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Signal-to-noise ratio of quantum imaging using entangled photon-number state SAI VINJANAMPATHY, Louisiana State University, JEFF ADAMS, SpectraNet, LLC, BARBARA CAPRON, CLAUDIO PARAZZOLI, The Boeing Company, JONATHAN DOWLING, Louisiana State University — Quantum Imaging involving a source with N+1 photons has been of interest in the recent years. N of these photons are present in the arm where the object is placed and are entangled with 1 photon in the other arm. The image is recorded in coincidence. We present here some ideas on how to generate such photons in the lab and study the signal-to-noise ratio for such an imaging scheme. Some preliminary experimental results are also presented.

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