

KIC 009965165

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})
009965165-01	OBS	No	0.956627	131.743791	41.3	5.252	8.4	7.9	0.93	6011	0.70	2769.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009965165-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

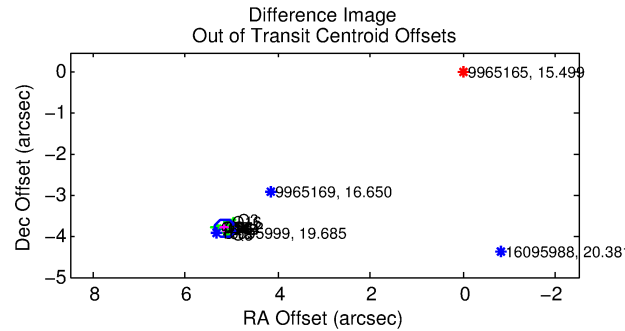
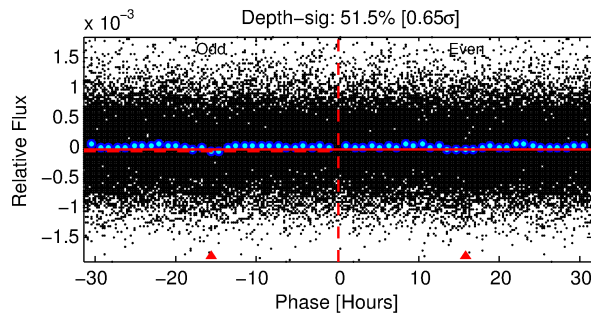
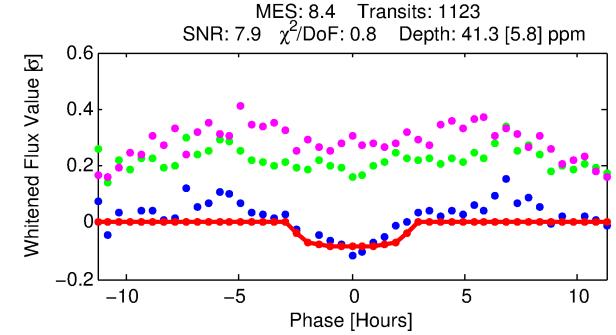
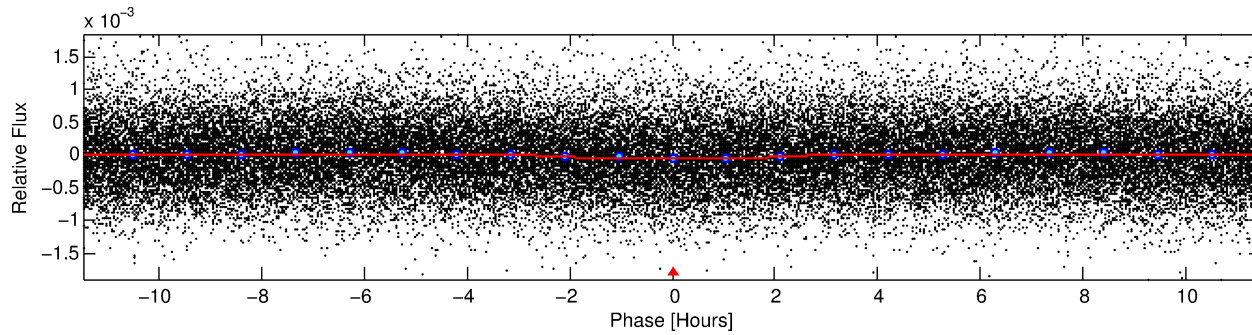
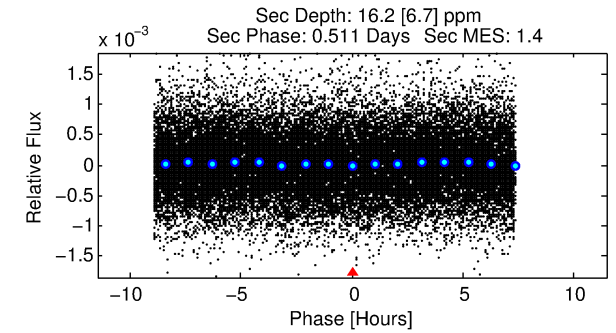
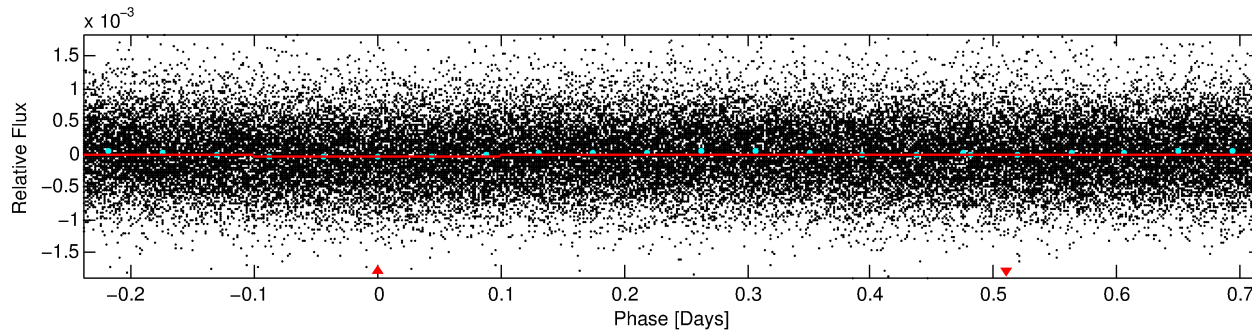
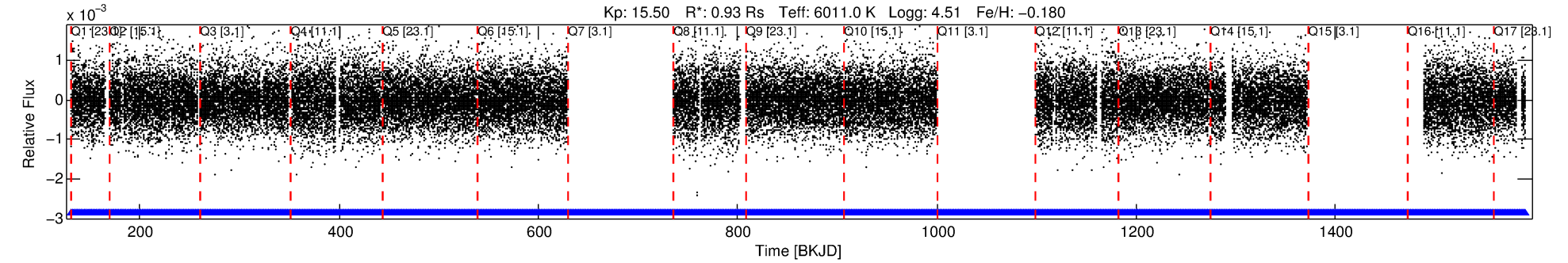
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009965165-01

No Significant Match Found

DV One-Page Summary

KIC: 9965165 Candidate: 1 of 1 Period: 0.957 d



DV Fit Results:

Period = 0.95663 [0.00002] d
Epoch = 131.7438 [0.0077] BKJD
Rp/R* = 0.0069 [0.0058]
a/R* = 1.14 [1.12]
b = 0.90 [0.99]
Seff = 2769.56 [1126.96]
Teq = 1850 [188] K
Rp = 0.70 [0.62] Re
a = 0.0191 [0.0050] AU
Ag = 6.60 [11.64] [0.48σ]
Teffp = 4585 [1979] K [1.38σ]

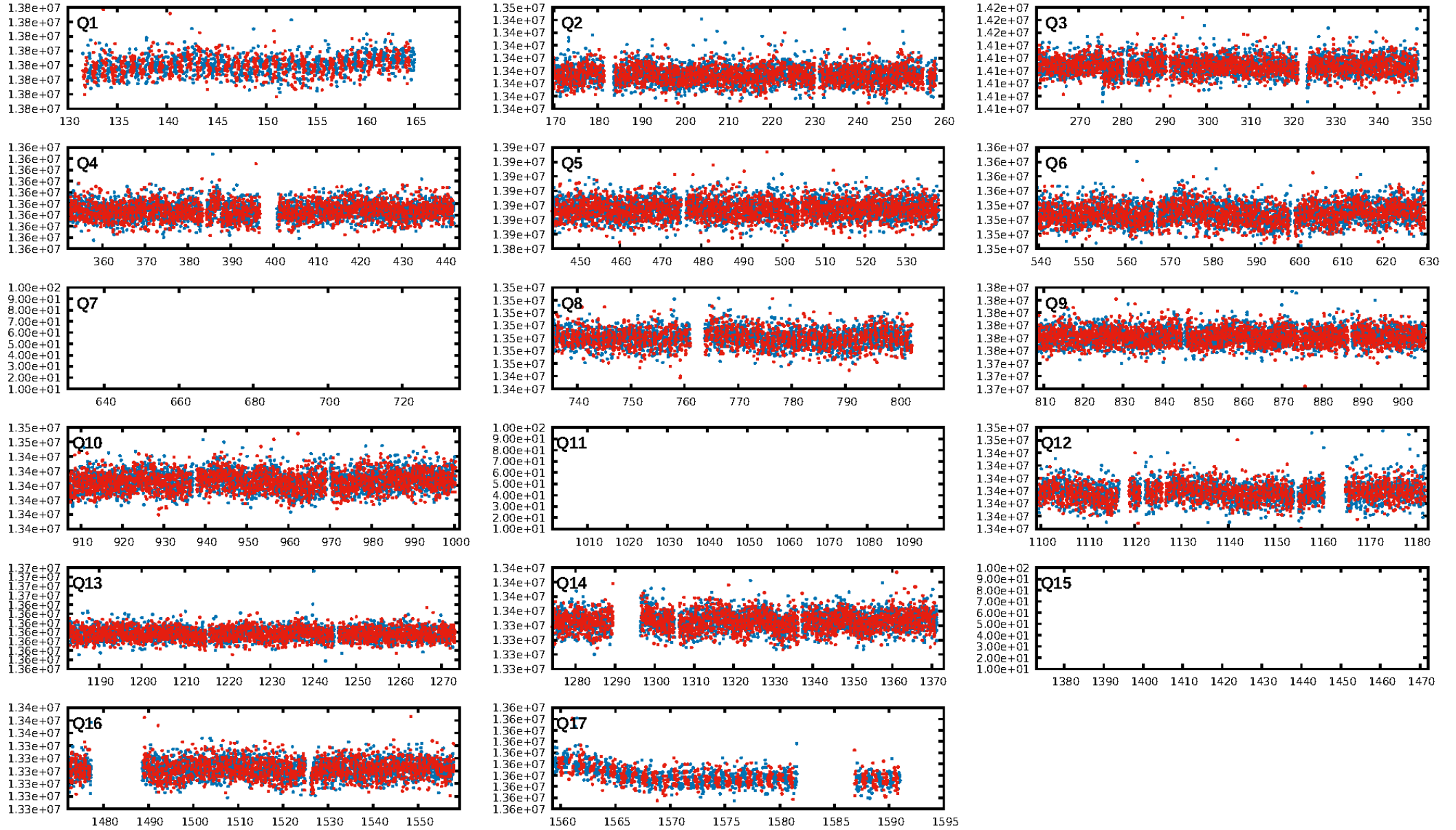
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.66e-13
RollingBand-fgt: 1.00 [1060/1060]
GhostDiagnostic-chr: -10.23
Centroid-sig: 0.0%
Centroid-so: 10.196 arcsec [5.91σ]
OotOffset-rm: 6.407 arcsec [88.15σ]
KicOffset-rm: 6.605 arcsec [93.97σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

