Beam Position Update

STT Meeting

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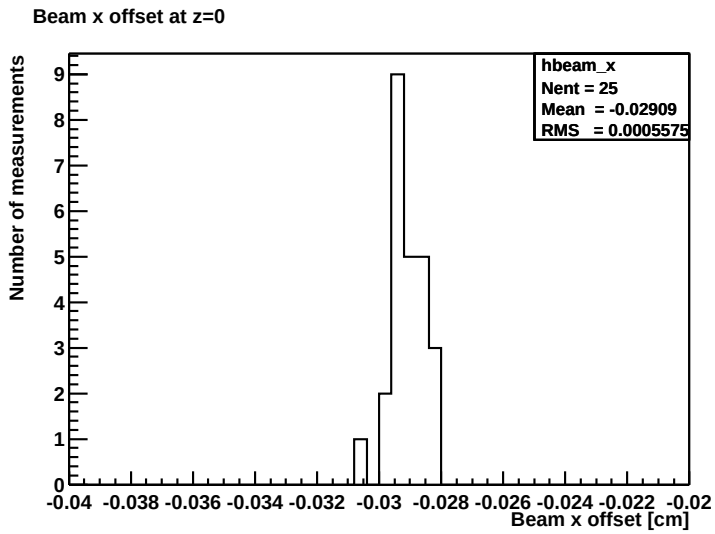
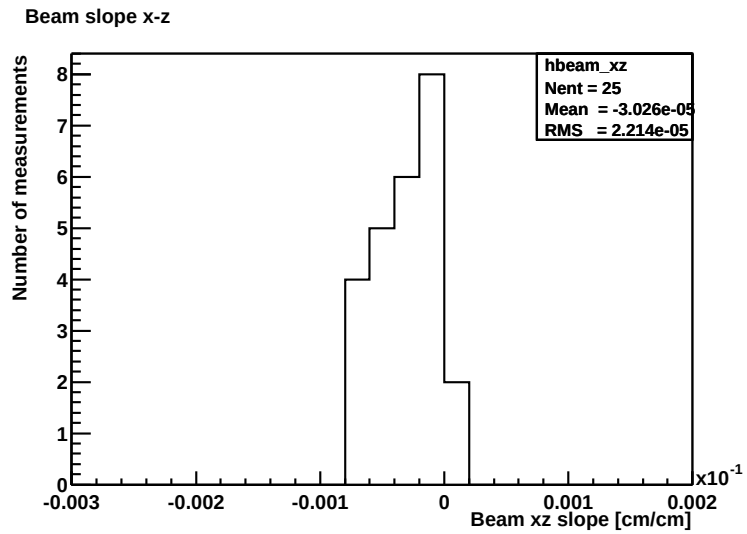
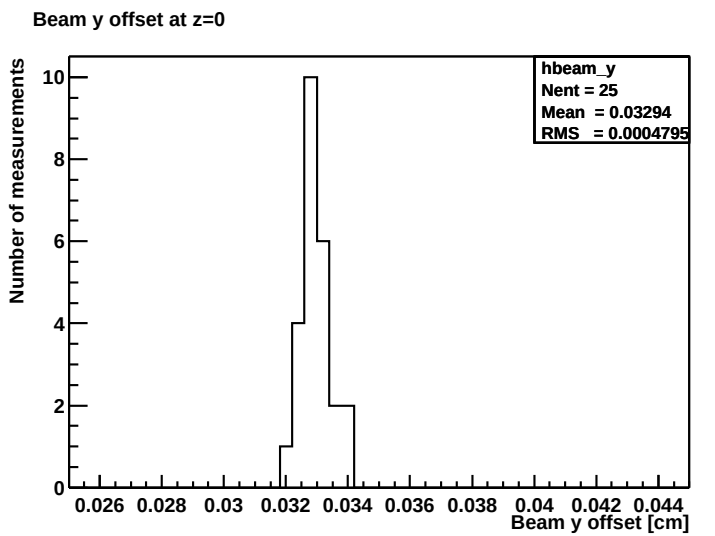
What's New?

