

# KIC 003547187

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003547187-01	OBS	No	5.864976	134.217538	58.6	26.564	13.7	10.6	1.91	6686	1.51	1273.99

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003547187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS

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

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

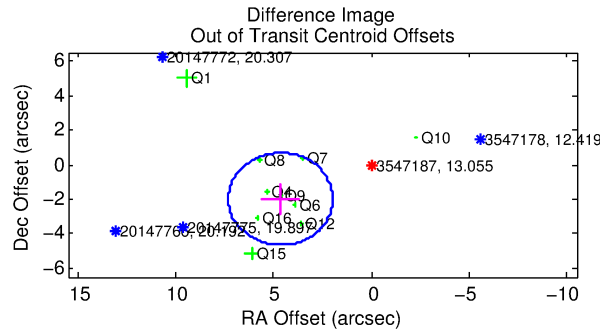
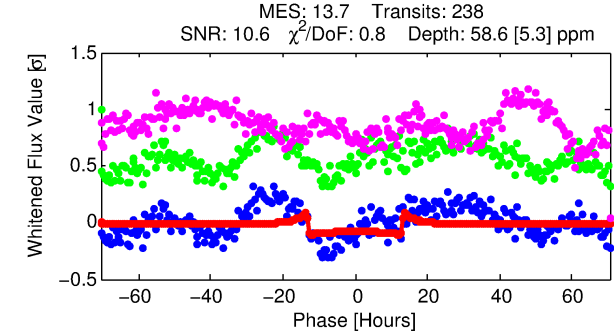
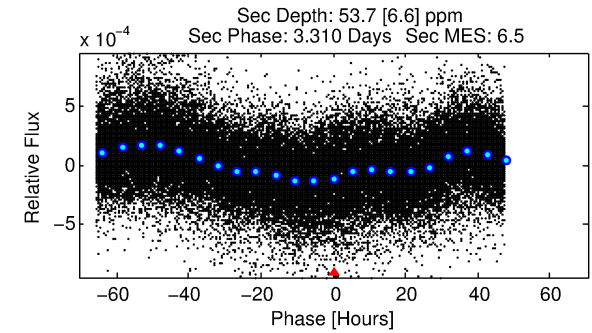
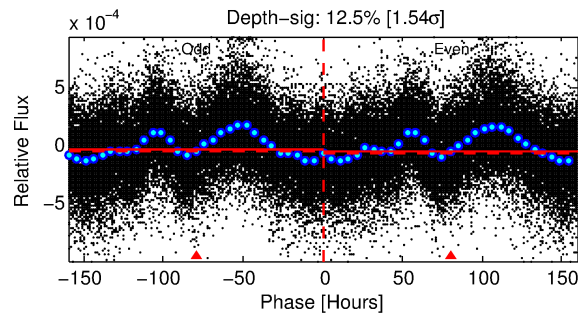
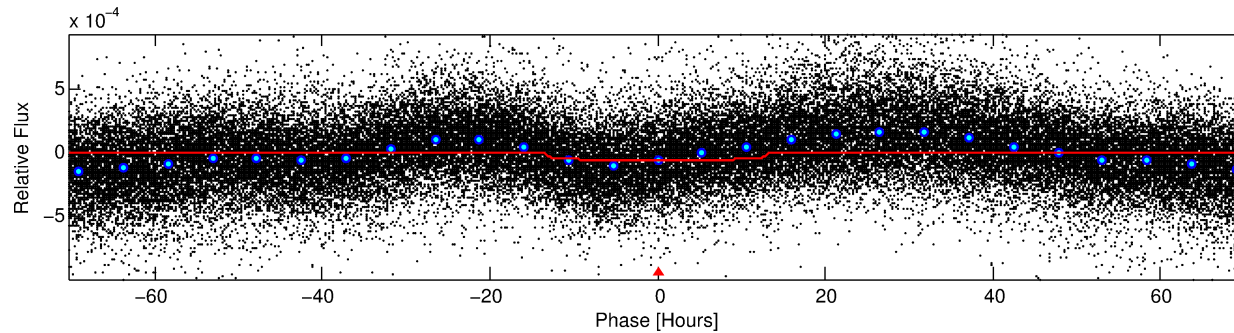
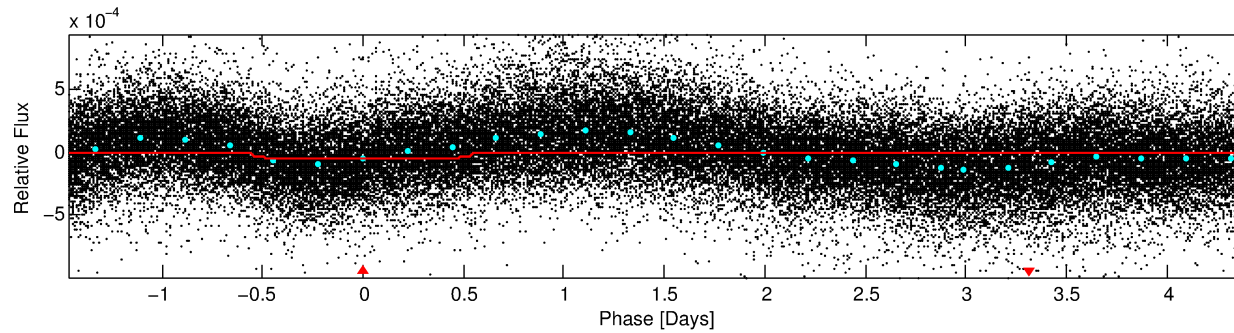
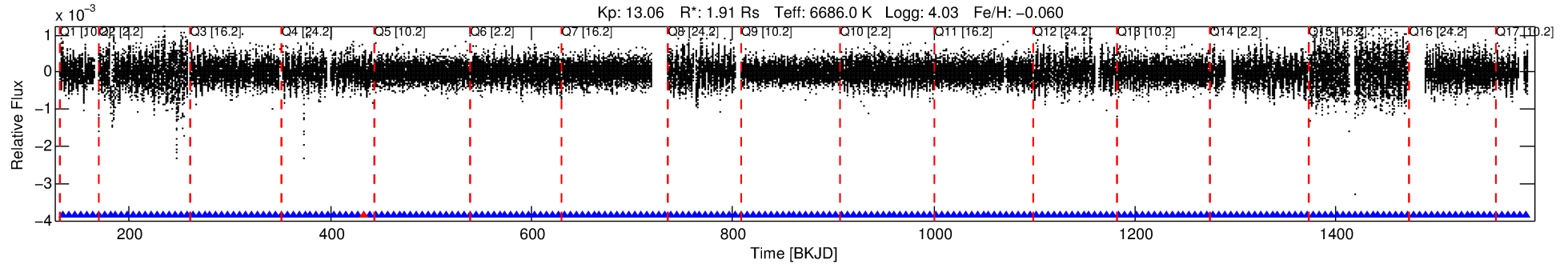
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003547187-01

No Significant Match Found

# DV One-Page Summary

KIC: 3547187 Candidate: 1 of 1 Period: 5.865 d



## DV Fit Results:

Period = 5.86498 [0.00007] d  
Epoch = 134.2175 [0.0089] BKJD  
Rp/R\* = 0.0072 [0.0016]  
a/R\* = 1.66 [1.31]  
b = 0.47 [2.04]  
Seff = 1273.99 [404.19]  
Teq = 1523 [121] K  
Rp = 1.51 [0.48] Re  
a = 0.0718 [0.0145] AU  
Ag = 66.77 [37.66] [1.75 $\sigma$ ]  
Teffp = 6733 [793] K [6.49 $\sigma$ ]

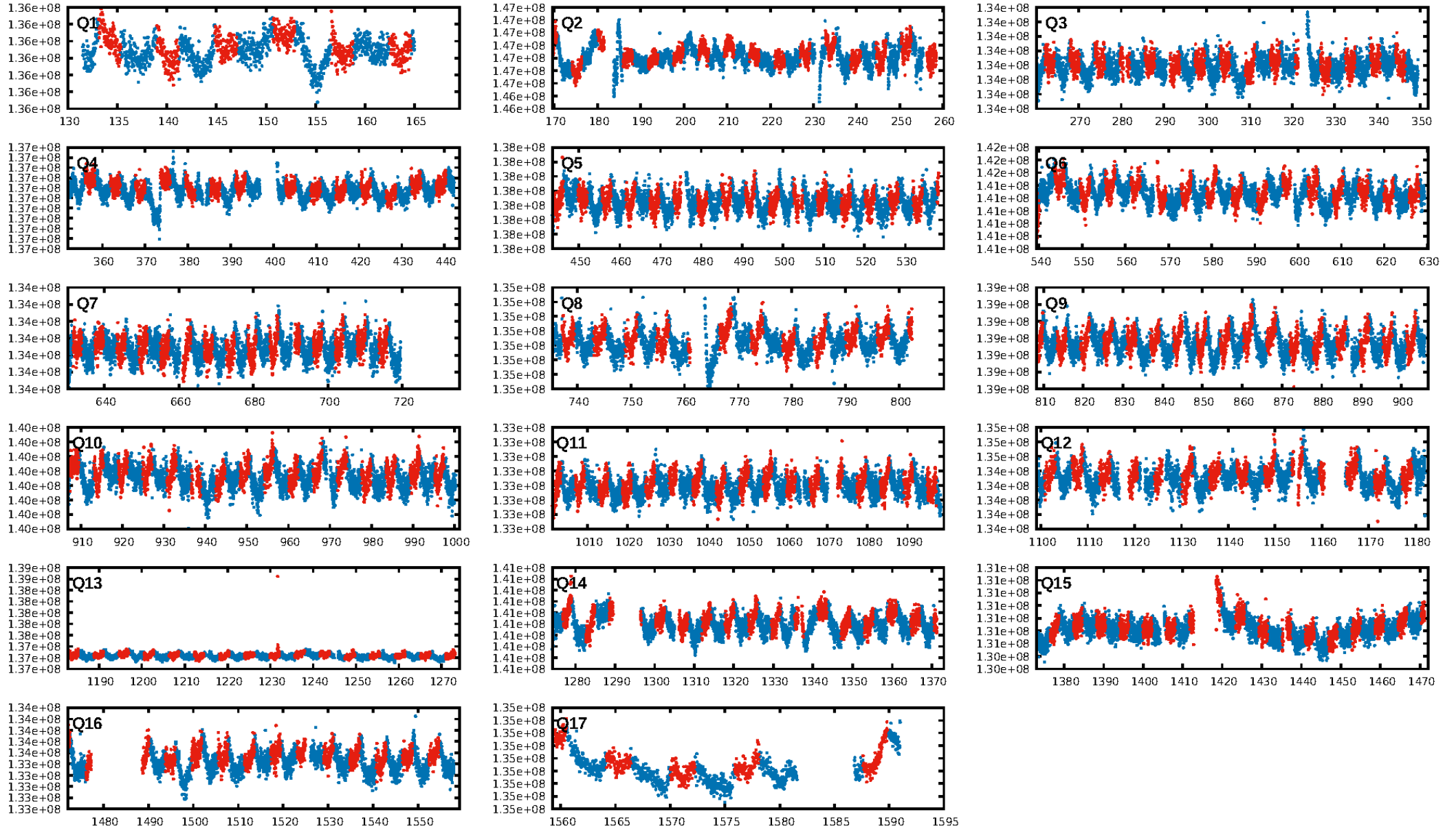
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.88e-41  
RollingBand-fgt: 1.00 [226/227]  
GhostDiagnostic-chr: 1.39  
Centroid-sig: 3.2%  
Centroid-so: 2.963 arcsec [8.09 $\sigma$ ]  
OotOffset-rm: 5.054 arcsec [5.68 $\sigma$ ]  
KicOffset-rm: 1.119 arcsec [1.22 $\sigma$ ]  
OotOffset-st: 2/2/4/2 [10]  
KicOffset-st: 2/2/4/2 [10]  
DiffImageQuality-fgm: 0.30 [3/10]  
DiffImageOverlap-fno: 1.00 [17/17]

