Spectral properties of pulses:

Semi-logarithmic plot of the carrier pulse spectrum with imprinted ghost pulse (black circles). Gaussian simulation of the carrier pulse with FWHM of w = 2.9(2) nm (blue line); Gaussian simulation of the ghost pulse (green line) with FWHM of w = 12.3 (2) nm; sum of simulations of carrier pulse and ghost pulse (red line). The ghost pulse spectrum was obtained by subtraction of the Gaussian simulation of the carrier pulse (x 0.82) without ghost pulse. We smoothed the result to suppress spikes in the ghost pulse spectrum. The amplitude of the carrier pulse is reduced to about 80% upon imprinting the ghost pulse. This is due to the loss of intensity upon SFG pulse formation. The ratio of the spectral widths between the carrier pulse and ghost pulse width is 1 : 4.3 (3) and the ratio of the areas is 7.7 (8).