

KIC 008936886

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})
008936886-01	OBS	No	322.081794	448.280030	116.1	38.761	7.2	3.6	0.91	5778	1.13	0.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008936886-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

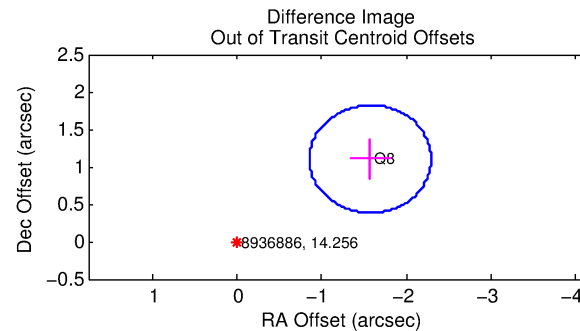
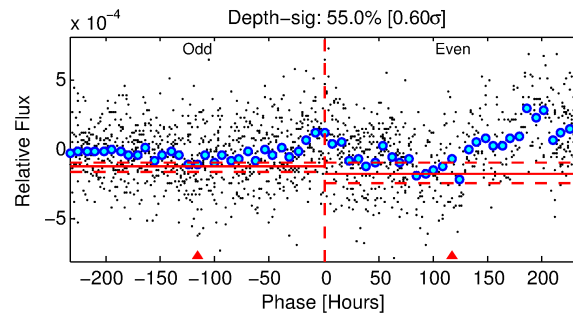
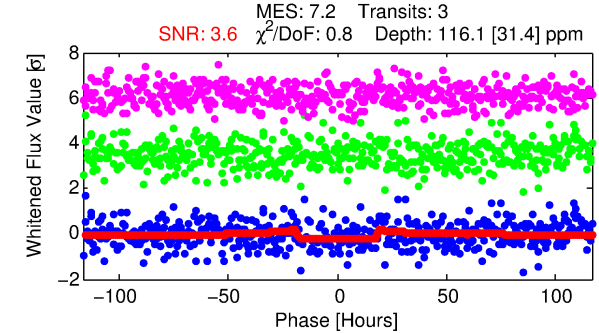
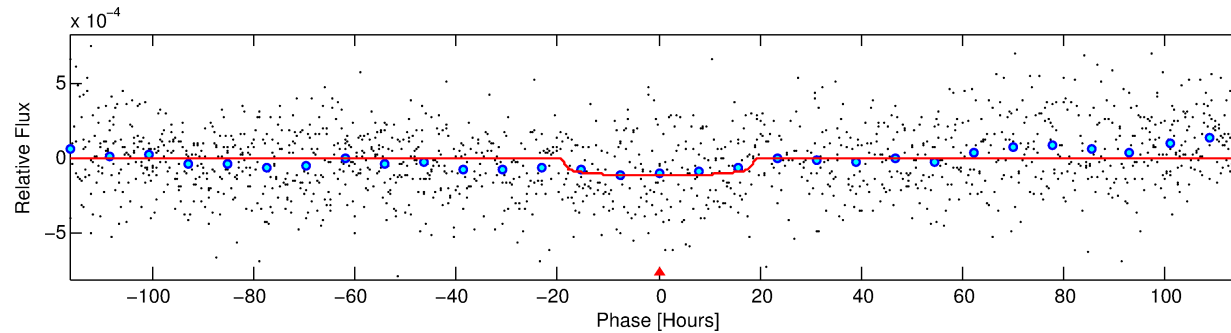
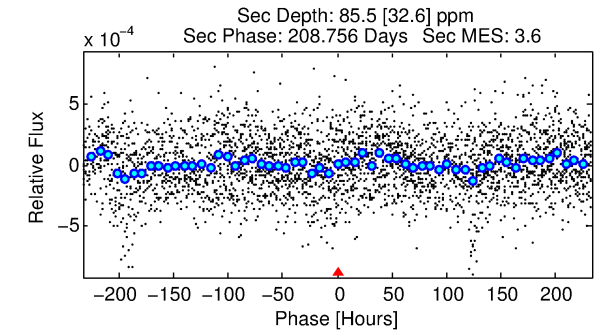
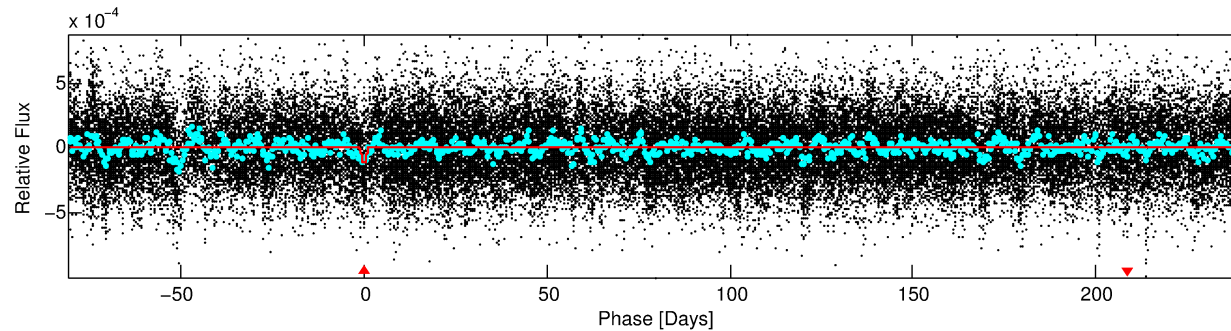
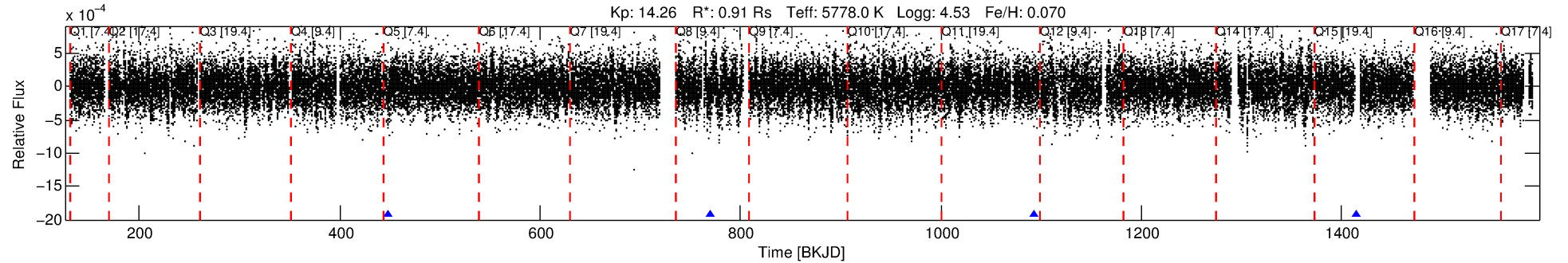
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008936886-01

No Significant Match Found

DV One-Page Summary

KIC: 8936886 Candidate: 1 of 1 Period: 322.082 d



DV Fit Results:

Period = 322.08179 [0.05448] d
Epoch = 448.2800 [0.0694] BKJD
Rp/R* = 0.0114 [0.0031]
a/R* = 33.31 [35.87]
b = 0.86 [0.32]
Seff = 0.96 [0.35]
Teff = 253 [23] K
Rp = 1.13 [0.44] Re
a = 0.9283 [0.2148] AU
Ag = 31579.28 [23683.23] [1.33σ]
Teffp = 5205 [884] K [5.60σ]

