

KIC 004844804

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})
004844804-01	OBS	No	681.139337	143.802301	1041.8	18.900	9.5	5.2	0.56	3958	3.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004844804-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

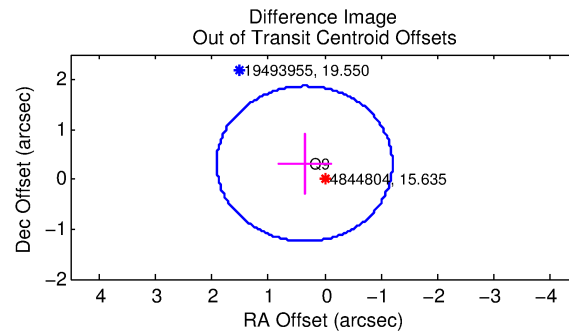
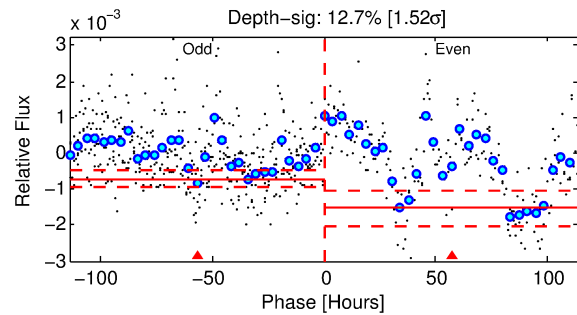
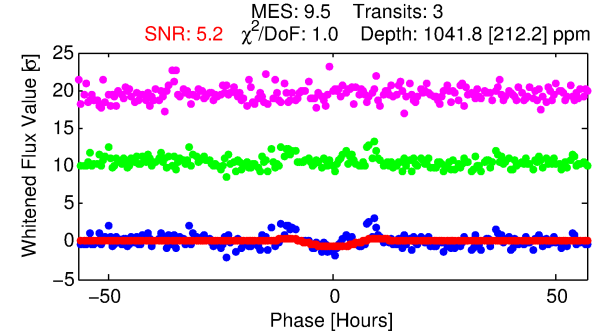
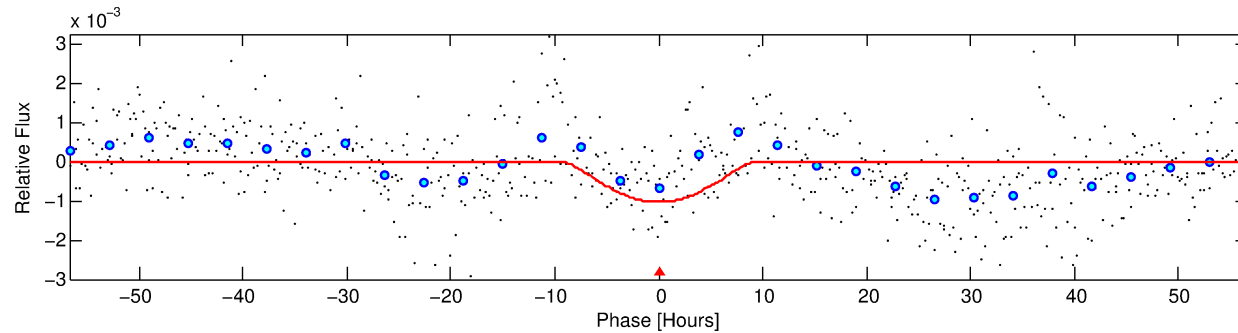
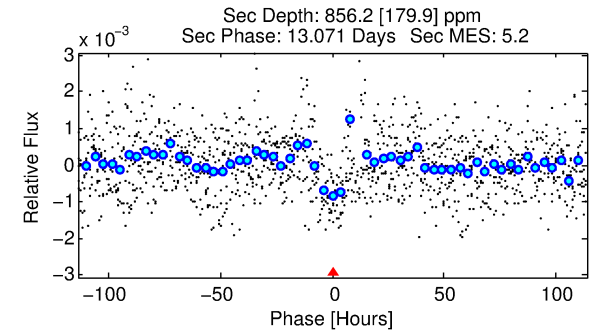
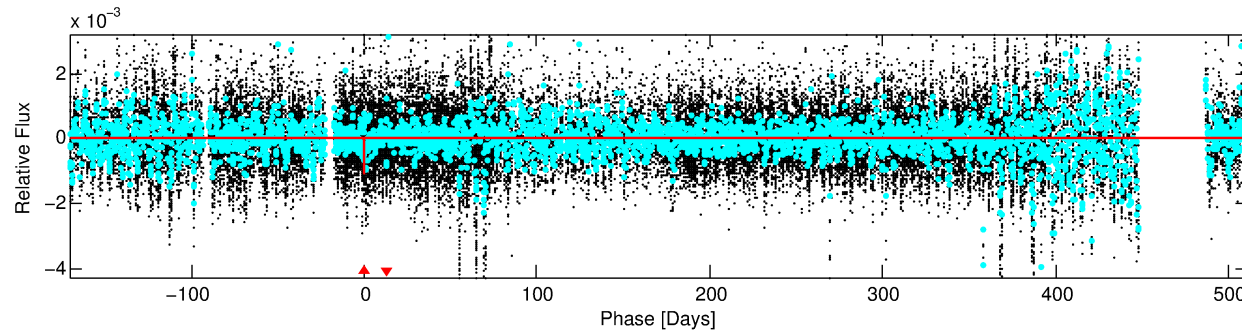
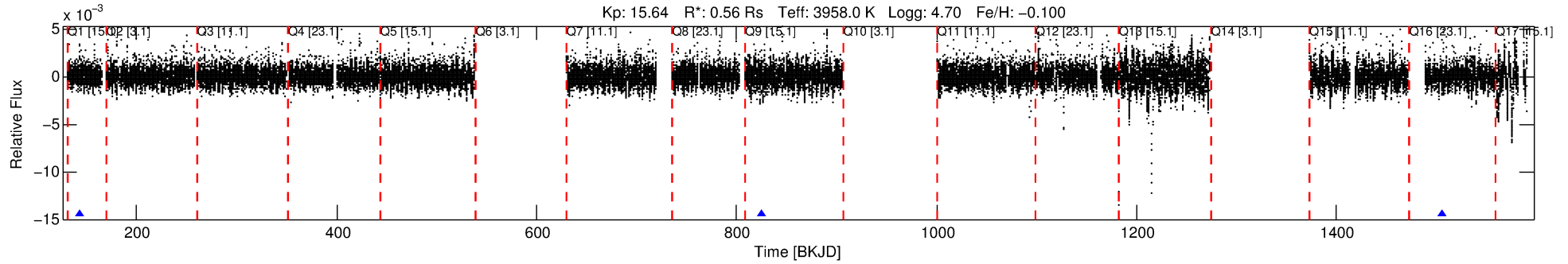
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004844804-01

No Significant Match Found

DV One-Page Summary

KIC: 4844804 Candidate: 1 of 1 Period: 681.139 d



DV Fit Results:

Period = 681.13934 [0.03702] d
Epoch = 143.8023 [0.0477] BKJD
Rp/R* = 0.0530 [0.1765]
a/R* = 98.06 [88.21]
b = 0.99 [0.28]
Seff = 0.04 [0.00]
Teq = 116 [3] K
Rp = 3.22 [10.75] Re
a = 1.2539 [0.0679] AU
Ag = 71230.44 [475072.09] [0.15σ]
Teffp = 2942 [4906] K [0.58σ]

