

KIC 003839294

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})
003839294-01	OBS	7669.01	137.665506	240.445573	572.6	3.929	8.1	7.7	6.90	4832	20.08	63.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003839294-01	OBS	FP	0.41	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.

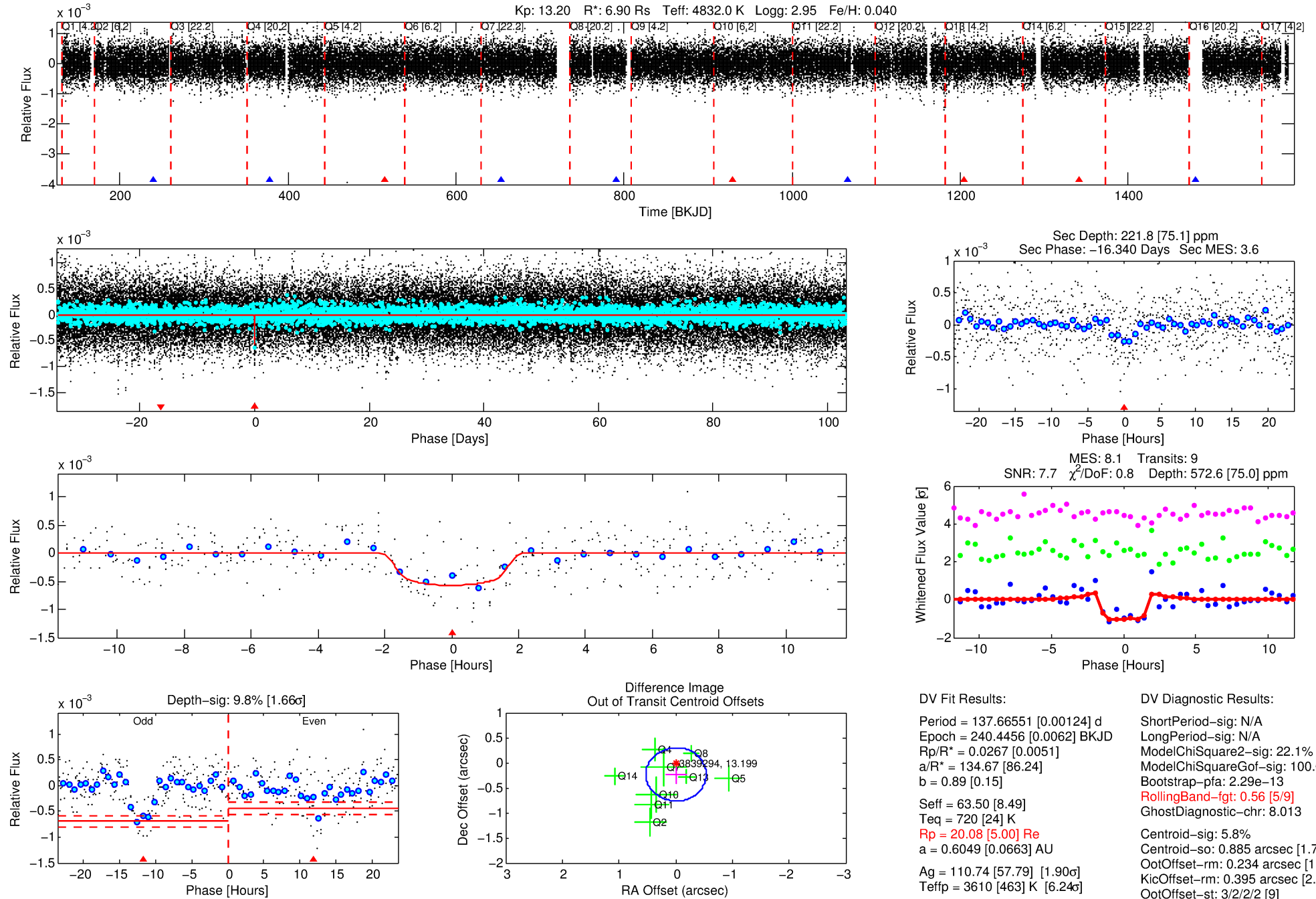
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003839294-01

No Significant Match Found

DV One-Page Summary

KIC: 3839294 Candidate: 1 of 1 Period: 137.666 d



DV Fit Results:

Period = 137.66551 [0.00124] d
Epoch = 240.4456 [0.0062] BKJD
Rp/R* = 0.0267 [0.0051]
a/R* = 134.67 [86.24]
b = 0.89 [0.15]
Seff = 63.50 [8.49]
Teff = 720 [24] K
Rp = 20.08 [5.00] Re
a = 0.6049 [0.0663] AU
Ag = 110.74 [57.79] [1.90 σ]
Teffp = 3610 [463] K [6.24 σ]

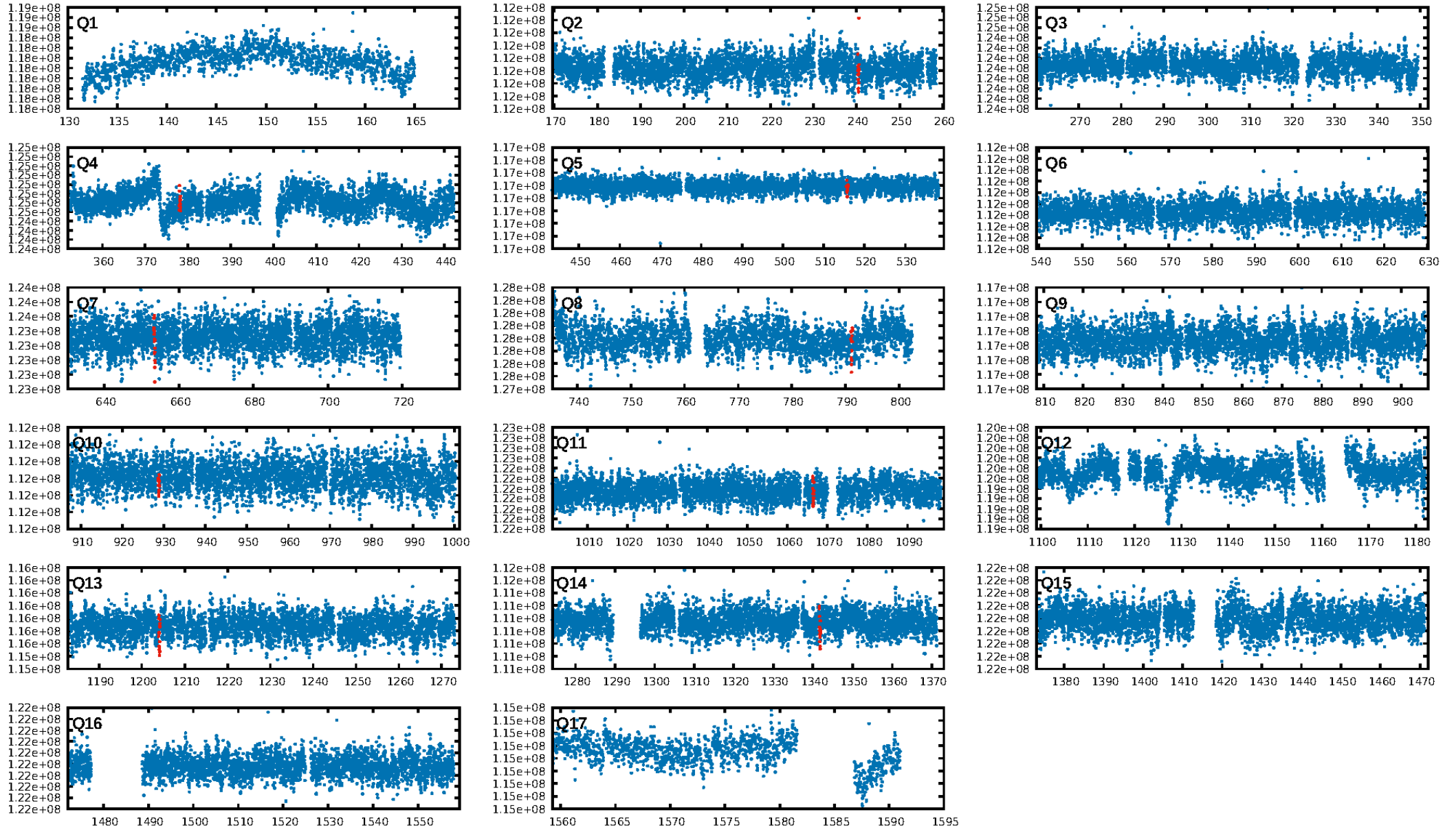
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.29e-13
RollingBand-fgt: 0.56 [5/9]
GhostDiagnostic-chr: 8.013
Centroid-sig: 5.8%
Centroid-so: 0.885 arcsec [1.70 σ]
OotOffset-rm: 0.234 arcsec [1.32 σ]
KicOffset-rm: 0.395 arcsec [2.13 σ]
OotOffset-st: 3/2/2/2 [9]
KicOffset-st: 3/2/2/2 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 1.00 [9/9]

