

KIC 003103684

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})
003103684-01	OBS	No	366.986340	373.636185	1131.8	10.409	8.2	8.2	0.77	5494	2.83	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003103684-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—MOD_NONUNIQ_ALT—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.

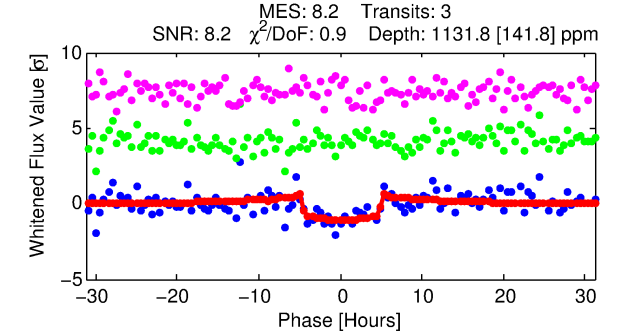
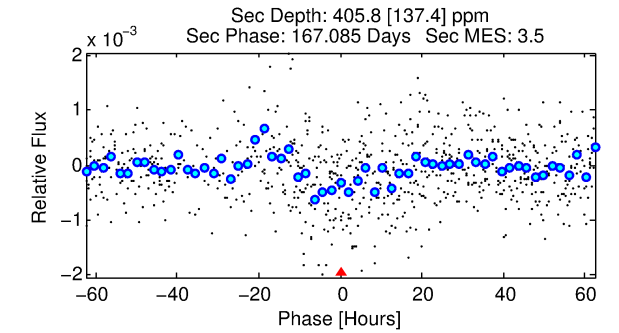
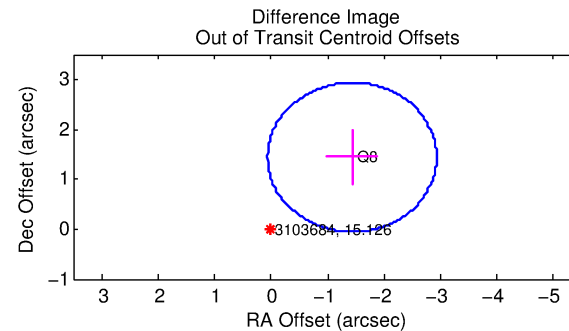
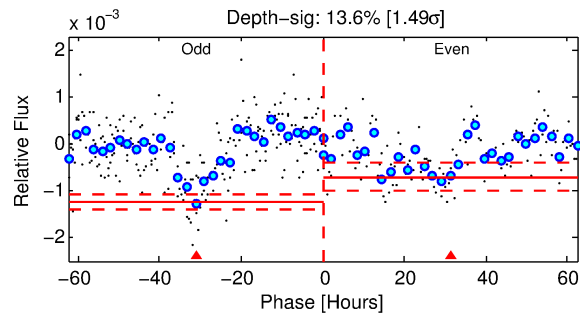
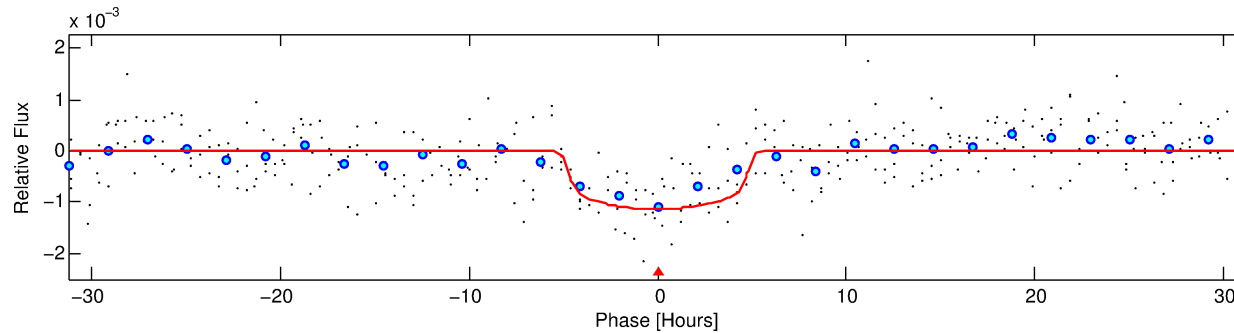
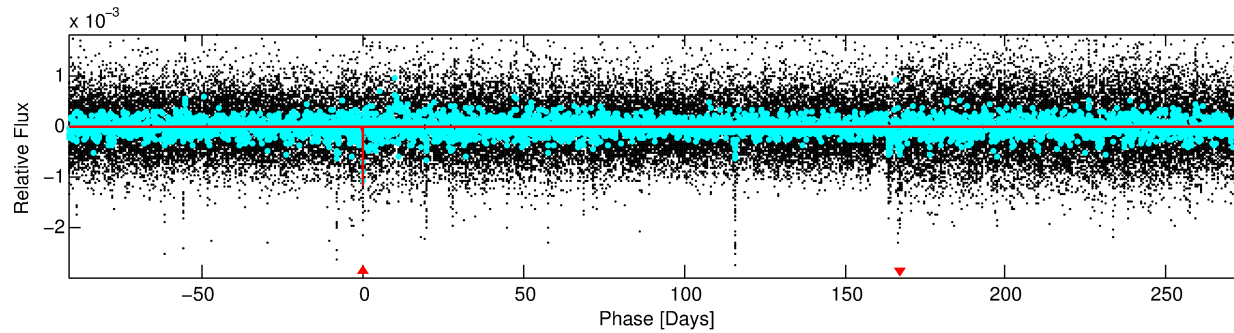
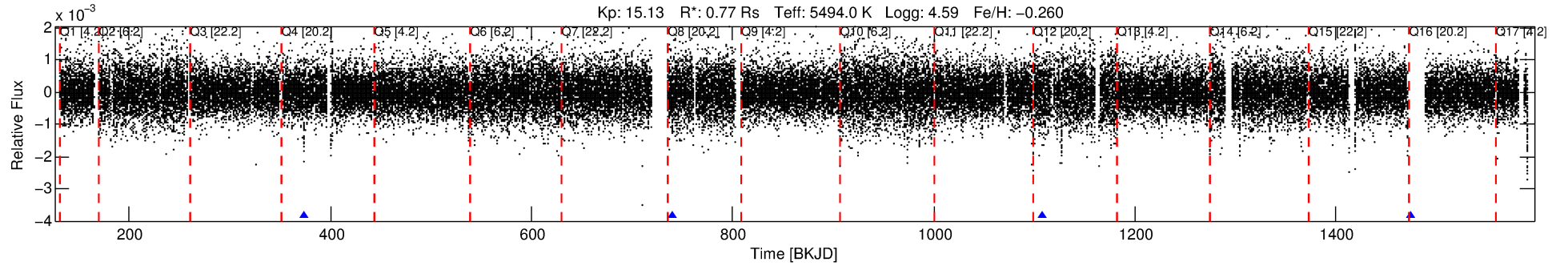
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003103684-01

No Significant Match Found

DV One-Page Summary

KIC: 3103684 Candidate: 1 of 1 Period: 366.986 d



DV Fit Results:

Period = 366.98634 [0.00898] d
Epoch = 373.6362 [0.0100] BKJD
Rp/R* = 0.0337 [0.0053]
a/R* = 187.83 [111.58]
b = 0.76 [0.32]
Seff = 0.54 [0.14]
Teq = 218 [14] K
Rp = 2.83 [0.71] Re
a = 0.9502 [0.1559] AU
Ag = 25105.02 [13021.05] [1.93 σ]
Teffp = 4249 [507] K [7.95 σ]

