

KIC 006200436

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})
006200436-01	OBS	No	494.937228	273.140927	337.8	13.324	7.5	7.6	1.13	5970	2.29	0.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006200436-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—CENT_FEW_MEAS

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

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

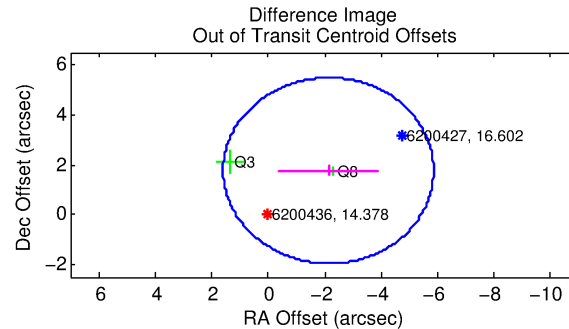
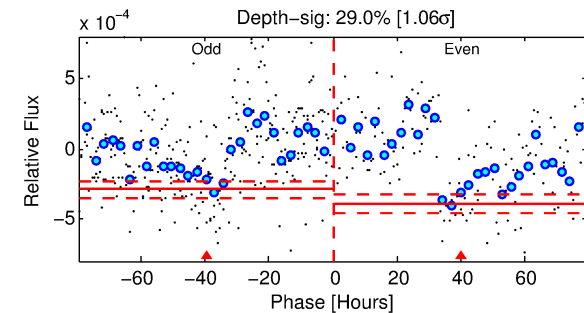
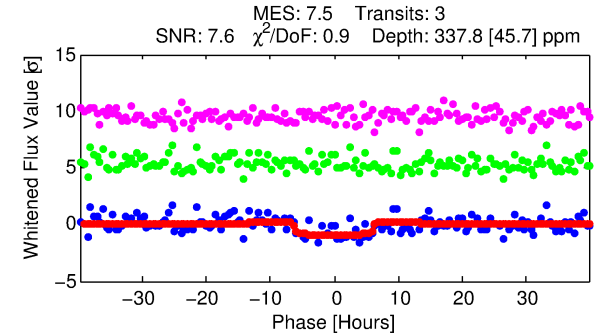
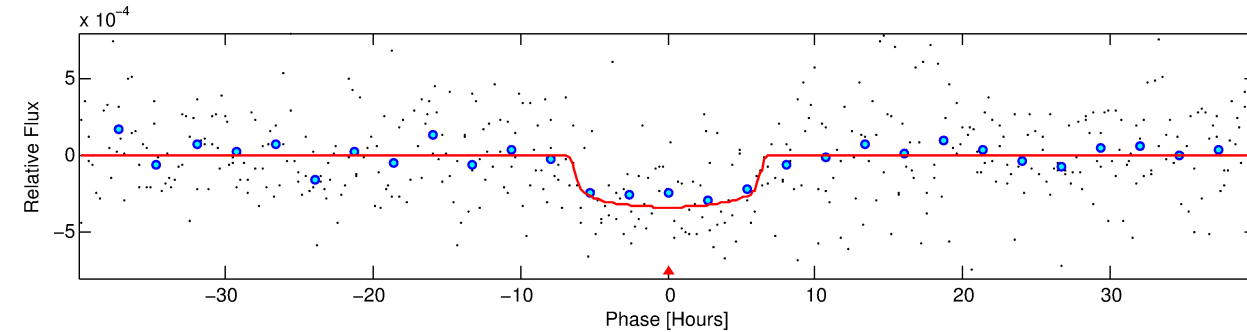
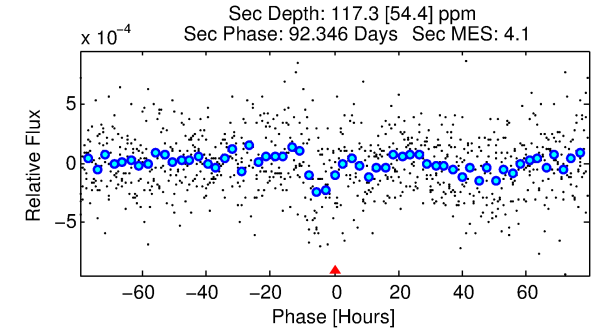
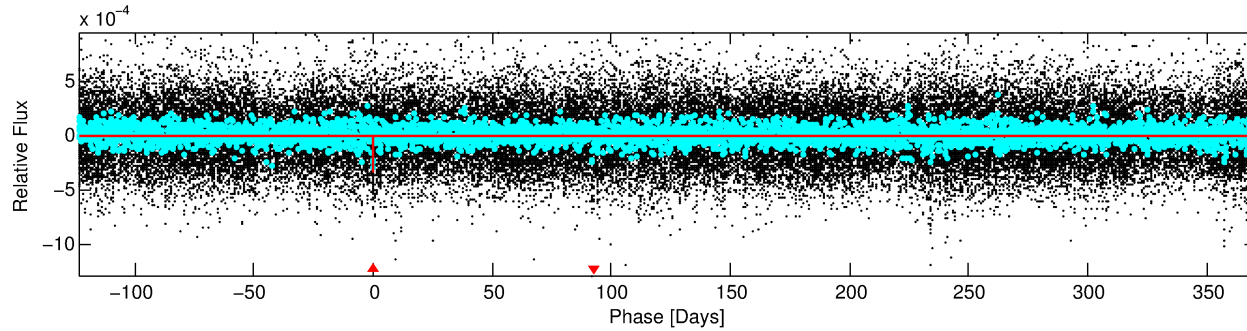
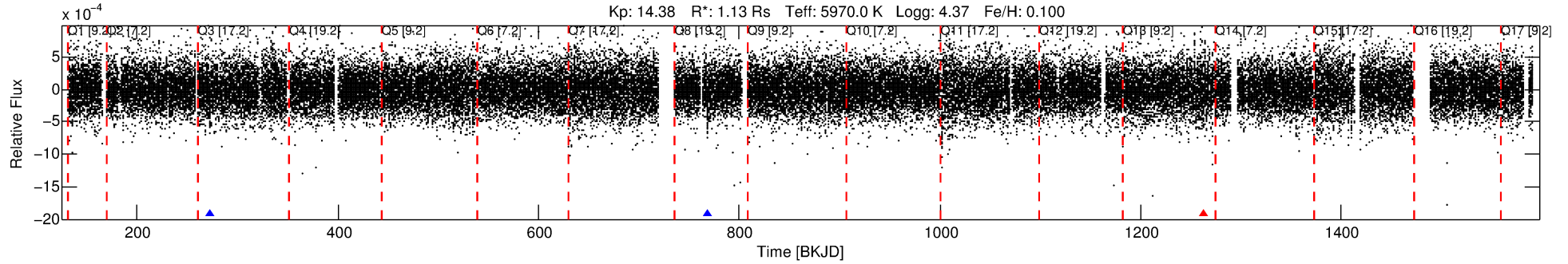
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006200436-01

No Significant Match Found

DV One-Page Summary

KIC: 6200436 Candidate: 1 of 1 Period: 494.937 d



DV Fit Results:

Period = 494.93723 [0.01587] d
Epoch = 273.1409 [0.0188] BKJD
Rp/R* = 0.0186 [0.0059]
a/R* = 182.15 [263.03]
b = 0.79 [0.69]
Seff = 0.92 [0.36]
Teq = 249 [24] K
Rp = 2.29 [1.02] Re
a = 1.2561 [0.3209] AU
Ag = 19481.29 [16906.56] [1.15σ]
Teffp = 4557 [910] K [4.73σ]

