transmit second data based at least in part on the best fit image plane; and

the servo is configured to:

receive the second data; and

based at least in part on the second data, adjust a position of the best fit image plane with respect to the reference surface.

9. The apparatus of claim 8, wherein the servo is further configured to:

based at least in part on the second data, adjust the position of the best fit image plane with respect to the reference surface by moving at least one of the best fit image plane or the substrate stage.

10. The apparatus of claim 6, wherein:

the reference surface is the surface of the coating on the substrate; and

the aerial image sensor is configured to detect sagittal and tangential foci during exposure of the surface of the coating on the substrate in a photolithographic process.

11. A method for controlling a focus of a projected image, the method comprising the steps of:

detecting, at a first time instant, first sagittal and tangential foci of at least a portion of an aerial image corresponding to the projected image, wherein the aerial image is disposed between projection optics and a reference surface selected from the group consisting of a surface of a substrate and a surface of a coating on the substrate;

estimating a first field curvature of the aerial image based at least in part on the first sagittal and tangential foci;

determining a first best fit image plane based at least in part on the first field curvature; and

adjusting a position of the first best fit image plane with respect to the reference surface.