

# KIC 004950557

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004950557-01	OBS	6483.01	24.714787	149.492923	206138.3	5.093	10362.1	4897.8	1.86	6300	114.75	155.94

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004950557-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—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 004950557-01

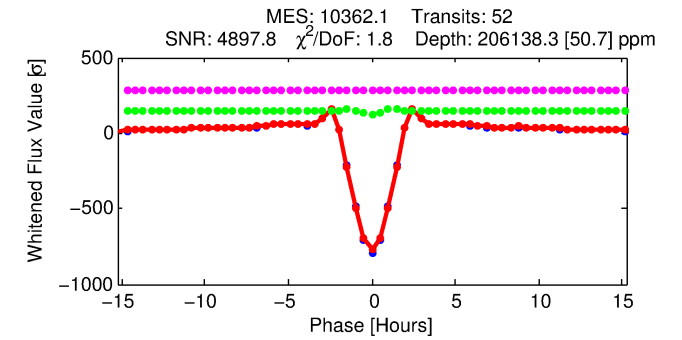
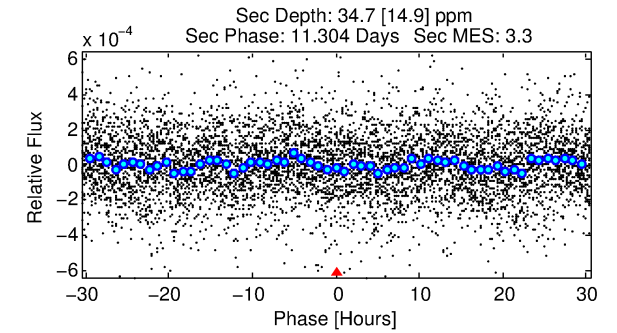
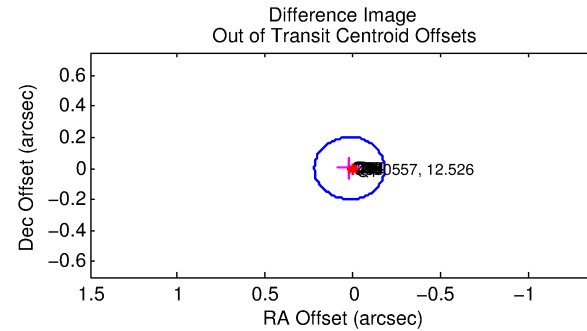
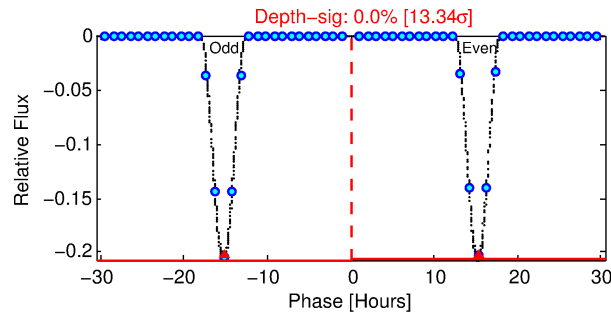
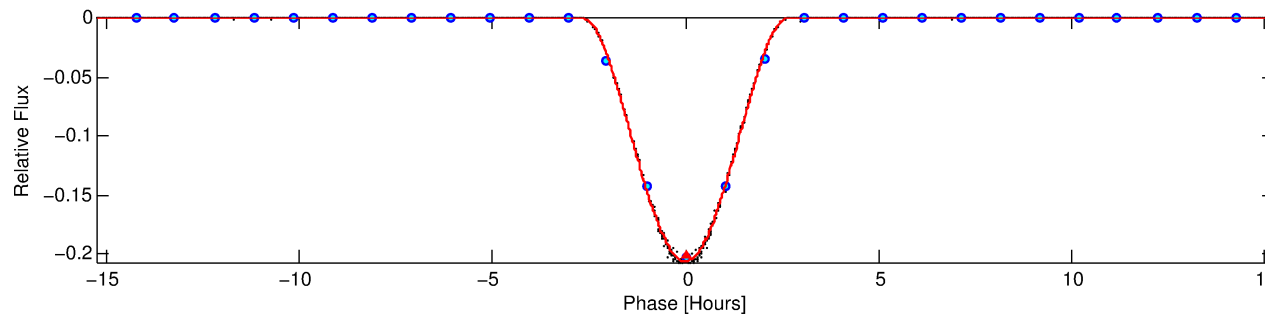
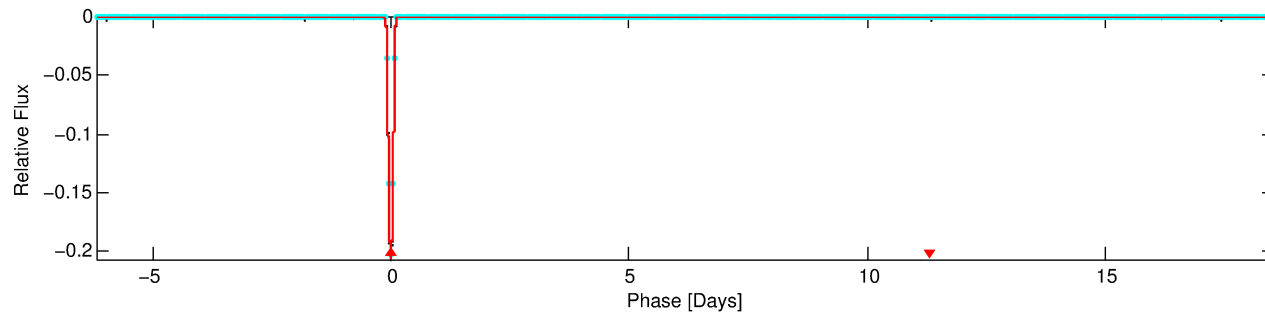
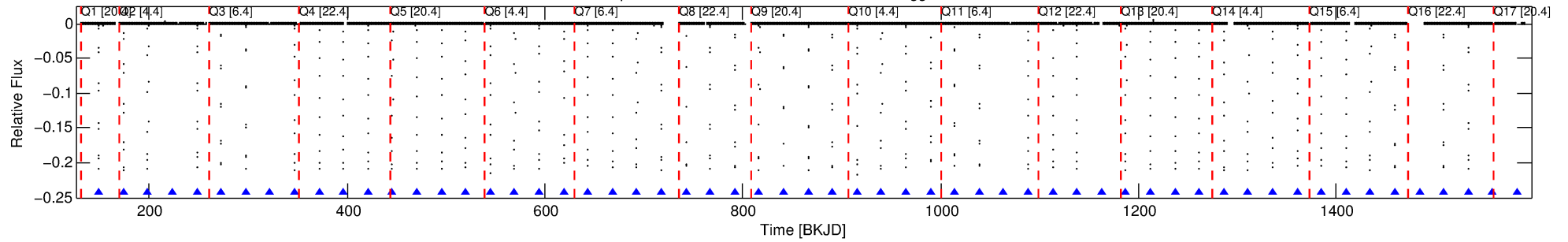
No Significant Match Found

# DV One-Page Summary

KIC: 4950557 Candidate: 1 of 1 Period: 24.715 d

KOI: K06483.01 Corr: 0.998

Kp: 12.53 R\*: 1.86 Rs Teff: 6300.0 K Logg: 3.98 Fe/H: -0.120



## DV Fit Results:

Period = 24.71479 [0.00000] d  
Epoch = 149.4929 [0.0000] BKJD  
Rp/R\* = 0.5648 [0.0126]  
a/R\* = 49.72 [0.14]  
b = 0.81 [0.02]  
Seff = 155.94 [69.56]  
Teq = 901 [100] K  
Rp = 114.75 [35.84] Re  
a = 0.1771 [0.0498] AU  
Ag = 0.05 [0.03] [-34.29σ]  
Teffp = 644 [72] K [-2.09σ]

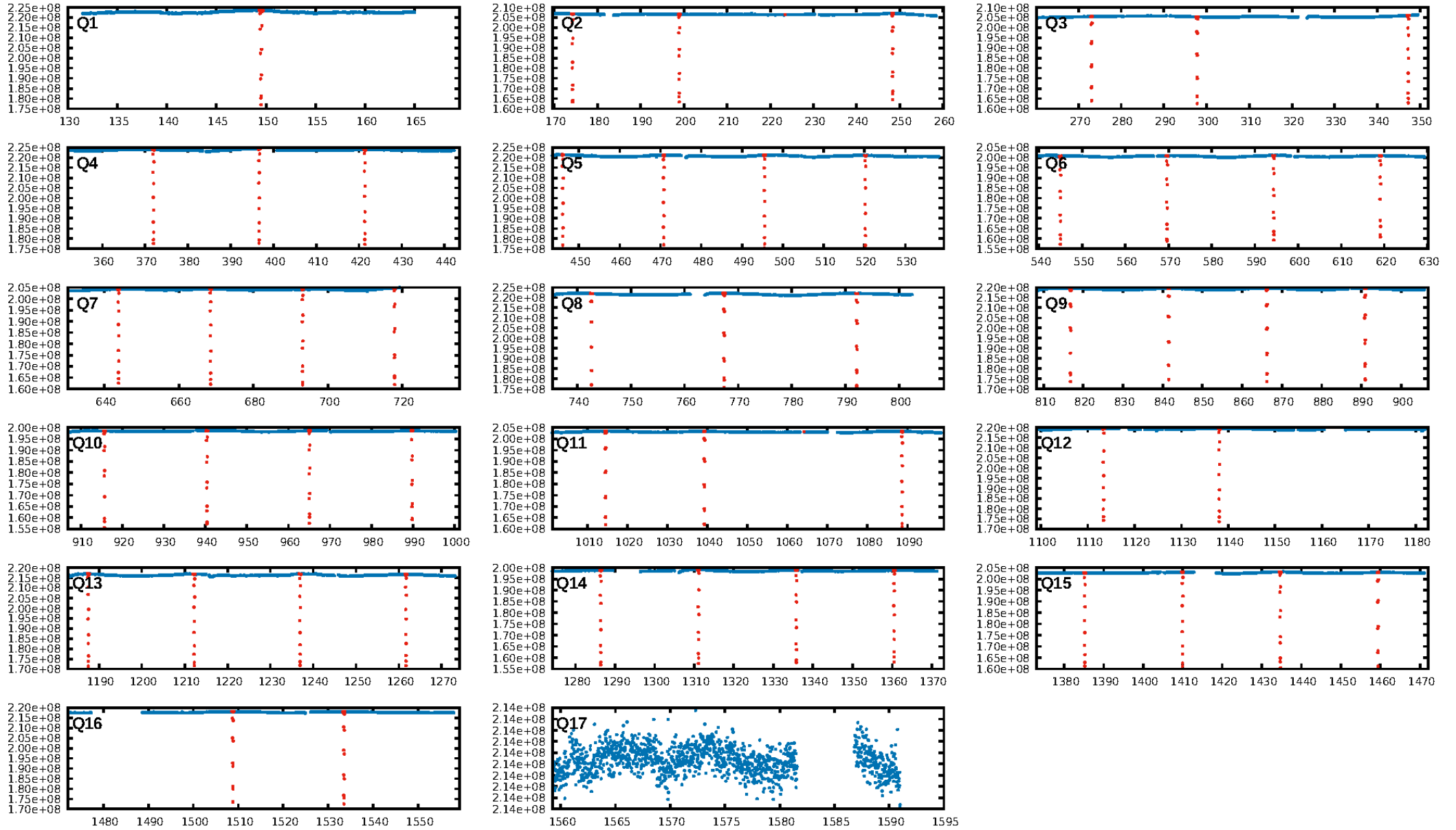
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 67.1%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [51/51]  
GhostDiagnostic-chr: 4.849  
Centroid-sig: 0.0%  
Centroid-so: 0.137 arcsec [237.71σ]  
OotOffset-rm: 0.021 arcsec [0.31σ]  
KicOffset-rm: 0.115 arcsec [1.70σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [16/16]

