

KIC 009692345

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})
009692345-01	OBS	1485.01	0.687885	131.603713	201.5	2.179	25.2	24.3	0.65	4478	1.14	886.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009692345-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—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 009692345-01

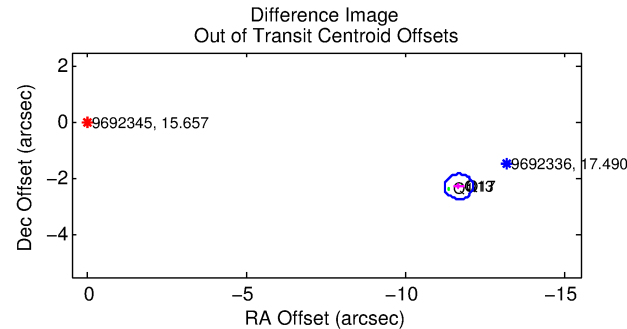
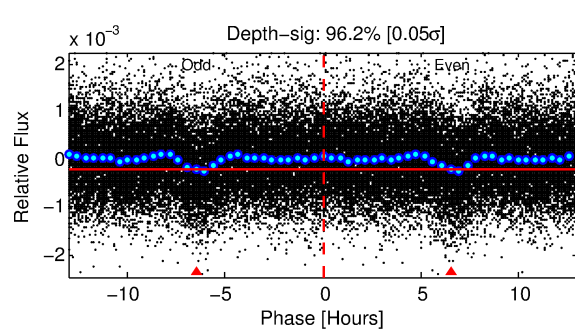
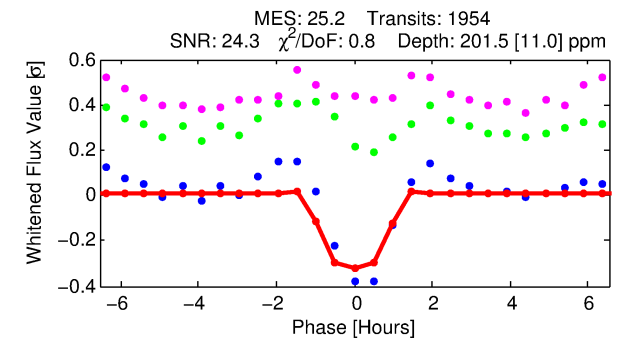
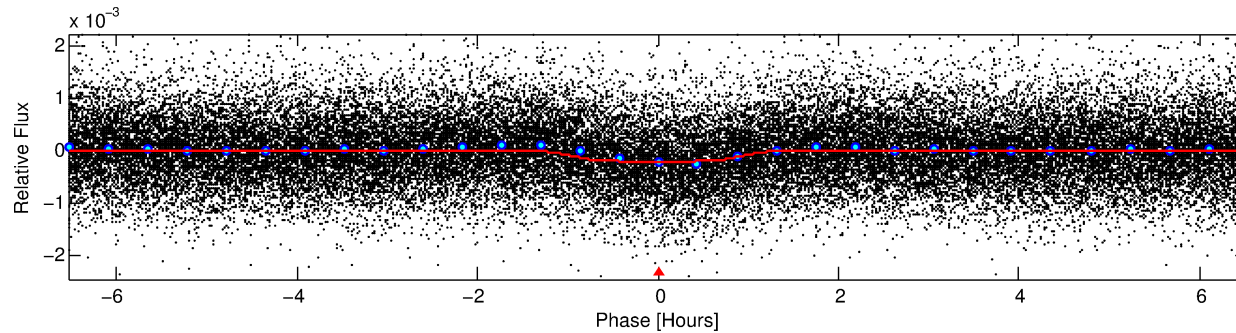
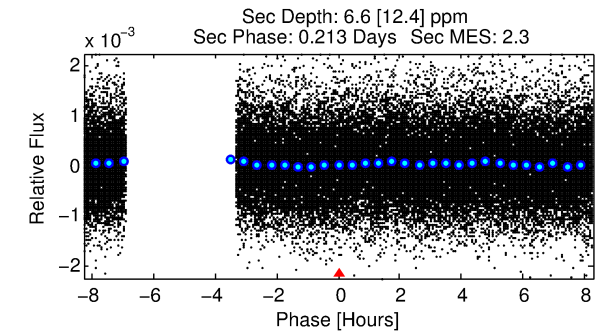
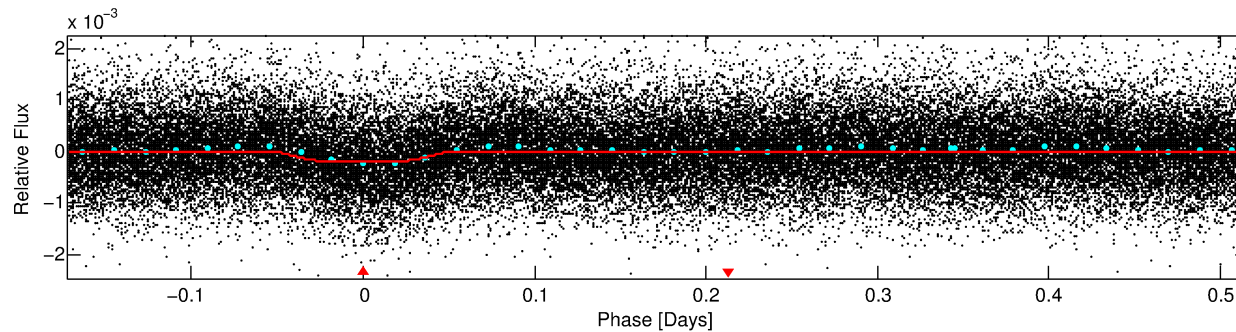
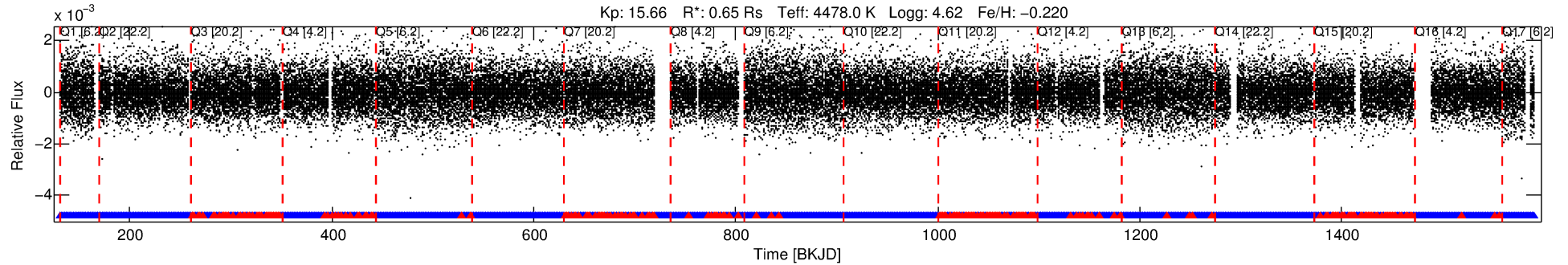
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009692345-01	9692345	3859.01	9692336	1:1	13.3	-2	3	17.49	15.66	1996.20	Direct-PRF	0	1.98	0.64

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: 9692345 Candidate: 1 of 1 Period: 0.688 d
KOI: K01485.01 Corr: 0.906

Kp: 15.66 R*: 0.65 Rs Teff: 4478.0 K Logg: 4.62 Fe/H: -0.220



DV Fit Results:

Period = 0.68789 [0.00000] d
Epoch = 131.6037 [0.0012] BKJD
Rp/R* = 0.0161 [0.0058]
a/R* = 1.47 [1.08]
b = 0.90 [0.29]
Seff = 886.33 [137.37]
Teff = 1391 [54] K
Rp = 1.14 [0.42] Re
a = 0.0131 [0.0009] AU
Ag = 0.48 [0.97] [-0.54σ]
Teffp = 1790 [904] K [0.44σ]

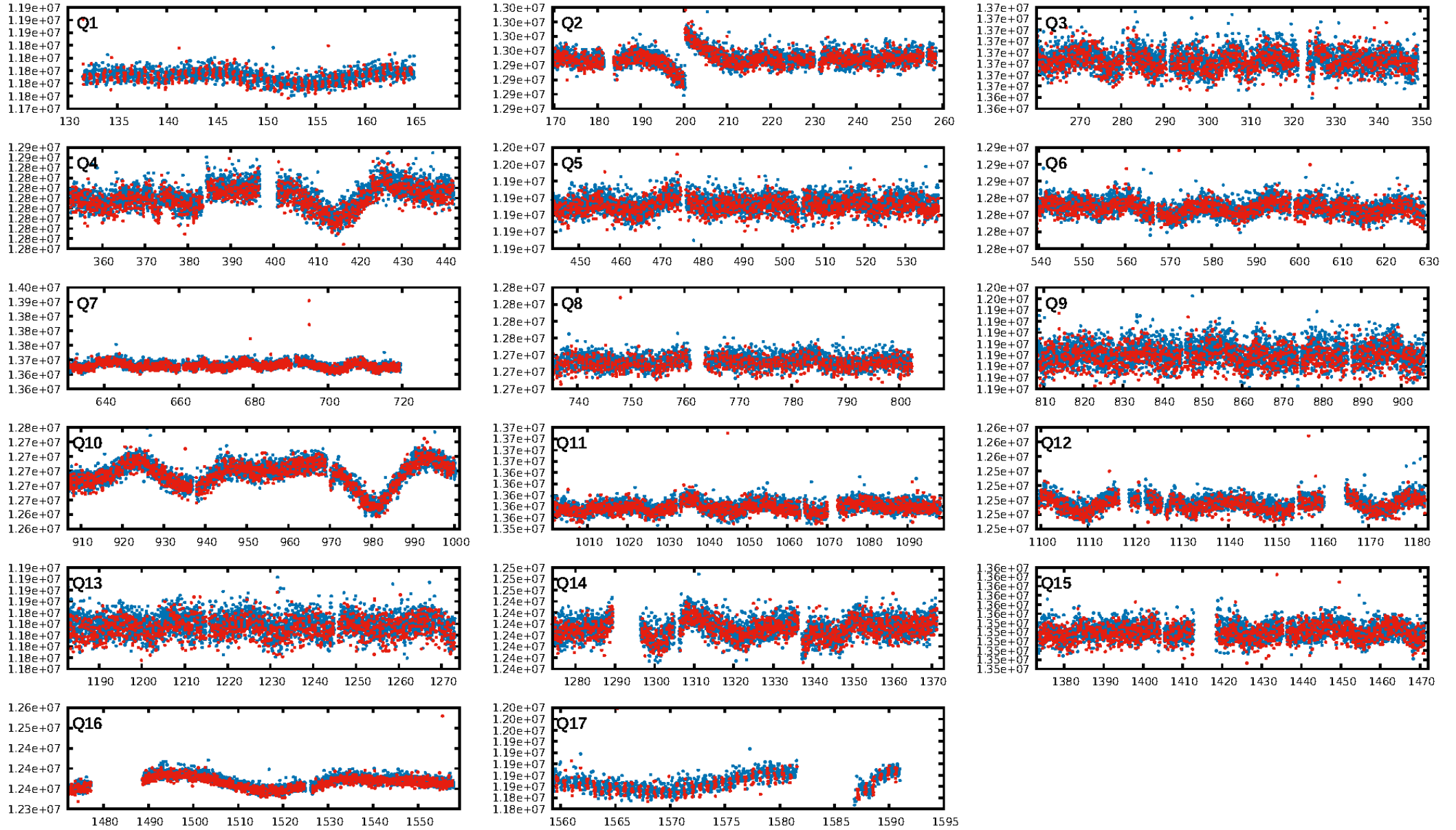
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.18e-122
RollingBand-fgt: 0.87 [1630/1867]
GhostDiagnostic-chr: -0.4453
Centroid-sig: 0.0%
Centroid-so: 20.379 arcsec [27.79σ]
OotOffset-rm: 11.879 arcsec [80.06σ]
KicOffset-rm: 12.171 arcsec [94.00σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [17/17]

