(r.m.s.) deviation of the individual distances from the mean is 0.007 Å. The r.m.s. deviation of the O-Cr-O angles from 109.5° is 0.9° . The corrected $O \cdots O$ distances have a r.m.s. deviation of 0.016 Å from their mean of 2.707 Å.

Both ammonium tetrahedra are regular within the e.s.d.'s. The average N-H distance is 0.91 Å with an 0.04 Å r.m.s. deviation. These ions are oriented as shown in Fig.1 to form the maximum number of nearly-equal hydrogen bonds with the surrounding oxygen atoms. The 8 oxygen atoms surrounding N(1) belong to 6 different chromate tetrahedra, while the 8 oxygen atoms about N(2) belong to 5 different tetrahedra. Each chromate group makes 16 $O \cdots N$ contacts with 11 adjacent NH_4^+ ions and there are 22 O···O contacts between 3.12 and 3.98 Å in length to other chromate groups. The uncorrected N-H distances and H-N-H angles are given in Table 4.

The n.m.r. results indicate that both ammonium ions are undergoing some rotational motion, as the proton resonance line-width is only 4.8 gauss, as compared with 12-15 gauss for a stationary NH₄⁺ ion (Gutowsky & Pake, 1948). The type of rotational motion is evidently one of rapid re-orientation with the ions spending only a small portion of time in transitions, since otherwise the hydrogen atoms would not have shown up in the difference electron density synthesis, nor could their positions have been refined by the l.s. program.

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Fig.1. Projection of the structure down the b axis. The open circles represent oxygen atoms. The broken lines indicate the 8 $N \cdots O$ distances for each nitrogen atom.

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Erratum: The structure of bis- π -cyclopentadienyl(toluene-3,4-dithiolato)molybdenum. By J.R.KNOX and C.K.

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In Table 1 of the title paper (Knox & Prout, 1969) the fifth line from the bottom should read: 871(69)

Reference

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