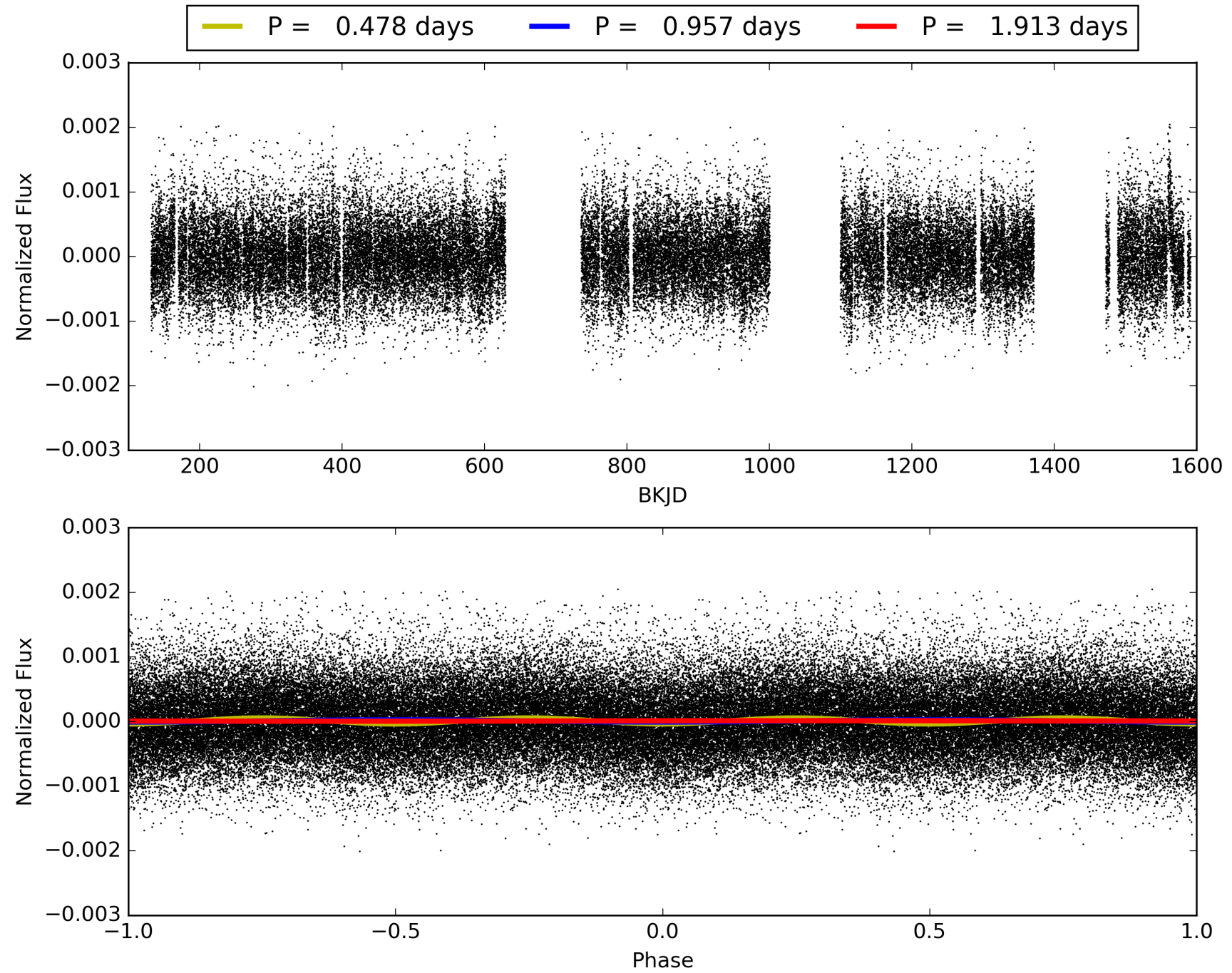
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:07:37 Z