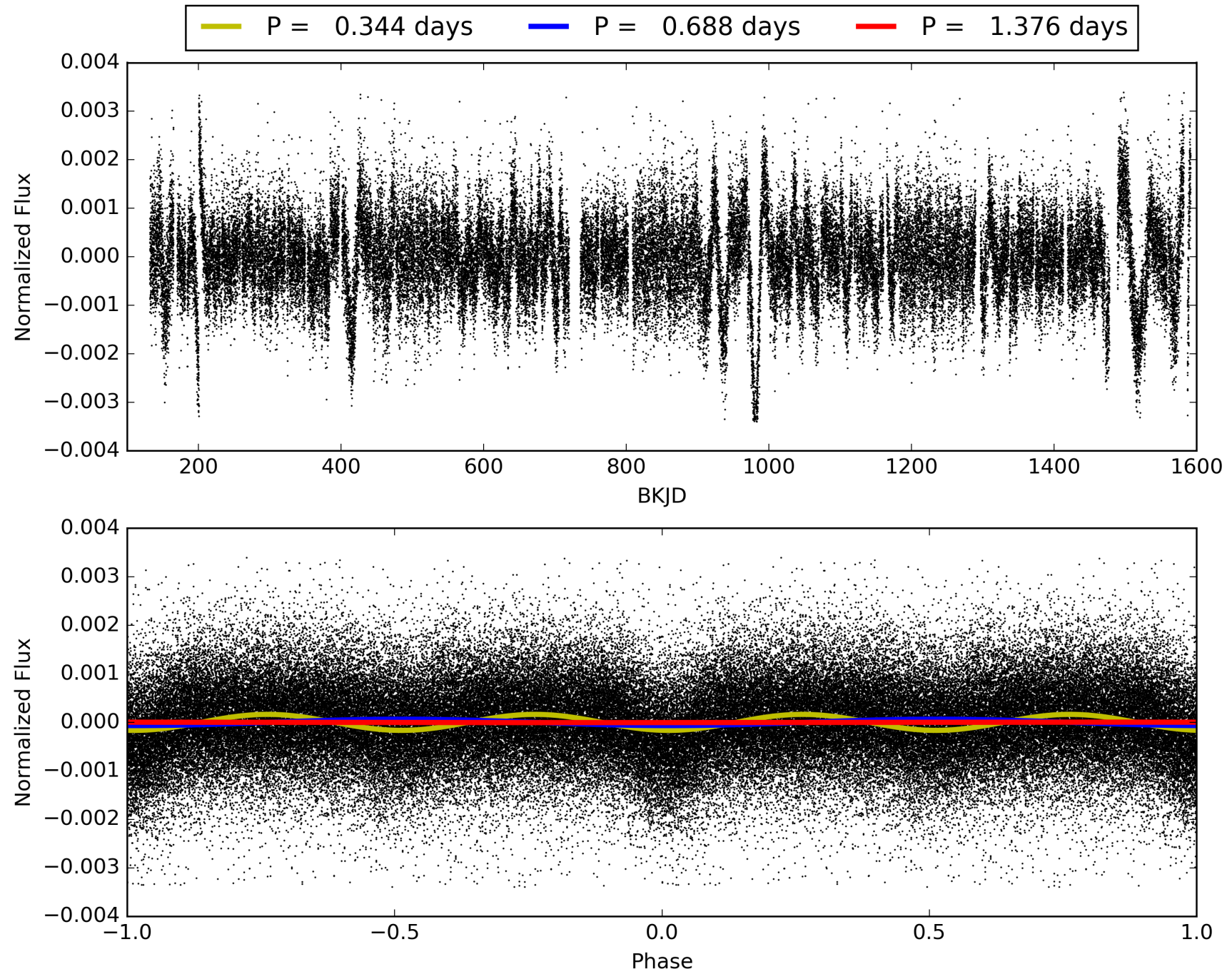
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:55:52 Z

