

# KIC 008525024

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008525024-01	OBS	No	3.396884	134.511308	0.1	31.028	10.9	0.0	2.11	6435	0.06	3097.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008525024-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

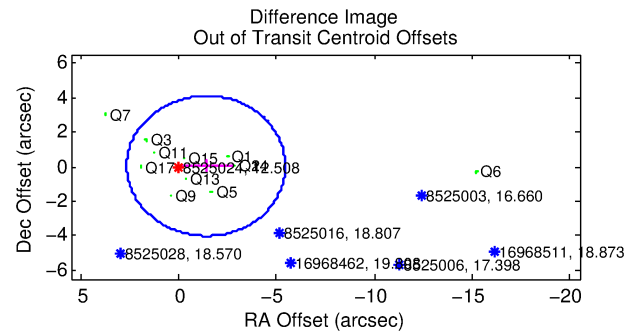
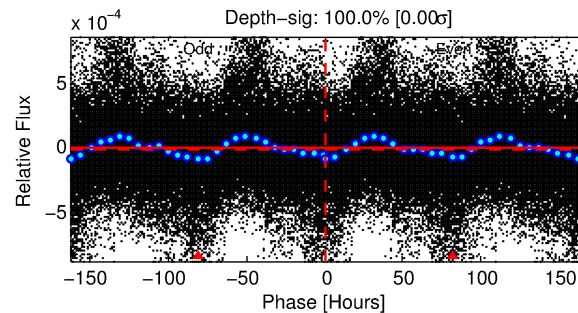
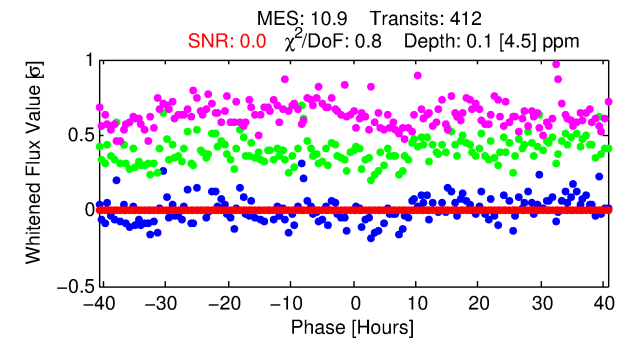
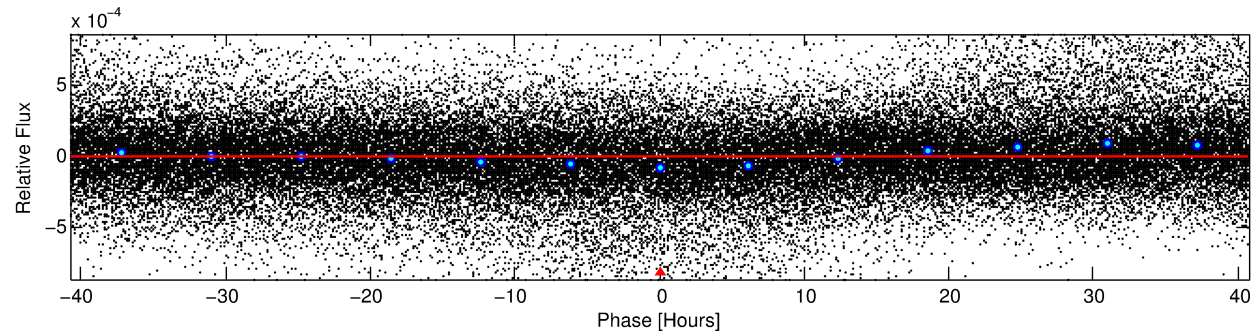
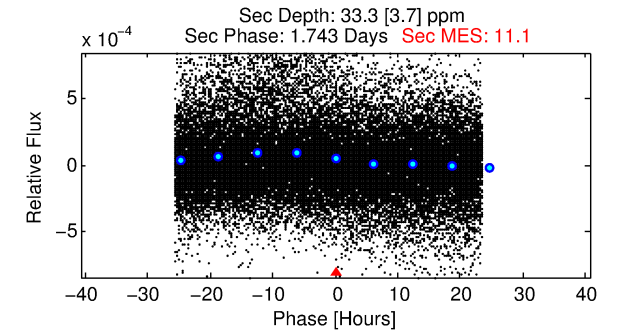
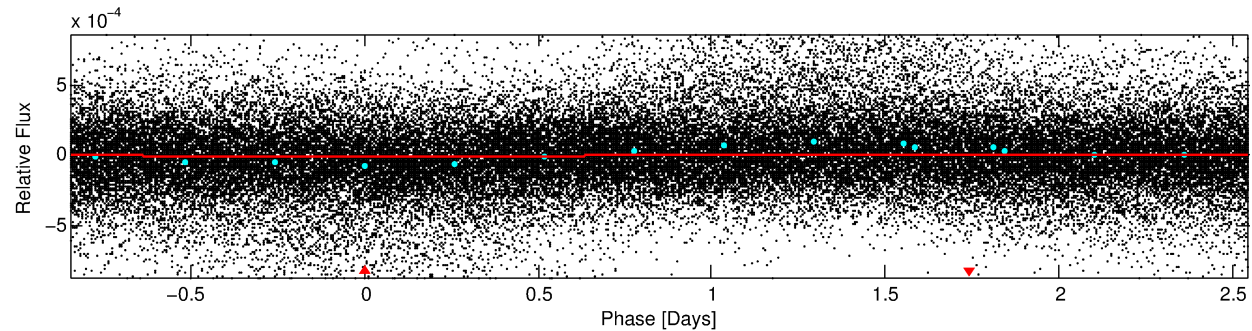
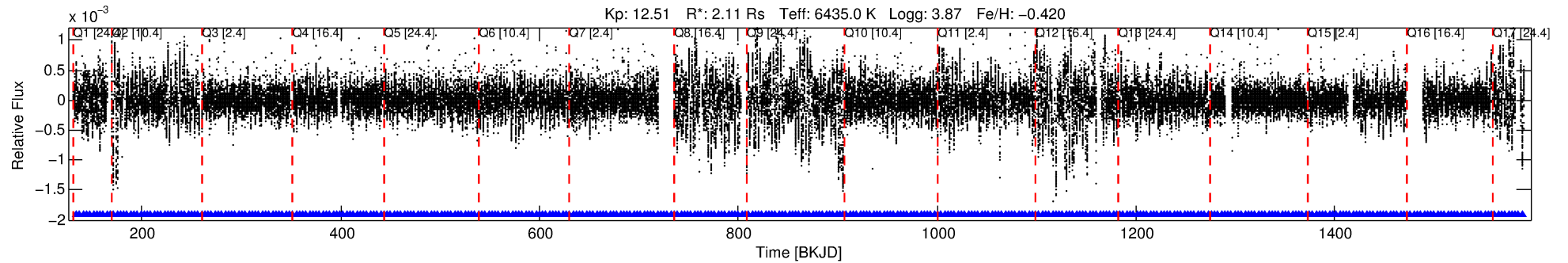
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008525024-01

No Significant Match Found

# DV One-Page Summary

KIC: 8525024 Candidate: 1 of 1 Period: 3.397 d



## DV Fit Results:

Period = 3.39688 [0.01508] d  
Epoch = 134.5113 [2.6234] BKJD  
Rp/R\* = 0.0003 [0.0184]  
a/R\* = 1.07 [54.38]  
b = 0.17 [2224.77]  
Seff = 3097.65 [1661.19]  
Teff = 1902 [255] K  
Rp = 0.06 [4.25] Re  
a = 0.0470 [0.0151] AU  
Ag = 11267.59 [1598195.10] [0.01σ]  
Teffp = 30303 [1074539] K [0.03σ]