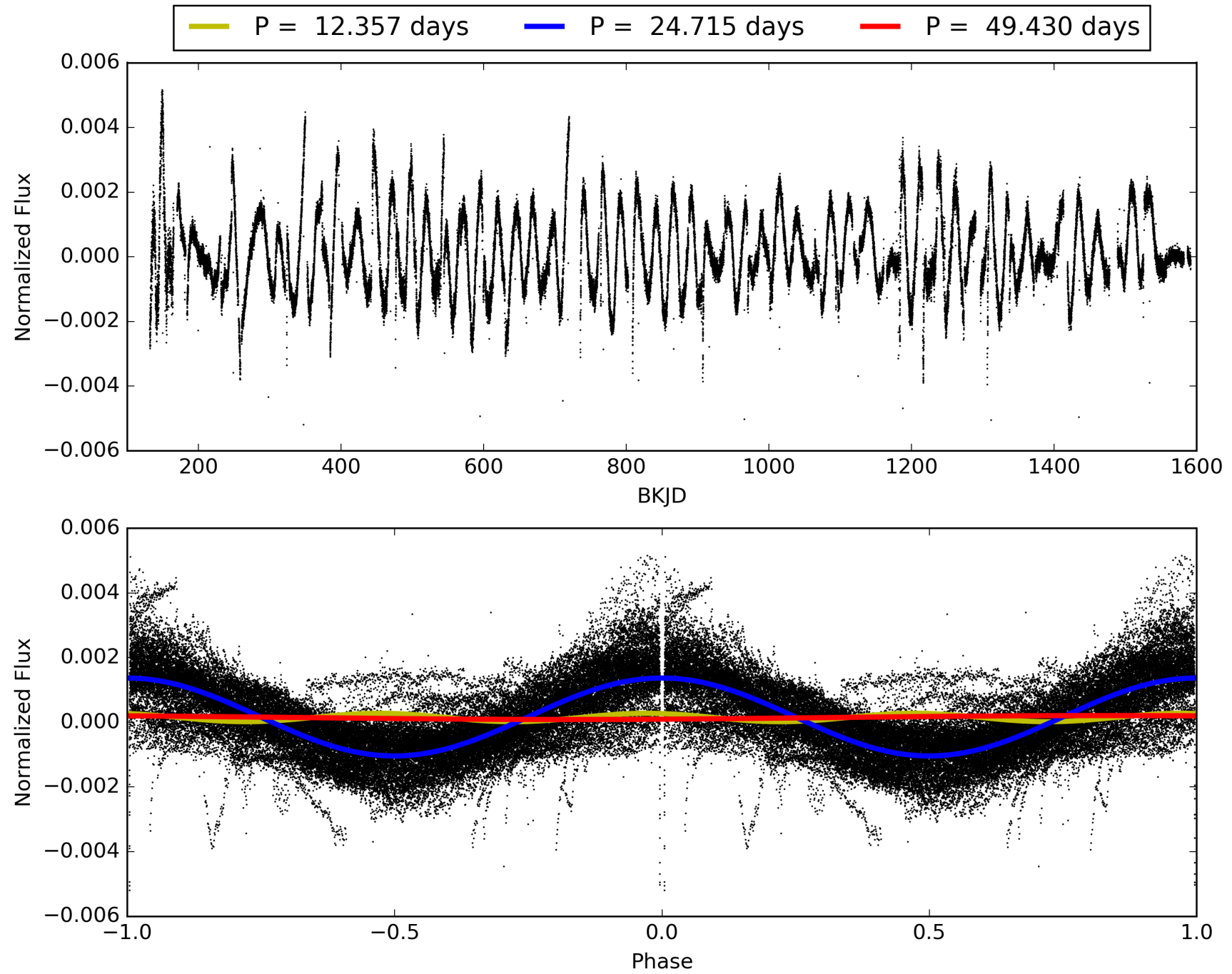
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:27:07 Z

