

europium, after Europe; and the name "curium" was suggested for element 96, after Pierre and Marie Curie, by analogy with the naming of its homologue, gadolinium, after the Finnish rare-earth chemist J. Gadolin.

By chance, the discovery of these elements was revealed informally on a nationally-broadcast radio program, the Quiz Kids, on which one author appeared as a guest on November 11, 1945 (Figure 10). The discovery information had already been declassified (i.e., removed from the "Secret" category) for presentation at an American Chemical Society symposium at Northwestern University in Chicago the following Friday. Therefore, when one of the youngsters asked--during a session in which one of the authors was trying to answer their questions--if any additional new elements had been discovered in the course of research on nuclear weapons during the war, he was able to reveal the existence of the elements 95 and 96. Apparently many children in America told their teachers about it the next day, and, judging from some of the letters which the author subsequently received from such youngsters, they were not entirely successful in convincing their teachers. The formal announcement of the discoveries was, of course, made later in the week, as planned.

Berkelium and californium (97 and 98)

The story of the discovery of berkelium and californium began shortly after the end of World War II. I recall that we began planning for the possible synthesis and identification of transuranium elements as soon as, or even before, we returned to Berkeley from the Chicago Metallurgical Laboratory; i.e., in late 1945 and in 1946. I thought that this would be a good Ph.D. thesis problem for Stan Thompson and it was, of course, natural that Al Ghiorso would participate on the radiation detection end of the problem as he had in the discovery of americium and curium in Chicago a year or two earlier.

On the basis of our confidence in the actinide concept we felt we could make the chemical identification, although we knew we would have to develop better chemical separation methods than were then available to us. And it seemed clear that we would use helium ion bombardments of americium and curium for our production reactions once these elements became available in sufficient quantity through production by prolonged neutron bombardment of plutonium, and we learned how to handle safely their intense radioactivity.

We knew these things, but we didn't anticipate how long it would take to solve these simple problems. Actually, three years went by before we found ourselves ready to make our first realistic experiment.

The most important prerequisite to the process for making the transcurium elements was the manufacture of sufficiently large amounts of americium and curium to