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(54) **METHOD AND SYSTEM FOR CALIBRATING A SPATIAL OPTICAL MODULATOR IN AN OPTICAL MICROSCOPE**

(58) **Field of Classification Search**
USPC 348/79
See application file for complete search history.

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(57) **ABSTRACT**

A method and system for calibrating an optical device having a spatial optical modulator (6) and including: an optical lens (8) of a large numerical aperture, capable of receiving an incident beam and/or collecting an optical beam reflected by a sample; a camera (14) disposed in a plane optically conjugate with the focal plane of the lens (8); and a spatial optical modulator (6) disposed on the optical beam upstream of the camera (14). The method includes the following steps consisting in: acquiring three-dimensional images of the PSF in terms of intensity in a plane conjugate with the focal plane of the lens (8), reconstructing the profile in terms of amplitude and/or phase of the beam using a phase diversity algorithm, and determining the respective influence functions of a plurality of elements P_1, \dots, P_N of the spatial optical modulator (6) on the profile in terms of the amplitude A and/or phase ϕ of the beam.

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8 Claims, 4 Drawing Sheets

