

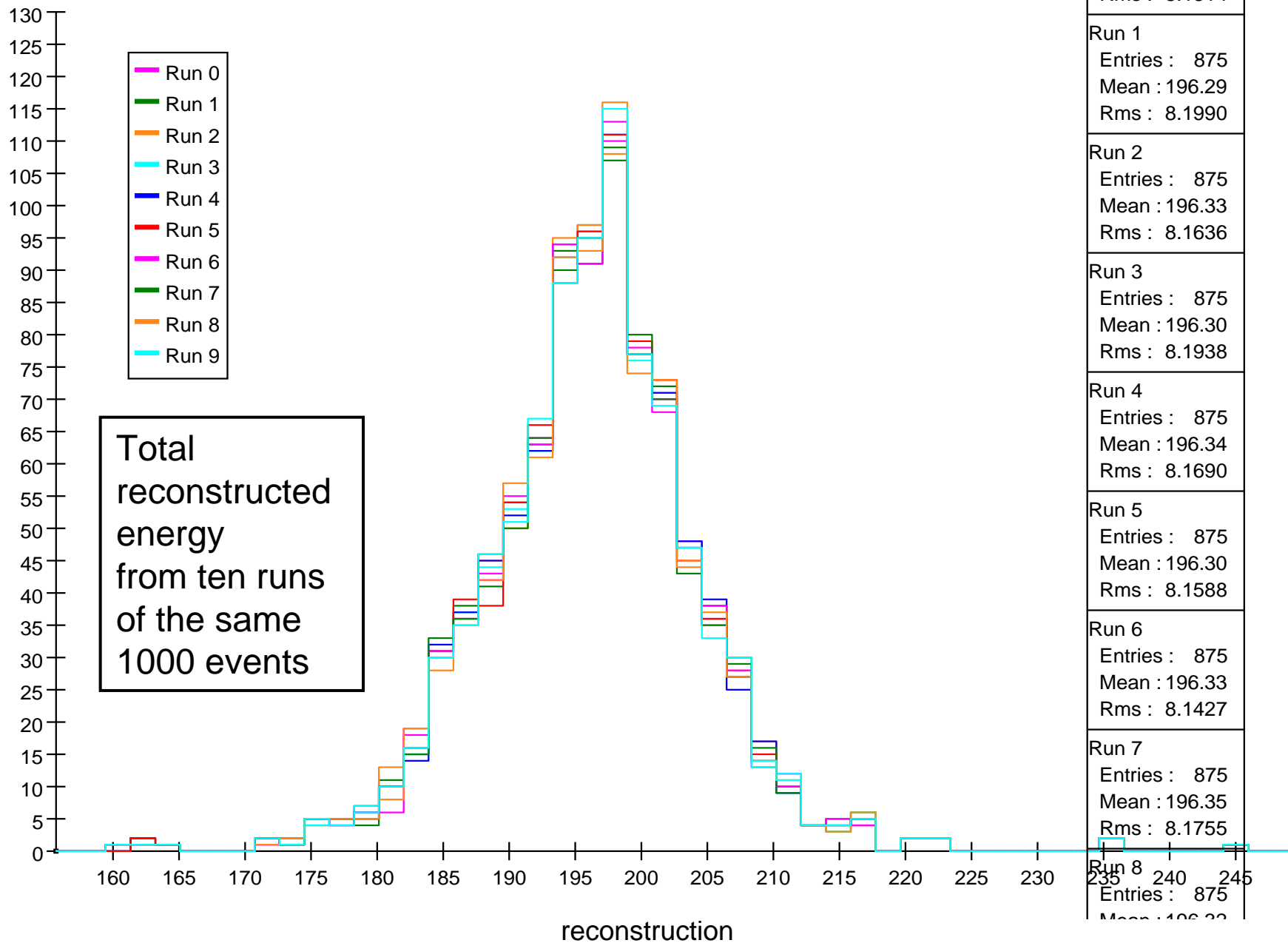
About non-repeatability of sid02 reconstruction

- Ron Cassell at this morning's PFA meeting (14 Jan 2010) reported that identical events don't always produce identical distributions under sid02 reco
- His slides follow
- His full presentation is at <http://ilcagenda.linearcollider.org/conferenceDisplay.py?confId=4386>

