

# KIC 007304393

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007304393-01	OBS	No	2.051528	132.066801	22.1	8.243	8.4	8.0	1.43	6470	0.80	2843.84

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007304393-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

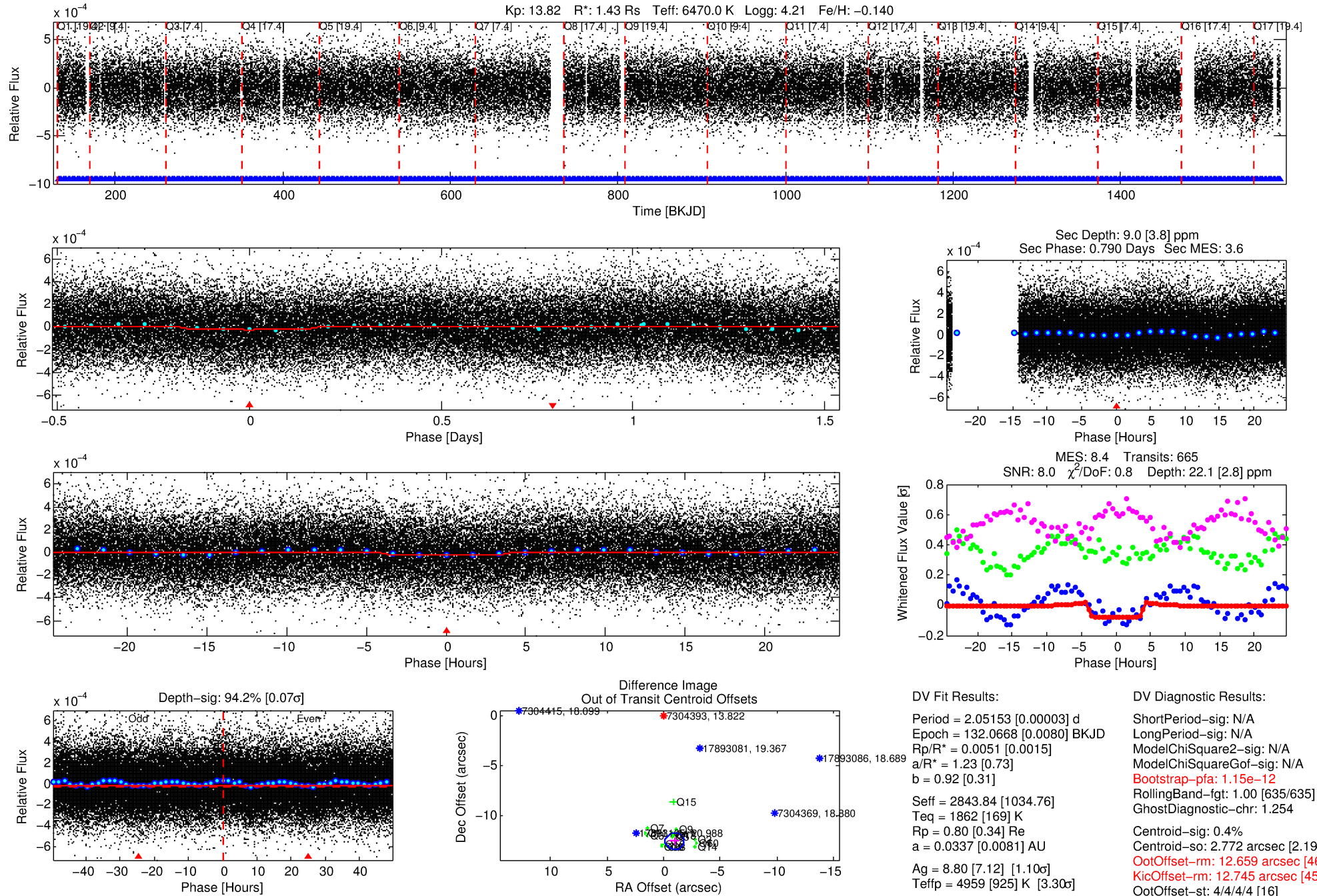
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007304393-01

No Significant Match Found

# DV One-Page Summary

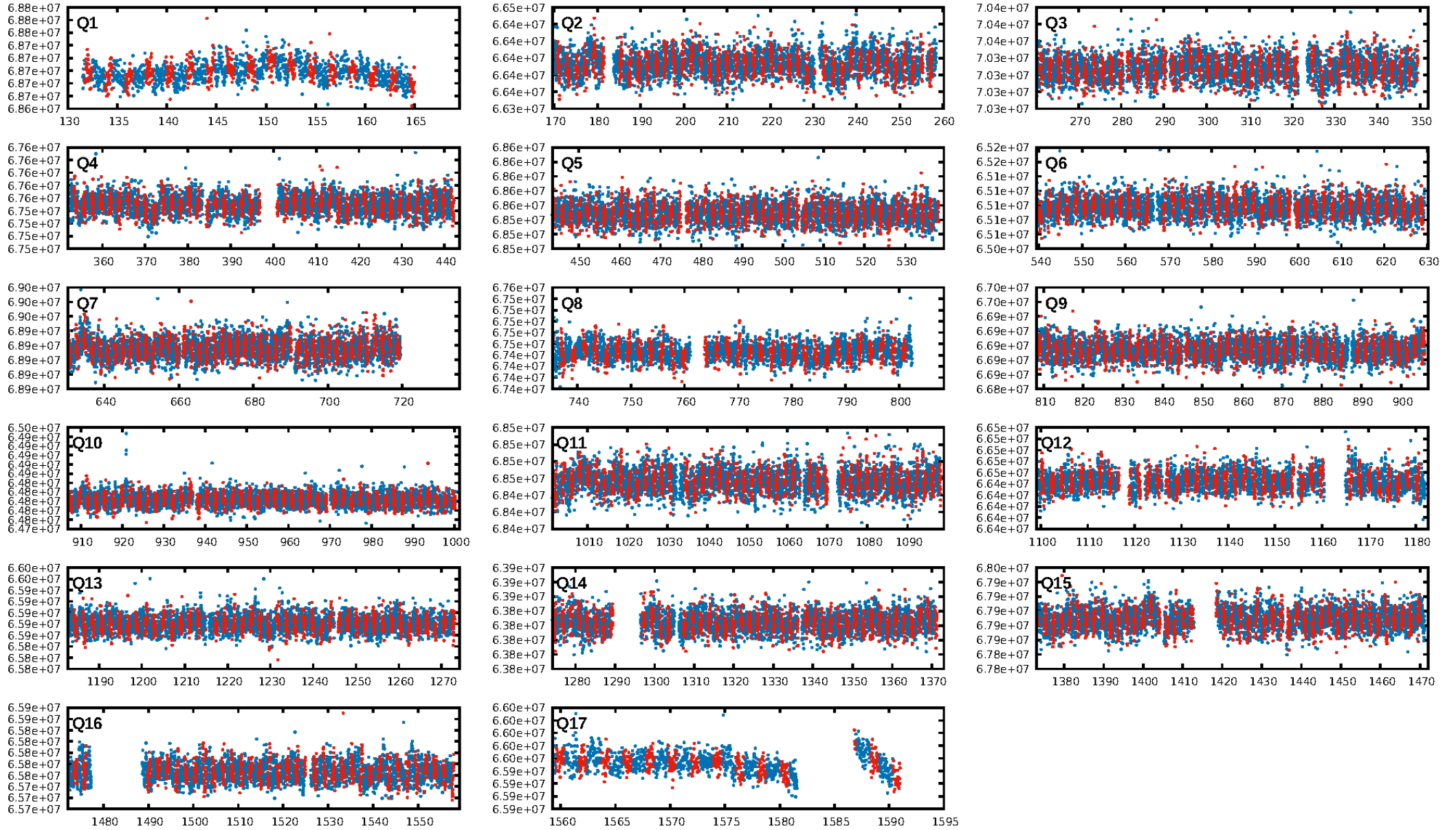
KIC: 7304393 Candidate: 1 of 1 Period: 2.052 d



Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:57:03 Z

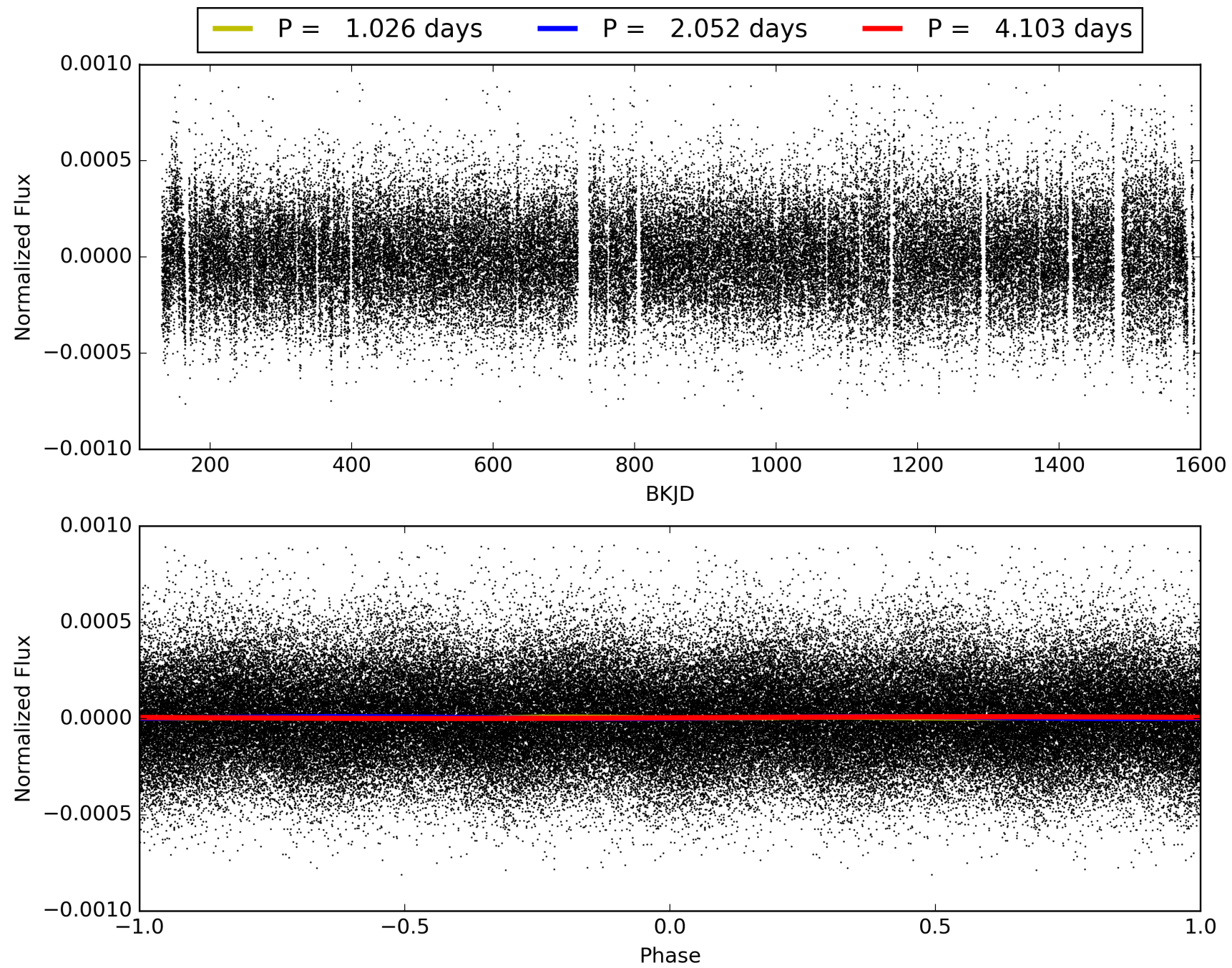
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007304393-01, PDC Light Curves



