

KIC 009139084

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})
009139084-01	OBS	0323.01	5.835979	134.859746	554.7	2.169	104.2	107.7	0.83	5423	2.27	144.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009139084-01	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.

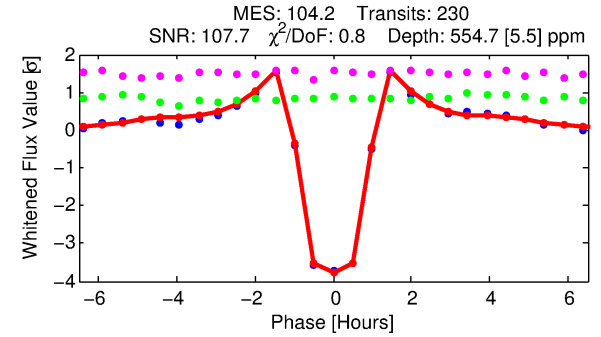
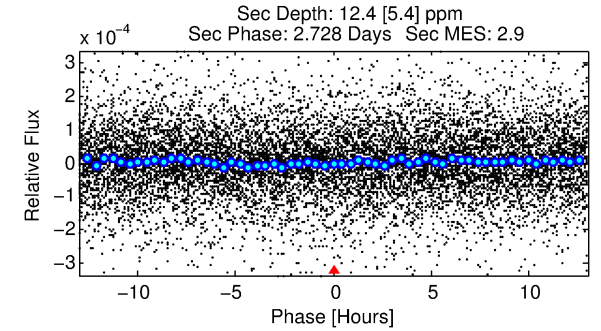
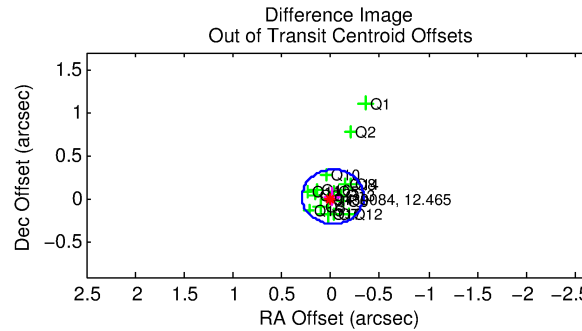
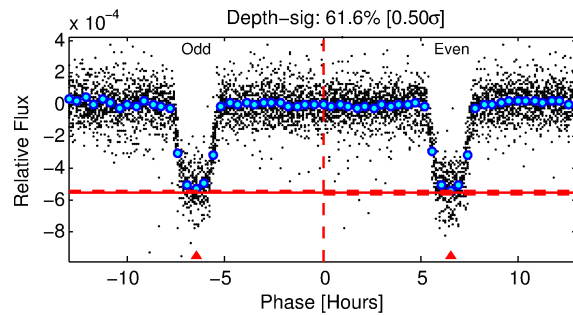
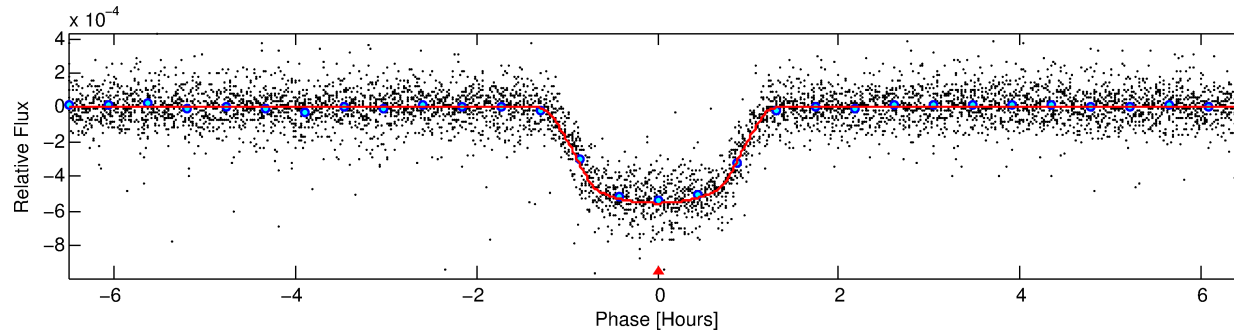
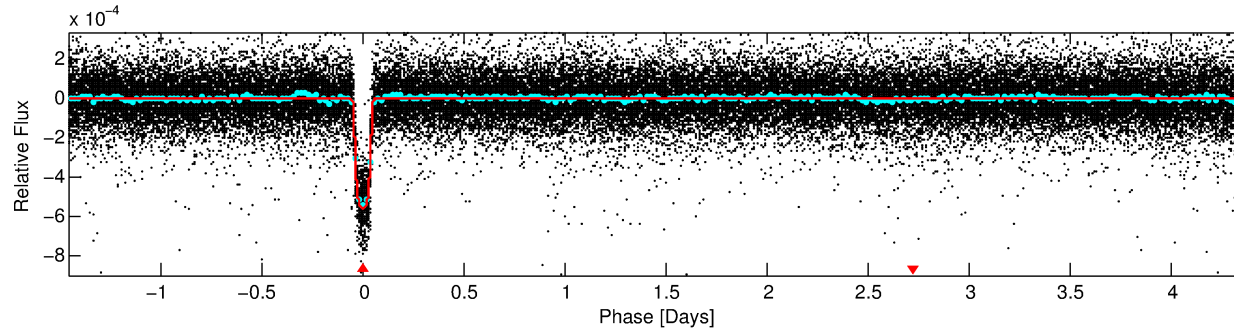
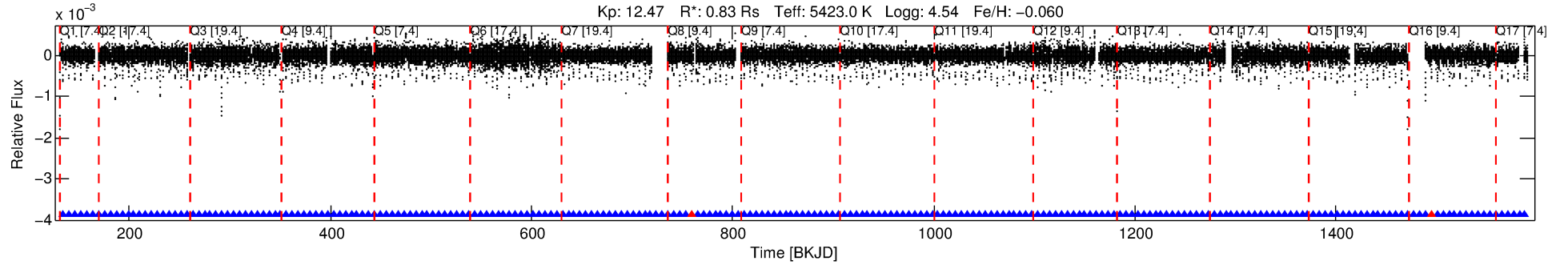
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009139084-01

No Significant Match Found

DV One-Page Summary

KIC: 9139084 Candidate: 1 of 1 Period: 5.836 d
KOI: K00323.01 Corr: 0.975



DV Fit Results:

Period = 5.83598 [0.00000] d
Epoch = 134.8597 [0.0003] BKJD
Rp/R* = 0.0251 [0.0012]
a/R* = 11.34 [2.16]
b = 0.87 [0.06]
Seff = 144.67 [23.99]
Teff = 884 [37] K
Rp = 2.27 [0.26] Re
a = 0.0606 [0.0057] AU
Ag = 4.87 [2.27] [1.70 σ]
Teffp = 2031 [229] K [4.94 σ]

