^{2}H(^{34}S,pγ) 1973Wa10

^{34}S(d,p)^{35}S in inverse kinematics.

1973Wa10: A 59.6-MeV ^{34}S beam was produced from the BNL MP-tandem Van de Graaff facility. Targets were 200 μg/cm^2 TiD prepared by evaporating titanium onto the Cu, Al, and Mg target backings in a deuterium atmosphere. γ rays were detected using a 35 cm^3 Ge(Li) detector at 0° with FWHM=2 keV at 656 keV. Measured Eγ. Deduced $T_{1/2}$ for two ^{35}S levels using Doppler Shift Attenuation lineshape analysis.

^{35}S Levels

E(level)	J$^\pi$[†]	$T_{1/2}$[‡]	Comments
0	3/2$^+$		
1574	1/2$^+$	2.29 ps *35*	$T_{1/2}$: Lifetime=3.3 ps *5* from 1973Wa10.
2350	3/2$^-$	0.90 ps *14*	$T_{1/2}$: Lifetime=1.3 ps *2* from 1973Wa10.

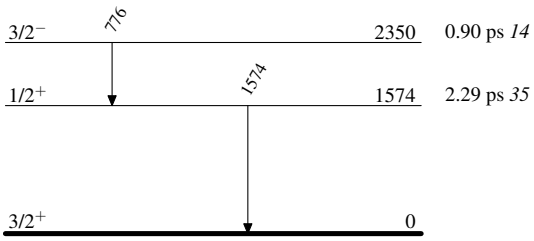
[†] From the Adopted Levels.
[‡] Using Doppler Shift Attenuation Method (DSAM).

γ(^{35}S)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
776	2350	3/2$^-$	1574	1/2$^+$
1574	1574	1/2$^+$	0	3/2$^+$

^{2}H(^{34}S,pγ) 1973Wa10

Level Scheme



$^{35}_{16}S_{19}$