^{257}Lr

Eskola et al. identified ^{257}Lr in "Studies of lawrencium isotopes with mass numbers 255 through 260" in 1971 (1971Es01). Boron, nitrogen, and oxygen beams with a maximum energy of 10.4 MeV/u from the Berkeley heavy-ion linear accelerator bombarded ^{249}Cf, ^{248}Cm, and ^{249}Bk targets. Recoil products were swept by rapidly flowing helium gas onto a collection wheel which rotated periodically in front of a series of Si-Au surface-barrier detectors. "In our bombardments of the ^{249}Cf target with ^{15}N ions with the primary goal of making isotopes of element 105, a pronounced 8.87-MeV, 0.6-sec α particle group appeared in the spectra. By producing this activity using three different projectiles, ^{11}B, ^{14}N, and ^{15}N, on the ^{249}Cf target, we have concluded that the activity must be due to ^{257}Lr... The excitation functions for the 8.87-MeV, 0.6-sec and the 8.6-MeV, 4.2-sec α activities produced by ^{15}N ions on ^{249}Cf are displayed in [the figure]... Such a behavior is in accordance with the assignments of the activities to ^{257}Lr and ^{258}Lr" Earlier half-life measurements of 8(2) s (1961Gh03) and $\sim$35 s (1968Fl01) assigned to ^{257}Lr (1961Gh03) were incorrect. The results for ^{257}Lr and ^{258}Lr were mentioned by Ghiorso et al. about a year earlier (1970Gh02) referring to the paper by Eskola et al. (1971Es01) as "to be published".

Adapted from reference (2013Th02)

1961Gh03 A. Ghiorso, T. Sikkeland, A. E. Larsh, and R. M. Latimer, Phys. Rev. Lett. **6**, 473 (1961).

1968Fl01 G. N. Flerov, Y. S. Korotkin, V. L. Mikheev, M. B. Miller *et al.*, Nucl. Phys. A **106**, 476 (1968).

1970Gh02 A. Ghiorso, M. Nurmia, K. Eskola, J. Harris, and P. Eskola, Phys. Rev. Lett. **24**, 1498 (1970).

1971Es01 K. Eskola, P. Eskola, M. Nurmia, and A. Ghiorso, Phys. Rev. C **4**, 632 (1971).

2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"