

# KIC 008326342

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008326342-01	OBS	2680.01	14.407933	142.026768	3031.0	2.461	100.0	100.0	0.73	5440	6.89	35.91

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008326342-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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

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

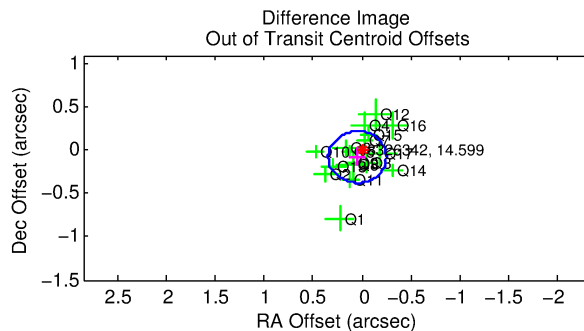
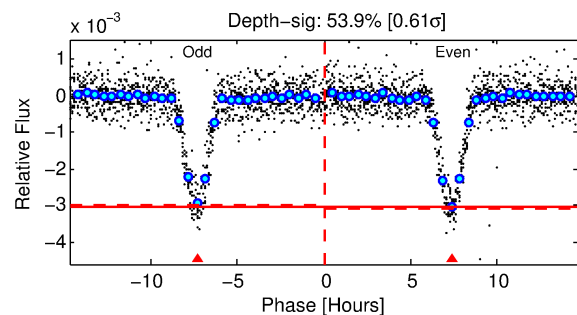
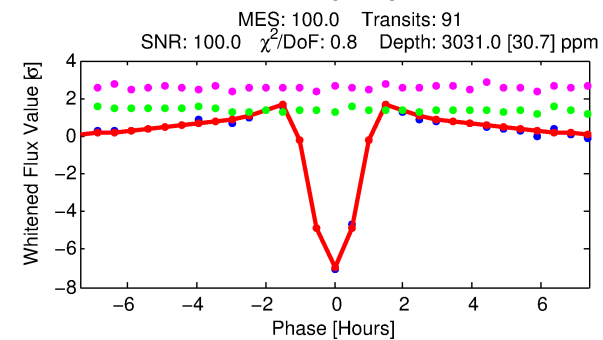
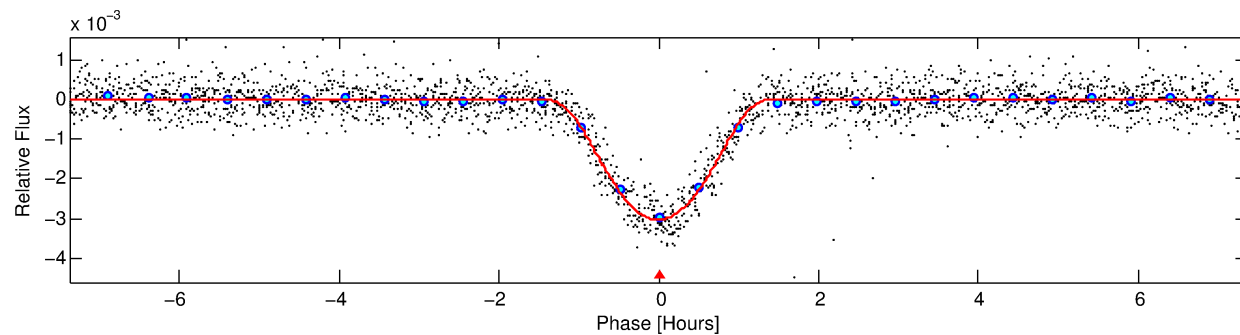
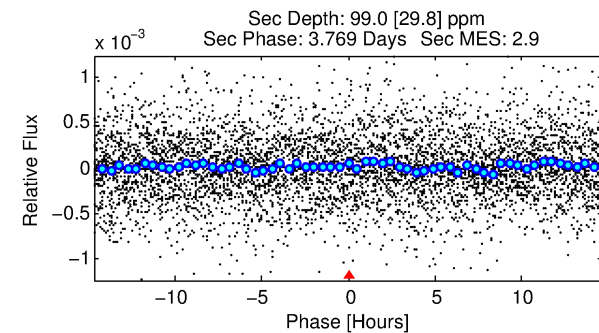
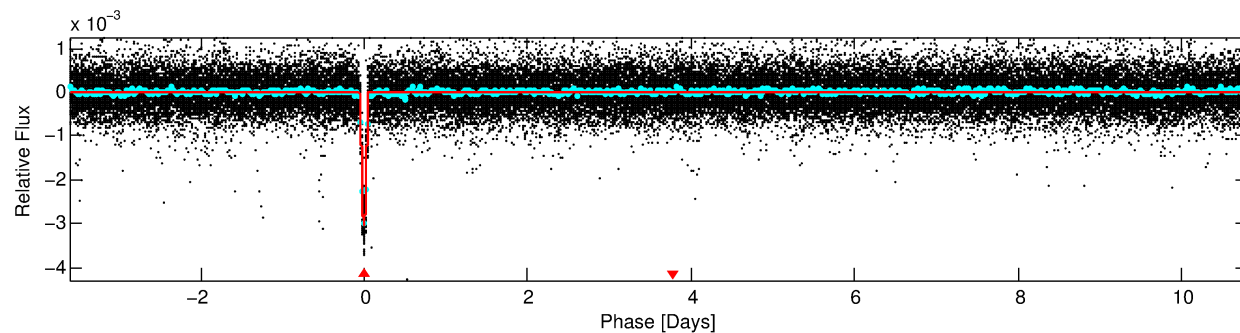
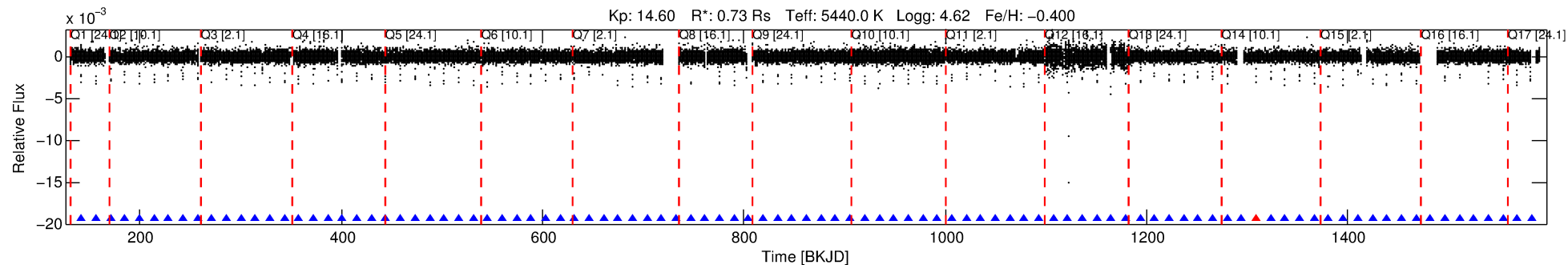
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008326342-01

No Significant Match Found

# DV One-Page Summary

KIC: 8326342 Candidate: 1 of 1 Period: 14.408 d  
KOI: K02680.01 Corr: 0.977



## DV Fit Results:

Period = 14.40793 [0.00001] d  
Epoch = 142.0268 [0.0005] BKJD  
Rp/R\* = 0.0867 [0.0271]  
a/R\* = 20.52 [1.56]  
b = 0.99 [0.04]  
Seff = 35.91 [8.65]  
Teq = 624 [38] K  
Rp = 6.89 [2.49] Re  
a = 0.1076 [0.0160] AU  
Ag = 13.30 [9.63] [1.28σ]  
Teffp = 1843 [324] K [3.74σ]

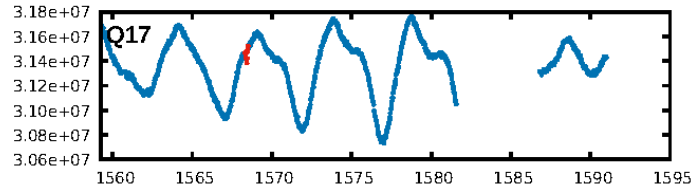
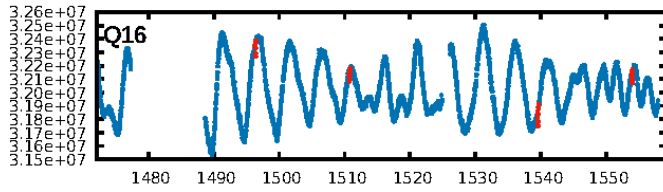
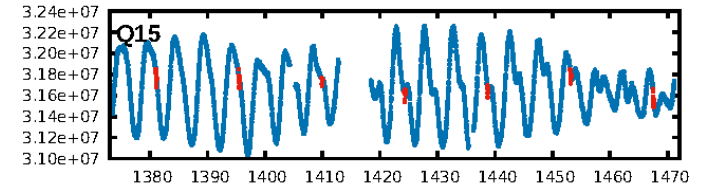
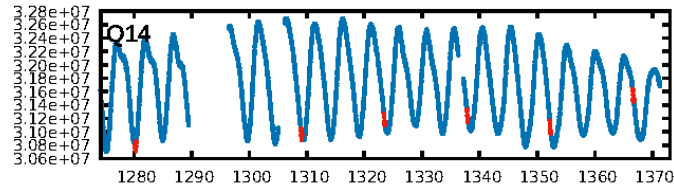
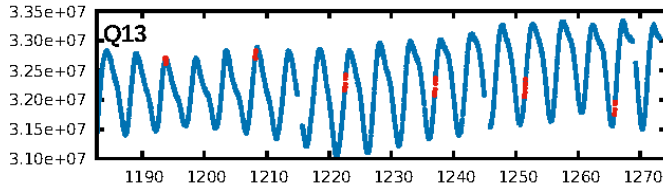
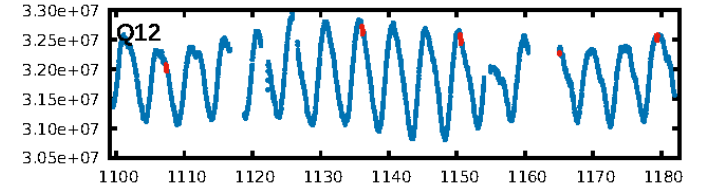
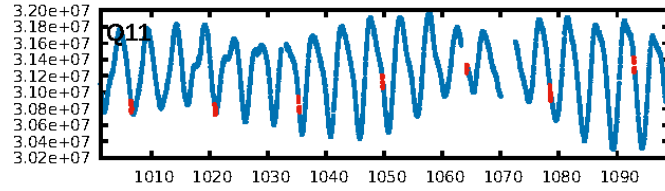
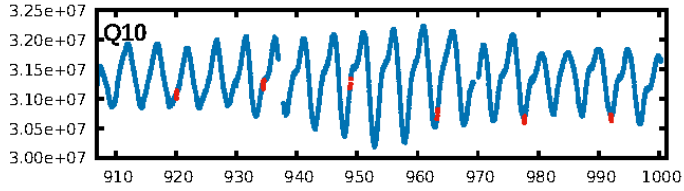
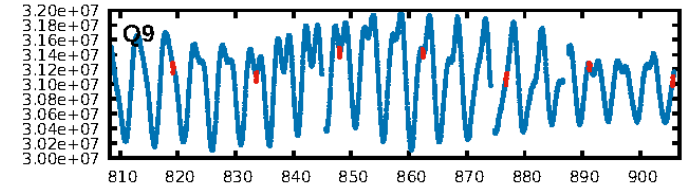
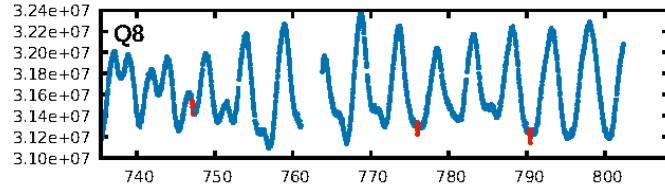
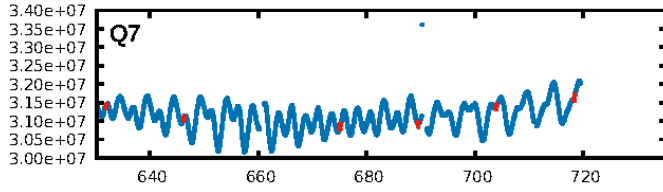
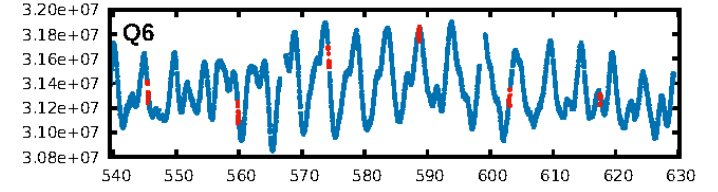
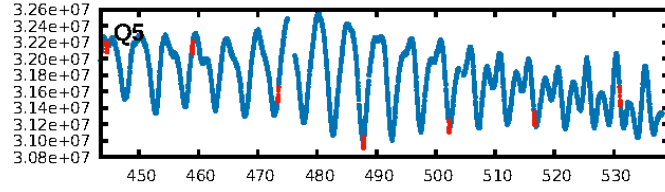
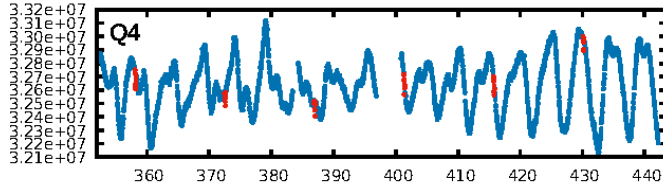
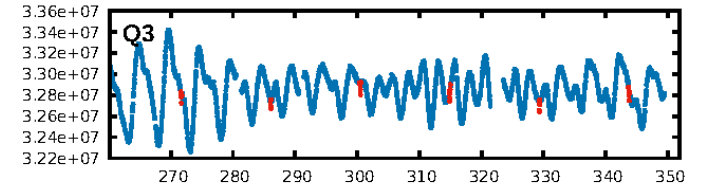
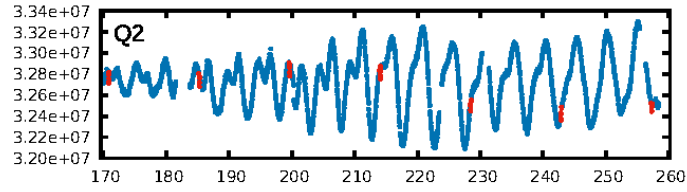
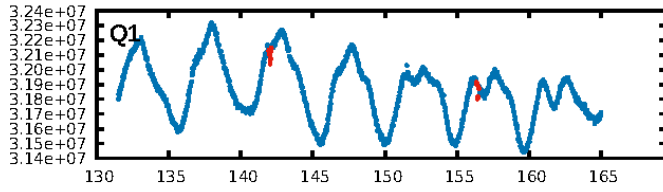
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 98.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [87/88]  
GhostDiagnostic-chr: 1.796  
Centroid-sig: 0.5%  
Centroid-so: 0.186 arcsec [1.85σ]  
OotOffset-rm: 0.092 arcsec [0.93σ]  
KicOffset-rm: 0.070 arcsec [0.73σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

