

KIC 008474897

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})
008474897-01	OBS	No	485.283974	608.509597	1193.9	6.135	9.3	9.5	0.41	3581	1.75	0.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008474897-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_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.

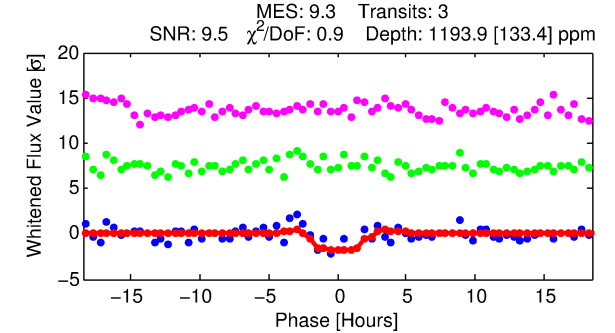
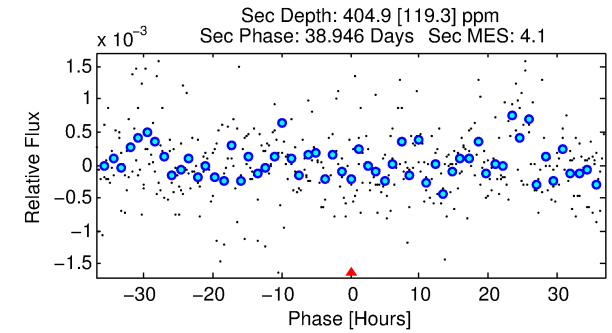
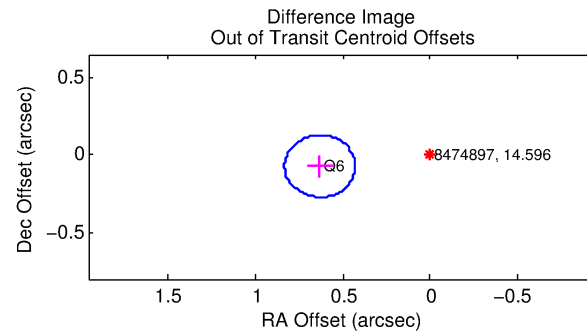
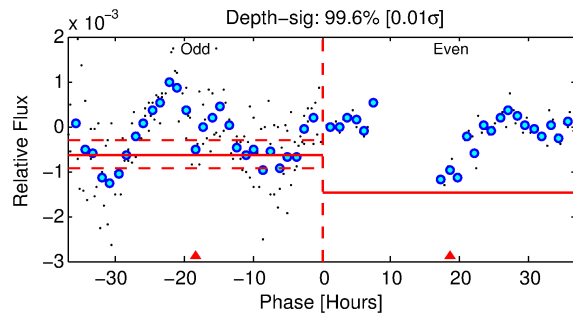
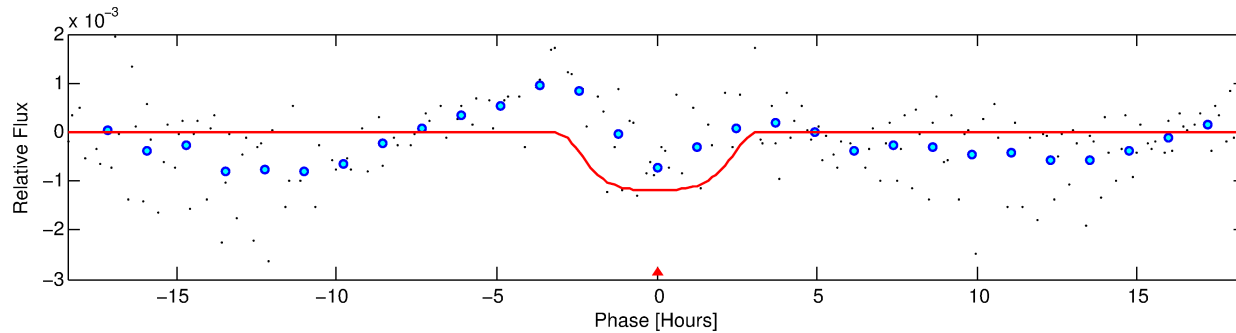
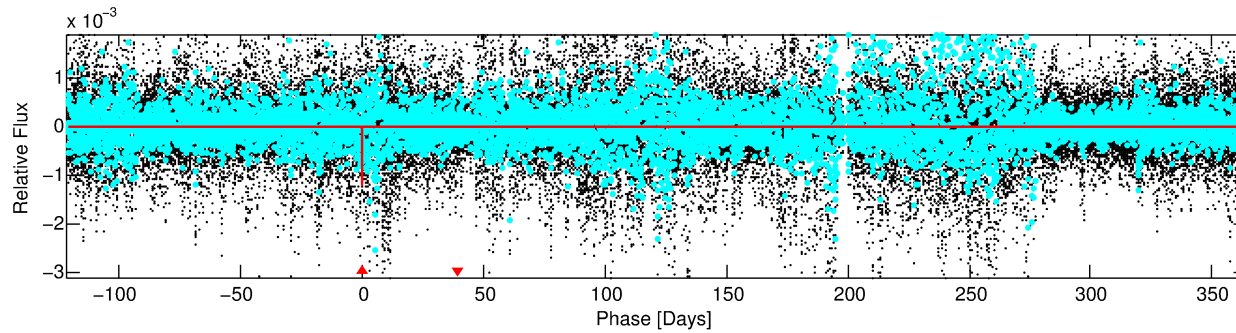
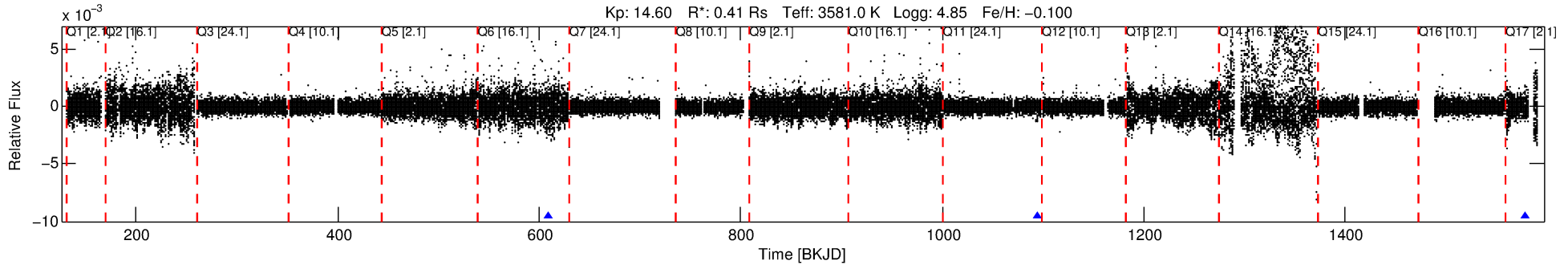
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008474897-01

No Significant Match Found

DV One-Page Summary

KIC: 8474897 Candidate: 1 of 1 Period: 485.284 d



DV Fit Results:

Period = 485.28397 [0.01191] d
Epoch = 608.5096 [0.0161] BKJD
Rp/R* = 0.0395 [0.0039]
a/R* = 275.30 [77.34]
b = 0.93 [0.04]
Seff = 0.03 [0.00]
Teq = 106 [4] K
Rp = 1.75 [0.29] Re
a = 0.9065 [0.0919] AU
Ag = 59701.89 [22485.43] [2.66σ]
Teffp = 2555 [235] K [10.42σ]

