^{28}Si(^{36}Ar,αpγ):prompt p decay 2002Ru06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Caroline D. Nesaraja, Scott D. Geraedts and Balraj Singh	NDS 111,897 (2010)	12-Jan-2010

2002Ru06: levels in ^{58}Ni from proton decay of high-spin states of ^{59}Cu formed in ^{28}Si(^{36}Ar,αpγ) reaction.

^{58}Ni Levels

Levels at 7313,8$^+$ (decaying by 1246γ and 1929γ) and 7445,9$^+$ (decaying by 842γ and 1379γ) shown in level scheme figure 1 of 2002Ru06 do not seem to be populated in prompt proton decay of ^{59}Cu levels, thus omitted here.

E(level)	J$^\pi$[†]	Comments
0	0$^+$	
1454	2$^+$	
2459	4$^+$	E(level): level populated by E(p)=1916- and 1949-keV proton branches from 7792,17/2$^+$ and 7825,17/2$^+$ levels in ^{59}Cu, respectively.
3620	4$^+$	
4383	5$^+$	
5127	6$^+$	
5384	6$^+$	
5588	5$^-$	
6067	7$^+$	
6084	7$^-$	E(level): level populated by E(p)=2484−keV proton branch from 11984,23/2$^-$ level in ^{59}Cu.
6604	8$^+$	E(level): level populated by E(p)=1897- and 2019-keV proton branches from 11917,25/2$^+$ and 12039,25/2$^+$ levels in ^{59}Cu, respectively.

[†] As proposed by 2002Ru06.

γ(^{58}Ni)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
496	6084	7$^-$	5588	5$^-$	956	6084	7$^-$	5127	6$^+$	1764	5384	6$^+$	3620	4$^+$
537	6604	8$^+$	6067	7$^+$	1001	5384	6$^+$	4383	5$^+$	1923	4383	5$^+$	2459	4$^+$
683	6067	7$^+$	5384	6$^+$	1005	2459	4$^+$	1454	2$^+$	2166	3620	4$^+$	1454	2$^+$
700	6084	7$^-$	5384	6$^+$	1161	3620	4$^+$	2459	4$^+$	2668	5127	6$^+$	2459	4$^+$
744	5127	6$^+$	4383	5$^+$	1454	1454	2$^+$	0	0$^+$	2924	5384	6$^+$	2459	4$^+$
763	4383	5$^+$	3620	4$^+$	1476	6604	8$^+$	5127	6$^+$	3129	5588	5$^-$	2459	4$^+$
939	6067	7$^+$	5127	6$^+$	1684	6067	7$^+$	4383	5$^+$	3625	6084	7$^-$	2459	4$^+$

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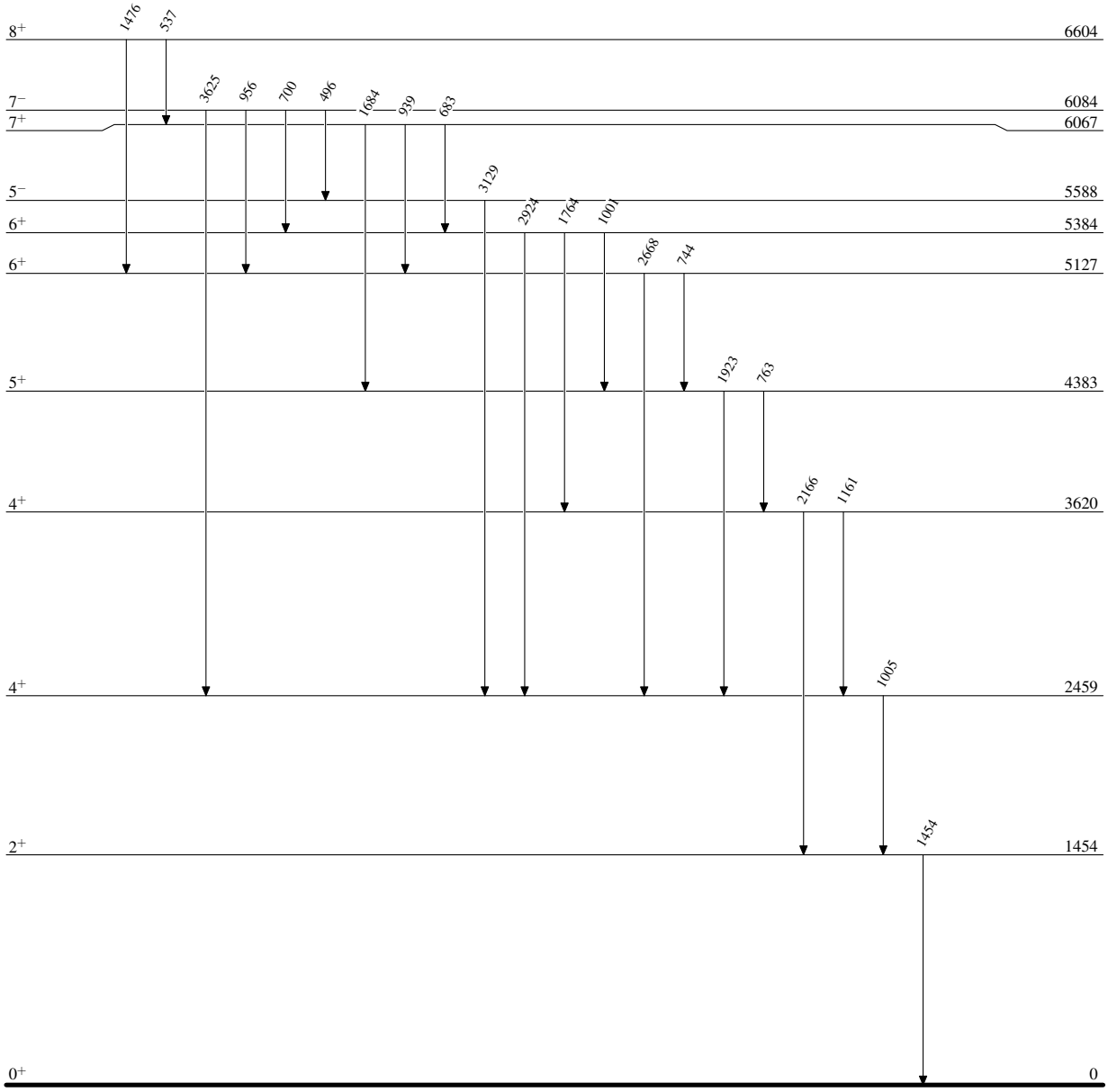
Level Scheme



$^{58}_{28}Ni_{30}$