

# KIC 003747262

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003747262-01	OBS	3005.01	1.312480	132.219988	33.4	1.479	11.4	12.7	2.51	6543	1.71	15065.42

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003747262-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

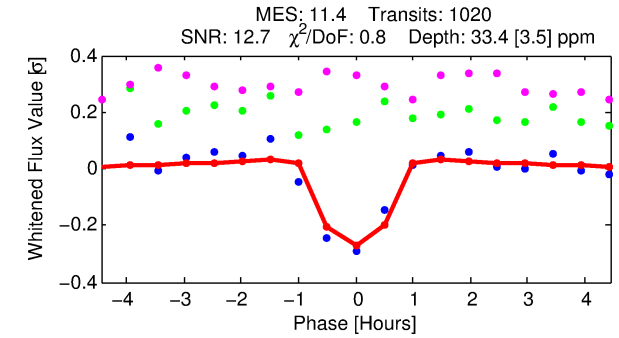
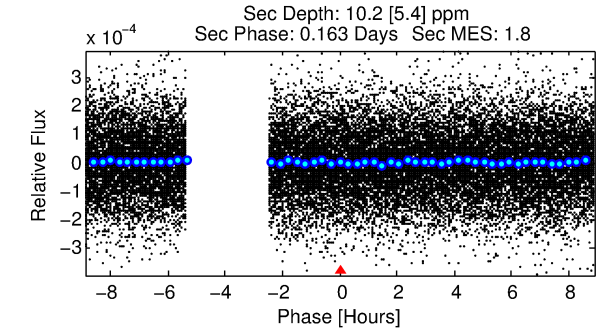
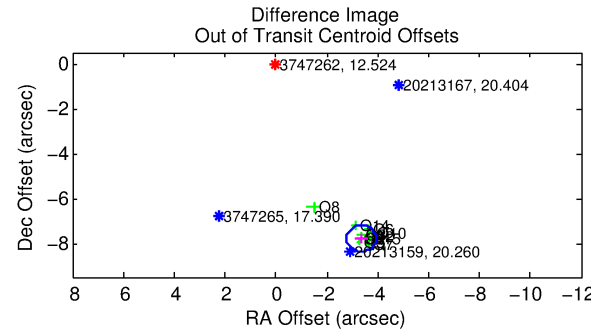
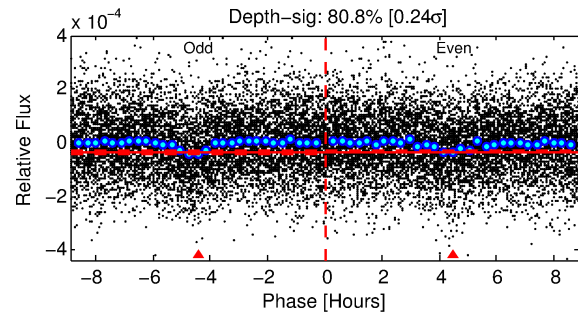
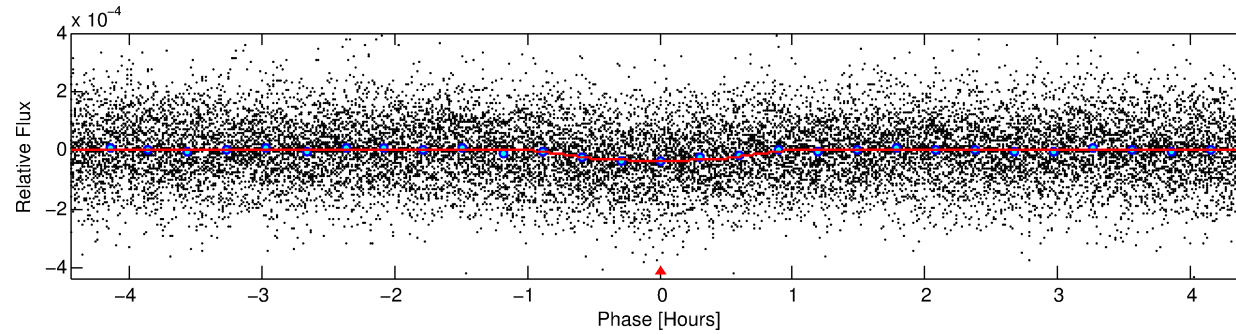
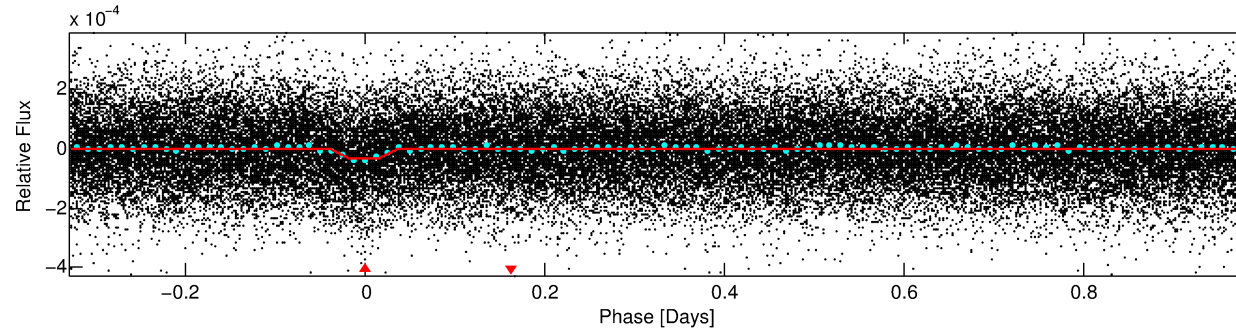
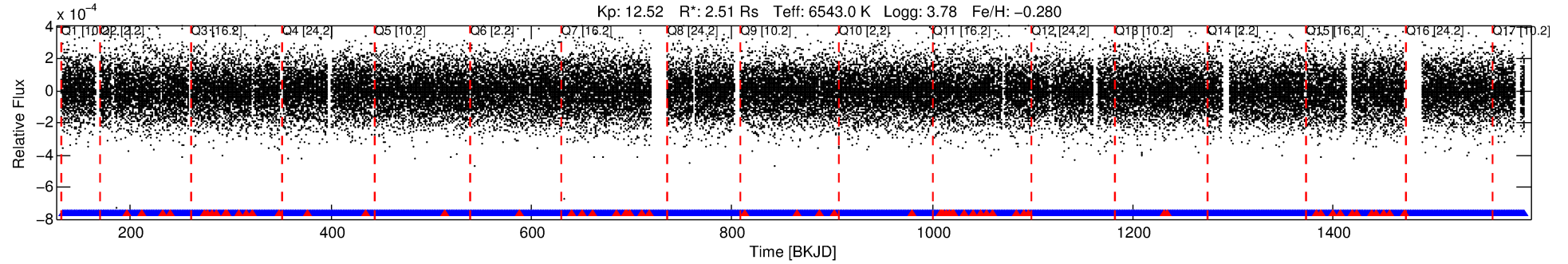
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 003747262-01

No Significant Match Found

# DV One-Page Summary

KIC: 3747262 Candidate: 1 of 1 Period: 1.312 d  
KOI: K03005.01 Corr: 0.891



## DV Fit Results:

Period = 1.31248 [0.00001] d  
Epoch = 132.2200 [0.0016] BKJD  
Rp/R\* = 0.0063 [0.0018]  
a/R\* = 3.03 [4.50]  
b = 0.91 [0.31]  
Seff = 15065.42 [7767.37]  
Teq = 2825 [364] K  
Rp = 1.71 [0.76] Re  
a = 0.0262 [0.0084] AU  
Ag = 1.31 [1.22] [0.26 $\sigma$ ]  
Teff = 4674 [919] K [1.87 $\sigma$ ]

