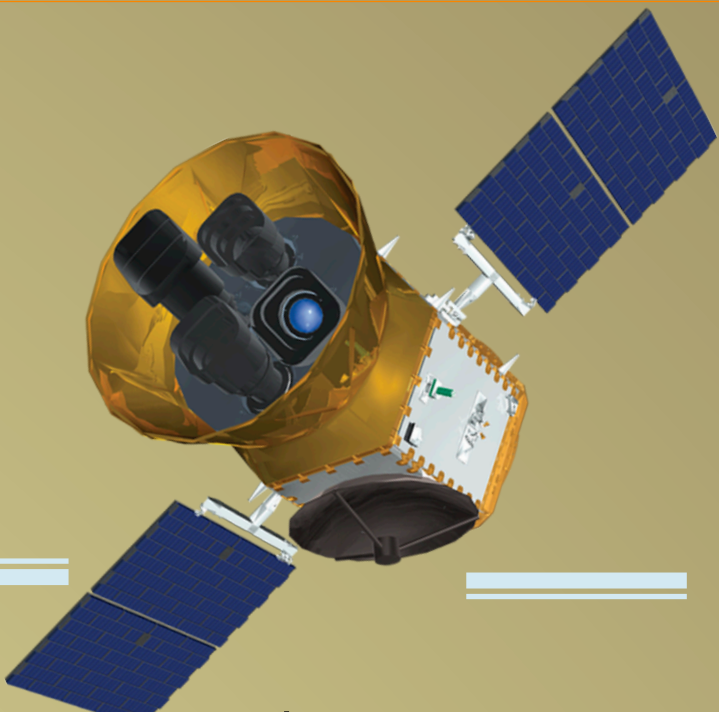




STATUS OF THE TESS SCIENCE PROCESSING OPERATIONS CENTER