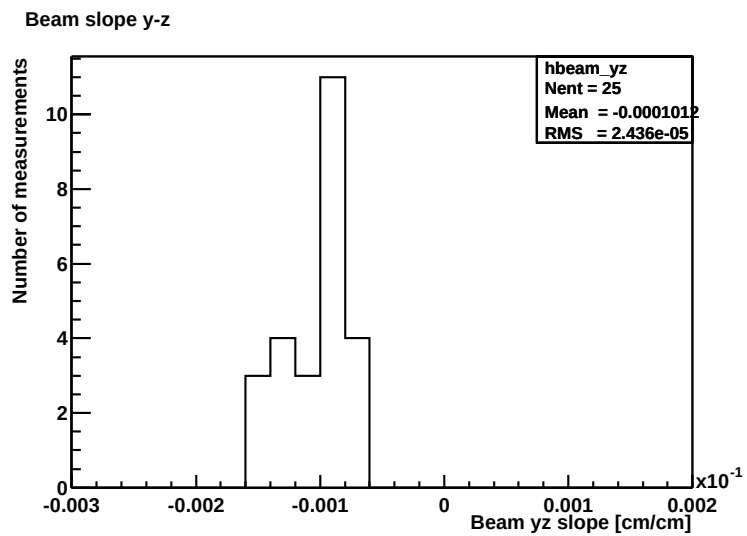
- Higher statistics: at least 10000 tracks (was 5000)
- In the same time: 4 minutes during smooth data taking
- Errors scale as they should
- Accuracy, based on RMS of 25 measurements in one run:
  - Offset x, y : ~ 5 μm
  - Tilt xz, yz : ~ 23 μrad

Run 166339

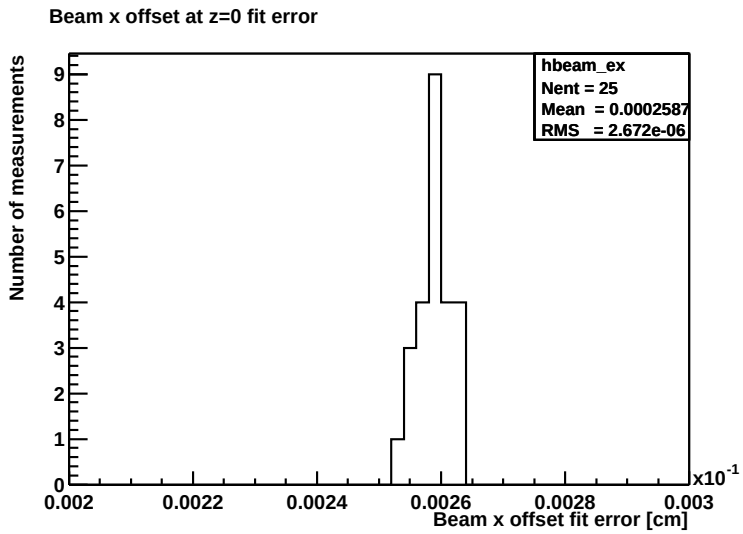

Beam x offset at z=0
hbeam_x
Nent = 25
Mean = -0.02909
RMS = 0.0005575
Number of measurements
Beam x offset [cm]

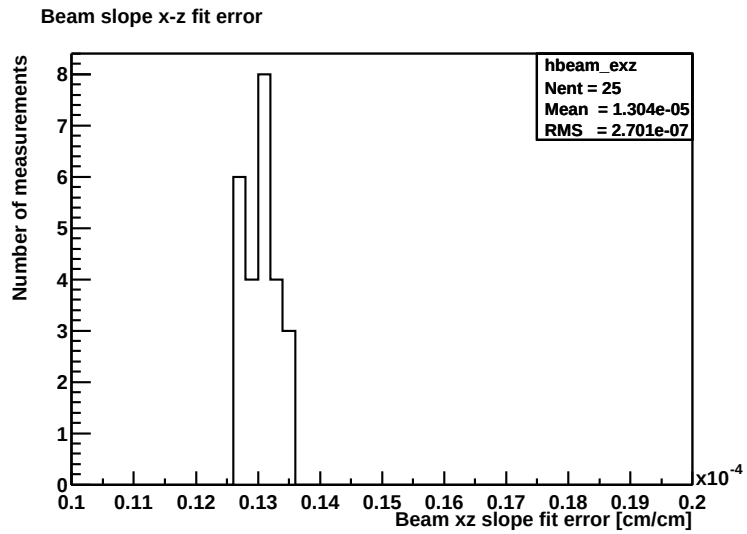

Beam slope x-z
hbeam_xz
Nent = 25
Mean = -3.026e-05
RMS = 2.214e-05
Number of measurements
x10^-1
Beam xz slope [cm/cm]

