

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22, 6, 20
yy mm dd

Initials: JM

Use a separate sheet for each configuration.

Configuration Name:

$Q^2=3.85$, $W=2.62$, $x=0.39$
high E SHMS right

E_{beam} : 10.541 GeV

I_{beam} : 40 μA

Purpose:

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

Raster: ☒ On ☐ Off
Size: 2 x 2 mm

Beam position and angle on target:

3H07A	X	Y
	-0.08 mm	-0.3 mm
Nomin:		Nomin:
3H07C	X	Y
	-0.42 mm	-0.50 mm
Nomin:		Nomin:

HMS

SHMS

Q1	I-SET (from PSU) 691.87 B-HALL	A	I-SET (from PSU) 1712.90 B-HALL	A	HB
	0.9.76	T	-10.905	KG	
Q2	I-SET (from PSU) 552.04 B-HALL	A	I-SET (from PSU) 1076.40 B-HALL	A	Q1
	-1.07807	T	7.68	KG	
Q3	I-SET (from PSU) 267.46 B-HALL	A	I-SET (from PSU) 1808.12 B-HALL	A	Q2
	0.54020	T	-17.082	KG	
D	I-READ 1664.85 B-NMR	A	I-SET (from PSU) 1189.52 B-HALL	A	Q3
	1.45647	T	-11.494	KG	
	If momentum increased:		I-SET (from PSU)		D
	☐ HMS cycled?		1635.72 A		
	☒ SHMS cycled?		11.83 / KG		

Run Number:

15054

Comments:

- ☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 12
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

17:38

Stop time (RC GUI):

17.43

- ☒ 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

FADC Mode 10 run

Run Number:

15055

Comments:

- ☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 12
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

17:44

Stop time (RC GUI):

18:50

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

HMS prescale
pretrig: 168 k

$e-\pi n$ evts:

12053

SHMS prescale
pretrig: 105 k

$\Sigma e-\pi n$ evts:

COIN pretrig: 274 k

☒ Data ok

☐ Junk

Run Number:

15056

Comments:

- ☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 12
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

18:51

Stop time (RC GUI):

19:55

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

HMS prescale
pretrig: 225 k

$e-\pi n$ evts:

15874

SHMS prescale
pretrig: 140 k

$\Sigma e-\pi n$ evts:

27927

COIN pretrig: 357 k

☒ Data ok

☐ Junk

Run Number:

15057

Comments:

- ☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 12
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

19:56

Stop time (RC GUI):

20:55

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

HMS prescale
pretrig: 188 k

$e-\pi n$ evts:

13257

SHMS prescale
pretrig: 101 k

$\Sigma e-\pi n$ evts:

41184

COIN pretrig: 298 k

☒ Data ok

☐ Junk

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22, 6, 20
yy mm dd

Initials: JPC

Continuation of Configuration:

$Q^2 = 3.85$, $W = 2.62$

high E , SHMS right

LH, Dummy,
LD+

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

Run Number: <u>15058</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>20:56</u> Stop time (RC GUI): <u>21:46</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>213</u> k $e\pi n$ evts: <u>14744</u>	SHMS prescale pretrig: <u>133</u> k $\Sigma e\pi n$ evts: <u>55928</u>	COIN pretrig: <u>332</u> k ☒ Data ok ☐ Junk
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Run Number: <u>15059</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>21:46</u> Stop time (RC GUI): <u>22:30</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>183</u> k $e\pi n$ evts: <u>12603</u>	SHMS prescale pretrig: <u>115</u> k $\Sigma e\pi n$ evts: <u>68531</u>	COIN pretrig: <u>287</u> k ☒ Data ok ☐ Junk
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Run Number: <u>15060</u>	☐ LH2 10cm ☐ LD2 10cm ☒ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>6</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>22:41</u> Stop time (RC GUI): <u>22:44</u>	☒ 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
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checking prescale factors