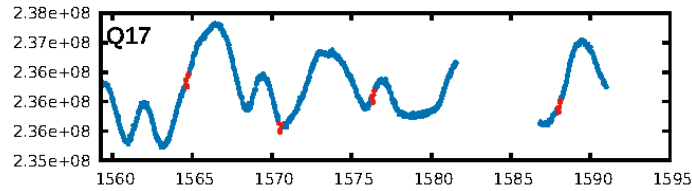
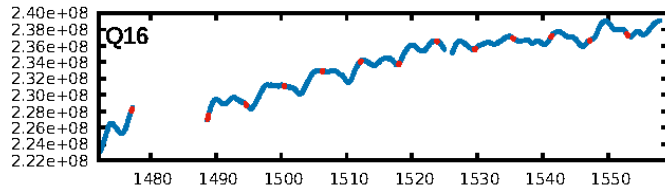
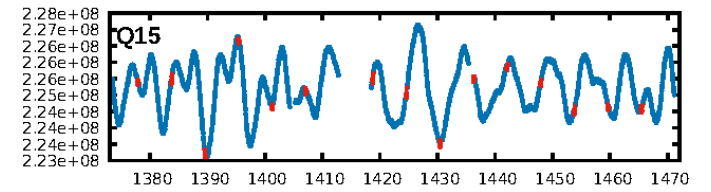
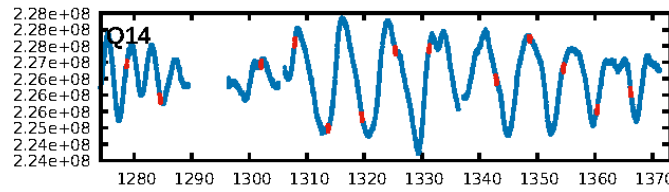
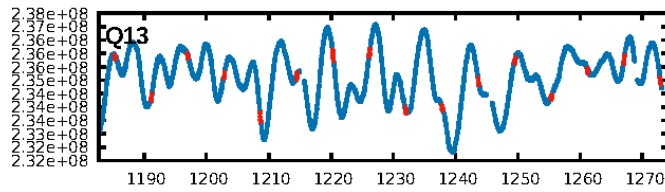
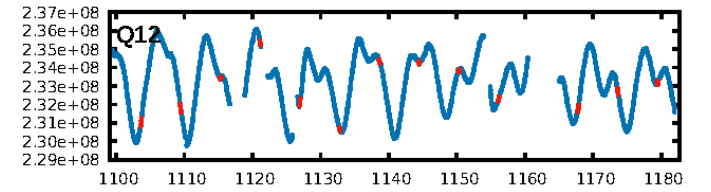
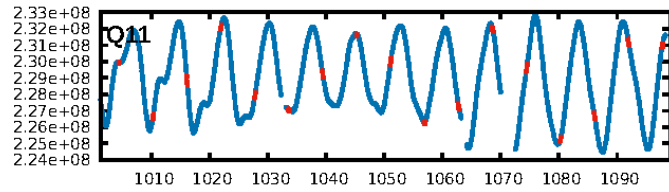
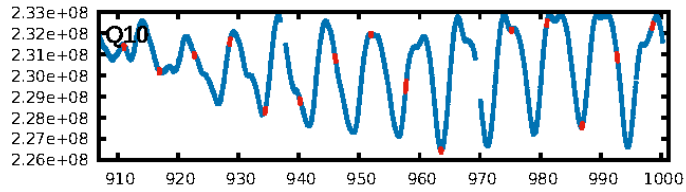
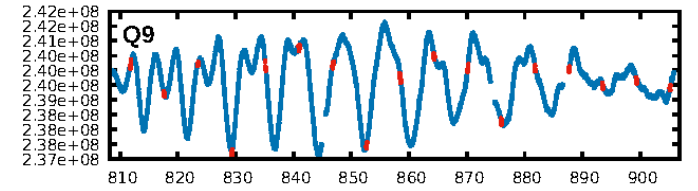
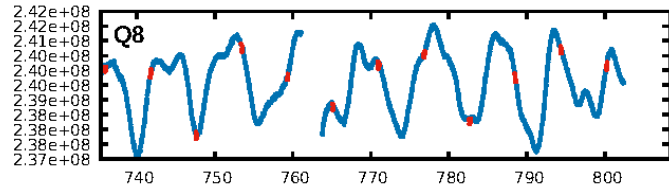
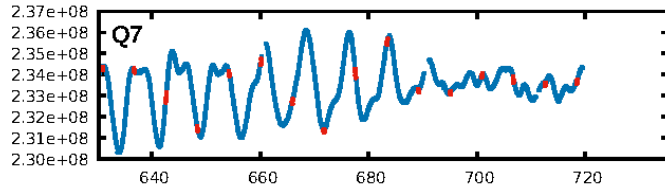
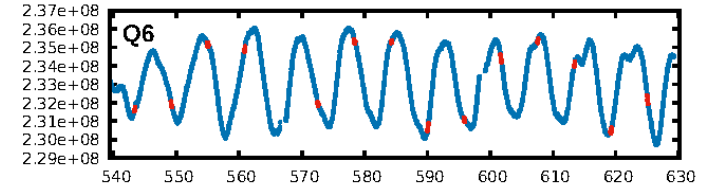
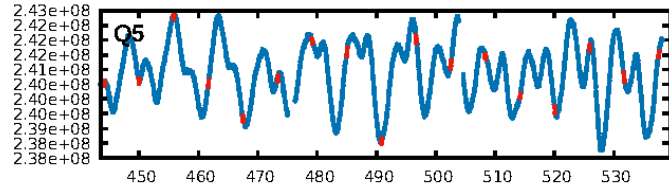
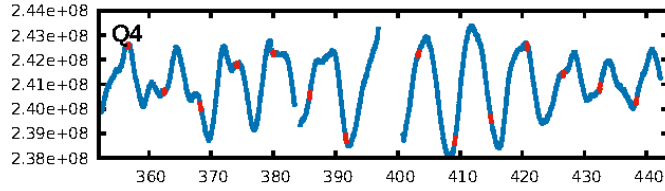
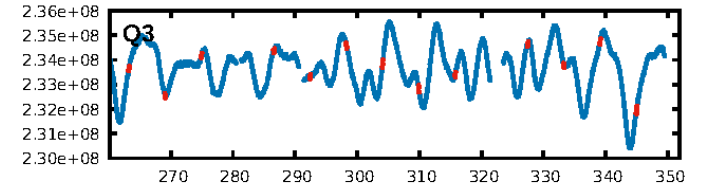
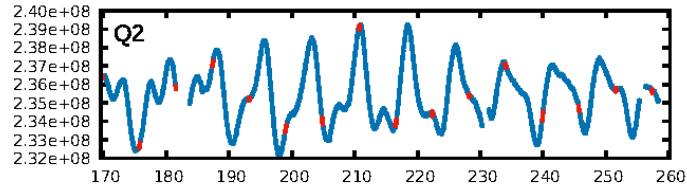
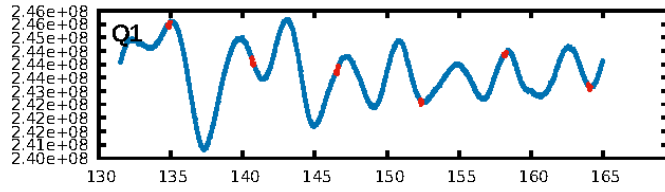
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [218/220]
GhostDiagnostic-chr: 2.198
Centroid-sig: 0.0%
Centroid-so: 0.040 arcsec [0.50 σ]
OotOffset-rm: 0.035 arcsec [0.33 σ]
KicOffset-rm: 0.080 arcsec [0.96 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

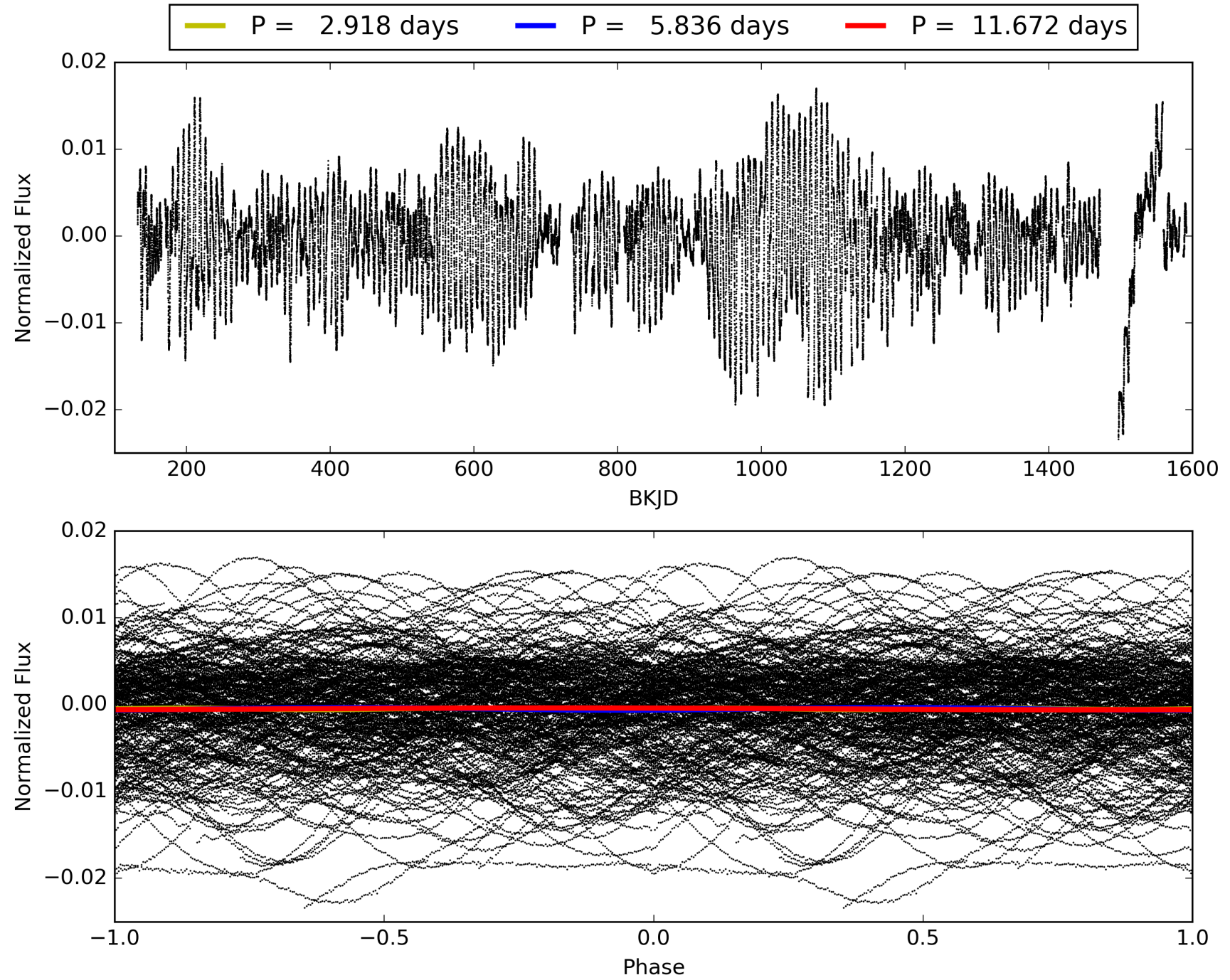
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:20:56 Z

