

KIC 008104436

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})
008104436-01	OBS	6967.01	2.535361	133.392881	177.5	1.778	11.4	12.3	0.71	5488	1.12	362.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008104436-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_UNRESOLVED_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 008104436-01

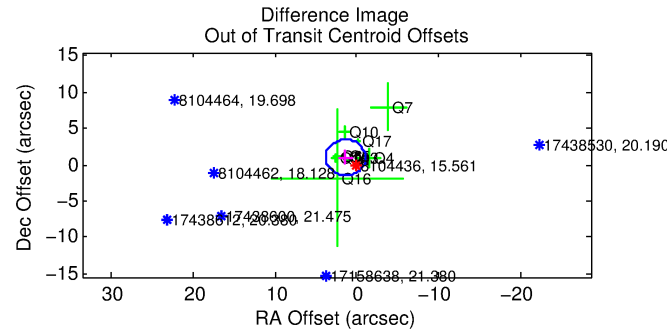
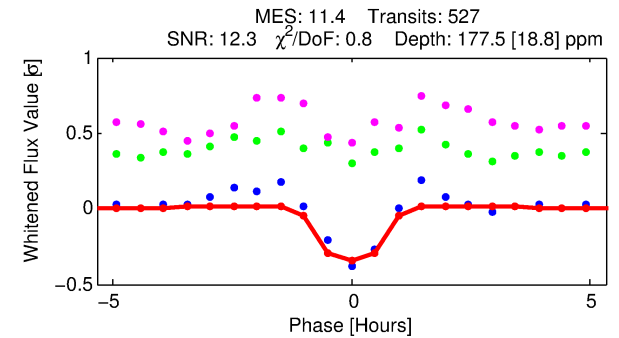
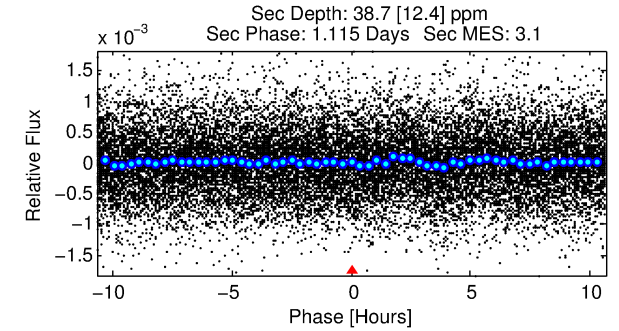
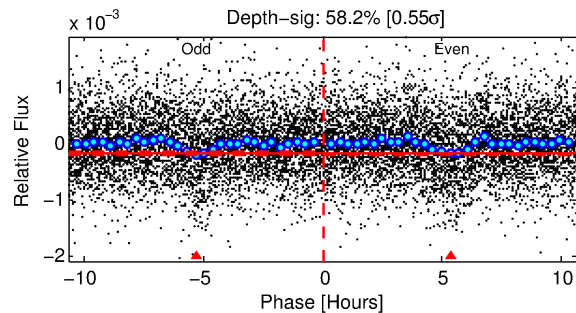
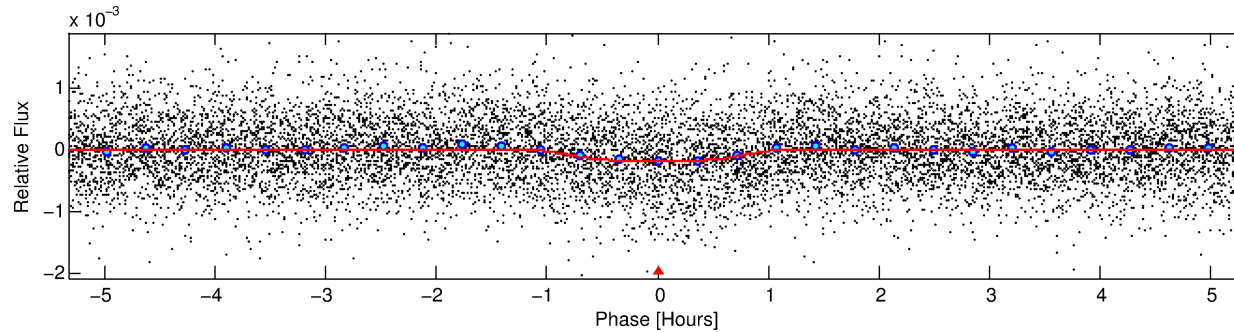
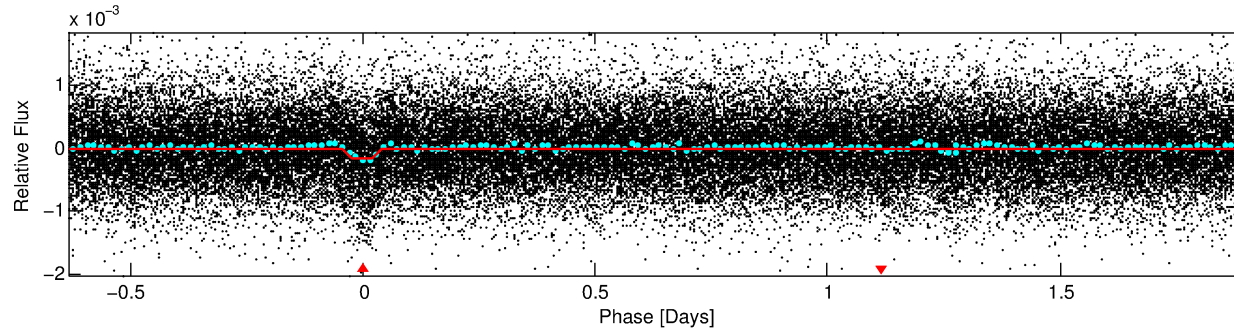
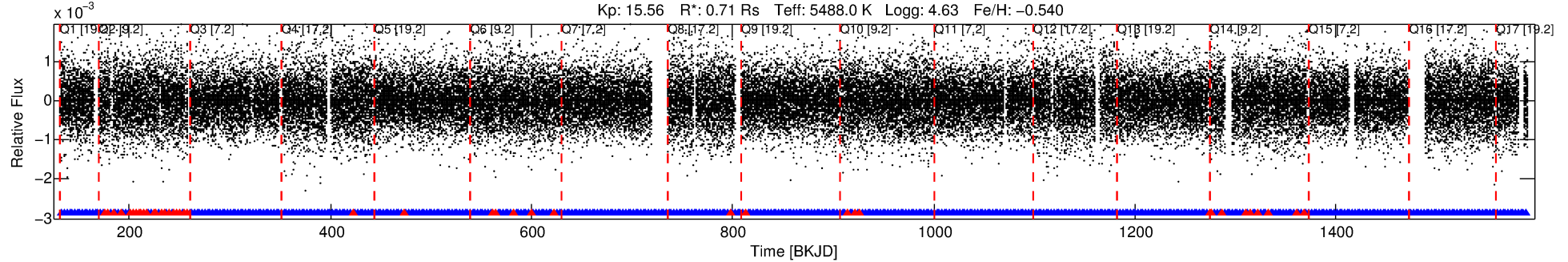
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008104436-01	8104436	006706287-pri	6706287	1:1	7756.9	-2	1	13.62	15.56	1981.50	Cross-Talk	0	0.67	0.29

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: 8104436 Candidate: 1 of 1 Period: 2.535 d
KOI: K06967.01 Corr: 0.880

Kp: 15.56 R*: 0.71 Rs Teff: 5488.0 K Logg: 4.63 Fe/H: -0.540



DV Fit Results:

Period = 2.53536 [0.00001] d
Epoch = 133.3929 [0.0025] BKJD
Rp/R* = 0.0145 [0.0094]
a/R* = 5.20 [15.28]
b = 0.90 [0.66]
Seff = 362.83 [82.98]
Teq = 1113 [64] K
Rp = 1.12 [0.75] Re
a = 0.0334 [0.0046] AU
Ag = 18.95 [25.53] [0.70σ]
Teffp = 3590 [1201] K [2.06σ]

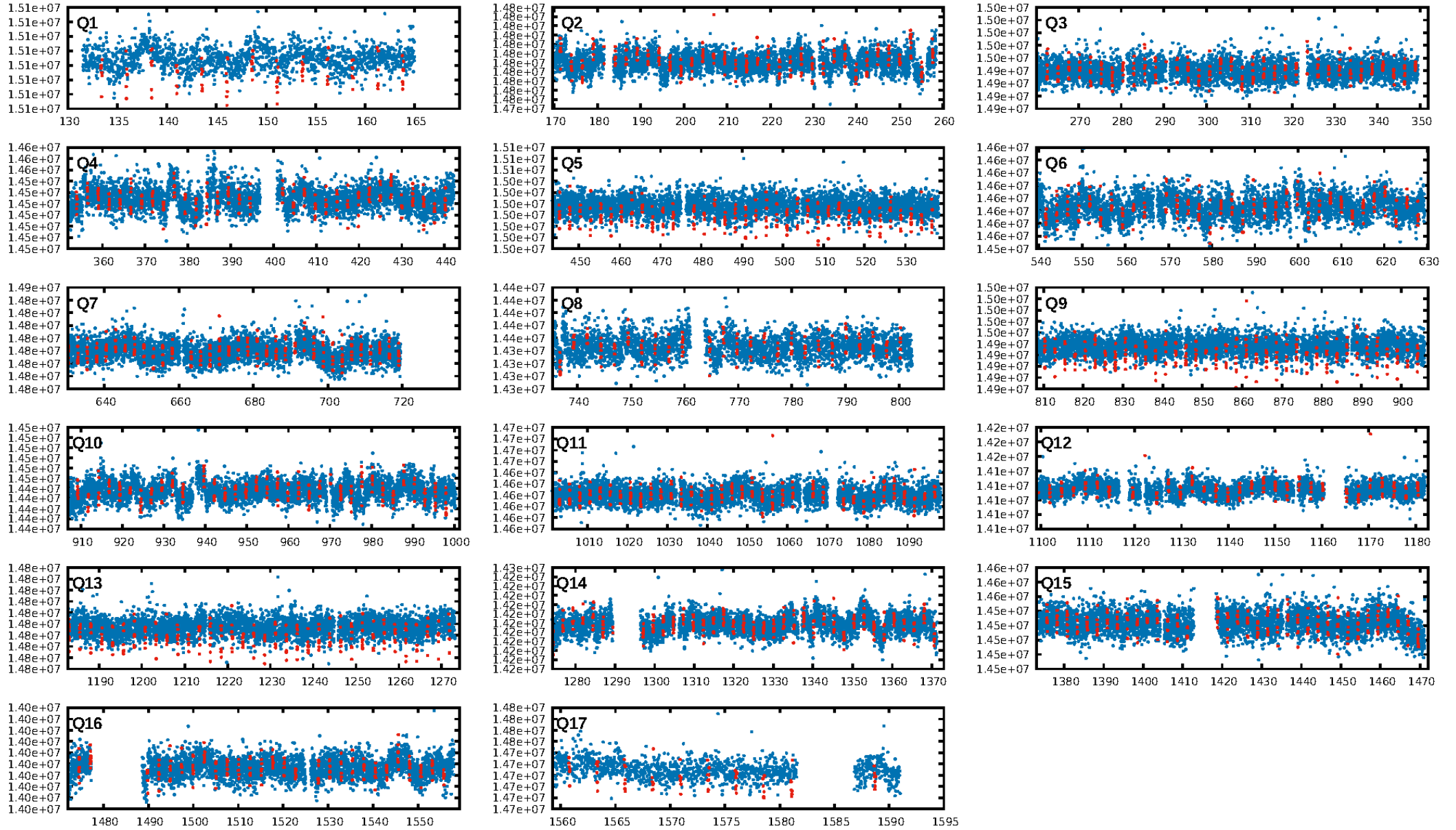
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-29
RollingBand-fgt: 0.92 [462/504]
GhostDiagnostic-chr: 5.104
Centroid-sig: 18.7%
Centroid-so: 1.565 arcsec [1.11σ]
OotOffset-rm: 1.729 arcsec [2.12σ]
KicOffset-rm: 1.918 arcsec [2.35σ]
OotOffset-st: 3/1/2/5 [11]
KicOffset-st: 3/1/2/5 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