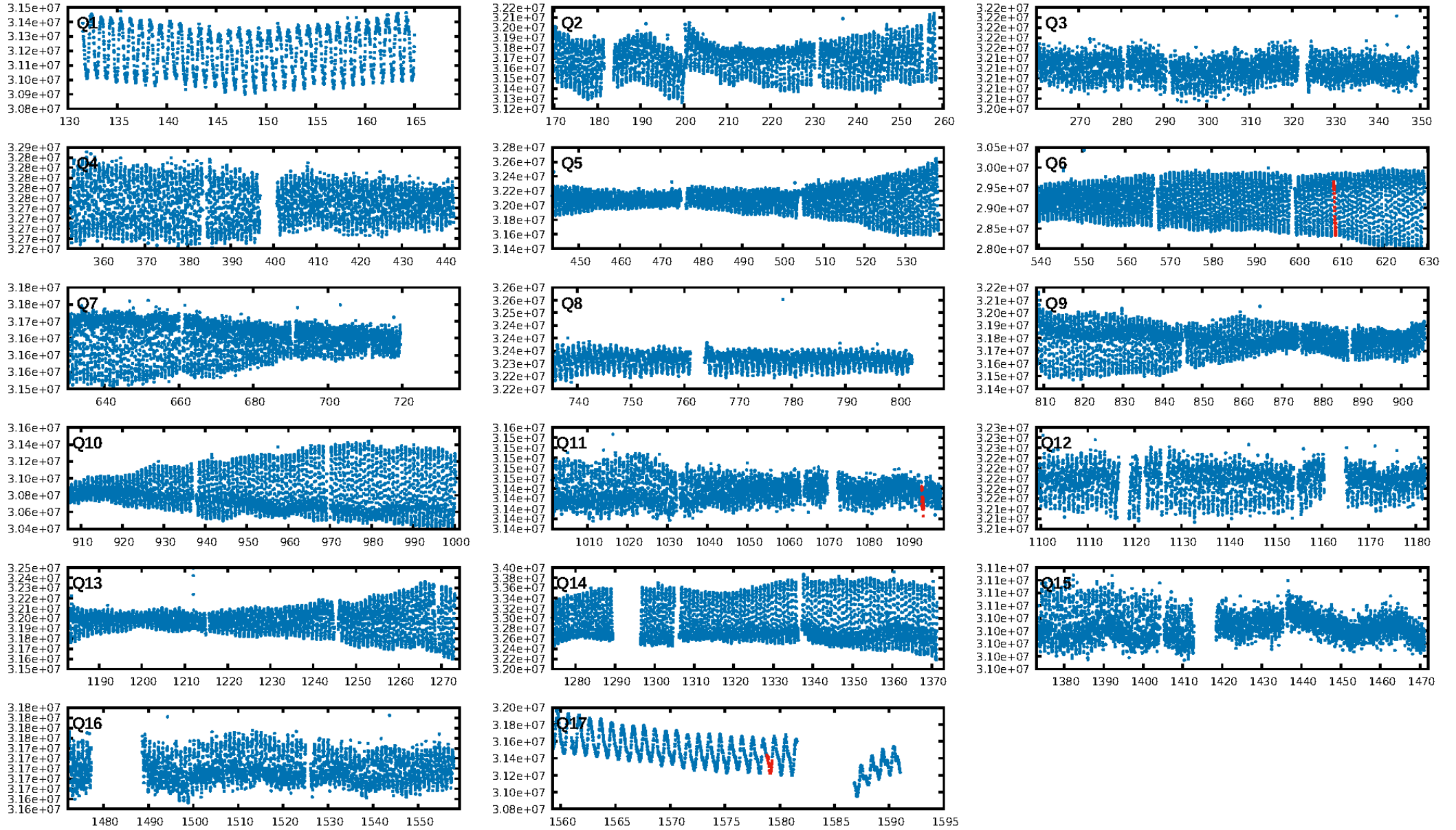
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 63.3%
ModelChiSquareGof-sig: 89.9%
Bootstrap-pfa: 7.43e-07
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.6102
Centroid-sig: 39.6%
Centroid-so: 5.425 arcsec [0.83σ]
OotOffset-rm: 0.634 arcsec [9.48σ]
KicOffset-rm: 9.049 arcsec [135.23σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

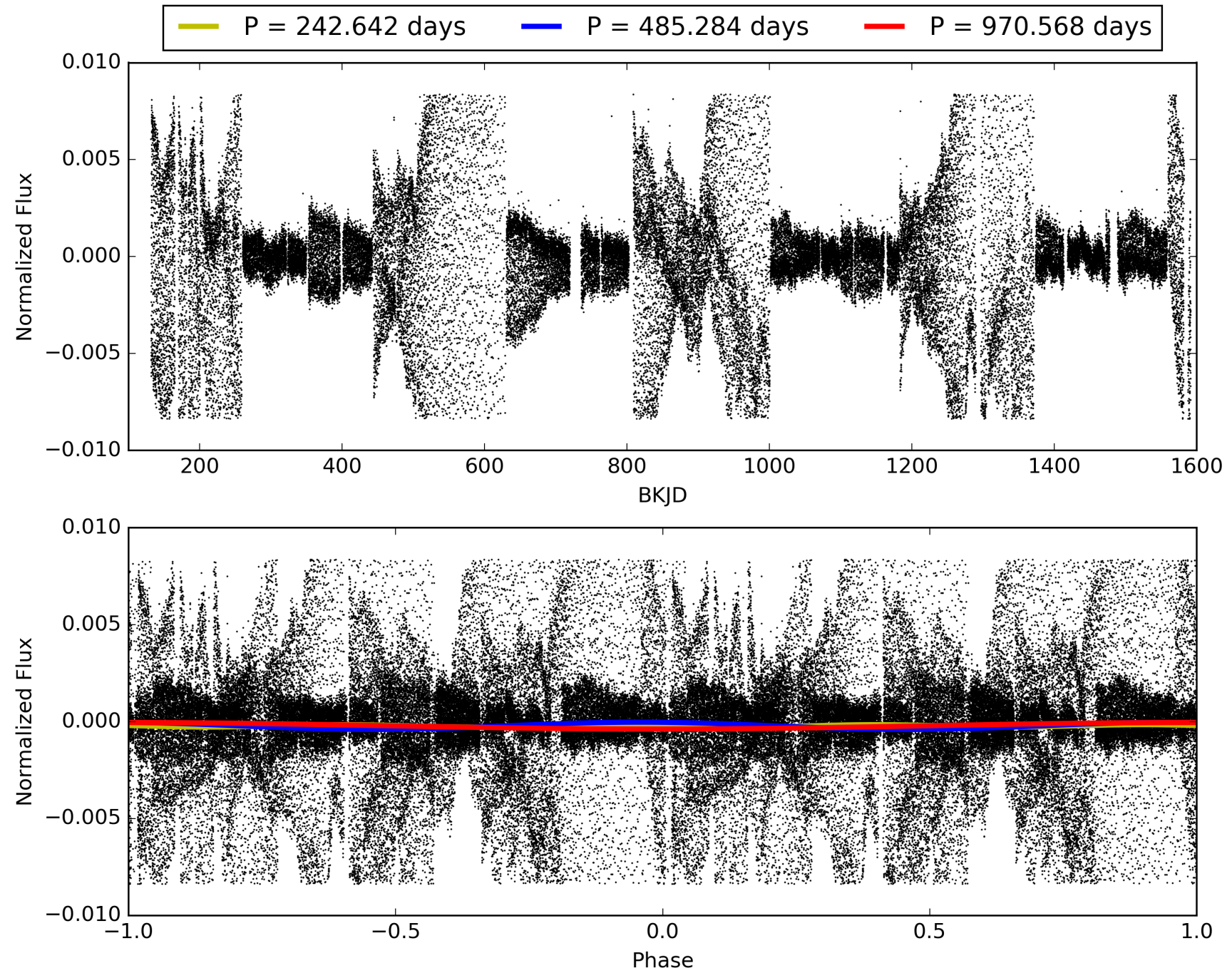
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:04:16 Z

