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Multiple polarized beam interferometers for array generation with improved efficiency

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Keywords

hexagonal array, interferometry, polarization

Abstract

A highly efficient multiple polarized beam interferometer for the generation of hexagonal array is reported. An expression for the intensity distribution is worked out using Jones' calculus and computed pattern is compared with the experimental results. The array pattern could be scanned over large longitudinal distances without loss of distortion. Fringe visibility of interferograms has been studied as a function of relative state of polarization of the interfering beams. Some of the potential applications of such arrays are also proposed.