

KIC 008308888

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})
008308888-01	OBS	No	368.723141	233.823837	1576.5	19.439	10.7	12.2	0.81	5510	4.78	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008308888-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

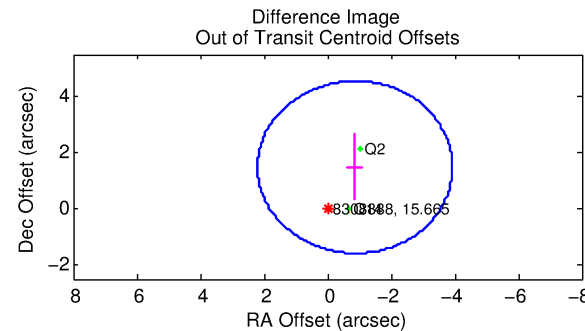
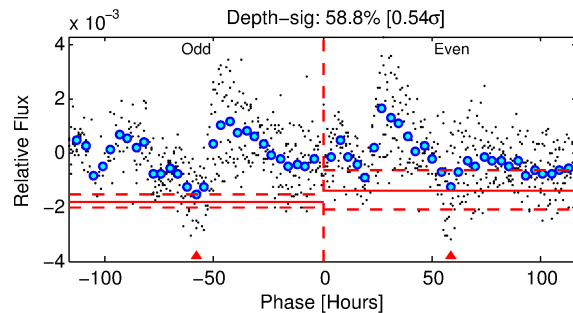
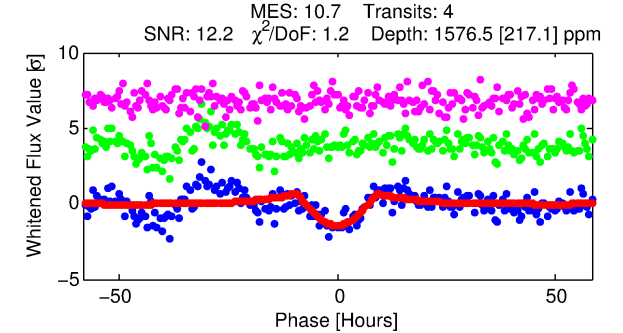
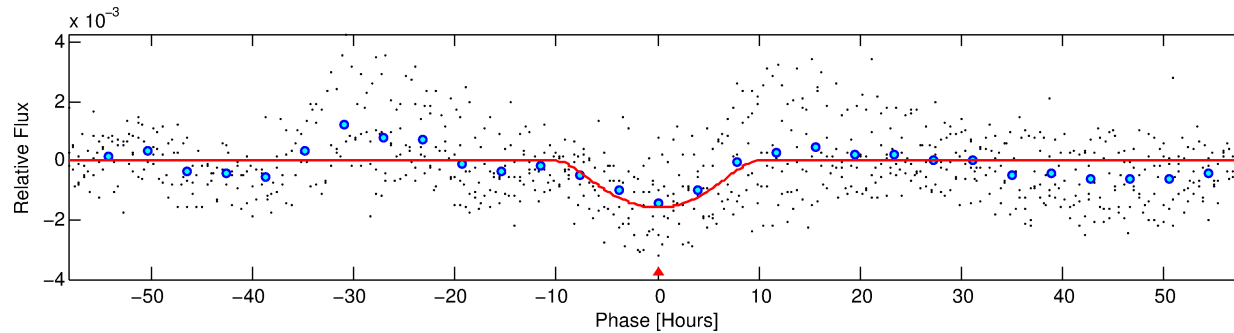
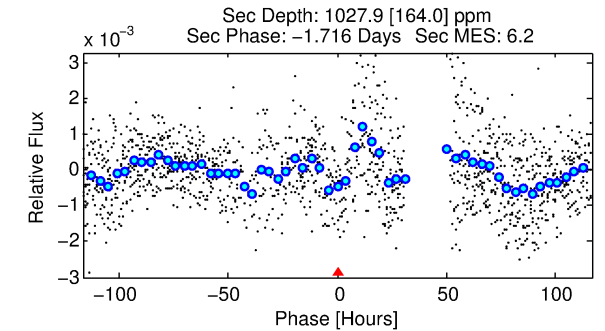
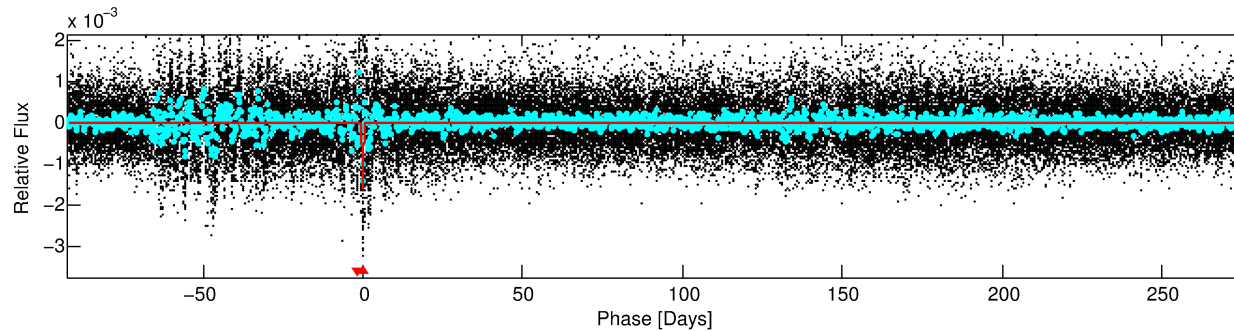
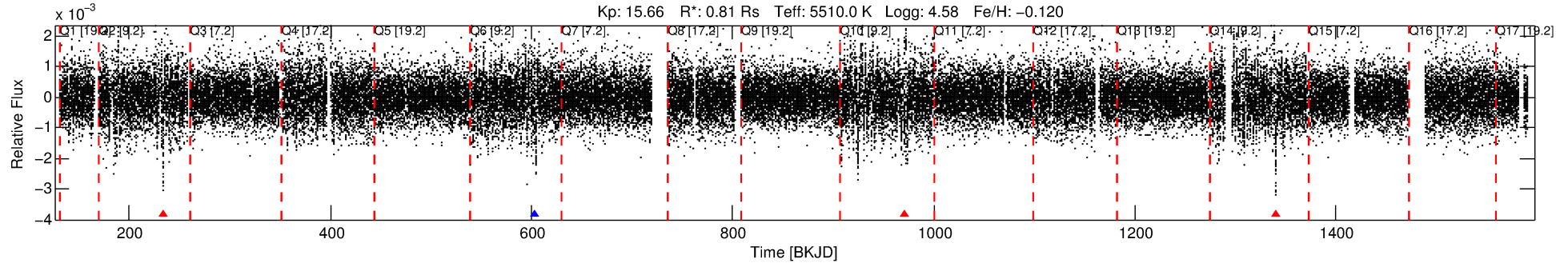
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008308888-01

No Significant Match Found

DV One-Page Summary

KIC: 8308888 Candidate: 1 of 1 Period: 368.723 d



DV Fit Results:

Period = 368.72314 [0.01500] d
Epoch = 233.8238 [0.0286] BKJD
Rp/R* = 0.0543 [0.0423]
a/R* = 58.98 [18.10]
b = 0.97 [0.08]
Seff = 0.57 [0.17]
Teq = 222 [16] K
Rp = 4.78 [3.87] Re
a = 0.9714 [0.1774] AU
Ag = 23320.58 [36995.40] [0.63σ]
Teffp = 4233 [1660] K [2.42σ]

