

KIC 003938291

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})
003938291-01	OBS	No	363.837320	451.459939	621.2	12.095	11.4	8.8	7.72	5098	22.41	22.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003938291-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

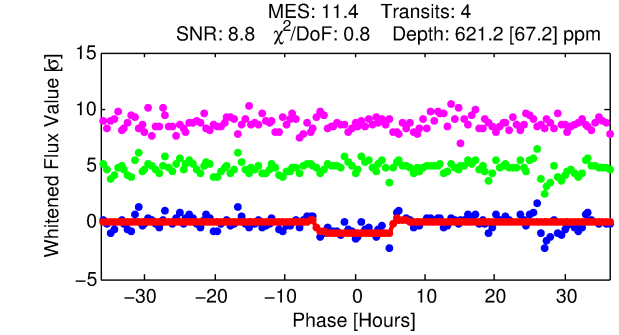
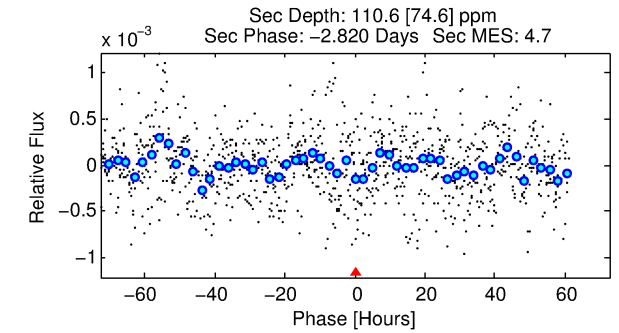
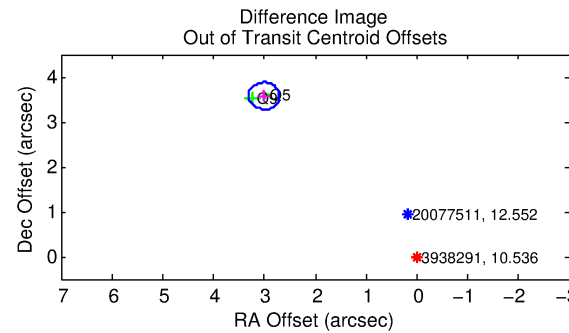
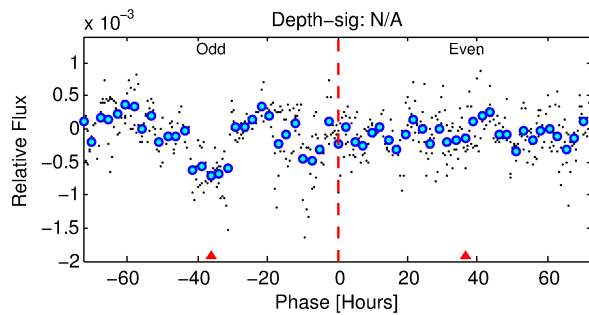
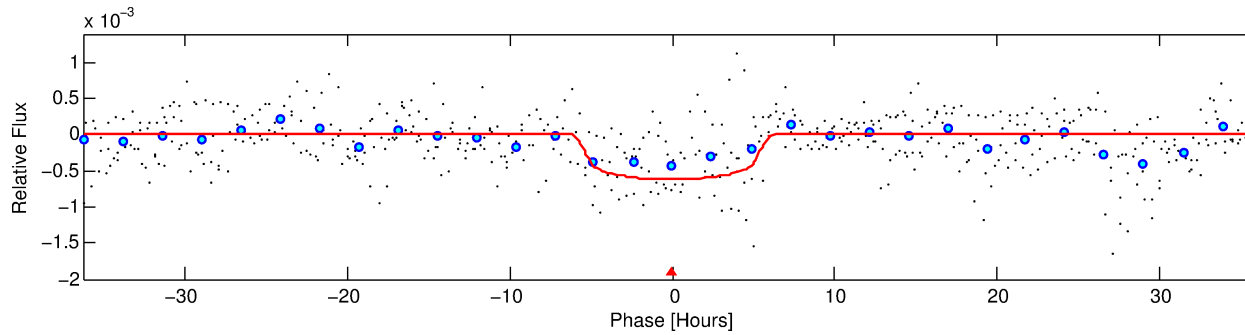
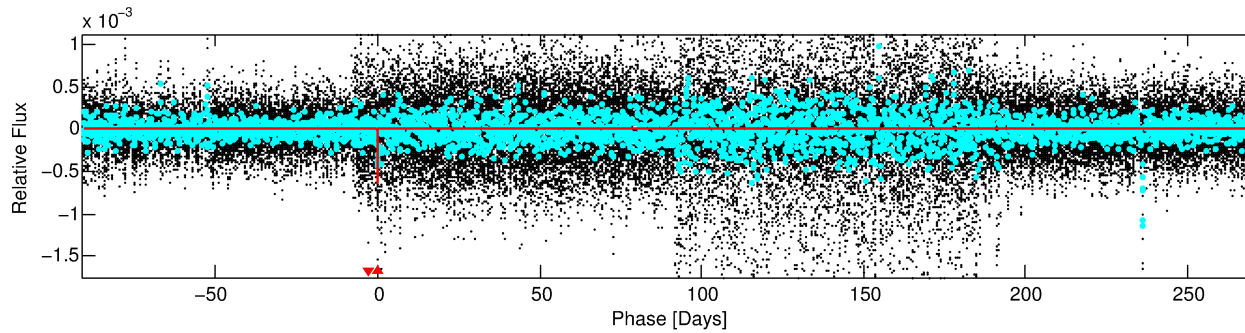
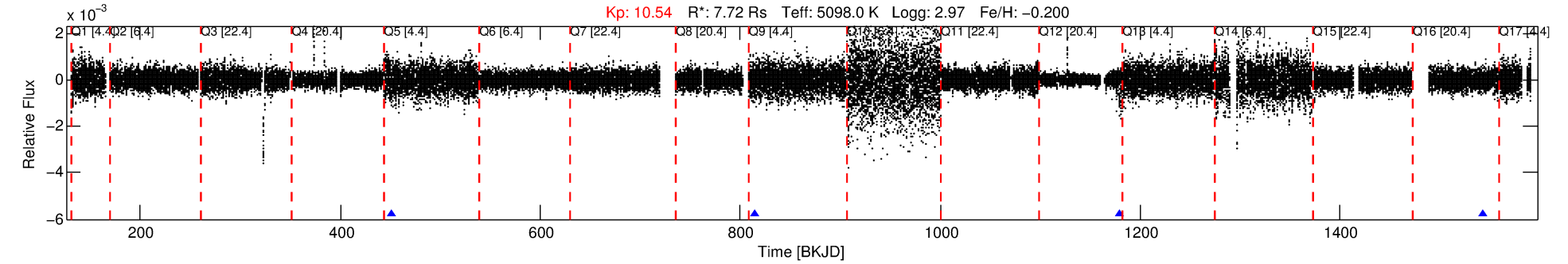
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003938291-01

No Significant Match Found

DV One-Page Summary

KIC: 3938291 Candidate: 1 of 1 Period: 363.837 d



DV Fit Results:

Period = 363.83732 [0.00688] d
Epoch = 451.4599 [0.0156] BKJD
Rp/R* = 0.0266 [0.0023]
a/R* = 128.19 [33.03]
b = 0.86 [0.08]
Seff = 22.68 [3.94]
Teq = 556 [24] K
Rp = 22.41 [4.89] Re
a = 1.2611 [0.1710] AU
Ag = 192.68 [136.81] [1.40σ]
Teffp = 3206 [564] K [4.70σ]