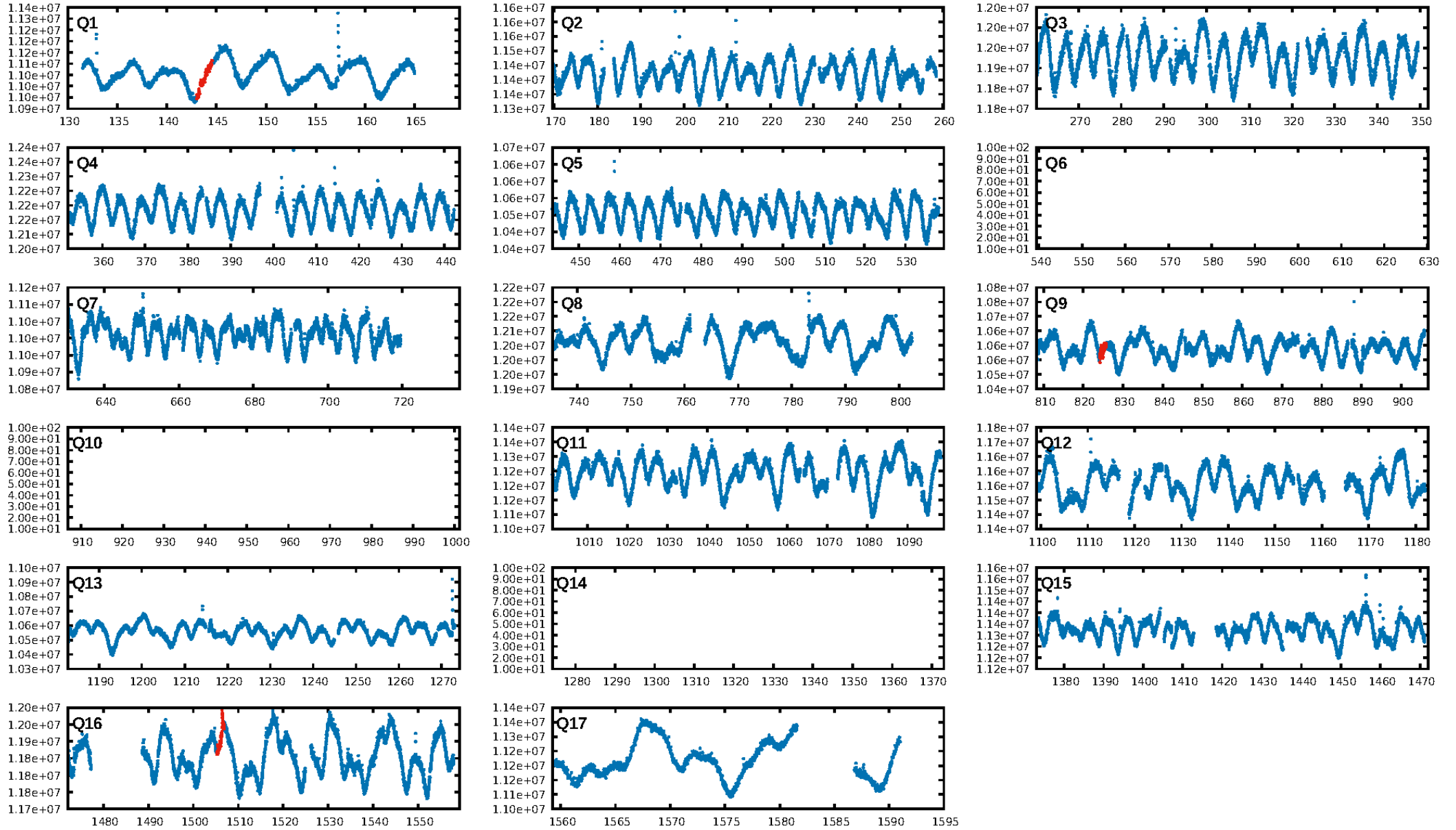
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.11e-07
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.3766
Centroid-sig: 83.5%
Centroid-so: 0.536 arcsec [0.55σ]
OotOffset-rm: 0.470 arcsec [0.91σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-rm: 0.674 arcsec [1.22σ]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

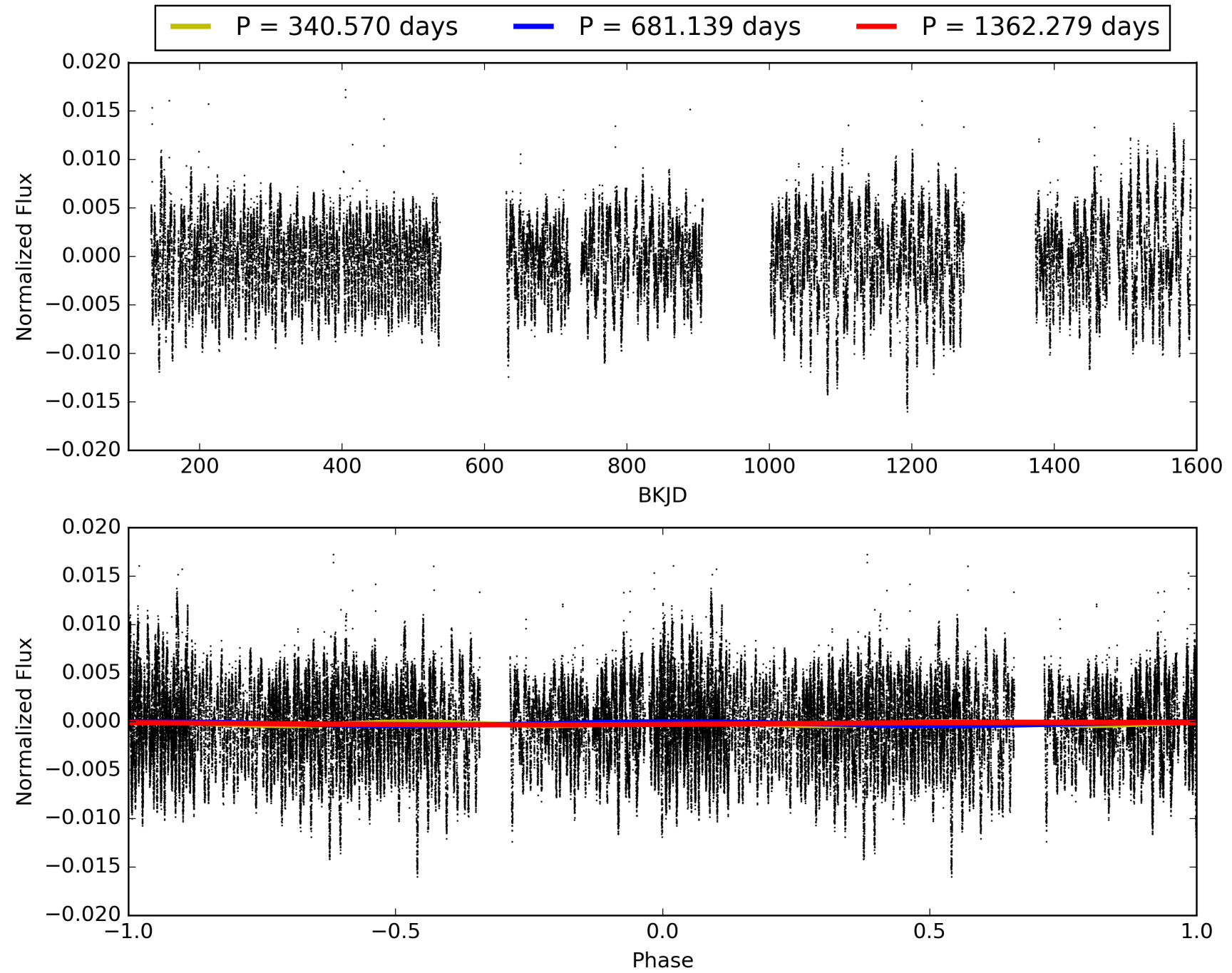
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:03:44 Z

