

Alignment Status

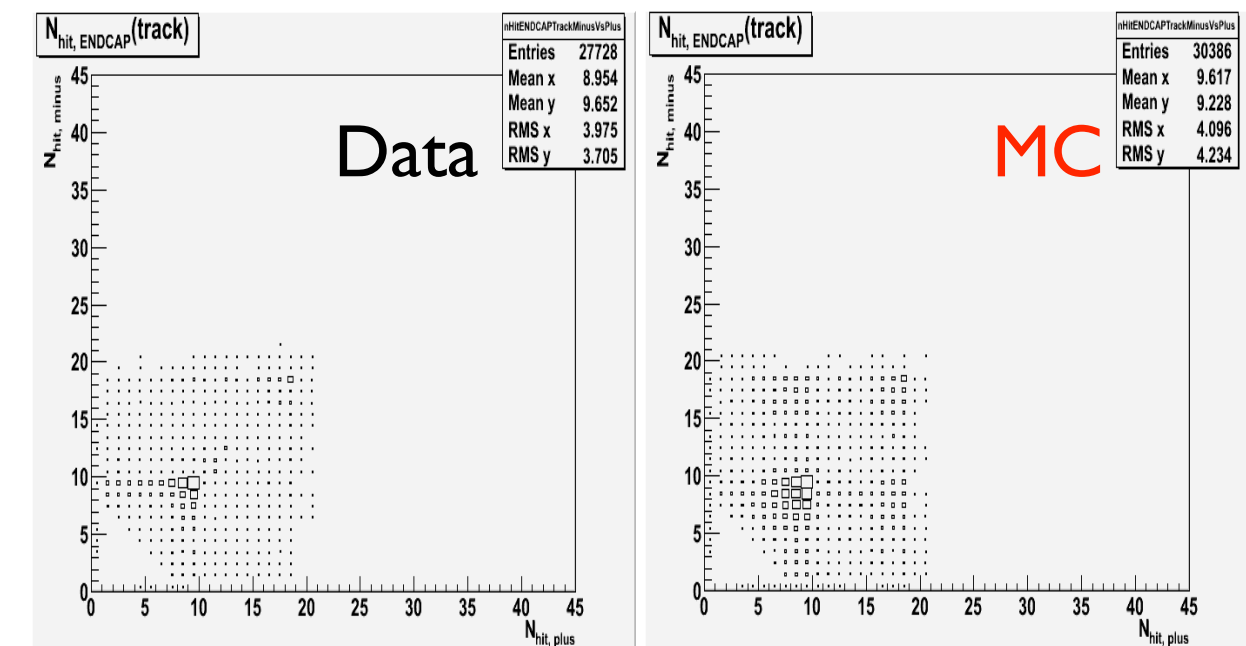
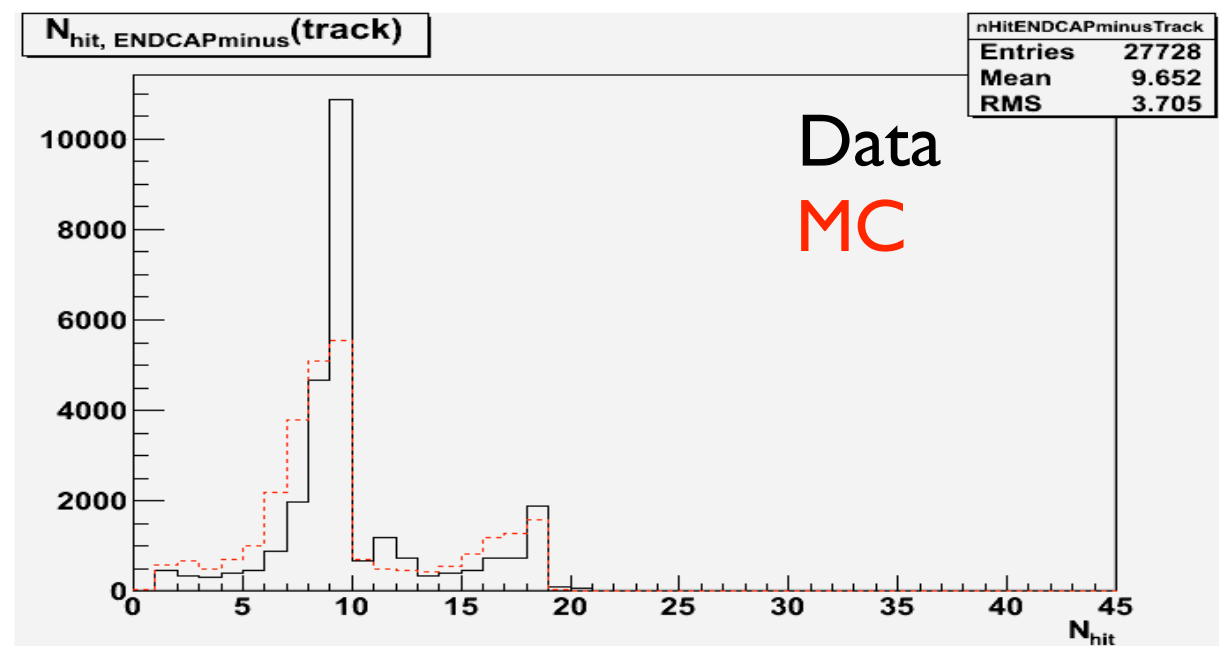
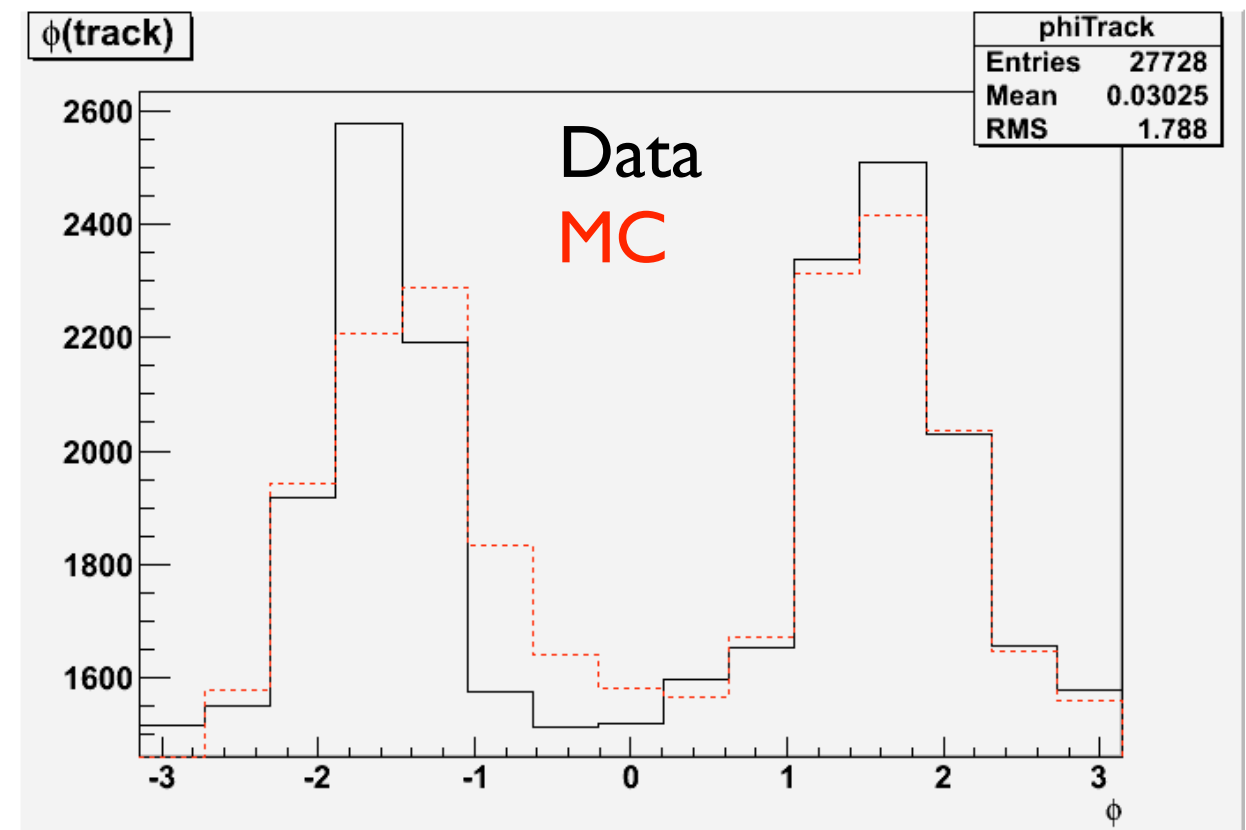
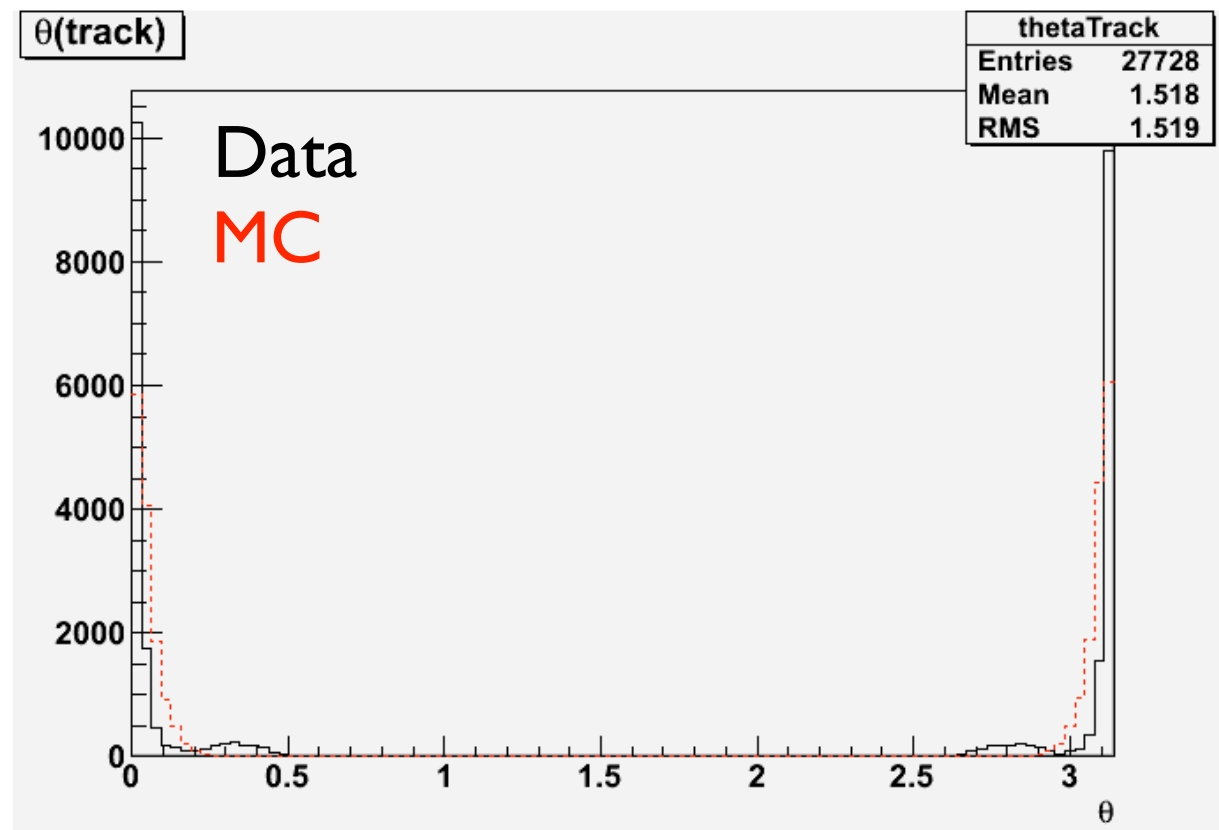
Gero Flucke, Krzysztof Glowinski, Johannes Hauk, Gregor Hellwig,
Claus Kleinwort, Rainer Mankel, Andreas Mussgiller,
Andrea Parenti, Alexander Spiridonov, Justyna Tomaszewska



