## $^{62}$Ni(p,n):resonances 1966Bo26

History

| Type | Author | Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Balraj Singh, Huang Xiaolong, and Wang Xianghan | NDS 204,1 (2025) | 30-Jun-2023 |

1966Bo26: E=3.1-4.6 MeV. Measured compound-nucleus resonances by n-yield excitation function at Tandem Van de Graaff accelerator facility. FWHM≈10 keV. A total of 23 resonances observed but only eight were reported in Table 3 of 1966Bo26. Consult also digitized dataset *X4 datasetF1133* in EXFOR database from Fig. 3 in 1966Bo26, where peak energies of other resonances can be found.

1966Bo26 deduce Coulomb displacement energy: $^{62}$Ni-$^{62}$Cu=9319 keV *19*.

## $^{62}$Cu Levels

Deduced energies of the corresponding states in $^{62}$Ni are listed in comments, with the assumption of experimentally known level at 4628 *10* in Adopted Levels of $^{62}$Cu, interpreted as analog of g.s. of $^{62}$Ni. A comparison is made with experimentally known low-spin (J≤6) levels in $^{62}$Ni Adopted Levels, within ≈100 keV of the deduced level energy in $^{62}$Ni.

| E(level)[†] | Comments |
|---|---|
| 9045 | E(p)(c.m.)=3190.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=4417, compared to known levels in $^{62}$Ni: 4317, $1^+$,$2^+$; 4393, $(1\text{ to }5)^+$; 4407, $2^+$; 4416, $1^+$,$2^+$; 4424; 4437, $(3^-)$; 4455; and 4503, $(3^-)$. |
| 9276 | E(p)(c.m.)=3421.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=4648, compared to known levels in $^{62}$Ni: 4623, $0^+$; 4627, $2^+$,$3^+$; 4655, $3^-$; 4704; 4712, $2^+$; and 4720, $3^-$. |
| 9478 | E(p)(c.m.)=3623.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=4850, compared to known levels in $^{62}$Ni: 4781, $2^+$; 4835; 4847, $(1\text{ to }5)^{(+)}$; 4860, $2^+$; 4882, $4^+$; and 4949. |
| 9689 | E(p)(c.m.)=3834.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=5061, compared to known levels in $^{62}$Ni: 4967; 4981, $(4^+)$; 4994, $3^-$; 5000, $1^+$,$2^+$; 5016, $4^+$; and 5041, $(3\text{ to }6)^-$. |
| 9916 | E(p)(c.m.)=4061.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=5288, compared to known levels in $^{62}$Ni: 5203, $2^+$; 5222; 5233; 5280; 5286, $2^+$; 5310, $2^+$; 5331, $(3)^-$; and 5355, $4^+$. |
| 10083 | E(p)(c.m.)=4228.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=5455, compared to known levels in $^{62}$Ni: 5355 $4^+$; 5393; 5420, $(4^+)$; 5447, $0^+$; 5465; 5488; 5511; 5541, $2^+$; and 5545, $(3\text{ to }6)^-$. |
| 10216 | E(p)(c.m.)=4361.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=5588, compared to known levels in $^{62}$Ni: 5488; 5511; 5541, $2^+$; 5545, $(3\text{ to }6)^-$; 5565; 5574, $2^+$; 5587, 5601; 5628, $3^-$; 5673, $5^-$; and 5679. |
| 10405 | E(p)(c.m.)=4550.<br>E(level): deduced energy of corresponding state in $^{62}$Ni=5777, compared to known levels in $^{62}$Ni: 5679; 5709; 5739; 5772; 5808, $(3^-)$; 5834, $2^-$; 5846; 5859; 5870; and 5888, $(4^+)$. |

[†] Deduced from E(p)(c.m.)+S(p), with S(p)=5854.5 *6* (2021Wa16).