

# KIC 008394753

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008394753-01	OBS	No	0.836492	132.095129	33.3	2.672	8.9	7.4	1.12	6508	0.75	6051.25

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008394753-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

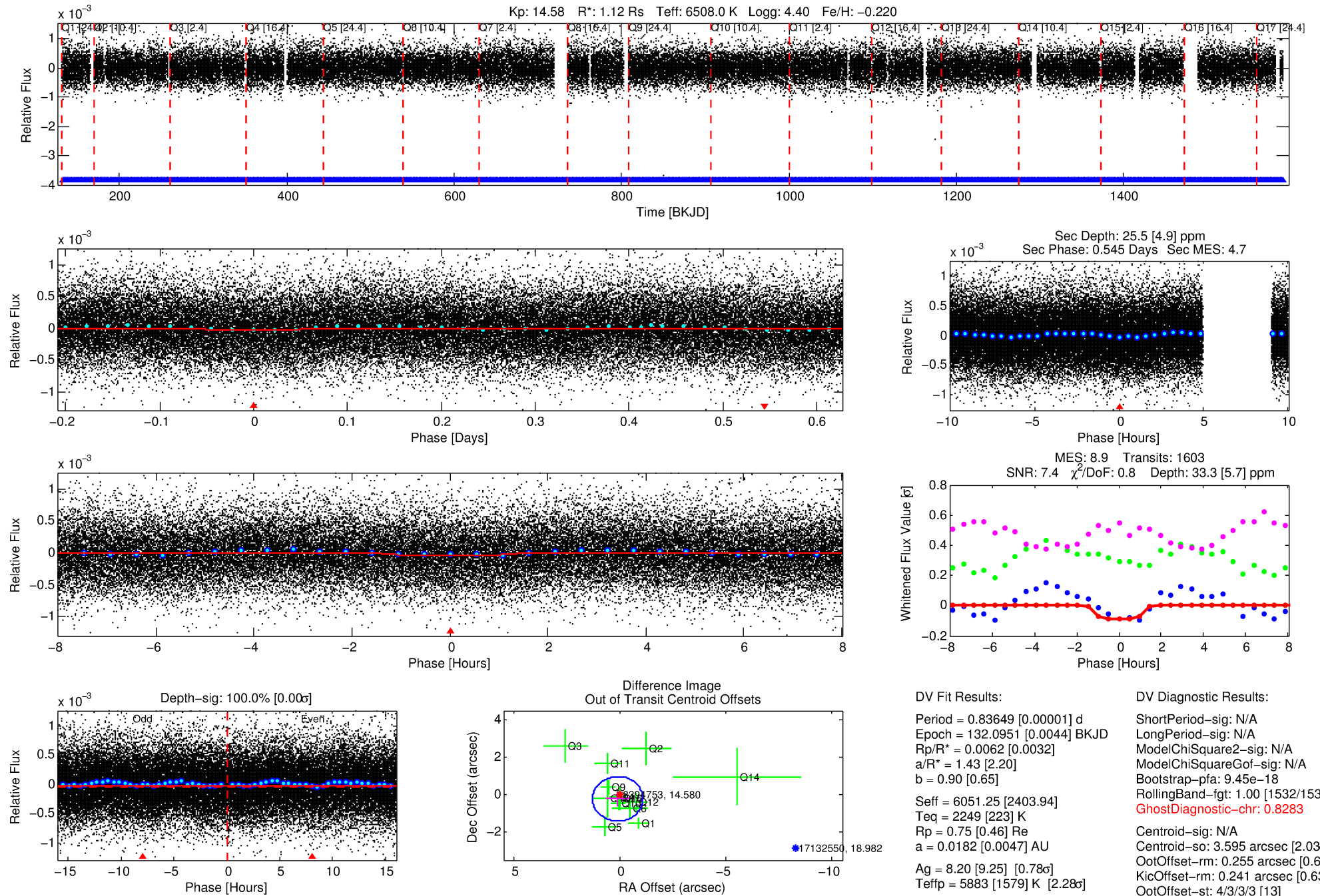
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008394753-01

No Significant Match Found

# DV One-Page Summary

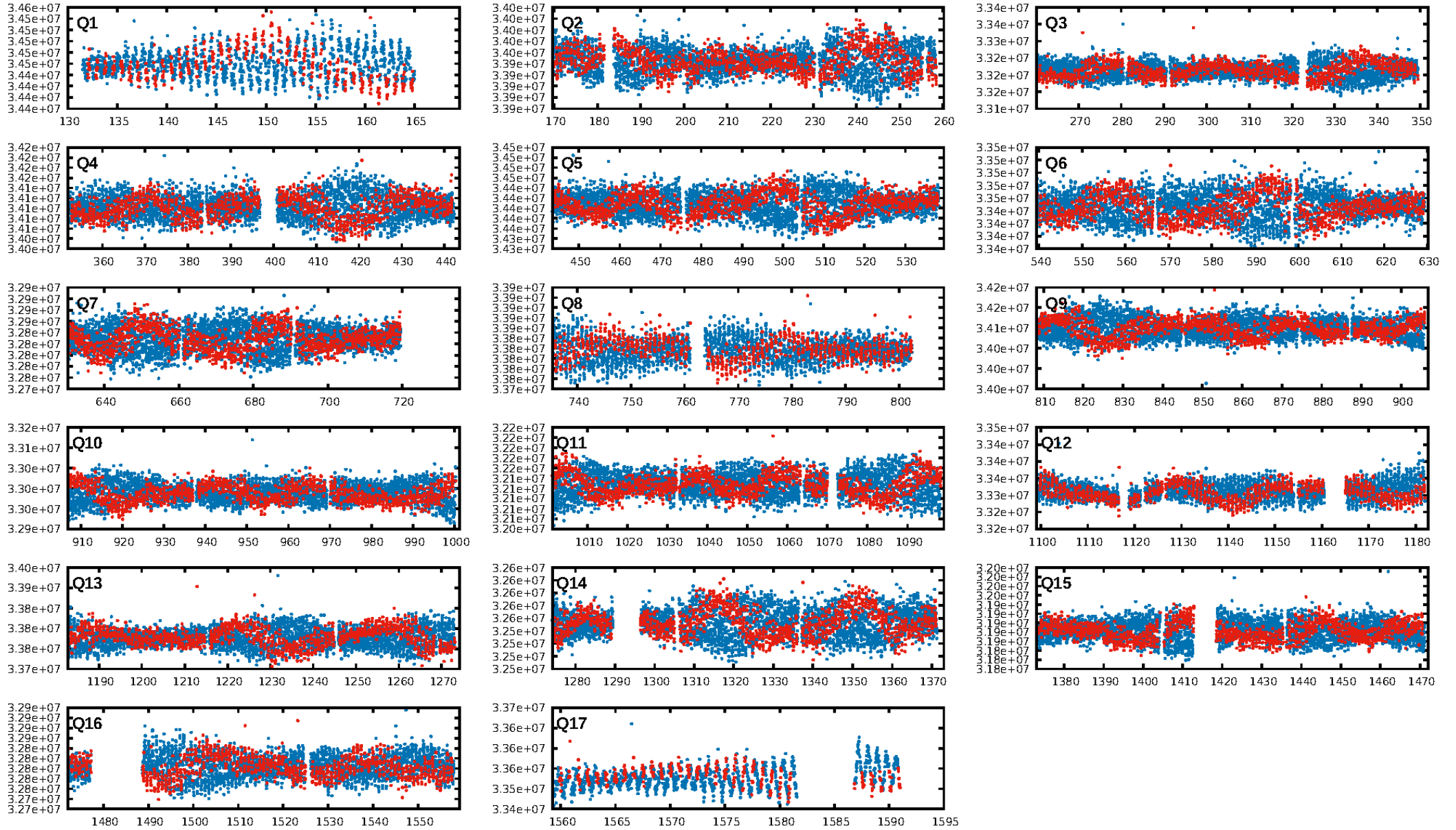
KIC: 8394753 Candidate: 1 of 1 Period: 0.836 d



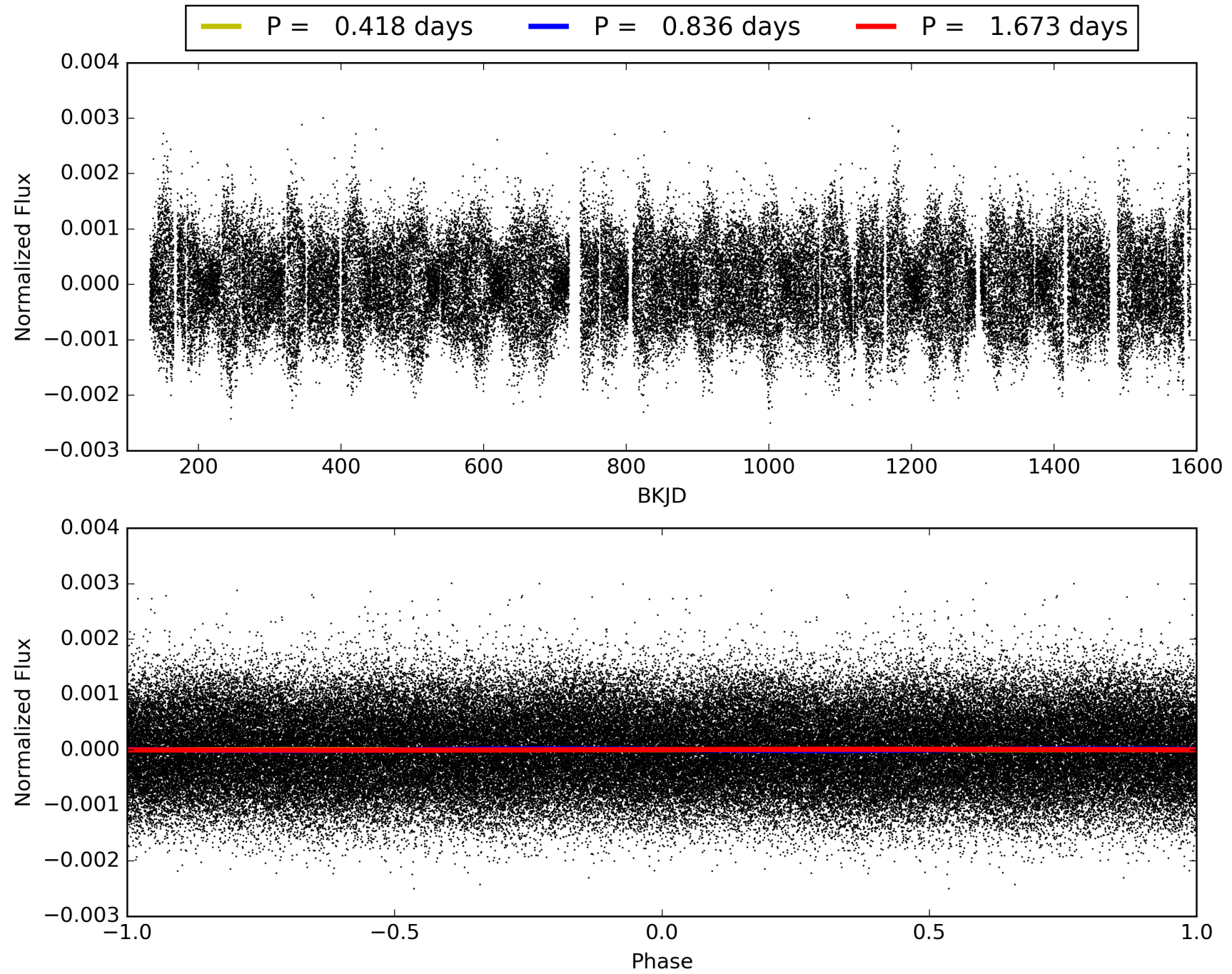
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:06:07 Z

