

# KIC 005304548

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005304548-01	OBS	No	0.579881	132.027015	1.7	4.892	7.9	1.1	1.32	5860	0.17	11563.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005304548-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

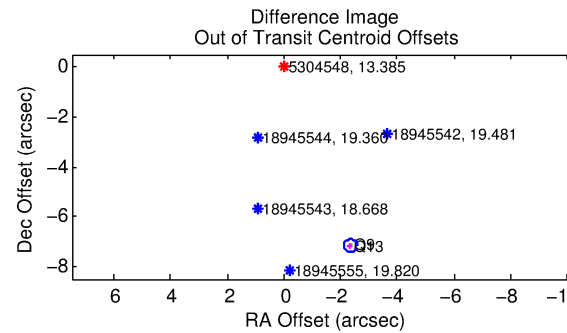
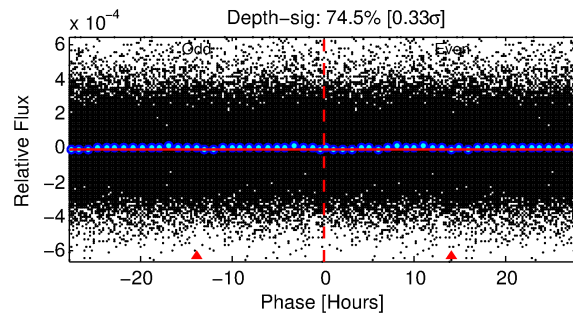
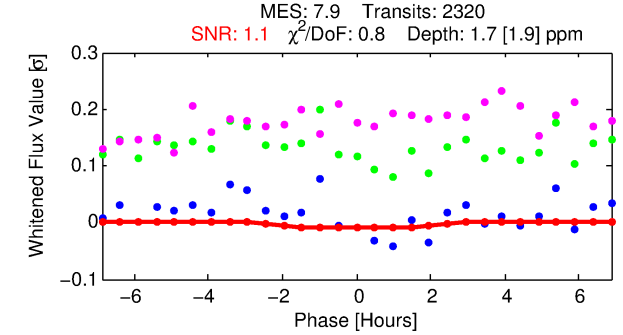
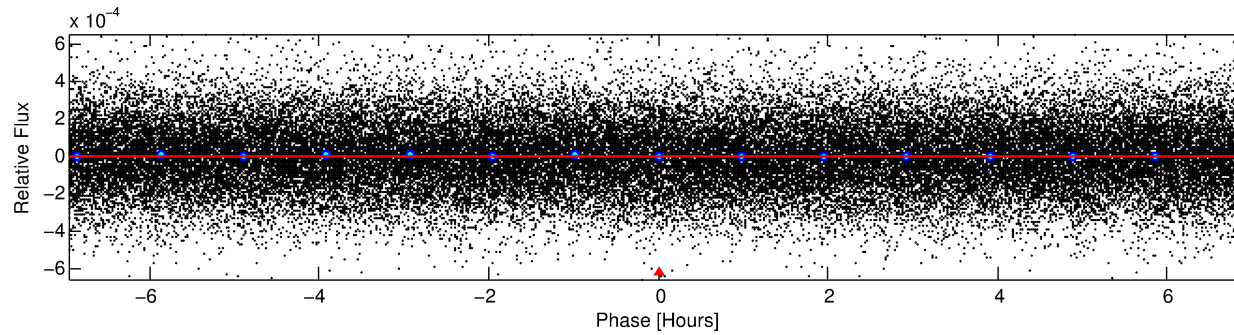
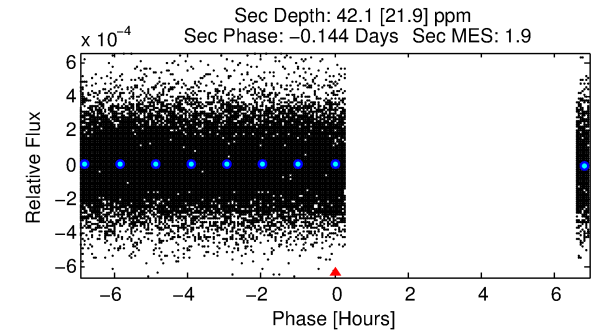
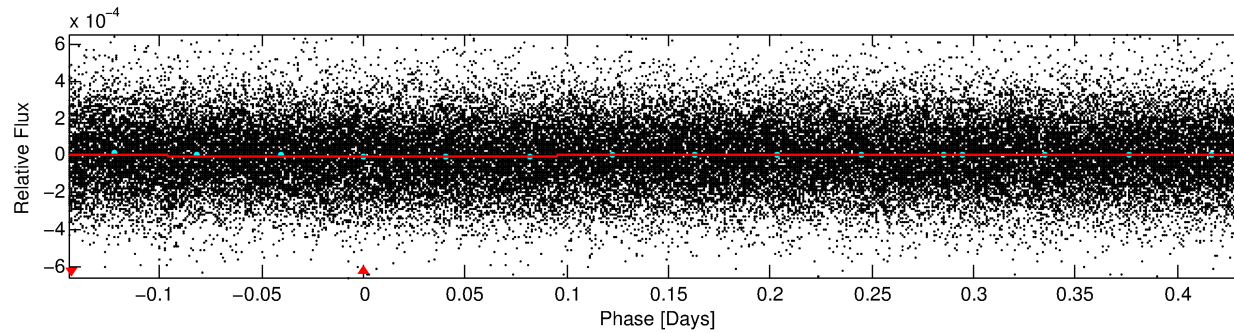
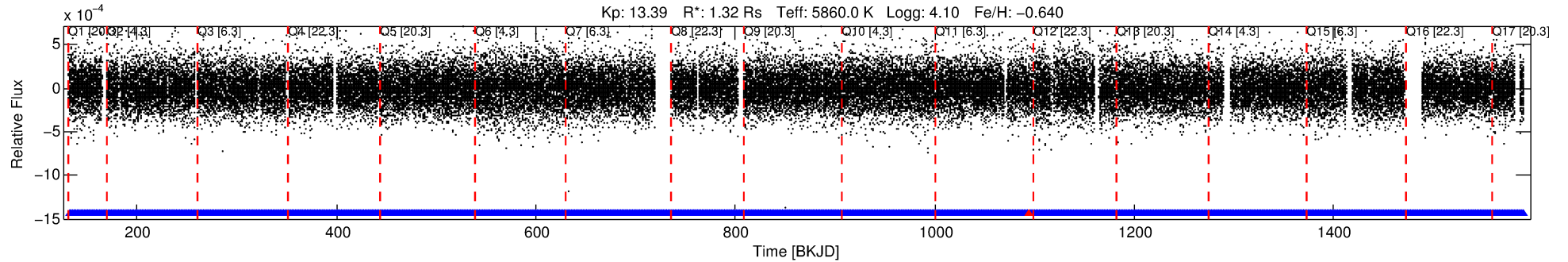
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005304548-01

No Significant Match Found

# DV One-Page Summary

KIC: 5304548 Candidate: 1 of 1 Period: 0.580 d



## DV Fit Results:

Period = 0.57988 [0.00009] d  
Epoch = 132.0270 [0.0455] BKJD  
Rp/R\* = 0.0012 [0.0090]  
a/R\* = 1.11 [7.49]  
b = 0.36 [90.45]  
Seff = 11563.06 [8746.38]  
Teq = 2644 [500] K  
Rp = 0.17 [1.30] Re  
a = 0.0126 [0.0055] AU  
Ag = 124.64 [1876.62] [0.07σ]  
Teffp = 13660 [51355] K [0.21σ]

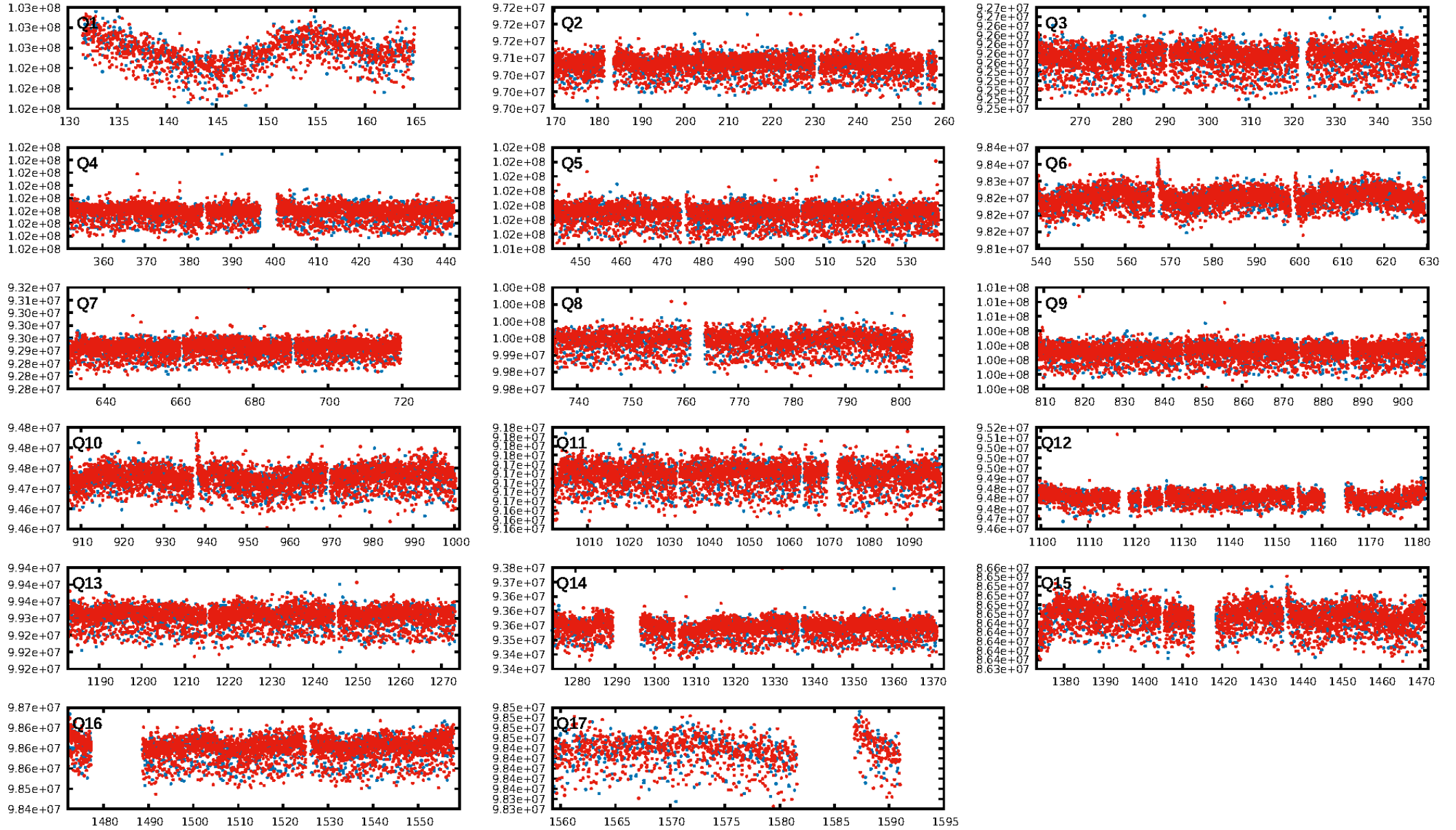
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2214/2215]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 7.540 arcsec [90.40σ]  
KicOffset-rm: 7.517 arcsec [86.27σ]  
OotOffset-st: 0/0/0/2 [2]  
KicOffset-st: 0/0/0/2 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [17/17]

