

$^{34}\text{S}(^3\text{He,t})$  2009Pa28,2007Fu06

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, Balraj Singh		NDS 113, 1563 (2012)	28-May-2012

**2009Pa28** (see also **2010PaZT** described In  $^{33}\text{S}(p,\gamma)$ :resonances dataset):  $^{34}\text{S}(^3\text{He,t})$  E=25 MeV, 99.999%-enriched target of  $\text{Ag}_2\text{S}$  on C backing. Used Q3d magnetic spectrograph (angular acceptance 13.9 msr) with measurements At  $15^\circ$  and  $25^\circ$ ; multiwire gas proportional counter backed with plastic scintillator with energy resolution of 10 keV FWHM. Measured  $4.92 < E_x < 5.98$  MeV and determined  $^{33}\text{S}(p,\gamma)^{34}\text{Cl}$  reaction rate of astrophysical interest.

**2007Fu06**:  $^{34}\text{S}(^3\text{He,t})$  E=140 MeV/nucleon, 93.47%-enriched  $^{34}\text{S}$  self-supported target, FWHM=21 keV. The  $\sigma(\theta)$  measurements from  $0^\circ$  to  $2^\circ$  were used to extract L transfers. Shell-model calculations.

 $^{34}\text{Cl}$  Levels

The Gamow-Teller strengths B(G-T) are from **2007Fu06**.

E(level) <sup>†</sup>	L <sup>‡</sup>	Comments
0 <sup>#</sup>	0	E(level): IAS of $^{34}\text{S}$ g.s. ( <b>2007Fu06</b> ).
458 <sup>#</sup> 4	0,≥1	B(GT)=0.025 3.
666 <sup>#</sup> 4	0	B(GT)=0.091 7.
2579 <sup>#</sup> 4	0	B(GT)=0.285 21.
2718 <sup>#</sup> 4	≥1	
3129 <sup>#</sup> 4	0	B(GT)=1.37 9.
3330 <sup>#</sup> 4	(0)	
4212 <sup>#</sup> 4	0,≥1	B(GT)=0.030 3.
4611 <sup>#</sup> 4	0	B(GT)=0.183 14.
4925 4		
4941 <sup>#</sup> 4	0	
4957 4		
4981 4		
4993 <sup>#</sup> 4	≥1	
5010 4		
5061 4		
5093 4		
5154 4		
5173 4		
5233 4		
5263 4		
5326 4		
5357 4		
5388?		
5424 4		
5444 4		
5485 4		
5545 4		
5572 4		
5606 4		
5635 4		
5671?		
5705 <sup>@</sup> 5		
5761?		
5782 4		
5806 4		
5852 4		

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$^{34}\text{S}(^3\text{He,t})$  [2009Pa28,2007Fu06](#) (continued)

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$^{34}\text{Cl}$  Levels (continued)

E(level)<sup>†</sup>

5868 4

5898 4

5917 4

5941 4

5980 4

<sup>†</sup> From [2009Pa28](#), except when noted otherwise. Statistical uncertainties of 2 keV and systematic uncertainties of 3 keV are quoted by [2009Pa28](#) which were quadratically added by evaluators.

<sup>‡</sup> From [2007Fu06](#).

<sup>#</sup> From [2007Fu06](#).

<sup>@</sup> A statistical uncertainty of 4 keV given by [2009Pa28](#) for this level was added quadratically with the systematic uncertainty.