

KIC 008884796

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})
008884796-01	OBS	No	375.119173	137.738968	837.4	68.250	9.9	15.5	0.95	6061	5.29	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008884796-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—EPHEM_MATCH

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.

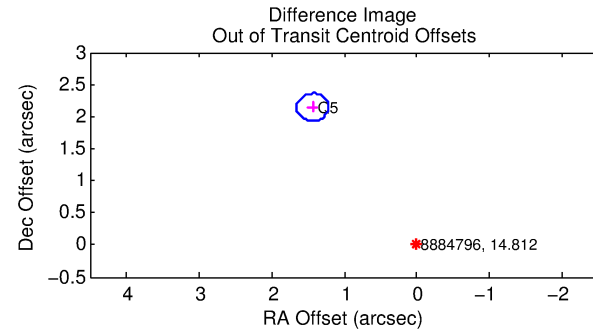
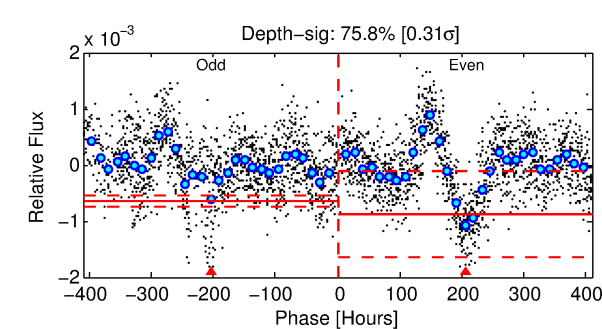
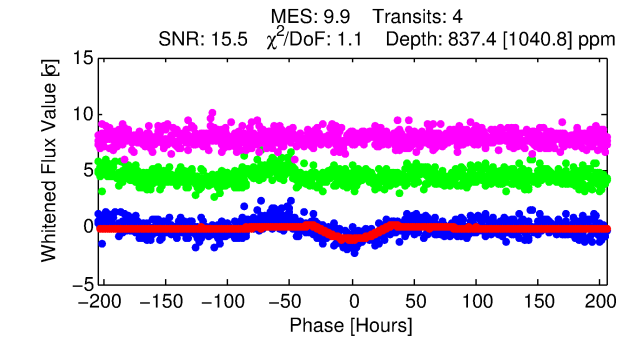
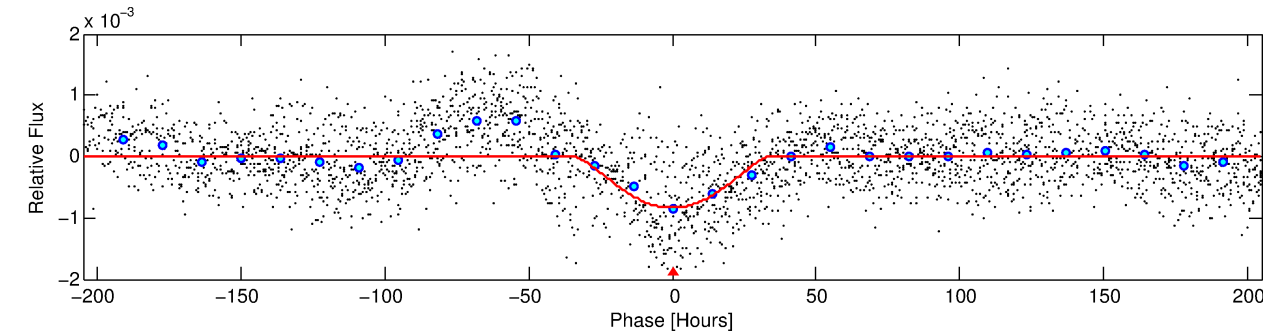
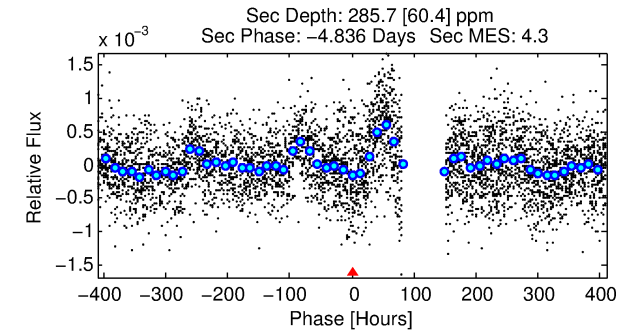
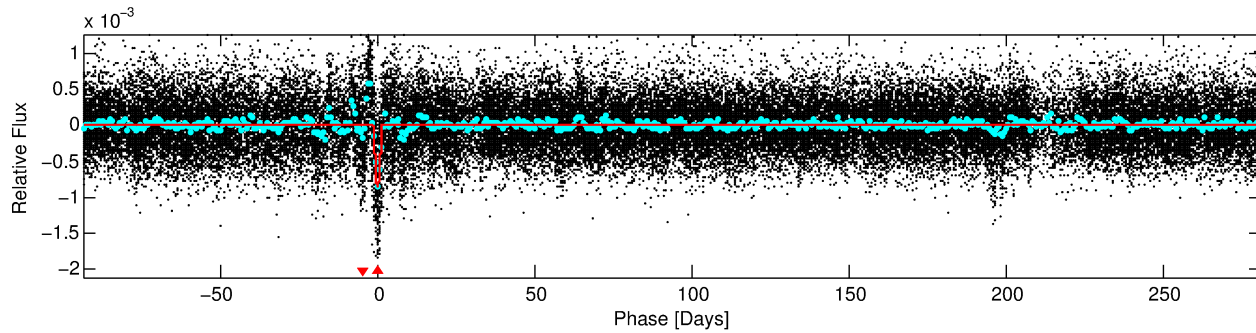
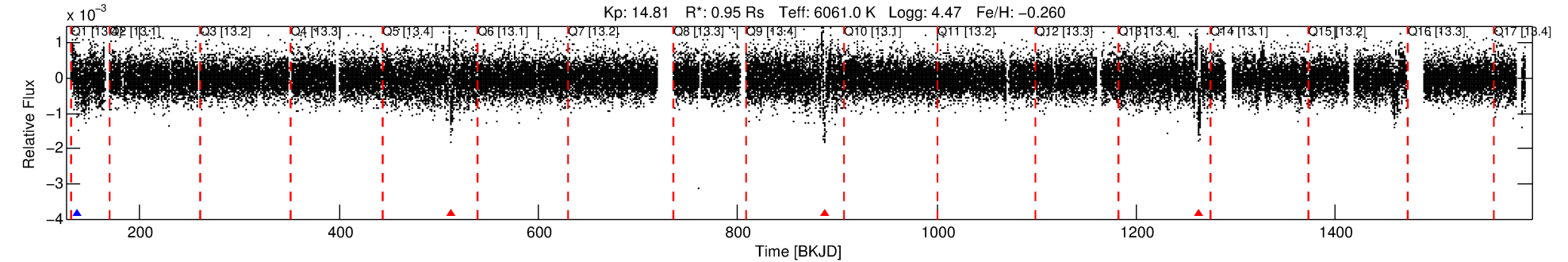
Ephemeris Match Information For 008884796-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008884796-01	8884796	008686761-01	8686761	1:1	1972.0	-495	-1	13.92	14.81	0.32	Col-Anomaly	1	4.29	1.67

