

# KIC 006611330

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006611330-01	OBS	1691.01	35.145802	136.493312	6685.6	2.237	88.8	86.4	0.78	5437	9.47	12.62

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006611330-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—CENT_KIC_POS

**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 006611330-01

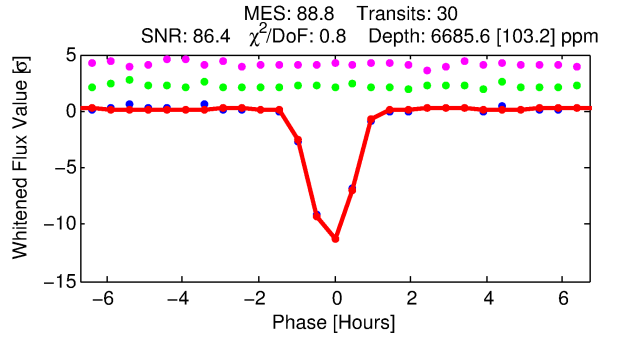
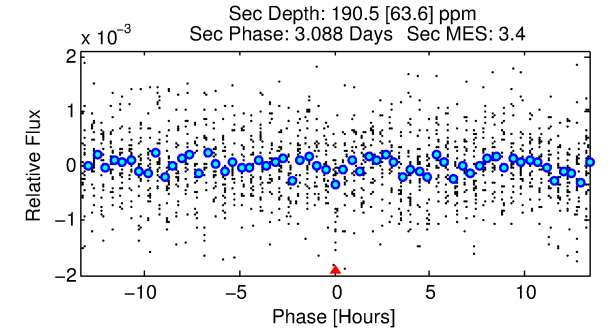
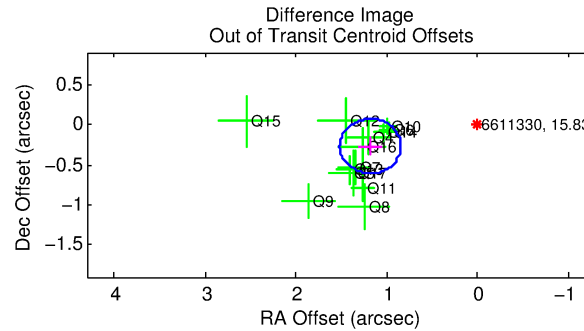
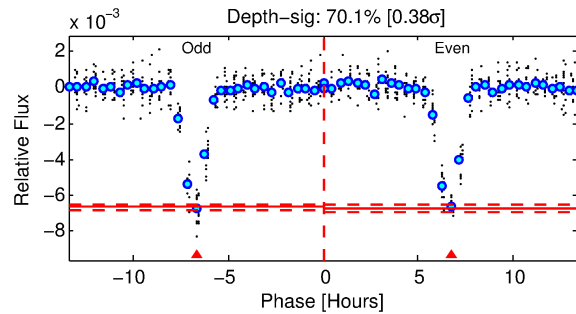
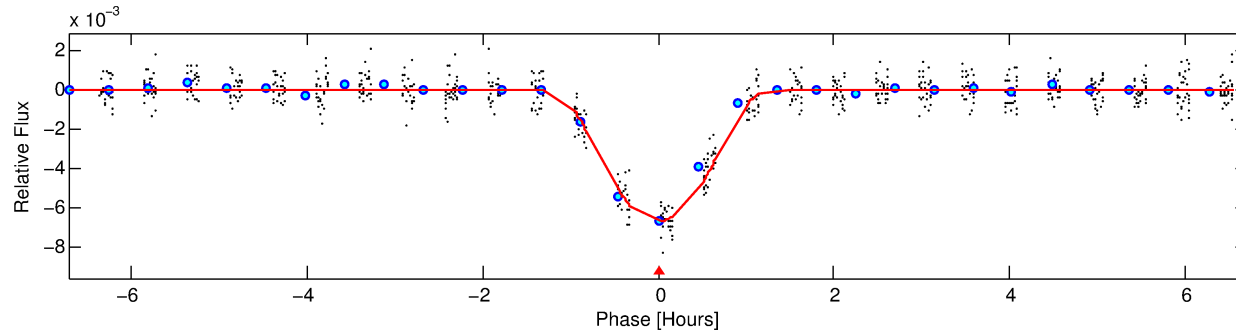
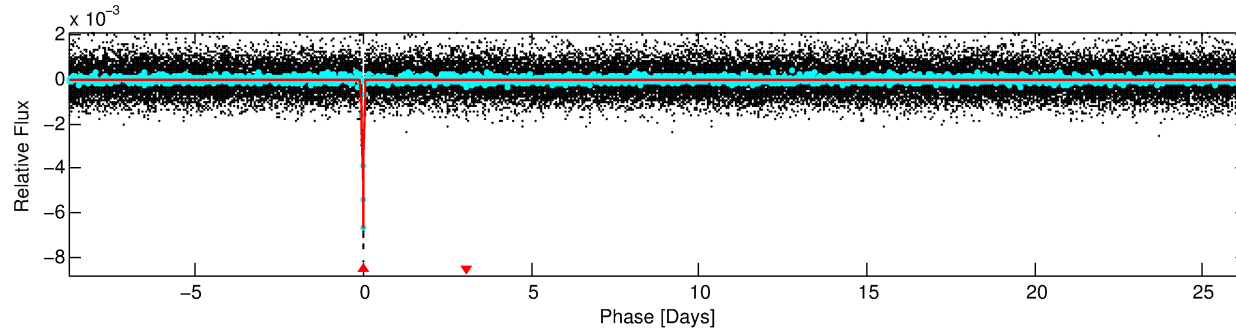
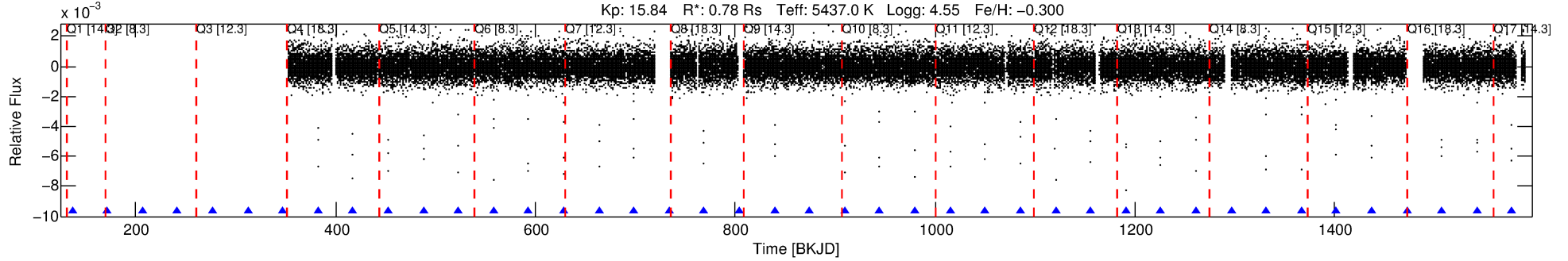
No Significant Match Found

# DV One-Page Summary

KIC: 6611330 Candidate: 1 of 1 Period: 35.146 d

KOI: K01691.01 Corr: 0.996

Kp: 15.84 R\*: 0.78 Rs Teff: 5437.0 K Logg: 4.55 Fe/H: -0.300



## DV Fit Results:

Period = 35.14580 [0.00003] d  
Epoch = 136.4933 [0.0009] BKJD  
Rp/R\* = 0.1108 [0.0285]  
a/R\* = 68.30 [5.23]  
b = 0.95 [0.05]  
Seff = 12.62 [3.24]  
Teq = 481 [31] K  
Rp = 9.47 [2.99] Re  
a = 0.1950 [0.0289] AU  
Ag = 44.45 [28.81] [1.51σ]  
Teffp = 1919 [303] K [4.72σ]

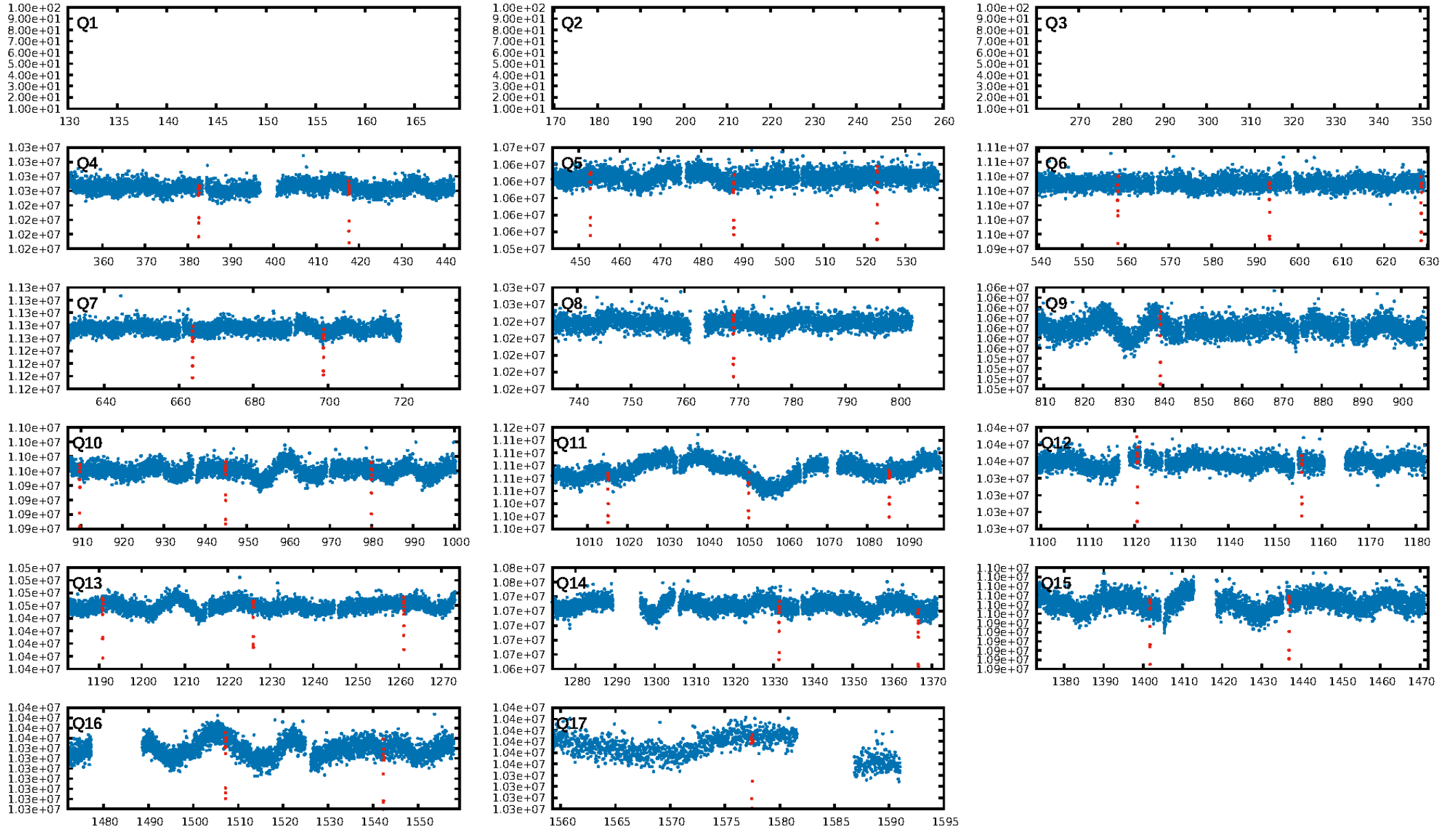
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 42.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [29/29]  
GhostDiagnostic-chr: 3.177  
Centroid-sig: 0.0%  
Centroid-so: 0.454 arcsec [5.29σ]  
OotOffset-rm: 1.213 arcsec [10.77σ]  
KicOffset-rm: 0.147 arcsec [1.08σ]  
OotOffset-st: 3/3/4/4 [14]  
KicOffset-st: 3/3/4/4 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