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

TCE 009139084-01, PDC Light Curves

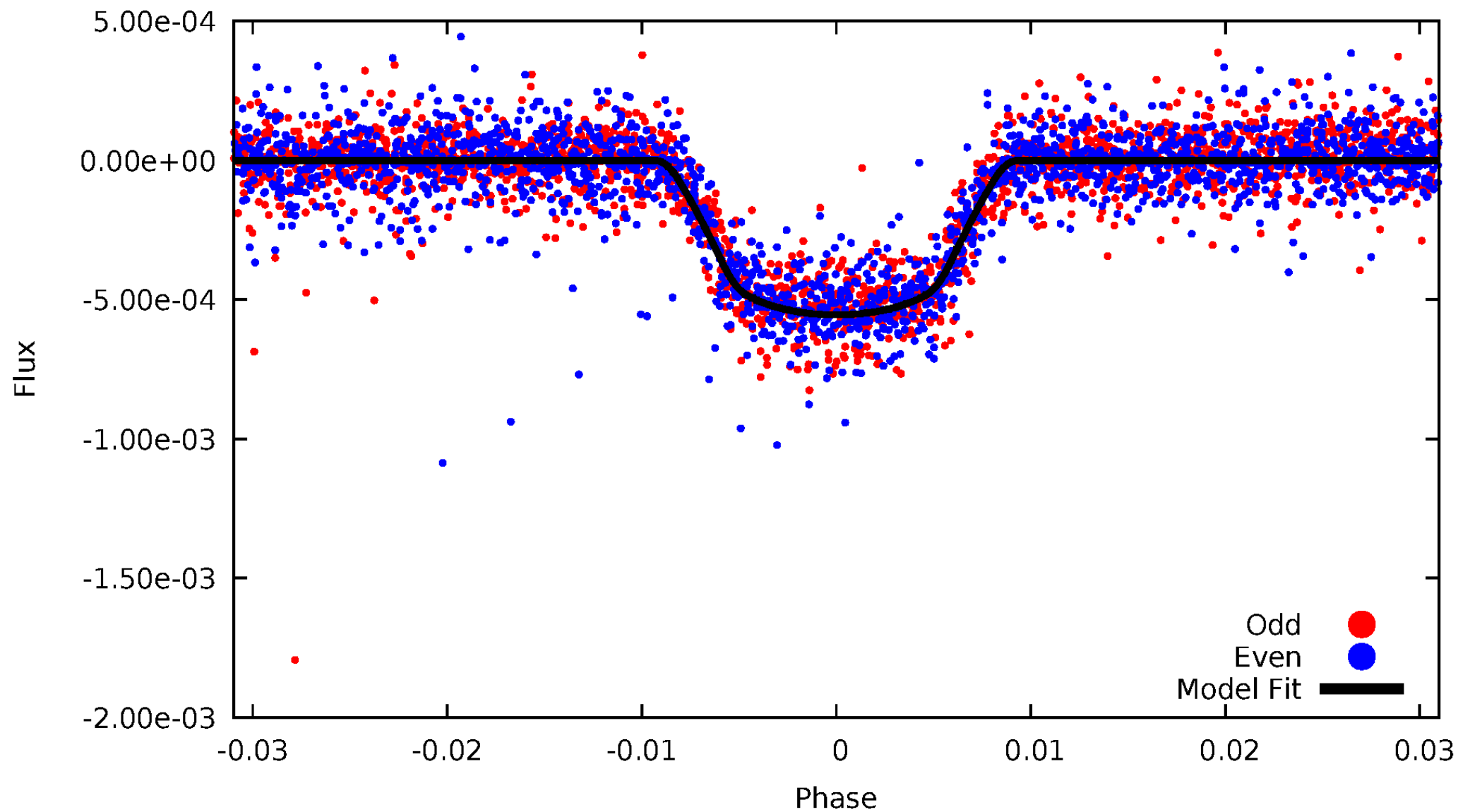


TCE 009139084-01



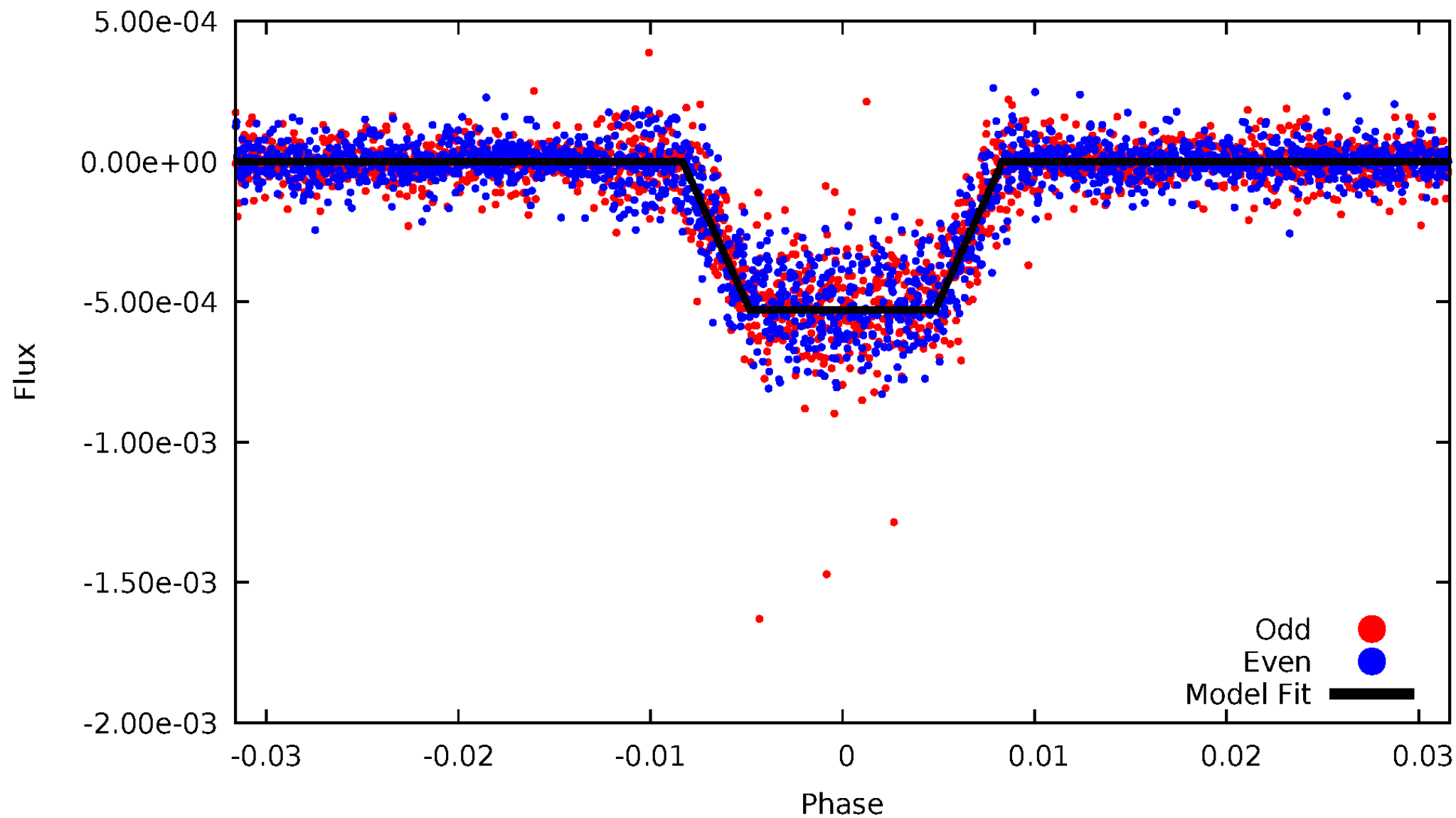
DV Odd/Even

TCE 009139084-01



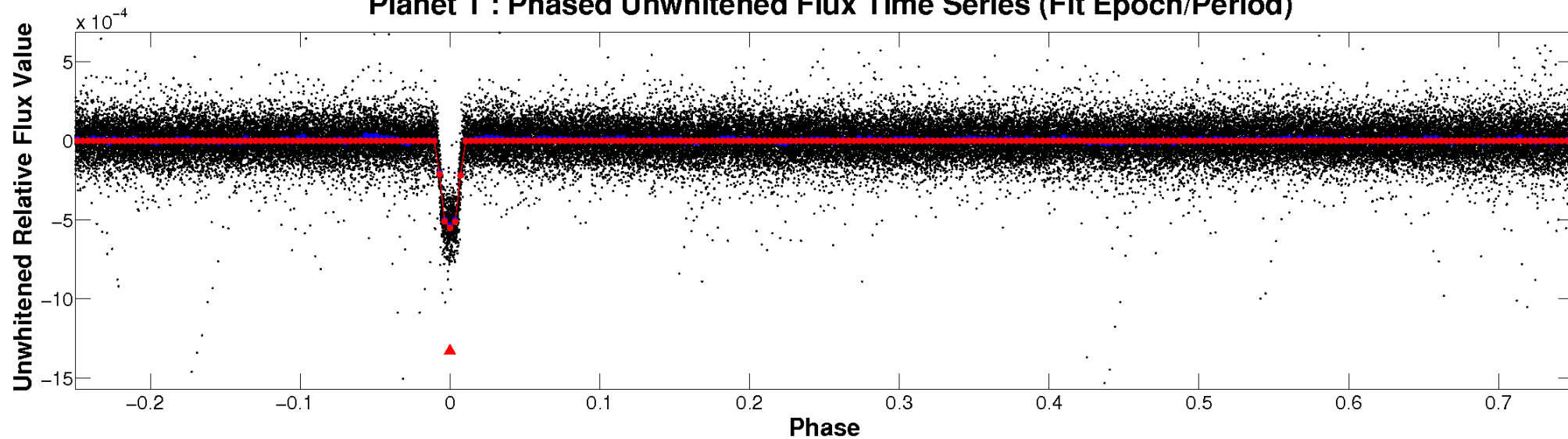
ALT Odd/Even

TCE 009139084-01

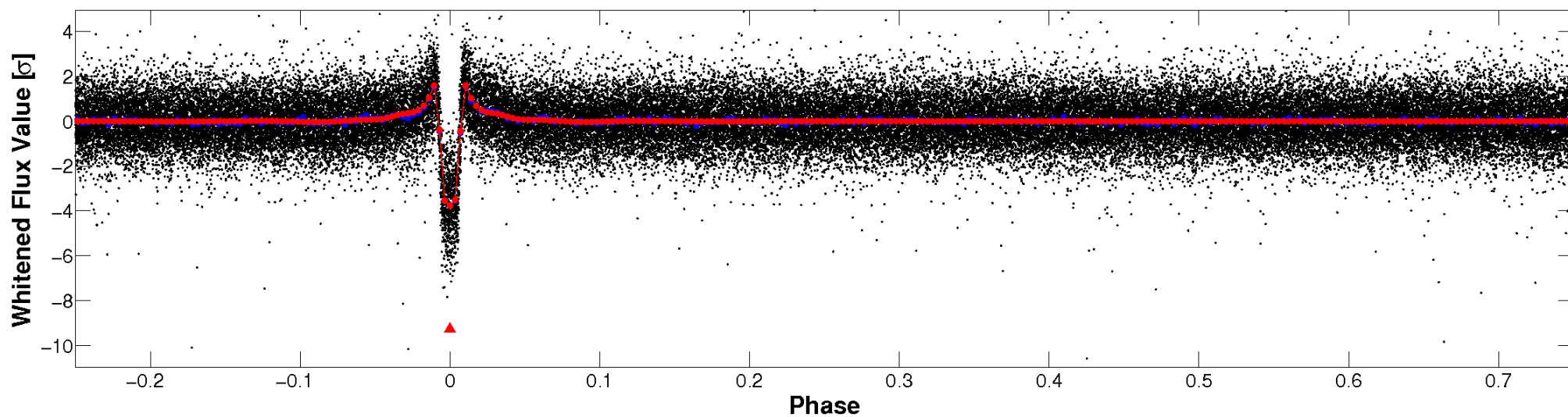


Non-Whitened Vs. Whitened Light Curve

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