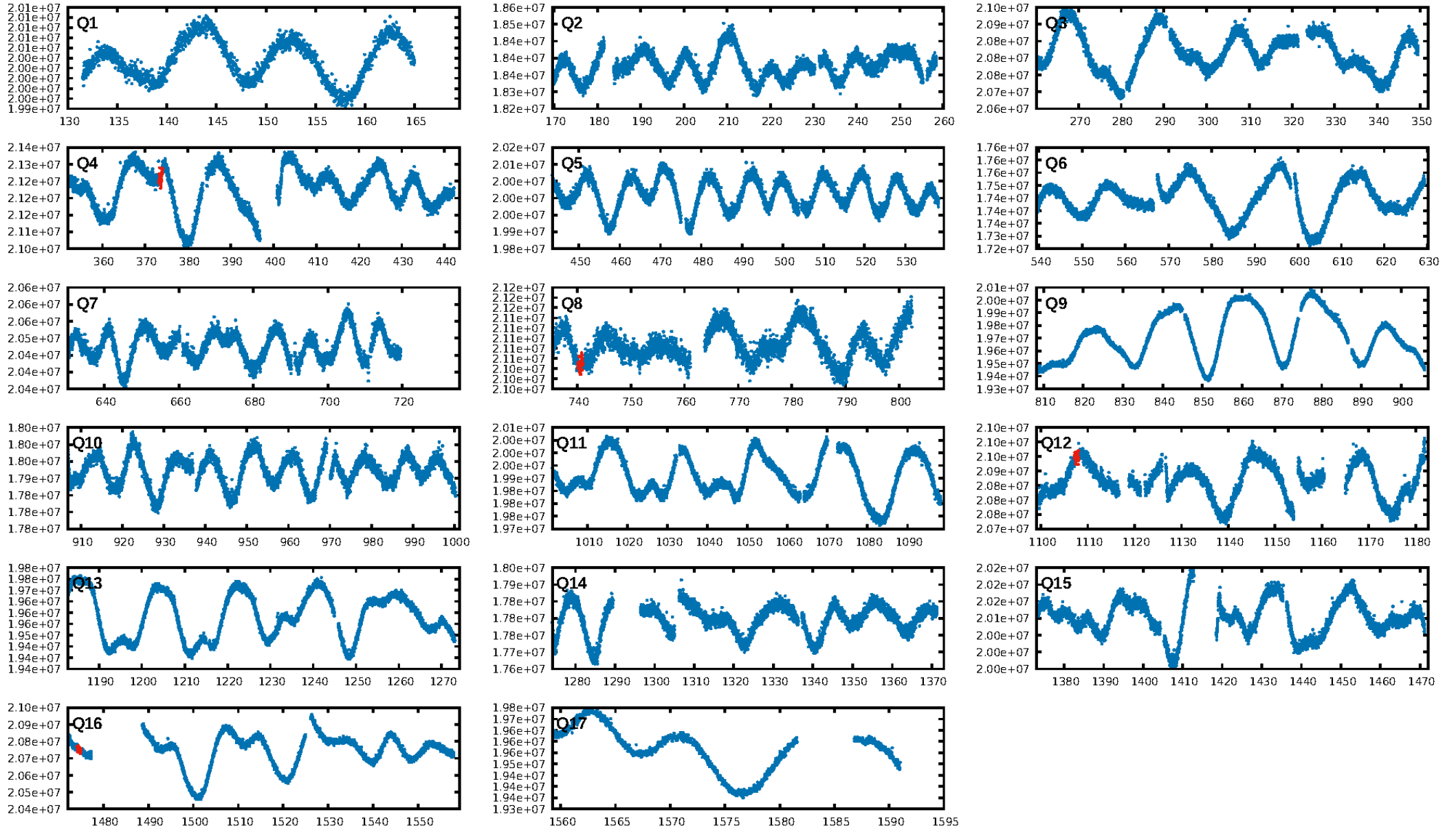
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.47e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3018
Centroid-sig: 3.8%
Centroid-so: 1.775 arcsec [1.55 σ]
OotOffset-rm: 2.030 arcsec [4.08 σ]
KicOffset-rm: 2.022 arcsec [3.98 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

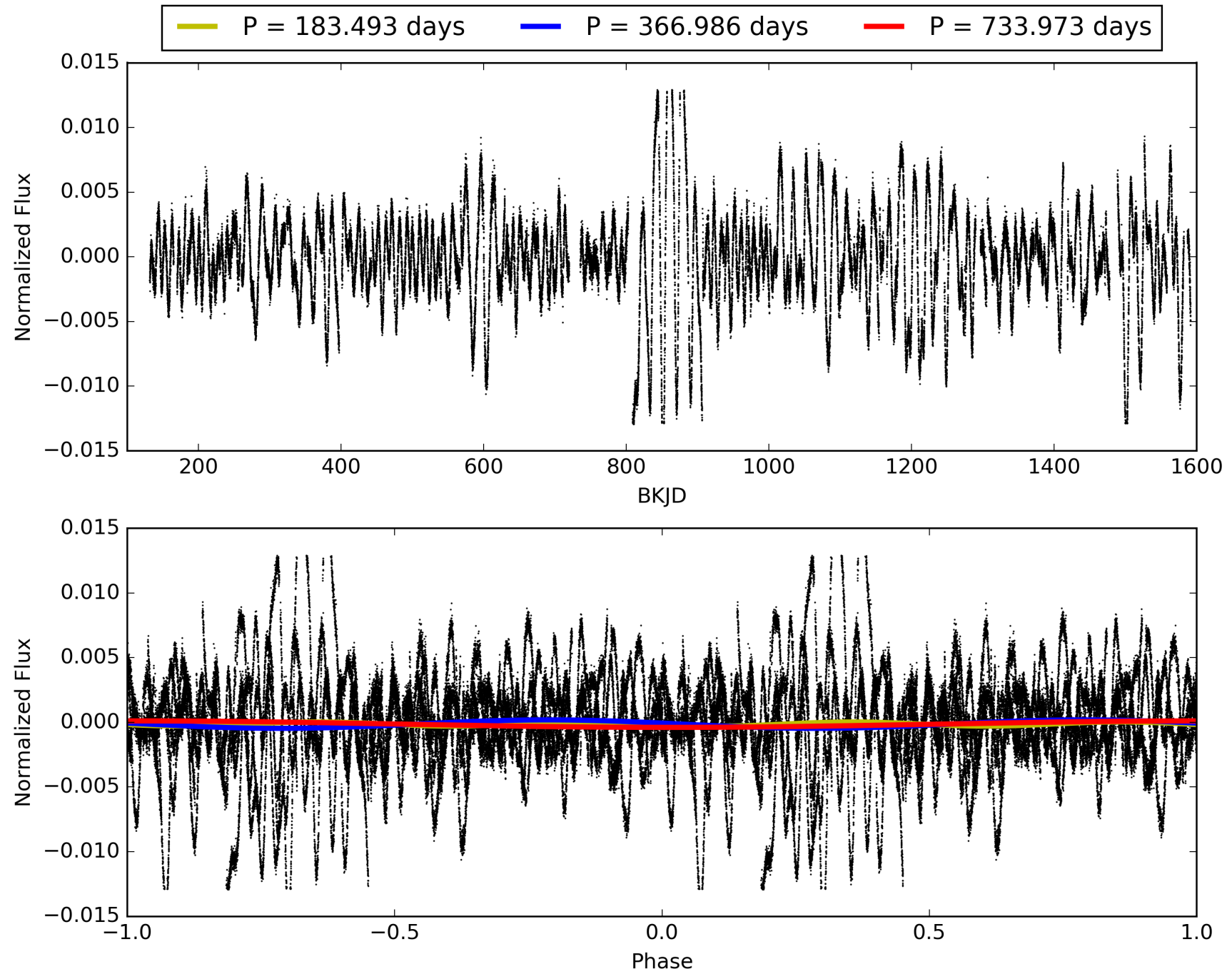
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:19:38 Z

