^{28}Si(^{18}O,pnγ) 1973Dr08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 190,1 (2023)	20-Jun-2023

1973Dr08: E=31 MeV ^{18}O beam was produced from the Liverpool EN tandem accelerator. Target was natural Si evaporated to 250 μg/cm^2 on 2 mg/cm^2 stretched gold foils. γ rays were detected with a 41 cm^3 Ge(Li) detector. Measured Eγ, recoil distance. Deduced $T_{1/2}$ using Recoil Distance Method (RDM). 1973Dr08 report data for ^{44}Sc mainly from ^{44}Ca(p,γ) and also report $T_{1/2}$ from DSAM using ^{41}K(α,nγ) reaction.

^{44}Sc Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$[#]
0.0	2$^+$	
68	1$^-$	
234.6	2$^-$	12.7 ns *22*
349.7	4$^+$	3.12 ns *28*
424.7	3$^-$	378 ps *42*
531.3	3$^{(-)}$	<35 ns
630.8	4$^-$	411 ps *30*
1006.3	(4$^-$)	<35 ns
1196	5$^-$	<35 ns

[†] From 1973De08 based on Eγ data.
[‡] From the Adopted Levels.
[#] From RDM in 1973Dr08.

γ(^{44}Sc)

E$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
235	234.6	2$^-$	0.0	2$^+$
297	531.3	3$^{(-)}$	234.6	2$^-$
350	349.7	4$^+$	0.0	2$^+$
357	424.7	3$^-$	68	1$^-$
396	630.8	4$^-$	234.6	2$^-$
531	531.3	3$^{(-)}$	0.0	2$^+$
566	1196	5$^-$	630.8	4$^-$
582	1006.3	(4$^-$)	424.7	3$^-$

[†] From 1973Dr08. The complete set of Eγ values with uncertainties from 1973De08 are given in (p,nγ).

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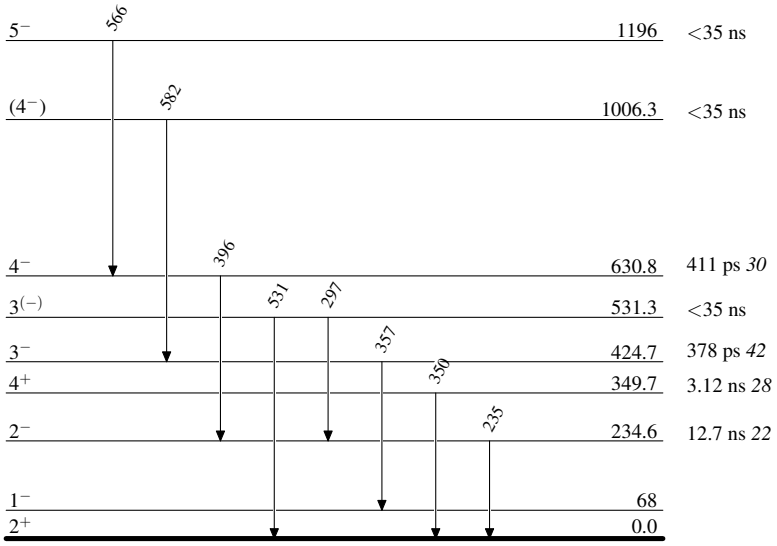
Level Scheme



$^{44}_{21}Sc_{23}$