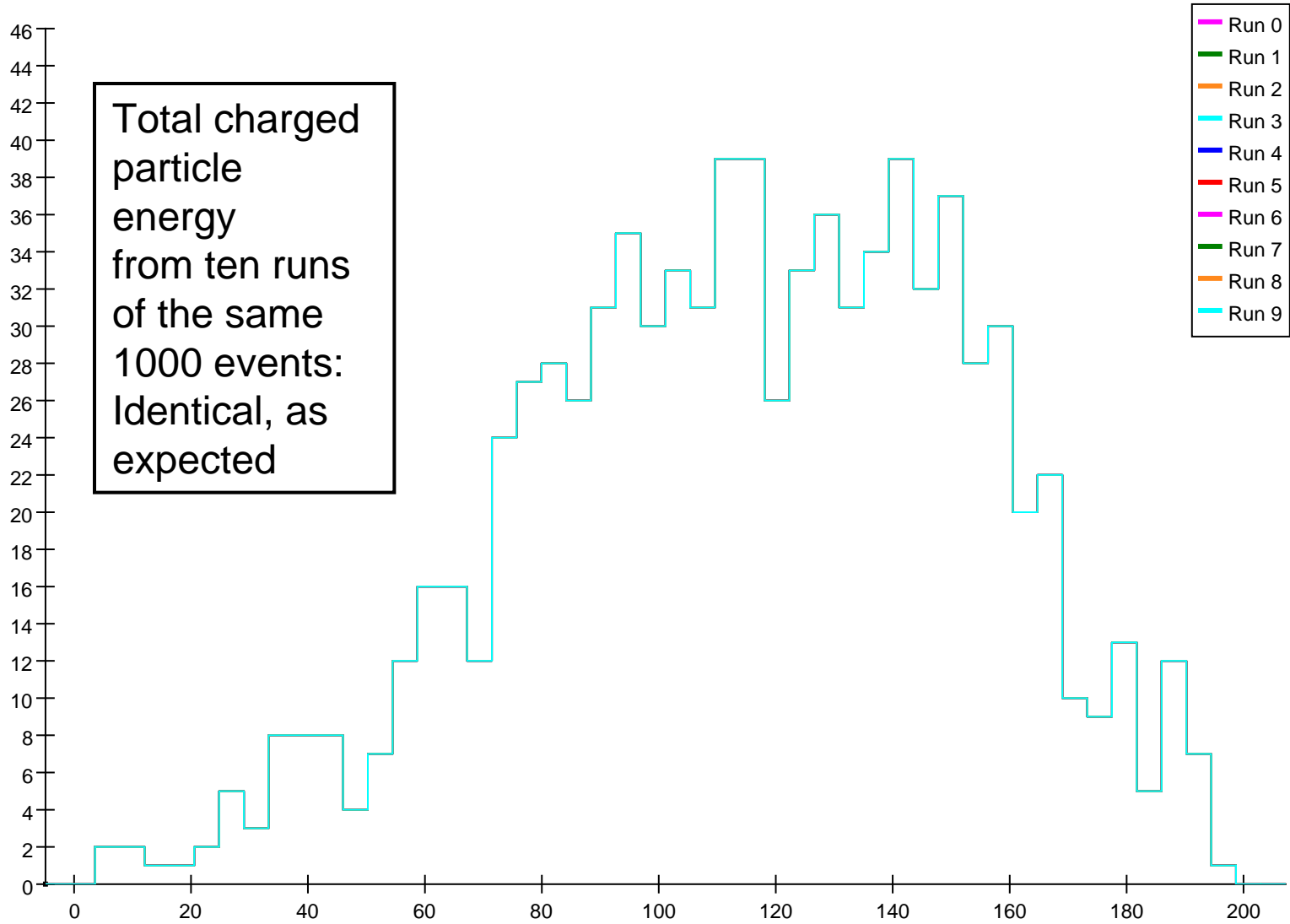
How to see the problem

- Run sid02 recon
 - On same simulated event sample multiple times
 - 10 times in this study
 - Input events from simulation
 - 1000 qqbar @ 200 GeV
 - Compare energy, multiplicity distributions of reconstructed particles
 - See plots on next page
 - 10 total event energy distributions overlaid