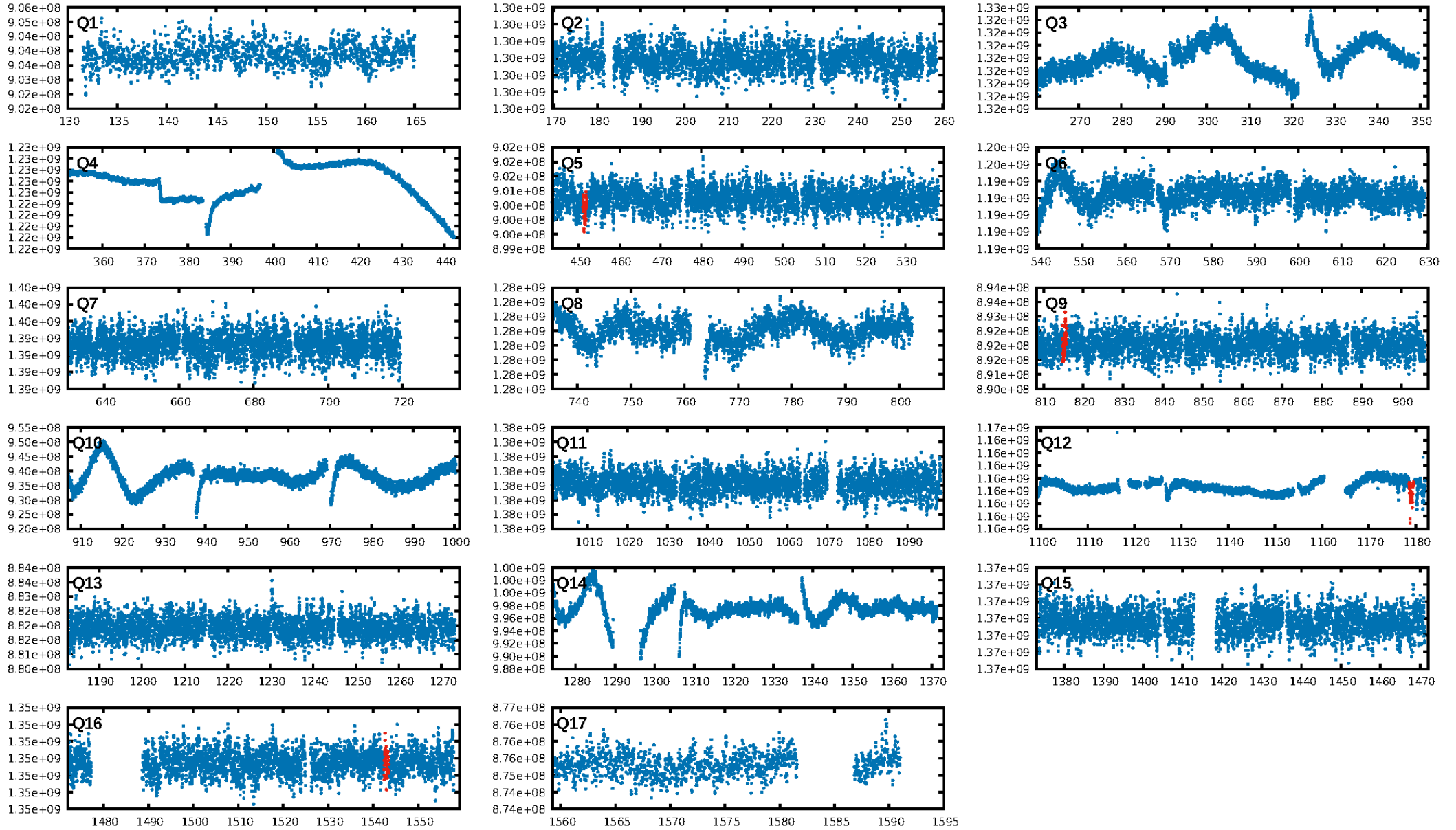
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.17e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -35.58
Centroid-sig: 40.4%
Centroid-so: 0.602 arcsec [2.48σ]
OotOffset-rm: 4.672 arcsec [46.71σ]
KicOffset-rm: 3.121 arcsec [25.83σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

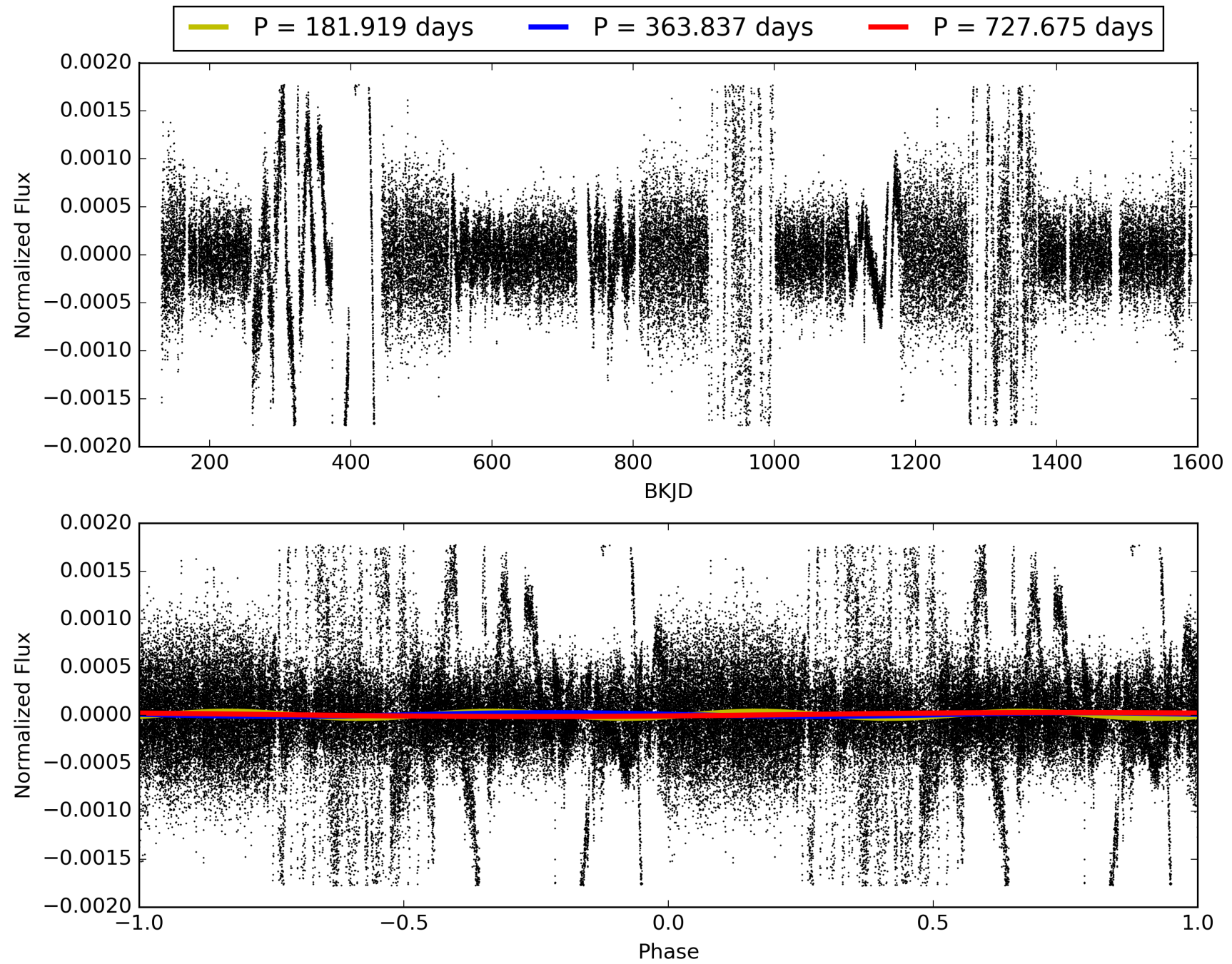
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:45:54 Z