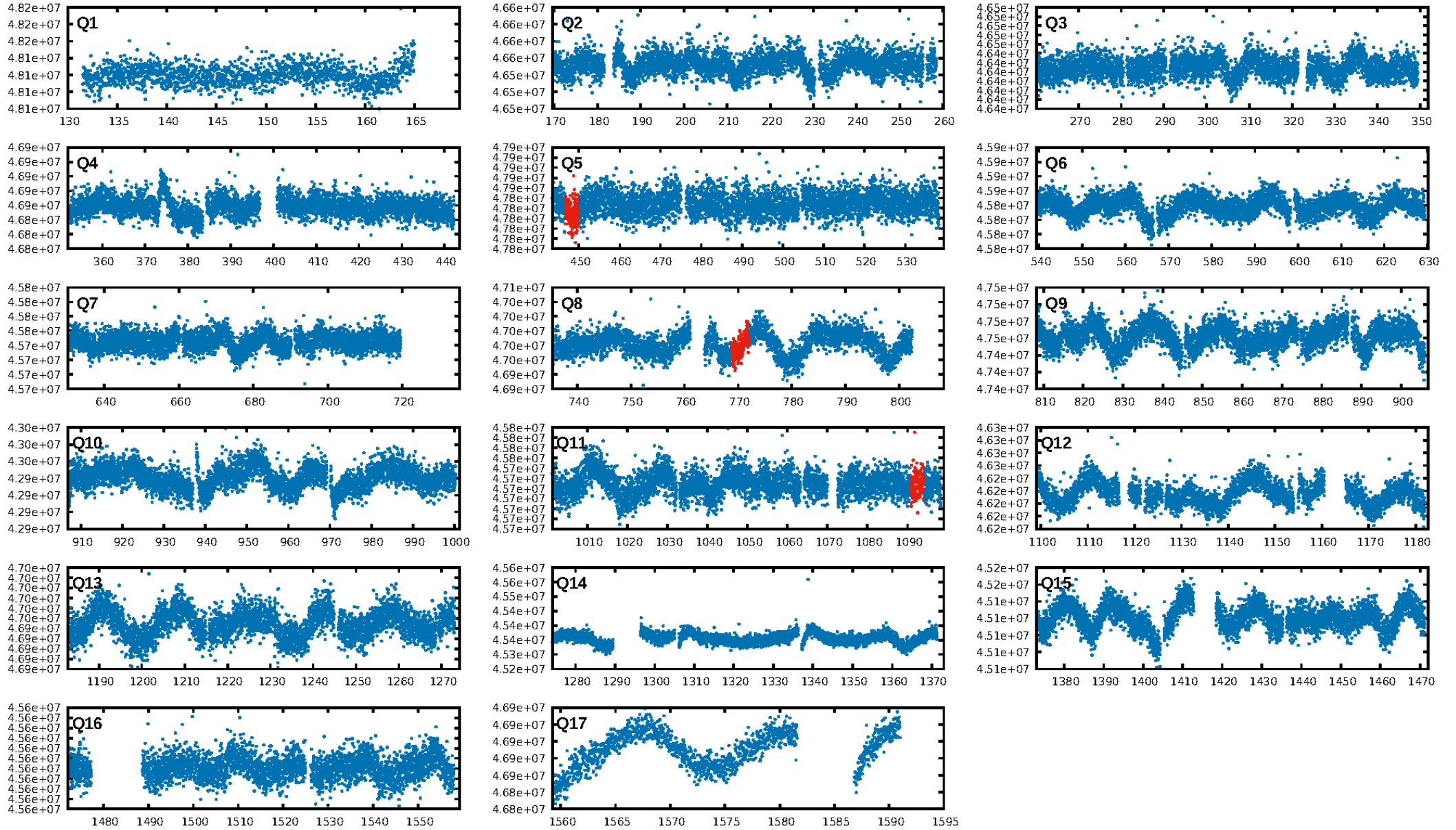
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.74e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.986
Centroid-sig: 56.8%
Centroid-so: 0.837 arcsec [0.54σ]
OotOffset-rm: 1.922 arcsec [8.03σ]
KicOffset-rm: 2.053 arcsec [8.64σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

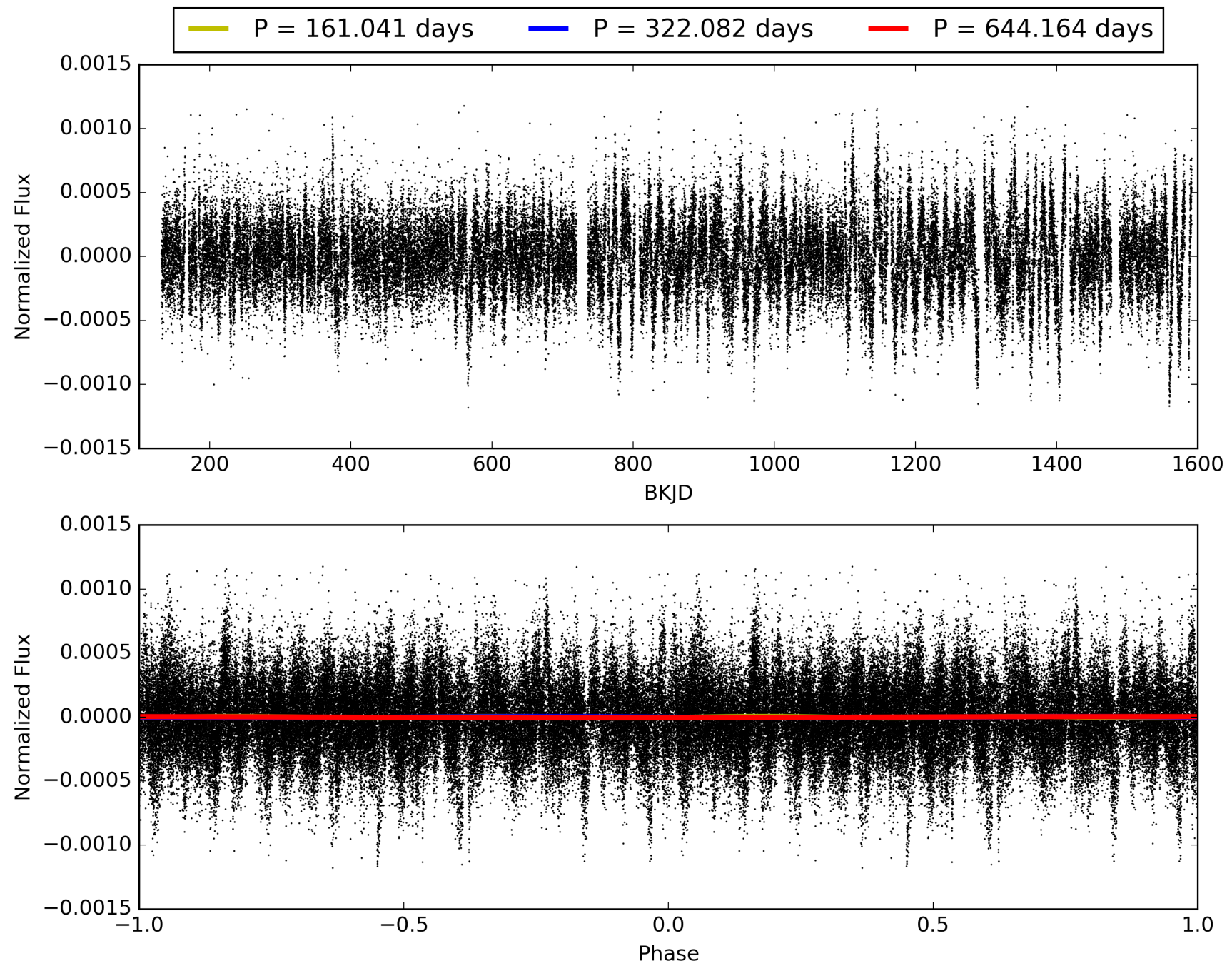
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:43:05 Z

