In the present work, the Rotation method[14] is adopted for L_0. The single parametric angle ϕ in (2 × 2) dimension was evaluated for the 10 ions (table 1). It is interesting to note in the table 1 that the parametric angle ϕ increases with the increase in the atomic weight of the central atom X. The valence force constants thus evaluated are in good agreement with the values reported by others[3, 4].

Mean vibrational amplitudes (table 2) and mean square perpendicular amplitudes (table 3) for these ions for various pairs of atomic nuclei were evaluated to check the reliability of the force field model.

Table 3 *Mean Square Perpendicular Amplitudes of Vibration (in A) of some* XY_6 *type ions*
(X = Pb, Pt, Ir, Os, Re, Hf, Ce, Te, Sn, Pd; Y = Cl)

		⟨X−Y⟩ short		⟨X−Y⟩ long
	⟨X−Y⟩	Δx^2	Δy^2	$\Delta x^2 = \Delta y^2$
$PdCl_6^{2-}$	0.009882	0.006374	0.029344	0.0071073
$PtCl_6^{2-}$	0.010526	0.010503	0.026030	0.010556
$IrCl_6^{2-}$	0.005946	0.007582	0.014195	0.005827
$OsCl_6^{2-}$	0.007424	0.007538	0.018638	0.007605
$ReCl_6^{2-}$	0.007907	0.007688	0.020028	0.008162
$HfCl_6^{2-}$	0.012404	0.009774	0.035359	0.008464
$CeCl_6^{2-}$	0.013313	0.011740	0.034008	0.014044
$TeCl_6^{2-}$	0.009521	0.013930	0.022432	0.009124
$SnCl_6^{2-}$	0.008008	0.010801	0.020276	0.008260
$PdCl_6^{2-}$	0.006301	0.008852	0.016097	0.006588

ACKNOWLEDGEMENT

The authors are grateful to Dr P. Paramasiviah, Bangalore University for his interest and encouragement during the progress of this work. CRG is thankful to UGC, New Delhi for the financial assistance under the support for research in Science subject.

12 September 1983

1. Strey, G., *J. Mol. Spec.*, 1967, **24,** 87.
2. Cyvin, S. J., *Molecular Vibrations and Mean Square Amplitudes*, Universities for larget, Oslo. 1968.
3. Theodore L Brown, W. Gordon McDugle, Jr. and Gregory Kent,L., *J. Am. Chem. Soc.*, 1970, **92,** 3645.
4. Brisdon, B. J., Ozin, G. A. and Walton, R. A., *J. Chem. Soc.*, A, 1969, 342.
5. Urey, H. C. and Bradley, C. A., *Phys. Rev.*, 1931, **38,** 1969.
6. King, W. T., *J. Chem. Phys.*, 1962, **36,** 165.
7. Heath, D. F. and Linnet, J. W., *Trans. Farad. Soc.*, 1948, **44,** 873.
8. Torkington, P., *J. Chem. Phys.*, 1949, **17,** 1026.
9. Bills, F., *Acta. Chim. Acad. Sci., Hungary*, 1966, **47,** 53.
10. Herranz, J. and Castano, F., *Spectro. Chim. Acta.*, 1966, **22,** 1965.
11. Cyvin, S. J., *Spectro. Chim. Acta.*, 1959, **15,** 828.
12. Ramaswamy, K. *et al.*, *J. Mol. Spec.*, 1962, **9,** 107.
13. Taylor, W. J., *J. Chem. Phys.*, 1950, **18,** 1301.
14. Person, W. B. and Crawford, B. Jr., *J. Chem. Phys.*, 1957, **26,** 1295.

NEWS

SPEEDY PRODUCTION OF GEOLOGICAL SAMPLES

Rock sections can be produced quickly with the aid of a British-made thin-cut-off saw which reduces samples from a starting thickness between 2 mm and 6 mm to 300–500 micrometers ready for lapping to the final 30 micrometers thickness needed. In just a few minutes the CS-10 can saw excess material from several samples at once. The machine needs no supervision and provides the full facilities of a 250-mm trim and slab saw. A 250-mm diameter diamond blade is supplied as standard, although blades down to 150-mm diameter can be fitted. Chuck face to a saw blade distance is adjustable between 0.75 mm and 2.5 mm. (John Morrison, *Search*, Lloyd Media, PO Box 340, Mona Vale, NSW 2103).