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

TCE 004844804-01, PDC Light Curves

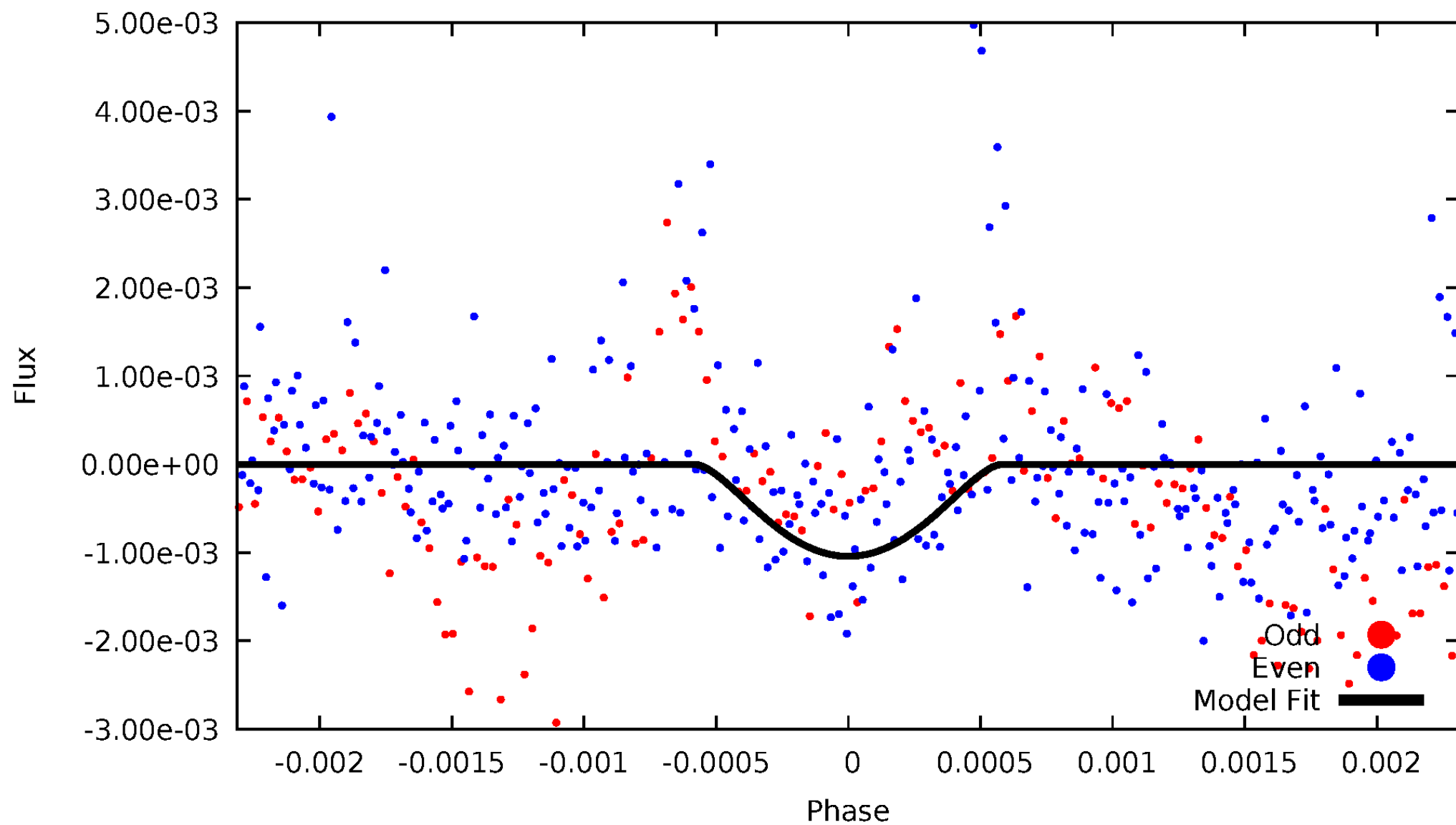


TCE 004844804-01



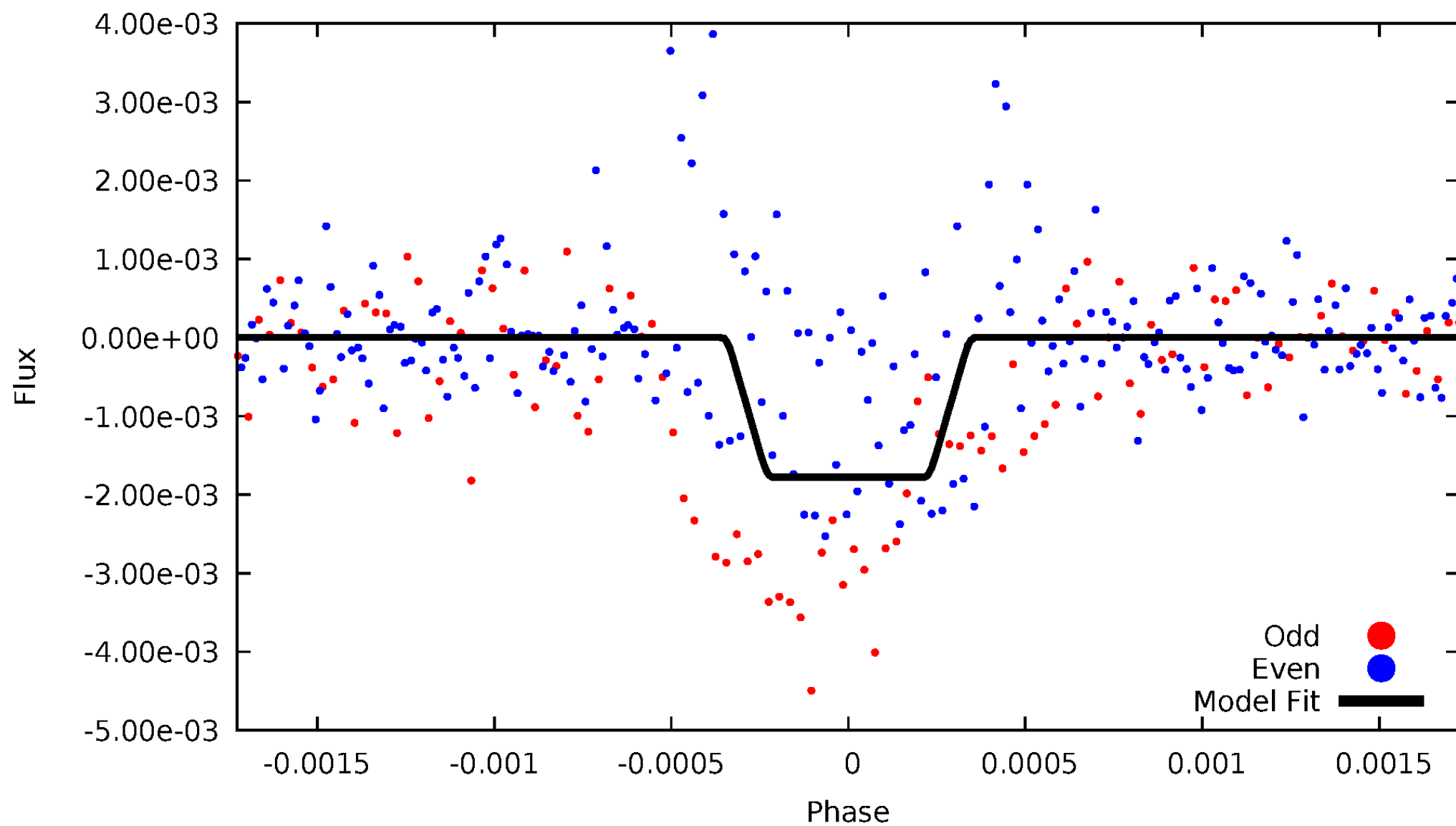
DV Odd/Even

TCE 004844804-01



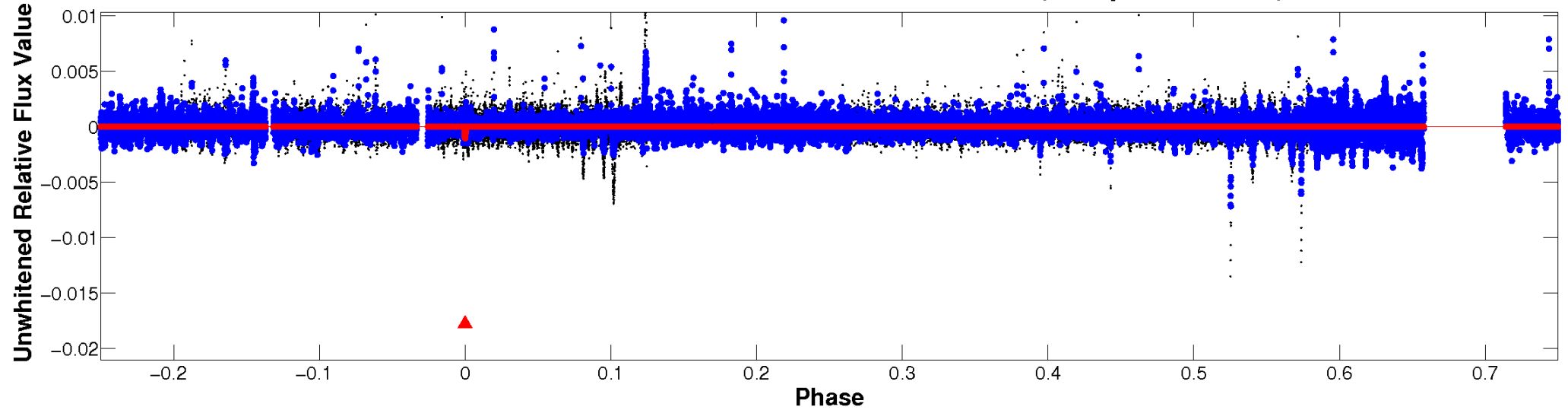
ALT Odd/Even

TCE 004844804-01

