

## <sup>142</sup>Pm

In 1959, Gratot et al. reported the observation of <sup>142</sup>Pm in “Étude de quelques isotopes très déficients en neutrons du prométhéum et du samarium” (1959Gr98). Protons were accelerated with the Saclay cyclotron to 11 MeV and bombarded an enriched <sup>142</sup>Nd target. Beta-decay curves were measured with a Geiger counter. “Pour obtenir l’activité  $\beta^+$  de <sup>142</sup>Pm, nous utilisons le fait que ces  $\beta^+$  ont une énergie de 3.78 MeV, alors que ceux de <sup>17</sup>F ont une énergie de 1.7 MeV.” [In order to obtain the  $\beta^+$  activity of <sup>142</sup>Pm, we utilized the fact that these  $\beta^+$  had an energy of 3.78 MeV, while those of <sup>17</sup>F had an energy of 1.7 MeV.] Previously, Kistiakowsky was only able to establish limits of <2 min or >200 y (1952Ki25). The 1958 Table of Isotope (1958St50) had assigned a 30 s half-life to <sup>142</sup>Pm based on a private communication.

Adapted from reference (2012Ma48)

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