repeattestdist.aida - Event energy



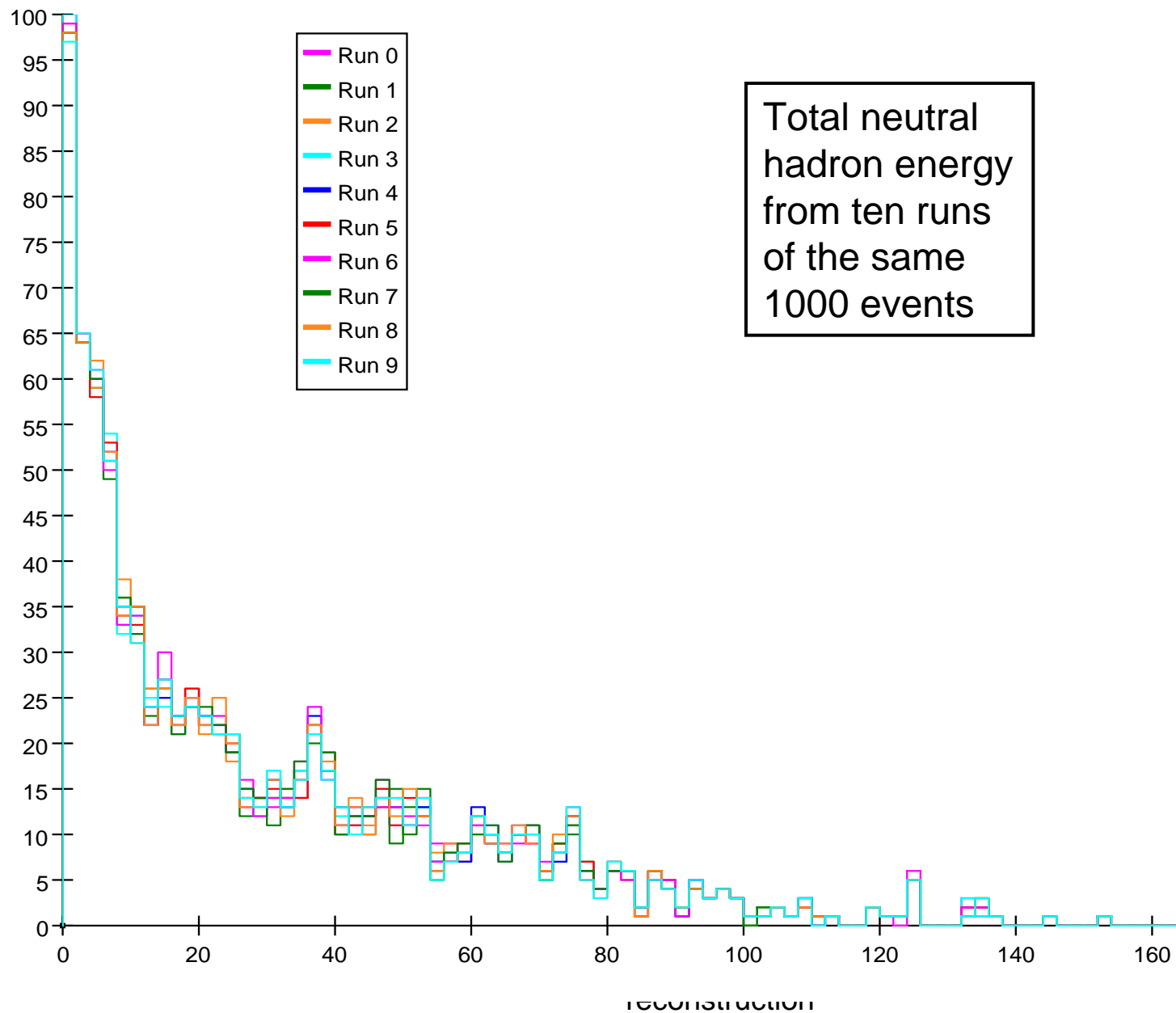
repeattestdist.aida - ch Event energy



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About non-repeatability of sid02 reconstruction

