^{77}Rb

In 1972, Arlt et al. identified ^{77}Rb in "Isobars from the spallation reaction for nuclear spectroscopy" (1972Ar02). A zirconium-niobium alloy target was bombarded with 660 MeV protons from the Dubna synchrocyclotron. ^{77}Rb was separated with an electromagnetic isotope separator attached to a surface ionization ion source and identified by measuring β- and γ-ray activities with the YASNAPP facility. "When the zirconium-niobium target was treated as described above a new β-activity on the mass position A=77 with half-life $T_{1/2}$ = 3.9±0.1 min has been discovered." About a year earlier Velandia et al. reported a half-life of 6.1(5) min (1972Ve02), however, these results were discredited by de Boer et al. only a month after the paper by Arlt et al.: "The most embarrassing point is that a 146.5 keV gamma ray which according to Borchert (1971Bo30) should be 31 times stronger than the 106.2 keV gamma ray, is not seen by Velandia et al." (1972De40). Also, a previously reported half-life of 2.8(10) min was assigned to either ^{77}Rb or a ^{77}Kr isomer (1971Do01).

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