

KIC 008308823

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})
008308823-01	OBS	No	345.855463	233.810352	320.6	17.121	8.6	8.1	1.01	6063	2.33	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008308823-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

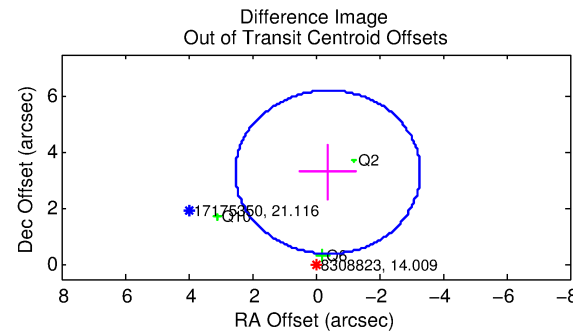
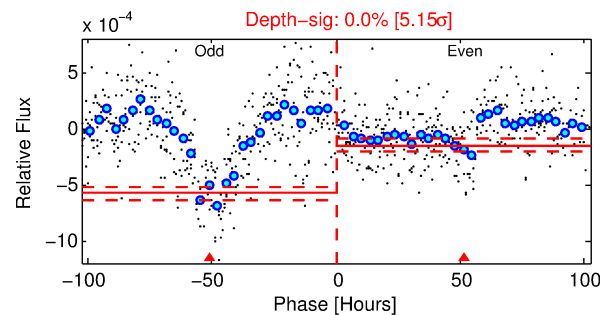
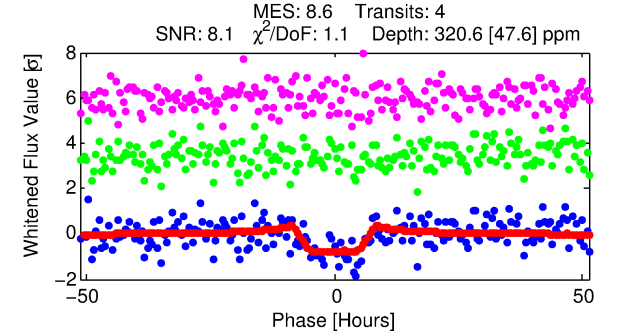
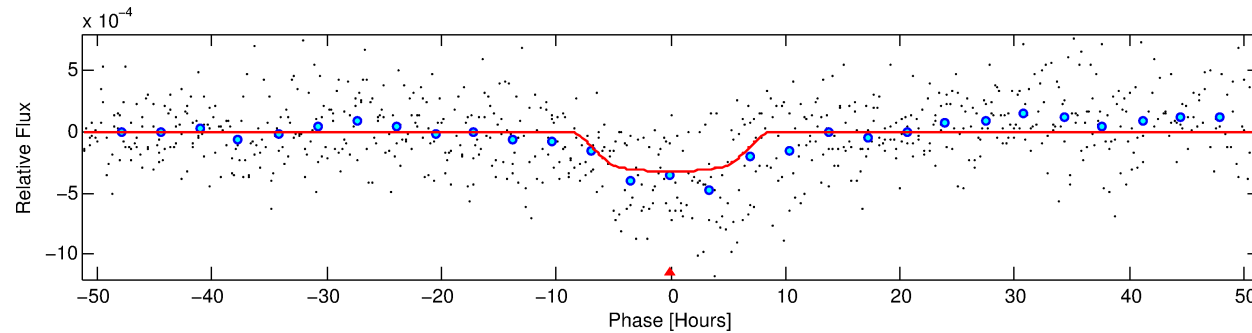
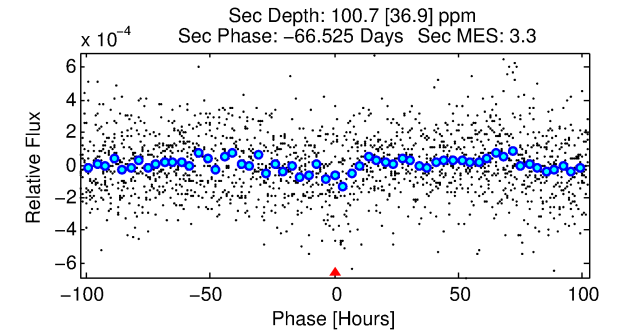
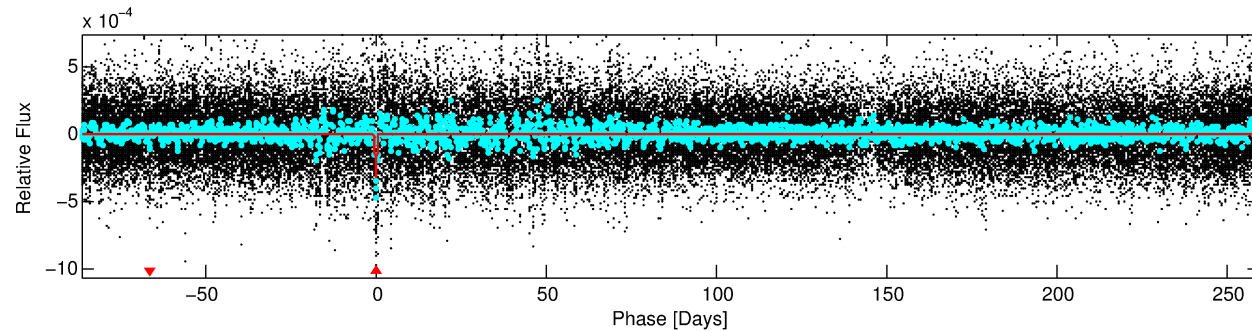
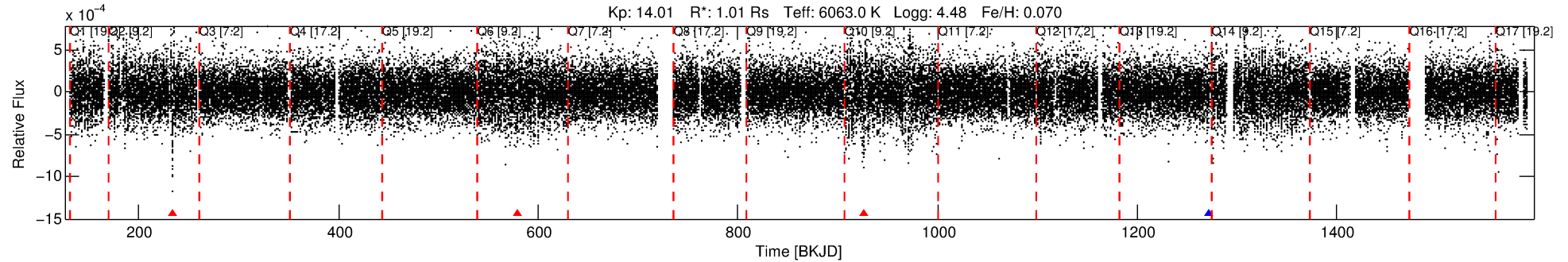
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008308823-01

No Significant Match Found

DV One-Page Summary

KIC: 8308823 Candidate: 1 of 1 Period: 345.855 d



DV Fit Results:

Period = 345.85546 [0.01514] d
Epoch = 233.8104 [0.0308] BKJD
Rp/R* = 0.0211 [0.0021]
a/R* = 53.56 [13.86]
b = 0.96 [0.02]
Seff = 1.24 [0.38]
Teff = 269 [21] K
Rp = 2.33 [0.59] Re
a = 1.0010 [0.1974] AU
Ag = 10261.63 [5180.96] [1.98σ]
Teffp = 4185 [452] K [8.65σ]