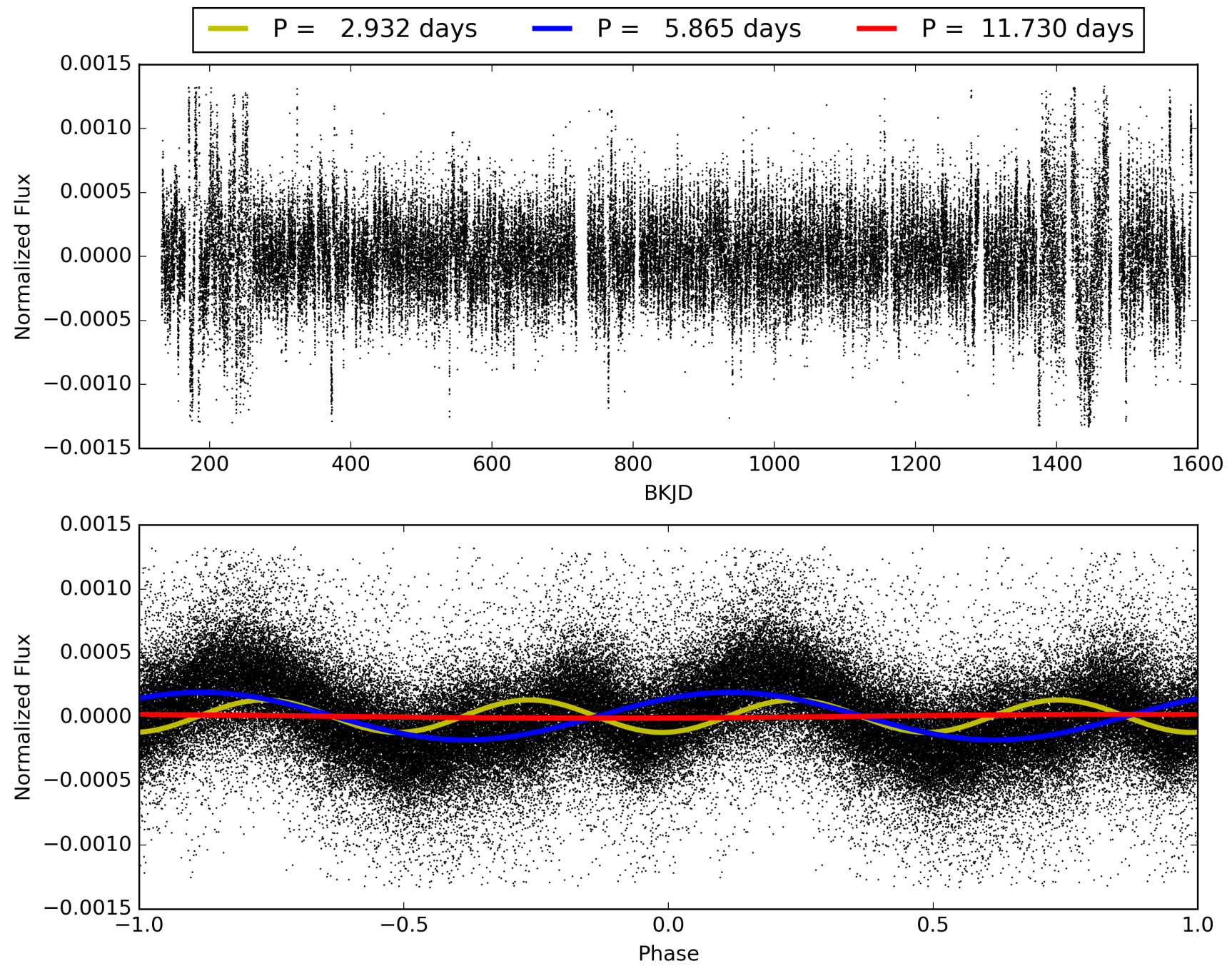
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:48:06 Z

