

# KIC 008259061

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008259061-01	OBS	No	1.027584	132.510134	172.0	8.662	8.7	6.4	1.68	7087	2.26	12425.99

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008259061-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

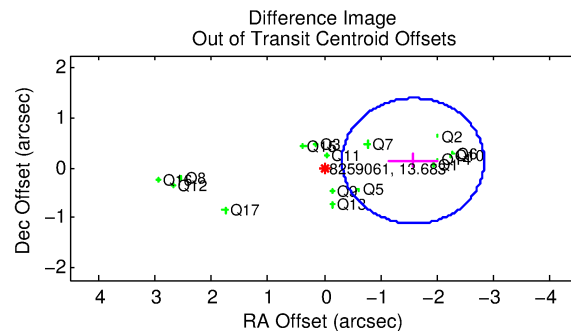
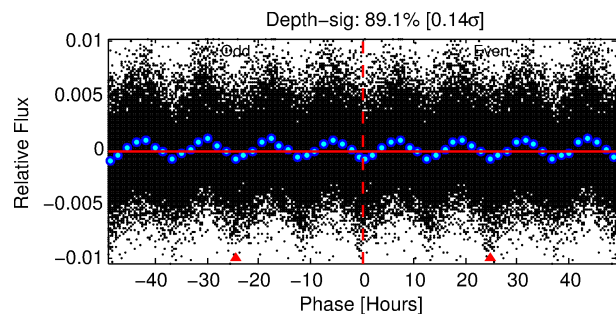
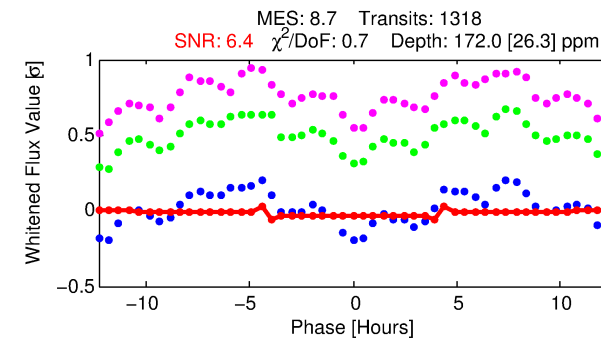
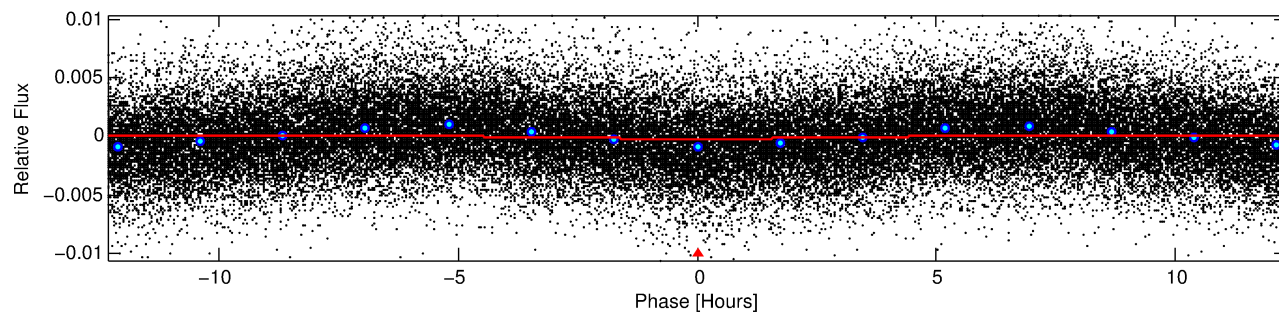
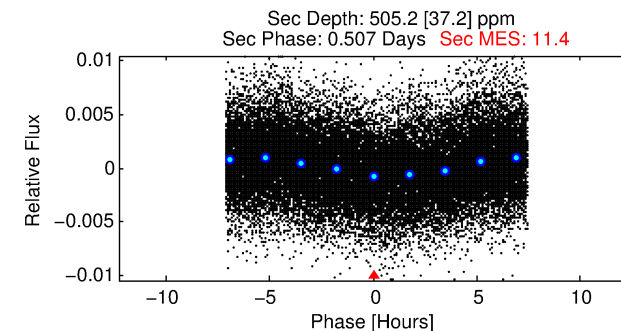
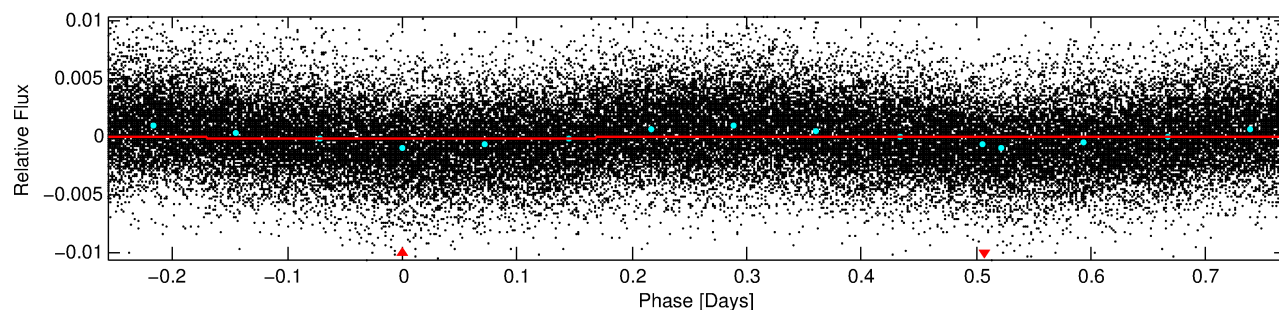
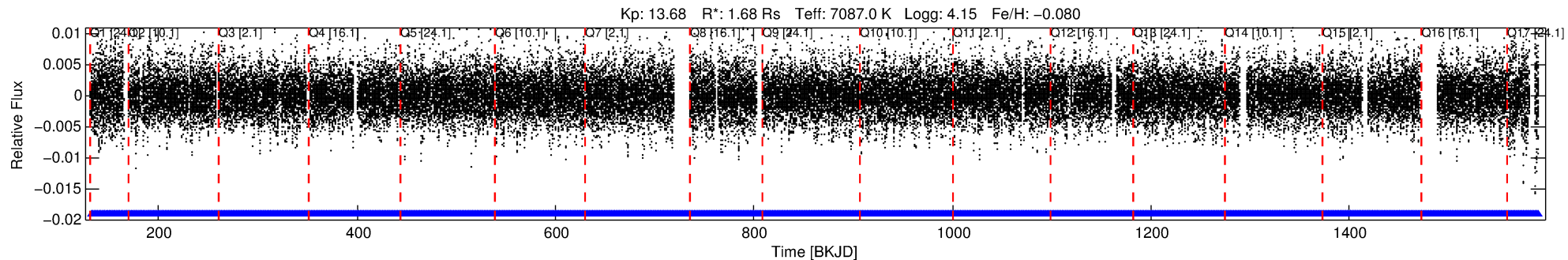
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008259061-01

No Significant Match Found

# DV One-Page Summary

KIC: 8259061 Candidate: 1 of 1 Period: 1.028 d



## DV Fit Results:

Period = 1.02758 [0.00002] d  
Epoch = 132.5101 [0.0028] BKJD  
Rp/R\* = 0.0124 [0.0041]  
a/R\* = 1.11 [0.39]  
b = 0.44 [3.39]  
Seff = 12425.98 [5190.07]  
Teq = 2692 [281] K  
Rp = 2.26 [1.04] Re  
a = 0.0226 [0.0059] AU  
Ag = 27.69 [21.03] [1.27σ]  
**Teff = 9549 [1646] K [4.11σ]**

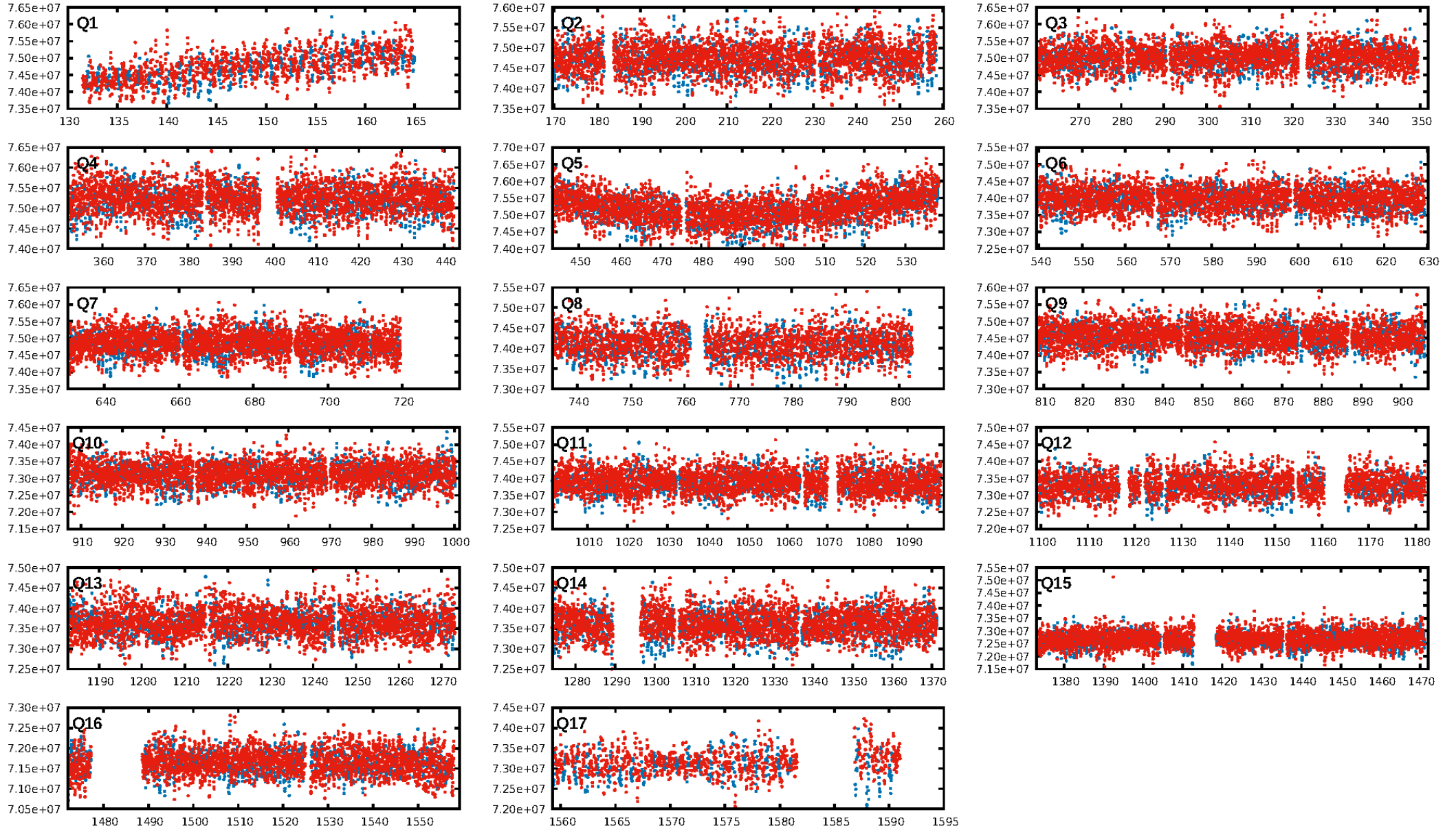
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1259/1259]  
**GhostDiagnostic-chr: 0.8933**  
Centroid-sig: 25.5%  
Centroid-so: 0.278 arcsec [2.04σ]  
**OotOffset-rm: 1.578 arcsec [3.77σ]**  
**KicOffset-rm: 1.577 arcsec [3.49σ]**  
OotOffset-st: 4/4/3/5 [16]  
KicOffset-st: 4/4/3/5 [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: 31-Jan-2016 02:28:04 Z