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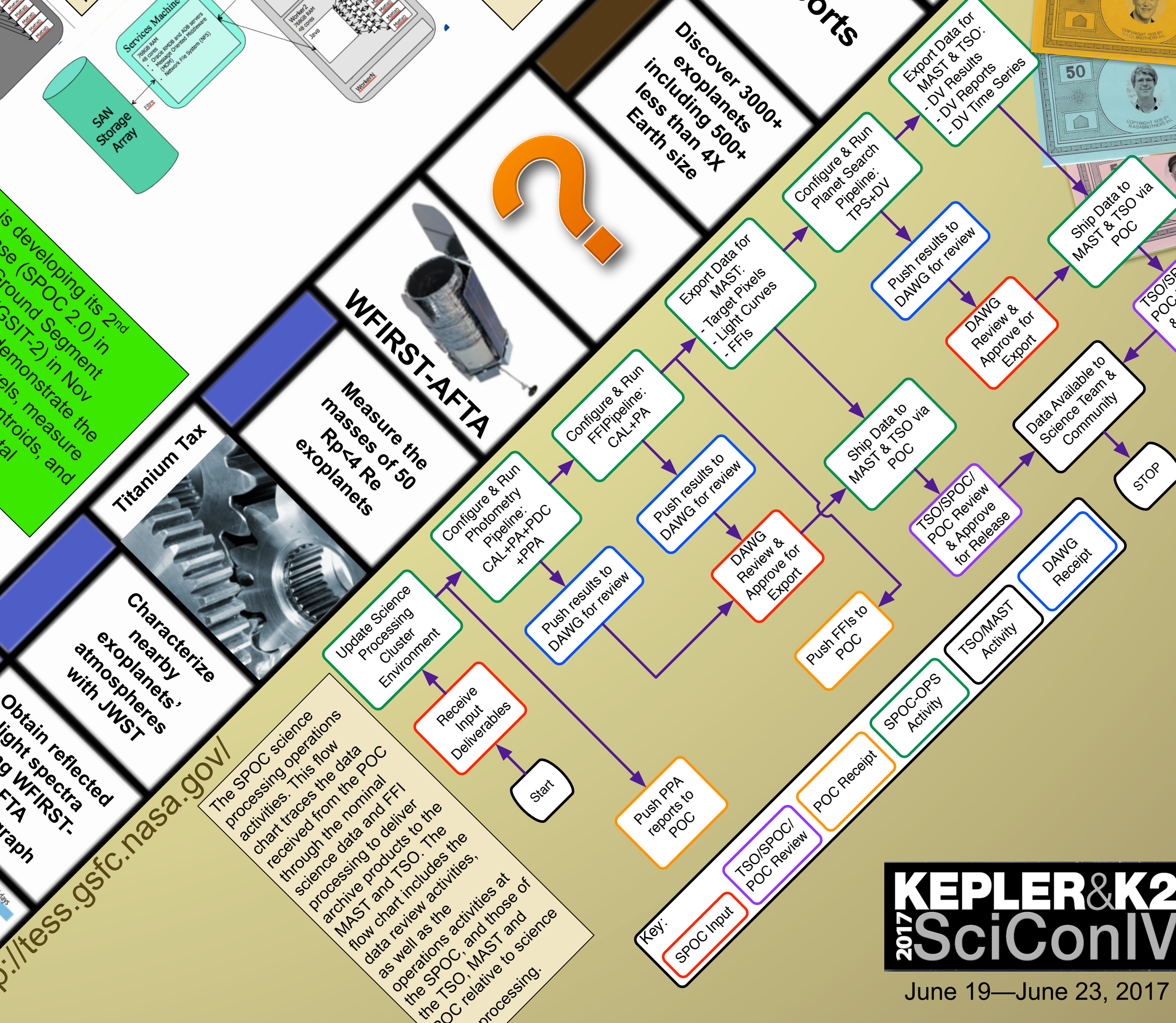