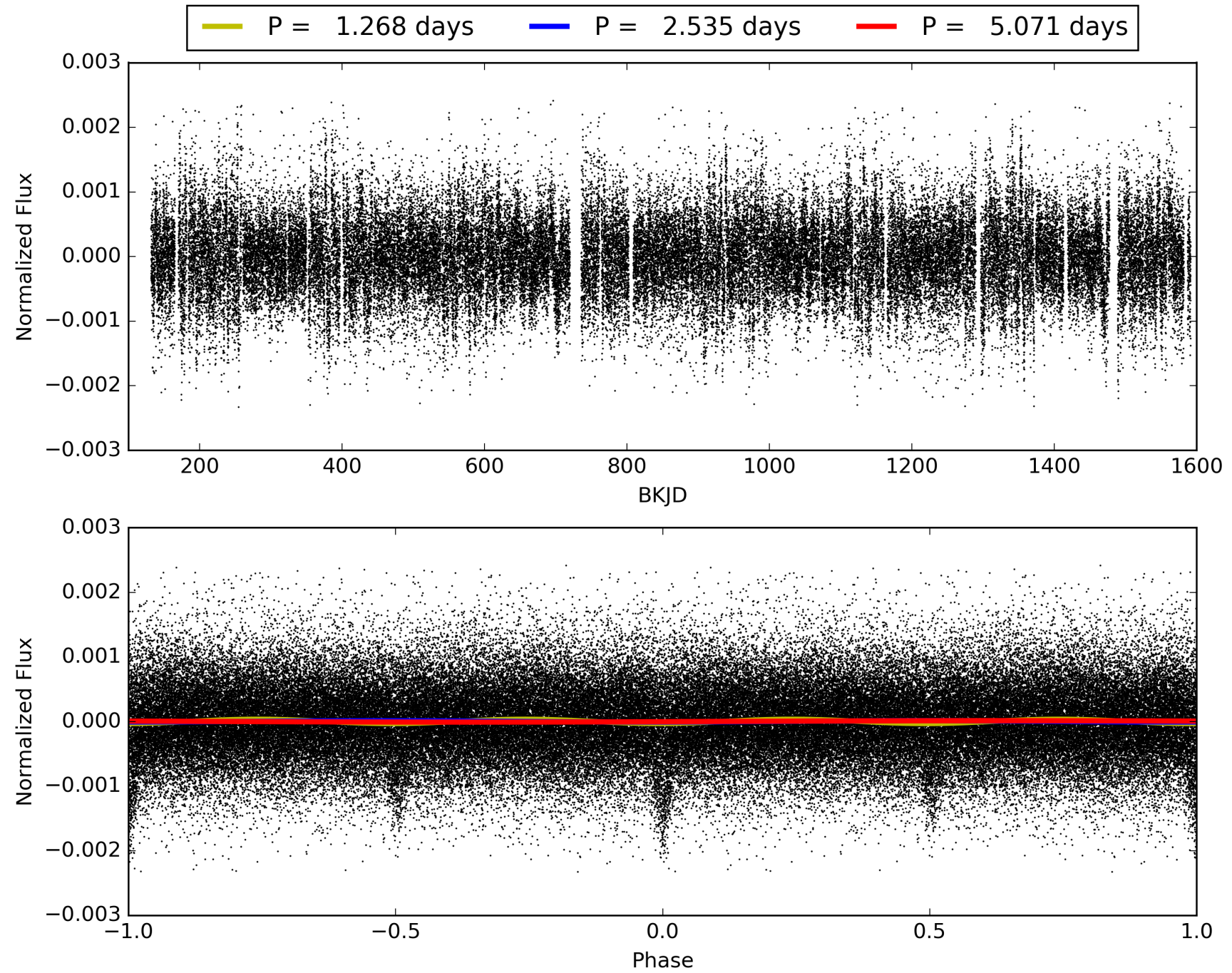
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:41:49 Z