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

TCE 009965165-01, PDC Light Curves

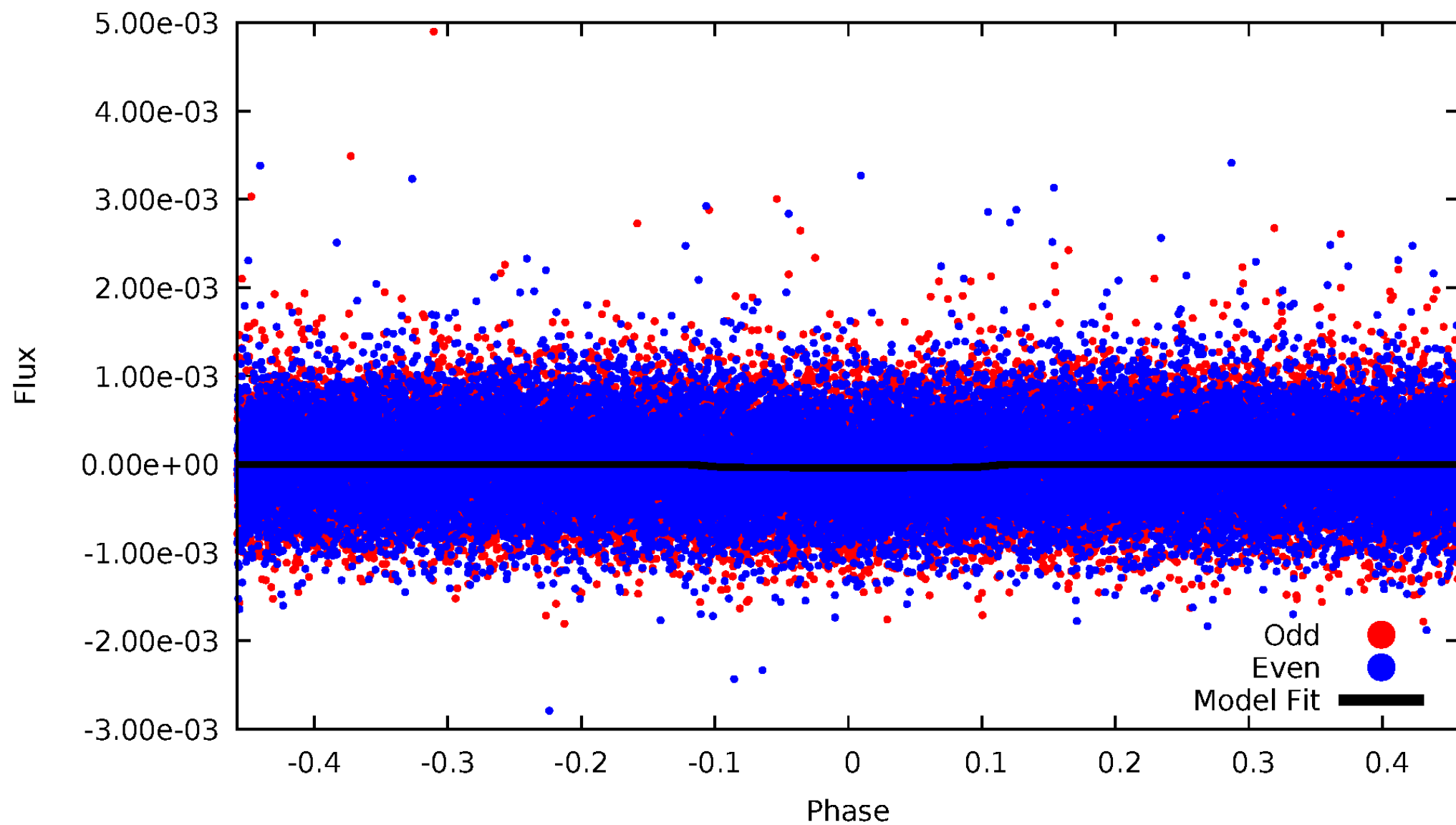


TCE 009965165-01



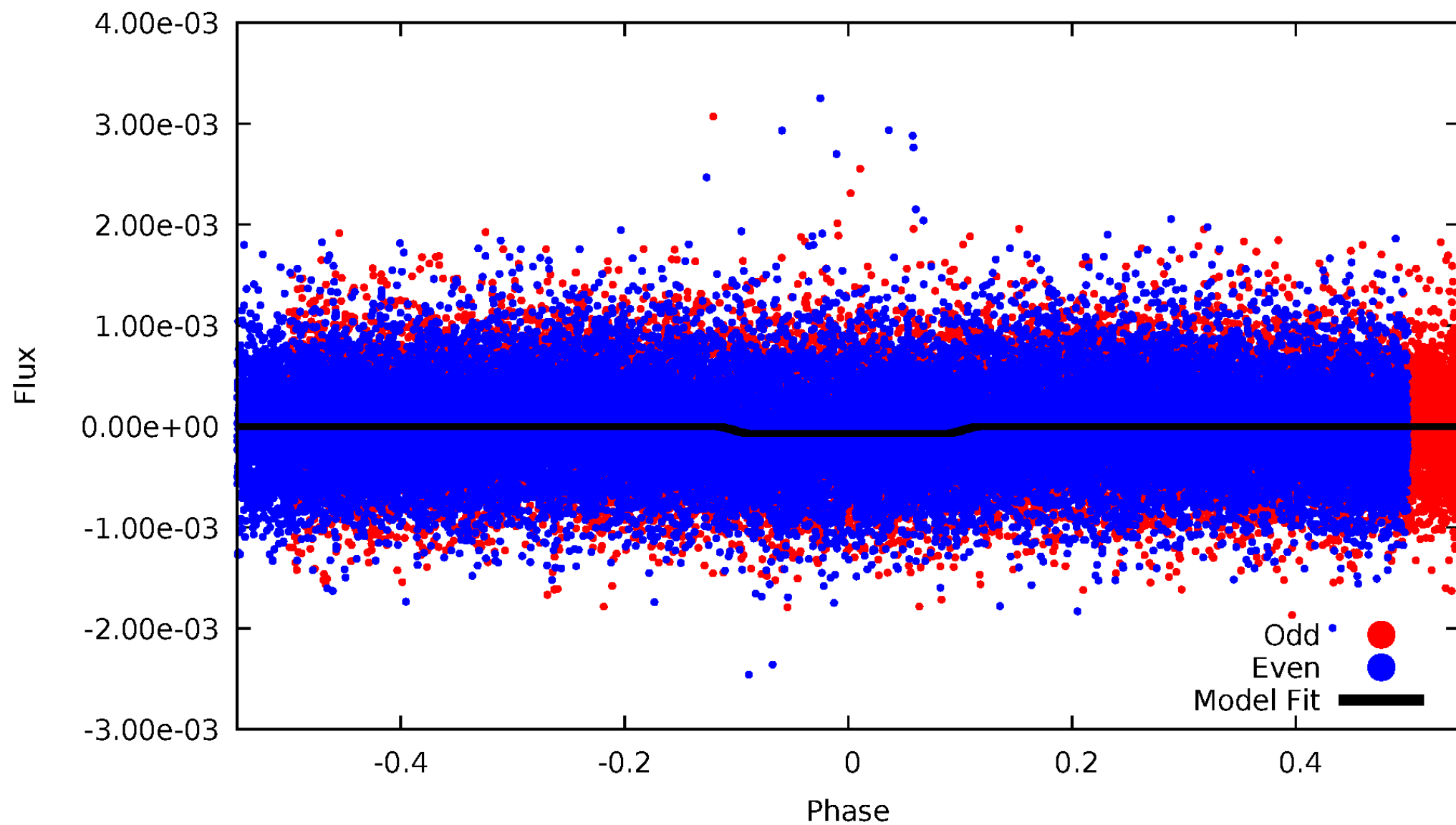
DV Odd/Even

TCE 009965165-01

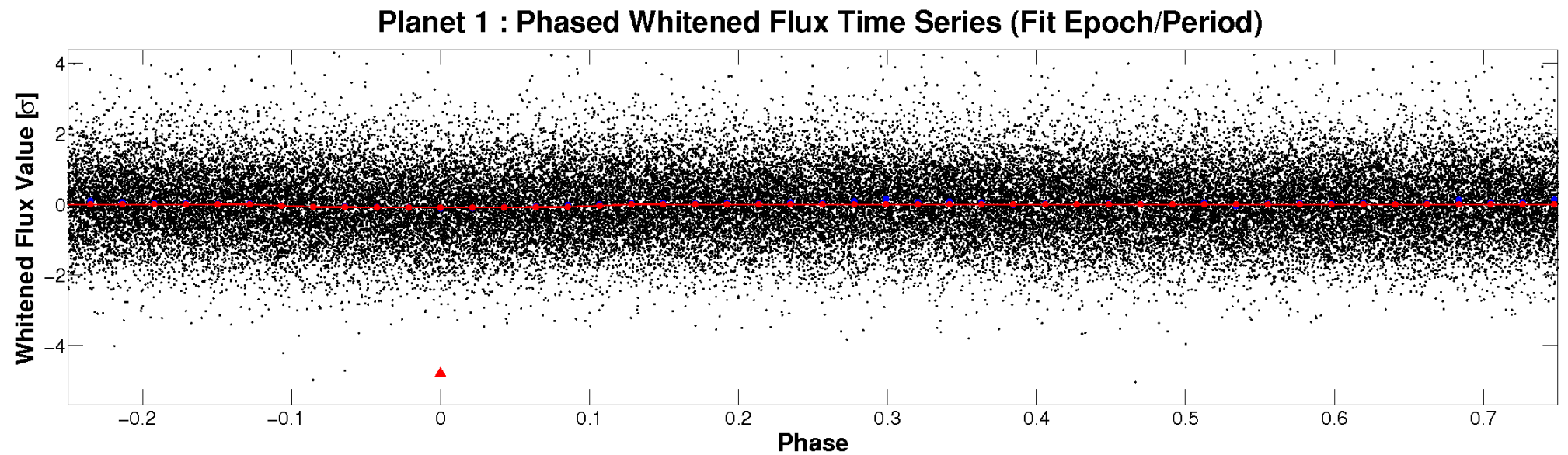
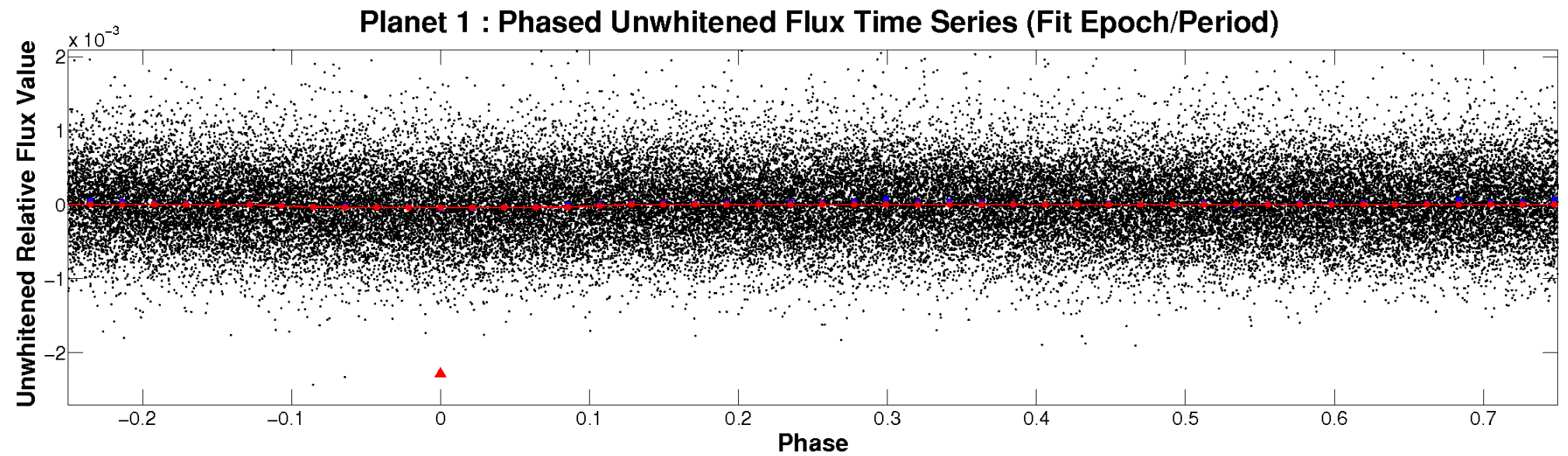


