²H(¹⁴O,t) 2013Fl01

	History		
Туре	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

2013Fl01: XUNDL dataset compiled by TUNL, 2013.

A 18.1 MeV/nucleon ¹⁴O beam was produced at the GANIL/SPIRAL facility. The beam impinged on a 1.5 mg/cm² CD₂ target (elastic scattering) or a 8.5 mg/cm² CD₂ target ((d,t)) and the light recoil nuclei were detected in one of six MUST2 array telescopes: four telescopes covered $\theta_{cm} \approx 15-70^{\circ}$ for the nucleon transfer reactions while the other two were near $\theta_{lab} \approx 90^{\circ}$ and were used to extend the elastic measurements.

The angular distributions were analyzed using the FRESCO code. Spectroscopic factors are deduced using both phenomenological and microscopic overlap functions and compared with literature results for ${}^{16}O(d, {}^{3}He)$, (d,t) and ${}^{18}O(d, {}^{3}He)$. See further analysis in (2018FI03).

¹³O Levels

E(level)	$J^{\pi \dagger}$	Comments	
0.0	3/2-	C ² S(phenomenological)=1.69 <i>17</i> (experimental) <i>20</i> (analysis). C ² S(microscopic)=1.89 <i>19</i> (experimental) <i>22</i> (analysis).	

[†] From FRESCO analysis of spectroscopic factors.