

# KIC 006268531

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006268531-01	OBS	No	3.615378	133.195346	37.3	10.716	8.3	9.4	1.90	6785	1.34	2556.23

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006268531-01	OBS	FP	0.00	1	0	0	0	LPP_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.

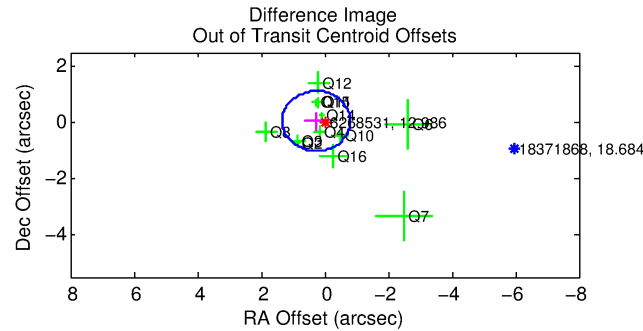
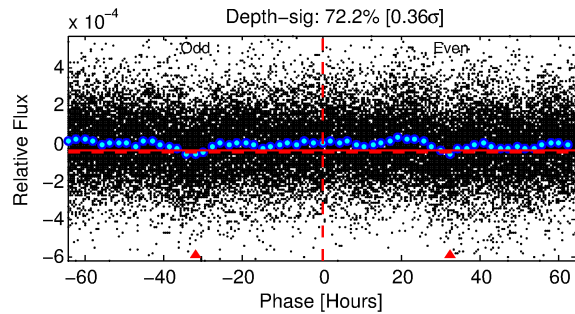
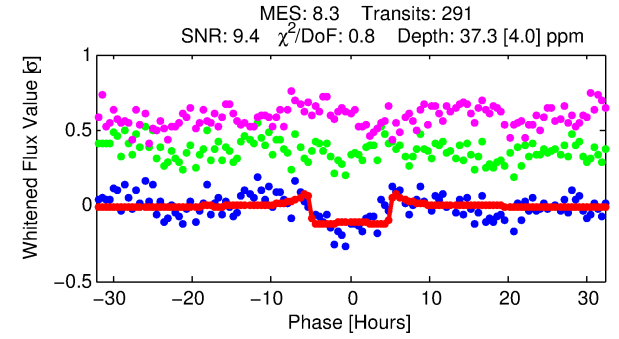
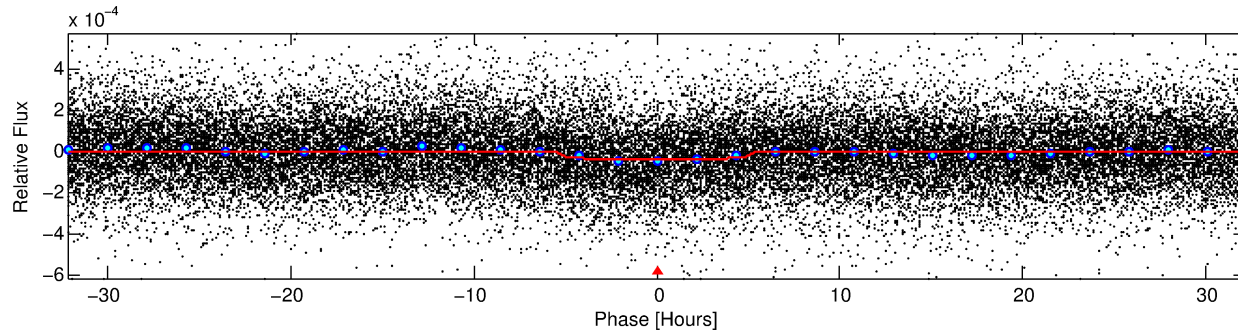
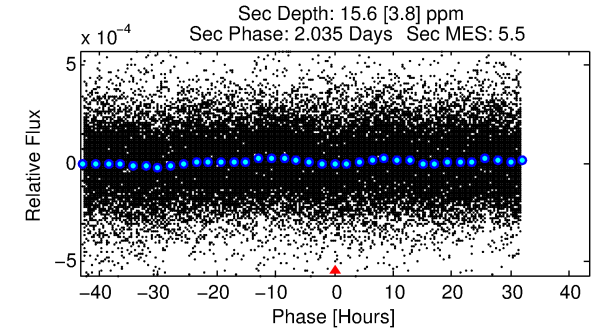
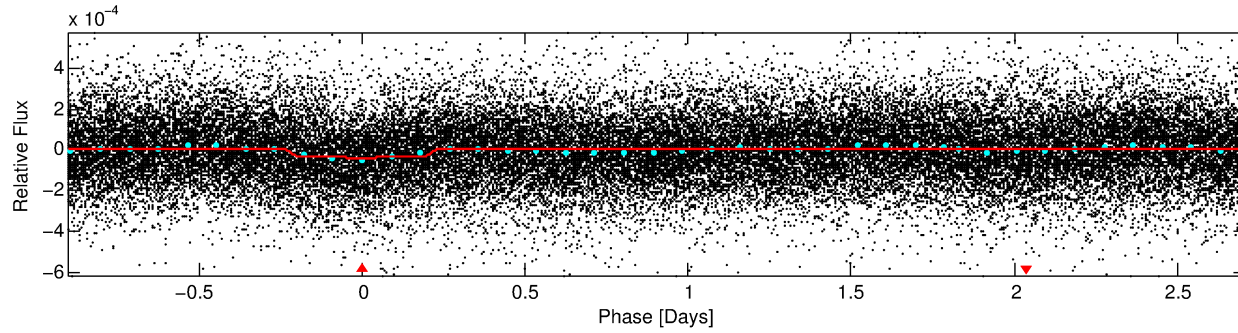
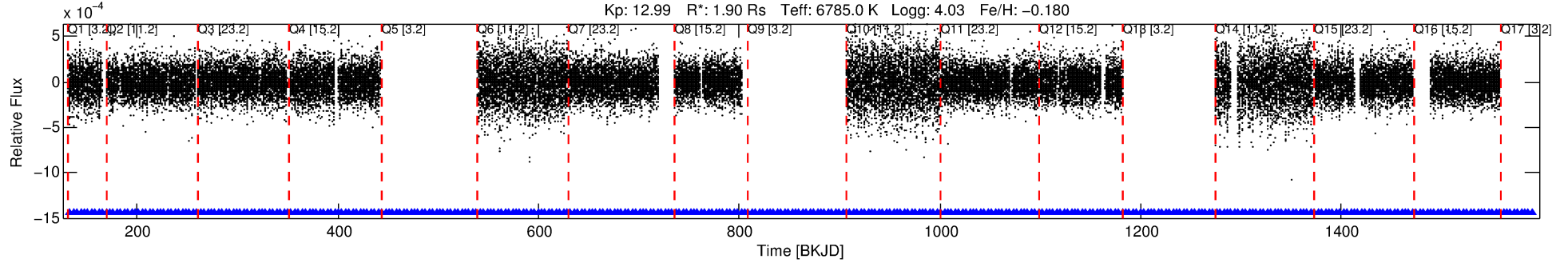
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006268531-01

No Significant Match Found

# DV One-Page Summary

KIC: 6268531 Candidate: 1 of 1 Period: 3.615 d



## DV Fit Results:

Period = 3.61538 [0.00003] d  
Epoch = 133.1953 [0.0060] BKJD  
Rp/R\* = 0.0065 [0.0009]  
a/R\* = 1.51 [0.61]  
b = 0.90 [0.16]  
Seff = 2556.23 [1002.17]  
Teq = 1813 [178] K  
Rp = 1.34 [0.41] Re  
a = 0.0517 [0.0125] AU  
Ag = 12.66 [6.56] [1.78σ]  
Teffp = 5288 [511] K [6.43σ]

