

# KIC 005478337

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005478337-01	OBS	No	1.457142	131.738174	2.8	12.095	11.4	1.1	1.33	6279	0.23	4254.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005478337-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT

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

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

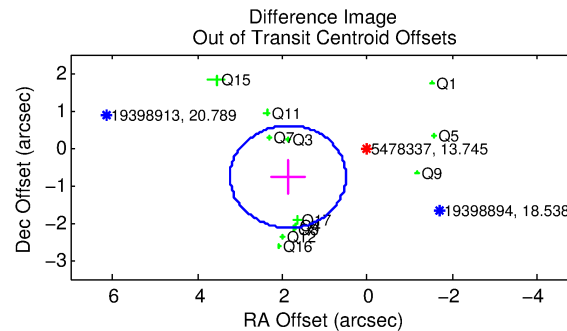
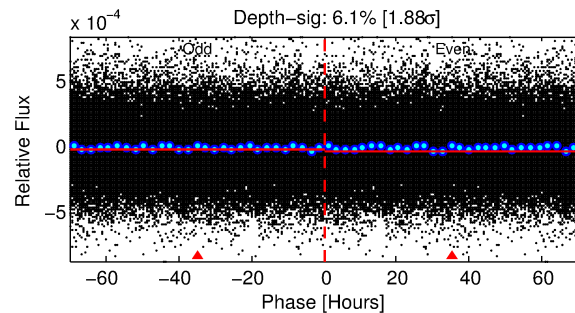
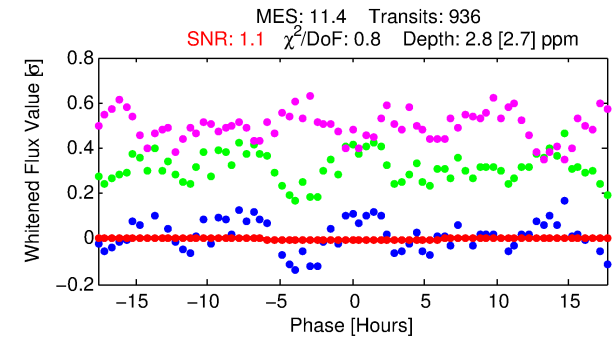
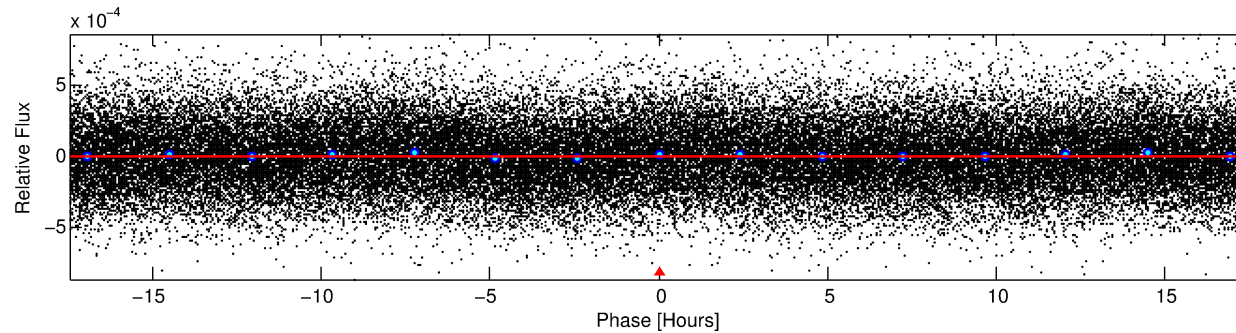
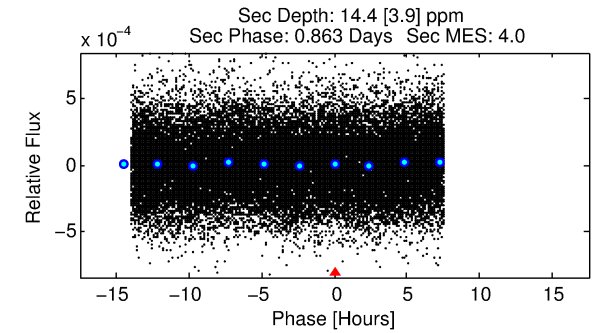
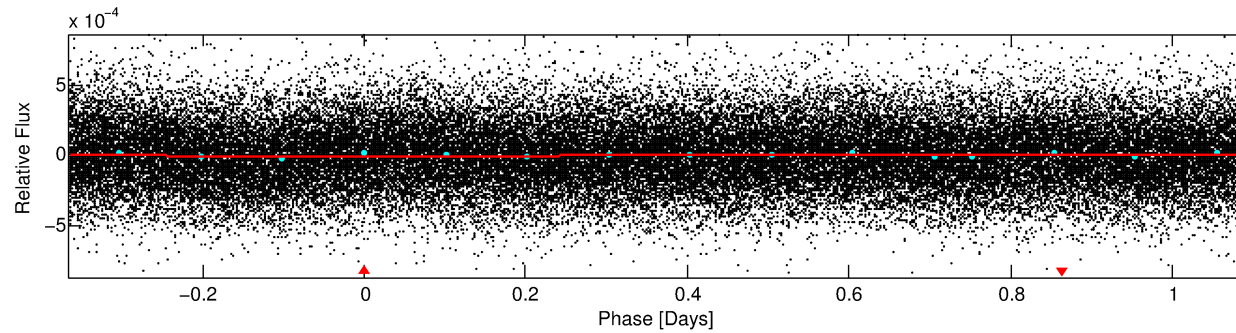
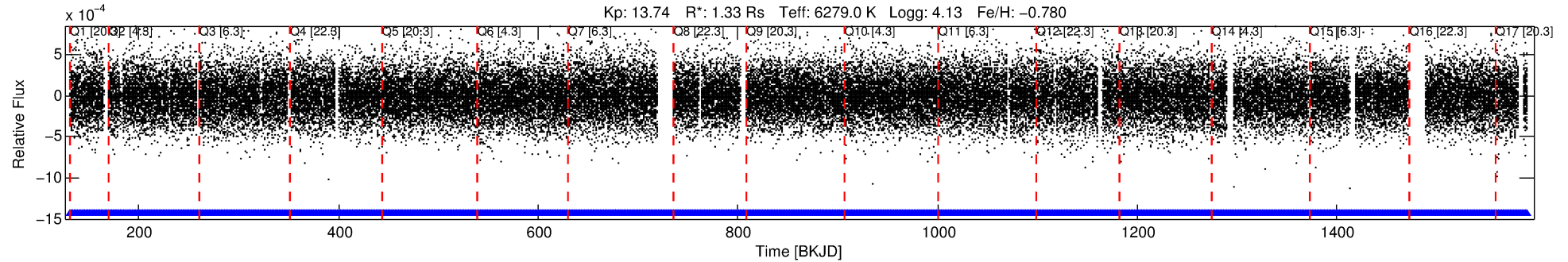
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005478337-01

No Significant Match Found

# DV One-Page Summary

KIC: 5478337 Candidate: 1 of 1 Period: 1.457 d



## DV Fit Results:

Period = 1.45714 [0.00023] d  
Epoch = 131.7382 [0.0692] BKJD  
Rp/R\* = 0.0016 [0.0077]  
a/R\* = 1.11 [5.38]  
b = 0.45 [47.89]  
Seff = 4254.06 [2442.79]  
Teq = 2059 [296] K  
Rp = 0.23 [1.12] Re  
a = 0.0240 [0.0083] AU  
Ag = 89.28 [880.20] [0.10σ]  
Teffp = 9787 [24086] K [0.32σ]

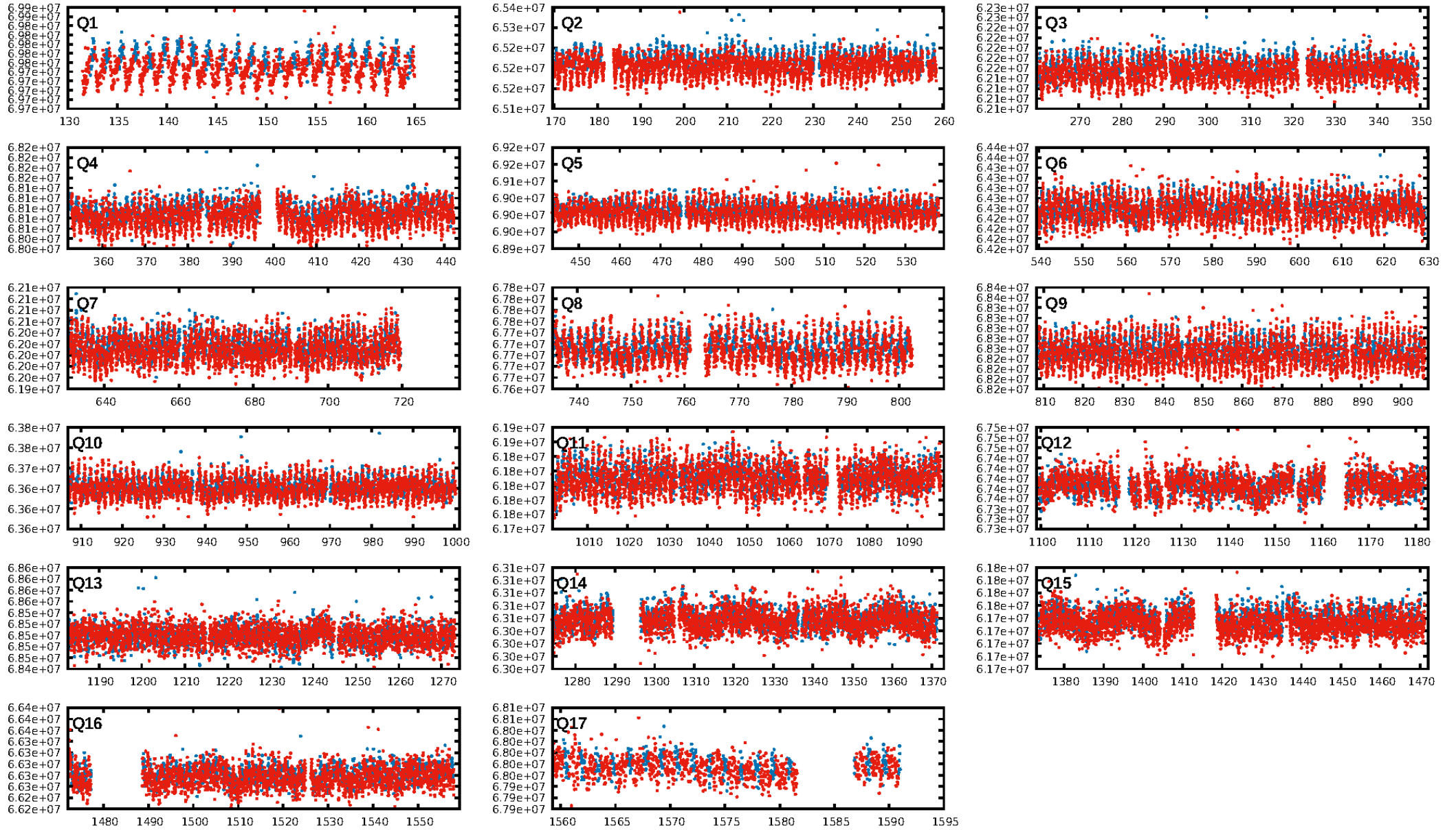
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [894/894]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.015 arcsec [4.43σ]  
KicOffset-rm: 2.015 arcsec [4.64σ]  
OotOffset-st: 0/4/4/4 [12]  
KicOffset-st: 0/4/4/4 [12]  
DiffImageQuality-fgm: 0.50 [6/12]  
DiffImageOverlap-fno: 1.00 [17/17]