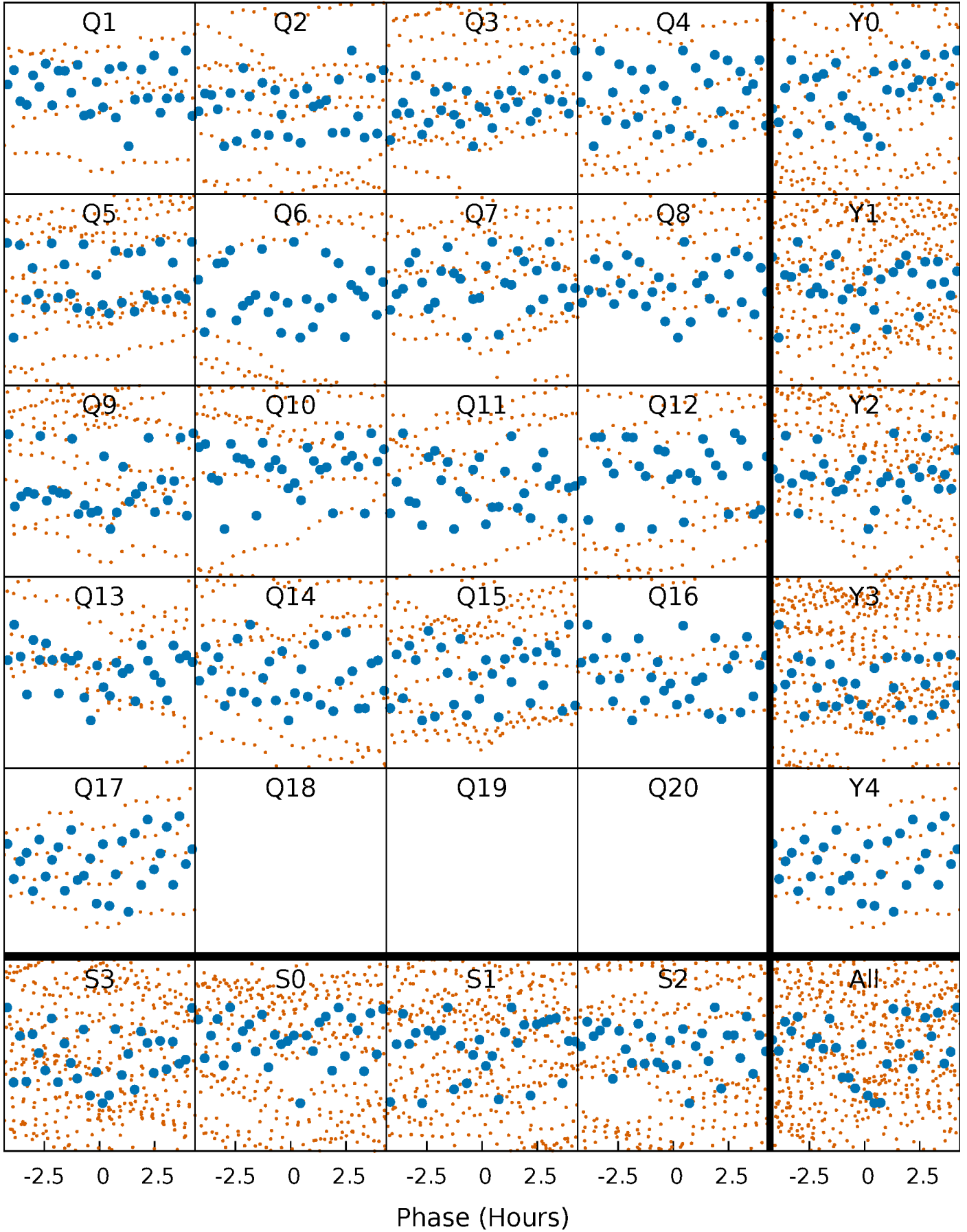


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



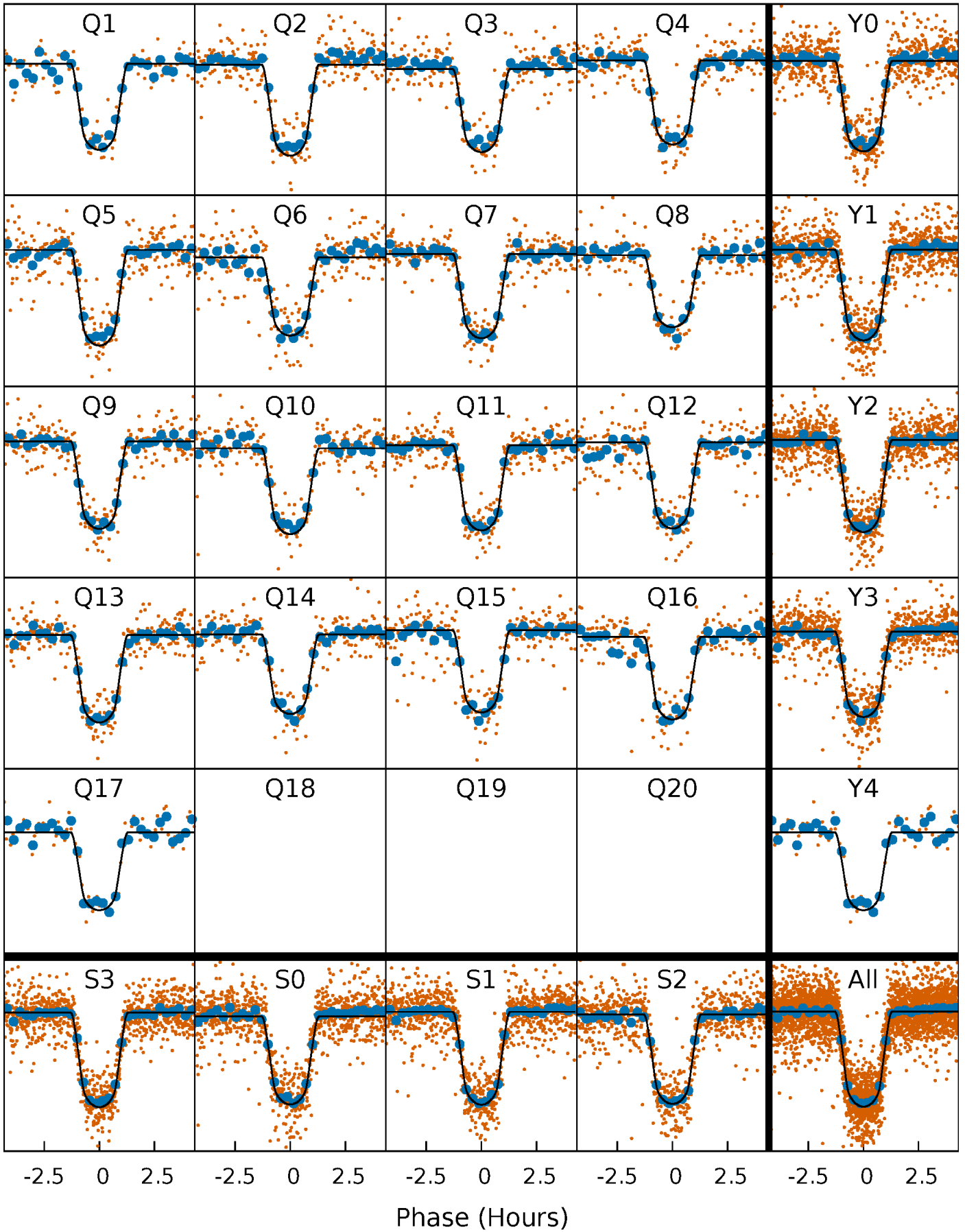
PDC Quarter-Phased Transit Curves

TCE 009139084-01 P= 5.835979 Days $T_0=134.859746$ (BKJD)



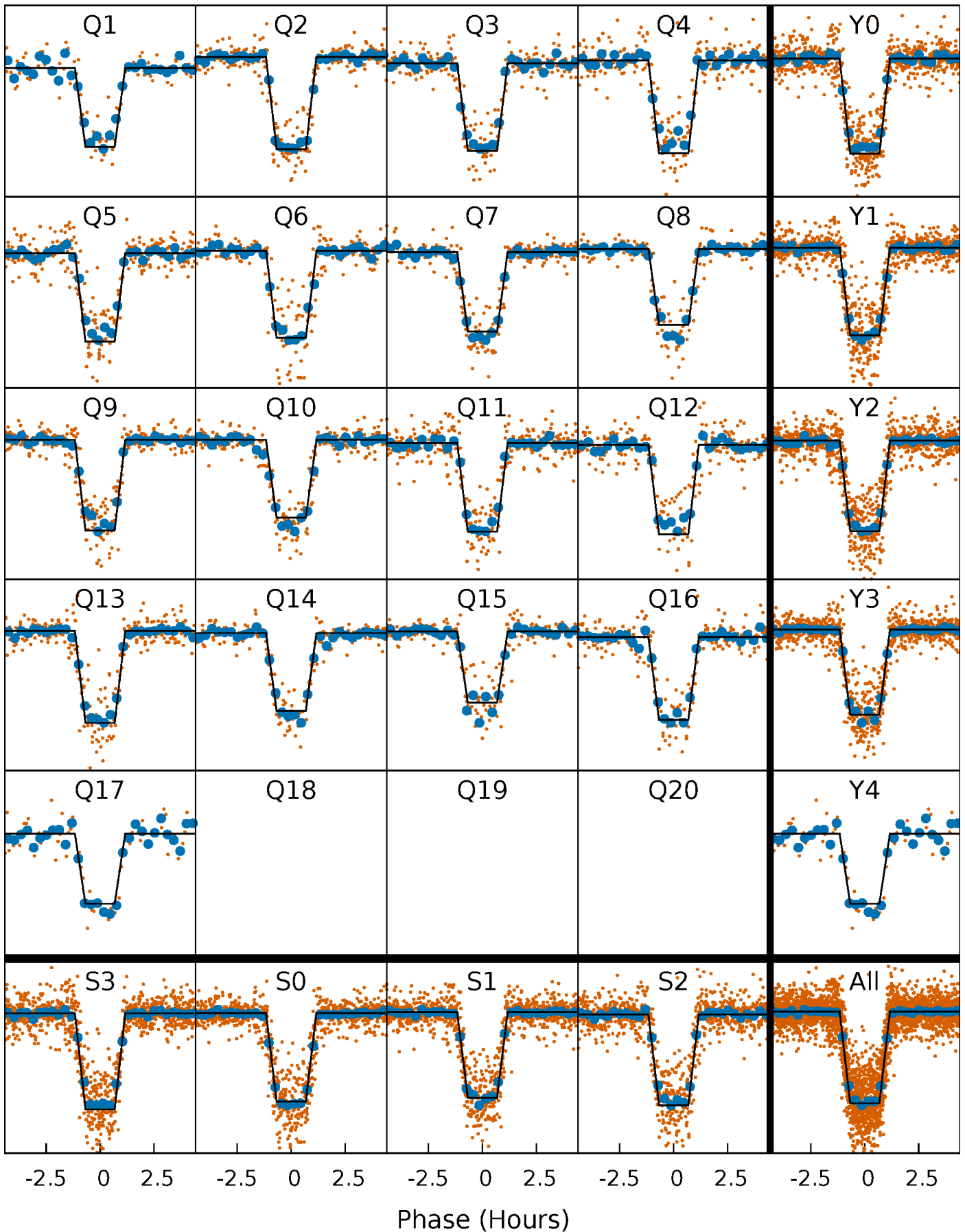
DV Quarter-Phased Transit Curves

TCE 009139084-01 P= 5.835979 Days $T_0=134.859746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