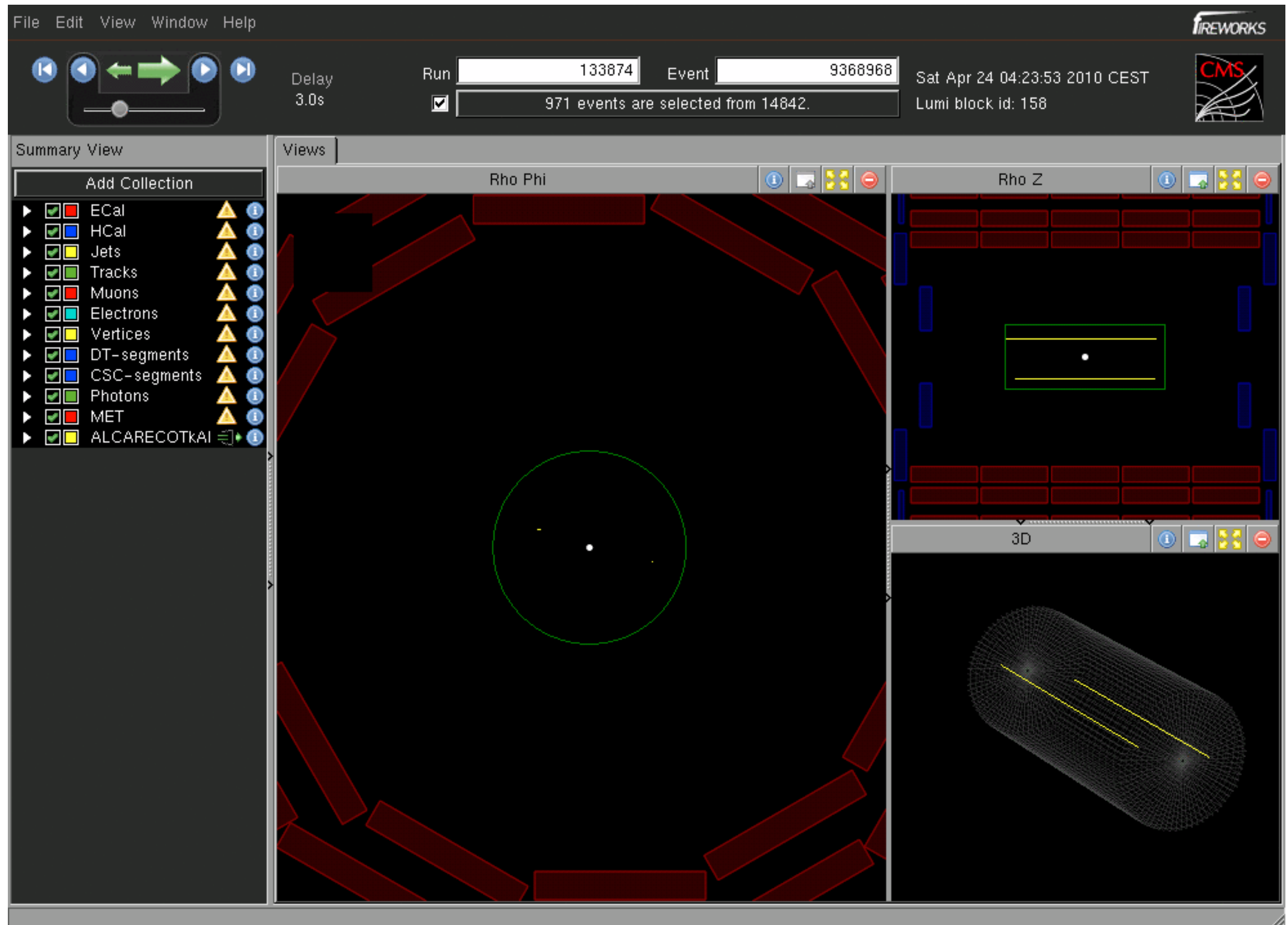
DESY CMS Group Meeting
30/08/2010

Beam Halo Tracks in Data

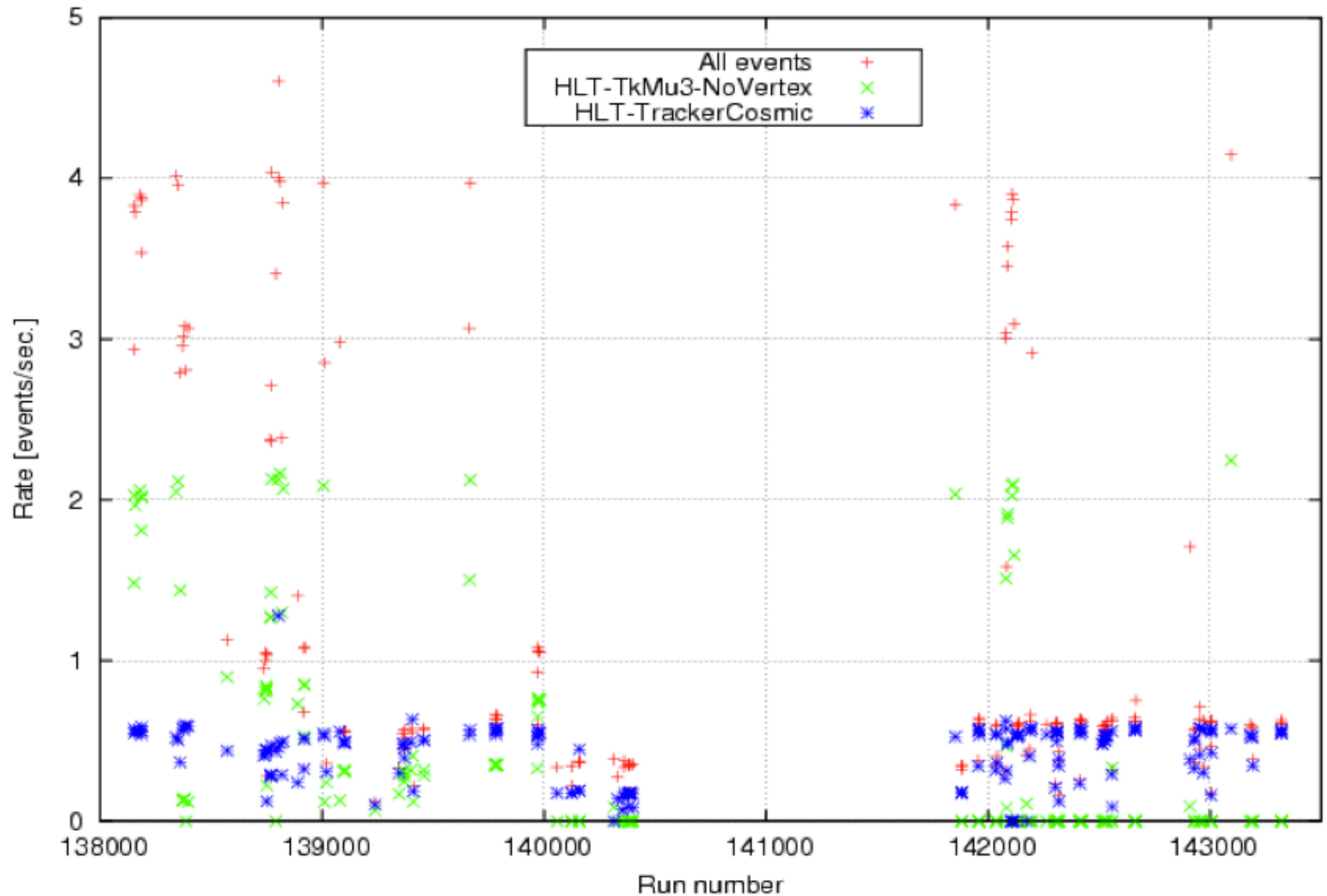
- Quite a few extensions and improvements in track selection
 - Minimum number of hits cut for end cap detector



