Bicoherence, periodic state

Plate 6.1b Bicoherence graph of x_2. The bicoherence is calculated from 153 points covering about five periods. The horizontal and diagonal ridges are due to the coupling occurring at a frequency of 0.34.
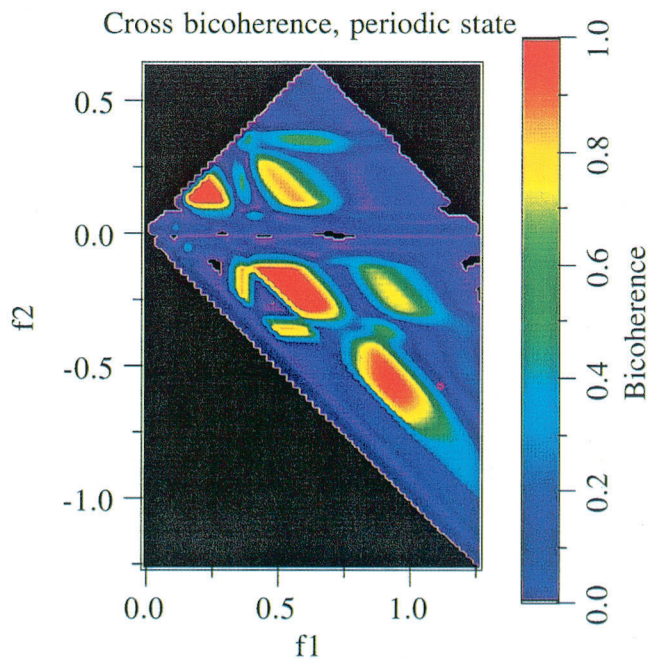

Cross bicoherence, periodic state

Plate 6.1c Cross-bicoherence graph of x_1 and x_2. The graph is similar to b) except for its lack of symmetry. The asymmetry pinpoints 0.34 as the driving frequency (see text).
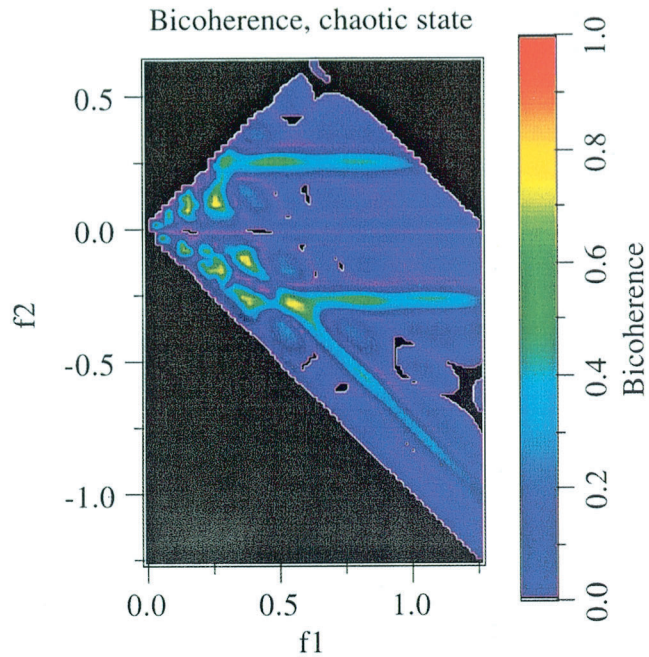
Plate 6.2b Bicoherence graph of x_2, chaotic. The bicoherence is calculated from 303 points covering about eight pseudoperiods. The structure seen bears some similarity to the one seen in Plate 6.1b, although it is less intense and more complex at lower frequencies due to the period doubling that has occurred in the transition to chaos. The main coupling frequency has been downshifted to 0.25.
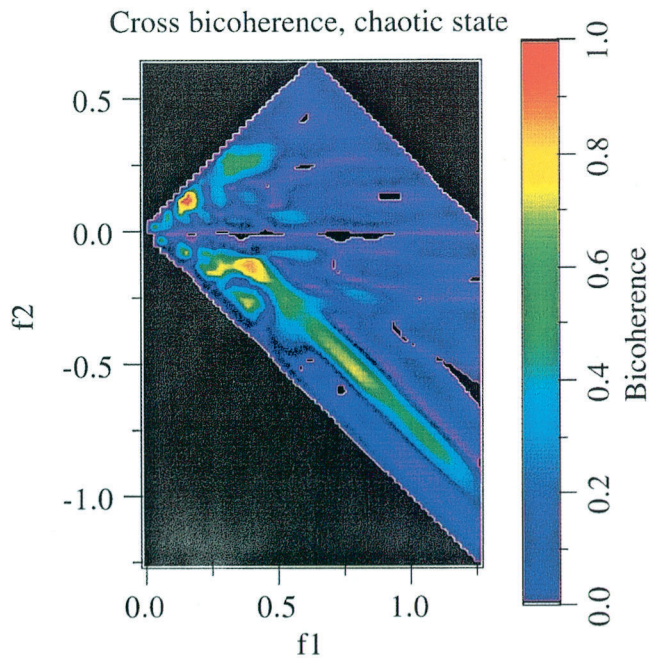

Plate 6.2c Cross bicoherence graph of x_1 and x_2. The asymmetry seen in Plate 6.1c survives in the chaotic régime, permitting the identification of the driving frequency even in chaos.