

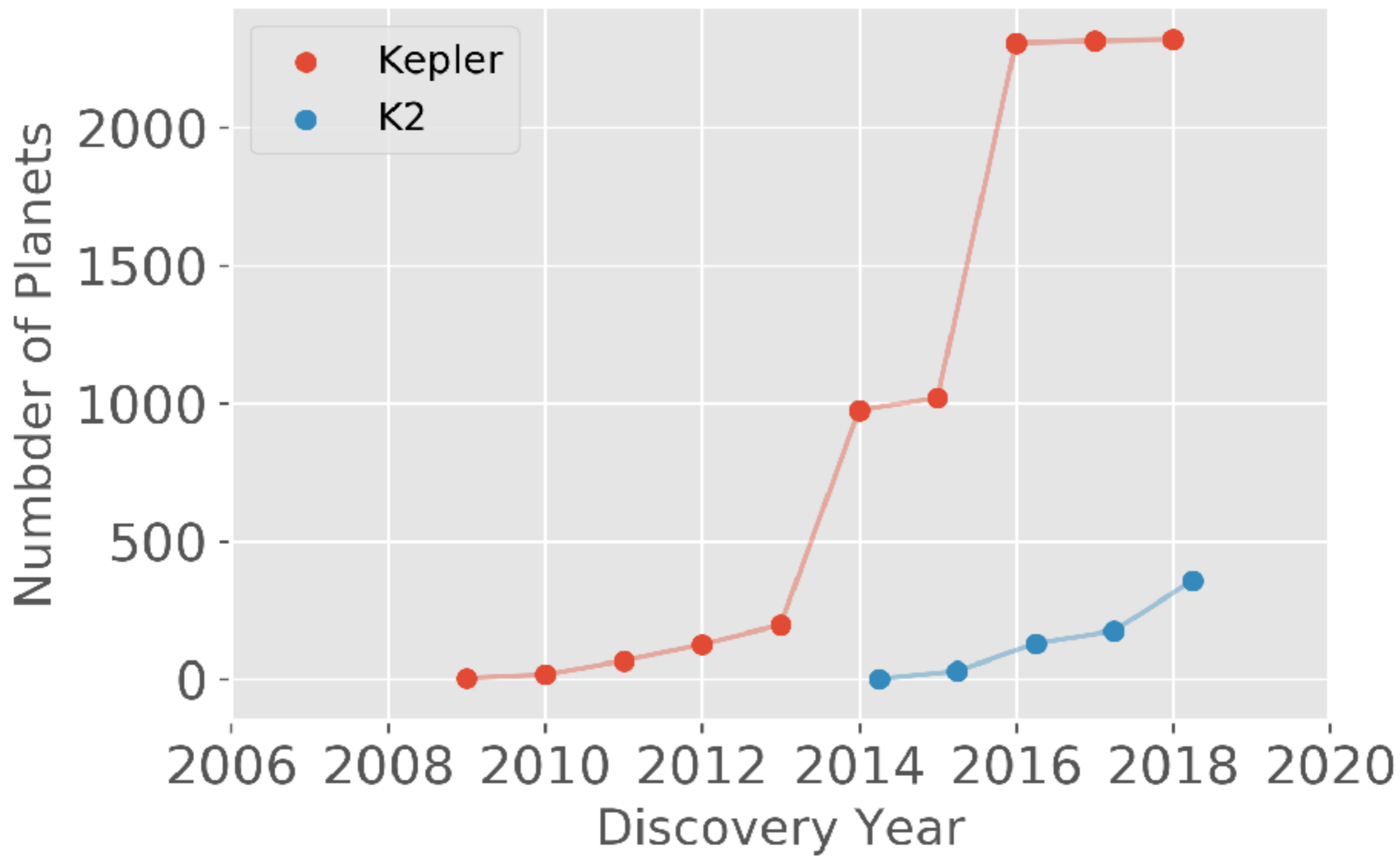
Are there any more planets in the Kepler / K2 dataset?

TL;DR : *Yes.*

Kepler will provide one of the best data set for **small** planets
around **sunlike** stars on **long period** orbits for decades to come

The Kepler planet catalog will be the most complete to understand **underlying populations**, which is vital for **future mission design**

Kepler **still continues to yield planets.**

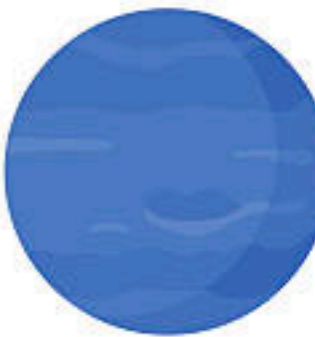




Why are there still planets left?
Where are the planets hiding?

