^{33}S(p,t) 1979Na07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 184,29 (2022)	24-Jun-2022

$J^{\pi}(^{33}S \text{ target})=3/2^{+}$.

1979Na07 (also 1976Na18): E=40 MeV protons from Michigan State University cyclotron. Enriched ^{33}S target (76.8%). Enge split-pole magnetic spectrograph. FWHM=30 keV. Position sensitive wire counters and plastic scintillators for detection of reaction products. Measured triton spectra and angular distributions from 7.5° to 57.5° (in center of mass system). Comparisons with DWBA calculations. Relative cross sections are accurate to 10% and absolute cross sections to 20%.

^{31}S Levels

E(level)[†]	J^{π}[#]	L[‡]	Comments
0		2	ε=1.27.
1250 *10*	$3/2^{+}$	0(+2)	ε=1.06.
2230 *10*		2+4	ε=0.97.
3080 *10*		2	ε=0.91.
3280 *10*		2	ε=1.09.
3350 *10*		2	ε=0.79.
3440 *10*	$3/2^{+}$	0+2	ε=0.91.
4080 *10*		2+4	ε=17.0.
4200 *10*		2	ε=2.79.
4530 *10*	$3/2^{+}$	0	ε=0.79.
4580 *10*		2	ε=3.48.
4730 *10*		2	ε=0.58.
4860 *10*			
6268 *10*	$3/2^{+}$	0	T=3/2 ε=0.91. E(level): lowest T=3/2 state (1979Na07).
6380 *10*			
6630 *10*			
6860 *10*			
6930 *10*			
7010 *10*			
7140 *10*			

[†] Uncertainty of 10 keV is assumed for all levels as for the 6268 level quoted by 1979Na07.

[‡] From comparison of angular distributions with those calculated from DWBA analysis. The DWBA fits are acceptable in most cases.

[#] From L(p,t)=0 or 0+2 (1979Na07) from $3/2^{+}$ target.