

KIC 008246855

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})
008246855-01	OBS	No	475.822082	315.795313	451.4	19.660	7.2	6.6	1.17	5743	2.67	0.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008246855-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

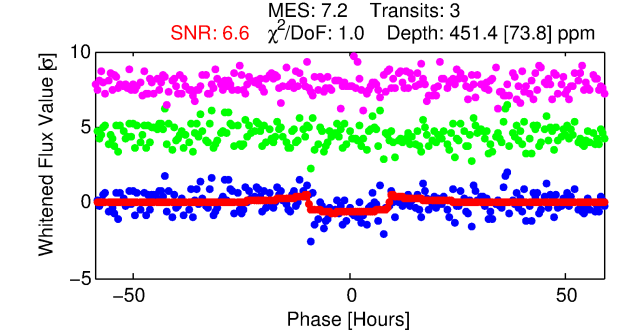
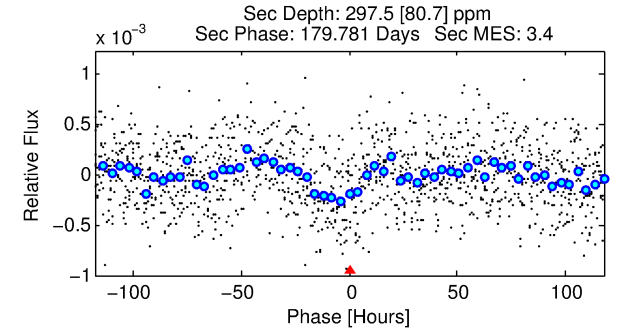
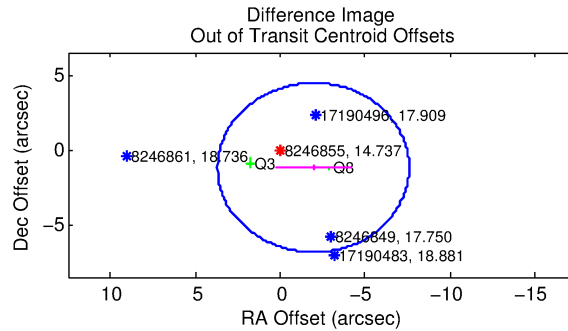
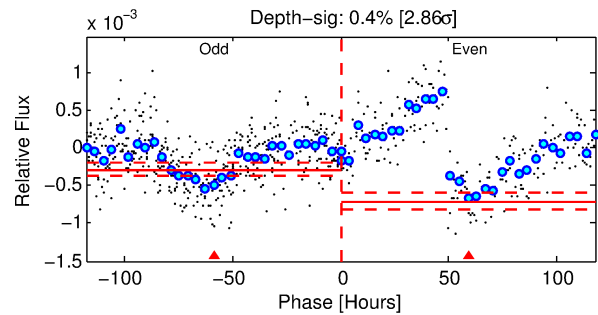
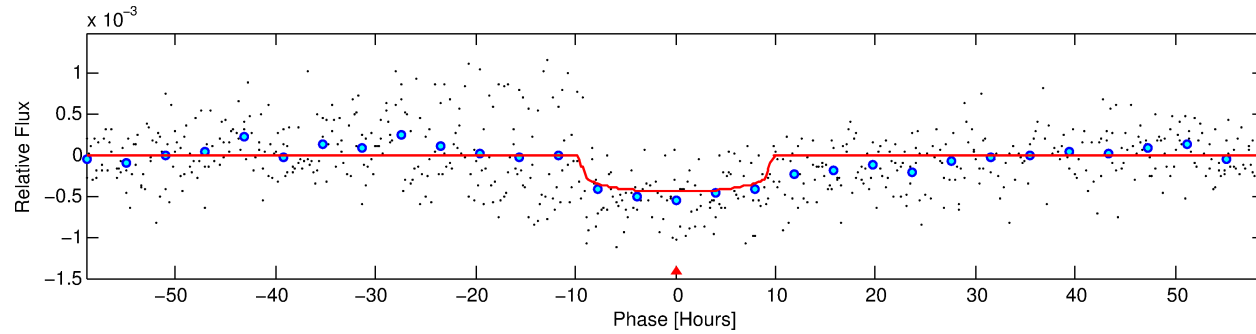
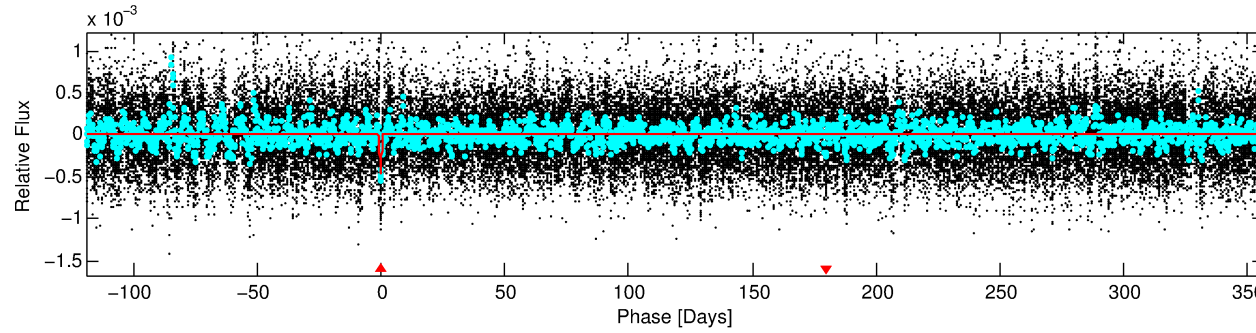
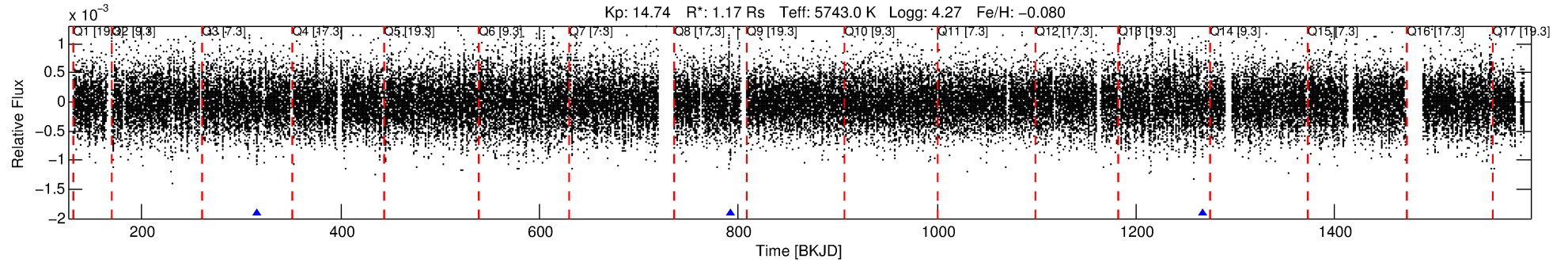
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008246855-01

No Significant Match Found

DV One-Page Summary

KIC: 8246855 Candidate: 1 of 1 Period: 475.822 d



DV Fit Results:

