#### Riunioncina Milano 22/12/2009

## Analysis of first collision data

### Outline

1) Measurement of Pixel Lorentz angle Detector commissioning and understanding, in continuity with the analysis performed on cosmics

2) Study of electrons and jets oriented to the preparation of SUSY/top/W analysis. goals are to learn to use good run/LB lists, reject cosmics/noise/garbage with cleaning cuts, measure fake electron rates in QCD, check basic distributions against expectations

# Technicalities

**Pixel Lorentz analysis:** performed on TrkValidation ntuples produced at Tier-O. The results I will present have been obtained with run 141811 (solenoid on) and 141944(solenoid off).

jet/electron studies: Performed first on DESD\_COLLCAND, Minimum Bias stream, as soon as they appeared on CAF at CERN from Tier-O. Later, we ran again on all runs on the grid, using the good run/LB list of the egamma.

data: 329832 events at 900 GeV (7.87 μb<sup>-1</sup>), 13566 events at 2380 GeV.

Monte Carlo is 10<sup>7</sup> non-diffractive minimum bias events at 900 GeV. For Lorentz plots, scaled to the same number of tracks as in data. For electron/jet plots scaled to the same integrated luminosity (about 20 per cent uncertainty).



- The available range of incident angles is restricted for collisions data (tracks from the IP)
- The cluster size of solenoic on data is in agreement with simulation.
- No fit shown. The systematics of the fit to get the value of the Lorentz angle (minimum of the curve) need to be studied yet.
- Plot approved!

### Example electron plots





number of jets