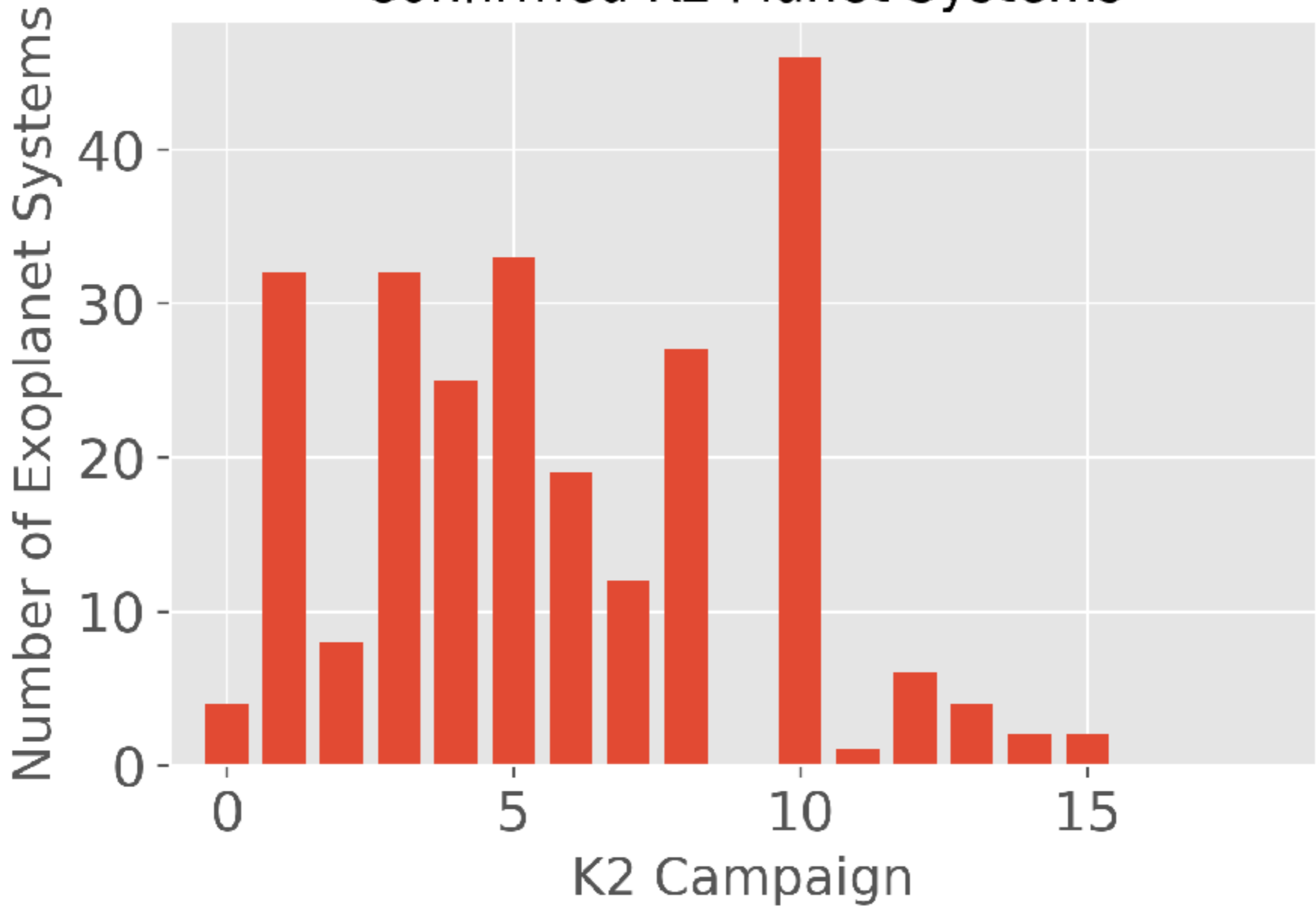
We need:

- Homogenous Search
- Improved Systematics Removal
- Non-Periodic Transit Hunting Methods