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

TCE 003103684-01, PDC Light Curves

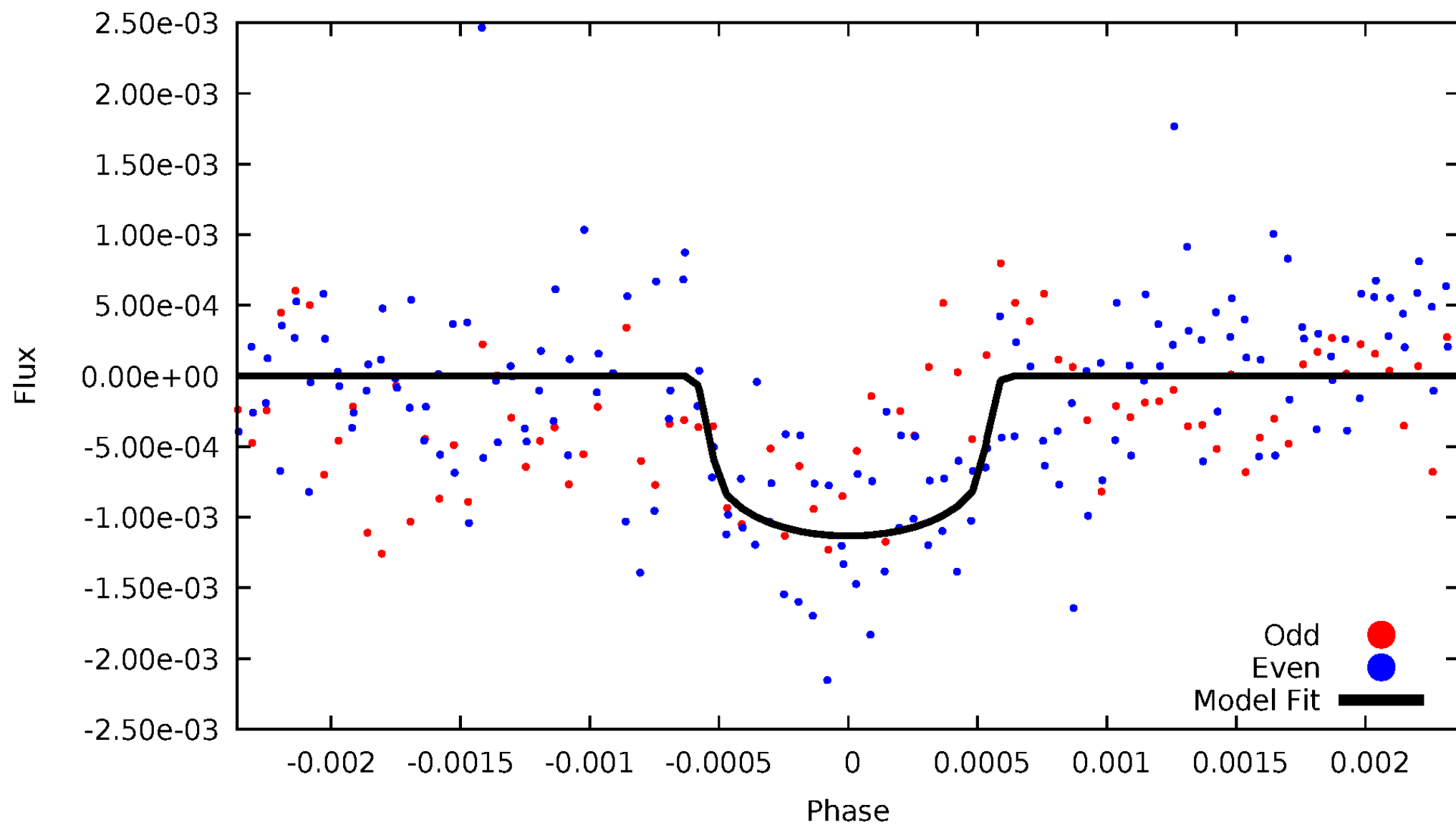


TCE 003103684-01



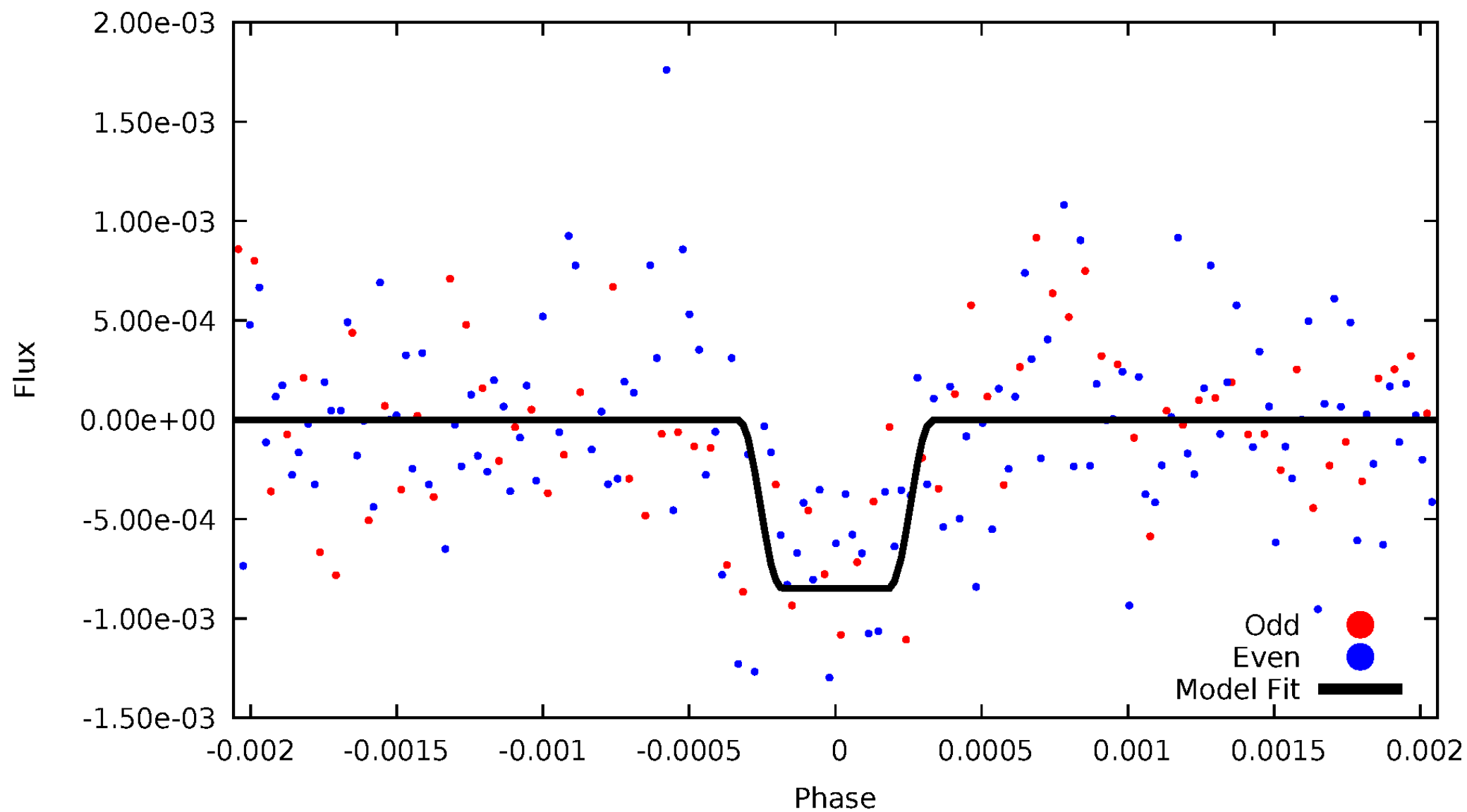
DV Odd/Even

TCE 003103684-01



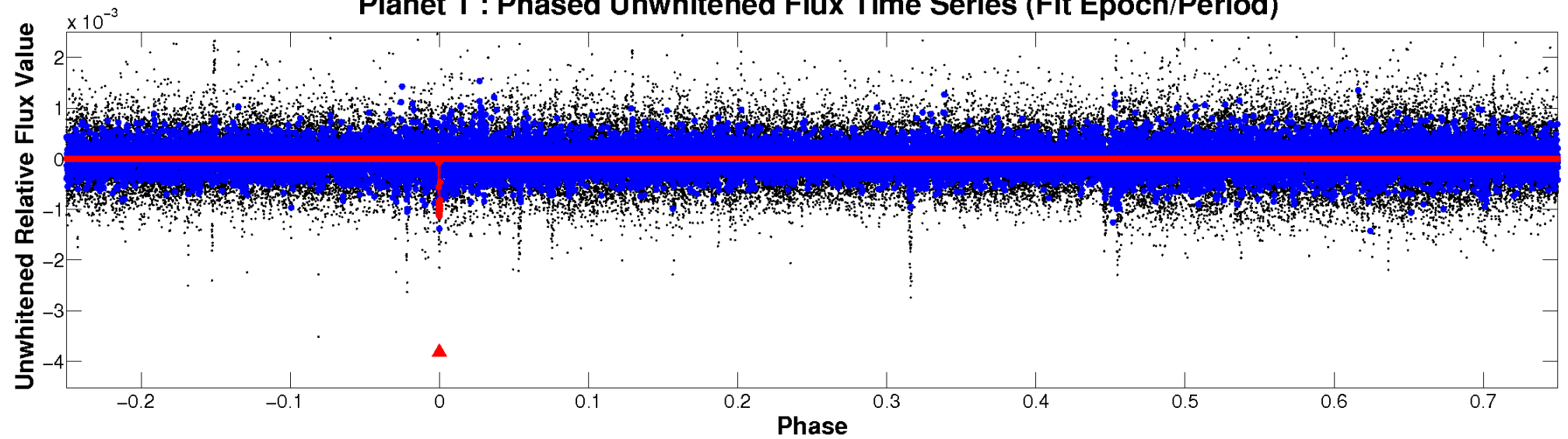
ALT Odd/Even

TCE 003103684-01

