Abstract Submitted
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Detailed spectroscopy following the ^{14}C on ^{36}S fusion-evaporation reaction[1] PETER BENDER, PETER DEROSA, DANIEL FOULDS-HOLT, ANDREW MACGREGOR, University of Massachusetts Lowell, SAMUAL TABOR, VANDANA TRIPATHI, REBEKA LUBNA, ELIZABETH RUBINO, Florida State University, JAMES ALLMOND, Oakridge National Laboratory — High-spin state in neutron-rich Sc isotopes were produced using the ^{3}6S(^{14}C,$pnn\gamma$) reaction at 34-MeV at Florida State University(FSU). The FSU γ-array, which is a mix of both signal crystal and clover-style HPGe detectors, was used to detect the prompt γ-radiation. A silicon telescope placed at 0° was used to detect and clearly identify charged particles released from the reaction. The level scheme for ^{47}Sc has been extend, approaching the neutron separation energy. Natural alignment following the reaction has allowed angular distributions to be extracted. States with clear particle-hole configurations have been identified from proton$-\gamma-\gamma$ coincidences. The experimental results will be presented and discussed in light of recent shell-model calculations.

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