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

TCE 008104436-01, PDC Light Curves

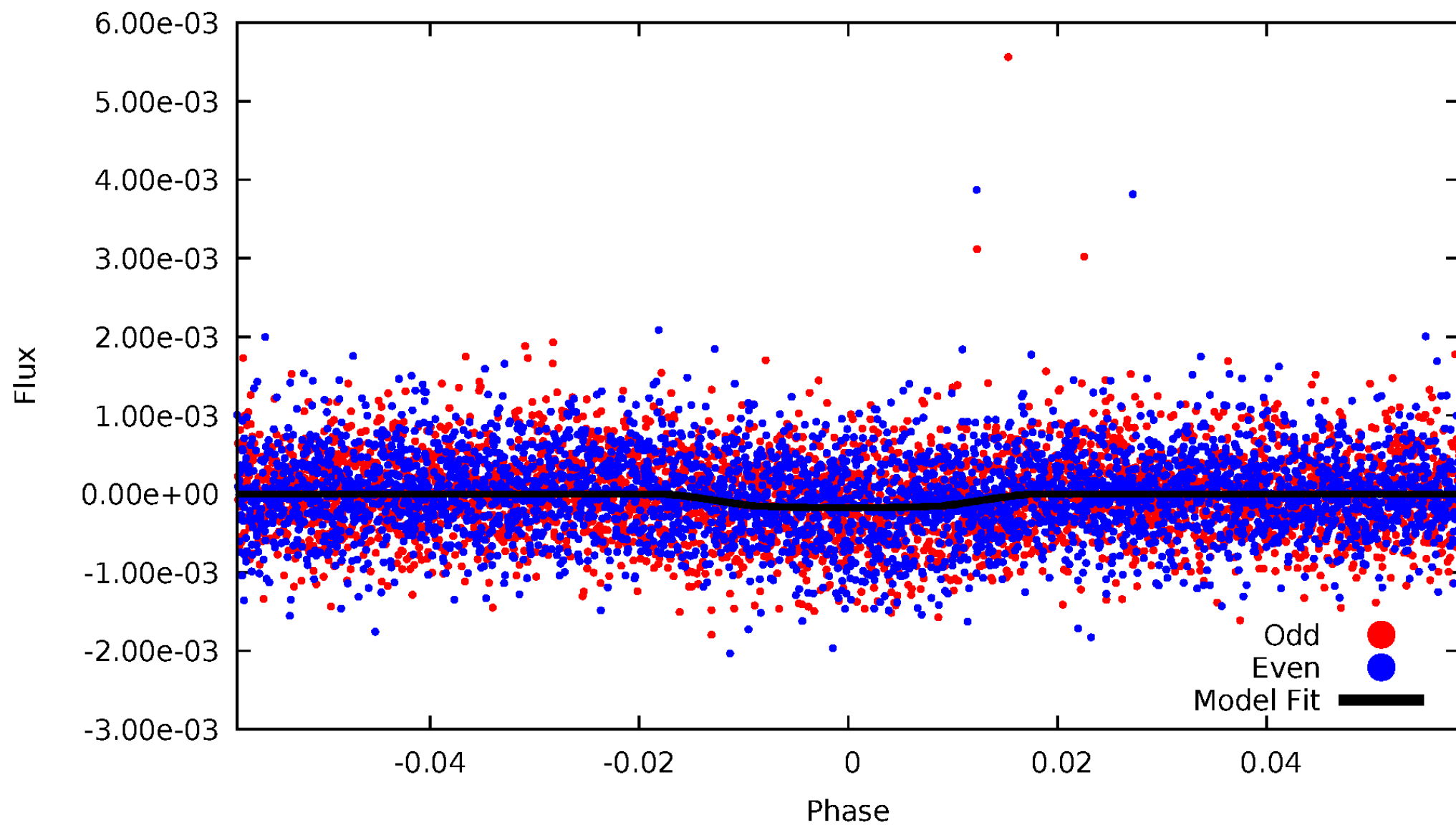


TCE 008104436-01



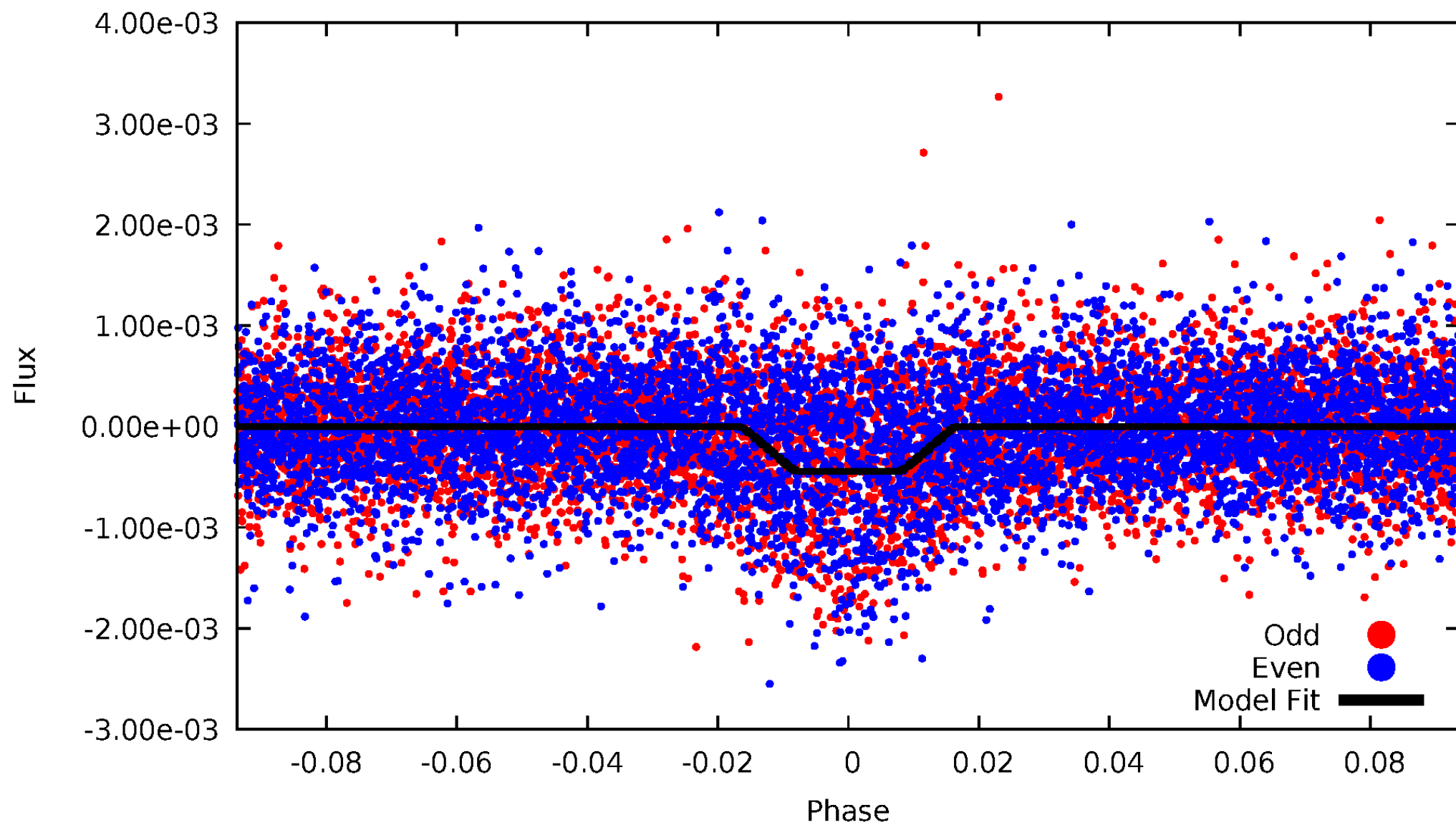
DV Odd/Even

TCE 008104436-01

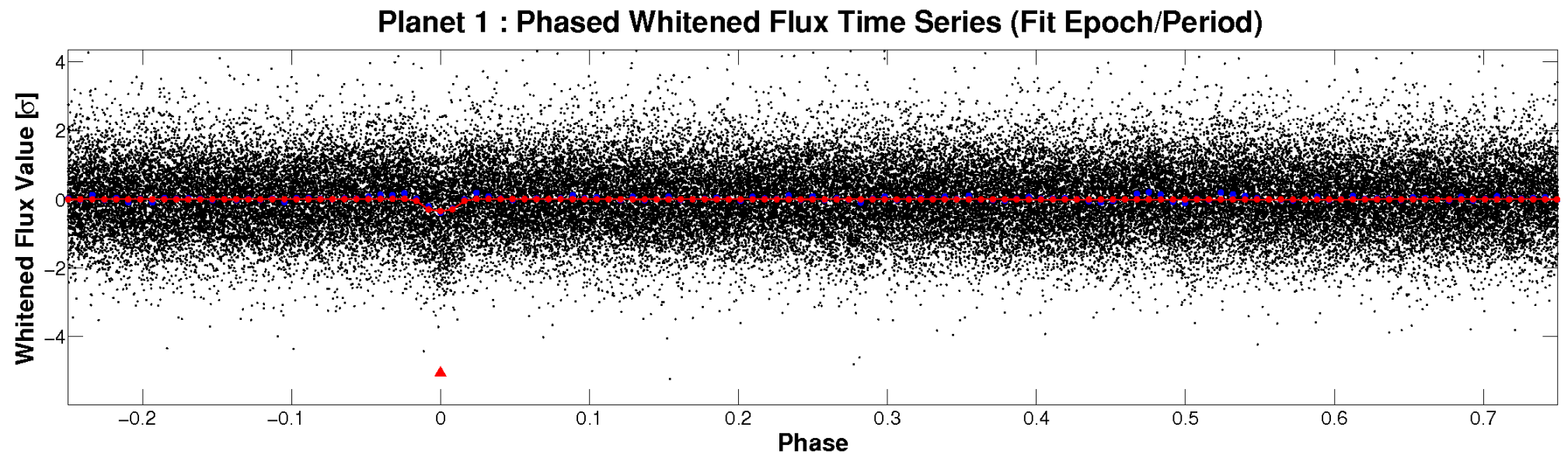
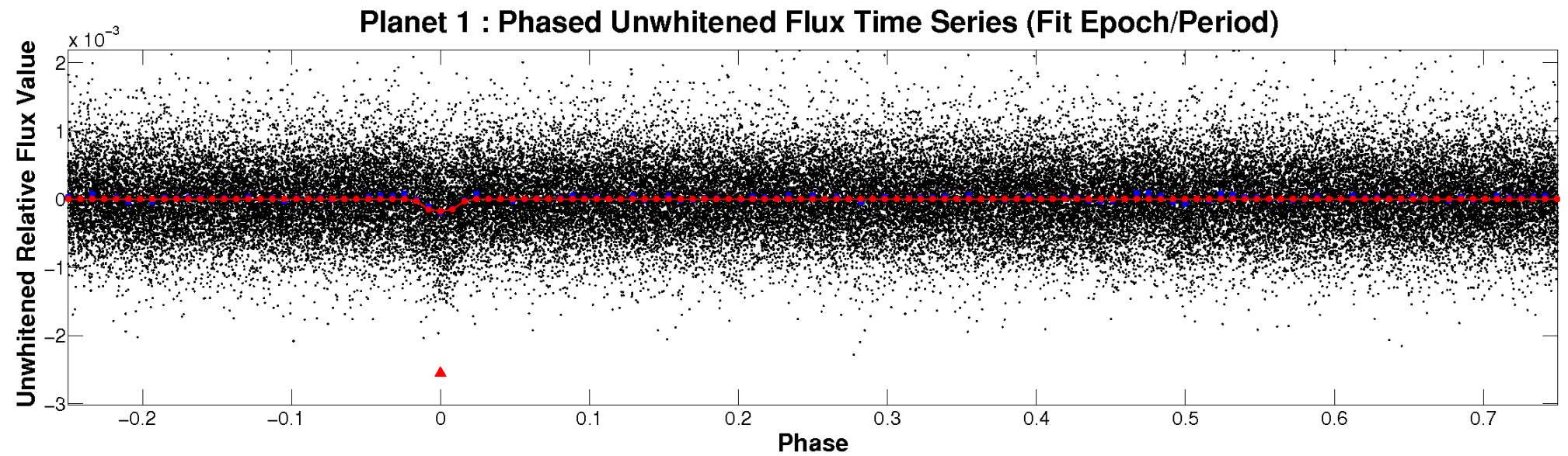


