

Abstract Submitted  
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**High-spin states in  $^{122,124}\text{Sn}$  above the  $10^+$  isomers.** N. FOTI-  
ADES, M. DEVLIN, R.O. NELSON, LANL, J.A. CIZEWSKI, Rutgers Univ., R.  
KRÜCKEN, TRIUMF, R.M. CLARK, P. FALLON, I.Y. LEE, A.O. MACCHI-  
AVELLI, LBNL, W. YOUNES, LLNL — High-spin states above the previously  
known  $10^+$  isomers of  $^{122}\text{Sn}$  and  $^{124}\text{Sn}$  were studied via prompt  $\gamma$ -ray spectroscopy.  
 $^{122}\text{Sn}$  and  $^{124}\text{Sn}$  were populated as fission fragments in the fission of the  $^{226}\text{Th}$   
compound nucleus formed in a fusion-fission reaction in a Gammasphere experi-  
ment at LBNL.  $^{122}\text{Sn}$  was also populated and studied as evaporation residue in the  
 $^{124}\text{Sn}(n, 3n)$  reaction using the GEANIE array coupled to the spallation neutron  
source of the Los Alamos Neutron Science Center's WNR facility. The  $^{124}\text{Sn}(n, n')$   
reaction in this experiment did not bring in enough angular momentum to adequately  
populate states above the  $10^+$  isomer in  $^{124}\text{Sn}$ . Sequences of transitions were ob-  
served for the first time feeding the previously known  $10^+$  isomers, at 2766-, and  
2657-keV excitation energy, and with  $62\mu\text{s}$  and  $45\mu\text{s}$  half-life, for  $^{122}\text{Sn}$  and  $^{124}\text{Sn}$ ,  
respectively. The level schemes above the isomers were established up to 5386-, and  
5952-keV excitation energy, for  $^{122}\text{Sn}$  and  $^{124}\text{Sn}$ , respectively. The experimental  
results are compared with predictions from shell-model calculations.

Ronald Nelson  
LANL

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