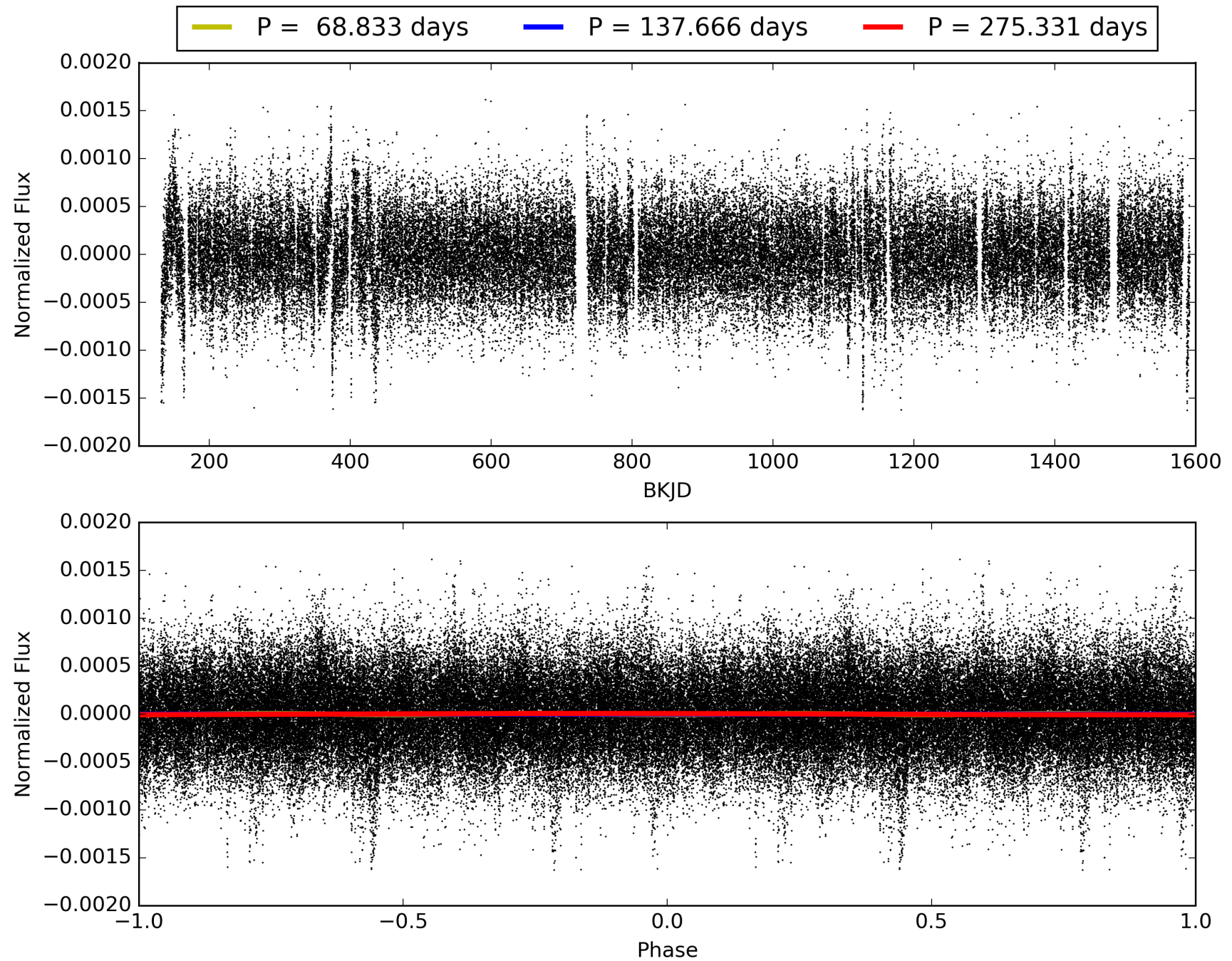
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:27:49 Z

