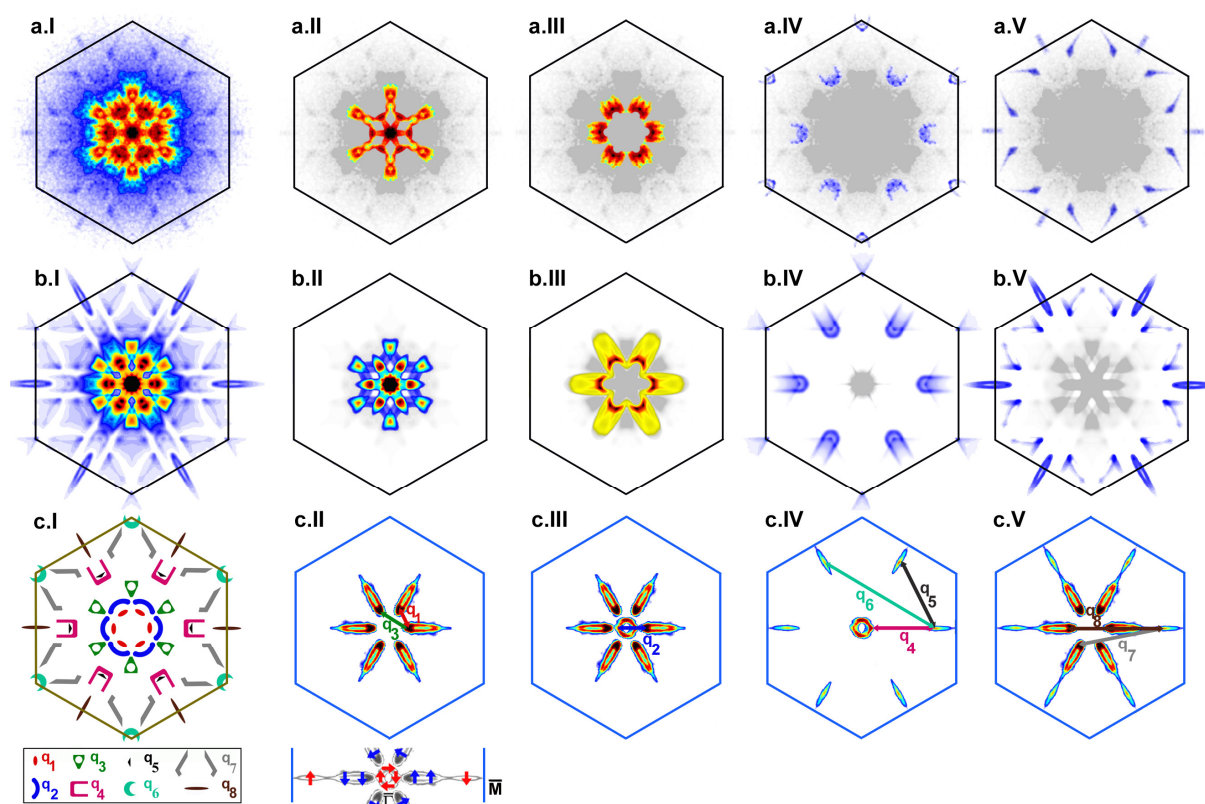


Supplementary figure

**Figure S1. Decomposition of the various parts of the QPI pattern at the Fermi**

level. **a.I**, the Fermi level QPI measured with STM. The individual features are highlighted in **a.II** to **a.V**. **b.I**, the SSP calculation of the QPI pattern from ARPES intensity maps at Fermi level, and its decomposition into various constituent parts is shown in **b.II** to **b.V**. **c.I**, the schematization of the various features seen in the FT-STS data. **c.II** to **c.V**, various parts of the Fermi contours measured by ARPES, with arrows showing the sources of the scatterings seen in STM data. Columns **II** to **V** have the following order: in **c**, we show a specific part of the Fermi surface, and in **b** the SSP based of that part is presented. In **a**, the corresponding parts of the pattern which are visible in STM data are in color and the rest are shown in gray. In the legend, the ARPES intensity map and its spin texture at the Fermi level is shown.