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

# TCE 003547187-01, PDC Light Curves

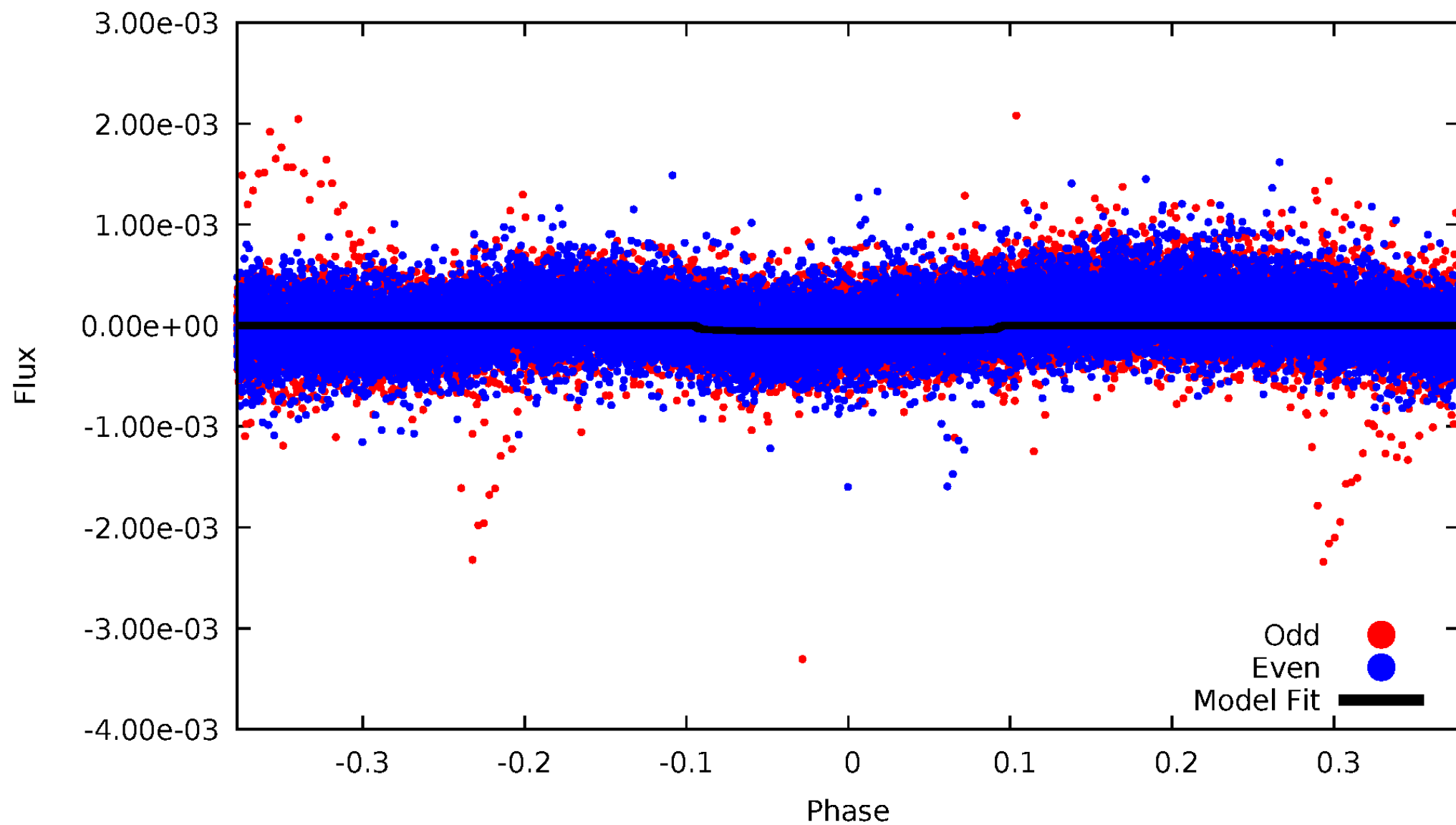


TCE 003547187-01



# DV Odd/Even

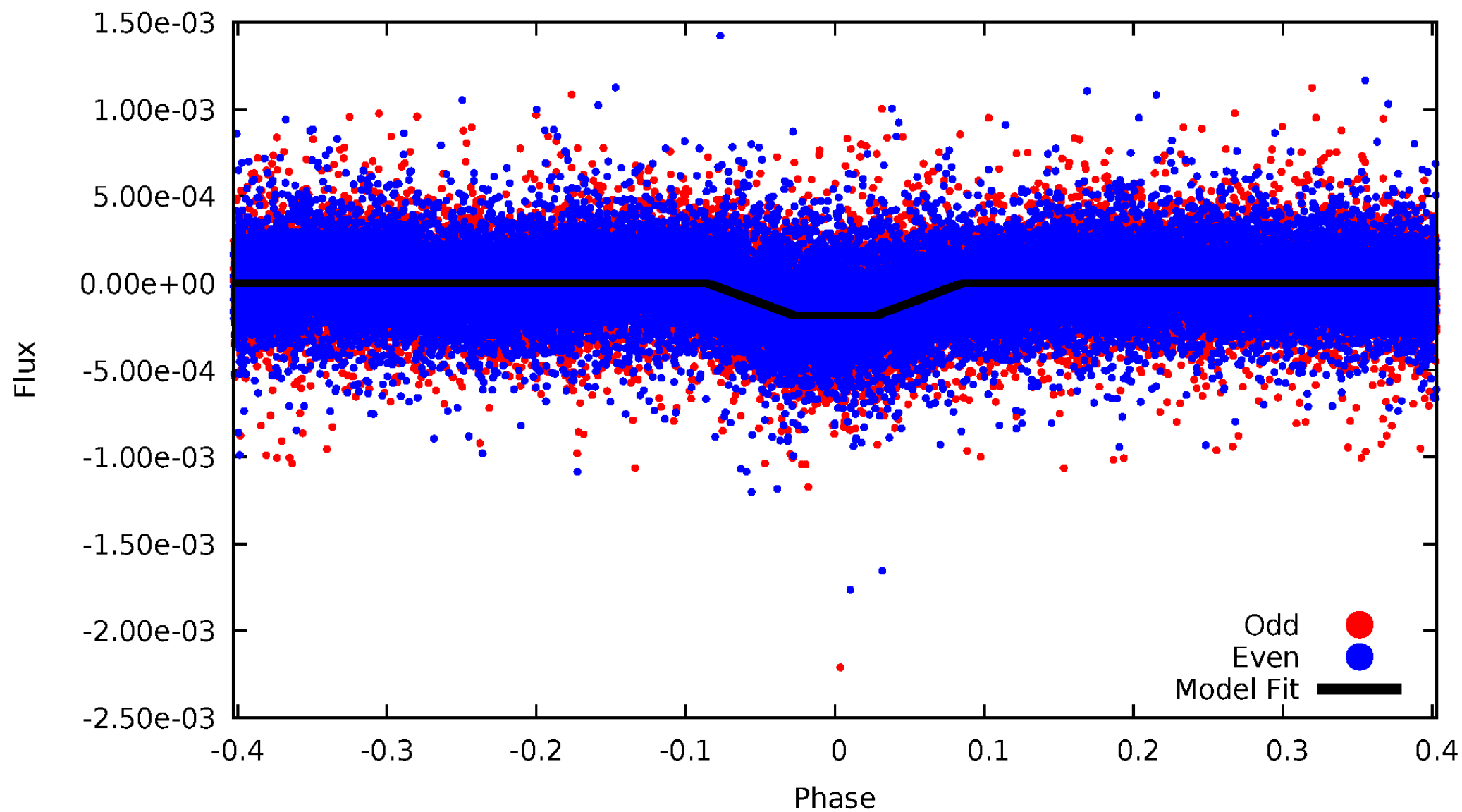
TCE 003547187-01



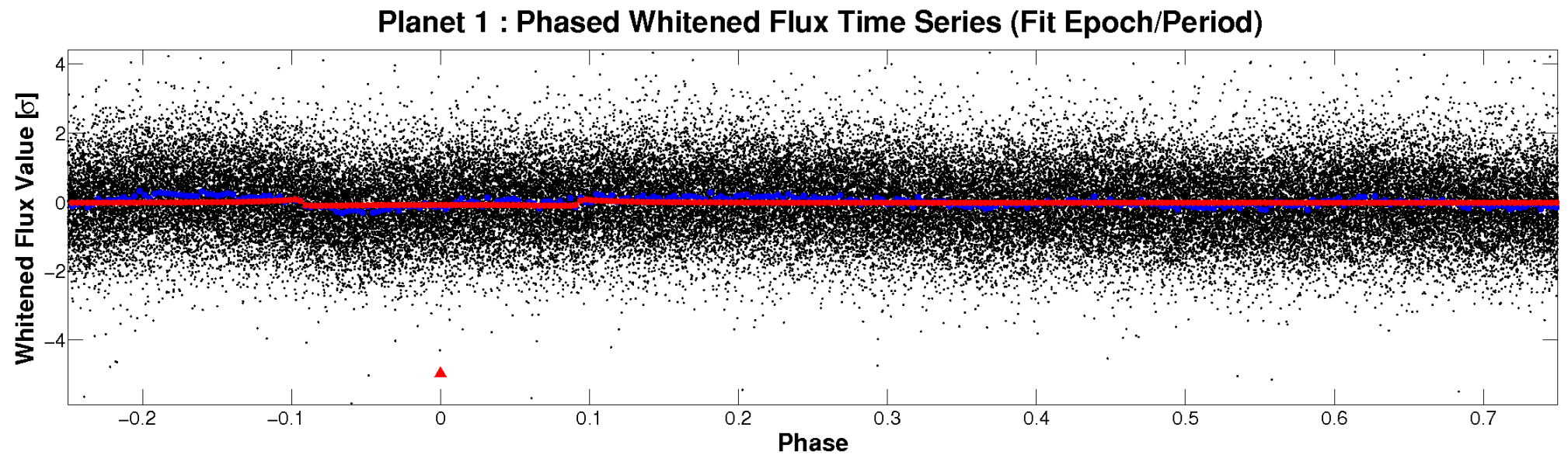
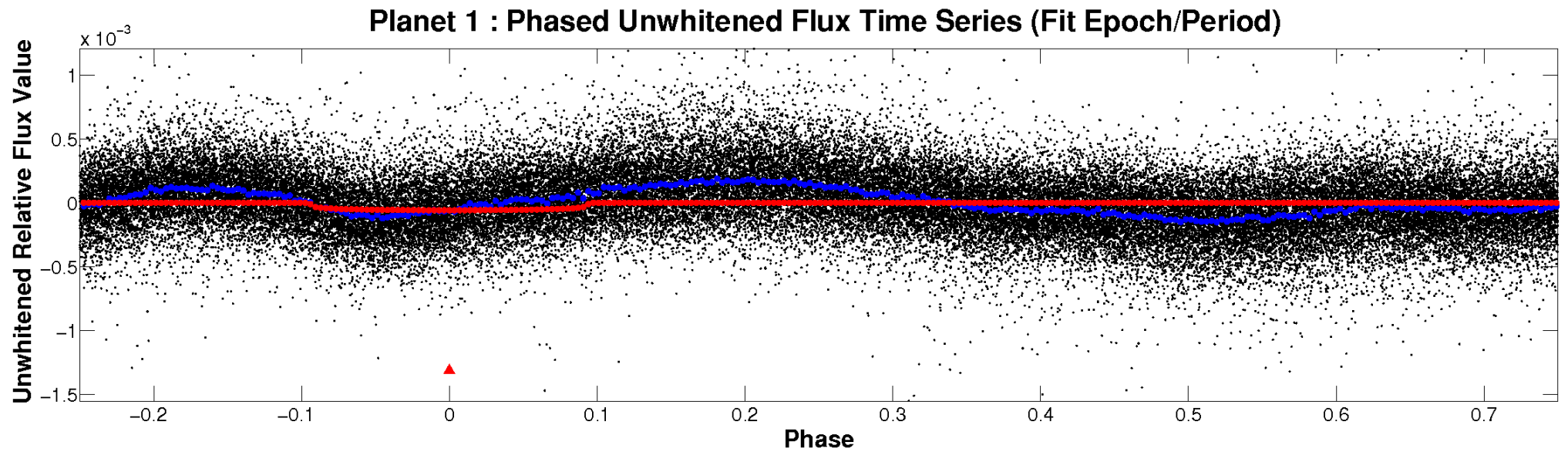


