^{2}H(p,γ)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. E. Purcell[#], C. G. Sheu[*]	NDS 130 1 (2015)	30-Jun-2015

The low energy cross sections, or S(E) factors, of this reaction have important astrophysical implications. Graph 1a in (2004De48) shows S(E) for E from about 2 keV up to 9 MeV. S(0) was determined to be 0.223 eV·b *10*, 60.1% of which is due to M1 capture and 39.9% is E1 capture. The graph results from an R-matrix analysis of results compiled from (1962Gr39,1963Gr12,1963Wa19,1967Wo08,1970Ba68,1979Sk01,1997Ma08,1997Sc31,2002Ca28). A later determination of S(E) for this same energy range is given in (2013Xu14). Also see (2014By01). In addition to the experimental results used by (2004De48) the following articles were cited: (1967Ge05,1996Sc14,1997Ma08,2002Ca28, 2008By03,1964Be45,1965Fe01,1965St07,1973Ti05). The last four references in this list actually studied the inverse reaction ^{3}He(γ,p)^{2}H. The value of S(0) determined by (2013Xu14) is 0.21 eV·b *4*.

^{3}He Levels

E(level)	J^{π}
0.0	$1/2^{+}$