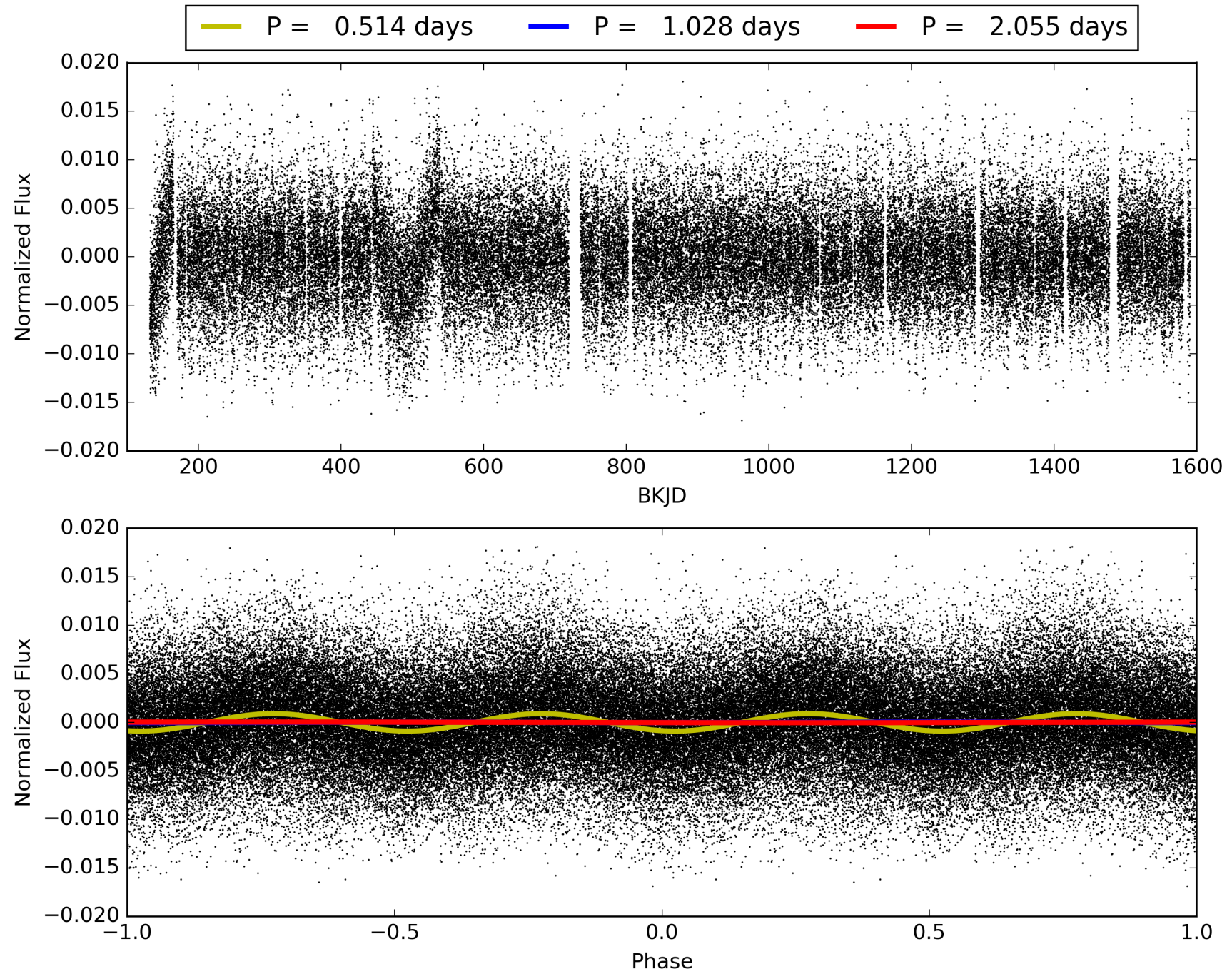
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008259061-01, PDC Light Curves