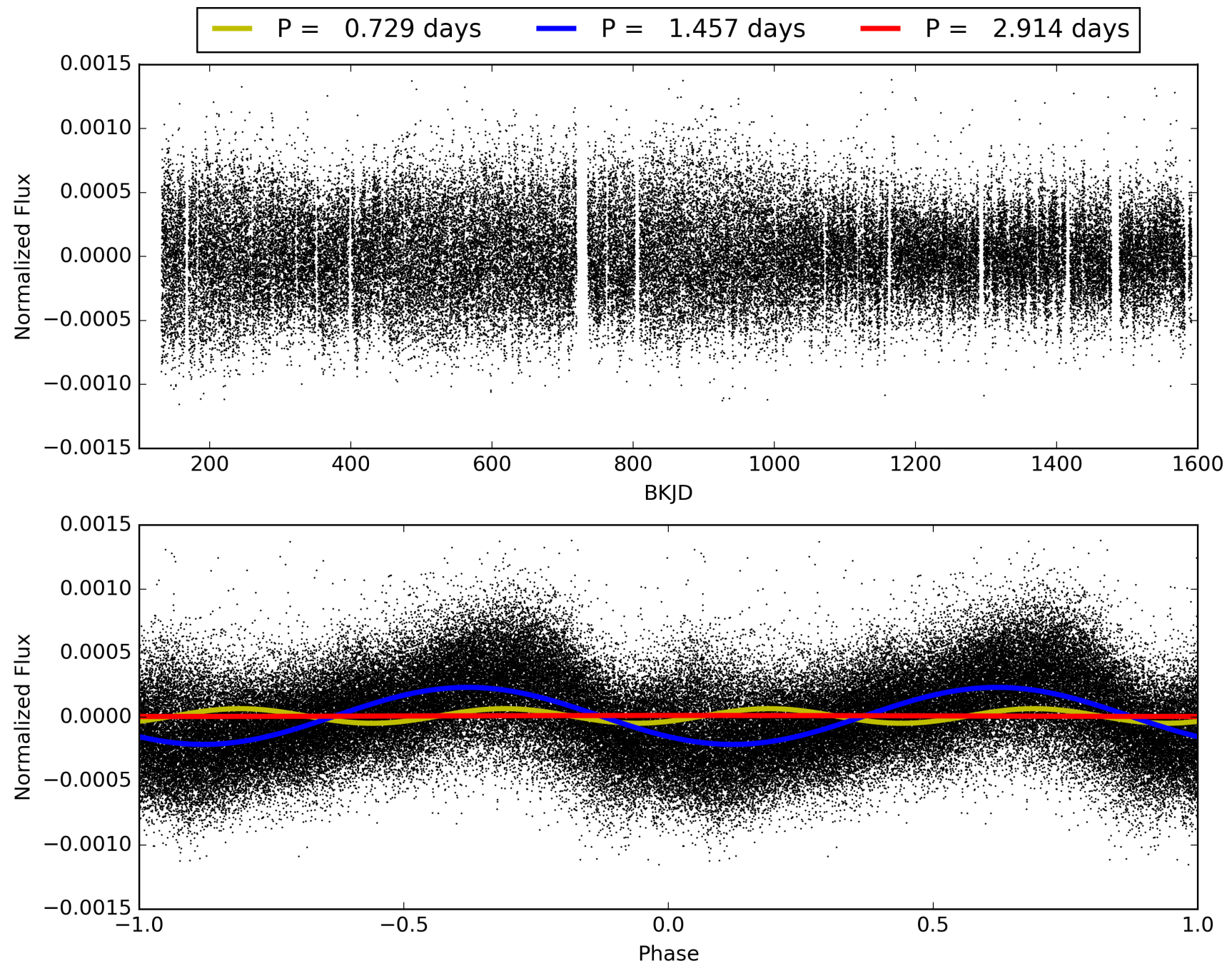
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:10:49 Z

