Observation of Cavity-Enhanced Single-Atom Spontaneous Emission

P. Goy, J. M. Raimond, M. Gross, and S. Haroche

Laboratoire de Physique de l'Ecole Normale Supérieure, F-75231 Paris Cedex 05, France
(Received 1 April 1983)

It has been observed that the spontaneous-emission lifetime of Rydberg atoms is shortened by a large ratio when these atoms are crossing a high-Q superconducting cavity tuned to resonance with a millimeter-wave transition between adjacent Rydberg states.

PACS numbers: 32.80.-t, 32.90.+a, 42.50.+q