

# KIC 001849555

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
001849555-01	OBS	No	1.672990	132.292524	19.2	4.528	9.3	7.0	4.31	7164	2.23	36194.69

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001849555-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

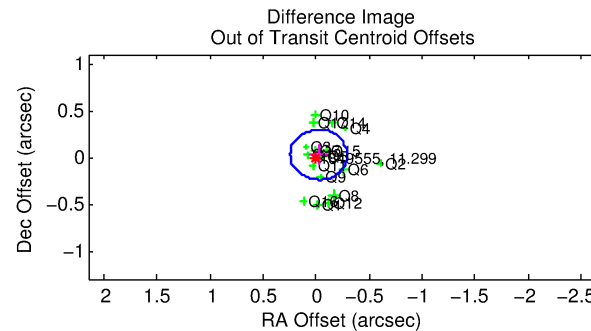
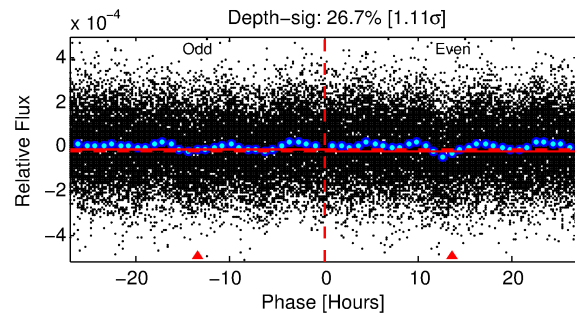
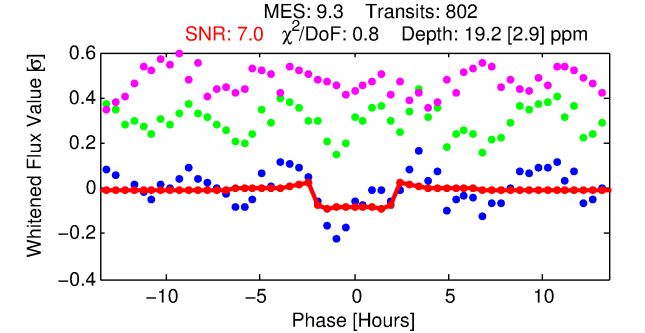
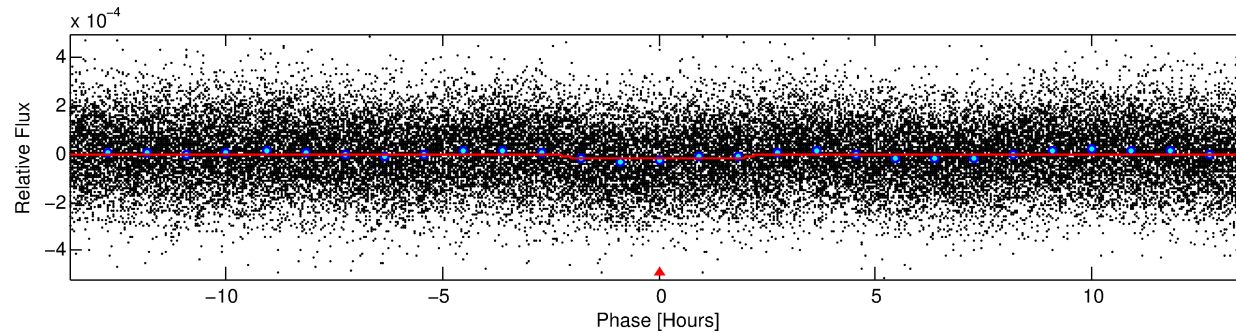
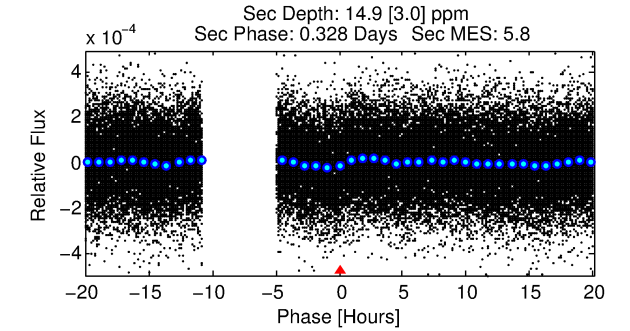
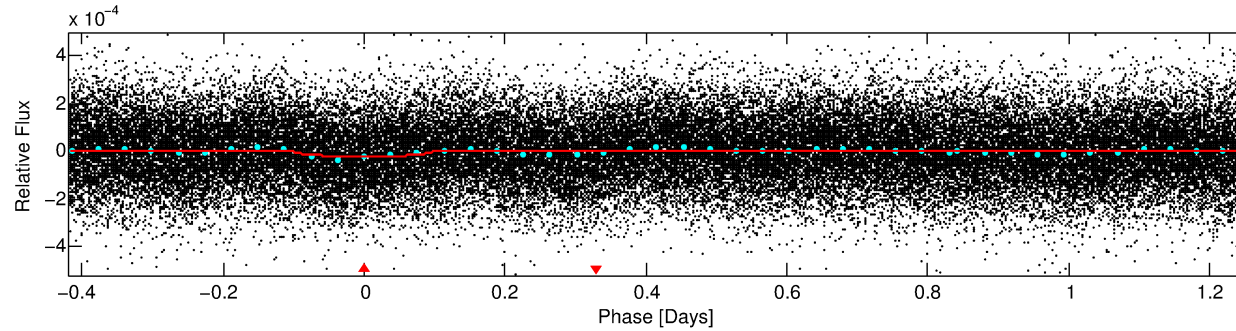
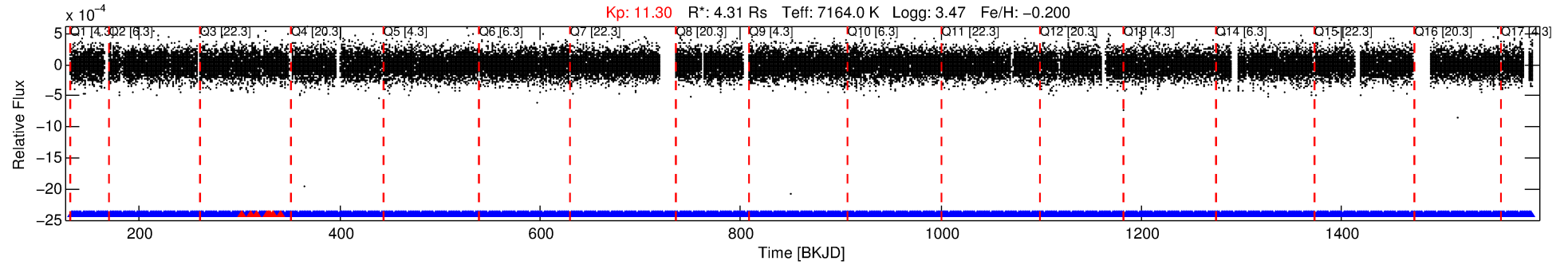
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 001849555-01

No Significant Match Found

# DV One-Page Summary

KIC: 1849555 Candidate: 1 of 1 Period: 1.673 d



## DV Fit Results:

Period = 1.67299 [0.00002] d  
Epoch = 132.2925 [0.0039] BKJD  
Rp/R\* = 0.0047 [0.0012]  
a/R\* = 1.54 [1.21]  
b = 0.91 [0.27]  
Seff = 36194.69 [23653.90]  
Teq = 3517 [575] K  
Rp = 2.23 [1.05] Re  
a = 0.0348 [0.0137] AU  
Ag = 2.00 [1.66] [0.60σ]  
Teffp = 6468 [887] K [2.79σ]

