

($j=1, 2, 3$ for triclinic structures; $j=1$ for monoclinic, rhombohedral).

In total, there were 281 independent $\delta(l)_{ij}$ values and 68 $\delta(\theta)_{ij}$'s. Histograms of the distributions of $|\delta(l)_{ij}|$ and $|\delta(\theta)_{ij}|$ are shown in Fig. 7(a) and (b), respectively; two extreme observations are omitted from Fig. 7(a) [$\delta(l)_{ij}=38.54$ for the c axis of structure 72 of Table 1, and $\delta(l)_{ij}=29.95$ for the c axis of structure 60].

The data in Fig. 7 show that cell-length e.s.d.'s are grossly underestimated, perhaps by an average factor of 5 or more. Cell-angle e.s.d.'s are more reliable but are still underestimated by an average factor of about 2.5. Most of the cell parameters on which Fig. 7 is based were measured on four-circle diffractometers but it is interesting that some of the worst discrepancies correspond to measurements made on two-circle diffractometers. Two of the largest cell-length discrepancies are due to simple calculational error (Ahmed & Neville, 1982) and one to polymerization of the crystal during irradiation (Marsh & Waser, 1970). The most interesting discrepancies are the largest: $|\delta(l)_{ij}|=38.54$ and $|\delta(\theta)_{ij}|=11.18$, both observed in structure 72 (6-mercaptopurine monohydrate). Detailed investigations by Brown (1969) suggest that these discrepancies reflect *genuine* differences in the 'optimum' cell parameters of two different crystals of the 'same' substance. These were ascribed to differences in the purity and/or mosaic spread of the crystals.

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Obituary

John E. Derry
30 July 1946-2 September 1985

Dr John E. Derry, Deputy Technical Editor of the International Union of Crystallography, died on 2 September 1985. He was born in Birmingham in 1946. After graduating from Birmingham University in chemistry in 1967 he continued his studies there for a PhD in crystallography under Dr F. A. Hamor. He joined the Union in 1972 as an Editorial Assistant, being promoted to Assistant Technical Editor in 1976, a position which was designated Deputy Technical Editor in 1983.

He was responsible for the editing and production of Section B and Section C of *Acta Crystallographica*. He brought to this work considerable editorial skills and an enviable capacity for handling papers rapidly and with great accuracy on a wide range of complicated structure determinations. He was the Union's expert on chemical nomenclature and recently had been developing checking procedures with various crystallographic data bases for crystal structure papers submitted for publication in the Union's journals.

His other interests included literature, particularly science fiction, films, and hill walking. His quiet efficiency, his dry sense of humour and his concern for the editorial staff working under him made him popular with his colleagues, who held him in high esteem.

He is sorely missed.