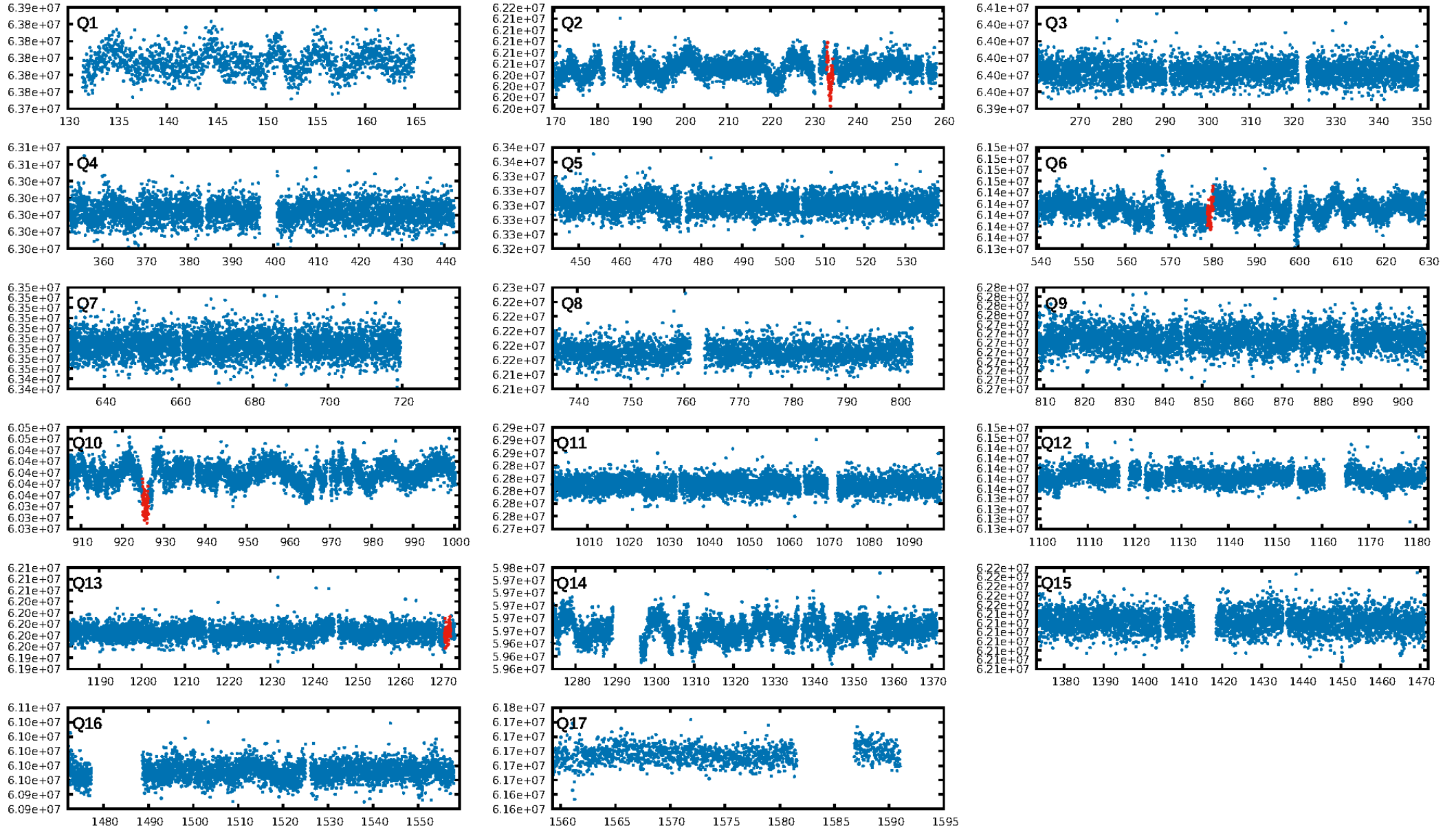
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 2.46e-11
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -35.97
Centroid-sig: 0.1%
Centroid-so: 4.273 arcsec [2.04σ]
OotOffset-rm: 3.324 arcsec [3.43σ]
KicOffset-rm: 3.350 arcsec [4.23σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

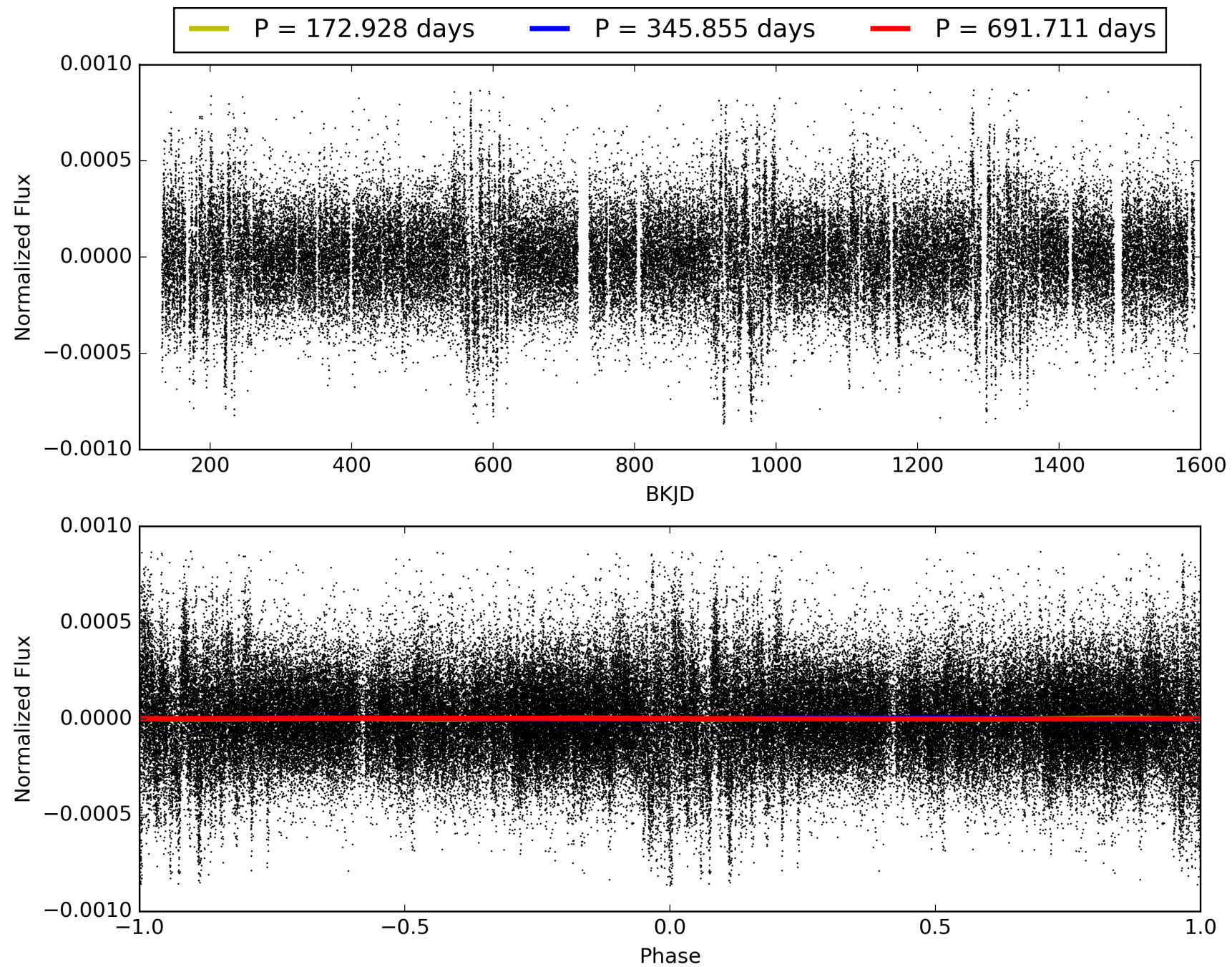
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:56:56 Z

