

Comparison of Monte Carlo Event Generators with Data

Work in the QCD, Luminosity, Forward Physics and Background Simulation groups is leading ATLAS to examine a number of Monte Carlo event generators to assess how well (or poorly) any of these generators describe basic event features. Event generators include

- [Pythia / Pythia6](#)
- [Pythia++ / Pythia8](#)
- PHOJET
- [DPMJET3](#)
- [RADGAP](#)
- [EPOS](#)
- [CASCADE](#)

and maybe others. Some of them are already interfaced to Athena, and the remainder are expected to be before this project starts. Athena provides a common platform for this study. We plan to define a set of distributions for comparison with data and for expectations in ATLAS. It is anticipated that a number of people will work in parallel, each person (or small group) focusing on one generator, so all the generators could be studied in a short time.