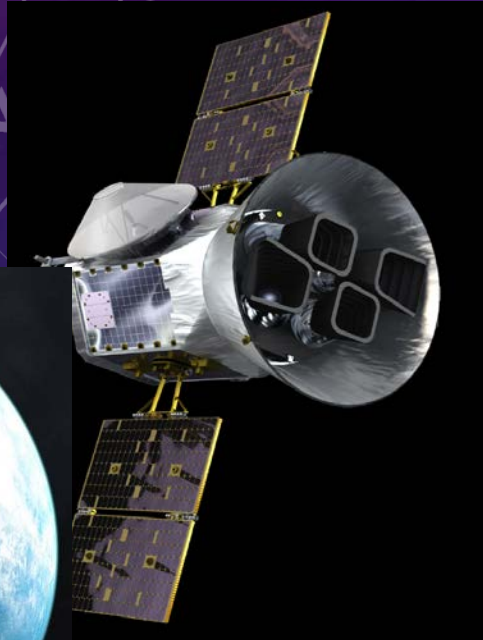
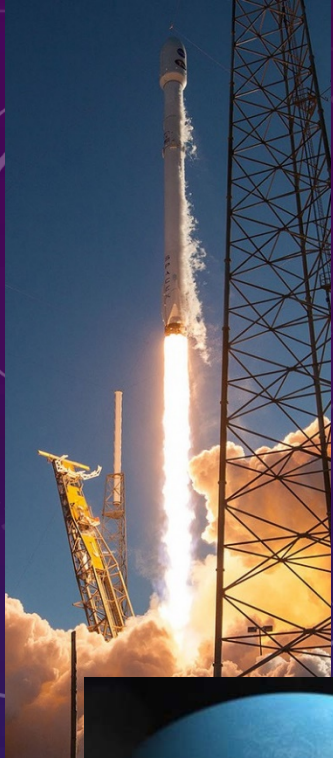


A SUMMARY OF TESS DISCOVERIES FROM YEAR 1+



DAVID R. CIARDI

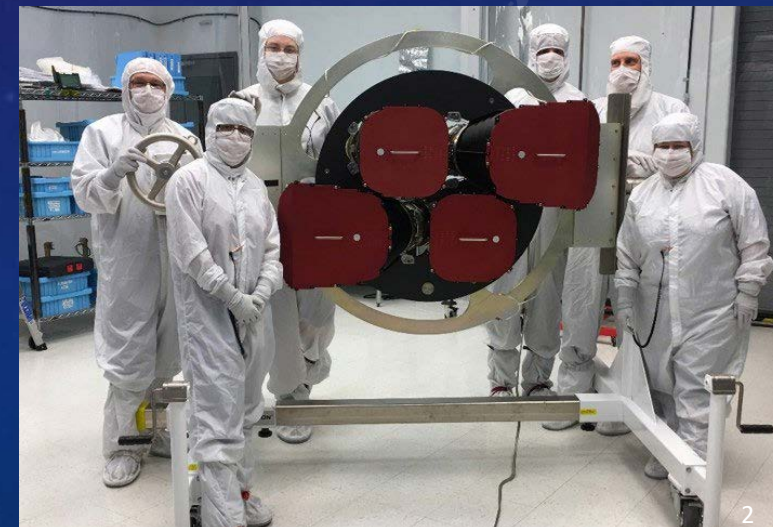
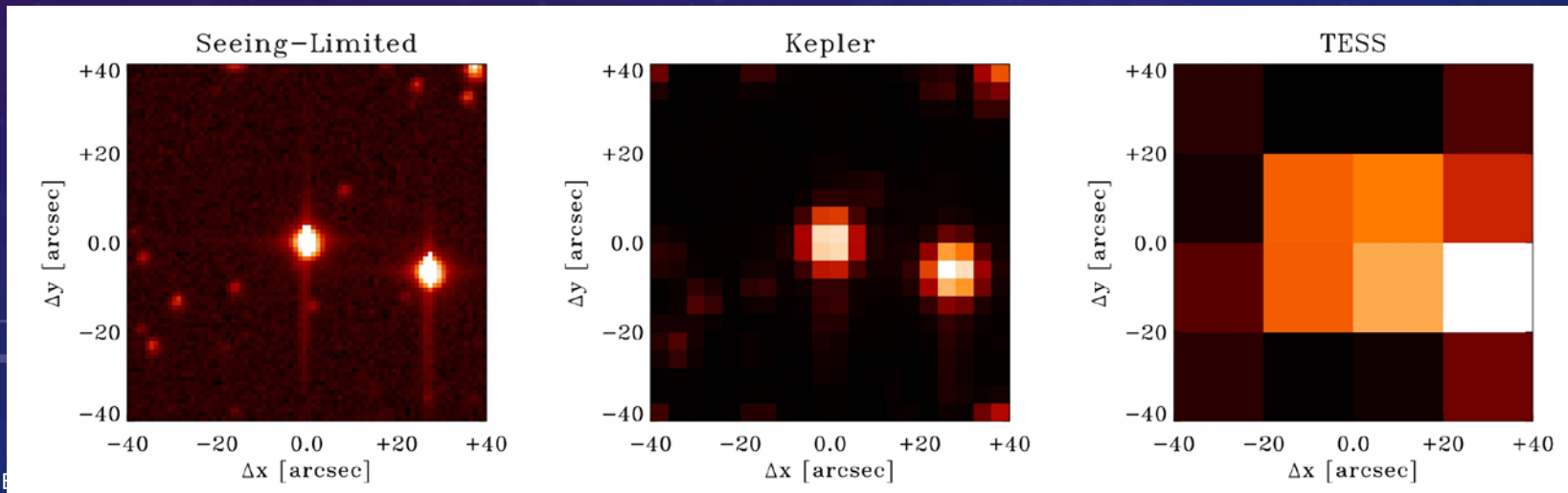
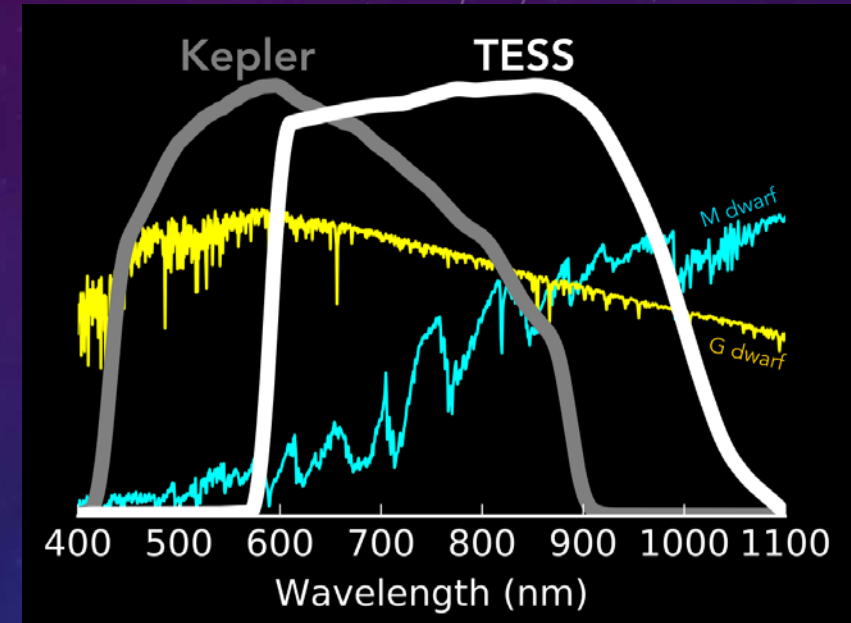
IPAC – CALTECH