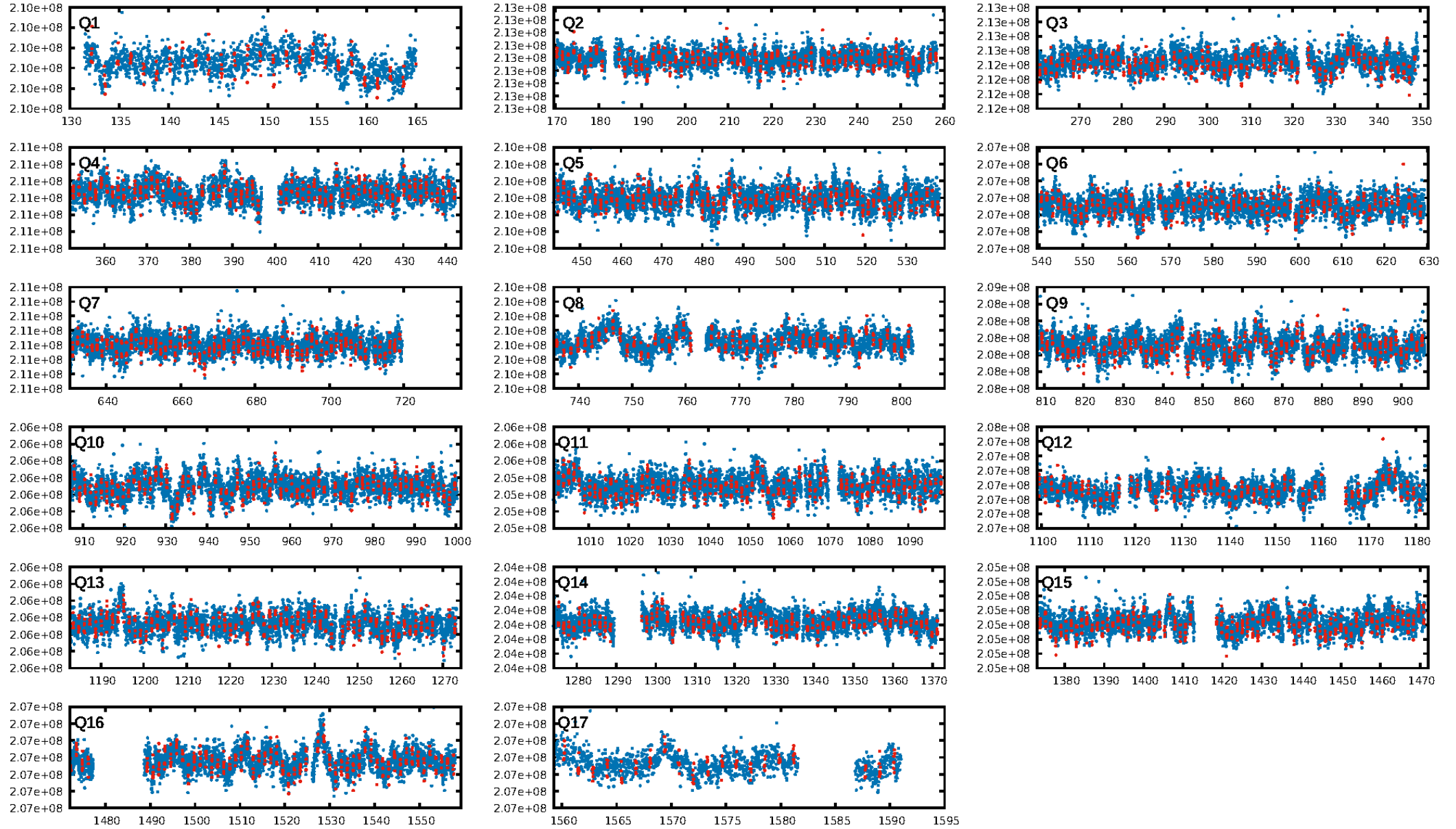
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGoF-sig: N/A  
Bootstrap-pfa: 6.04e-29  
RollingBand-fgt: 0.94 [915/975]  
GhostDiagnostic-chr: 0.04901  
Centroid-sig: 0.0%  
Centroid-so: 16.970 arcsec [20.39 $\sigma$ ]  
OotOffset-rm: 8.469 arcsec [43.32 $\sigma$ ]  
KicOffset-rm: 8.492 arcsec [50.32 $\sigma$ ]  
OotOffset-st: 4/3/1/3 [11]  
KicOffset-st: 4/3/1/3 [11]  
DiffImageQuality-fgm: 1.00 [11/11]  
DiffImageOverlap-fno: 1.00 [17/17]

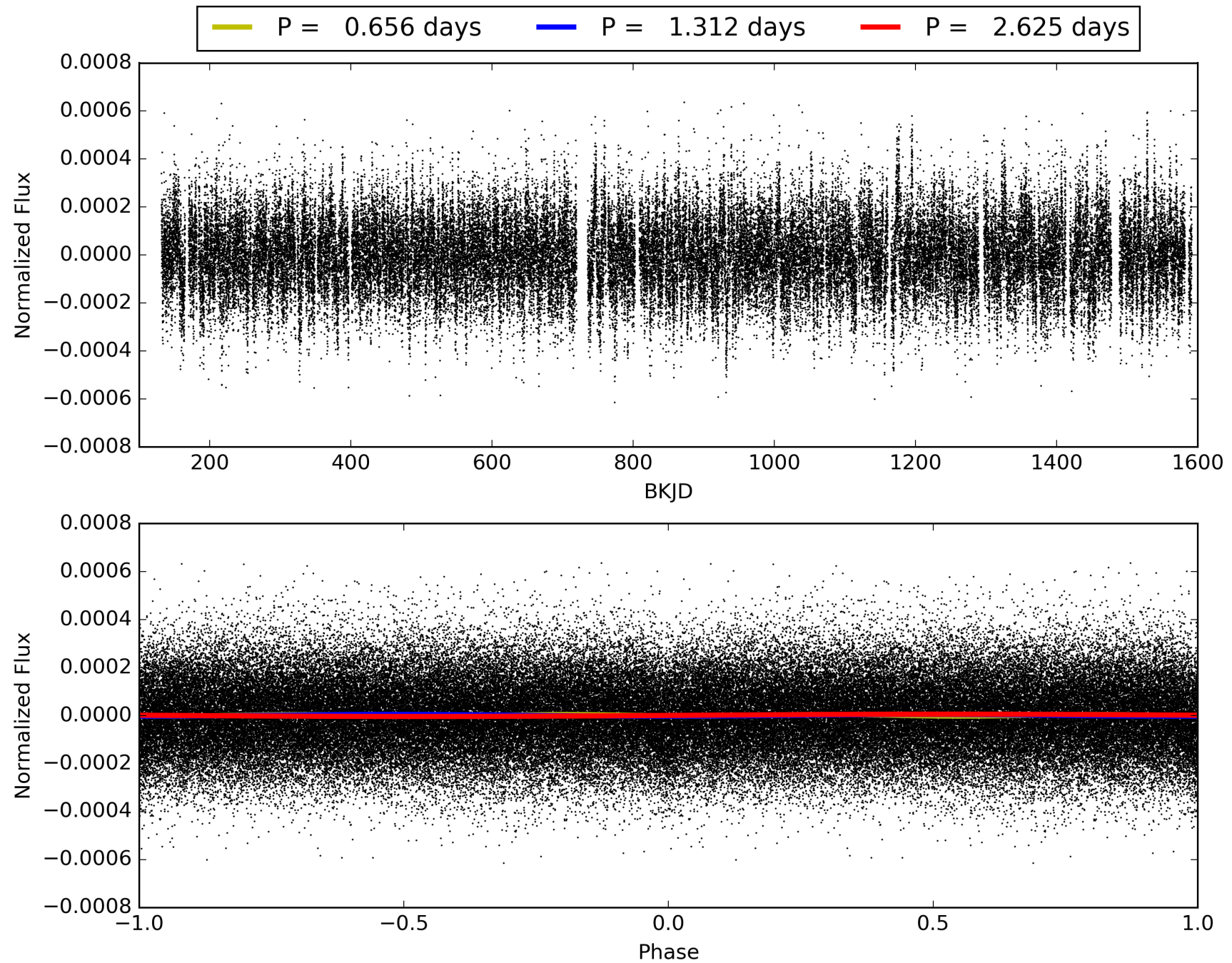
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:03:55 Z

