

KIC 008439084

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})
008439084-01	OBS	No	369.147571	232.562616	587.7	11.204	8.7	10.5	1.20	6338	5.60	2.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008439084-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

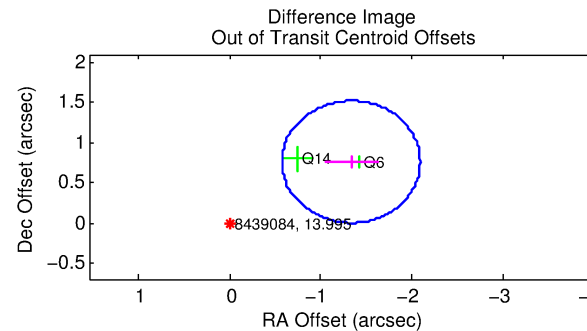
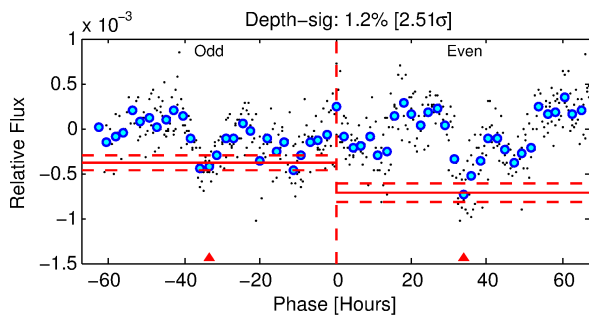
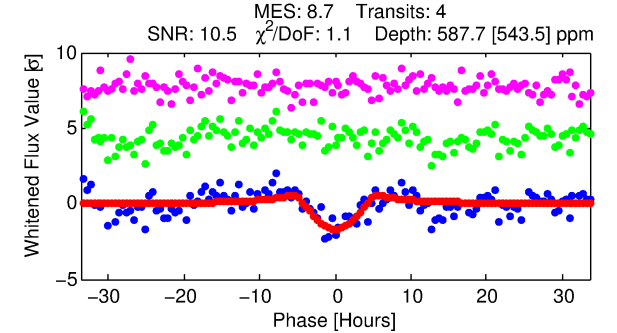
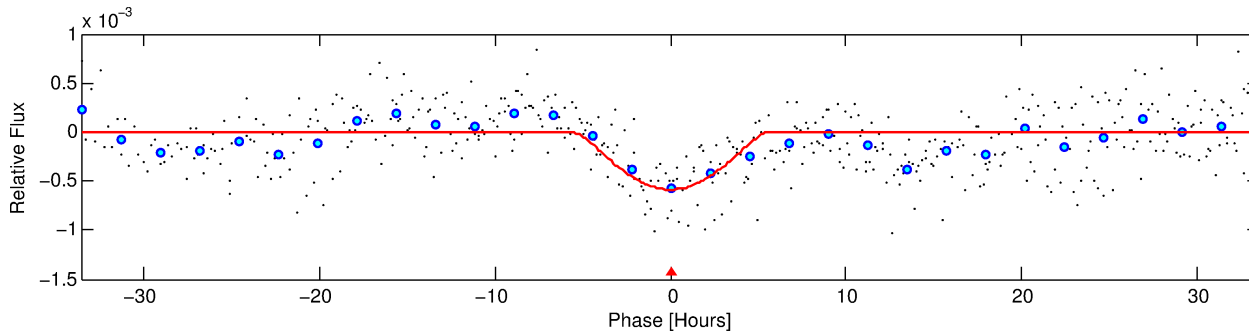
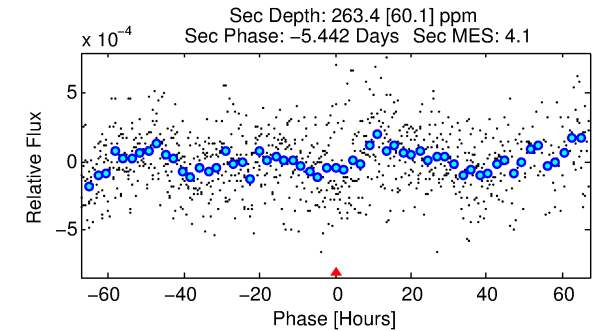
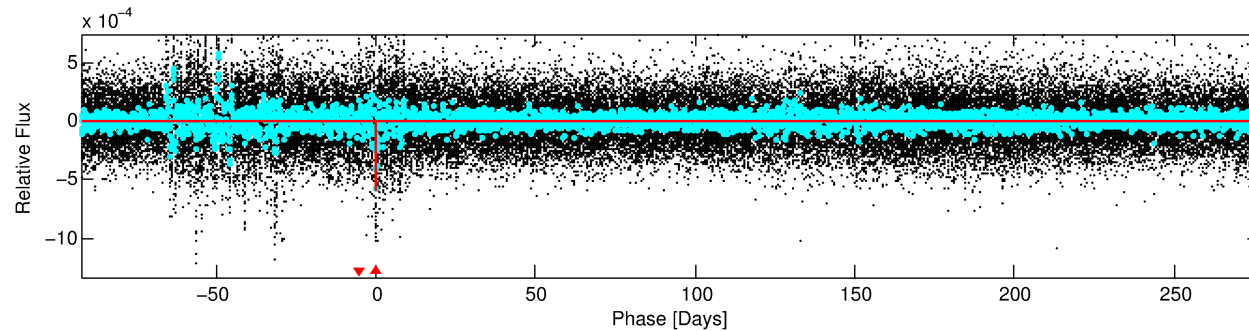
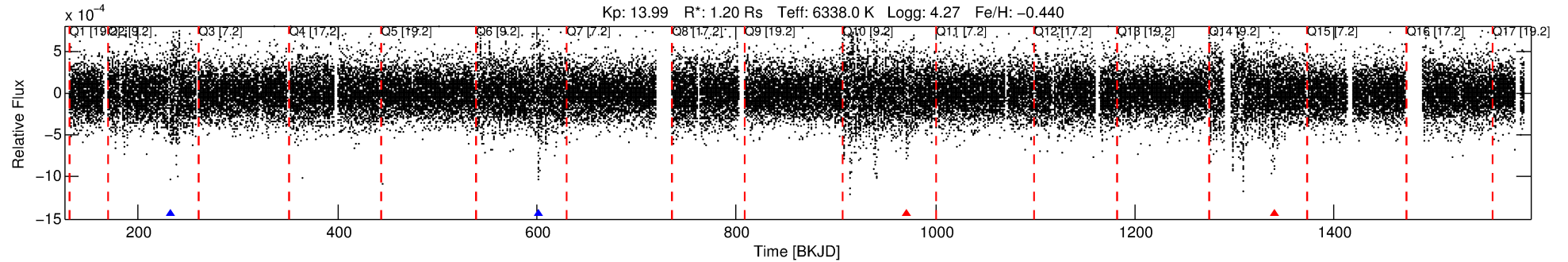
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008439084-01