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

TCE 003938291-01, PDC Light Curves

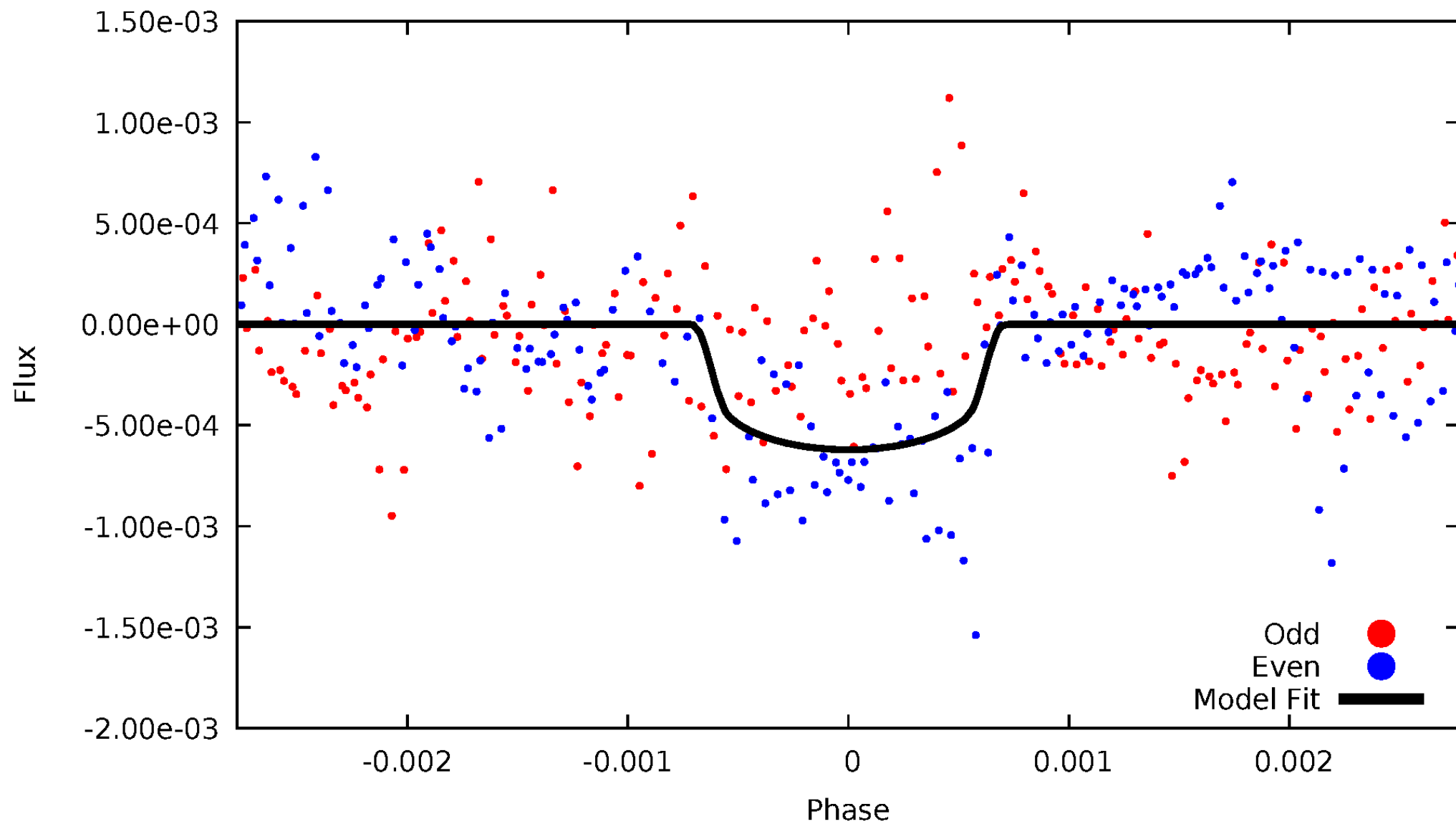


TCE 003938291-01



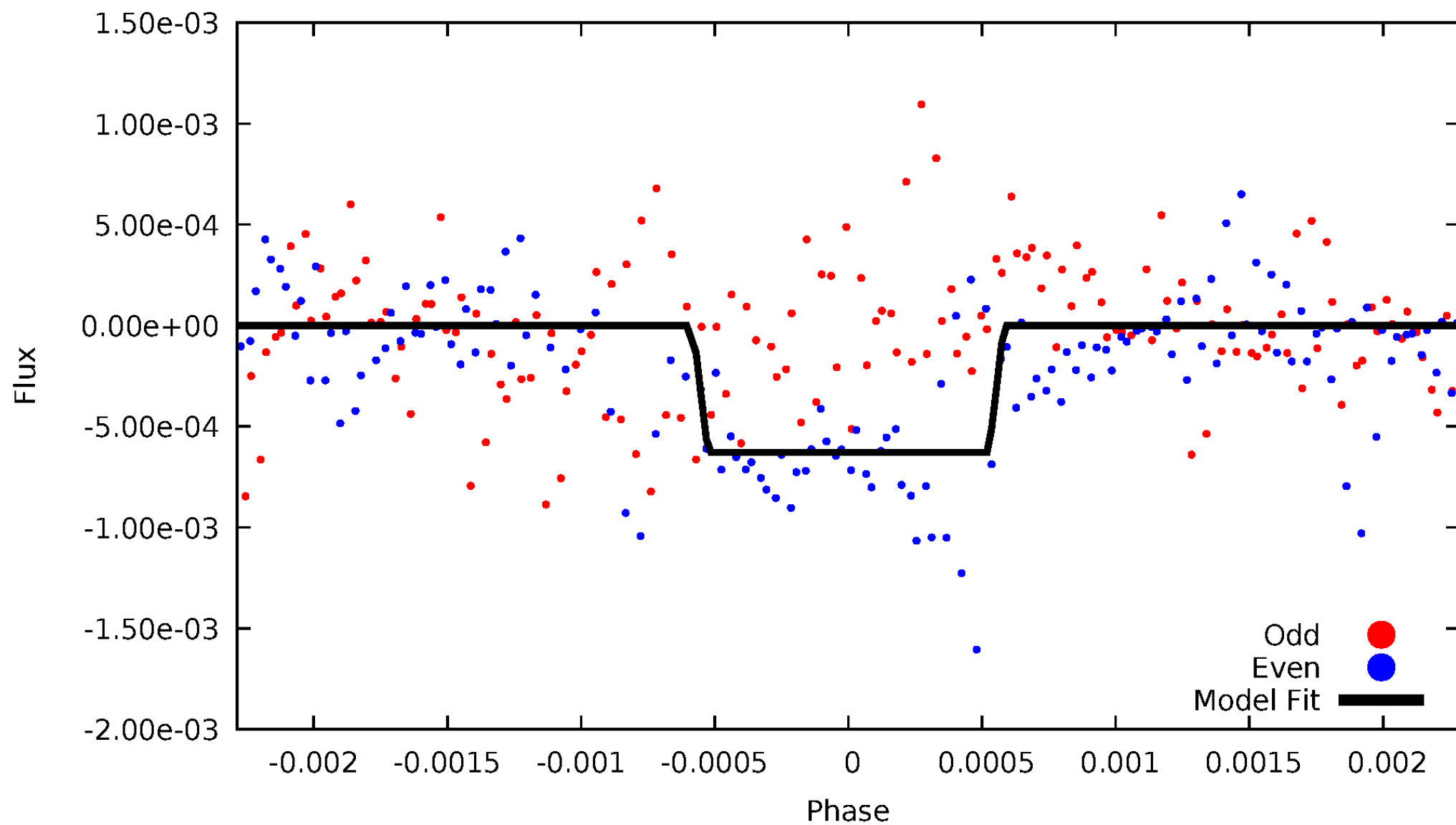
DV Odd/Even

TCE 003938291-01



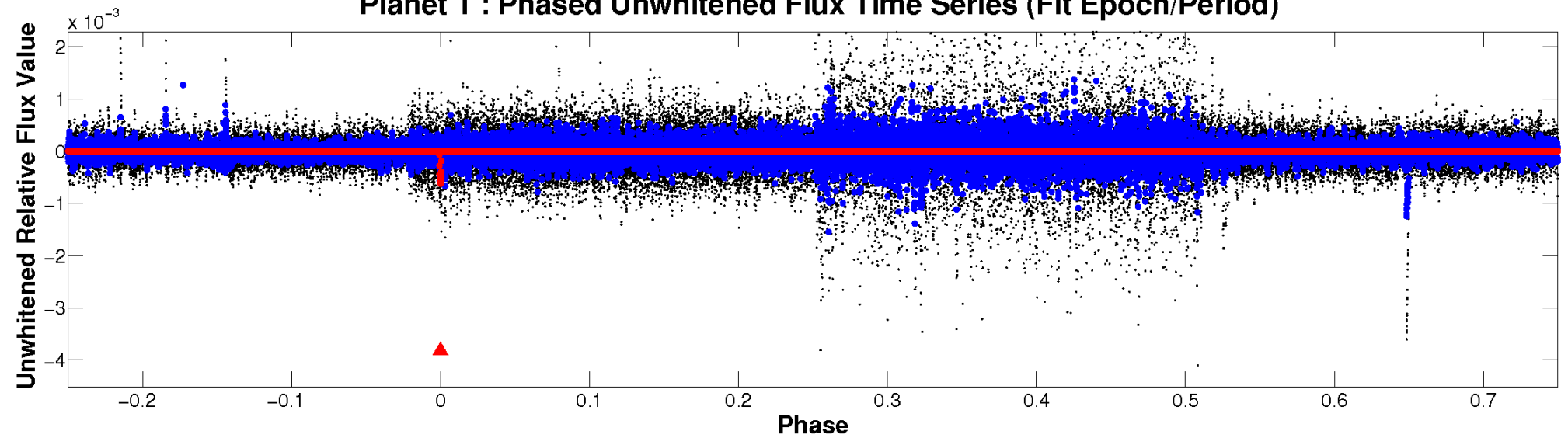
ALT Odd/Even

TCE 003938291-01

