

KIC 009597806

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})
009597806-01	OBS	1481.01	5.101361	133.023821	873.8	2.720	46.0	50.6	0.95	5869	3.13	287.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009597806-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

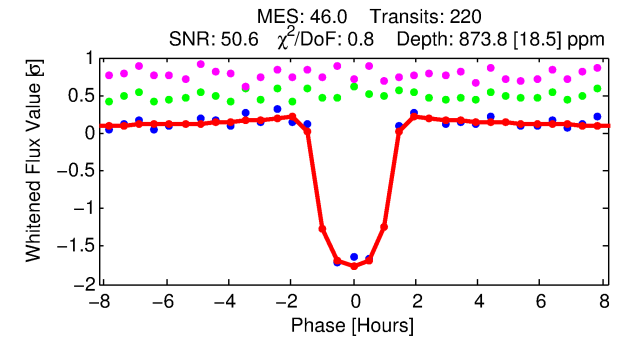
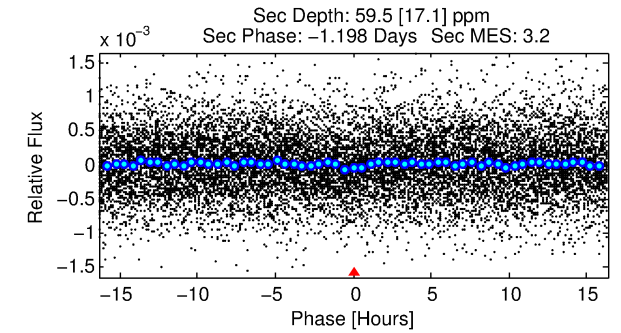
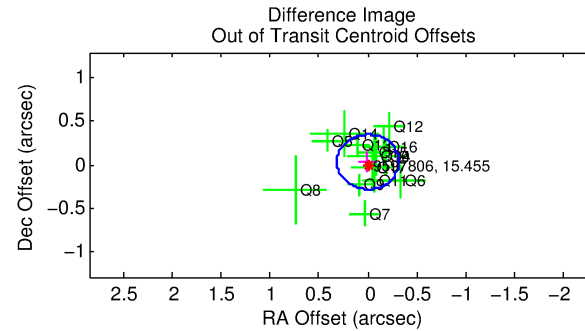
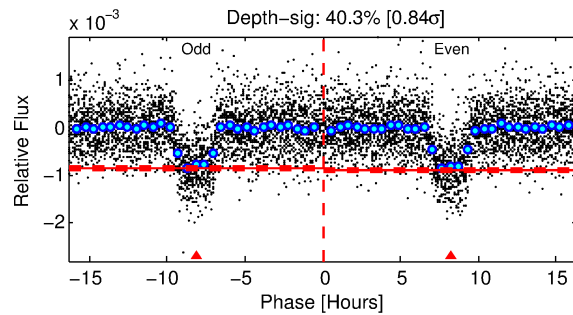
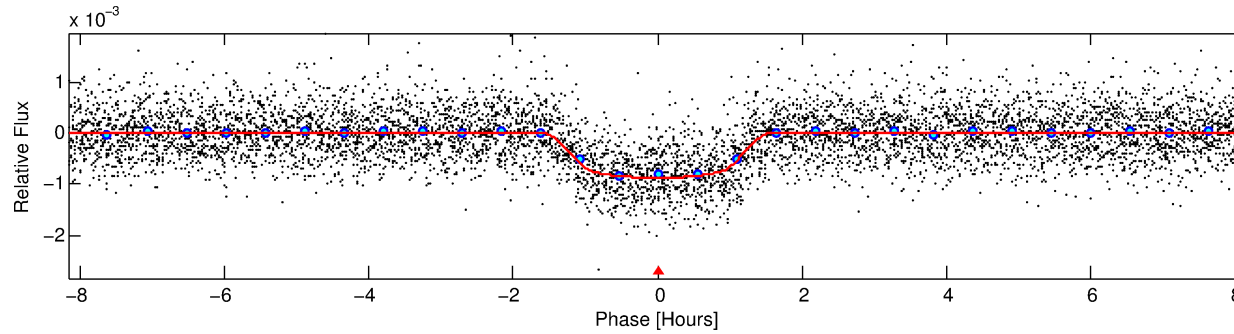
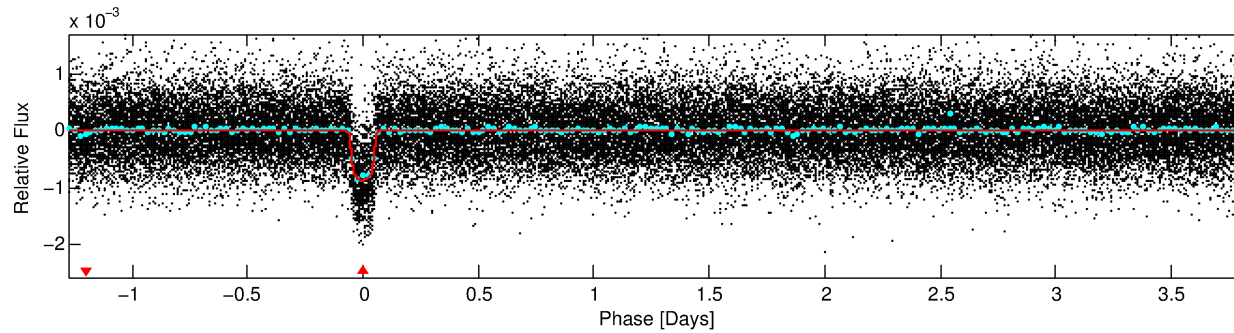
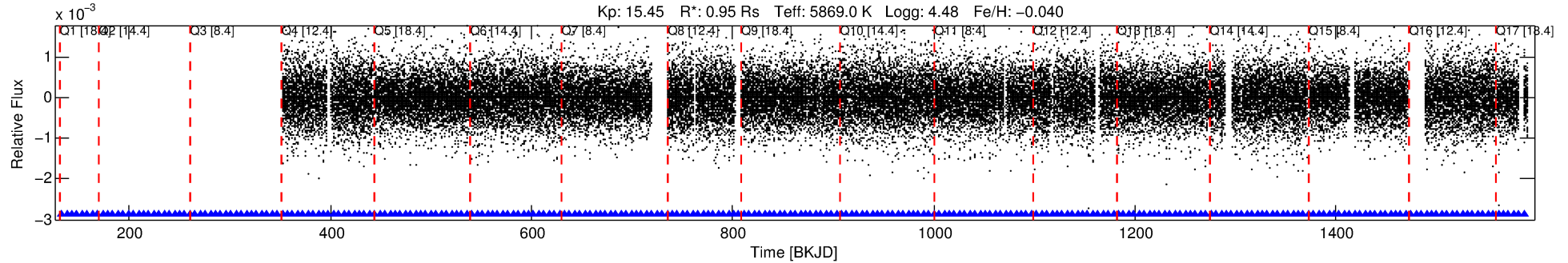
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009597806-01

No Significant Match Found

DV One-Page Summary

KIC: 9597806 Candidate: 1 of 1 Period: 5.101 d
KOI: K01481.01 Corr: 0.976



DV Fit Results:

Period = 5.10136 [0.00001] d
Epoch = 133.0238 [0.0010] BKJD
Rp/R* = 0.0301 [0.0041]
a/R* = 9.33 [5.70]
b = 0.80 [0.28]
Seff = 287.48 [114.54]
Teq = 1050 [105] K
Rp = 3.13 [1.06] Re
a = 0.0580 [0.0150] AU
Ag = 11.23 [6.09] [1.68 σ]
Teffp = 2972 [310] K [5.87 σ]

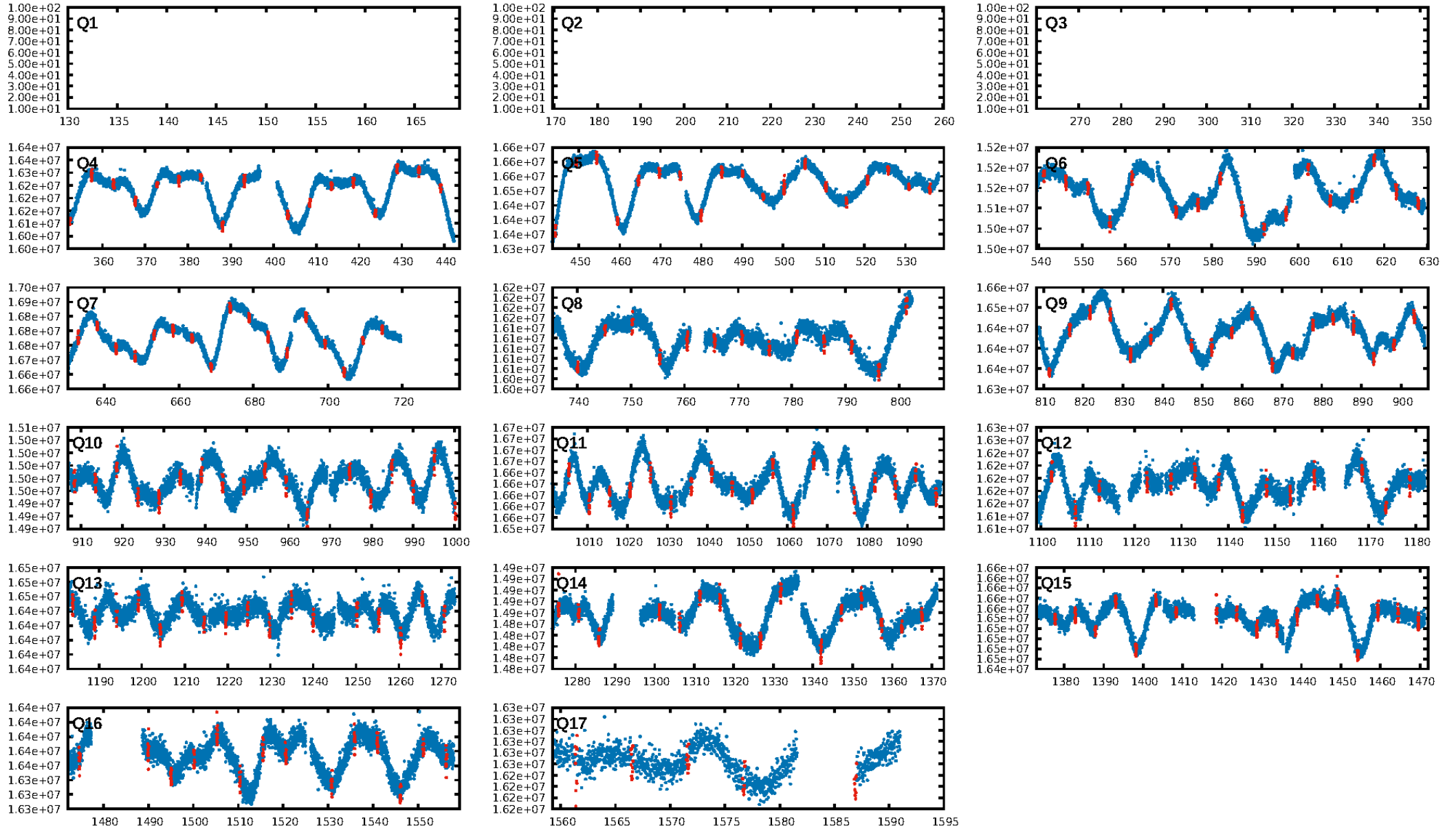
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [215/215]
GhostDiagnostic-chr: 3.165
Centroid-sig: 3.6%
Centroid-so: 0.567 arcsec [2.03 σ]
OotOffset-rm: 0.032 arcsec [0.30 σ]
KicOffset-rm: 0.077 arcsec [0.72 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

