UNIVERSITY OF GOTHENBURG

Interaction point simulations

Towards the TDR

- All data being downloaded to `/nfs/dust/luxe/group/MCProduction/Signal/compressed/ptarmigan`

- Physics that needs to be included:
  - Electron-positron pair creation via nonlinear Breit-Wheeler [May 2021]
  - Photon-polarization dependence of Compton/BW (additional accuracy for trident modelling) [EOY 2021]

- Switching output format:
  - Currently mimicking IPstrong ".out": plain-text – wasteful of space, compression required, slower to write
  - Long-term reuse + reproducibility favours binary format (no precision loss) with included metadata
  - Working on HDF5 [expected end of Feb]

- Move compute to DESY resources?
  - Clone code to group space, compile once (latest stable version) and allow anyone to generate output
  - "Standard" job on BIRD receives 1 core, 2 GB of memory and 3h of runtime, which is enough to run one BX with 10^6 primary macroelectrons