

KIC 008807057

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})
008807057-01	OBS	7093.01	97.991186	134.672130	128.6	4.516	8.3	8.2	1.17	6499	1.43	11.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008807057-01	OBS	FP	0.43	1	0	0	0	MOD_NONUNIQ_ALT

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.

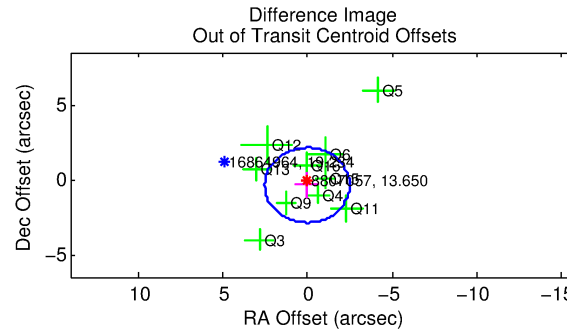
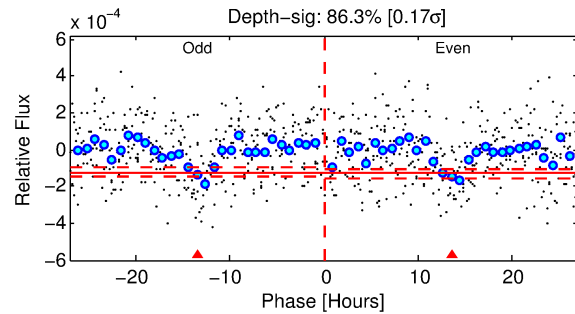
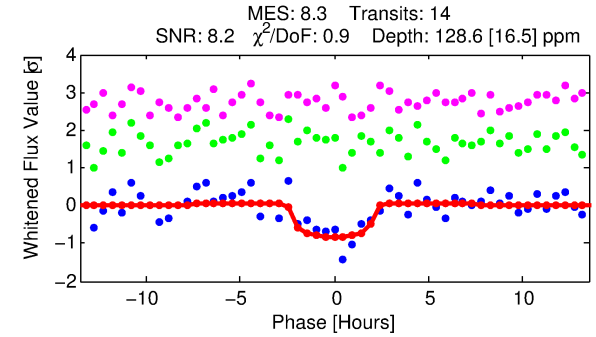
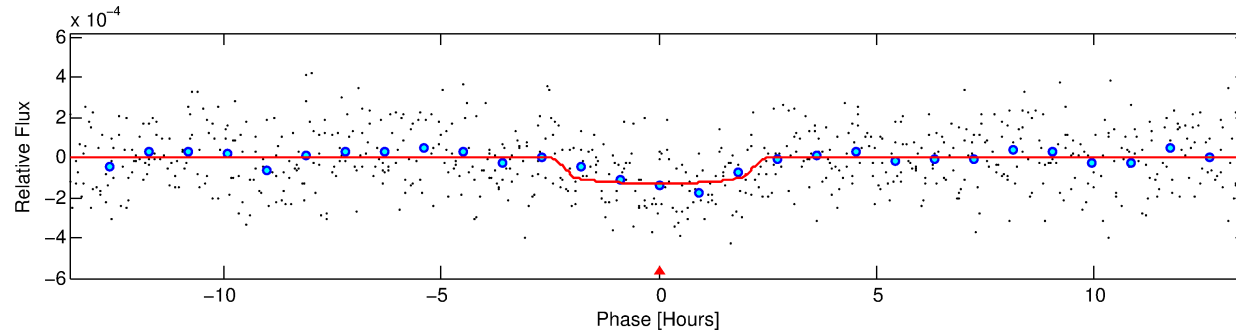
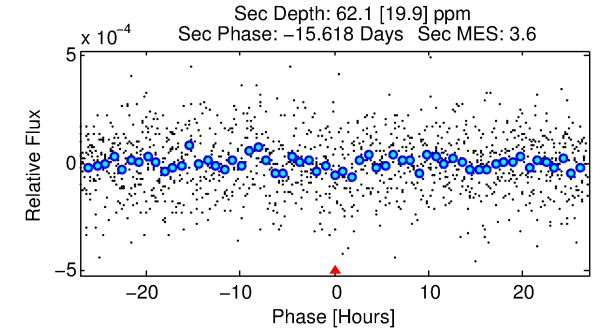
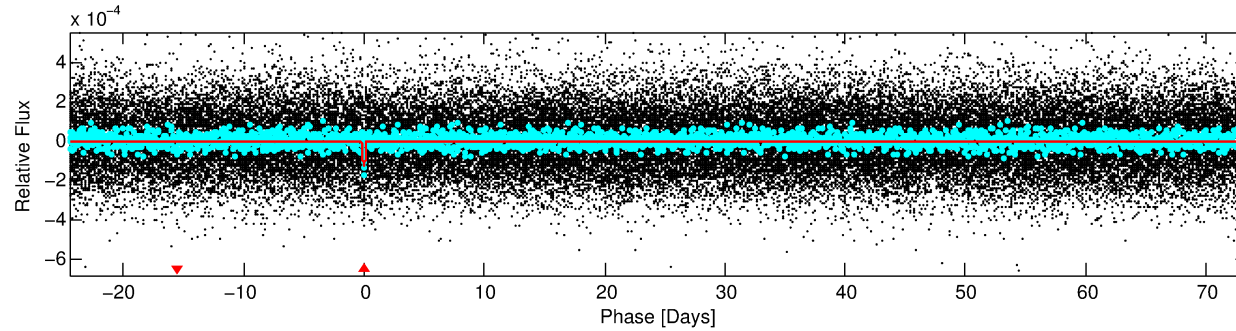
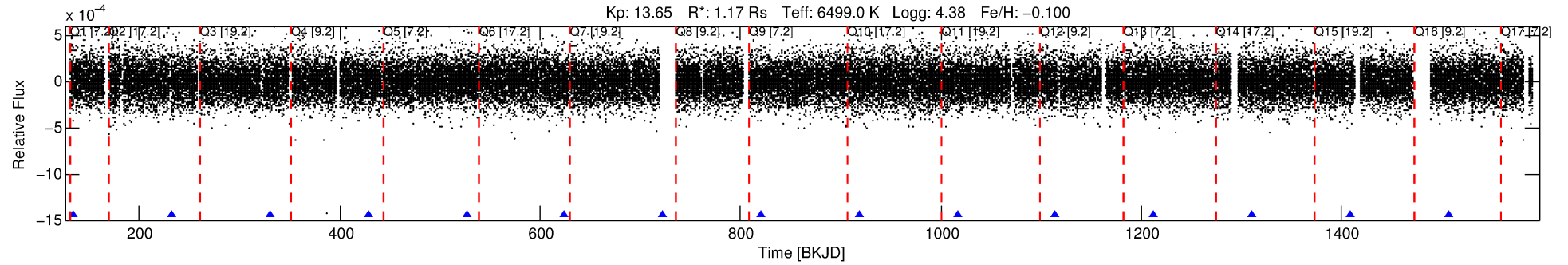
Ephemeris Match Information For 008807057-01

No Significant Match Found

DV One-Page Summary

KIC: 8807057 Candidate: 1 of 1 Period: 97.991 d

KOI: K07093.01 Corr: 0.966



DV Fit Results:

Period = 97.99119 [0.00130] d
Epoch = 134.6721 [0.0113] BKJD
Rp/R* = 0.0112 [0.0087]
a/R* = 116.16 [493.08]
b = 0.73 [2.75]
Seff = 11.24 [4.71]
Teq = 467 [49] K
Rp = 1.43 [1.21] Re
a = 0.4409 [0.1221] AU
Ag = 3244.96 [5320.35] [0.61σ]
Teffp = 5448 [2173] K [2.29σ]

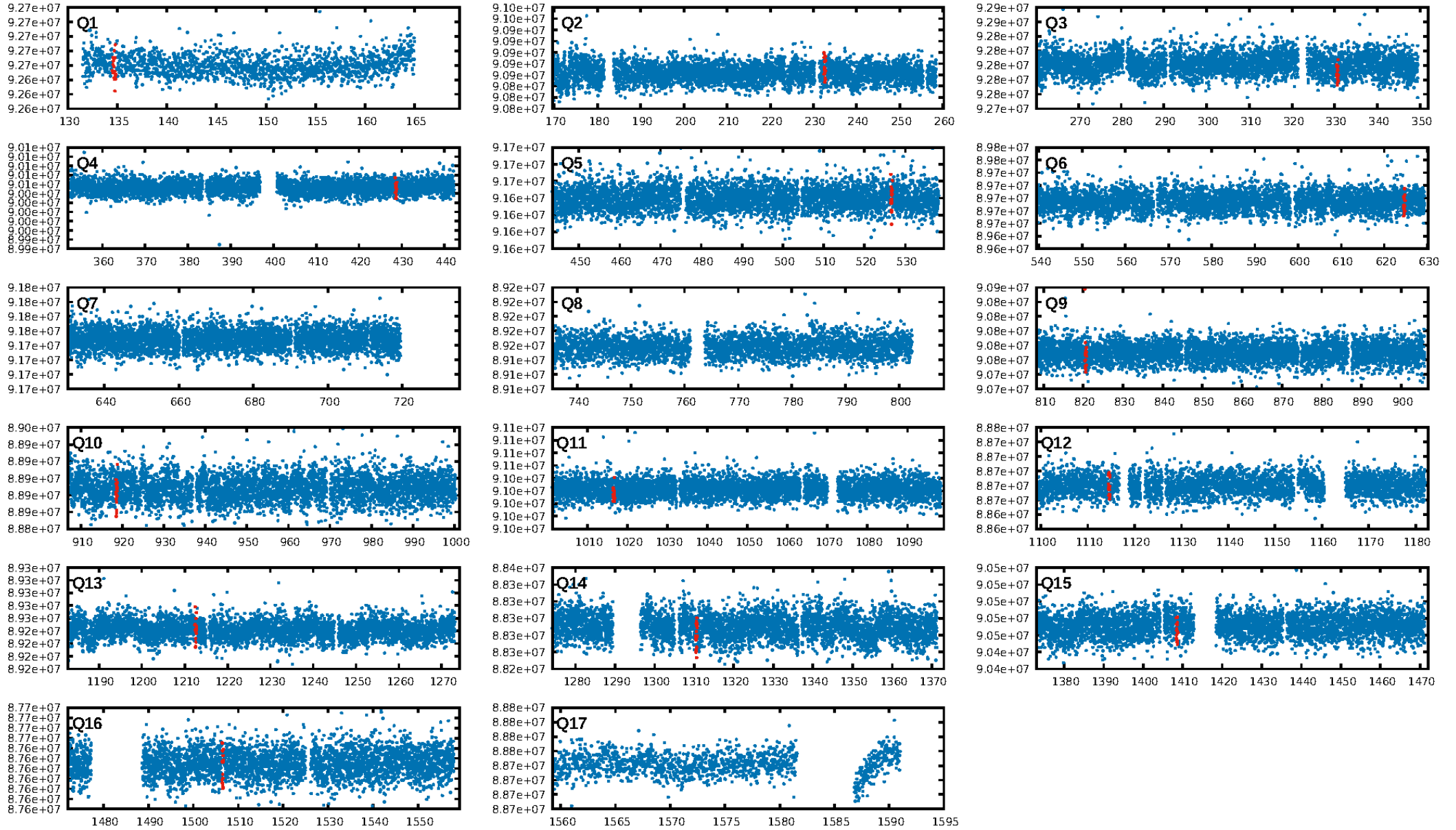
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.76e-15
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 2.057
Centroid-sig: 1.7%
Centroid-so: 2.317 arcsec [1.36σ]
OotOffset-rm: 0.375 arcsec [0.45σ]
KicOffset-rm: 0.474 arcsec [0.60σ]
OotOffset-st: 1/3/3/3 [10]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [13/13]