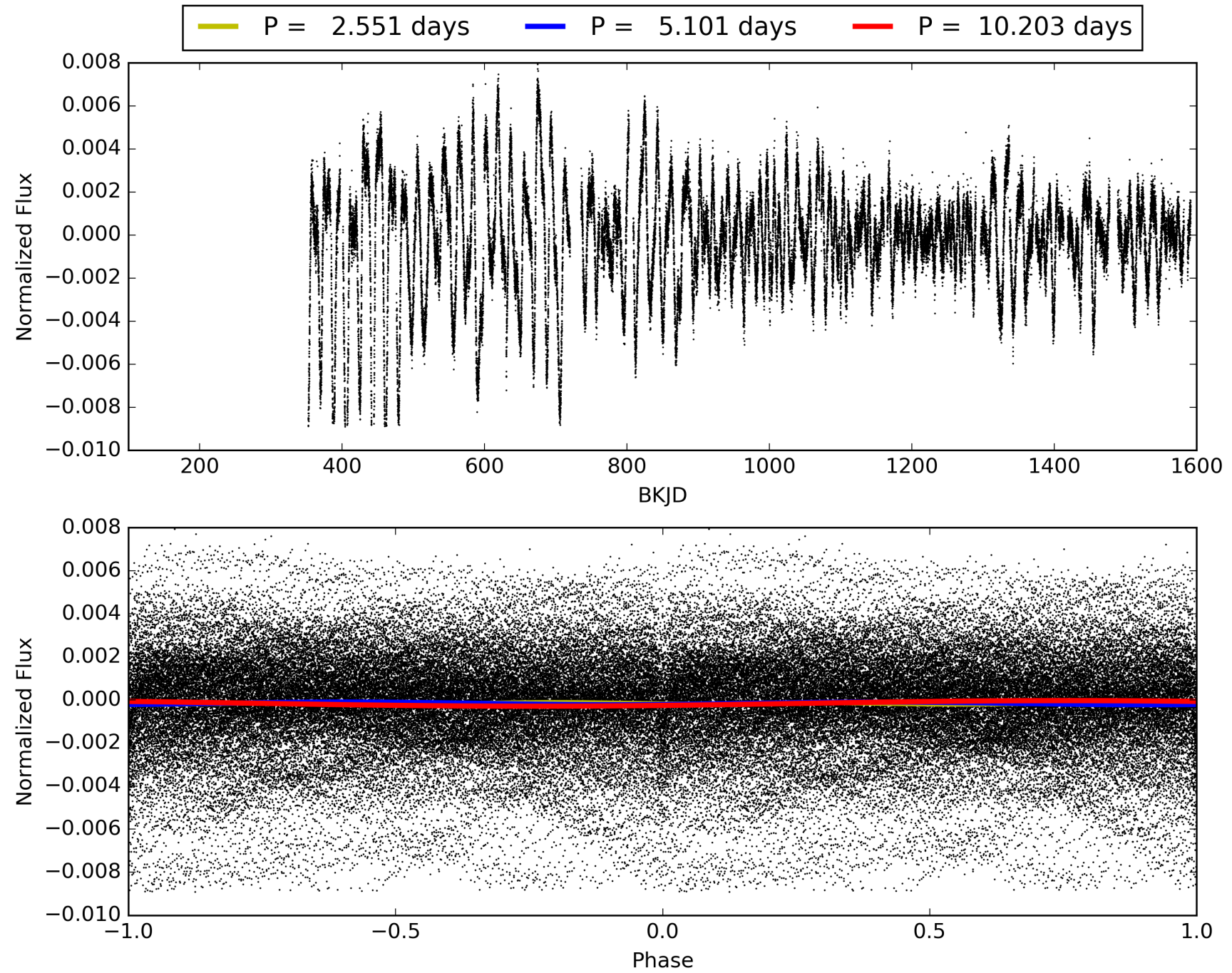
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:41:26 Z