Period = 475.82208 [0.01686] d
Epoch = 315.7953 [0.0208] BKJD
Rp/R* = 0.0209 [0.0050]
a/R* = 133.42 [129.72]
b = 0.72 [0.65]
Seff = 0.98 [0.39]
Teff = 254 [25] K
Rp = 2.67 [0.98] Re
a = 1.1624 [0.2887] AU
Ag = 31131.53 [20732.59] [1.50 σ]
Teffp = 5213 [732] K [6.77 σ]

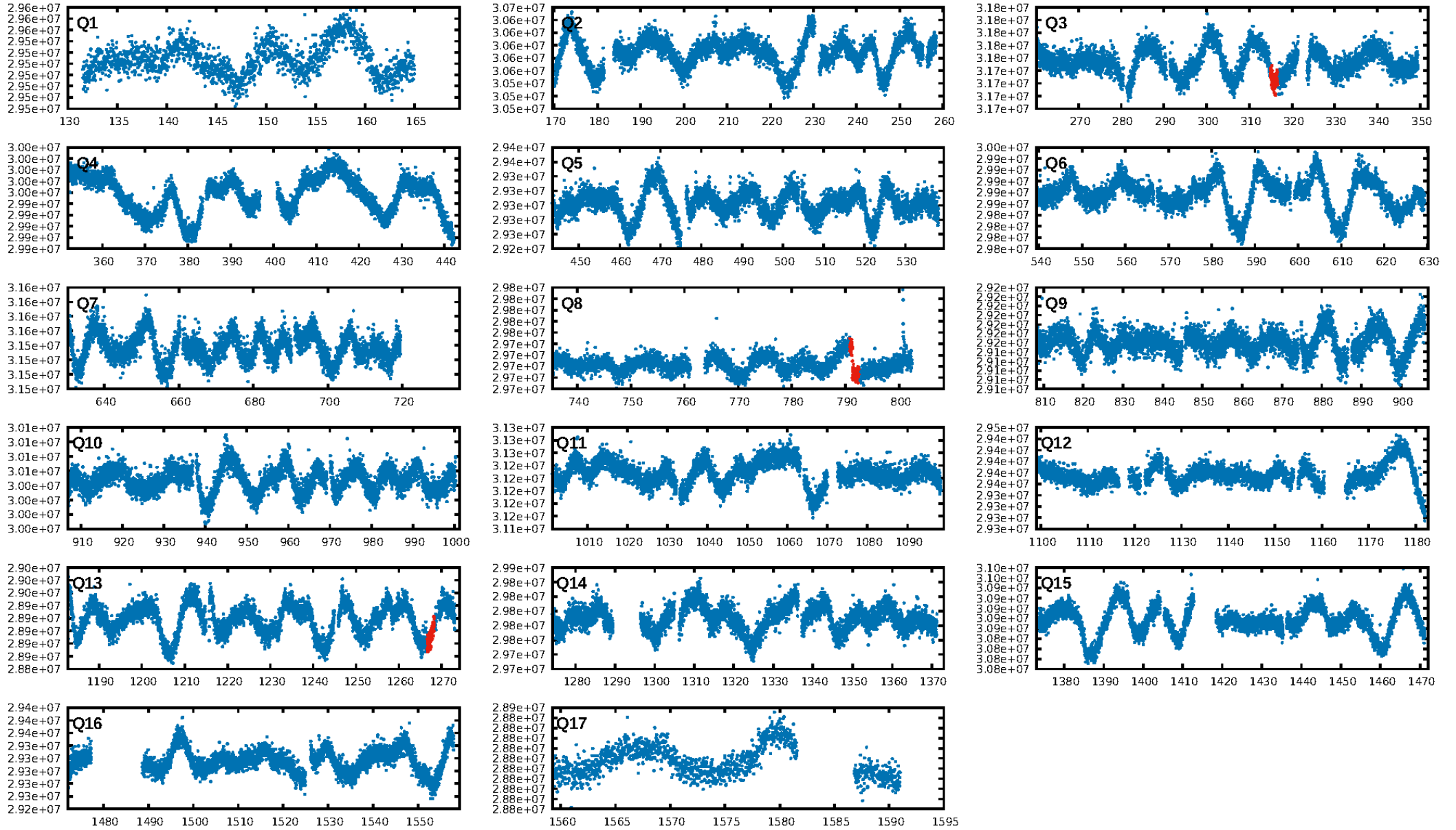
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.48e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.37
Centroid-sig: 76.4%
Centroid-so: 0.523 arcsec [0.47 σ]
OotOffset-rm: 2.300 arcsec [1.22 σ]
KicOffset-rm: 2.239 arcsec [1.14 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

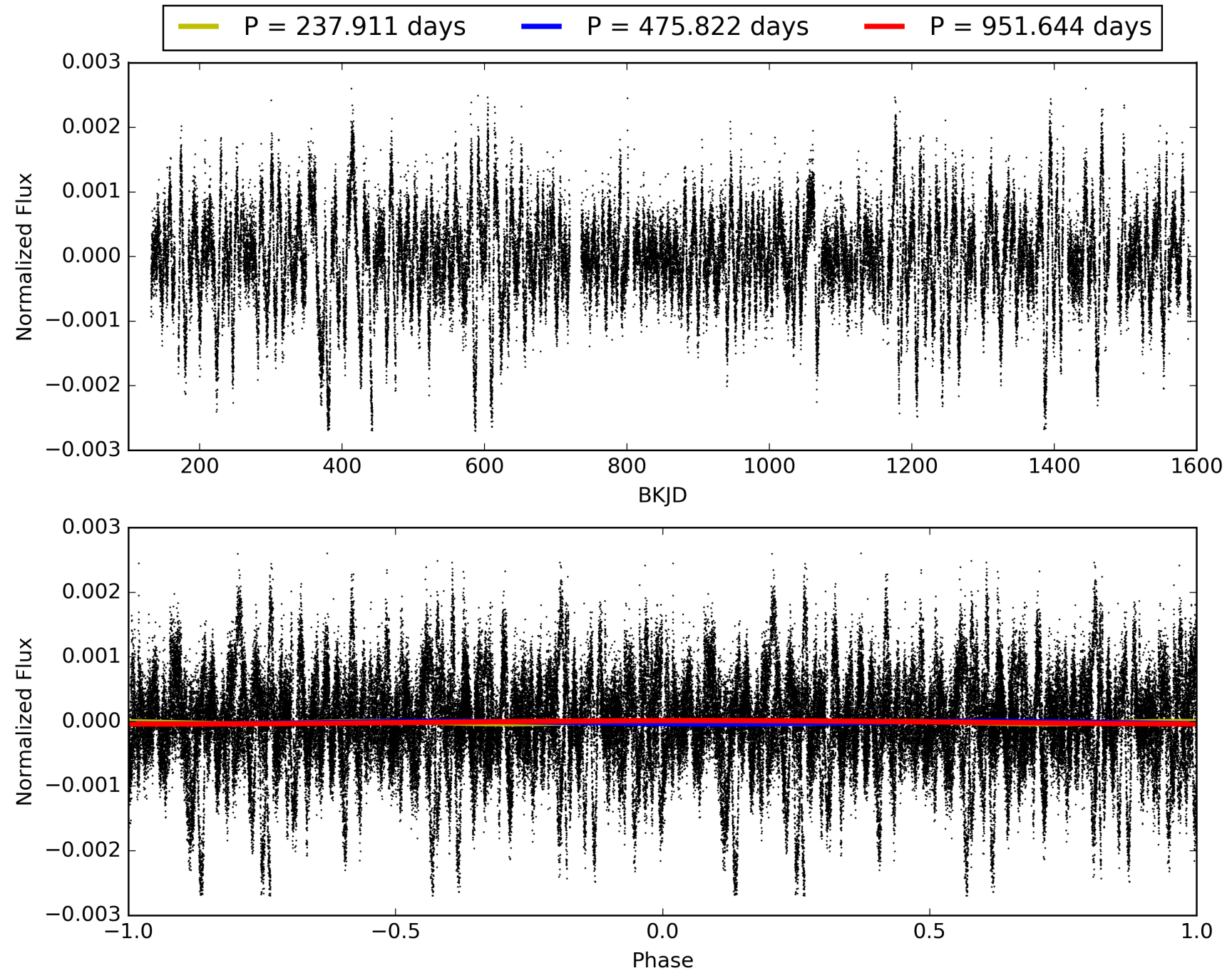
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:39:56 Z