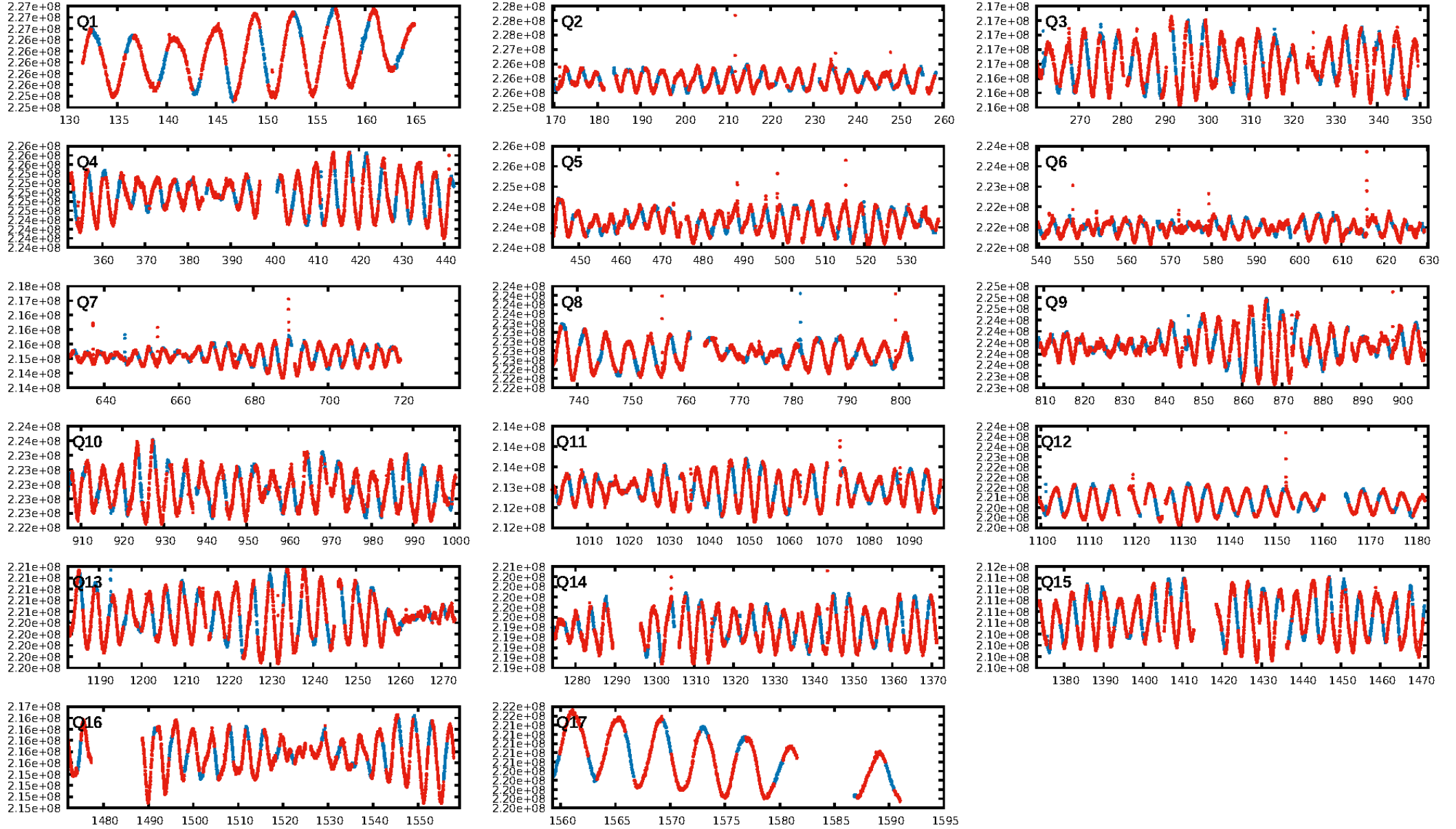
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [393/393]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 1.400 arcsec [1.04σ]  
KicOffset-rm: 1.418 arcsec [1.22σ]  
OotOffset-st: 3/4/0/5 [12]  
KicOffset-st: 3/4/0/5 [12]  
DiffImageQuality-fgm: 0.75 [9/12]  
DiffImageOverlap-fno: 1.00 [17/17]

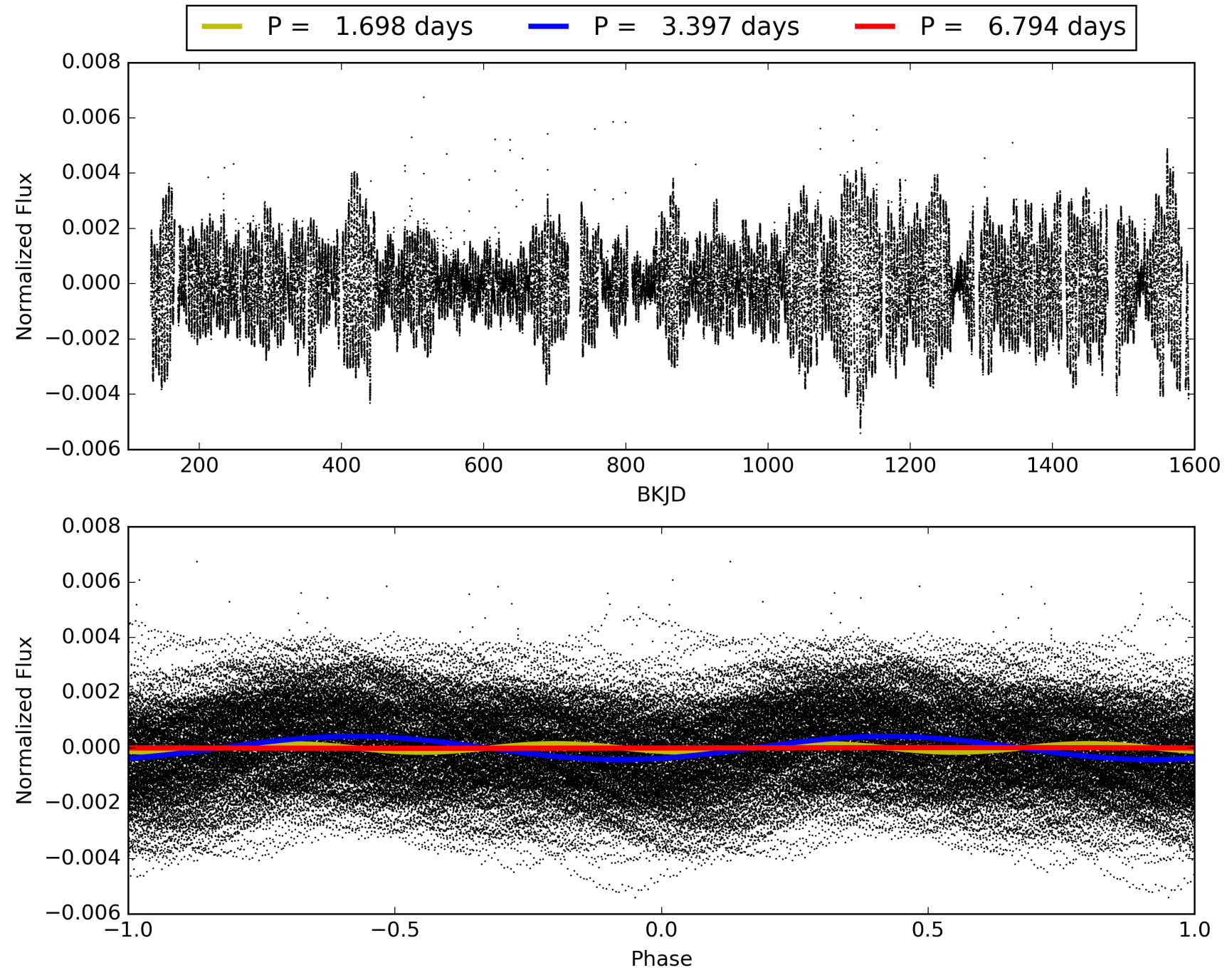
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:44:05 Z