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

# TCE 008394753-01, PDC Light Curves



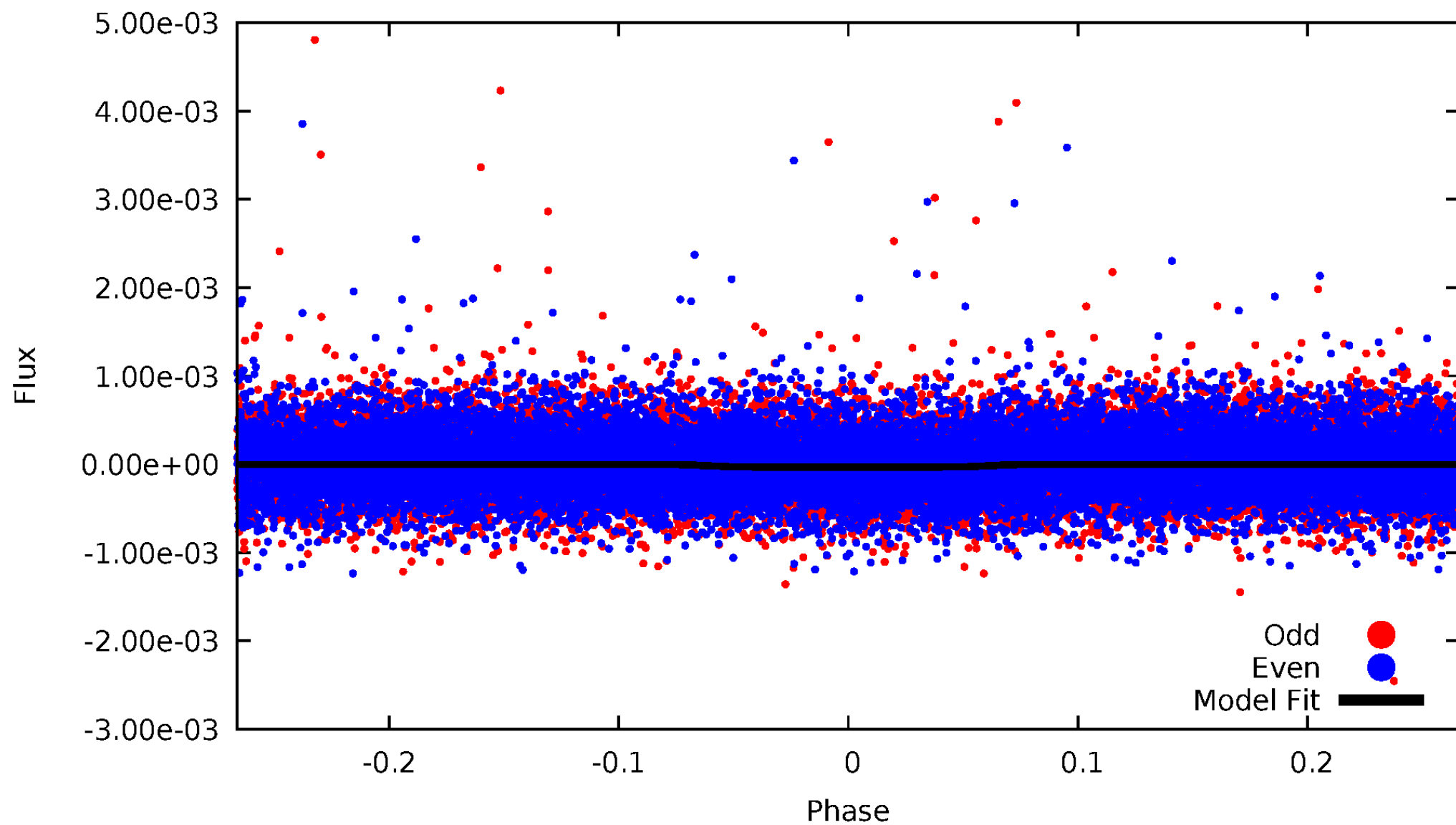
TCE 008394753-01





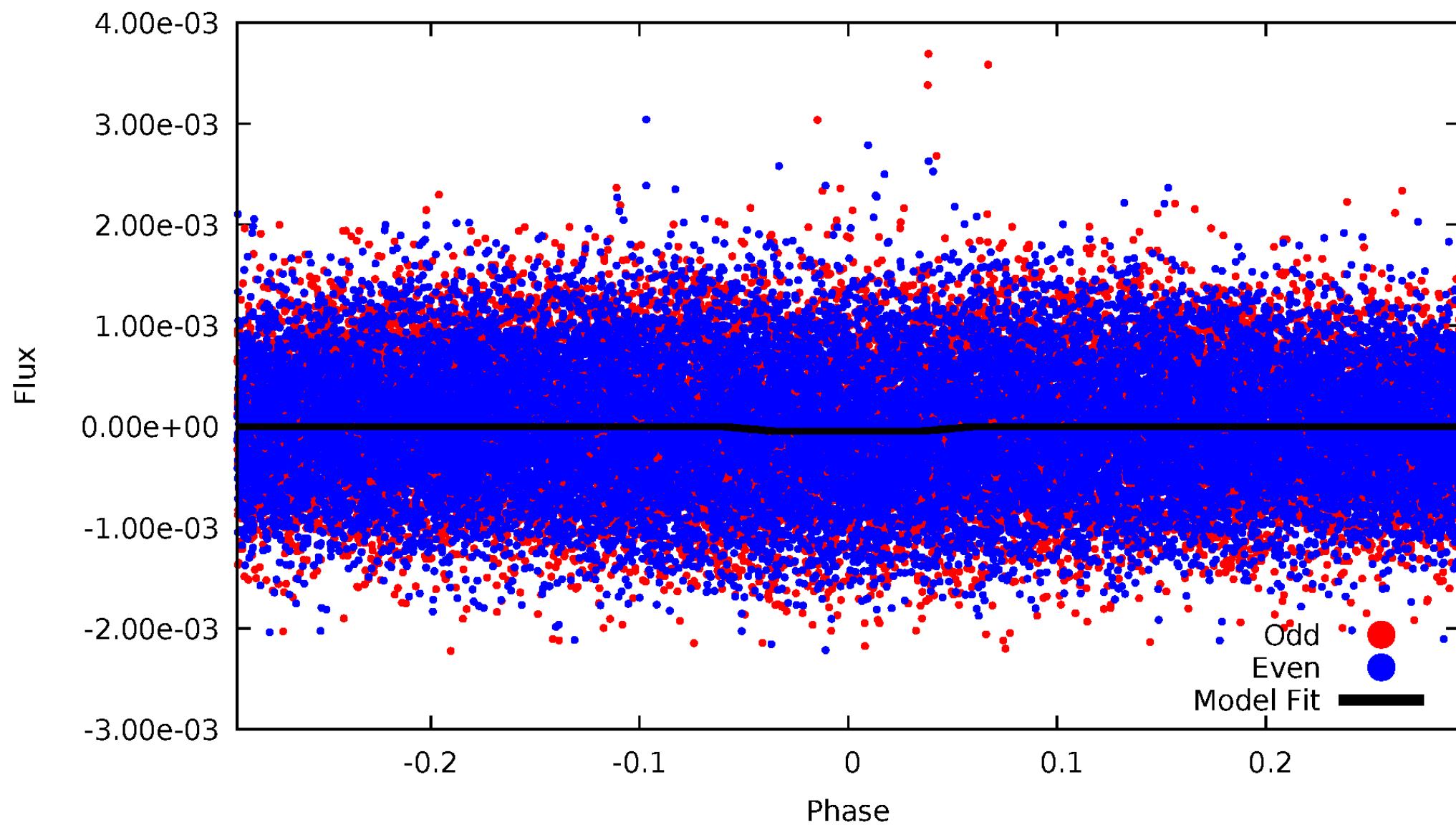
# DV Odd/Even

TCE 008394753-01



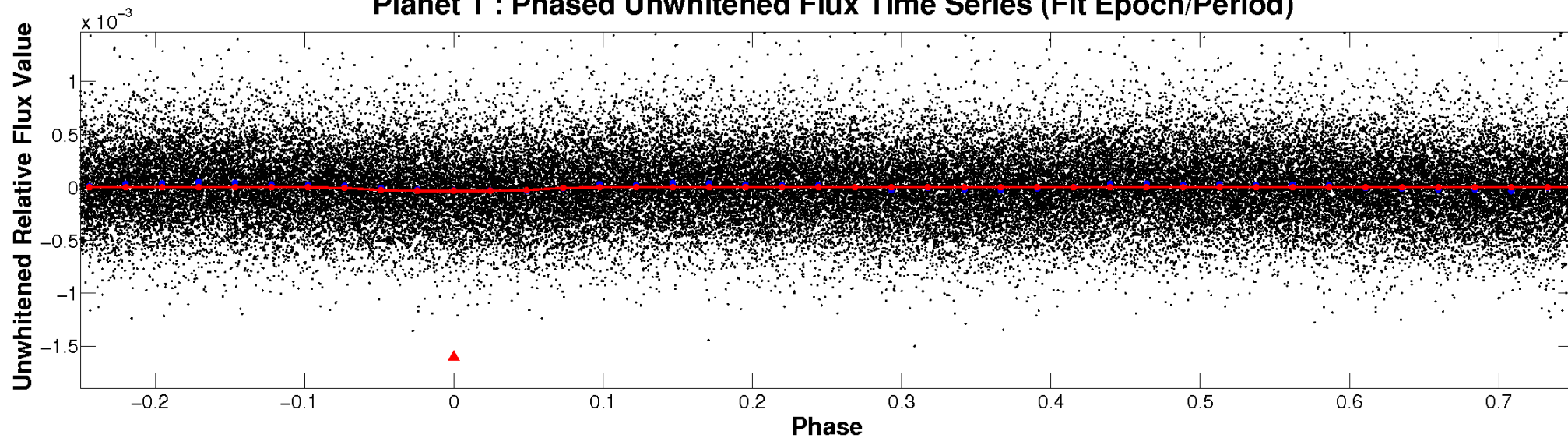
# ALT Odd/Even

TCE 008394753-01

