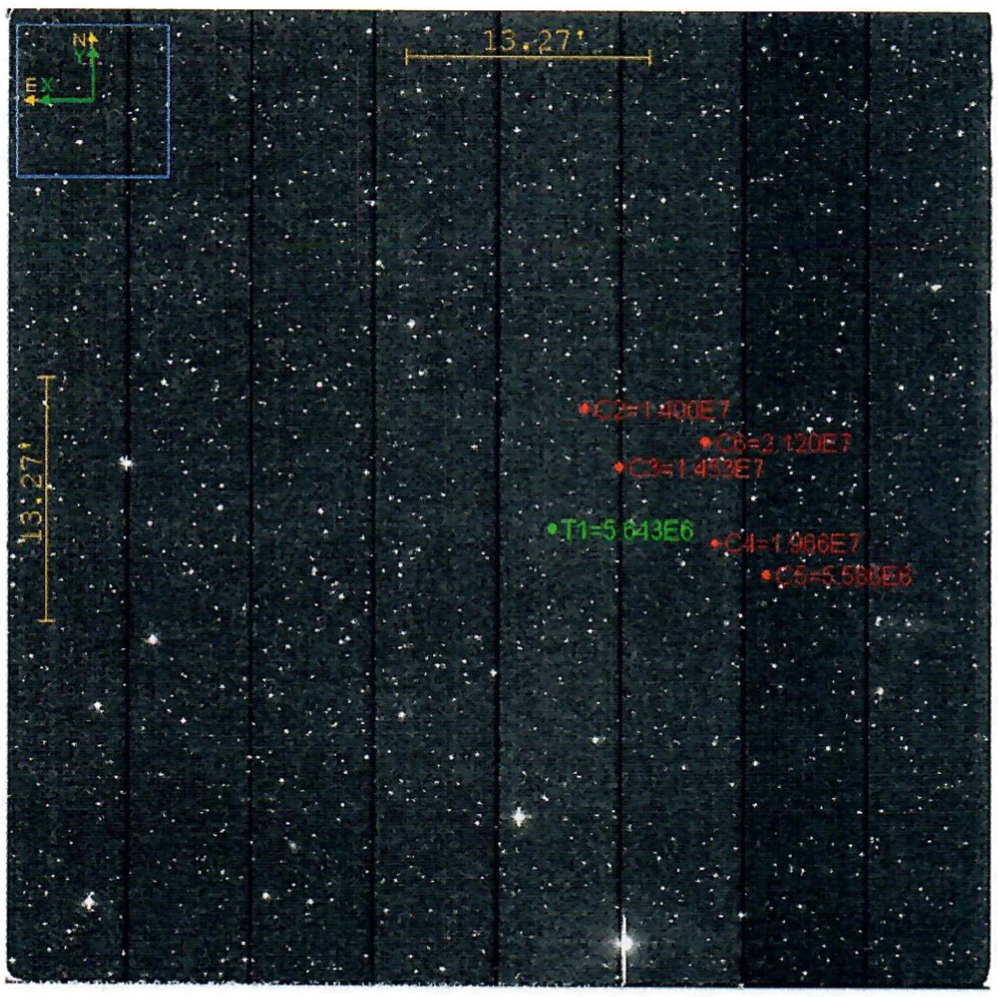
DEPARTMENT OF THE AIR FORCE
DEPARTMENT OF PHYSICS
USAF ACADEMY, COLORADO

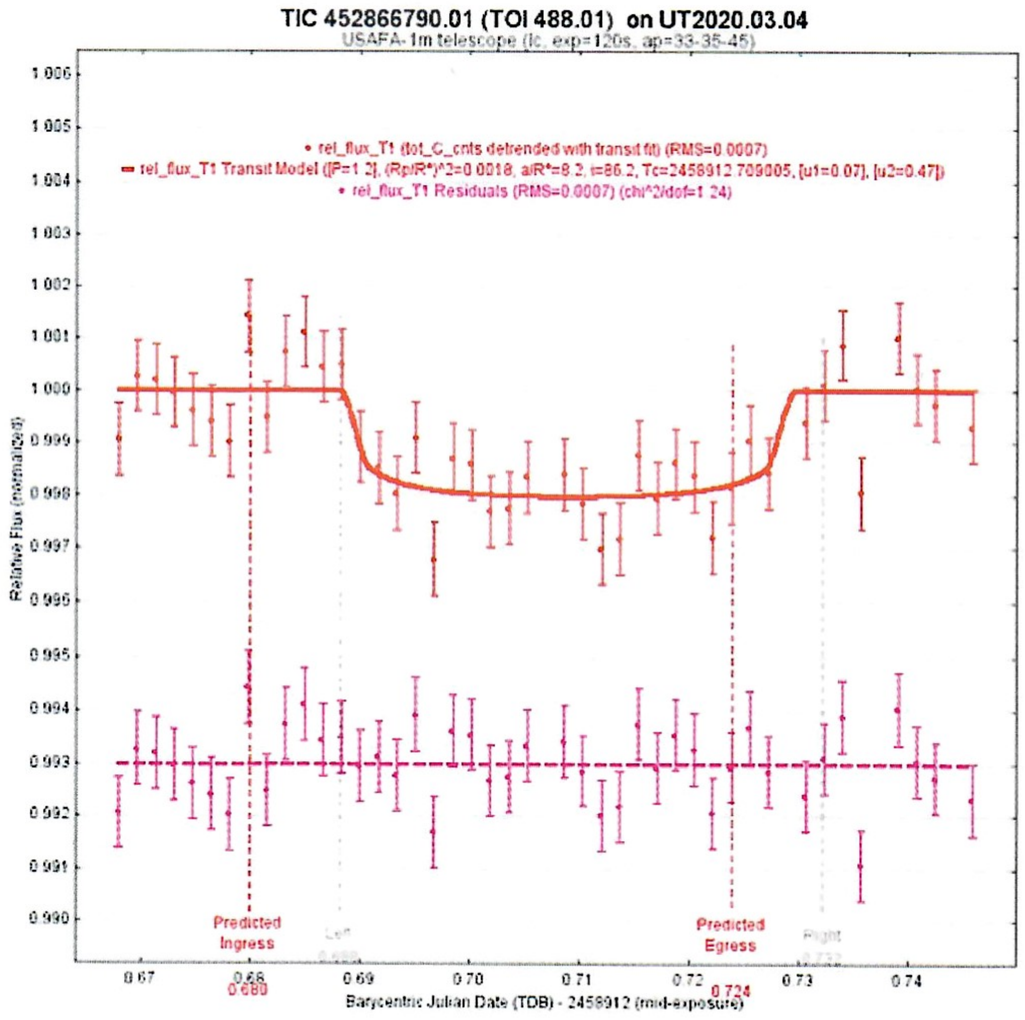
30 Apr 2021

To Whom It May Concern:

AstroSysteme Austria (ASA) delivered and installed a 1-meter (f/6) equatorial fork mount Ritchey-Chrétien reflecting telescope to our observatory on Tuesday, 8 October 2019. The telescope was operational in just two days (including creation of the initial pointing file). ASA also installed a dome control system for us in mid-December 2019. Importantly, our ASA telescope has supported installation and use of a 70kg large-format camera, filter wheel, and auto-guiding system.

The pointing accuracy and tracking precision of our ASA telescope is excellent, and has enabled us to participate in follow-up seeing-limited photometric observations for NASA's Transiting Exoplanet Survey Satellite (TESS). Data from our first TESS observing run are shown in the two figures below. The image on the left shows an approximately 1°×1° field of the target star (T1), along with several highlighted comparison stars in red. The right-hand graph is our resulting transit light curve of the target vs. comparison stars, in which we successfully resolved a two part-per-thousand transit. This was made possible by the outstanding tracking achieved with our ASA 1-meter telescope; over a two-hour period, the cumulative RA and DEC tracking drift were less than one arc-second each. Our data were used as part of a refereed journal article announcing the discovery of this planet, GJ 3473b, a hot Earth-sized world just 89 light-years distant.





As director of the U.S. Air Force Academy Observatory, I am very pleased with the mechanical and optical precision of our ASA 1-meter telescope, and I know it will enable first-class astronomical research projects for students and faculty in the decades to come.

Sincerely,

Devin J. Della-Rose

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