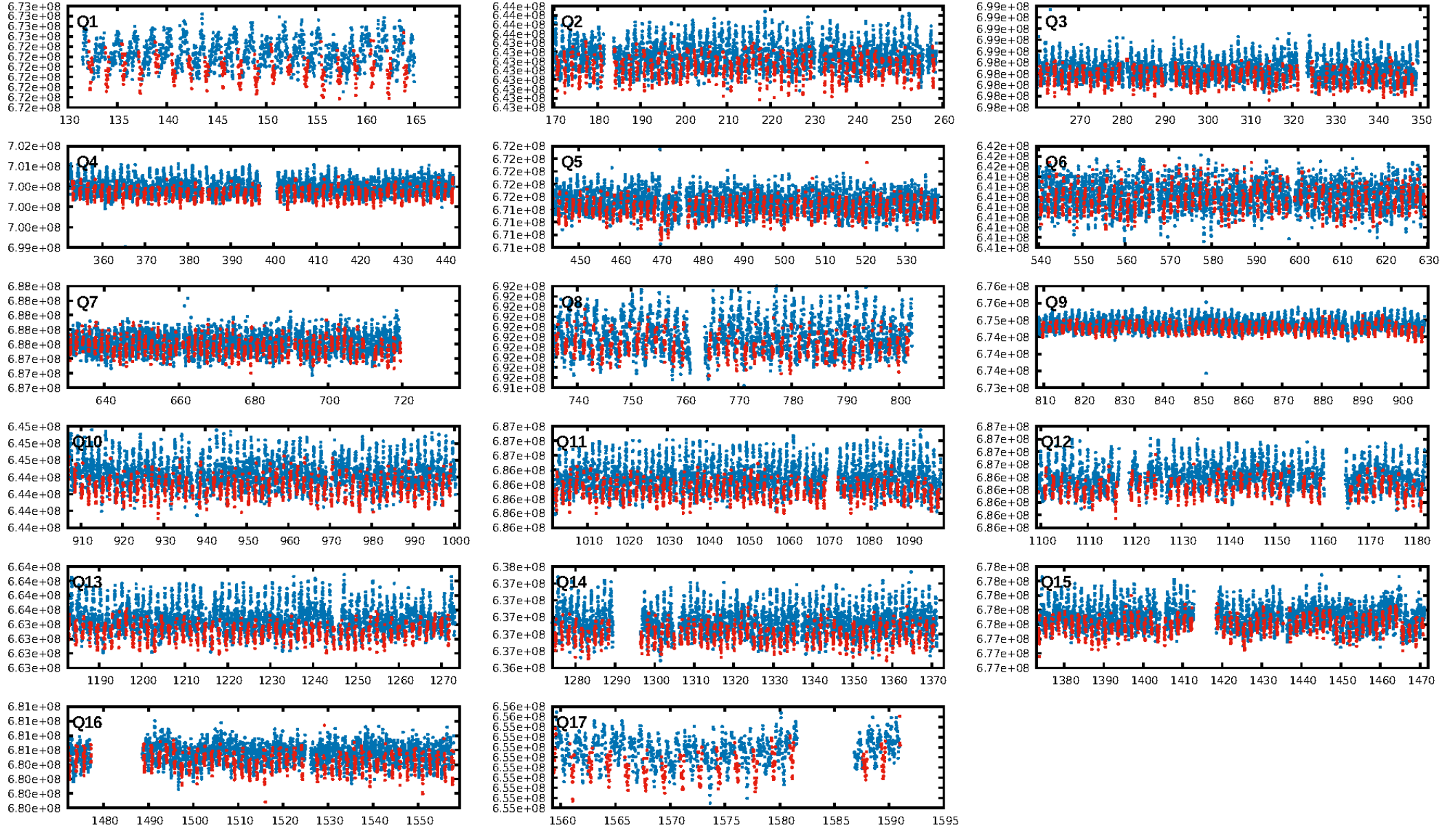
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.53e-15  
RollingBand-fgt: 0.99 [758/766]  
GhostDiagnostic-chr: 0.4429  
Centroid-sig: 0.0%  
Centroid-so: 5.642 arcsec [5.16σ]  
OotOffset-rm: 0.036 arcsec [0.41σ]  
KicOffset-rm: 0.198 arcsec [2.13σ]  
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]

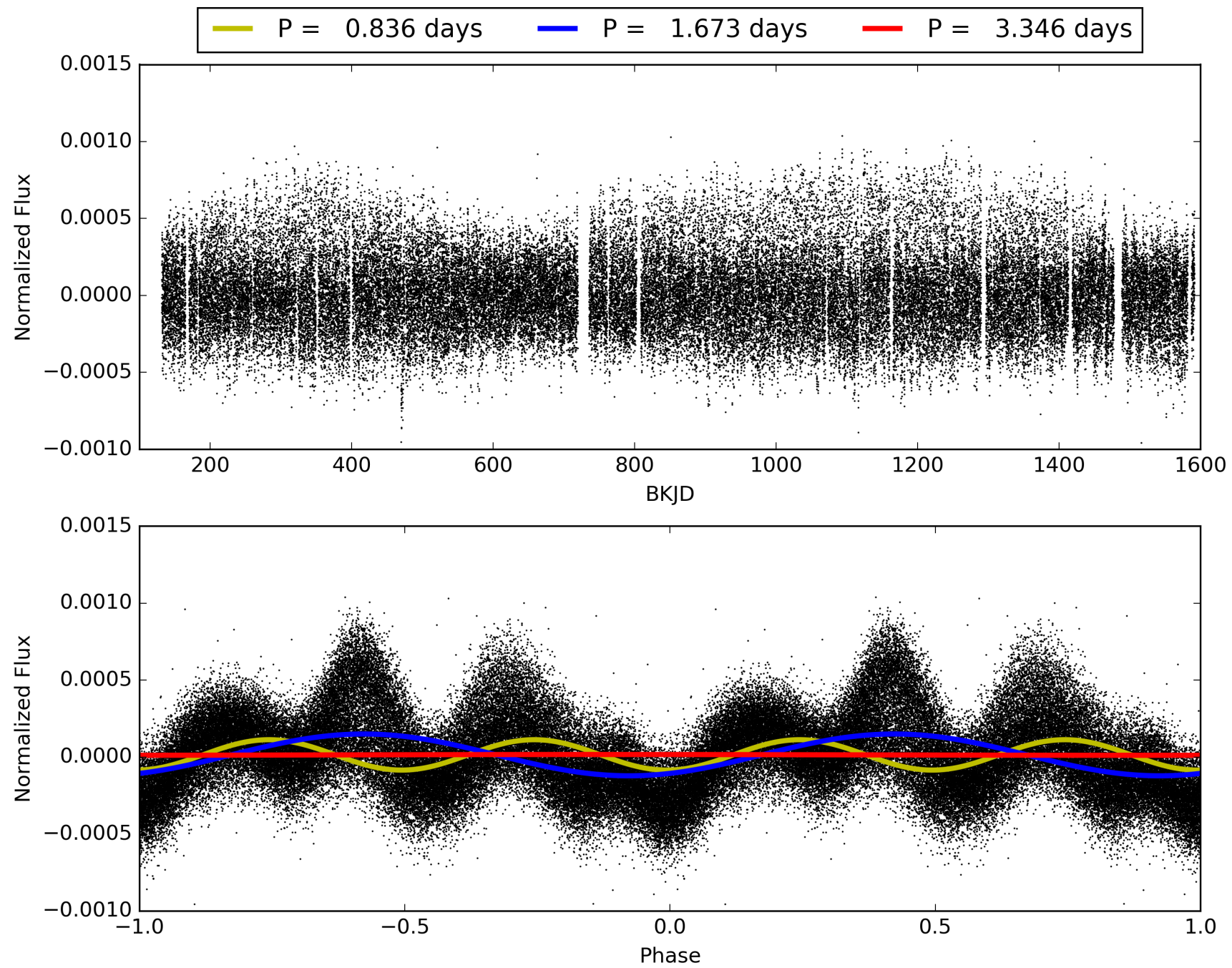
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:55:07 Z