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

TCE 009597806-01, PDC Light Curves

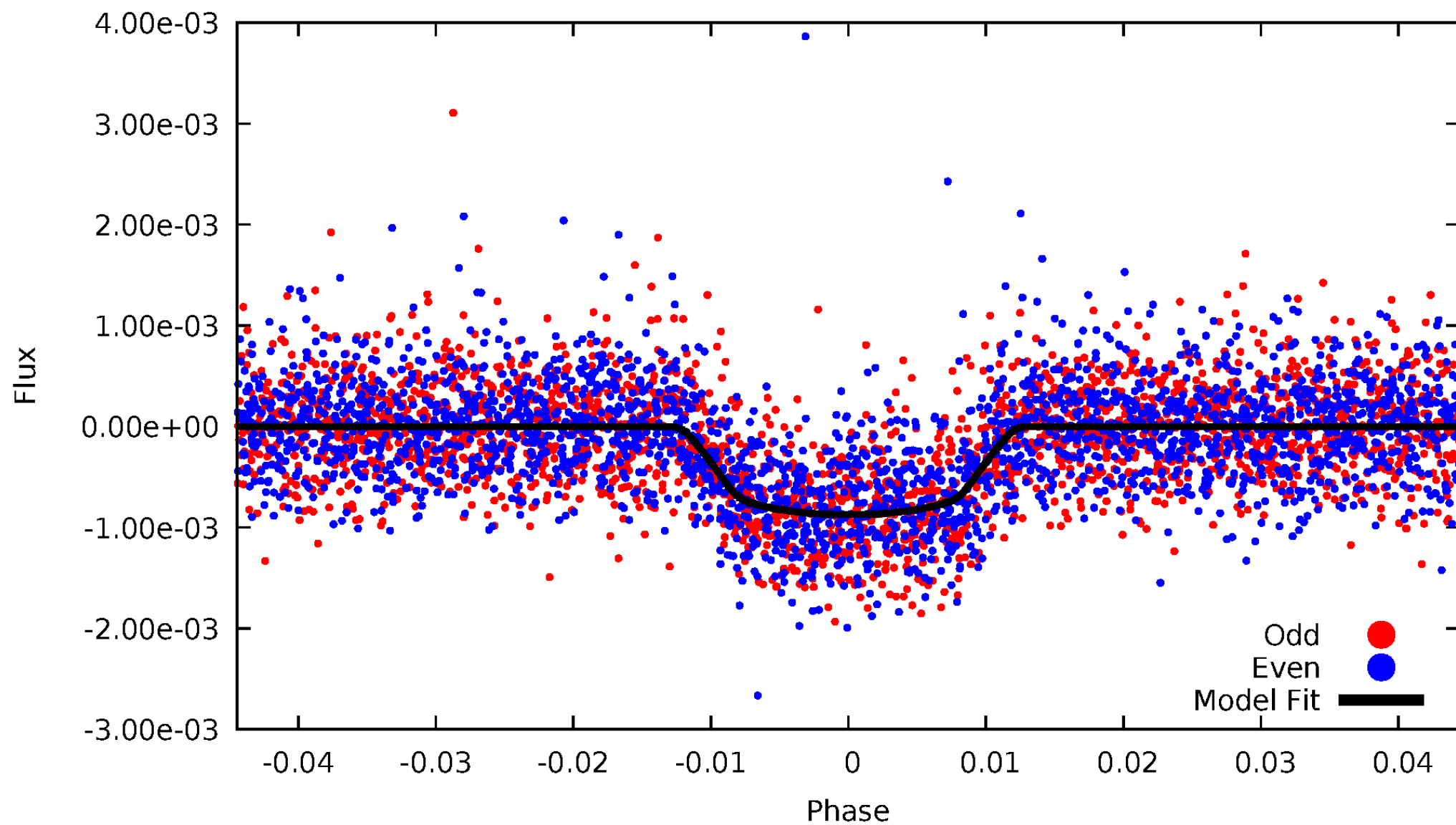


TCE 009597806-01



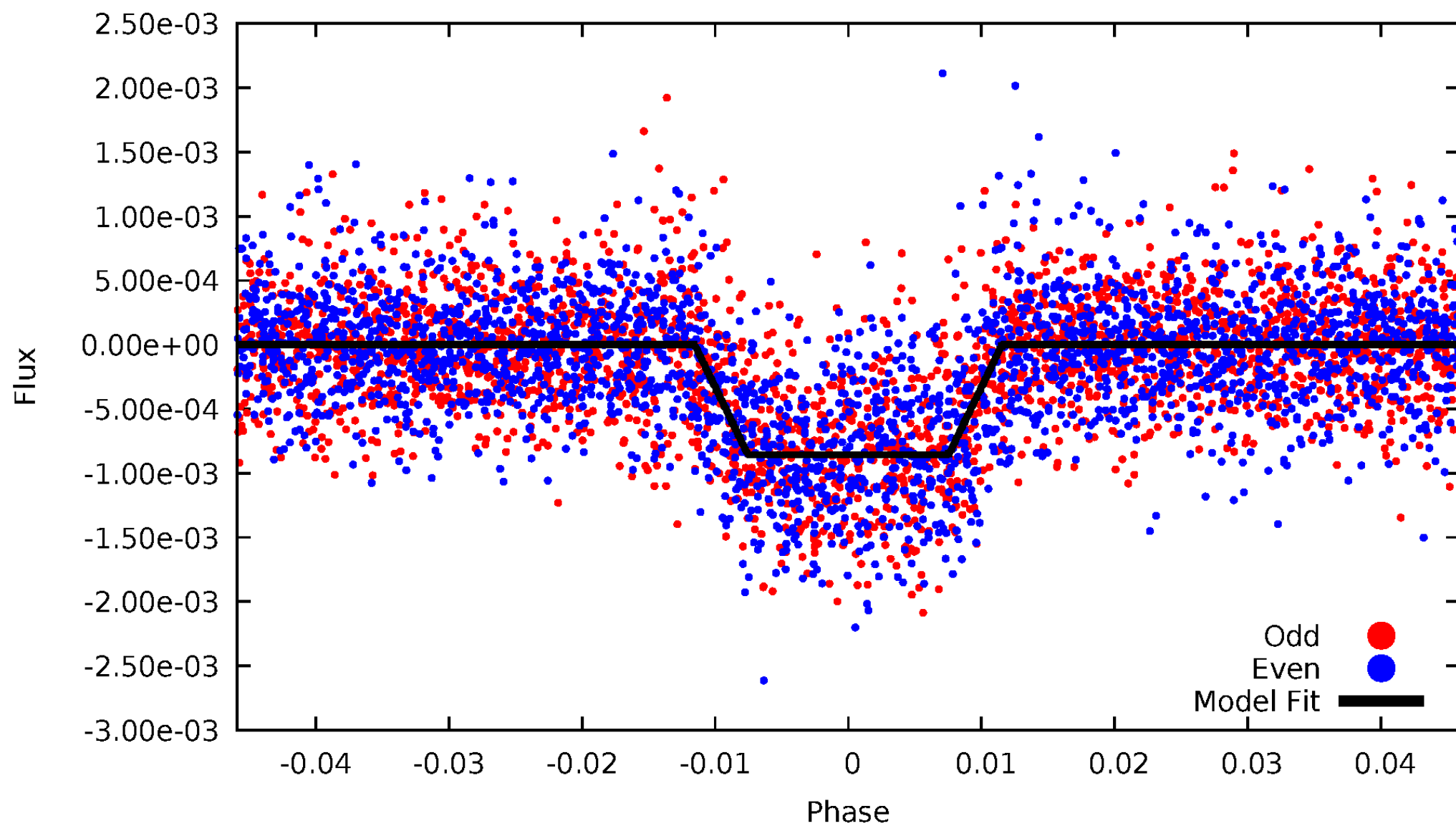
DV Odd/Even

TCE 009597806-01



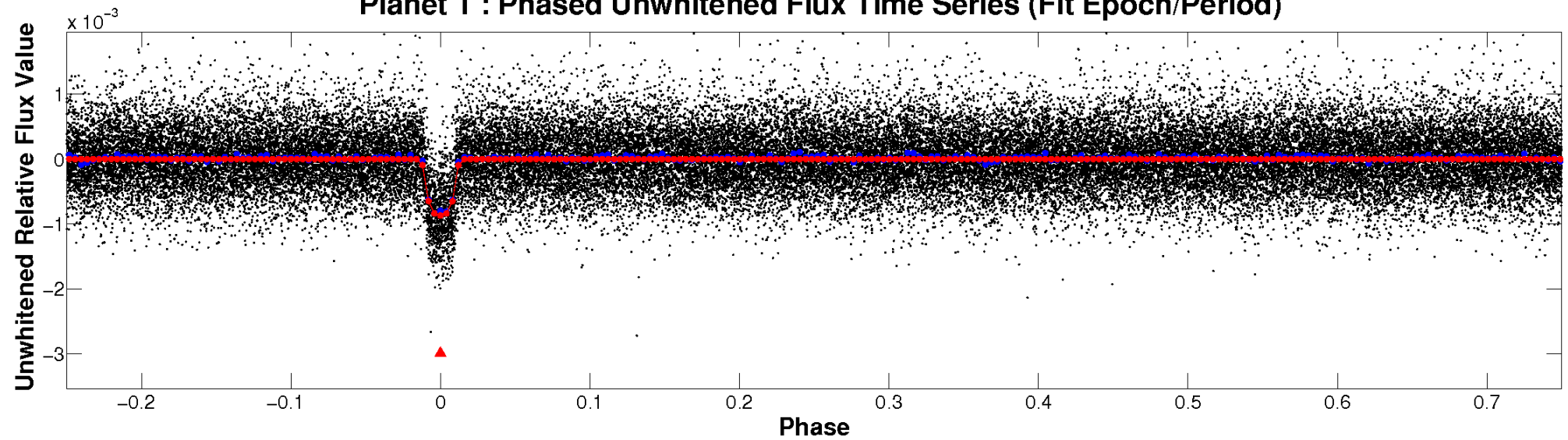
ALT Odd/Even

TCE 009597806-01

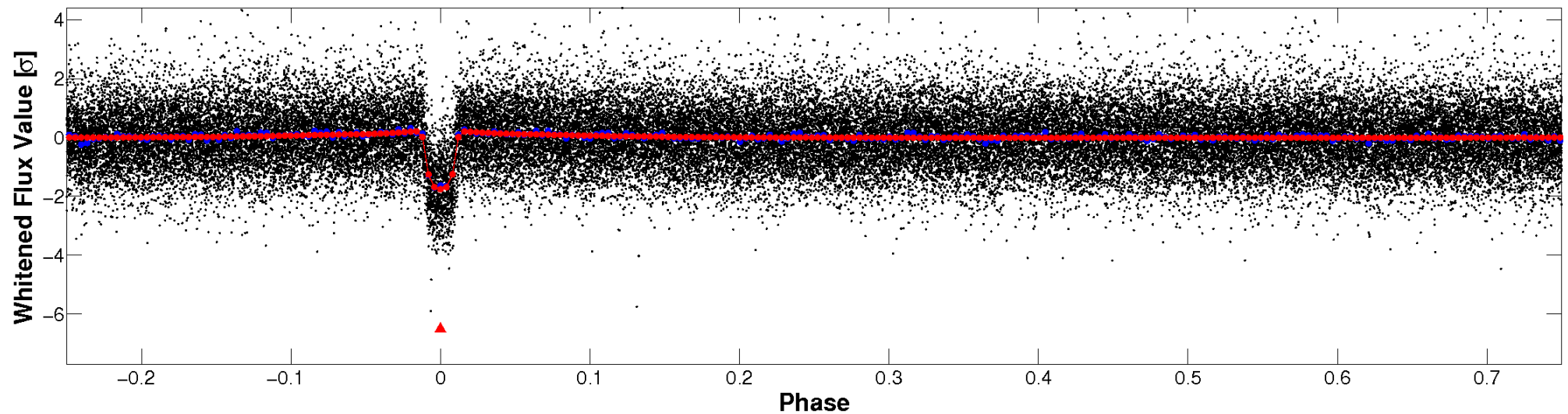


Non-Whitened Vs. Whitened Light Curve

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