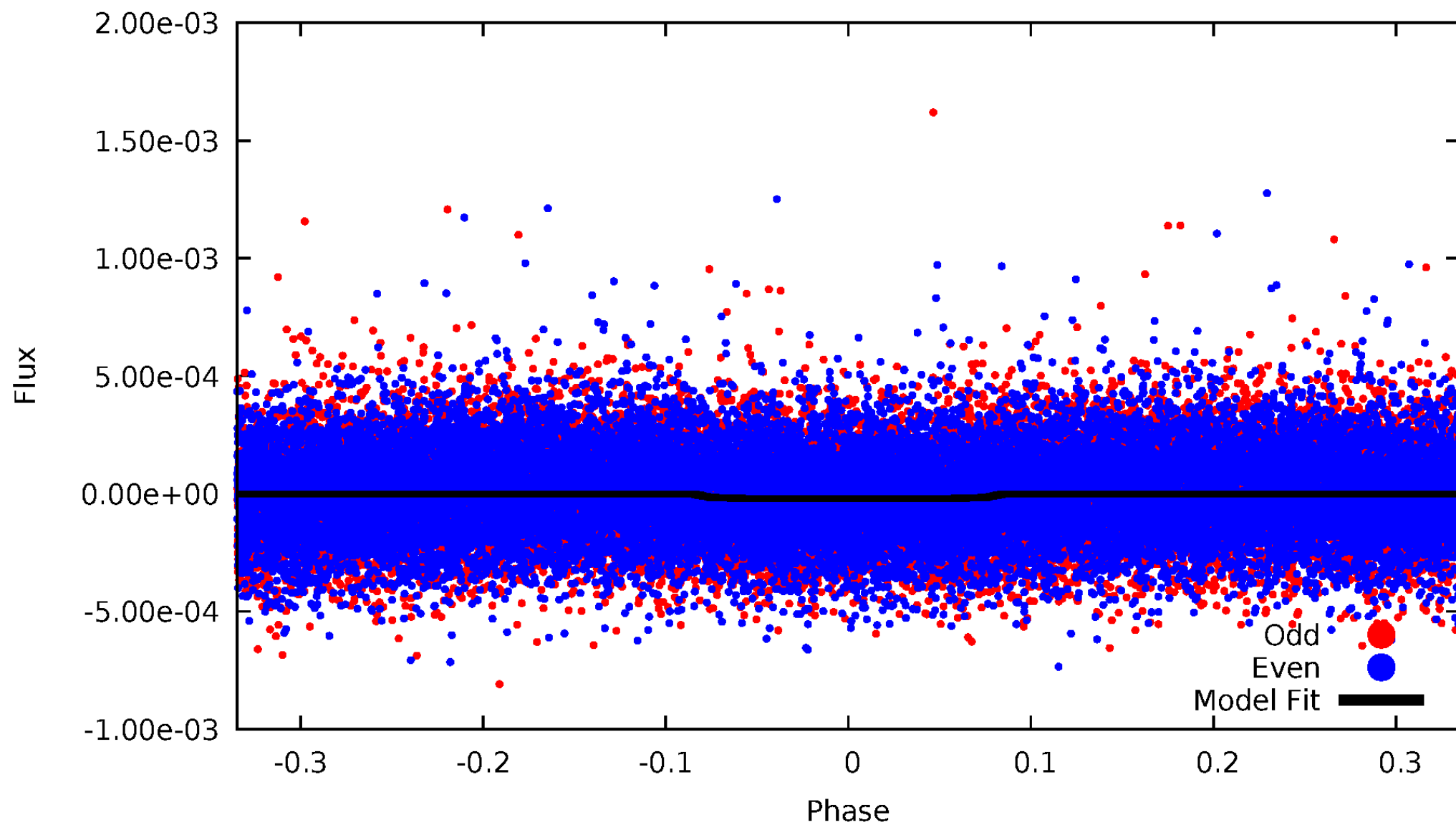


TCE 007304393-01



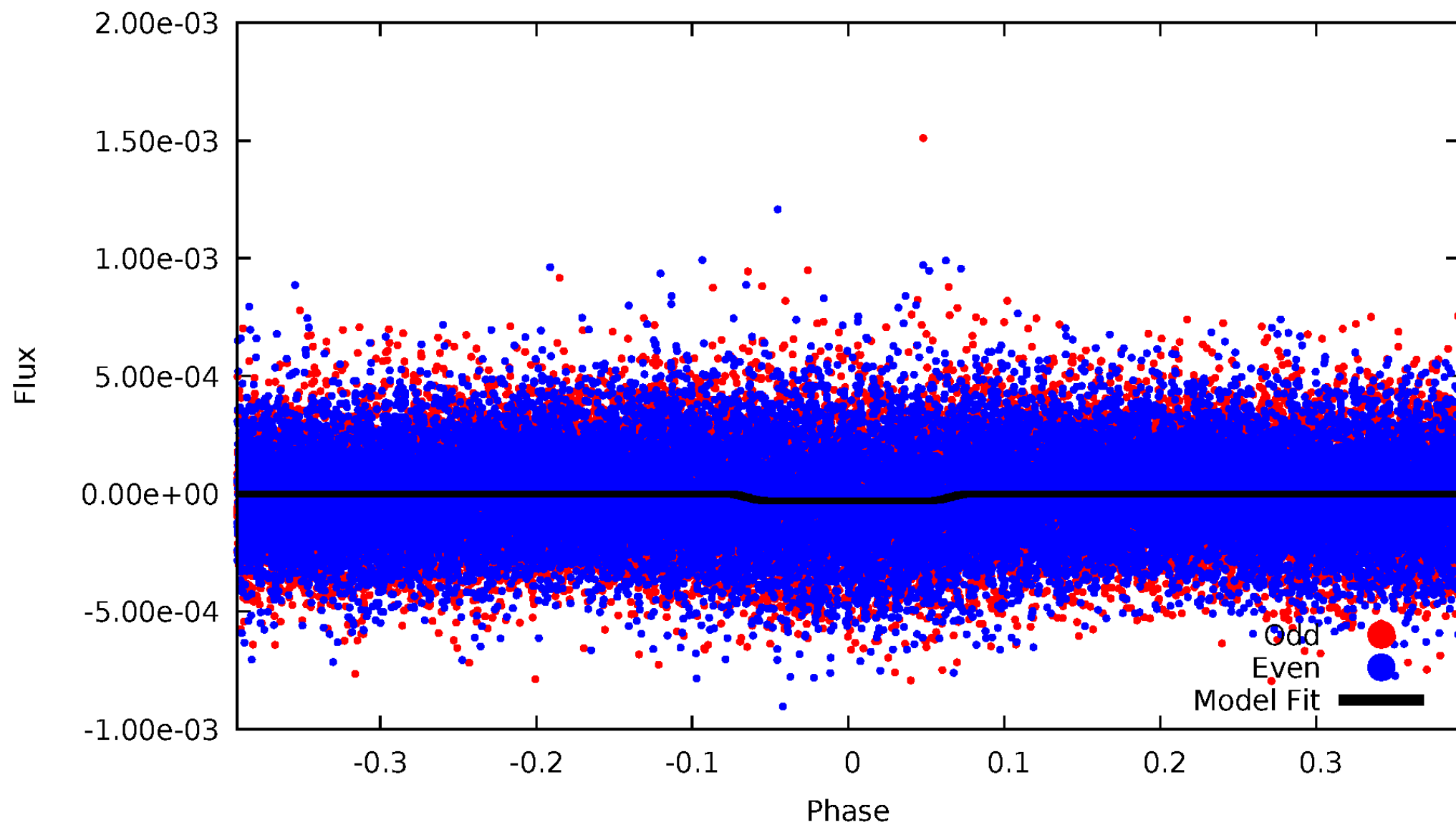
# DV Odd/Even

TCE 007304393-01

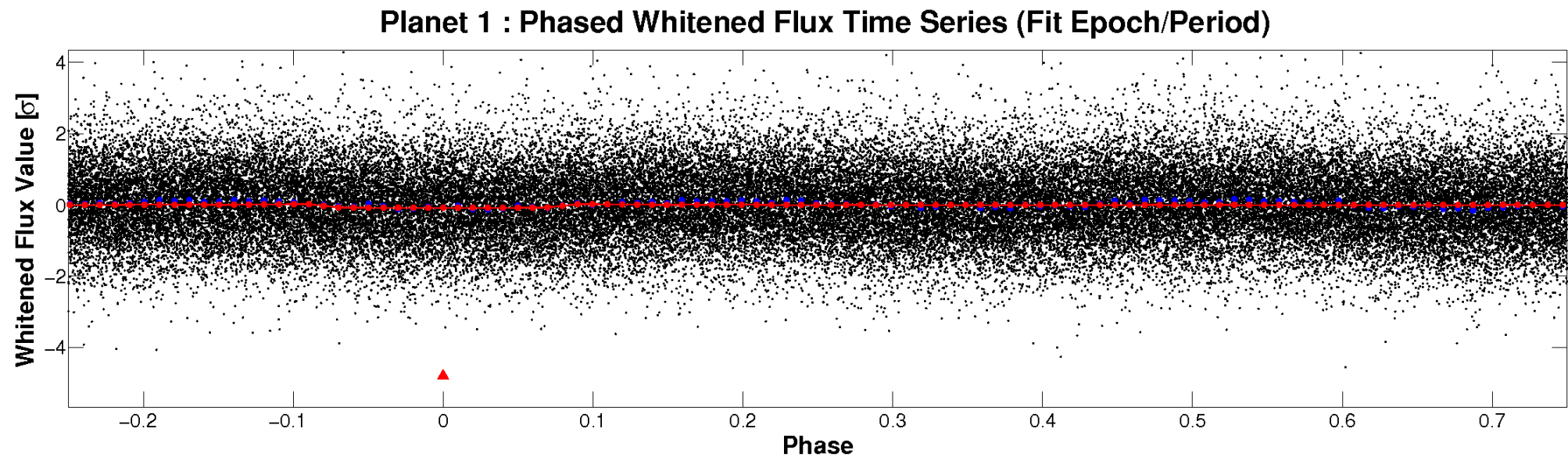
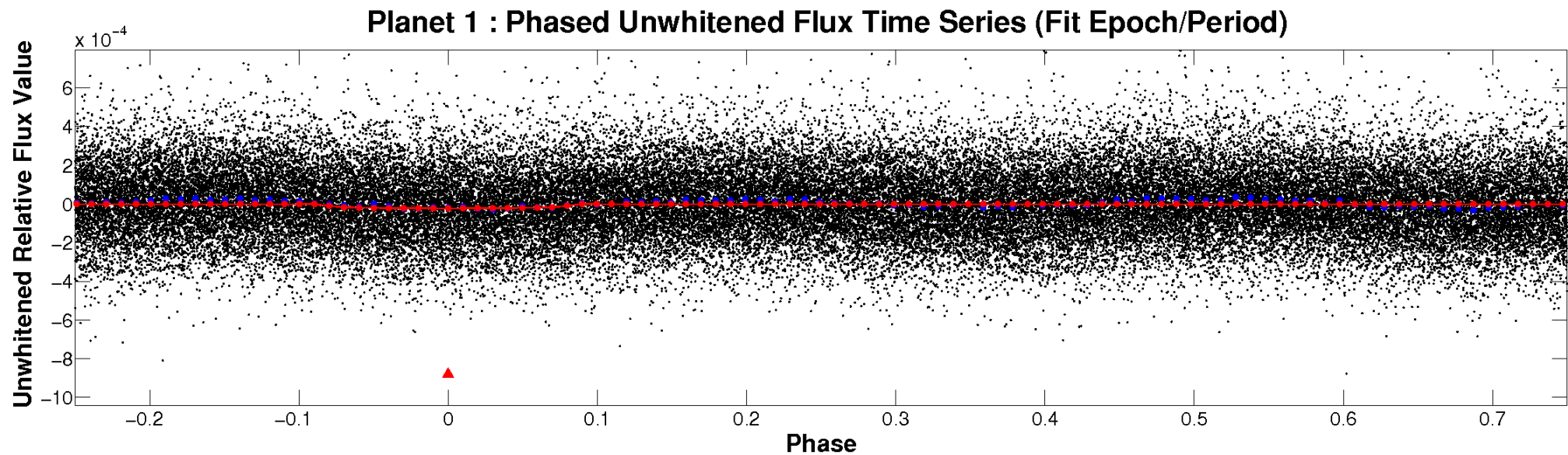