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

# TCE 005478337-01, PDC Light Curves



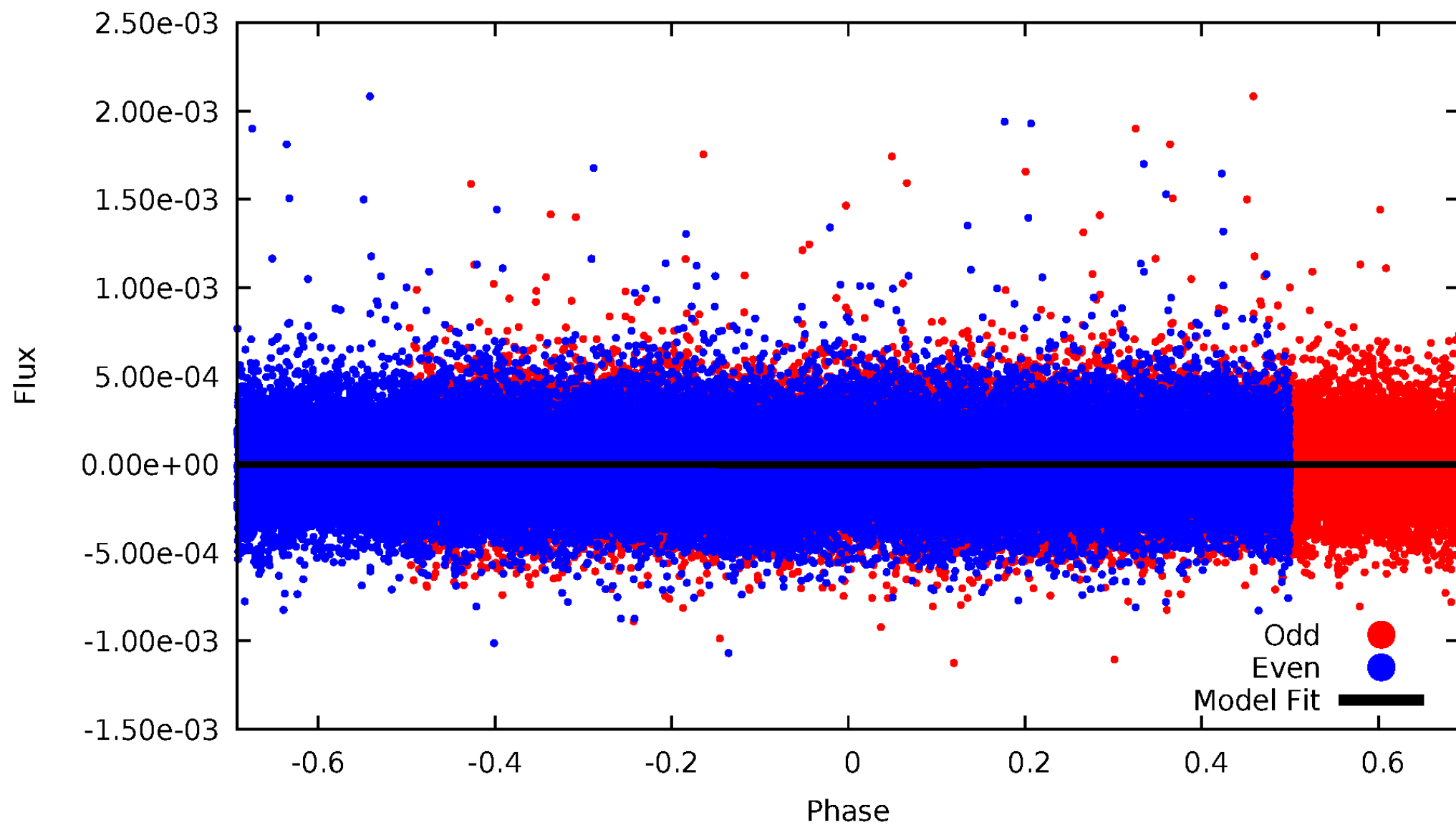
TCE 005478337-01





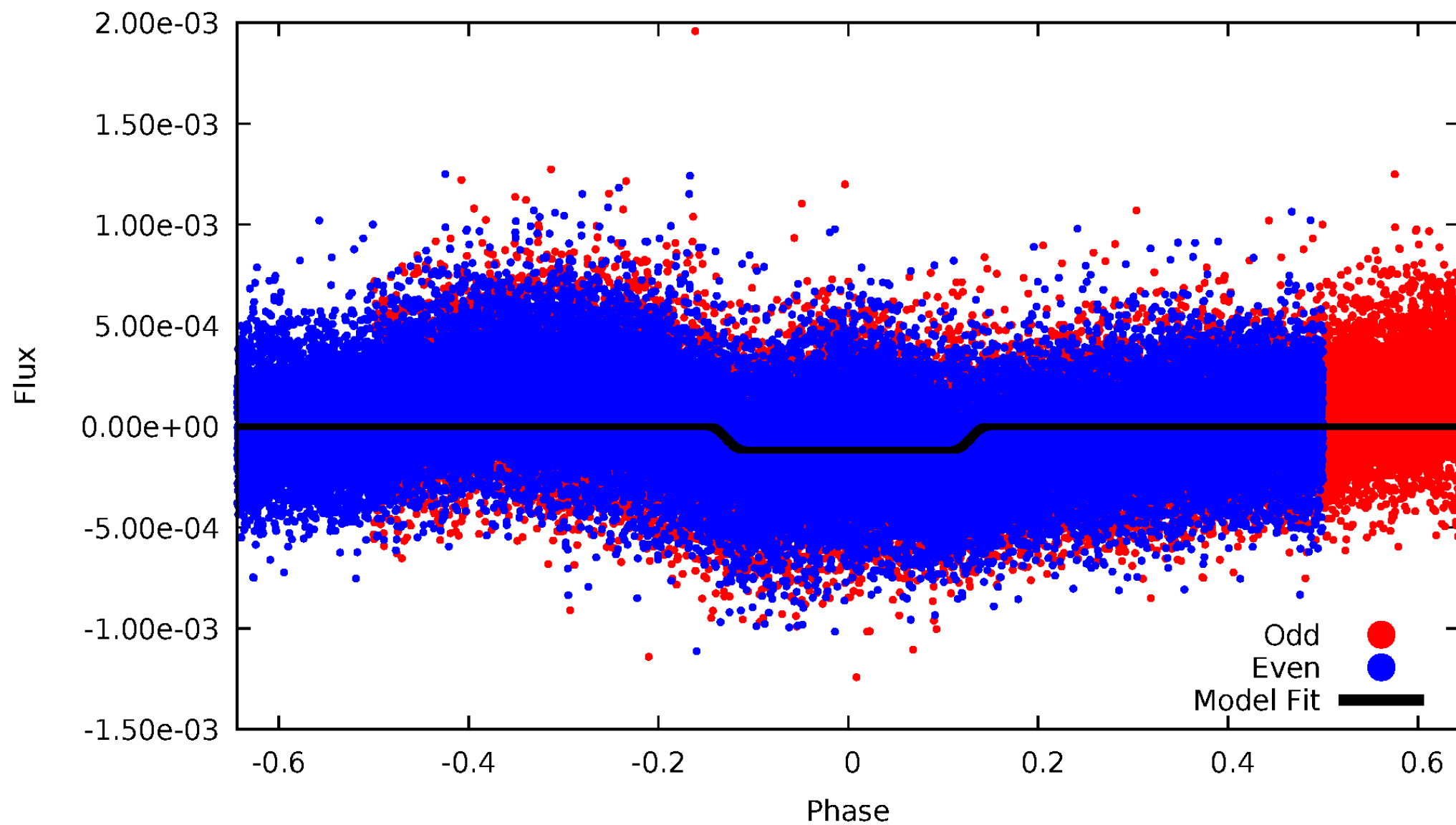
# DV Odd/Even

TCE 005478337-01

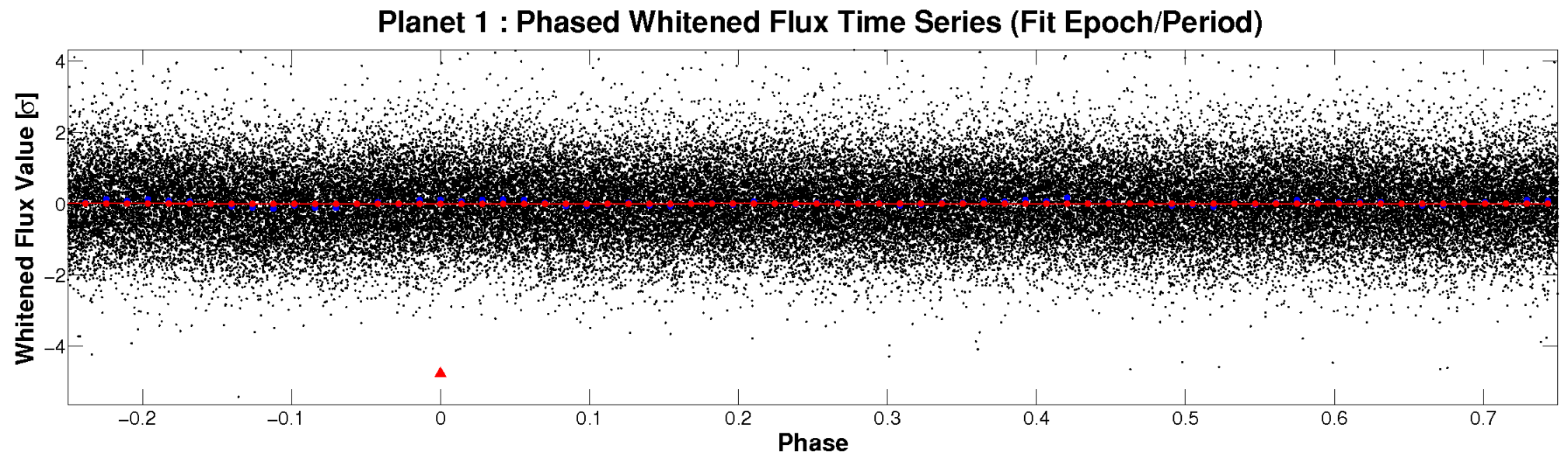
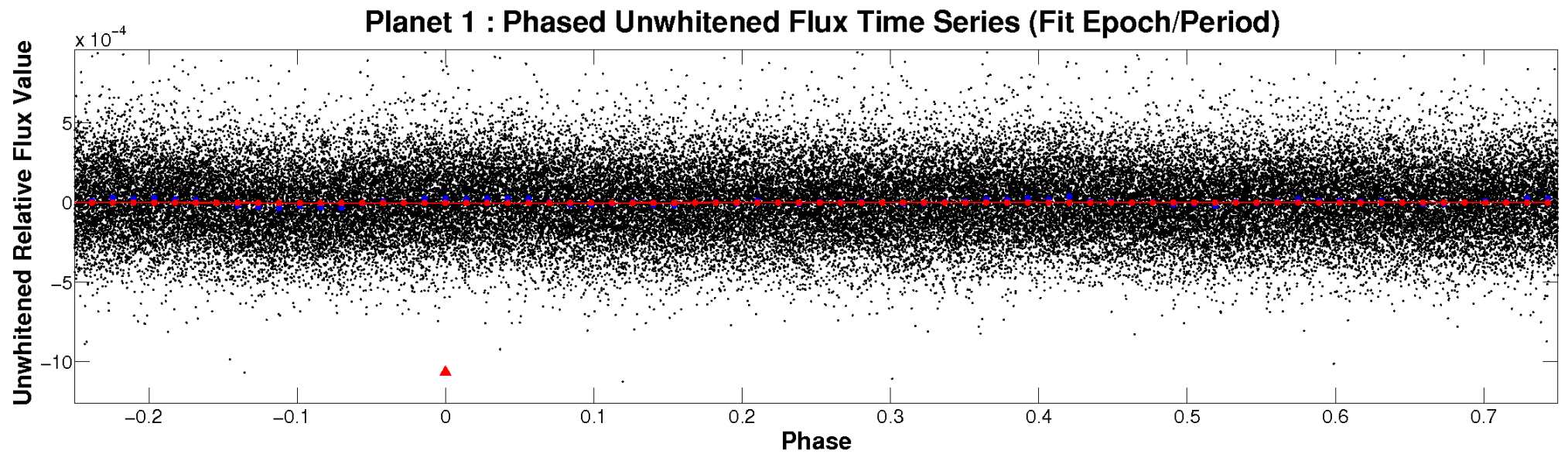


