analysis/AnaEx03

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`extended/analysis` Examples

- The extended examples in the `analysis` category use of Geant4 analysis category and the statistical tool `G4ConvergenceTester` (in `global`)
- B1Con - shows how to use the statistical tool G4ConvergenceTester.
- AnaEx01, 02 – the same scenario (“sandwich” calorimeter , producing histograms and ntuples with Geant4 analysis (AnaEx01) and ROOT (AnaEx02)
- AnaEx03 – previously demonstrated usage of the external analysis tools based on the AIDA interface, this code was removed in 11.0 and a new example of this name was introduced in 11.1

AnaEx03

- The same setup including as AnaEx01,02
- It demonstrates usage of analysis **commands for file management** (new since Geant4 11.1), in particular writing histograms and ntuples in a file multiple times
  - `/analysis/openFile`
  - `/analysis/write`
  - `/analysis/closeFile`
- and **commands for histogram [and ntuple] deleting** (new since Geant4 11.2)
  - `/analysis/h1/delete id [keepSetting]`
  - `/analysis/ntuple/delete id [keepSetting]`
  - Deleting ntuples is still to be added

AnaEx03.in

```
# Macro file for the test of AnaEx03 example
#
/run/initialize
#
/analysis/setDefaultFileType {defaultFileType}
/analysis/openFile e-
#
# … define e- 100MeV
#
/run/beamOn 10
/analysis/write
/AnaEx03/runAction/printStatistic
/analysis/reset
#
# … define e- 200MeV
#
/analysis/h1/delete 1
/analysis/h1/delete 3 true
#
/run/beamOn 20
/analysis/write
/AnaEx03/runAction/printStatistic
/analysis/reset
#
# … define e- 300MeV
#
/analysis/h1/create "EGap2" "Edep in gap (MeV) 2" 10 0. 100.
/analysis/h1/create "LGap2"  "trackL in gap (mm) 2" 10 0. 500.
#
/run/beamOn 30
/analysis/write
/AnaEx03/runAction/printStatistic
/analysis/closeFile
#
/analysis/openFile proton
#
# … define proton 400MeV
#
/run/beamOn 40
/analysis/write
/AnaEx03/runAction/printStatistic
/analysis/reset

# … define proton 500MeV
/gun/energy 500 MeV
#
/run/beamOn 50
/analysis/write
/AnaEx03/runAction/printStatistic
/analysis/closeFile
```