

KIC 003838486

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})
003838486-01	OBS	0808.01	2.990243	133.114978	551.2	6.601	35.5	39.7	0.73	4667	2.69	168.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003838486-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 003838486-01

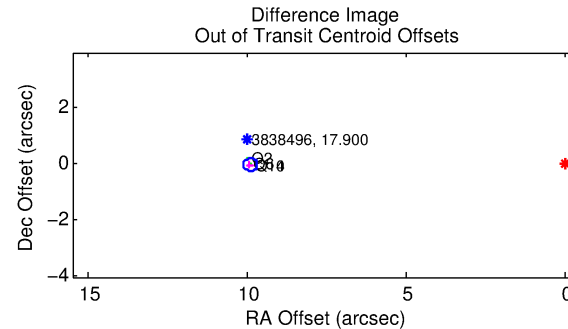
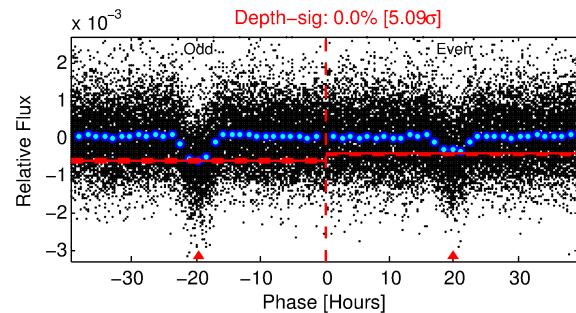
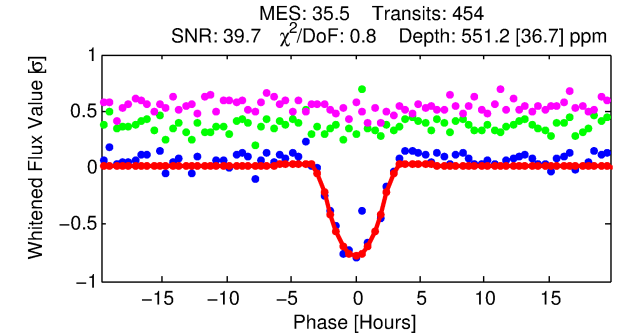
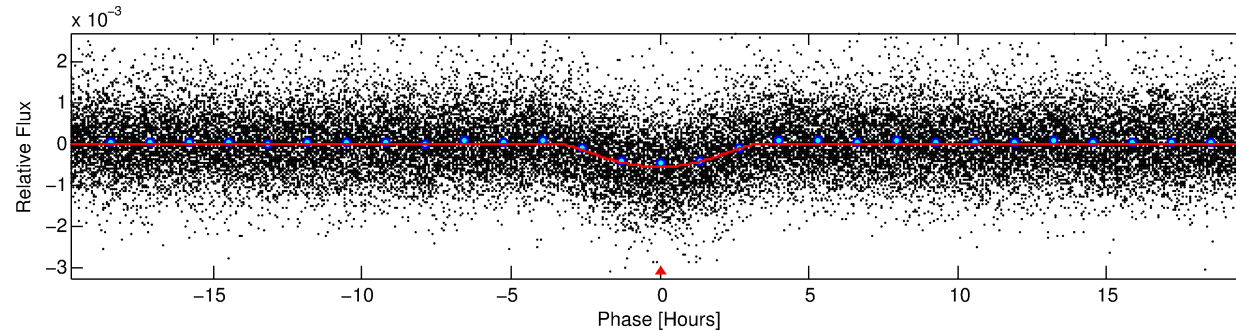
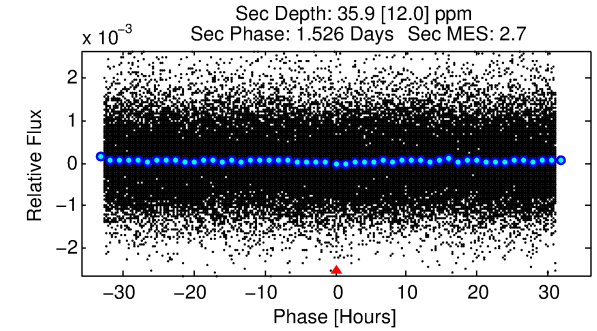
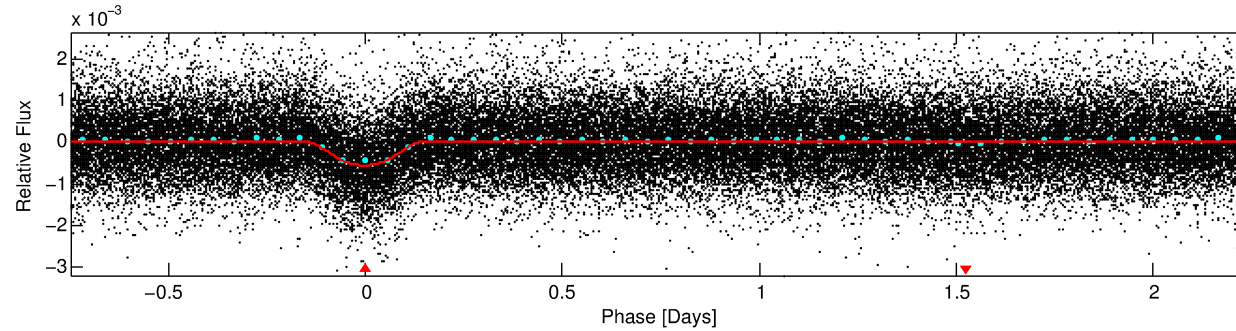
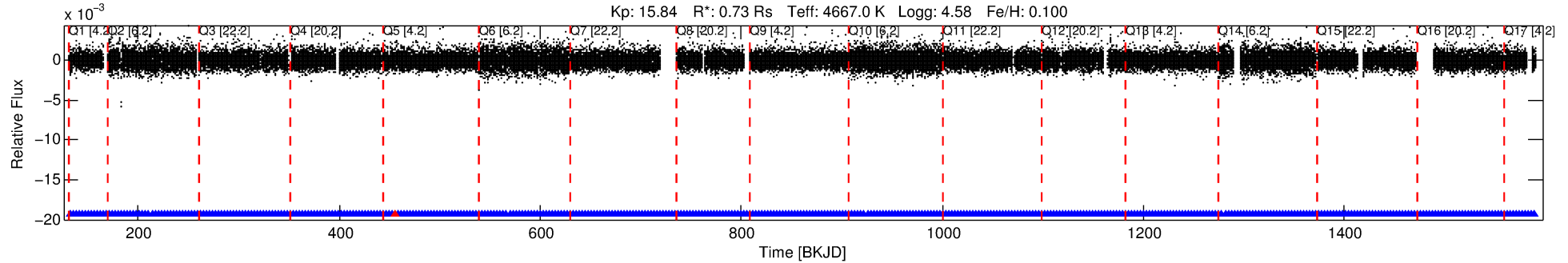
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003838486-01	3838486	3700.01	3838496	1:1	10.1	2	1	17.90	15.84	725.95	Direct-PRF	0	0.18	0.20

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3838486 Candidate: 1 of 1 Period: 2.990 d
KOI: K00808.01 Corr: 0.950

Kp: 15.84 R*: 0.73 Rs Teff: 4667.0 K Logg: 4.58 Fe/H: 0.100



DV Fit Results:

Period = 2.99024 [0.00001] d
Epoch = 133.1150 [0.0037] BKJD
Rp/R* = 0.0337 [0.0083]
a/R* = 1.52 [0.10]
b = 0.98 [0.02]
Seff = 168.54 [27.26]
Teq = 919 [37] K
Rp = 2.69 [0.70] Re
a = 0.0367 [0.0025] AU
Ag = 3.68 [2.22] [1.21σ]
Teff = 1968 [300] K [3.47σ]

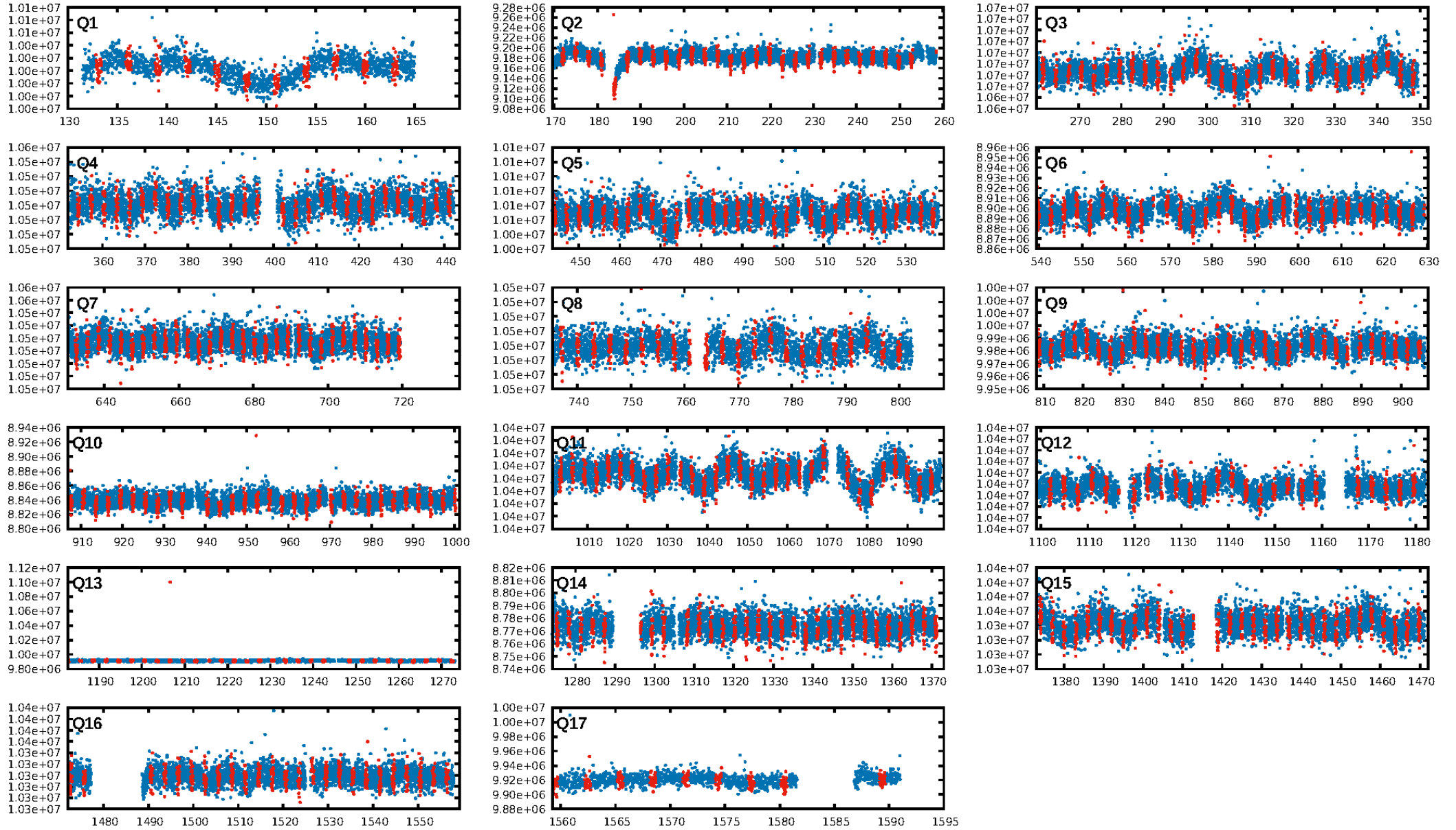
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.44e-257
RollingBand-fgt: 1.00 [433/434]
GhostDiagnostic-chr: -0.3827
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: 9.915 arcsec [131.21σ]
KicOffset-rm: 9.688 arcsec [129.01σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