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

# TCE 004950557-01, PDC Light Curves

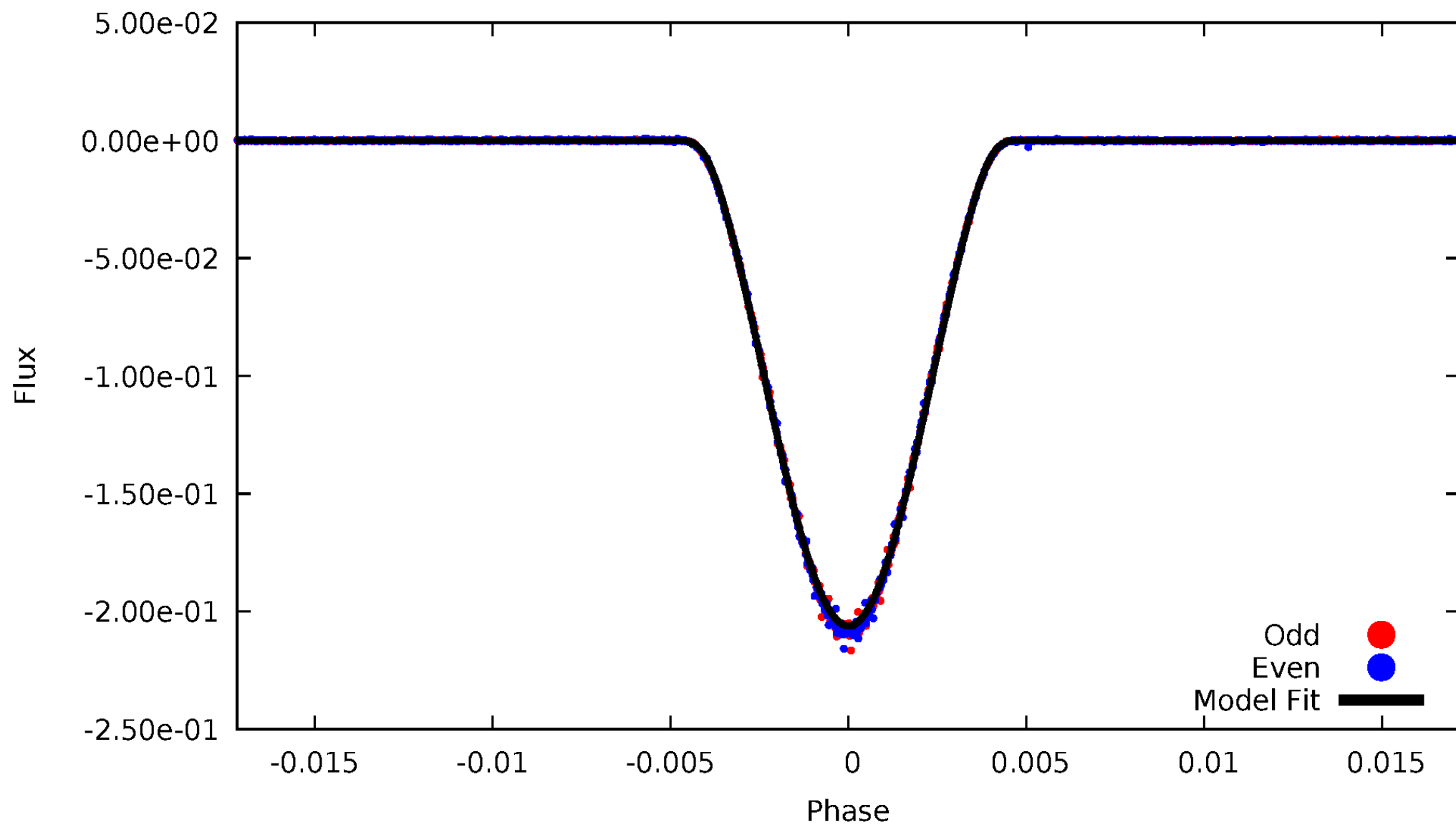


TCE 004950557-01



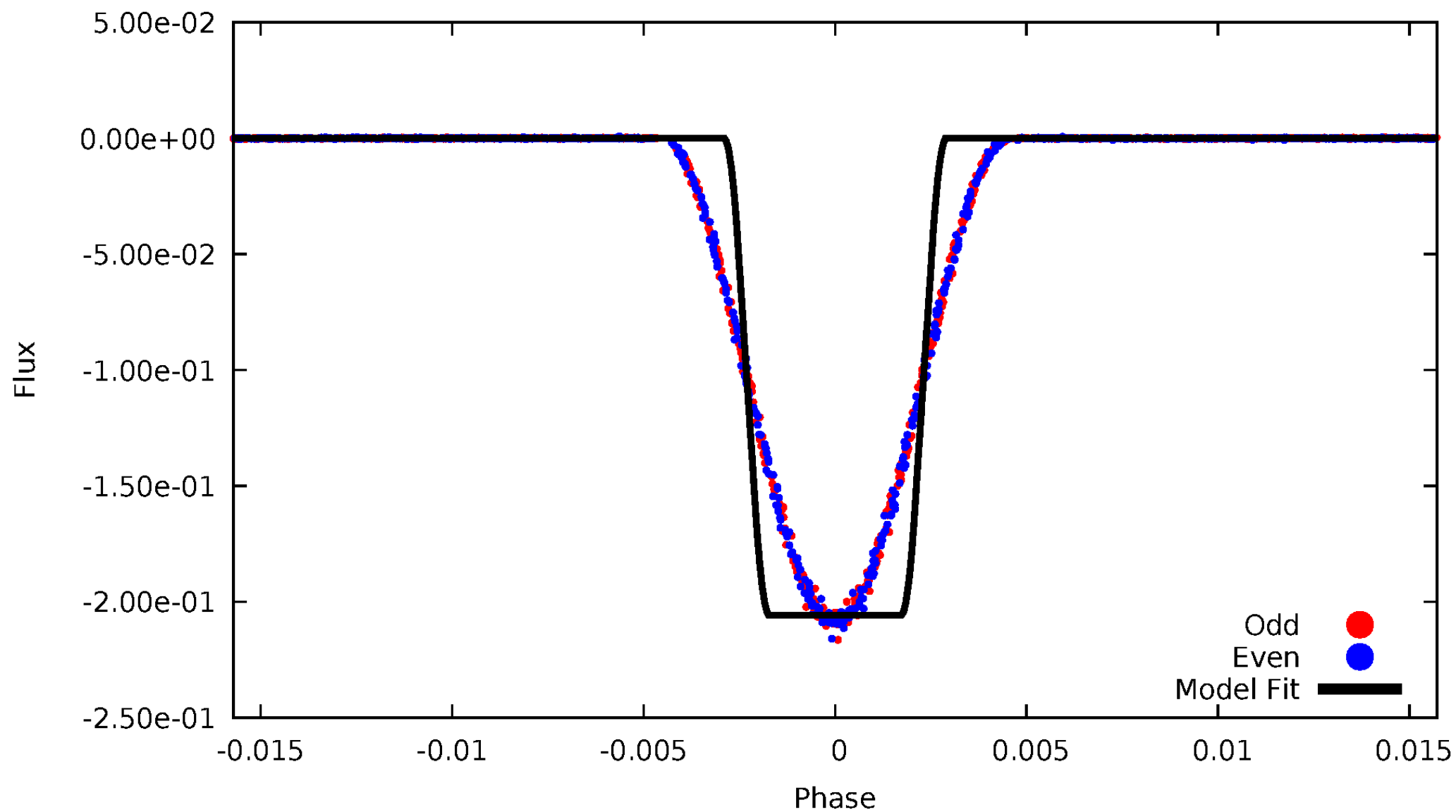
# DV Odd/Even

TCE 004950557-01



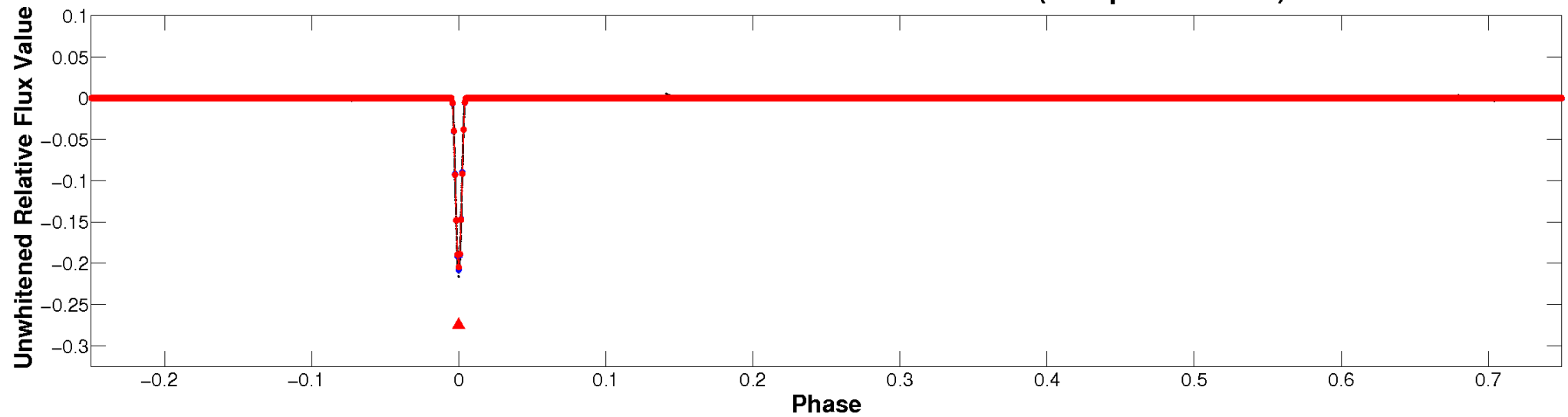
# ALT Odd/Even

TCE 004950557-01

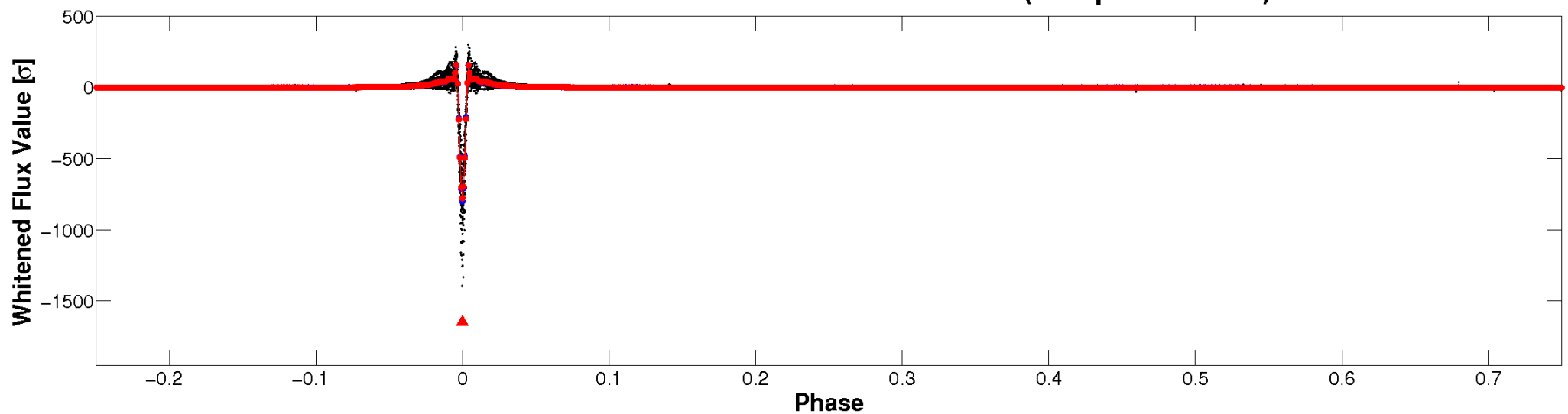


# Non-Whitened Vs. Whitened Light Curve

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

