

# KIC 007369349

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007369349-01	OBS	No	508.320026	404.529418	395.7	19.718	10.2	9.5	0.98	6257	1.99	0.83

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007369349-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

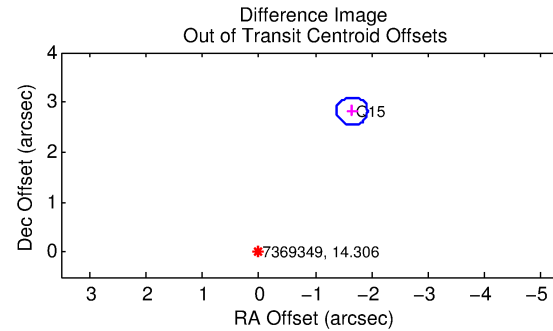
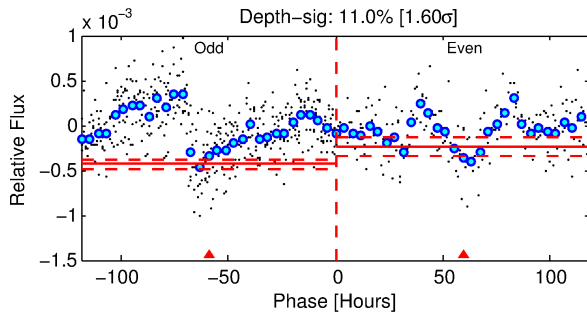
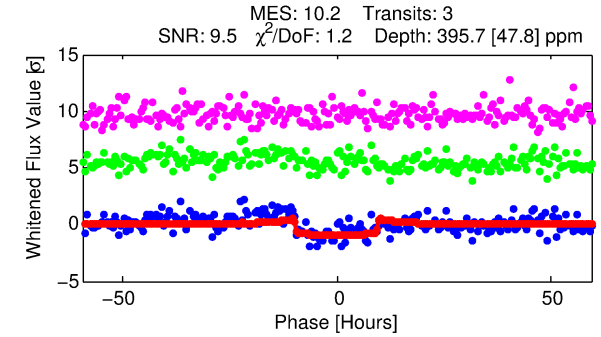
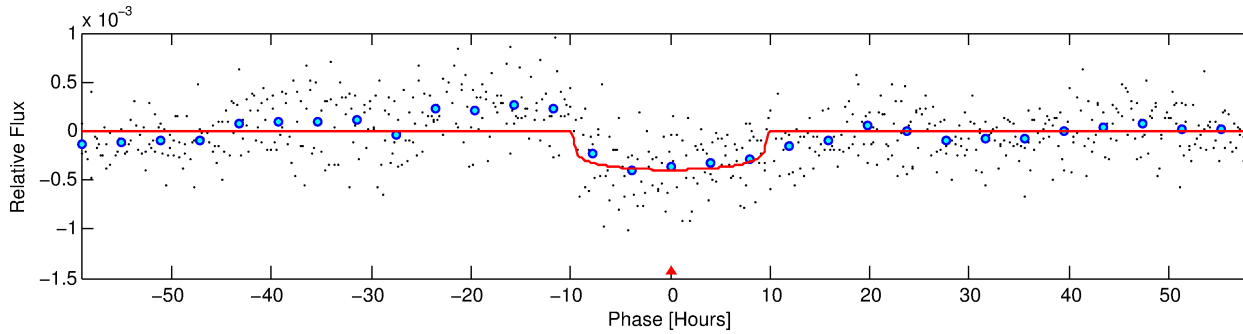
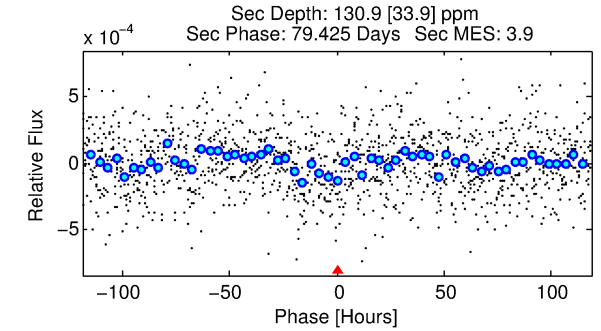
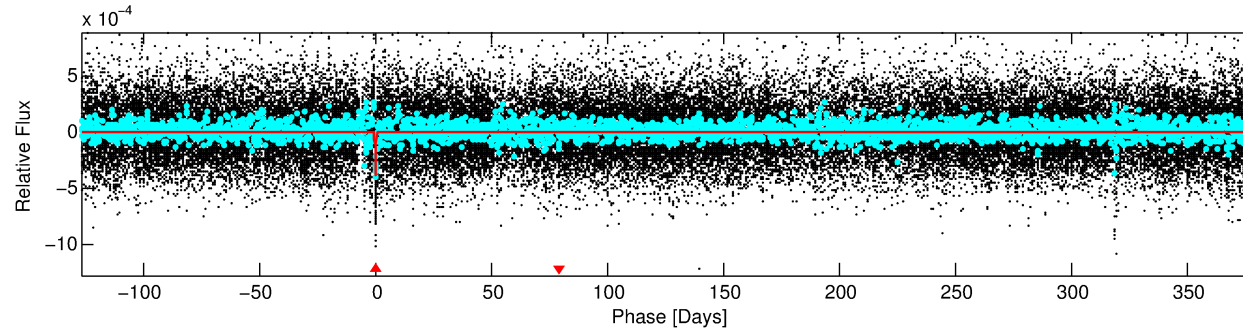
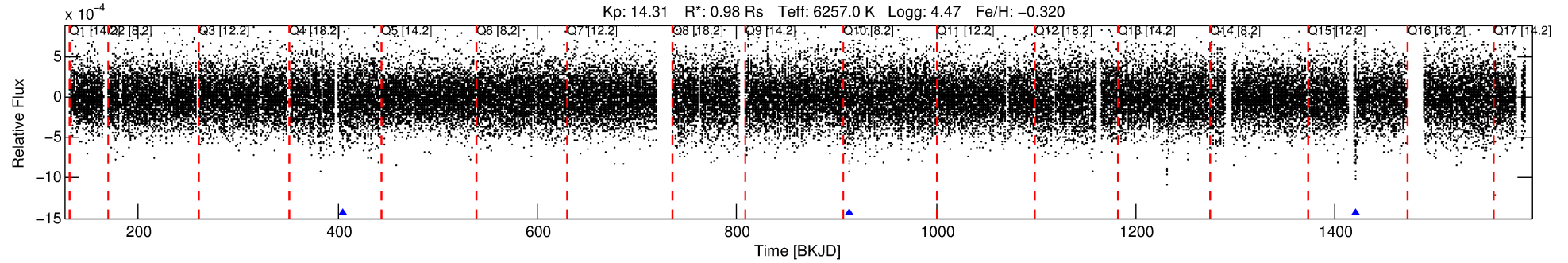
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007369349-01

No Significant Match Found

# DV One-Page Summary

KIC: 7369349 Candidate: 1 of 1 Period: 508.320 d



## DV Fit Results:

Period = 508.32003 [0.01153] d  
Epoch = 404.5294 [0.0166] BKJD  
Rp/R\* = 0.0187 [0.0097]  
a/R\* = 180.87 [486.78]  
b = 0.44 [4.93]  
Seff = 0.83 [0.34]  
Teq = 244 [25] K  
Rp = 1.99 [1.23] Re  
a = 1.2561 [0.3448] AU  
Ag = 28649.62 [32691.18] [0.88σ]  
Teffp = 4899 [1323] K [3.52σ]

