

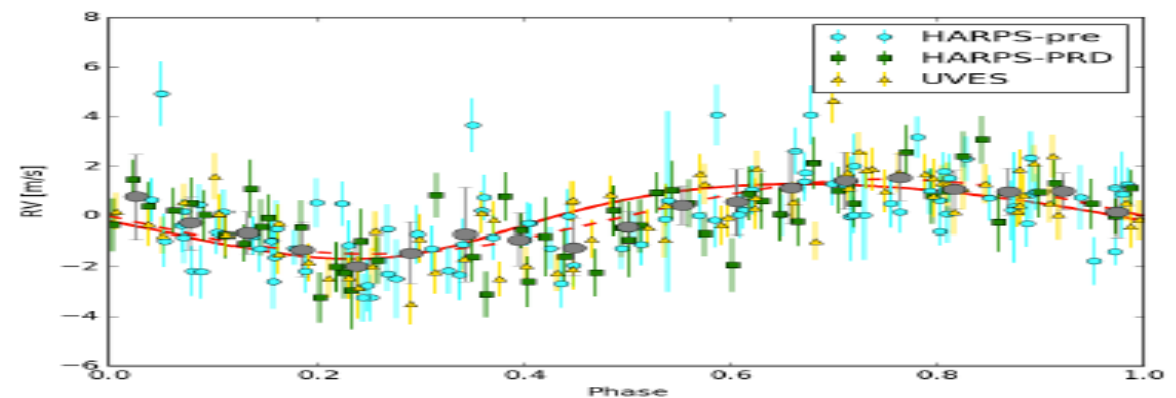
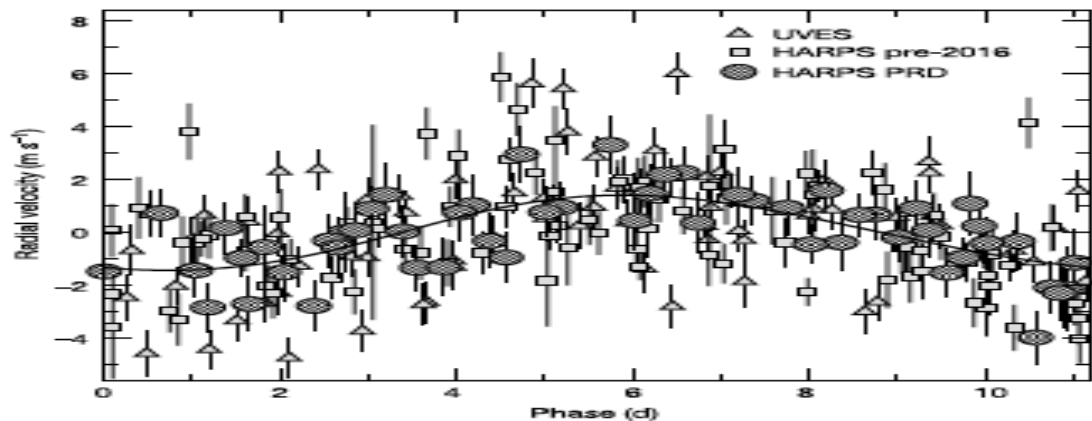
A Multi-Year Transit Search for Proxima Centauri b

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Quick Summary of Proxima Centauri b

- Anglada-Escude et al 2016 (left) released a RV detection paper of ProxCen b:
 - a) $1.3 M_{\text{Earth}}$
 - b) 11.186 day orbital period