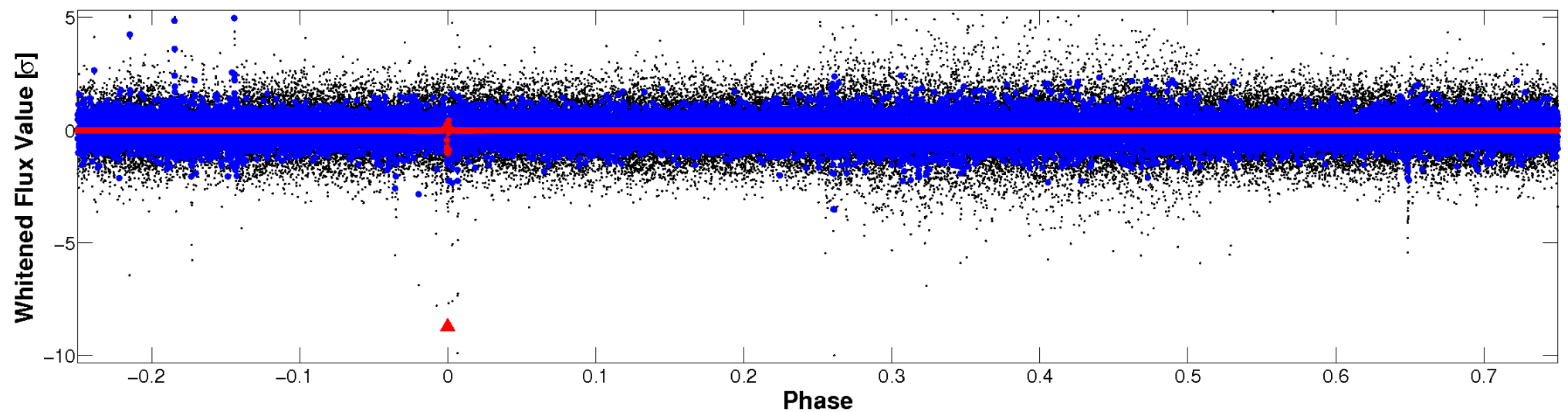


Non-Whitened Vs. Whitened Light Curve

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



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



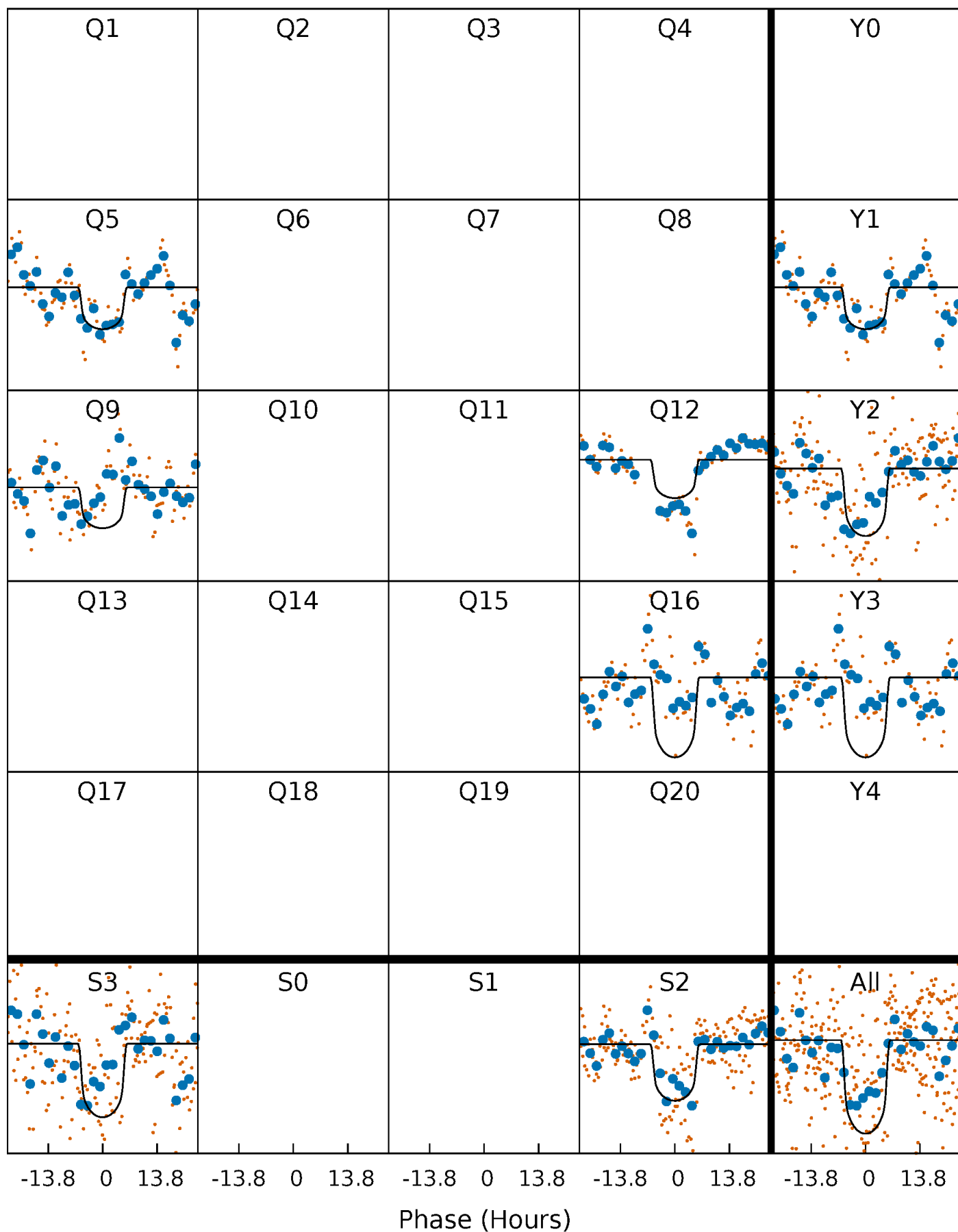
PDC Quarter-Phased Transit Curves

TCE 003938291-01 P=363.837319 Days $T_0=451.459939$ (BKJD)