# ALT Odd/Even

TCE 005478337-01

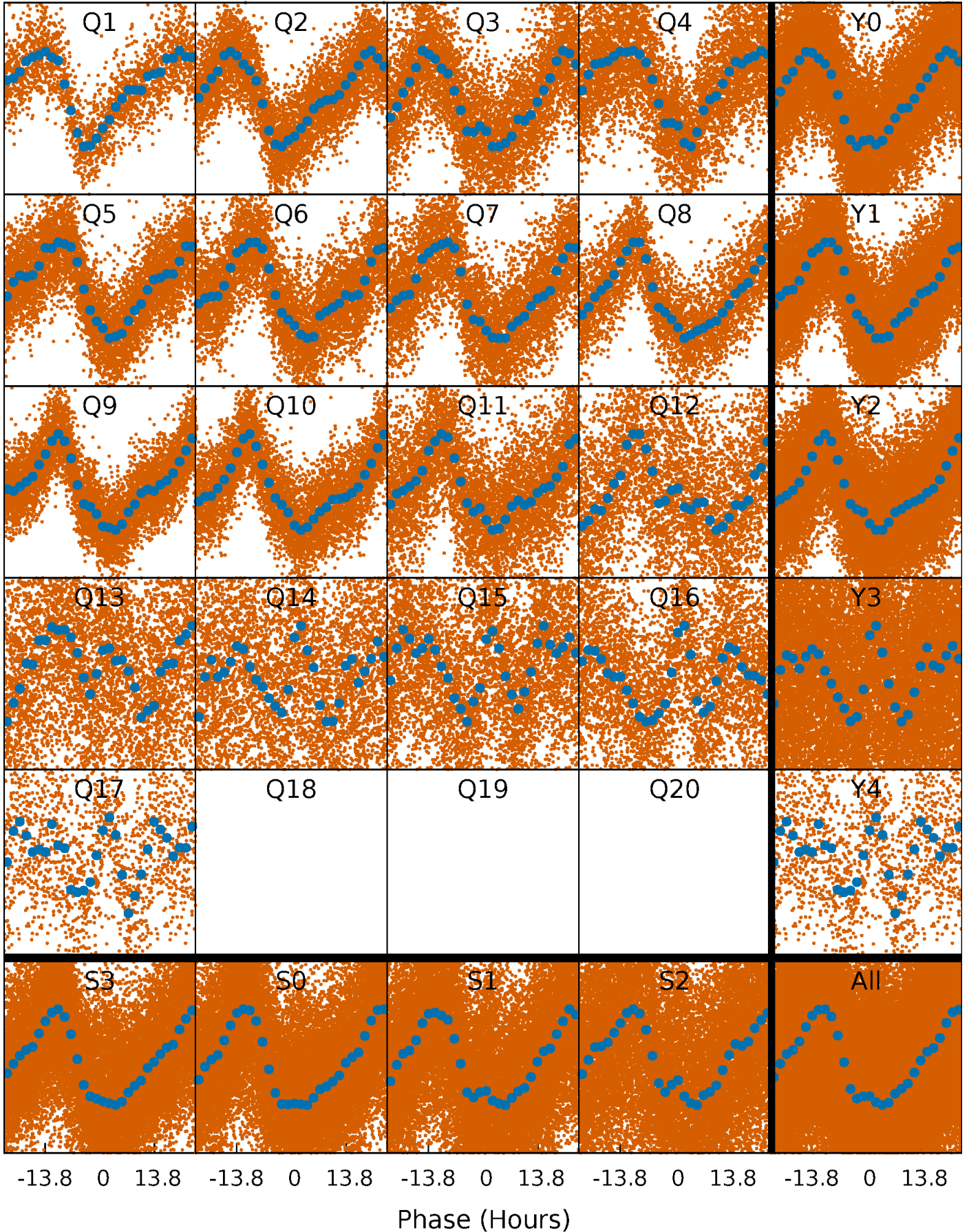


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

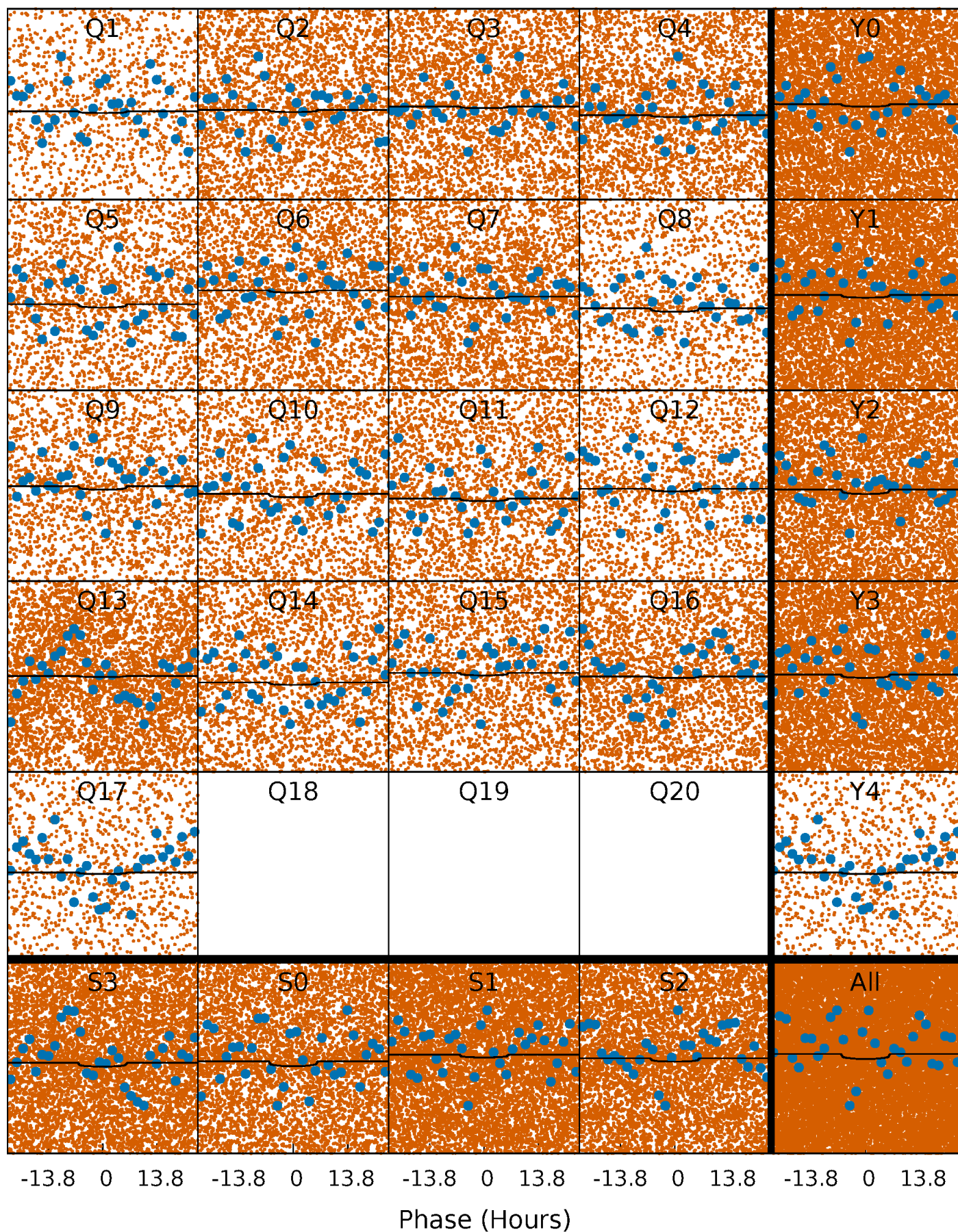
TCE 005478337-01 P= 1.457142 Days  $T_0=131.738174$  (BKJD)





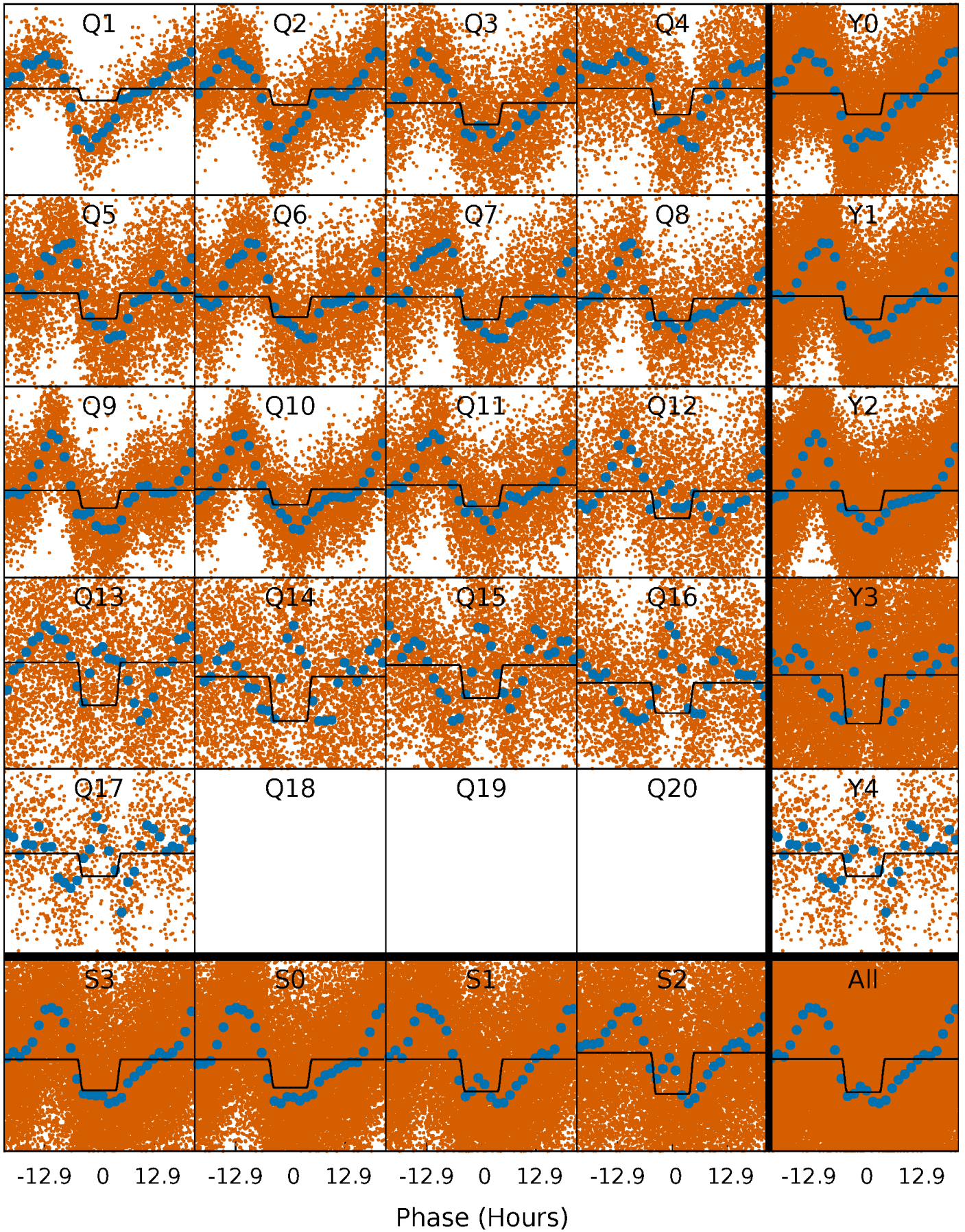
# DV Quarter-Phased Transit Curves

TCE 005478337-01 P= 1.457142 Days  $T_0=131.738174$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005478337-01 P= 1.457281 Days  $T_0=131.696596$  (BKJD)

