

$^{27}\text{Al}(^3\text{He,t})$  2009De33,1989Wa19

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 112, 1875 (2011)	30-Nov-2010

Others: 1986Sc21, 1984Bu09.

2009De33:  $^{27}\text{Al}$  target on carbon substrate; Projectile:  $^3\text{He}$ ,  $E=25$  MeV; Enge split-pole spectrograph, position sensitive ionization drift chamber and plastic scintillator; measured triton spectrum (FWHM 35-keV); Deduced levels, resonance energies, widths. Protons from excited states of  $^{27}\text{Si}$  were measured using the Yale lamp-shade array of five 16-strip silicon detectors.

1989Wa19: Self supporting  $^{27}\text{Al}$  target; Projectile:  $^3\text{He}$ ,  $E=22.5$  and  $26.3$  MeV; magnetic spectrograph; measured  $\sigma E(t)$ , deduced level energies.

 $^{27}\text{Si}$  Levels

E(level) <sup>†</sup>	Comments
0	
7379 4	
7428 4	
7436 4	
7470 4	
7533 3	
7557? 3	E(level): Uncertain level, not adopted.
7589 3	
7651 3	
7690? 3	E(level): Uncertain level, not adopted.
7702 3	
7741 3	
7789 3	
7832 3	
7893 4	
7913 3	
7971 3	
8037 3	
8073 3	
8140 4	
8161 2	E(level): Weighted average of 8162(2) (2009De33) and 8159(3) (1989Wa19).
8184 <sup>‡</sup> 4	
8207 3	E(level): Weighted average of 8211(5) (2009De33) and 8206(3) (1989Wa19).
8226 <sup>‡</sup> 3	
8299 5	
8324 5	
8358 4	
8380 4	
8450 4	
8493 4	
8525 4	
8558 4	
8587 4	
8671 3	
8724 4	
8782 4	
8863 3	
8947 9	
8987 3	
9028 3	
9072 3	
9140 2	
9184 3	

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 $^{27}\text{Al}(\alpha,\text{He,t})$  [2009De33](#),[1989Wa19](#) (continued) $^{27}\text{Si}$  Levels (continued)

<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>
9227 4	9362 10	9577 3	9834 2
9238 4	9386 13	9616 9	9856 3
9280 5	9409 3	9666 10	9914 2
9311 3	9477 3	9715 2	9934 5
9335 7	9549 10	9762 2	

<sup>†</sup> Up to 8140 keV from [1989Wa19](#) and 8299 keV and above from [2009De33](#), except otherwise noted.

<sup>‡</sup> From [1989Wa19](#).