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(54) Title: ARRANGEMENTS AND METHODS FOR DETERMINING POSITIONS AND OFFSETS

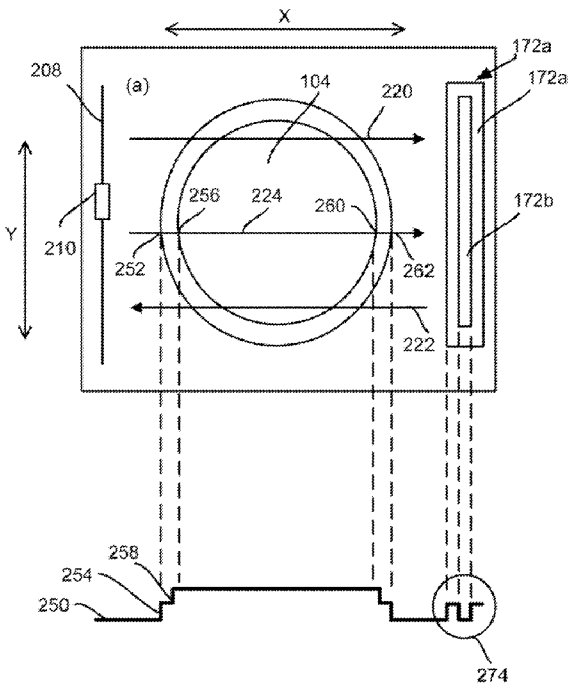



FIG. 2

(57) Abstract: A method for determining positions and offsets in a plasma processing system, the plasma processing system including at least a chuck and an upper electrode is provided. The method including moving a traversing assembly along a first plurality of paths to generate a first plurality of data sets, the traversing assembly including at least a light source, the light source providing a light beam, moving the traversing assembly along each path of the first plurality of paths causing the light beam to traverse the chuck and resulting in one or more data sets of the first plurality of data sets. The method also including receiving the first plurality of data sets and analyzing the first plurality of data sets to identify a first set of at least three discontinuities, wherein the first set of at least three discontinuities are related to three or more reflected light signals generated when the light beam encounters an edge of the chuck. The method also including determining a center of the chuck using coordinate data associated with the first set of at least three discontinuities.

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