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

TCE 008246855-01, PDC Light Curves

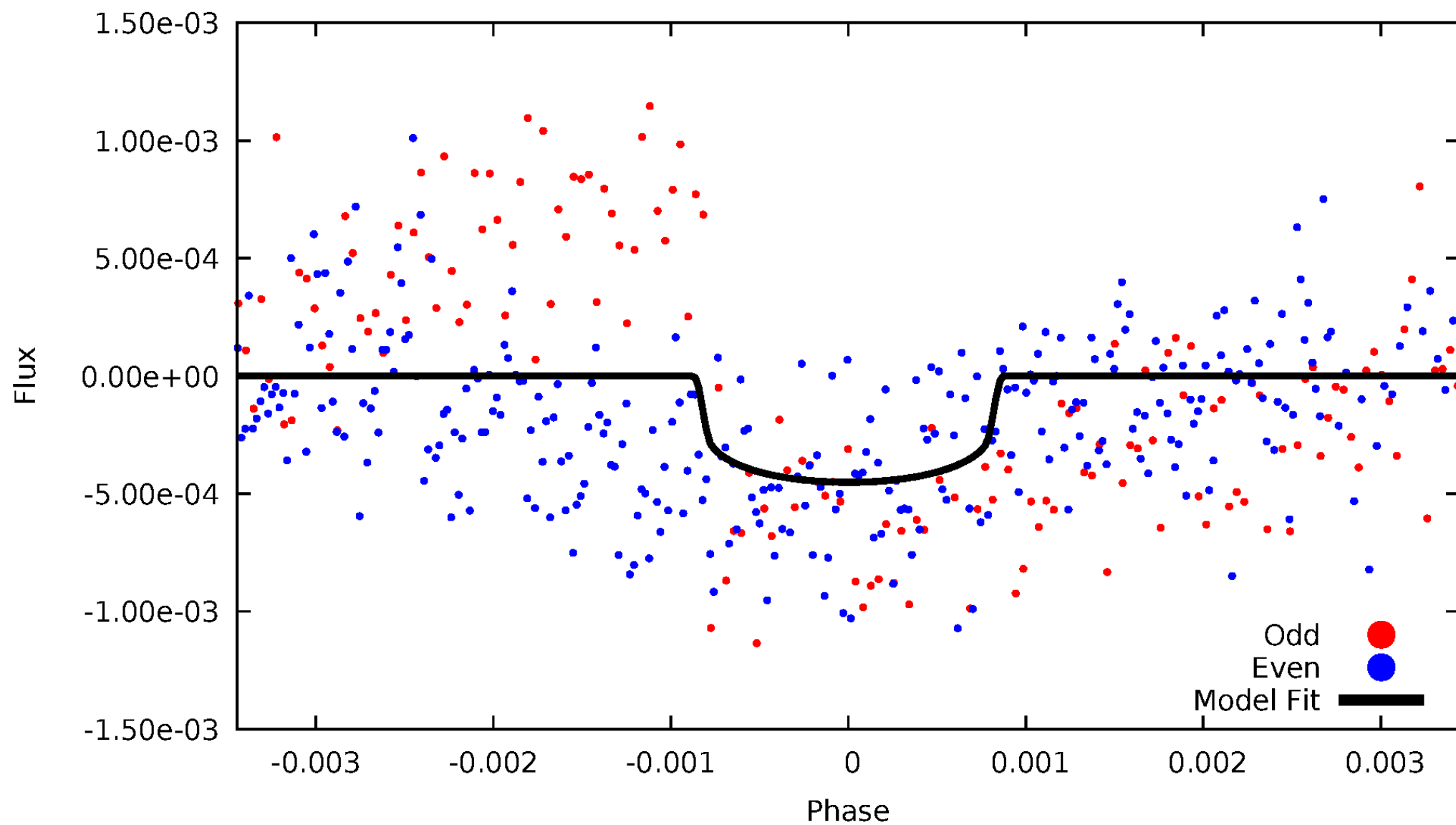


TCE 008246855-01



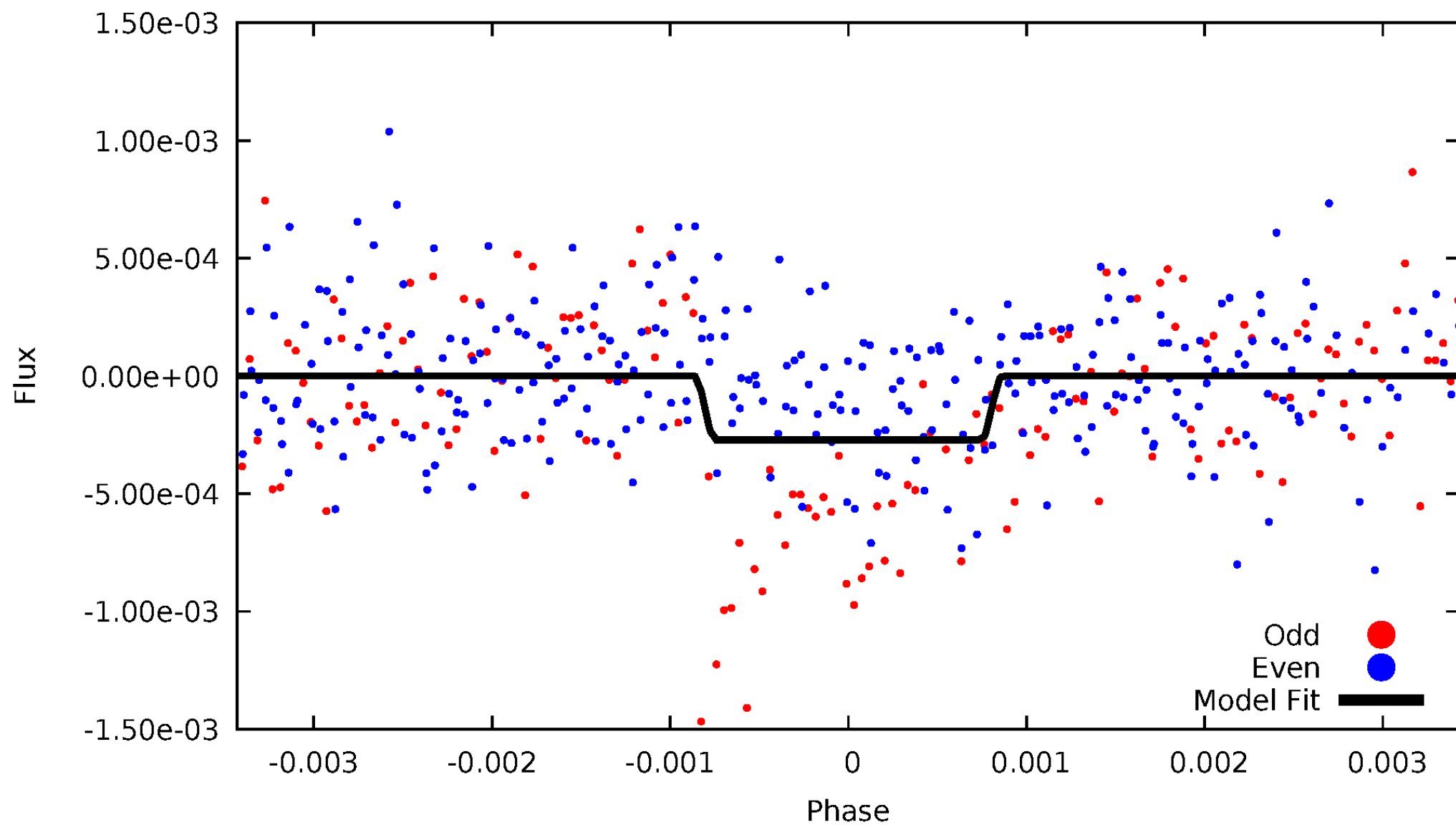
DV Odd/Even

TCE 008246855-01



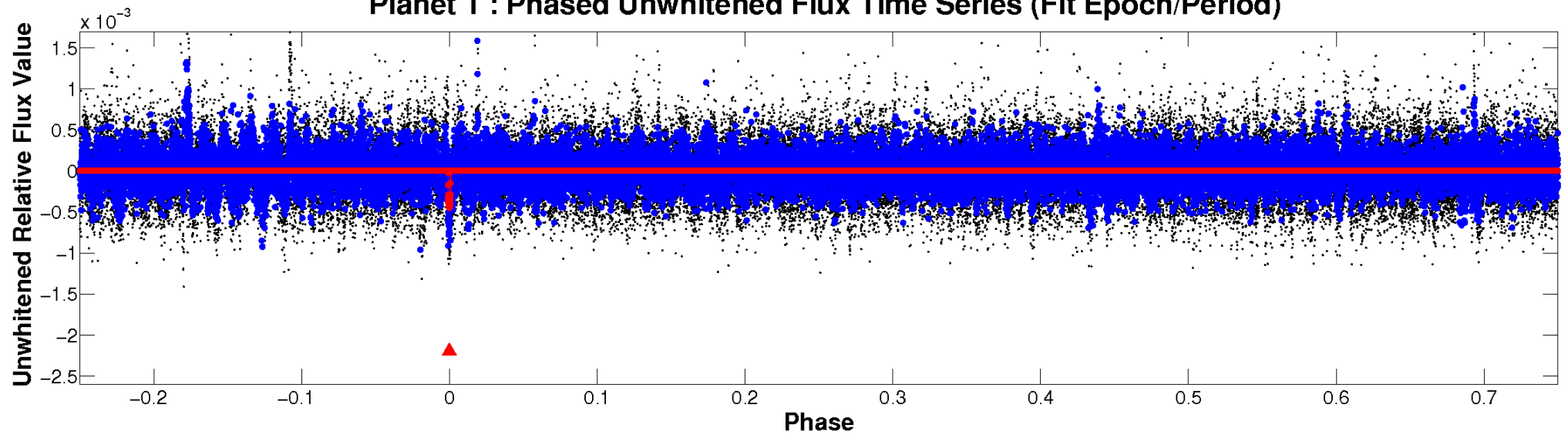
