^{34}S(p,p′),(pol p,p′) 1991Ke09,1978BeXU,1968Mo22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, Balraj Singh	NDS 113, 1563 (2012)	28-May-2012

1991Ke09, 1991Kh06: ^{34}S(pol p,p′) E=318 MeV, 67.92%-enriched ^{34}S target (powder In between thin beryllium foils). Used the high-resolution spectrometer (At Los Alamos Meson Physics Facility) At angles between 5° and 39°. Measured differential cross sections and analyzing powers.

1985Al03: ^{34}S(p,p′) E=29.8 MeV, target of 94.3%-enriched ^{34}S on C backing. Used position-sensitive gas proportional counter (FWHM=20 keV) and measured angular distributions covering the angles from 15° to 120° In steps of 5°.

1983Iv01: ^{34}S(p,p′) E=6 MeV, measured elastic and inelastic angular distributions.

1975Al28: ^{34}S(p,p′) E=1 GeV, target of 98.0%-enriched ^{34}S. Used magnetic spectrometer (quadrupole lens doublet, magnet, detecting system of scintillator counters) and measured elastic and inelastic differential cross sections.

1975Al08: ^{34}S(p,p′) E=1 GeV, same type of target and same experimental setup As those In 1975Al28 (FWHM=1.6 MeV). Measured elastic differential cross sections.

1974Gu26: ^{34}S(p,p′) E=5.4-6.2 MeV, 97.97%-enriched ^{34}S thick target (sulfur on glass plate). Measured excitation functions At several angles and elastic angular distributions.

1973Go42: ^{34}S(pol p,p′) E=24.5 MeV. Measured differential cross sections and asymmetries (As function of angle) for inelastic proton scattering.

1969An35: ^{34}S(p,p′) E=6.03 MeV, 57.17%-enriched ^{34}S InS target. Used Si(Li) detector and measured elastic and inelastic angular distributions, and differential cross section for elastic scattering.

1968Mo22: ^{34}S(p,p′) E=12.011 *17* MeV, 85%-enriched ^{34}S CdS target. Used double focusing magnetic spectrometer and array of 16 Si surface barrier detectors (FWHM=25 keV) At 20°, 60°, and 130° relative to beam direction.

1985SaZS: ^{34}S(pol p,p′) E=65 MeV. Used high-resolution magnetic spectrograph and measured angular distribution of the differential cross sections and analyzing powers for a number of states.

1978BeXU: ^{34}S(p,p′) E=40 MeV, thick sandwich-type target. Used Enge split-pole spectrometer and position-sensitive proportional counter backed with plastic scintillator (additional runs on photographic plates too).

Others: 2005Ko28, 2001Kh17 (inverse kinematics), 1999Ma63, 1999ShZX, 1988Za04, 1988Al14, 1983Mi25, 1983Ch50, 1980Fa07, 1980PrZT.

See also: 1990SeZR, 1989KhZZ, 1984AlZV, 1982IvZX.

^{34}S Levels

E(level)	J^π	Comments
0.0	0^+	β_2(p,p′)=0.28 *1* (1985Al03); 0.24 *2* (1999Ma63 by reanalysing 1985Al03 data with Becchetti-Greenless optical potential). Other: 1983Iv01.
2129 *18*	2^+	E(level): 2129 *18* (1968Mo22); 2127 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06, 1973Go42, 1985SaZS; J=2 from 1985Al03, 1983Iv01, 1975Al28.
3306 *14*	2^+	E(level): 3306 *14* (1968Mo22); 3303 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06, 1985SaZS; J=2 from 1985Al03, 1983Iv01.
3917 *14*	0	E(level): 3917 *14* (1968Mo22); 3914 (1983Iv01). J^π: from 1983Iv01.
4077† *15*		
4115 *14*	2^+	E(level): 4115 *14* (1968Mo22); 4114 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06, 1985SaZS; J=2 from 1985Al03.
4625 *14*	3^-	E(level): 4623 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06, 1973Go42.
4689† *25*		
4882 *14*	4^+	E(level): 4882 *14* (1968Mo22); 4688 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06; J=4 from 1985Al03.
4889	2^+	E(level): 4889 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06; J=2 from 1985Al03.
5228† *14*		
5321† *14*		

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^{34}S(p,p′),(pol p,p′) 1991Ke09,1978BeXU,1968Mo22 (continued)

^{34}S Levels (continued)

E(level)	J^π	Comments
5381† *14*		
5684† *14*		
5689	5^-	E(level): 5689 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06.
5755 *14*	1^-	E(level): 5755 *14* (1968Mo22); 5753 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06.
5848† *18*		
5995† *18*		
6118† *14*		
6170 *14*	3^-	E(level): 6170 *14* (1968Mo22); 6174 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06.
6248† *18*		
6340 *14*	1^-	E(level): 6340 *14* (1968Mo22); 6345 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06.
6414† *14*		
6479† *18*		
6635† *14*		
6680† *14*		
6738† *25*		
6819† *26*		
6860 *14*	5^-	E(level): 6860 *14* (1968Mo22); 6864 (1991Ke09, 1991Kh06). J^π: from 1991Ke09, 1991Kh06.
6888† *14*		
6950† *14*		
7110† *14*		
7248† *18*		
7264?† *18*		
7360?† *18*		
7389?† *18*		
7479 *5*		E(level): weighted average of: 7479 *5* (1978BeXU); 7479 *14* (1968Mo22).
7556 *5*		E(level): weighted average of: 7557 *5* (1978BeXU); 7549 *14* (1968Mo22).
7625 *5*		E(level): weighted average of: 7625 *5* (1978BeXU); 7621 *14* (1968Mo22).
7649† *14*		
7732‡ *5*		
7779‡ *5*		
7805‡ *5*		
7976‡ *5*		
8034‡ *5*		
8296‡ *5*		
8385‡ *5*		
8423‡ *5*		
8511‡ *5*		
8580‡ *5*		
8623‡ *5*		
8656‡ *5*		
8671‡ *5*		
8718‡ *5*		

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^{34}S(p,p′),(pol p,p′) 1991Ke09,1978BeXU,1968Mo22 (continued)

^{34}S Levels (continued)

E(level)	E(level)	E(level)	E(level)
8740‡ *10*	9120‡ *5*	9429‡ *5*	9700‡ *6*
8792‡ *5*	9171‡ *5*	9445‡ *5*	9872‡ *5*
8809‡ *5*	9205‡ *7*	9481‡ *5*	9925‡ *5*
8953‡ *5*	9226‡ *6*	9566‡ *10*	9969‡ *10*
8987‡ *5*	9347‡ *10*	9601‡ *5*	

† From 1968Mo22.
‡ From 1978BeXU.