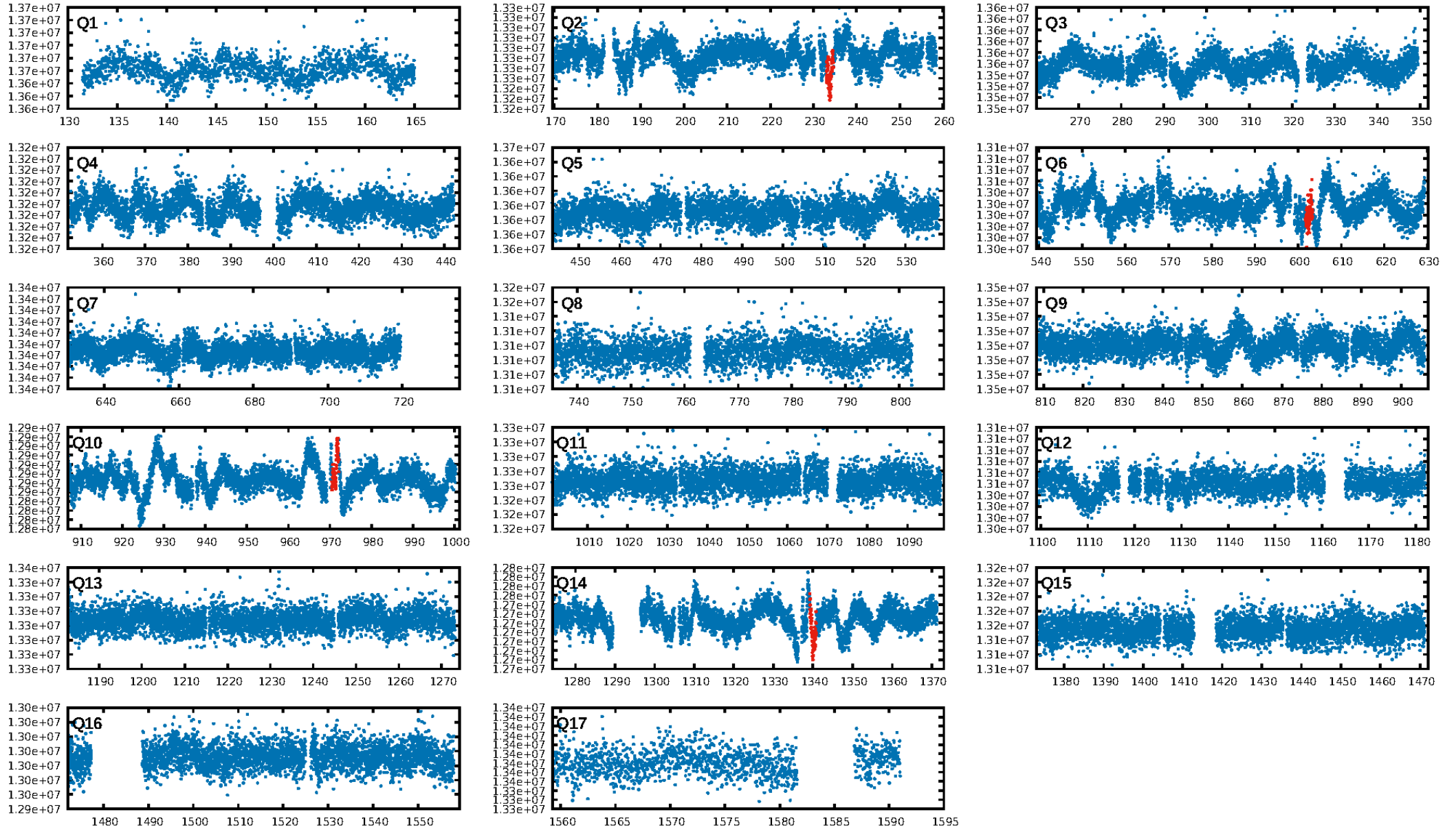
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 96.6%
Bootstrap-pfa: 1.41e-18
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.4048
Centroid-sig: 15.7%
Centroid-so: 2.247 arcsec [1.34σ]
OotOffset-rm: 1.714 arcsec [1.68σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 1.710 arcsec [1.60σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

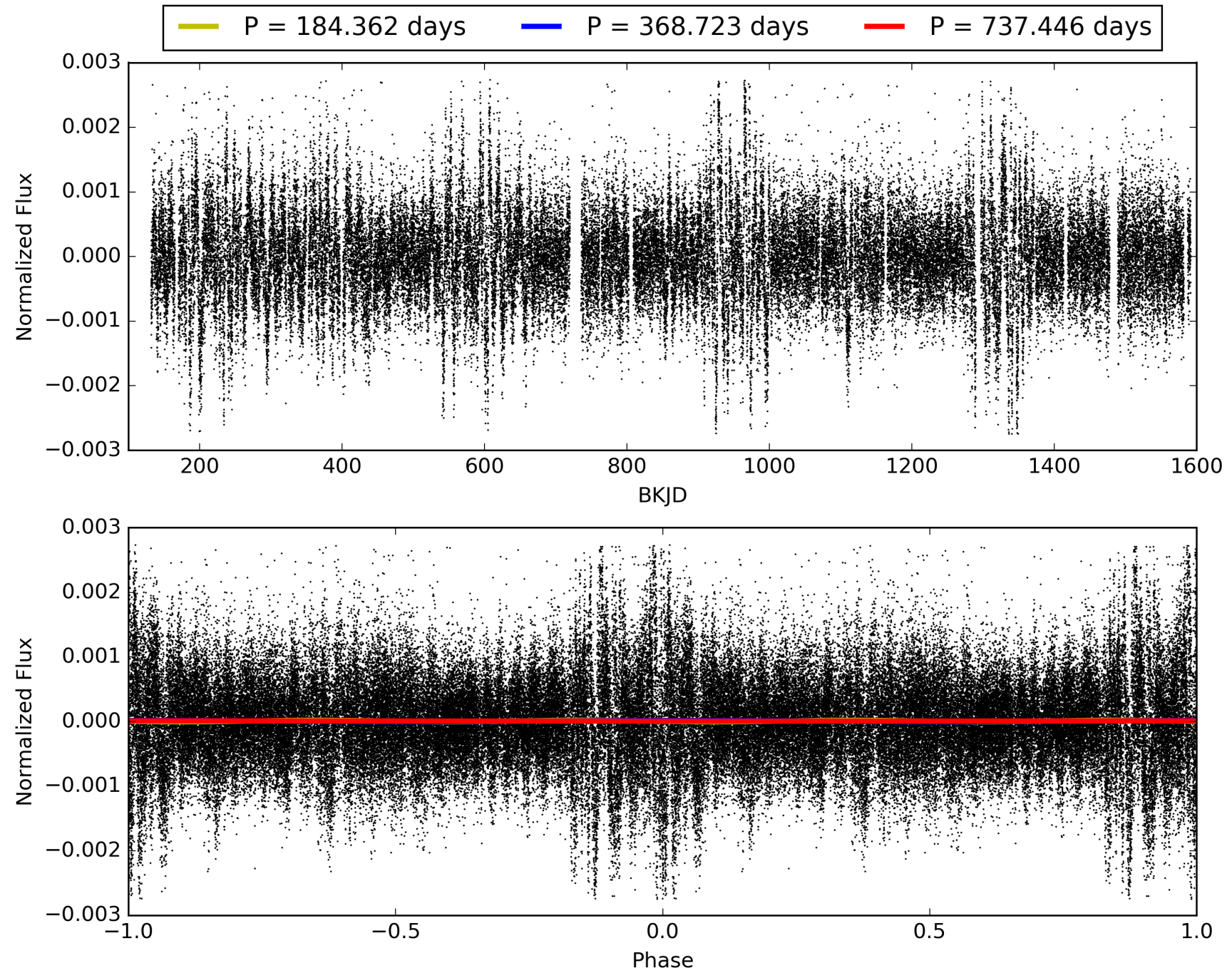
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:39:04 Z