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

# TCE 003747262-01, PDC Light Curves



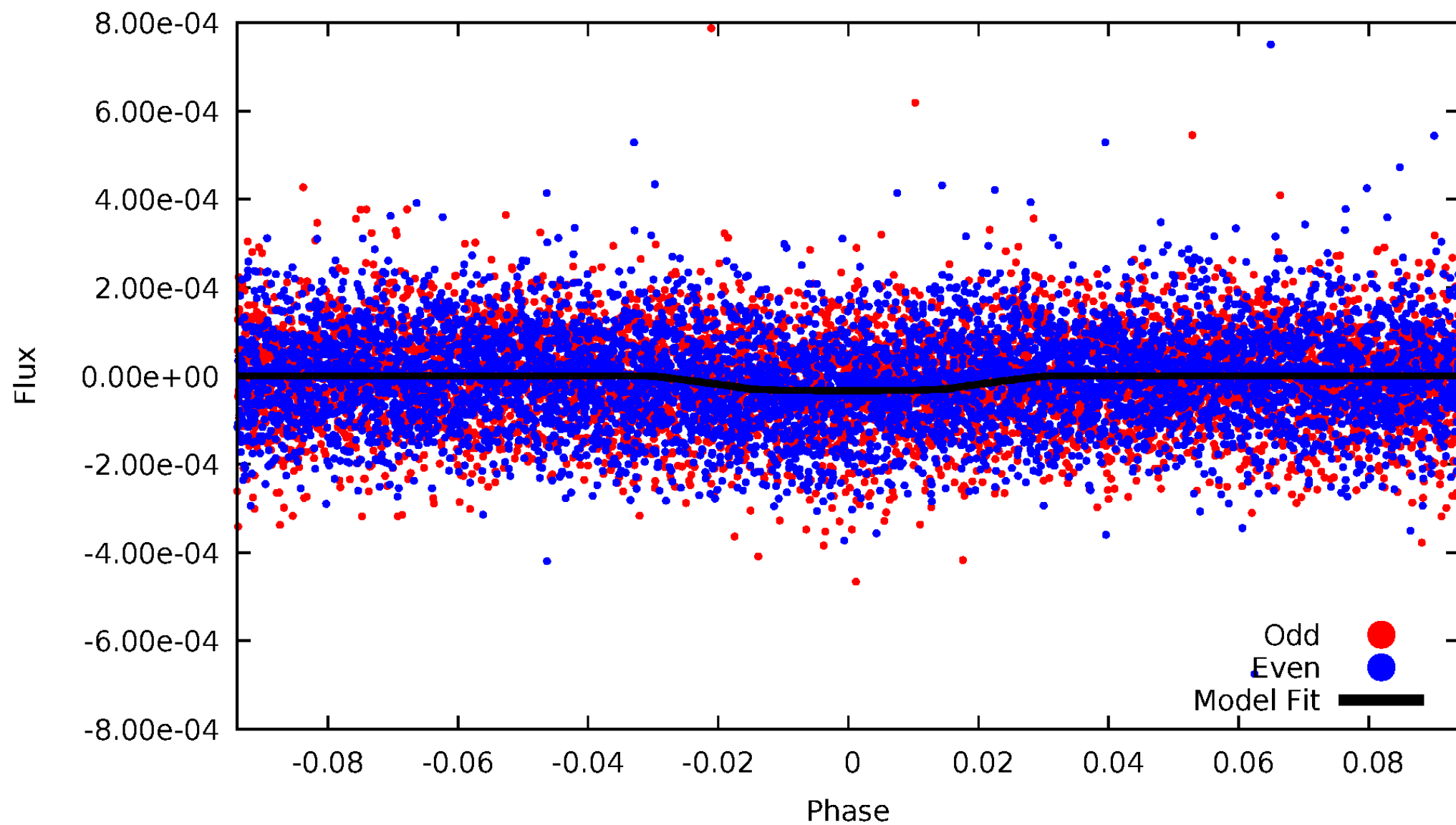
TCE 003747262-01





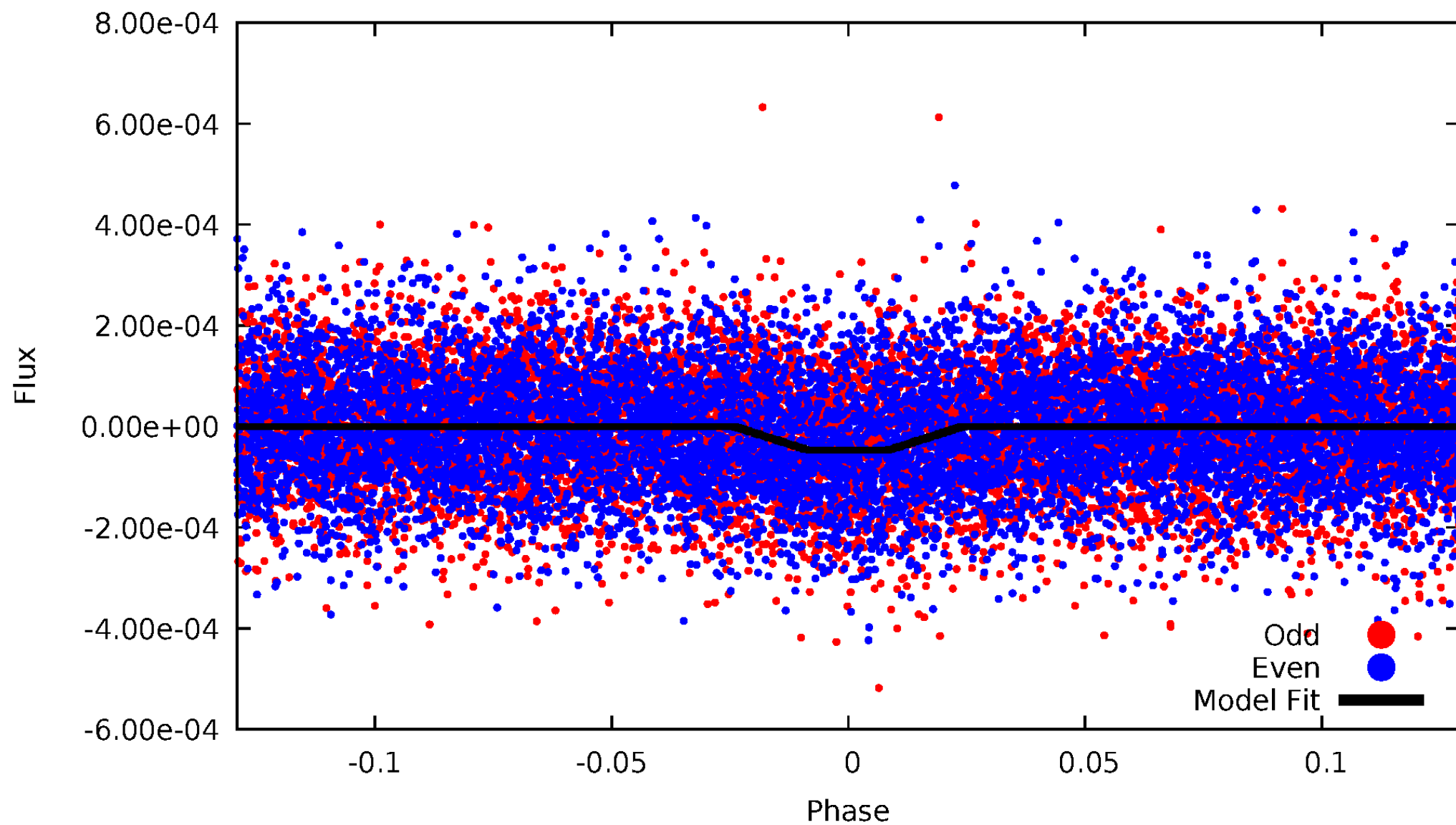
# DV Odd/Even

TCE 003747262-01



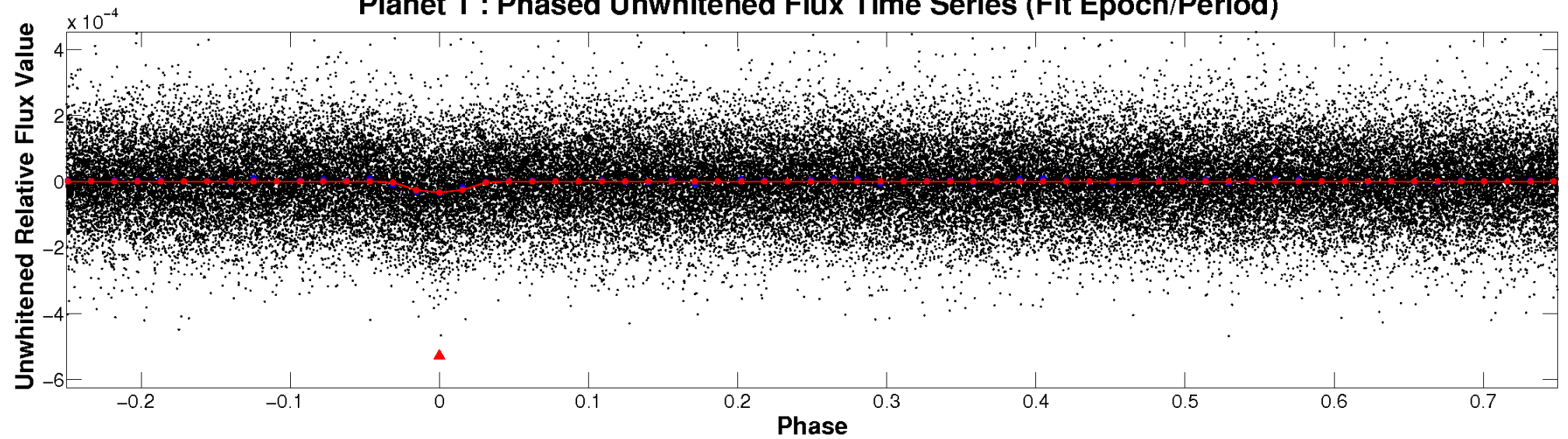
# ALT Odd/Even

TCE 003747262-01

