

$^{31}\text{P}(\text{n},\text{n}'\gamma)$ 1989Ge09

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 184, 29 (2022)	24-Jun-2022

1989Ge09: fast neutrons from ITR-200 reactor at the Institute for Nuclear Research and Nuclear Power of the Bulgarian Academy of Sciences. γ -rays detected using Ge detectors. DSAM for lifetime measurements. See also 1988Ge08.

1969K105: E=14.5 MeV at Strasbourg. Measured E_γ with a Ge(Li) detector.

1973Ke09: Kelvin Laboratory University of Glasgow (n,n); (n,n') E=1.27-9 MeV, $\sigma(\theta)$ measured, 1266 and 2234 γ -rays reported.

Other: 1973Cr06, 1965Bo17, 1960An14.

 ^{31}P Levels

E(level) [†]	$T_{1/2}$ [‡]	Comments
0		
1266		
2234		
3134	6 fs 5	$T_{1/2}$: $\tau=9$ fs 7.
3295	97 fs 17	$T_{1/2}$: $\tau=140$ fs 24.
3414	0.28 ps 15	$T_{1/2}$: $\tau=400$ fs 210.
3505	12 fs 8	$T_{1/2}$: $\tau=18$ fs 12.
4190	62 fs 10	$T_{1/2}$: $\tau=90$ fs 15.
4259	<14 fs	$T_{1/2}$: $\tau<20$ fs.
4431		
4635		
5530	11 fs 5	$T_{1/2}$: $\tau=16$ fs 7.

[†] From E_γ .

[‡] From DSAM (1989Ge09).

 $\gamma(^{31}\text{P})$

E_γ [†]	$E_i(\text{level})$	E_f	E_γ [†]	$E_i(\text{level})$	E_f	E_γ [†]	$E_i(\text{level})$	E_f
1061 [‡]	3295	2234	2029	3295	1266	2234 [‡]	2234	0
1136 [‡]	4431	3295	2116	5530	3414	2924	4190	1266
1266 [‡]	1266	0	2148	3414	1266	3134	3134	0
1340 [‡]	4635	3295	2197 [‡]	4431	2234	3505	3505	0
						4259	4259	0

[†] From 1989Ge09, unless otherwise noted.

[‡] From FIG.2 of 1969K105.

$^{31}\text{P}(n,n'\gamma)$ 1989Ge09

Level Scheme