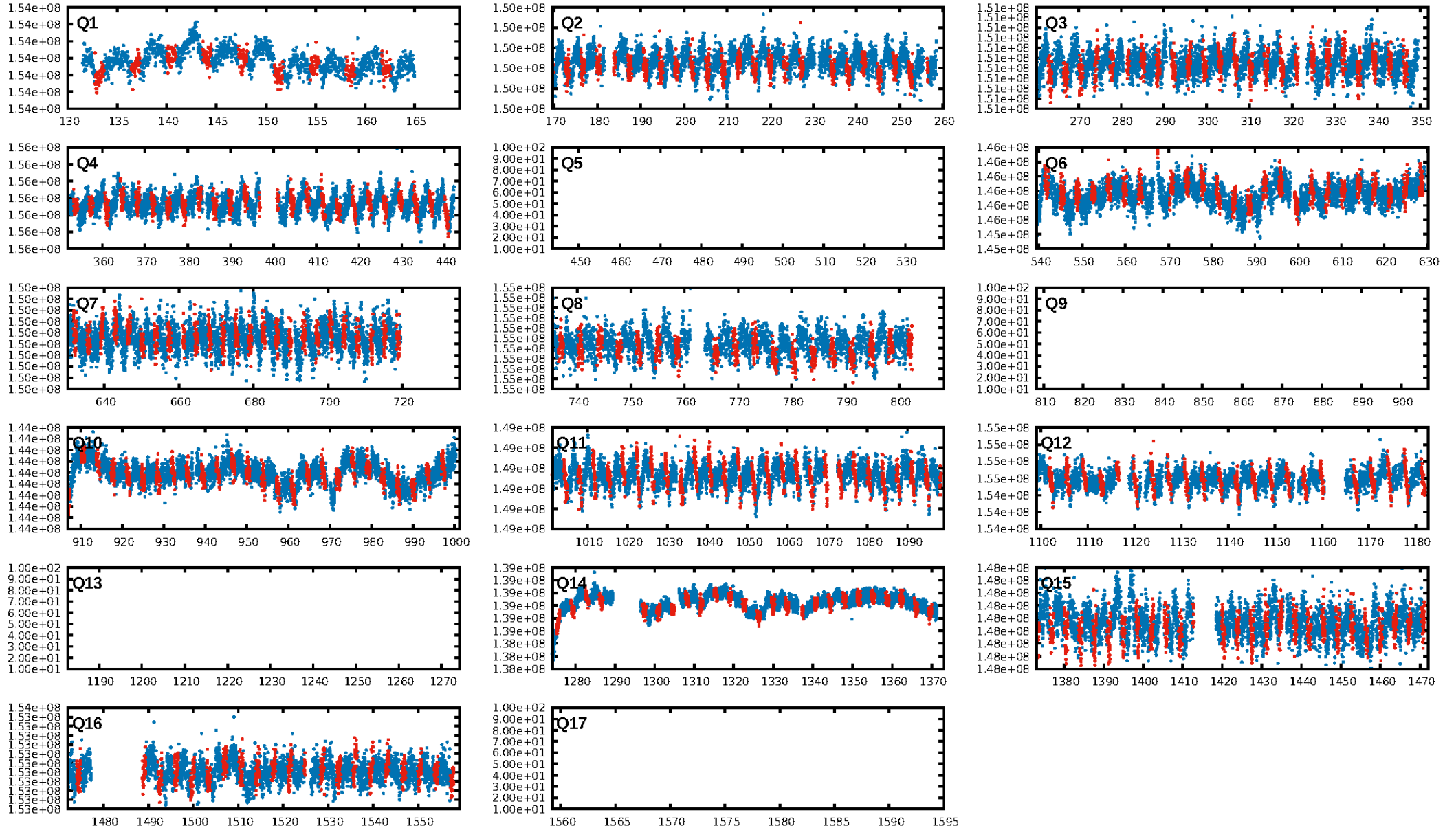
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 8.83e-13  
RollingBand-fgt: 1.00 [282/282]  
GhostDiagnostic-chr: 13.56  
Centroid-sig: 45.9%  
Centroid-so: 0.529 arcsec [1.05σ]  
OotOffset-rm: 0.274 arcsec [0.77σ]  
KicOffset-rm: 0.339 arcsec [0.94σ]  
OotOffset-st: 4/4/4/0 [12]  
KicOffset-st: 4/4/4/0 [12]  
DiffImageQuality-fgm: 0.50 [6/12]  
DiffImageOverlap-fno: 1.00 [13/13]

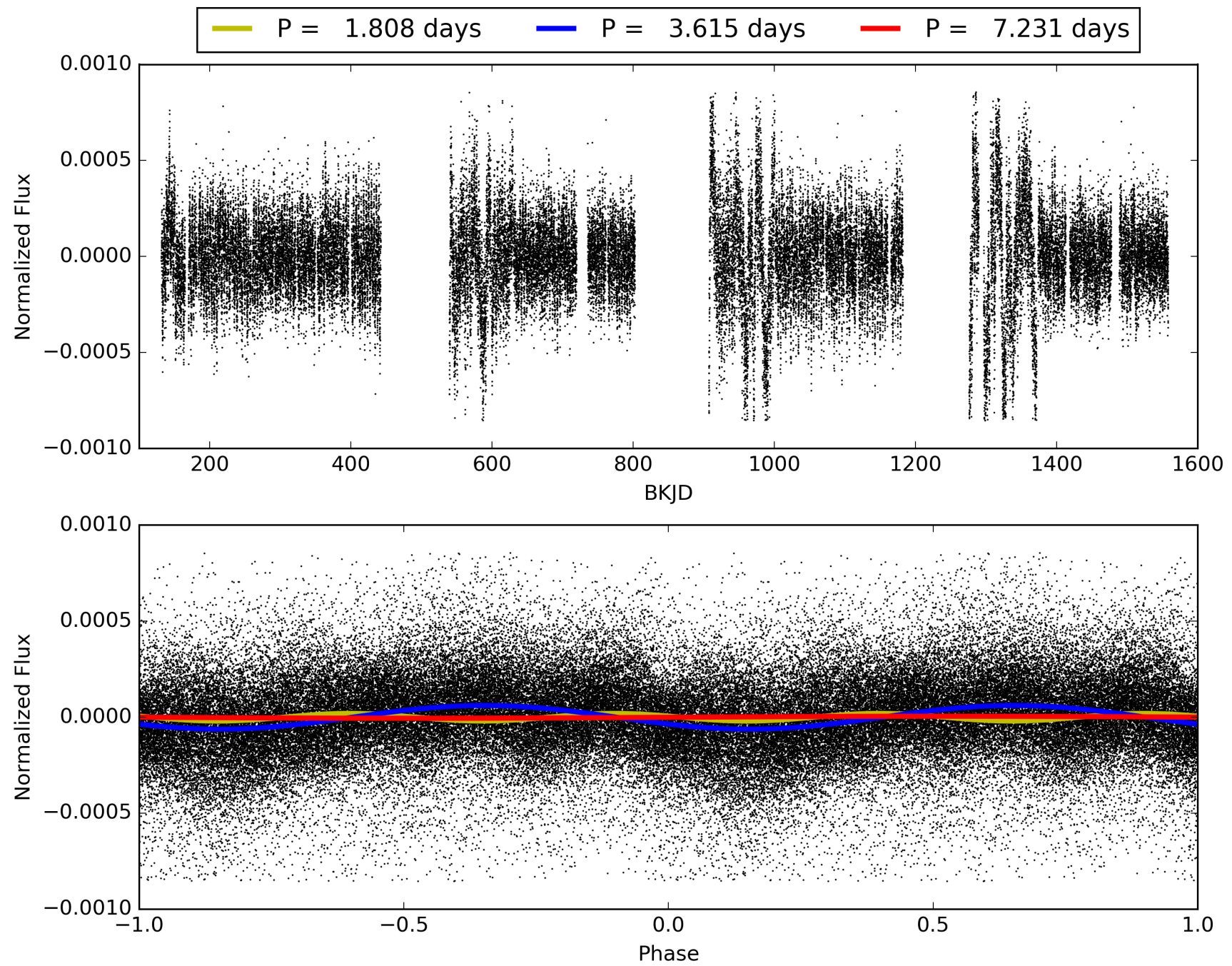
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:27:33 Z