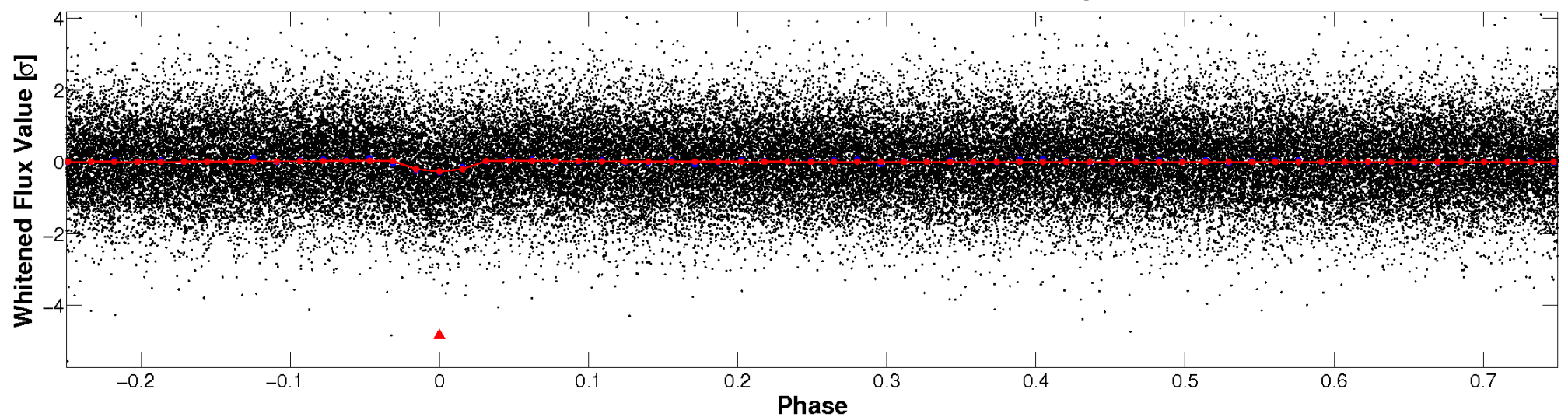


# Non-Whitened Vs. Whitened Light Curve

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

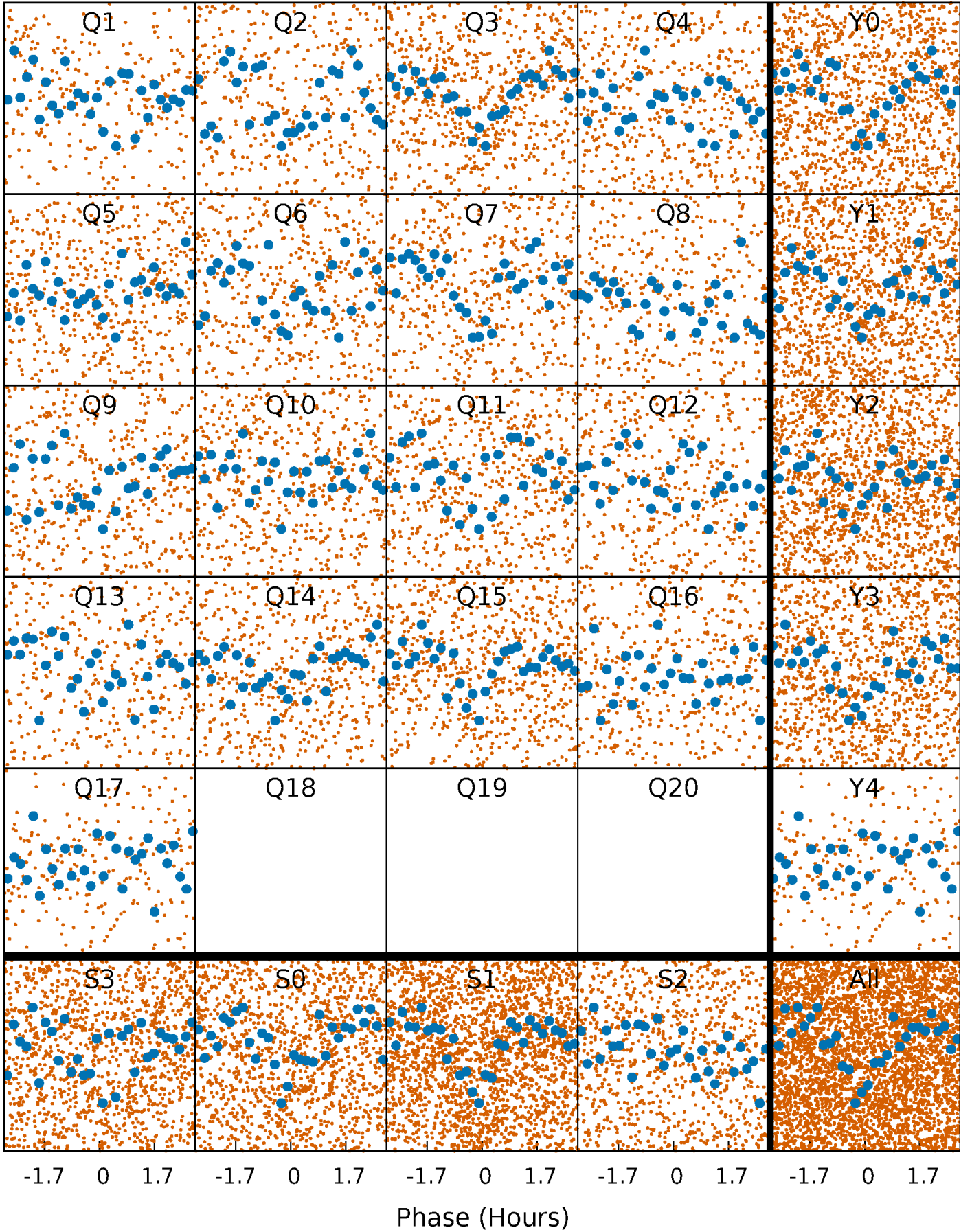


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

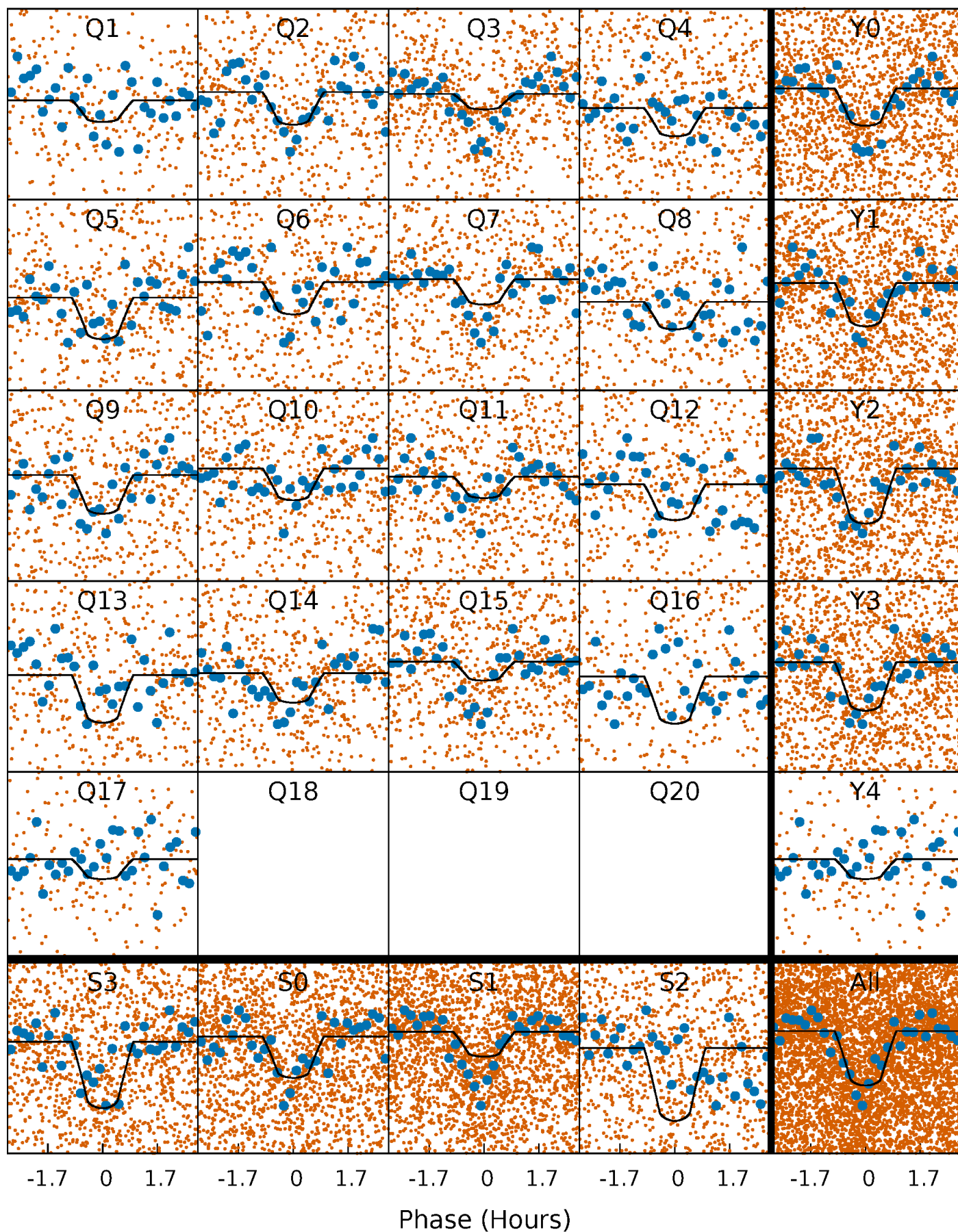
TCE 003747262-01 P= 1.312480 Days  $T_0=132.219988$  (BKJD)





