

Supplementary Material for

Tuning of Charge Order by Uniaxial Stress in a Cuprate Superconductor

Authors

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Supplementary Note 1

For a consistency check, the measurements were performed on additional peak centered around (1, 0.77, 8.5) rlu. The obtained behavior can be seen in **Fig. S1** and they exhibit the same behavior as the (2, 1.77, 16.5) peak with **(Fig. S2)** and without **(Fig. 4 of the main text)** magnetic field.

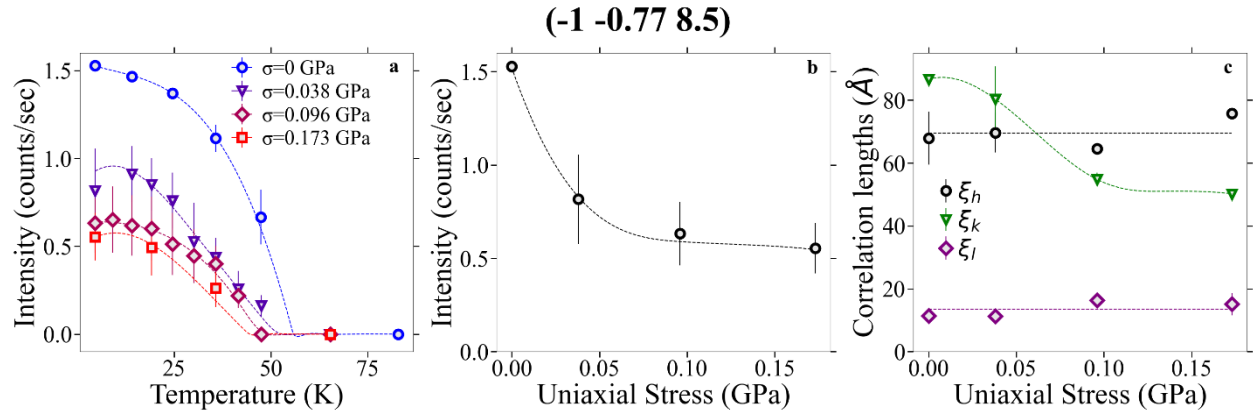


Fig. S1. The evolution of charge-order parameters as obtained from the (1, 0.77, 8.5) peak. (a) shows the intensity of the peak as a function of temperature for the various values of applied stress. (b) shows how the base-temperature intensity varies as a function of applied stress. The stress-dependence of the correlation lengths for the different directions is shown in (c). The lines in all the panels are guides to the eye.

Supplementary Note 2

The dependence as a function of temperature as well as a function of applied stress is very similar with and without the field. Here, in **Fig. S2** we show the development of parameters with the applied field, in an analogous form to the Figure 4 of the main text. Due to beamtime limitation at the synchrotron, only a few temperature points were measured, but they show qualitatively similar behaviour.

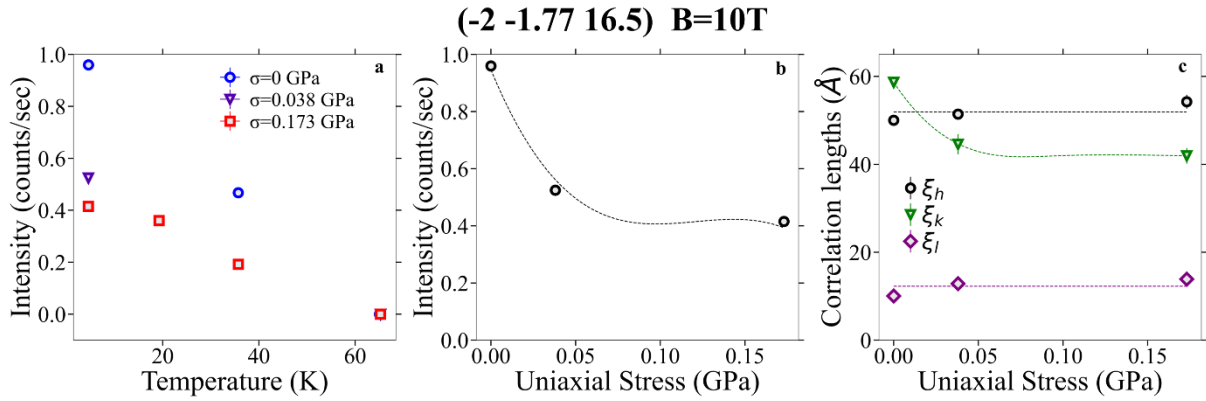


Fig. S2. The evolution of charge-order parameters as obtained from the (2, 1.77, 16.5) peak with applied field. (a) shows the intensity of the peak as a function of temperature for the various values of applied stress. **(b)** shows how the base-temperature intensity varies as a function of applied stress. The stress-dependence of the correlation lengths for the different directions is shown in **(c)**. The lines in all the panels are guides to the eye.