ALT Odd/Even

TCE 008104436-01

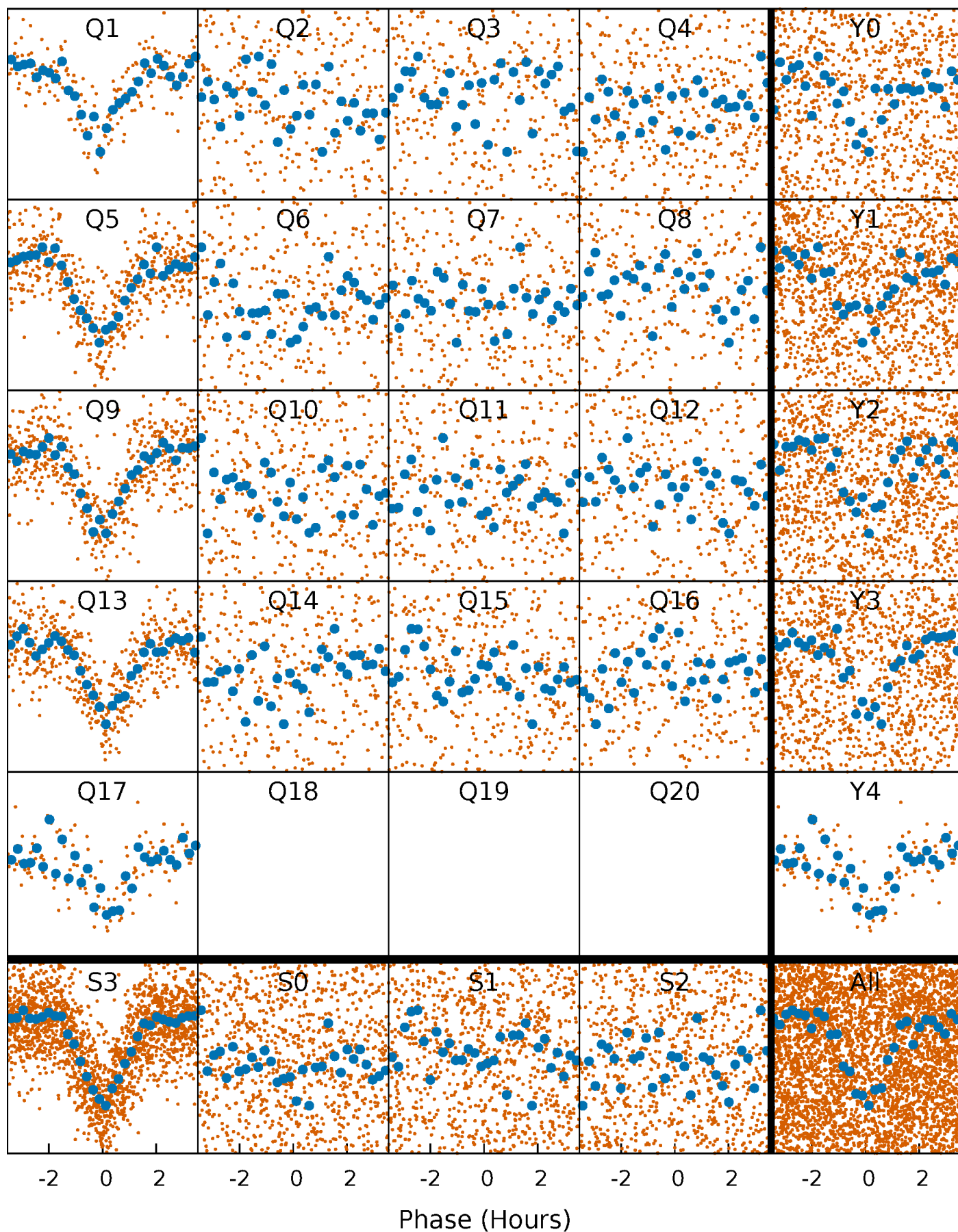


Non-Whitened Vs. Whitened Light Curve



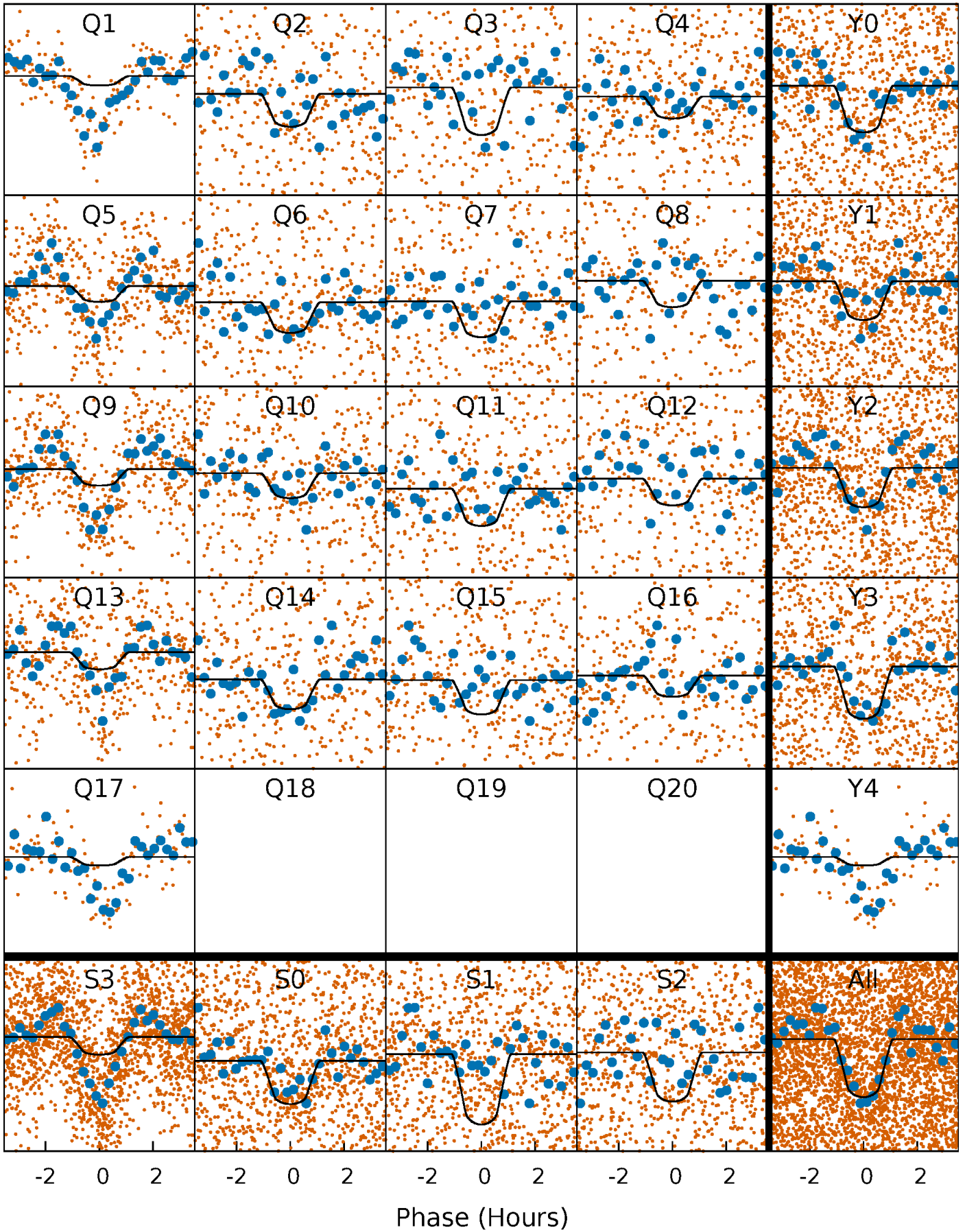
PDC Quarter-Phased Transit Curves

TCE 008104436-01 P= 2.535361 Days $T_0=133.392881$ (BKJD)



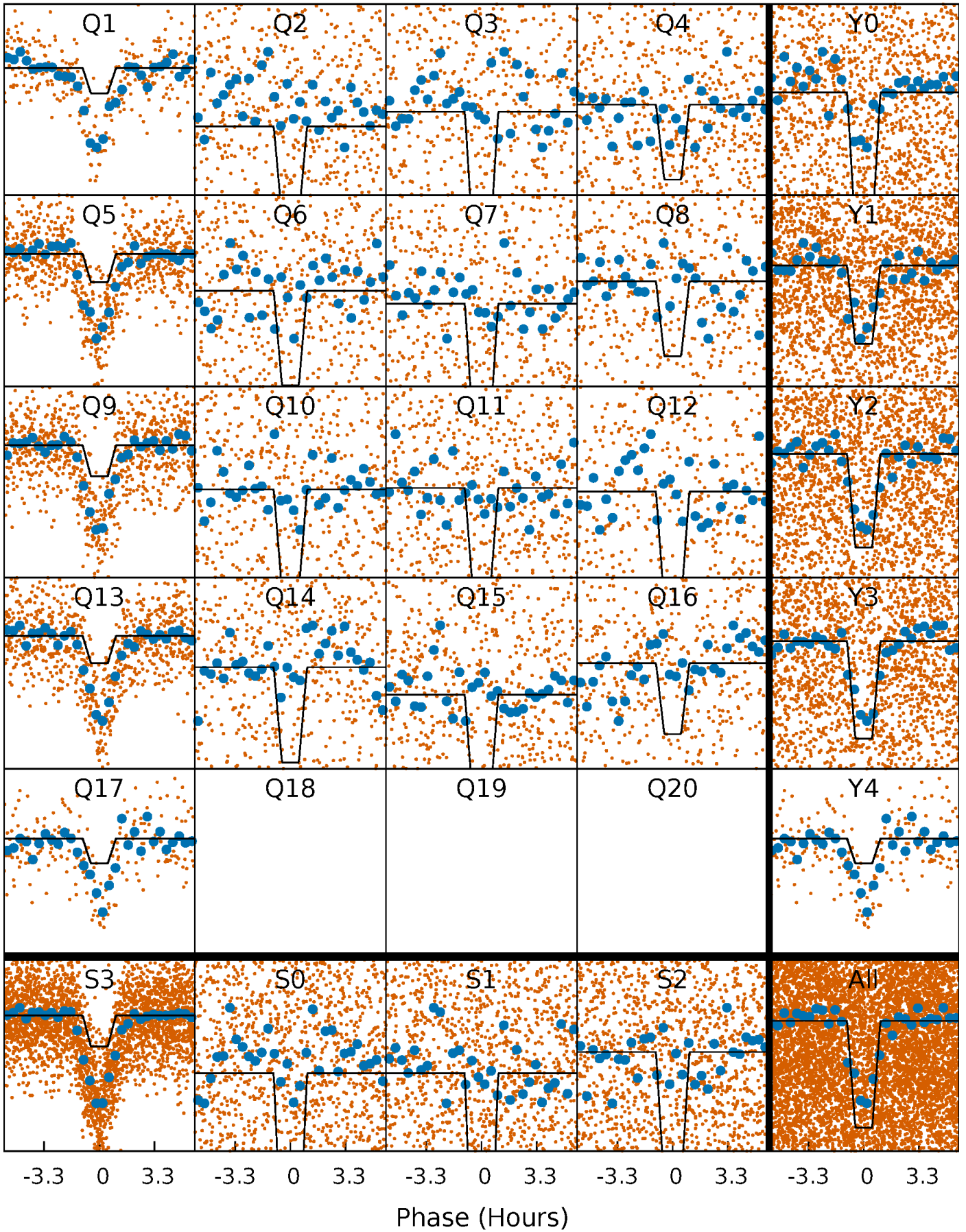
DV Quarter-Phased Transit Curves

TCE 008104436-01 P= 2.535361 Days $T_0=133.392881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

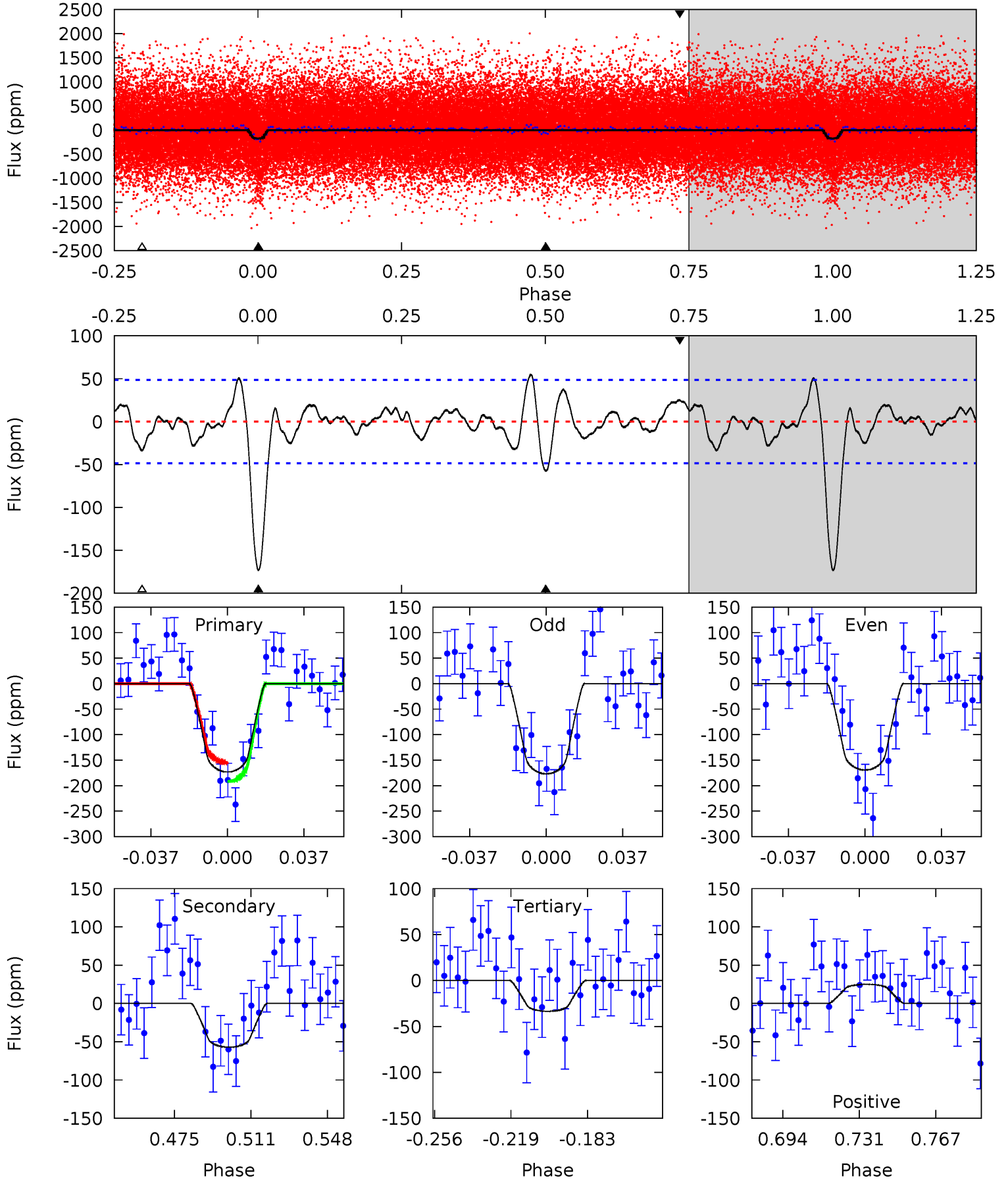
TCE 008104436-01 P= 2.535373 Days $T_0=133.391366$ (BKJD)