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

TCE 008474897-01, PDC Light Curves

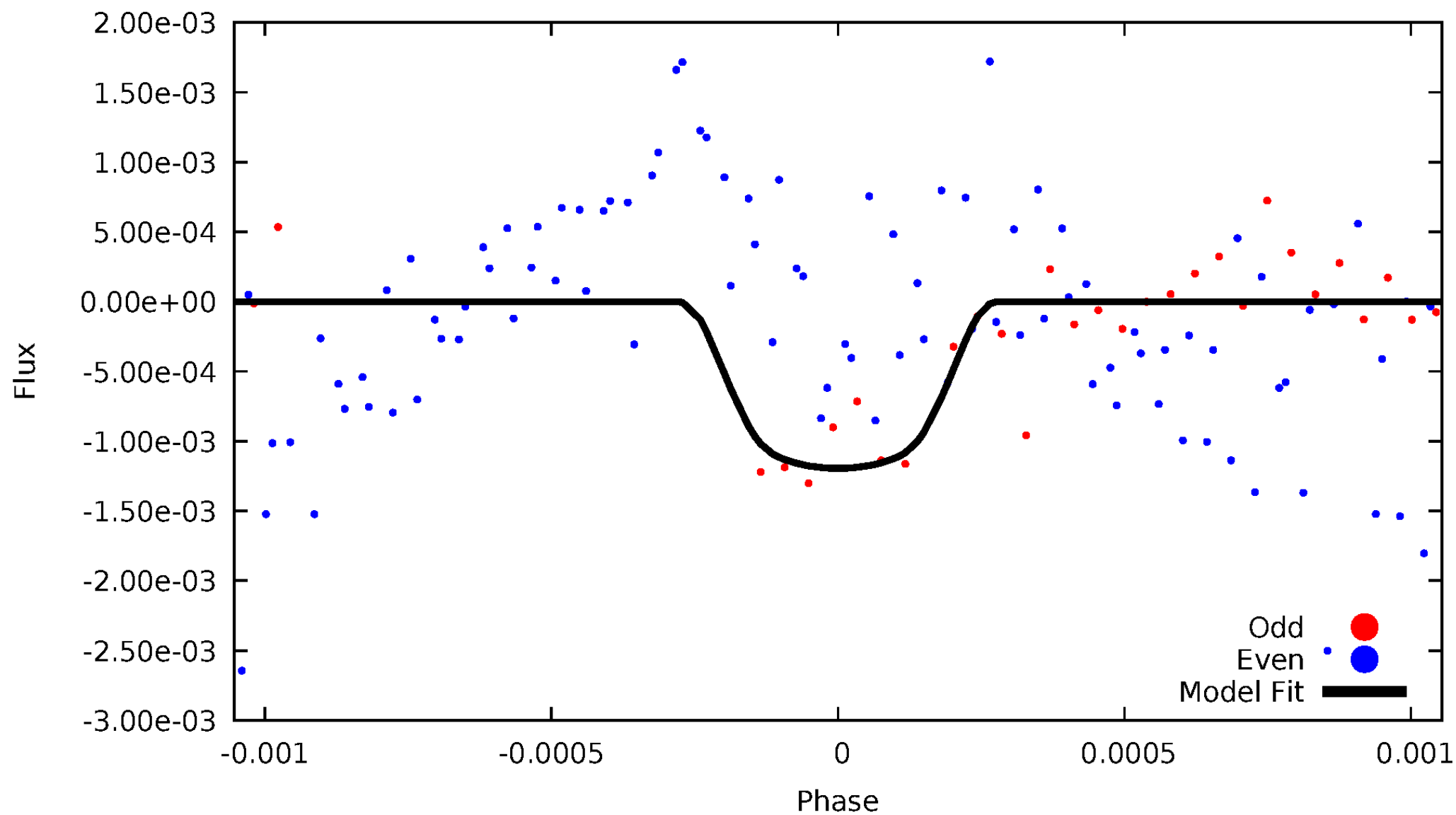


TCE 008474897-01



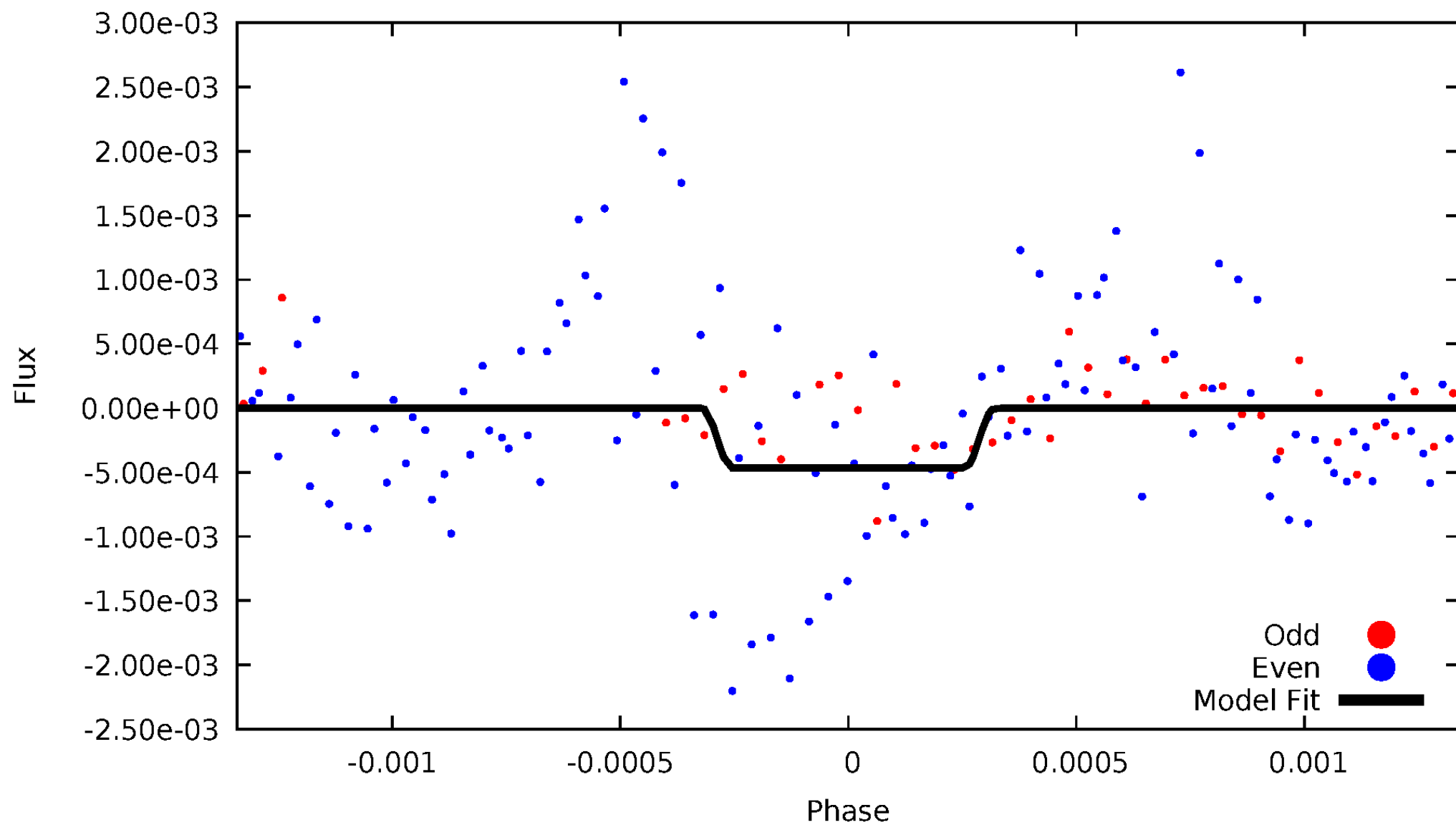
DV Odd/Even

TCE 008474897-01



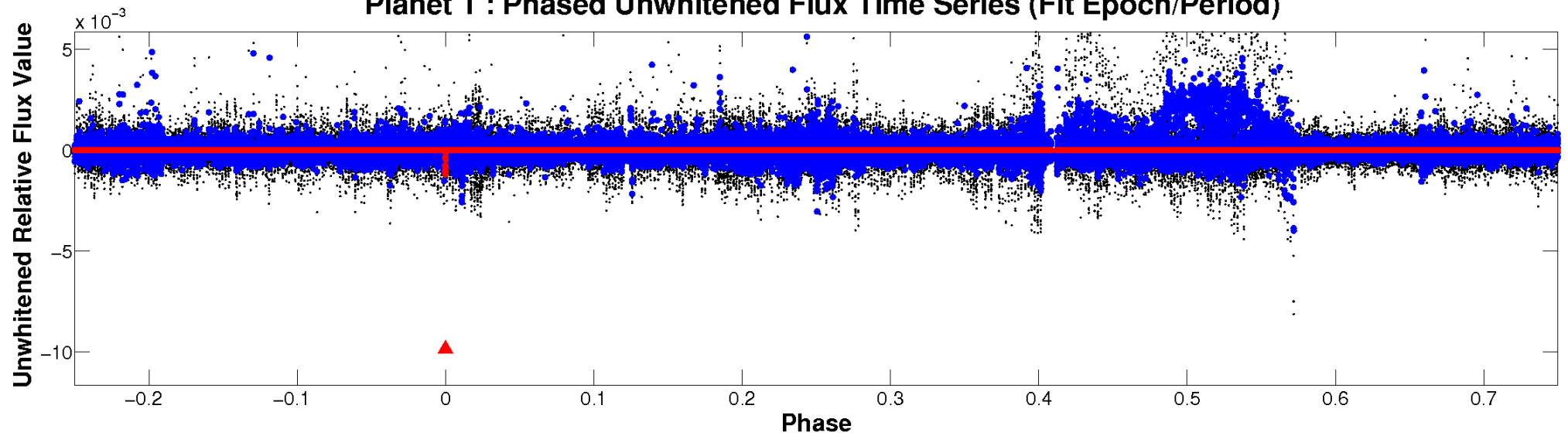
ALT Odd/Even

TCE 008474897-01