ALT Odd/Even

TCE 008246855-01

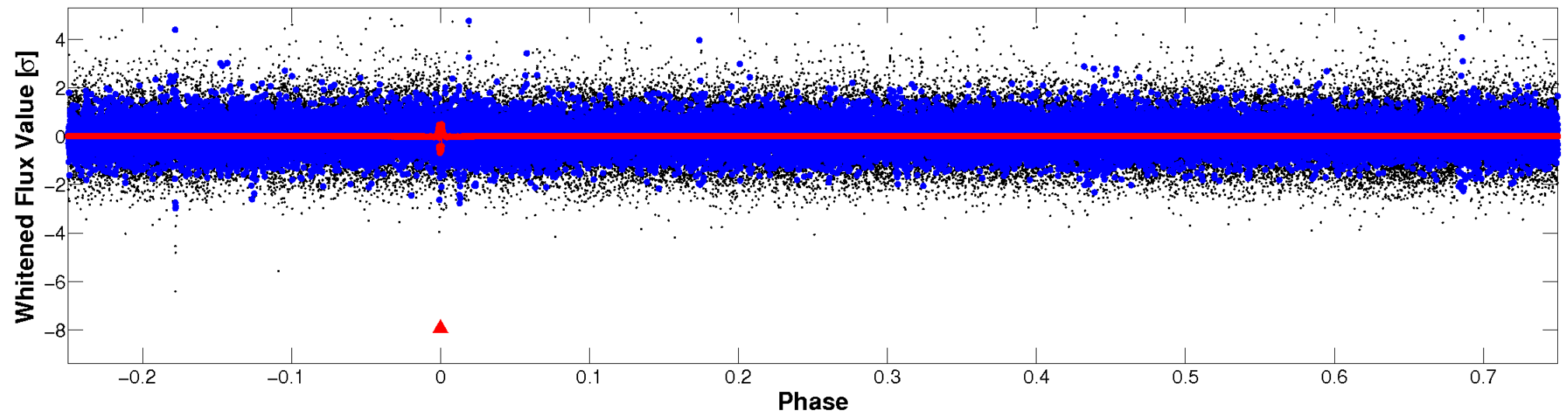


Non-Whitened Vs. Whitened Light Curve

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

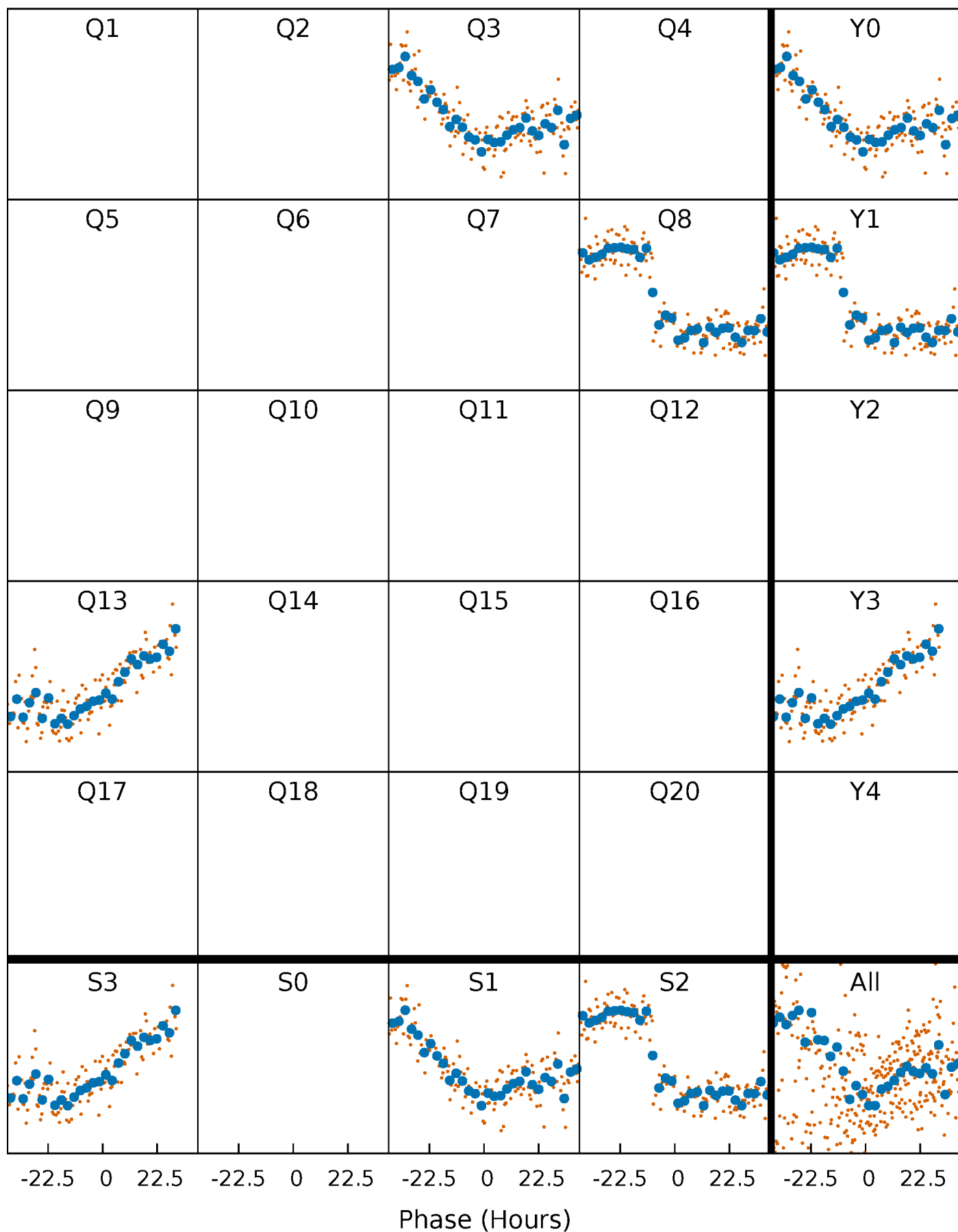


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