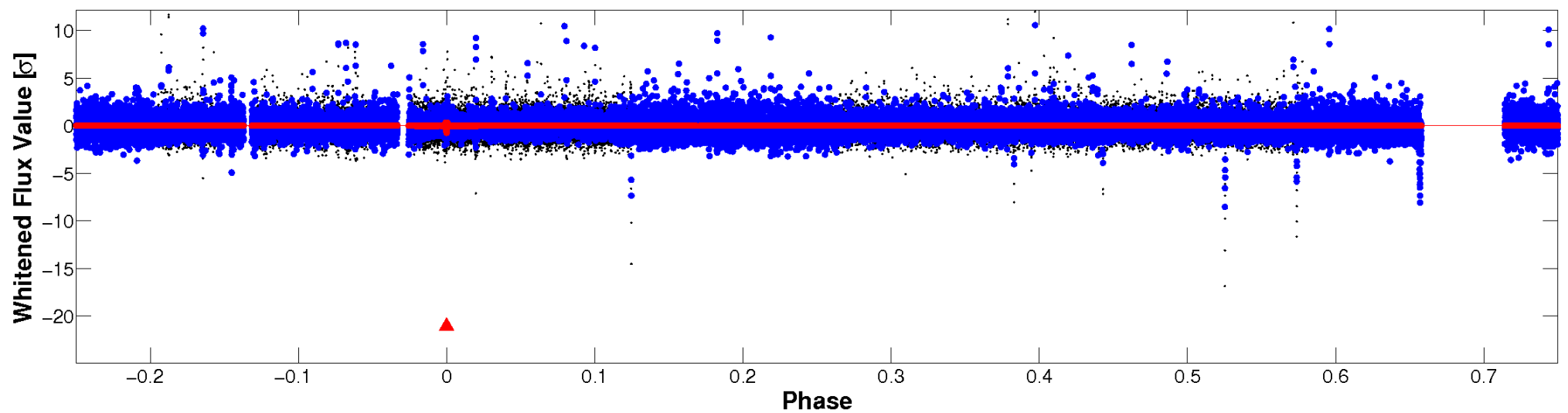


Non-Whitened Vs. Whitened Light Curve

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

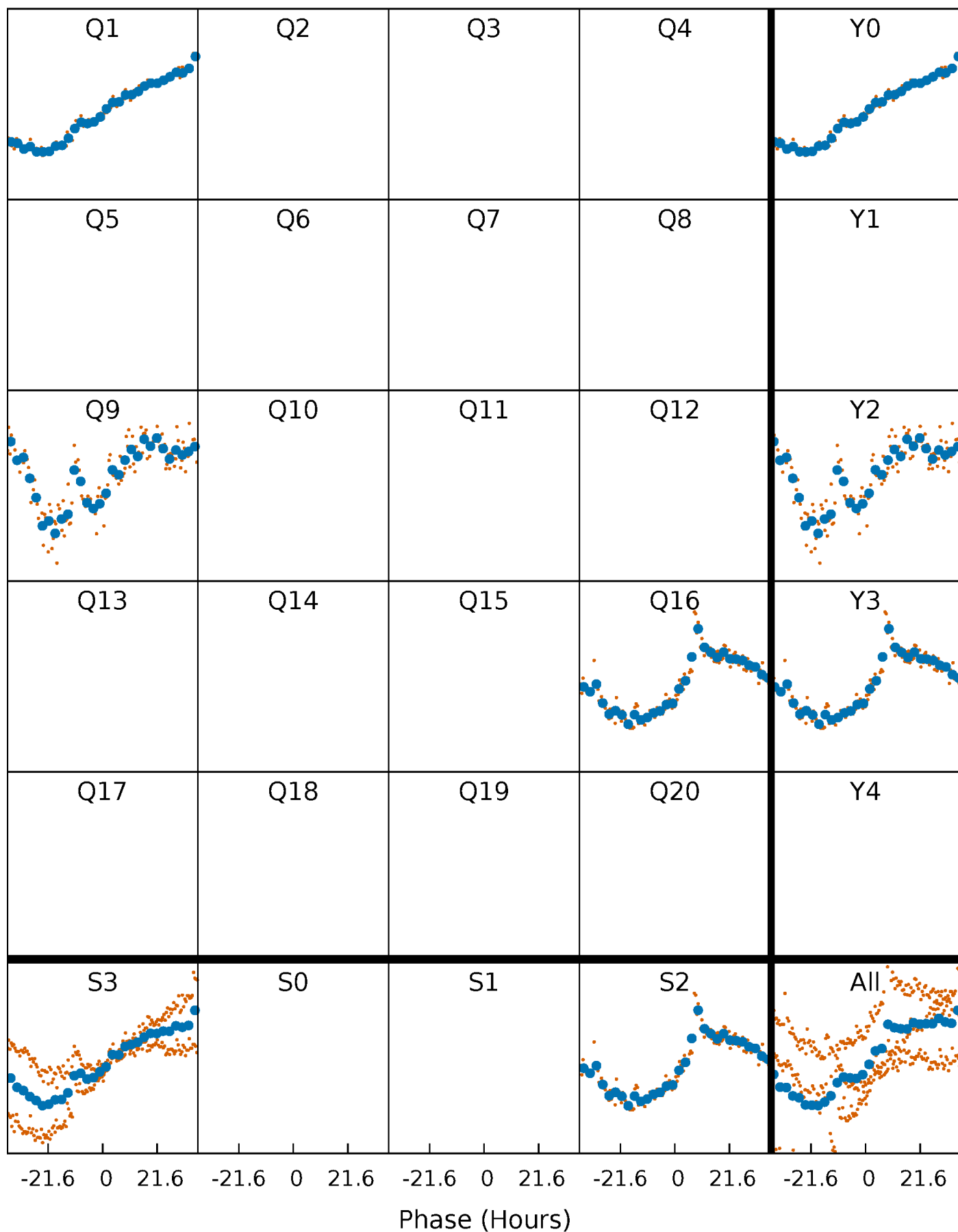


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 004844804-01 P=681.139337 Days $T_0=143.802301$ (BKJD)