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8884796 Candidate: 1 of 1 Period: 375.119 d



DV Fit Results:

Period = 375.11917 [0.04977] d
Epoch = 137.7390 [0.0990] BKJD
Rp/R* = 0.0510 [0.0878]
a/R* = 13.62 [5.59]
b = 1.00 [0.17]
Seff = 1.07 [0.44]
Teq = 259 [26] K
Rp = 5.29 [9.27] Re
a = 1.0122 [0.2699] AU
Ag = 5746.79 [19947.76] [0.29σ]
Teffp = 3489 [3011] K [1.07σ]

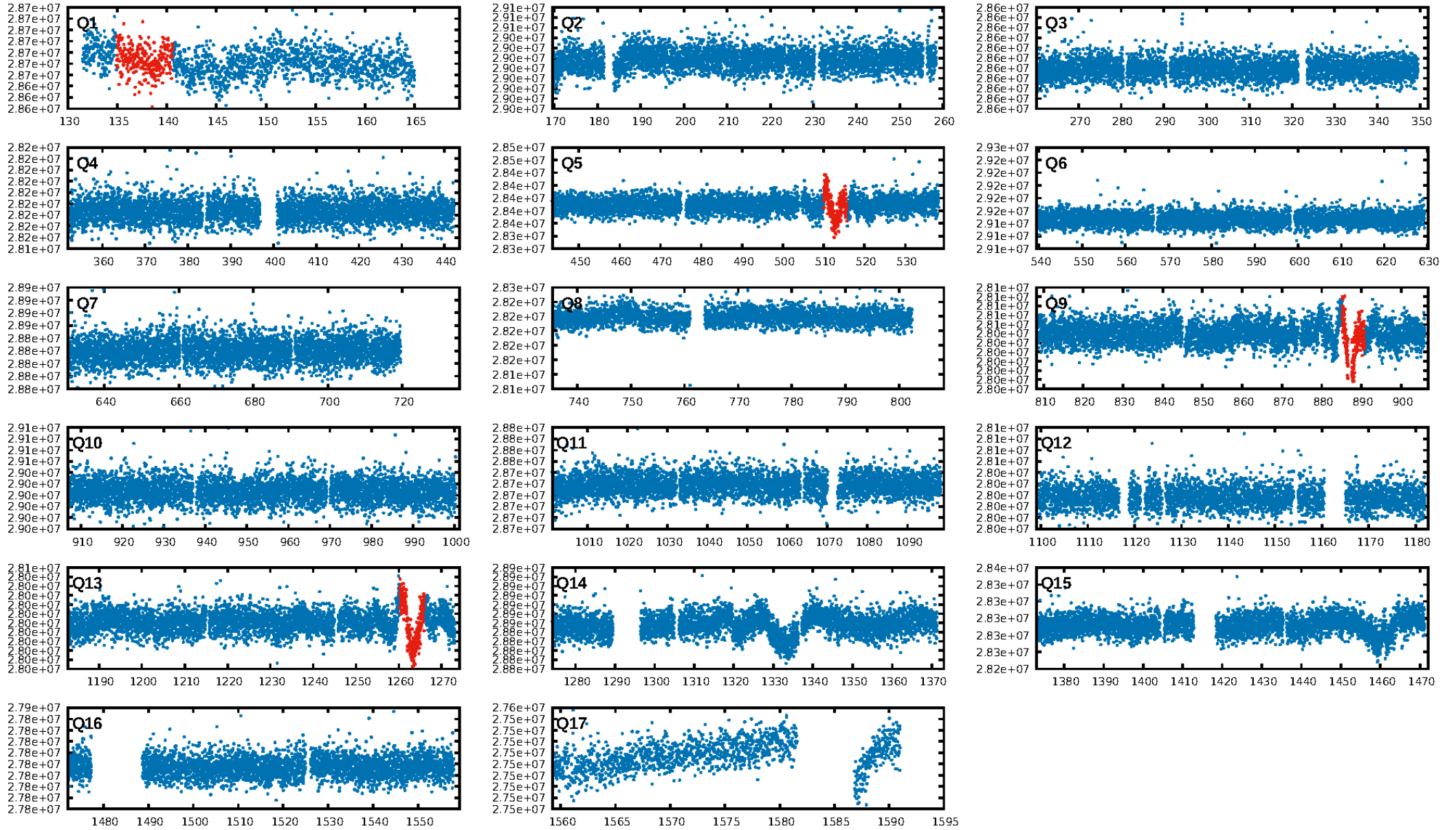
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.15e-13
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -0.4935
Centroid-sig: 6.4%
Centroid-so: 1.111 arcsec [1.82σ]
OotOffset-rm: 2.579 arcsec [35.79σ]
KicOffset-rm: 2.662 arcsec [36.95σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