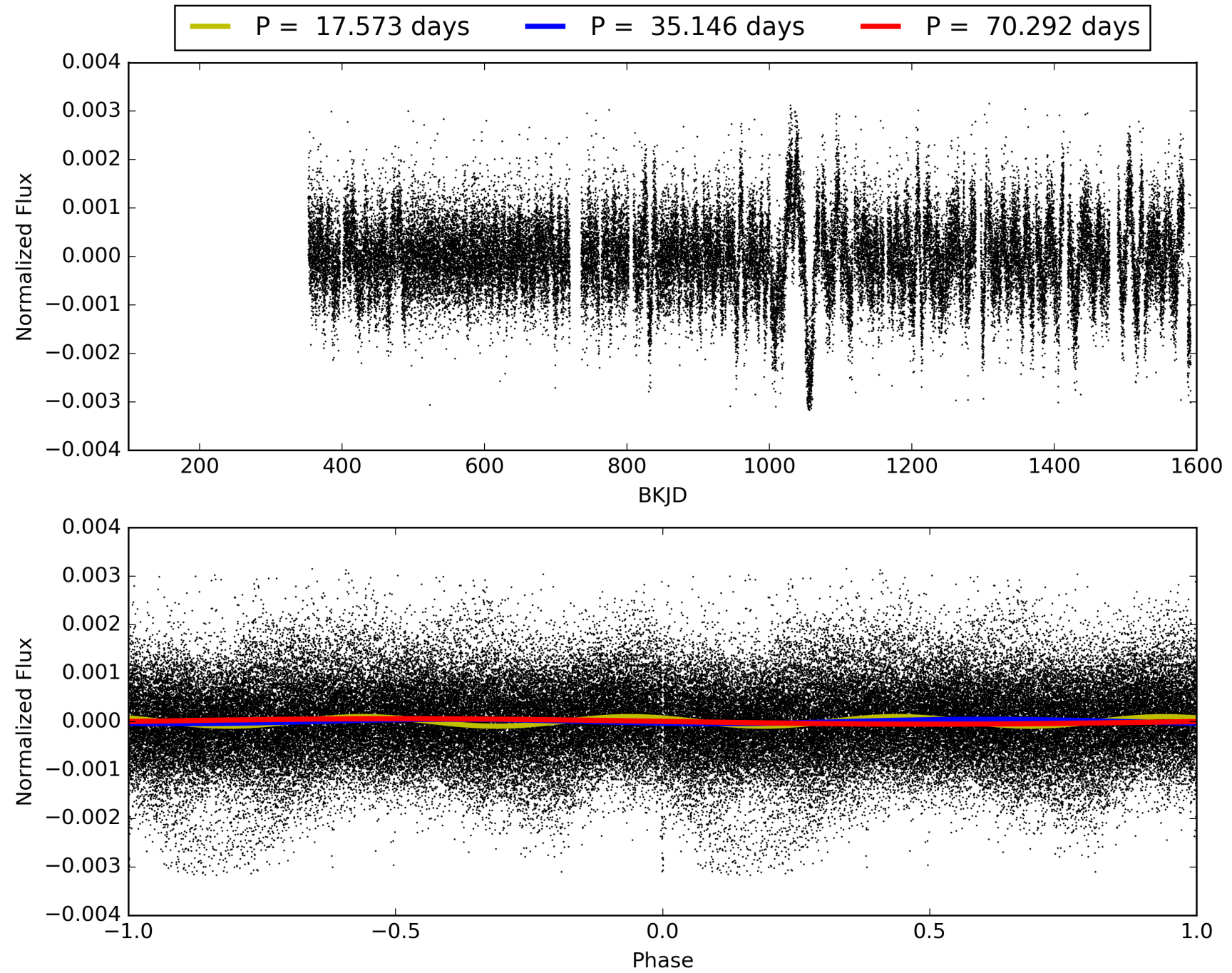
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:39:45 Z