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

# TCE 006268531-01, PDC Light Curves



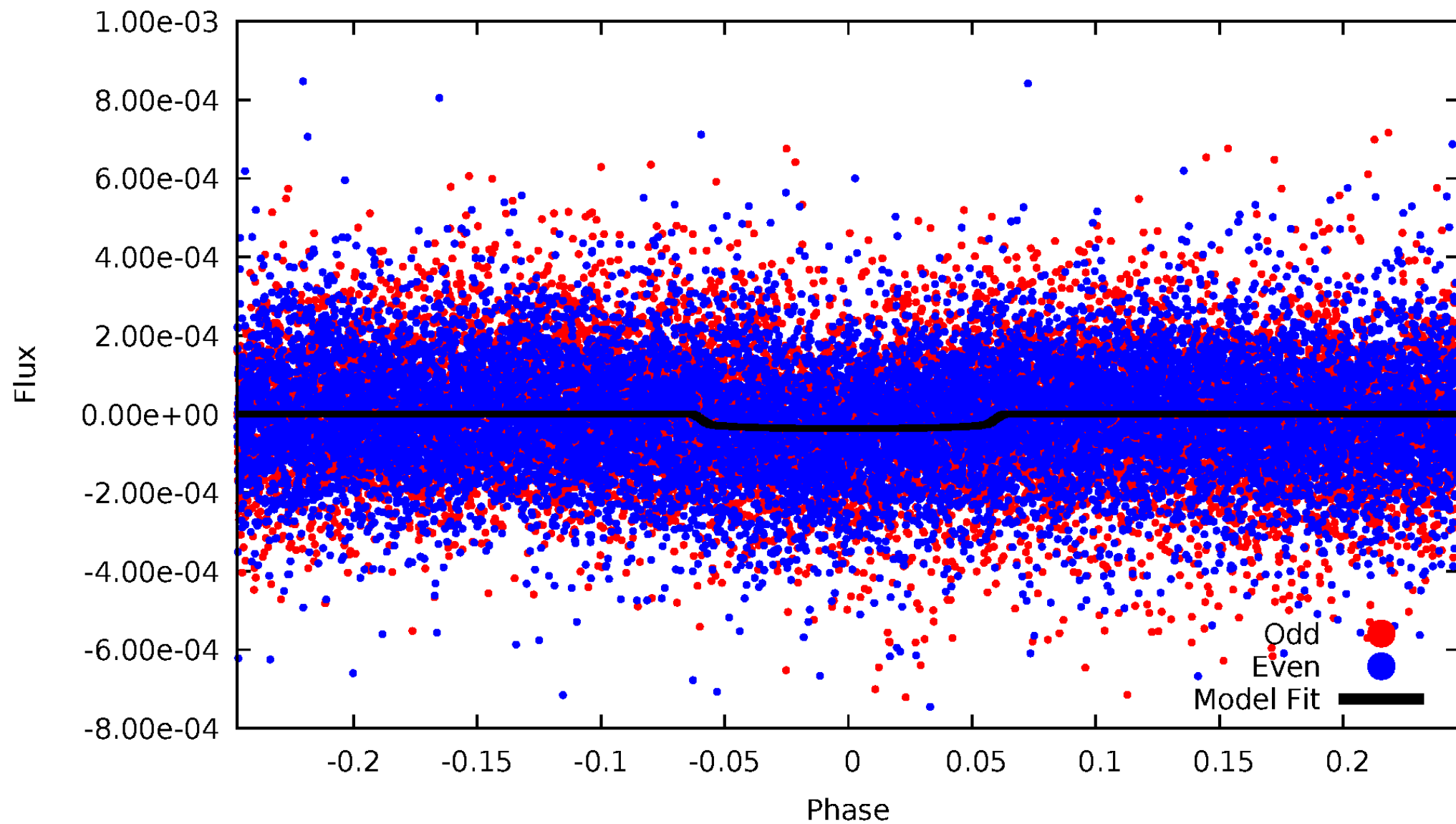
TCE 006268531-01





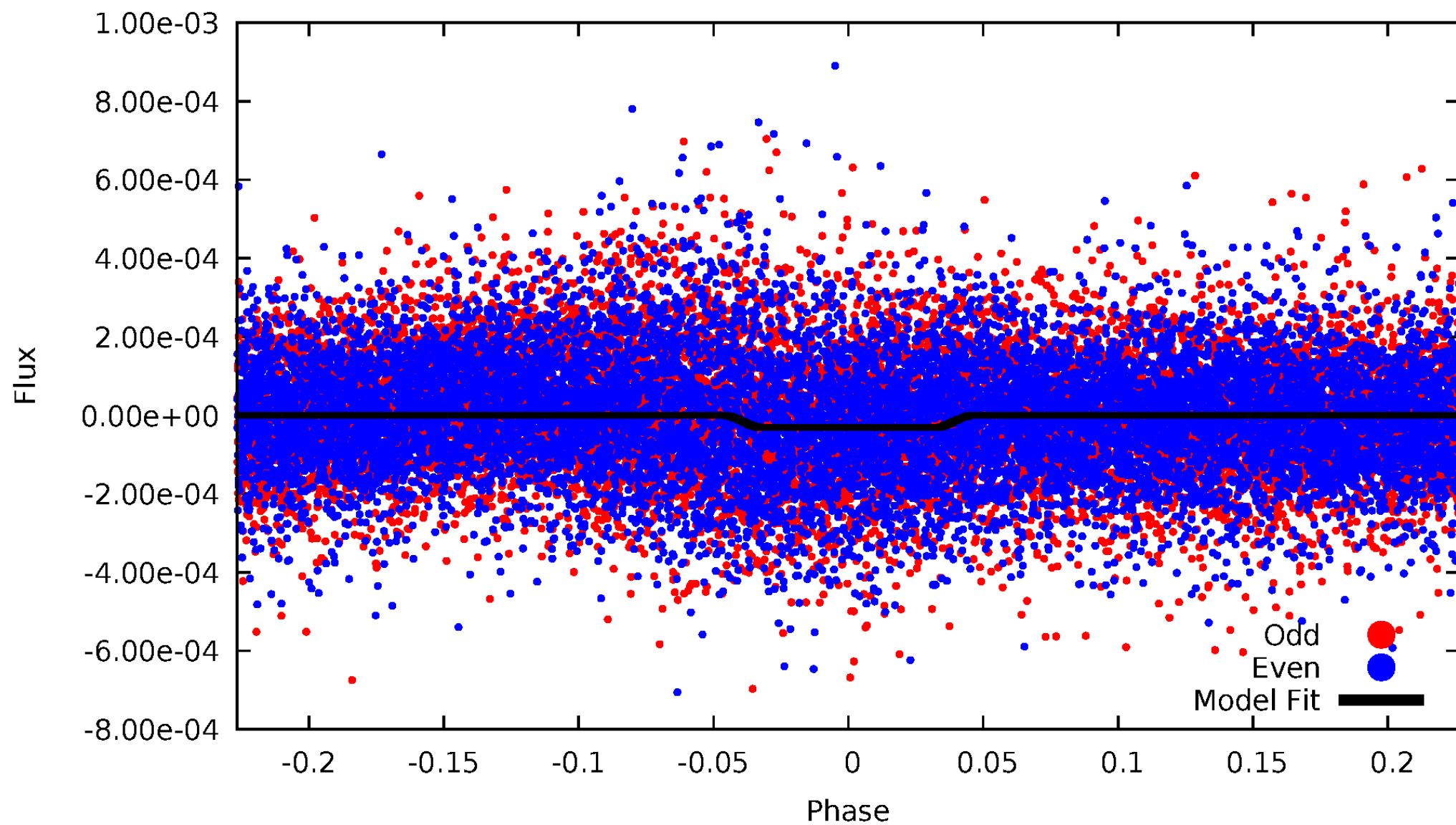
# DV Odd/Even

TCE 006268531-01



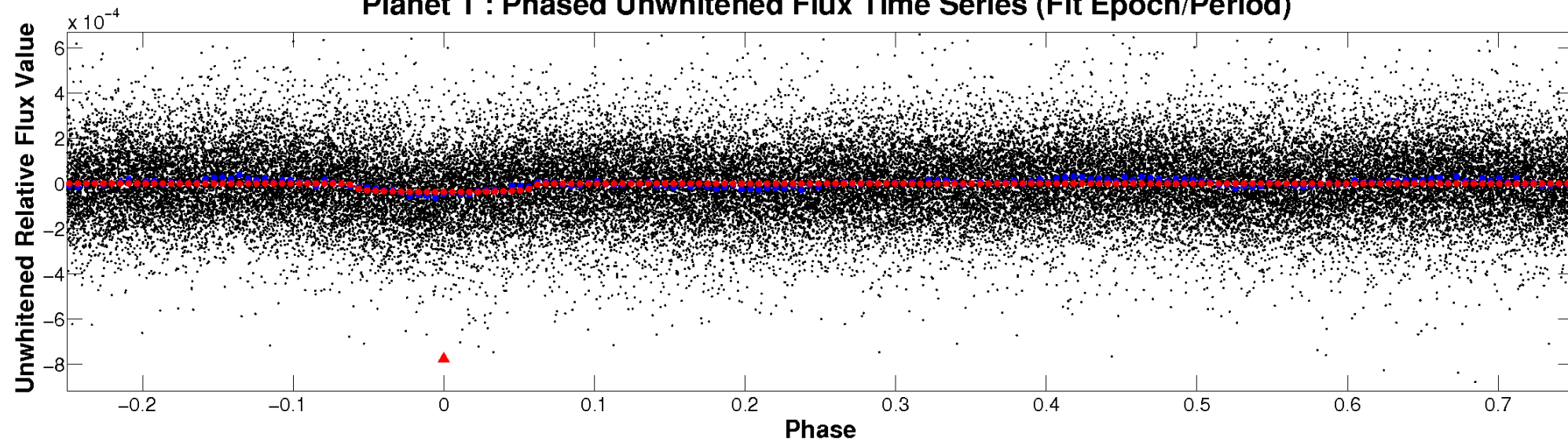
# ALT Odd/Even

TCE 006268531-01

