Contribution ID: **198** Contribution code: **P42**   Type: **Poster**

Computing and data management for SABRE South

Monday 17 July 2023 18:19 (1 minute)

The SABRE (Sodium iodide with Active Background REjection) experiment aims to detect an annual rate modulation from dark matter interactions in ultra-high purity NaI(Tl) crystals in order to provide a model independent test of the signal observed by DAMA/LIBRA. SABRE South is located at the Stawell Underground Physics Laboratory (SUPL), in regional Victoria, Australia.

SABRE South is designed to detect the signals generated by radiation and cosmic rays using both a 17kL liquid scintillator detector which will be contained in a steel vessel, and a plane of plastic scintillator modules located above the vessel to more reliably detect muons from cosmic-rays. In addition the crystal detector can host seven NaI(Tl) crystals to detect potential dark matter signals. As both the backgrounds from the outer detectors and potential signals from the crystal detectors are of interest the data taking strategy for SABRE South is to apply a minimal sustainable selection in DAQ to ensure no data of interest is lost. This is then followed by dedicated event building, a final software trigger step and further data reduction using the main SABRE South computing systems. SUPL is a newly constructed facility and as the first experiment, the SABRE computing infrastructure also needs to manage the data transfer to the main data centre in Melbourne serving as a template for future experiments.

This poster will present details of the computing systems for SABRE South and how they will be used to support the experimental data taking and analysis.

Author: MCKENZIE, Jade

Presenter: MCKENZIE, Jade

Session Classification: Reception and poster presentation

Track Classification: Detectors and facilities