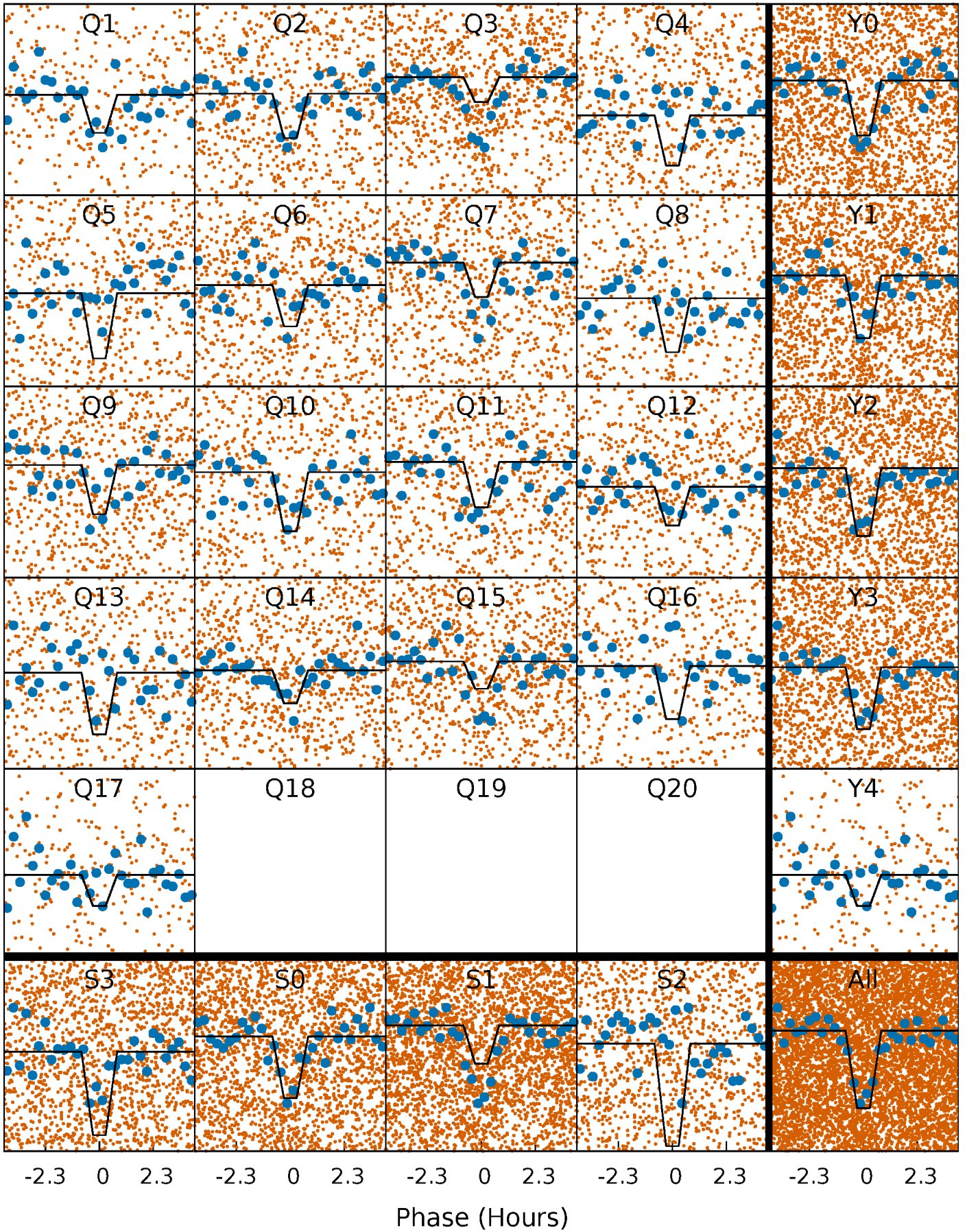
# DV Quarter-Phased Transit Curves

TCE 003747262-01 P= 1.312480 Days  $T_0=132.219988$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

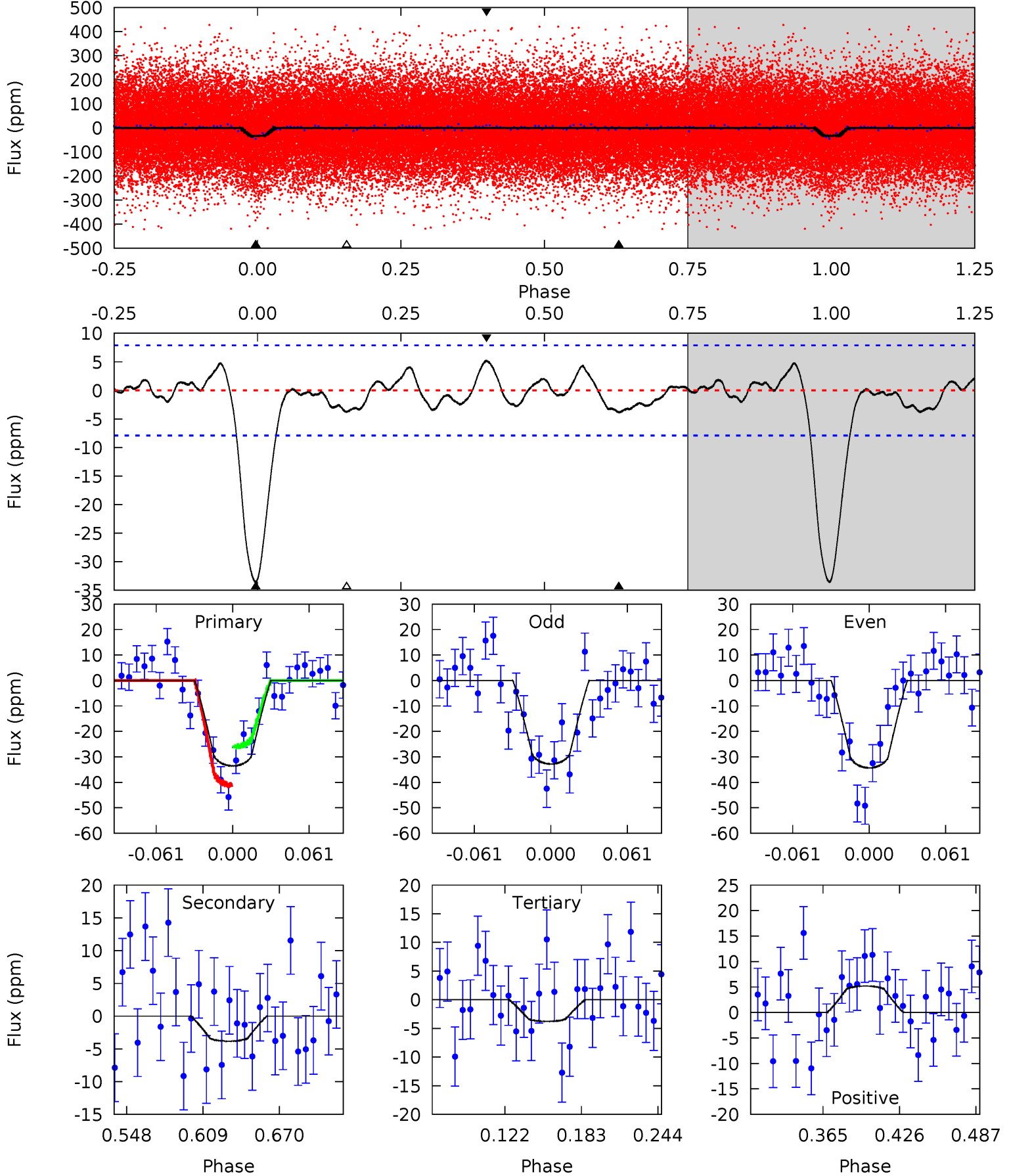
TCE 003747262-01 P= 1.312462 Days  $T_0=132.223158$  (BKJD)



# DV Model-Shift Uniqueness Test

003747262-01, P = 1.312480 Days, E = 130.907508 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
19.8	2.26	2.23	3.07	4.67	1.87	1.18	17.6	16.8	0.03	-0.81	0.45	1.01	0.13	4.50

