

KIC 010938339

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})
010938339-01	OBS	No	231.522967	266.216435	725.4	6.444	7.5	6.0	1.00	5472	2.80	1.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010938339-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

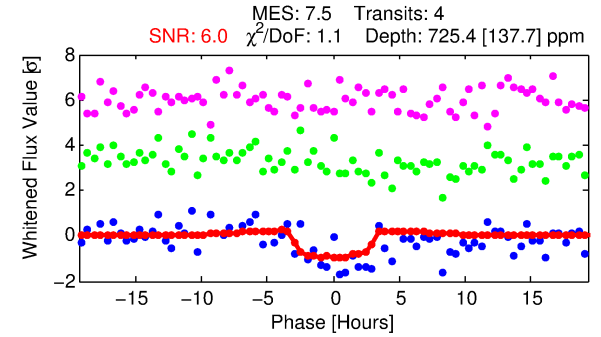
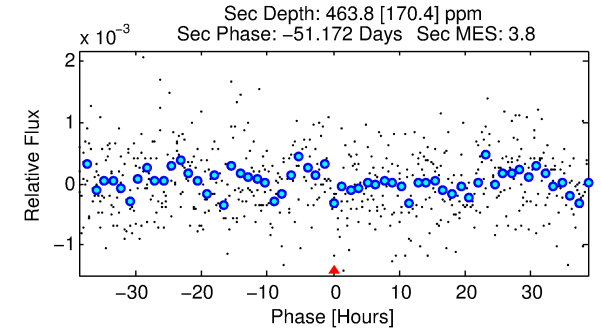
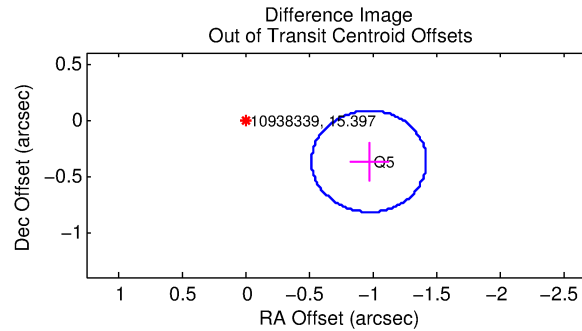
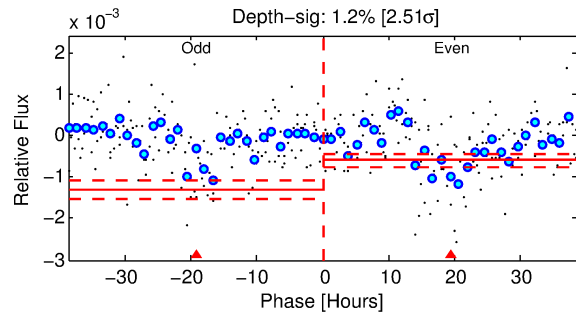
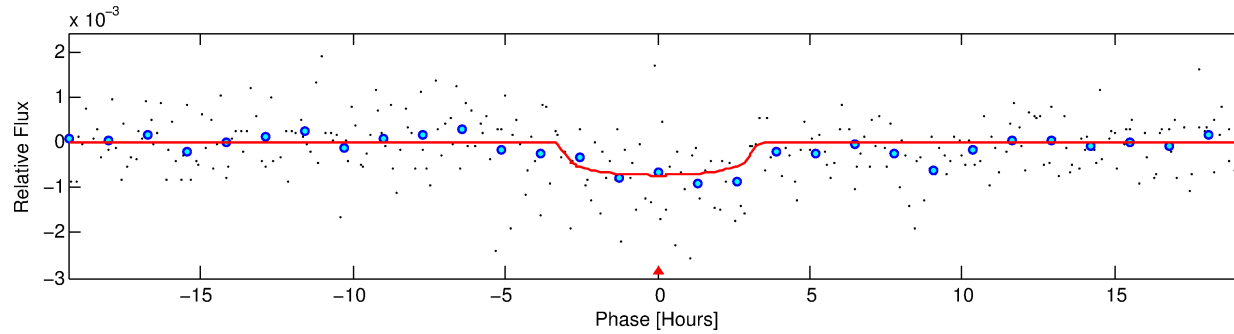
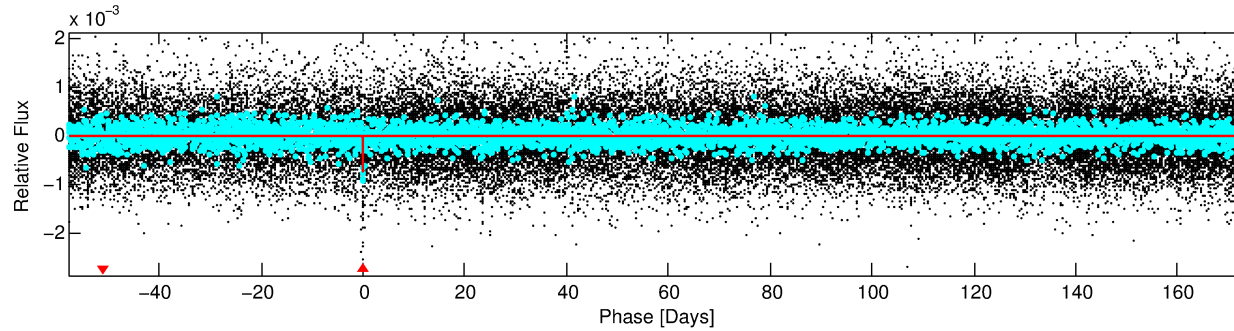
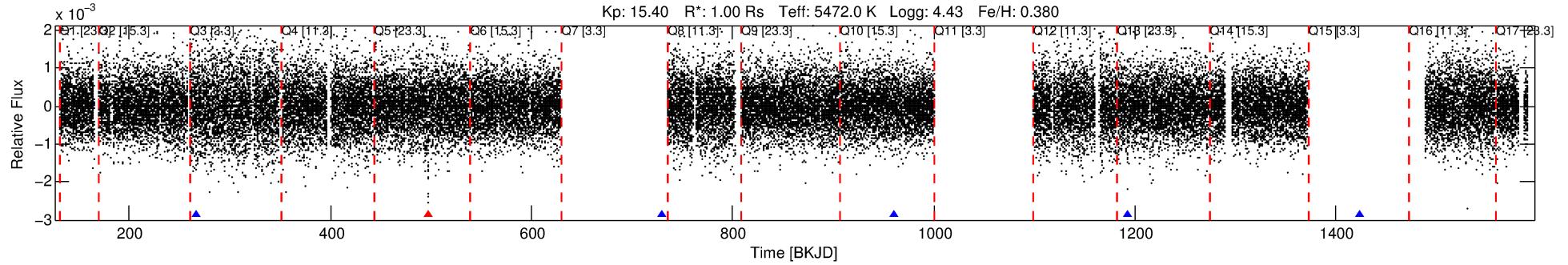
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010938339-01

No Significant Match Found

DV One-Page Summary

KIC: 10938339 Candidate: 1 of 1 Period: 231.523 d



DV Fit Results:

Period = 231.52297 [0.00715] d
Epoch = 266.2164 [0.0198] BKJD
Rp/R* = 0.0255 [0.0480]
a/R* = 228.51 [1613.21]
b = 0.60 [7.68]
Seff = 1.50 [0.53]
Teq = 282 [25] K
Rp = 2.80 [5.30] Re
a = 0.7339 [0.1633] AU
Ag = 17578.57 [66561.91] [0.26 σ]
Teffp = 5024 [4742] K [1.00 σ]