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

# TCE 006611330-01, PDC Light Curves

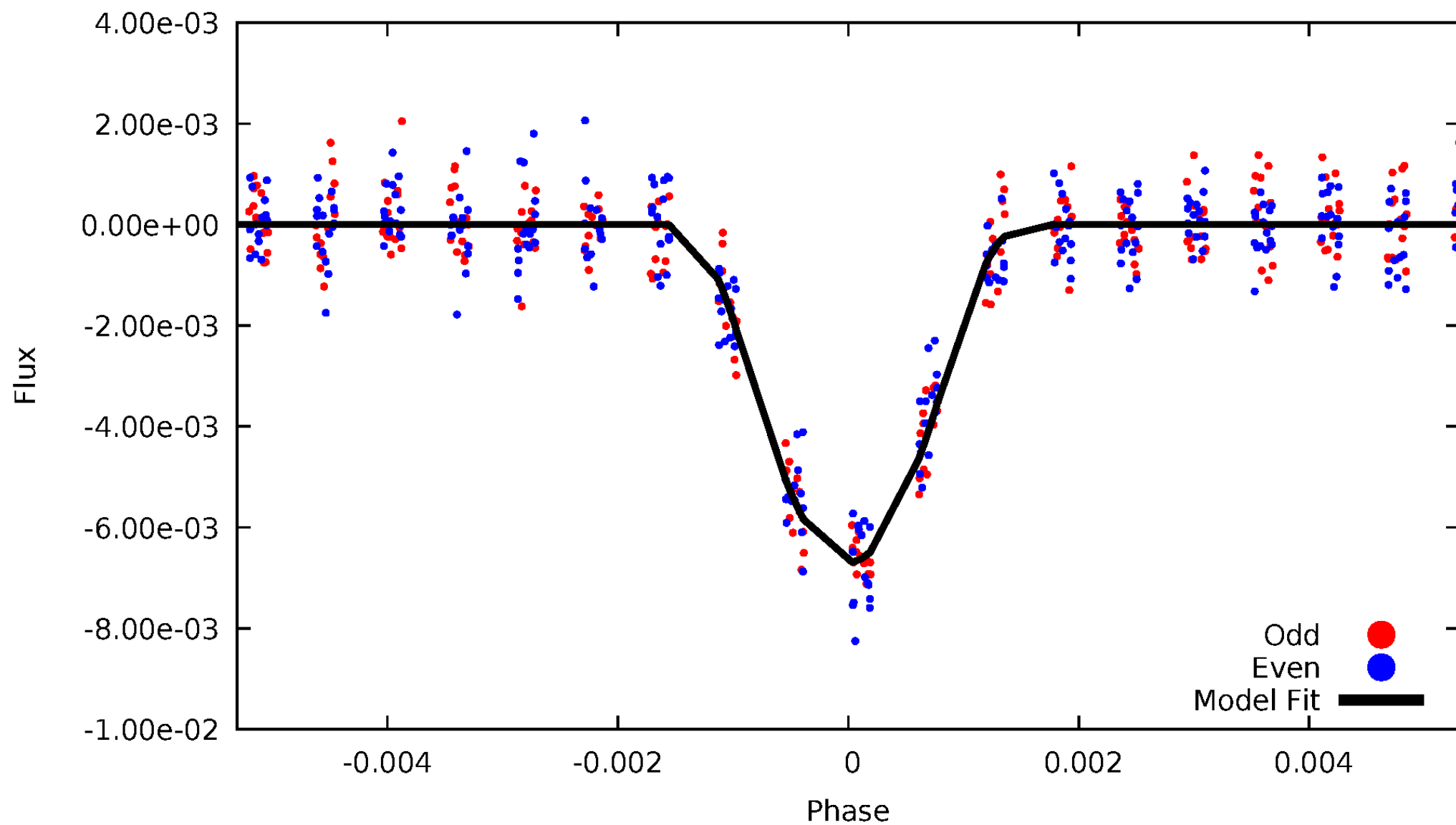


TCE 006611330-01



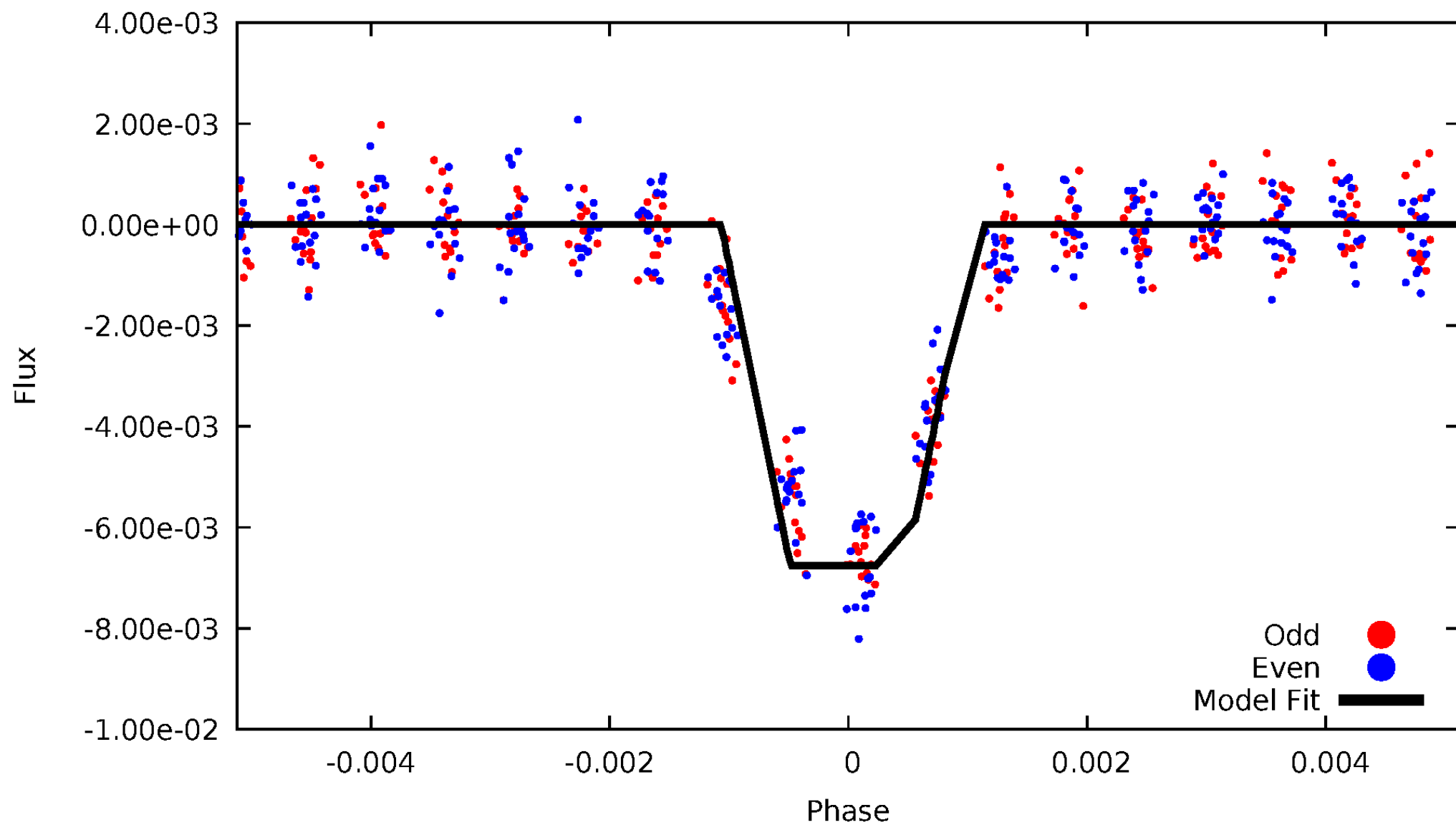
# DV Odd/Even

TCE 006611330-01



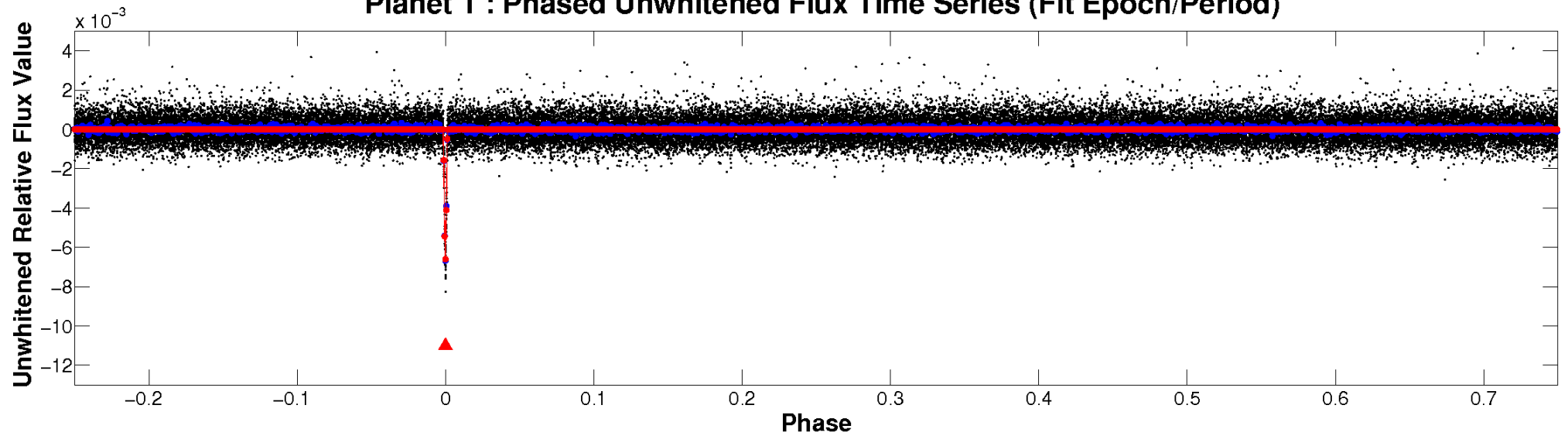
# ALT Odd/Even

TCE 006611330-01

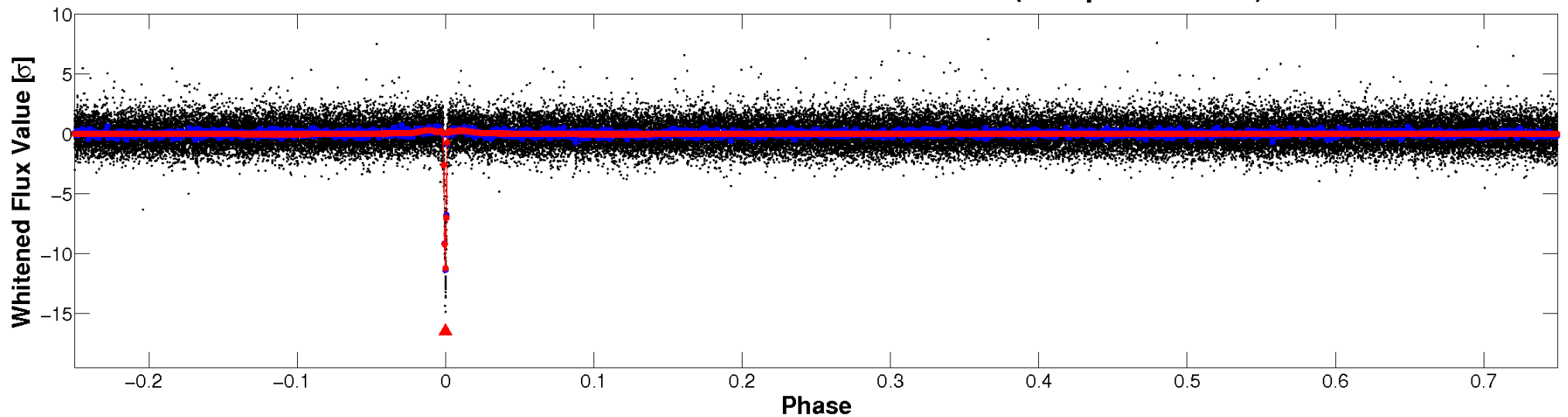


# Non-Whitened Vs. Whitened Light Curve

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

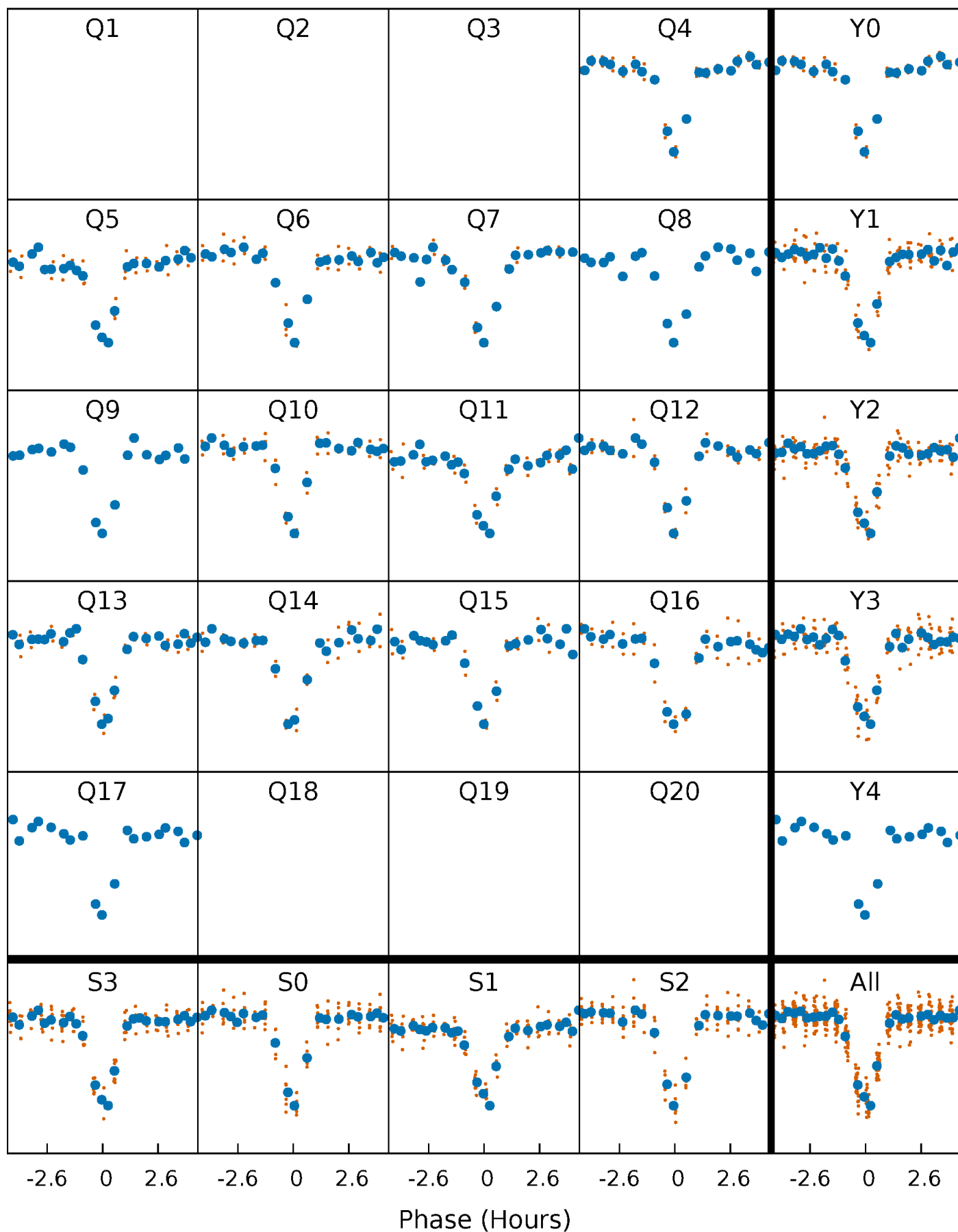


