## Frontiers in Gamma Ray Spectroscopy FIG18



Tuesday 13 Mar 2018 at 14:30 (00h15')

## Content :

The level structure of the odd-mass 29Al nucleus has been investigated following heavy-ion induced fusion evaporation reaction, 18O(13C, 1p1n)29Al. The accelerated beam at 30-MeV was provided by the BARC-TIFR Pelletron Linac facility at Mumbai, India. The de-exciting gamma rays were detected using INGA (Indian National Gamma Array). During the time of the experiment, the array was comprised of fifteen Compton suppressed high-resolution Clover detectors. The level scheme has been deduced using the conventional gamma-gamma coincidence analysis. The probable spins of the excited levels could be established from the angle dependent anisotropy ratio measurements of the transitions decaying from the concerned levels. Lifetime measurements using DSAM technique, with modified algorithms, have been carried out for a few of the observed levels. The observed level structure of 29Al appears to exhibit the possible on set of multi-facet excitation modes. Further, the shell model calculations, carried out within the sd-model space, reproduces qualitatively the observed experimental features.

Primary authors : Mrs. SULTANA, Hajera (Department of Physics, Visva Bharati)

Co-authors : Ms. BHATTACHARJEE, Rajashri (UGC - DAE CSR, Kolkata 700 098) ; Dr. TRIVEDI, T (Guru Ghasidas University, Bilaspur 495 009, India) ; Dr. PALIT, Rudrajyoti (Tata Institute of Fundamental Research, Mumbai 400 005, India) ; Dr. SAHA, S (Tata Institute of Fundamental Research, Mumbai 400 005, India) ; Dr. CHAKRABORTY, Anagha (Department of Physics, Visva Bharati) ; Mr. SAMANTA, Saradindu (UGC - DAE CSR, Kolkata 700 098) ; Mr. DAS, Soumya (UGC - DAE CSR, Kolkata 700 098) ; Dr. BHATTACHARJEE, S.S. (UGC - DAE CSR, Kolkata 700 098) ; Dr. BHATTACHARJEE, S.S. (UGC - DAE CSR, Kolkata 700 098) ; Dr. RAUT, Rajarshi (2UGC - DAE CSR, Kolkata 700 098) ; Dr. GHUGRE, S.S. (UGC - DAE CSR, Kolkata 700 098) ; Prof. SINHA, A.K. (UGC-DAE Consortium for Scientific Research, Indore 452 017, India) ; Prof. GARD, Umesh (Department of Physics, University of Notre Dame, Notre Dame, Indiana 46556, USA)

Presenter : Mrs. SULTANA, Hajera (Department of Physics, Visva Bharati) ; Ms. BHATTACHARJEE, Rajashri (UGC - DAE CSR, Kolkata 700 098) ; Dr. CHAKRABORTY, Anagha (Department of Physics, Visva Bharati) Session classification : --not yet classified--

Track classification : --not yet classified--Type : Poster