Run Number: <u>15061</u>	☐ LH2 10cm ☐ LD2 10cm ☒ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>6</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>22:45</u> Stop time (RC GUI): <u>23:05</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>104</u> k $e\pi n$ evts: <u>361</u>	SHMS prescale pretrig: <u>109</u> k $\Sigma e\pi n$ evts:	COIN pretrig: <u>27</u> k ☒ Data ok ☐ Junk
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Run Number: <u>15062</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>23:17</u> Stop time (RC GUI): <u>23:21</u>	☒ 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
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stopped to do FADC mode10 (next run)

Run Number: <u>15063</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): <u>23:23</u> Stop time (RC GUI): <u>23:25</u>	☒ 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
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FADC Mode10 run

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22, 6, 20
yy mm dd

Initials: jr

Continuation of Configuration:

$Q^2 = 3.85$, $W = 2.62$

high E , SHMS right

LD+

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

Run Number: <u>15064</u>	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): <u>23:28</u> Stop time (RC GUI): _____	☐ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: _____	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: _____	COIN pretrig: <u>0.35</u> k ☐ Data ok ☒ Junk
Comments: <u>Junk.</u>							

Run Number: <u>15065</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>23:28</u> Stop time (RC GUI): <u>00:28</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: <u>12920</u>	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: <u>12920</u>	COIN pretrig: <u>0.35</u> k ☒ Data ok ☐ Junk
Comments: <u>First V run on LD2</u>							

Run Number: <u>15066</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>00:30</u> Stop time (RC GUI): <u>01:27</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: <u>10058</u>	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: <u>22978</u>	COIN pretrig: <u>0.35</u> k ☒ Data ok ☐ Junk
Comments:							

Run Number: <u>15067</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>01:28</u> Stop time (RC GUI): <u>02:45</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: <u>14038</u>	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: <u>37016</u>	COIN pretrig: <u>0.35</u> k ☒ Data ok ☐ Junk
Comments:							

Run Number: <u>15068</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>02:45</u> Stop time (RC GUI): <u>03:42</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: <u>10569</u>	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: <u>47575</u>	COIN pretrig: <u>0.35</u> k ☒ Data ok ☐ Junk
Comments:							

Run Number: <u>15069</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>03:55</u> Stop time (RC GUI): <u>05:17</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>200</u> k $e-\pi n$ evts: <u>7520</u>	SHMS prescale pretrig: <u>27</u> k $\Sigma e-\pi n$ evts: <u>55095</u>	COIN pretrig: <u>0.35</u> k ☒ Data ok ☐ Junk
Comments:							

p(e,e' π)n Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: ~~22.06.21~~
yy mm dd

Initials: PM

Continuation of Configuration:

$\alpha^2 = 3.85$ $w = 2.62$

High ϵ , SHMS right

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

Run Number: <u>15070</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>9</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>05:23</u> Stop time (RC GUI): <u>06:38</u>	☒ Settings Verified? ☒ HV OK? ☐ 50k OK?	HMS prescale pretrig: <u>21</u> k $e-\pi n$ evts: <u>14767</u>	SHMS prescale pretrig: <u>25</u> k $\Sigma e-\pi n$ evts: <u>69852</u>	COIN pretrig: <u>33</u> k ☐ Data ok ☐ Junk
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Run Number: <u>15071</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>9</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>06:38</u> Stop time (RC GUI): <u>07:33</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>14</u> k $e-\pi n$ evts: <u>13083</u>	SHMS prescale pretrig: <u>26</u> k $\Sigma e-\pi n$ evts: <u>82935</u>	COIN pretrig: <u>34</u> k ☒ Data ok ☐ Junk
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Run Number: <u>15072</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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HMS w c noise check

Run Number: <u>15073</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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More noise checks

Run Number: <u>15073</u>	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>12</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>07:52</u> Stop time (RC GUI): <u>08:09</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>20</u> k $e-\pi n$ evts: <u>5189</u>	SHMS prescale pretrig: <u>25</u> k $\Sigma e-\pi n$ evts: <u>88124</u>	COIN pretrig: <u>36</u> k ☒ Data ok ☐ Junk
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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$p(e,e'\pi)n$ Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/6/21
yy mm dd

Initials: SJDk

Use a separate sheet for each configuration.