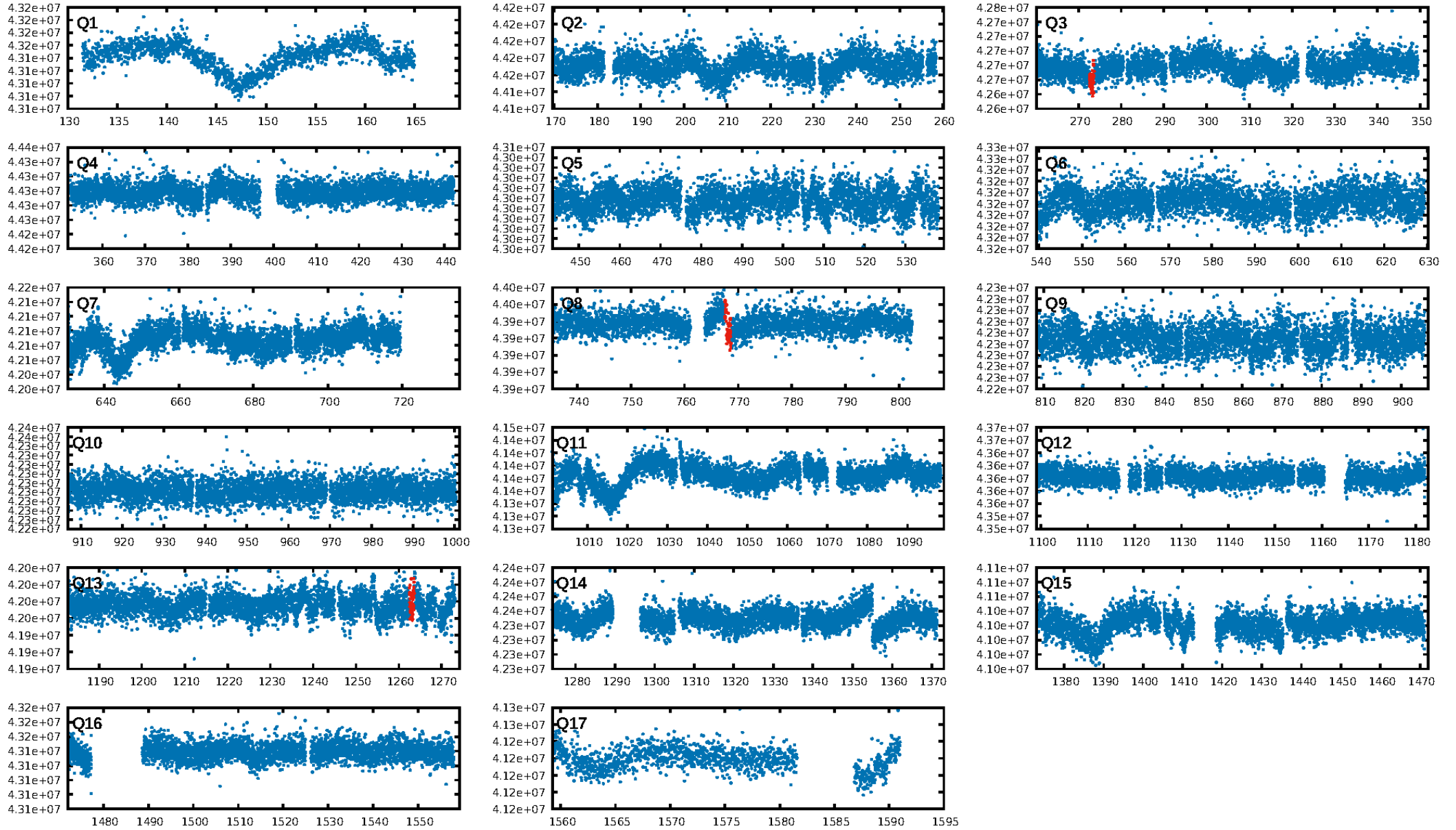
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 39.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.27e-08
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 1.597
Centroid-sig: 13.3%
Centroid-so: 1.677 arcsec [0.97σ]
OotOffset-rm: 2.769 arcsec [2.23σ]
KicOffset-rm: 3.157 arcsec [4.01σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

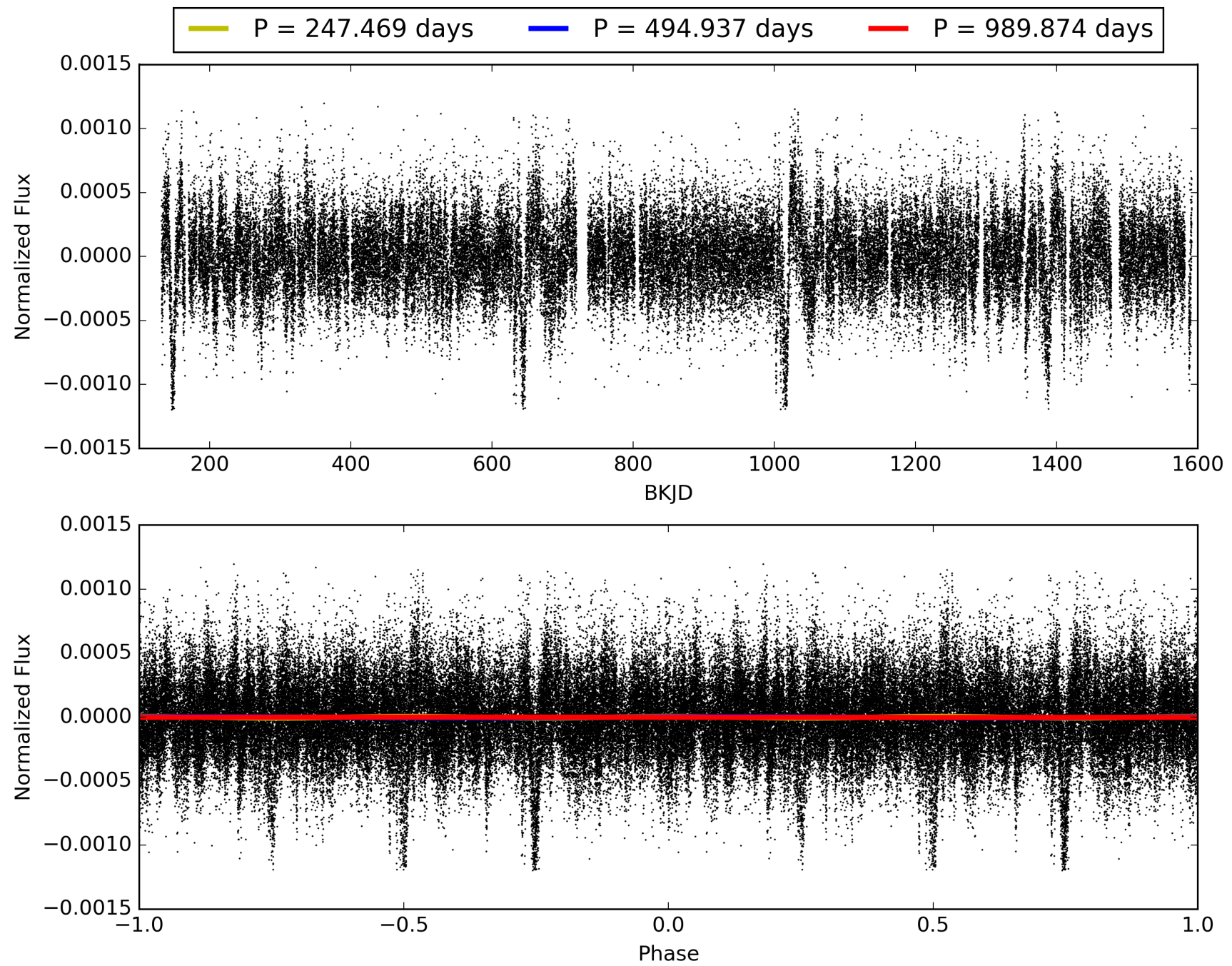
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:47:06 Z