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

TCE 008936886-01, PDC Light Curves

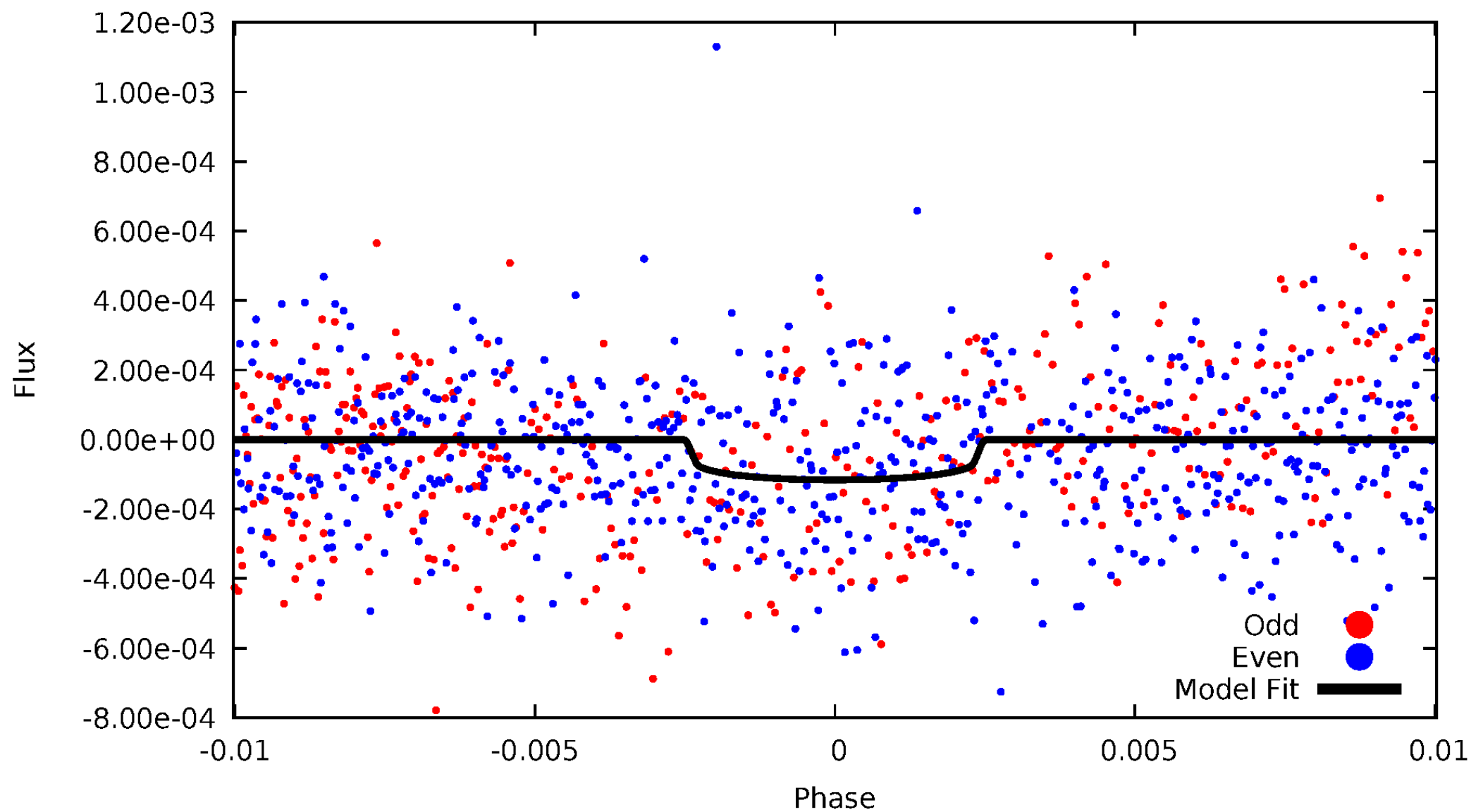


TCE 008936886-01



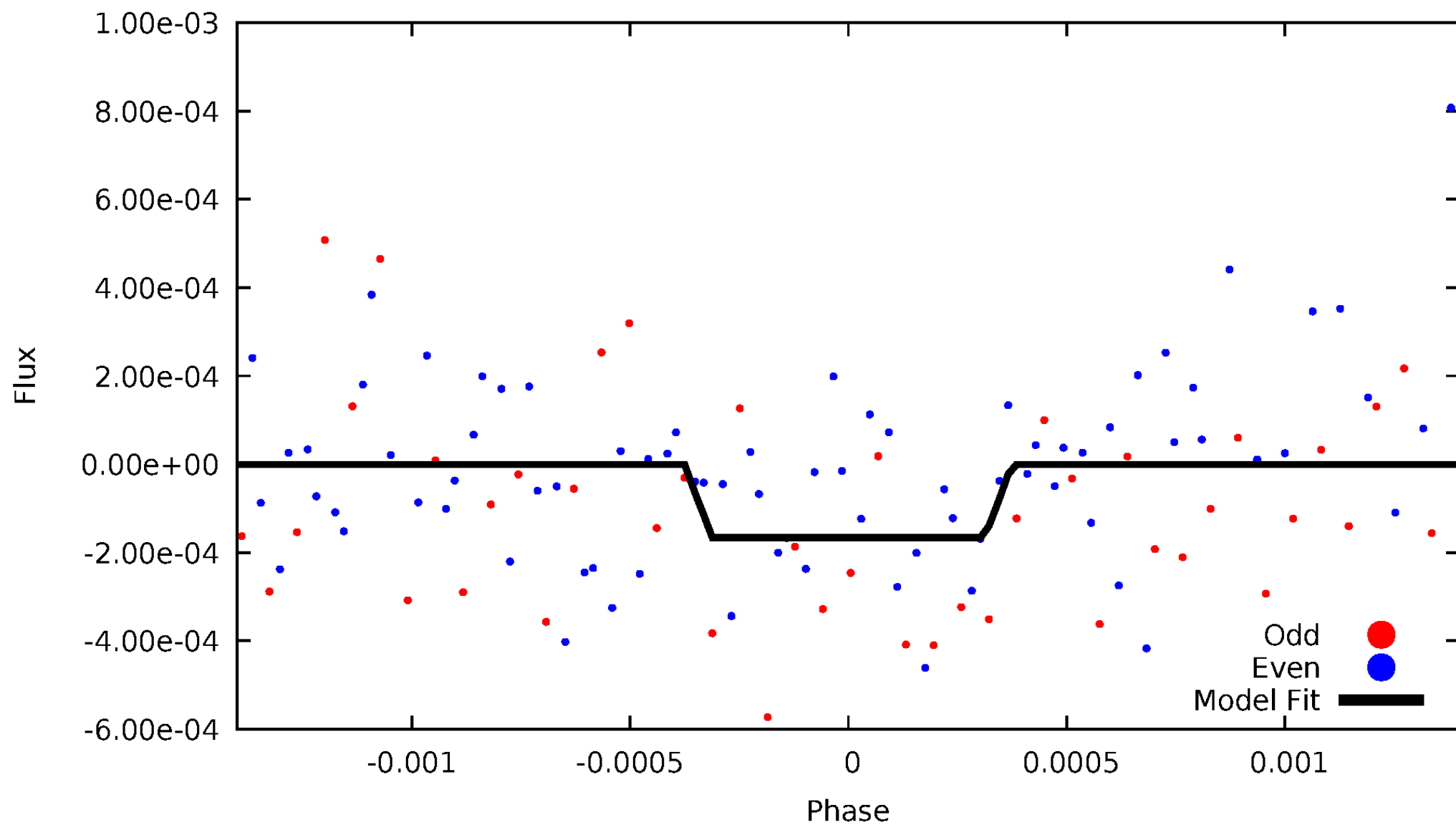
DV Odd/Even

TCE 008936886-01



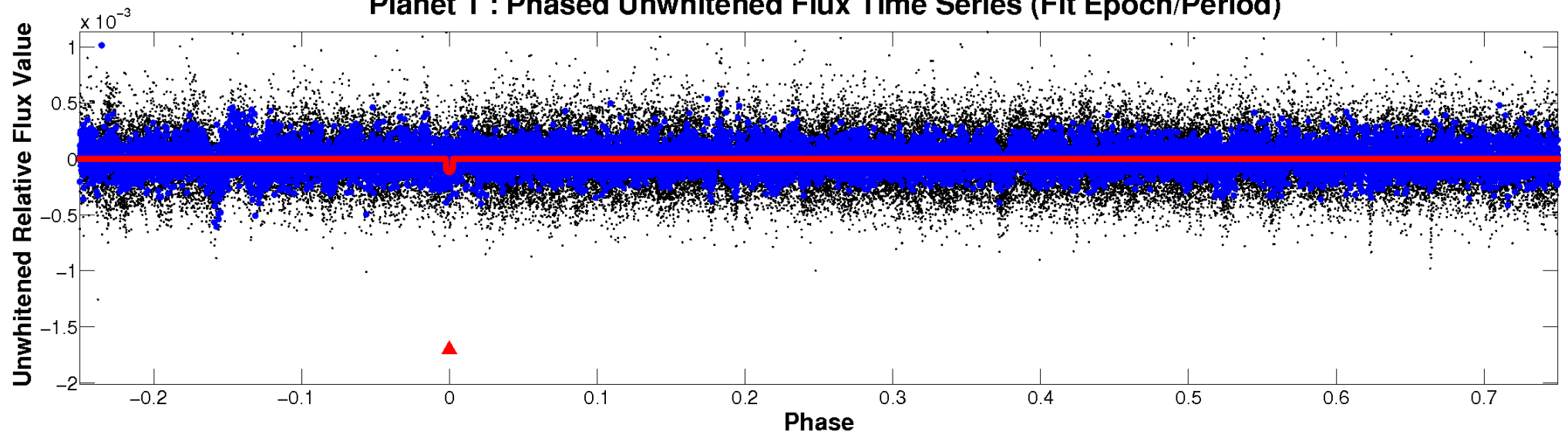
ALT Odd/Even

TCE 008936886-01

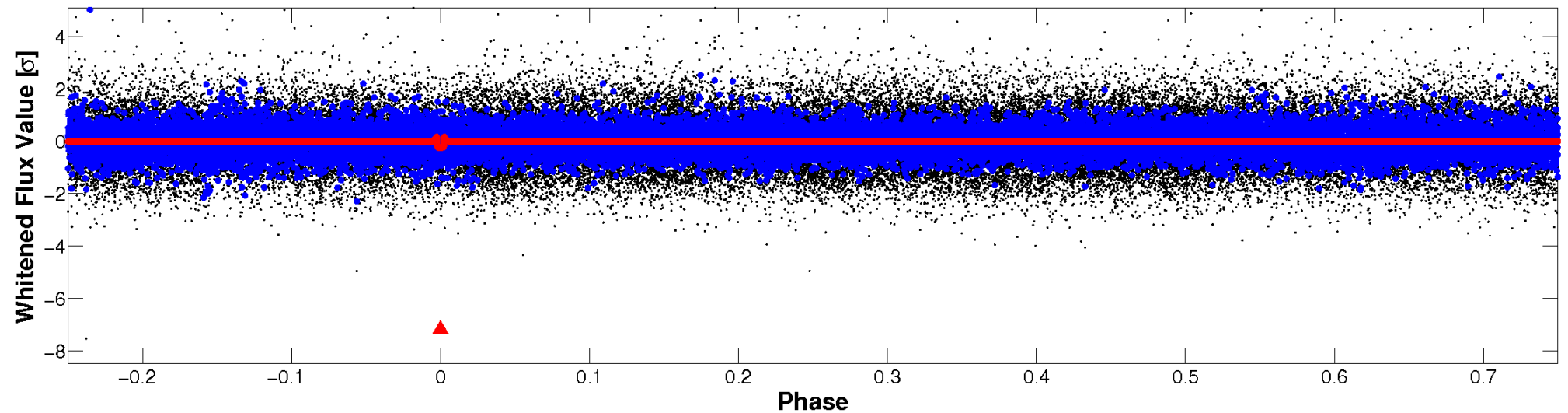


Non-Whitened Vs. Whitened Light Curve