DV Model-Shift Uniqueness Test

008104436-01, P = 2.535361 Days, E = 130.857520 Days

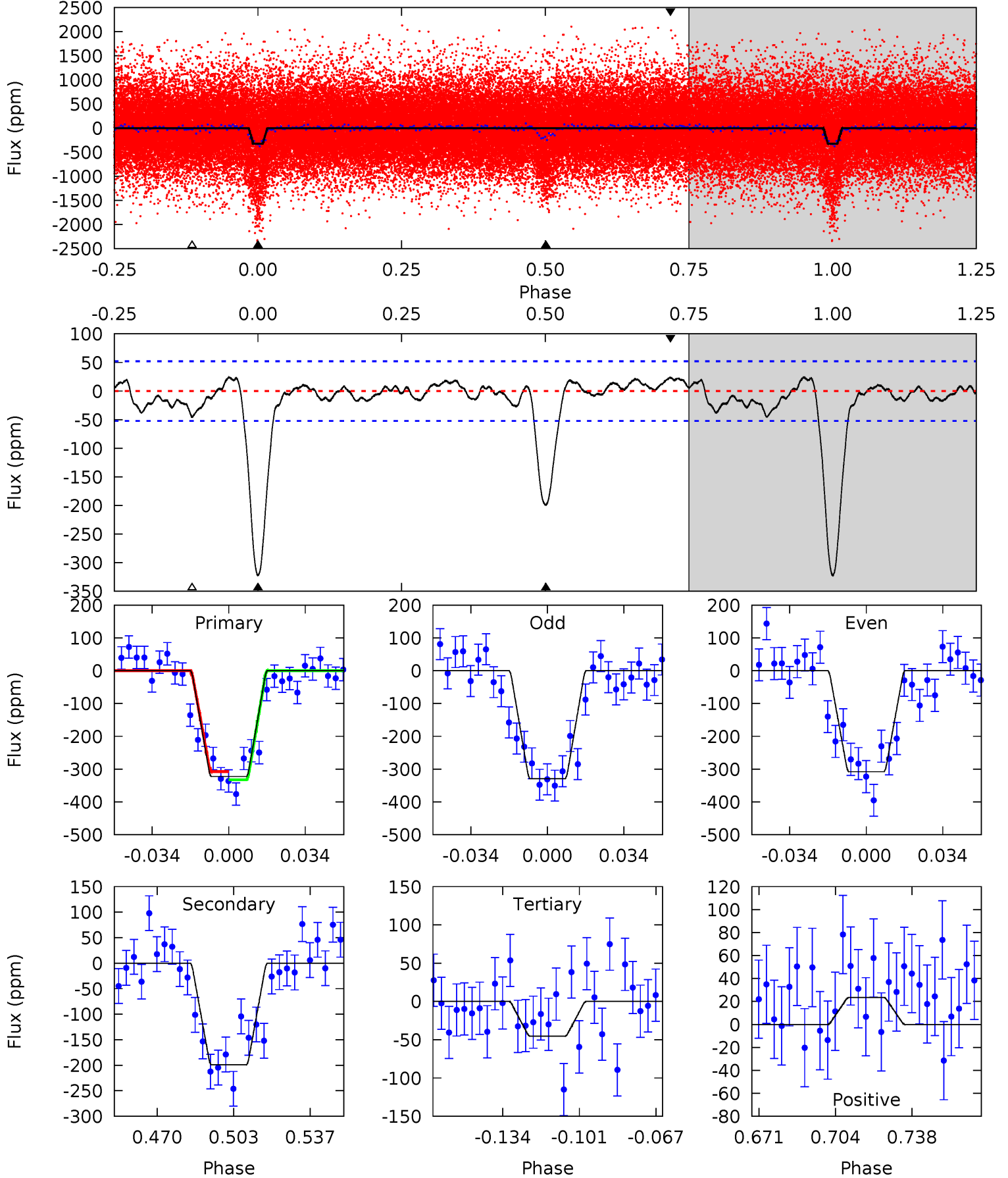
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	5.62	3.30	2.45	4.77	2.09	1.32	13.7	14.6	2.32	3.17	0.37	1.10	0.24	1.82



Alt Model-Shift Uniqueness Test

008104436-01, P = 2.535373 Days, E = 130.855993 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	18.2	4.16	2.15	4.79	2.13	1.35	25.4	27.4	14.1	16.1	0.96	1.77	0.07	1.15



Stellar Parameters For KIC 008104436

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5488^{+163}_{-147}	$4.629^{+0.035}_{-0.105}$	$-0.540^{+0.300}_{-0.300}$	$0.706^{+0.117}_{-0.050}$	$0.790^{+0.074}_{-0.081}$	$3.162^{+0.452}_{-1.102}$
	+3%/-3%	+1%/-2%	+56%/-56%	+17%/-7%	+9%/-10%	+14%/-35%
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 008104436-01 / KOI 6967.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-57 ± 10	$1.19^{+0.72}_{-0.60}$	1578^{+69}_{-56}	4155^{+1383}_{-657}	24^{+76}_{-15}
Alt.	-199 ± 11	$1.66^{+0.80}_{-0.67}$	1576^{+70}_{-56}	4626^{+1137}_{-603}	44^{+75}_{-23}

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 $A_{obs} \gg 1.0$

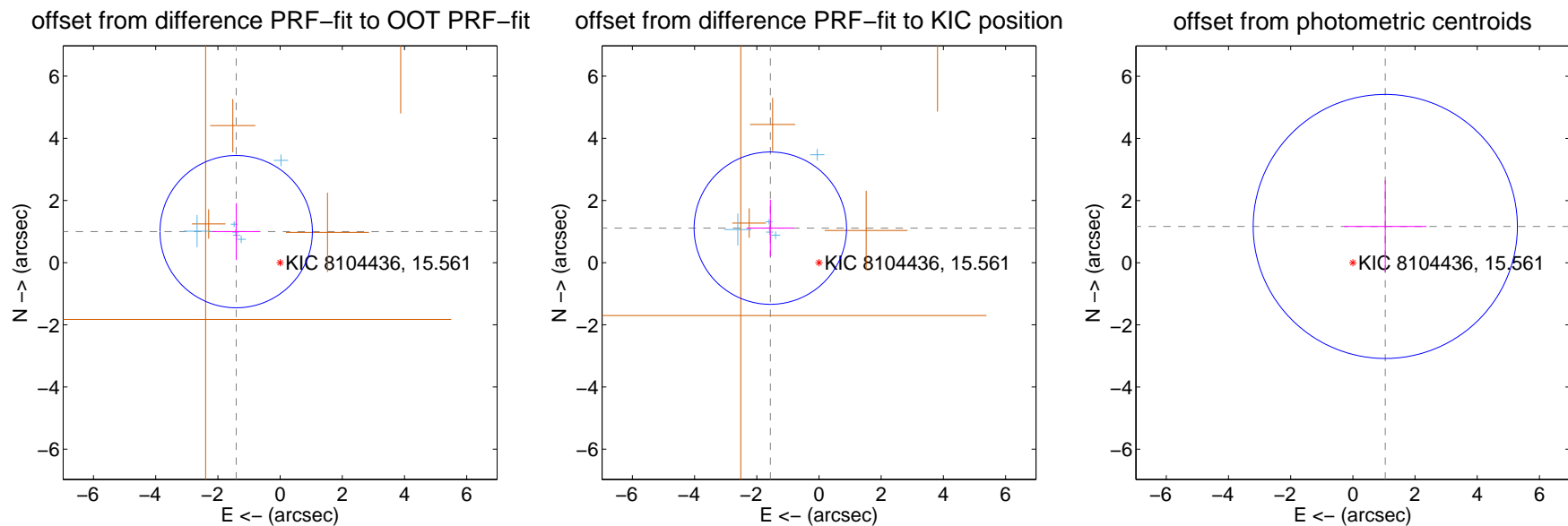
DV Centroid Data

Supplemental centroid analysis for 008104436-01. Kepler magnitude: 15.56. Transit SNR 12.30

There are 6 quarters with good PRF difference image offsets

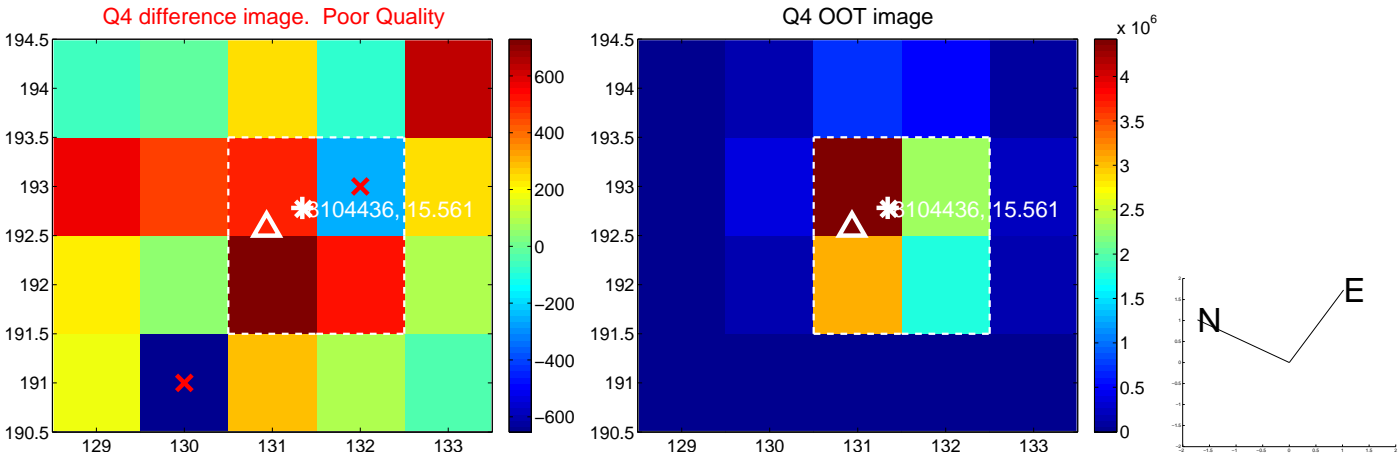
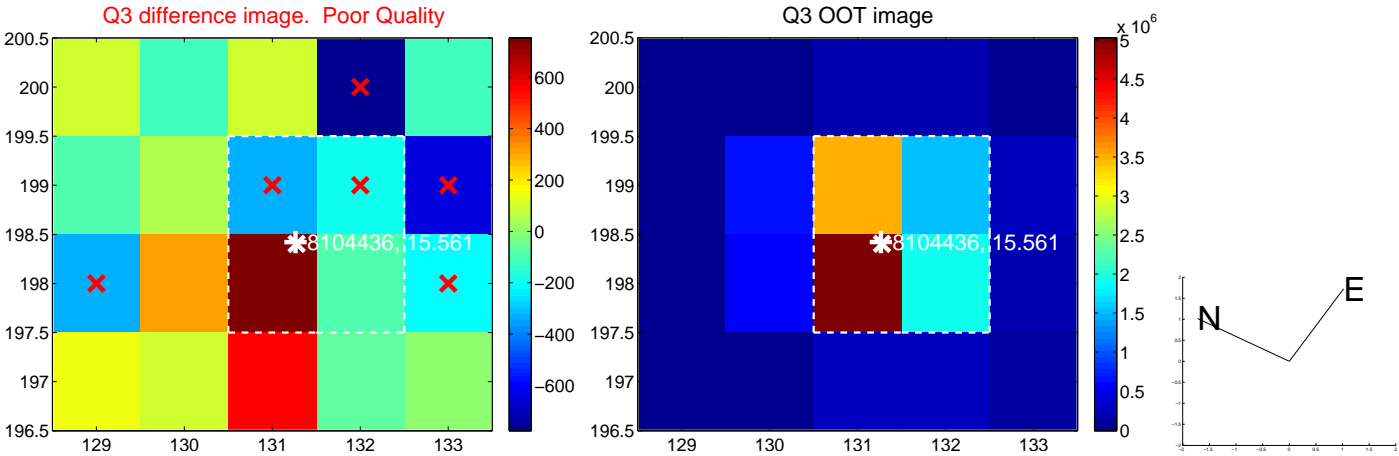
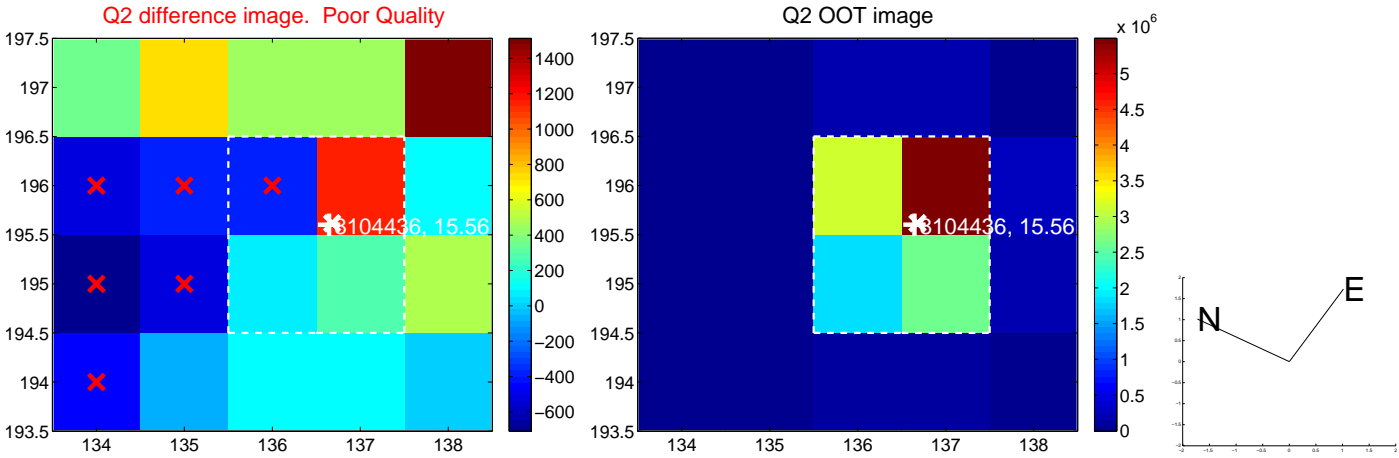
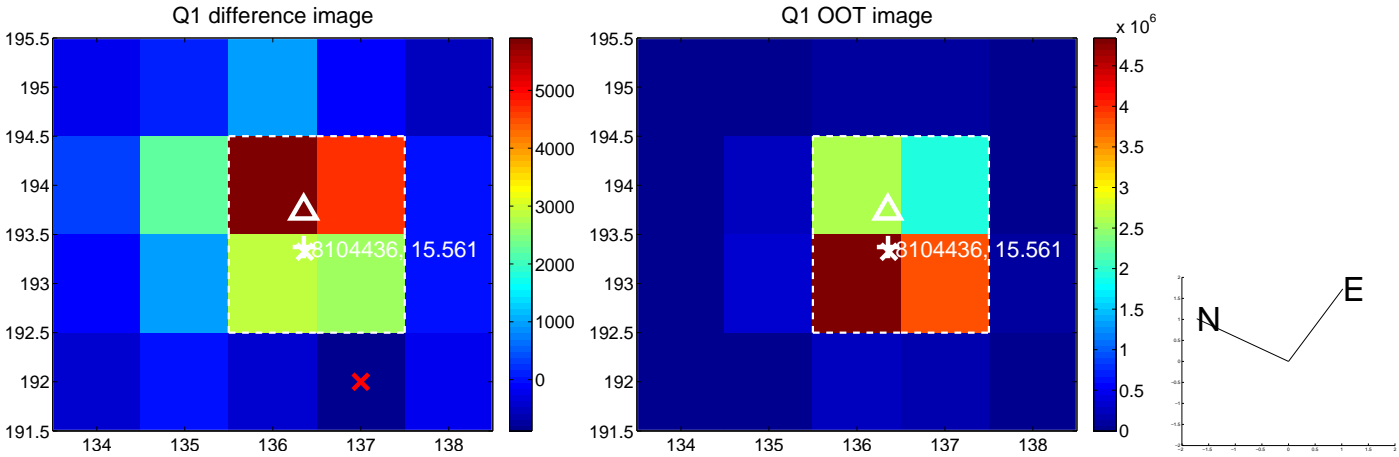
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.729 ± 0.816	2.12	1.412 ± 0.763	0.997 ± 0.914
PRF-fit source offset from KIC position	1.918 ± 0.817	2.35	1.565 ± 0.763	1.109 ± 0.914
photometric centroid source offset	1.57 ± 1.42	1.11	-1.04 ± 1.33	1.17 ± 1.48