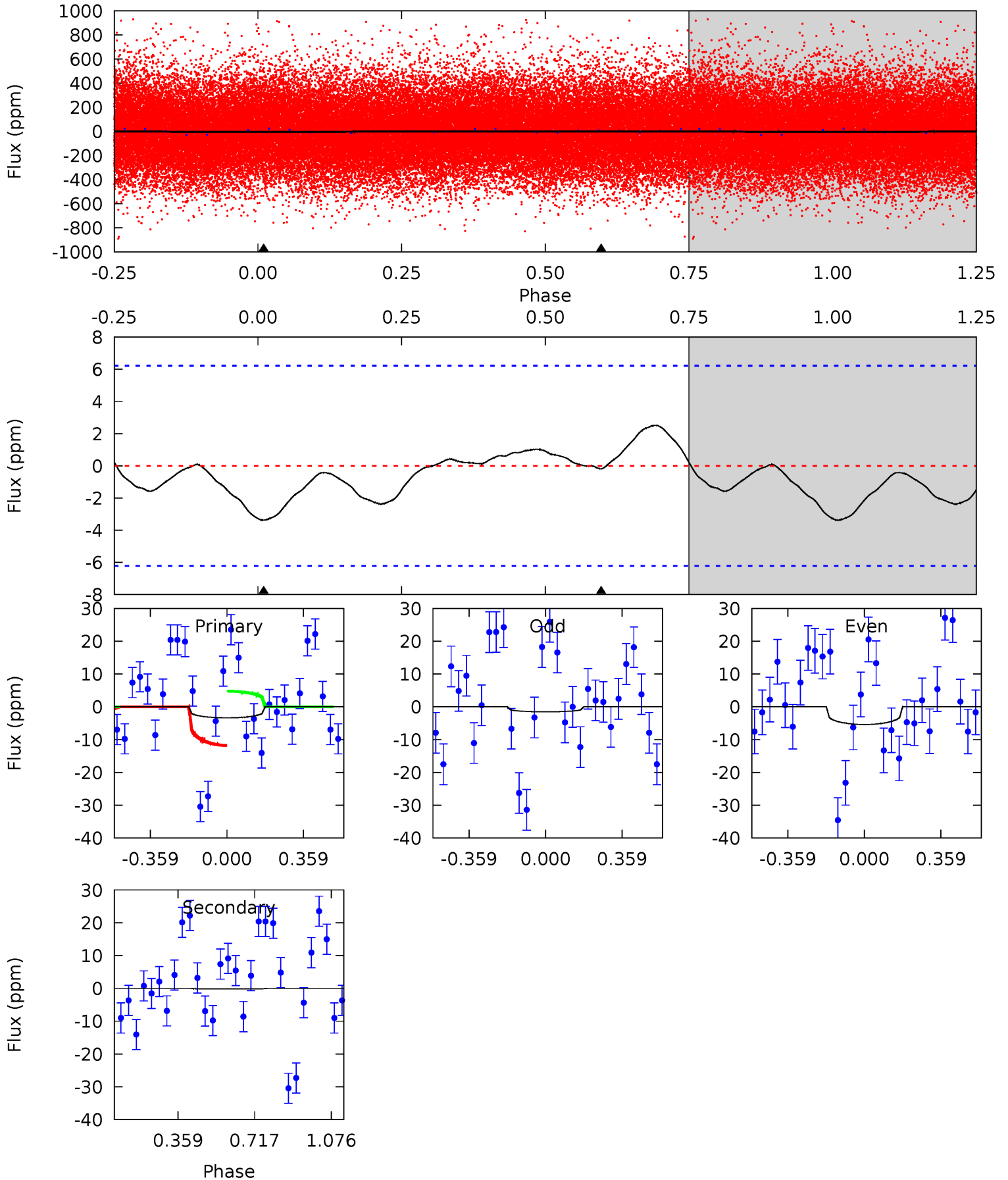




# DV Model-Shift Uniqueness Test

005478337-01, P = 1.457142 Days, E = 130.281032 Days

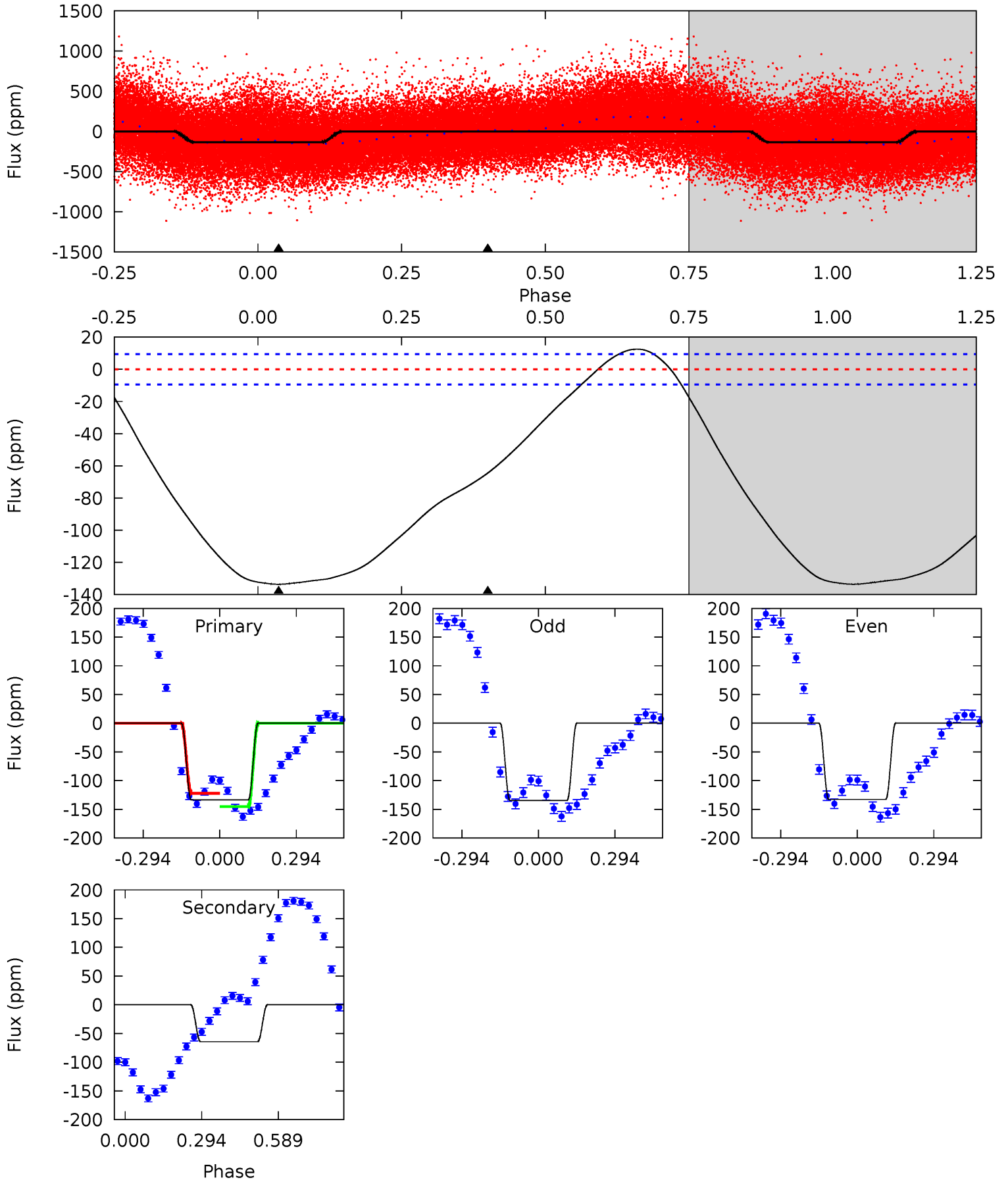
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.33	0.13	0	0	4.29	0.92	0.33	2.33	2.33	0.13	0.13	1.33	0.41	0.43	2.39



# Alt Model-Shift Uniqueness Test

005478337-01, P = 1.457281 Days, E = 130.239315 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
61.1	29.5	0	0	4.33	1.05	5.81	61.1	61.1	29.5	29.5	0.43	0.93	0.09	6.06





### Stellar Parameters For KIC 005478337

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6279^{+189}_{-207}$	$4.132^{+0.331}_{-0.178}$	$-0.780^{+0.300}_{-0.300}$	$1.329^{+0.348}_{-0.464}$	$0.874^{+0.113}_{-0.076}$	$0.524^{+1.115}_{-0.235}$
	+3%/-3%	+8%/-4%	+38%/-38%	+26%/-35%	+13%/-9%	+213%/-45%
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 005478337-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-0 \pm 1$	$0.81^{+0.86}_{-0.57}$	$2862^{+234}_{-263}$	$-2938^{+6545}_{-827}$	$0.036^{+1.463}_{-1.053}$
Alt.	$-64 \pm 2$	$1.57^{+1.12}_{-0.89}$	$2854^{+232}_{-286}$	$5343^{+2887}_{-1050}$	$8.561^{+34.828}_{-5.694}$

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

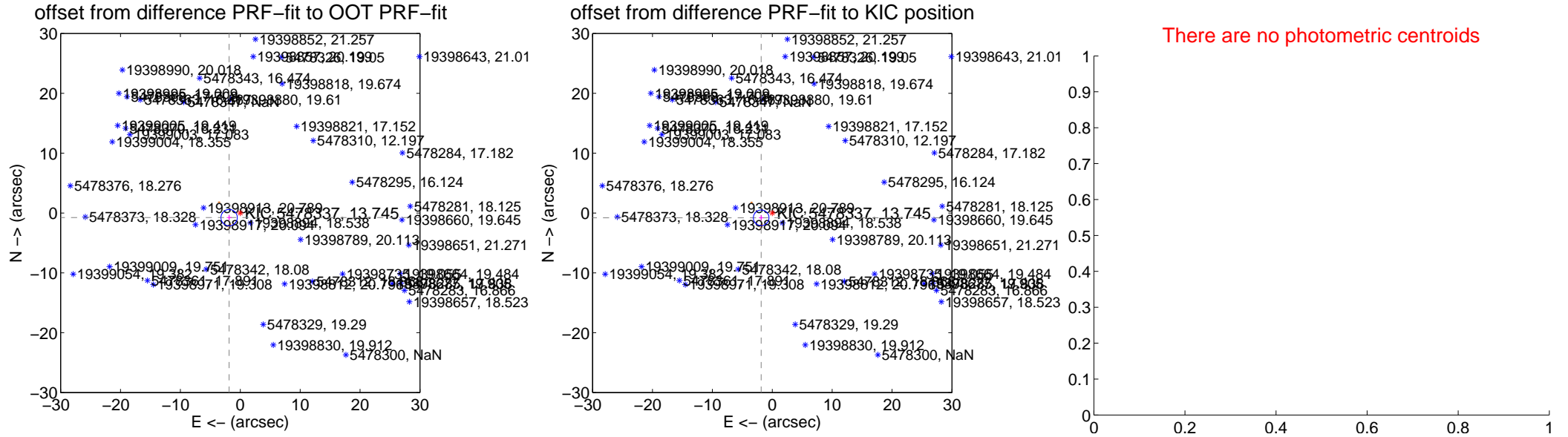
## DV Centroid Data

Supplemental centroid analysis for 005478337-01. Kepler magnitude: 13.74. Transit SNR 1.11