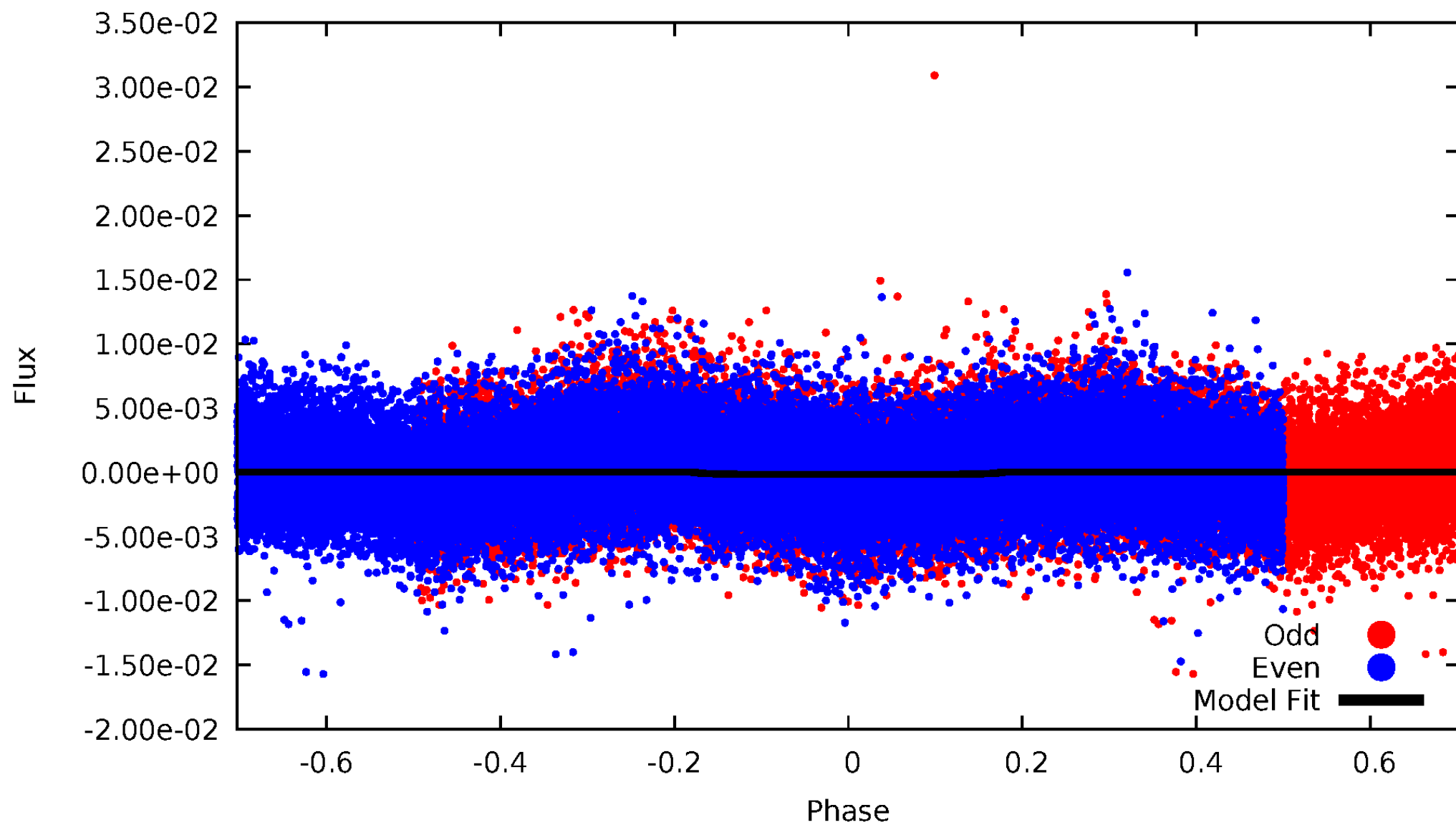


TCE 008259061-01



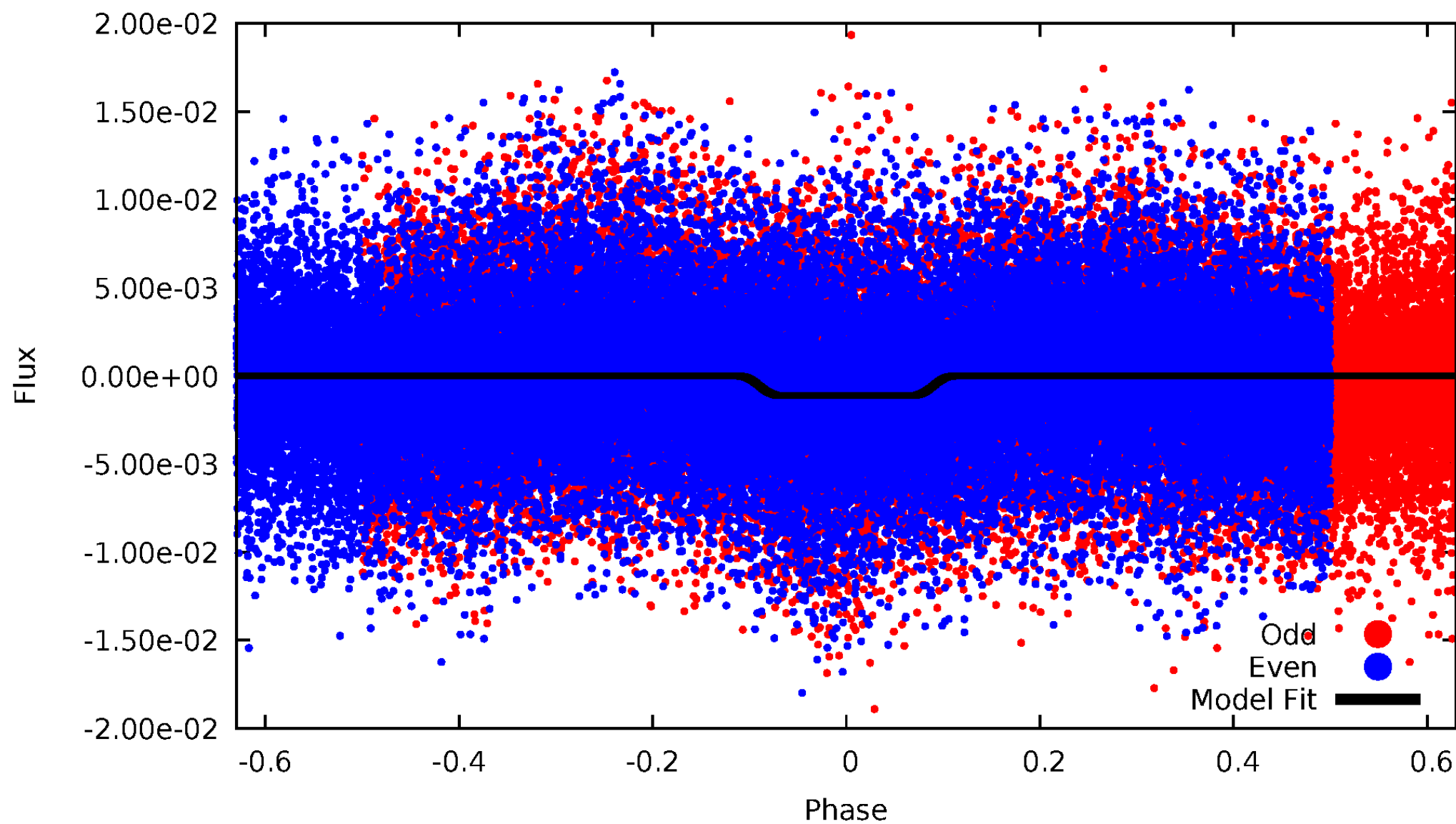
# DV Odd/Even

TCE 008259061-01



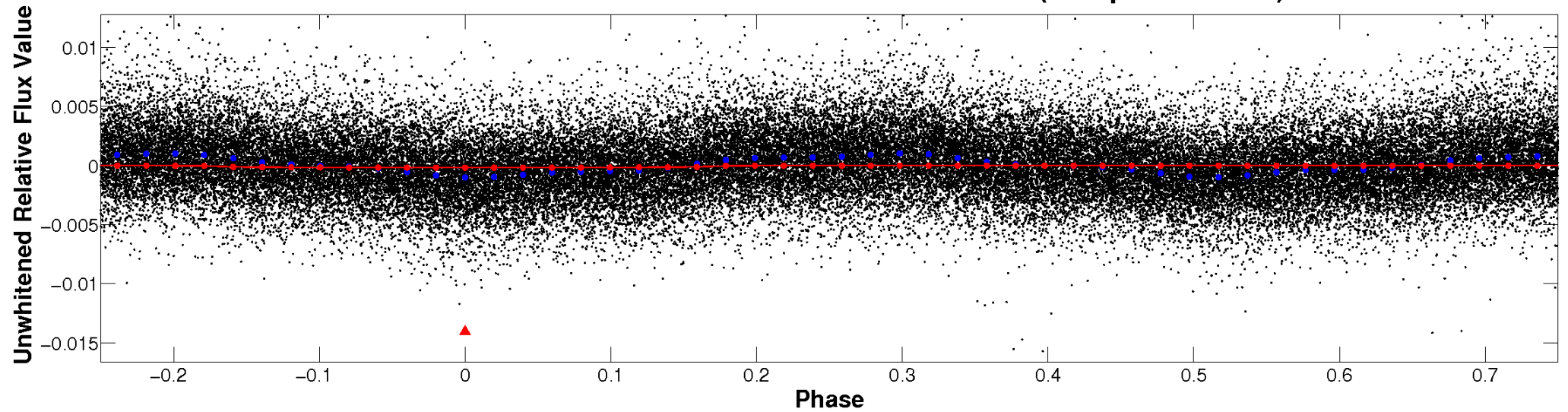
# ALT Odd/Even

TCE 008259061-01

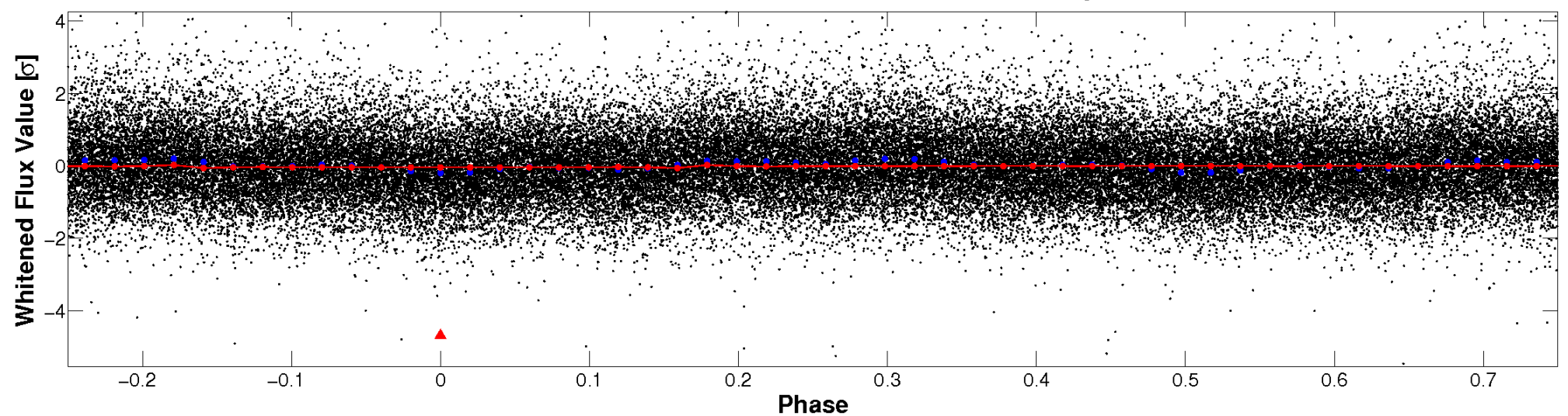


# Non-Whitened Vs. Whitened Light Curve

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



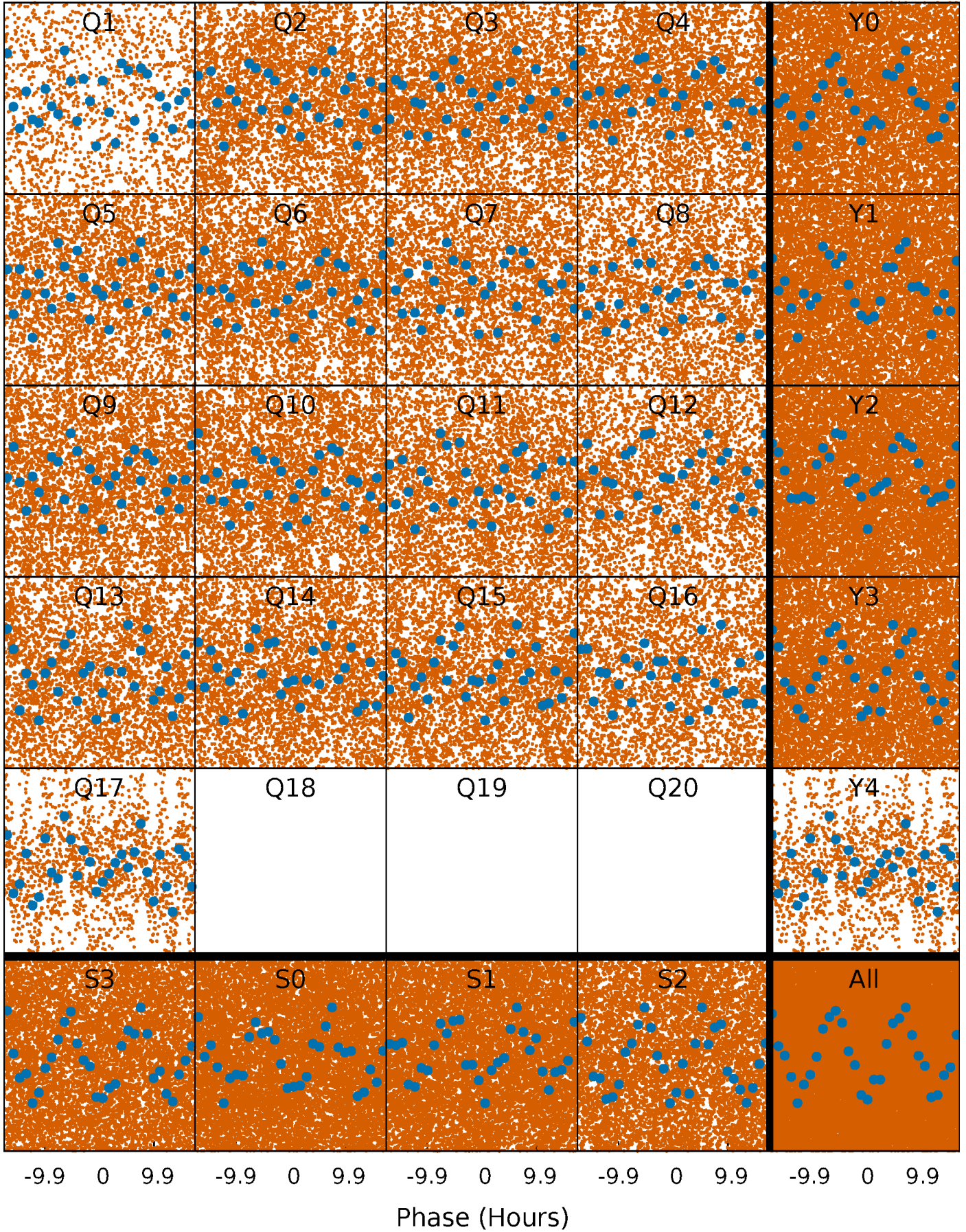
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