Beam Halo Tracks in Data



Cosmics in Collisions



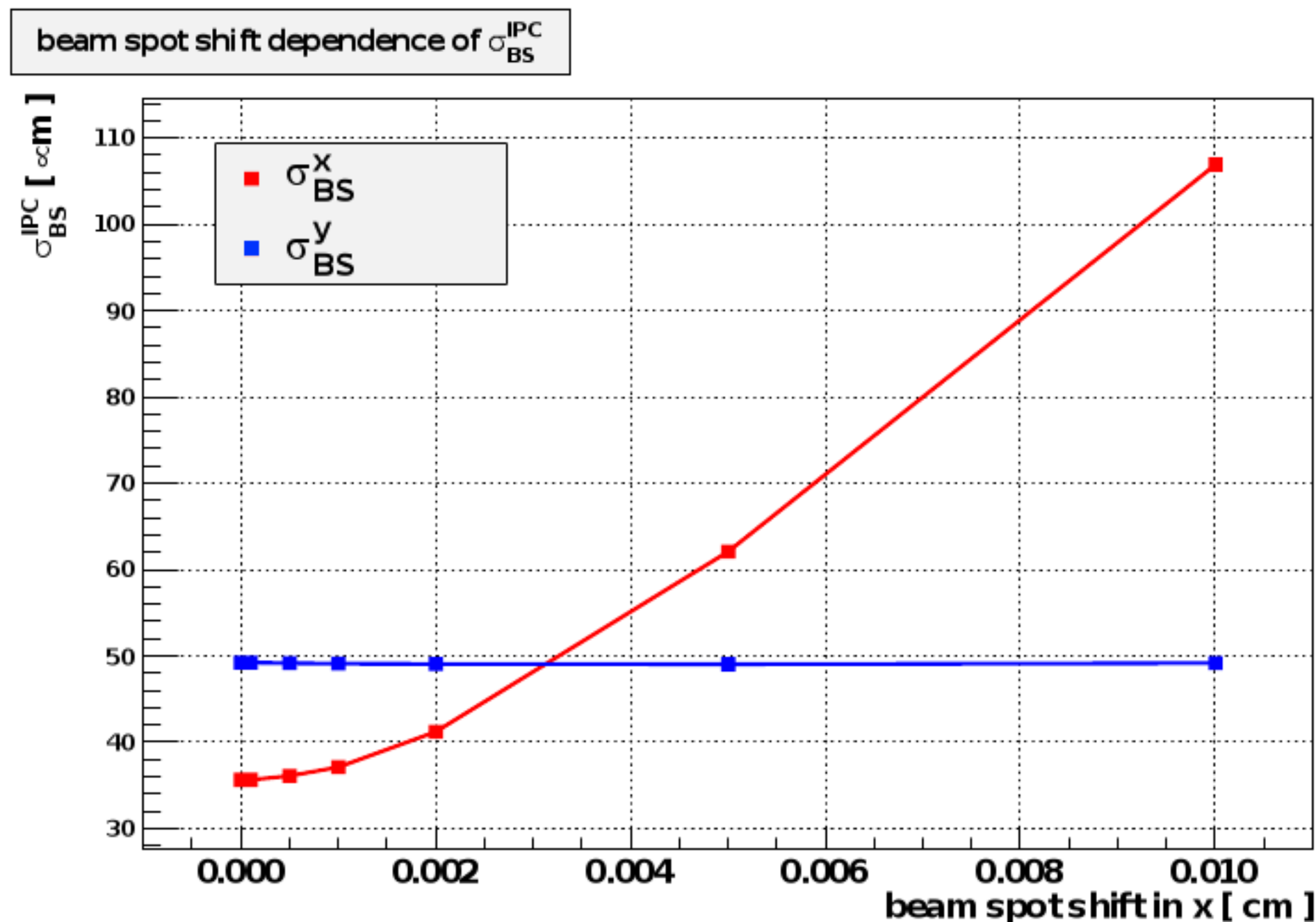
- Cosmic Trigger *HLT_TrackerCosmic* gives stable rates

Beam Spot Constraint in MillePede

- Implementation allows to use beam spot as constraint and additional alignable
 - Sensitive to X and Y position, and slopes $dXdZ$ and $dYdZ$
- Beam spot used to construct a virtual hit for each track
 - Virtual ID sensor at nominal beam spot position
 - Measurement is the transverse impact parameter
- Tested with RelVal samples, and shifted and tilted beam spots
- Some further cleanup needed
- Will go into CMSSW_3_9_0