NASA EXOPLANET SCIENCE INSTITUTE



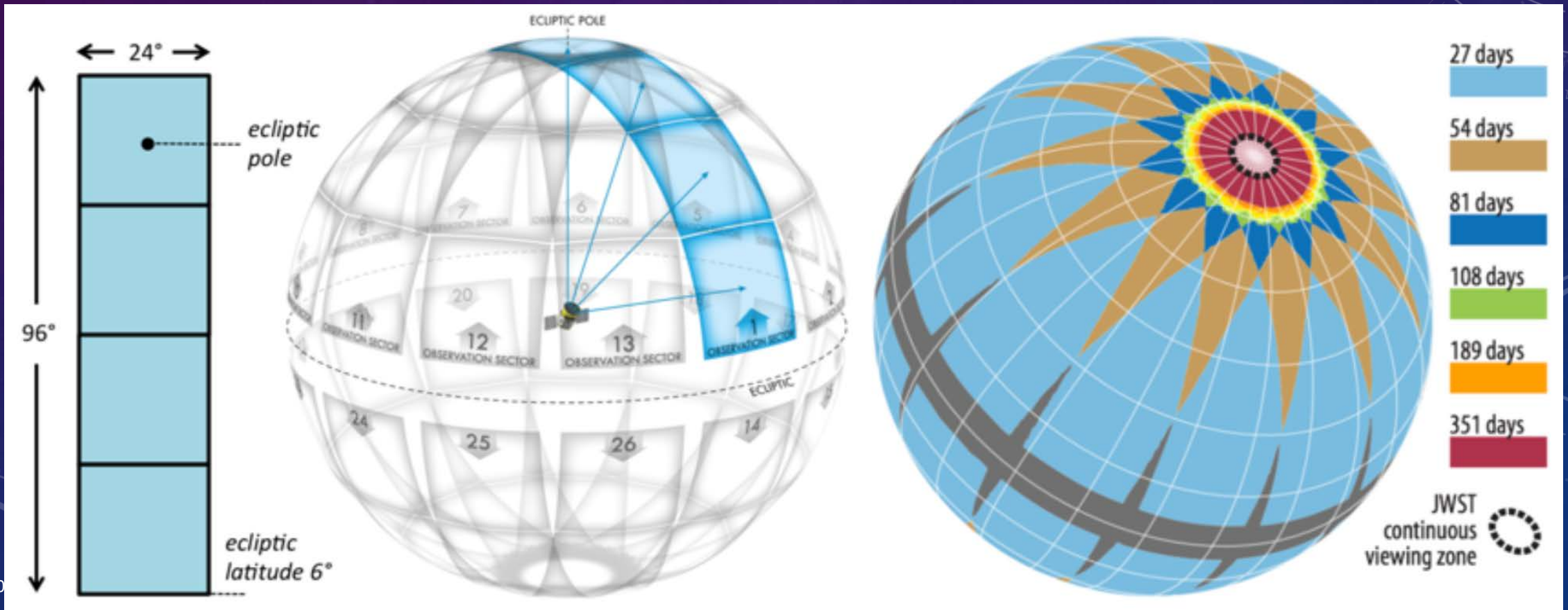
TESS Launch April 2018

- 4 146 mm cameras each with 4 CCDs 2048×2048 pixels
- 21" pixels
- 24°×24° FOV per camera