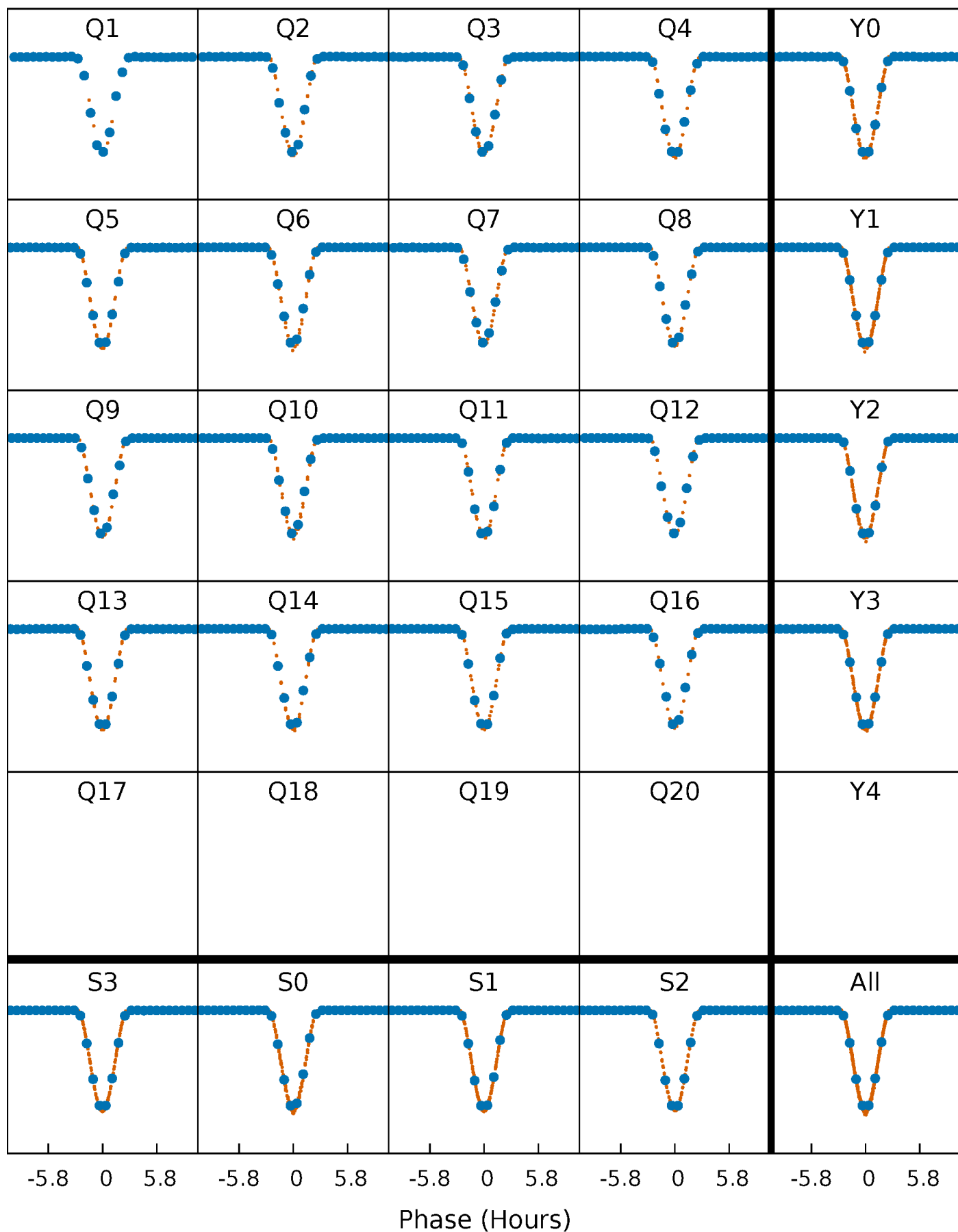


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

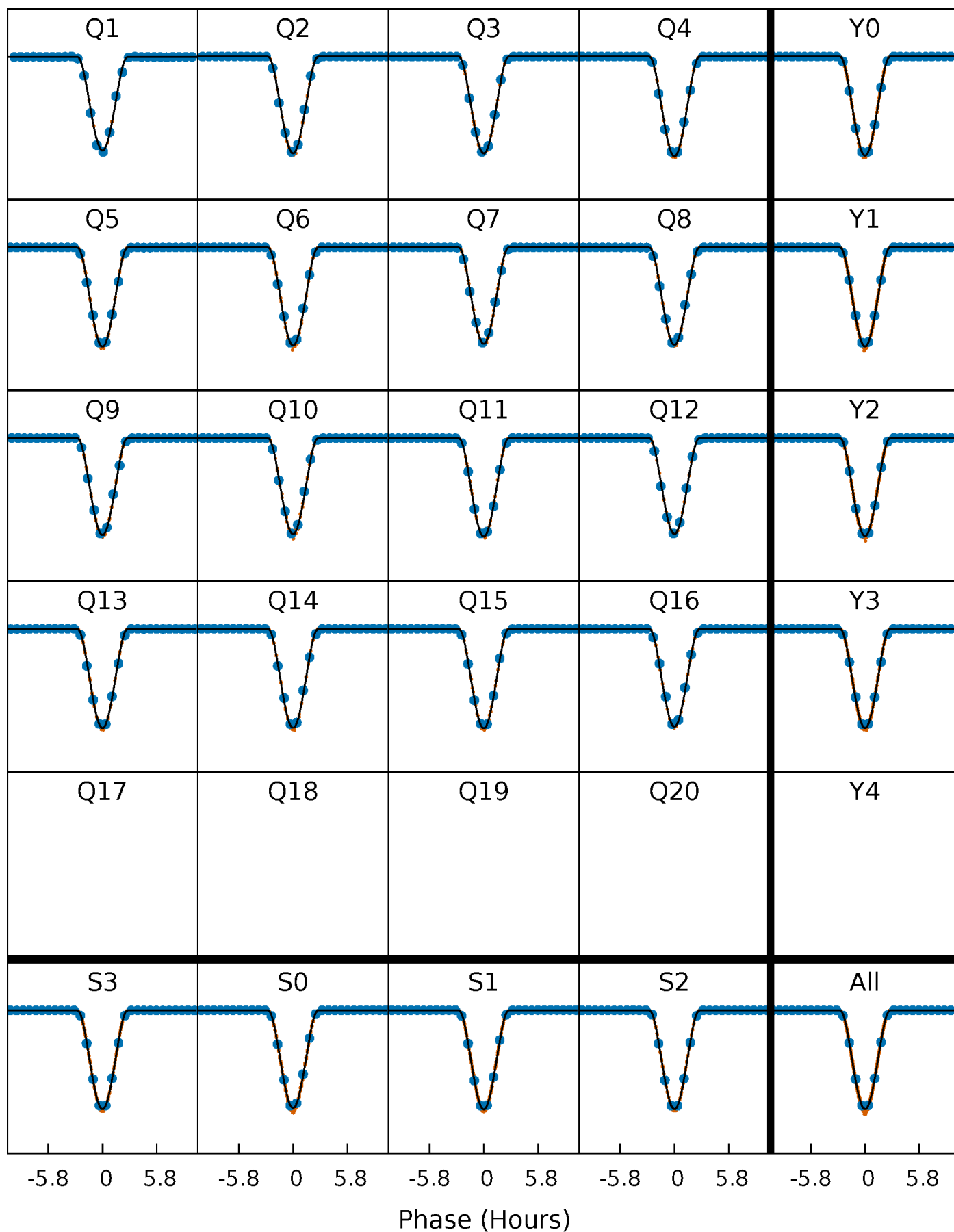
TCE 004950557-01 P= 24.714787 Days  $T_0=149.492923$  (BKJD)





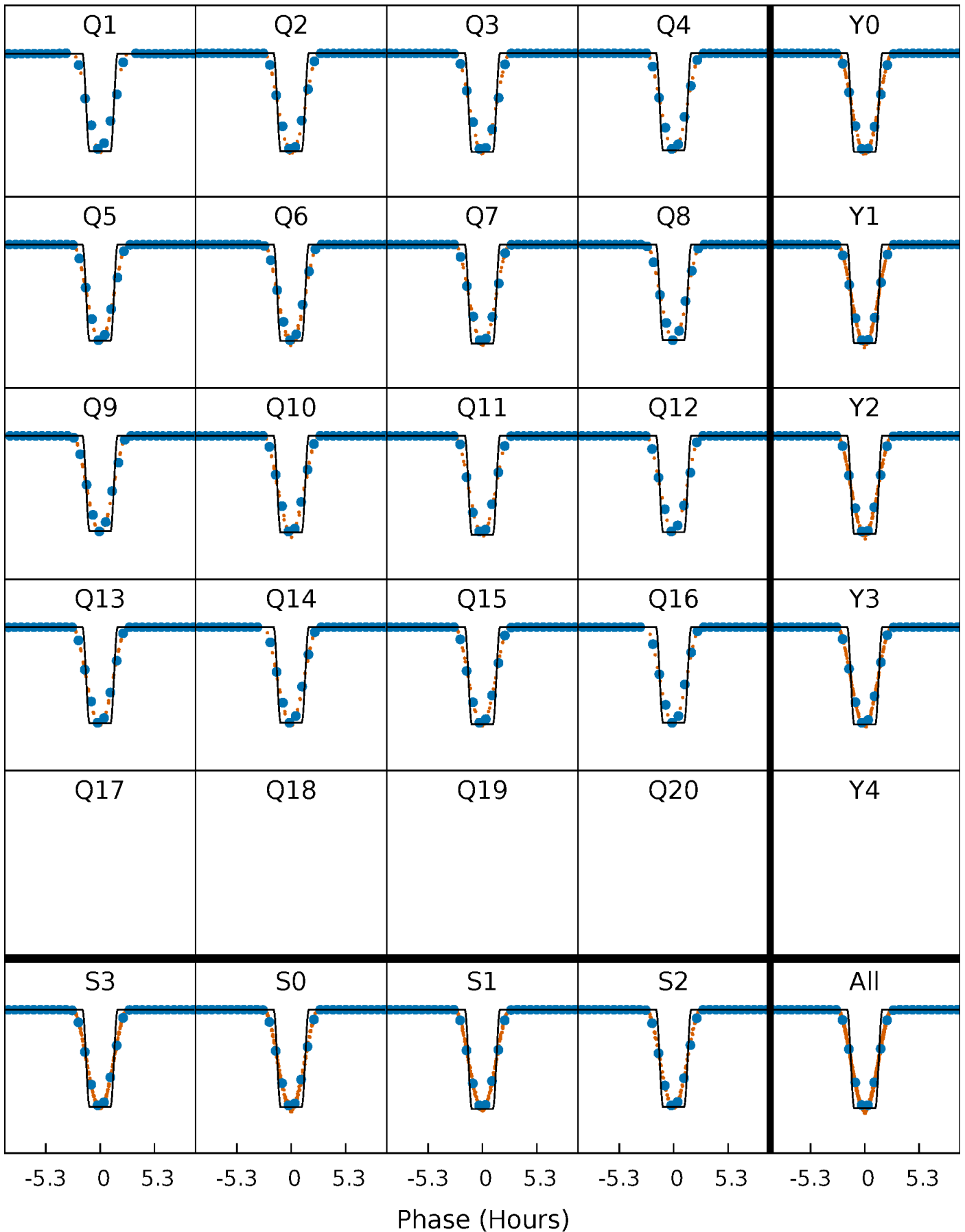
# DV Quarter-Phased Transit Curves

TCE 004950557-01 P= 24.714787 Days  $T_0=149.492923$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