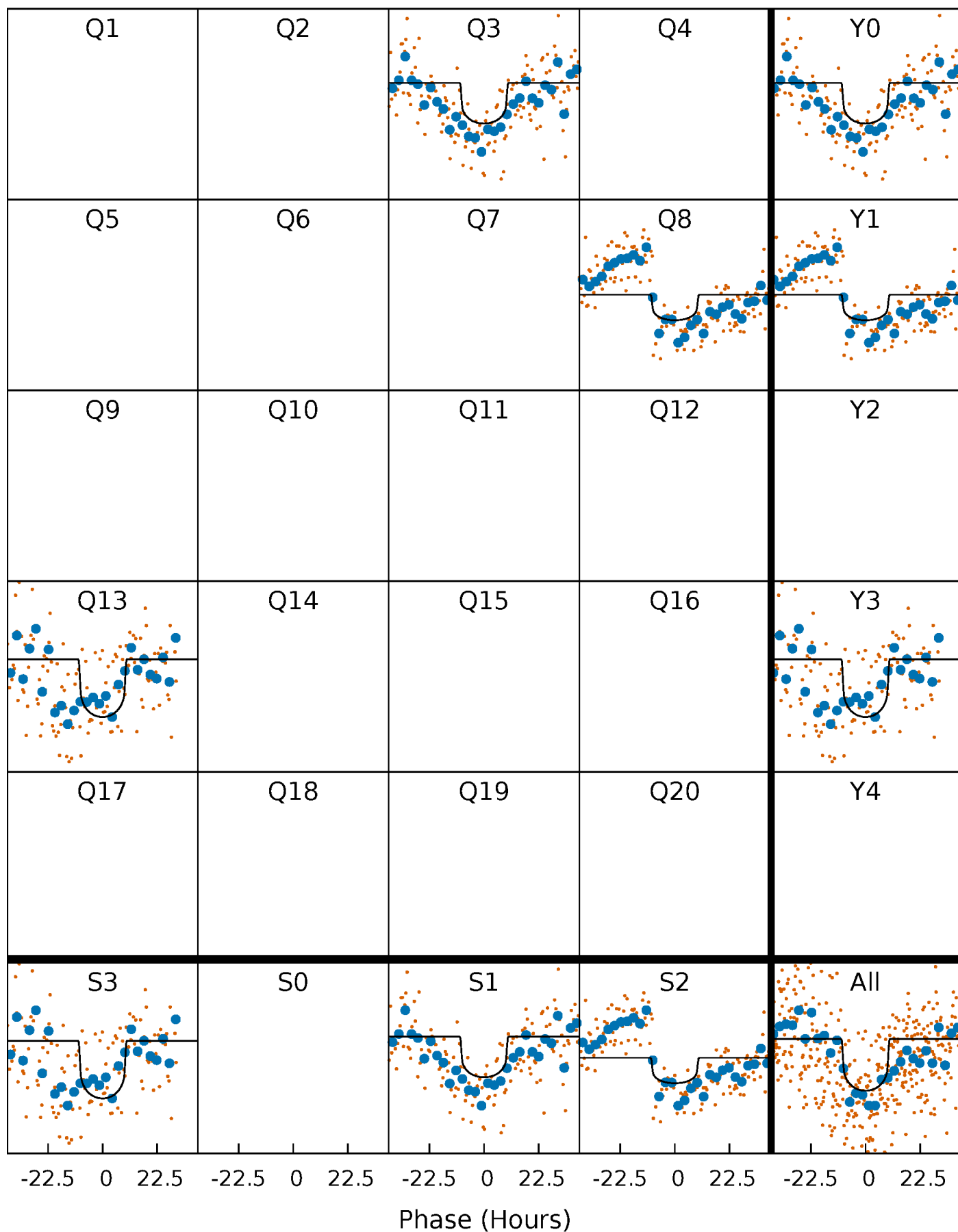
PDC Quarter-Phased Transit Curves

TCE 008246855-01 P=475.822082 Days $T_0=315.795313$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008246855-01 P=475.822082 Days $T_0=315.795313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