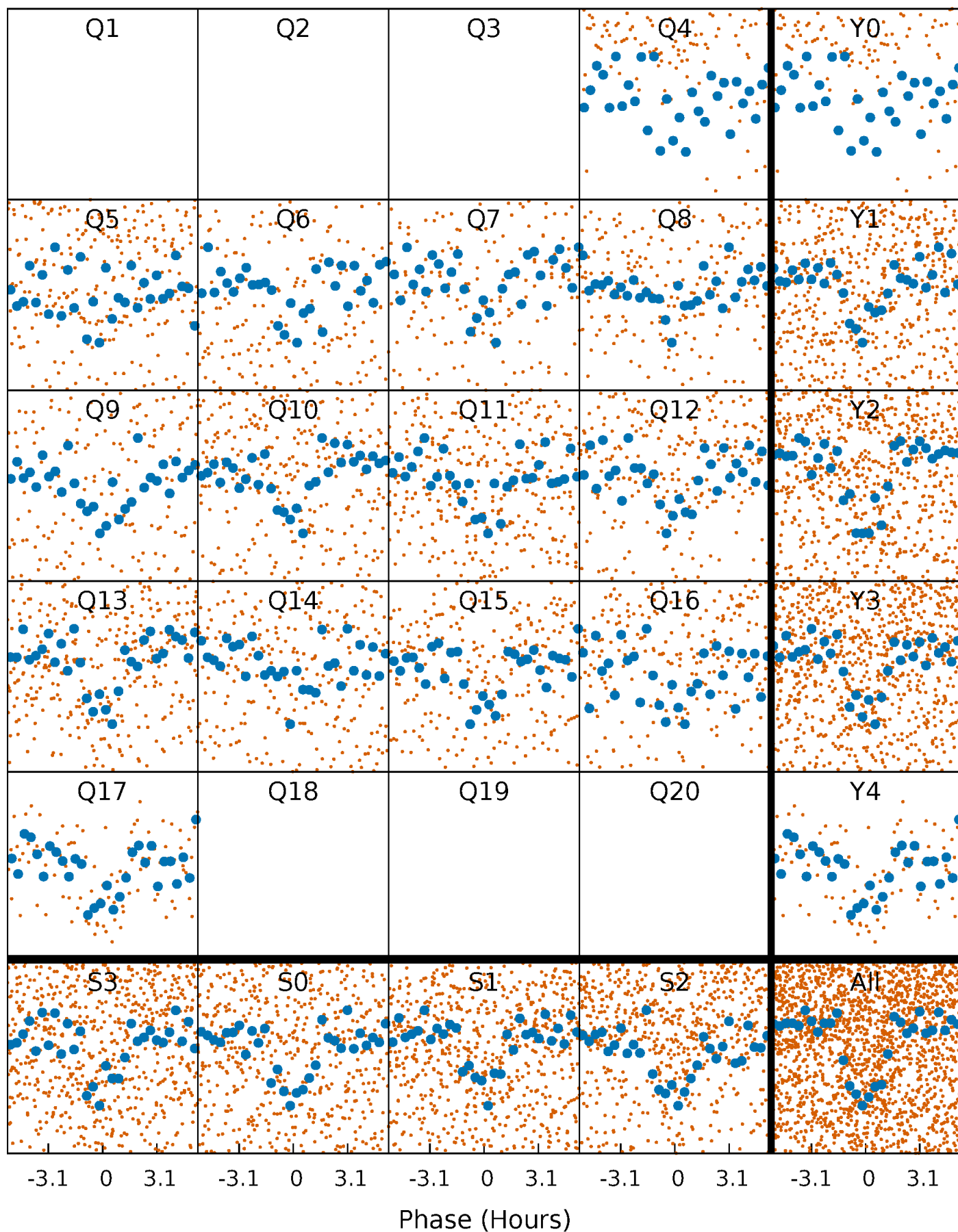


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



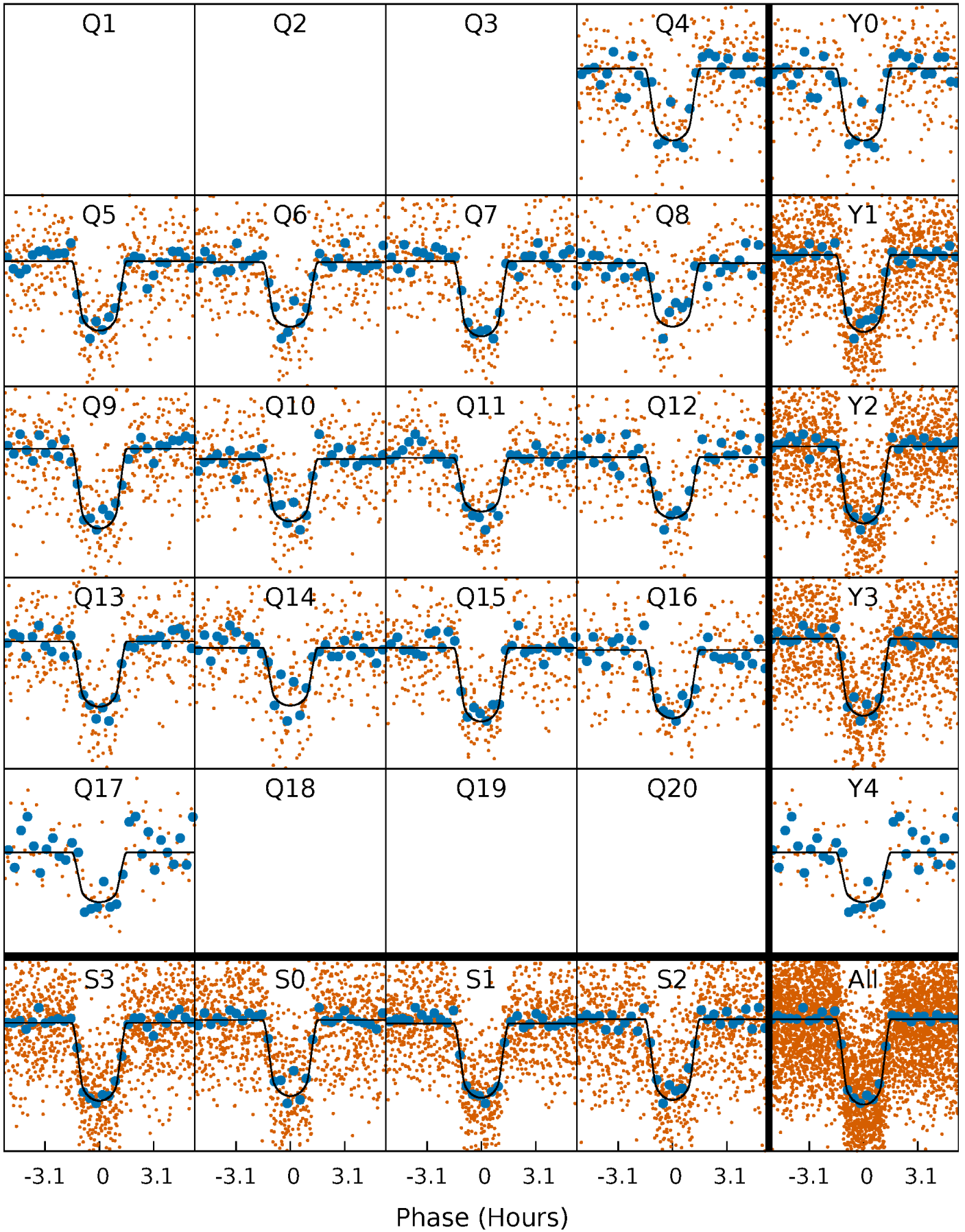
PDC Quarter-Phased Transit Curves

TCE 009597806-01 P= 5.101361 Days $T_0=133.023821$ (BKJD)



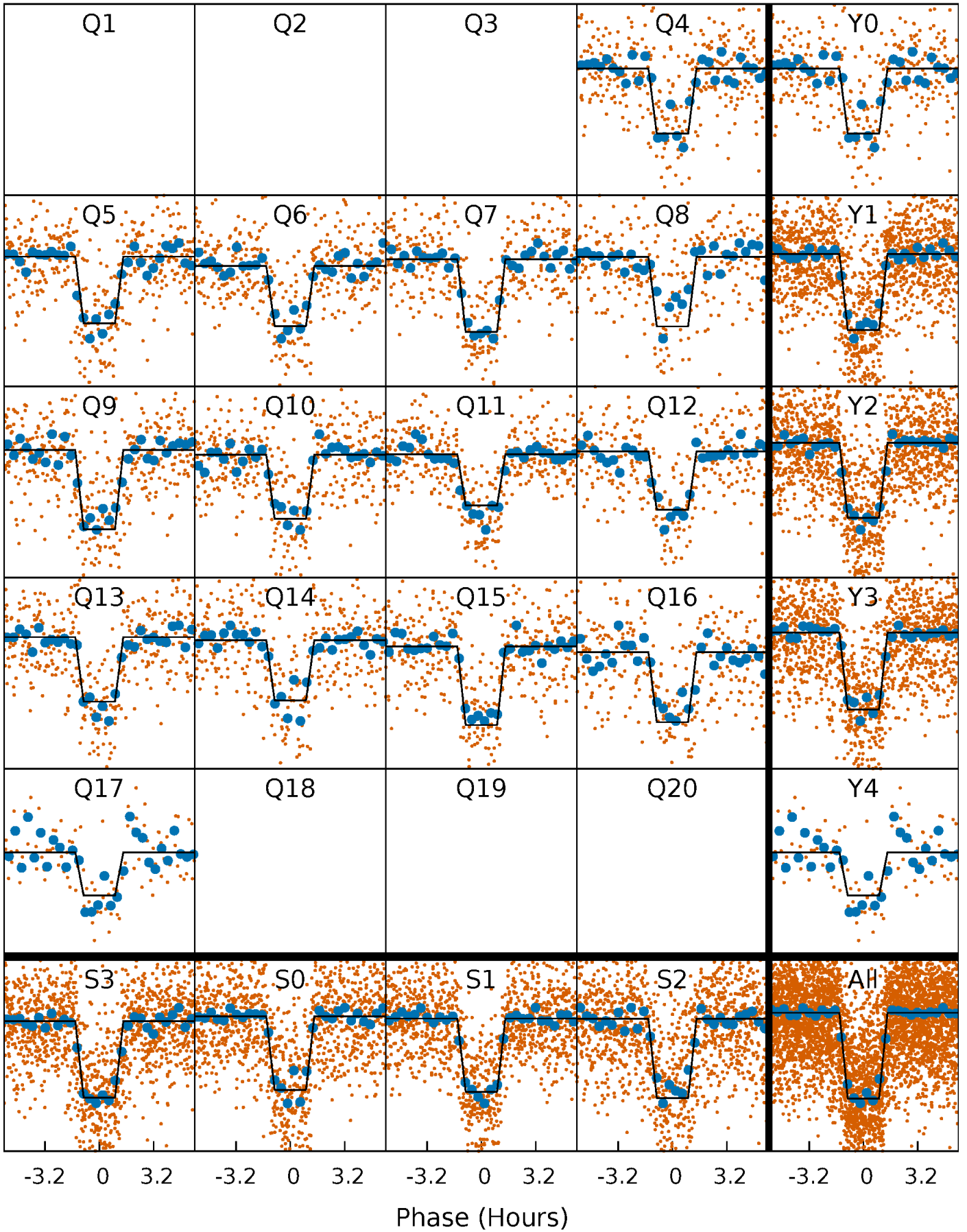
DV Quarter-Phased Transit Curves

TCE 009597806-01 P= 5.101361 Days $T_0=133.023821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

