Level Structure Above the \(T_{1/2} = 2.0 \times 10^5\) yr Isomer in \(^{186}\text{Re}\) D. A. MATTERS, J. W. MCCLORY, Air Force Institute of Technology, F. G. KONDEV, M. P. CARPENTER, Argonne National Laboratory, J. J. CARROLL, Army Research Laboratory, C. J. CHIARA, Oak Ridge Associated Universities / Army Research Laboratory, G. J. LANE, T. KIBÉDI, Australian National University, E. IDEGUCHI, Y. FANG, RCNP, Osaka University, H. WATANABE, Beihang University, AND THE E435 CAGRA COLLABORATION — The level structure above the \(K^\pi = (8^+), 149\)-keV isomer in \(^{186}\text{Re}\) is largely undeveloped. The isomer could play a role in the \(s\)-process nucleosynthesis of \(^{187}\text{Os}\) and \(^{187}\text{Re}\) and affect the accuracy of the Re-Os cosmochronometer. An experiment was conducted at the Research Center for Nuclear Physics (RCNP) at Osaka University, Japan, using the Clover Array Gamma-ray spectrometer at RCNP/RIBF for Advanced research (CAGRA) to measure \(\gamma\)-ray coincidences from \((d, 2n)\) reactions on an enriched \(^{186}\text{W}\) target. The \(\gamma - \gamma\) coincidence data obtained from the CAGRA array were analyzed along with data from a similar experiment performed in 2006 at the Australian National University. A preliminary analysis of the data reveals several new levels and transitions feeding the \(^{186}\text{Re}\) isomer.

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Date submitted: 08 Jan 2016