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

TCE 003839294-01, PDC Light Curves

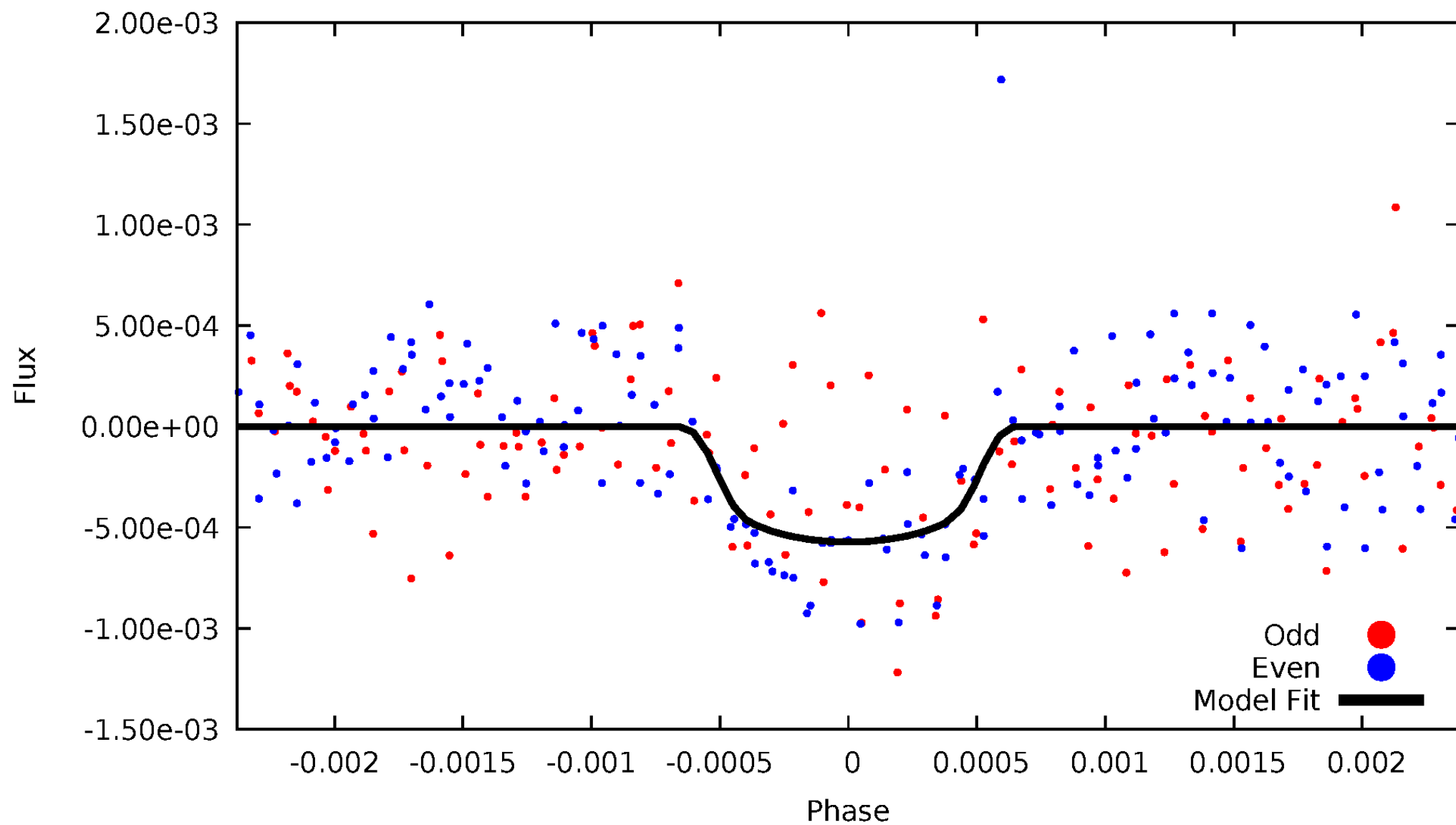


TCE 003839294-01



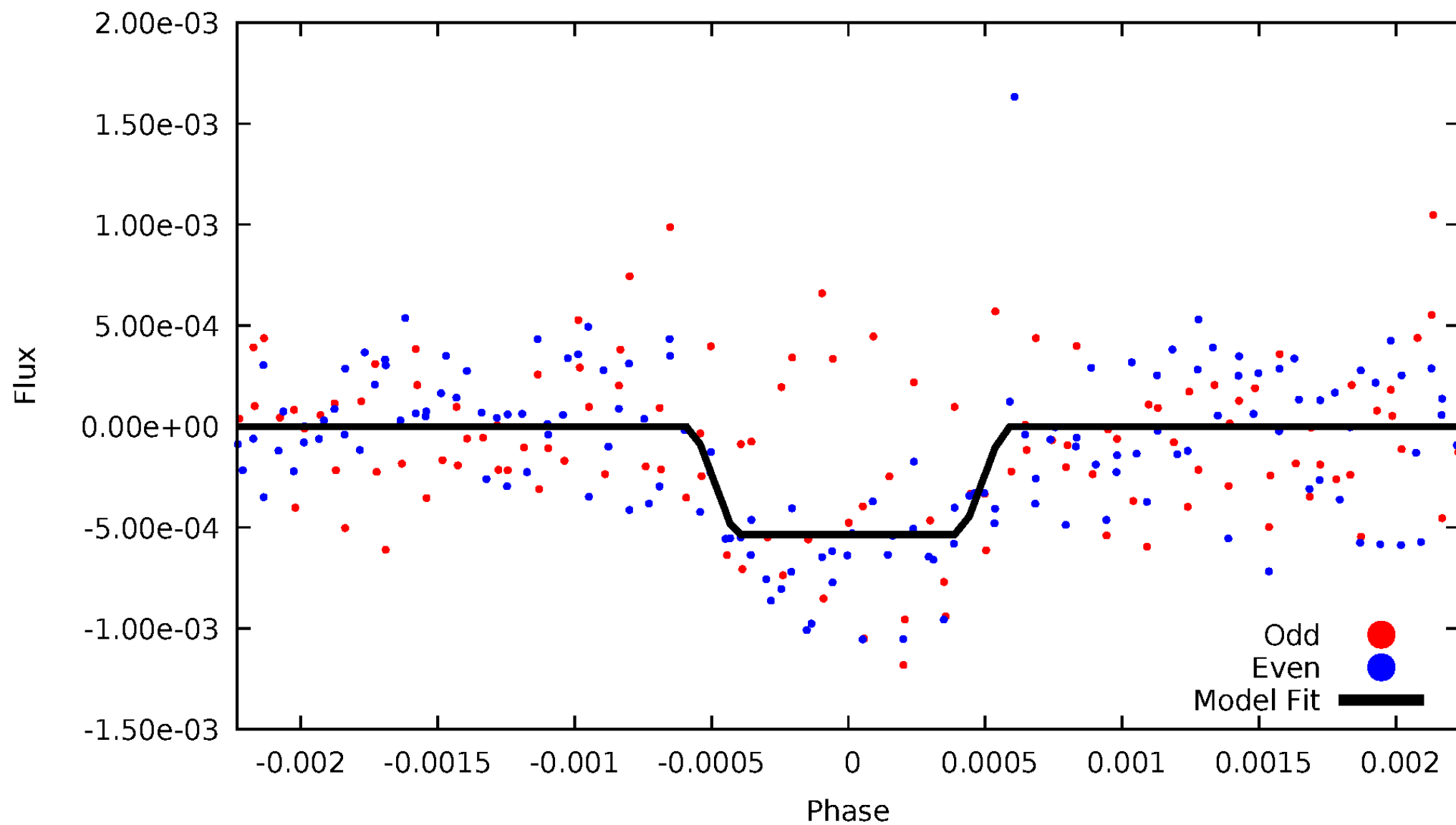
DV Odd/Even

TCE 003839294-01



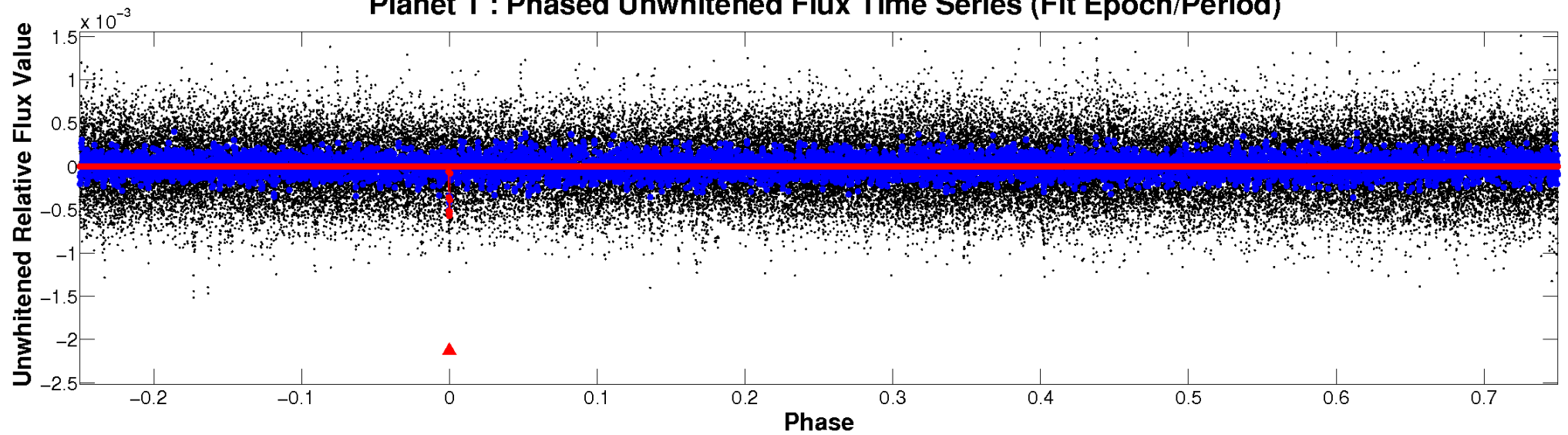
ALT Odd/Even

TCE 003839294-01

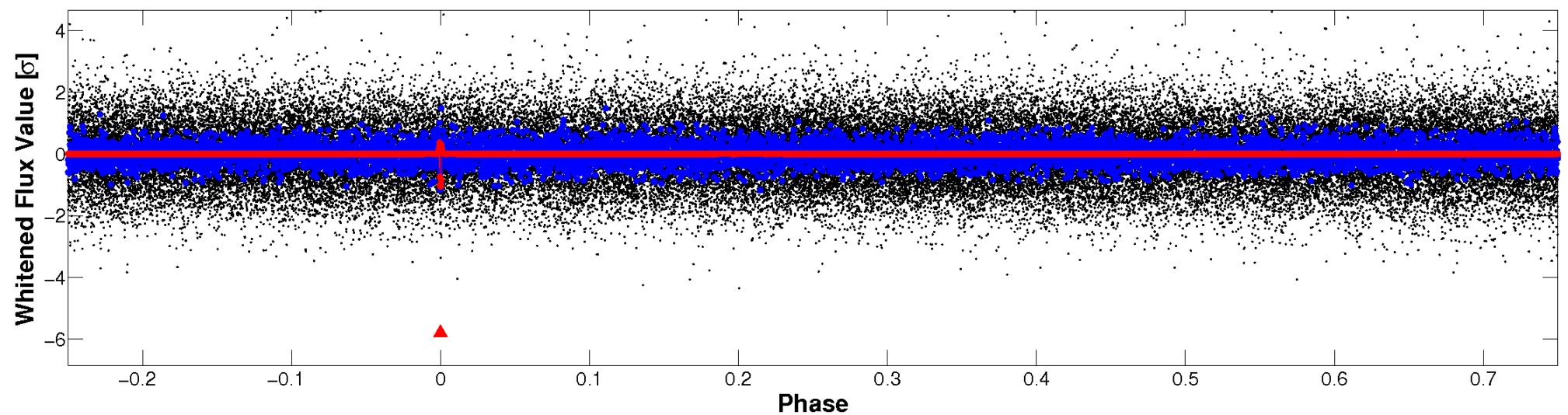


Non-Whitened Vs. Whitened Light Curve

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

