



Contribution ID: 129

Type: Poster

Multi-messenger and Low-threshold Trigger System at JUNO

With 20-kiloton liquid scintillator as detection medium, the Jiangmen Underground Neutrino Observatory (JUNO) will have highly competitive sensitivity to MeV-scale neutrino, and will play an important role in the emerging field of multi-messenger astronomy, especially for the transient events where high radioactivity background can be easily bypassed. We will present a multi-messenger trigger system, which is built on novel hardware/firmware and lowers the detector trigger threshold by an order of magnitude – to as low as 20 keV. This trigger system will enable the widest broadband real-time monitoring of the transient neutrino sky and possibly steady signal searches at the sub-MeV to GeV energies, and can communicate with other multi-messenger facilities around the world on the millisecond time scale.

Mini-abstract

A low-latency multi-messenger and low-threshold trigger system at JUNO, built on novel firmware.

Primary author: Prof. XU, Donglian (Tsung-Dao Lee Institute)

Co-authors: Mr ZHANG, Feiyang (Shanghai Jiao Tong University); Dr YE, Ziping (Tsung-Dao Lee Institute)

Presenter: Prof. XU, Donglian (Tsung-Dao Lee Institute)

Session Classification: Poster session 4