*** MEDIA ADVISORY ***

Issued by the MIT Kavli Institute for Astrophysics and Space Research and the MIT School of Science

MIT hosts first conference on TESS Science, July 29-August 2, 2019: Scientists available to discuss latest results from NASA's newest planet hunter

TESS scientists and spokespeople will address questions about the growing list of exoplanet detections from the first year of scientific operation

WHAT: At the first major science conference showcasing results from NASA's Transiting Exoplanet Survey Satellite (TESS), scientists will discuss the growing list of exoplanetary detections since the satellite's launch in April 2018. The upcoming conference is dedicated to all TESS mission science, including: exoplanets, asteroseismology, stellar binaries, variable stars, and extragalactic astronomy, such as active galactic nuclei and supernovae. Presentations will address all aspects of the mission, from TESS data analysis, through follow-up observations to TESS' impact on the formation and evolution of exoplanets.

Participation is open to all interested journalists and free registration can be provided for on-site interviews. ***For on-site media, please register for free at the conference to obtain press credentials.*** Journalists are invited to schedule time to meet with scientists for interviews on **Wednesday, July 31, 2:00-4:00 p.m. EDT** and again from **4:30-6:30 p.m. EDT** on the MIT campus' **Kresge Auditorium, 77 Massachusetts Avenue.** The full program schedule can be found on the website for the TESS Conference: tsc.mit.edu.

TESS has reported more than 750 objects of interest (TOIs) with more than 20 exoplanet discoveries, including the detection of its first Earth-sized world, orbiting a bright star only 53 light-years away, making it well-suited to follow-up study. In June, scientists found a planet between the sizes of Mars and Earth, this system only 35 light-years from ours.

These detections are exciting, as they demonstrate TESS's ability to pick out small planets around nearby stars. In the near future, the TESS team expects the probe to reveal even colder planets with conditions more suitable for the potential to host life.

While all recent exoplanets' sizes, orbits, and masses are known, further study with other telescopes will be needed to determine if they have atmospheres and, if so, which gases are present. One of TESS's goals is to build a catalog of small, rocky planets on short orbits around very bright, nearby stars for atmospheric study by NASA's upcoming James Webb Space Telescope. TESS has already found planets that are ideally located for such follow-up observations.

Further observations and statistical analysis are needed to confirm all of the candidate exoplanets, which are now shared publicly in real-time to facilitate efforts by telescopes and other instruments around the world to validate the data.

Background: Since its launch in April 2018, TESS, an MIT-led space mission, has been monitoring the sky, sector by sector, for momentary dips in the light of bright nearby stars. Such dips likely represent a planet passing in front of that star. Using this transit method, TESS will survey the entire sky over a two-

year period, beginning with the southern ecliptic hemisphere, and catalogs thousands of planets for future study during the next two decades. The stars TESS studies are 30 to 100 times brighter than those surveyed by the Kepler Mission and the subsequent K2 survey, enabling far easier follow-up observations with both ground-based and space-based telescopes. TESS will also cover a sky area 400 times larger than that monitored by Kepler.

WHO:
Representatives from the TESS Science team available for comment and Q&A during the conference include:

- George Ricker, TESS Principal Investigator, Senior Research Scientist, MIT Kavli Institute
- Sara Seager, TESS deputy science director, MIT Professor of Physics and Planetary Science
- Padi Boyd, Chief of the NASA Exoplanets and Stellar Astrophysics Laboratory in the Astrophysics Science Division, and TESS Project Scientist
- Avi Shporer, TESS research scientist and conference organizer, MIT Kavli Institute
- Maximilian N. Günther, TESS research scientist and postdoctoral researcher, MIT Kavli Institute
- Enric Palle, Research Staff Scientist, Instituto de Astrofísica de Canarias
- Martin Still, NASA Astrophysics Division, Exoplanet Research Program lead
- Jeff Volosin, Deputy Director, NASA Astrophysics Division

WHEN:
Wednesday, July 31, 2:00-4:00 p.m. EDT, and again 4:30-6:00 p.m. EDT.

WHERE:
Kresge Auditorium, Building W16, MIT campus, 77 Massachusetts Ave, Cambridge, MA 02139. We anticipate live-streaming of the final day of the conference, Friday, August 2. For more information, please consult the conference website.

ADDITIONAL RESOURCES:
For additional background about the project, you may be interested in these websites:

- NASA's TESS website: https://www.nasa.gov/tess
- MIT's TESS website: https://tess.mit.edu
- Additional information for TESS and exoplanet discoveries: https://exoplanets.nasa.gov/tess/
- TESS Science Writers guide
- Media resources, including videos and images, related to previous detections and announcements: https://www.nasa.gov/content/tess-media-resources
- TESS High-resolution graphics and video: https://svs.gsfc.nasa.gov/Gallery/TESS.html

ON-SITE MEDIA RSVP:
Please register at the conference to obtain press credentials. For interviews in advance of the conference and/or outside the designated interview blocks, please contact the relevant media contact below.

MEDIA CONTACTS:
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TESS Social Media

Throughout the conference, attendees and media contacts can use **#TESScon** to post live updates from sessions throughout the four days of programming.

MIT TESS on Twitter: https://twitter.com/TESSatMIT
MIT Kavli on Twitter: https://twitter.com/MITKavli
NASA TESS on Facebook: https://www.facebook.com/NASATESS
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TESS is a NASA Astrophysics Explorer mission led and operated by MIT in Cambridge, Massachusetts, and managed by Goddard. Additional partners include Northrop Grumman, based in Falls Church, Virginia; NASA's Ames Research Center in California's Silicon Valley; the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts; MIT Lincoln Laboratory; and the Space Telescope Science Institute in Baltimore. More than a dozen universities, research institutes, and observatories worldwide are participants in the mission.

The MIT TESS Conference is sponsored by the MIT Kavli Institute for Astrophysics and Space Research, the MIT Department of Earth, Atmospheric and Planetary Sciences (EAPS), the Kavli Foundation, NExSci, the Center for Center for Astrophysics, Harvard/Smithsonian Center for Astrophysics, and Northrop Grumman.