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EFFECT OF APODISED PSF COROLLARIES ON OPTICAL IMAGING WITH SEMITRANSPARENT AND Π-PHASE ANNULAR APERTURE

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Abstract

The effects of apodisation on few corollaries of optical system using given annular pupil plane filter have been investigated. These are encircled energy, relative encircled energy and zonal energy. This has been observed that transmittance of the aperture varies with degree of apodization of annular and semitransparent central regions, separated by π-phase difference. We have been found that lower order optical side lobes are suppressed fair enough by annular shading. Results obtained have been presented graphically. These studies are useful to tune the imaging properties in optical microscopy.

Keywords: Apodisation, Point spread function, Fourier transform, Annular pupil.

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