XXXI International Conference on Neutrino Physics and Astrophysics

ID contributo: 286

Tipo: Poster

Feasibility of detecting B8 solar neutrinos at JUNO

venerdì 21 giugno 2024 17:30 (2 ore)

In this poster we describe in detail the feasibility of detecting ⁸B solar neutrino at JUNO with three reaction channels (neutrino-electron elastic scattering, neutrino-13C charged current, and neutral current interactions). A reduced 2 MeV threshold on the recoil electron energy is achievable with optimized background reduction strategies. The advantage of JUNO for charge and neutral current channel detection is a large amount of ¹³C (~0.2 kt). With ten years of data taking, about 60,000 ES signals and 600 NC/CC signal are expected. This leads to a simultaneous measurement of $\sin^2\theta_{12}$ and Δm_{21}^2 using reactor antineutrinos and solar neutrinos in the JUNO detector.

Poster prize

No

Given name

Jie

Surname

Zhao

First affiliation

Institute of High Energy Physics

Second affiliation

Institutional email

zhaojie@ihep.ac.cn

Gender

Female

Collaboration (if any)

JUNO

Autore principale:ZHAO, Jie (Institute of High Energy Physics (IHEP))Relatore:ZHAO, Jie (Institute of High Energy Physics (IHEP))Classifica Sessioni:Poster session and reception 2

Classificazione della track: Solar neutrinos