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

TCE 009692345-01, PDC Light Curves

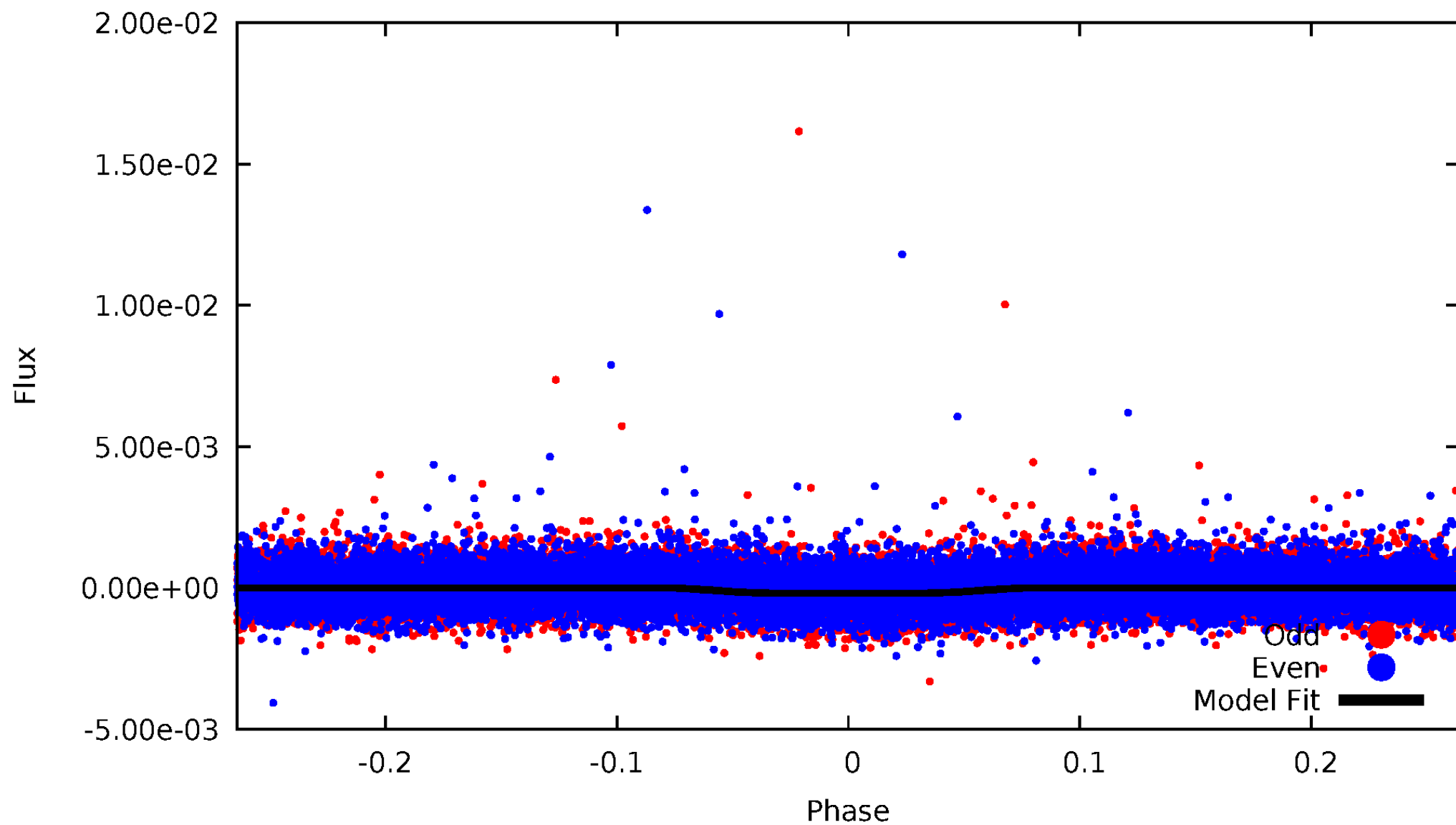


TCE 009692345-01



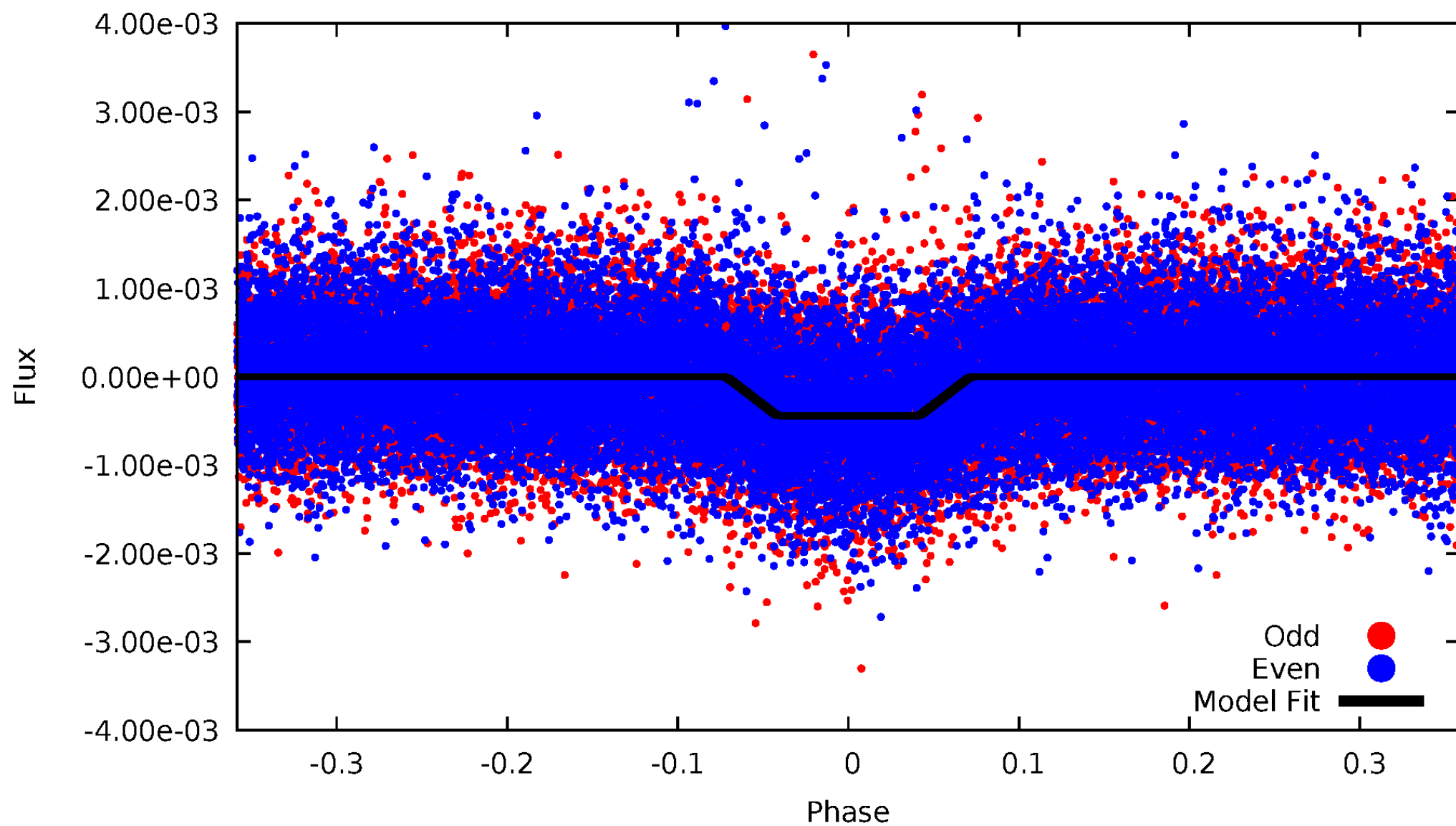
DV Odd/Even

TCE 009692345-01



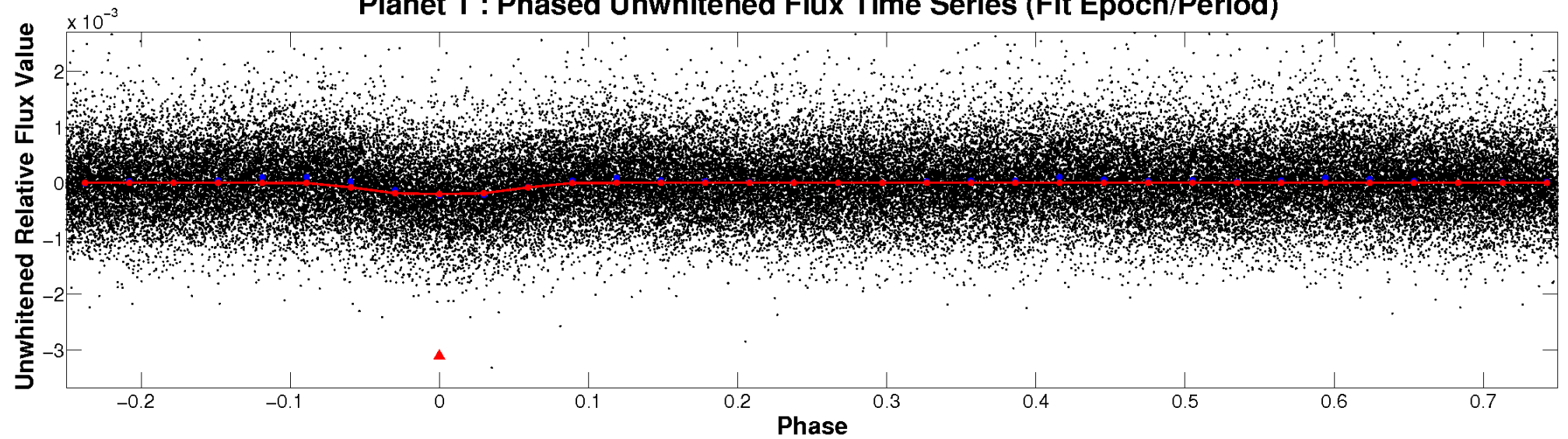
ALT Odd/Even

TCE 009692345-01

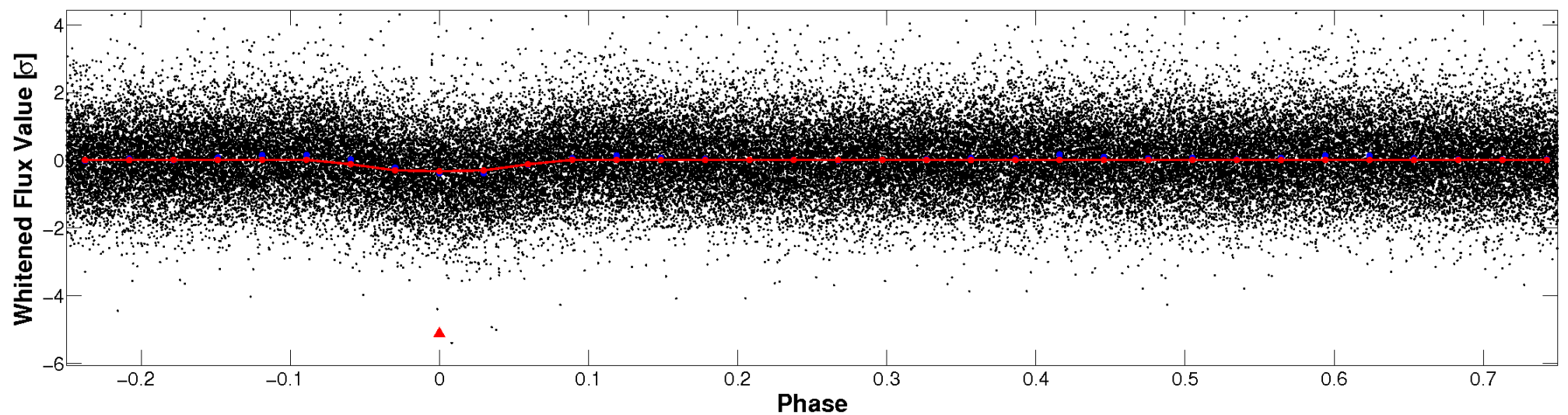


Non-Whitened Vs. Whitened Light Curve

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

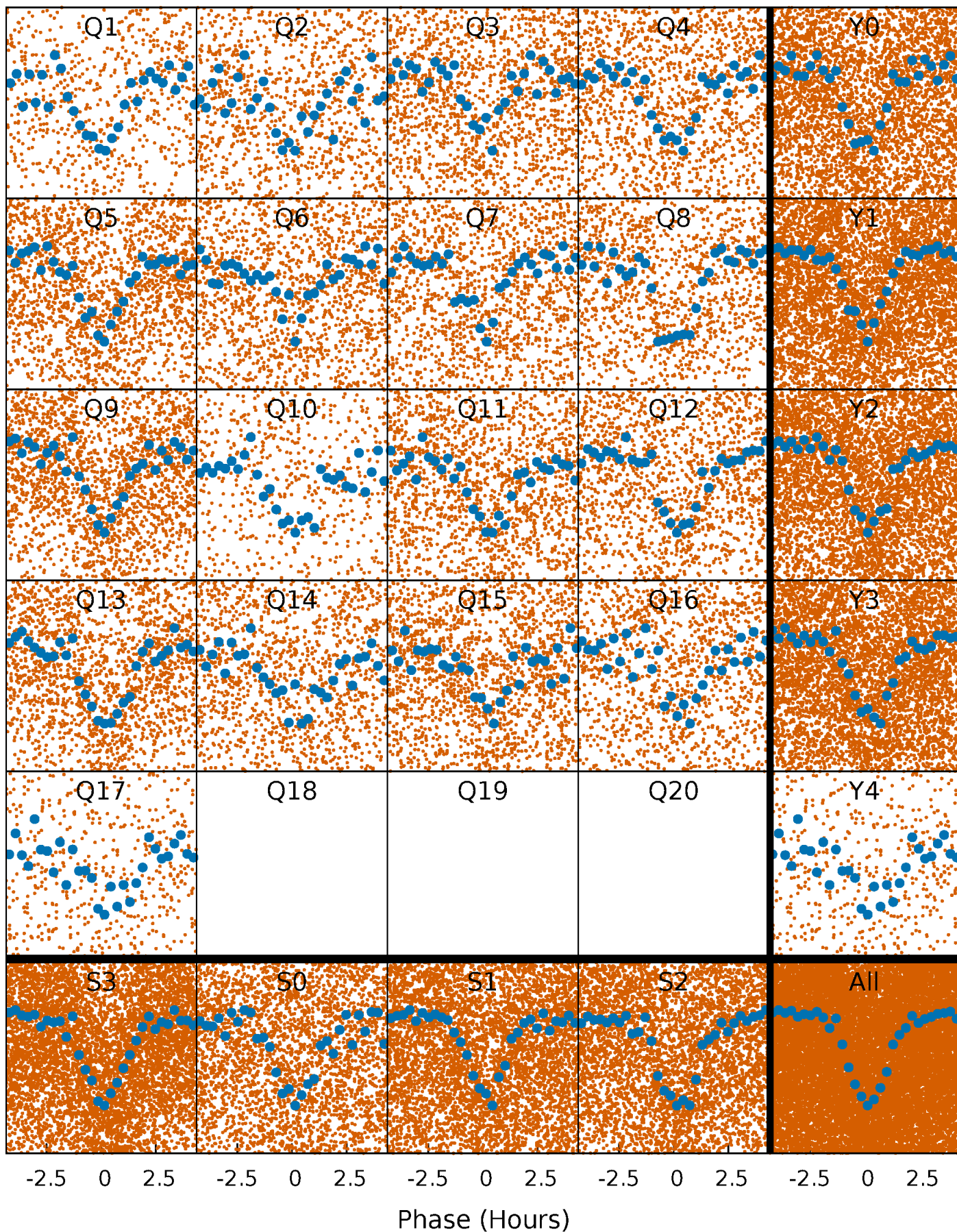


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



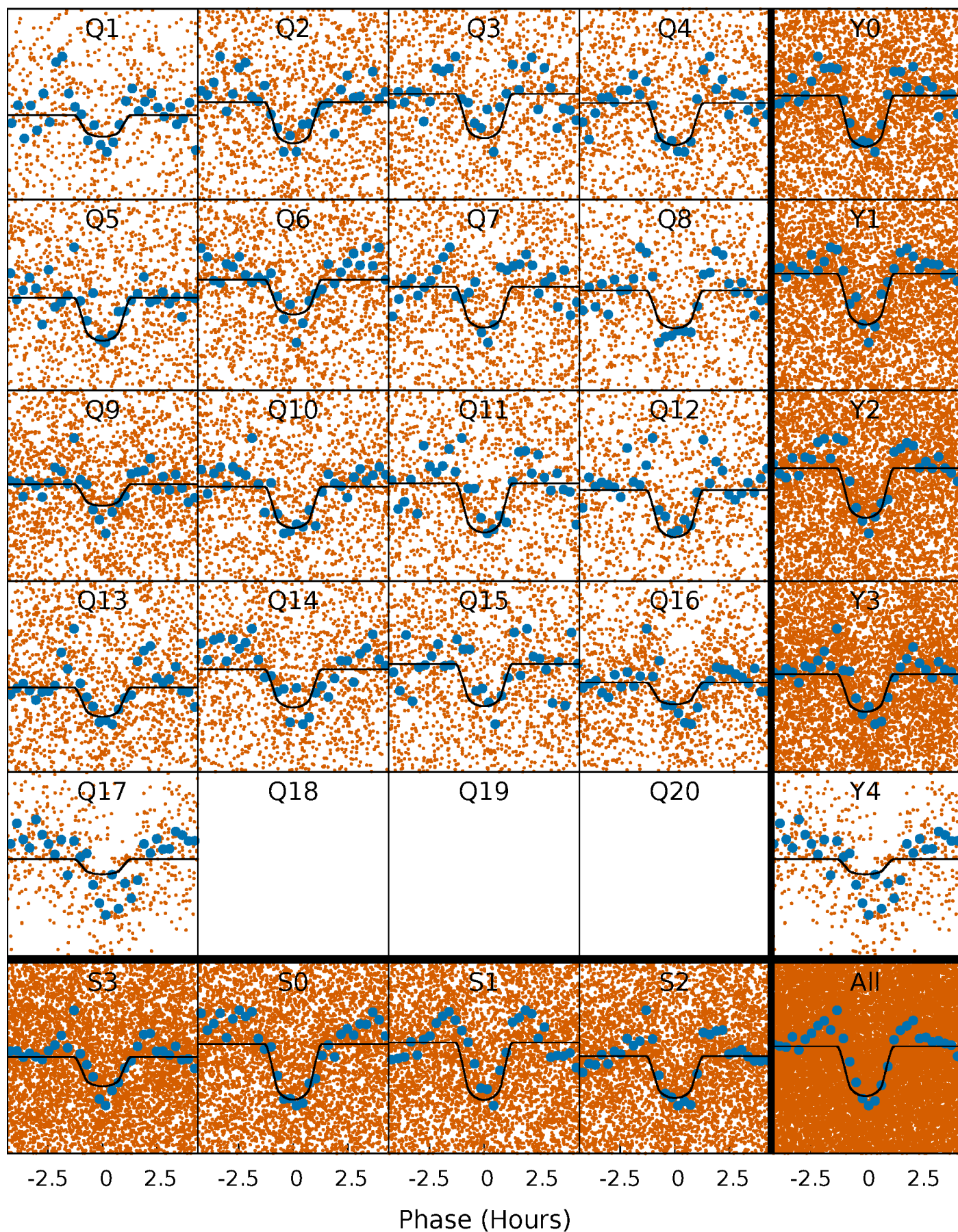
PDC Quarter-Phased Transit Curves

TCE 009692345-01 P= 0.687885 Days $T_0=131.603713$ (BKJD)