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

TCE 008308888-01, PDC Light Curves

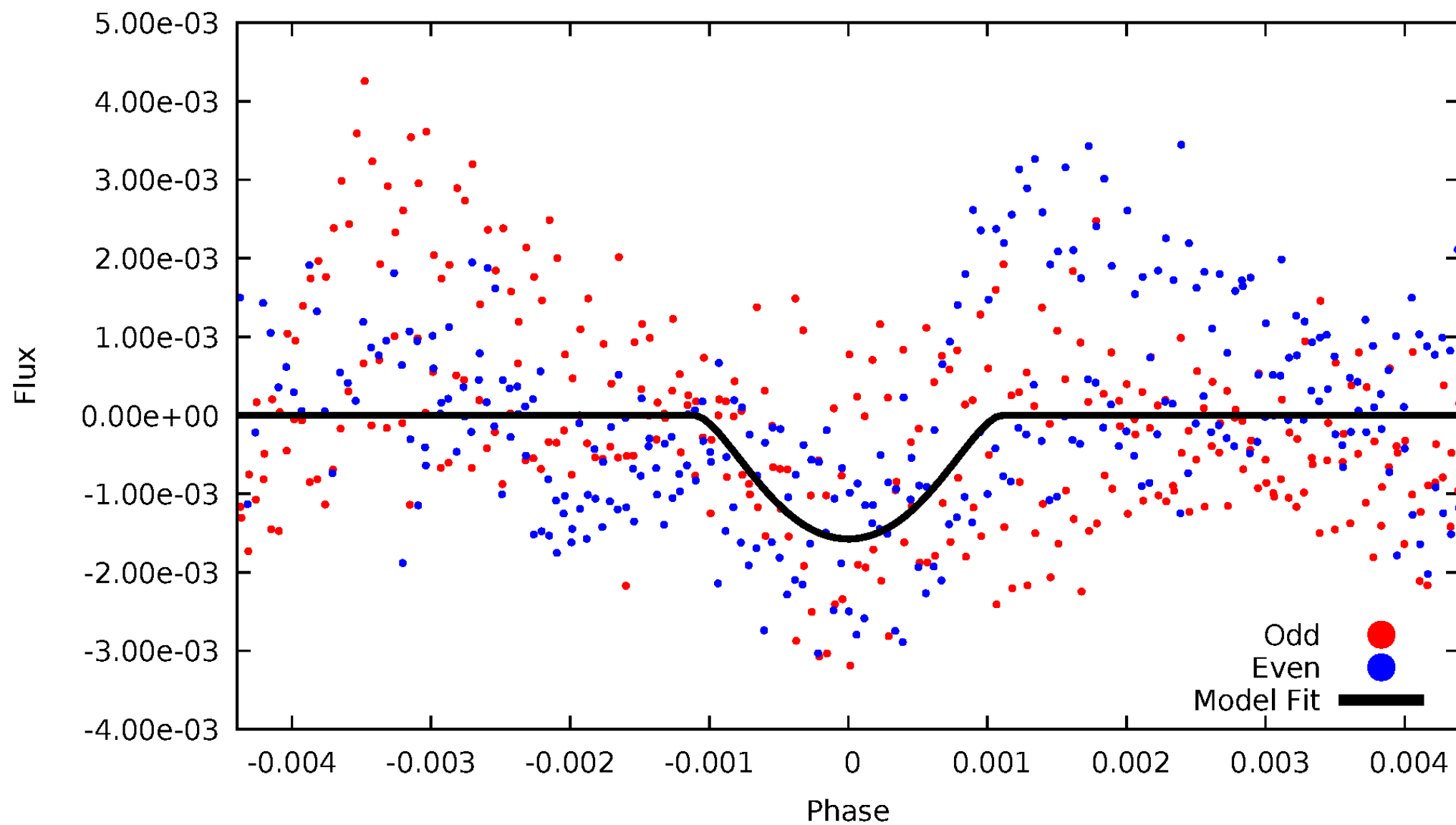


TCE 008308888-01



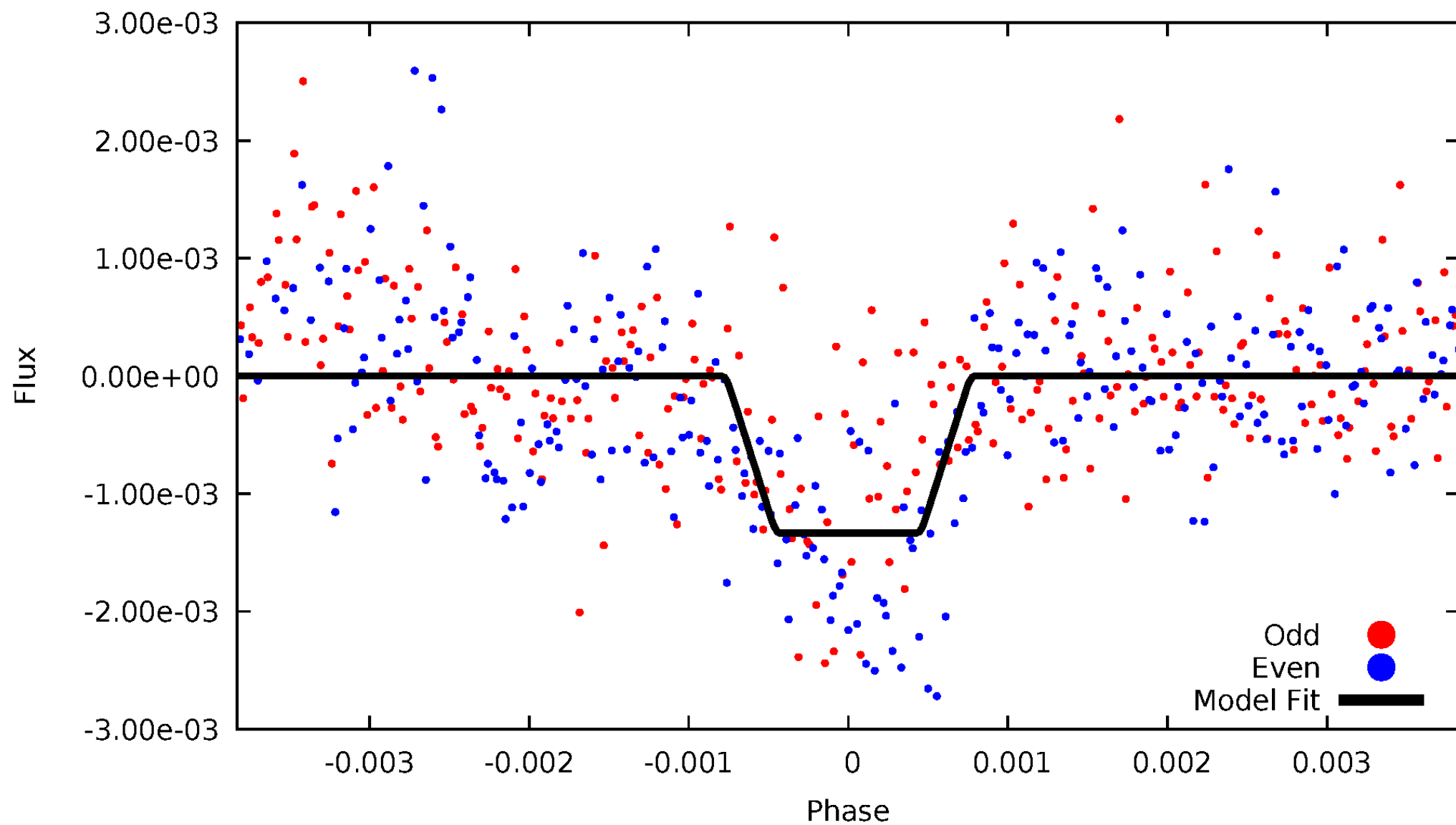
DV Odd/Even

TCE 008308888-01



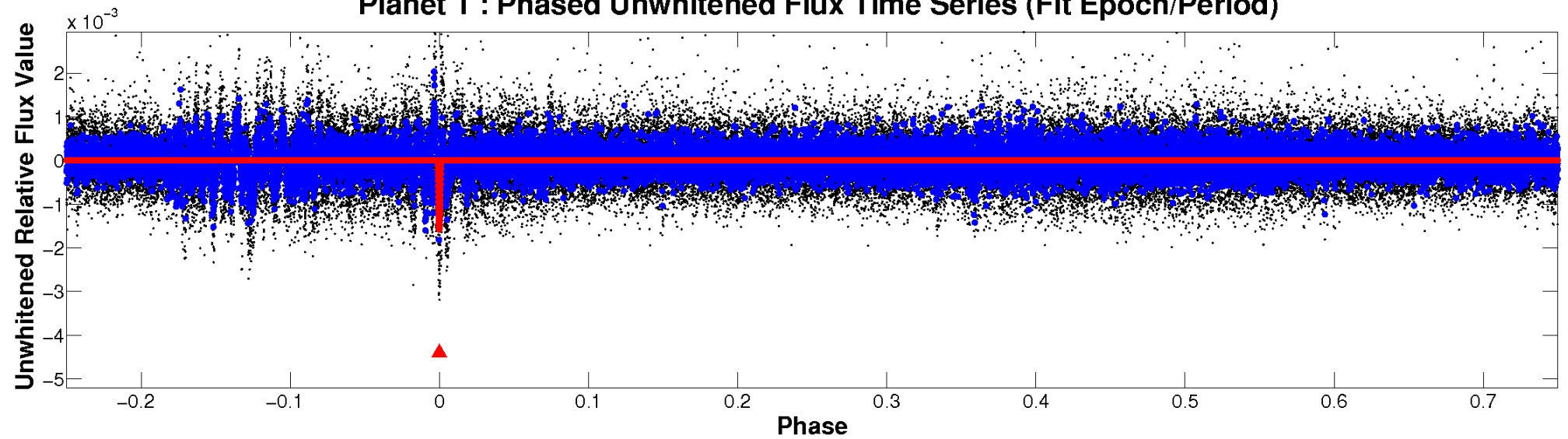
ALT Odd/Even

TCE 008308888-01