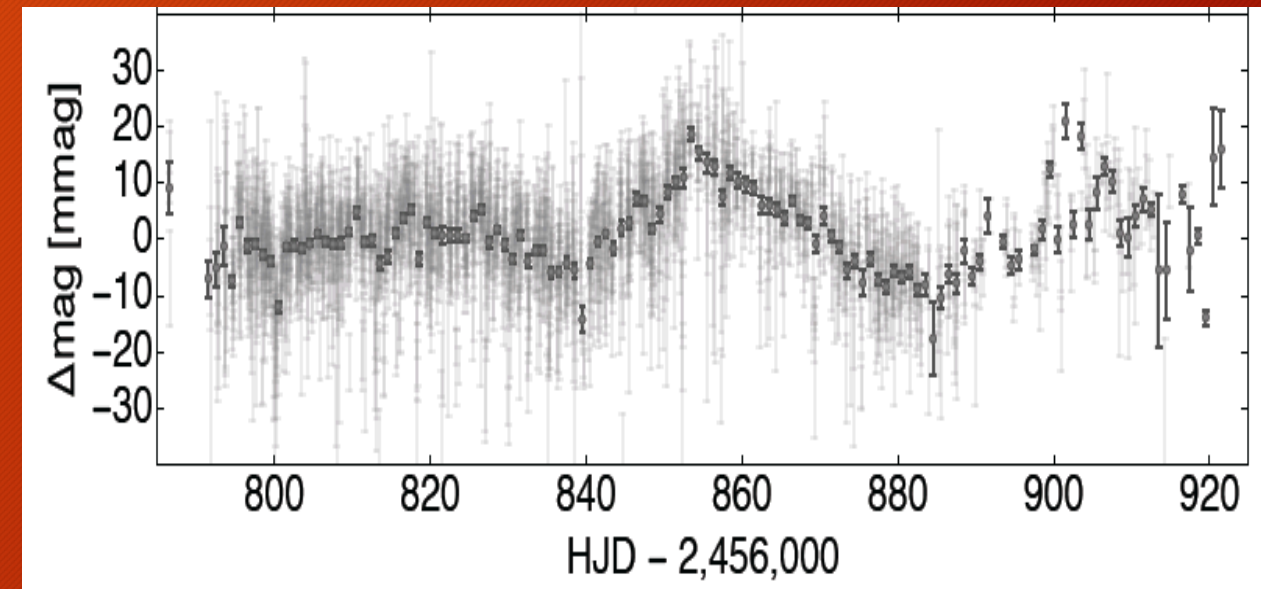
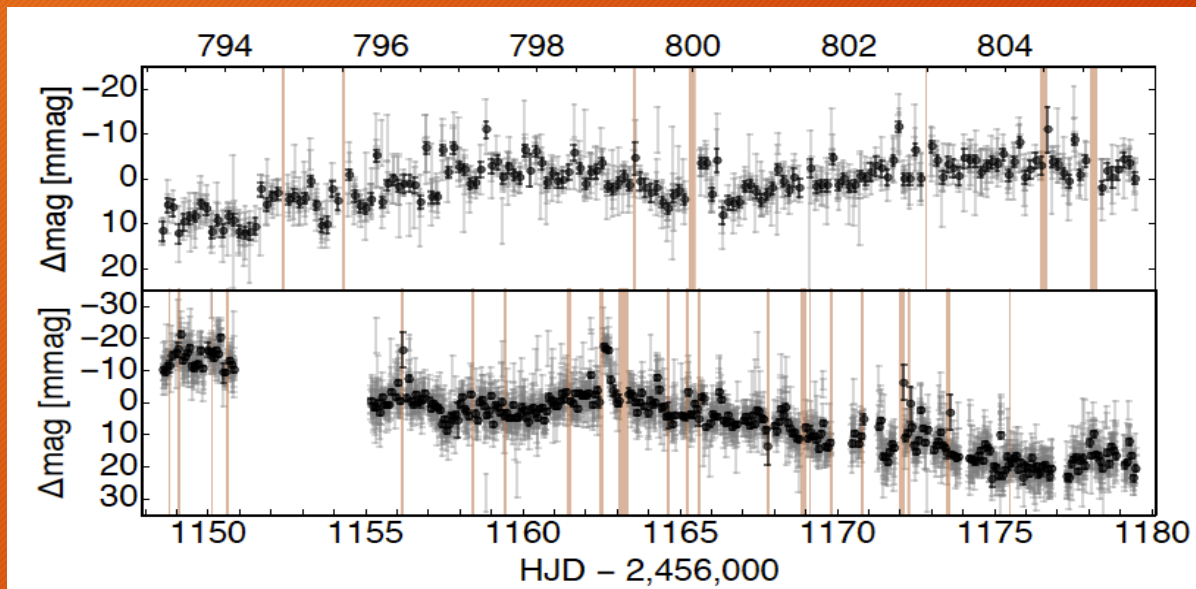


- Damasso et al 2017 (right) did a follow up RV analysis of ProxCen b:
 - $1.21 M_{\text{Earth}}$
 - 11.1855 day orbital period

