

# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 7 / 19  
yy mm dd

Initials: mmo

Use a separate sheet for each configuration.

## Configuration Name:

$Q^2 = 8.5 \text{ GeV}^2$   $W = 2.79 \text{ GeV}$   
 $x = 0.55$  high  $E$  SHMS center

$E_{\text{beam}}$ : 10540 GeV

$I_{\text{beam}}$ : 65  $\mu\text{A}$

## Purpose:

- ☒ Production  
☐ Test (e.g. DAQ, Detector)  
☐ Optics (SHMS / HMS)  
☐ Other: \_\_\_\_\_

Raster: ☒ On ☐ Off  
Size: 2x2

## Beam position and angle on target:

|               |    |                  |
|---------------|----|------------------|
| 3H07A         | X  | Y                |
| <u>-0.137</u> | mm | <u>-0.255</u> mm |
| Nomin:        |    | Nomin:           |
| 3H07C         | X  | Y                |
|               | mm | mm               |
| Nomin:        |    | Nomin:           |

HMS

SHMS

|    |                                                  |                 |                  |                |    |
|----|--------------------------------------------------|-----------------|------------------|----------------|----|
| Q1 | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | HB |
|    | B-HALL                                           | <u>-305.01</u>  | B-HALL           | <u>-270255</u> |    |
| Q2 | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | Q1 |
|    | B-HALL                                           | <u>0.40350</u>  | B-HALL           | <u>-17.093</u> |    |
| Q3 | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | Q2 |
|    | B-HALL                                           | <u>242.41</u>   | B-HALL           | <u>1670.44</u> |    |
| D  | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | Q3 |
|    | B-HALL                                           | <u>-0.45148</u> | B-HALL           | <u>11.876</u>  |    |
| D  | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | D  |
|    | B-HALL                                           | <u>17.79</u>    | B-HALL           | <u>2189.84</u> |    |
| D  | I-READ                                           | A               | I-SET (from PSU) | A              | D  |
|    | B-NMR                                            | <u>716.07</u>   | B-HALL           | <u>1835.64</u> |    |
| D  | I-SET (from PSU)                                 | A               | I-SET (from PSU) | A              | D  |
|    | B-NMR                                            | <u>0.64089</u>  | B-HALL           | <u>-17.650</u> |    |
| D  | If momentum increased:                           |                 | I-SET (from PSU) | A              | D  |
|    | <input checked="" type="checkbox"/> HMS cycled?  |                 | B-NMR            | <u>2523.96</u> |    |
| D  | <input checked="" type="checkbox"/> SHMS cycled? |                 | B-NMR            | <u>18.300</u>  |    |

## Run Number:

15622

- ☒ LH2 10cm  
☐ LD2 10cm  
☐ Dummy 10cm  
☐ C 0.5% r.l.  
☐ Optics \_\_\_\_ cm  
☐ \_\_\_\_\_

PS1: 12  
PS2: -1  
PS3: -1  
PS4: 3  
PS5: 0  
PS6: -1  
Mode10: cer / fadc

## Start time (RC GUI):

12:44

## Stop time (RC GUI):

12:46

- ☒ Settings Verified?  
☒ HV OK?  
☐ 50k OK?

HMS prescale  
pretrig: \_\_\_\_\_ k

$e-\pi n$  evts:

SHMS prescale  
pretrig: \_\_\_\_\_ k

$\Sigma e-\pi n$  evts:

COIN pretrig: \_\_\_\_\_ k

- ☐ Data ok  
☐ Junk

## Comments:

FADC mode 10

## Run Number:

15623

- ☒ LH2 10cm  
☐ LD2 10cm  
☐ Dummy 10cm  
☐ C 0.5% r.l.  
☐ Optics \_\_\_\_ cm  
☐ \_\_\_\_\_

PS1: 12  
PS2: -1  
PS3: 5  
PS4: -1  
PS5: -1  
PS6: 0  
Mode10: cer / fadc

## Start time (RC GUI):

12:48

## Stop time (RC GUI):

13:11

- ☒ Settings Verified?  
☒ HV OK?  
☒ 50k OK?

HMS prescale  
pretrig: 423 k

$e-\pi n$  evts:

155

SHMS prescale  
pretrig: 89 k

$\Sigma e-\pi n$  evts:

155

COIN pretrig: 20 k

- ☒ Data ok  
☐ Junk

## Comments:

HMS 3/4 trigger run

997 98.4

$Q = 71.8 \text{ mC}$

## Run Number:

15624

- ☒ LH2 10cm  
☐ LD2 10cm  
☐ Dummy 10cm  
☐ C 0.5% r.l.  
☐ Optics \_\_\_\_ cm  
☐ \_\_\_\_\_

PS1: 12  
PS2: -1  
PS3: -1  
PS4: 0  
PS5: 0  
PS6: -1  
Mode10: cer / fadc

## Start time (RC GUI):

13:12

## Stop time (RC GUI):

14:18

- ☒ Settings Verified?  
☒ HV OK?  
☒ 50k OK?

HMS prescale  
pretrig: 148 k

$e-\pi n$  evts:

270

SHMS prescale  
pretrig: 148 k

$\Sigma e-\pi n$  evts:

425

COIN pretrig: 45 k

- ☒ Data ok  
☐ Junk

## Comments:

65  $\mu\text{A}$

100 91.6

$Q = 123.2 \text{ mC}$   $\Sigma Q = 195.0$

## Run Number:

15625

- ☒ LH2 10cm  
☐ LD2 10cm  
☐ Dummy 10cm  
☐ C 0.5% r.l.  
☐ Optics \_\_\_\_ cm  
☐ \_\_\_\_\_

PS1: 12  
PS2: -1  
PS3: -1  
PS4: 0  
PS5: 0  
PS6: -1  
Mode10: cer / fadc

## Start time (RC GUI):

14:14

## Stop time (RC GUI):

15:21

- ☒ Settings Verified?  
☒ HV OK?  
☒ 50k OK?

HMS prescale  
pretrig: 130 k

$e-\pi n$  evts:

211

SHMS prescale  
pretrig: 138 k

$\Sigma e-\pi n$  evts:

636

COIN pretrig: 40 k

- ☒ Data ok  
☐ Junk

## Comments:

65  $\mu\text{A}$

100 91.7

$Q = 116.2 \text{ mC}$   $\Sigma Q = 311.2 \text{ mC}$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/7/19  
yy mm dd

Initials: MM

## Continuation of Configuration:

$$Q^2 = 8.5 \text{ GeV}^2 \quad W = 2.79 \text{ GeV}$$

$x = 0.55$  high  $E$  SHMS center

This sheet is only to be used to continue a running configuration.

|                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                            |                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15626</b>                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>15:22</u><br>Stop time (RC GUI):<br><u>16:22</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>169</u> k<br>SHMS prescale<br><u>170</u> k<br>e- $\pi$ n evts:<br><u>317</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>953</u> | COIN pretrig:<br><u>46</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: <b>65 <math>\mu</math>A</b> <span style="margin-left: 100px;"><b>100 97.7</b></span> <span style="margin-left: 100px;"><b><math>Q = 141.74 \text{ mC}</math></b></span><br><span style="margin-left: 500px;"><b><math>\Sigma Q = 452.94 \text{ mC}</math></b></span> |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                            |                                                                                                              |

|                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                           |                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15627</b>                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>16:22</u><br>Stop time (RC GUI):<br><u>16:53</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>77</u> k<br>SHMS prescale<br><u>79</u> k<br>e- $\pi$ n evts:<br><u>130</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>1083</u> | COIN pretrig:<br><u>23</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: <b>65 <math>\mu</math>A</b> <span style="margin-left: 50px;"><b>The beam was gone, so I stopped the run. short run</b></span> <span style="margin-left: 100px;"><b><math>Q = 64.397 \text{ mC}</math></b></span><br><span style="margin-left: 400px;"><b><math>\Sigma Q = 517.311 \text{ mC}</math></b></span> |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                           |                                                                                                              |

|                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                           |                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15628</b>                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>17:16</u><br>Stop time (RC GUI):<br><u>17:42</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>54</u> k<br>SHMS prescale<br><u>53</u> k<br>e- $\pi$ n evts:<br><u>102</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>1185</u> | COIN pretrig:<br><u>19</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: <b>65 <math>\mu</math>A</b> <span style="margin-left: 50px;"><b>The beam was gone, so I stopped the run. short run</b></span> <span style="margin-left: 100px;"><b><math>Q = 44.621 \text{ mC}</math></b></span><br><span style="margin-left: 400px;"><b><math>\Sigma Q = 561.932 \text{ mC}</math></b></span> |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                           |                                                                                                              |

|                                                                                                                                                                                                                         |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                             |                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15629</b>                                                                                                                                                                                             | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>17:47</u><br>Stop time (RC GUI):<br><u>18:47</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>206</u> k<br>SHMS prescale<br><u>215</u> k<br>e- $\pi$ n evts:<br><u>352</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>1537</u> | COIN pretrig:<br><u>50</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: <b>65 <math>\mu</math>A</b> <span style="margin-left: 100px;"><b><math>Q = 175.305 \text{ mC}</math></b></span><br><span style="margin-left: 400px;"><b><math>\Sigma Q = 737.237 \text{ mC}</math></b></span> |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                             |                                                                                                              |

|                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                          |                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15630</b>                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>18:47</u><br>Stop time (RC GUI):<br><u>19:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>26</u> k<br>SHMS prescale<br><u>26</u> k<br>e- $\pi$ n evts:<br><u>43</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>1580</u> | COIN pretrig:<br><u>10</u> k<br><input checked="" type="checkbox"/> Data ok?<br><input type="checkbox"/> Junk |
| Comments: <b>65 <math>\mu</math>A</b> <span style="margin-left: 50px;"><b>The beam was gone, so I stopped the run. very short run.</b></span> <span style="margin-left: 100px;"><b><math>Q = 21.418 \text{ mC}</math></b></span><br><span style="margin-left: 400px;"><b><math>\Sigma Q = 758.655 \text{ mC}</math></b></span> |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                          |                                                                                                               |

|             |                                                                                                                                                                                                                                    |                                                                                                               |                                                         |                                                                                                                    |                                                                                                                  |                                                                                               |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Run Number: | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><br>Stop time (RC GUI):<br><br> | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>_____ k<br>SHMS prescale<br>_____ k<br>e- $\pi$ n evts:<br><br>$\Sigma$ e- $\pi$ n evts:<br><br> | COIN pretrig:<br>_____ k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:   |                                                                                                                                                                                                                                    |                                                                                                               |                                                         |                                                                                                                    |                                                                                                                  |                                                                                               |



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/21  
yy mm dd

Initials: MA

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ;  $W = 2.79 \text{ GeV}$

$x = 0.55$  high  $\delta$ ; SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15631</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>04:50</b><br>Stop time (RC GUI):<br><b>05:50</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>129</b> k<br>$e-\pi n$ evts:<br><b>221</b> | SHMS prescale<br>pretrig: <b>132</b> k<br>$\Sigma e-\pi n$ evts:<br><b>1801</b> | COIN pretrig: <b>44</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

The beam started, and mostly it was 65  $\mu\text{A}$ .