ALT Odd/Even

TCE 009965165-01

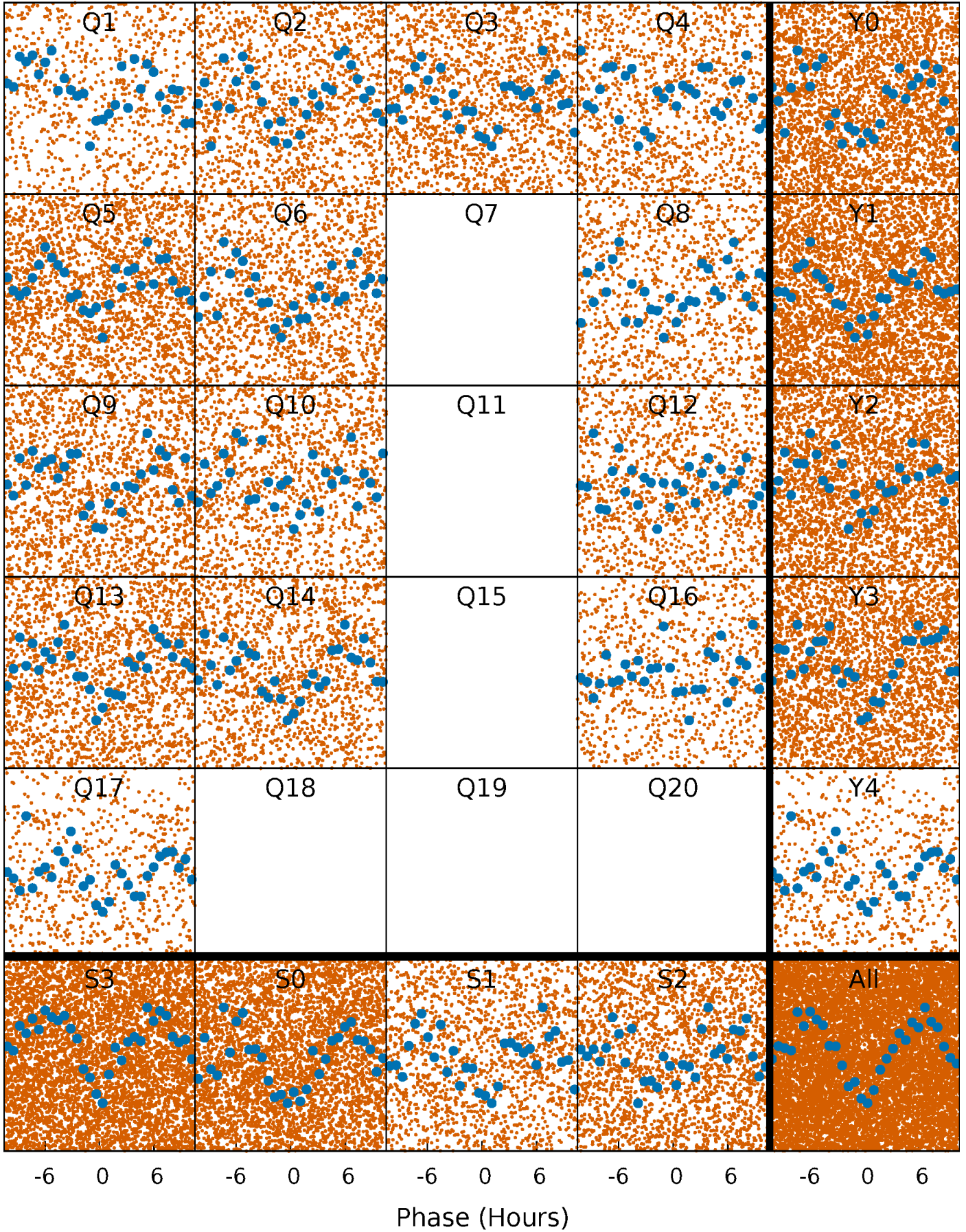


Non-Whitened Vs. Whitened Light Curve



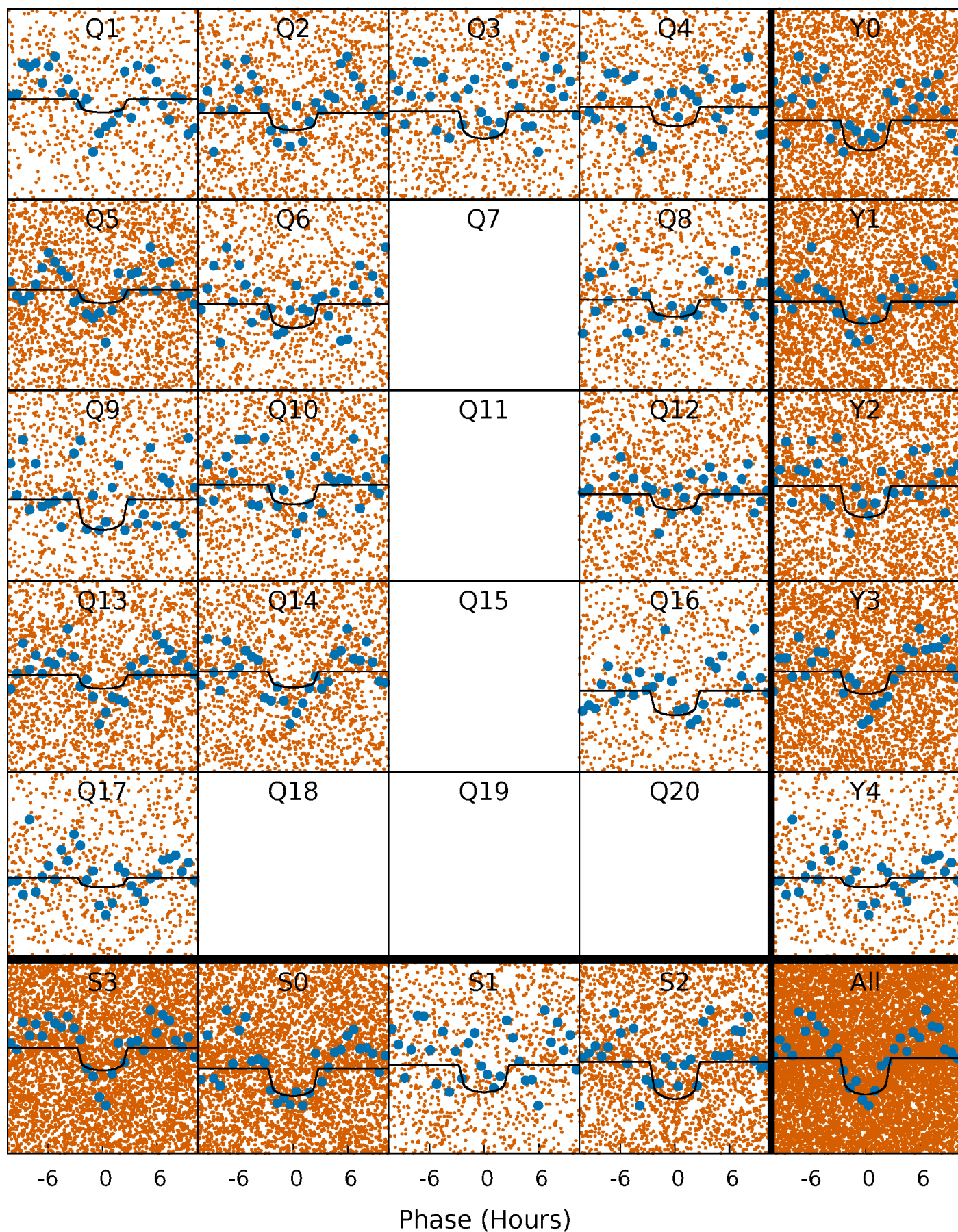
PDC Quarter-Phased Transit Curves

TCE 009965165-01 P= 0.956627 Days $T_0=131.743791$ (BKJD)



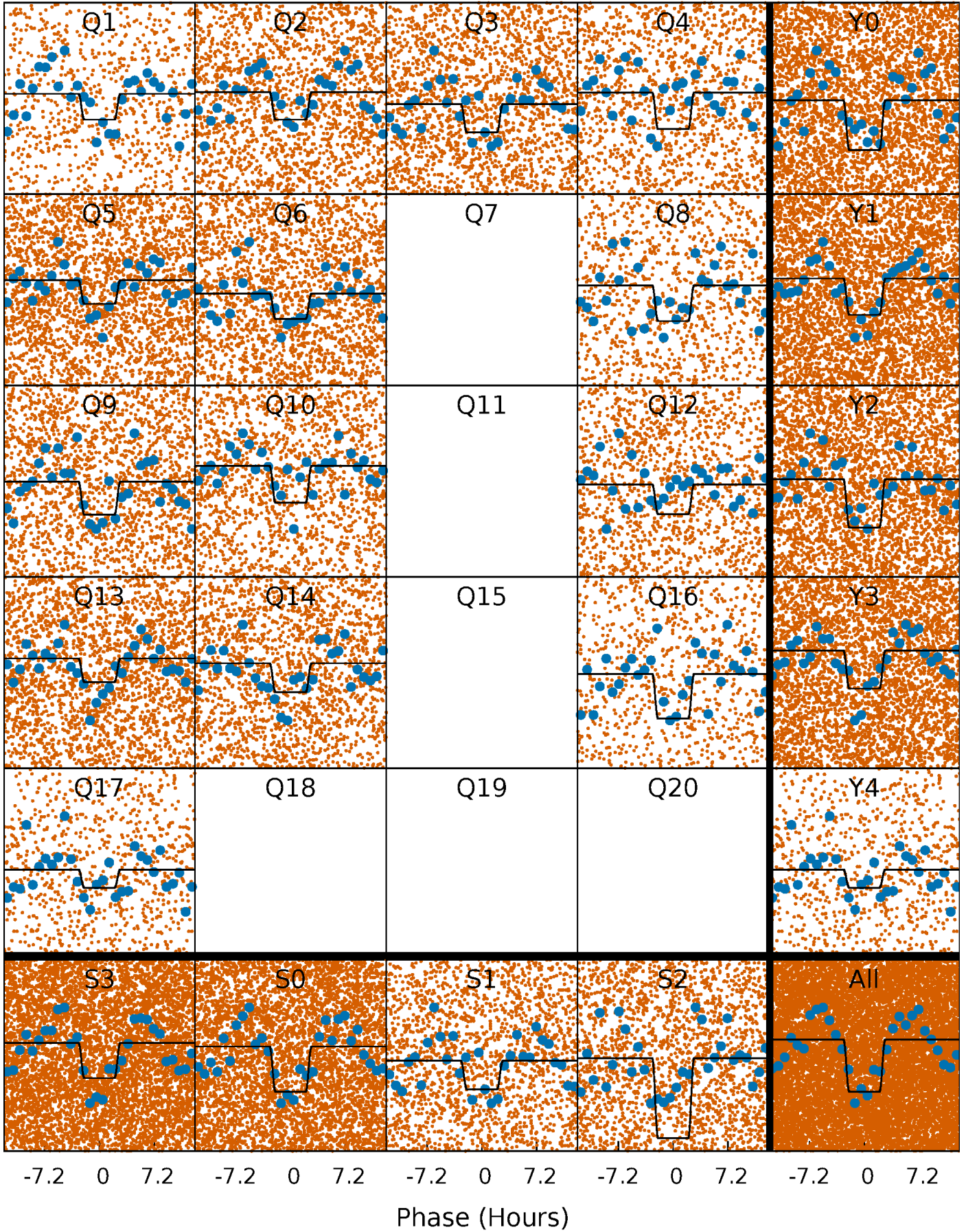
DV Quarter-Phased Transit Curves

TCE 009965165-01 P= 0.956627 Days $T_0=131.743791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

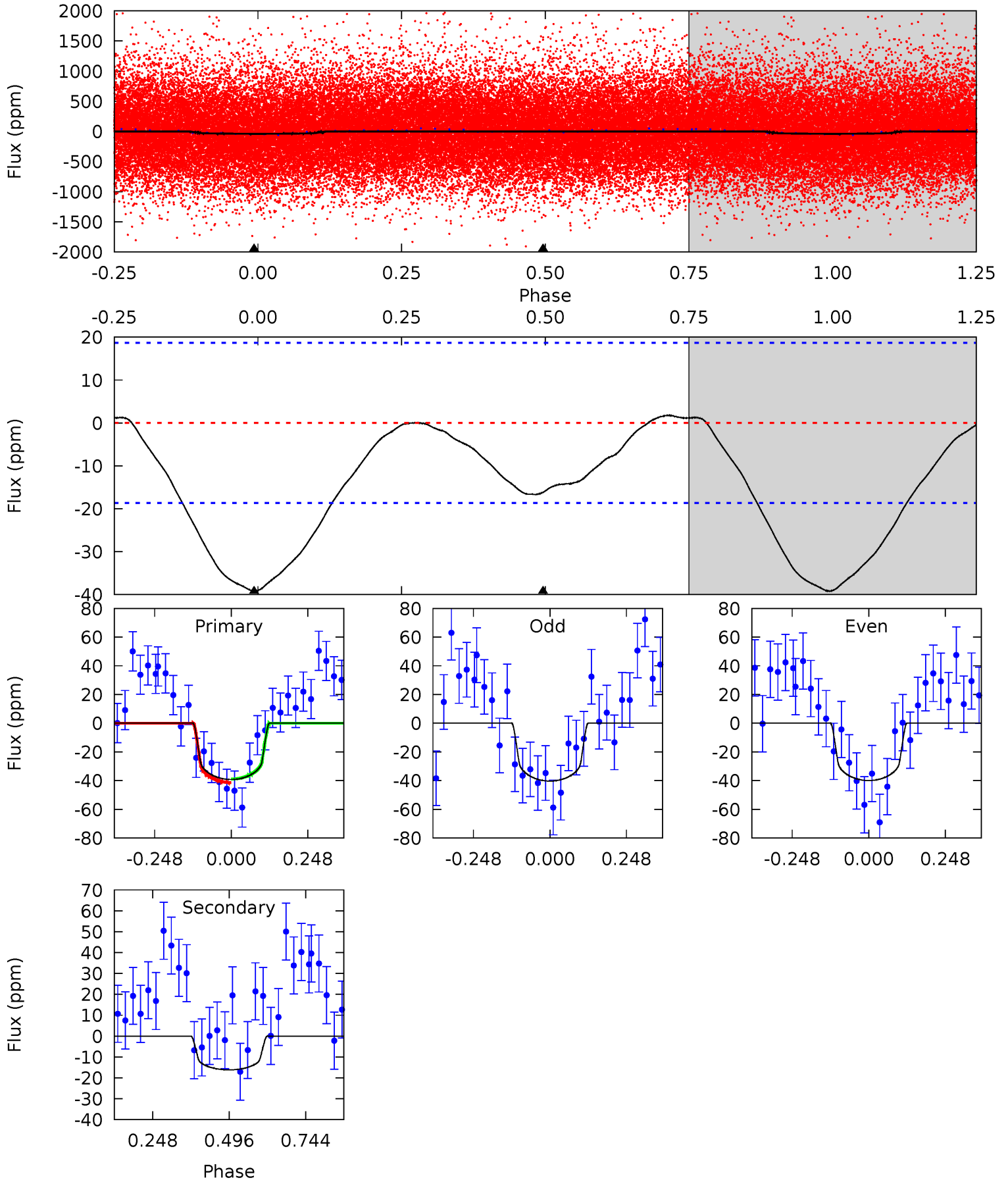
TCE 009965165-01 P= 0.956701 Days $T_0=131.698531$ (BKJD)