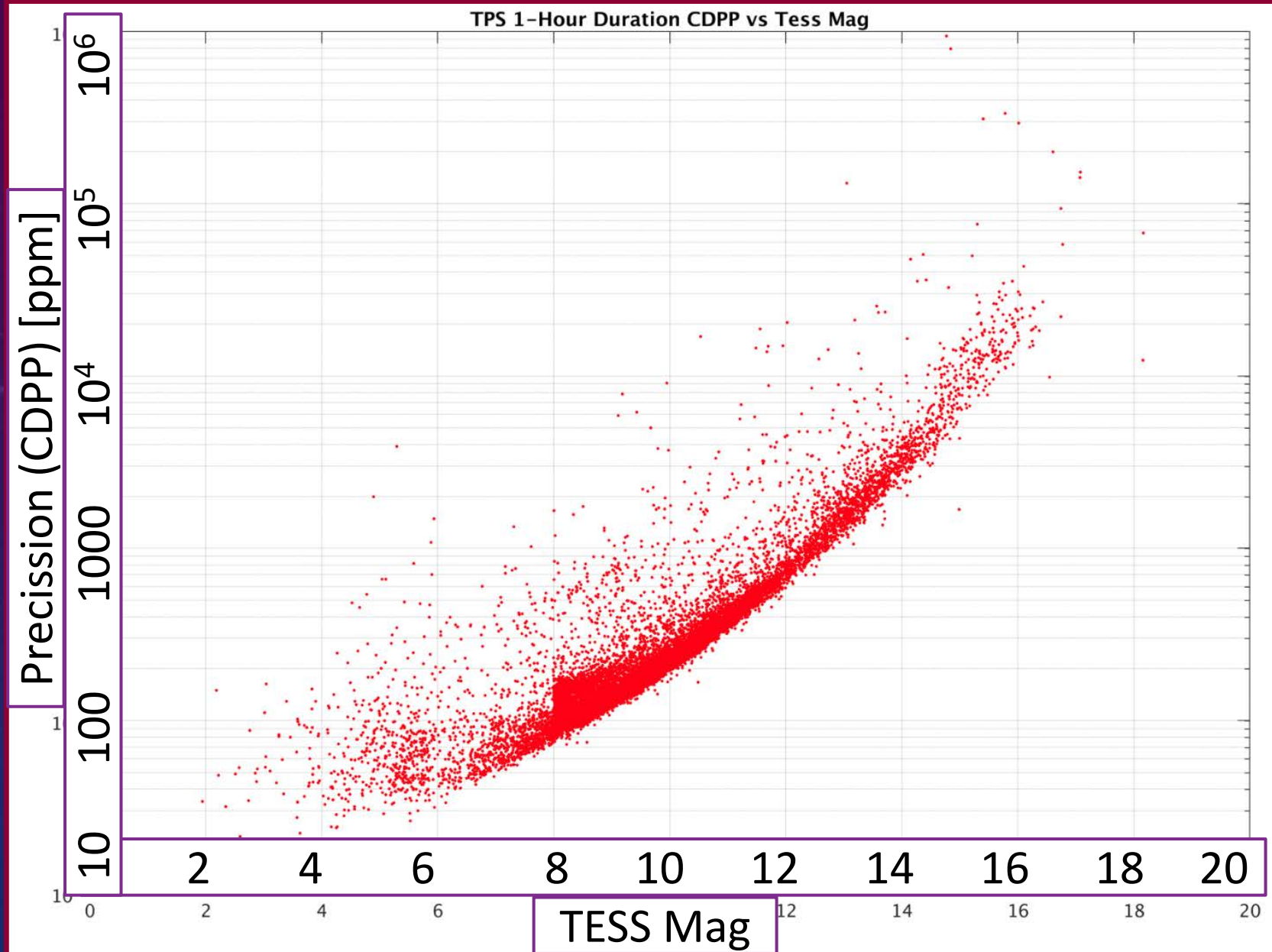


“All-Sky” Coverage

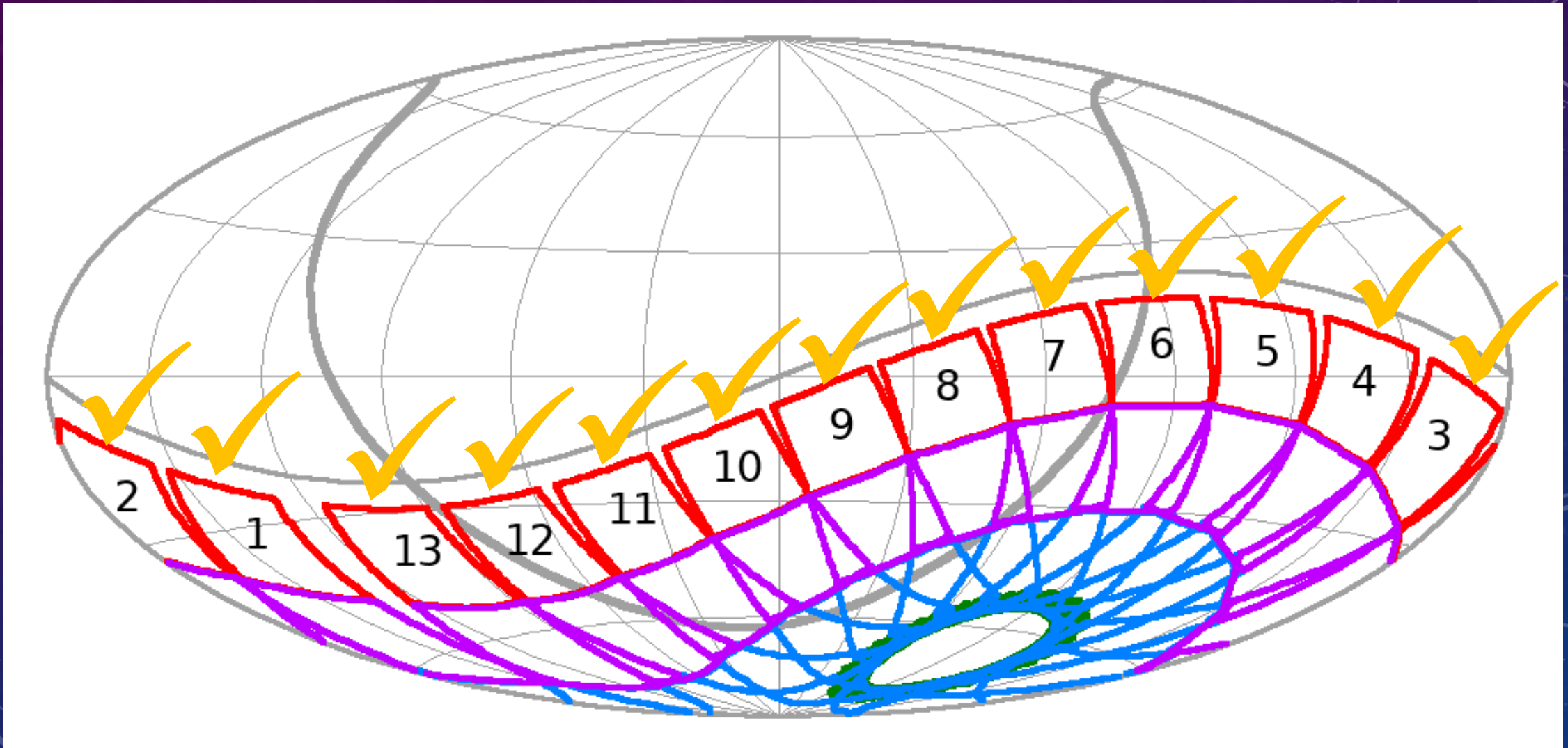
- 27 days per sector
- ~15000 2-minute postage stamp targets per sector.
- Full-Frame Images ever 30 minutes