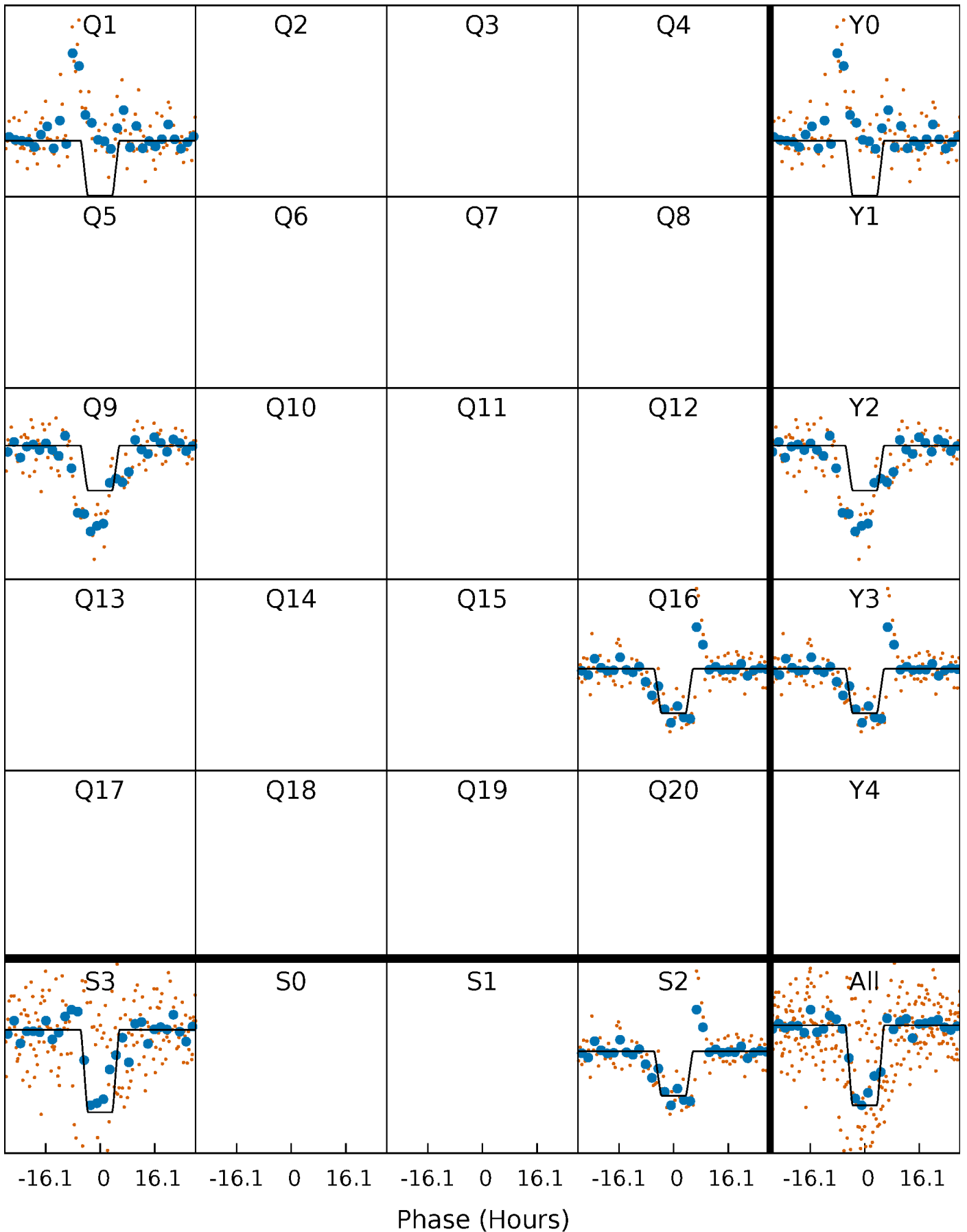
DV Quarter-Phased Transit Curves

TCE 004844804-01 P=681.139337 Days $T_0=143.802301$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

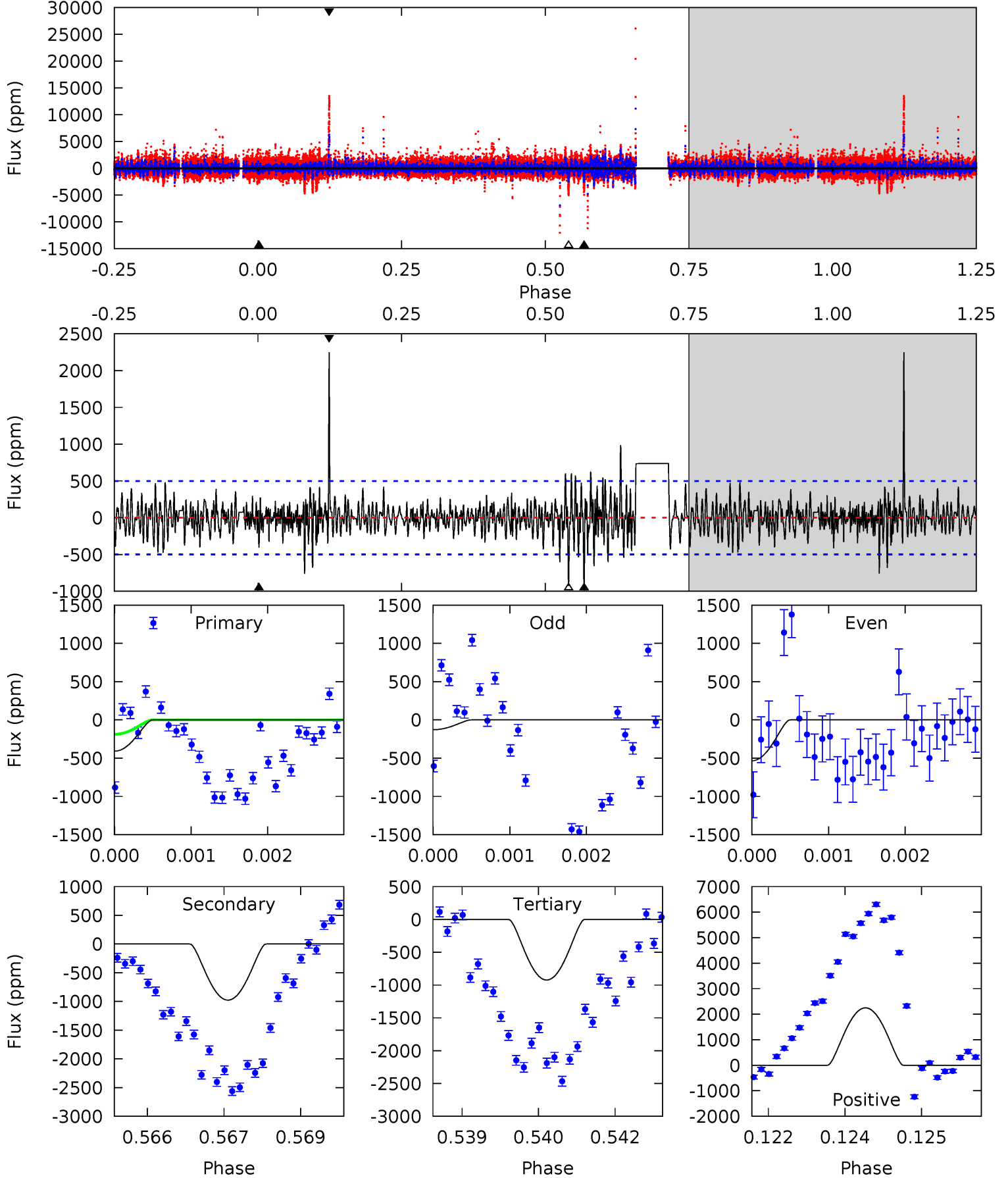
TCE 004844804-01 P=681.207212 Days $T_0=143.706595$ (BKJD)