Beam Spot Width - Systematic Studies

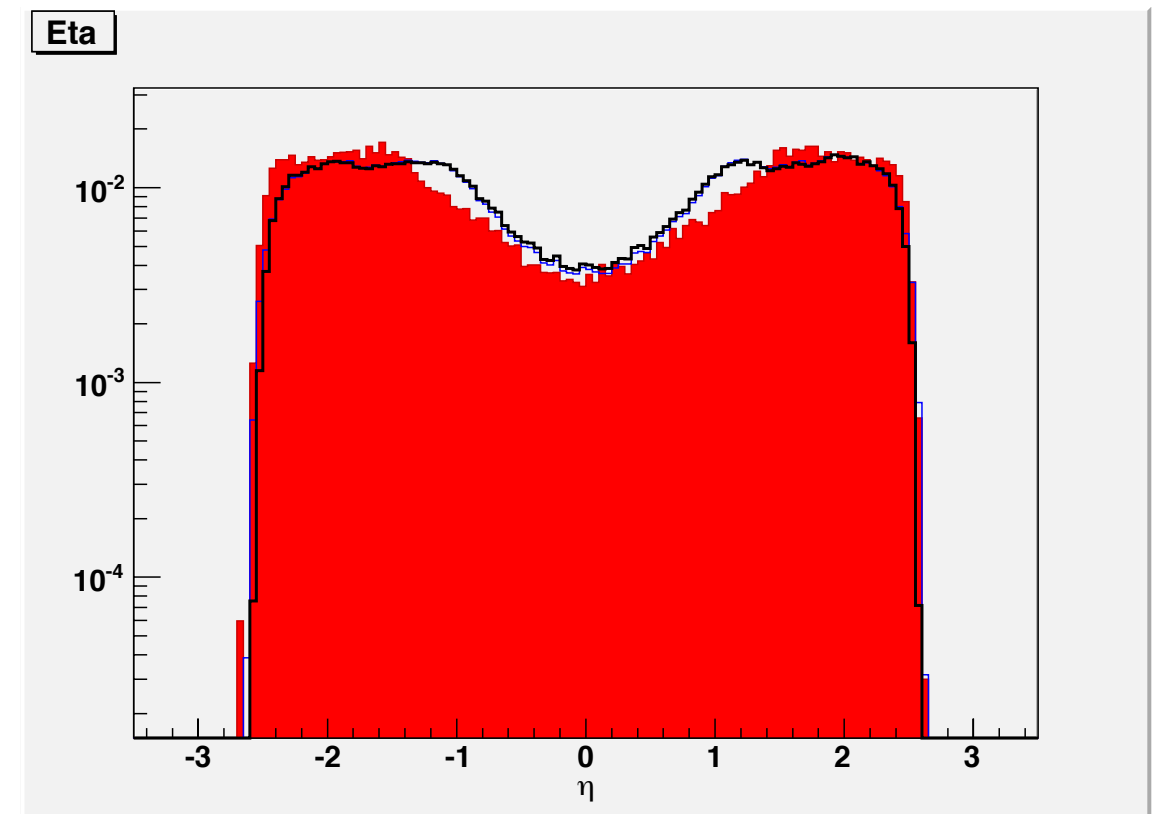
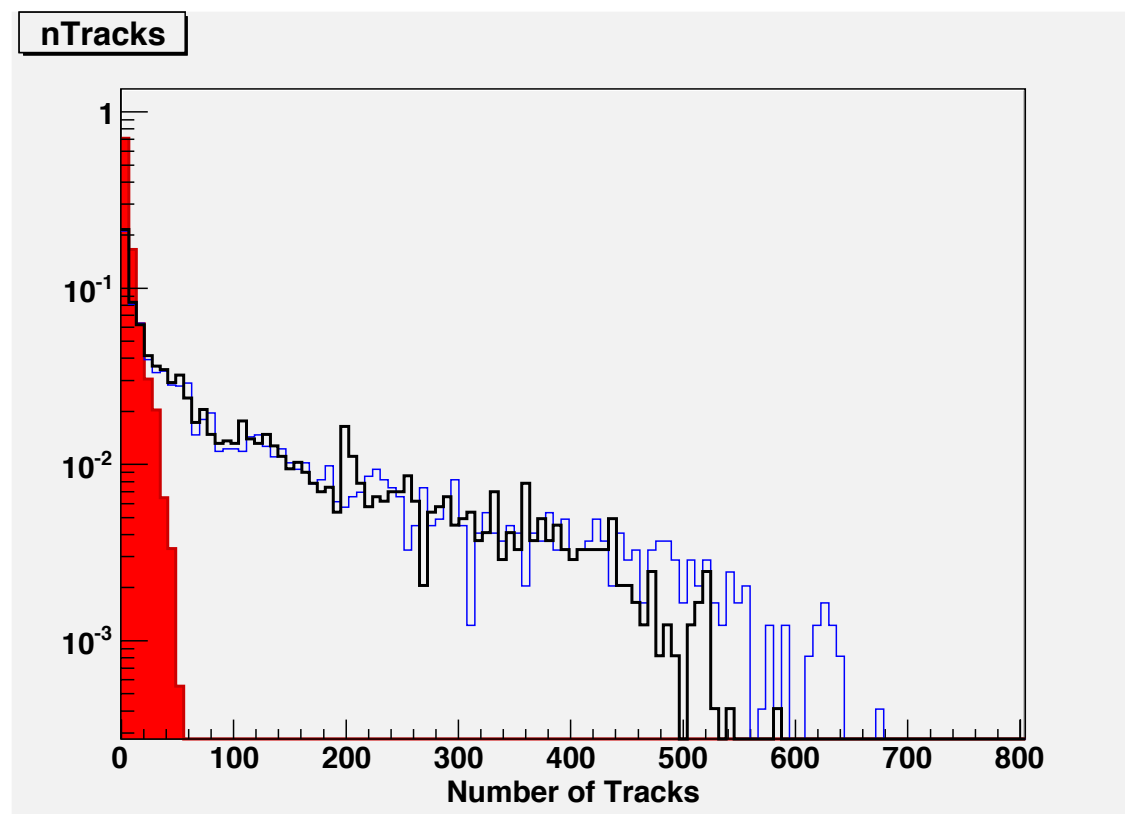
- Shift in beam spot position affects determination of beam spot width



