^{122}Te(p,p′) IAR   1971Bu09

	Type	Author	History Citation	Literature Cutoff Date
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1971Bu09: E=6.70-7.76, 8.51-11.20 MeV proton beams were produced from an EN tandem Van de Graaff accelerator. Target was 910 μg/cm^2 94.8% enriched ^{122}Te on a 20 μg/cm^2 carbon backing. Scattered protons were detected with Si(Li) and surface-barrier silicon counters (FWHM=40-50 MeV). Measured $\sigma(E_p,\theta)$. Deduced levels, J, π, L-transfers, total resonance widths, proton partial widths, spectroscopic factors from the analysis of the elastic excitation functions using a theoretical multi-level formula. Comparisons with available data.

^{123}I Levels

Widths given under comments are from a theoretical fit to angular distribution of outgoing protons (1971Bu09).

E(level)[†]	J$^{\pi}$[‡]	L	C^{2}S[‡]	Comments
S(p)+7189 *20*	1/2$^+$	0	0.33	Γ=51 keV *5*; Γ_p=11.2 keV *15* E(level): IAR of g.s., 1/2$^+$ in ^{123}Te.
S(p)+7347 *20*	(3/2)$^+$	2	0.25	Γ=33 keV *5*; Γ_p=3.5 keV *6* E(level): IAR of 159-keV, 3/2$^+$ state in ^{123}Te.
S(p)+8620 *20*		(2)		E(level): IAR of 1414, (5/2$^+$) level.
S(p)+8750 *20*		(2)		E(level): IAR of 1558, (3/2$^+$) level.
S(p)+8948 *20*	(1/2)	(0,1)		Γ=36 keV *5*; Γ_p=3.1 keV *5* E(level): IAR of 1760, (3/2)$^-$ level.
S(p)+9056 *20*	(3/2)$^-$	1	0.03	Γ=38 keV *5*; Γ_p=2.4 keV *4* E(level): IAR of 1887-keV,(3/2)$^-$ level in ^{123}Te; L=1 in ^{122}Te(d,p).
S(p)+9154 *20*	(3/2$^-$)	(1)		Γ=32 keV *7* E(level): IAR of 1978-keV,(3/2)$^-$ level in ^{123}Te; L=1 in ^{122}Te(d,p).
S(p)+9204 *20*	(7/2)$^-$	3	0.054	Γ=37 keV *6*; Γ_p=1.4 keV *4* E(level): IAR of 2051 level.
S(p)+9255 *20*	(3/2$^-$)	(1)		Γ=50 keV *10* E(level): Possible IAR of 2093-keV, (1/2,3/2) state in ^{123}Te.
S(p)+9550? *20*		(1)		
S(p)+9740? *20*				
S(p)+9910 *20*		(3)		
S(p)+10076 *20*				
S(p)+10880 *20*				

† Given as S(p)+ E(p)(c.m.), with S(p)=4918 *3* (2021Wa16).
‡ From a theoretical fit to angular distribution of outgoing protons (1971Bu09).