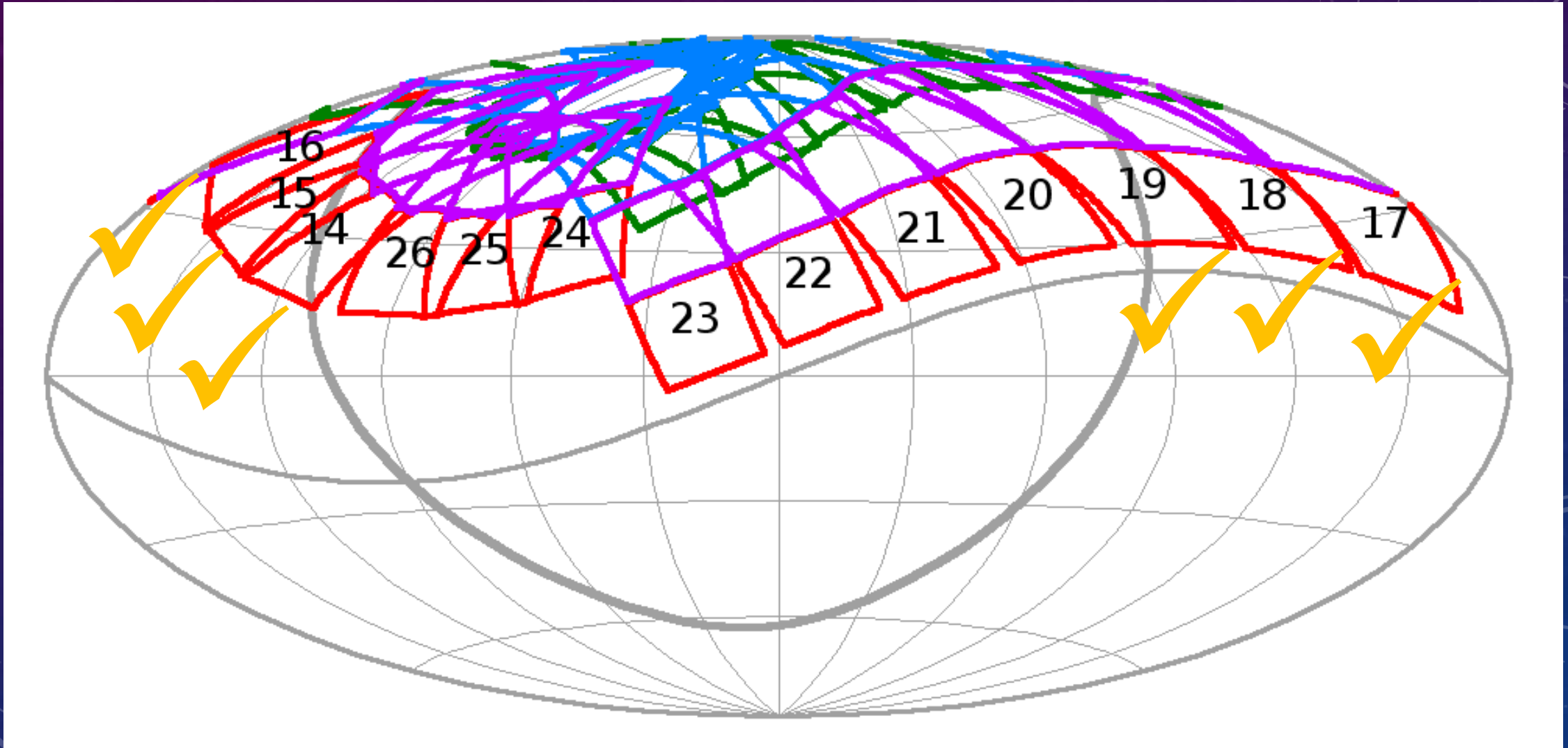
TESS Precision is Excellent



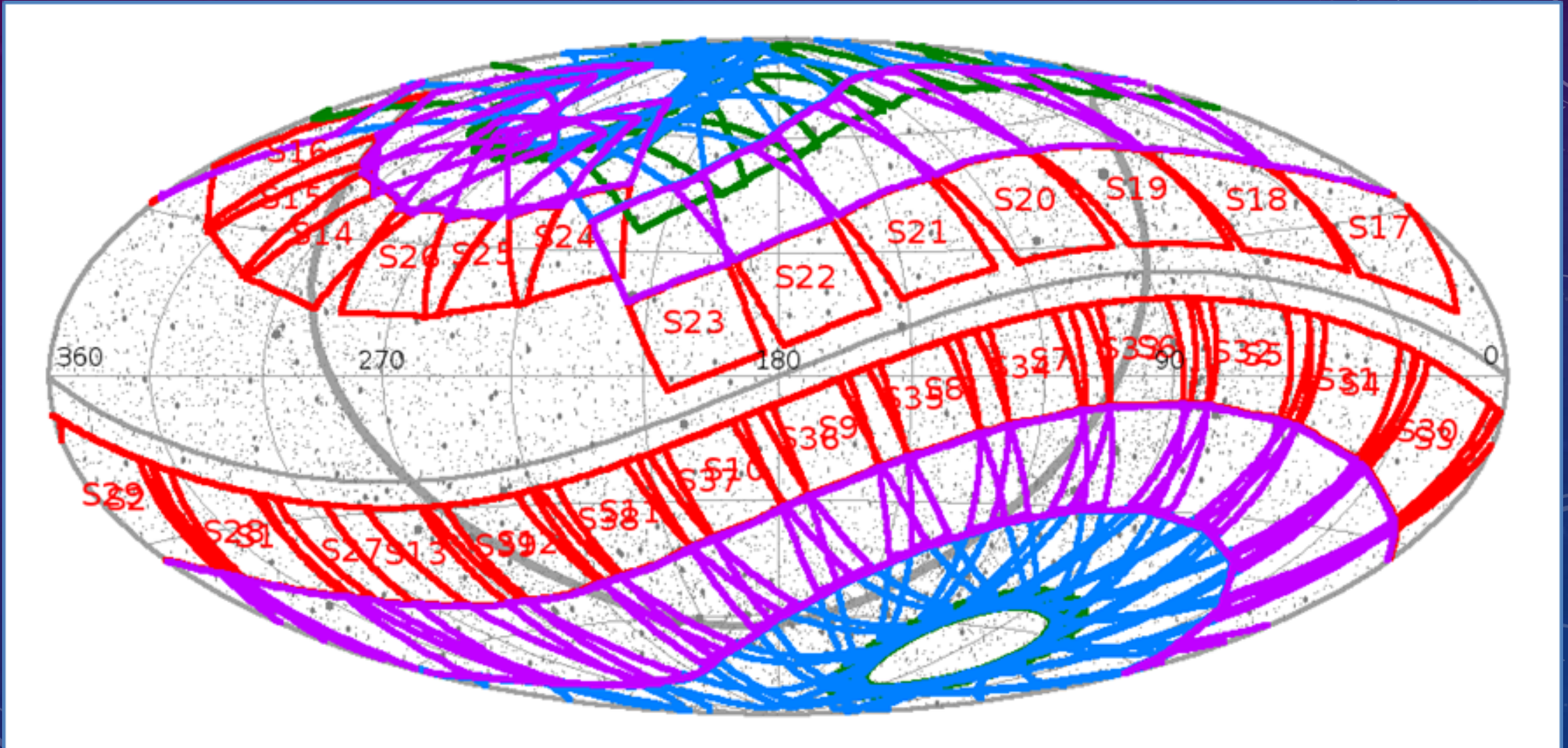
Southern Hemisphere: July 2018 – July 2019



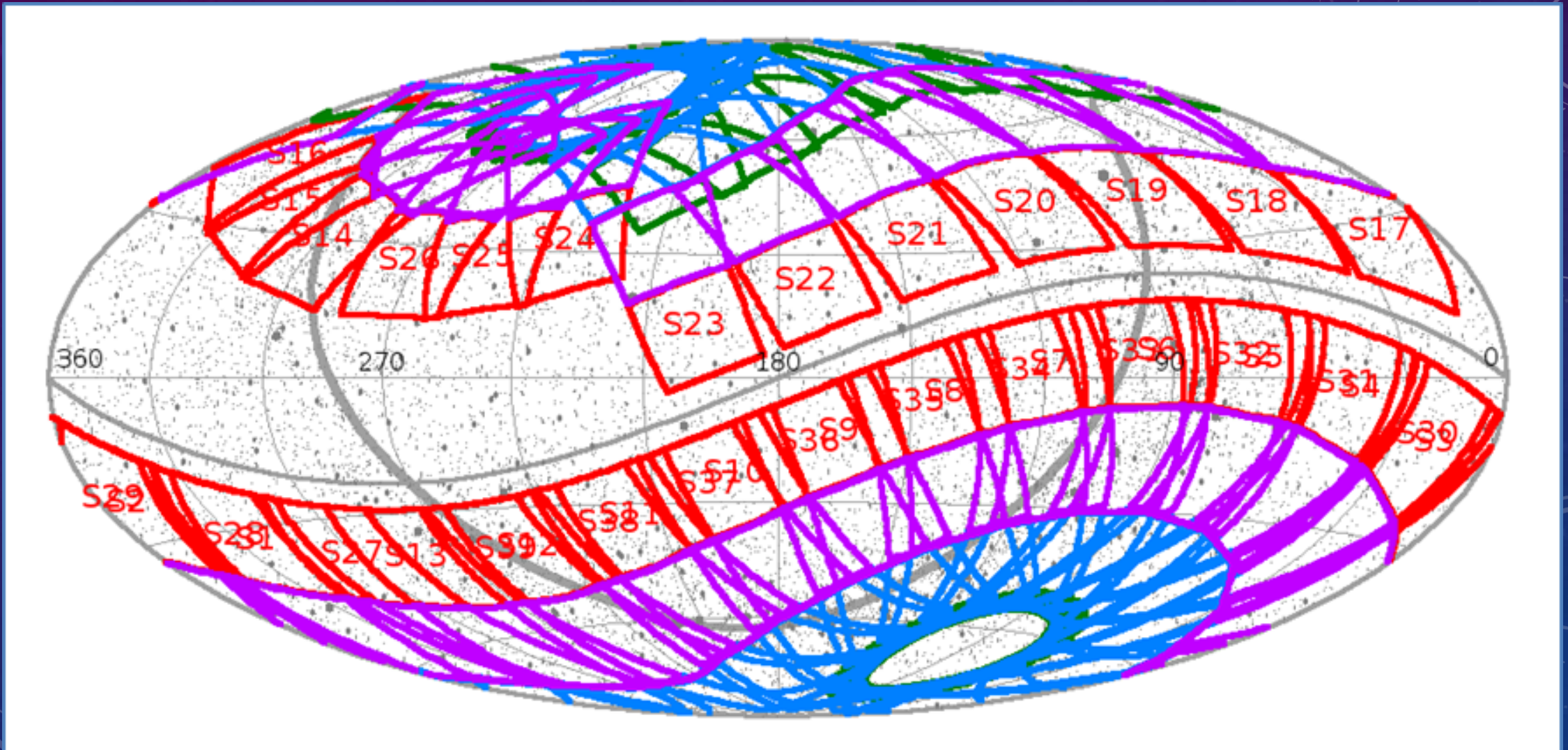
Northern Hemisphere: July 2019 - ongoing



