

# Geo-neutrino signal at JUNO predicted by geological models

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## *Abstract*

The Jiangmen Underground Neutrino Observatory (JUNO) located in Jiangmen, Guangdong, China is facilitated with a 20 kton liquid scintillator detector. One of the goals of the JUNO experiment is to detect geo-neutrinos produced by radioactive decay of U and Th, in order to provide constraints on the composition and radiogenic heat budget of Earth's mantle.

To test different mantle composition models, the geo-neutrino flux from the U and Th rich crust must be properly estimated first. In addition, the detect probability of geo-neutrinos decreases with increasing distance from the radioactive source, making the signal contribution from local crust critical. This talk will report the expected geo-neutrino signals at JUNO based on different geological models, with a focus on local crust models.