- Can be used to estimate influence of systematic error on beam spot position measurement on beam spot width

Preparations for Heavy Ion Running

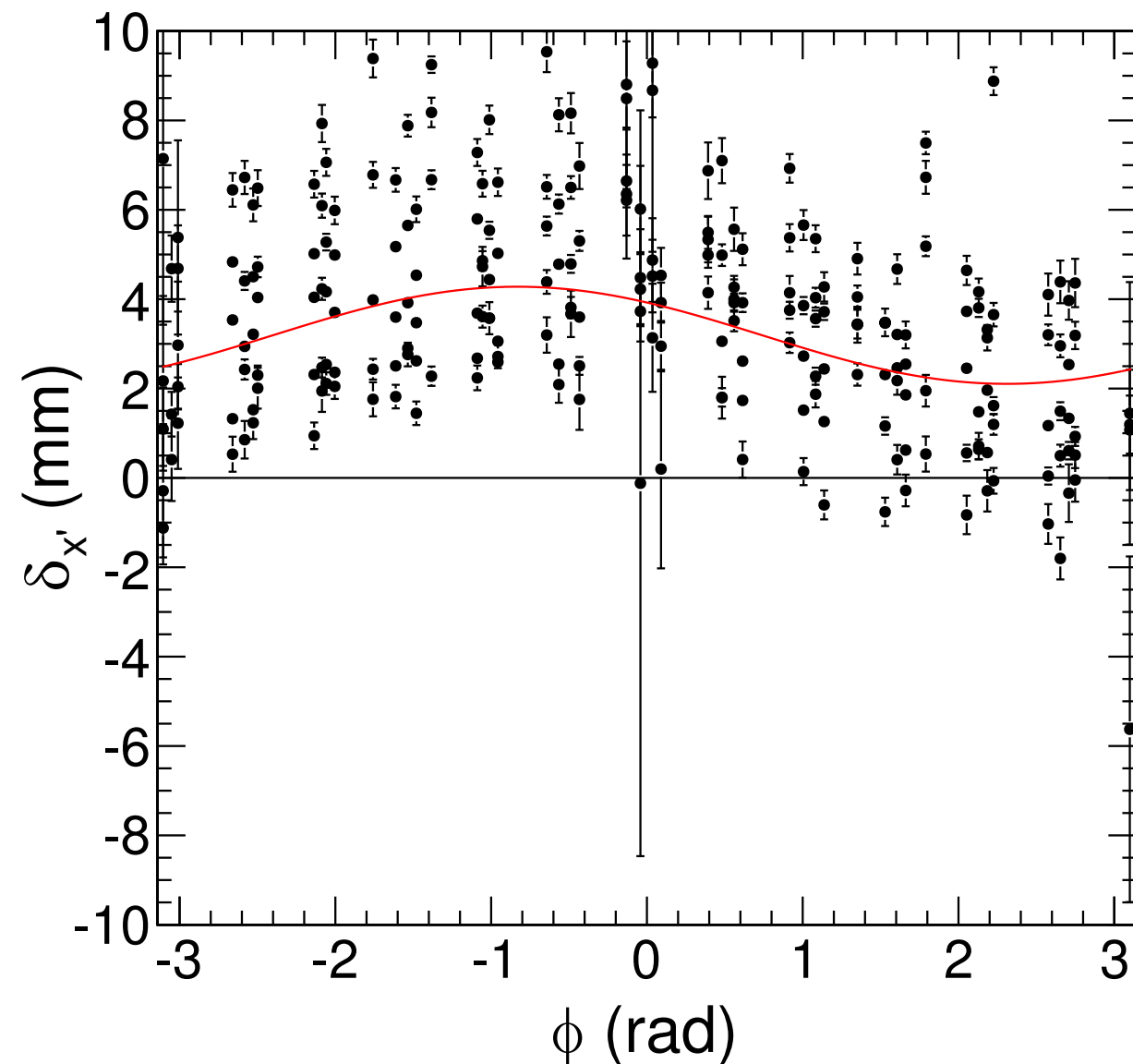
- CMSSW_3_9_0 will be used for HI running
- Need new AlCaReco producers
- Preliminary changes in place but not in CVS
- Details will be discussed in AlCa meeting tomorrow



