

Work in progress

- Integrating latest versions of EvtGen from BaBar and LHCb
 - LHCb version has extra models that depend on the GNU scientific library (EvtGenExtras package). This will be kept separate for now.
- Make sure we have the latest DECAY.DEC file
 - Using data from PDG database team
- Making EvtCPUtil work for either coherent or incoherent B Bbar production
 - Two OtherB() functions that will be called depending on what the user wants
- Making this version available in GENSER by end of this year
 - Requires Photos and Pythia generators from GENSER website
 - Should be possible to build EvtGen from a configure script

Next steps

- Clean up some coding issues
 - Many places with static variables/functions that could be improved
 - Many places where quantities are re-calculated/re-extracted when a simple variable would do (potentially saving CPU time)
 - Improving the way Pythia is called and used in EvtGen
 - Migrating fortran model classes to C++
- Add additional functionality according to what other experiments have added to their EvtGen version
 - Each experiment should give us the code they want to be added to the package (e.g in a tarball file)
 - Make sure all changes are compatible with all user cases, so no one should need to edit (or comment out) the source code to get the physics they are interested in.
- Continually update DECAY.DEC file according to the latest data from PDG

Next steps cont.

- Migrate StdHep (obsolete) to HepMC “event records”
- Migrate to the latest (C++) versions of Photos and Pythia (this needs HepMC)
- Improve the use of Dalitz Plot (DP) models
 - Make the code independent of DP amplitude convention choice
- Provide comprehensive documentation for using the code and how to correctly add new physics models within the framework
 - Keep this documentation up-to-date as we maintain the code
- Provide a set of validation tools for testing physics models for users and developers
 - Check if key decay modes still work OK after any code changes etc..
- Add additional functionality/physics models according to what the community needs