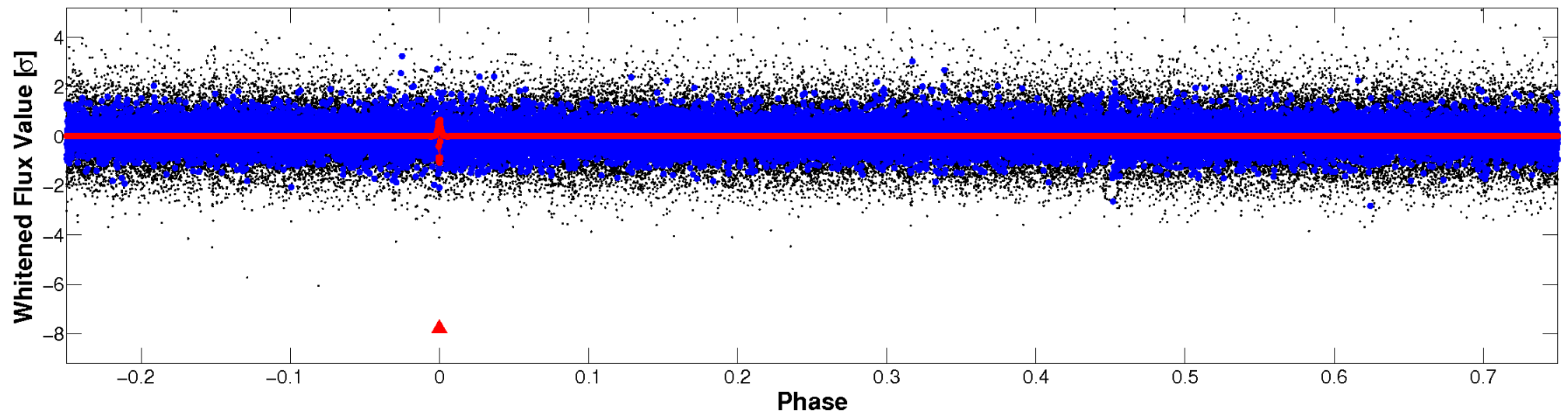


Non-Whitened Vs. Whitened Light Curve

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



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



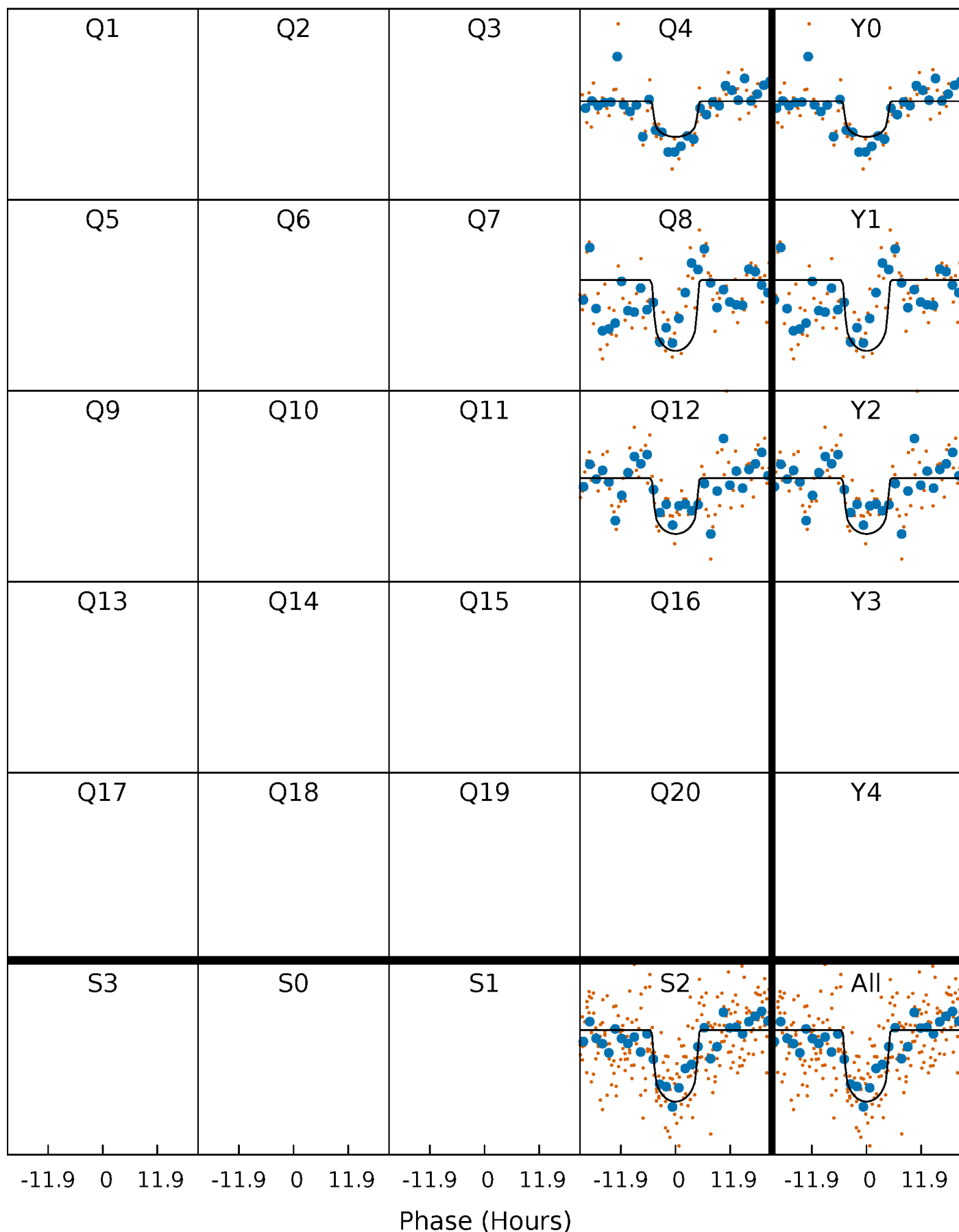
PDC Quarter-Phased Transit Curves

TCE 003103684-01 P=366.986340 Days $T_0=373.636185$ (BKJD)