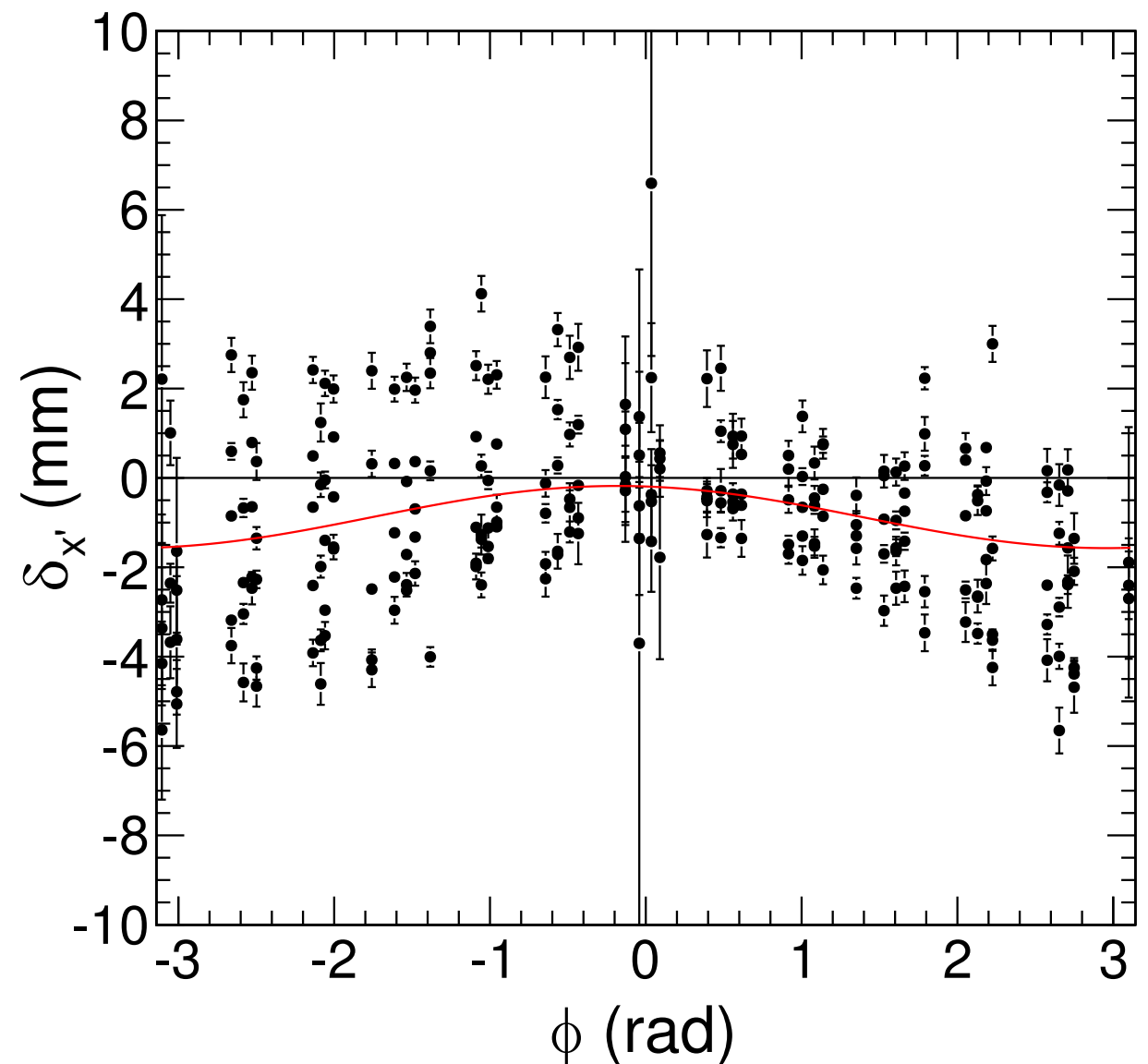
- MinBias ReVal AlCaReco
- AlCaReco from Hydjet_Quenched_MinBias_2760GeV
 - hiSelectedTracks collection
 - hiGeneralTracks collection

Global Muon vs. Tracker Alignment

Without Sasha's numbers



With Sasha's numbers



- *GlobalPositionRcd* correctly removes rotation between tracker and muon
- Will become a standard part of the alignment workflow