

# KIC 004850046

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004850046-01	OBS	No	1.321878	132.345486	0.0	1.653	9.7	0.0	1.05	6510	0.00	3005.18

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004850046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

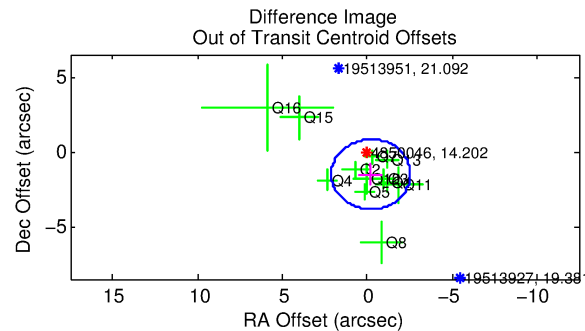
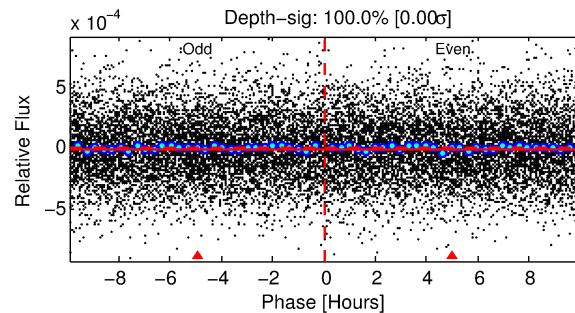
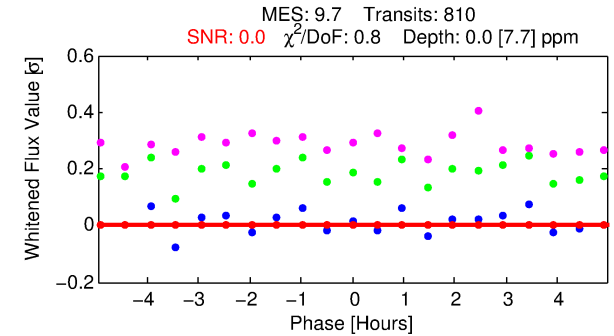
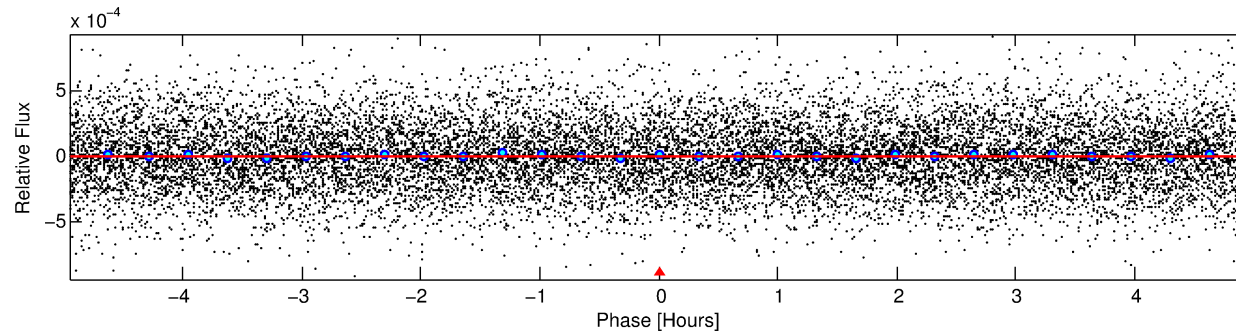
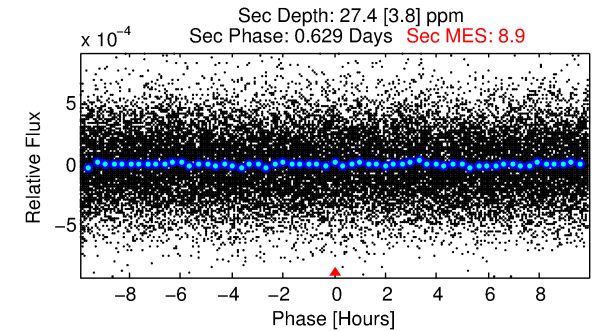
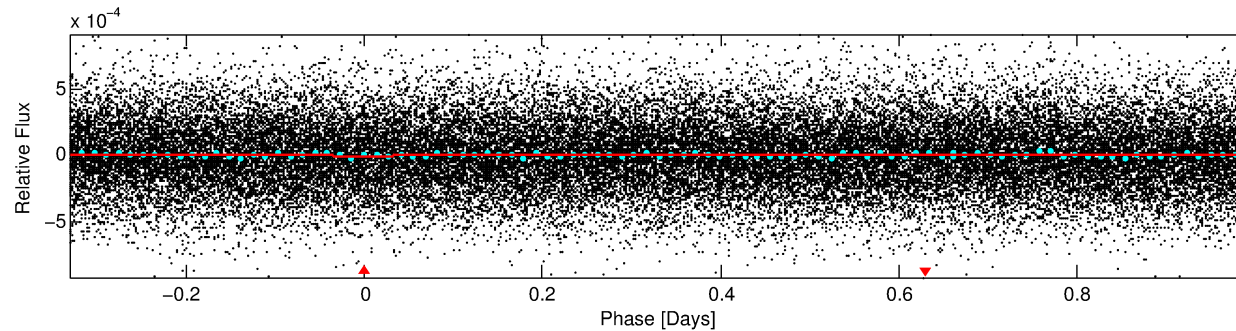
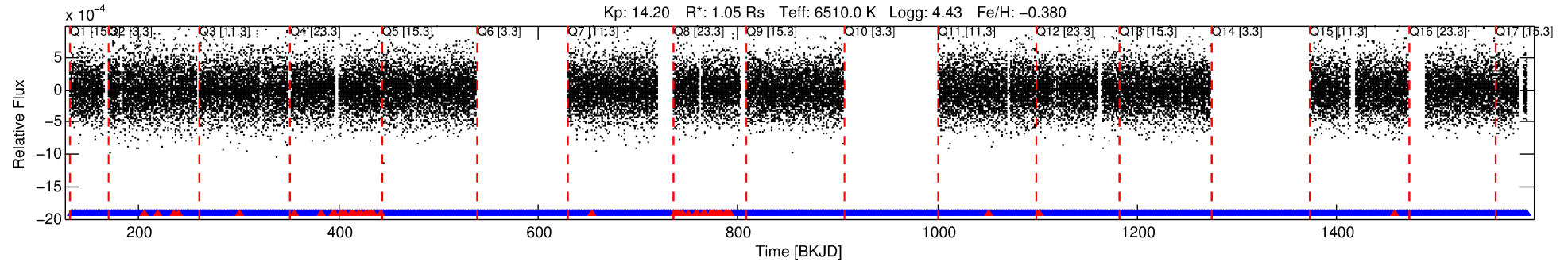
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004850046-01

No Significant Match Found

# DV One-Page Summary

KIC: 4850046 Candidate: 1 of 1 Period: 1.322 d



## DV Fit Results:

Period = 1.32188 [4.48200] d  
Epoch = 132.3455 [1014.6031] BKJD  
Rp/R\* = 0.0000 [0.3773]  
a/R\* = 1.87 [5703.42]  
b = 0.97 [938.56]  
Seff = 3005.18 [13633.41]  
Teff = 1888 [2141] K  
Rp = 0.00 [43.15] Re  
a = 0.0243 [0.0551] AU  
Ag = 3443701.50 [185241614073.02] [0.00σ]  
Teffp = 125745 [1691086275] K [0.00σ]

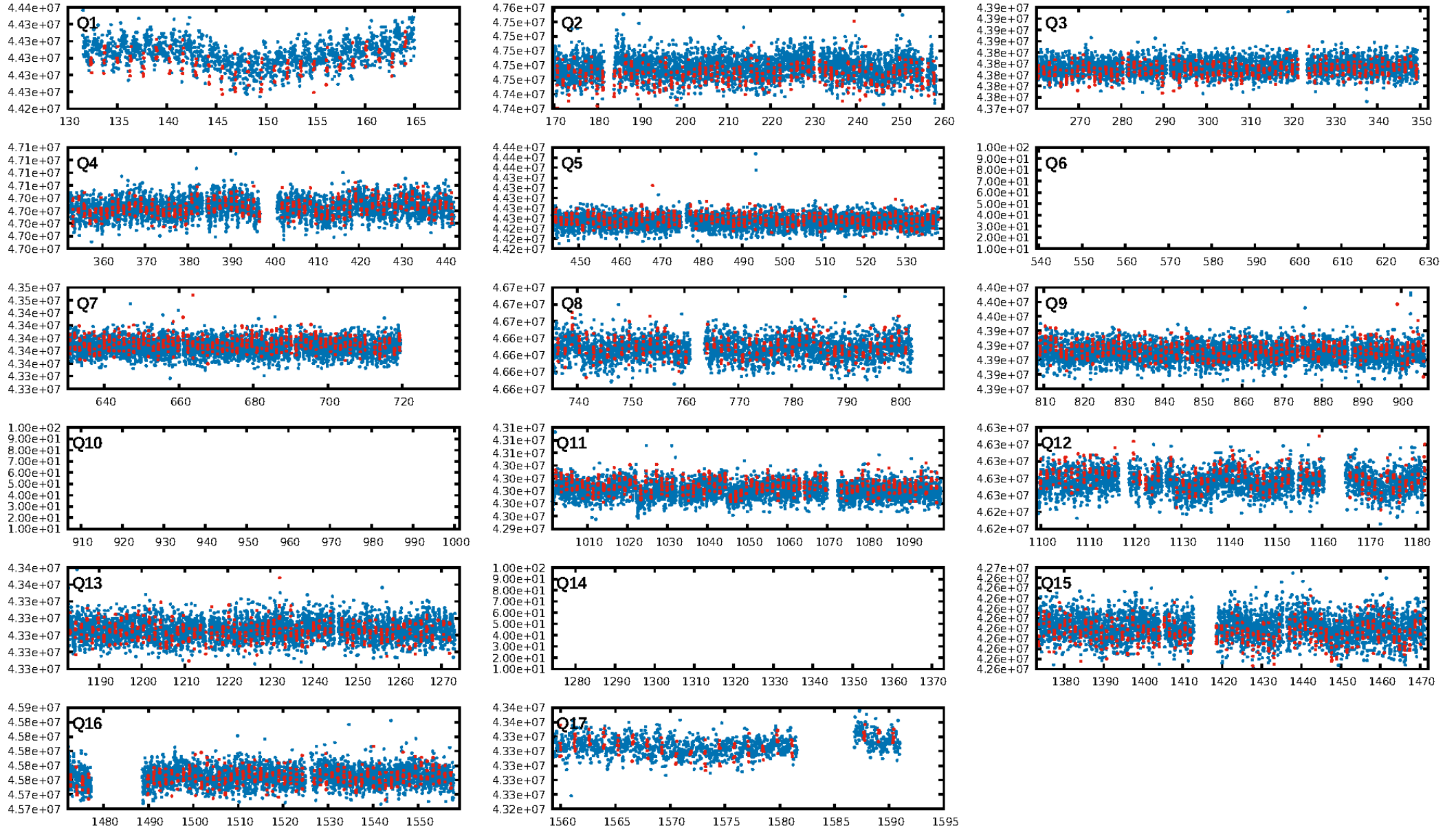
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.25e-22  
RollingBand-fgt: 0.93 [715/765]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
QotOffset-rm: 1.524 arcsec [1.96σ]  
QicOffset-rm: 1.499 arcsec [2.35σ]  
QotOffset-st: 1/4/4/3 [12]  
QicOffset-st: 1/4/4/3 [12]  
DiffImageQuality-fgm: 0.42 [5/12]  
DiffImageOverlap-fno: 1.00 [14/14]