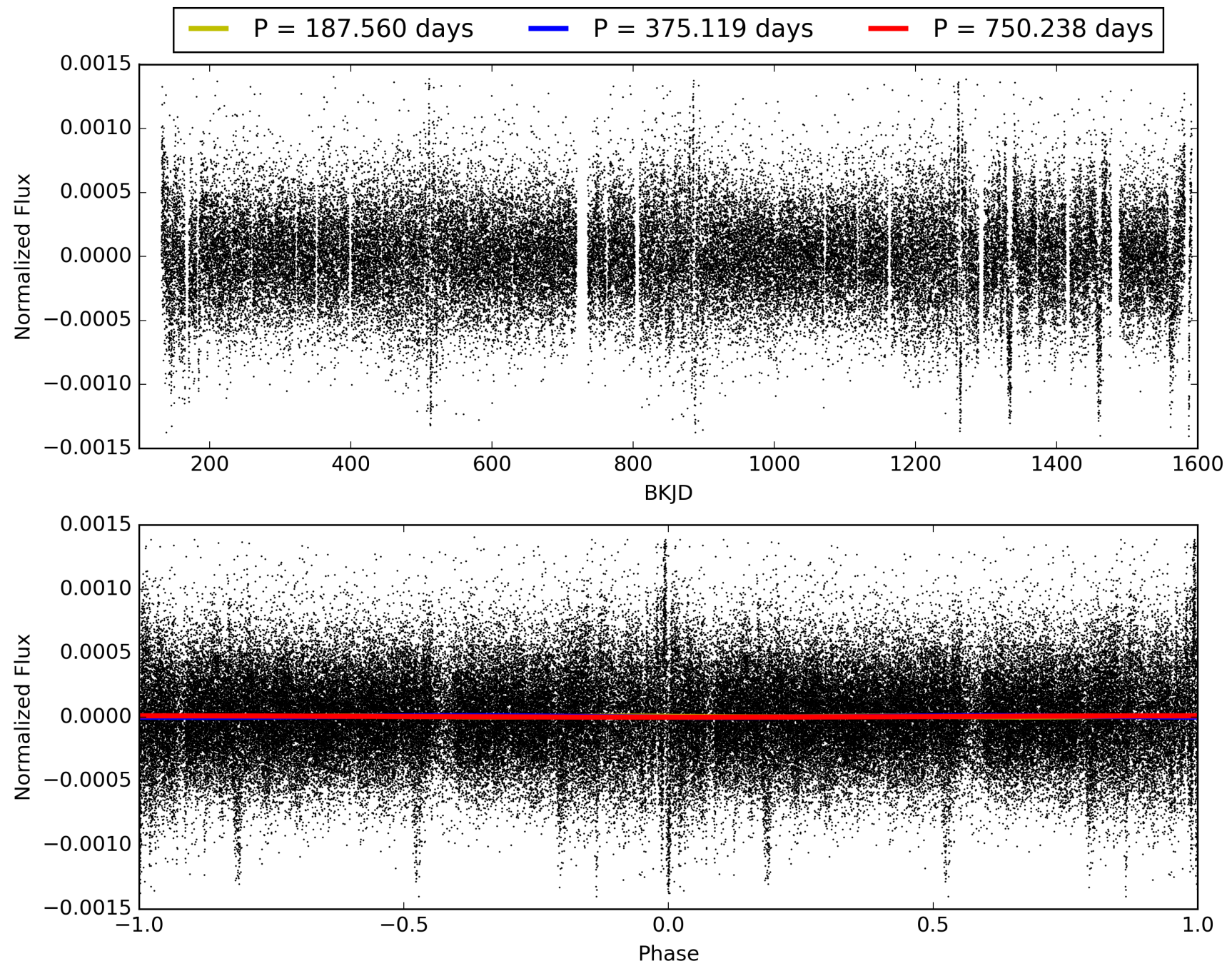
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:14:04 Z