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

# TCE 008525024-01, PDC Light Curves

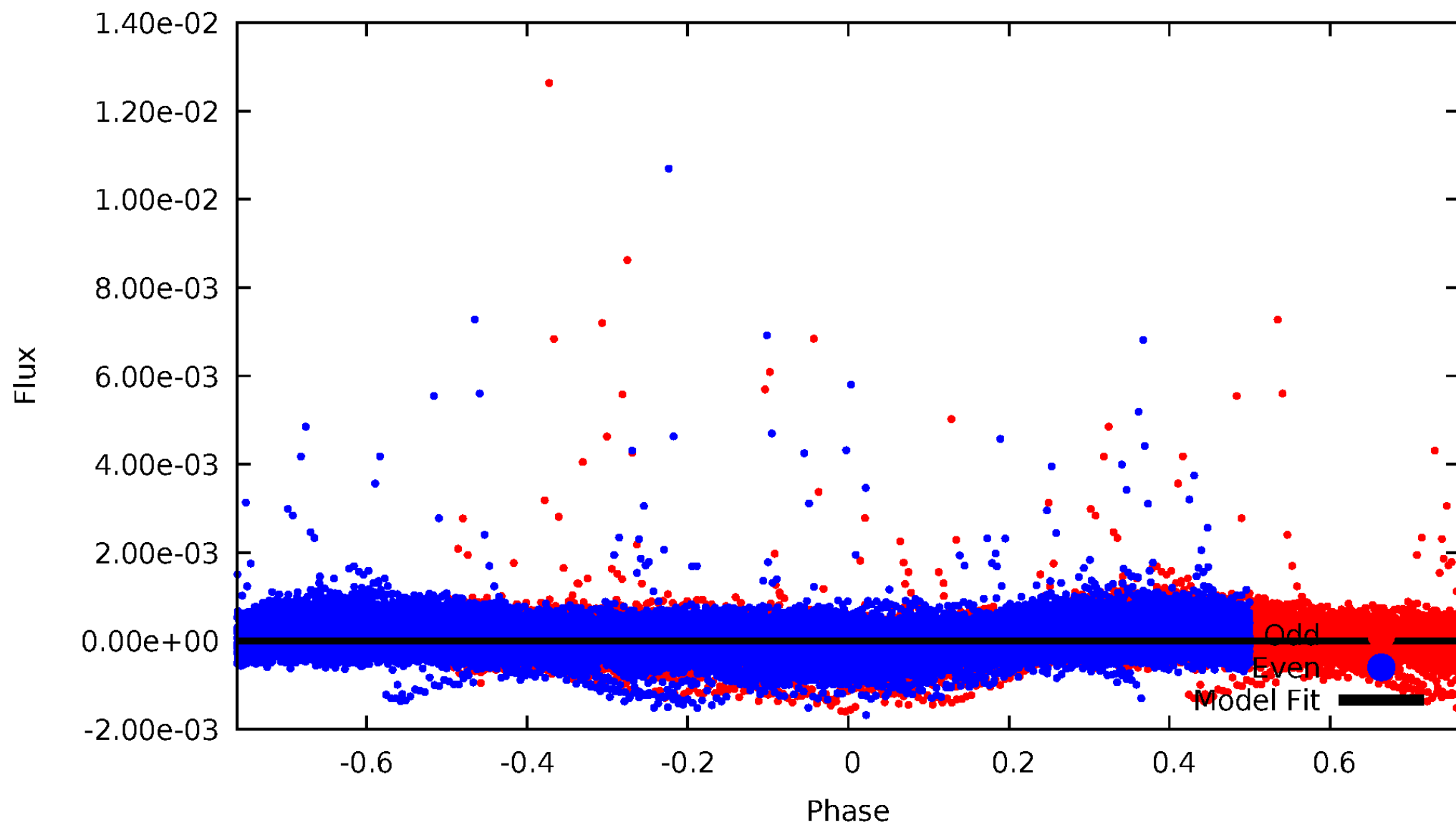


# TCE 008525024-01



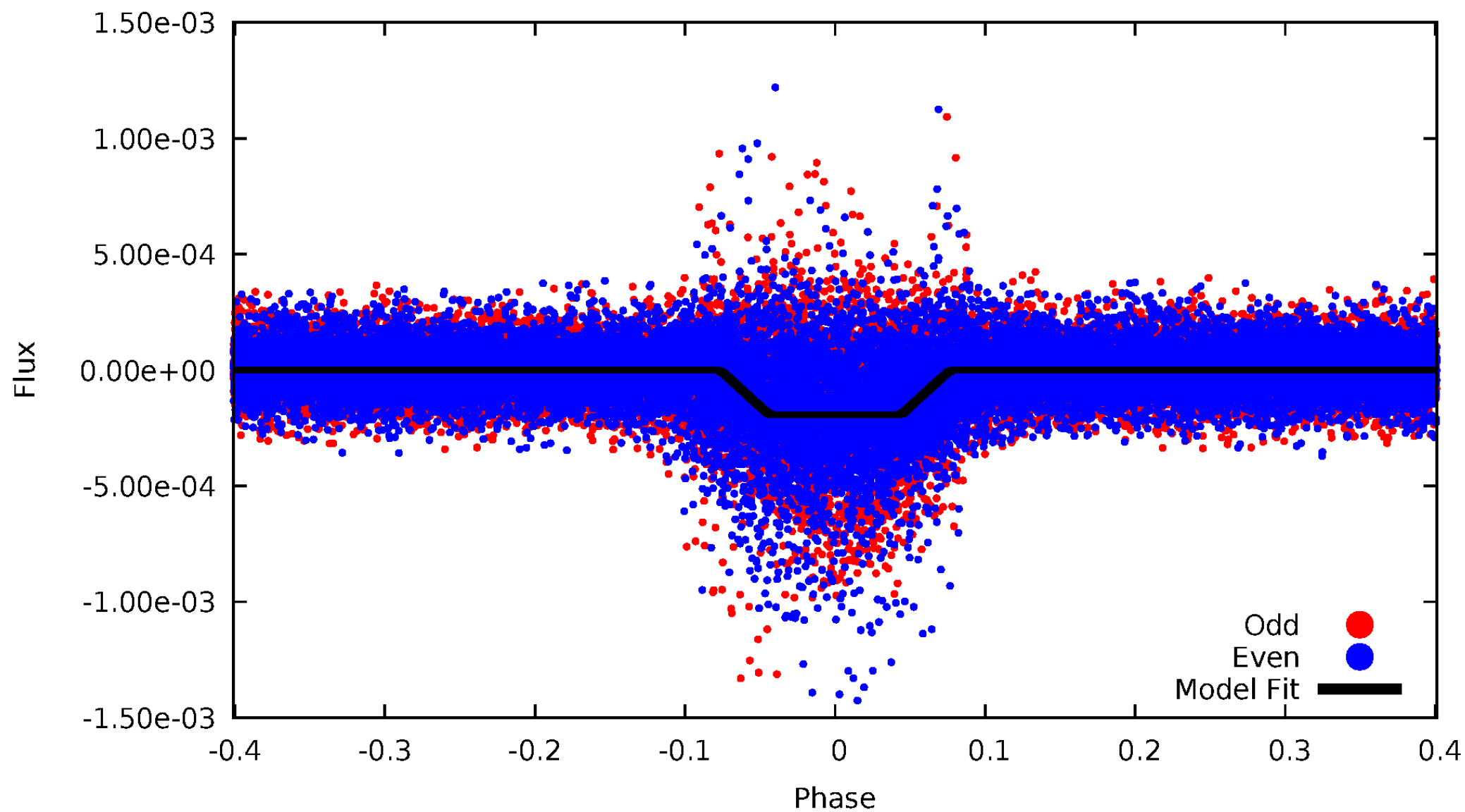
# DV Odd/Even

TCE 008525024-01



# ALT Odd/Even

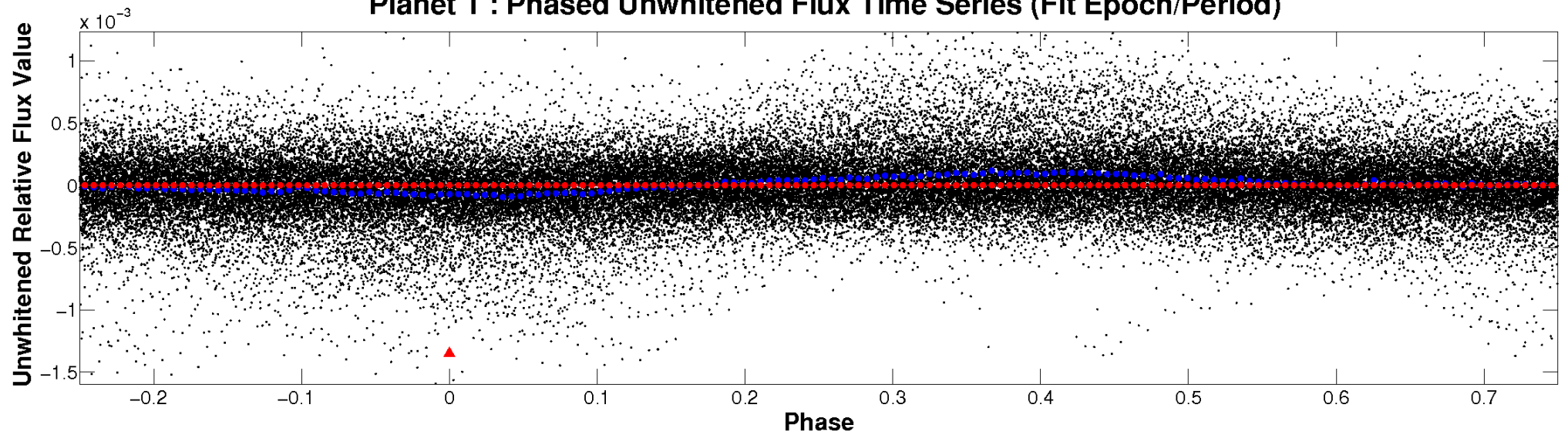
TCE 008525024-01