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

TCE 008308823-01, PDC Light Curves

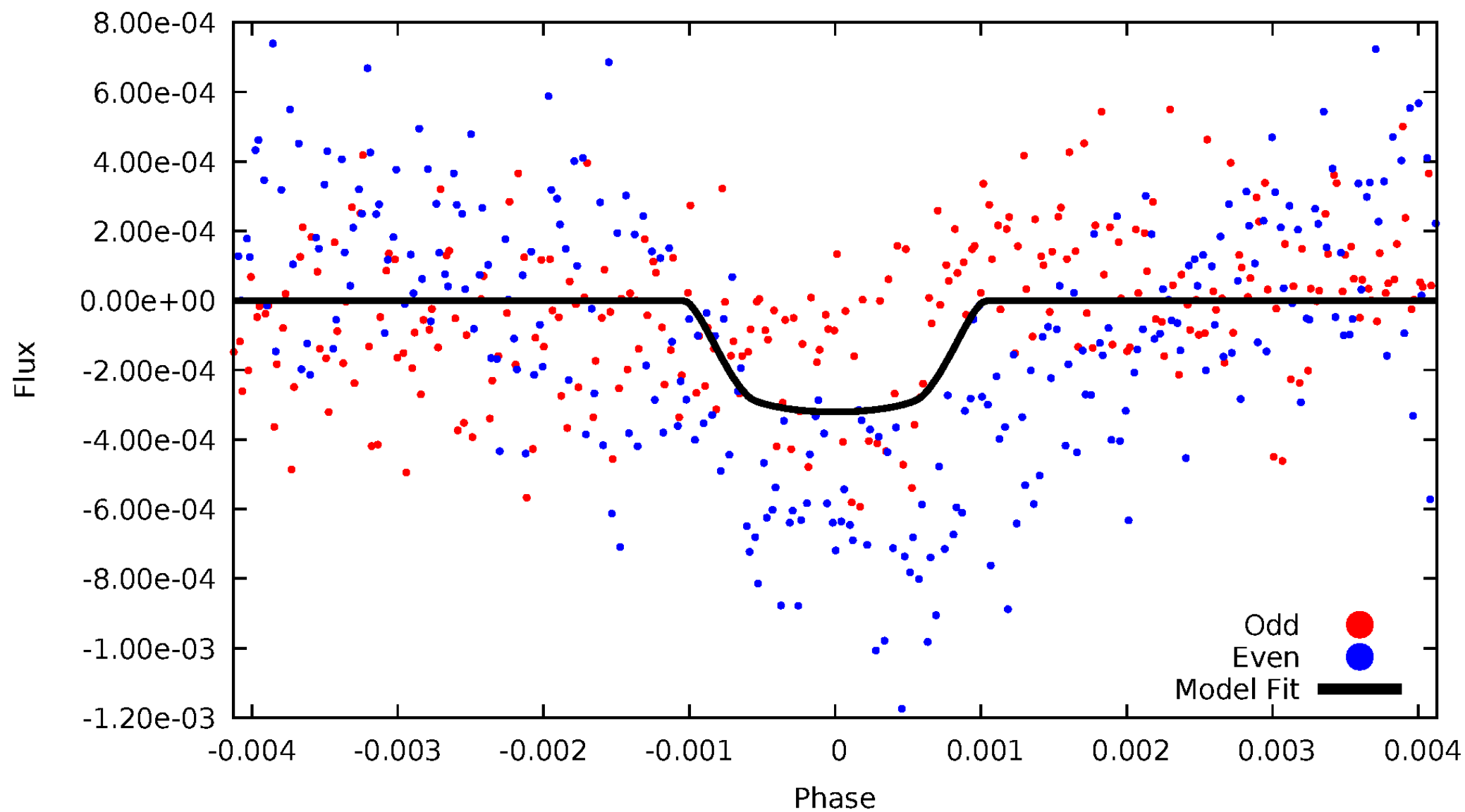


TCE 008308823-01



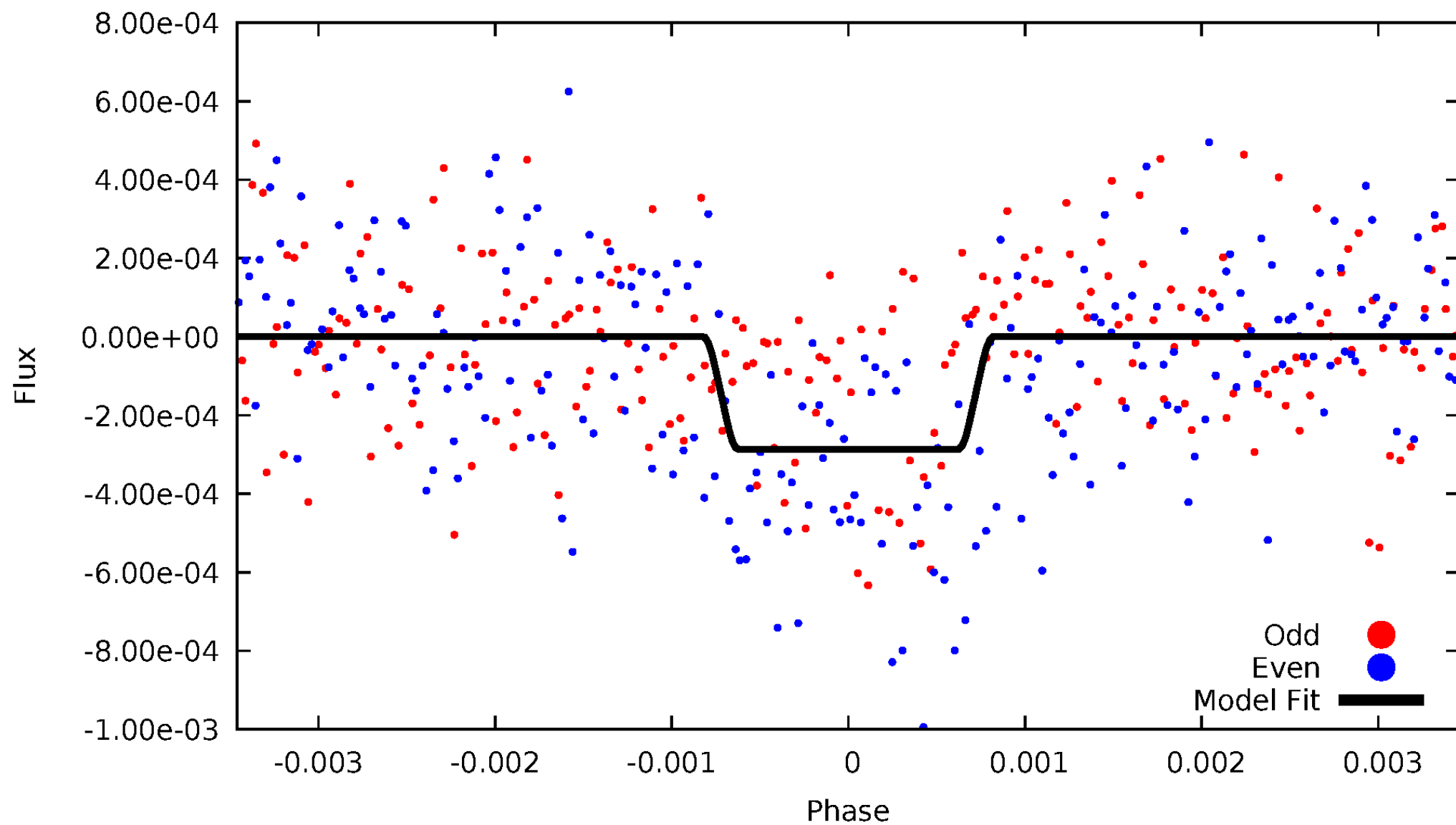
DV Odd/Even

TCE 008308823-01



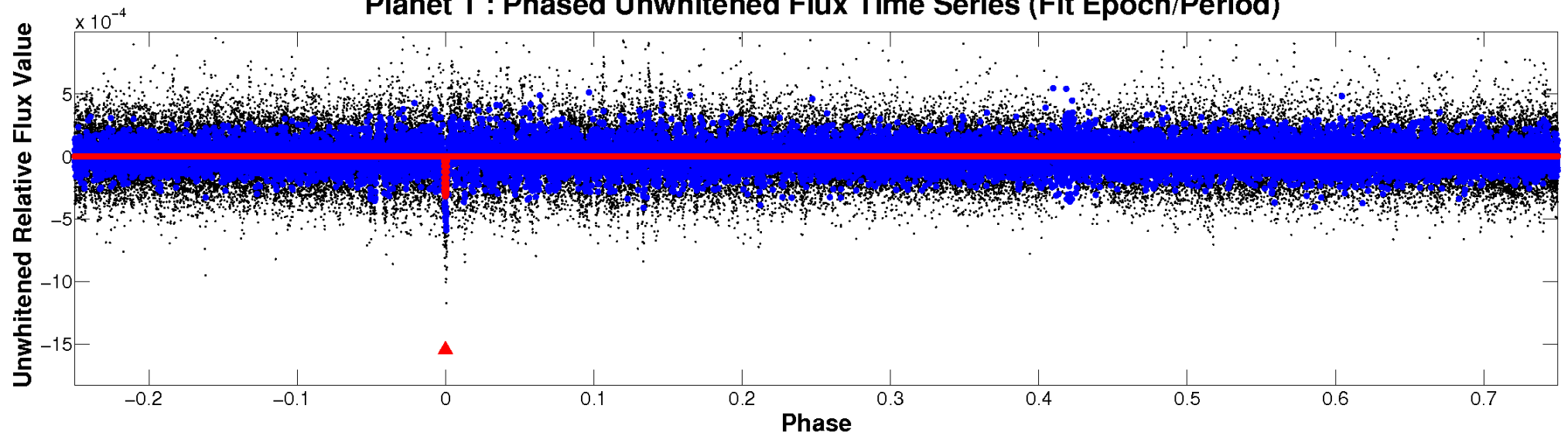
ALT Odd/Even

TCE 008308823-01

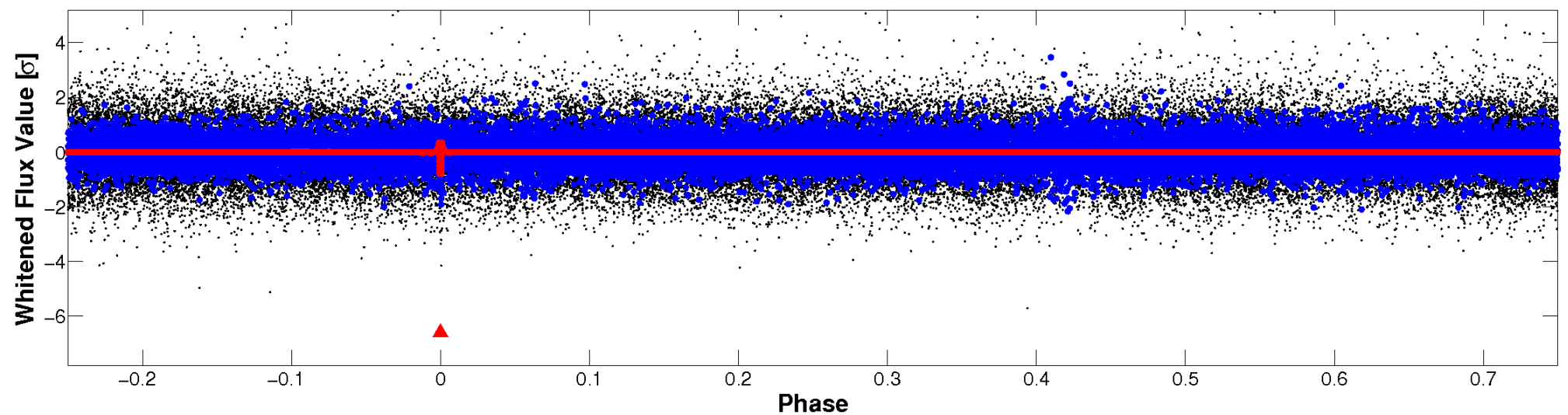


Non-Whitened Vs. Whitened Light Curve

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