repeattestdist.aida - nh Event energy

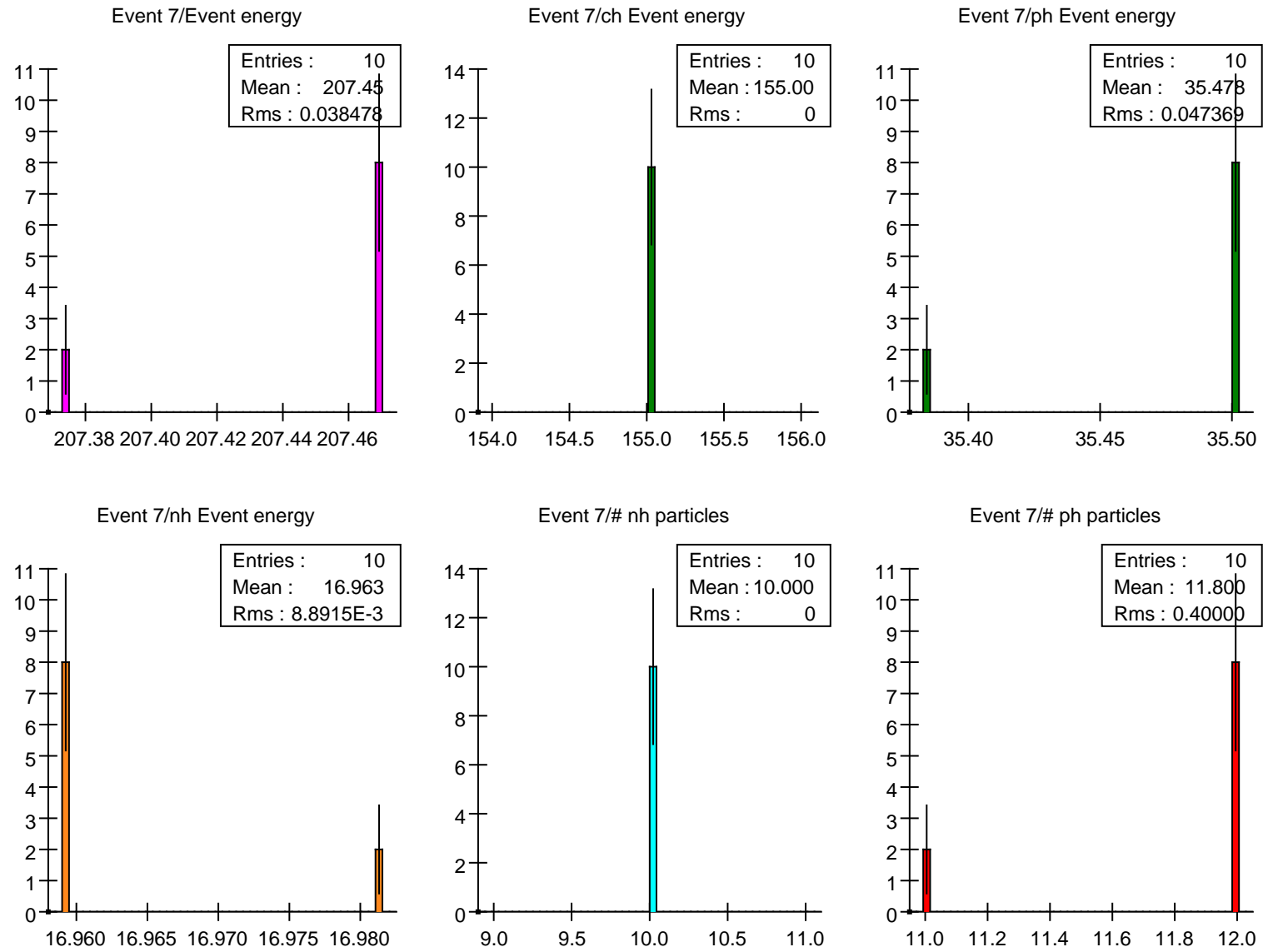


Run 0	Entries : 875	Mean : 30.283	Rms : 30.745
Run 1	Entries : 875	Mean : 30.279	Rms : 30.723
Run 2	Entries : 875	Mean : 30.291	Rms : 30.706
Run 3	Entries : 875	Mean : 30.301	Rms : 30.759
Run 4	Entries : 875	Mean : 30.305	Rms : 30.728
Run 5	Entries : 875	Mean : 30.265	Rms : 30.731
Run 6	Entries : 875	Mean : 30.307	Rms : 30.720
Run 7	Entries : 875	Mean : 30.311	Rms : 30.747
Run 8	Entries : 875	Mean : 30.283	Rms : 30.745
Run 9	Entries : 875	Mean : 30.279	Rms : 30.723

Compare individual events

- Next slides show distributions from selected single events
- Each event reconstructed ten times
- 9 of 50 events inspected have differences

