NAU NORTHERN ARIZONA UNIVERSITY

Department of Astronomy and Planetary Science

# ASTRONOMY COLLOQUIUM

## DR. DIANA DRAGOMIR
## ASSISTANT PROFESSOR AT UNIVERSITY OF NEW MEXICO

**WHEN:**

Monday,
November 25th,
3:30 PM

**WHERE:**

Physical Sciences,
Bldg. 19,
Room 103

DR. DIANA DRAGOMIR IS AN ASSISTANT PROFESSOR IN THE UNM DEPARTMENT OF PHYSICS AND ASTRONOMY SINCE AUGUST 2020. SHE OBTAINED HER PHD IN ASTRONOMY FROM THE UNIVERSITY OF BRITISH COLUMBIA IN 2013, AND WAS A POSTDOCTORAL SCHOLAR AT LAS CUMBRES OBSERVATORY IN SANTA BARBARA AND AT MIT. DR. DRAGOMIR'S RESEARCH FOCUSES ON THE DEMOGRAPHICS OF LONG-PERIOD EXOPLANETS, WITH SIDE HUSTLES IN ATMOSPHERIC CHARACTERIZATION OF SMALL HOT EXOPLANETS. SHE USES OBSERVATIONS FROM THE TRANSITING EXOPLANET SURVEY SATELLITE (TESS), THE HUBBLE SPACE TELESCOPE, JAMES WEBB SPACE TELESCOPE AND A VARIETY OF GROUND-BASED OBSERVATORIES.

## NASA'S TESS MISSION REACHES FOR COOLER PLANETS

**"Launched in 2018, TESS - NASA's latest planet hunting mission - has greatly exceeded expectations. It has brought about the discovery of hundreds of transiting exoplanets, and thousands more candidates awaiting confirmation. Though TESS' observing strategy is biased towards finding short-period planets, after more than six years of observations, TESS-discovered exoplanets with orbital period in the tens-to-hundreds of days are being confirmed at an accelerating pace. In this talk, I will describe how the TESS Single Transit Planet Candidate Working Group searches for long-period planet candidates in TESS observations, and how we validate and confirm those that are true planets. I will present the science cases we aim to address through these discoveries, including finding increasingly temperate planets amenable to follow-up studies such as atmospheric characterization and probing planet occurrence on the outskirts of M dwarf systems. I will highlight a few systems of interest and what we are learning about planet formation from them, and outline directions for the future of this effort."**