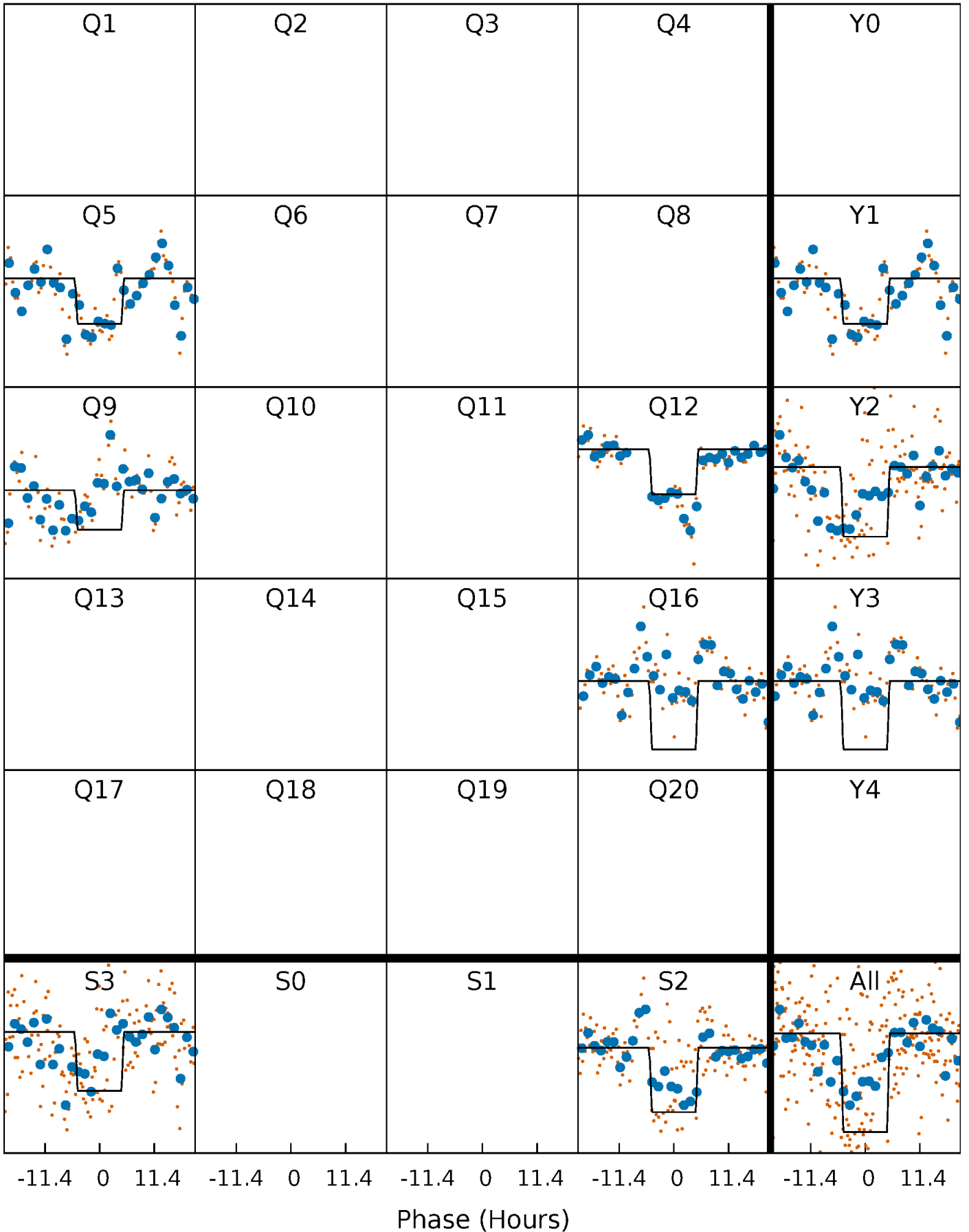
DV Quarter-Phased Transit Curves

TCE 003938291-01 P=363.837319 Days $T_0=451.459939$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

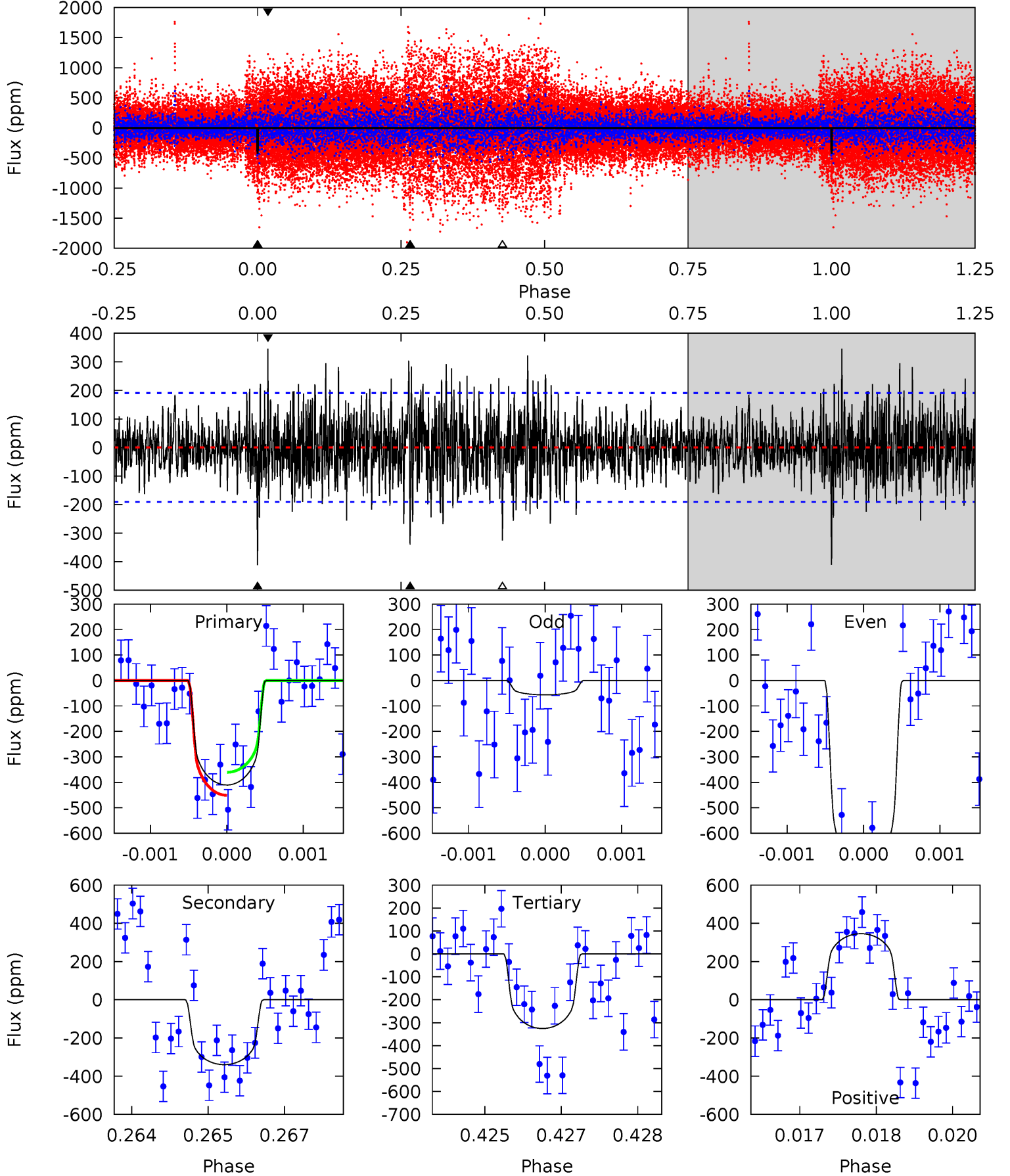
TCE 003938291-01 $P=363.805913$ Days $T_0=451.558553$ (BKJD)