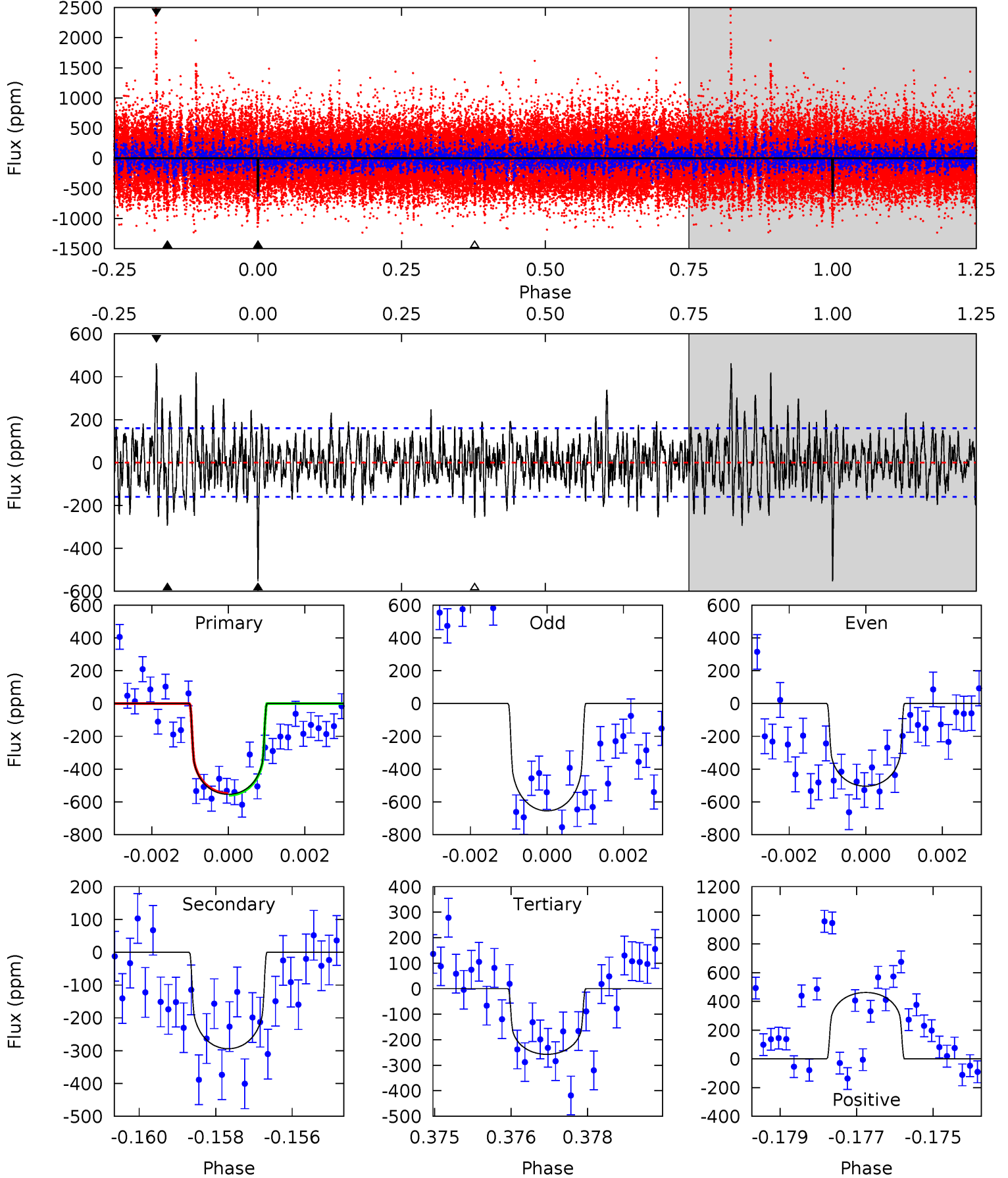
TCE 008246855-01 P=475.856745 Days $T_0=315.785401$ (BKJD)



DV Model-Shift Uniqueness Test

008246855-01, P = 475.822082 Days, E = 315.795313 Days

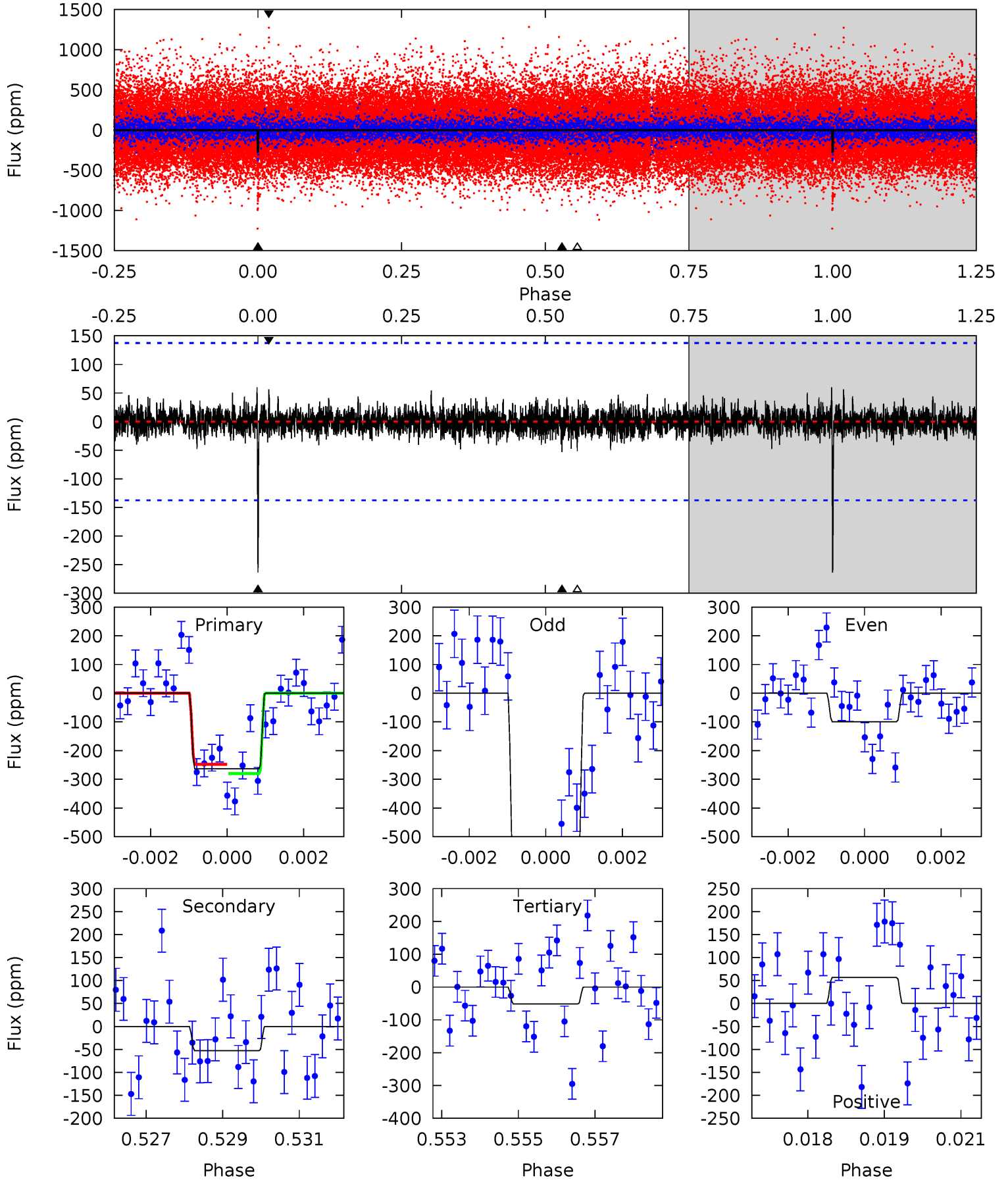
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	9.85	8.61	15.5	5.35	3.13	3.07	9.93	3.06	1.23	-5.64	2.36	0.84	0.46	0.18