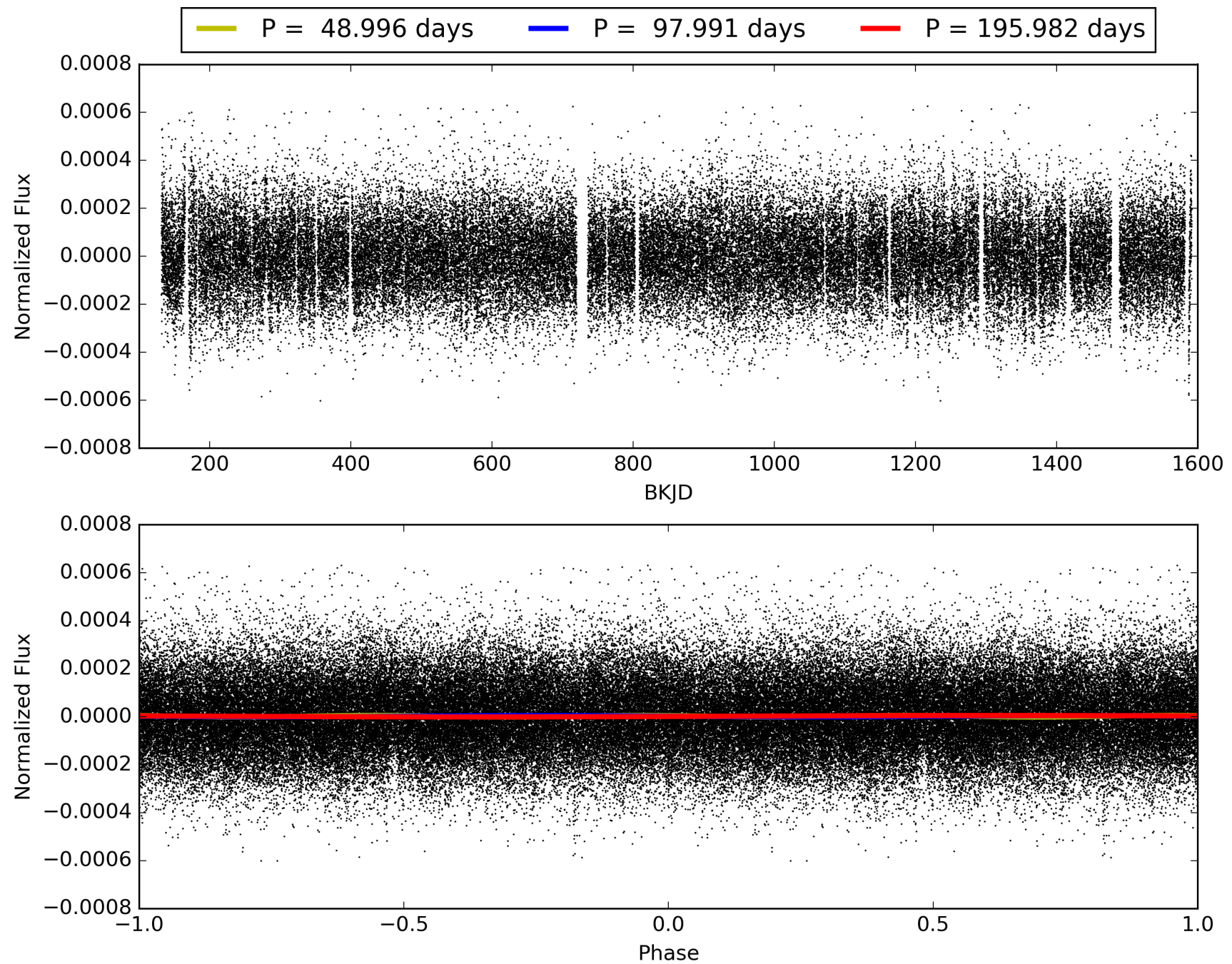
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:02:49 Z