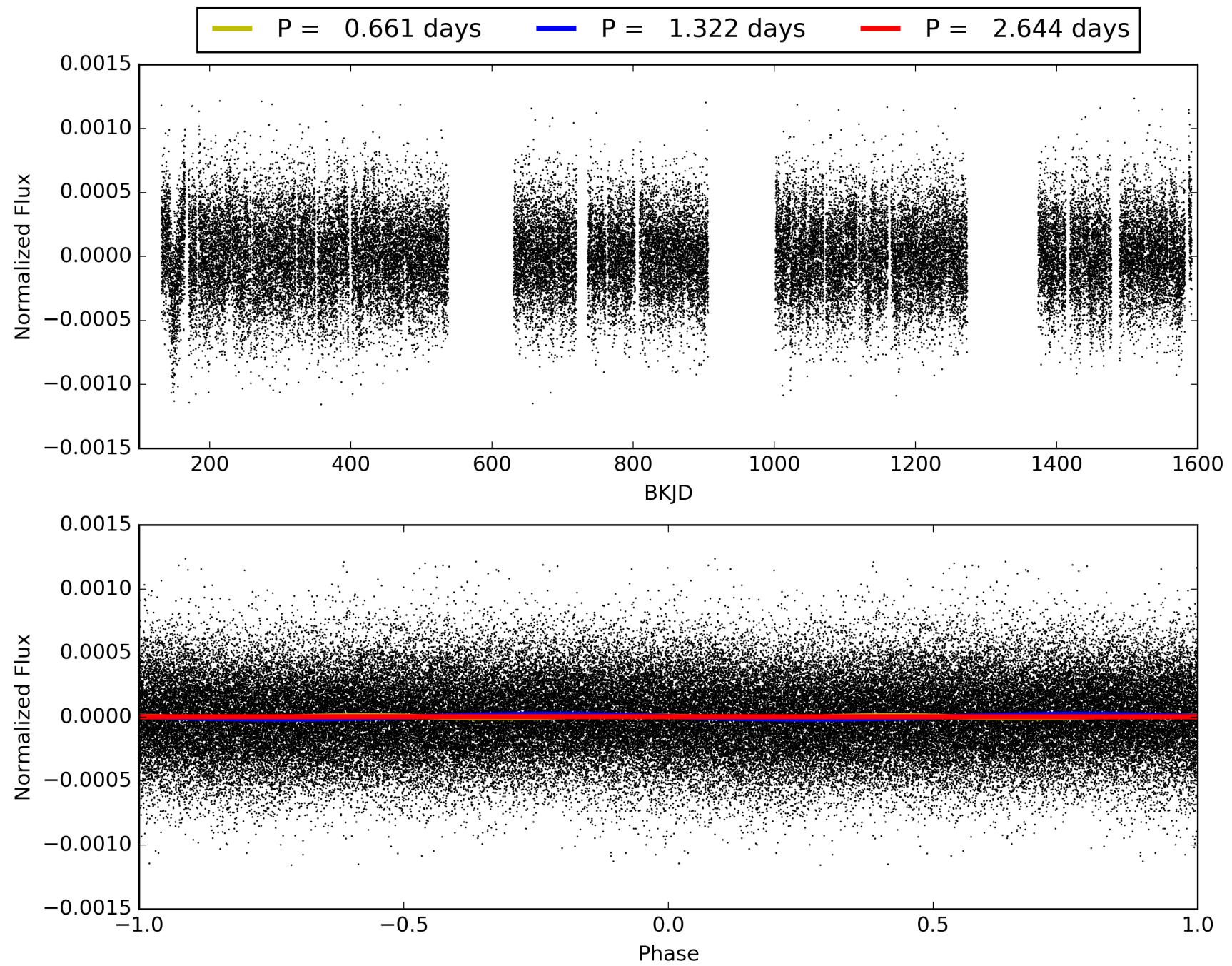
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:38:14 Z