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

TCE 008884796-01, PDC Light Curves

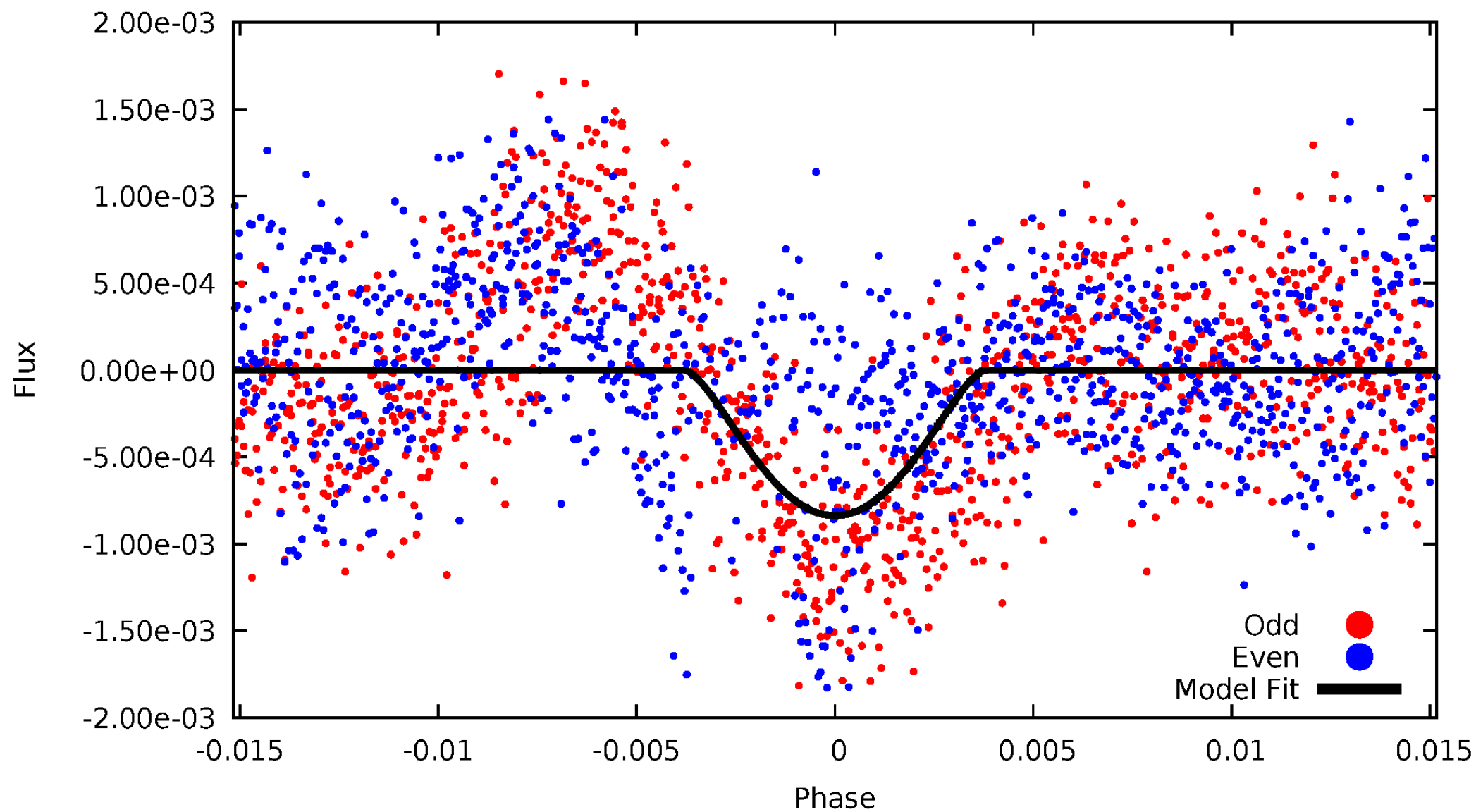


TCE 008884796-01