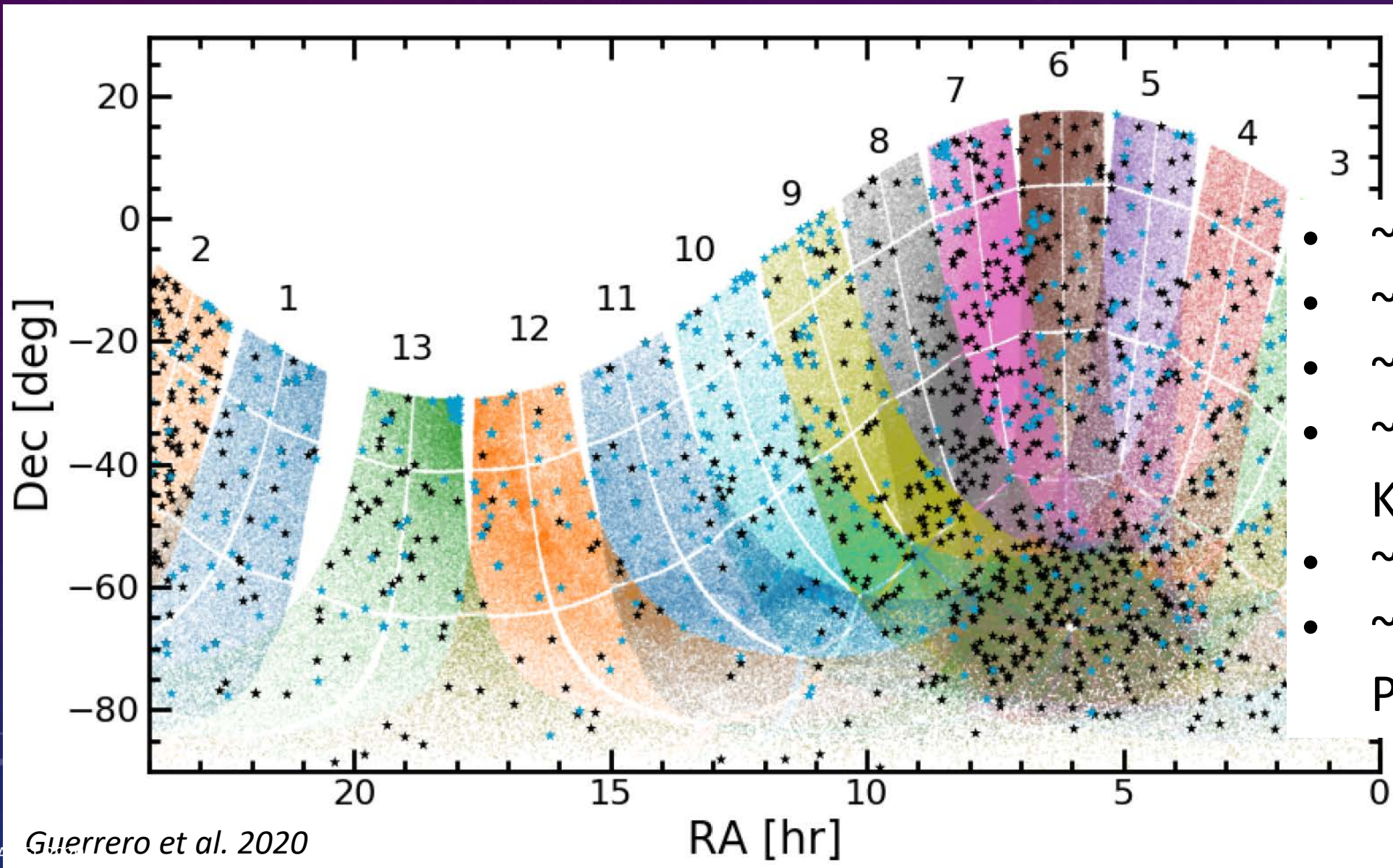
Year 3 Repeats Southern Hem: July 2020



Year 4: Still being discussed

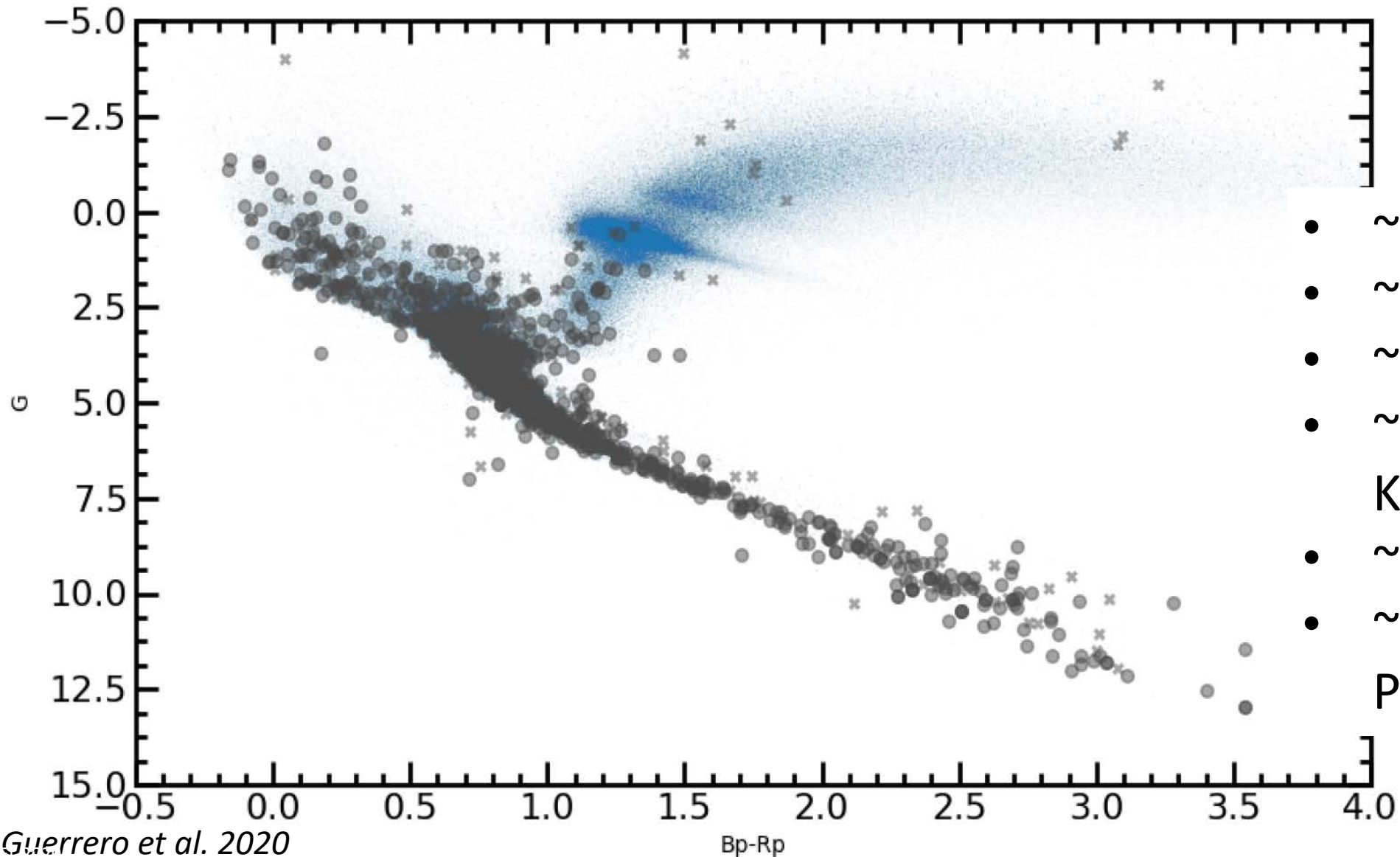


Year 1 Candidate Properties



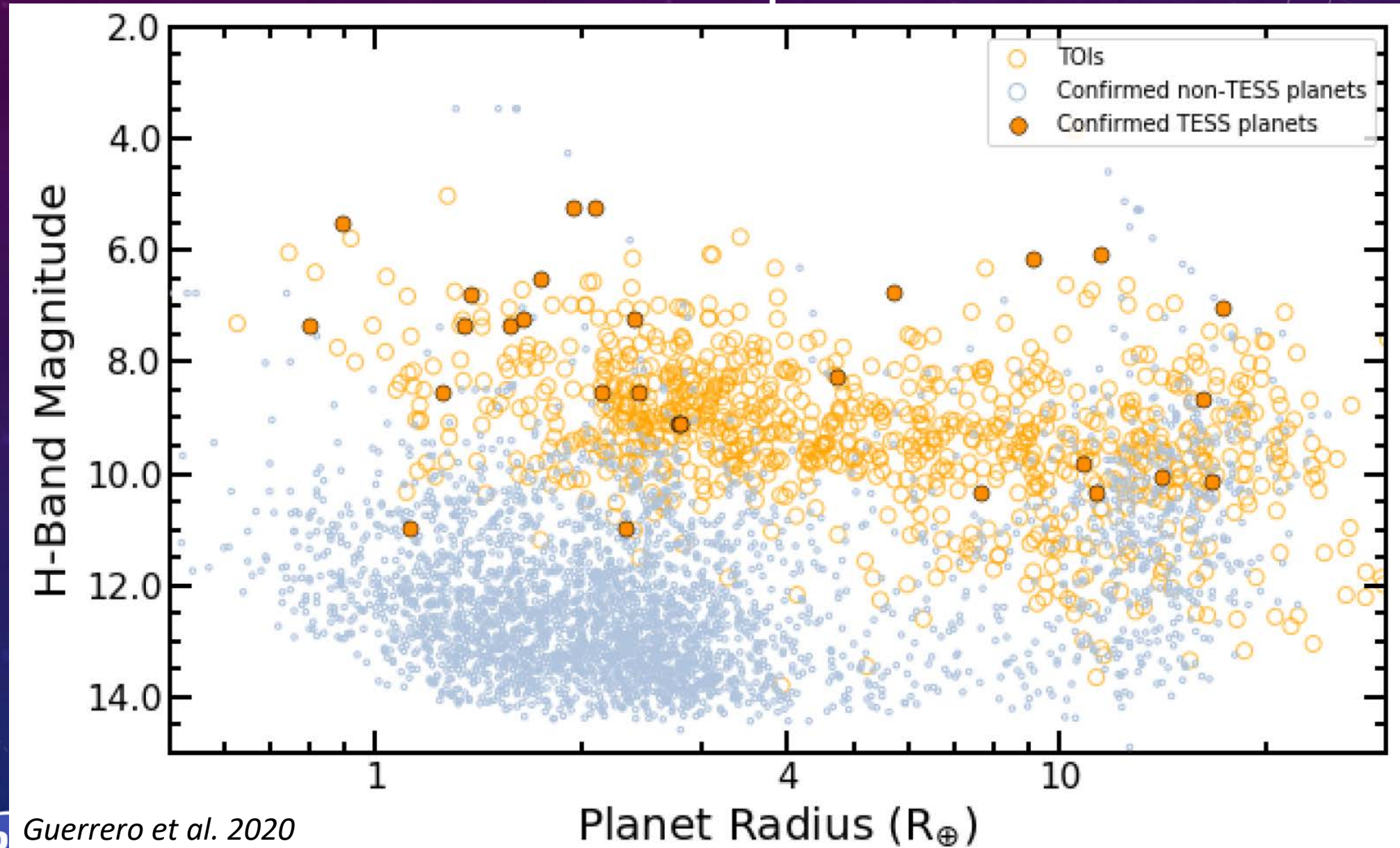
- ~120,000 Targets
- ~1300 TOIs
- ~20% FP
- ~10% Previously Known
- ~5% Multi-planet
- ~20 Confirmed Planets

