Finally, although for reasons of simplicity, we have restricted our attention here to changes in the Fermi surface of palladium, it is clear from Table 1 that the application of pressure should induce large changes in other experimental situations as well. For example, measurements of optical properties (piezoreflecting), spin–lattice relaxation times, and the static susceptibility under pressure would all contribute our understanding of the electron–phonon interaction in transition metals. One of us (SGD)[16] has formulated a method of studying the electron–phonon interaction in noble and transition metals. The study of such effects on palladium using the above mentioned formulation is presently underway.

REFERENCES

1. FONER S. and MCNIFF E.J., Jr., *Phys. Rev Lett.* **19**, 1438 (1967).
2. DIAMOND J.B., *J. appl. Phys.* **42**, 1621 (1971); BERK N. and SCHRIEFFER J.R., *Phys. Rev. Lett.* **17**, 433 (1966); DONIACH S. and ENGLESBERG S., *Phys. Rev Lett.* **18**, 554 (1967); SCHRIEFFER J.R., *Phys. Rev. Lett.* **19**, 642 (1968); CLOGSTON A.M., *Phys. Rev. Lett.* **19**, 583 (1967).
3. HOARE F.E. and YATES B., *Proc. R. Soc. (London)* **A240**, 42 (1957).
4. WINDMILLER L.R., KETTERSON J.B. and HORNFELDT S., *Phys. Rev.* **3**, 4213 (1971).
5. This can be seen as either a *g*-shift of the conduction electrons, or as a change in the density of state as the Fermi energy. Since both effects enter additively in the denominator of the large Stoner–Wohlfarth factor of palladium[6] ($D \sim 15$), the effective lifetime of the paramagnons would be strongly modulated by the electron–phonon interaction. If we assume in the RPA form for the Stoner–Wohlfarth factor $D \sim [1 - \bar{I}N(E_F)]^{-1}$ ($N(E_F)$ being the density of states at the Fermi energy) the effective exchange interaction coupling constant $\bar{I}$ is independent of pressure, then based on the values of Table 1, we would predict that palladium would be ferromagnetic at 75 kbar pressure. However, we believe that the dependence of $\bar{I}$ is even stronger than that the density of states.
6. MUELLER F.M., FREEMAN A.J., DIMMOCK J.O. and FURDYNA A., *Phys. Rev.* **B1**, 4617 (1970).
7. ANDERSON O.K. and MACKINTOSH A.R., *Solid State Commun.* **6**, 285 (1968); ANDERSON O.K., *Phys. Rev.* **B2**, 883 (1970).
8. MATTHEISS L.F., *Phys. Rev.* **139** , A1893 (1965).
9. HODGE L., EHRENREICH H. and LONG N.D., *Phys. Rev.* **152**, 505 (1966).
10. MUELLER F.M., *Phys. Rev.* **153**, 659 (1967) and PHILLIPS J.C., *Phys. Rev.* **133**, A1020 (1969).
11. SLATER J.C. and KOSTER G.F., *Phys. Rev.* **58**, 1498 (1954).
12. PETTIFOR D.G., *J. Phys. C.* **2**, 1051 (1969).
13. DAVIS H.L., FAULKNER J.S. and JOY H.W., *Phys. Rev.* **162**, 601 (1968).
14. O'SULLIVAN W.J. and SCHIRBER J.E., *Phys Rev.* **170**, 667 (1968).
15. MUELLER F.M. *et al.*, *J. appl. Phys.* **37**, 1256 (1966).
16. DAS SHASHIKALA G., to be published;
17. VULLEMIN J.J. and BRYANT H.J., *Phys. Rev. Lett.* **23**, 914 (1969).

Der Einfluss von hydrostatischem Druck auf die De Haas-van Alphen Querschnitte der Fermifläche von Palladium wird behaudelt. Unsere Berechnungen für die Zustandsdichte in Palladium mit ausgedehnten und verkürzten Gitterkoustanten zeigen, dass 2% Äuderung der Gitterkoustanten zu einer Äuderung der Zustandsdichtenan der Fermifläche um 10% führen.