# ALT Odd/Even

TCE 007304393-01



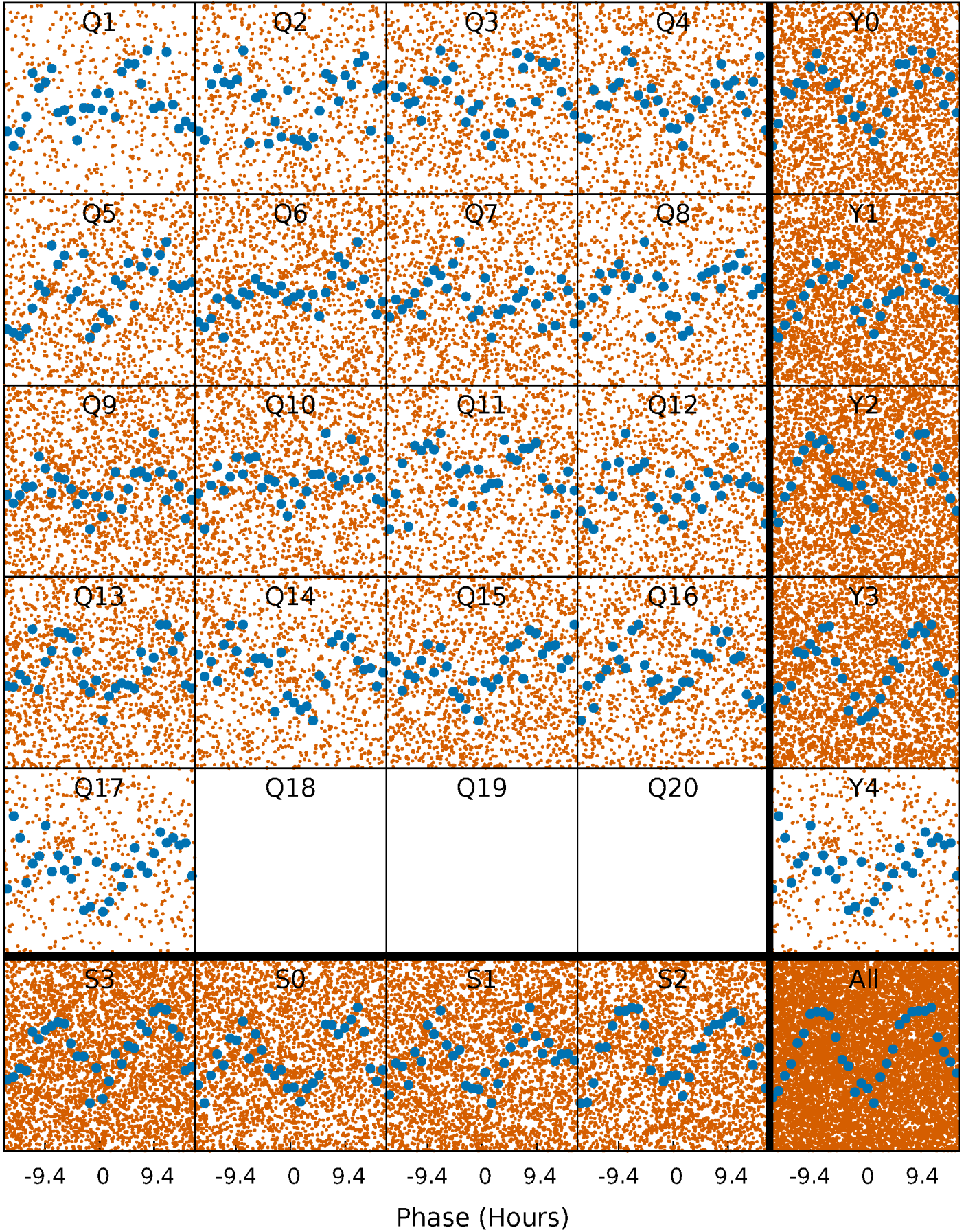
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

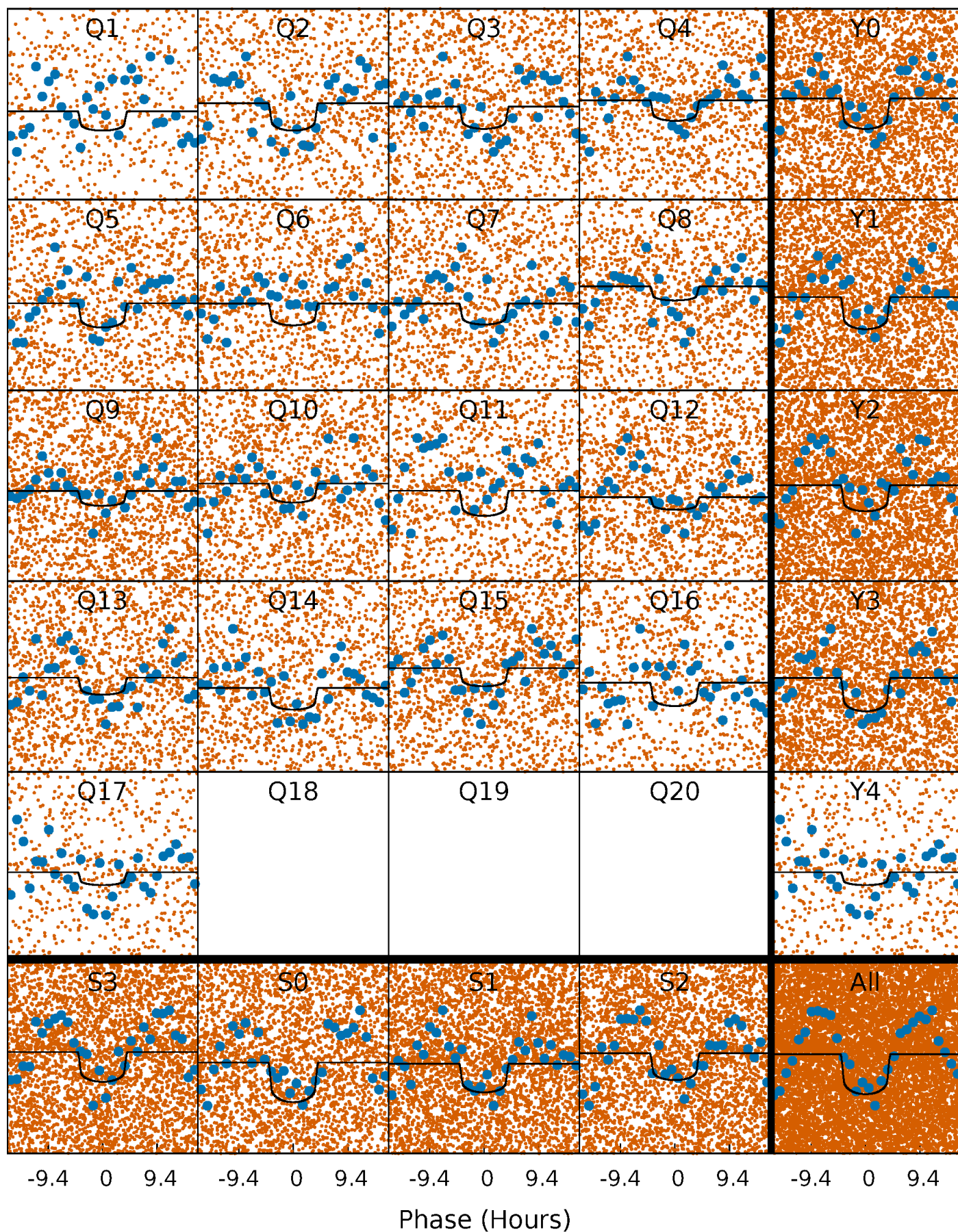
TCE 007304393-01 P= 2.051528 Days  $T_0=132.066801$  (BKJD)