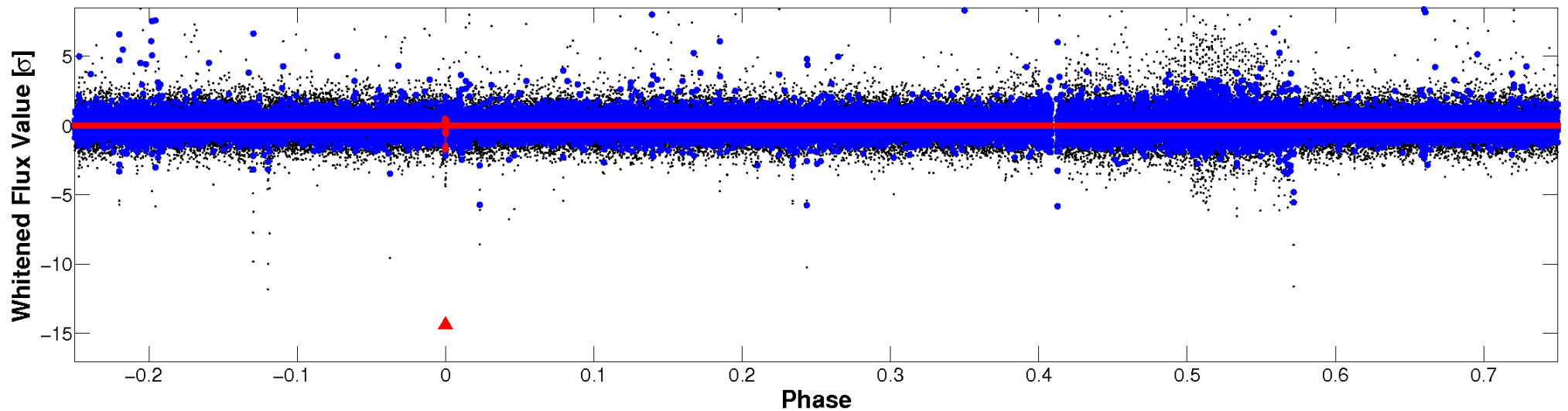


Non-Whitened Vs. Whitened Light Curve

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

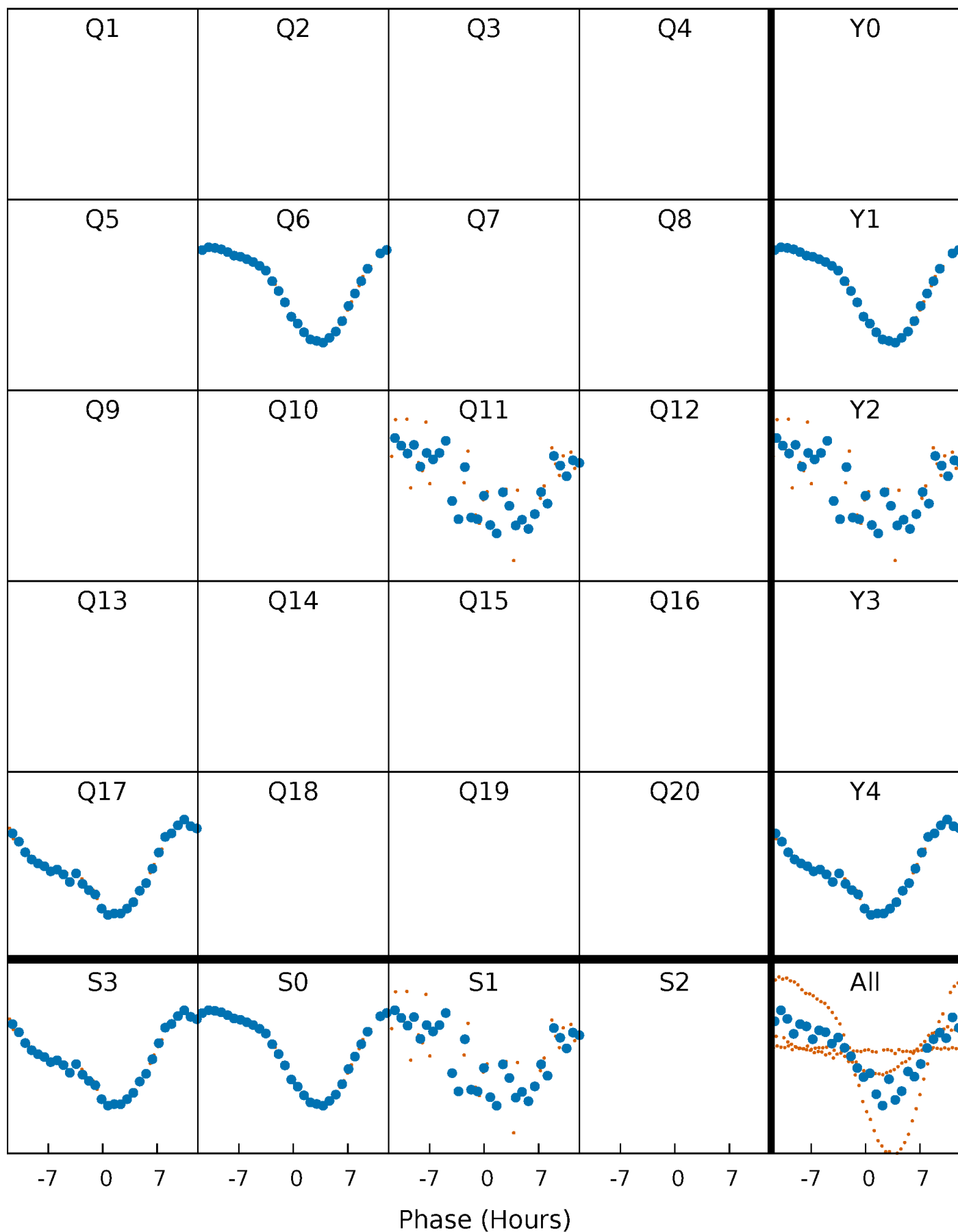


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



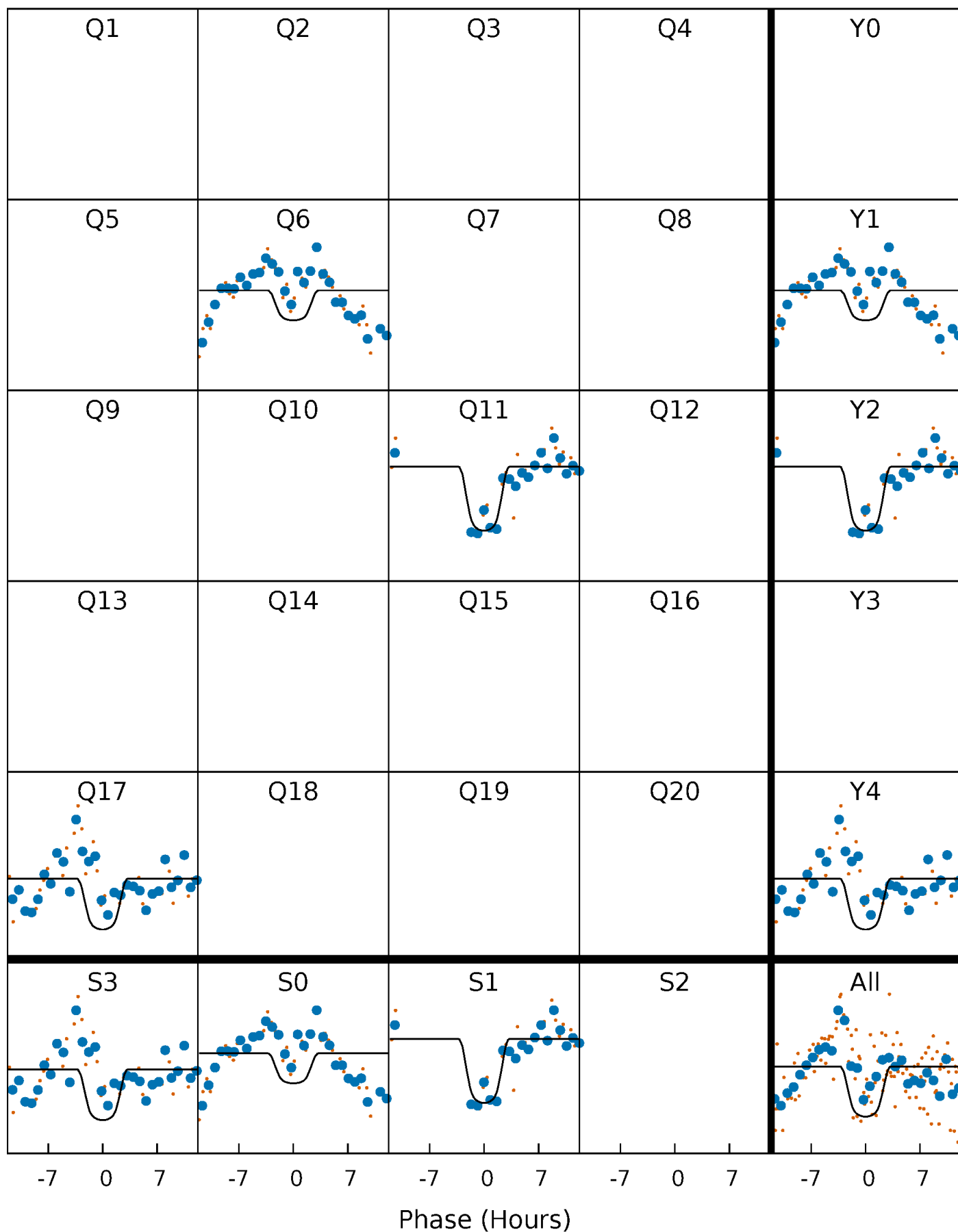
PDC Quarter-Phased Transit Curves

