^{51}Cl

^{51}Cl was discovered by Tarasov et al. in 2009 and published in "Evidence for a change in the nuclear mass surface with the discovery of the most neutron-rich nuclei with $17 \leq Z \leq 25$" (2009Ta05). ^{9}Be targets were bombarded with 132 MeV/u ^{76}Ge ions accelerated by the Coupled Cyclotron Facility at the National Superconducting Cyclotron Laboratory at Michigan State University. ^{51}Cl was produced in projectile fragmentation reactions and identified with a two-stage separator consisting of the A1900 fragment separator and the S800 analysis beam line. Tarasov et al. did not include ^{51}Cl in the list of newly discovered isotopes, but questioned the previously reported observation by Lewitowicz et al. (1990Le03): "While not conclusive, the previous identification of this isotope may have been masked by the presence of the hydrogenlike ion ^{48}Cl^{16+} produced at the same time." (2009Ta05).

The assignment was changed (2016Th03) from the original compilation (2012Th10) which credited the 1990 paper by Lewitowicz et al. (1990Le03) with the discovery of ^{51}Cl.

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