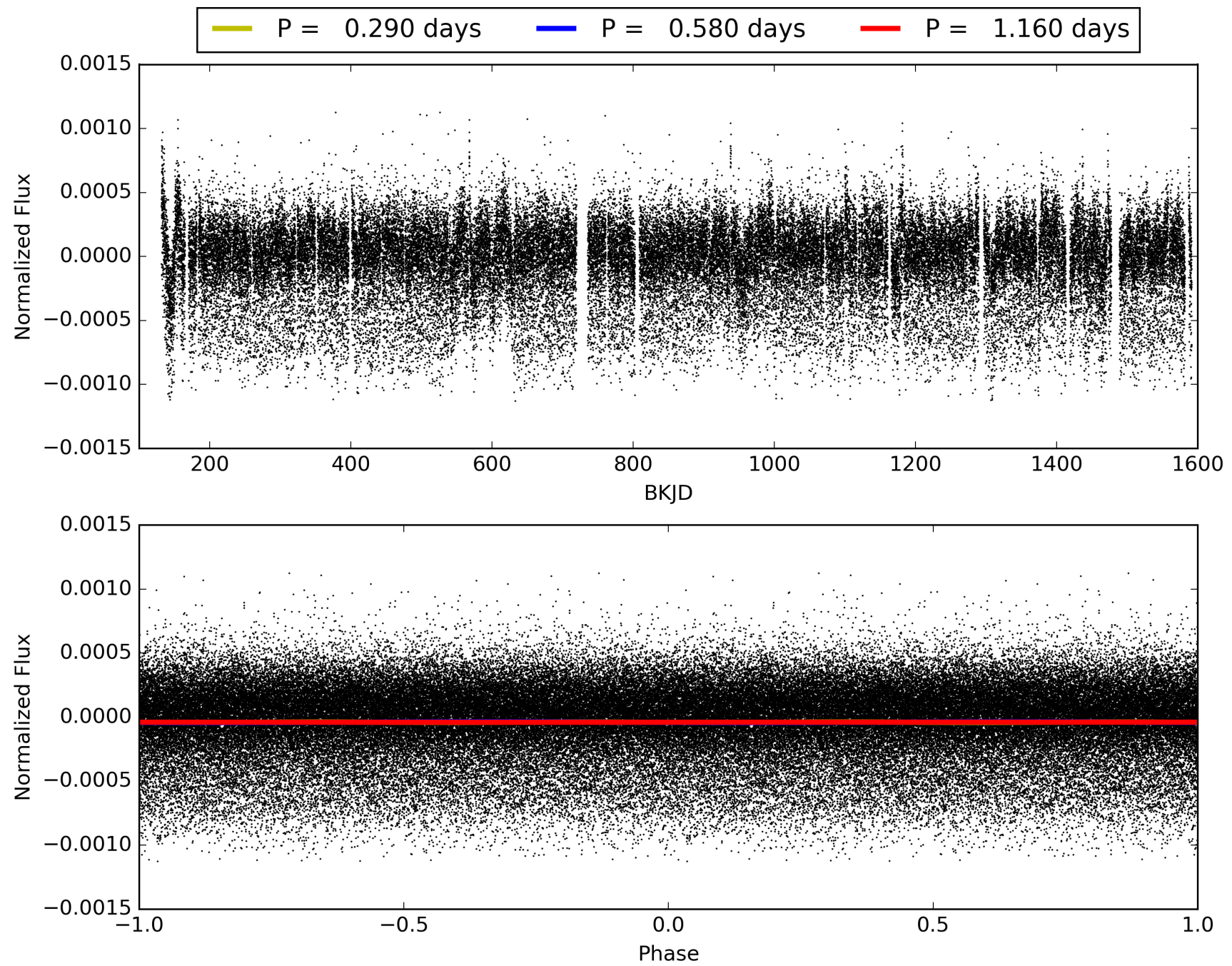
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:52:23 Z