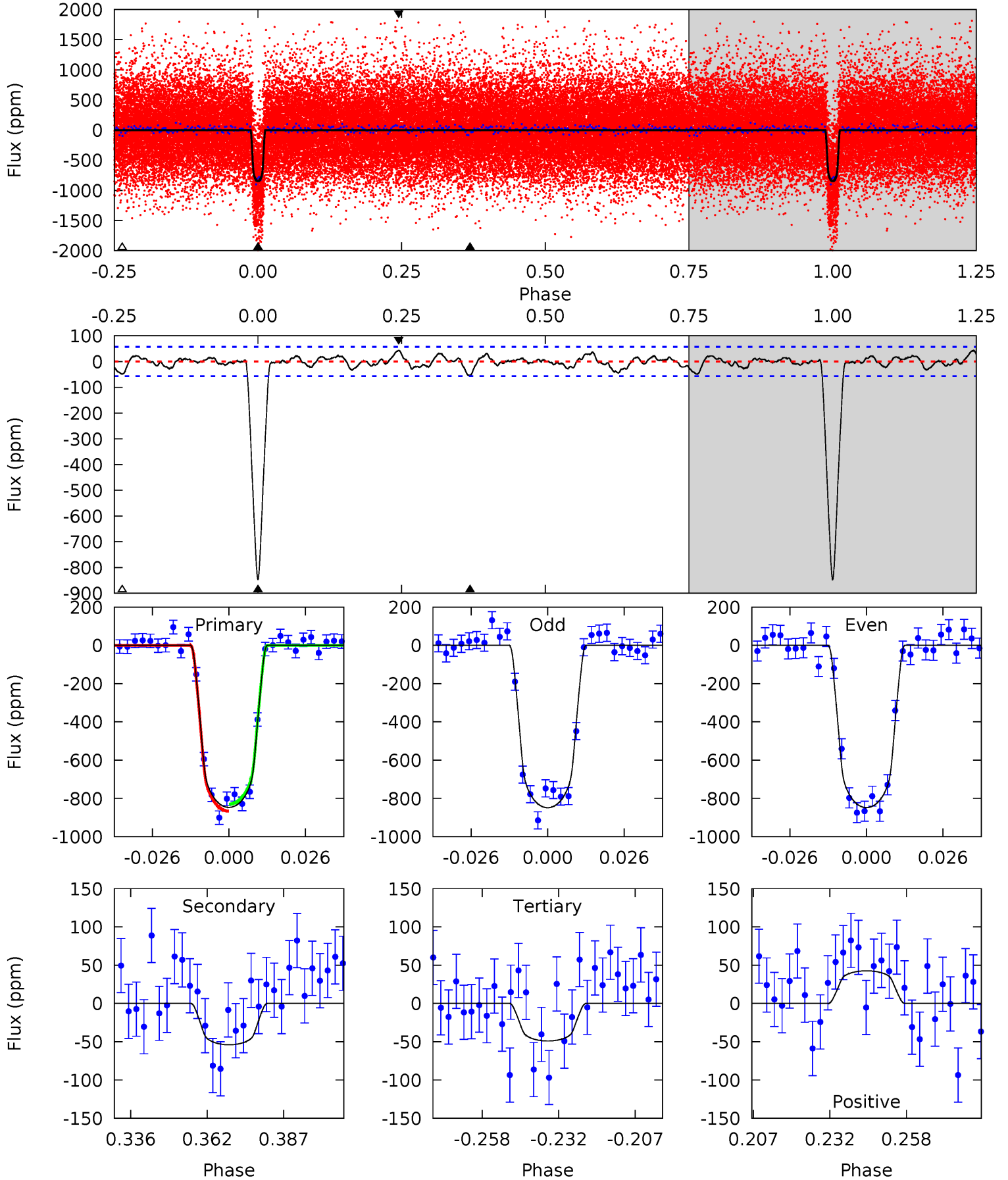
TCE 009597806-01 P= 5.101352 Days $T_0=133.025284$ (BKJD)



DV Model-Shift Uniqueness Test

009597806-01, P = 5.101361 Days, E = 133.023821 Days

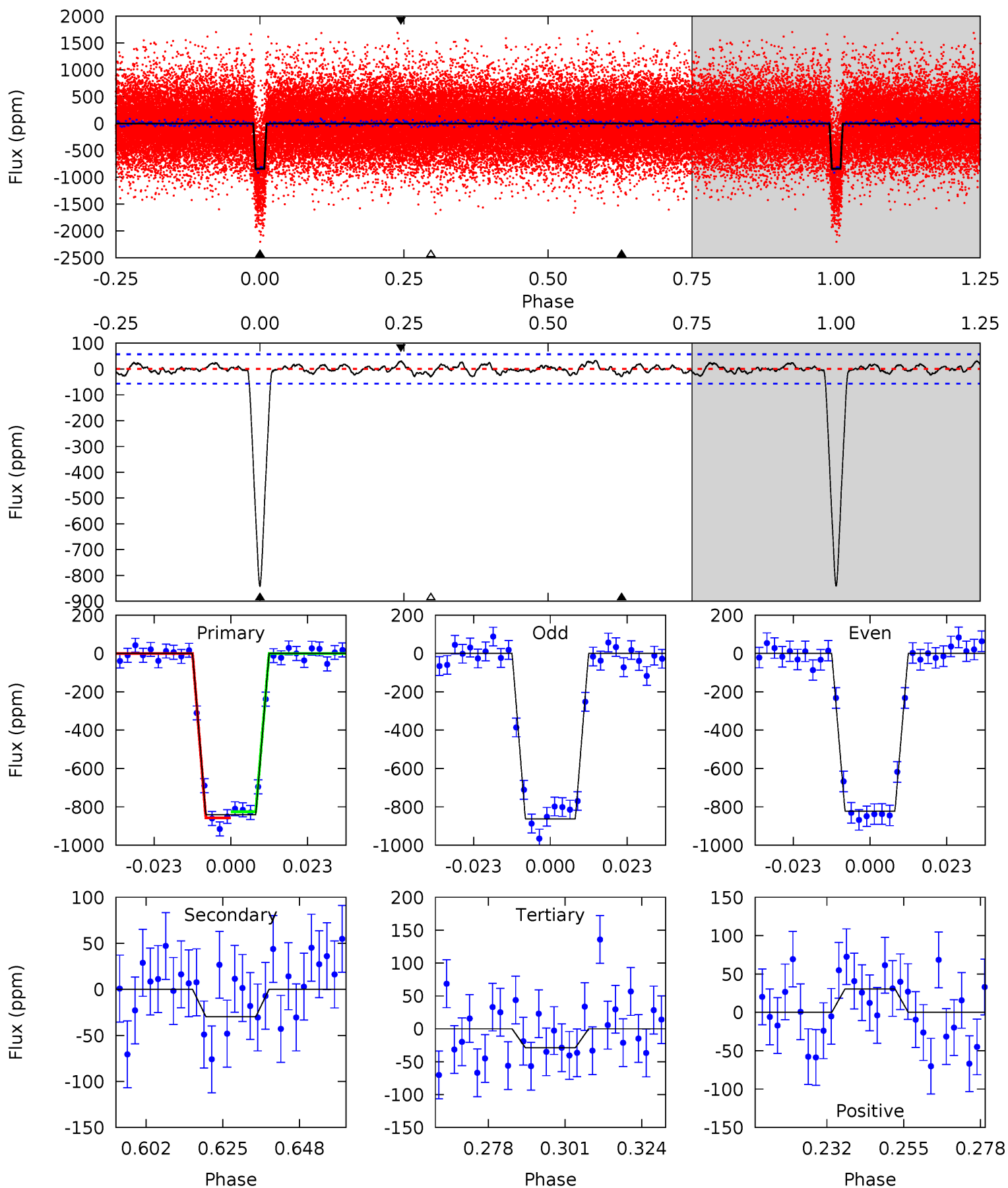
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.7	4.57	4.15	3.61	4.84	2.23	1.39	67.6	68.1	0.42	0.96	0.02	0.99	0.05	1.54



Alt Model-Shift Uniqueness Test

009597806-01, P = 5.101352 Days, E = 133.025284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.7	2.53	2.46	2.61	4.86	2.27	1.06	69.3	69.1	0.07	-0.08	1.73	1.00	0.04	1.36



Stellar Parameters For KIC 009597806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5869^{+164}_{-205}	$4.479^{+0.067}_{-0.202}$	$-0.040^{+0.250}_{-0.300}$	$0.954^{+0.297}_{-0.099}$	$1.001^{+0.127}_{-0.127}$	$1.623^{+0.446}_{-0.833}$
	+3%/-3%	+1%/-5%	+625%/-750%	+31%/-10%	+13%/-13%	+28%/-51%
Source	KIC0	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 009597806-01 / KOI 1481.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-54 ± 12	$3.25^{+0.71}_{-0.56}$	1485^{+105}_{-75}	3381^{+219}_{-204}	$9.315^{+4.661}_{-3.381}$
Alt.	-30 ± 12	$3.14^{+0.60}_{-0.51}$	1490^{+100}_{-70}	3101^{+245}_{-262}	$5.098^{+3.844}_{-2.304}$