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



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



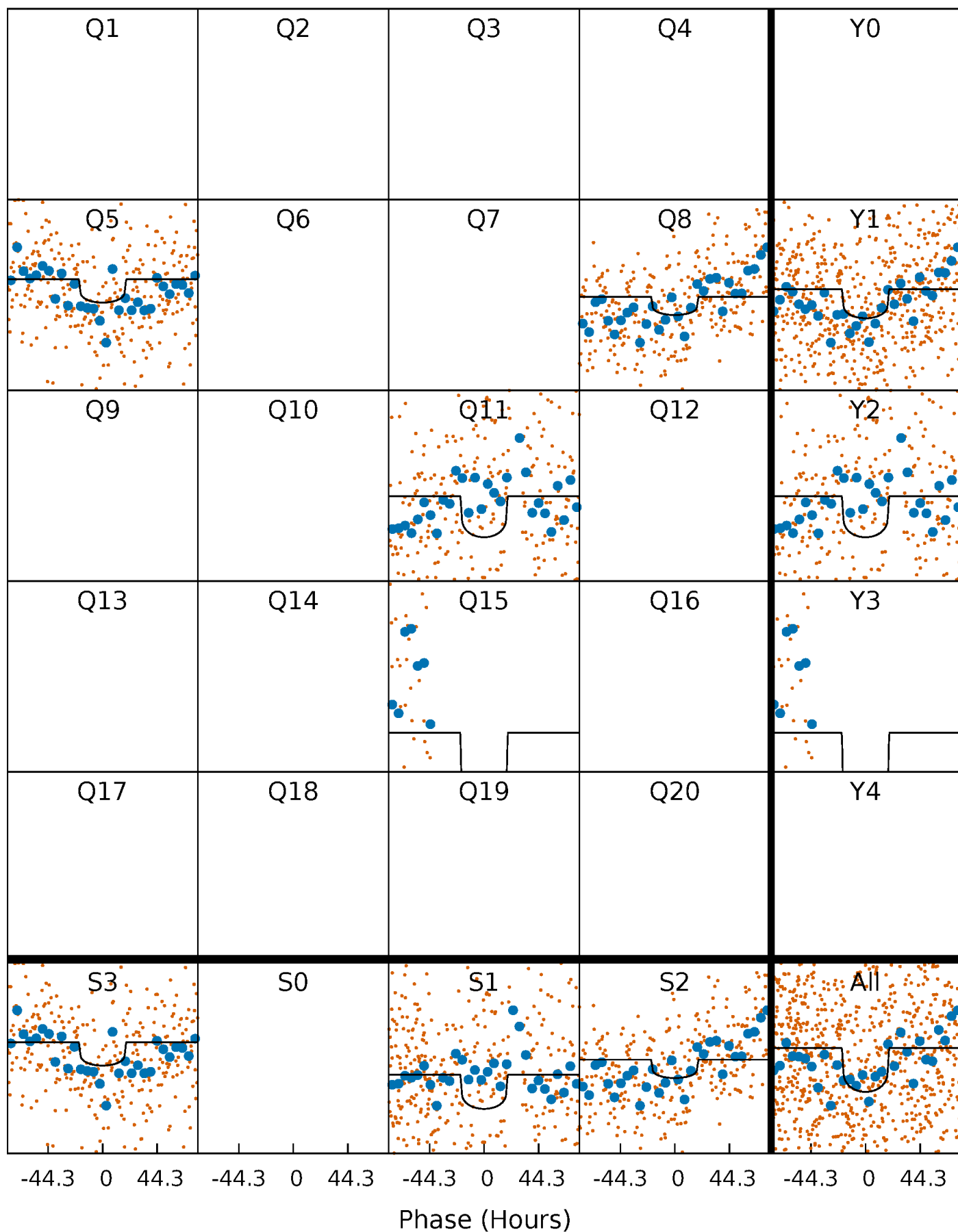
PDC Quarter-Phased Transit Curves

TCE 008936886-01 P=322.081794 Days $T_0=448.280030$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008936886-01 P=322.081794 Days $T_0=448.280030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