# ALT Odd/Even

TCE 003547187-01

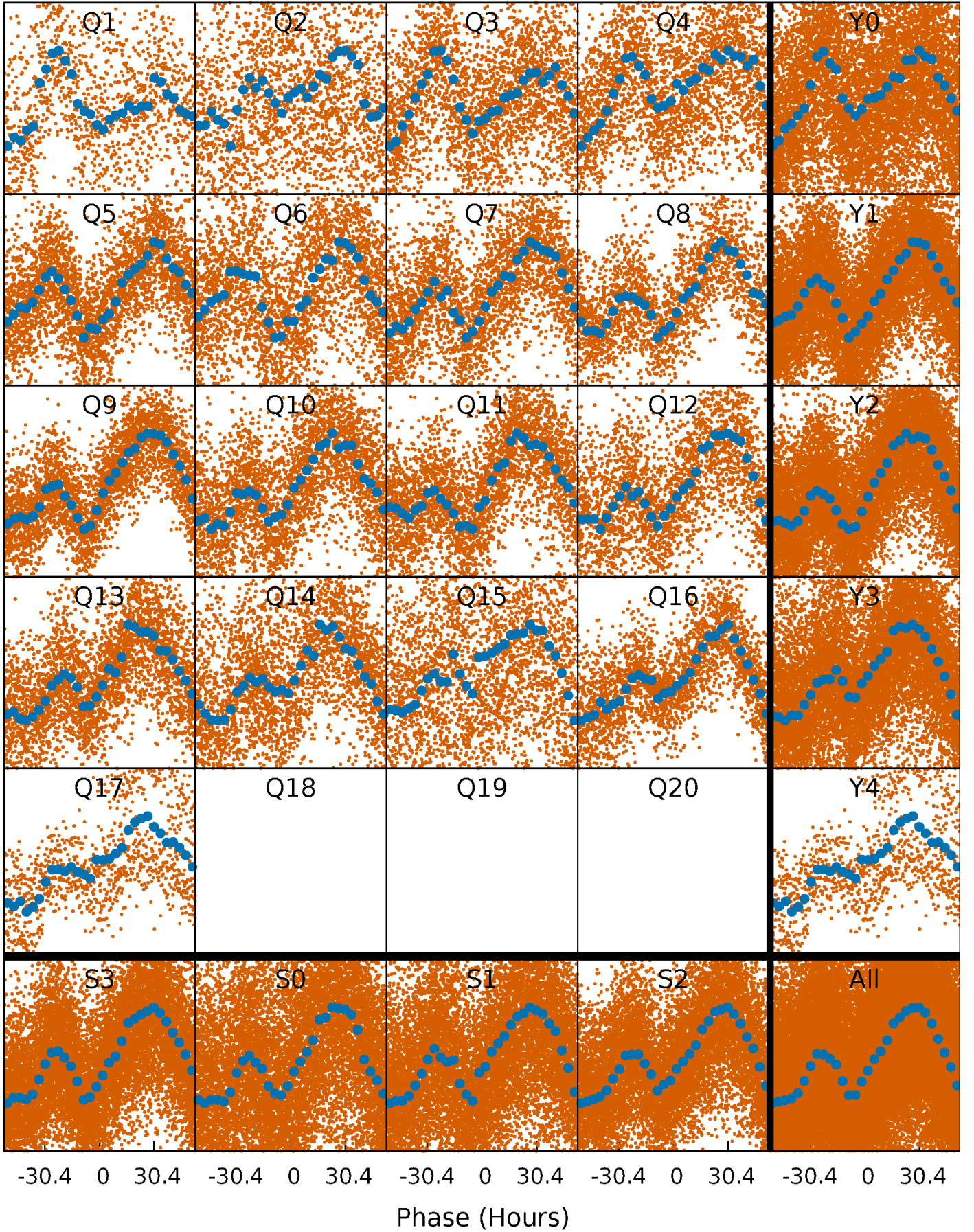


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

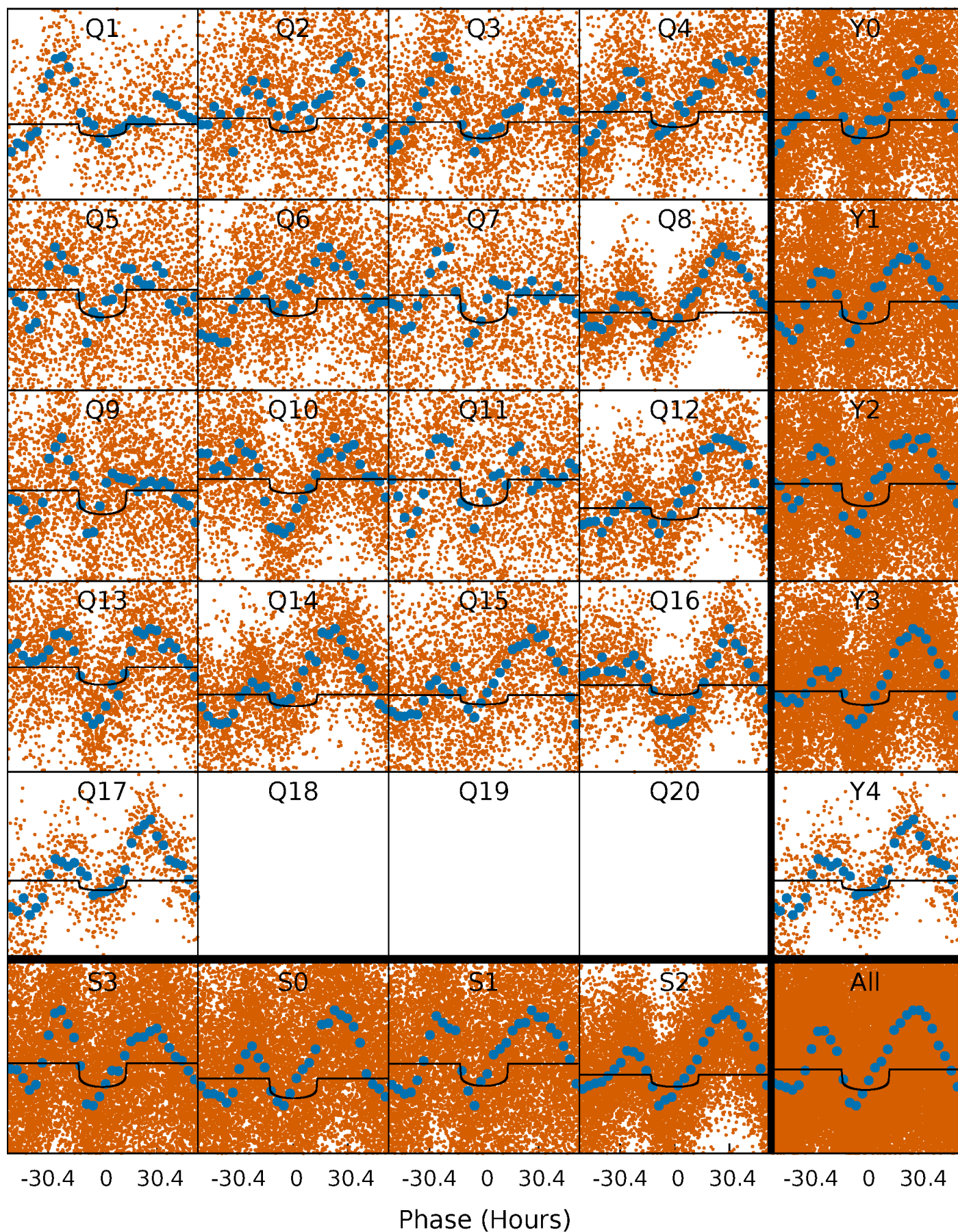
TCE 003547187-01 P= 5.864976 Days  $T_0=134.217538$  (BKJD)





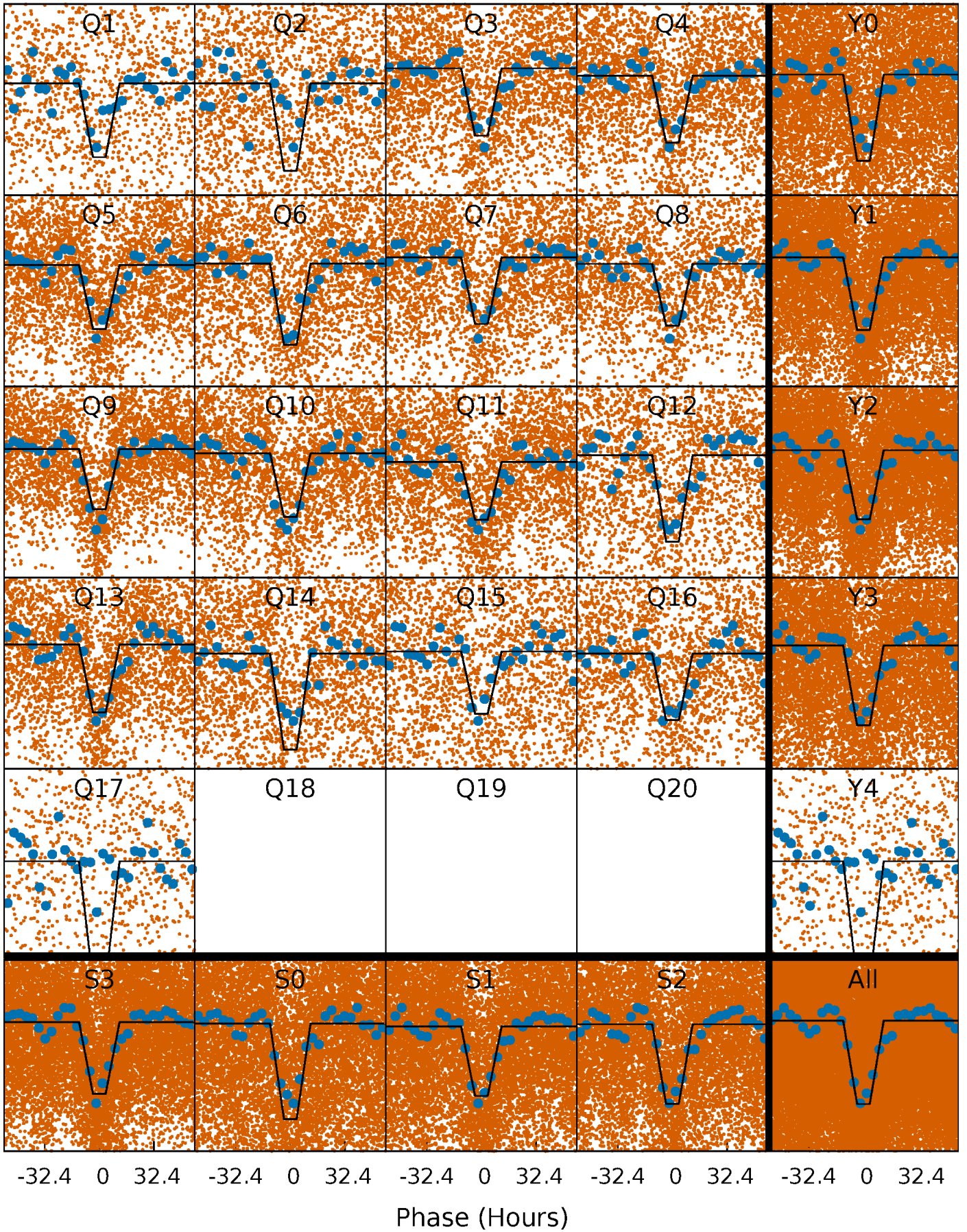
# DV Quarter-Phased Transit Curves

TCE 003547187-01 P= 5.864976 Days  $T_0=134.217538$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003547187-01 P= 5.865760 Days  $T_0=133.859039$  (BKJD)