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

TCE 008807057-01, PDC Light Curves

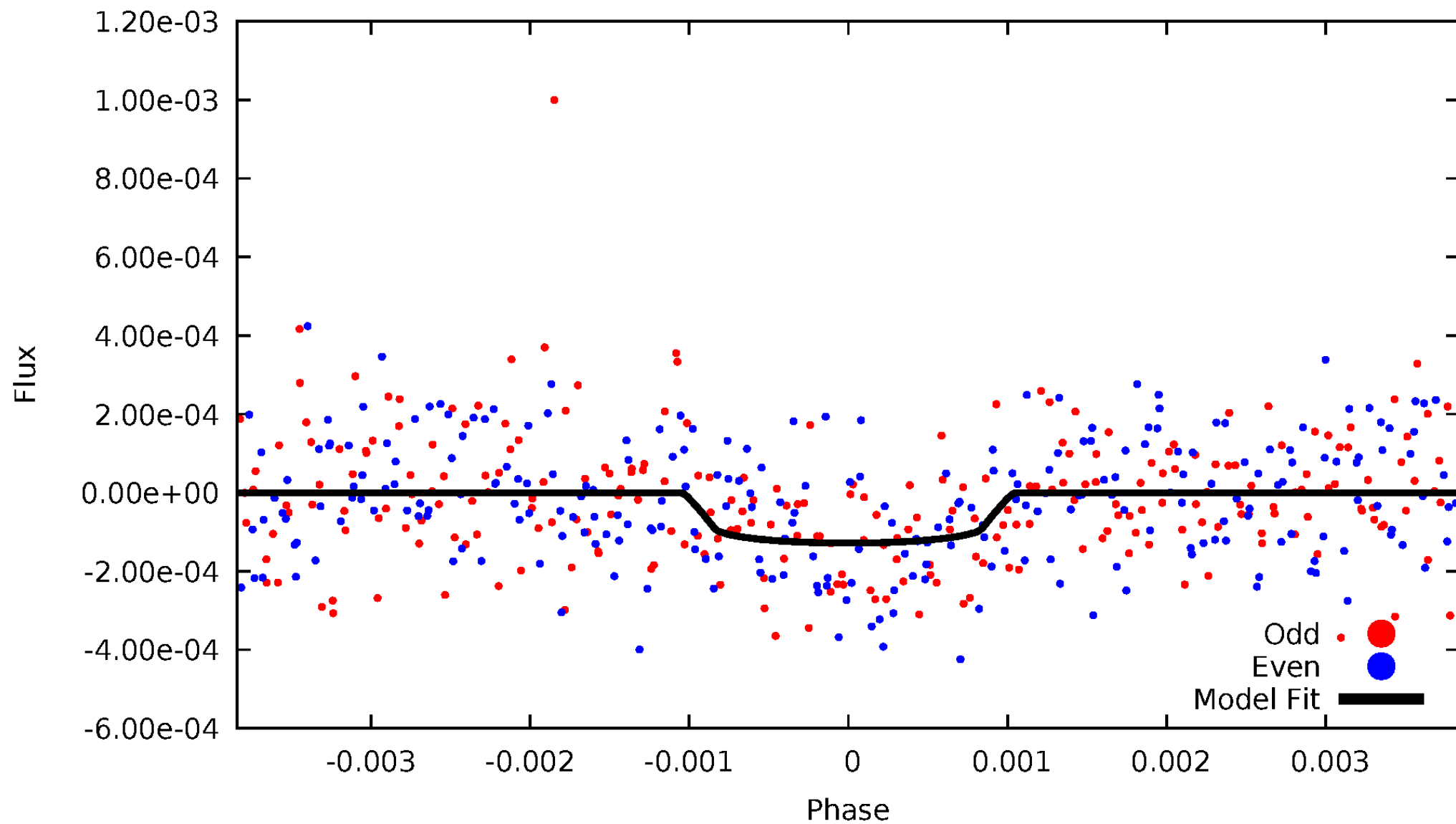


TCE 008807057-01



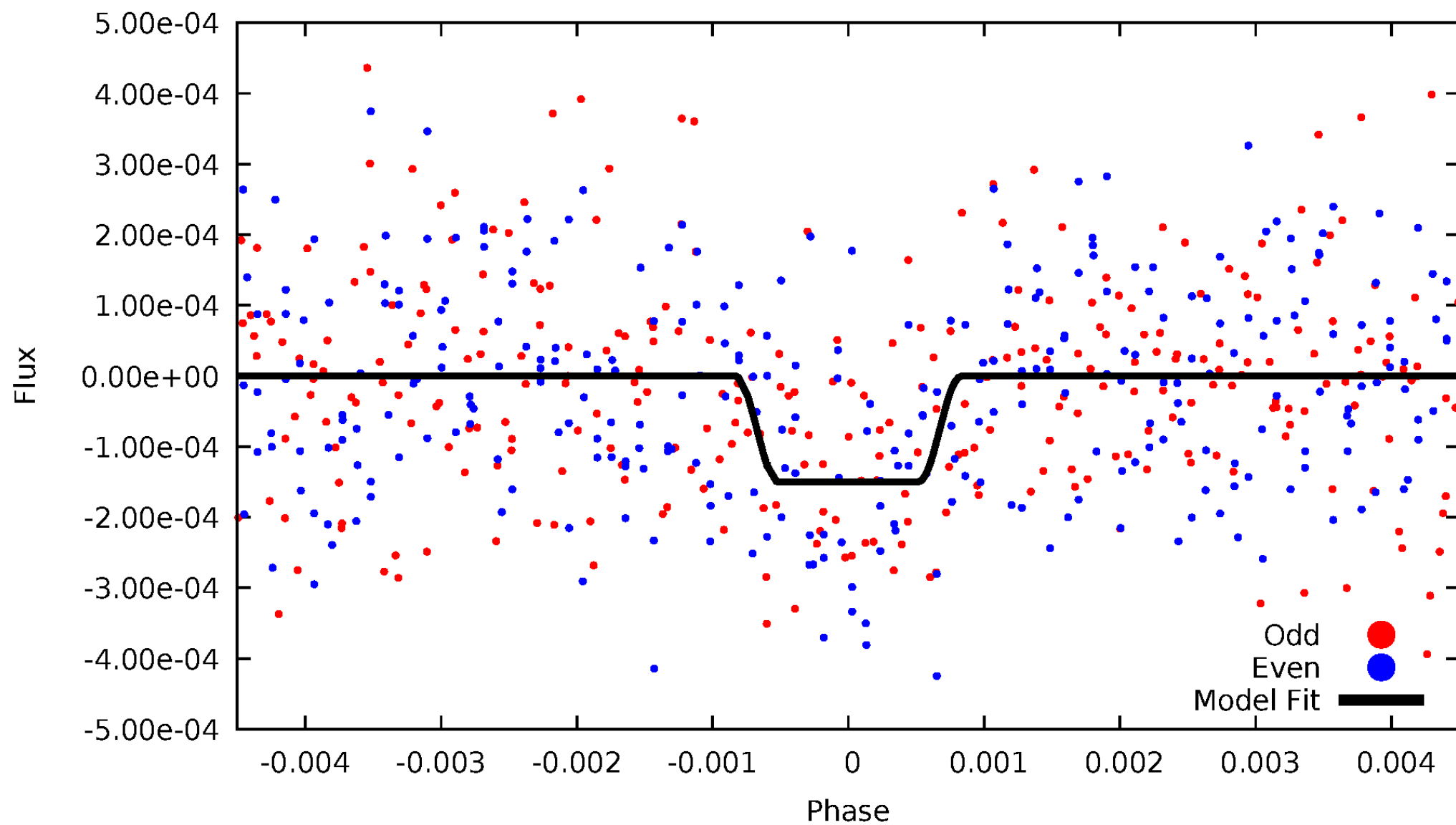
DV Odd/Even

TCE 008807057-01



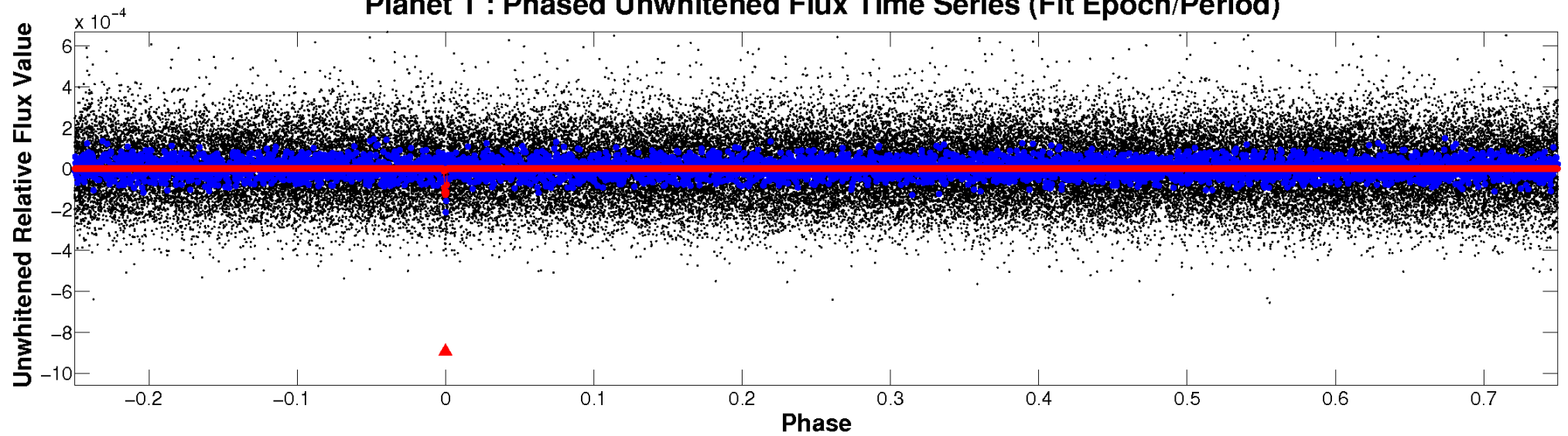
ALT Odd/Even

TCE 008807057-01

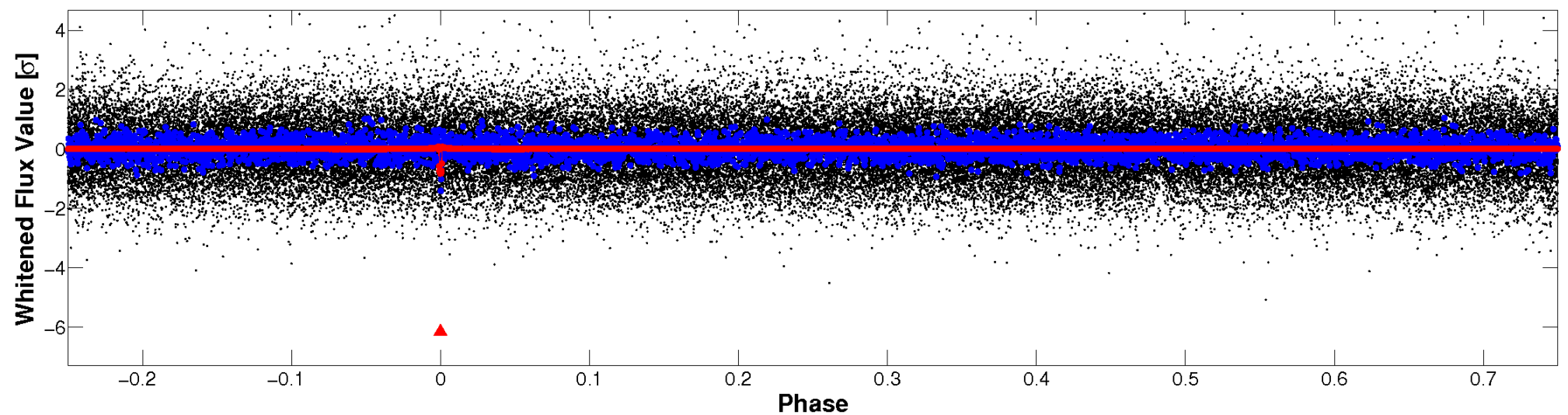


Non-Whitened Vs. Whitened Light Curve

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

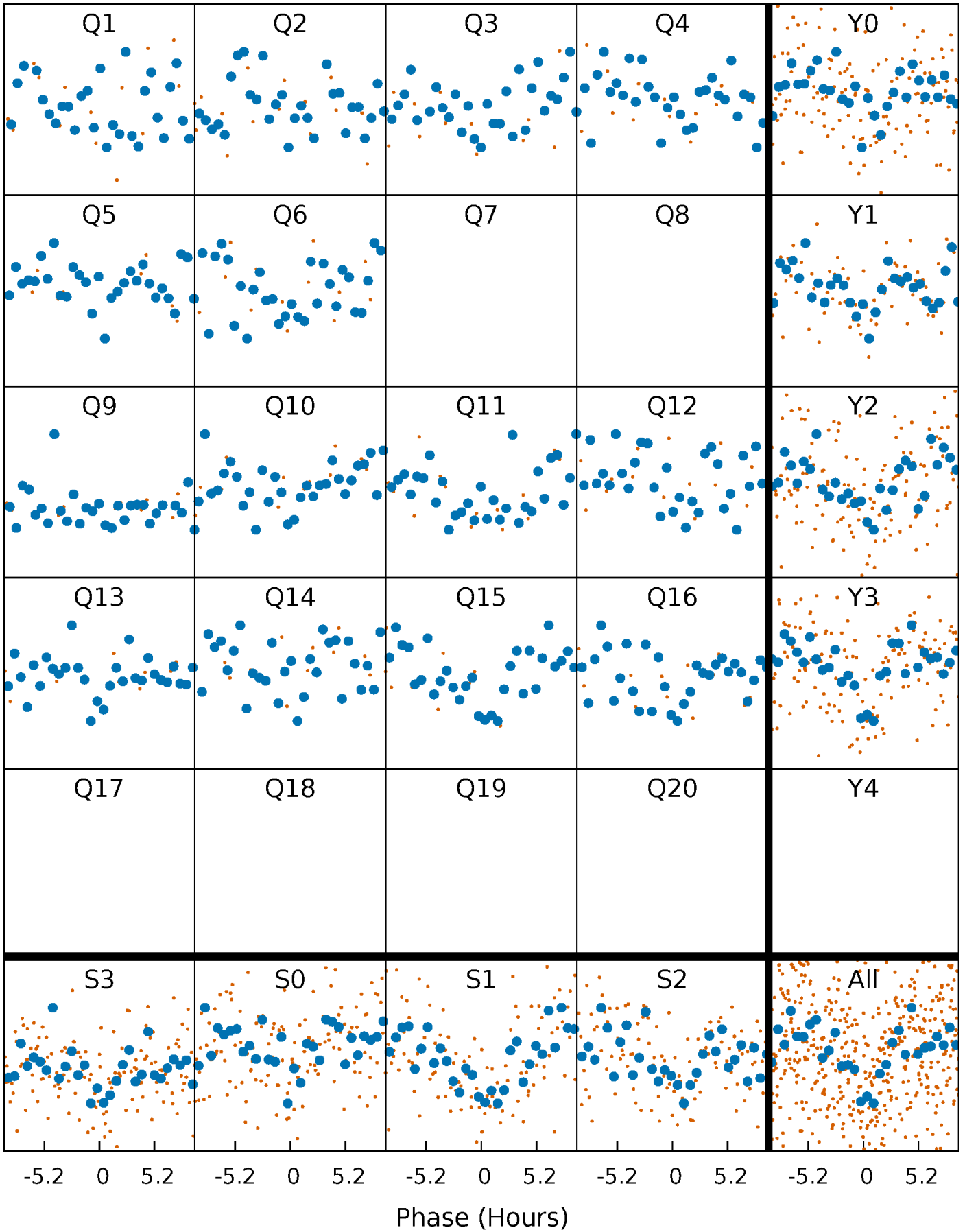