No Significant Match Found

DV One-Page Summary

KIC: 8439084 Candidate: 1 of 1 Period: 369.148 d



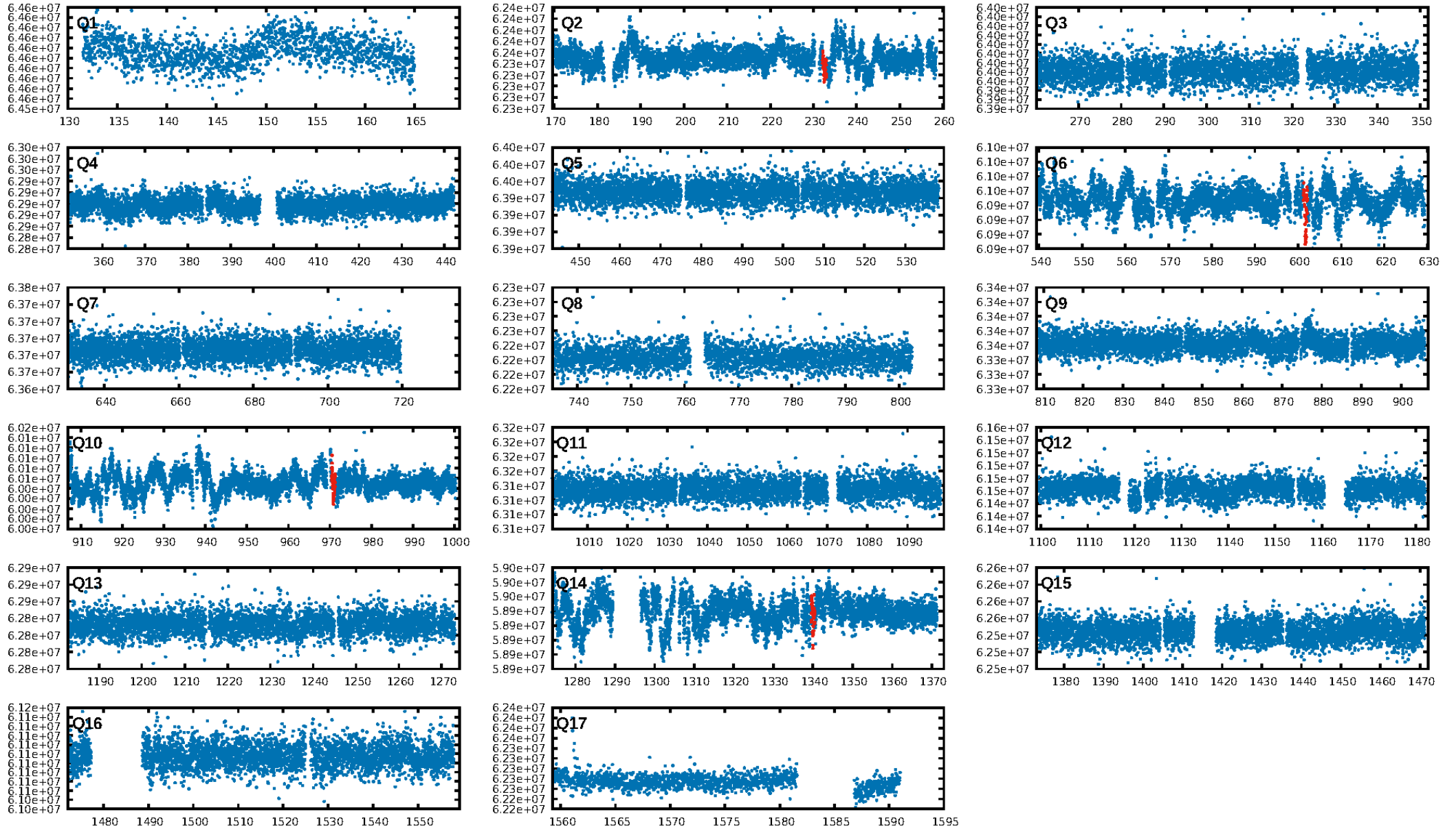
DV Fit Results:

Period = 369.14757 [0.01039] d
Epoch = 232.5626 [0.0201] BKJD
Rp/R* = 0.0426 [0.1179]
a/R* = 74.29 [51.93]
b = 1.00 [0.20]
Seff = 2.08 [0.73]
Teq = 306 [27] K
Rp = 5.60 [15.55] Re
a = 1.0023 [0.2265] AU
Ag = 4650.21 [25782.46] [0.18 σ]
Teffp = 3911 [5413] K [0.67 σ]

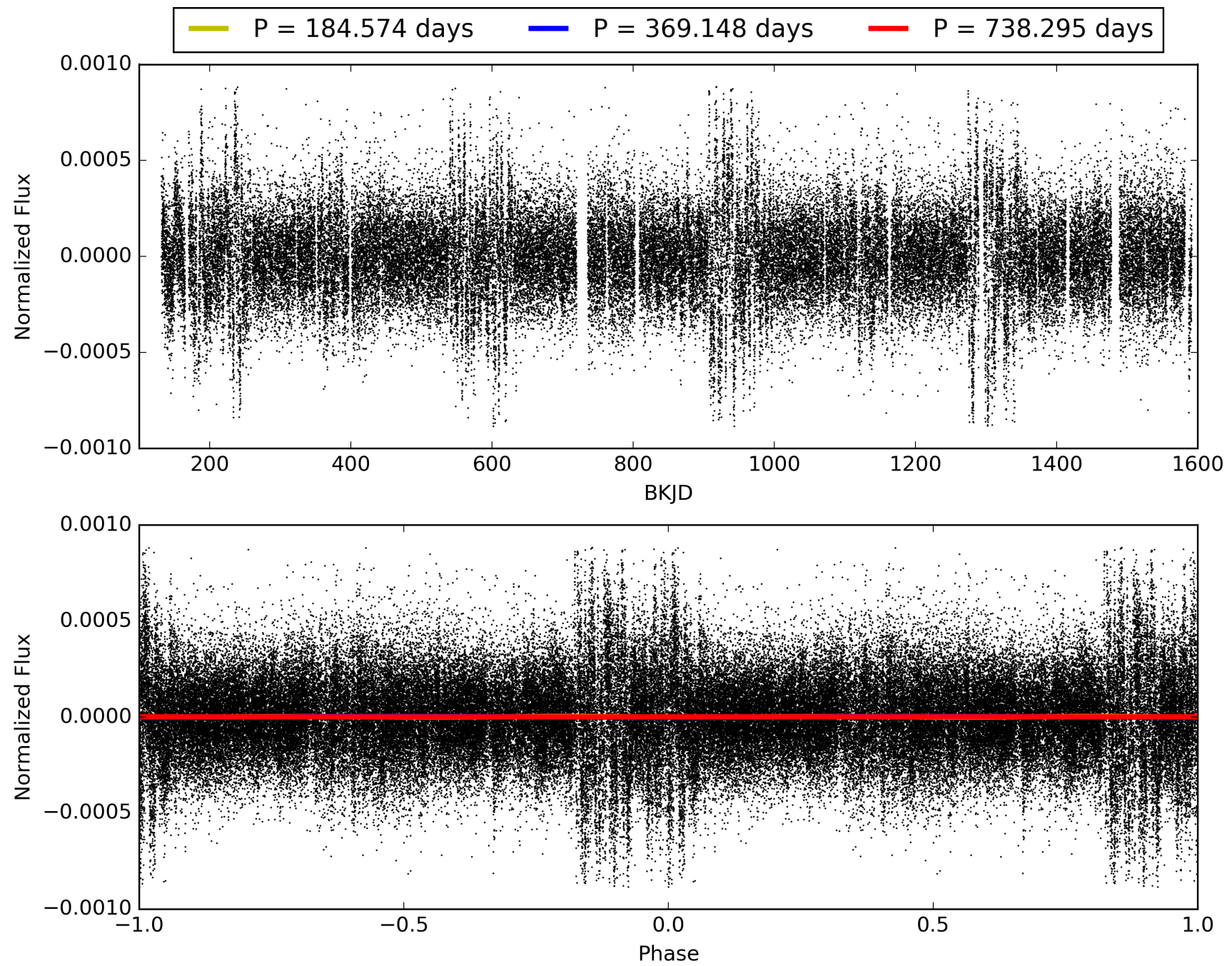
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.1%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 1.53e-11
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 0.5648
Centroid-sig: 0.0%
Centroid-so: 4.130 arcsec [3.20 σ]
OotOffset-rm: 1.535 arcsec [6.05 σ]
KicOffset-rm: 1.721 arcsec [6.96 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 008439084-01, PDC Light Curves

