

${}^{60}\text{Ni}(\alpha, {}^2\text{He})$ 1990Fi07

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alan L. Nichols, Balraj Singh, Jagdish K. Tuli		NDS 113, 973 (2012)	15-Apr-2012

1990Fi07: E=55.6 MeV, $\theta(\text{lab})=17.5$, DWBA analysis.

 ${}^{62}\text{Ni}$ Levels

E(level)	J^π [‡]	Normalization factor [#]	Comments
0.0	0 ⁺	3.4×10^2 10	Configuration= $\nu p_{3/2}^2$.
4110	4 ⁺	90 15	Configuration= $\nu p_{3/2} \otimes \nu f_{5/2}$.
4630	7 ⁻	50 10	Configuration= $\nu f_{5/2} \otimes \nu g_{9/2}$.
4980	4 ⁺	85 10	Configuration= $\nu p_{3/2} \otimes \nu f_{5/2}$.
5660	5 ⁻	75 15	Configuration= $\nu f_{5/2} \otimes \nu d_{5/2}$.
6060 [†]	5 ⁻ & 7 ⁻	70 15	Configuration= $\nu f_{5/2} \otimes \nu d_{5/2}$ for 5 ⁻ and $\nu f_{5/2} \otimes \nu g_{9/2}$ for 7 ⁻ . Normalization factor: for 5 ⁻ , 60 15 for 7 ⁻ .
7190 [†]	8 ⁺ & 6 ⁺	130 25	Configuration= $\nu g_{9/2} \otimes \nu g_{9/2}$ for 8 ⁺ and $\nu g_{9/2} \otimes \nu d_{5/2}$ for 6 ⁺ . Normalization factor: for 8 ⁺ , 65 15 for 6 ⁺ .
7620	6 ⁺ , 8 ⁺	55 25	Configuration= $\nu g_{9/2} \otimes \nu g_{9/2}$ for 8 ⁺ and $\nu g_{9/2} \otimes \nu d_{5/2}$ for 6 ⁺ . Normalization factor: for 6 ⁺ , 100 40 for 8 ⁺ .

[†] Unresolved doublet.

[‡] Based on DWBA analysis and proposed configurations.

[#] Normalization factor= $d\sigma/d\Omega(\text{exp})/[(\Delta\epsilon)(d\sigma/d\Omega(\text{DWBA}))]$, where $\Delta\epsilon$ =fixed breakup energy interval (1990Fi07).