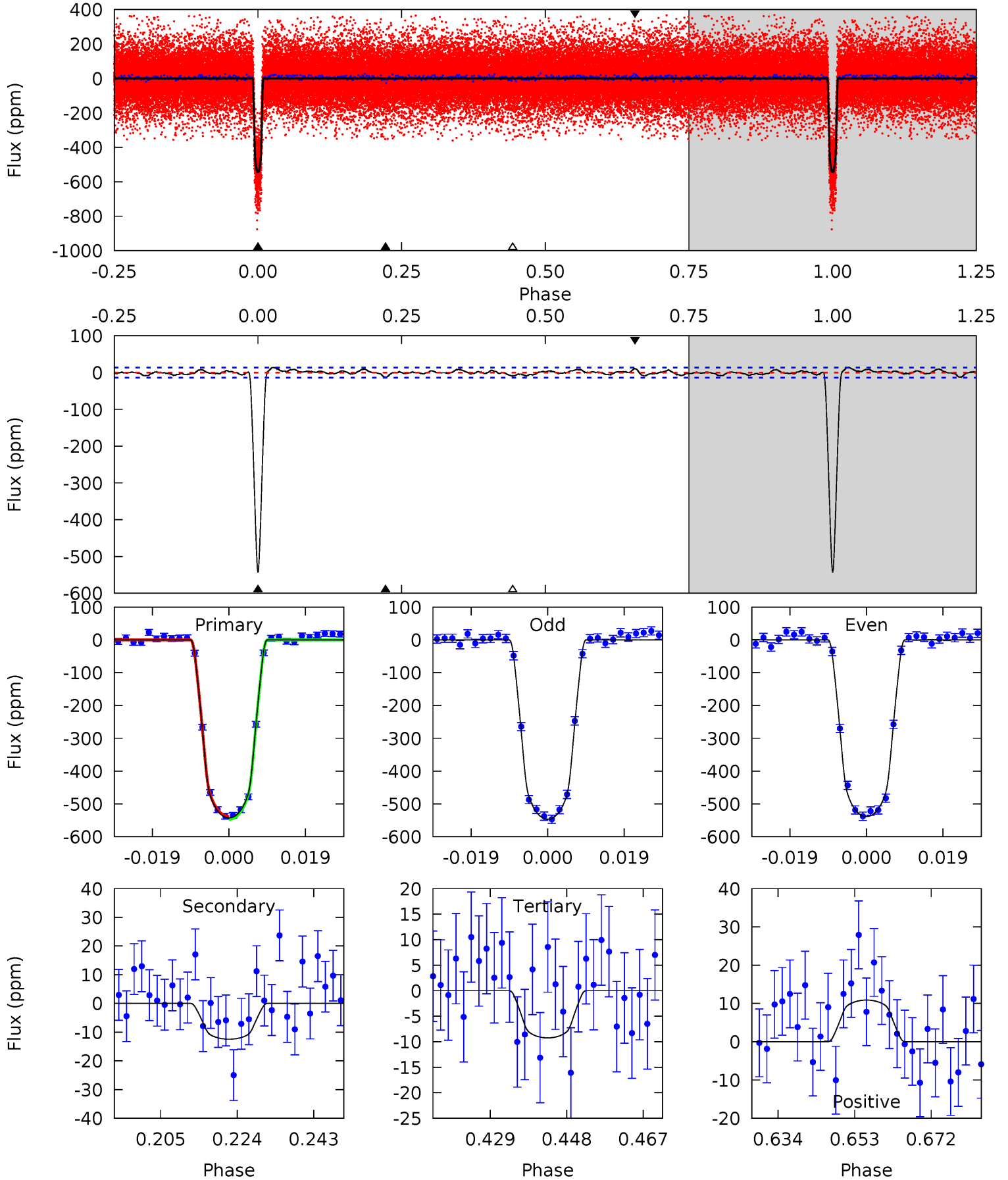
TCE 009139084-01 P= 5.835974 Days $T_0=134.860368$ (BKJD)



DV Model-Shift Uniqueness Test

009139084-01, P = 5.835979 Days, E = 129.023767 Days

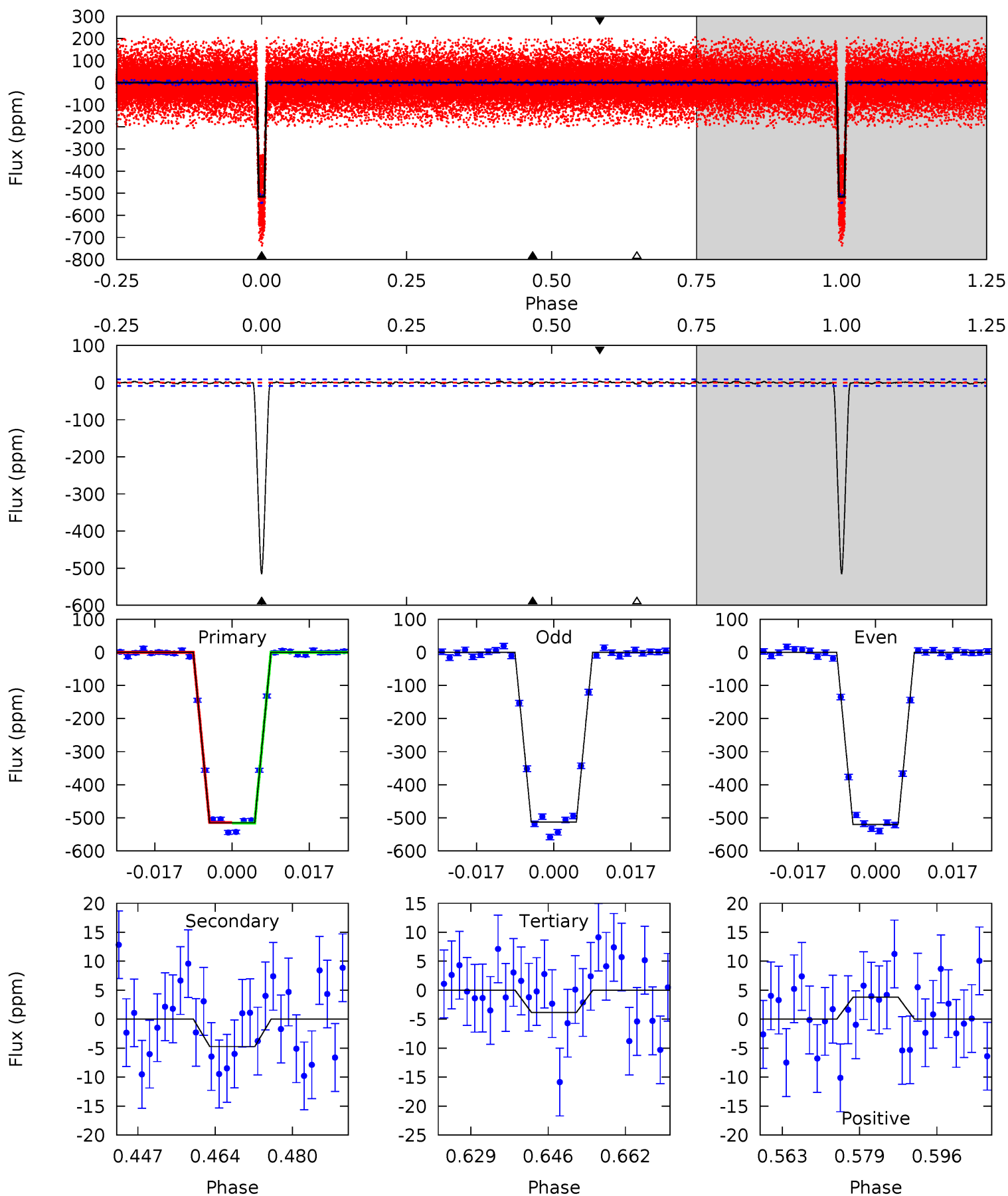
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
194.5	4.46	3.32	3.90	4.91	2.35	1.55	191.2	190.6	1.15	0.56	1.41	1.01	0.03	1.41



Alt Model-Shift Uniqueness Test

009139084-01, P = 5.835974 Days, E = 129.024394 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
282.2	2.59	2.09	2.08	4.93	2.40	0.81	280.1	280.1	0.50	0.50	1.89	1.00	0.01	0.51



Stellar Parameters For KIC 009139084

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5423^{+108}_{-108}	$4.542^{+0.033}_{-0.083}$	$-0.060^{+0.150}_{-0.150}$	$0.828^{+0.087}_{-0.044}$	$0.872^{+0.048}_{-0.054}$	$2.161^{+0.288}_{-0.548}$
	+2%/-2%	+1%/-2%	+250%/-250%	+11%/-5%	+6%/-6%	+13%/-25%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009139084-01 / KOI 0323.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 3	$2.30^{+0.16}_{-0.15}$	1244^{+40}_{-33}	2753^{+104}_{-105}	$4.688^{+1.392}_{-1.095}$
Alt.	-5 ± 2	$2.12^{+0.15}_{-0.13}$	1245^{+38}_{-34}	2461^{+134}_{-174}	$2.079^{+0.980}_{-0.791}$

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

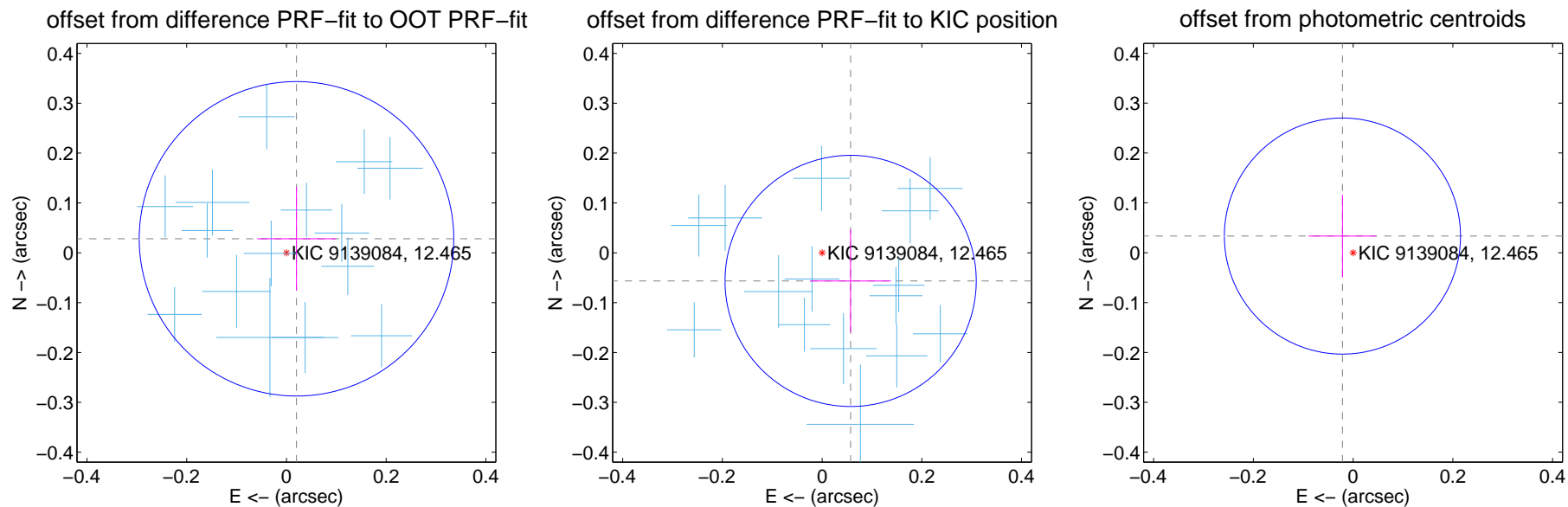
DV Centroid Data

Supplemental centroid analysis for 009139084-01. Kepler magnitude: 12.46. Transit SNR 107.72