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

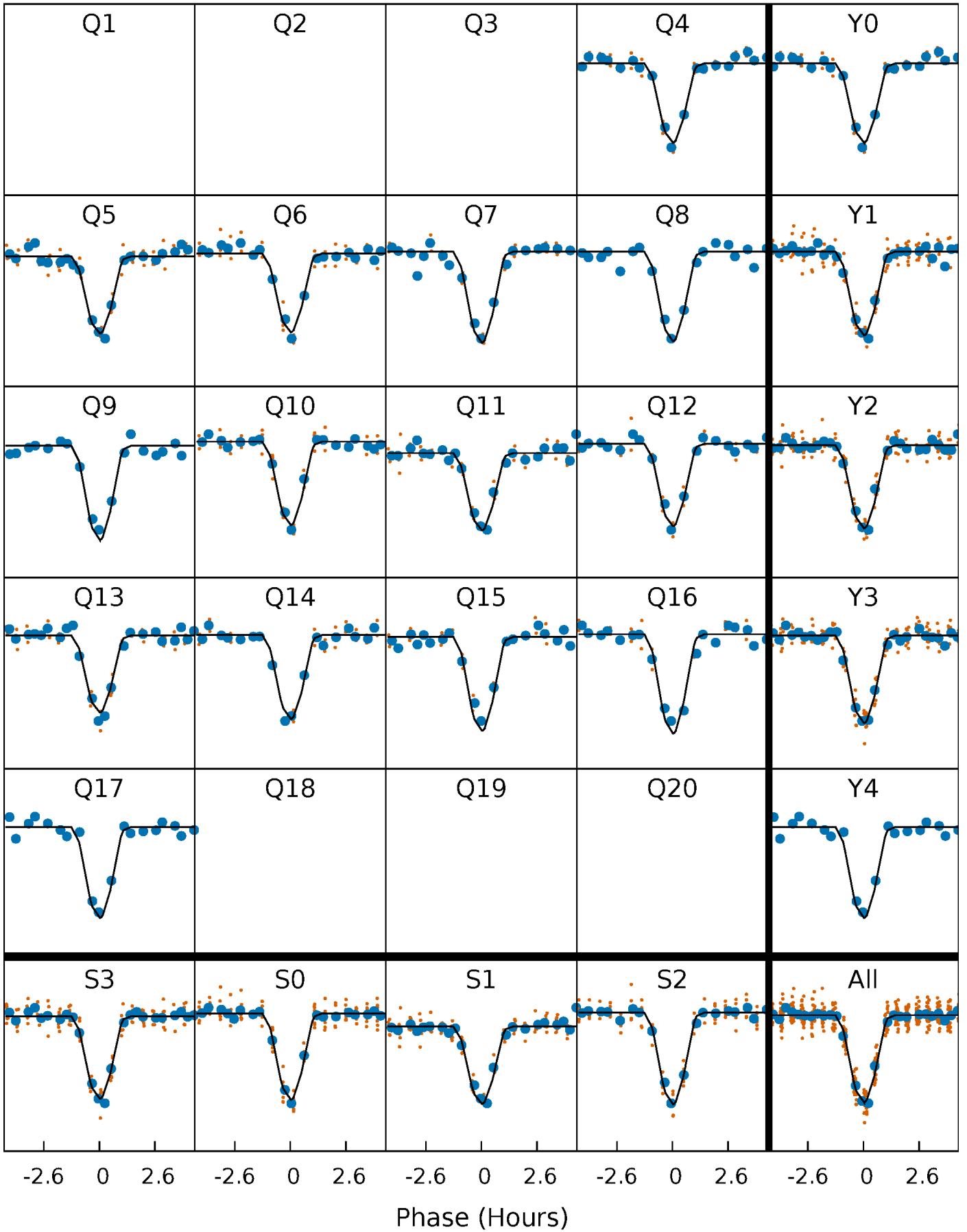
TCE 006611330-01 P= 35.145802 Days  $T_0=136.493312$  (BKJD)





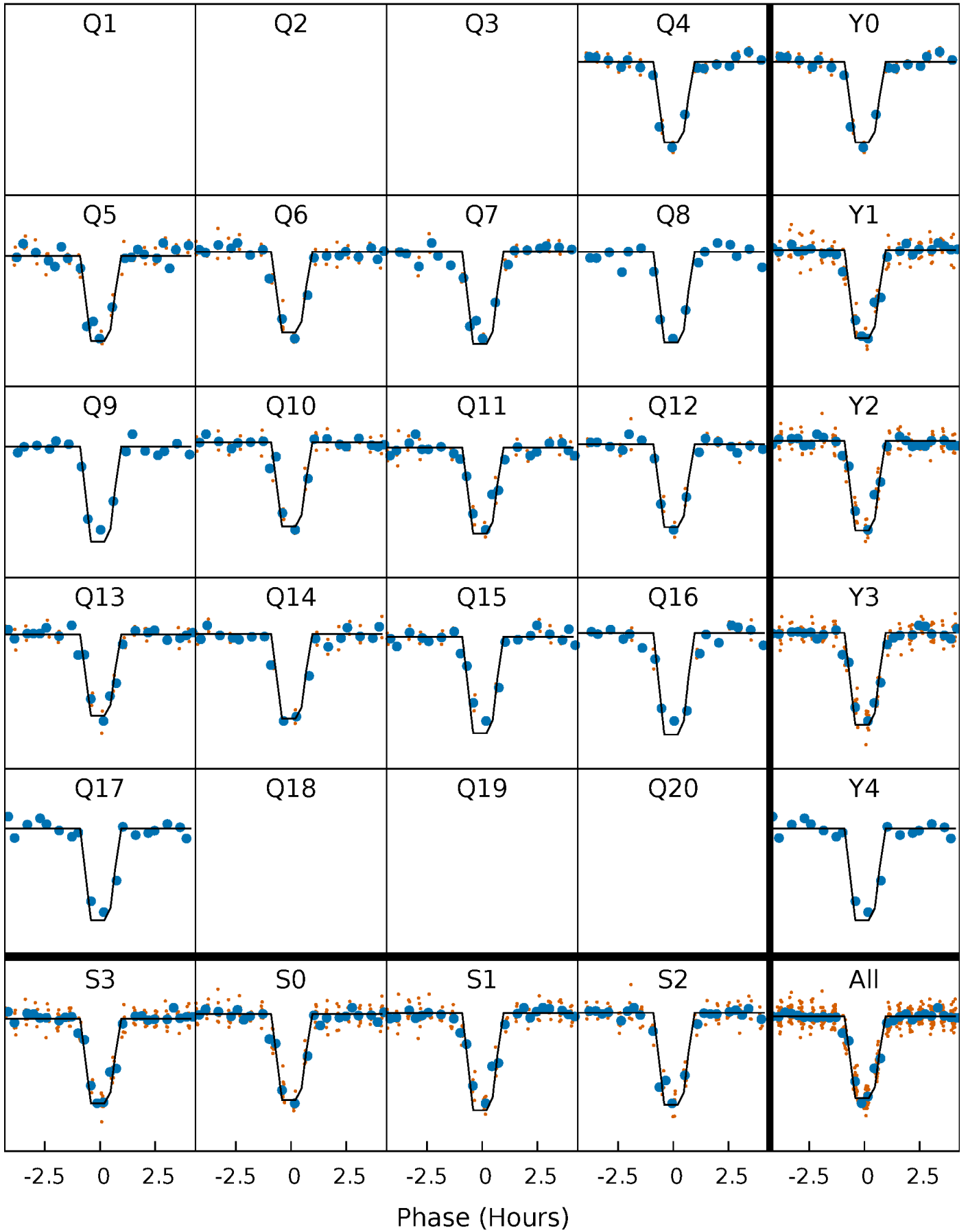
# DV Quarter-Phased Transit Curves

TCE 006611330-01 P= 35.145802 Days  $T_0=136.493312$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

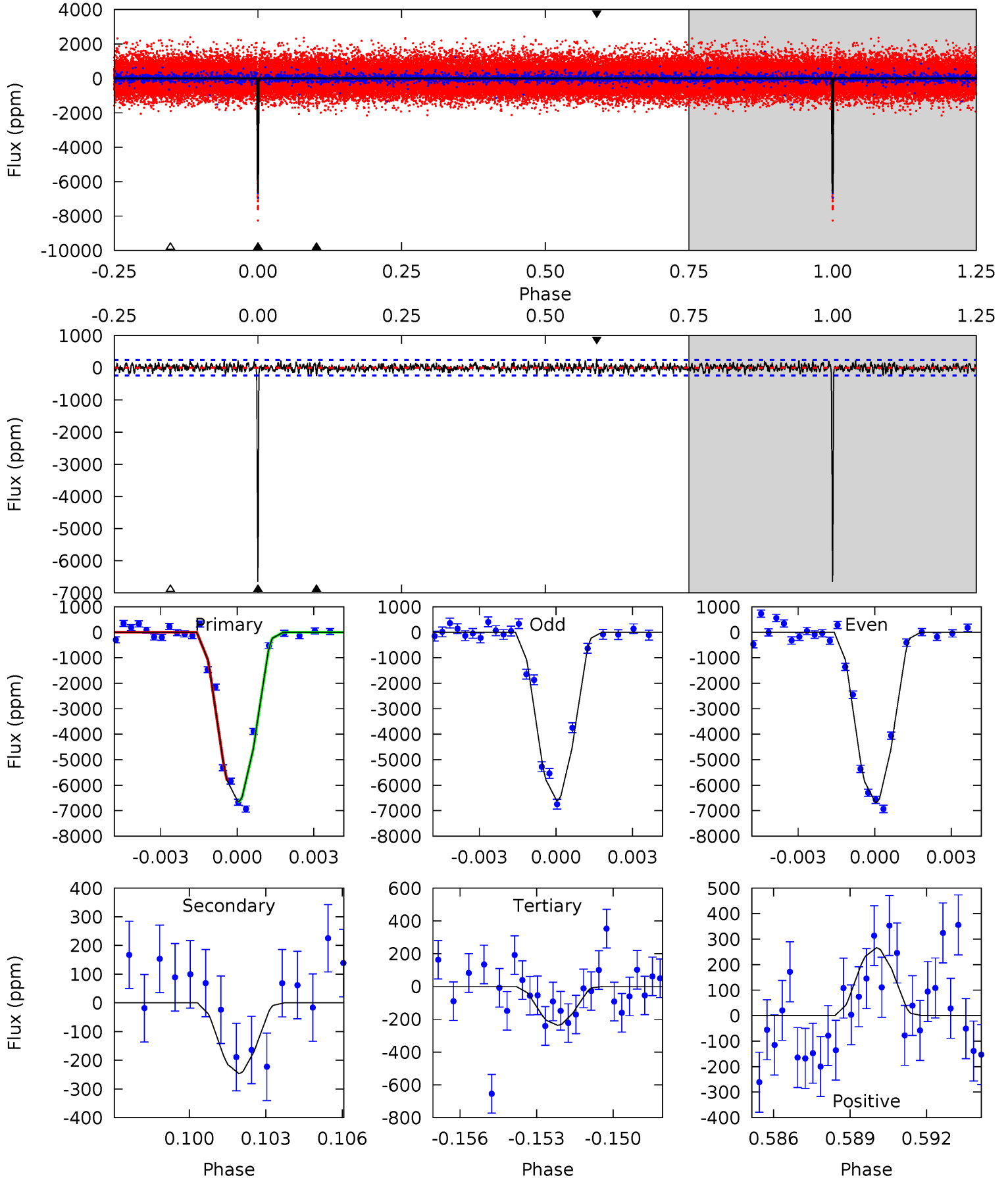
TCE 006611330-01 P= 35.145662 Days  $T_0=136.496497$  (BKJD)



