Rivet monthly dev meeting

1 April 2019

News, releases etc.

- **3.0.0 validation & release:**
  - Chris G visited Andy at start of March: good progress! Source of persistent disagreements with 2.x versions identified
  - Due to (opportunistic) Projection-comparison API change: enum → enum class. No longer implicit ints ⇒ non-numerical equivalence testing ⇒ didn't match
  - Fix comparisons to match 2.x ⇒ agreement! And stability (Chris?)
    However… we don't like the cmp logic. Lurking bugs with non-negligible effect?
  - In parallel, horrific merge of multiweight and options/re-entrant half done.
    Need input from Leif to patch up the collisions between re-entrant and mw histos
  - Plan: finish merge, re-validate vs. 2.x with "bad cmp logic", fix logic ⇒ release

More code plans & developments

- **Code hosting:** main repo to move Bitbucket when we have time. Not urgent
- **2.7.1 / 2.8.0 (and pull all forward into v3)**
  - Particle → GenParticle* removed in 2.7.x release branch, few analyses updated
  - Merge James Monk's HepMC 3.1 branch (maybe 2.8)
  - Backport cmp logic fixed from 3.0? (definite 2.8)
  - Beam energy comparison rationalisation
  - Projection cast via uint required… for Smeared* classes?
  - Remaining Unicode/Py3 issue in rivet-mkhtml
  - Adding Transformers list to Fastjets: do inefficiently now, improve later?
  - Built-in event filtering/transformation: reduce GenEvent to "safe" elements in reader. Filtering code exists in MCUtils, Leif has more. Speed as well as "philosophy"!

Outlook

- **Releases:**
  - **HepData consistency/sync:** Holger & Christian?
- **Papers:**
  - v3/multiweight: requires release, Jon coordinating — underway
  - smearing: Andy + Deepak Kar & Karl Nordstrom — underway
  - heavy ion: after 2.7.0 release… when? Christian B?
- **Workshops:**
  - **Lunga dev workshop, 27-30 May:** SM, Heavy Ion, and BSM interpretation all welcome
  - **Les Houches SM and BSM, June 10-28 June:** AB, Jon, David Y, Louie, Deepak, Karl Nordstrom, David Y at BSM; Leif and various sympathisers at SM