Contribution ID: **264** Type: **Poster presentation**

The Data Acquisition Architecture for the ”Dark matter Experiment using Argon Pulse-shaped discrimination - DEAP-3600 -

Friday 10 June 2016 10:30 (1h 35m)

This paper describes the data acquisition and its challenges posed by the operation of the DEAP detector installed in the underground Solar Neutrino Observatory Laboratory ‘SNOLab” near Sudbury, Ontario, Canada. The DEAP experiment aims at a direct observation of dark matter using liquid Argon with a factor ten better sensitivity than current experiments.
The SNOLab is located in an active Nickel mine about 2km underground. The constrains of this environment limits the accessibility, installation and maintenance of the equipment. Emphasis on simple and reliable Data Acquisition with remote control and monitor capabilities have been essential for the expected long run periods.
Overall data acquisition architecture with its specific trigger implementation will be discussed. The Midas Data acquisition software being the main software handling the run control and data path, we will highlight some of its features used to facilitate the remote monitoring and control including necessary safety operation required for this particular experiment.

Support:
https://en.wikipedia.org/wiki/DEAP
http://deap3600.ca/

Author: Mr AMAUDRUZ, Pierre-Andre (TRIUMF (CA))

Co-authors: Dr SMITH, Ben (Triumf (CA)); Dr RETIERE, Fabrice (TRIUMF (CA)); Dr OLCHANSKI, Konstantin (TRIUMF (CA)); Dr GOREL, Pierre (Uni. of Alberta (CA)); Dr LINDNER, Thomas (TRIUMF (CA))

Presenter: Mr AMAUDRUZ, Pierre-Andre (TRIUMF (CA))

Session Classification: Poster Session 2

Track Classification: Data Acquisition