

Contribution ID: 43

Type: **Poster**

A TESS Full-Sky Map for Low Surface Brightness Astronomy

The Transiting Exoplanet Survey Satellite (TESS) was primarily designed to monitor stellar light curves and detect exoplanets. However, its full-frame images (FFIs) could be valuable for studying low surface brightness objects. In this work, we construct a full-sky map from TESS image patches in HEALPix format with a pixel size of $1.7' \times 1.7'$. To enhance the usability of the map for extragalactic studies, we remove about 4 hundred millions foreground stars detected in Gaia. The resulting map provides a powerful tool for stacking analyses of extended structures beyond the Milky Way, including galaxies, galaxy clusters, and large-scale structures. This map offers new opportunities for exploring faint astrophysical phenomena at large scales.

Section

Galaxy/Extragalactic

Primary authors: CHEN, Po-Han (ASIAA); Dr CHIANG, Yi-Kuan (ASIAA)

Presenter: CHEN, Po-Han (ASIAA)

Session Classification: Poster-EA