DV Model-Shift Uniqueness Test

004844804-01, P = 681.139337 Days, E = 143.802301 Days

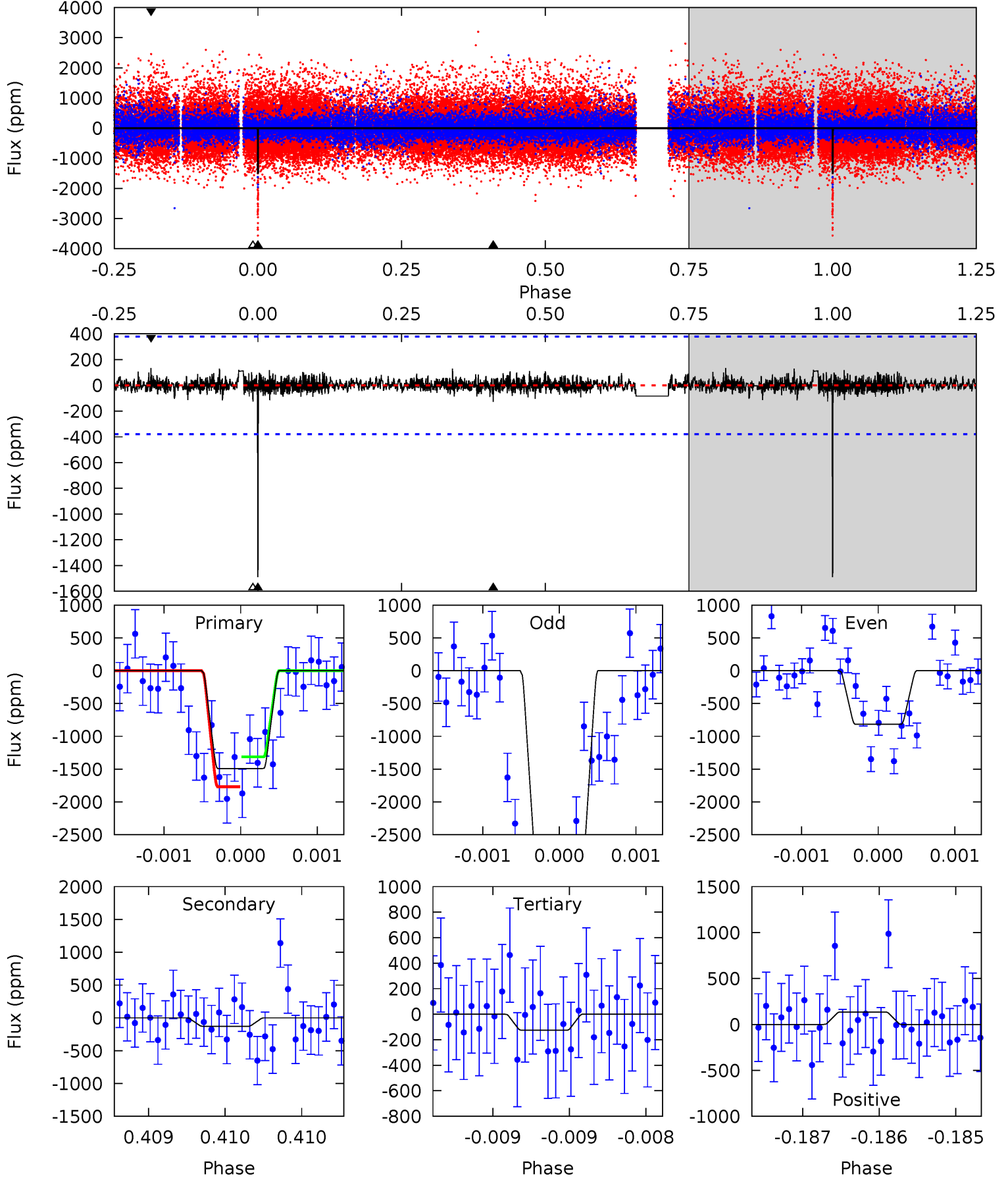
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.44	10.6	10.0	24.5	5.42	3.24	2.10	-5.61	-20.0	0.58	-13.9	2.13	2.99	0.70	2.39



Alt Model-Shift Uniqueness Test

004844804-01, P = 681.207212 Days, E = 143.706595 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	1.86	1.82	1.96	5.51	3.38	0.43	19.9	19.7	0.04	-0.10	14.4	0.82	0.08	3.28



Stellar Parameters For KIC 004844804

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3958^{+79}_{-87}	$4.698^{+0.036}_{-0.024}$	$-0.100^{+0.200}_{-0.200}$	$0.558^{+0.035}_{-0.039}$	$0.567^{+0.039}_{-0.042}$	$4.598^{+0.753}_{-0.480}$
	+2%/-2%	+1%/-1%	+200%/-200%	+6%/-7%	+7%/-7%	+16%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004844804-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-976 ± 92	$8.23^{+8.94}_{-5.79}$	162^{+4}_{-4}	2577^{+1064}_{-410}	$12655^{+126452}_{-9728}$
Alt.	-128 ± 69	$8.07^{+8.79}_{-5.70}$	162^{+4}_{-4}	2020^{+680}_{-307}	1464^{+16818}_{-1174}

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

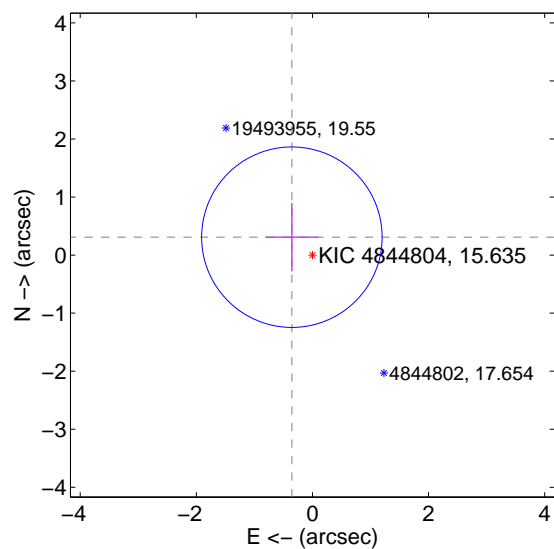
Supplemental centroid analysis for 004844804-01. Kepler magnitude: 15.63. Transit SNR 5.22

There are 1 quarters with good PRF difference image offsets

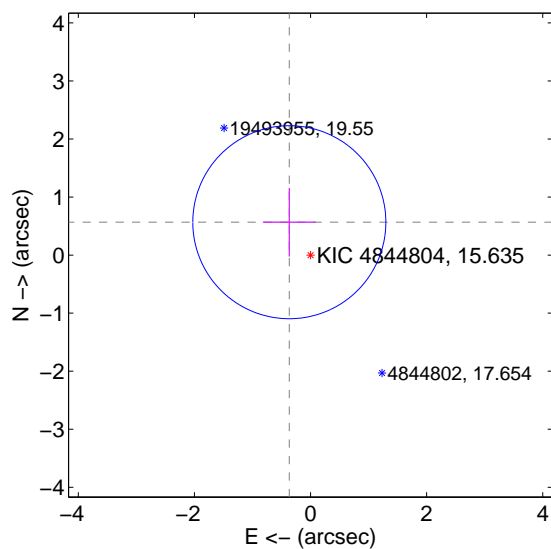
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.470 ± 0.518	0.91	0.354 ± 0.456	0.309 ± 0.590
PRF-fit source offset from KIC position	0.674 ± 0.554	1.22	0.365 ± 0.456	0.567 ± 0.590
photometric centroid source offset	0.54 ± 0.98	0.55	-0.17 ± 0.86	0.51 ± 0.99

