

# Action items

ALL

**CDF/D0/AD luminosity meeting  
of February 23<sup>rd</sup>, 2005**

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# Conclusions – Action items

- D0 found that with a more appropriate dead time correction they can have an increase of luminosity of the order of 10%. They are performing further checks on their luminosity measurement system trying to understand the source of background causing significant dead-time and the coupling of dead-time with baseline shifts in the PMT signals. They are also redetermining the absolute efficiency of the detector to account for new magnetic field, new coupling scheme and new corrections.

# Conclusions - Action Items

- The D0 offline measurement of  $\beta^*$  indicates that  $\beta^*_x$  is approximately 33 cm and  $\beta^*_y$  37 cm. They are investigating  $\beta^*$  evolution within a store and detector alignment in y direction. There was a reduction in  $\beta^*$  values both in x and y after store ~3910. AD will check on any possible correlations with separator voltages.
- The CDF offline  $\beta^*$  measurements (based on 6 stores since late December) indicate values smaller than the D0 ones of the order of 10 to 20% but with uncertainties in the ratio of the order of 7%. CDF is mostly concentrating now on validating their online measurements available on ACNET.

# Conclusions - Action Items

- The comparison of measured and calculated luminosities (initial and end of store) at both the CDF and D0 IPs indicate that either beta\*s were reduced at both IPs after the Fall shutdown or that the emittancies were reduced or both. The emittancies (sigmas as well as lattice functions used as input for the emittance calculation) will be studied before and after the shutdown.

# Conclusions - Action Items

- Better accuracy lattice measurements (of the order of 5%) using the new Tevatron BPMs are expected to be available in about 4 to 6 months.
- Our next meeting will be planned for around mid April.