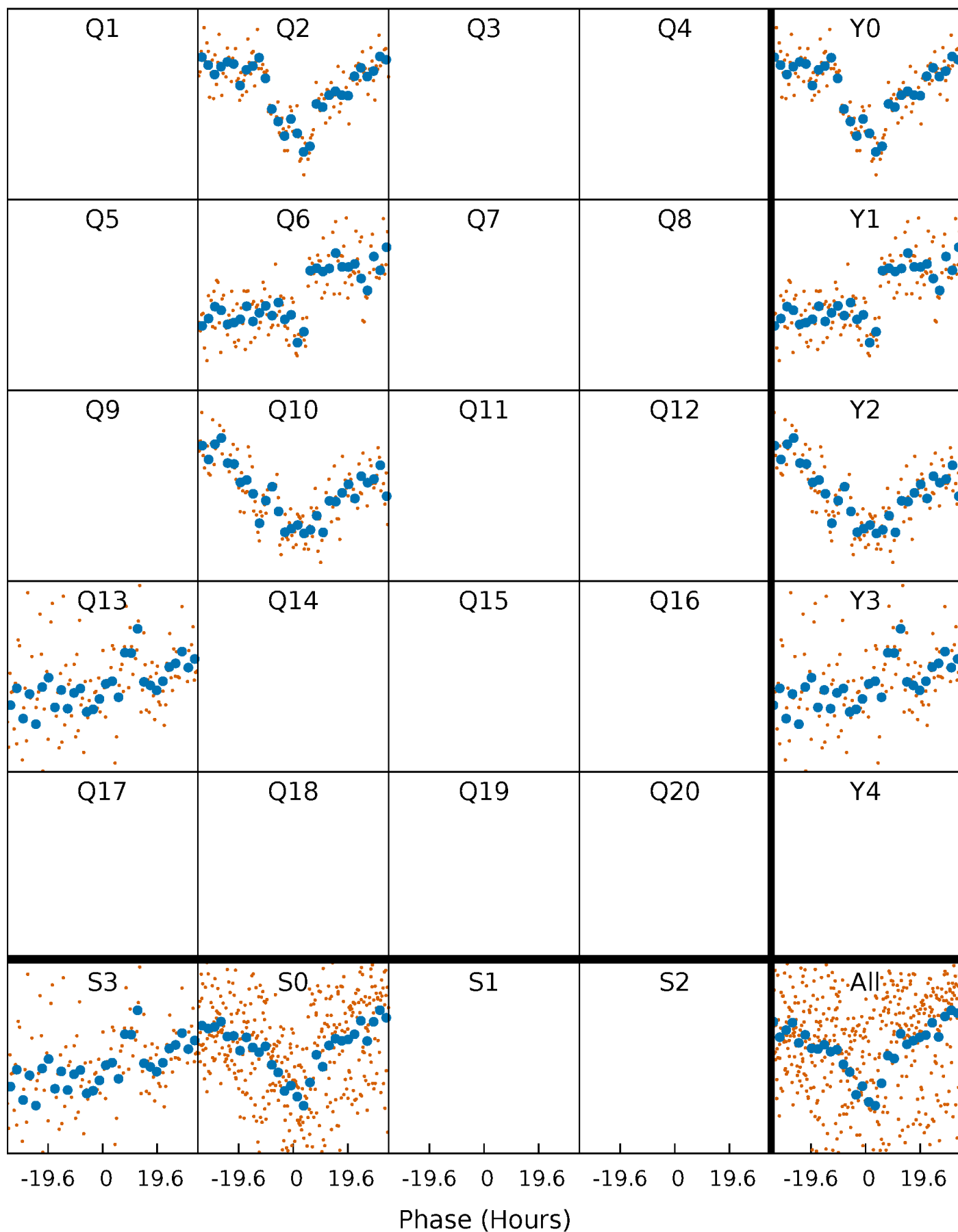


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008308823-01 P=345.855462 Days $T_0=233.810352$ (BKJD)



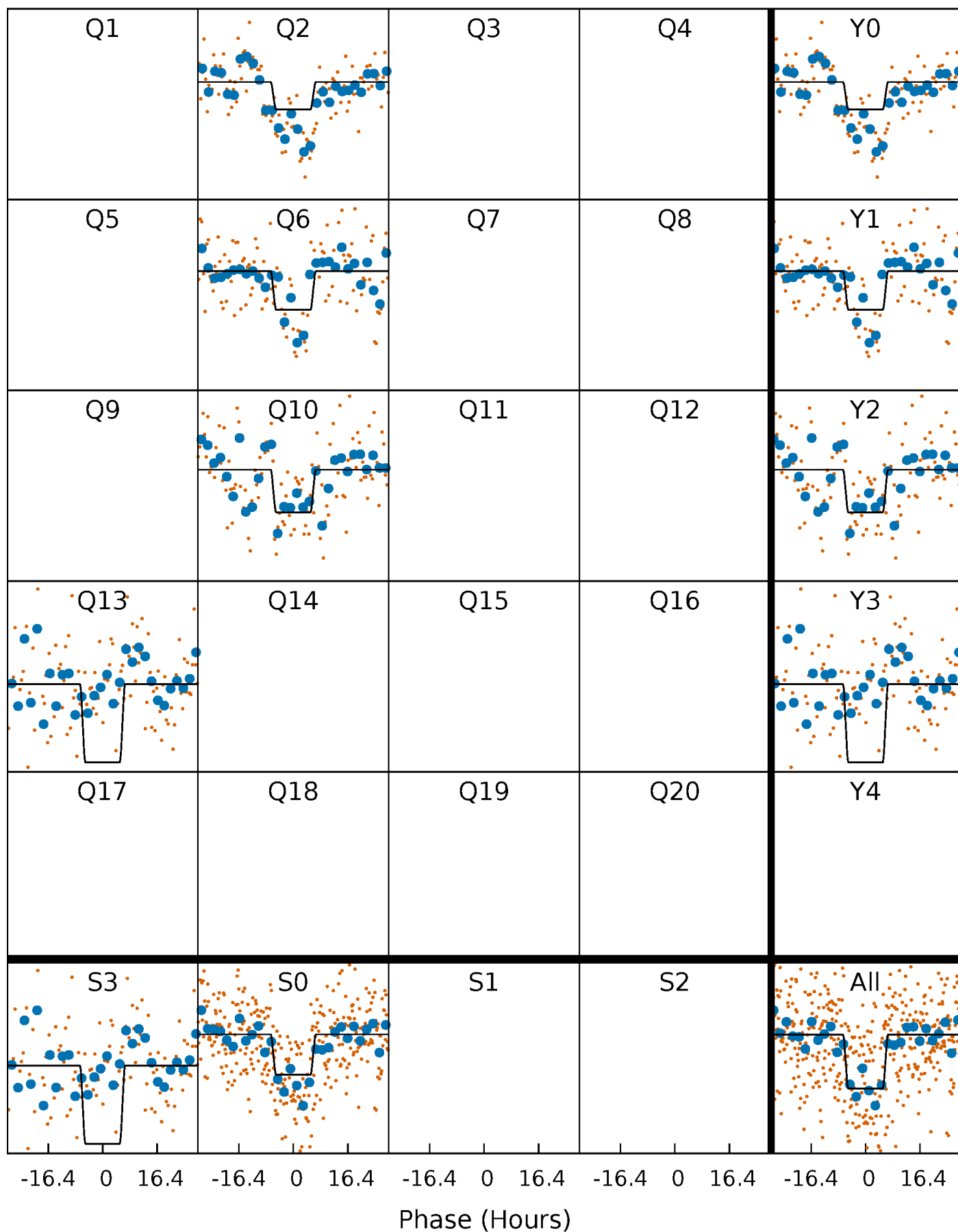
DV Quarter-Phased Transit Curves

TCE 008308823-01 P=345.855462 Days $T_0=233.810352$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

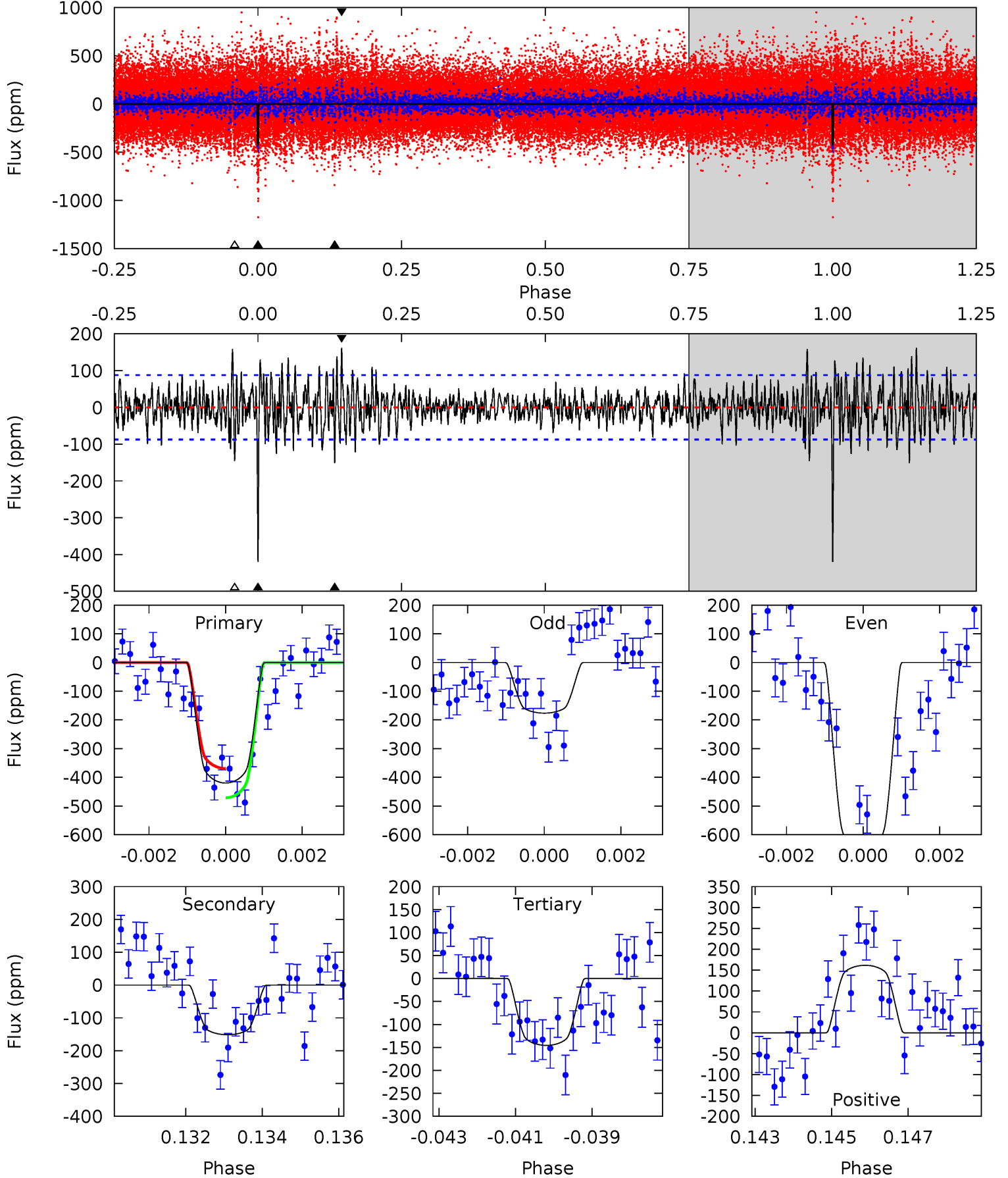
TCE 008308823-01 P=345.865248 Days $T_0=233.821192$ (BKJD)