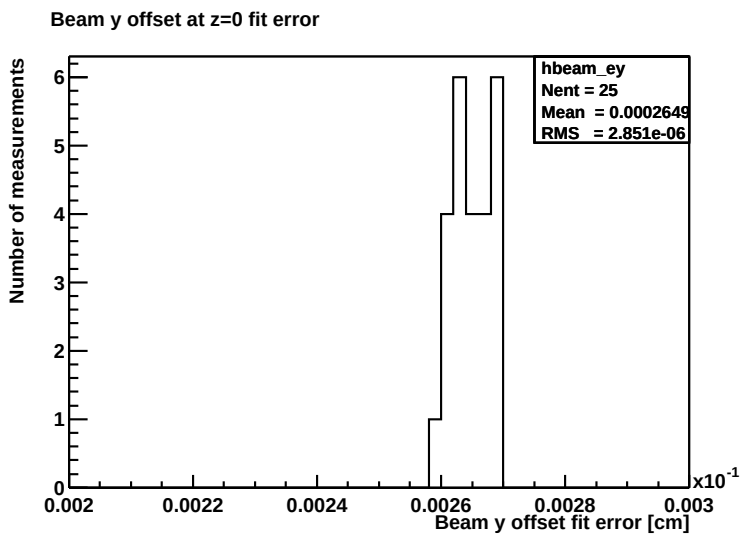

Beam y offset at z=0
hbeam_y
Nent = 25
Mean = 0.03294
RMS = 0.0004795
Number of measurements
Beam y offset [cm]

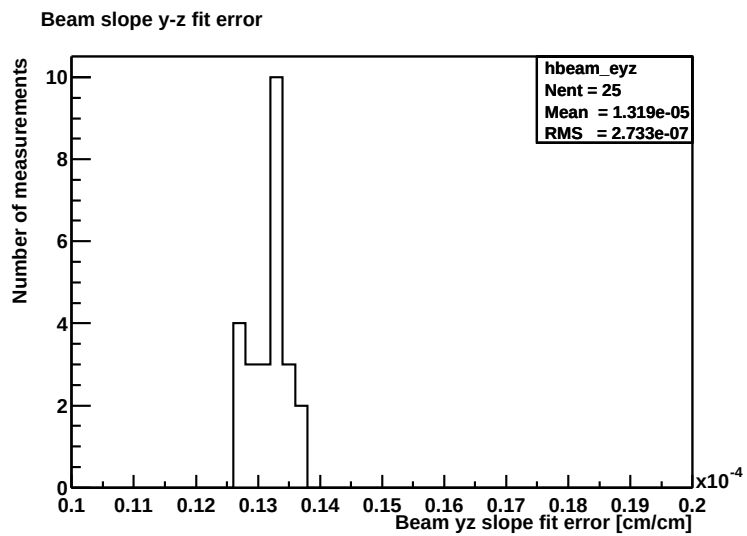

Beam slope y-z
hbeam_yz
Nent = 25
Mean = -0.0001012
RMS = 2.436e-05
Number of measurements
x10^-1
Beam yz slope [cm/cm]

Run 166339


Beam x offset at z=0 fit error
hbeam_ex
Nent = 25
Mean = 0.0002587
RMS = 2.672e-06
Number of measurements
Beam x offset fit error [cm]
x10^-1


Beam slope x-z fit error
hbeam_exz
Nent = 25
Mean = 1.304e-05
RMS = 2.701e-07
Number of measurements
Beam xz slope fit error [cm/cm]
x10^-4


Beam y offset at z=0 fit error
hbeam_ey
Nent = 25
Mean = 0.0002649
RMS = 2.851e-06
Number of measurements
Beam y offset fit error [cm]
x10^-1


Beam slope y-z fit error
hbeam_eyz
Nent = 25
Mean = 1.319e-05
RMS = 2.733e-07
Number of measurements
Beam yz slope fit error [cm/cm]
x10^-4