Supplemental Materials for "Scaling Behaviour of Low-Temperature Orthorhombic Domains in Prototypical High-Temperature Superconductor $La_{1.875}Ba_{0.125}CuO_4$"

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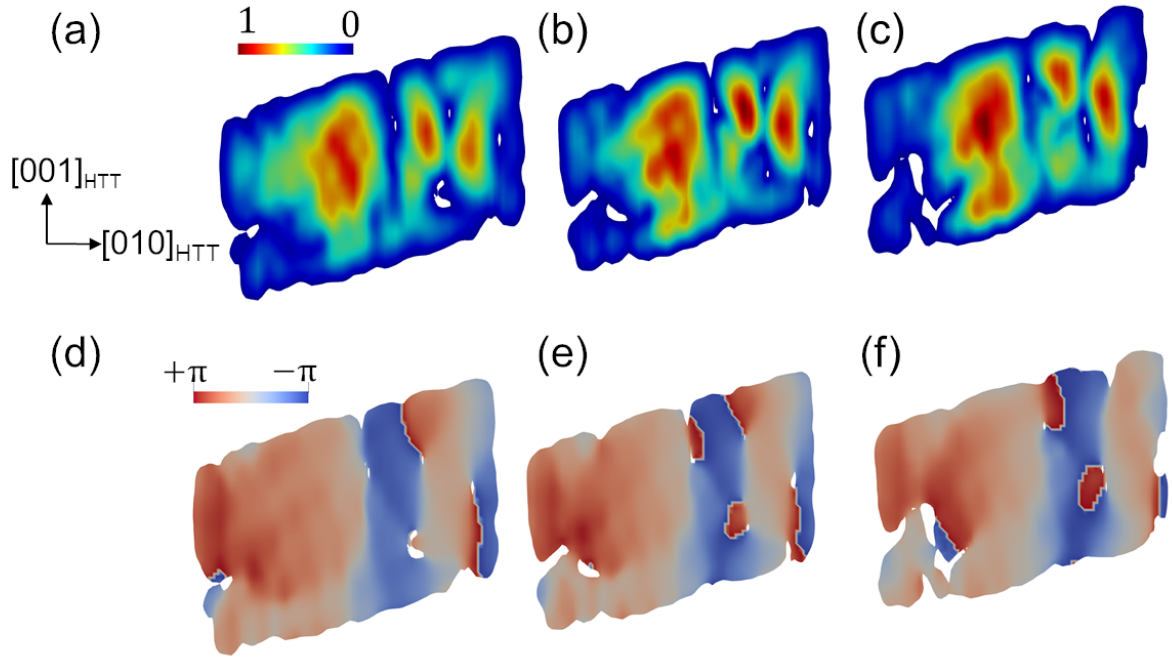# I. SUPPLEMENTARY FIGURES

Figure S1.   Two-dimensional slices of [100] plane of the 235 K data. The slices are taken at the same positions, as shown in Fig.4(a) of main manuscript. (a-c) and (d)-(f) are sliced at different positions of the crystal showing a map of the amplitude (electron density) and phase (projection of the lattice displacement) respectively.
