Contribution ID: **785** Type: **Poster**

Detecting neutrinos from natural sources with the JUNO experiment

Thursday 18 July 2024 20:40 (20 minutes)

The Jiangmen Underground Neutrino Observatory (JUNO) is a neutrino detector currently under construction in China. It will use 20 ktons of liquid scintillator as the target medium, which will be surrounded by 45,000 photomultiplier tubes to collect the scintillation light produced by the interacting particles. The JUNO physics program encompasses a comprehensive range of measurements, including neutrino fluxes from various natural sources such as solar, atmospheric, geo-, and supernova neutrinos (core-collapse and diffuse background). The primary challenges are posed by radioactive and cosmogenic backgrounds, which can be effectively mitigated through the use of highly radiopure materials and advanced identification techniques.
This talk reviews the potential of JUNO to improve measurements of neutrinos from natural sources and focuses on factors and conditions necessary for achieving the corresponding physical targets.

Alternate track

1. Astro-particle Physics and Cosmology

I read the instructions above

Yes

Author: Dr BASILICO, Davide (University of Milan / INFN Milano)

Presenter: Dr BASILICO, Davide (University of Milan / INFN Milano)

Session Classification: Poster Session 1

Track Classification: 02. Neutrino Physics