^{32}S(n,n′γ),(n,n′)   **1983El13,1968Ma28,1968Ma20**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 201,1 (2025)	31-Oct-2024

(n,n′γ):

1983El13 (also 1989Ge09,1984El12,1982El06): (n,n′γ) E=fast neutrons were from Institute of Nuclear Research, Sofia. Measured Eγ, Doppler-shift attenuation. Deduced lifetimes, transition strengths. Comparisons with available data. DSAM for lifetime measurements. See also 1989Ge09, 1988Ge08.

1968Ma28: E=14.1 MeV neutrons. Measured Eγ. Deduced levels.

(n,n′):

1968Ma20: E_{max}=6.05 MeV neutrons from the IBIS facility at AERE, Harwell. Neutrons were detected with liquid scintillator detectors. Measured $\sigma(\theta)$. Deduced levels, J, π.

1990Ol02: E=21.6 MeV neutrons from the CN Van de Graaff at Uppsala University. Neutrons were detected with liquid scintillator detectors. Measured $\sigma(E_n,\theta)$. Coupled channel calculations.

Others (measured σ): 2012Al15, 1986Al21, 1980De17, 1978Ko19, 1976Sh08, 1976Wo12, 1975Co13, 1973Cr06, 1965Co03.

^{32}S Levels

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
0			
2230	(2)		
3780	(0)		E(level): from 1968Ma20 and 1968Ma28.
4281	(2)	28 fs 10	Additional information 1.
4461	(4)	88 fs 21	Additional information 2.
4700			E(level): from 1968Ma28.
5006	(3)	0.49 ps 11	Additional information 3.
5798			
6224			
6410			
6621			
6762			

[†] From 1983El13, unless otherwise noted.
[‡] From analysis of $\sigma(\theta)$ in 1968Ma20.
[#] From DSAM in 1983El13.

γ(^{32}S)

E$_{\gamma}$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Comments
1500 30	3780	(0)	2230	(2)	
2070 30	4281	(2)	2230	(2)	
2230	4461	(4)	2230	(2)	E$_{\gamma}$: from level-energy difference; transition reported in 1983El13.
2240 10	2230	(2)	0		
2470 20	4700		2230	(2)	
2750 20	5006	(3)	2230	(2)	
^{x}3810 20					
3950 30	6224		2230	(2)	
4320 30	4281	(2)	0		

[†] From 1968Ma28.
[x] γ ray not placed in level scheme.

^{32}S(n,n′γ),(n,n′)   **1983El13,1968Ma28,1968Ma20**

Level Scheme

		6224
(3)		5006 0.49 ps *11*
		4700
(4)		4461 88 fs *21*
(2)		4281 28 fs *10*
(0)		3780
(2)		2230
		0

3950
2750
2470
2230
4320
2070
1500
2240

$^{32}_{16}S_{16}$