~~44.7~~

$Q = 107.991$

$\Sigma Q = 866.646$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15632</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>05:51</b><br>Stop time (RC GUI):<br><b>06:53</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>177</b> k<br>$e-\pi n$ evts:<br><b>325</b> | SHMS prescale<br>pretrig: <b>185</b> k<br>$\Sigma e-\pi n$ evts:<br><b>2126</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 150.363$

$\Sigma Q = 1017.009$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15633</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>06:54</b><br>Stop time (RC GUI):<br><b>07:53</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>219</b> k<br>$e-\pi n$ evts:<br><b>376</b> | SHMS prescale<br>pretrig: <b>231</b> k<br>$\Sigma e-\pi n$ evts:<br><b>2502</b> | COIN pretrig: <b>50</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 187.538$

$\Sigma Q = 1204.547$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15634</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>07:54</b><br>Stop time (RC GUI):<br><b>08:54</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>164</b> k<br>$e-\pi n$ evts:<br><b>276</b> | SHMS prescale<br>pretrig: <b>171</b> k<br>$\Sigma e-\pi n$ evts:<br><b>2778</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Counting stats maybe not great?

Compared to golden photos FullReplay

$Q = 139.089 \text{ mC}$

$\Sigma Q = 1343.636 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                       |                                                                                |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15635</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>08:54</b><br>Stop time (RC GUI):<br><b>09:54</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>95</b> k<br>$e-\pi n$ evts:<br><b>177</b> | SHMS prescale<br>pretrig: <b>95</b> k<br>$\Sigma e-\pi n$ evts:<br><b>2955</b> | COIN pretrig: <b>41</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 78.336$

$\Sigma Q = 1421.972 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                                |                                                                                                            |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15636</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>09:54</b><br>Stop time (RC GUI):<br><b>10:54</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>48</b> k<br>$e-\pi n$ evts:<br><b>88</b> | SHMS prescale<br>pretrig: <b>40</b> k<br>$\Sigma e-\pi n$ evts:<br><b>3043</b> | COIN pretrig: <b>37</b> k<br><input checked="" type="checkbox"/> Data ok?<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|

Beam tripping a lot... took a while to reach SNV

$Q = 36.303$

$\Sigma Q = 1458.275 \text{ mC}$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/21  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$   $W = 2.79 \text{ GeV}$   
 $x = 0.55$  high  $\epsilon$  HMS Centre

This sheet is only to be used to continue a running configuration.

|                                                           |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15637</b>                               | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>10:55</u><br>Stop time (RC GUI):<br><u>11:55</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>129</u> k<br>SHMS prescale<br><u>132</u> k<br>COIN pretrig: <u>44</u> k<br>$e-\pi n$ evts: <u>216</u><br>$\Sigma e-\pi n$ evts: <u>3259</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:                                                 |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
| $Q = 108.217 \text{ mC}$ $\Sigma Q = 1566.492 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |

|                                                                                     |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                              |                                                                   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Run Number:<br><b>15638</b>                                                         | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>11:55</u><br>Stop time (RC GUI):<br><u>12:55</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>74</u> k<br>SHMS prescale<br><u>72</u> k<br>COIN pretrig: <u>40</u> k<br>$e-\pi n$ evts: <u>111</u><br>$\Sigma e-\pi n$ evts: <u>3370</u> | <input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:                                                                           |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                              |                                                                   |
| Full replay data is sparse. $Q = 59.69 \text{ mC}$ $\Sigma Q = 1626.182 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                              |                                                                   |

|                                                          |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                             |                                                                              |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15639</b>                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>12:56</u><br>Stop time (RC GUI):<br><u>13:54</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>37</u> k<br>SHMS prescale<br><u>28</u> k<br>COIN pretrig: <u>36</u> k<br>$e-\pi n$ evts: <u>59</u><br>$\Sigma e-\pi n$ evts: <u>3429</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:                                                |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                             |                                                                              |
| $Q = 26.425 \text{ mC}$ $\Sigma Q = 1652.607 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                             |                                                                              |

|                                                                                                          |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                          |                                                                                                                                                         |                                                                              |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15640</b>                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>13:55</u><br>Stop time (RC GUI):<br><u>14:10</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br><u>2</u> k<br>SHMS prescale<br><u>0</u> k<br>COIN pretrig: <u>9</u> k<br>$e-\pi n$ evts: <u>0</u><br>$\Sigma e-\pi n$ evts: <u>3429</u> | <input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments:                                                                                                |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                          |                                                                                                                                                         |                                                                              |
| Realized the beam was tipped the whole time. Stopped the run. $Q = 0$ , $\Sigma Q = 1652.607 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                          |                                                                                                                                                         |                                                                              |

|                                                                                                          |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15641</b>                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>22:06</u><br>Stop time (RC GUI):<br><u>22:58</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>162</u> k<br>SHMS prescale<br><u>170</u> k<br>COIN pretrig: <u>41</u> k<br>$e-\pi n$ evts: <u>275</u><br>$\Sigma e-\pi n$ evts: <u>3704</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:                                                                                                |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
| 65 $\mu\text{A}$ stopped as the beam was gone. $Q = 139.306 \text{ mC}$ $\Sigma Q = 1791.916 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |

|                                                      |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15642</b>                          | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer / fadc</u> | Start time (RC GUI):<br><u>23:02</u><br>Stop time (RC GUI):<br><u>00:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>209</u> k<br>SHMS prescale<br><u>221</u> k<br>COIN pretrig: <u>50</u> k<br>$e-\pi n$ evts: <u>324</u><br>$\Sigma e-\pi n$ evts: <u>4028</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:                                            |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |
| 65 $\mu\text{A}$ $Q = 180.808$ $\Sigma Q = 1972.704$ |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                                                                                                                |                                                                              |



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/22  
yy mm dd

Initials: MA

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ;  $W = 2.79 \text{ GeV}$   
 $X = 0.55$  high  $E$ ; SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15643</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>00:02</u><br>Stop time (RC GUI):<br><u>01:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>211</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>377</u> | SHMS prescale <u>223</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>4405</u> | COIN <u>49</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 182.820$   
 $\Sigma Q = 2155.524$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15644</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>01:02</u><br>Stop time (RC GUI):<br><u>02:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>217</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>343</u> | SHMS prescale <u>230</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>4748</u> | COIN <u>50</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 188.255$   
 $\Sigma Q = 2343.779$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15645</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>02:02</u><br>Stop time (RC GUI):<br><u>03:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>210</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>332</u> | SHMS prescale <u>220</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>5080</u> | COIN <u>49</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 181.850$   
 $\Sigma Q = 2525.629$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15646</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>03:02</u><br>Stop time (RC GUI):<br><u>04:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>196</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>340</u> | SHMS prescale <u>204</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>5420</u> | COIN <u>48</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 168.342$   
 $\Sigma Q = 2693.971$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15647</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>04:02</u><br>Stop time (RC GUI):<br><u>05:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>184</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>324</u> | SHMS prescale <u>193</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>5744</u> | COIN <u>48</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 158.313$   
 $\Sigma Q = 2852.284$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                           |                                                                                    |                                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15648</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>05:02</u><br>Stop time (RC GUI):<br><u>06:02</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale <u>187</u> k<br>pretrig: _____<br>$e-\pi n$ evts: <u>319</u> | SHMS prescale <u>196</u> k<br>pretrig: _____<br>$\Sigma e-\pi n$ evts: <u>6063</u> | COIN <u>47</u> k<br>pretrig: _____<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|

$Q = 161.308$   
 $\Sigma Q = 3013.592$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/22  
yy mm dd

Initials: MA

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ;  $W = 2.79 \text{ GeV}$   
 $X = 0.55 \text{ high } E$ ; SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15649</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>06:02</b><br>Stop time (RC GUI):<br><b>07:02</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>168</b> k<br>$e-\pi n$ evts:<br><b>318</b> | SHMS prescale<br>pretrig: <b>174</b> k<br>$\Sigma e-\pi n$ evts:<br><b>6381</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 144.259$   
 $\Sigma Q = 3157.851$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15650</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>07:02</b><br>Stop time (RC GUI):<br><b>08:02</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>142</b> k<br>$e-\pi n$ evts:<br><b>232</b> | SHMS prescale<br>pretrig: <b>145</b> k<br>$\Sigma e-\pi n$ evts:<br><b>6613</b> | COIN pretrig: <b>44</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 121.438 \text{ mC}$   
 $\Sigma Q = 3272.929 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15651</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>08:02</b><br>Stop time (RC GUI):<br><b>09:02</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>117</b> k<br>$e-\pi n$ evts:<br><b>190</b> | SHMS prescale<br>pretrig: <b>118</b> k<br>$\Sigma e-\pi n$ evts:<br><b>6803</b> | COIN pretrig: <b>43</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 98.300 \text{ mC}$   
 $\Sigma Q = 3377.229 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                       |                                                                                |                                                                                                |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15652</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>09:02</b><br>Stop time (RC GUI):<br><b>10:02</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>96</b> k<br>$e-\pi n$ evts:<br><b>158</b> | SHMS prescale<br>pretrig: <b>96</b> k<br>$\Sigma e-\pi n$ evts:<br><b>6961</b> | COIN pretrig: <b>41</b> k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|

beam off for last bit of run  
(cavity problem, will start new run when beam is back)

$Q = 79.688 \text{ mC}$   
 $\Sigma Q = 3456.917 \text{ mC}$

XA  
R  
off

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15653</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>10:49</b><br>Stop time (RC GUI):<br><b>11:50</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>148</b> k<br>$e-\pi n$ evts:<br><b>255</b> | SHMS prescale<br>pretrig: <b>152</b> k<br>$\Sigma e-\pi n$ evts:<br><b>7216</b> | COIN pretrig: <b>45</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 125.981 \text{ mC}$   
 $\Sigma Q = 3582.898 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15654</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>11:51</b><br>Stop time (RC GUI):<br><b>12:51</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>142</b> k<br>$e-\pi n$ evts:<br><b>252</b> | SHMS prescale<br>pretrig: <b>145</b> k<br>$\Sigma e-\pi n$ evts:<br><b>7468</b> | COIN pretrig: <b>44</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 121.067 \text{ mC}$   
 $\Sigma Q = 3703.965 \text{ mC}$



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 22  
yy mm dd

Initials: BFB

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ,  $X_1 = 2.49 \text{ GeV}$   
 $X = 0.55$ , high  $\epsilon$ , SKMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                                           |                                                              |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15655</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>12:51</u><br>Stop time (RC GUI):<br><u>13:52</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>114</u> k<br>SHMS prescale<br><u>114</u> k<br>e-πn evts:<br><u>171</u> | SHMS prescale<br><u>114</u> k<br>Σ e-πn evts:<br><u>7639</u> | COIN pretrig: <u>43</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 95.584 \text{ mC}$   
 $\Sigma Q = 3799.549 \text{ mC}$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                                           |                                                              |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15656</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>13:52</u><br>Stop time (RC GUI):<br><u>14:52</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>144</u> k<br>SHMS prescale<br><u>148</u> k<br>e-πn evts:<br><u>237</u> | SHMS prescale<br><u>148</u> k<br>Σ e-πn evts:<br><u>7876</u> | COIN pretrig: <u>44</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 122.855 \text{ mC}$   
 $\Sigma Q = 3922.404 \text{ mC}$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                                           |                                                              |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15657</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>14:52</u><br>Stop time (RC GUI):<br><u>15:53</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>105</u> k<br>SHMS prescale<br><u>104</u> k<br>e-πn evts:<br><u>157</u> | SHMS prescale<br><u>104</u> k<br>Σ e-πn evts:<br><u>8033</u> | COIN pretrig: <u>42</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

beam off & tune beam @ 15:13

$Q = 86.89$   
 $\Sigma Q = 4009.39$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                      |                                                                                                                    |                                                                          |                                                  |                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15658</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>15:53</u><br>Stop time (RC GUI):<br>_____ | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>____ k<br>SHMS prescale<br>____ k<br>e-πn evts:<br>_____ | SHMS prescale<br>____ k<br>Σ e-πn evts:<br>_____ | COIN pretrig: ____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------|

Junk! Beam x/ies OFF!

