

triple product are listed. For example, the derivative of  $C$  ( $C = c_1 + c_2 + c_3$ ) with respect to  $x$  is equal to  $2\pi(-hm_1 - lq_2 - ko_3)$ .

The geometrical structure factors for each set of parity conditions on the indices for every cubic space group are presented in Table 3 in terms of the sums of triple products defined in Table 1. The presentation follows that of *International Tables for X-ray Crystallography* (1952); in cases where the *International Tables* give a choice of origins, the origin is taken at a center. Corrections in  $O^7$  and  $O_h^7$  have been made as directed by the errata sheet.

For our programs we have utilized similarities in the structure factor expressions for different space groups. For example, the structure factor expressions for  $T^1$ ,  $T^2$ , and  $T^3$  are identical except for a different multiplicity factor; the same applies for space groups  $T_h^1$ ,  $T_h^2$ , and  $T_h^3$ ,  $O^1$ ,  $O^3$ , and  $O^5$ ,  $T_d^1$ ,  $T_d^2$ , and  $T_d^3$ , and  $O_h^1$ ,  $O_h^5$ , and  $O_h^9$ . Some pairs of space groups whose similarities have been utilized are  $T^4$  and  $T^5$ ,  $T_h^2$  and  $T_h^4$ ,  $T_h^3$  and  $O_h^6$  and  $O^7$ ,  $O^8$  and  $T_d^6$ ,  $T_d^6$  and  $O_h^{10}$ ,  $O_h^8$  and  $O_h^4$ , and  $O_h^7$  and  $O_h^9$ .

We give one example to illustrate the use of the tables. Consider reflections  $h+k=2n+1$ ,  $k+l=2n+1$  in space

group  $T_h^2$ . For the atoms in one set of general 24-fold positions,

$$\begin{aligned} F_c &= -8I = -8(i_1 + i_2 + i_3) \\ \partial F_c / \partial x &= -8(2\pi)(hq_1 + lm_2 - kk_3) \\ &= -8(2\pi)[h \cos(2\pi hx) \cos(2\pi ky) \sin(2\pi lz) \\ &\quad + l \sin(2\pi hy) \cos(2\pi kz) \cos(2\pi lx) \\ &\quad - k \sin(2\pi hz) \sin(2\pi kx) \sin(2\pi ly)] . \end{aligned}$$

We get  $F_c$  from Table 3,  $I$  from Table 1, and the derivatives from Table 2.

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### References

- International Tables for X-Ray Crystallography* (1952). Vol. I. Birmingham: Kynoch Press.  
HYBL, A. & MARSH, R. E. (1961). *Acta Cryst.* **14**, 1046

## 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, Mathematisch Instituut, University of Groningen, Reithdiepskade 4, 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 Acta Crystallographica

The Executive Committee of the Union and the Commission on *Acta Crystallographica* regret to announce that pressure of other work has caused the resignation of Professor E. W. Hughes as Co-editor of *Acta Crystallographica*. Professor Hughes was appointed in 1956

when the increasing number of papers offered for publication in the journal made the appointment of a second U.S.A. Co-editor desirable. The Union is greatly indebted to him for his work for *Acta Crystallographica*, and in this way for the community of crystallographers.

The Executive Committee has approved the appointment of Dr R. E. Marsh, of the California Institute of Technology, as successor to Professor Hughes.