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

# TCE 005304548-01, PDC Light Curves

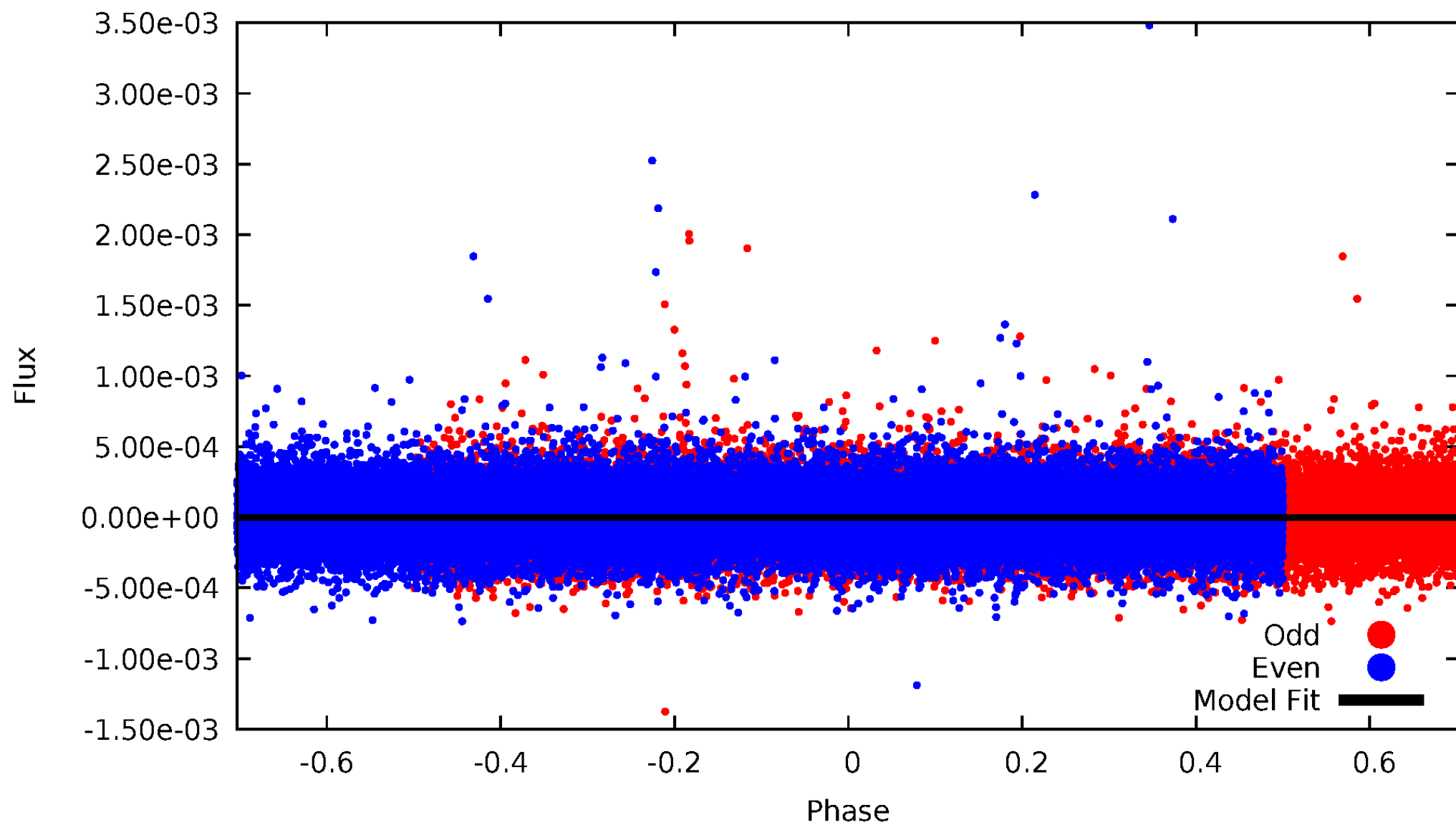


TCE 005304548-01



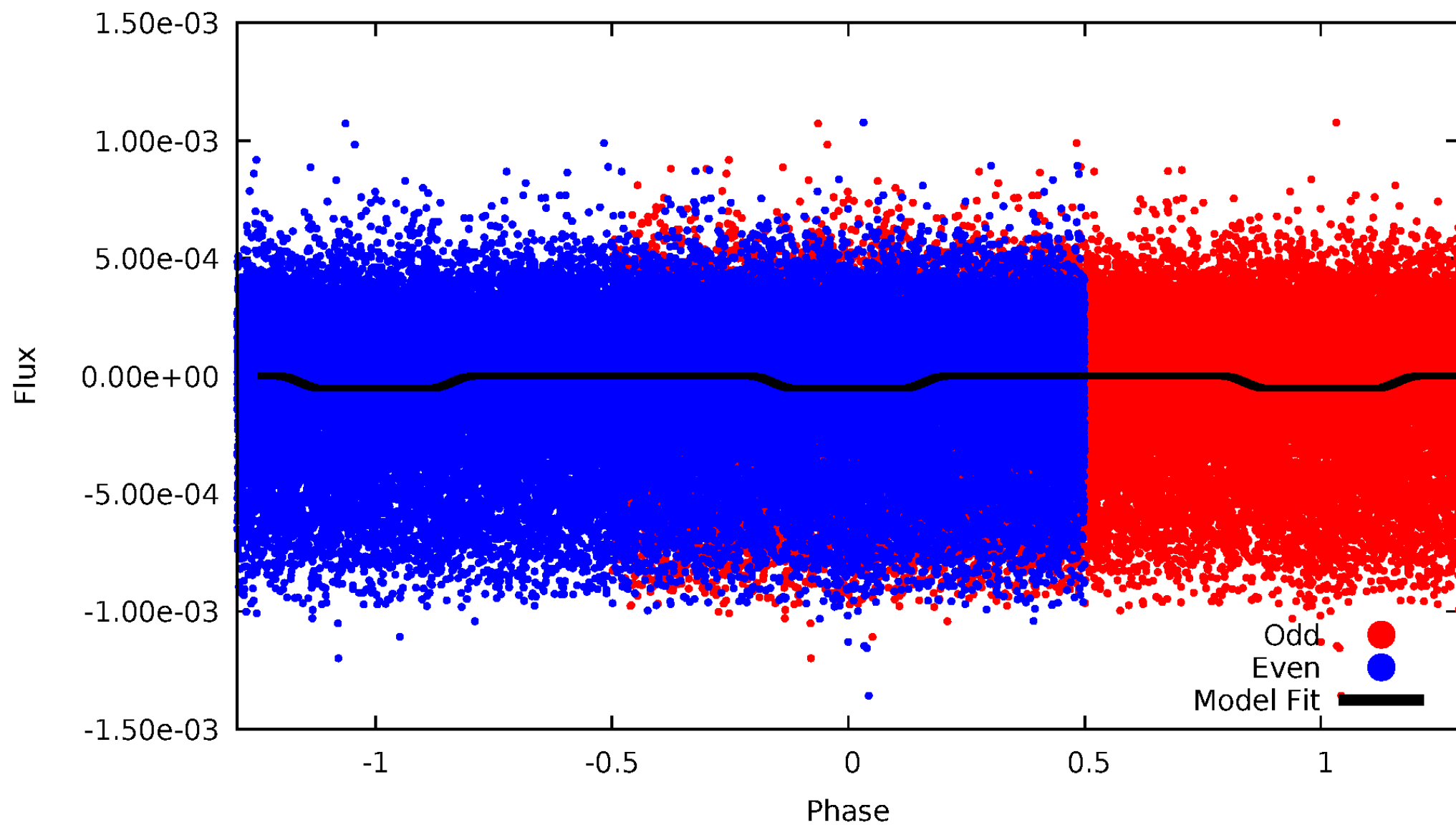
# DV Odd/Even

TCE 005304548-01

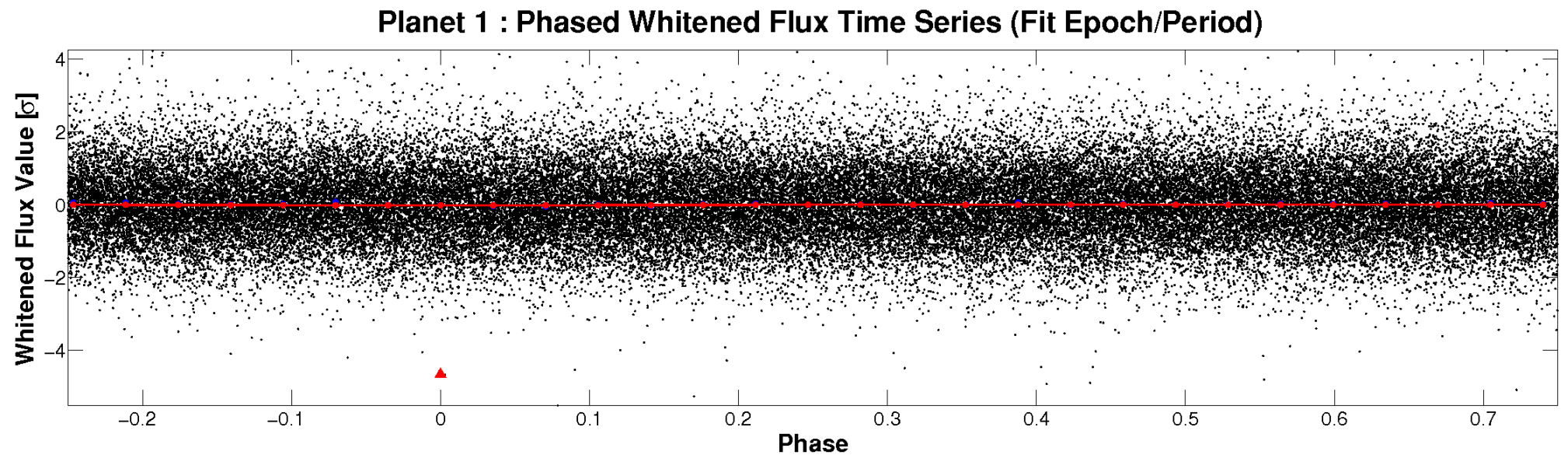
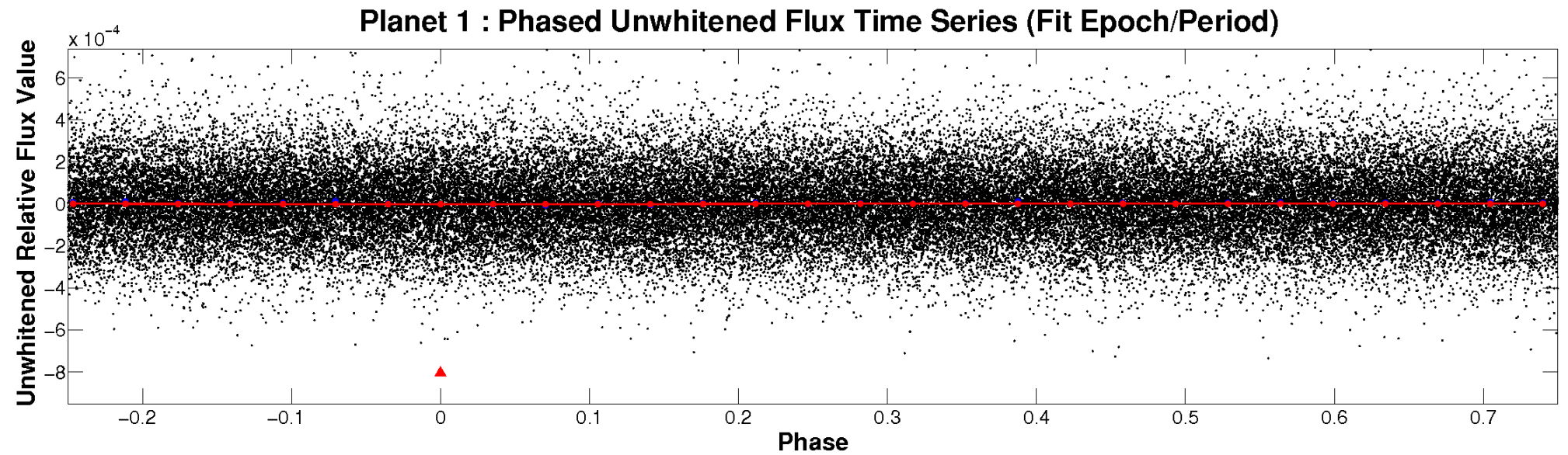