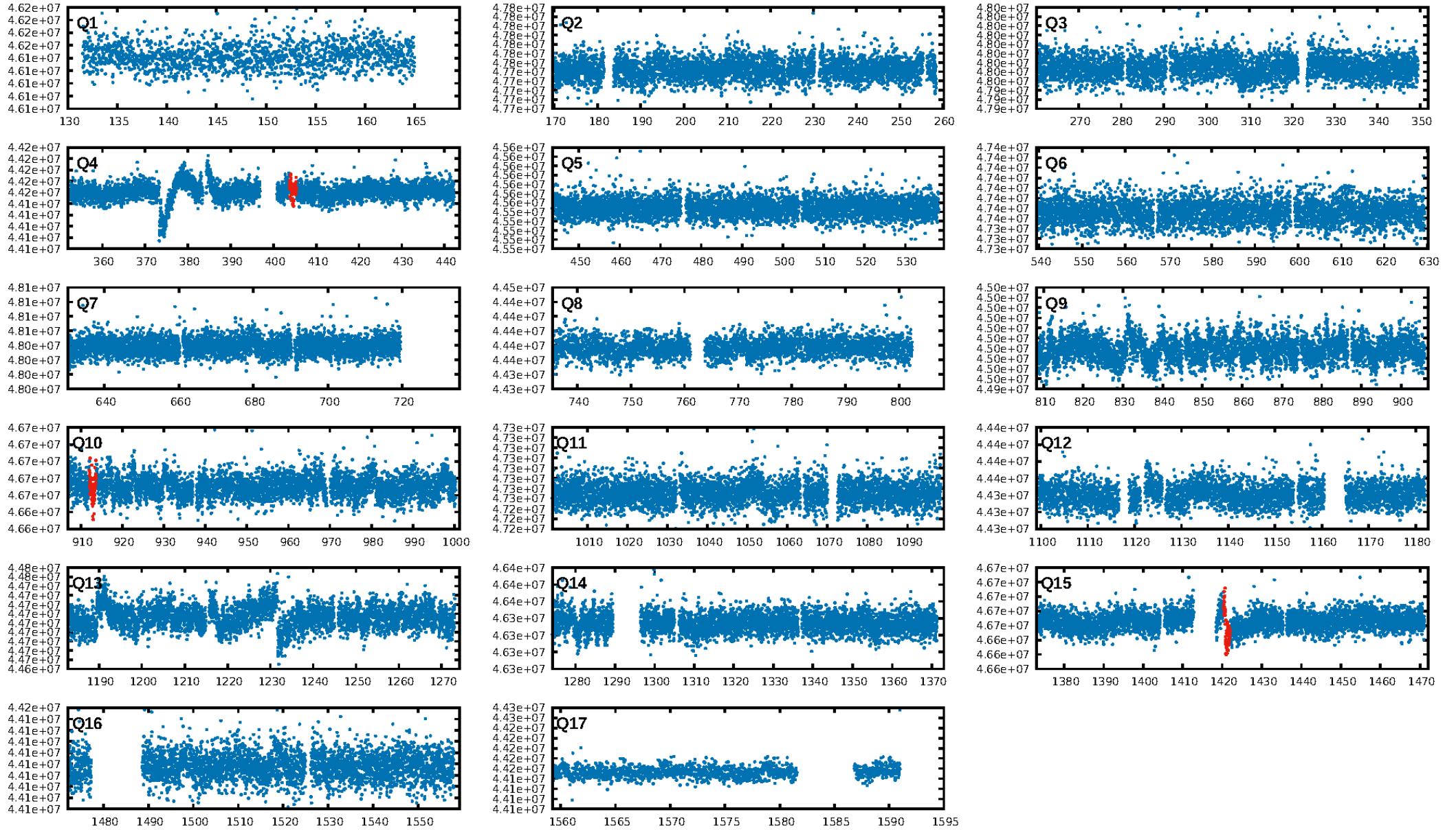
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 10.5%  
ModelChiSquareGof-sig: 75.1%  
Bootstrap-pfa: 7.98e-14  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -1.46  
Centroid-sig: 37.7%  
Centroid-so: 0.192 arcsec [0.20σ]  
OotOffset-rm: 3.271 arcsec [35.48σ]  
KicOffset-rm: 3.344 arcsec [36.29σ]  
OotOffset-st: 0/1/0/0 [1]  
KicOffset-st: 0/1/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [3/3]

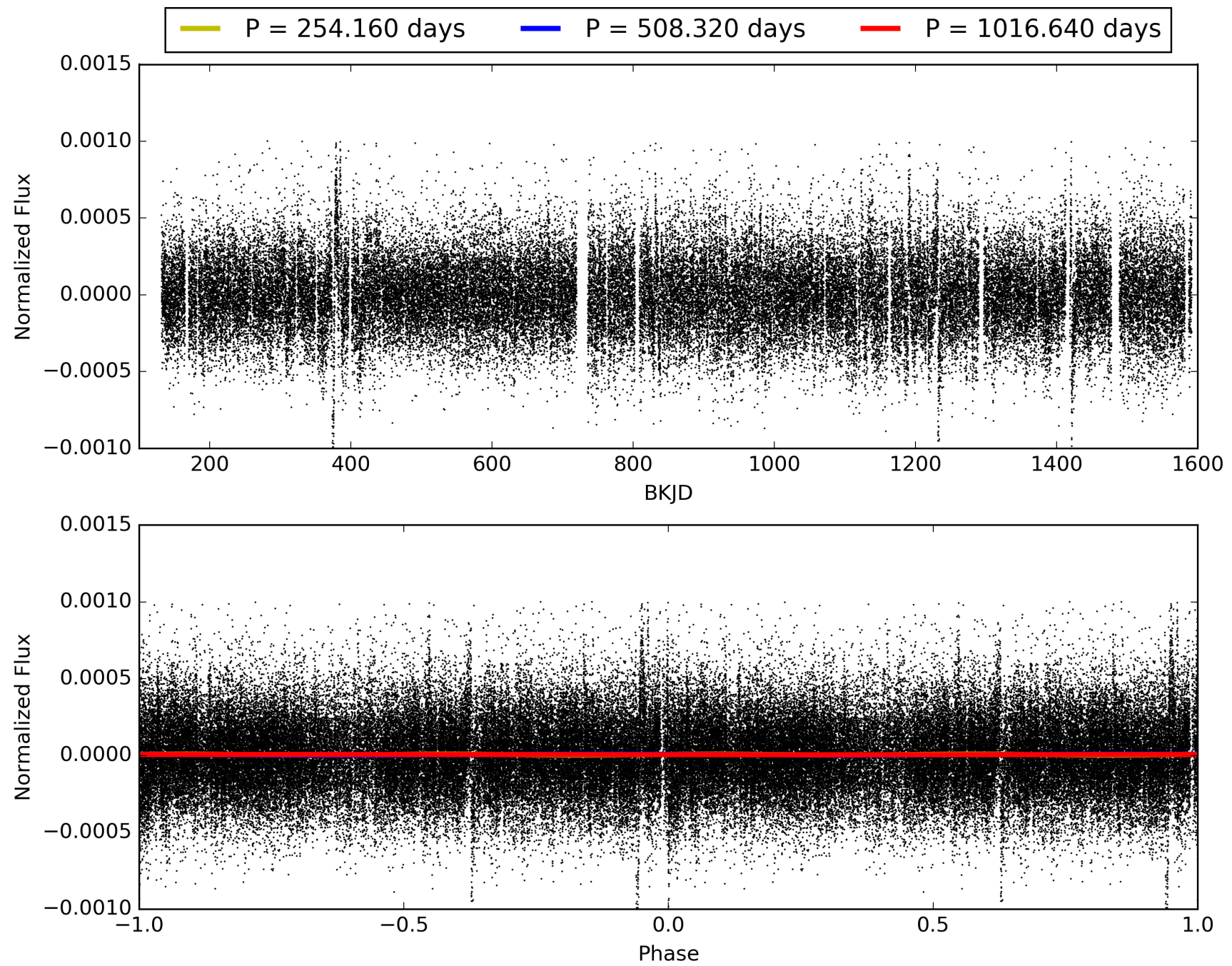
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:33:07 Z

