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(71) Applicant: TRUSTEES OF BOSTON UNIVERSITY [US/US]; One Silber Way, Boston, MA 02215 (US).
(72) Inventors: MERTZ, Jerome Charles; 16 Maplewood Avenue, Newton, MA 02459 (US). CHU, Kengyeh Ken; 105 Walk Hill Street #2, Jamaica Plain, MA 02130 (US). PARTHASARATHY, Ashwin; 441 Cambridge Street, Apartment 1, Allston, MA 02134 (US).
(74) Agents: EISENSTEIN, Ronald et al.; Nixon Peabody LLP, 100 Summer Street, Boston, MA 02110-2131 (US).
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(54) Title: PARTITIONED APERTURE WAVEFRONT IMAGING METHOD AND SYSTEM

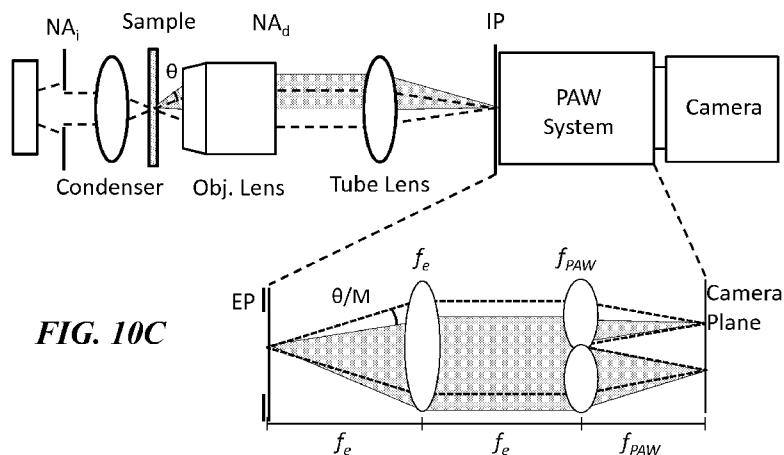


FIG. 10C

(57) Abstract: A partitioned aperture wavefront imaging system includes an imaging system comprising a partitioned aperture lens array positioned at the aperture plane or Fourier plane between the entrance plane and camera plane of an imaging system. The partitioned aperture lens array can include 2 or more off-axis lenses symmetrically distributed about an optical axis, and adapted to produce simultaneously at the camera plane at least two images of an object, or intermediate image of an object, presented at the entrance plane. Preferably, the partitioned aperture lens array includes from 3 to 5 off-axis lenses and produces 3 to 5 images at the camera plane from which phase and amplitude information about the light field can be determined. The partitioned aperture wavefront imaging system provides enough information about the light field presented at the entrance plane to enable reconstruction of the light field at other planes relative to the entrance plane.

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