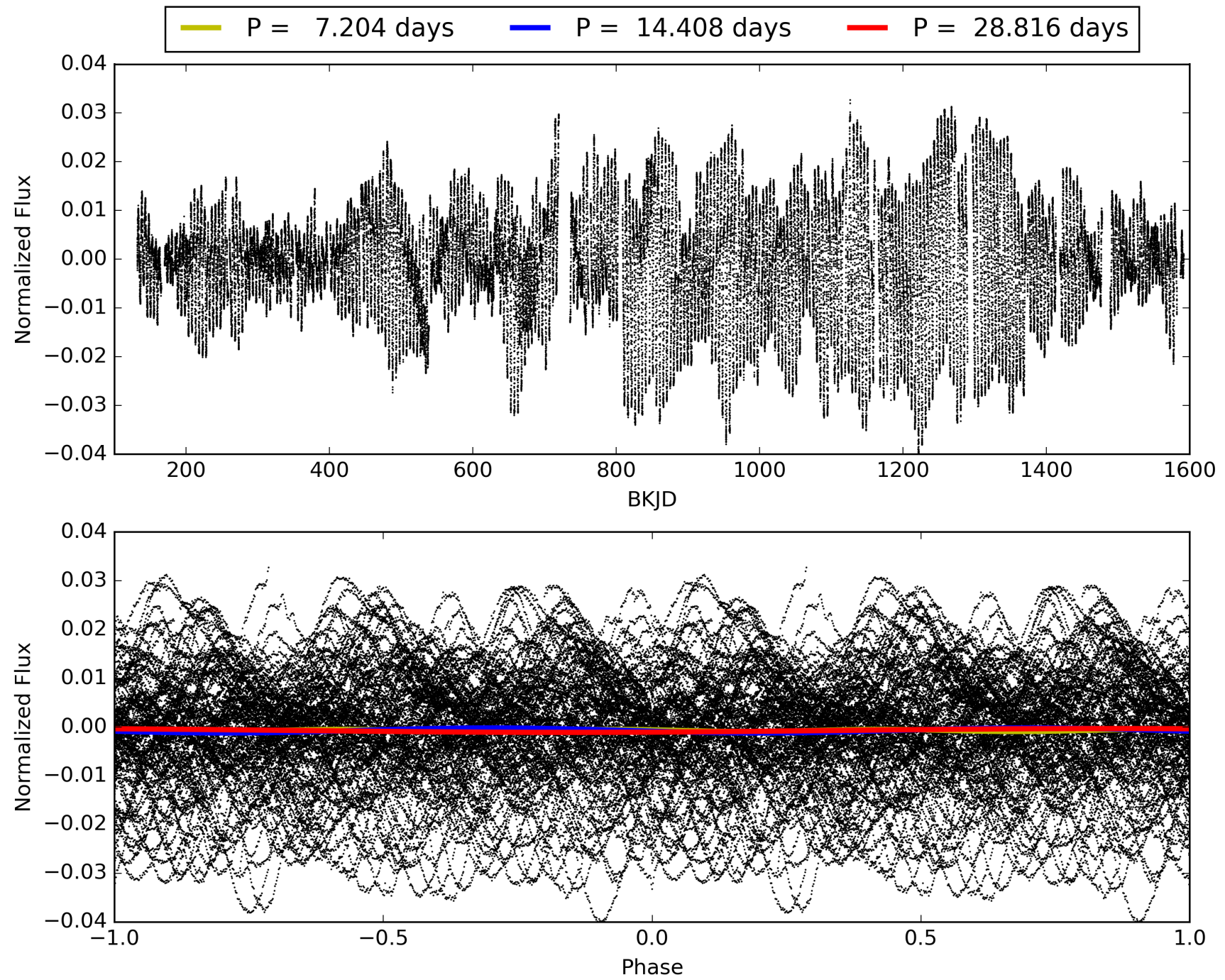
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:10:00 Z