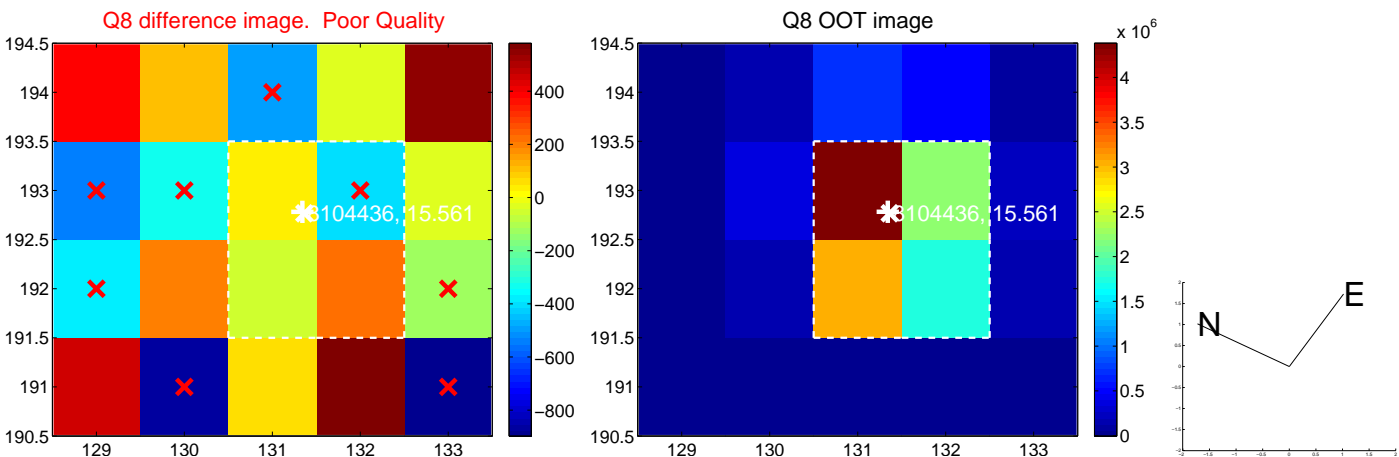
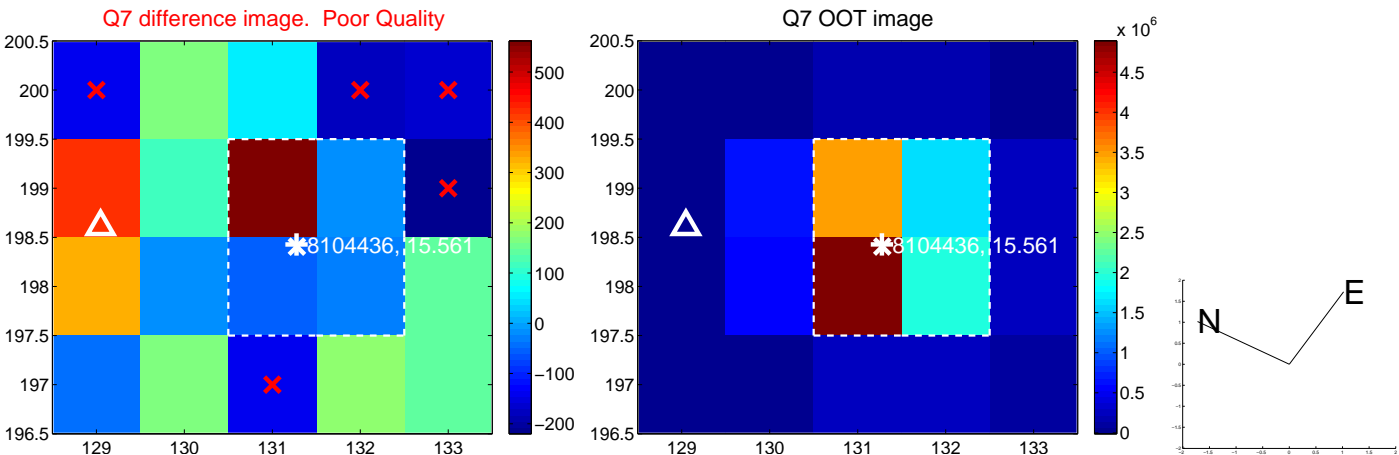
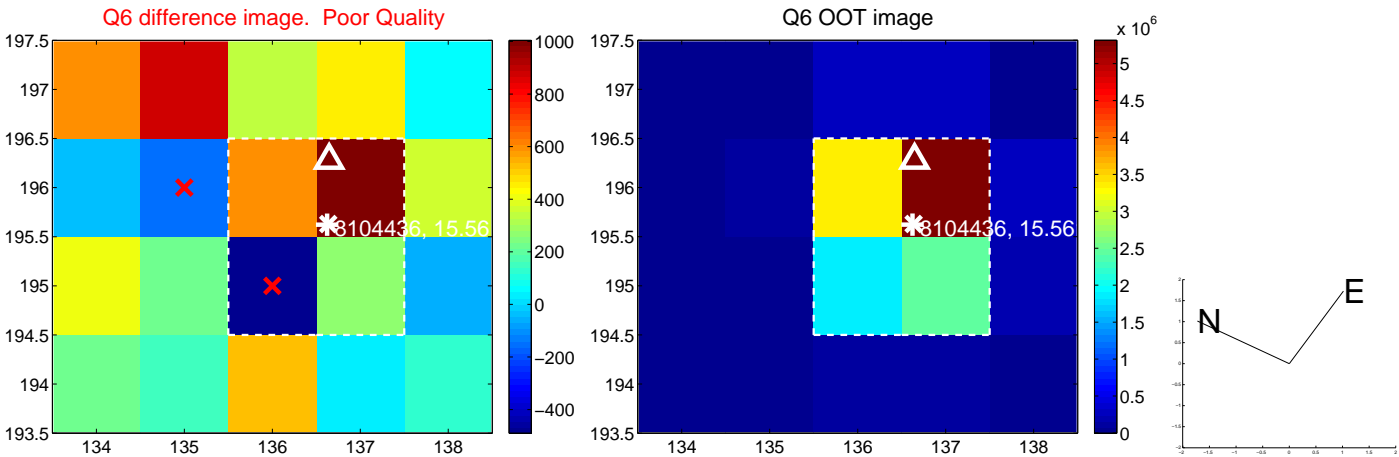
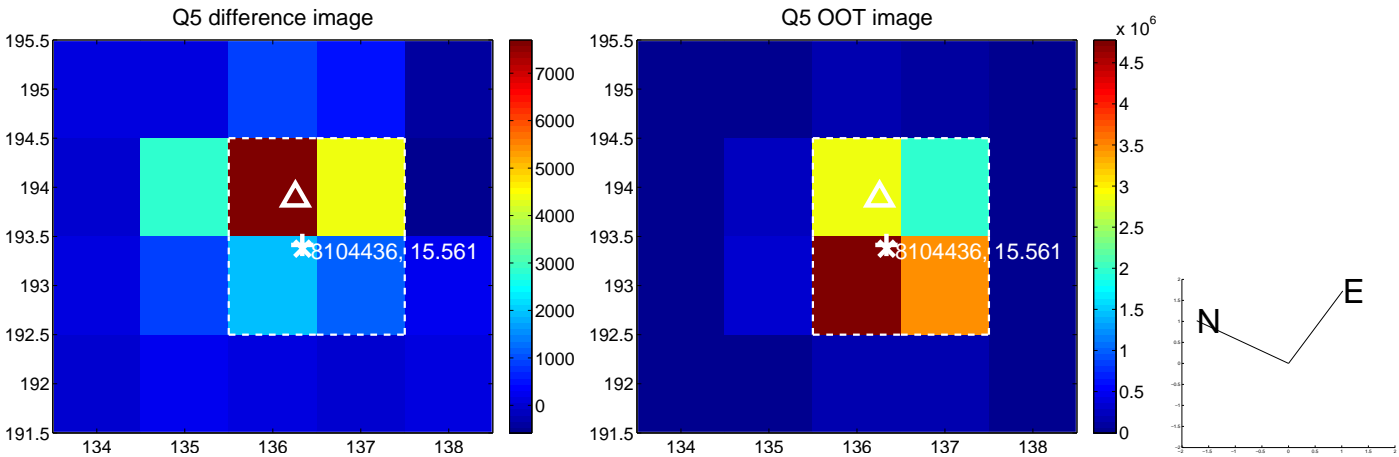