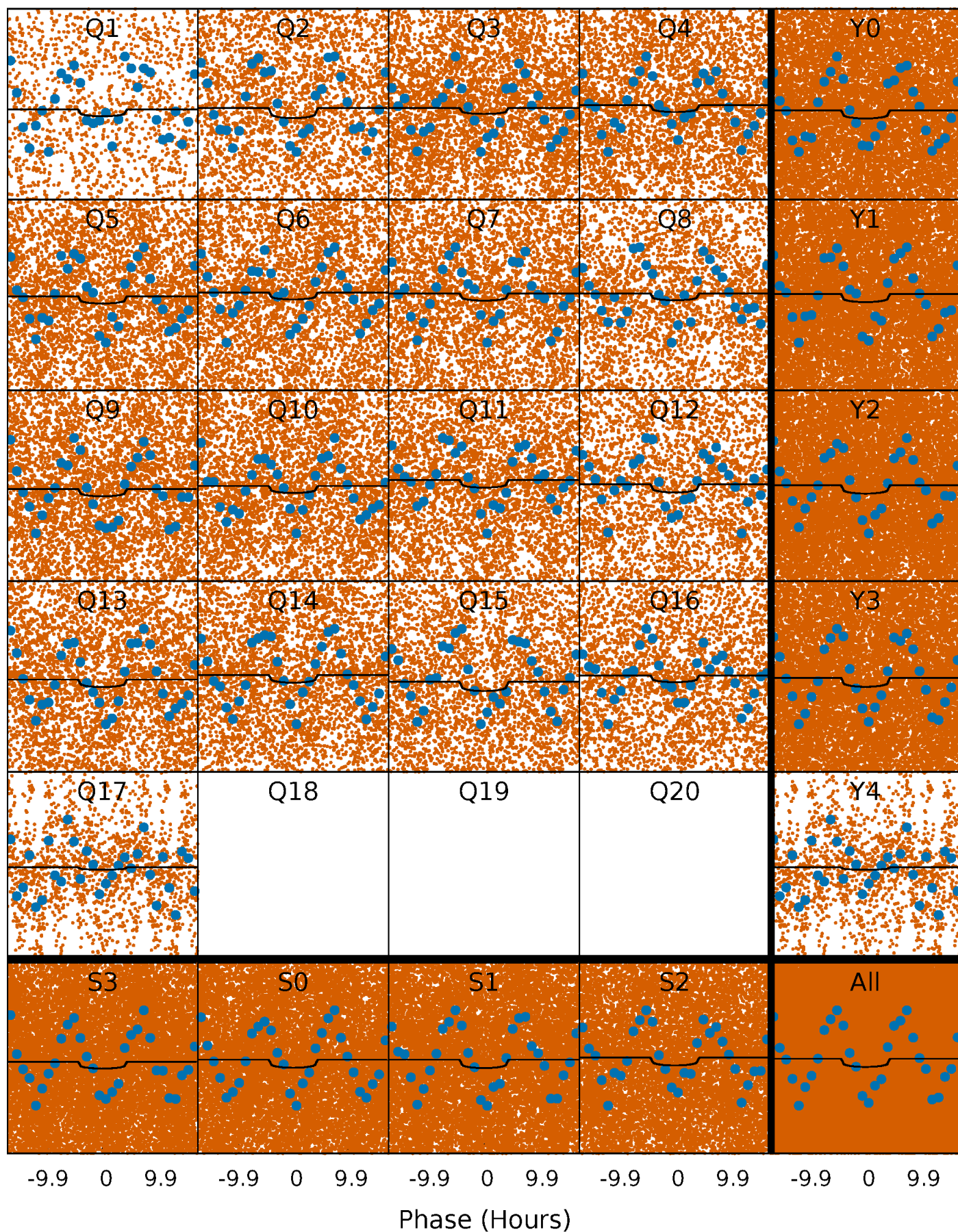
TCE 008259061-01 P= 1.027584 Days  $T_0=132.510134$  (BKJD)





# DV Quarter-Phased Transit Curves

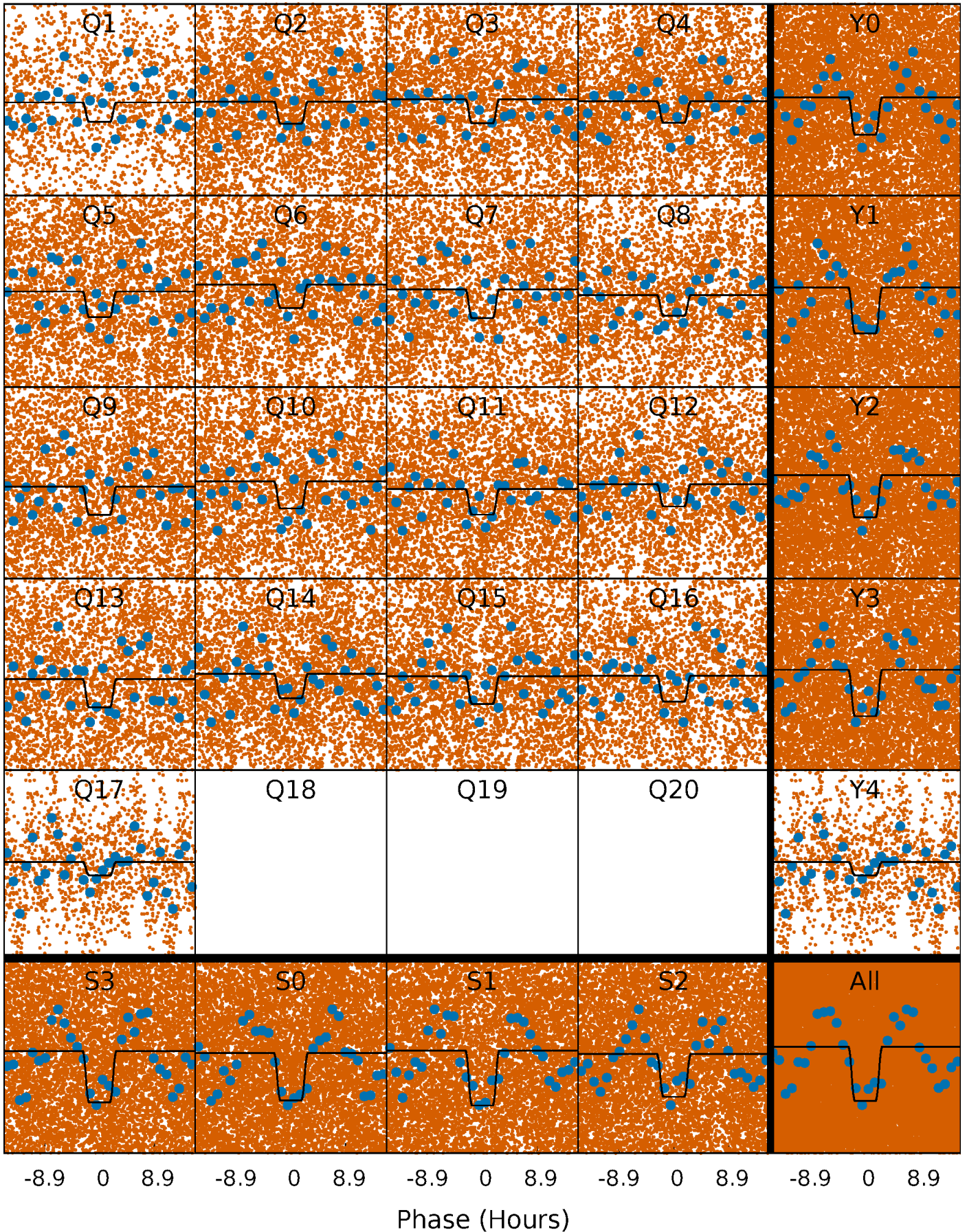
TCE 008259061-01   P= 1.027584 Days    $T_0=132.510134$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