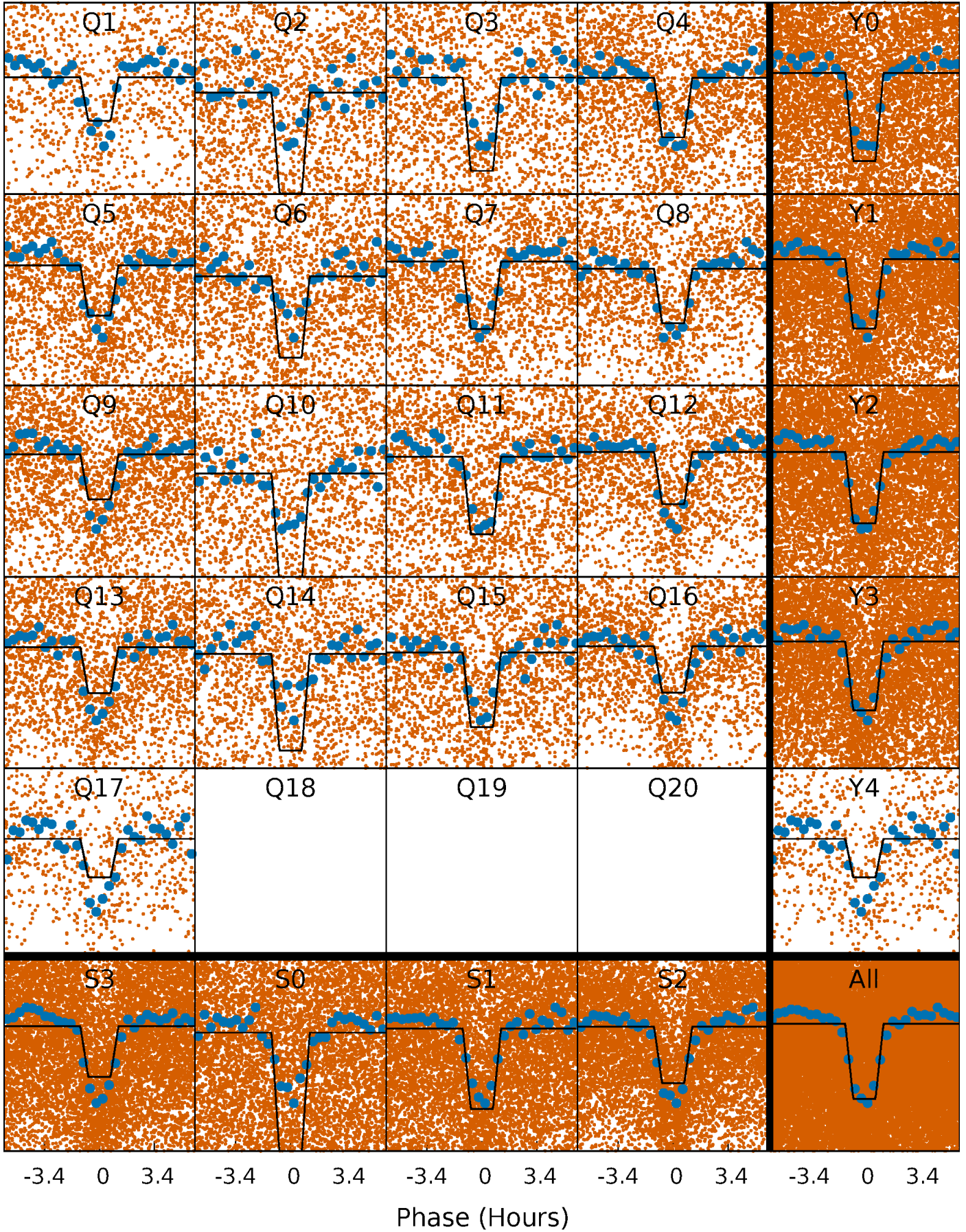
DV Quarter-Phased Transit Curves

TCE 009692345-01 P= 0.687885 Days $T_0=131.603713$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

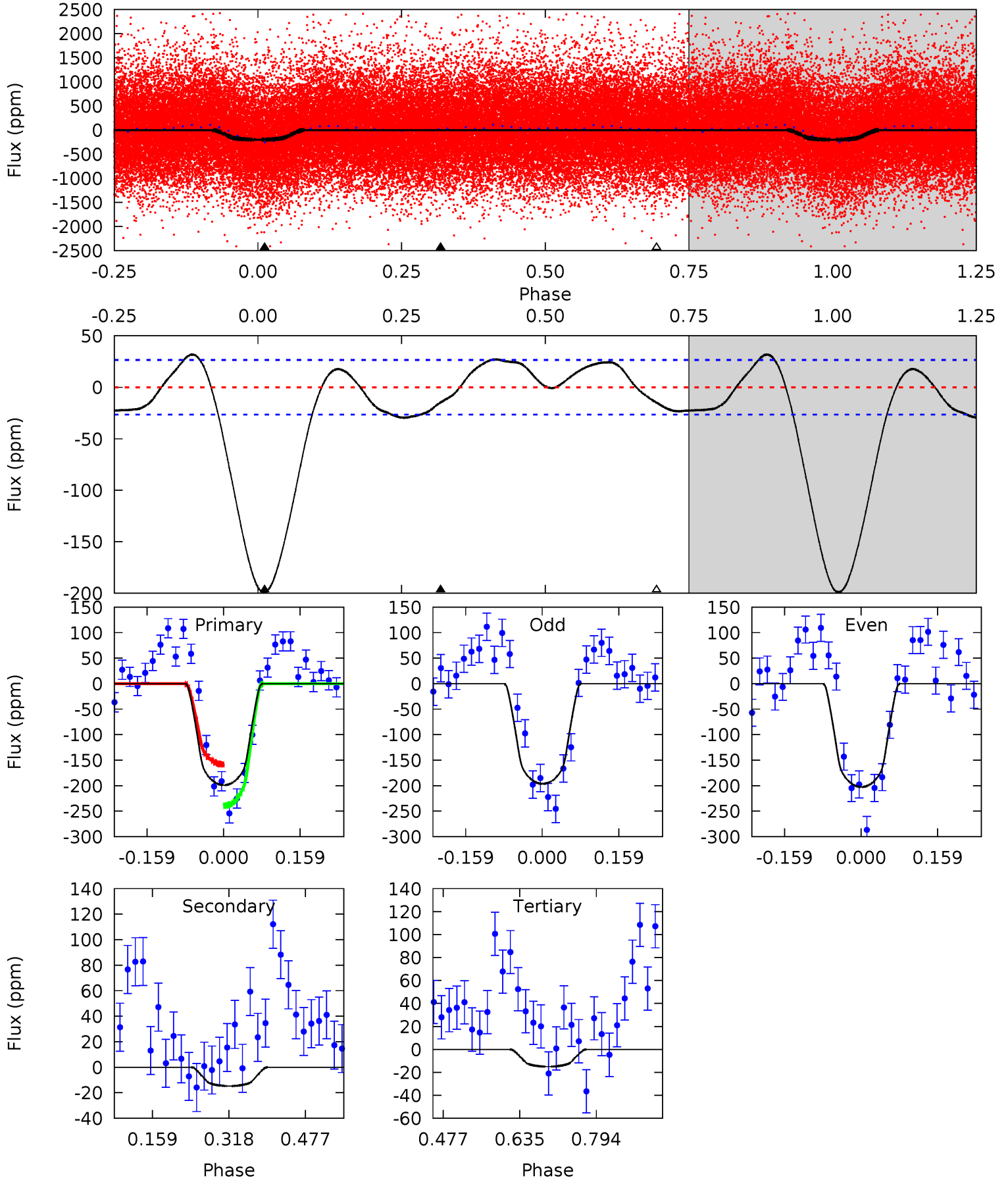
TCE 009692345-01 P= 0.687897 Days $T_0=131.598907$ (BKJD)