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                                        |                                                             |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15659</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>15:57</u><br>Stop time (RC GUI):<br><u>16:12</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>37</u> k<br>SHMS prescale<br><u>37</u> k<br>e-πn evts:<br><u>63</u> | SHMS prescale<br><u>37</u> k<br>Σ e-πn evts:<br><u>8096</u> | COIN pretrig: <u>15</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Ended run, Mcc will work to improve beam quality  
 $\Sigma Q = 4040.59$   $Q = 31.2$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                               |                                                                                           |                                                              |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15660</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>16:25</u><br>Stop time (RC GUI):<br><u>17:31</u> | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>227</u> k<br>SHMS prescale<br><u>225</u> k<br>e-πn evts:<br><u>421</u> | SHMS prescale<br><u>225</u> k<br>Σ e-πn evts:<br><u>8517</u> | COIN pretrig: <u>53</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$\Sigma Q = 4237.44$   $Q = 196.85$



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/22  
yy mm dd

Initials: H.M.

## Continuation of Configuration:

$Q = 8.5 \text{ GeV}^2$ ,  $W = 2.79 \text{ GeV}$   
 $X = 0.55$ , high  $\epsilon$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15661</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>17:31</b><br>Stop time (RC GUI):<br><b>18:35</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>184</b> k<br>$e-\pi n$ evts:<br><b>298</b> | SHMS prescale<br>pretrig: <b>188</b> k<br>$\Sigma e-\pi n$ evts:<br><b>8815</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

DAG crashed at the end of this run.  $\rightarrow$  might be missing DC info near end of run.

$\Sigma Q = 4395.81$

$Q = 158.37$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15663</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>18:58</b><br>Stop time (RC GUI):<br><b>20:00</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>166</b> k<br>$e-\pi n$ evts:<br><b>264</b> | SHMS prescale<br>pretrig: <b>170</b> k<br>$\Sigma e-\pi n$ evts:<br><b>9079</b> | COIN pretrig: <b>47</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

$\Sigma Q = 4538.41$

$Q = 142.60$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15664</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>20:00</b><br>Stop time (RC GUI):<br><b>21:13</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>212</b> k<br>$e-\pi n$ evts:<br><b>372</b> | SHMS prescale<br>pretrig: <b>217</b> k<br>$\Sigma e-\pi n$ evts:<br><b>9451</b> | COIN pretrig: <b>56</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

$\Sigma Q = 4720.56$

$Q = 182.148$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                 |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15665</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>21:39</b><br>Stop time (RC GUI):<br><b>22:40</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>195</b> k<br>$e-\pi n$ evts:<br><b>330</b> | SHMS prescale<br>pretrig: <b>202</b> k<br>$\Sigma e-\pi n$ evts:<br><b>9781</b> | COIN pretrig: <b>48</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

$\Sigma Q = 4889.24$

$Q = 168.68$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15666</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>22:40</b><br>Stop time (RC GUI):<br><b>23:38</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>198</b> k<br>$e-\pi n$ evts:<br><b>355</b> | SHMS prescale<br>pretrig: <b>205</b> k<br>$\Sigma e-\pi n$ evts:<br><b>10136</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

$\Sigma Q = 5059.87$

$Q = 170.63$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                                                |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15667</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>23:39</b><br>Stop time (RC GUI):<br><b>00:21:52</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>135</b> k<br>$e-\pi n$ evts:<br><b>187</b> | SHMS prescale<br>pretrig: <b>139</b> k<br>$\Sigma e-\pi n$ evts:<br><b>10323</b> | COIN pretrig: <b>34</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Comments:

~ last 6 min @ 65 pA

$Q = 116.262 \text{ mC}$   
 $4.10 = 5176.351 \text{ mC}$



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/23  
yy mm dd

Initials: *fm*

## Continuation of Configuration:

$Q^2=8.5$ ,  $W=2.79$ ,  $x=0.55$

High  $e$ , SHMS Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                          |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15668</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>00:22:34<br>Stop time (RC GUI):<br>01:23:16 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 177 k<br>$e-\pi n$ evts:<br>289 | SHMS prescale<br>pretrig: 186 k<br>$\Sigma e-\pi n$ evts:<br>10612 | COIN pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

65mA

$Q = 152.2$  mC  
 $\Sigma Q = 5328.551$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                          |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15669</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>01:23:50<br>Stop time (RC GUI):<br>02:26:55 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 156 k<br>$e-\pi n$ evts:<br>274 | SHMS prescale<br>pretrig: 161 k<br>$\Sigma e-\pi n$ evts:<br>10886 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

65mA

~01:50 ↑ 70mA, ↓ 67mA, very unstable

$Q = 132.782$   
 $\Sigma Q = 5461.33$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                           |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15670</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: 5<br>PS4: -1<br>PS5: -1<br>PS6: 0<br>Mode10: cer / fadc | Start time (RC GUI):<br>02:28:52<br>Stop time (RC GUI):<br>03:43:52 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: ____ k<br>$e-\pi n$ evts:<br>372 | SHMS prescale<br>pretrig: 215 k<br>$\Sigma e-\pi n$ evts:<br>11258 | COIN pretrig: 58 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

67mA

3/4 Run

No beam since 03:27:30

65-67mA  $Q = 175.331$  mC  
 $\Sigma Q = 5636.672$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                          |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15671</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>03:45:40<br>Stop time (RC GUI):<br>04:45:34 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 155 k<br>$e-\pi n$ evts:<br>249 | SHMS prescale<br>pretrig: 160 k<br>$\Sigma e-\pi n$ evts:<br>11507 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

65mA

$Q = 133.012$  mC  
 $\Sigma Q = 5769.684$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                          |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15672</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>04:45:11<br>Stop time (RC GUI):<br>06:02:15 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 164 k<br>$e-\pi n$ evts:<br>280 | SHMS prescale<br>pretrig: 170 k<br>$\Sigma e-\pi n$ evts:<br>11787 | COIN pretrig: 56 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

25 min down in the middle

$Q = 139.119$  mC  
 $\Sigma Q = 5908.802$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                          |                                                                    |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15673</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>06:03:20<br>Stop time (RC GUI):<br>07:04:10 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 170 k<br>$e-\pi n$ evts:<br>299 | SHMS prescale<br>pretrig: 176 k<br>$\Sigma e-\pi n$ evts:<br>12086 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 145.615$  mC  
 $\Sigma Q = 6054.417$  mC



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/23  
yy mm dd

Initials: gm

## Continuation of Configuration:

$Q=9.5, W=2.79, \lambda=0.55$

H206, SHMS Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                               |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15674</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>07:04:48<br>Stop time (RC GUI):<br>08:05:52 | <input type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 148 k<br>$e-\pi n$ evts: 270 | SHMS prescale pretrig: 152 k<br>$\Sigma e-\pi n$ evts: 12356 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 125.967$   
 $\Sigma Q = 6180.384$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                                     |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15675</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:06:11<br>Stop time (RC GUI):<br>09:07:43 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 163 k<br>$e-\pi n$ evts: 265<br><del>32</del> | SHMS prescale pretrig: 170 k<br>$\Sigma e-\pi n$ evts: 12621 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

mcc delived ~80mA for a few minutes  $Q = 139.757$   
at about 8:50  $\Sigma Q = 6320.141$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15676</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>09:08:52<br>Stop time (RC GUI):<br>10:08:51 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 173 k<br>$e-\pi n$ evts: 281 | SHMS prescale pretrig: 180 k<br>$\Sigma e-\pi n$ evts: 12902 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 148.629$   
 $\Sigma Q = 6468.770$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15677</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>10:09:28<br>Stop time (RC GUI):<br>11:11:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 176 k<br>$e-\pi n$ evts: 305 | SHMS prescale pretrig: 183 k<br>$\Sigma e-\pi n$ evts: 13207 | COIN pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 151.801$   
 $\Sigma Q = 6620.571$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15678</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>11:11:29<br>Stop time (RC GUI):<br>12:09:32 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 162 k<br>$e-\pi n$ evts: 284 | SHMS prescale pretrig: 168 k<br>$\Sigma e-\pi n$ evts: 13491 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 139.211$   
 $\Sigma Q = 6759.832$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15679</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:10:08<br>Stop time (RC GUI):<br>13:16:05 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 172 k<br>$e-\pi n$ evts: 292 | SHMS prescale pretrig: 179 k<br>$\Sigma e-\pi n$ evts: 13783 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

+DC1190 error event #102223

$Q = 148.291$   
 $\Sigma Q = 6908.123$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 23/07/2  
yy mm dd  
22 07 23

Initials: SAL

## Continuation of Configuration:

$Q^2 = 8.5, W = 279, x = 0.55$

High  $e$ , SHMS Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                 |                                                                           |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15680</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>13:11:38</b><br>Stop time (RC GUI):<br><b>13:45:22</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <b>78</b> k<br>$e-\pi n$ evts: <b>130</b> | SHMS prescale pretrig: <b>80</b> k<br>$\Sigma e-\pi n$ evts: <b>13913</b> | COIN pretrig: <b>25</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

RF Zone drop

$Q = 66.136$   
 $\Sigma Q = 6974.259$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                  |                                                                            |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15681</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>16:18:57</b><br>Stop time (RC GUI):<br><b>17:19:26</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <b>203</b> k<br>$e-\pi n$ evts: <b>353</b> | SHMS prescale pretrig: <b>216</b> k<br>$\Sigma e-\pi n$ evts: <b>14266</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 177.385$   
 $\Sigma Q = 7151.644$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                  |                                                                            |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15682</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>17:20:11</b><br>Stop time (RC GUI):<br><b>18:17:16</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <b>149</b> k<br>$e-\pi n$ evts: <b>249</b> | SHMS prescale pretrig: <b>155</b> k<br>$\Sigma e-\pi n$ evts: <b>14515</b> | COIN pretrig: <b>43</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 128.386$   
 $\Sigma Q = 7280.03$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                          |                                                      |                                                              |                                                                                                      |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15683</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>18:17:59</b><br>Stop time (RC GUI):<br><b>18:25:00</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: ____ k<br>$e-\pi n$ evts: ____ | SHMS prescale pretrig: ____ k<br>$\Sigma e-\pi n$ evts: ____ | COIN pretrig: ____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------|

NO Beam this whole row

$Q =$   
 $\Sigma Q =$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                  |                                                                            |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15684</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>18:32:04</b><br>Stop time (RC GUI):<br><b>19:33:17</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <b>169</b> k<br>$e-\pi n$ evts: <b>332</b> | SHMS prescale pretrig: <b>174</b> k<br>$\Sigma e-\pi n$ evts: <b>14847</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 146.234$   
 $\Sigma Q = 7426.264$