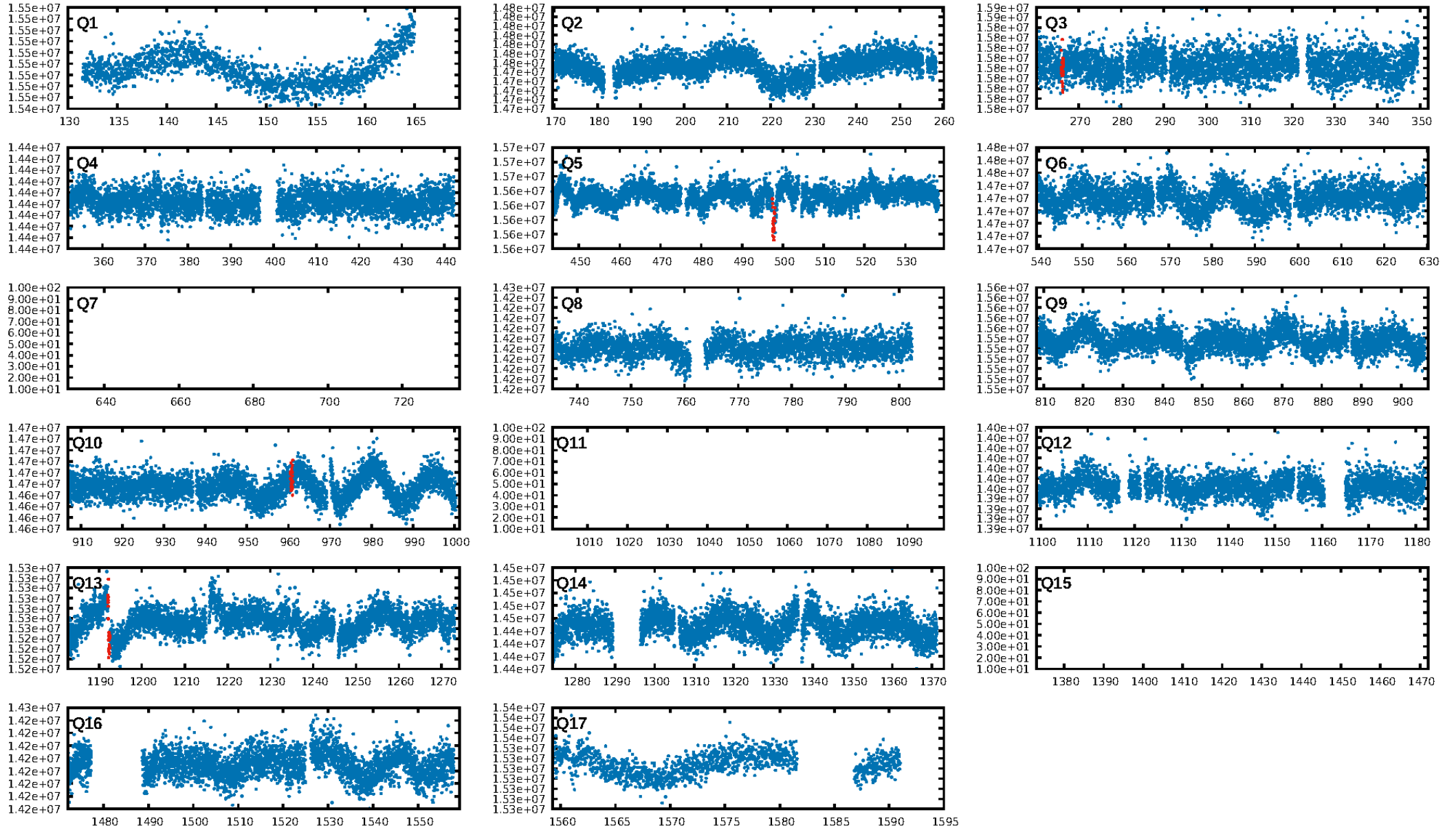
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 84.1%
Bootstrap-pfa: 1.51e-12
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 2.656
Centroid-sig: 0.9%
Centroid-so: 5.126 arcsec [2.22 σ]
OotOffset-rm: 1.042 arcsec [6.92 σ]
KicOffset-rm: 1.013 arcsec [6.79 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

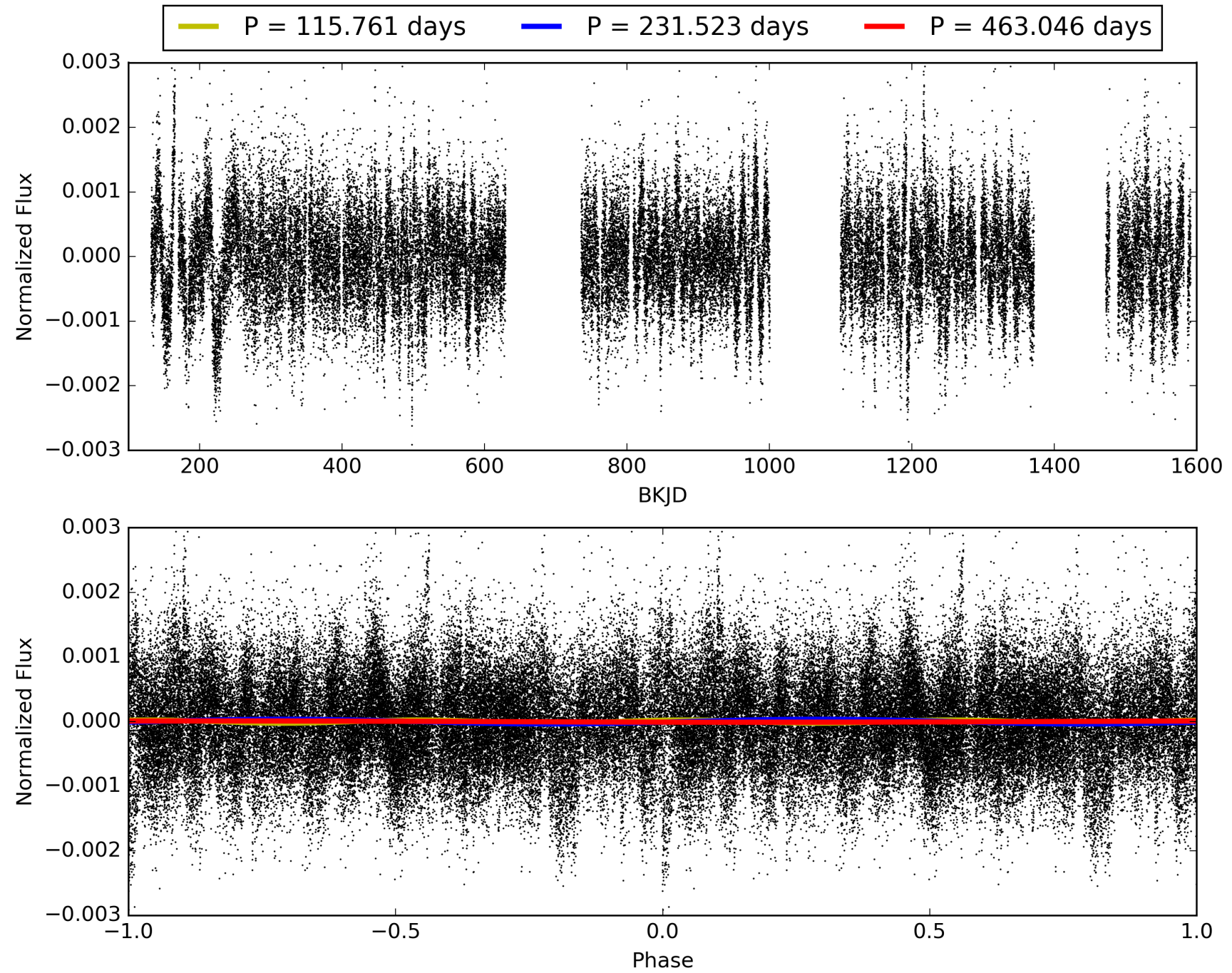
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:03:47 Z