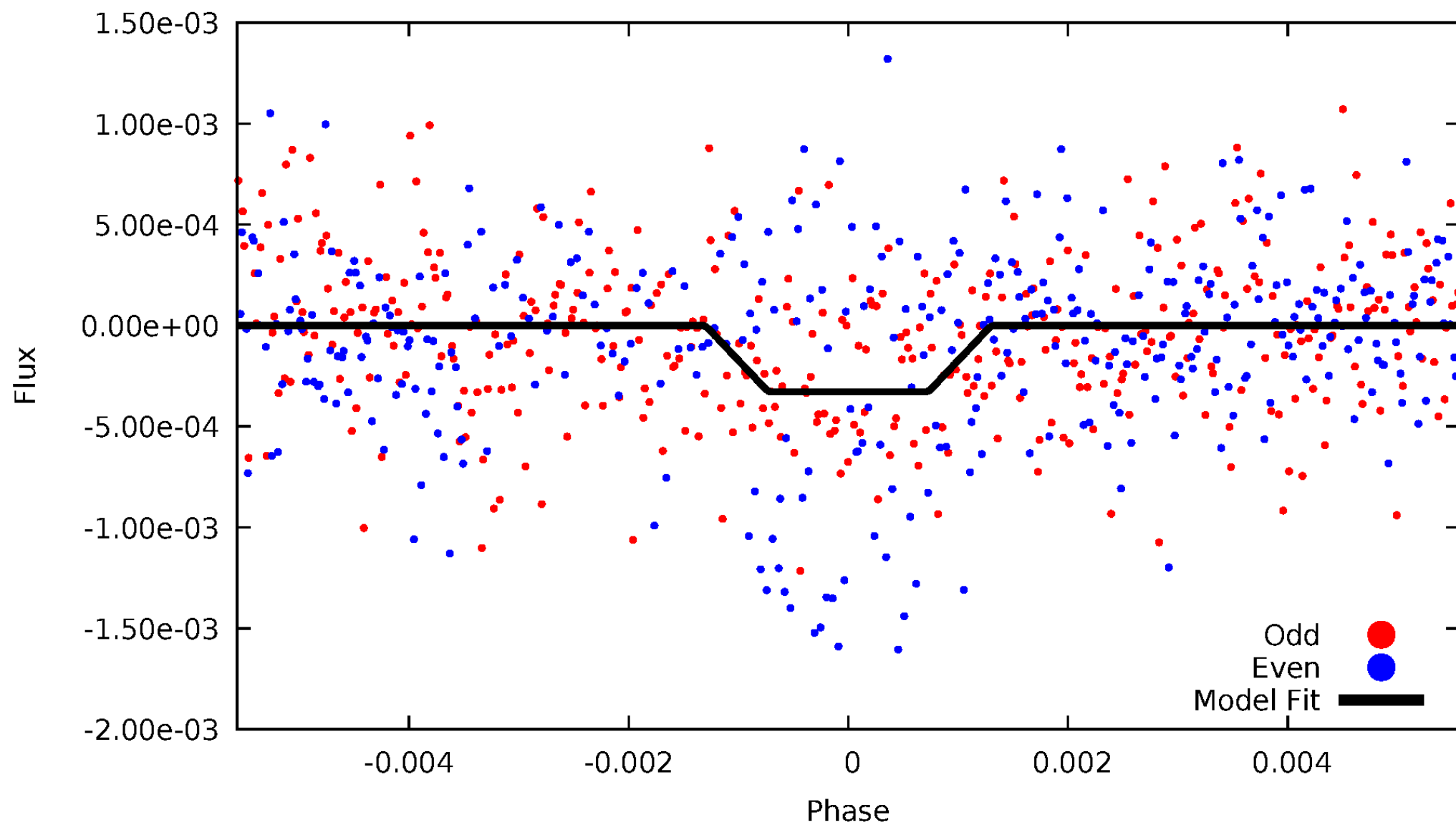
DV Odd/Even

TCE 008884796-01



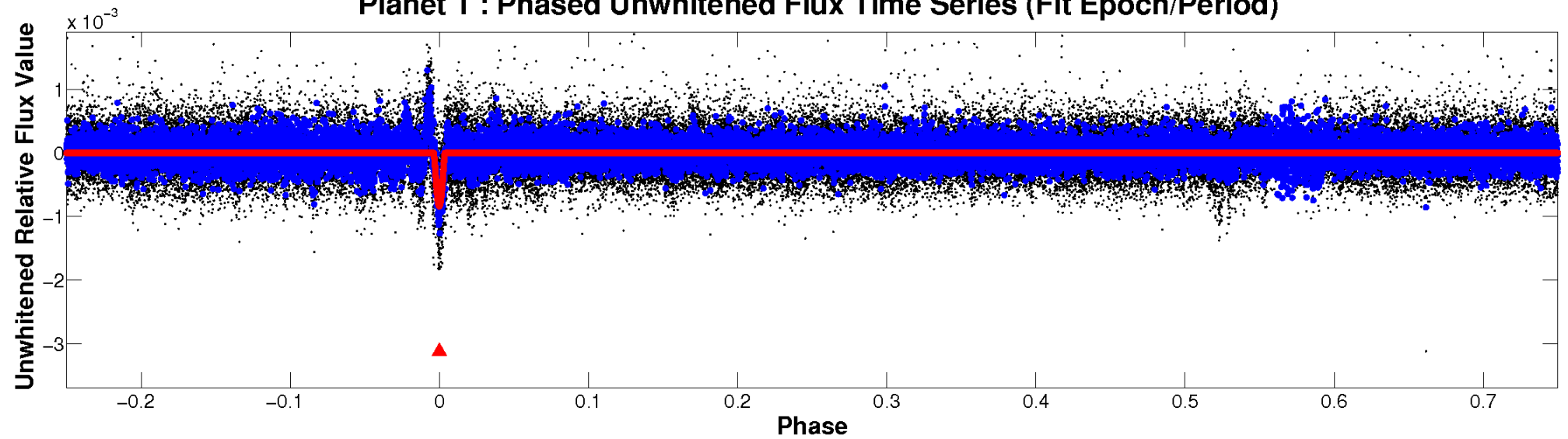
ALT Odd/Even

TCE 008884796-01

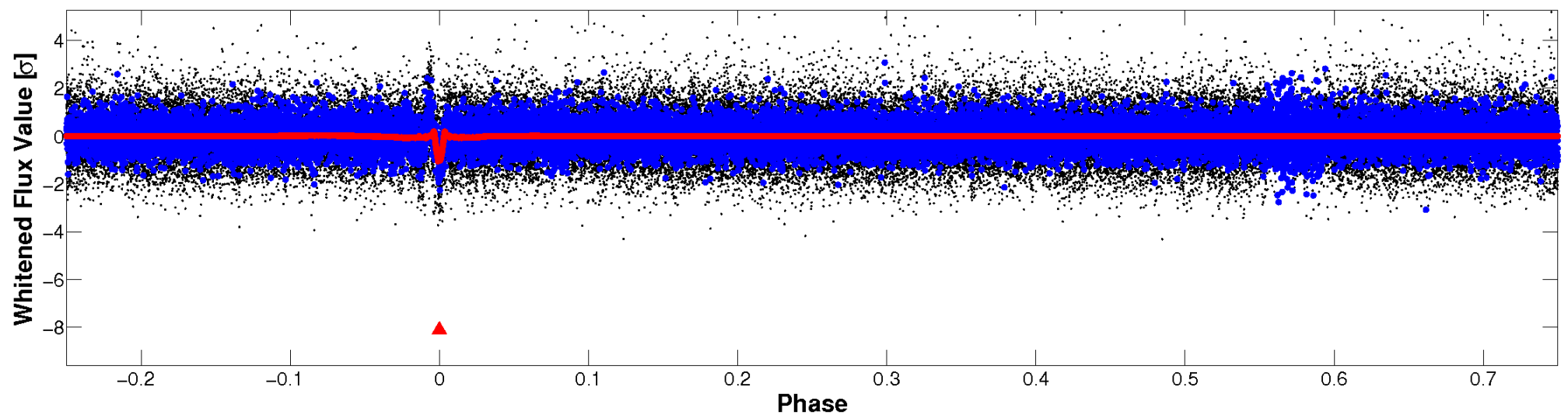