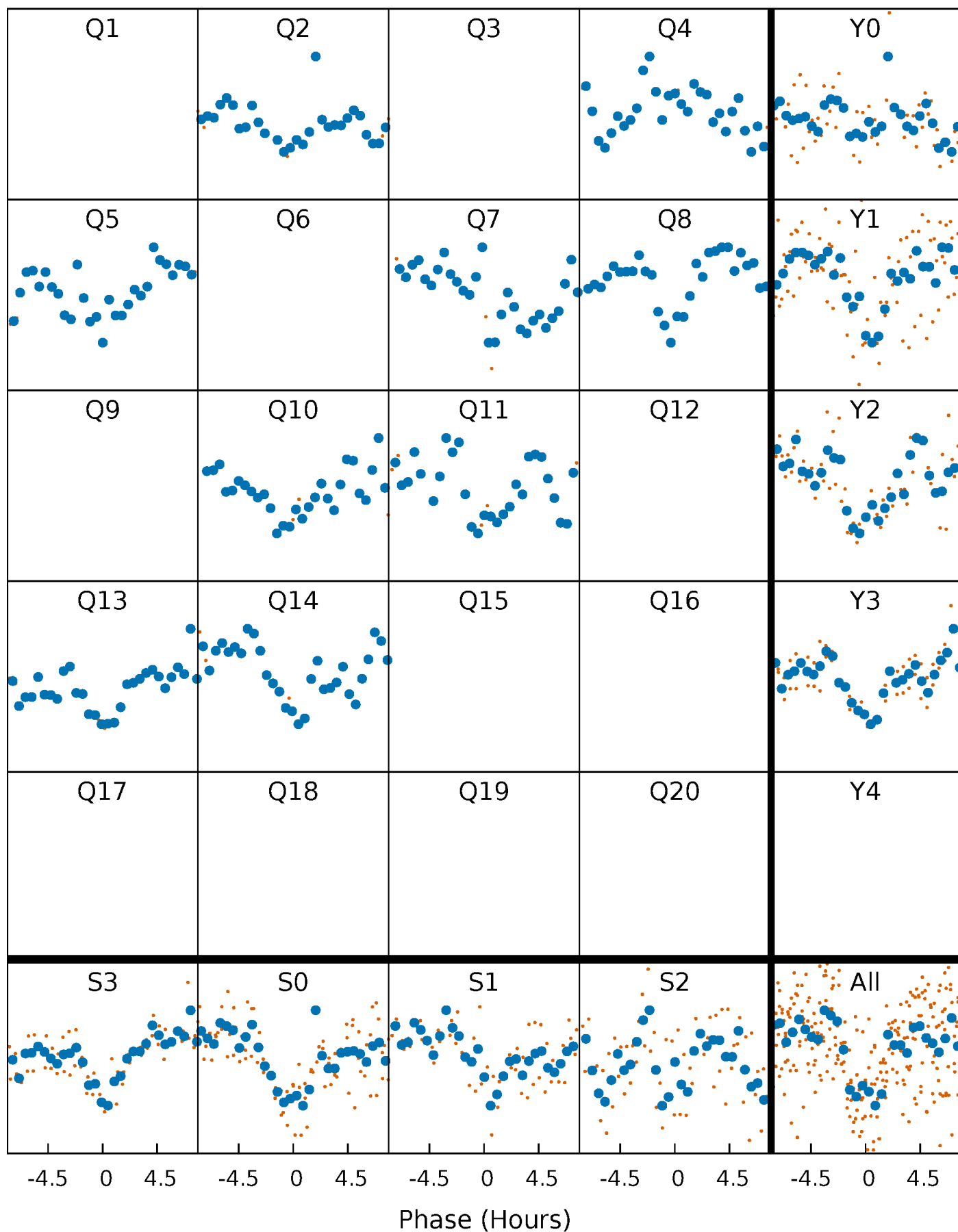


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



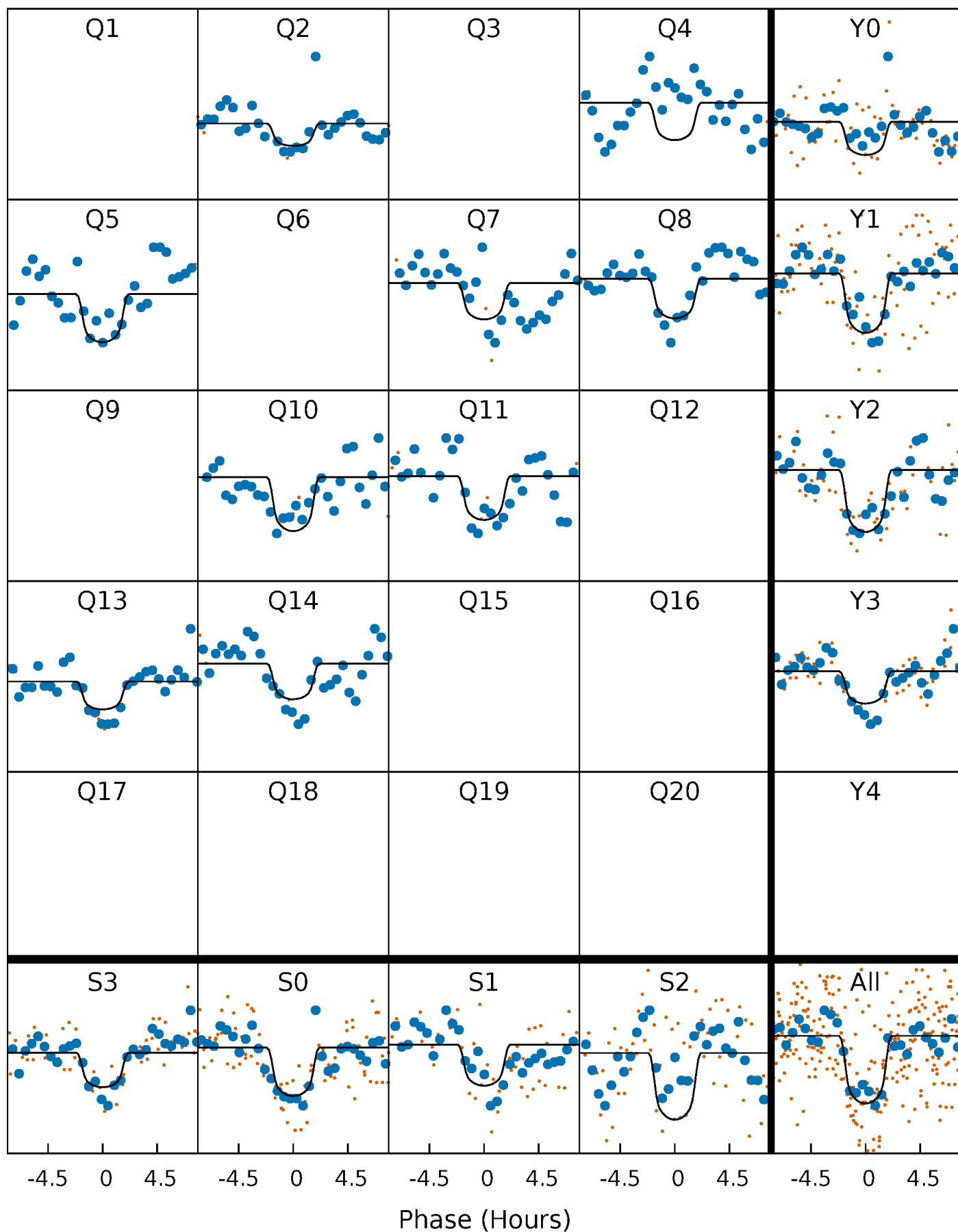
PDC Quarter-Phased Transit Curves

TCE 003839294-01 P=137.665506 Days $T_0=240.445573$ (BKJD)



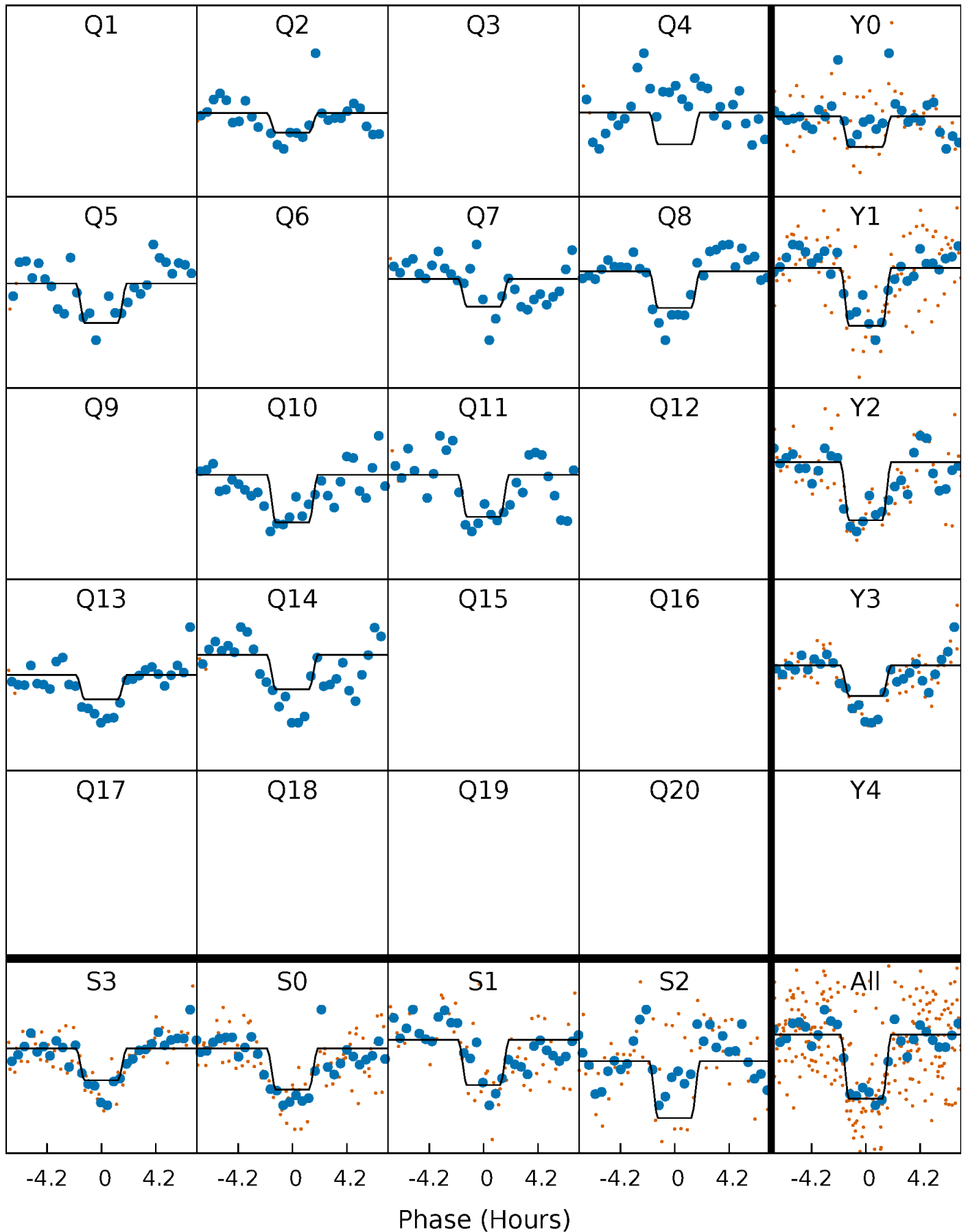
DV Quarter-Phased Transit Curves

TCE 003839294-01 P=137.665506 Days $T_0=240.445573$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