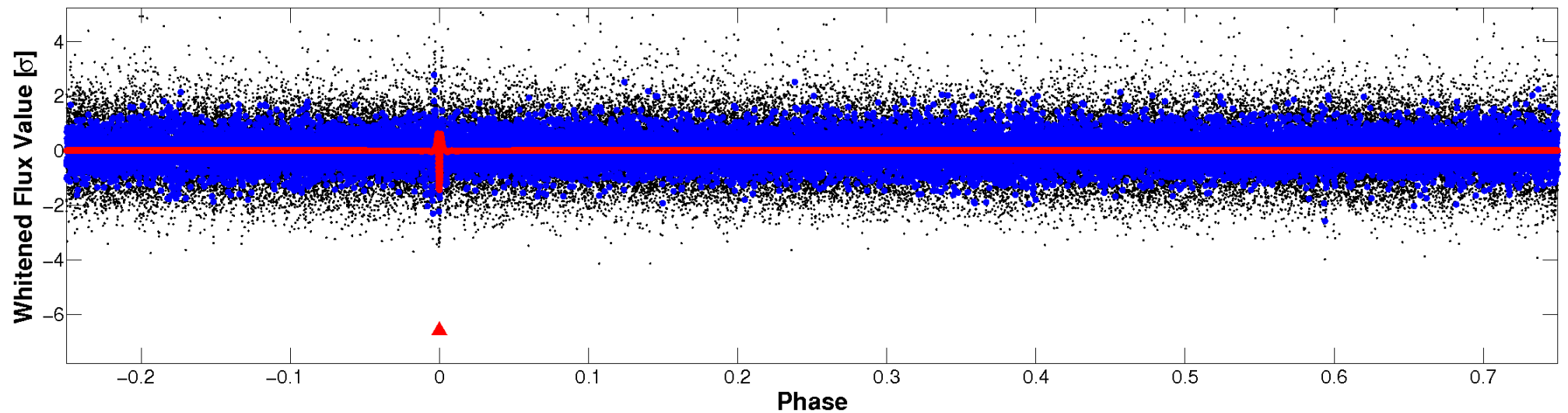


Non-Whitened Vs. Whitened Light Curve

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



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



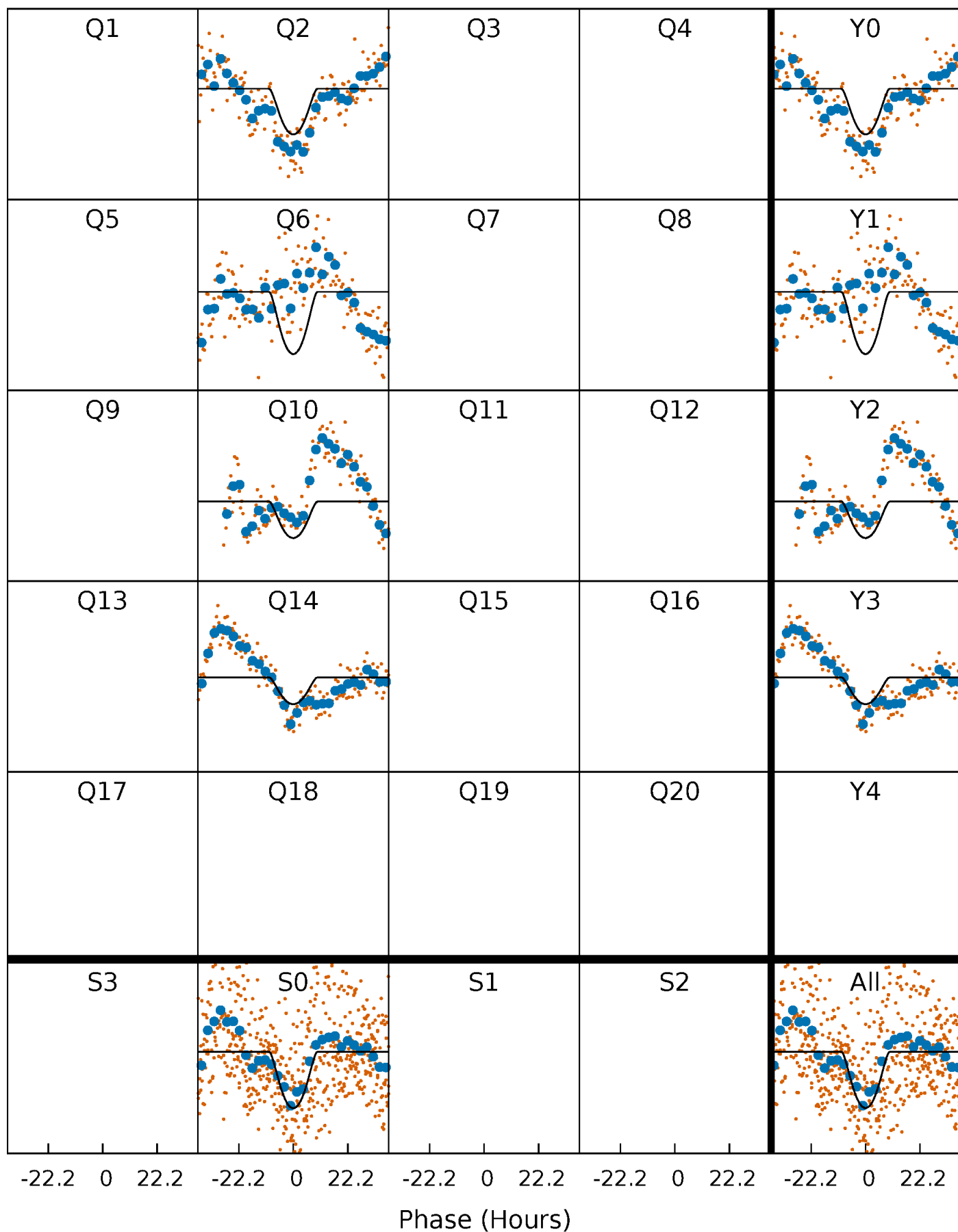
PDC Quarter-Phased Transit Curves

TCE 008308888-01 P=368.723141 Days $T_0=233.823837$ (BKJD)