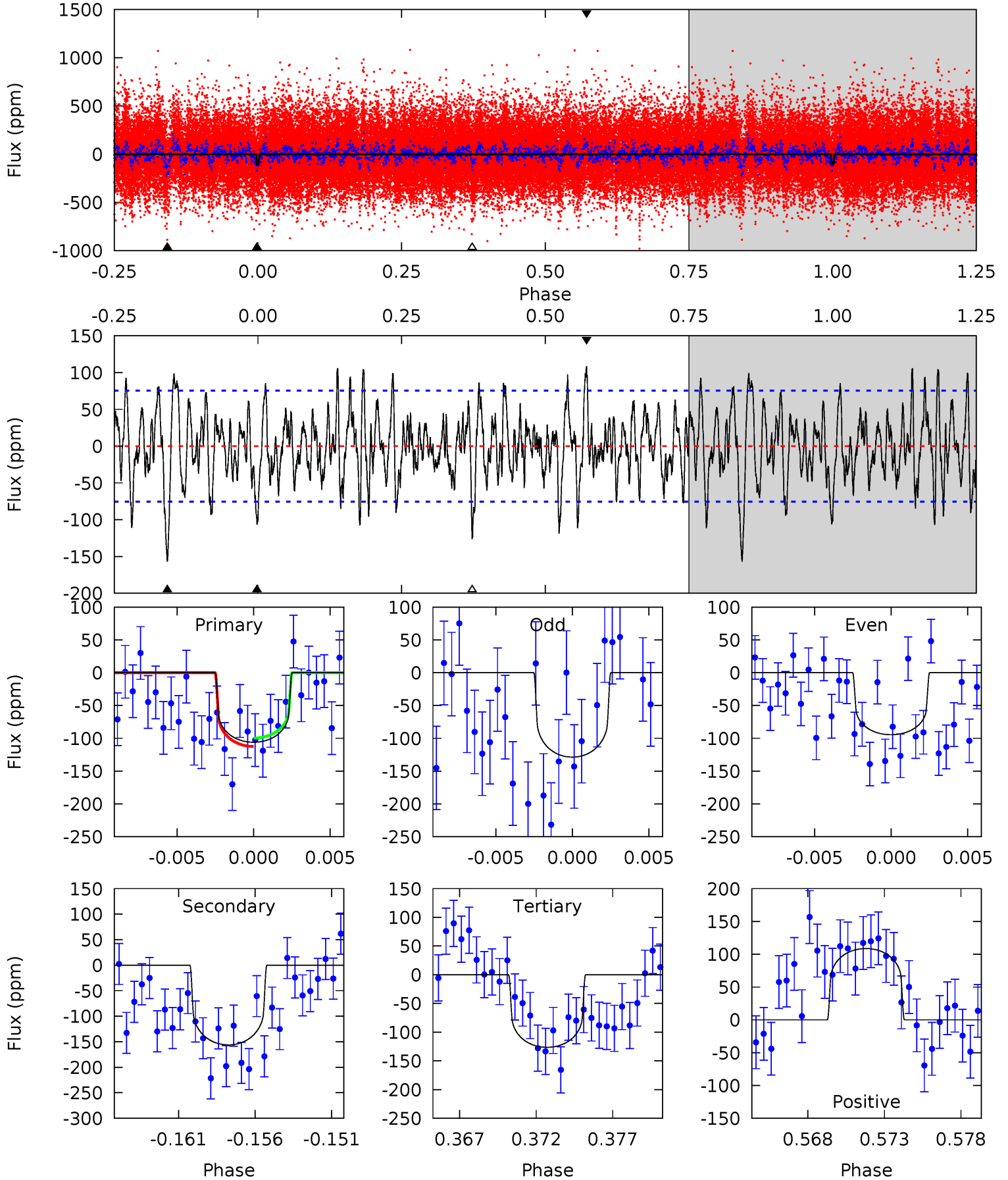
TCE 008936886-01 P=322.393898 Days $T_0=448.276975$ (BKJD)



DV Model-Shift Uniqueness Test

008936886-01, P = 322.081794 Days, E = 126.198236 Days

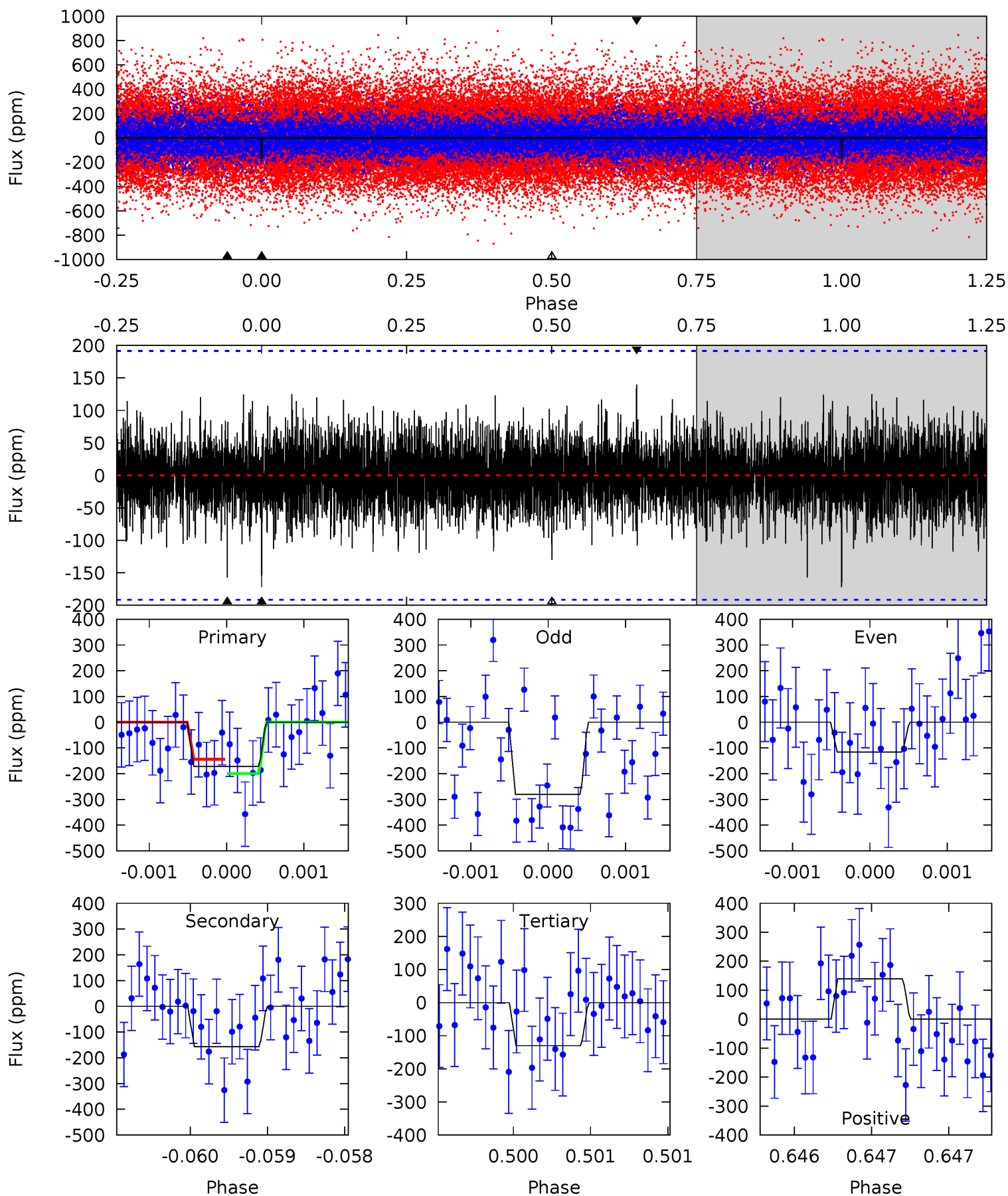
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.26	10.7	8.65	7.44	5.16	2.81	2.66	-1.39	-0.18	2.04	3.25	1.10	0.79	0.41	0.44



Alt Model-Shift Uniqueness Test

008936886-01, P = 322.393898 Days, E = 125.883077 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.94	4.51	3.73	4.01	5.51	3.38	1.01	1.21	0.93	0.77	0.49	2.22	1.17	0.45	0.79



Stellar Parameters For KIC 008936886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5778^{+143}_{-171}	$4.531^{+0.033}_{-0.187}$	$0.070^{+0.250}_{-0.300}$	$0.911^{+0.248}_{-0.083}$	$1.028^{+0.100}_{-0.133}$	$1.914^{+0.352}_{-0.986}$
	+2%/-3%	+1%/-4%	+357%/-429%	+27%/-9%	+10%/-13%	+18%/-52%
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 008936886-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-156 ± 15	$1.18^{+0.36}_{-0.32}$	360^{+24}_{-16}	6032^{+1098}_{-700}	51082^{+45656}_{-20592}
Alt.	-157 ± 35	$1.34^{+0.38}_{-0.30}$	361^{+23}_{-15}	5673^{+804}_{-605}	40004^{+28609}_{-16448}