TCE 008474897-01 $P=485.283974$ Days $T_0=608.509597$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008474897-01 P=485.283974 Days $T_0=608.509597$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

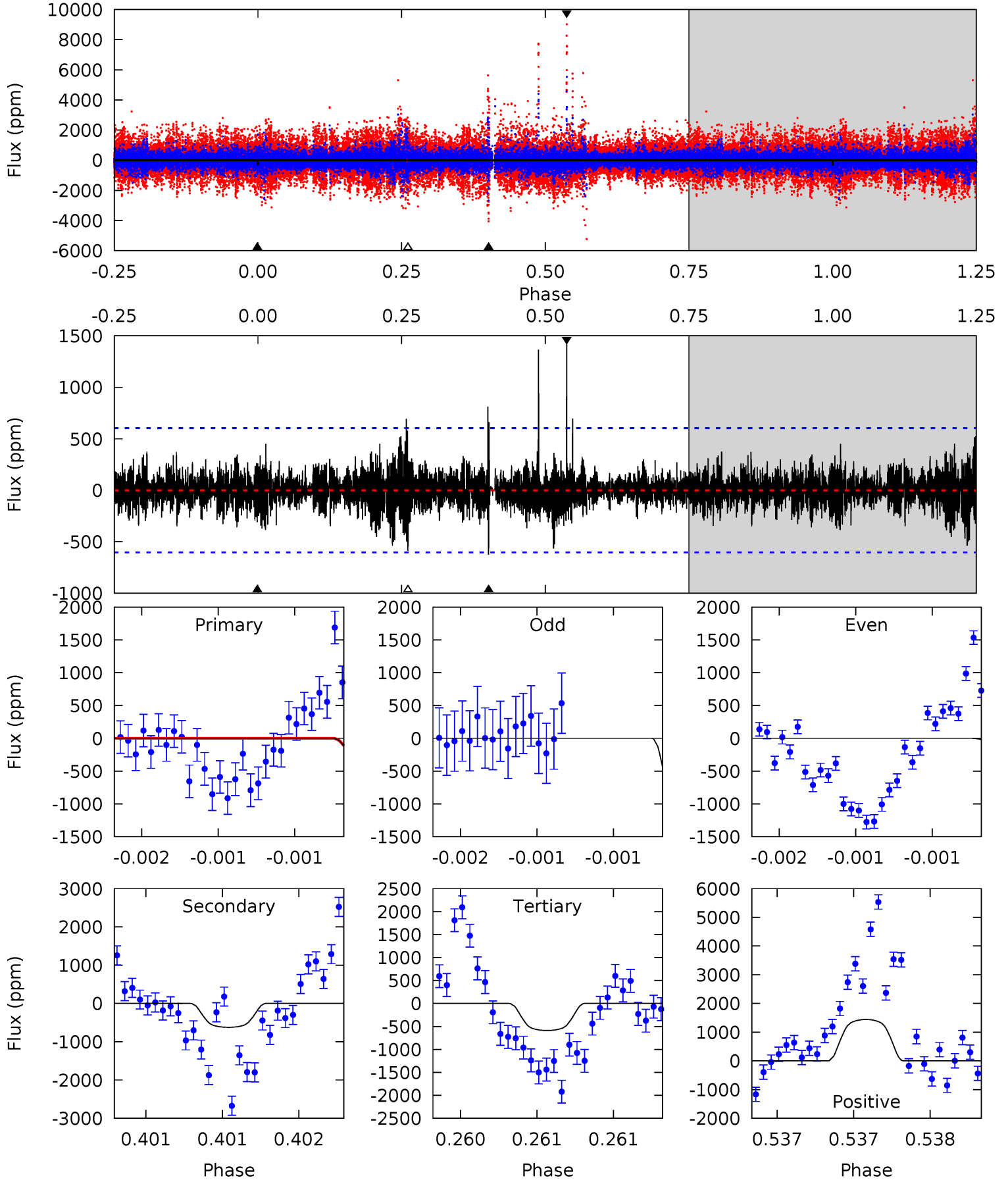
TCE 008474897-01 P=485.310672 Days $T_0=608.611413$ (BKJD)