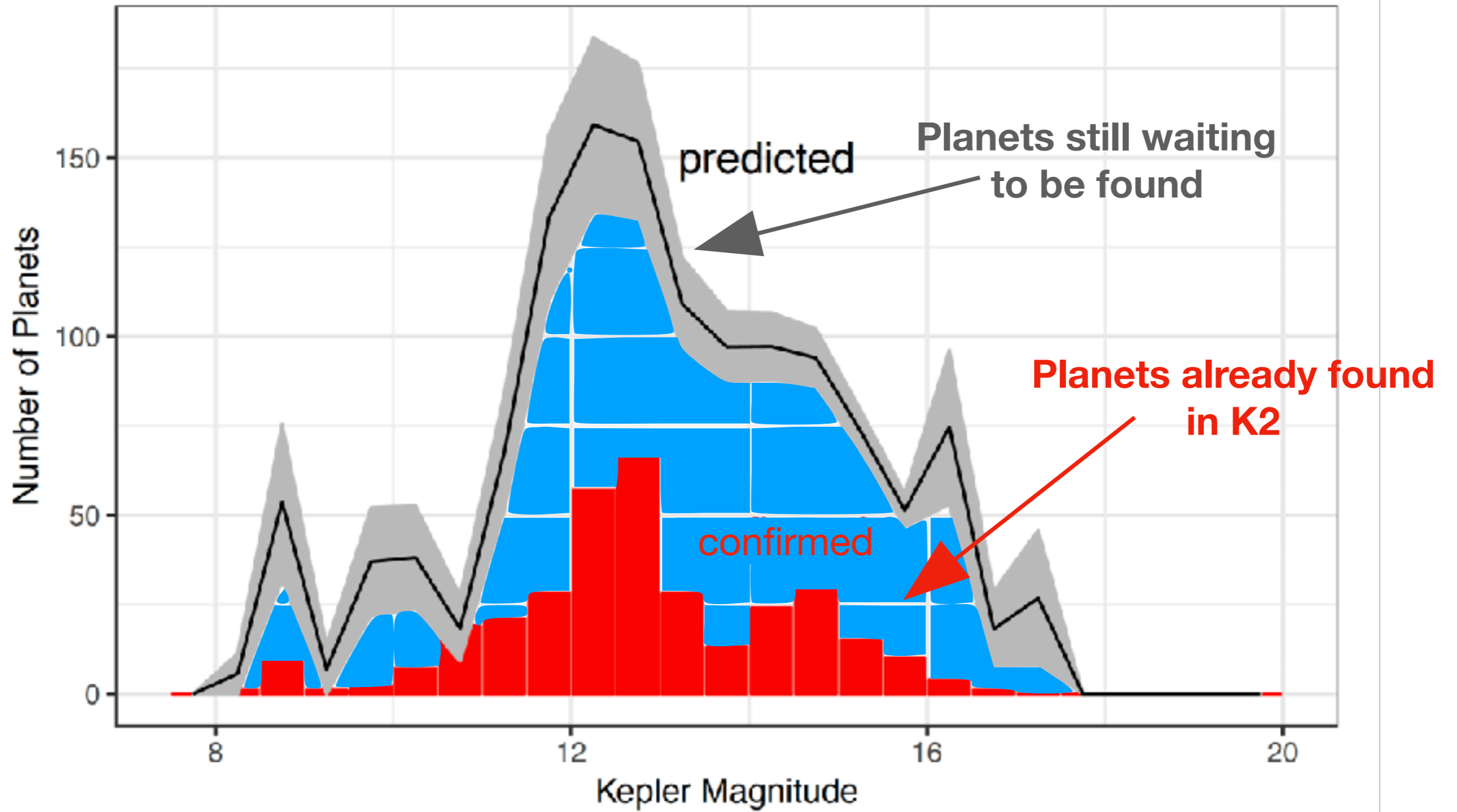


A homogenous search of the final K2 dataset
will provide more planets.

