GENIE - Support #2670

Spline file generation and reduction

04/24/2012 01:29 PM - Robert Hatcher

Status:	Work in progress		**Start date:**	04/24/2012
Priority:	Normal		**Due date:**	07/19/2016
Assignee:	Robert Hatcher		**% Done:**	90%
Category:			**Estimated time:**	0.00 hour
Target version:			**Spent time:**	0.00 hour

Description

Have an easily run (push-button) set of scripts that will generate a spline file. It should be able to take an indicator of a GENIE release and optionally any variations (changes of parameters/models). Using the parallelism of the grid or a cluster. It should generate the free (proton,neutrino) off each of the nu flavors (ie. 6). Once that is complete it then combines those and uses those as inputs to produce splines for all possible isotopes used in any FNAL geometry. Once those are finish then they should be combined to form a master spline file.

From the master spline one should be able to produce a stripped down file that only has the desired isotopes for a particular setup.

The output files should be held in some common shareable area and non-standard variants should be classified in some identifiable manner.

History

#1 - 06/11/2013 01:13 PM - Robert Hatcher

- *% Done changed from 0 to 50*

Scripts to help do this are documented at: <u>Creating_cross-section_spline_files</u>

#2 - 04/30/2014 11:43 AM - Robert Hatcher

- *Due date set to 06/30/2014*

Solution given documented above was adequate for users at the time. It could possibly do with some revisions to make it more robust, or scrapped and a new more installation agnostic system built. Putting a due date on this to ensure that it gets reviewed in the not too distant future.

#3 - 04/30/2014 11:44 AM - Robert Hatcher

- *Status changed from New to Assigned*

#4 - 04/30/2014 11:45 AM - Robert Hatcher

- *% Done changed from 50 to 70*

#5 - 06/23/2014 12:08 PM - Robert Hatcher

- *Due date changed from 06/30/2014 to 08/29/2014*

Extending due date because it doesn't look like this is going to get worked on in the near future.

#6 - 05/22/2015 03:55 PM - Gabriel Perdue

- *Due date changed from 08/29/2014 to 06/08/2015*

#7 - 07/12/2016 10:04 AM - Robert Hatcher

- *Due date changed from 06/08/2015 to 07/19/2016*

- *Status changed from Assigned to Work in progress*

- *% Done changed from 70 to 90*

Extended script exists for general case. Uses a DAG of { 12 , 1, 105, 1, 1 } jobs to do processing { free nucleons x nu flavors, combine, isotopes, combine, package }. Creates full UPS product and can handle alternative UserPhysicsOptions.xml and/or EventGeneratorListAssembler.xml.

Due to requirement of intermediate work products needs a common work space -- currently relies on BlueArc data disk mounted on grid nodes.

Needs to be migrated to use ifdh to avoid the direct write (and for users such a genie who lack BlueArc data and only have PNFS disk space).