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

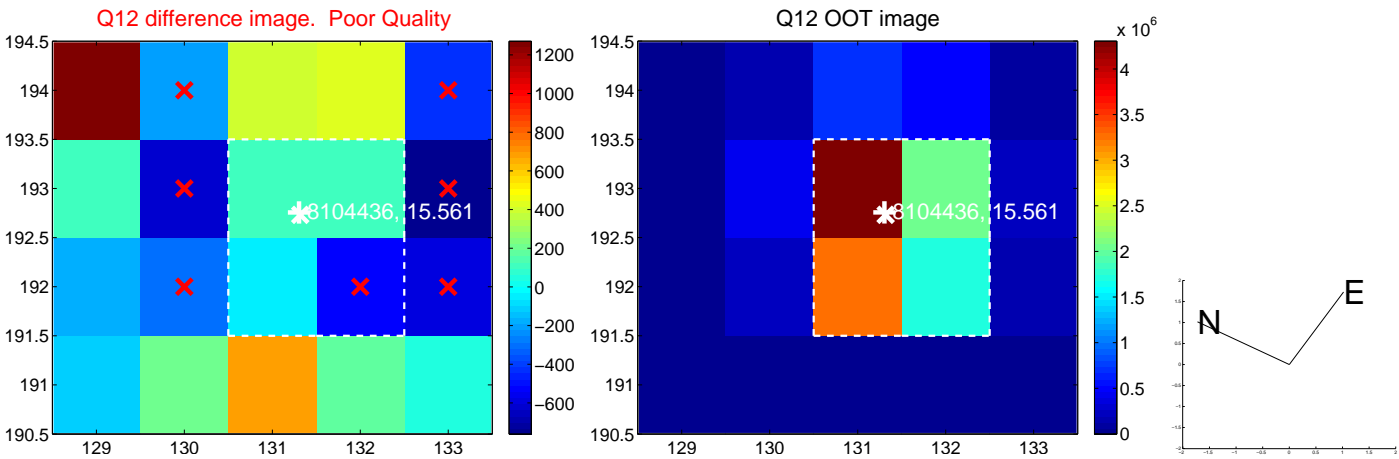
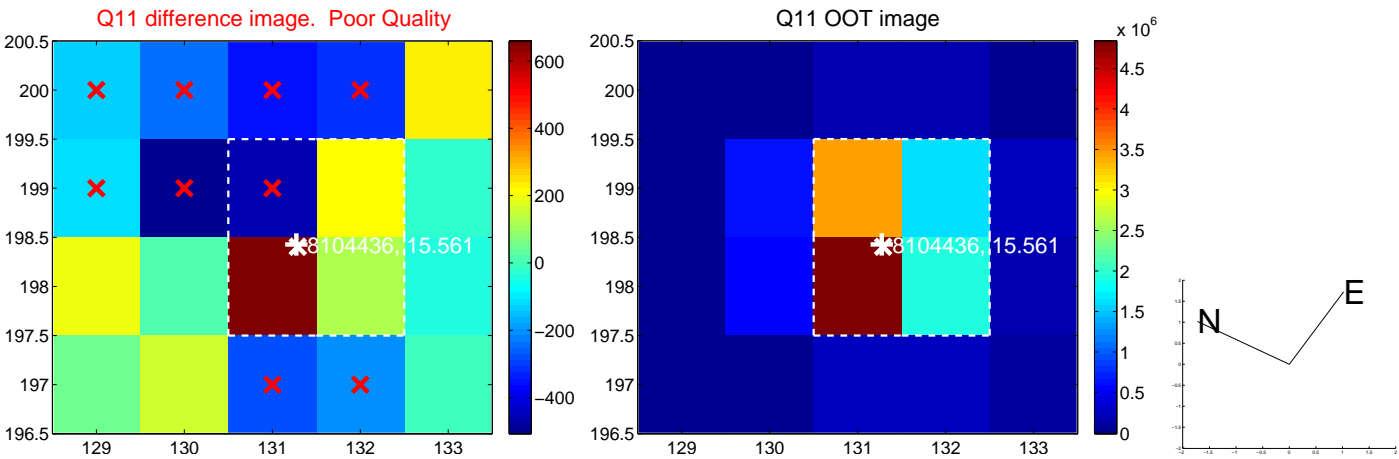
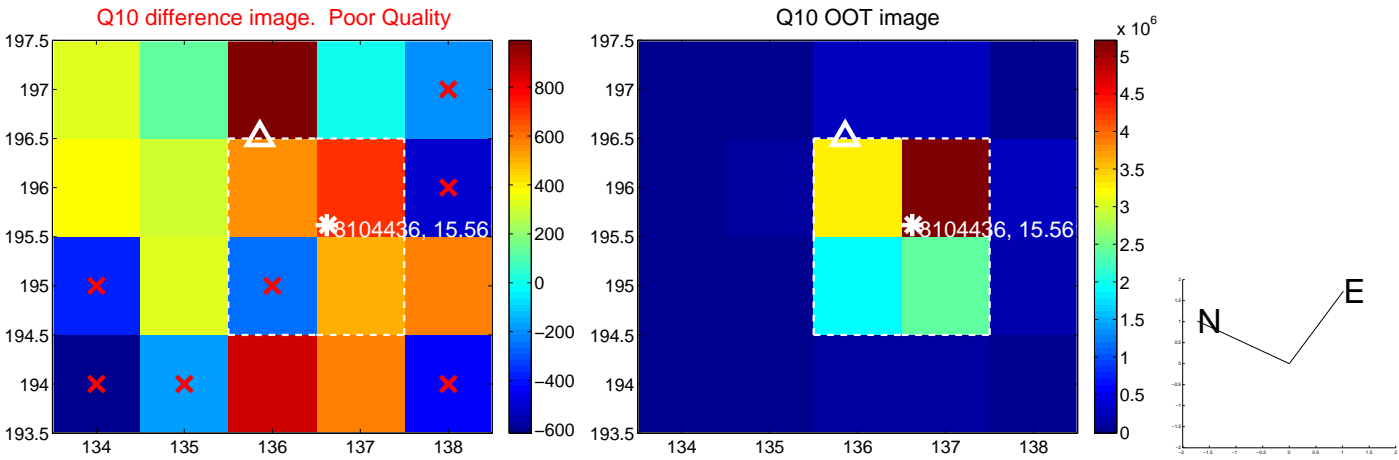
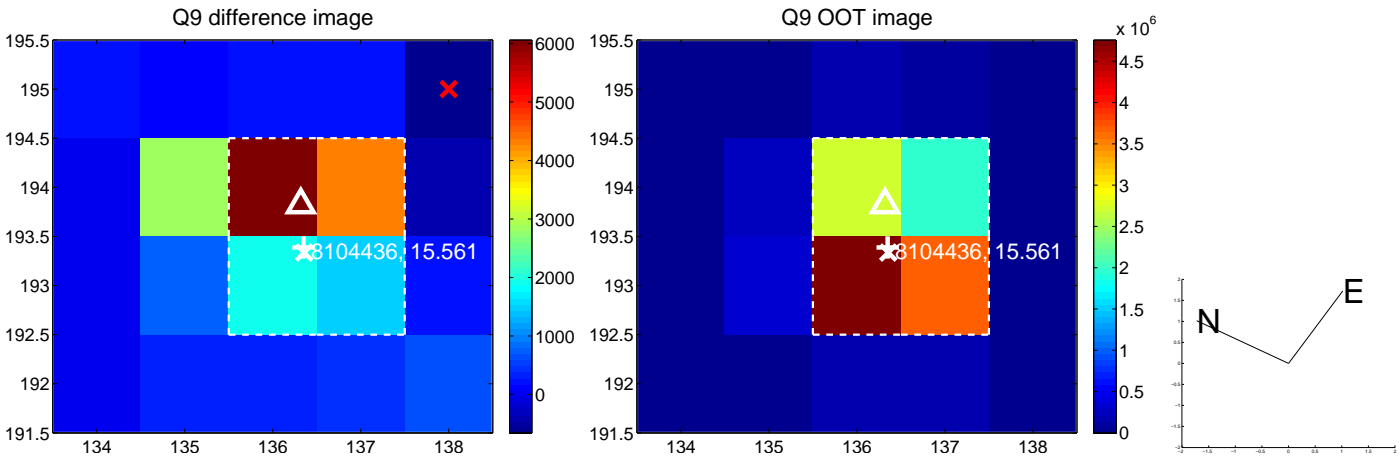
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