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



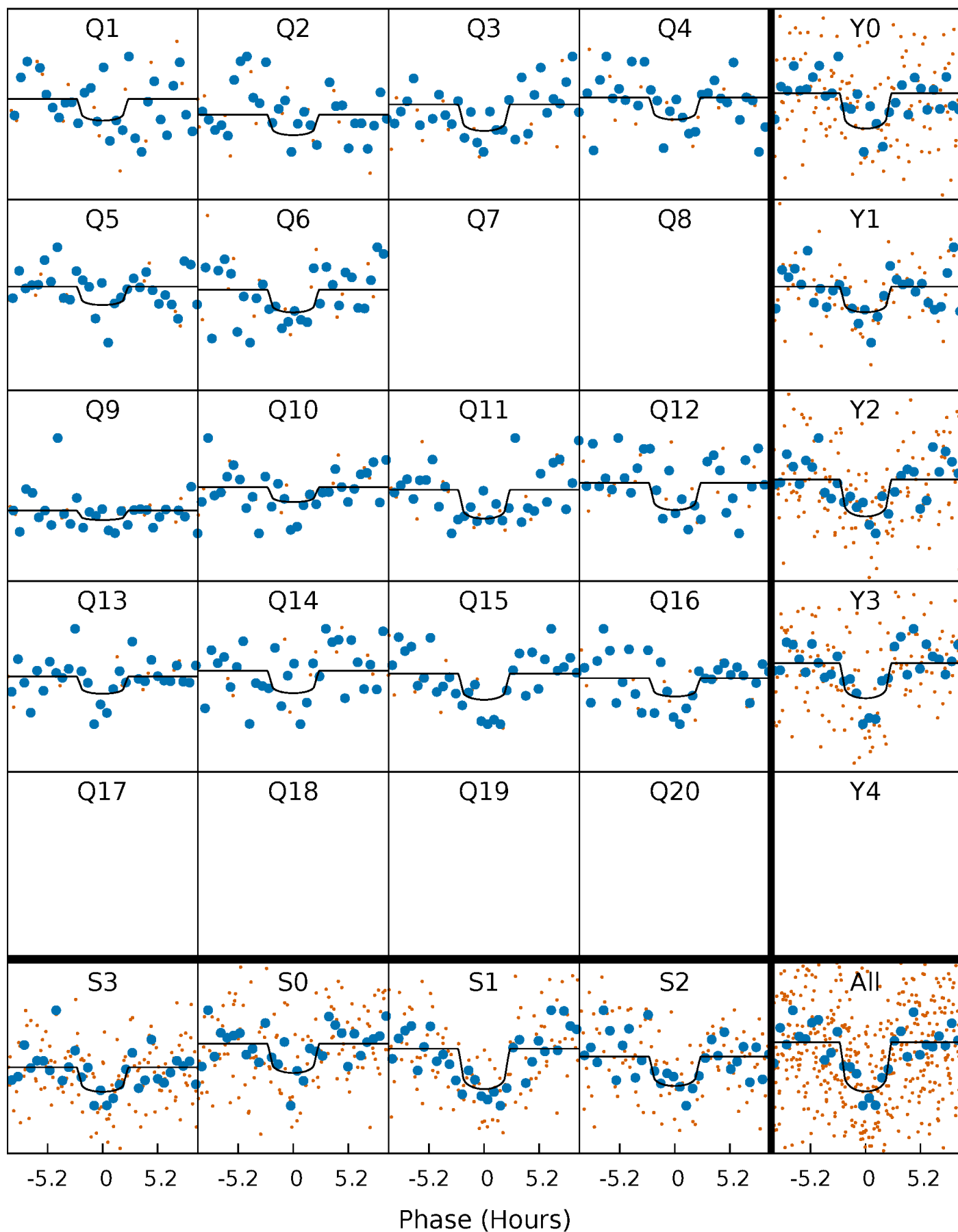
PDC Quarter-Phased Transit Curves

TCE 008807057-01 P= 97.991186 Days $T_0=134.672131$ (BKJD)



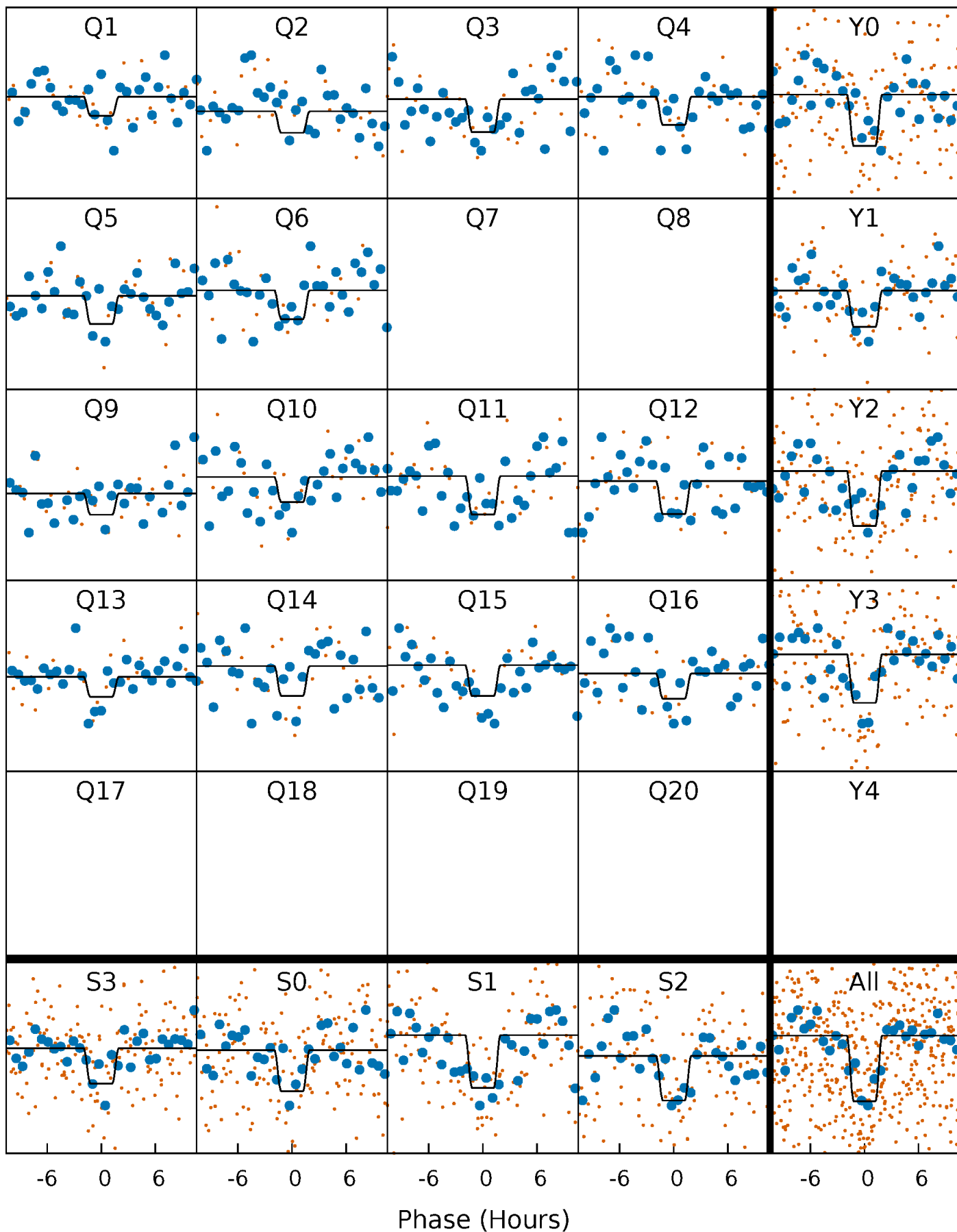
DV Quarter-Phased Transit Curves

TCE 008807057-01 P= 97.991186 Days $T_0=134.672131$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

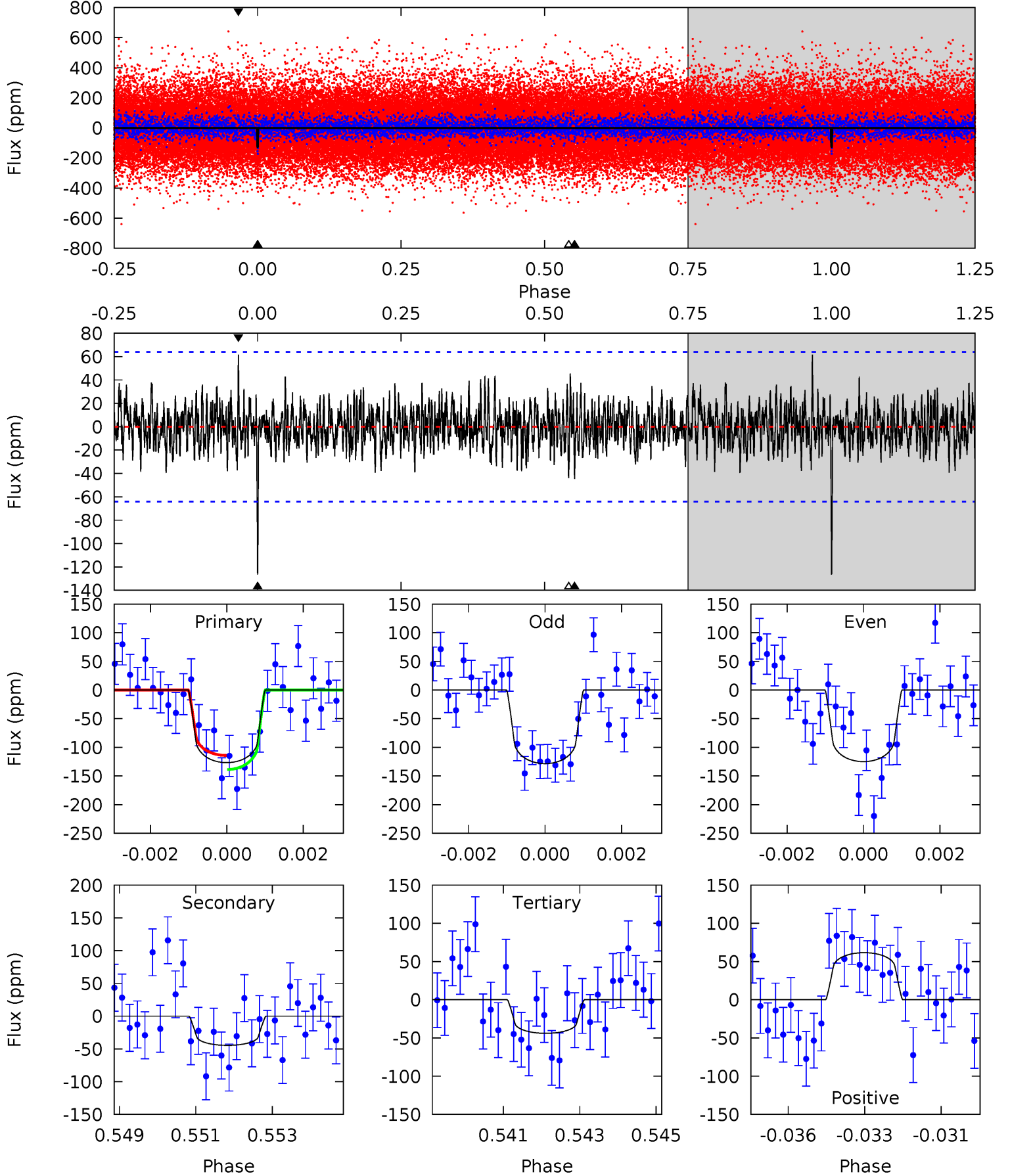
TCE 008807057-01 P= 97.992008 Days $T_0=134.677263$ (BKJD)



