Arecchi and Lisi Respond: In order to answer the preceding Comments,[1,2] it is important to restate the main results of our measurements,[3] which were confirmed also by a laser experiment.[4] In both cases it was found that a nonlinear driven system yields power spectra with a low-frequency divergence $f^{-\alpha}$, with α around 1, whenever the following conditions are fulfilled: (i) The system has at least two attractors; (ii) the attractors are near to being destabilized or they have just become unstable; and (iii) the system is "open" to external fluctuations, i.e., the presence of white noise is essential to yield jumps between different basins of attraction.

As pointed in Ref. 1, in our spectra[3] the slopes should all be multiplied by a factor 2, because of a misleading use of the power calibration in the spectrum analyzer. Hence most slopes cluster around $\alpha = 1.2$, and the $1/f$ spectrum of our Fig. 3 is the tail of a Lorentzian.

The above conditions show that we are in the presence of a phenomenon which occurs beyond the usual approach to chaos by either one of the current scenarios.[5] A simple jump between two attractors, as introduced in Ref. 1, is not sufficient to explain the phenomenology. In fact experiments[3] show that, when leaving an attractor, the representative point in phase space has a long erratic motion before landing onto another attractor. This "transient" regime is made of motions among repulsive orbits.

As for the Comment of Voss,[2] we agree with his calculations. We point out, however, that the spectrum most similar to our experimental situation is that reported in his Fig. 1(b), for $A = 0.110$, which shows a slope around 1.4. (A numerical study of the Duffing equation disturbed by noise will easily show that in this case the phase-space point wanders over four attractors: two of period 4 and two of period 7.)

The noiseless spectra [Ref. 2, Fig. 1(a)] are not comparable with our experiment, since any macroscopic device has a certain unavoidable amount of internal random noise.

As a conclusion, we agree with both Comments that our low-frequency jumps do not explain in general $1/f$ noise in linear equilibrium situations, as most of those observed so far. They open, however, a new area of investigation, namely that of noise-induced interactions among many attractor domains.

F. T. Arecchi
F. Lisi
Istituto Nazionale di Ottica
I-50125 Firenze, Italy

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