Configuration Name: _____

$Q^2 = 3.85$, $W = 2.62$, $x = 0.39$

High ϵ_γ SHMS Centre

$E_{\text{beam}} = 10.5$ GeV

$I_{\text{beam}} = 45$ μA

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
-0.1 mm	-0.30 mm	
Nomin: -0.09	Nomin: -0.3	
3H07C	X	Y
-0.64 mm	-0.5 mm	
Nomin: -0.68	Nomin: -0.44	

HMS

SHMS

Q1	I-SET (from PSU) 691.838 A	A	I-SET (from PSU) 1713.36 A	A	HB
	B-HALL 0.92730 T		B-HALL -10.406 KG		
Q2	I-SET (from PSU) 552.0140 A	A	I-SET (from PSU) 1076.51 A	A	Q1
	B-HALL -1.08788 T		B-HALL 7.680 KG		
Q3	I-SET (from PSU) 267.5320 A	A	I-SET (from PSU) 1868.20 A	A	Q2
	B-HALL 0.53554 T		B-HALL -17.082 KG		
D	I-READ 1663.4 A	A	I-SET (from PSU) 1189.78 A	A	Q3
	B-NMR 1.4564600 T		B-HALL -11.445 KG		
If momentum increased:			I-SET (from PSU) 1635.82 A	A	D
☐ HMS cycled? ☒ SHMS cycled?			B-NMR 11.831 KG		

Run Number:

15074

- ☐ LH2 10cm
☒ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 11
PS2: -1
PS3: -1
PS4: 9
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

08:16

Stop time (RC GUI):

08:24

- ☒ 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 Mode10, long run (end of beam for the day)

Run Number:

15075

- ☐ LH2 10cm
☒ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 11
PS2: -1
PS3: -1
PS4: 9
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

08:25

Stop time (RC GUI):

08:26

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

HMS prescale
pretrig: 4 k

$e-\pi n$ evts:

353

SHMS prescale
pretrig: 4 k

$\Sigma e-\pi n$ evts:

3

COIN pretrig: 10 k

☒ Data ok

☐ Junk

Comments:

Short run & beam off, probably not much good

Run Number:

15076

- ☐ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: _____
PS2: _____
PS3: _____
PS4: _____
PS5: _____
PS6: _____
Mode10: cer / fadc

Start time (RC GUI):

Stop time (RC GUI):

- ☐ 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 No Threshold run

Run Number:

15077

- ☐ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: _____
PS2: _____
PS3: _____
PS4: _____
PS5: _____
PS6: _____
Mode10: cer / fadc

Start time (RC GUI):

Stop time (RC GUI):

- ☐ 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 No Threshold run

p(e,e' π)n Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/6/21
yy mm dd

Initials: Sook

Continuation of Configuration:

$Q^2 = 3.85$, $W = 262$, $x = 0.39$

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

High E_n SHMS Center

LD+

Run Number: 15078	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 0 PS2: -1 PS3: -1 PS4: 0 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 09:32 Stop time (RC GUI): 10:17	☐ 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
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Comments:

Cosmics run during beam down

Run Number: 15079	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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Comments:

FADC No Threshold run

Run Number: 15080	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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Comments:

FADC No threshold run

Run Number: 15081	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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Comments:

FADC No threshold run

Run Number: 15082	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI): 	☐ 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
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Comments:

FADC No threshold run

Run Number: 15083	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☒ Optics ____ cm ☒ HOME	PS1: 0 PS2: -1 PS3: -1 PS4: 0 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 13:23 Stop time (RC GUI): 	☐ 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
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Comments:

Cosmics

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/6/21
yy mm dd

Initials: GH

Continuation of Configuration:

$Q^2 = 3.85$, $W = 2.62$, $x = 0.39$

High E_q STIMS Center

LD2+

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

Run Number: 15084	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☒ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): _____ Stop time (RC GUI): _____	☐ 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
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DC ringing test