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

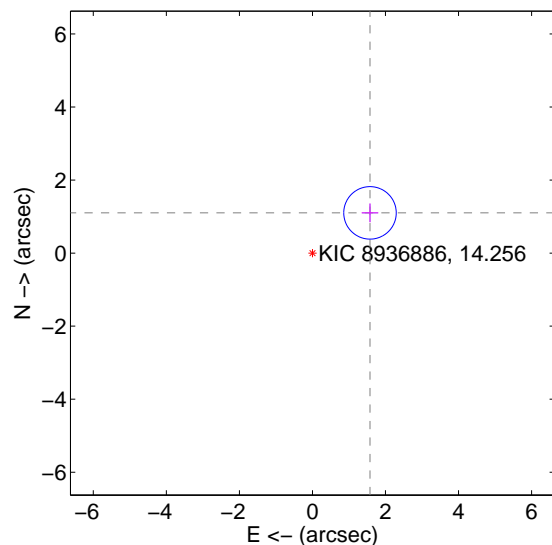
Supplemental centroid analysis for 008936886-01. Kepler magnitude: 14.26. Transit SNR 3.59

There are 1 quarters with good PRF difference image offsets

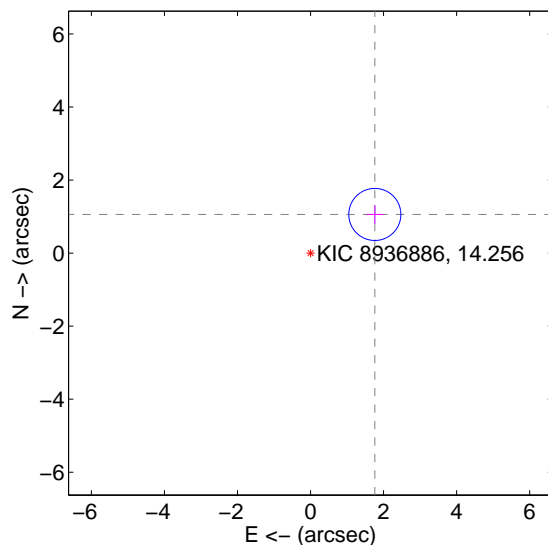
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.922 ± 0.239	8.03	-1.575 ± 0.229	1.101 ± 0.260
PRF-fit source offset from KIC position	2.053 ± 0.238	8.64	-1.760 ± 0.229	1.058 ± 0.260
photometric centroid source offset	0.84 ± 1.56	0.54	-0.19 ± 1.72	-0.81 ± 1.55

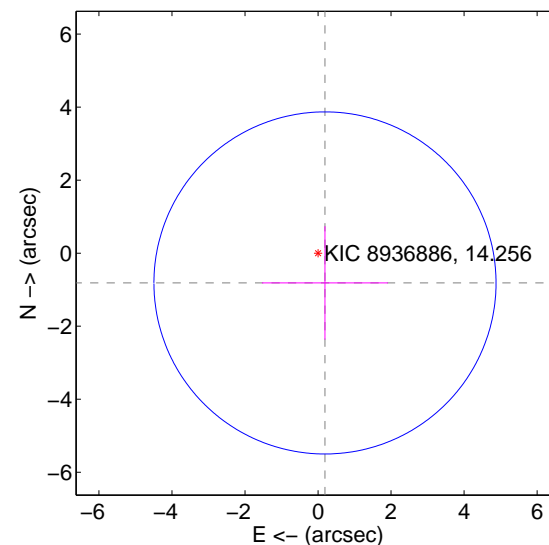
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