There are 6 quarters with good PRF difference image offsets

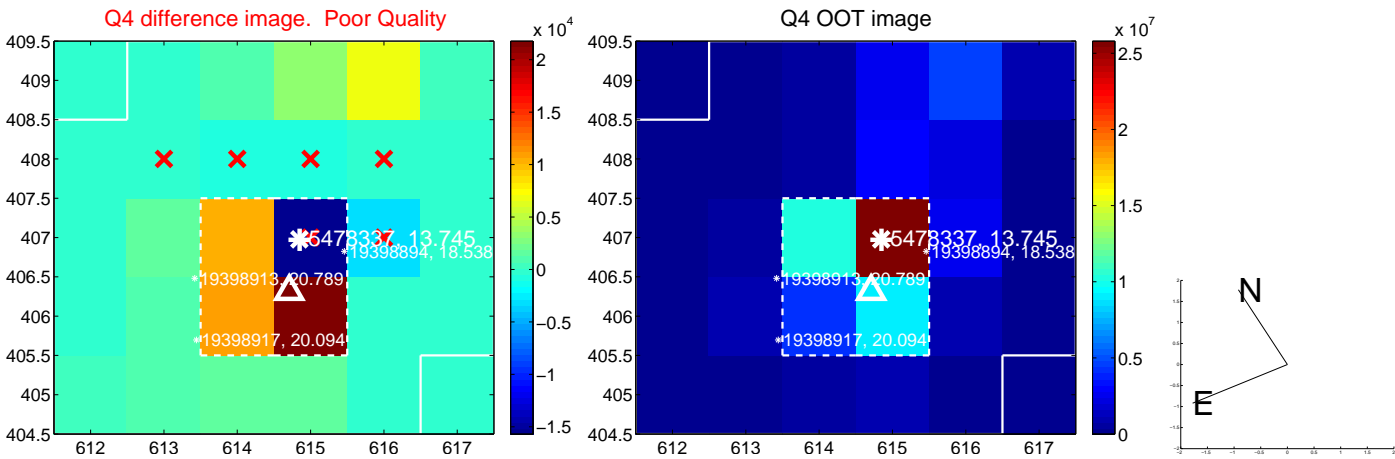
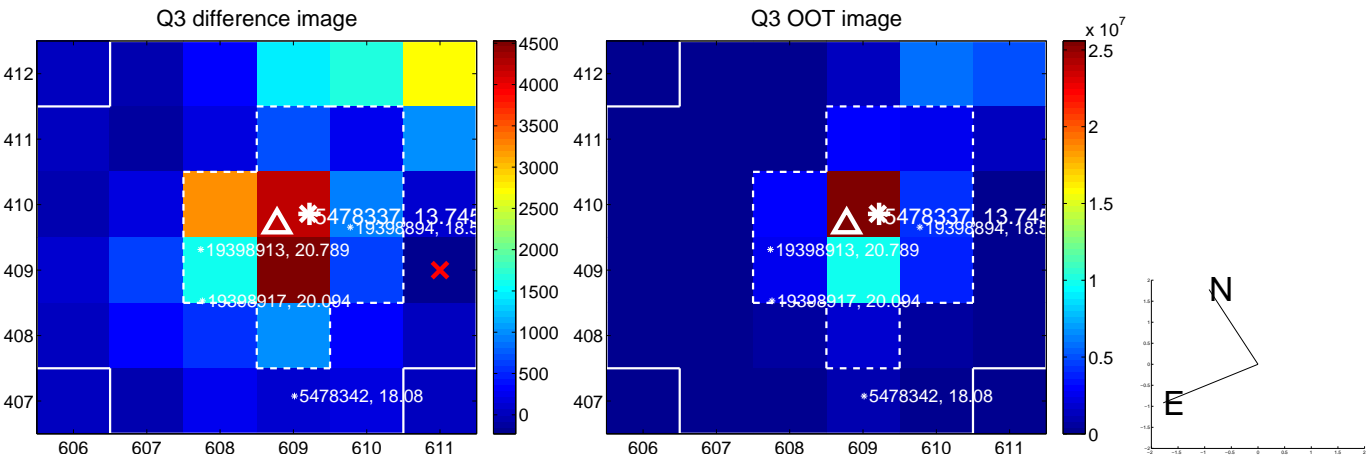
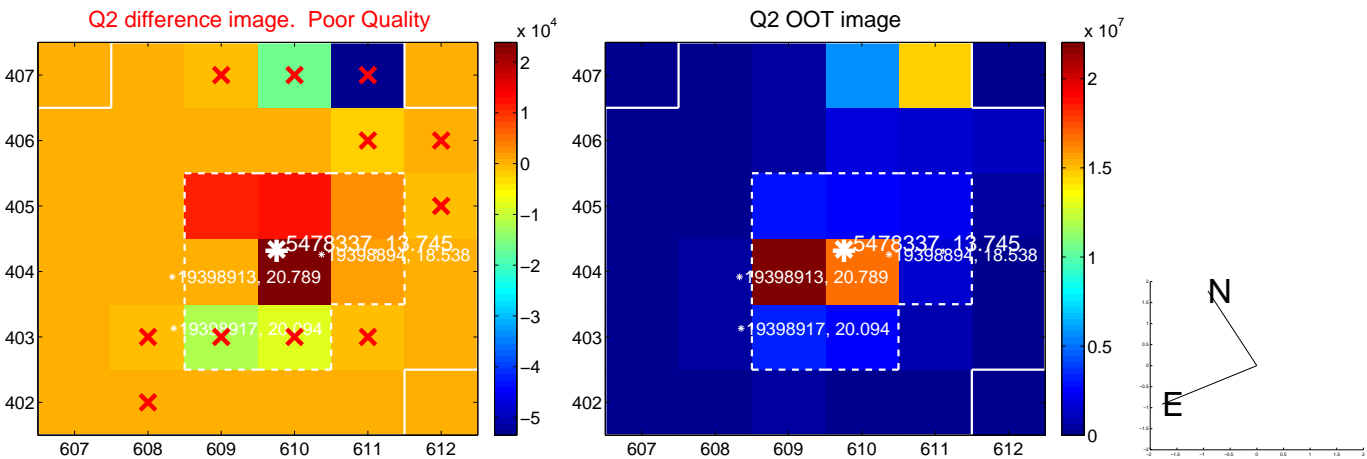
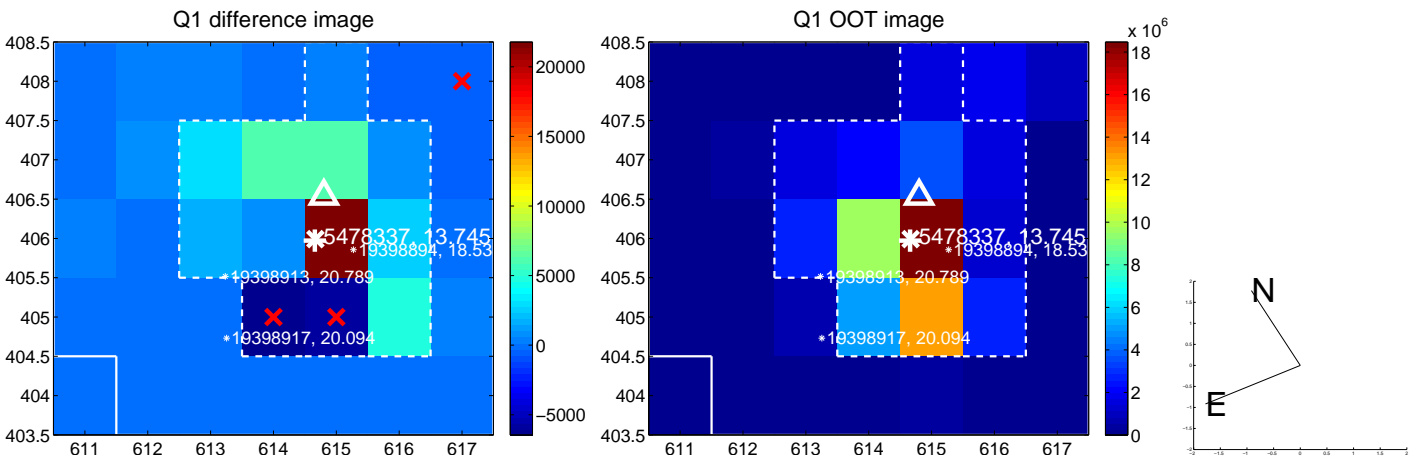
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	2.015 $\pm$ 0.455	4.43	1.864 $\pm$ 0.408	-0.767 $\pm$ 0.461
PRF-fit source offset from KIC position	2.015 $\pm$ 0.434	4.64	1.850 $\pm$ 0.386	-0.797 $\pm$ 0.455
photometric centroid source offset	—	—	—	—

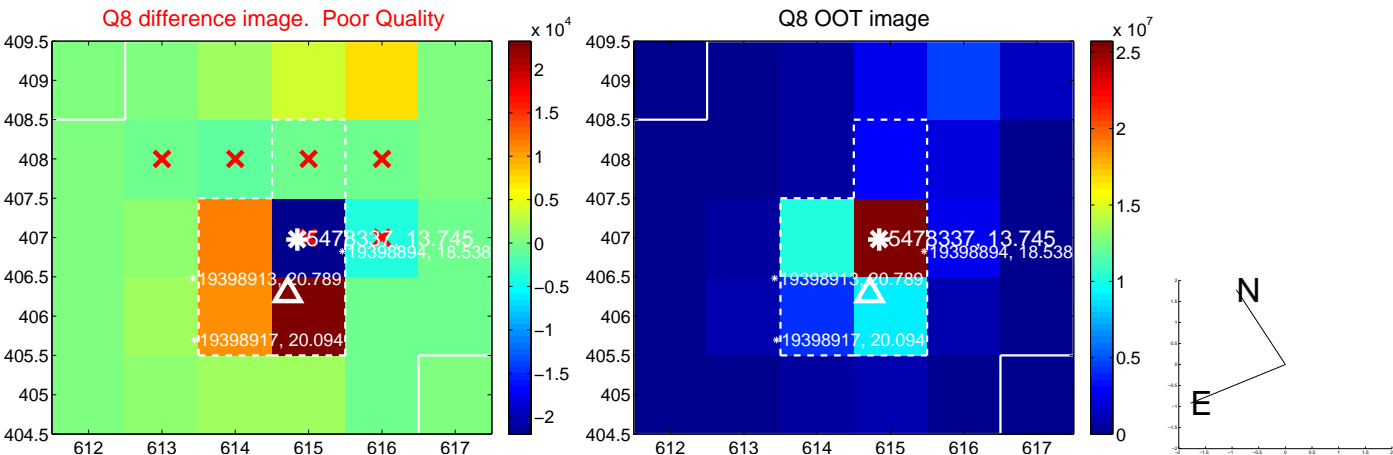
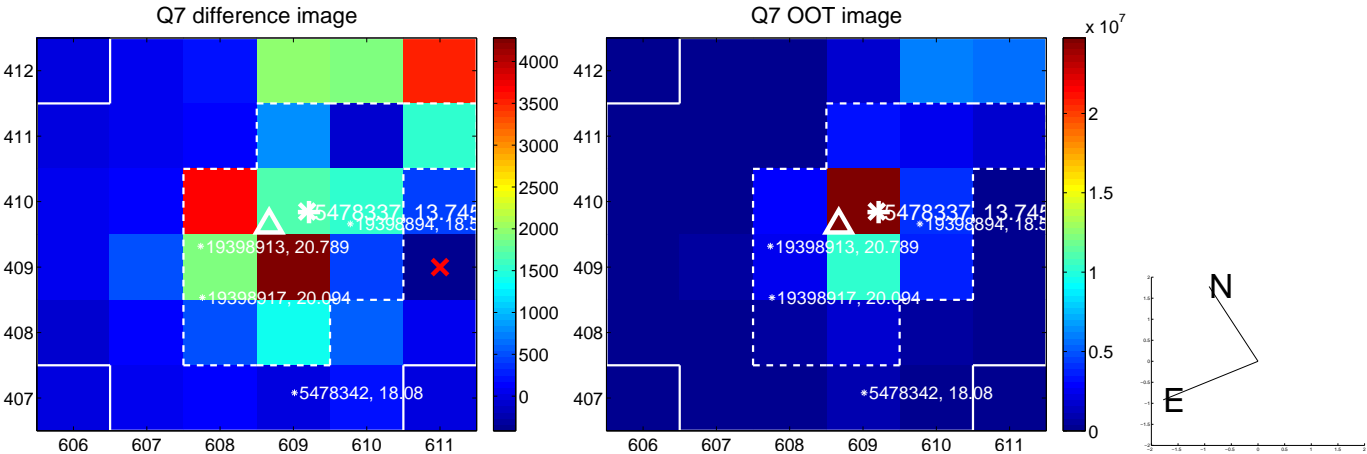
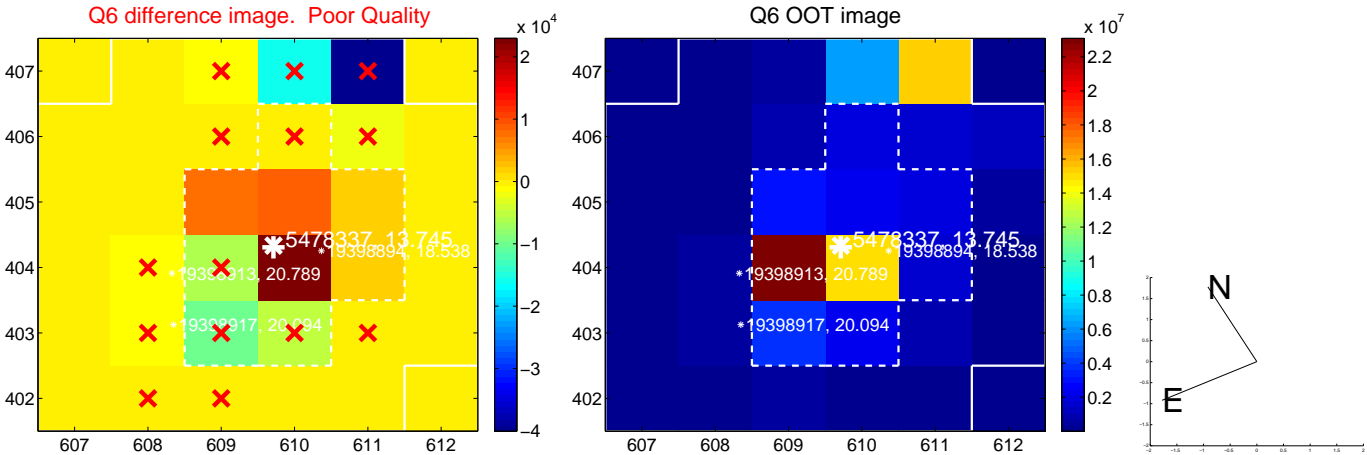
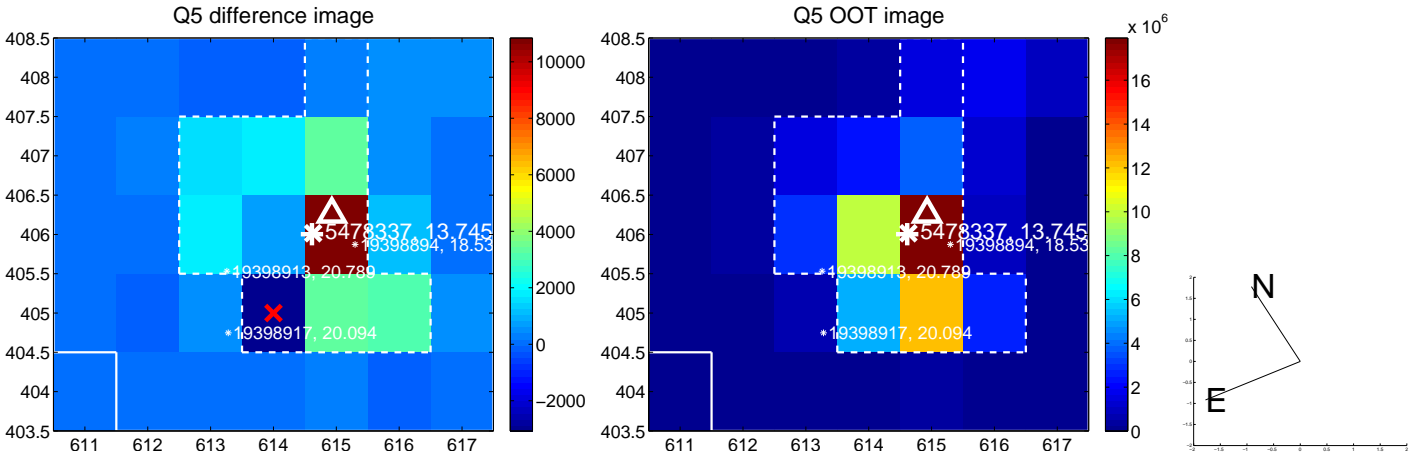


