

KIC 006106038

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})
006106038-01	OBS	No	230.331972	287.826805	503.9	12.201	7.4	6.9	0.88	5830	2.34	1.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006106038-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_ALT—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.

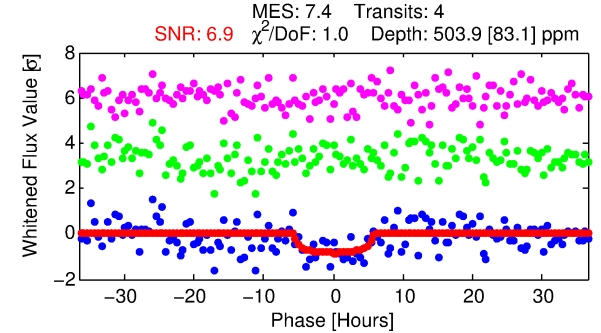
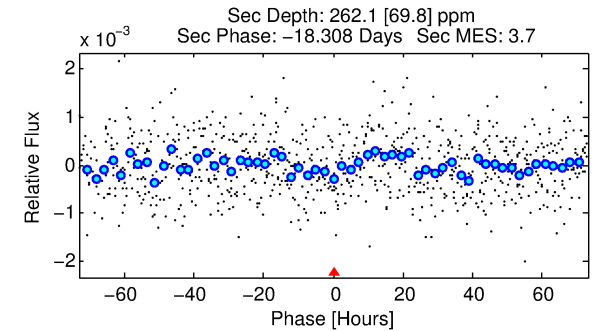
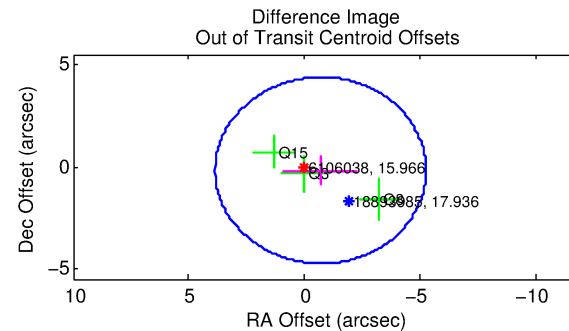
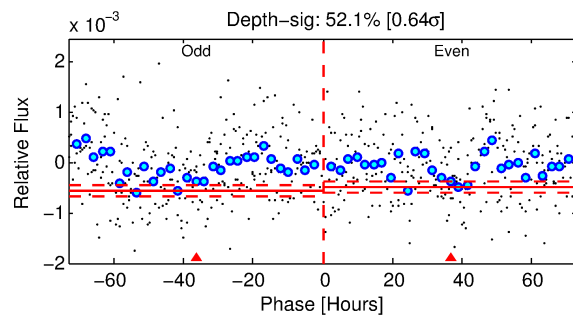
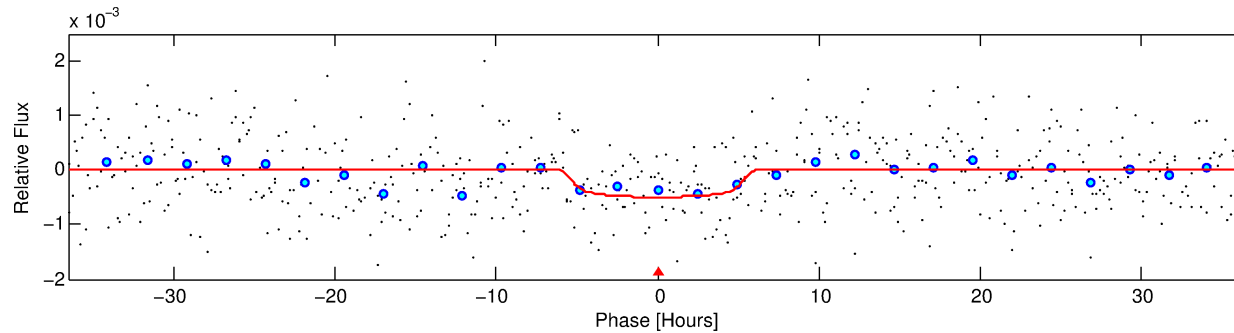
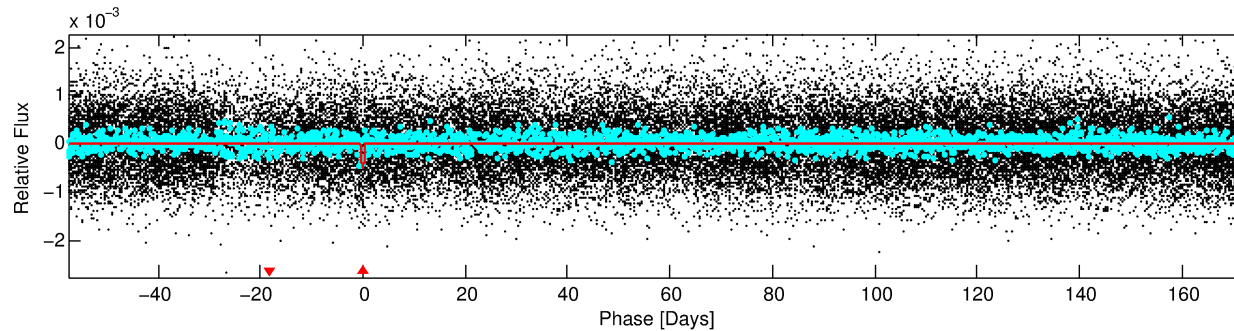
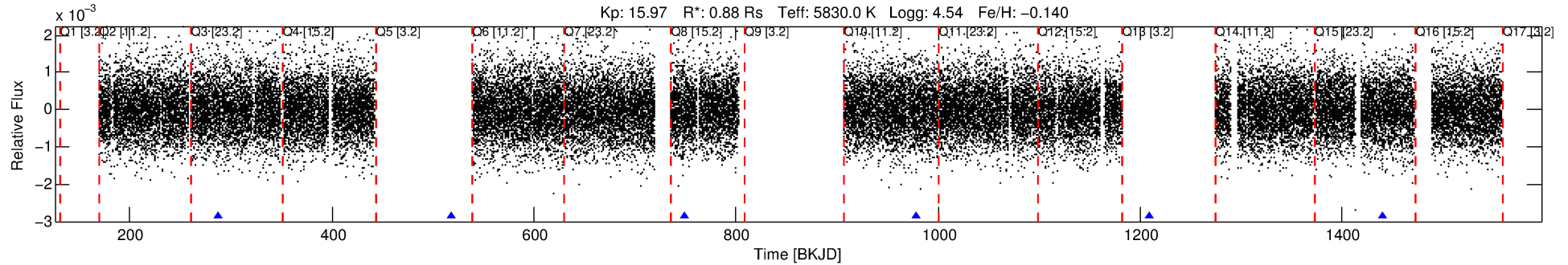
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006106038-01

No Significant Match Found

DV One-Page Summary

KIC: 6106038 Candidate: 1 of 1 Period: 230.332 d



DV Fit Results:

Period = 230.33197 [0.01126] d
Epoch = 287.8268 [0.0350] BKJD
Rp/R* = 0.0245 [0.0053]
a/R* = 68.90 [63.53]
b = 0.91 [0.19]
Seff = 1.50 [0.61]
Teq = 282 [29] K
Rp = 2.34 [0.89] Re
a = 0.7282 [0.1934] AU
Ag = 13912.85 [8856.27] [1.57 σ]
Teff = 4737 [614] K [7.24 σ]

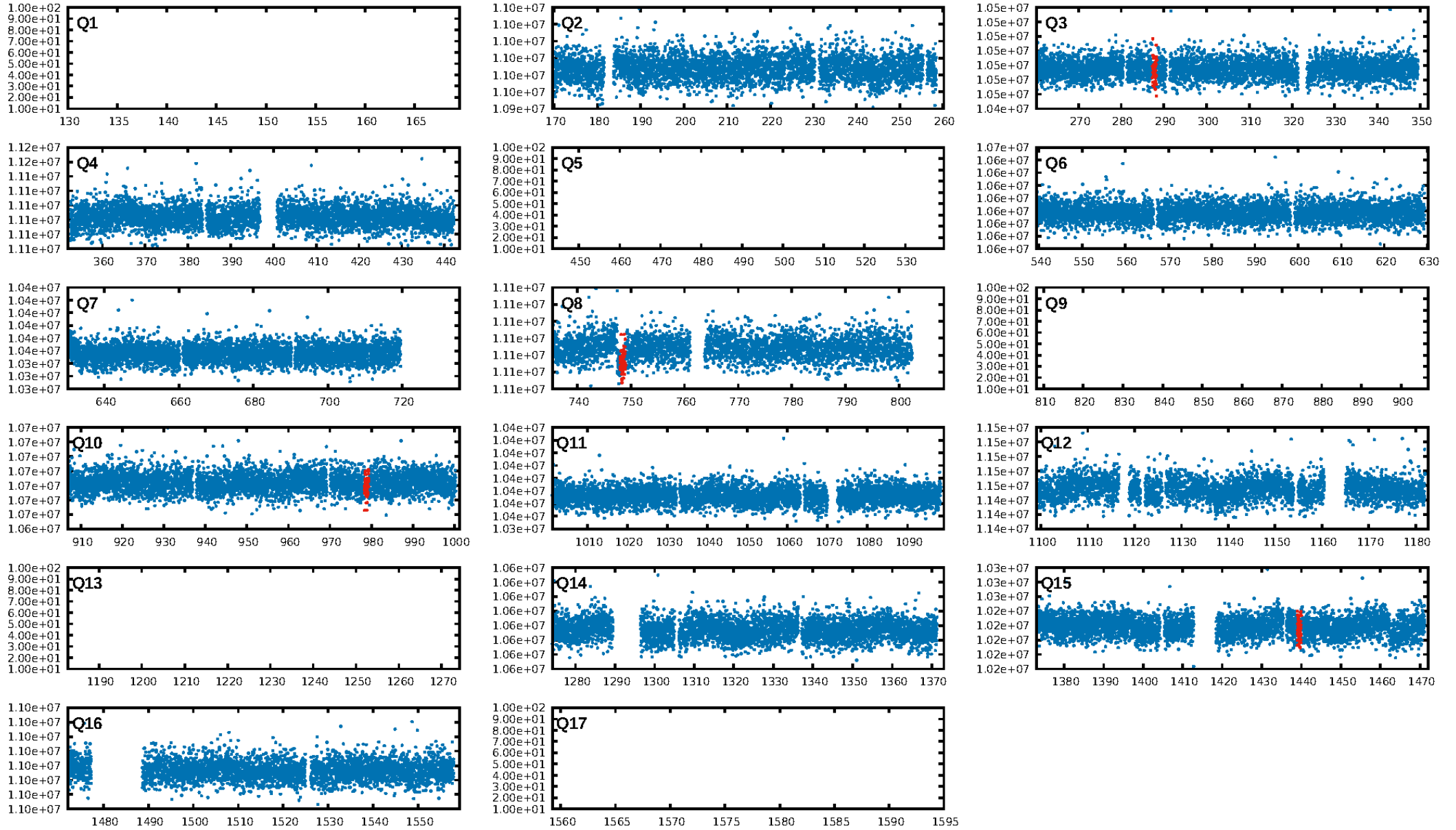
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 44.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.25e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.168
Centroid-sig: 6.0%
Centroid-so: 3.337 arcsec [1.47 σ]
OotOffset-rm: 0.726 arcsec [0.48 σ]
KicOffset-rm: 0.845 arcsec [0.54 σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