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                  |                                                                            |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15685</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>19:33:57</b><br>Stop time (RC GUI):<br><b>20:35:12</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <b>161</b> k<br>$e-\pi n$ evts: <b>278</b> | SHMS prescale pretrig: <b>164</b> k<br>$\Sigma e-\pi n$ evts: <b>15125</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 138.300$   
 $\Sigma Q = 7564.564$



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/23  
yy mm dd

Initials: RPG

## Continuation of Configuration:

$Q^2 = 8.5$   $W = 2.79$   $x = 0.55$

H<sub>2</sub>He, SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15686</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>20:35:48</b><br>Stop time (RC GUI):<br><b>21:31:10</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>199</b> k<br>$e-\pi n$ evts:<br><b>342</b> | SHMS prescale<br>pretrig: <b>210</b> k<br>$\Sigma e-\pi n$ evts:<br><b>15467</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 173.603$   
 $\Sigma Q = 7738.167$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15687</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>21:31:44</b><br>Stop time (RC GUI):<br><b>22:29:01</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>191</b> k<br>$e-\pi n$ evts:<br><b>327</b> | SHMS prescale<br>pretrig: <b>202</b> k<br>$\Sigma e-\pi n$ evts:<br><b>15794</b> | COIN pretrig: <b>47</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 165.589$   
 $\Sigma Q = 7903.756$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                                   |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15688</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>22:29:49</b><br>Stop time (RC GUI):<br><b>23:30:19</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>195</b> k<br>$e-\pi n$ evts:<br><b>366</b> | SHMS prescale<br>pretrig: <b>206</b> k<br>$\Sigma e-\pi n$ evts:<br><b>16160</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 168.766$   
 $\Sigma Q = 8072.522$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                                |                                                                                                                                                     |                                                                        |                                                                                                     |                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15689</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>23:31:06</b><br>Stop time (RC GUI):<br><b>00:32</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>200</b> k<br>$e-\pi n$ evts:<br><b>399</b> | SHMS prescale<br>pretrig: <b>213</b> k<br>$\Sigma e-\pi n$ evts:<br><del>16559</del><br><b>8246</b> | COIN pretrig: <b>49</b> k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|

$Q = 173.843$  atm.  
 $\Sigma Q = 8246.365$  atm.

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15690</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>00:32</b><br>Stop time (RC GUI):<br><b>01:30</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>207</b> k<br>$e-\pi n$ evts:<br><b>344</b> | SHMS prescale<br>pretrig: <b>220</b> k<br>$\Sigma e-\pi n$ evts:<br><b>16903</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 180.052$   
 $\Sigma Q = 8426.417$

|                             |                                                                                                                                                                                                                                              |                                                                                                                              |                                                                             |                                                                                                                                                     |                                                                        |                                                                                                         |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15691</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>01:31</b><br>Stop time (RC GUI):<br><b>02:30</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>209</b> k<br>$e-\pi n$ evts:<br><b>397</b> | SHMS prescale<br>pretrig: <b>223</b> k<br>$\Sigma e-\pi n$ evts:<br><del>17300</del><br><b>8409.020</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 181.622$   
 $\Sigma Q = 8609.020$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: <sup>22</sup>24/07/24  
yy mm dd

Initials: *V.K*

## Continuation of Configuration:

$$Q^2 = 2.5, W = 2.79, x = 0.55$$

high  $\epsilon$ , center SHMS.

This sheet is only to be used to continue a running configuration.

|                                                       |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                            |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15692</b>                           | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>02:31</b><br>Stop time (RC GUI):<br><b>3:30</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>172</b> k<br>$e-\pi n$ evts:<br><b>273</b> | SHMS prescale<br>pretrig: <b>182</b> k<br>$\Sigma e-\pi n$ evts:<br><b>17573</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 148.478$<br>$\epsilon Q = 8756.517$ |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                            |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |

|                                                       |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15693</b>                           | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>3:31</b><br>Stop time (RC GUI):<br><b>4:31</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>206</b> k<br>$e-\pi n$ evts:<br><b>331</b> | SHMS prescale<br>pretrig: <b>219</b> k<br>$\Sigma e-\pi n$ evts:<br><b>17904</b> | COIN pretrig: <b>50</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 179.011$<br>$\epsilon Q = 8935.528$ |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                     |                                                                                                                                          |                                                              |                                                                      |                                                                                                       |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15694</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>4:32</b><br>Stop time (RC GUI):<br>_____ | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: _____ k<br>$e-\pi n$ evts:<br>_____ | SHMS prescale<br>pretrig: _____ k<br>$\Sigma e-\pi n$ evts:<br>_____ | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments:<br><b>Junk —</b>  |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                     |                                                                                                                                          |                                                              |                                                                      |                                                                                                       |

|                                                       |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15695</b>                           | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>5:01</b><br>Stop time (RC GUI):<br><b>6:01</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>186</b> k<br>$e-\pi n$ evts:<br><b>348</b> | SHMS prescale<br>pretrig: <b>196</b> k<br>$\Sigma e-\pi n$ evts:<br><b>18252</b> | COIN pretrig: <b>48</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 160.454$<br>$\epsilon Q = 9095.982$ |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |

|                                                       |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15696</b>                           | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>6:01</b><br>Stop time (RC GUI):<br><b>7:00</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>147</b> k<br>$e-\pi n$ evts:<br><b>232</b> | SHMS prescale<br>pretrig: <b>153</b> k<br>$\Sigma e-\pi n$ evts:<br><b>18484</b> | COIN pretrig: <b>44</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 125.713$<br>$\epsilon Q = 9221.695$ |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |

|                                                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15697</b>                                 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><b>7:00</b><br>Stop time (RC GUI):<br><b>8:00</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>124</b> k<br>$e-\pi n$ evts:<br><b>216</b> | SHMS prescale<br>pretrig: <b>127</b> k<br>$\Sigma e-\pi n$ evts:<br><b>18700</b> | COIN pretrig: <b>43</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 104.551$ mC<br>$\epsilon Q = 9221.695$ mC |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                           |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 24  
yy mm dd

Initials: V.K

## Continuation of Configuration:

$\theta = 2.5, \omega = 2.79, x = 0.55$   
high  $\epsilon$ , center HMS.

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                              |                                                                     |                                                                                                                                                     |                                                        |                                                                |                                                                                                                |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15698</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>8:00</u><br>Stop time (RC GUI):<br>_____ | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: _____ k<br>$e-\pi n$ evts: _____ | SHMS prescale pretrig: _____ k<br>$\Sigma e-\pi n$ evts: _____ | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk <u>2</u> |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|

\* possible junk... coda fail, no stop time \*  $Q =$   
 $\Sigma Q =$

|                             |                                                                                                                                                                                                                                    |                                                                                                        |                                                               |                                                                                                                    |                                                        |                                                                |                                                                                                       |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15699</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: cer / fadc | Start time (RC GUI):<br>_____<br>Stop time (RC GUI):<br>_____ | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: _____ k<br>$e-\pi n$ evts: _____ | SHMS prescale pretrig: _____ k<br>$\Sigma e-\pi n$ evts: _____ | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

— Junk —

|                             |                                                                                                                                                                                                                                    |                                                                                                        |                                                               |                                                                                                                    |                                                        |                                                                |                                                                                                       |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15700</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: cer / fadc | Start time (RC GUI):<br>_____<br>Stop time (RC GUI):<br>_____ | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: _____ k<br>$e-\pi n$ evts: _____ | SHMS prescale pretrig: _____ k<br>$\Sigma e-\pi n$ evts: _____ | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

— Junk —

|                             |                                                                                                                                                                                                                                               |                                                                                                                            |                                                                             |                                                                                                                                                     |                                                                  |                                                                            |                                                                                                                      |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15701</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>0</u><br>PS6: <u>0</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>09:11</u><br>Stop time (RC GUI):<br><u>10:11</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <u>187</u> k<br>$e-\pi n$ evts: <u>310</u> | SHMS prescale pretrig: <u>197</u> k<br>$\Sigma e-\pi n$ evts: <u>19010</u> | COIN pretrig: <u>48</u> k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|

$Q = 161.009$  mC  
 $\Sigma Q = 9487.255$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                             |                                                                             |                                                                                                                                                     |                                                                  |                                                                            |                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15702</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>10:12</u><br>Stop time (RC GUI):<br><u>11:12</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <u>177</u> k<br>$e-\pi n$ evts: <u>306</u> | SHMS prescale pretrig: <u>186</u> k<br>$\Sigma e-\pi n$ evts: <u>19313</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------|

$Q = 152.633$  mC  
 $\Sigma Q = 9639.888$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                             |                                                                             |                                                                                                                                                     |                                                                  |                                                                            |                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br><b>15703</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: cer / fadc | Start time (RC GUI):<br><u>11:12</u><br>Stop time (RC GUI):<br><u>12:13</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: <u>128</u> k<br>$e-\pi n$ evts: <u>209</u> | SHMS prescale pretrig: <u>130</u> k<br>$\Sigma e-\pi n$ evts: <u>19522</u> | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------|

$Q = 107.618$  mC  
 $\Sigma Q = 9747.506$  mC



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/24  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2 = 8.5$   $W = 2.79$   $x = 0.35$   
high  $E$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15704</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:13<br>Stop time (RC GUI):<br>13:13 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 168 k<br>$e-\pi n$ evts: 270 | SHMS prescale pretrig: 175 k<br>$\Sigma e-\pi n$ evts: 19792 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 144.269$  mC  
 $\Sigma Q = 9891.775$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15705</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:13<br>Stop time (RC GUI):<br>14:13 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 145 k<br>$e-\pi n$ evts: 245 | SHMS prescale pretrig: 149 k<br>$\Sigma e-\pi n$ evts: 20037 | COIN pretrig: 44 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 123.856$  mC  
 $\Sigma Q = 10015.631$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15706</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>14:15<br>Stop time (RC GUI):<br>15:02 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 113 k<br>$e-\pi n$ evts: 195 | SHMS prescale pretrig: 118 k<br>$\Sigma e-\pi n$ evts: 20232 | COIN pretrig: 35 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

long beam trip, ended run early

$Q = 96.943$  mC  
 $\Sigma Q = 10112.574$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15707</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>15:23<br>Stop time (RC GUI):<br>16:26 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 189 k<br>$e-\pi n$ evts: 347 | SHMS prescale pretrig: 197 k<br>$\Sigma e-\pi n$ evts: 20579 | COIN pretrig: 50 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 163.023$   
 $\Sigma Q = 10275.597$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15708</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>16:27<br>Stop time (RC GUI):<br>16:33 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

HV Alarm + Drop on chart see LogBook

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15709</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>16:41<br>Stop time (RC GUI):<br>16:45 | <input type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

Done to check HMS HV problems : not working



# p(e,e' $\pi$ )n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/24  
yy mm dd

Initials: RPA

## Continuation of Configuration:

$Q^2 = 8.5$   $W = 2.79$   $x = 0.55$   
hsh e, SHMS center

This sheet is only to be used to continue a running configuration.

|                                                                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15710                                                 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:07<br>Stop time (RC GUI):<br>20:18 | <input checked="" type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments: Run used to test whether HV is okay. 50k showed PMT's out. |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |

|                                                                   |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                    |                                            |                                                    |                                                                                                 |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15711                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:24<br>Stop time (RC GUI):<br>20:29 | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments: Still testing PMT's w/ 50k PMT's hC8 1y+3 are still out |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                    |                                            |                                                    |                                                                                                 |

|                                                                        |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15712                                                   | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:35<br>Stop time (RC GUI):<br>20:43 | <input checked="" type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments: Still testing PMT's w/ 50k hC8 out trying a fix for next run |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |

|                                     |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15713                | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:44<br>Stop time (RC GUI):<br>20:55 | <input checked="" type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments: PMT test result: hC+8 out |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |

|                                                                         |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                                  |                                                             |                                                                                                    |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15714                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:56<br>Stop time (RC GUI):<br>21:20 | <input checked="" type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 46 k<br>$e-\pi n$ evts: 62 | SHMS prescale pretrig: 46 k<br>$\Sigma e-\pi n$ evts: 20641 | COIN pretrig: 17 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: HV 60k out But 50k replays look good. Beam Down end run early |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                                  |                                                             |                                                                                                    |

|                                           |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15715                      | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>01:06<br>Stop time (RC GUI):<br>02:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 196 k<br>$e-\pi n$ evts: 346 | SHMS prescale pretrig: 207 k<br>$\Sigma e-\pi n$ evts: 20987 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: $Q = 162.004$<br>$Q = 1049.157$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 25  
yy mm dd

Initials: V.K

## Continuation of Configuration:

$Q^2 = 0.5$ ,  $\omega = 2.79$ ,  $x = 0.55$   
high  $\epsilon$ , SHMS center.