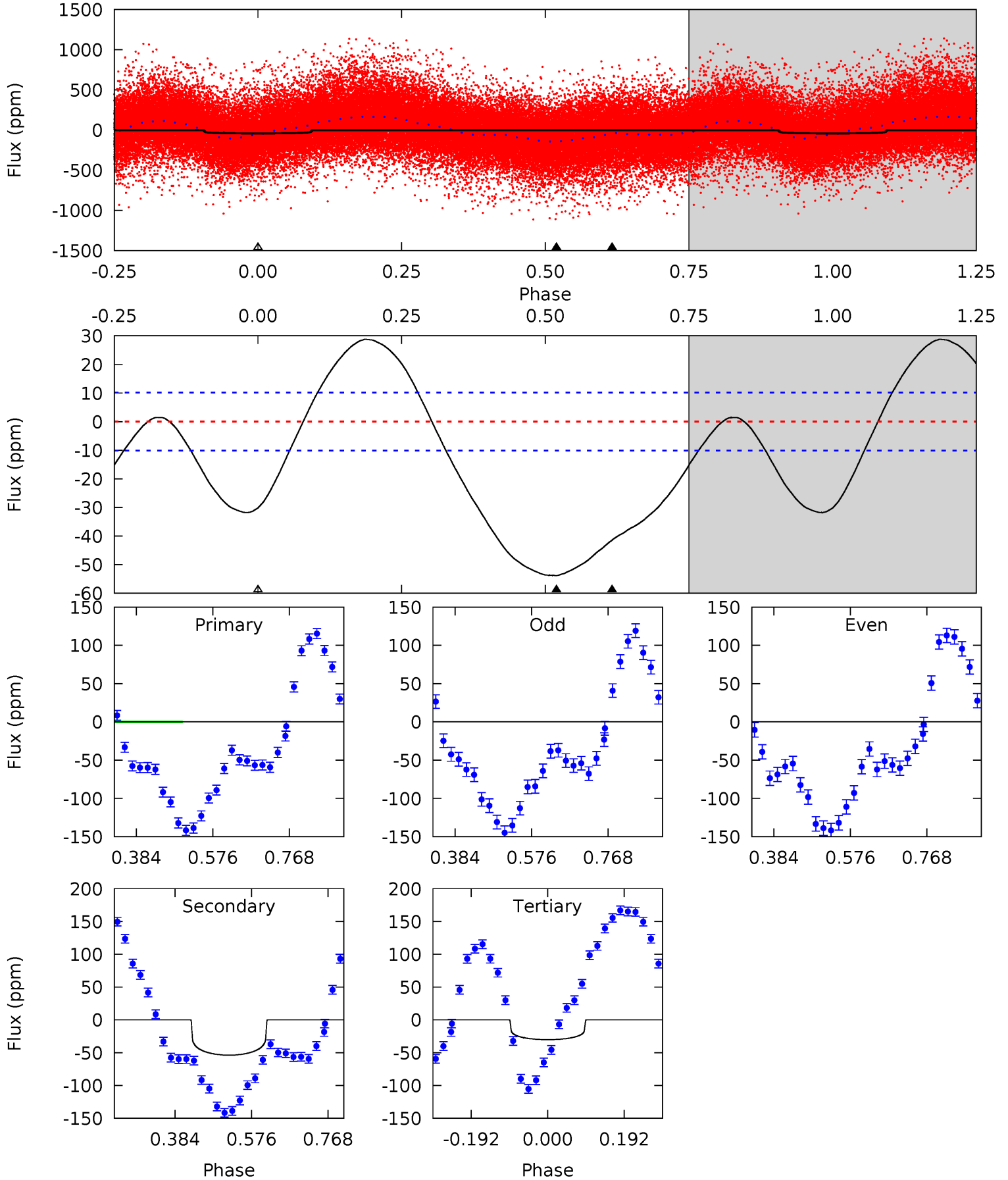




# DV Model-Shift Uniqueness Test

003547187-01, P = 5.864976 Days, E = 128.352562 Days

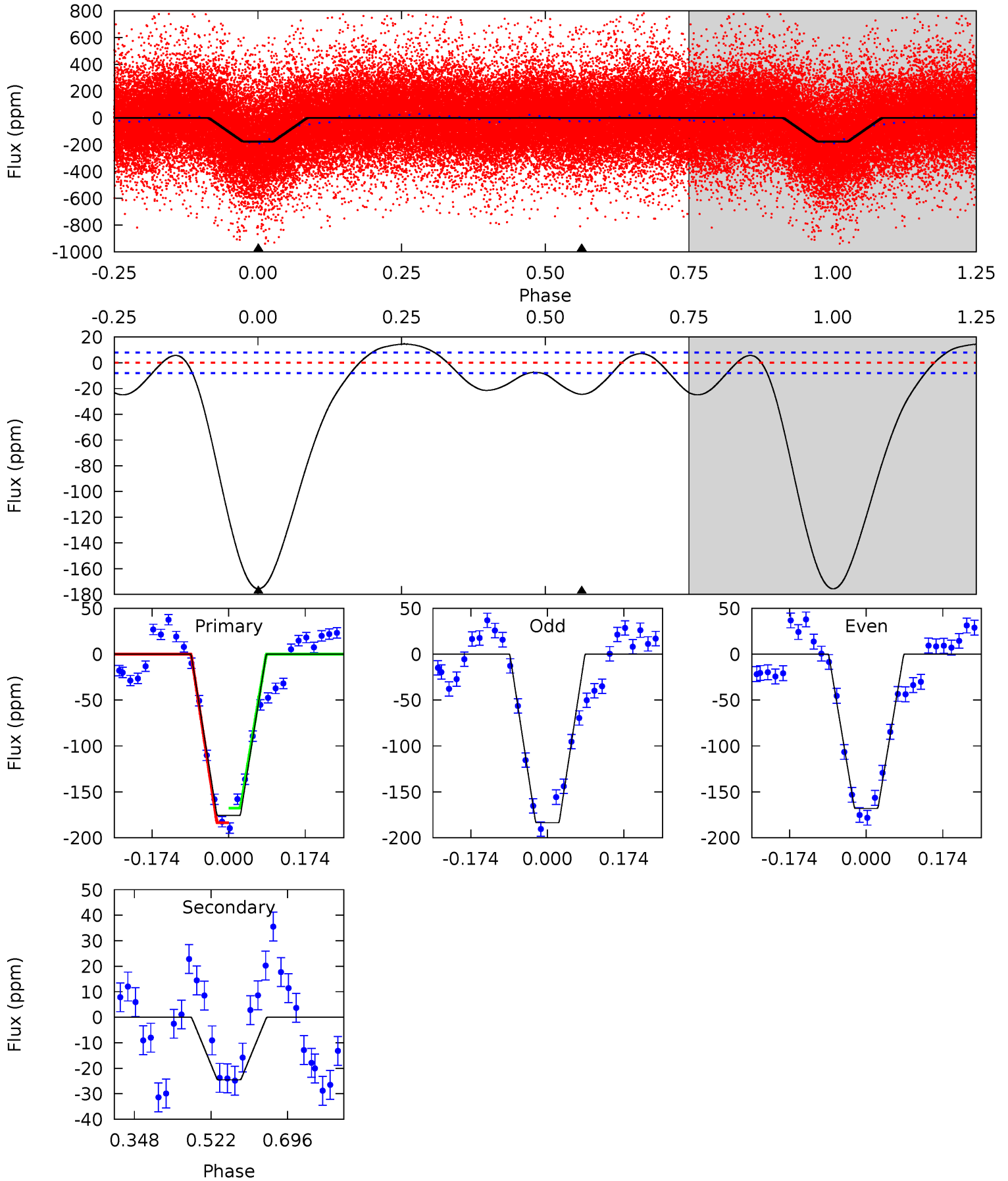
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	23.5	13.2	0	4.43	1.30	8.60	4.92	18.1	10.3	23.5	2.26	1.20	0.35	20.0



# Alt Model-Shift Uniqueness Test

003547187-01, P = 5.865760 Days, E = 127.993279 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
97.7	13.6	0	0	4.45	1.36	7.89	97.7	97.7	13.6	13.6	4.30	0.93	0.08	4.41





### Stellar Parameters For KIC 003547187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6686^{+80}_{-80}$	$4.030^{+0.180}_{-0.105}$	$-0.060^{+0.150}_{-0.150}$	$1.914^{+0.310}_{-0.426}$	$1.436^{+0.109}_{-0.134}$	$0.288^{+0.277}_{-0.094}$
	+1%/-1%	+4%/-3%	+250%/-250%	+16%/-22%	+8%/-9%	+96%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 003547187-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-54 \pm 2$	$1.47^{+0.40}_{-0.38}$	$2116^{+103}_{-116}$	$6794^{+1100}_{-754}$	$71^{+60}_{-27}$
Alt.	$-25 \pm 2$	$2.83^{+0.46}_{-0.45}$	$2121^{+104}_{-120}$	$4225^{+232}_{-185}$	$8.789^{+3.390}_{-2.406}$

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

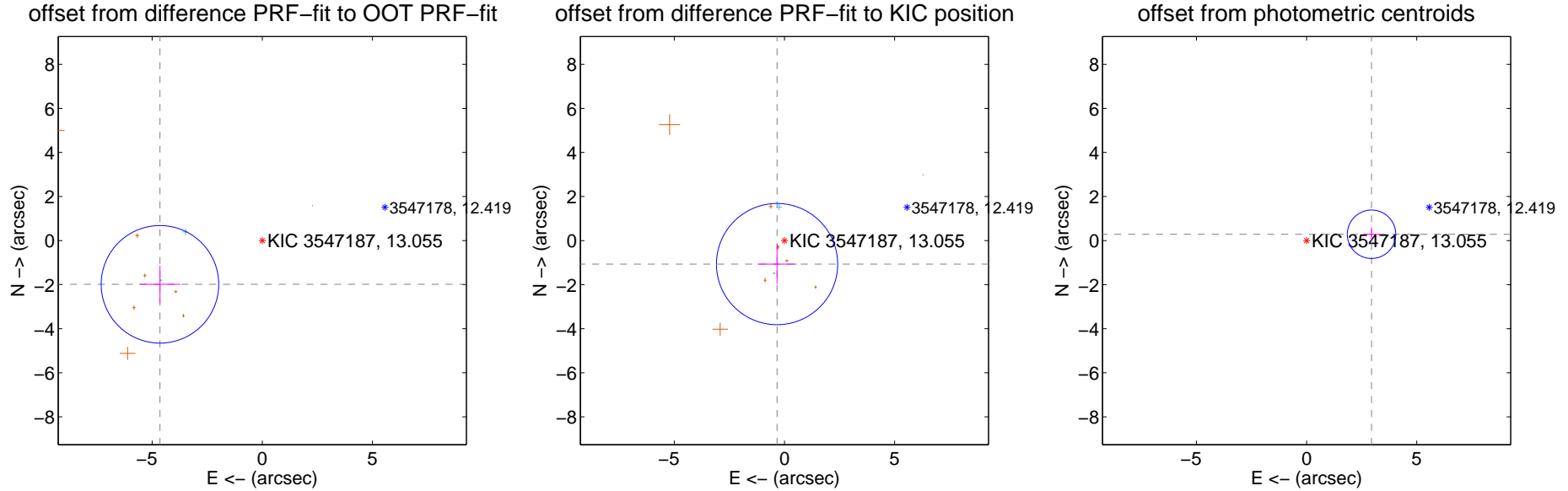
## DV Centroid Data

Supplemental centroid analysis for 003547187-01. Kepler magnitude: 13.05. Transit SNR 10.62