# DV Quarter-Phased Transit Curves

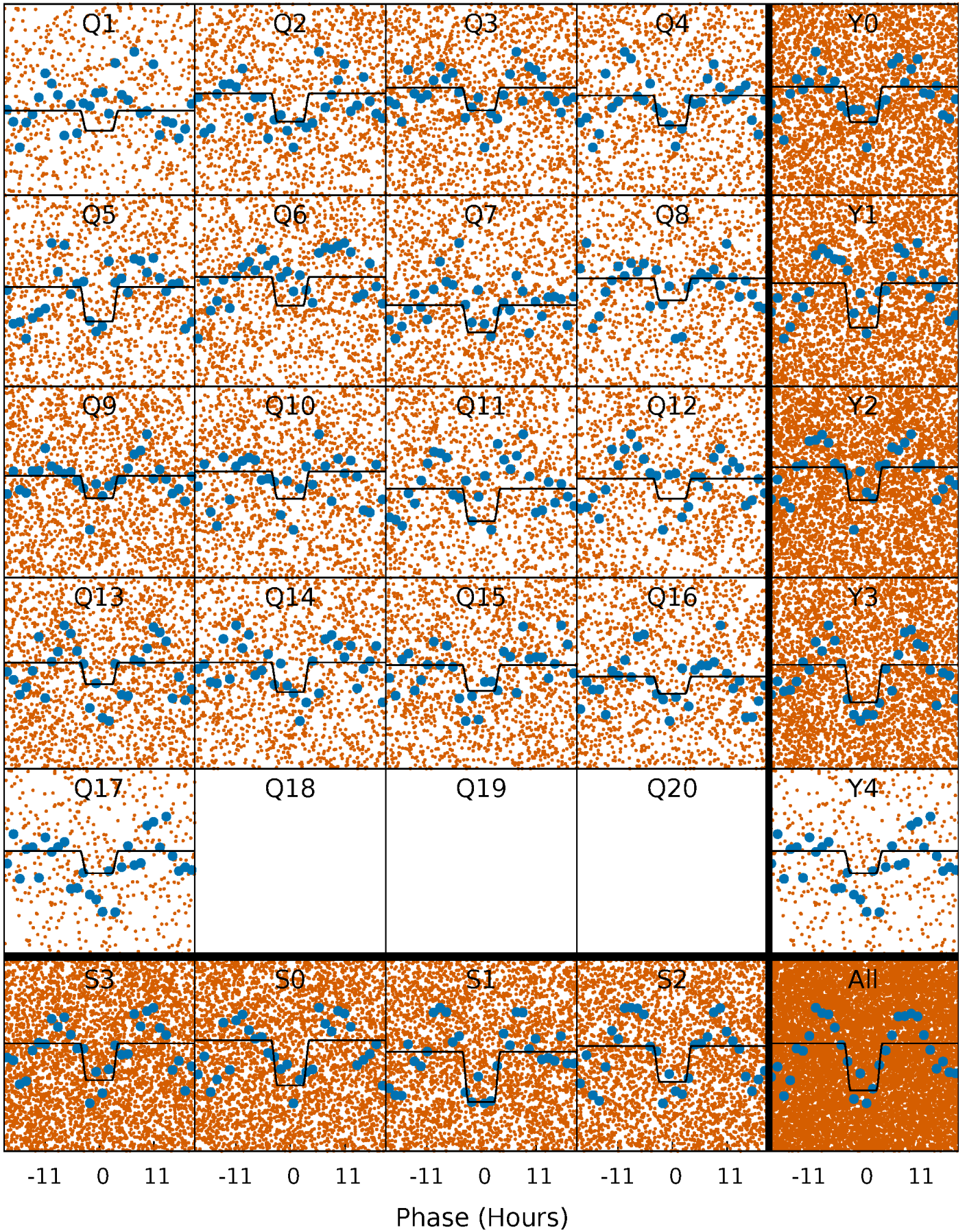
TCE 007304393-01 P= 2.051528 Days  $T_0=132.066801$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

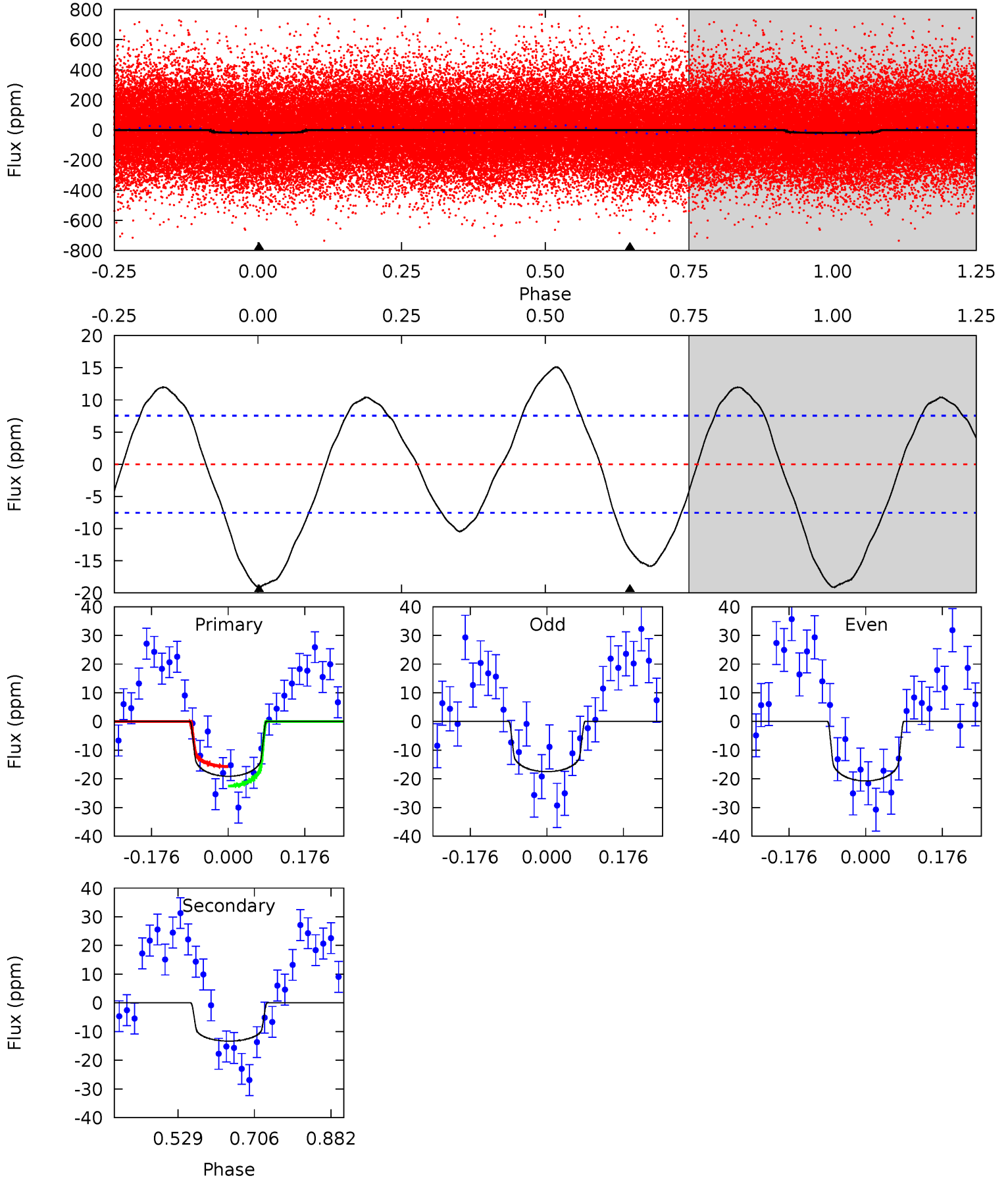
TCE 007304393-01 P= 2.051470 Days  $T_0=132.103886$  (BKJD)



# DV Model-Shift Uniqueness Test

007304393-01, P = 2.051528 Days, E = 130.015273 Days

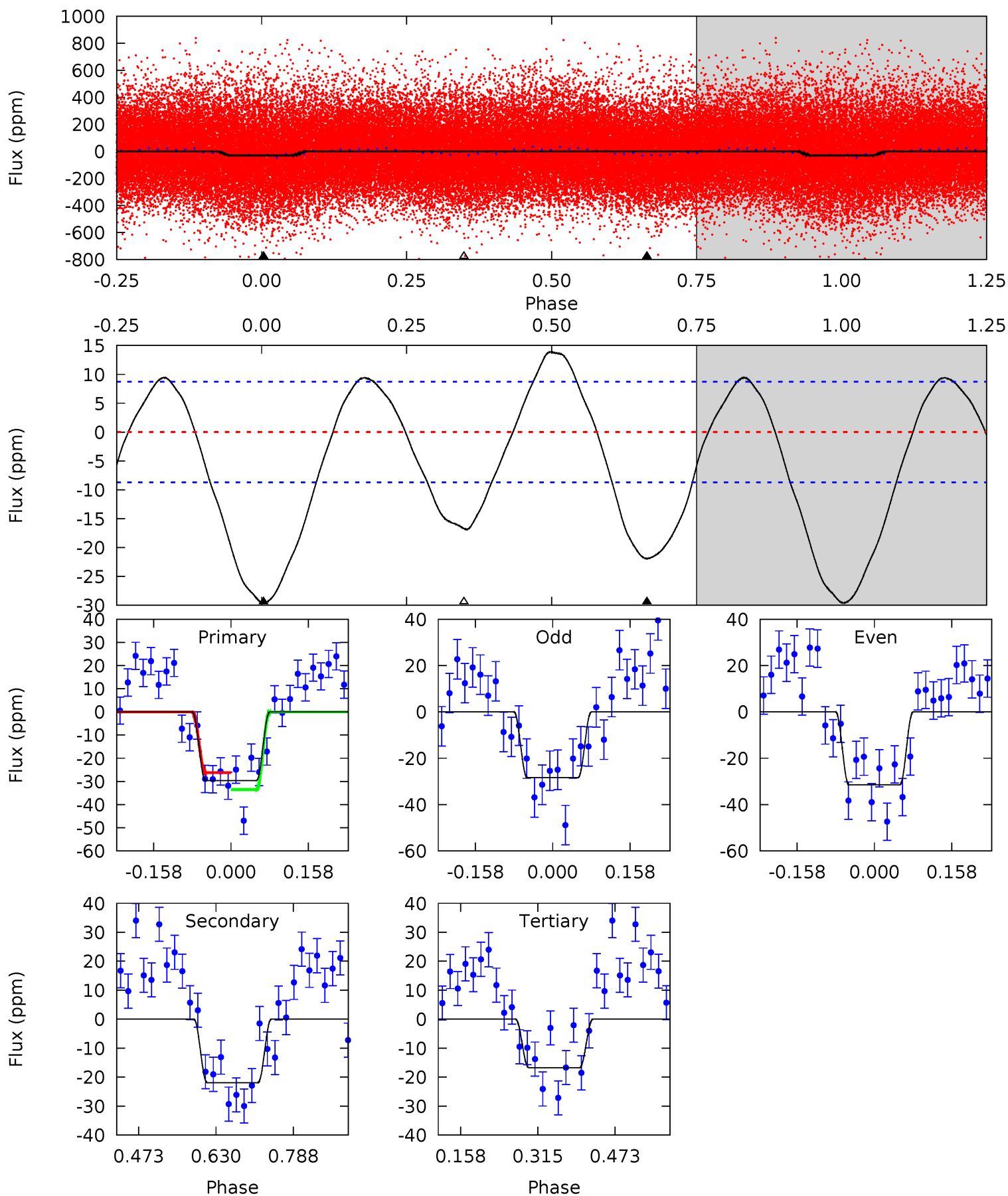
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.85	0	0	4.44	1.35	4.12	11.3	11.3	7.85	7.85	0.95	0.92	0.44	2.00



# Alt Model-Shift Uniqueness Test

007304393-01, P = 2.051470 Days, E = 130.052416 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	11.2	8.58	0	4.47	1.41	5.13	6.60	15.2	2.66	11.2	0.79	0.89	0.32	1.81