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                          |                                                                    |                                                                                                       |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Run Number:<br>15716 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>02:01<br>Stop time (RC GUI):<br>03:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 188 k<br>$e-\pi n$ evts:<br>303 | SHMS prescale<br>pretrig: 197 k<br>$\Sigma e-\pi n$ evts:<br>21290 | COIN<br>pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

$Q = 160.679$   
 $E_Q = 10642.352$

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                          |                                                                    |                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Run Number:<br>15717 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>03:00<br>Stop time (RC GUI):<br>04:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 194 k<br>$e-\pi n$ evts:<br>348 | SHMS prescale<br>pretrig: 204 k<br>$\Sigma e-\pi n$ evts:<br>21638 | COIN<br>pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|

- SHMS DC BAD -

$Q = 166.394$   
 $E_Q = 10808.646$

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                          |                                                                    |                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Run Number:<br>15718 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>04:00<br>Stop time (RC GUI):<br>05:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 177 k<br>$e-\pi n$ evts:<br>267 | SHMS prescale<br>pretrig: 185 k<br>$\Sigma e-\pi n$ evts:<br>21905 | COIN<br>pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|

- SHMS DC BAD -

$Q = 151.054$   
 $E_Q = 10959.705$

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                          |                                                                    |                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Run Number:<br>15719 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>05:00<br>Stop time (RC GUI):<br>06:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 193 k<br>$e-\pi n$ evts:<br>334 | SHMS prescale<br>pretrig: 204 k<br>$\Sigma e-\pi n$ evts:<br>22239 | COIN<br>pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|

- SHMS DC BAD -

$Q = 165.549$   
 $E_Q = 11125.254$

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                      |                                                                |                                                                                                               |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Run Number:<br>15720 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>06:00<br>Stop time (RC GUI):<br>07:01 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: k<br>$e-\pi n$ evts:<br>305 | SHMS prescale<br>pretrig: k<br>$\Sigma e-\pi n$ evts:<br>22544 | COIN<br>pretrig: k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

- SHMS DC BAD -

$Q = 139.096$   
 $E_Q = 112643.35$

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                      |                                                                                                                                          |                                                     |                                                       |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15721 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>07:02<br>Stop time (RC GUI): | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: k<br>$e-\pi n$ evts:<br>45 | SHMS prescale<br>pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN<br>pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|

- SHMS DC BAD - Junk.

$Q = 20.097$   
 $E_Q =$



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 25  
yy mm dd

Initials: v-k

## Continuation of Configuration:

$\theta^2 = 8.5, \omega = 2.79, x = 0.55$   
high  $\varepsilon$ , SHMS, center.

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                              |                                                                                                                                                     |                                                    |                                                             |                                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Run Number:<br>15722 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>7:40<br>Stop time (RC GUI):<br>08:19 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 114 k<br>$e-\pi n$ evts: 168 | SHMS prescale pretrig: 20 k<br>$\Sigma e-\pi n$ evts: 22712 | COIN pretrig: 31 k<br><input checked="" type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

ended early so HV GUI could be modified

$Q = 97.497 \text{ mC}$   
 $\Sigma Q = 11361.847 \text{ mC}$

SHMS DC B40

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                               |                                            |                                                    |                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15723 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:23<br>Stop time (RC GUI):<br>08:42 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? Nope | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

50k Replay SHMS Drift chamber wire maps missing gaps. Stopped run.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15724 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:43<br>Stop time (RC GUI):<br>08:55 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

same problem in 50k. Stopped run while fixing problem

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15725 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:57<br>Stop time (RC GUI):<br>09:10 | <input checked="" type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

switched on/off HV, still same problem. beam off.

|                      |                                                                                                                                                                                                                                    |                                                                                    |                                                               |                                                                                                                    |                                            |                                                    |                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|
| Run Number:<br>15726 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 0<br>PS2: -1<br>PS3: -1<br>PS4: 0<br>PS5: -1<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>11:10<br>Stop time (RC GUI):<br>11:59 | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|

— COSMICS —

|             |                                                                                                                                                                                                                                    |                                                                                                        |                                             |                                                                                                                    |                                            |                                                    |                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|
| Run Number: | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: cer / fadc | Start time (RC GUI):<br>Stop time (RC GUI): | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|

↑ all these runs are junk ↑ (15717 → 15725)



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 25  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2 = 0.5$   $W = 2.79$   $x = 0.55$

high E, SHMS Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                   |                                                             |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15727</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:21<br>Stop time (RC GUI):<br>13:21 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 82 k<br>$e-\pi n$ evts: 158 | SHMS prescale pretrig: 82 k<br>$\Sigma e-\pi n$ evts: 21448 | COIN pretrig: 40 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 67.232 \text{ mC}$   
 $\Sigma Q = 10709484 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                               |                                            |                                                    |                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15728</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:21<br>Stop time (RC GUI):<br>13:30 | <input type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

beam off

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15729</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:38<br>Stop time (RC GUI):<br>14:38 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 177 k<br>$e-\pi n$ evts: 336 | SHMS prescale pretrig: 187 k<br>$\Sigma e-\pi n$ evts: 21784 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 152.350 \text{ mC}$   
 $\Sigma Q = 10861.834 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15730</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>14:39<br>Stop time (RC GUI):<br>15:39 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 159 k<br>$e-\pi n$ evts: 312 | SHMS prescale pretrig: 166 k<br>$\Sigma e-\pi n$ evts: 22096 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 136.679 \text{ mC}$   
 $\Sigma Q = 10998.513 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15731</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>15:39<br>Stop time (RC GUI):<br>16:39 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 145 k<br>$e-\pi n$ evts: 257 | SHMS prescale pretrig: 150 k<br>$\Sigma e-\pi n$ evts: 22353 | COIN pretrig: 36 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 124.007 \text{ mC}$   
 $\Sigma Q = 11122.520 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15732</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>16:40<br>Stop time (RC GUI):<br>17:43 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 122 k<br>$e-\pi n$ evts: 212 | SHMS prescale pretrig: 126 k<br>$\Sigma e-\pi n$ evts: 22565 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Choppy Beam

$Q = 103.379 \text{ mC}$   
 $\Sigma Q = 111775.900 \text{ mC}$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/25  
yy mm dd

Initials: MS

## Continuation of Configuration:

$Q = 8.5$   $W = 2.79$   $x < 0.55$   
high  $\epsilon$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                                                                                         |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                   |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Run Number:<br>15733                                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>17:45<br>Stop time (RC GUI):<br>17:59 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 23 k<br>$e-\pi n$ evts: 42 | SHMS prescale pretrig: 21 k<br>$\Sigma e-\pi n$ evts: 22607 | COIN pretrig: 9 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: 40 nA Short run - choppy beam<br>$Q = 19.353$ mC<br>$\Sigma Q = 11245.252$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                   |

|                                                                                                                                          |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15734                                                                                                                     | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:06<br>Stop time (RC GUI):<br>21:12 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 215 k<br>$e-\pi n$ evts: 383 | SHMS prescale pretrig: 225 k<br>$\Sigma e-\pi n$ evts: 22990 | COIN pretrig: 53 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: 40 nA for first 20 minutes<br>65 nA for the rest of the run<br>99.13%, 98.59%<br>$Q = 186.569$ mC<br>$\Sigma Q = 11431.821$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                                                                                                                                                                    |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15735                                                                                                                                                                               | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>21:12<br>Stop time (RC GUI):<br>22:14 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 181 k<br>$e-\pi n$ evts: 294 | SHMS prescale pretrig: 186 k<br>$\Sigma e-\pi n$ evts: 23284 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: Pushed to 70 nA, but it was too unstable.<br>Back to 65 nA after 10 minutes, 40 nA after 40 mins due to unstable beam<br>99.65%, 97.29%<br>$Q = 156.279$ mC<br>$\Sigma Q = 11588.100$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                                                                                   |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15736                                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>22:15<br>Stop time (RC GUI):<br>23:11 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 178 k<br>$e-\pi n$ evts: 316 | SHMS prescale pretrig: 186 k<br>$\Sigma e-\pi n$ evts: 23600 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: 40 nA. Pushed to 65 nA after 15 mins<br>99.81%, 98.72%<br>$Q = 154.159$ mC<br>$\Sigma Q = 11742.290$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                                                    |                                                                                                                                                                                                                                               |                                                                                    |                                                              |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15737                                                               | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>23:29<br>Stop time (RC GUI):<br>0:31 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 223 k<br>$e-\pi n$ evts: 395 | SHMS prescale pretrig: 240 k<br>$\Sigma e-\pi n$ evts: 23995 | COIN pretrig: 52 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: 65 nA<br>99.30%, 98.56%<br>$Q = 194.508$ mC<br>$\Sigma Q = 11936.767$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                              |                                                                                                                                          |                                                    |                                                              |                                                                                                    |

|                                                           |                                                                                                                                                                                                                                               |                                                                                    |                                                              |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15738                                      | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>00:32<br>Stop time (RC GUI):<br>1:33 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 212 k<br>$e-\pi n$ evts: 374 | SHMS prescale pretrig: 228 k<br>$\Sigma e-\pi n$ evts: 24369 | COIN pretrig: 51 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 184.955$ mC<br>$\Sigma Q = 12121.79$ mC |                                                                                                                                                                                                                                               |                                                                                    |                                                              |                                                                                                                                          |                                                    |                                                              |                                                                                                    |



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 28  
yy mm dd

Initials: V.K.

