

# KIC 011305366

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011305366-01	OBS	No	3.461893	132.283007	55.2	10.204	12.7	12.4	4.00	6886	4.10	10785.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011305366-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

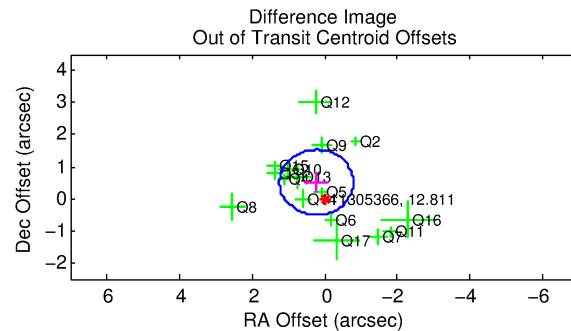
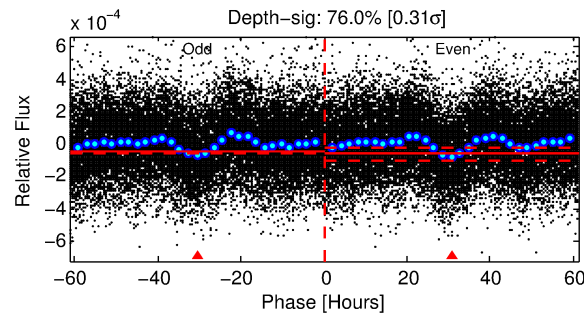
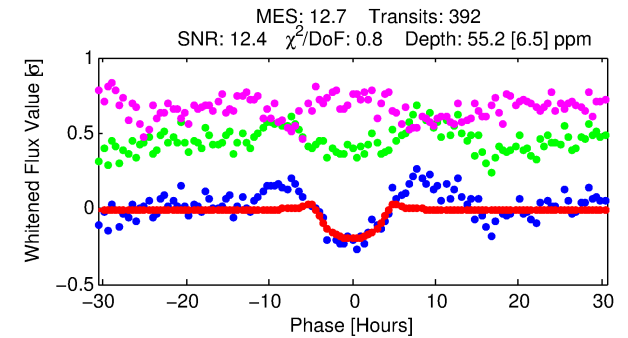
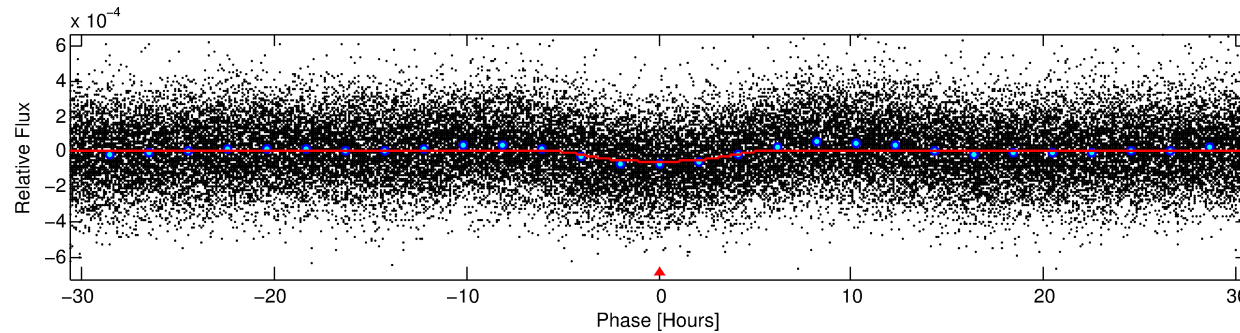
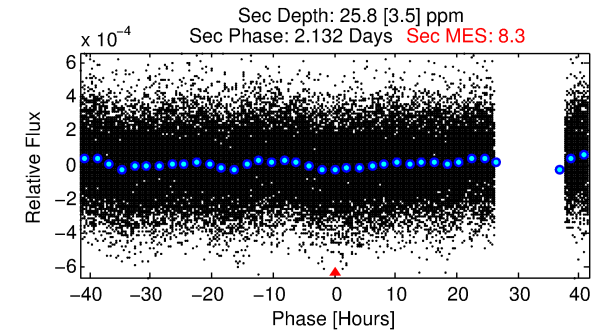
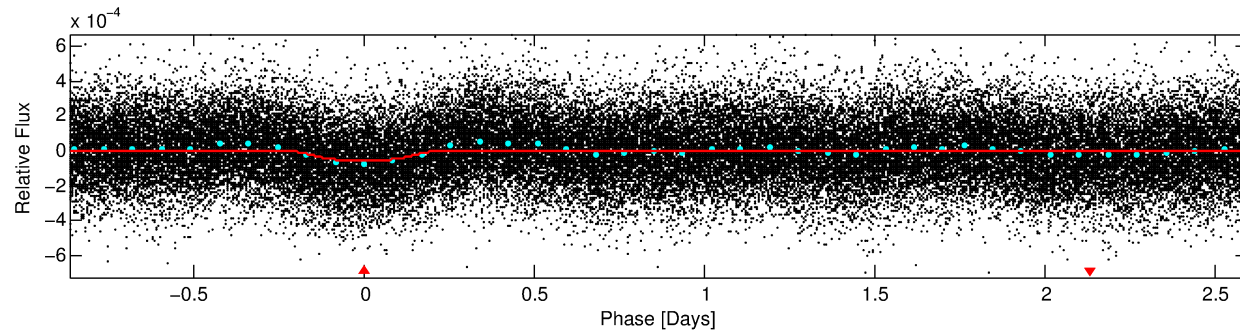
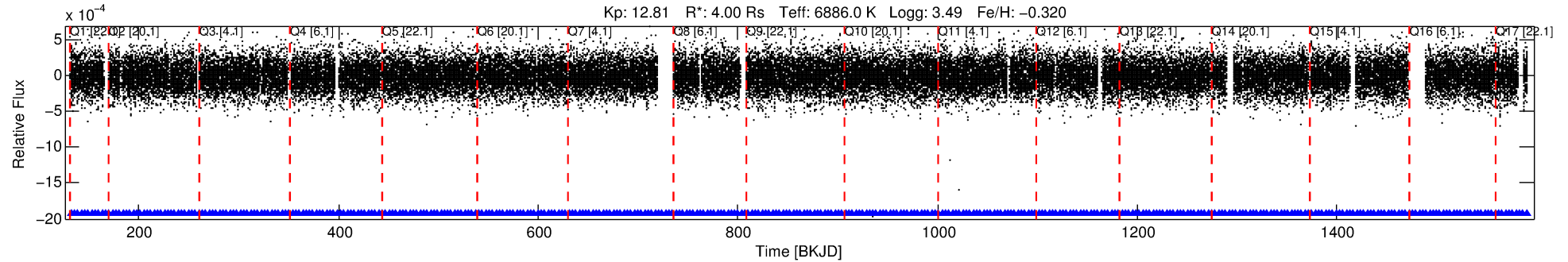
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011305366-01

No Significant Match Found

# DV One-Page Summary

KIC: 11305366 Candidate: 1 of 1 Period: 3.462 d



## DV Fit Results:

Period = 3.46189 [0.00007] d  
Epoch = 132.2830 [0.0158] BKJD  
Rp/R\* = 0.0094 [0.0007]  
a/R\* = 1.12 [0.03]  
b = 0.99 [0.00]  
Seff = 10785.34 [6807.01]  
Teq = 2599 [410] K  
Rp = 4.10 [1.72] Re  
a = 0.0546 [0.0213] AU  
Ag = 2.51 [1.63] [0.93σ]  
Teffp = 5059 [304] K [4.82σ]

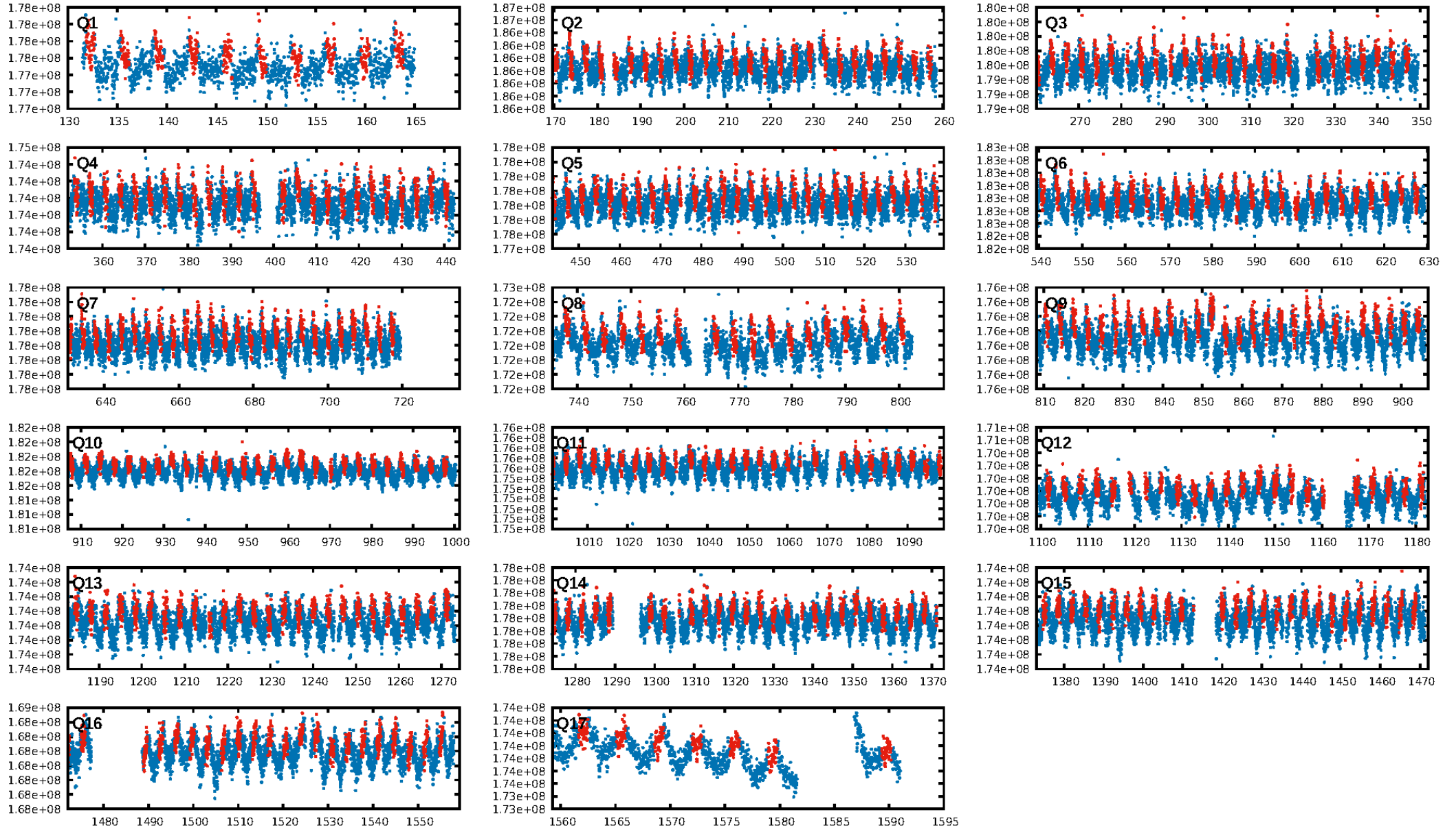
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.16e-25  
RollingBand-fgt: 1.00 [375/375]  
GhostDiagnostic-chr: 1.955  
Centroid-sig: 7.9%  
Centroid-so: 0.672 arcsec [1.64σ]  
OotOffset-rm: 0.560 arcsec [1.66σ]  
KicOffset-rm: 0.622 arcsec [1.94σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [17/17]