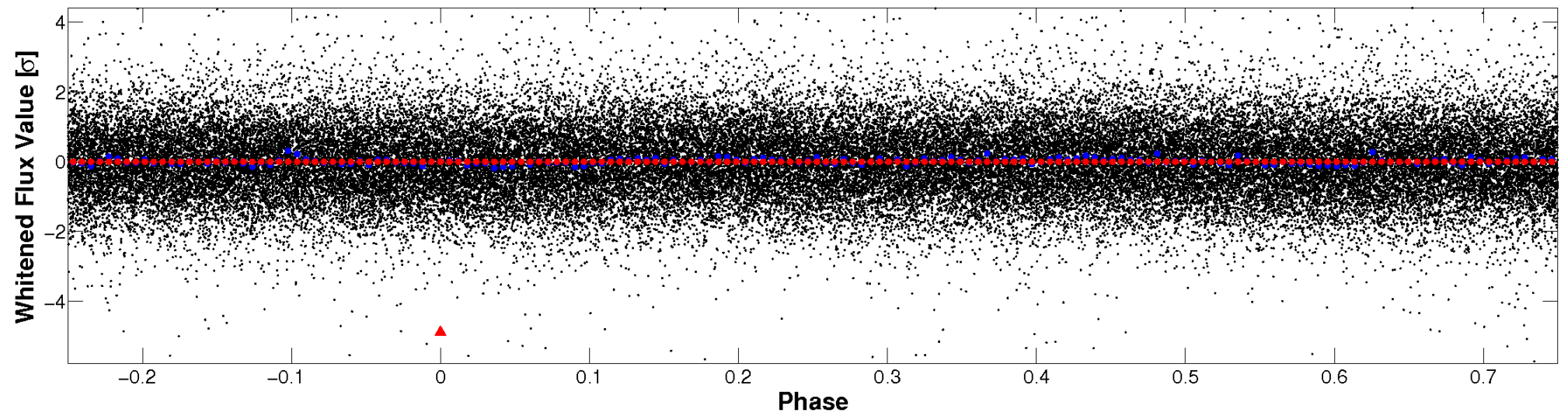


# Non-Whitened Vs. Whitened Light Curve

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

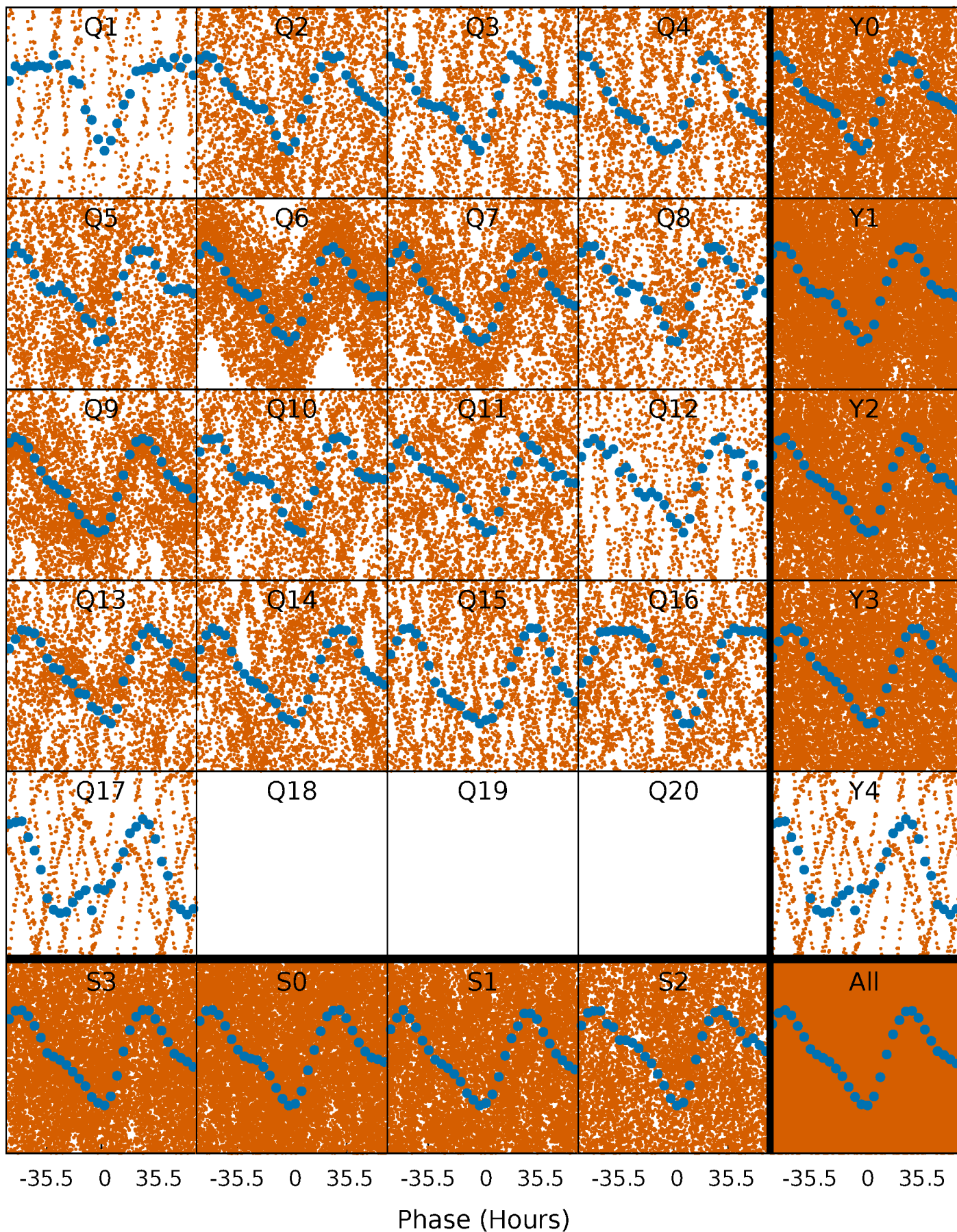


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

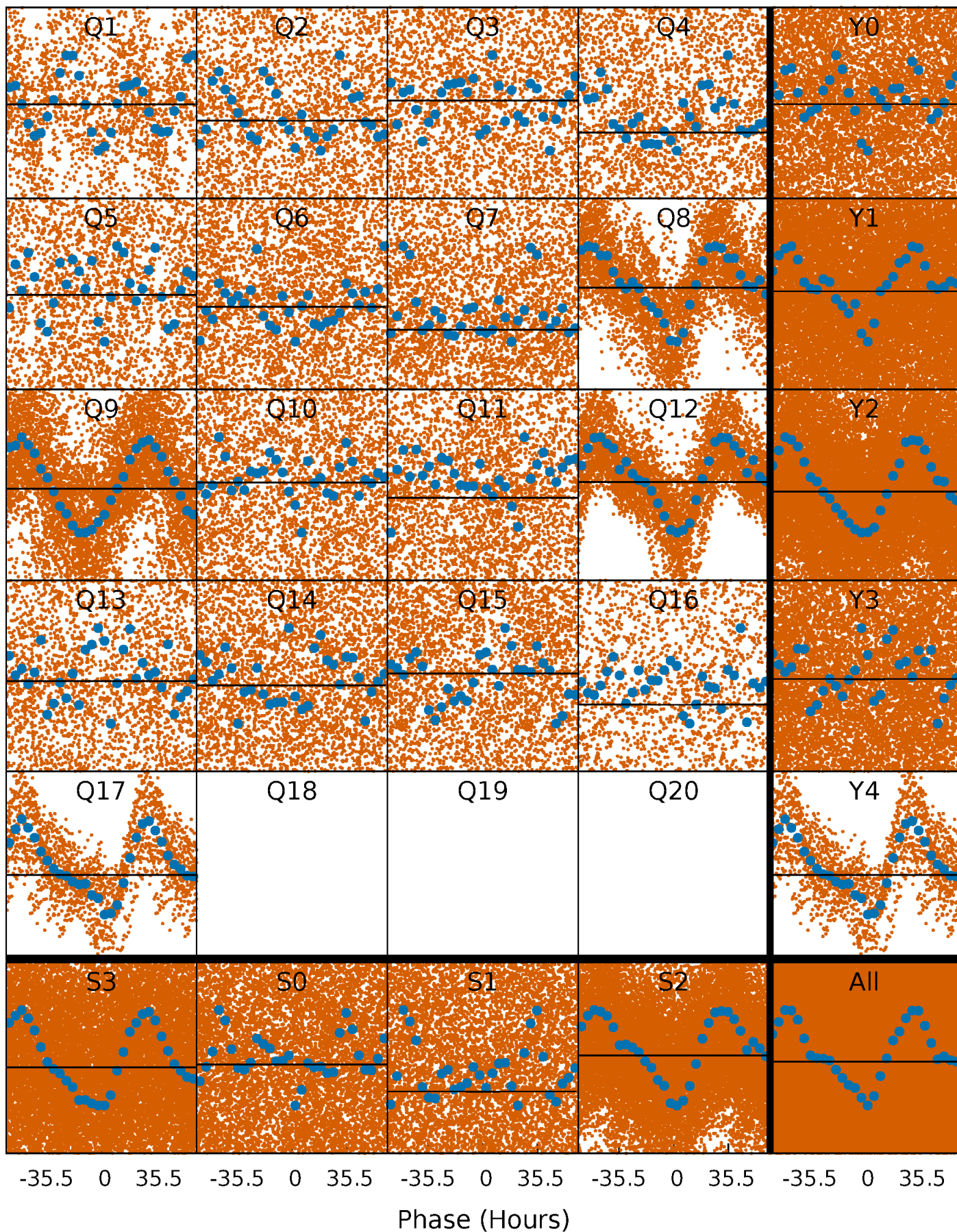
TCE 008525024-01 P= 3.396884 Days  $T_0=134.511308$  (BKJD)