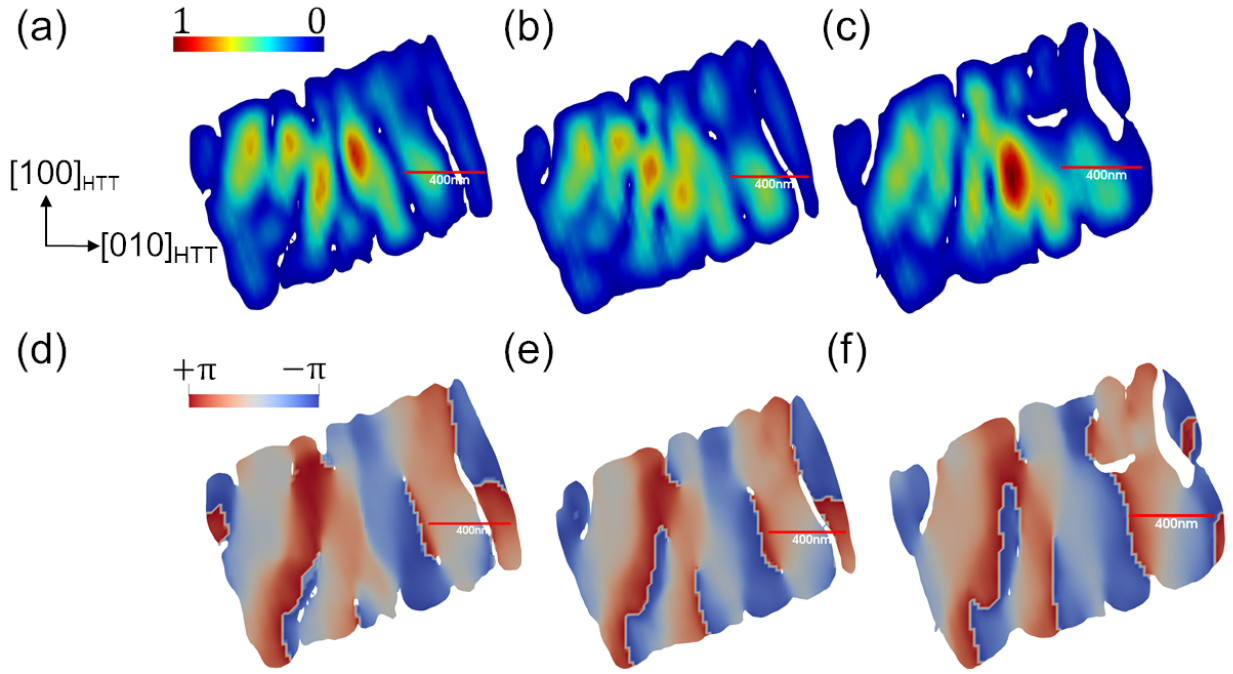
Figure S2. Two-dimensional slices of the [001] plane of the 228 K image. The slices are taken at different positions in the crystal, similar to those shown in Fig.4(a) of main manuscript. (a-c) and (d)-(f) are sliced at different positions of the crystal showing a map of the amplitude (electron density) and phase (projection of the lattice displacement) respectively.
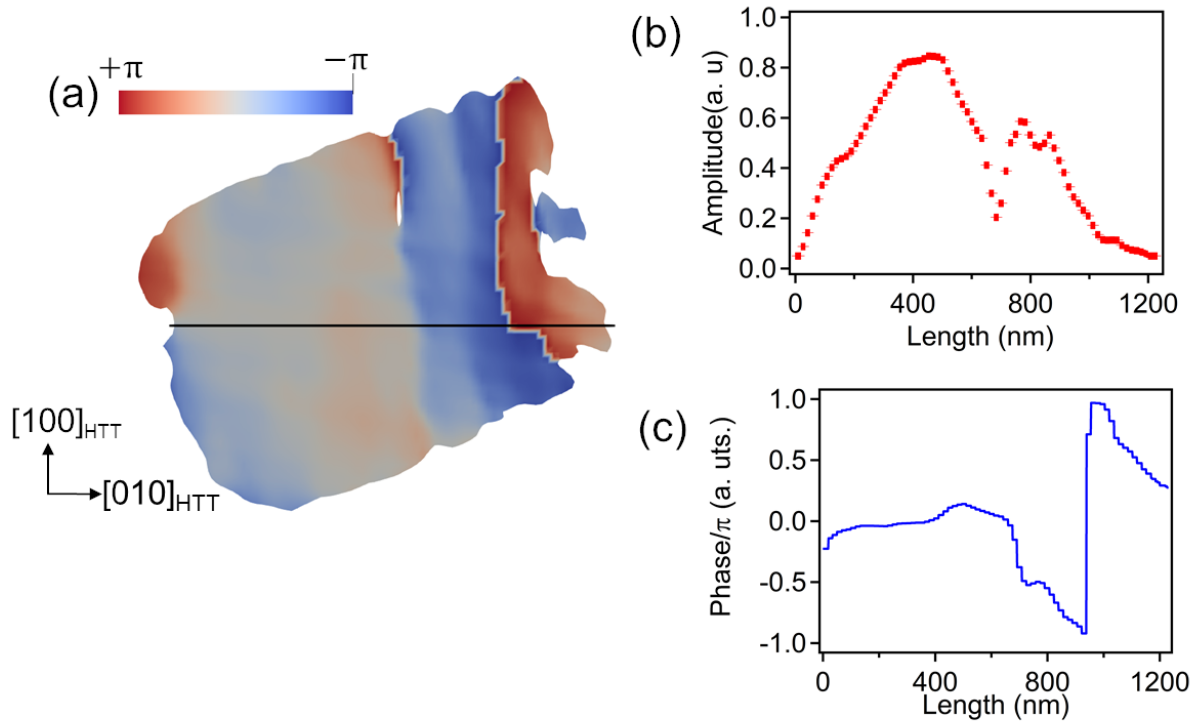

Figure S3. Two-dimensional slices of [001] plane of the 258 K data. (b) and (c) are line-profiles of the amplitude (electron density) and normalized phase (projection of the lattice displacement) along the [010]$_{HTT}$ direction respectively. Black line shows the position where line-profile data is taken.