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

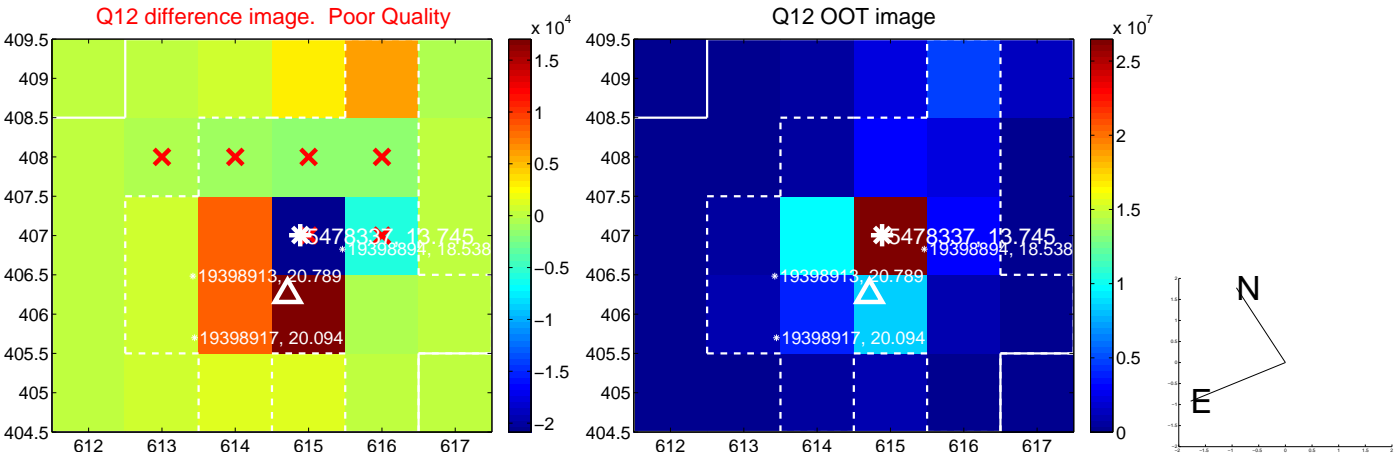
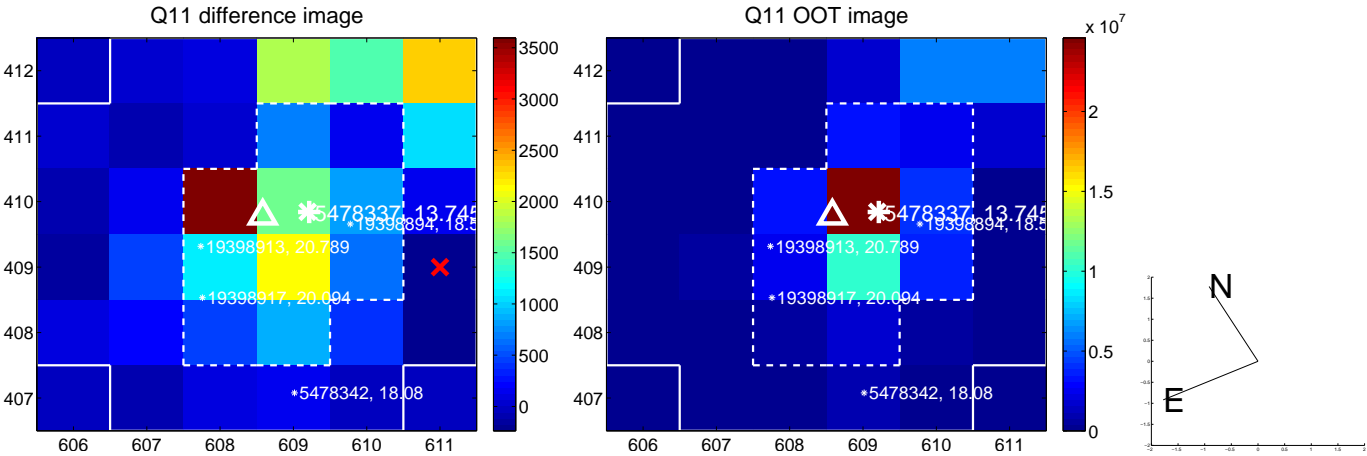
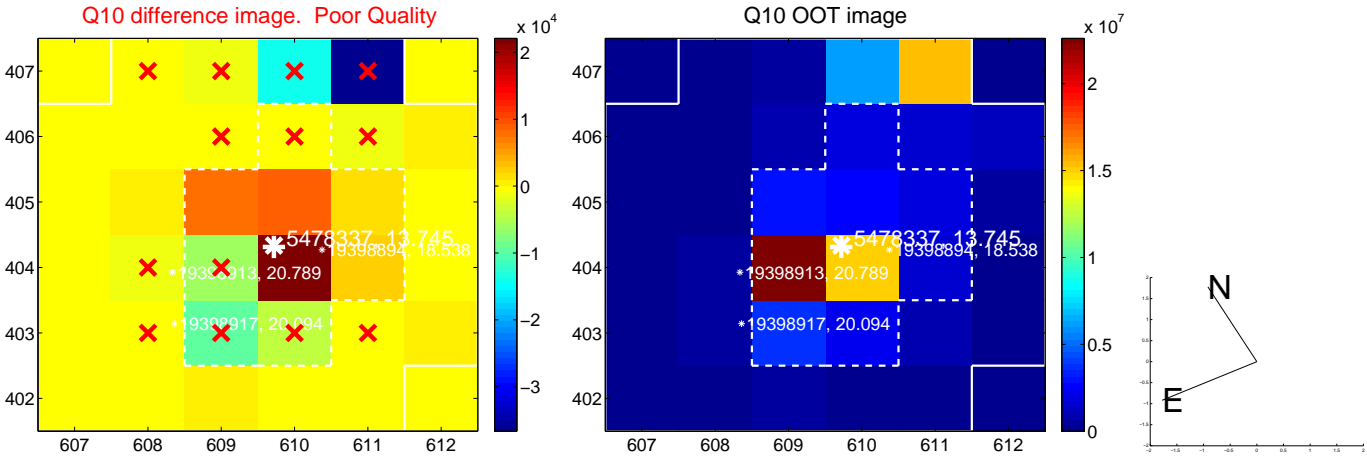
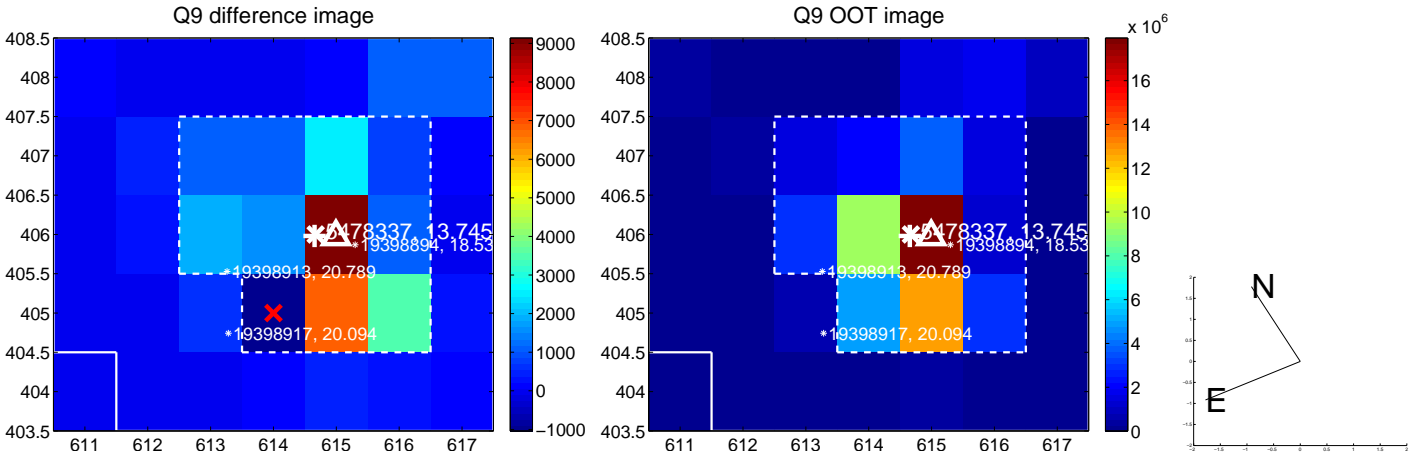


