



Contribution ID: 374

Type: Poster

## Commissioning the SoLid Detector Using Cosmic Ray Muons

*Monday, 15 July 2019 18:30 (1h 30m)*

The SoLid detector was constructed during 2017 and started to take data in December 2017. Commissioning a new detector implies defining and understanding a whole set of new variables. On the one hand the environmental conditions are followed, and on the other hand quantities related to the stability of the detector are monitored.

Cosmic muons are ideal for studying the stability of SoLid, because of their abundance due to the small overburden. Muons can be used to study the timing synchronisation and energy calibration of the detector on a daily timescale. They can be used to monitor the detector stability and to correlate it with the environmental conditions.

Muons also create secondary particles along their trajectory that can be detected and used for commissioning. For instance, spallation neutrons that are thermalized and captured in the detector can be used to verify the thermalisation properties of the detector. Stopping muon decays allow for a check of the muon decay time.

This poster will summarise the experience gained using cosmic ray muons for the detector commissioning.

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**Session Classification:** Wine & Cheese Poster Session

**Track Classification:** Neutrino Physics