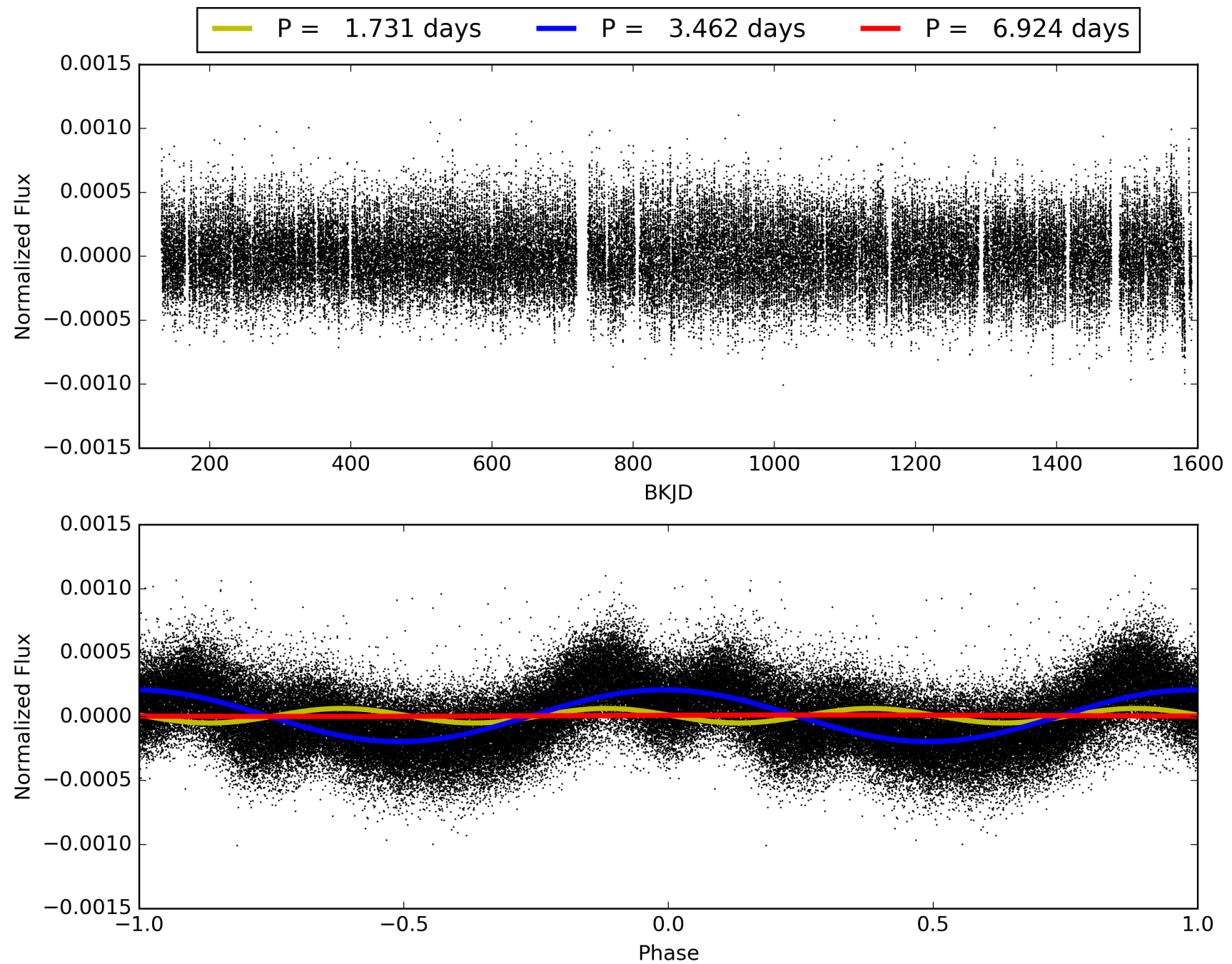
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:40:10 Z

