

compared with experiments. The Figure shows a comparison between the results (a) of the effectively free electron model (b) of the three OPW calculation without the higher order corrections and (c) of the three OPW calculations with higher-order corrections. The agreement of the latter with experiments is very good although the extreme

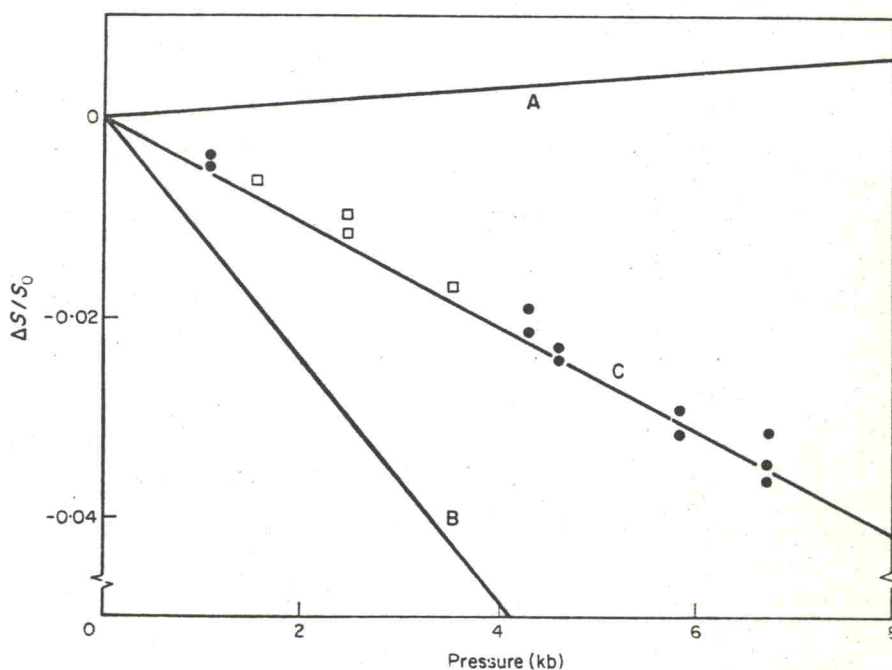


FIG. 11. The pressure dependence of the γ -[110] cross-section in Al. The points are the experimental results (two different samples). The lines represent theoretical calculations: A, simple scaling of the Fermi surface; B, calculation based on 3 OPW Ashcroft pseudo-potential; C, 5 OPW calculation. (From Melz, 1966b.)

closeness is almost certainly fortuitous. For our present purposes, however, the point is that this sort of calculation can explain some of the features of the pressure dependence of the Fermi surface of Al.

Melz made further comparisons between experiment and theory, although the other cross-sections do not lend themselves so readily to theoretical comparison.

2. Fermi Surface of Pb under Pressure

Anderson *et al.* (1967) measured the effect of pressure on some extremal cross-sections of the Fermi surface of Pb and used their results to