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

# TCE 008326342-01, PDC Light Curves

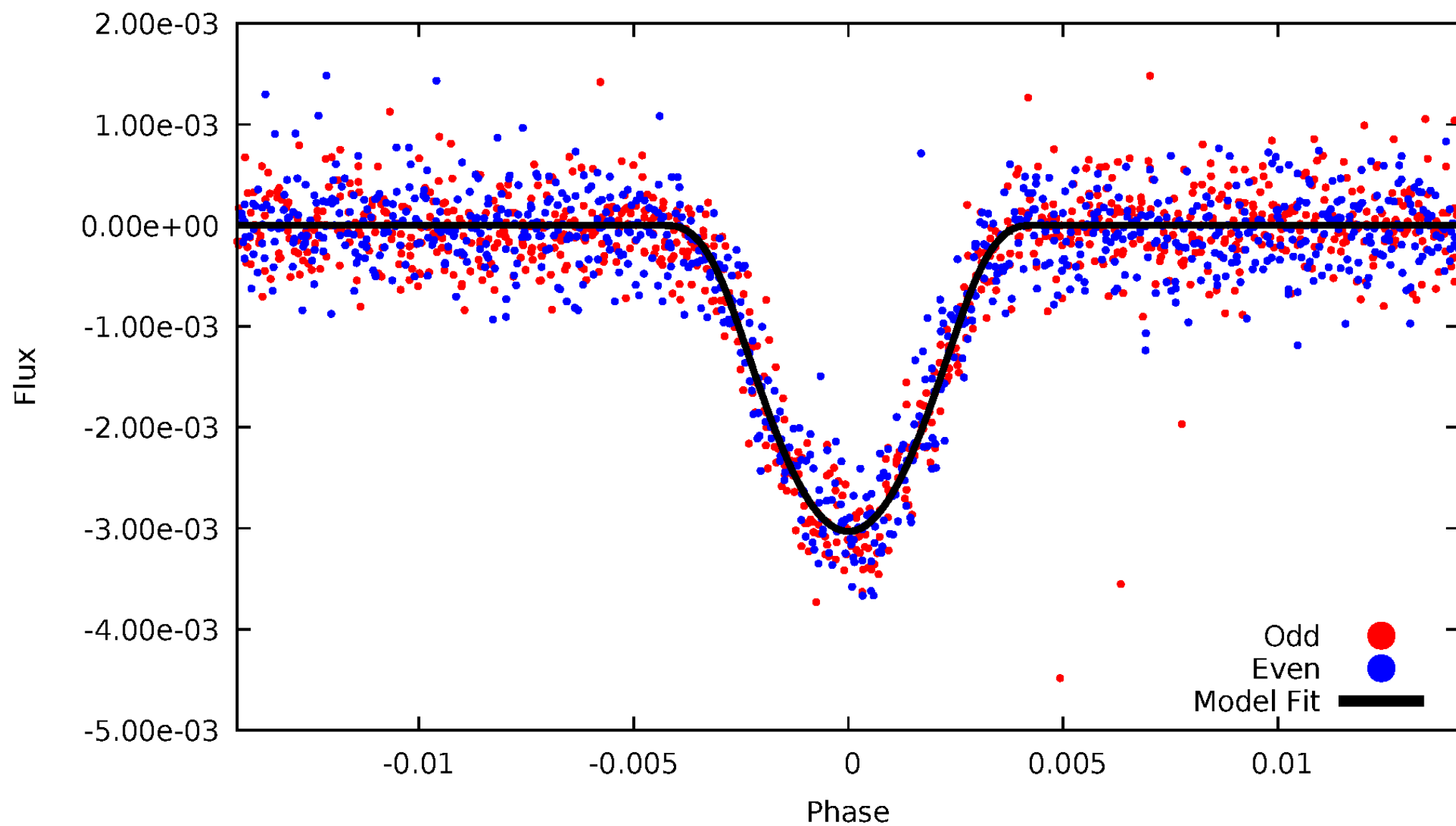


TCE 008326342-01



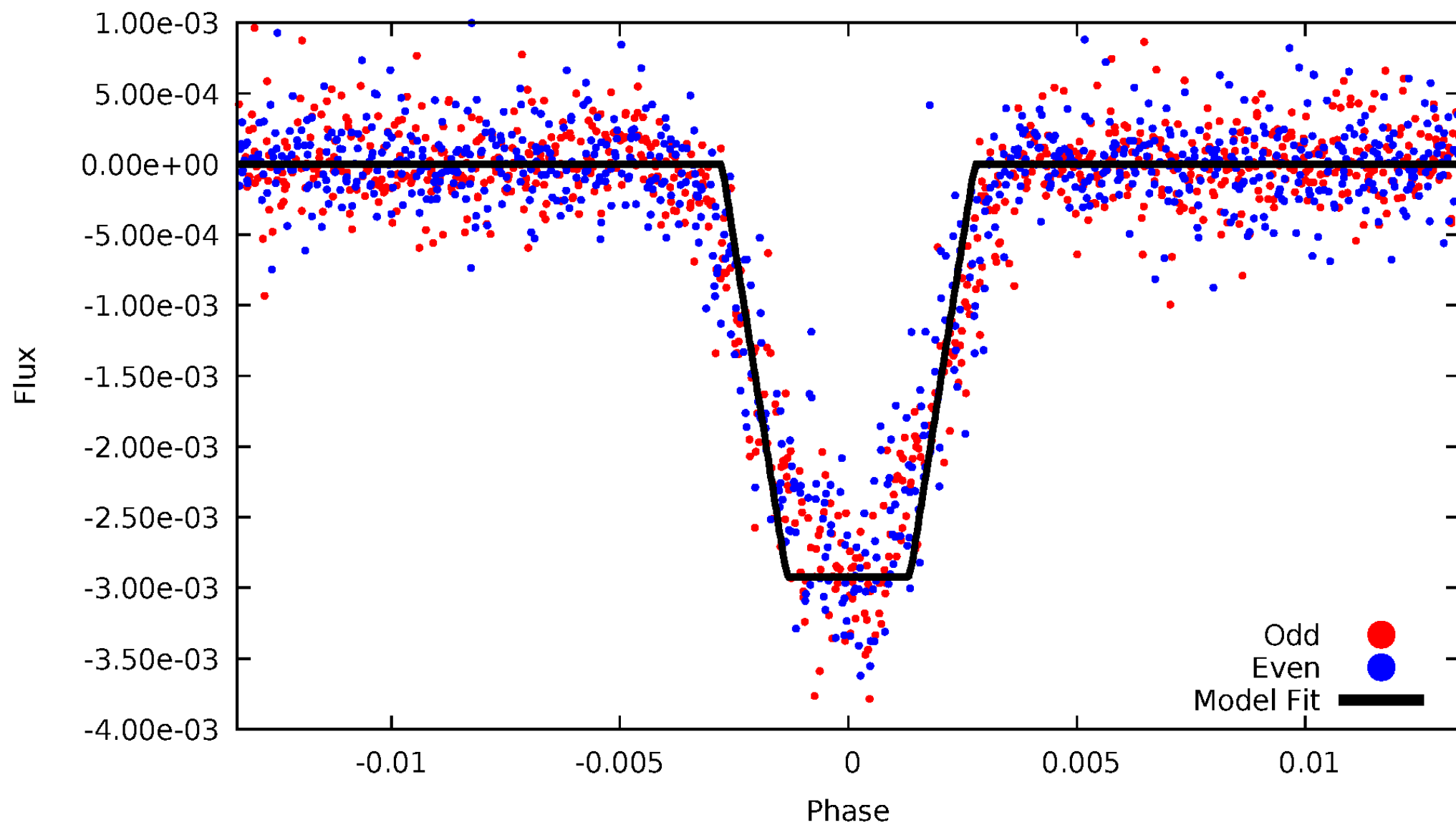
# DV Odd/Even

TCE 008326342-01



# ALT Odd/Even

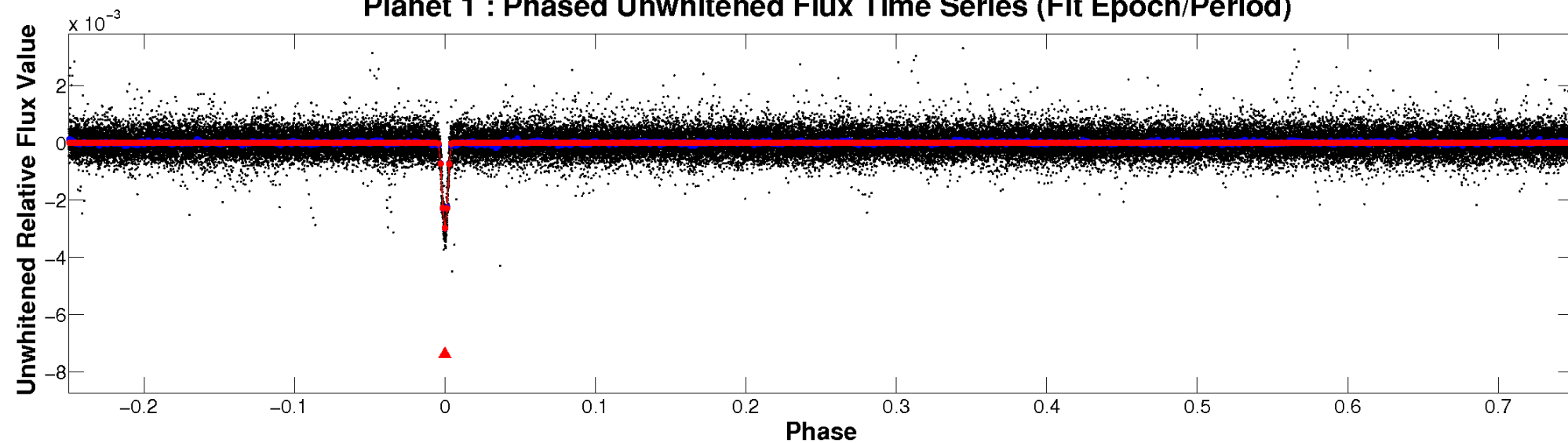
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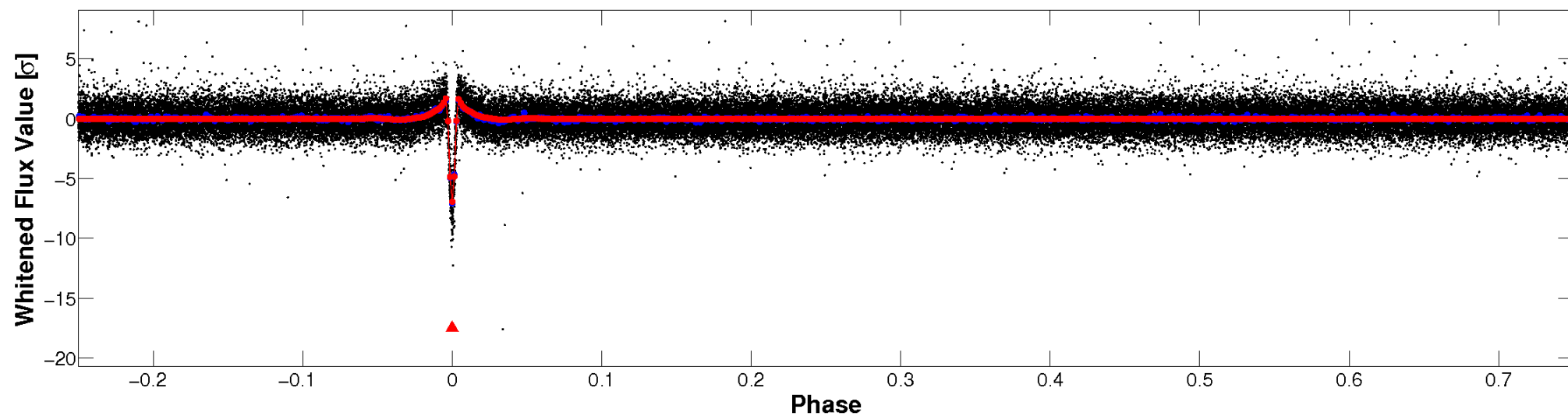