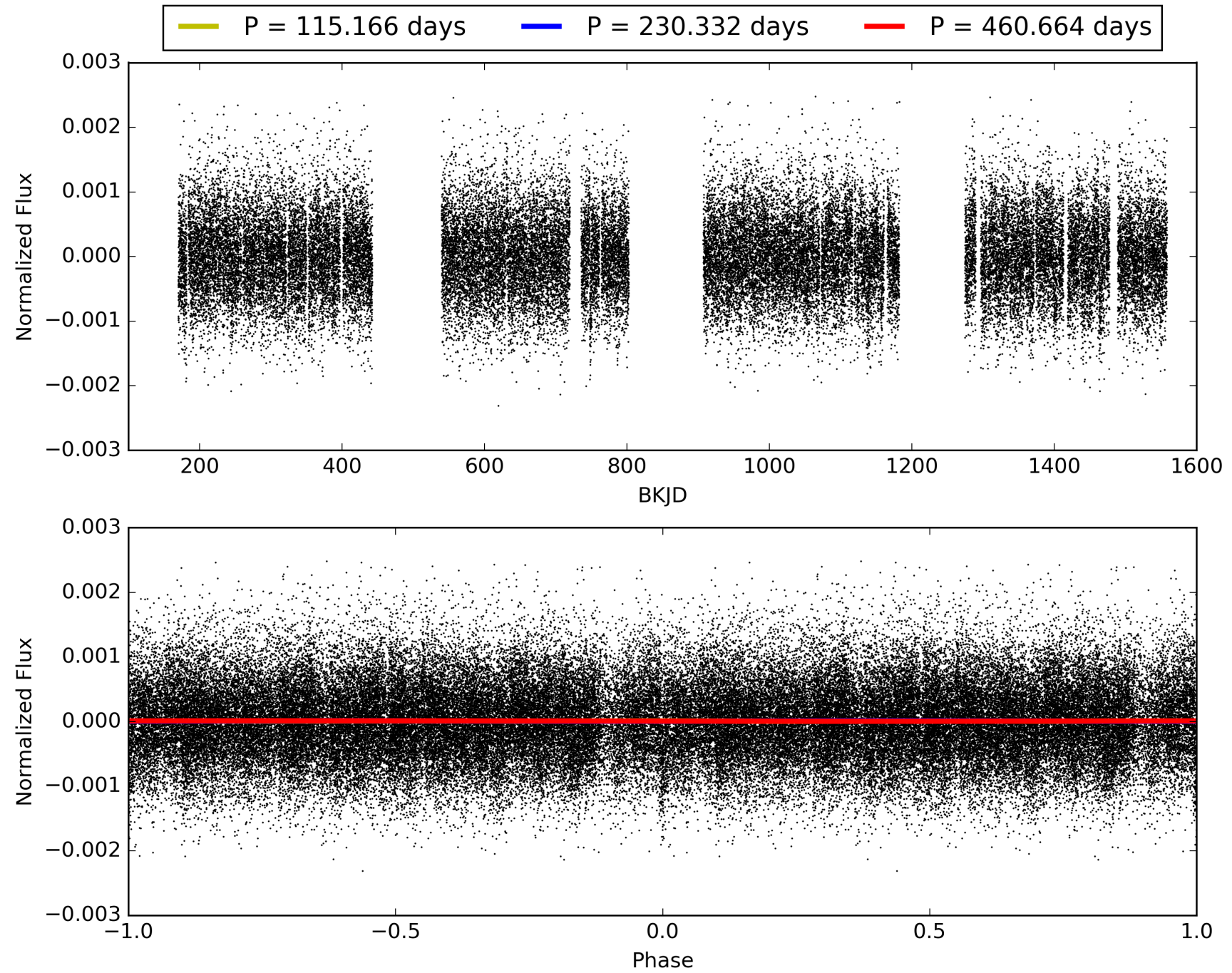
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:38:27 Z