DV Model-Shift Uniqueness Test

008474897-01, P = 485.283974 Days, E = 123.225623 Days

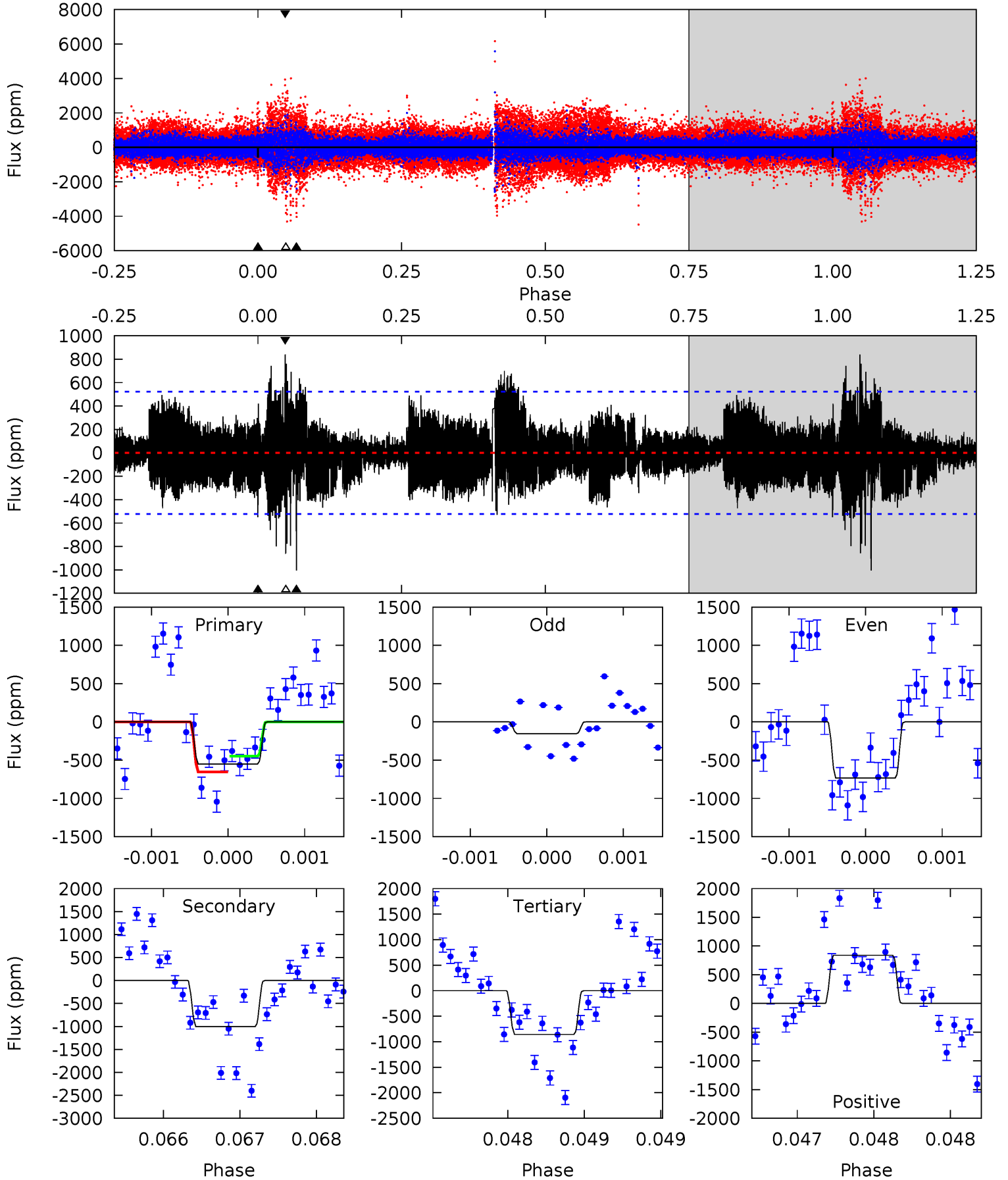
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.84	5.74	5.41	13.3	5.55	3.45	1.20	-2.57	-10.4	0.33	-7.55	3.24	2.29	0.70	0.18



Alt Model-Shift Uniqueness Test

008474897-01, P = 485.310672 Days, E = 123.300741 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.80	10.6	9.06	8.87	5.53	3.41	1.91	-3.26	-3.07	1.54	1.73	2.57	2.51	0.46	1.10



Stellar Parameters For KIC 008474897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3581^{+81}_{-90}	$4.846^{+0.060}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.406^{+0.044}_{-0.055}$	$0.424^{+0.049}_{-0.065}$	$8.915^{+2.866}_{-1.819}$
	+2%/-3%	+1%/-1%	+100%/-100%	+11%/-14%	+12%/-15%	+32%/-20%
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 008474897-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-623 ± 109	$1.75^{+0.21}_{-0.20}$	147^{+4}_{-5}	3091^{+148}_{-120}	90923^{+28429}_{-22363}
Alt.	-1004 ± 95	$0.95^{+0.18}_{-0.18}$	147^{+5}_{-5}	4085^{+350}_{-276}	$504065^{+246062}_{-154369}$

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 $A_{\text{obs}} \gg 1.0$

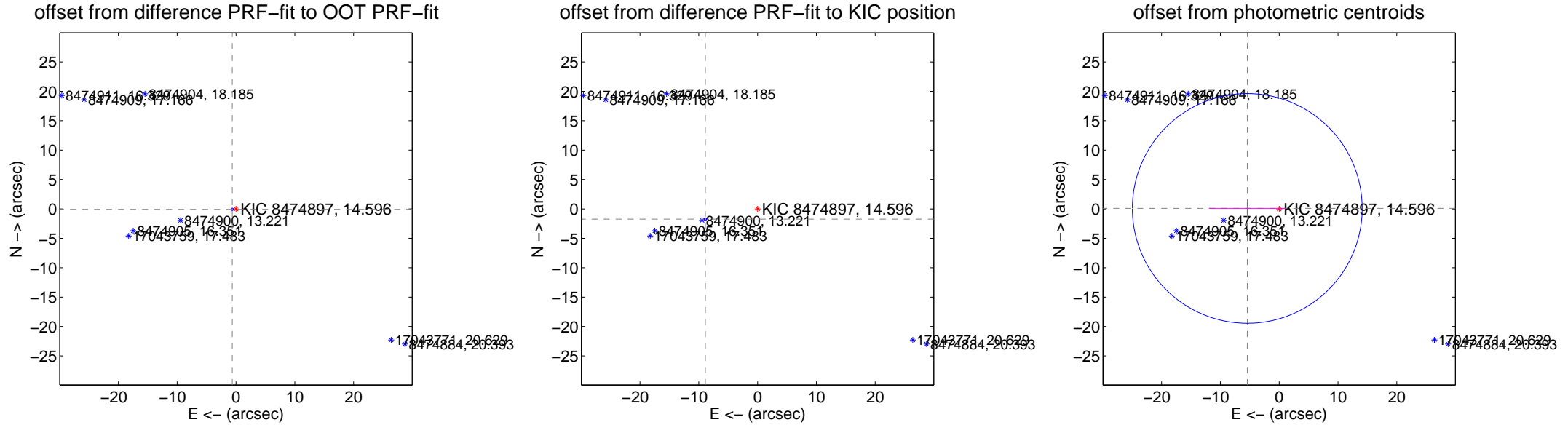
DV Centroid Data

Supplemental centroid analysis for 008474897-01. Kepler magnitude: 14.60. Transit SNR 9.46

