

$^{23}\text{Na}(\text{t,p}), ^{26}\text{Mg}(\text{t},\alpha)$ **1962Hi01,1975Pa14,1978Fo28**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 205,1 (2025)	31-May-2025

Includes $^{26}\text{Mg}(^{11}\text{B}, ^{12}\text{C}), (^{16}\text{O}, ^{17}\text{F})$.

1962Hi01,1961Hi15: $^{23}\text{Na}(\text{t,p}), ^{26}\text{Mg}(\text{t},\alpha)$ $E \approx 6$ MeV. The emitted charged particles were analyzed at several angles (20° , 30° , 40° and 45°) for ^{23}Na target; 20° , 30° , 40° and 50° with $E=5.75$ MeV and 30° , 45° , and 60° with $E=5.96$ MeV for ^{26}Mg target with the broad-range magnetic spectrograph. Deduced levels,

1975Pa14: $^{26}\text{Mg}(^{11}\text{B}, ^{12}\text{C})$, $E=114$ MeV; measured $\sigma(\theta)$. spectroscopic factors.

1978Fo28: $^{23}\text{Na}(\text{t,p})$, $E=12$ MeV; measured $\sigma(\theta)$. Deduced levels, spin, parity, DWBA analysis.

1976Si05: $^{26}\text{Mg}(^{16}\text{O}, ^{17}\text{F})$, $E=126$ MeV; measured $\sigma(\theta)$ and DWBA.

1984An17: $^{23}\text{Na}(\text{t,p})$, $E=3.3$ MeV; measured $\sigma(\theta)$, deduced ground state mass defect, Coulomb energy differences, radius parameter.

Others: **1961Hi15**, **1976Si05**, **1982Ai27**.

 ^{25}Na Levels

E(level) [†]	L [‡]	C ² S	Comments
0	2+4	4.60	C ² S: from 1975Pa14 . Other: 2.75 (1975Si05).
90 5	0+2		
1068 7	2	0.23	E(level): other: 1070 5 (1978Fo28). C ² S: From 1975Si05 .
2204 7	2+0		E(level): other: 2200 5 (1978Fo28).
2418 7			E(level): other: 2420 5 (1978Fo28).
2788 5	2(+4)		E(level): other: 2790 5 (1978Fo28).
2913 5			E(level): other: 2910 10 (1978Fo28).
3353 5			
3456 7			
3685 7			
3928 7			
3952 7			
3995 7			
4136 7			
4286 7			
4340 7			
4450 10			
4710 10			
4800 10			
4962 10			
5146 10			
5190 10			
5223 10			
5347 10			
5378 10			
5465 10			
5484 12			
5690 12			
5713 12			
5746 12			

[†] From **1962Hi01,1961Hi15**, weighted mean of the results from (t,p) and (t,α).

[‡] From **1978Fo28**, based on measured $\sigma(\theta)$ and DWBA.