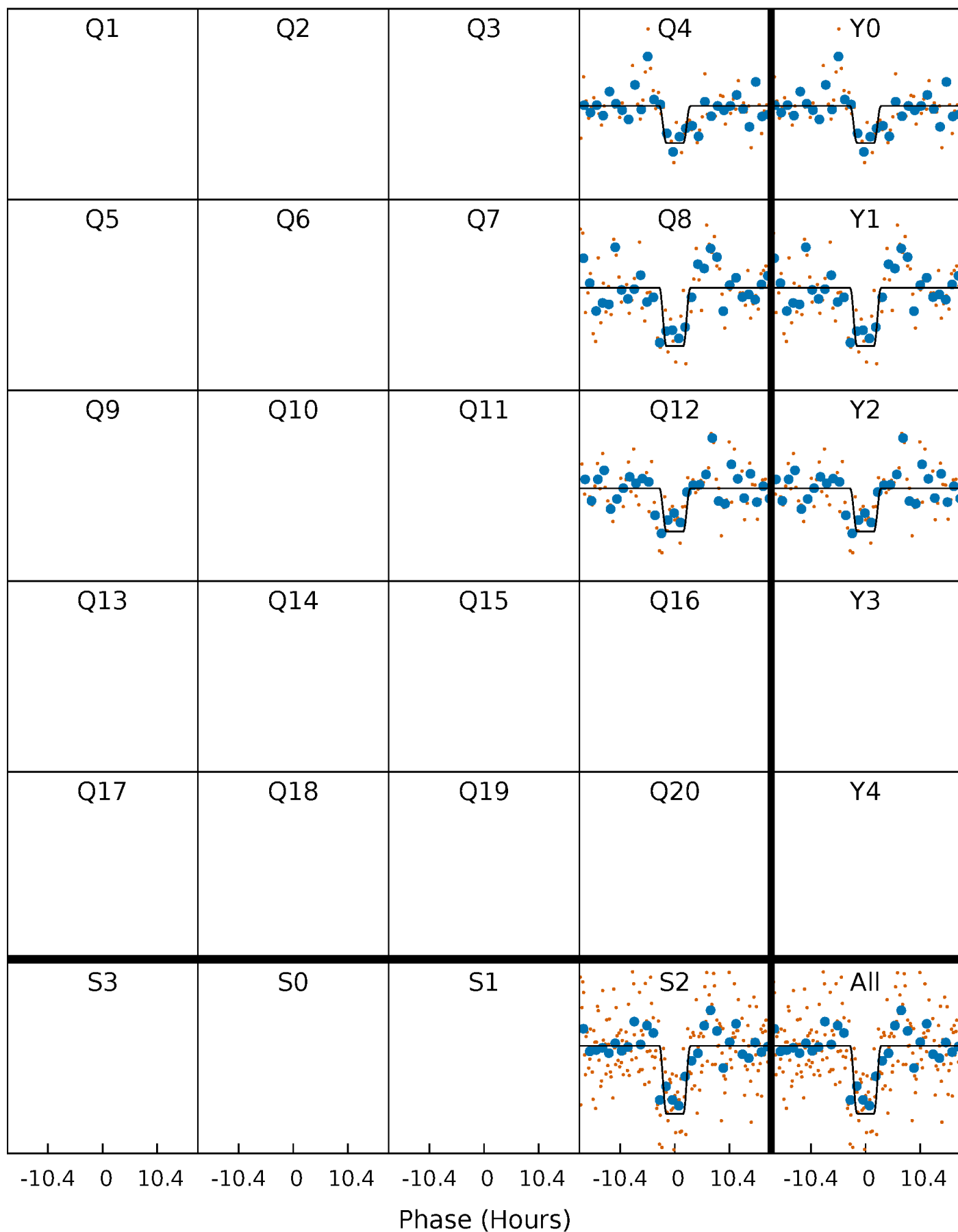
DV Quarter-Phased Transit Curves

TCE 003103684-01 P=366.986340 Days $T_0=373.636185$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

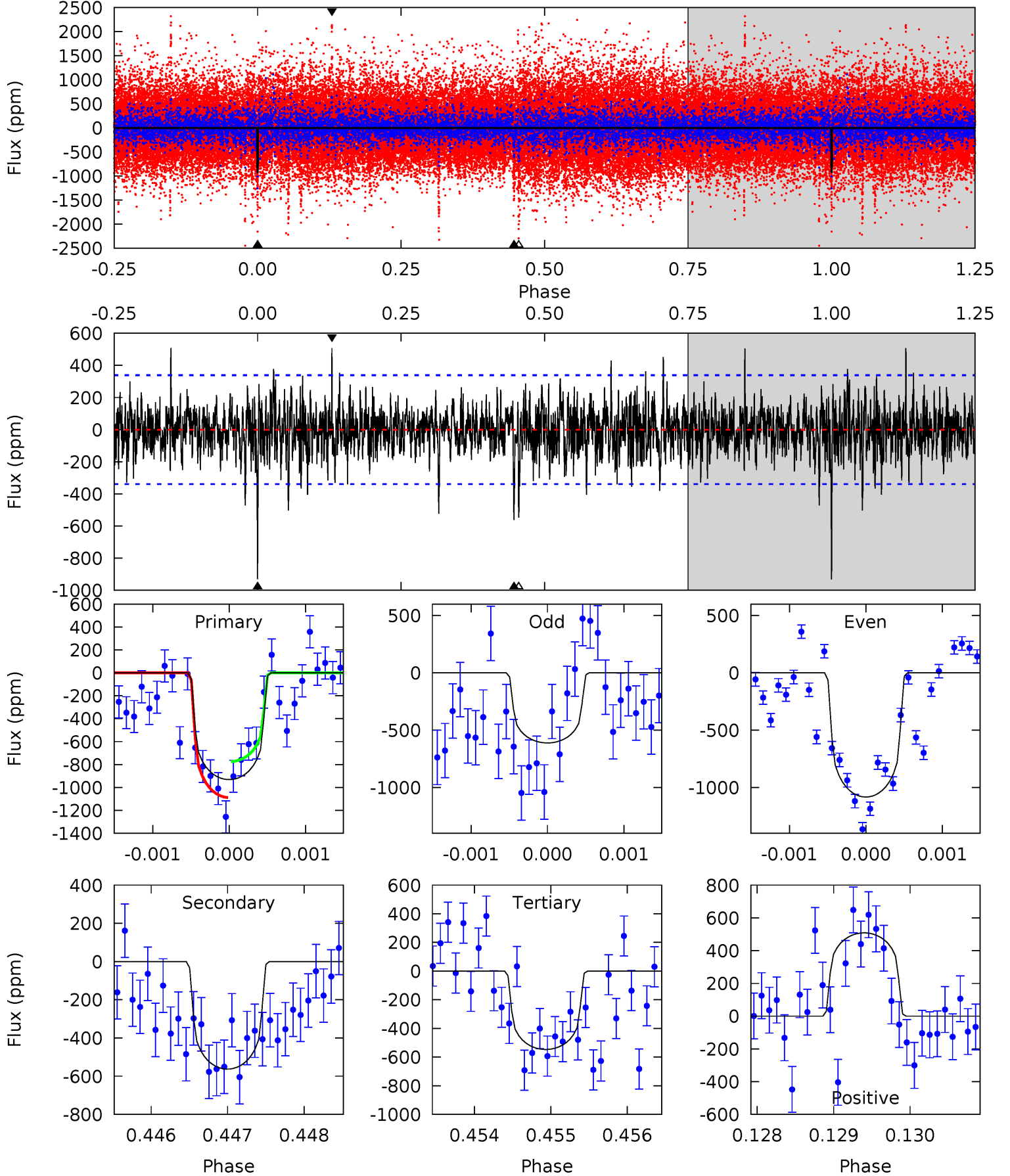
TCE 003103684-01 P=366.973115 Days $T_0=373.613796$ (BKJD)