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 $A_{obs} \gg 1.0$

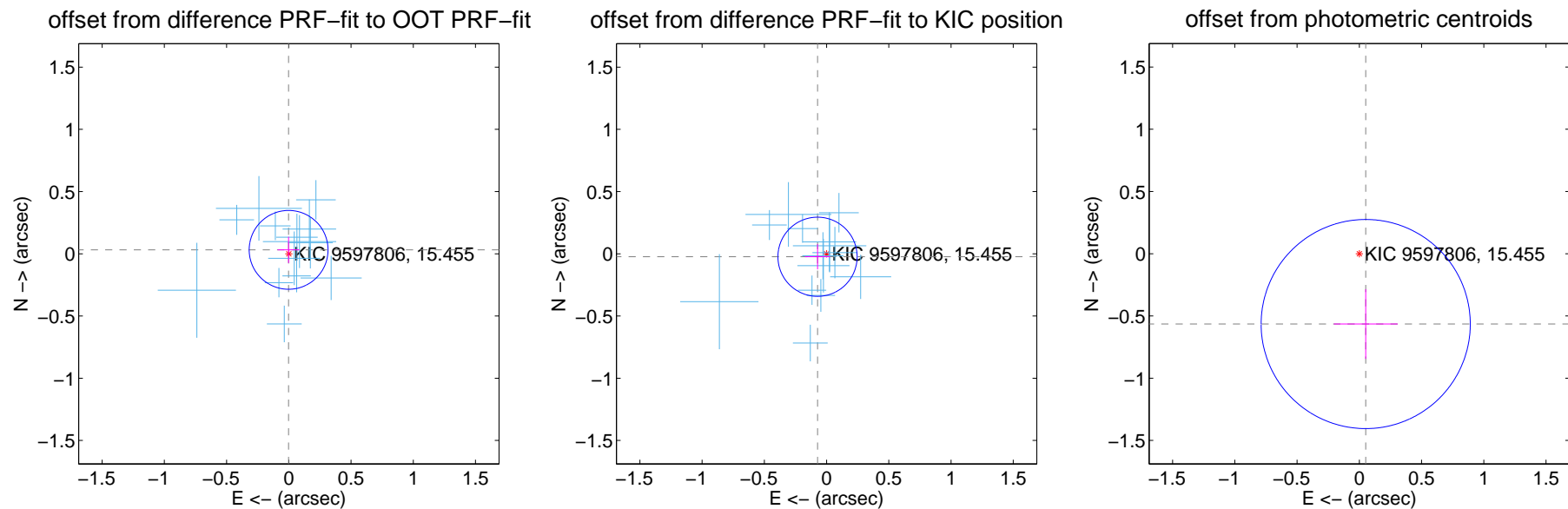
DV Centroid Data

Supplemental centroid analysis for 009597806-01. Kepler magnitude: 15.46. Transit SNR 50.64

There are 14 quarters with good PRF difference image offsets

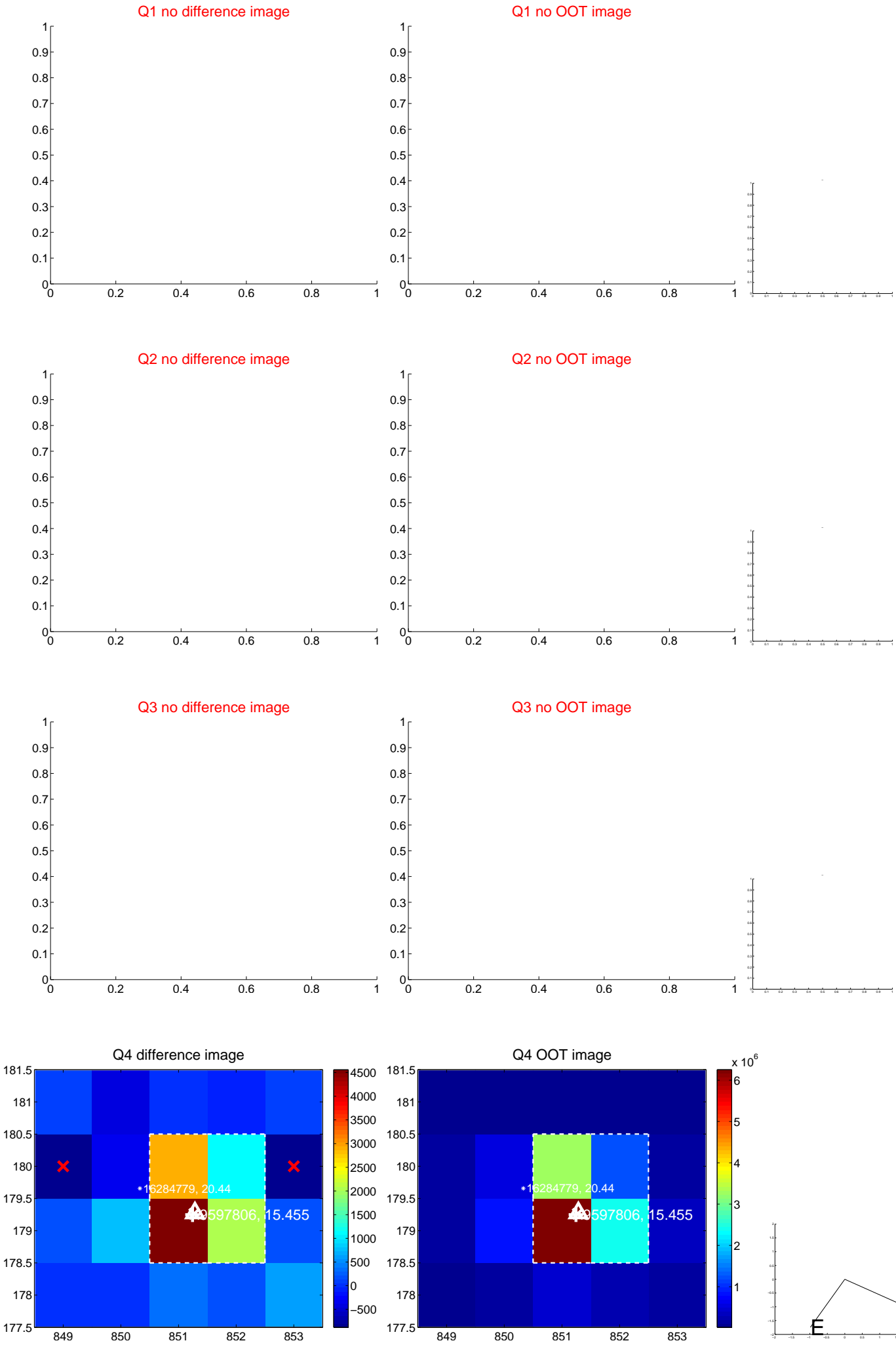
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.106	0.30	0.002 ± 0.088	0.032 ± 0.106
PRF-fit source offset from KIC position	0.077 ± 0.106	0.72	0.073 ± 0.101	-0.024 ± 0.101
photometric centroid source offset	0.57 ± 0.28	2.03	-0.05 ± 0.26	-0.56 ± 0.28

