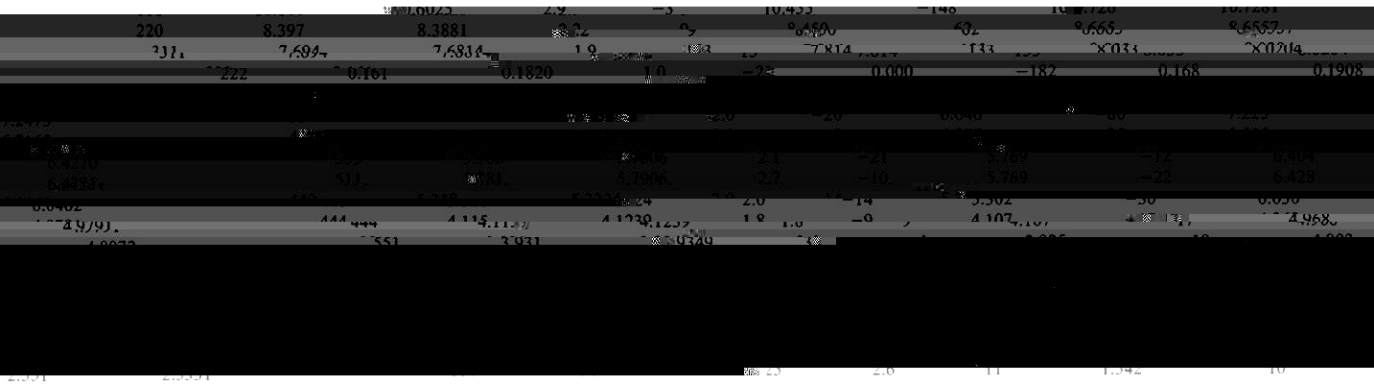
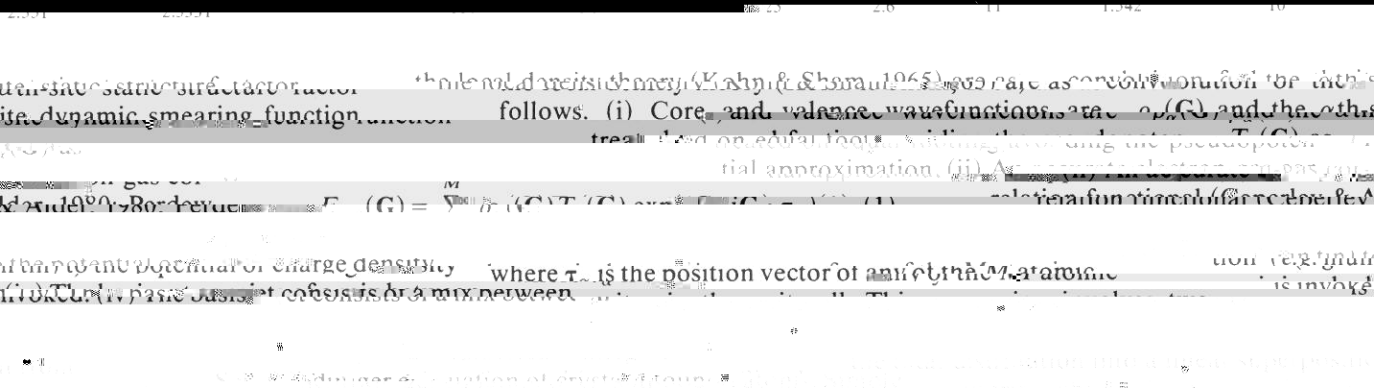
Acta Cryst. (1992). A48, 544–554

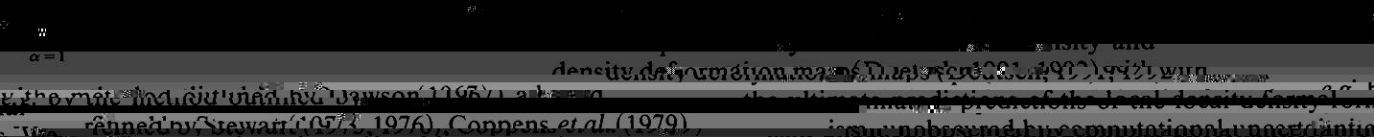
The Electronic Charge Distribution in Crystalline Silicon: A Comparison of