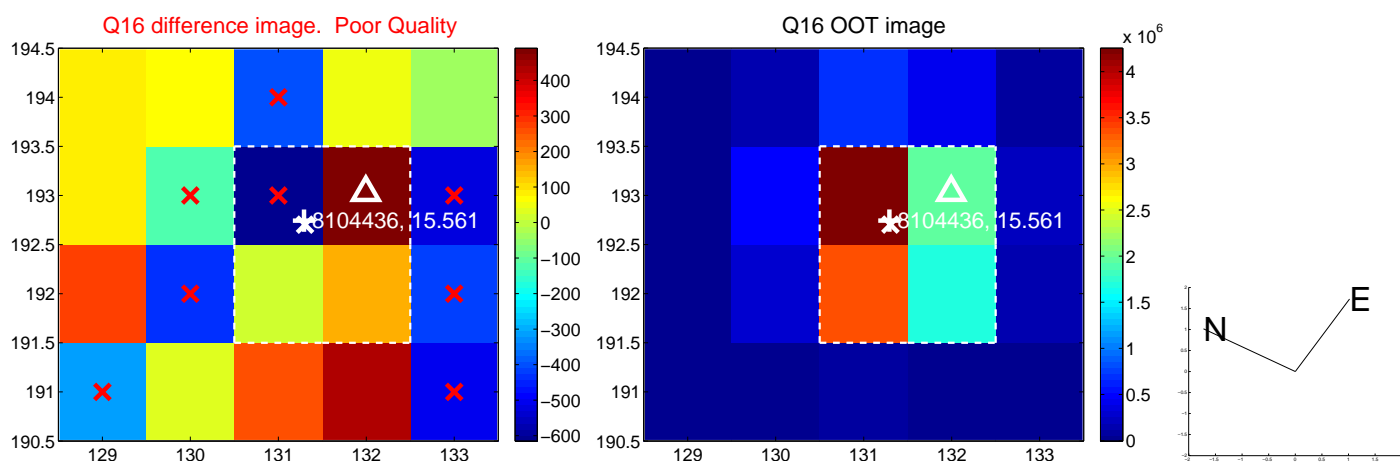
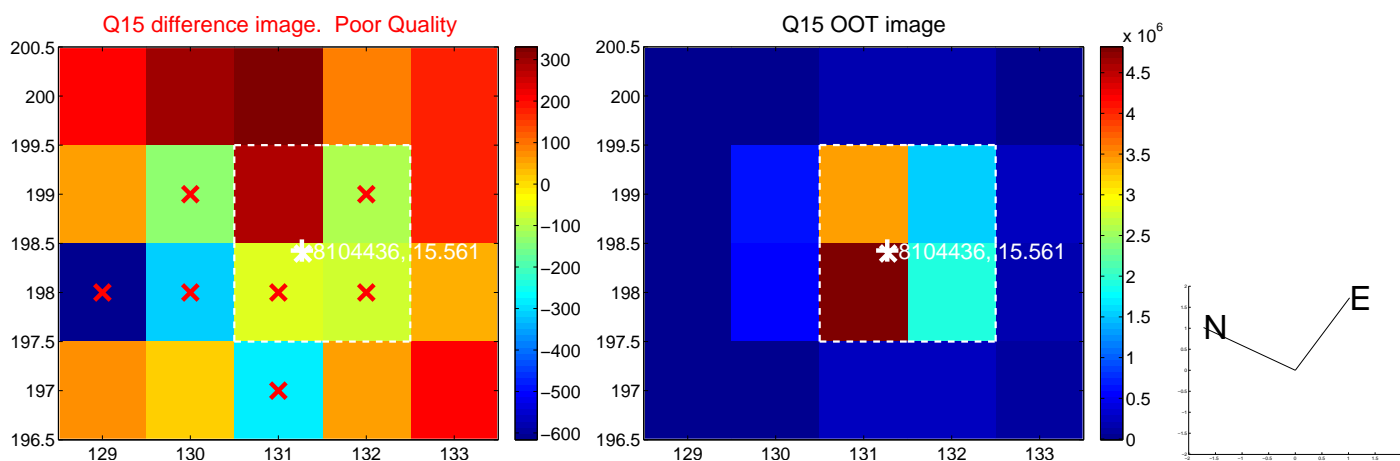
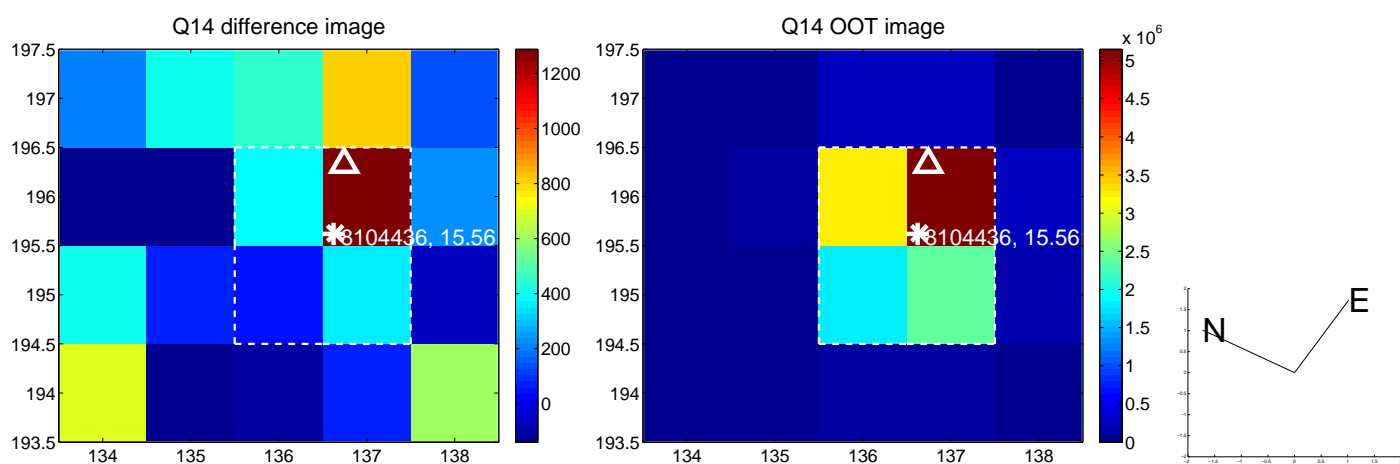
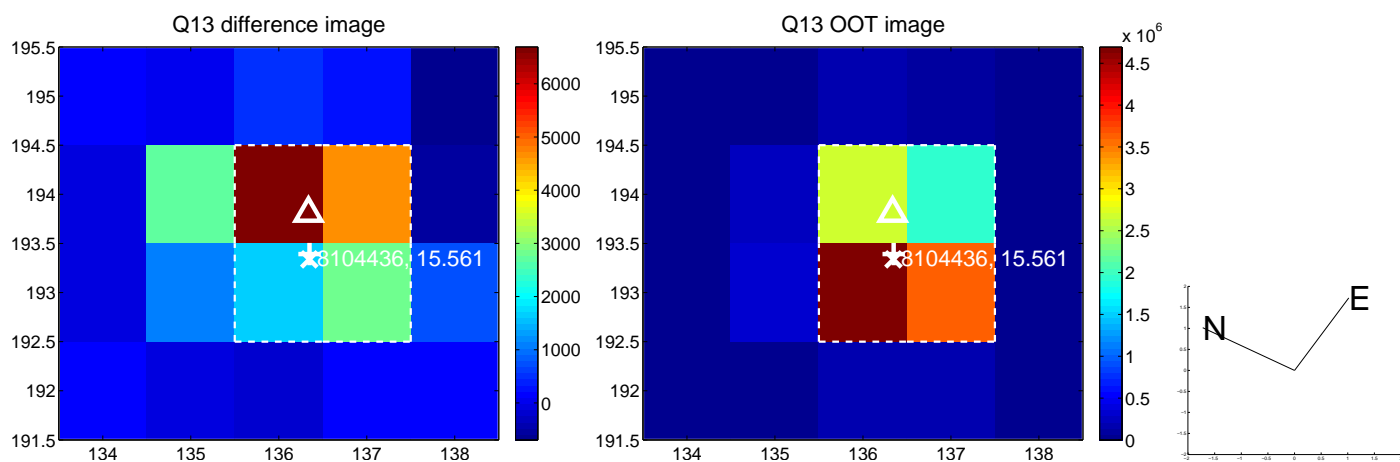
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



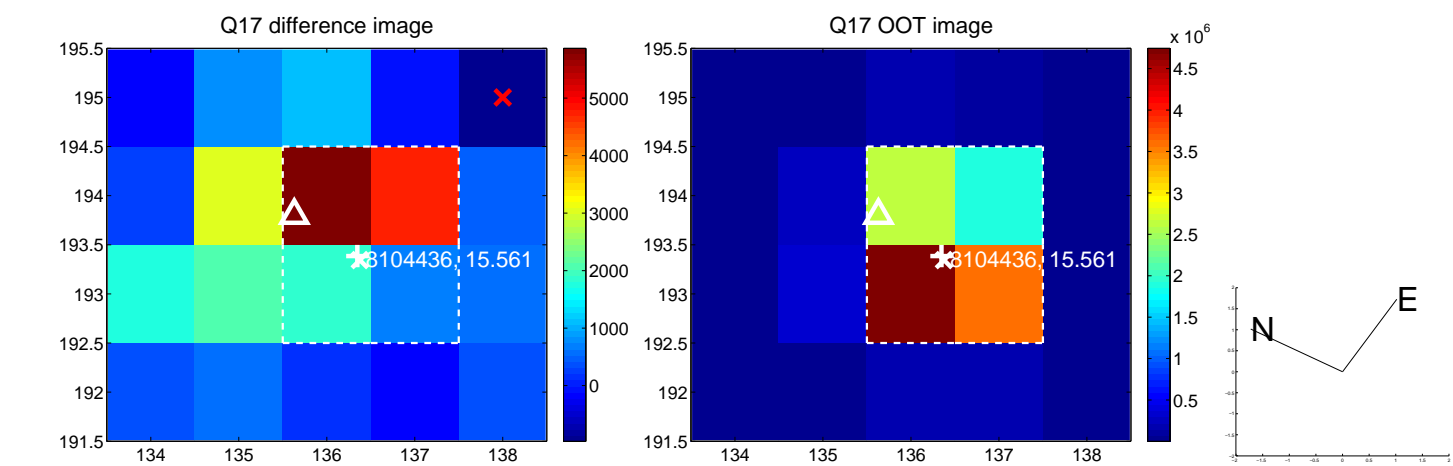
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



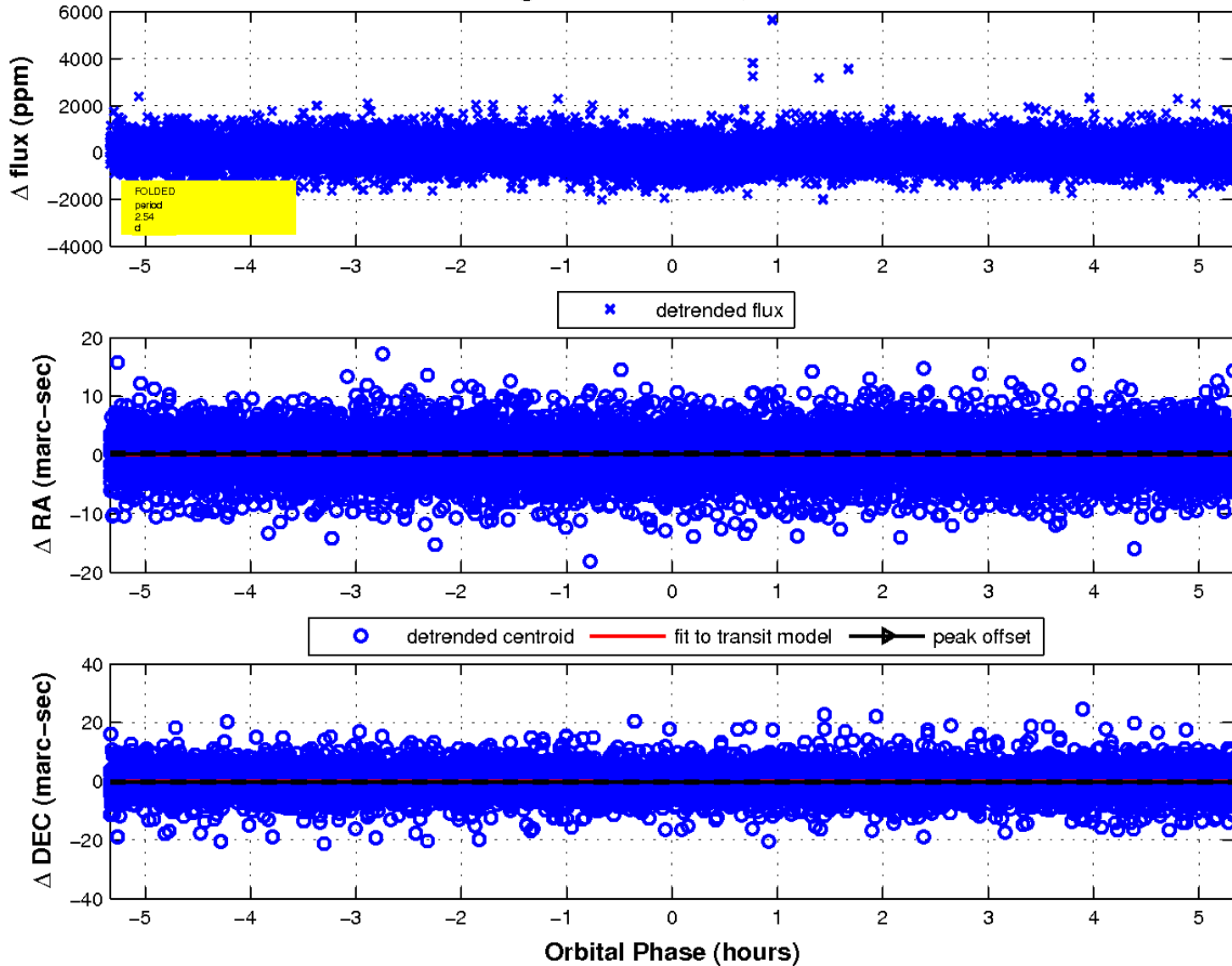
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

