

# Image Transfer through Two Sequential Four-Wave Mixing in a Hot Atomic Vapor

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Efficient wavelength conversion of images has many potential applications in optical communication, sensing, imaging, and quantum information fields. In this work, we report on here the first demonstration of an image transfer between the light of wavelength 780 nm and the light of wavelength 1530 nm by performing two sequential four-wave mixing processes in two different hot atomic rubidium vapor cells. Furthermore, we confirm the persistence of coherence of the input light during this sequential process experimentally. Our results may be useful to the research fields mentioned above.

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