DV Model-Shift Uniqueness Test

009965165-01, P = 0.956627 Days, E = 130.787164 Days

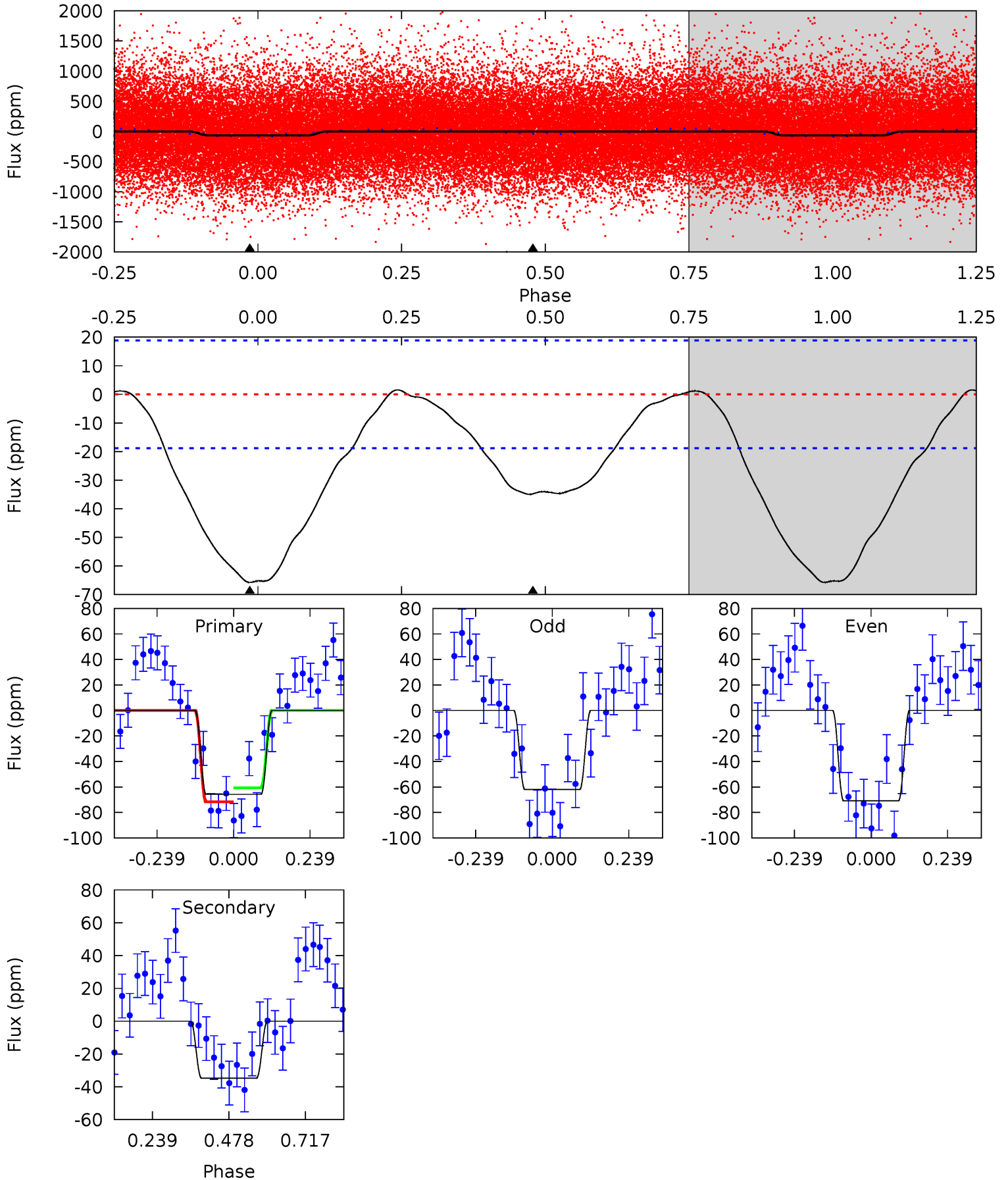
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	3.79	0	0	4.37	1.15	0.34	9.19	9.19	3.79	3.79	0.04	0.96	0.04	0.29



Alt Model-Shift Uniqueness Test

009965165-01, P = 0.956701 Days, E = 130.741830 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	8.08	0	0	4.38	1.18	0.34	15.3	15.3	8.08	8.08	1.04	1.08	0.02	1.27



Stellar Parameters For KIC 009965165

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6011^{+189}_{-210}	$4.507^{+0.052}_{-0.208}$	$-0.180^{+0.300}_{-0.300}$	$0.927^{+0.292}_{-0.097}$	$1.006^{+0.131}_{-0.131}$	$1.781^{+0.385}_{-0.972}$
	+3%/-3%	+1%/-5%	+167%/-167%	+31%/-10%	+13%/-13%	+22%/-55%
Source	PHO1	KIC0	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 009965165-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 4	$0.83^{+0.64}_{-0.49}$	2650^{+215}_{-139}	4411^{+2528}_{-902}	$4.538^{+25.861}_{-3.134}$
Alt.	-35 ± 4	$0.96^{+0.58}_{-0.52}$	2638^{+198}_{-142}	4854^{+2271}_{-860}	$7.061^{+26.440}_{-4.225}$

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 $A_{obs} \gg 1.0$

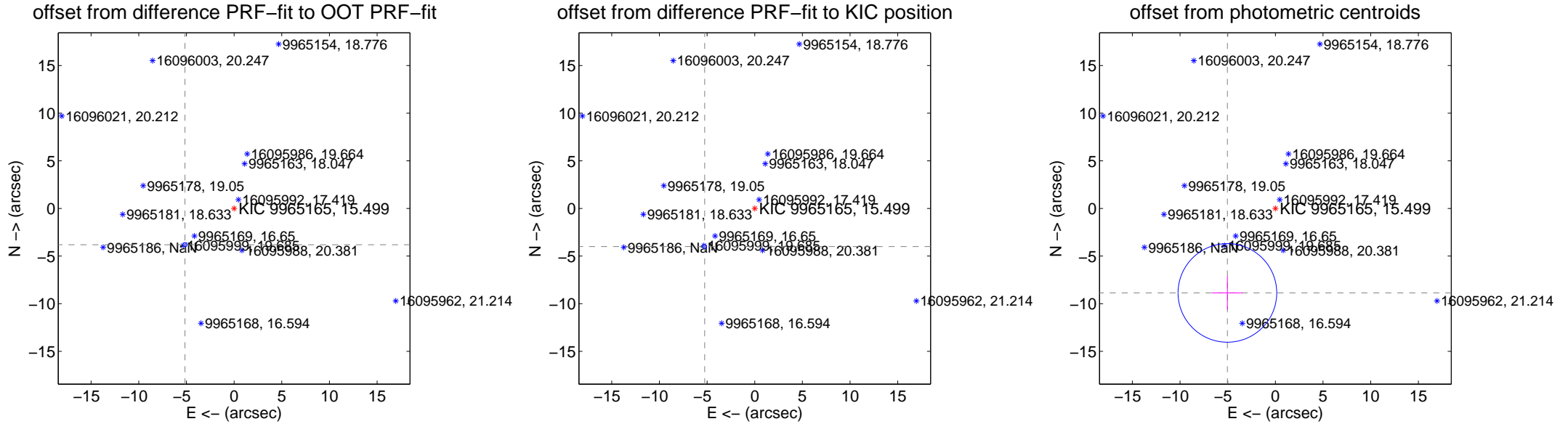
DV Centroid Data

Supplemental centroid analysis for 009965165-01. Kepler magnitude: 15.50. Transit SNR 7.89

There are 14 quarters with good PRF difference image offsets

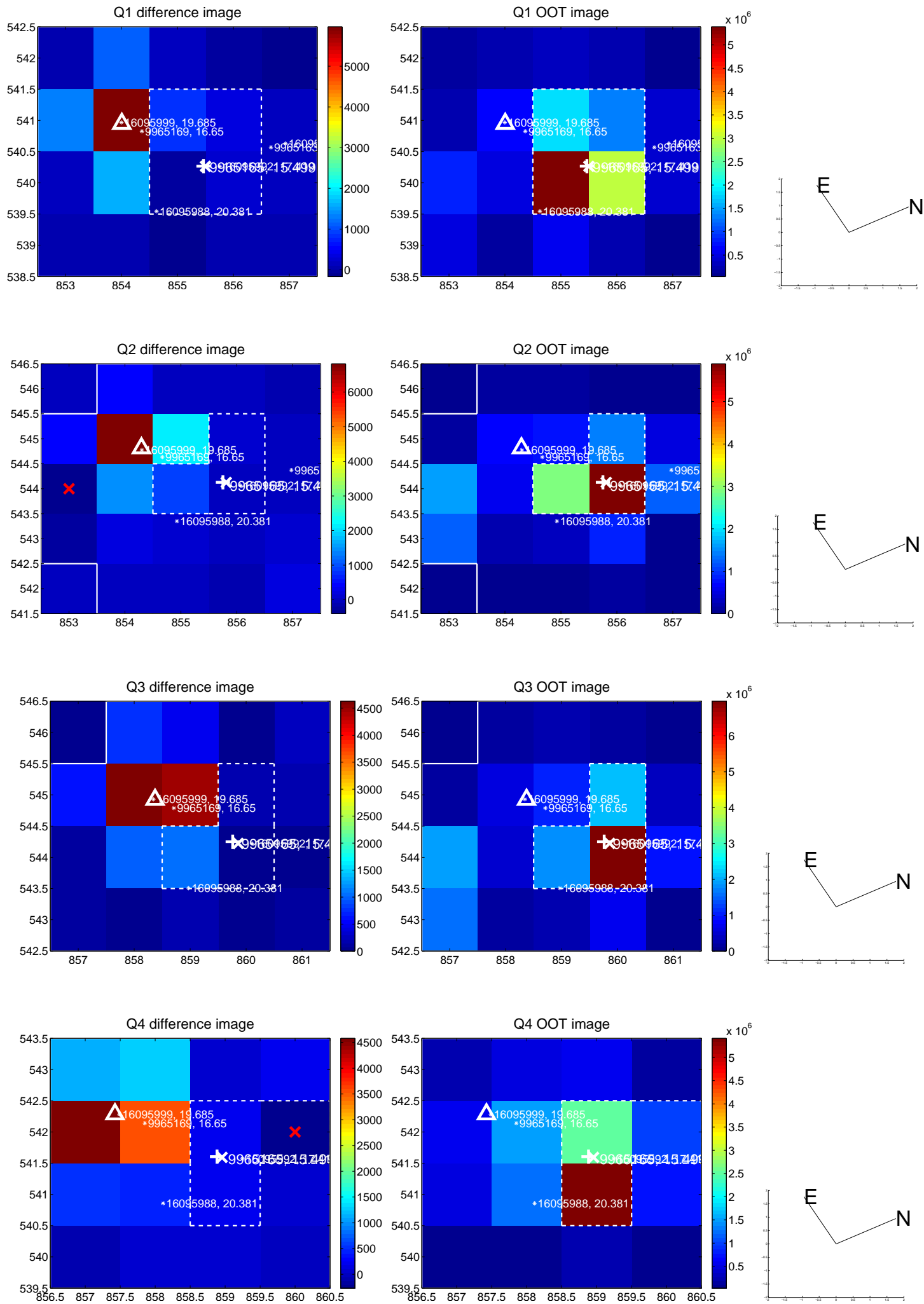
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.407 \pm 0.073	88.15	5.153 \pm 0.071	-3.806 \pm 0.071
PRF-fit source offset from KIC position	6.605 \pm 0.070	93.97	5.255 \pm 0.069	-4.002 \pm 0.072
photometric centroid source offset	10.20 \pm 1.72	5.91	5.03 \pm 1.63	-8.87 \pm 1.75

