



“Random” Gaps. The statistics of nearest-neighbor spacings range from random to uniform (<'s indicate spacings too close for the figure to resolve). The second column shows the primes from 7,791,097 to 7,791,877. The third column shows energy levels for an excited heavy (Erbium) nucleus. The fourth column is a “length spectrum” of periodic trajectories for Sinai billiards. The fifth column is a spectrum of zeroes of the Riemann zeta function. (Figure courtesy of Springer-Verlag New York, Inc., “Chaotic motion and random matrix theories” by O. Bohigas and M. J. Giannoni in *Mathematical and Computational Methods in Nuclear Physics*, J. M. Gomez et al., eds., *Lecture Notes in Physics*, volume 209 (1984), pp. 1–99.)