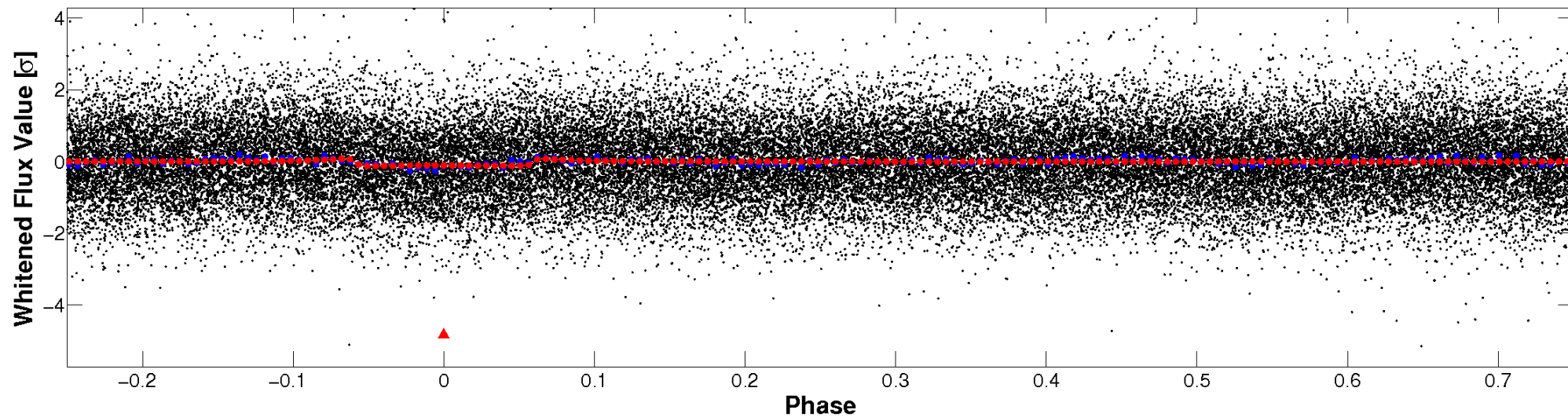


# Non-Whitened Vs. Whitened Light Curve

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

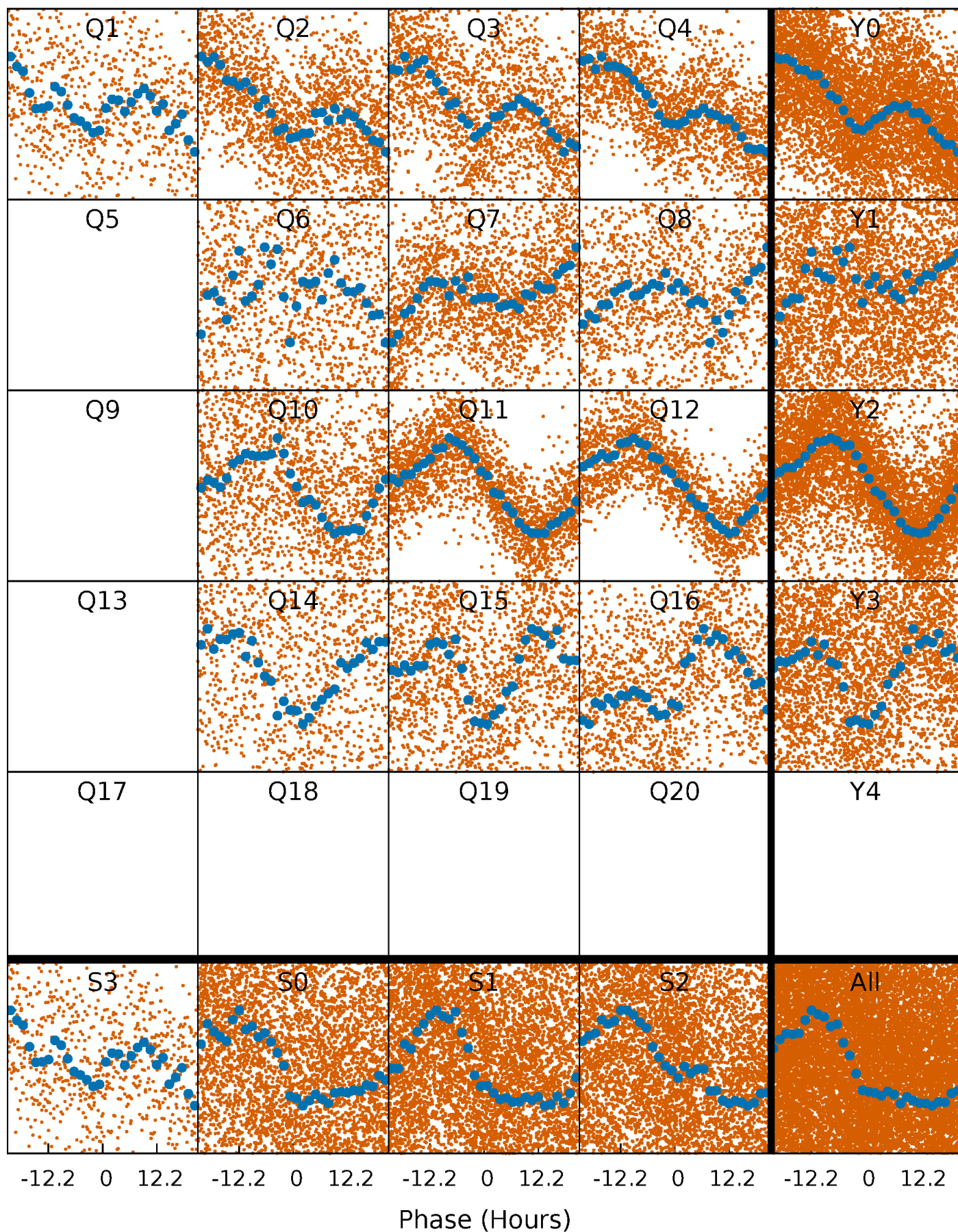


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

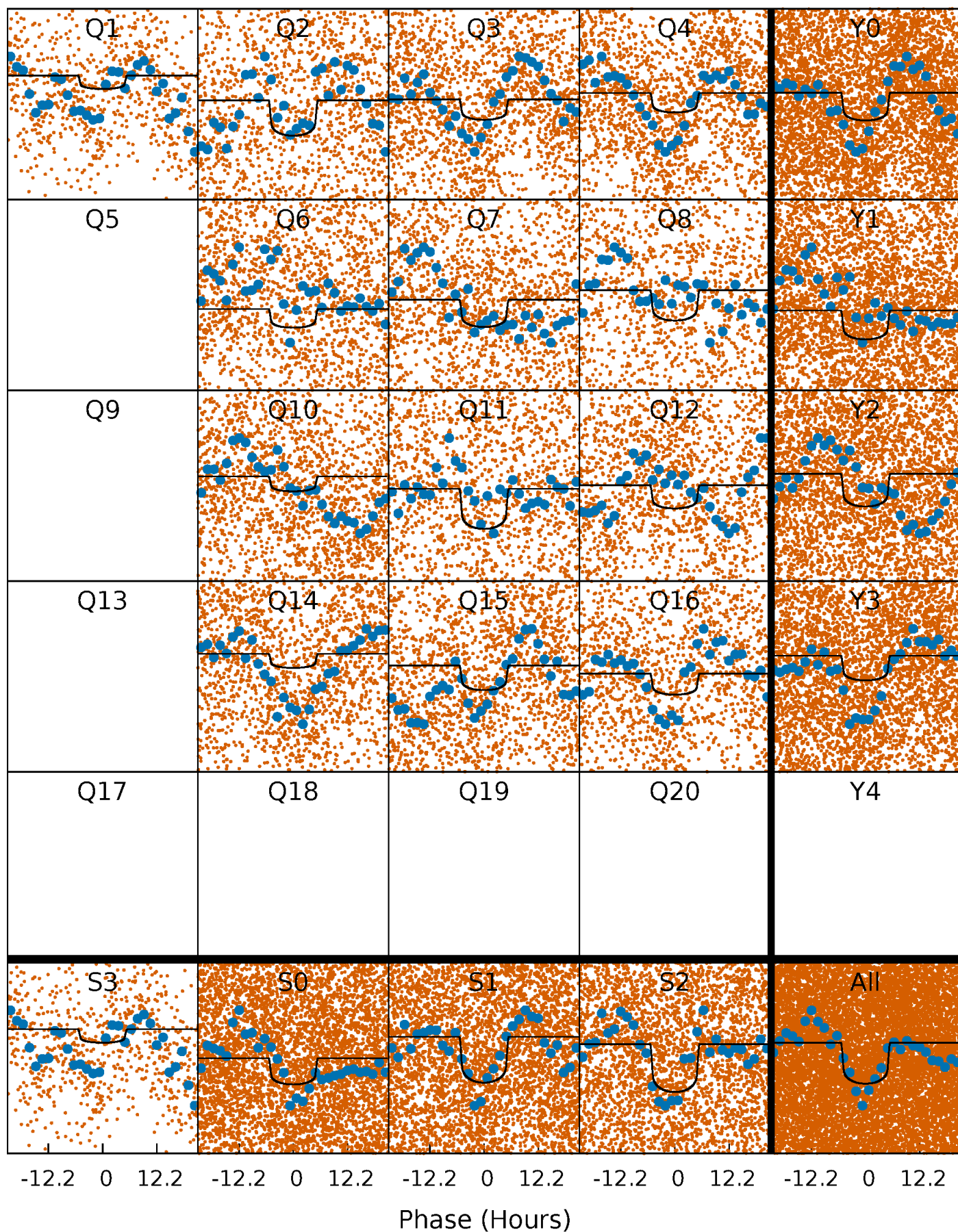
TCE 006268531-01 P= 3.615378 Days  $T_0=133.195346$  (BKJD)