Supplementary Note 3

The background subtraction was achieved by removing the high-temperature data from the foreground scattering. **Figure S3** illustrates how the background subtraction was performed for all the pressure and temperature points.

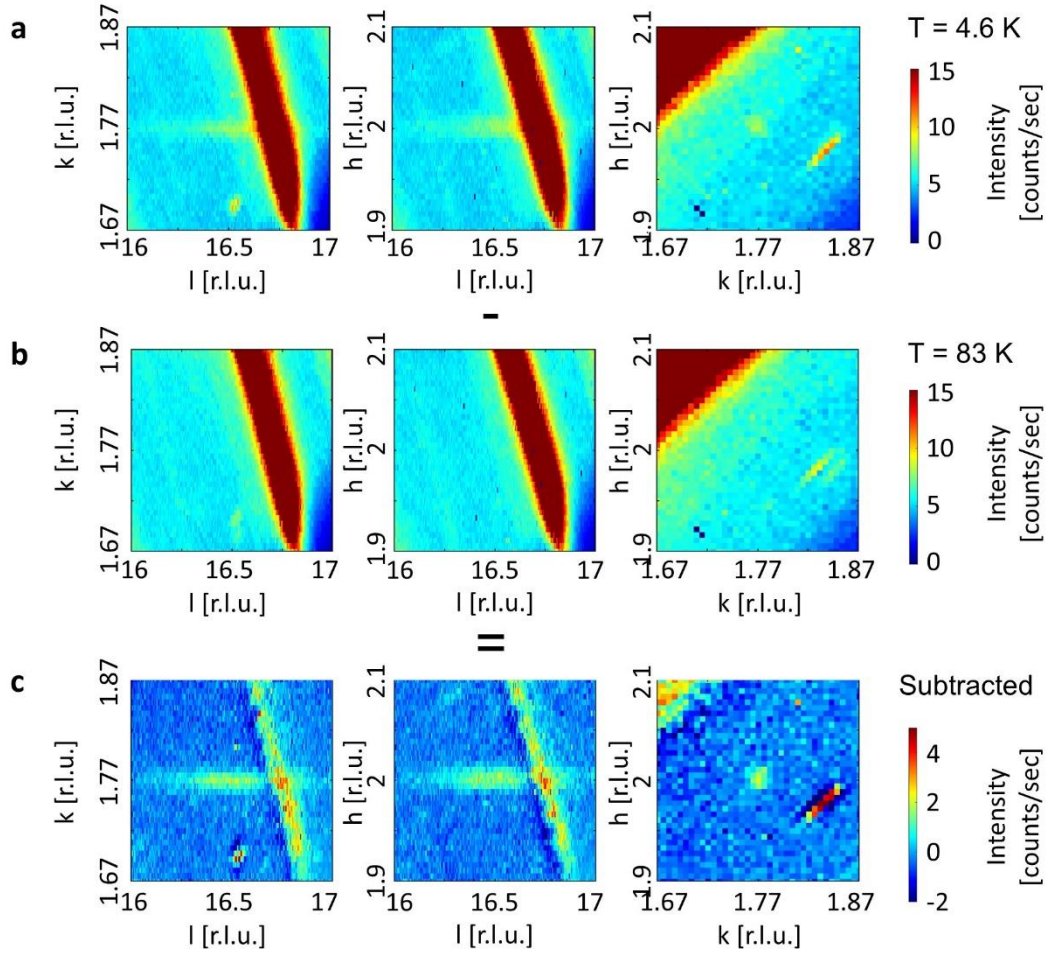


Fig. S3. The background subtraction using high-temperature data. Top panel (a) shows the slices through the scattering intensity at low temperature, whereas the middle panel (b) shows the data obtained well above the charge order temperature. The bottom panel (c) shows the scattering intensity of the background-subtracted data. It can be seen that in some parts of the reciprocal space map, some bright regions persist arising from imperfect subtraction of comparably intense scattering from sample environment. These parts were disregarded in the fits, as shown in the Fig.1 of the main manuscript. At every temperature, three different projection slices of the reciprocal space are shown.