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

# TCE 011305366-01, PDC Light Curves

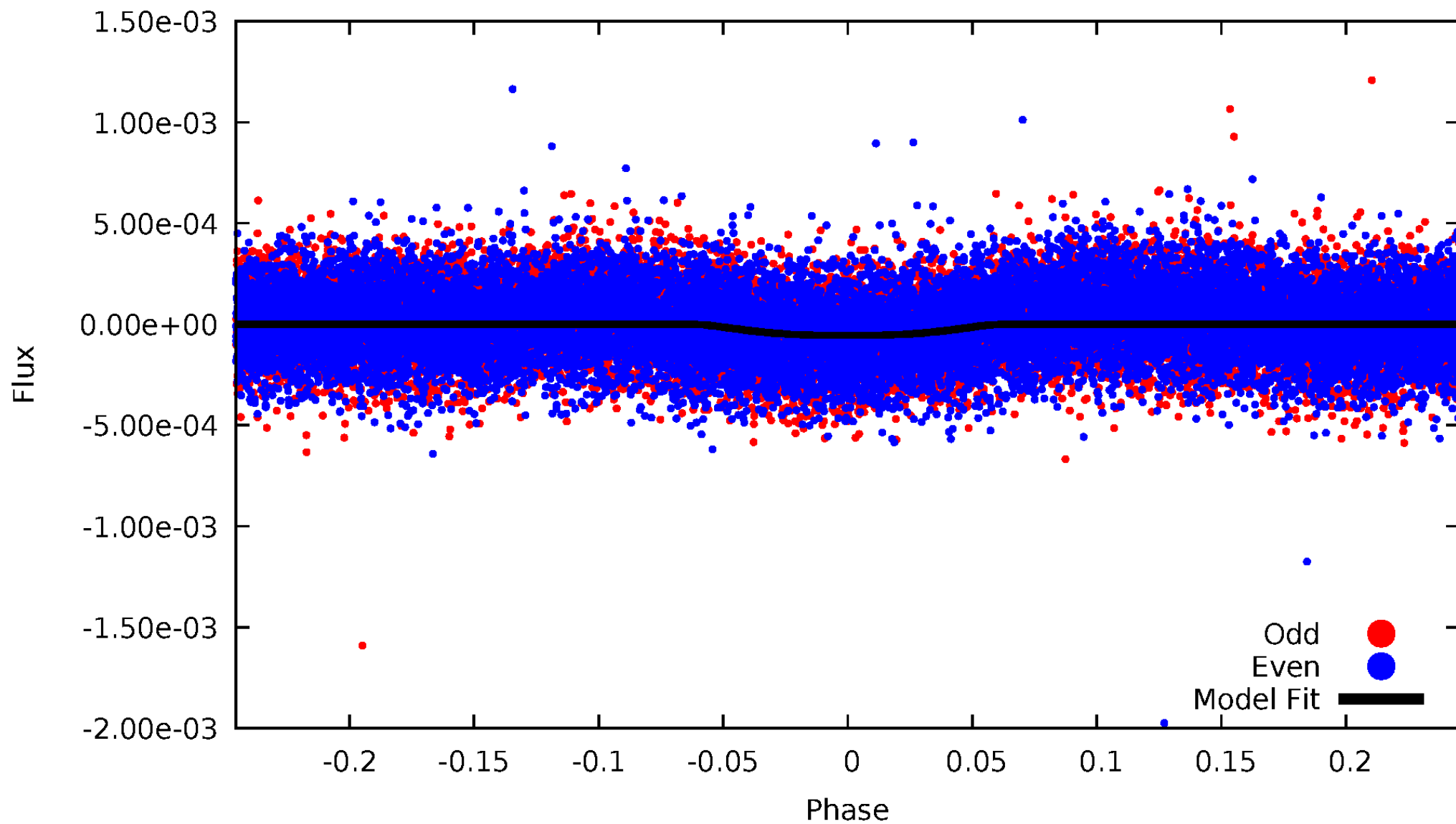


TCE 011305366-01



# DV Odd/Even

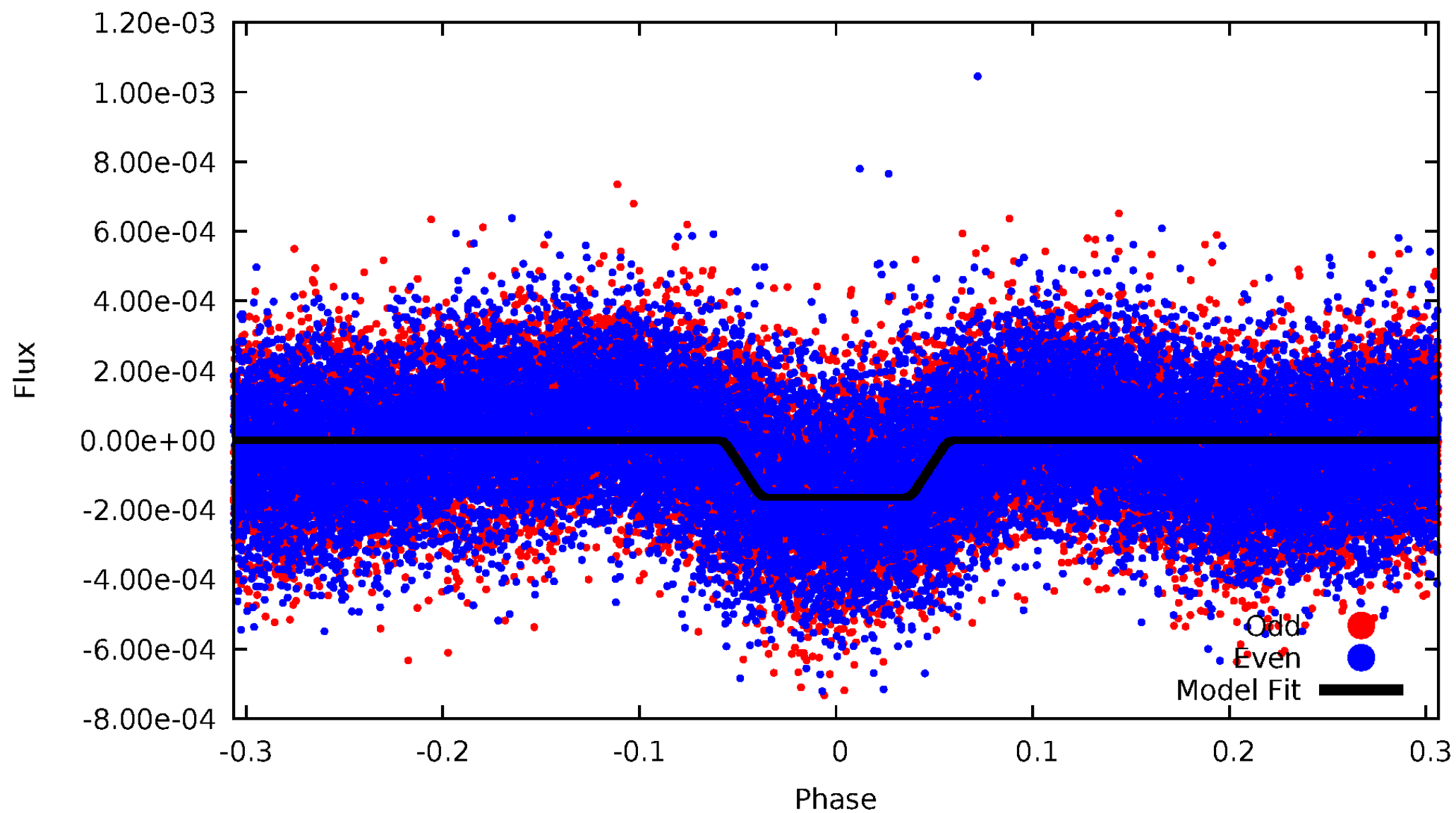
TCE 011305366-01



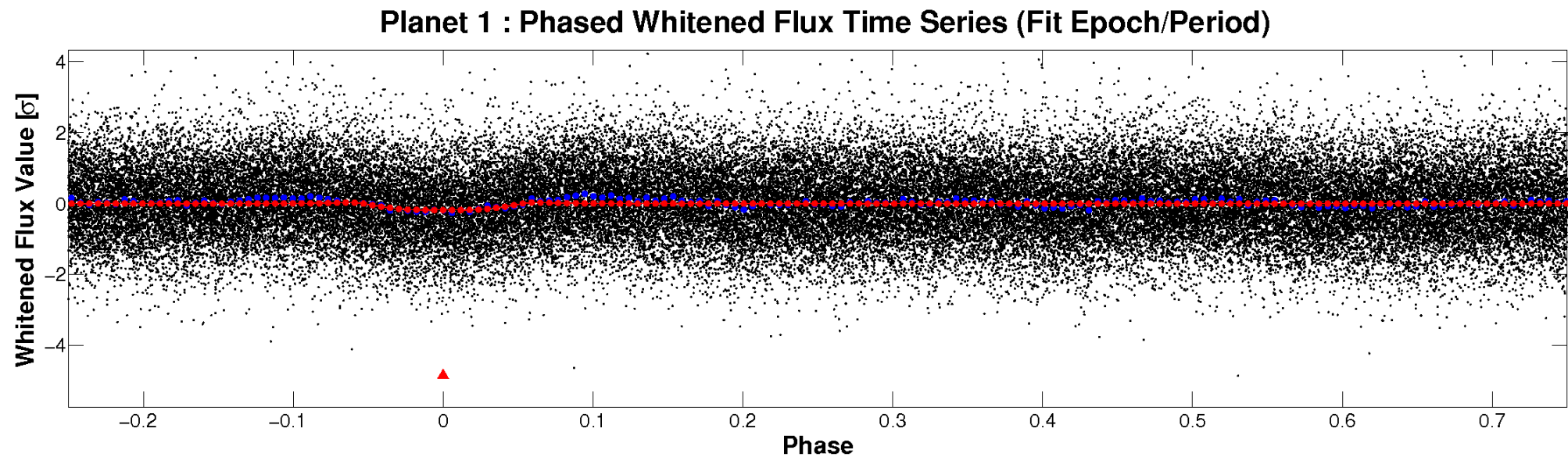
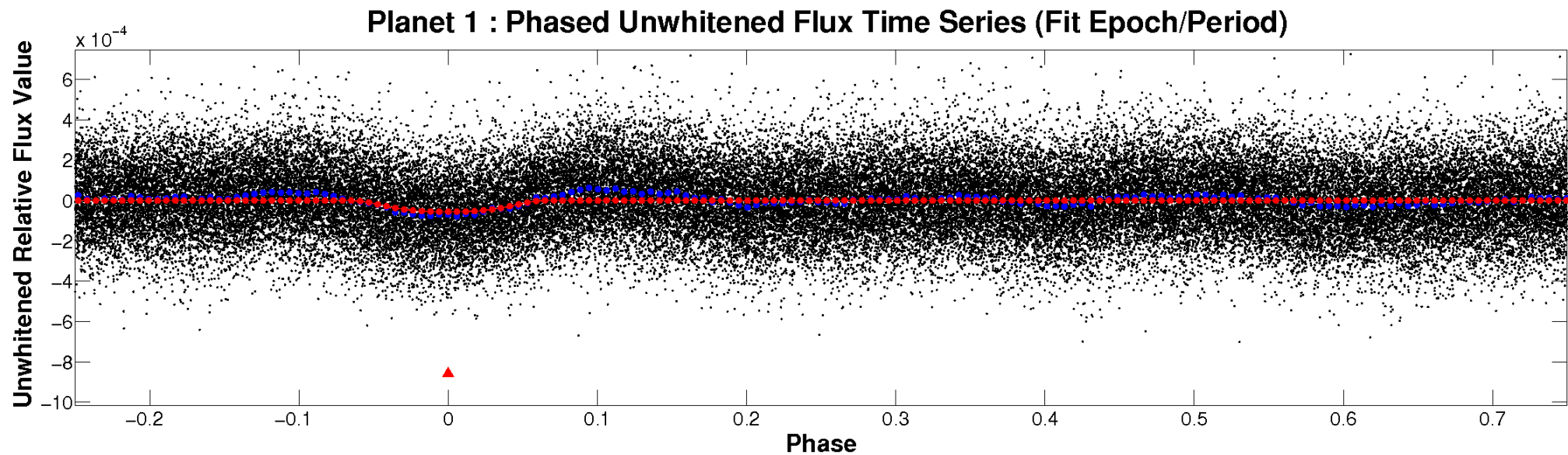