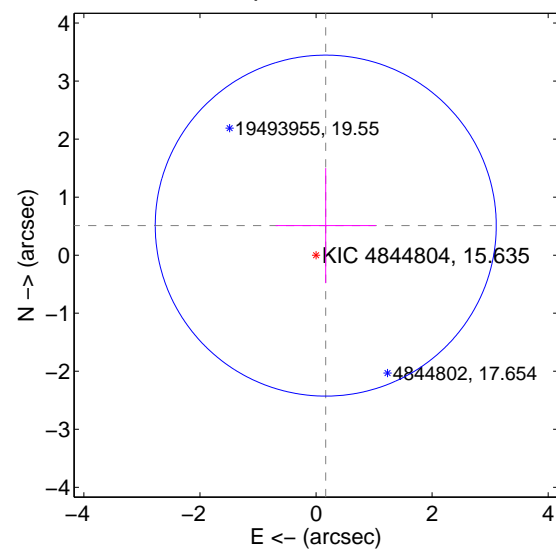
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

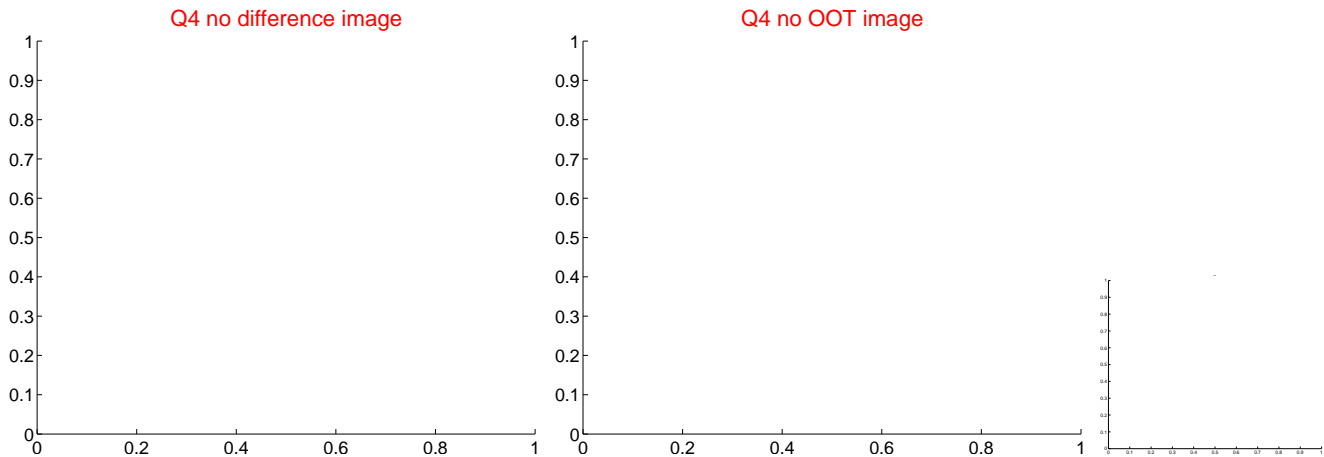
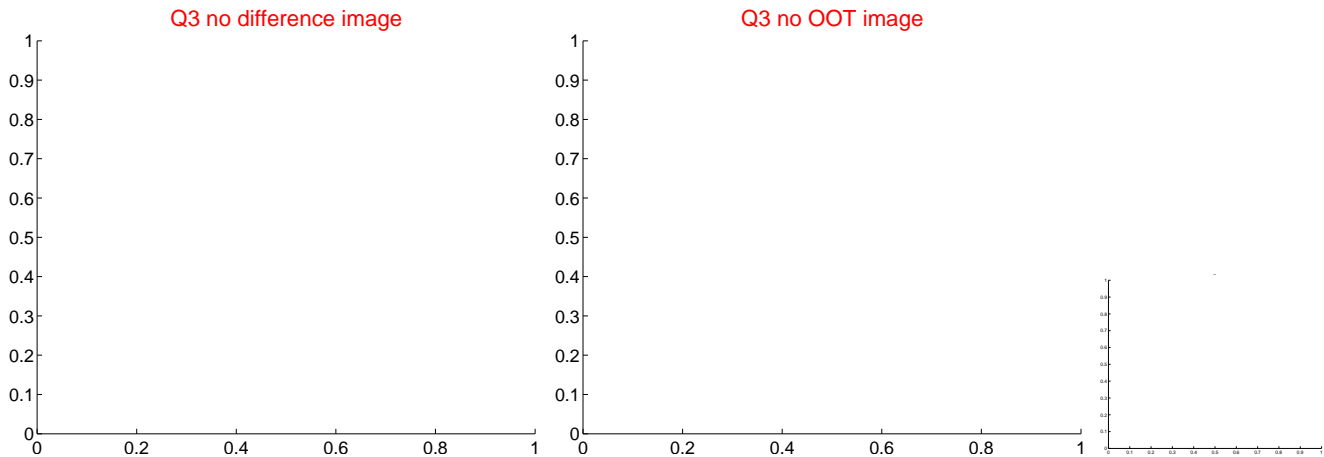
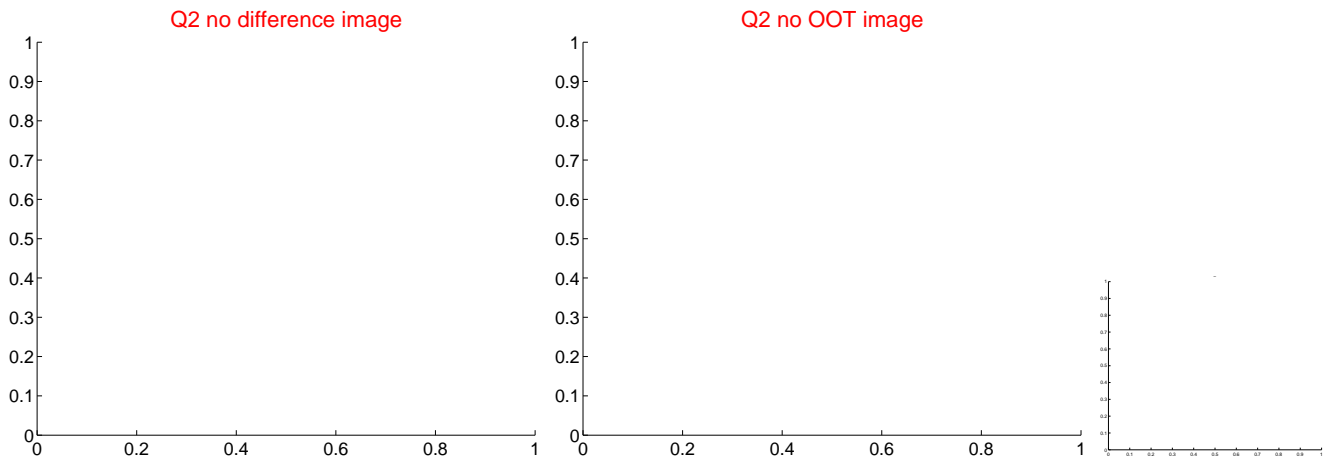
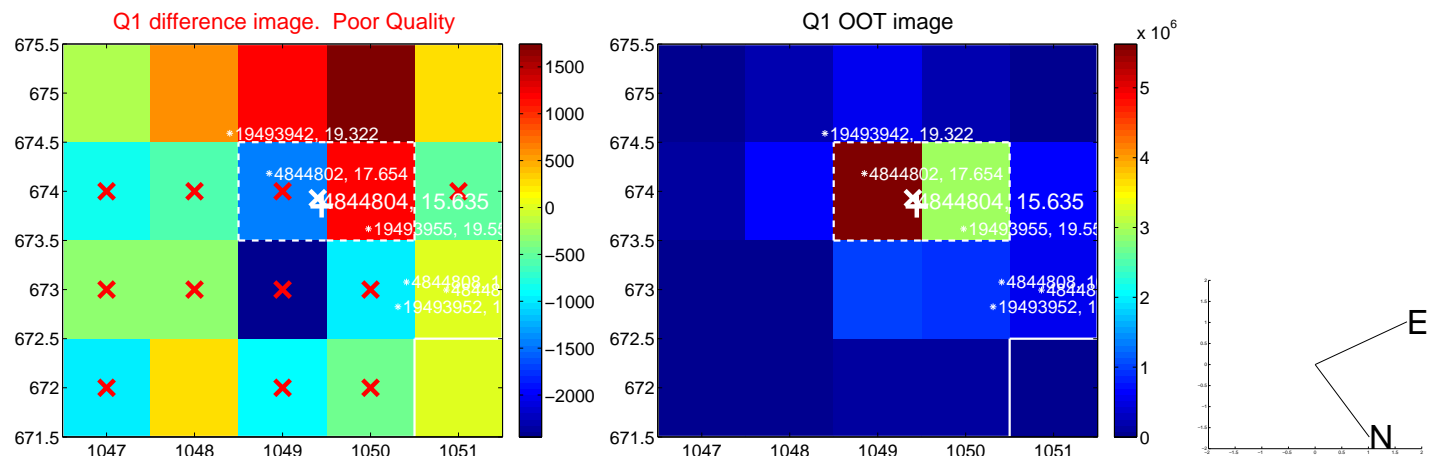