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

# TCE 004850046-01, PDC Light Curves



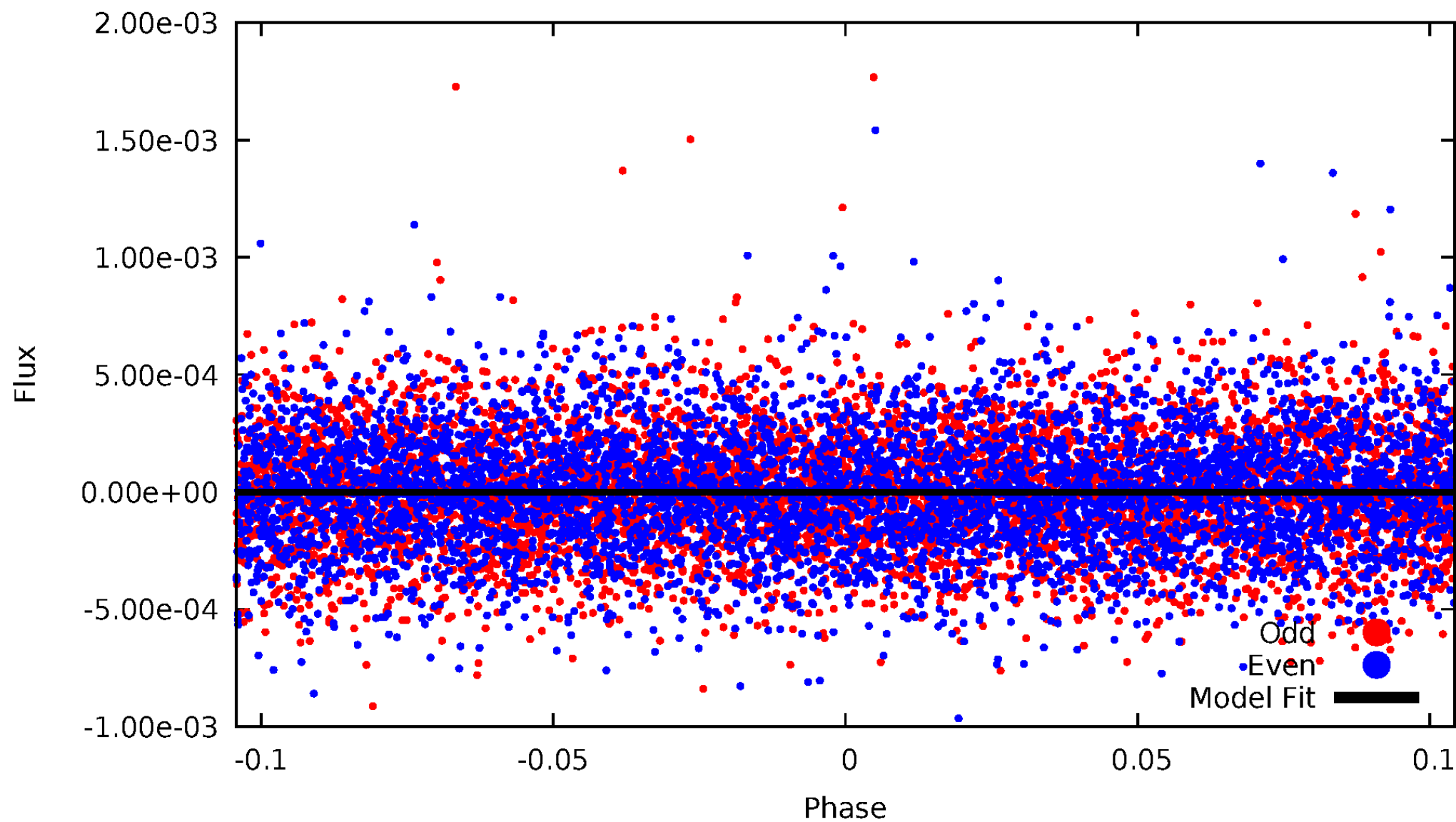
TCE 004850046-01





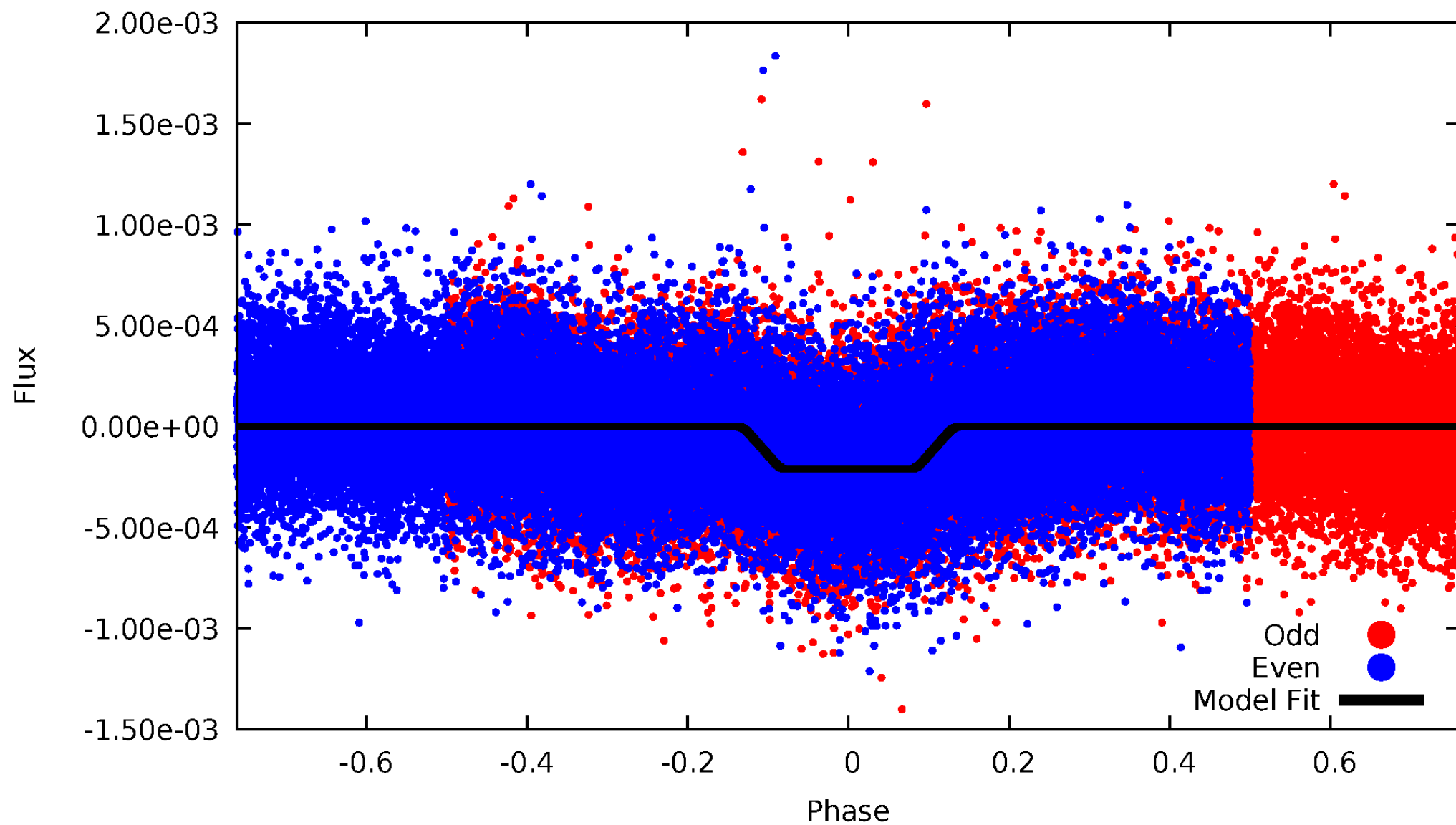
# DV Odd/Even

TCE 004850046-01



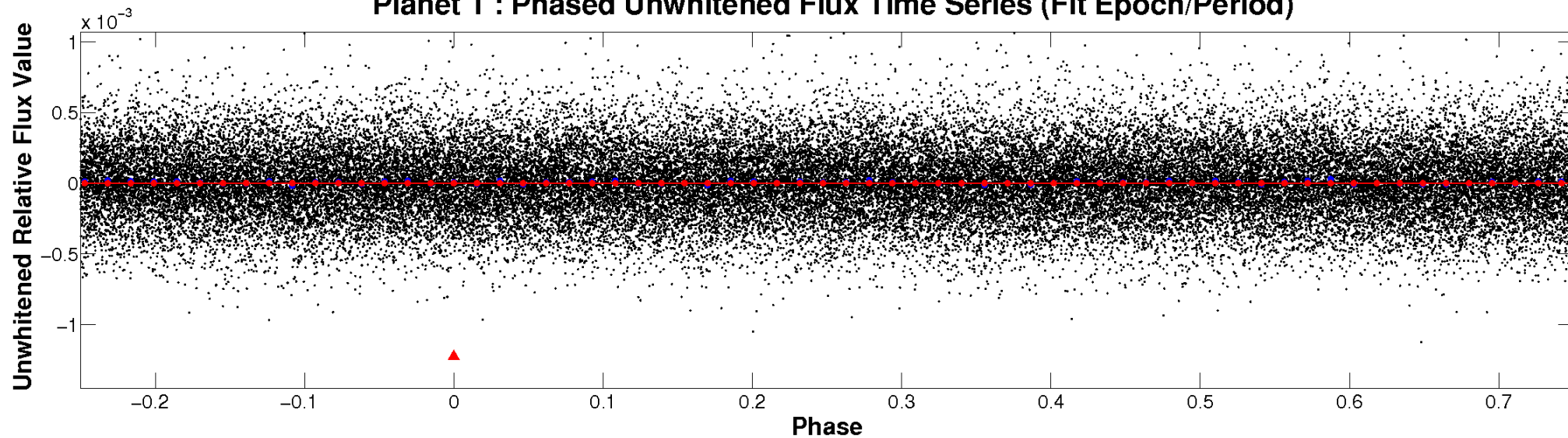
# ALT Odd/Even

TCE 004850046-01

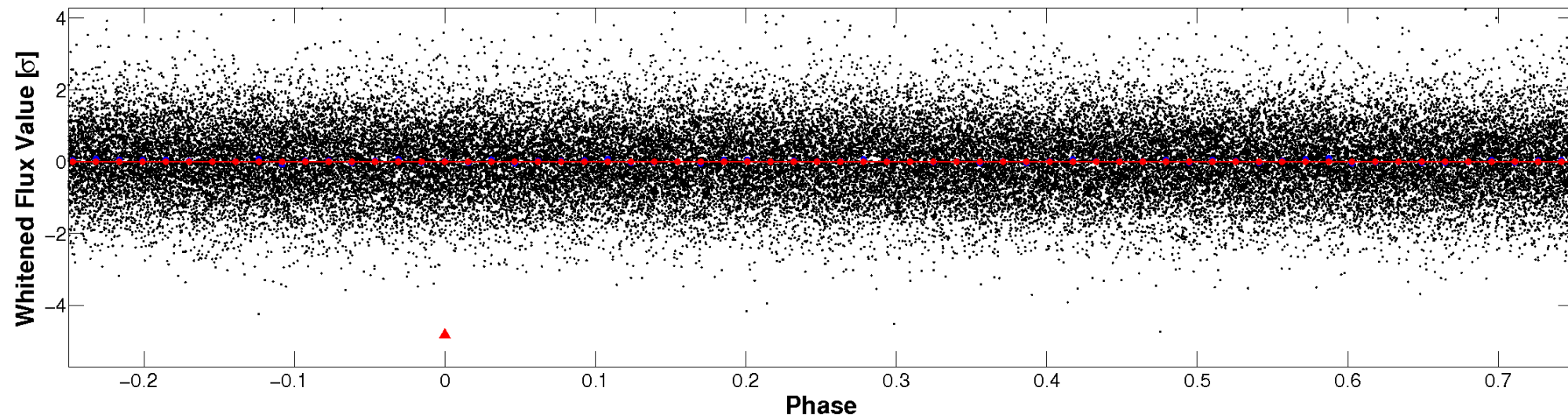


# Non-Whitened Vs. Whitened Light Curve

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