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

TCE 006106038-01, PDC Light Curves

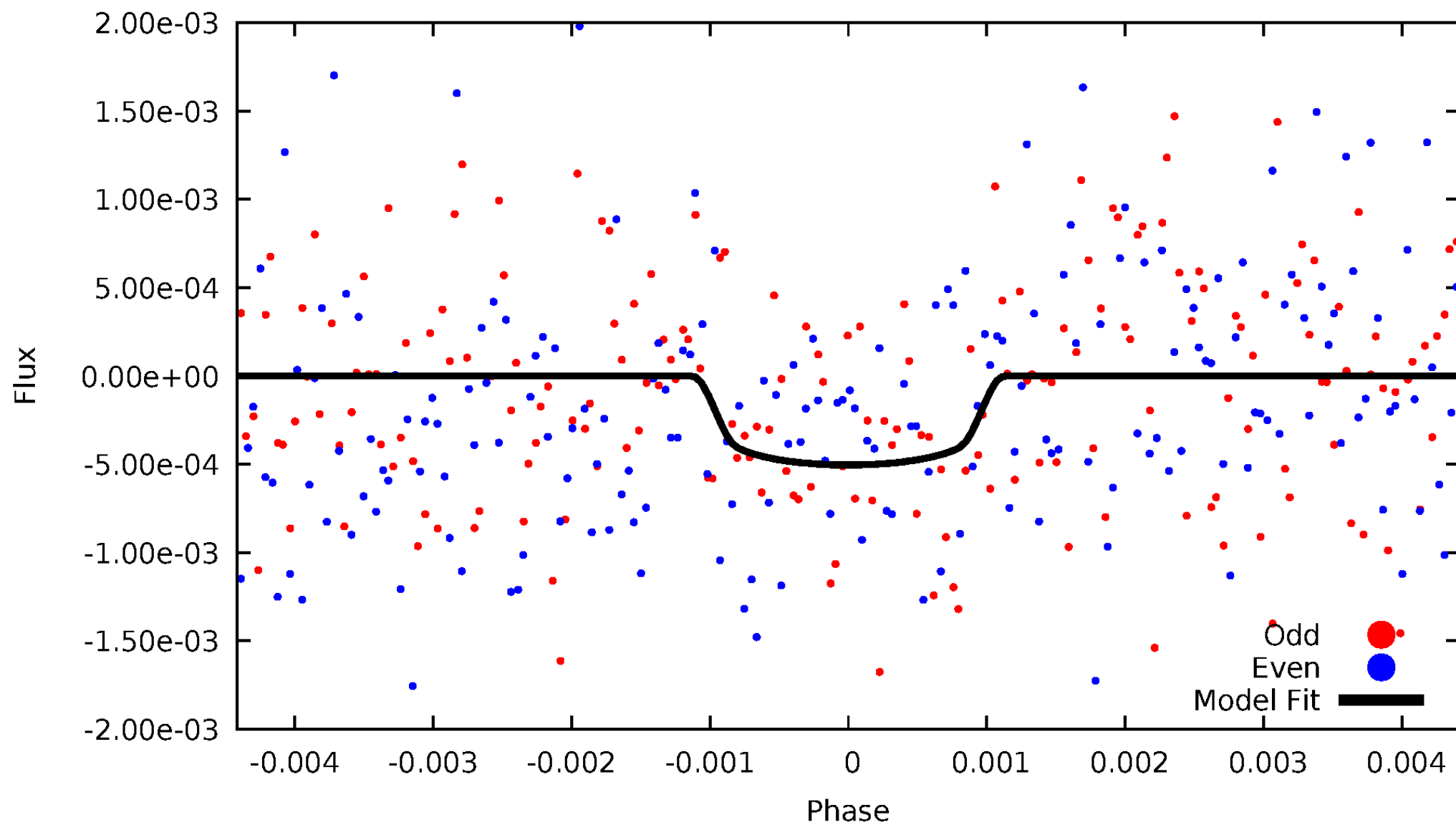


TCE 006106038-01



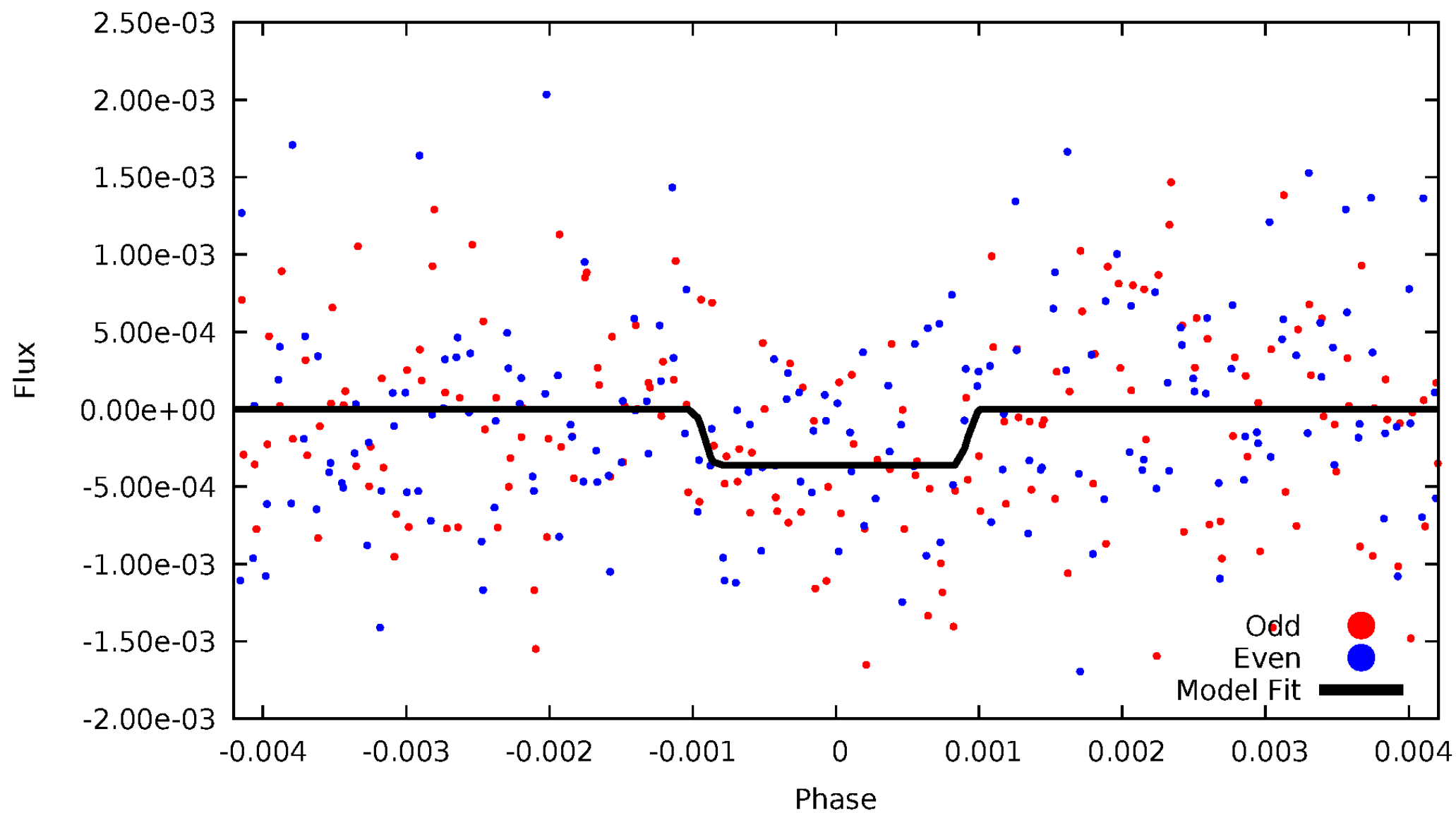
DV Odd/Even

TCE 006106038-01



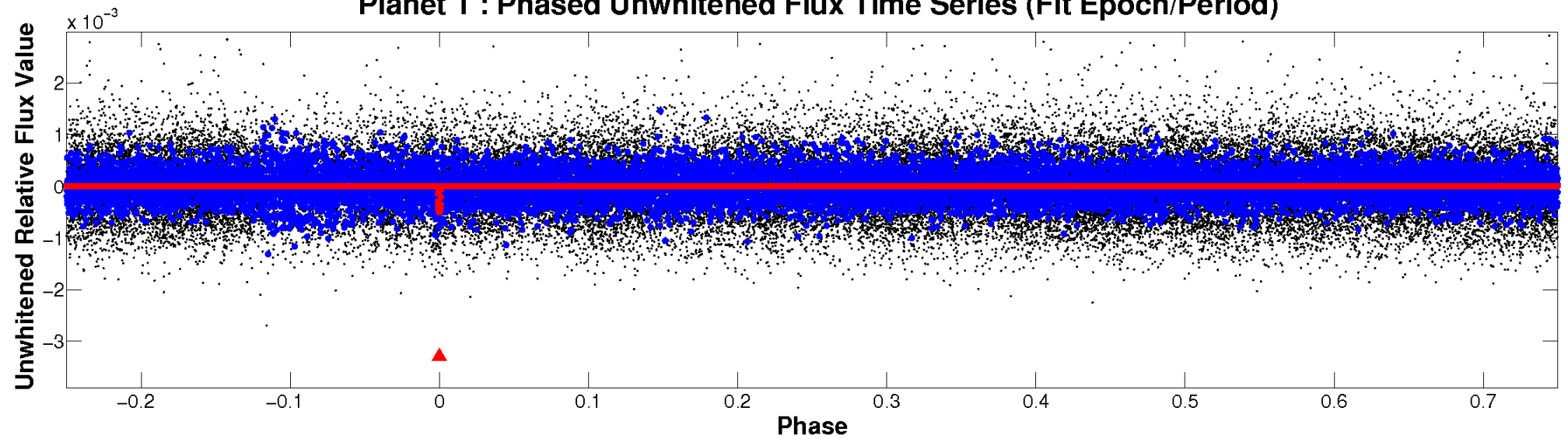
ALT Odd/Even

TCE 006106038-01

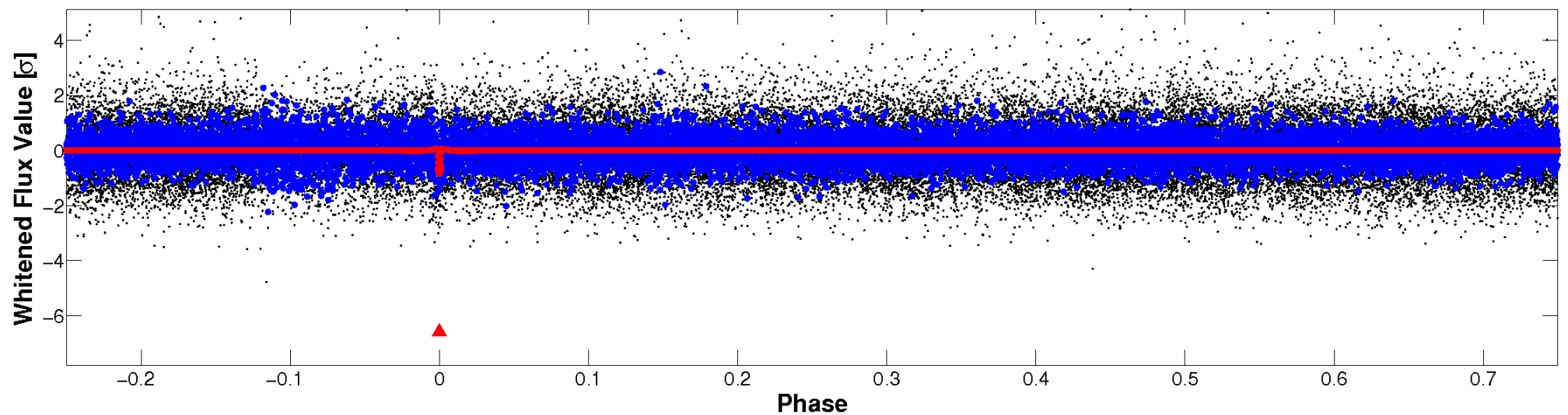


Non-Whitened Vs. Whitened Light Curve

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