Non-Whitened Vs. Whitened Light Curve

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

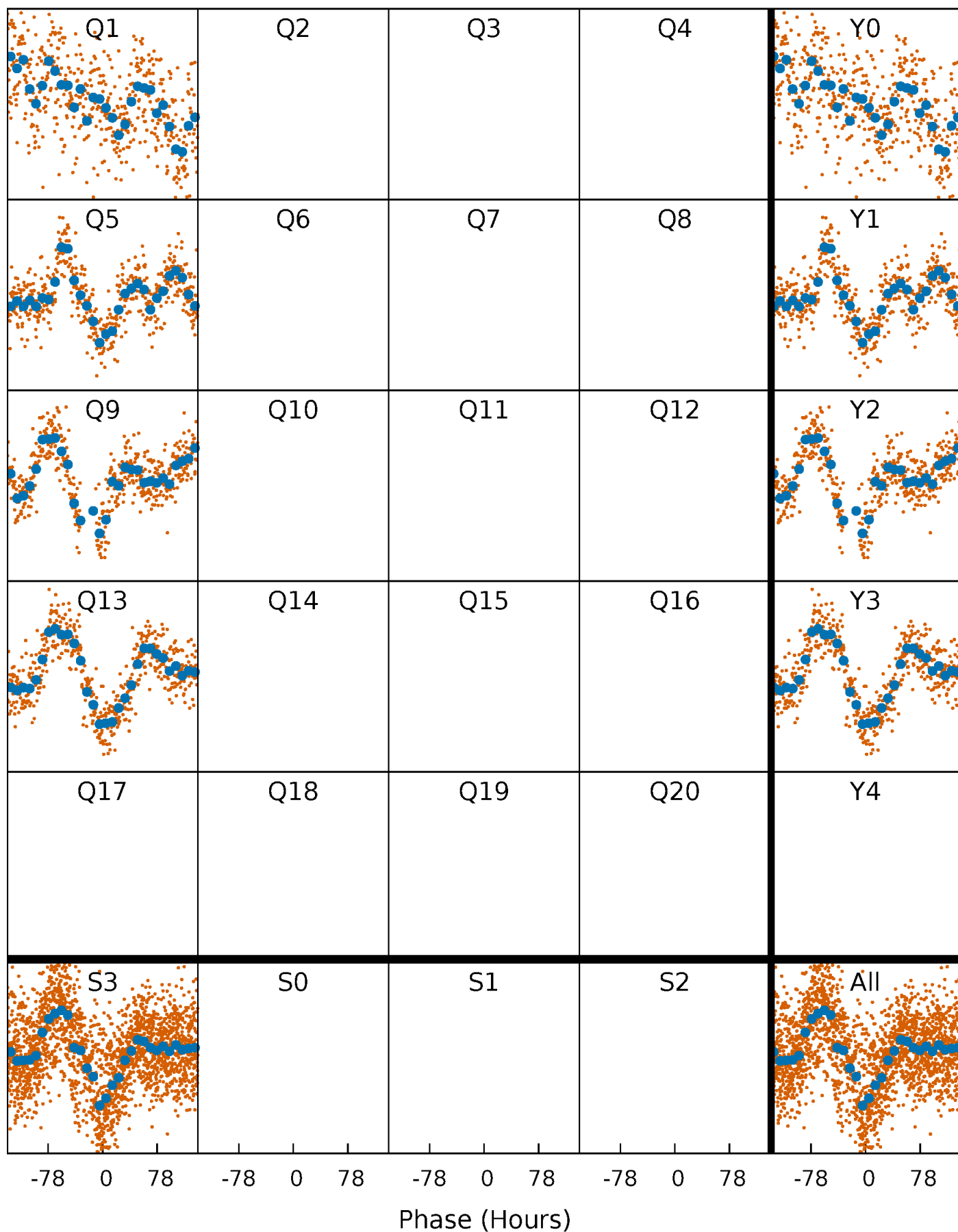


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



