

Can we get a reliable on-line measurements of the transverse beam size?

Wednesday 8 December 2010 12:40 (20 minutes)

The transverse beam emittances of the LHC proton and ion beams can be inferred by measuring the beam sizes with Wire Scanner (WS), Synchrotron Radiation (BSRT) and Beam Gas Ionization (BGI) monitors. This presentation covers all aspects related to the operation of such devices in 2010 with a particular emphasis on the monitors performance with respect to their design specifications and expected signals. The absolute and relative accuracy of the emittance measurement is discussed, including cross calibration among the three instruments and with the luminous region estimation during collisions at the LHC experiments. This allows reviewing the reliability of the on-line data and of the values published in the logging database. In addition, an overview of the programmed hardware and software upgrades is given.

Presenter: RONCAROLO, F.

Session Classification: Session 3: Beam diagnostics and feedback systems