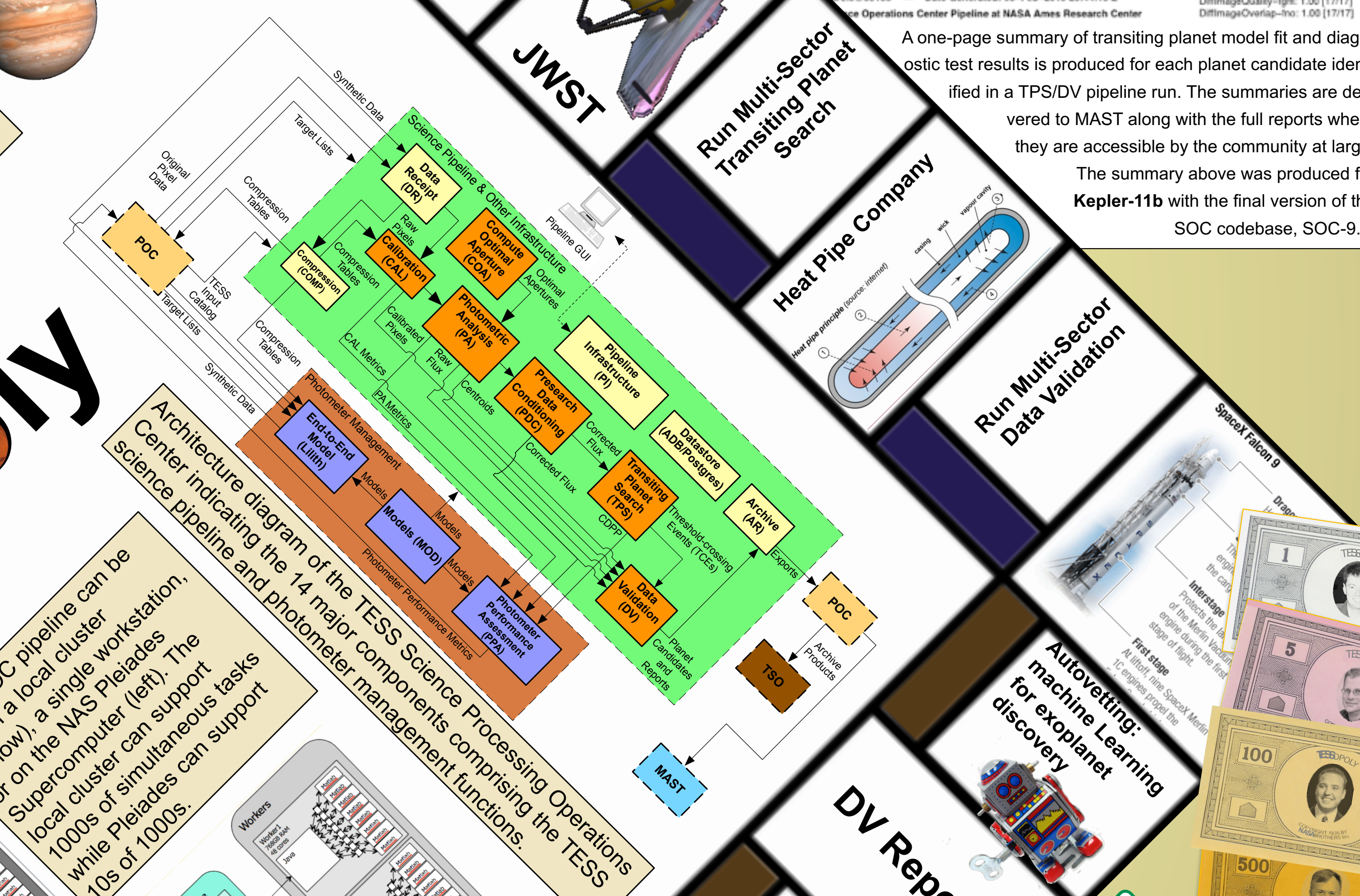
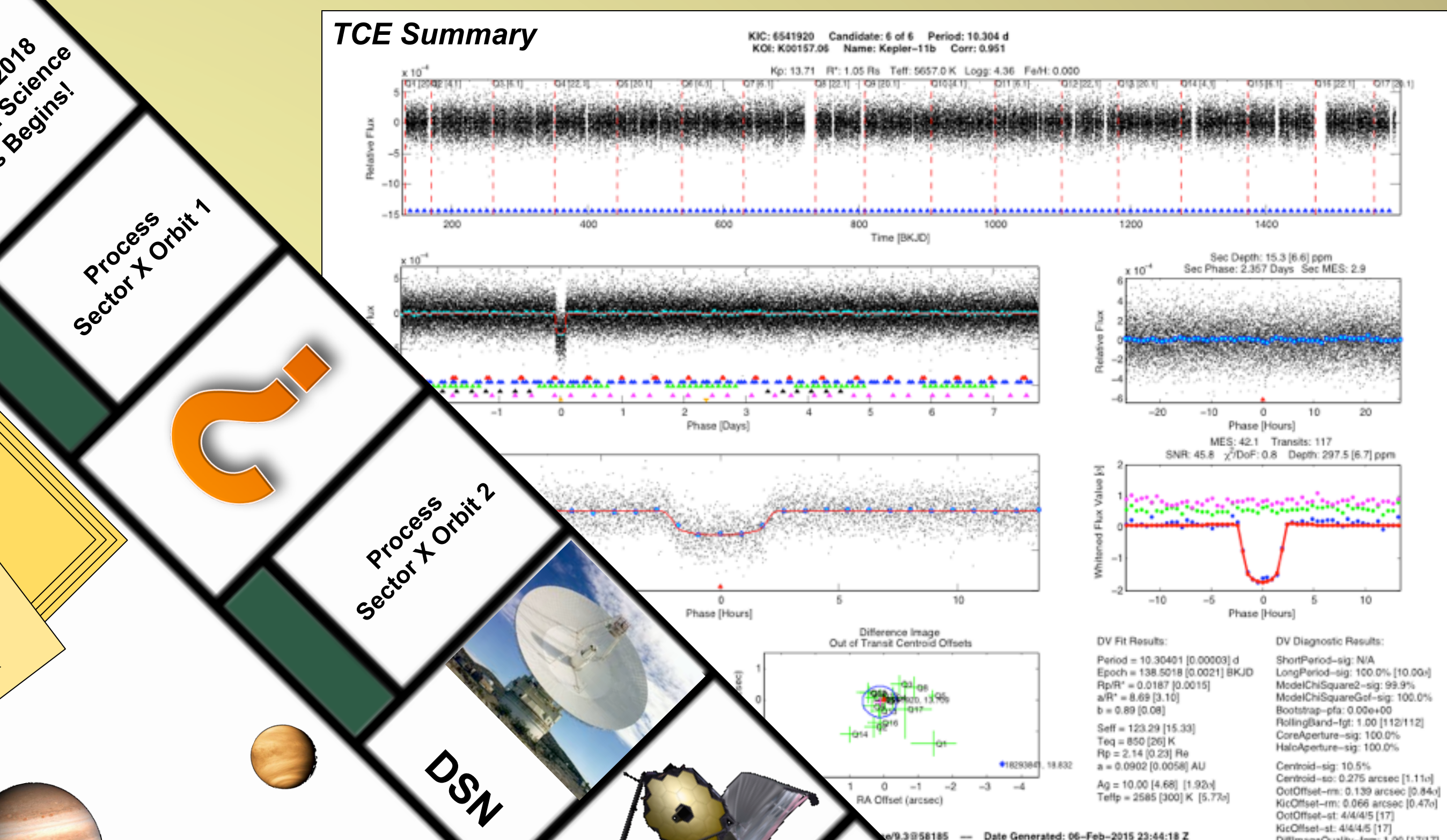