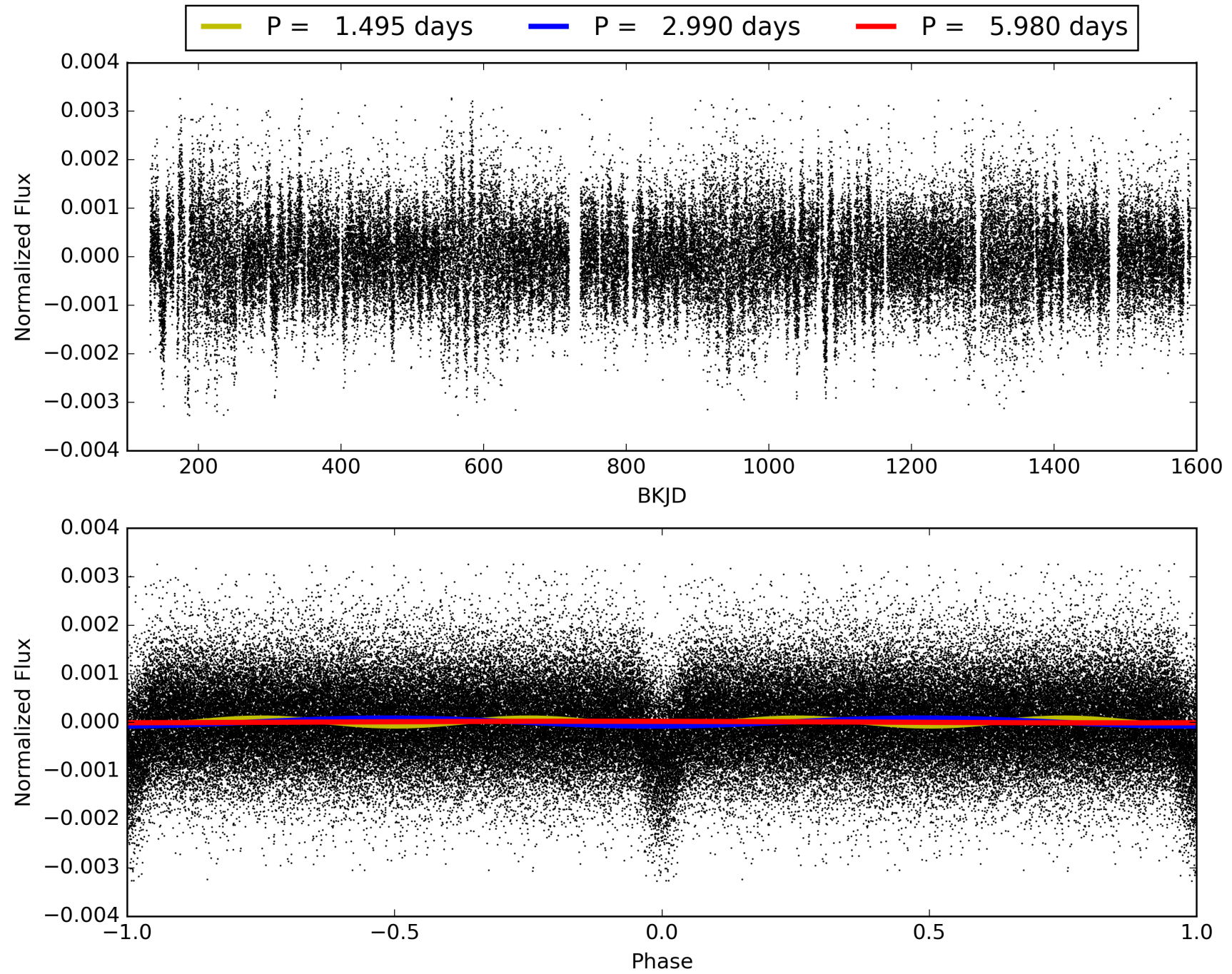
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:57:03 Z