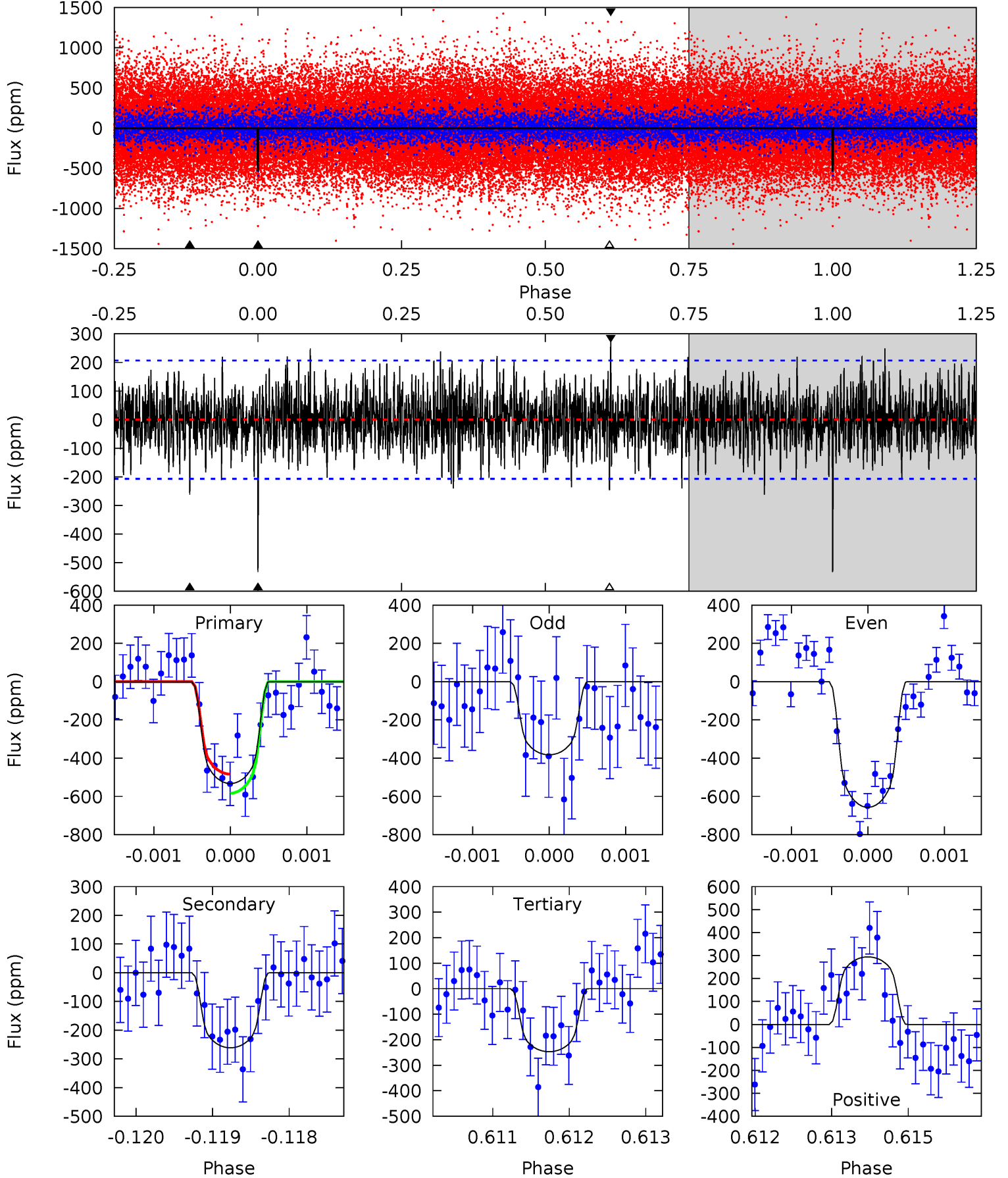
TCE 003839294-01 P=137.665645 Days $T_0=240.443813$ (BKJD)



DV Model-Shift Uniqueness Test

003839294-01, P = 137.665506 Days, E = 102.780067 Days

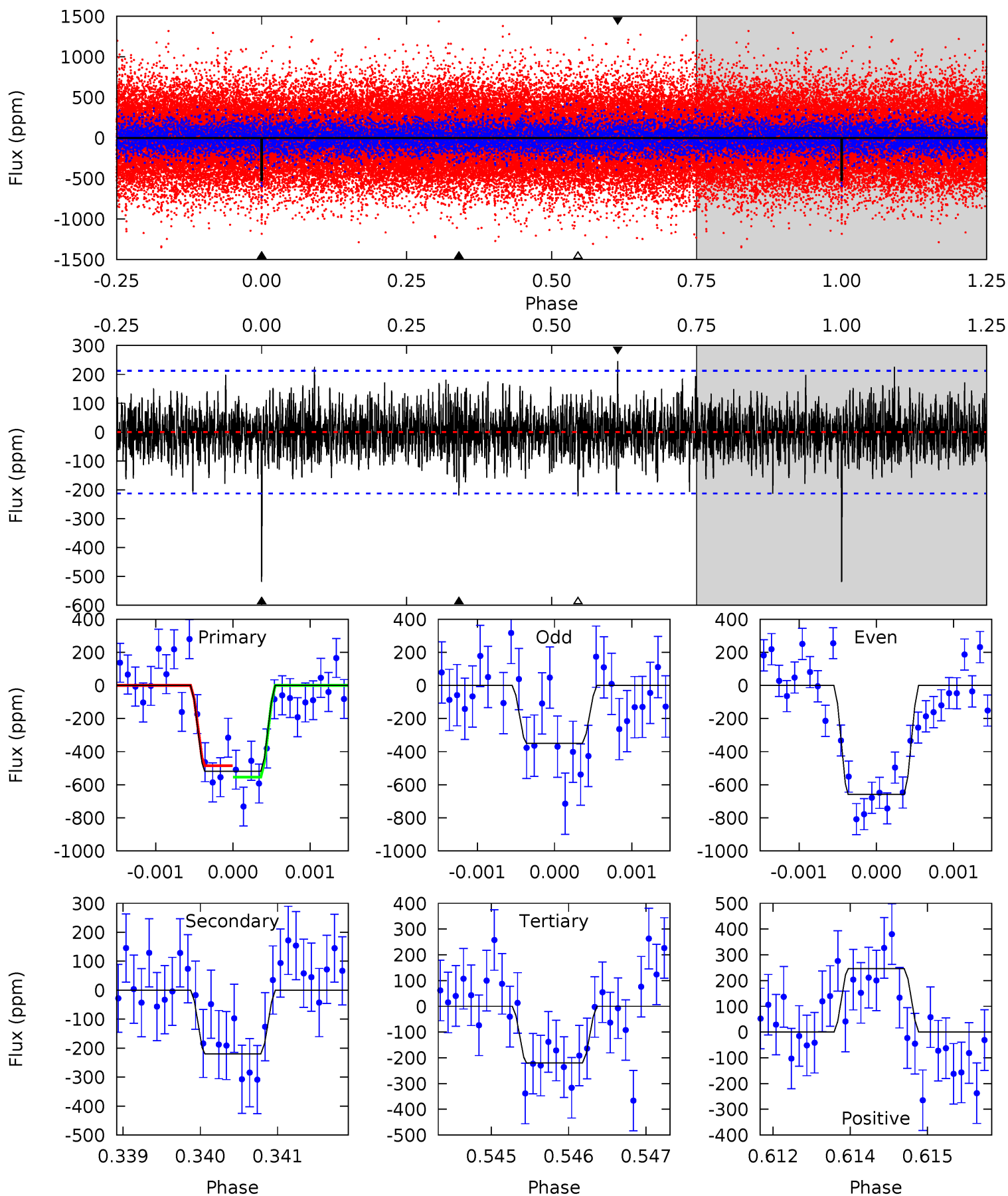
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	6.84	6.46	7.69	5.40	3.21	1.96	7.47	6.24	0.38	-0.85	3.59	0.85	0.36	1.30



Alt Model-Shift Uniqueness Test

003839294-01, P = 137.665645 Days, E = 102.778168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.61	5.60	6.29	5.44	3.27	1.58	7.67	6.99	0.01	-0.68	3.94	0.89	0.32	0.87



Stellar Parameters For KIC 003839294

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4832^{+50}_{-79}	$2.953^{+0.030}_{-0.027}$	$0.040^{+0.100}_{-0.150}$	$6.897^{+0.475}_{-1.109}$	$1.553^{+0.189}_{-0.441}$	$0.007^{+0.002}_{-0.001}$
	+1%/-2%	+1%/-1%	+250%/-375%	+7%/-16%	+12%/-28%	+23%/-10%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 003839294-01 / KOI 7669.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-261 ± 38	$20.18^{+4.13}_{-4.07}$	1006^{+17}_{-23}	3986^{+333}_{-254}	129^{+75}_{-38}
Alt.	-220 ± 39	$17.47^{+3.90}_{-4.03}$	1004^{+19}_{-22}	4062^{+401}_{-287}	146^{+97}_{-51}