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

TCE 010938339-01, PDC Light Curves

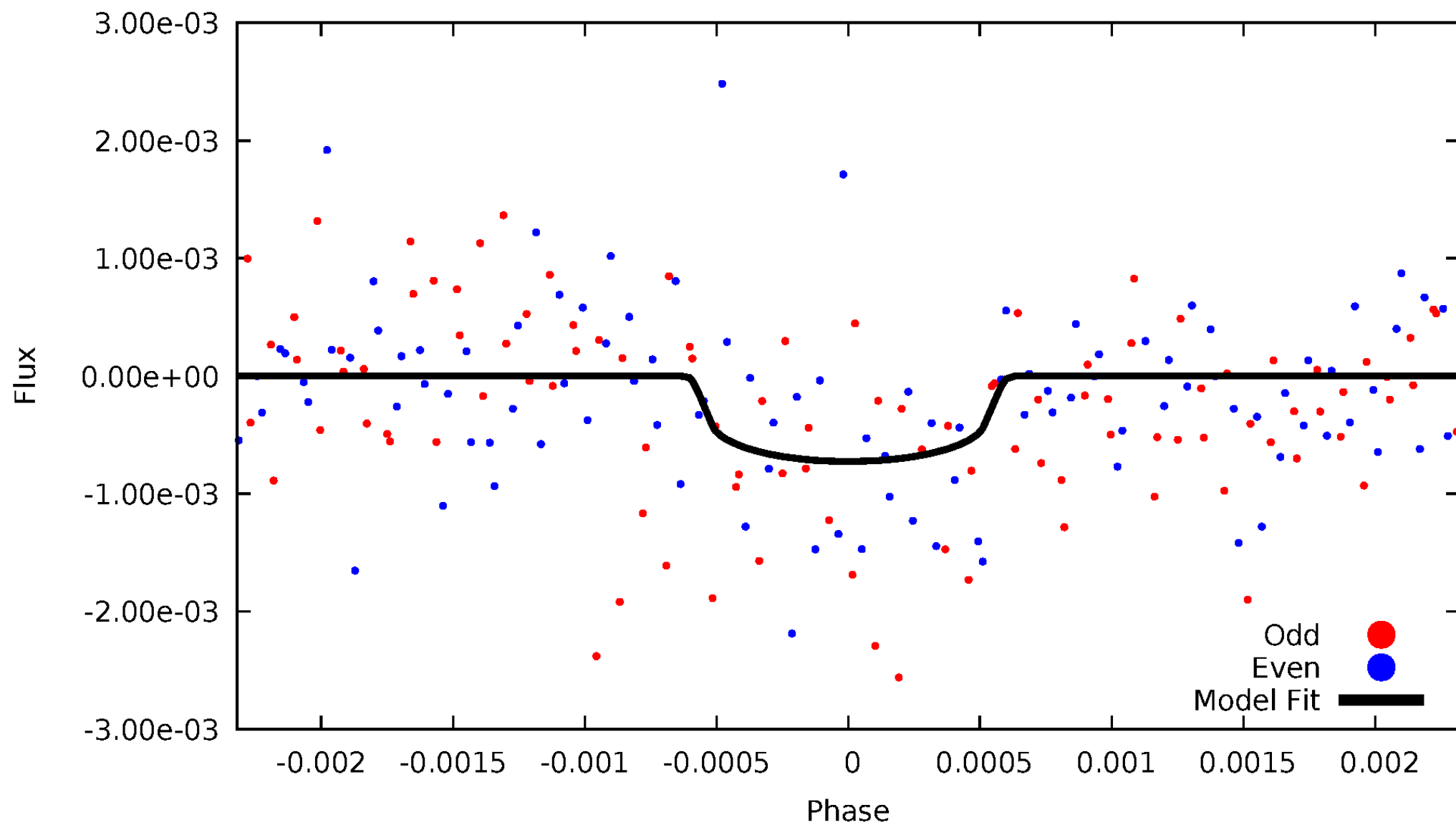


TCE 010938339-01



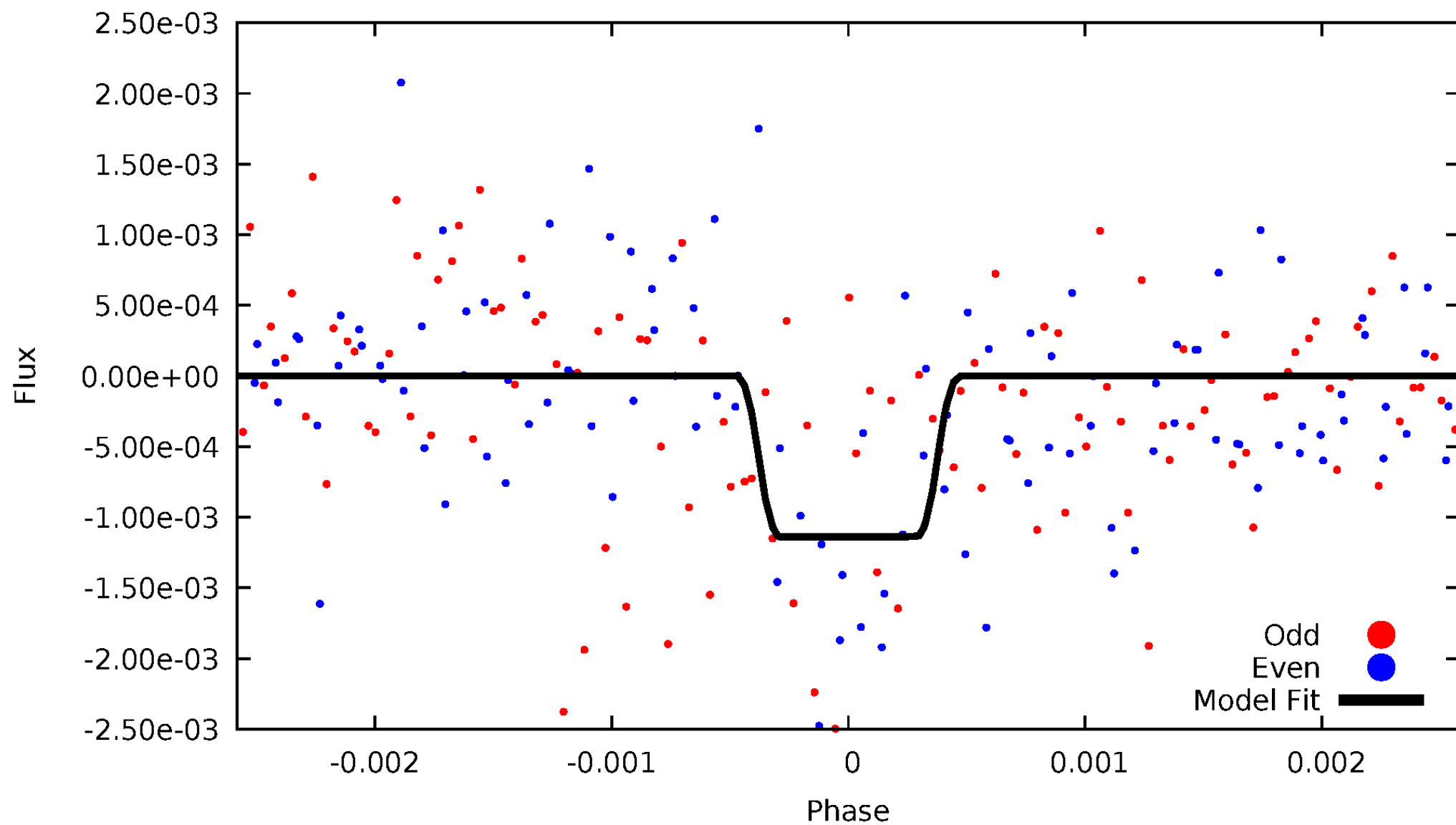
DV Odd/Even

TCE 010938339-01

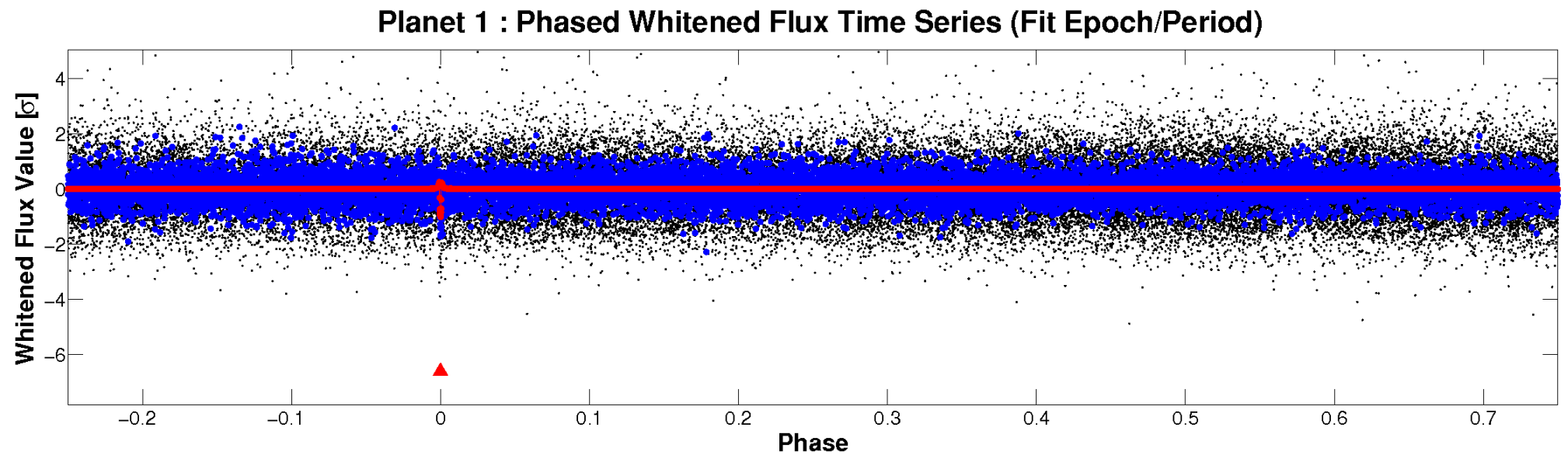
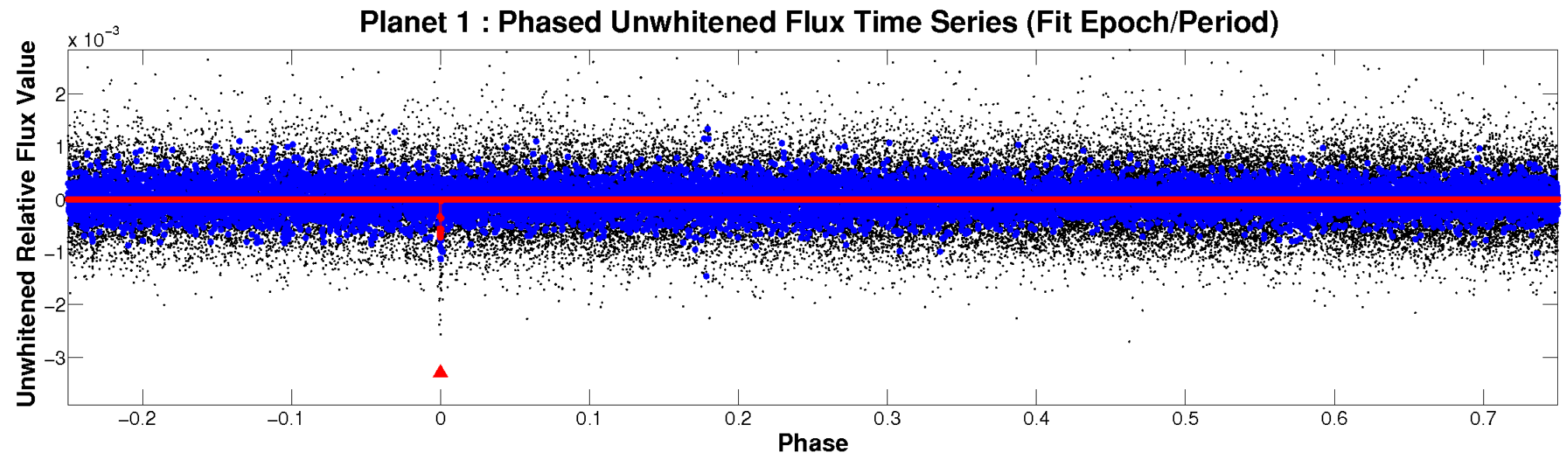