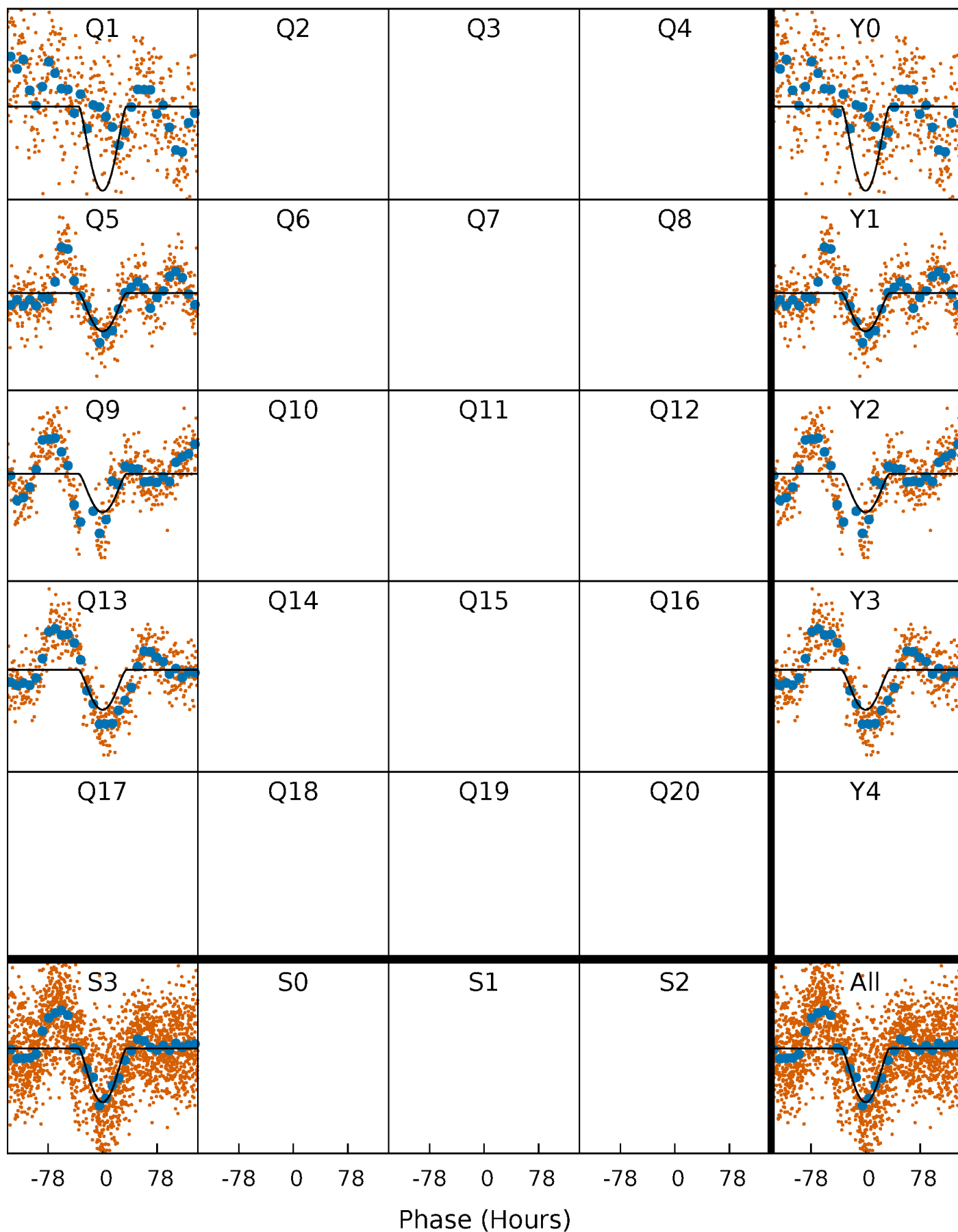
PDC Quarter-Phased Transit Curves

TCE 008884796-01 P=375.119173 Days $T_0=137.738968$ (BKJD)