Initial Transit Survey of ProxCen b

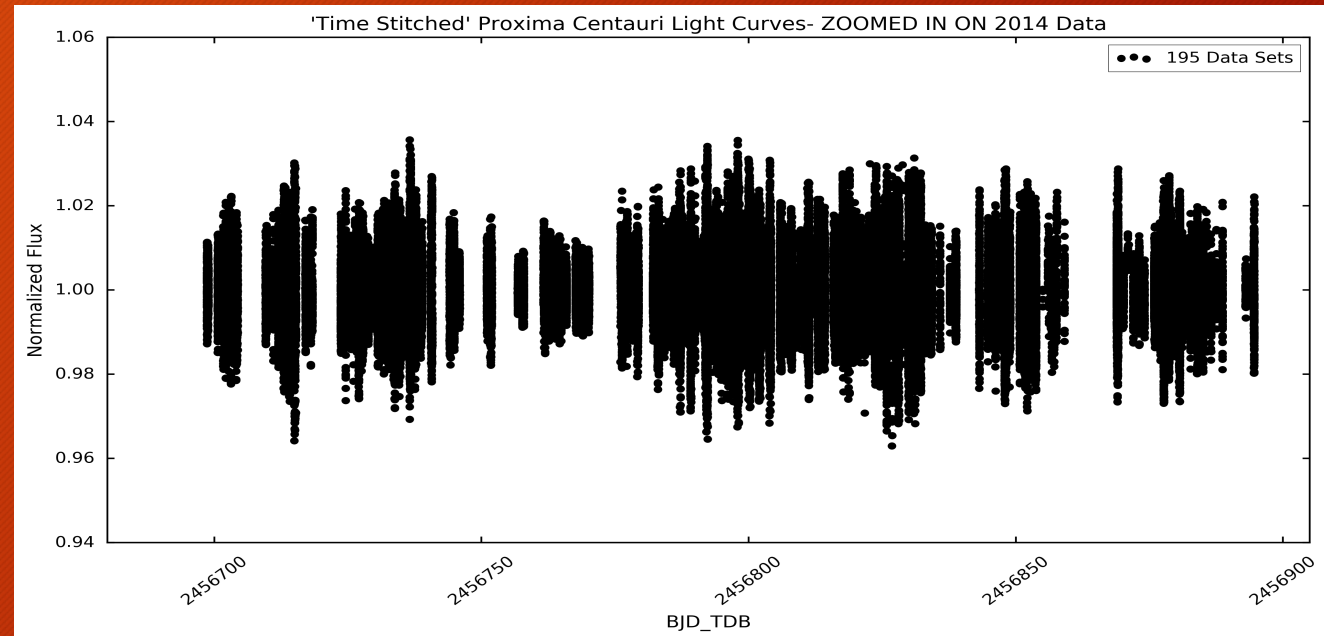
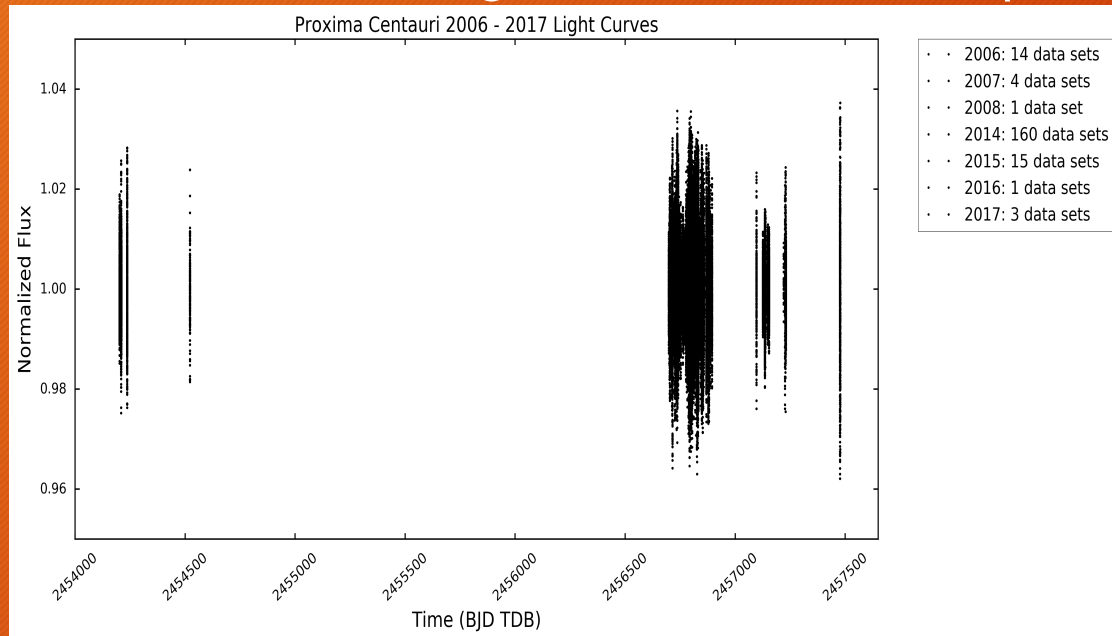
- Kipping et al 2016 used the MOST Space Telescope(left) and HAT-South ground telescope(right) to observe Proxima Centauri.
 - Concluded that there is no significant evidence of a transiting planet around Proxima Centauri.