There are 3 quarters with good PRF difference image offsets

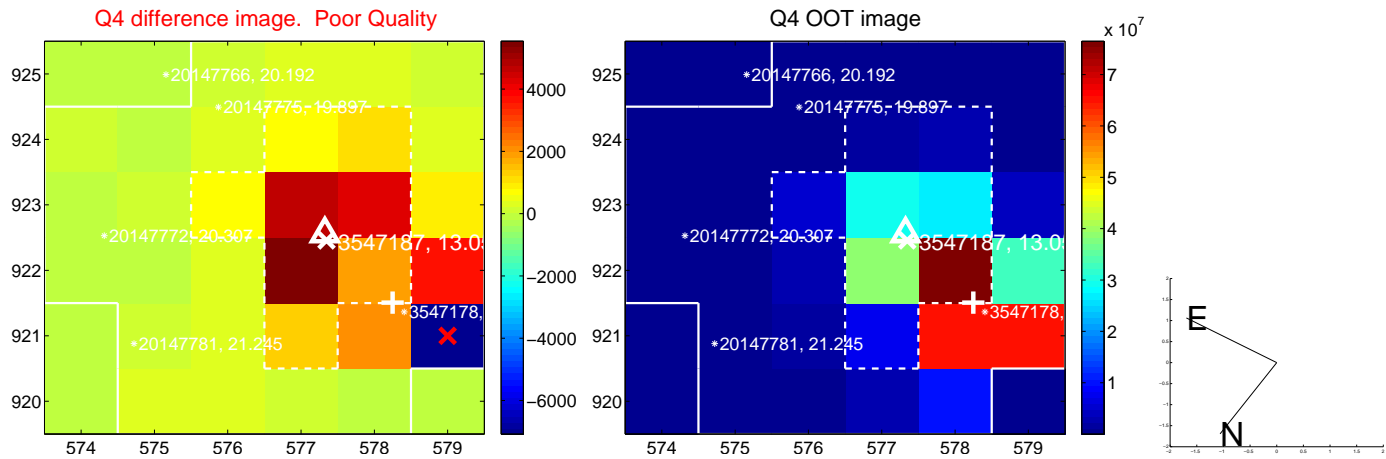
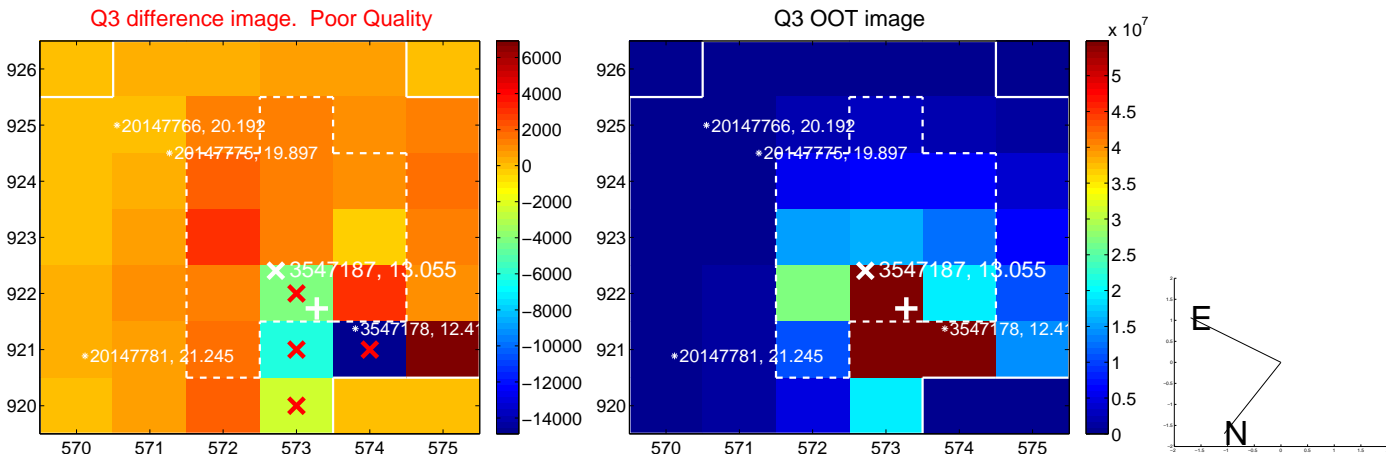
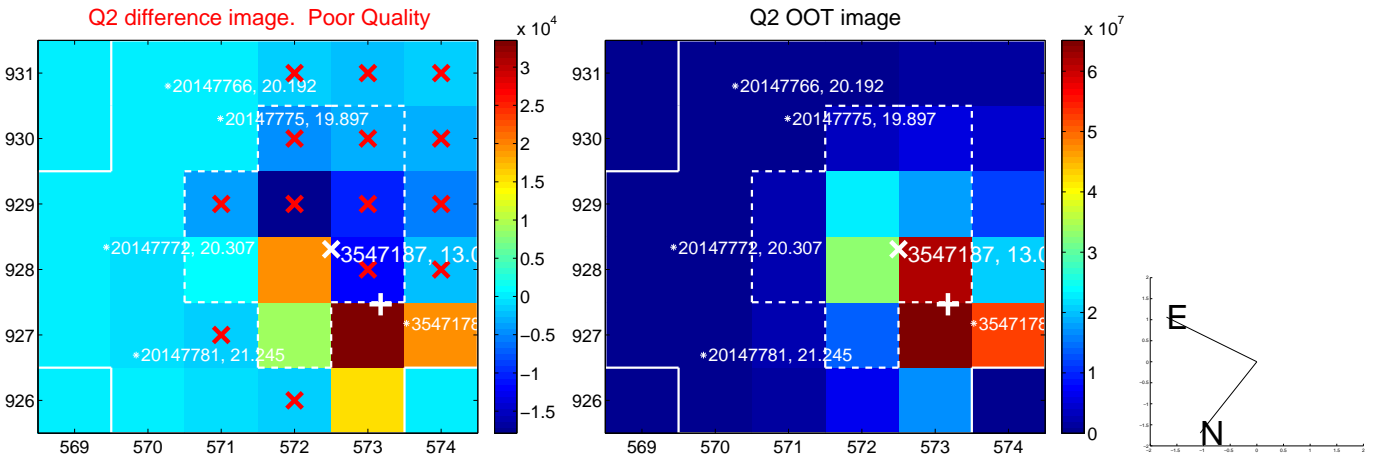
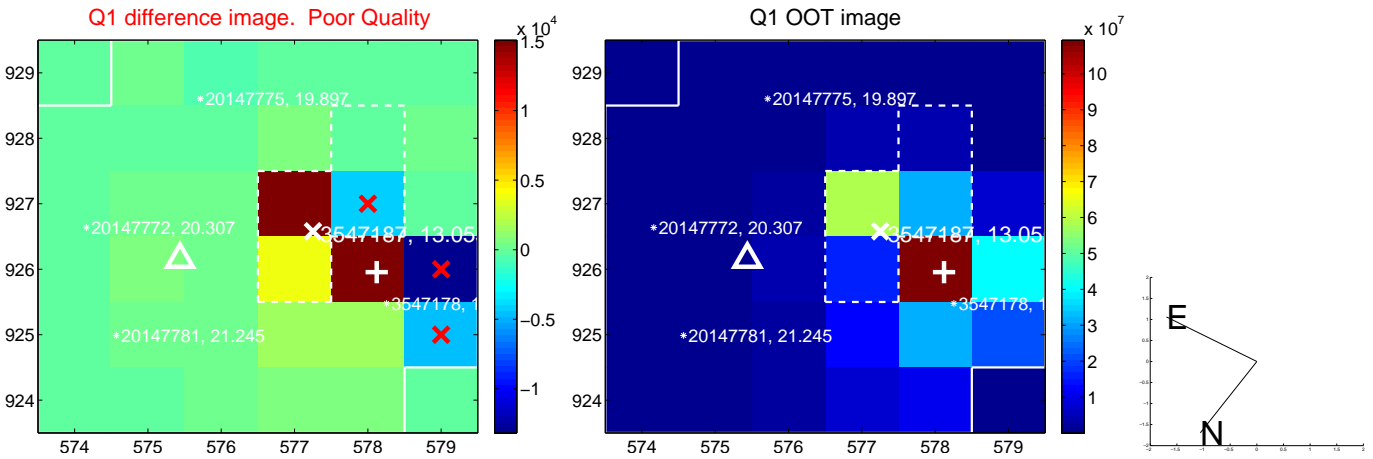
The OOT PRF centroid is offset from the target star catalog position by about 5.10 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.054 \pm 0.890$	5.68	$4.648 \pm 0.923$	$-1.986 \pm 0.848$
PRF-fit source offset from KIC position	$1.119 \pm 0.917$	1.22	$0.335 \pm 0.883$	$-1.067 \pm 0.898$
photometric centroid source offset	$2.96 \pm 0.37$	8.09	$-2.95 \pm 0.37$	$0.29 \pm 0.32$

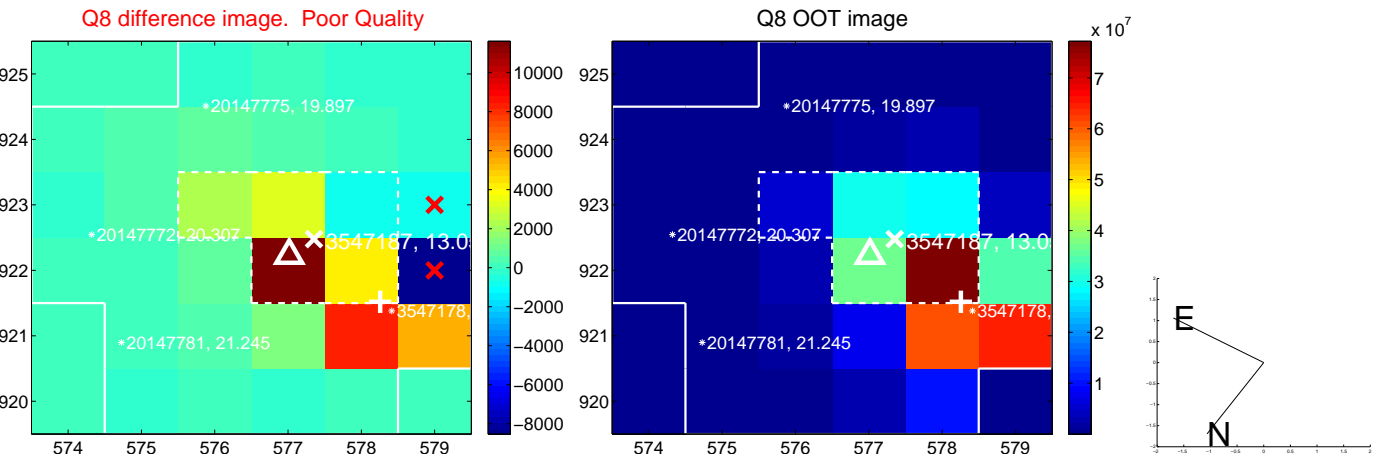
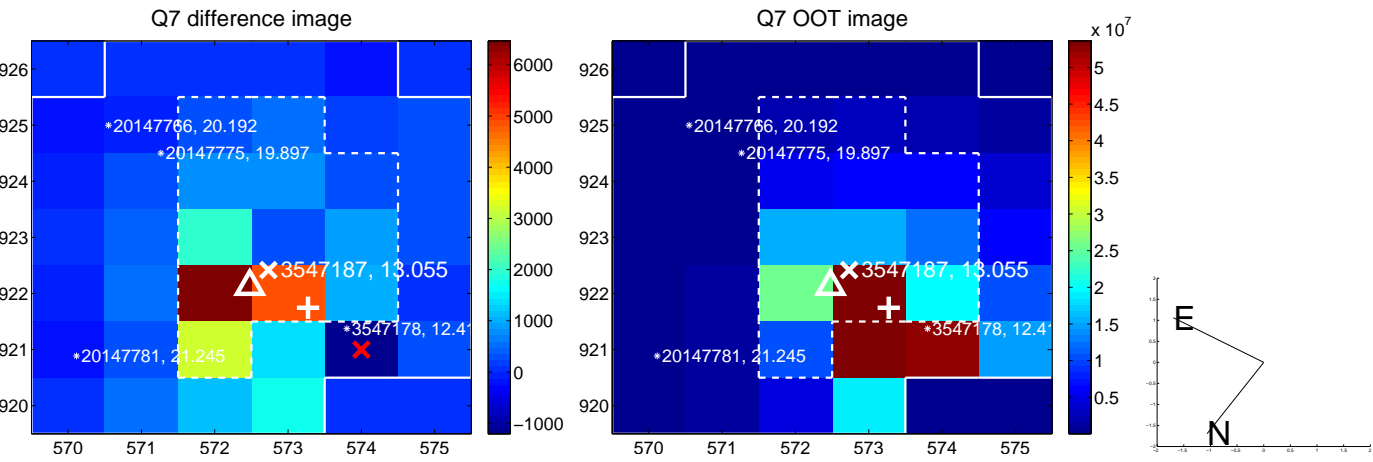
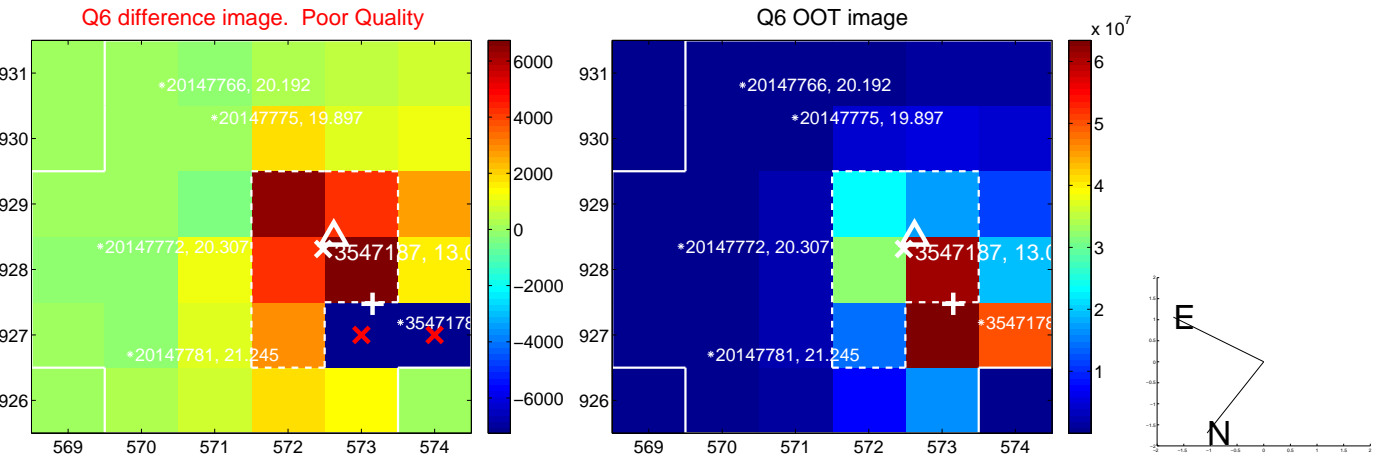
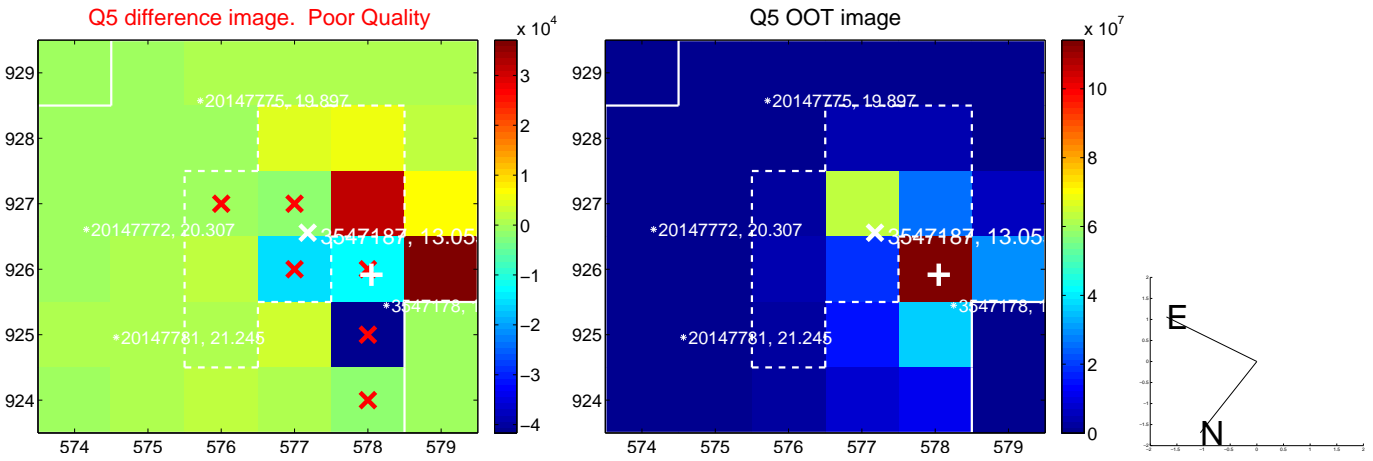