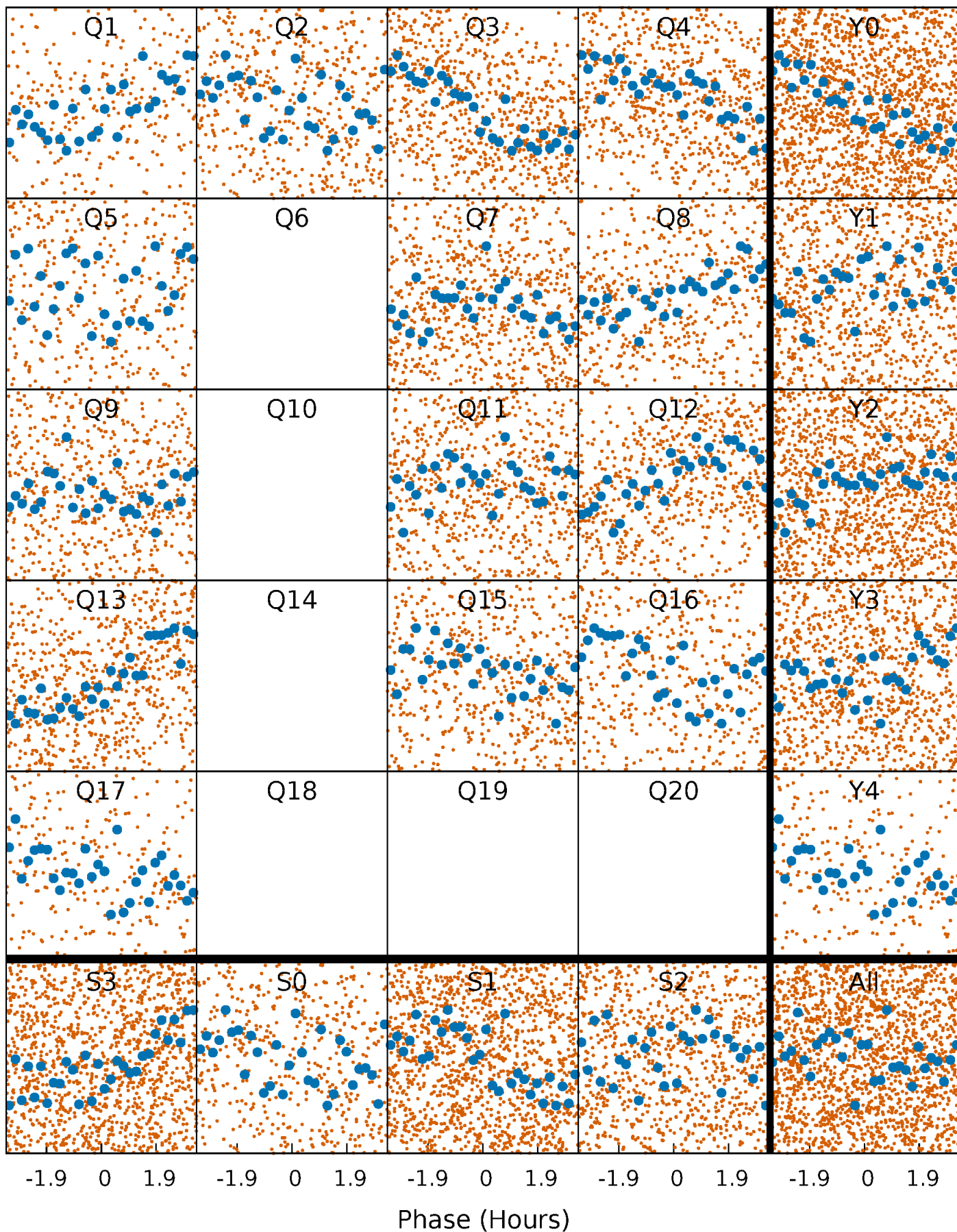


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

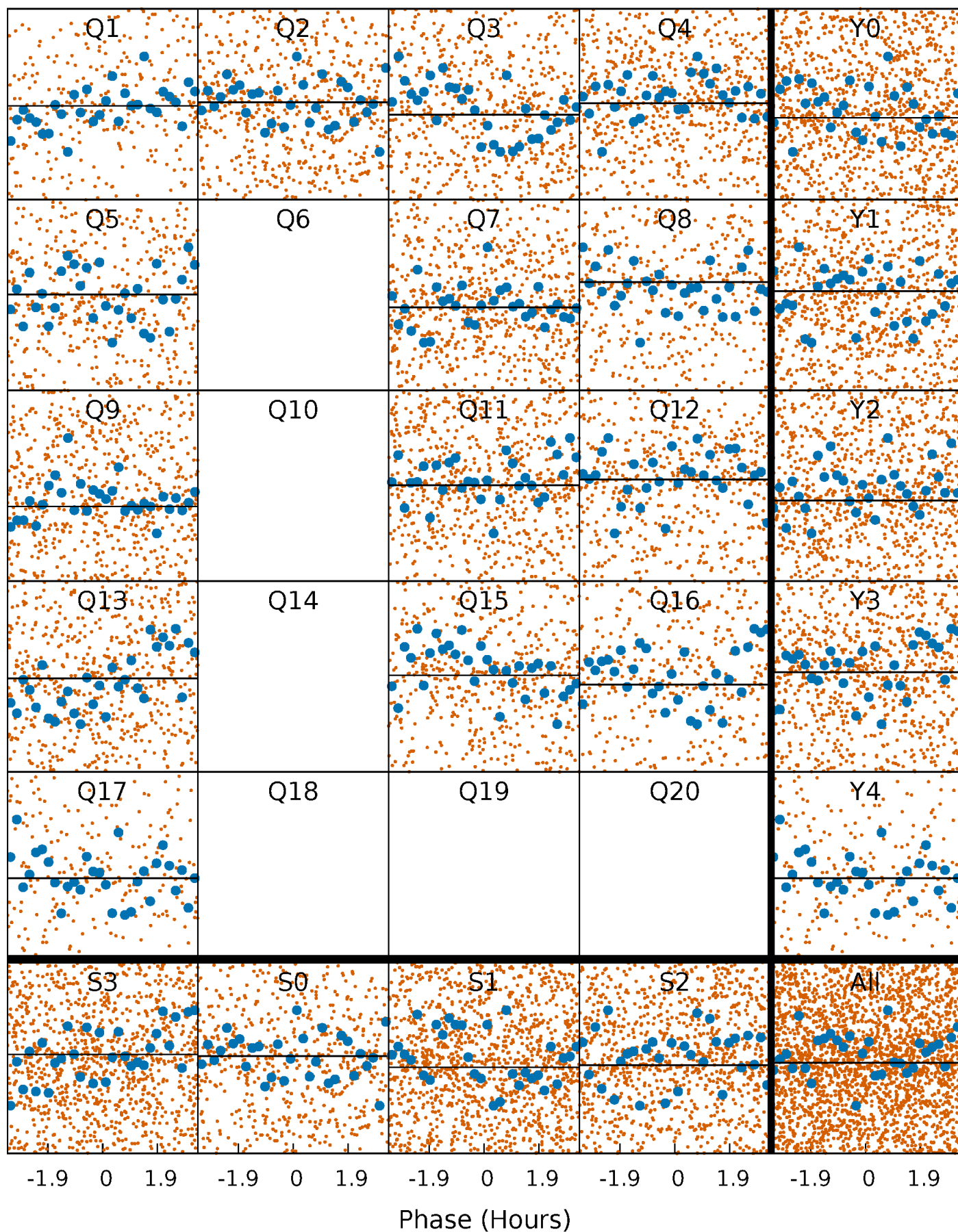
TCE 004850046-01 P= 1.321878 Days  $T_0=132.345486$  (BKJD)





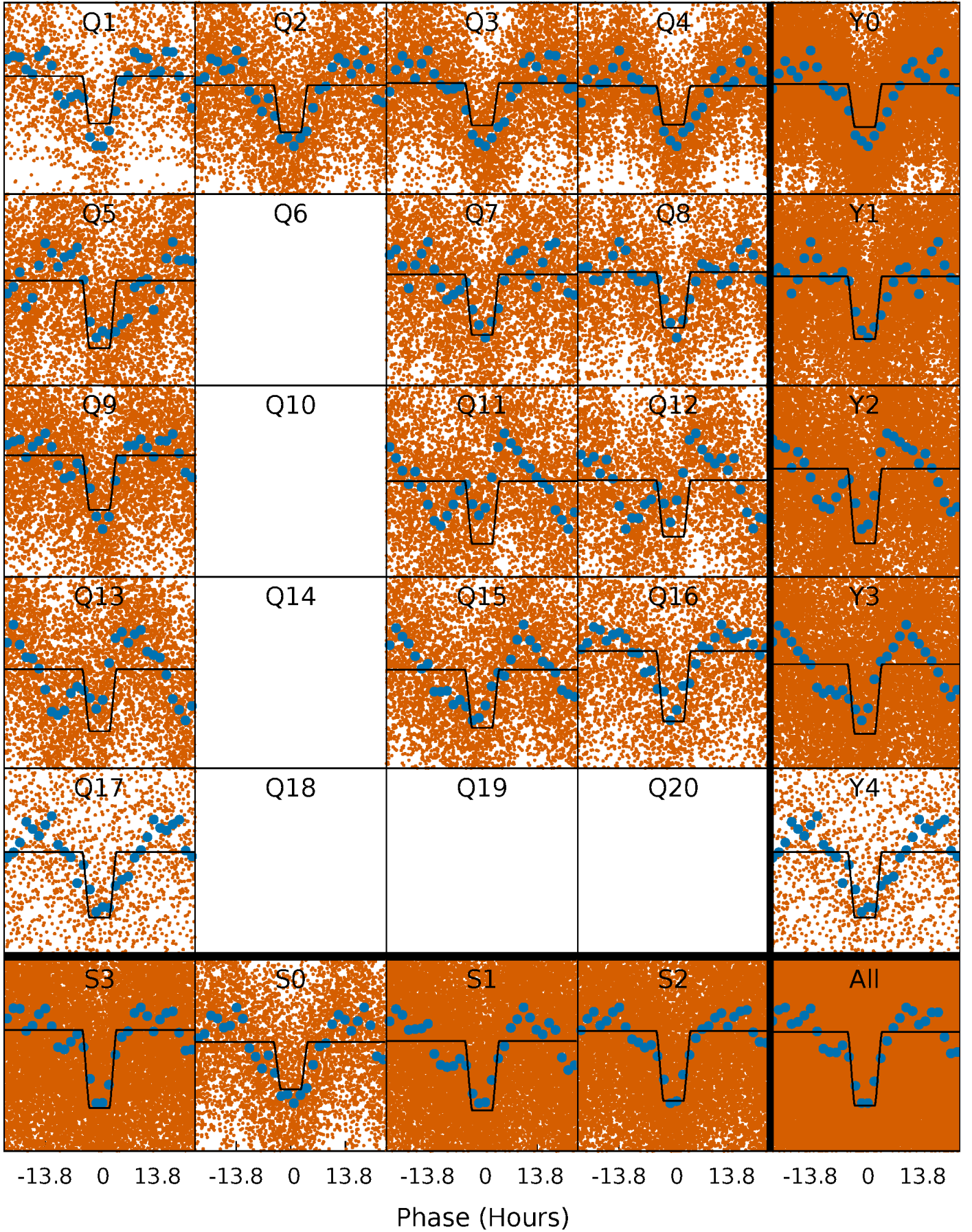
# DV Quarter-Phased Transit Curves

TCE 004850046-01 P= 1.321878 Days  $T_0=132.345486$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

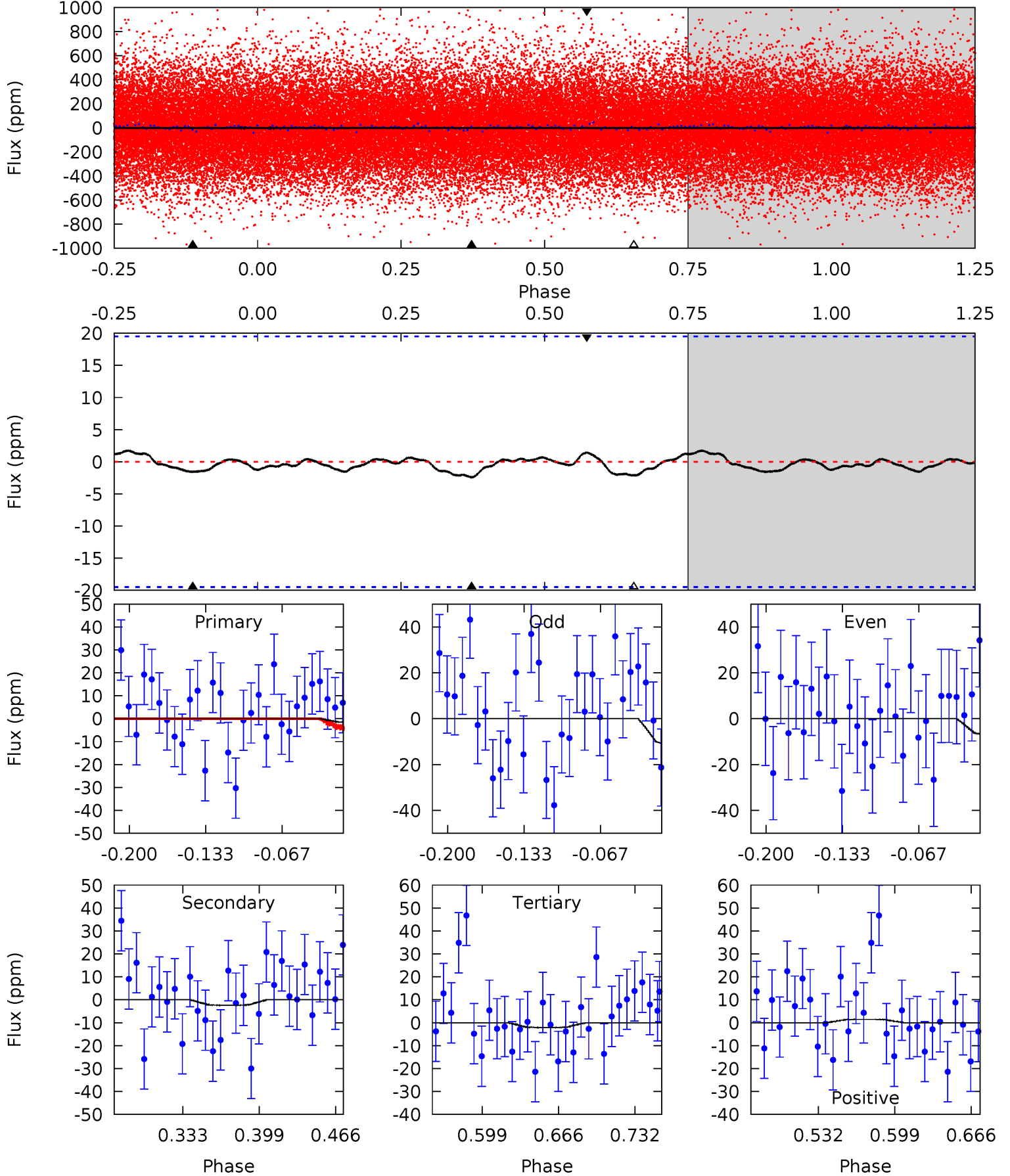
TCE 004850046-01 P= 1.323511 Days  $T_0=132.268963$  (BKJD)