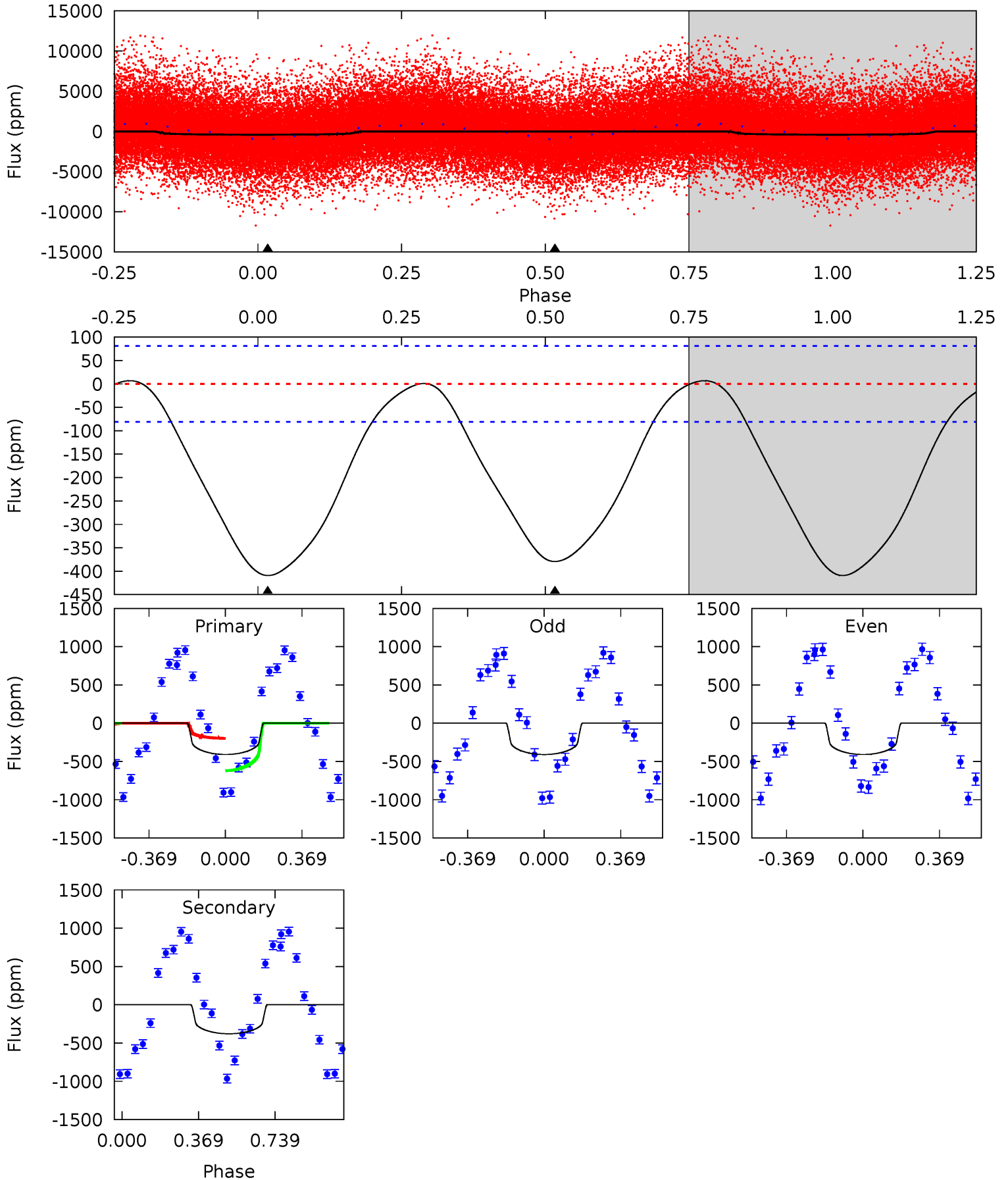
TCE 008259061-01   P= 1.027636 Days    $T_0=132.496108$  (BKJD)



# DV Model-Shift Uniqueness Test

008259061-01, P = 1.027584 Days, E = 131.482550 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
21.6	20.1	0	0	4.28	0.90	0.45	21.6	21.6	20.1	20.1	0.01	0.96	0.02	11.8

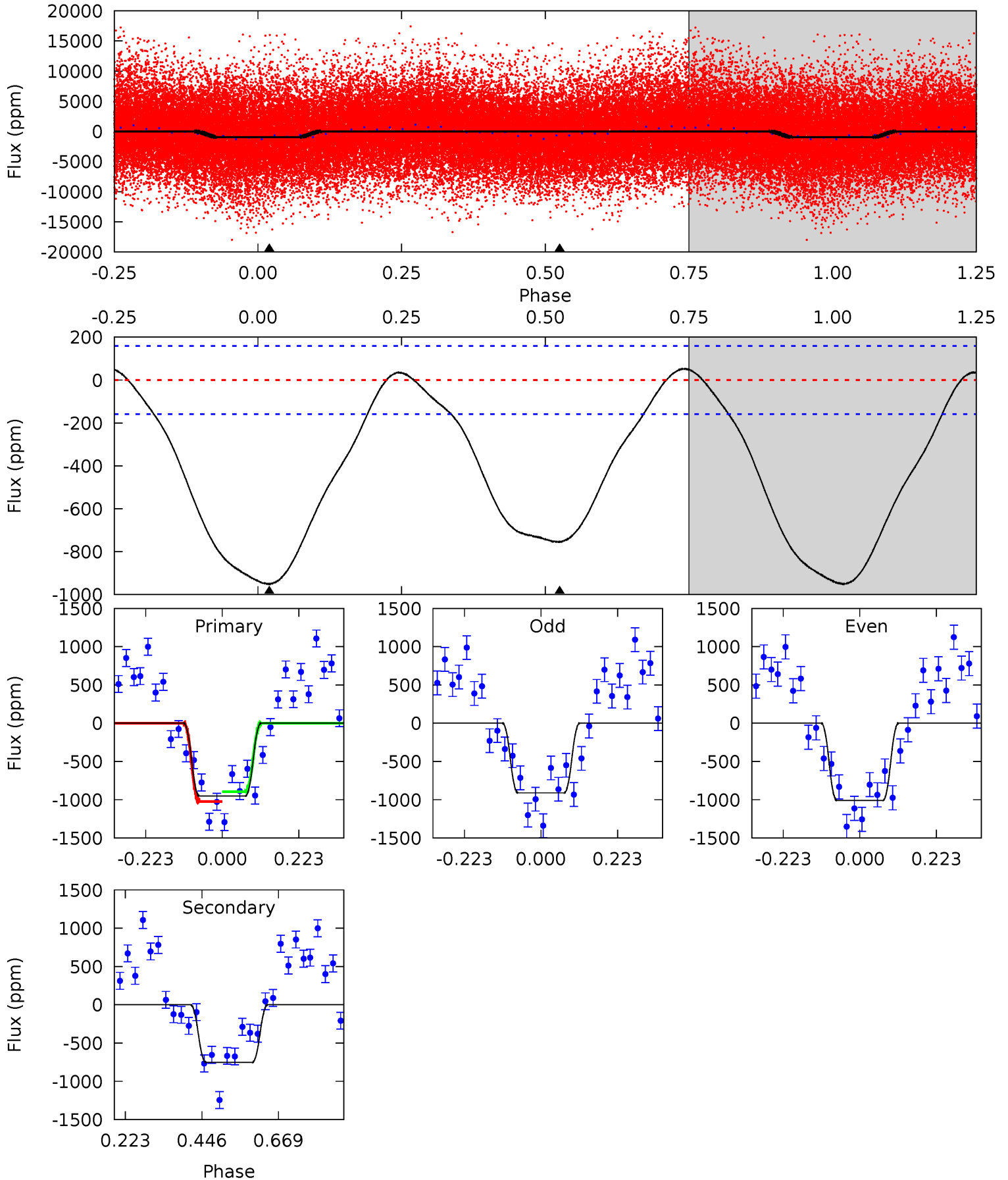




# Alt Model-Shift Uniqueness Test

008259061-01, P = 1.027636 Days, E = 131.468472 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
26.3	20.9	0	0	4.39	1.22	1.04	26.3	26.3	20.9	20.9	1.36	0.93	0.05	1.79



### Stellar Parameters For KIC 008259061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7087^{+197}_{-338}$	$4.153^{+0.132}_{-0.198}$	$-0.080^{+0.250}_{-0.350}$	$1.675^{+0.537}_{-0.358}$	$1.458^{+0.220}_{-0.242}$	$0.437^{+0.287}_{-0.234}$
	+3%/-5%	+3%/-5%	+312%/-438%	+32%/-21%	+15%/-17%	+66%/-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 008259061-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-379 \pm 19$	$2.29^{+0.90}_{-0.79}$	$3768^{+306}_{-254}$	$9232^{+3511}_{-1608}$	$20^{+25}_{-10}$
Alt.	$-754 \pm 36$	$6.23^{+1.36}_{-1.06}$	$3786^{+316}_{-265}$	$6230^{+527}_{-442}$	$5.313^{+2.357}_{-1.586}$

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

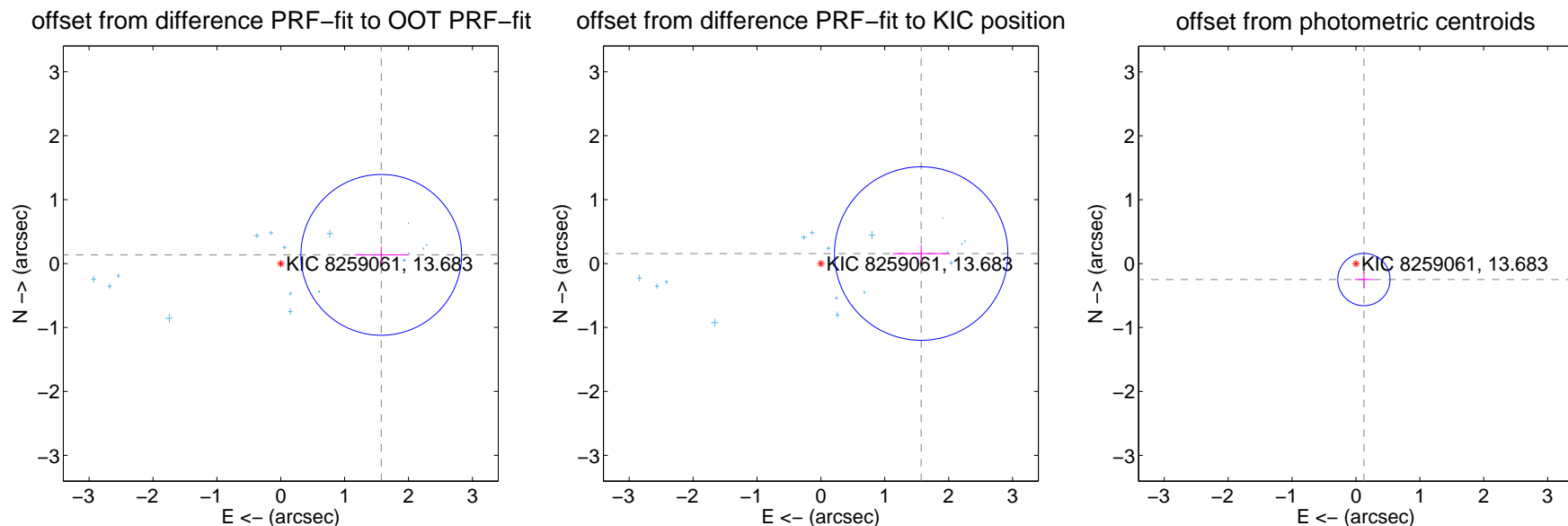
## DV Centroid Data

Supplemental centroid analysis for 008259061-01. Kepler magnitude: 13.68. Transit SNR 6.39