Run Number: 15085	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): _____ Stop time (RC GUI): _____	☐ 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
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DC ringing test.-

Run Number: 15090	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 11 PS2: -1 PS3: -1 PS4: 9 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 19:45 Stop time (RC GUI): 19:59	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 28 k $e-\pi n$ evts: 2469	SHMS prescale pretrig: 31 k $\Sigma e-\pi n$ evts: 2469	COIN pretrig: 83 k ☒ Data ok ☐ Junk
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HMS = 5.5V threshold
→ noisy HMS DC.

Choppy 60uA beam.

141.9k evts

Run Number: 15091	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 11 PS2: -1 PS3: -1 PS4: 9 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 20:01 Stop time (RC GUI): 20:13	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 55 k $e-\pi n$ evts: 4899	SHMS prescale pretrig: 62 k $\Sigma e-\pi n$ evts: 7368	COIN pretrig: 162 k ☒ Data ok ☐ Junk
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HMS = 6.0V threshold

278k evts

Run Number: 15092	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 11 PS2: -1 PS3: -1 PS4: 9 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 20:14 Stop time (RC GUI): 20:26	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 34 k $e-\pi n$ evts: 3145	SHMS prescale pretrig: 38 k $\Sigma e-\pi n$ evts: 10,513	COIN pretrig: 97 k ☒ Data ok ☐ Junk
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HMS = 6.0V threshold

Run Number: 15093	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 11 PS2: -1 PS3: -1 PS4: 9 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 20:27 Stop time (RC GUI): 20:44	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 64 k $e-\pi n$ evts: 5808	SHMS prescale pretrig: 72 k $\Sigma e-\pi n$ evts: 16,321	COIN pretrig: 186 k ☒ Data ok ☐ Junk
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HMS = 5.8V threshold

→ HMS DC plots look clean

321k evts

p(e,e' π)n Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/6/21
yy mm dd

Initials: GH

Continuation of Configuration:

$Q^2=3.85$, $W=82$ LD2+
high E, SHMS center

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

Run Number: 15094	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 20:47 Stop time (RC GUI): 21:01	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 34 k $e-\pi n$ evts: 3172	SHMS prescale pretrig: 38 k $\Sigma e-\pi n$ evts: 19,493	COIN pretrig: 101 k ☒ Data ok ☐ Junk
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HMS threshold 5.7V.

172k ats

→ noisy areas starting to appear

Run Number: 15095	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 21:02 Stop time (RC GUI): 21:32	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 39 k $e-\pi n$ evts: 3562	SHMS prescale pretrig: 44 k $\Sigma e-\pi n$ evts: 23,055	COIN pretrig: 118 k ☒ Data ok ☐ Junk
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HMS threshold 5.8V No beam first 15 minutes. 200k ats

→ noisy areas appeared, worse than in 15094. Clearly time dependent!

Run Number: 15096	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 21:33 Stop time (RC GUI): 22:24	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 139 k $e-\pi n$ evts: 12743	SHMS prescale pretrig: 156 k $\Sigma e-\pi n$ evts: 35798	COIN pretrig: 418 k ☒ Data ok ☐ Junk
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HMS th = 5.8V.

Noisy areas smaller now.

Beam was off last ~10 min of run.

Run Number: 15097	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 22:58 Stop time (RC GUI): 23:07	☐ Settings Verified? ☒ HV OK? ☐ 50k OK?	HMS prescale pretrig: 139 k $e-\pi n$ evts: 1173	SHMS prescale pretrig: 156 k $\Sigma e-\pi n$ evts: 35798	COIN pretrig: 418 k ☐ Data ok ☒ Junk
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Run Number: 15098	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 00:06:41 Stop time (RC GUI): 01:08:01	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 153 k $e-\pi n$ evts: 13937	SHMS prescale pretrig: 173 k $\Sigma e-\pi n$ evts: 49735	COIN pretrig: 468 k ☒ Data ok ☐ Junk
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~30 min of beam