# DV Model-Shift Uniqueness Test

004850046-01, P = 1.321878 Days, E = 131.023608 Days

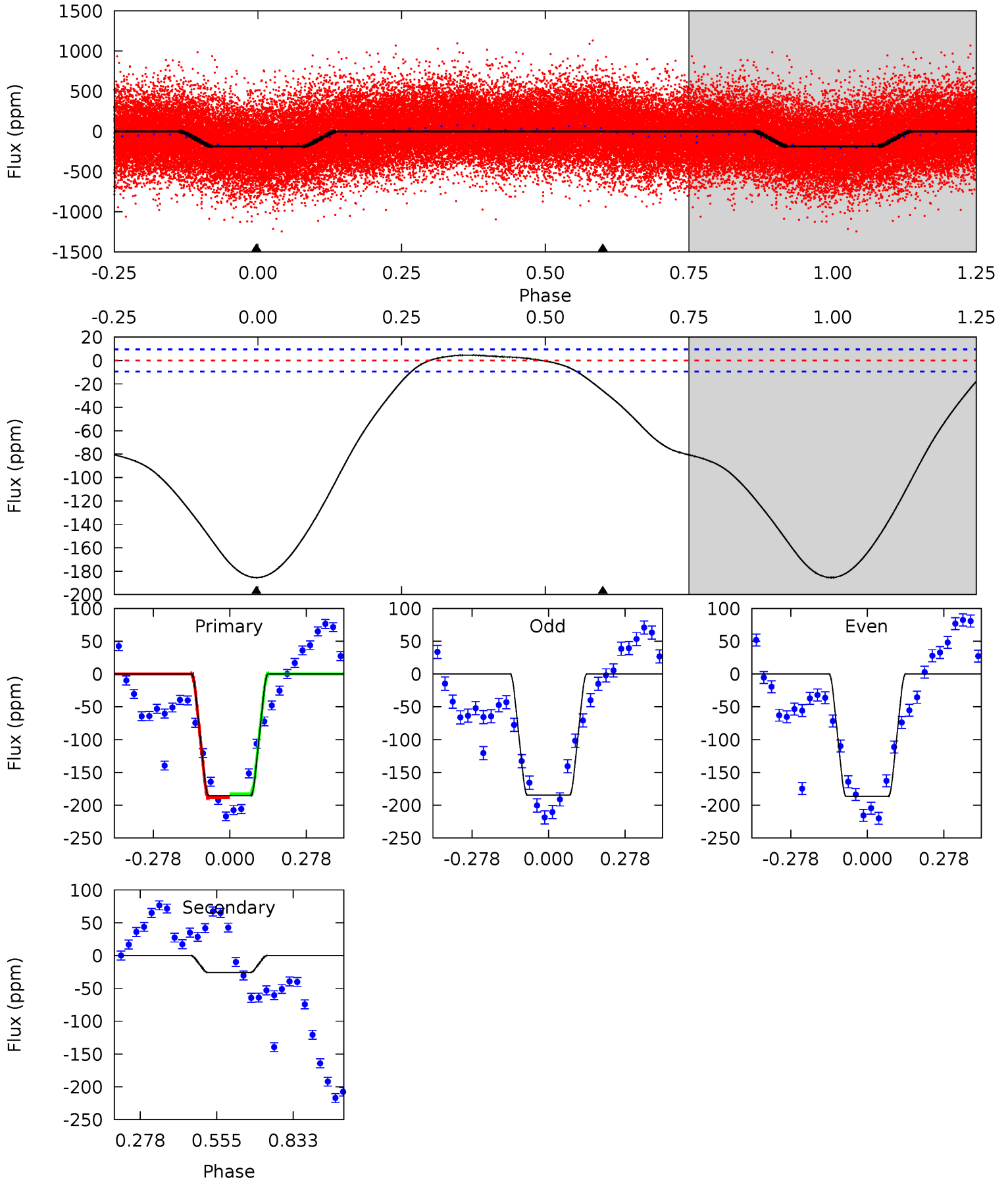
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.38	0.58	0.51	0.34	4.65	1.83	0.21	-0.13	0.04	0.07	0.23	0.50	0.29	0.42	0.46



# Alt Model-Shift Uniqueness Test

004850046-01, P = 1.323511 Days, E = 130.945452 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
85.1	11.8	0	0	4.35	1.09	3.10	85.1	85.1	11.8	11.8	0.48	1.02	0.02	1.32





### Stellar Parameters For KIC 004850046

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6510^{+157}_{-196}$	$4.434^{+0.065}_{-0.195}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.310}_{-0.111}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.371}_{-0.700}$
	+2%/-3%	+1%/-4%	+66%/-92%	+30%/-11%	+13%/-13%	+28%/-53%
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 004850046-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-2 \pm 4$	$32.02^{+33.48}_{-23.66}$	$1967^{+877}_{-424}$	$-2470^{+307}_{-530}$	$0.001^{+0.024}_{-0.003}$
Alt.	$-26 \pm 2$	$32.34^{+34.51}_{-22.51}$	$1957^{+993}_{-425}$	$-2361^{+4335}_{-644}$	$0.026^{+0.376}_{-0.023}$

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

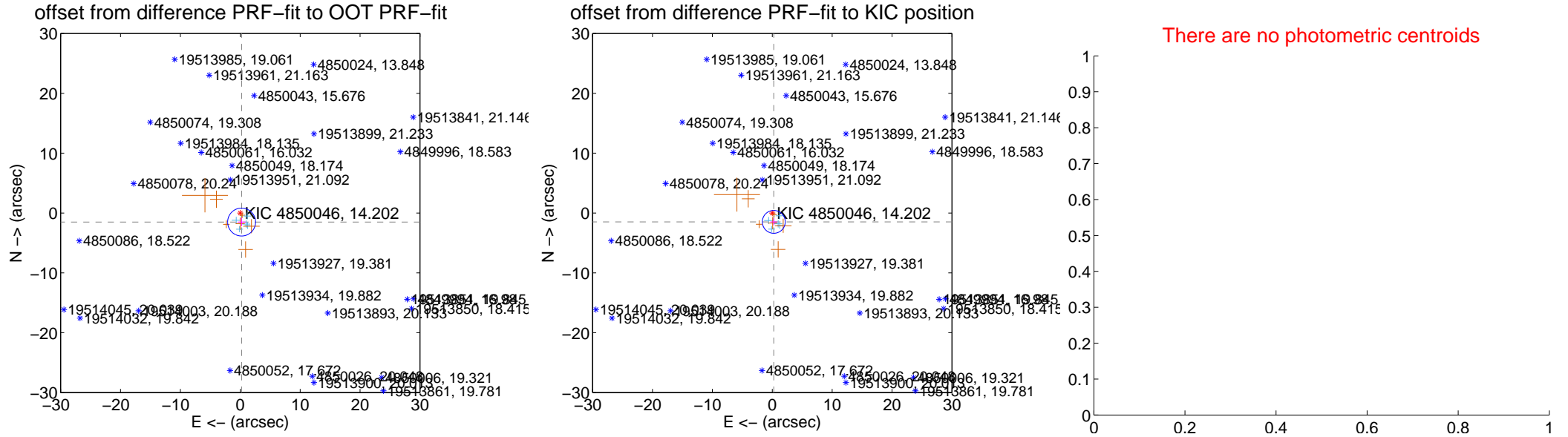
## DV Centroid Data

Supplemental centroid analysis for 004850046-01. Kepler magnitude: 14.20. Transit SNR 0.00