There are 16 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

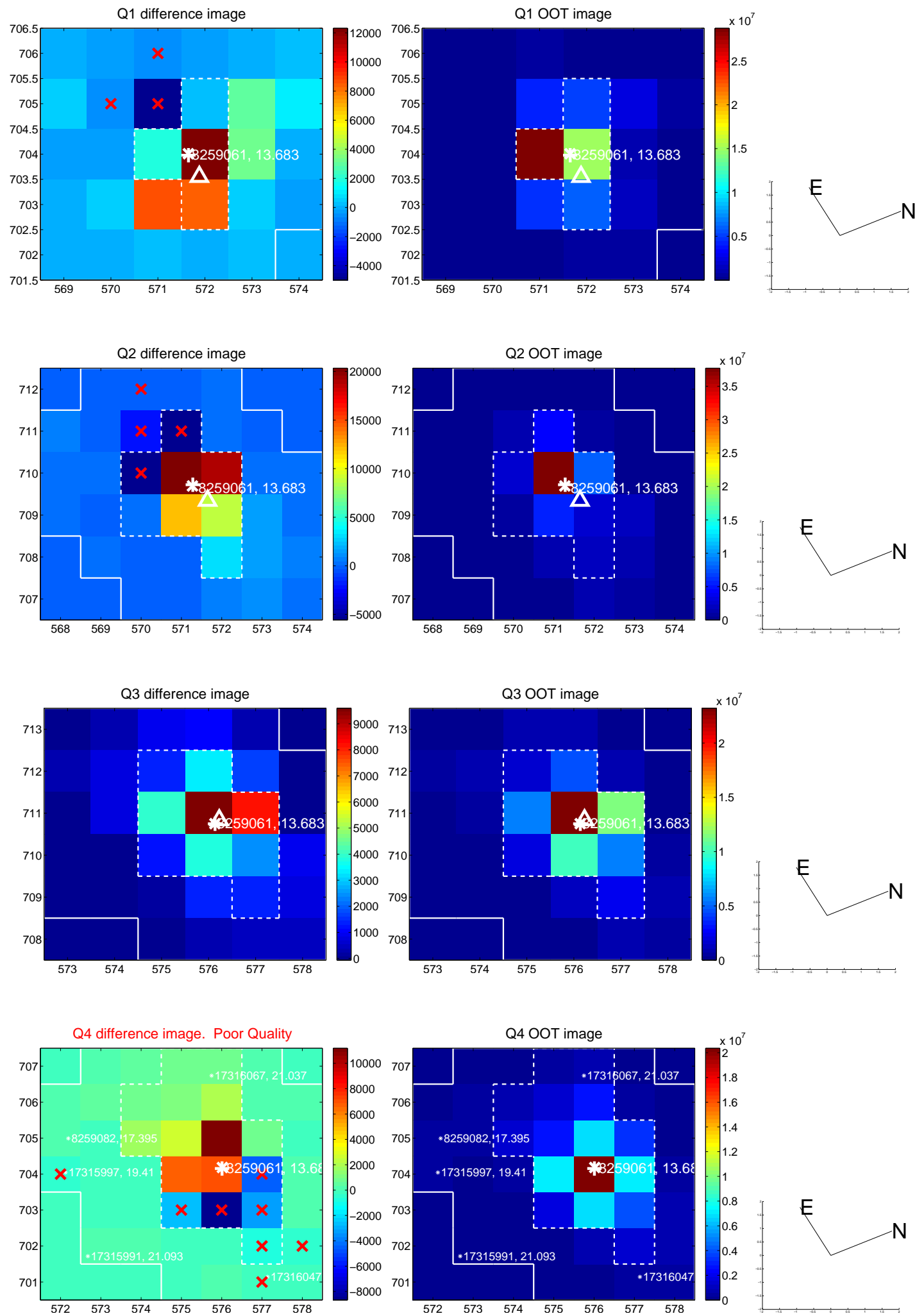
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.578 \pm 0.419$	$3.77$	$-1.573 \pm 0.416$	$0.135 \pm 0.127$
PRF-fit source offset from KIC position	$1.577 \pm 0.452$	$3.49$	$-1.570 \pm 0.448$	$0.156 \pm 0.133$
photometric centroid source offset	$0.28 \pm 0.14$	2.04	$-0.12 \pm 0.15$	$-0.25 \pm 0.13$



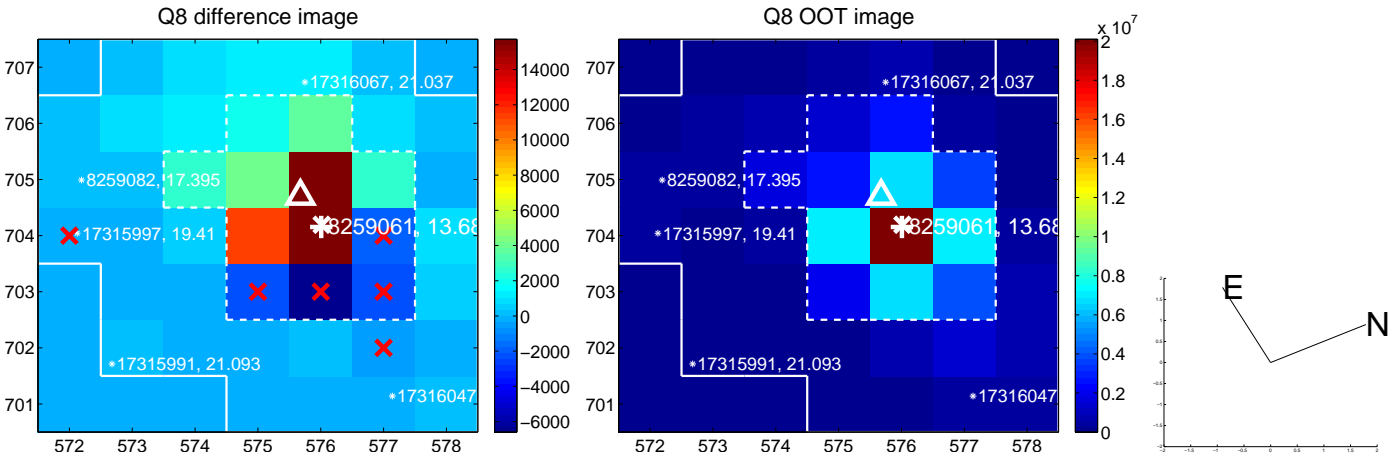
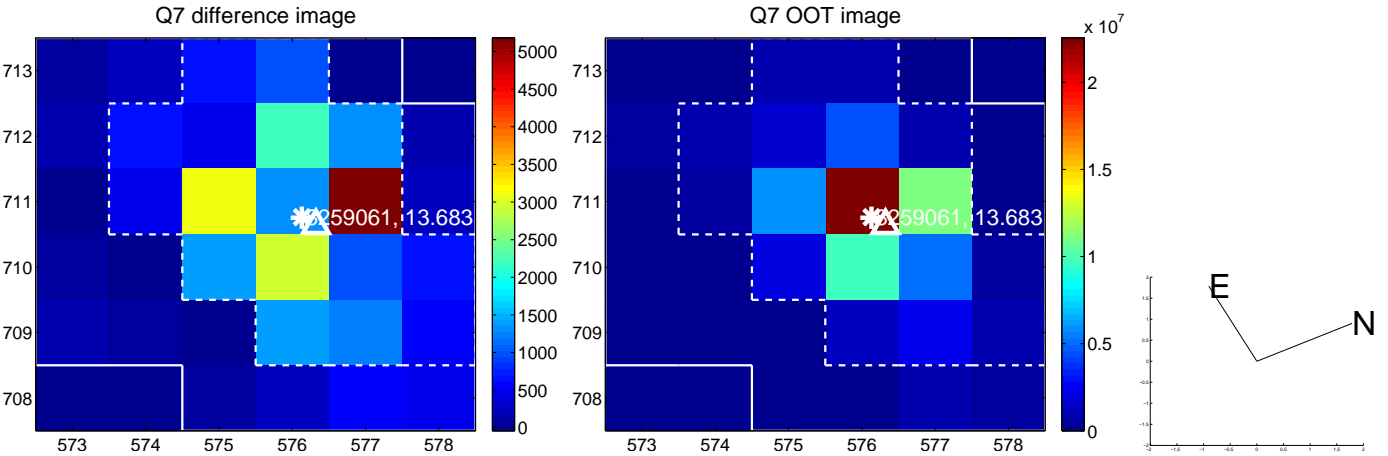
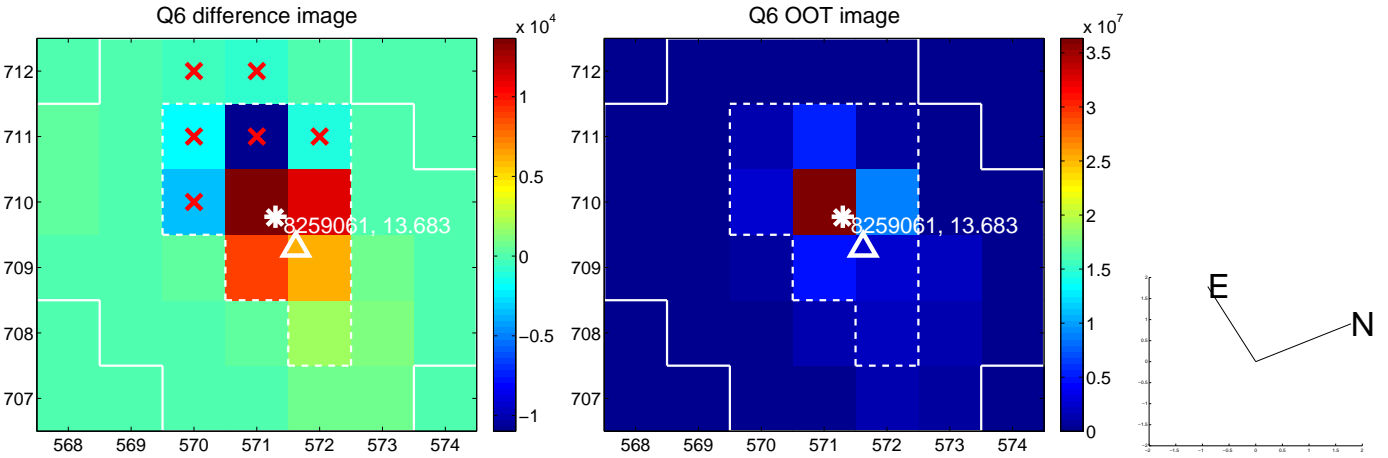
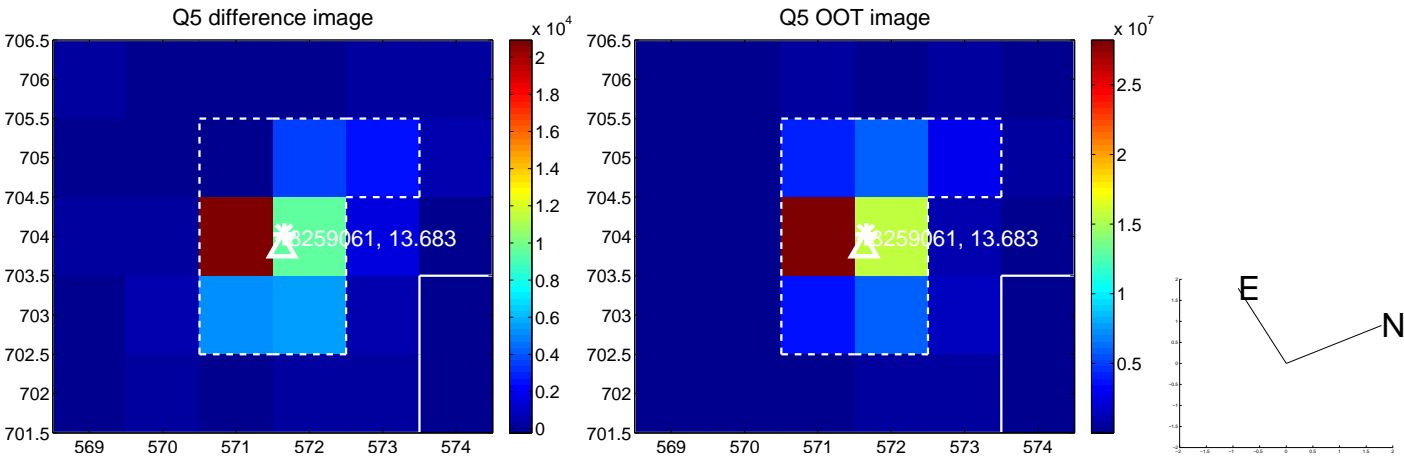
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



