

$^{30}\text{Si}(^3\text{He},\text{t}) \text{E}=30 \text{ MeV}$ 1981Ra11

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia, A. Chakraborty	NDS 197,1 (2024)	31-May-2024

1981Ra11: Target: 95% enriched ^{30}Si ; Projectile: ^3He , E=30 MeV; Split pole magnetic spectrograph using position sensitive detectors, particle identified by energy loss, triton peaks taken at 20 angles between 5° to 65° ; deduced level energy and L value; the particle spectra were recorded with energy resolution typically of about 50 keV.

Others:

2009Fu03: $^{30}\text{Si}(^3\text{He},\text{t}) \text{E}=140 \text{ MeV/nucleon}$.

1970Cu06: $^{30}\text{Si}(^3\text{He},\text{t}) \text{E}=17.85 \text{ MeV}$.

1970Du08: $^{30}\text{Si}(^3\text{He},\text{t}) \text{E}=15.4 \text{ MeV}$.

 ^{30}P Levels

E(level) [†]	J ^π [†]	L [†]	Comments
0		0	L: from 1970Du08.
676 5	0 ⁺	0	
708 5	1 ⁺	2	
1454 5	2 ⁺	2	
1973 5			
2538 5	3 ⁺	4	
2724 5	2 ⁺	2	
2842 5	3 ⁺	4	
2941 5	2 ⁺	2	
3025 5	1 ⁺	2	
3731 5	1 ⁺	2	
3834 5	2 ⁺	2	
3929 5	3 ⁺	4	
4144 5	2 ⁻	3	
4183 5	2 ⁺		
4232 5			
4298 5	4 ⁺	4	
4344 5	5 ⁺	6	
4421 5	2 ⁺	2	
4468 5	0 ⁺	0	
4501 5	1 ⁺	2	
4625 5	3 ⁻	3	
4735 5	3 ⁺	4	
4930 5			
4951 5			
5026 5	5 ⁻	5	
5204 5	3 ⁺	4	
5228 5			
5415 5	2 ⁺ [‡]	(2)	
5505 5		2	
5573 5		2+4	
5597 5		2+4	
5700 5		2+6	
5719 5		2+6	
5788 5	(3 to 5) ⁺	4	
5807 5	3 ⁺	4	
5896 5	2 ⁻	3	
			E(level): authors refer this level to 5916 in the literature – which is 5908 keV level in the adopted dataset.
5928 5			
6000 5	(0 to 2) ⁻	1	
6051 5	4 ⁺	4	
6092 5	3 ⁻	3	E(level): doublet.

Continued on next page (footnotes at end of table)

$^{30}\text{Si}(^3\text{He,t}) \text{ E}=30 \text{ MeV}$ [1981Ra11](#) (continued) ^{30}P Levels (continued)

E(level) [†]	J ^π [†]	L [†]	Comments
6177 5	(5 to 7) ⁺	6	
6231 5	(3,5) ⁺	4	
6264 5	2 ⁺	2	
6295 5			
6354 5	(4 to 6) ⁻	5	
6470 5		6,(7)	
6514 5	(1 to 3) ⁺	2	
6606 5	(3,5) ⁺	4	
6666 5		4	
6786 5			
6858 5	1 ⁺	2	
6881 5	3 ⁺	4	
6927 5	1 ⁻	1	
6981 5	(5 to 7) ⁺	6	
7017 5	2 ⁻	3	
7048 5	4 ⁻	5	
7119 5			
7177 5	(1 to 3) ⁺ [#]	2	
7201 5			
7222 5	2 ⁻	3	
7279 5	2 ⁺	2	
7300 5		2	
7314 5			
7347 5	5 ⁺	6	
7370 5			
7390 5			
7486 5			
7550 5	(2 ⁺)		
7580 10			
7608 10	(3 ⁺)	2	
7647 10	5 ⁻	5	
7687 10	5 ⁺	6	
7765 10	4 ⁺	4	
7830 10			
7890 10			
7928 10			
8030 10			
8105 10	1 ⁺	2	
8180 10			
8206 10			
8242 10	(4 to 6) ⁻	5	
8280 10	3 ⁻	3	E(level): doublet. J ^π =2 ⁻ in the Adopted Levels.
8353 10			
8402 10	2 ⁺	2	
8442 10	2 ⁻ ,3 ⁻ ,4 ⁻	3	
8486 10	3 ⁺ , (4,5,6) ⁻	(4,5)	J ^π : (4-6) ⁻ assignment is also possible (1981Ra11).
8529 10	(3 to 5) ⁺	4	
8575 10			
8634 10			
8665 10			
8730 10			
8820 10			

[†] From [1981Ra11](#), unless otherwise noted.

$^{30}\text{Si}(^3\text{He,t})\text{E}=30\text{ MeV}$ **1981Ra11** (continued)

^{30}P Levels (continued)

‡ $J^\pi=(2^-)$ in Adopted Levels.

1^- in Adopted Levels.