# DV Model-Shift Uniqueness Test

006611330-01, P = 35.145802 Days, E = 136.493312 Days

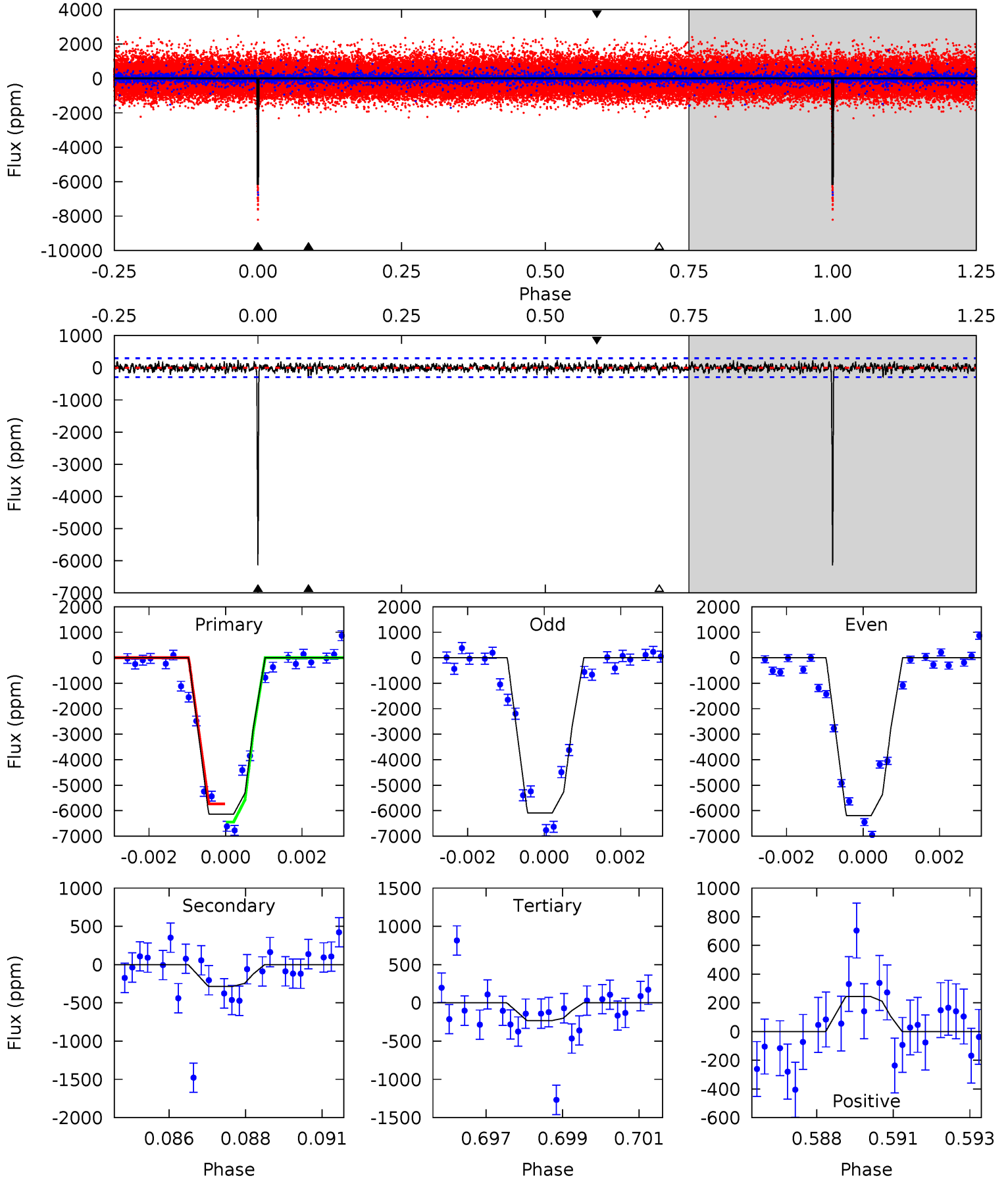
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.3	5.38	5.17	5.81	5.26	2.97	1.56	140.2	139.5	0.20	-0.43	0.94	1.01	0.04	9.04



# Alt Model-Shift Uniqueness Test

006611330-01, P = 35.145662 Days, E = 136.496497 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
111.4	5.15	4.21	4.43	5.31	3.06	1.23	107.2	106.9	0.94	0.72	1.02	1.03	0.04	6.48



### Stellar Parameters For KIC 006611330

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5437^{+204}_{-185}$	$4.554^{+0.059}_{-0.110}$	$-0.300^{+0.300}_{-0.300}$	$0.783^{+0.143}_{-0.077}$	$0.801^{+0.104}_{-0.070}$	$2.352^{+0.605}_{-0.818}$
	+4%/-3%	+1%/-2%	+100%/-100%	+18%/-10%	+13%/-9%	+26%/-35%
Source	KIC0	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 006611330-01 / KOI 1691.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-246 \pm 46$	$9.71^{+2.71}_{-2.46}$	$677^{+35}_{-33}$	$2782^{+243}_{-184}$	$56^{+44}_{-23}$
Alt.	$-284 \pm 55$	$7.28^{+2.44}_{-2.63}$	$680^{+36}_{-33}$	$3078^{+458}_{-264}$	$112^{+167}_{-52}$

$T_{max}$  = Theoretical Maximum Planetary Temperature

$T_{obs}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{obs}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$

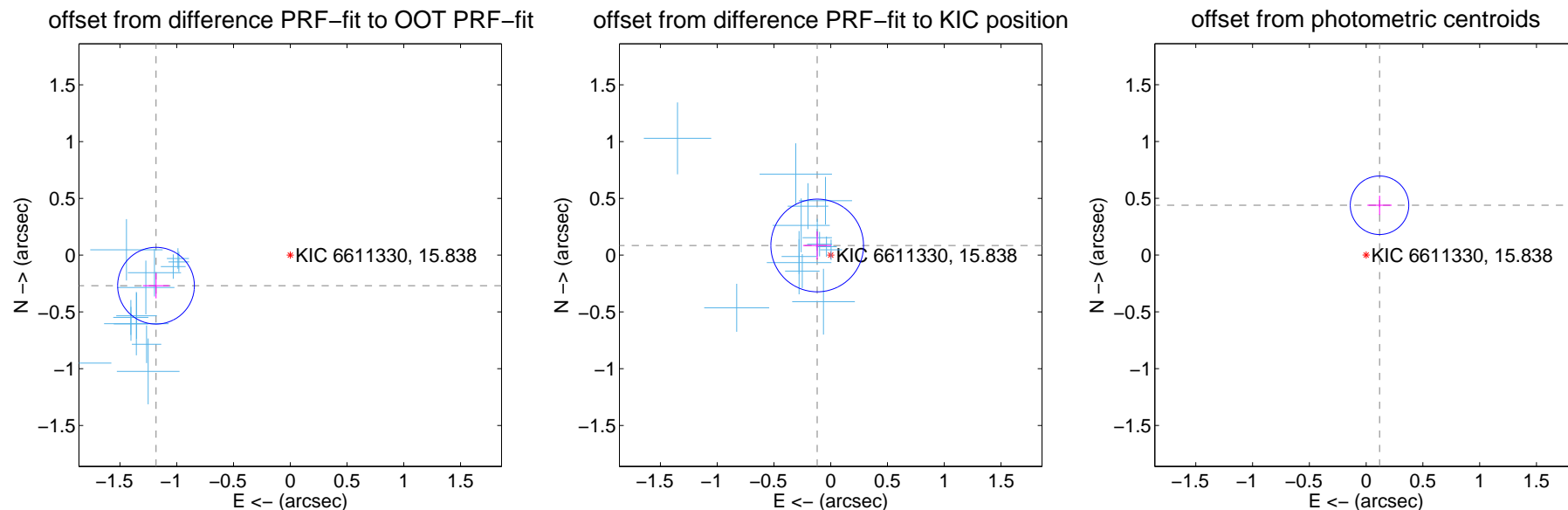
## DV Centroid Data

Supplemental centroid analysis for 006611330-01. Kepler magnitude: 15.84. Transit SNR 86.37

There are 14 quarters with good PRF difference image offsets

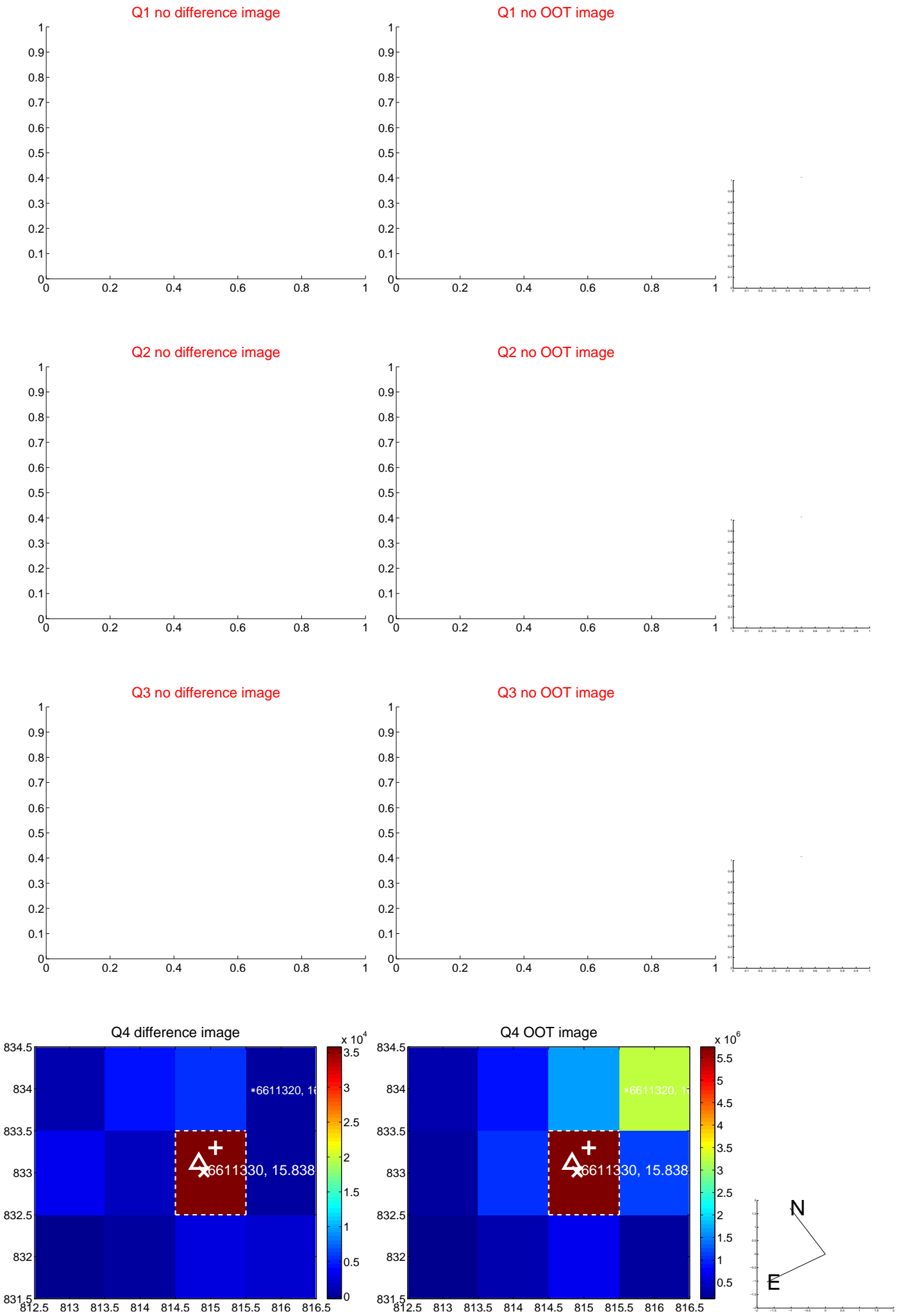
The direct PRF centroid is offset from the target star catalog position by about 1.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>1.213 \pm 0.113</math></b>	<b>10.77</b>	$1.183 \pm 0.115$	$-0.269 \pm 0.112$
PRF-fit source offset from KIC position	$0.147 \pm 0.136$	1.08	$0.119 \pm 0.124$	$0.085 \pm 0.123$
photometric centroid source offset	<b><math>0.45 \pm 0.09</math></b>	<b>5.29</b>	$-0.12 \pm 0.11$	$0.44 \pm 0.08$

