

very close to that occurring in  $\text{CoCl}_2 \cdot 2\text{H}_2\text{O}$ . However, the Co-Cl distances are slightly longer than those reported in the other structures (2.52 Å as against 2.45, 2.48 and 2.49 Å), and are equal, by symmetry. The other important difference is that the other structures contain polymeric chains of Co and Cl, whereas in this structure the octahedron is isolated. It does, however, provide some of the linking between the more complex coordination around Co(1). Additional linking with this complex sheet is provided by the sodium atom which has an environment of three oxygen atoms lying in a planar configuration. Fig. 2 shows the general arrangement for the lower half of the unit cell. A list of selected interatomic distances is given in Table 2.

The Patterson function was calculated on a Deuce computer using programs written by Dr Rollett of Oxford University, but the later  $F_o$  maps and structure factor cycles were calculated on the Elliott 803.

The author wishes to thank the Chairman and Directors of The British Petroleum Company Limited, for permission to publish this paper. He also wishes to thank Mr N. Hannon and Mr D. J. Smith of the BP Research Centre who wrote the 3-D Fourier and structure factor programs respectively for the Elliott 803.

### References

- DUNITZ, J. D. (1957). *Acta Cryst.* **10**, 307.  
 IBERS, J. A. & SMITH, G. W. (1964). *Acta Cryst.* **17**, 190.  
 MOROSIN, B. & GRAEBER, E. J. (1963). *Acta Cryst.* **16**, 1176.  
 SMITH, G. W. (1962). *Acta Cryst.* **15**, 1054.  
 WILSON, A. J. C. (1942). *Nature, Lond.* **150**, 152.

### Notes and News

*Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the General Secretary of the International Union of Crystallography (D. W. Smits, Rekencentrum der Rijksuniversiteit, Grote Appelstraat 11, Groningen, The Netherlands). Publication of an item in a particular issue cannot be guaranteed unless the draft is received 8 weeks before the date of publication.*

#### International Union of Crystallography Commission on Crystallographic Apparatus Bibliographies

Under the auspices of the Commission a series of comprehensive bibliographies is being prepared, covering specific areas of crystallographic apparatus, techniques and methods. The first bibliographies of this series appeared early in 1965, and are:

1. *High-temperature X-ray diffraction techniques*, edited by H. J. Goldschmidt.
2. *Low-temperature X-ray diffraction*, edited by Ben Post.

Copies were sent free of charge to all subscribers to *Acta Crystallographica*. Additional copies can be obtained from N. V. A. Oosthoek's Uitgevers Mij, Domstraat 11-13, Utrecht, The Netherlands, at the price of 10 Netherlands Guilders per copy (U.S. \$3.00 or U.K. £1 at the present rates of exchange). Orders can be placed with Polycrystal Book Service, or with any bookseller.