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Comparing techniques for the study of orbital angular momentum transfer in nonlinear processes[1] AYSAN BAHARI , ALEXANDRA ZHDANOVA, MARIIA SHUTOVA , Texas AM University, MIAOCHAN ZHI, National Institute of Standards and Technology, ALEXEI SOKOLOV, Texas AM University
— We present results from our investigation for the transfer of orbital angular momentum in nonlinear processes. We introduce an experimental setup to study optical vortex beams (which carry orbital angular momentum) through the use of a spatial light modulator (SLM), which has much greater flexibility than the spiral phase plates we used earlier. We compare our results and measurement methods to an older setup which did not have such freedom. Finally, we will discuss how our results may be derived from orbital angular momentum conservation, or equivalently, from phase matching between the beams.

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