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(54) Title: DISTORTION REDUCTION IN A MULTI-BEAM IMAGING SYSTEM

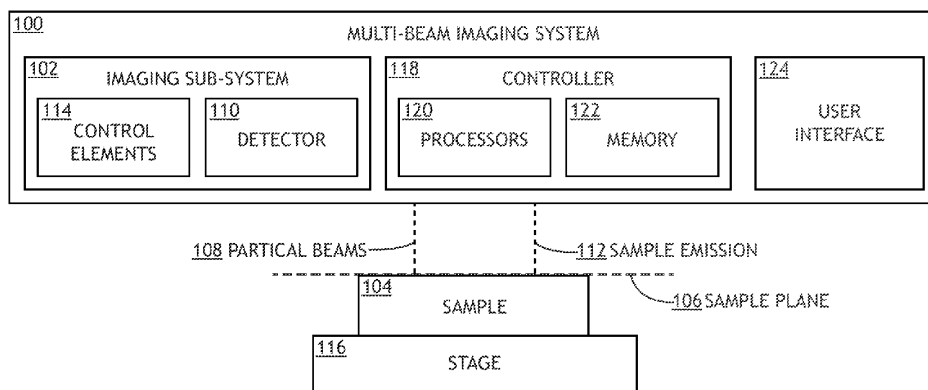


FIG.1A

(57) Abstract: A system may include a controller couplable to an imaging sub-system utilizing multiple particle beams, where the imaging sub-system includes one or more control elements to manipulate the two or more particle beams that are adjustable with two or more control parameters. The controller may select values of the two or more control parameters by iteratively performing steps until one or more termination conditions are met. For example, the controller may receive measurements of changes of distortions of the particle beams resulting from individual adjustments of the control parameters. The controller may further calculate values of the control parameters that reduce the distortions of the particle beams based on the changes of the distortions resulting from the individual adjustments. The controller may further direct the adjustment of the values of the control parameters to the calculated values.

[Continued on next page]

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