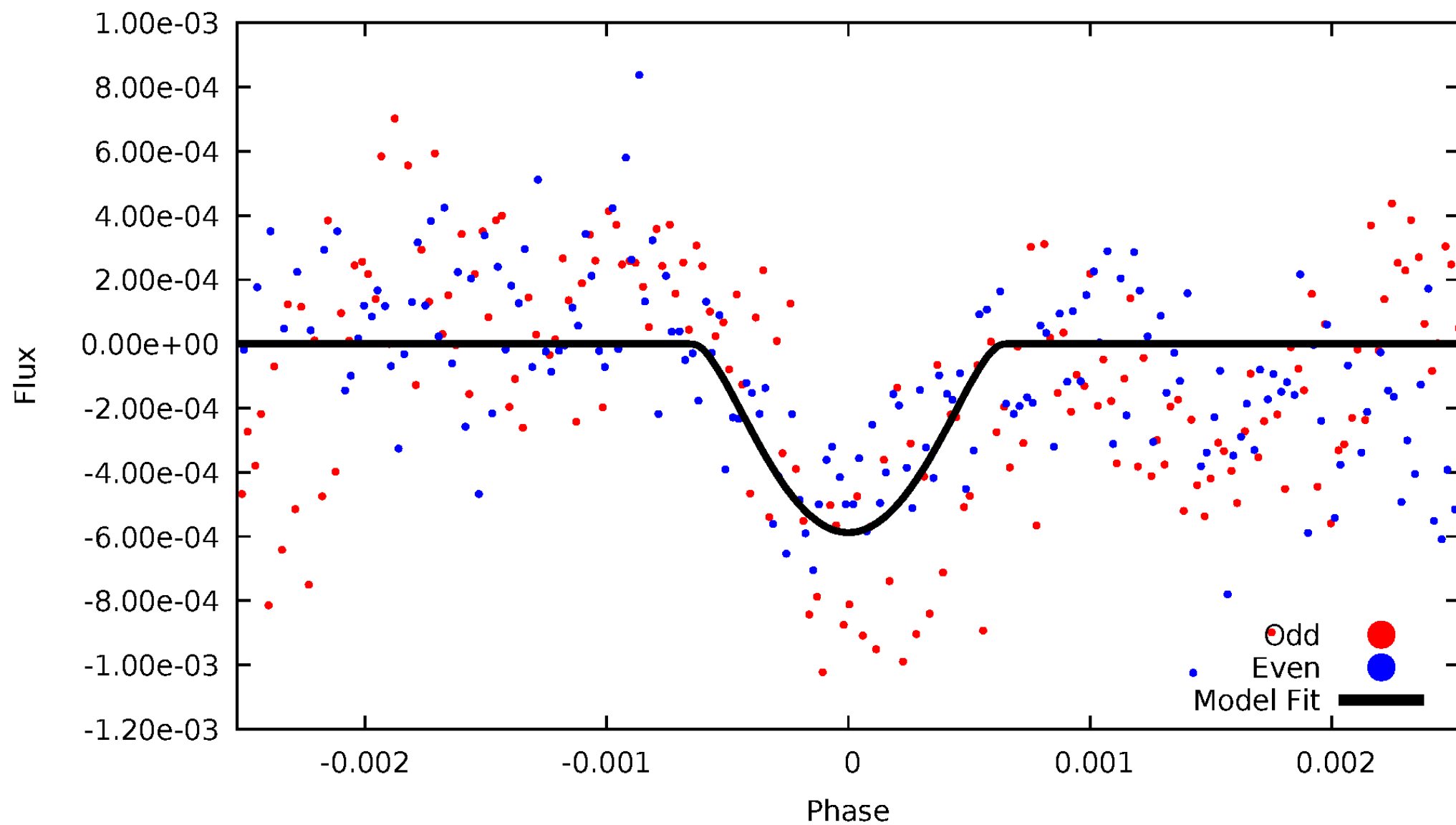


TCE 008439084-01



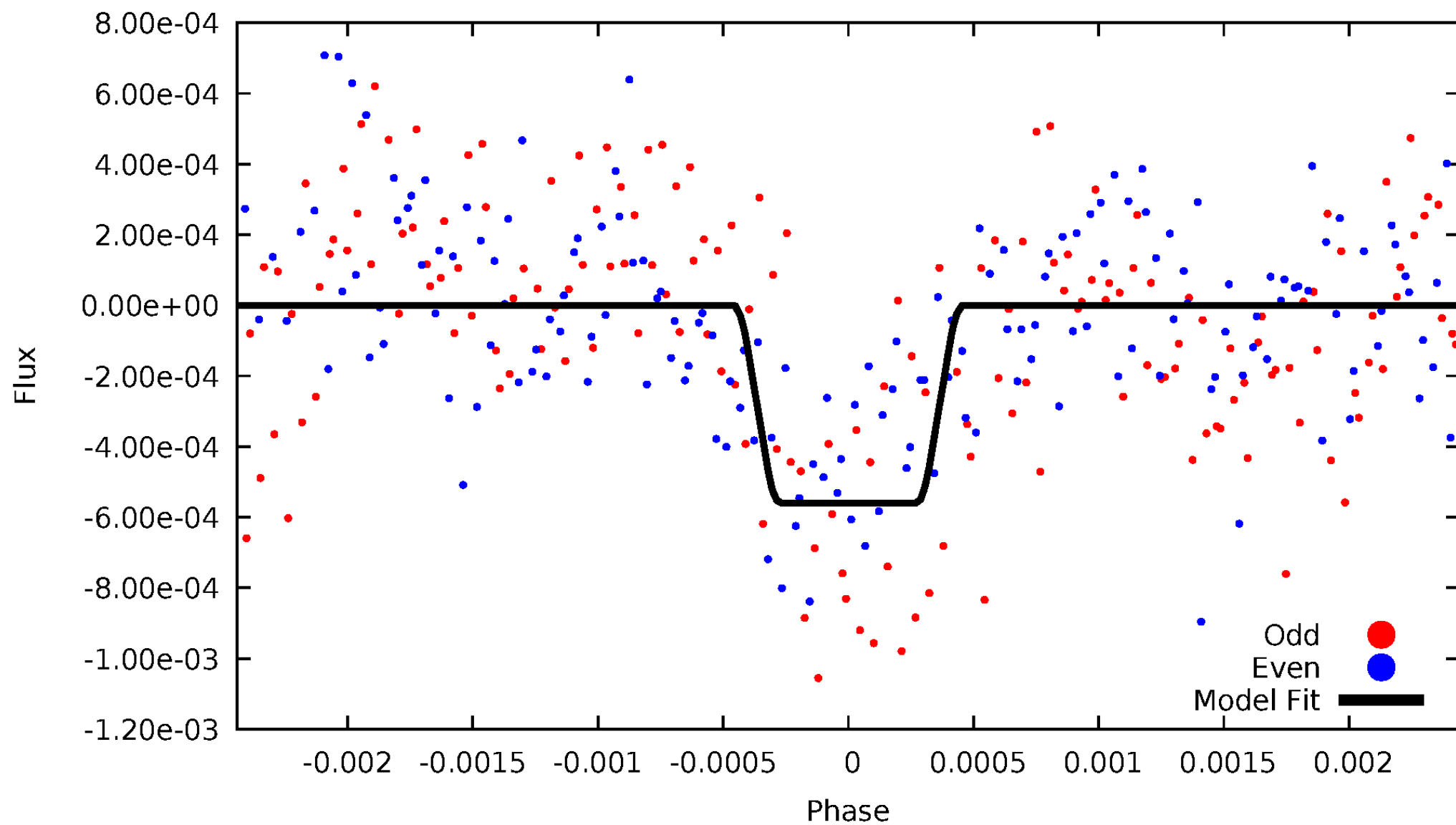
DV Odd/Even

TCE 008439084-01



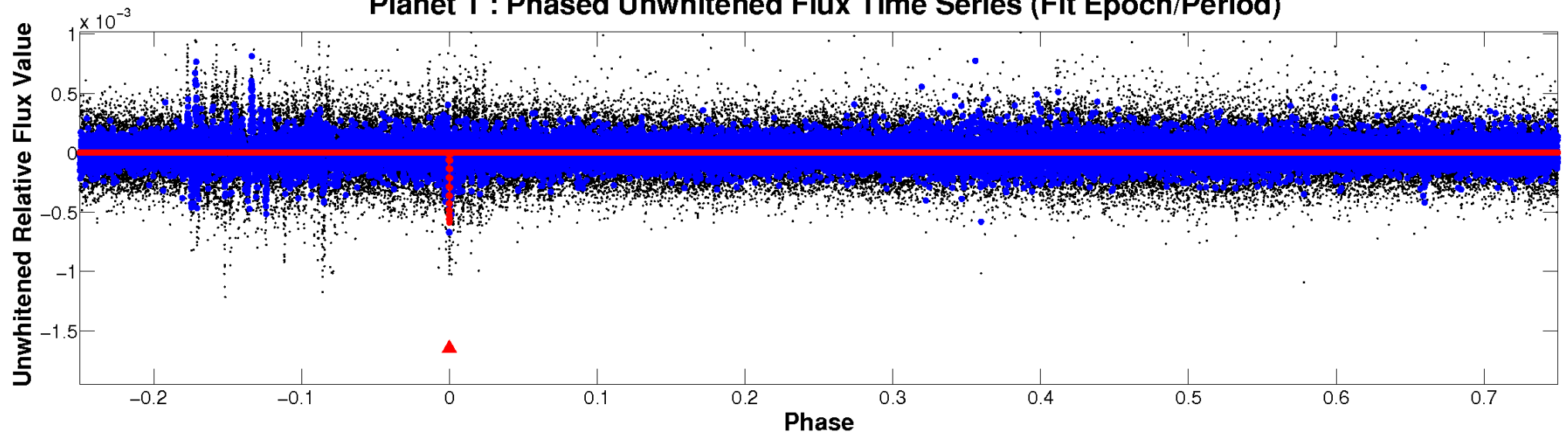
ALT Odd/Even

TCE 008439084-01

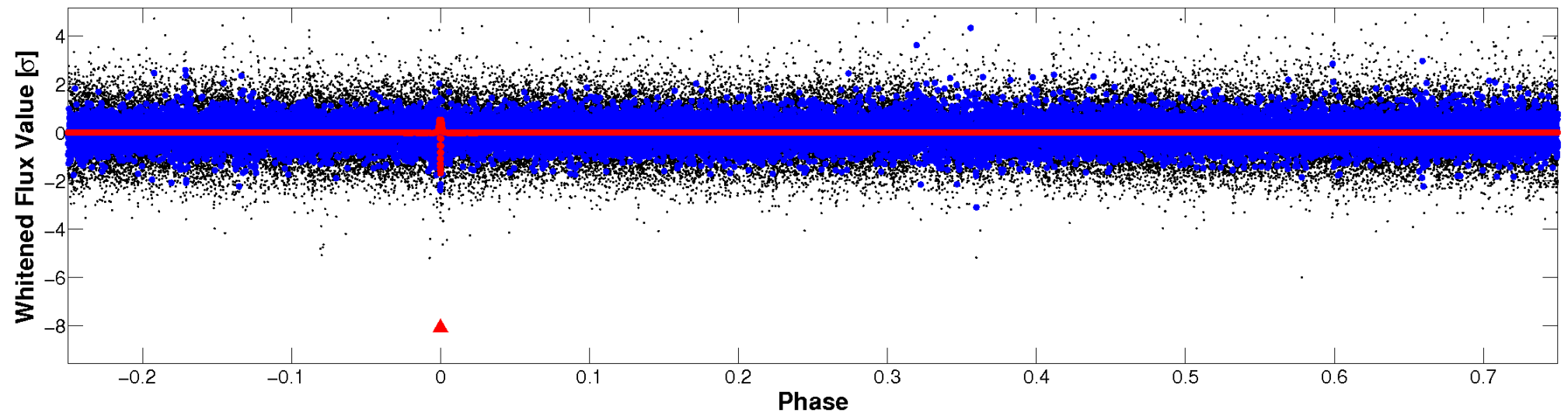