ALT Odd/Even

TCE 010938339-01

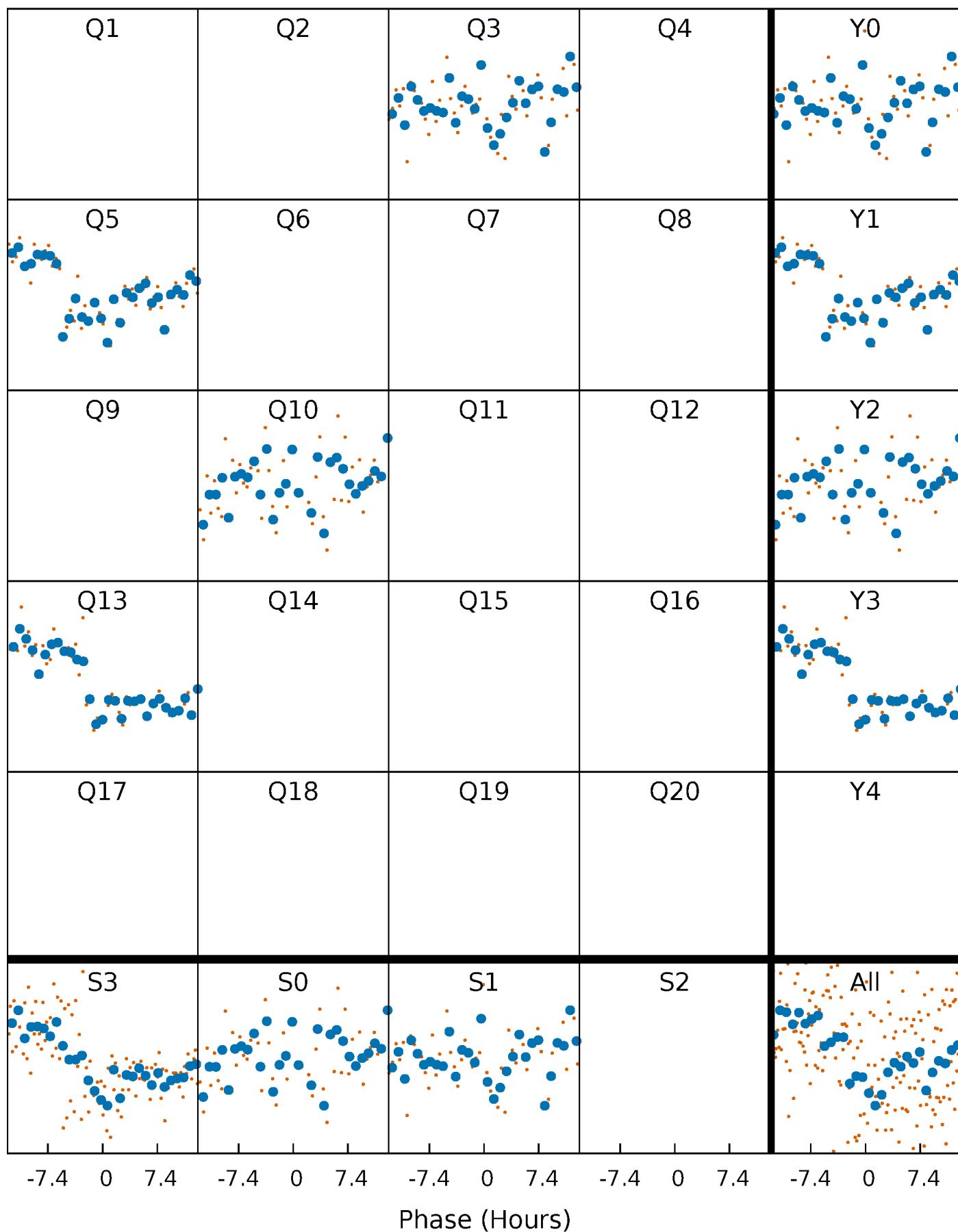


Non-Whitened Vs. Whitened Light Curve



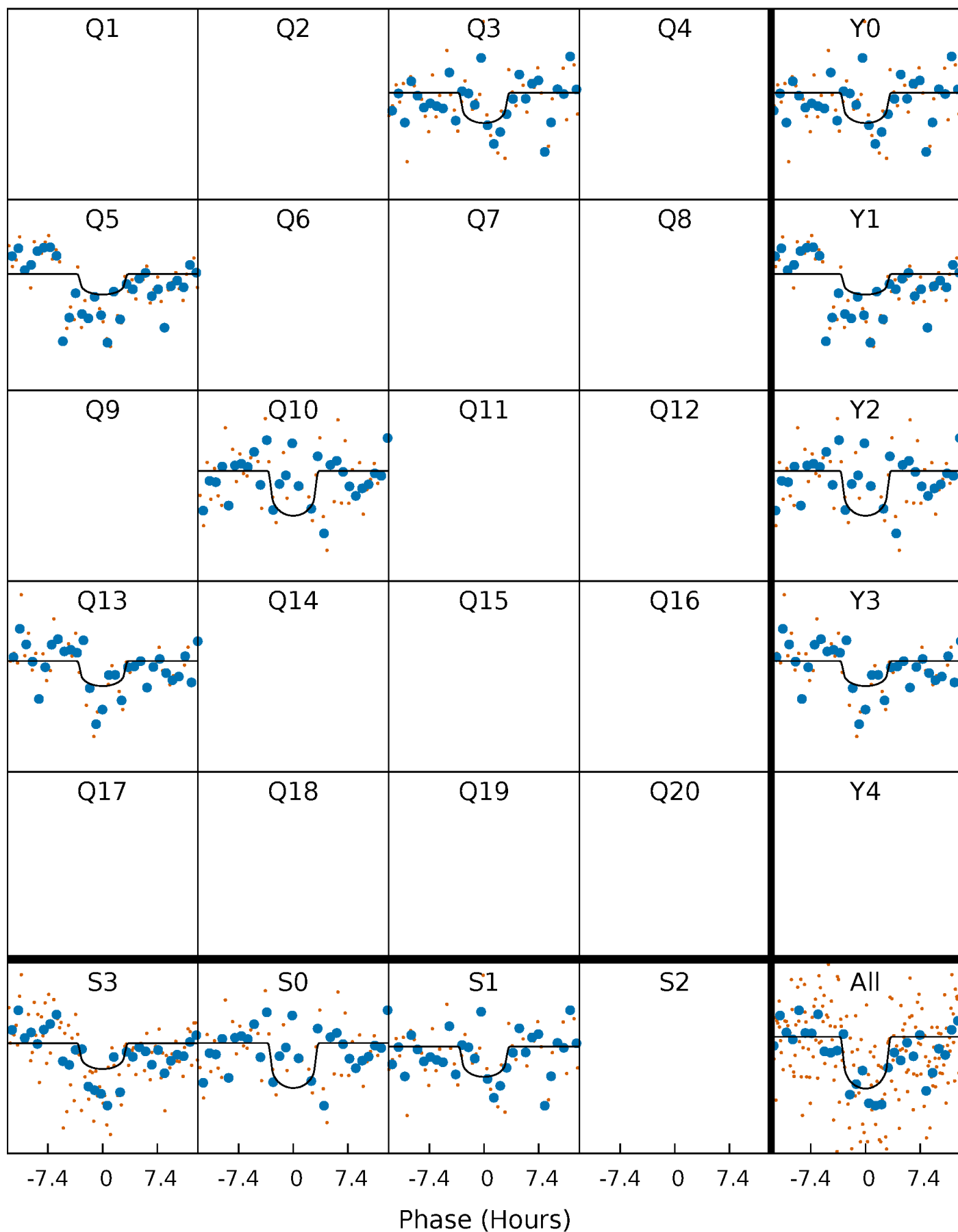
PDC Quarter-Phased Transit Curves

TCE 010938339-01 P=231.522967 Days $T_0=266.216435$ (BKJD)