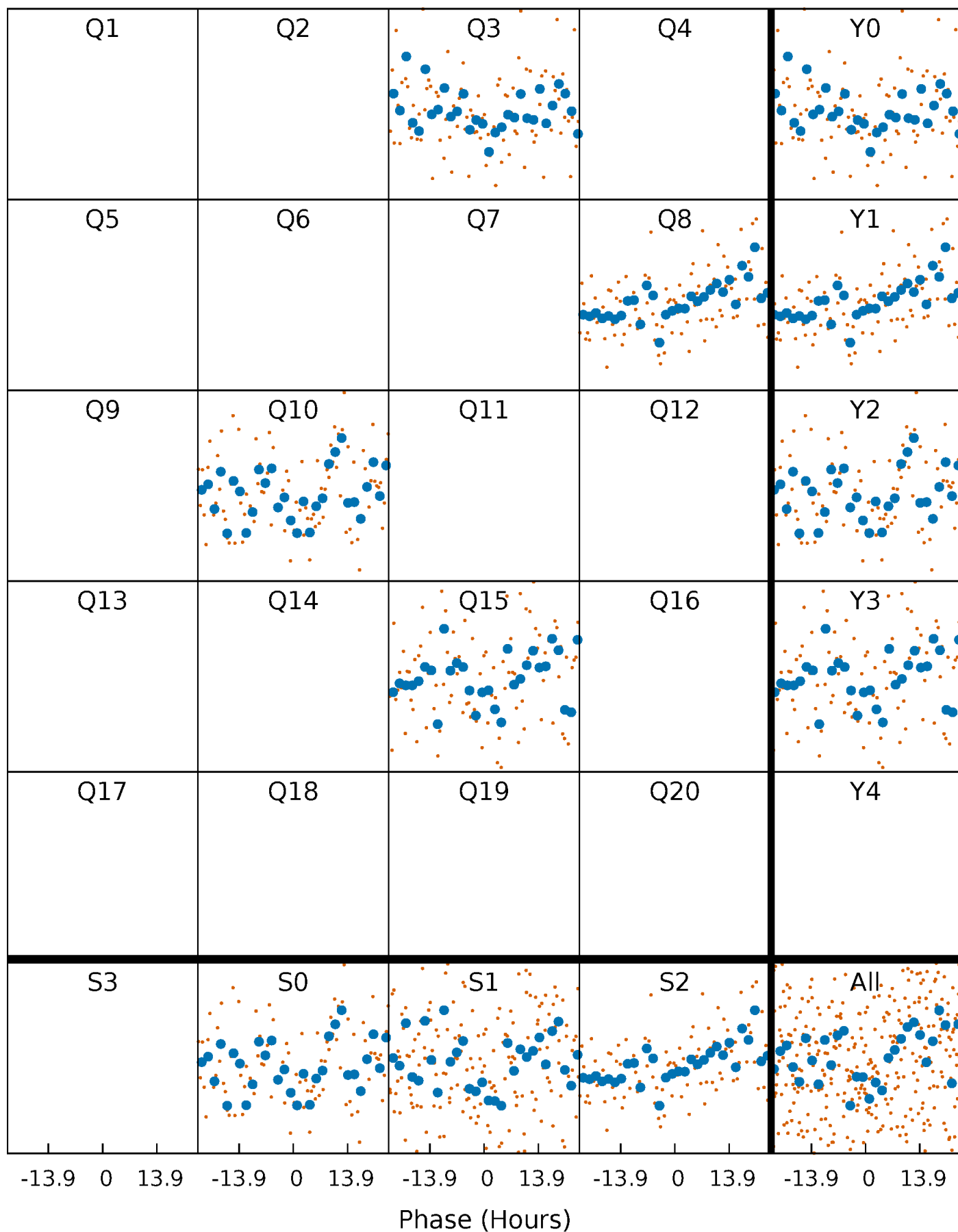


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



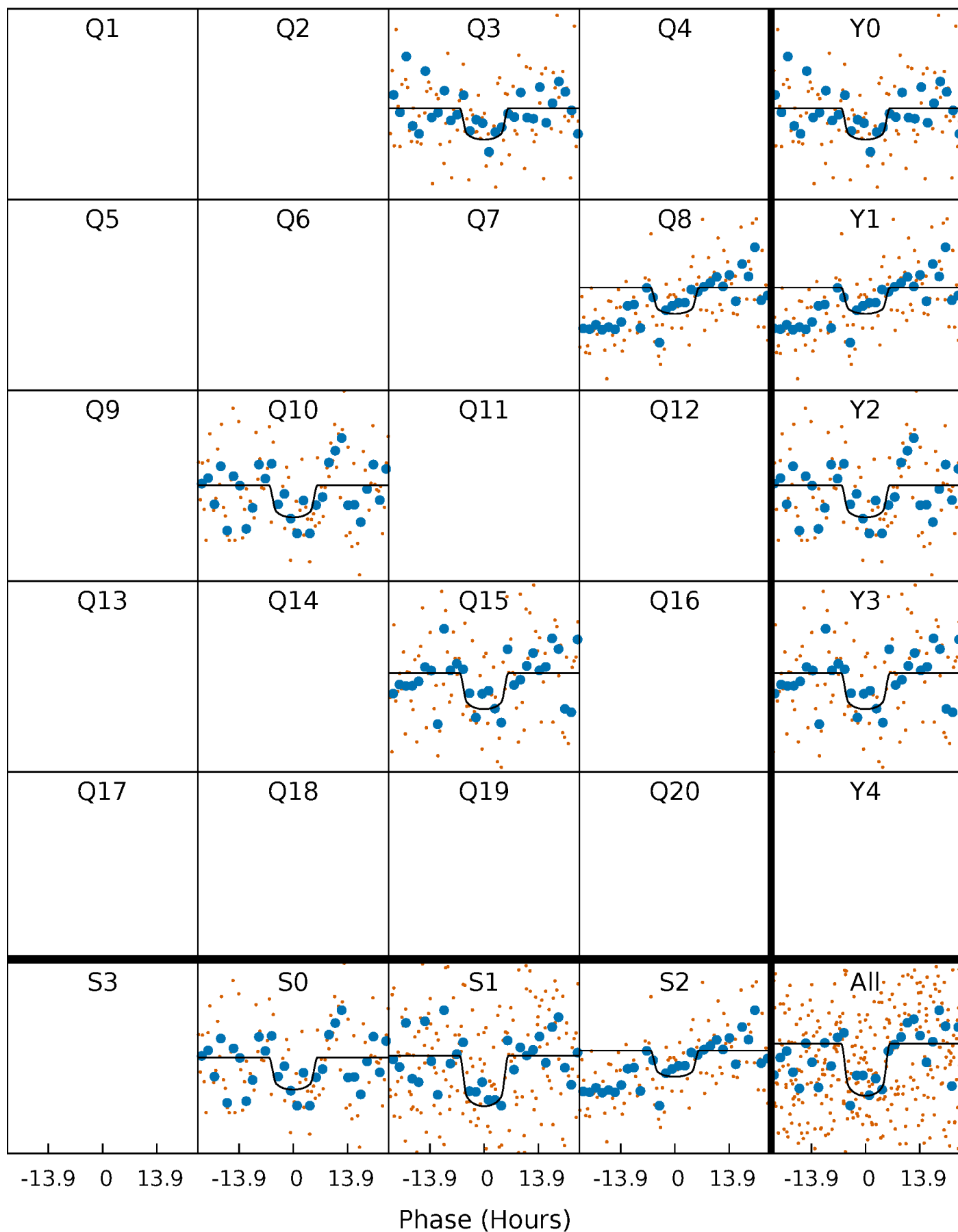
PDC Quarter-Phased Transit Curves

TCE 006106038-01 P=230.331972 Days $T_0=287.826805$ (BKJD)



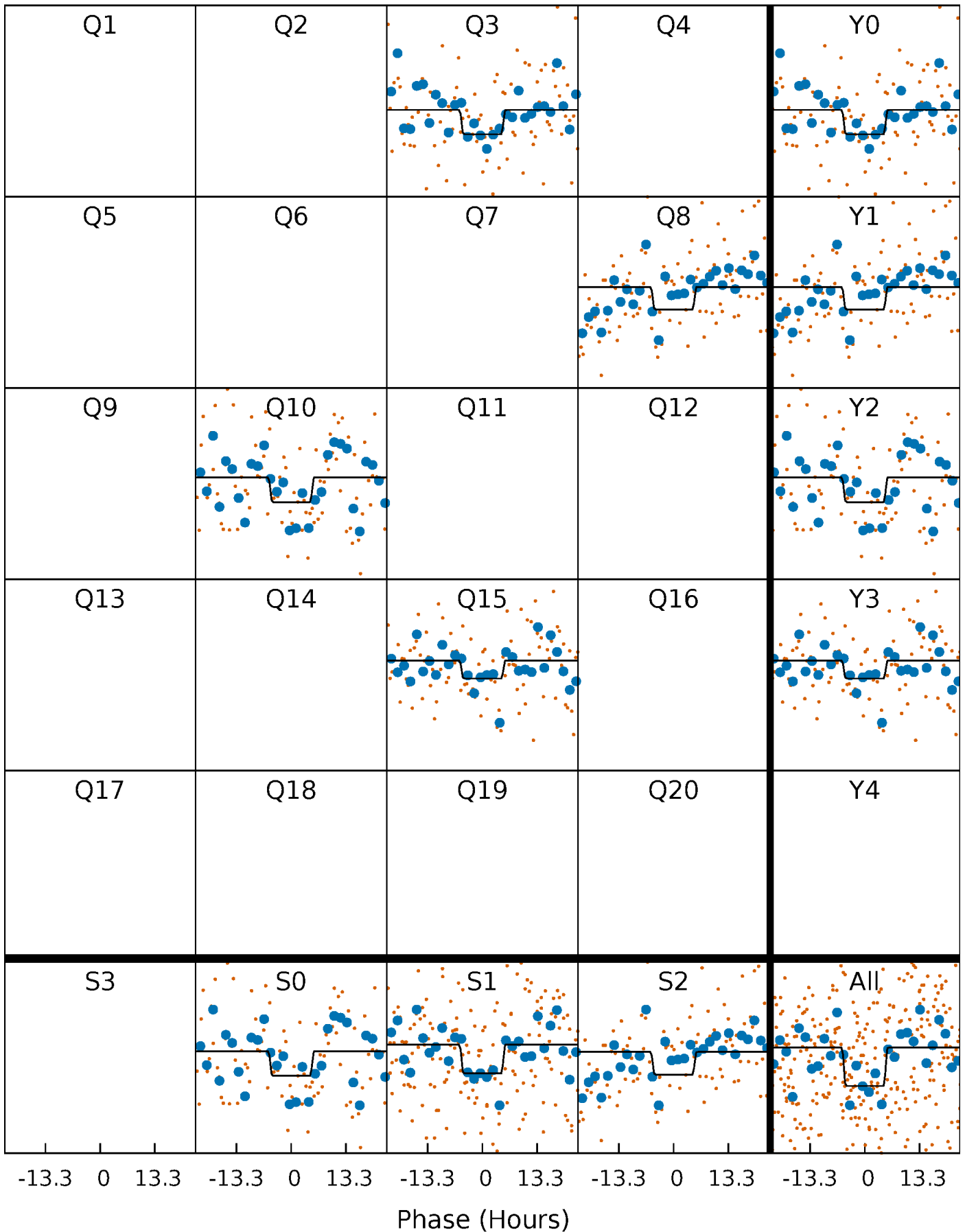
DV Quarter-Phased Transit Curves

TCE 006106038-01 P=230.331972 Days $T_0=287.826805$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