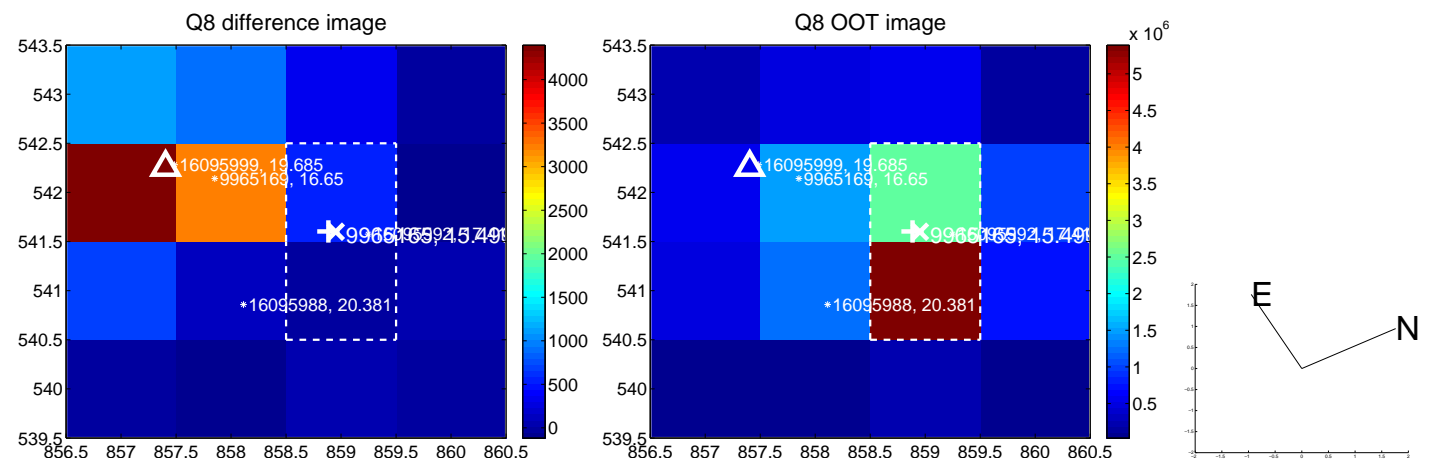
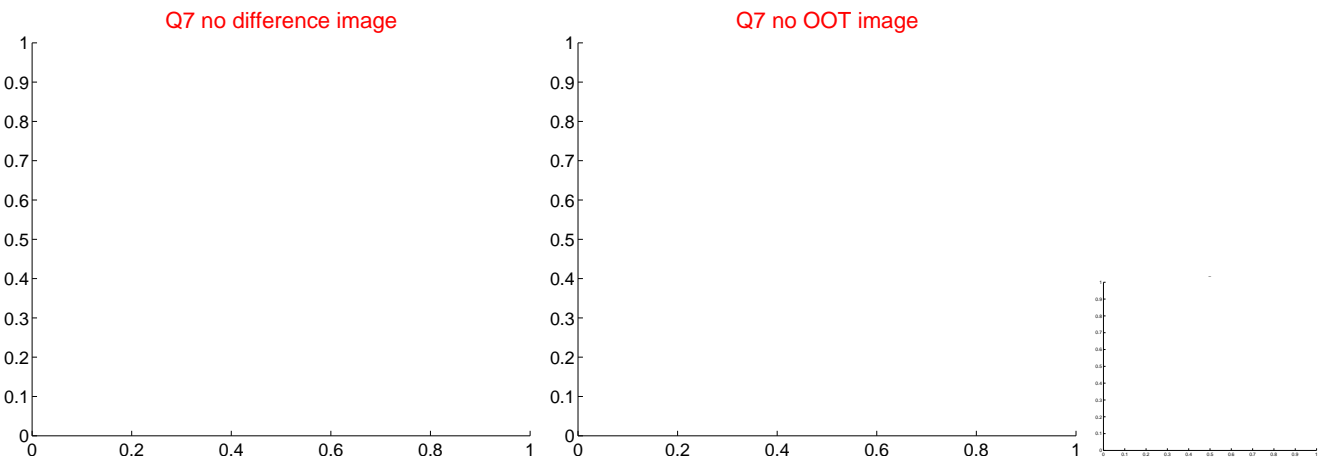
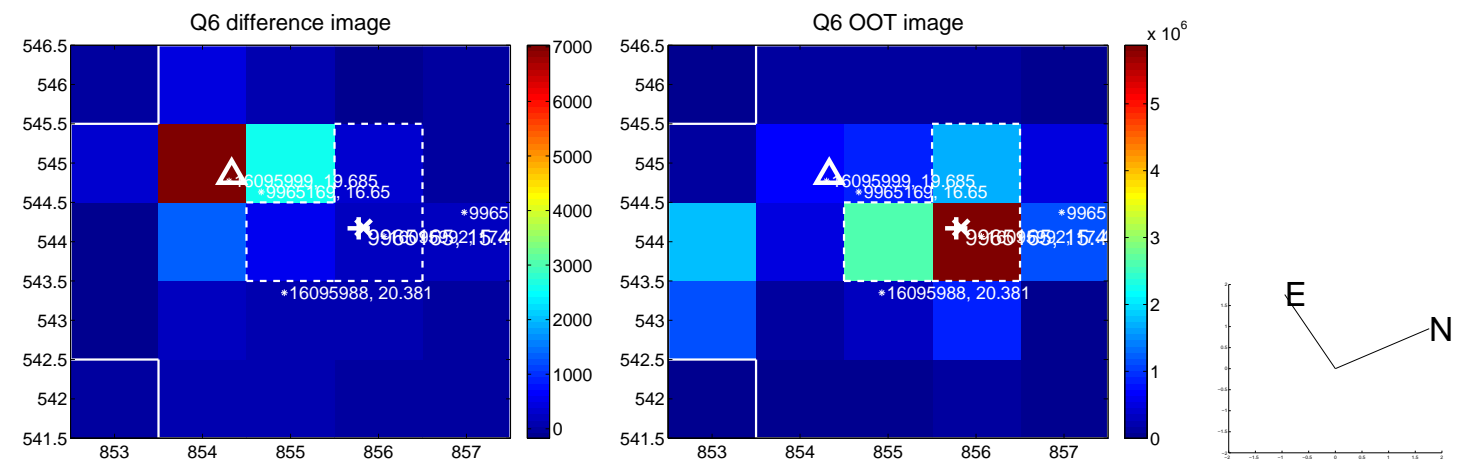
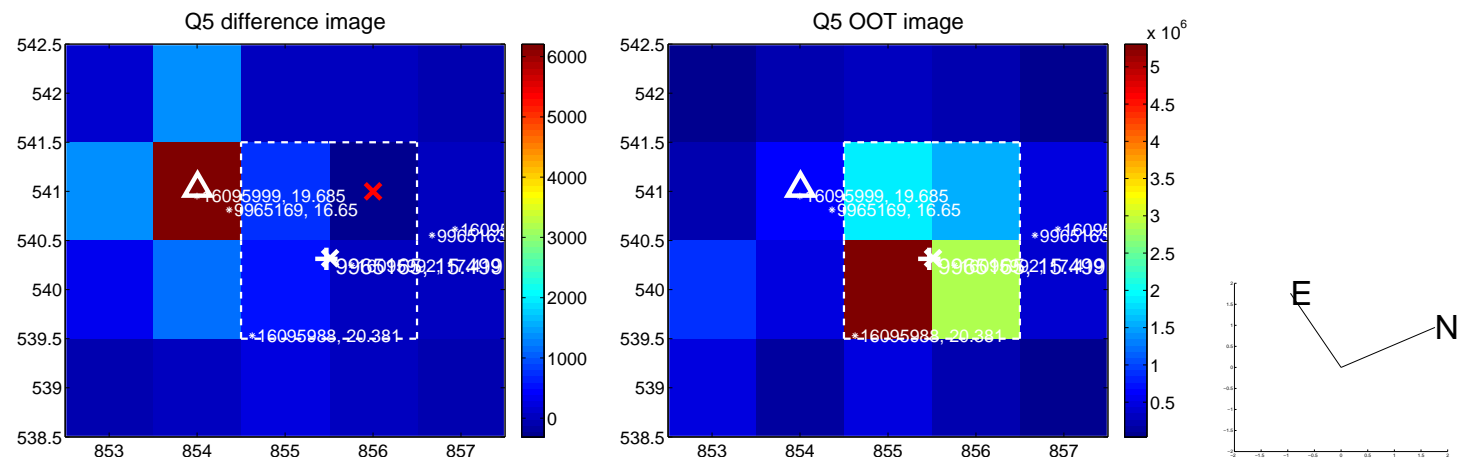


