## $^{9}$Be($^{54}$Ni,X$\gamma$) 2013Da08

History

| Type | Author | Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Yang Dong, Huo Junde | NDS 128, 185 (2015) | 10-Jul-2015 |

Beams of $^{54}$Ni at E=87 MeV/nucleon were produced from fragmentation of $^{58}$Ni primary beam at 160 MeV/nucleon on a $^{9}$Be primary target. A1900 fragment separator, $^{52}$Ni beams were identified from energy loss in the S800 ionization chamber, time-of-flight measurement, $\gamma$ rays were measured using SeGA array, Shell-model calculations.

### $^{52}$Ni Levels

| E(level) | J$^{\pi}$[†] |
|---|---|
| 0 | $0^+$ |
| 1397 *6* | $2^+$ |
| 2385 *10* | $4^+$ |
| 3247 *17* | $6^+$ |

[†] Based on the intensity profile of the $\gamma$-rays and mirror-symmetry arguments, i.e., through comparison with the spectrum of $^{52}$Cr.

### $\gamma(^{52}$Ni)

| E$_\gamma$ | I$_\gamma$ | E$_i$(level) | J$_i^\pi$ | E$_f$ | J$_f^\pi$ |
|---|---|---|---|---|---|
| 862 *14* | 27 *11* | 3247 | $6^+$ | 2385 | $4^+$ |
| 988 *8* | 44 *10* | 2385 | $4^+$ | 1397 | $2^+$ |
| 1397 *6* | 100 *13* | 1397 | $2^+$ | 0 | $0^+$ |

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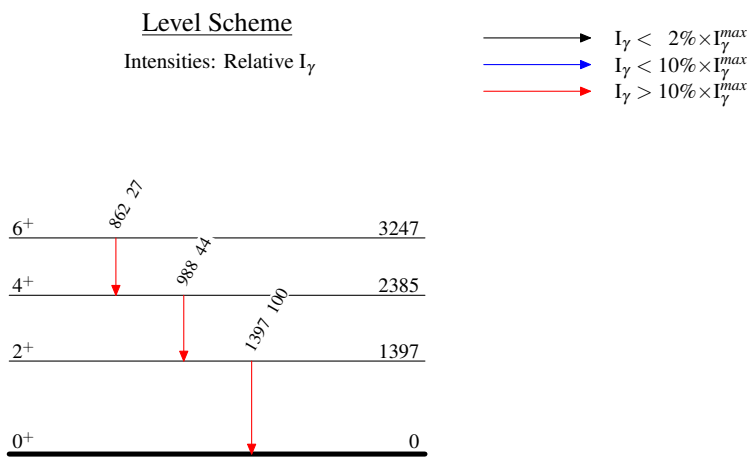
Level Scheme

Intensities: Relative I$_\gamma$




$^{52}_{28}Ni_{24}$