DV Model-Shift Uniqueness Test

008308823-01, P = 345.855462 Days, E = 233.810352 Days

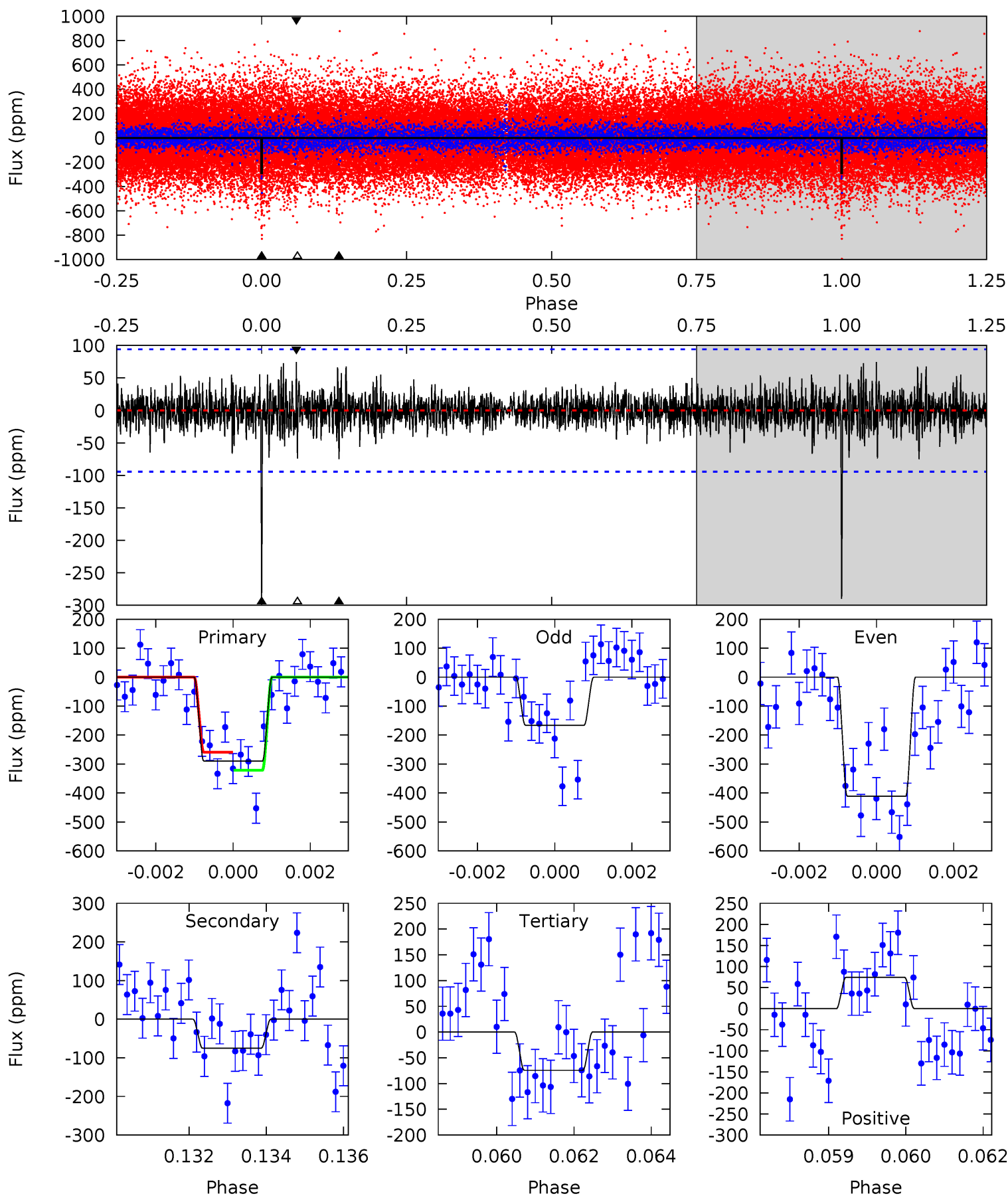
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	9.19	8.85	9.81	5.32	3.08	2.30	16.7	15.7	0.35	-0.62	14.6	1.01	0.28	3.10



Alt Model-Shift Uniqueness Test

008308823-01, P = 345.865248 Days, E = 233.821192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.27	4.22	4.23	5.36	3.15	0.97	12.3	12.3	0.05	0.04	6.97	1.04	0.20	1.77



Stellar Parameters For KIC 008308823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6063^{+151}_{-181}	$4.476^{+0.052}_{-0.157}$	$0.070^{+0.200}_{-0.350}$	$1.012^{+0.237}_{-0.102}$	$1.117^{+0.101}_{-0.159}$	$1.519^{+0.412}_{-0.649}$
	+2%/-3%	+1%/-4%	+286%/-500%	+23%/-10%	+9%/-14%	+27%/-43%
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 008308823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-151 ± 16	$2.39^{+0.37}_{-0.29}$	382^{+20}_{-16}	4754^{+272}_{-238}	14411^{+4163}_{-3822}
Alt.	-75 ± 18	$1.94^{+0.29}_{-0.28}$	381^{+21}_{-17}	4483^{+315}_{-298}	10662^{+4832}_{-3449}

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

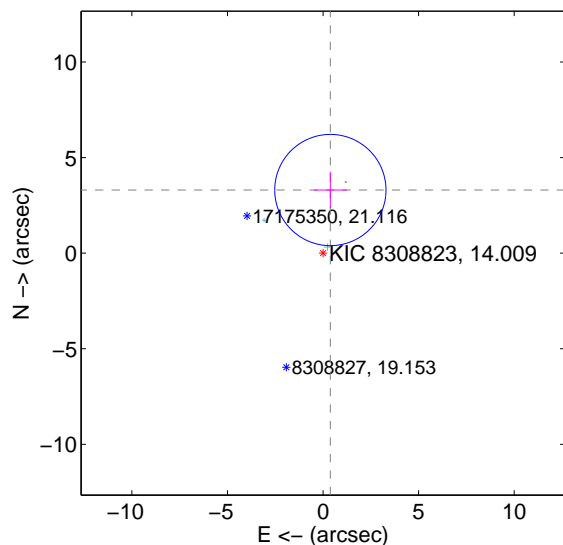
Supplemental centroid analysis for 008308823-01. Kepler magnitude: 14.01. Transit SNR 8.09

There are 2 quarters with good PRF difference image offsets

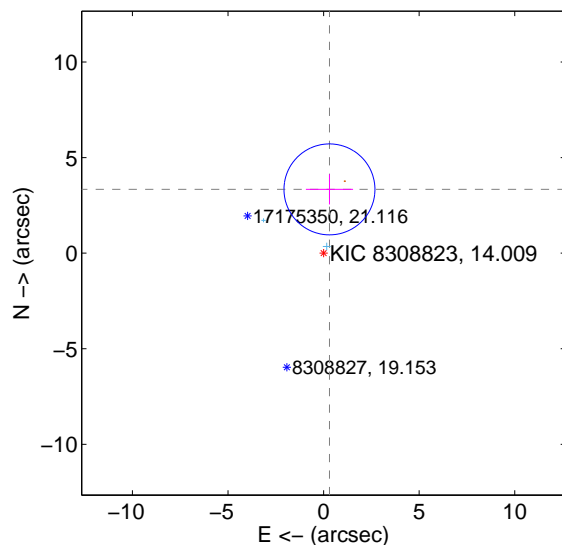
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.324 ± 0.970	3.43	-0.383 ± 0.861	3.302 ± 0.944
PRF-fit source offset from KIC position	3.350 ± 0.793	4.23	-0.307 ± 1.234	3.336 ± 0.788
photometric centroid source offset	4.27 ± 2.09	2.04	2.55 ± 2.27	-3.43 ± 1.98

