

Probing star evolution in deep underground laboratory with JUNA

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Jinping Underground experiment for Nuclear Astrophysics (JUNA) takes advantage of the ultralow background of the CJPL. Commissioning of mA level high current accelerator based on an ECR source and BGO and ^3He detectors finished in 2020. JUNA started experiments to directly study the many crucial reactions occurring at relevant stellar energies during the evolution stars. JUNA performed the direct measurements of $^{25}\text{Mg}(p,g)^{26}\text{Al}$, $^{19}\text{F}(p,g)^{16}\text{O}$, $^{19}\text{F}(p,g)^{20}\text{Ne}$, $^{13}\text{C}(a,n)^{16}\text{O}$, $^{18}\text{O}(a,g)^{22}\text{Ne}$ and $^{12}\text{C}(a,g)^{16}\text{O}$. Research highlights, which provide reaction rates in higher precision, wider energy range near Gamow window and their astrophysics implications will be presented

Experimental study on nuclear physics

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