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Radiation-Pressure-Driven Micro-Mechanical Cavity and Emergence of Chaos FARHAN SAIF, PIERRE MEYSTRE, Department of Physics, University of Arizona — In the presence of an optical field between its mirrors a high finesse micro-mechanical cavity acts as an oscillator driven by radiation pressure force. We study the effect of radiation pressure force in two mirror cavity and three mirror cavity geometries. We explain the conditions which lead to a chaotic evolution of the micro mechanical oscillator.

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