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 $A_{obs} \gg 1.0$

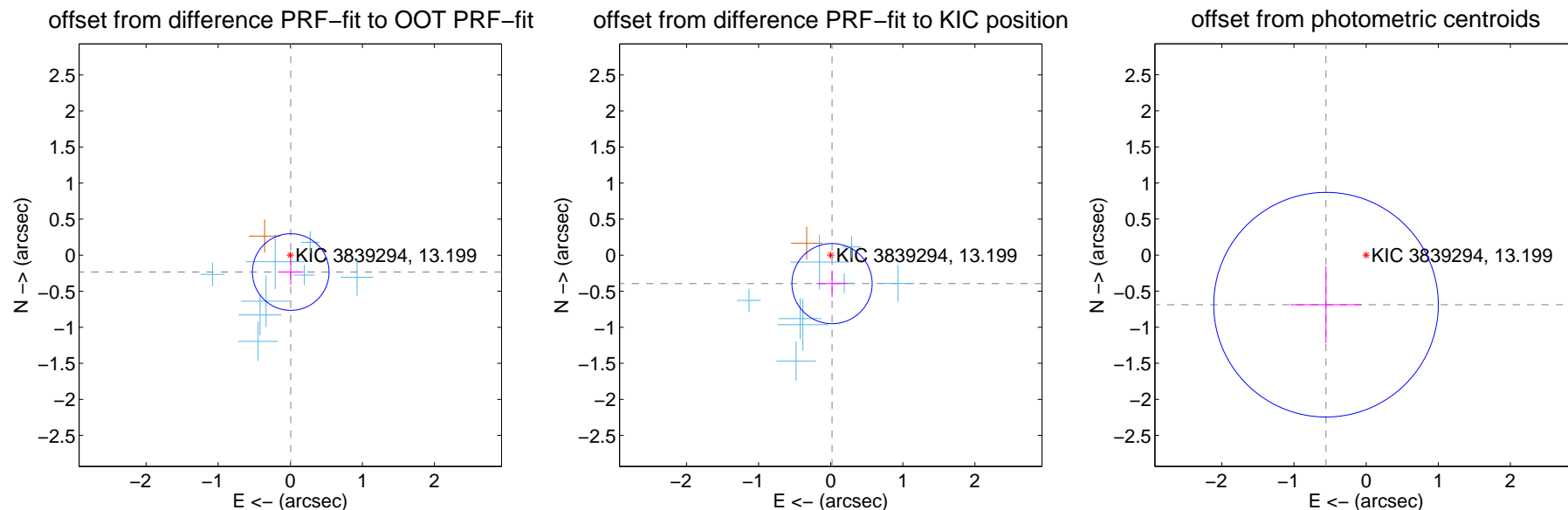
DV Centroid Data

Supplemental centroid analysis for 003839294-01. Kepler magnitude: 13.20. Transit SNR 7.70

There are 8 quarters with good PRF difference image offsets

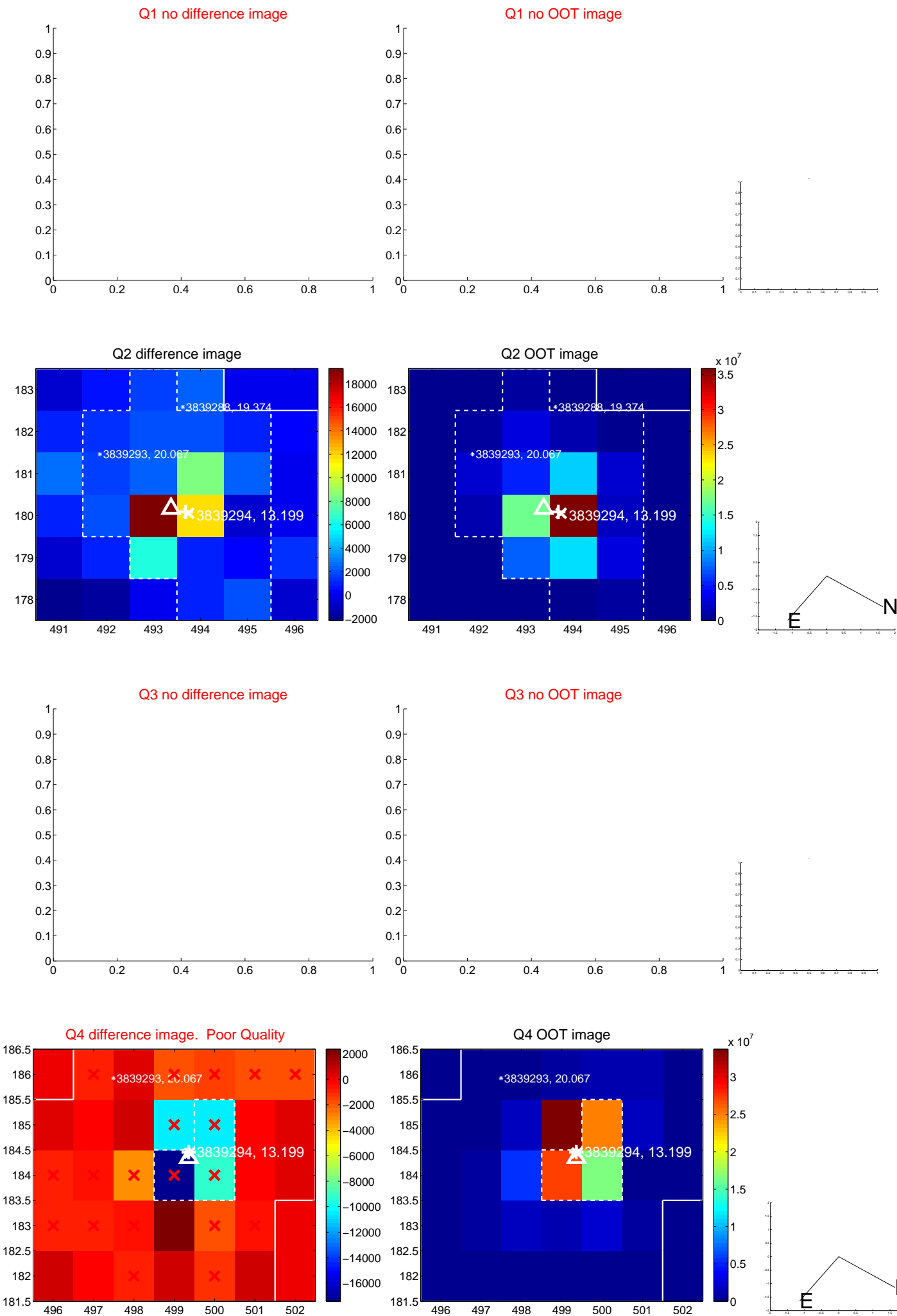
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.234 ± 0.177	1.32	-0.006 ± 0.174	-0.234 ± 0.178
PRF-fit source offset from KIC position	0.395 ± 0.185	2.13	-0.018 ± 0.216	-0.395 ± 0.185
photometric centroid source offset	0.88 ± 0.52	1.70	0.56 ± 0.50	-0.69 ± 0.53