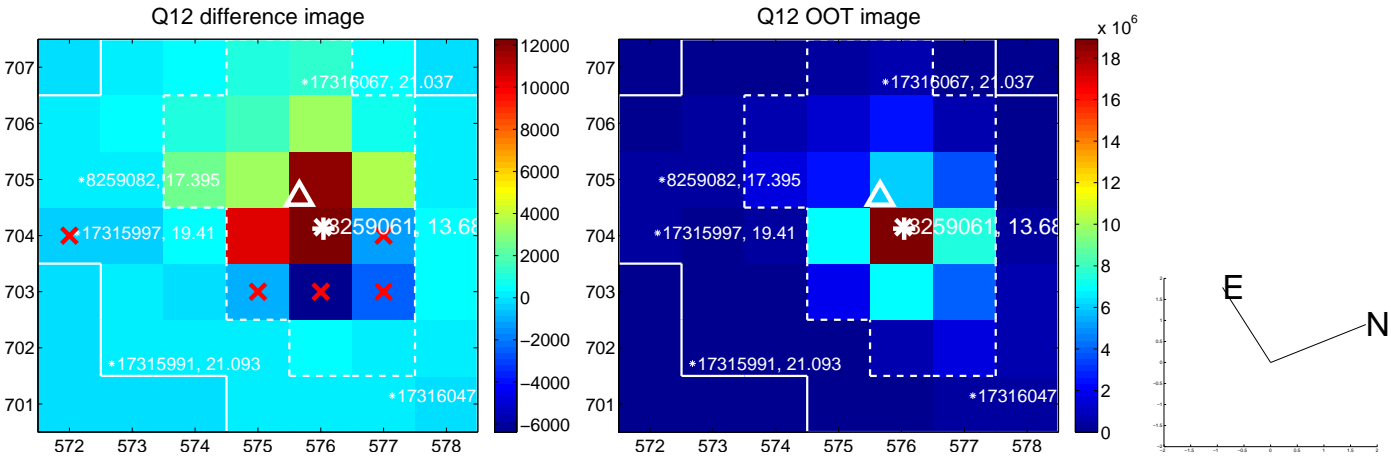
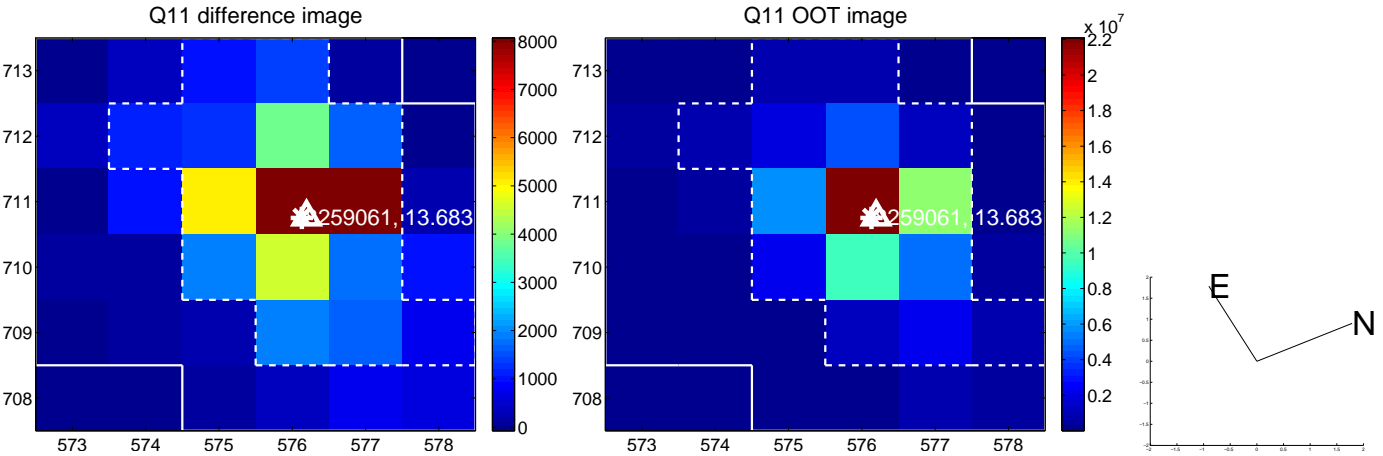
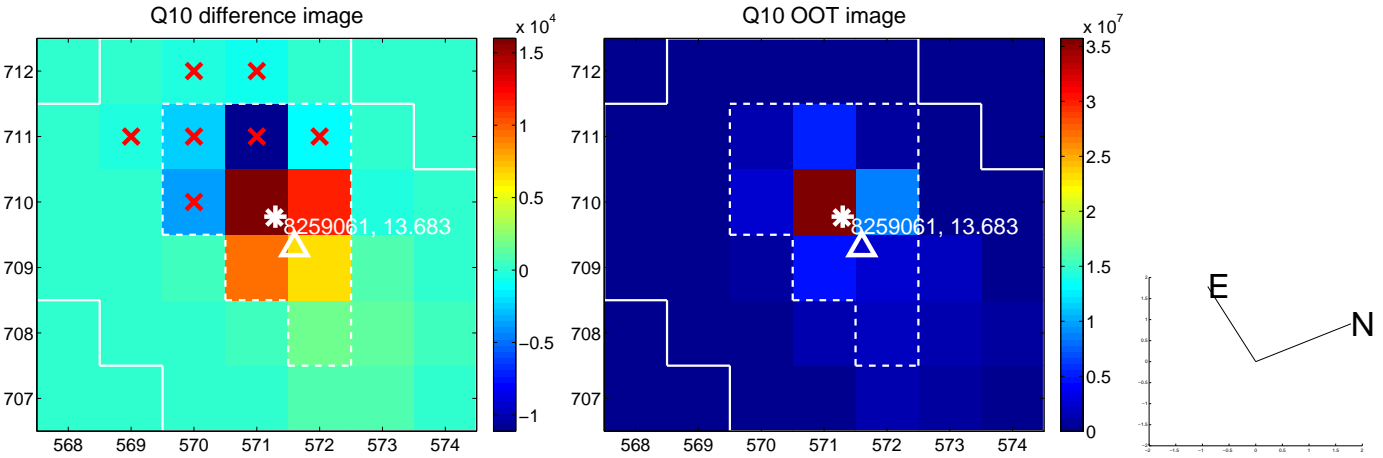
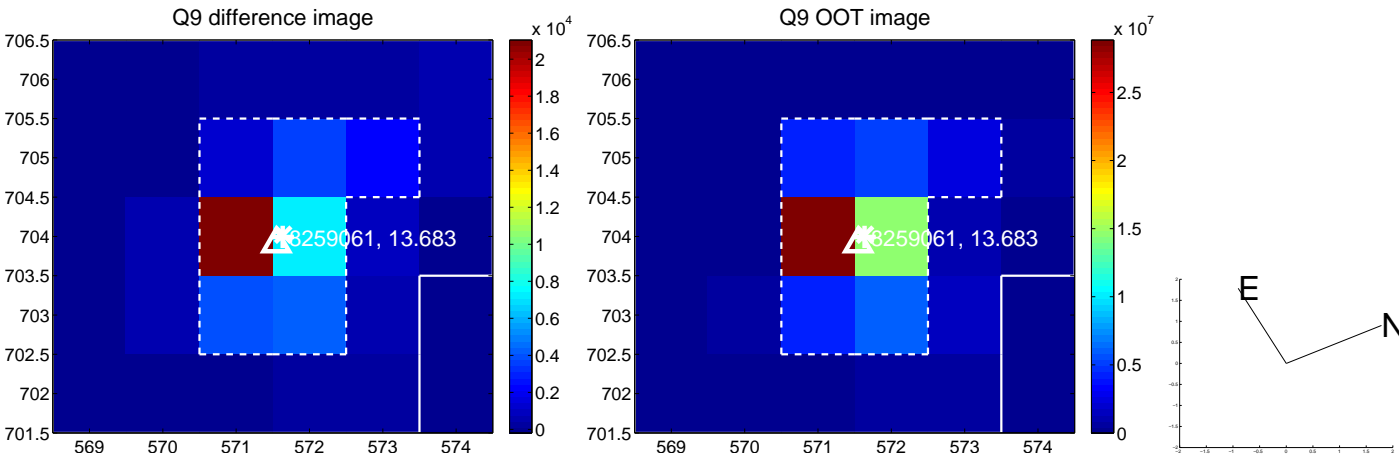
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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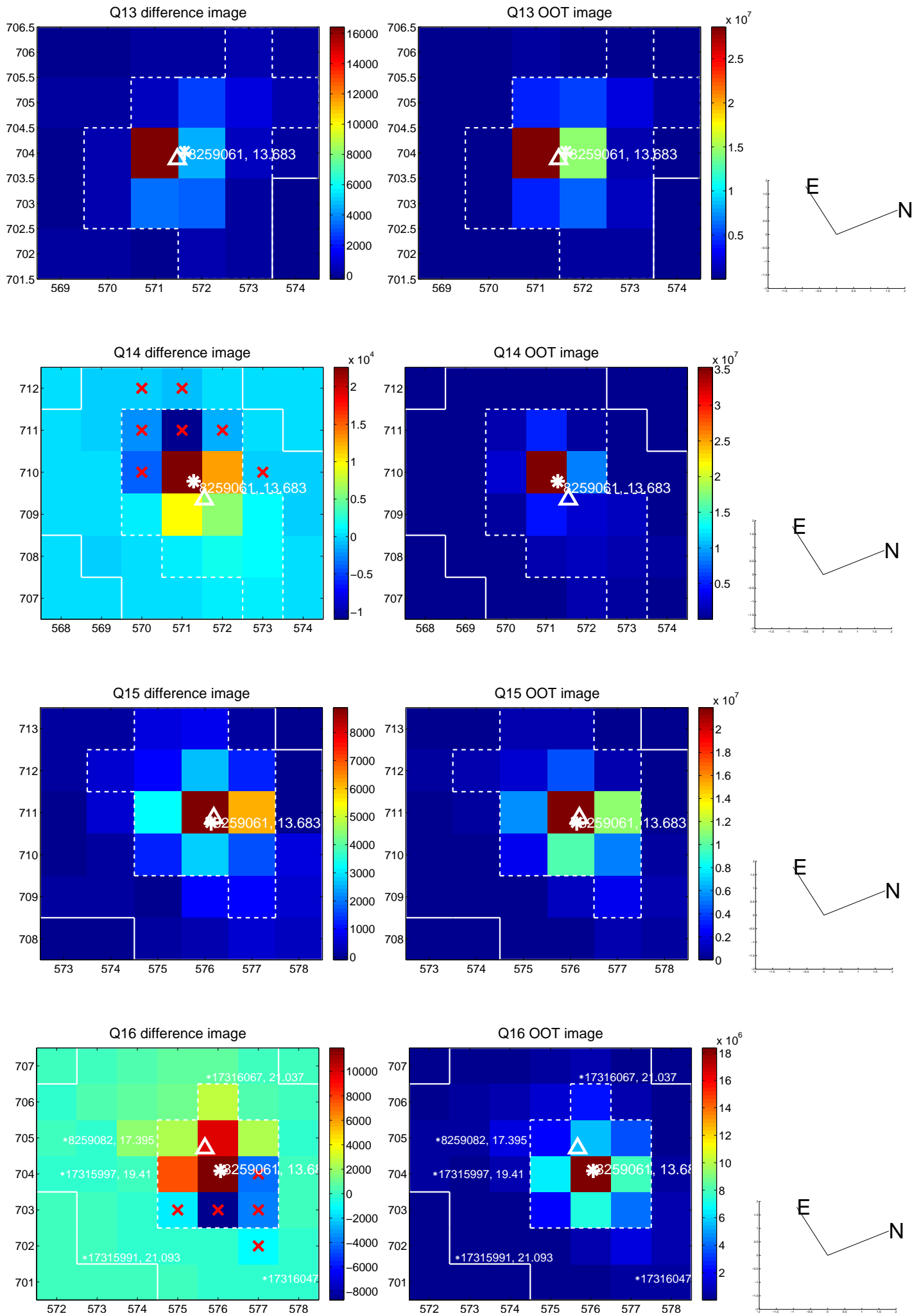