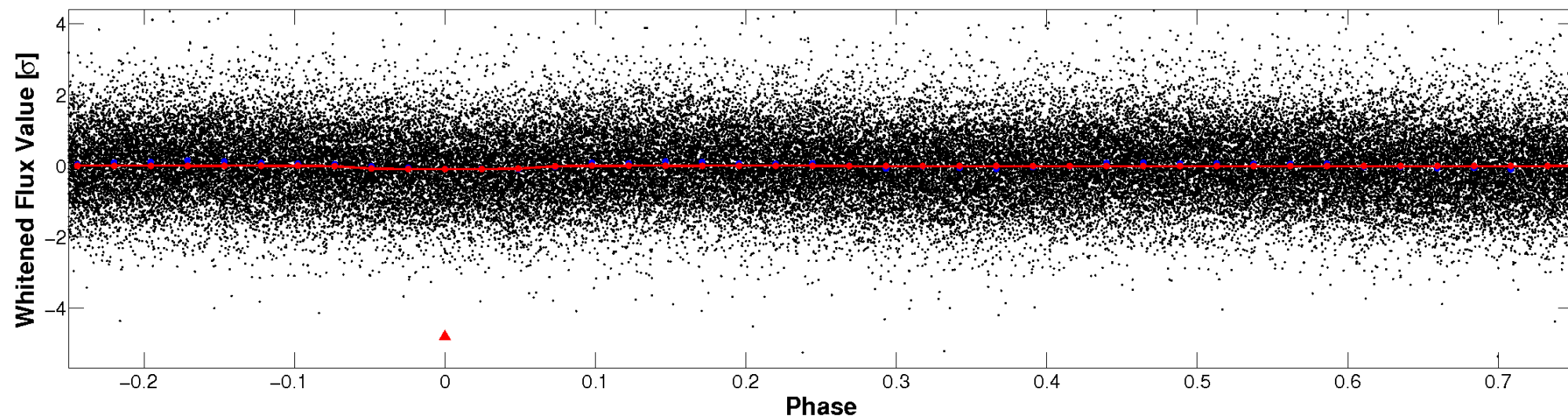


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

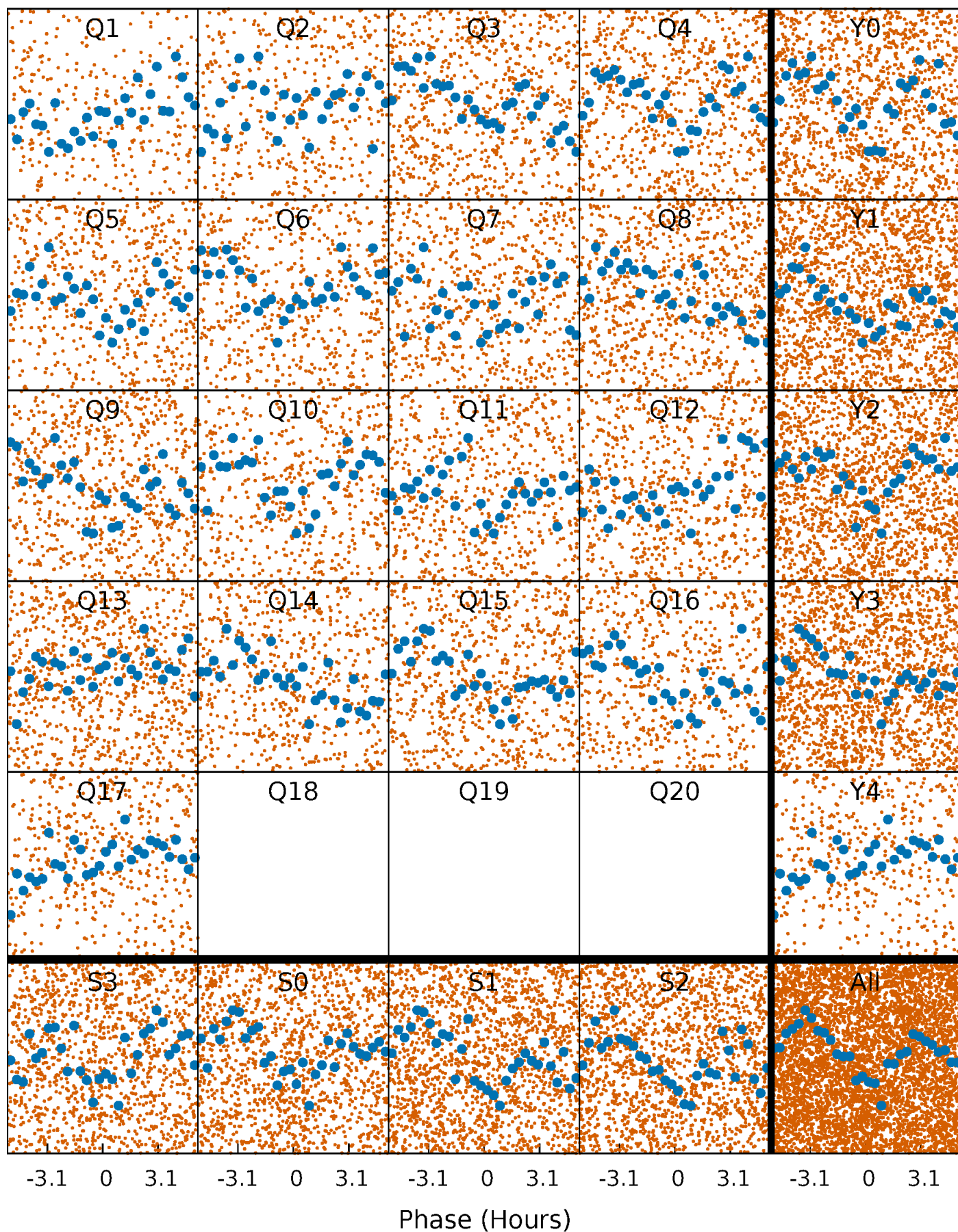


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

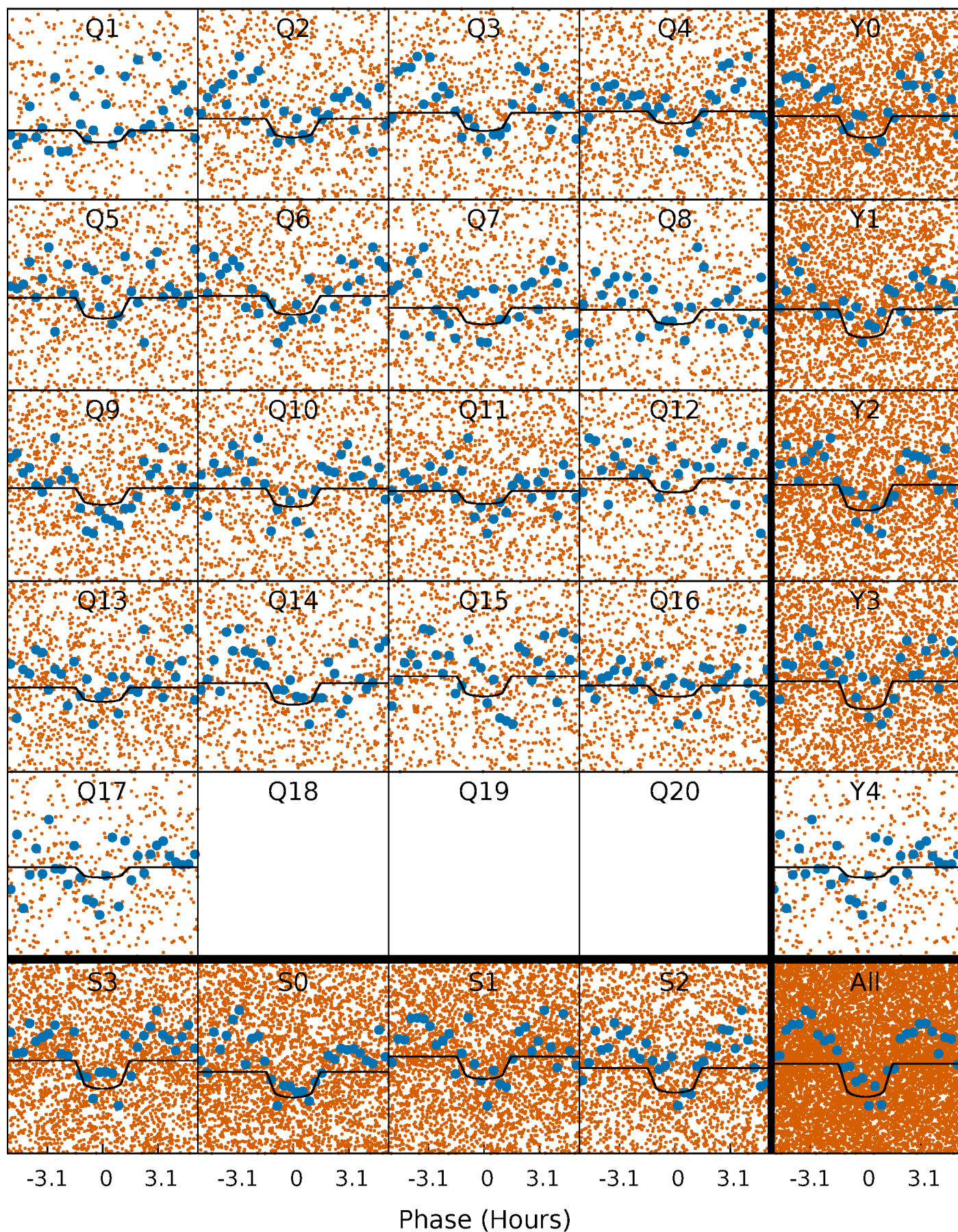
TCE 008394753-01 P= 0.836492 Days  $T_0=132.095129$  (BKJD)