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

# TCE 007369349-01, PDC Light Curves

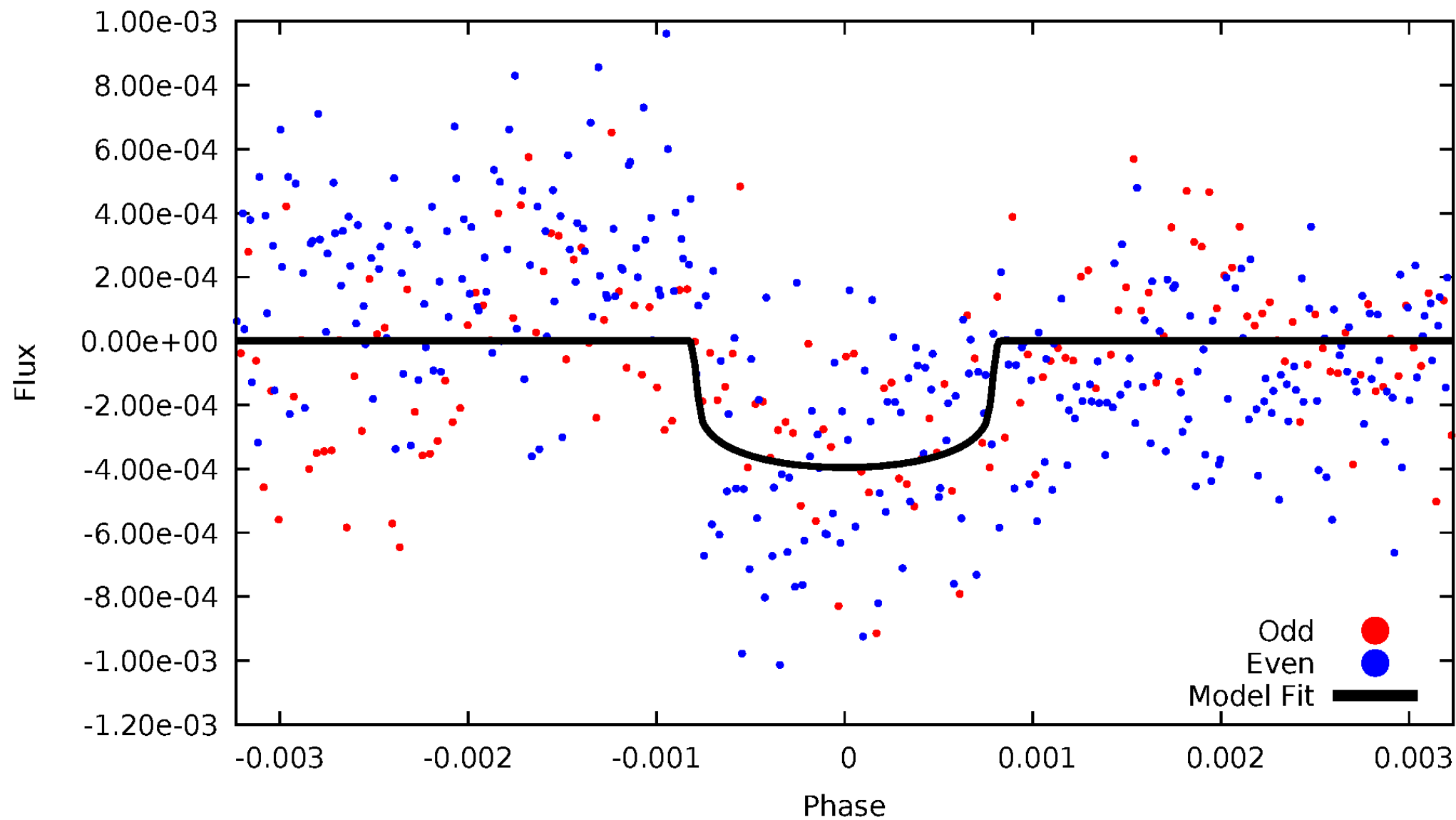


TCE 007369349-01



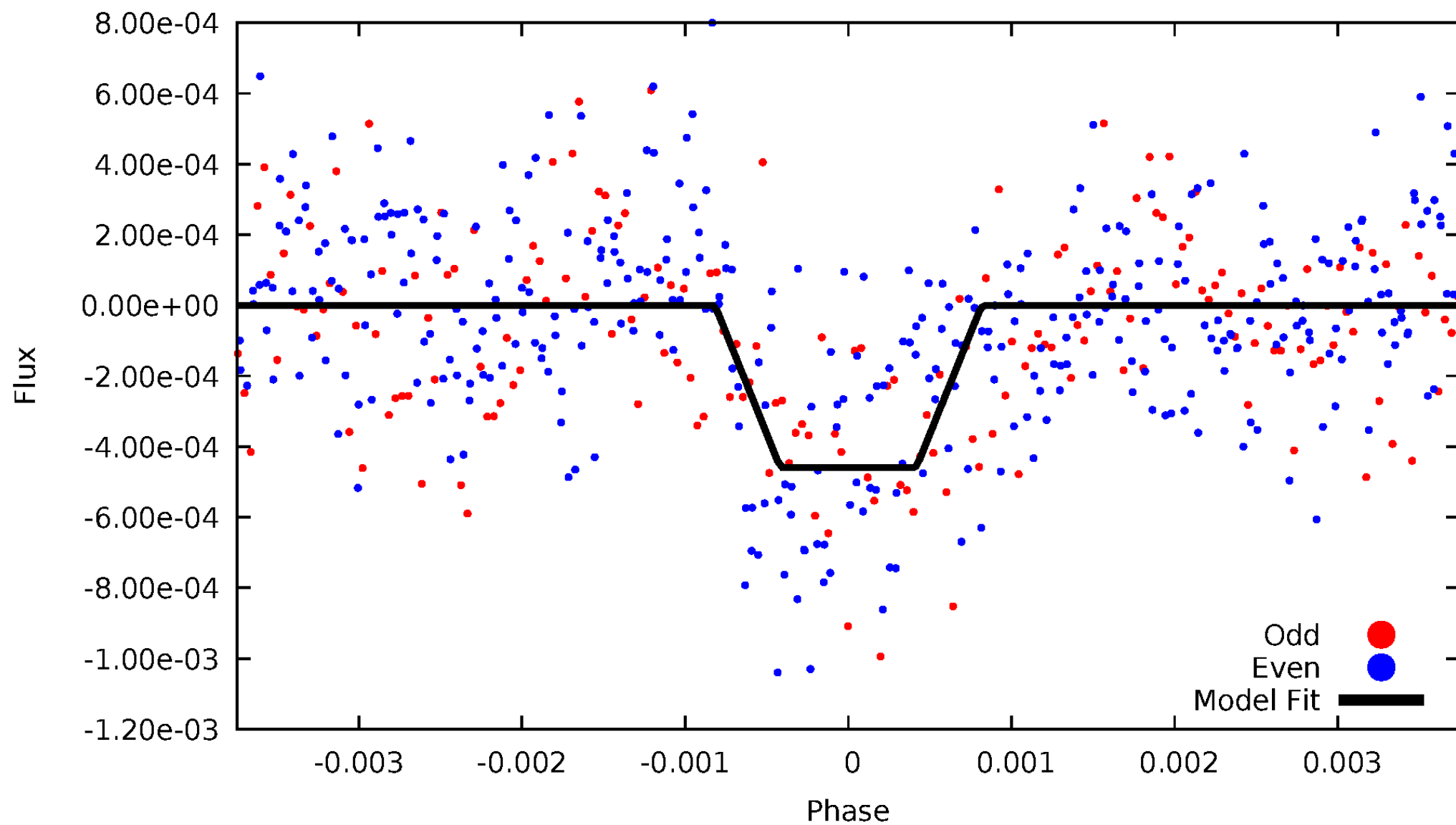
# DV Odd/Even

TCE 007369349-01



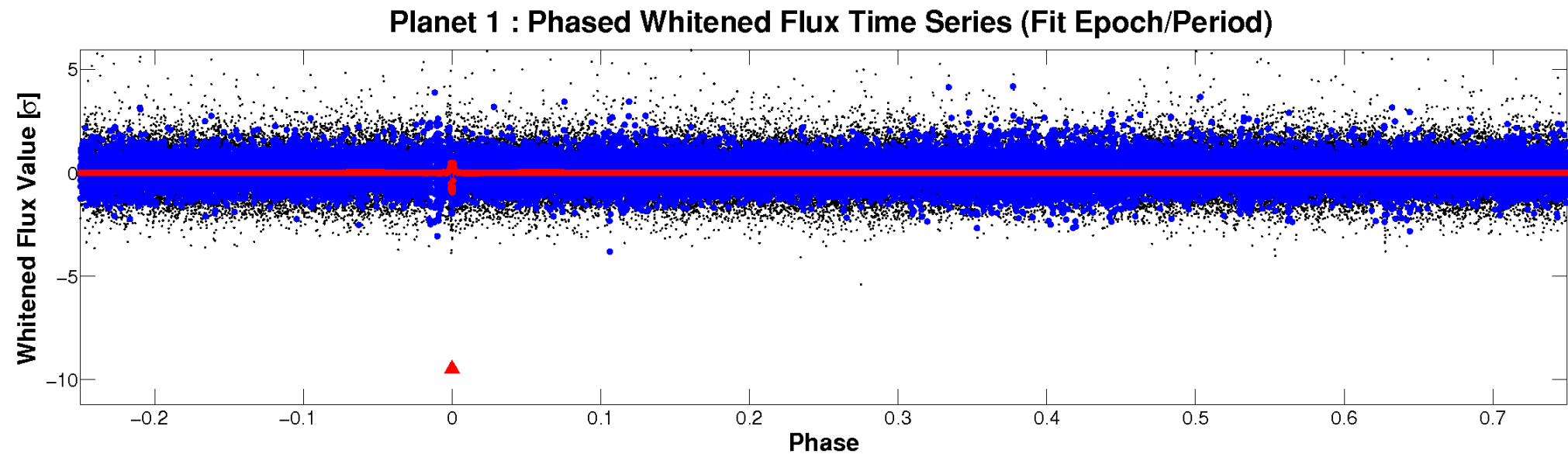
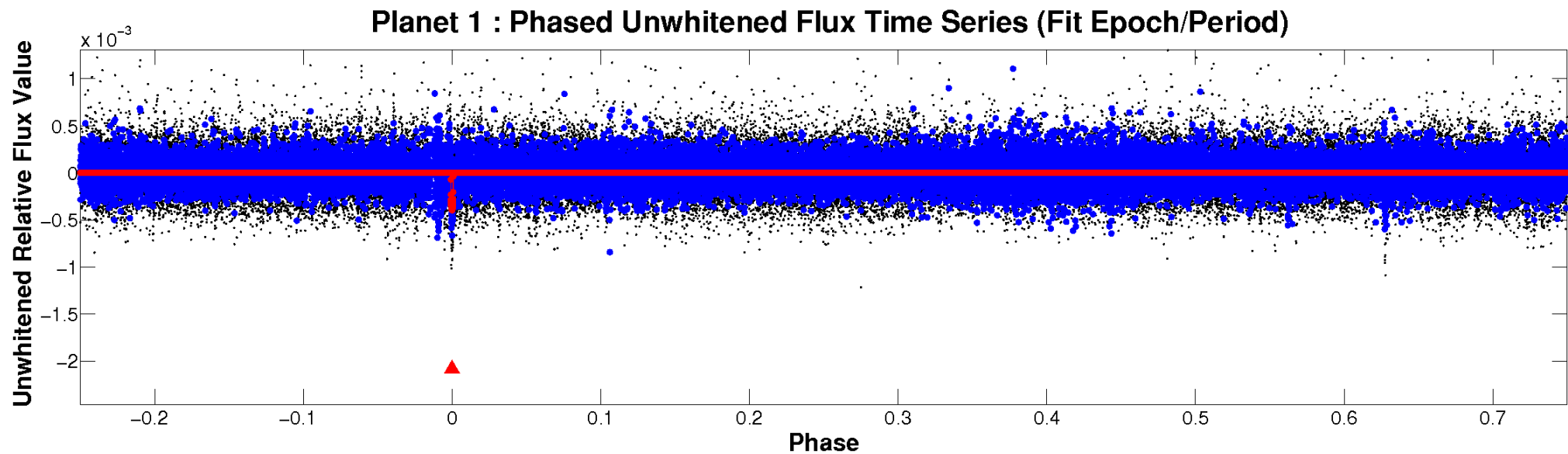
# ALT Odd/Even

TCE 007369349-01





# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

TCE 007369349-01 P=508.320025 Days  $T_0=404.529418$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 007369349-01 P=508.320025 Days  $T_0=404.529418$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

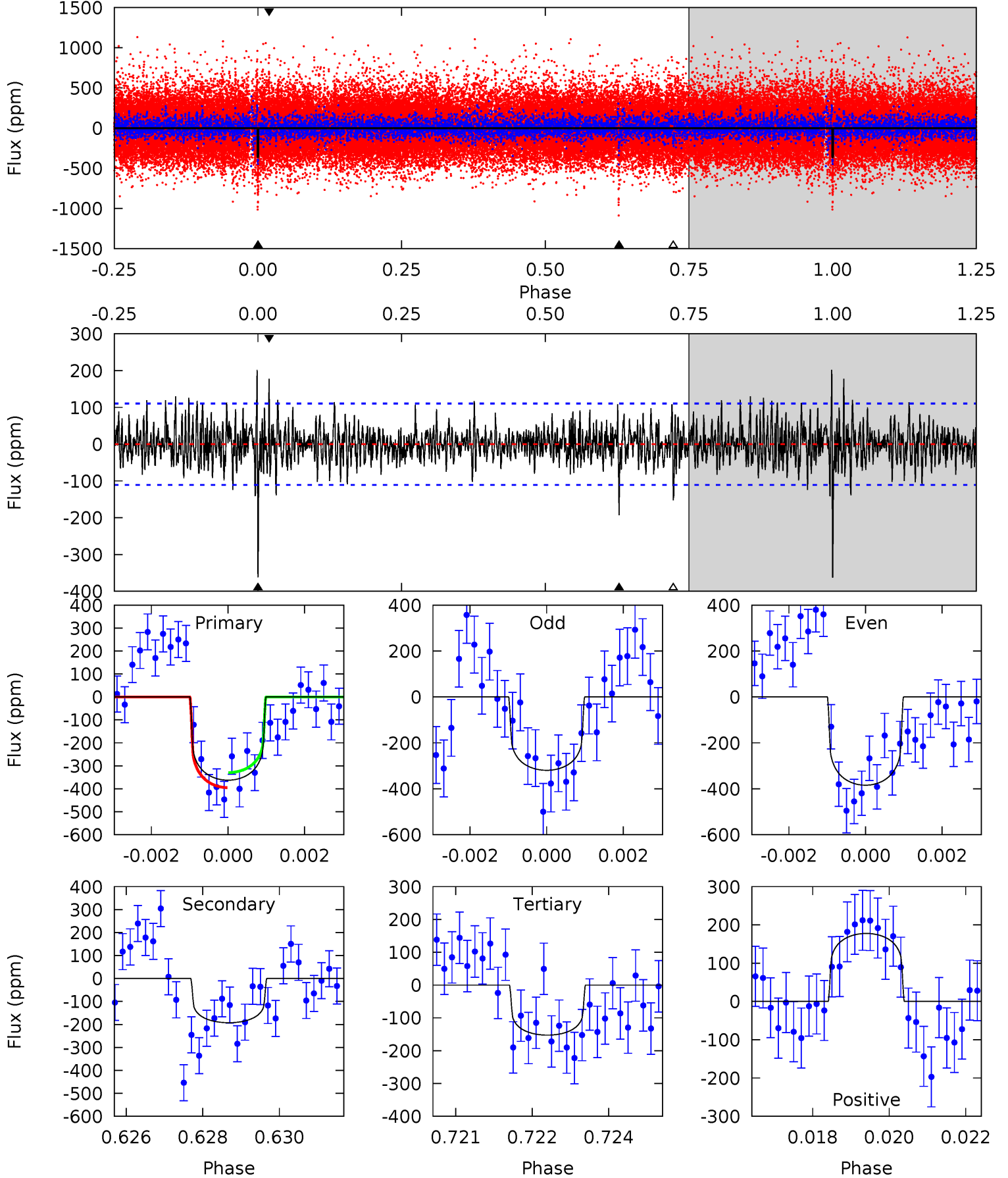
TCE 007369349-01 P=508.277994 Days  $T_0=404.556254$  (BKJD)