DV Model-Shift Uniqueness Test

003938291-01, P = 363.837319 Days, E = 87.622620 Days

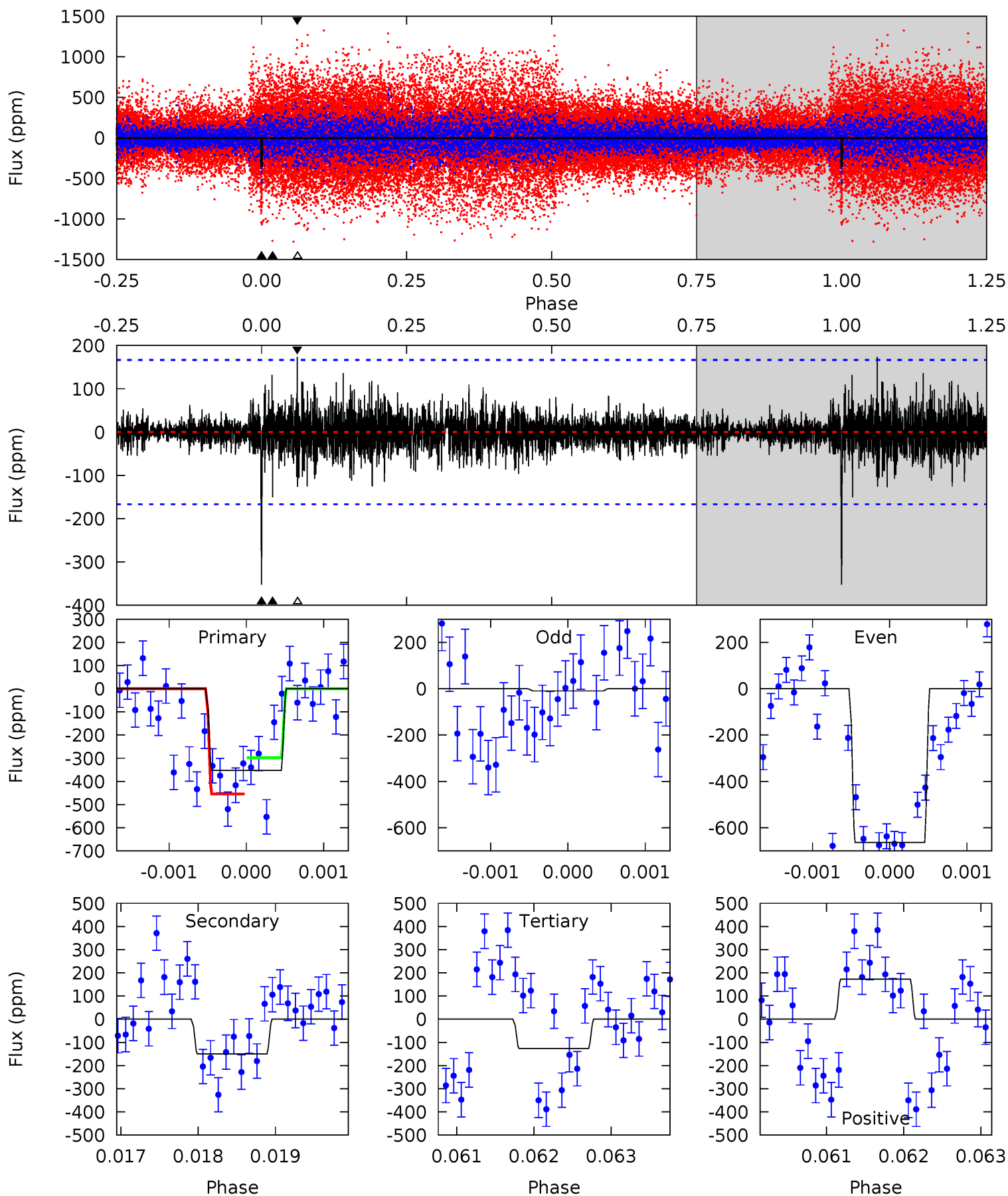
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	9.59	9.19	9.76	5.39	3.19	2.30	2.40	1.83	0.40	-0.17	9.41	1.13	0.46	1.26



Alt Model-Shift Uniqueness Test

003938291-01, P = 363.805913 Days, E = 87.752640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	4.89	4.11	5.64	5.43	3.25	0.95	7.34	5.82	0.78	-0.75	10.4	1.15	0.33	0



Stellar Parameters For KIC 003938291

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5098^{+45}_{-129}	$2.968^{+0.030}_{-0.030}$	$-0.200^{+0.100}_{-0.200}$	$7.721^{+0.290}_{-1.548}$	$2.020^{+0.039}_{-0.701}$	$0.006^{+0.002}_{-0.001}$
	+1%/-3%	+1%/-1%	+50%/-100%	+4%/-20%	+2%/-35%	+30%/-8%
Source	PHO55	AST55	SPE55	DSEP		

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

Secondary Eclipse Parameters for KIC 003938291-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-340 ± 35	$22.46^{+2.03}_{-2.40}$	777^{+15}_{-21}	4375^{+177}_{-183}	589^{+137}_{-108}
Alt.	-150 ± 31	$21.00^{+2.15}_{-2.23}$	777^{+13}_{-21}	3856^{+206}_{-190}	296^{+92}_{-75}

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 $A_{obs} \gg 1.0$

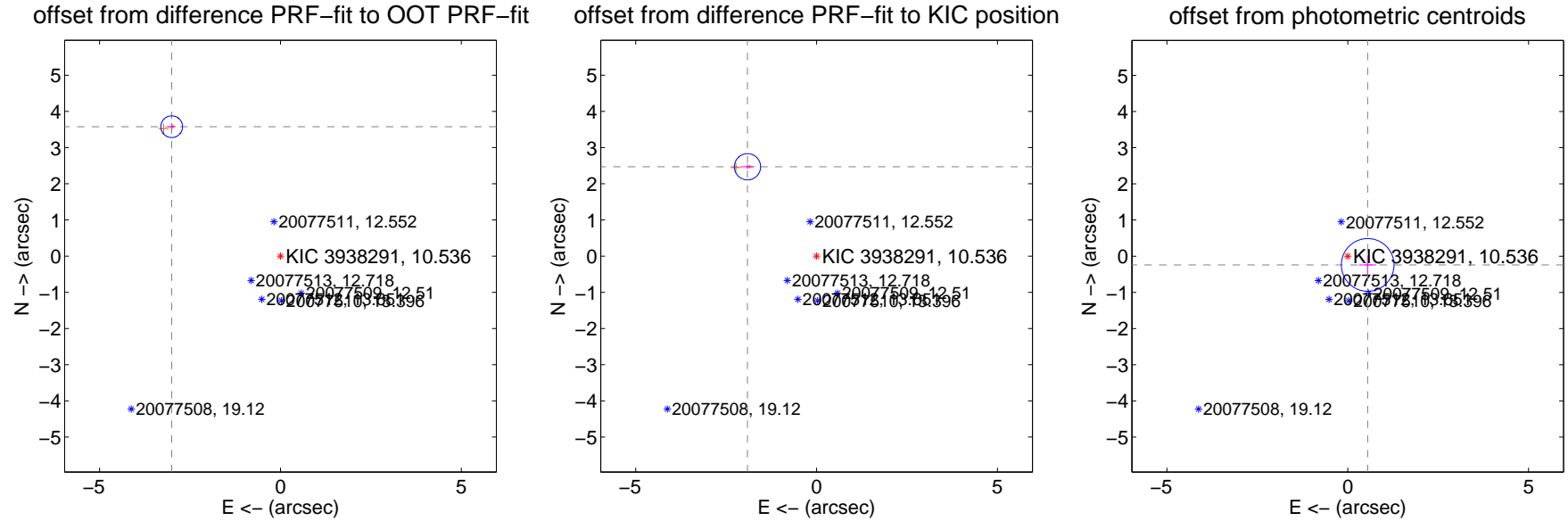
DV Centroid Data

Supplemental centroid analysis for 003938291-01. **Kepler magnitude: 10.54.** Transit SNR 8.76

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.672 ± 0.100	46.71	3.006 ± 0.102	3.576 ± 0.099
PRF-fit source offset from KIC position	3.121 ± 0.121	25.83	1.910 ± 0.192	2.469 ± 0.068
photometric centroid source offset	0.60 ± 0.24	2.48	-0.55 ± 0.24	-0.24 ± 0.25