# ALT Odd/Even

TCE 011305366-01

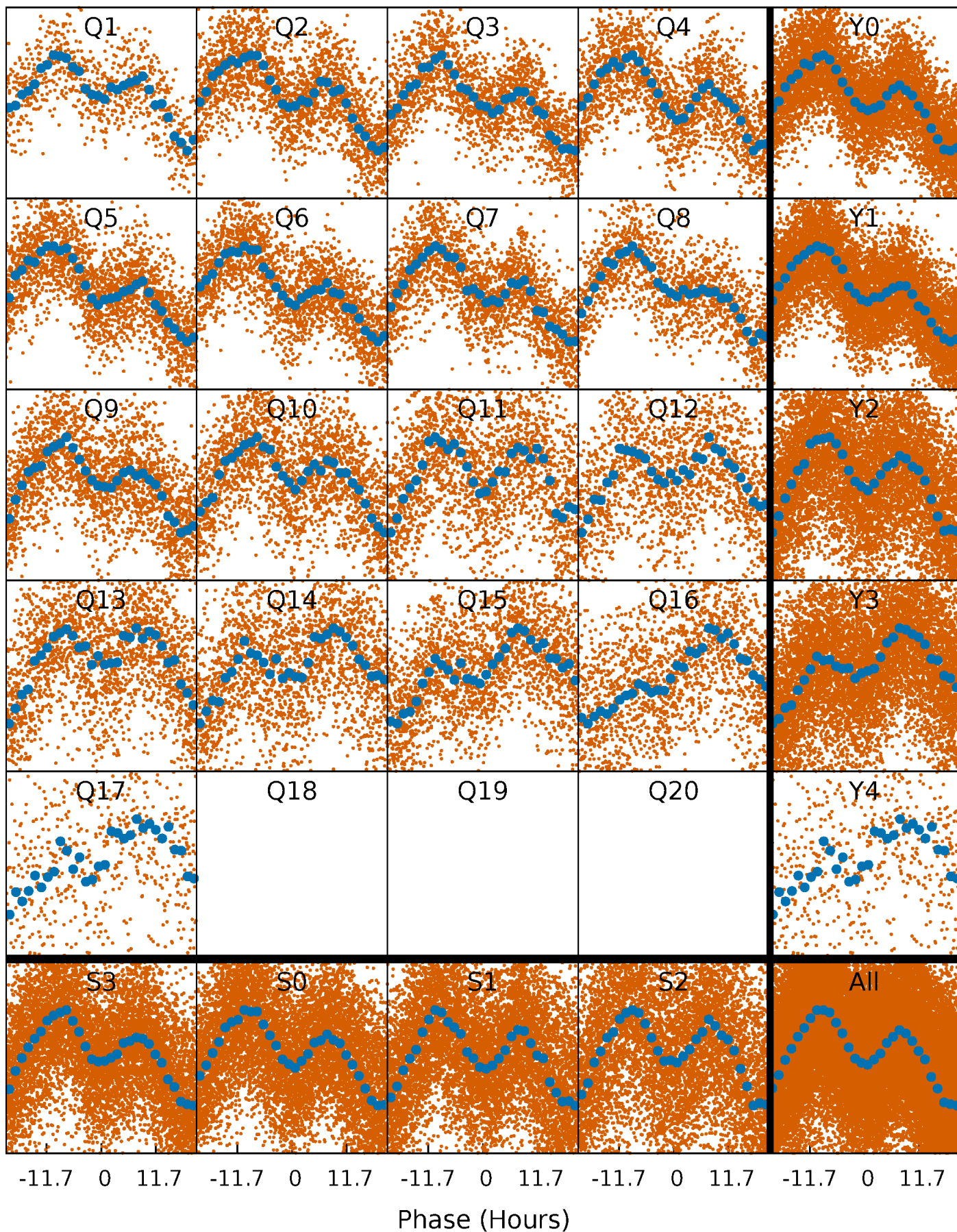


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

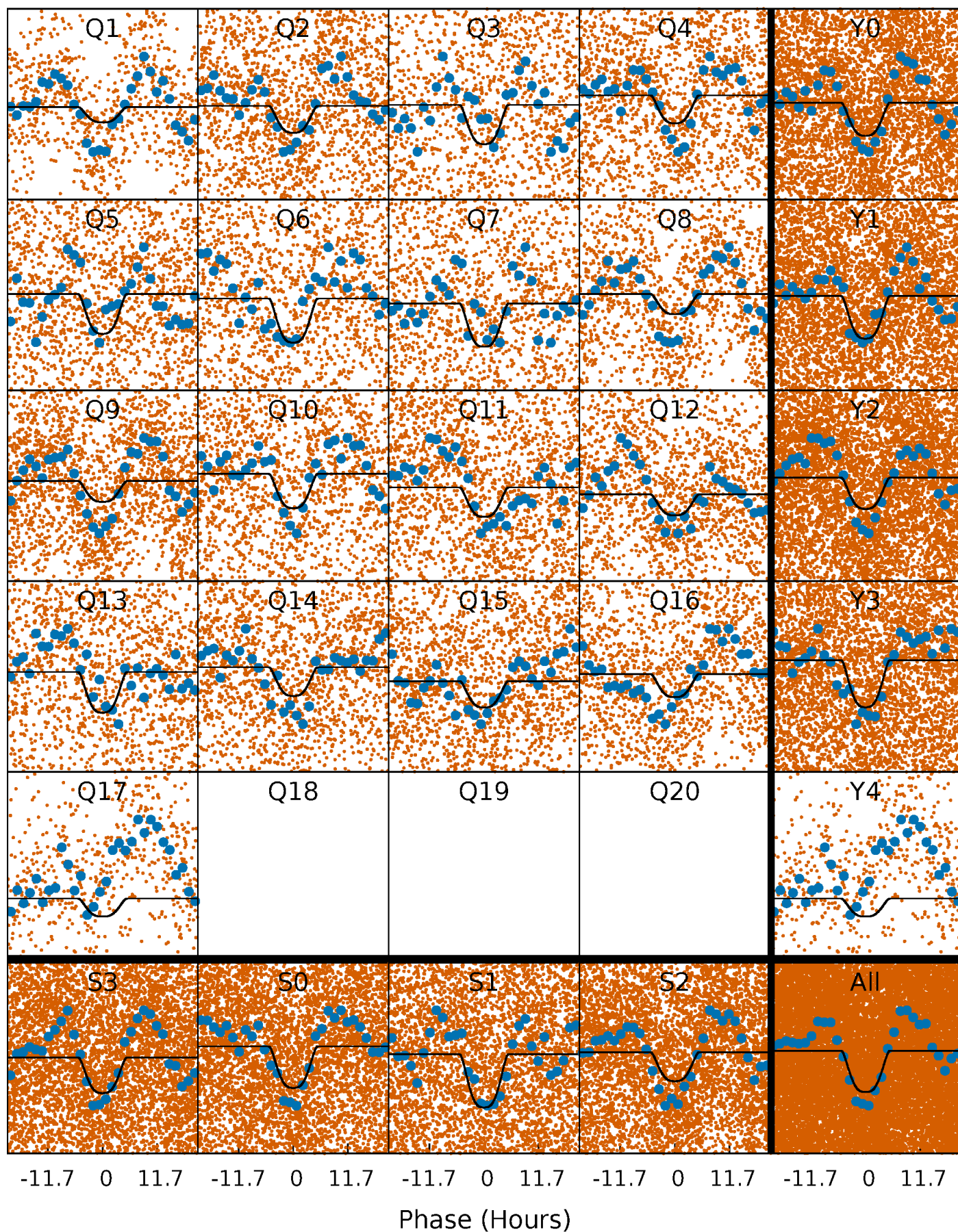
TCE 011305366-01 P= 3.461893 Days  $T_0=132.283007$  (BKJD)





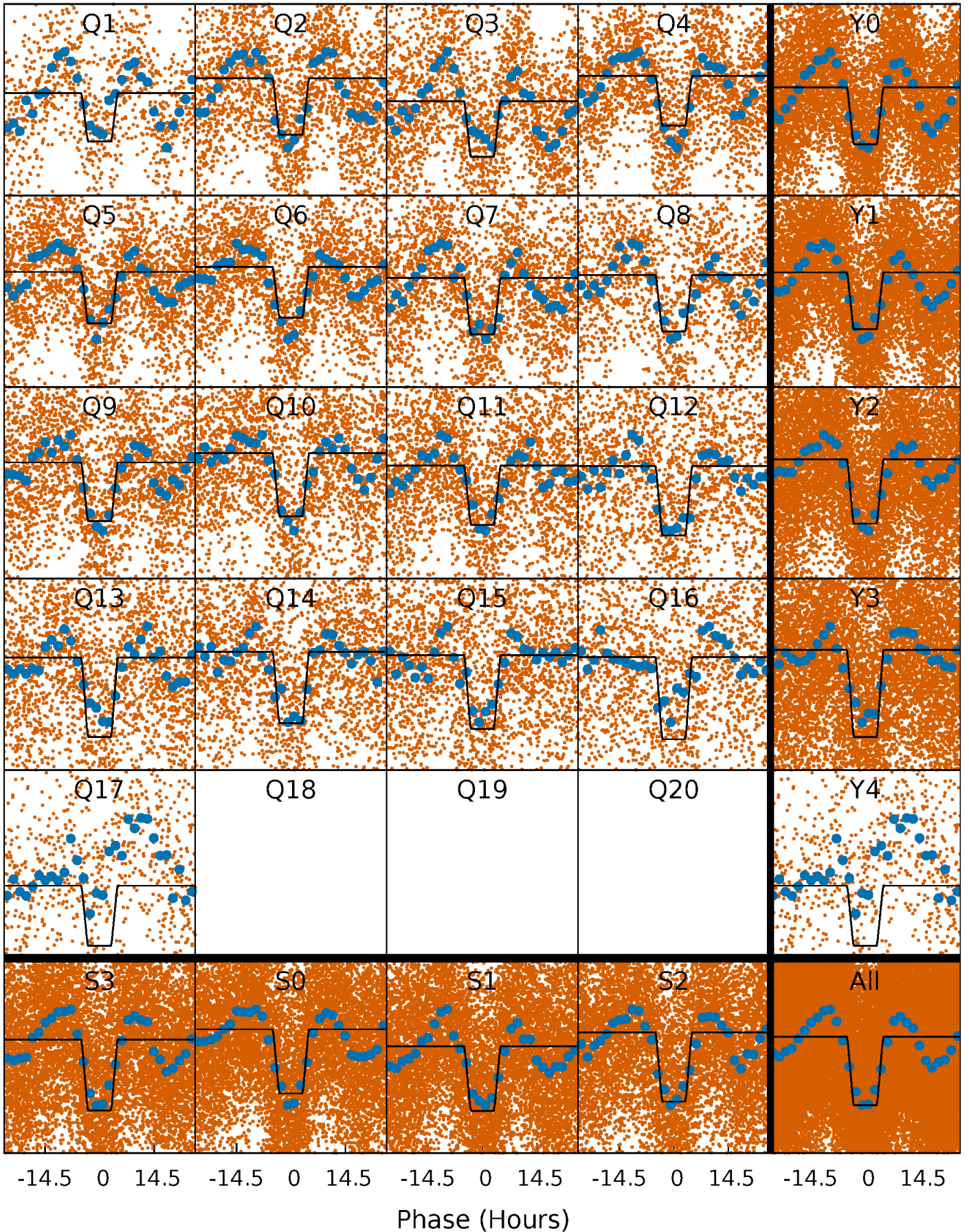
# DV Quarter-Phased Transit Curves

TCE 011305366-01 P= 3.461893 Days  $T_0=132.283007$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011305366-01 P= 3.461836 Days  $T_0=132.283604$  (BKJD)