# ALT Odd/Even

TCE 005304548-01

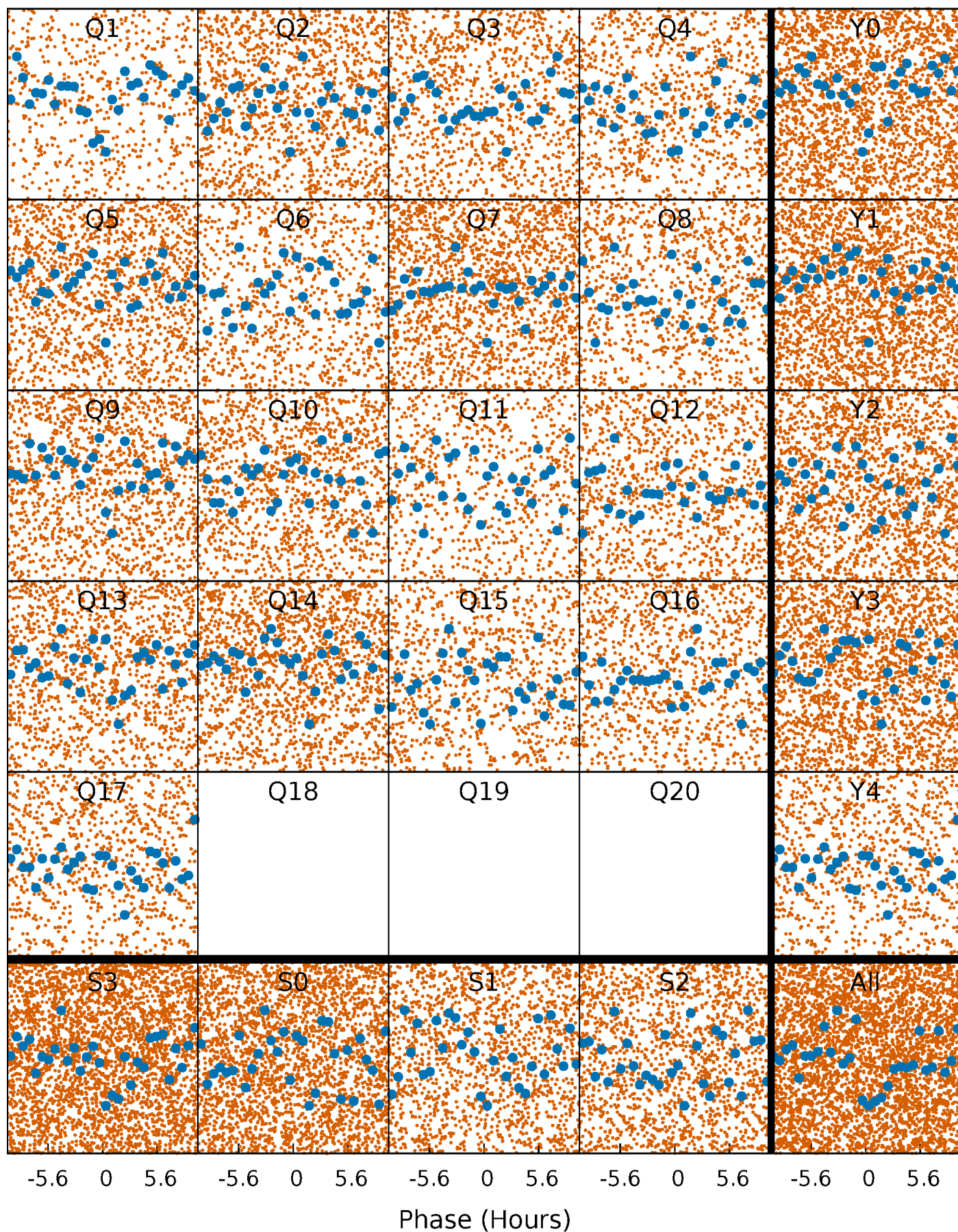


# Non-Whitened Vs. Whitened Light Curve



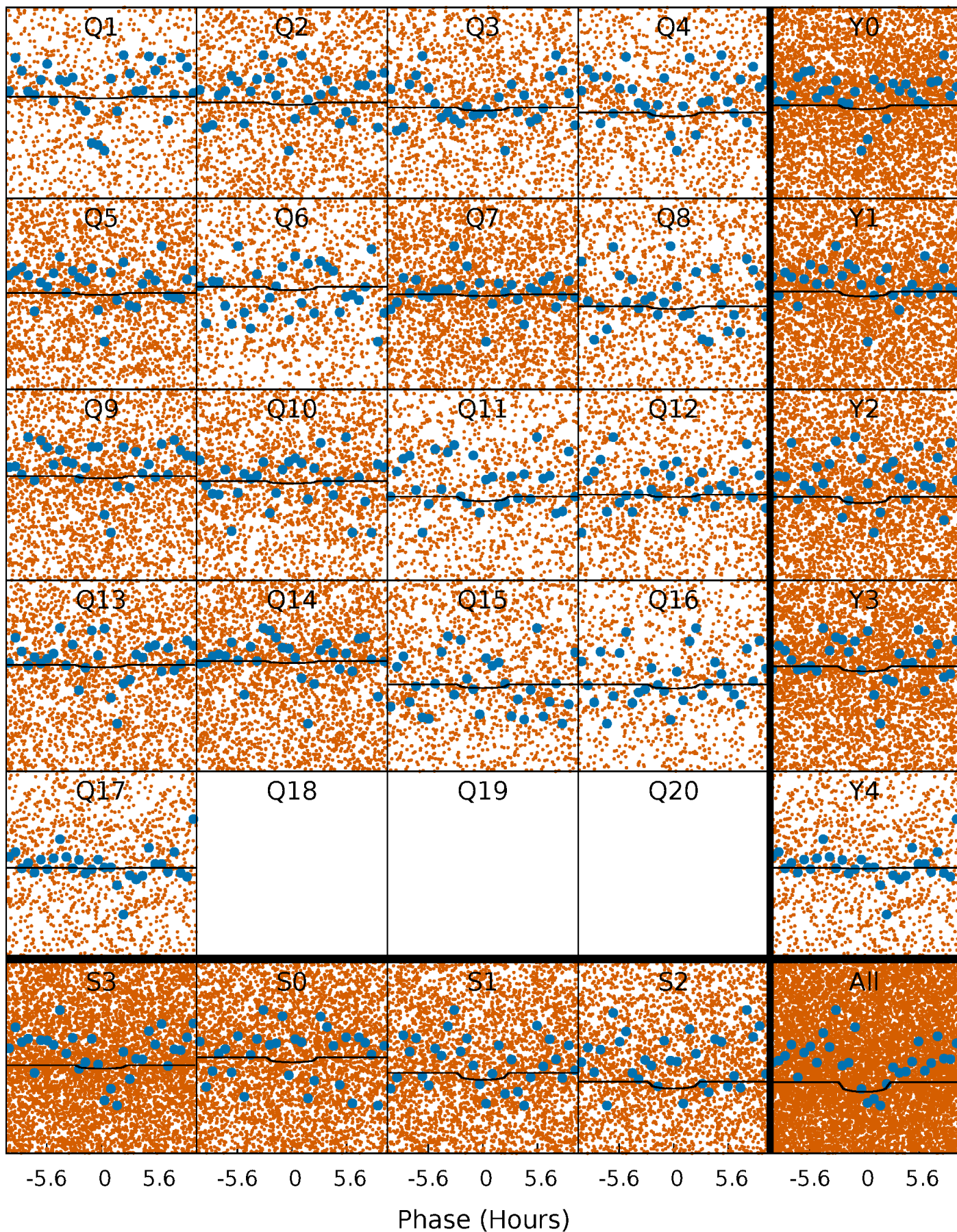
# PDC Quarter-Phased Transit Curves

TCE 005304548-01 P= 0.579881 Days  $T_0=132.027015$  (BKJD)



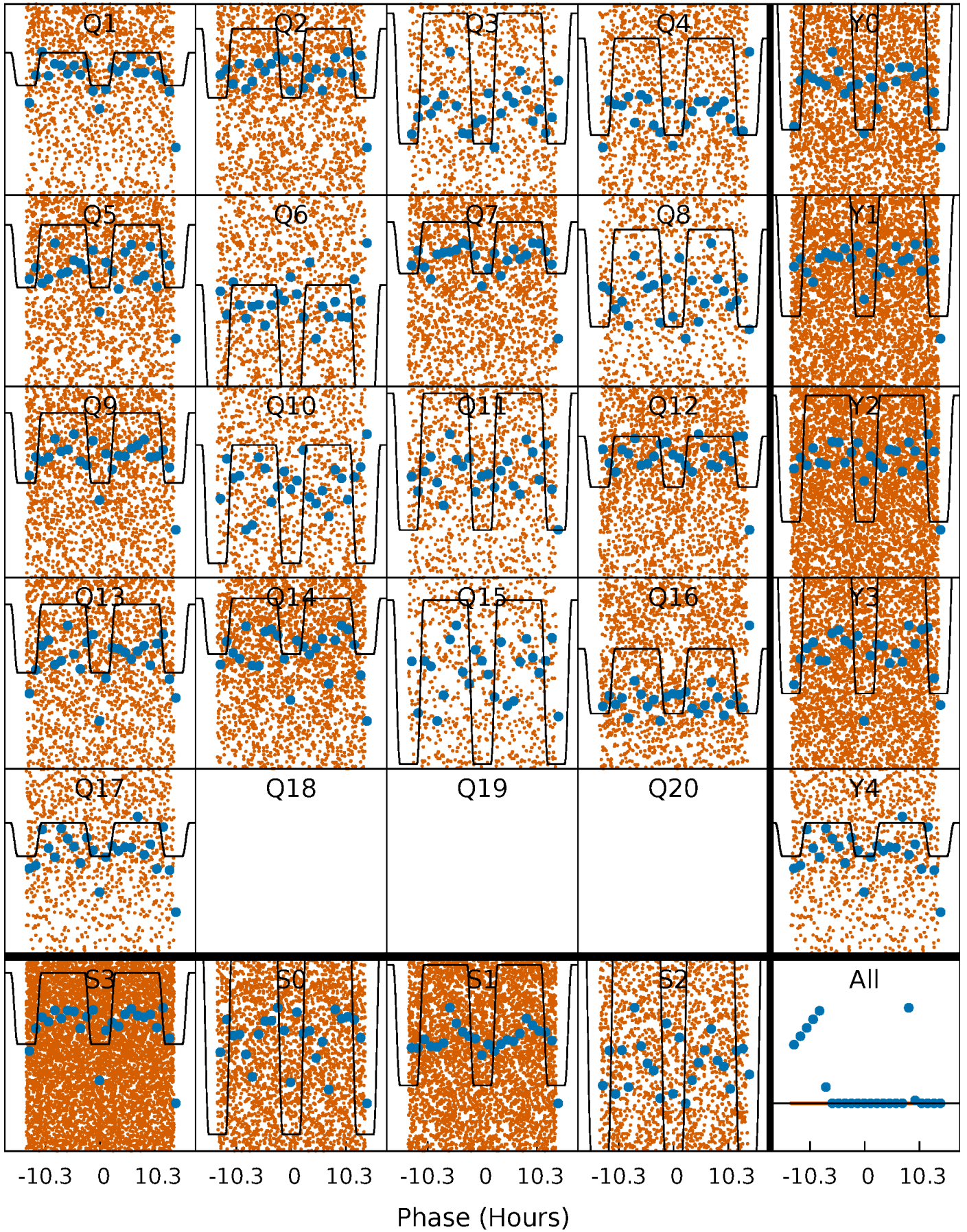
# DV Quarter-Phased Transit Curves

TCE 005304548-01 P= 0.579881 Days  $T_0=132.027015$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

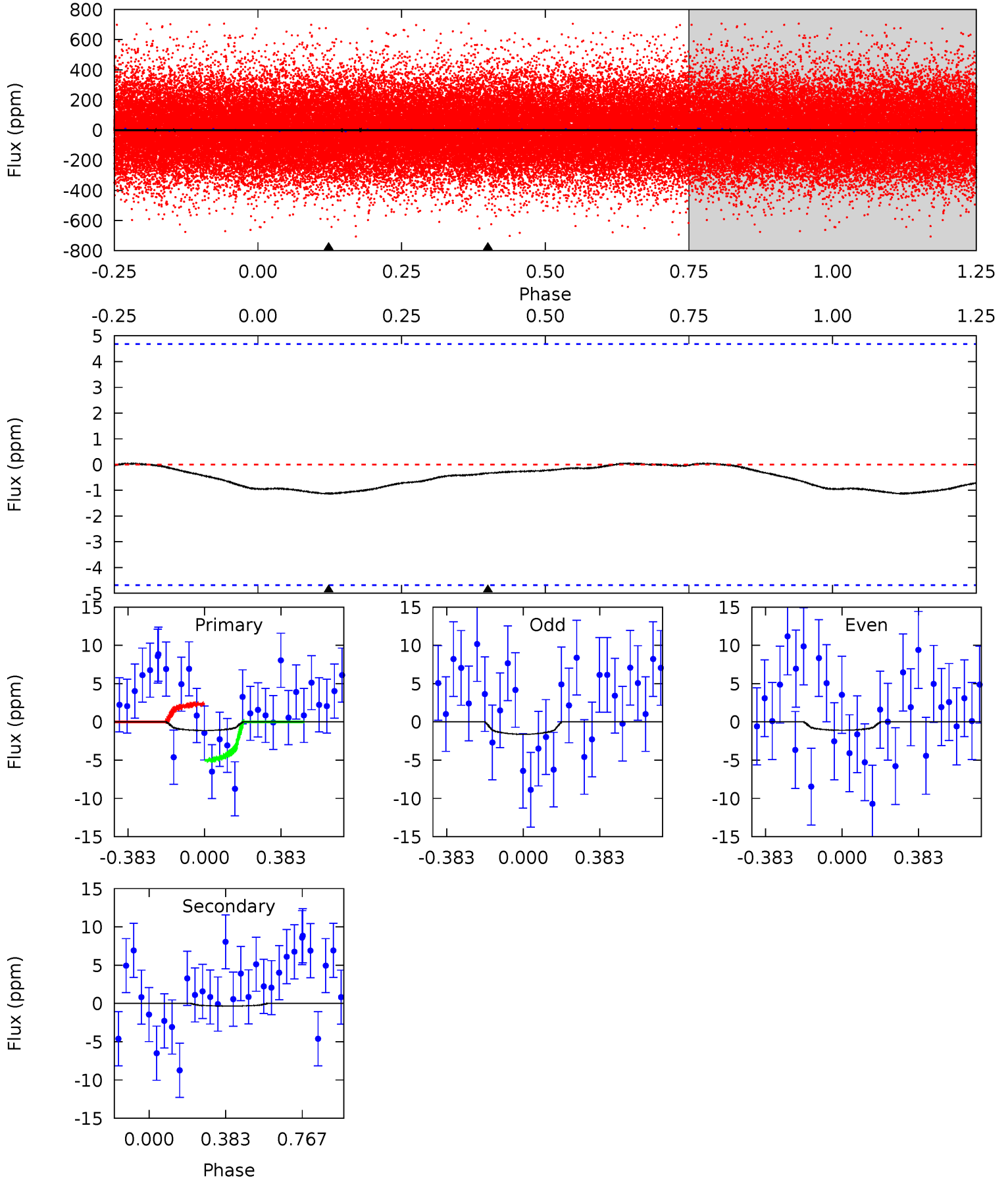
TCE 005304548-01 P= 0.579926 Days  $T_0=132.008610$  (BKJD)