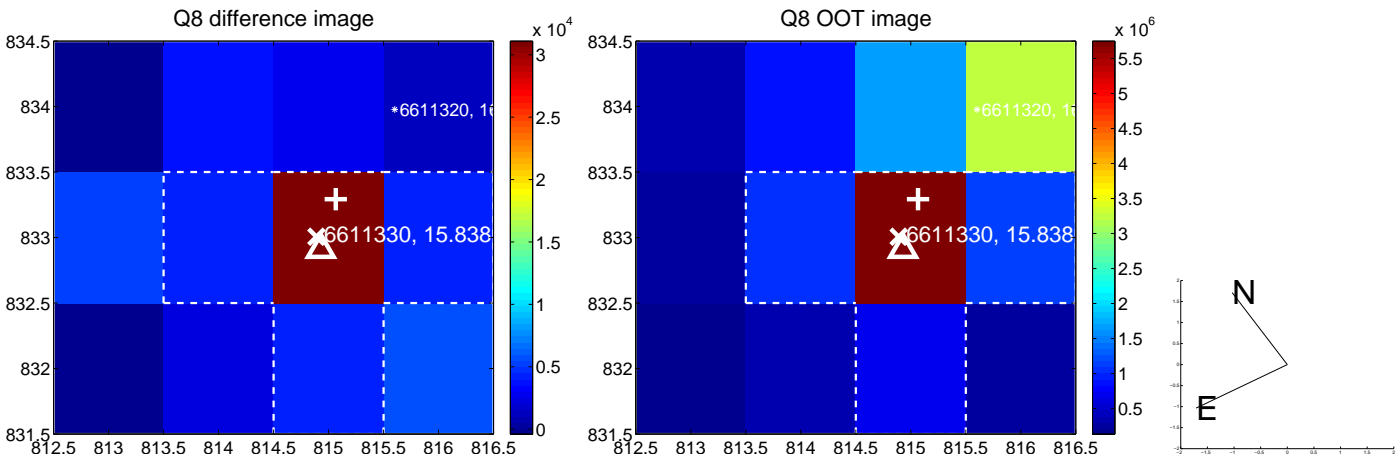
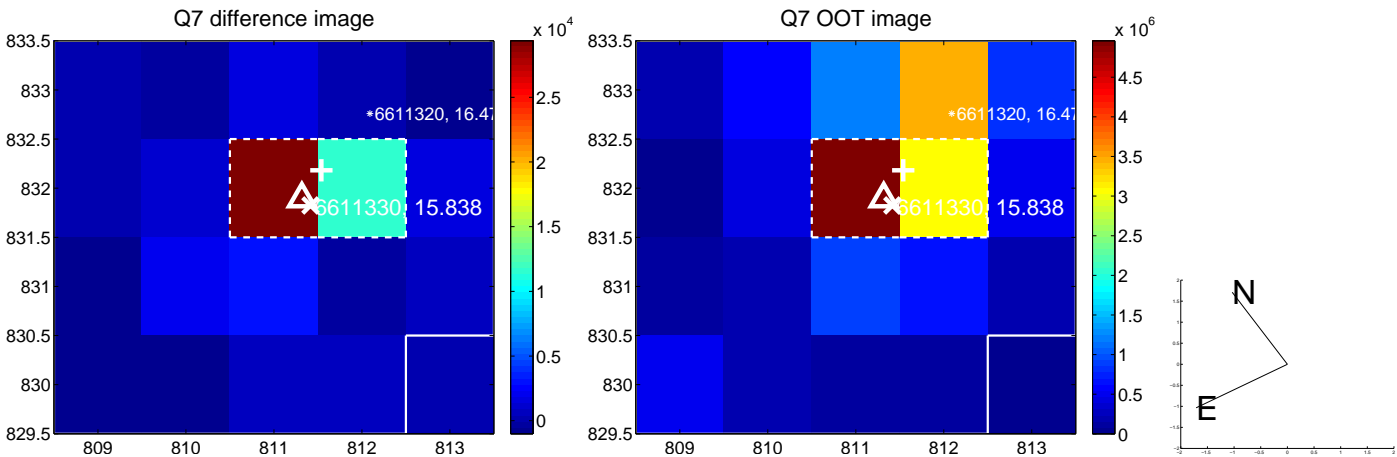
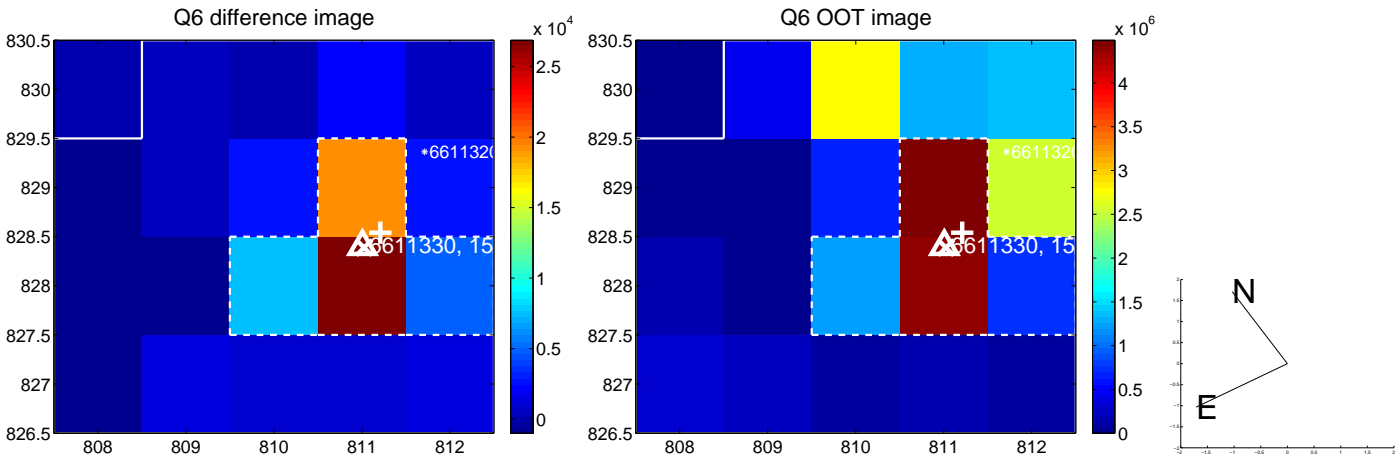
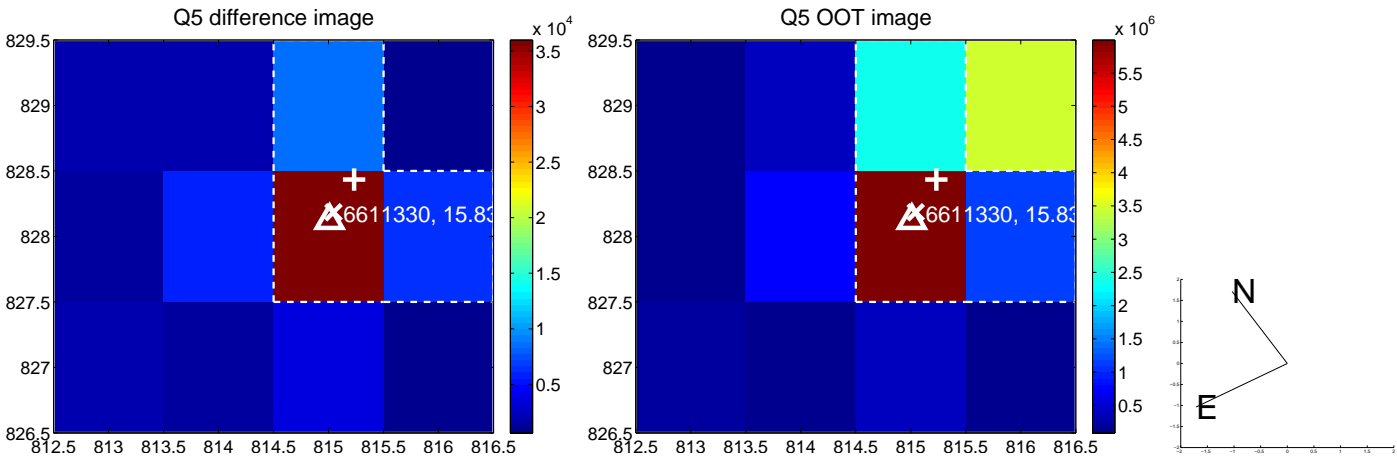