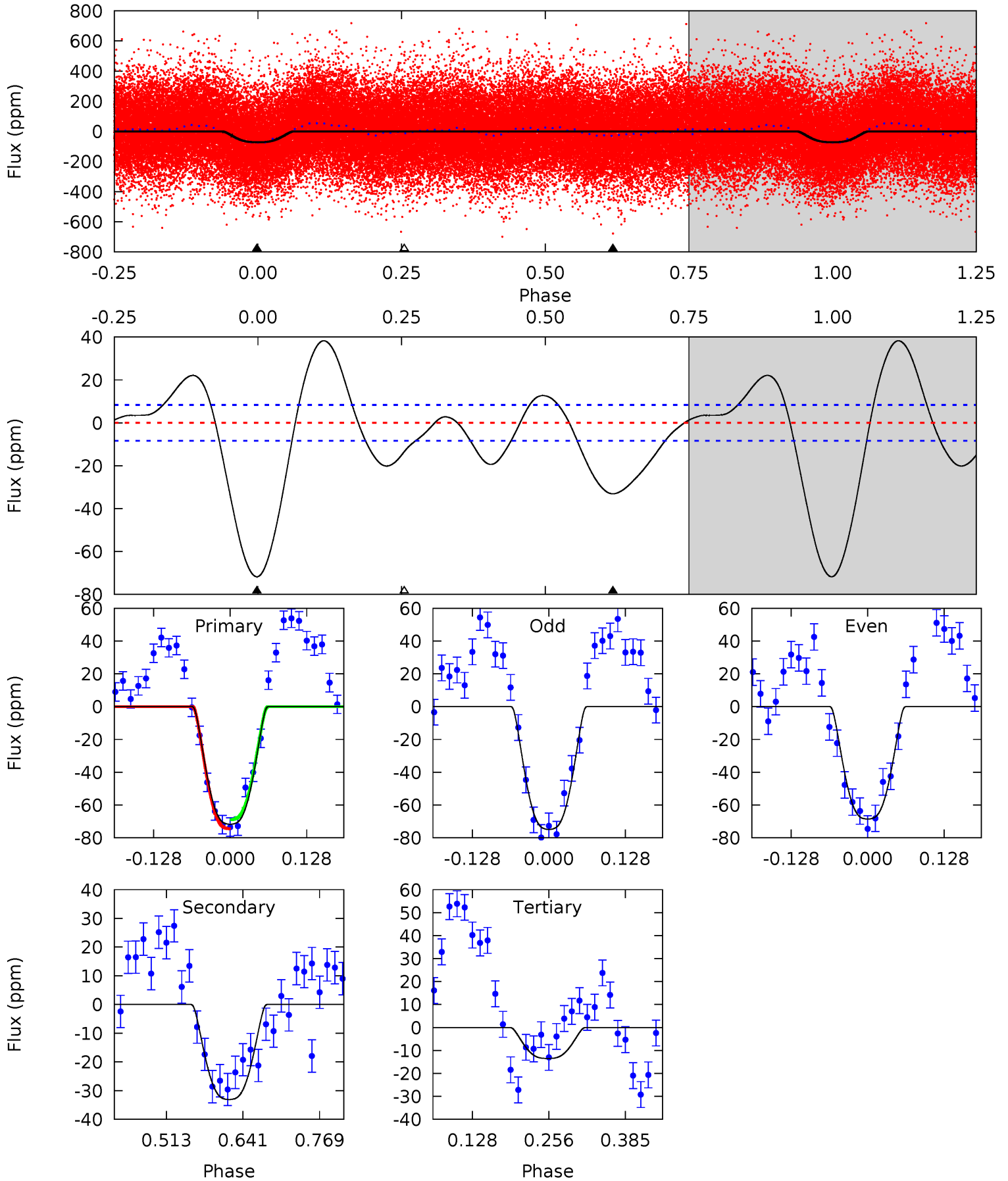




# DV Model-Shift Uniqueness Test

011305366-01, P = 3.461893 Days, E = 128.821114 Days

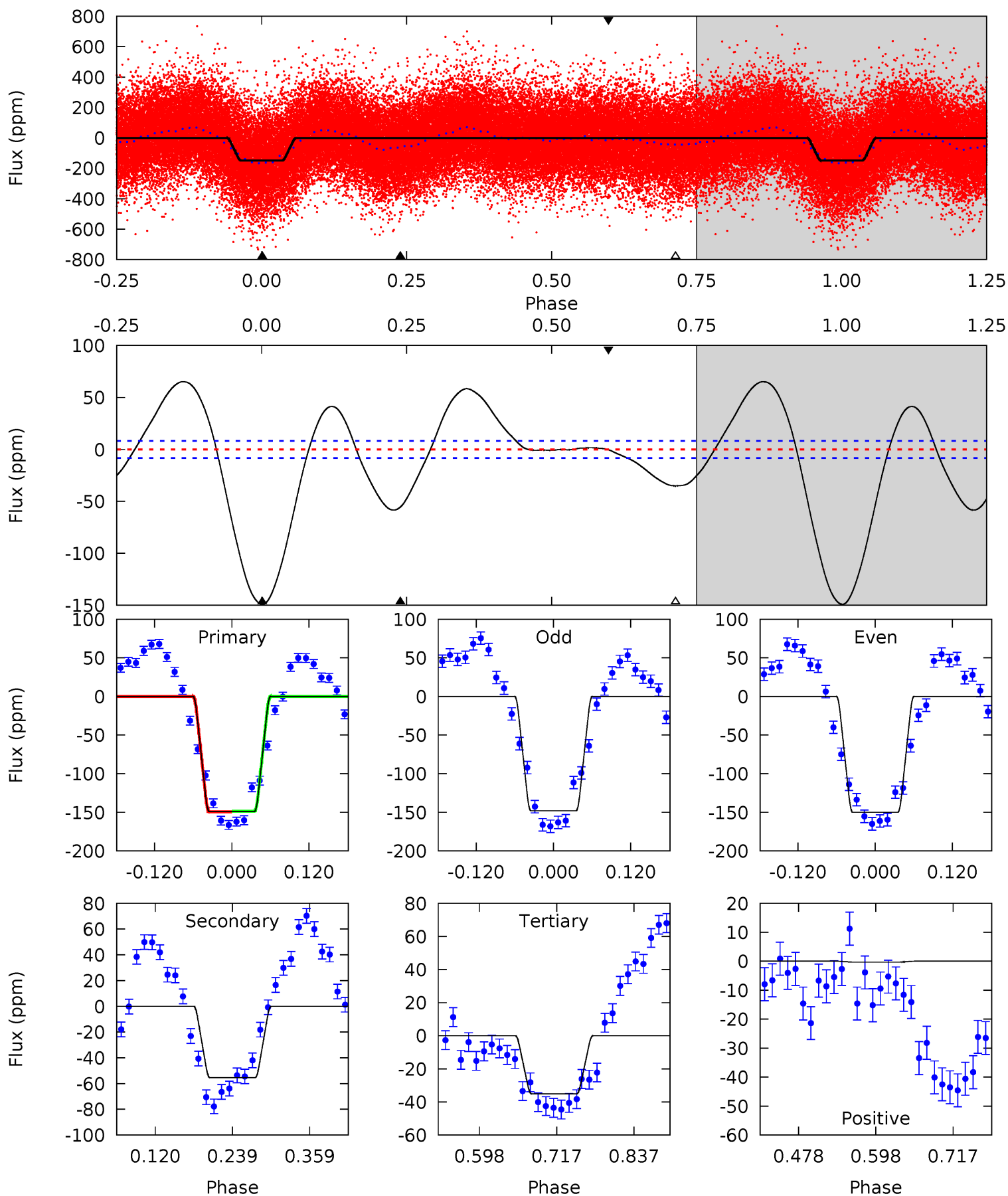
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	17.9	7.28	0	4.51	1.52	6.73	31.4	38.7	10.6	17.9	1.71	0.97	0.35	1.49



# Alt Model-Shift Uniqueness Test

011305366-01, P = 3.461836 Days, E = 128.821768 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
82.0	30.5	19.3	-0.17	4.53	1.56	15.5	62.7	82.1	11.2	30.7	0.52	1.02	0.30	0.24





### Stellar Parameters For KIC 011305366

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6886^{+186}_{-227}$	$3.493^{+0.360}_{-0.090}$	$-0.320^{+0.350}_{-0.250}$	$3.997^{+0.412}_{-1.648}$	$1.815^{+0.140}_{-0.420}$	$0.040^{+0.124}_{-0.011}$
	+3%/-3%	+10%/-3%	+109%/-78%	+10%/-41%	+8%/-23%	+310%/-28%
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 011305366-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-33 \pm 2$	$3.99^{+0.53}_{-0.86}$	$3573^{+201}_{-353}$	$5272^{+274}_{-224}$	$3.440^{+1.734}_{-0.779}$
Alt.	$-55 \pm 2$	$5.50^{+0.62}_{-1.20}$	$3587^{+190}_{-381}$	$5159^{+165}_{-174}$	$3.095^{+1.587}_{-0.619}$

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

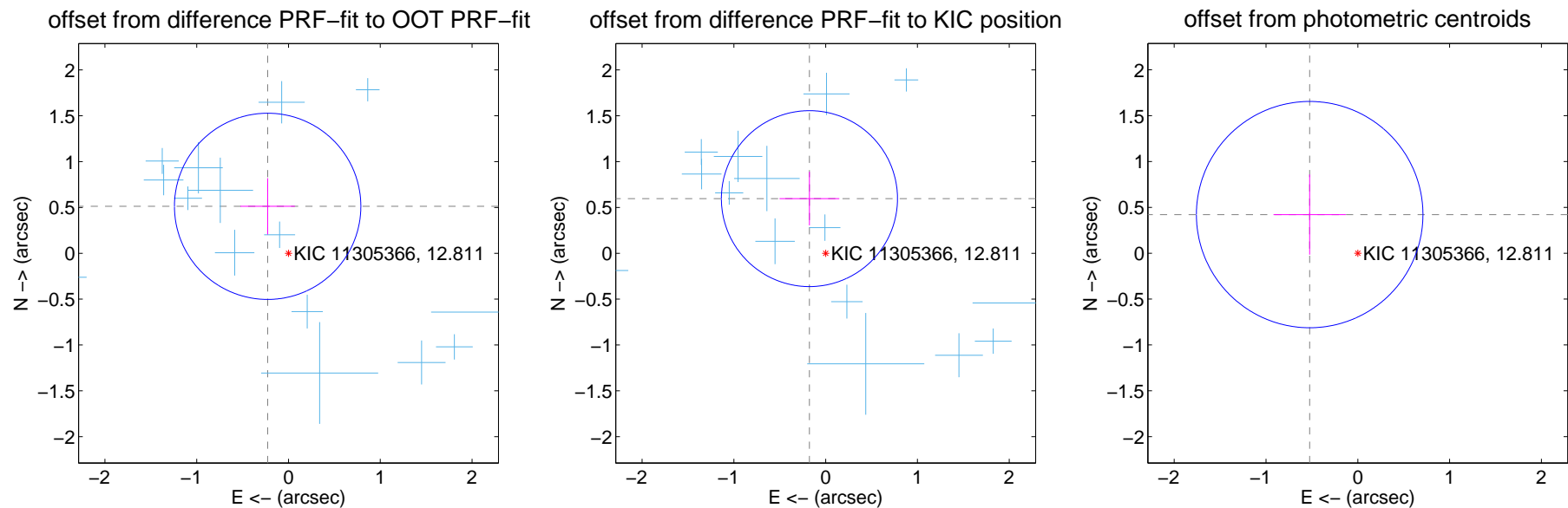
## DV Centroid Data

Supplemental centroid analysis for 011305366-01. Kepler magnitude: 12.81. Transit SNR 12.35

There are 16 quarters with good PRF difference image offsets

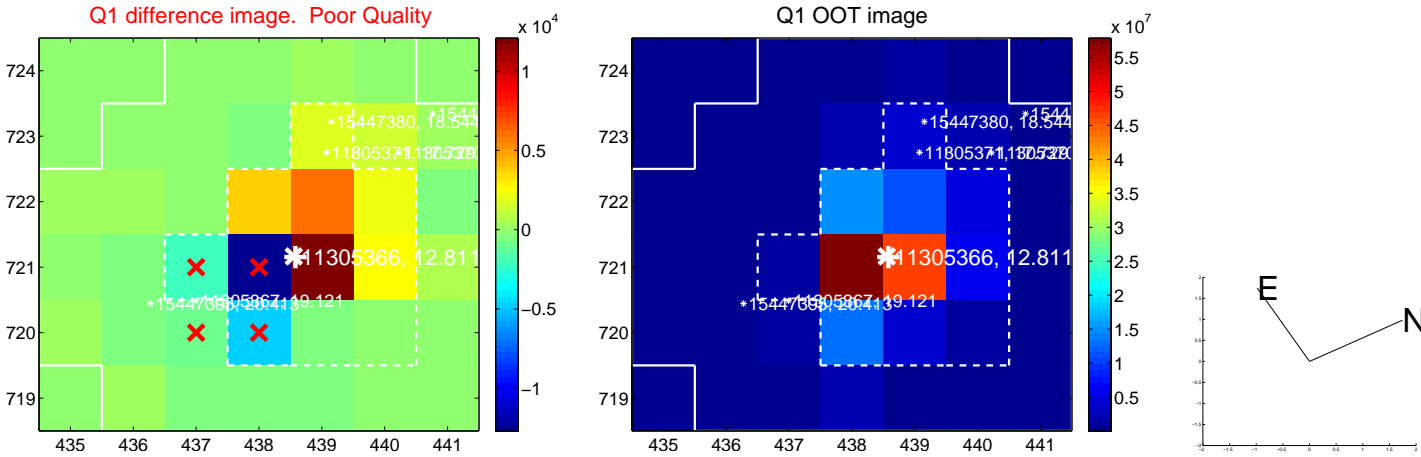
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.560 \pm 0.338$	1.66	$0.227 \pm 0.297$	$0.512 \pm 0.307$
PRF-fit source offset from KIC position	$0.622 \pm 0.320$	1.94	$0.177 \pm 0.326$	$0.596 \pm 0.292$
photometric centroid source offset	$0.67 \pm 0.41$	1.64	$0.52 \pm 0.39$	$0.42 \pm 0.44$