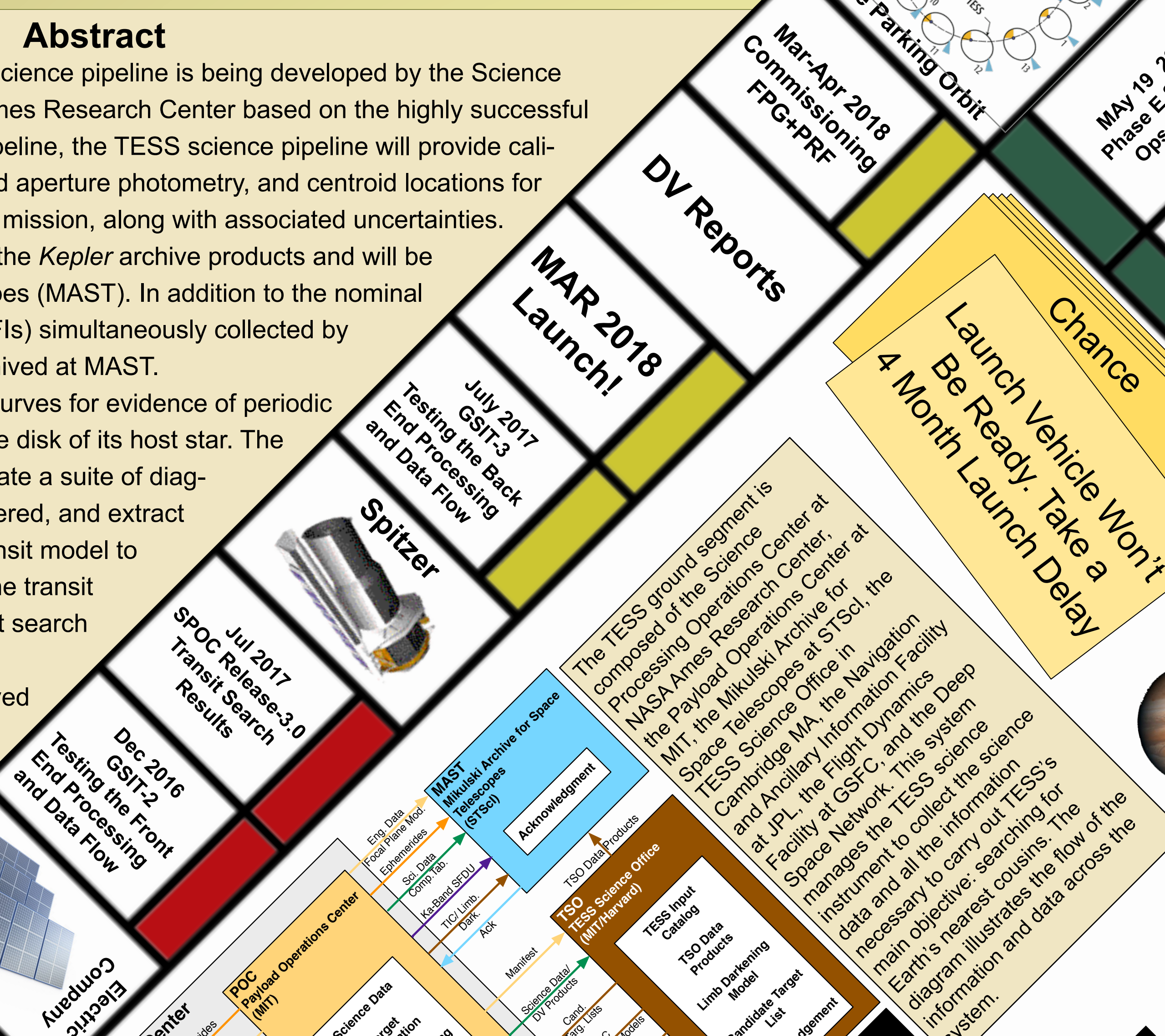
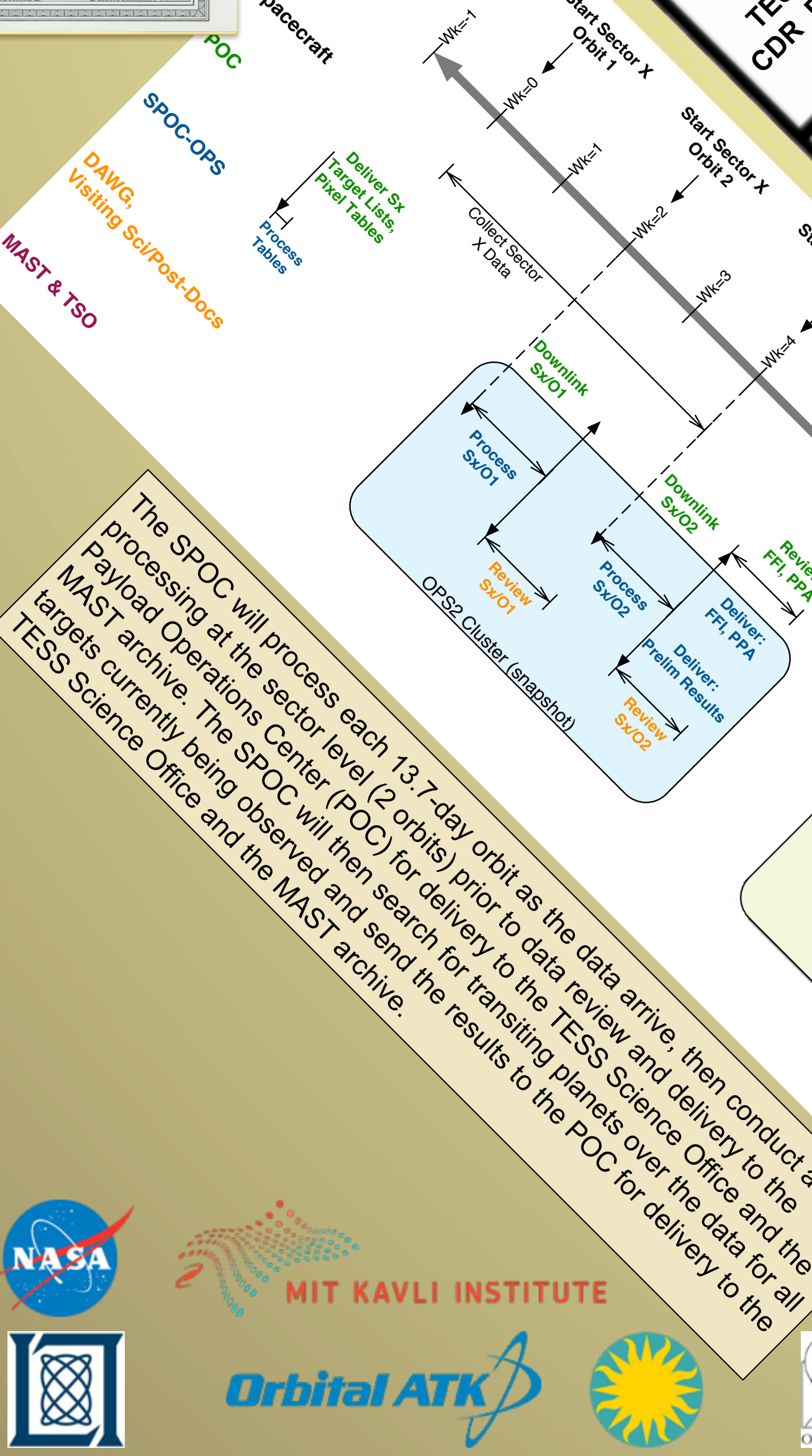
Abstract