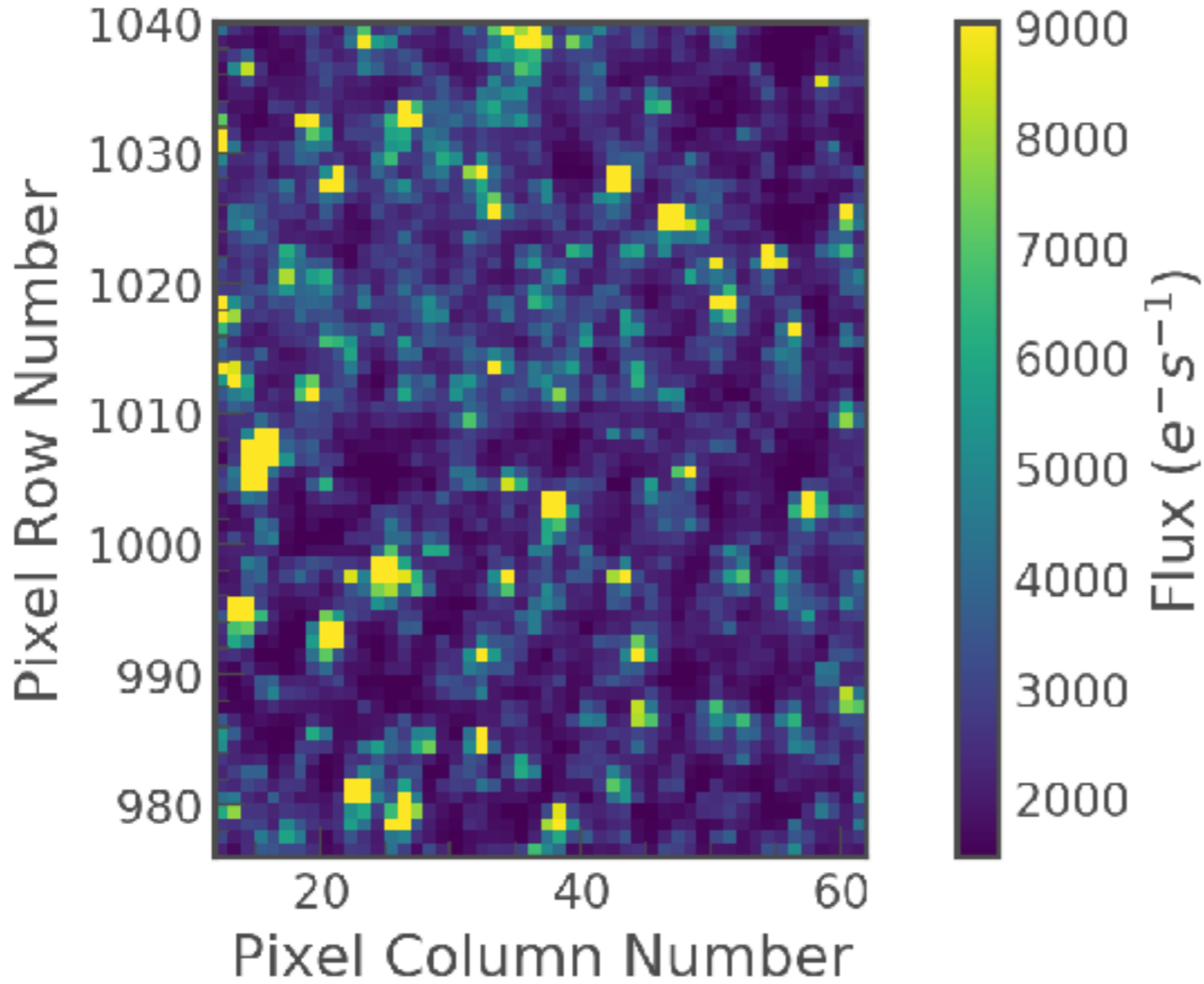
Confirmed K2 Planet Systems



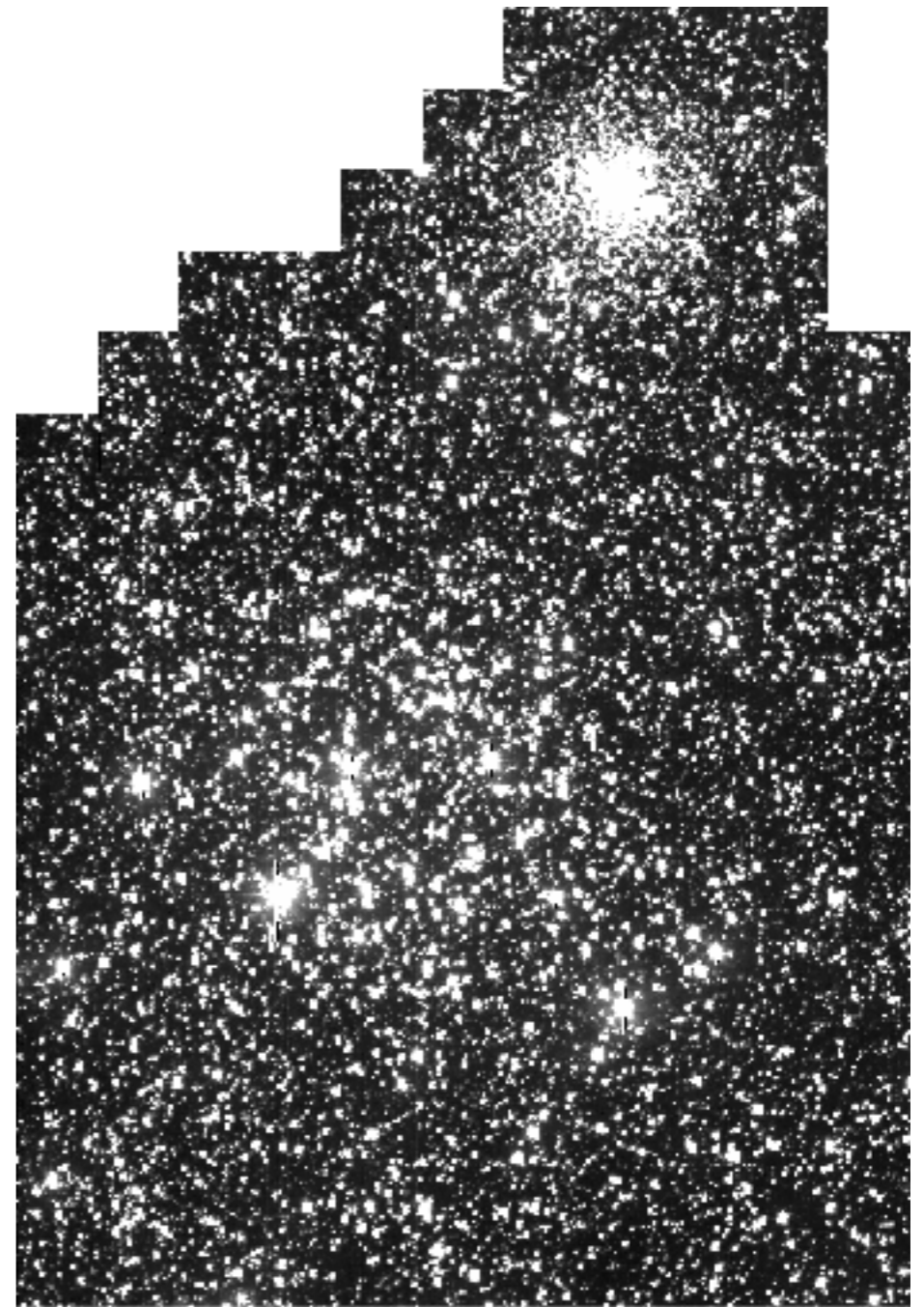
100's of planets waiting to be found!