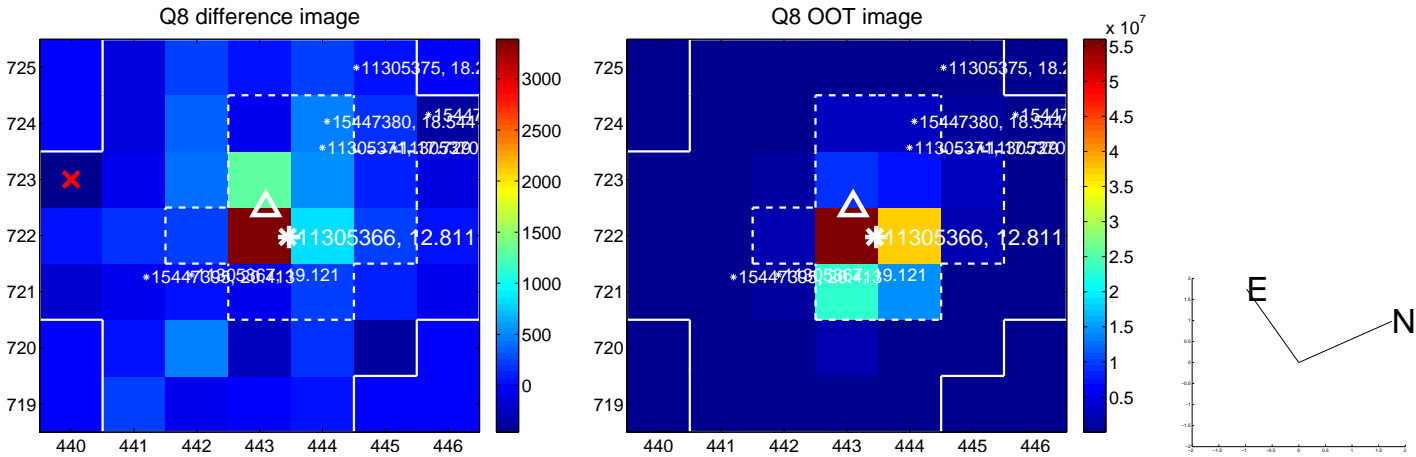
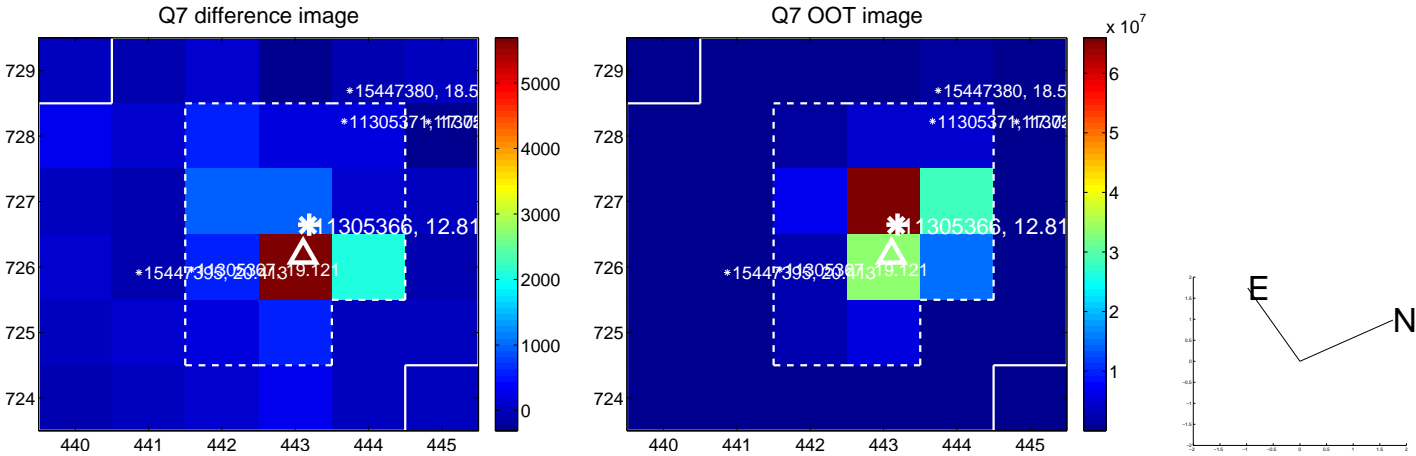
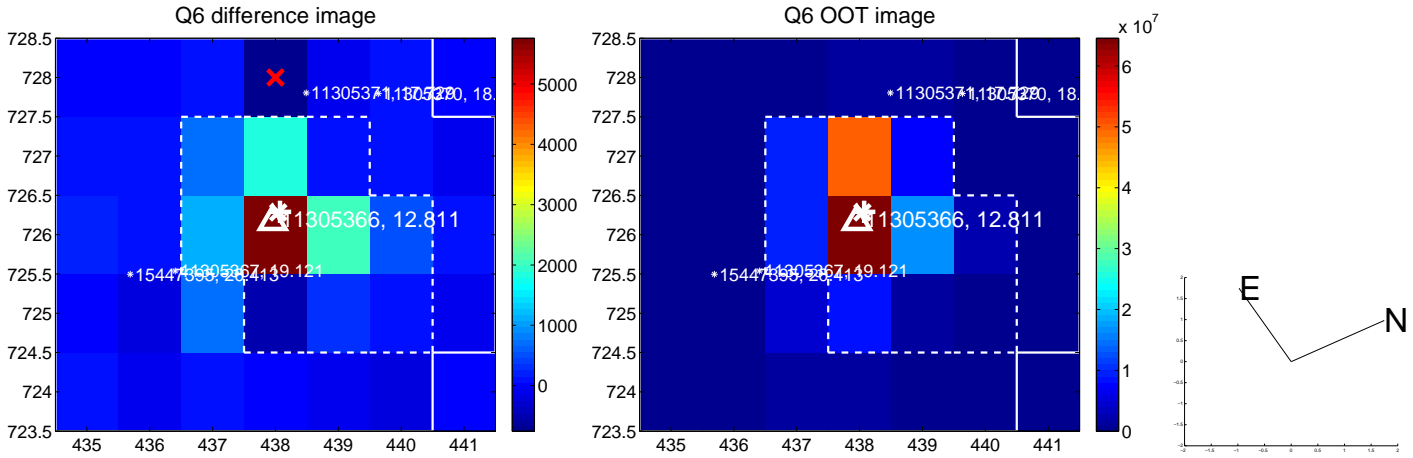
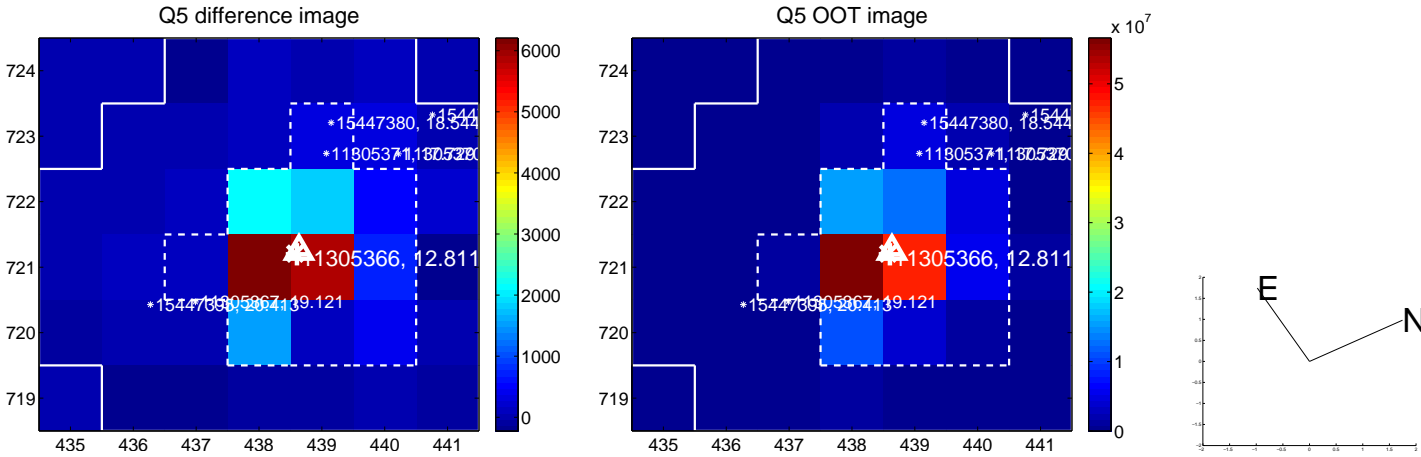