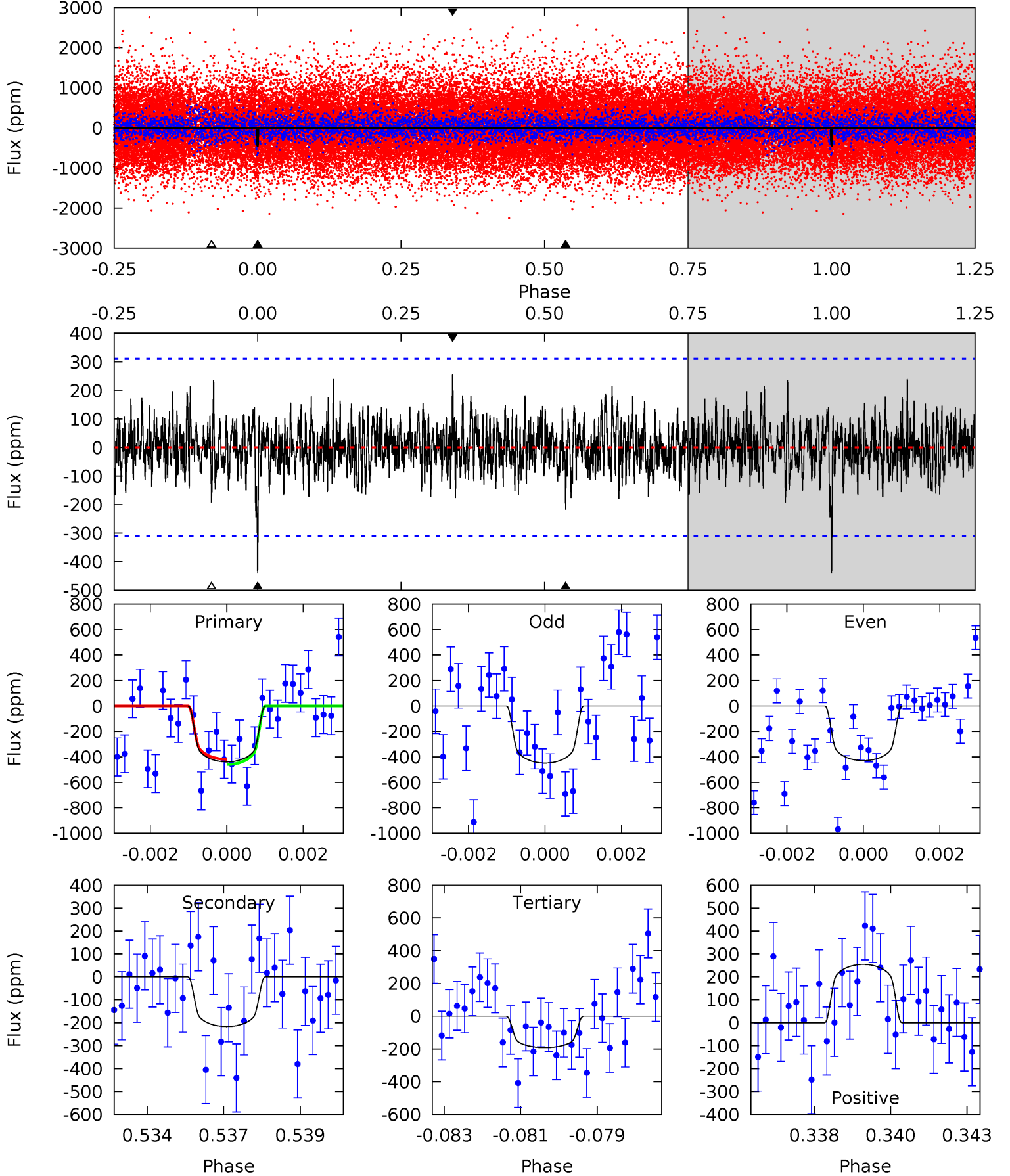
TCE 006106038-01 P=230.327088 Days $T_0=287.845154$ (BKJD)



DV Model-Shift Uniqueness Test

006106038-01, $P = 230.331972$ Days, $E = 57.494833$ Days

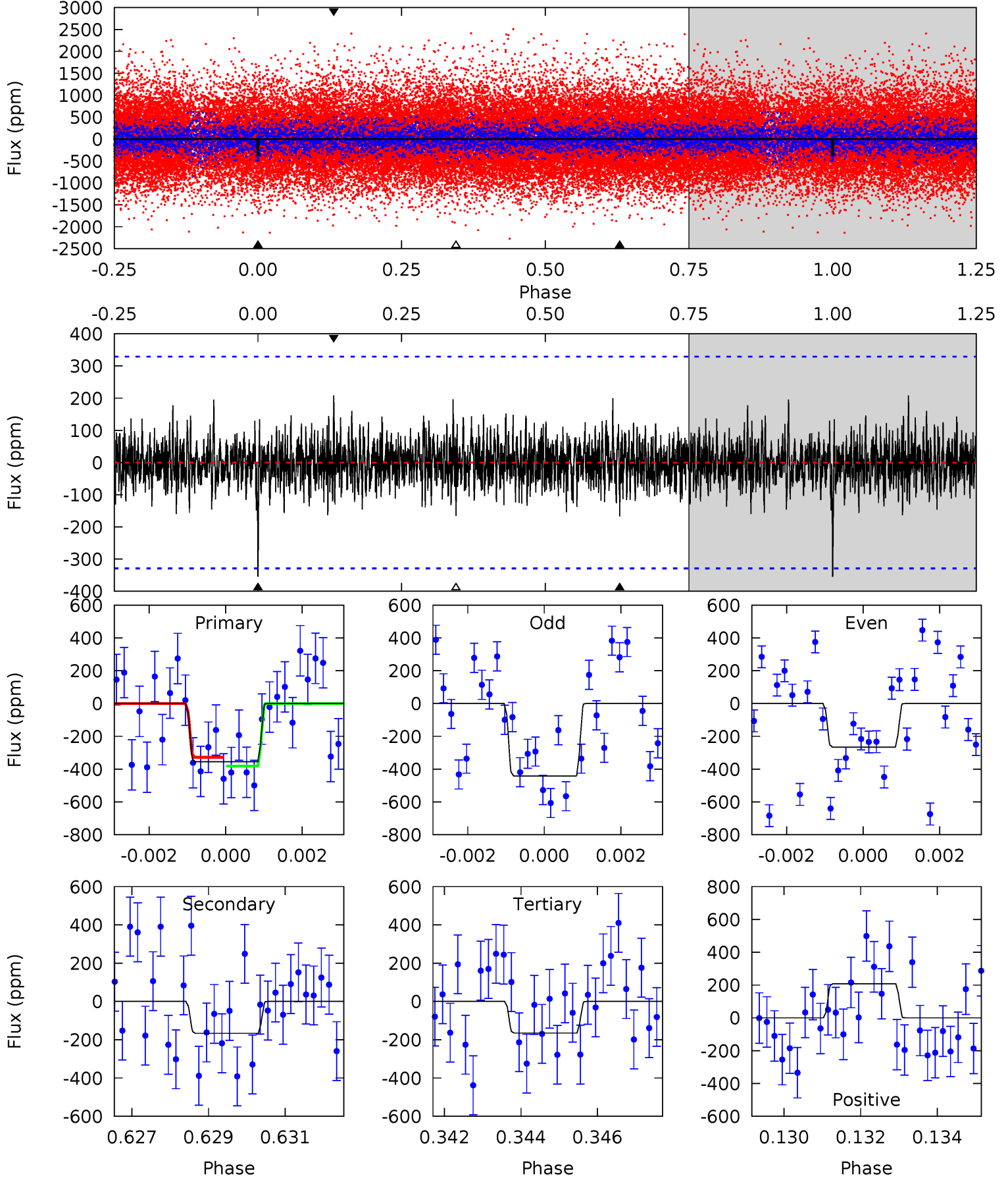
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.51	3.71	3.28	4.35	5.30	3.05	1.16	4.22	3.16	0.42	-0.64	0.16	0.98	0.37	0.35



Alt Model-Shift Uniqueness Test

006106038-01, $P = 230.327088$ Days, $E = 57.518066$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	2.70	2.67	3.37	5.33	3.10	0.84	3.07	2.38	0.03	-0.67	1.43	0.92	0.37	0.43



Stellar Parameters For KIC 006106038

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5830^{+158}_{-176}	$4.540^{+0.037}_{-0.213}$	$-0.140^{+0.300}_{-0.300}$	$0.876^{+0.275}_{-0.092}$	$0.970^{+0.108}_{-0.121}$	$2.036^{+0.417}_{-1.075}$
	+3%/-3%	+1%/-5%	+214%/-214%	+31%/-11%	+11%/-12%	+20%/-53%
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 006106038-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-217 ± 58	$2.46^{+0.60}_{-0.58}$	404^{+30}_{-18}	4675^{+580}_{-435}	10088^{+7952}_{-4123}
Alt.	-167 ± 62	$1.91^{+0.61}_{-0.55}$	406^{+32}_{-21}	4888^{+878}_{-598}	13147^{+13890}_{-7209}