Run Number: 15099	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>11</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: <u>cer</u> / fadc	Start time (RC GUI): 20:47 01:24:15 Stop time (RC GUI): 01:54:43	☐ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 144 k $e-\pi n$ evts: 13487	SHMS prescale pretrig: 160 k $\Sigma e-\pi n$ evts: 63,222	COIN pretrig: 395 k ☒ Data ok ☐ Junk
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45 mA, 50 mA

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/06/22
yy mm dd

Initials: *jm*

Continuation of Configuration:

$Q^2 = 3.85$, $W = 2.62$

$X = 0.39$, High Epsilon, SHMS Center

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

Run Number: 15100	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 11 PS2: -1 PS3: -1 PS4: 9 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 03:25:19 Stop time (RC GUI): 04:08:57	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 140 k $e-\pi n$ evts: 12858	SHMS prescale pretrig: 156 k $\Sigma e-\pi n$ evts: 76080	COIN pretrig: 391 k ☒ Data ok ☐ Junk
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50 μ A, 55 μ A

Run Number: 15102	☐ LH2 10cm ☐ LD2 10cm ☒ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 8 PS2: -1 PS3: -1 PS4: 6 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 04:18:14 Stop time (RC GUI): 04:42:06	☒ Settings Verified? ☒ HV OK? ☐ 50k OK?	HMS prescale pretrig: 407 k $e-\pi n$ evts: 451	SHMS prescale pretrig: 125 k $\Sigma e-\pi n$ evts: 76080	COIN pretrig: 29 k ☒ Data ok ☐ Junk
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15101 Junk - wrong PS.

Went for 2811 events, estimating 10% stats from

Run Number: 15103	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 04:52:39 Stop time (RC GUI): 05:51:54	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 113 k $e-\pi n$ evts: 8336	SHMS prescale pretrig: 116 k $\Sigma e-\pi n$ evts: 8336	COIN pretrig: 141 k ☒ Data ok ☐ Junk
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55 μ A

$Q = 56.67$ mC
 $\Sigma Q = 56.67$ mC

Run Number: 15104	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 05:56:22 Stop time (RC GUI): 07:01:55	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 199 k $e-\pi n$ evts: 14653	SHMS prescale pretrig: 203 k $\Sigma e-\pi n$ evts: 22889	COIN pretrig: 216 k ☒ Data ok ☐ Junk
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$Q = 100.068$
 $\Sigma Q = 157.35$ mC

Run Number: 15105	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 07:02:42 Stop time (RC GUI): 07:05:05	☐ 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
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FAOL mode 10 run

Run Number: 15106	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 07:06:02 Stop time (RC GUI): 08:06:08	☒ Settings Verified? ☒ HV OK? ☐ 50k OK?	HMS prescale pretrig: 227 k $e-\pi n$ evts: 16751	SHMS prescale pretrig: 232 k $\Sigma e-\pi n$ evts: 39740	COIN pretrig: 237 k ☒ Data ok ☐ Junk
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$Q = 114.60$
 $\Sigma Q = 271.96$

p(e,e'π)n Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22 / 06 / 22
yy mm dd

Initials: CAM

Continuation of Configuration:

$$Q^2 = 3.85, W = 2.62$$

x = 0.32, High-E, SHMS center

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

Run Number: <u>15107</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>10</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>08:09</u> Stop time (RC GUI): <u>09:07</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>226</u> k e-πn evts: <u>18532</u>	SHMS prescale pretrig: <u>232</u> k Σ e-πn evts: <u>52272</u>	COIN pretrig: <u>235</u> k ☒ Data ok ☐ Junk
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16792
 $Q = 114.2$
 $\Sigma Q = 386.16$
56532

Run Number: <u>15108</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>10</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>09:08</u> Stop time (RC GUI): <u>09:37</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: <u>125</u> k e-πn evts: <u>10763</u>	SHMS prescale pretrig: <u>127</u> k Σ e-πn evts: <u>65860</u>	COIN pretrig: <u>128</u> k ☒ Data ok ☐ Junk
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9328
 $Q = 62.96$
 $\Sigma Q = 449.12$