Alt Model-Shift Uniqueness Test

008246855-01, P = 475.856745 Days, E = 315.785401 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.06	2.01	2.20	5.35	3.13	0.52	8.26	8.07	0.05	-0.14	9.72	1.98	0.19	0.63



Stellar Parameters For KIC 008246855

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5743^{+156}_{-173}	$4.270^{+0.214}_{-0.175}$	$-0.080^{+0.300}_{-0.300}$	$1.167^{+0.326}_{-0.267}$	$0.925^{+0.134}_{-0.083}$	$0.821^{+0.989}_{-0.393}$
	+3%/-3%	+5%/-4%	+375%/-375%	+28%/-23%	+14%/-9%	+120%/-48%
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 008246855-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-294 ± 30	$2.61^{+0.80}_{-0.63}$	353^{+26}_{-26}	5264^{+714}_{-510}	32822^{+24228}_{-13949}
Alt.	-53 ± 26	$2.07^{+0.73}_{-0.64}$	353^{+26}_{-26}	4064^{+707}_{-545}	8735^{+12150}_{-5121}

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 $A_{obs} \gg 1.0$

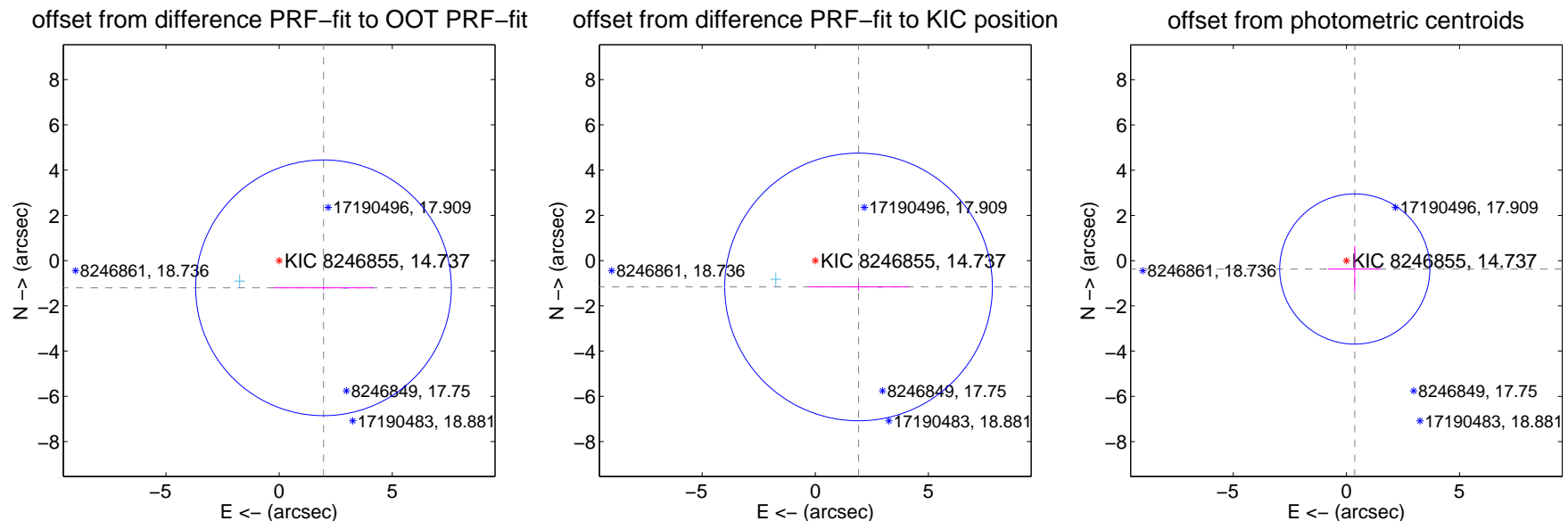
DV Centroid Data

Supplemental centroid analysis for 008246855-01. Kepler magnitude: 14.74. Transit SNR 6.63

There are 2 quarters with good PRF difference image offsets

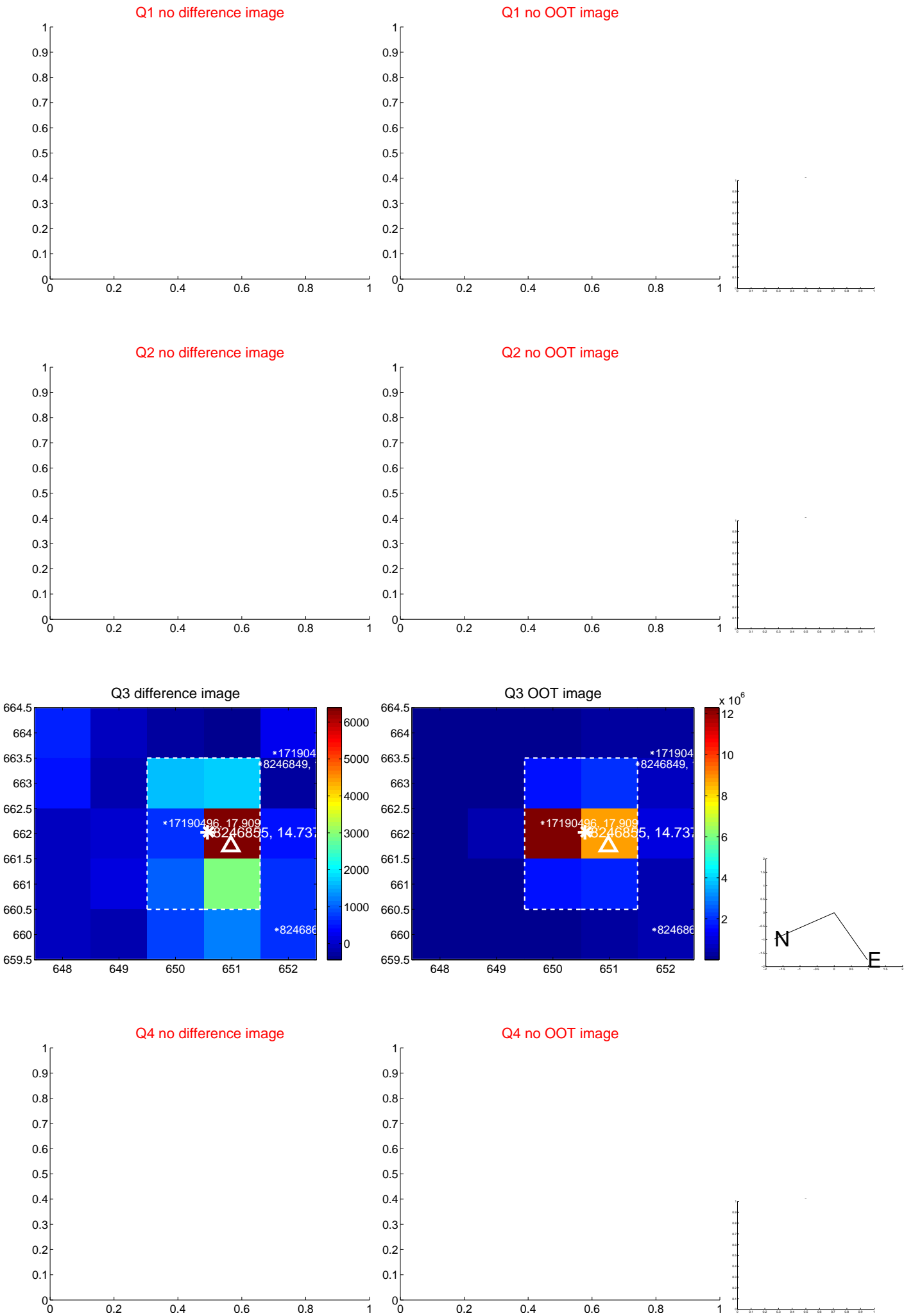
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.300 ± 1.883	1.22	-1.961 ± 2.209	-1.203 ± 0.086
PRF-fit source offset from KIC position	2.239 ± 1.971	1.14	-1.912 ± 2.207	-1.165 ± 0.179
photometric centroid source offset	0.52 ± 1.11	0.47	-0.37 ± 1.18	-0.37 ± 1.02