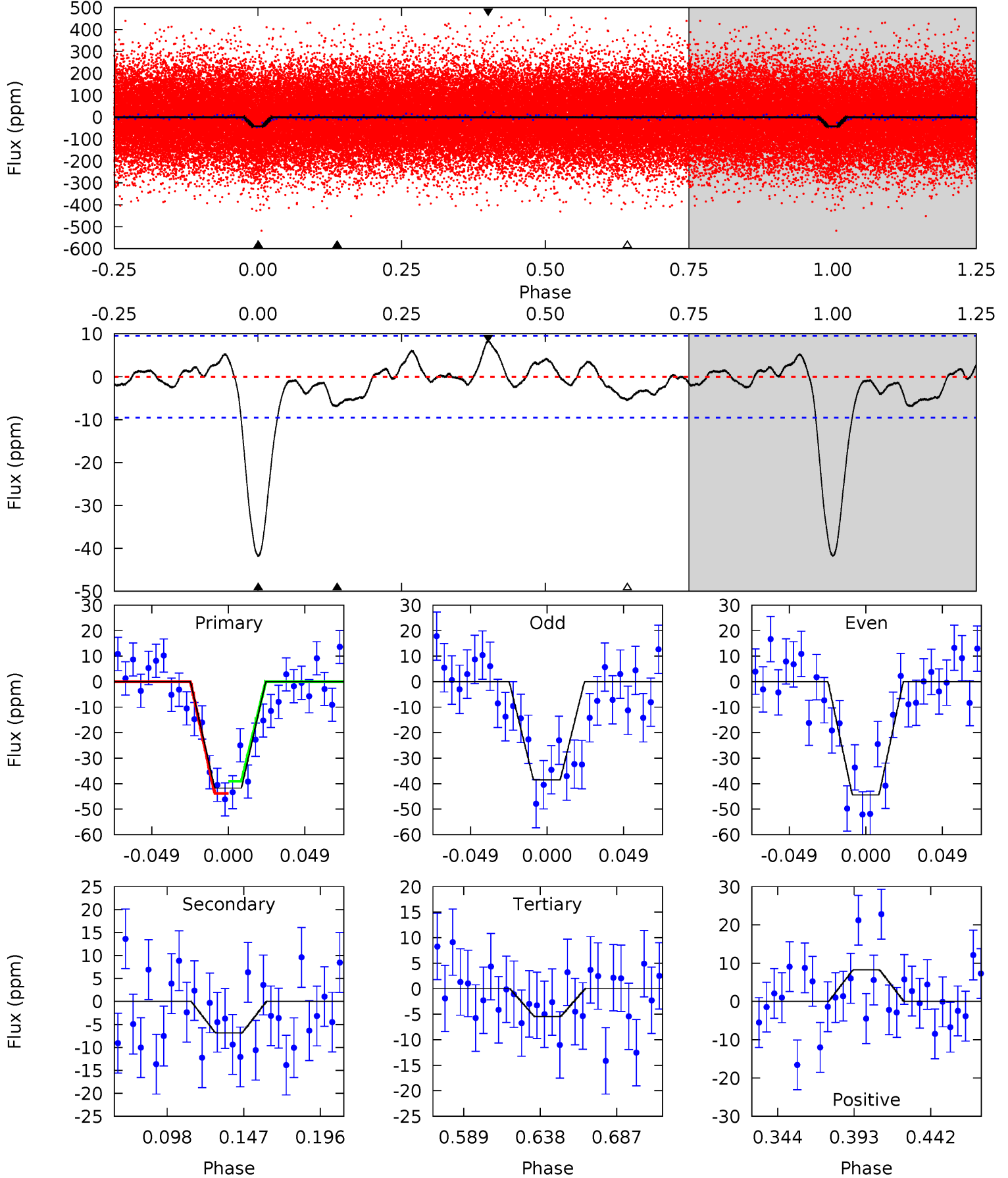




# Alt Model-Shift Uniqueness Test

003747262-01, P = 1.312462 Days, E = 130.910696 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
20.6	3.38	2.68	4.07	4.71	1.97	1.34	17.9	16.5	0.70	-0.69	1.45	1.03	0.16	1.18





### Stellar Parameters For KIC 003747262

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6543^{+158}_{-177}$	$3.782^{+0.293}_{-0.098}$	$-0.280^{+0.300}_{-0.250}$	$2.507^{+0.461}_{-0.856}$	$1.388^{+0.255}_{-0.255}$	$0.124^{+0.250}_{-0.038}$
	+2%/-3%	+8%/-3%	+107%/-89%	+18%/-34%	+18%/-18%	+202%/-31%
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 003747262-01 / KOI 3005.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-4 \pm 2$	$1.62^{+0.56}_{-0.54}$	$3903^{+222}_{-332}$	$3481^{+847}_{-6274}$	$0.545^{+0.688}_{-0.297}$
Alt.	$-7 \pm 2$	$1.78^{+0.56}_{-0.55}$	$3870^{+228}_{-323}$	$3895^{+799}_{-712}$	$0.790^{+1.014}_{-0.364}$

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

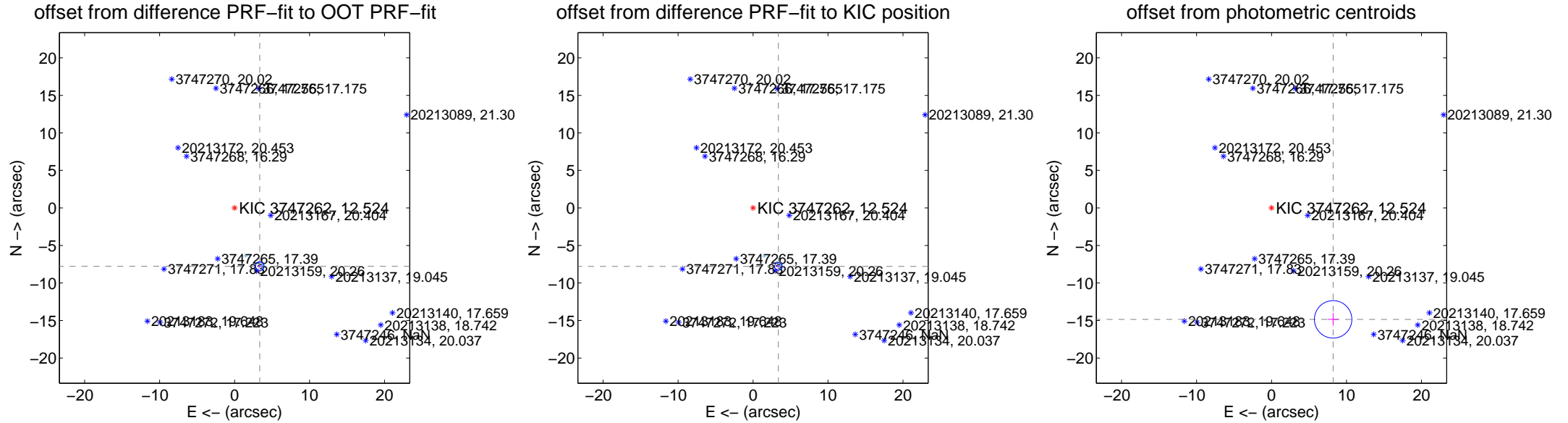
## DV Centroid Data

Supplemental centroid analysis for 003747262-01. Kepler magnitude: 12.52. Transit SNR 12.71

There are 11 quarters with good PRF difference image offsets

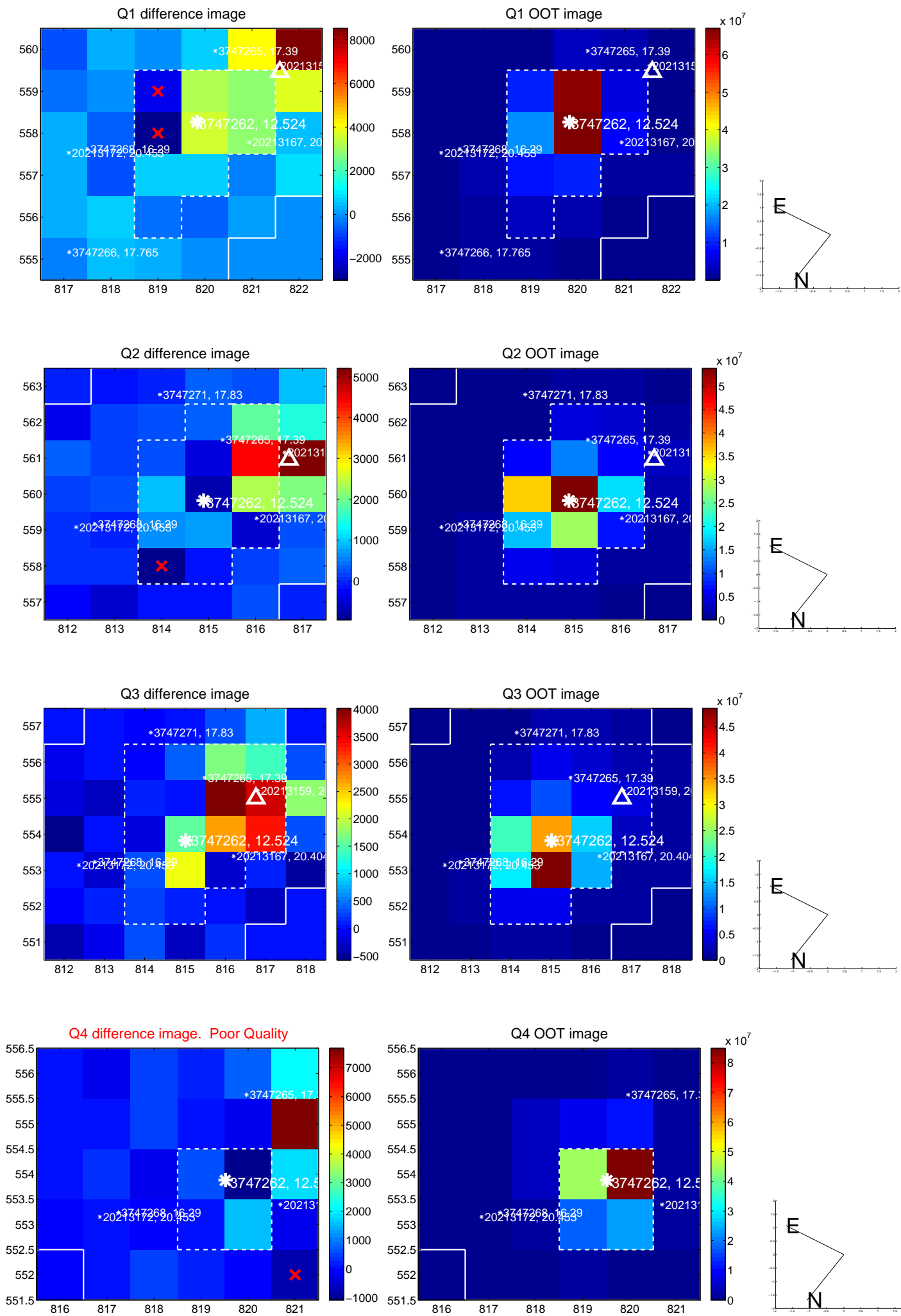
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	8.469 $\pm$ 0.196	43.32	-3.355 $\pm$ 0.200	-7.776 $\pm$ 0.144
PRF-fit source offset from KIC position	8.492 $\pm$ 0.169	50.32	-3.380 $\pm$ 0.170	-7.791 $\pm$ 0.132
photometric centroid source offset	16.97 $\pm$ 0.83	20.39	-8.22 $\pm$ 0.73	-14.85 $\pm$ 0.86

