

$^{35}\text{Cl}(n,d)$ 1968Mi02,1977Pa29

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

^{35}Cl target J^π : $3/2^+$.

1968Mi02: $E=14.4$ MeV, $\text{PbCl}_2^{\text{nat}}$ deposited on Au backing ($\approx 75\%$ ^{35}Cl and $\approx 25\%$ ^{37}Cl), deuteron group leading to unresolved 2^+ , 2130 In ^{34}Cl and to g.s. of ^{36}S (coming from reaction on ^{35}Cl and on ^{37}Cl respectively). Measured angular distributions, DWBA and PWBA analyses. Deduced L values, spectroscopic factors S^{DW} , S^{PW} (for each respective method).

1977Pa29: $E=14.1$ MeV, 99.32%-enriched ^{35}Cl As PbCl_2 on Au backing. Measured angular distributions, DWBA analysis. Deduced L values and spectroscopic factors (from two different sets of optical potential parameters).

Other: **1967Fa10** (spectroscopic factors).

 ^{34}S Levels

E(level)	L	S	Comments
0.0	2	1.11 10	E(level),L: from 1968Mi02 and 1977Pa29 . S: weighted average of 1.06 14 and 1.16 15 (1977Pa29); others: $S^{\text{DW}}=1.58$, $S^{\text{PW}}=1.05$ (1968Mi02); 1.07 (1967Fa10).
2130	0	0.39 4	E(level),L: from 1968Mi02 and 1977Pa29 . S: weighted average of 0.34 5 and 0.45 6 (1977Pa29); others: from 1968Mi02 , $S^{\text{DW}}=0.29$ (with No cut-off), $S^{\text{DW}}=0.36$ (with cut-off radius of 4.1 fm), $S^{\text{PW}}=0.19$; 0.358 13 (1967Fa10).
3310	0	0.87	E(level),L: from 1968Mi02 . S: from 1968Mi02 : $S^{\text{DW}}=0.87$ (adopted), $S^{\text{PW}}=0.30$; others: 0.95 3 (1967Fa10).