

KIC 005954886

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})
005954886-01	OBS	No	506.908821	374.128870	360.9	23.945	7.5	8.8	1.04	5907	2.03	0.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005954886-01	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.

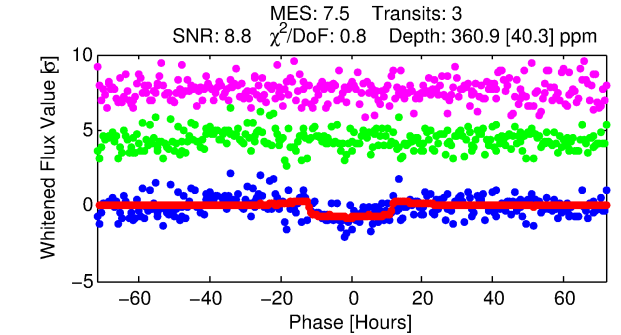
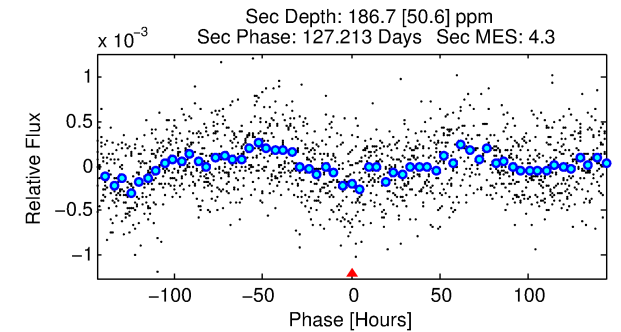
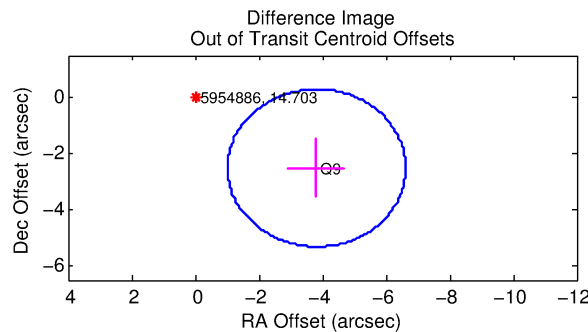
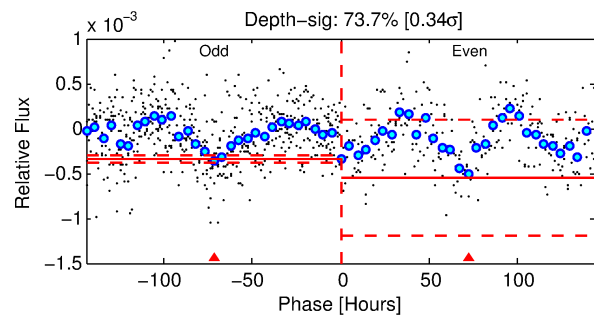
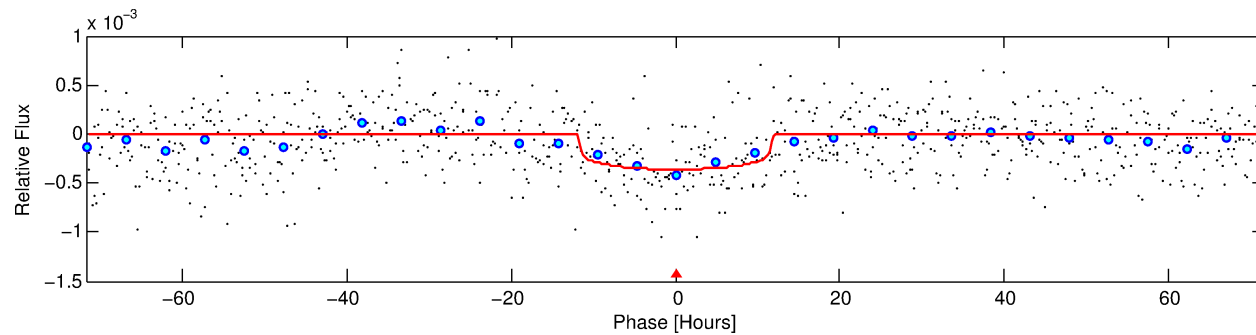
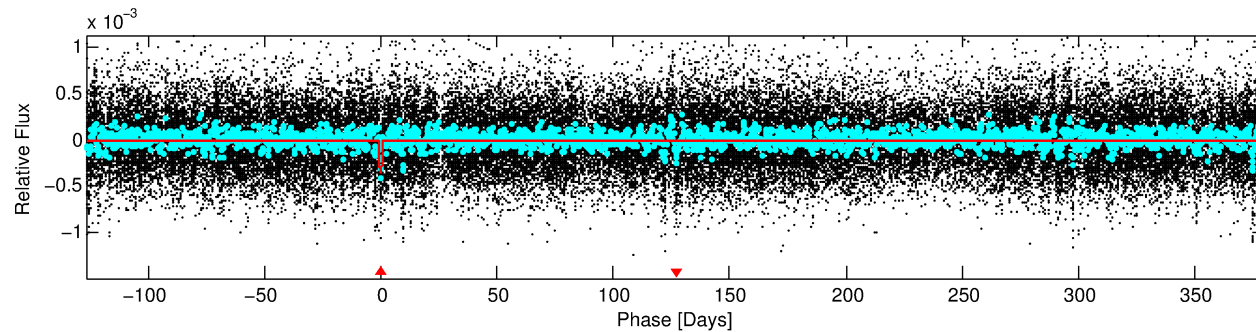
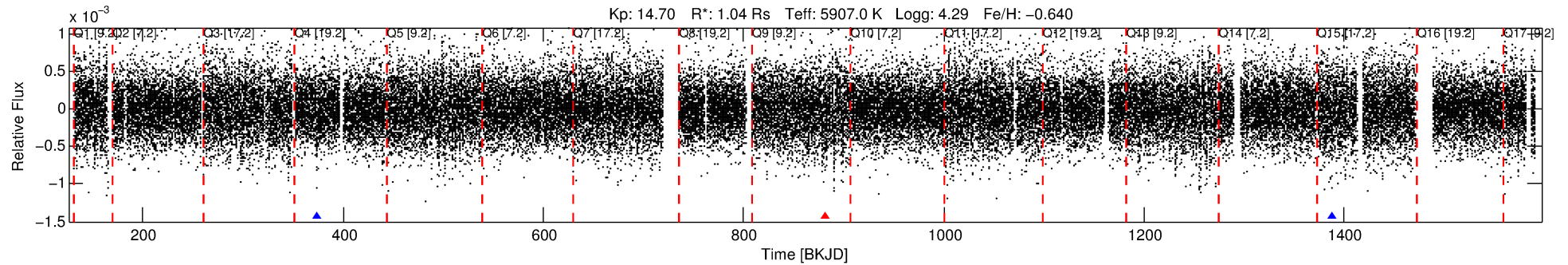
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005954886-01

