

XX International Workshop on Neutrino Telescopes



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Prospect for the Detection of the Geo-neutrino Signal with JUNO

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The Jiangmen Underground Neutrino Observatory (JUNO) is a 20 kton multi-purpose liquid scintillator detector which is located at a 700-m underground laboratory in the south of China (Jiangmen city, Guangdong province). The primary goals of JUNO are to determine the neutrino mass ordering and precisely measure the neutrino oscillation parameters. In addition, the massive volume of the JUNO detector will allow to record more geo-neutrino events in a year than all previous detectors have accumulated to date, which will improve our understanding of the heat budget of Earth and its composition.

This talk will report the latest studies of the geo-neutrino sensitivity including the measurement of the total geo-neutrino signal, individual contributions from U and Th and their ratio, as well as the potential to observe the mantle geo-neutrino signal.

Primary author: Dr XIN, Zhao (Institute of High Energy Physics, CAS)

Presenter: Dr XIN, Zhao (Institute of High Energy Physics, CAS)

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