Non-Whitened Vs. Whitened Light Curve

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

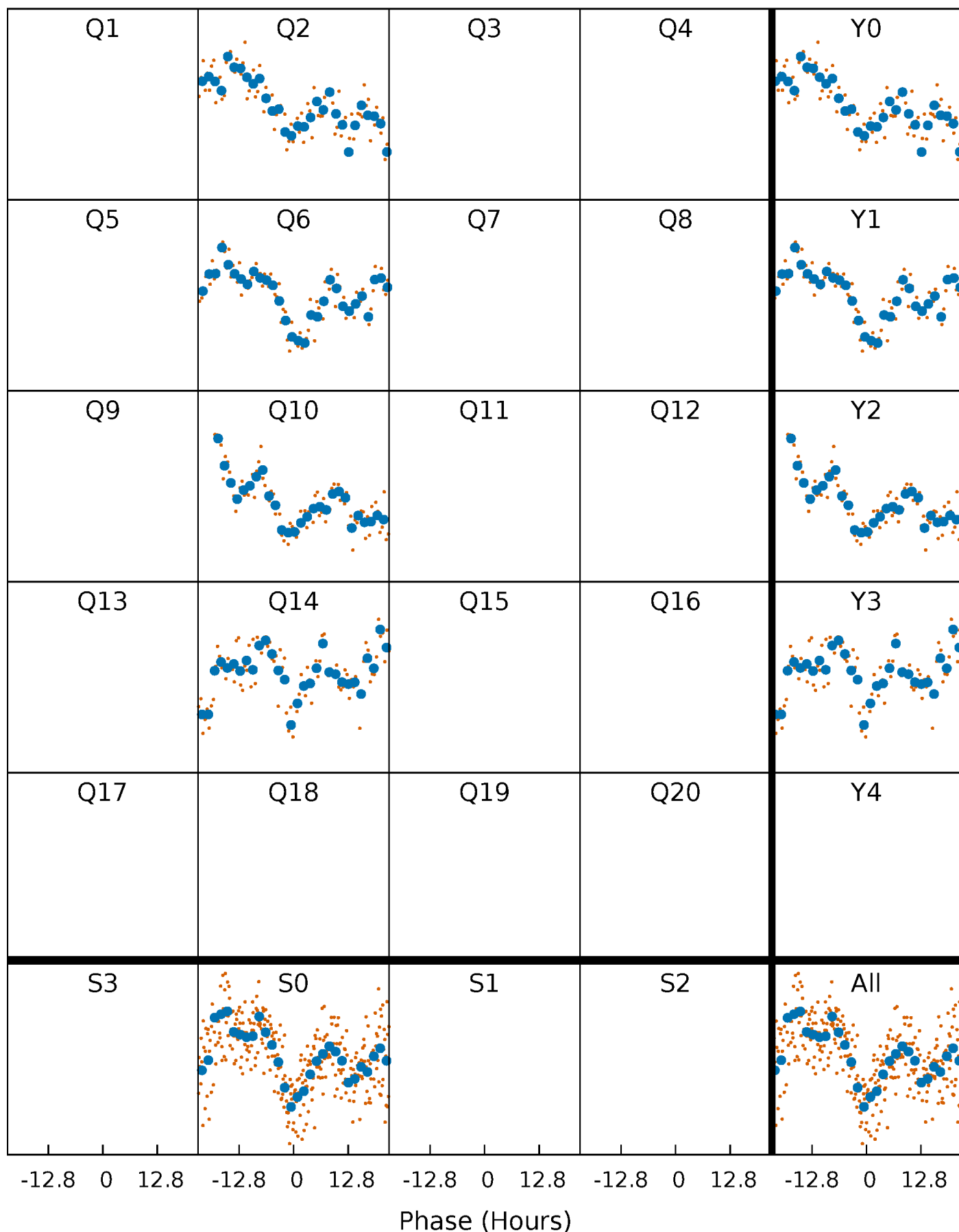


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



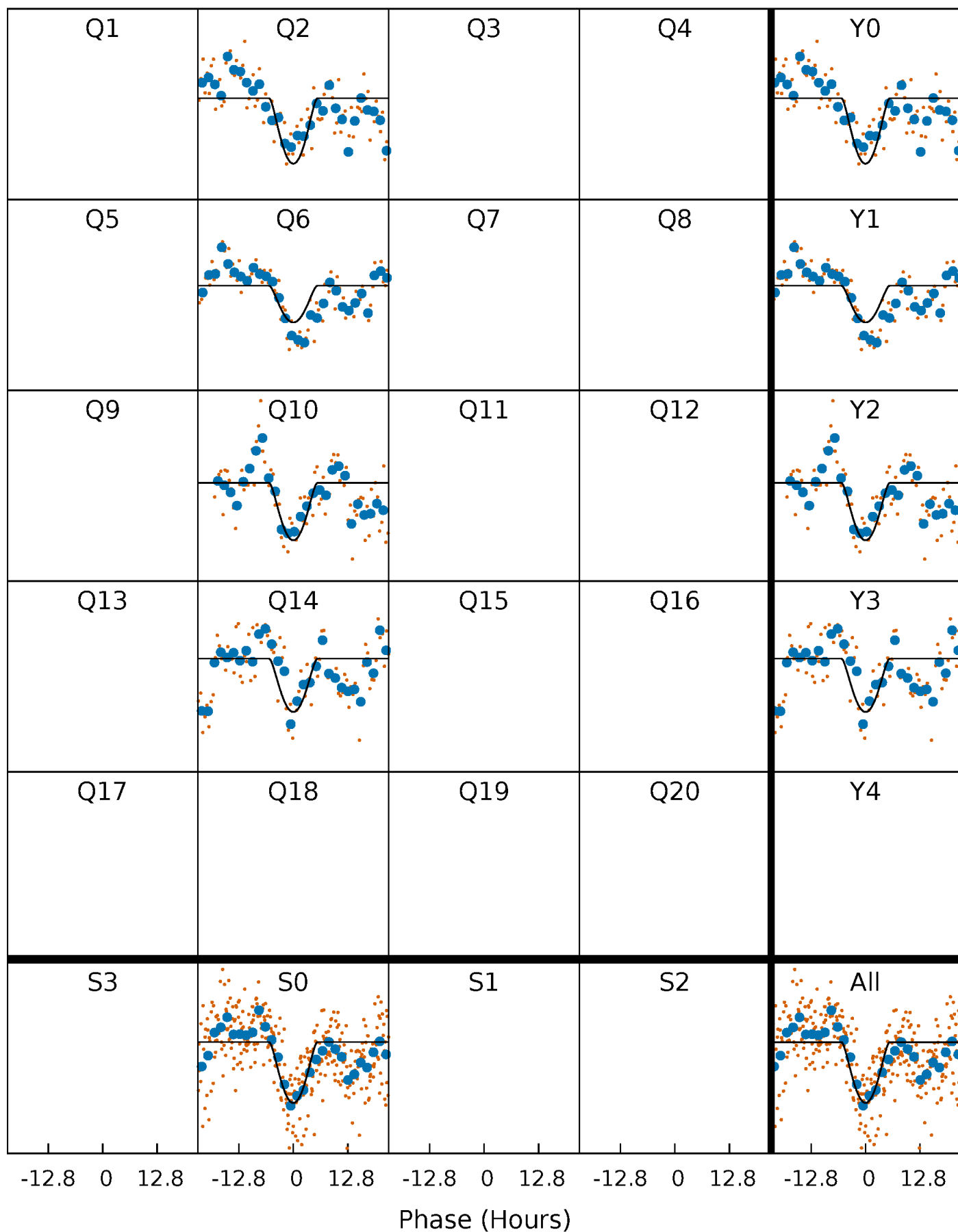
PDC Quarter-Phased Transit Curves

