the dial indicator readings because as the pressure is generated the glycerine compresses, the cylinder expands and the pistons shorten. We corrected the data for the compression of glycerine with the values published by Bridgman, and for the expansion of the cylinder and shortening of the pistons by calculations using elastic theory.

The compression curves of seven Pu-Al delta-stabilized alloys, containing between 1.7 and 12.5 a/o Al, are shown in Slide 3. Irreversible transformations occur at 2040, 4480, and 7020 atms. in the 1.7, 2.5, and 3.4 a/o Al alloys, respectively. These transformations are due to changes of delta into either alpha phase or a phase mixture of mostly alpha and some beta. In general there remains some untransformed delta phase after compression. No transformations were found in the alloys containing from 4.0 to 12.5 a/o Al when compressed at pressures up to 10,600 atms. (The transformation pressures were obtained by extrapolating the pressure-volume curves at the transformation breaks; volumes of transformation are the percentage volume changes at the pressure of transformation.)

The transformation pressures and volumes of transformation of these Pu-Al alloys are shown in Slide 4 plotted against atomic per cent aluminum. They are seen to vary linearly with aluminum content over the range of the experimental measurements. Alloys containing 0.8 and 1.2 a/o Al were heat treated and examined. The 0.8 a/o Al alloy was mostly alpha phase plus some beta and gamma phases and had a density of 17.7 gm/cc. The 1.2 a/o Al alloy was delta phase and had a density of 15.7 gm/cc. The linear extrapolation to zero transformation pressure is interpreted, therefore, as determining the minimum amount of aluminum, 1 atomic per cent, which is required to retain delta phase at room temperature with the heat treatment being used.