

Albert Ghiorso, trained in electrical engineering, who played a dominant role in the development of the electronic instruments which were used in our radioactivity investigations, and to two young chemists, R. A. James and L. O. Morgan, who had been especially proficient in the investigations involving the chemistry of the transuranium elements. These investigations, supplemented by later work at the University of California, served as the thesis material for James and Morgan in connection with the graduate work which they undertook at the University a couple of years later.

There followed quite a period during which the attempts to synthesize and identify elements 95 and 96 bore no fruit. These unsuccessful experiments were based on the premise that these elements should be much like plutonium in that it should be possible to oxidize them to the (VI) oxidation state and utilize this in the chemical isolation procedures. It was not until the middle of the summer of 1944, upon the first recognition that these elements were part of an actinide transition series, about which I will say more later, that any advance was made, and then progress came quickly.

As soon as it was recognized that these elements should be oxidized above the (III) state only with extreme difficulty, if at all, the identification of an isotope of element 96 followed immediately. Thus the isotope Cm^{242} was identified (12) in the summer of 1944 as a result of the bombardment of Pu^{239} with 32 Mev helium ions in the Berkeley 60-inch cyclotron. The reaction involved was $\text{Pu}^{239}(\alpha, n)\text{Cm}^{242}$, and the bombardment took place in the Berkeley 60-inch cyclotron after which the material was shipped to the Metallurgical Laboratory for chemical identification.