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

TCE 003838486-01, PDC Light Curves

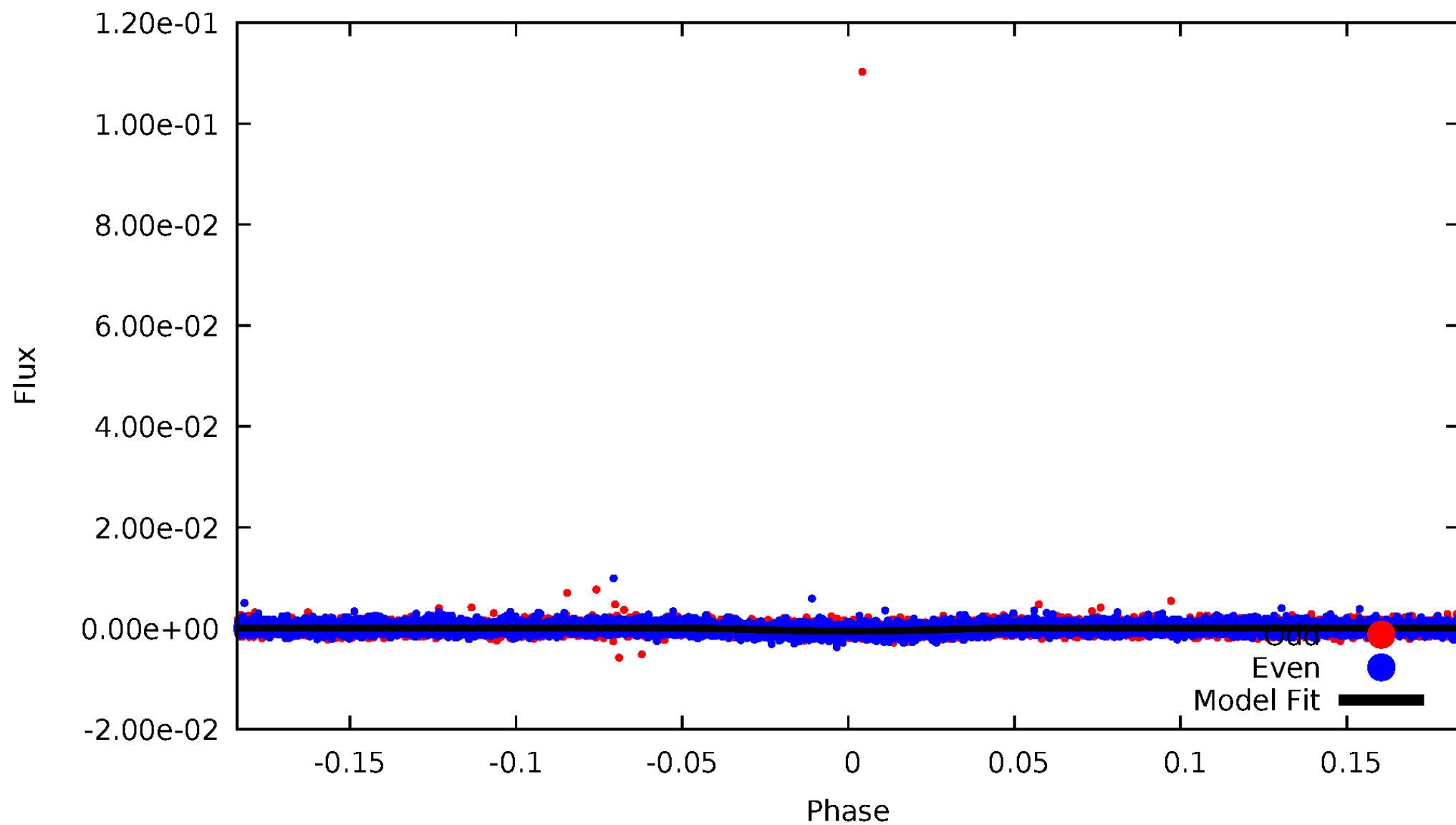


TCE 003838486-01



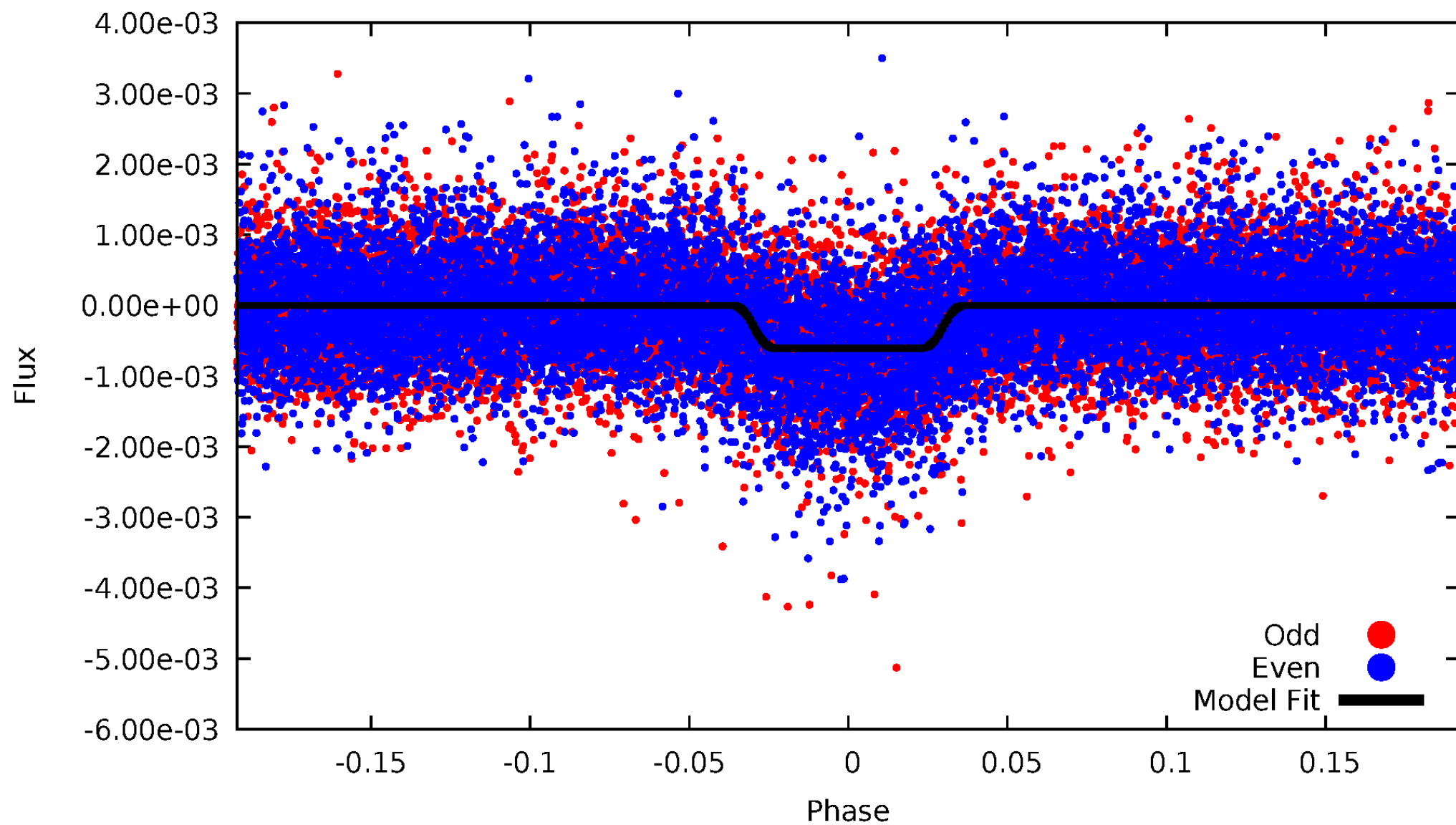
DV Odd/Even

TCE 003838486-01



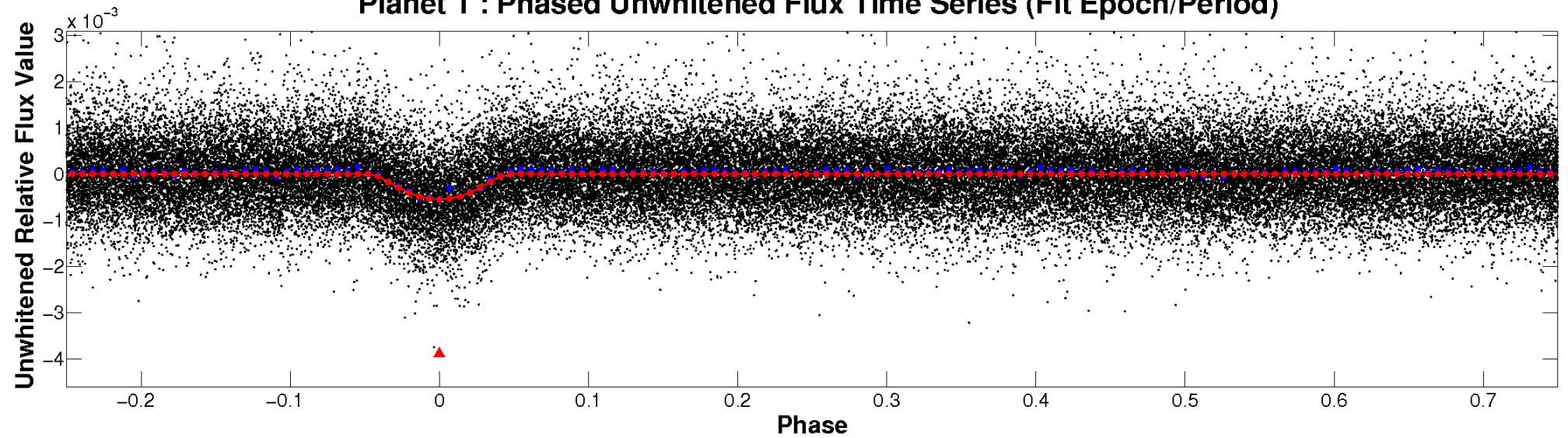
ALT Odd/Even

TCE 003838486-01

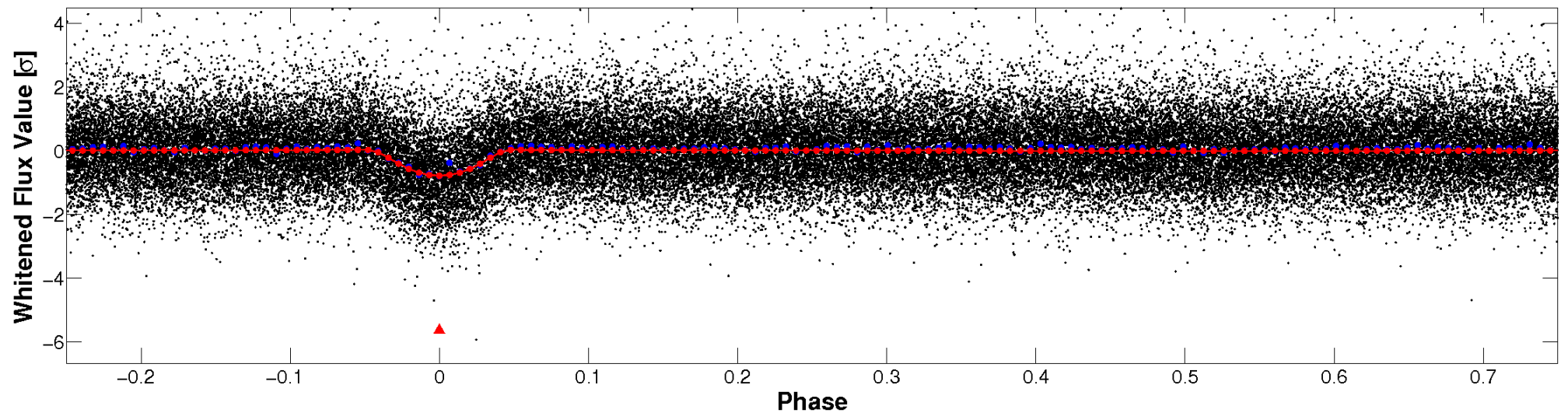


Non-Whitened Vs. Whitened Light Curve

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

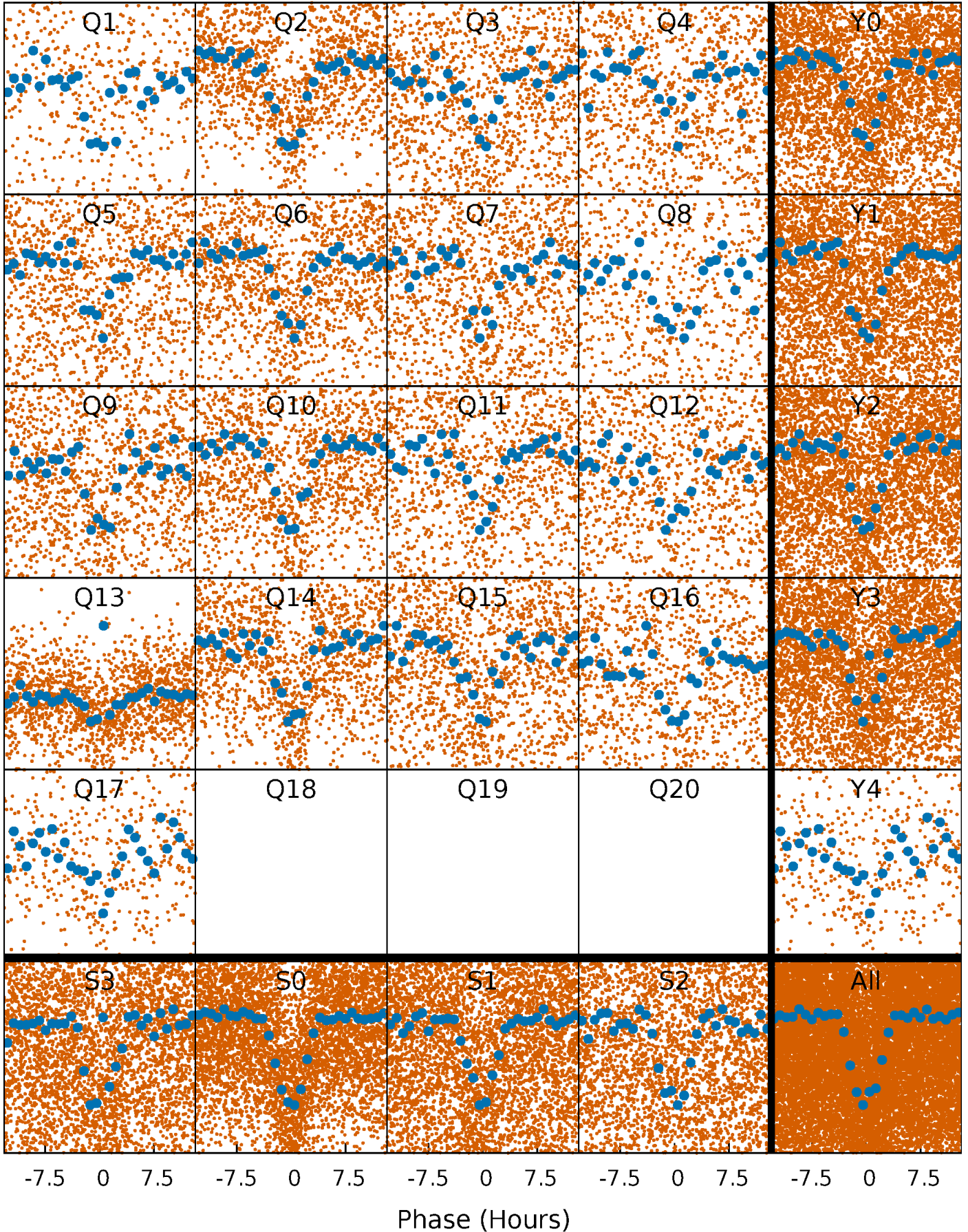