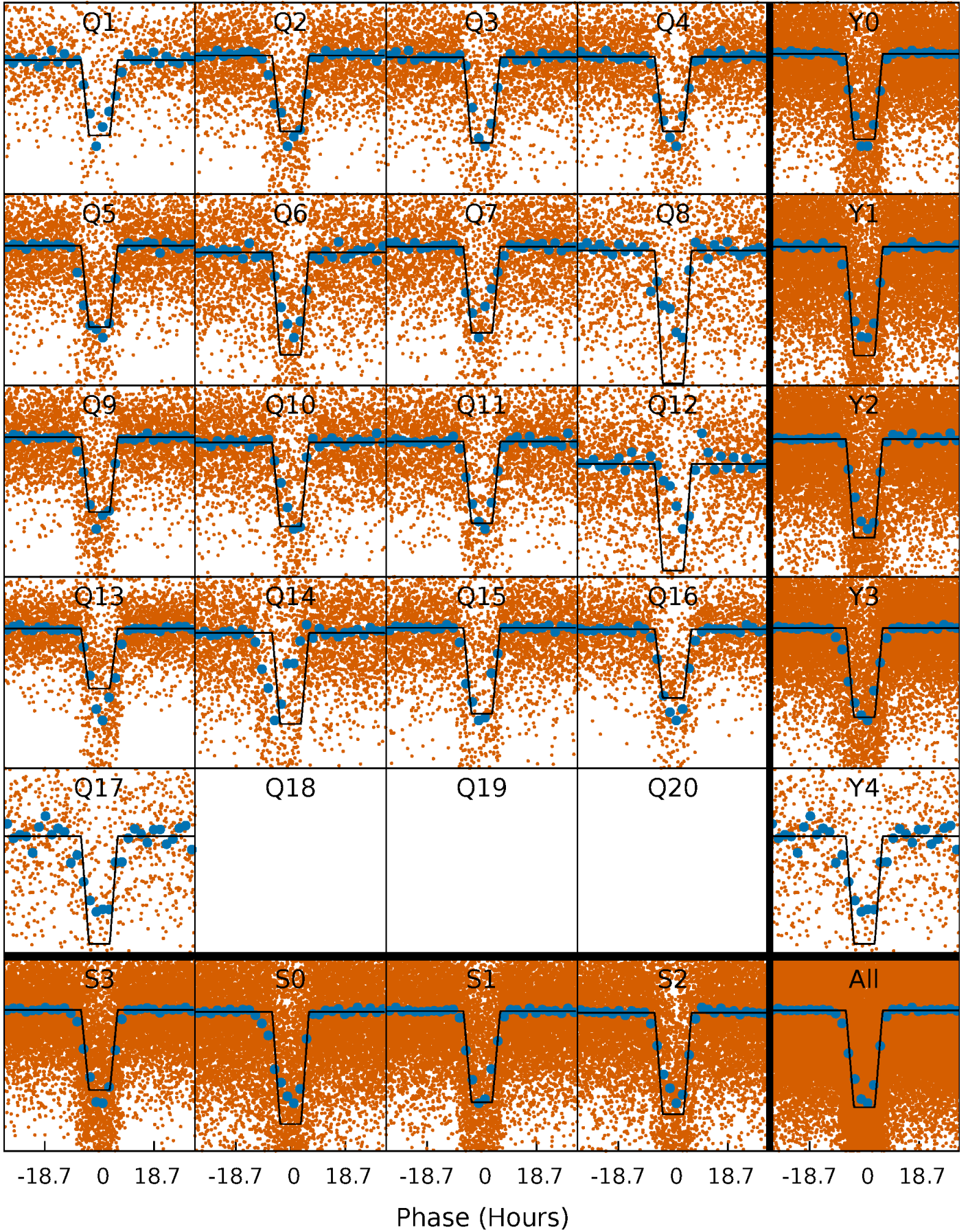
# DV Quarter-Phased Transit Curves

TCE 008525024-01 P= 3.396884 Days  $T_0=134.511308$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008525024-01 P= 3.397957 Days  $T_0=134.455313$  (BKJD)

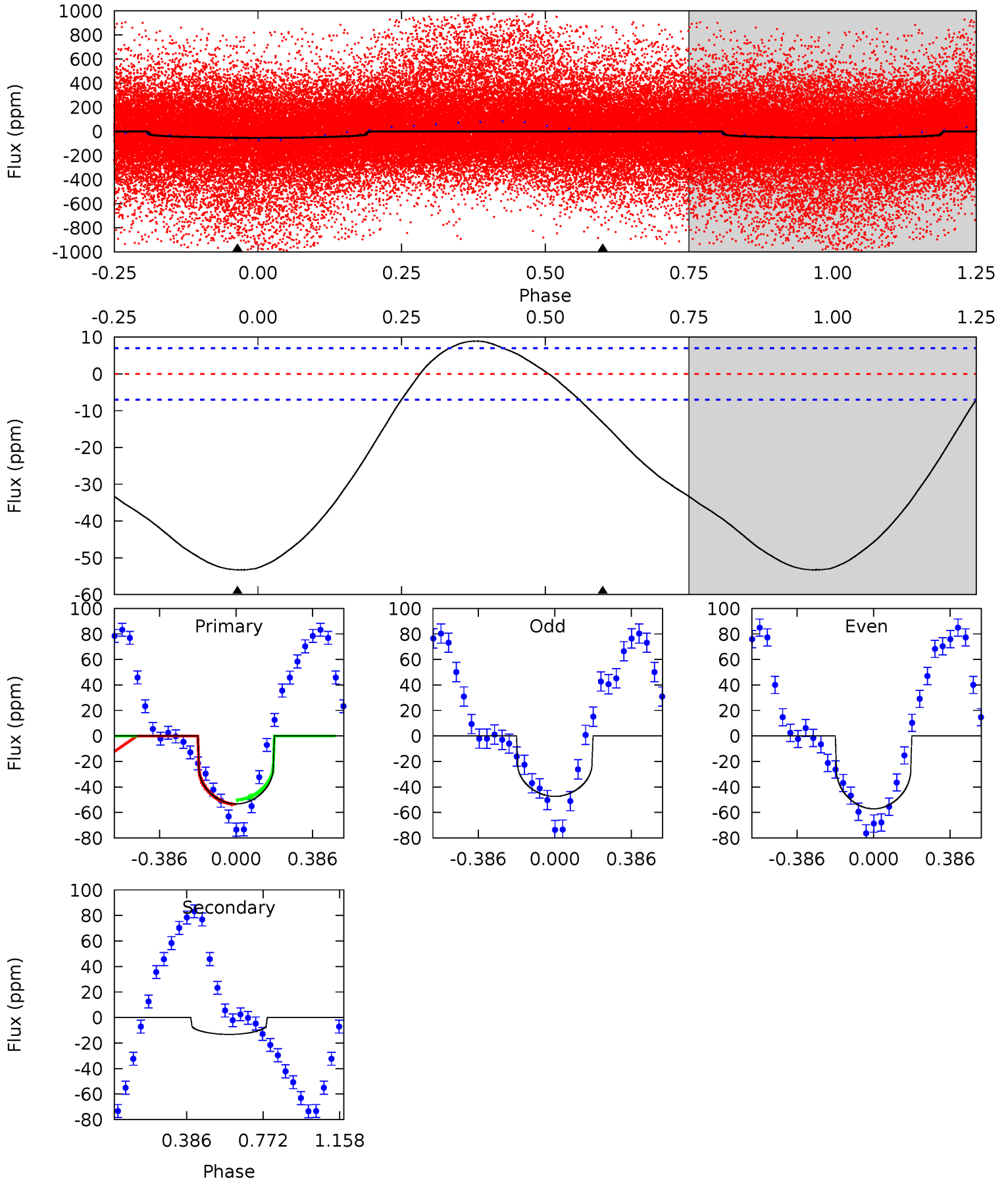




# DV Model-Shift Uniqueness Test

008525024-01, P = 3.396884 Days, E = 131.114424 Days

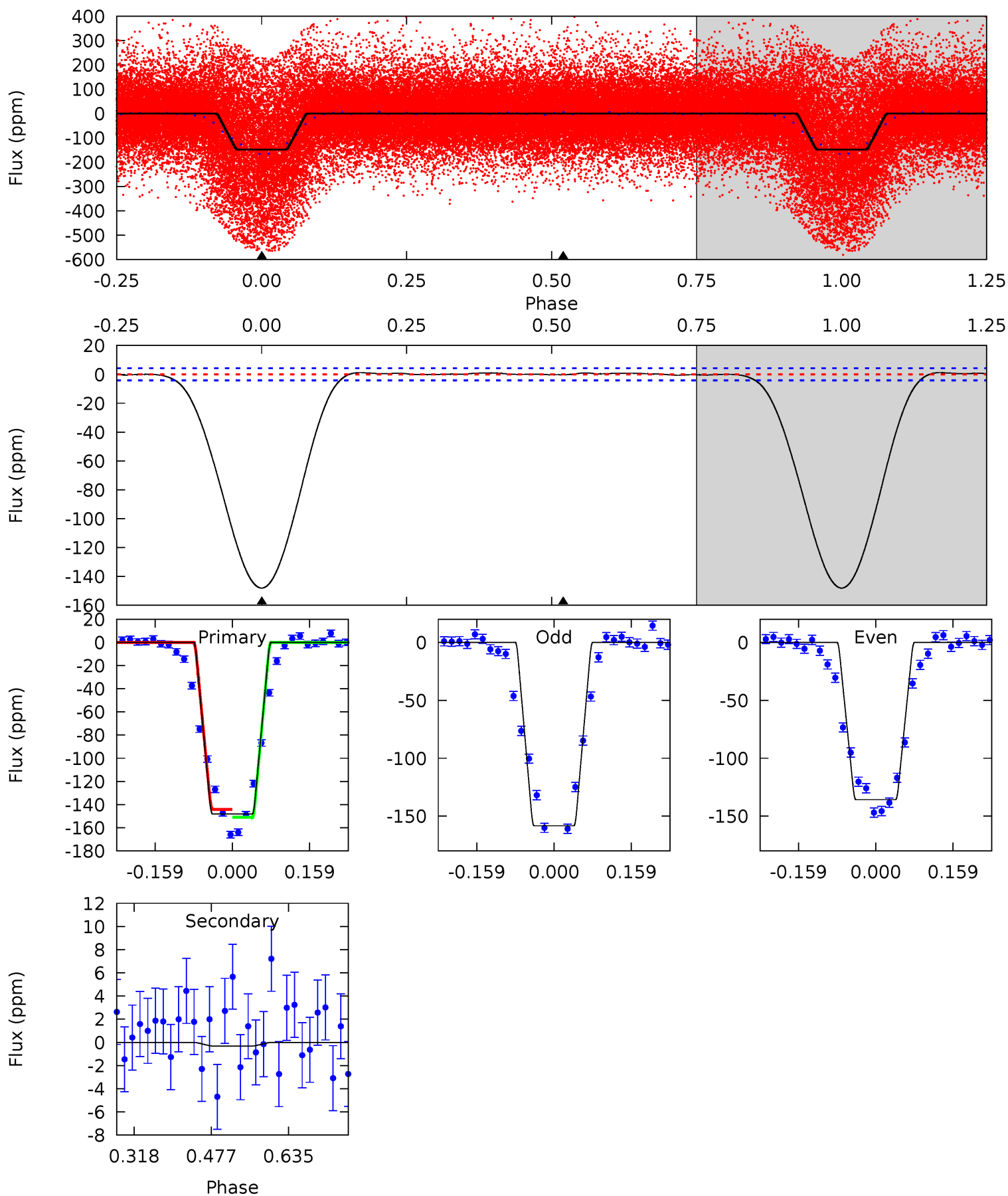
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.6	8.09	0	0	4.27	0.87	3.39	32.6	32.6	8.09	8.09	3.00	2.04	0.14	1.04