# Non-Whitened Vs. Whitened Light Curve

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

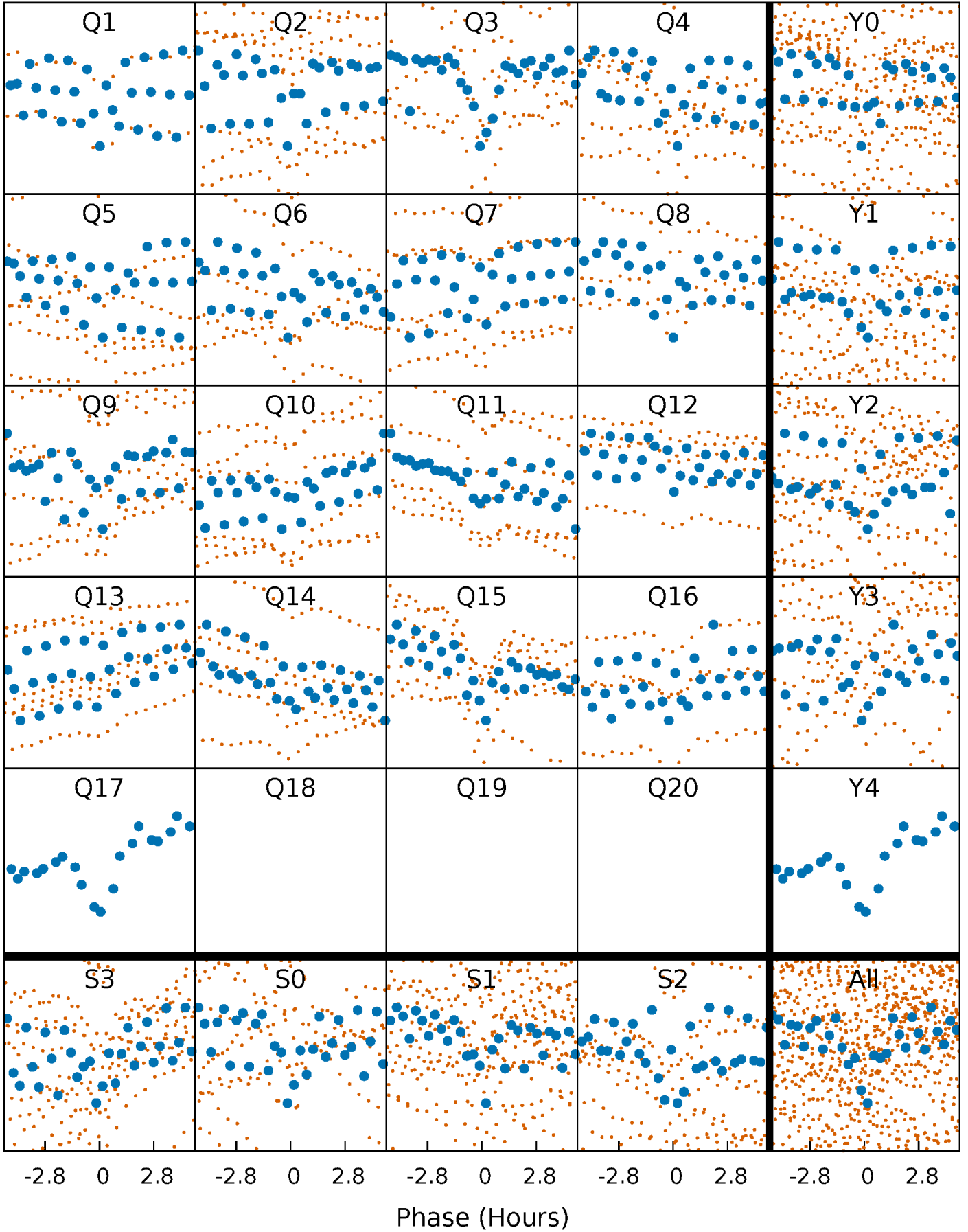


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

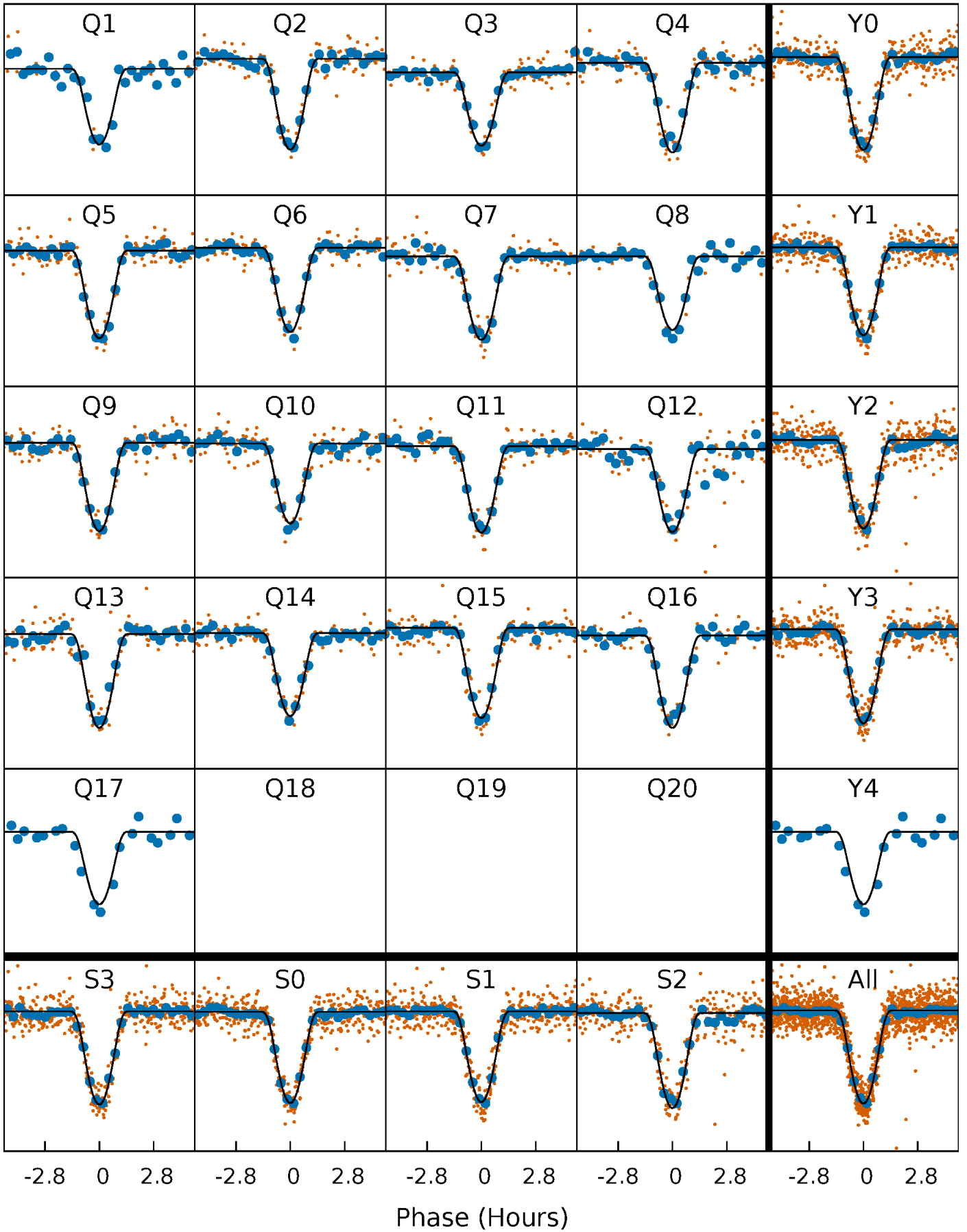
TCE 008326342-01 P= 14.407933 Days  $T_0=142.026768$  (BKJD)





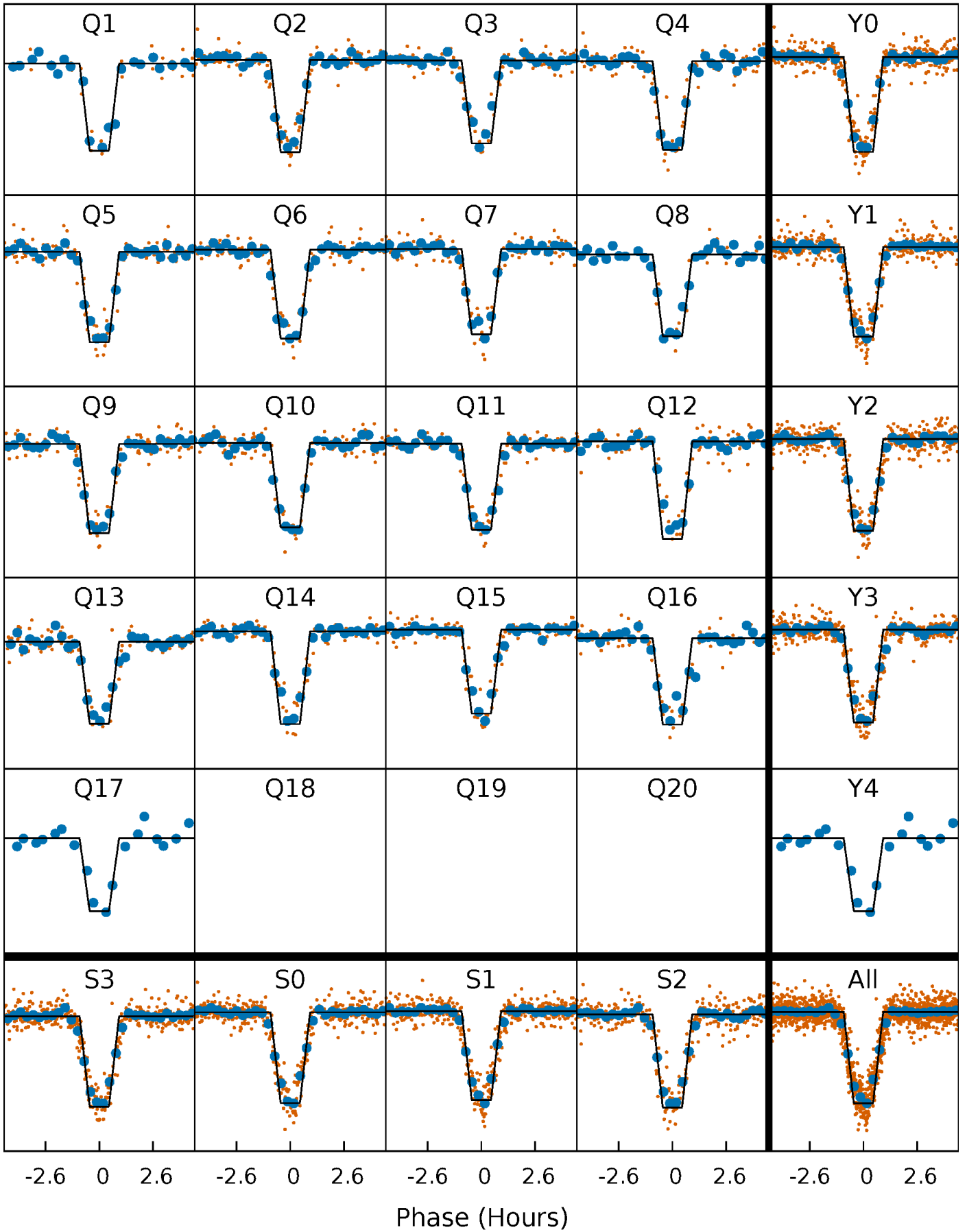
# DV Quarter-Phased Transit Curves

TCE 008326342-01 P= 14.407933 Days  $T_0=142.026768$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

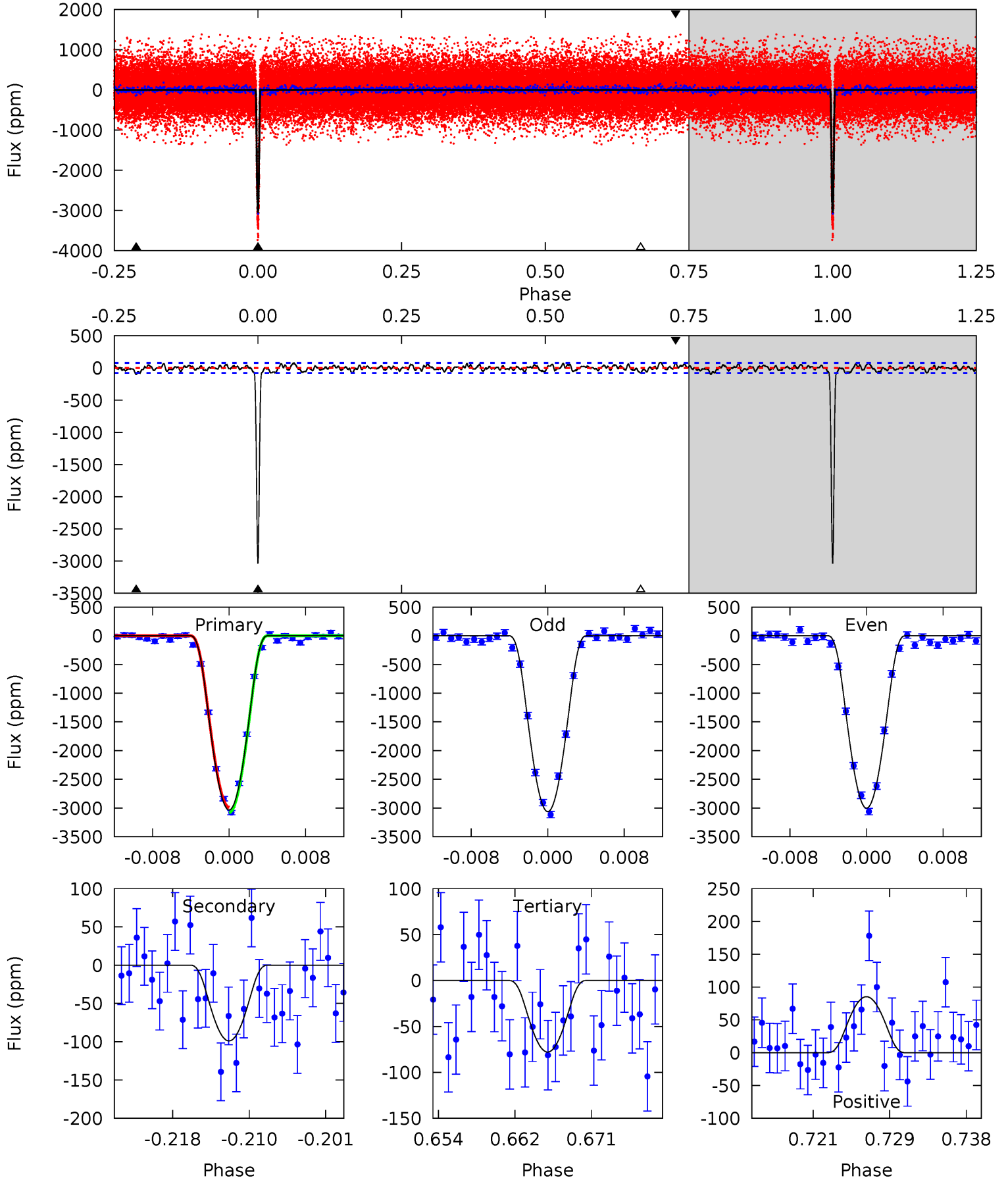
TCE 008326342-01 P= 14.407870 Days  $T_0=142.030086$  (BKJD)