Target ID: 200069415



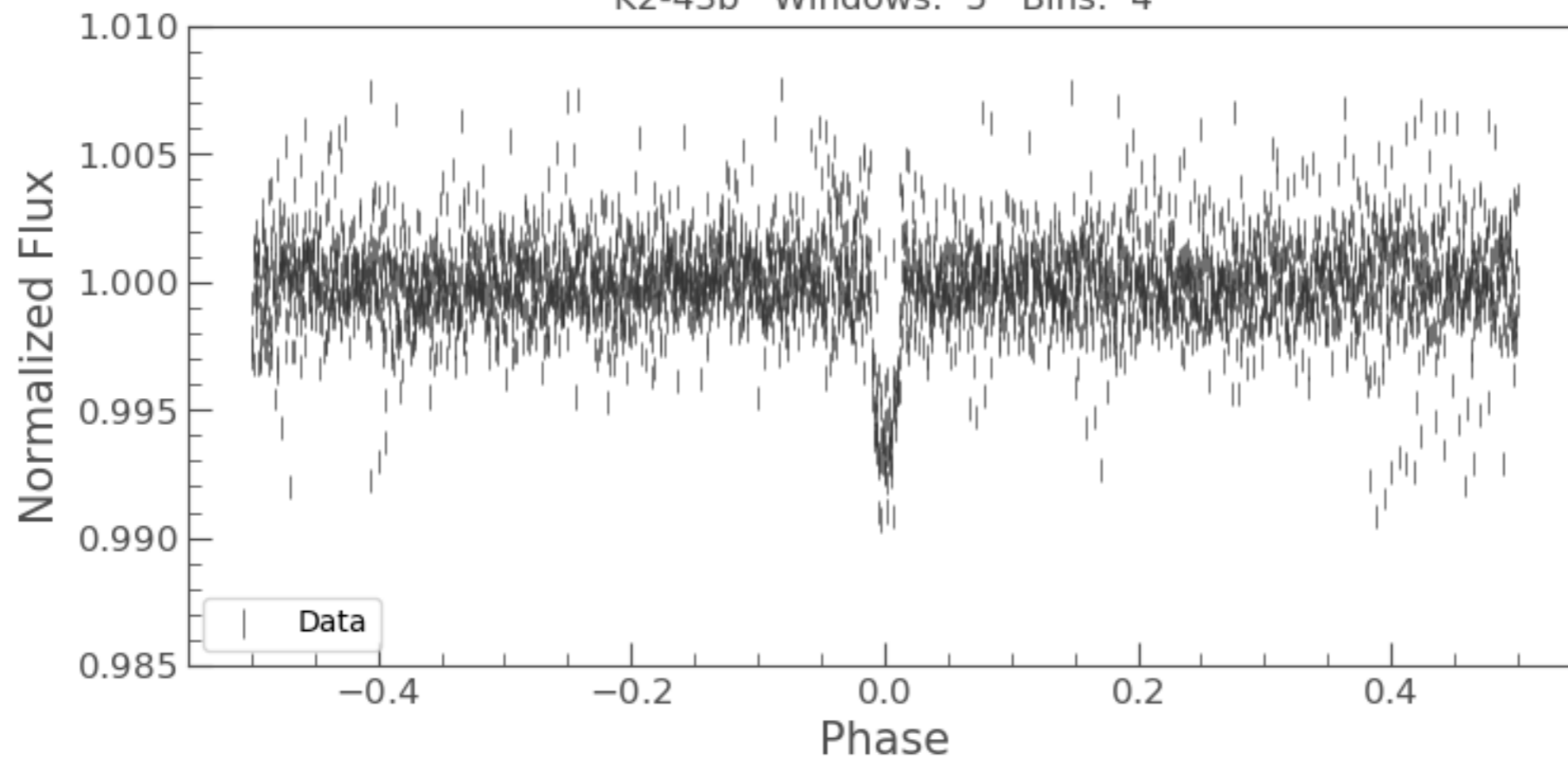
Campaign 9, Crowded TPF



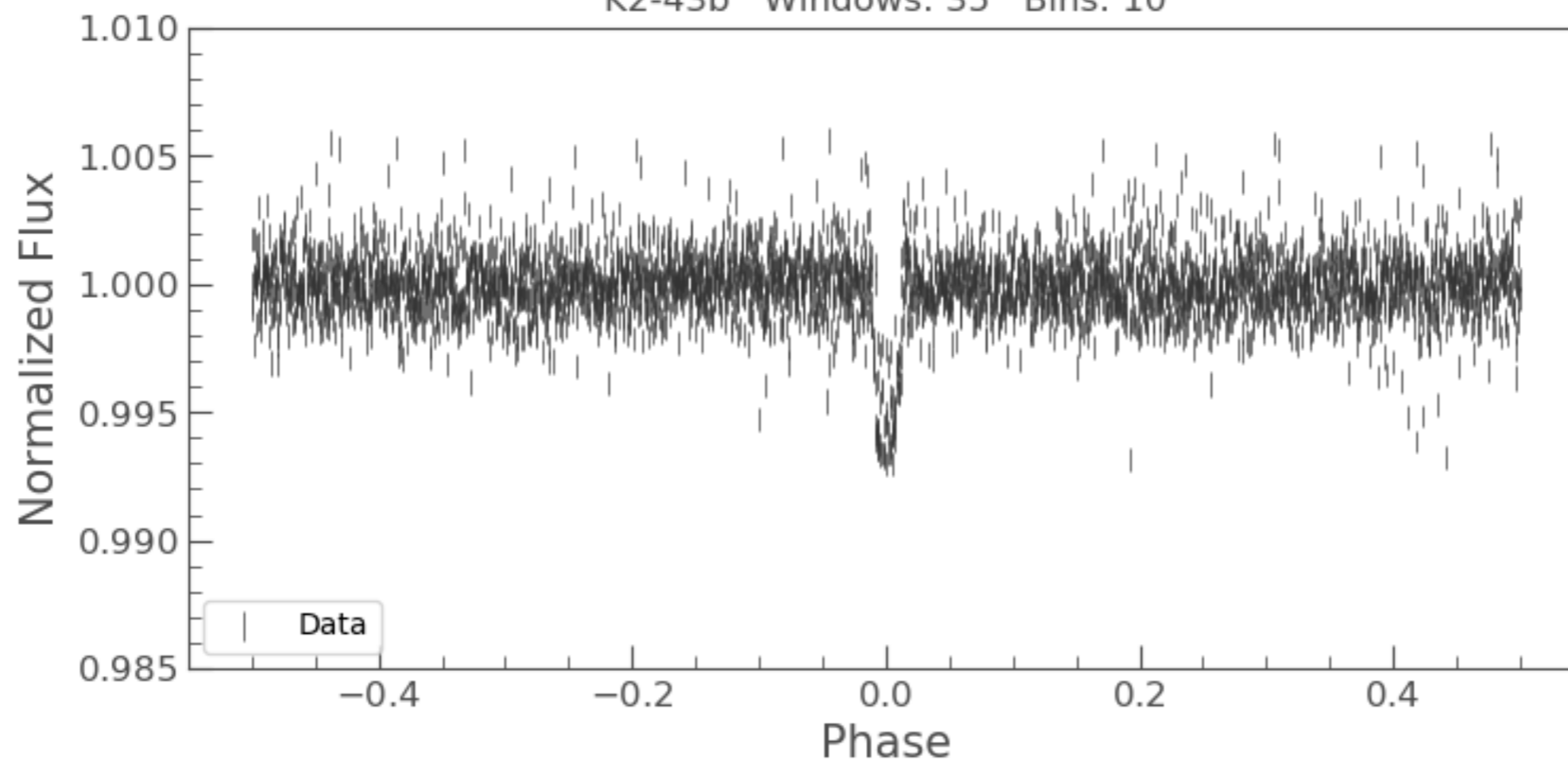
K2 SUPERSTAMP Cody 2019

Improved **systematics removal** will provide
