

and comparatively pure state following chemical separation. These reactions are summarized on the following slide (Figure 12).

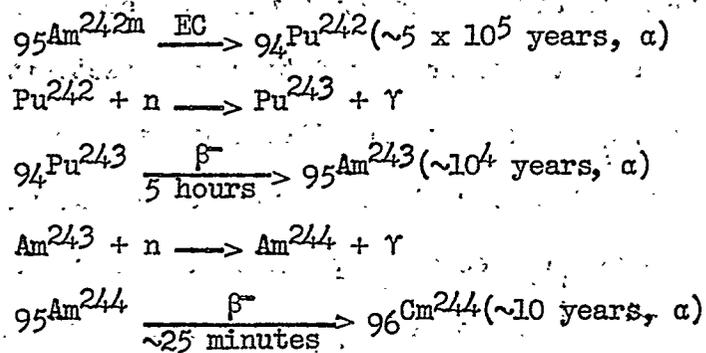


Figure 12

Thus the isotope Am^{243} , with a specific activity some twenty times lower than that of Am^{241} , may supplant Am^{241} for use in the chemical studies of the future; it is not yet known whether Am^{243} is beta stable, but if it is not, its partial half-life for beta emission appears to be longer than 10^4 years so that these considerations would not be altered. Due to the difficulties in studying the chemical properties of curium through the use of the isotope Cm^{242} , the isotope Cm^{244} with twenty times lower specific activity produced as just indicated, offers great hope for the simplification of future chemical studies of curium.

After the return at the conclusion of the war of a number of us to the University of California late in 1945 and early 1946, a part of the effort was put into the problem of the possible production and identification of further transuranium elements. S. G. Thompson, who had done so much in connection with the development of the separation processes for plutonium during the war, undertook to collaborate on the search for