Run Number: <u>15109</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): 09:53 Stop time (RC GUI):	☐ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale pretrig: _____ k e-πn evts:	SHMS prescale pretrig: _____ k Σ e-πn evts:	COIN pretrig: _____ k ☐ Data ok ☐ Junk
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Junk, didn't change PS

Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>2</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale pretrig: _____ k e-πn evts:	SHMS prescale pretrig: _____ k Σ e-πn evts:	COIN pretrig: _____ k ☐ Data ok ☐ Junk
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale pretrig: _____ k e-πn evts:	SHMS prescale pretrig: _____ k Σ e-πn evts:	COIN pretrig: _____ k ☐ Data ok ☐ Junk
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale pretrig: _____ k e-πn evts:	SHMS prescale pretrig: _____ k Σ e-πn evts:	COIN pretrig: _____ k ☐ Data ok ☐ Junk
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$p(e,e'\pi)n$ Run Sheet

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/06/22
yy mm dd

Initials: CAM

Use a separate sheet for each configuration.

Configuration Name: _____

$Q^2=3.85$, $W=2.62$

$X=0.39$, High- E , SHMS Left

$E_{\text{beam}}=10538$ GeV $I_{\text{beam}}=45$ μA

HMS

$p: +1-5.309$ $\theta(\text{TV}): 15.06$
From GUI Nearest 0.005

SHMS

$p: +1-5.127$ $\theta(\text{TV}): 16.28$
From GUI Nearest 0.005

Collimator:

HMS: Large Sieve ☒

SHMS: Collim Sieve ☒

Purpose:

☒ Production

☐ Test (e.g. DAQ, Detector)

☐ Optics (SHMS / HMS)

☐ Other: _____

Raster: ☒ On ☐ Off
Size: 2×2

Beam position and angle on target:

3H07A	X	Y
-0.079 mm	-0.291 mm	
Nomin:	Nomin:	
3H07C	X	Y
-0.712 mm	-0.570 mm	
Nomin:	Nomin:	

HMS

SHMS

Q1	I-SET (from PSU) 691.81 A B-HALL 0.9163 T	I-SET (from PSU) A B-HALL -10.907 KG	HB
Q2	I-SET (from PSU) 552.03 A B-HALL -1.0782 T	I-SET (from PSU) 1076.36 A B-HALL 7.679 KG	Q1
Q3	I-SET (from PSU) 267.48 A B-HALL 0.54024 T	I-SET (from PSU) 1807.96 A B-HALL -17.080 KG	Q2
D	I-READ 1664.82 A B-NMR 1.45646 T	I-SET (from PSU) 1189.56 A B-HALL -11.495 KG	Q3
	If momentum increased: ☐ HMS cycled? ☐ SHMS cycled?	I-SET (from PSU) 1635.56 A B-NMR 11.831 KG	D

Run Number:

15110
~~15109~~

☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 9
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

09:53

Stop time (RC GUI):

10:43

☒ Settings Verified?

☒ HV OK?

☒ 50k OK?

HMS prescale
pretrig: 145 k

$e-\pi n$ evts: 8157

SHMS prescale
pretrig: 130 k

$\Sigma e-\pi n$ evts: 8157

COIN pretrig: 115 k

☒ Data ok

☐ Junk

Comments:

$Q=24.758$
 $\Sigma Q=24.758$

Run Number:

15111

☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 9
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

~~09:53~~

Stop time (RC GUI):

☐ 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:

JUNK FADC MODE TEN, NO CER MODE

Run Number:

15112

☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 9
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

12:11:40

Stop time (RC GUI):

12:14:10

☐ 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:

15113

☒ LH2 10cm
☐ LD2 10cm
☐ Dummy 10cm
☐ C 0.5% r.l.
☐ Optics ____ cm
☐ _____

PS1: 9
PS2: -1
PS3: -1
PS4: 8
PS5: 0
PS6: -1
Mode10: cer / fadc

Start time (RC GUI):

12:15

Stop time (RC GUI):

13:17

☒ Settings Verified?