DV Model-Shift Uniqueness Test

009692345-01, P = 0.687885 Days, E = 130.915828 Days

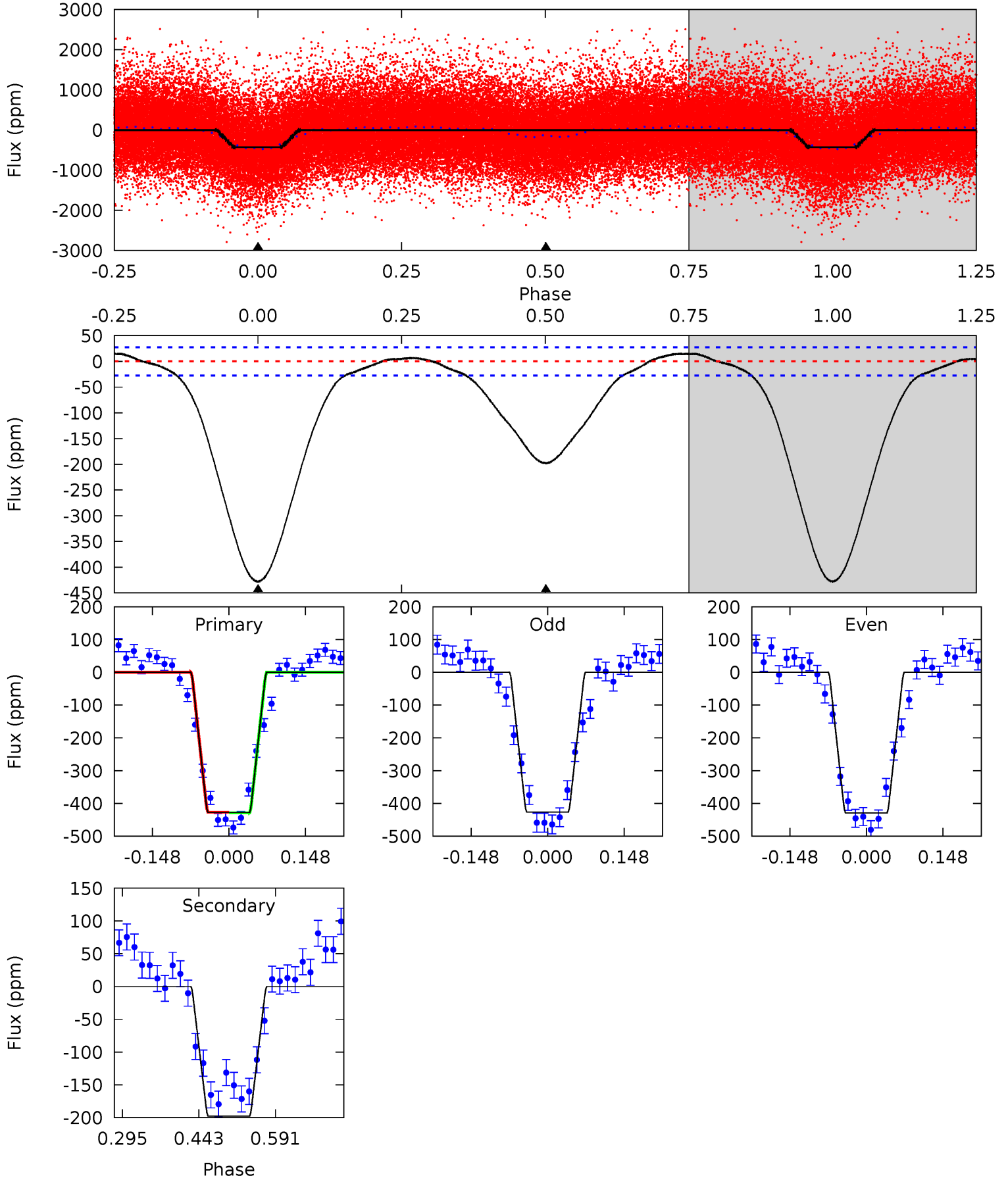
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	2.49	2.54	0	4.47	1.41	2.77	31.1	33.6	-0.05	2.49	0.53	0.88	0.14	6.91



Alt Model-Shift Uniqueness Test

009692345-01, P = 0.687897 Days, E = 130.911010 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.0	32.4	0	0	4.48	1.45	1.88	70.0	70.0	32.4	32.4	0.19	0.96	0.03	0.16



Stellar Parameters For KIC 009692345

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4478^{+133}_{-133}	$4.615^{+0.053}_{-0.025}$	$-0.220^{+0.300}_{-0.300}$	$0.651^{+0.046}_{-0.056}$	$0.637^{+0.076}_{-0.051}$	$3.257^{+0.759}_{-0.347}$
	+3%/-3%	+1%/-1%	+136%/-136%	+7%/-9%	+12%/-8%	+23%/-11%
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 009692345-01 / KOI 1485.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 6	$1.11^{+0.43}_{-0.41}$	1933^{+64}_{-73}	2710^{+450}_{-471}	$1.114^{+1.649}_{-0.666}$
Alt.	-198 ± 6	$1.44^{+0.44}_{-0.38}$	1931^{+67}_{-64}	3869^{+490}_{-332}	$9.171^{+7.524}_{-3.782}$

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 $A_{obs} \gg 1.0$

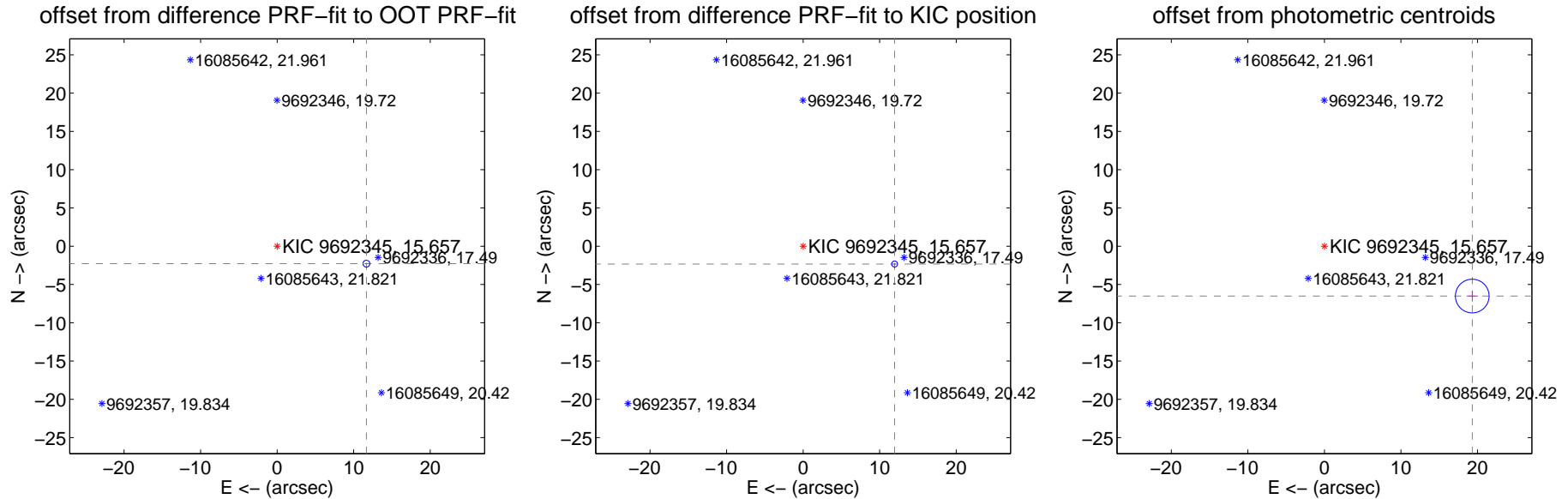
DV Centroid Data

Supplemental centroid analysis for 009692345-01. Kepler magnitude: 15.66. Transit SNR 24.26

There are 3 quarters with good PRF difference image offsets

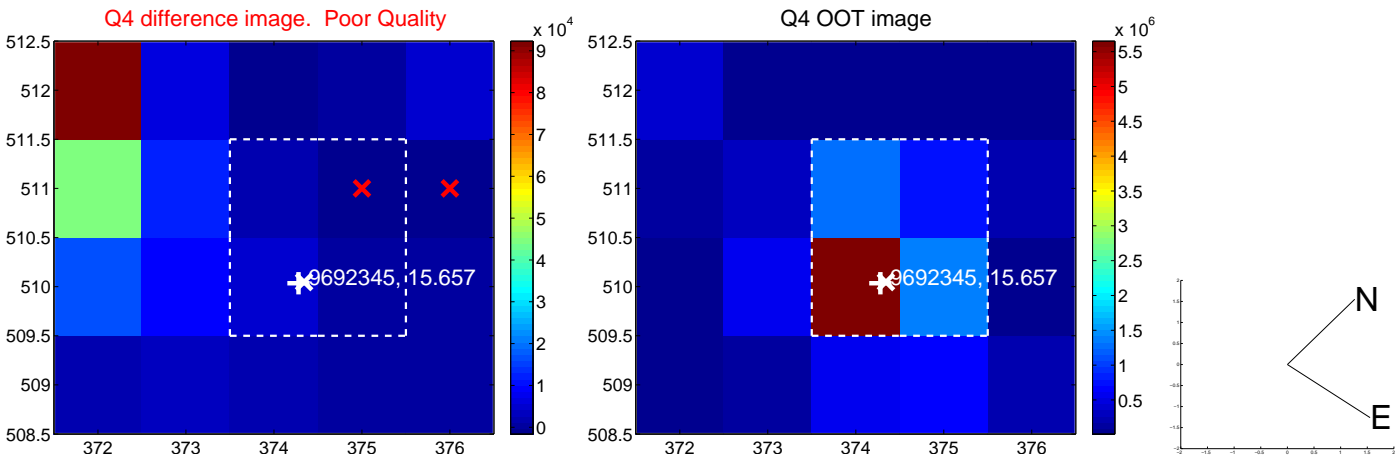
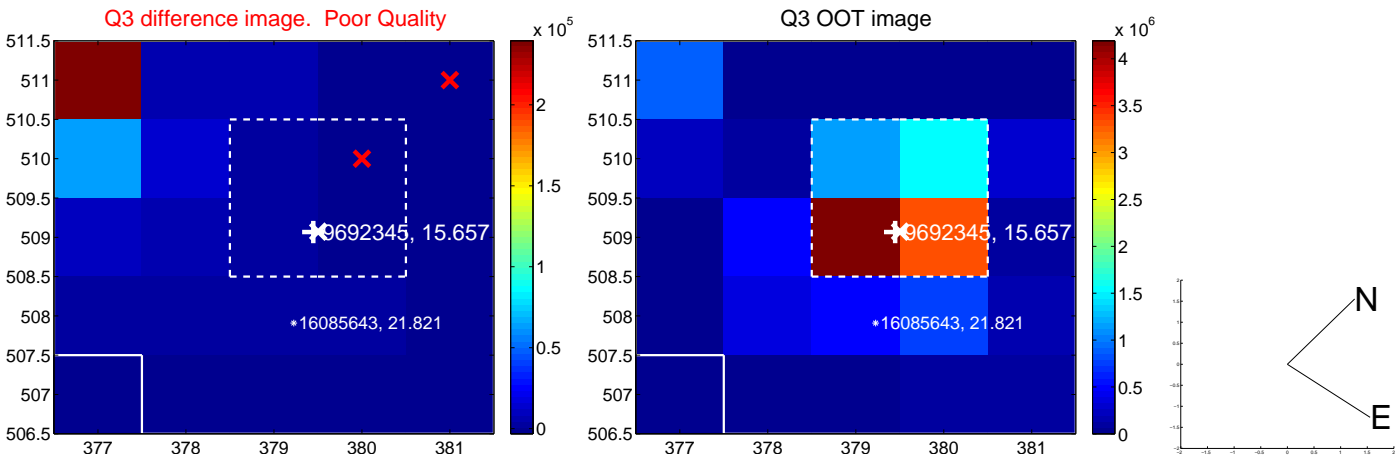
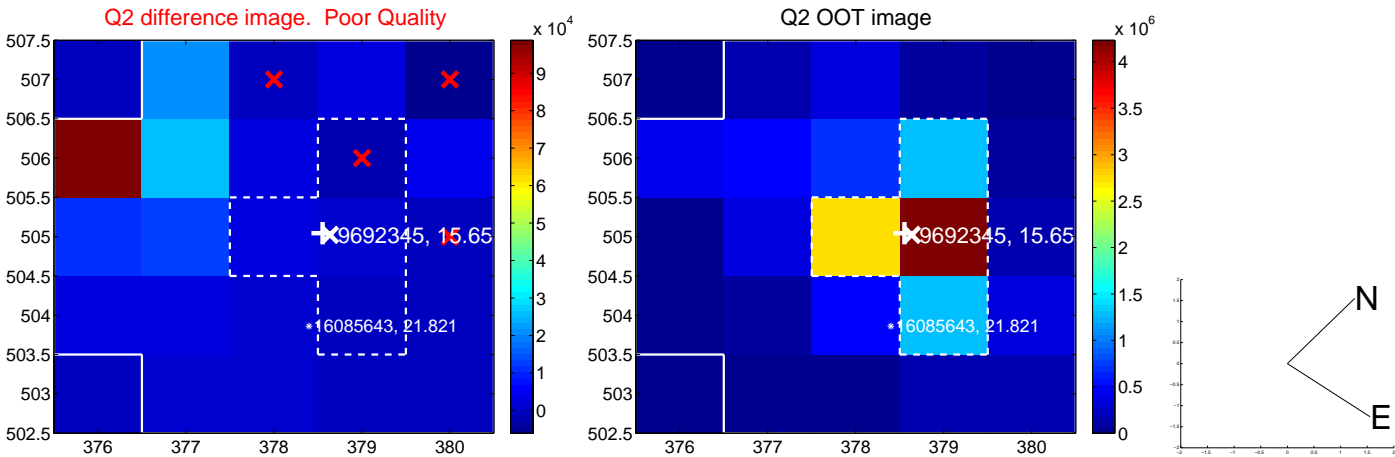
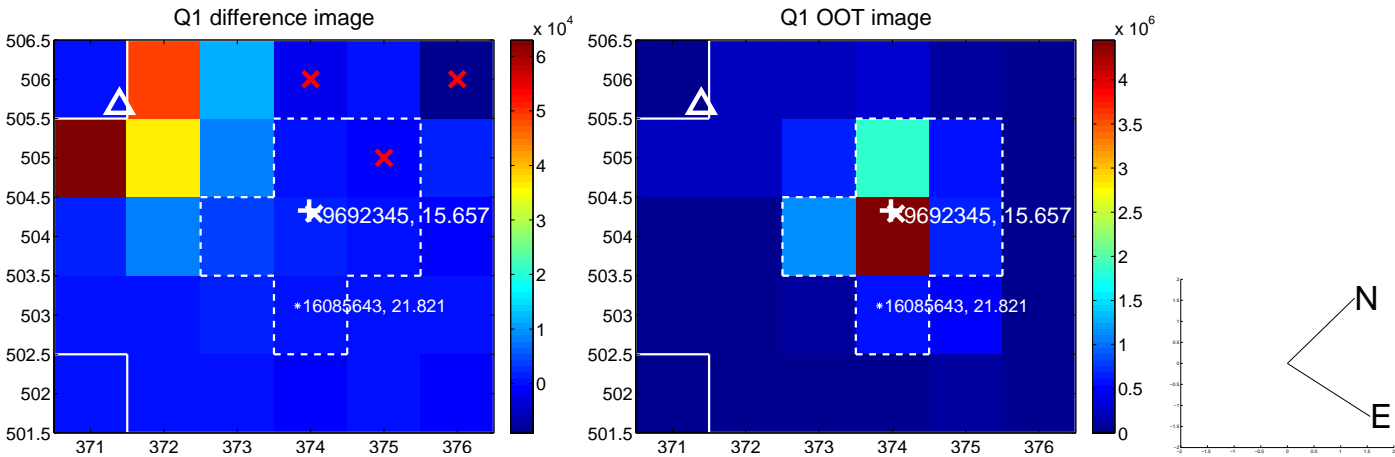
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.879 ± 0.148	80.06	-11.659 ± 0.150	-2.276 ± 0.077
PRF-fit source offset from KIC position	12.171 ± 0.129	94.00	-11.947 ± 0.131	-2.326 ± 0.076
photometric centroid source offset	20.38 ± 0.73	27.79	-19.31 ± 0.74	-6.51 ± 0.71