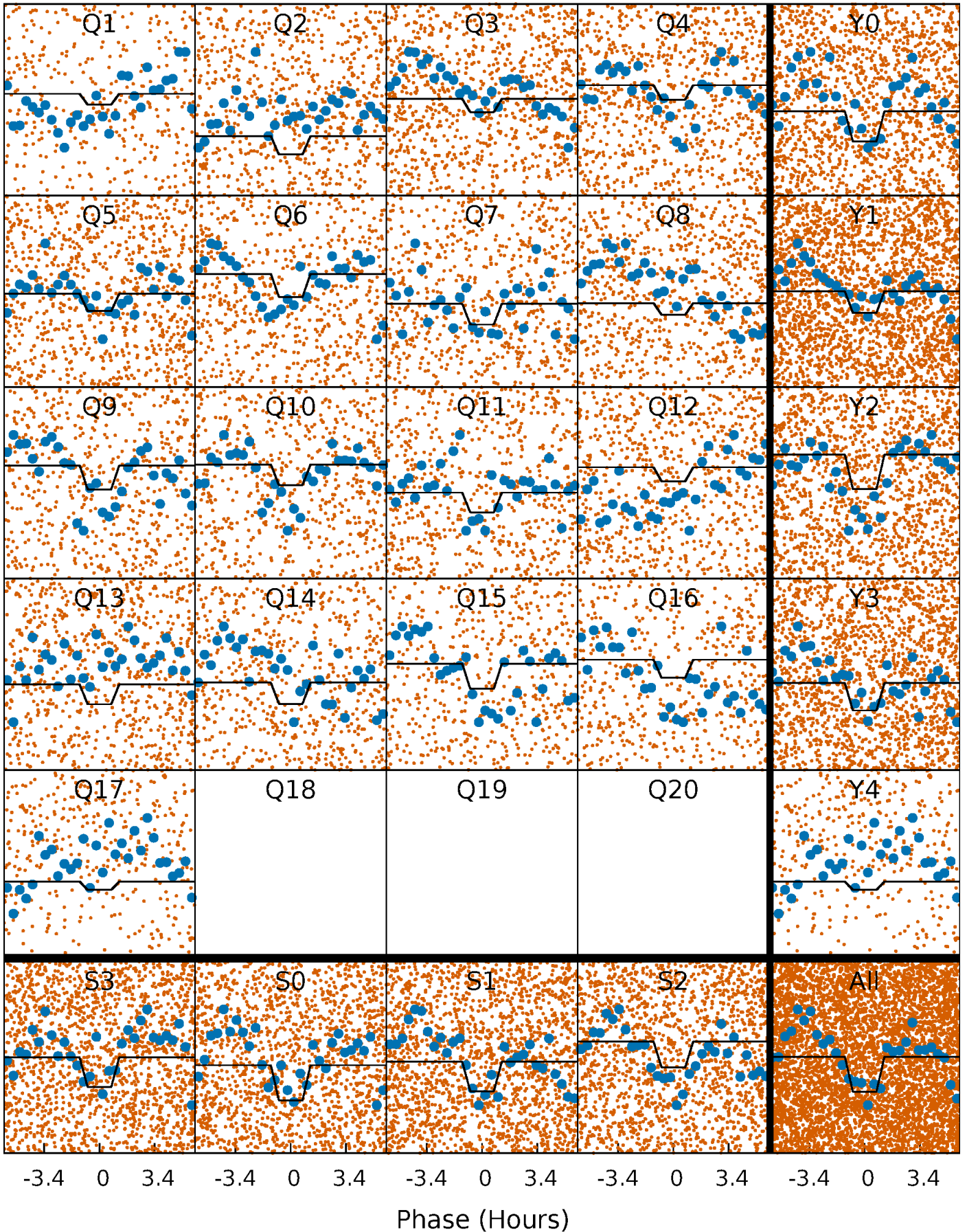
# DV Quarter-Phased Transit Curves

TCE 008394753-01 P= 0.836492 Days  $T_0=132.095129$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008394753-01 P= 0.836507 Days  $T_0=132.097778$  (BKJD)

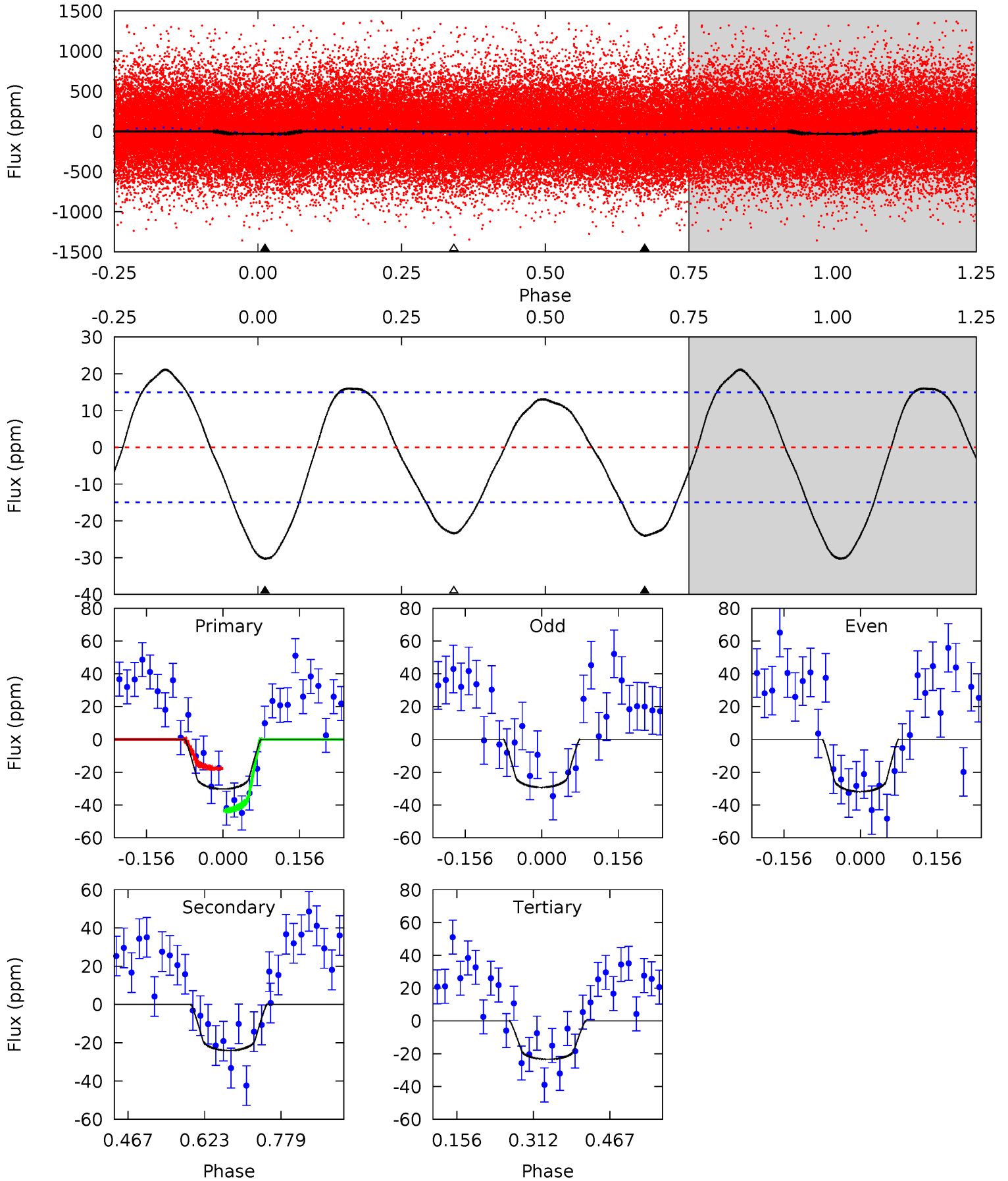




# DV Model-Shift Uniqueness Test

008394753-01, P = 0.836492 Days, E = 131.258637 Days

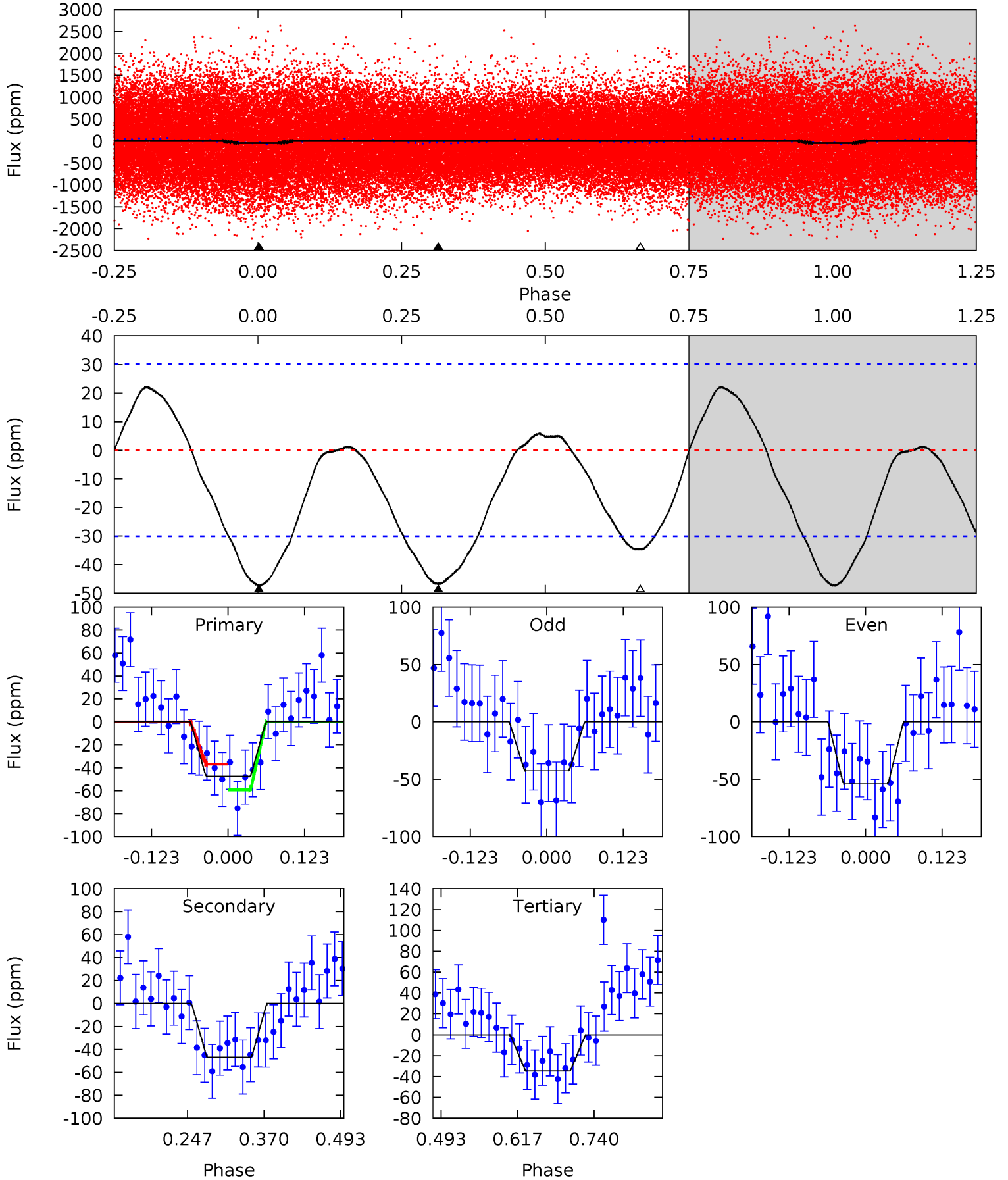
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.04	7.18	6.99	0	4.47	1.42	4.25	2.05	9.04	0.18	7.18	0.40	0.82	0.41	3.87



# Alt Model-Shift Uniqueness Test

008394753-01, P = 0.836507 Days, E = 131.261271 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
7.11	7.02	5.20	0	4.52	1.54	2.45	1.91	7.11	1.82	7.02	0.86	0.83	0.32	1.63