☒ HV OK?

☒ 50k OK?

HMS prescale
pretrig: 215 k

$e-\pi n$ evts: 12217

SHMS prescale
pretrig: 194 k

$\Sigma e-\pi n$ evts: 20374

COIN pretrig: 163 k

☒ Data ok

☐ Junk

Comments:

$Q=108.452$
 $\Sigma Q=133.21$

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/06/22
yy mm dd

Initials: CAM

Continuation of Configuration:

$$Q^2 = 3.85, W = 2.62$$

$$x = 0.39, \text{High-}E, \text{SHMS-LEFT}$$

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

Run Number: <u>15114</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>13:15</u> Stop time (RC GUI): <u>14:12</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale <u>187</u> k pretrig: $e-\pi n$ evts: <u>10503</u>	SHMS prescale <u>168</u> k pretrig: $\Sigma e-\pi n$ evts: <u>30877</u>	COIN pretrig: <u>144</u> k ☒ Data ok ☐ Junk
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$$Q = \cancel{27.575} 94.186$$
$$\Sigma Q = 227.4$$

Run Number: <u>15115</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>14:13:14</u> Stop time (RC GUI): <u>15:14:18</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale <u>184</u> k pretrig: $e-\pi n$ evts: <u>10398</u>	SHMS prescale <u>165</u> k pretrig: $\Sigma e-\pi n$ evts: <u>41275</u>	COIN pretrig: <u>145</u> k ☒ Data ok ☐ Junk
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$$Q = 92.612$$
$$\Sigma Q = 320.012$$

Run Number: <u>15116</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>15:14:52</u> Stop time (RC GUI): <u>16:10:32</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale <u>129</u> k pretrig: $e-\pi n$ evts: <u>7294</u>	SHMS prescale <u>116</u> k pretrig: $\Sigma e-\pi n$ evts: <u>48569</u>	COIN pretrig: <u>108</u> k ☒ Data ok ☐ Junk
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$$Q = 65.141 \text{ mC}$$
$$\Sigma Q = 385.153$$

Run Number: <u>15117</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>16:57:27</u> Stop time (RC GUI): <u>17:30:05</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale <u>46</u> k pretrig: $e-\pi n$ evts: <u>2625</u>	SHMS prescale <u>41</u> k pretrig: $\Sigma e-\pi n$ evts: <u>51194</u>	COIN pretrig: <u>47</u> k ☒ Data ok ☐ Junk
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A lot of beam trips.

$$Q = 22.833 \text{ mC}$$
$$\Sigma Q = 407.986 \text{ mC}$$

Run Number: <u>15118</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>20:18:02</u> Stop time (RC GUI): <u>21:16:15</u>	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale <u>120</u> k pretrig: $e-\pi n$ evts: <u>6823</u>	SHMS prescale <u>109</u> k pretrig: $\Sigma e-\pi n$ evts: <u>58017</u>	COIN pretrig: <u>108</u> k ☒ Data ok ☐ Junk
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Long beam trip.

$$Q = 60.411 \text{ mC}$$
$$\Sigma Q = 468.397 \text{ mC}$$

Run Number: <u>15119</u>	☒ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): <u>22:29:58</u> Stop time (RC GUI): <u>22:52:13</u>	☒ Settings Verified? ☐ HV OK? ☐ 50k OK?	HMS prescale <u>84</u> k pretrig: $e-\pi n$ evts: <u>4639</u>	SHMS prescale <u>76</u> k pretrig: $\Sigma e-\pi n$ evts: <u>62656</u>	COIN pretrig: <u>64</u> k ☒ Data ok ☐ Junk
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$$Q = 42.133 \text{ mC}$$
$$\Sigma Q = 510.53 \text{ mC}$$

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22 / 06 / 22
yy mm dd

Initials: PD

Continuation of Configuration:

$$Q^2 = 3.85, W = 2.62$$

$$x = 0.39, \text{High } E, \text{SHMS LEFT}$$

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

Run Number: 15120	☐ LH2 10cm ☐ LD2 10cm ☒ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>8</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 23:01 Stop time (RC GUI): 23:04	☐ 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
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Junk. Prescales weren't optimized for dummy.

