

$^{32}\text{S}(\alpha, \text{d})$ 1982De29, 1977Na10, 1976De24

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

1982De29: $^{32}\text{S}(\alpha, \text{d})$ E=50 MeV, solid target of S evaporated on C foil and covered with C layer, and gaseous target of H_2S . Used $\Delta\text{E-E}$ Si telescopes. Measured angular distribution. Calculated two-nucleon transfer spectroscopic factors with assumed L, or L and L+2 values (not given in the table below). Supersedes **1981De37**.

1977Na10: $^{32}\text{S}(\alpha, \text{d})$ E=40 MeV, with target of 99.9%-enriched S layer in between resin and C foils. Enge-split magnetic spectrograph with proportional-counter plastic-scintillator combination with resolution of 40 and 60 keV FWHM. Measured angular distribution from 6° to 55° .

1976De24: $^{32}\text{S}(\alpha, \text{d})$ E=40 MeV, natural ^{32}S CdS target, $\Delta\text{E-E}$ Si detector with FWHM=50 keV. Measured excitation energies and $\sigma(20^\circ)_{\text{c.m.}}$ (given in comments in arbitrary units, a.u.). Also data from $^{32}\text{S}(^3\text{He}, \text{p})$ – see respective dataset.

Others: **1966Ki10**.

 ^{34}Cl Levels

E(level) [†]	J^π [‡]	L [#]	Comments
150 @ 10	(1 ⁺ , 2 ⁺ , 3 ⁺)	(2) ^b	$\sigma(20^\circ)_{\text{c.m.}}=9$ a.u. (1976De24).
460 @ 10	1 ⁺ , 2 ⁺ , 3 ⁺	2 ^b	$\sigma(20^\circ)_{\text{c.m.}}=8$ a.u. (1976De24).
1230 40			
1880 @ 10			
2180 @ 10			
2708 20	(2 ⁻ , 3 ⁻ , 4 ⁻)	(3) ^b	$\sigma(20^\circ)_{\text{c.m.}}=9$ a.u. (1976De24).
3600 14			
3630 @ 10	4 ⁻ , 5 ⁻ , 6 ⁻	5	$\sigma(20^\circ)_{\text{c.m.}}=25$ a.u. (1976De24).
4080 @ 10	4 ⁻ , 5 ⁻ , 6 ⁻	5	$\sigma(20^\circ)_{\text{c.m.}}=14$ a.u. (1976De24).
4417 17			
4650 40			
4680 @ 10			
4788 & 7	3 to 7 ⁺	4, 6 ^c	$\sigma(20^\circ)_{\text{c.m.}}=18$ a.u. (1976De24).
4930 20			
5278 ^a 7	5 ⁺ , 6 ⁺ , 7 ⁺	6	$\sigma(20^\circ)_{\text{c.m.}}=35$ a.u. (1976De24).
7350 20			
7840 30			
8390 40			

[†] From **1982De29**, unless stated otherwise.

[‡] ADOPTED by evaluators.

[#] From **1977Na10**.

@ From **1977Na10**.

& Weighted average of 4786 10 (**1982De29**) and 4790 10 (**1977Na10**).

^a Weighted average of 5277 10 (**1982De29**) and 5280 10 (**1977Na10**).

^b From **1976De24**.

^c L=4 from **1977Na10** and L=6 from **1976De24**.