There are 5 quarters with good PRF difference image offsets

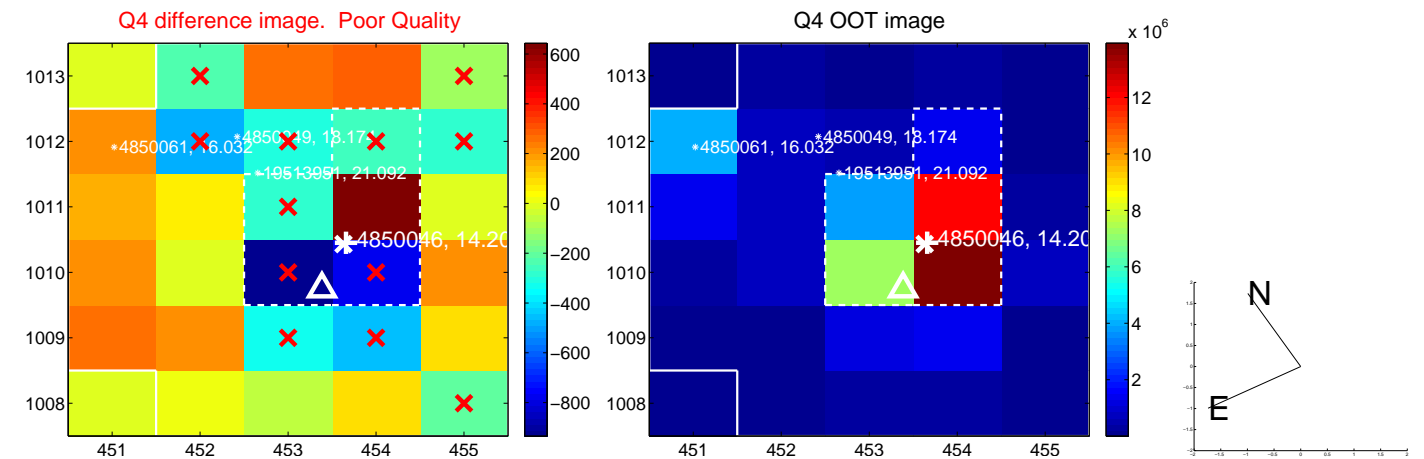
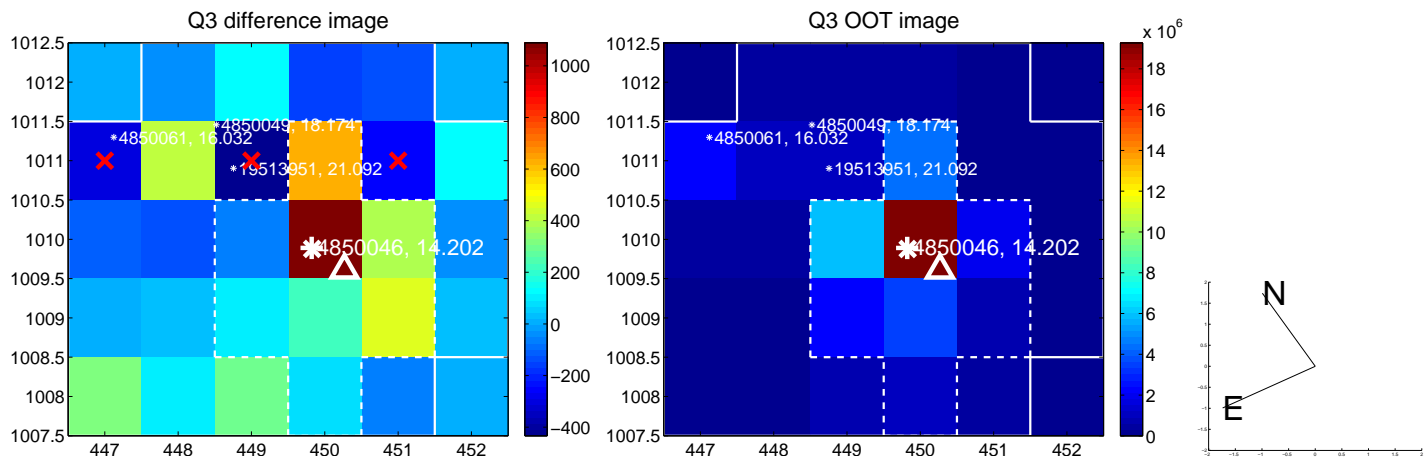
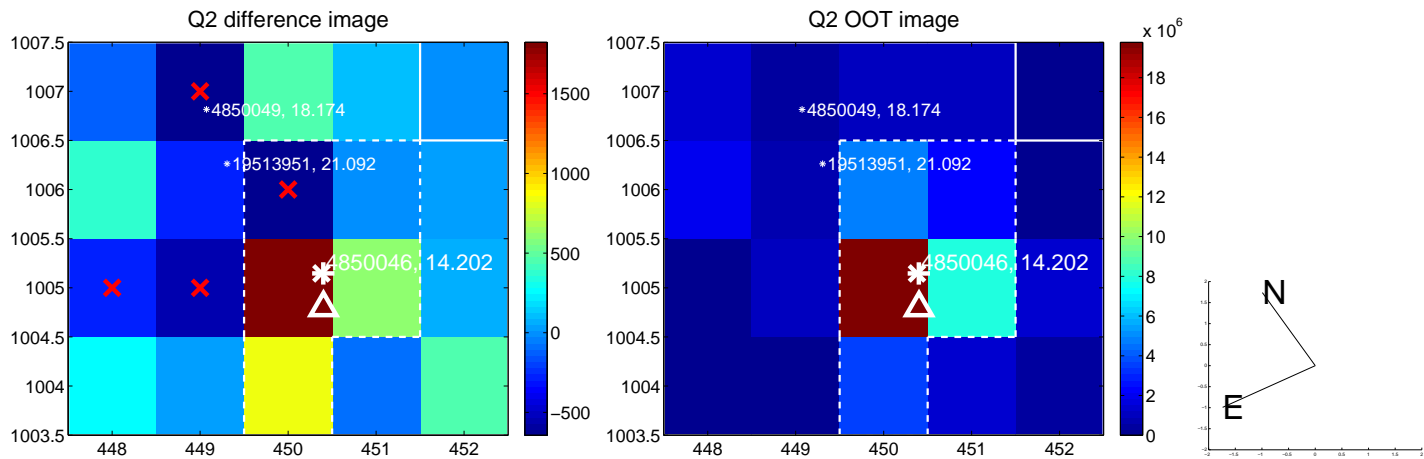
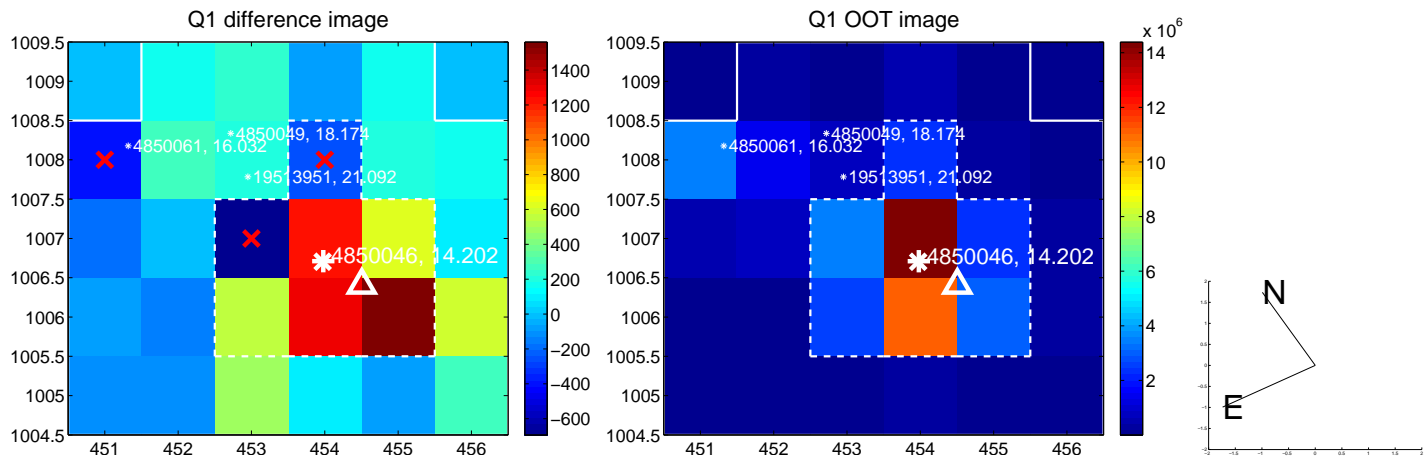
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.524 \pm 0.777$	1.96	$-0.220 \pm 0.672$	$-1.508 \pm 0.712$
PRF-fit source offset from KIC position	$1.499 \pm 0.637$	2.35	$-0.255 \pm 0.562$	$-1.477 \pm 0.584$
photometric centroid source offset	—	—	—	—

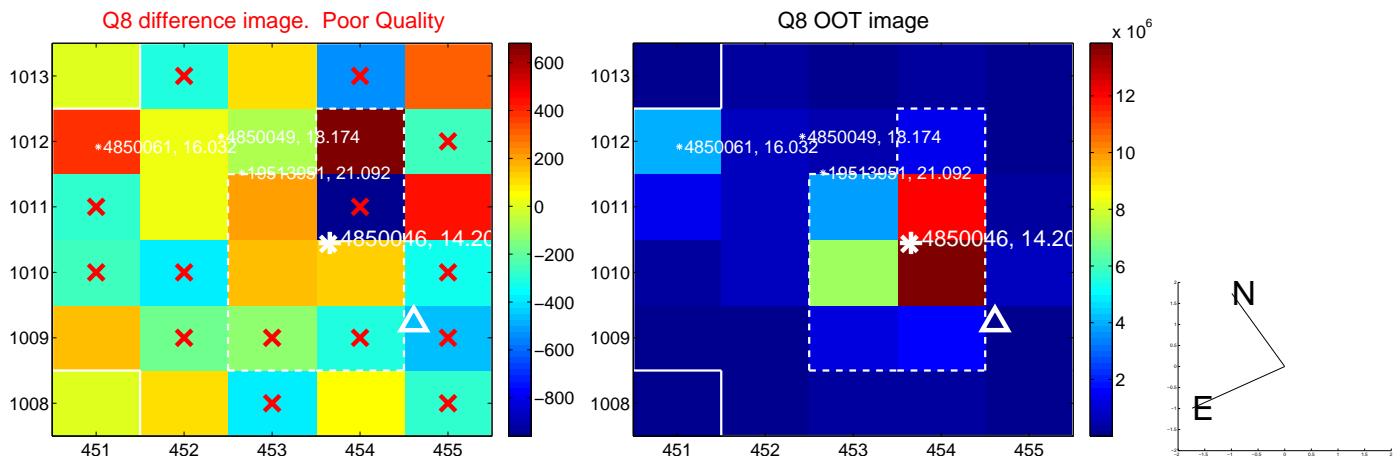
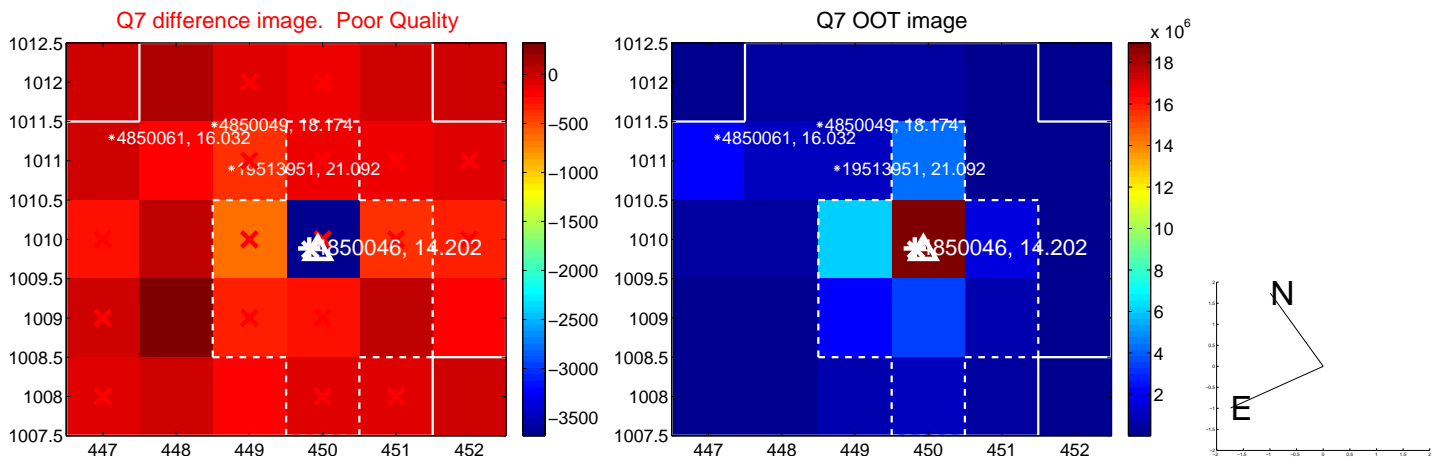
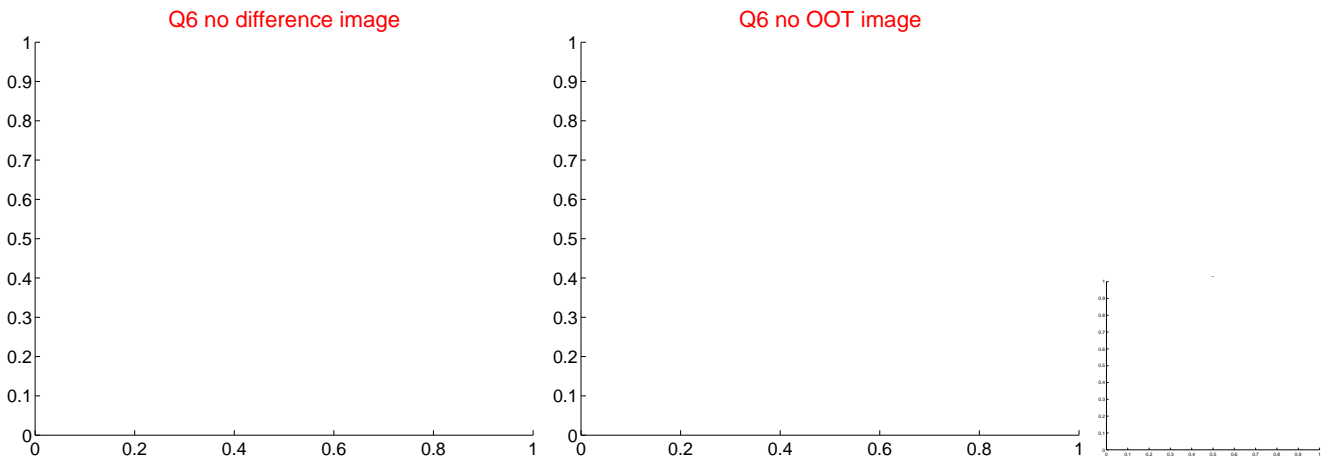
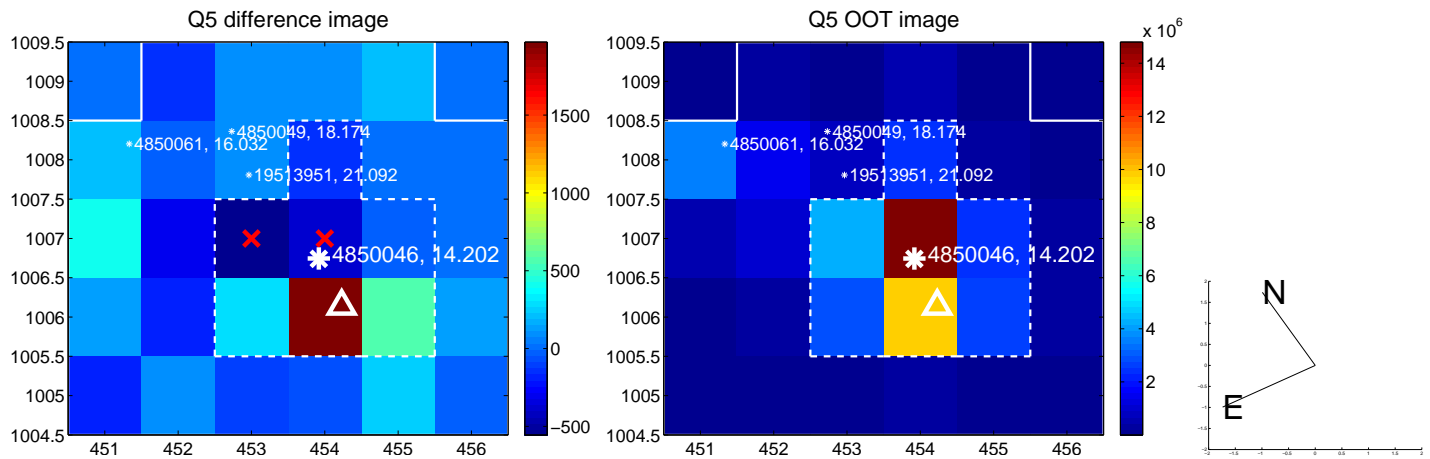