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

# TCE 001849555-01, PDC Light Curves



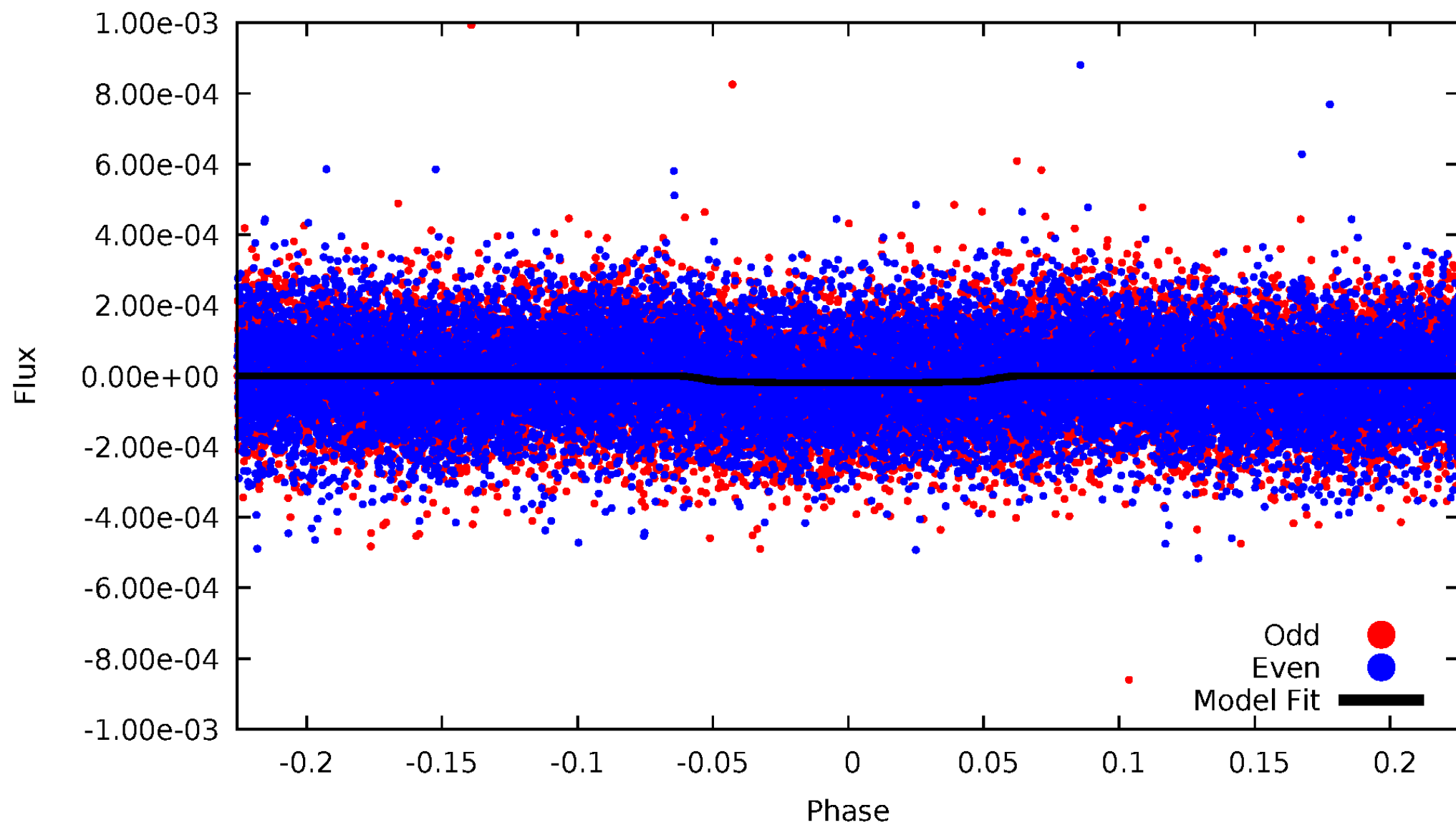
TCE 001849555-01





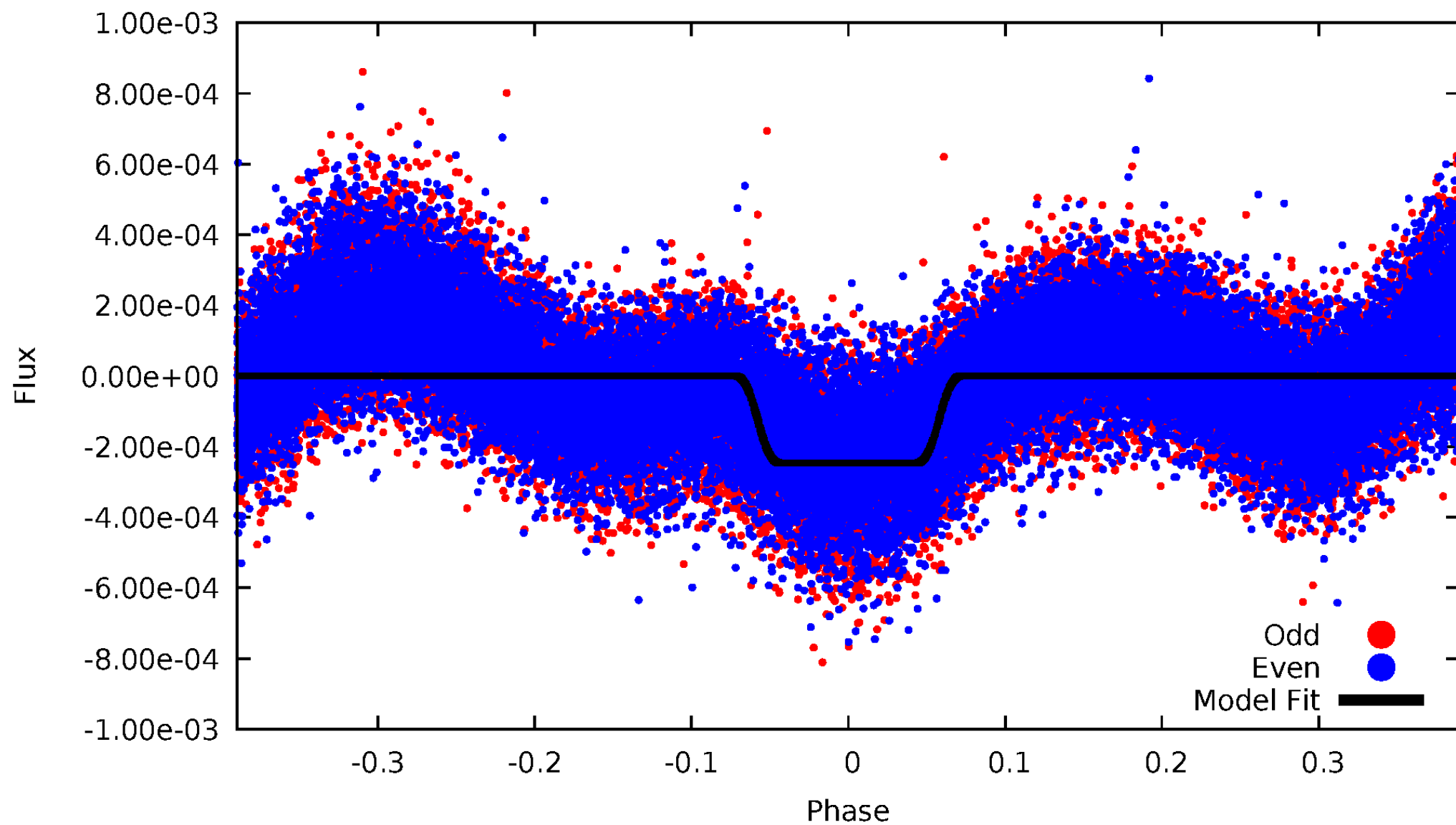
# DV Odd/Even

TCE 001849555-01

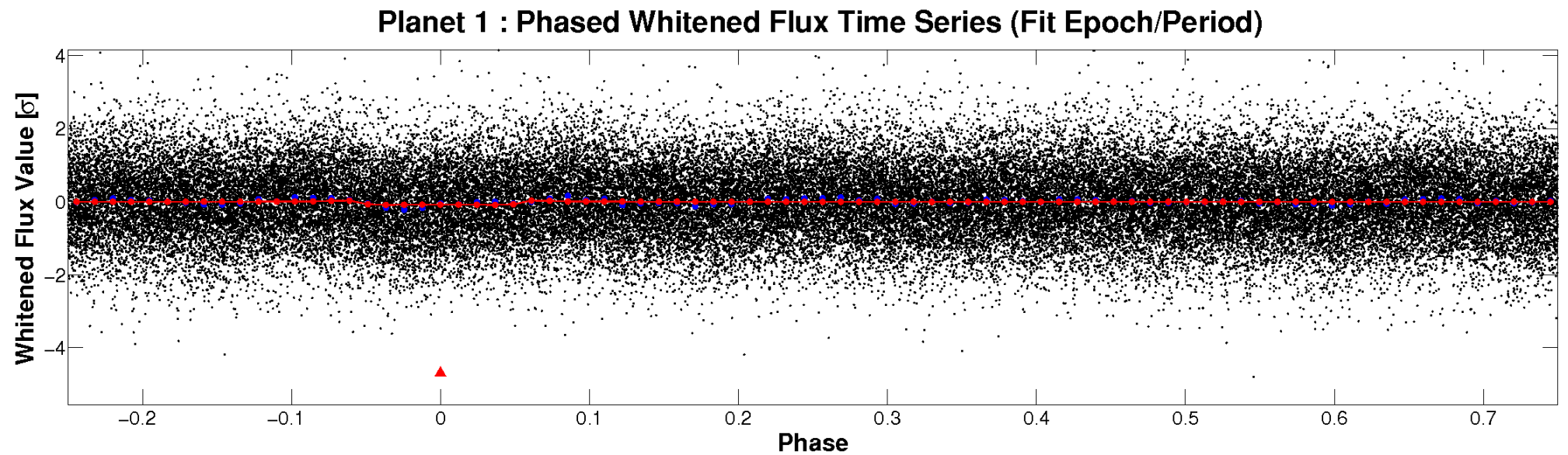
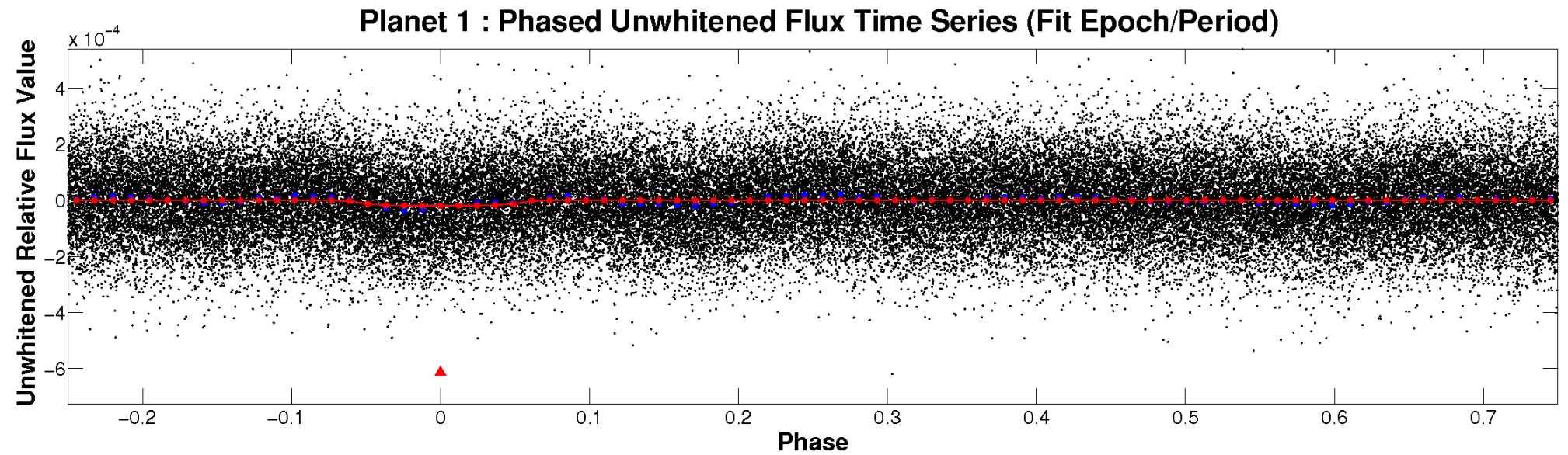