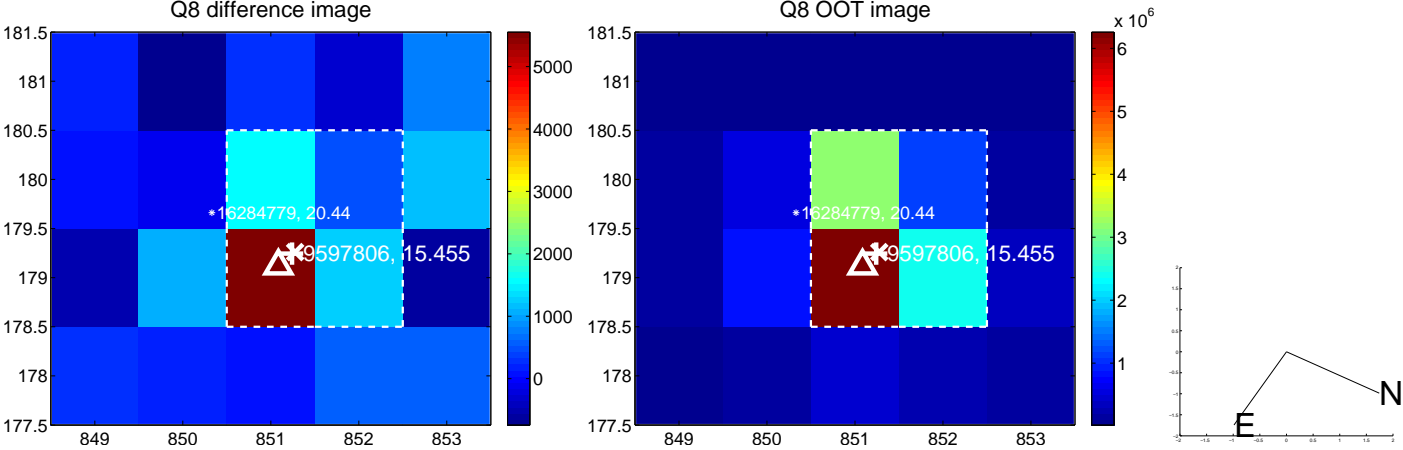
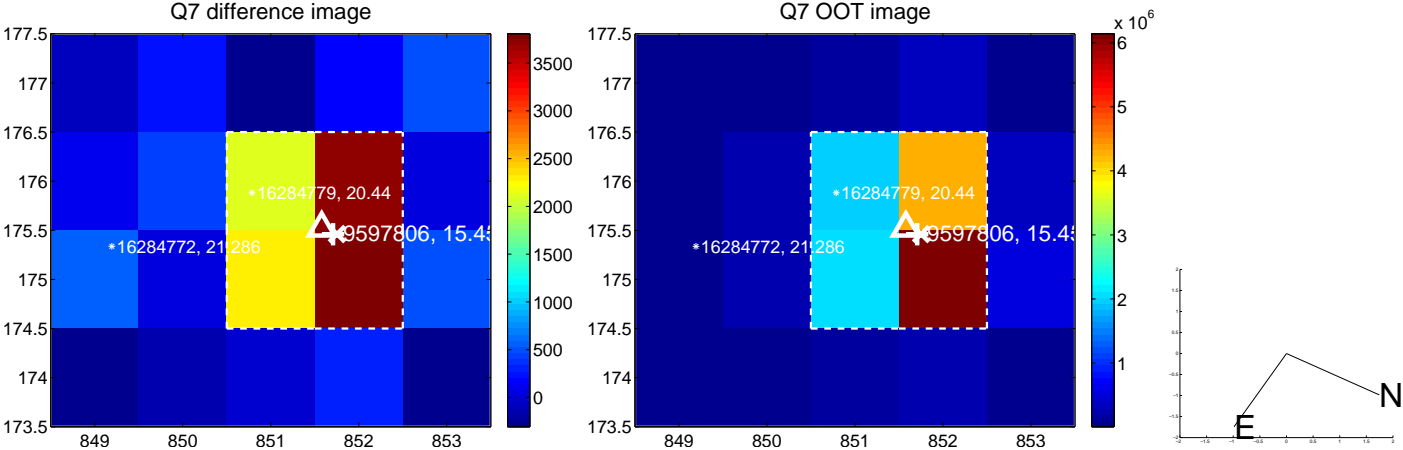
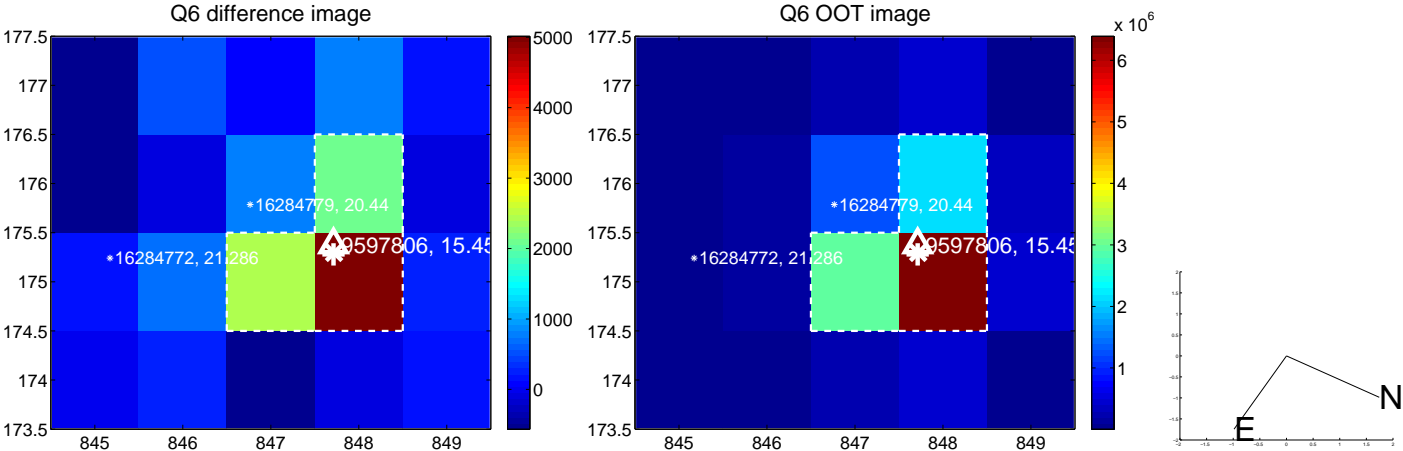
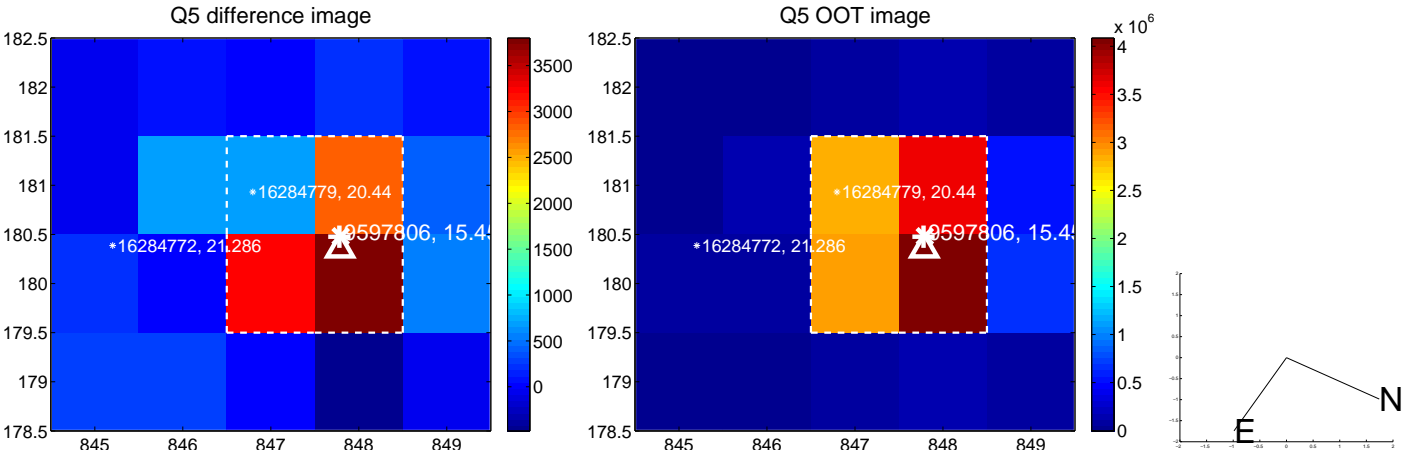


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

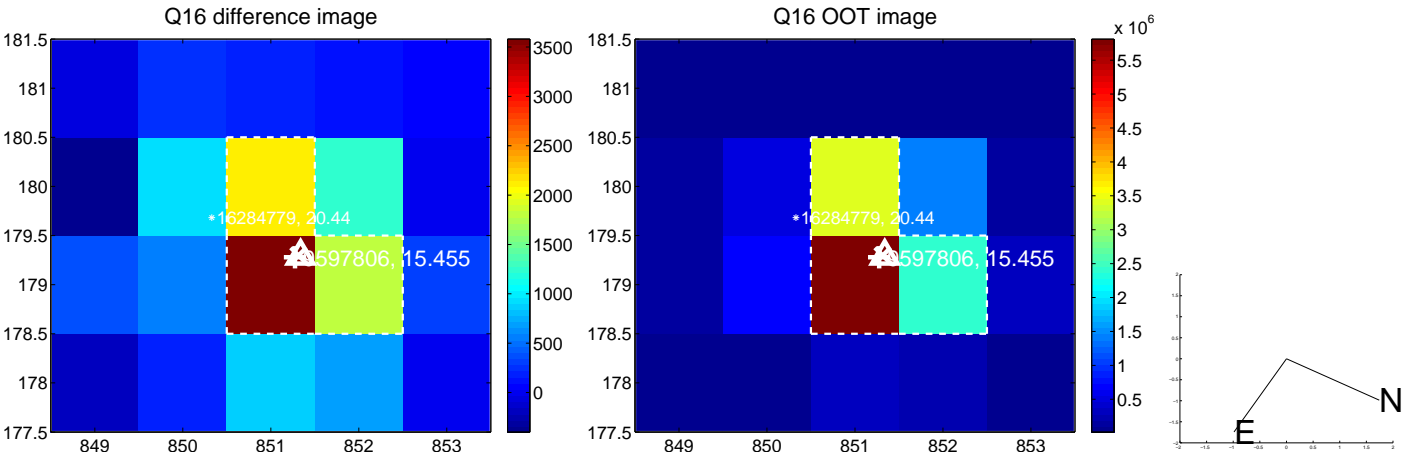
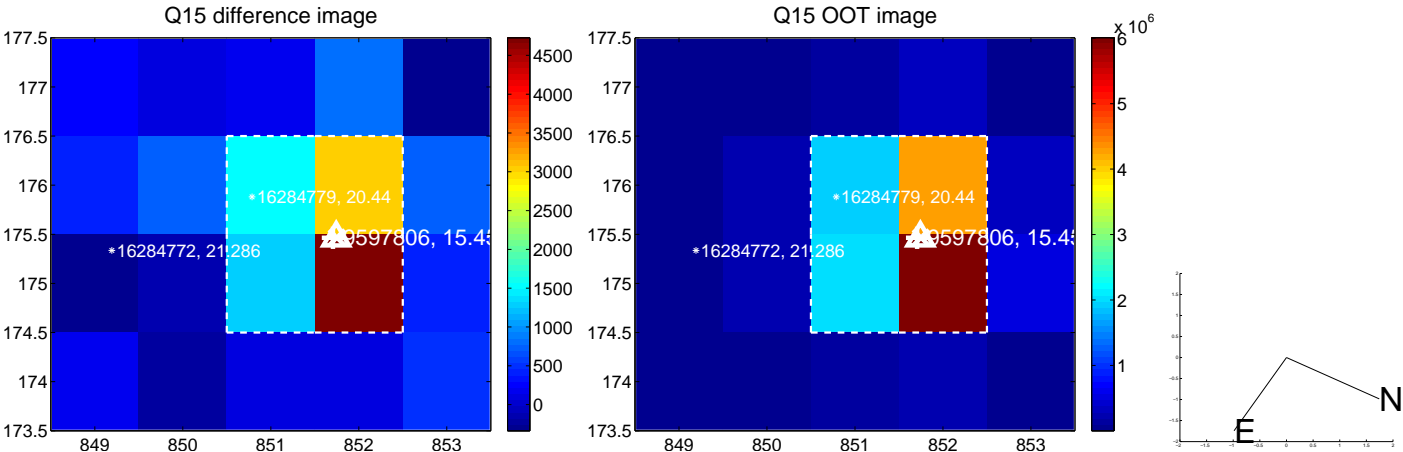
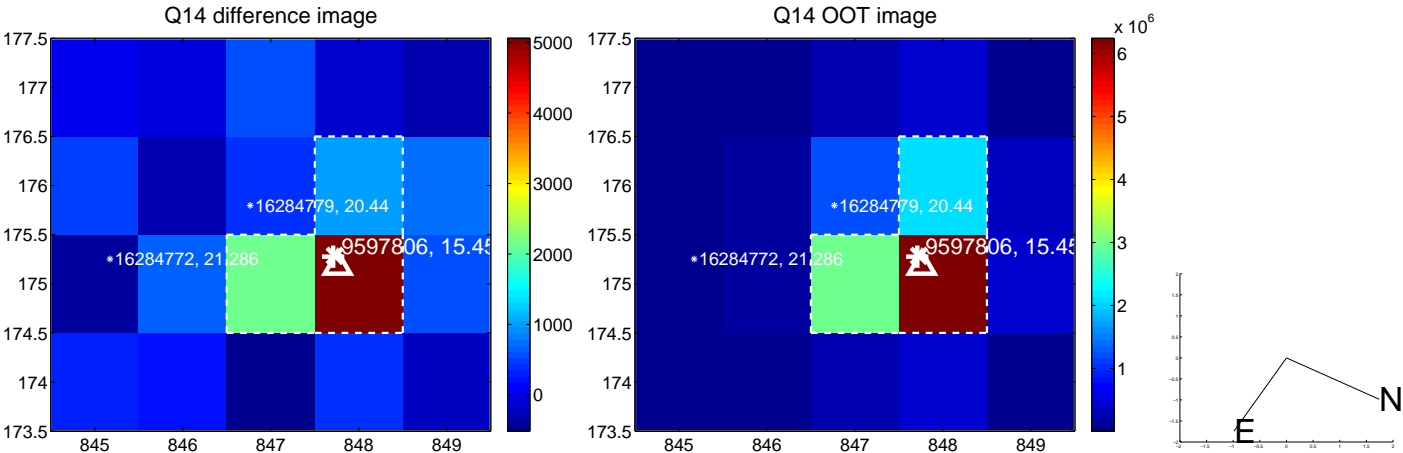
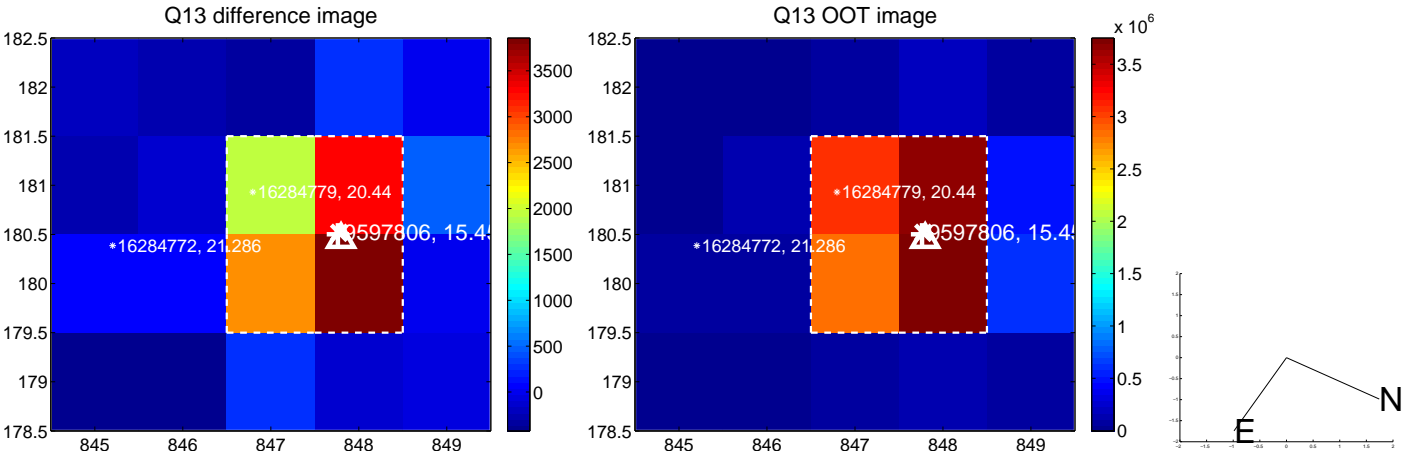
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