# DV Model-Shift Uniqueness Test

007369349-01, P = 508.320025 Days, E = 404.529418 Days

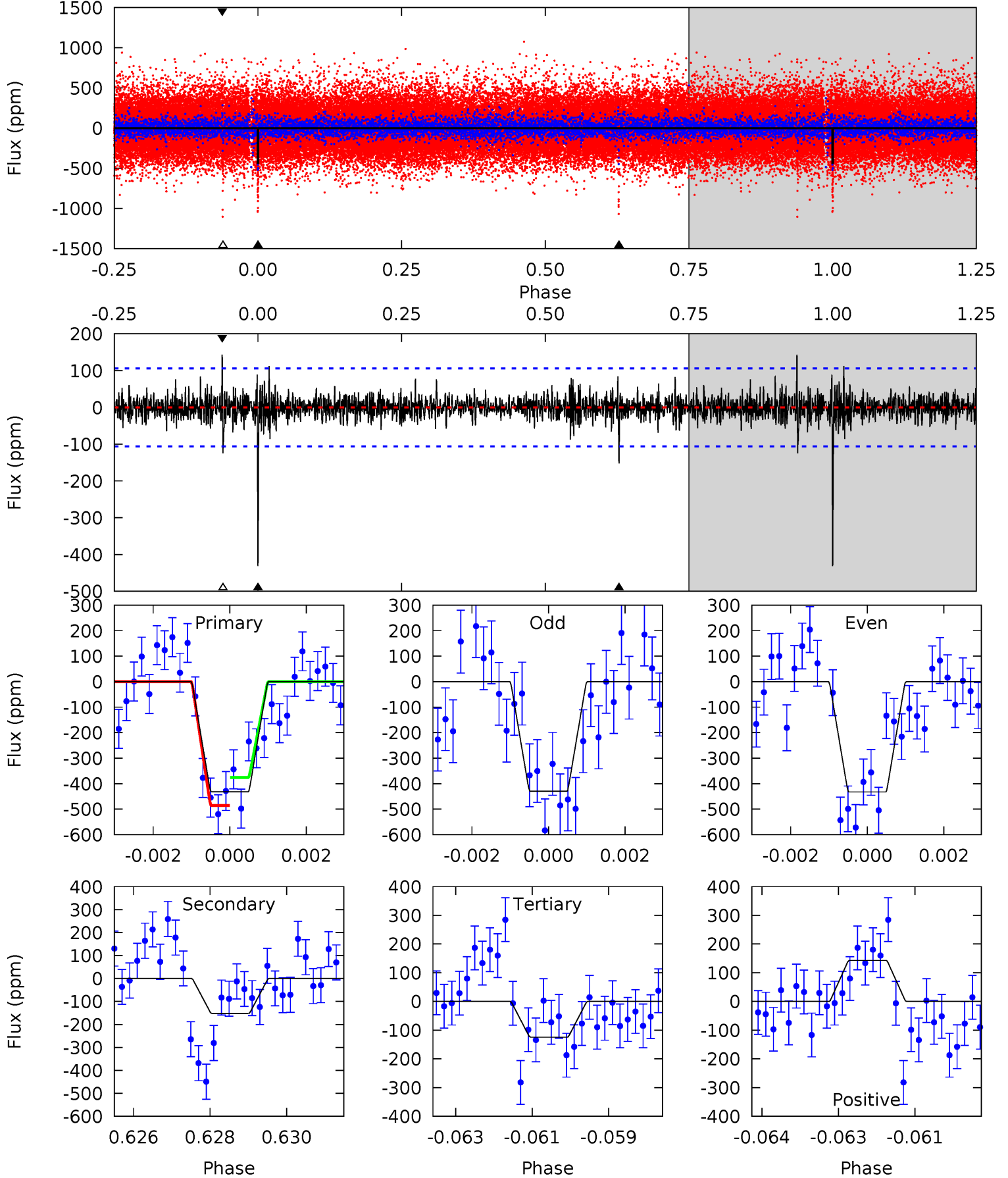
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	9.34	7.40	8.61	5.36	3.15	1.85	10.2	8.96	1.94	0.72	1.47	1.13	0.36	1.59



# Alt Model-Shift Uniqueness Test

007369349-01, P = 508.277994 Days, E = 404.556254 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
21.8	7.68	6.29	7.22	5.36	3.15	1.18	15.5	14.6	1.40	0.46	0.08	1.00	0.25	2.77



### Stellar Parameters For KIC 007369349

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6257^{+169}_{-206}$	$4.467^{+0.056}_{-0.210}$	$-0.320^{+0.300}_{-0.350}$	$0.978^{+0.326}_{-0.102}$	$1.018^{+0.147}_{-0.120}$	$1.531^{+0.449}_{-0.829}$
	+3%/-3%	+1%/-5%	+94%/-109%	+33%/-10%	+14%/-12%	+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 007369349-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-193 \pm 21$	$2.19^{+1.14}_{-1.06}$	$348^{+26}_{-17}$	$5364^{+1935}_{-897}$	$34659^{+93161}_{-20341}$
Alt.	$-152 \pm 20$	$2.42^{+1.12}_{-1.14}$	$348^{+25}_{-18}$	$4856^{+1606}_{-704}$	$22107^{+53593}_{-11995}$

$T_{\text{max}}$  = 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

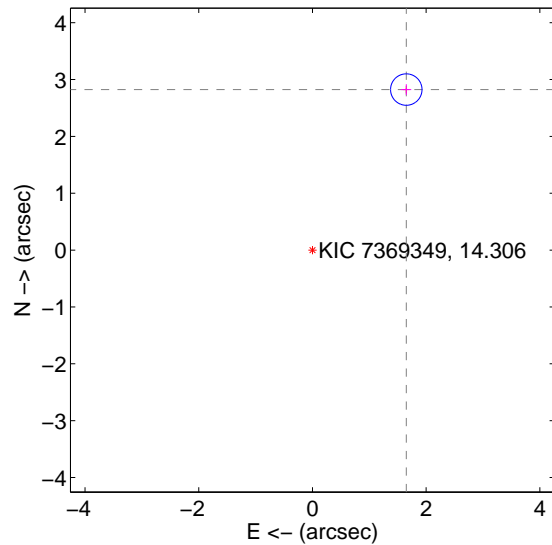
Supplemental centroid analysis for 007369349-01. Kepler magnitude: 14.31. Transit SNR 9.52

