^{203}Pb

Maurer and Ramm announced the discovery of ^{203}Pb at the Max Planck Institut in Berlin Dahlem, in the 1942 paper "Künstlich radioaktive Isotope bei Blei und seinen Nachbarelementen unter Verwendung von Uran- und Thorblei" (1942Ma03). Ordinary lead, as well as uranium- and thorium-lead were irradiated with fast neutrons produced from deuteron bombardment of lithium. Beta- and gamma-ray activities were measured following chemical separation. "Nach diesem Ergebnis kann nur das Blei-Isotop der Masse 204 das Ausgangs-Isotop der Umwandlung sein, weil es im Vergleich zum gewöhnlichen Blei im Uran- und Thorblei nur in Spuren vorkommt. Die 52-Stunden-Periode ist also dem Prozeß Pb^{204}(n,2n)Pb^{203}(52 Stunden) zuzuordnen." [Based on these results only the lead isotope of mass 204 can be the initial isotope for this transformation, because relative to ordinary lead it is present only in traces in uranium- and thorium-lead. The 52-hour period has thus to be assigned to the process Pb^{204}(n,2n)Pb^{203}(52 hours).] The earlier report of a small abundance of ^{209}Pb by Aston (1932As03) and the assignment of a 10.25 min half-life by Krishnan and Nahum (1940Kr08) were incorrect. Krishnan and Nahum assigned a 54 h half-life to ^{205}Pb (1940Kr08).

Adapted from reference (2013Fr04)

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