

HECOs

Andie Wall¹, Ameer Shaa²

¹Department of Physics and Astronomy
University of Alabama

²School of Physics and Applied Physics
Nanyang Technological University

MoEDAL Software and Analysis Meeting, January 2018

Table of Contents

1 HECOs

2 Questions, Comments, Suggestions

HECOs

Work being done

- We are able to use Gauss to simulate HECO's.
- In order to determine the range, we will simulate masses 20, 40, 100, 200, 500, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000 GeV and for each mass, electric charges of 25, 50, 75, 100, 150, 200, 250, 300, 400, 500.
- 130 simulations in total!
- Hopefully we will have some results next week.

HECOs

Work that needs to be done

- Geometry of NTDs implemented in GEANT4 (done)
- Perform GEANT4 simulations to determine the range; replacing Ahlen with Bethe-Bloch (being done)
- Perform GEANT4 simulations with a larger range of masses for the HECO; replacing Ahlen with Bethe-Bloch
- Compute limits \Rightarrow Limit plots
- Consider Spin Zero and Spin One

Table of Contents

- 1 HECOs
- 2 Questions, Comments, Suggestions

Questions, Comments, Suggestions