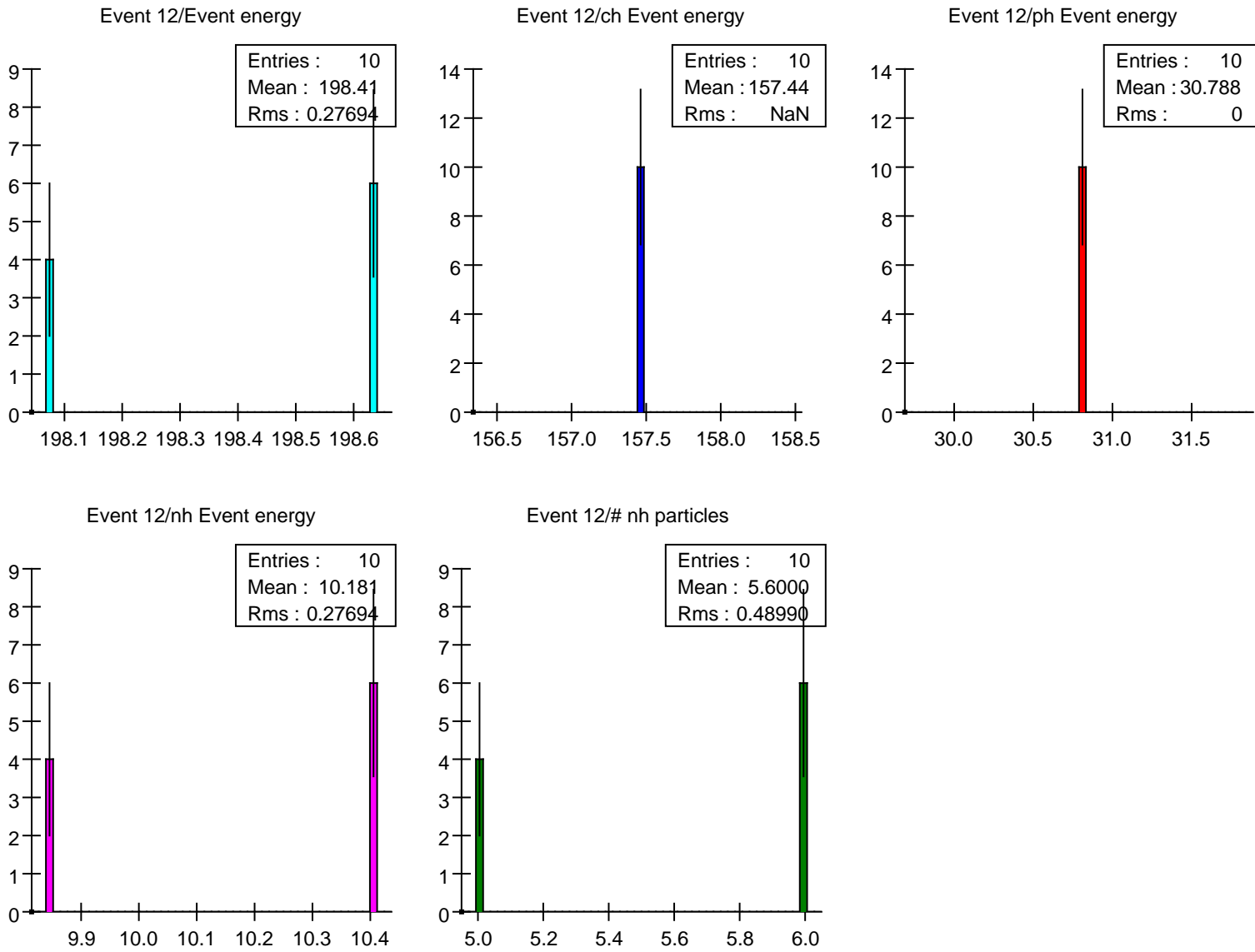
Ten events in each histogram



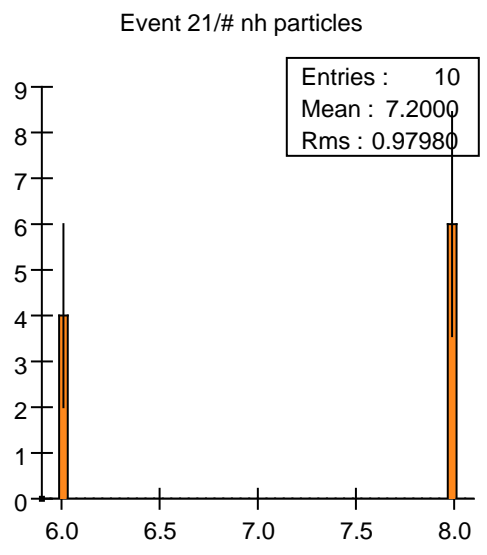
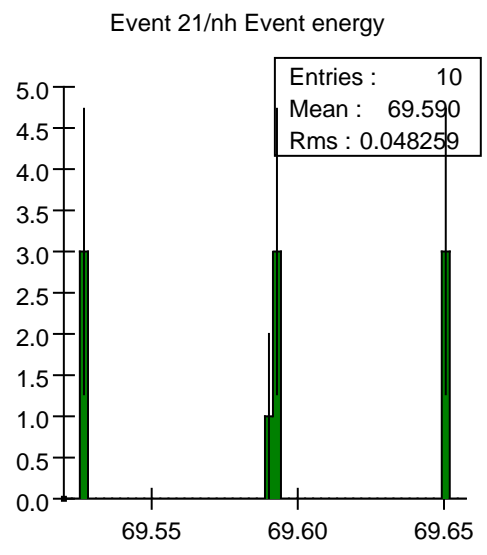
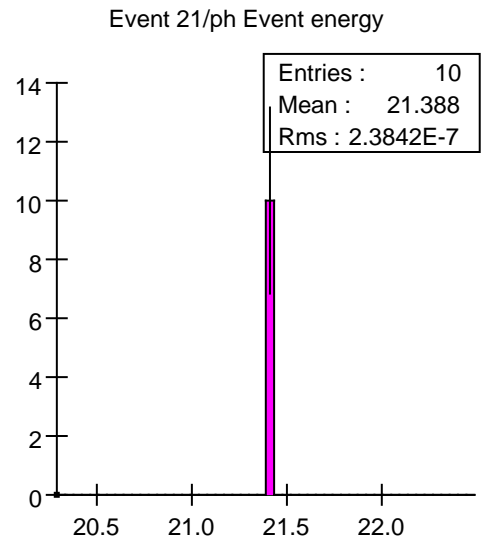
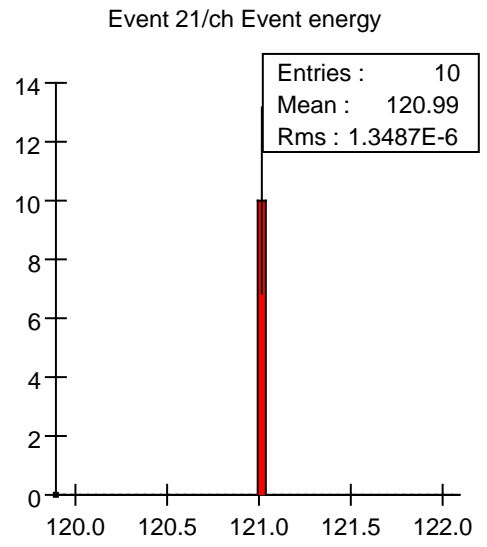
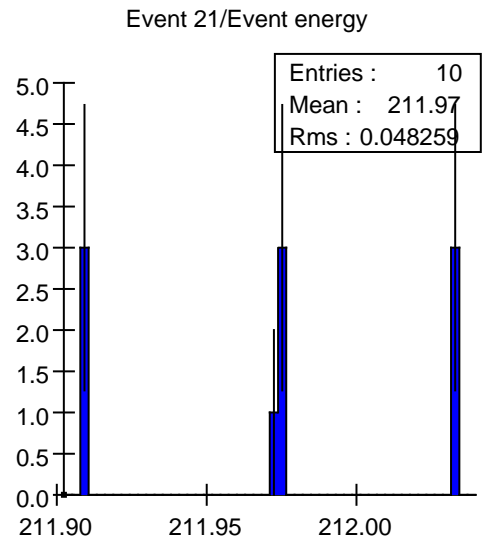
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About non-repeatability of sid02 reconstruction