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

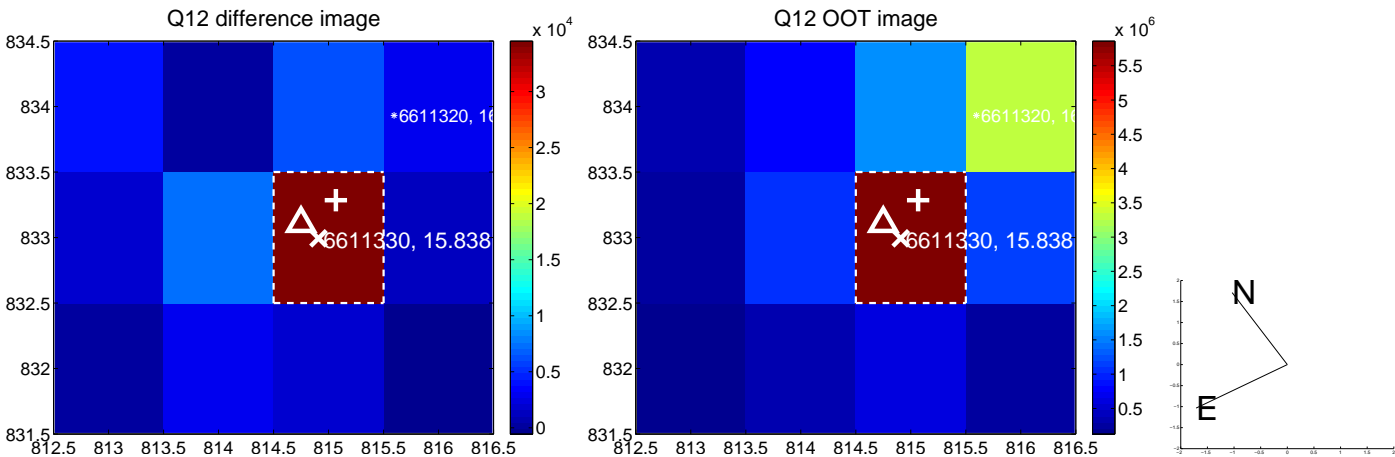
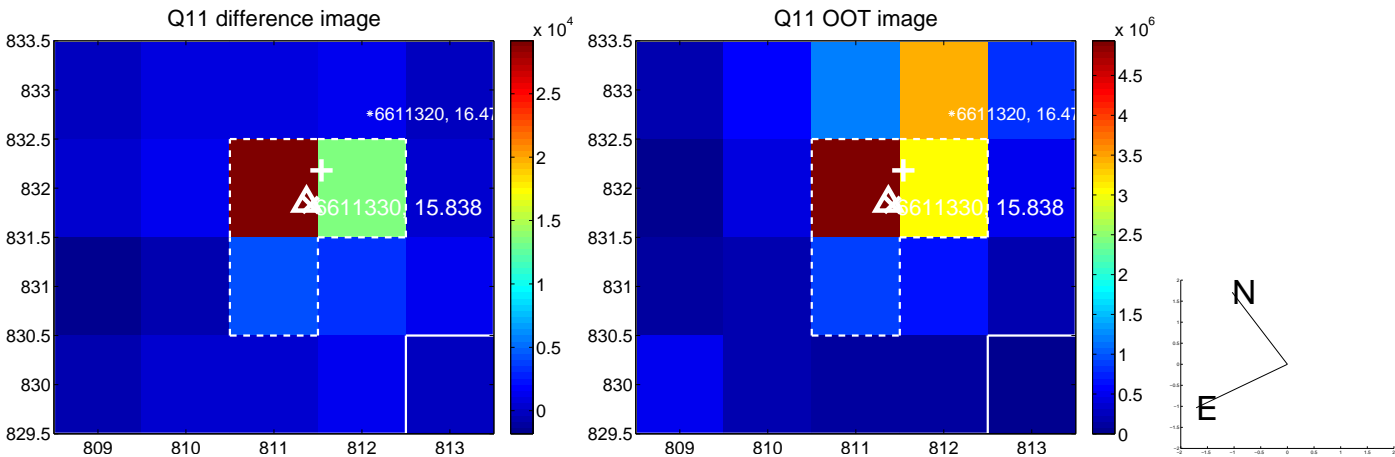
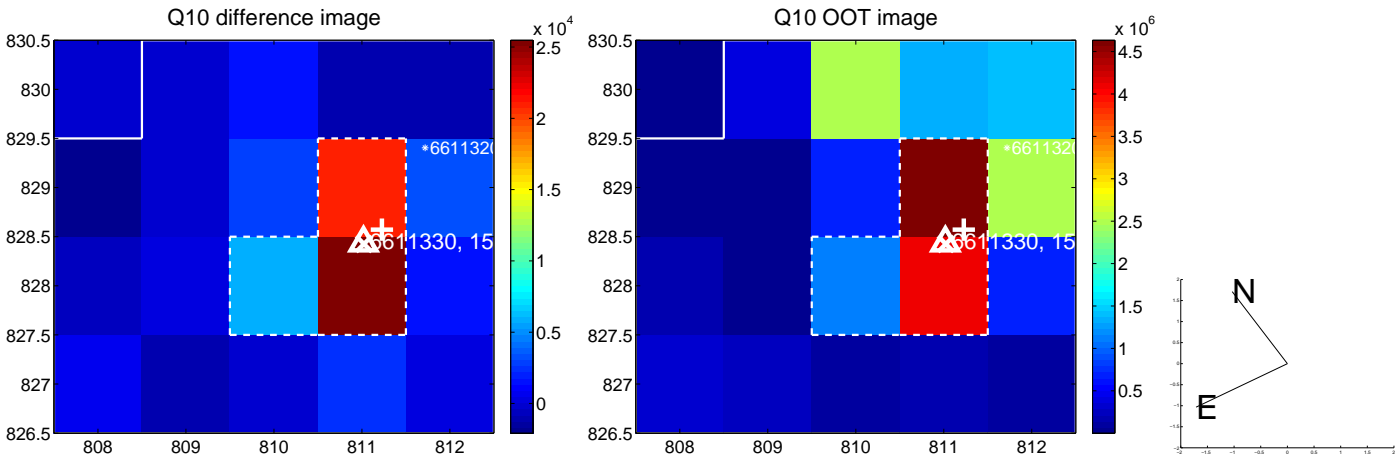
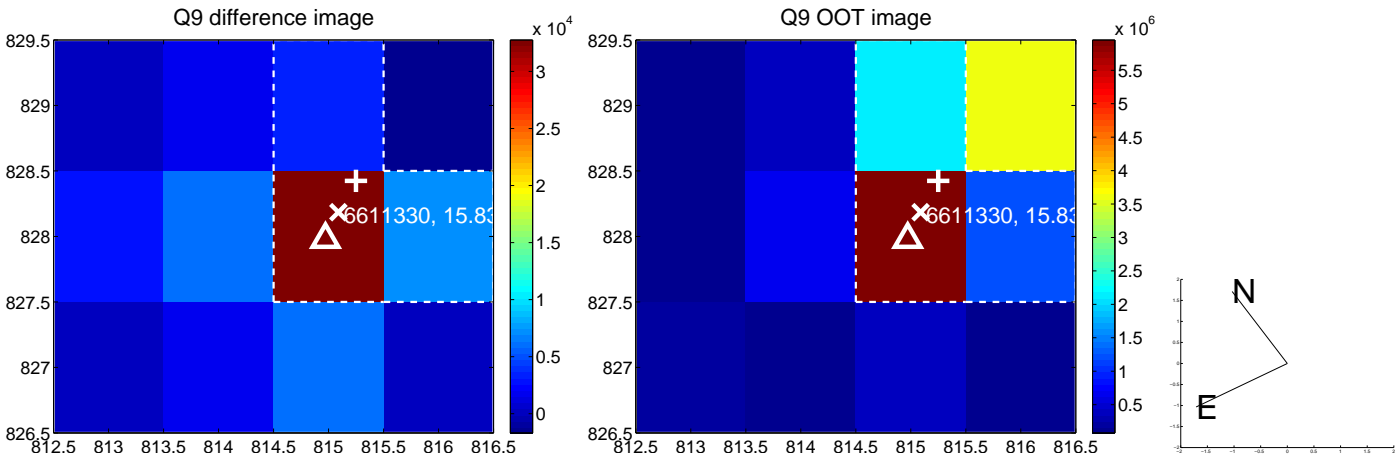