The Transiting Exoplanet Survey Satellite (TESS) science pipeline is being developed by the Science Processing Operations Center (SPOC) at NASA Ames Research Center based on the highly successful *Kepler* Mission science pipeline. Like the *Kepler* pipeline, the TESS science pipeline will provide calibrated pixels, simple and systematic error-corrected aperture photometry, and centroid locations for all 200,000+ target stars, observed over the 2-year mission, along with associated uncertainties.

The pixel and light curve products are modeled on the *Kepler* archive products and will be archived to the Mikulski Archive for Space Telescopes (MAST). In addition to the nominal science data, the 30-minute Full Frame Images (FFIs) simultaneously collected by TESS will also be calibrated by the SPOC and archived at MAST.

The TESS pipeline will search through all light curves for evidence of periodic Transit signals that occur when a planet crosses the disk of its host star. The Data Validation (DV) pipeline component will generate a suite of diagnostic metrics for each transit-like signature discovered, and extract planetary parameters by fitting a limb-darkened transit model to each potential planetary signature. The results of the transit search will be similar in content to the *Kepler* transit search products (tabulated numerical results, time series products, and pdf reports) all of which will be archived to MAST.

TESS was selected by NASA for launch in 2017 as an Astrophysics Explorer mission.



NASA Explorer Program's TESS Mission To be launched in March 2018

Collect 15,000 light curves

Go! <http://tess.gsfc.nasa.gov/>



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