DV Model-Shift Uniqueness Test

003103684-01, P = 366.986340 Days, E = 6.649845 Days

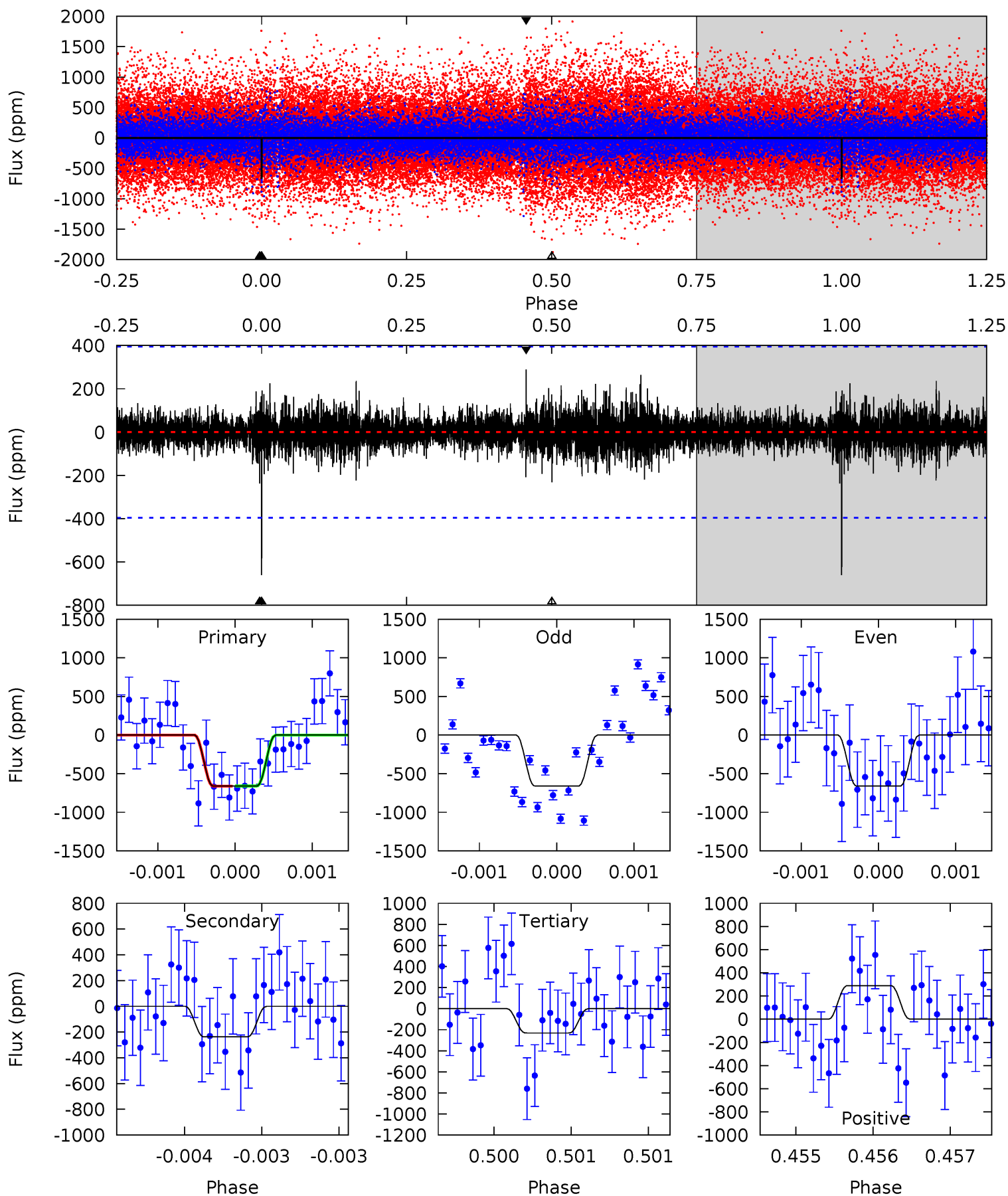
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	9.01	8.75	8.14	5.42	3.25	1.86	6.16	6.77	0.26	0.87	3.54	1.29	0.35	2.51



Alt Model-Shift Uniqueness Test

003103684-01, P = 366.973115 Days, E = 6.640681 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.23	3.32	3.23	4.04	5.53	3.42	0.71	6.00	5.19	0.09	-0.72	0.00	1.00	0.30	0.01



Stellar Parameters For KIC 003103684

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5494^{+149}_{-166}	$4.593^{+0.032}_{-0.128}$	$-0.260^{+0.300}_{-0.300}$	$0.771^{+0.152}_{-0.065}$	$0.857^{+0.083}_{-0.092}$	$2.631^{+0.465}_{-1.019}$
	+3%/-3%	+1%/-3%	+115%/-115%	+20%/-8%	+10%/-11%	+18%/-39%
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 003103684-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-563 ± 62	$2.95^{+0.52}_{-0.50}$	309^{+16}_{-12}	4688^{+394}_{-285}	31671^{+14893}_{-9190}
Alt.	-237 ± 72	$2.55^{+0.49}_{-0.49}$	310^{+14}_{-13}	4197^{+433}_{-343}	17709^{+11064}_{-6951}

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

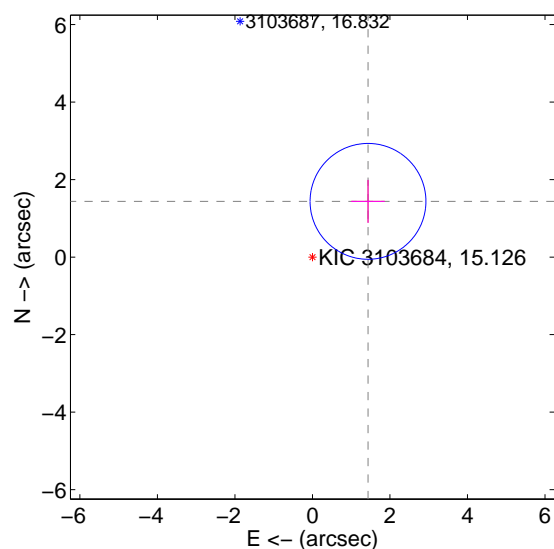
Supplemental centroid analysis for 003103684-01. Kepler magnitude: 15.13. Transit SNR 8.16

There are 0 quarters with good PRF difference image offsets

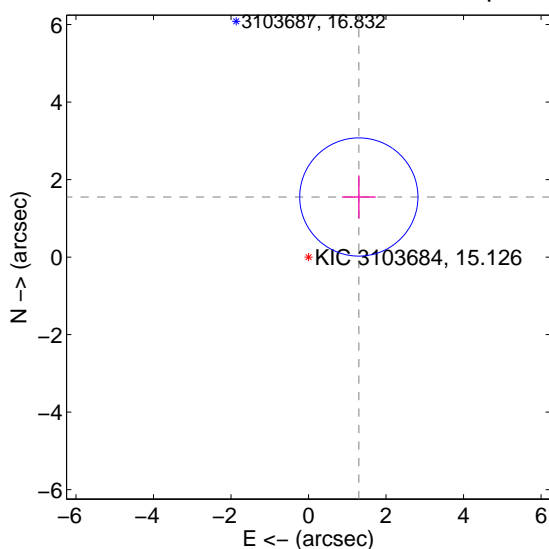
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.030 ± 0.498	4.08	-1.433 ± 0.434	1.438 ± 0.555
PRF-fit source offset from KIC position	2.022 ± 0.508	3.98	-1.298 ± 0.434	1.551 ± 0.555
photometric centroid source offset	1.78 ± 1.14	1.55	1.36 ± 1.09	-1.14 ± 1.21