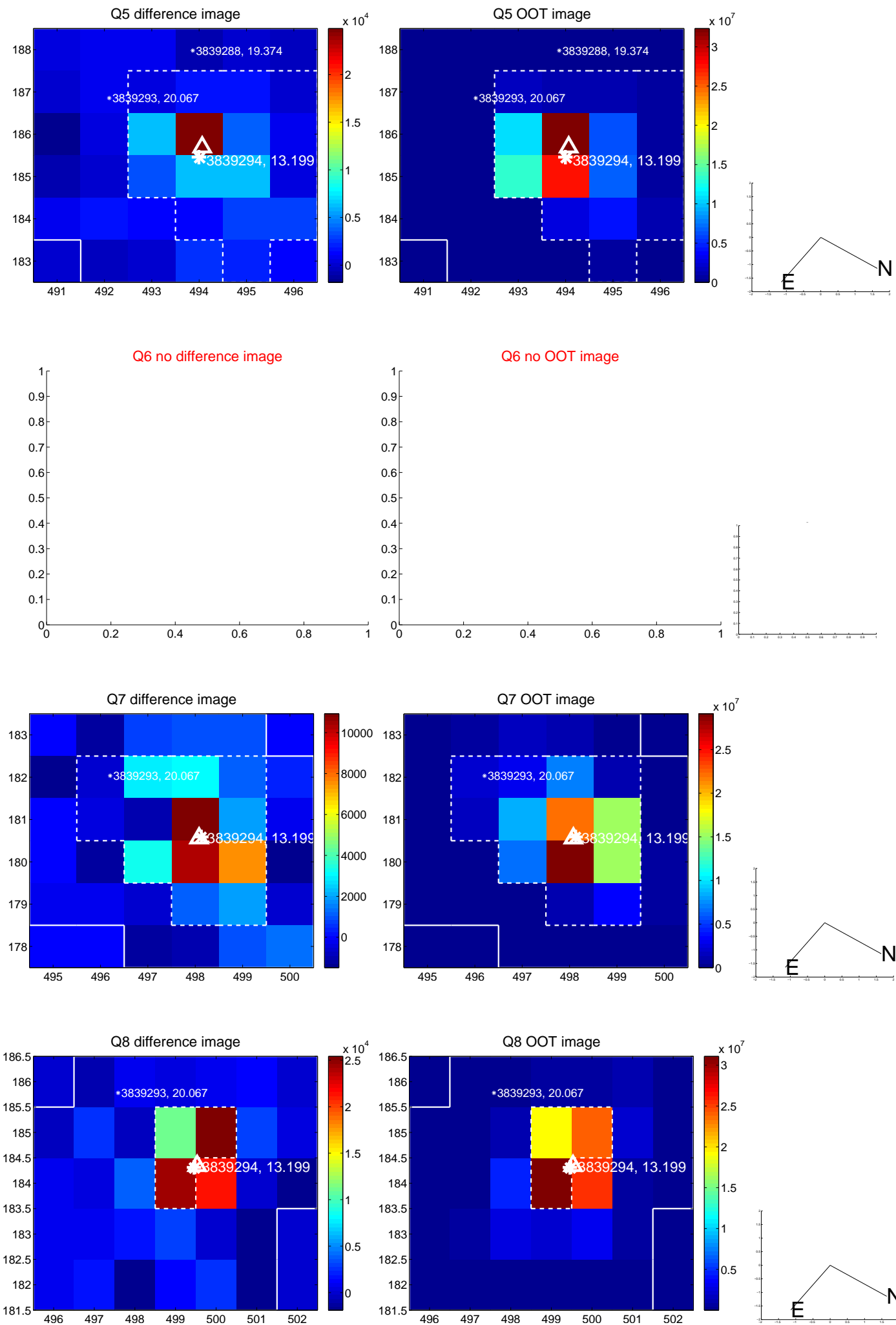


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

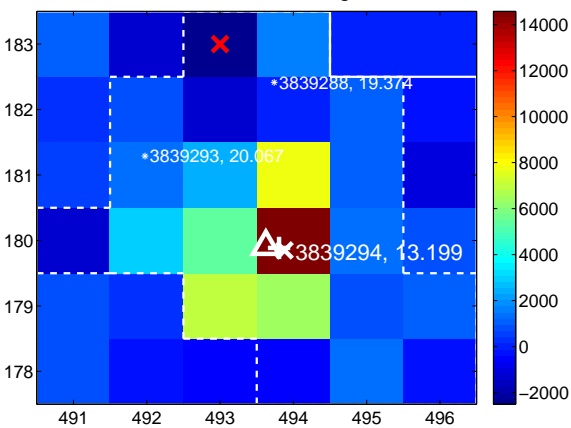
Q9 no difference image



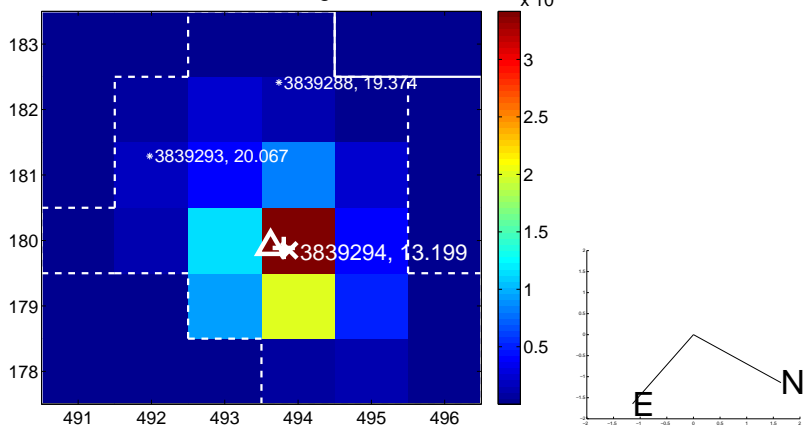
Q9 no OOT image



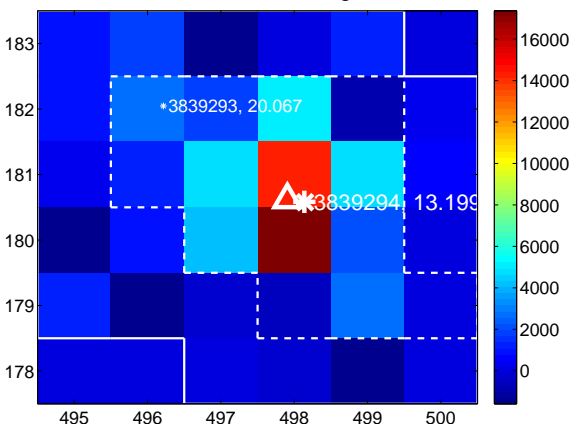
Q10 difference image



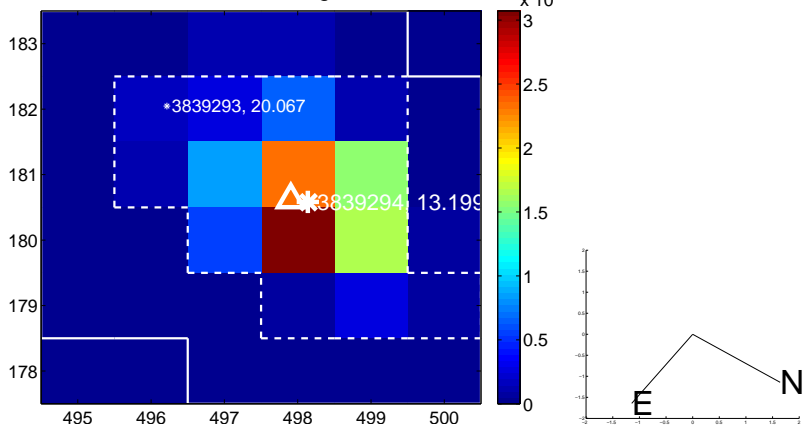
Q10 OOT image



Q11 difference image



