

Excited states and gamma ray analysis of neutron rich nucleus ^{111}Mo

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Theoretical calculations based on different approaches predict that, ground state prolate to oblate shape transitions can coexist in $N=70$ neutron rich region in nuclear chart. To investigate the phenomena, we study the excited states and lowest lying yrast states of neutron rich ^{111}Mo nucleus. The experiment (SEASTAR2 campaign) was done using the unique setup in Radioactive Ion Beam factory (RIBF) with the BigRips, Zero Degree spectrometers and DALI2, MINOS detectors in RIKEN. This nucleus was populated in (p,p') and knock-out reactions involving the primary U238 beam at 345 MeV/u and secondary BigRIPS beam which is centered in ^{111}Nb at 228 MeV/u. As a results of the analysis 4 transitions observed first time for ^{111}Mo nucleus and the construction of the level scheme will be studied.

Summary

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