

Measurement of $^{59}\text{Fe}(n,g)$ reaction based on beta-OSLO method

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The experiment for measuring the $^{59}\text{Fe}(n,g)$ reaction rate is performed in the Radioactive Ion Beam Line in Lanzhou, China. The beta-Oslo method is employed to obtain the level density and gamma strength function of ^{60}Fe . This presentation will introduce the facility, detection and the preliminary results of this experiment. It also presents the impact of the $^{59}\text{Fe}(n,g)$ reaction on the the r-process in the Common Envelop Jet Supernova, which jets launched by a neutron star that spirals-in inside the core of a red supergiant star in a common envelope evolution. Some novel features of different r-process scenarios are presented as well.

Author: JIN, Shilun (Institute of Modern Physics, Chinese Academy of Sciences)

Presenter: JIN, Shilun (Institute of Modern Physics, Chinese Academy of Sciences)