# ALT Odd/Even

TCE 001849555-01

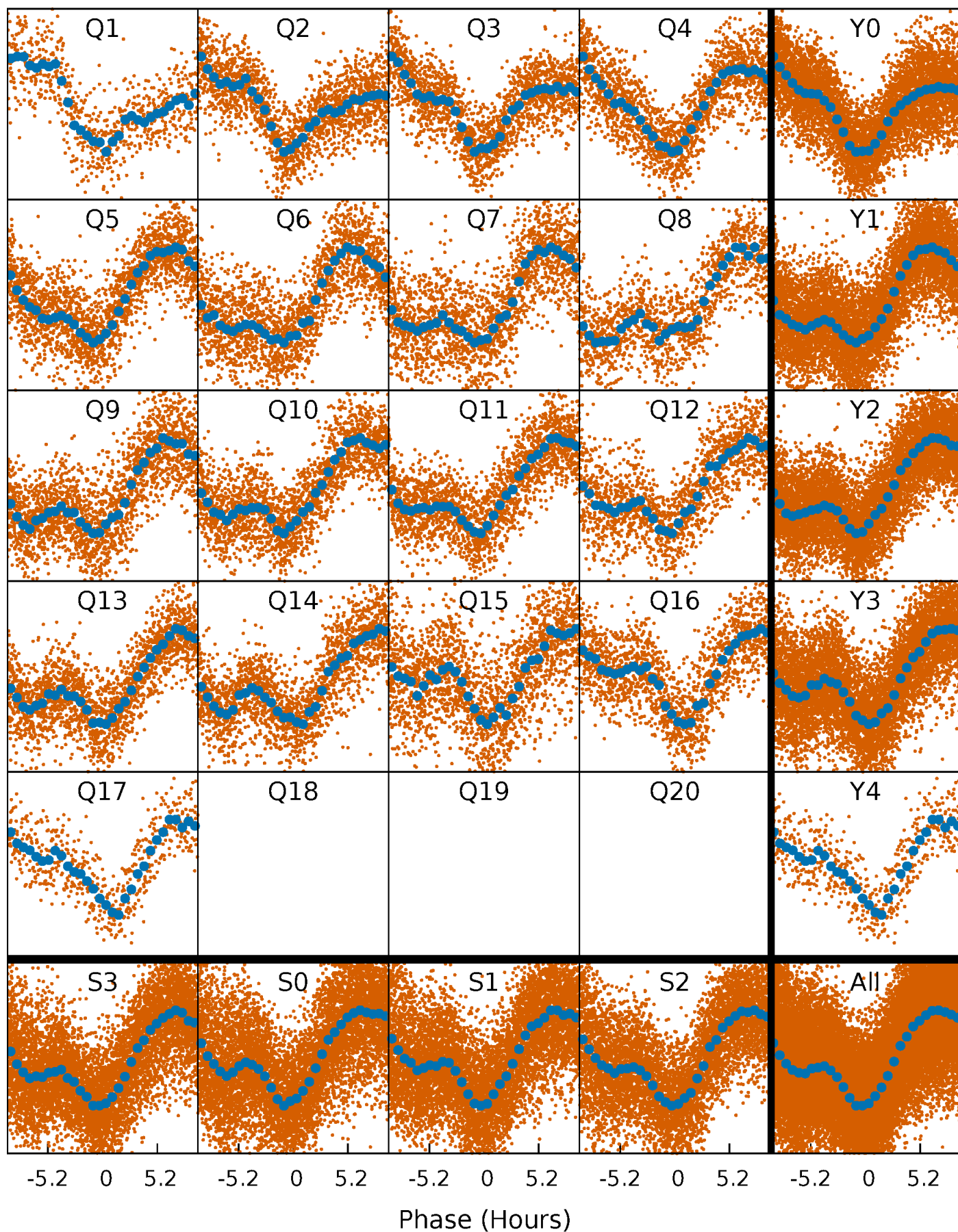


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

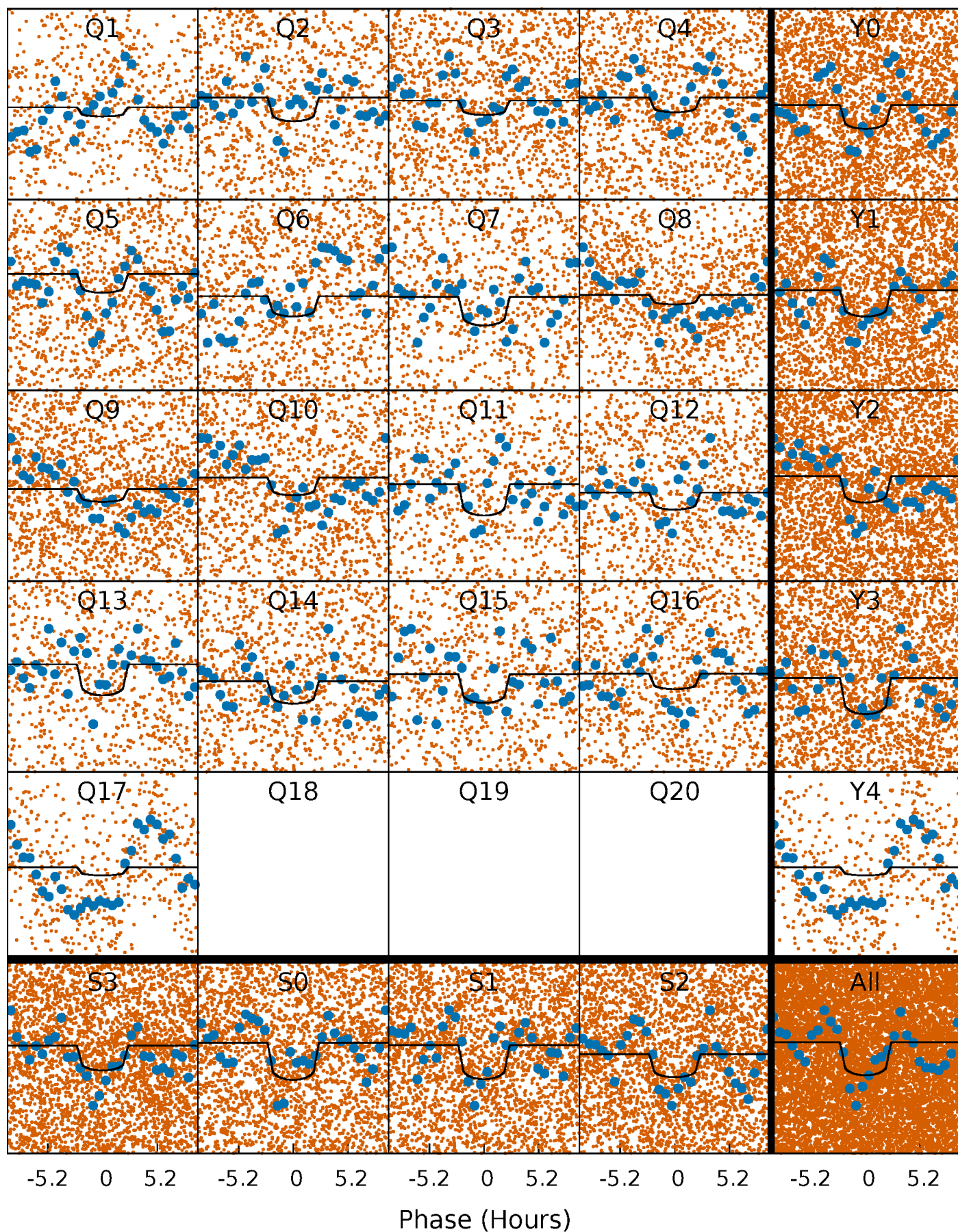
TCE 001849555-01 P= 1.672990 Days  $T_0=132.292524$  (BKJD)





