## $^{9}$Be($^{67}$As,$^{65}$As$\gamma$) 2011Ob02

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Jun Chen | NDS 202,59 (2025) | 25-Feb-2025 |

Adapted from the XUNDL dataset of 2011Ob02, compiled by F.G. Kondev (ANL), on July 3, 2011.

2011Ob02: secondary $^{67}$As beam was produced by fragmentation of a $^{78}$Kr beam at energy of 140 MeV/nucleon on a 329 mg/cm$^2$ $^{9}$Be target at NSCL. Fragments were identified and separated using the A1900 separator. The secondary target was 376 mg/cm$^2$ $^{9}$Be. $\gamma$ rays were detected with the SeGA array consisting 17 segmented HPGe detectors. Beam-like reaction products were analyzed by the S800 spectrograph. Measured E$\gamma$, Doppler-shift line shape. Deduced levels, $T_{1/2}$. Comparisons with shell-model calculations.

### $^{65}$As Levels

| E(level)[†] | J$^{\pi}$[‡] | $T_{1/2}$ | Comments |
|---|---|---|---|
| 0.0 | (3/2$^-$) | | |
| 187 *3* | (5/2$^-$) | 0.27 ns *14* | E(level): the Coulomb energy difference of +76 keV 3 was deduced from the excitation energies of the 5/2$^-$ state in $^{65}$As and $^{65}$Ge (2011Ob02).<br>$T_{1/2}$: from analysis of the observed lineshape of 187$\gamma$ with Monte-Carlo simulations (2011Ob02). |

† From E$\gamma$.

‡ From calculations using D1S Gogny interactions and shell-model approach using the JUN45 interactions predict oblate-deformed shape (2011Ob02). The ordering of 3/2$^-$ and 5/2$^-$ states is tentative.

### $\gamma$($^{65}$As)

| $E_i$(level) | $J_i^{\pi}$ | $E_{\gamma}$ | $I_{\gamma}$ | $E_f$ | $J_f^{\pi}$ | Comments |
|---|---|---|---|---|---|---|
| 187 | (5/2$^-$) | 187 *3* | 100 | 0.0 | (3/2$^-$) | $E_{\gamma}$: the uncertainty in energy results from the quadratic sum of uncertainties on the energy calibration and the peak-maximum determination (2011Ob02). |

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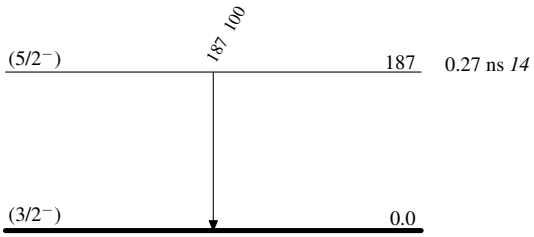
Level Scheme

Intensities: % photon branching from each level




$^{65}_{33}As_{32}$