

$^{31}\text{P}(^3\text{He},p\gamma)$  1971Kn04

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 199,1 (2025)	30-Sep-2024

**1971Kn04:** E=12 and 13 MeV  $^3\text{He}$  beams were produced from the E(n) and MP tandem Van de Graaff accelerators of the Max-Planck-Institut in Heidelberg and the FN tandem at the Argonne National Laboratory. Target was a  $0.7 \text{ mg/cm}^2$  on a  $100 \mu\text{g}$  gold backing for  $p\gamma(\theta)$  measurement. Protons were detected with a lithium-drifted counter or an ion-implanted Si counter;  $\gamma$  rays were detected with a 38.5 cc Ge(Li) detector. Measured  $E_\gamma$ ,  $I_\gamma$   $p\gamma$ -coin. Deduced levels.

 $^{33}\text{S}$  Levels

<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>	<u>E(level)<sup>†</sup></u>
0	2970	4213	6380
842	3221	4377	7920
1968	3832	4747	
2314	3935	5475.0 16	
2869	4049	6091	

<sup>†</sup> As given in 1971Kn04.

 $\gamma(^{33}\text{S})$ 

<u><math>E_i(\text{level})</math></u>	<u><math>E_\gamma</math><sup>†</sup></u>	<u><math>E_f</math></u>	<u><math>E_i(\text{level})</math></u>	<u><math>E_\gamma</math><sup>†</sup></u>	<u><math>E_f</math></u>	<u><math>E_i(\text{level})</math></u>	<u><math>E_\gamma</math><sup>†</sup></u>	<u><math>I_\gamma</math><sup>†</sup></u>	<u><math>E_f</math></u>
842	842	0	3832	963	2869	4213	3371		842
1968	1968	0	3935	1967	1968	4377	4377		0
2314	1471	842		3093 <sup>‡</sup>	842	4747	4747		0
	2313	0		3935	0	5475.0	4632.7 10	85	842
2970	1002 <sup>‡</sup>	1968	4049	1180 <sup>‡</sup>	2869		5475.0 16	15	0
	2970 <sup>‡</sup>	0		3207 <sup>‡</sup>	842	6091	6091		0
3221	2379	842		4049	0	6380	6380		0
	3221	0	4213	1344 <sup>‡</sup>	2869	7920	7078		842

<sup>†</sup> From 1971Kn04. Energy values without uncertainties are from level-energy difference.

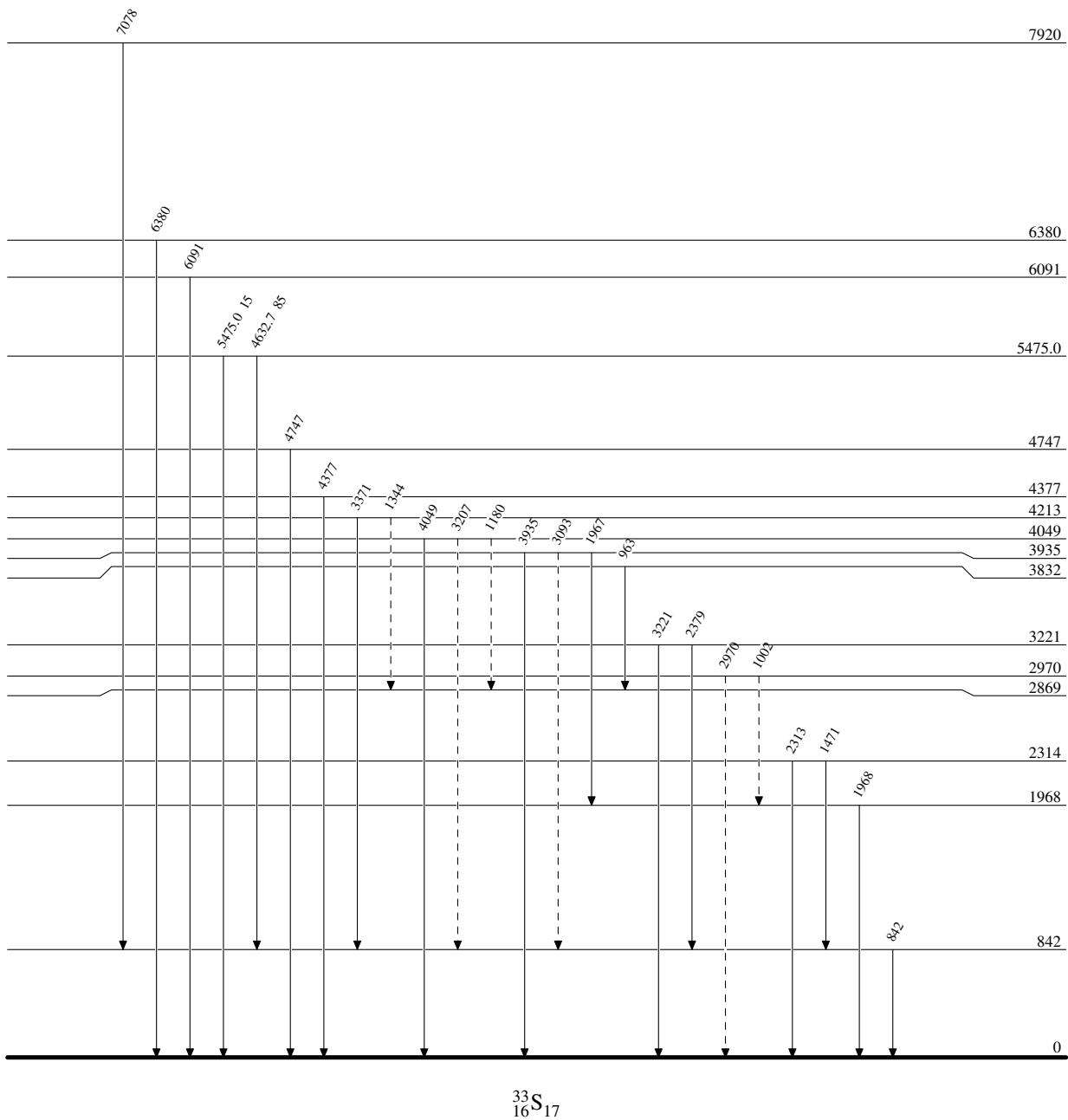
<sup>‡</sup> Placement of transition in the level scheme is uncertain.

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Legend

## Level Scheme

Intensities: % photon branching from each level

-----►  $\gamma$  Decay (Uncertain) $^{33}_{16}\text{S}_{17}$