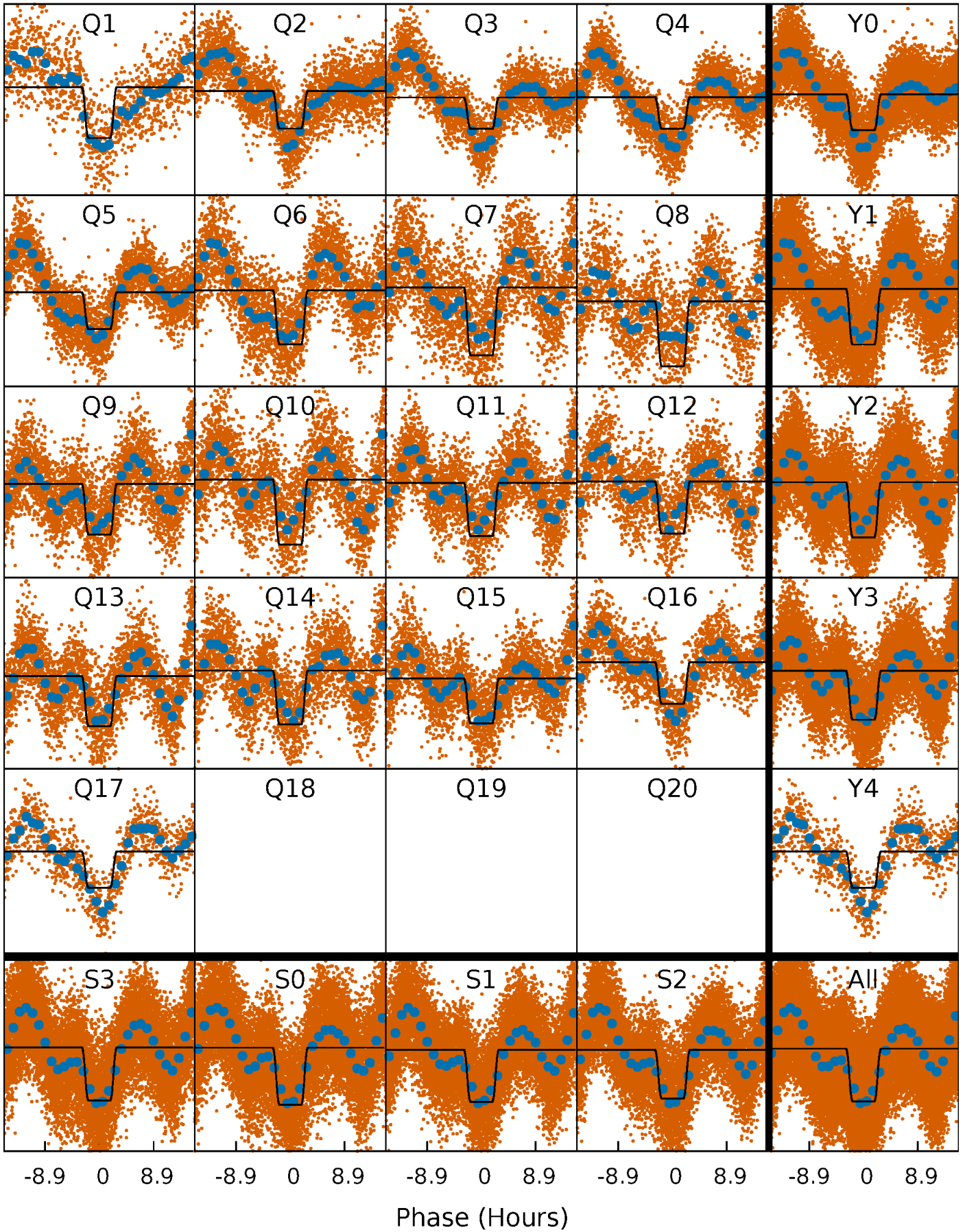
# DV Quarter-Phased Transit Curves

TCE 001849555-01 P= 1.672990 Days  $T_0=132.292524$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

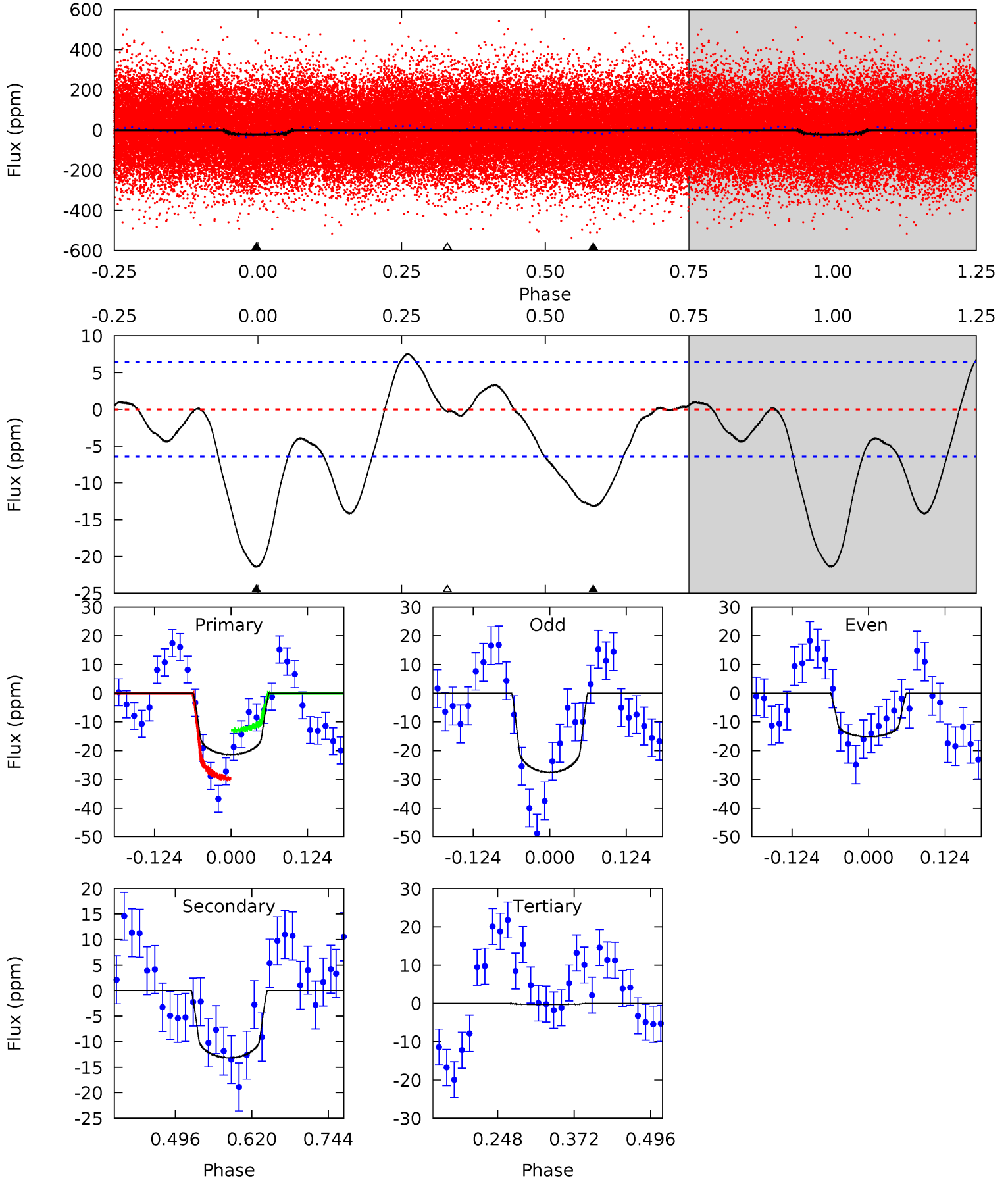
TCE 001849555-01 P= 1.673043 Days  $T_0=132.263063$  (BKJD)



# DV Model-Shift Uniqueness Test

001849555-01, P = 1.672990 Days, E = 130.619534 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
15.0	9.23	0.19	0	4.52	1.54	3.68	14.8	15.0	9.04	9.23	4.34	1.03	0.26	5.89