No Significant Match Found

DV One-Page Summary

KIC: 5954886 Candidate: 1 of 1 Period: 506.909 d



DV Fit Results:

Period = 506.90882 [0.01681] d
Epoch = 374.1289 [0.0194] BKJD
Rp/R* = 0.0178 [0.0072]
a/R* = 146.83 [290.18]
b = 0.46 [3.40]
Seff = 0.90 [0.29]
Teq = 249 [20] K
Rp = 2.03 [0.89] Re
a = 1.1467 [0.2177] AU
Ag = 32792.08 [29770.94] [1.10 σ]
Teffp = 5173 [1100] K [4.47 σ]

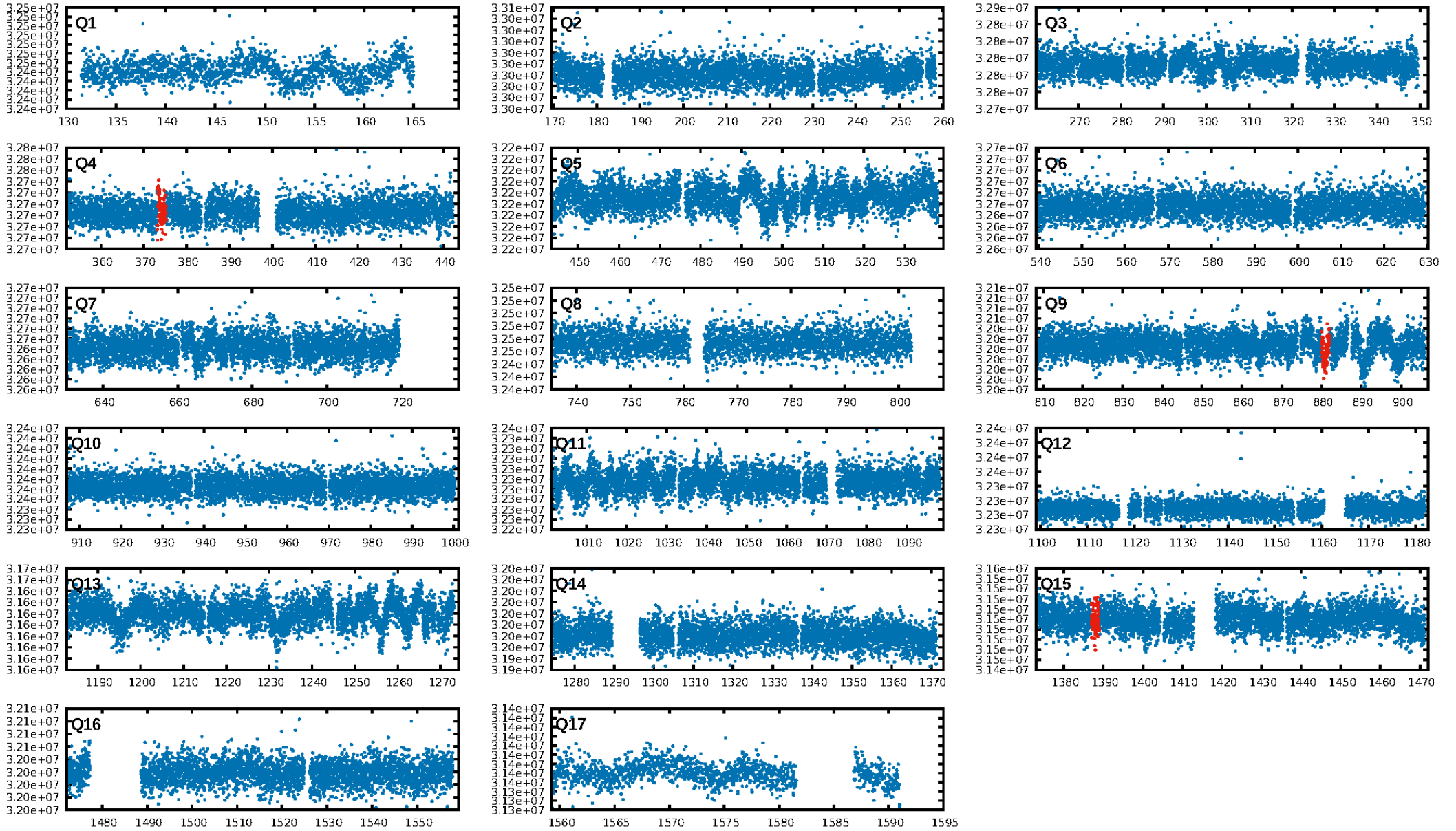
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.46e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.4597
Centroid-sig: 2.4%
Centroid-so: 3.072 arcsec [1.59 σ]
OotOffset-rm: 4.569 arcsec [4.89 σ]
KicOffset-rm: 4.639 arcsec [4.98 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