There are 17 quarters with good PRF difference image offsets

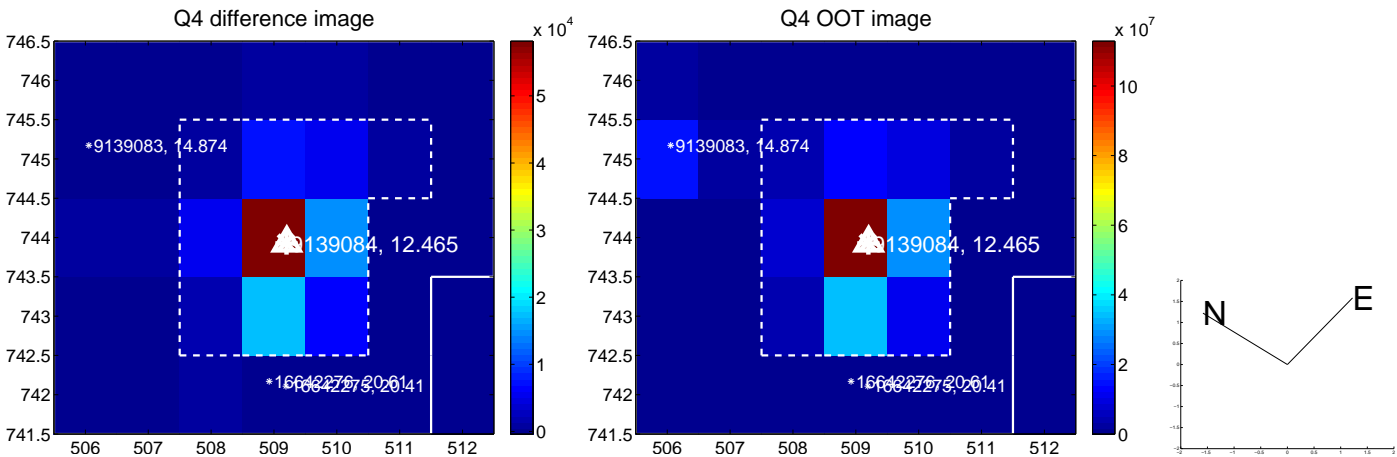
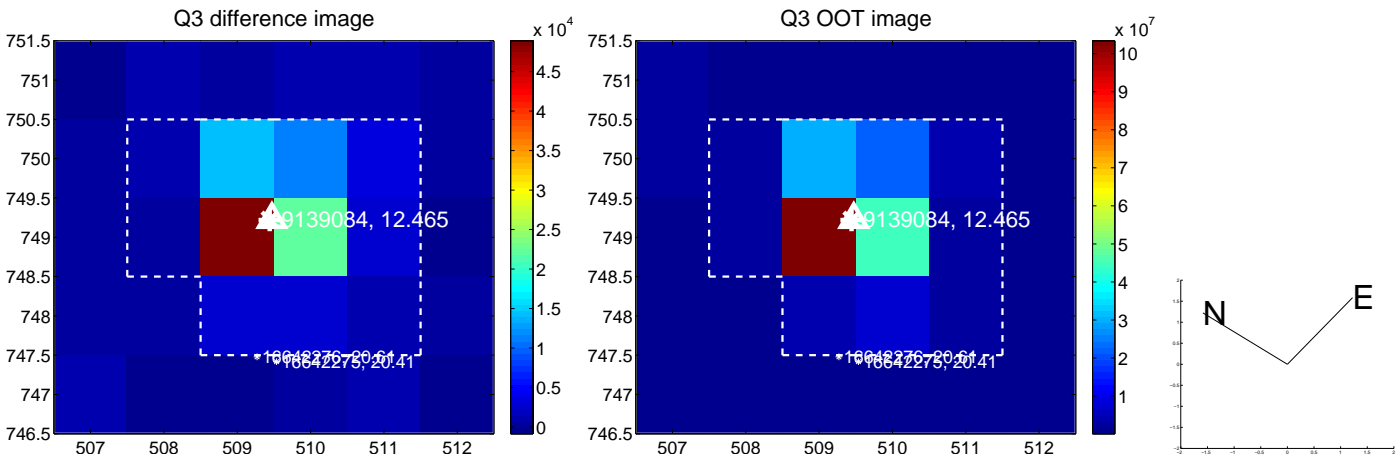
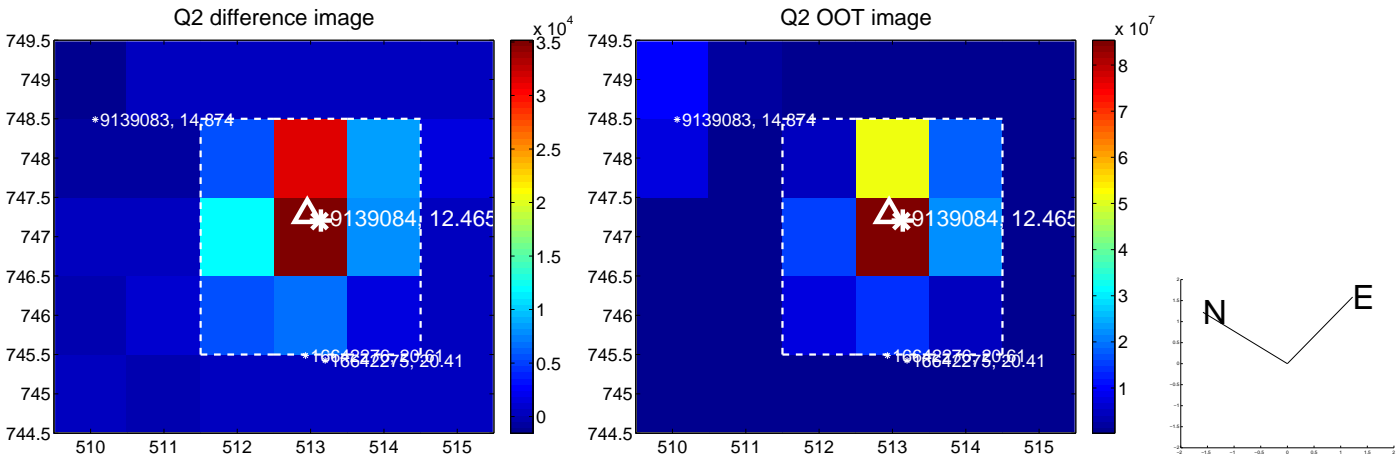
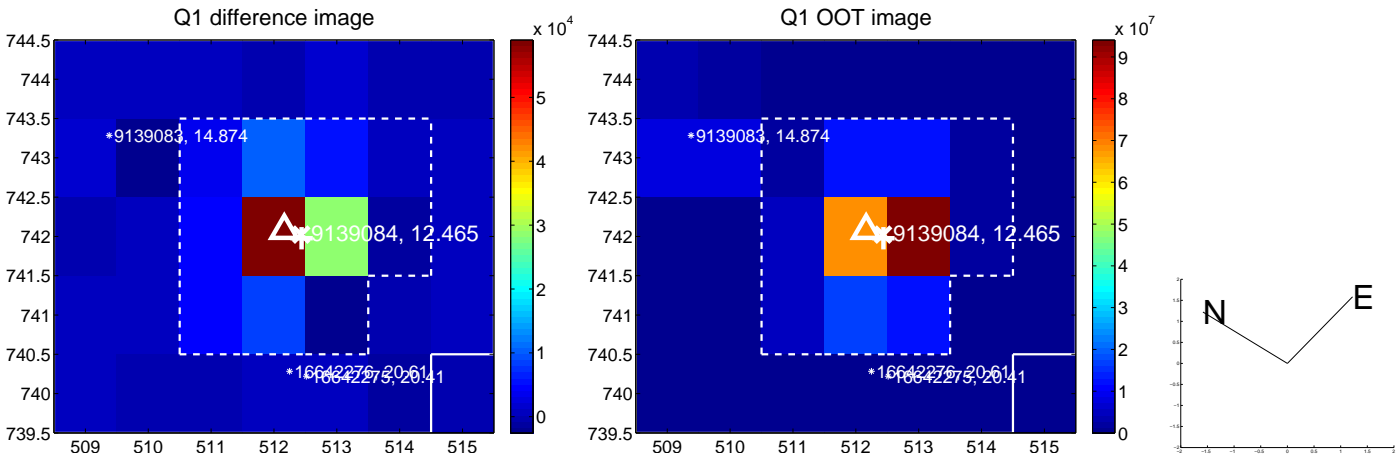
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.105	0.33	-0.020 ± 0.079	0.028 ± 0.104
PRF-fit source offset from KIC position	0.080 ± 0.084	0.96	-0.057 ± 0.081	-0.056 ± 0.103
photometric centroid source offset	0.04 ± 0.08	0.50	0.02 ± 0.07	0.03 ± 0.08

