



The anisotropic displacement parameters of each ion site in CaIrO_3 are illustrated by the 75% probability ellipsoids determined from fitting to $G(r)$ with $r_{\text{max}} = 18 \text{ \AA}$ at 325 K (a) and 1114 K (b and c). Parameters, given in the supplementary table, have considerable estimated uncertainty, assigned by *PDFFIT*, yet are consistent across the 41 structure refinements with increasing temperature. Note that the maximum direction of the anisotropic displacement ellipsoid for the O[8f] atom closely coincides with the edge-sharing direction of the IrO_6 octahedra.