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



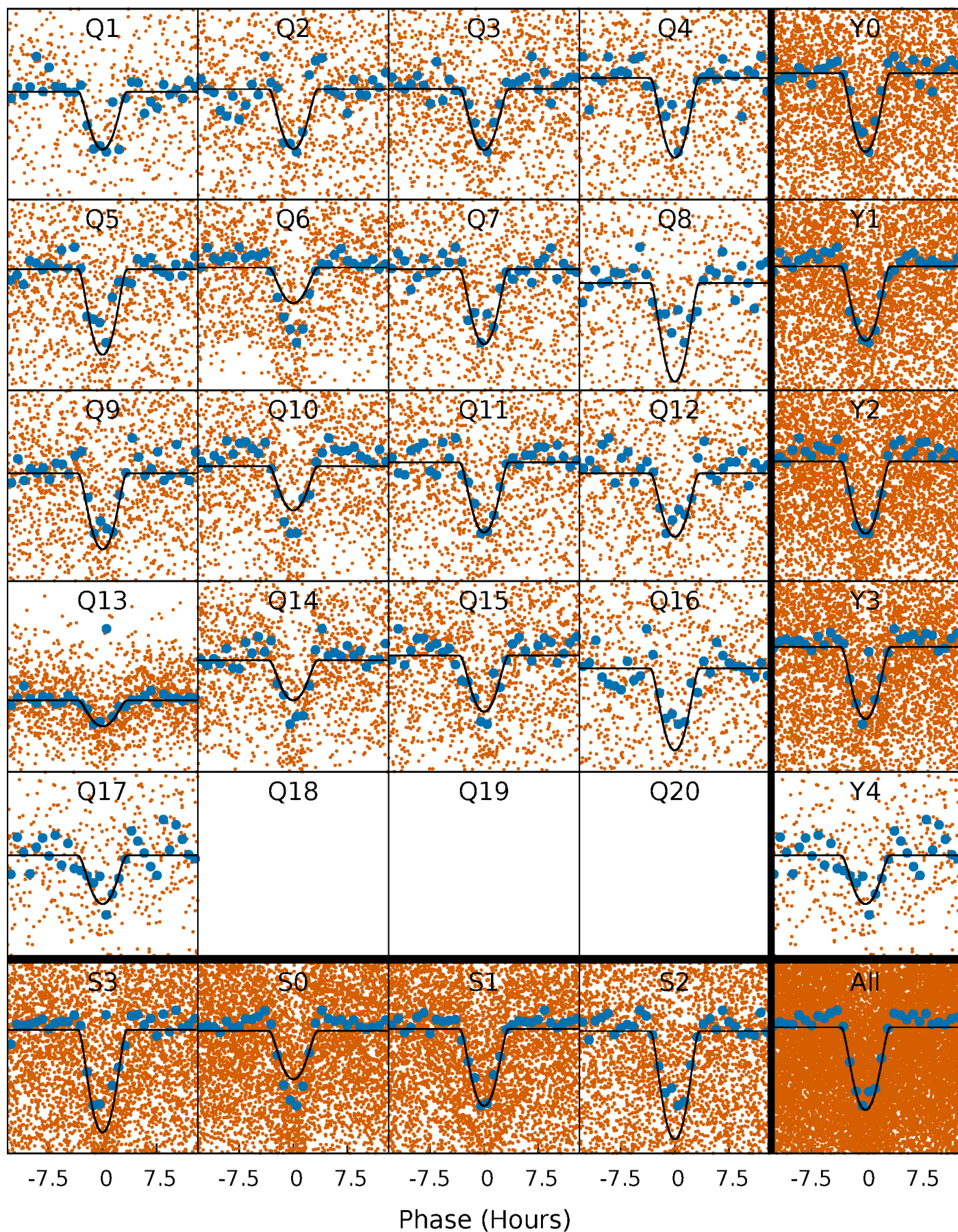
PDC Quarter-Phased Transit Curves

TCE 003838486-01 P= 2.990243 Days $T_0=133.114978$ (BKJD)



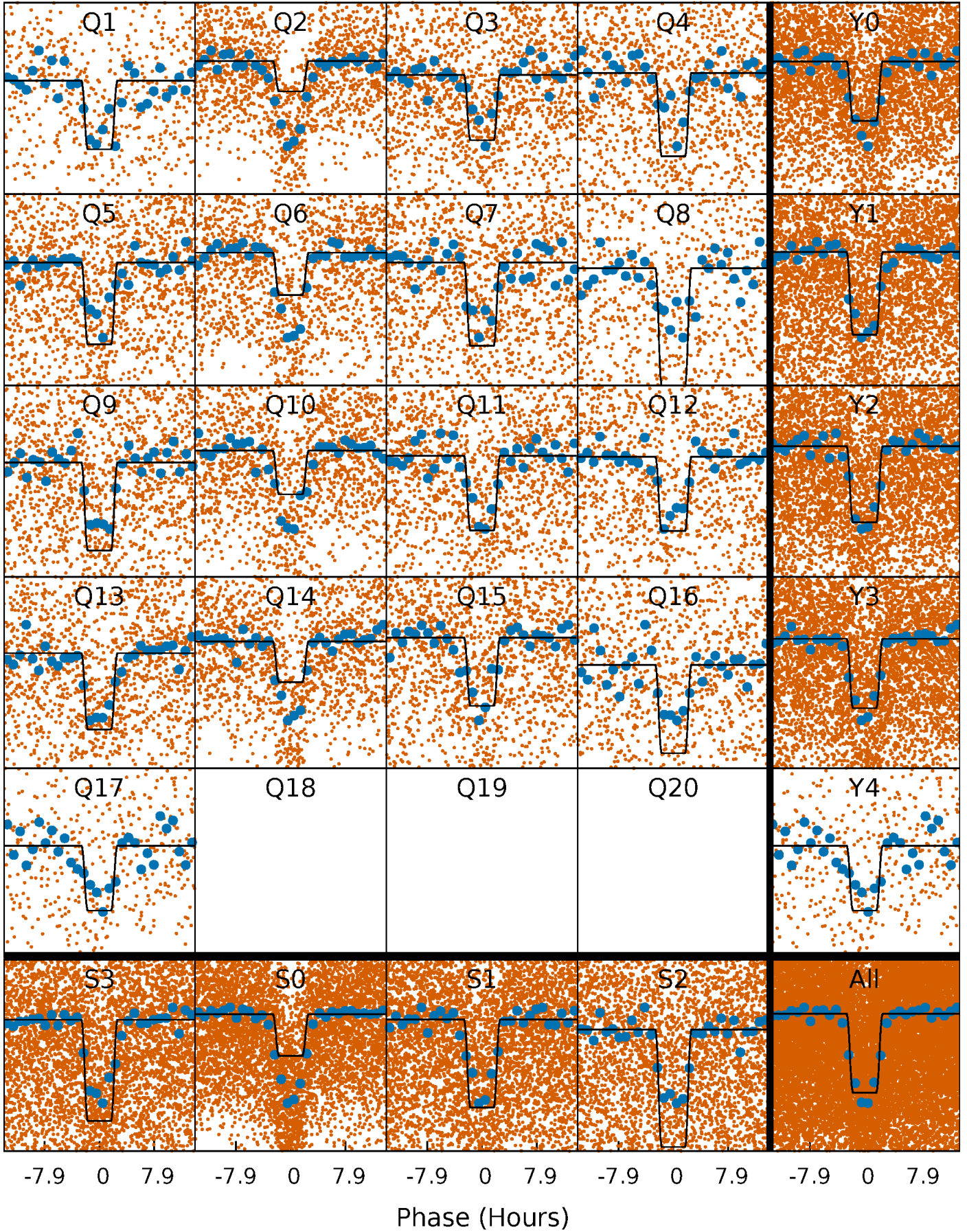
DV Quarter-Phased Transit Curves

TCE 003838486-01 P= 2.990243 Days $T_0=133.114978$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

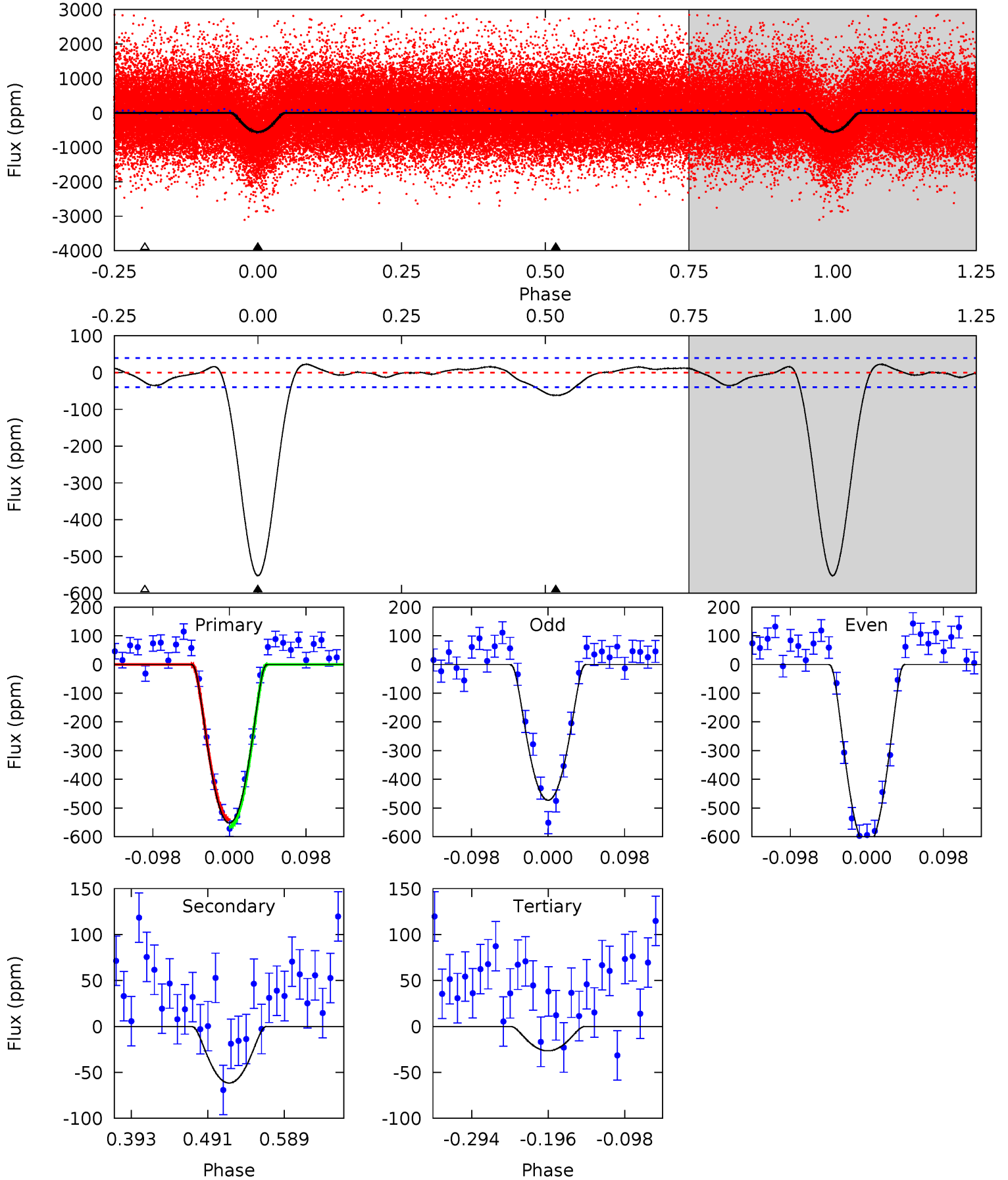
TCE 003838486-01 P= 2.990266 Days $T_0=133.108239$ (BKJD)