### Stellar Parameters For KIC 007304393

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6470^{+155}_{-214}$	$4.208^{+0.162}_{-0.180}$	$-0.140^{+0.250}_{-0.300}$	$1.433^{+0.422}_{-0.307}$	$1.213^{+0.188}_{-0.188}$	$0.580^{+0.476}_{-0.304}$
	+2%/-3%	+4%/-4%	+179%/-214%	+29%/-21%	+15%/-15%	+82%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 007304393-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-13 \pm 2$	$0.80^{+0.28}_{-0.25}$	$2590^{+207}_{-165}$	$5451^{+990}_{-637}$	$13^{+14}_{-6}$
Alt.	$-22 \pm 2$	$0.88^{+0.29}_{-0.28}$	$2619^{+184}_{-181}$	$5883^{+1211}_{-641}$	$18^{+19}_{-8}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming A=0.3)

$A_{\text{obs}}$  = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

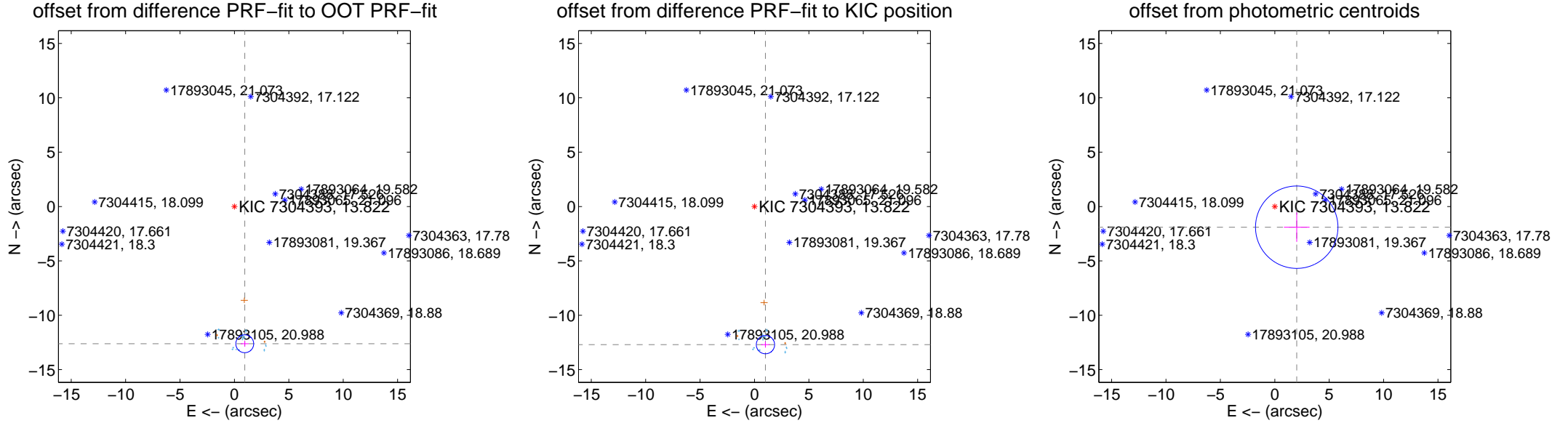
## DV Centroid Data

Supplemental centroid analysis for 007304393-01. Kepler magnitude: 13.82. Transit SNR 7.96

There are 13 quarters with good PRF difference image offsets

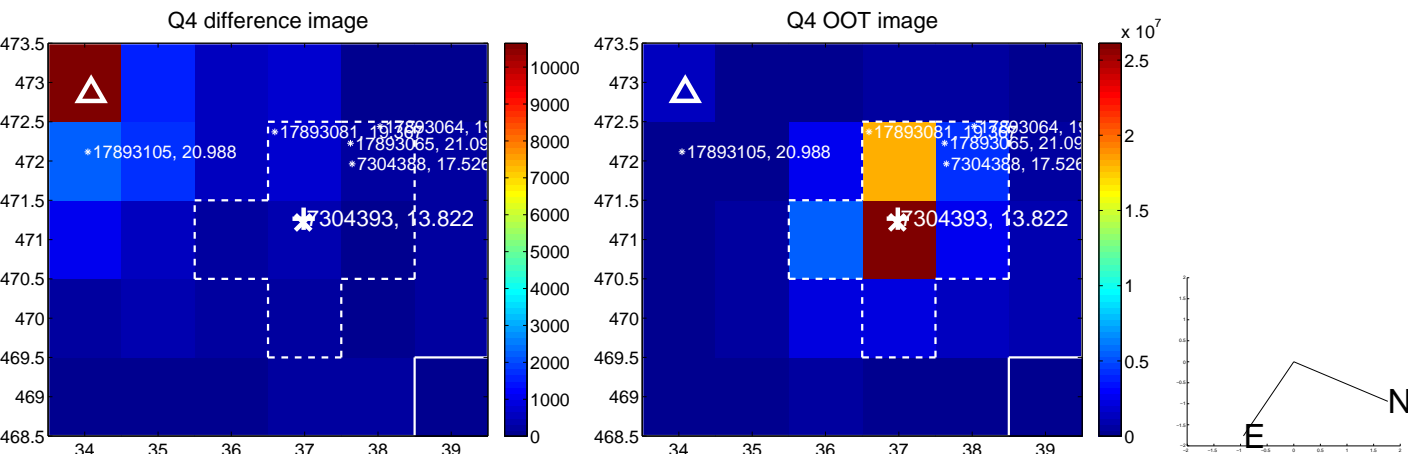
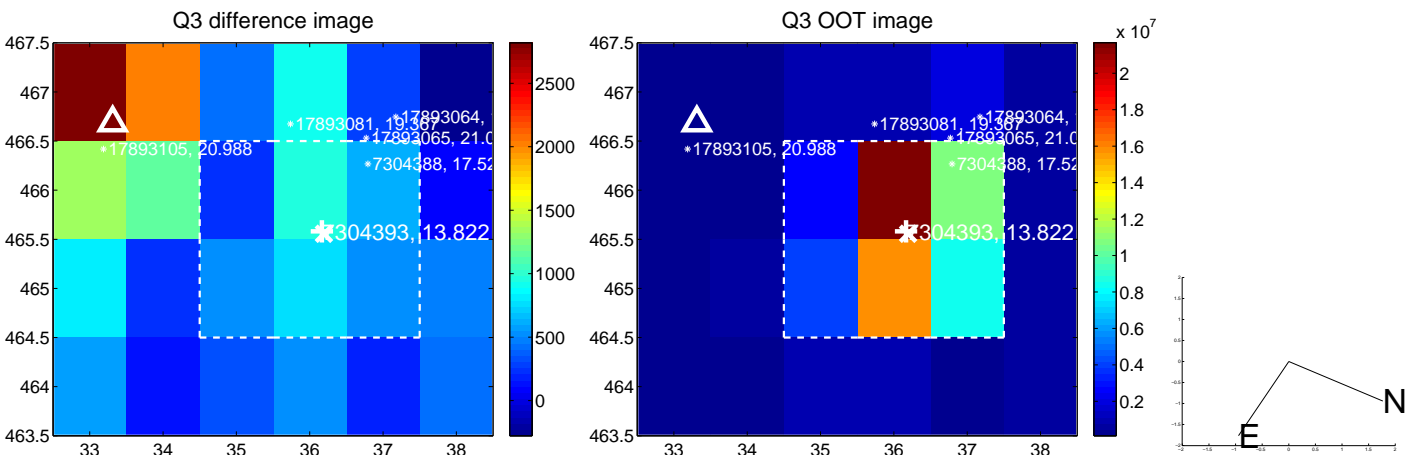
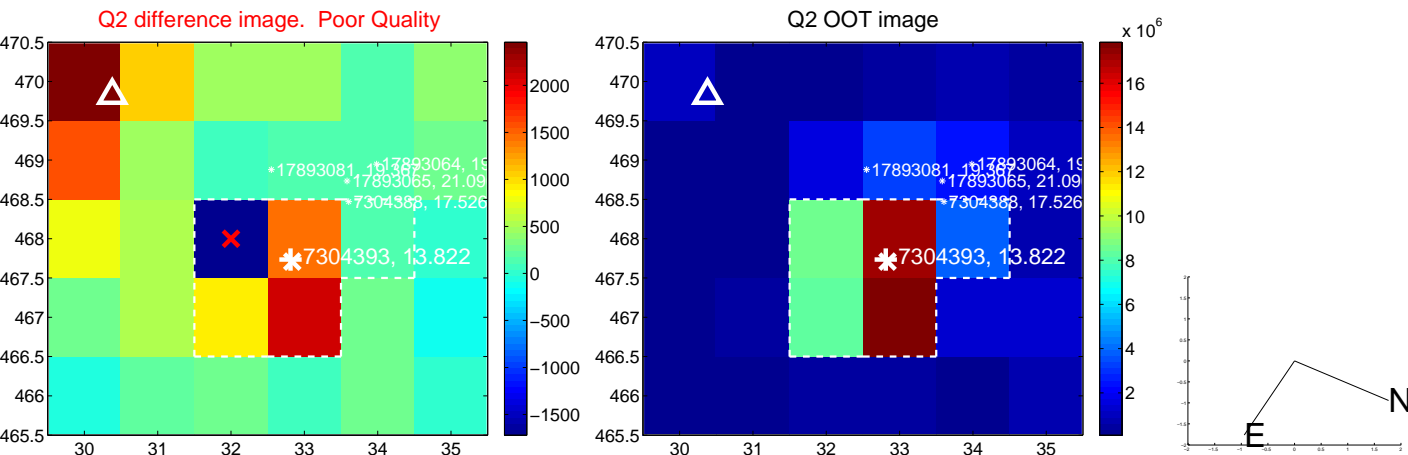
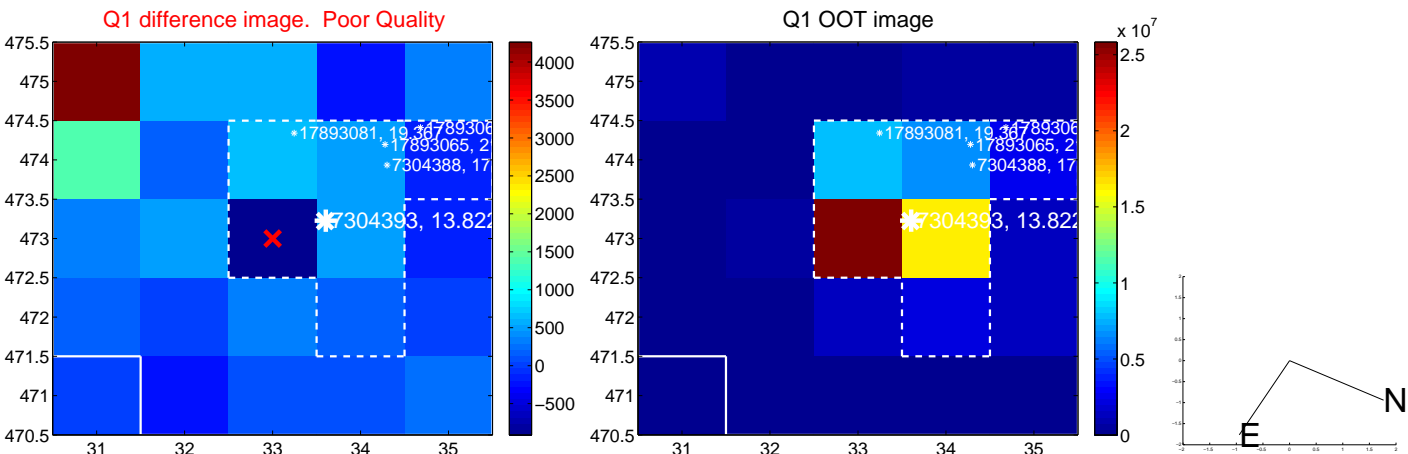
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>12.659 <math>\pm</math> 0.274</b>	<b>46.23</b>	-0.950 $\pm$ 0.359	-12.623 $\pm$ 0.267
PRF-fit source offset from KIC position	<b>12.745 <math>\pm</math> 0.280</b>	<b>45.45</b>	-1.010 $\pm$ 0.391	-12.705 $\pm$ 0.273
photometric centroid source offset	2.77 $\pm$ 1.26	2.19	-2.02 $\pm$ 1.18	-1.90 $\pm$ 1.35