# Alt Model-Shift Uniqueness Test

008525024-01, P = 3.397957 Days, E = 131.057356 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
157.5	0.34	0	0	4.47	1.41	0.57	157.5	157.5	0.34	0.34	11.9	1.18	0.01	3.62





### Stellar Parameters For KIC 008525024

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6435^{+176}_{-176}$	$3.868^{+0.312}_{-0.098}$	$-0.420^{+0.300}_{-0.300}$	$2.109^{+0.453}_{-0.680}$	$1.196^{+0.227}_{-0.206}$	$0.180^{+0.344}_{-0.066}$
	+3%/-3%	+8%/-3%	+71%/-71%	+21%/-32%	+19%/-17%	+192%/-37%
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 008525024-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-13 \pm 2$	$2.66^{+3.03}_{-1.77}$	$2591^{+164}_{-220}$	$3739^{+2078}_{-1059}$	$2.212^{+17.855}_{-1.709}$
Alt.	$-0 \pm 1$	$4.27^{+3.32}_{-2.73}$	$2601^{+161}_{-242}$	$-2811^{+431}_{-152}$	$0.016^{+0.183}_{-0.060}$

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

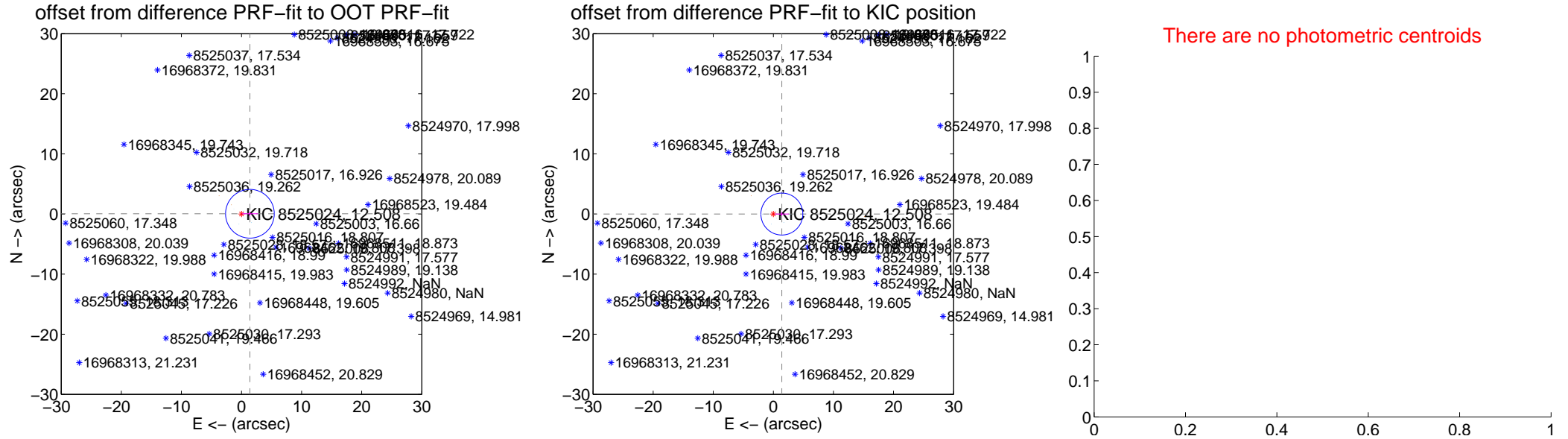
## DV Centroid Data

Supplemental centroid analysis for 008525024-01. Kepler magnitude: 12.51. Transit SNR 0.02

There are 9 quarters with good PRF difference image offsets

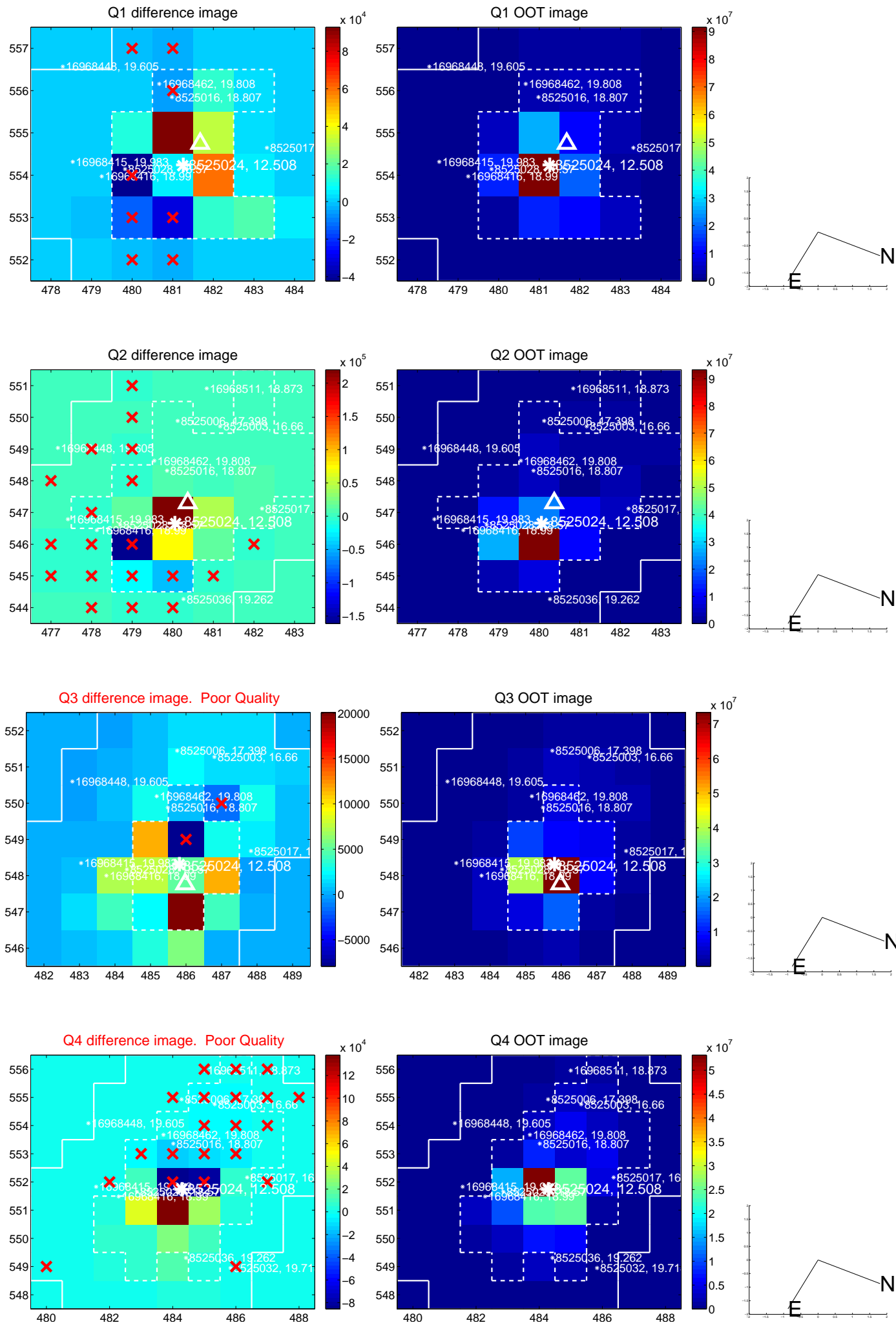
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.400 \pm 1.351$	1.04	$-1.399 \pm 1.354$	$0.039 \pm 0.353$
PRF-fit source offset from KIC position	$1.418 \pm 1.163$	1.22	$-1.418 \pm 1.162$	$-0.010 \pm 0.329$
photometric centroid source offset	—	—	—	—

