## Measurement of very forward photon production cross-section at pp $\sqrt{s} = 510$ GeV with RHICf detector H. MENJO (ISEE, Nagoya University), On behalf of the RHICf collaboration Abstract

The RHIC forward (RHICf) experiment performed an operation with proton-proton collisions at  $\sqrt{s} = 510$  GeV in June 2017. In this presentation, we present the analysis result of differential cross-section measurement of photons in the pseudorapidity range of more than 6.1. The data were compared with predictions of four hadronic interaction models to test these models. In addition, Feynman scaling law was tested by comparing with the LHCf result at  $s\sqrt{2}$  = 7 and 13 TeV, and it was confirmed within the errors. *More detail, refer* arXiv:2203.15416

## **Very forward and Cosmic-rays**

## **The RHICf experiment**

Very high energy cosmic-rays induce particle cascade PHYSICAL REVIEW D 86, 092001 (2012) shower, called air showers, though interactions between forward region of high energy hadronic collisions at RHIC. Very high energy cosmic-rays induce particle cascade proton collisions primary/secondary particles and air neuclei.