DV Model-Shift Uniqueness Test

003838486-01, P = 2.990243 Days, E = 130.124735 Days

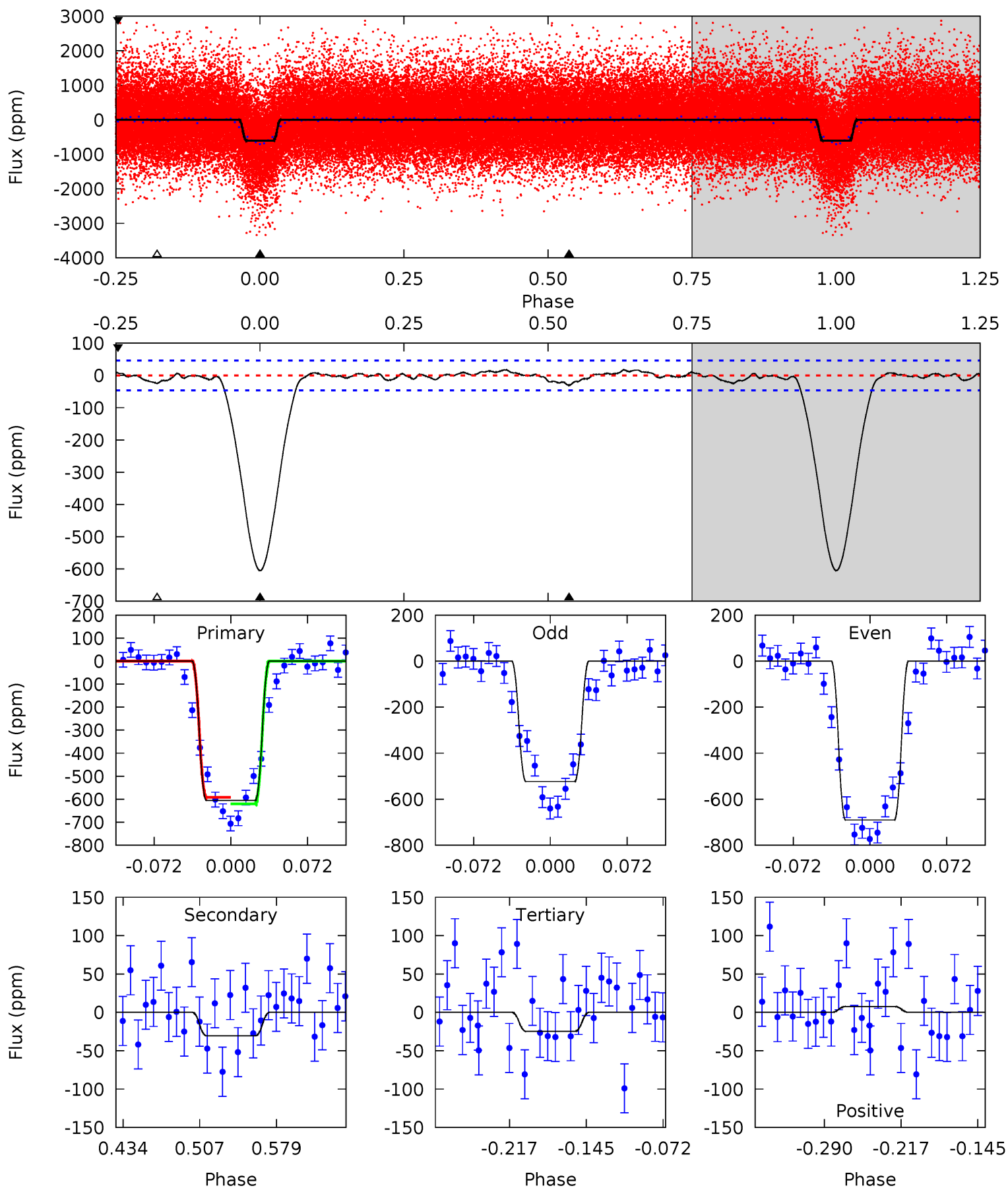
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.3	7.06	3.04	0	4.57	1.65	1.38	60.3	63.3	4.02	7.06	9.22	0.98	0.04	1.42



Alt Model-Shift Uniqueness Test

003838486-01, P = 2.990266 Days, E = 130.117973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.5	3.05	2.47	0.75	4.63	1.80	0.86	58.0	59.7	0.58	2.29	8.39	1.18	0.03	1.37



Stellar Parameters For KIC 003838486

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4667^{+140}_{-154}	$4.578^{+0.048}_{-0.028}$	$0.100^{+0.250}_{-0.300}$	$0.731^{+0.042}_{-0.063}$	$0.737^{+0.058}_{-0.058}$	$2.658^{+0.570}_{-0.323}$
	+3%/-3%	+1%/-1%	+250%/-300%	+6%/-9%	+8%/-8%	+21%/-12%
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 003838486-01 / KOI 0808.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-62 ± 9	$2.67^{+0.67}_{-0.70}$	1278^{+46}_{-45}	2871^{+273}_{-192}	$6.395^{+5.522}_{-2.394}$
Alt.	-30 ± 10	$1.96^{+0.60}_{-0.68}$	1281^{+42}_{-50}	2841^{+366}_{-267}	$5.931^{+7.786}_{-3.011}$

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

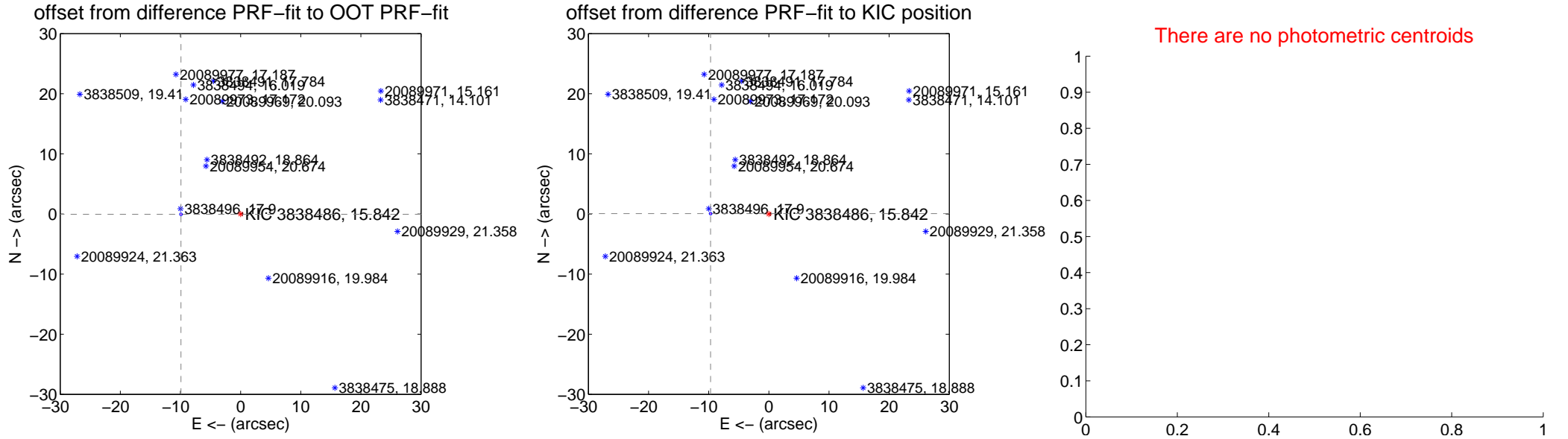
DV Centroid Data

Supplemental centroid analysis for 003838486-01. Kepler magnitude: 15.84. Transit SNR 39.67

There are 4 quarters with good PRF difference image offsets

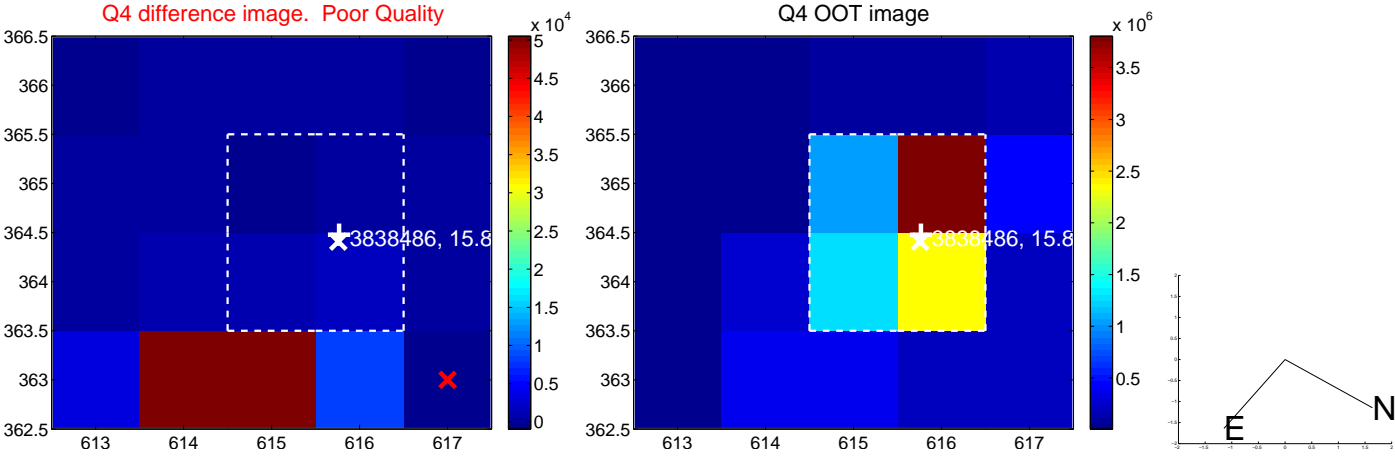
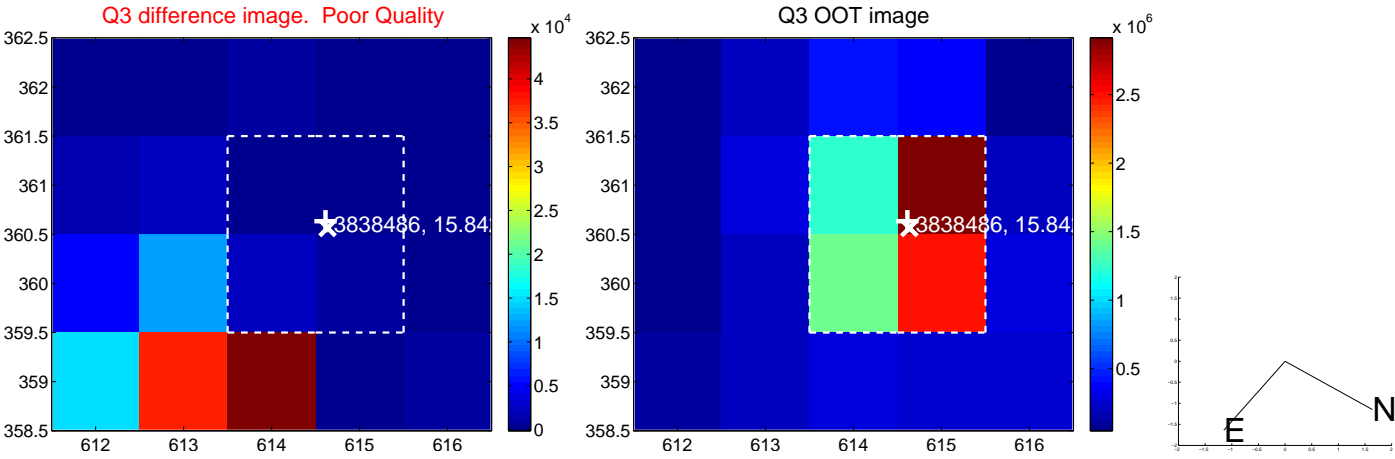
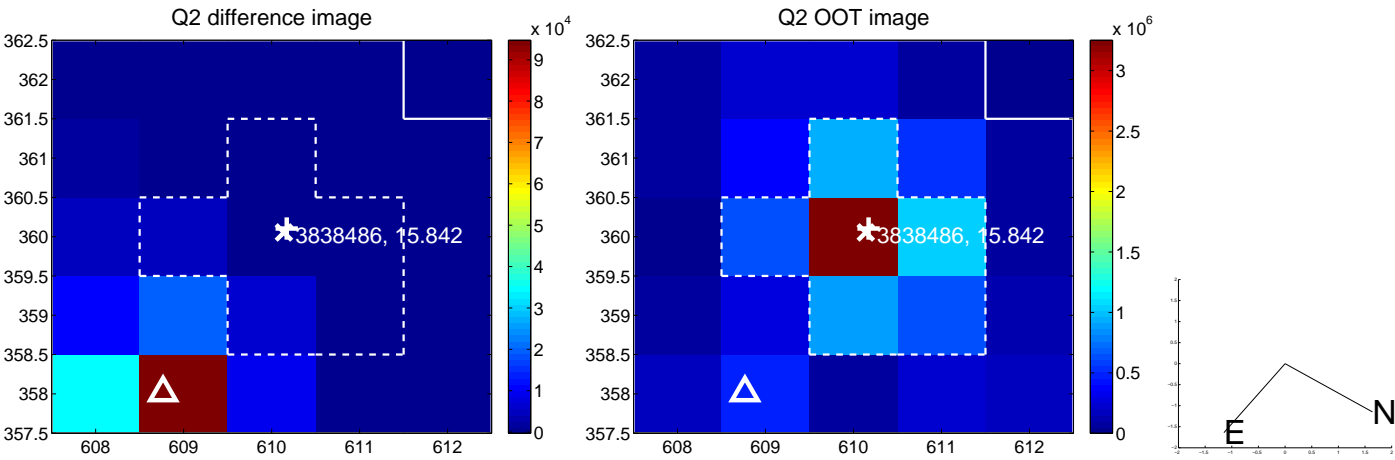
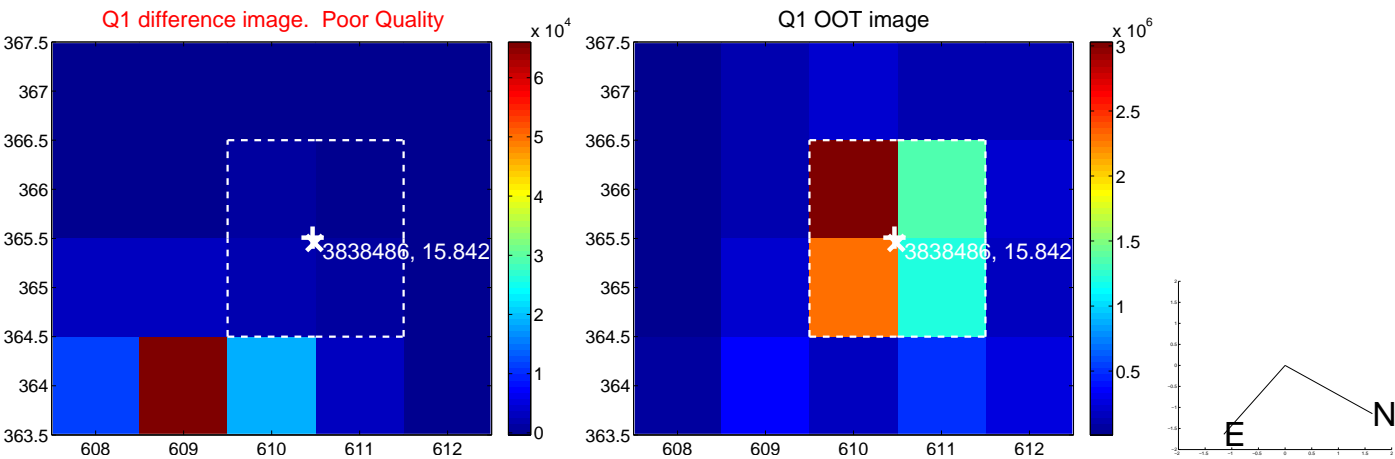
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.915 \pm 0.076	131.21	9.915 \pm 0.076	-0.051 \pm 0.074
PRF-fit source offset from KIC position	9.688 \pm 0.075	129.01	9.688 \pm 0.075	0.060 \pm 0.079
photometric centroid source offset	—	—	—	—