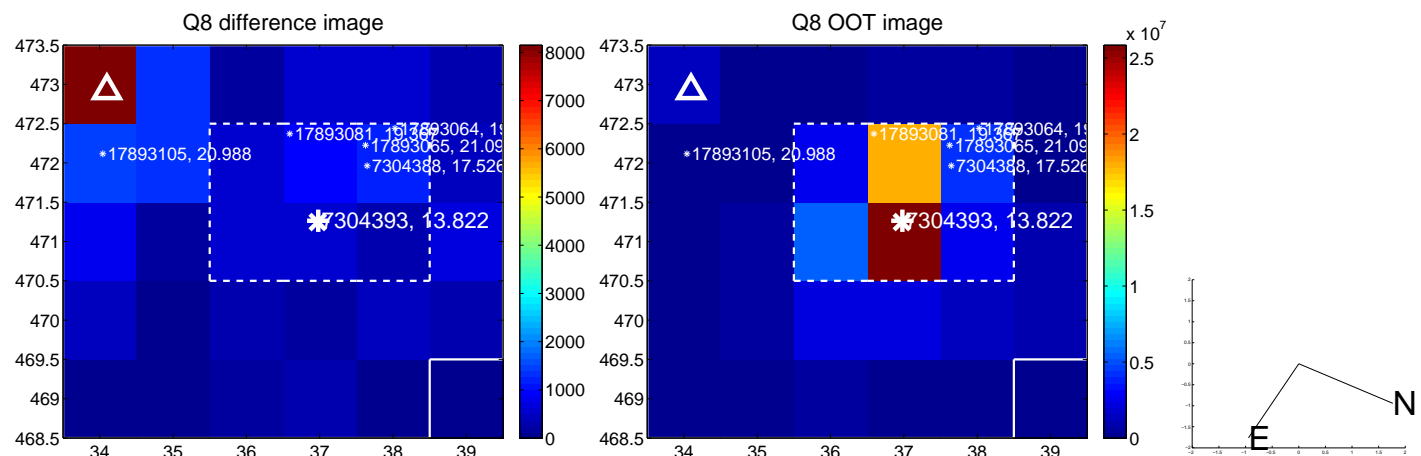
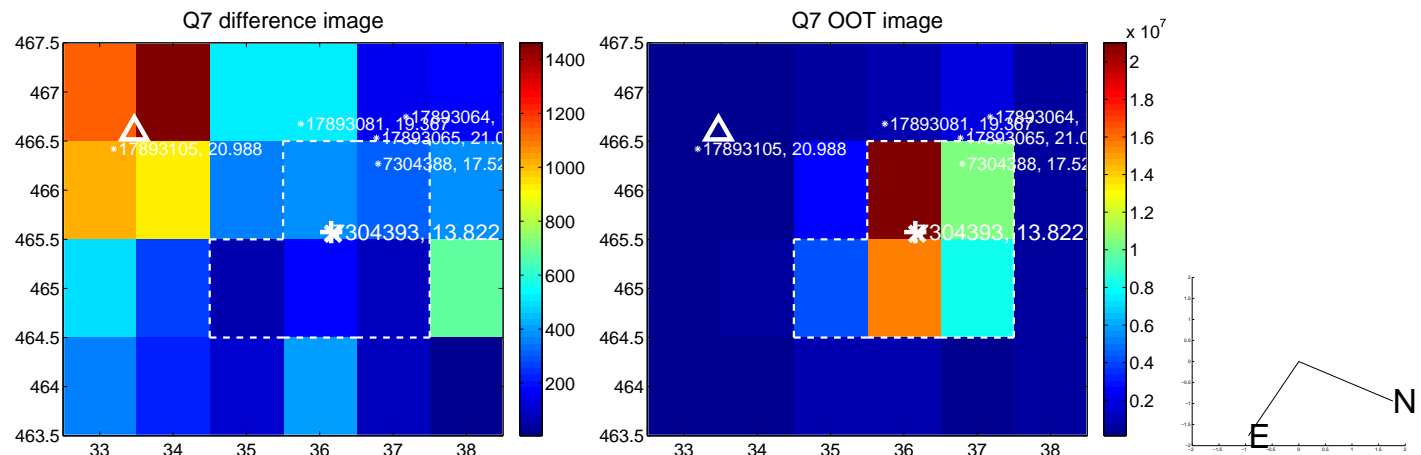
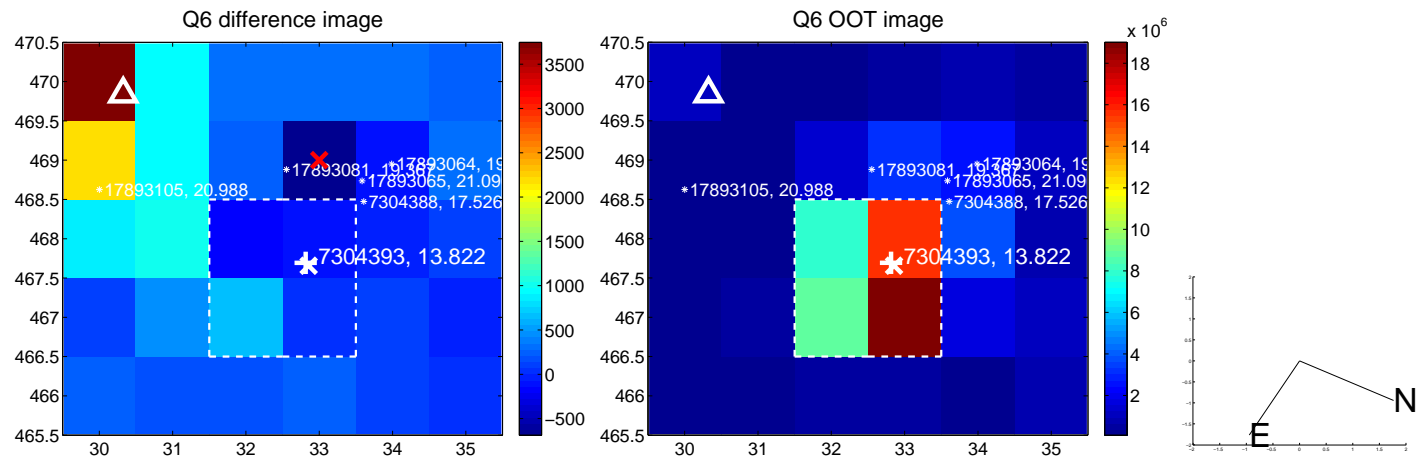
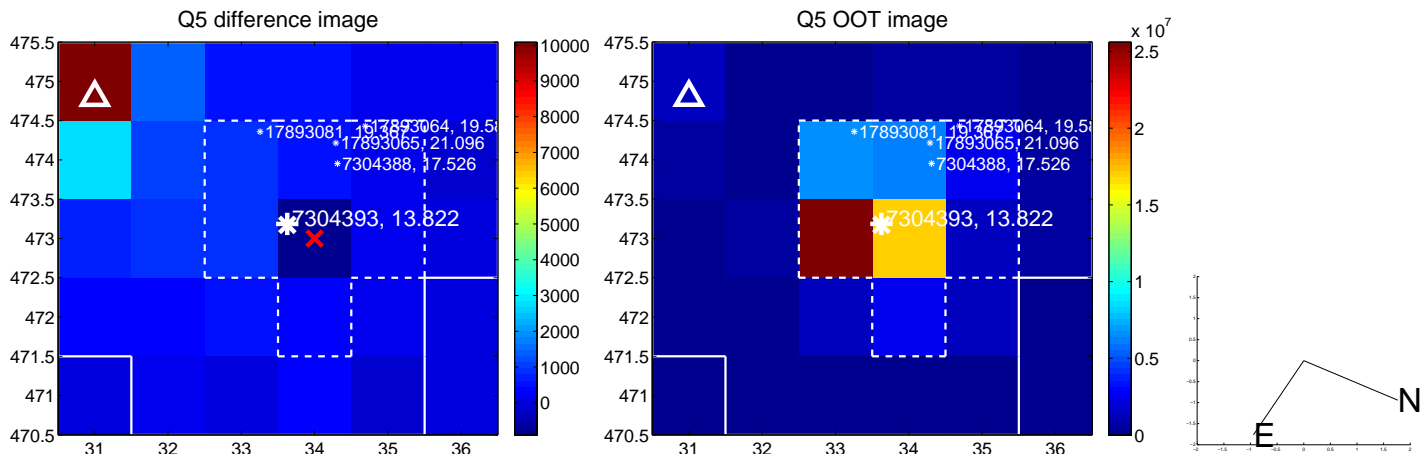