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

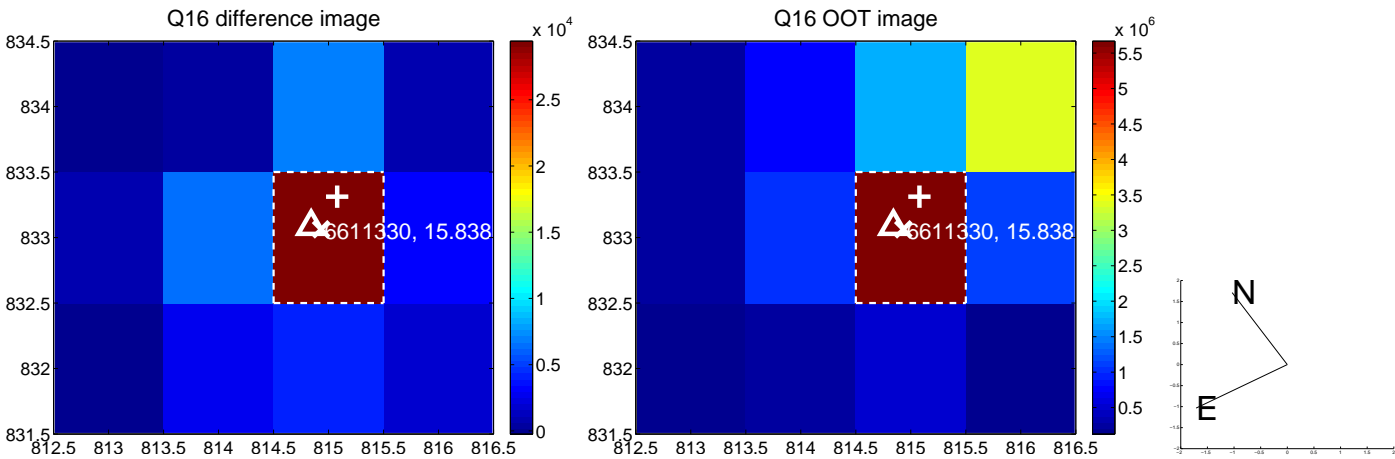
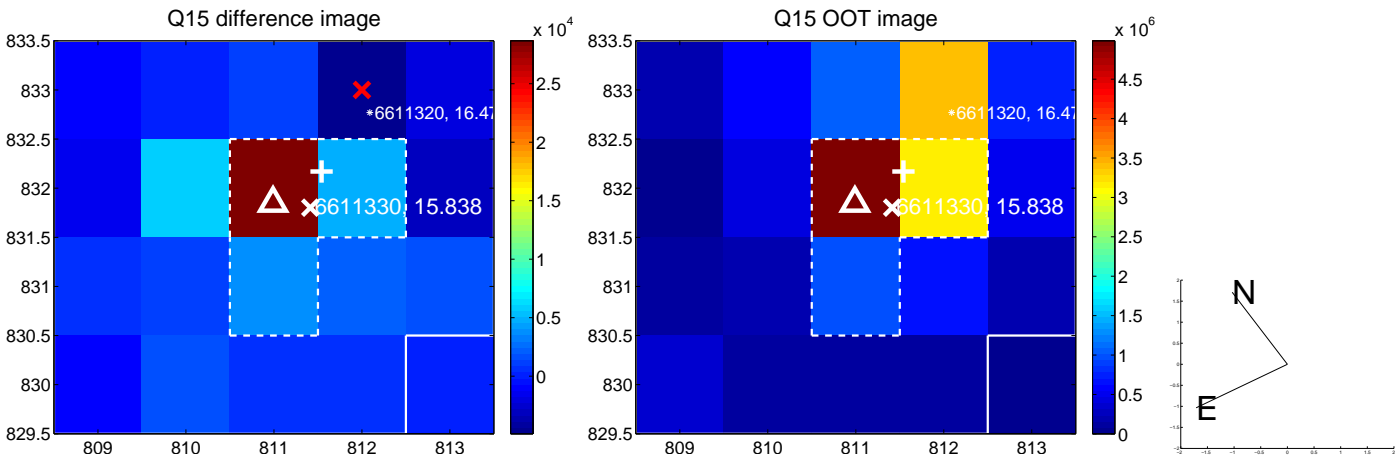
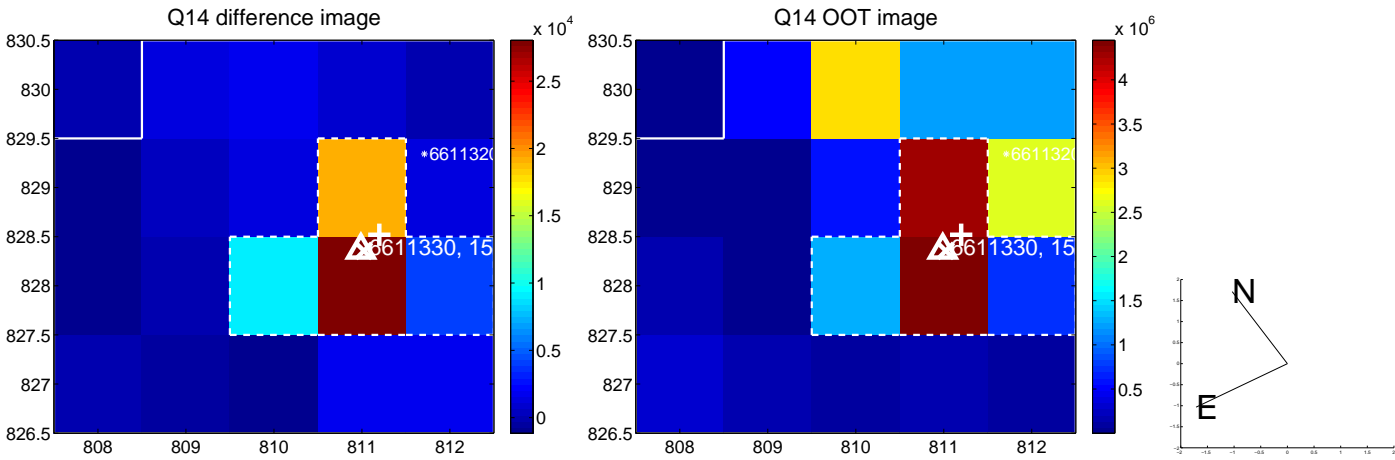
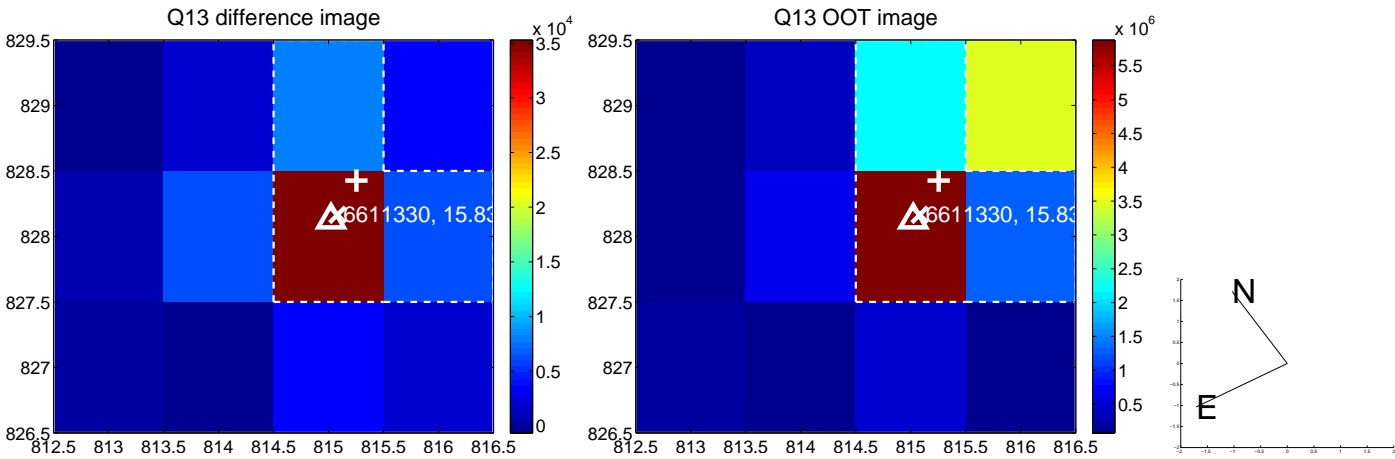




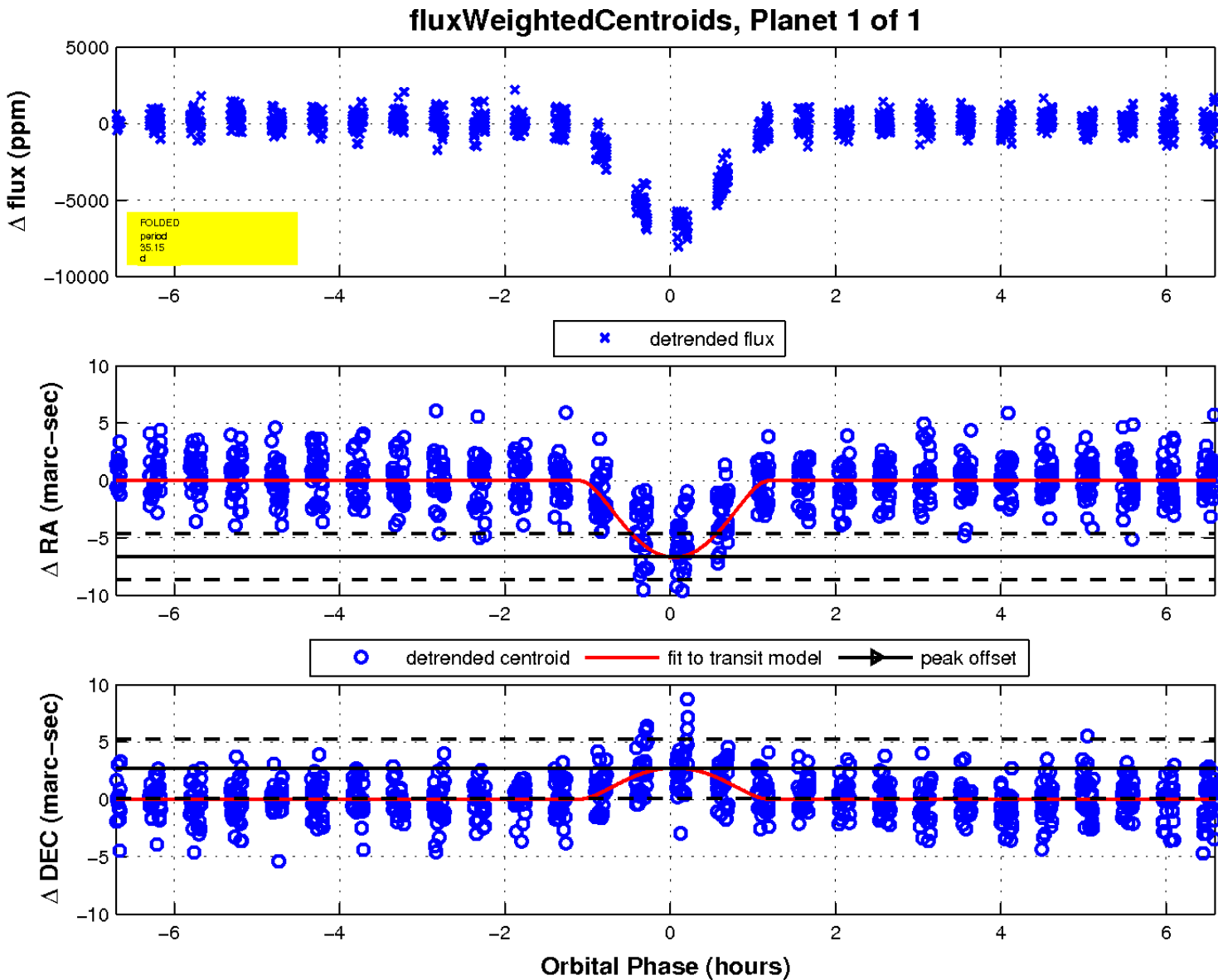
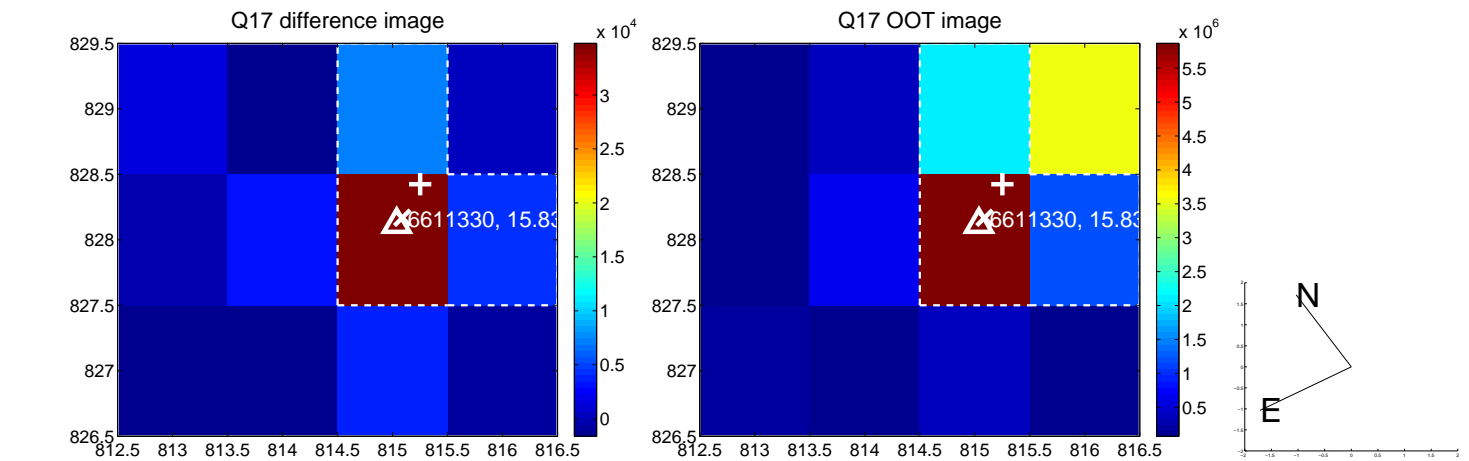
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

