sPHENIX Software Status

Production and Tools

Cameron Dean

05/17/2021

Heavy Flavor Topical Group

Heavy Flavor Tools

- No updates on DecayFinder and Anti-trigger
- KFParticle: Changes were pushed
  - **Jenkins complained**
  - **No error was recorded though? Maybe accidentally picked up some other issue?**

New Warnings

Congratulations

No issues have been reported

```
------------------------------------------------------------------
Libraries have been installed in:
   /var/lib/jenkins/workspace/sPHENIX/Build-Master-gcc8@5/build/new/install.1/lib

If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the `-LLIBDIR'
flag during linking and do at least one of the following:
   - add LIBDIR to the `LD_LIBRARY_PATH' environment variable
     during execution
   - add LIBDIR to the `LD_RUN_PATH' environment variable
     during linking
   - use the `-Wl,-rpath -Wl,LIBDIR' linker flag
   - have your system administrator add LIBDIR to `/etc/ld.so.conf'

See any operating system documentation about shared libraries for
more information, such as the ld(1) and ld.so(8) manual pages.
------------------------------------------------------------------
```

Information Messages

MDC Production

- Min-bias production was attempted but crashed
  - **Traced down to events with no silicon seeds or low number of tracks**
  - **This meant initial vertexing would segfault**
  - **[Fix has been implemented](#)**
- Chris tried to start signal reprocessing to recover truth matching
  - **I kept distracting Chris which has delayed this, sorry**

This PR fixes a few issues in the Acts::IVF:

1. It adds a catch for the case where there are no silicon seeds produced. In this case, the IVF returns a dummy vertex of (0,0,0)

2. It adds a catch for the case where the number of silicon tracks is less than the number of centroids in the initial silicon stub cleaning algorithm. In this case, the number of centroids is just set to 1. This only occurs when there are a small number of tracks (i.e. less than 5).

3. It updates the random number generator used in the centroid clustering algorithm to use that of the `RANDOMSEED` flag, so that results are reproducible if a random seed is set at the top most macro level.