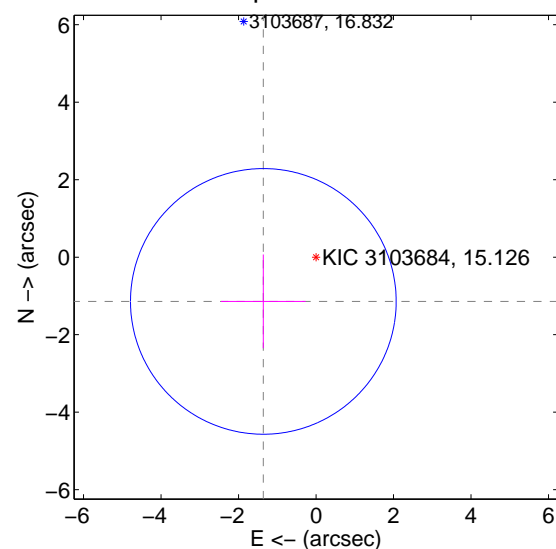
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

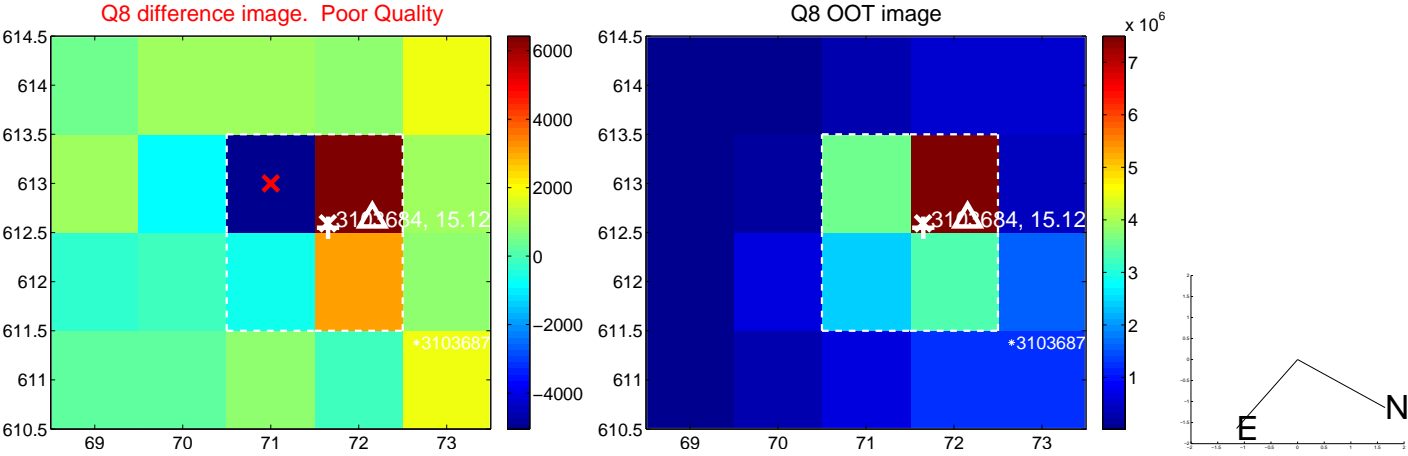
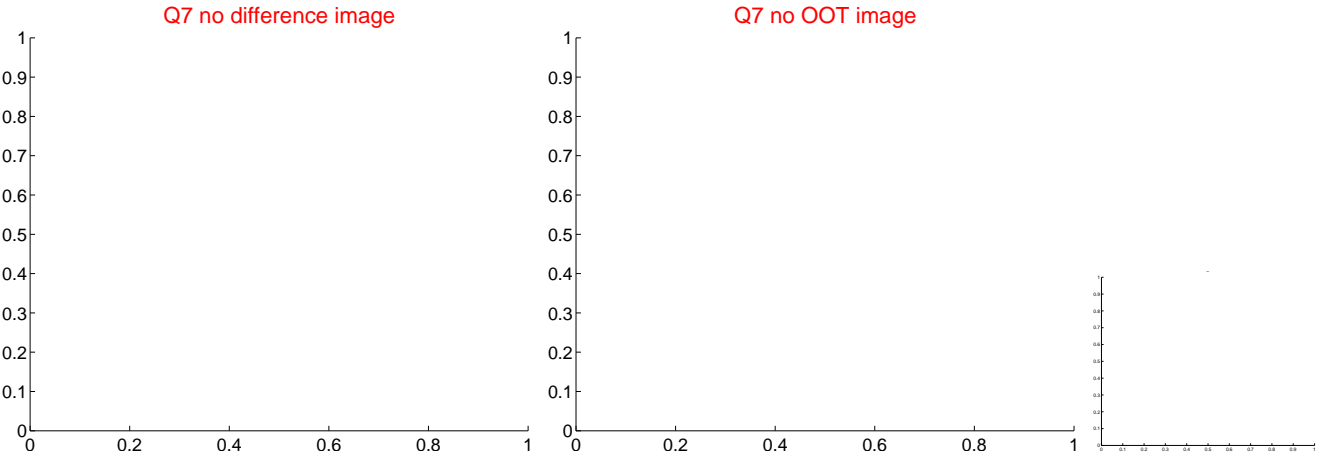
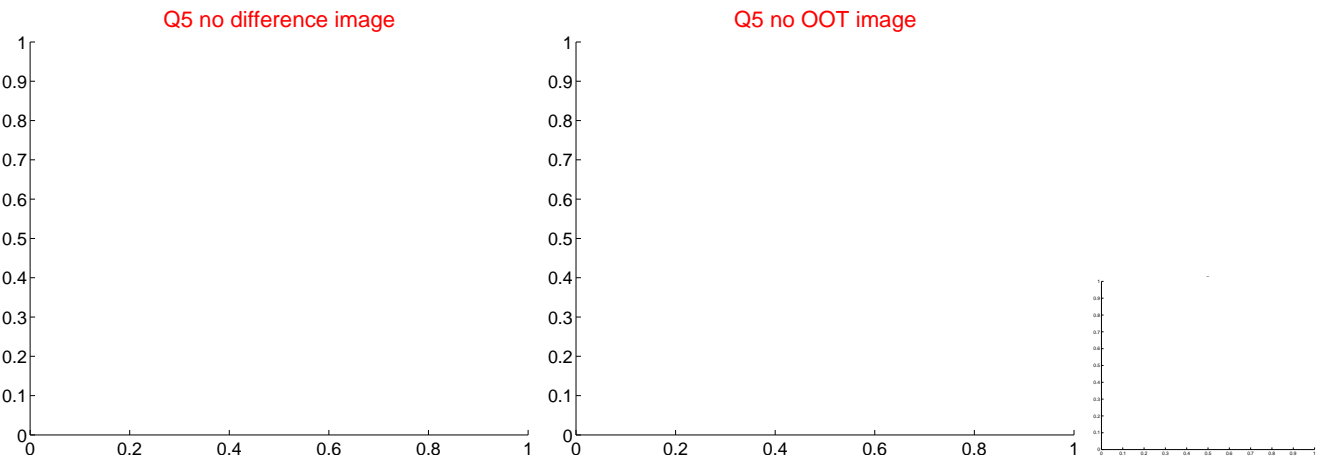