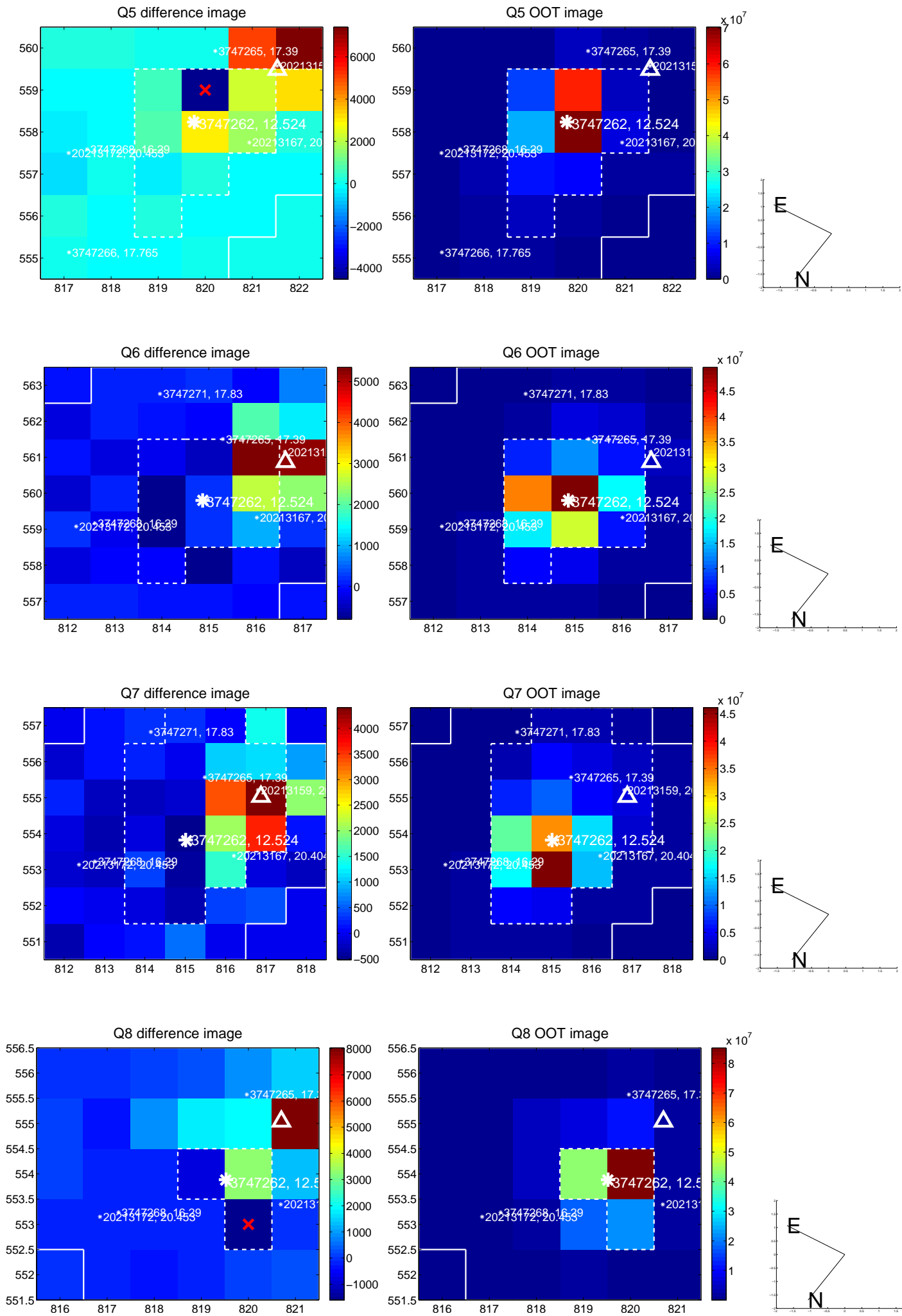


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

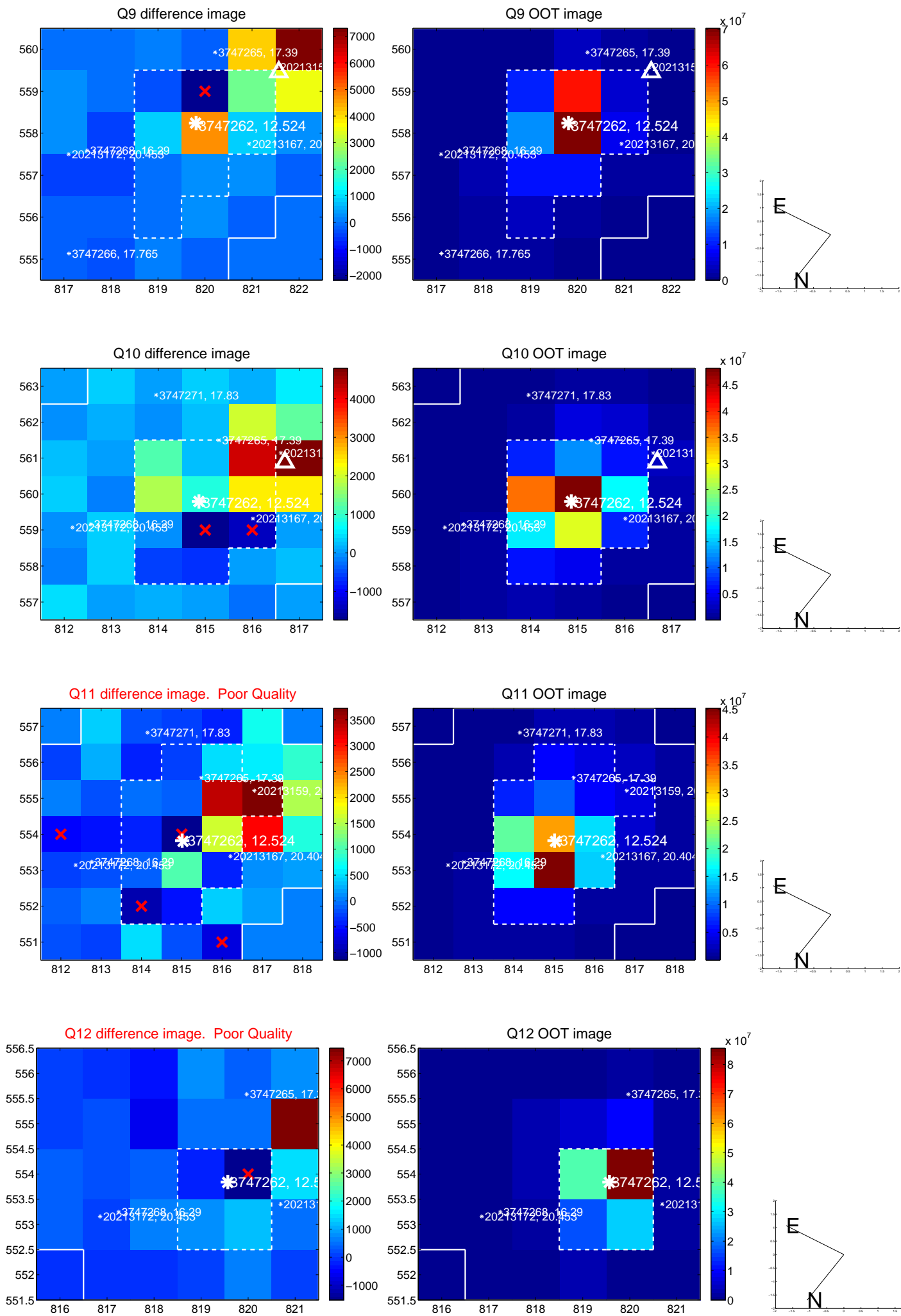


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