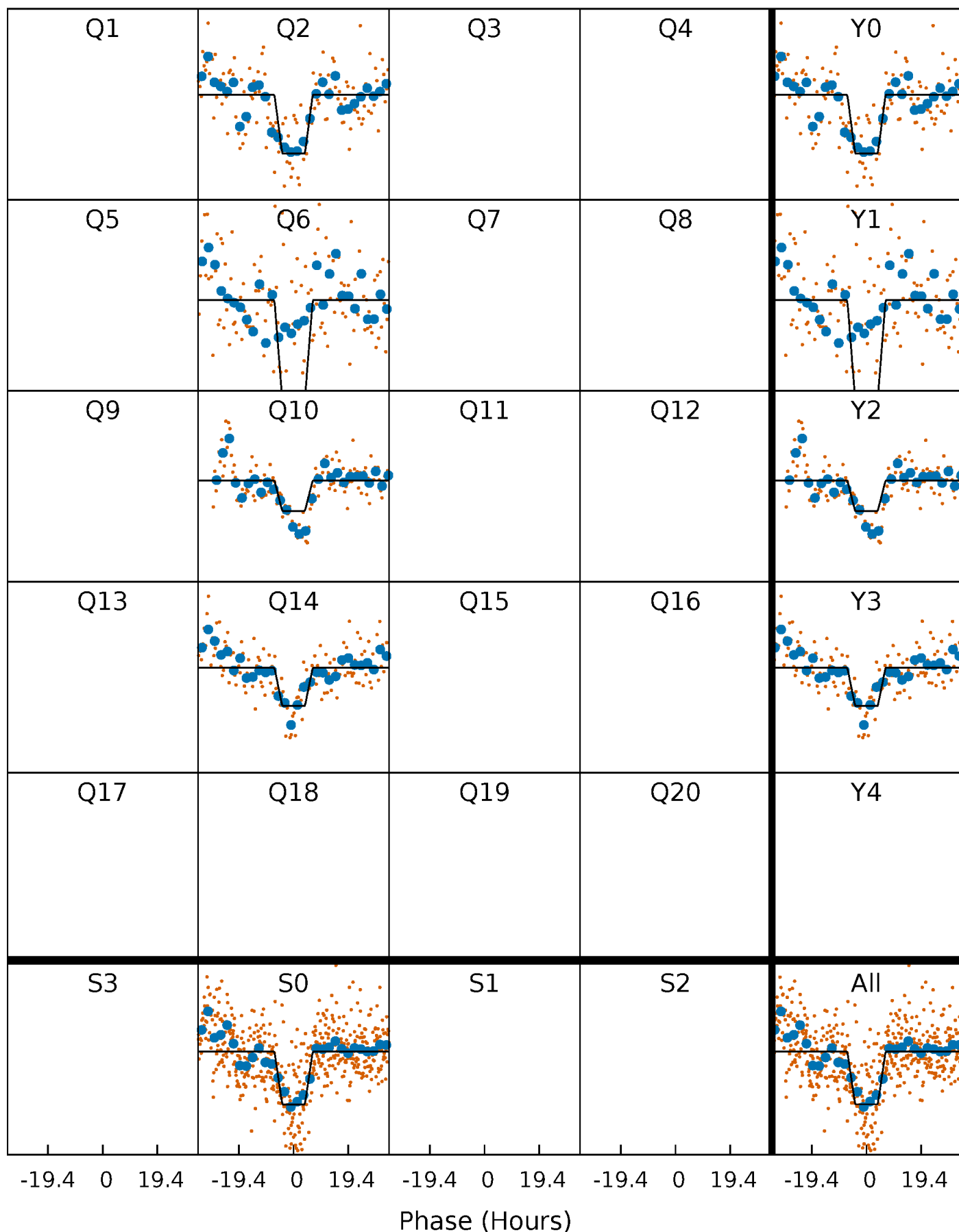
DV Quarter-Phased Transit Curves

TCE 008308888-01 P=368.723141 Days $T_0=233.823837$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

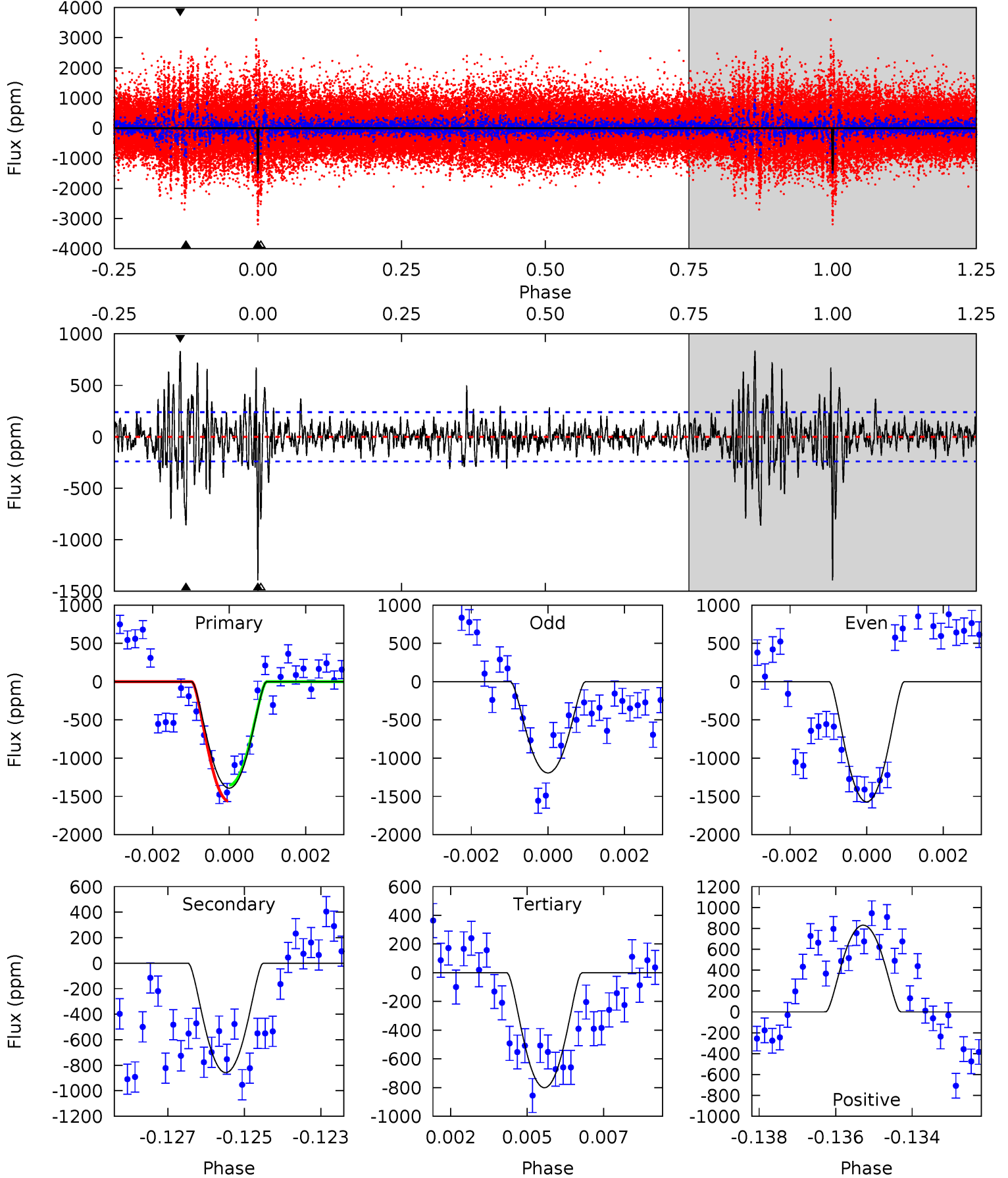
TCE 008308888-01 P=368.696345 Days $T_0=233.881278$ (BKJD)



DV Model-Shift Uniqueness Test

008308888-01, P = 368.723141 Days, E = 233.823837 Days

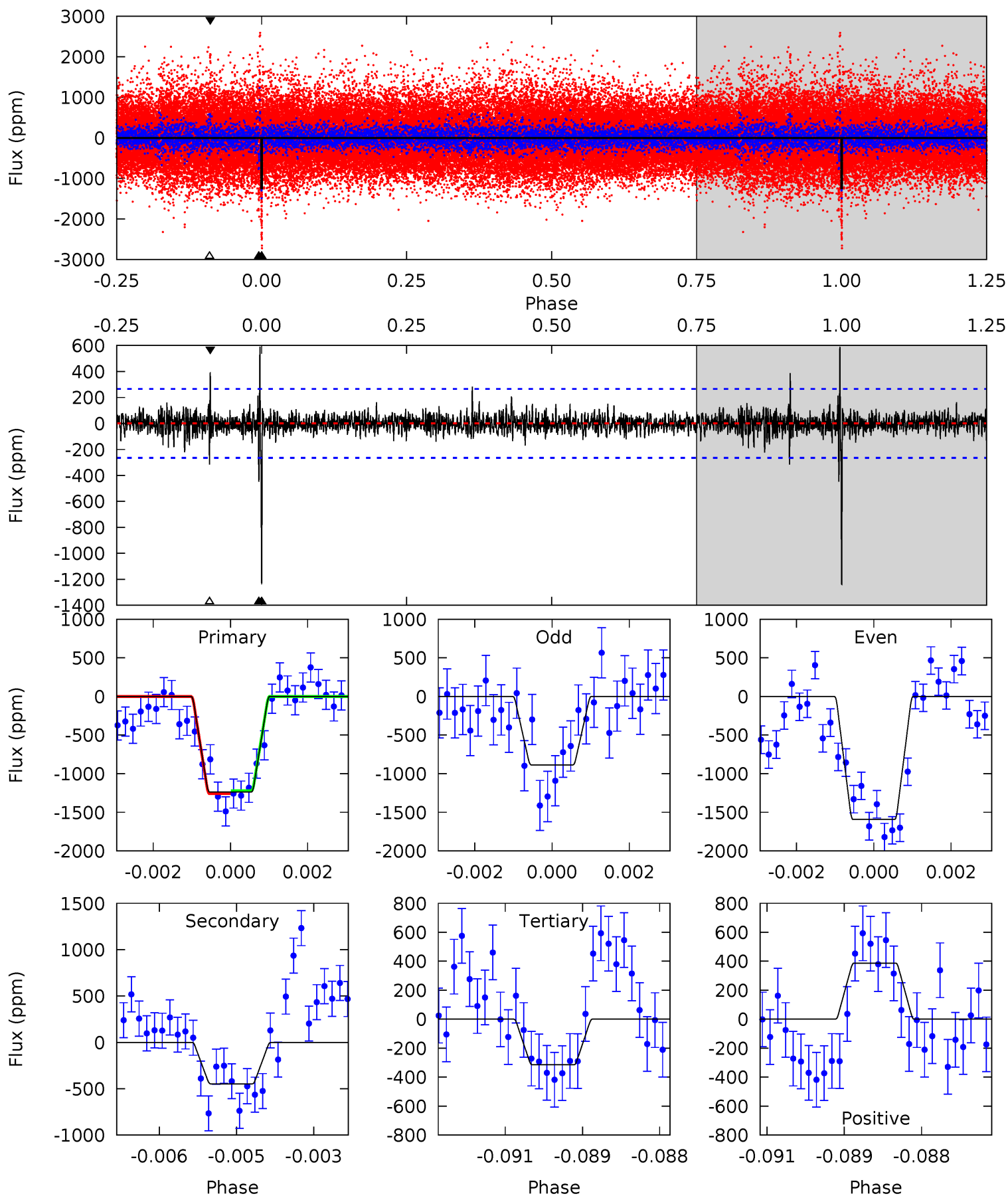
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	19.0	17.8	18.4	5.30	3.05	3.27	13.1	12.5	1.26	0.60	4.20	0.90	0.37	2.28