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

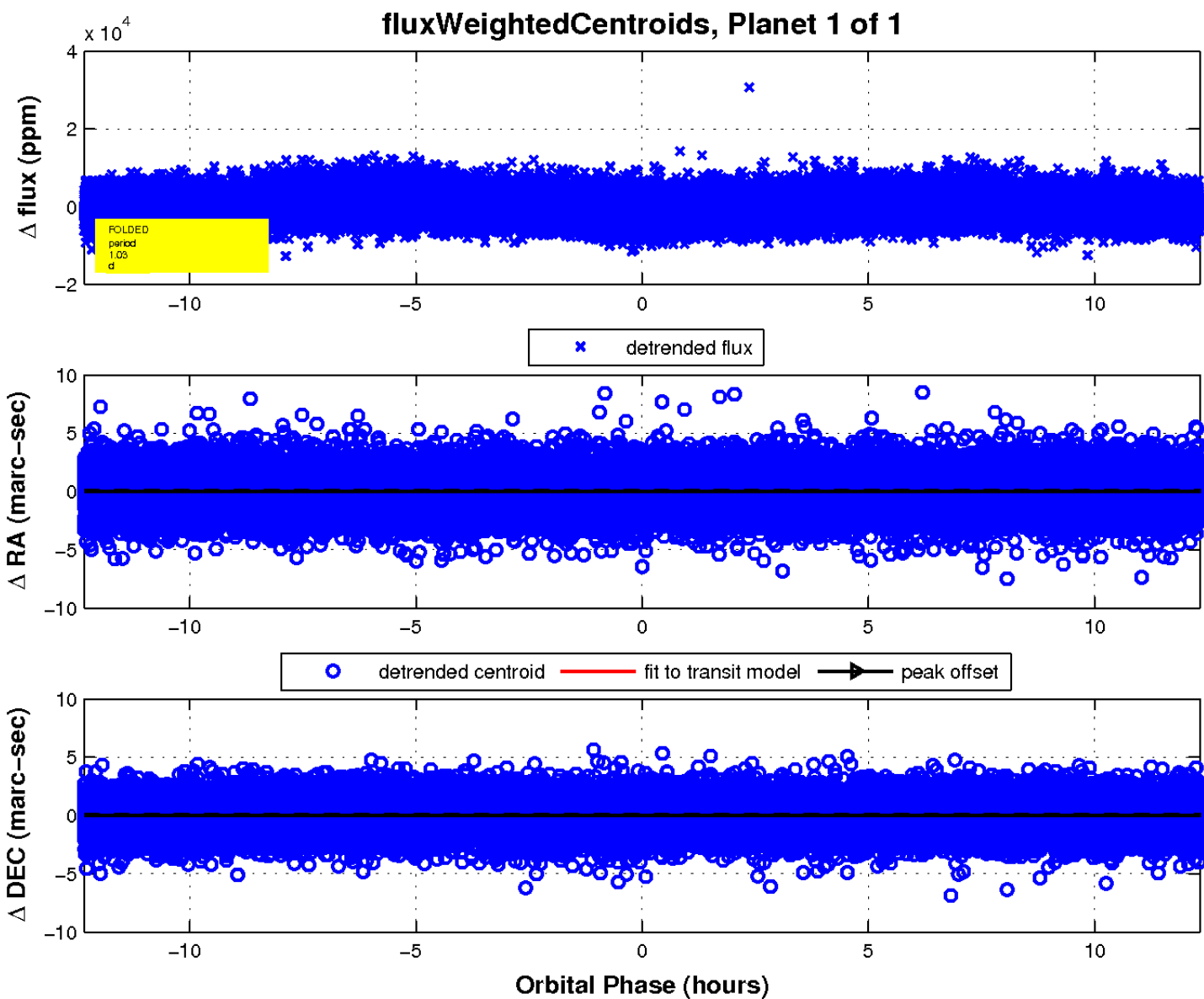
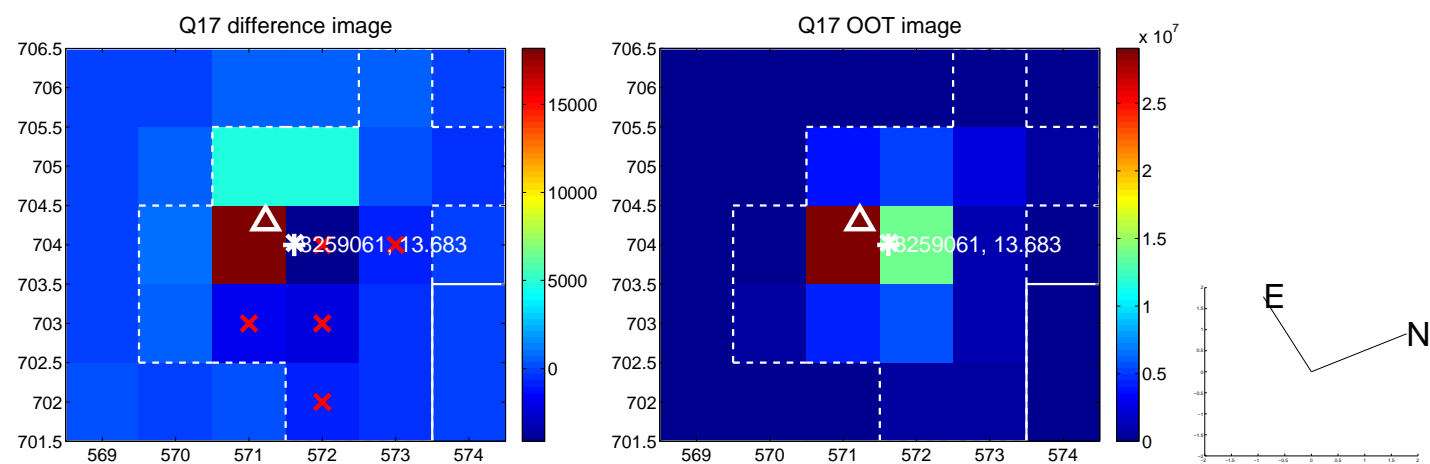




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