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

TCE 006200436-01, PDC Light Curves

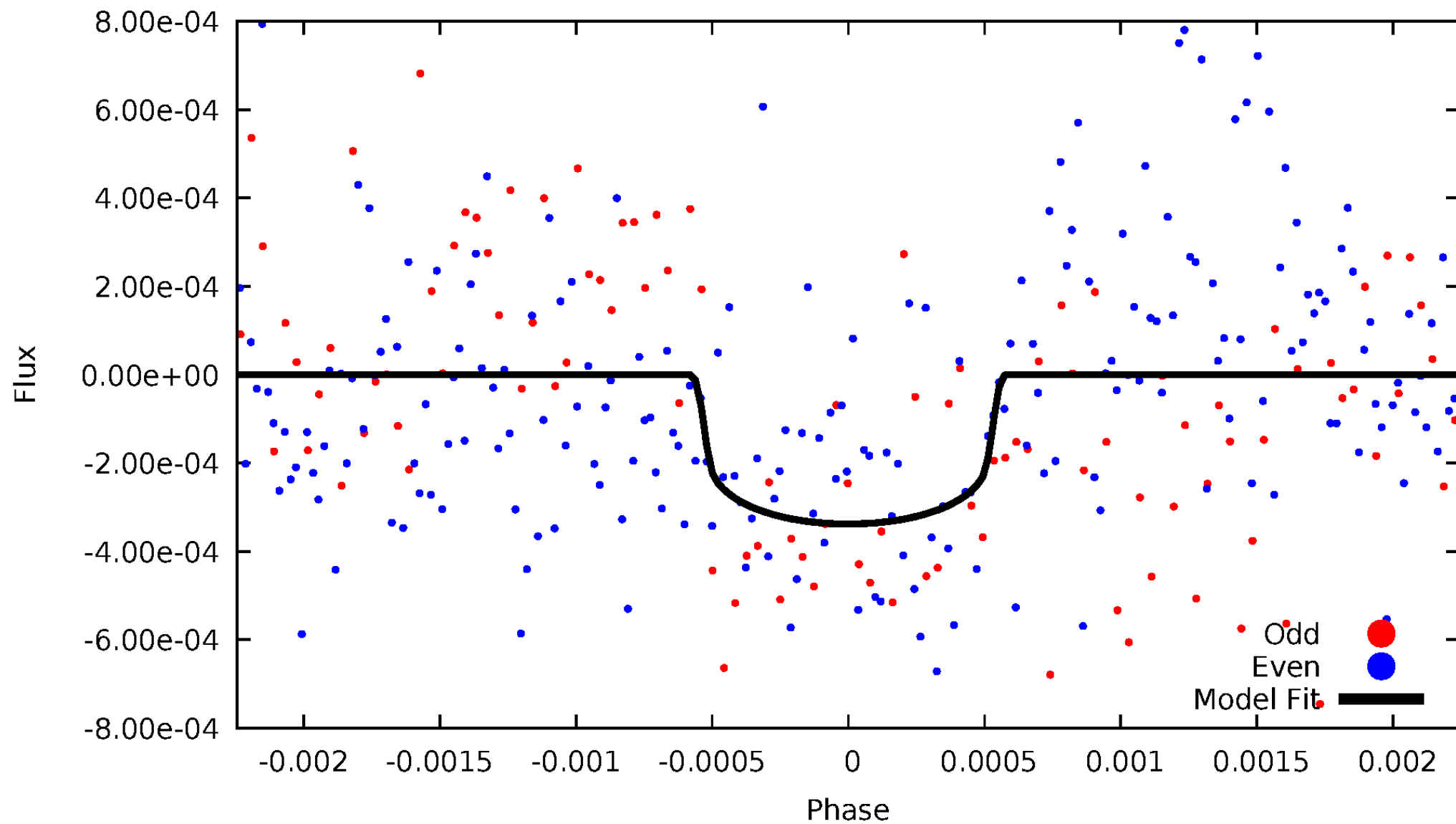


TCE 006200436-01



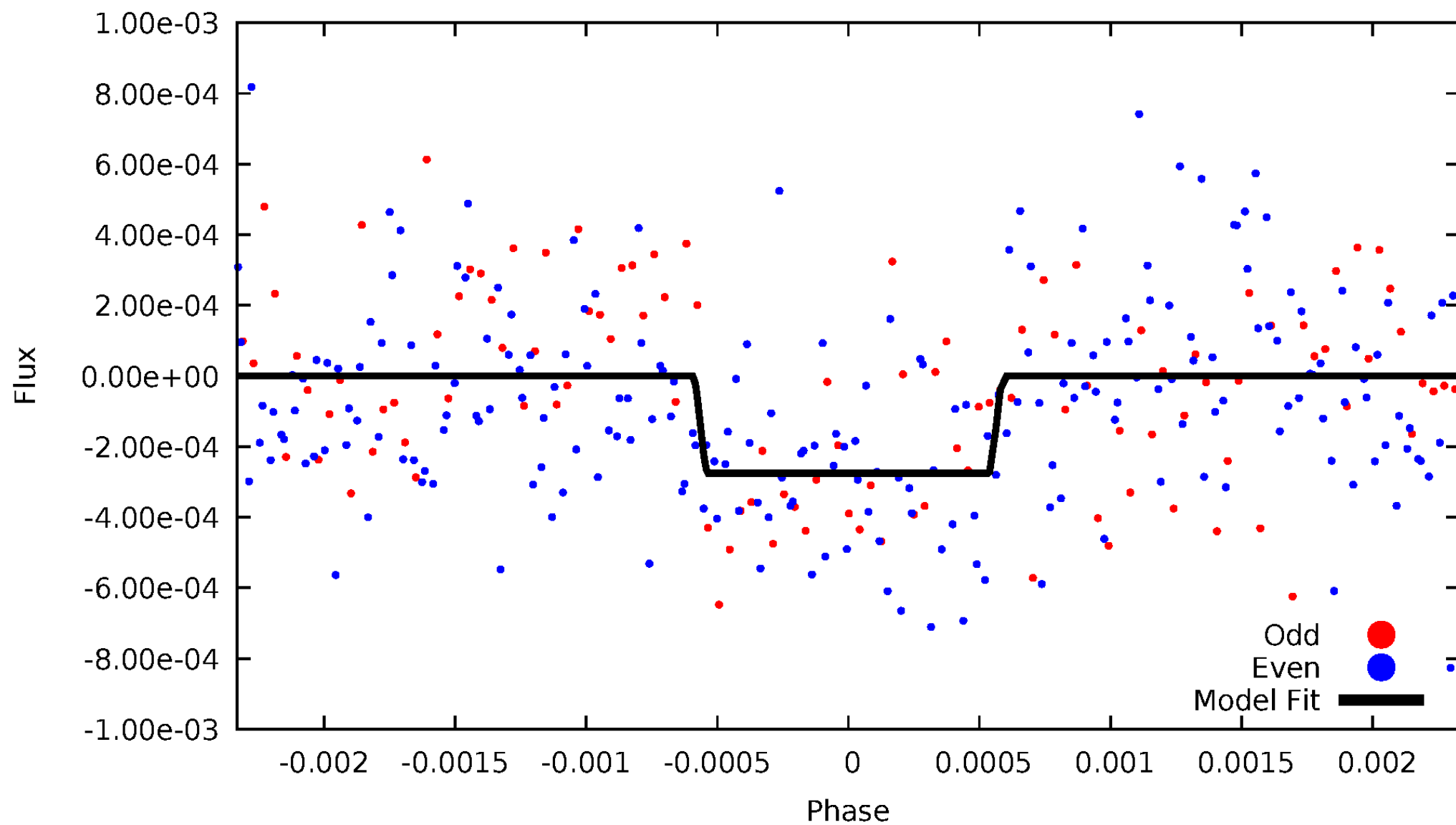
DV Odd/Even

TCE 006200436-01



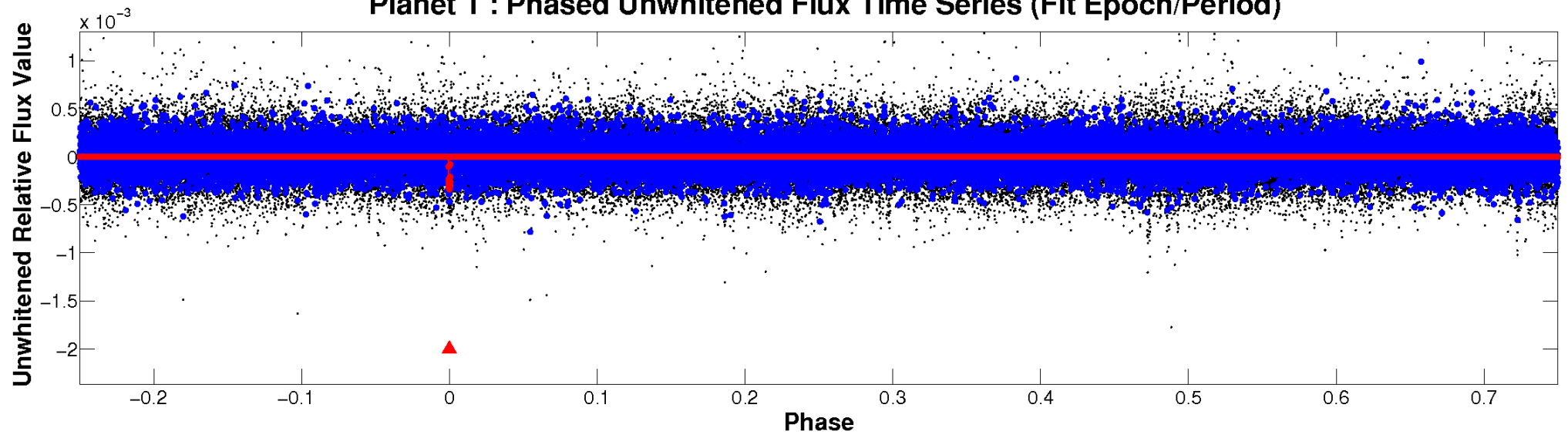
ALT Odd/Even

TCE 006200436-01