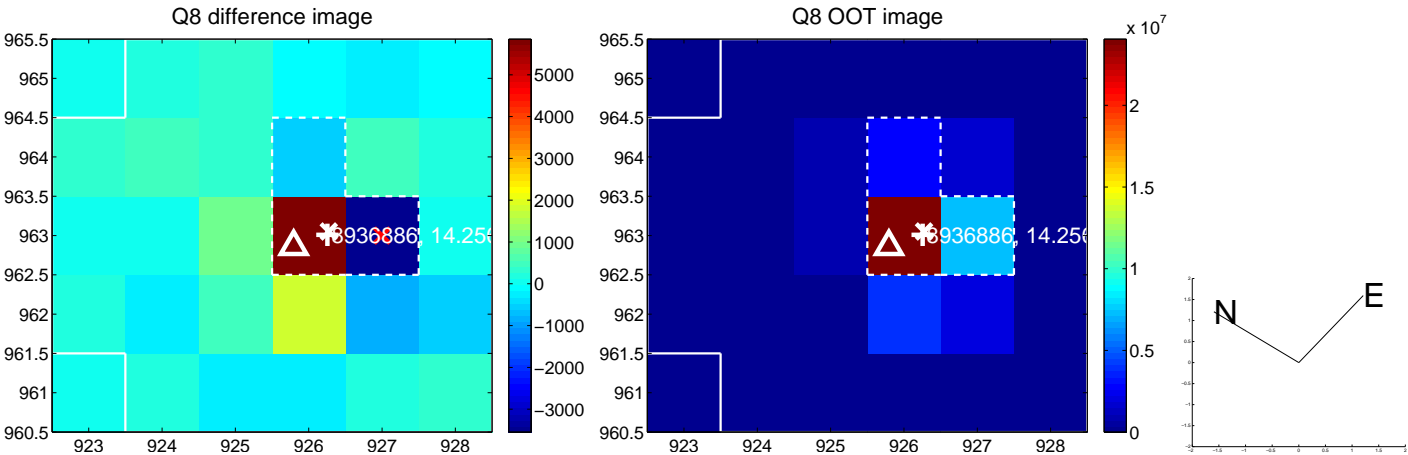
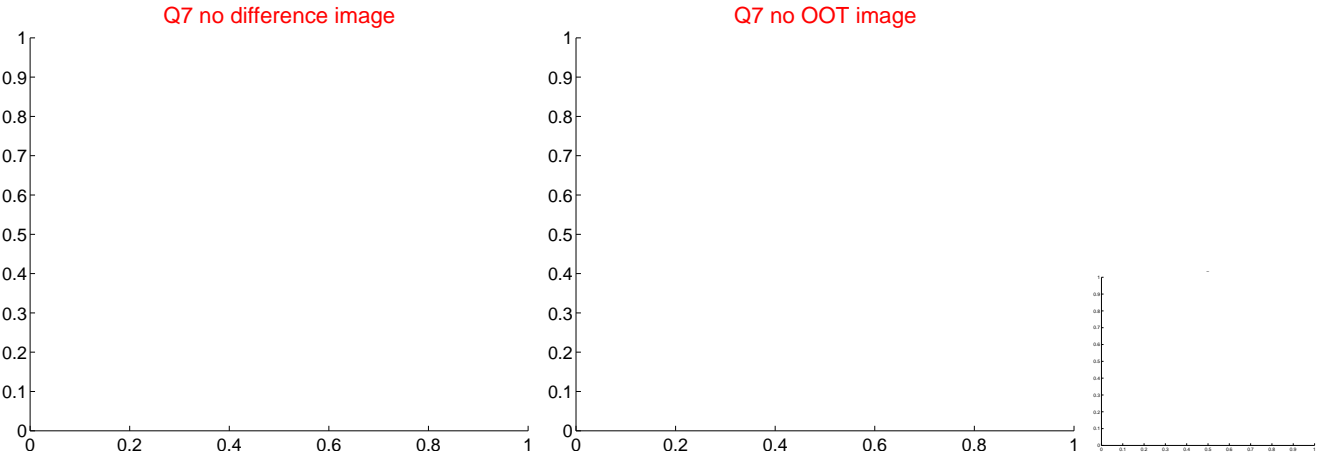
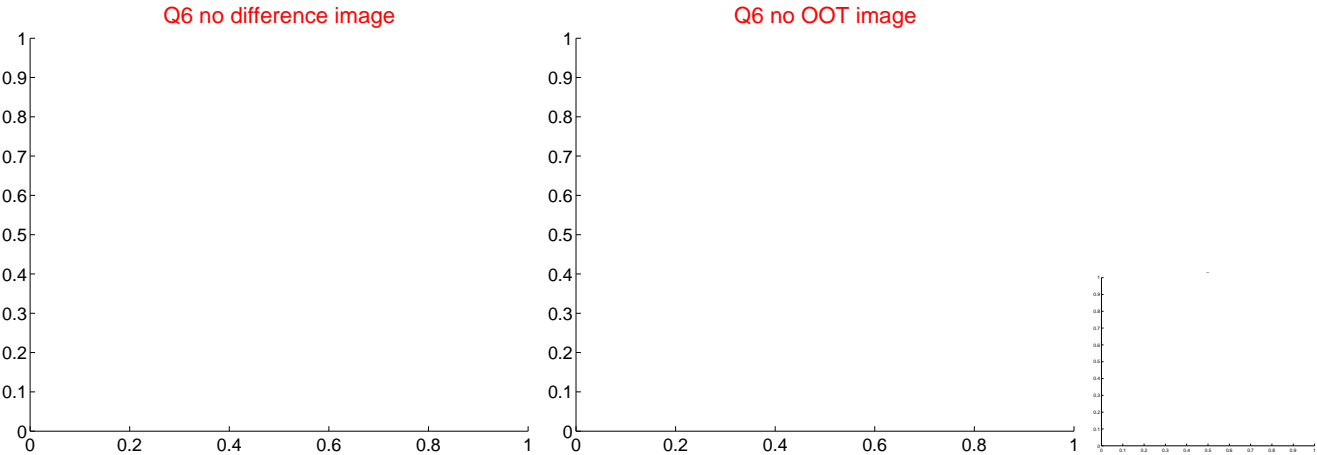
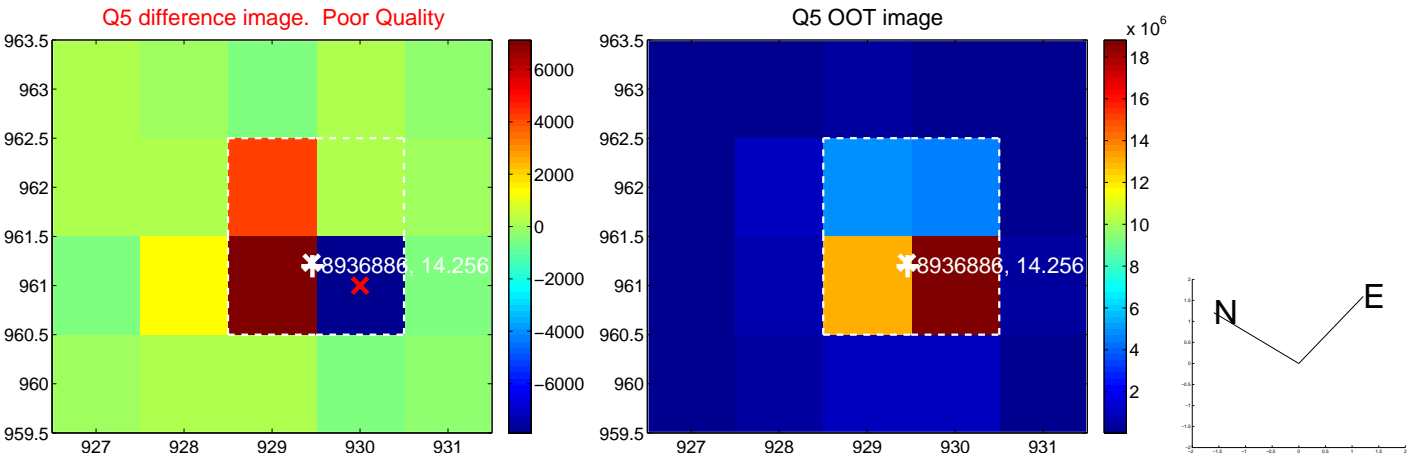


