Contribution ID: **499** Type: **Poster**

Performances of JUNO's Small PMT subdetector during the first commissioning runs

Friday, 21 June 2024 17:30 (2 hours)

The Jiangmen Underground Neutrino Observatory (JUNO) is a 20 kilo-tons liquid scintillator detector currently under construction in southern China. The primary goal of the experiment is to determine the mass hierarchy of the neutrino by analysing the energy spectrum shape of reactor antineutrino. That is why, the detector's energy response is of paramount importance. In the JUNO detector, the liquid scintillator is seen by 17612 20-inch PMTs (Large PMT) and 25600 3-inch PMTs (Small PMT). The LPMT subdetector constitutes the main calorimeter with an excellent energy resolution but can be submitted to instrumental non-linearity for large signals. Unlike the LPMT, the Small PMT subdetector operates in a single photo-electron regime. This subdetector is essential to characterise the overall detector non-linearity. In this poster, we will present the status of the installation and the preliminary performances of the SPMT subdetector with more than 11000 channels tested during the first commissioning runs. In particular, we will report on the preliminary measurement of the electronic noise, PMT gain, and the charge resolution.

Poster prize

Yes

Given name

Loïc

Surname

Labit

First affiliation

LP2IB-IN2P3-CNRS

Second affiliation

Institutional email

labit@cenbg.in2p3.fr

Gender

Male

Collaboration (if any)

JUNO

Primary author: LABIT, Loïc (LP2IB-IN2P3-CNRS)

Presenter: LABIT, Loïc (LP2IB-IN2P3-CNRS)

Session Classification: Poster session and reception 2

Track Classification: Reactor neutrinos