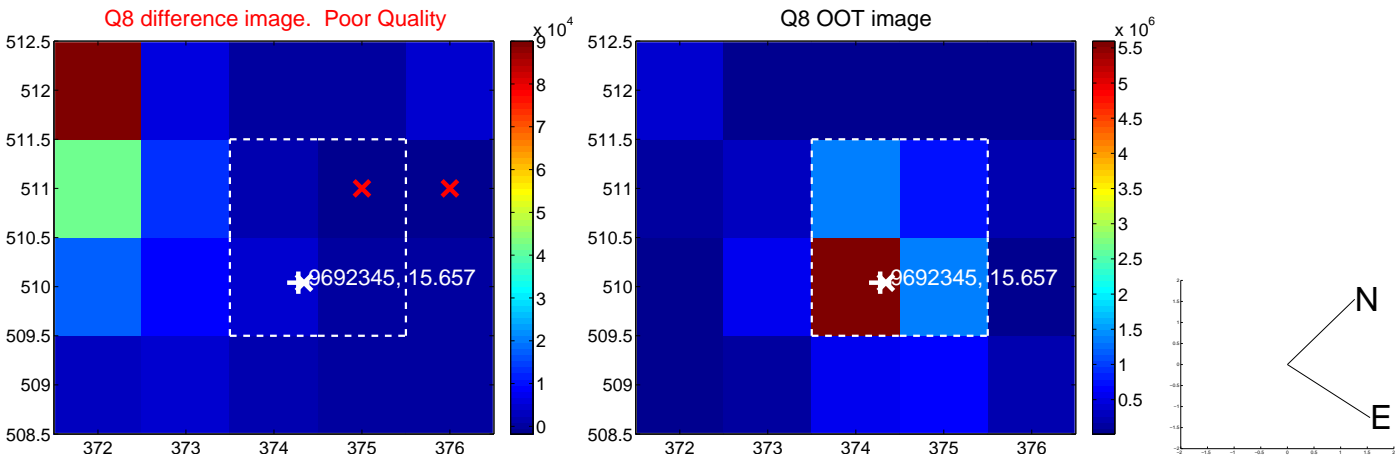
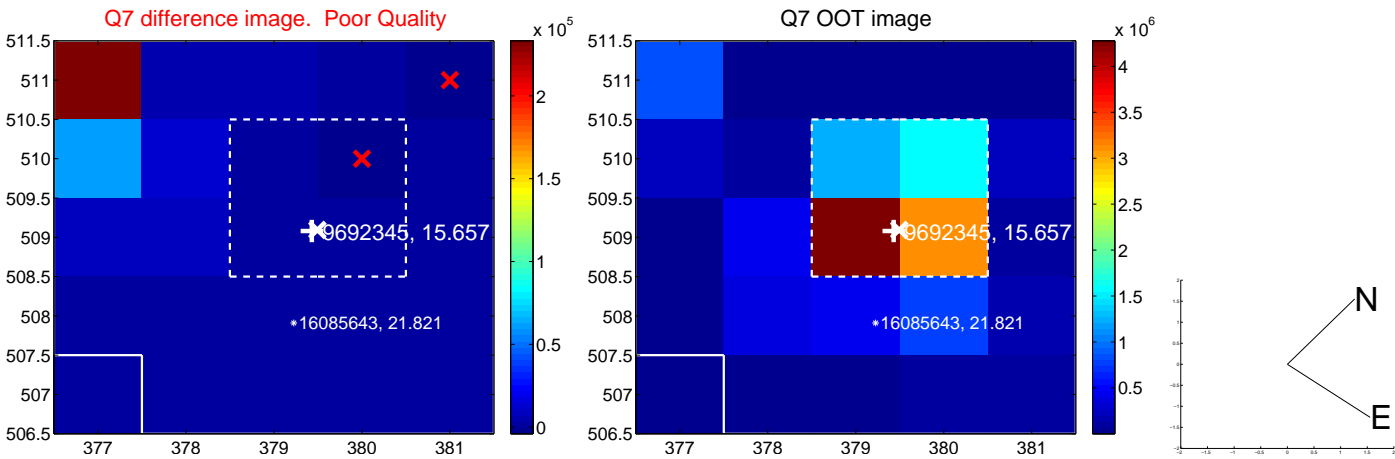
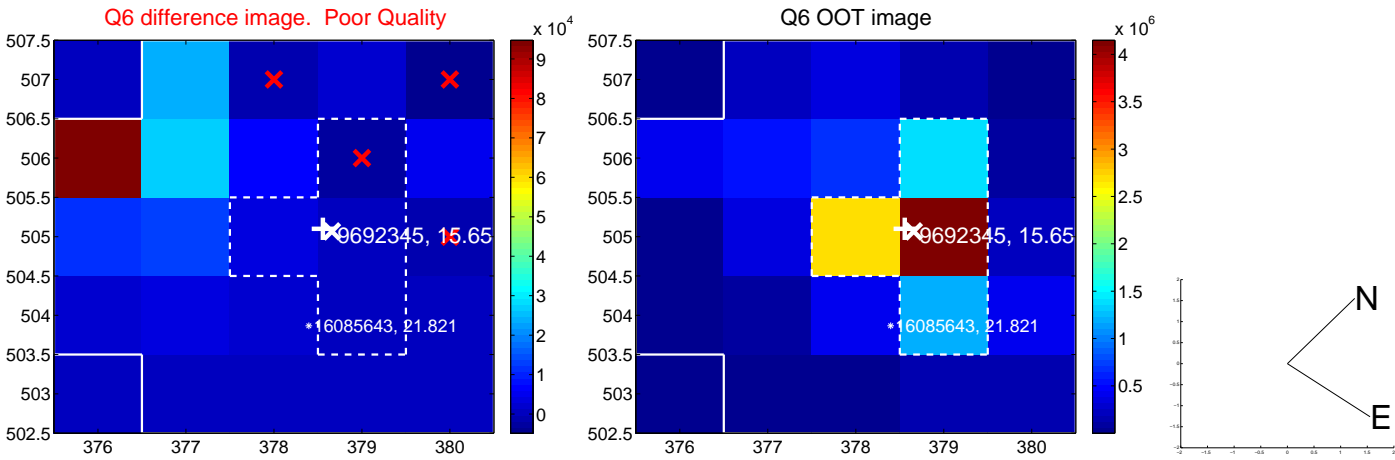
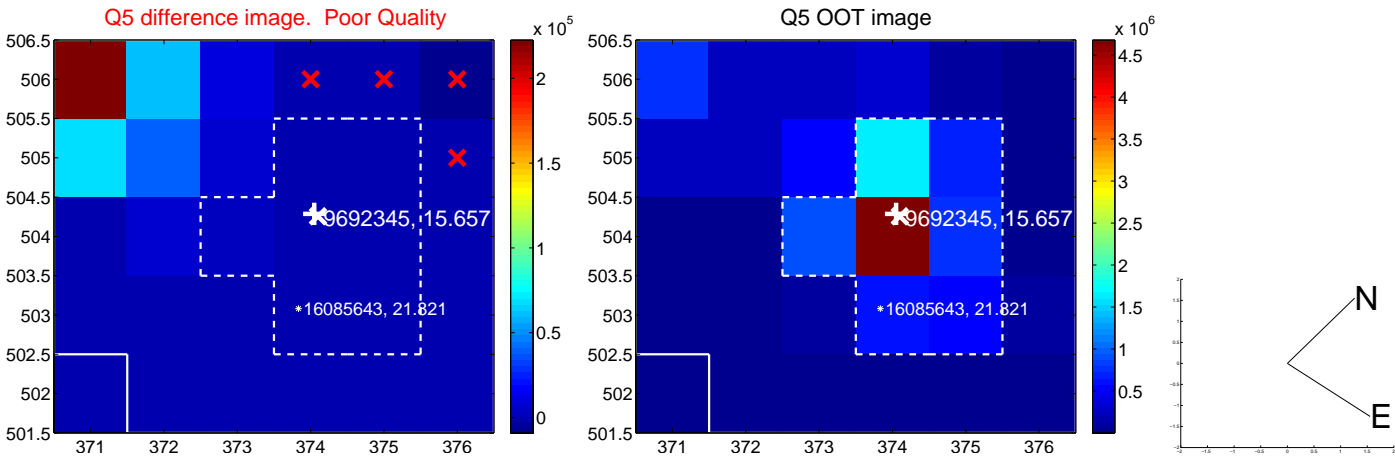