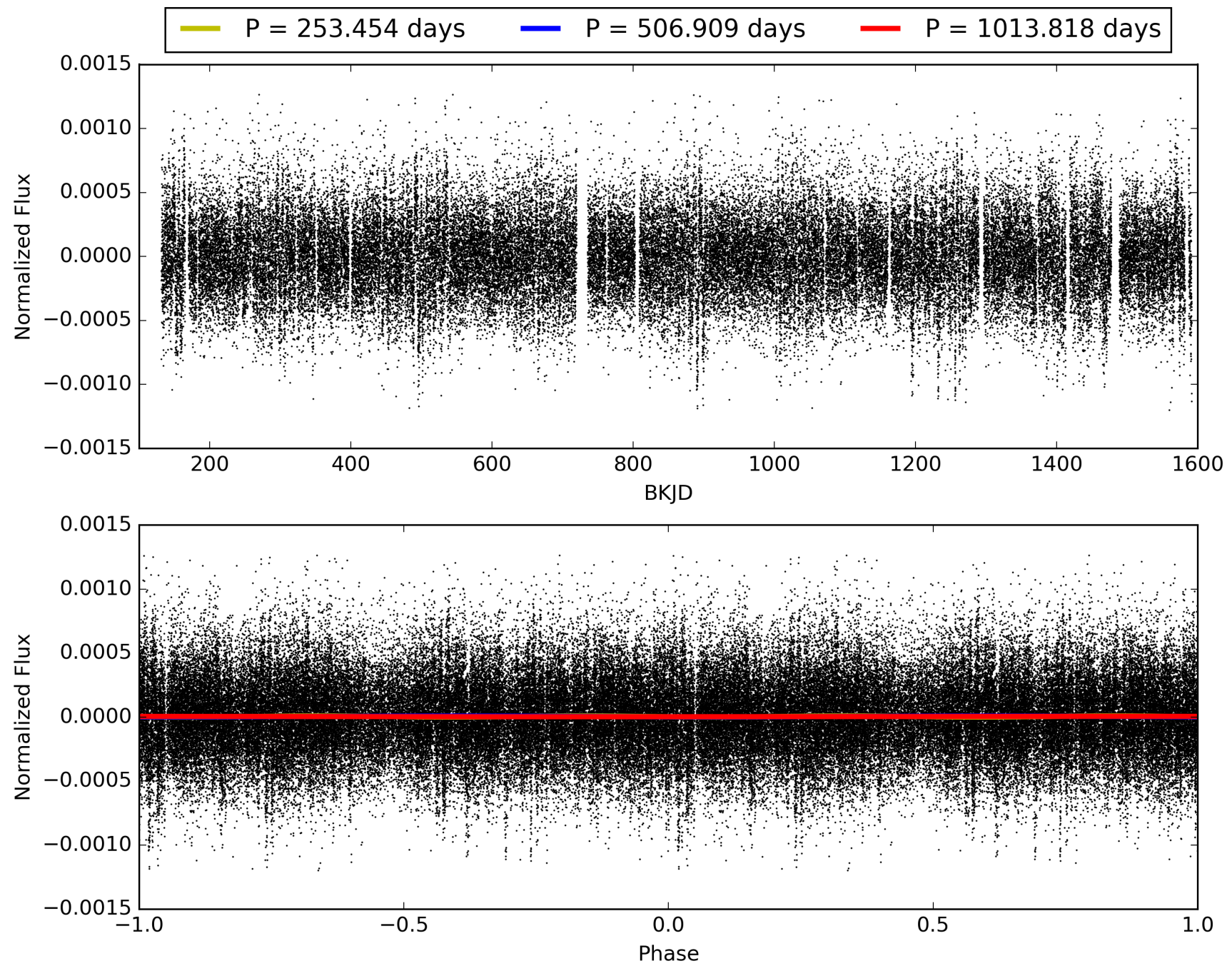
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:54:01 Z

