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Gaseous Tracking Detectors at the Sakurajima Muography Observatory

Thursday, May 27, 2021 5:12 AM (18 minutes)

Muography is a novel imaging technology to reveal density structure of hill-sized objects. The cosmic muons predictably lose their energy and penetrate hundreds of meters into the ground, thus their differential local flux correlates with the crossed density-length.

The Sakurajima Muography Observatory in Kagoshima, Japan, is the largest muography experiment targeting an active volcano.
A set of multilayered gaseous detectors are used to reconstruct the muon tracks, thus by measuring the flux, imaging of the inner part of the vulcano becomes possible.

The presentation will focus on the technical challenges of such a particle
tracking system, the designed multi-wire proportional chambers,
and the recent results from the measurements.

TIPP2020 abstract resubmission?

Yes, this would have been presented at TIPP2020.

Funding information

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