## Continuation of Configuration:

$Q^2 = 8.5, W = 2.79, x = 0.55$   
high  $\epsilon$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15739</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>1:35<br>Stop time (RC GUI):<br>2:31 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 188 k<br>$e-\pi n$ evts: 337 | SHMS prescale pretrig: 200 k<br>$\Sigma e-\pi n$ evts: 24706 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 163.196$   
 $EQ = 12284.918$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                          |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15740</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>2:31<br>Stop time (RC GUI):<br>3:37 | <input type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 220 k<br>$e-\pi n$ evts: 393 | SHMS prescale pretrig: 236 k<br>$\Sigma e-\pi n$ evts: 25099 | COIN pretrig: 54 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 191.802$   
 $EQ = 12476.720$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15741</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>3:37<br>Stop time (RC GUI):<br>4:36 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 205 k<br>$e-\pi n$ evts: 362 | SHMS prescale pretrig: 220 k<br>$\Sigma e-\pi n$ evts: 25461 | COIN pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 178.305$   
 $EQ = 12655.025$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15742</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>4:36<br>Stop time (RC GUI):<br>5:36 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 198 k<br>$e-\pi n$ evts: 332 | SHMS prescale pretrig: 211 k<br>$\Sigma e-\pi n$ evts: 25793 | COIN pretrig: 49 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 172.233$   
 $EQ = 12827.258$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15743</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>5:30<br>Stop time (RC GUI):<br>6:33 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 145 k<br>$e-\pi n$ evts: 242 | SHMS prescale pretrig: 153 k<br>$\Sigma e-\pi n$ evts: 26035 | COIN pretrig: 43 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 12951.761$   
 $EQ = 124503$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                             |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15744</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>6:34<br>Stop time (RC GUI):<br>7:34 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 164 k<br>$e-\pi n$ evts: 302 | SHMS prescale pretrig: 172 k<br>$\Sigma e-\pi n$ evts: 26337 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 141.133$   
 $EQ = 12889.001$



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/26  
yy mm dd

Initials: V.K.

## Continuation of Configuration:

$Q^2 = 8.5$ ,  $W = 2.79$ ,  $x = 0.55$   
high- $\epsilon$ , SHMS center.

This sheet is only to be used to continue a running configuration.

|                                                                            |                                                                                                                                                                                                                                               |                                                                                    |                                                             |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15745</b>                                                | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>7:36<br>Stop time (RC GUI):<br>8:36 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 132 k<br>$e-\pi n$ evts: 218 | SHMS prescale<br>pretrig: 137 k<br>$\Sigma e-\pi n$ evts: 26555 | COIN pretrig: 44 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 111.909 \text{ mC}$<br>$\Sigma Q = 13204.803 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                             |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |

|                                                           |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                               |                                                       |                                                                                                 |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15746</b>                               | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:36<br>Stop time (RC GUI):<br>08:48 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: k<br>$e-\pi n$ evts: | SHMS prescale<br>pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments:<br>~~~~~ no beam ~~~~~<br>$Q =$<br>$\Sigma Q =$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                               |                                                       |                                                                                                 |

|                                                                            |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15747</b>                                                | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>09:28<br>Stop time (RC GUI):<br>10:28 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 154 k<br>$e-\pi n$ evts: 274 | SHMS prescale<br>pretrig: 162 k<br>$\Sigma e-\pi n$ evts: 26829 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>$Q = 132.378 \text{ mC}$<br>$\Sigma Q = 13337.181 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |

|                                                                          |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                               |                                                       |                                                                                                 |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15748</b>                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>10:28<br>Stop time (RC GUI):<br>10:44 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: k<br>$e-\pi n$ evts: | SHMS prescale<br>pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments:<br>beam off first 10 minutes<br>... ~2 minutes of beam... junk |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                               |                                                       |                                                                                                 |

|                                                                                                                                                  |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15749</b>                                                                                                                      | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>10:48<br>Stop time (RC GUI):<br>11:44 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 111 k<br>$e-\pi n$ evts: 215 | SHMS prescale<br>pretrig: 114 k<br>$\Sigma e-\pi n$ evts: 27044 | COIN pretrig: 41 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>MCC called, changing magnet settings<br>b/c lots of trips right now<br>$Q = 94.130 \text{ mC}$<br>$\Sigma Q = 13431.311 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |

|                                                                                       |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15750</b>                                                           | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: 4<br>PS4: -1<br>PS5: -1<br>PS6: 0<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:01<br>Stop time (RC GUI):<br>13:02 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 917 k<br>$e-\pi n$ evts: 342 | SHMS prescale<br>pretrig: 194 k<br>$\Sigma e-\pi n$ evts: 27386 | COIN pretrig: 48 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments:<br>3/4 Run<br>$Q = 158.916 \text{ mC}$<br>$\Sigma Q = 13500.222 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                       |                                                                 |                                                                                                    |



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/26  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2=8.5$   $W=2.79$   $x=0.55$   
high E SHMS center

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15751 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:03<br>Stop time (RC GUI):<br>13:42 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 55 k<br>$e-\pi n$ evts: 94 | SHMS prescale pretrig: 54 k<br>$\Sigma e-\pi n$ evts: 27480 | COIN pretrig: 26 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 45.694$  mC  
 $\Sigma Q = 13635.94$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                 |                                                         |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15752 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 10<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:53<br>Stop time (RC GUI):<br>14:53 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 20 k<br>$e-\pi n$ evts: 4 | SHMS prescale pretrig: 21 k<br>$\Sigma e-\pi n$ evts: 4 | COIN pretrig: 36 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------|

dummy!

$Q = 22.259$  mC  
 $\Sigma Q = 22.259$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                 |                                                        |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15753 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 10<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>14:53<br>Stop time (RC GUI):<br>15:53 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 10 k<br>$e-\pi n$ evts: 1 | SHMS prescale pretrig: 5 k<br>$\Sigma e-\pi n$ evts: 5 | COIN pretrig: 36 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------|

dummy!

<50k events (beam down)

$Q = 5.410$  mC  
 $\Sigma Q = 27.669$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15754 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 10<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>15:53<br>Stop time (RC GUI):<br>23:59 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15755 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:01<br>Stop time (RC GUI):<br>12:26 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

Back to LH2 after ~22h of no beam. ~4 min of Beam on now

$Q =$  used 50k to check detectors.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15756 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>13:49<br>Stop time (RC GUI):<br>14:10 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 55 k<br>$e-\pi n$ evts: 93 | SHMS prescale pretrig: 56 k<br>$\Sigma e-\pi n$ evts: 27573 | COIN pretrig: 13 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Diagon crashed, but we did do a full reply.

$Q = 46.862$   
 $\Sigma Q = 13682.783$



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/27  
yy mm dd

Initials: RPK

## Continuation of Configuration:

$Q^2 = 8.5$   $w = 2.79$   $x = 0.55$   
high E, SHMS center

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                         |                                                                   |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15757 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>16:27<br>Stop time (RC GUI):<br>17:05 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 52 k<br>$e-\pi n$ evts:<br>114 | SHMS prescale<br>pretrig: 42 k<br>$\Sigma e-\pi n$ evts:<br>27687 | COIN pretrig: 25 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Run started with 20  $\mu$ A (7 min) then up to 40  $\mu$ A (~8 min), then back to 20  $\mu$ A till the end of the run  
 $Q = 41.982 \text{ mC}$   
 $\Sigma Q = 13724.775 \text{ mC}$

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                               |                                                       |                                                                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br>15758 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>17:11<br>Stop time (RC GUI):<br>17:16 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: k<br>$e-\pi n$ evts: | SHMS prescale<br>pretrig: k<br>$\Sigma e-\pi n$ evts: | <input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------|

started with 30  $\mu$ A. stopped the run to change the prescalers.

|                      |                                                                                                                                                                                                                                               |                                                                                   |                                                               |                                                                                                                                                     |                                                        |                                                                |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15759 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 9<br>PS2: -1<br>PS3: -1<br>PS4: 2<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>17:17<br>Stop time (RC GUI):<br>18:21 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 104 k<br>$e-\pi n$ evts:<br>4 | SHMS prescale<br>pretrig: 182 k<br>$\Sigma e-\pi n$ evts:<br>9 | COIN pretrig: 39 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

30  $\mu$ A, then 40  $\mu$ A, dummy  
 $Q = 93.727 \text{ mC}$   
 $\Sigma Q = 121.396 \text{ mC}$

|                      |                                                                                                                                                                                                                                               |                                                                                   |                                                               |                                                                                                                                                     |                                                         |                                                                 |                                                                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br>15760 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 9<br>PS2: -1<br>PS3: -1<br>PS4: 2<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>18:21<br>Stop time (RC GUI):<br>18:22 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 139 k<br>$e-\pi n$ evts:<br>10 | SHMS prescale<br>pretrig: 255 k<br>$\Sigma e-\pi n$ evts:<br>19 | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|

40  $\mu$ A, dummy.  
 $Q = 130.776 \text{ mC}$   
 $\Sigma Q = 252.172 \text{ mC}$

|                      |                                                                                                                                                                                                                                               |                                                                                   |                                                               |                                                                                                                                                     |                                                         |                                                                 |                                                                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br>15761 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 9<br>PS2: -1<br>PS3: -1<br>PS4: 1<br>PS5: 9<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>18:23<br>Stop time (RC GUI):<br>20:32 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 221 k<br>$e-\pi n$ evts:<br>13 | SHMS prescale<br>pretrig: 269 k<br>$\Sigma e-\pi n$ evts:<br>32 | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|

40  $\mu$ A, dummy  
 $Q = 137.545 \text{ mC}$   
 $\Sigma Q = 389.717 \text{ mC}$

|                      |                                                                                                                                                                                                                                               |                                                                                   |                                                               |                                                                                                                                                     |                                                        |                                                                 |                                                                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| Run Number:<br>15762 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 9<br>PS2: -1<br>PS3: -1<br>PS4: 1<br>PS5: 9<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>20:33<br>Stop time (RC GUI):<br>21:29 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: 186 k<br>$e-\pi n$ evts:<br>7 | SHMS prescale<br>pretrig: 229 k<br>$\Sigma e-\pi n$ evts:<br>39 | <input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|

40  $\mu$ A, dummy  
 $Q = 117.202 \text{ mC}$   
 $\Sigma Q = 506.919 \text{ mC}$



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/27  
yy mm dd

Initials: Iu.S.

## Continuation of Configuration:

$Q^2=8.5$ ,  $W=2.79$ ,  $x=0.55$   
high  $\epsilon$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                  |                                                                           |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15763</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>9</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>1</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>21:30</b><br>Stop time (RC GUI):<br><b>22:05</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>58</b> k<br>$e-\pi n$ evts: <b>6</b> | SHMS prescale<br>pretrig: <b>64</b> k<br>$\Sigma e-\pi n$ evts: <b>45</b> | COIN pretrig: <b>21</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

40  $\mu$ A, dummy. Just 15 min of beam:  
Stopped as the beam was gone.  $Q=32.592$  mC  
 $\Sigma Q=539.511$  mC

|                             |                                                                                                                                                                                                                                    |                                                                                                               |                                             |                                                                                                                    |                                                           |                                                                   |                                                                                                       |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15764</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br>Stop time (RC GUI): | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: _____ k<br>$e-\pi n$ evts: _____ | SHMS prescale<br>pretrig: _____ k<br>$\Sigma e-\pi n$ evts: _____ | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

Junk, forgot to change the prescalers.

