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Status of the JUNO-TAO Detector

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The Taishan Antineutrino Observatory (TAO or JUNO-TAO) is a satellite experiment of the Jiangmen Underground Neutrino Observatory (JUNO). By adopting 10 m^2 Silicon Photomultipliers (SiPMs) with 50% photon detection efficiency (PDE) and 94% coverage, and 2.8 ton gadolinium-doped liquid scintillator (GdLS) with 4500 photoelectrons per MeV effective light yield, TAO detector will reach 2%/√E when running at -50℃ low temperature. The high energy resolution of TAO offers good potential to precisely measure the reactor antineutrino spectrum providing reference for JUNO, and a new benchmark for nuclear database. TAO could also measure isotopic neutrino spectrum and monitor the reactor. In this talk, the status of detector design and construction, liquid scintillator, SiPM mass testing, muon veto, calibration, and 1:1 prototype will be presented.

Primary author: Dr XIE, Yuguang (IHEP CAS, China)

Presenter: Dr XIE, Yuguang (IHEP CAS, China)

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