

Transverse Feedback System for SIS 18 and SIS 100

- Design and implementation of a new Transverse Feedback System (TFS) to suppress coherent instabilities for coasting and bunched beam
 - ▶ **Noise Minimization Using Multiple Pickups**
 - ▶ Optimal weighted sum of multiple PU signals that gives minimum noise power & unbiased estimation of beam angle
 - ▶ **Robust TFS Against Optics Uncertainties**
 - ▶ Introduce perturbation terms to the transfer matrices. Subsequently, use the EKF to estimate feedback signal and optics
 - ▶ In progress: * Implementation on FPGA
 - * study non-linearities
 - ▶ Publications at IPAC11 & 12. PRST-AB submitted