DV Model-Shift Uniqueness Test

008807057-01, P = 97.991186 Days, E = 36.680945 Days

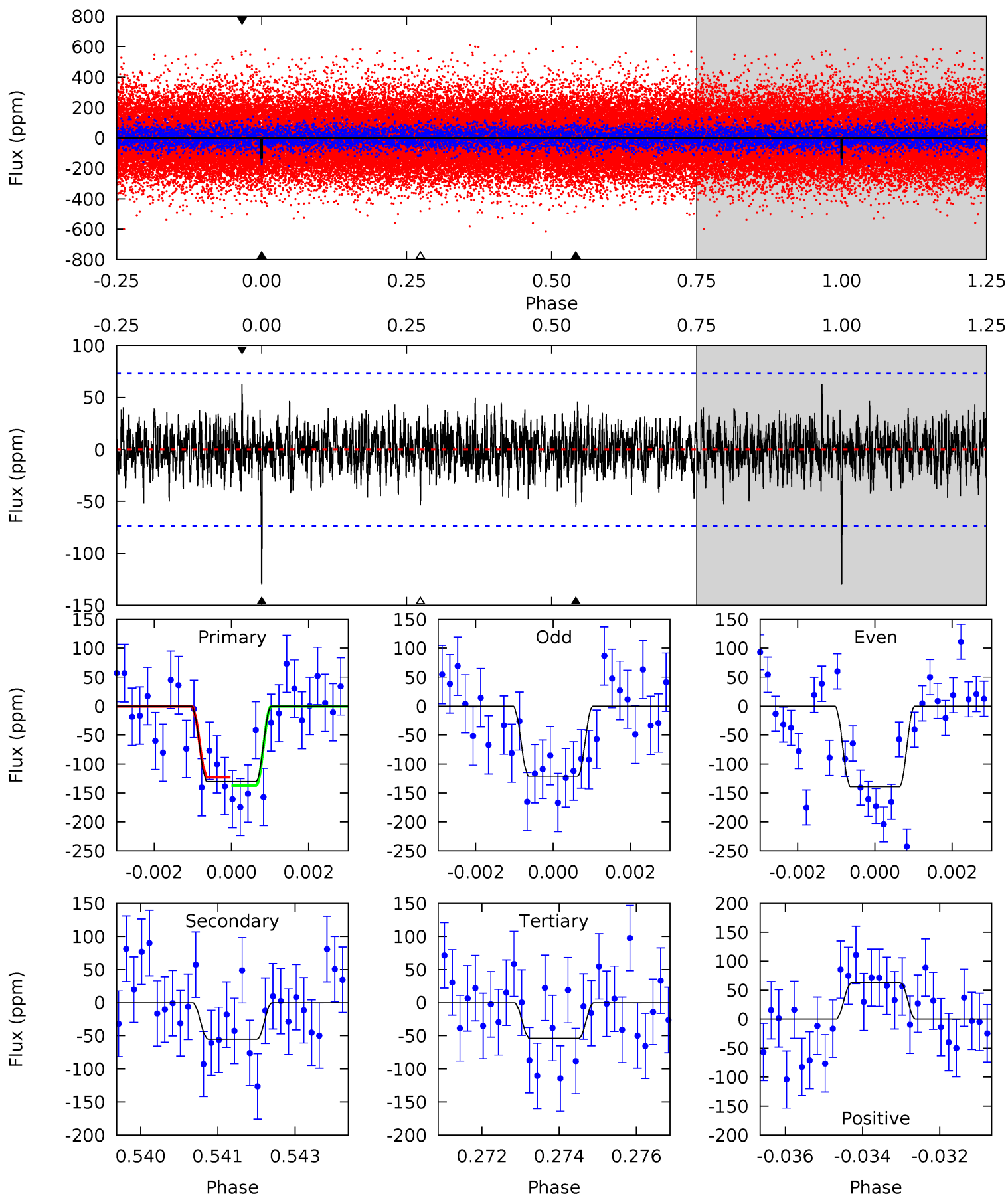
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.70	3.64	5.11	5.32	3.08	1.19	6.87	5.40	0.06	-1.41	0.14	0.92	0.33	1.02



Alt Model-Shift Uniqueness Test

008807057-01, P = 97.992008 Days, E = 36.685255 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	4.02	3.94	4.58	5.36	3.15	1.16	5.56	4.92	0.08	-0.56	0.66	0.93	0.33	0.53



Stellar Parameters For KIC 008807057

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6499^{+144}_{-208}	$4.378^{+0.067}_{-0.216}$	$-0.100^{+0.250}_{-0.300}$	$1.169^{+0.389}_{-0.130}$	$1.191^{+0.185}_{-0.152}$	$1.050^{+0.317}_{-0.580}$
	+2%/-3%	+2%/-5%	+250%/-300%	+33%/-11%	+16%/-13%	+30%/-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 008807057-01 / KOI 7093.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-45 ± 12	$1.62^{+1.11}_{-0.92}$	662^{+46}_{-32}	4877^{+2686}_{-900}	1701^{+8102}_{-1137}
Alt.	-55 ± 14	$1.70^{+1.14}_{-1.02}$	661^{+52}_{-33}	4957^{+2811}_{-840}	1934^{+9673}_{-1257}

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 $A_{\text{obs}} \gg 1.0$

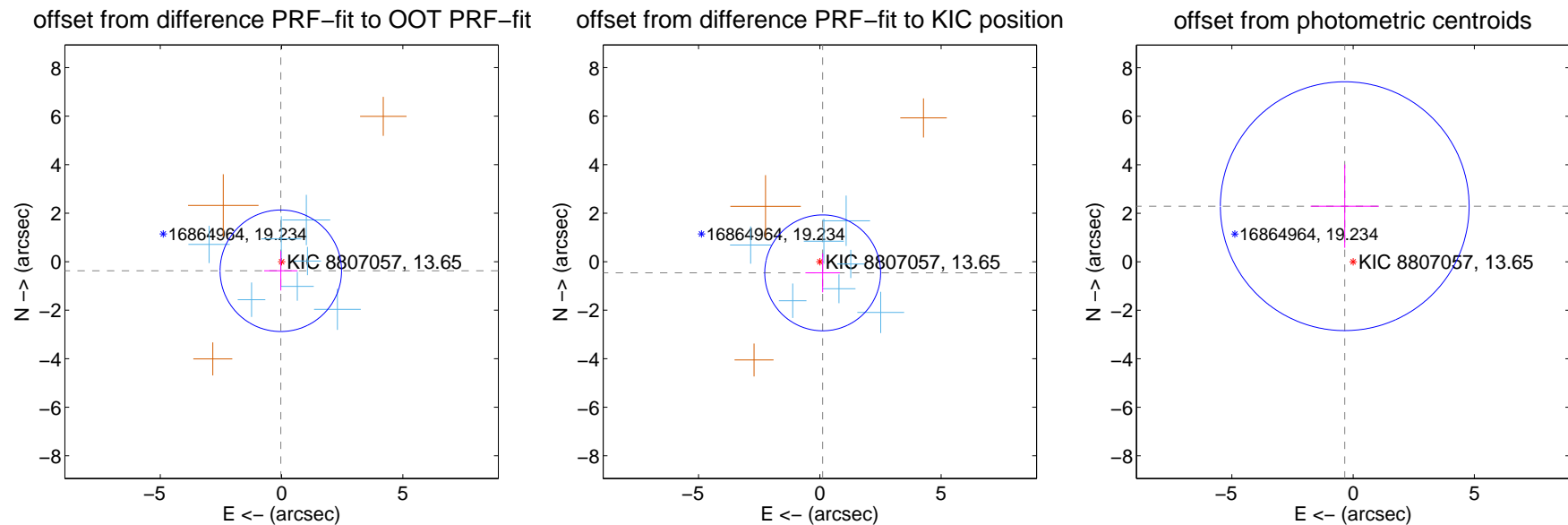
DV Centroid Data

Supplemental centroid analysis for 008807057-01. Kepler magnitude: 13.65. Transit SNR 8.24