Run Number: 15121	☐ LH2 10cm ☐ LD2 10cm ☒ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>7</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>6</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 23:04:33 Stop time (RC GUI): 23:26:09	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 116 k $e-\pi n$ evts: 296	SHMS prescale pretrig: 109 k $\Sigma e-\pi n$ evts: _____	COIN pretrig: 23 k ☒ Data ok ☐ Junk
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Run Number: 15122	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>9</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>10</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 23:35 Stop time (RC GUI): 23:36	☒ 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
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Suggested prescales were slightly off.

Run Number: 15123	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>10</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 23:37:25 Stop time (RC GUI): 00:37:44	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 246 k $e-\pi n$ evts: 17601	SHMS prescale pretrig: 246 k $\Sigma e-\pi n$ evts: 17601	COIN pretrig: 389 k ☒ Data ok ☐ Junk
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$$Q = 133.013 \text{ mC}$$

$$\Sigma Q = 133.013 \text{ mC}$$

Run Number: 15124	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>10</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 00:38:26 Stop time (RC GUI): 01:40:10	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 188 k $e-\pi n$ evts: 13395	SHMS prescale pretrig: 188 k $\Sigma e-\pi n$ evts: 30976	COIN pretrig: 306 k ☒ Data ok ☐ Junk
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$$Q = 101.372 \text{ mC}$$

$$\Sigma Q = 234.385 \text{ mC}$$

Run Number: 15126	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: <u>10</u> PS2: <u>-1</u> PS3: <u>-1</u> PS4: <u>9</u> PS5: <u>0</u> PS6: <u>-1</u> Mode10: cer / fadc	Start time (RC GUI): 02:00:31 Stop time (RC GUI): 03:06:39	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 218 k $e-\pi n$ evts: 15455	SHMS prescale pretrig: 218 k $\Sigma e-\pi n$ evts: 46431	COIN pretrig: 349 k ☒ Data ok ☐ Junk
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15125 = Junk

$$Q = 117.257 \text{ mC}$$

$$\Sigma Q = 351.642 \text{ mC}$$

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

can be found at lichen.phys.uregina.ca/~huberg/fpi/

Date: 22/06/23
yy mm dd

Initials: jk

Continuation of Configuration:

$Q^2=3.85$, $W=2.62$, $x=0.39$
High- ϵ , SHMS Left

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

Run Number: 15127	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 03:07:17 Stop time (RC GUI): 03:09:35	☒ 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
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fADC mode 10

Run Number: 15128	☐ LH2 10cm ☒ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: 10 PS2: -1 PS3: -1 PS4: 8 PS5: 0 PS6: -1 Mode10: cer / fadc	Start time (RC GUI): 03:10:16 Stop time (RC GUI): 04:18:40	☒ Settings Verified? ☒ HV OK? ☒ 50k OK?	HMS prescale pretrig: 196 k $e-\pi n$ evts: 13600	SHMS prescale pretrig: 193 k $\Sigma e-\pi n$ evts: 60031	COIN pretrig: 303 k ☒ Data ok ☐ Junk
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SHMS Q1 interlock

$Q = 105.053$ mC
 $\Sigma Q = 456.645$ mC

Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ 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
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ 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
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ 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
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Run Number:	☐ LH2 10cm ☐ LD2 10cm ☐ Dummy 10cm ☐ C 0.5% r.l. ☐ Optics ____ cm ☐ _____	PS1: _____ PS2: _____ PS3: _____ PS4: _____ PS5: _____ PS6: _____ Mode10: cer / fadc	Start time (RC GUI): Stop time (RC GUI):	☐ 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
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