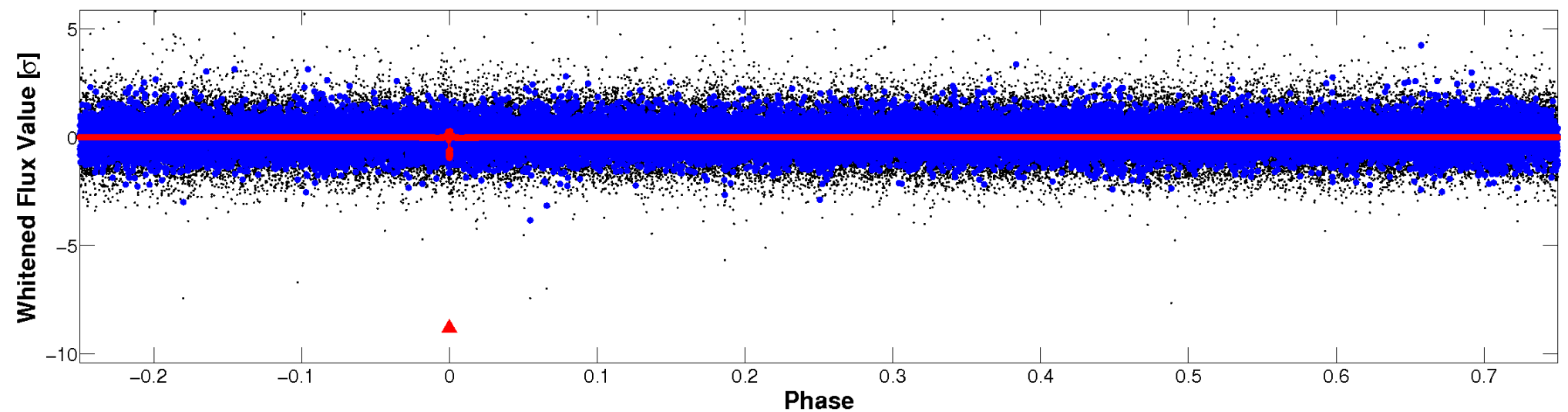


Non-Whitened Vs. Whitened Light Curve

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

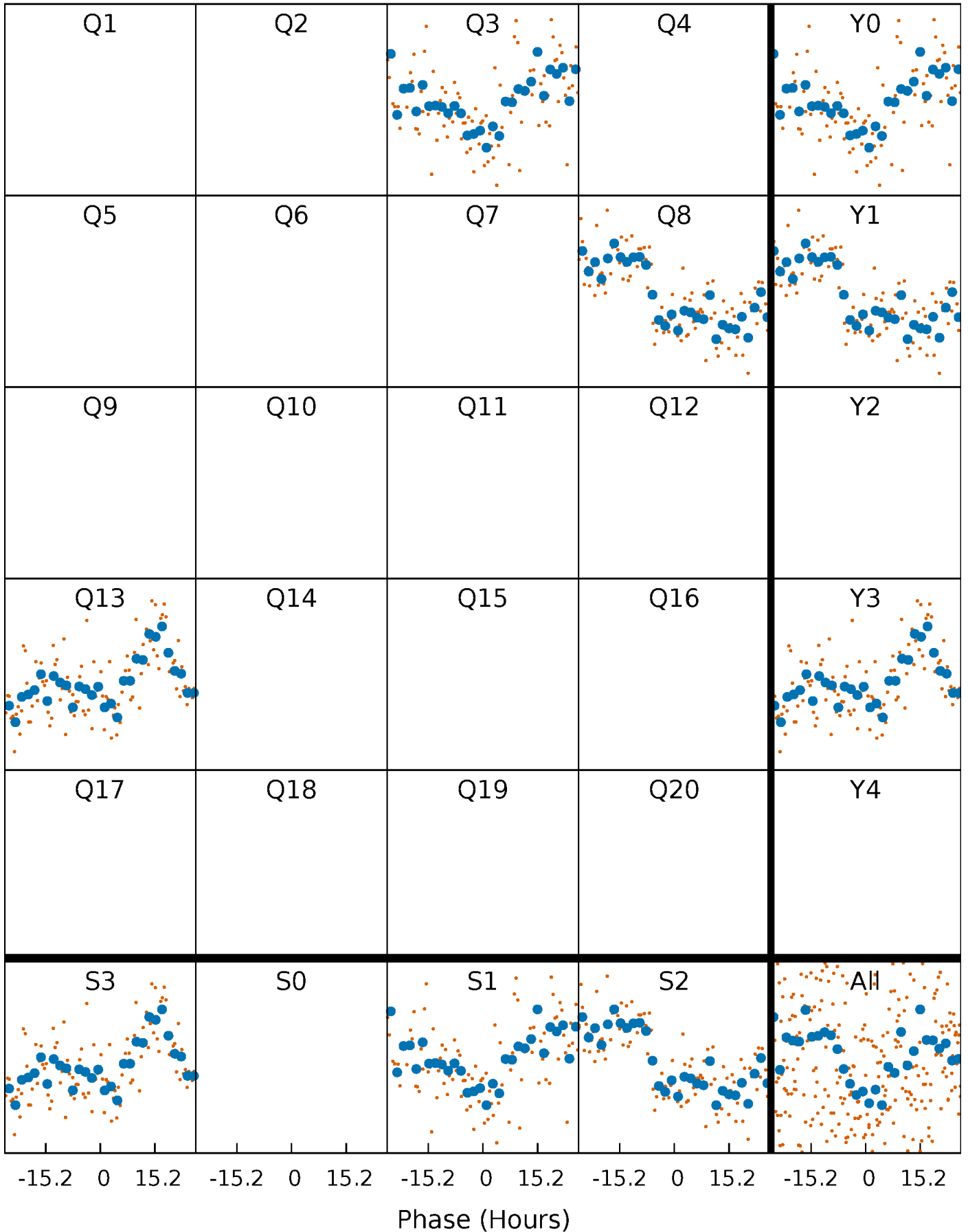


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 006200436-01 P=494.937228 Days $T_0=273.140927$ (BKJD)



