fun4all analysis software

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Historical motivation for afterburner

Event generator/eic-smear (ROOT file with HepMC events)

fun4all
(ROOT files with full DST,
evaluator TTrees)

Performance/physics analysis (resolution, kinematic reconstruction, etc.)

- fun4all output contains:
 - Detector quantities (hits, towers, etc.)
 - Reconstructed quantities (tracks, clusters, etc.)

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 Afterburner allowed quick implementation/study of new cluster algorithms

Performance/physics analysis (resolution, kinematic reconstruction, etc.)

Current analysis flow with afterburner

fun4all
(ROOT files with full DST,
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Afterburner (improved clusterization, track matching, truth info)



"Evaluator+" TTree



Performance/physics analysis (resolution, kinematic reconstruction, etc.)

- New clusterization algorithms have since been implemented in fun4all
- However, running afterburner provides useful (though not strictly necessary) information:
 - Track/cluster matching
 - Truth matching information
 - Preliminary eID information
- Currently use afterburner to create enhanced evaluator file, on which analysis is run
- Can bypass afterburner if desired

Github repositories

Official afterburner repository (owned by F. Bock, calorimetry co-convener):
 https://github.com/FriederikeBock/AnalysisSoftwareEIC

 Fork containing "plugin" for creating enhanced evaluator file: https://github.com/tylerkutz/AnalysisSoftwareEIC