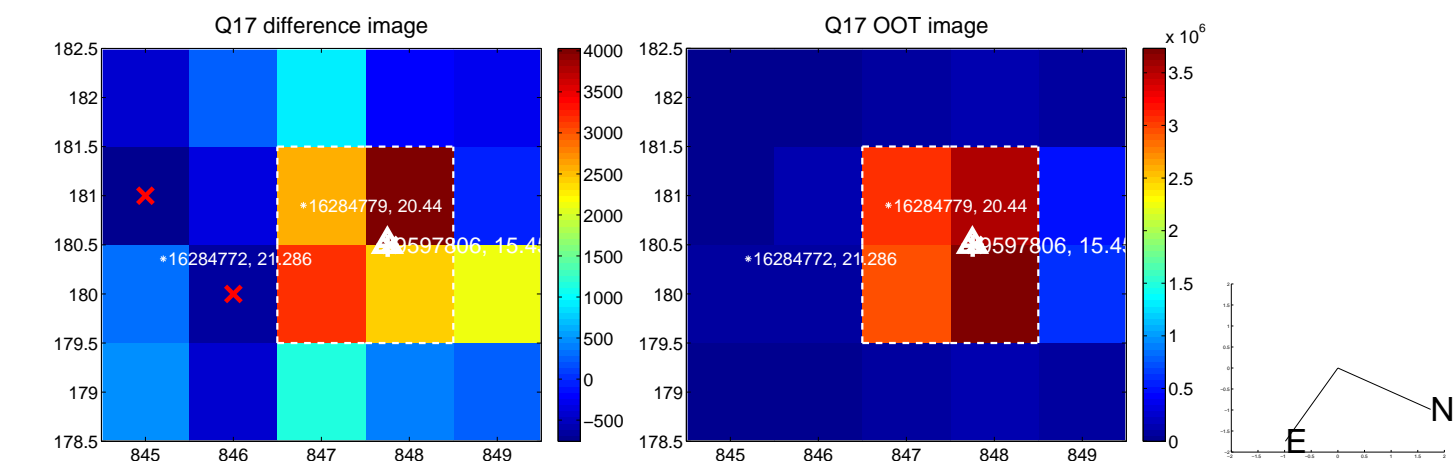
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



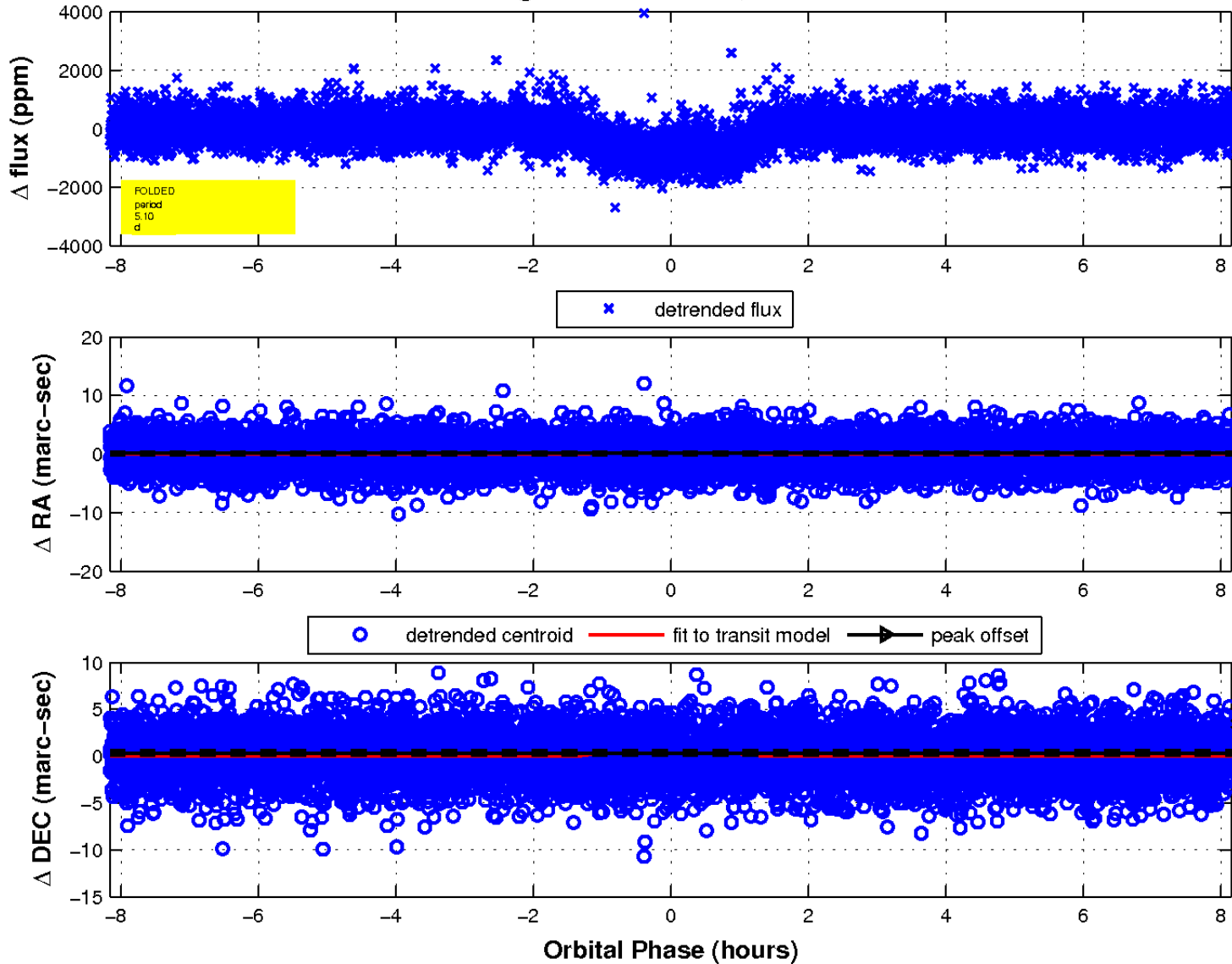
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

