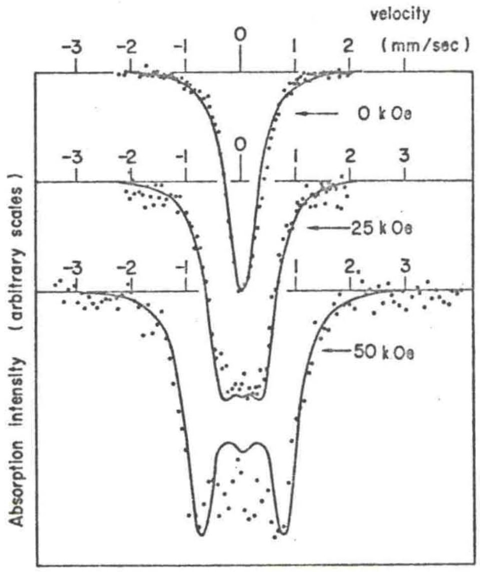

Fig. 2. Absorption spectra of Mössbauer effect of $(Mn_{0.99}Fe_{0.01})_{0.95}Cu_{0.05}$ alloy. Closed circles are observed values and solid curves are calculated. (See text.) Numbers attached are values of applied magnetic field.

transformation is quite remarkable. The discontinuous change of the electric resistivity at the transition temperature almost disappeared by addition of 1 at. % iron to $Mn_{0.95}Cu_{0.05}$ alloys. The iron impurities also affected the susceptibility in such a way as to broaden the sharp kink observed at the transition temperature. These results are quite contrasted with the effect of copper impurities on the transition. The alloys containing 5 at. % copper still show a sharp transition.

Thanks are due to Dr. H. Nagasawa for the measurement of the electric resistance at low temperatures.

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NONLINEAR PRESSURE EFFECT ON THE ELECTRONIC DENSITY OF STATES OF INDIUM*

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Received 17 April 1969

The pressure dependence of γ of In was determined directly from low temperature measurements of the changes of the critical field under pressure. The observed change of H_c under hydrostatic pressure does not follow the predictions of the similarity principle.

The normal electronic density of states may be deduced from the critical field of a superconductor, $H_c(T)$, at temperatures approaching 0^oK [1]. This article describes measurements of $H_c(T)$ for In of sufficient sensitivity to observe the pressure effect on the Sommerfeld constant, γ, directly and which shows the deviations from the so-called "similarity principle" which occur under pressure. H_c of In from T_c to 0.3^oK was measured under pressures up to 1000 atm using solid He. γ was calculated from the slope of $H_c^2(T,p)$ versus T^2 using:

$$H_c^2 = H_0^2 - (4\pi\gamma/V)T^2 . \quad (1)$$

* This work was supported in part by the Advanced Research Projects Agency under Contract SD-131.

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