

ALFA performance plot at $\beta^* 90\text{m}$

The back-to-back correlation of protons on both sides of the interaction point is the direct evidence for the observation of elastic events. Shown is the scattering angle in the vertical plane reconstructed at either side of the interaction point using the vertical coordinate and the lever arm calculated from the beam optics. The resolution of the angle θ_y^* is further improved by taking the difference between the left and right measurement, whereby the unknown contribution from the vertex position is cancelled.

