Introducing…

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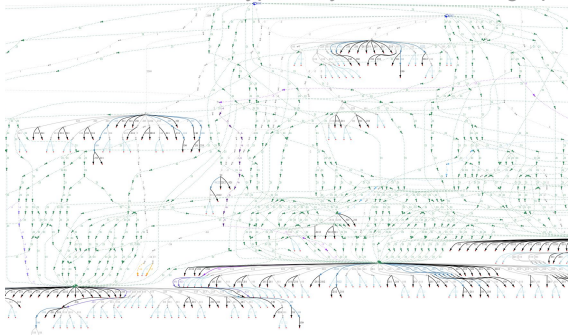
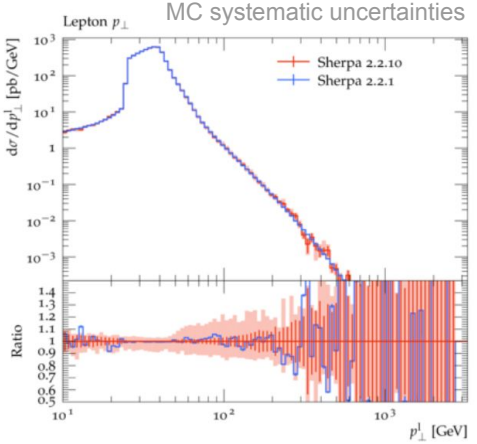
MC validation background and plans

- **I have been nominated to join as validation coordinator, focusing on MC generation**
- **Background:** LHC physics, particularly ATLAS. Former ATLAS MC convener; QCD soft and jet analysis; lead on various MC tools e.g. LHAPDF, HepMC, Rivet; also MC tuning, validation, reproducibility, and BSM/PDFs
- **Vision:** particularly to incorporate LHC-era MC gens and validation/optimisation procedures into ePIC
- **Examples:** Rivet analysis coverage of inclusive and exclusive physics, use of LHE workflows and modern shower/hadr MC
- Harmonisation means not re-learning lessons, maximising potential via existing data and tools, set up for ePIC analysis and publication design that reinforces the virtuous cycle

Typical Pythia LHC event graph

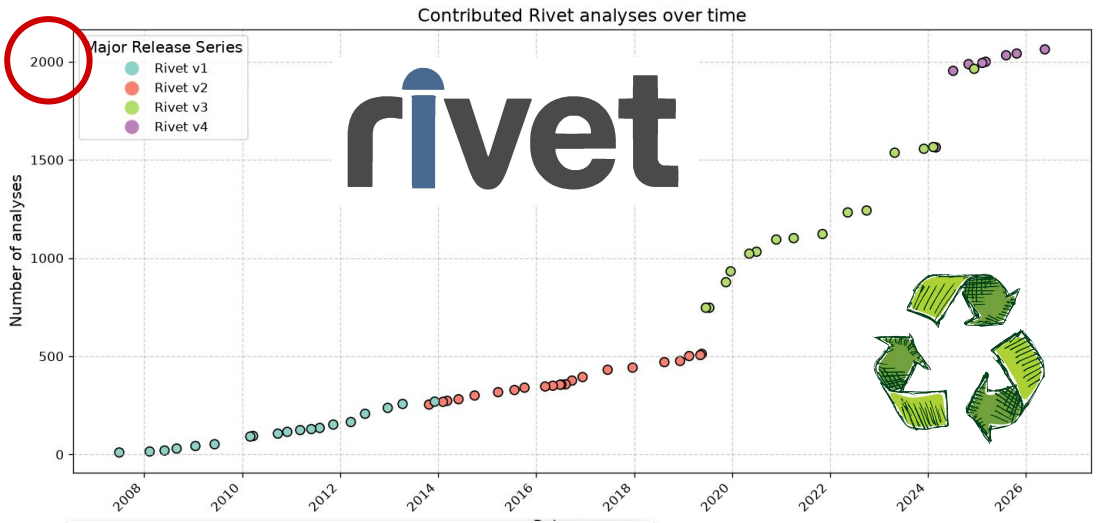


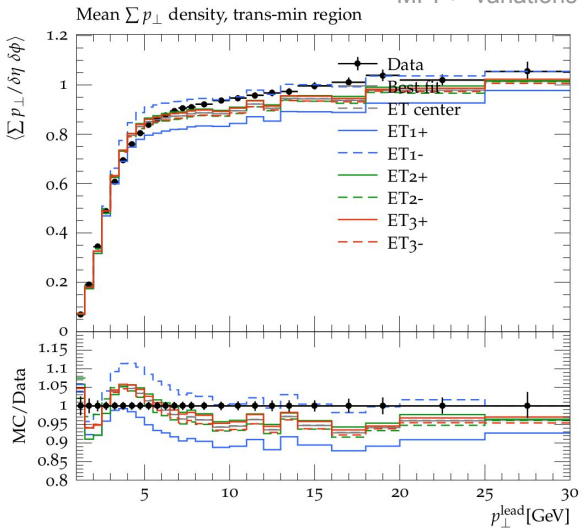
Rivet output, with automatic MC systematic uncertainties

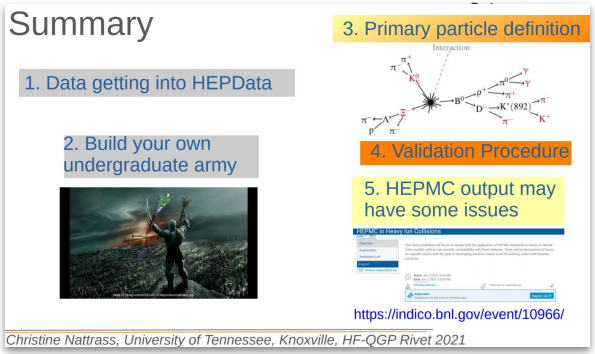


A few highlights

Rivet + Professor analysis+tuning, with MPI +- variations







Left: PHENIX feedback on Rivet for undergrad projects.
Below+right: Professor surrogate MC tuning