



Contribution ID : 150

Type : Oral talk

Observation of the DANSS plastic scintillator aging during of 6 years of operation

Thursday, 1 December 2022 12:45 (15)

Aging of the plastic scintillators plays a significant role in the degradation of detectors performance. Several effects are considered responsible for this process like mechanical stresses, water penetration and oxidation. The DANSS detector core consists of 2500 polystyrene based scintillation strips. The detector is located just below an industrial nuclear reactor of Kalininskaya NPP. The room housing the detector is air conditioned and has very low humidity. The temperature of about 20C was sustained at the detector core. The performance of the scintillator is permanently monitored with cosmic muons passing through the detector. 6 years of observation are reported since April 2016 till March 2022. The light yield degradation about 1% per year is observed.

Primary author(s) : Dr. ALEKSEEV, Igor (KCTEP NRC KI)

Presenter(s) : Dr. ALEKSEEV, Igor (KCTEP NRC KI)

Session Classification : Facilities and Advanced Detector Technologies

Track Classification : Facilities and advanced detector technologies