^{83}Zr

The first recorded observation of ^{83}Zr was presented in "Das Neue Isotop ^{83}Zr" by Kaba and Miyano in 1974 (1974Ka36). Enriched ^{54}Fe targets were bombarded with a 100 MeV ^{32}S beam from the Munich MP tandem accelerator. ^{83}Zr was identified by measuring γ-ray spectra with Ge(Li) detectors following chemical separation. "Die Halbwertszeiten der sieben gefundenen Gammalinien entsprechen genau der Anstiegzeit des ^{83m}Y. Auf Grund dessen können Gammalinien mit $T_{1/2}$ = 42 sec dem Mutterkern von ^{83m}Y, nämlich ^{83}Zr zugeordnet werden." [The half-lives of the seven observed γ-rays correspond exactly to the time for the ingrowing ^{83m}Y. For this reason the γ-lines with $T_{1/2}$ = 42 s were attributed to ^{83}Zr, the mother nucleus of ^{83m}Y.] A similar half-life of 0.7 min was attributed to either ^{83}Zr or ^{80}Y (1971Do01). Also, a previous observation of a half-life of 5−10 min assigned to ^{83}Zr was incorrect (1965Za02).

Adapted from reference (2012Ny02)

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