There are 0 quarters with good PRF difference image offsets

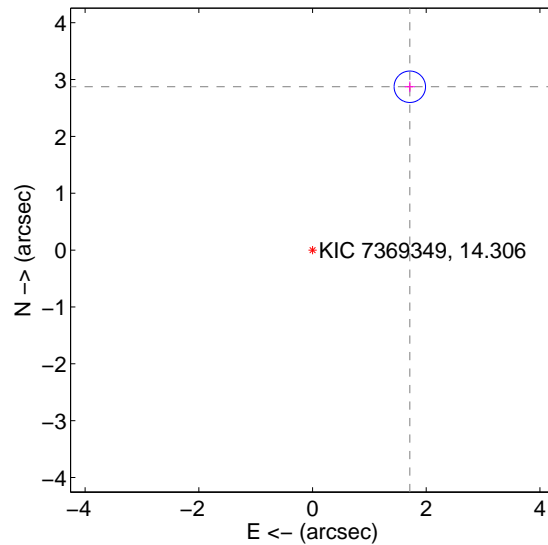
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.271 \pm 0.092$	35.48	$-1.650 \pm 0.088$	$2.824 \pm 0.094$
PRF-fit source offset from KIC position	$3.344 \pm 0.092$	36.29	$-1.711 \pm 0.088$	$2.873 \pm 0.094$
photometric centroid source offset	$0.19 \pm 0.95$	0.20	$-0.07 \pm 1.18$	$0.18 \pm 0.92$

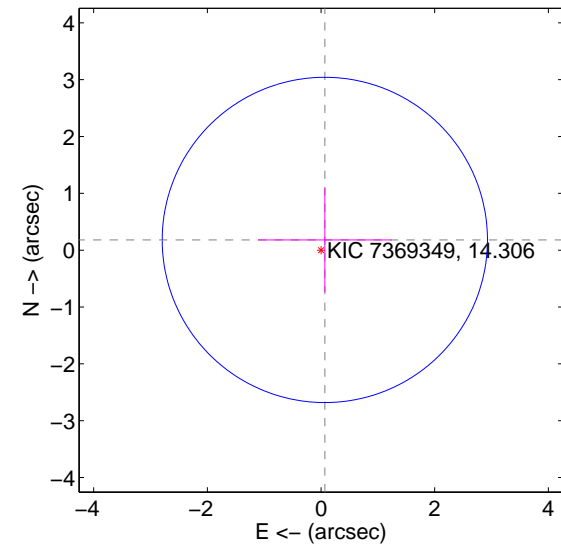
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

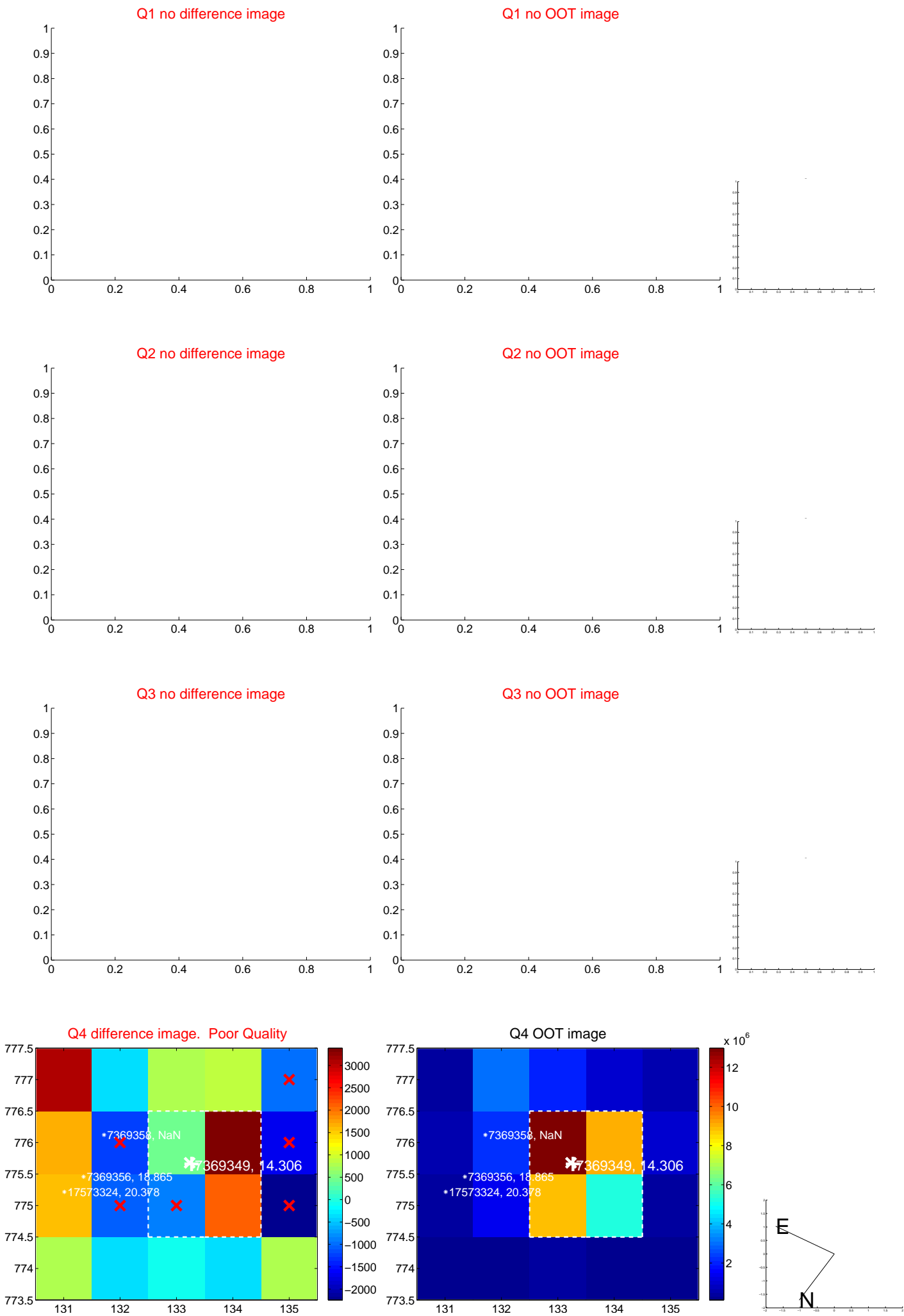


offset from photometric centroids



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.