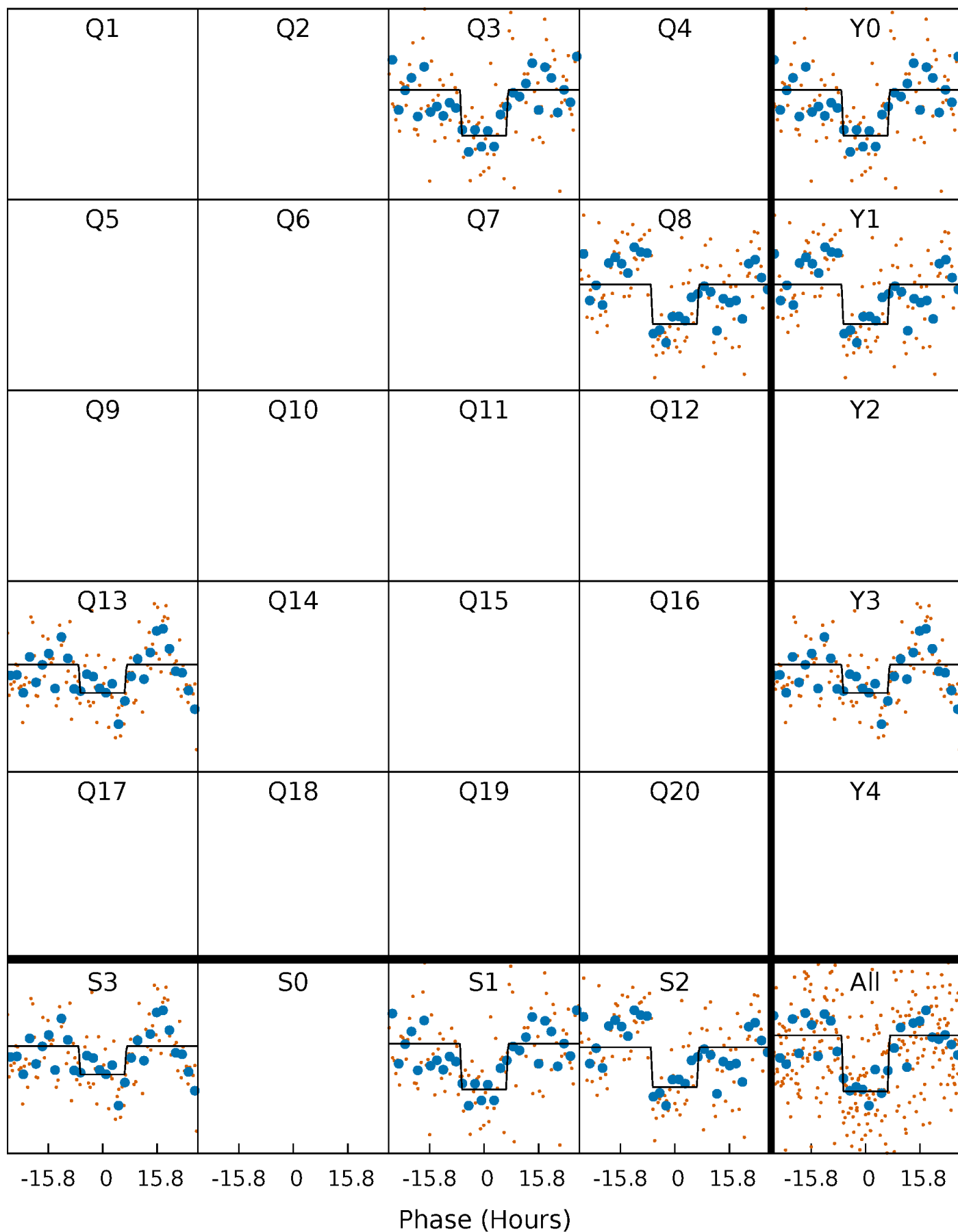
DV Quarter-Phased Transit Curves

TCE 006200436-01 P=494.937228 Days $T_0=273.140927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

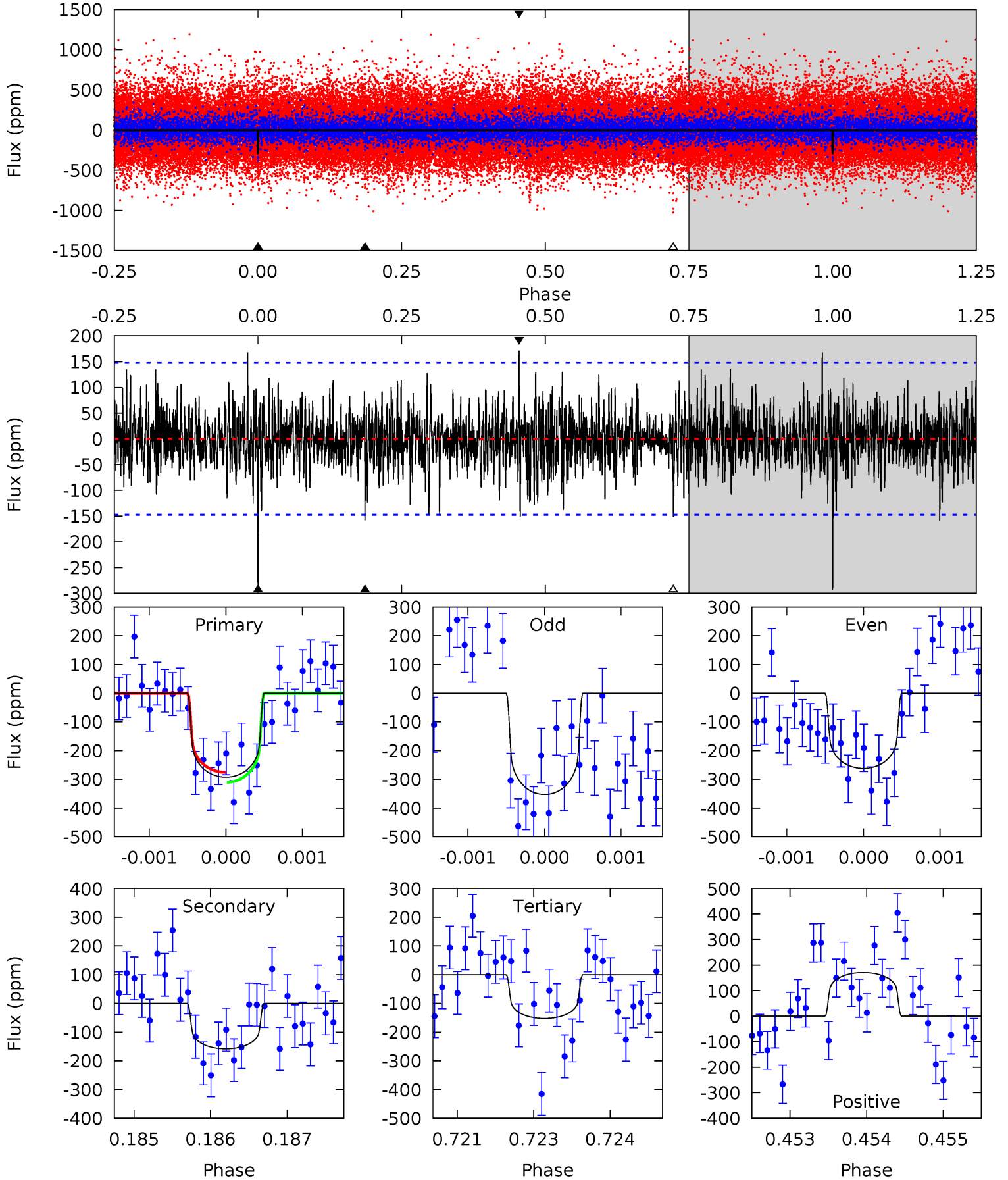
TCE 006200436-01 P=494.894012 Days $T_0=273.202345$ (BKJD)