# DV Model-Shift Uniqueness Test

005304548-01, P = 0.579881 Days, E = 131.447134 Days

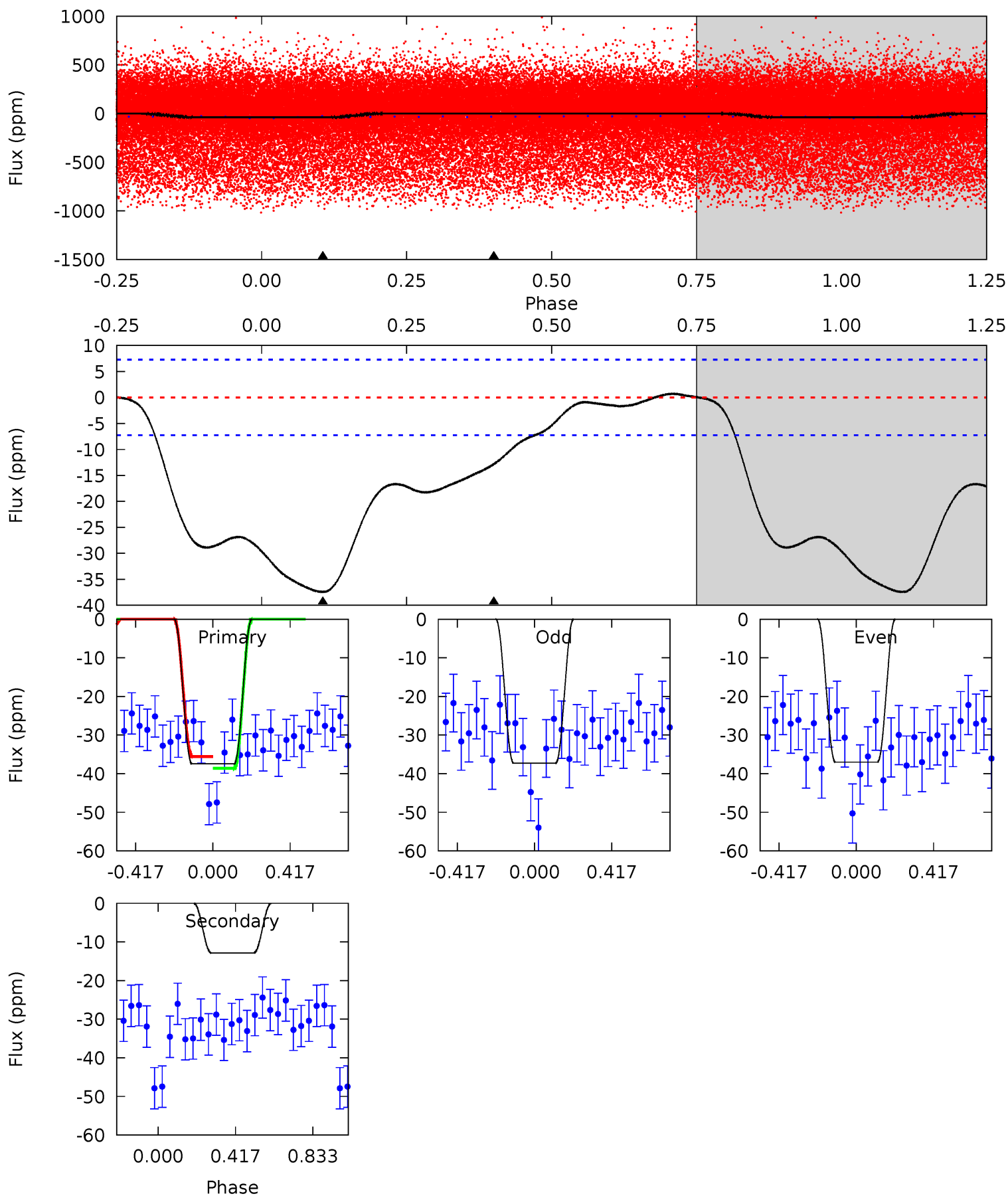
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.03	0.31	0	0	4.27	0.87	0.03	1.03	1.03	0.31	0.31	0.24	0.25	0.03	1.23



# Alt Model-Shift Uniqueness Test

005304548-01, P = 0.579926 Days, E = 131.428684 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
21.9	7.54	0	0	4.26	0.81	0.63	21.9	21.9	7.54	7.54	0.08	0.89	0.02	0.85



### Stellar Parameters For KIC 005304548

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5860^{+177}_{-159}$	$4.099^{+0.455}_{-0.195}$	$-0.640^{+0.300}_{-0.250}$	$1.323^{+0.429}_{-0.524}$	$0.801^{+0.103}_{-0.055}$	$0.487^{+1.717}_{-0.278}$
	+3%/-3%	+11%/-5%	+47%/-39%	+32%/-40%	+13%/-7%	+352%/-57%
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 005304548-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	-0±1	$0.83^{+1.11}_{-0.59}$	$3635^{+328}_{-456}$	$-3374^{+6686}_{-404}$	$0.022^{+0.574}_{-0.138}$
Alt.	-13±2	$1.26^{+1.28}_{-0.84}$	$3618^{+373}_{-427}$	$3619^{+2509}_{-6683}$	$0.741^{+6.161}_{-0.559}$

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

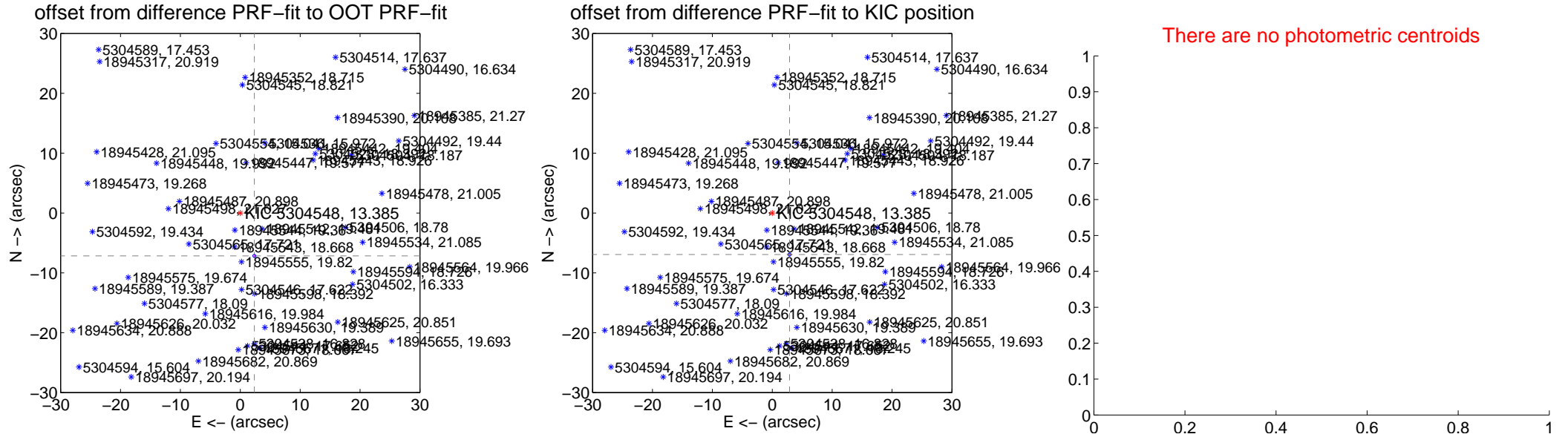
## DV Centroid Data

Supplemental centroid analysis for 005304548-01. Kepler magnitude: 13.38. Transit SNR 1.12