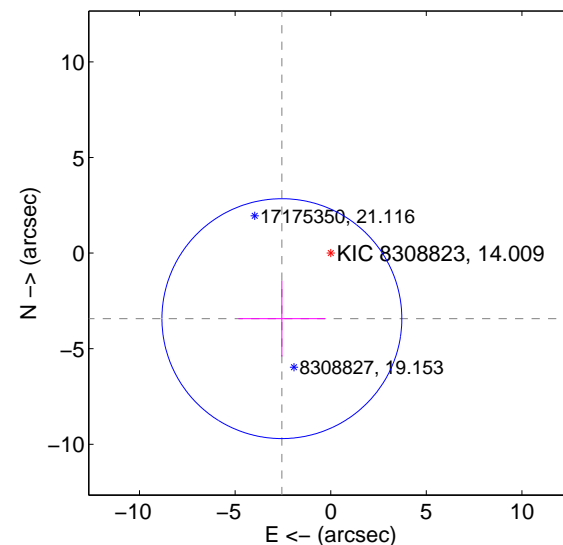
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

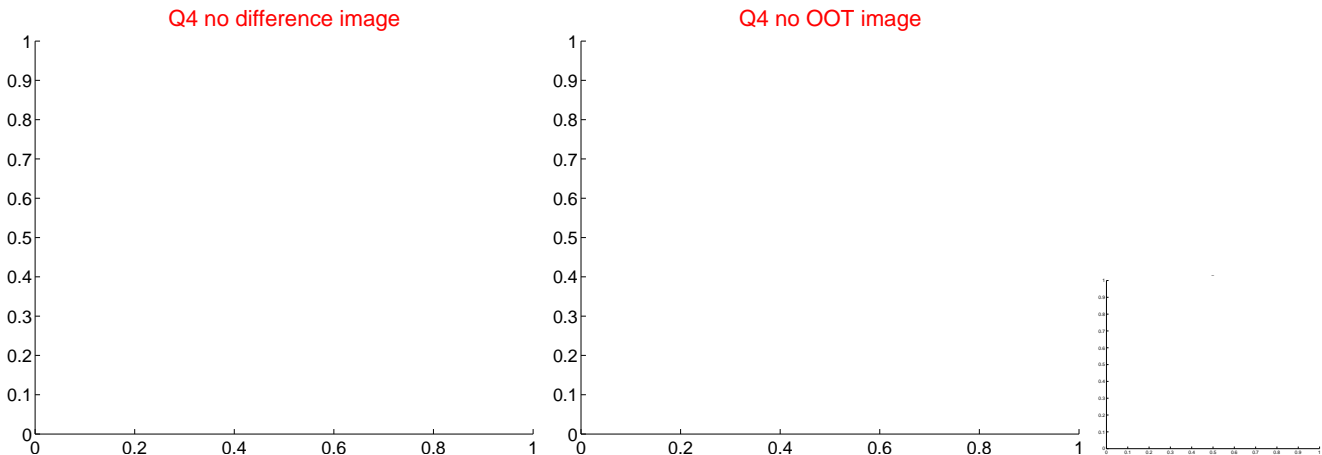
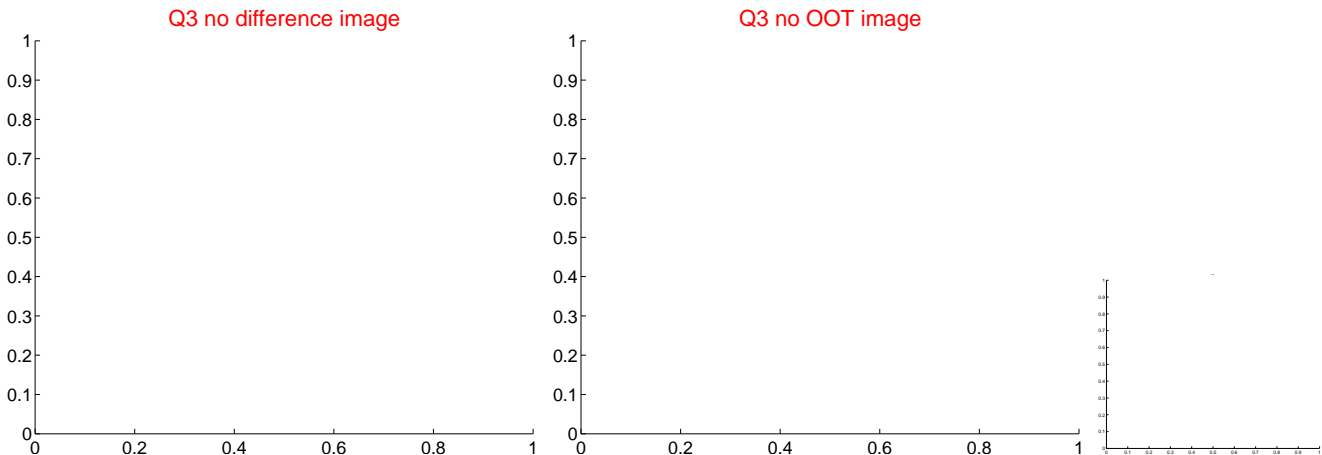
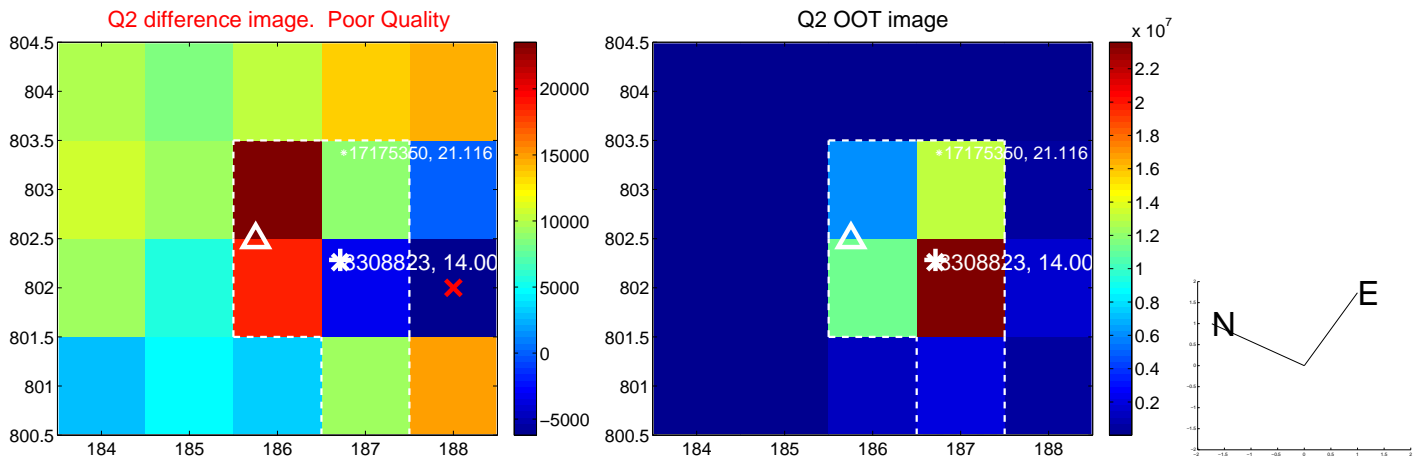
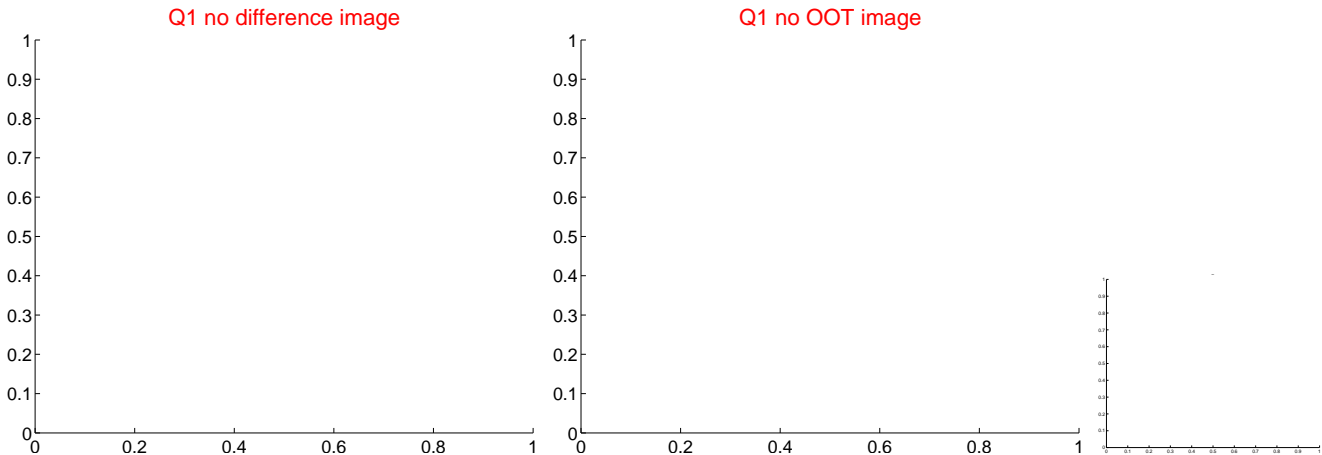


