

## **Deterministic Figure Correction of Piezoelectrically Adjustable Slumped Glass Optics**

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Thin X-ray optics with high angular resolution ( $\leq 0.5$  arcseconds) over a wide field of view enable the study of a number of astrophysically important topics, and feature prominently in Lynx, a next-generation X-ray observatory concept currently under NASA study. To produce such optics, we propose to use piezoelectrically adjustable, thin mirror segments capable of figure correction after mounting and on-orbit. In the present work, we report on the fabrication and characterization of an adjustable cylindrical slumped glass optic. This optic has realized 100% piezoelectric cell yield and employs lithographically patterned traces and anisotropic conductive film (ACF) connections to address the piezoelectric cells. The response of the piezoelectric cells are found to agree with finite-element analysis models, and simulated corrections to distortions are found to improve 7 - 10 arcsecond mirrors to 1 - 2 arcseconds (HPD, single reflection at 1 keV). Moreover, such a figure change is empirically demonstrated using an adjustable slumped glass optic, and we identify a path for achieving subarcsecond corrections.