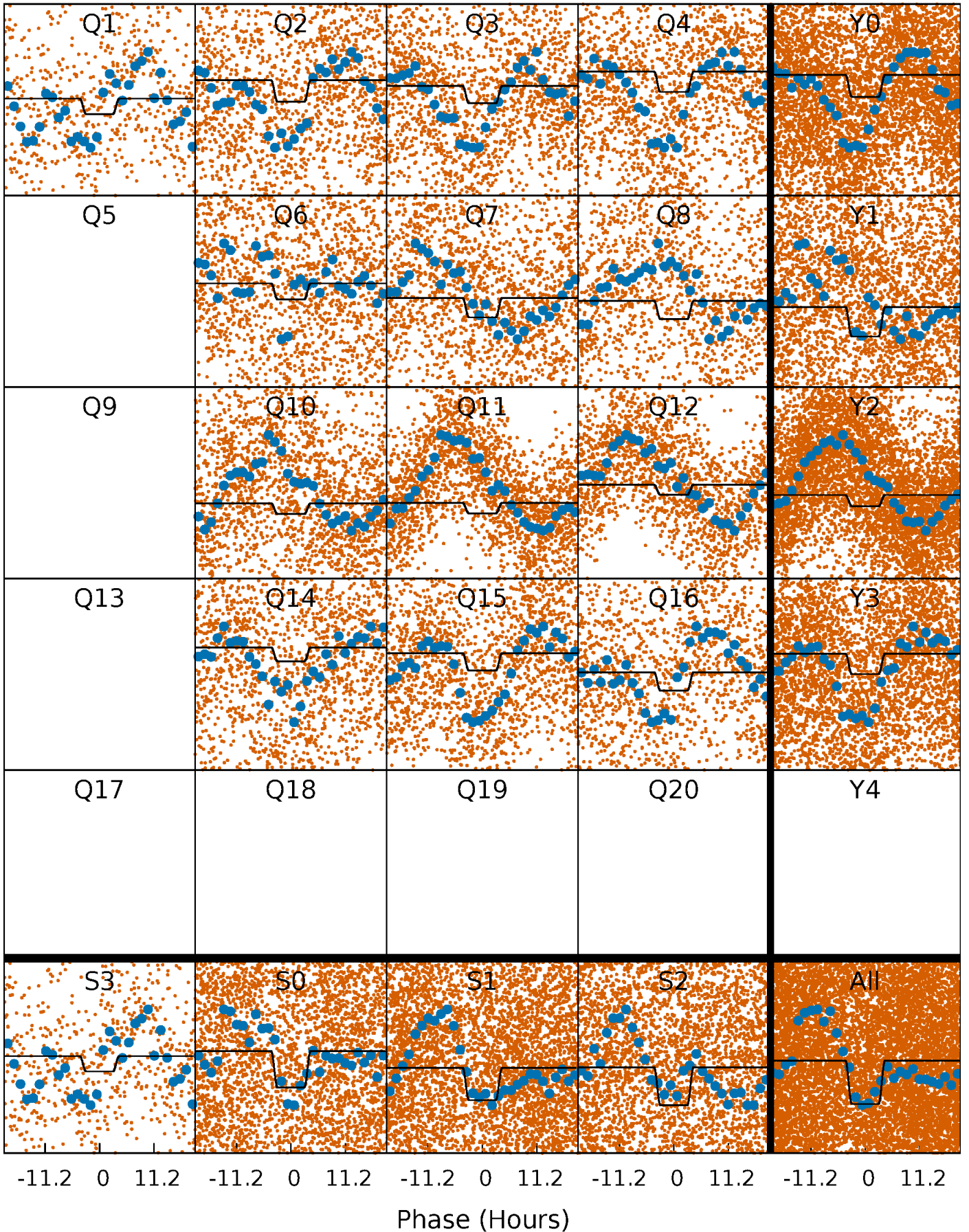
# DV Quarter-Phased Transit Curves

TCE 006268531-01 P= 3.615378 Days  $T_0=133.195346$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

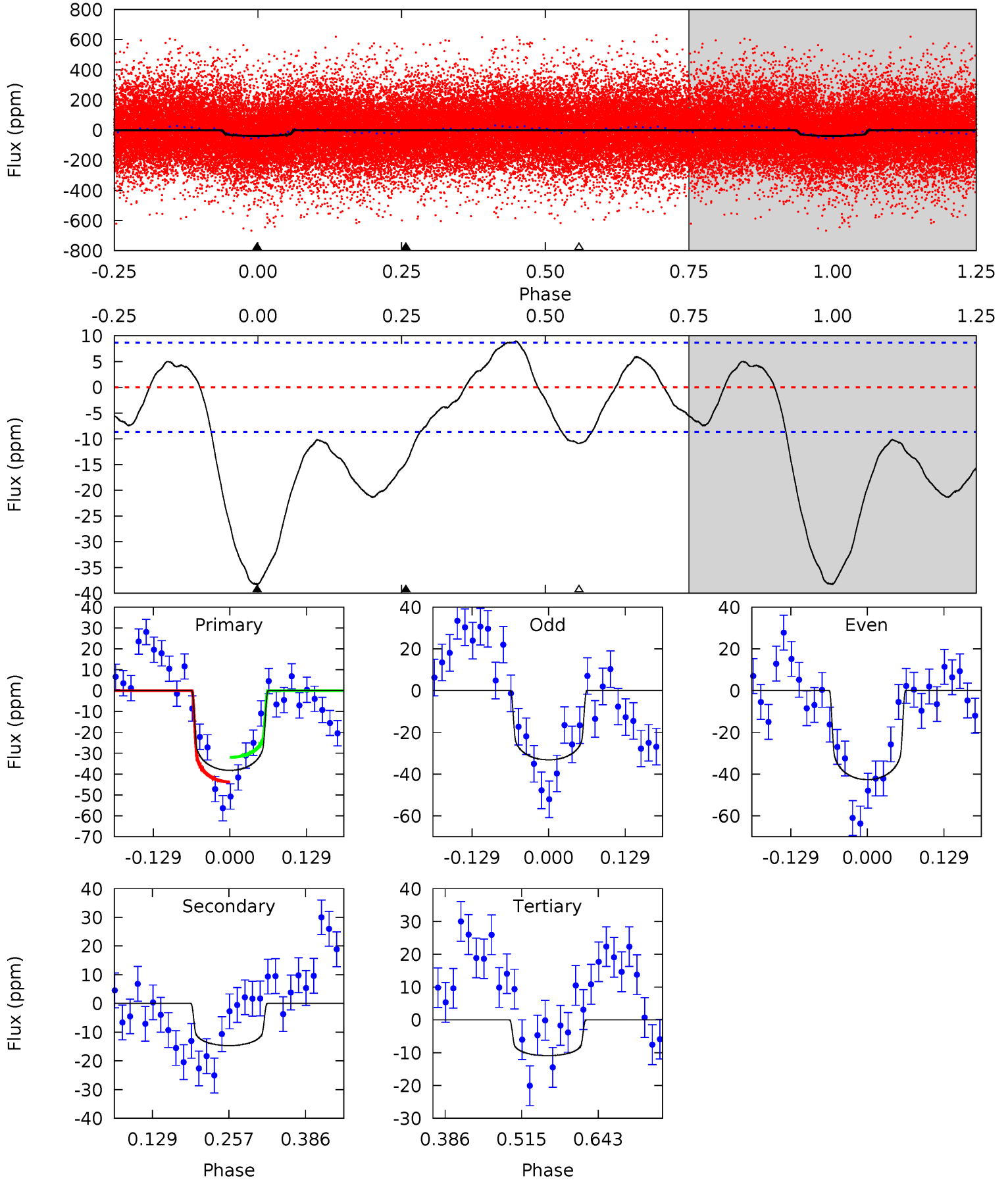
TCE 006268531-01 P= 3.615459 Days  $T_0=133.205022$  (BKJD)



# DV Model-Shift Uniqueness Test

006268531-01, P = 3.615378 Days, E = 129.579968 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
19.9	7.65	5.69	0	4.51	1.52	3.06	14.2	19.9	1.96	7.65	2.48	1.31	0.19	3.09