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

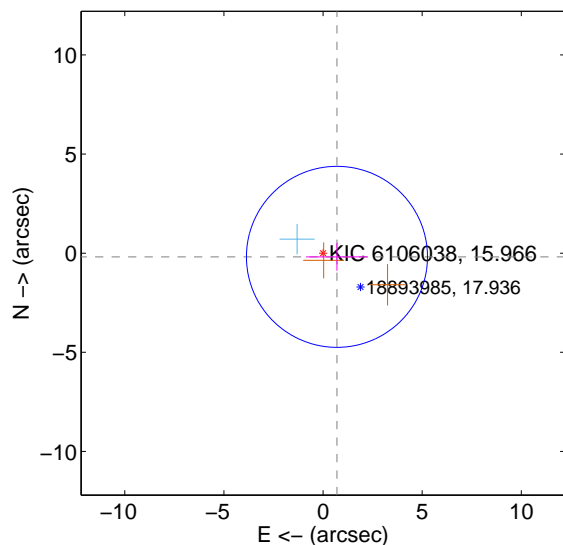
Supplemental centroid analysis for 006106038-01. Kepler magnitude: 15.97. Transit SNR 6.86

There are 1 quarters with good PRF difference image offsets

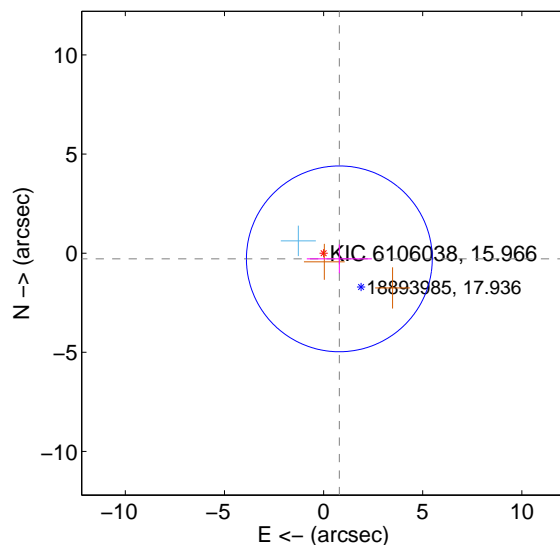
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.726 ± 1.522	0.48	-0.702 ± 1.563	-0.185 ± 0.703
PRF-fit source offset from KIC position	0.845 ± 1.562	0.54	-0.795 ± 1.639	-0.286 ± 0.723
photometric centroid source offset	3.34 ± 2.28	1.47	-2.83 ± 2.29	1.76 ± 2.24

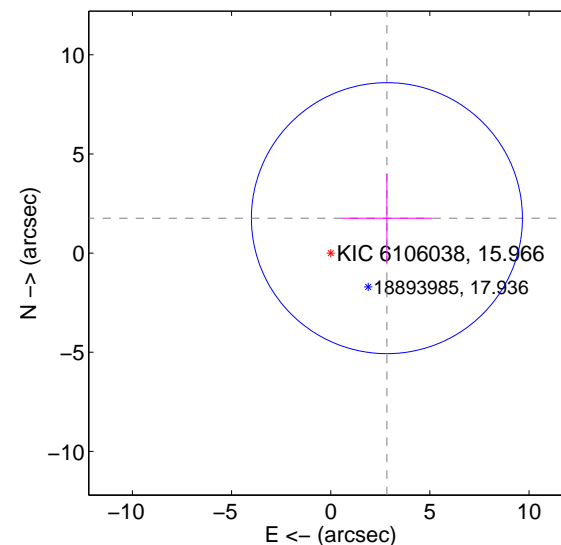
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

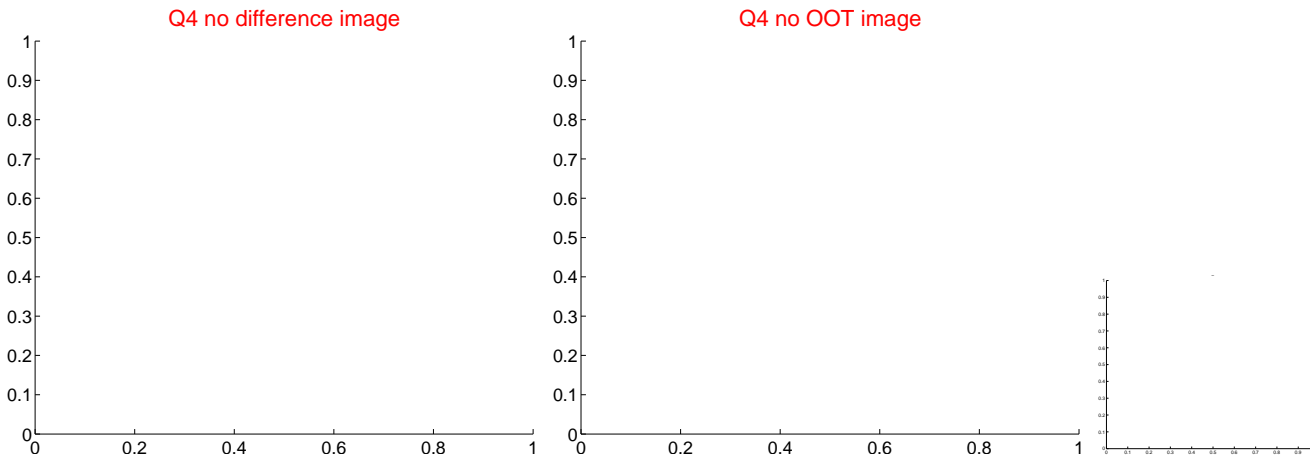
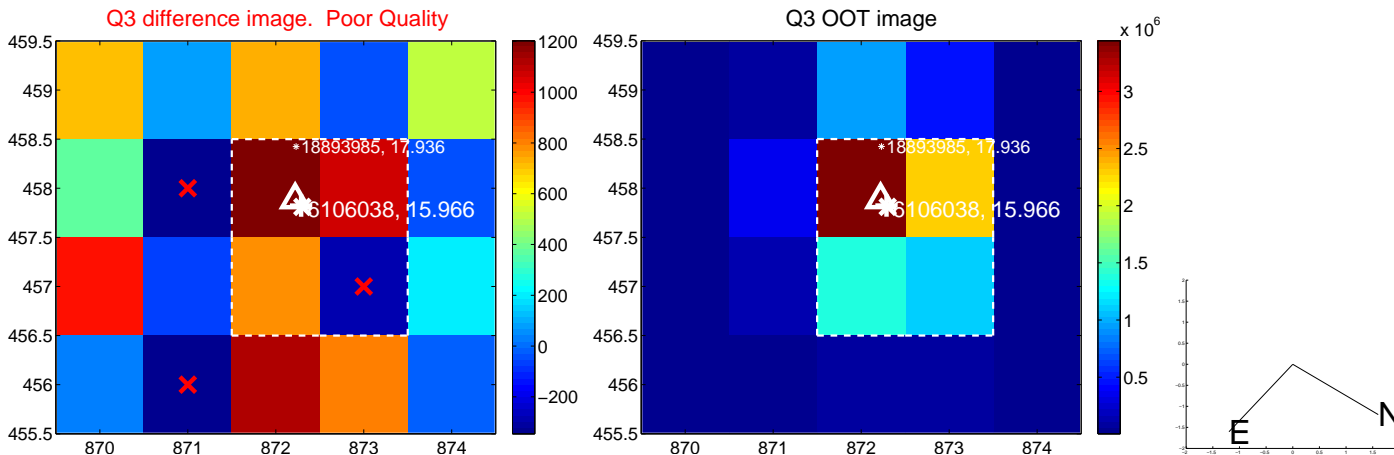
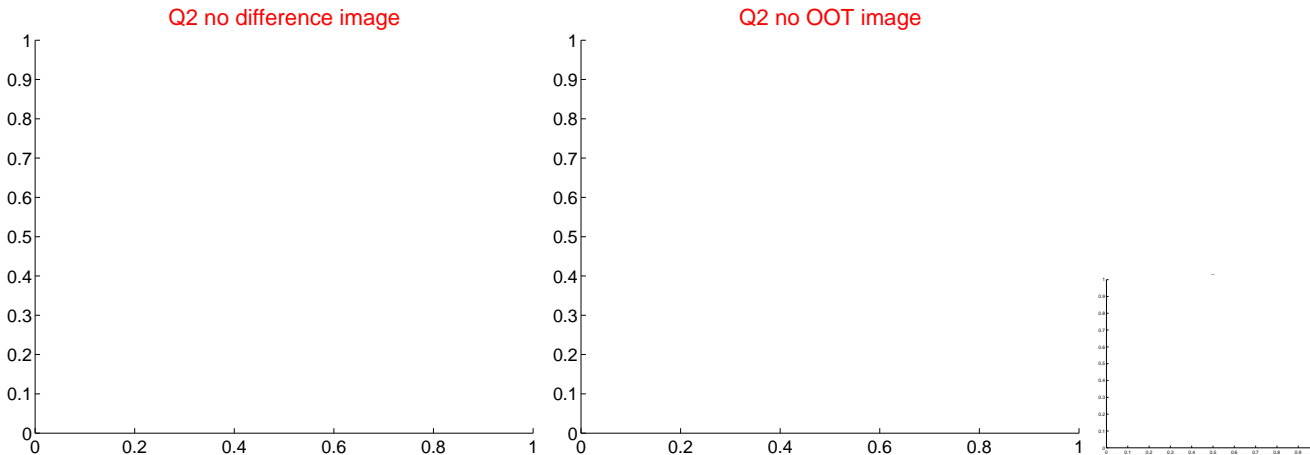
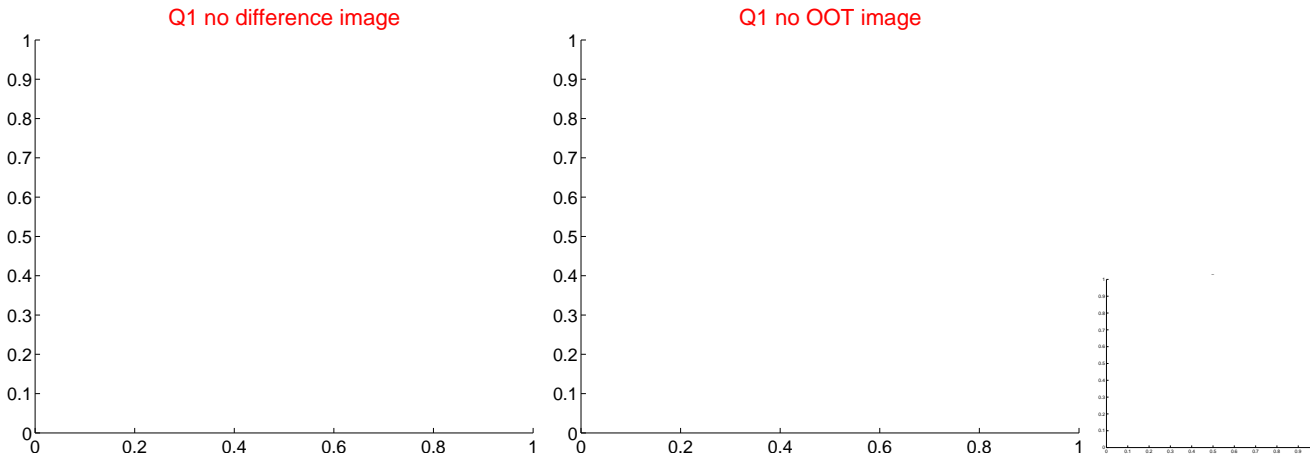


