

$^{187}\text{Os}(\text{p,t})$ 1976Sh15

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106, 619 (2005)	1-Nov-2005

Target: ^{187}Os ($J^\pi=1/2^-$). E=19 MeV. Detector: magnetic spectrometer, FWHM \approx 15 keV.

 ^{185}Os Levels

$\geq 11/2$ members of the 9/2[624] and 11/2[615] rotational bands are significantly mixed by the Coriolis interaction (1975So01).

E(level) [†]	J^π [‡]	L	$\Sigma\sigma\sin\theta$ [#]	Comments
0 [@]	1/2 ⁻	0	939.8	
38 [@]	3/2 ⁻	2	85.3	
98	5/2 ⁻ & 7/2 ⁻	2	110.5	E(level): Doublet, possibly 5/2 ⁻ state of 1/2(510) band, and 7/2 ⁻ state of 7/2(503) band.
127 ^a	3/2 ⁻		19.0	
198 [@]	7/2 ⁻		17.0	
224 ^a	5/2 ⁻		42.1	
257 ^{&}	9/2 ⁻			
270 ^b	11/2 ⁺			
354 ^a	7/2 ⁻			
410	9/2 ⁺ & 13/2 ⁺			E(level): Doublet, possibly 9/2 ⁺ state of 9/2[624] band, and 13/2 ⁺ state of 11/2(615) band.
519 ^a	(9/2 ⁻)		14.5	
599 ^c	(3/2 ⁻)		153.3	
679			13.8	
802 ^d	(5/2 ⁻)		151.8	
1070 ^e	1/2 ⁻	0	155.7	
1123 ^e	3/2 ⁻		33.8	Angular distribution similar to that for the 38-keV level.
1213 ^f	1/2 ⁻	0	74.9	
1275 ^f	3/2 ⁻		55.6	Angular distribution similar to that for the 38- and 1123-keV levels.

[†] Uncertainties in energy calibration are generally 5-7 keV.

[‡] Based on L-value transfers obtained from angular distributions, on level energy and cross-section systematics.

[#] Cross sections in ($\mu\text{b/sr}$) summed from 10° to 60° with an interval of 5°.

[@] Band(A): 1/2(510) rotational band.

[&] Band(B): 7/2(503) rotational band.

^a Band(C): 3/2(512) rotational band.

^b Band(D): 11/2(615) rotational band.

^c Band(E): K=3/2 possible K-2 γ -vibrational state + 1 quasiparticle state: (1/2[510],2⁺)+3/2[512].

^d Band(F): K=5/2 possible K+2 γ -vibrational state + 1 quasiparticle state: (1/2[510],2⁺)+5/2[512].

^e Band(G): K=1/2 band. Probably the 1/2⁻[510] particle (hole) coupled to the excited 0⁺ state in ^{184}Os (^{186}Os) (1976Sh15).

^f Band(H): probable 1/2(521) rotational band.

$^{187}\text{Os}(\text{p,t})$ 1976Sh15 (continued)

**Band(H): Probable
1/2(521) rotational band**

3/2⁻ 1275

1/2⁻ 1213

Band(G): K=1/2 band

3/2⁻ 1123

1/2⁻ 1070

$^{185}_{76}\text{Os}_{109}$