offset from photometric centroids



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.

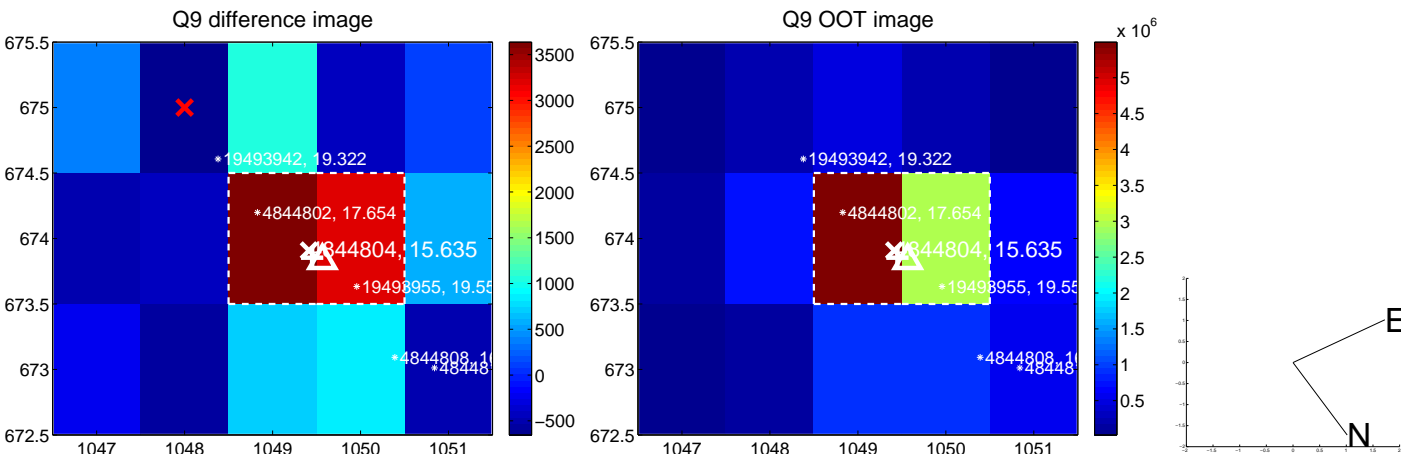
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



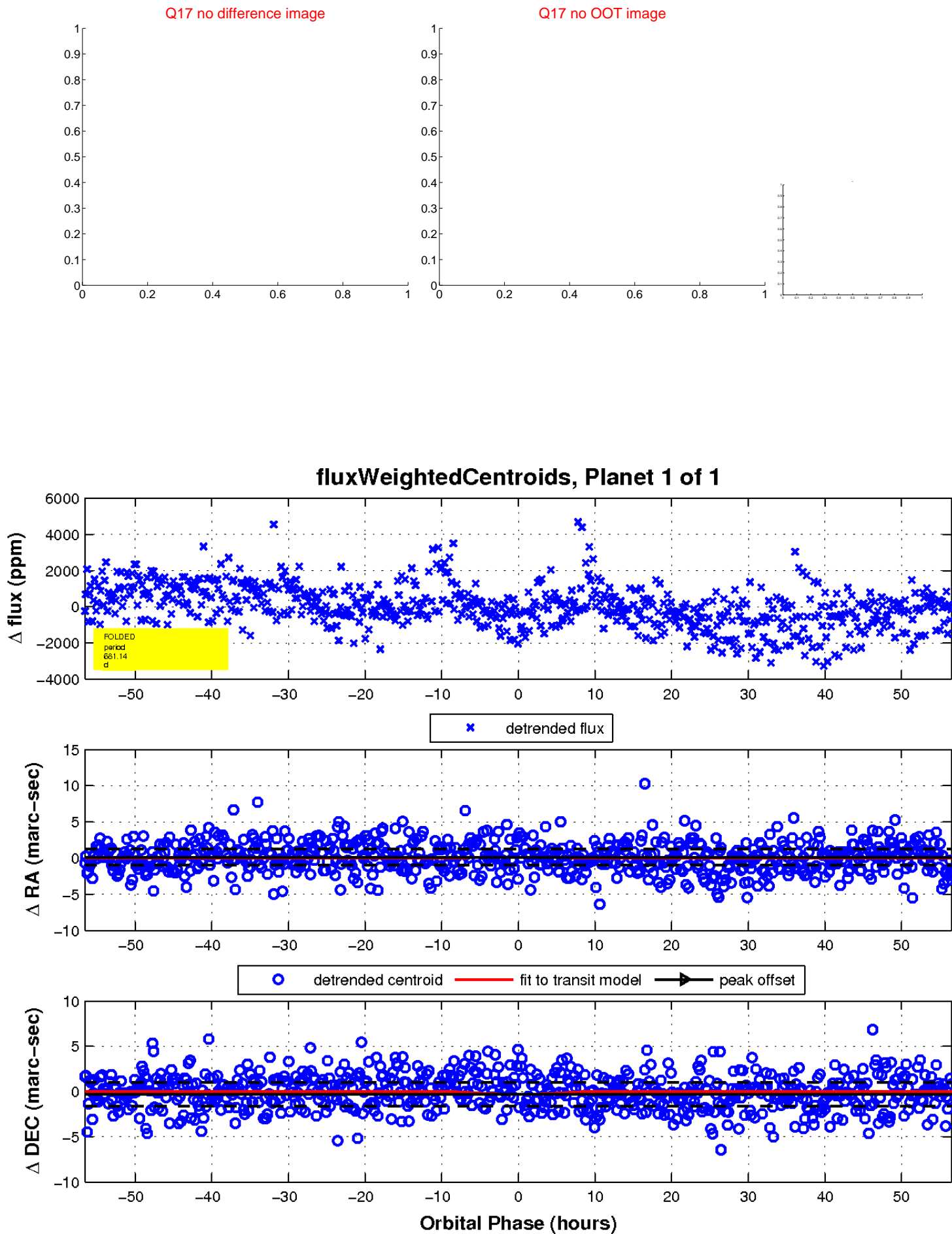
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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.



UKIRT Image

Declination

