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Quantum interference between autonomous single-photon sources from Doppler-broadened atomic ensembles HAN SEB MOON, TAEK JEONG, JIHO PARK, HEONOH KIM, Pusan National University — To realize a quantum network based on quantum entanglement swapping, bright and completely autonomous single-photon sources are essentially required. They experimentally demonstrate Hong-Ou-Mandel quantum interference between two independent bright photon-pair sources to show the indistinguishability and purity in Doppler-broadened warm Rb atomic vapor. The manuscript describes bright autonomous single-photon sources based on the hot vapor cells that can work continuously and greatly simplifies the experiment. It might be an important step towards the scalable quantum network.

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