

PLPAC meeting 2024-1

Contribution ID : 19

Lifeitme measurement of $13/2^+$ isomeric state of $205, 207\text{At}$ nuclei

Tuesday 23 Apr 2024 at 12:00 (00h15')

PI info :

Dr. Buddhadev Mukherjee

local collaborator info :

Prof. Rudrajyoti Palit

Collaborators Name :

Dr. R. P. Singh, IUAC; Prof. U. D. Pramanik, SINP; Dr. S. Ghugre, UGC-DAE CSR, Kolkata; Dr. U. Ghosh, IUAC;

Dr. A. Chakraborty, Visva-Bharati; Mr. Koustav Bhandary, Ms. S. Biswas, Mr. A Goswami, Mr. S. Maiti, Visva-Bharati

Motivation :

Existing literatures have been studied for odd A , $199-207\text{At}$ mass nuclei, and it has been found that, we can

investigate the lifetime of $(13/2)^+$ isomeric state in 205At which is unknown. In addition to that, as the study associated with 205At is very old, a scope for re-investigation is there to justify the old lifetime values for other isomeric states as well in 205At . Also, for the 207At , we can simply observe the $(13/2)^+$ and $(21/2)^-$ -state and calculate their unknown lifetimes.

Beam time requirement in shifts :

30

Beam :

Lithium. $A = 6$ (6Li)

Beam Energy :

55-80

Beam Current :

1-5

Beam Port :

Linac hall 1- 15D

Buncher Required :

No

Target / Sample Details :

206Pb,Thickness- 300 microgram/cm², Backing - No

Whether the experiment is part of PhD work ? :

Yes

Name of the PhD student and year of registration :

Mr. Koustav Bhandary, Year of registration - 2022

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

No

information on the past beamtime at PLF :

Nil

Publication information related to prior work at the PLF :

Nil

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Session classification : --not yet classified--

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Type : --not specified--