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

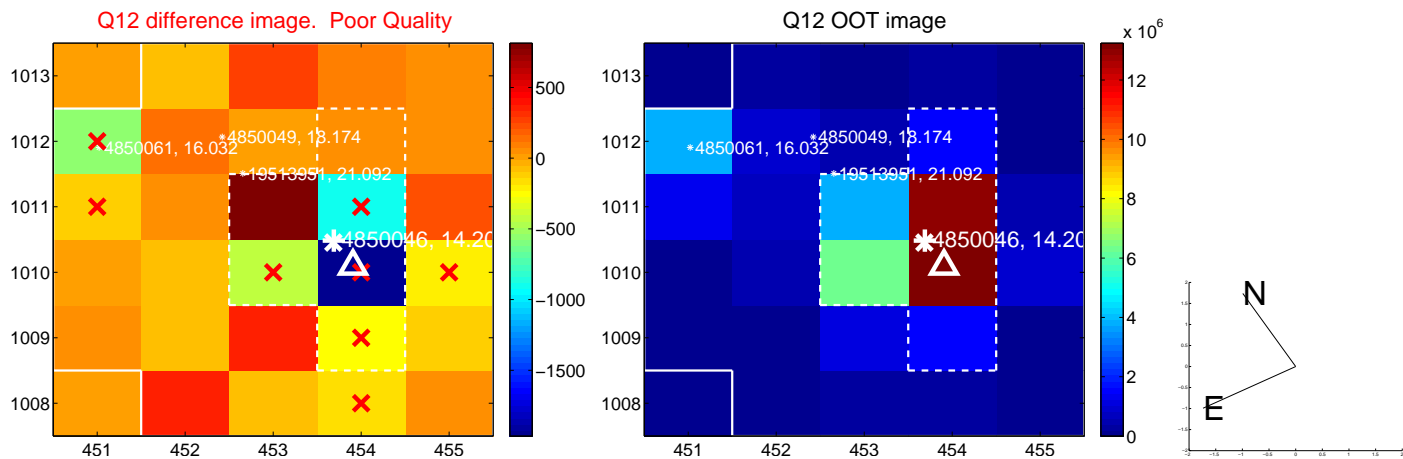
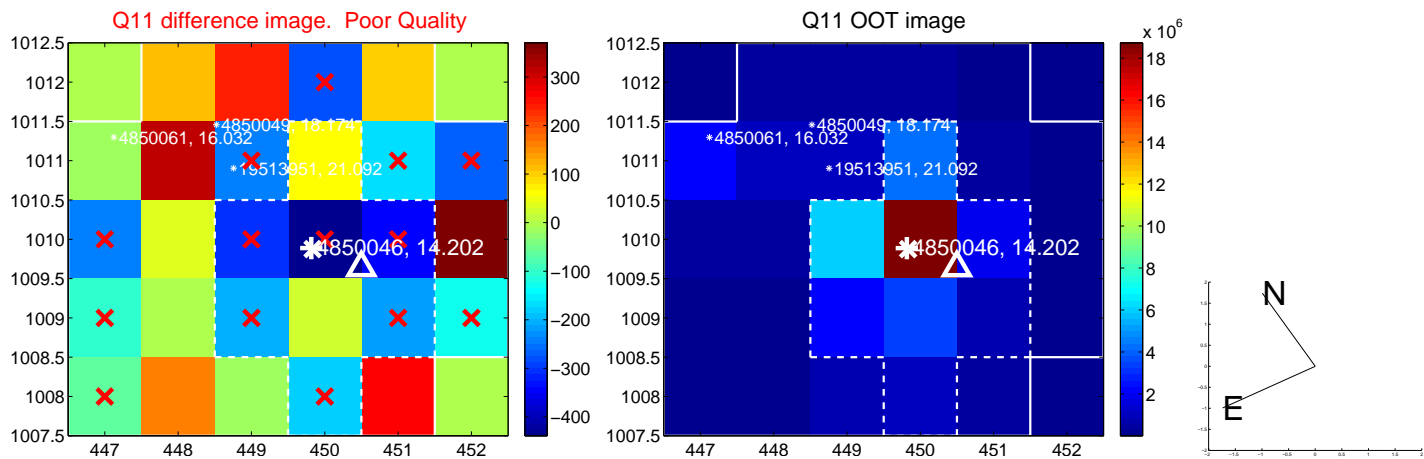
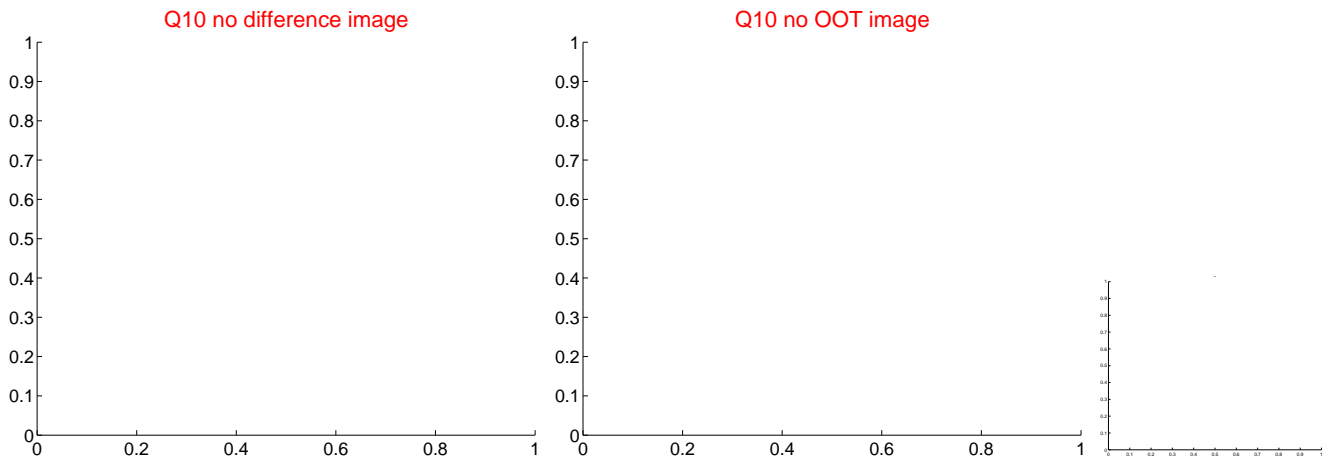
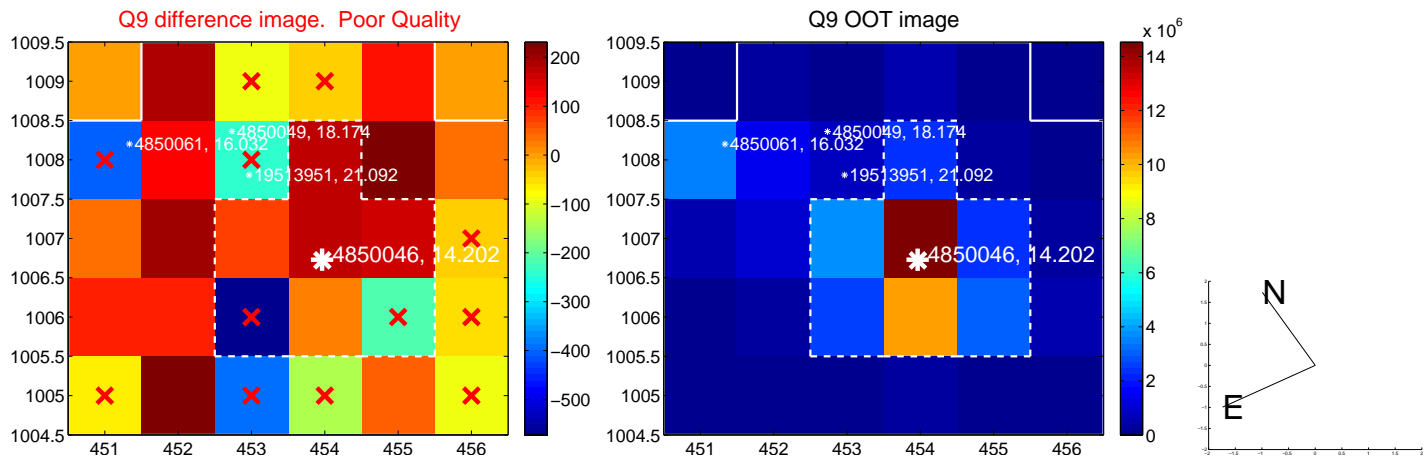