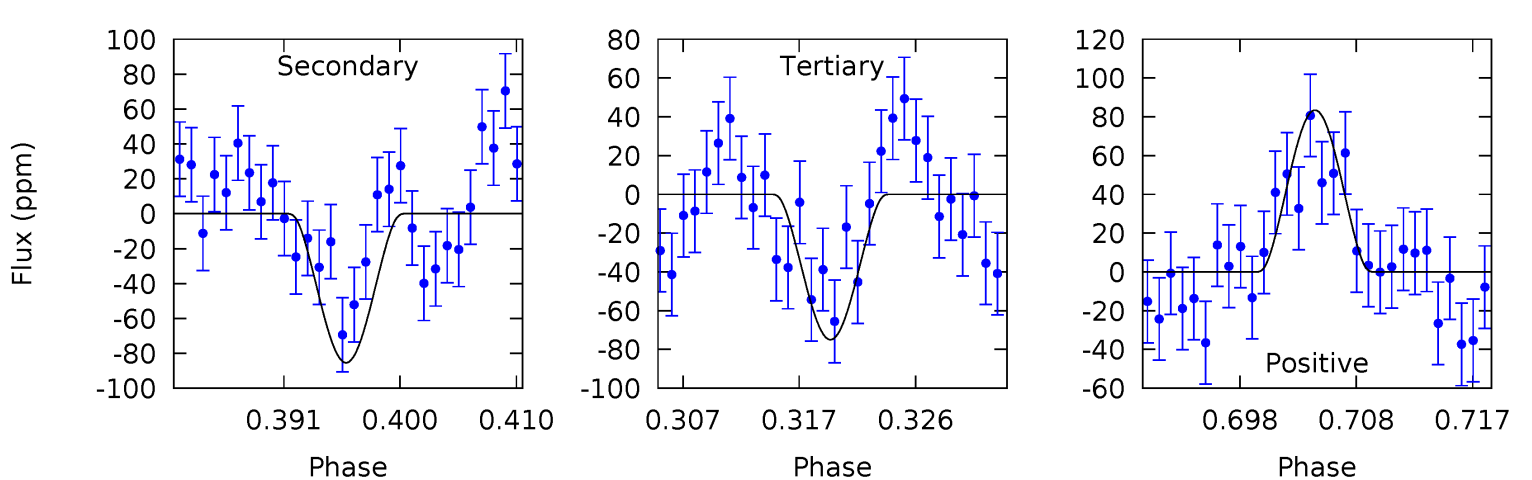
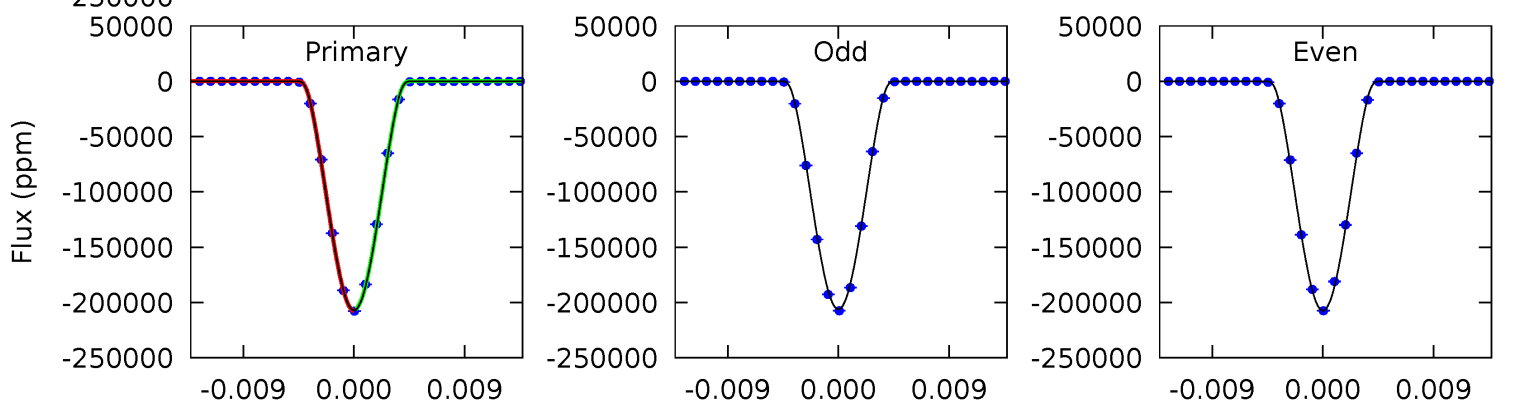
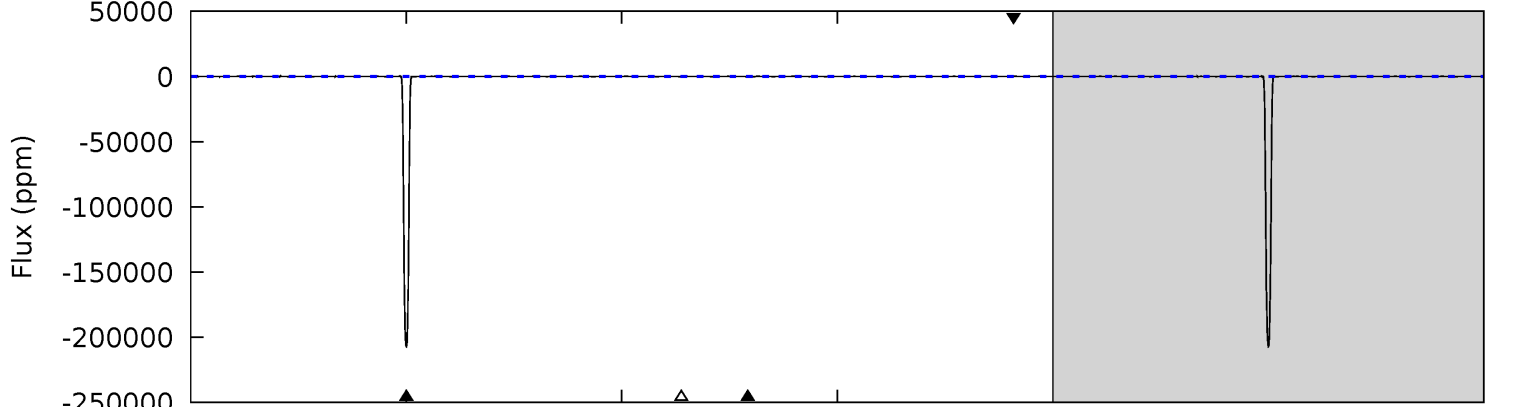
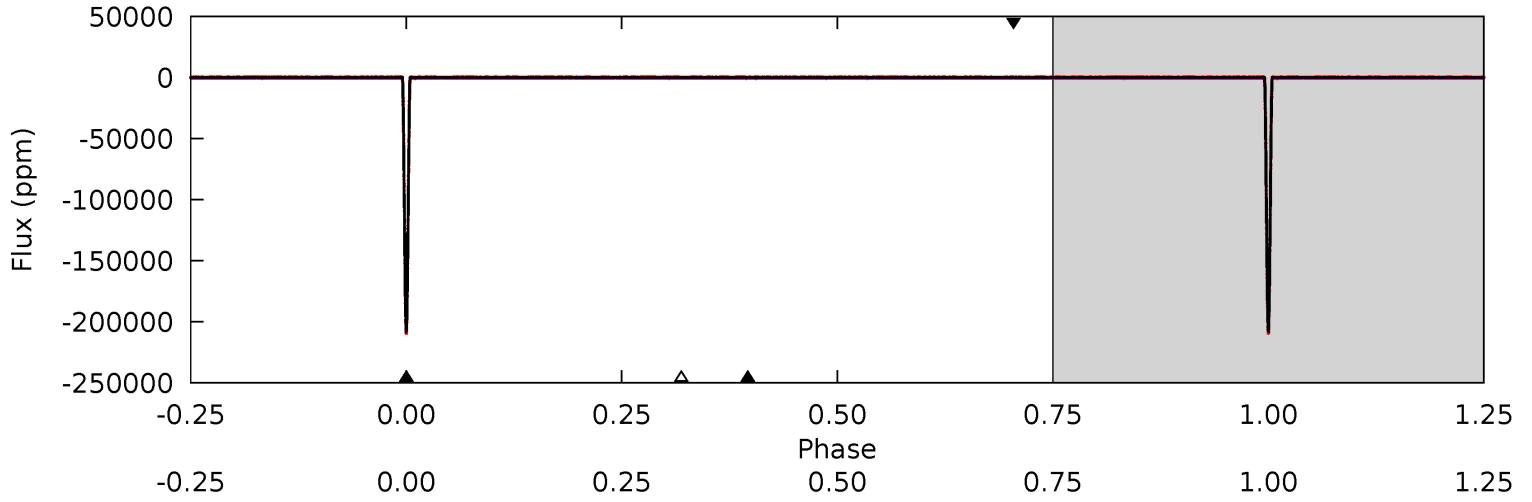
TCE 004950557-01 P= 24.714863 Days  $T_0=149.490750$  (BKJD)