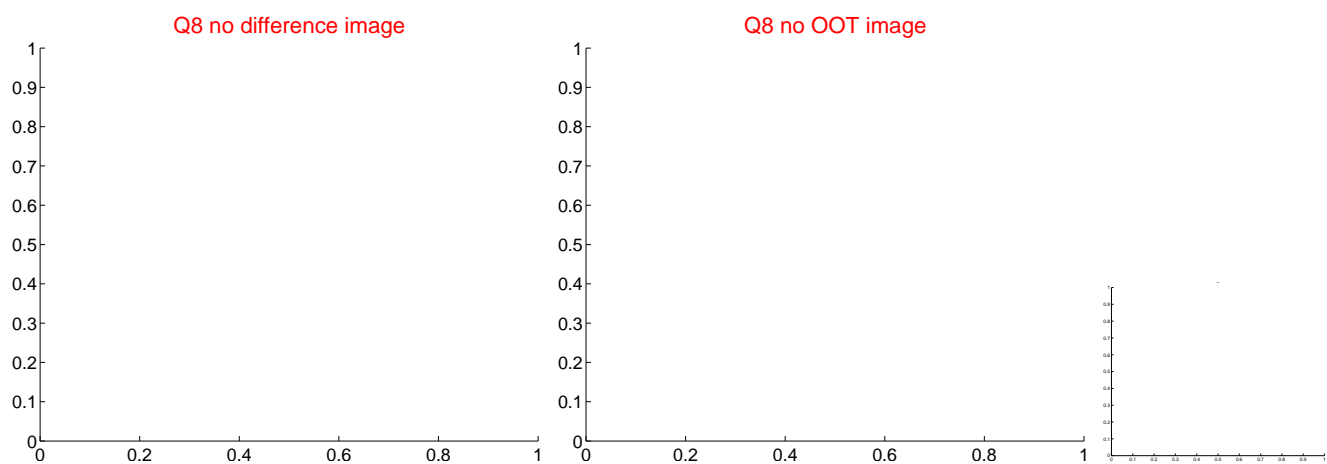
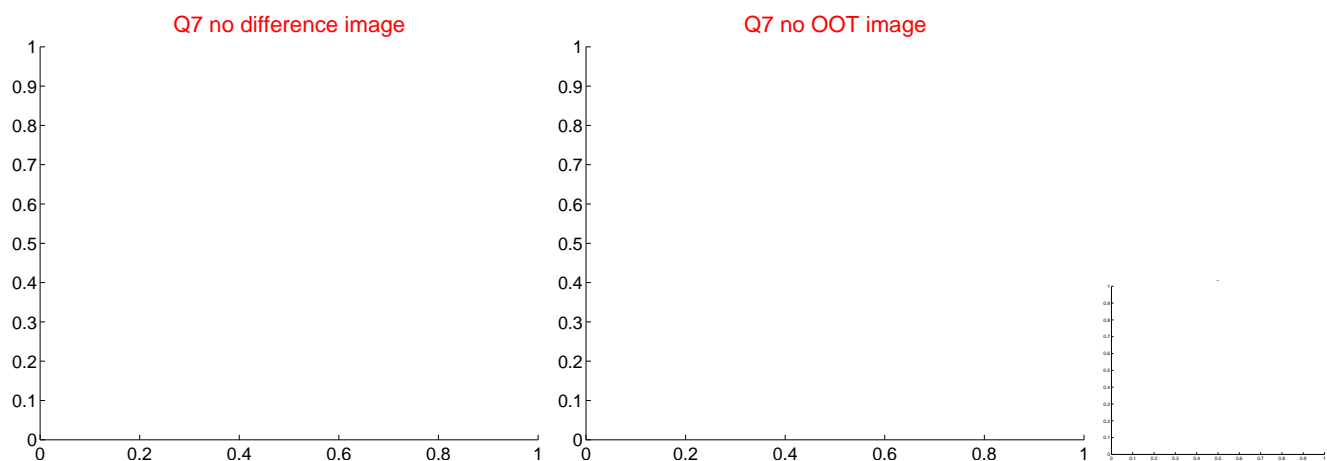
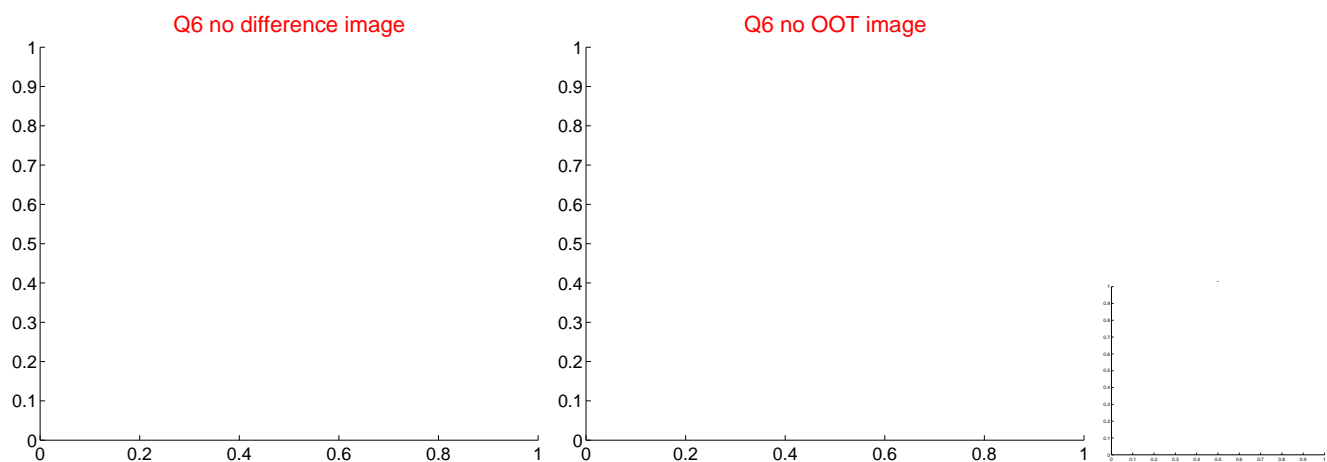
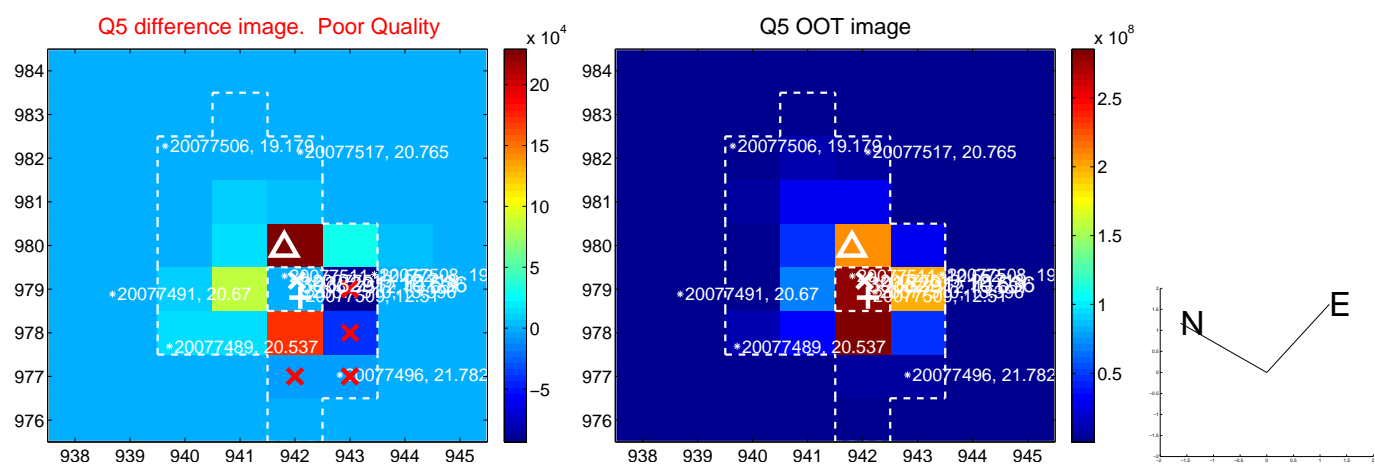


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

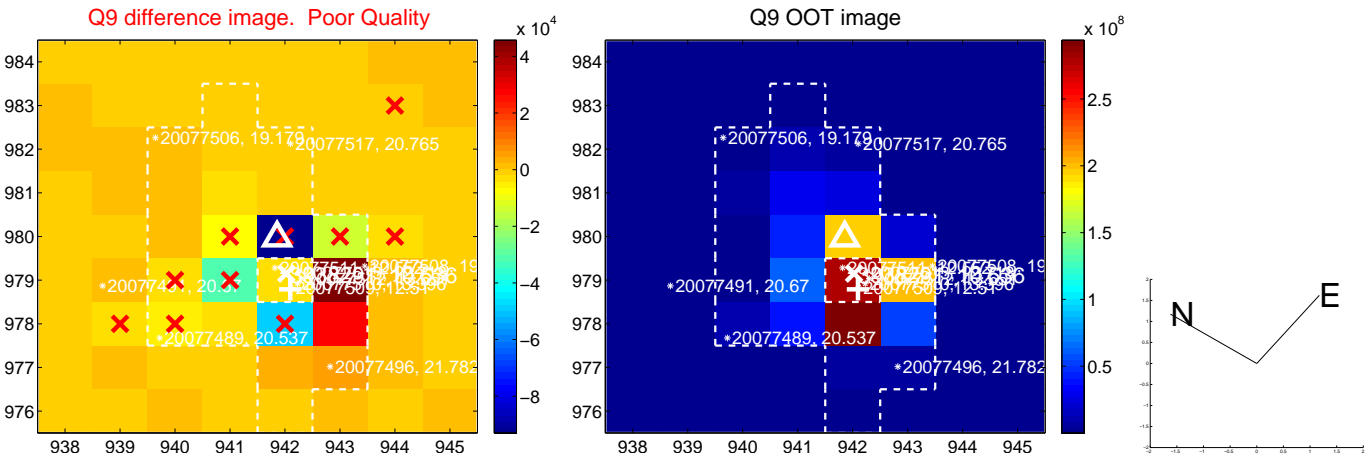
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