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

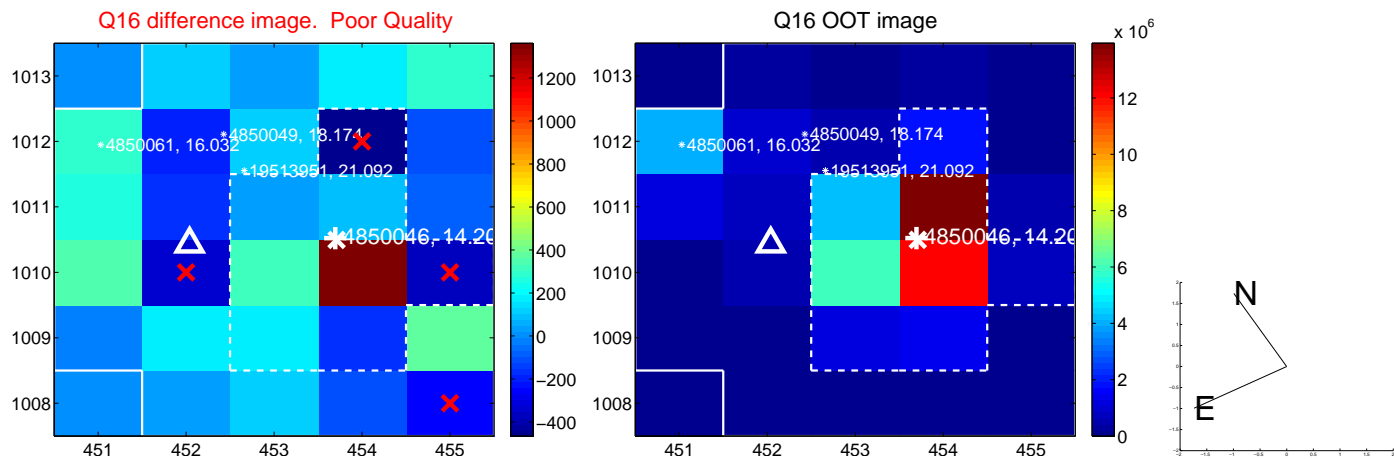
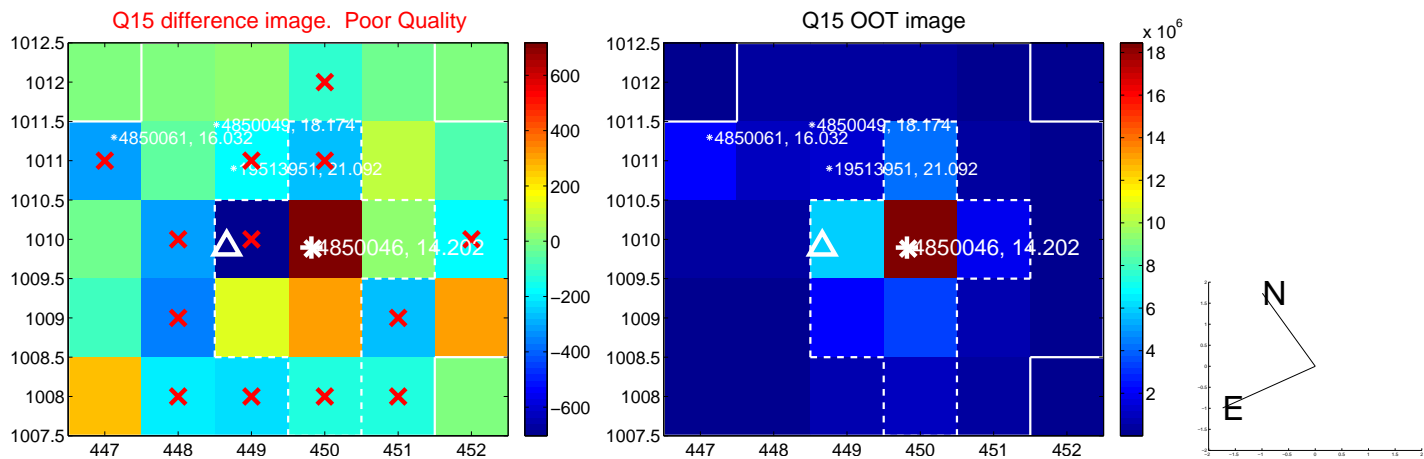
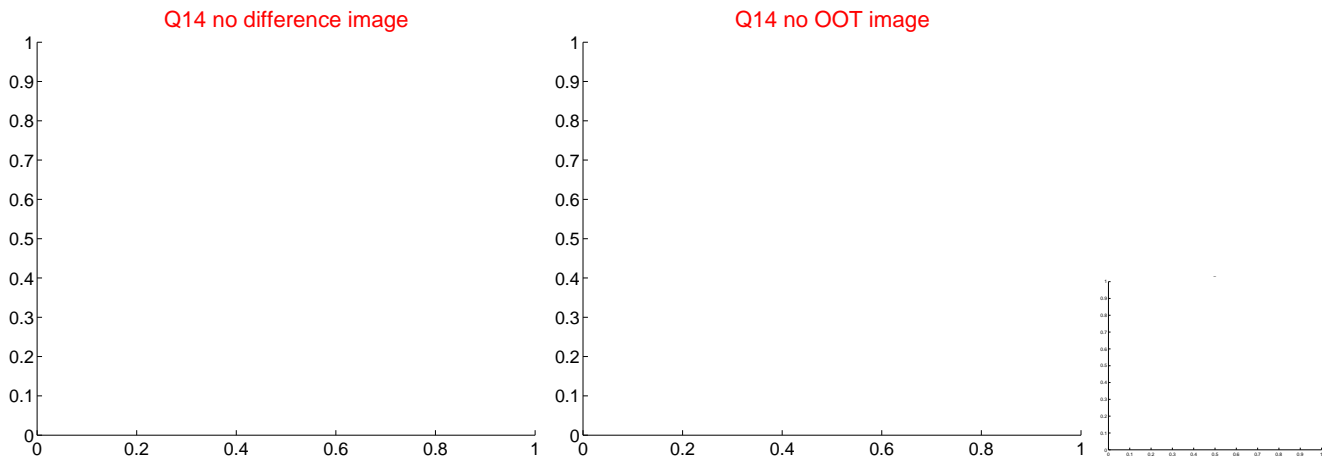
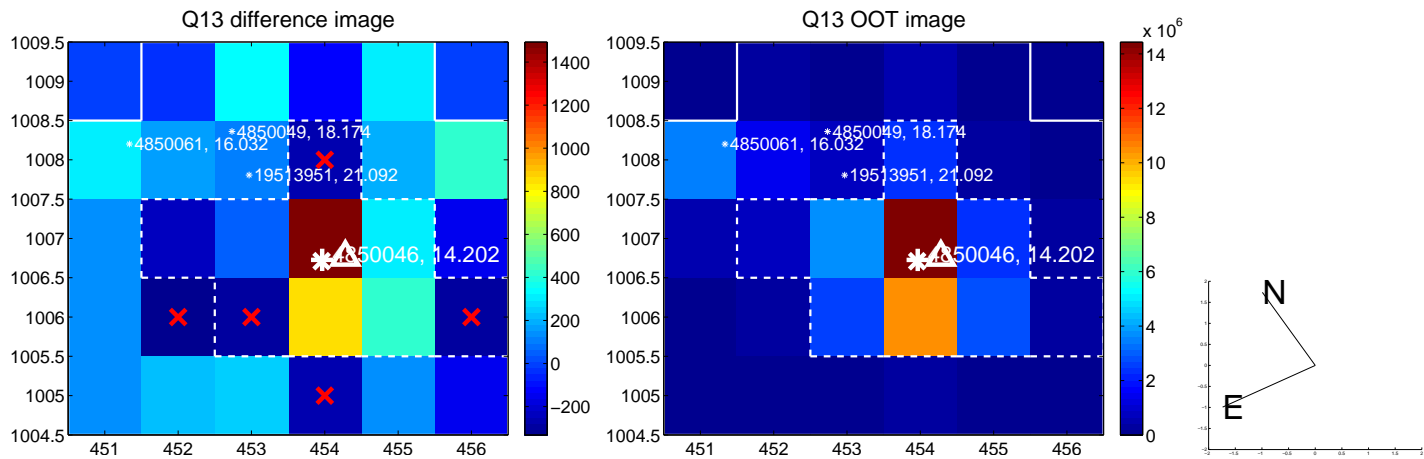




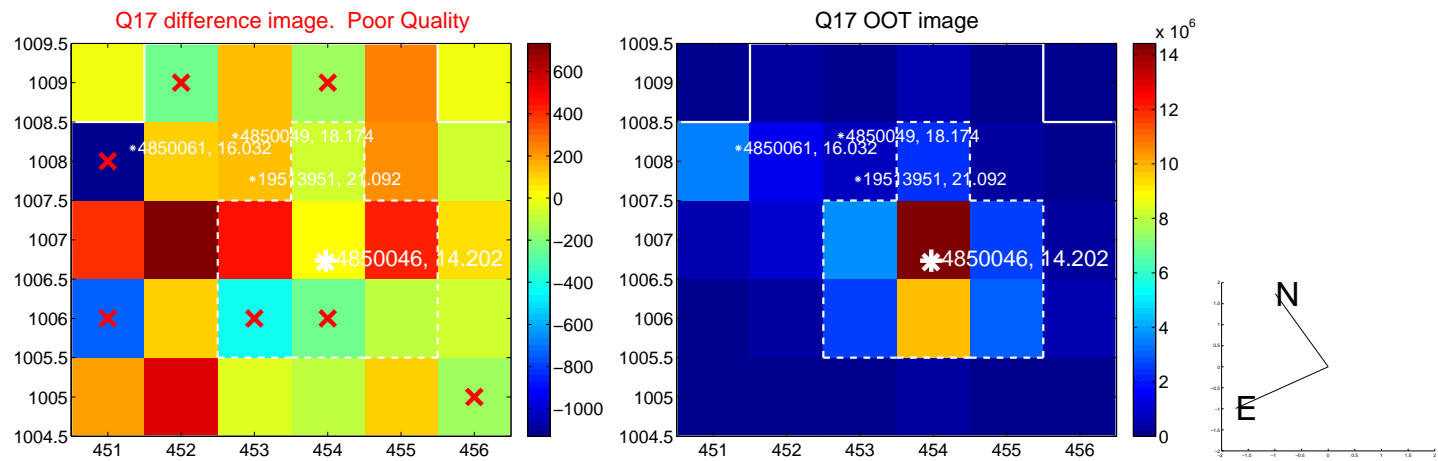
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