Alt Model-Shift Uniqueness Test

008308888-01, P = 368.696345 Days, E = 233.881278 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	9.06	6.38	7.84	5.37	3.16	1.08	18.7	17.3	2.68	1.22	7.19	0.94	0.32	0.39



Stellar Parameters For KIC 008308888

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5510^{+166}_{-166}	$4.578^{+0.036}_{-0.144}$	$-0.120^{+0.300}_{-0.300}$	$0.807^{+0.176}_{-0.070}$	$0.904^{+0.083}_{-0.102}$	$2.424^{+0.464}_{-1.045}$
	+3%/-3%	+1%/-3%	+250%/-250%	+22%/-9%	+9%/-11%	+19%/-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 008308888-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-858 ± 45	$5.47^{+3.90}_{-3.16}$	315^{+17}_{-14}	4107^{+1805}_{-659}	14830^{+65768}_{-9821}
Alt.	-447 ± 49	$4.05^{+3.71}_{-2.73}$	316^{+16}_{-13}	4067^{+2584}_{-769}	$13808^{+115868}_{-10045}$

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

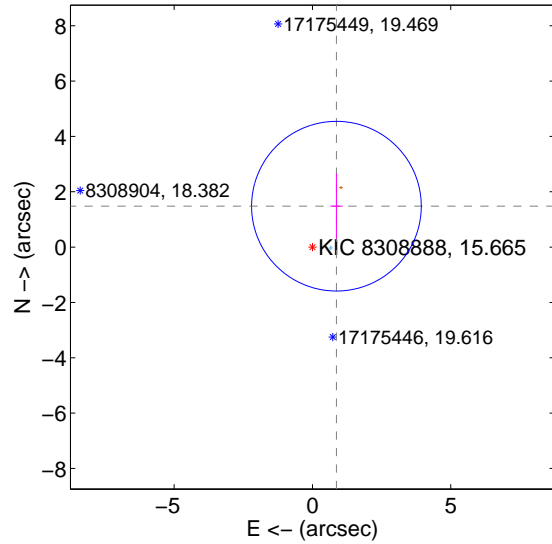
Supplemental centroid analysis for 008308888-01. Kepler magnitude: 15.66. Transit SNR 12.19

There are 1 quarters with good PRF difference image offsets

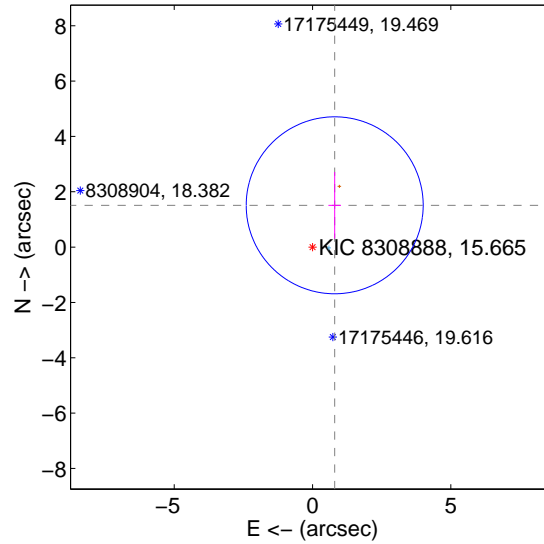
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.714 ± 1.022	1.68	-0.867 ± 0.224	1.479 ± 1.177
PRF-fit source offset from KIC position	1.710 ± 1.066	1.60	-0.802 ± 0.227	1.511 ± 1.201
photometric centroid source offset	2.25 ± 1.68	1.34	-2.20 ± 1.66	-0.48 ± 2.02

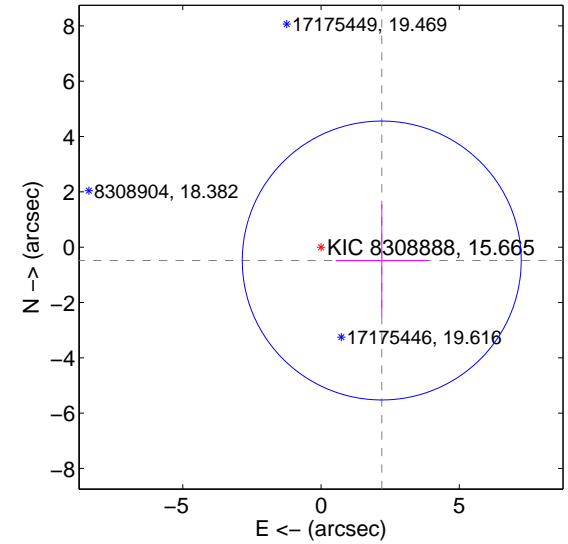
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