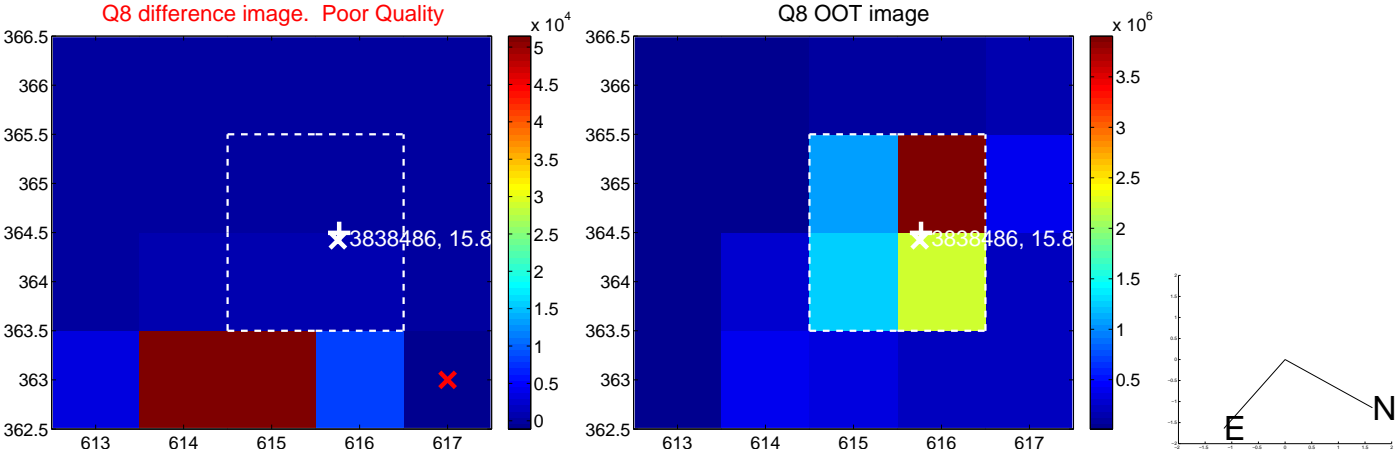
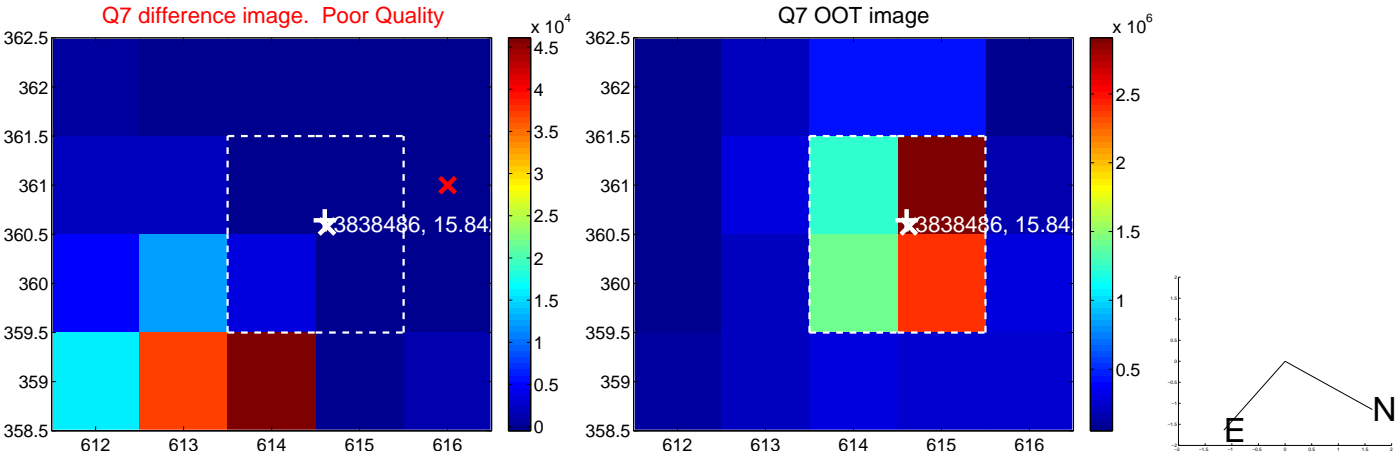
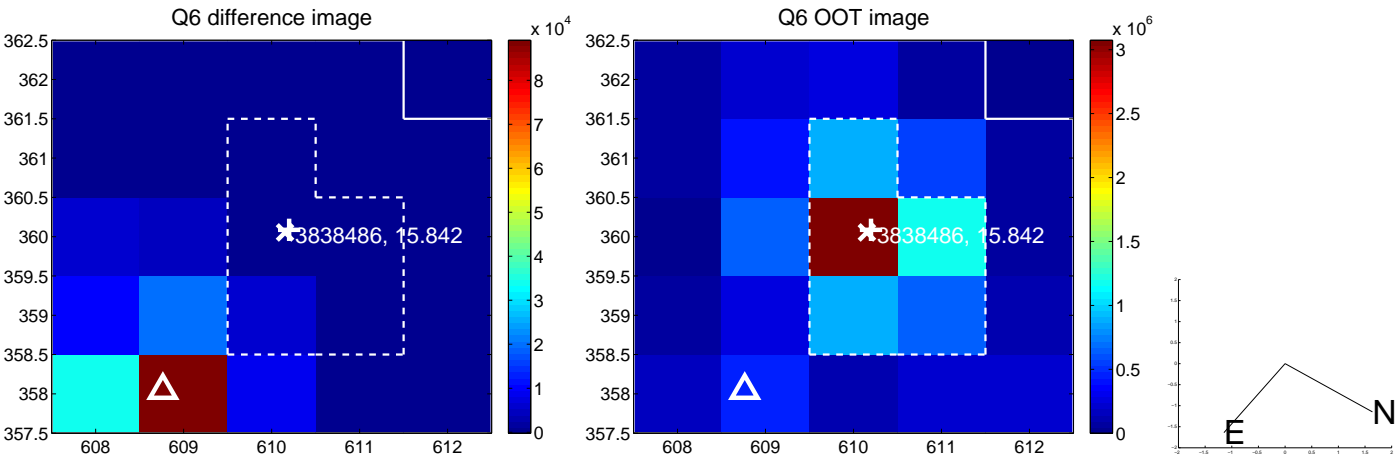
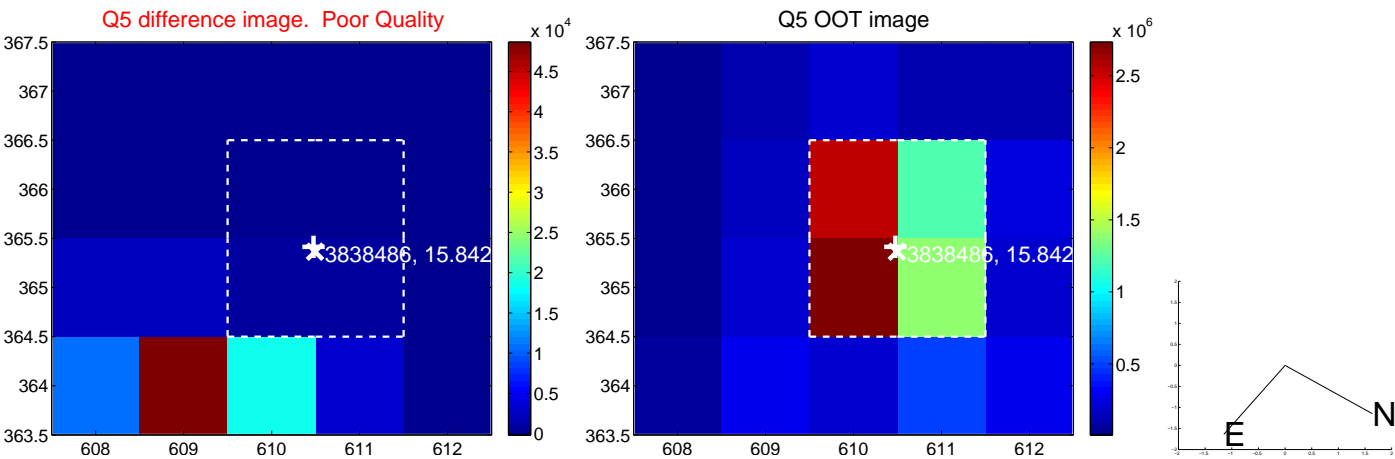