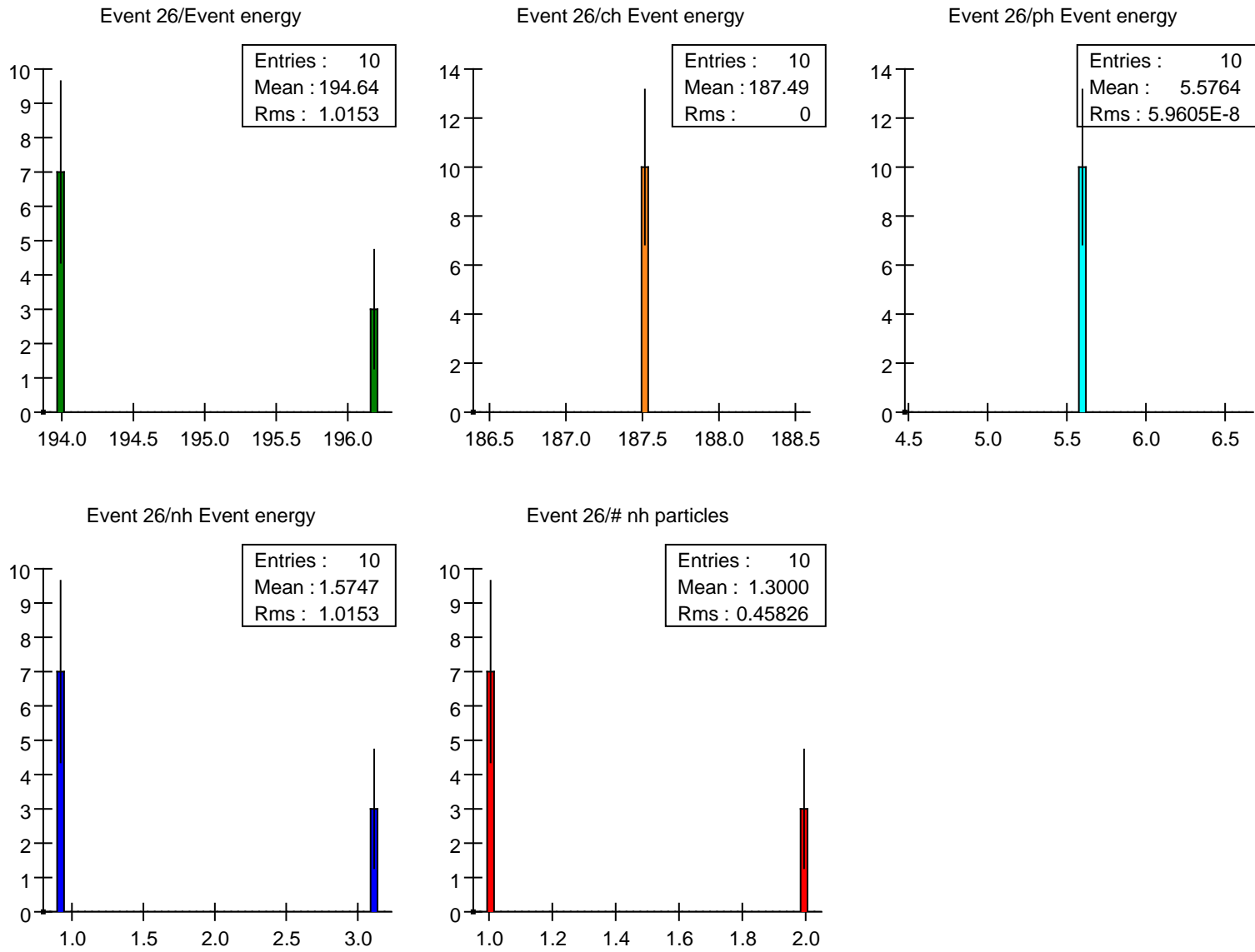
Ten events in each histogram



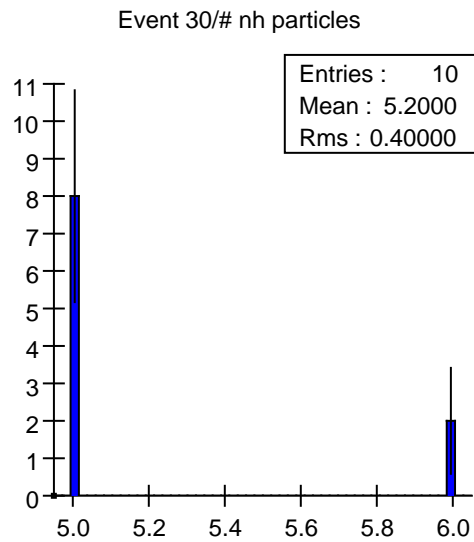
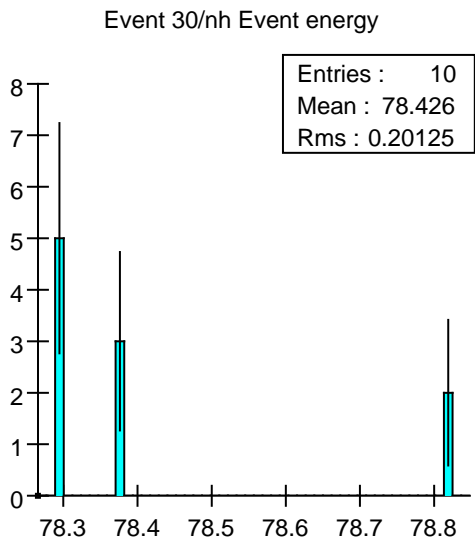
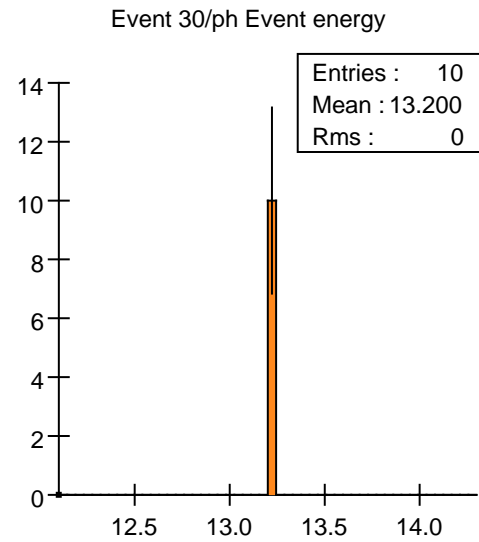
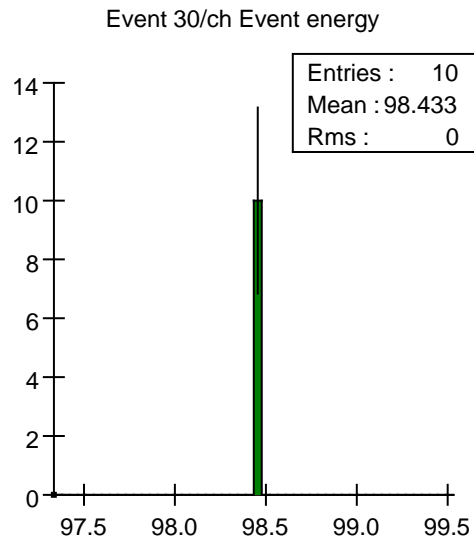
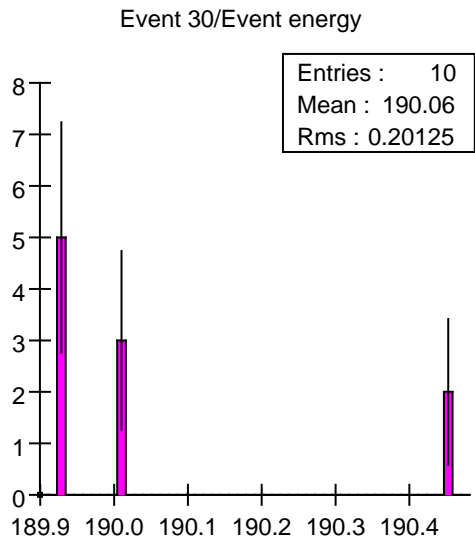
