

PLPAC meeting 2024-1

Contribution ID : 18

Measurement of neutron capture reaction cross section on ^{88}Zr isotope using Surrogate Reaction Method

Monday 22 Apr 2024 at 12:05 (00h15')

PI info :

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local collaborator info :

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Motivation :

Neutron capture cross section data are of fundamental importance in nuclear science, such as the nuclear reactor performance, reactor waste management, nuclear security, stellar nucleosynthesis, nuclear medicine and defence applications. Obtaining the reliable neutron capture cross section data for radioactive targets remains a formidable challenge. In addition, understanding the formation of elements greater than iron, neutron capture reactions plays a crucial role. In recent years several indirect methods are developed to overcome in measuring the neutron induced reaction cross section for unstable isotopes.

Beam time requirement in shifts :

15

Beam :

^1H

Beam Energy :

19.5-21.5 MeV

Beam Current :

5-10 pnA

Beam Port :

CASCADE Hall-15N

Buncher Required :

No

Target / Sample Details :

^{90}Zr

Whether the experiment is part of PhD work ? :

YES

Name of the PhD student and year of registration :

Jyotiskar Das, 2023

Whether the experiment is part of Post-Doc work ? :

No

Name of the Post Doc fellow :

NA

information on the past beamtime at PLF :

NA

Publication information related to prior work at the PLF :

NA

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