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 8.42 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.634 ± 0.067	9.48	0.630 ± 0.067	-0.071 ± 0.067
PRF-fit source offset from KIC position	9.049 ± 0.067	135.23	8.880 ± 0.067	-1.739 ± 0.067
photometric centroid source offset	5.43 ± 6.51	0.83	5.42 ± 6.51	0.09 ± 0.93



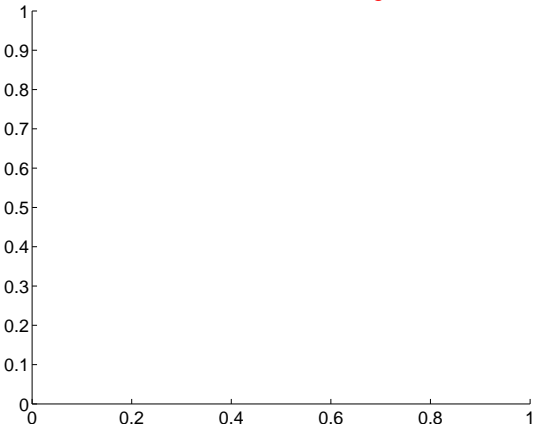
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

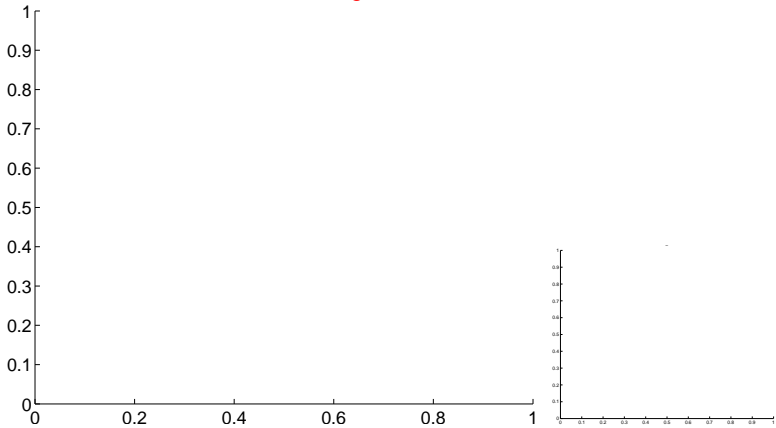


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

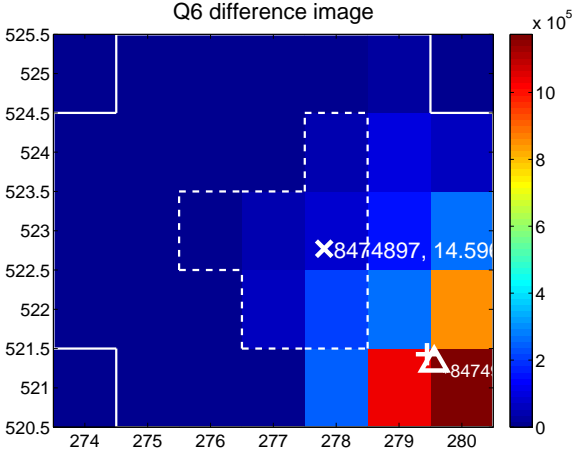