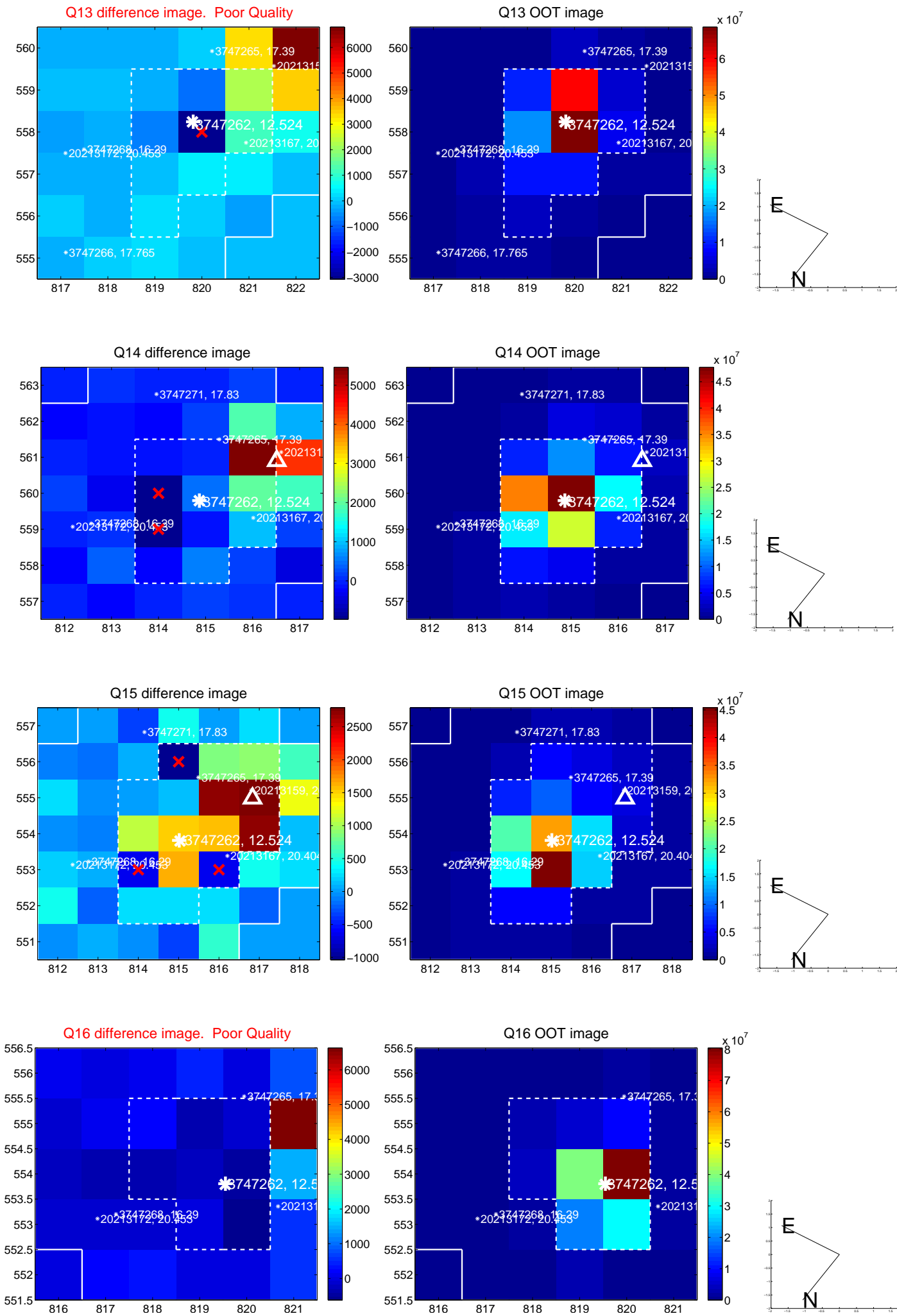




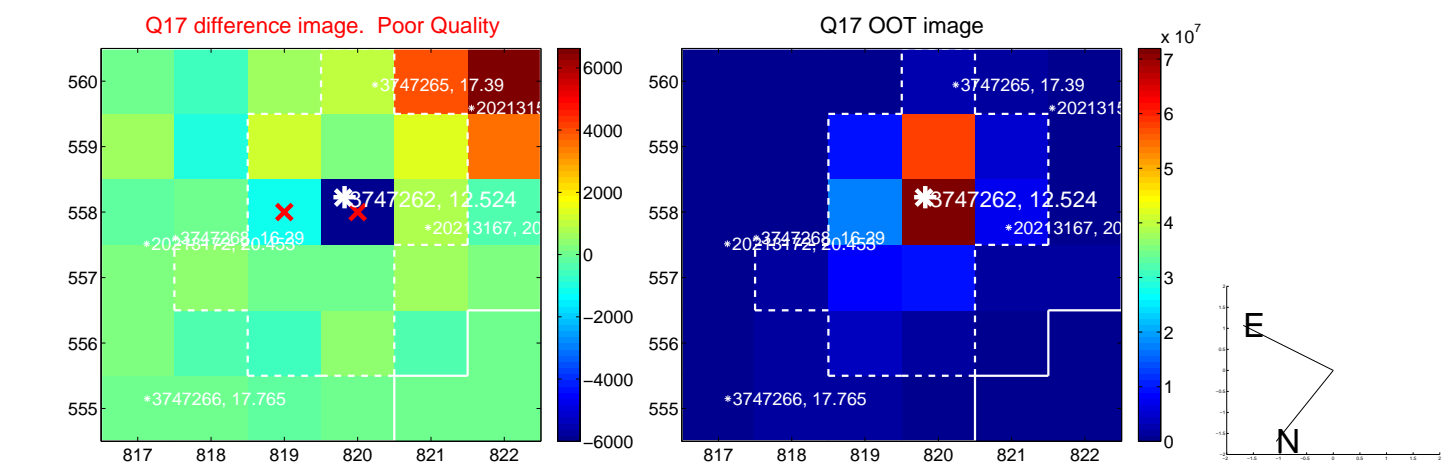
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



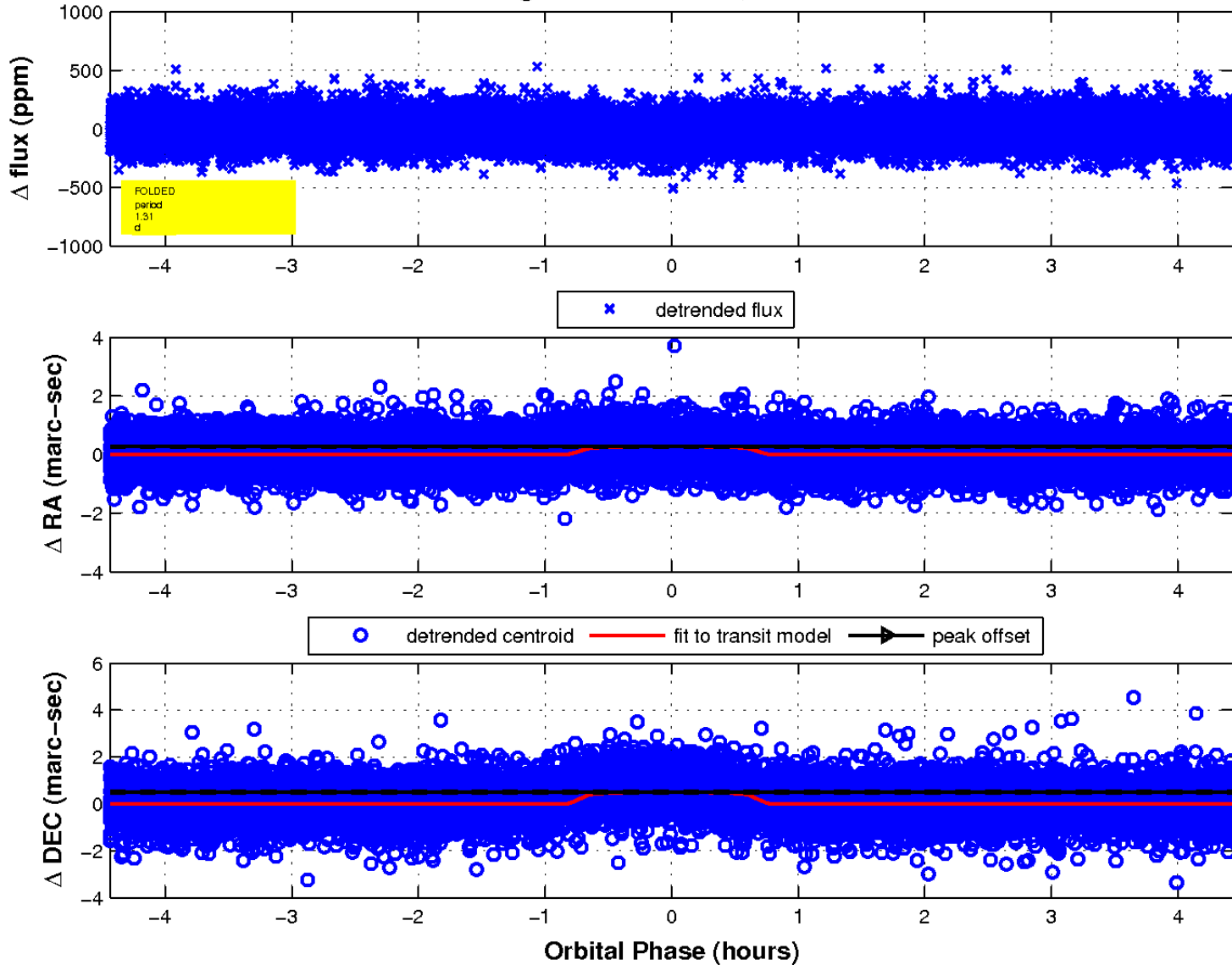
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