TCE 008439084-01 P=369.147571 Days $T_0=232.562616$ (BKJD)



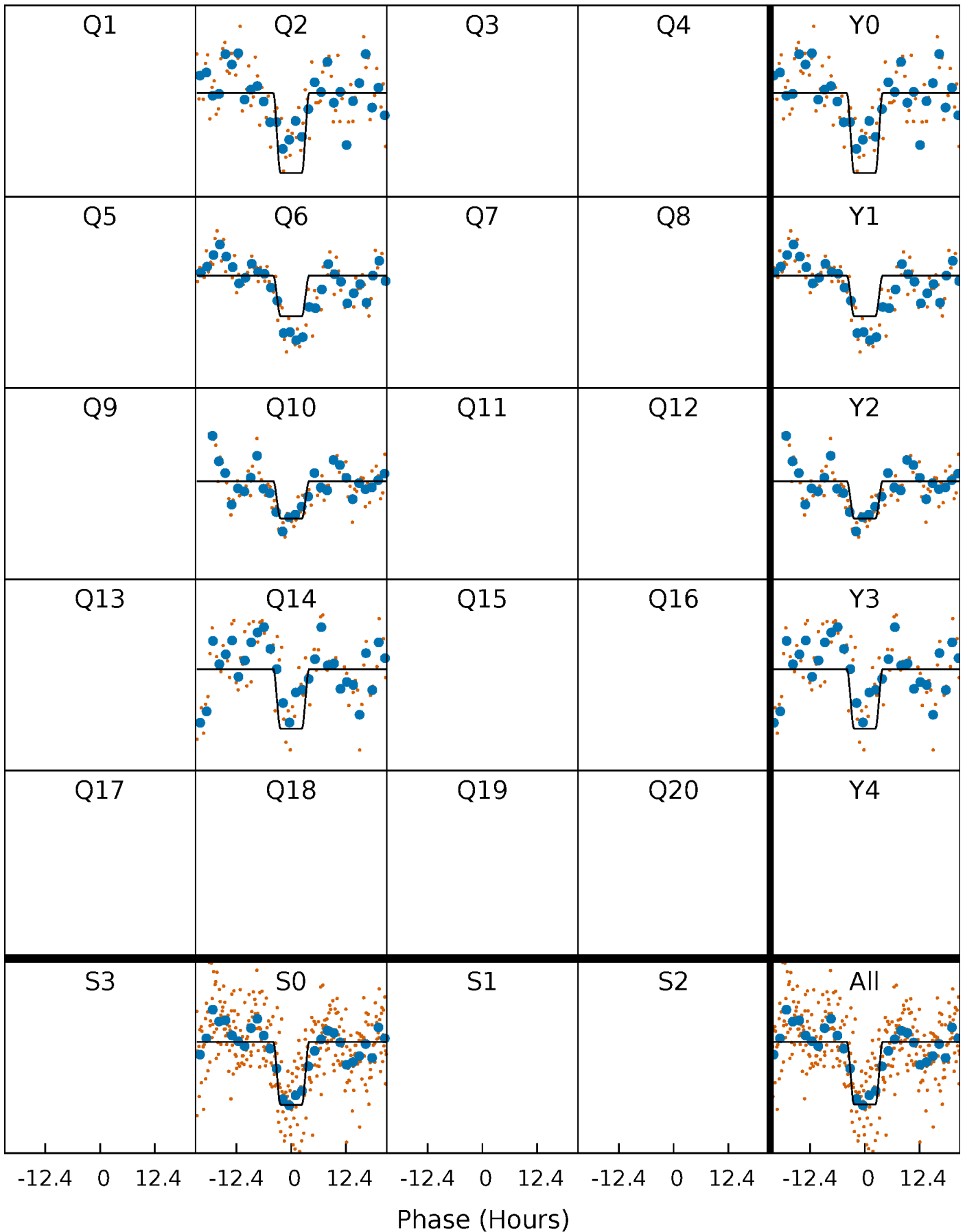
DV Quarter-Phased Transit Curves

TCE 008439084-01 P=369.147571 Days $T_0=232.562616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