There are 0 quarters with good PRF difference image offsets

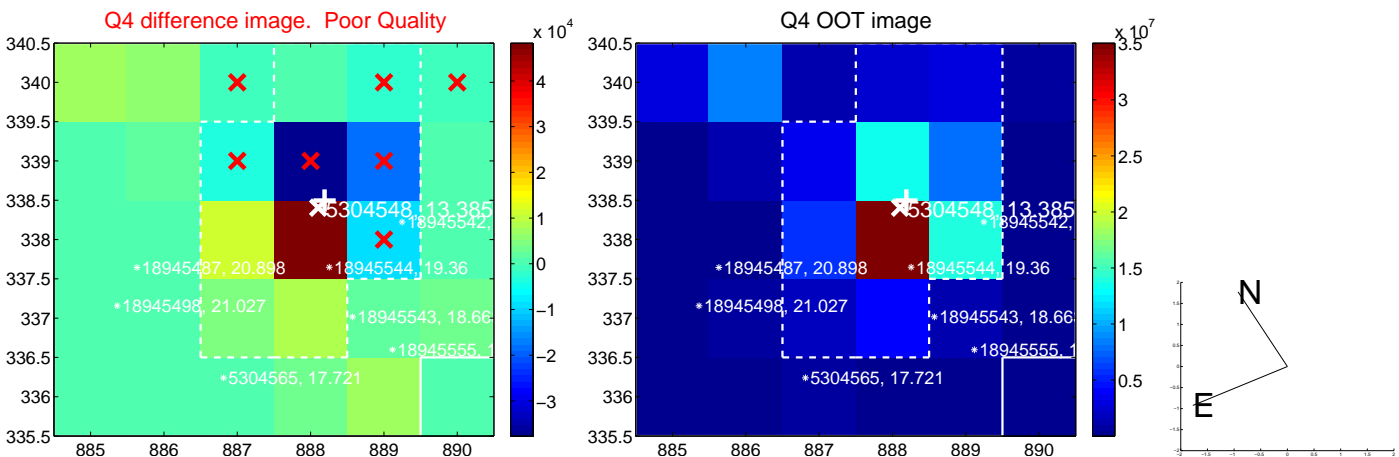
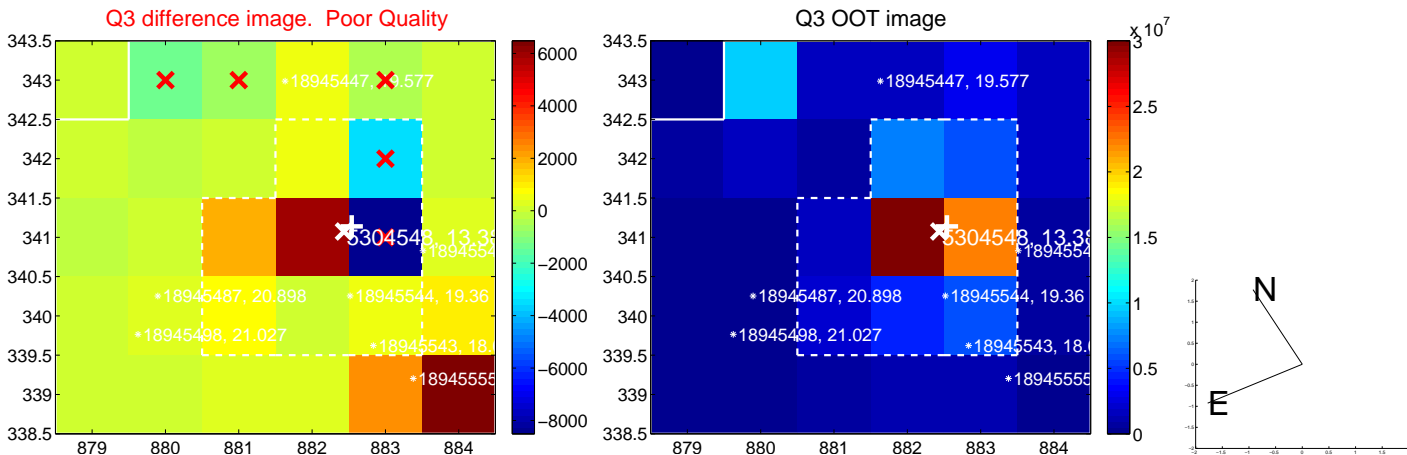
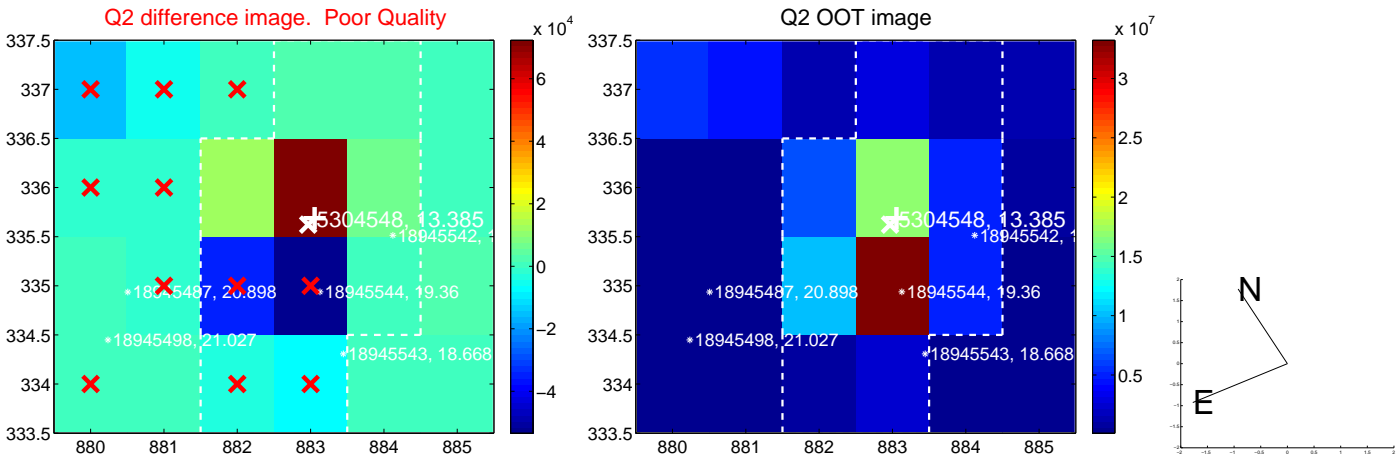
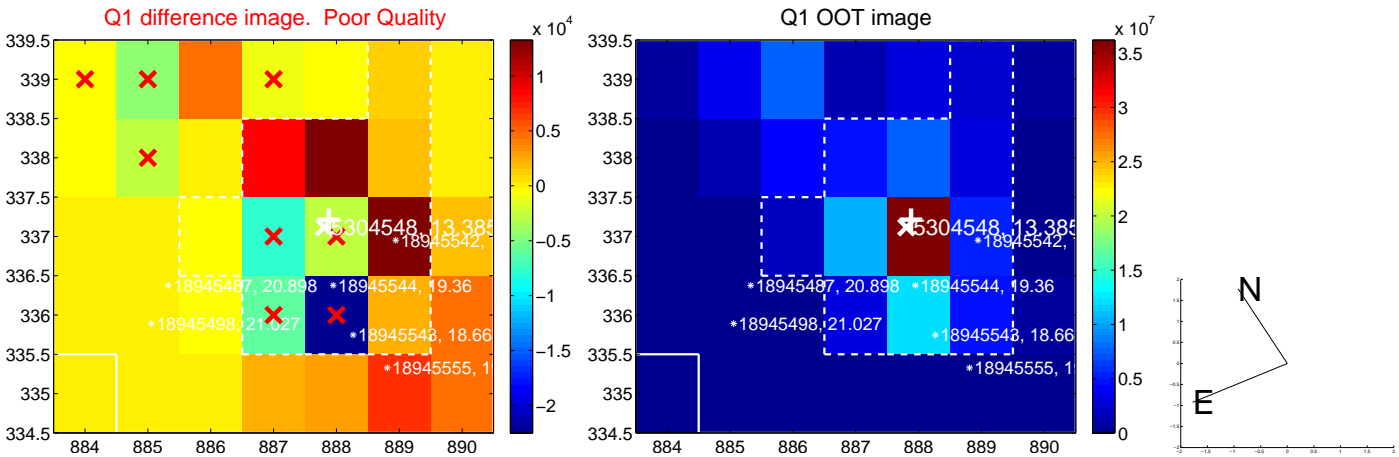
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$7.540 \pm 0.083$	90.40	$-2.346 \pm 0.067$	$-7.166 \pm 0.085$
PRF-fit source offset from KIC position	$7.517 \pm 0.087$	86.27	$-2.886 \pm 0.076$	$-6.941 \pm 0.089$
photometric centroid source offset	—	—	—	—

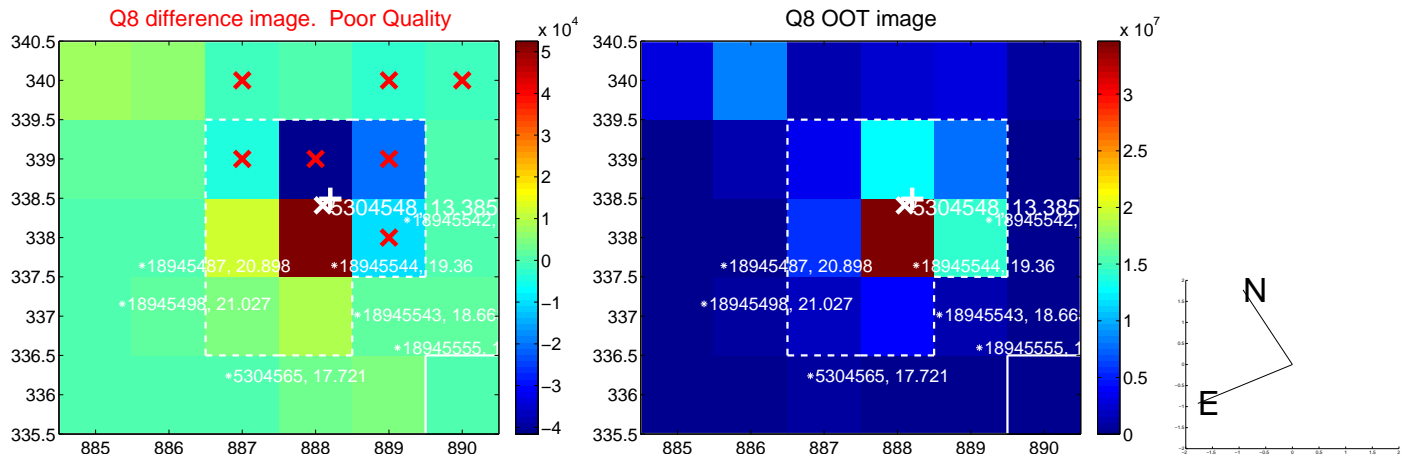
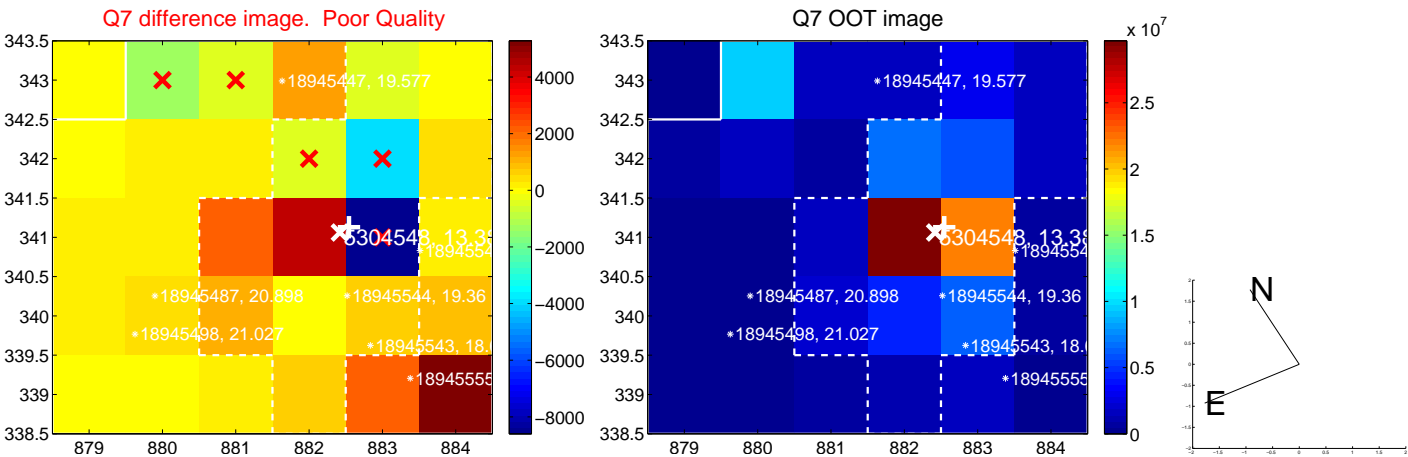
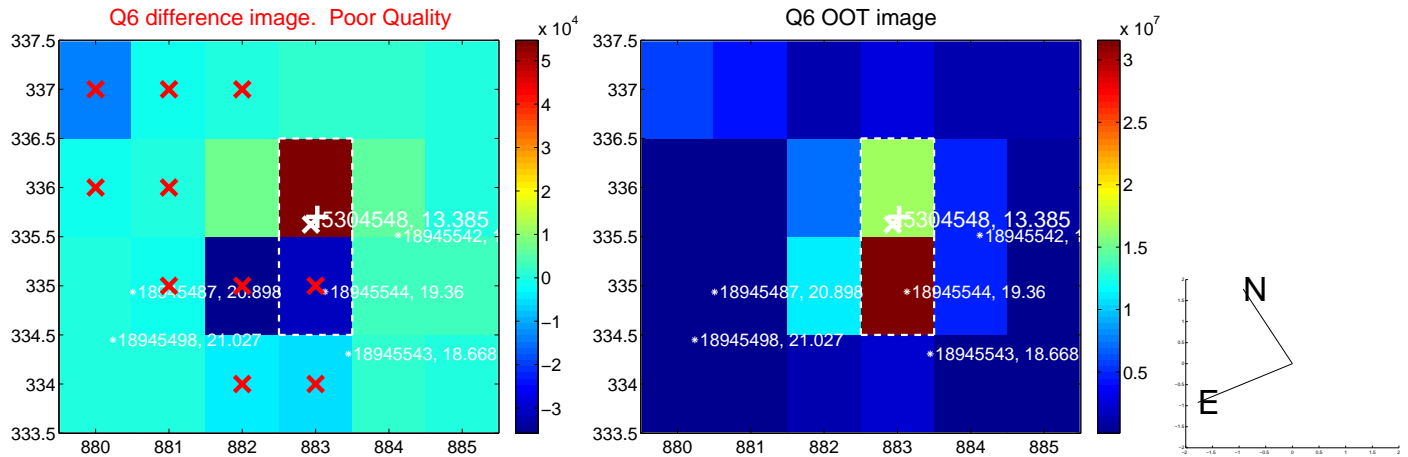
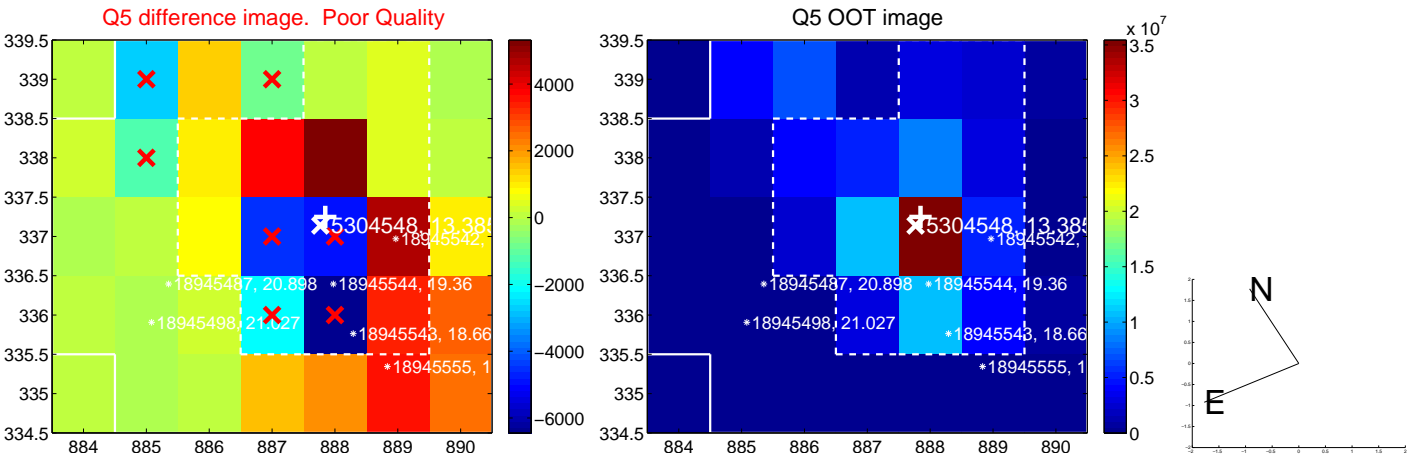


