

$^{29}\text{Si}({}^3\text{He}, {}^6\text{He})$  2002Ca24

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst		NDS 134, 1 (2016)	1-Feb-2016

$J(^{26}\text{Si})=1/2^+$ .

Excited states observed in  $^{26}\text{Si}$  using the reaction  $^{29}\text{Si}({}^3\text{He}, {}^6\text{He})^{26}\text{Si}$  at  $E({}^3\text{He})=51$  MeV incident upon carbon-backed  $^{29}\text{Si}$  (59.5% enriched, 0.161 mg/cm<sup>2</sup>) and  $^{29}\text{SiO}_2$  (95% enriched, 0.17 mg/cm<sup>2</sup>) targets. Focal plane detection system (7.5°) comprising a gas-ionization drift chamber for energy loss measurements, backed by a scintillator for residual charged-particle energy measurement. See also 2001CaZY.

 $^{26}\text{Si}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>†</sup>	Comments
0.0	0 <sup>+</sup>	
1795.9 <sup>#</sup>	2 <sup>+</sup> ‡	
2783.5 <sup>#</sup>	2 <sup>+</sup> ‡	
4144 8	2 <sup>+</sup>	E(level): 2002Ca24 fit a broad single peak at 4148 keV 5 for two states at 4144 and 4211.
4211 16	3 <sup>+</sup>	
4446 <sup>#</sup>	2 <sup>+</sup> , 4 <sup>+</sup>	
4806 <sup>#</sup>	0 <sup>+</sup> , 2 <sup>+</sup> , 4 <sup>+</sup>	
5140 10	2 <sup>+</sup>	
5291	4 <sup>+</sup>	
5526 8	4 <sup>+</sup>	
5678 8	1 <sup>+</sup> ‡	
5945 8	3 <sup>+</sup> ‡	$J^\pi$ : Based on weak population, 2002Ca24 discarded 0 <sup>+</sup> and assign 3 <sup>+</sup> .

<sup>†</sup> Values suggested by 2002Ca24 based on their charged-particle spectroscopy measurements in comparison to angular-distribution results presented in 2002Ba25 (p,t) and 1982Bo14 ( ${}^3\text{He},n$ ), and the compilation in 1996II01.

‡ Assignment based on comparison of observed excitation energy with calculated Coulomb-shifted level from 1996II01.

# Used for calibration.