# DV Model-Shift Uniqueness Test

008326342-01, P = 14.407933 Days, E = 127.618835 Days

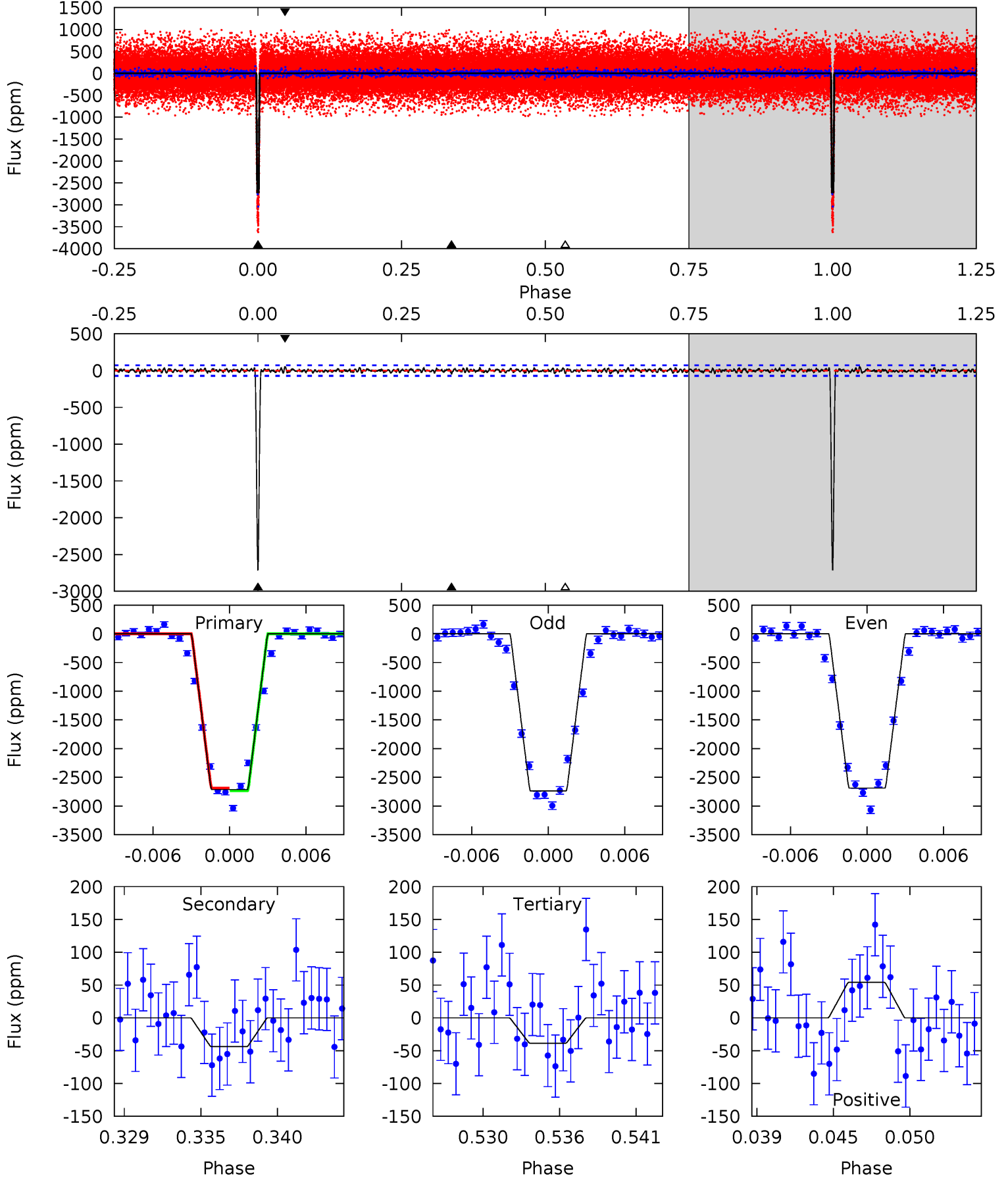
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
199.0	6.49	5.11	5.60	5.06	2.64	1.93	193.9	193.4	1.38	0.89	1.99	0.99	0.03	3.11



# Alt Model-Shift Uniqueness Test

008326342-01, P = 14.407870 Days, E = 127.622216 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
193.3	3.12	2.75	3.86	5.14	2.77	0.98	190.6	189.5	0.37	-0.74	1.80	0.99	0.02	1.71



### Stellar Parameters For KIC 008326342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5440^{+160}_{-160}$	$4.617^{+0.035}_{-0.112}$	$-0.400^{+0.300}_{-0.300}$	$0.728^{+0.132}_{-0.057}$	$0.814^{+0.076}_{-0.093}$	$2.972^{+0.446}_{-1.021}$
	+3%/-3%	+1%/-2%	+75%/-75%	+18%/-8%	+9%/-11%	+15%/-34%
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 008326342-01 / KOI 2680.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-99 \pm 15$	$7.16^{+2.26}_{-2.31}$	$886^{+38}_{-34}$	$2621^{+298}_{-185}$	$12^{+15}_{-5}$
Alt.	$-44 \pm 14$	$4.52^{+2.19}_{-2.11}$	$884^{+38}_{-35}$	$2651^{+546}_{-281}$	$13^{+35}_{-8}$

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

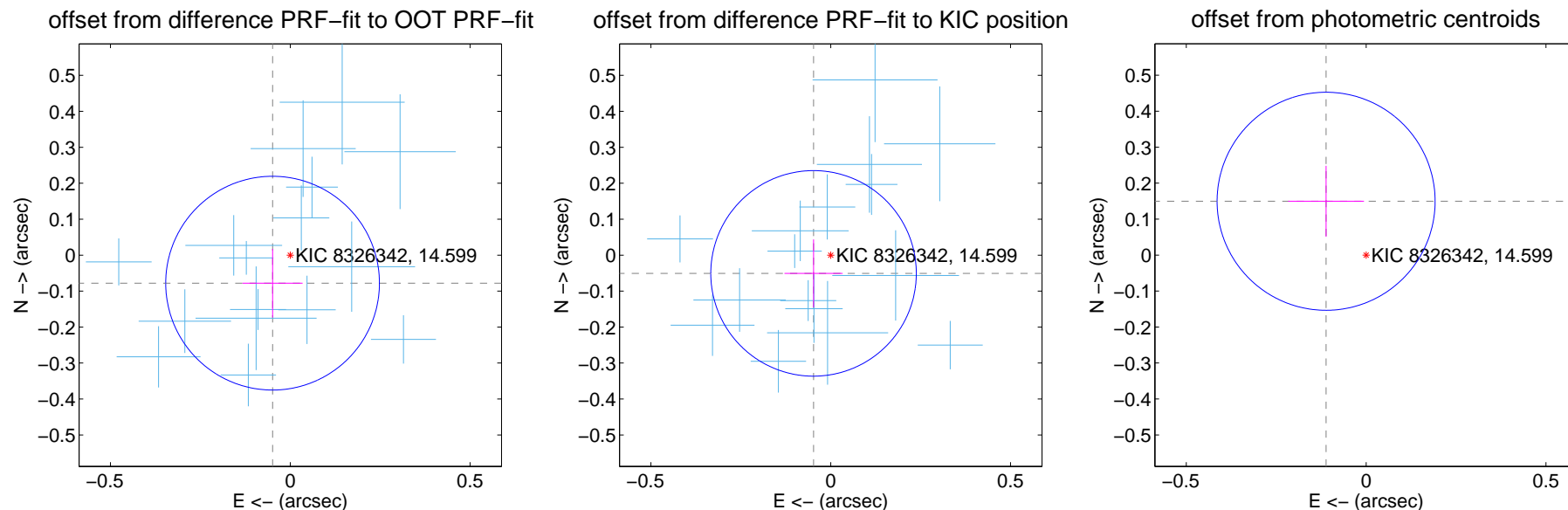
## DV Centroid Data

Supplemental centroid analysis for 008326342-01. Kepler magnitude: 14.60. Transit SNR 100.04

There are 17 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

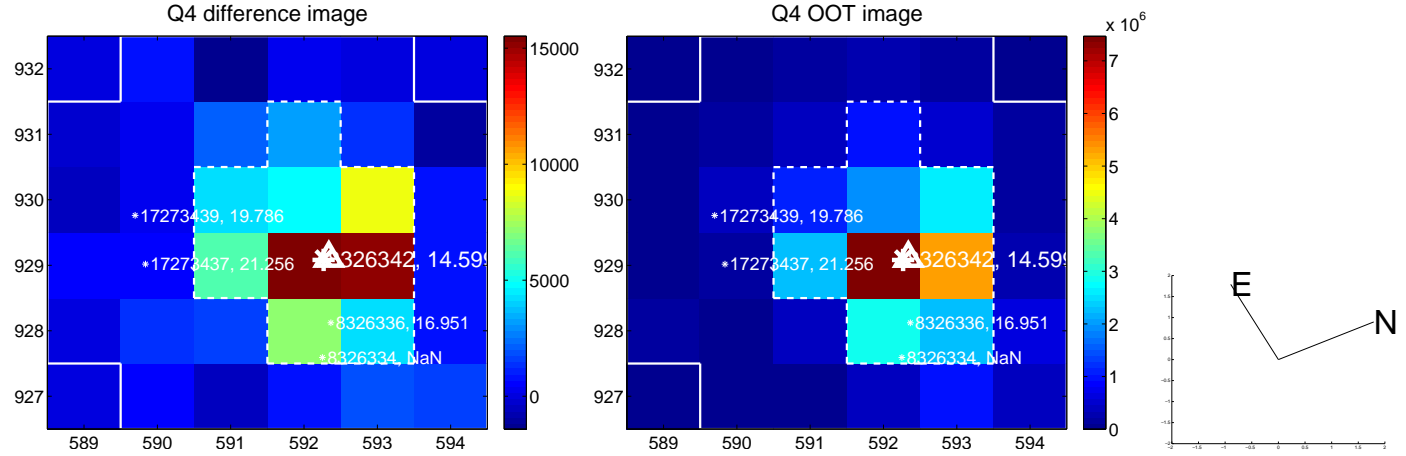
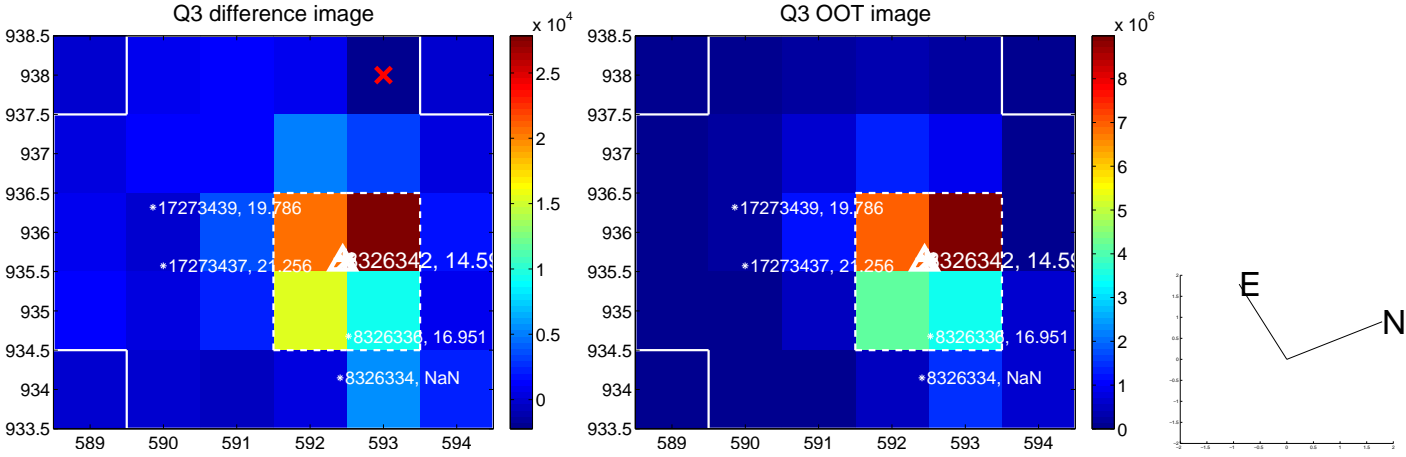
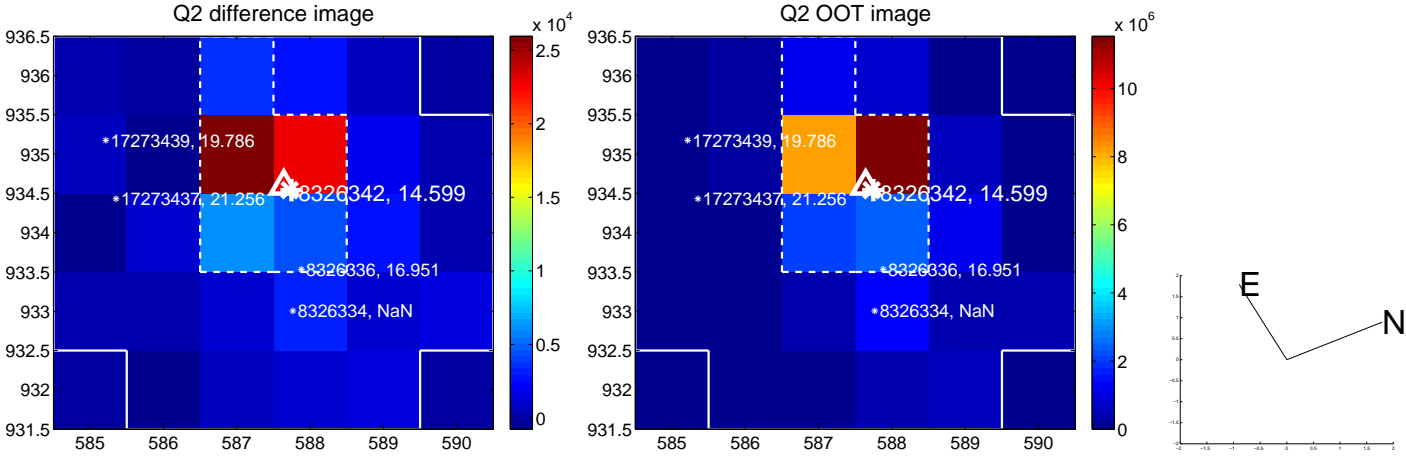
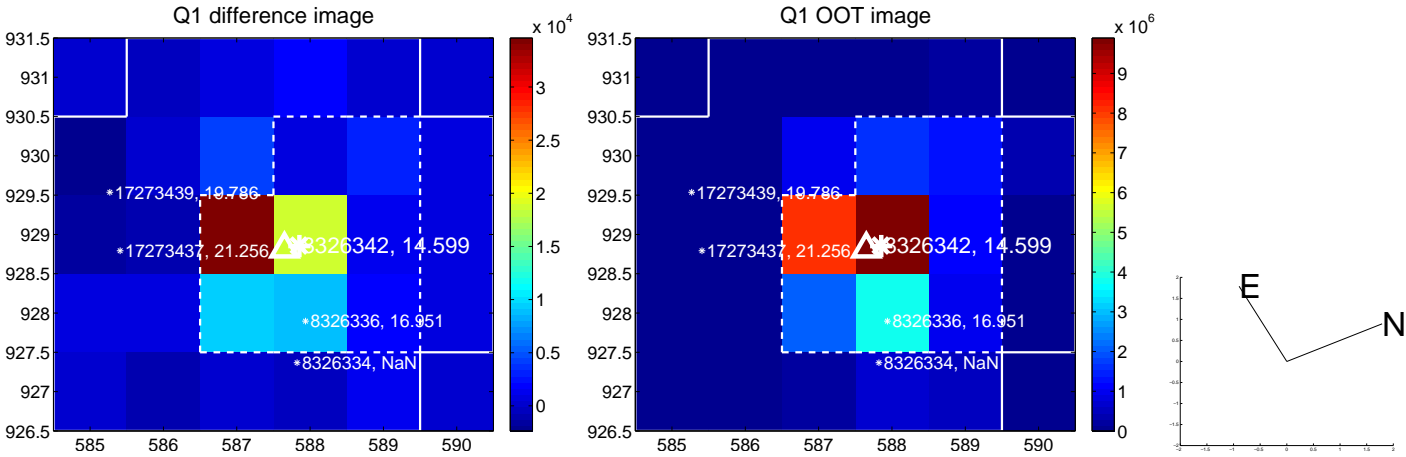
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.092 \pm 0.099$	0.93	$0.049 \pm 0.083$	$-0.078 \pm 0.095$
PRF-fit source offset from KIC position	$0.070 \pm 0.095$	0.73	$0.048 \pm 0.081$	$-0.051 \pm 0.094$
photometric centroid source offset	$0.19 \pm 0.10$	1.85	$0.11 \pm 0.11$	$0.15 \pm 0.10$