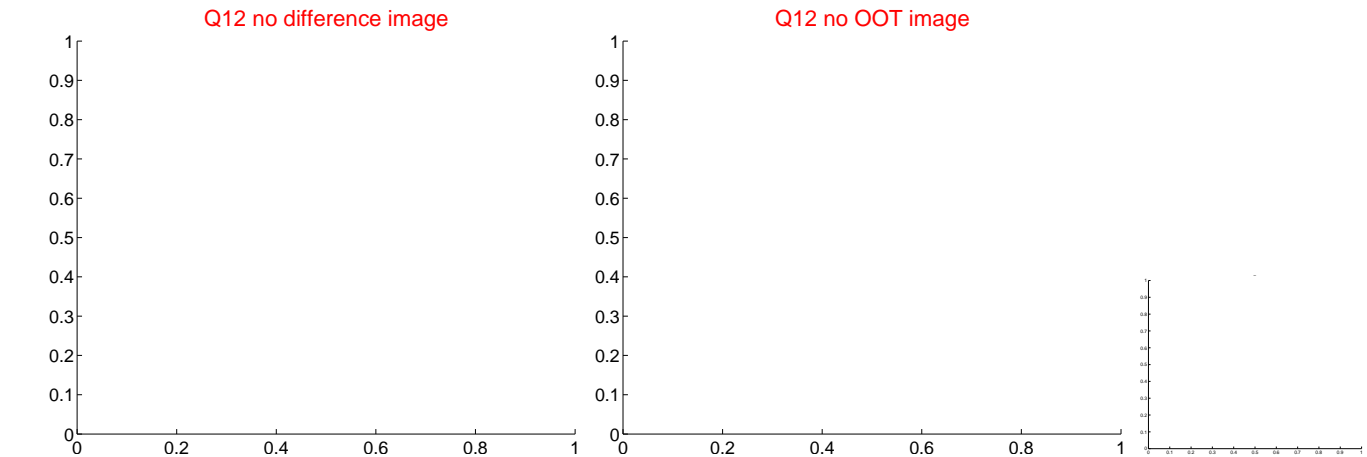
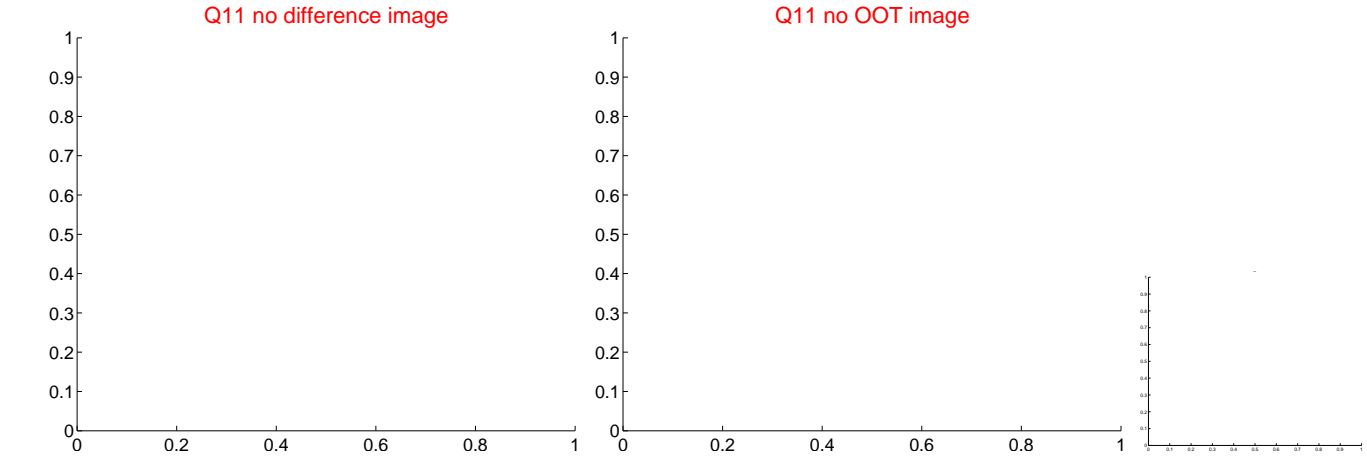
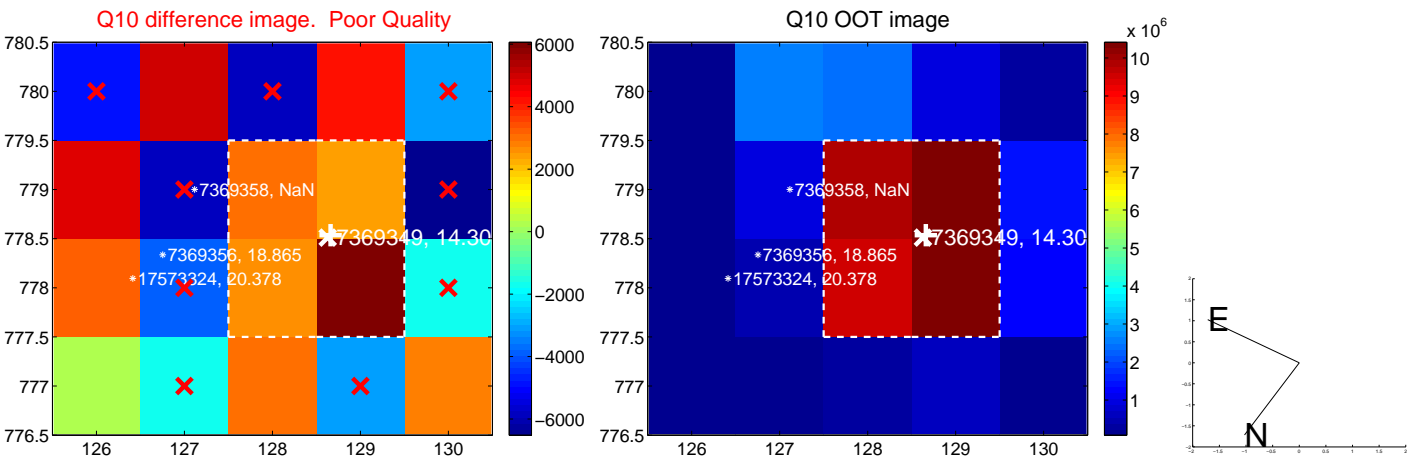
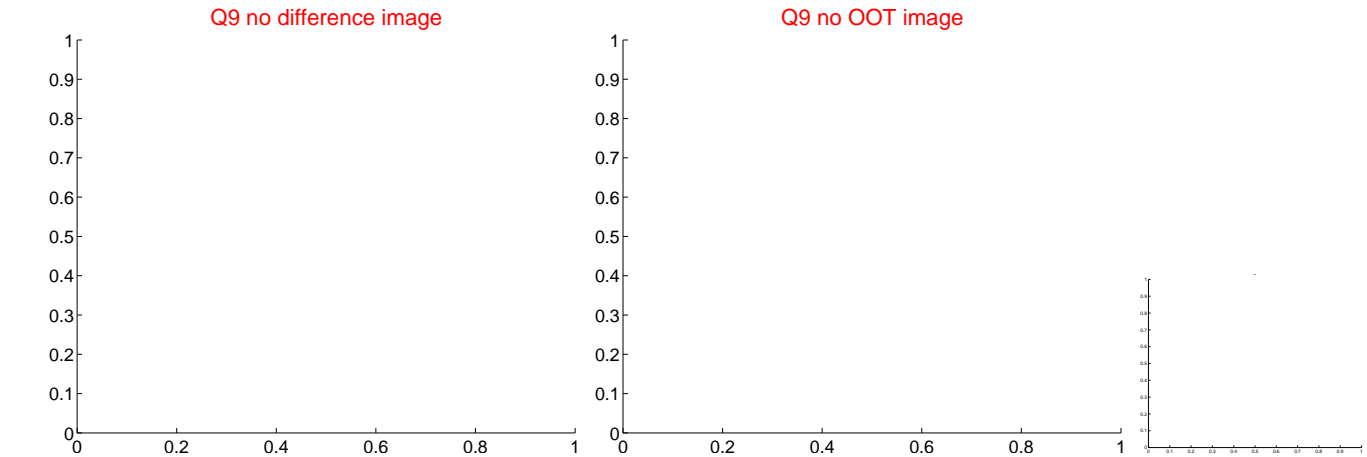