# DV Model-Shift Uniqueness Test

004950557-01, P = 24.714787 Days, E = 124.778136 Days

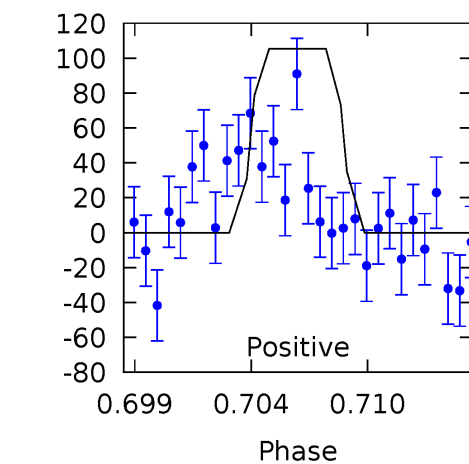
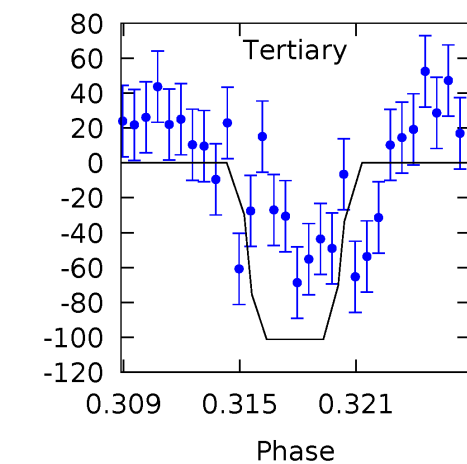
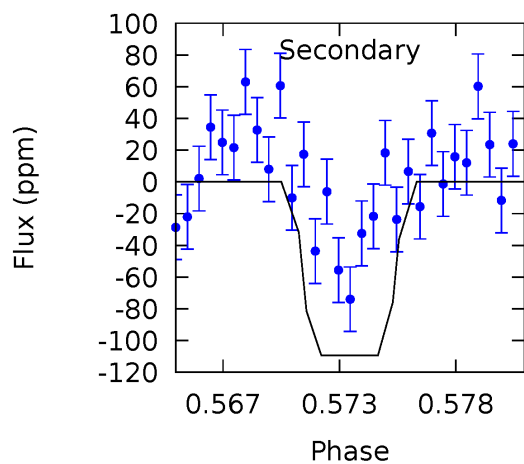
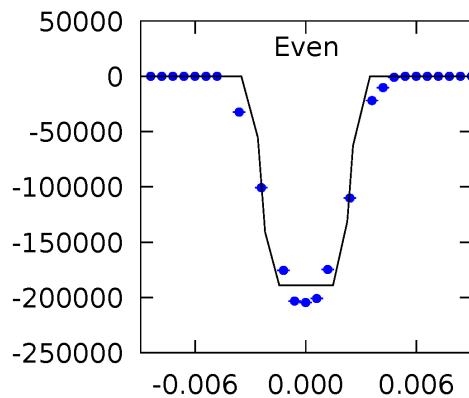
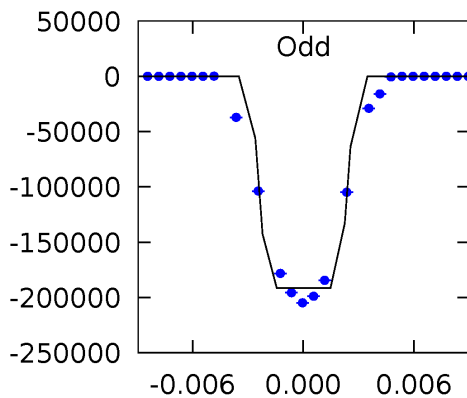
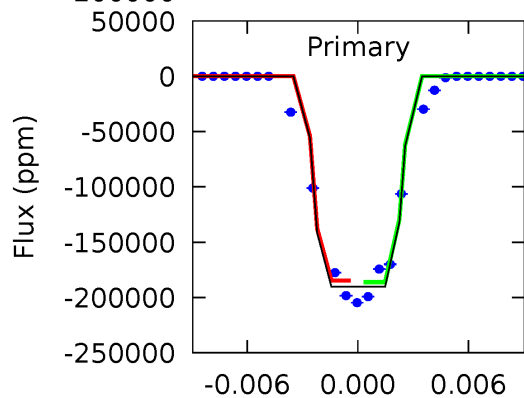
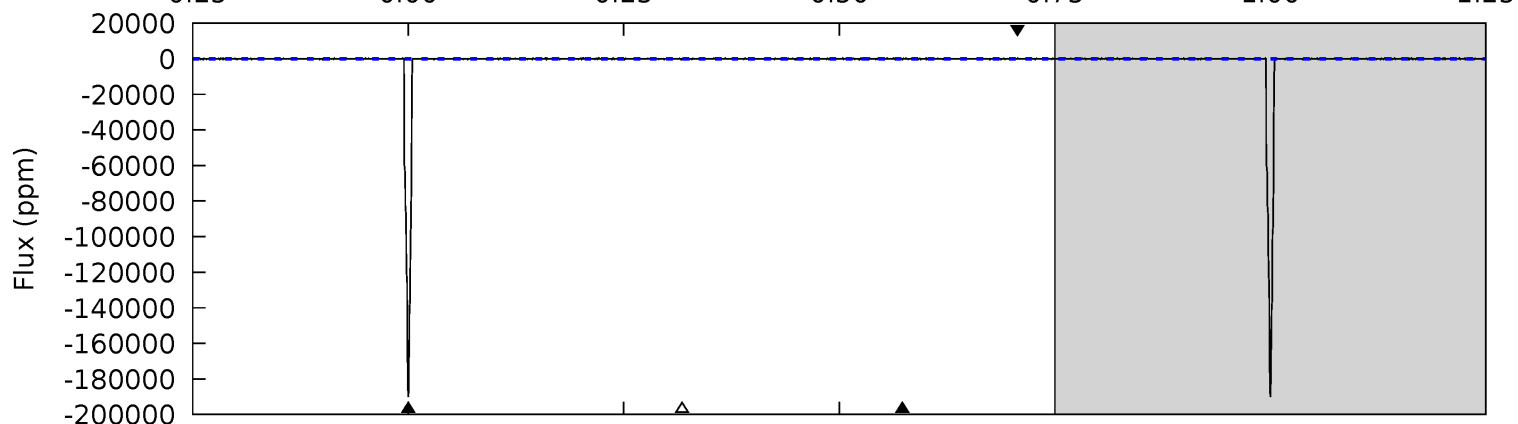
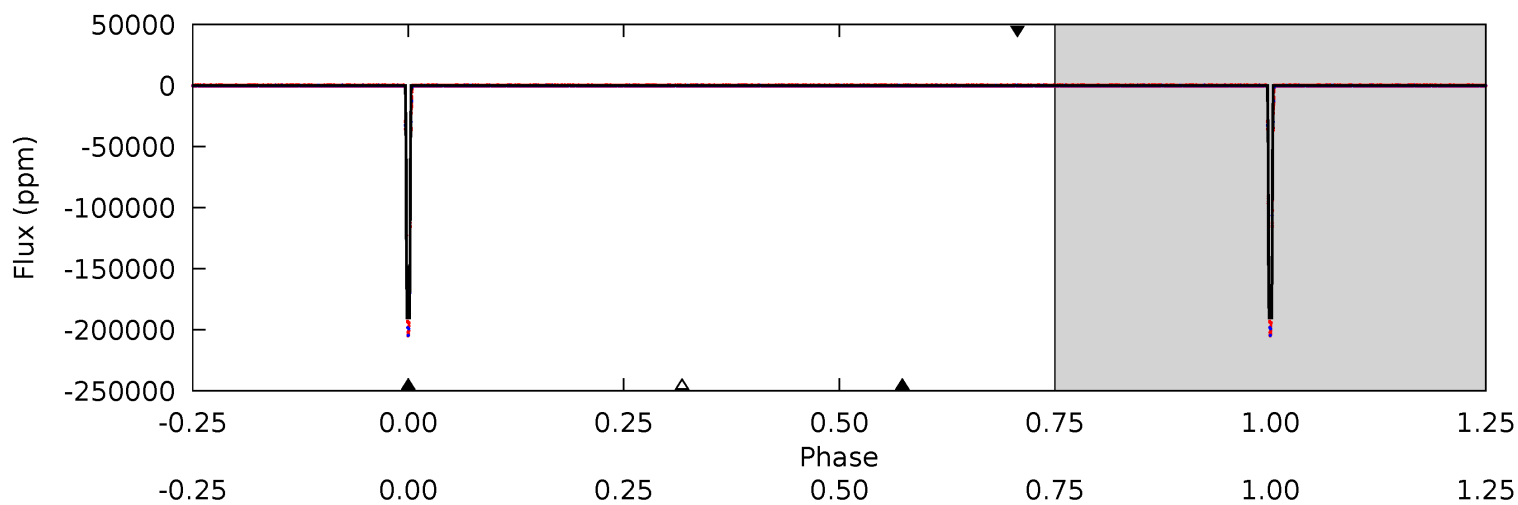
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22998	9.48	8.33	9.26	5.04	2.60	3.24	22989	22988	1.16	0.22	62.1	1.00	0.00	86.2



# Alt Model-Shift Uniqueness Test

004950557-01, P = 24.714863 Days, E = 124.775887 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
7820	4.49	4.16	4.34	5.13	2.76	1.17	7816	7816	0.33	0.16	56.7	1.00	0.00	0



### Stellar Parameters For KIC 004950557

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6300^{+173}_{-173}$	$3.982^{+0.247}_{-0.114}$	$-0.120^{+0.300}_{-0.250}$	$1.862^{+0.387}_{-0.580}$	$1.214^{+0.212}_{-0.173}$	$0.265^{+0.435}_{-0.101}$
	+3%/-3%	+6%/-3%	+250%/-208%	+21%/-31%	+17%/-14%	+164%/-38%
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 004950557-01 / KOI 6483.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-85 \pm 9$	$112.59^{+15.23}_{-18.09}$	$1244^{+78}_{-106}$	$-1919^{+114}_{-72}$	$0.118^{+0.046}_{-0.027}$
Alt.	$-109 \pm 24$	$91.50^{+11.39}_{-15.03}$	$1245^{+80}_{-99}$	$-1748^{+3355}_{-155}$	$0.231^{+0.105}_{-0.067}$

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

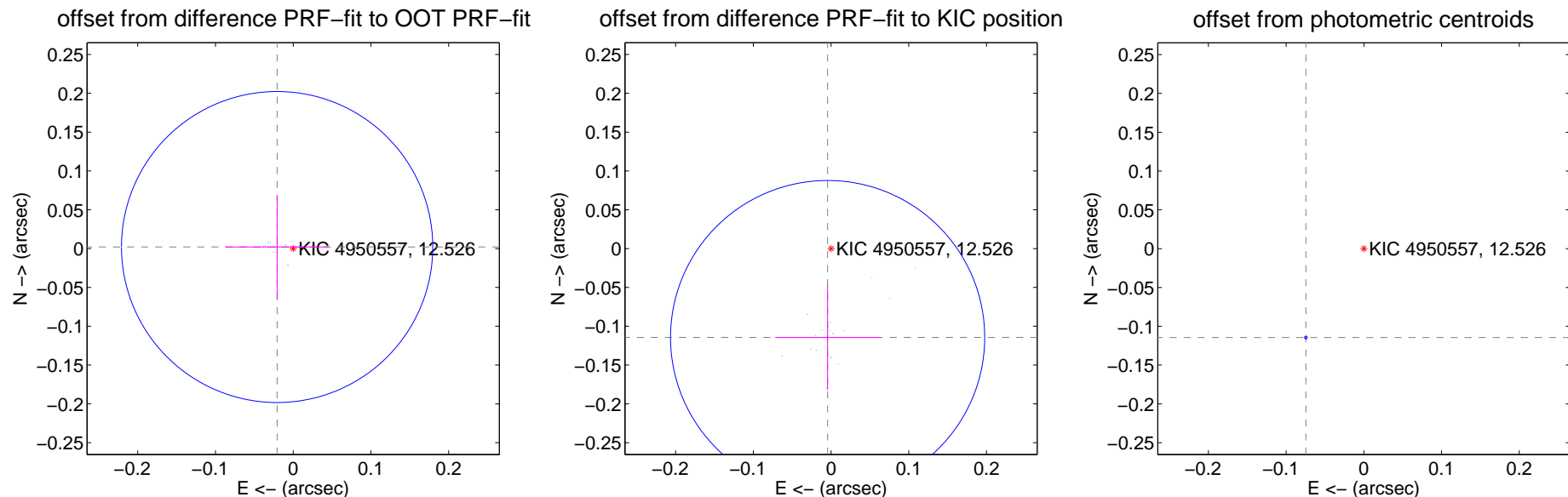
## DV Centroid Data

Supplemental centroid analysis for 004950557-01. Kepler magnitude: 12.53. Transit SNR 4897.81