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

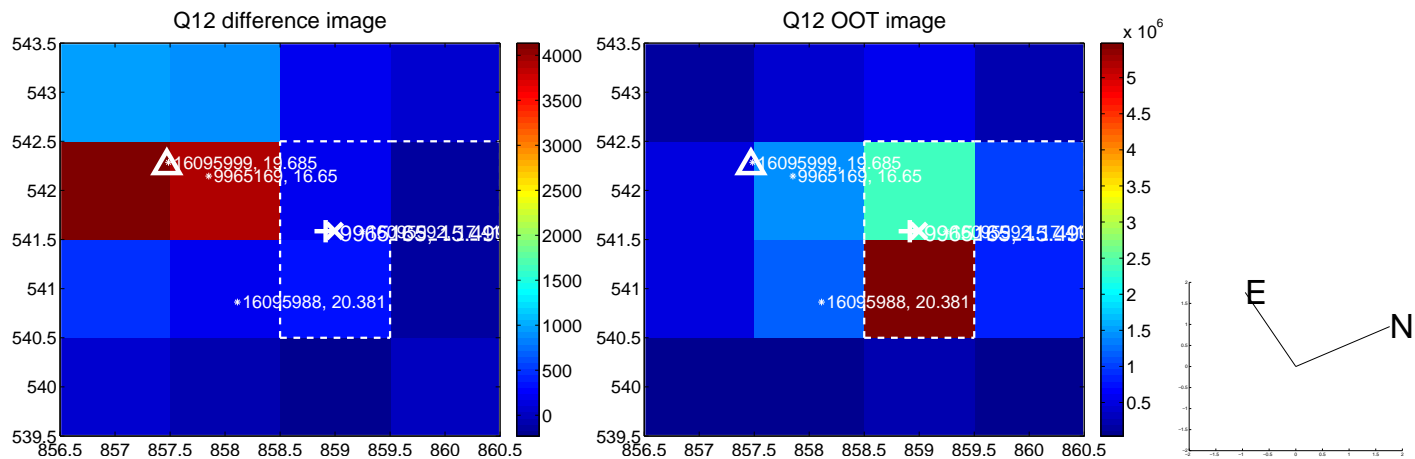
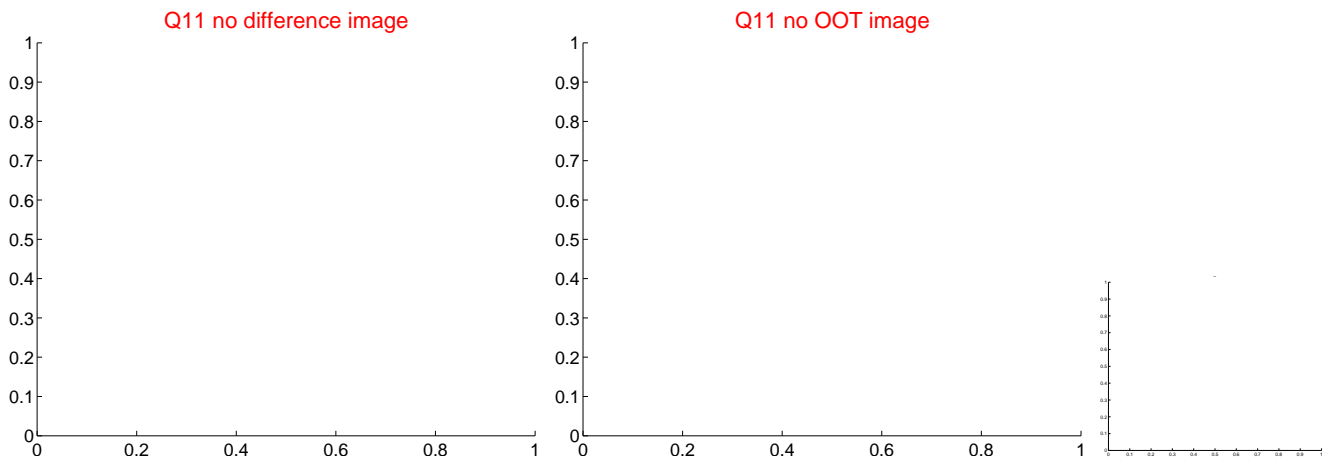
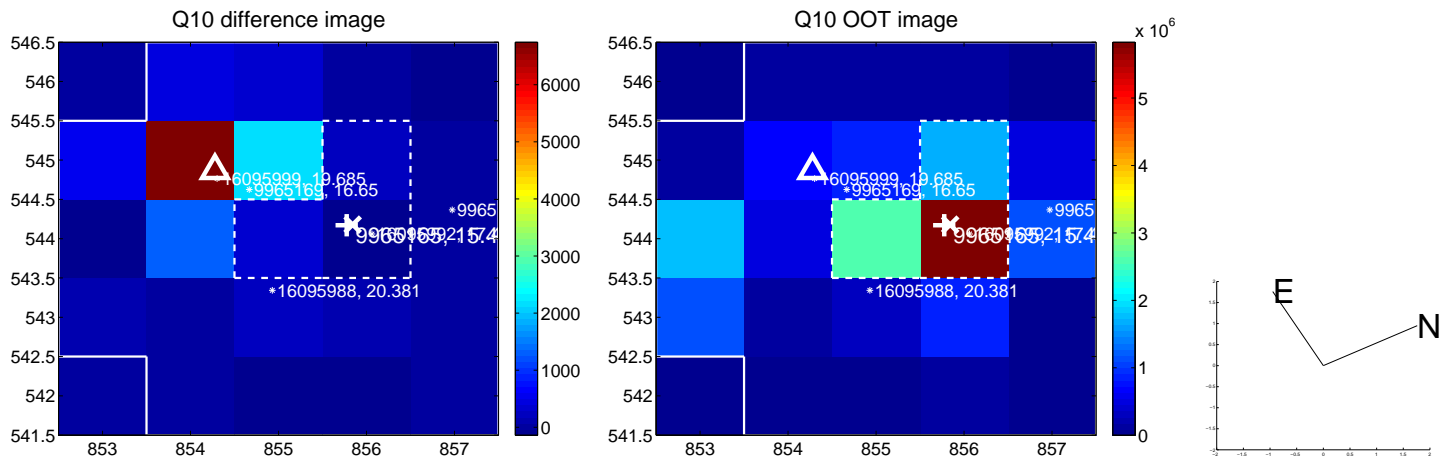
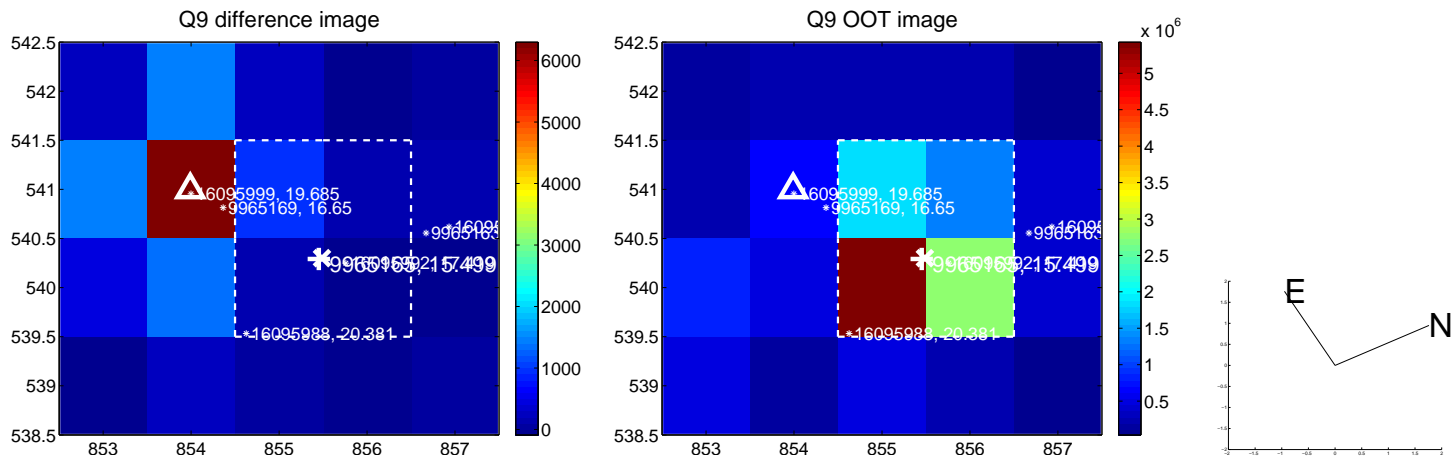
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



