

File name: Supplementary Movie 1

Description: Example of temporal dynamics in the Energy vs. k_y space, reconstructed from the set of temporal traces. The time resolved measurements were obtained by scanning the far-field emission and acquiring for each k_y an Energy vs. time temporal trace with a streak camera.

File name: Supplementary Movie 2

Description: Sequence of cuts of the emission in the (k_x, k_y) -plane at different energies above threshold (like the images shown in Fig. 4). The data is obtained by scanning the far-field emission and acquiring a set of Energy vs. k_x dispersions, each one corresponding to a different k_y , and then merged and cut at a given energy in the plane k_x, k_y .

File name: Supplementary Movie 3

Description: Sequence of cuts of the emission in the (k_x, k_y) -plane at different energies below threshold (like the images shown in Supplementary Fig. 3). The data is obtained by scanning the far-field emission and acquiring a set of Energy vs. k_x dispersions, each one corresponding to a different k_y , and then merged and cut at a given energy in the plane k_x, k_y .