The level structure of $^{19}\text{Ne}$ via measurement of the $^{2}\text{H}(^{18}\text{F},\alpha^{+}^{15}\text{O})n$ reaction.\textsuperscript{1} A.S. ADEKOLA, C.R. BRUNE, Z. HEINEN, M.J. HORNISH, T.N. MASSEY, A.V. VOINOV, Ohio U., D.W. BARDAYAN, J.C. BLACKMON, C.D. NESARAJA, M.S. SMITH, Oak Ridge Nat. Lab., A. CHAE, C. DOMIZIOLI, Z. MA, B. MOAZEN, U. of Tenn., A.E. CHAMPAGNE, D.W. VISSER, UNC - Chapel Hill, U. GREIFE, R. LIVESAY, M. PORTER - PEDEN, Col. School of Mines, M. JOHNSON, Oak Ridge Assoc. U., K.L. JONES, S.D. PAIN, J.S. THOMAS, Rutgers, R.L. KOZUB, J.F. SHRINER, N.D. SMITH, Tenn. Tech. — The $^{18}\text{F}(d,n)^{19}\text{Ne}$ and $^{18}\text{F}(d,p)^{19}\text{F}$ reactions have been measured simultaneously at $E_{c.m.} = 14.9$ MeV at ORNL’s HRIBF with a radioactive $^{18}\text{F}$ beam. The $^{19}\text{Ne}$ excited states near the proton threshold are potentially important for the $^{18}\text{F}(p,\alpha)$ reaction rate in novae. These states decay by breakup into $\alpha^{+}^{15}\text{O}$ which were detected in coincidence with position-sensitive $E-\Delta E$ telescopes. The neutron (proton) angular distributions for states in $^{19}\text{Ne}$ ($^{19}\text{F}$) were extracted using momentum conservation. Information on the spins and spectroscopic strengths of these states will be presented and $^{19}\text{Ne} - ^{19}\text{F}$ mirror symmetry will be discussed.

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