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

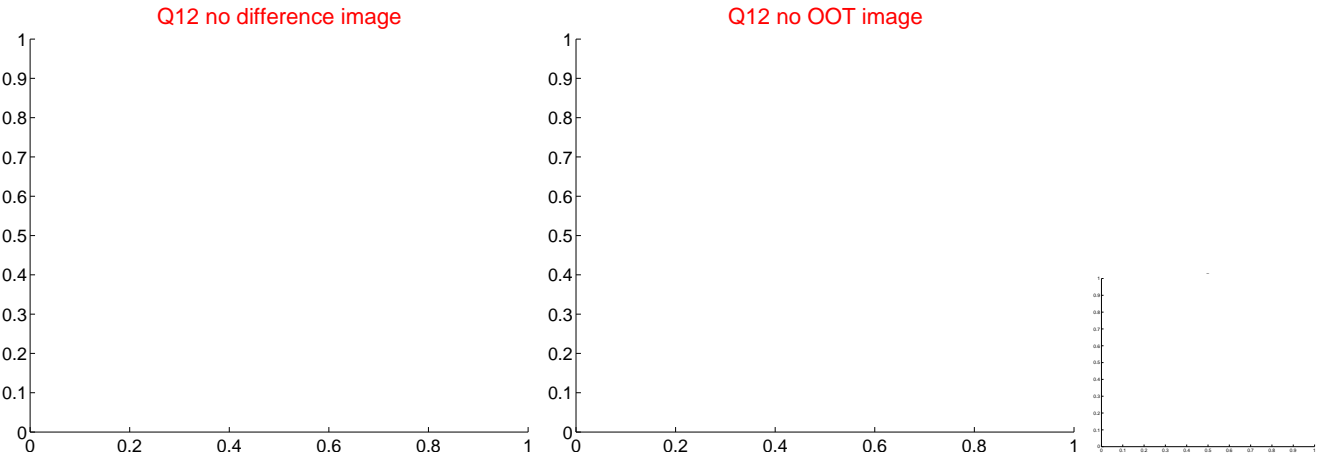
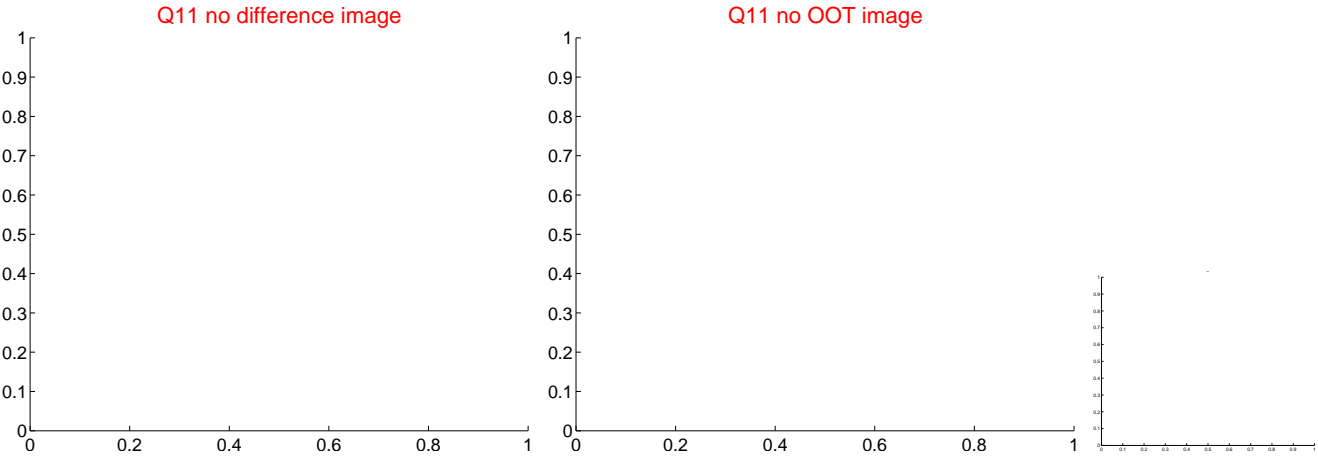
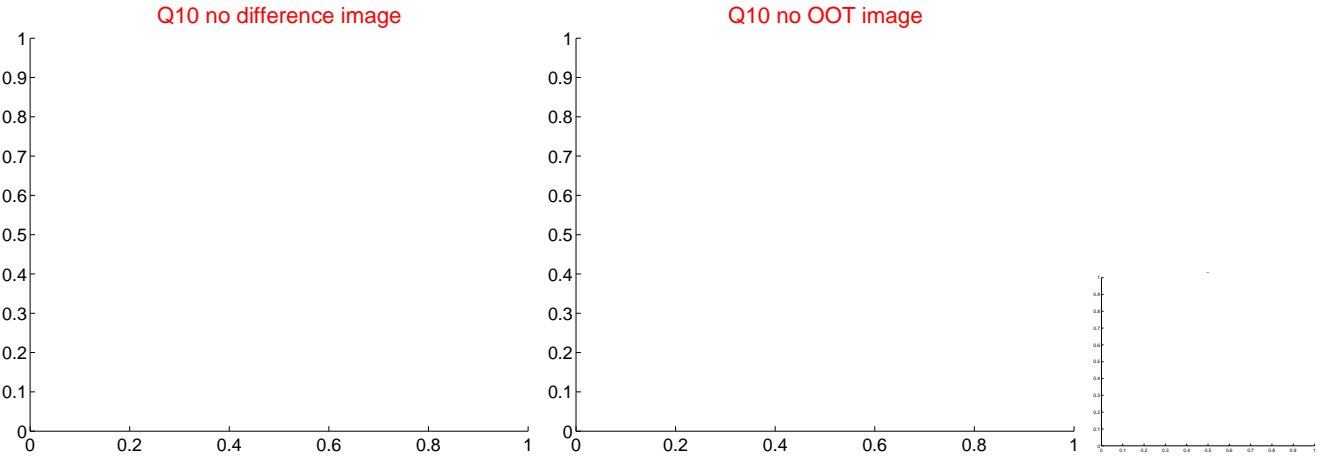
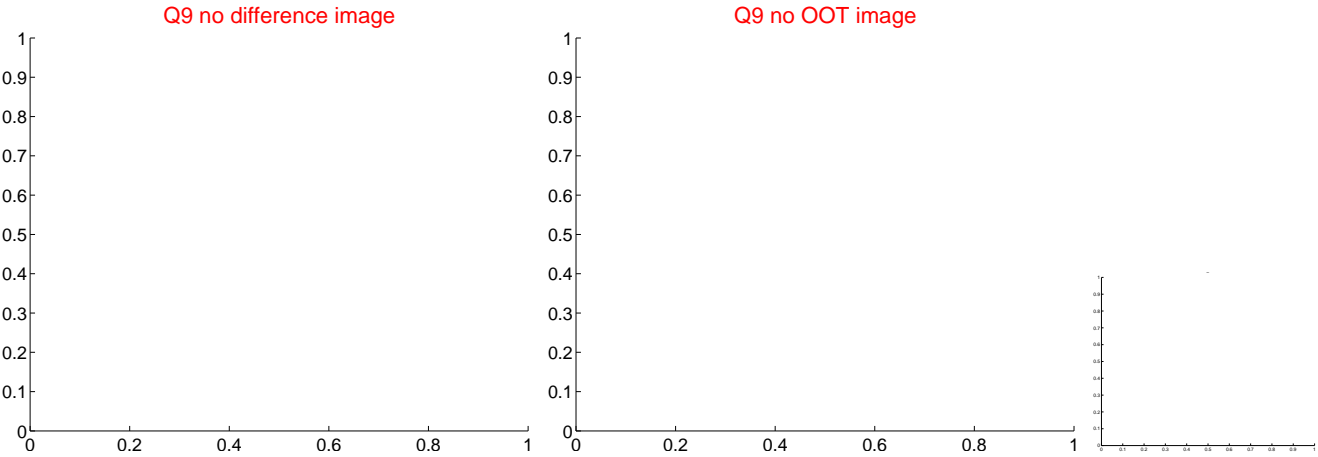
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



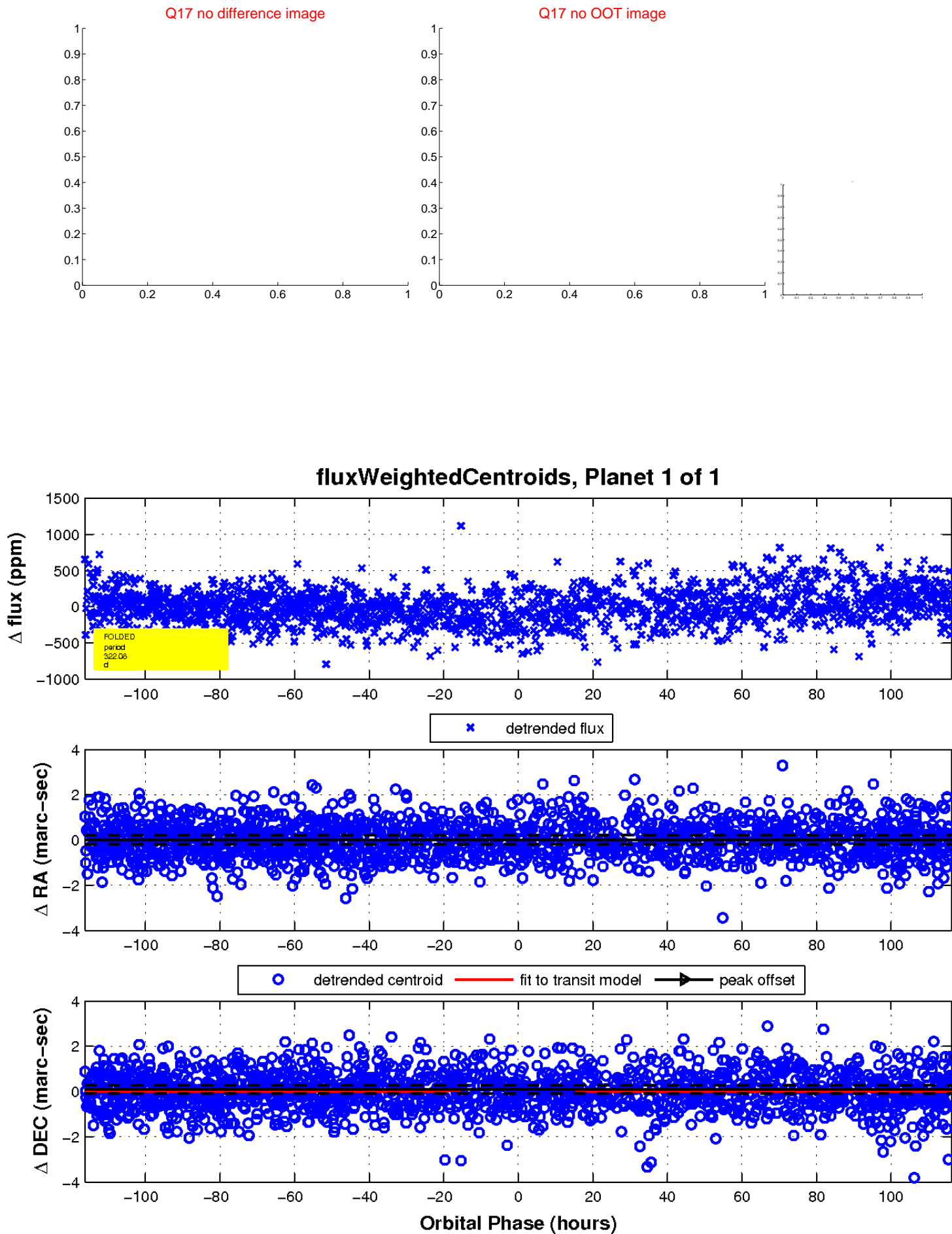
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

