

## Simulation and Analysis Task Force (27 July 2021) Signal simulation status

- Upcoming in Ptarmigan v.0.8.1:
  - Choice of units ('hep', 'si', etc): default for TDR production will be 'hep' (mm, GeV/c).
  - Relevant unit will eventually be accessible for each individual dataset. At the moment, global metadata will be available under config/unit/momentum → 'GeV/c' | 'MeV/c' | ... and config/unit/length → 'mm' | 'um' | ....
  - Offset between particle beam and laser
- Description of nominal input parameters and proposed parameter scans available at <a href="https://confluence.desy.de/display/LUXE/Signal+simulations">https://confluence.desy.de/display/LUXE/Signal+simulations</a>
  - Accessible to anyone with a DESY account and the confluence resource [cf. Jenny's email yesterday]
  - Proposed scans include: general physics case, phases 0 and 1; alignment errors for nominal focal spots; photoproduction optimisation for BSM; scoping study for ILC ©



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- Laser parameters confirmed by Matt and Gianluca
- Things to verify:
  - Number of BXs per point. At the moment 10 BXs, each with 10<sup>6</sup> primary macroparticles (approx. 3 – 10 core-hours)
  - Transverse size of electron beam (5 micron at the moment)
  - Also affects input for brem-laser and ICS-laser modes (new data needed from Sasha and Daniel?)