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

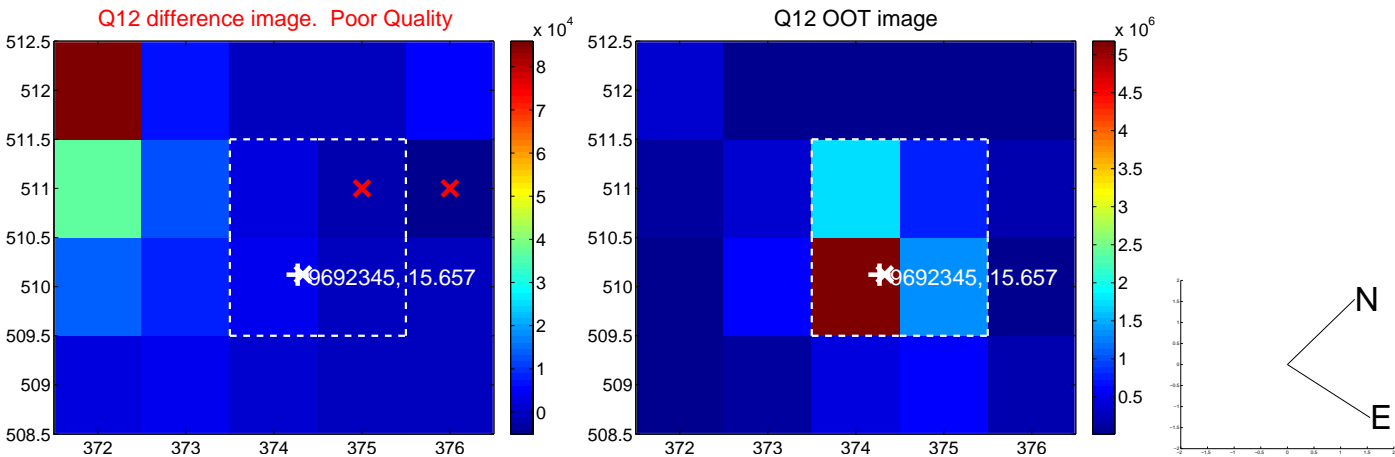
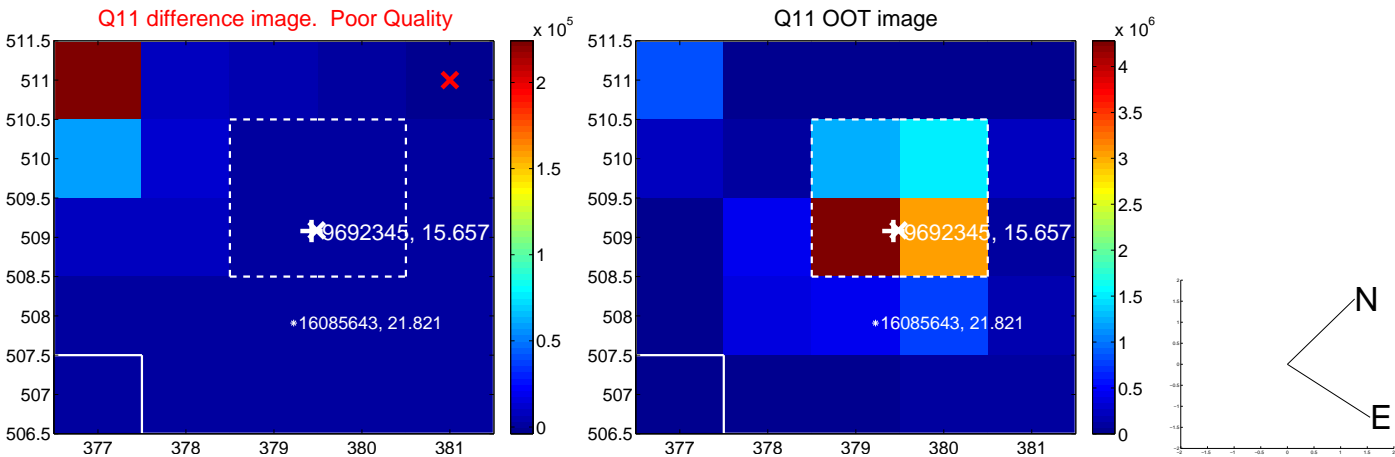
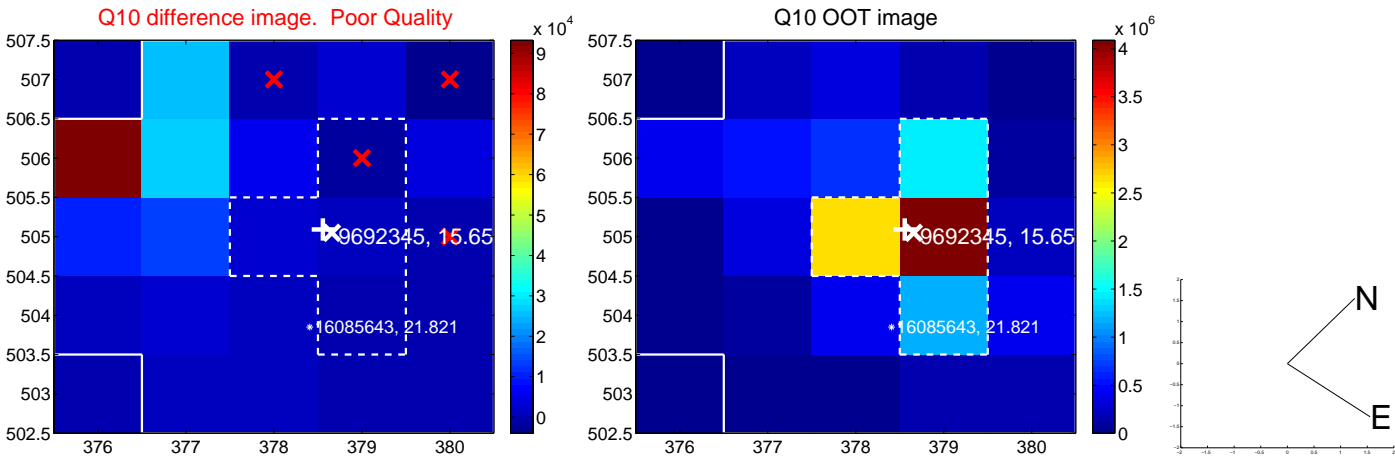
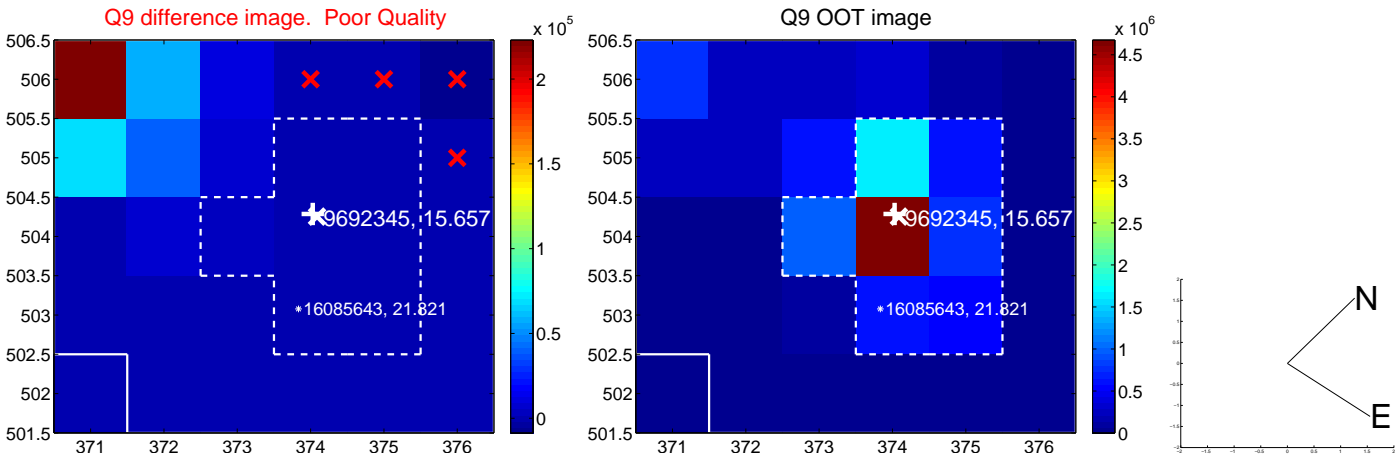
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



