

$^9\text{Be}(^{33}\text{Mg},\text{X})$ 2021Ch47

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 184, 29 (2022)	24-Jun-2022

2021Ch47: Neutron-unbound states were populated via a two-proton knockout reaction with an 89 MeV/nucleon beam impinged on a segmented Be target. Fragments and neutrons were detected by the MoNa-LISA-Sweeper setup at NSCL. Invariant mass spectroscopy was used to reconstruct the decay energy ($^{30}\text{Ne}+n$). Deduced excited states at E=300 keV 170 and 1500 keV 330 from the two-body decay-energy spectrum. Comparisons within shell-model calculations.

 ^{31}Ne Levels

E(level) [†]	Comments
0.30×10 ³ ? [‡] 17 1092? [‡]	E(level): for a resonance peak observed in the two-body decay energy spectrum (2021Ch47).
1.50×10 ³ ? [#] 33 2292? [#] 2535? [‡] 3735? [#]	E(level): for a broad enhancement observed in the two-body decay energy spectrum (2021Ch47).

[†] From a two-body decay energy spectrum constructed using invariant mass spectroscopy. Decays to excited states in ^{30}Ne cannot be discriminated and possible levels are proposed based on extracted decay energies of 300 keV and 1500 keV assumed for decays to accessible states of g.s., 792 and 2235 in ^{30}Ne (2021Ch47), with S(n)(^{31}Ne)=170 130 from AME2020 (2021Wa16).

[‡] From decay energy of 300 keV assumed for decays to g.s., 792 and 2235 levels in ^{30}Ne .

[#] From decay energy of 1500 keV assumed for decays to g.s., 792 and 2235 levels in ^{30}Ne .