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Structure of odd-odd ^{112}I K. STAROSTA, C.J. CHIARA, D.B. FOSSAN, D.R. LAFOSSE, G.J. LANE, J.M. SEARS, J.F. SMITH, SUNY at Stony Brook, M. DEVLIN, D.G. SARANTITES, Washington Univ., I.-Y. LEE, A.O. MACCHIAVELLI, LBNL, A.J. BOSTON, E.S. PAUL, Univ. of Liverpool — High spin states in ^{112}I have been studied using the $^{58}\text{Ni}(^{58}\text{Ni},3\text{pn})$ reaction at 250 MeV. The experimental set-up consisted of GAMMASPHERE with 83 75-80%-efficient HPGe detectors coupled with the MICROBALL and an array of 15 NE213 scintillators for neutron detection. Coincident-triples cubes gated by 3p, 4p and 3pn were sorted and analysed. DCO matrices are being extracted for spin information. A preliminary level scheme has been built consisting of six high spin $\Delta I=2$ sequences and a weak $\Delta I=1$ band. The interpretation of the observed structures is aided by comparisons with systematic properties of the neighboring odd-odd and odd isotopes and odd isotones; new information for ^{111}Te extracted from the 4pn channel of this study is helpful in this regard. With the Fermi level for both the protons and neutrons being in the vicinity of the $d_{5/2}$, $g_{7/2}$ and $h_{11/2}$ orbitals, the $\pi h_{11/2} \otimes \nu h_{11/2}$ configuration competes for the yrast level sequence in neutron deficient odd-odd Iodines, showing in ^{116}I and ^{118}I signature inversion consistent with odd-odd Cs, La, Pr systematics. Possible structure assignments in ^{112}I will be discussed.

Prefer Oral Session
 Prefer Poster Session

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