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 ×: 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.

Q5 no difference image



Q5 no OOT image



Q6 no difference image



Q6 no OOT image



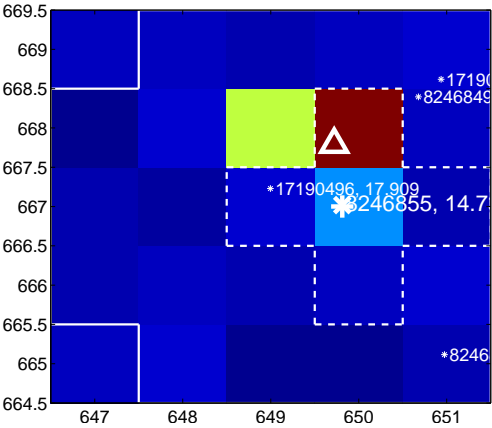
Q7 no difference image



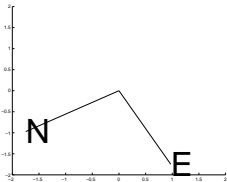
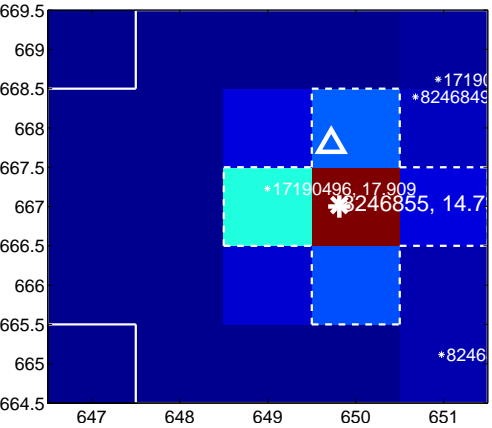
Q7 no OOT image



Q8 difference image



Q8 OOT image



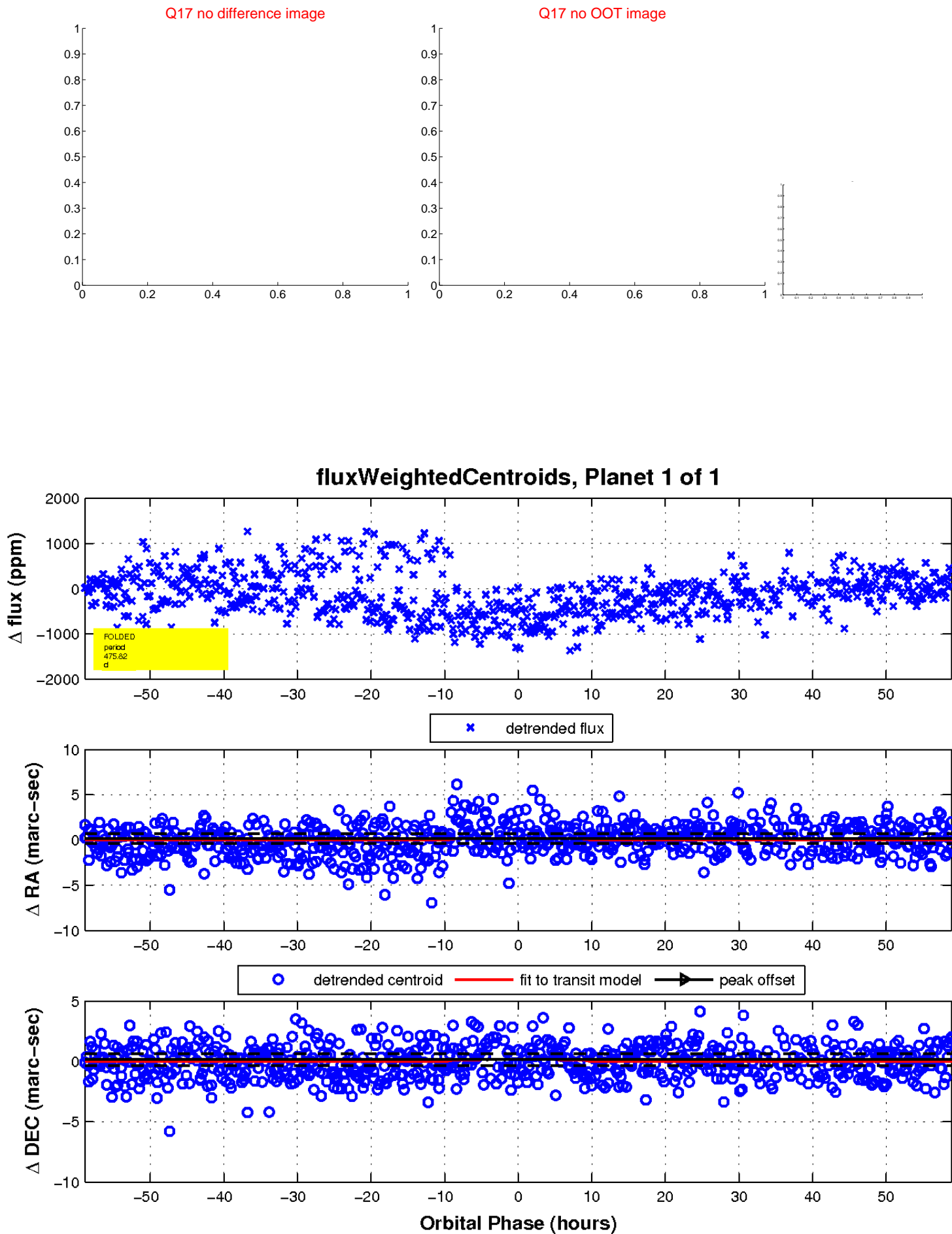
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