offset from photometric centroids

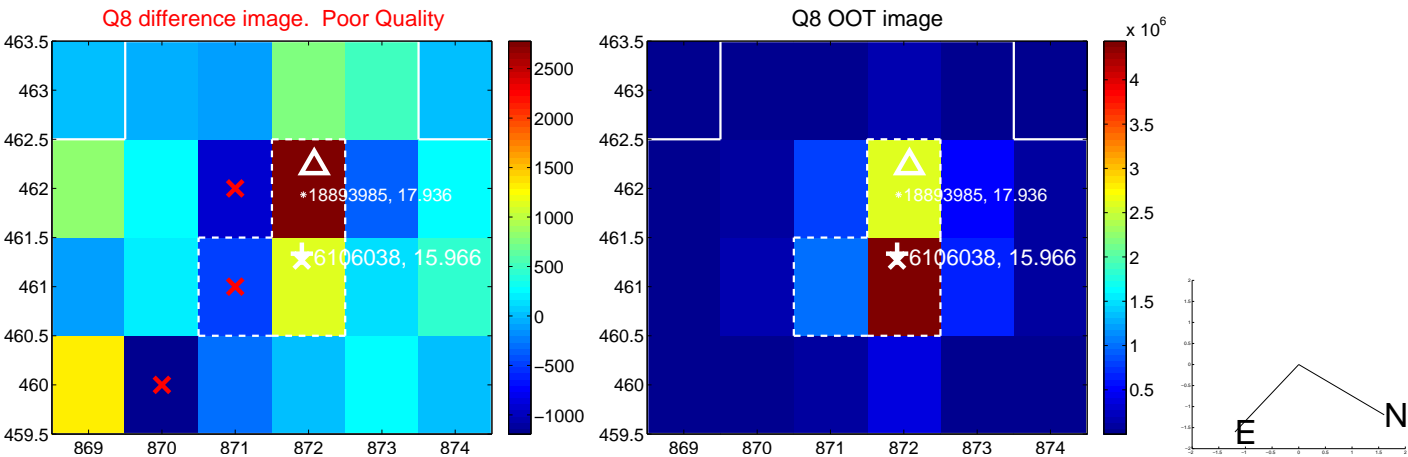


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

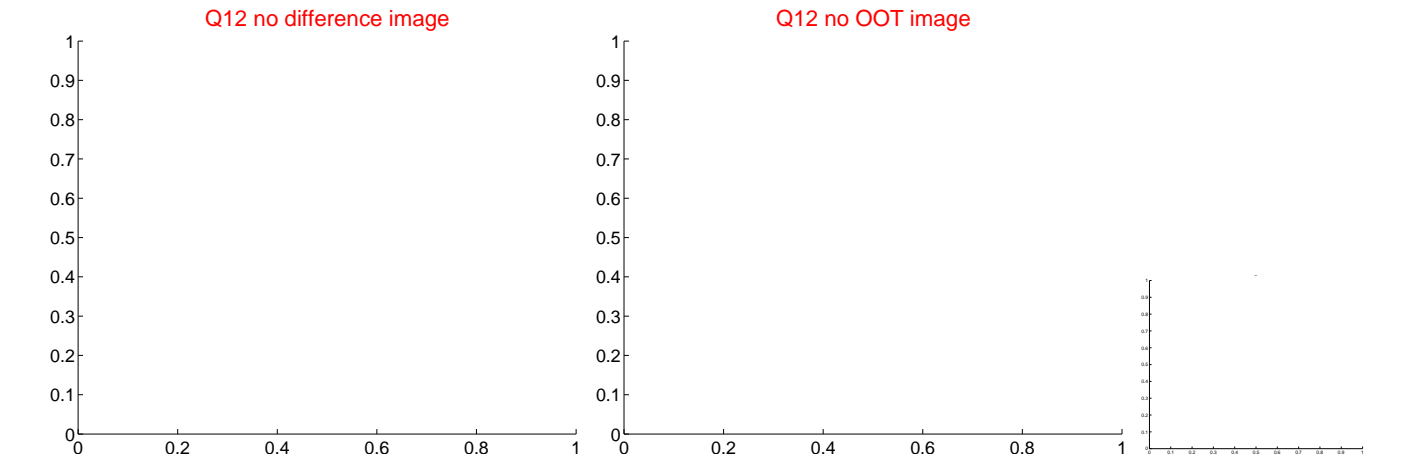
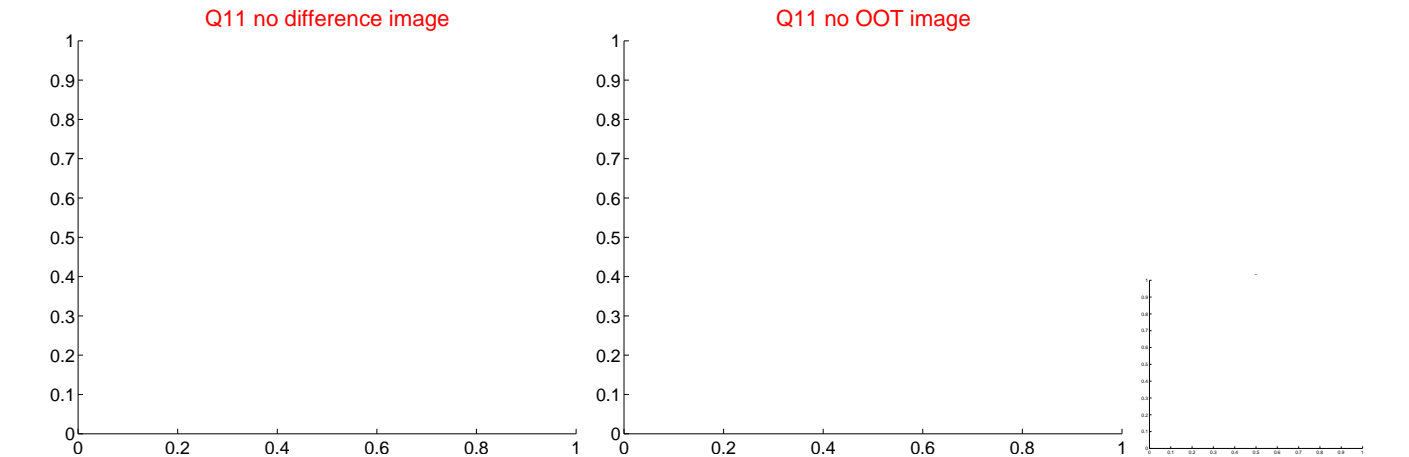
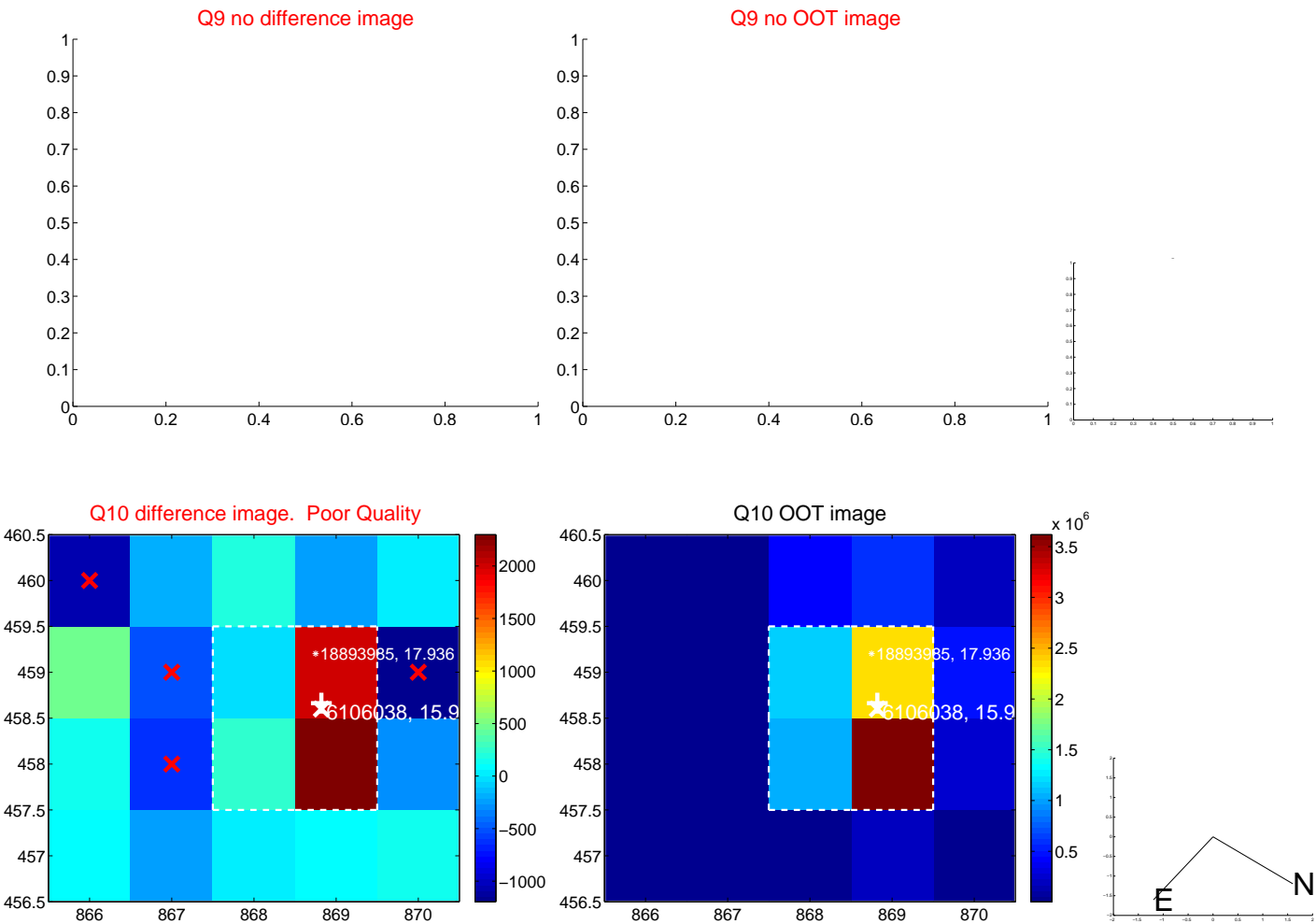
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



