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**A Miniature Ultrabright Source of Long Biphotons** CHIH-SUNG CHUU, Stanford University and National Tsing Hua University, G.Y. YIN, STEPHEN E. HARRIS, Stanford University — An ultrabright compact source of long biphotons is essential for scalable quantum networks. Here we report the generation of long biphotons utilizing the cluster effect in a monolithic doubly resonant parametric down-converter. The biphoton generation rate and spectral brightness are 110 and 41 times larger, respectively, than previously reported. This source will find applications in quantum repeater protocols.

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