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

TCE 005954886-01, PDC Light Curves

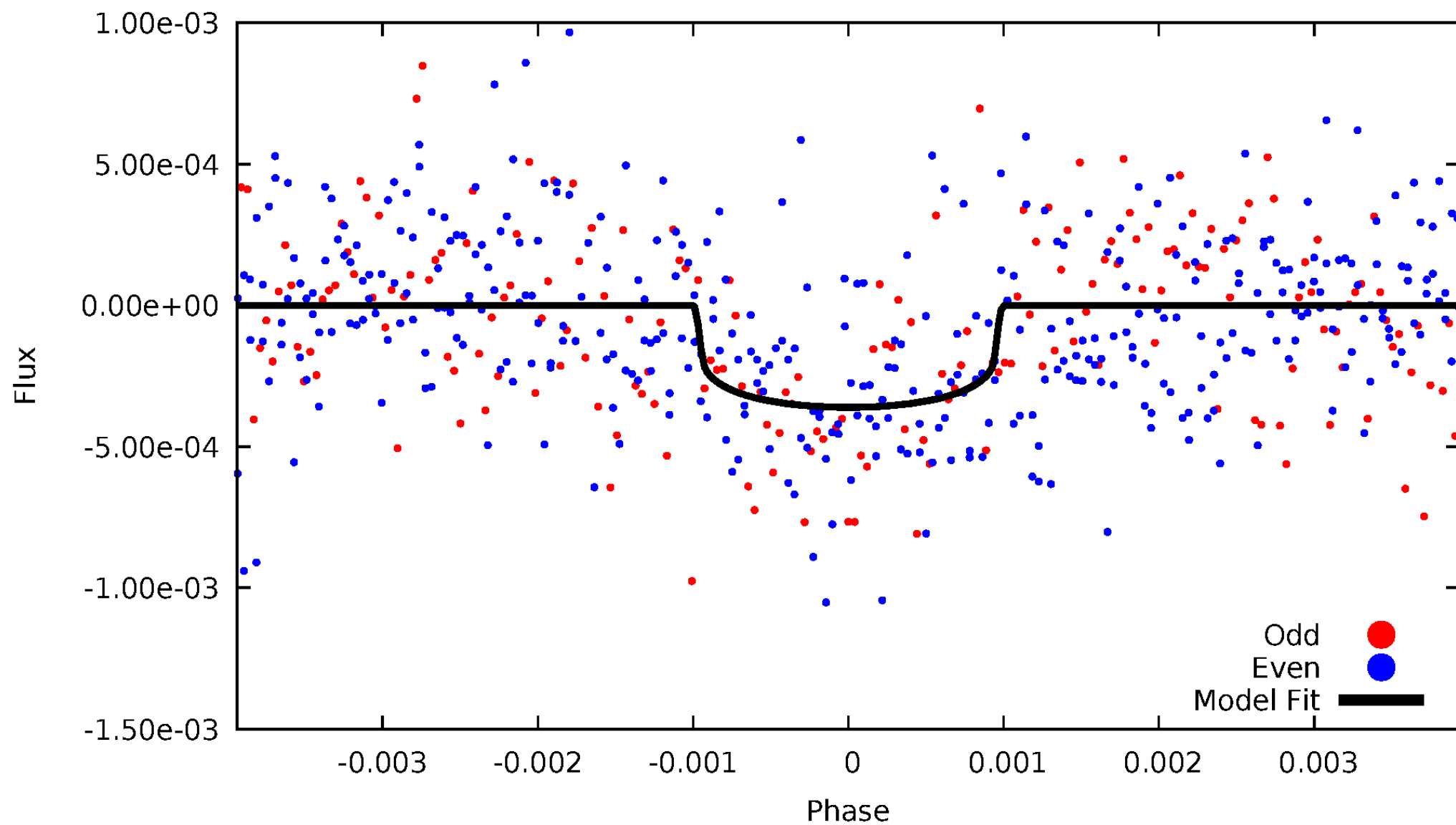


TCE 005954886-01



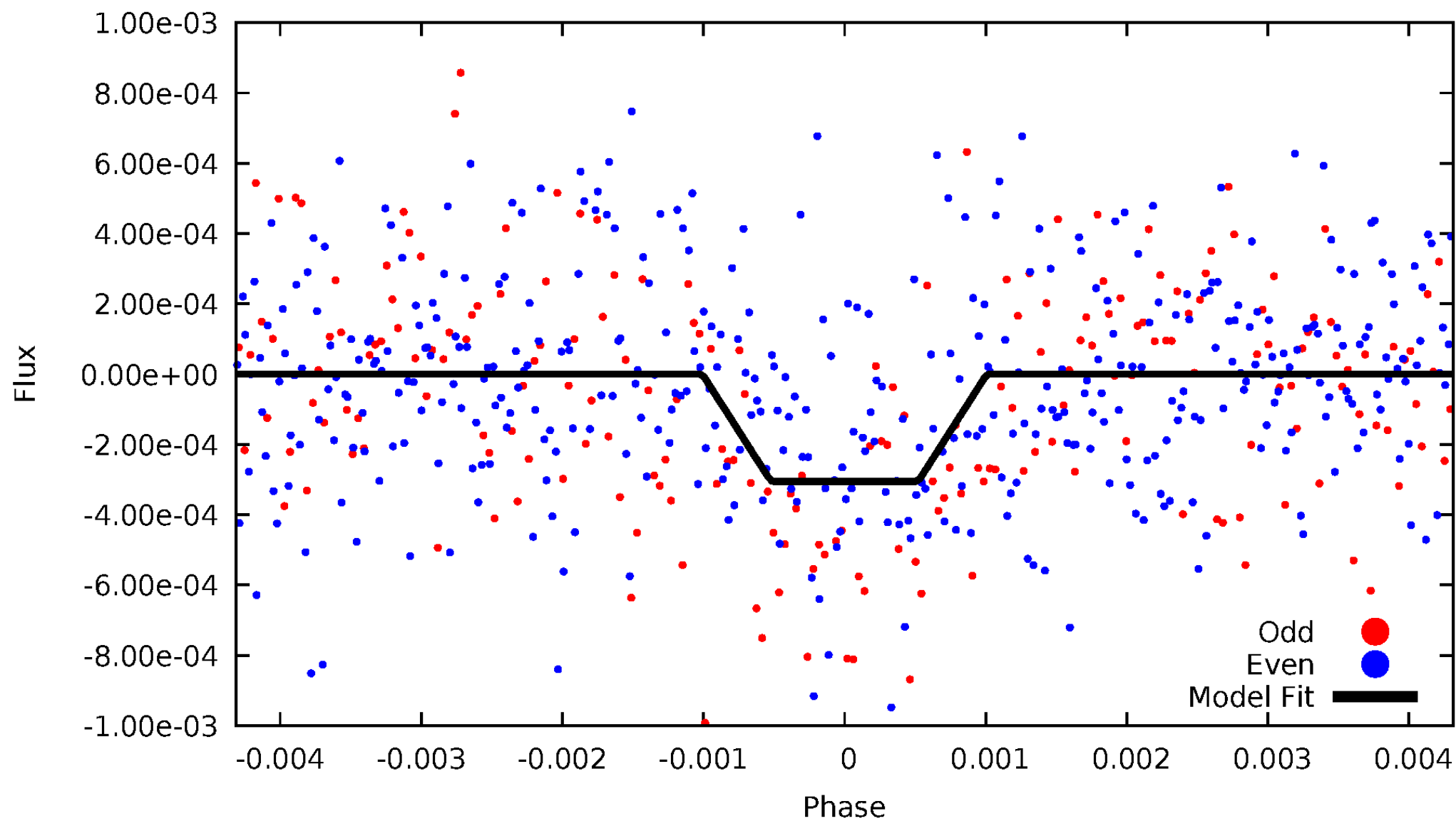
DV Odd/Even

TCE 005954886-01



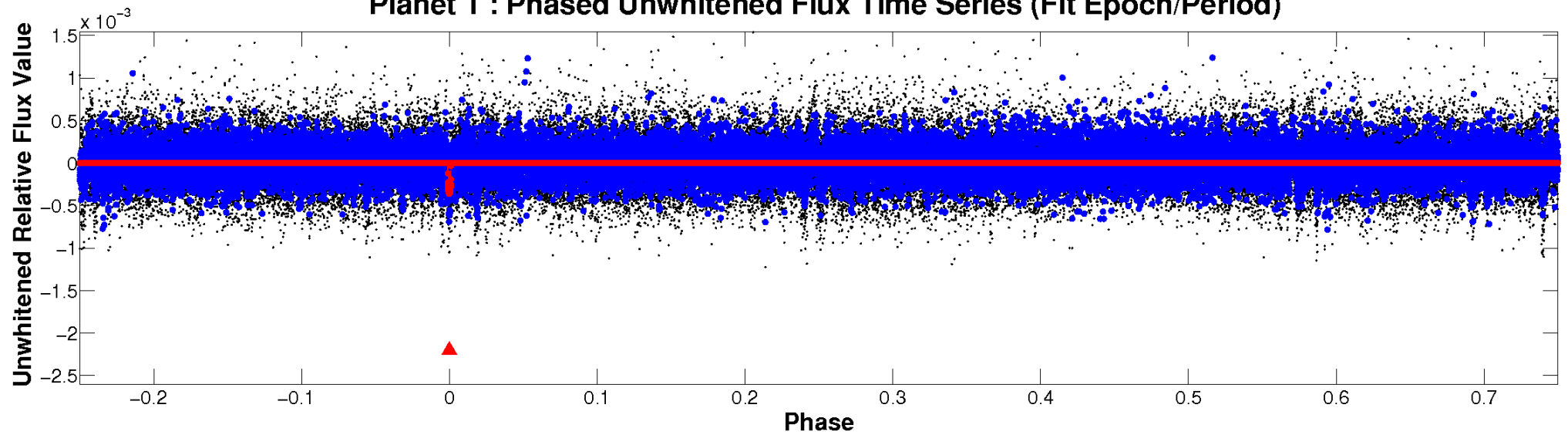
ALT Odd/Even

TCE 005954886-01

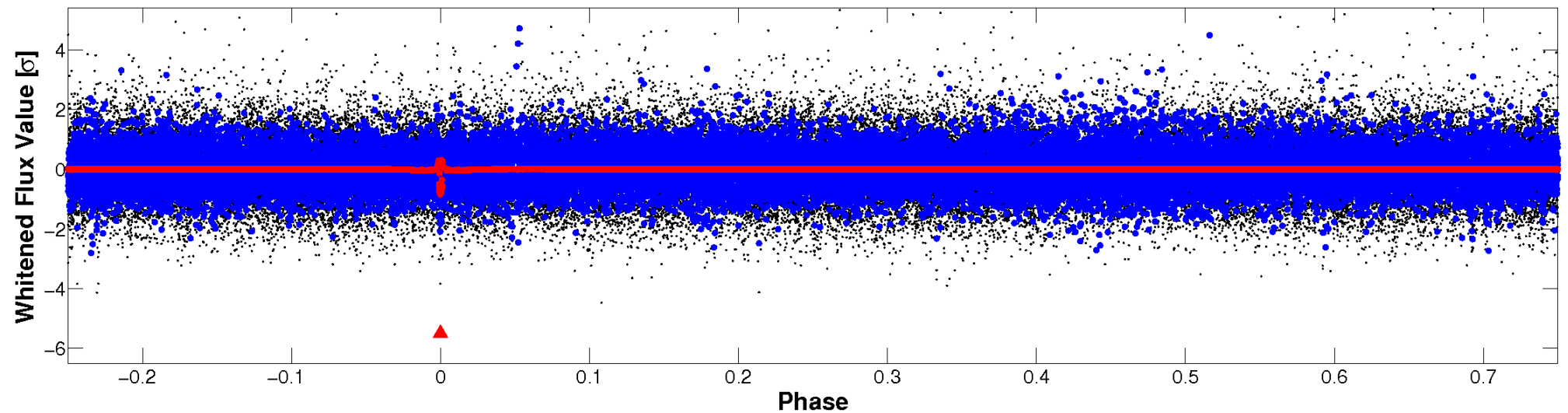


Non-Whitened Vs. Whitened Light Curve