offset from photometric centroids

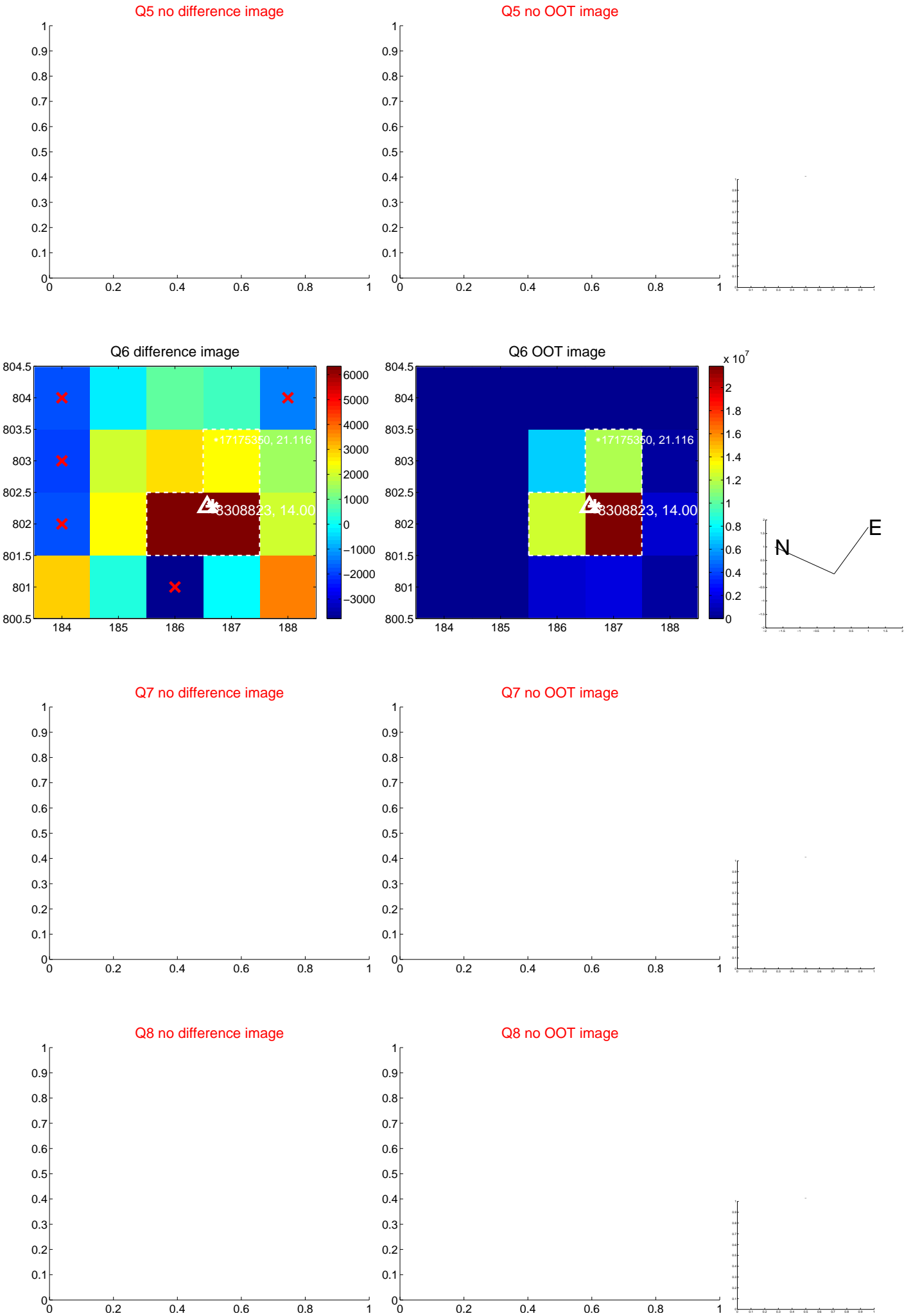


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

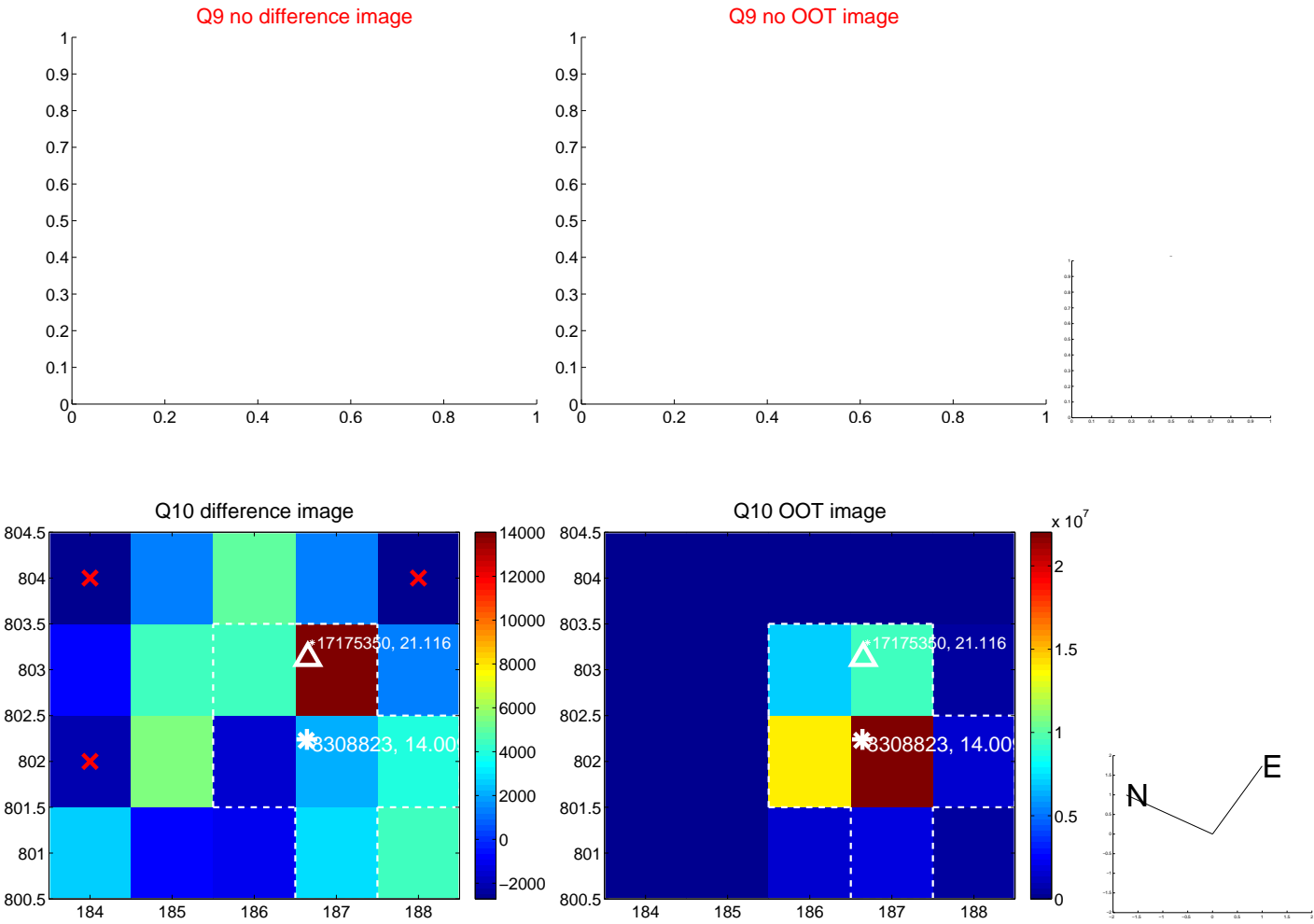
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