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

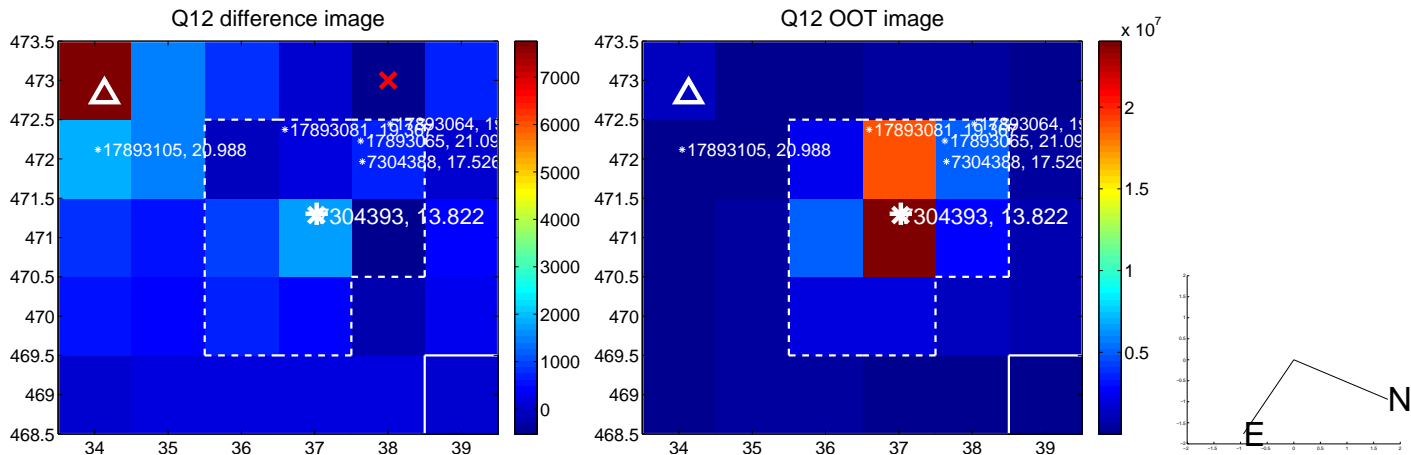
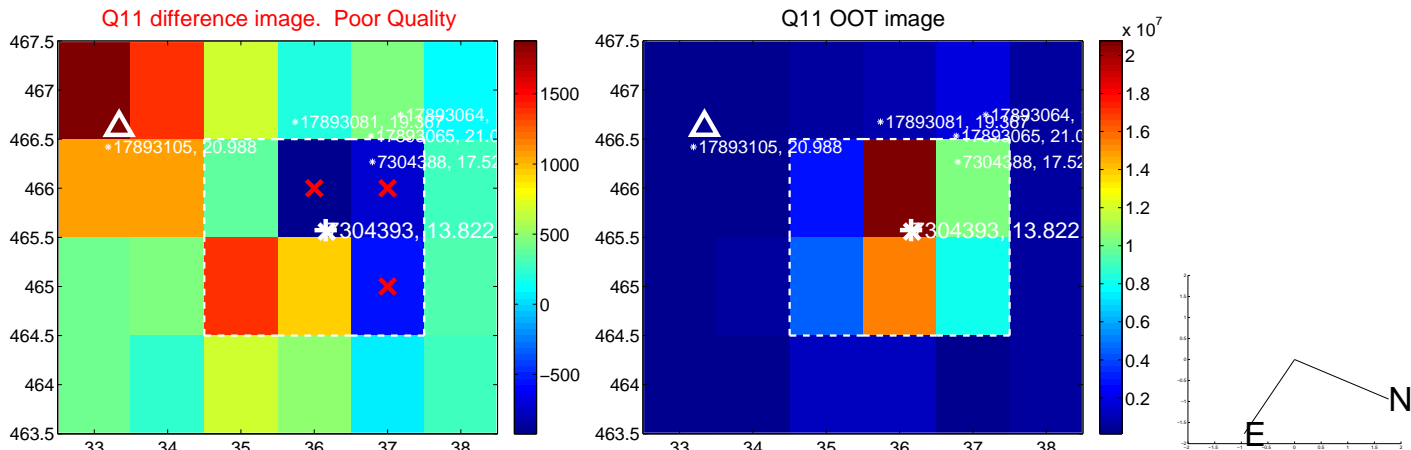
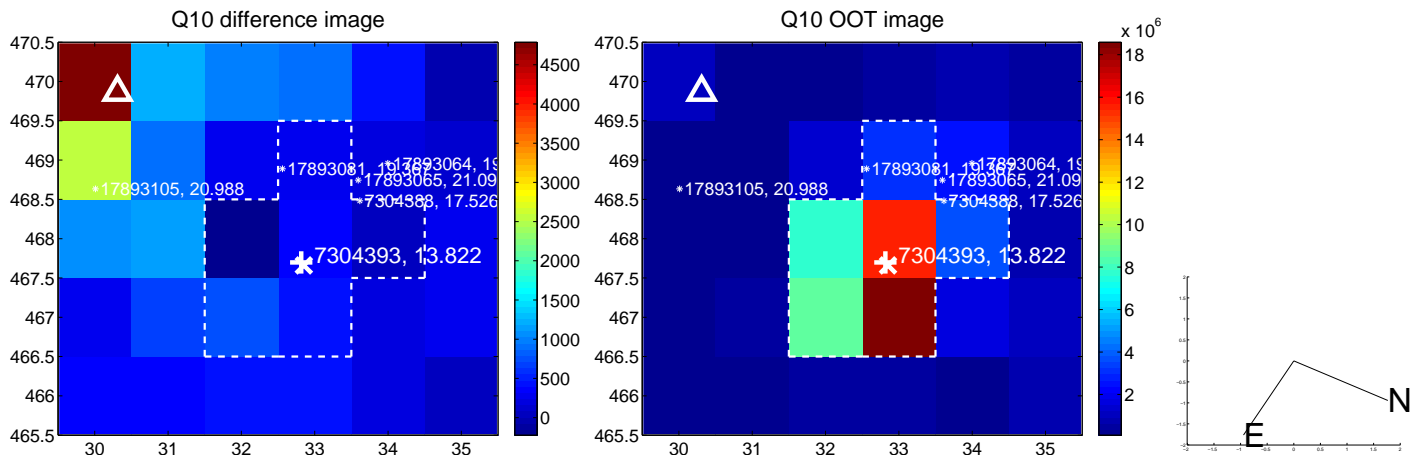
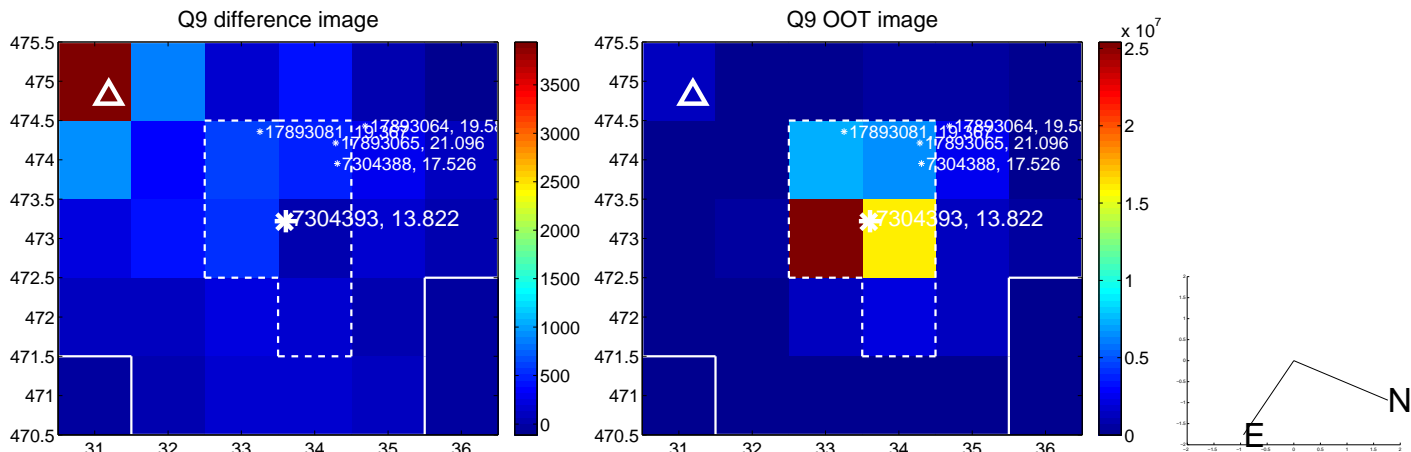


