



HEEP Studies

Mr. Muhammad Junaid
Ph.D. Student
Department of Physics,
University of Regina, Canada

- Next task is to start HeeP Studies.
- For the HeeP study, we have total 17 HeeP coin settings.
- Selected 9 HeeP Settings on basis of physics momentums and angles.
- Will Start analyzing these 9 settings. Later, we will test our offsets on HeeP Single data if needed.

HEEP Study

PionLT Experiment

Beam Energy (GeV)	Setting (HeePCoin)	Run Numbers
9.177	HMS_p = -3.738, HMS_theta = 31.645, SHMS_p = 6.265, SHMS_theta = 18.125	11846 - 11879
9.177	HMS_p = -5.015, HMS_theta = 23.750, SHMS_p = 5.015, SHMS_theta = 23.800	11880 - 11881
5.986	HMS_p = -3.400, HMS_theta = 28.285, SHMS_p = 3.400, SHMS_theta = 28.280	13051 - 13057
5.986	HMS_p = -3.271, HMS_theta = 29.170, SHMS_p = 3.493, SHMS_theta = 27.495	13058 - 13062, 13128
9.876	HMS_p = -5.366, HMS_theta = 23.050, SHMS_p = 5.422, SHMS_theta = 23.050	13164 - 13169
7.937	HMS_p = -6.079, HMS_theta = 15.450, SHMS_p = 2.634, SHMS_theta = 37.930	14570 - 14574
7.937	HMS_p = -5.202, HMS_theta = 19.880, SHMS_p = 3.493, SHMS_theta = 31.100	14576 - 14580
7.937	HMS_p = -4.388, HMS_theta = 25.260, SHMS_p = 4.388, SHMS_theta = 25.260	14582 - 14587
7.937	HMS_p = -3.280, HMS_theta = 33.645, SHMS_p = 5.512, SHMS_theta = 19.265	14589 - 14600
10.549	HMS_p = -5.878, HMS_theta = 21.670, SHMS_p = 5.539, SHMS_theta = 23.110	14986 - 14993

HEEP Study

PionLT Experiment

Beam Energy (GeV)	Setting (HeePCoin)	Run Numbers
8.479	HMS_p = -5.587, HMS_theta = 19.560, SHMS_p = 3.731, SHMS_theta = 30.020	16162 – 16165
8.479	HMS_p = -5.321, HMS_theta = 20.905, SHMS_p = 3.996, SHMS_theta = 28.355	16167 - 16170
6.395	HMS_p = -4.752, HMS_theta = 18.595, SHMS_p = 2.412, SHMS_theta = 37.970	16277 – 16279
6.395	HMS_p = -4.391, HMS_theta = 21.095, SHMS_p = 2.792, SHMS_theta = 34.470	16280 – 16282
6.395	HMS_p = -3.716, HMS_theta = 26.550, SHMS_p = 3.493, SHMS_theta = 28.460	16284 – 16286
6.395	HMS_p = -3.514, HMS_theta = 28.402, SHMS_p = 3.706, SHMS_theta = 26.810	16509 – 16511
6.395	HMS_p = -3.014, HMS_theta = 33.350, SHMS_p = 4.220, SHMS_theta = 23.115	16512 - 16517

HEEP Study

PionLT Experiment

Beam Energy (GeV)	Setting (HeePCoin)	Run Numbers
9.177	HMS_p = -3.738, HMS_theta = 31.645, SHMS_p = 6.265, SHMS_theta = 18.125	11846 - 11879
5.986	HMS_p = -3.271, HMS_theta = 29.170, SHMS_p = 3.493, SHMS_theta = 27.495	13058 – 13062, 13128
9.876	HMS_p = -5.366, HMS_theta = 23.050, SHMS_p = 5.422, SHMS_theta = 23.050	13164 - 13169
7.937	HMS_p = -3.280, HMS_theta = 33.645, SHMS_p = 5.512, SHMS_theta = 19.265	14589 - 14600
10.549	HMS_p = -5.878, HMS_theta = 21.670, SHMS_p = 5.539, SHMS_theta = 23.110	14986 - 14993
8.479	HMS_p = -5.587, HMS_theta = 19.560, SHMS_p = 3.731, SHMS_theta = 30.020	16162 – 16165
6.395	HMS_p = -4.752, HMS_theta = 18.595, SHMS_p = 2.412, SHMS_theta = 37.970	16277 – 16279
6.395	HMS_p = -4.391, HMS_theta = 21.095, SHMS_p = 2.792, SHMS_theta = 34.470	16280 – 16282
6.395	HMS_p = -3.014, HMS_theta = 33.350, SHMS_p = 4.220, SHMS_theta = 23.115	16512 - 16517