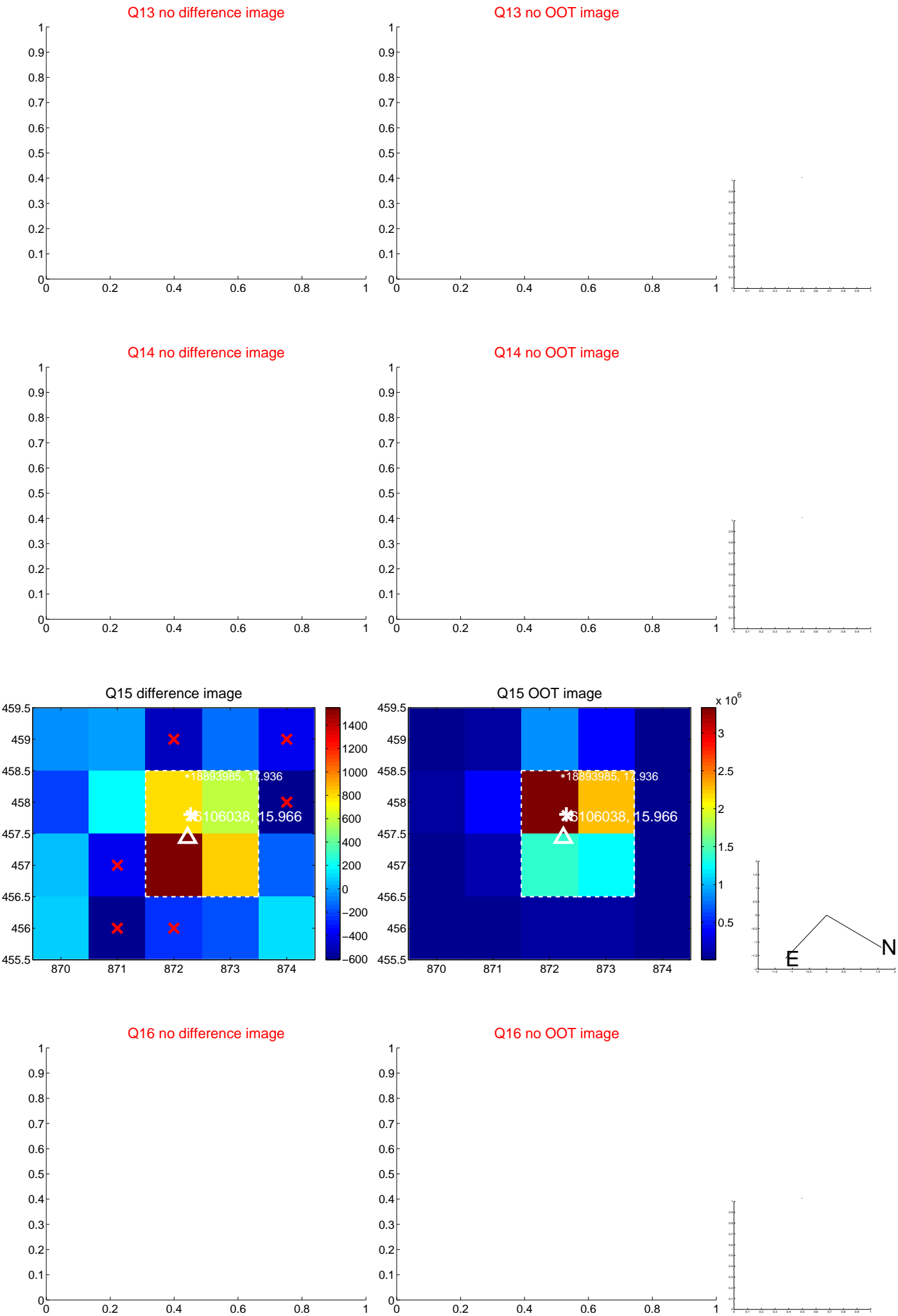
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



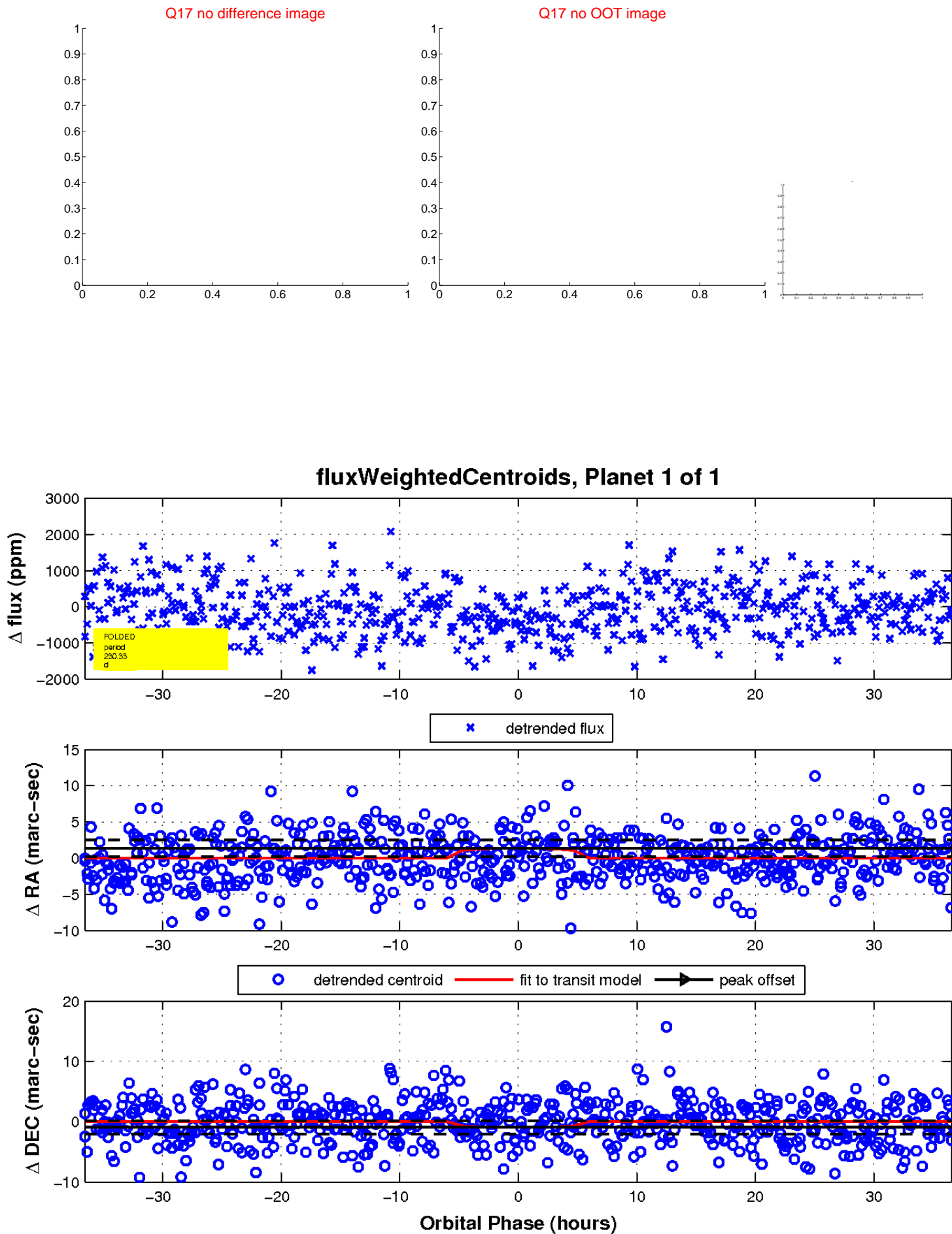
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