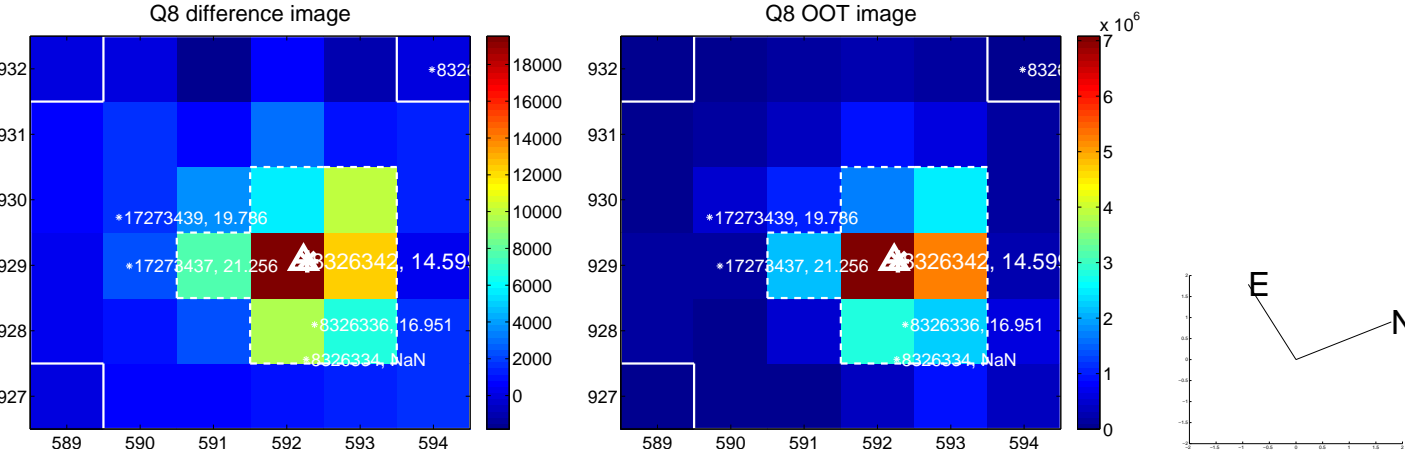
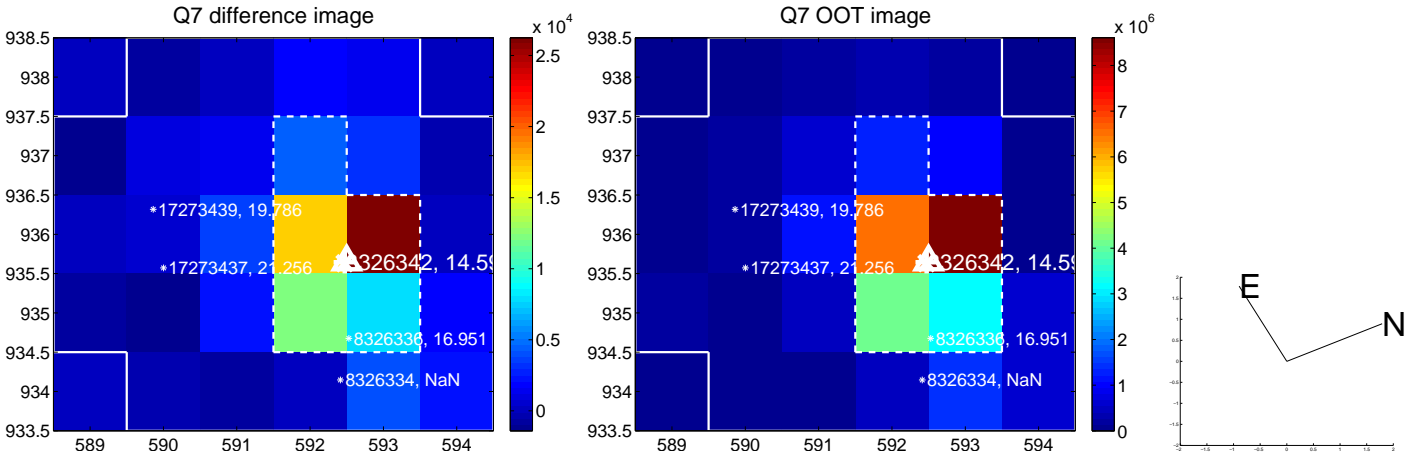
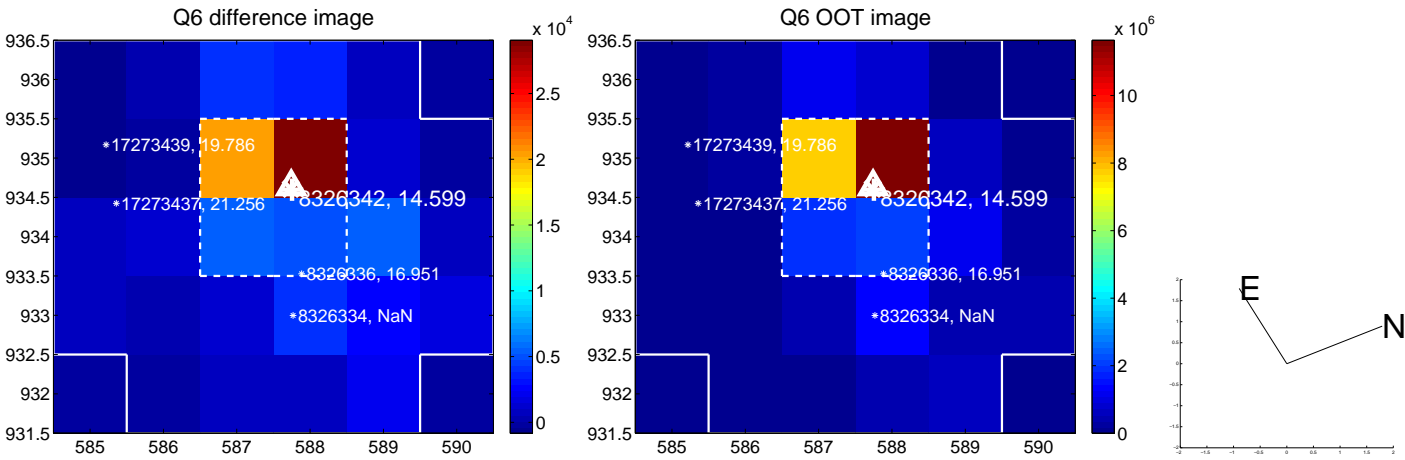
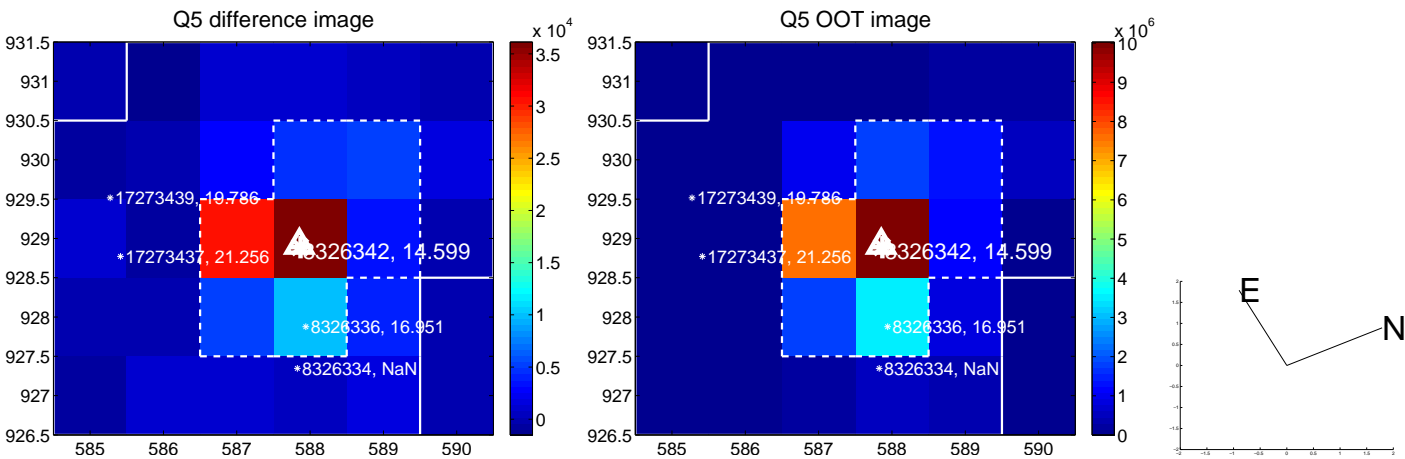
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



