The Native BRAHMS Event Display

Karsten Büßer



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Introductio

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- Event display for the interactive version of BRAHMS
- Uses interactive GEANT3 features
- Plots reconstructed events, not simulated GEANT3 tracks and hits
- Visualization of the Particle Flow Algorithm
- Based on the work of many persons (Vasiliy Morgunov, Ties Behnke)
- Part of BRAHMS v308 (CVS version)
- Help function available
- Example kumac included in the CVS repository

Tracking Hits

Commands:

reco/cdet/hits 2 0.003

colour: 2 (red) size: 0.003





Tracking Hits

Commands:

reco/cdet/hits 6 0.03

colour: 6 (violet) size: 0.03





Commands:

reco/cdet/track 0 2 0.0 0 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 0.0 GeV colour for p<pcut: 0 (not dr.) line width: 3





Commands:

reco/cdet/track 0 2 1.0 5 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 1.0 GeV colour for p<pcut: 5 (yellow) line width: 3





Commands:

reco/cdet/track 0 2 2.0 5 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 2.0 GeV colour for p<pcut: 5 (yellow) line width: 3





Commands:

reco/cdet/track 0 2 5.0 5 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 5.0 GeV colour for p<pcut: 5 (yellow) line width: 3

Commands:

reco/cdet/track 0 2 10.0 5 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 10.0 GeV colour for p<pcut: 5 (yellow) line width: 3

Commands:

reco/cdet/track 0 2 30.0 5 3

track-#: 0 (all) colour for p>pcut: 2 (red) p-cut: 30.0 GeV colour for p<pcut: 5 (yellow) line width: 3

ECAL Hits

Commands:

reco/calo/ecal/assigned 2 0.03 260.

colour: 2 (red) size: 0.03 z-cut: 260. (just plot hits for abs(z)<260, → cut out endcap)

Plot hits assigned to tracks by particle flow algorithm.

ECAL Hits

Commands:

reco/calo/ecal/assigned 2 0.03 260. reco/calo/ecal/cluster 3 0.03 260.

colour: 2 (red), 3 (green) size: 0.03 z-cut: 260. (just plot hits for abs(z)<260, → cut out endcap)

Plot hits assigned to tracks by particle flow algorithm. Plot hits assigned to neutral clusters.

HCAL Hits

Commands:

reco/calo/hcal/size 2 0.0 100 260.

colour: 2 (red) E cut: 0.0 E scale: 100 z-cut: 260.

Plot hits assigned to tracks by particle flow algorithm. Energy deposition is encoded in the marker size.

HCAL Hits

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Commands:

reco/calo/hcal/size 2 0.0 100 260. reco/calo/hcal/cluster 3 0. 100 260.

colour: 2 (red), 3 (green) E cut: 0.0 E scale: 100 z-cut: 260.

Plot hits assigned to tracks by particle flow algorithm. Plot hits assigned to neutral clusters.

Particle Flow Objects

Commands:

reco/eflow/out 3 2 5 colour neutral obj.: 3 (green) colour charged obj.: 2(red) Line width

Plot particle flow objects. Lines are proportional to p_t and project to the IP.

Commands:

reco/cdet/hits 2 0.003

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Commands:

reco/cdet/hits 2 0.003 reco/cdet/track 0 2 2.0 0 3

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Commands:

reco/cdet/hits 2 0.003 reco/cdet/track 0 2 2.0 0 3 reco/calo/ecal/assigned 2 0.03 260. reco/calo/ecal/cluster 3 0.03 260.

Commands:

reco/cdet/hits 2 0.003 reco/cdet/track 0 2 2.0 0 3 reco/calo/ecal/assigned 2 0.03 260. reco/calo/ecal/cluster 3 0.03 260. reco/calo/hcal/size 2 0.0 100 260. reco/calo/hcal/cluster 3 0.0 100 260.

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Commands:

reco/cdet/hits 2 0.003 reco/cdet/track 0 2 2.0 0 3 reco/calo/ecal/assigned 2 0.03 260. reco/calo/ecal/cluster 3 0.03 260. reco/calo/hcal/size 2 0.0 100 260. reco/calo/hcal/cluster 3 0.0 100 260. reco/calo/hcal/cluster 3 0.0 100 260.

Conclusio n

- Try it out !
- Download BRAHMS v308 CVS developer version from:

www-zeuthen.desy.de/lc-cgi-bin/cvsweb.cgi/Br308/

- Example eventplot.kumac is in directory Br308/kumacs
- Trigger your favourite event and type exec eventplot
- Have fun !