Exo-Earth Discovery and Characterization with Large UV-Optical-IR Observatories. A. M. Mandell[1], C. C. Stark[2], A. Roberge[1], S. D. Domagal-Goldman[1], K. R. Stapelfeldt[1], T. D. Robinson[3], M. Clampin[1], N. Rioux[1], M. Postman[2], and H. Thronson[1]. [1]NASA Goddard Space Flight Center, 8800 Greenbelt Road, Greenbelt, MD 20771 (contact: avi.mandell@nasa.gov), [2]Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218, [3]ORAU Fellow in residence at NASA Ames Research Center, Moffett Field, CA 94035

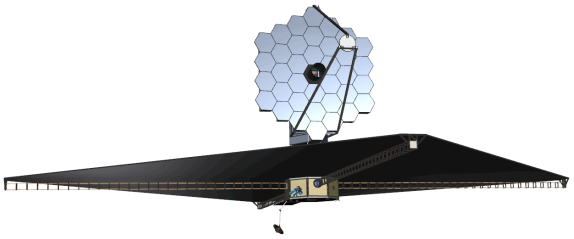

Figure 1: The image is a representation of ATLAST (Advanced Technology Large Aperture Space Telescope). ATLAST is a 9.2 meter LUVOIR telescope designed to search for extrasolar life. The segmented architecture enables the folding of large aperture sizes within existing launch vehicles such as the Delta IV.

References:

[1] AURA. (June 2015). Beyond JWST Report.

[2] Stark, C. C., et al. (2014). *The Astrophysical Journal*, *795*(2), 122.

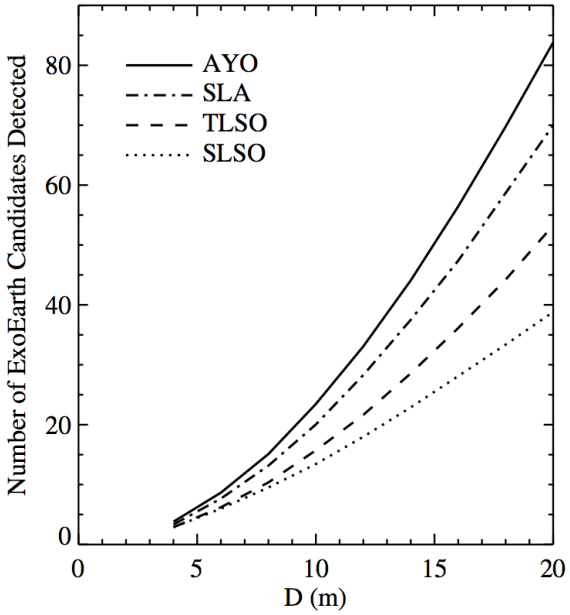

Figure 2: Number of exoEarth candidates detected vs. telescope diameter for different yield calculation methods. AYO increases yield by up to 100% compared to previous yield calculation methods: Stellar Luminosity-Adjusted (SLA), Tuned Limiting Search Observation (TLSO), and Strict Limiting Search Observation (SLSO) [2].