Year 1 Candidate Properties

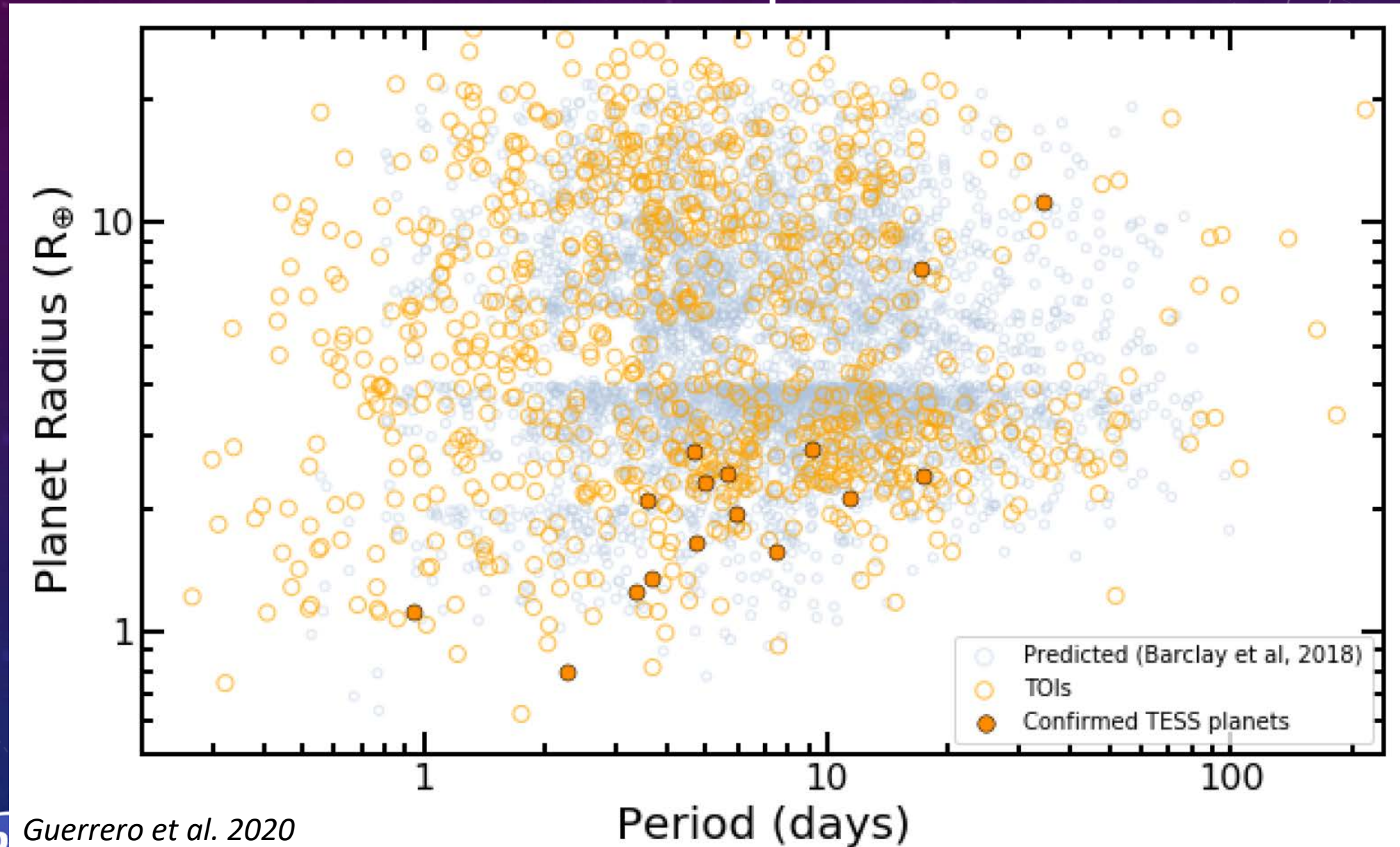


- ~120,000 Targets
- ~1300 TOIs
- ~20% FP
- ~10% Previously Known
- ~5% Multi-planet
- ~20 Confirmed Planets

