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Describing Polarization States of Photon Vortices ANDREI AFANASEV, DARTAGNAN HOWELL, George Washington University — Electromagnetic waves with large values of Orbital Angular Momentum (OAM) along their direction of propagation were demonstrated in a broad range wavelengths, from radio to optical. Photons with large OAM, or "twisted photons" can be generated with higher energies in helical undulators or via Compton backscattering. Description of the polarization states of such photons will be a subject of this talk. In particular, we consider representing twisted-photon polarization with Poincare sphere, Majorana sphere, and Dalitz plots, and discuss advantages for each approach.

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