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                     |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15765</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>22:18</b><br>Stop time (RC GUI):<br><b>23:17</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>177</b> k<br>$e-\pi n$ evts: <b>286</b> | SHMS prescale<br>pretrig: <b>187</b> k<br>$\Sigma e-\pi n$ evts: <b>27973</b> | COIN pretrig: <b>46</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

started at 40  $\mu$ A, then 50  $\mu$ A, 60  $\mu$ A and 65  $\mu$ A, then 70  $\mu$ A,  
then 75  $\mu$ A and back to 65  $\mu$ A, and 60  $\mu$ A.  $Q=154.179$  mC  
 $\Sigma Q=13878.954$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                                |                                                                                                                                                     |                                                                     |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15766</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>23:18</b><br>Stop time (RC GUI):<br><b>00:23:10</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>212</b> k<br>$e-\pi n$ evts: <b>355</b> | SHMS prescale<br>pretrig: <b>221</b> k<br>$\Sigma e-\pi n$ evts: <b>28328</b> | COIN pretrig: <b>52</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

60  $\mu$ A at 00:27 hrs, started trying for 65  $\mu$ A  
stable @ 63  $\mu$ A @ 00:15 hrs  $Q=183400$  mC  
 $\Sigma Q=14062.354$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                                   |                                                                                                                                                     |                                                                     |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15767</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>00:23:41</b><br>Stop time (RC GUI):<br><b>01:25:55</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>188</b> k<br>$e-\pi n$ evts: <b>312</b> | SHMS prescale<br>pretrig: <b>200</b> k<br>$\Sigma e-\pi n$ evts: <b>28640</b> | COIN pretrig: <b>49</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

63  $\mu$ A  $Q=163.810$  mC  
 $\Sigma Q=14226.164$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                                   |                                                                                                                                                     |                                                                     |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15768</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>01:26:28</b><br>Stop time (RC GUI):<br><b>02:30:17</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>190</b> k<br>$e-\pi n$ evts: <b>343</b> | SHMS prescale<br>pretrig: <b>201</b> k<br>$\Sigma e-\pi n$ evts: <b>28983</b> | COIN pretrig: <b>50</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

63  $\mu$ A  $Q=165.004$  mC  
 $\Sigma Q=14391.168$  mC



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/28  
yy mm dd

Initials: jm

## Continuation of Configuration:

$Q^2=8.50, W=2.79, X=0.55$

high E, SHMS Center

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15769 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>02:30:52<br>Stop time (RC GUI):<br>03:34:02 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 203 k<br>$e-\pi n$ evts: 227 | SHMS prescale pretrig: 218 k<br>$\Sigma e-\pi n$ evts: 29310 | COIN pretrig: 51 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Comments:

65  $\mu$ A

$Q=177.282$  mL  
 $\Sigma Q=14568.450$  mL

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                    |                                                              |                                                                                         |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Run Number:<br>15770 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>03:34:35<br>Stop time (RC GUI):<br>04:33:19 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 165 k<br>$e-\pi n$ evts: 283 | SHMS prescale pretrig: 176 k<br>$\Sigma e-\pi n$ evts: 29593 | COIN pretrig: 46 k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|

Comments:

65  $\mu$ A

$Q=143.805$  mL  
 $\Sigma Q=14712.255$  mL

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                    |                                                              |                                                                                         |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Run Number:<br>15771 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>04:33:48<br>Stop time (RC GUI):<br>05:34:39 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 151 k<br>$e-\pi n$ evts: 264 | SHMS prescale pretrig: 160 k<br>$\Sigma e-\pi n$ evts: 29857 | COIN pretrig: 46 k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|

Comments:

65  $\mu$ A

$Q=150.302$  mL  
 $\Sigma Q=14842.557$  mL

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15772 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>05:35:13<br>Stop time (RC GUI):<br>06:46:28 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 215 k<br>$e-\pi n$ evts: 377 | SHMS prescale pretrig: 224 k<br>$\Sigma e-\pi n$ evts: 30234 | COIN pretrig: 55 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Comments:

65  $\mu$ A  $\rightarrow$  40  $\mu$ A  $\rightarrow$  60  $\mu$ A

$Q=187.243$  mL  
 $\Sigma Q=15029.800$  mL

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                                     |                                                    |                                                              |                                                                                         |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Run Number:<br>15773 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>06:47:09<br>Stop time (RC GUI):<br>07:47:17 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 161 k<br>$e-\pi n$ evts: 267 | SHMS prescale pretrig: 165 k<br>$\Sigma e-\pi n$ evts: 30501 | COIN pretrig: 45 k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|

Comments:

60  $\mu$ A - 40  $\mu$ A

$Q=159.285$  mL  
 $\Sigma Q=15169.085$  mL

|                      |                                                                                                                                                                                                                                              |                                                                                    |                                                                     |                                                                                                                                          |                                                |                                                        |                                                                                                 |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15774 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>07:47:50<br>Stop time (RC GUI):<br>07:58:29 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: 161 k<br>$e-\pi n$ evts: | SHMS prescale pretrig: 165 k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------|

Comments:

<50k events, but beam evs only



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/28  
yy mm dd

Initials: H.M.

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ,  $W = 2.78 \text{ GeV}$   
 $X = 0.55$ , high  $\epsilon$ , stems center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                       |                                                                                 |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15775</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -3<br>PS3: -3<br>PS4: 3<br>PS5: 0<br>PS6: -3<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>16:24</b><br>Stop time (RC GUI):<br><b>17:05</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>58</b> k<br>$e-\pi n$ evts:<br><b>113</b> | SHMS prescale<br>pretrig: <b>56</b> k<br>$\Sigma e-\pi n$ evts:<br><b>30614</b> | COIN pretrig: <b>27</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Beam lines only  
first 10 men:  $Q = 48.44$   
 $\Sigma Q = 15217.52$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15776</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>17:17</b><br>Stop time (RC GUI):<br><b>18:25</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>149</b> k<br>$e-\pi n$ evts:<br><b>256</b> | SHMS prescale<br>pretrig: <b>143</b> k<br>$\Sigma e-\pi n$ evts:<br><b>30757</b> | COIN pretrig: <b>47</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 127.04$   
 $\Sigma Q = 15344.56$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15777</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>18:25</b><br>Stop time (RC GUI):<br><b>19:33</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>126</b> k<br>$e-\pi n$ evts:<br><b>199</b> | SHMS prescale<br>pretrig: <b>130</b> k<br>$\Sigma e-\pi n$ evts:<br><b>30956</b> | COIN pretrig: <b>48</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 107.0$   
 $\Sigma Q = 15451.56$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15778</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>20:02</b><br>Stop time (RC GUI):<br><b>21:07</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>135</b> k<br>$e-\pi n$ evts:<br><b>209</b> | SHMS prescale<br>pretrig: <b>139</b> k<br>$\Sigma e-\pi n$ evts:<br><b>31165</b> | COIN pretrig: <b>47</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

$Q = 115.6$   
 $\Sigma Q = 15567.16$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                           |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15779</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>21:08</b><br>Stop time (RC GUI):<br><b>22:03</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>100</b> k<br>$e-\pi n$ evts:<br><b>183</b> | SHMS prescale<br>pretrig: <b>101</b> k<br>$\Sigma e-\pi n$ evts:<br><b>31348</b> | COIN pretrig: <b>39</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Beam efficiency ~~50%~~  $\Sigma Q = 15651.74$   $Q = 84.58$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                                             |                                                                                                                                                     |                                                                        |                                                                                  |                                                                                                                         |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15780</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br><b>23:00</b><br>Stop time (RC GUI):<br><b>00:04</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>204</b> k<br>$e-\pi n$ evts:<br><b>381</b> | SHMS prescale<br>pretrig: <b>215</b> k<br>$\Sigma e-\pi n$ evts:<br><b>31842</b> | COIN pretrig: <del>57</del> <b>51</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 15830.029$ ,  $Q = 178.279 \text{ mc}$



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 19  
yy mm dd

Initials: KA

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ,  $W = 2.736 \text{ GeV}$   
 $X = 0.55$ , high E, SHMS=Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15781</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>00:06</u><br>Stop time (RC GUI):<br><u>01:09</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>219</u> k<br>SHMS prescale<br><u>233</u> k<br>e- $\pi$ n evts:<br><u>409</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>32209</u> | COIN pretrig:<br><u>51</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

check R15733 which lasts 42 nt  $\Sigma Q = 16003.191 \text{ mC}$   $Q = 192.15 \text{ mC}$   
but it is "shortrun + choppy beam"

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15782</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>01:09</u><br>Stop time (RC GUI):<br><u>02:10</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>205</u> k<br>SHMS prescale<br><u>217</u> k<br>e- $\pi$ n evts:<br><u>374</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>32583</u> | COIN pretrig:<br><u>49</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 16182.910 \text{ mC}$   $Q = 179.719 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                                |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15783</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>02:10</u><br>Stop time (RC GUI):<br><u>03:09:54</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>200</u> k<br>SHMS prescale<br><u>212</u> k<br>e- $\pi$ n evts:<br><u>334</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>32917</u> | COIN pretrig:<br><u>48</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 16358.158 \text{ mC}$   $Q = 175.248 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15784</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>03:10</u><br>Stop time (RC GUI):<br><u>04:10</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>191</u> k<br>SHMS prescale<br><u>201</u> k<br>e- $\pi$ n evts:<br><u>329</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>33246</u> | COIN pretrig:<br><u>47</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 16524.869 \text{ mC}$ ,  $Q = 166.711 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15785</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>04:10</u><br>Stop time (RC GUI):<br><u>05:10</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>182</u> k<br>SHMS prescale<br><u>193</u> k<br>e- $\pi$ n evts:<br><u>318</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>33564</u> | COIN pretrig:<br><u>47</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 16684.263 \text{ mC}$ ,  $Q = 159.394 \text{ mC}$

|                             |                                                                                                                                                                                                                                               |                                                                                                                                    |                                                                             |                                                                                                                                                     |                                                                                                                                              |                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Run Number:<br><u>15786</u> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>3</u><br>PS4: <u>0</u><br>PS5: <u>-1</u><br>PS6: <u>0</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><u>05:10</u><br>Stop time (RC GUI):<br><u>06:10</u> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br><u>154</u> k<br>SHMS prescale<br><u>160</u> k<br>e- $\pi$ n evts:<br><u>265</u><br>$\Sigma$ e- $\pi$ n evts:<br><u>33829</u> | COIN pretrig:<br><u>45</u> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

$\Sigma Q = 16817.525 \text{ mC}$   $Q = 133.262 \text{ mC}$



# p(e,e' $\pi$ )n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 02/07/29  
yy mm dd

Initials: KAA

## Continuation of Configuration:

$Q^2 = 8.5 \text{ GeV}^2$ ,  $W = 2.73 \text{ GeV}$

$X = 0.55$ , high  $G$ , SHMS = center

This sheet is only to be used to continue a running configuration.