There are 7 quarters with good PRF difference image offsets

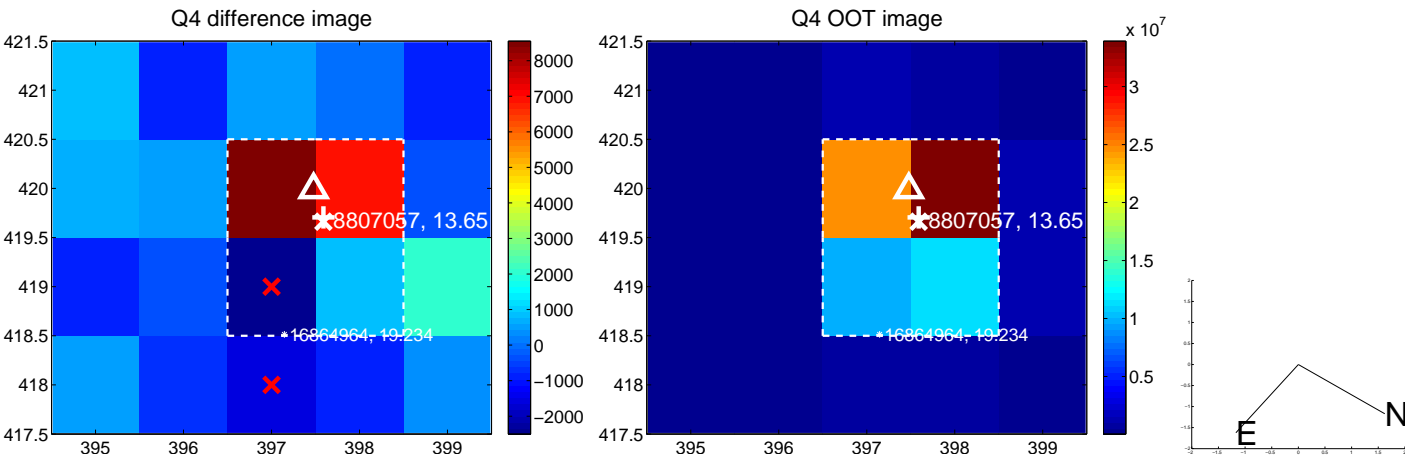
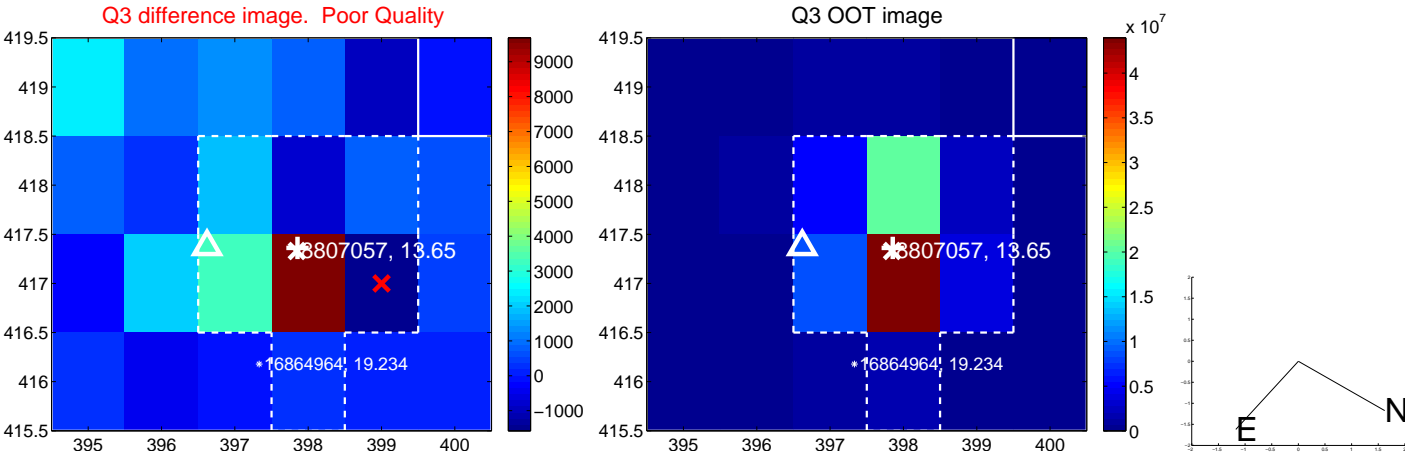
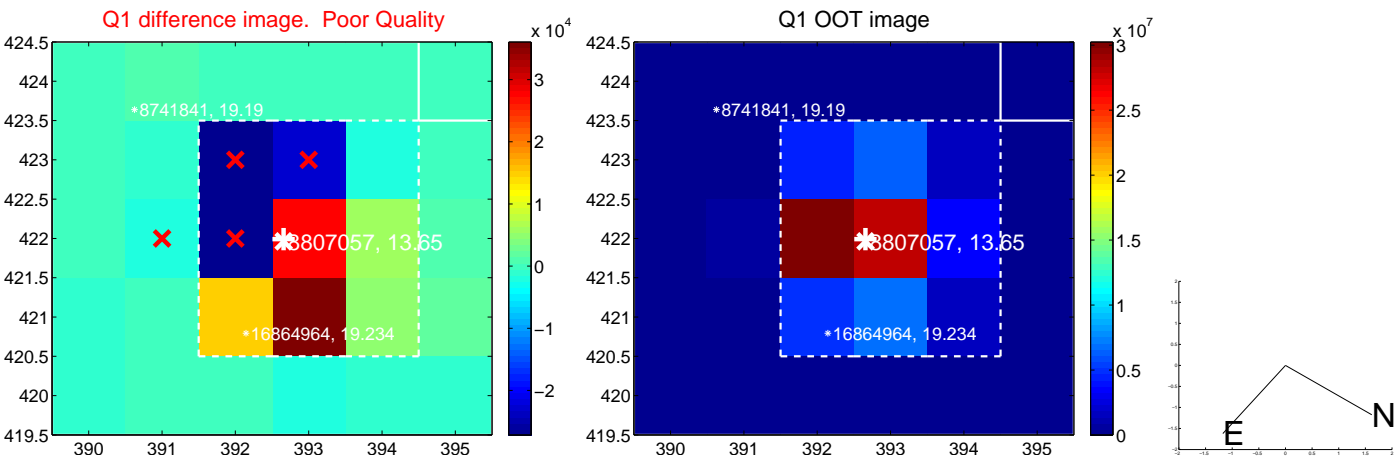
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.375 ± 0.835	0.45	0.032 ± 0.684	-0.374 ± 0.811
PRF-fit source offset from KIC position	0.474 ± 0.796	0.60	-0.117 ± 0.711	-0.460 ± 0.801
photometric centroid source offset	2.32 ± 1.71	1.36	0.35 ± 1.41	2.29 ± 1.72

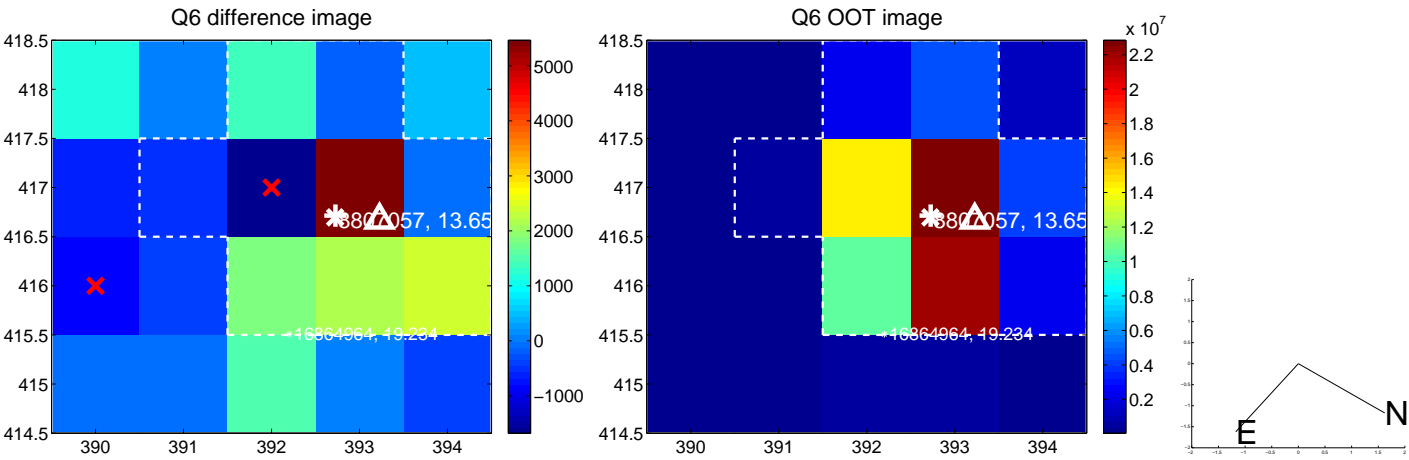
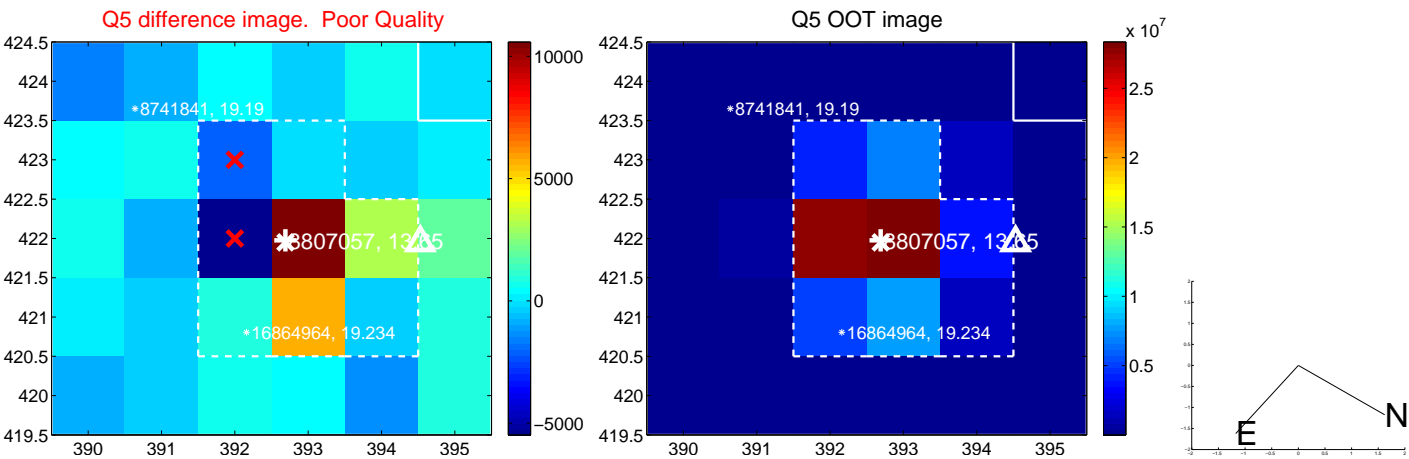