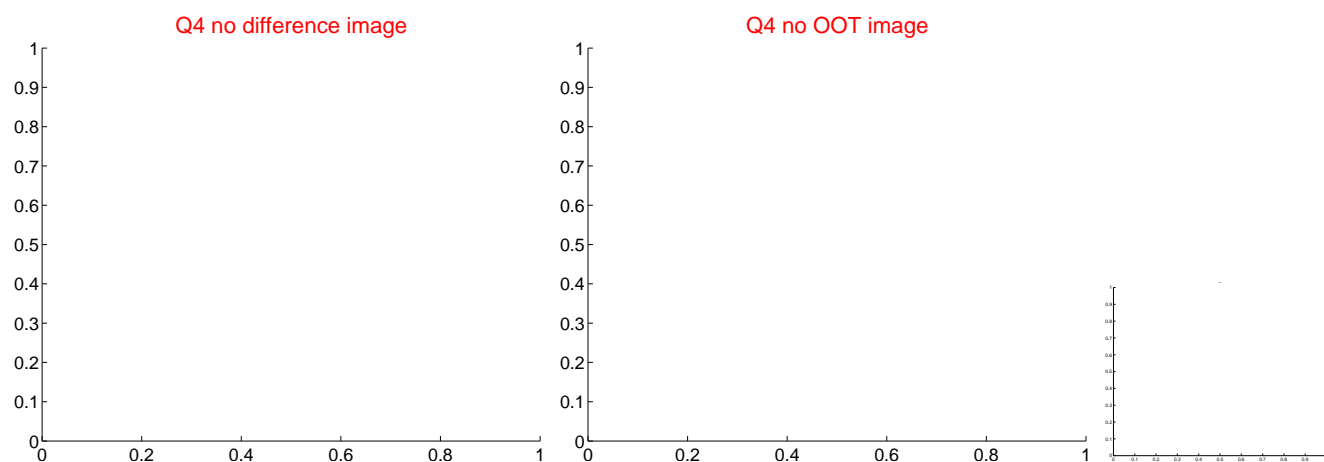
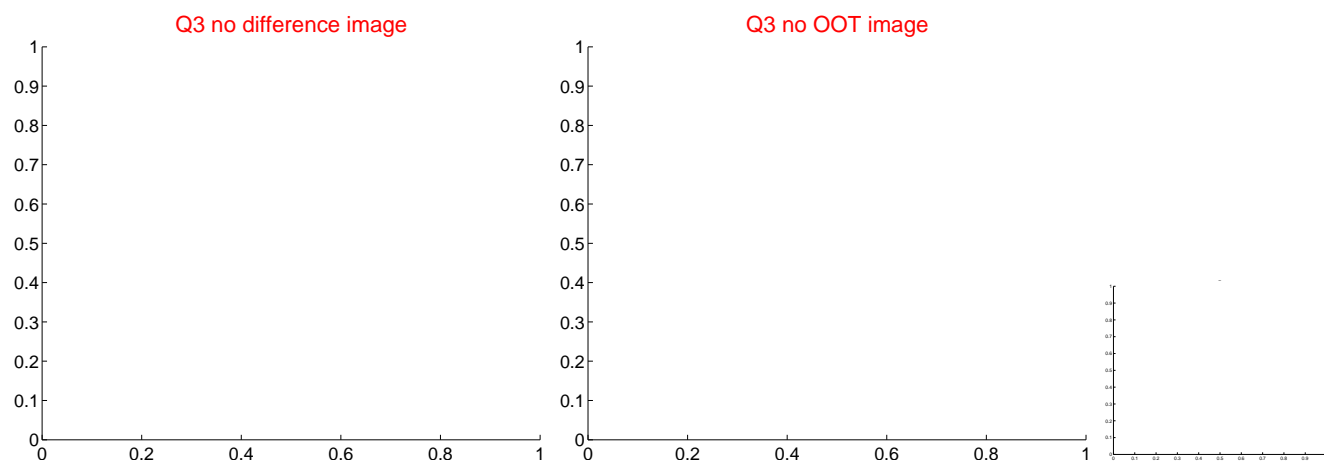
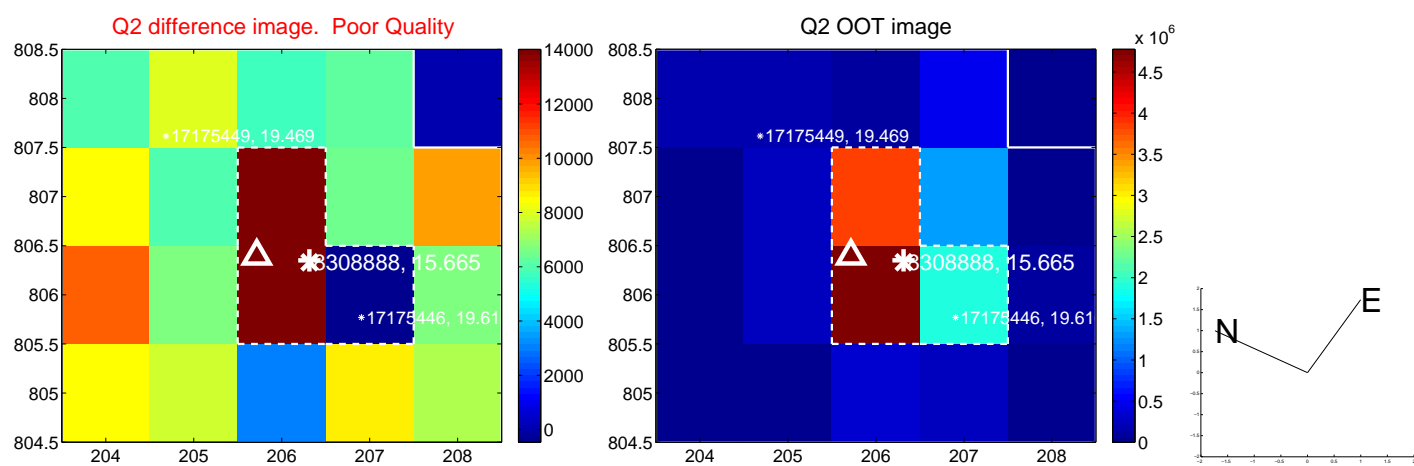
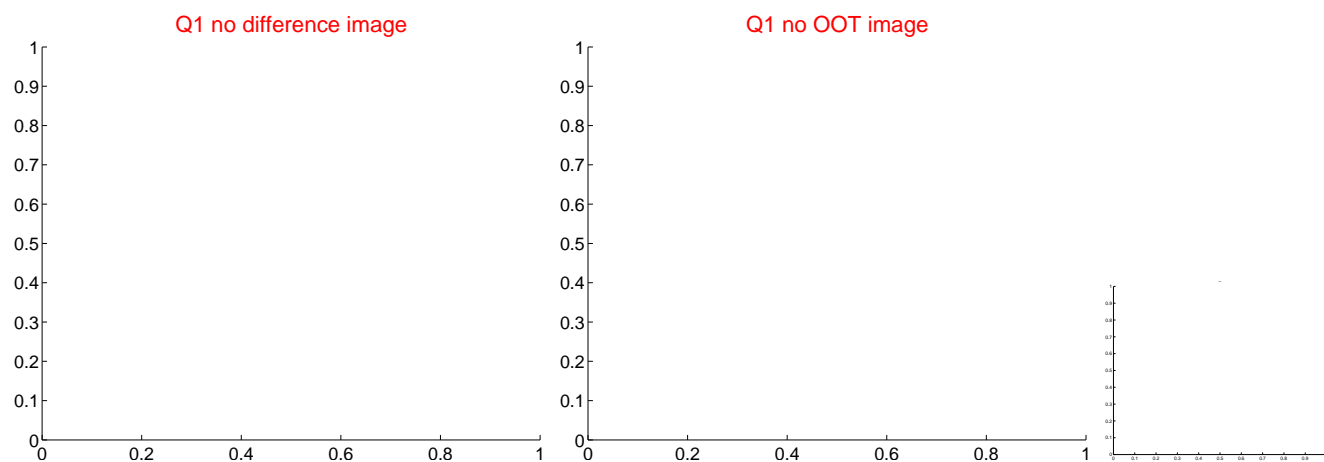