|                                                                                                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                    |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15787                                                                                        | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>06:10<br>Stop time (RC GUI):<br>06:28 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 38 k<br>$e-\pi n$ evts: 71 | SHMS prescale pretrig: 39 k<br>$\Sigma e-\pi n$ evts: 33900 | COIN pretrig: 13 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: Stopped run to try for $I > 60 \mu A$ . $\Sigma Q = 16850.007 \text{ mC}$ $Q = 22.482 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                    |

|                                                                                                                   |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Run Number:<br>15788                                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>06:45<br>Stop time (RC GUI):<br>07:45 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 184 k<br>$e-\pi n$ evts: 319 | SHMS prescale pretrig: 197 k<br>$\Sigma e-\pi n$ evts: 34219 | COIN pretrig: 47 k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: continue with $I = 60 \mu A \sim 70 \mu A$ . $\Sigma Q = 17010.483 \text{ mC}$ $Q = 160.476 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                         |

|                                                                         |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15789                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>07:45<br>Stop time (RC GUI):<br>08:45 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 117 k<br>$e-\pi n$ evts: 209 | SHMS prescale pretrig: 121 k<br>$\Sigma e-\pi n$ evts: 34428 | COIN pretrig: 43 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: $Q = 100.222 \text{ mC}$<br>$\Sigma Q = 17110.705 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                                                                                                   |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15790                                                                                                              | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>08:45<br>Stop time (RC GUI):<br>09:59 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 195 k<br>$e-\pi n$ evts: 362 | SHMS prescale pretrig: 202 k<br>$\Sigma e-\pi n$ evts: 34790 | COIN pretrig: 56 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: let run go long b/c MCC called to take beam away @ 10:00. $Q = 168.877 \text{ mC}$<br>$\Sigma Q = 17279.582 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                                         |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15791                                                    | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>10:30<br>Stop time (RC GUI):<br>11:30 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 150 k<br>$e-\pi n$ evts: 255 | SHMS prescale pretrig: 155 k<br>$\Sigma e-\pi n$ evts: 35045 | COIN pretrig: 45 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
| Comments: $Q = 129.595 \text{ mC}$<br>$\Sigma Q = 17409.177 \text{ mC}$ |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |

|                                                             |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br>15792                                        | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>11:30<br>Stop time (RC GUI):<br>11:54 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
| Comments: drift chamber SHMS problems $\rightarrow$ stopped |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                          |                                            |                                                    |                                                                                                 |



# $p(e,e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/29  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2=8.5$   $W=2.73$   $x=0.85$   
high  $\epsilon$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                             |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15793 | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:14<br>Stop time (RC GUI):<br>12:37 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 45 k<br>$e-\pi n$ evts: 77 | SHMS prescale pretrig: 45 k<br>$\Sigma e-\pi n$ evts: 35122 | COIN pretrig: 16 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Stopped early - beam will be off for 30-40 mins ... RF trouble

$Q = 38.449$  mC  
 $\Sigma Q = 17447.626$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                          |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15794 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>00:56<br>Stop time (RC GUI):<br>02:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 79 k<br>$e-\pi n$ evts: 13 | SHMS prescale pretrig: 30 k<br>$\Sigma e-\pi n$ evts: 13 | COIN pretrig: 39 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Note this starts Dummy stream @ 5  $\mu$ A up to 40  $\mu$ A

$\Sigma Q = 123.678$  mC  $Q = 123.678$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                          |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15795 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>02:00<br>Stop time (RC GUI):<br>03:00 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 82 k<br>$e-\pi n$ evts: 14 | SHMS prescale pretrig: 32 k<br>$\Sigma e-\pi n$ evts: 27 | COIN pretrig: 36 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Dummy 10cm @ 40  $\mu$ A

$\Sigma Q = 253.283$  mC

$Q = 129.605$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                          |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15796 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>03:00<br>Stop time (RC GUI):<br>04:05 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 88 k<br>$e-\pi n$ evts: 18 | SHMS prescale pretrig: 34 k<br>$\Sigma e-\pi n$ evts: 45 | COIN pretrig: 40 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Dummy 10cm @ 40  $\mu$ A

$\Sigma Q = 393.247$  mC

$Q = 139.964$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                 |                                                          |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15797 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>04:06<br>Stop time (RC GUI):<br>05:06 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 84 k<br>$e-\pi n$ evts: 9 | SHMS prescale pretrig: 33 k<br>$\Sigma e-\pi n$ evts: 54 | COIN pretrig: 37 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Dummy 10cm @ 40  $\mu$ A

$\Sigma Q = 526.81$  mC

$Q = 133.563$  mC

|                      |                                                                                                                                                                                                                                               |                                                                                    |                                                               |                                                                                                                                                     |                                                  |                                                          |                                                                                                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br>15798 | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>05:06<br>Stop time (RC GUI):<br>06:06 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 71 k<br>$e-\pi n$ evts: 12 | SHMS prescale pretrig: 27 k<br>$\Sigma e-\pi n$ evts: 66 | COIN pretrig: 36 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|

Dummy 10cm @ 40  $\mu$ A

$\Sigma Q = 637.657$  mC

$Q = 110.847$  mC



# $p(e, e'\pi)n$ Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22 / 07 / 30  
yy mm dd

Initials: KAA

## Continuation of Configuration:

$Q^2 = 0.5$ ,  $W = 2.73$ ,  $x = 0.55$

high  $E$ , SHMS center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                              |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15799</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>06:07</b><br>Stop time (RC GUI):<br><b>07:07</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>75</b> k<br>$e-\pi n$ evts:<br><b>15</b> | SHMS prescale<br>pretrig: <b>29</b> k<br>$\Sigma e-\pi n$ evts:<br><b>81</b> | COIN pretrig: <b>37</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Dummy 10cm, 40  $\mu$ A

$\Sigma Q = 754.955$  mC

$Q = 117.298$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15800</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>07:07</b><br>Stop time (RC GUI):<br><b>08:07</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>80</b> k<br>$e-\pi n$ evts:<br><b>10</b> | SHMS prescale<br>pretrig: <b>31</b> k<br>$\Sigma e-\pi n$ evts:<br><b>136</b> | COIN pretrig: <b>36</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Dummy 10cm, 40  $\mu$ A

$\Sigma Q = 1420.986$  mC

$Q = 126.520$  mC

(including all dummy in the  $\Sigma$  now)

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15801</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>08:07</b><br>Stop time (RC GUI):<br><b>09:07</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>78</b> k<br>$e-\pi n$ evts:<br><b>13</b> | SHMS prescale<br>pretrig: <b>30</b> k<br>$\Sigma e-\pi n$ evts:<br><b>149</b> | COIN pretrig: <b>36</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Dummy 10 cm, 40  $\mu$ A

$Q = 123.727$  mC

$\Sigma Q = 1544.713$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15802</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>09:07</b><br>Stop time (RC GUI):<br><b>10:07</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>78</b> k<br>$e-\pi n$ evts:<br><b>14</b> | SHMS prescale<br>pretrig: <b>30</b> k<br>$\Sigma e-\pi n$ evts:<br><b>163</b> | COIN pretrig: <b>36</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Dummy 10cm, 40  $\mu$ A

$Q = 122.602$  mC

$\Sigma Q = 1667.315$  mC

|                             |                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                             |                                                                                                                                                     |                                                                      |                                                                               |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15803</b> | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input checked="" type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: <u>12</u><br>PS2: <u>-1</u><br>PS3: <u>-1</u><br>PS4: <u>3</u><br>PS5: <u>0</u><br>PS6: <u>-1</u><br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><b>10:07</b><br>Stop time (RC GUI):<br><b>11:12</b> | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: <b>82</b> k<br>$e-\pi n$ evts:<br><b>15</b> | SHMS prescale<br>pretrig: <b>32</b> k<br>$\Sigma e-\pi n$ evts:<br><b>178</b> | COIN pretrig: <b>40</b> k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

Dummy 10 cm, 40  $\mu$ A

(long to get closer to 1800)

$Q = 128.697$  mC

$\Sigma Q = 1796.012$  mC

|                                 |                                                                                                                                                                                                                                               |                                                                                                               |                                                         |                                                                                                                    |                                                             |                                                                     |                                                                                            |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Run Number:<br><del>15803</del> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____ cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: <u>cer</u> / fadc | Start time (RC GUI):<br><br>Stop time (RC GUI):<br><br> | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale<br>pretrig: _____ k<br>$e-\pi n$ evts:<br><br> | SHMS prescale<br>pretrig: _____ k<br>$\Sigma e-\pi n$ evts:<br><br> | COIN pretrig: _____ k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------|

dummy done.

switched to LH2



# p(e,e'π)n Run Sheet

can be found at [lichen.phys.uregina.ca/~huberg/fpi/](http://lichen.phys.uregina.ca/~huberg/fpi/)

Date: 22/07/30  
yy mm dd

Initials: BB

## Continuation of Configuration:

$Q^2=8.5$   $W=2.73$   $x=0.55$   
high  $\epsilon$ , SHMS Center

This sheet is only to be used to continue a running configuration.

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15804</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>11:27<br>Stop time (RC GUI):<br>12:27 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 171 k<br>$e-\pi n$ evts: 281 | SHMS prescale pretrig: 179 k<br>$\Sigma e-\pi n$ evts: 35403 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 149.463$  mC  
 $\Sigma Q = 17597.089$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                              |                                                    |                                                                                                 |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15805</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>12:27<br>Stop time (RC GUI):<br>12:37 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: 1 | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input checked="" type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------|

ended early, RF zone beam problems ... 1 event total... no beam

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15806</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>14:38<br>Stop time (RC GUI):<br>15:38 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 168 k<br>$e-\pi n$ evts: 301 | SHMS prescale pretrig: 176 k<br>$\Sigma e-\pi n$ evts: 35704 | COIN pretrig: 46 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

$Q = 146.744$  mC  
 $\Sigma Q = 17743.833$  mC

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                    |                                                              |                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Run Number:<br><b>15807</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: -1<br>PS6: 0<br>Mode10: cer / fadc | Start time (RC GUI):<br>15:39<br>Stop time (RC GUI):<br>16:40 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 872 k<br>$e-\pi n$ evts: 298 | SHMS prescale pretrig: 182 k<br>$\Sigma e-\pi n$ evts: 36002 | COIN pretrig: 47 k<br><input checked="" type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

\* 3/4 Run \*

$Q = 152.292$   
 $\Sigma Q = 17896.125$

|                             |                                                                                                                                                                                                                                              |                                                                                    |                                                               |                                                                                                                                                     |                                                   |                                                             |                                                                                         |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Run Number:<br><b>15808</b> | <input checked="" type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: 12<br>PS2: -1<br>PS3: -1<br>PS4: 3<br>PS5: 0<br>PS6: -1<br>Mode10: cer / fadc | Start time (RC GUI):<br>16:41<br>Stop time (RC GUI):<br>17:11 | <input checked="" type="checkbox"/> Settings Verified?<br><input checked="" type="checkbox"/> HV OK?<br><input checked="" type="checkbox"/> 50k OK? | HMS prescale pretrig: 64 k<br>$e-\pi n$ evts: 131 | SHMS prescale pretrig: 65 k<br>$\Sigma e-\pi n$ evts: 36133 | COIN pretrig: 21 k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------|

NON-3/4 Run, Back to Normal  
 $Q = 55.055$   
 $\Sigma Q = 17951.180$

|             |                                                                                                                                                                                                                                   |                                                                                                        |                                                 |                                                                                                                    |                                            |                                                    |                                                                                      |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|
| Run Number: | <input type="checkbox"/> LH2 10cm<br><input type="checkbox"/> LD2 10cm<br><input type="checkbox"/> Dummy 10cm<br><input type="checkbox"/> C 0.5% r.l.<br><input type="checkbox"/> Optics ____cm<br><input type="checkbox"/> _____ | PS1: _____<br>PS2: _____<br>PS3: _____<br>PS4: _____<br>PS5: _____<br>PS6: _____<br>Mode10: cer / fadc | Start time (RC GUI):<br><br>Stop time (RC GUI): | <input type="checkbox"/> Settings Verified?<br><input type="checkbox"/> HV OK?<br><input type="checkbox"/> 50k OK? | HMS prescale pretrig: k<br>$e-\pi n$ evts: | SHMS prescale pretrig: k<br>$\Sigma e-\pi n$ evts: | COIN pretrig: k<br><input type="checkbox"/> Data ok<br><input type="checkbox"/> Junk |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------|