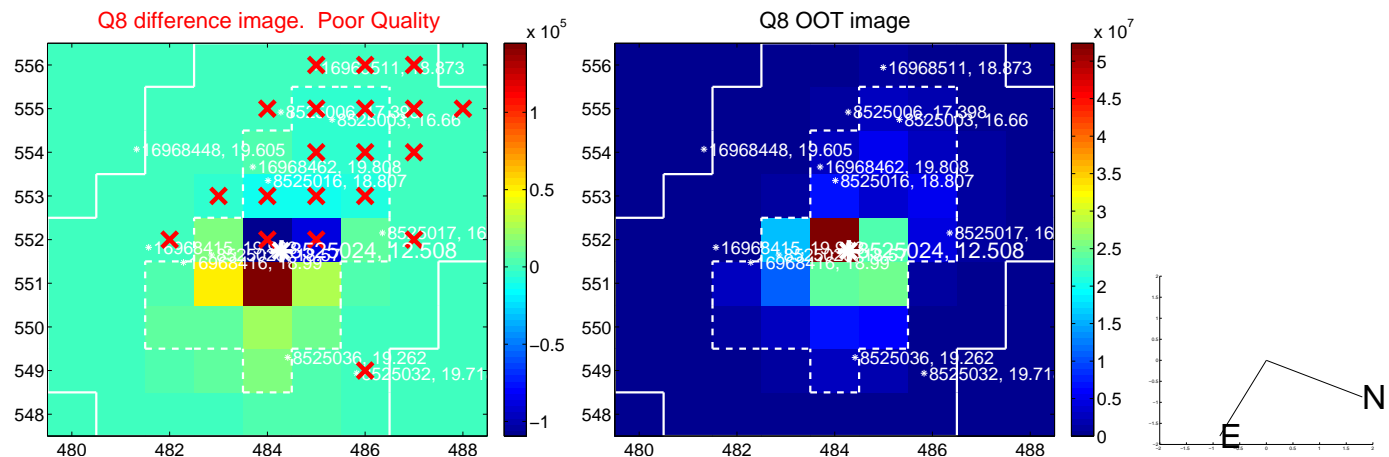
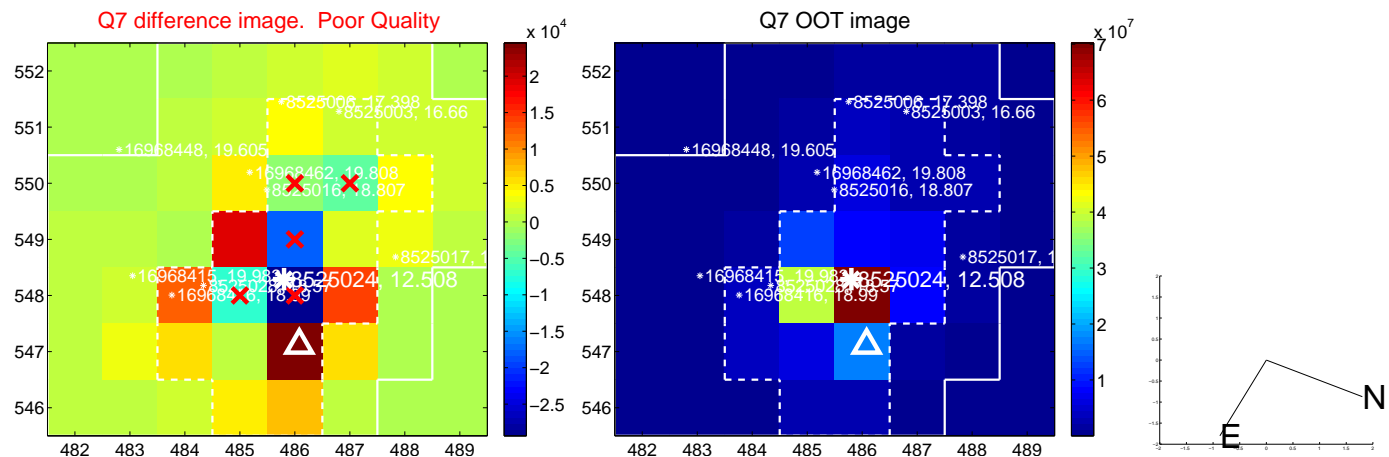
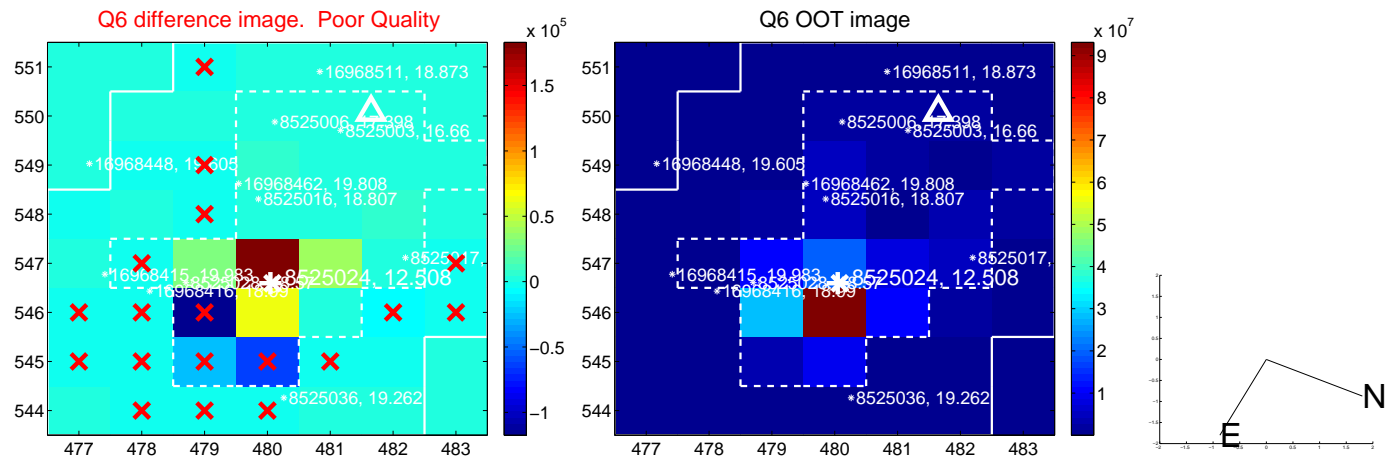
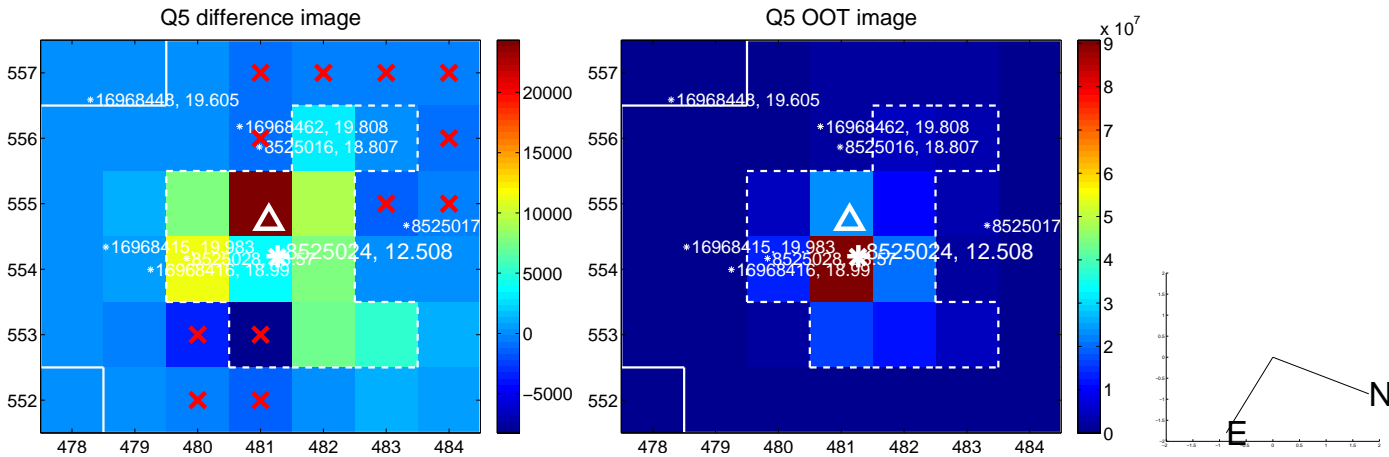