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

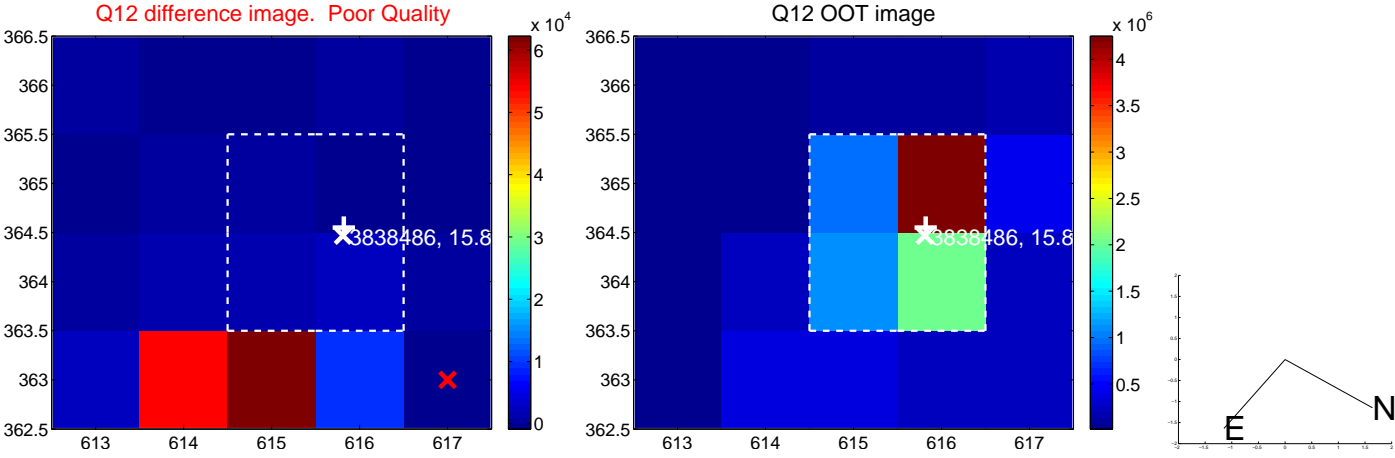
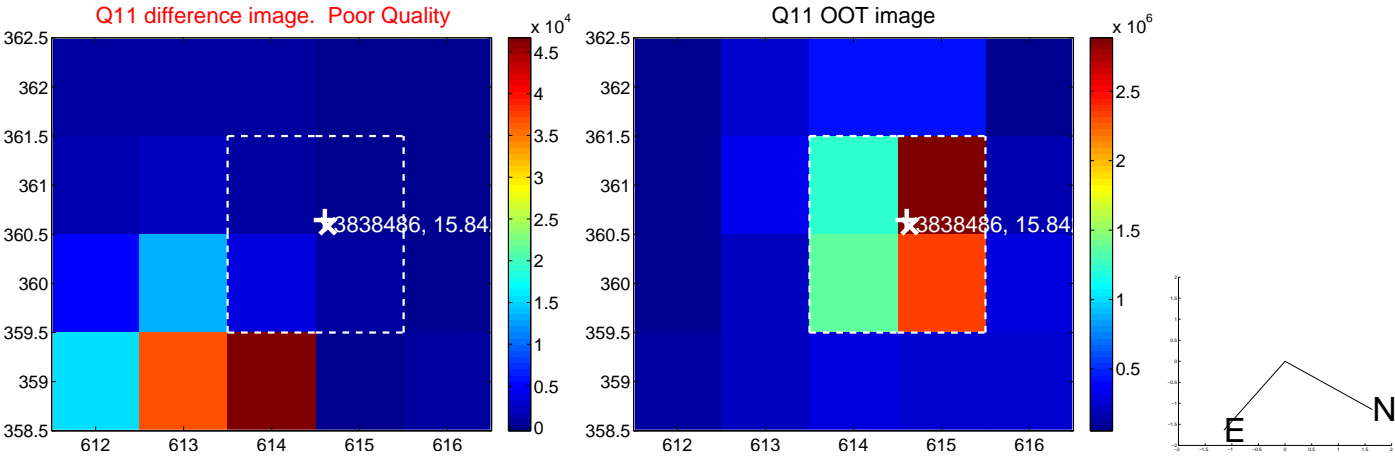
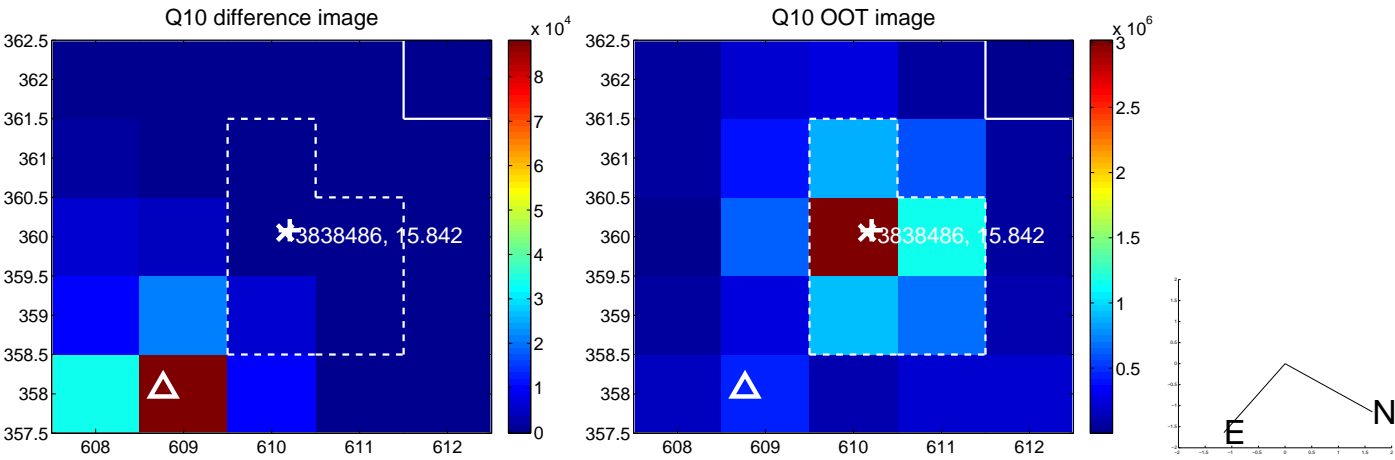
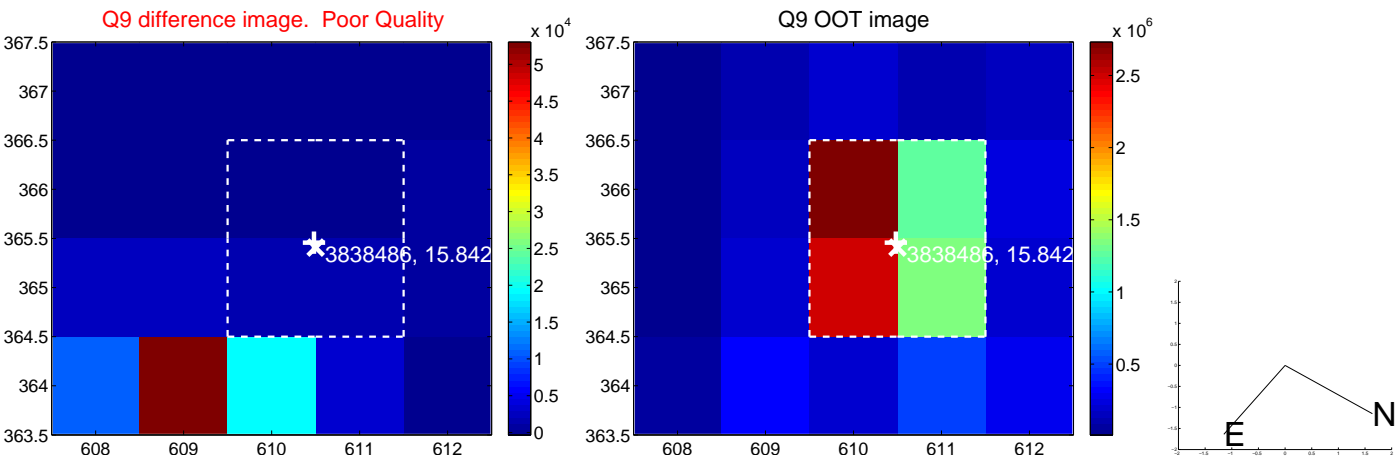
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