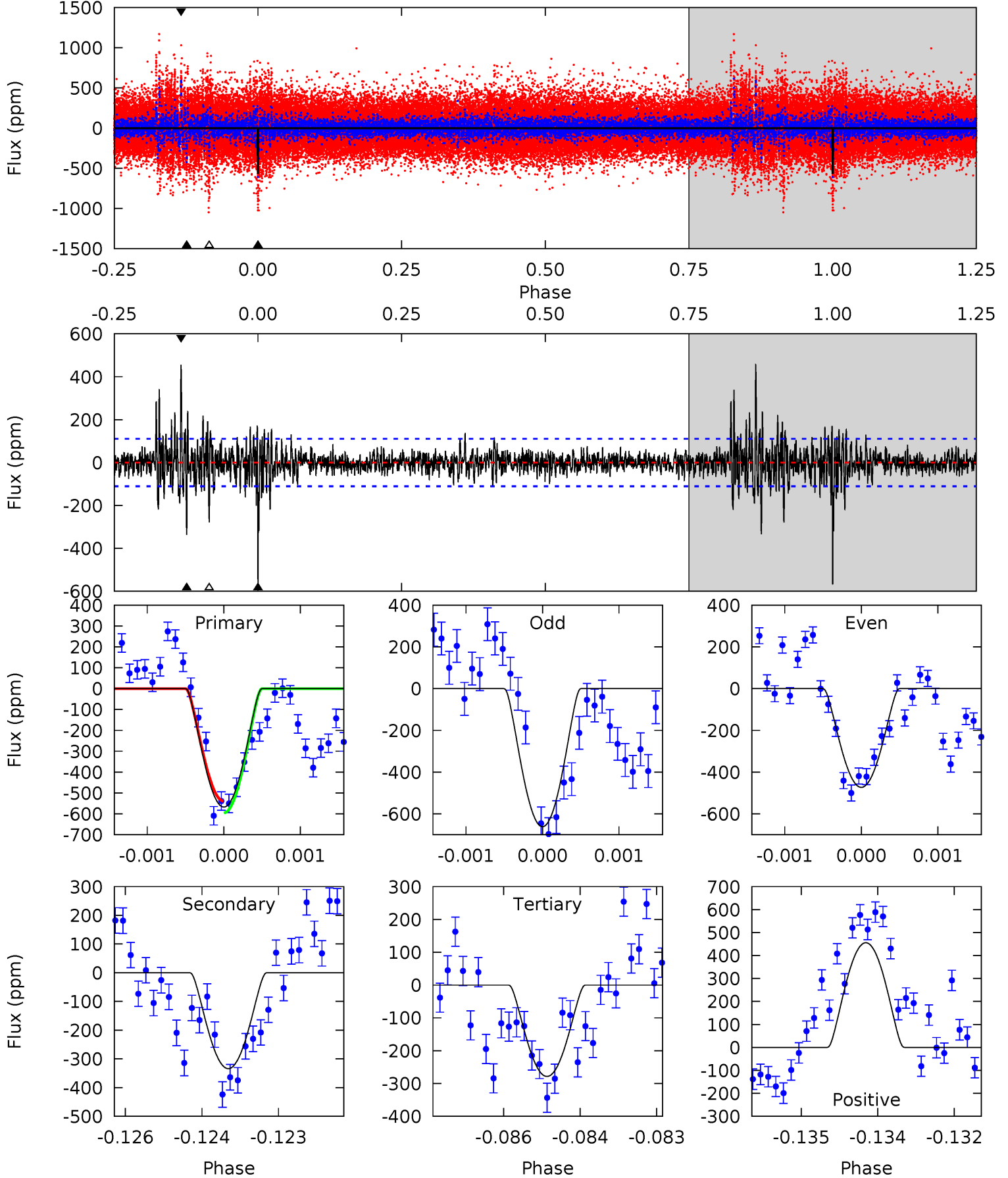
TCE 008439084-01 P=369.145884 Days $T_0=232.569289$ (BKJD)



DV Model-Shift Uniqueness Test

008439084-01, P = 369.147571 Days, E = 232.562616 Days

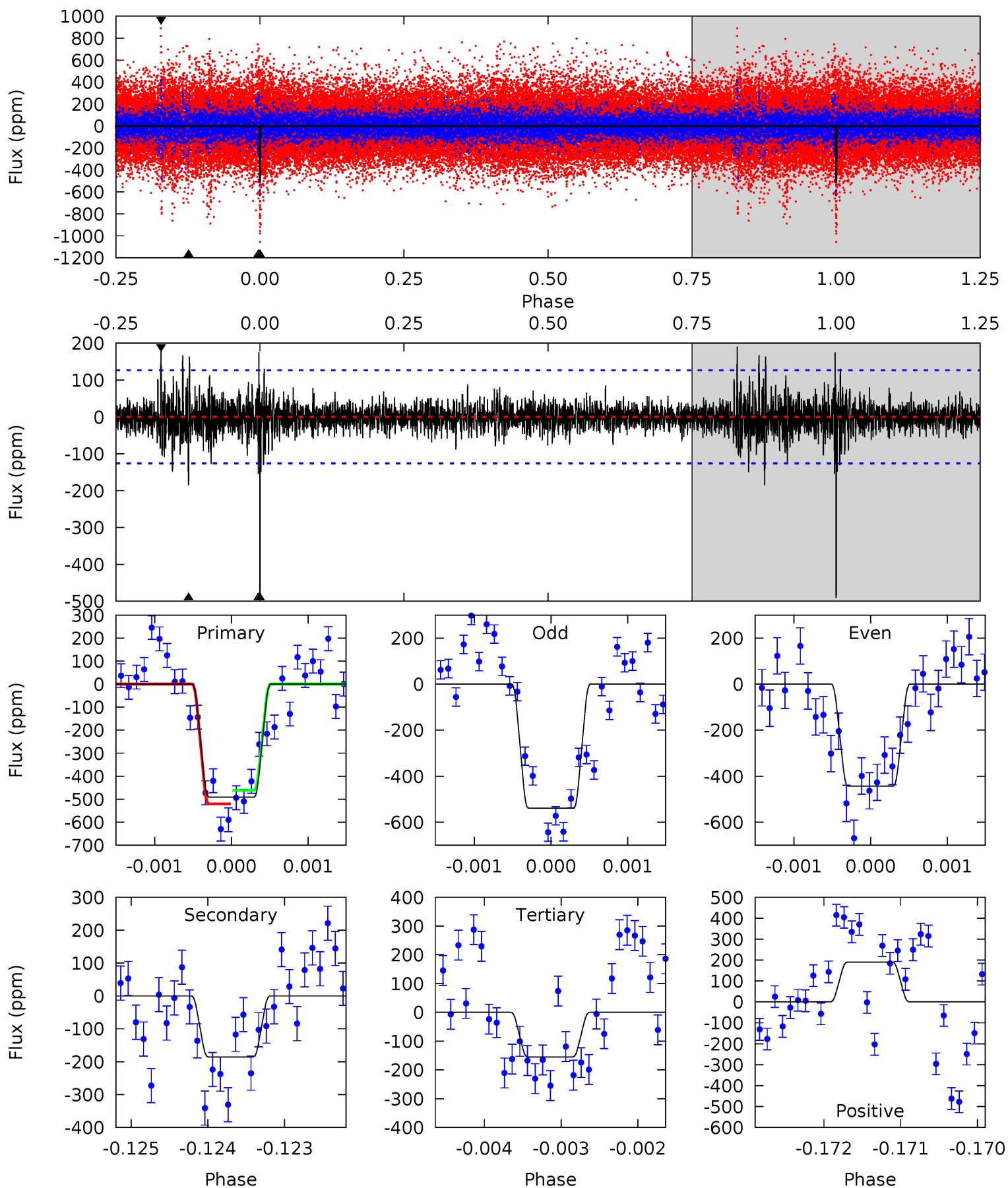
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	16.3	13.6	22.3	5.40	3.22	2.48	14.1	5.47	2.71	-5.95	4.64	1.17	0.45	1.38