DV Model-Shift Uniqueness Test

006200436-01, P = 494.937228 Days, E = 273.140927 Days

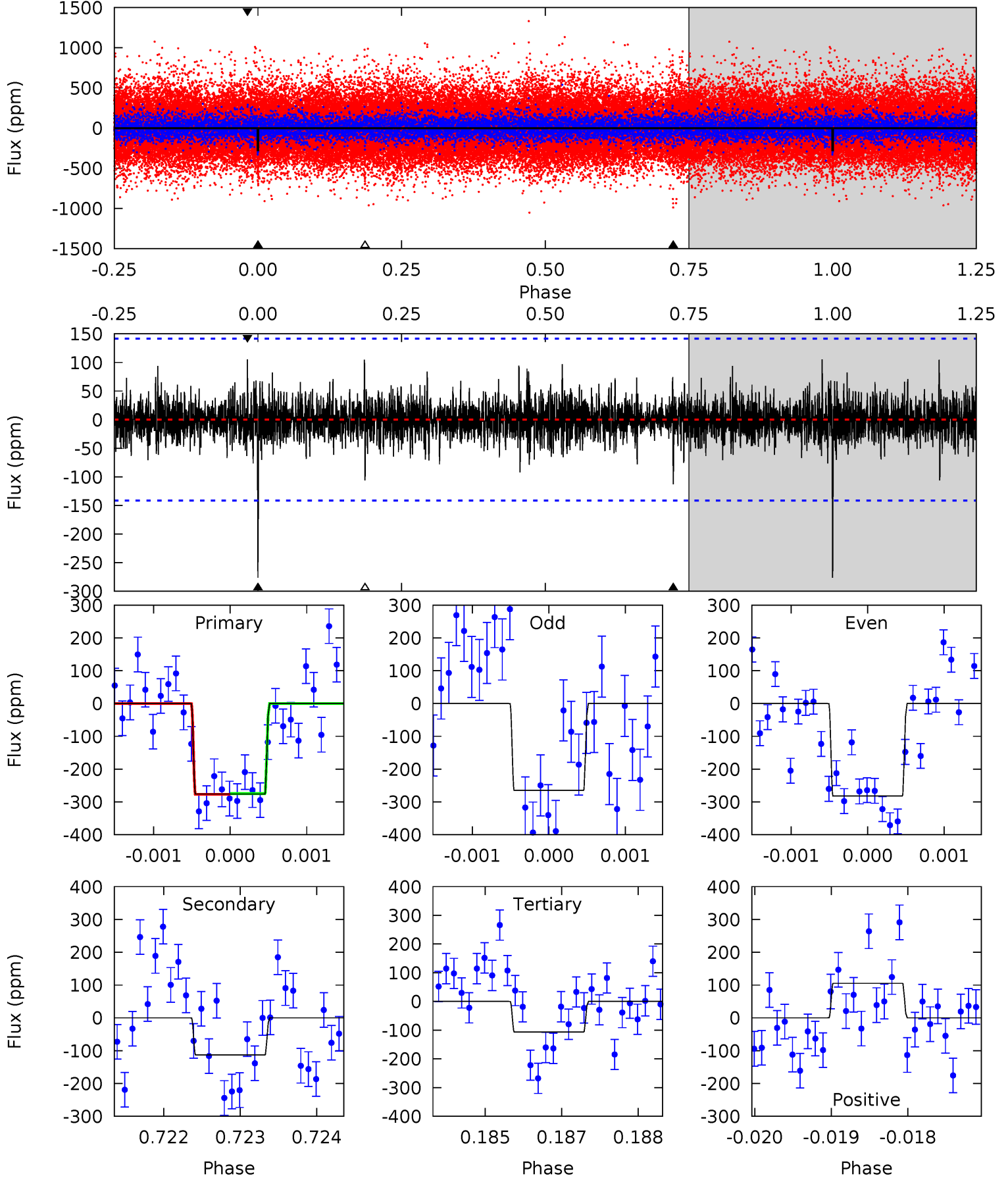
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	5.82	5.60	6.30	5.43	3.25	1.55	5.17	4.47	0.21	-0.48	1.59	0.86	0.37	0.64



Alt Model-Shift Uniqueness Test

006200436-01, P = 494.894012 Days, E = 273.202345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	4.32	4.07	4.03	5.42	3.25	0.90	6.51	6.54	0.25	0.29	0.30	0.99	0.28	0.05



Stellar Parameters For KIC 006200436

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5970^{+163}_{-199}	$4.367^{+0.105}_{-0.195}$	$0.100^{+0.250}_{-0.300}$	$1.127^{+0.350}_{-0.175}$	$1.079^{+0.138}_{-0.138}$	$1.062^{+0.500}_{-0.542}$
	+3%/-3%	+2%/-4%	+250%/-300%	+31%/-16%	+13%/-13%	+47%/-51%
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 006200436-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-158 ± 27	$2.35^{+0.82}_{-0.73}$	352^{+25}_{-20}	4978^{+870}_{-553}	24252^{+28911}_{-11077}
Alt.	-113 ± 26	$2.09^{+0.86}_{-0.79}$	352^{+27}_{-21}	4882^{+1101}_{-619}	21536^{+36602}_{-10773}

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

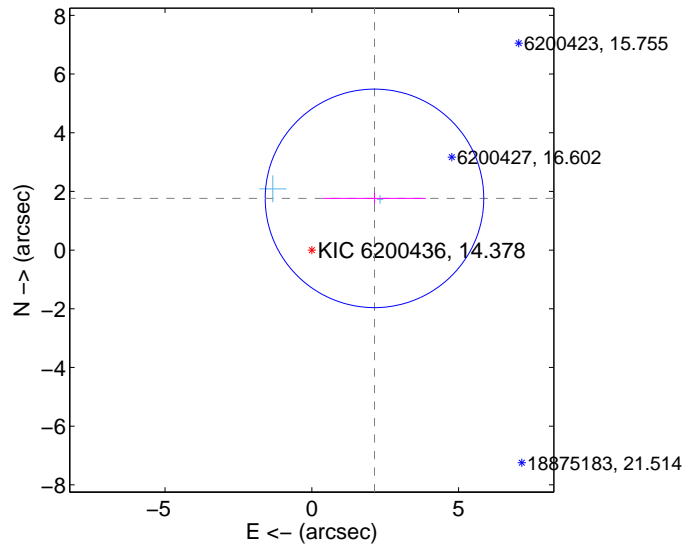
Supplemental centroid analysis for 006200436-01. Kepler magnitude: 14.38. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

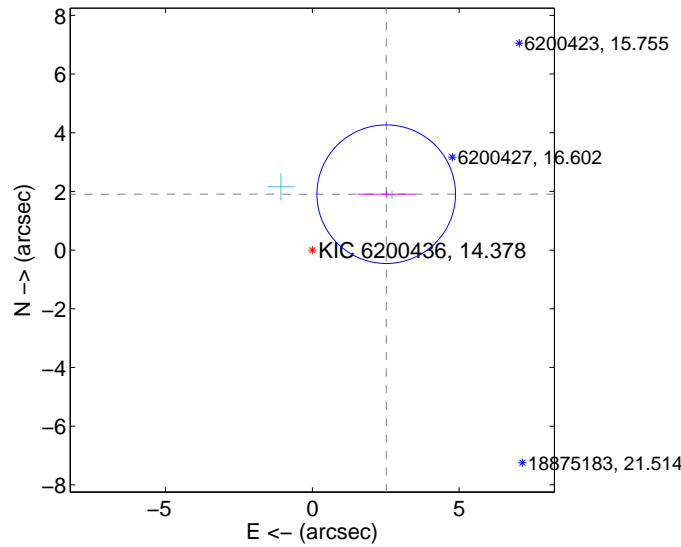
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.769 ± 1.241	2.23	-2.135 ± 1.749	1.763 ± 0.184
PRF-fit source offset from KIC position	3.157 ± 0.787	4.01	-2.517 ± 0.983	1.905 ± 0.115
photometric centroid source offset	1.68 ± 1.73	0.97	0.08 ± 1.93	-1.67 ± 1.73