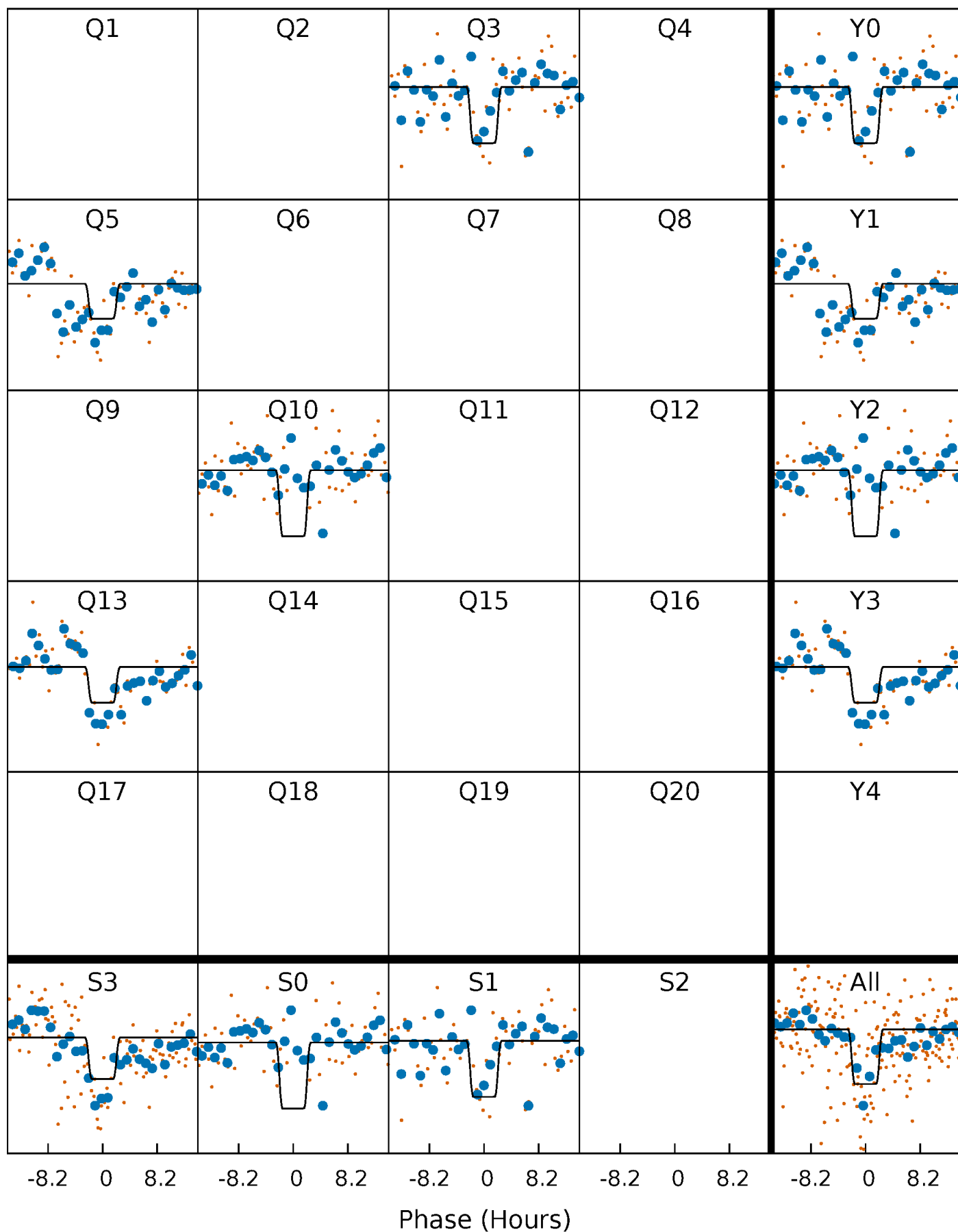
DV Quarter-Phased Transit Curves

TCE 010938339-01 P=231.522967 Days $T_0=266.216435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

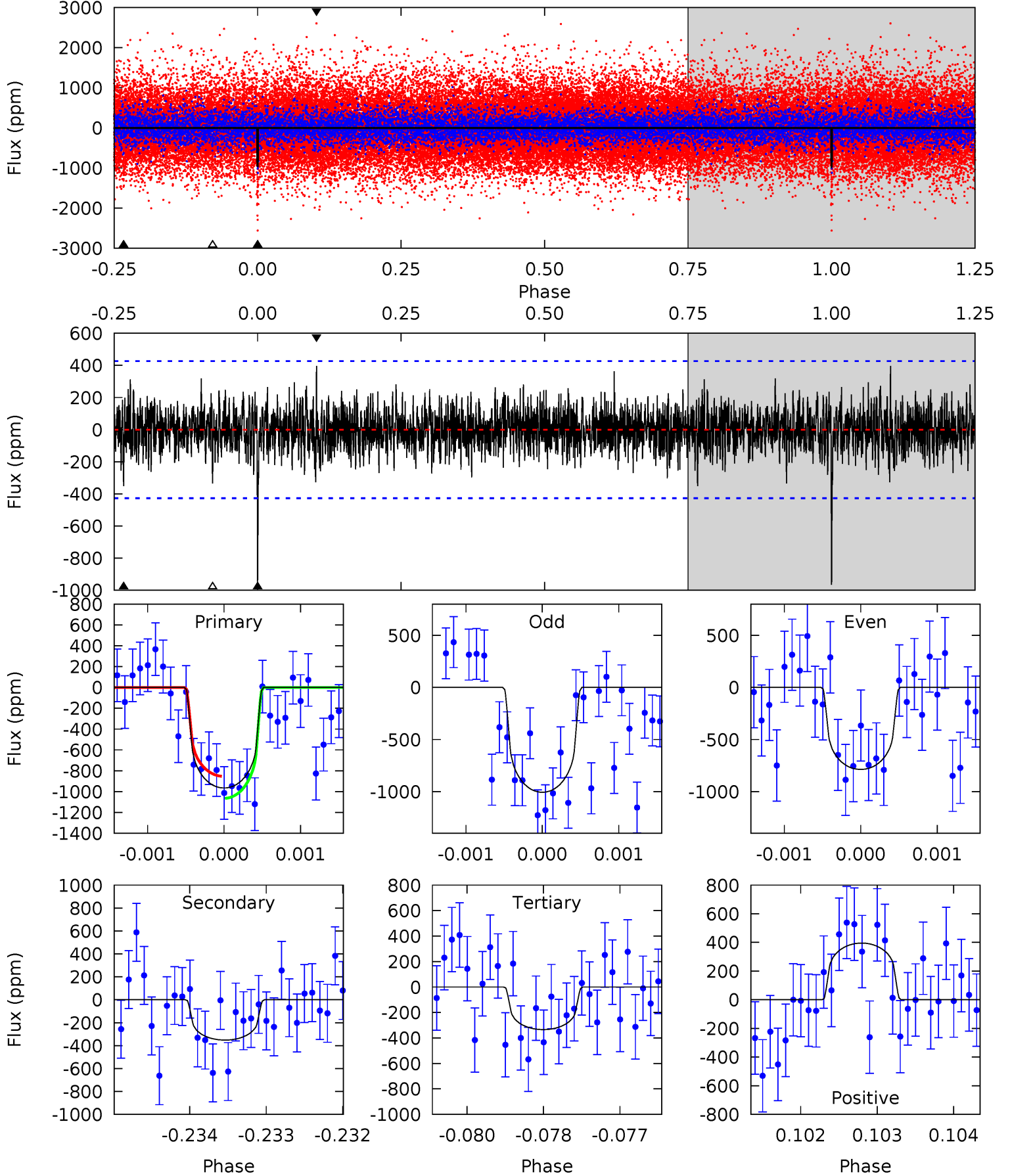
TCE 010938339-01 P=231.496984 Days $T_0=266.299477$ (BKJD)



