Contribution ID: **135** Type: **Poster Contribution**

Cooled BGO array detector for experiments at JUNA

Jinping Underground lab for Nuclear Astrophysics (JUNA) is designed to directly measure the cross-sections of crucial reactions during the evolution of hydrostatic stars. The extremely low cross-sections of radiative capture reactions within their relevant Gamow peaks require a gamma detector with high detection efficiency. For this reason, we have constructed a 4π BGO array detector composed of eight crystals with a length of 250 mm and a radial thickness of 63 mm. In order to improve the energy resolution of the BGO array detector, all the crystals are cooled to -20 degrees Celsius. An energy resolution <11% is observed for the 661 keV gamma ray.

Summary

Primary author: Dr SU, Jun (China Institute of Atomic Energy)

Presenter: Dr SU, Jun (China Institute of Atomic Energy)