YOUNG'S DIAGNOSTICS OF PHASE SINGULARITIES OF THE SPATIAL COHERENCE FUNCTION AT PARTIALLY COHERENT SINGULAR BEAMS

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A complex experimental technique for the separate determination of the azimuthal and radial dependences of a phase of the spatial coherence function of partially spatially coherent singular beams is introduced and demonstrated by the example of combined beams with a separable phase of the spatial coherence function. Beside of the diagnostics of the central vortex of the spatial coherence function, the presence of the ring singularity of the complex degree of coherence supported by a partially spatially coherent singular beam is showed experimentally for the first time.