offset from photometric centroids

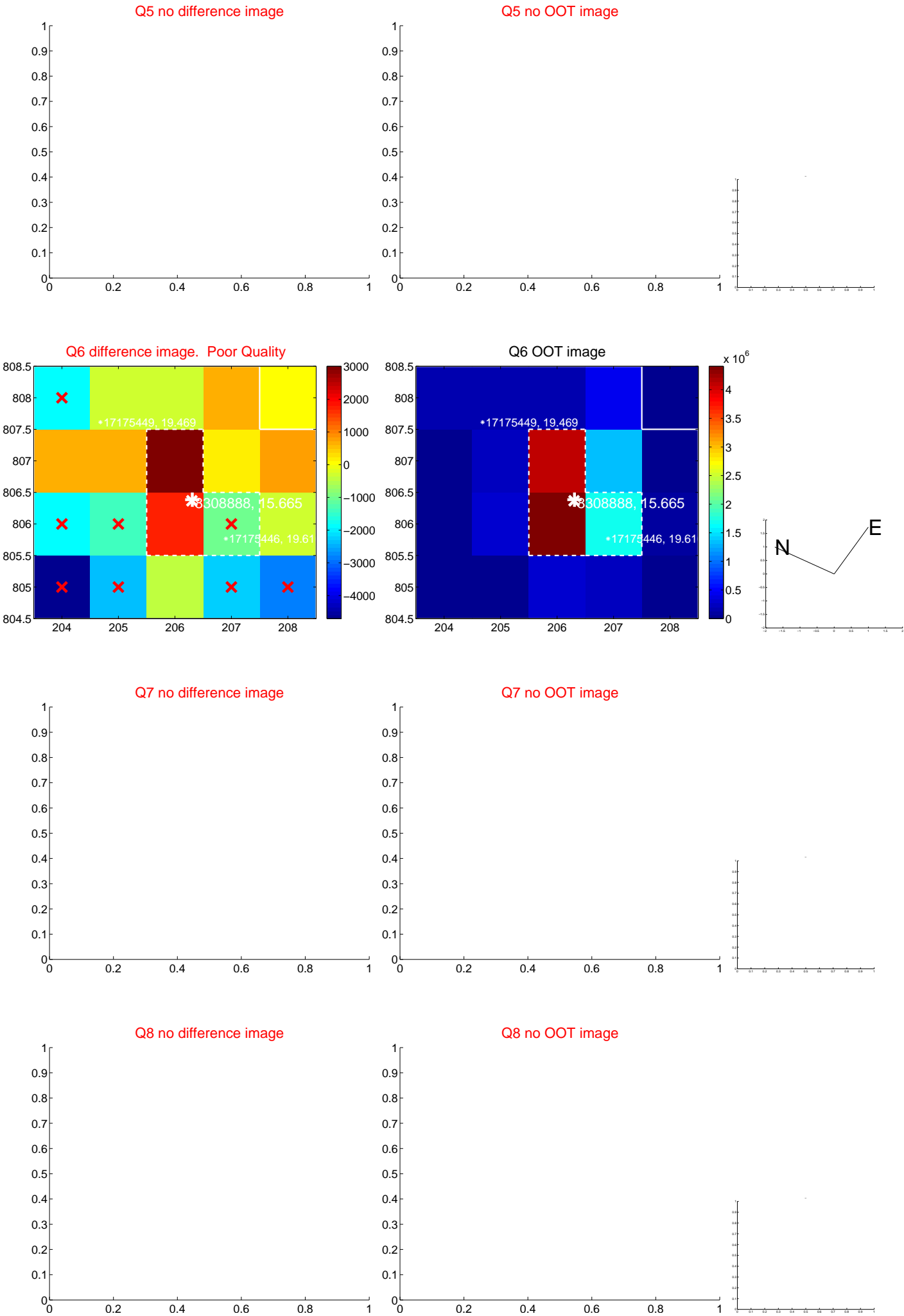


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



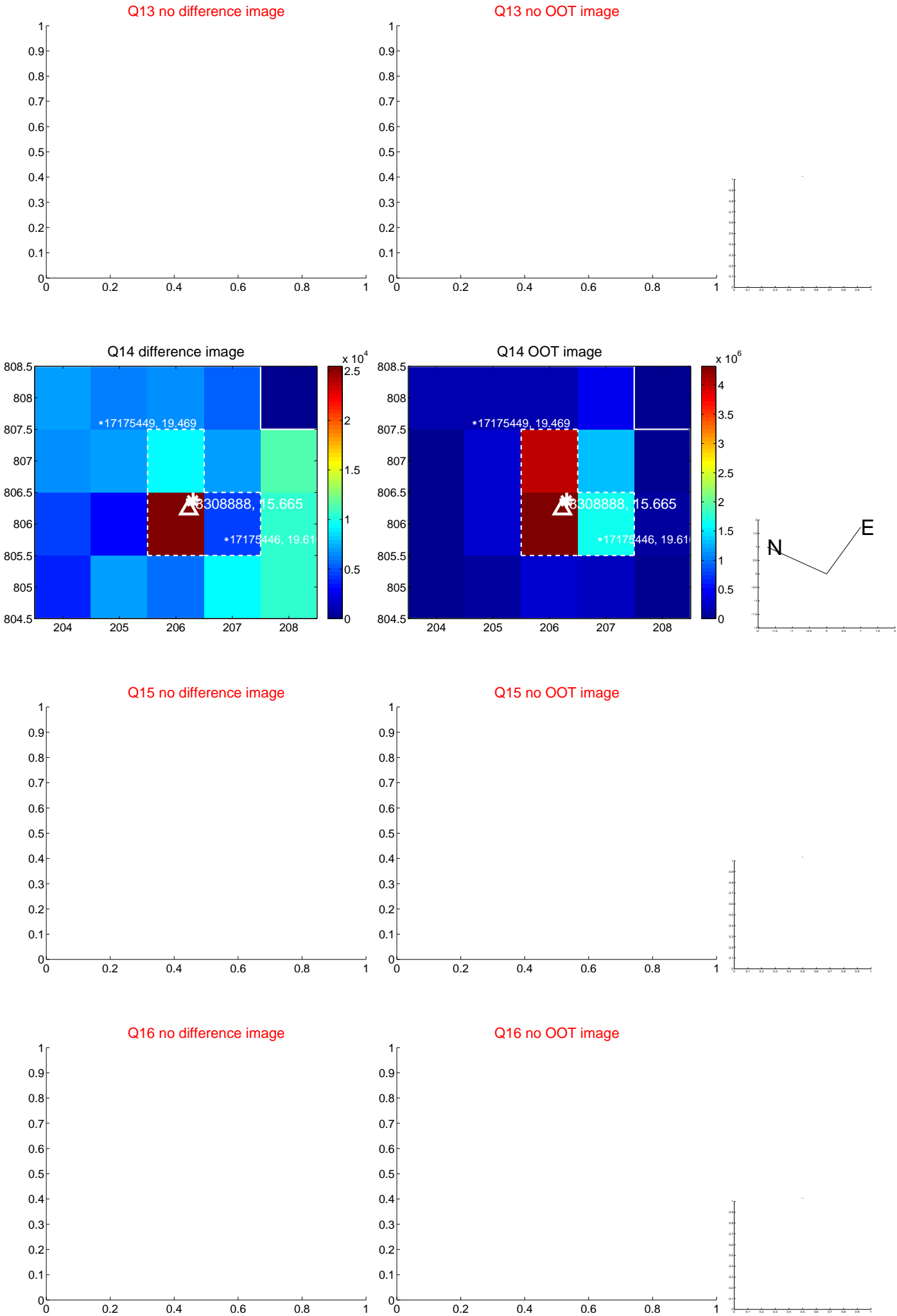
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



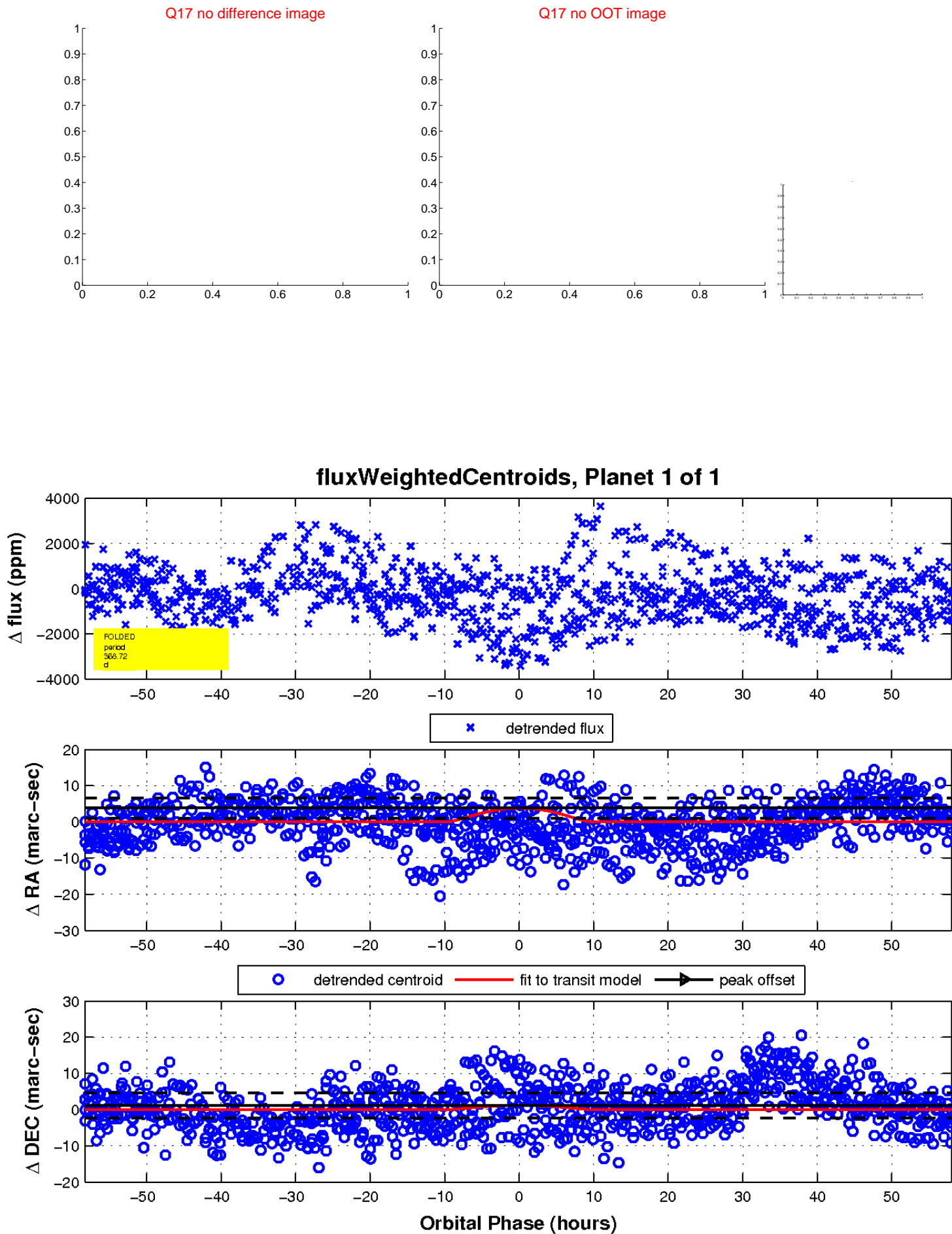
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