more planets

K2-43b Windows: 5 Bins: 4



K2-43b Windows: 35 Bins: 10



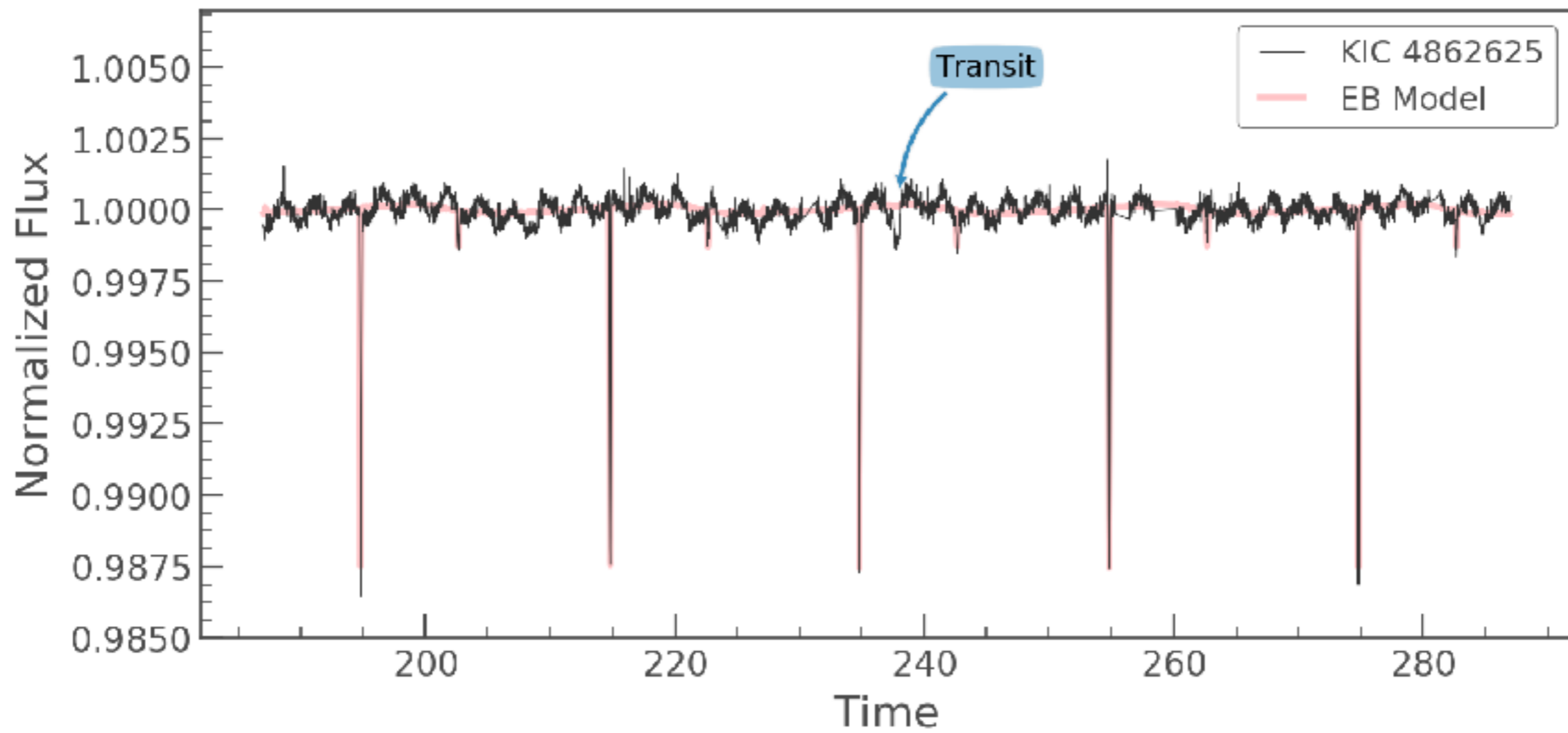
lightkurve

```
from astropy.stats import bls
```