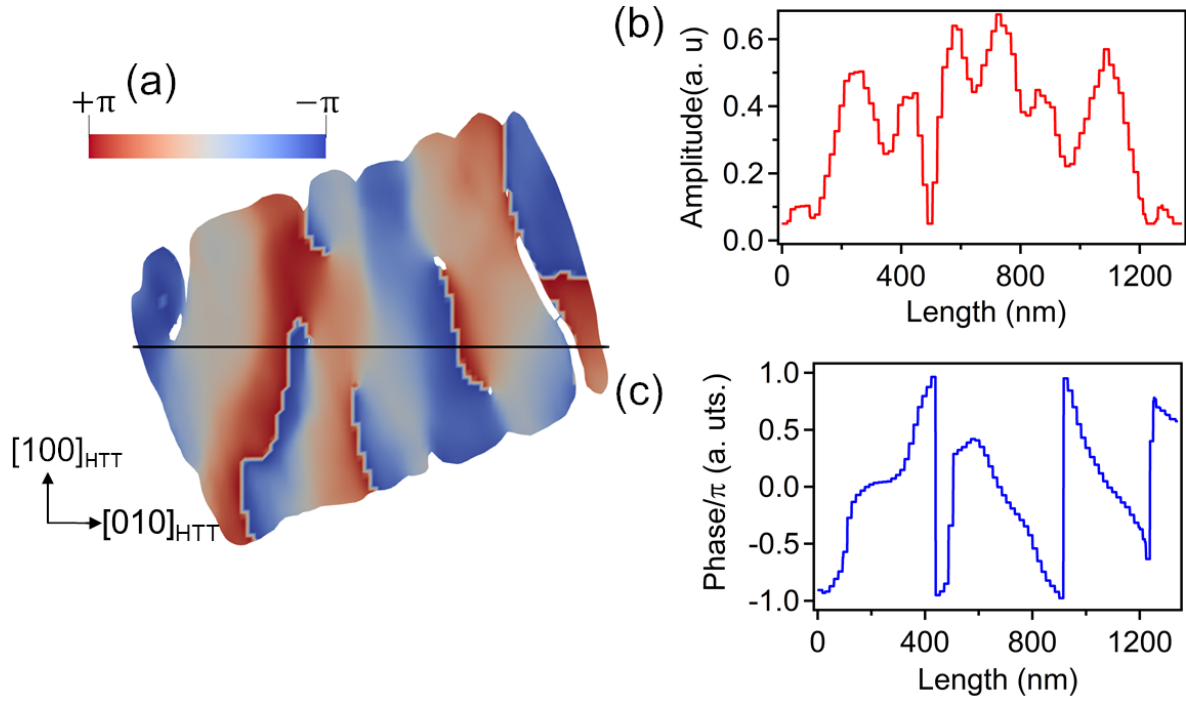
Figure S4.   Two-dimensional slices of [001] plane of the 228 K data. (b) and (c) are line-profiles of the amplitude (electron density) and normalized phase (projection of the lattice displacement) along the $[010]_{\mathrm{HTT}}$ direction respectively. Black line shows the position where line-profile data is taken.