

^{29}S β^+ p decay **1979Vi01,1985Zh05**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 114, 1189 (2013)	1-Apr-2013

Parent: ^{29}S : $E=0.0$; $J^\pi=(5/2^+)$; $T_{1/2}=188$ ms 4; $Q(\beta^+p)=11050$ 50; $\% \beta^+p$ decay=47 5

1979Vi01: ^{29}S was produced from $^{28}\text{Si}(^3\text{He},2n)$, $E=31.3$ MeV on target; recoiled ^{29}S was thermalized in the helium gas and transported to a counting chamber and was deposited on aluminum foil; several ΔE -E counter telescopes were used to measure all different proton decays; measured beta-delayed proton spectra.

1985Zh05: ^{29}S was produced from $^{28}\text{Si}(^3\text{He},2n)$, $E=31.5$ MeV (Same research group as of **1979Vi01**).

 ^{28}Si Levels

$E(\text{level})^\dagger$	$J^\pi^\dagger$	$T_{1/2}^\dagger$
0.0	0^+	stable
1779.030 11	2^+	475 fs 9
4617.86 4	4^+	44 fs 4

† From Adopted Levels.

 $\gamma(^{28}\text{Si})$

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.
1778.969 12	11.6 6	1779.030	2^+	0.0	0^+	E2
2838.67 5	0.16 6	4617.86	4^+	1779.030	2^+	

† Absolute intensity per 100 decays.

Delayed Protons (^{28}Si)

$E(p)^\dagger$	$E(^{28}\text{Si})$	$I(p)^{\dagger\#}$	$E(^{29}\text{P})$	$E(p)^\dagger$	$E(^{28}\text{Si})$	$I(p)^{\dagger\#}$	$E(^{29}\text{P})$
3296 15		0.34 3		3870 20	1779.030	0.27 6	8532
739.5 9	1779.030	3.4 3	5293.0	4186 20	0.0	1.08 7	7083
1006 25	4617.86	0.16 6	8379	4338 20	0.0	0.33 4	7272
1257 10	1779.030	3.8 4	5826	4480 25	0.0	0.25 4	7361
1766 15	1779.030	0.38 5	6356	4685 20	1779.030	0.27 4	9389
1910 15	1779.030	0.30 4	6505	4835 20	0.0	0.23 4	7755
2129.8 9	0.0	11.9 4	4954.1	5174 15	0.0	0.69 7	8105
2457.0 9	0.0	0.53 4	5293.0	5304 15	0.0	0.92 7	8234
2531 10	1779.030	1.08 7	7148	5438.2 22	0.0	15.8 4	8379
2883 15	1779.030	0.082 15	7523	5585 20	0.0	0.87 7	8532
2961 15	0.0	0.18 2	5826	5853 20	0.0	0.14 3	8780
3101 15	0.0	0.18 2	5968	6446 30	0.0	0.16 3	9389
3211 15	0.0	0.16 2	6074	6725 ‡ 50	0.0	0.10 ‡ 2	9760
3456 15	0.0	0.38 5	6328	6860 ‡ 30	0.0	0.21 ‡ 2	9855
3587 15	1779.030	0.21 4	8234	7090 ‡ 30	0.0	0.12 ‡ 1	10095
3720.6 22	1779.030	2.34 12	8379	7520 ‡ 30	0.0	0.18 ‡ 1	10535
3770 15	0.0	0.71 6	6653				

† From **1979Vi01**, except otherwise noted.

‡ From **1985Zh05**.

$^\#$ Absolute intensity per 100 decays.

E(p)	I(p)	E($^{20}_{15}\text{P}$)	E($^{28}_{14}\text{Si}$)
2129.8	11.9	4954.1	0.0
2457.0	0.53	5293.0	0.0
2961	0.18	5826	0.0
3101	0.18	5968	0.0
3211	0.16	6074	0.0
3456	0.38	6328	0.0
3770	0.71	6653	0.0
4186	1.08	7083	0.0
4338	0.33	7272	0.0
4480	0.25	7361	0.0
4835	0.23	7755	0.0
5174	0.69	8105	0.0
5304	0.92	8234	0.0
5438.2	15.8	8379	0.0
5585	0.87	8532	0.0
5853	0.14	8780	0.0
6446	0.16	9389	0.0
6725	0.10	9760	0.0
6860	0.21	9855	0.0
7090	0.12	10095	0.0
7520	0.18	10535	0.0
739.5	3.4	5293.0	1779.030

²⁹S β⁺p decay 1979Vi01,1985Zh05

Decay Scheme (continued)

γ Intensities: I(γ+ce) per 100 parent decays
I(p) Intensities: I(p) per 100 parent decays