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

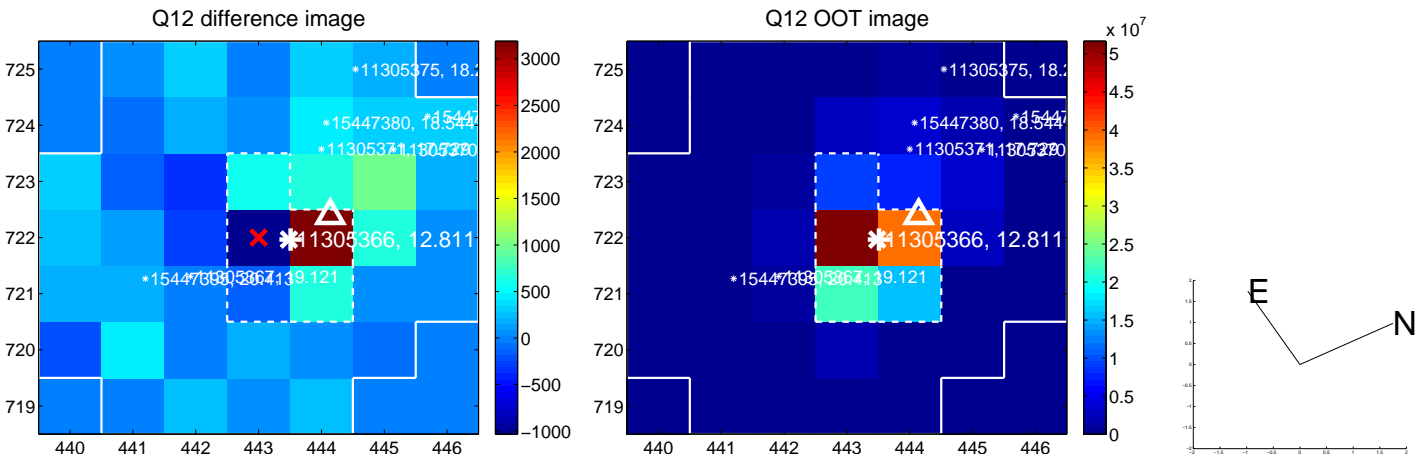
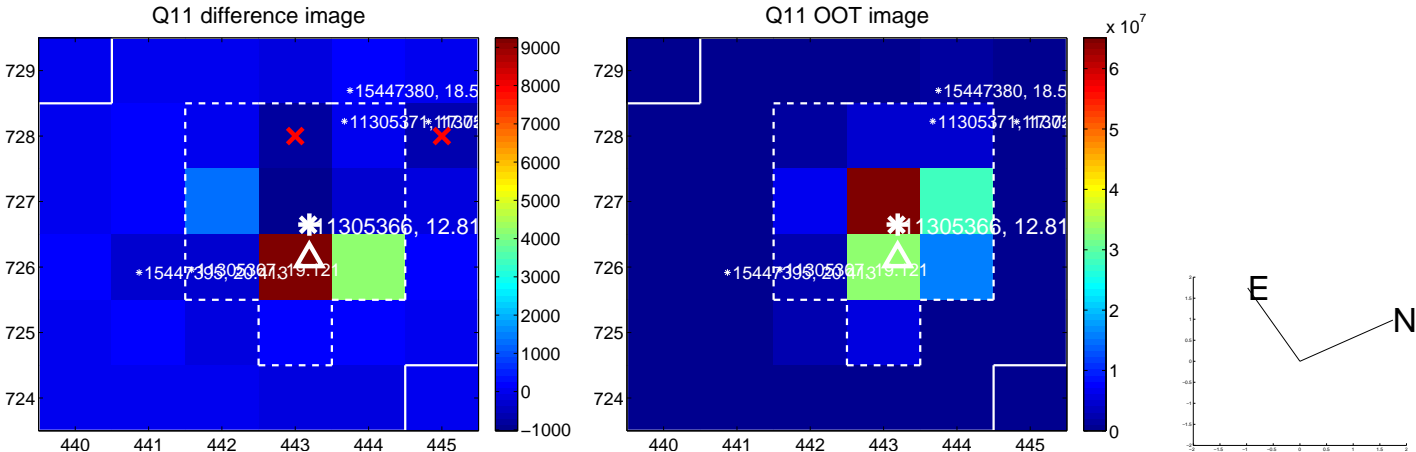
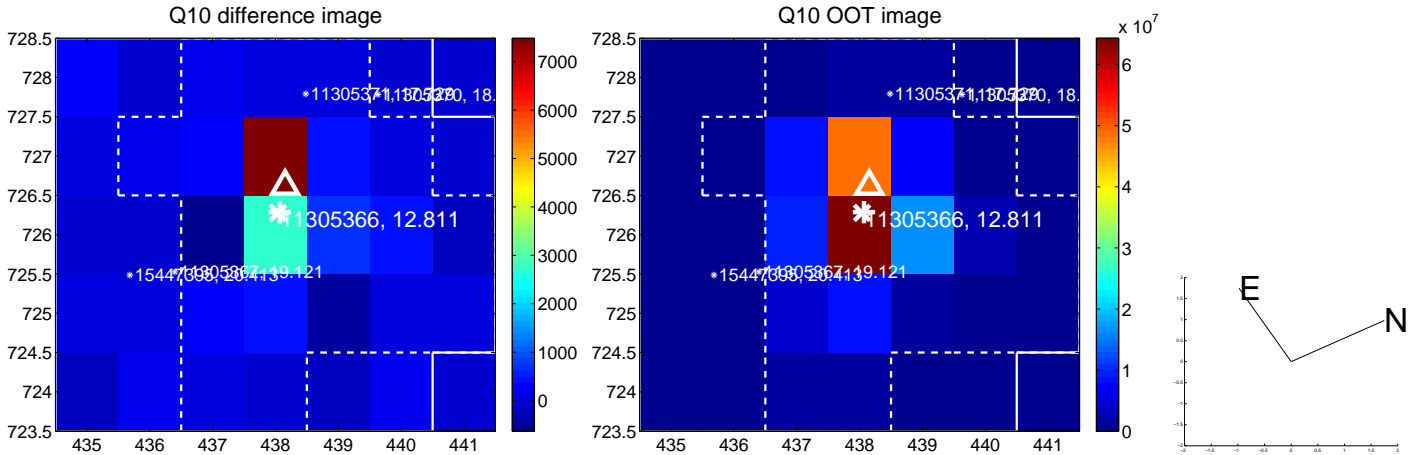
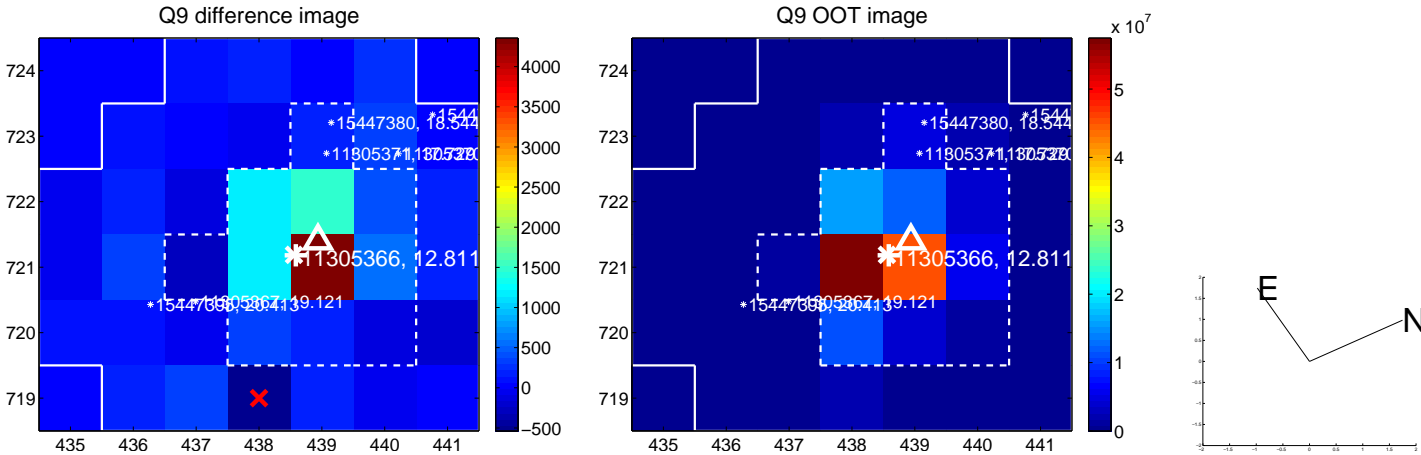