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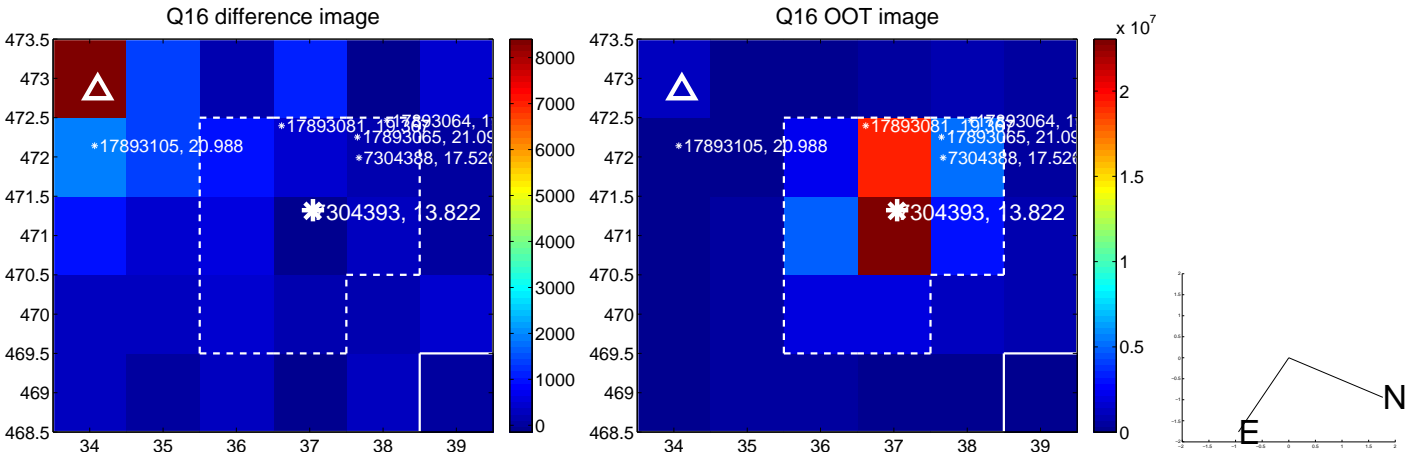
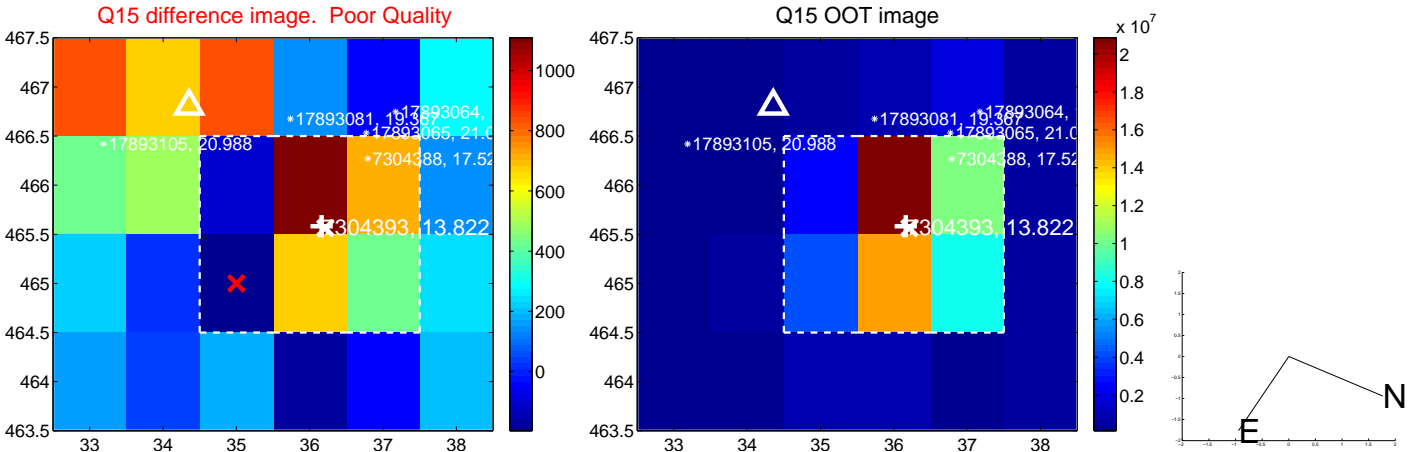
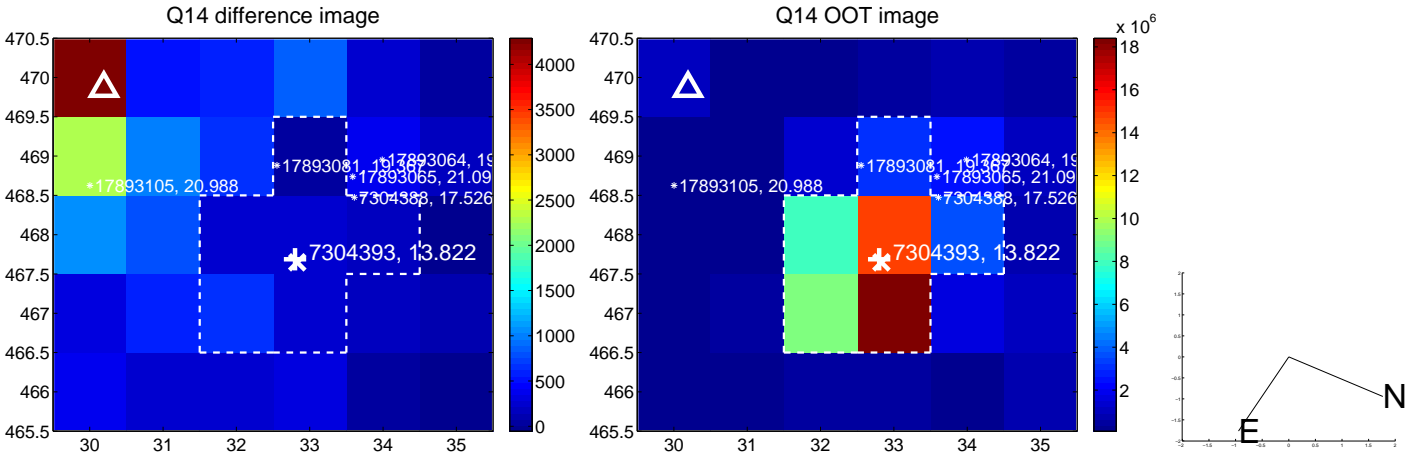
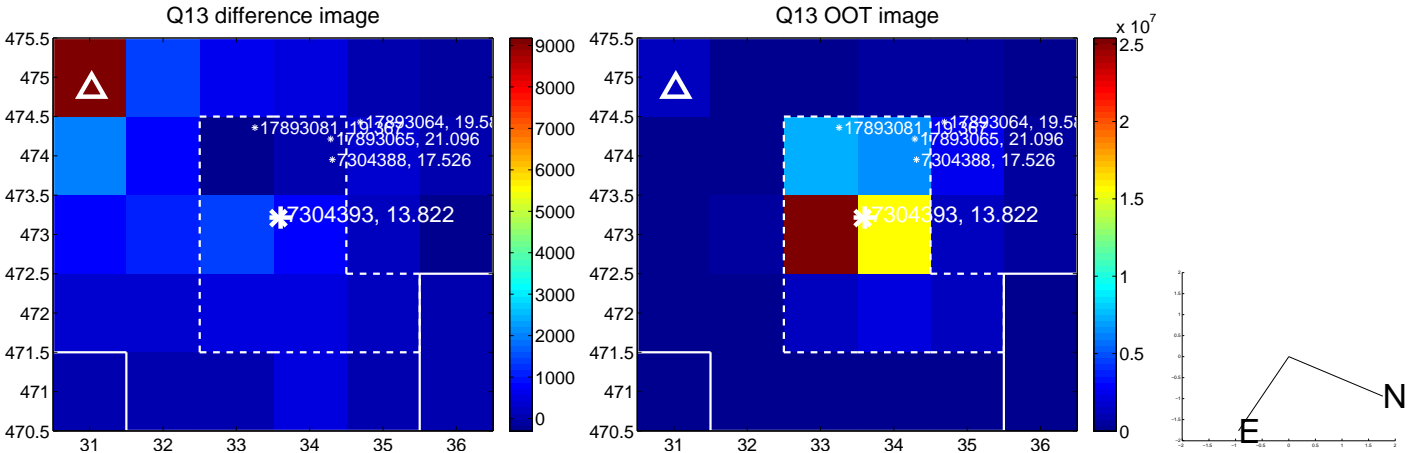




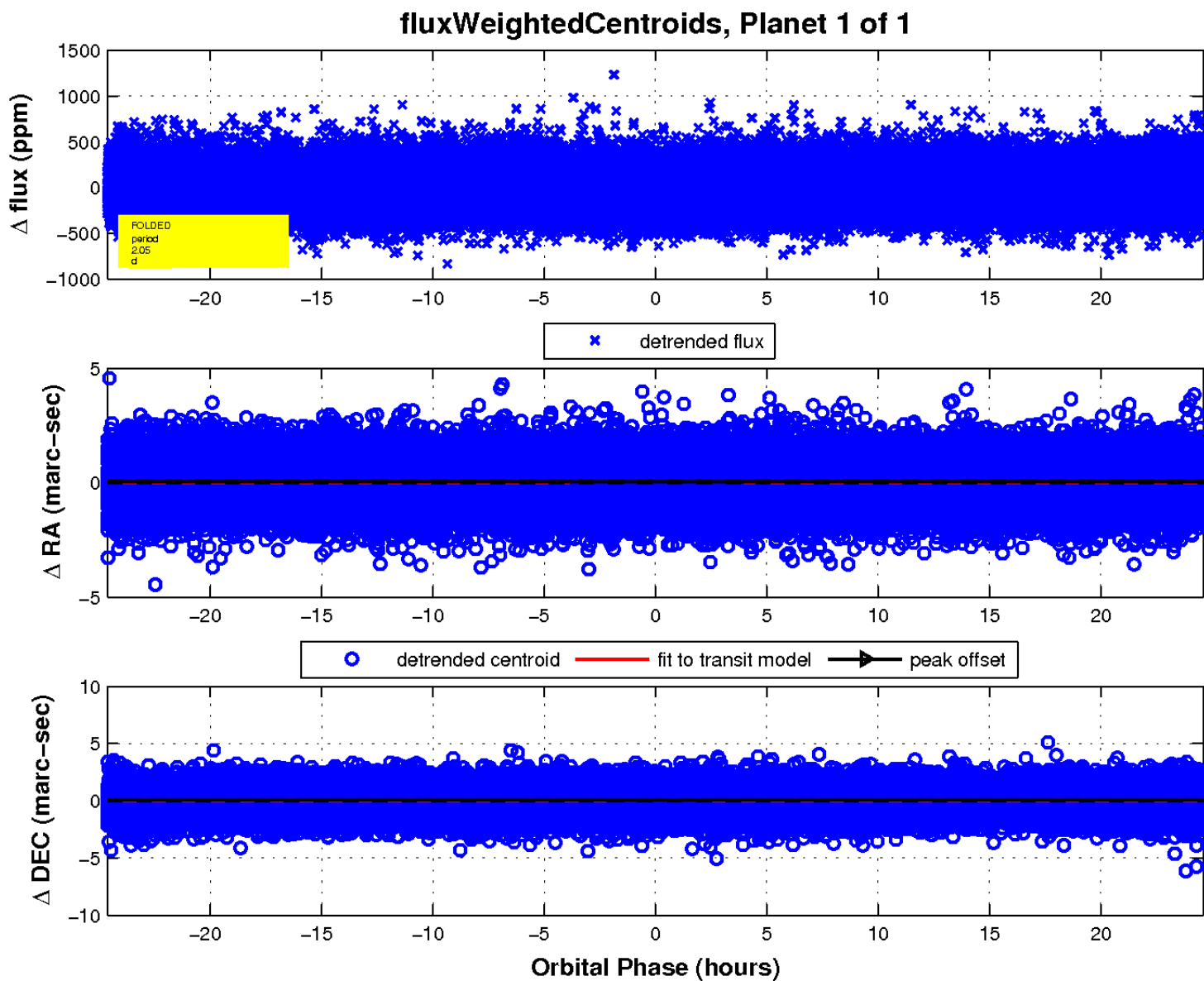
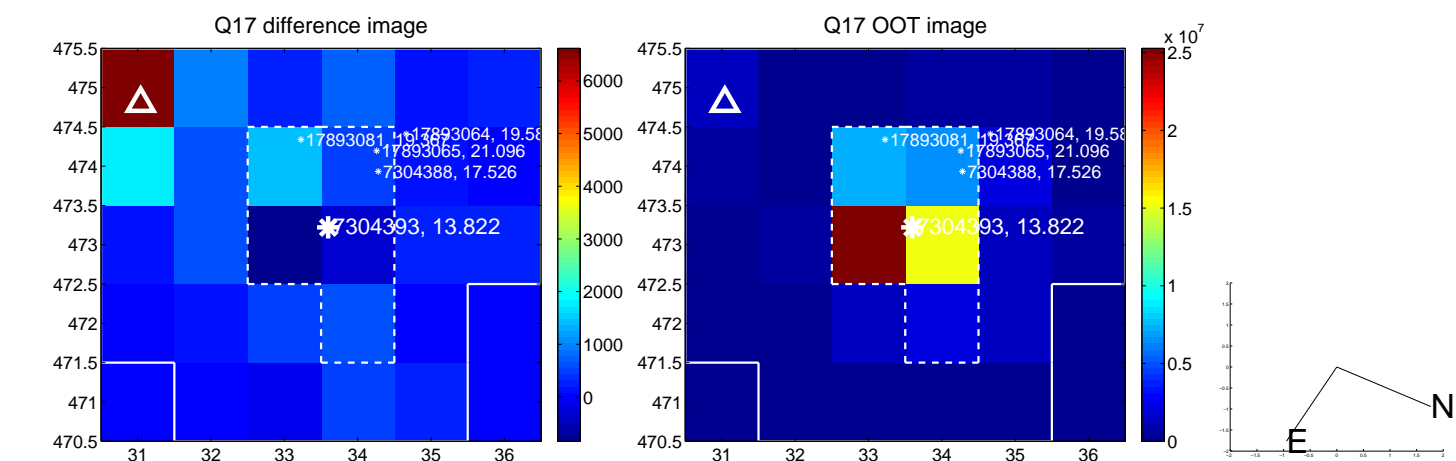
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UKIRT Image

