

$^9\text{Be}(^{29}\text{Na},\text{N27NE})$ **2012Sm08**

| <u>Type</u> | <u>Author</u> | <u>History</u> | <u>Citation</u> | <u>Literature Cutoff Date</u> |
|-----------------|------------------------|----------------|----------------------|-------------------------------|
| Full Evaluation | M. Shamsuzzoha Basunia | | NDS 114, 1189 (2013) | 1-Apr-2013 |

2012Sm08: $^9\text{Be}(^{29}\text{Na},\text{N27NE})$: ^{29}Na was produced from the ^{48}Ca primary beam, $E=140$ MeV/u, fragmentation on a Be target. Reaction products were separated using the A1900 fragment separator at NSCL. Secondary beam of ^{29}Na , $E=102$ MeV/nucleon, bombarded another Be target and populated excited state in ^{28}Ne . Measured charged fragment spectra by time-of-flight and energy loss, and Neutron spectra using the Modular Neutron Array, decay energy spectra for ^{28}Ne reconstructed from $^{27}\text{Ne}+n$ system. Deduced excited level energy.

 ^{28}Ne Levels

| <u>E(level)</u> | <u>J^π</u> | <u>Comments</u> |
|-----------------------|---------------------------|--|
| 3.86×10^3 11 | $(2^+, 3^+, 4^+)$ | E(level): Deduced from the measured decay energy of 32 keV 22 in the $^{27}\text{Ne}+n$ system and the best fit. With a neutron separation energy of 3820 keV 120 and the assumption of decay to the g.s., the state is interpreted as an unbound state in 2012Sm08 . J^π : Suggested from shell model calculations. |