DV Model-Shift Uniqueness Test

010938339-01, $P = 231.522967$ Days, $E = 34.693468$ Days

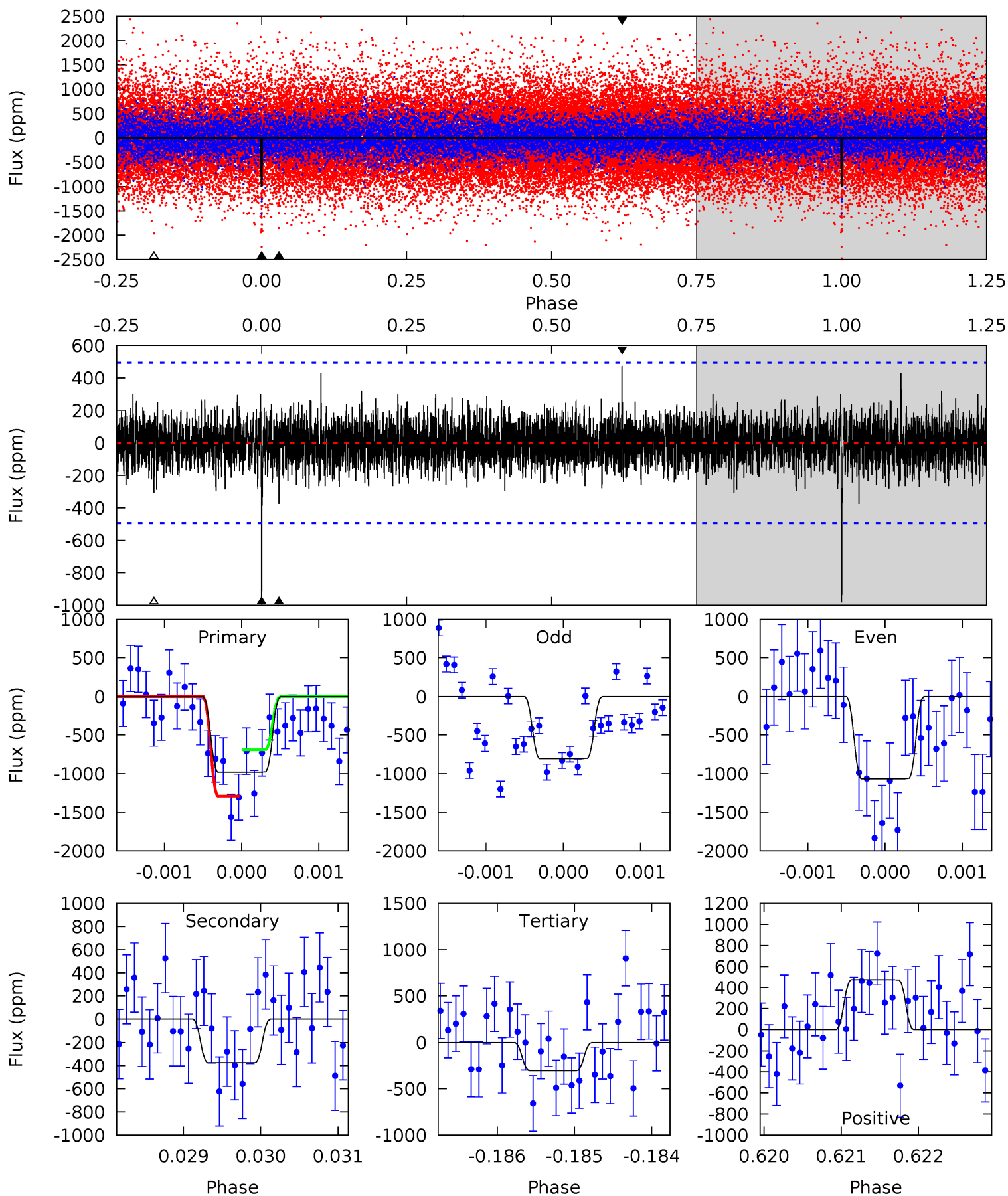
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	4.46	4.24	5.02	5.42	3.23	1.23	8.01	7.23	0.22	-0.55	1.41	1.19	0.29	0



Alt Model-Shift Uniqueness Test

010938339-01, P = 231.496984 Days, E = 34.802493 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	4.15	3.38	5.24	5.46	3.31	1.04	7.46	5.61	0.76	-1.09	1.46	0.90	0.33	3.31



Stellar Parameters For KIC 010938339

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5472^{+191}_{-172}	$4.428^{+0.094}_{-0.175}$	$0.380^{+0.050}_{-0.300}$	$1.003^{+0.267}_{-0.114}$	$0.984^{+0.082}_{-0.090}$	$1.373^{+0.541}_{-0.627}$
	+3%/-3%	+2%/-4%	+13%/-79%	+27%/-11%	+8%/-9%	+39%/-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 010938339-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-352 ± 79	$4.64^{+4.60}_{-3.16}$	399^{+25}_{-21}	3991^{+2428}_{-816}	4643^{+41167}_{-3489}
Alt.	-375 ± 90	$5.47^{+4.74}_{-3.79}$	399^{+26}_{-21}	3807^{+2433}_{-681}	3462^{+34188}_{-2438}

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 $A_{obs} \gg 1.0$

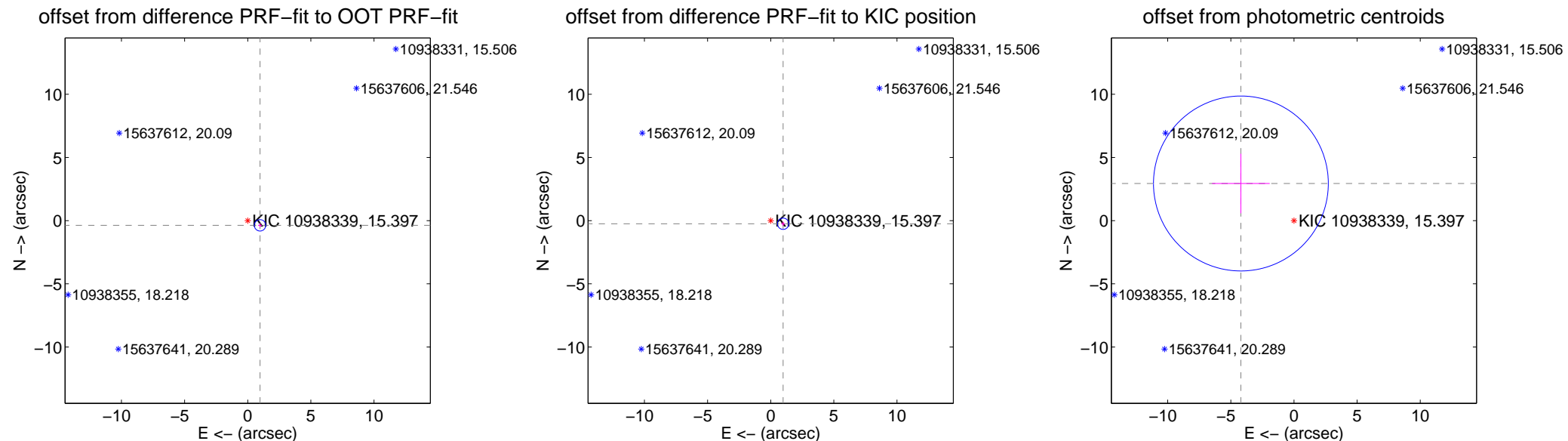
DV Centroid Data

Supplemental centroid analysis for 010938339-01. Kepler magnitude: 15.40. Transit SNR 5.95