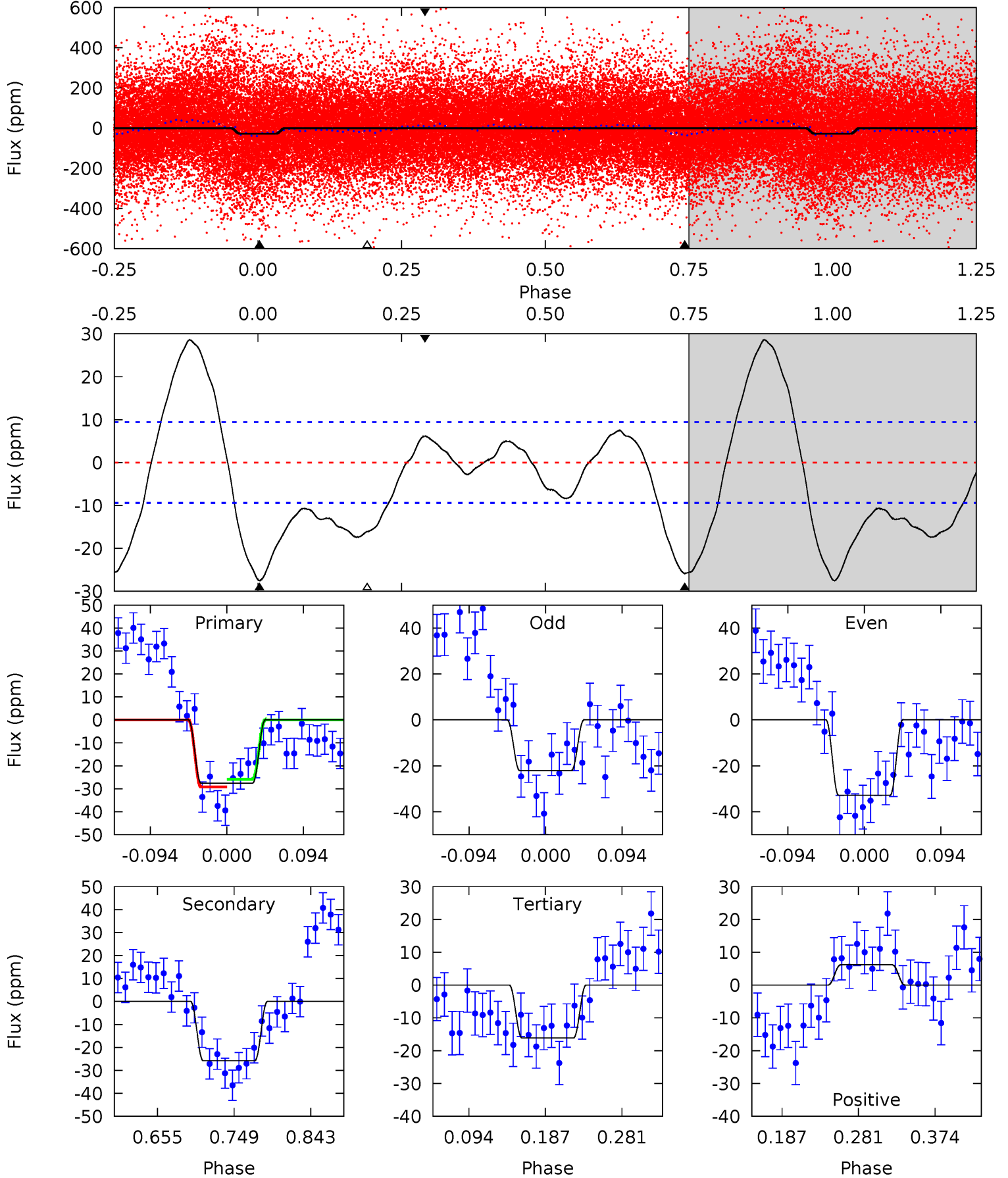




# Alt Model-Shift Uniqueness Test

006268531-01, P = 3.615459 Days, E = 129.589563 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
13.4	12.5	7.83	2.99	4.58	1.68	5.45	5.53	10.4	4.71	9.55	2.61	0.72	0.51	0.81





### Stellar Parameters For KIC 006268531

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6785^{+162}_{-223}$	$4.031^{+0.210}_{-0.140}$	$-0.180^{+0.250}_{-0.300}$	$1.897^{+0.419}_{-0.513}$	$1.412^{+0.173}_{-0.259}$	$0.291^{+0.344}_{-0.119}$
	+2%/-3%	+5%/-3%	+139%/-167%	+22%/-27%	+12%/-18%	+118%/-41%
Source	PHO1	FLK73	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 006268531-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-15 \pm 2$	$1.33^{+0.25}_{-0.23}$	$2508^{+166}_{-176}$	$5180^{+387}_{-323}$	$12^{+6}_{-4}$
Alt.	$-26 \pm 2$	$1.12^{+0.26}_{-0.23}$	$2513^{+155}_{-176}$	$6471^{+602}_{-541}$	$30^{+17}_{-10}$

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

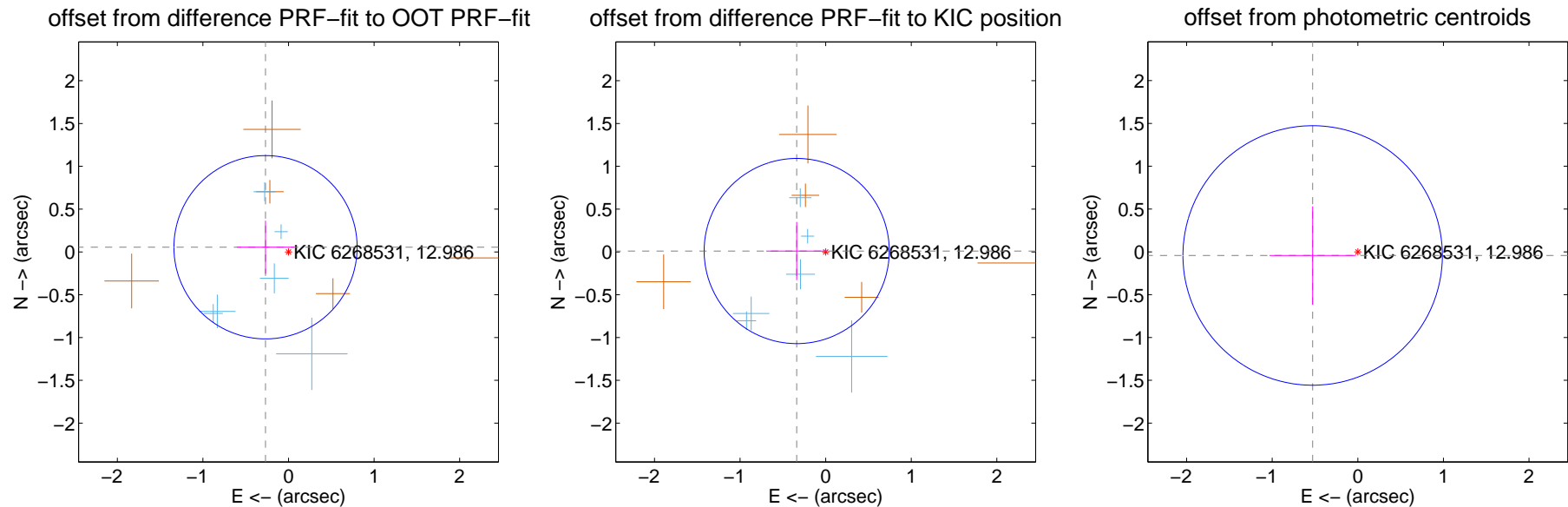
## DV Centroid Data

Supplemental centroid analysis for 006268531-01. Kepler magnitude: 12.99. Transit SNR 9.37