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

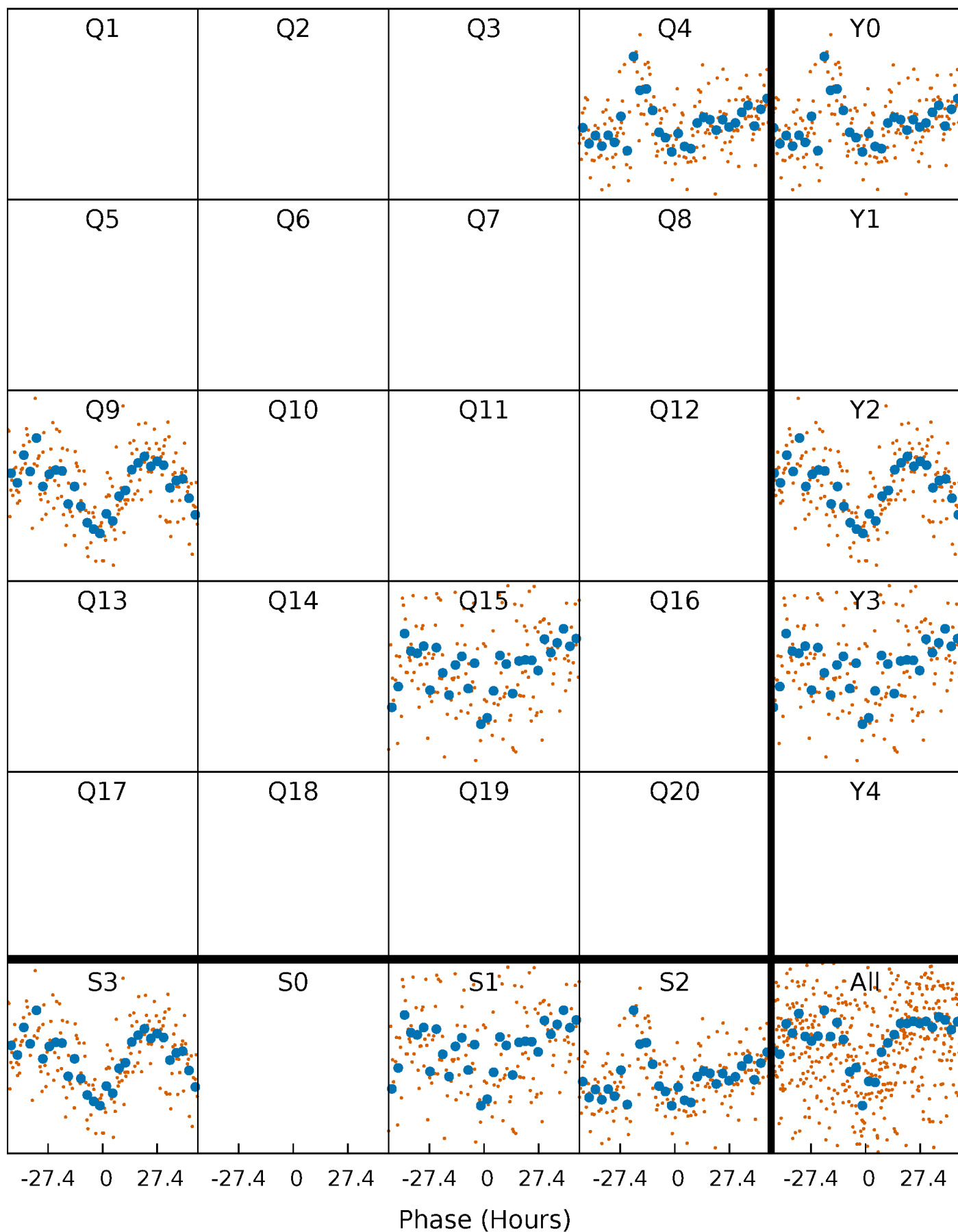


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005954886-01 P=506.908821 Days $T_0=374.128870$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005954886-01 P=506.908821 Days $T_0=374.128870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

