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RHICf – Measurements of very forward particles at RHIC

KIYOSHI TANIDA, Department of Physics and Astronomy, Seoul National University, RHICF COLLABORATION — In this presentation, we will introduce a newly proposed experiment at Relativistic Heavy Ion Collider (RHIC), named as RHICf (RHIC-forward). The proposal is to install a high-resolution electromagnetic calorimeter in front of a zero-degree hadron calorimeter (ZDC) at the PHENIX interaction point, and to measure cross sections and single spin asymmetries of very forward ($\eta > 6$) neutral particles in proton-proton collision at $\sqrt{s} = 510$ GeV. Such information helps to understand the production mechanism, which is beyond perturbative QCD. In addition, together with measurements at LHC, these data are invaluable for calibrating ultra-high energy cosmic ray measurements.

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