

$^{122}\text{Sn}(\text{pol p,p})$ IAR 1975Ar04

Type	Author	History Citation	Literature Cutoff Date
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1975Ar04: E=7.2-12.0 MeV polarized proton beams were produced from the FN tandem Van de Graaff accelerator at Rutgers University. Target was 1000 $\mu\text{g}/\text{cm}^2$ 92%–98% enriched ^{122}Sn . Reaction products were detected with Si(Li) detectors. Measured $\sigma(\theta)$, analyzing powers (E, θ). Deduced resonance energies, J, π , widths, L-transfers. Comparisons with available data.

 ^{123}Sb Levels

†: From analysis of experimental cross sections and analyzing powers compared with theoretical calculations.

E(level) [†]	J π [‡]	L [‡]	E(p)(c.m.)	Comments
14261	3/2 ⁺	2	7689	$\Gamma=48$ keV; $\Gamma_p=7.4$ keV E(level): IAR of 24.6-keV, 3/2 ⁺ state in ^{123}Sn .
14395	1/2 ⁺	0	7823	$\Gamma=48$ keV; $\Gamma_p=14.3$ keV E(level): IAR of 150.4-keV, 1/2 ⁺ state in ^{123}Sn .
15434	5/2 ⁺	2	8862	$\Gamma=74$ keV; $\Gamma_p=3.4$ keV E(level): IAR of 1194.4-keV, 5/2 ⁺ level in ^{123}Sn ; L=2 in $^{122}\text{Sn}(\text{d,p})$.
15734	5/2 ⁺	2	9162	$\Gamma=93$ keV; $\Gamma_p=2.7$ keV E(level): IAR of 1488.8-keV, 5/2 ⁺ level in ^{123}Sn ; L=2 in $^{122}\text{Sn}(\text{d,p})$.
16932	7/2 ⁻	3	10360	$\Gamma=94$ keV; $\Gamma_p=19.6$ keV E(level): IAR of 2726-keV, 7/2 ⁻ level in ^{123}Sn ; L=2 in $^{122}\text{Sn}(\text{d,p})$.
17376	(7/2 ⁻)	(3)	10840	$\Gamma=140$ keV; $\Gamma_p=8.0$ keV E(level): IAR of 3151-keV, (7/2 ⁻) level in ^{123}Sn ; L=3 in $^{122}\text{Sn}(\text{d,p})$.
17563	(3/2 ⁻)	(1)	10911	$\Gamma=202$ keV; $\Gamma_p=30.0$ keV E(level): IAR of 3320-keV, (3/2 ⁻) level in ^{123}Sn ; L=1,2 in $^{122}\text{Sn}(\text{d,p})$.
18256	(1/2 ⁻)	1	11684	$\Gamma=130$ keV; $\Gamma_p=27.0$ keV E(level): Possibly IAR of 4008-keV level in $^{122}\text{Sn}(\text{d,p})$.

[†] From E(p)(c.m.)+S(p), where S(p)=6571.9 keV 24 (2021Wa16). Uncertainties of E(p) are 5-20 keV.

[‡] From analysis of experimental cross sections and analyzing powers compared with theoretical calculations.