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# Fast Simulation - Event Generator

Complete:

## Event Generation or reading (Source)

The event generation/reading step is not different from the event generation/reading step used as well for full simulation, and use a "source" module in the cfg file. A complete documentation can be found in the WorkBook. Several possibilities exist and include

- On-the fly generation with event generators (e.g., Pythia, Herwig, ...)
- On-the-fly generation with particle guns (Flat E, flat pT, single particles, several particles, with/without decays...)
- Reading MC truth information from HepMC ascii files
- Reading MC truth information from a PAW (!) CMKIN ntuple
- Reading MC truth information from a Pool Root file

A very useful possibility is opened by the latter point: fully simulated events, saved in a Pool Root file, contains in particular the MC truth information. By reading these events, it is possible to process them through the Fast Simulation, and compare the results of the latter with those of the Full Simulation in a single job! Un-be-lie-va-ble! Isn't that beautiful? Eh? [↗](#)

The random number initialization for this step is included in the above step as

```
untracked uint32 sourceSeed = 98765
```

## Review status

Reviewer/Editor and Date (copy from screen)	Comments
PatrickJanot - 26 Apr 2007	Documentation complete
JennyWilliams - 23 Mar 2007	created template page

Responsible: AndreaGiammanco

Last reviewed by: Reviewer

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This topic: CMSPublic > SWGuideFastSimEvtGen

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