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Nongeneric polarization structures of the vortex beams resulting from coherent coaxial mixing of orthogonally polarized one-charged Laguerre-Gaussian modes with different mode numbers are analyzed. General solutior is derived for a superposition of elliptically orthogonally polarized partial vortex beams, and the limiting partial cases when the mixed modes are polarized linearly or circularly are explored both theoretically and experimentally. It is established that in such combined beams unusual spatially stable polarization stmctures arise, such as closed C — contours and L — contours with a constant azimuth of linear polarization.
Keywords: singular optics, vortex beams, polarization singularities, nongeneric structures

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