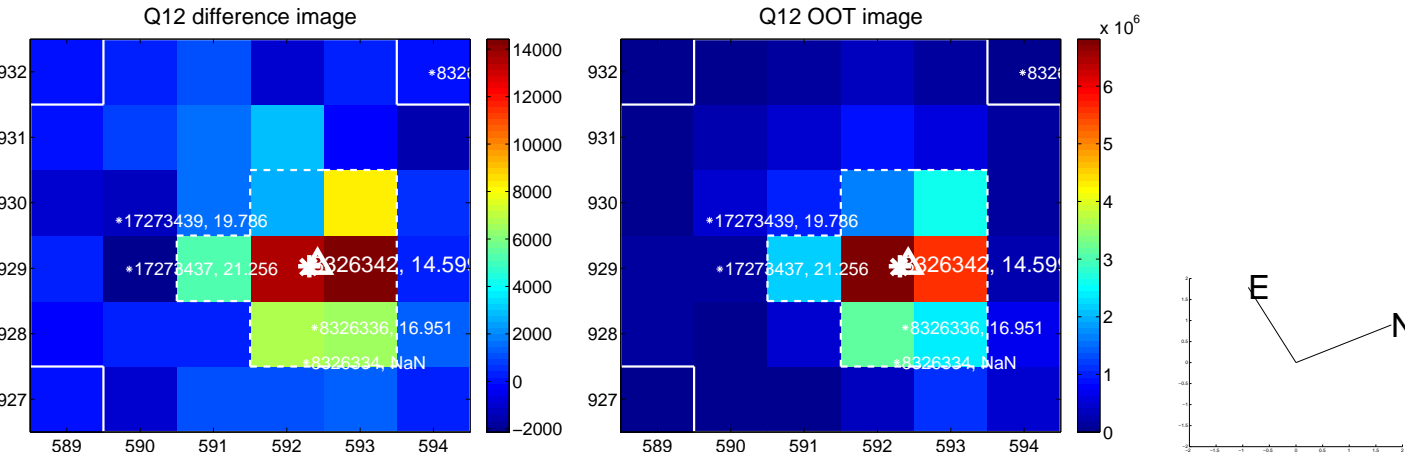
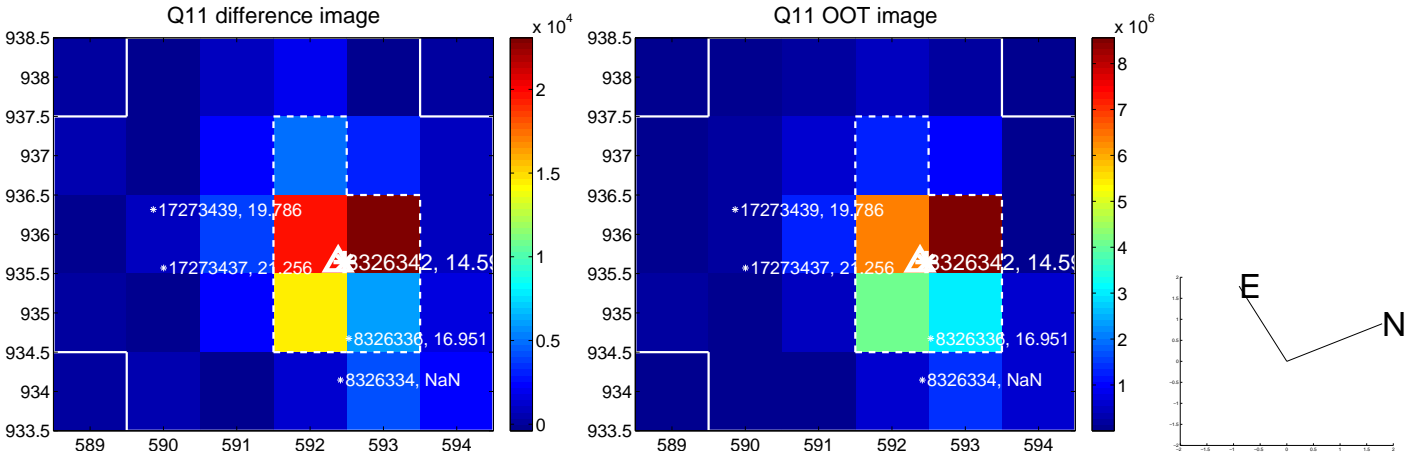
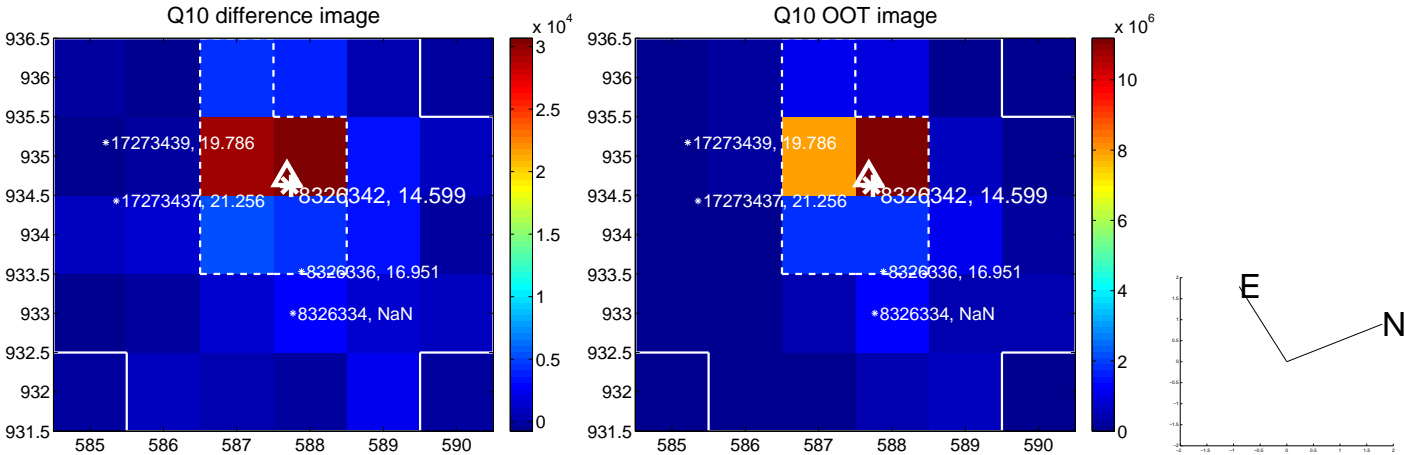
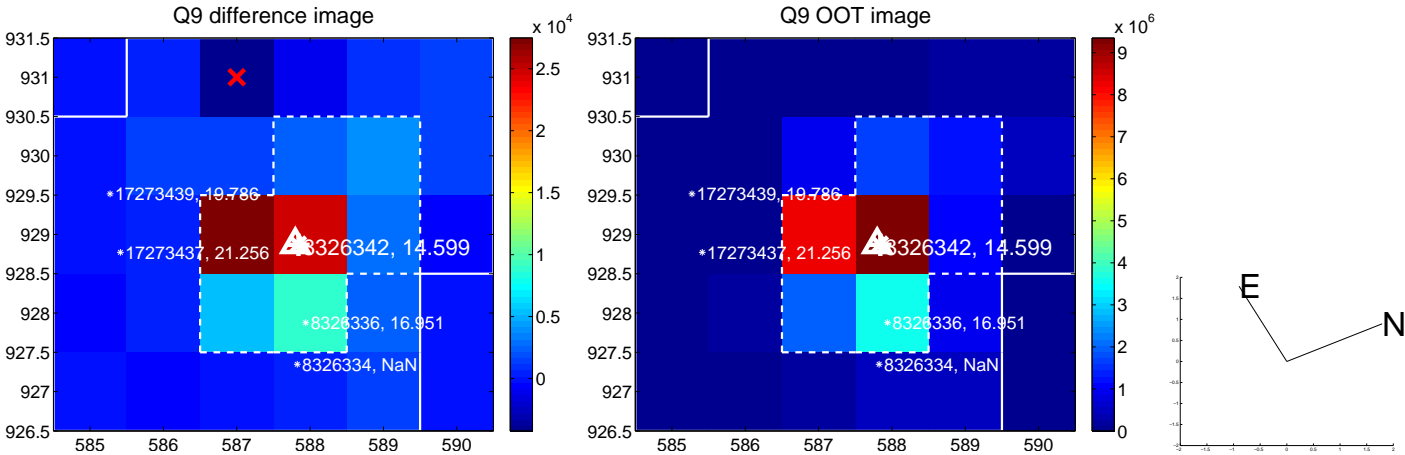
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