### Stellar Parameters For KIC 008394753

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6508^{+158}_{-218}$	$4.402^{+0.067}_{-0.202}$	$-0.220^{+0.250}_{-0.300}$	$1.116^{+0.350}_{-0.125}$	$1.146^{+0.165}_{-0.150}$	$1.161^{+0.337}_{-0.622}$
	+2%/-3%	+2%/-5%	+114%/-136%	+31%/-11%	+14%/-13%	+29%/-54%
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 008394753-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-24 \pm 3$	$0.81^{+0.45}_{-0.40}$	$3199^{+219}_{-160}$	$5654^{+2552}_{-1004}$	$6.733^{+18.315}_{-4.002}$
Alt.	$-47 \pm 7$	$0.89^{+0.40}_{-0.42}$	$3213^{+211}_{-174}$	$6337^{+3040}_{-1034}$	$11^{+28}_{-6}$

$T_{\text{max}}$  = 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  $A_{\text{obs}} \gg 1.0$

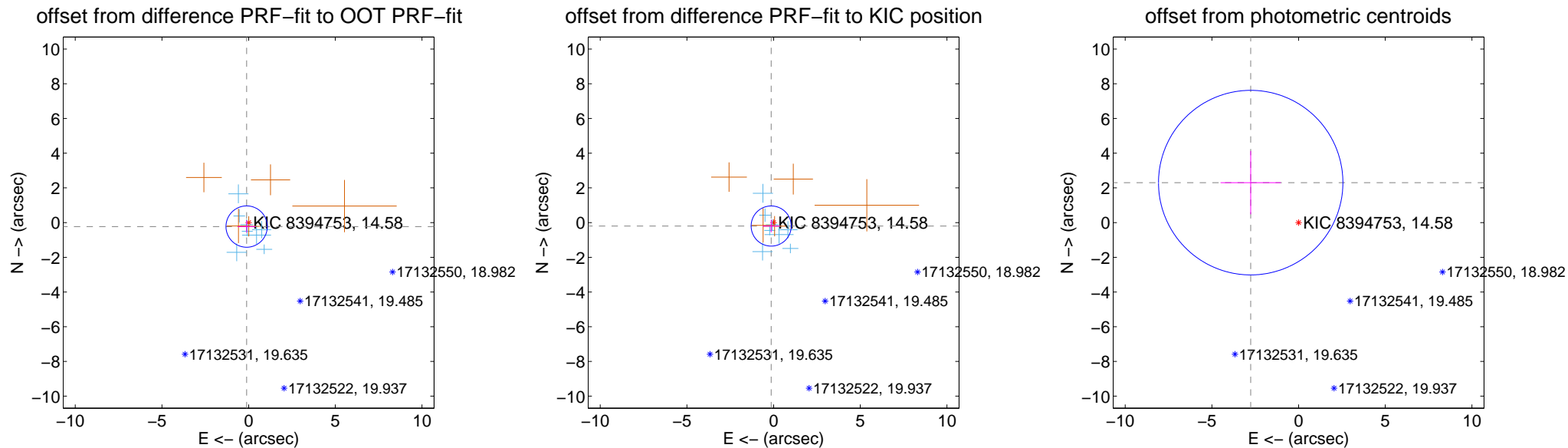
## DV Centroid Data

Supplemental centroid analysis for 008394753-01. Kepler magnitude: 14.58. Transit SNR 7.40

There are 8 quarters with good PRF difference image offsets

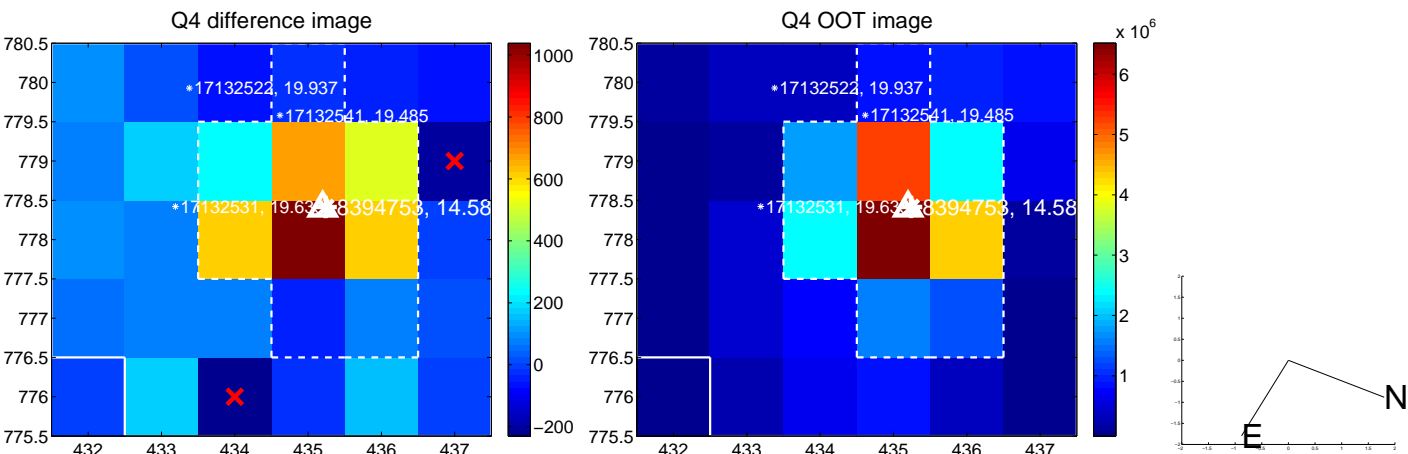
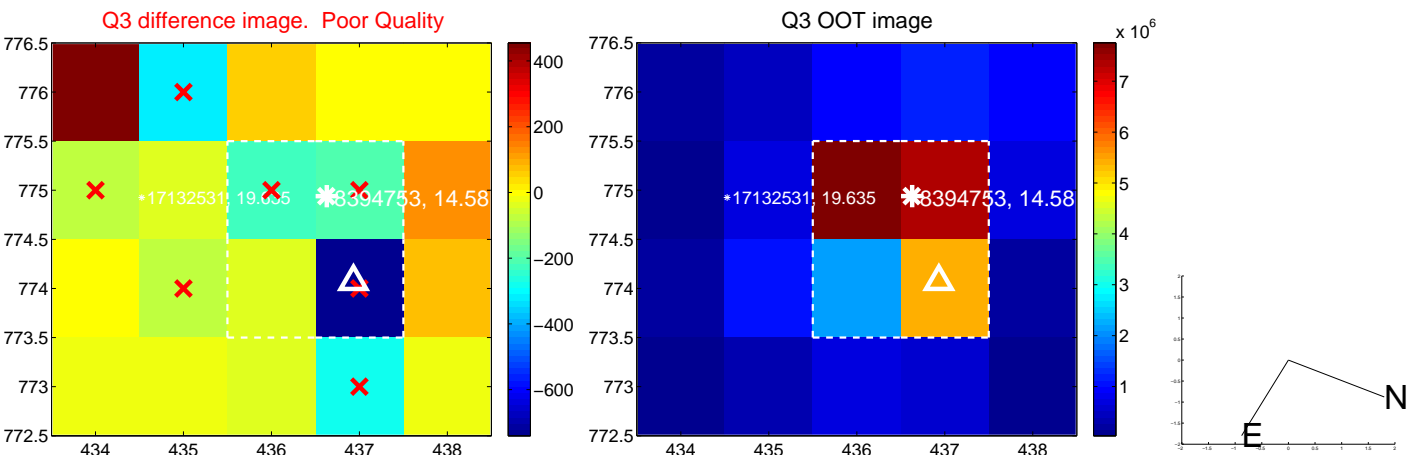
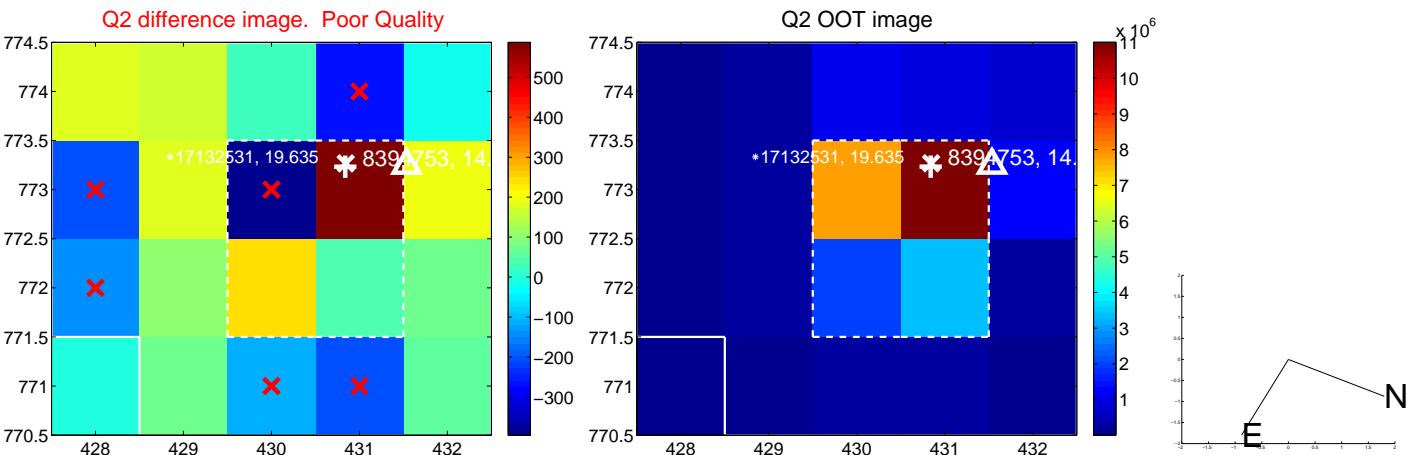
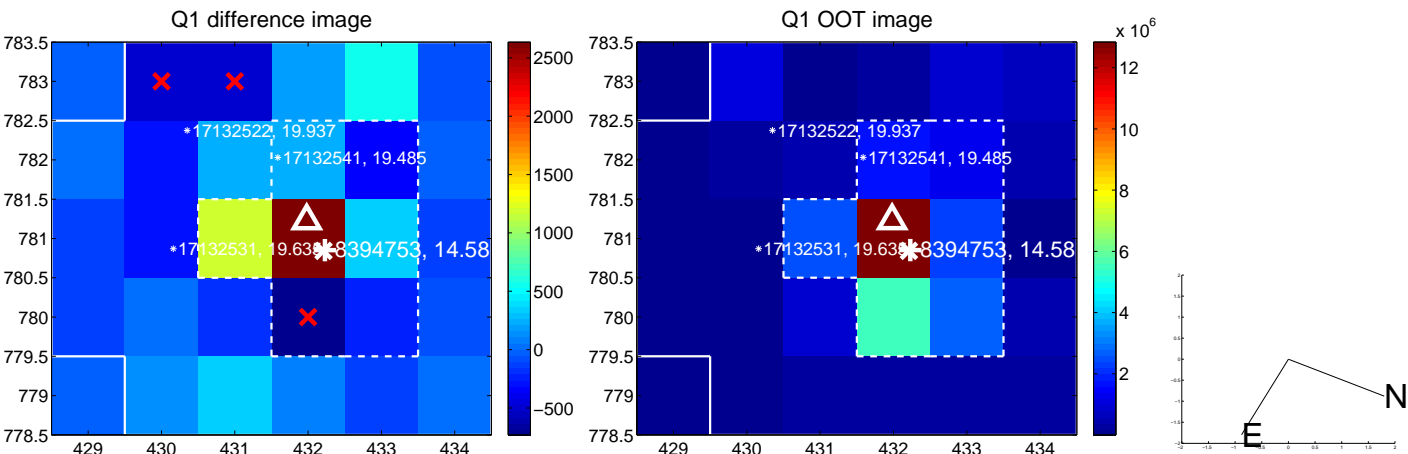
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.255 \pm 0.397$	0.64	$0.114 \pm 0.521$	$-0.229 \pm 0.353$
PRF-fit source offset from KIC position	$0.241 \pm 0.386$	0.63	$0.138 \pm 0.496$	$-0.198 \pm 0.363$
photometric centroid source offset	$3.59 \pm 1.77$	2.03	$2.76 \pm 1.74$	$2.30 \pm 1.82$