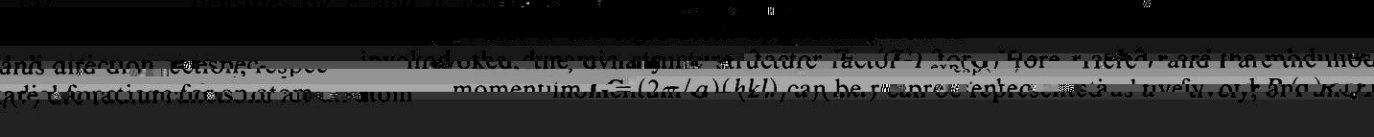
Table 1. *Dynamic (E) and static (α) structure factors for silicon, in units of 10 atomic*

The experimental data (corrected for multiple scattering and nuclear scattering), including the estimated standard deviations $\sigma(I)$









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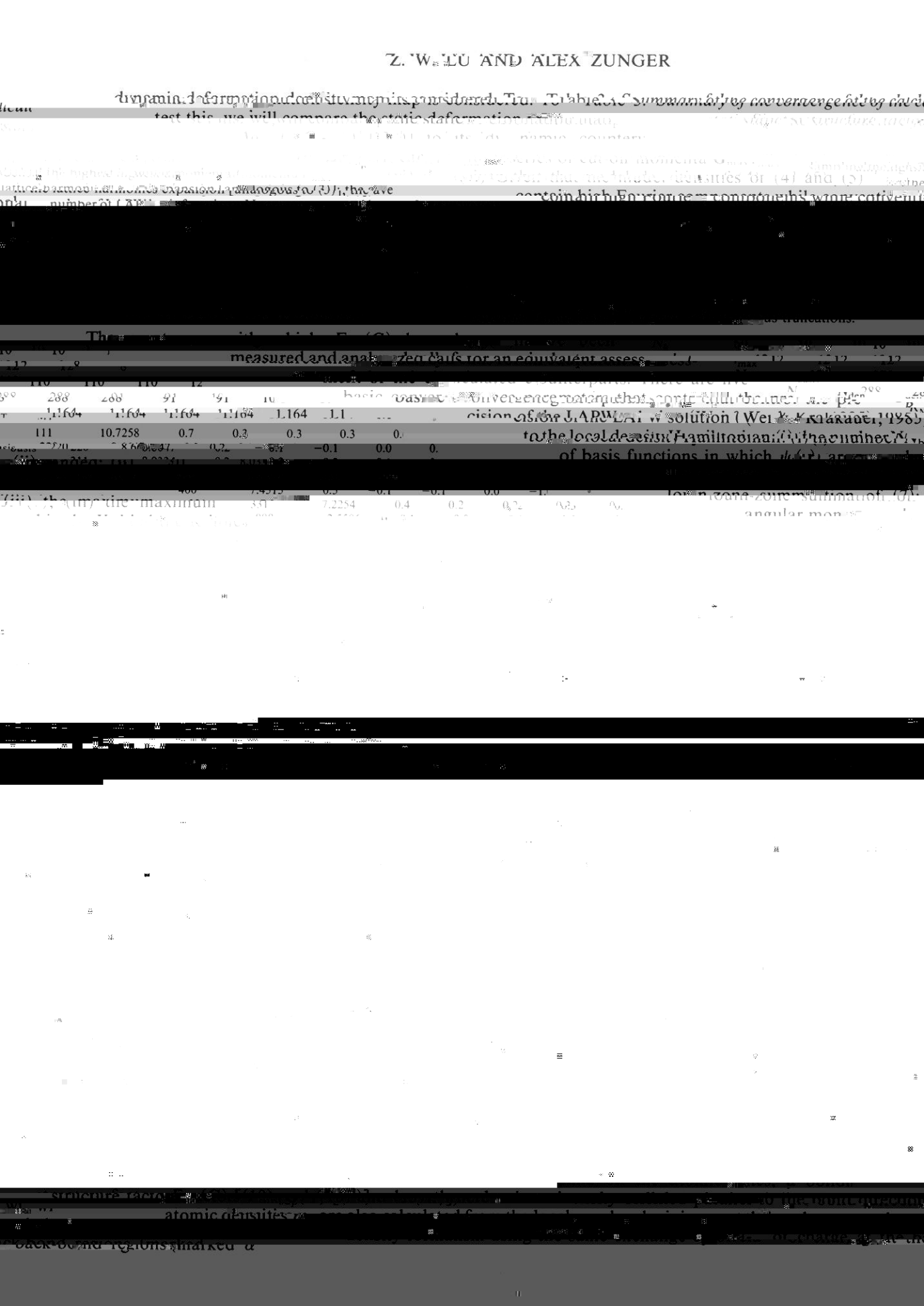