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

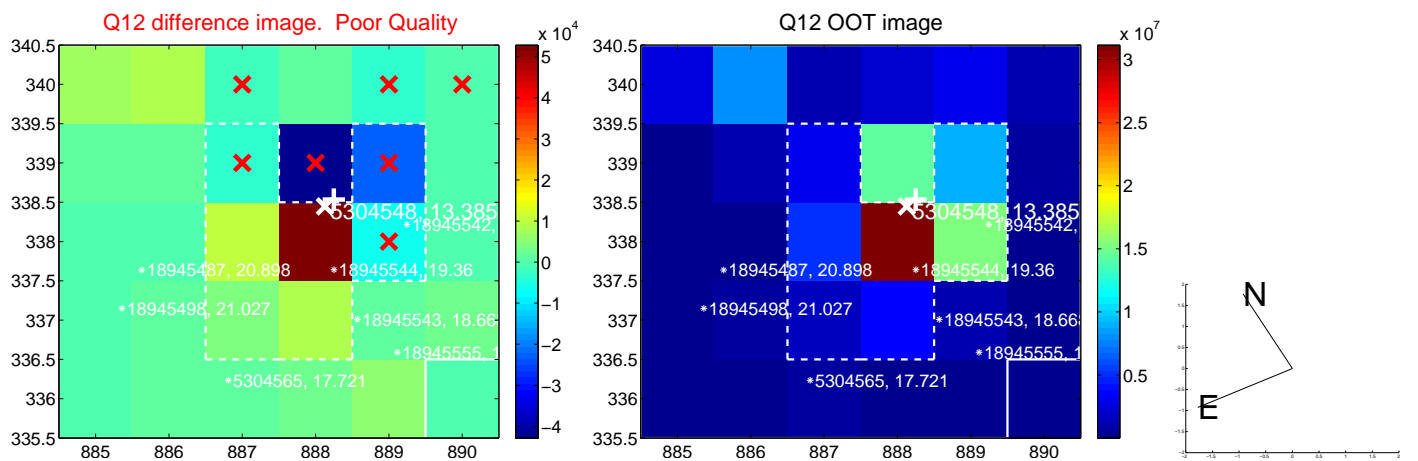
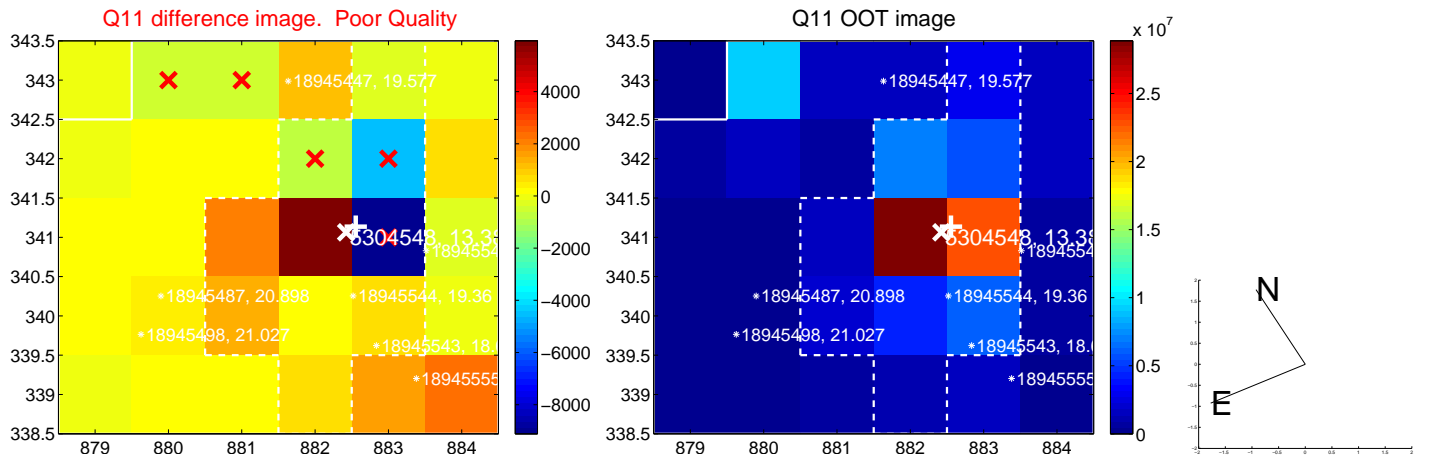
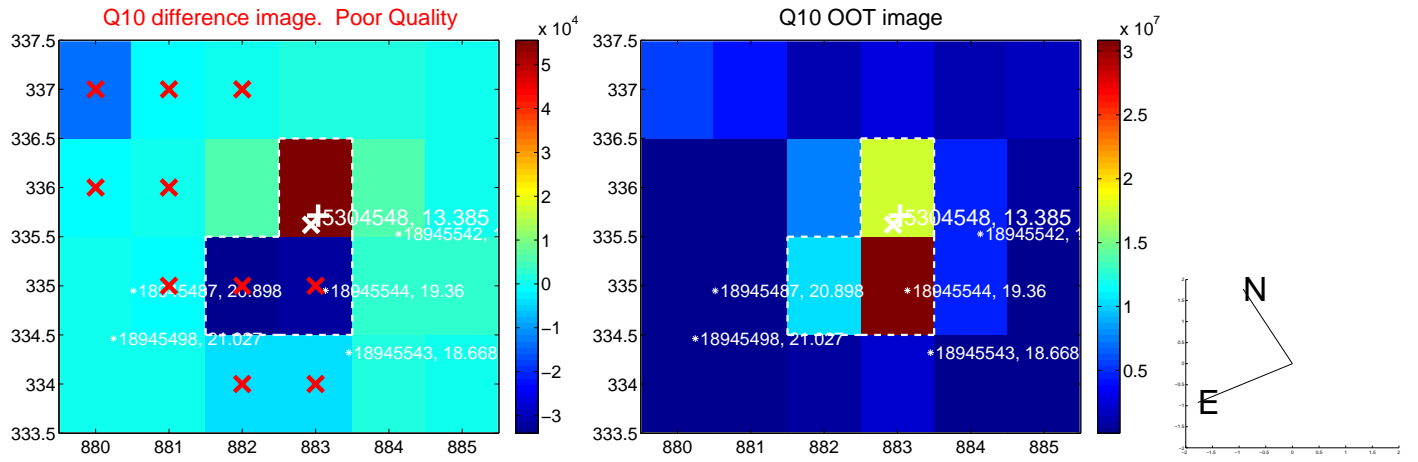
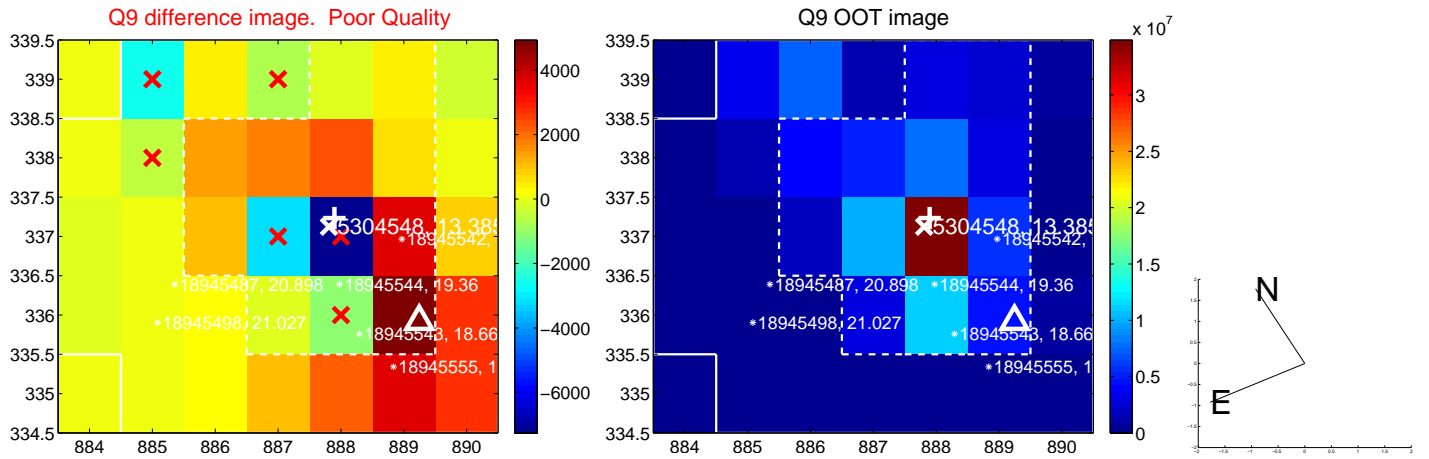
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