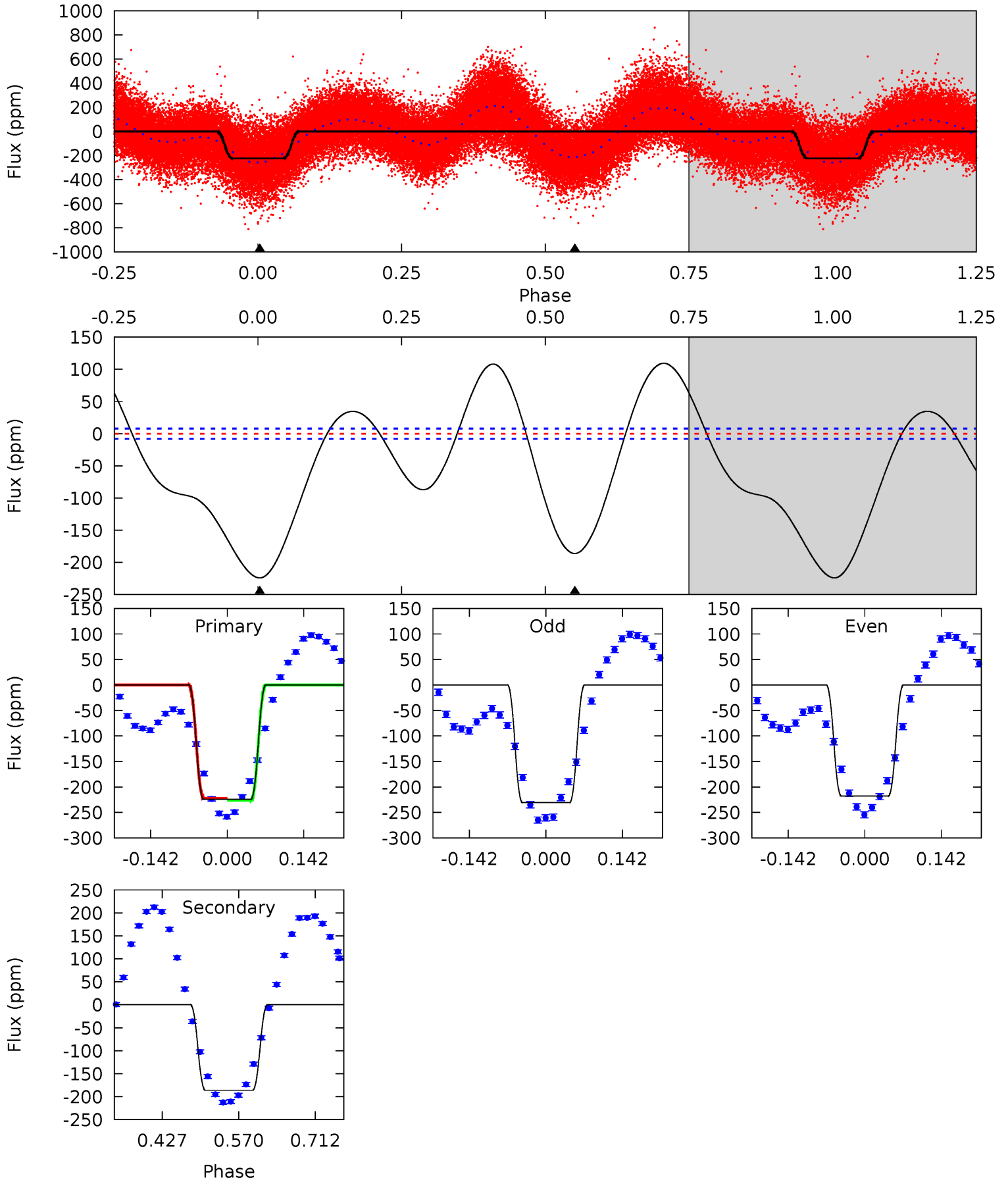




# Alt Model-Shift Uniqueness Test

001849555-01, P = 1.673043 Days, E = 130.590020 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
126.3	104.9	0	0	4.49	1.47	36.7	126.3	126.3	104.9	104.9	3.70	1.07	0.33	1.25





### Stellar Parameters For KIC 001849555

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7164^{+173}_{-247}$	$3.472^{+0.378}_{-0.063}$	$-0.200^{+0.250}_{-0.250}$	$4.312^{+0.305}_{-1.728}$	$2.011^{+0.071}_{-0.405}$	$0.035^{+0.106}_{-0.007}$
	+2%/-3%	+11%/-2%	+125%/-125%	+7%/-40%	+4%/-20%	+301%/-20%
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 001849555-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-13 \pm 1$	$2.07^{+0.61}_{-0.61}$	$4797^{+255}_{-451}$	$5904^{+1111}_{-680}$	$2.038^{+2.016}_{-0.845}$
Alt.	$-186 \pm 2$	$7.04^{+0.92}_{-1.34}$	$4802^{+256}_{-417}$	$6409^{+348}_{-332}$	$2.476^{+1.145}_{-0.524}$

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

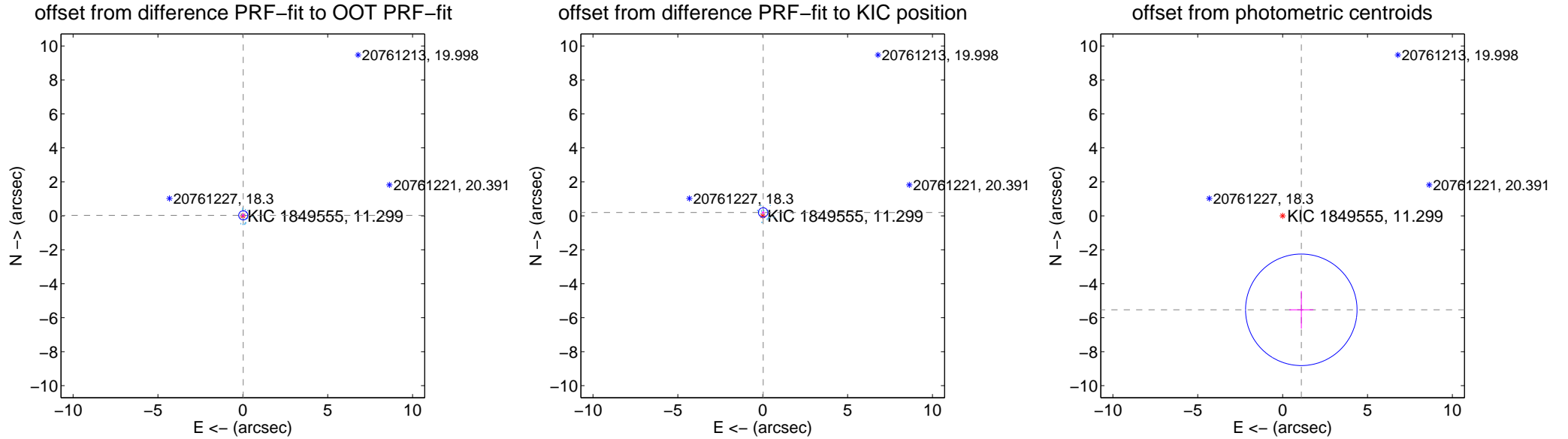
## DV Centroid Data

Supplemental centroid analysis for 001849555-01. **Kepler magnitude: 11.30.** Transit SNR 7.05