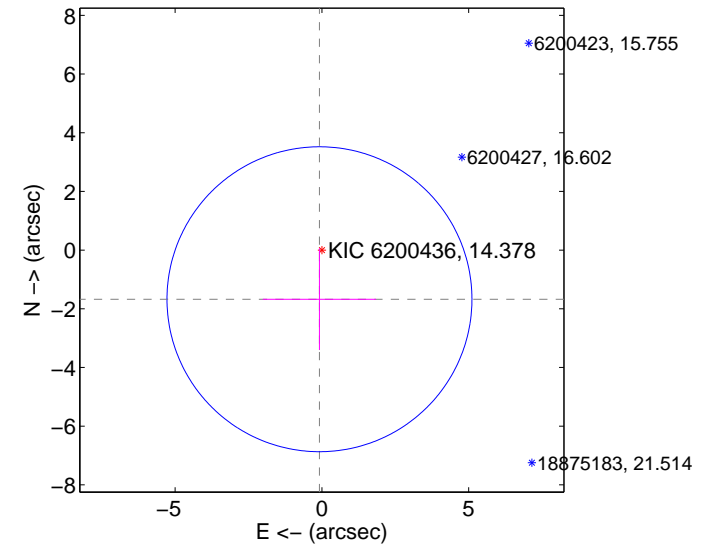
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