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

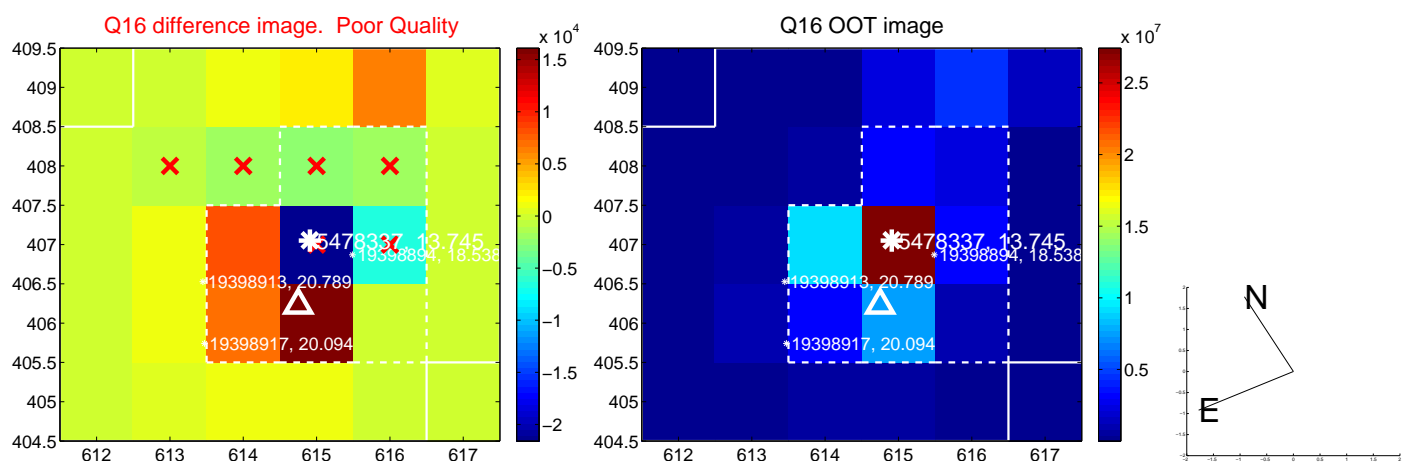
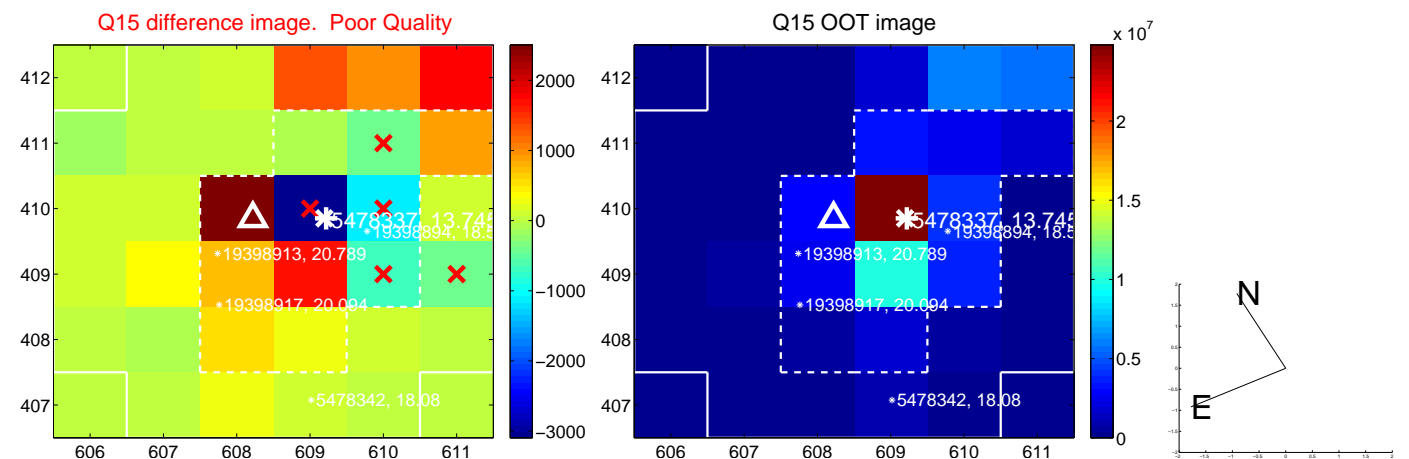
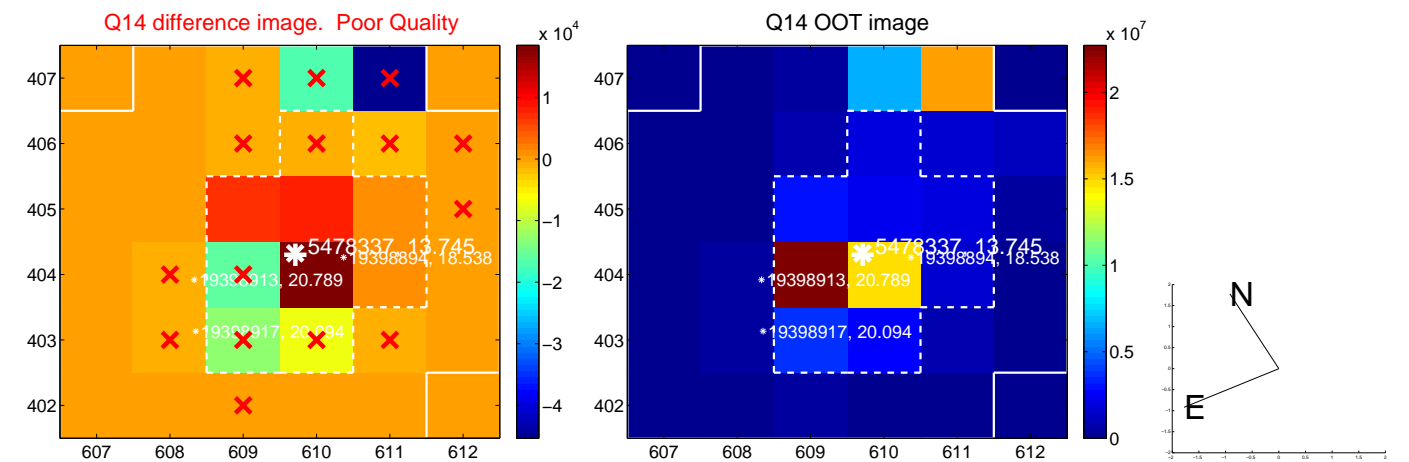
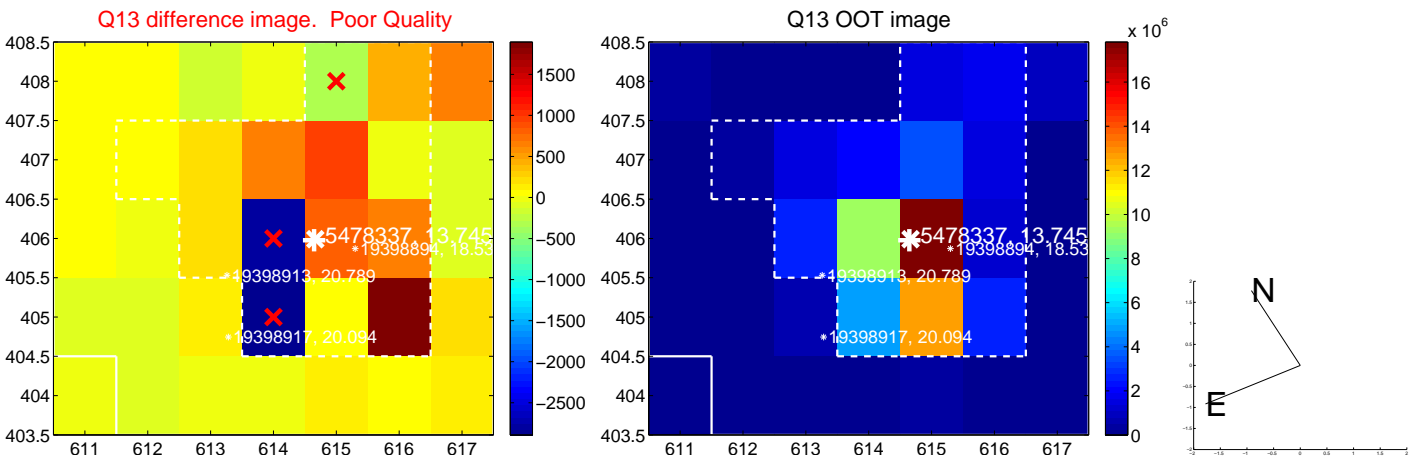




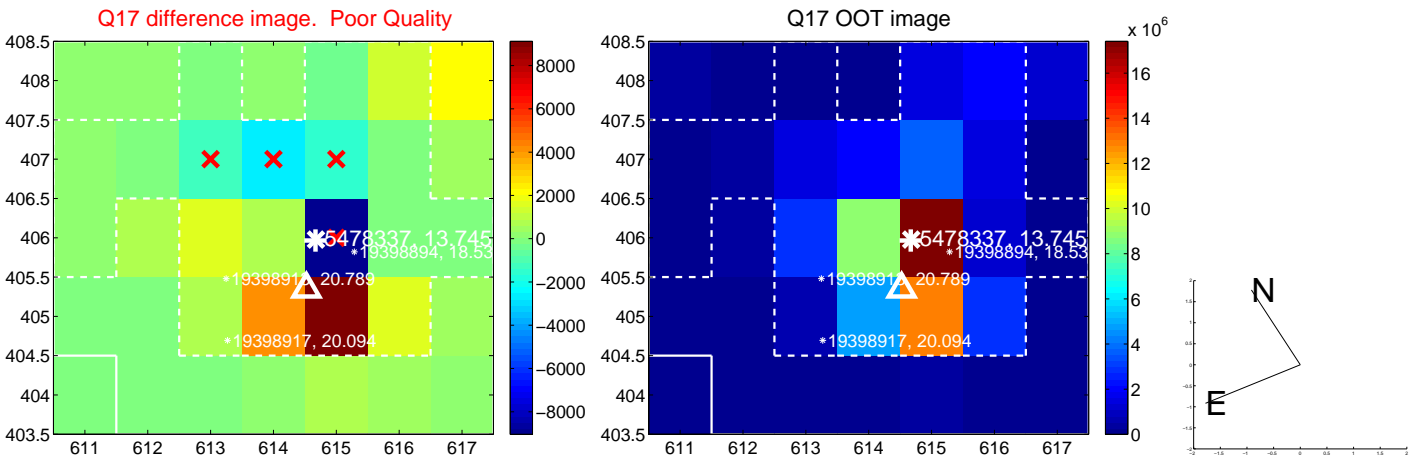
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

