PROGRESS REPORT ON BEAMLINE SIMULATION

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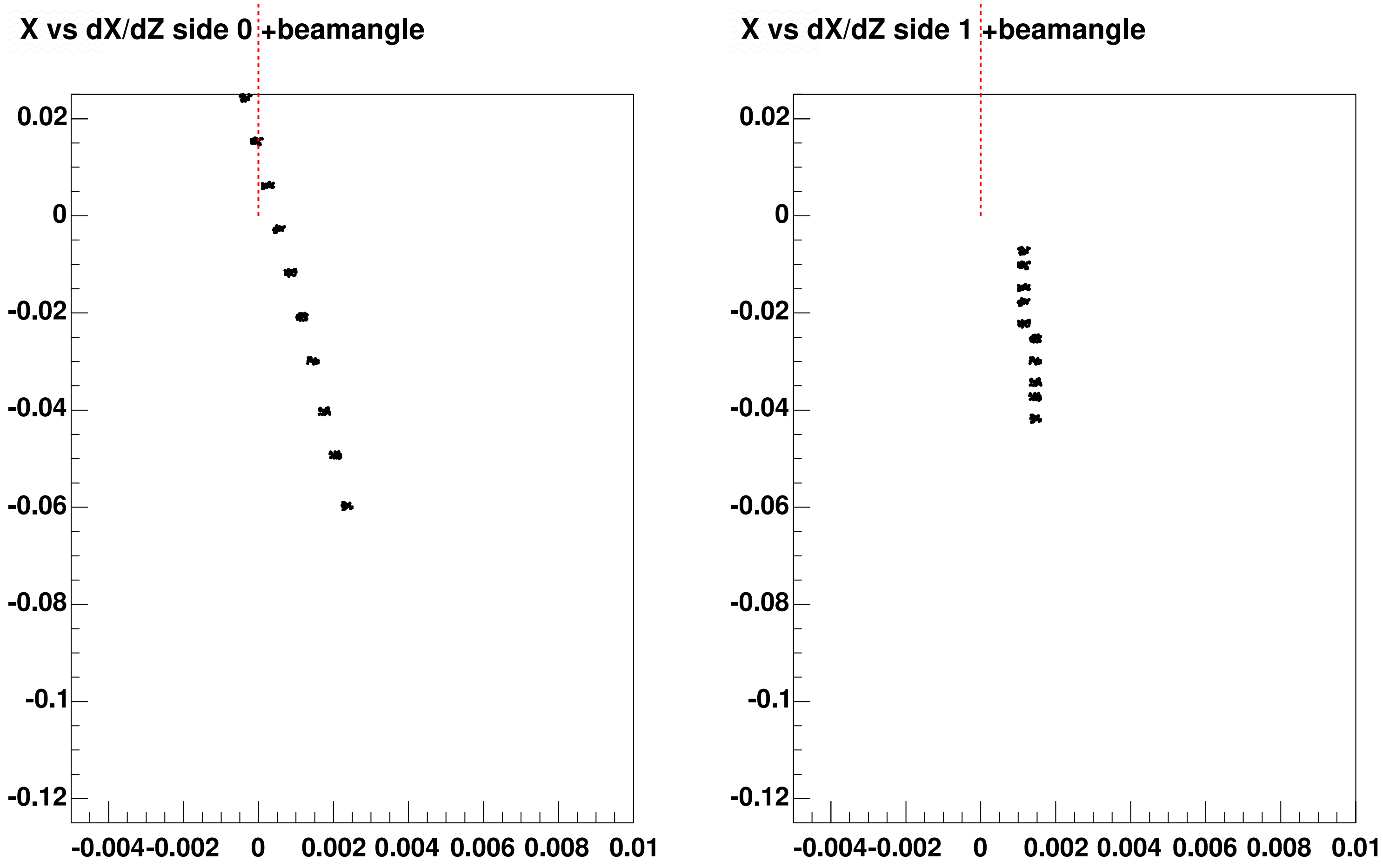
Aim is to assemble a Root program (initially) that will:

- **simulate forward proton production in a desired event**
- **track the protons through the beamline elements**
- **simulate the physical detectors in the 420 m region.**

So far the first of these two have been coded.

Reminder: beamline has 4 quadrupoles, then two opposing bending magnet systems which transport protons into a parallel displaced trajectory, then more quadrupoles.