2014 (top), 2015(bottom) Light Curves, ~ 44 days of observations HAT-South Ground Telescope 2014 Light Curve



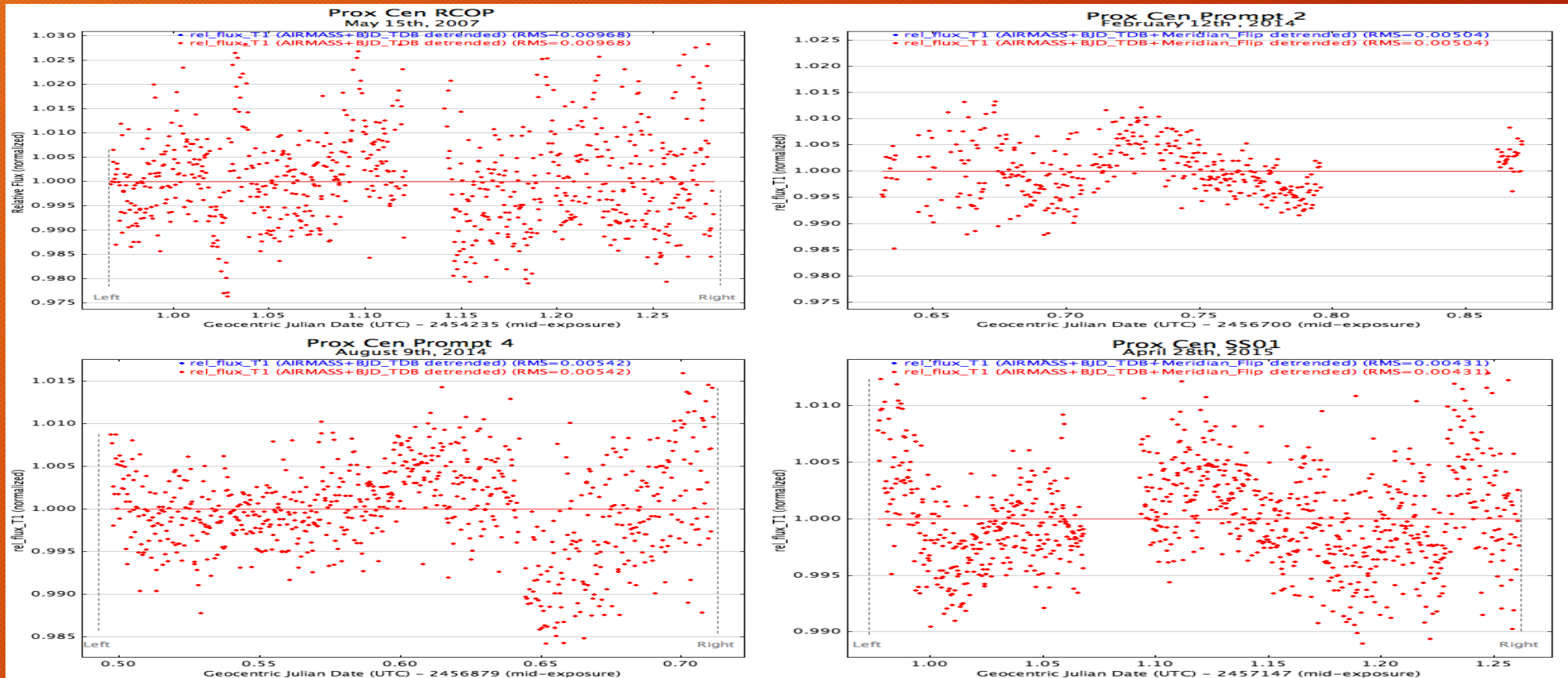
Where do we come in?