There are 0 quarters with good PRF difference image offsets

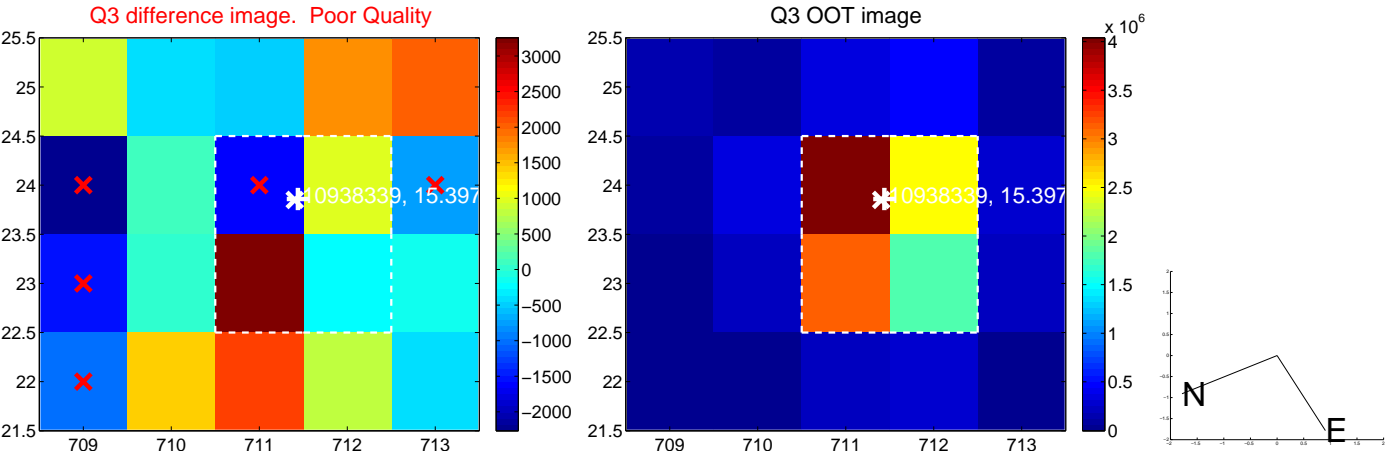
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.042 ± 0.150	6.92	-0.973 ± 0.148	-0.371 ± 0.165
PRF-fit source offset from KIC position	1.013 ± 0.149	6.79	-0.983 ± 0.148	-0.247 ± 0.165
photometric centroid source offset	5.13 ± 2.31	2.22	4.20 ± 2.28	2.94 ± 2.35

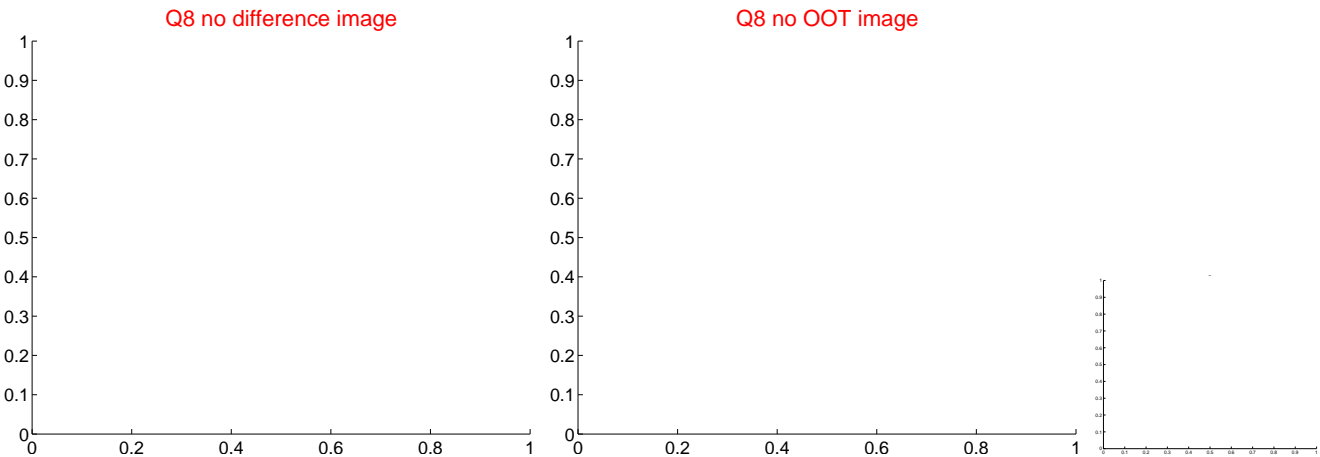
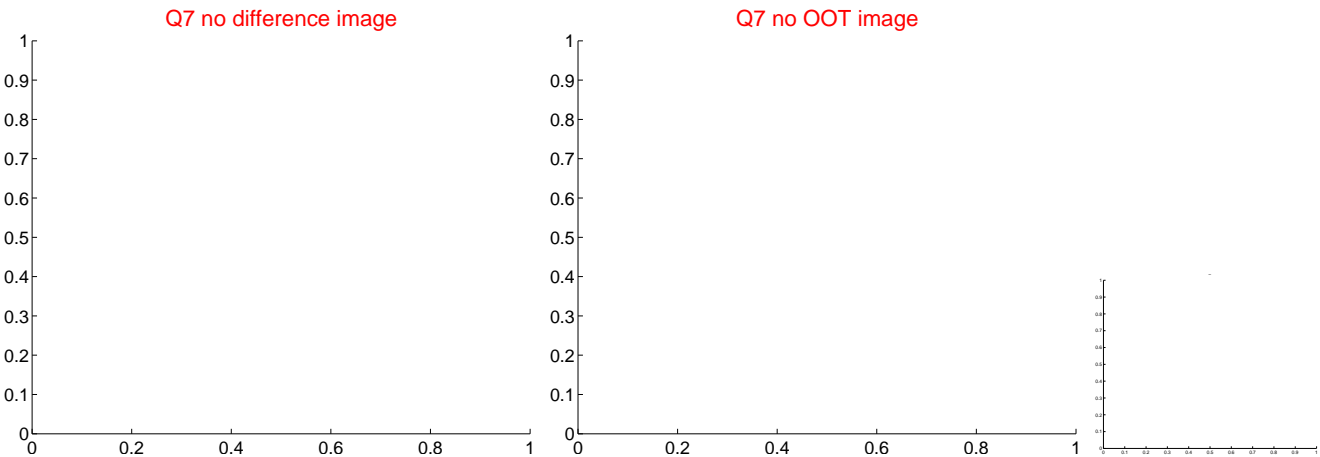
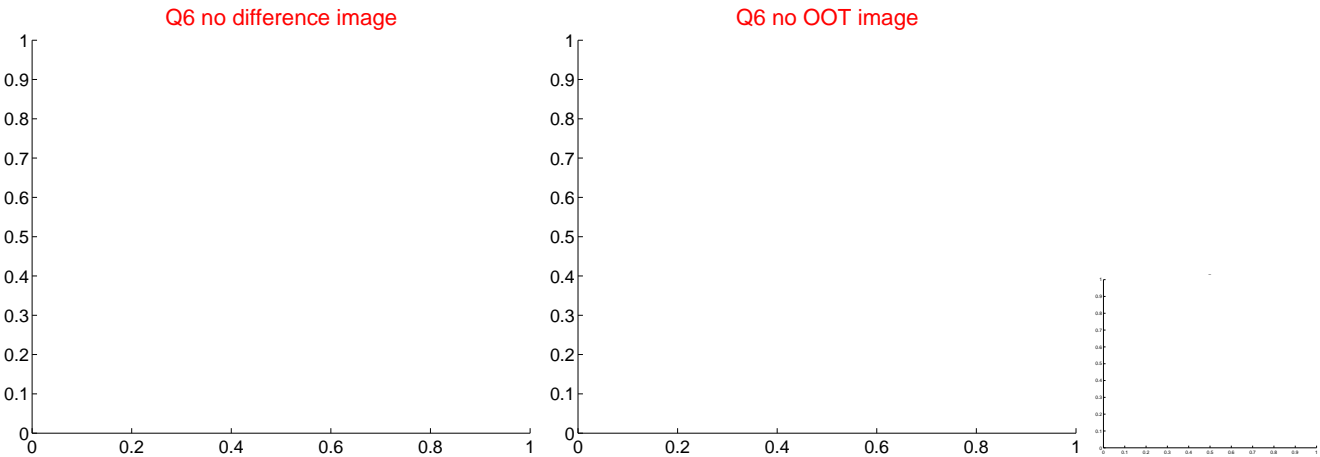
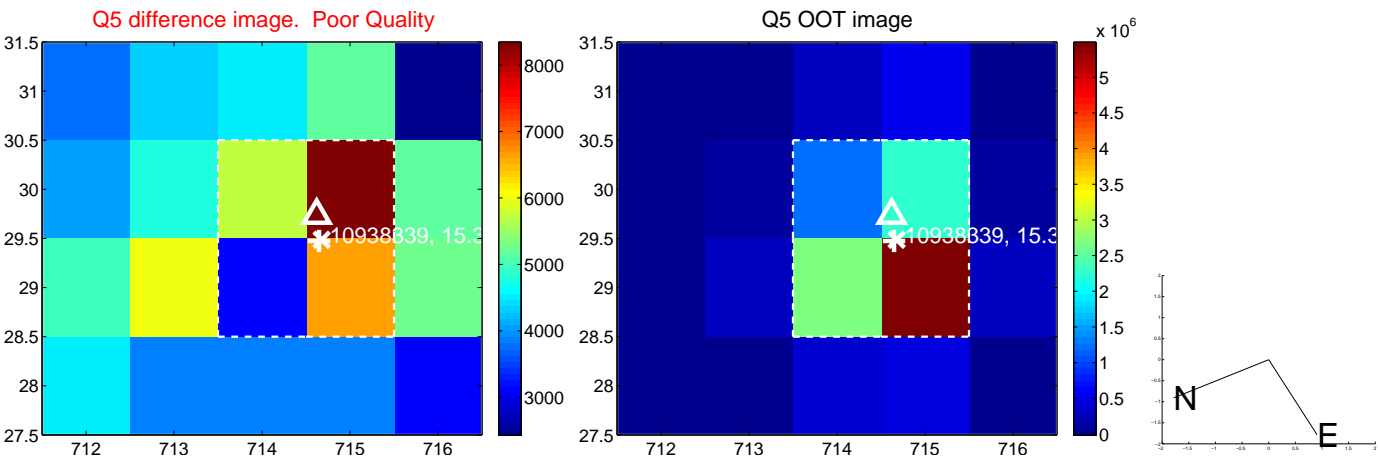