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

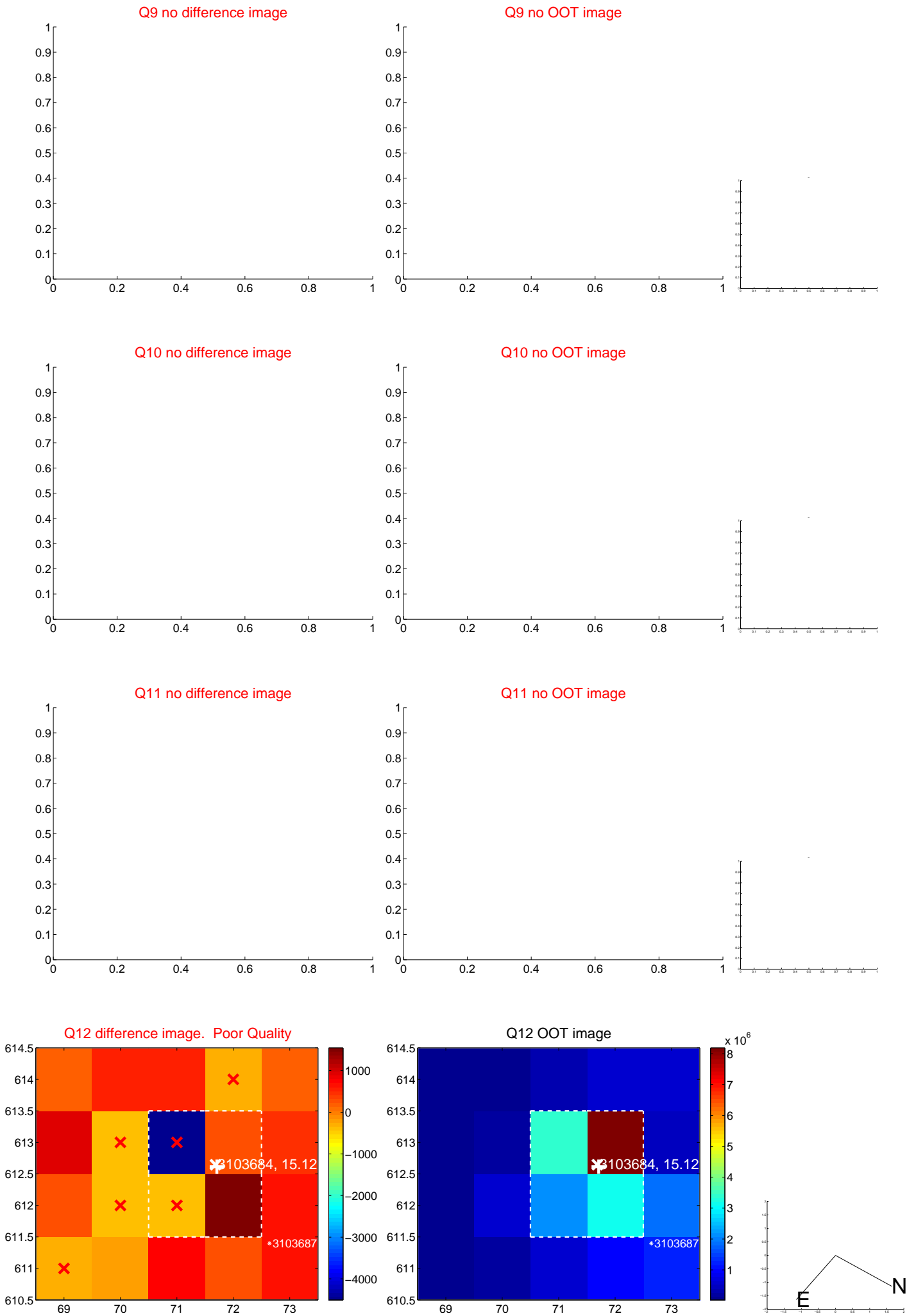
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



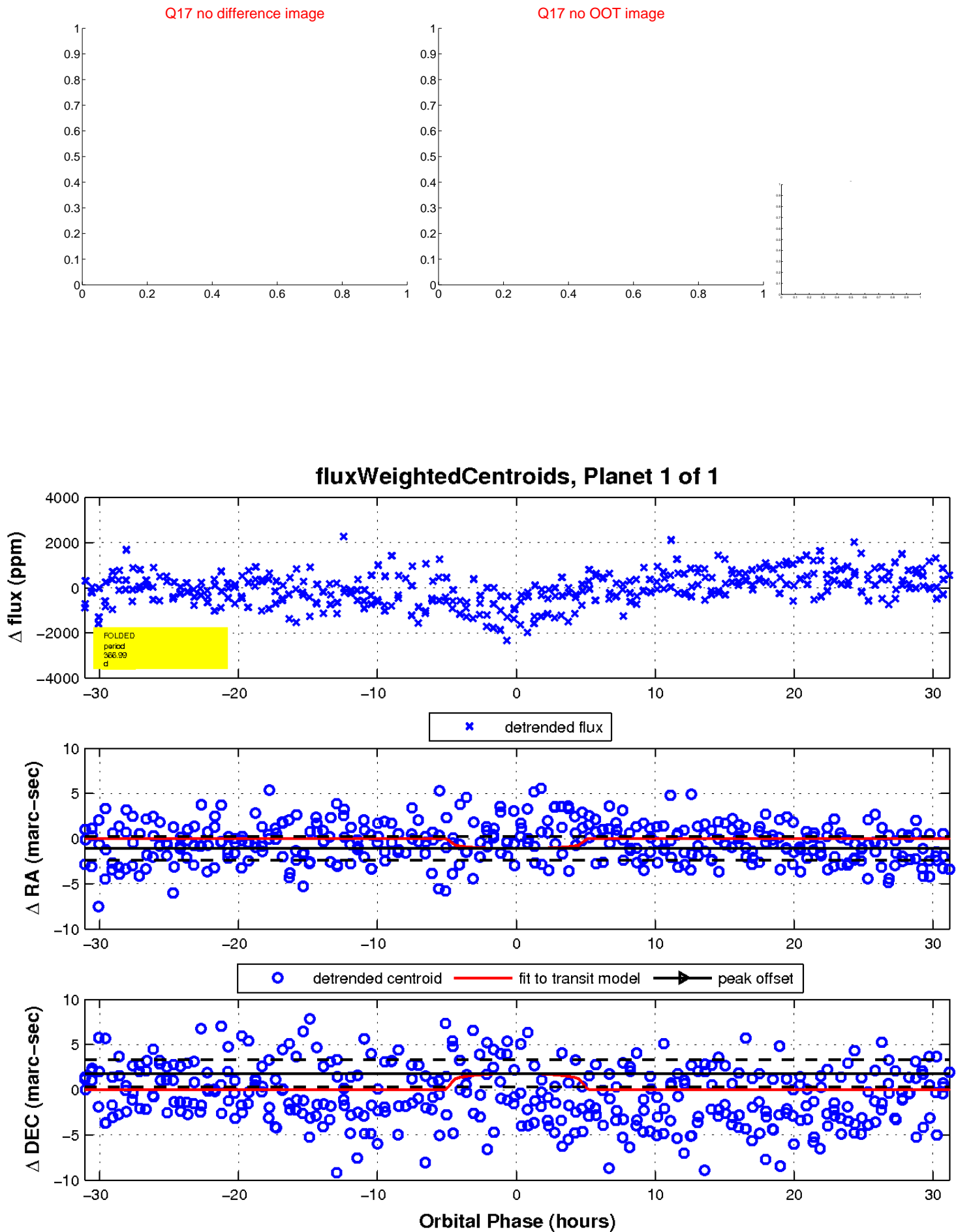
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