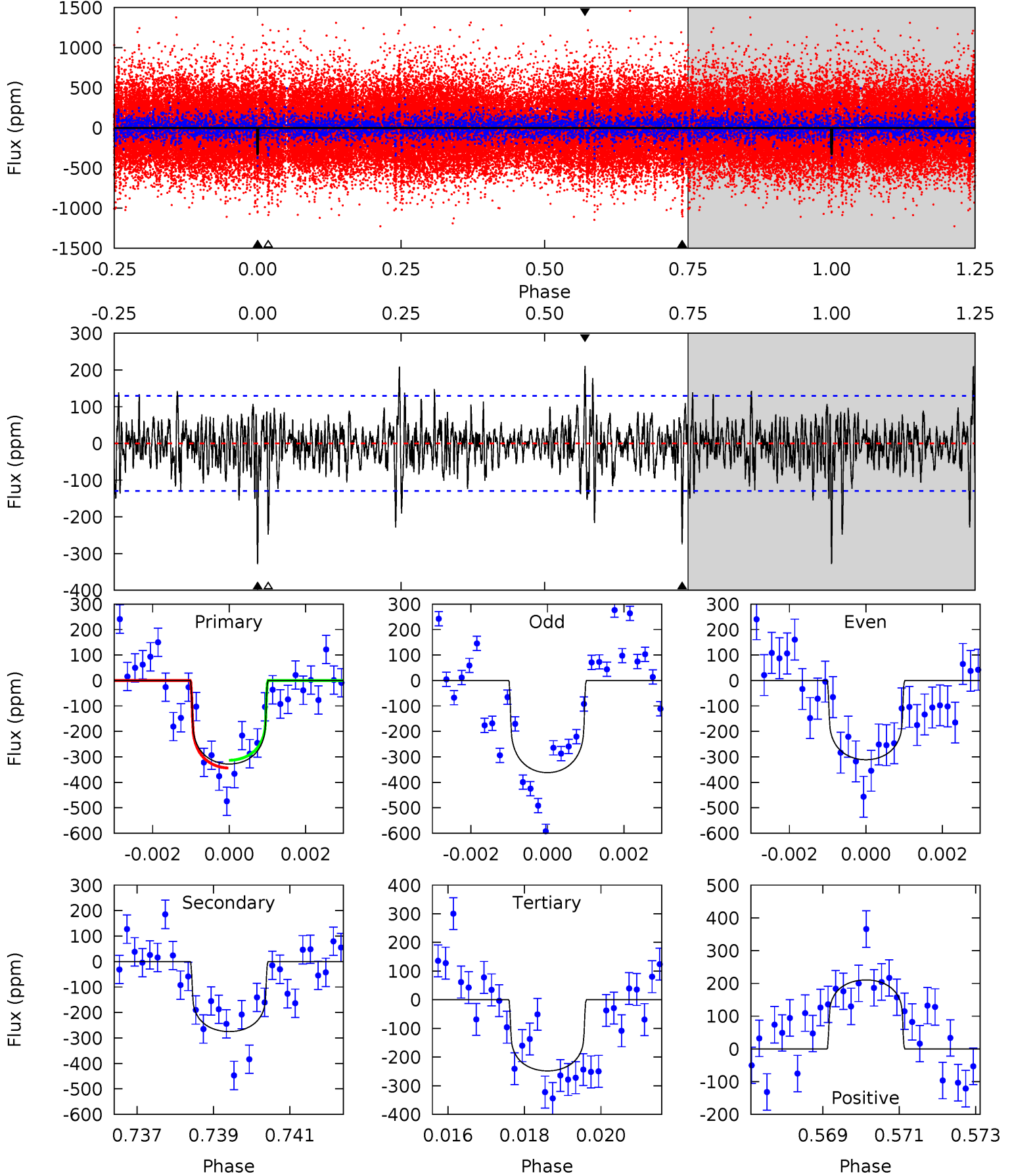
TCE 005954886-01 P=506.861267 Days $T_0=374.166351$ (BKJD)



DV Model-Shift Uniqueness Test

005954886-01, P = 506.908821 Days, E = 374.128870 Days

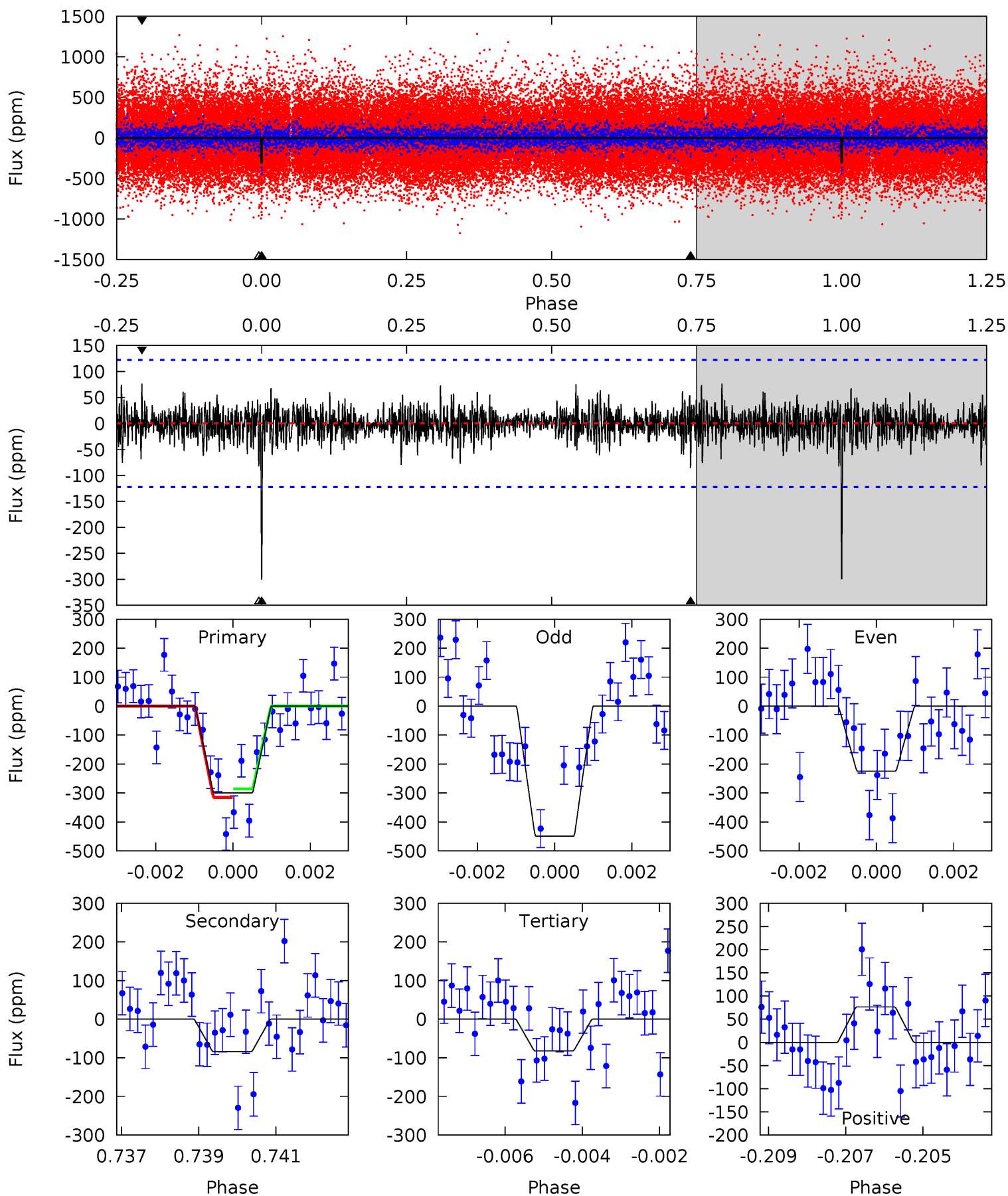
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	11.3	10.2	8.68	5.33	3.09	2.10	3.29	4.85	1.10	2.65	0.99	0.91	0.39	0.63