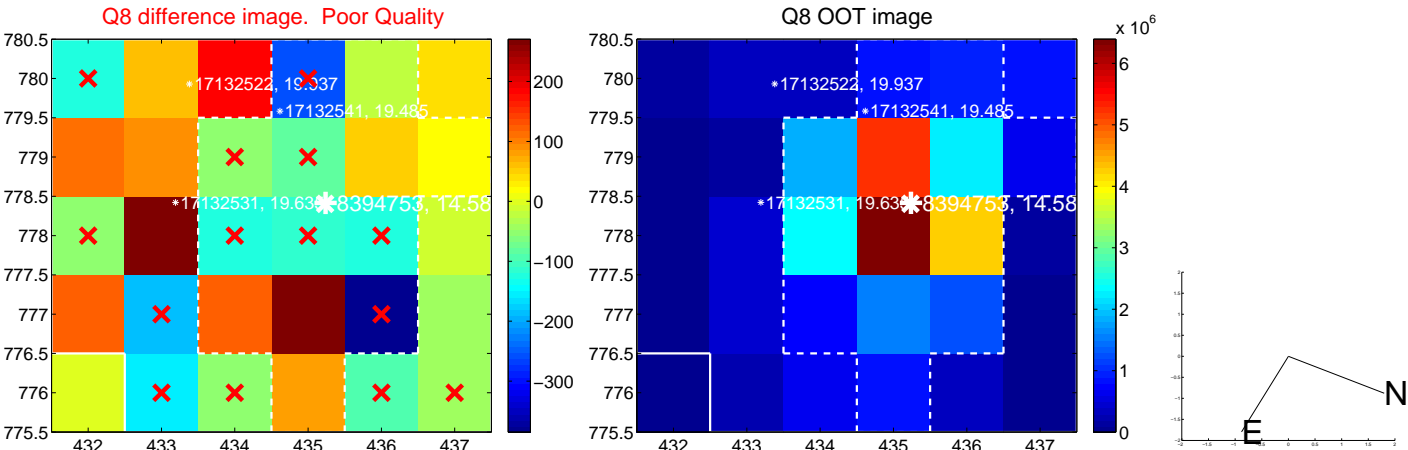
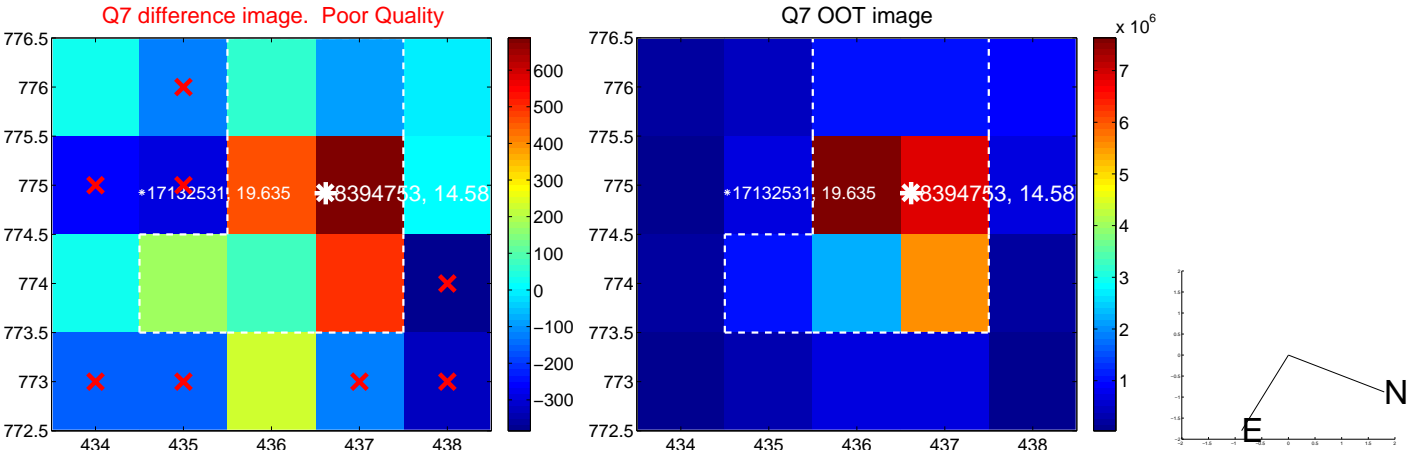
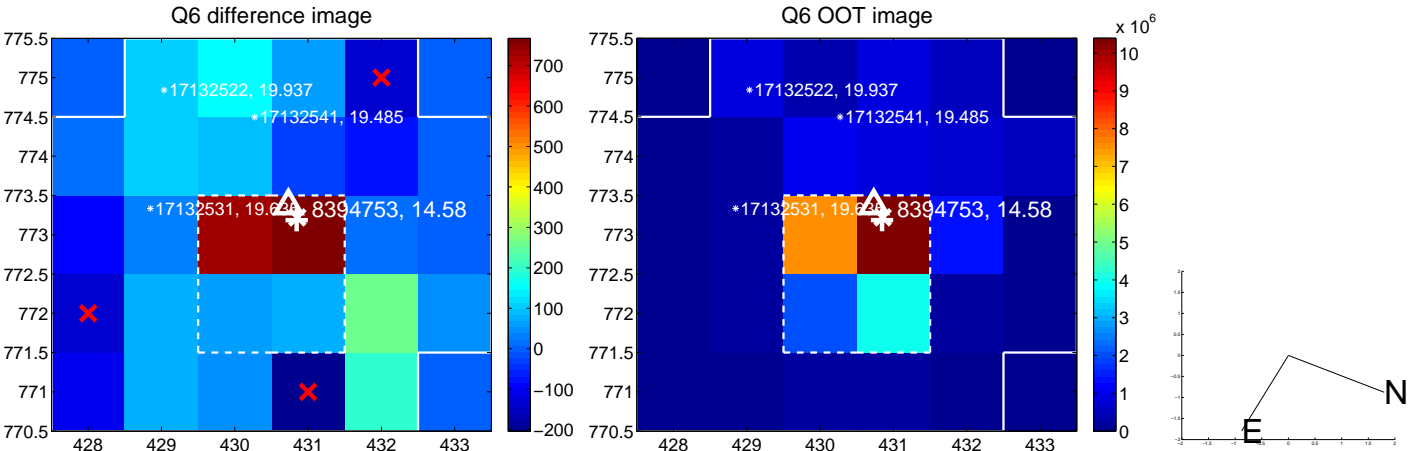
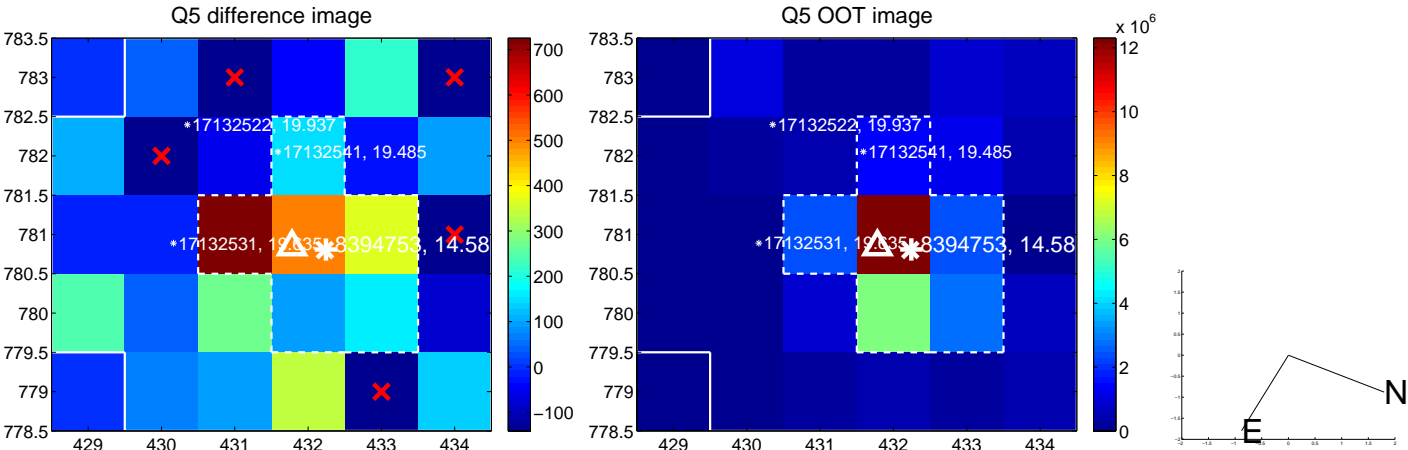


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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.

