

## $^{257}\text{Fm}$

$^{257}\text{Fm}$  was observed by Hulet et al. from Berkeley in “79-day fermium isotope of mass 257” in 1964 (1964Hu02). A target consisting of  $^{242}\text{Pu}$ ,  $^{243}\text{Am}$ , and  $^{244}\text{Cm}$  was irradiated for four years in the Idaho Materials Testing Reactor and  $^{257}\text{Fm}$  was formed primarily by neutron capture on  $^{256}\text{Fm}$ . Alpha-decay spectra and spontaneous fission were measured following chemical separation. “The decay of the complex 6.6-MeV alpha peak is shown in [the figure]. A best fit was made to the data obtained thus far by use of the least-squares method. The best value for the  $\text{Fm}^{257} T_{1/2}$  is  $79 \pm 8$  days, provided the half-lives of  $\text{Cf}^{253}$  and  $\text{Es}^{253}$  are 17.6 days and 20.0 days, respectively.” Previously a  $11^{+10}_{-6}$  d half-life had been assigned to either  $^{257}\text{Fm}$  or  $^{258}\text{Fm}$  (1963Ga08).

Adapted from reference (2013Th02)

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