There are 17 quarters with good PRF difference image offsets

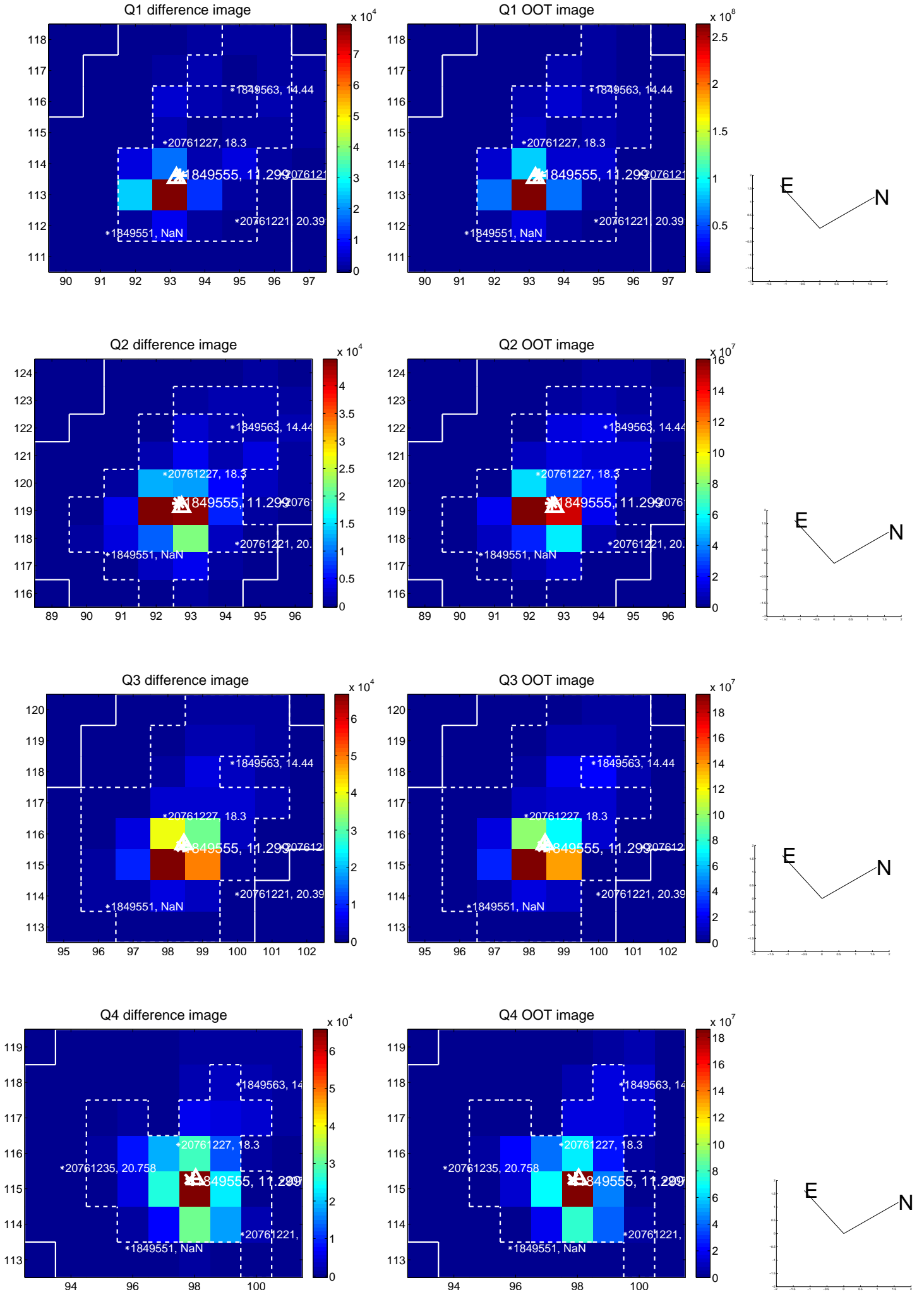
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.036 \pm 0.089$	0.41	$-0.024 \pm 0.078$	$0.027 \pm 0.099$
PRF-fit source offset from KIC position	$0.198 \pm 0.093$	2.13	$-0.025 \pm 0.089$	$0.197 \pm 0.093$
photometric centroid source offset	<b><math>5.64 \pm 1.09</math></b>	<b>5.16</b>	$-1.10 \pm 0.71$	$-5.53 \pm 1.11$