There are 16 quarters with good PRF difference image offsets

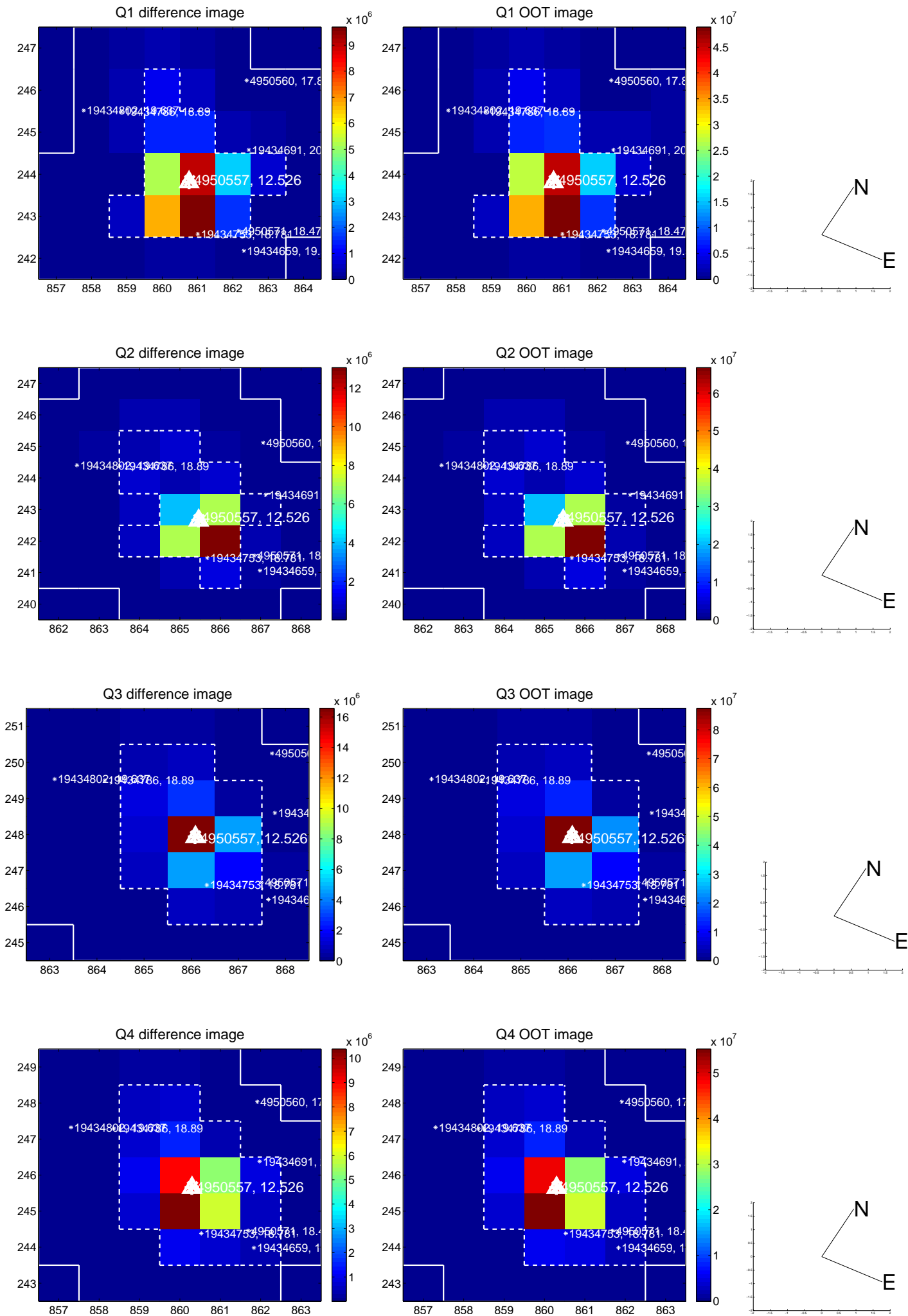
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.021 \pm 0.067$	0.31	$0.021 \pm 0.067$	$0.002 \pm 0.067$
PRF-fit source offset from KIC position	$0.115 \pm 0.067$	1.70	$0.004 \pm 0.067$	$-0.114 \pm 0.067$
photometric centroid source offset	$0.14 \pm 0.00$	237.71	$0.07 \pm 0.00$	$-0.11 \pm 0.00$