Ten events in each histogram



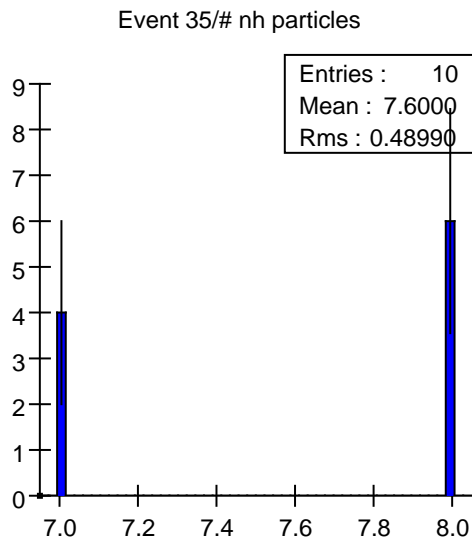
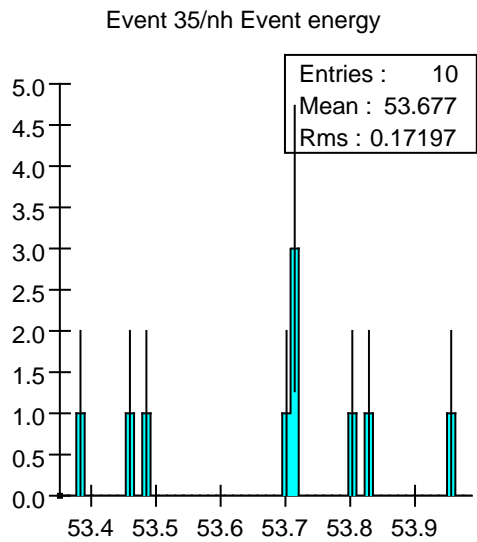
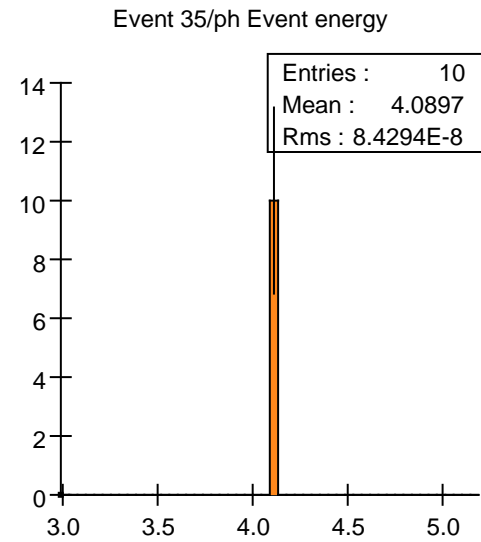
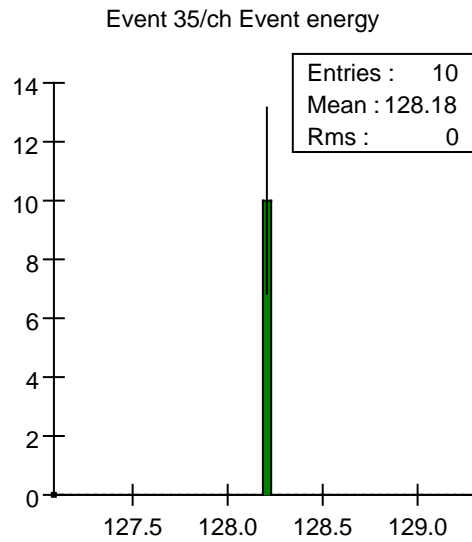
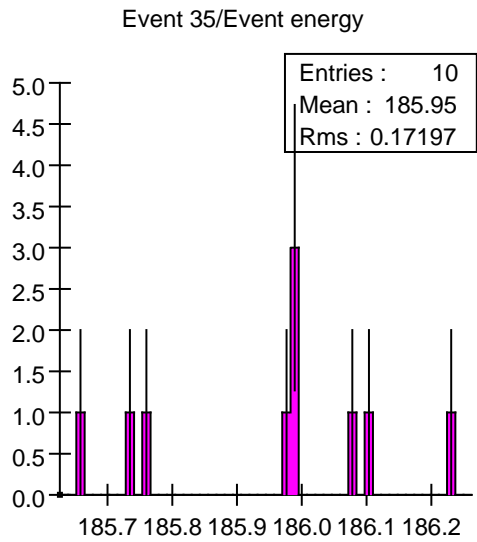
Ten events in each histogram