There are 6 quarters with good PRF difference image offsets

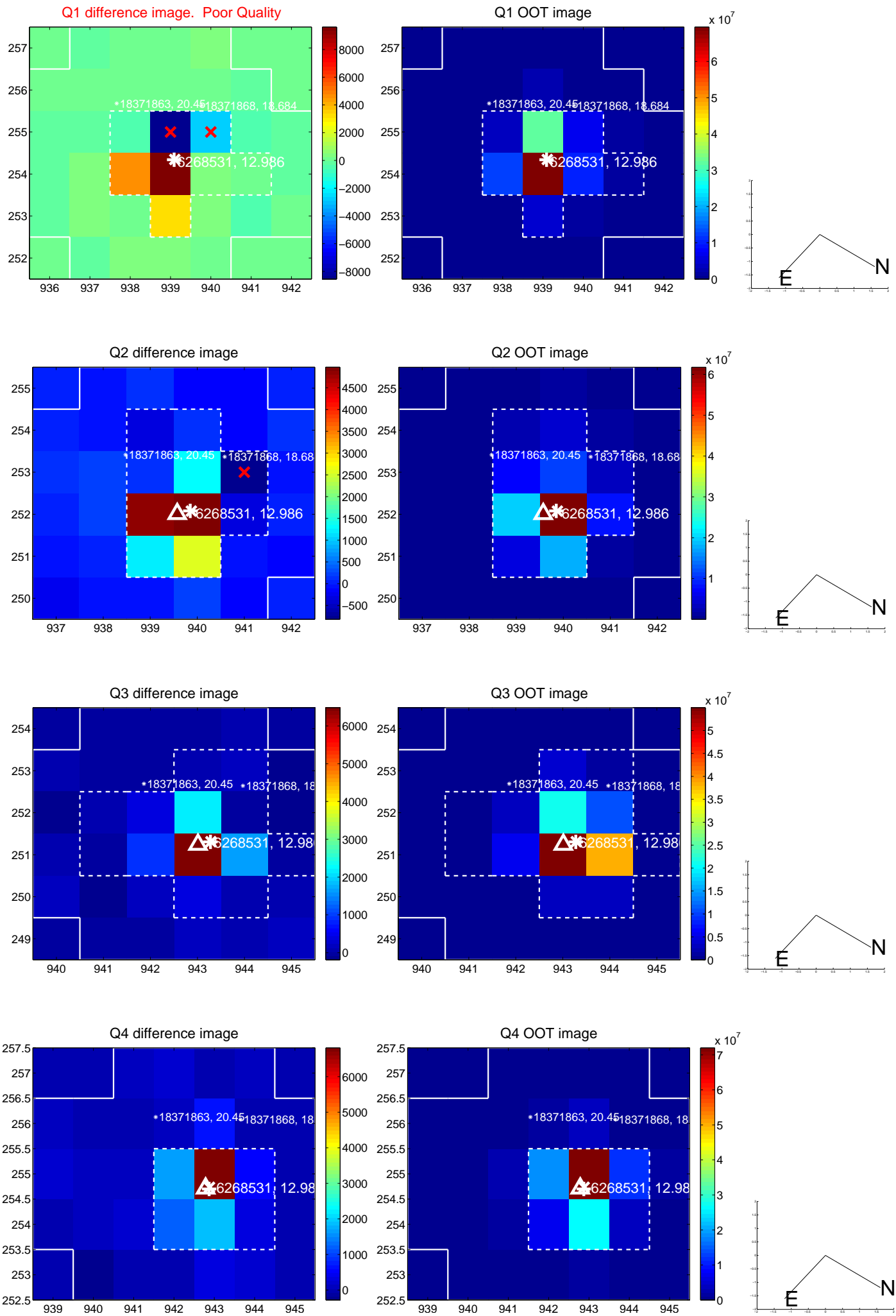
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.274 \pm 0.357$	0.77	$0.268 \pm 0.335$	$0.055 \pm 0.309$
PRF-fit source offset from KIC position	$0.339 \pm 0.361$	0.94	$0.338 \pm 0.356$	$0.010 \pm 0.340$
photometric centroid source offset	$0.53 \pm 0.51$	1.05	$0.53 \pm 0.50$	$-0.04 \pm 0.57$