Q5 no difference image



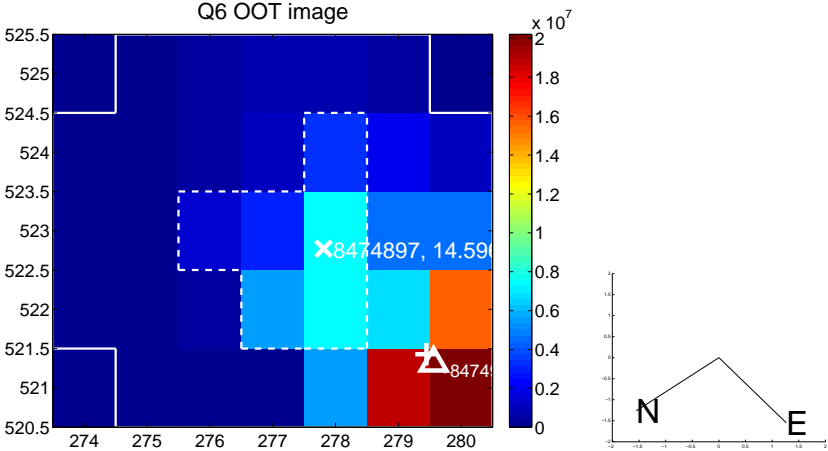
Q5 no OOT image



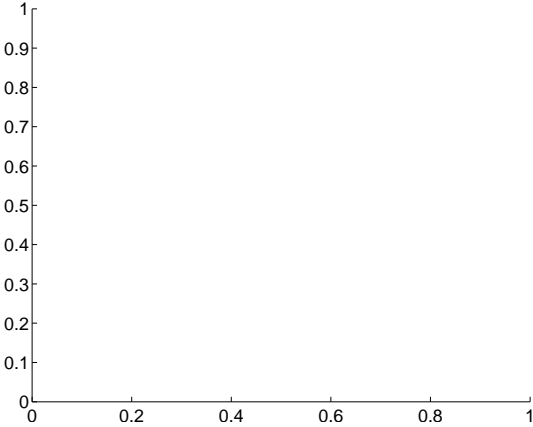
Q6 difference image



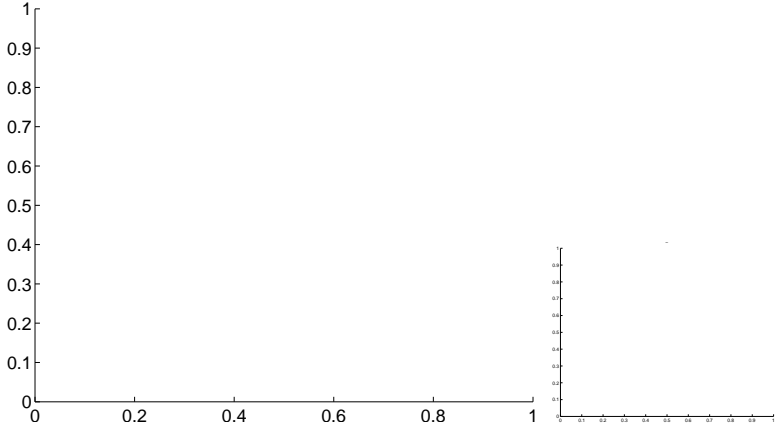
Q6 OOT image



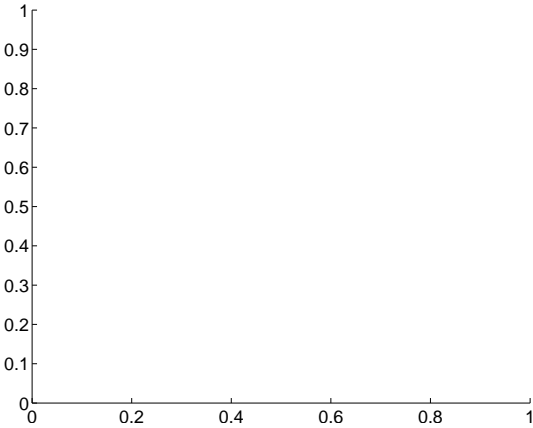
Q7 no difference image



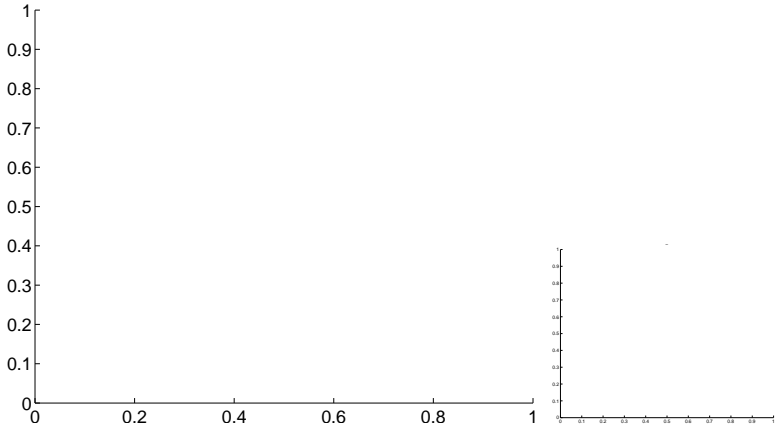
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



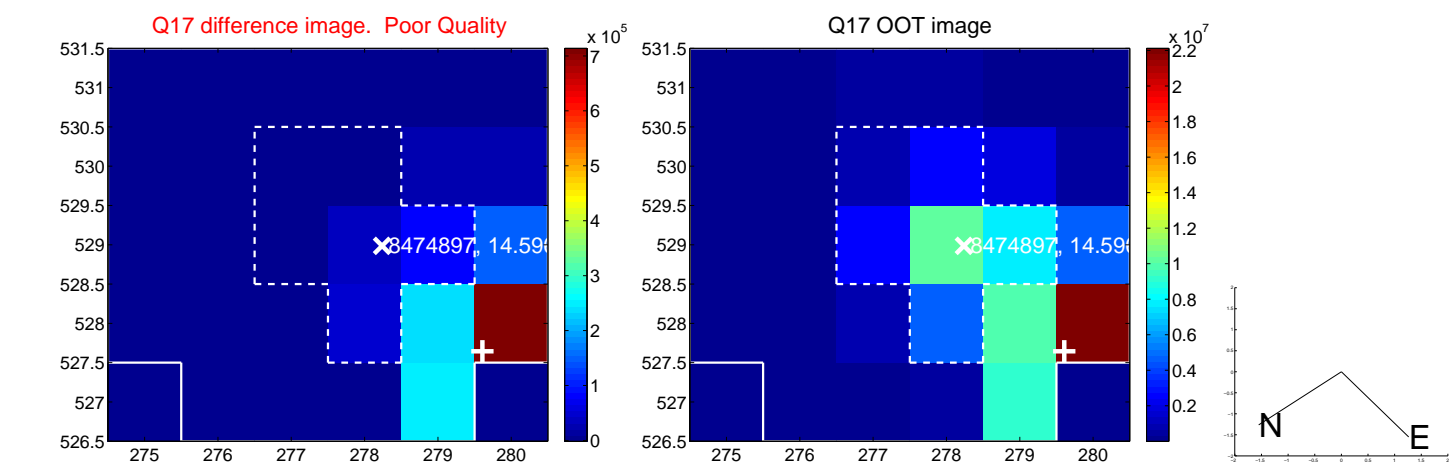
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



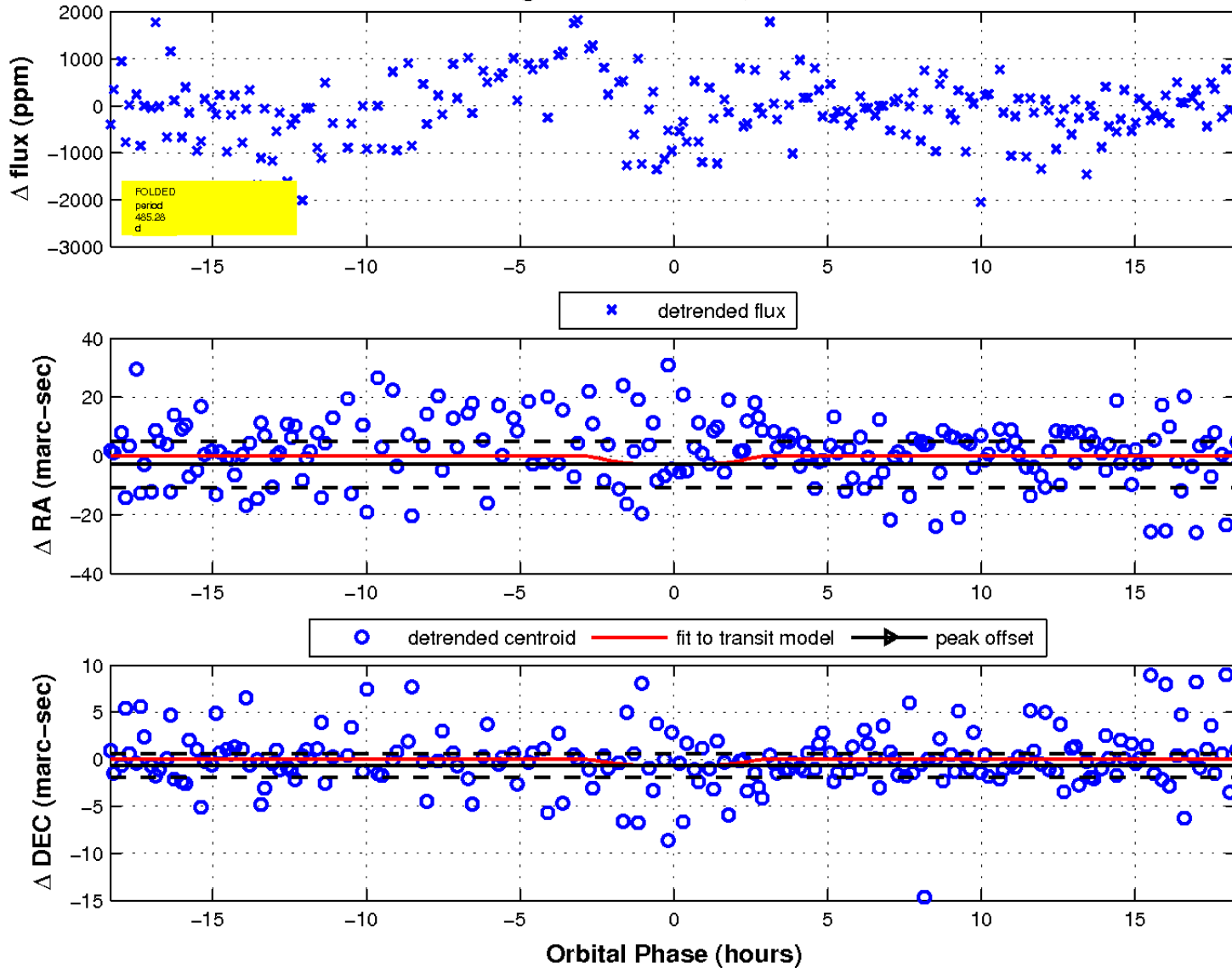
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

