

*alignment:*

— horizontal

— vertical, right arm

— vertical, right-left transfer

*alignment + optics:*

— tilt in  $x$ - $y$  plane

*optics:*

— mode 1

— mode 2

*acceptance correction:*

— beam divergence RMS uncertainty

— beam divergence left-right asymmetry

— beam divergence non-gaussianity

*uncorrelated 1-RP efficiencies:*

- - - slope uncertainty, 45 bot. – 56 top

- - - slope uncertainty, 45 top – 56 bot.

*beam momentum:*

- - - offset from nominal

*unfolding:*

- - -  $\vartheta_x^*$  resolution uncertainty

- - -  $\vartheta_y^*$  resolution uncertainty

- - - model dependence

**envelope of uncertainties:**

—  $\pm 1 \sigma$