- Using SKYNET and KELT-FUN data spanning from 2006-2008, 2014-2017 we have ~ 230 nights of time series photometric observations of Proxima Centauri.
- We have combined our datasets and are in the process of running the BLS VARTOOLS algorithm to search for periodic events

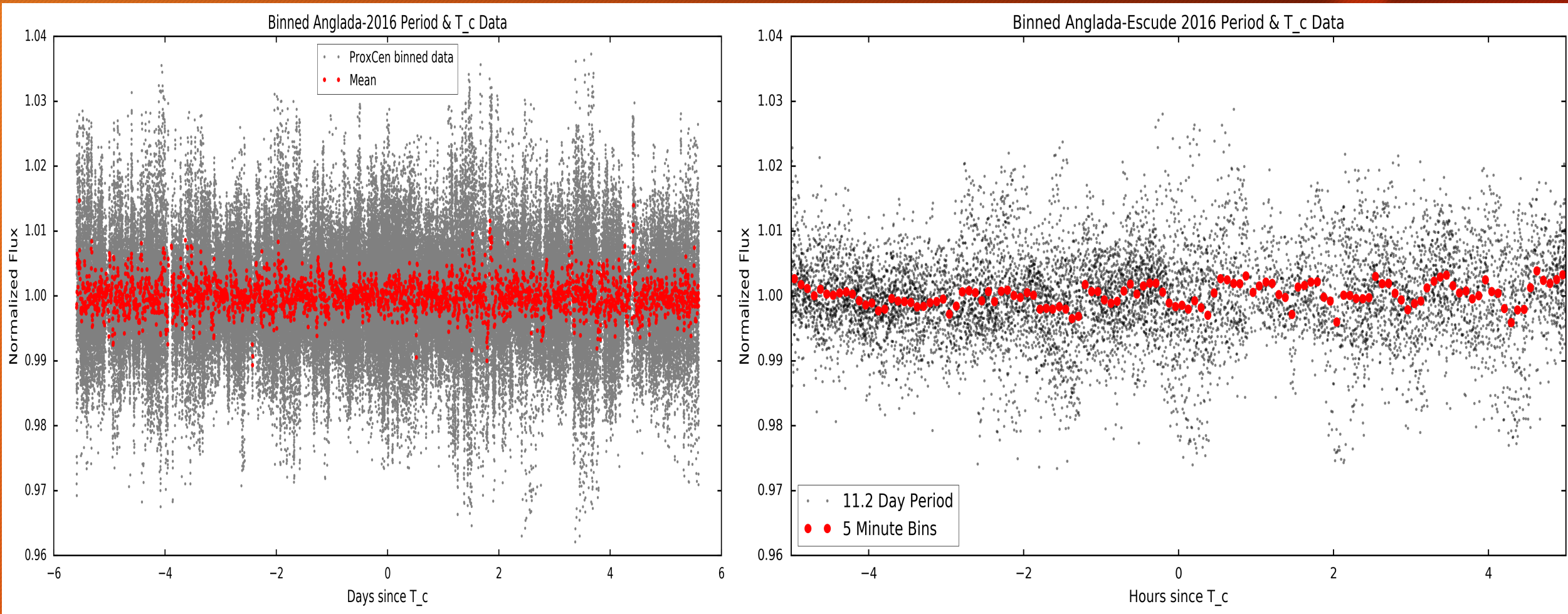


Some Example Light Curves

- Expected Transit Duration: ~ 1 to 2 hours
- Expected Transit Depth: 5 to 10 mmag



Phase Folding Around Anglada-Escude period



Preliminary BLS Search: 1-30 days