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

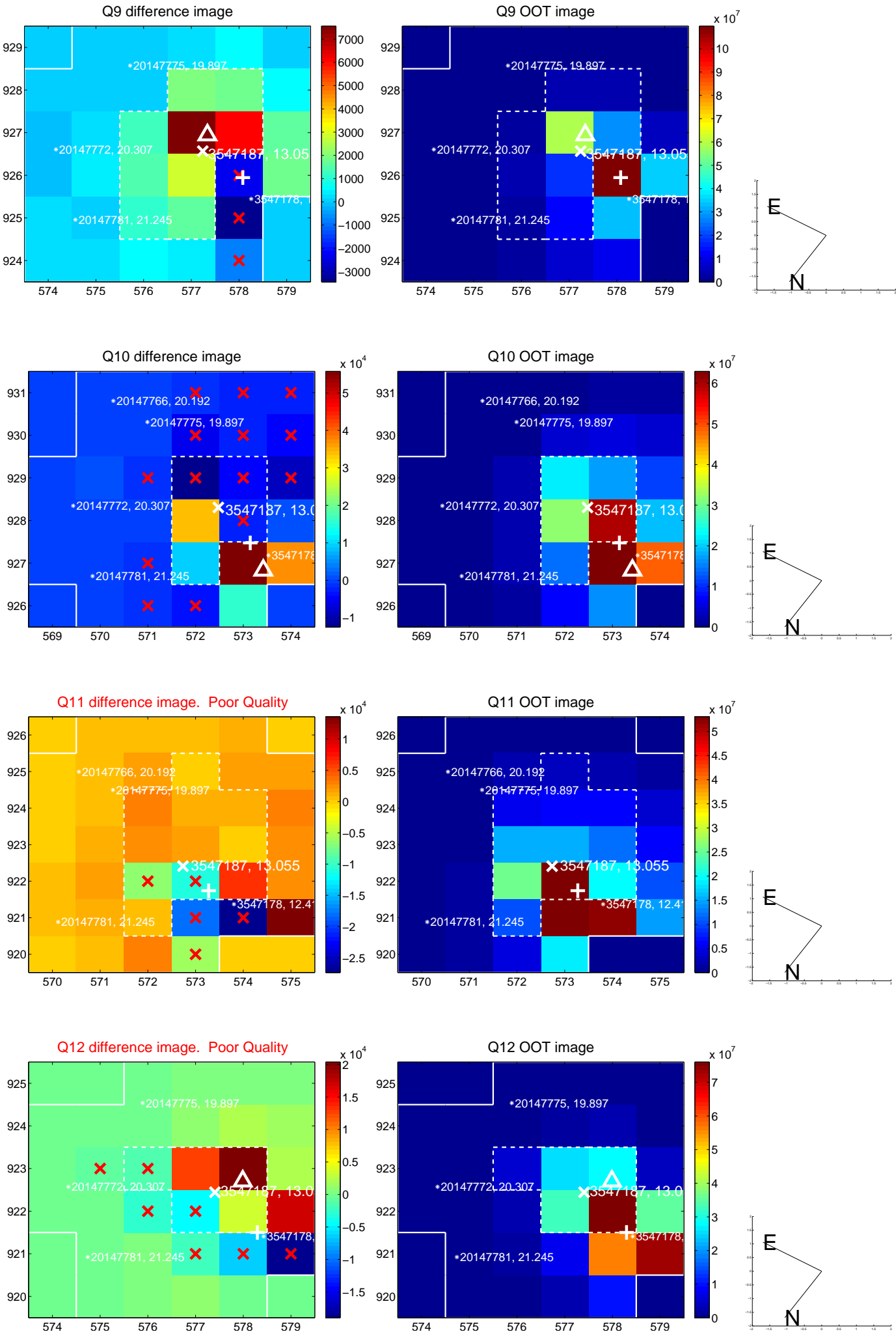


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

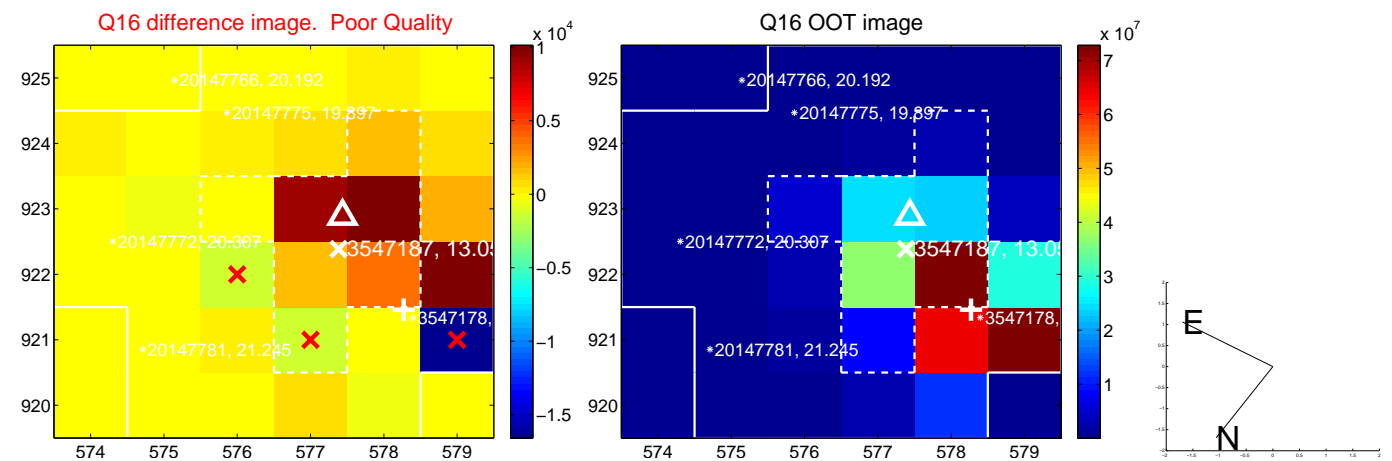
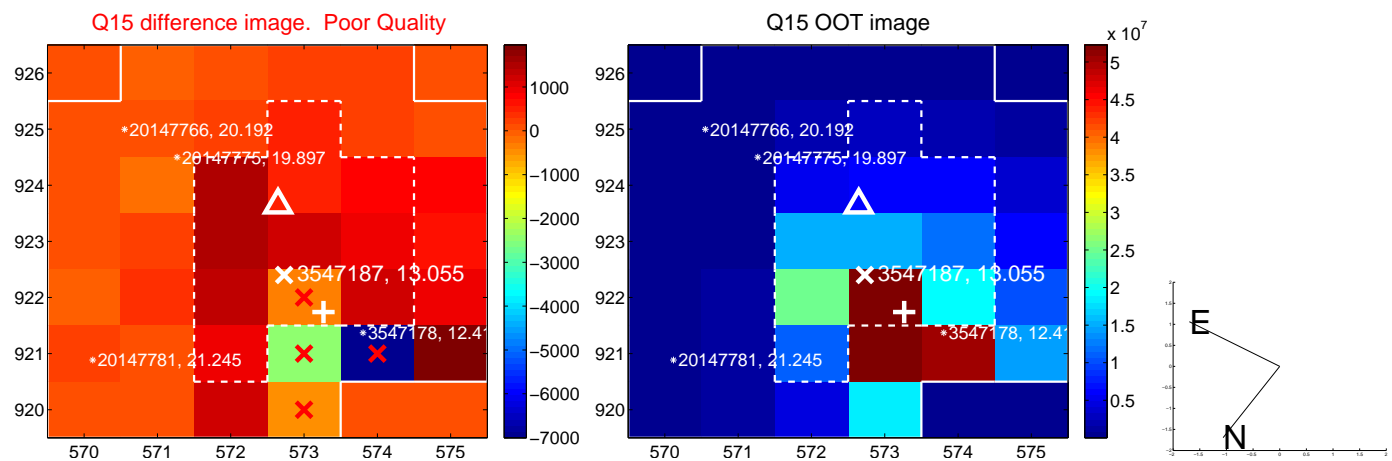
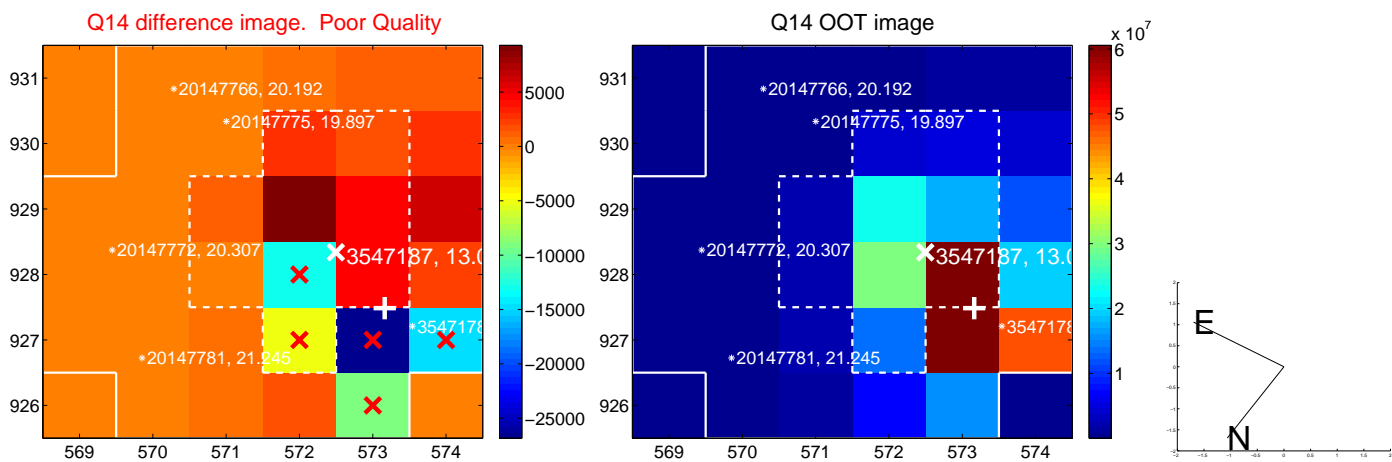