Alt Model-Shift Uniqueness Test

005954886-01, P = 506.861267 Days, E = 374.166351 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	3.66	3.58	3.33	5.32	3.08	0.93	9.48	9.74	0.07	0.33	4.61	0.95	0.20	0.65



Stellar Parameters For KIC 005954886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5907^{+79}_{-70}	$4.294^{+0.195}_{-0.120}$	$-0.640^{+0.150}_{-0.100}$	$1.044^{+0.164}_{-0.183}$	$0.781^{+0.064}_{-0.024}$	$0.968^{+0.831}_{-0.327}$
	+1%/-1%	+5%/-3%	+23%/-16%	+16%/-18%	+8%/-3%	+86%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005954886-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-275 ± 24	$1.98^{+0.84}_{-0.79}$	346^{+17}_{-20}	5754^{+1626}_{-815}	51008^{+90214}_{-25906}
Alt.	-84 ± 23	$1.94^{+0.86}_{-0.78}$	347^{+17}_{-21}	4466^{+1012}_{-578}	15537^{+26180}_{-8353}

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

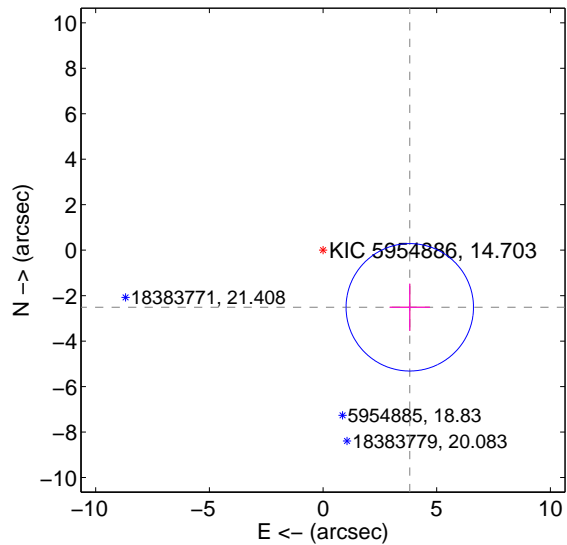
Supplemental centroid analysis for 005954886-01. Kepler magnitude: 14.70. Transit SNR 8.79

There are 0 quarters with good PRF difference image offsets

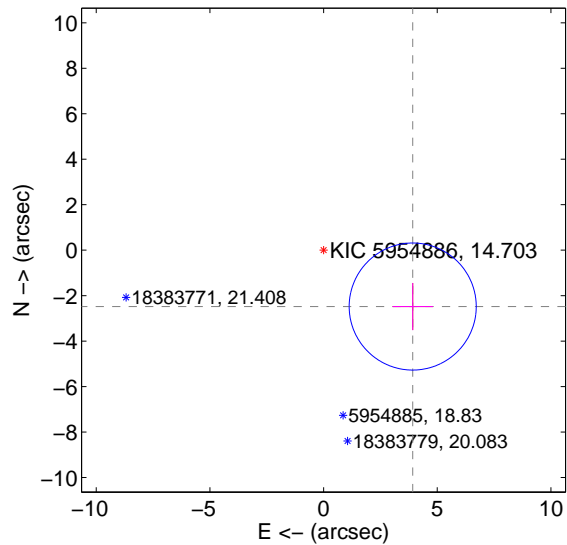
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.569 ± 0.934	4.89	-3.816 ± 0.885	-2.513 ± 1.038
PRF-fit source offset from KIC position	4.639 ± 0.932	4.98	-3.921 ± 0.885	-2.480 ± 1.038
photometric centroid source offset	3.07 ± 1.93	1.59	2.66 ± 1.95	-1.54 ± 1.88

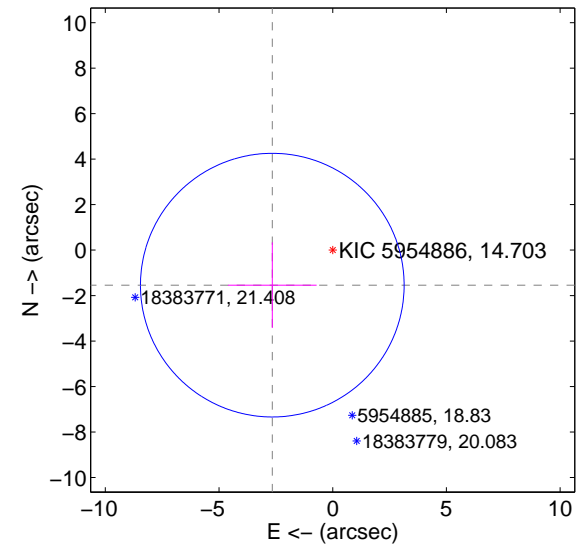
offset from difference PRF-fit to OOT PRF-fit



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.