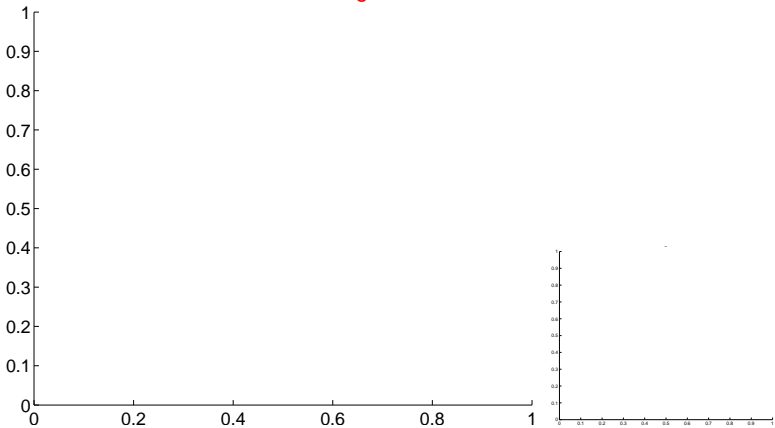
Q11 OOT image



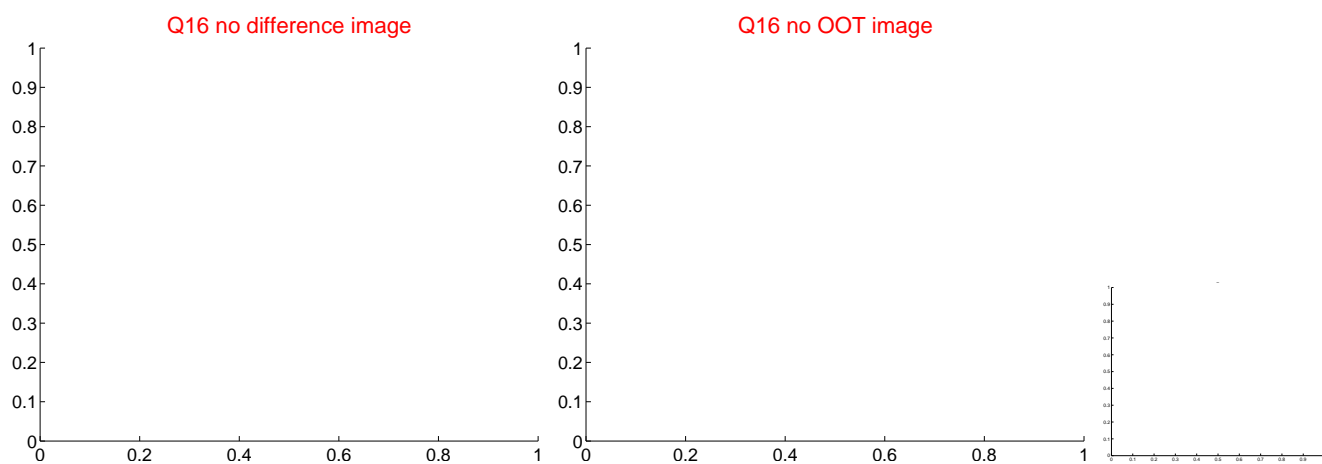
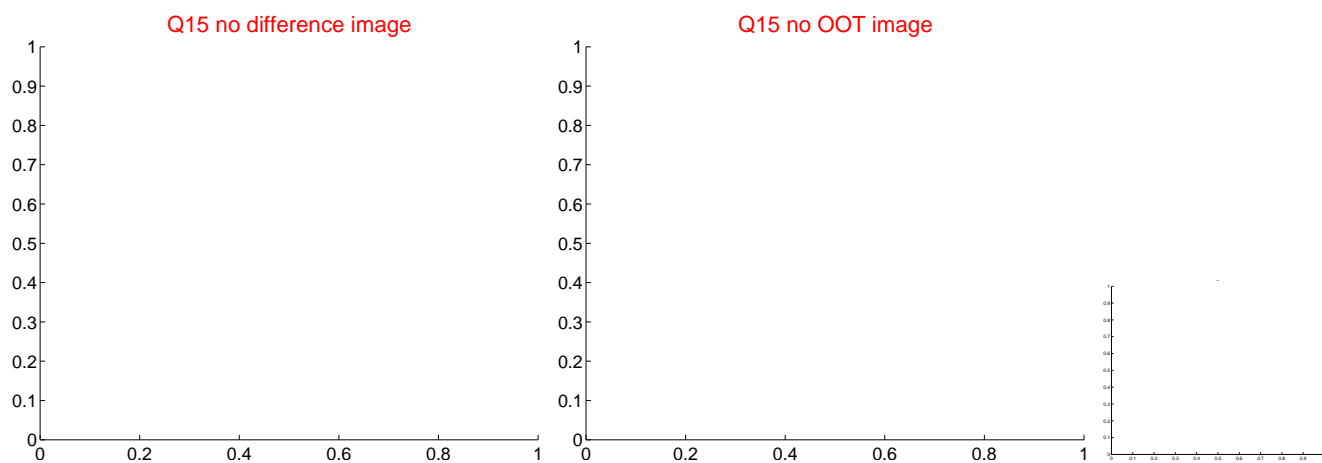
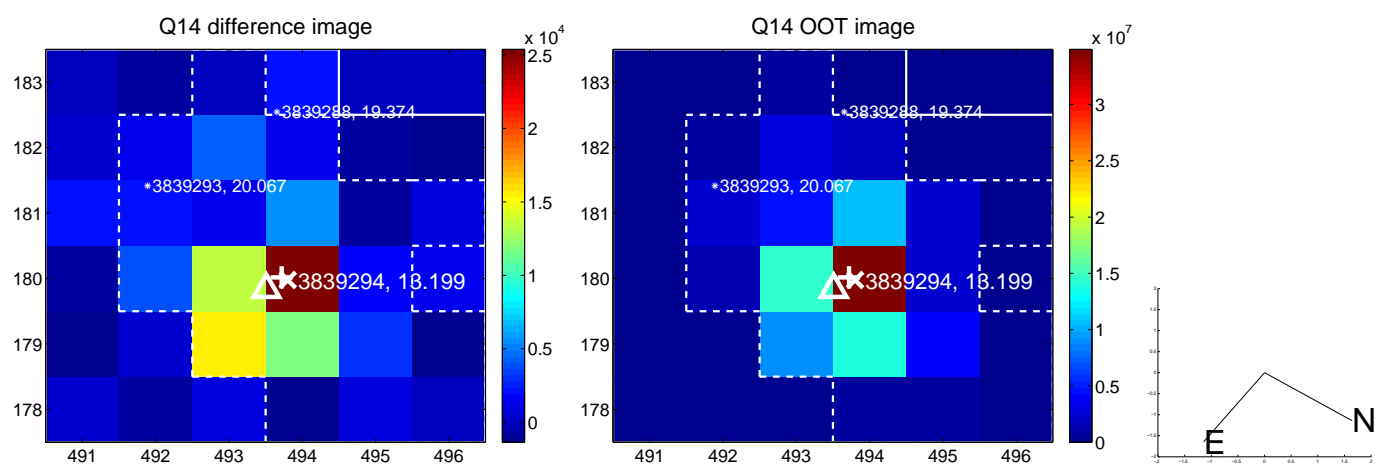
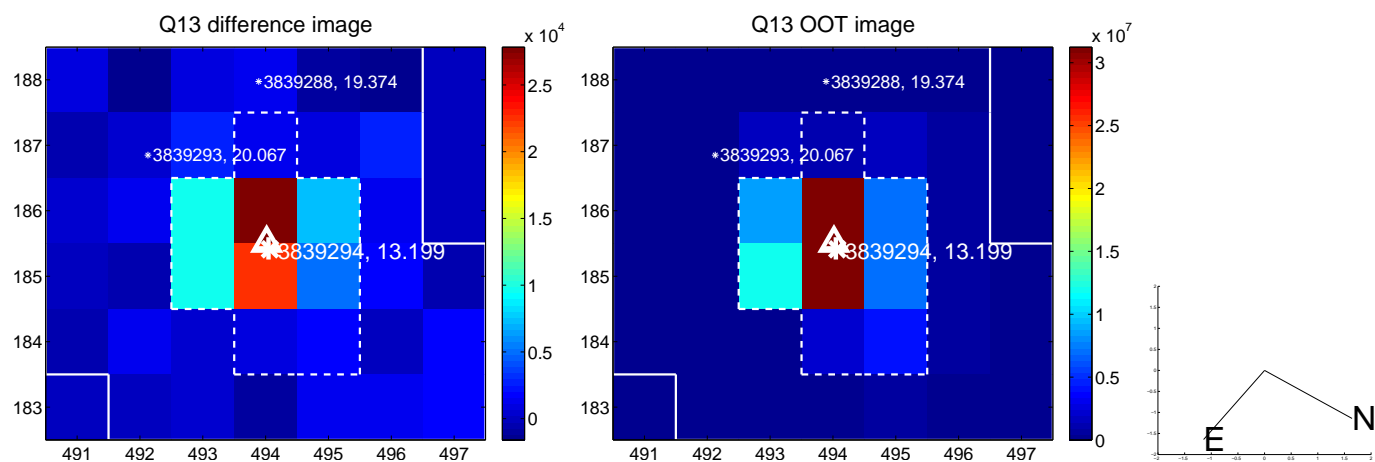
Q12 no difference image



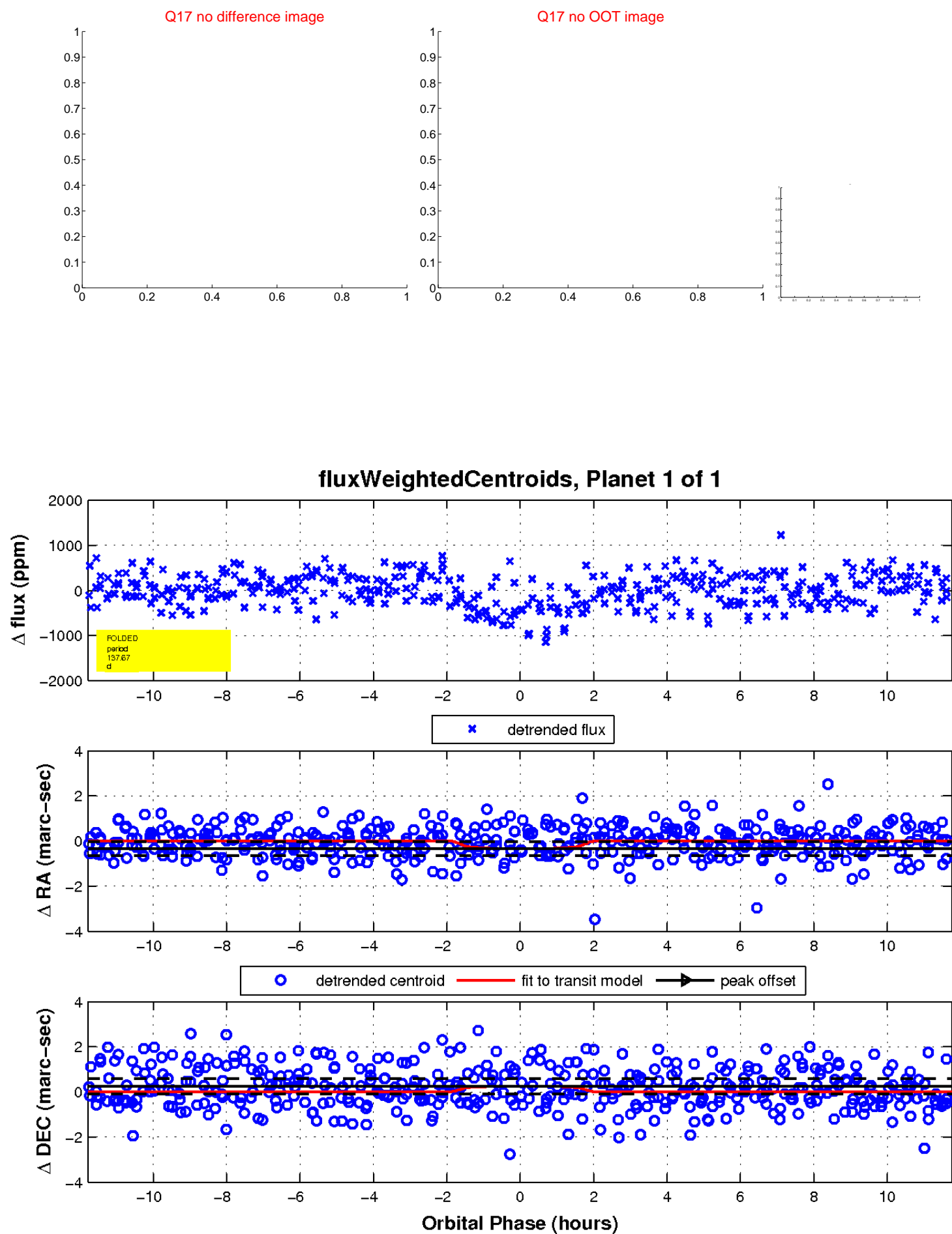
Q12 no OOT image



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.



UKIRT Image

Declination