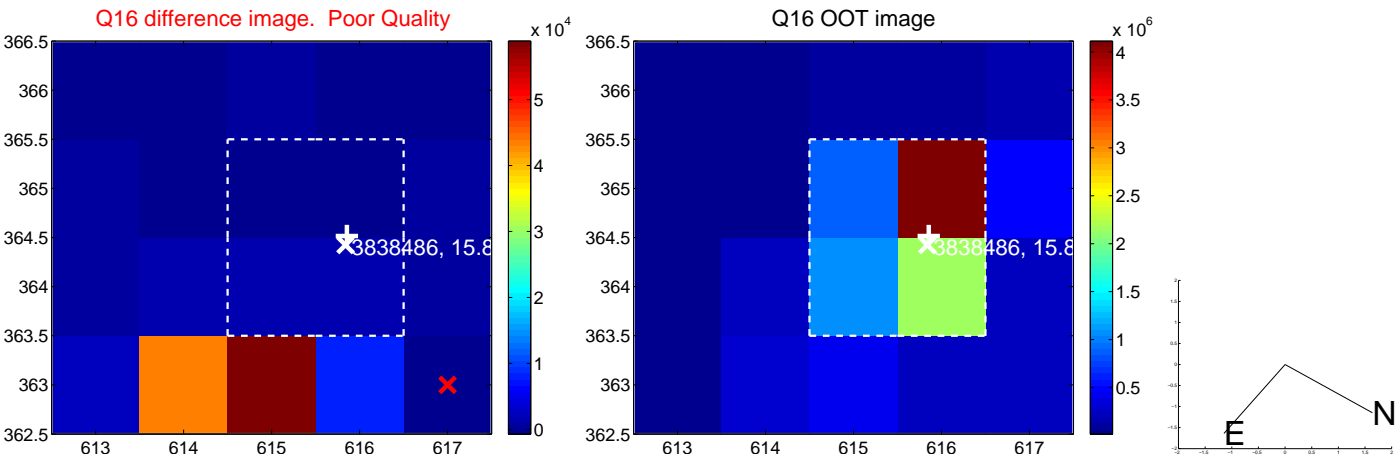
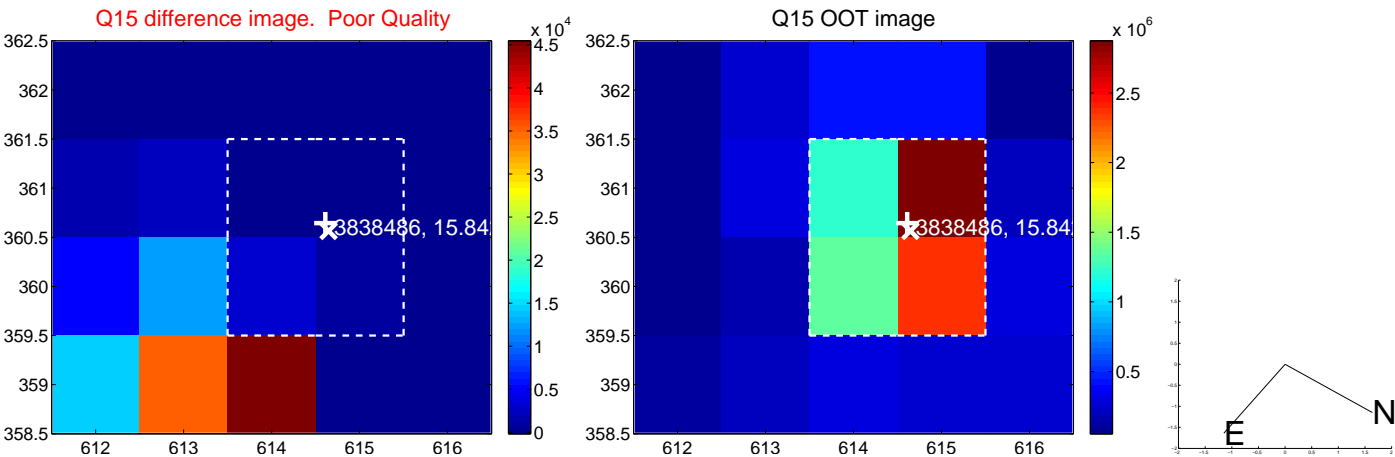
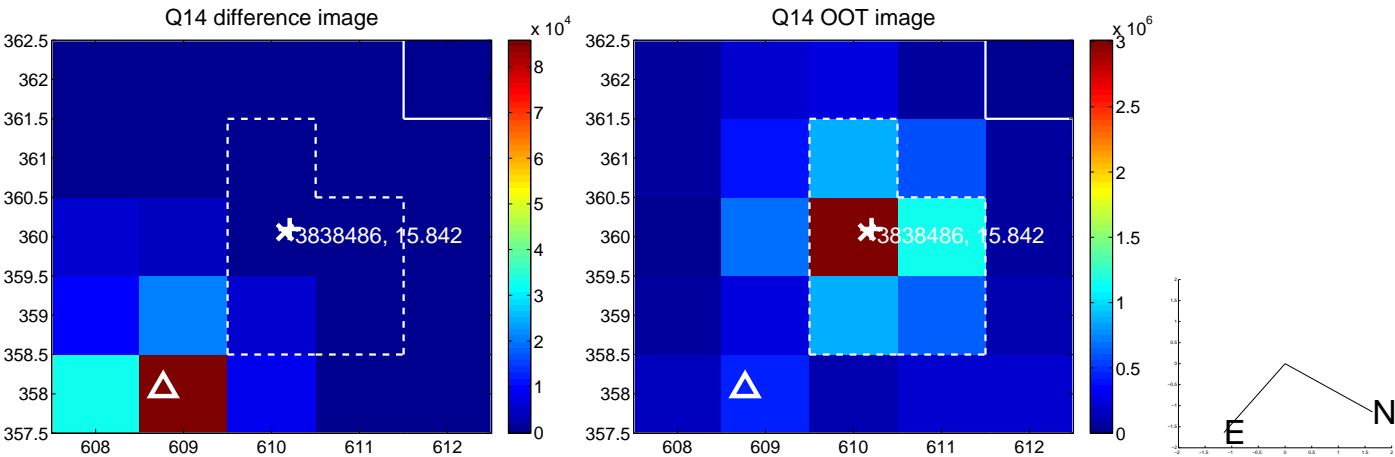
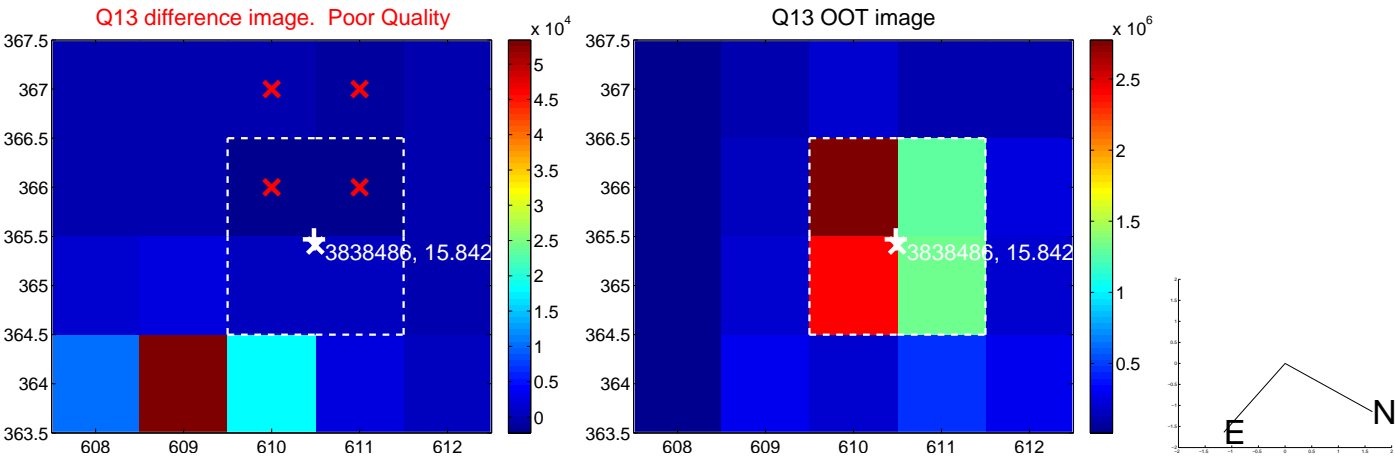
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



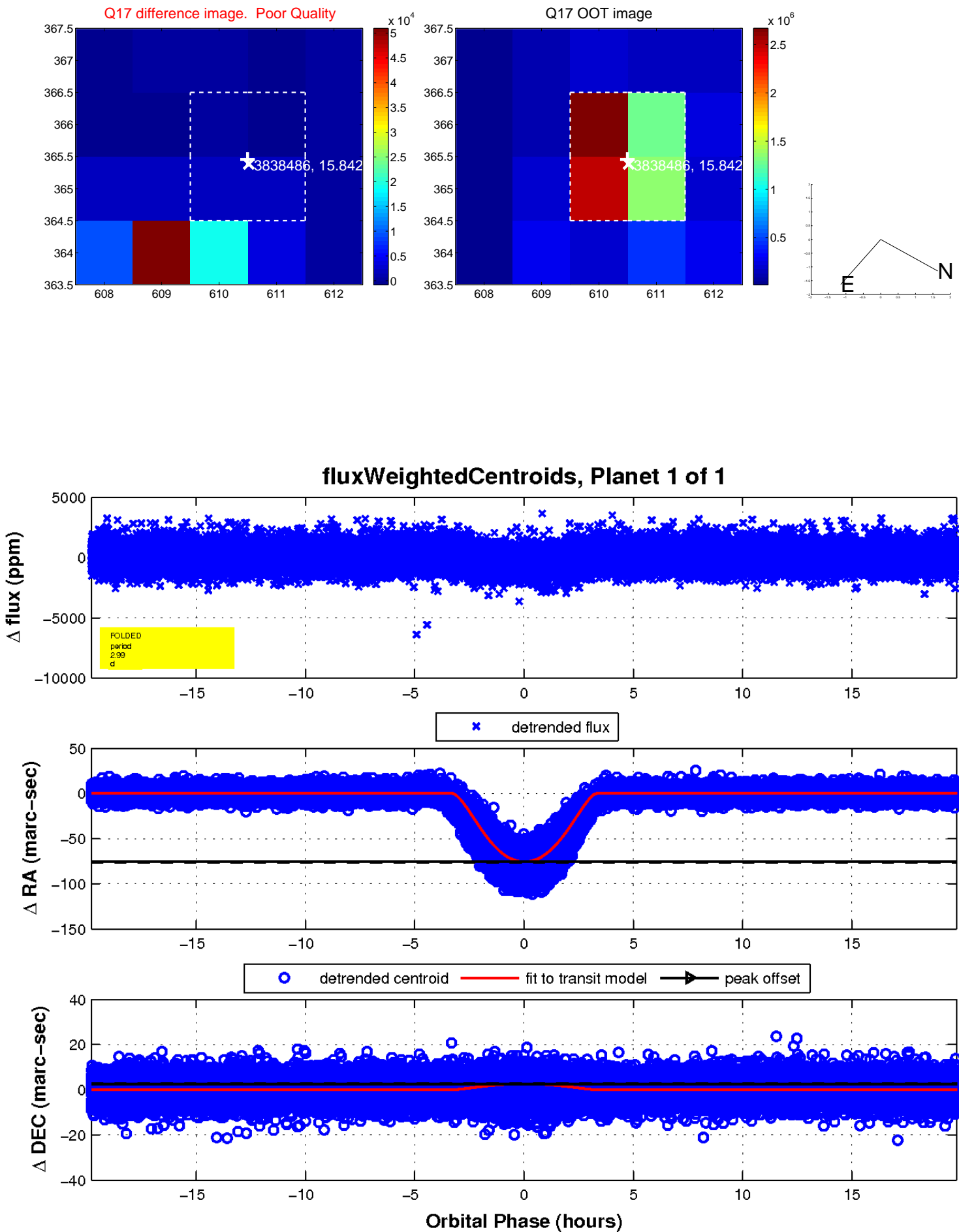
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