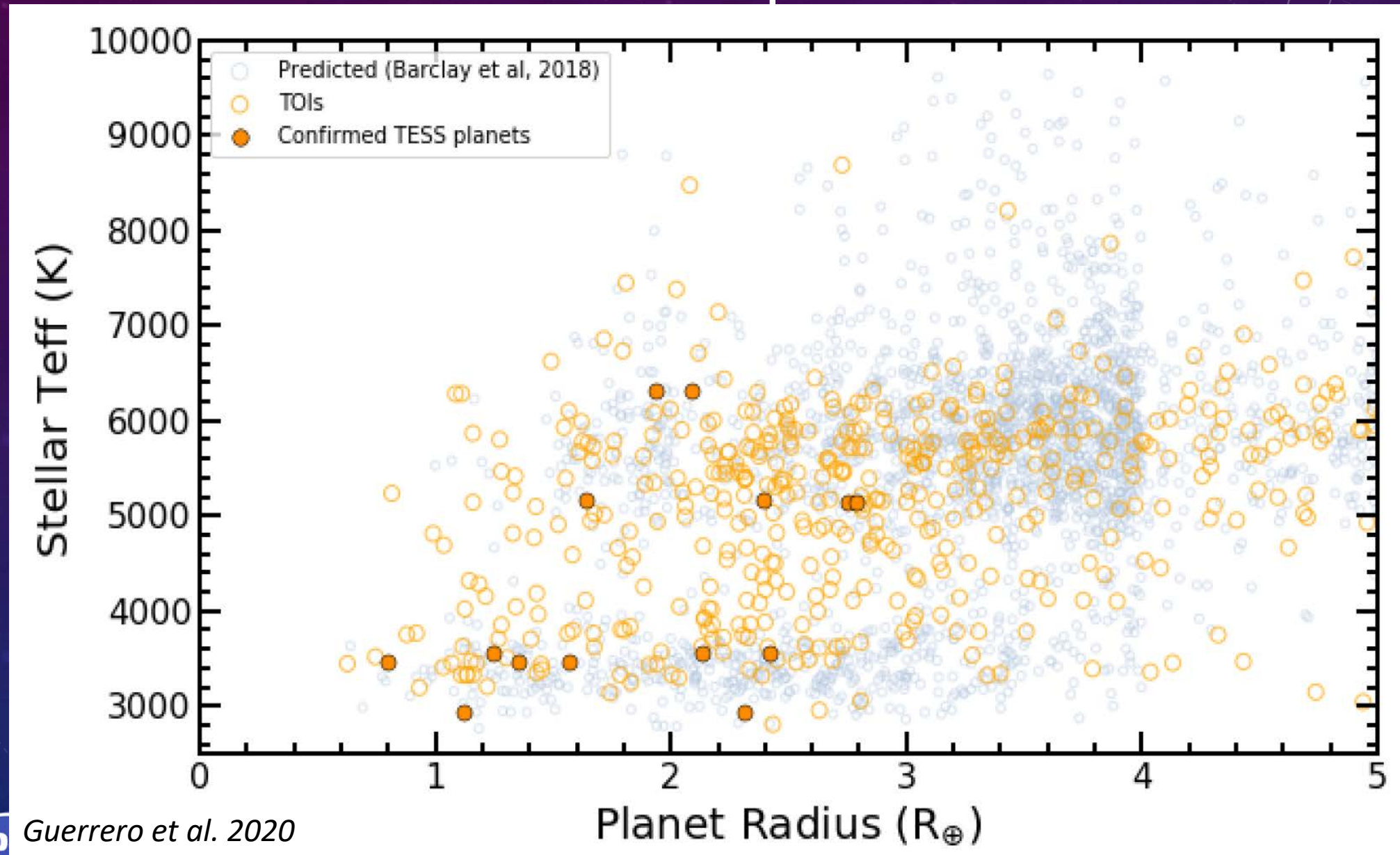
Year 1 Candidate Properties



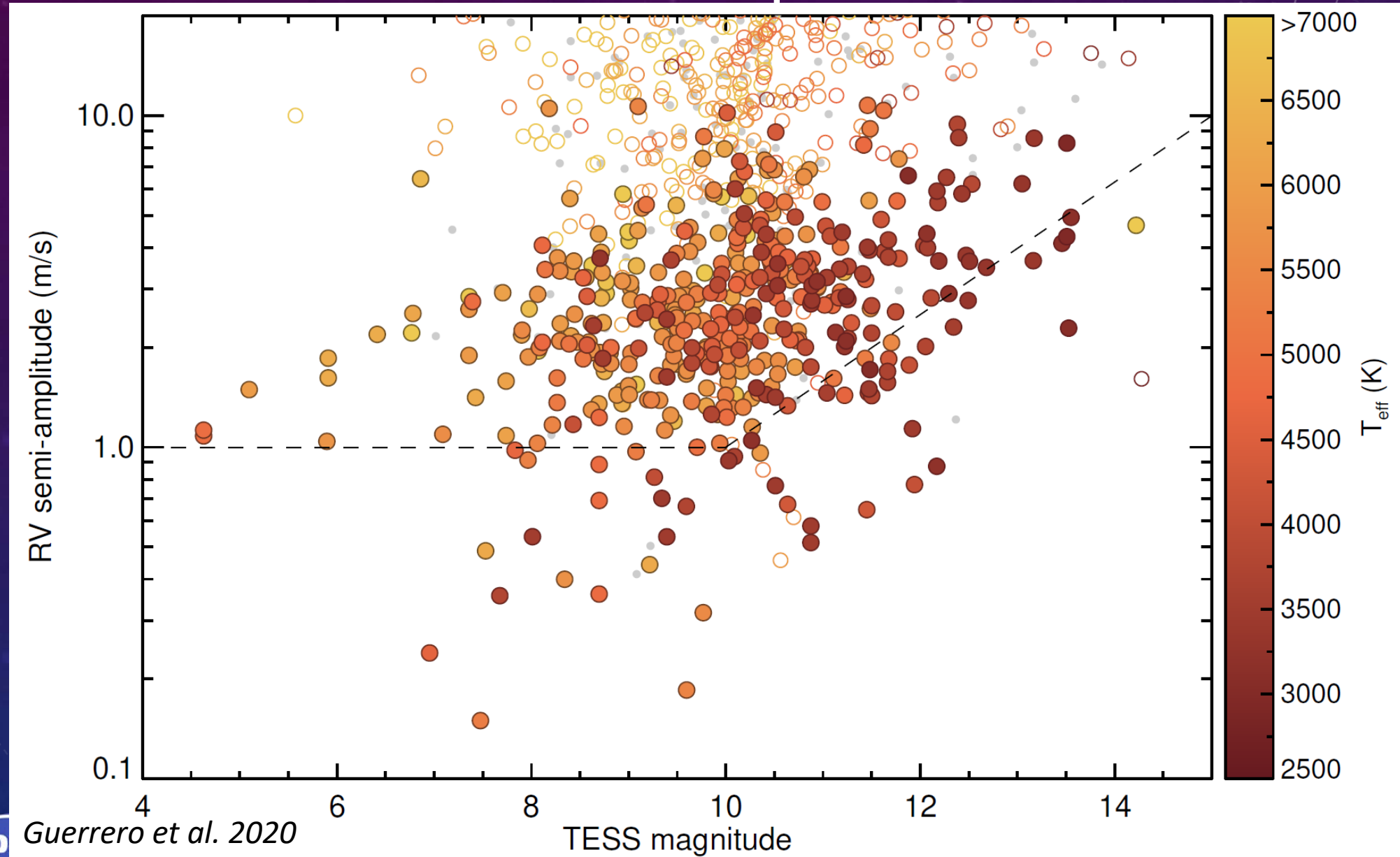
Year 1 Candidate Properties



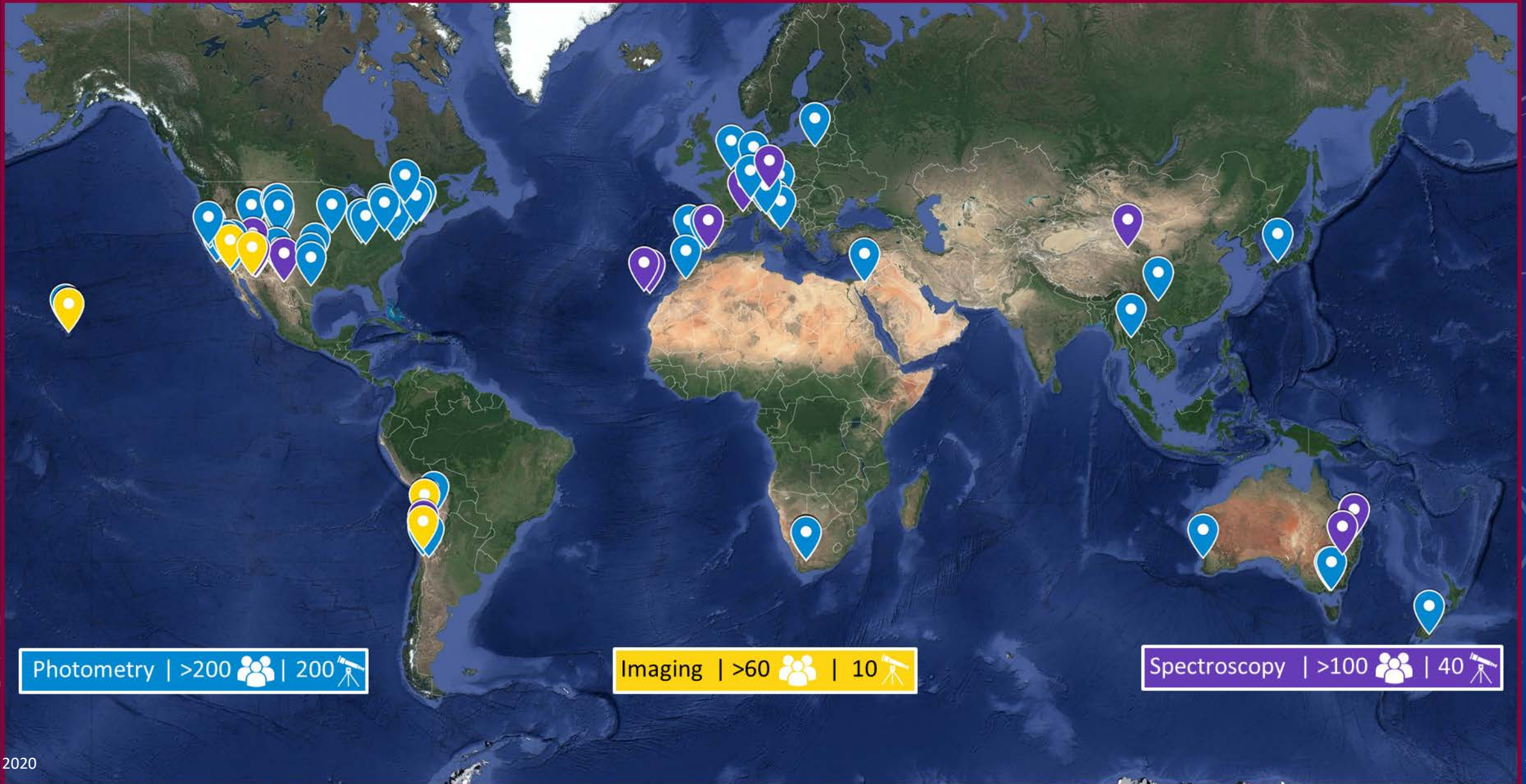
Year 1 Candidate Properties



Year 1 Candidate Properties



TFOP is a World-Wide Collaboration



TFOP is a World-Wide Collaboration

Welcome to ExoFOP-TESS



Targets (TIC v8)

TIC ID or Exoplanet Archive name:
 [Go](#)
(e.g. 21535479, 377780790 or K2-96)

Data Tag (text or number):
 [Go](#)
(e.g. YYYYMMDD_username_description_nnnn or tag number)

[Search the TESS Candidate Target List \(CTL\)](#)
(v8) (9,488,282 targets)

[Download the full TESS Candidate Target List \(v8\) \(3.7G\)](#)

TOIs/CTOIs

List of all TOIs **1,604**

List of all CTOIs **317**

TOI name:
 [Go](#)
(e.g. nnn or nnn.01 or nnn.02)

Bulk Uploads

- Files
- Observations
- Observing Notes
- CTOIs/Parameters
- TOI Priorities
- ACWG Priorities
- Group Accounts

NEW MyTargets

[MyTargets](#)

Observations

- Imaging **1,852**
- Spectroscopy **2,557**
- Time Series **2,264**

TESS Follow-up Observing Program (TFOP) Working Group

- [Apply to Join TFOP Working Group](#)
- [SG1 TESS Transit Finder \(TTF\)](#)
- [SG1 TESS Observations Coordinator \(TOC\)](#)
- [SG2 Observation Coordinator](#)

ExoFOP TESS

TOIs (1604) [Download Table](#) [Clear All Filters/Sorts](#)

TIC ID	TOI	Previous CTOI	ACWG priority	TESS Disposition
47384844	1022.01		1	PC
447283466	1028.01		1	PC
370133522	1078.01		1	PC

To Sum Up

- 1604 TOIs, 37 Confirmed Planets, Dozens more confirmed planets on the way
- Follow-up, confirmation, and masses takes time
- TESS is finding planets around bright stars ripe for characterization
- TESS Prime + Extended mission should provide 100's to 1000's of planets potentially suitable for JWST, CHEOPS, and ARIEL
- There is so much more science from TESS for which I didn't have time to discuss