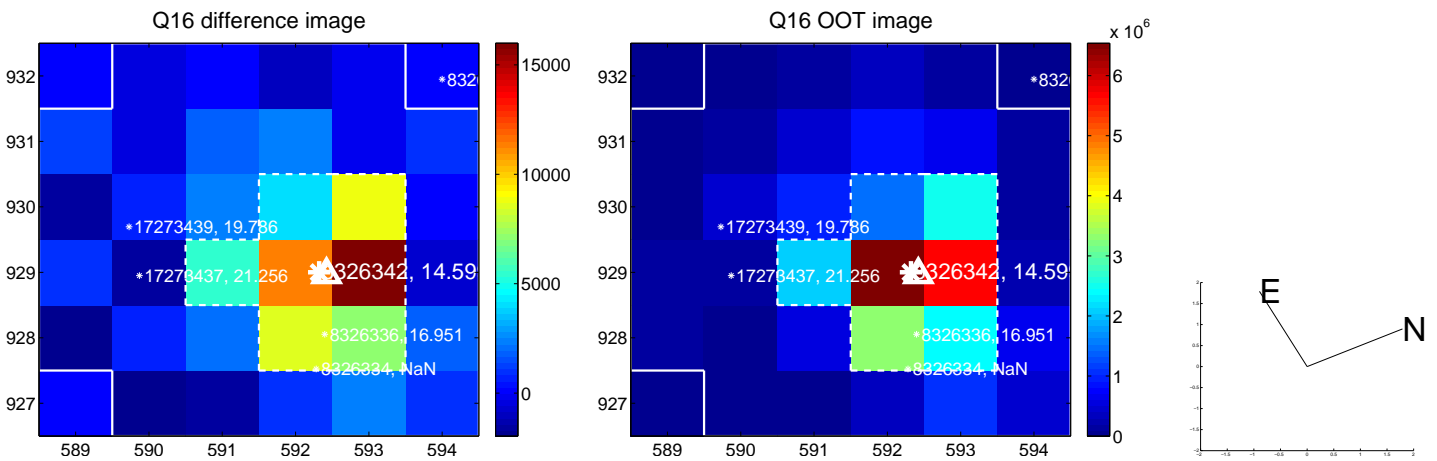
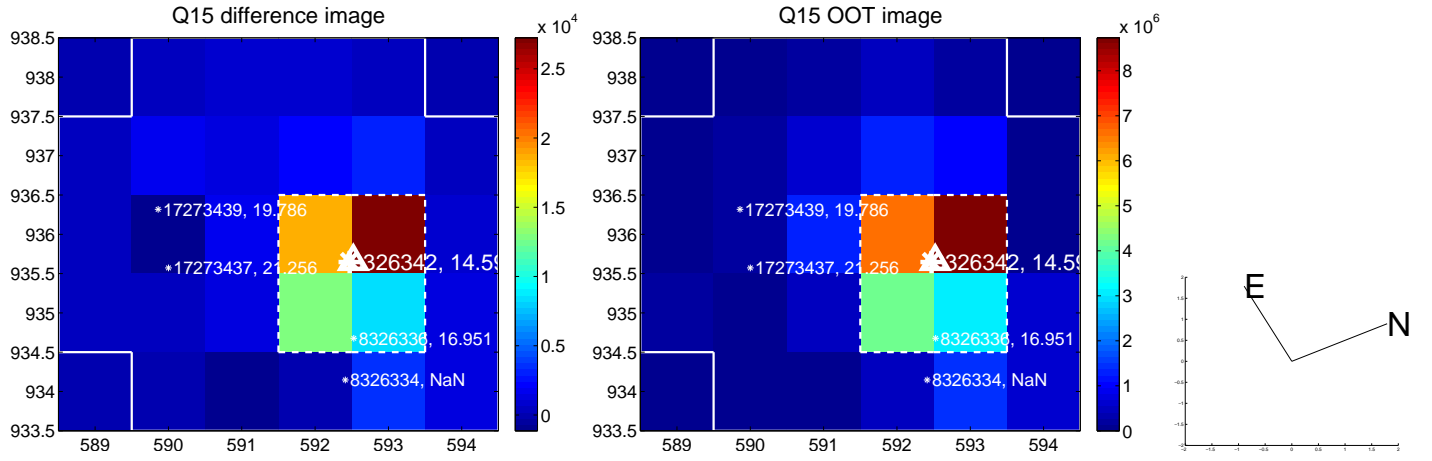
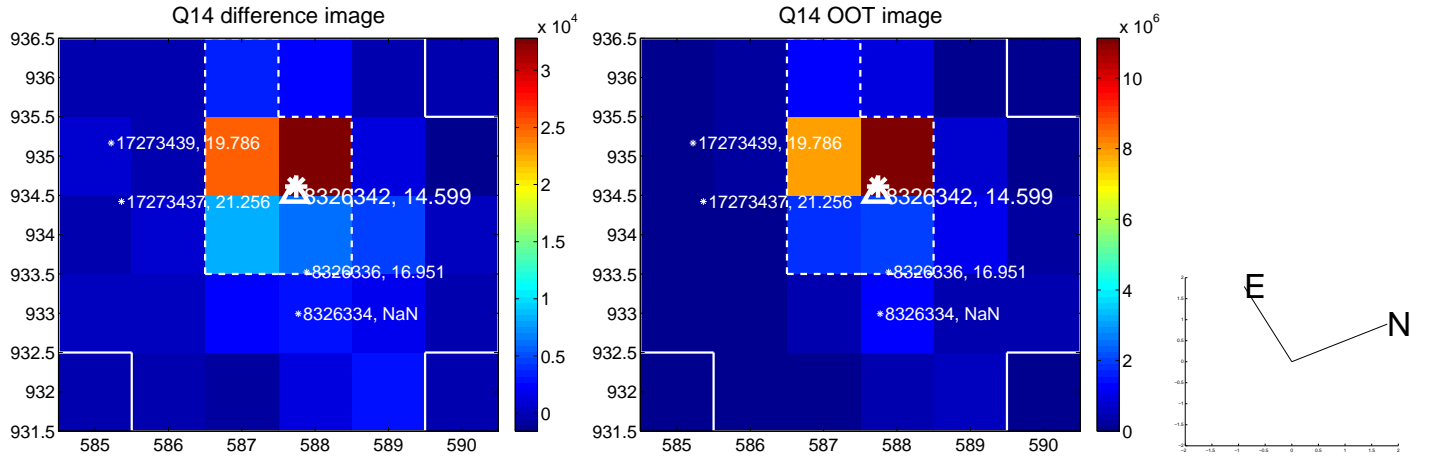
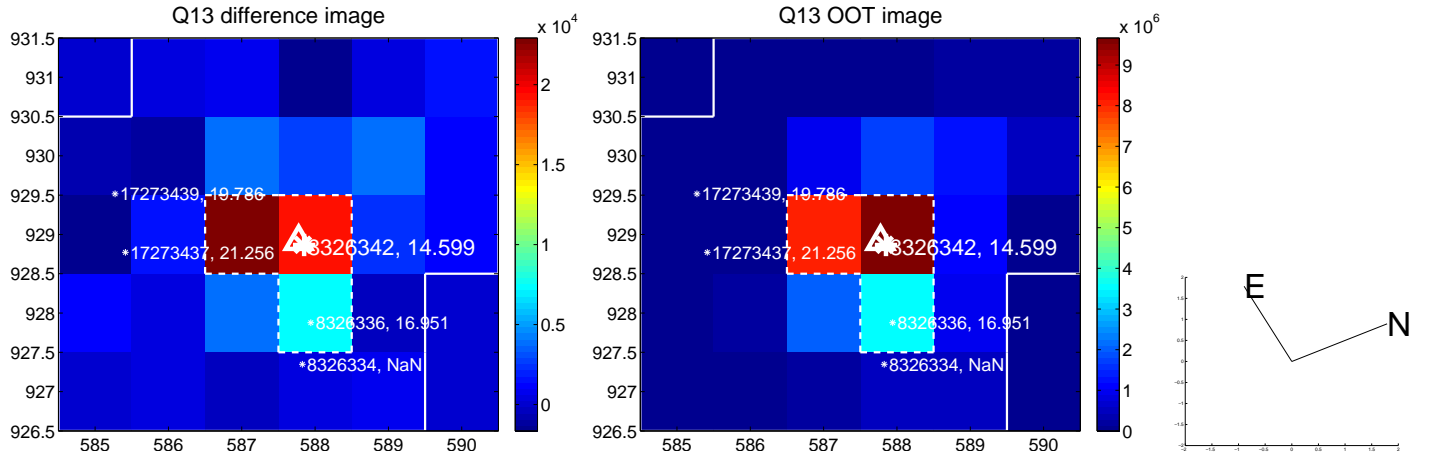
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



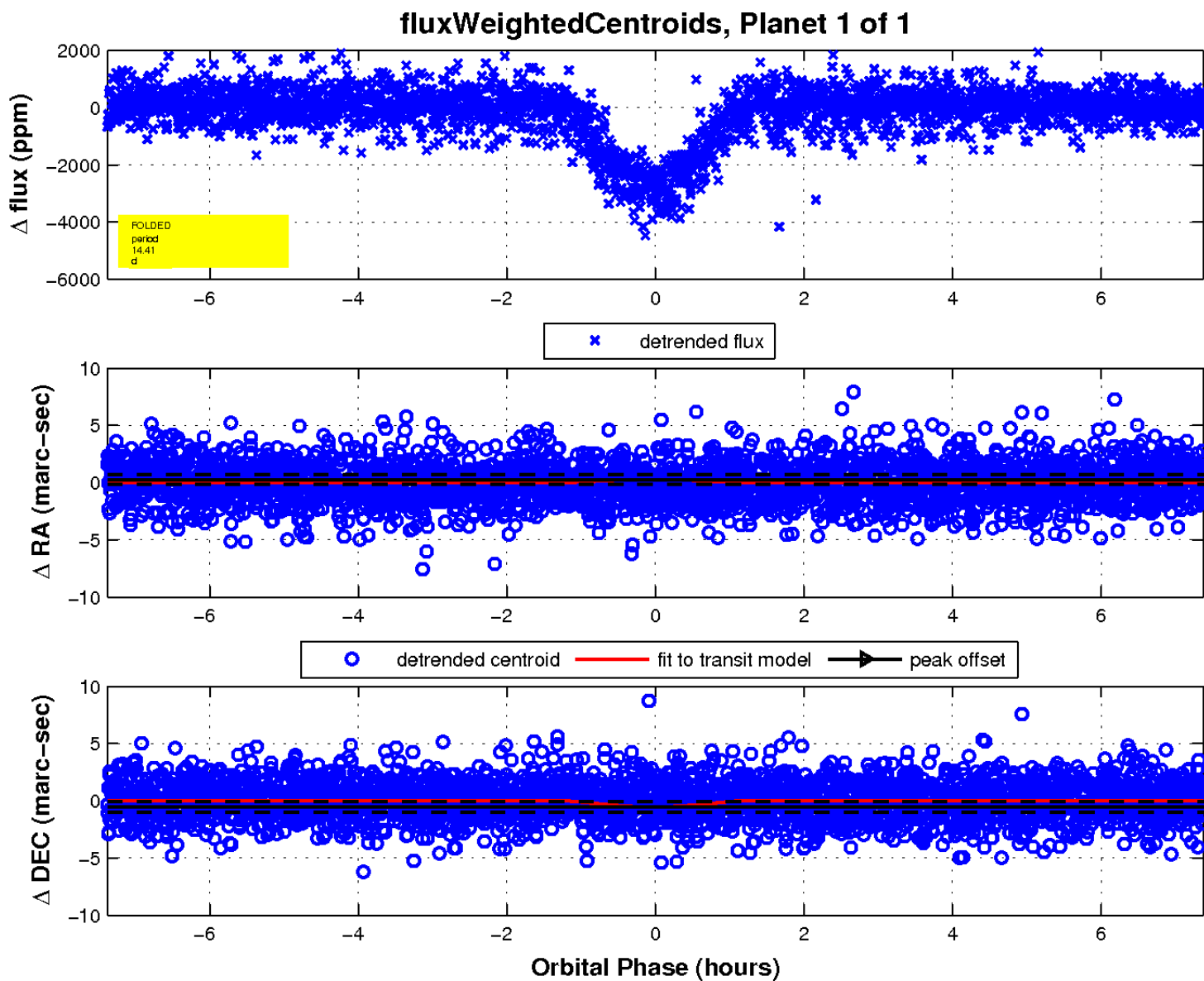
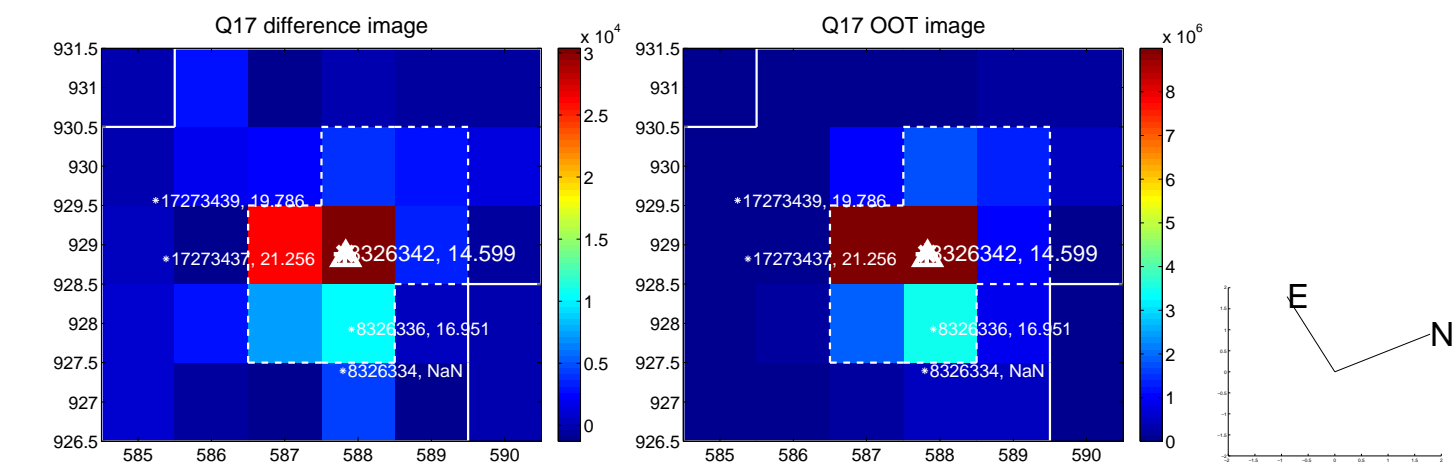
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