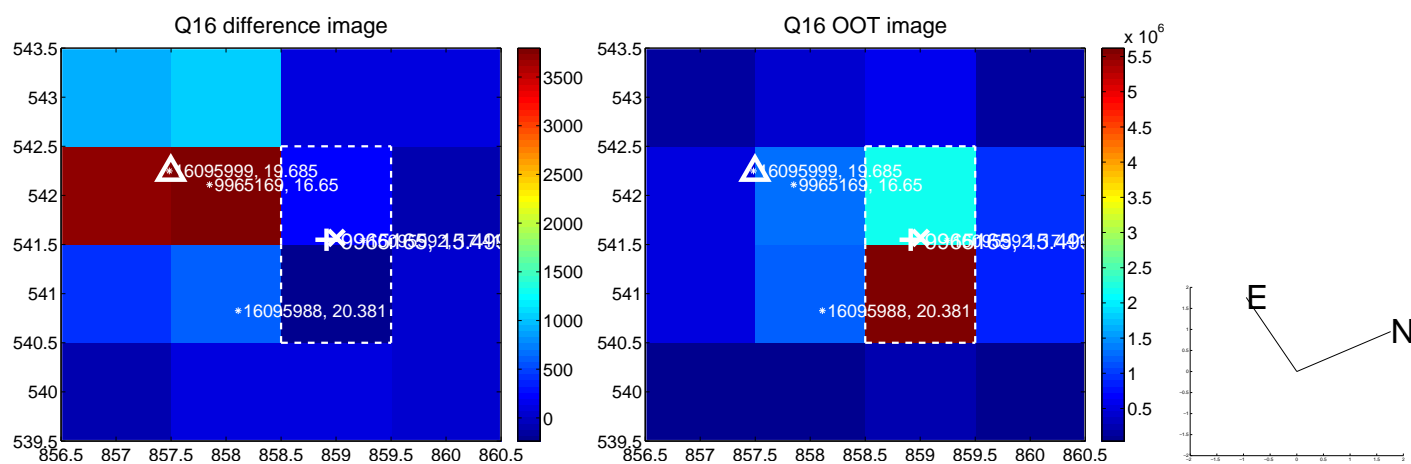
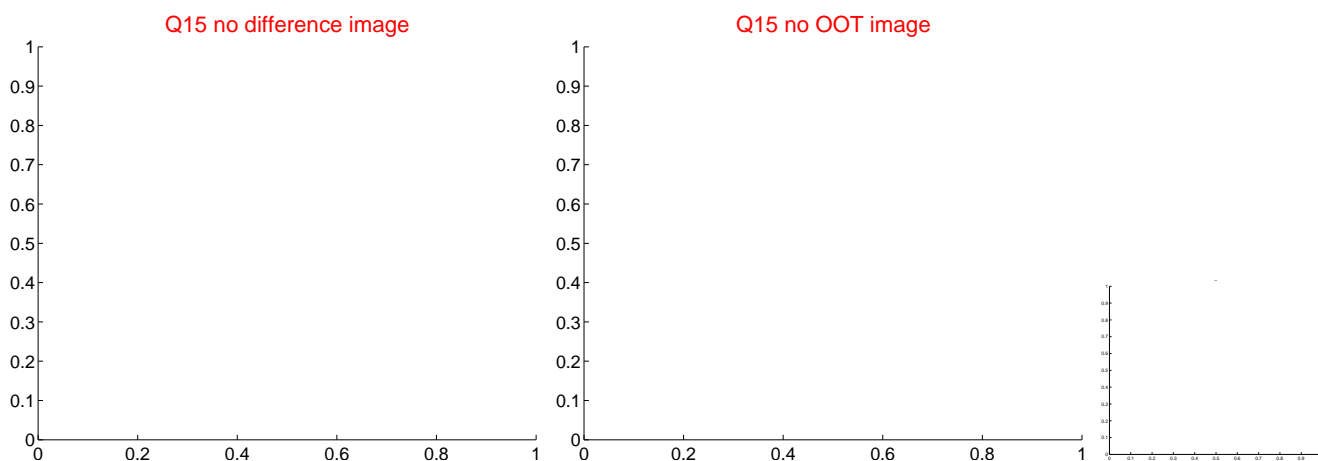
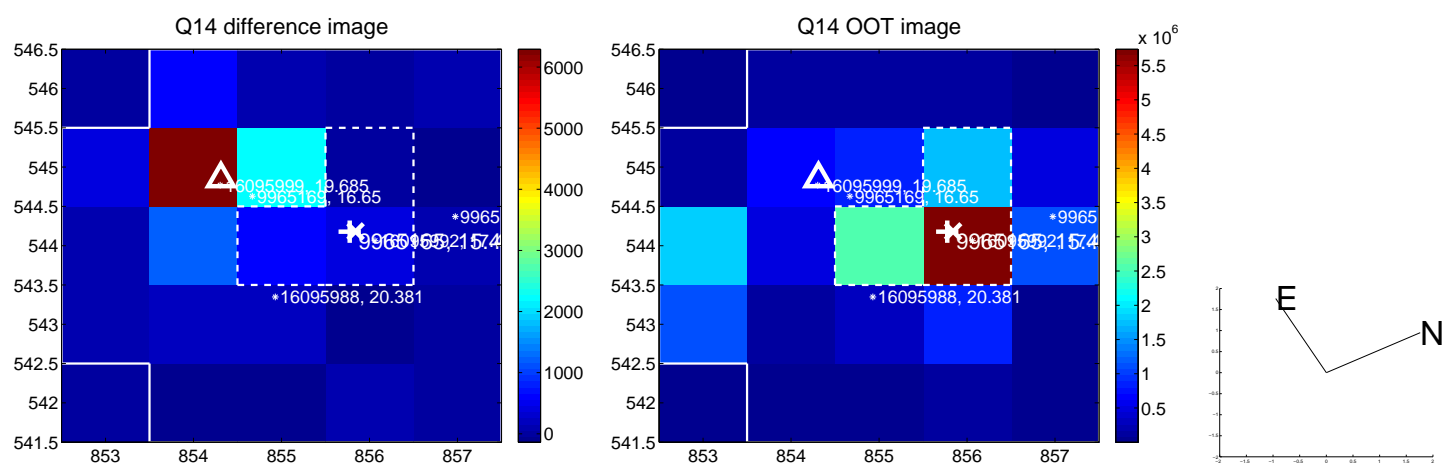
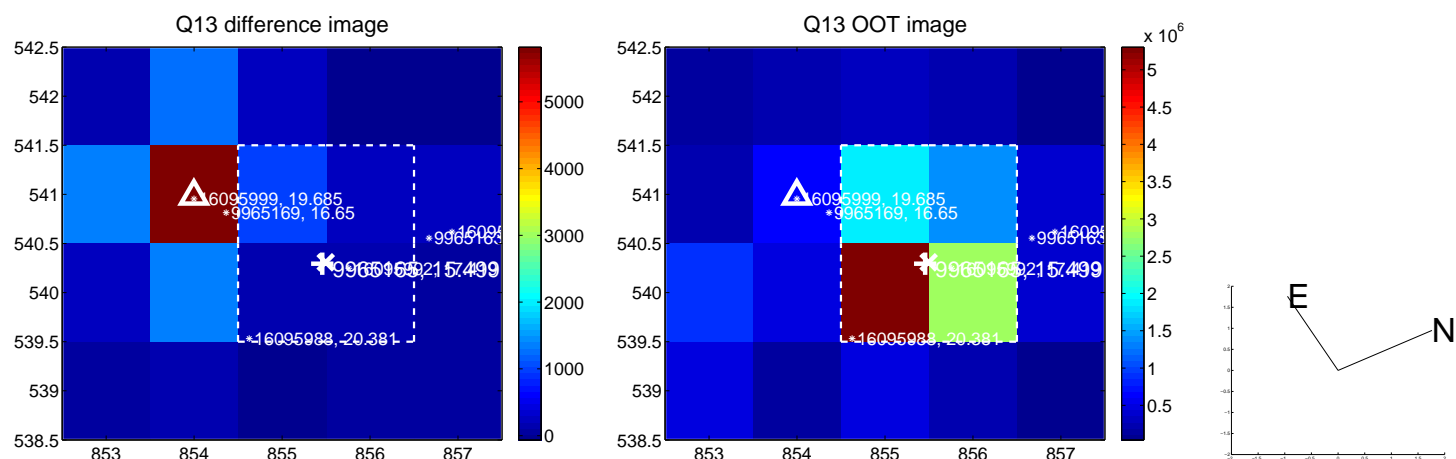
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



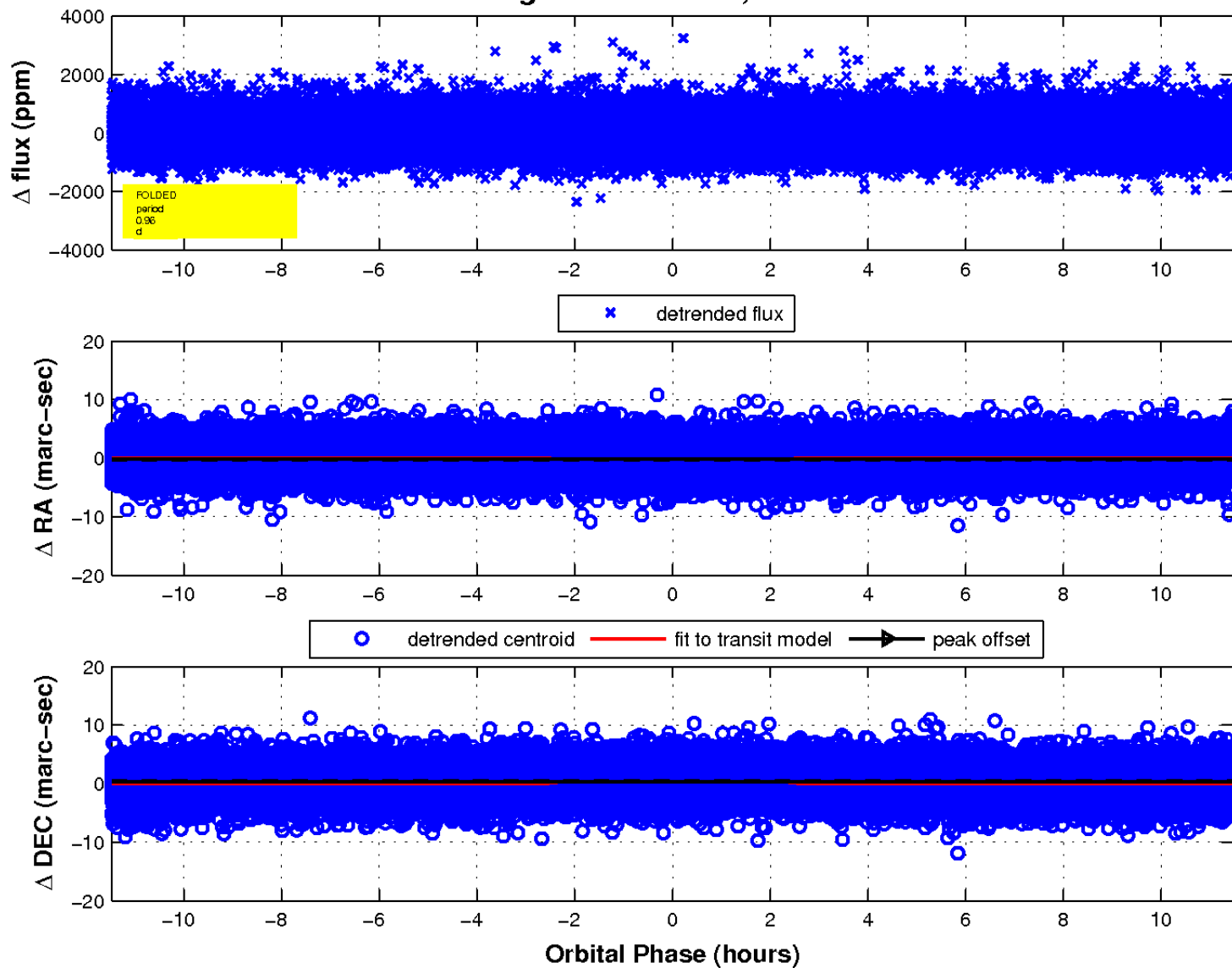
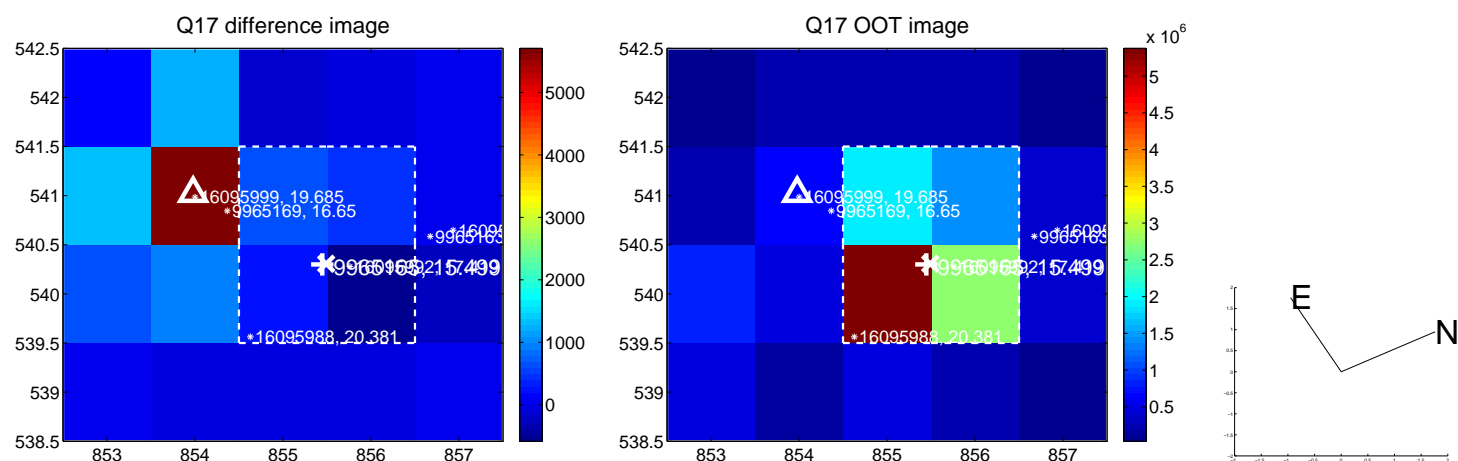
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