Alt Model-Shift Uniqueness Test

008439084-01, P = 369.145884 Days, E = 232.569289 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	8.03	6.70	8.22	5.47	3.32	1.27	14.6	13.0	1.33	-0.19	2.07	1.11	0.28	1.27



Stellar Parameters For KIC 008439084

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+171}_{-209}	$4.271^{+0.175}_{-0.175}$	$-0.440^{+0.300}_{-0.300}$	$1.203^{+0.328}_{-0.268}$	$0.984^{+0.145}_{-0.106}$	$0.797^{+0.706}_{-0.370}$
	+3%/-3%	+4%/-4%	+68%/-68%	+27%/-22%	+15%/-11%	+89%/-46%
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 008439084-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-334 ± 20	$12.66^{+13.93}_{-8.89}$	427^{+31}_{-26}	3301^{+1785}_{-604}	1171^{+12107}_{-900}
Alt.	-186 ± 23	$11.70^{+12.73}_{-7.90}$	429^{+32}_{-28}	3113^{+1396}_{-557}	762^{+6727}_{-587}

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

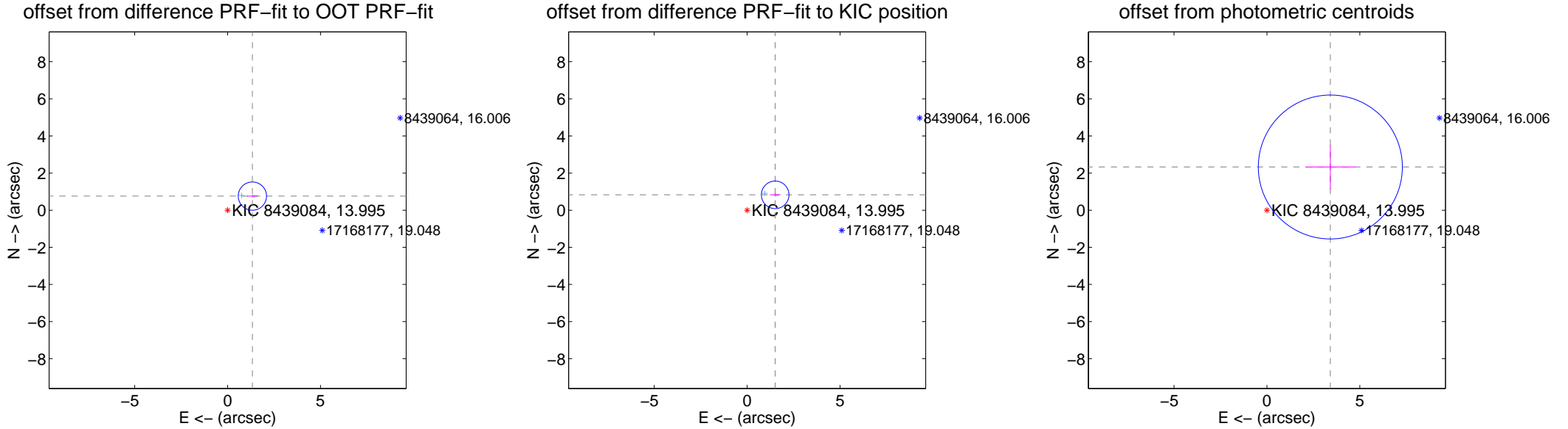
DV Centroid Data

Supplemental centroid analysis for 008439084-01. Kepler magnitude: 13.99. Transit SNR 10.47

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.535 \pm 0.254	6.05	-1.334 \pm 0.289	0.760 \pm 0.070
PRF-fit source offset from KIC position	1.721 \pm 0.247	6.96	-1.509 \pm 0.279	0.828 \pm 0.082
photometric centroid source offset	4.13 \pm 1.29	3.20	-3.41 \pm 1.34	2.33 \pm 1.19