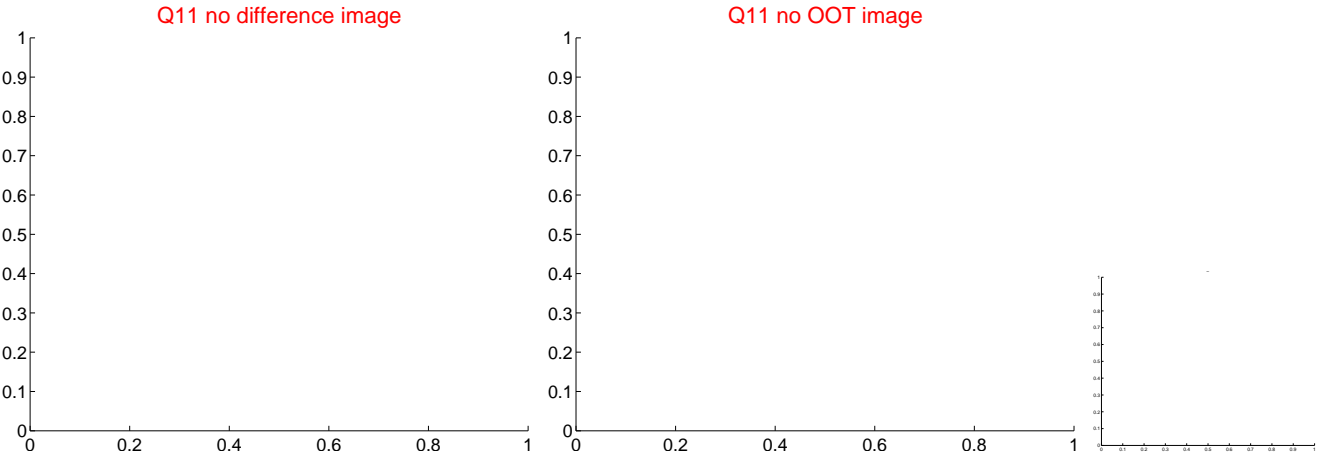
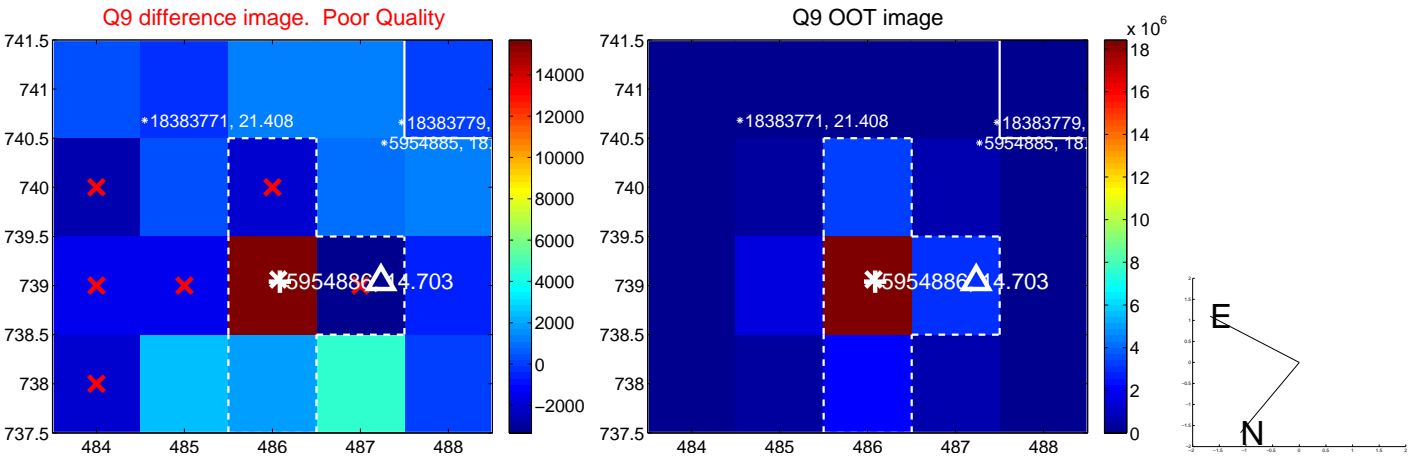
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



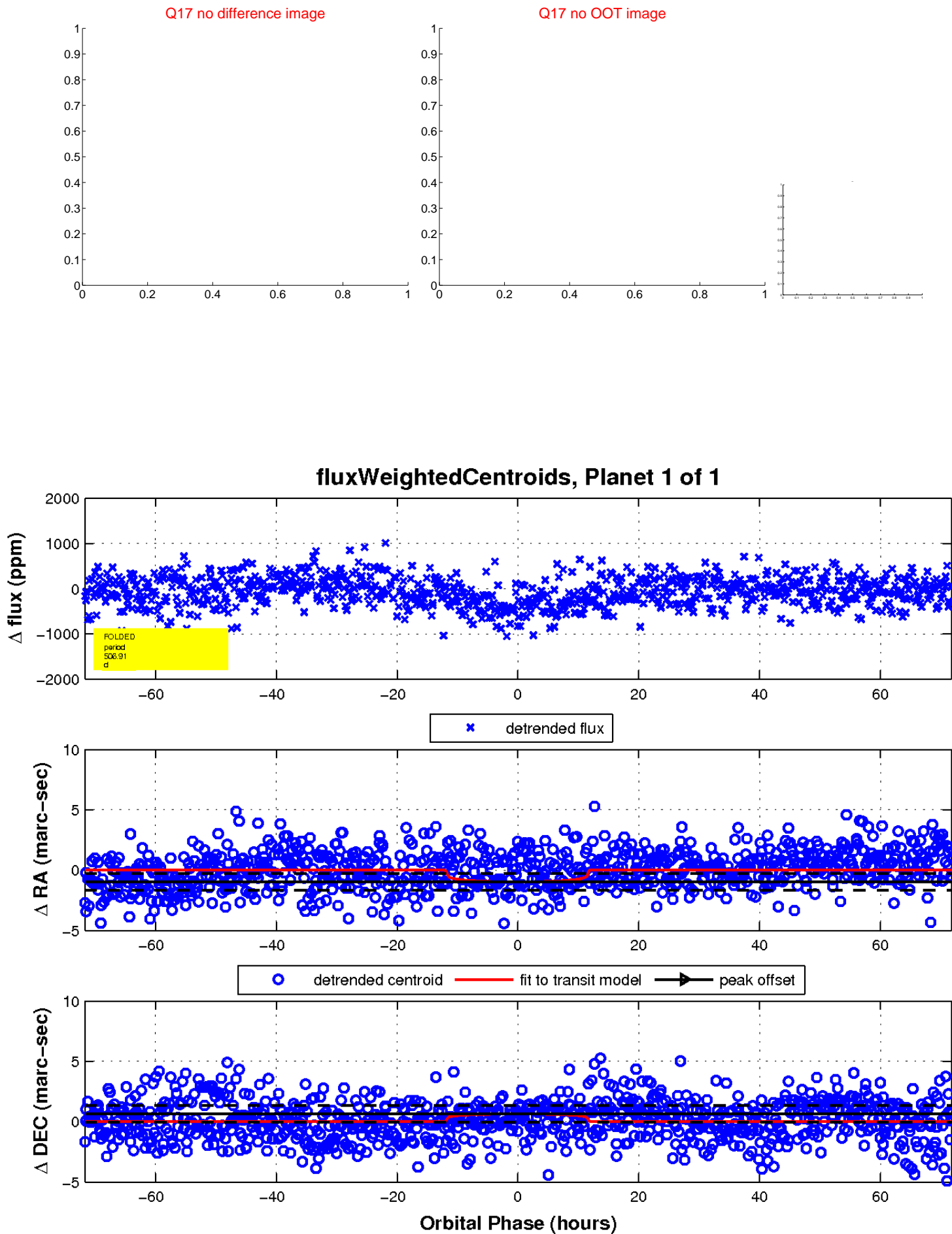
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