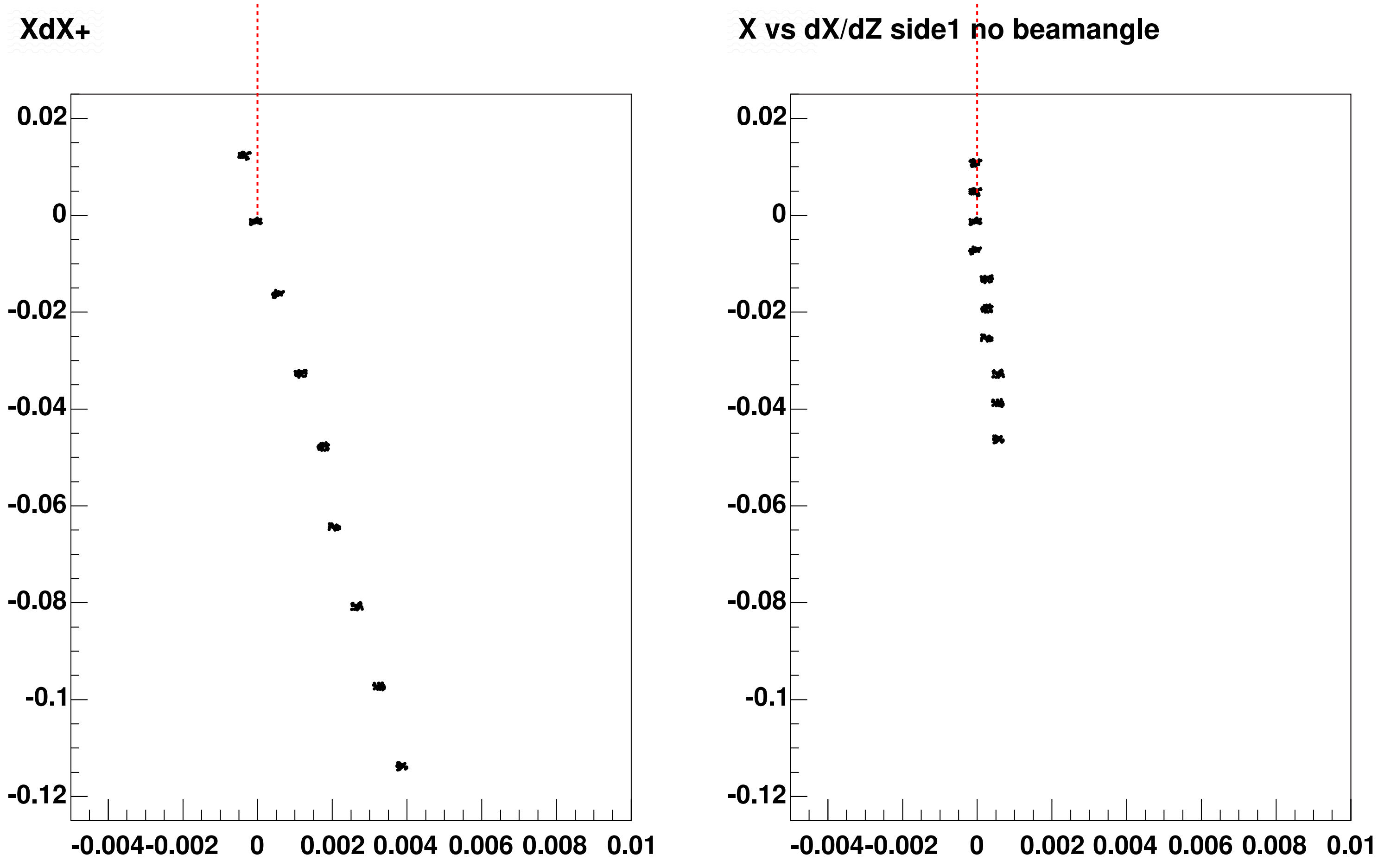
Track protons of 7000, 6990 . . . 6910 GeV through two sides



X metres (horiz) vs dX/dZ mrad (vert)