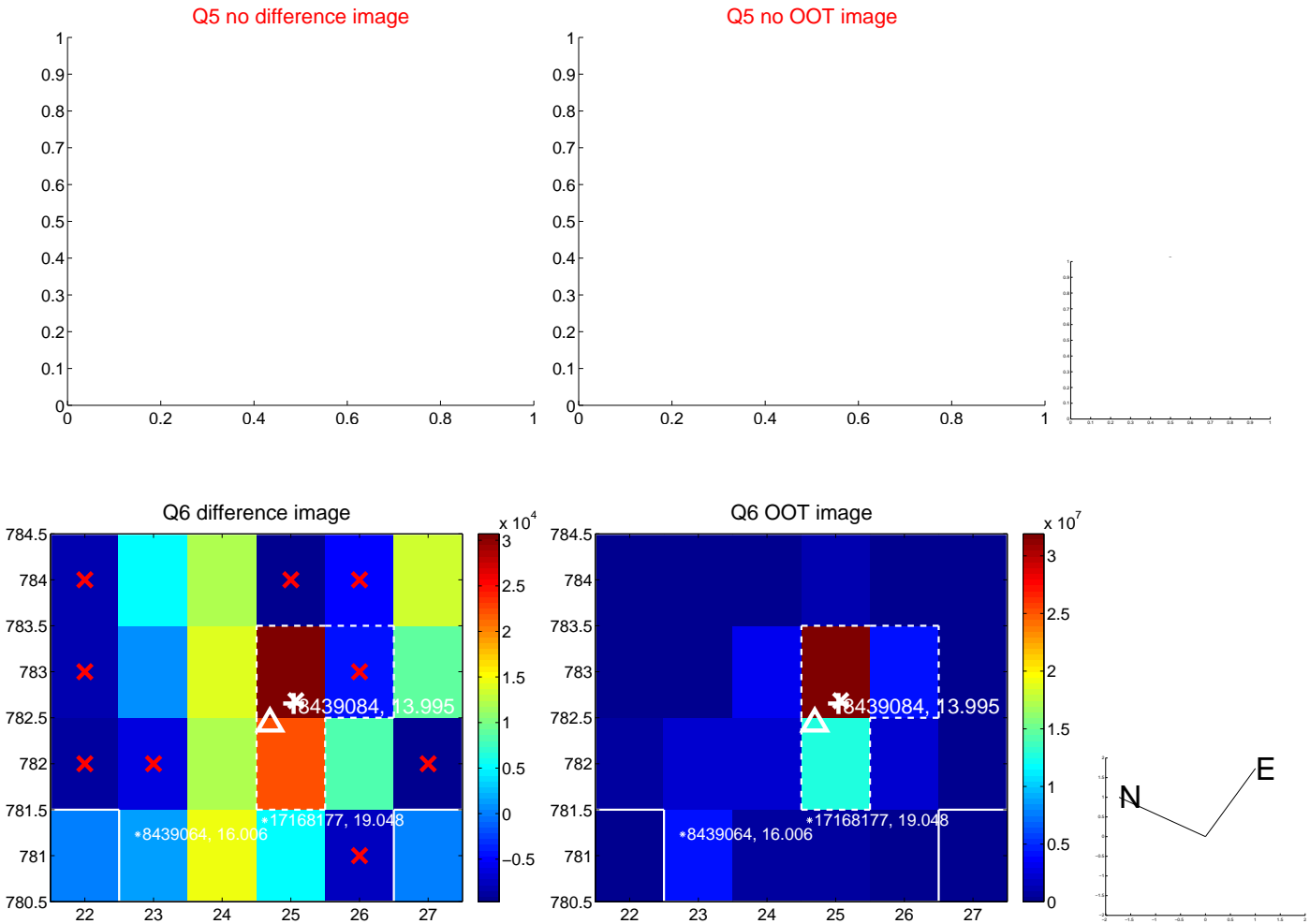


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



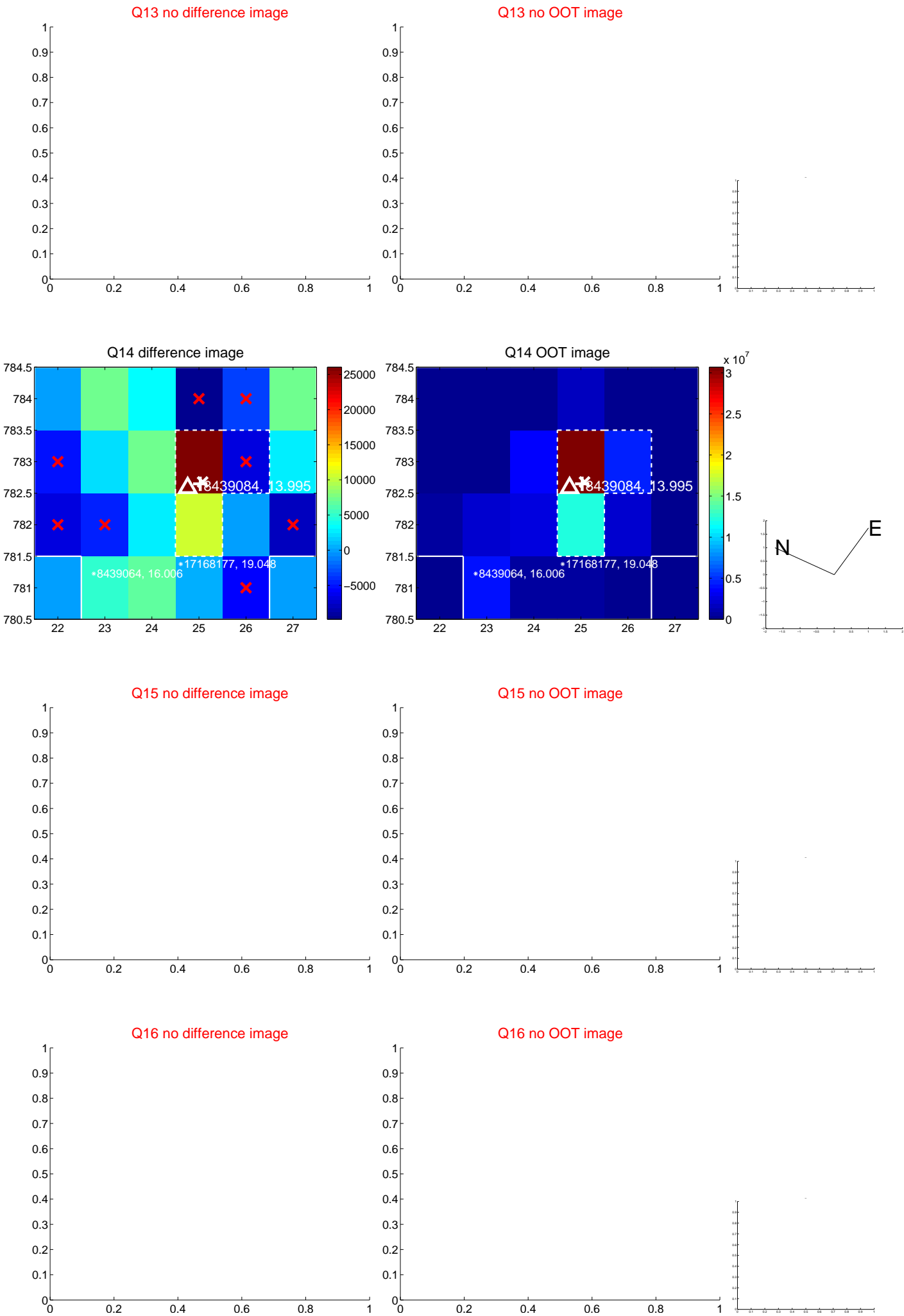
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



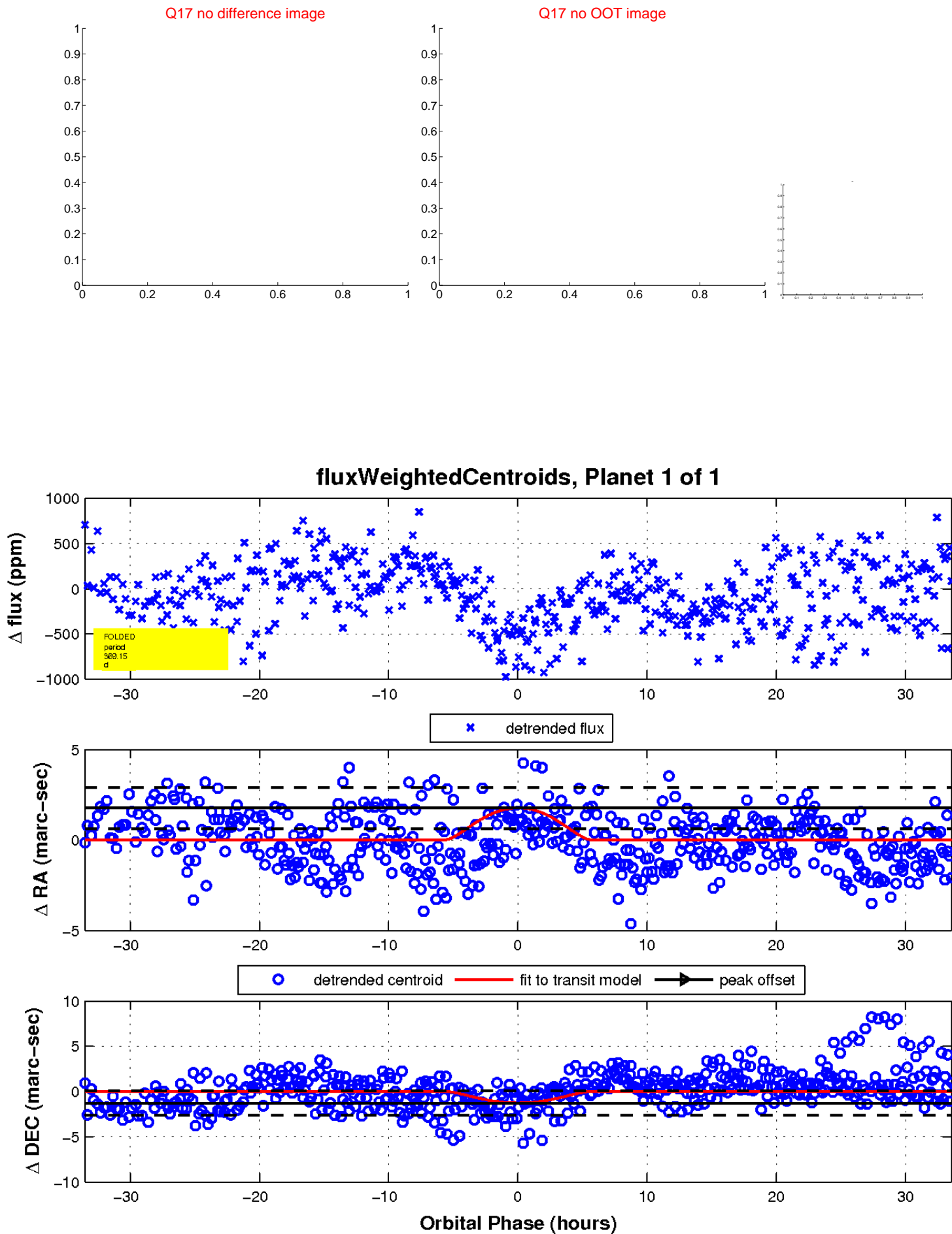
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

