The Balloon Exoplanet Nulling Interferometer mission will use a visible nulling coronagraph (VNC) to detect, image, and characterize exoplanets. Starlight can seep through the VNC and lower the contrast in an image so Goddard turned to deformable mirrors (DMs) to correct for the light.

Goddard started working with Iris AO to improve the company’s microelectromechanical (MEMS) DMs for imaging and characterizing exoplanets. Iris AO and Goddard tested the new DMs, and they had impressive results. Outside of NASA, the technology is being evaluated and used in research and industrial applications.

The technology is being used in ophthalmic instruments to improve images of the eye. In the future, it could be incorporated into biological microscopes to get a better view of tissues. The technology also has promise in shaping laser beams more precisely for manufacturing.