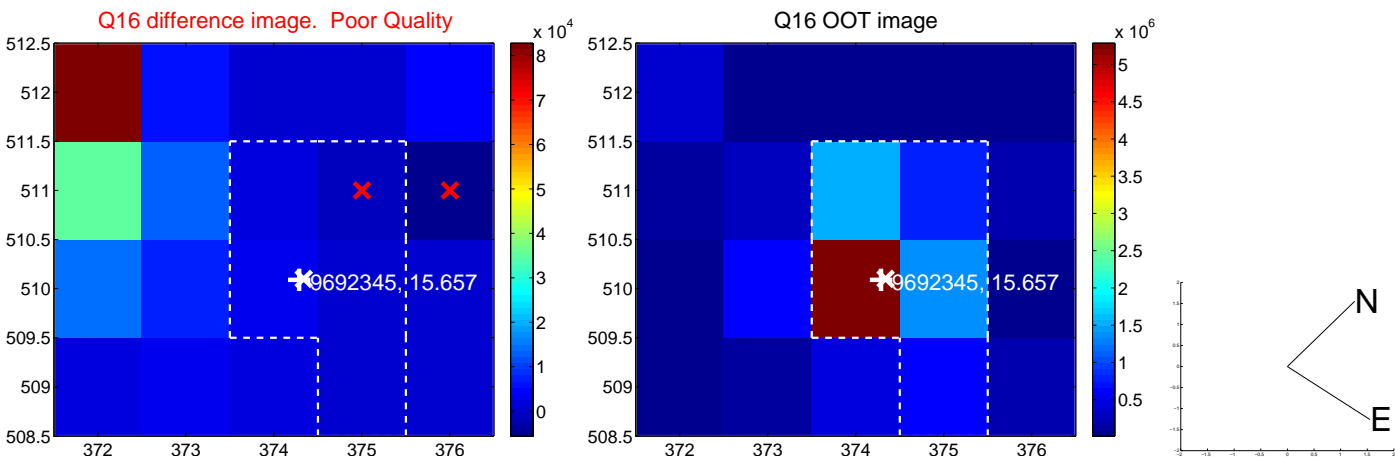
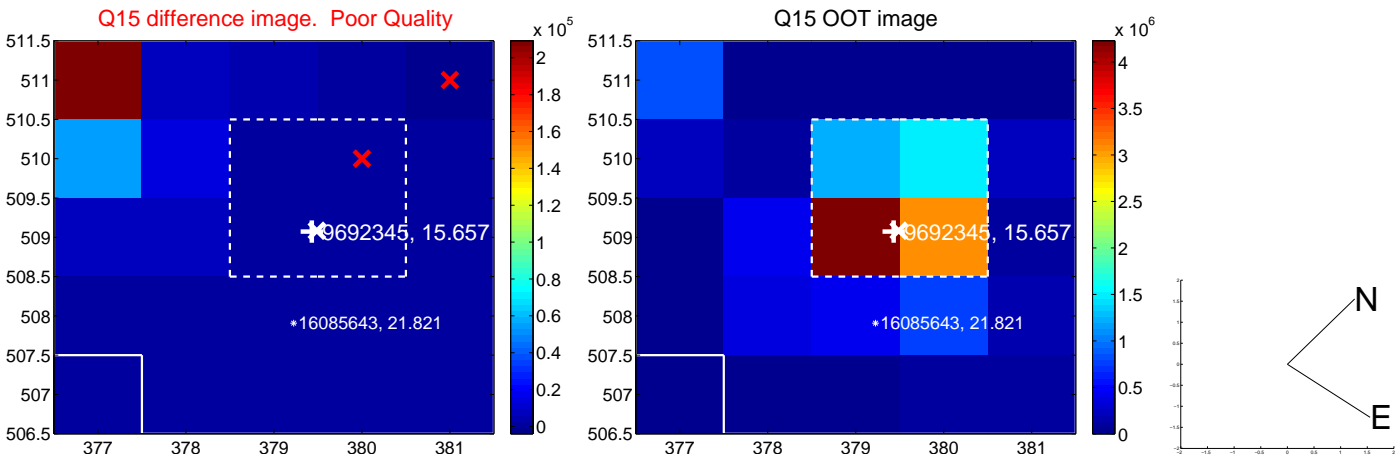
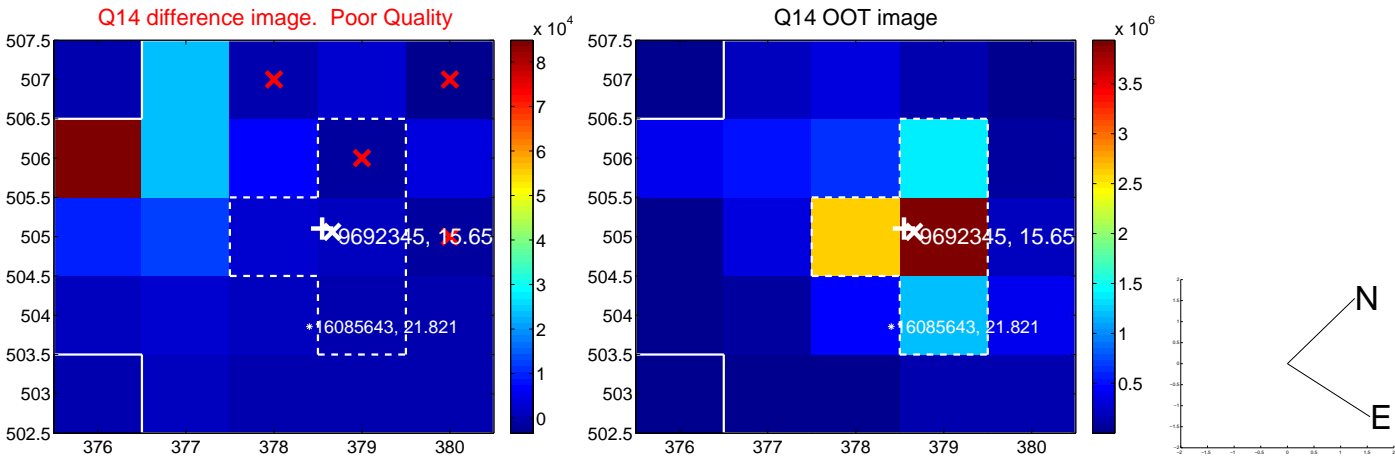
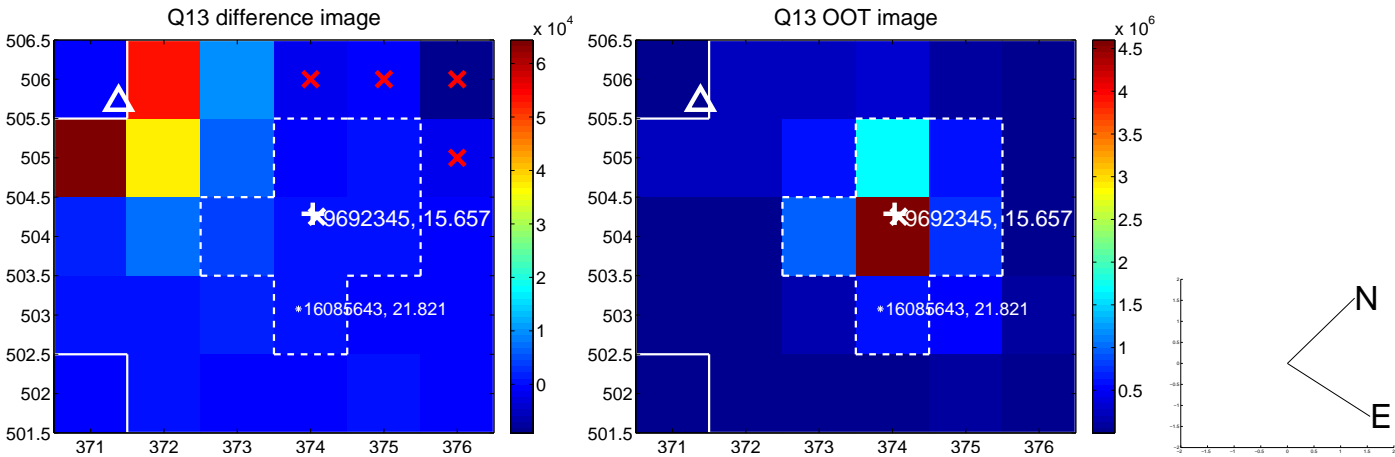
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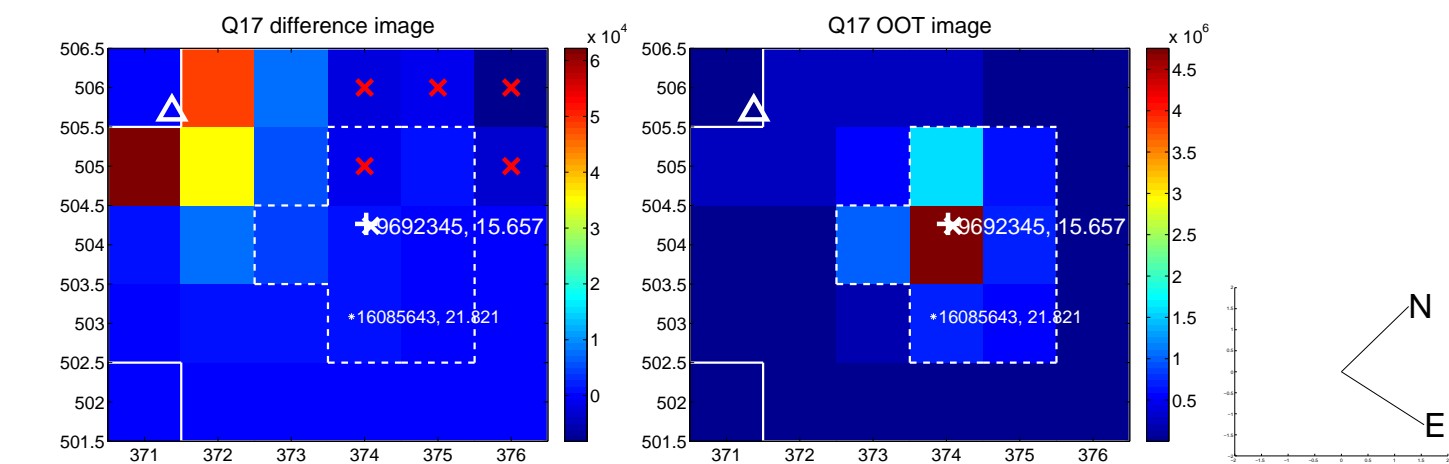
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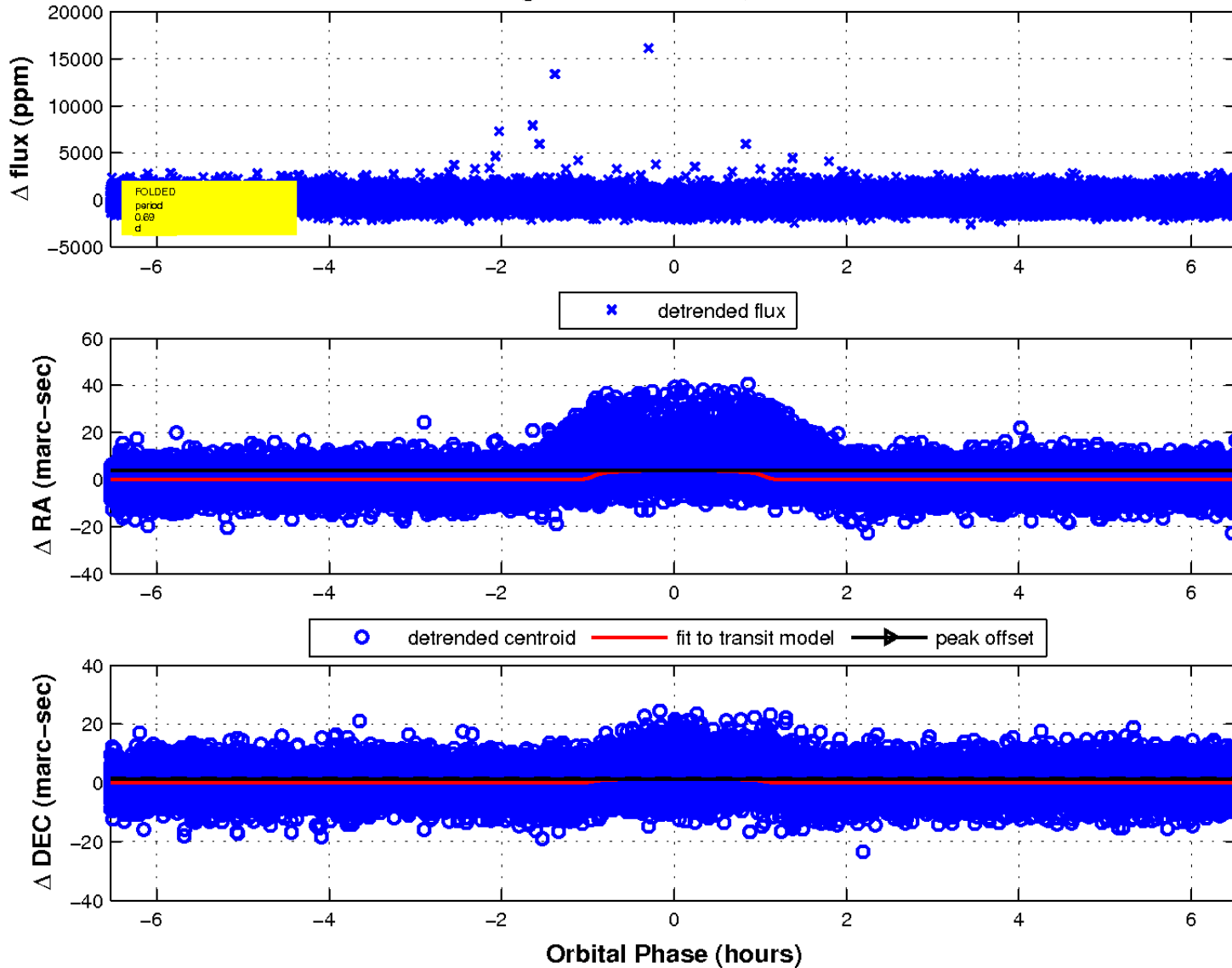
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