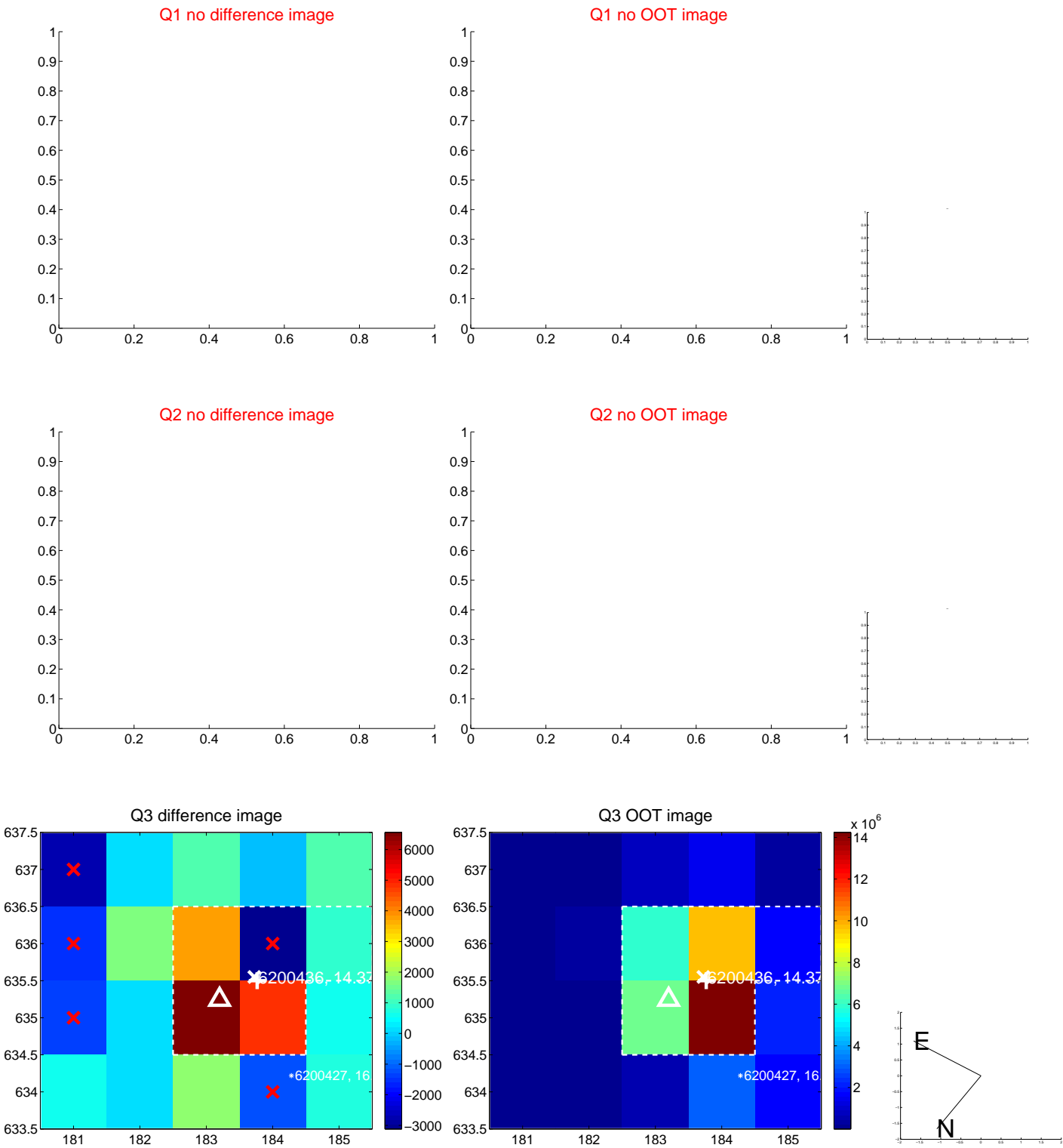


offset from photometric centroids

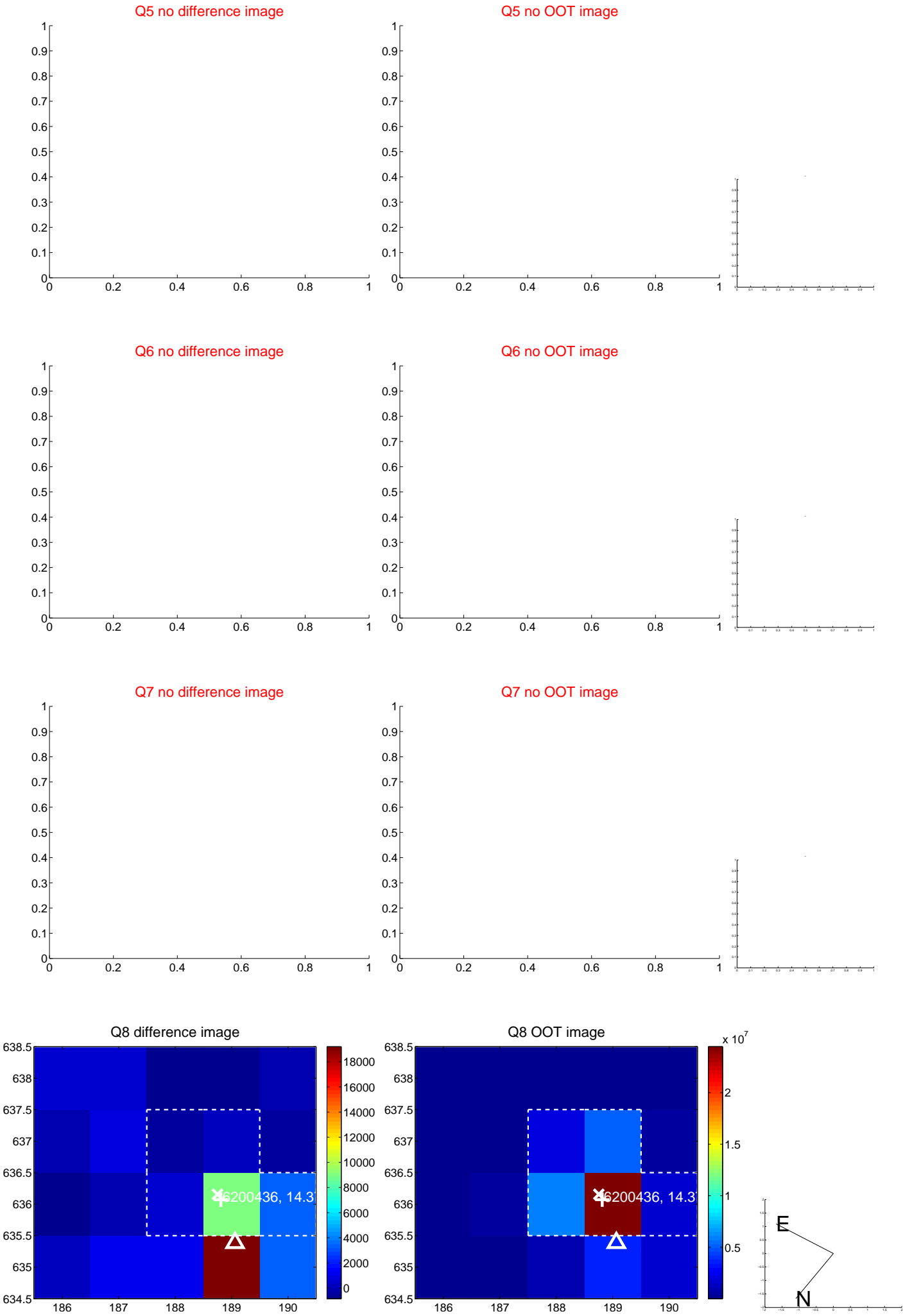


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



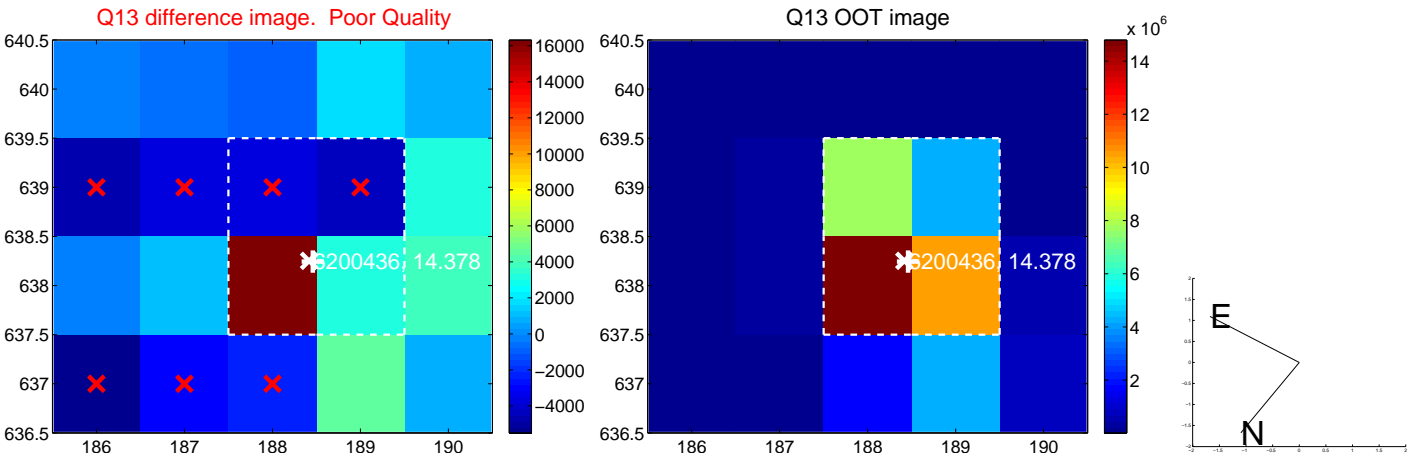
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



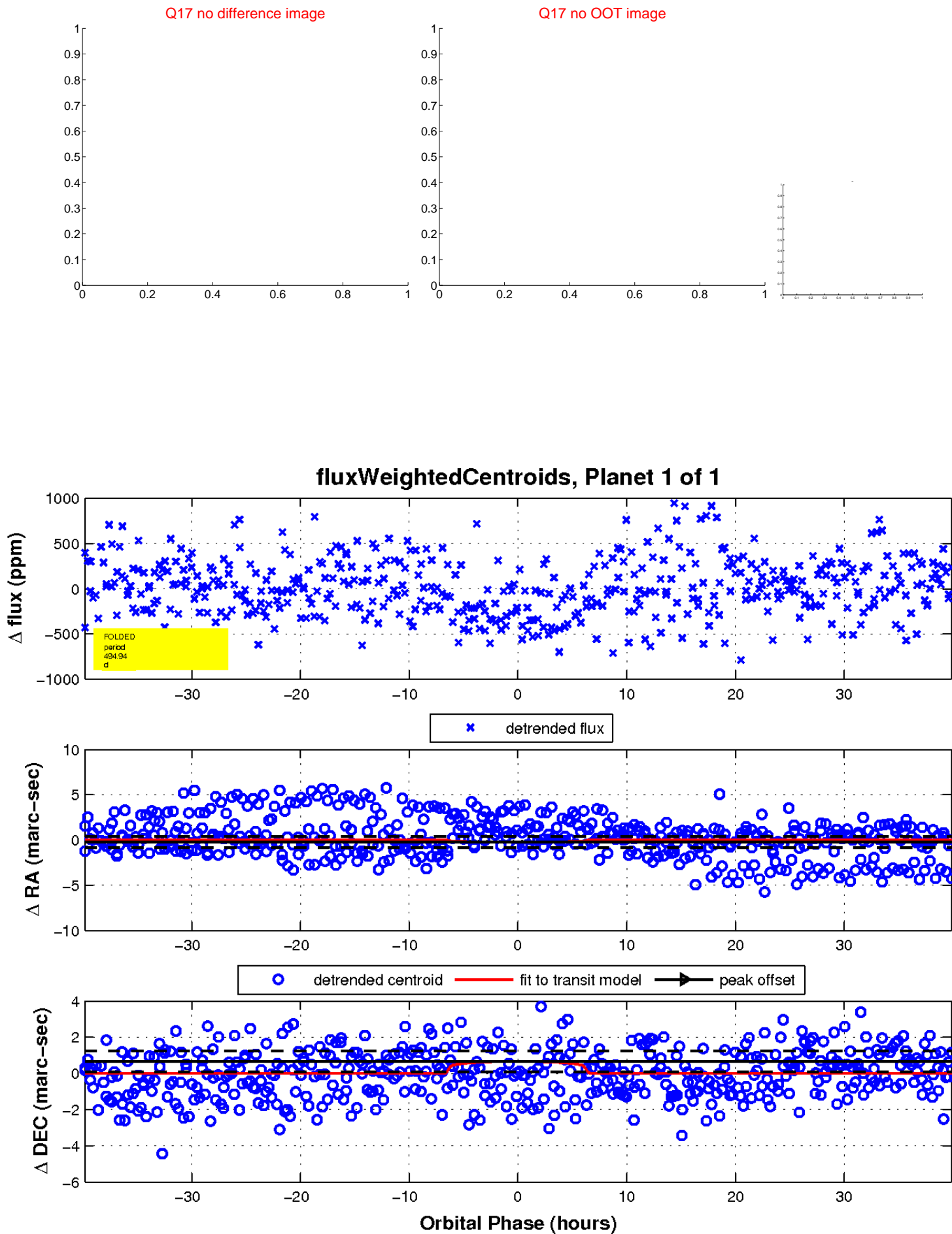
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

