# Spatial multipartite entanglement and localization of entanglement

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We present a simple model together with its physical implementation which allows one to generate multipartite entanglement between several spatial modes of the electromagnetic field. It is based on parametric down-conversion with N pairs of symmetrically-tilted plane waves serving as a pump. The characteristics of this spatial entanglement are investigated in the cases of zero as well as nonzero phase mismatch. Furthermore, the phenomenon of entanglement localization in just two spatial modes is studied in detail and results in an enhancement of the entanglement by a factor square root of N.

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