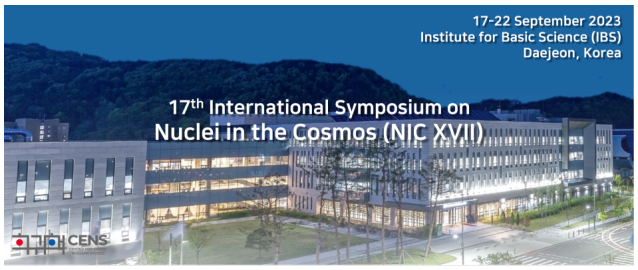

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Exploring the Potential for Astrophysical Neutrino Detection at JUNO

Monday, 18 September 2023 15:30 (15 minutes)

The Jiangmen Underground Neutrino Observatory (JUNO) is a 20-kton liquid scintillator detector currently under construction in an underground laboratory in South China. It is expected to complete detector construction by the end of 2023. With excellent energy resolution, a large detector volume and superb background control, JUNO will become a flagship experiment in the coming decades. Its primary aims are determining the neutrino mass ordering, and providing precise measurements on the neutrino oscillation parameters with reactor antineutrinos. As a multi-purpose neutrino observatory, JUNO has world-competitive potential on astrophysical phenomena such as diffuse supernova neutrino background (DSNB), core-collapse supernova (CCSN) neutrinos, solar neutrinos, and more. This talk will present the astrophysical potential of neutrino research at JUNO.

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