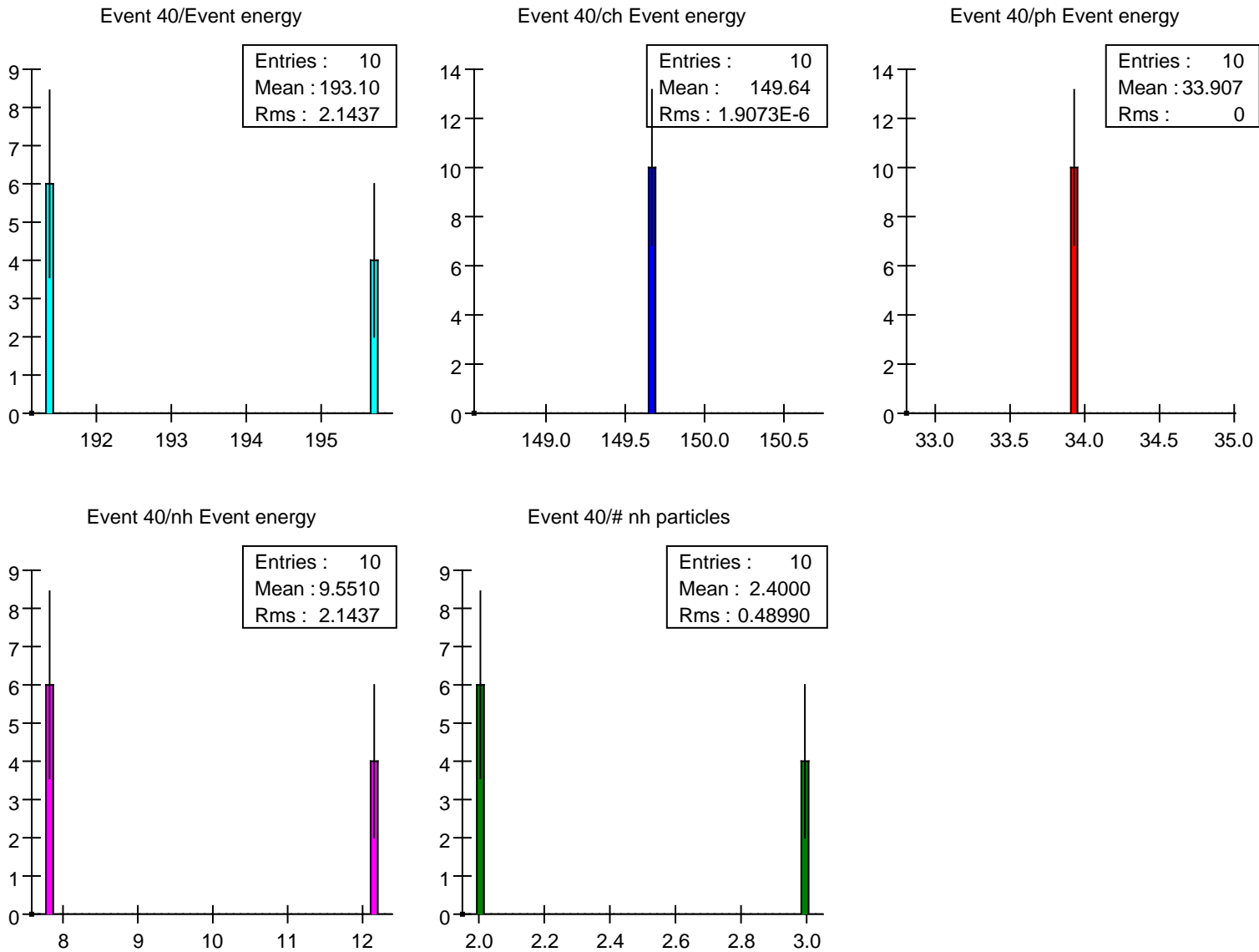
Ten events in each histogram



Ten events in each histogram



Ten events in each histogram



Ten events in each histogram

