

ctools - Feature #807

Add check of number of events to simulate in ctobssim

03/22/2013 10:47 AM - Martin Pierrick

Status:	Closed	Start date:	03/22/2013
Priority:	High	Due date:	
Assigned To:	Knödlseider Jürgen	% Done:	100%
Category:		Estimated time:	2.00 hours
Target version:	1.0.0		
Description It could be useful to make a check of the number of events to simulate with ctobssim before actually running the simulation. The problem at the moment is that if you mess up with the spectral parameters of a source or of the background (prefactors or pivot energies or...), the code runs the simulation even if the number of events to throw is huge and will lead to excessive memory requirements. In the worst cases, the job ends up on a bad_alloc().			

History

#1 - 01/07/2014 11:57 PM - Knödlseider Jürgen

- Status changed from New to In Progress
- Assigned To set to Knödlseider Jürgen
- % Done changed from 0 to 20

ctobssim now determines the length of a time slice from the photon flux, limiting the number of photons simulated in one slice to 1000000. This avoids a core dump due to a memory allocation problem.

Still, no warning is issues if the flux is higher than expected.

#2 - 10/30/2014 12:28 PM - Knödlseider Jürgen

- Priority changed from Normal to High
- Target version set to 1.0.0

We want to have a warning for release version 1.0.0

#3 - 02/10/2015 11:53 AM - Knödlseider Jürgen

- Status changed from In Progress to Closed
- % Done changed from 20 to 100

I added a hidden maxrate parameter that leads to an exception in case that the model requires a photon rate above that value. By default the maxrate parameter is set to 1e6 which should be okay for realistic VHE sources, and thus prevents getting stuck by huge memory requirements for ctobssim.