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

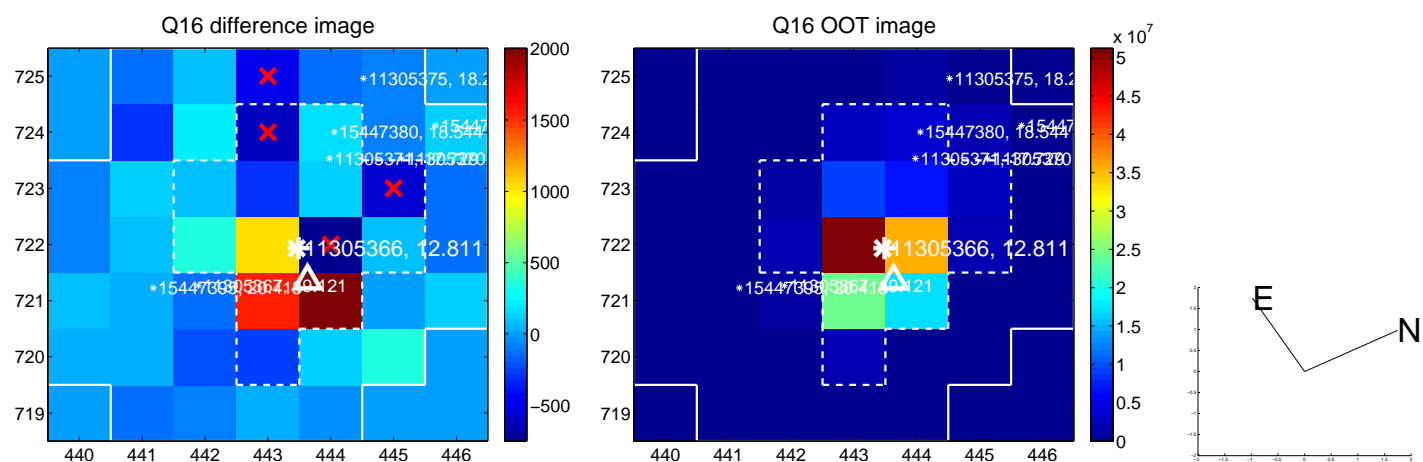
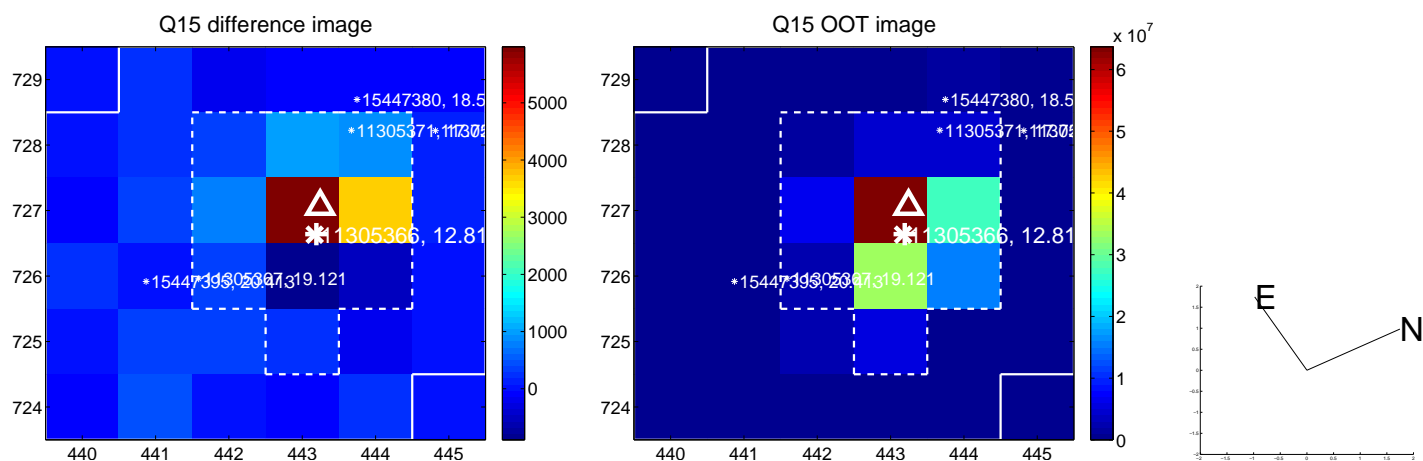
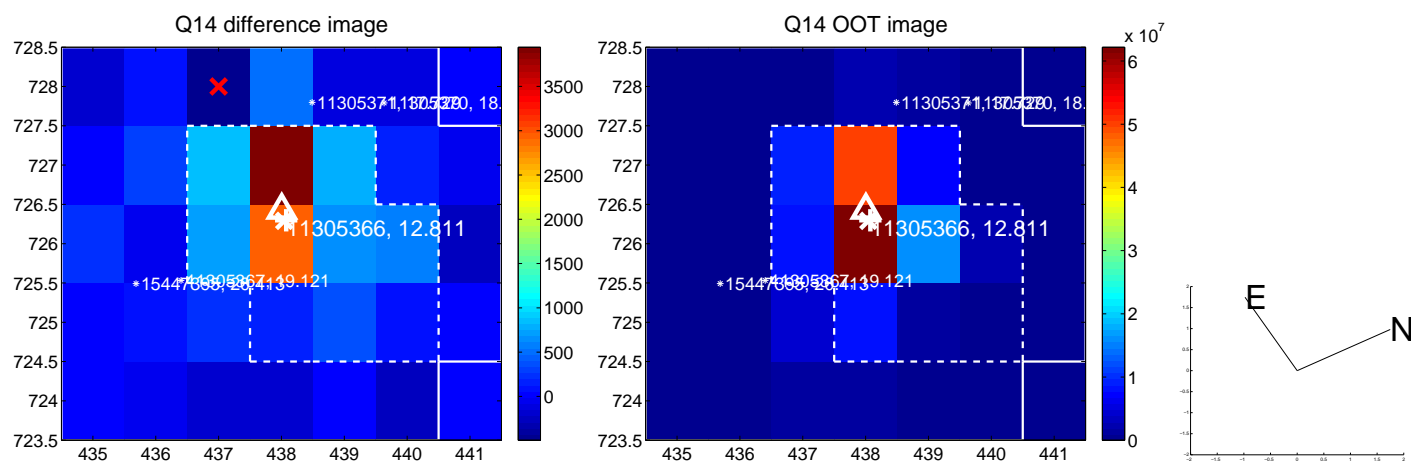
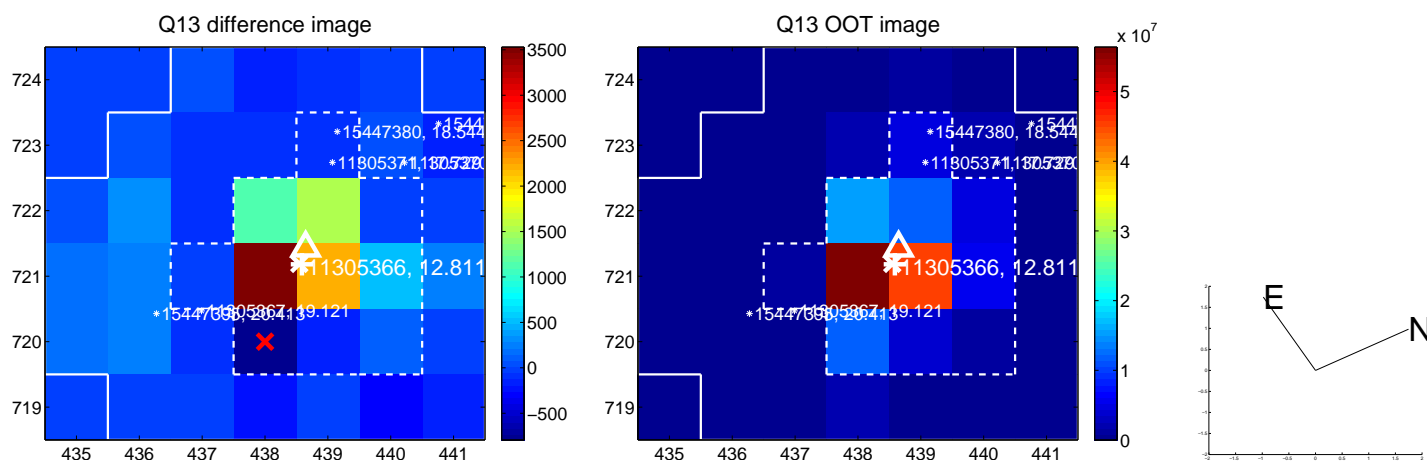




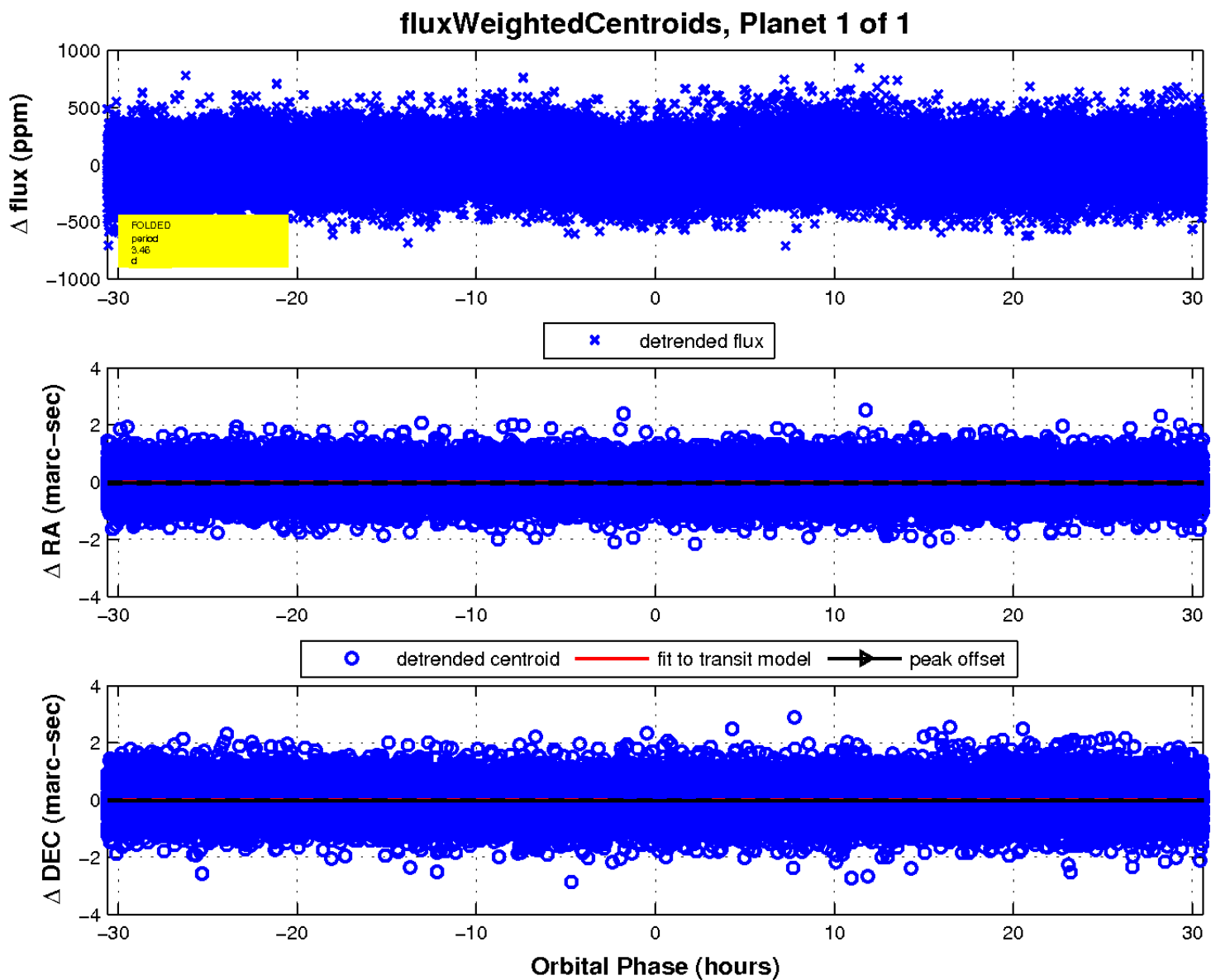
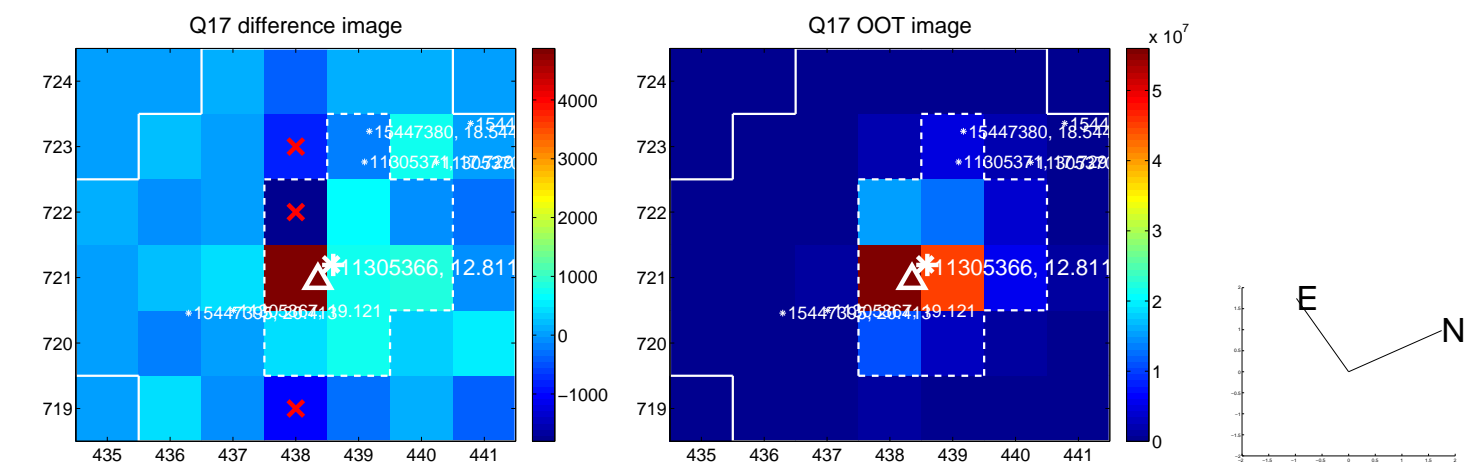
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

