Cooker Integration
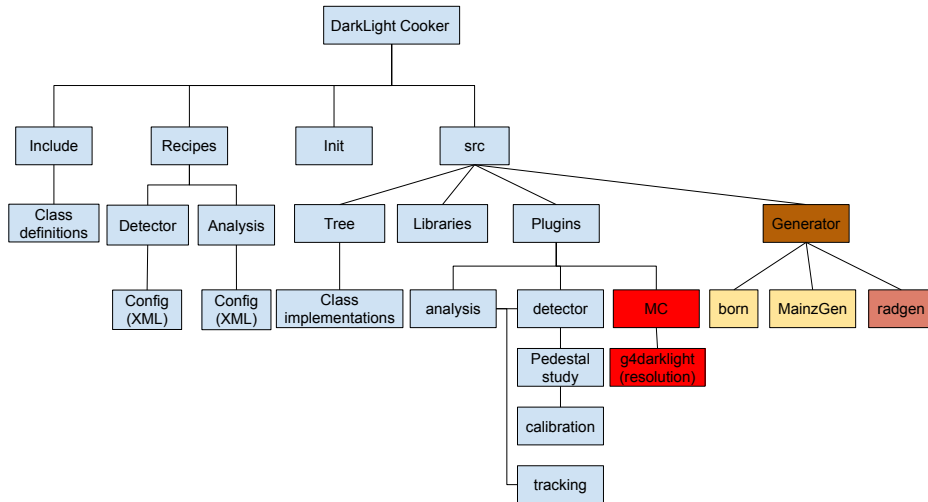
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Cooker Framework

Prelimaries

- Code located: darklight-cooker (click)

- Following `directories` have been added to the `darklight-cooker` repo: MainzGen, radgen & resolution (g4darklight)

- README contains best information of how to

- BUILD_OPTIONS are as follows:
  cmake ../ -DDo_XX=ON

- cmake ../ -DDo_MC=ON: g4darklight (Geant4 simulation)

- cmake ../ -DDo_RadGen=ON: turn on radgen generator

- cmake ../ -DDo_MainzGen=ON: turn on MainzGen generator

recommended

- cmake ../ -DDo_MC=ON -DDo_RadGen=ON -DDo_MainzGen=ON
  (turn everything ON)

g4darklight plugin

src/plugins/MC/g4darklight

- Currently standalone
- Fully functional from cooker
- **Fixed hard-coded paths**
- Use `CMAKE_CURRENT_SOURCE_DIR` to set file paths
- Add new files as follows:
  `SOURCE_DIR + "/stl/StainlessSteel/"`
- In general: `SOURCE_DIR + "/path/to/filedir/"`
- Added `config.h.in` where cmake `VARIABLES` can be defined for use in source files
- Run g4DL from the `BUILD_DIR` as follows:
  `./bin/g4DL`

Issues Encountered

- Noticed that the `DetectorConstruction.cc` looks for `field/B-Field.bin` file
- This crashes if `field/B-Field.bin` file is not found
- Needs further investigation or discussion (renaming files in `field/*.bin` not viable)

Work to Do

- Fully incorporated formerly independent submodules: `resolution`, `radgen`, `MainzGen`
- Renamed `resolution` to `g4darklight` which is fully functional
- Working on making `radgen` to be standalone
- More work needed: Reach out to the simulation folks