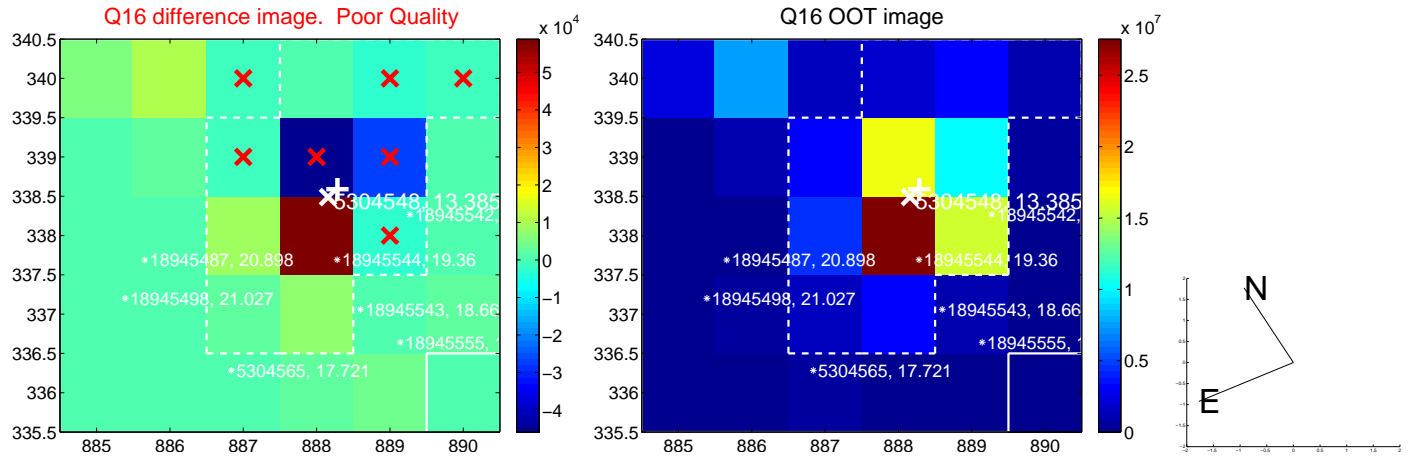
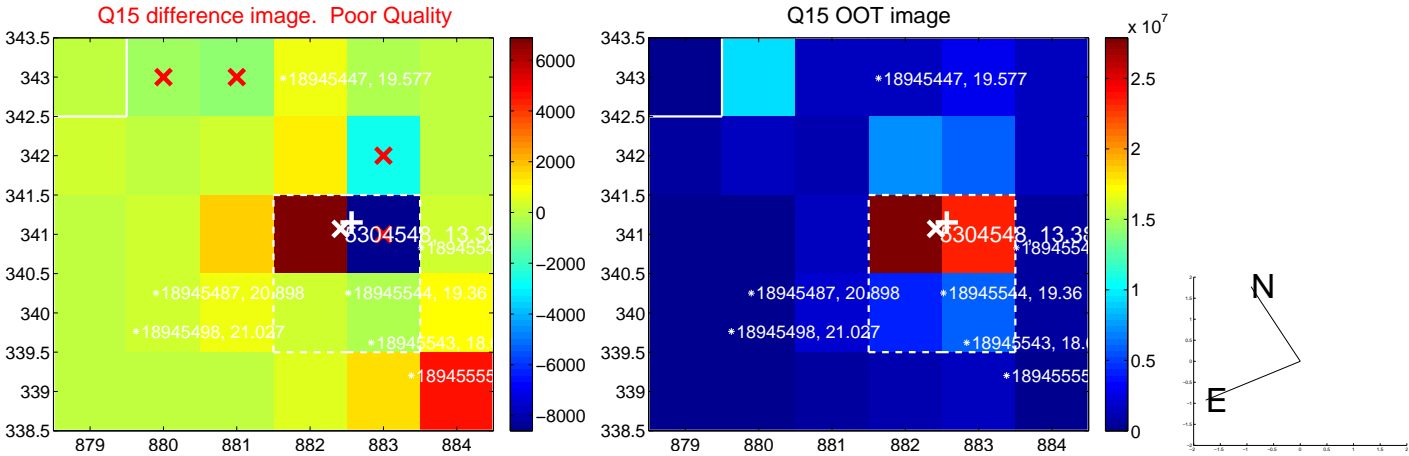
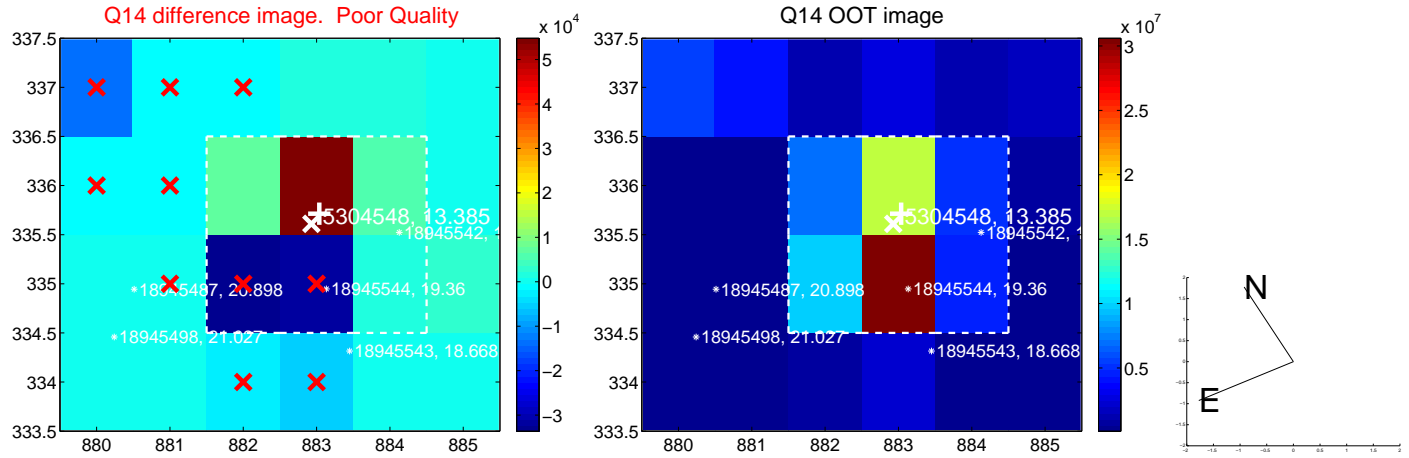
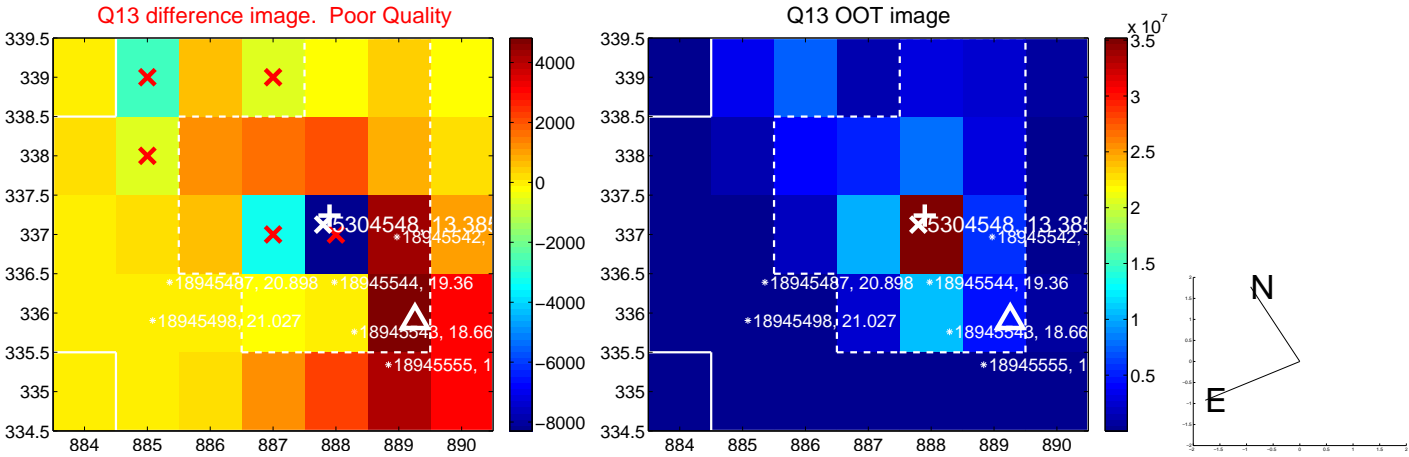
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



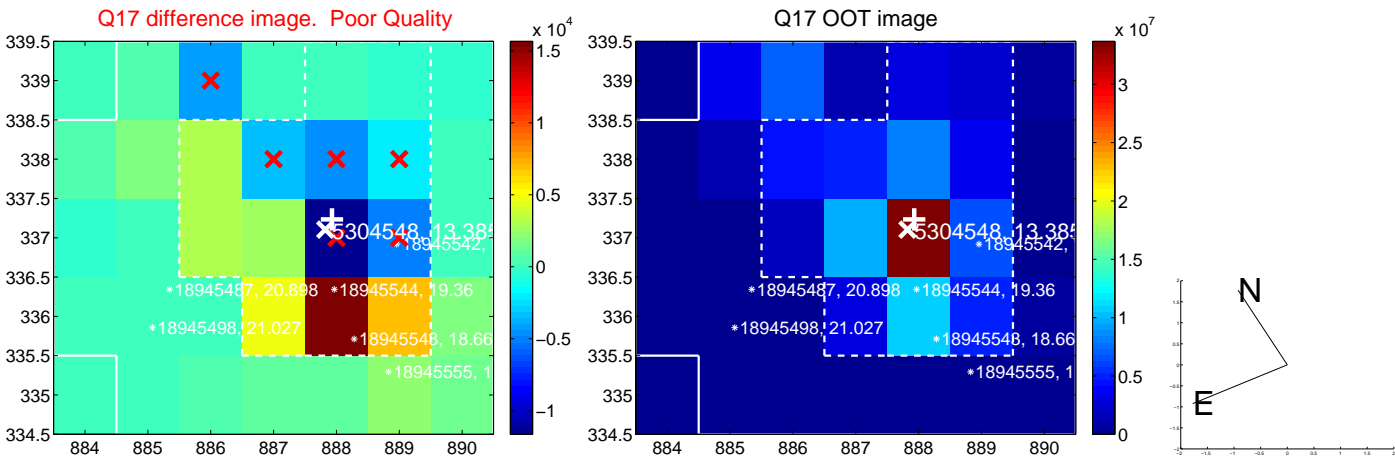
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