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

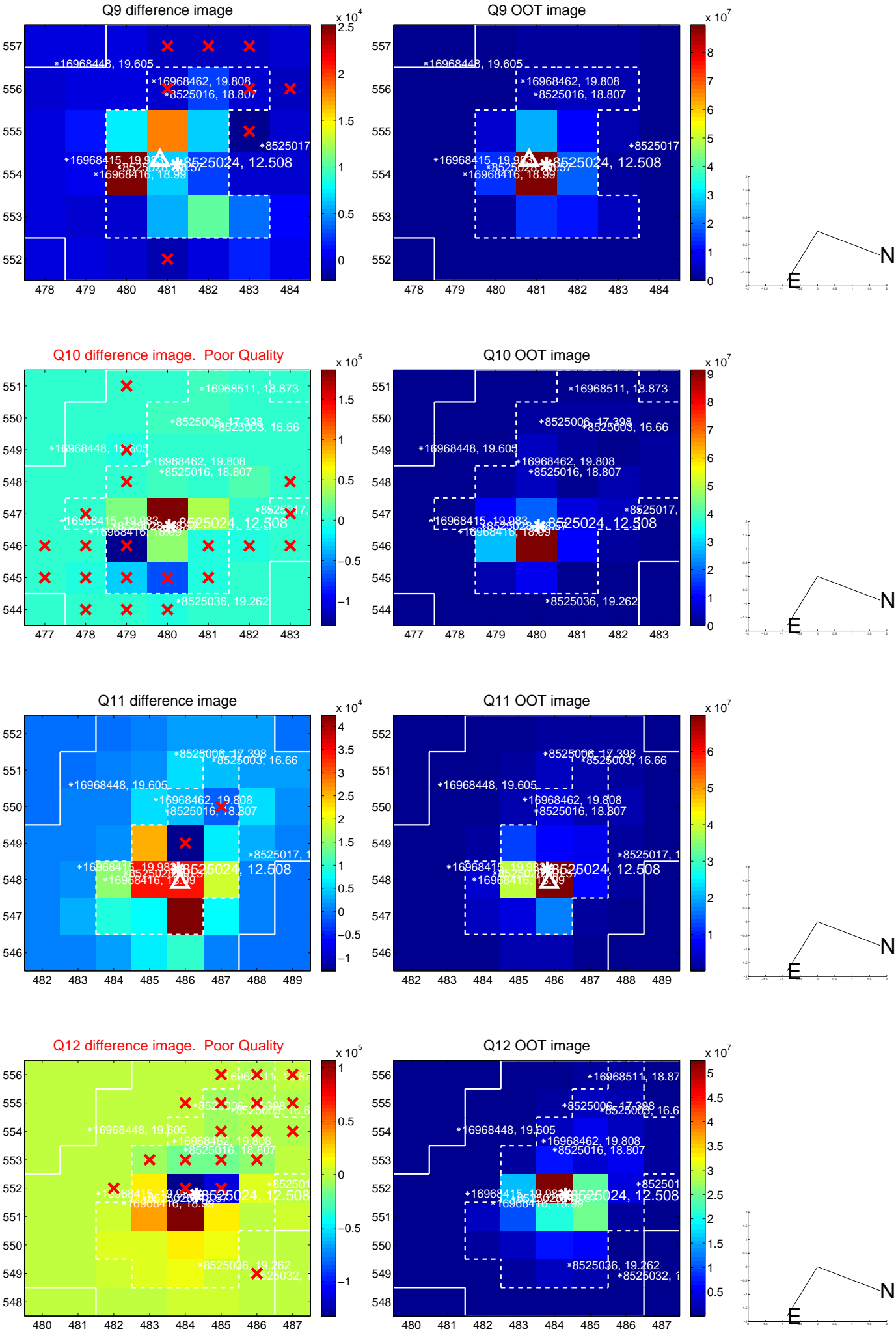


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

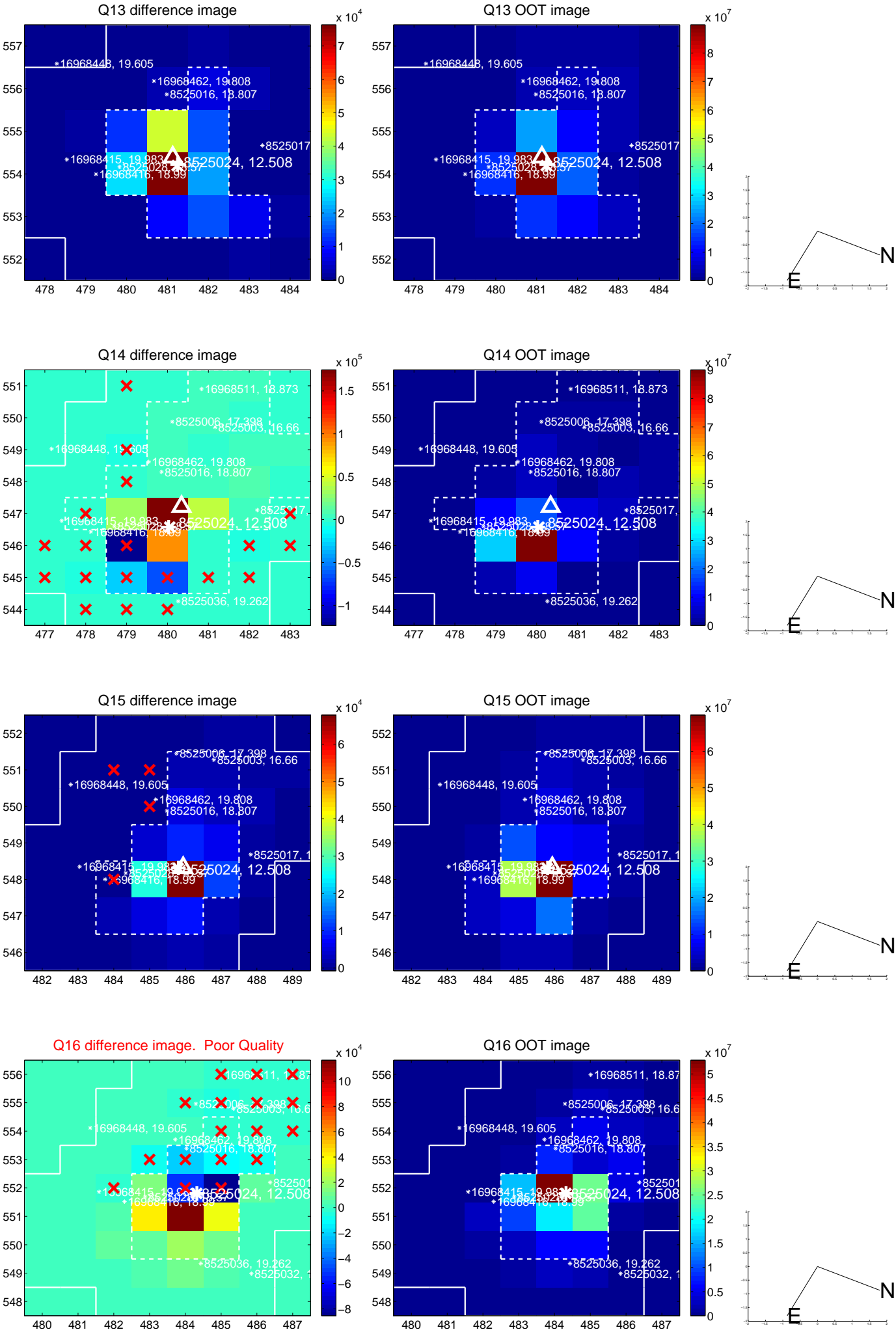




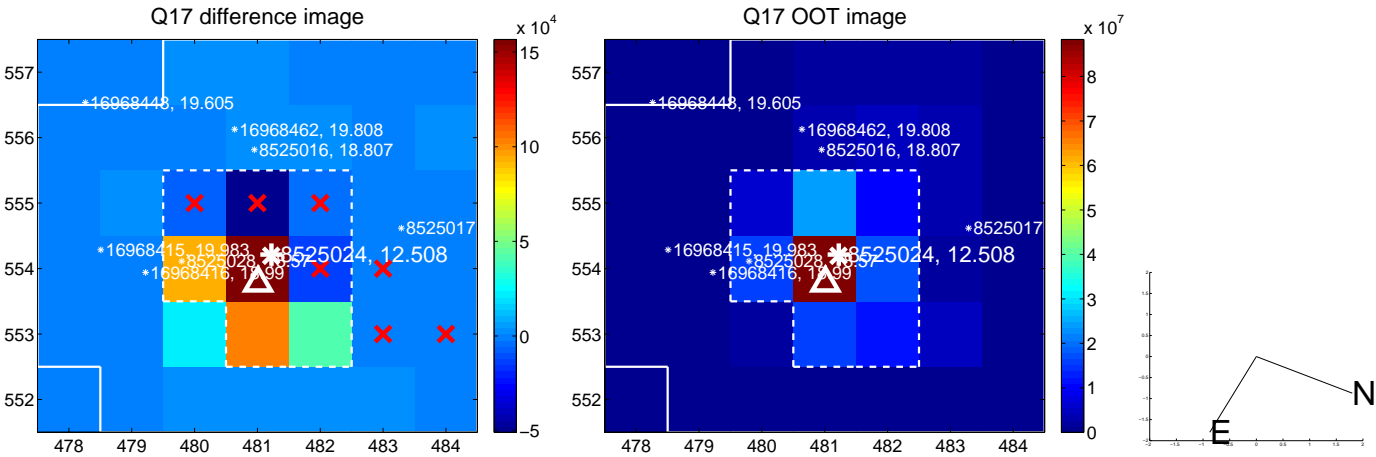
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

