

Prospect for Discoveries of New Exoplanets by Transiting Exoplanet Survey Satellite TESS

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Transiting Exoplanet Survey Satellite (TESS) is NASA's next satellite mission in the field of exoplanets. TESS will search for exoplanets by the transit method, especially targeting small exoplanets of less than 4 Earth radii orbiting around stars in the Solar neighborhood. TESS equips 4 wide field cameras, each having the field of view of $24^\circ \times 24^\circ$, providing a total field of view of $24^\circ \times 96^\circ$. TESS will observe 26 sectors in total in 2 years which cover $\sim 80\%$ of the sky. The observation will start from the southern sky in the first year and move on to the northern sky in the second year. The current expected launch date of TESS is after April 16, 2018.

We will report the latest mission status and present the prospect for discoveries of new exoplanets by the TESS mission. We also introduce ongoing worldwide efforts of ground-based follow-up observations for candidate exoplanets to confirm and characterize their planetary nature.

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