Abstract Submitted for the MAR06 Meeting of The American Physical Society

Methods of calculating Ruelle-Pollicott resonances ELIZABETH KELLER, MARK SREDNICKI, University of California, Santa Barbara — We develop a method to compute the Ruelle-Pollicott resonances for the classical perturbed cat map. Using sine and cosine basis states, we calculate the matrix elements of the Frobenius-Perron operator and find the eigenvalues of the resulting matrix. Because the matrix is sparse, we are able to reach sufficiently large matrix dimensions to obtain stable, convergent values for the Ruelle-Pollicott resonances.

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Date submitted: 12 Jan 2006

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