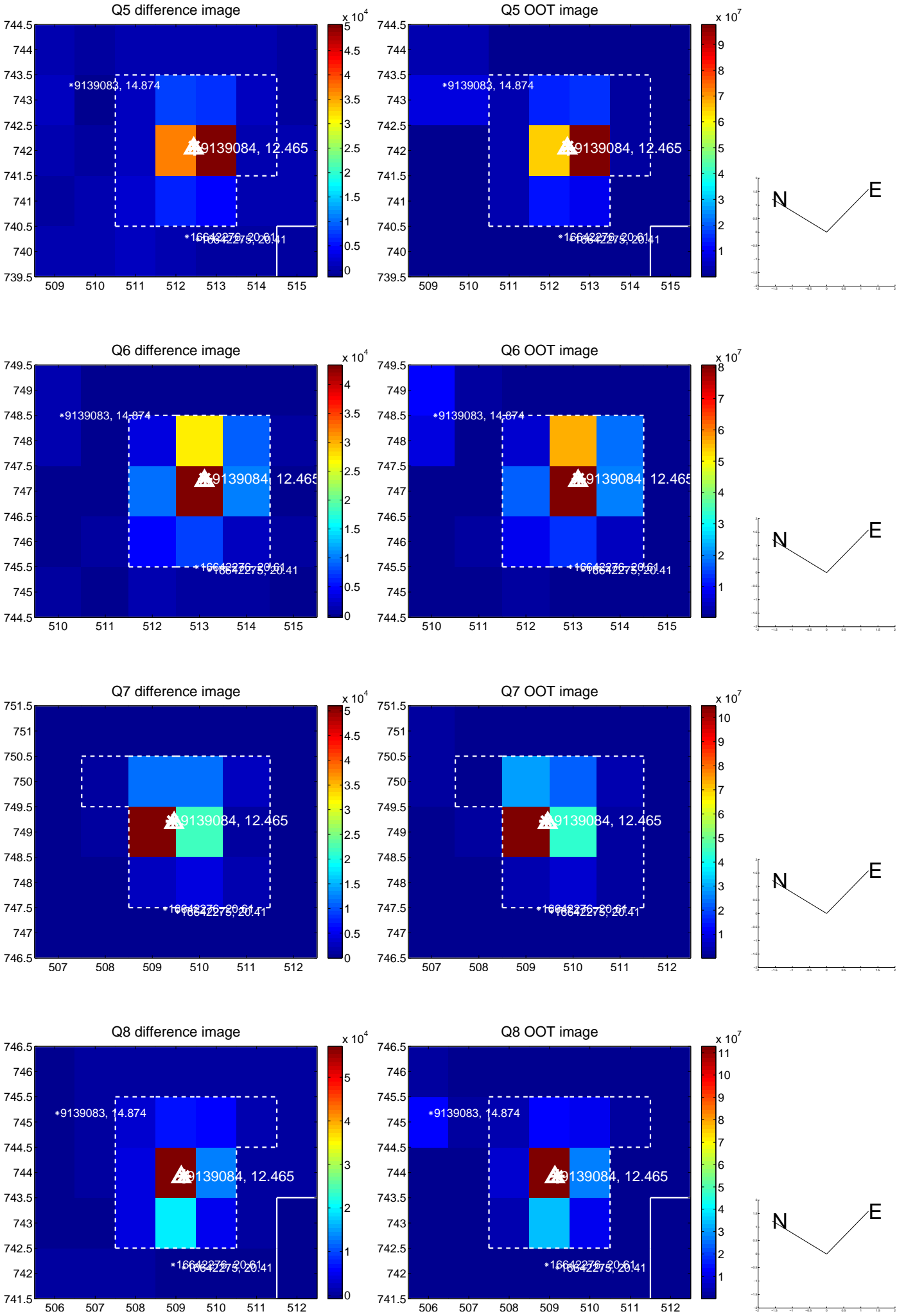


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

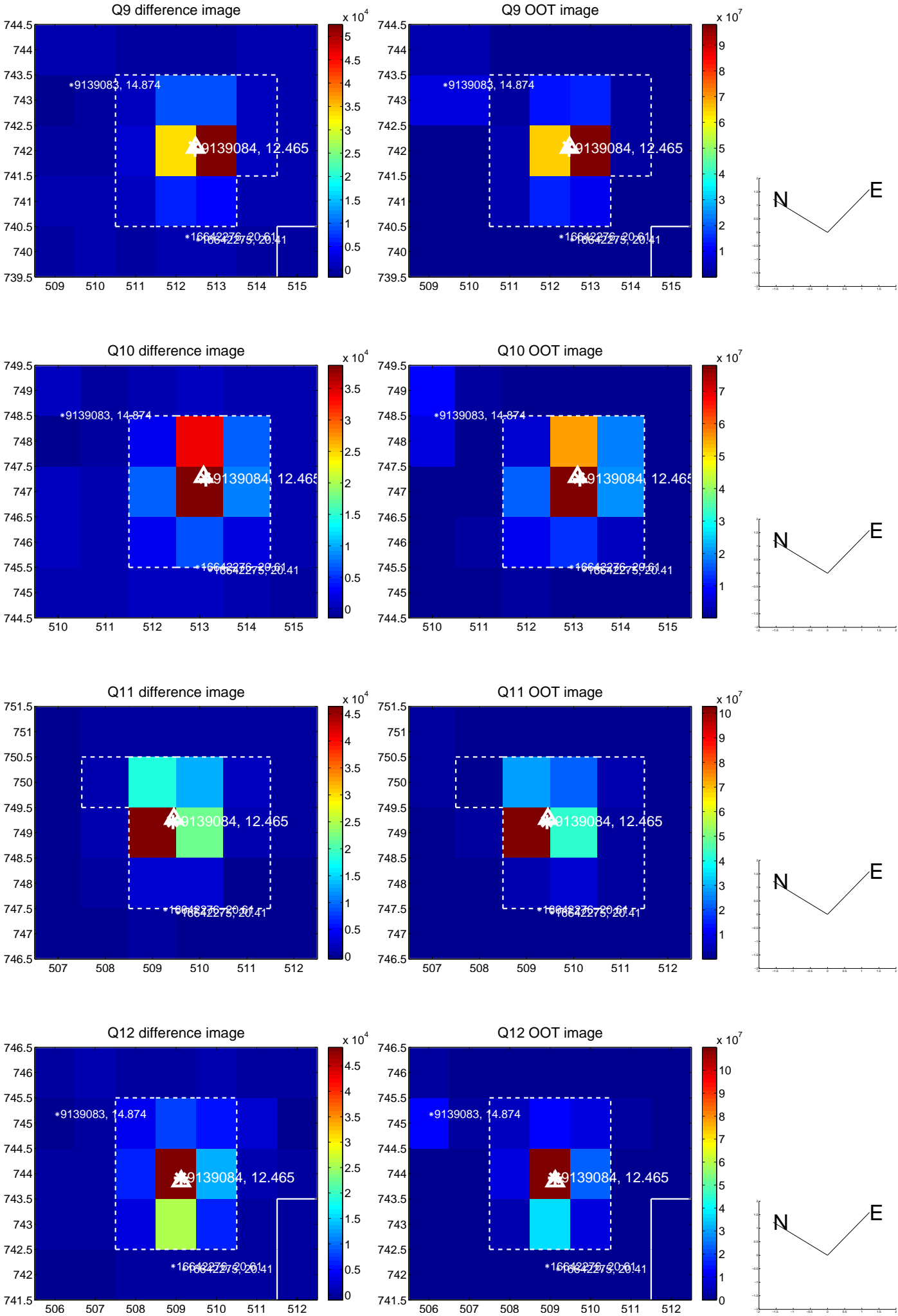
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