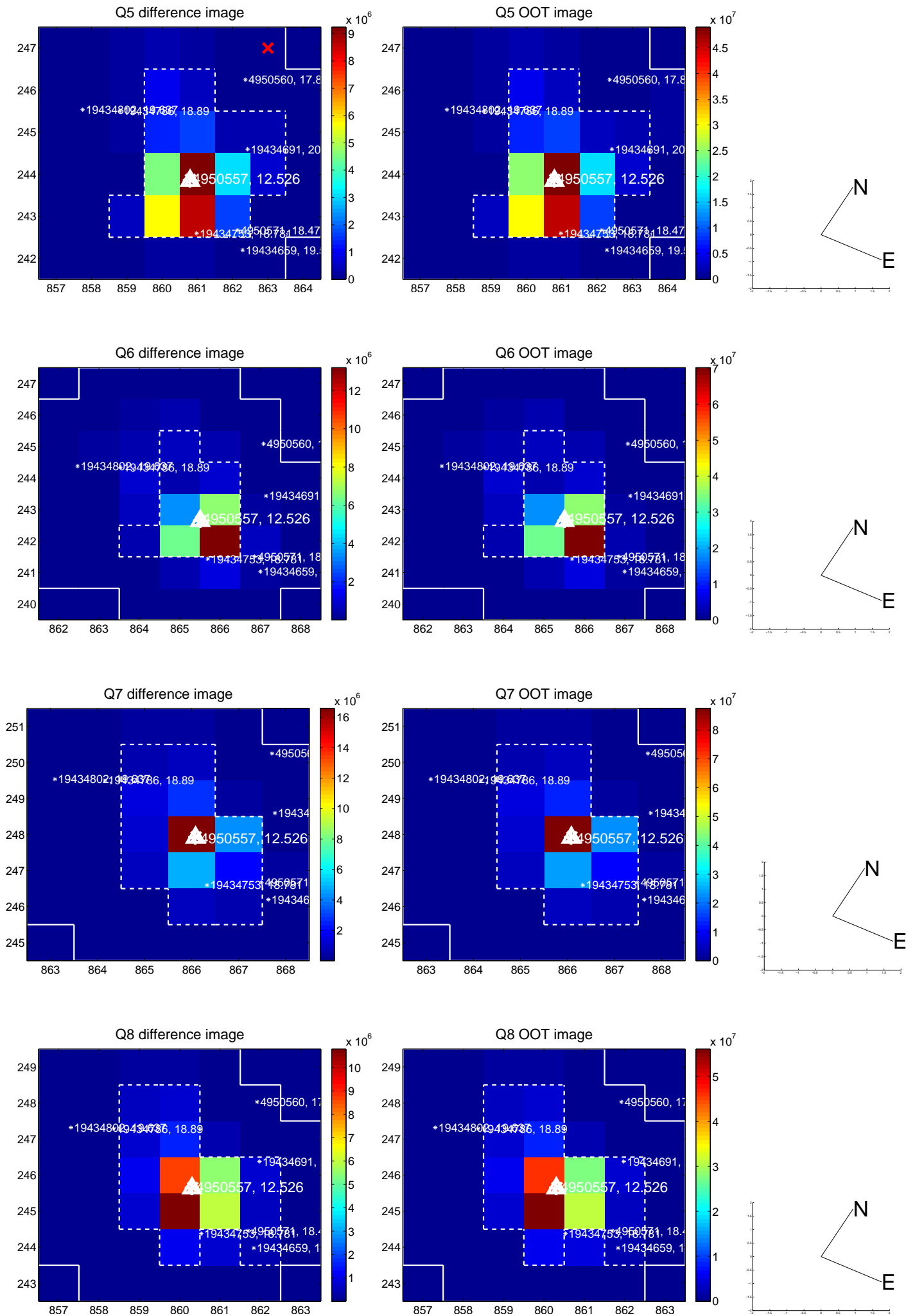


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

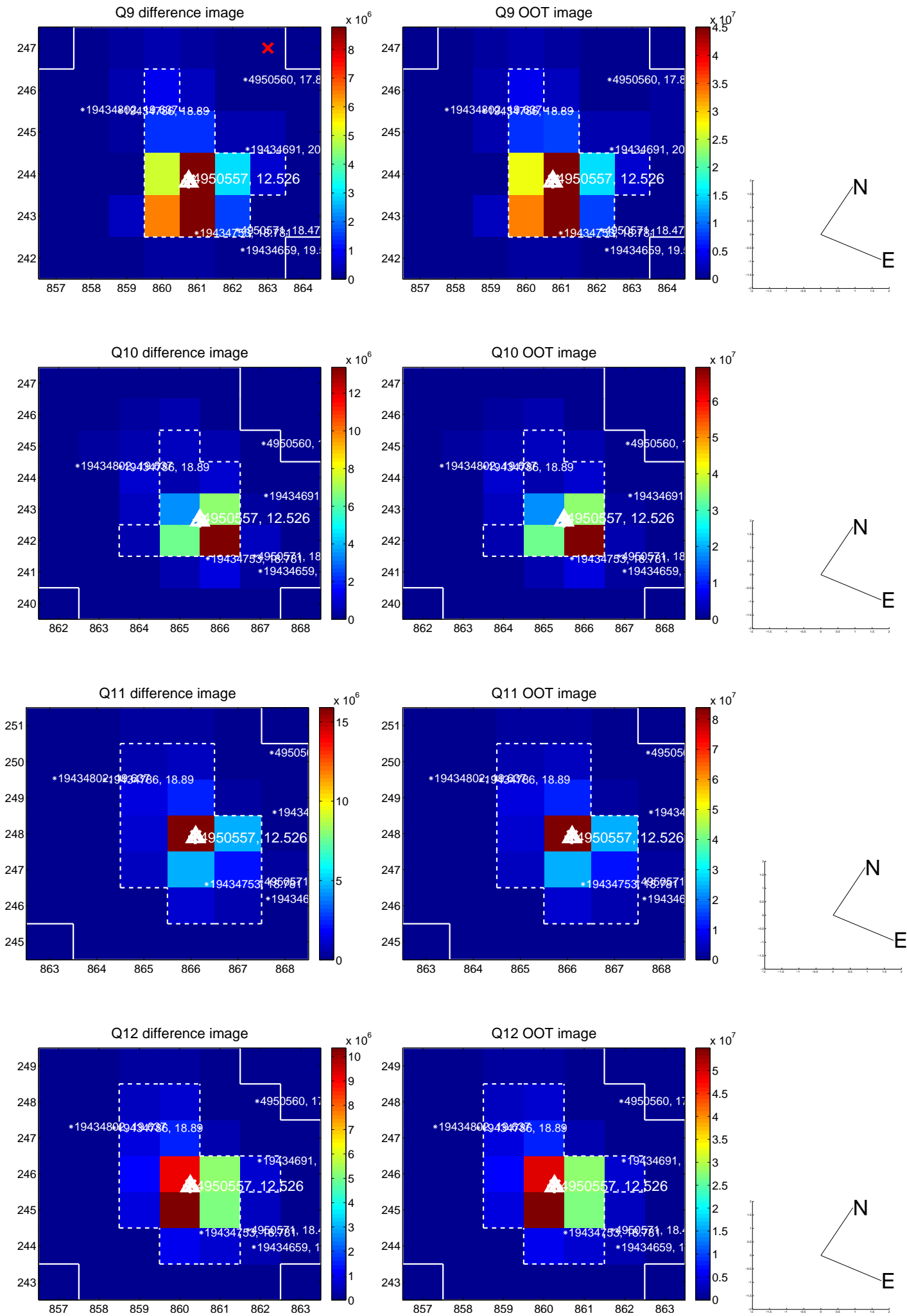


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

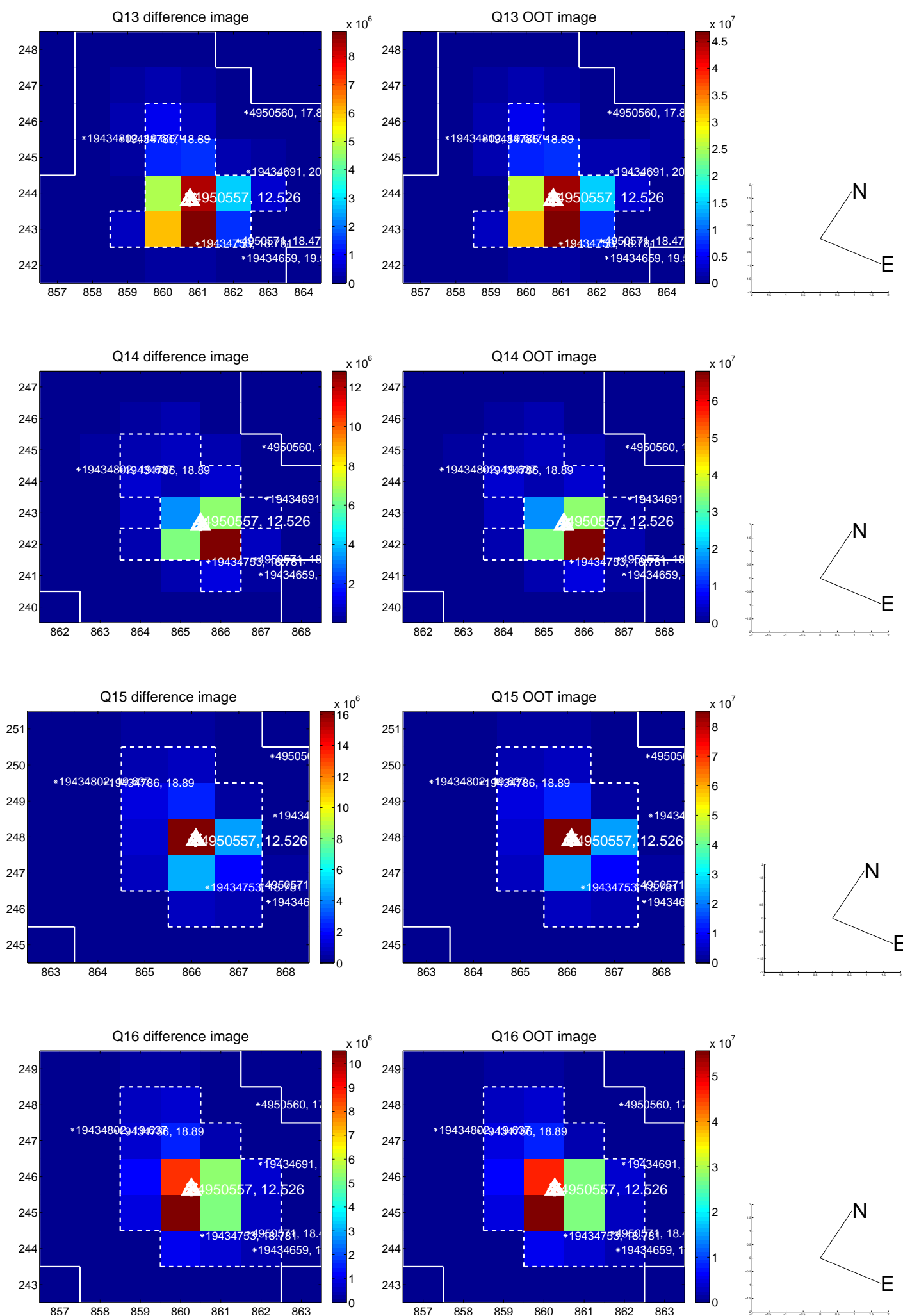




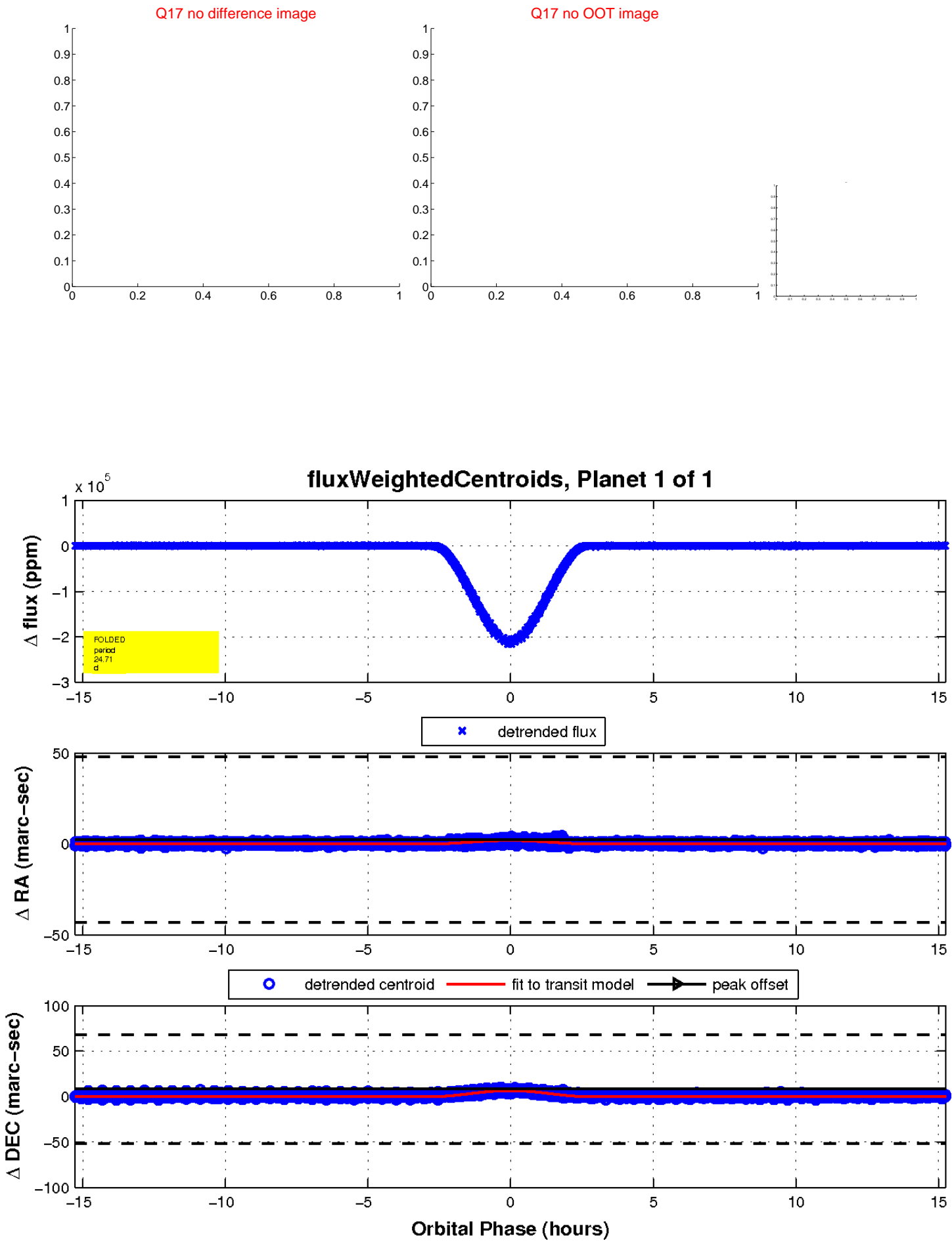
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