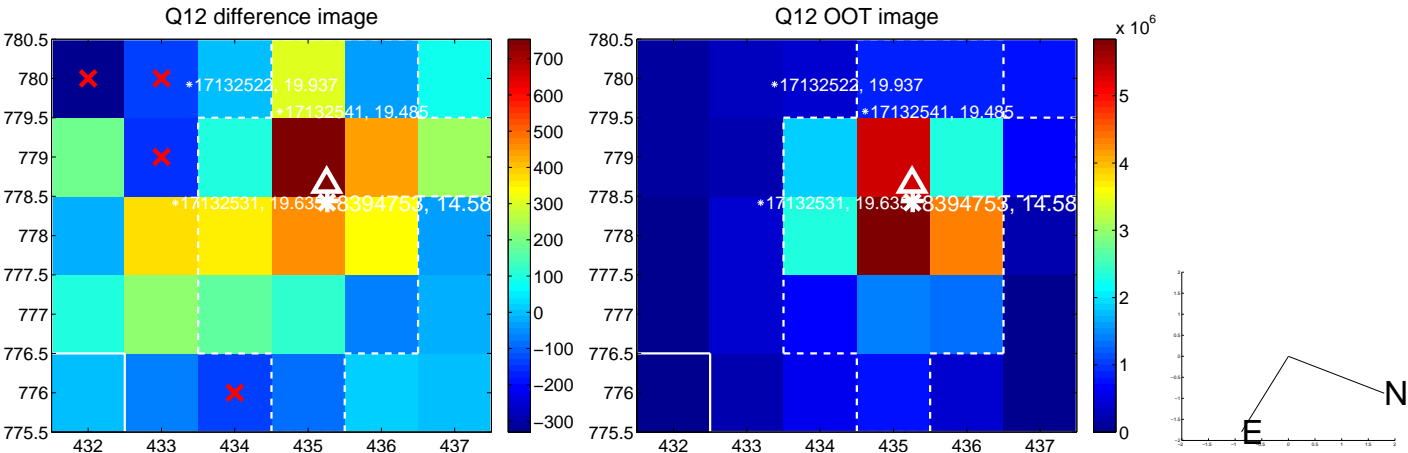
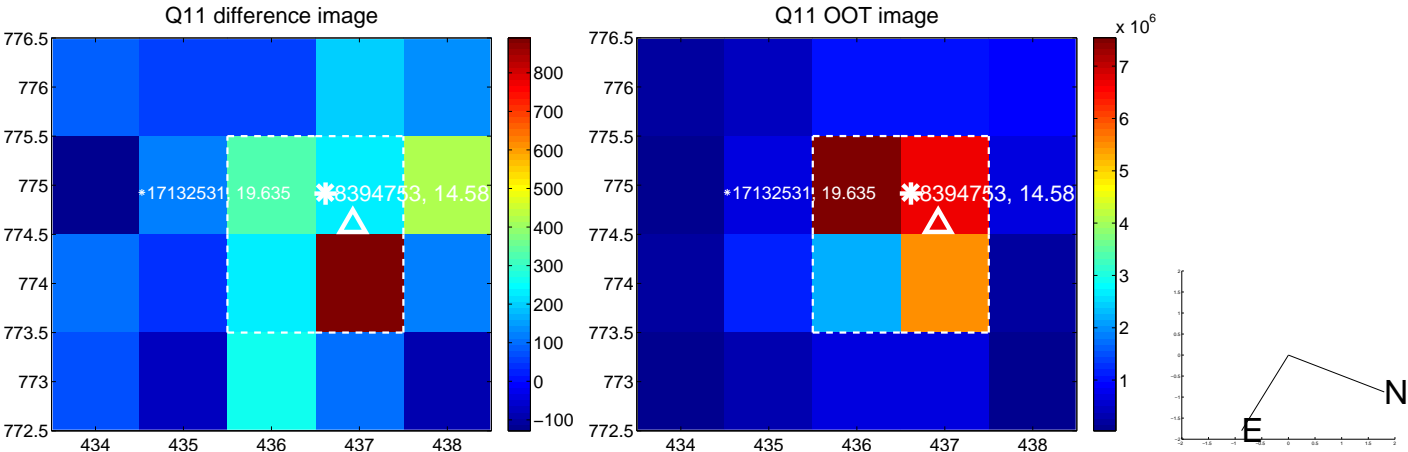
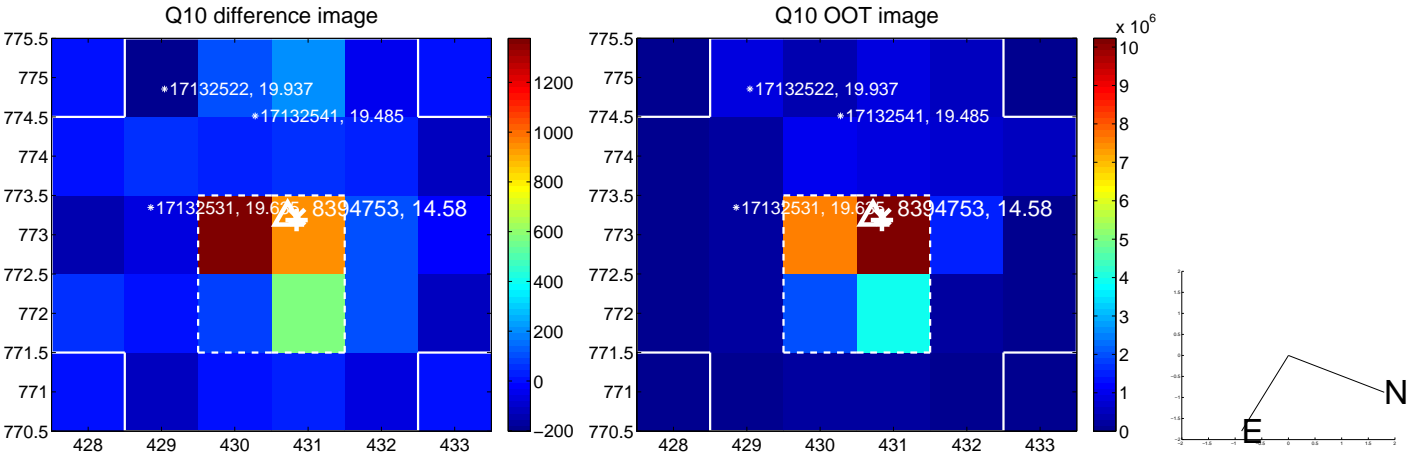
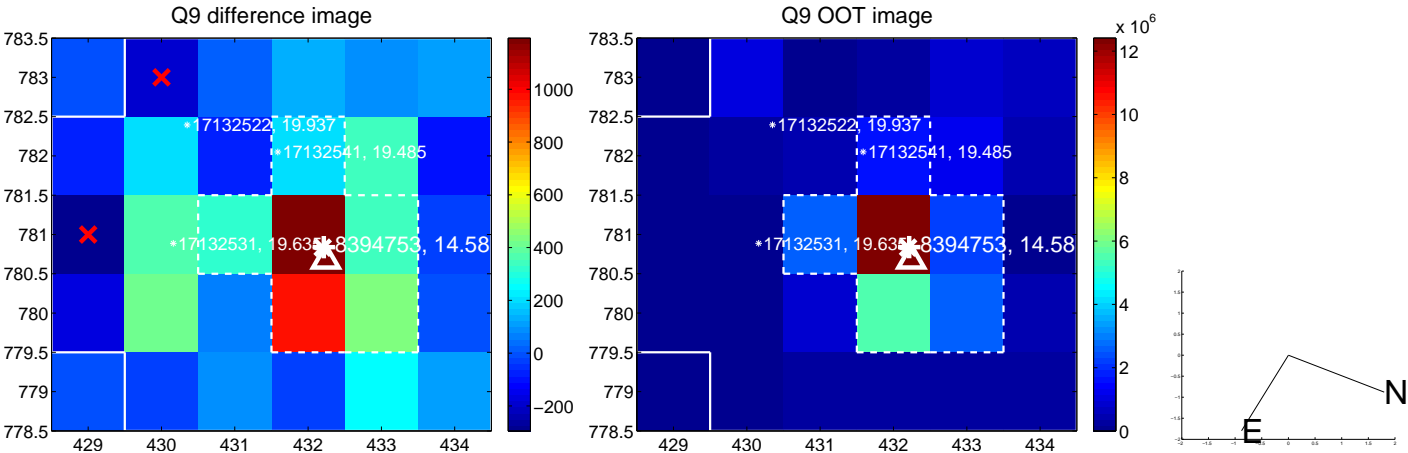