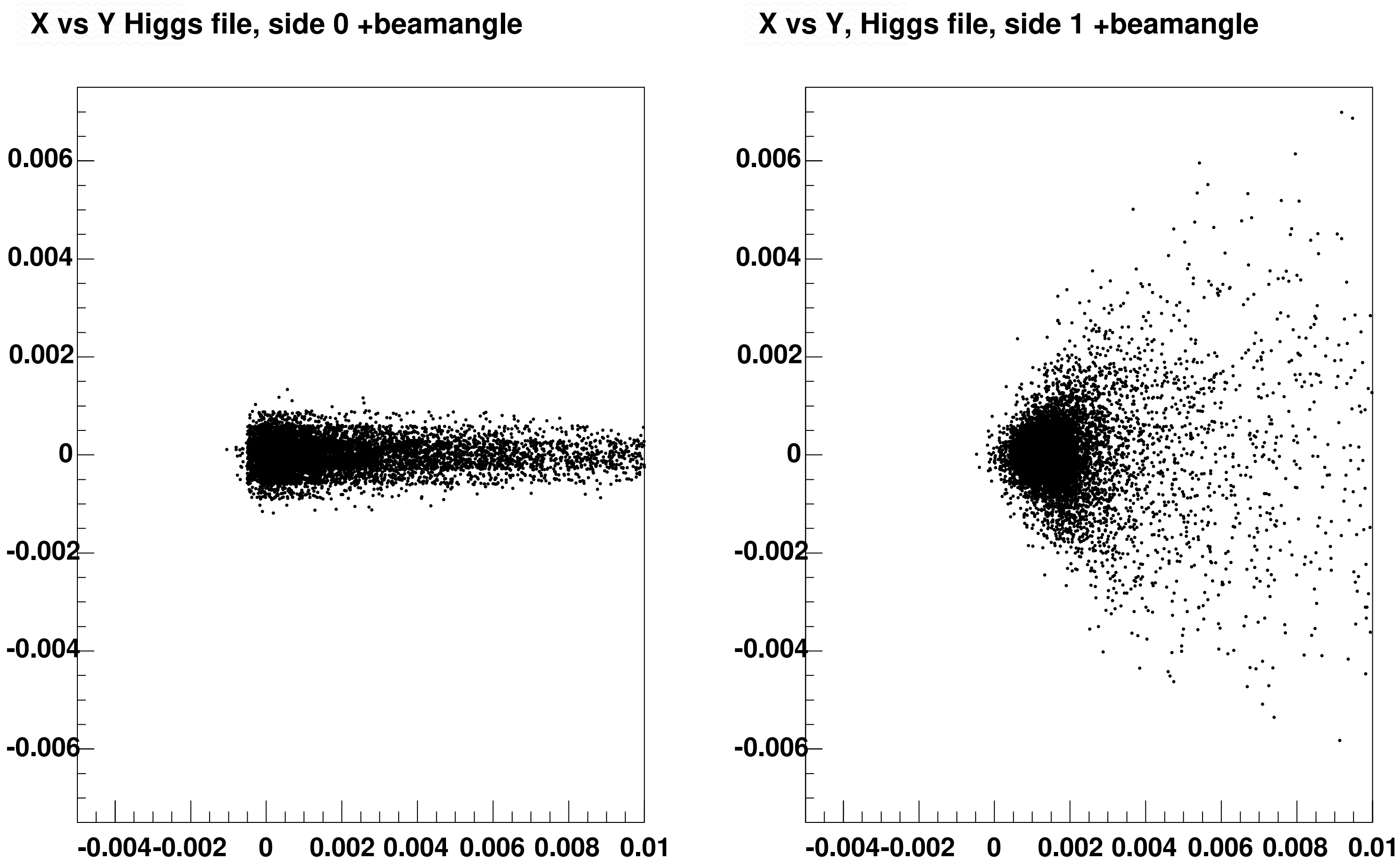
POSITION vs ANGLE

Track protons of 7000, 6990 . . . 6910 GeV through two sides

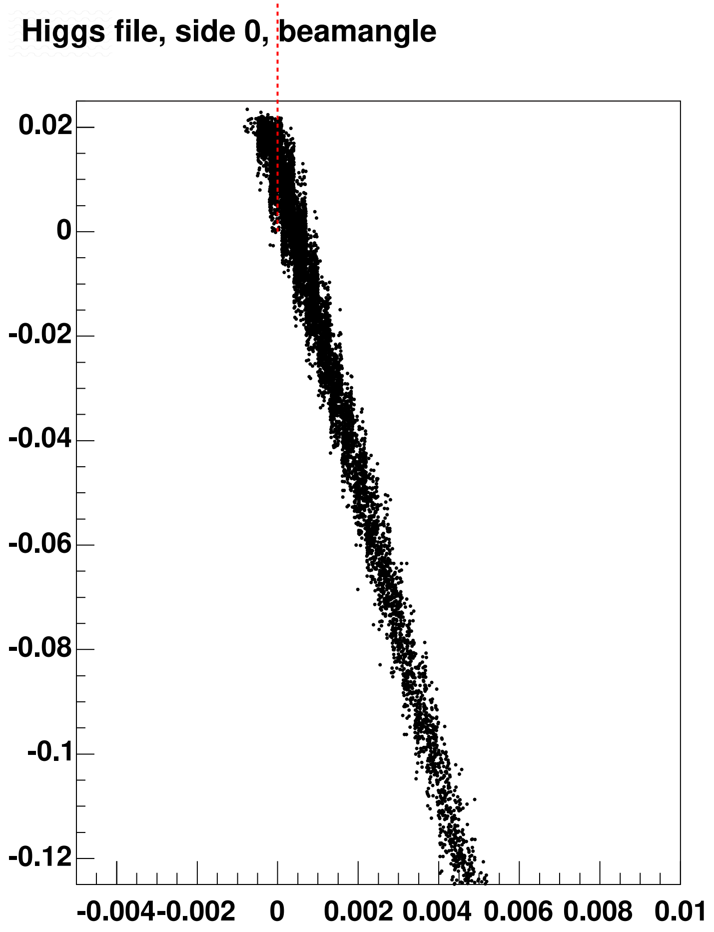