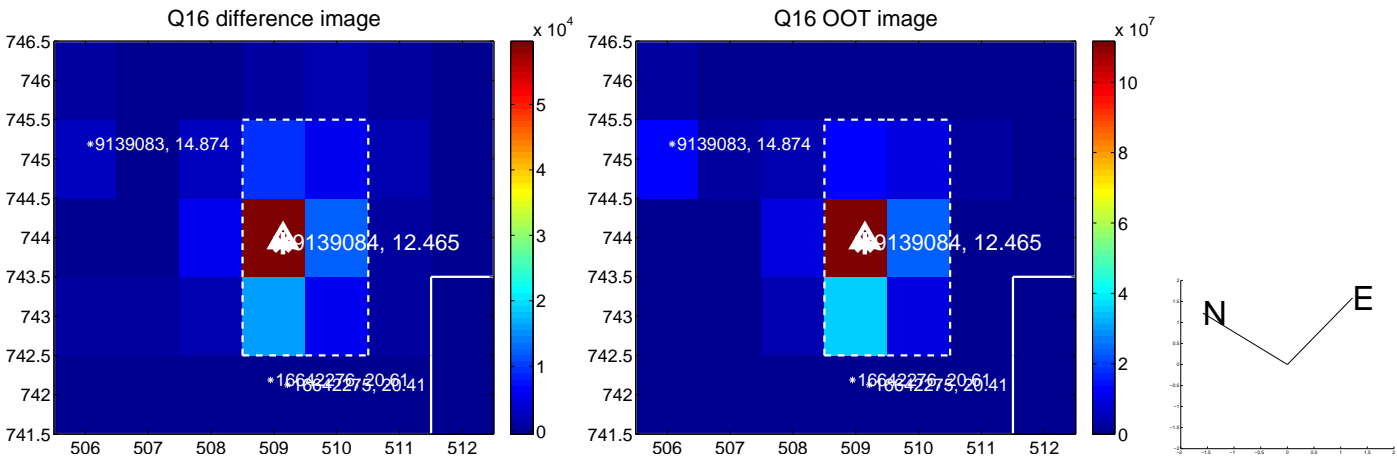
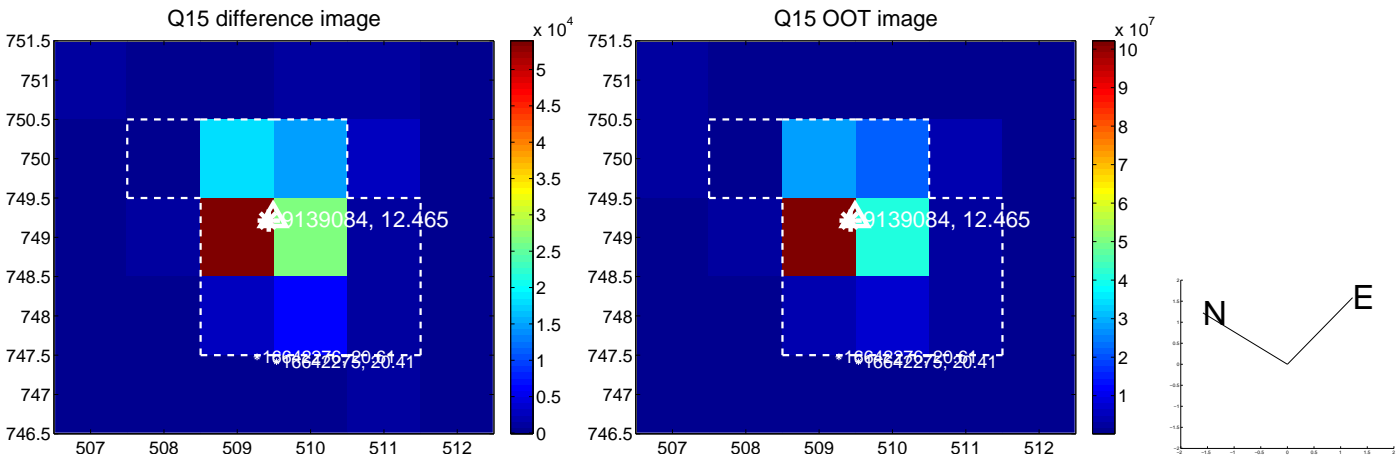
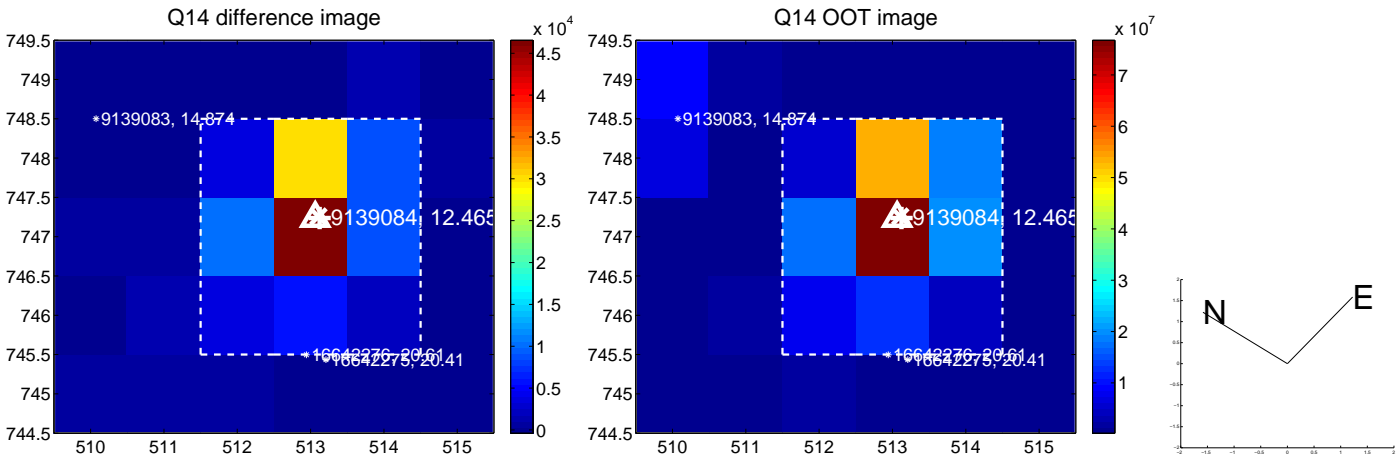
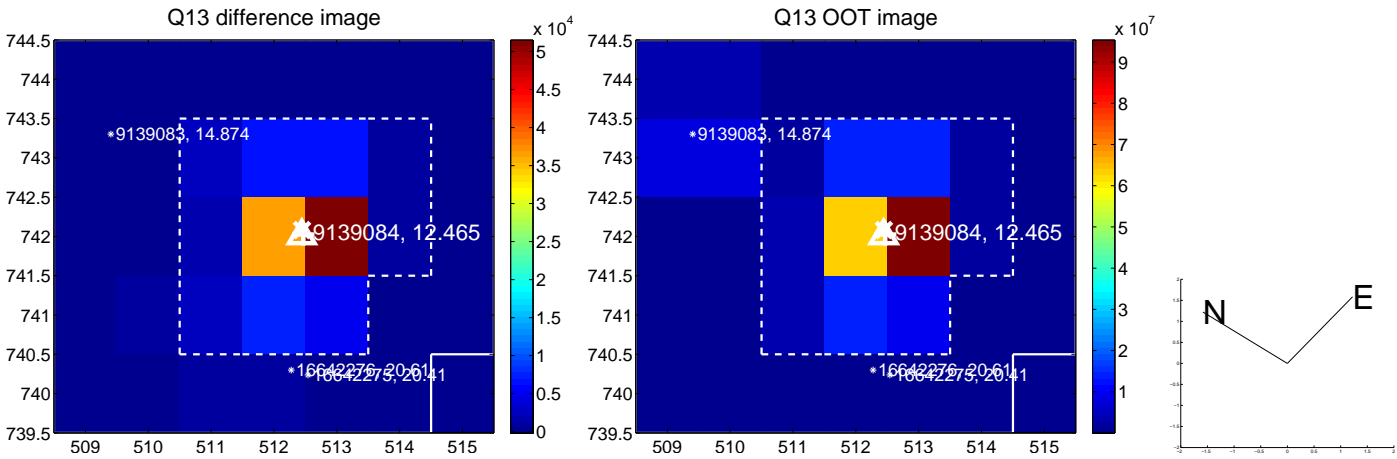
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



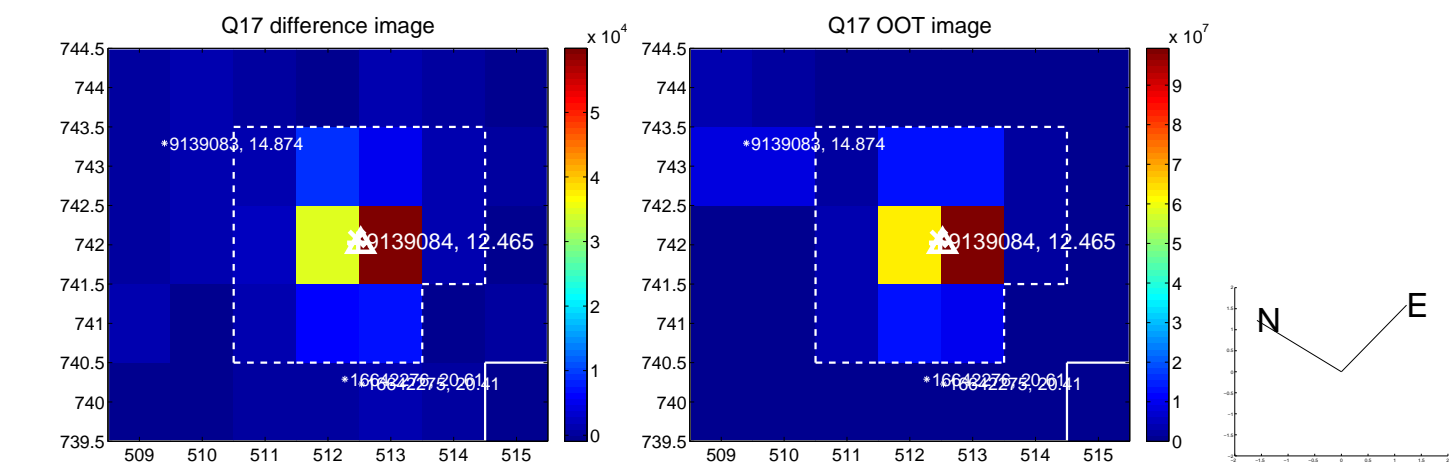
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



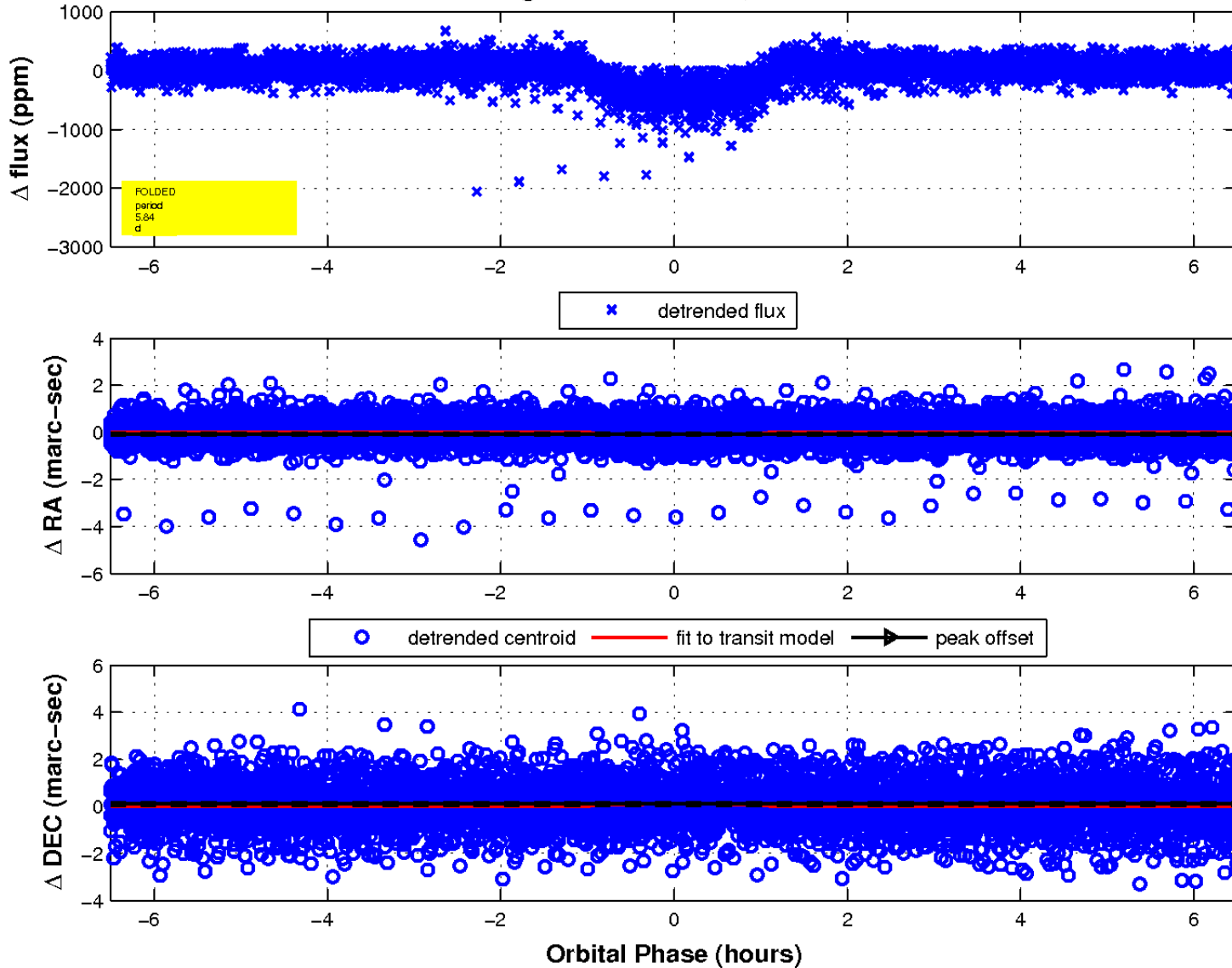
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