exoplanet



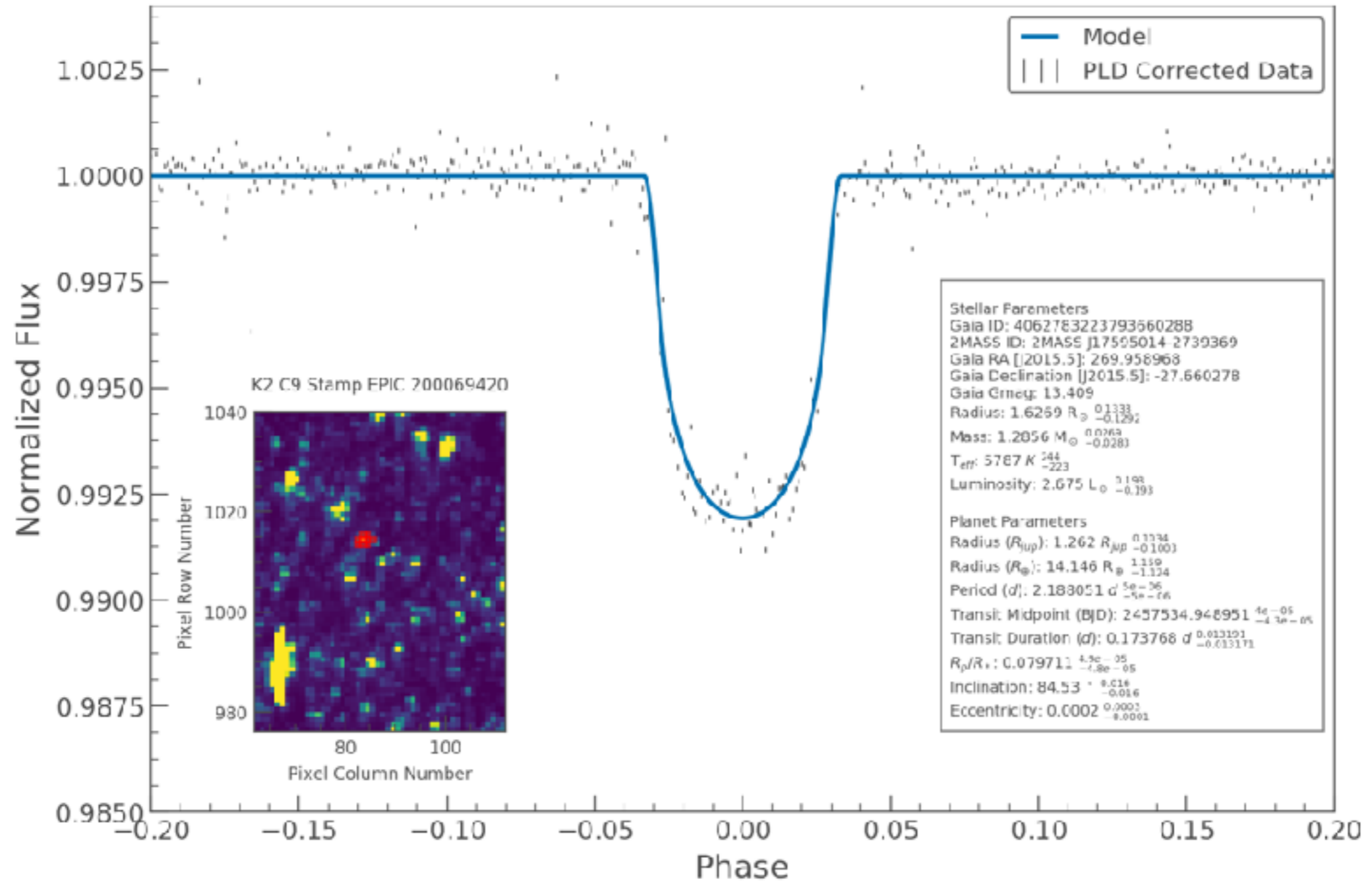
New **planet hunting** methods will help us to find
new, more complex systems



Identified in (Schwamb et al 2013)
Planet Hunters: A Transiting Circumbinary Planet in a Quadruple Star System

But are there **really** any more planets?