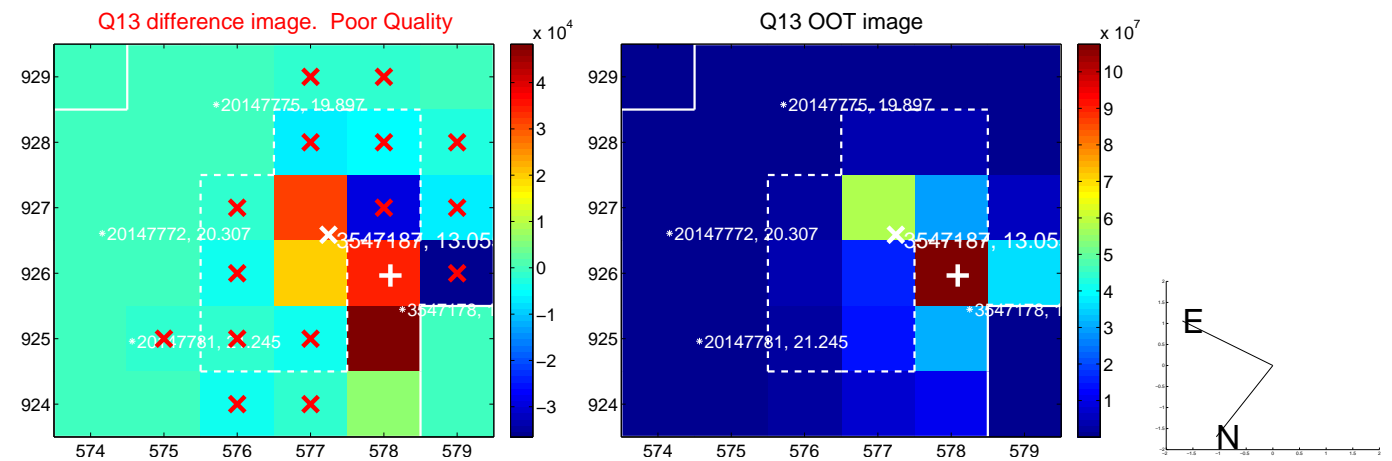




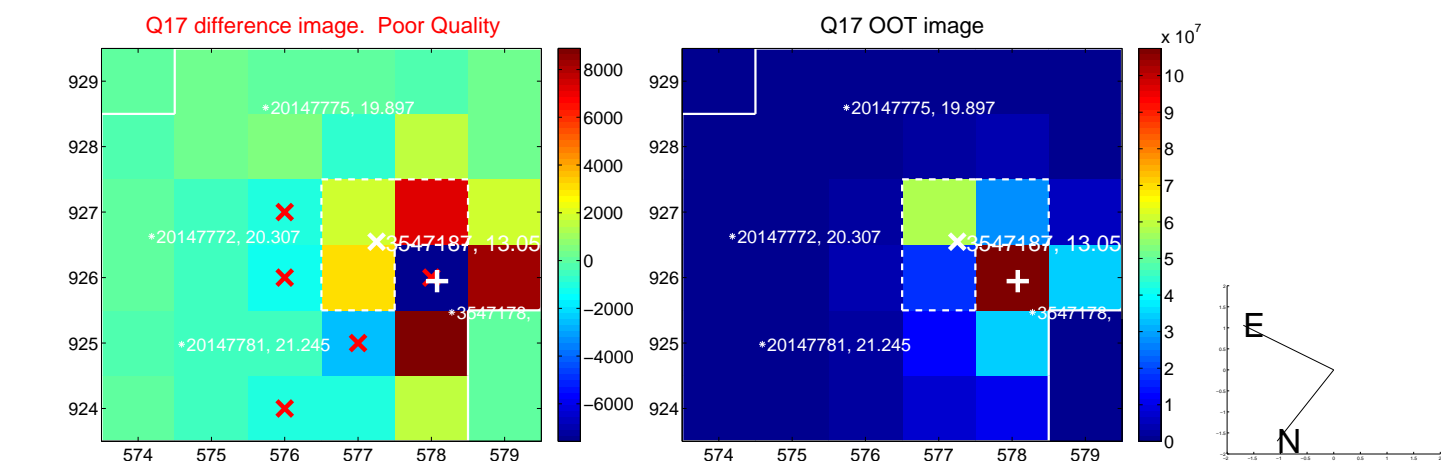
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



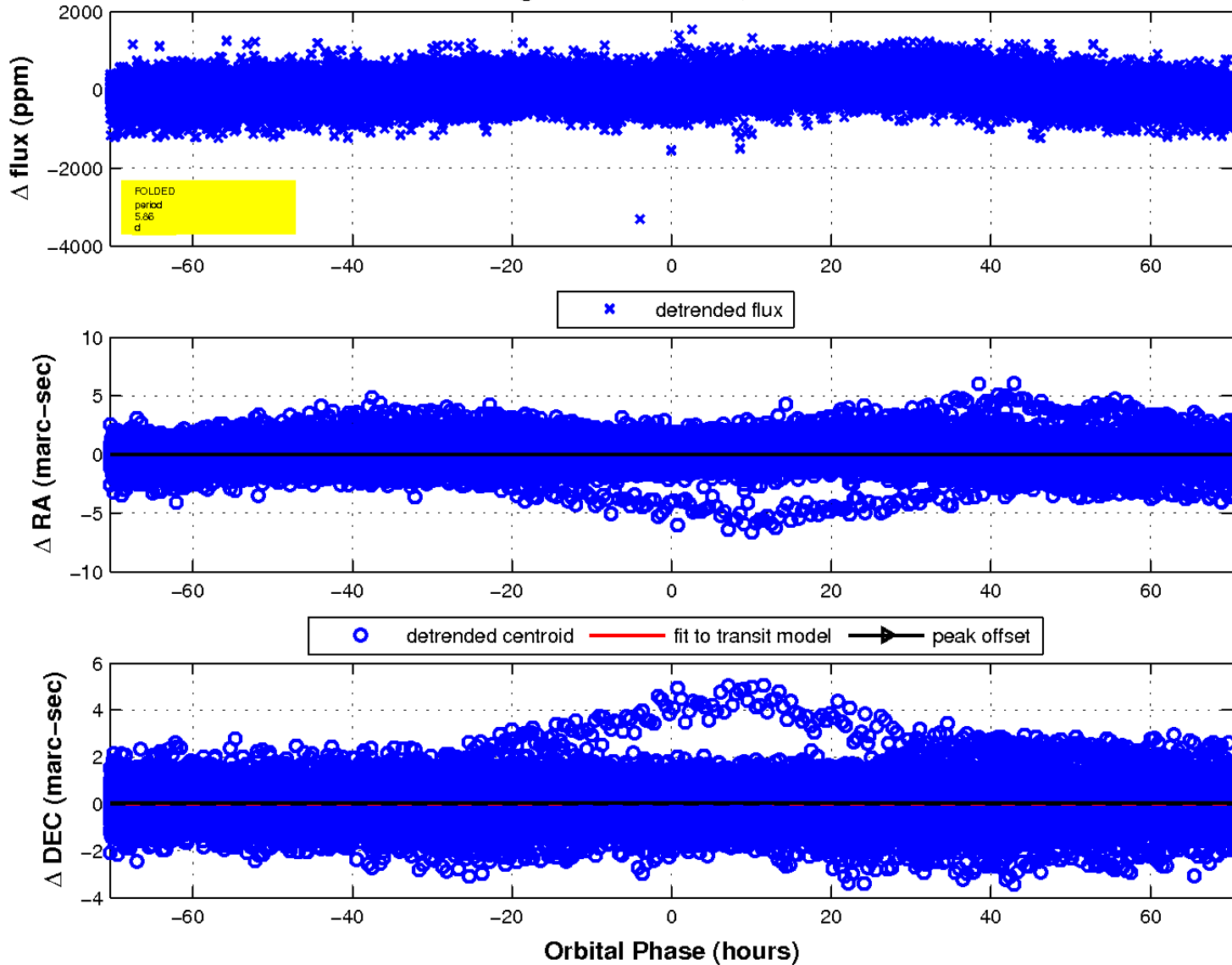
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

