

Genie User Forum

16 October 2019




UNIVERSAL NEUTRINO GENERATOR
& GLOBAL FIT

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On behalf of the GENIE collaboration



Genie Updates



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GENIE Forum - M. Roda

G18 - 10i/j - 02 - 11a

- We have decided that the tune requested by NOvA is long overdue
- The requirement of the prior of the parameter of z-expansion is solved
 - <https://arxiv.org/abs/1603.03048>
 - We want to use this to repeat the same exercise
- We are in the process of starting the exercise
 - Probably won't be ready for v3.2
 - Should be done for v3.4

Bug in Resonance definition

- Stephen Dolan reported a bug in the Resonant interaction
- The resonances P33(1600) and F17(1970) are enabled in the options
 - config/CommonParam.xml – Line 280
 - The code is able to support it
- Events will be generated anyway but the resonance is stored as a ROOTino particle (PDG = 0)
 - The resonance it is not decayed
 - The event looks like a 0pi event
- How to deal with this
 - Change the configuration simply removing the name from the list
 - It has to be done in all the CommonParam file :-)
 - Leave things as they are and then remove events that contain a ROOTino
 - Only P33(1600) is relevant, the other has an energy too high to create the issue

Other minor things

- Fix in reweight to cope with new Coherent definitions
- A number of changes mentioned in previous forums are now officially into the master branch and will be released with v3.2
 - Coherent definitions will have impacts on the API typically seen by users
- Configuration script is under heavy maintenance as many new external dependencies are being added
 - Also proper configuration for some fortran libraries are included
 - Users might experience some troubles
 - Please feel free to report these issues

Release of version 3.2.0

- The time release to be expected in 1-2 months
 - If you are working on an incubator please get in touch with your group coordinator
- Many new dependencies will be introduced
 - The webpage <https://hep.ph.liv.ac.uk/~costasa/genie/releases.html> is updated for the purpose
- Because of the the changes for Coherent a new reweight tag will be necessary as well