

Adopted Levels: tentative

| <u>Type</u> | <u>Author</u> | <u>History Citation</u> | <u>Literature Cutoff Date</u> |
|-----------------|---------------|-------------------------|-------------------------------|
| Full Evaluation | C. Morse | NDS 182, 130 (2022). | 14-Sep-2021 |

$S(p)=1082$ SY; $Q(\alpha)=1.178\times 10^4$ 5 [2021Wa16](#)

$\Delta S(p)=225$ ([2021WA16](#)).

$S(2p)=1599$ SY 205, $Q(ep)=5451$ SY 205 ([2021WA16](#)).

One possible observation of ^{267}Ds was reported in [1995Gh05](#). However, there were a number of issues that make the identification of the event uncertain. An equipment failure rendered the daughter decay invisible. In addition, there were two consecutive implantation events, which complicates the interpretation of subsequent decays. Finally, the proposed decay scheme relies on the existence of unobserved electron-capture decay branches. Therefore, the assignment of this event to ^{267}Ds is considered tentative. [1995Gh05](#) requires that the electron-capture decay branch of ^{259}Sg to ^{259}Ha be 10-35% in order to explain the observed decay-chain candidate. However, [2015AN05](#) determined that the electron-capture decay branch of ^{259}Hs is <1%.

Half-lives, branching ratios, and α -decay energies in this evaluation have been computed from the individual events listed in the references above. Half-life uncertainties have been computed according to the method of [1984SC13](#). An additional 10 keV systematic uncertainty is assumed for the α -decay energies, which is added in quadrature to the averaged statistical uncertainty.

 ^{267}Ds Levels

| <u>E(level)</u> | <u>$T_{1/2}$</u> | <u>Comments</u> |
|-----------------|-----------------------------|---|
| 0 | $3 \mu\text{s} +13-1$ | $\% \alpha=100$ E(level): Assumed ground state. $T_{1/2}$: From one event. |