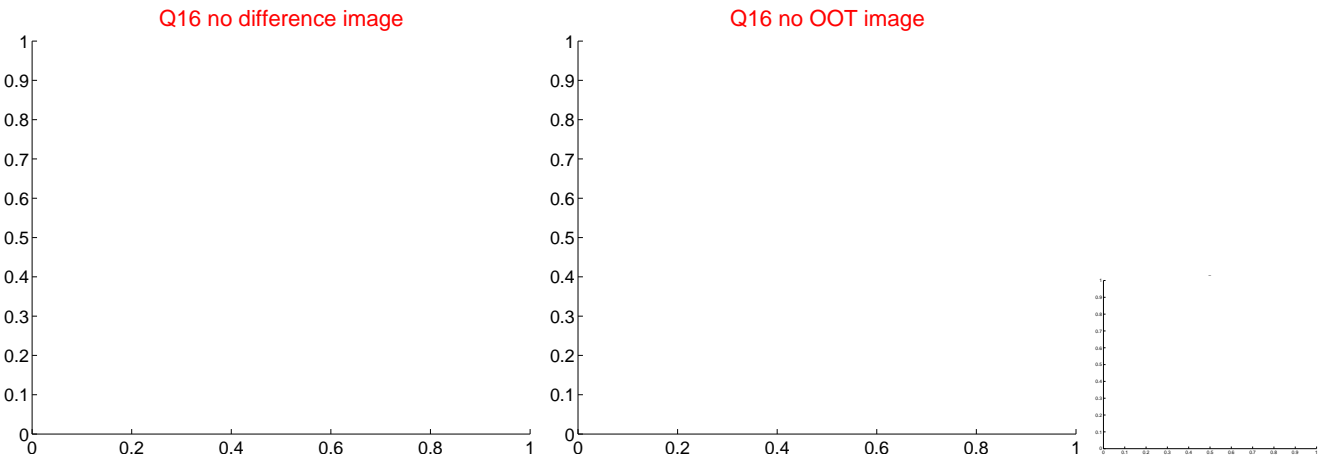
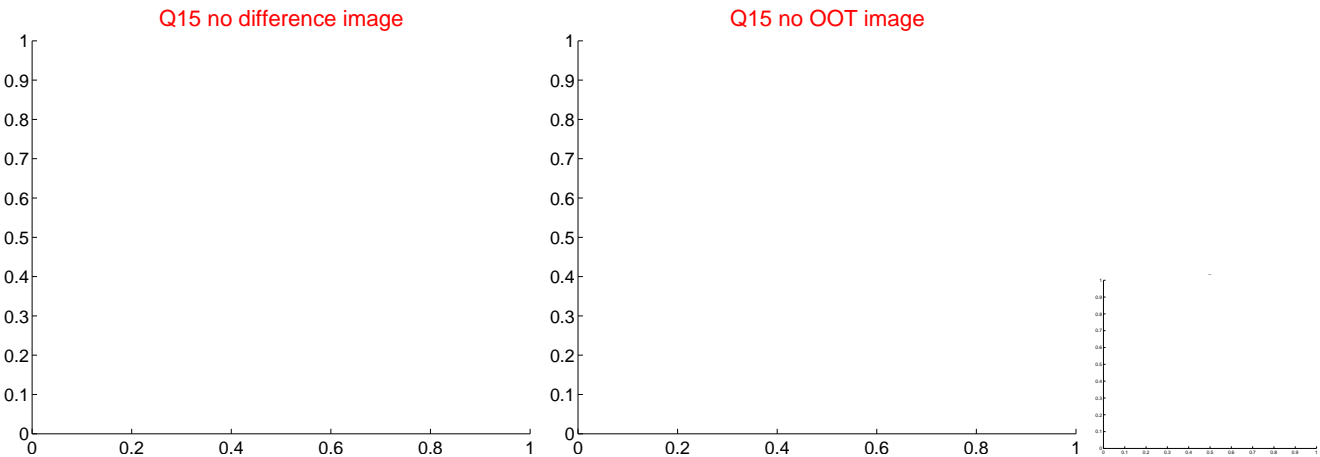
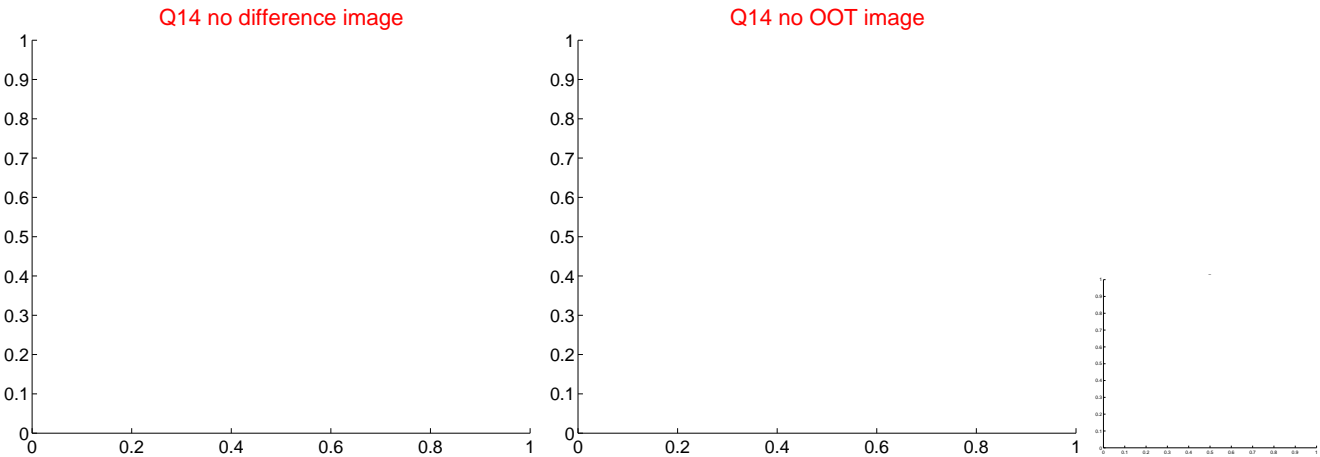
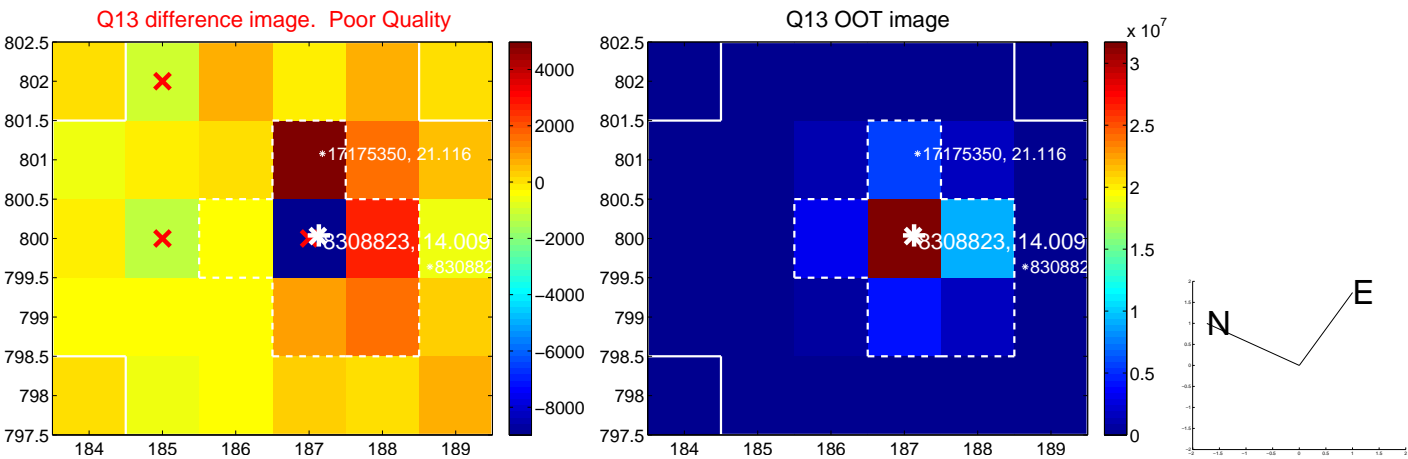
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



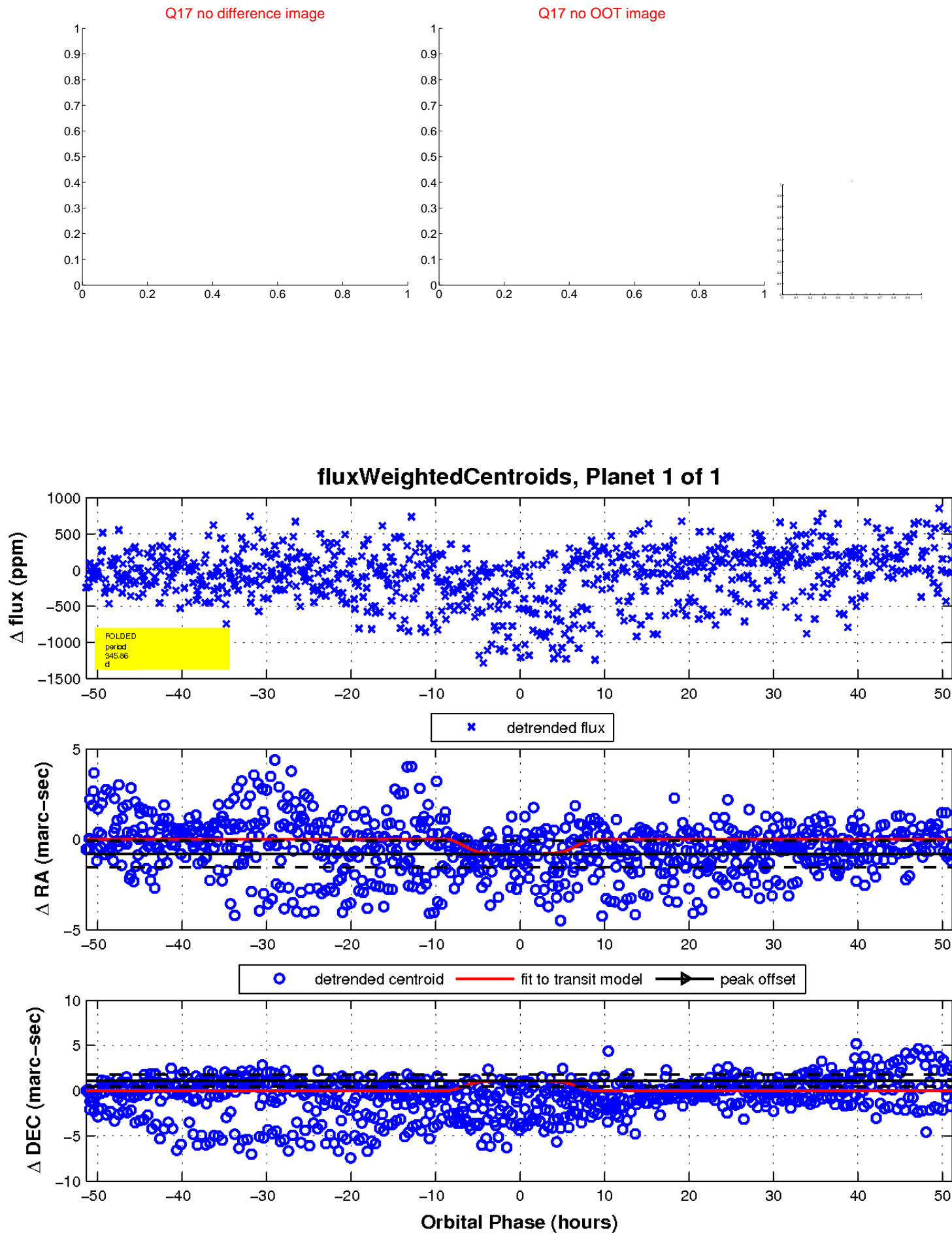
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

