The average of several such pulse analyses (see Fig. 8) gave 1.14 as the value of the ratio of Pu^{236} to Pu^{239}. Using the value 983 days (obtained from figure 7b) for the half-life of Pu^{236} one calculates 26.7 days as the half-life of 96^{240} which is in excellent agreement with the value 26.8 days obtained by resolution of the alpha decay curve (Figure 6). <Fig. 8

2.3 Other Isotopes of Element 96. In addition to the isotopes 96^{240} and 96^{242} one other activity has been observed which may be due to either an isotope of element 96 or to an americium (element 95) isotope.

When the Geiger counter activity of the combined americium-element 96 fraction of plutonium targets bombarded with helium ions is followed with various absorbers the decay curves shown in figures 9, 10 and 11 are obtained. From the percentage of the alpha-activity in the sample which is due to 96^{242} the Geiger counter activity due to this isotope can be obtained from figures 2, 3, 4, and 5. If this is done it is found that there remains, in addition to an activity corresponding to the 96^{240} half-life, an activity of about 55 day half-life and one of about 2 day half-life. The ca. 2 day activity is very probably the same activity as the one which has been found in deuteron bombardments of Pu^{239} (1), i.e. the 50-hour Am^{238}. The 55 day activity has a large amount of soft-electromagnetic radiation, perhaps some electrons, but no hard gamma rays. It is probable that the activity is due to 96^{241} decaying by orbital electron capture. <Figs. 9, 10 and 11

3. Name for Element 96.

As the name for the element of atomic number 96 we should like to propose "curium", with symbol Cm. The evidence indicates that element 96 contains seven 5f electrons and is thus analogous to the element gadolinium, with its seven 4f electrons in the regular rare earth series. On this