2MASS J17595014-2739369b



Planet Candidate in C9 (Hedges et al. 2019)

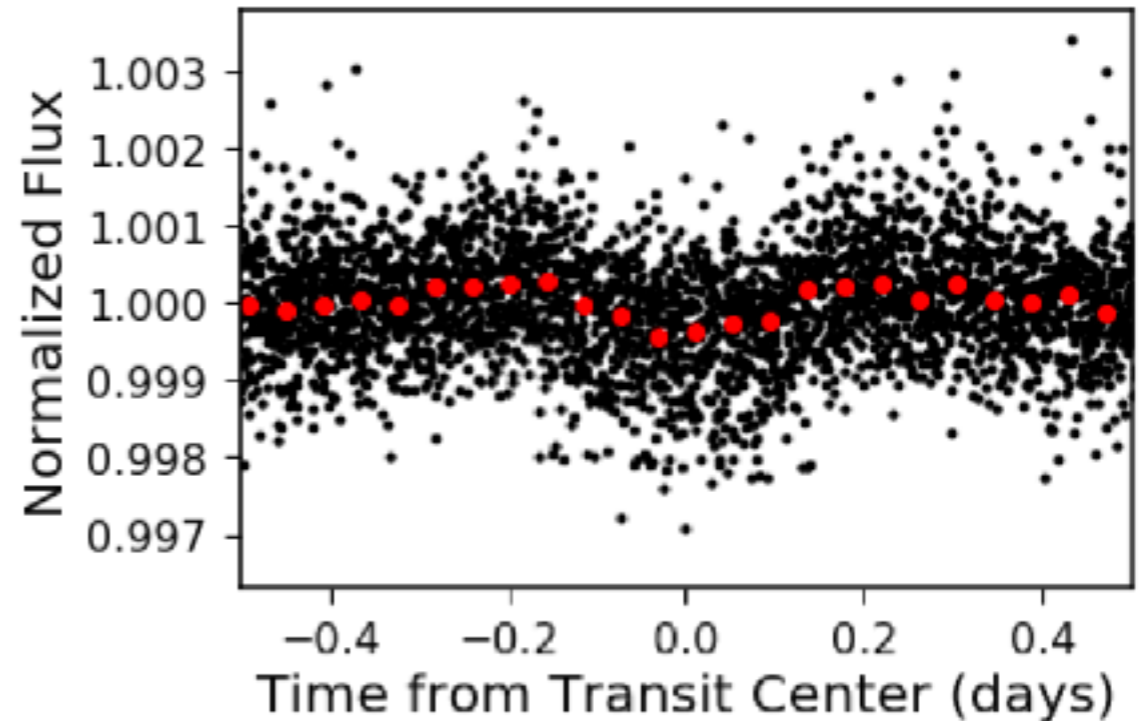
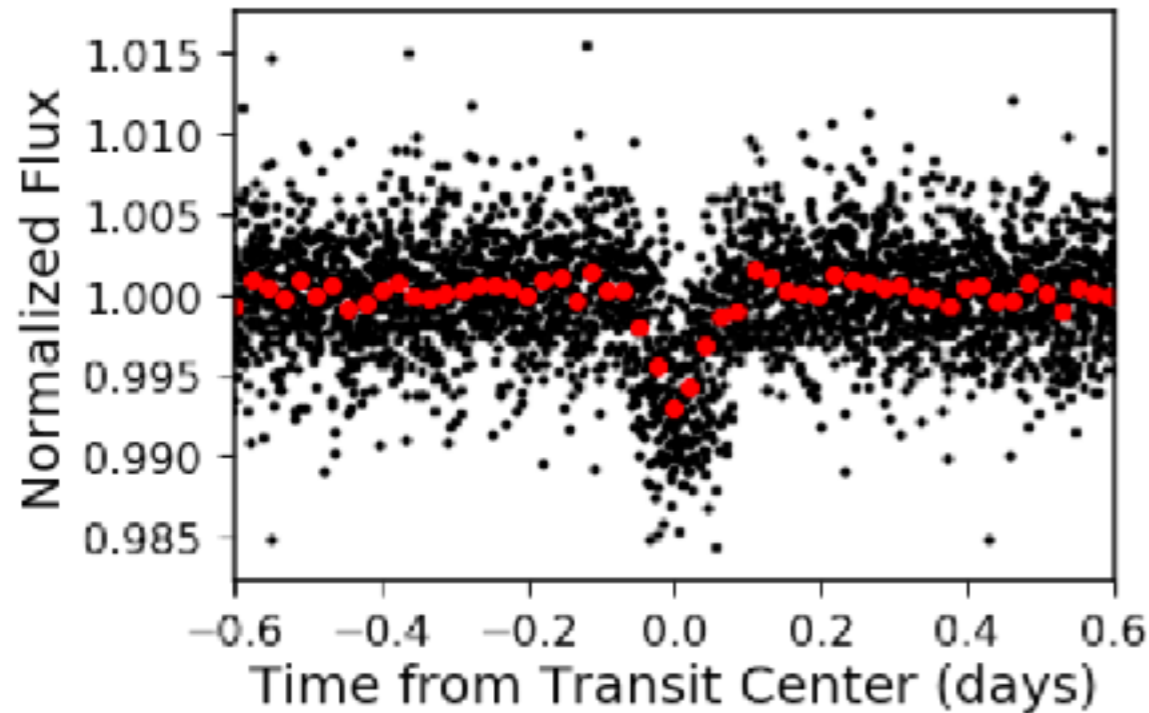
Transiting Planet Candidates in NGC 6791

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