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

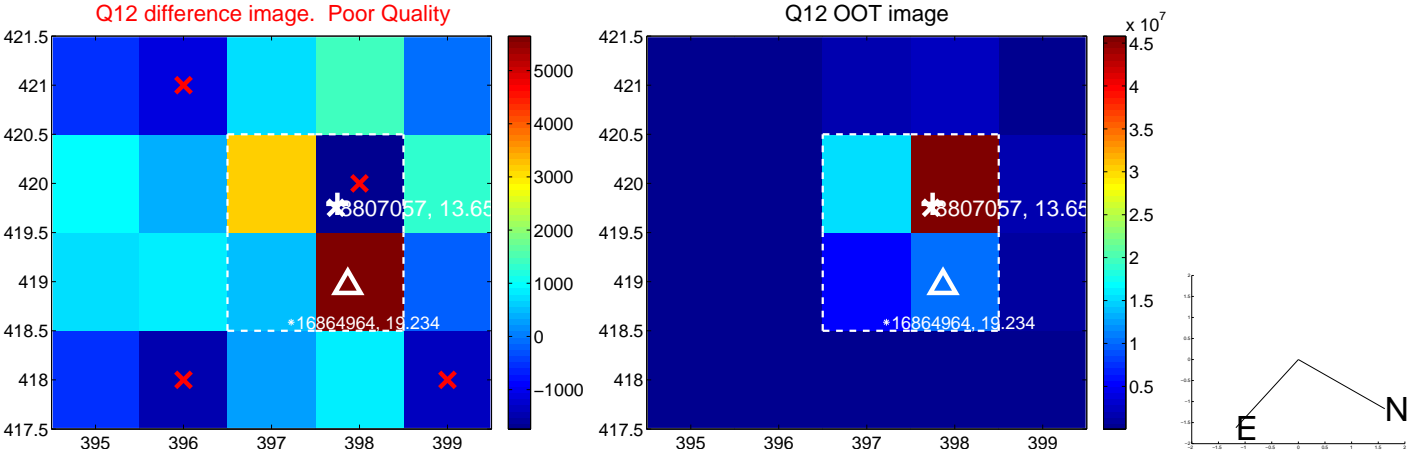
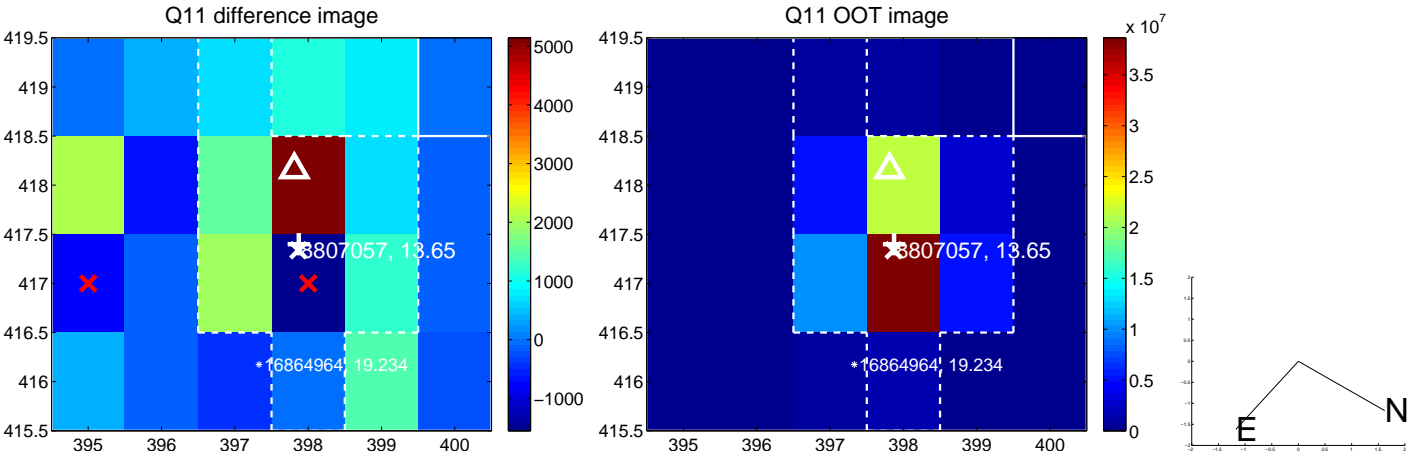
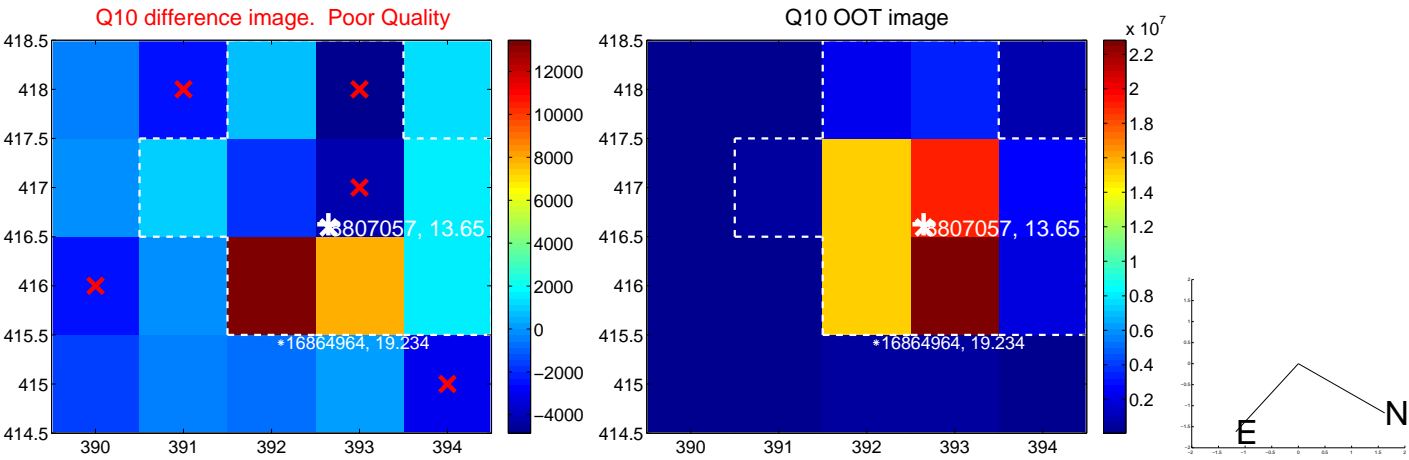
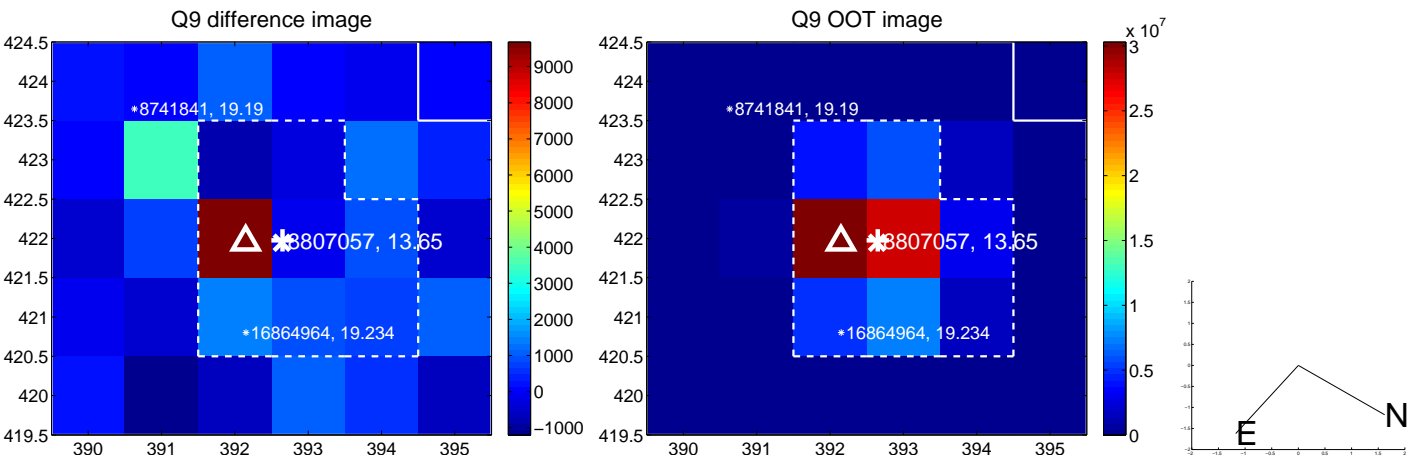
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