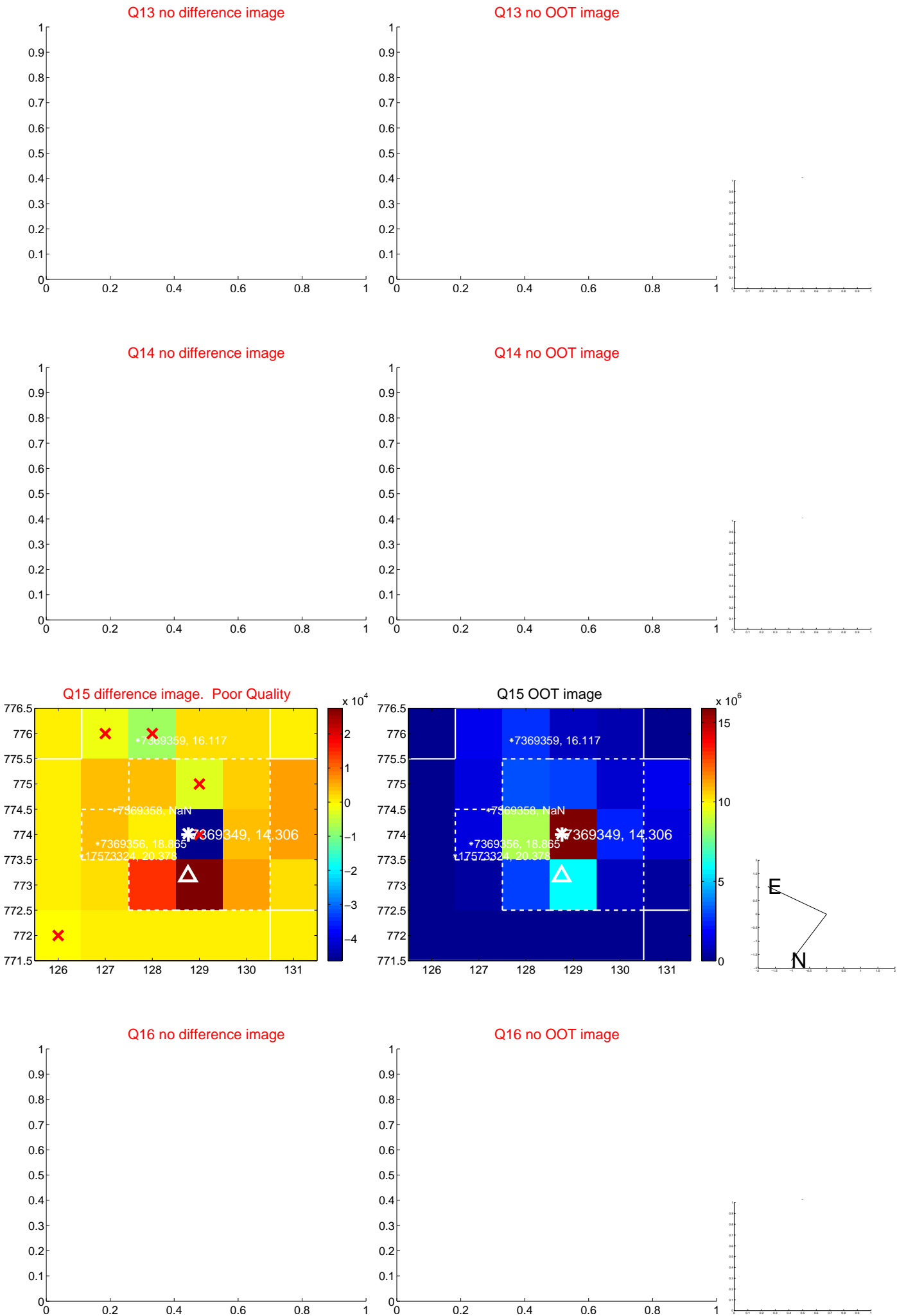
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



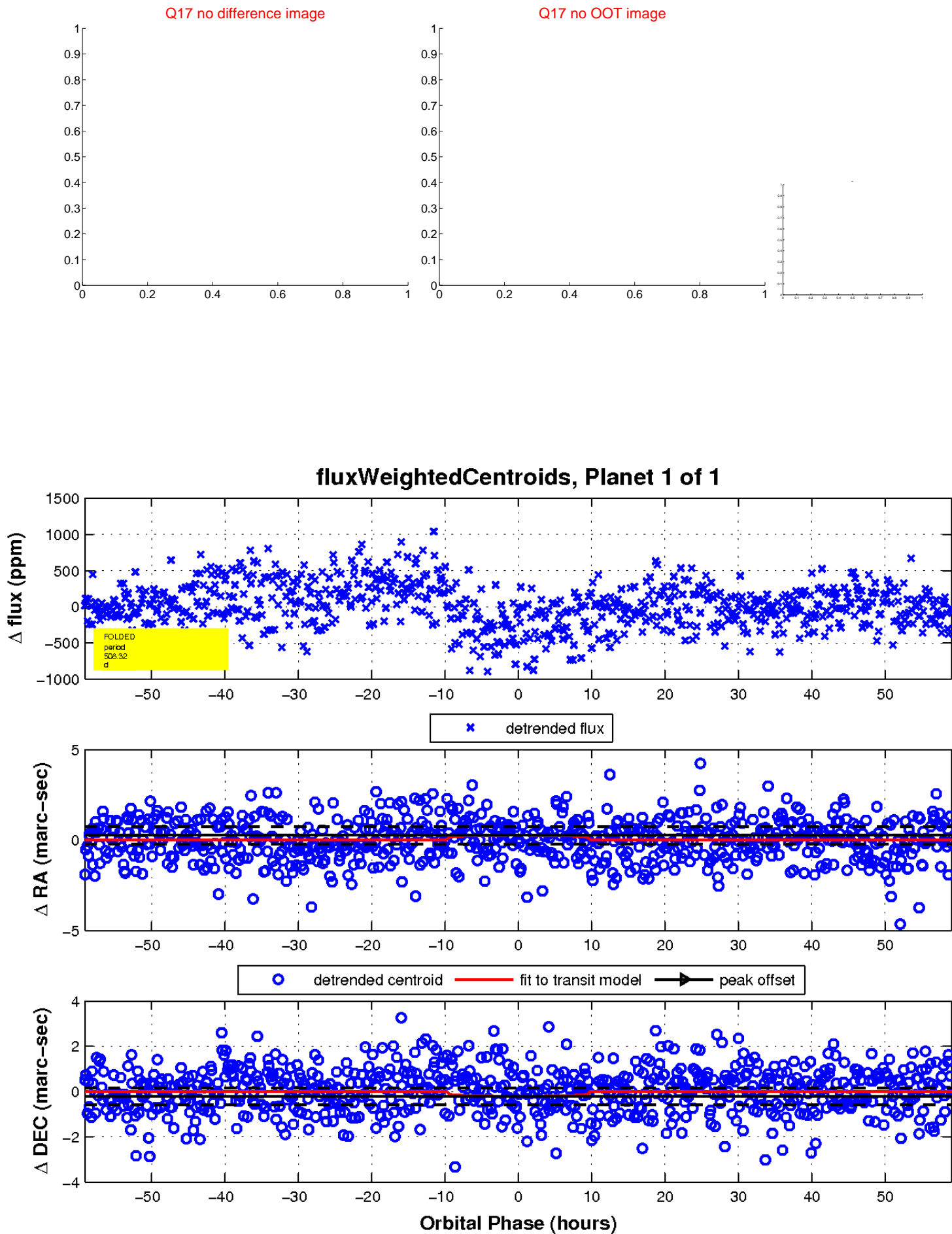
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

