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Evaporative Cooling of a Photon Fluid BRIAN SEAMAN, DOUGLAS MASON, MURRAY HOLLAND, JILA and Department of Physics, CU Boulder — The field of ultracold atomic physics has made large advances using the insight gained from the manipulation of optical fields. We explore the opposite, recreating in optical systems effects usually seen only in atomic systems. The possibility of evaporatively cooling a "photon fluid" in a Fabry-Perot cavity is considered. This would allow for the creation a superfluid coherent beam of light from an incoherent source without inversion.

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