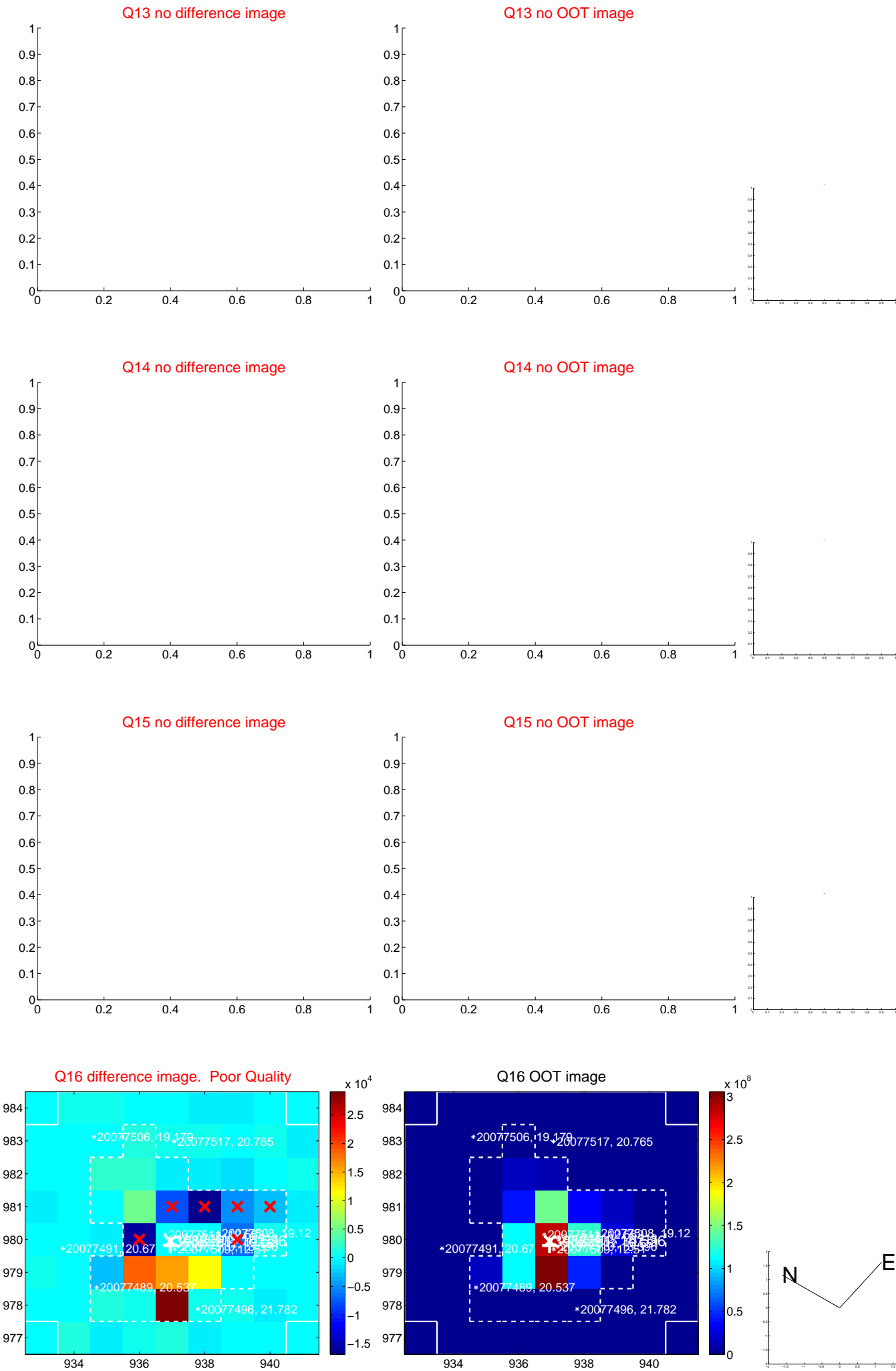
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



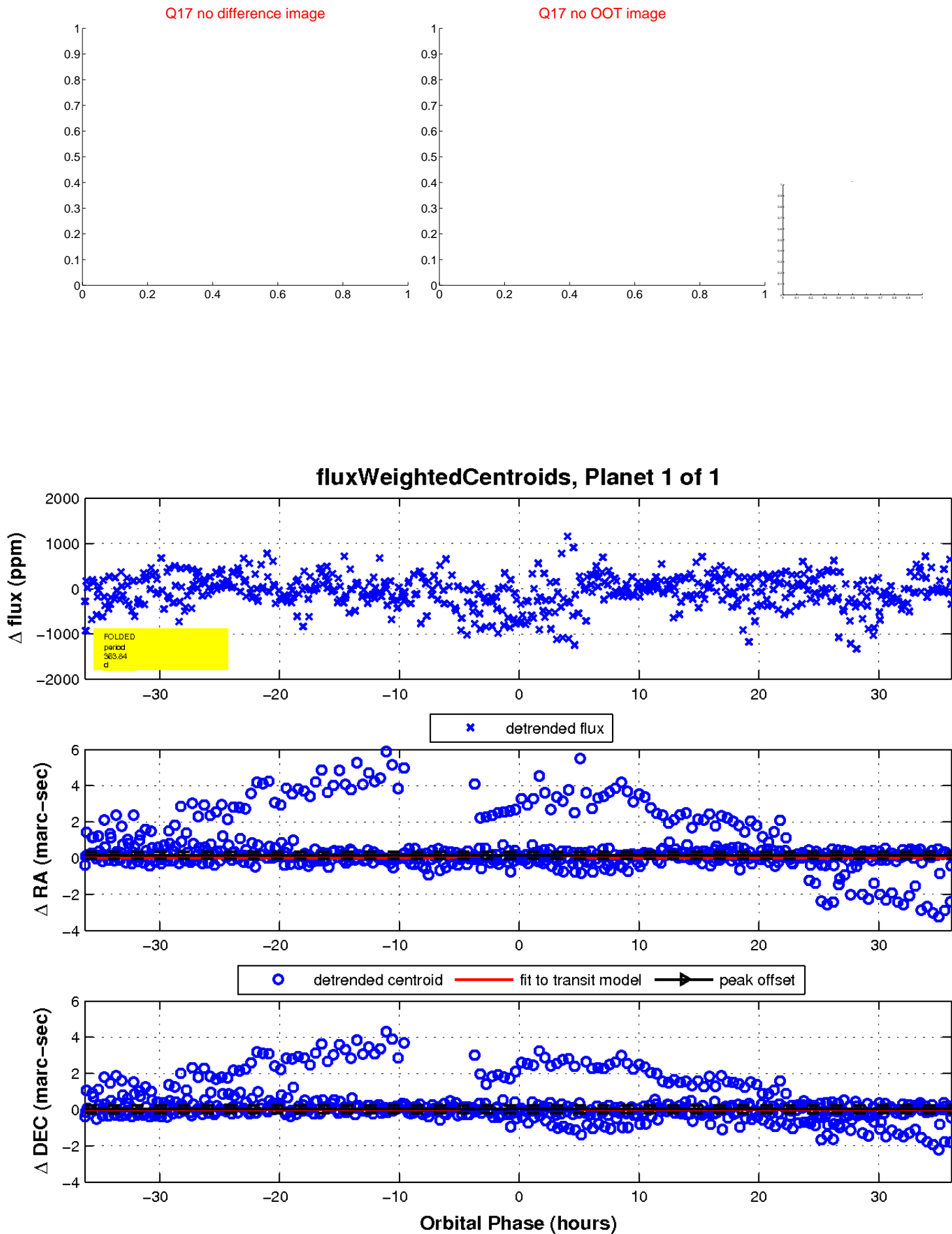
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