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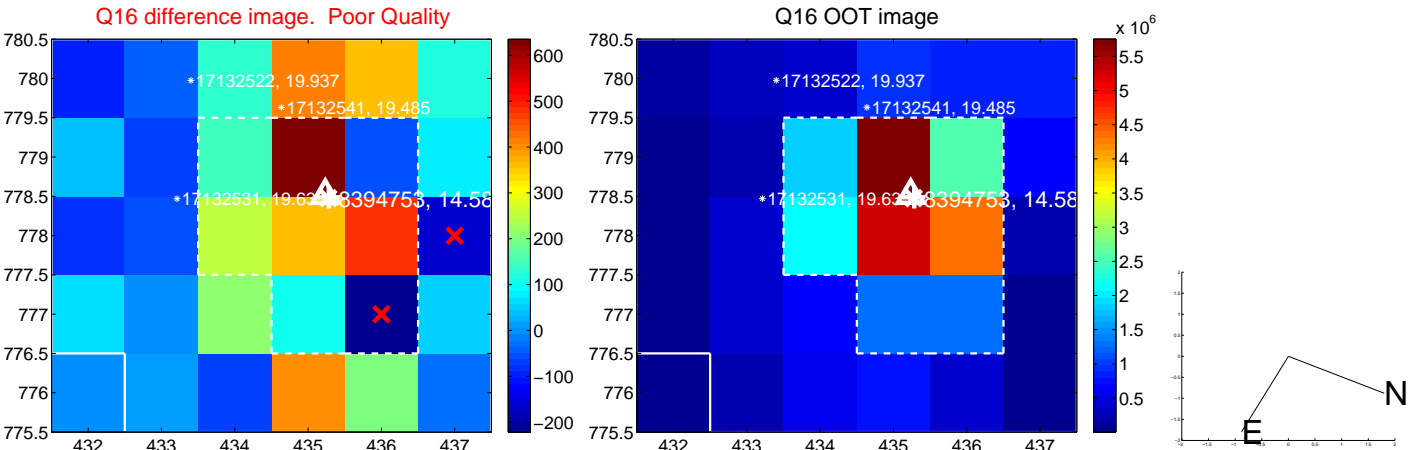
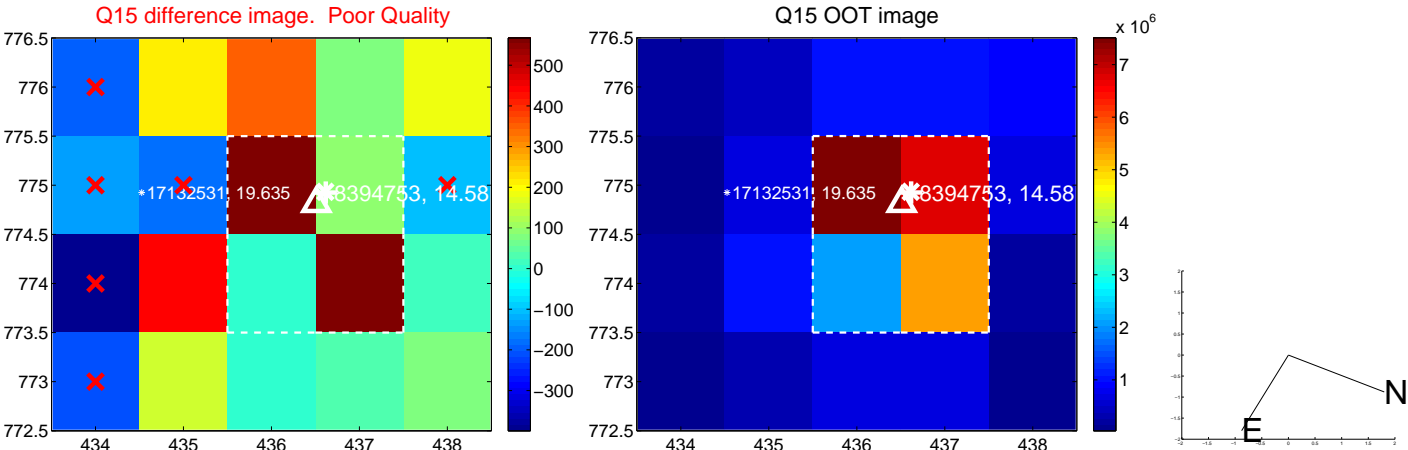
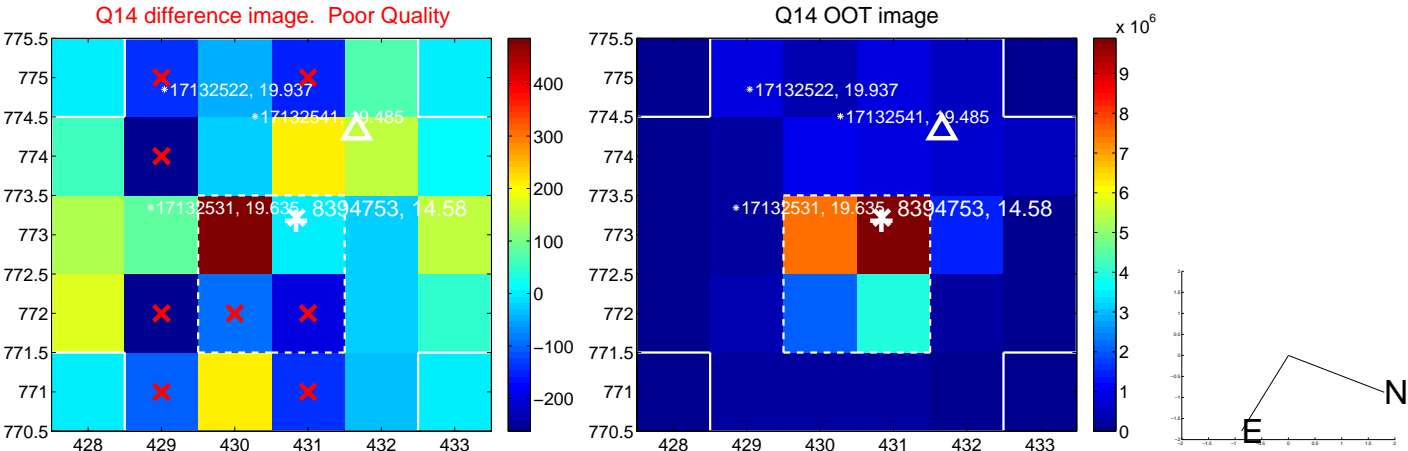
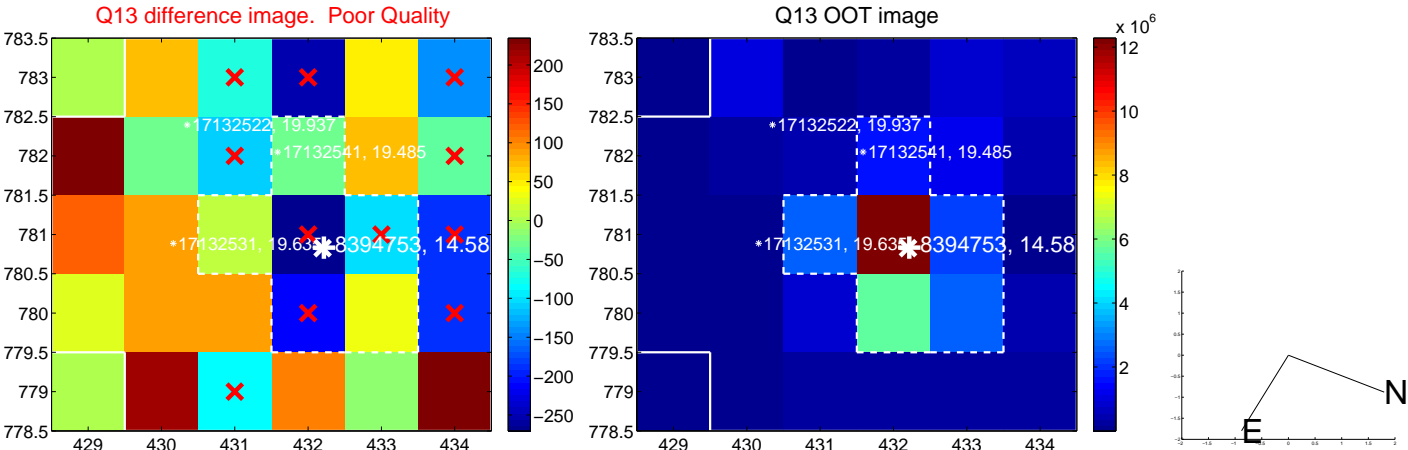




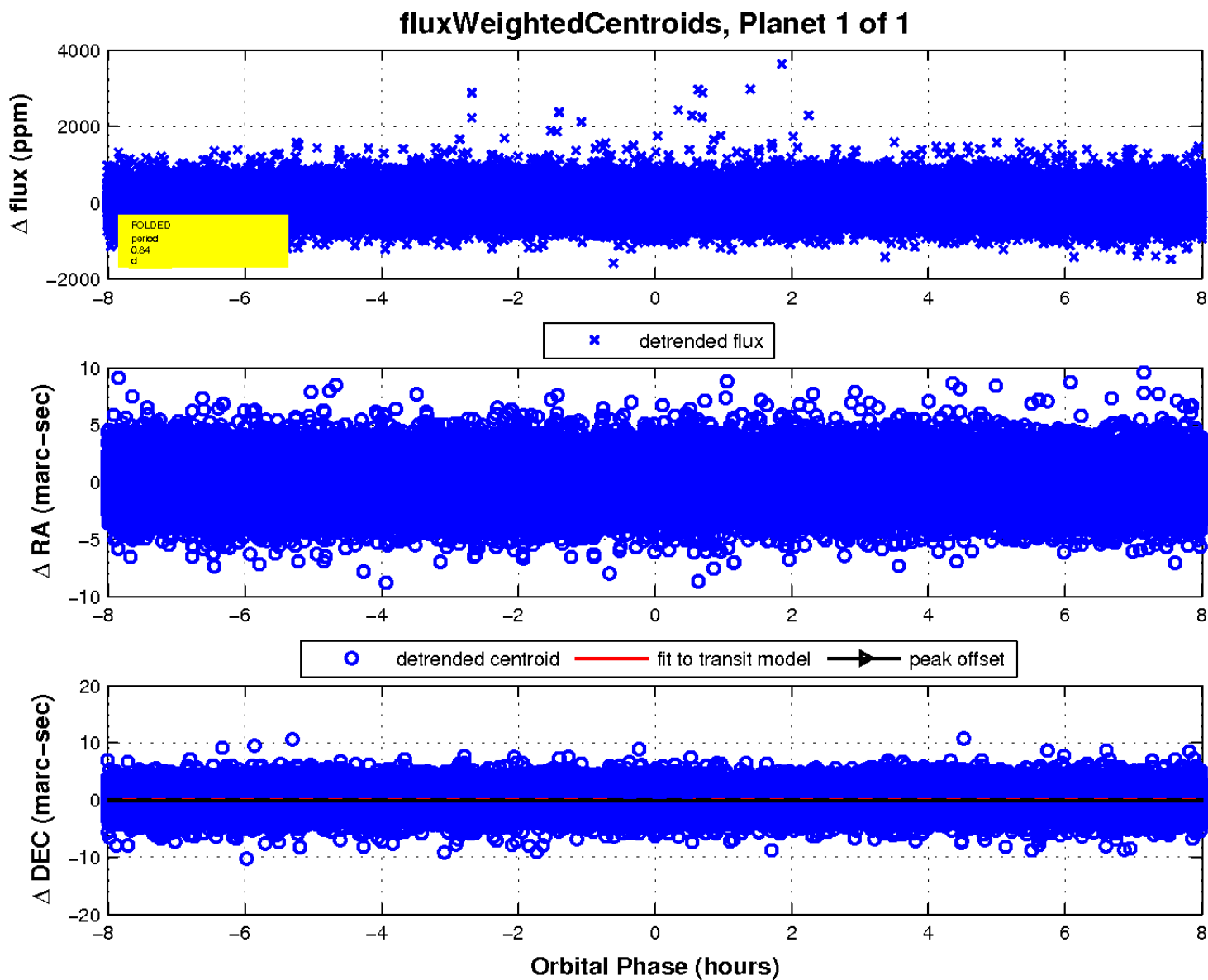
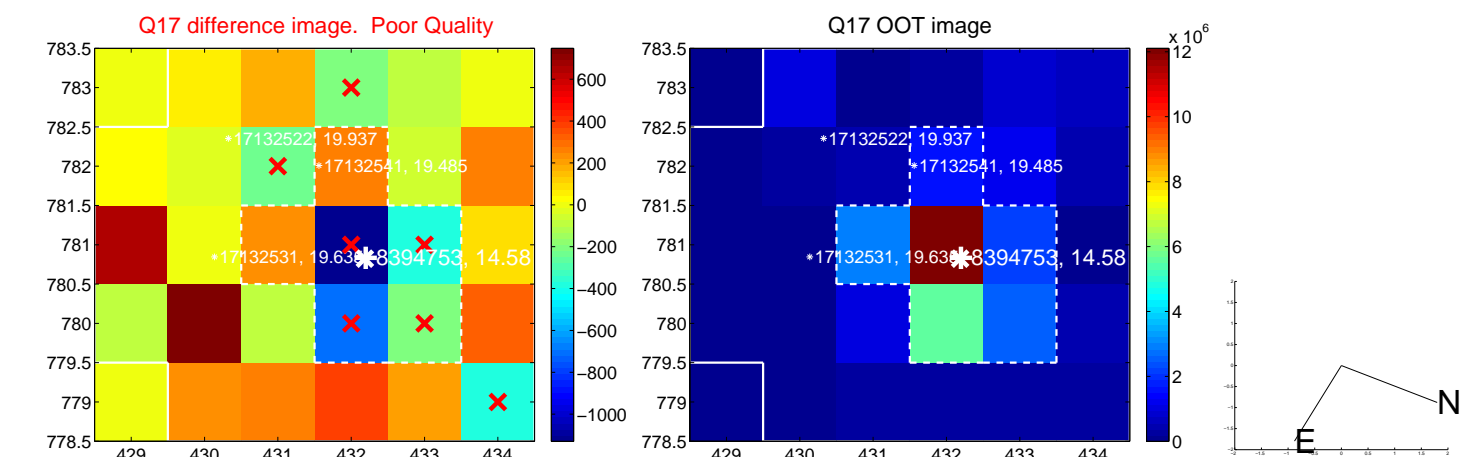
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