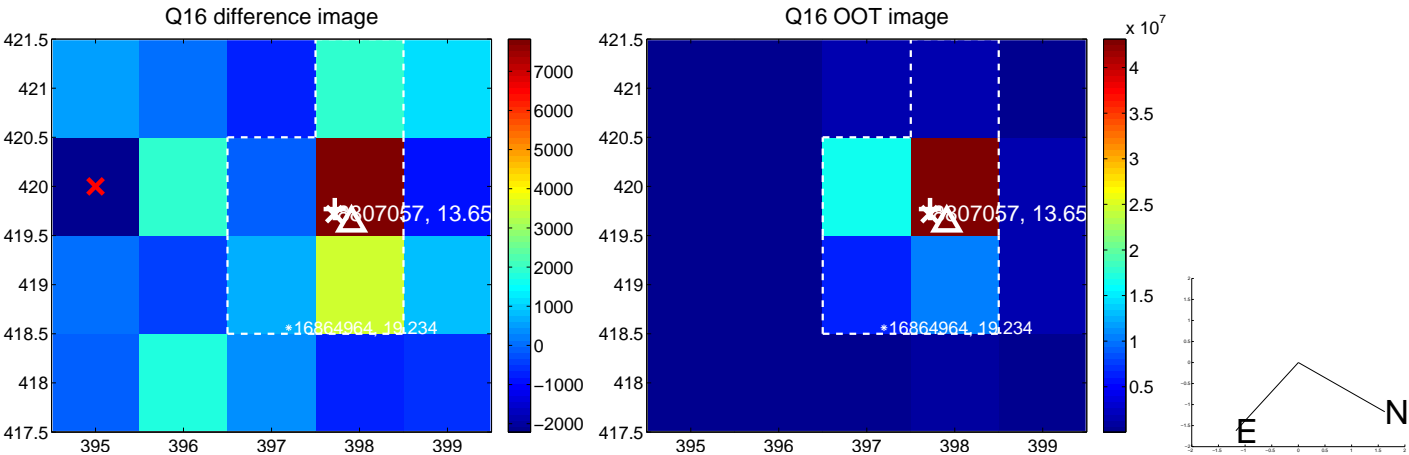
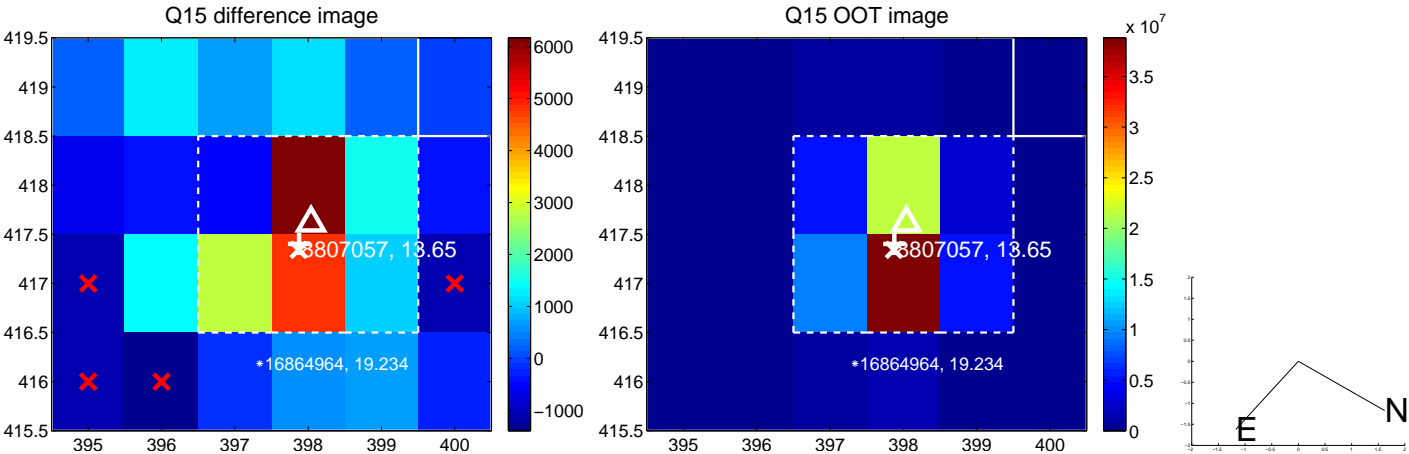
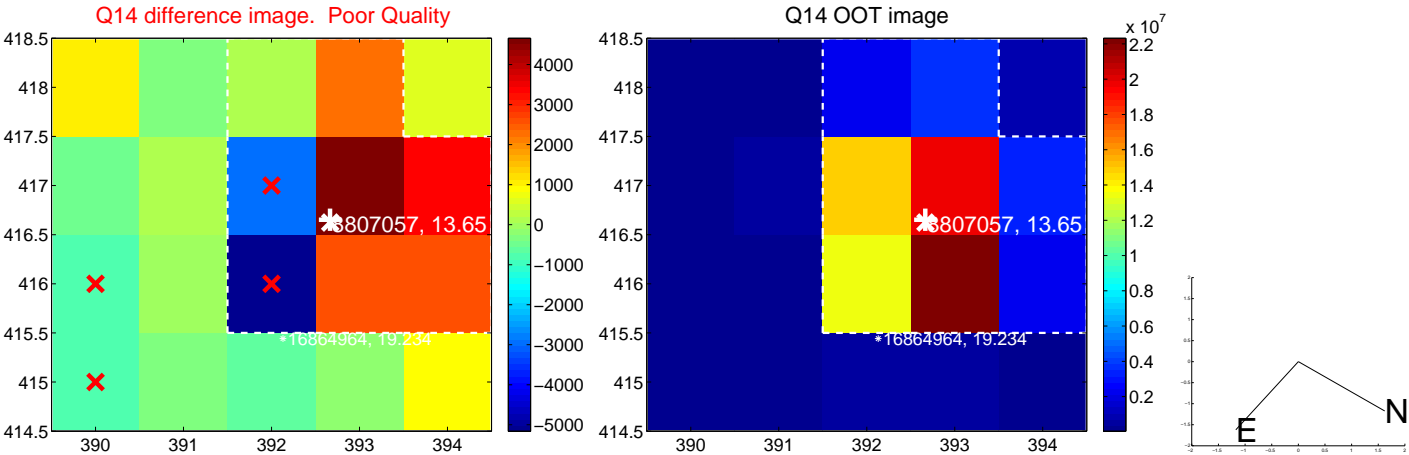
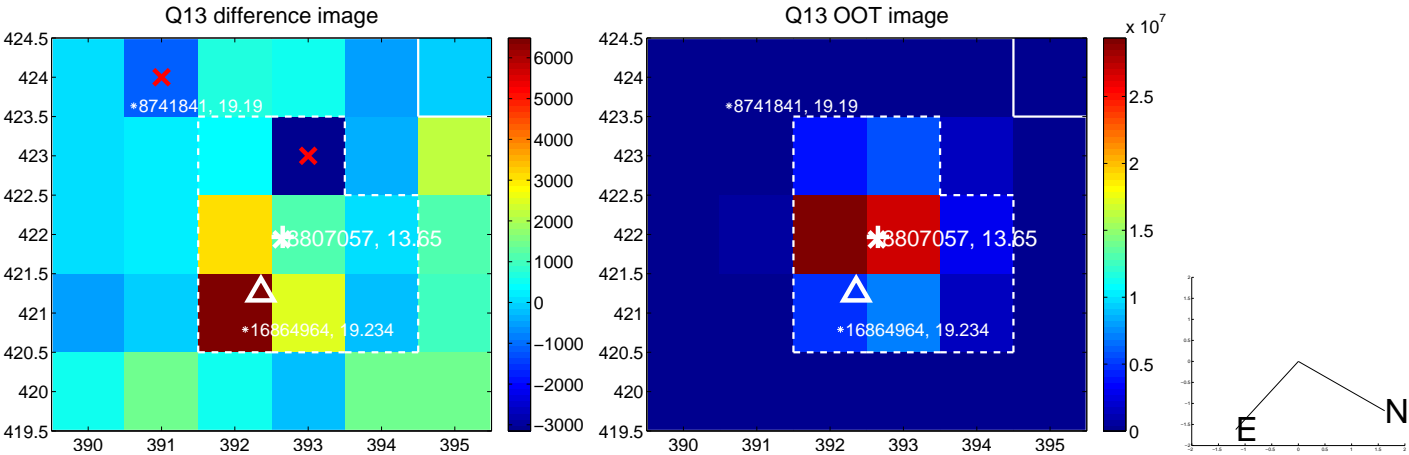
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



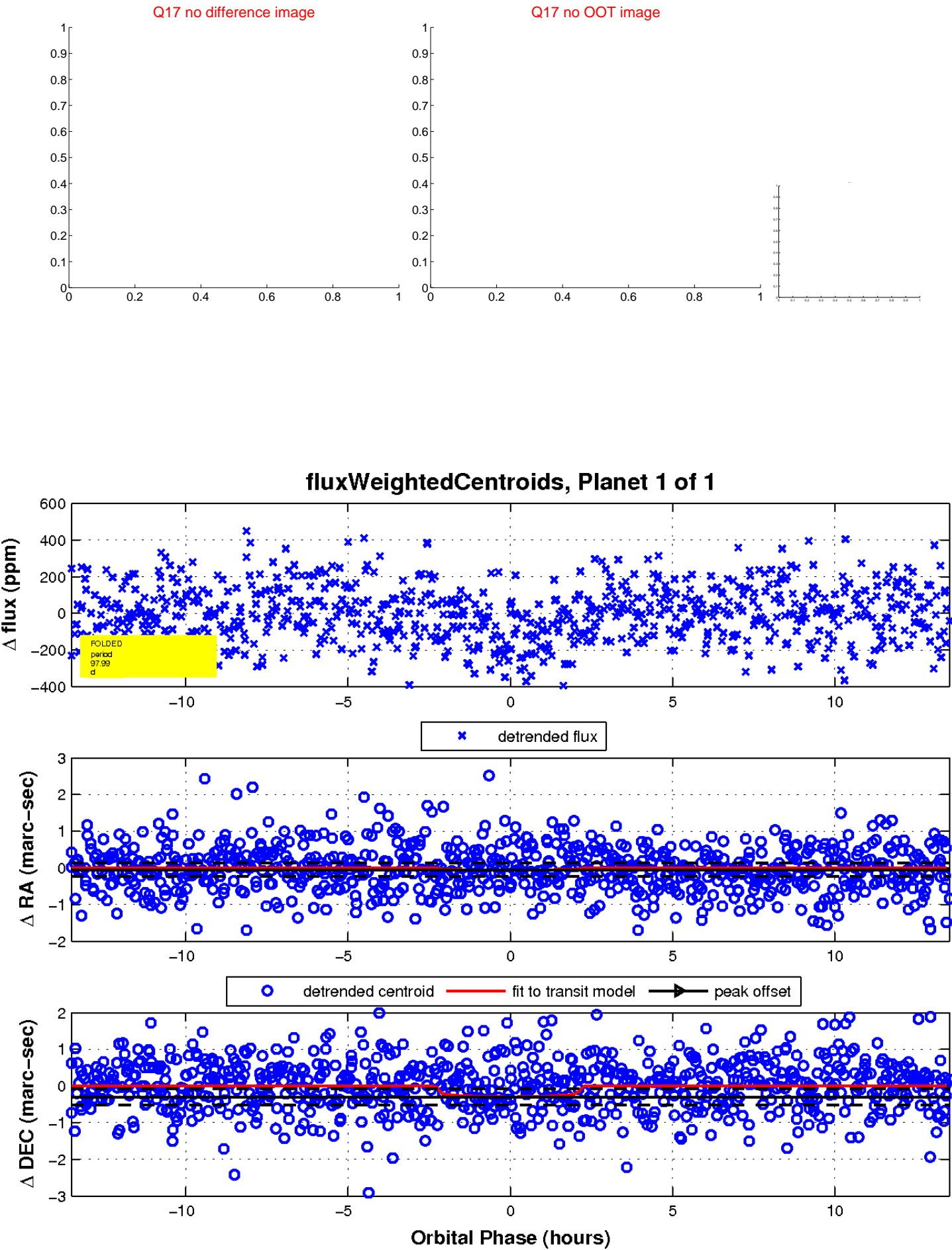
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