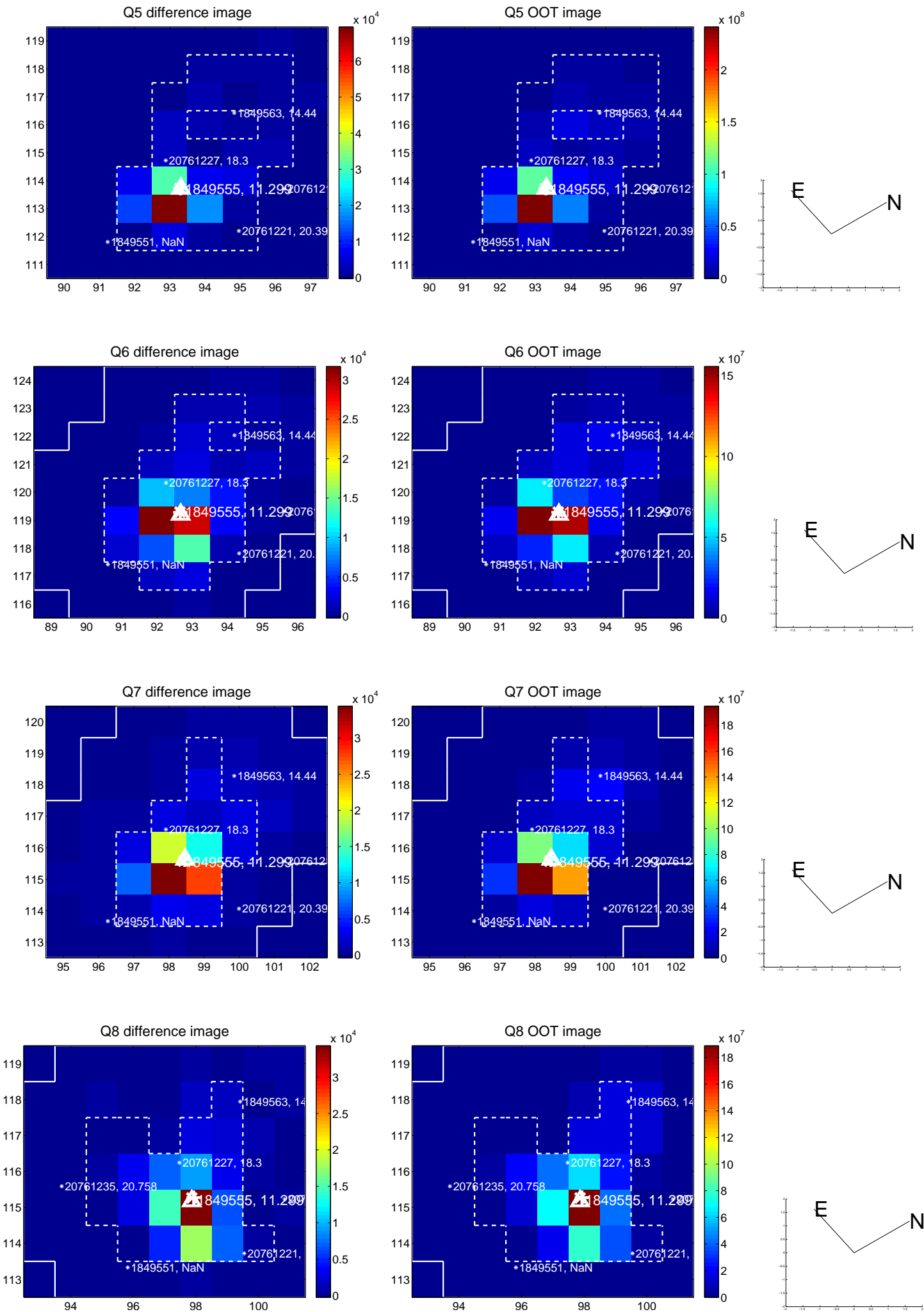


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

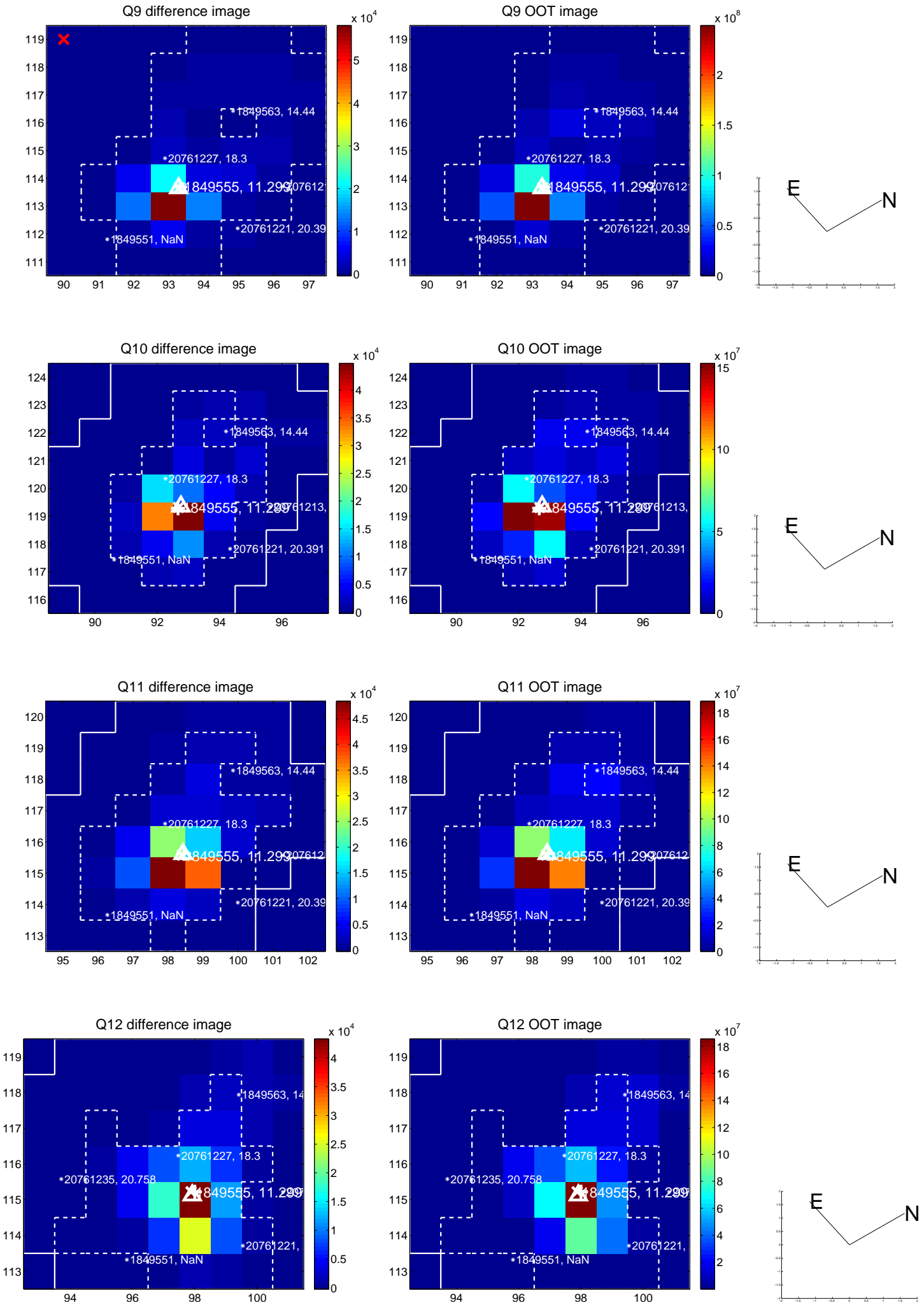


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

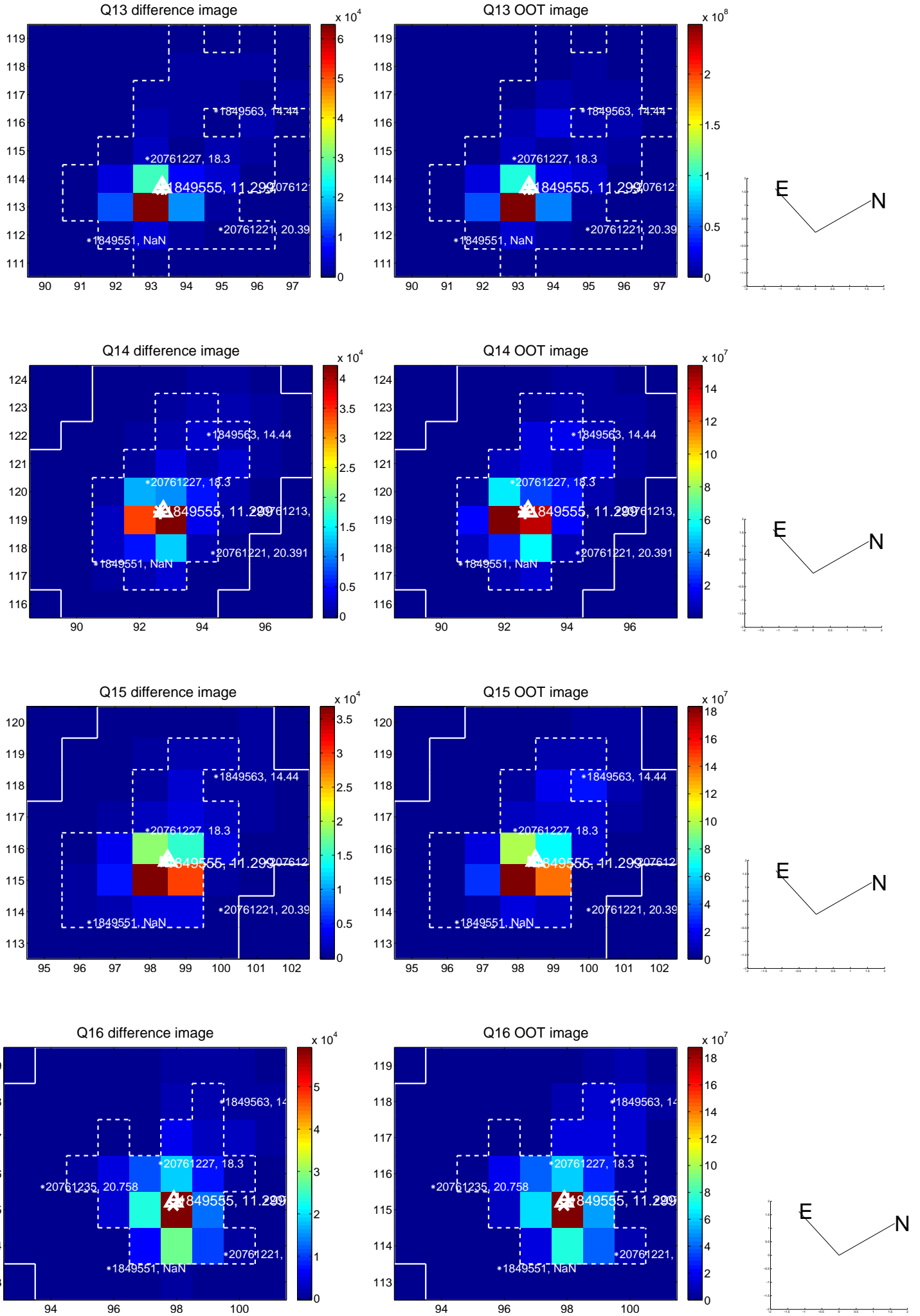




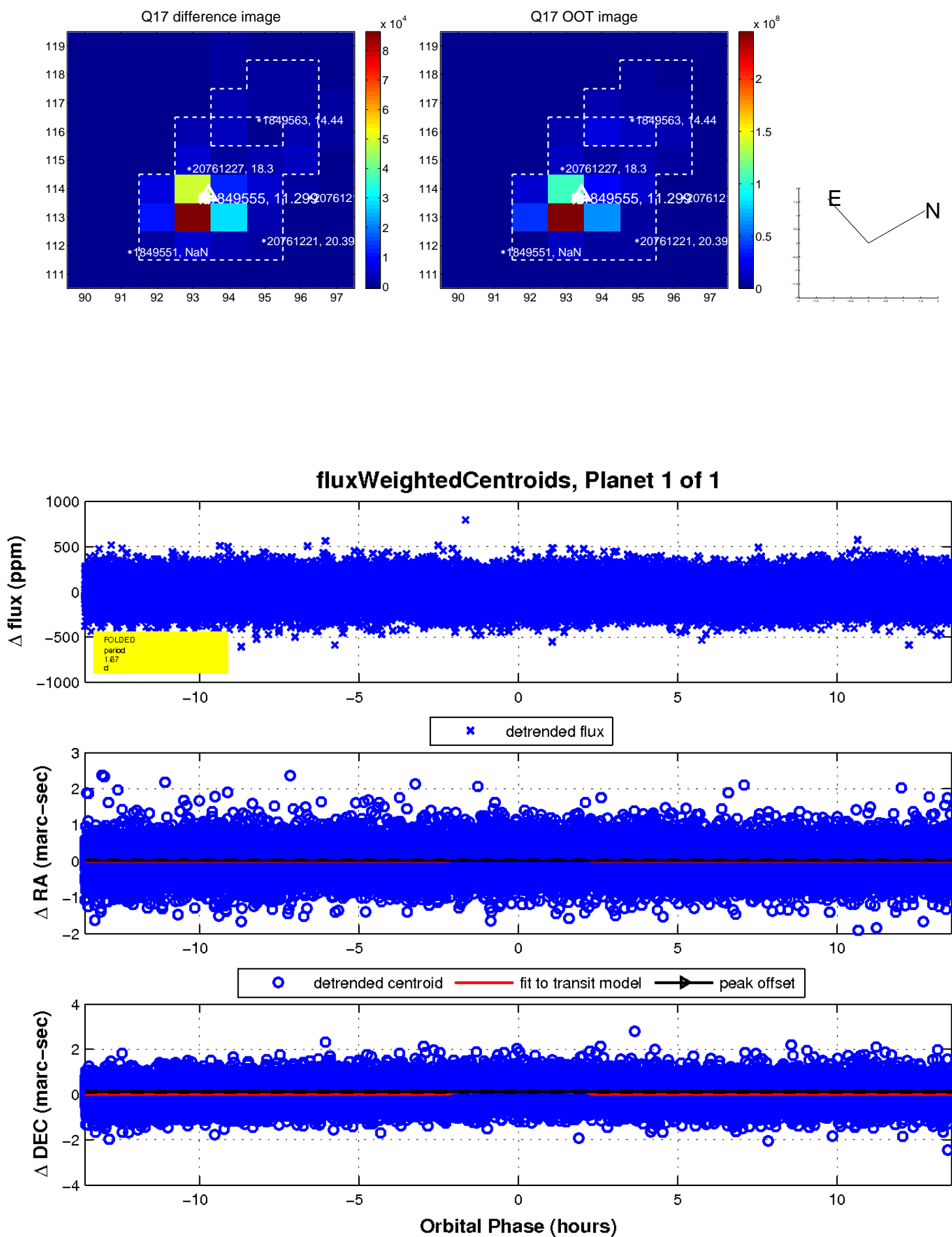
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