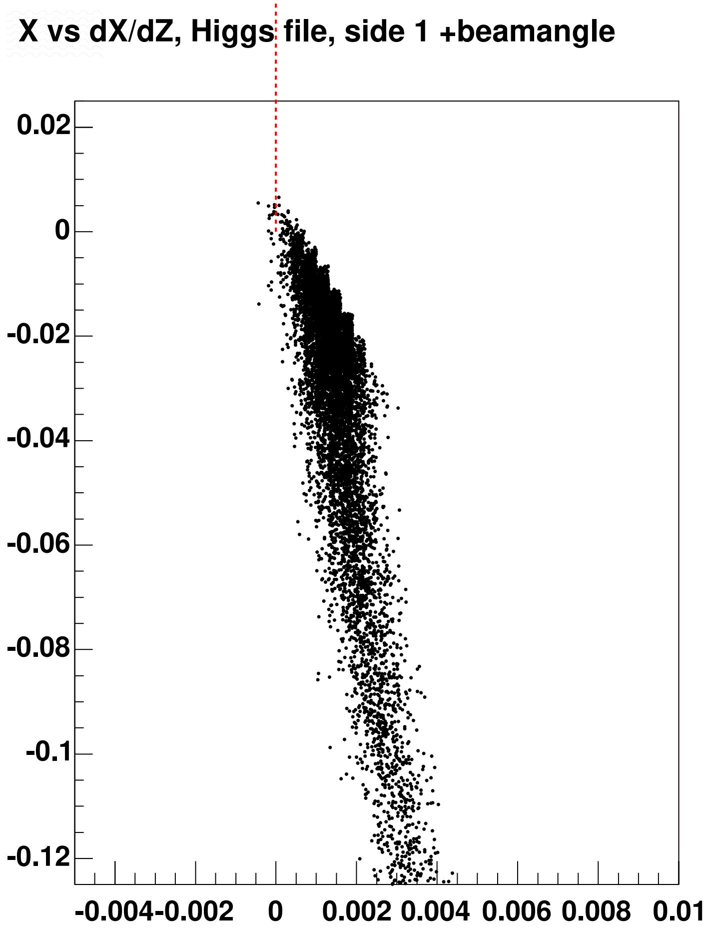
X metres (horiz) vs dX/dZ mrad (vert) NO BEAM ANGLE THIS TIME

120 GeV HIGGS FILE



X (horiz) vs Y(vert). BEAM ANGLE set.





X vs dX/dZ. BEAM ANGLE set.