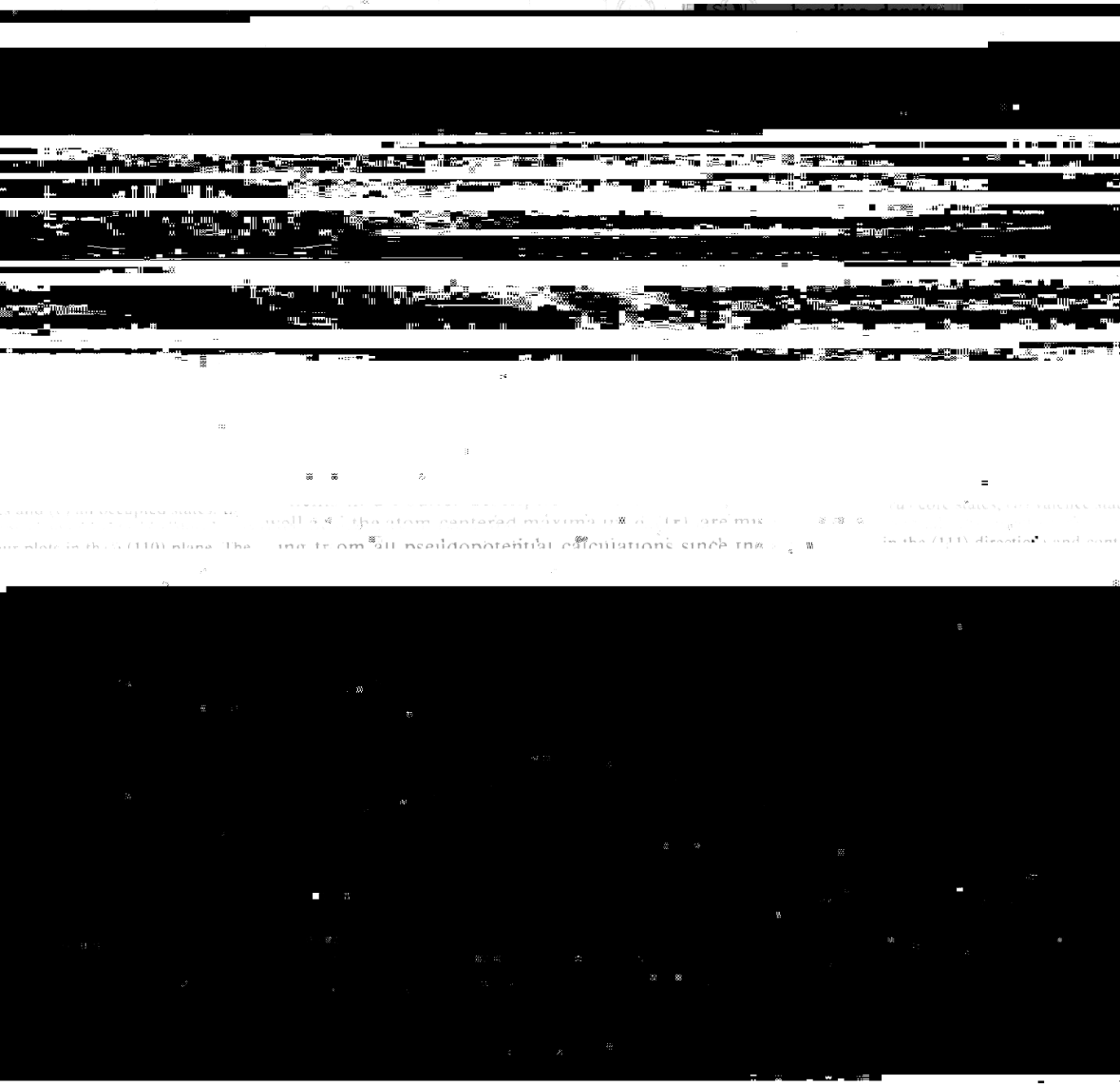
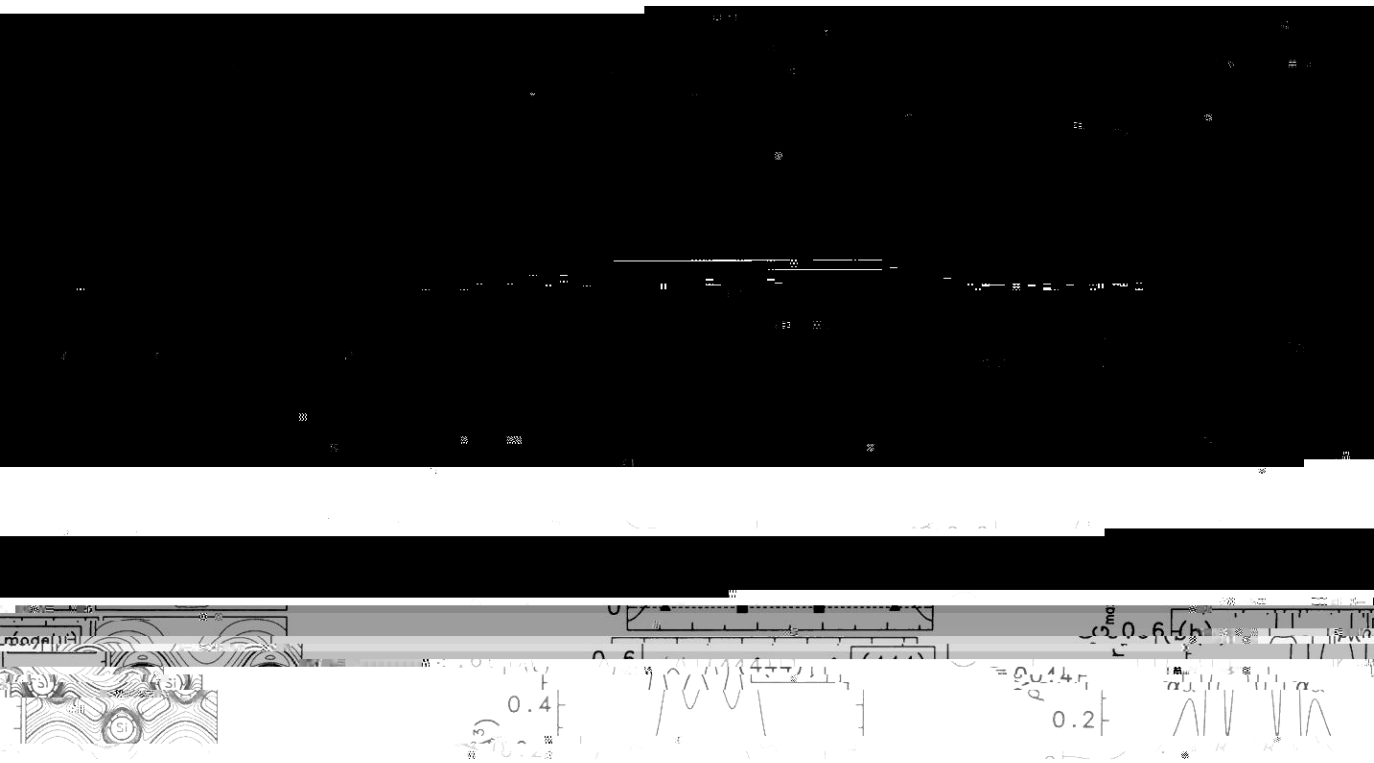


Fig. 3. Contributions of individual beams [summarized in (2)] to $\Delta\rho(\mathbf{r})$ for [illegible] and (c) all reflections [illegible] individual wave vectors to the crystal deformation charge density. The inserts denote contour steps in e Å^{-3}. [illegible] Å^{-3} [illegible] cated. As e



0.4
0.2

calculated with his model parameters ... the range where ... is non-negligible. This impl... identical to his (1990) Fig. 1. We see that ... Deutsch ... the ... calcu... exhibits a bond charge density that is elongated ... dynamic charge ... parallel to the bond direction ... effectively replace ... simpler static density calculations. ... has criticized the calculation of Wang & Klein (1981) ... since high-momentum Fourier components ... which shows ...

... Deutsch's parameters ...

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... densities $\Delta\rho(\mathbf{r}, G_{max})$, they will be ... sequential to ... the dynamic deformation density $\Delta\rho(\mathbf{r}, G_{max})$, since the Debye–Waller factors will effectively attenuate ...

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