

## Oscillation Physics Potential of JUNO

*Friday, August 5, 2022 4:10 PM (22 minutes)*

The Jiangmen Underground Neutrino Observatory is a 20 kton multi-purpose liquid scintillator detector located at a 700-m underground laboratory in South China (Jiangmen city, Guangdong province). The exceptional energy resolution and the massive volume of the JUNO detector offer great opportunities for addressing many essential topics in neutrino and astroparticle physics. JUNO's primary goals are to determine the neutrino mass ordering and precisely measure the related neutrino oscillation parameters. With reactor neutrino data, JUNO can determine the neutrino mass ordering with great significance and measure the neutrino oscillation parameters  $\sin^2 \theta_{12}$ ,  $\Delta m_{21}^2$ , and  $\Delta m_{31}^2 / \Delta m_{32}^2$  to the sub-percent precision level. In addition, the atmospheric and solar neutrino measurements at JUNO can also provide important information for oscillation physics. This talk will focus on the oscillation physics potential of JUNO, including the sensitivity analysis and results based on the recent understanding of the detector.

### Attendance type

Virtual presentation

**Primary author:** ZHANG, Jinnan

**Presenter:** ZHANG, Jinnan

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