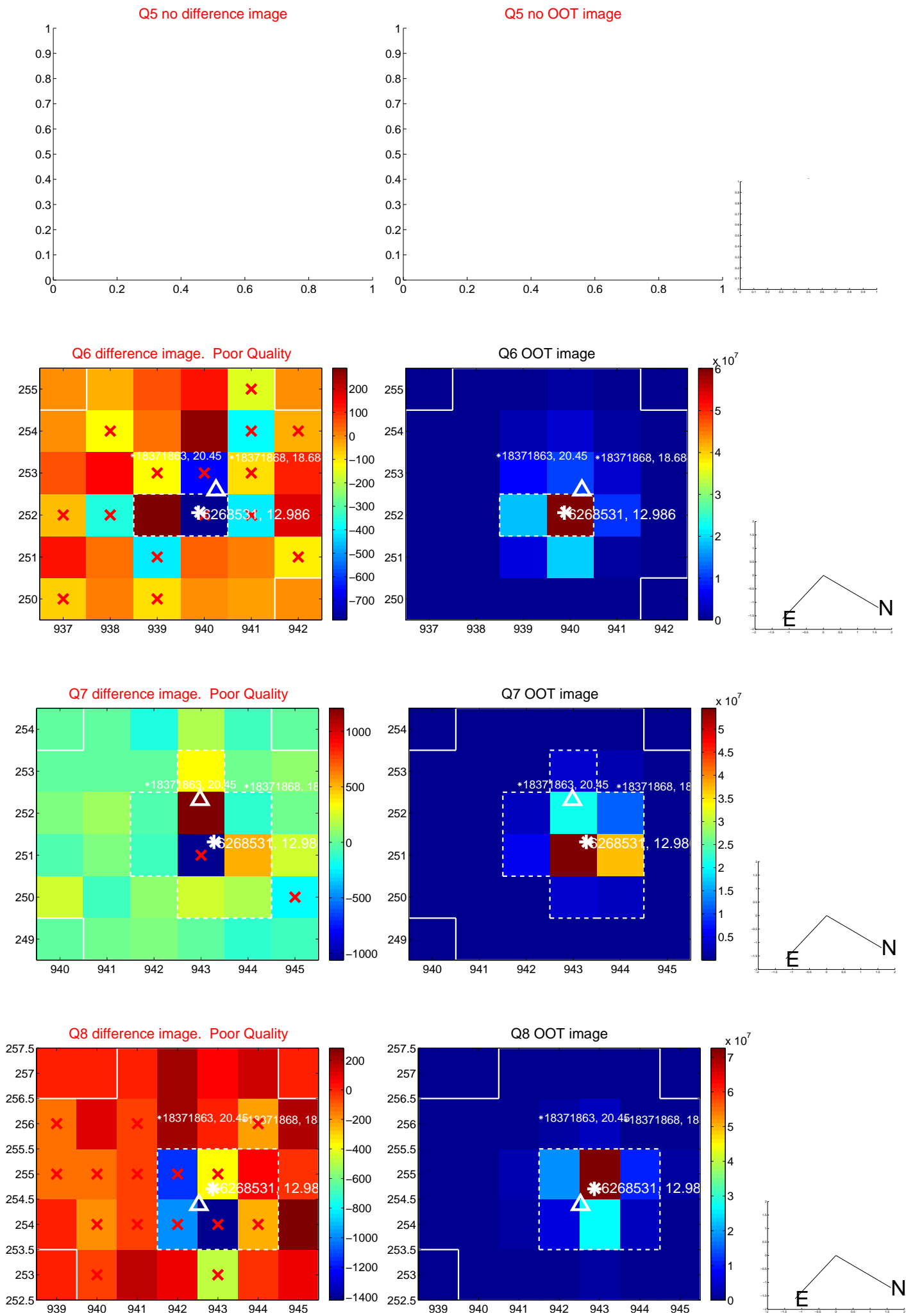


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

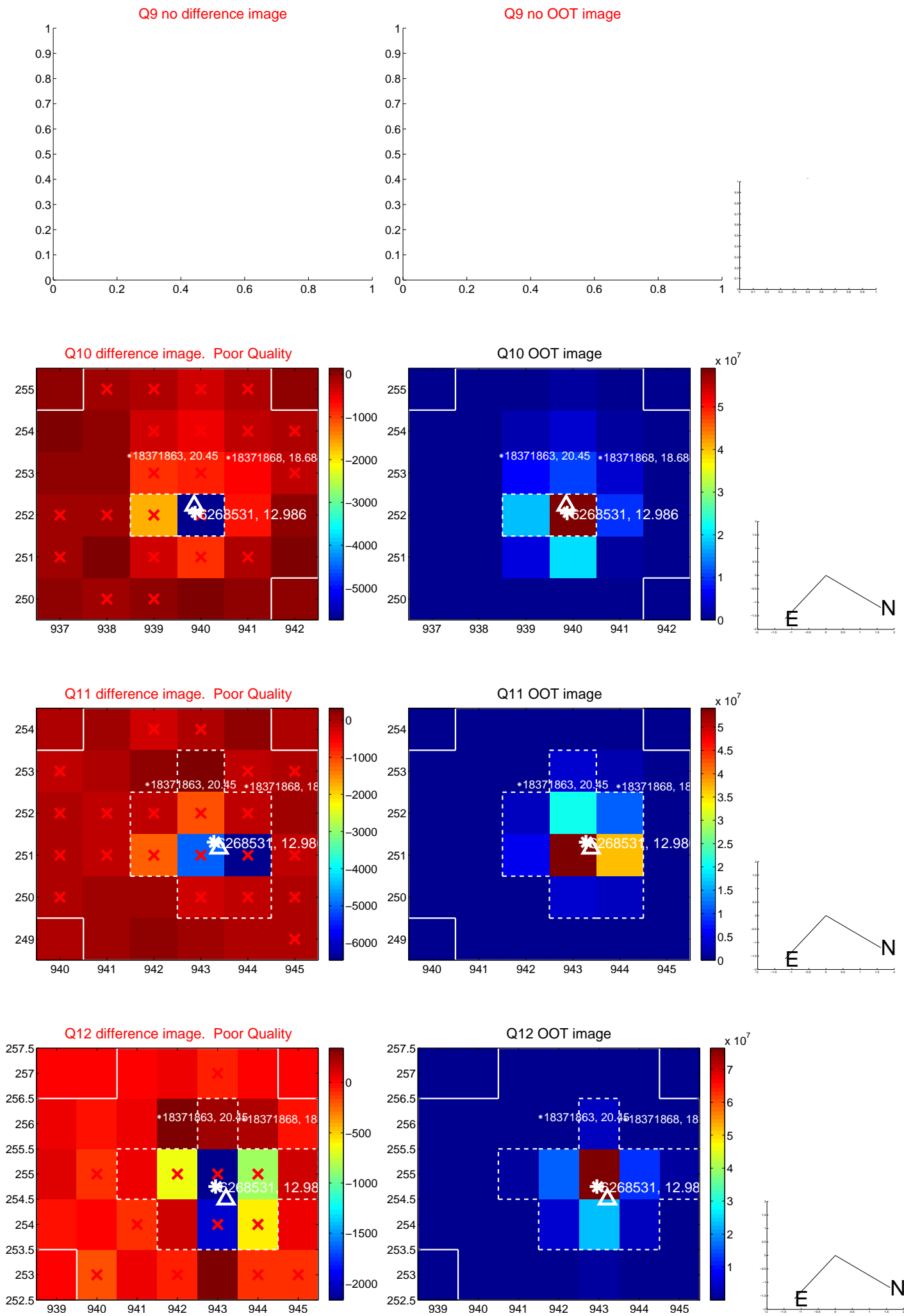


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

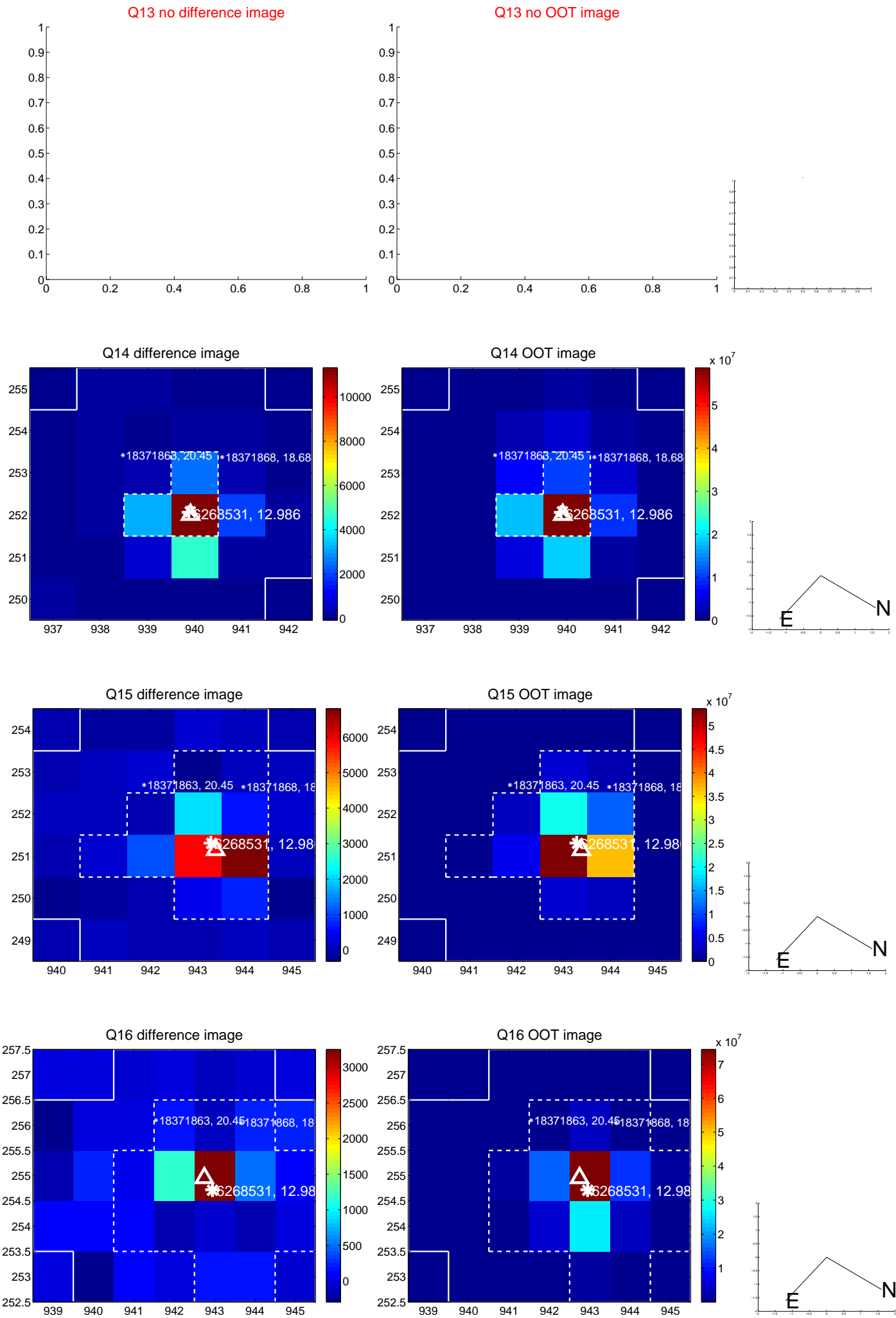




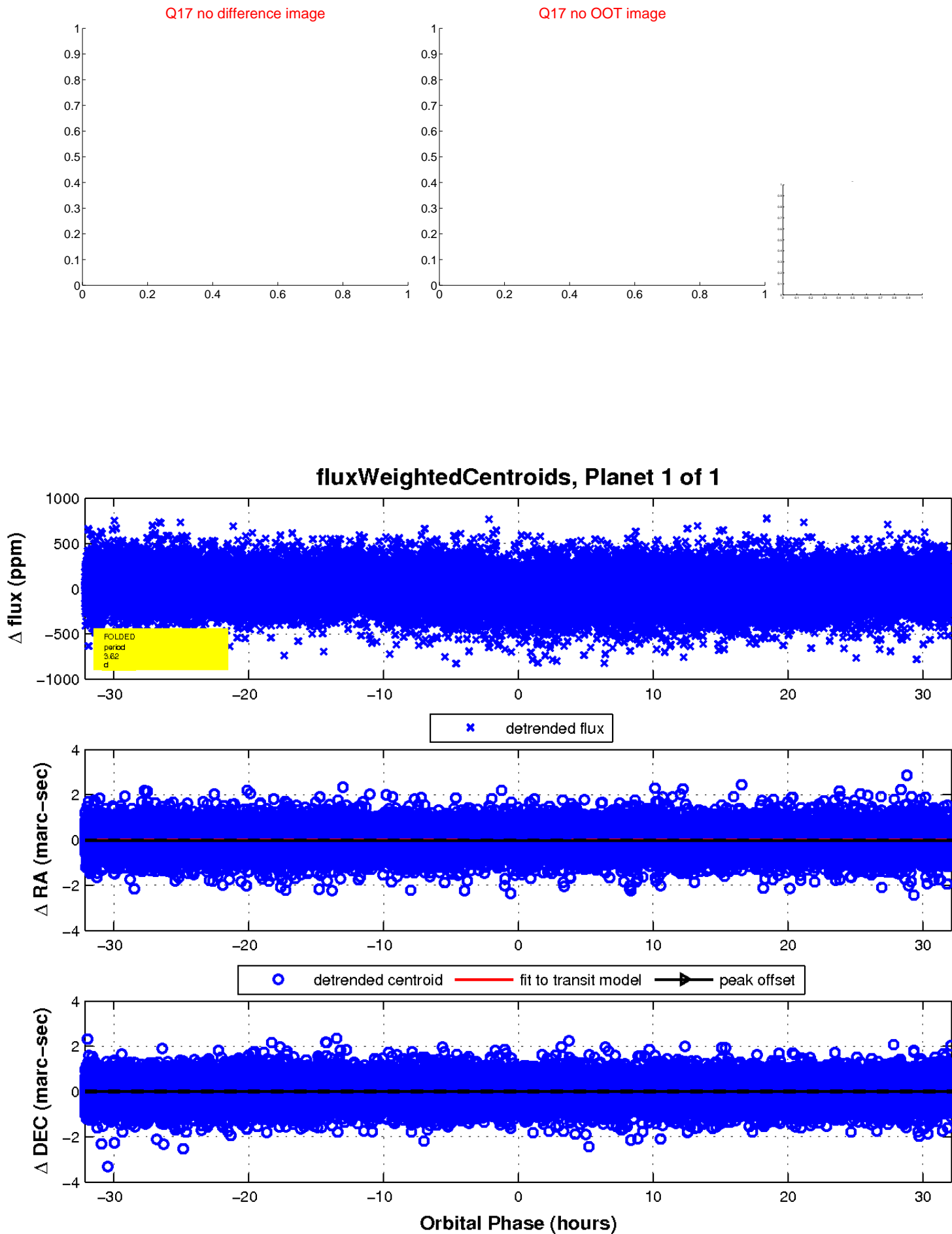
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