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

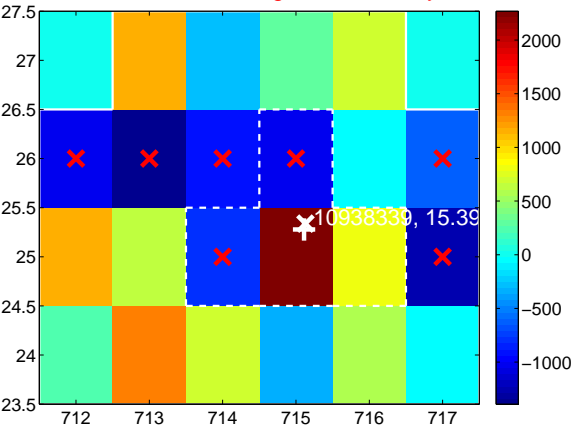
Q9 no difference image



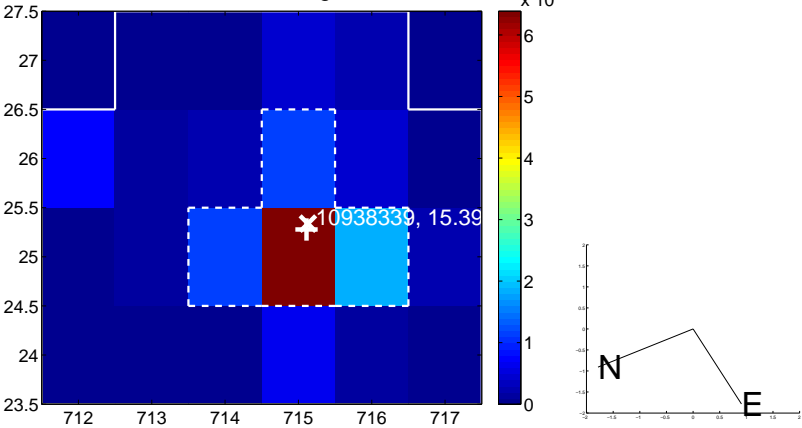
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



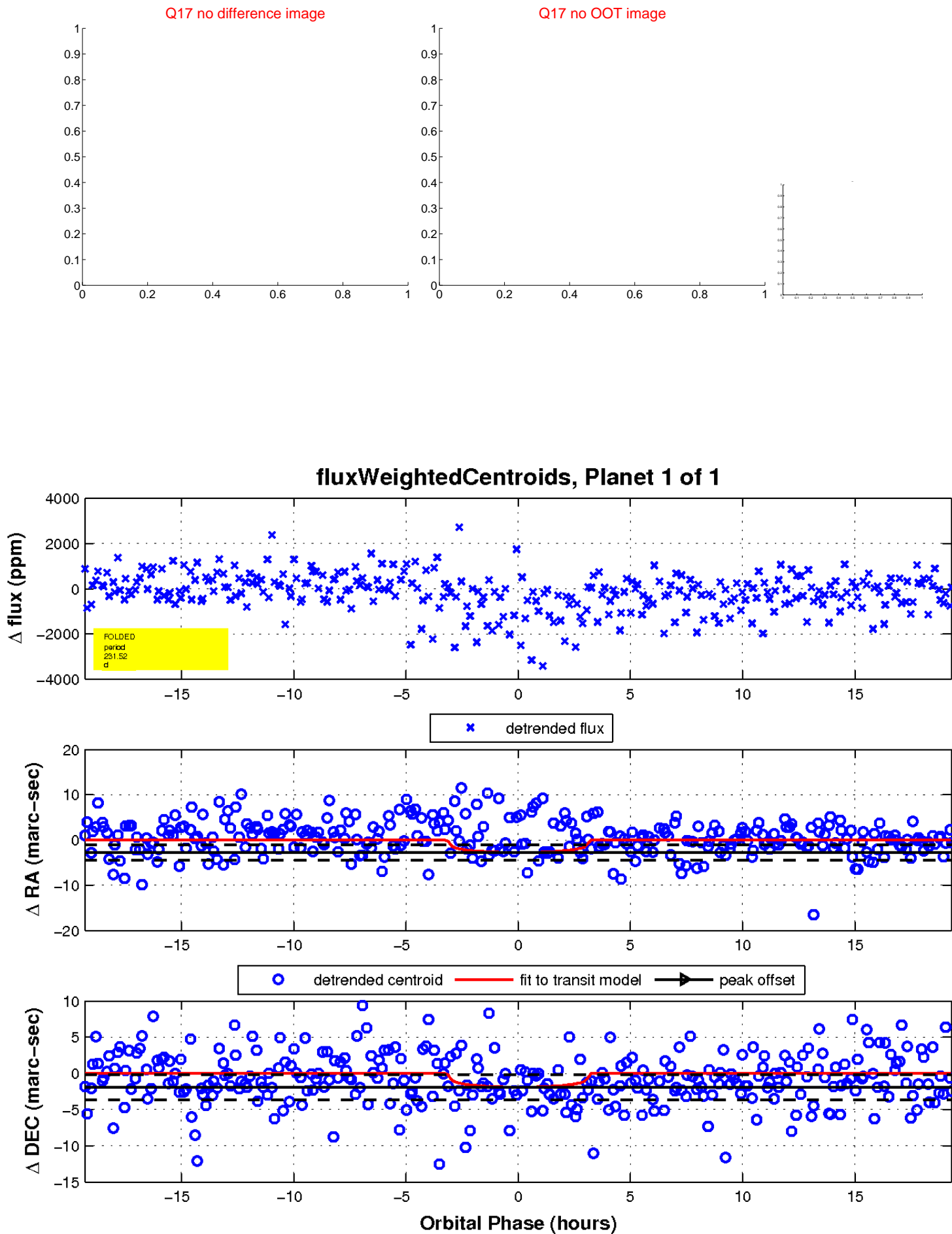
Q12 no OOT image



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