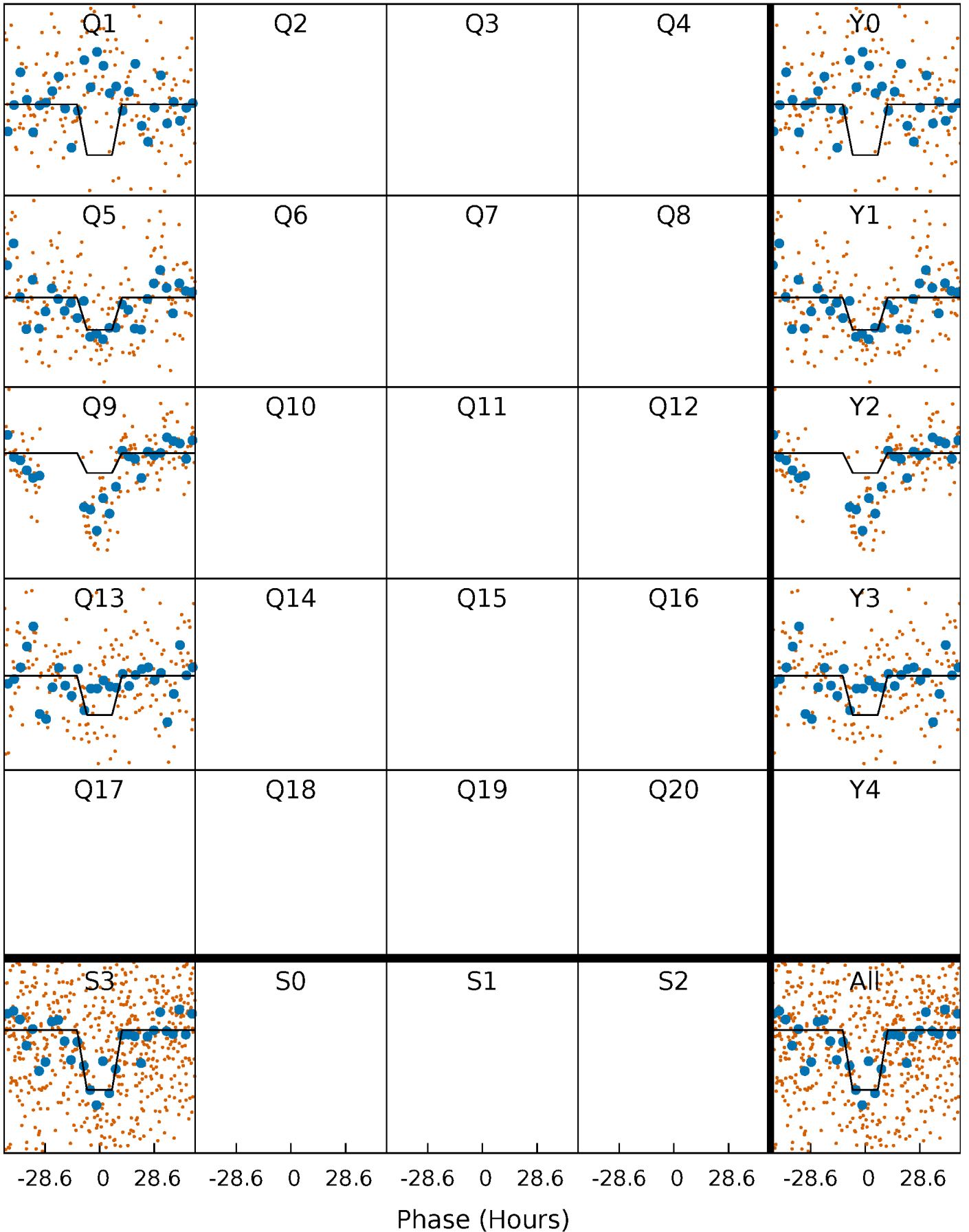
DV Quarter-Phased Transit Curves

TCE 008884796-01 P=375.119173 Days $T_0=137.738968$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

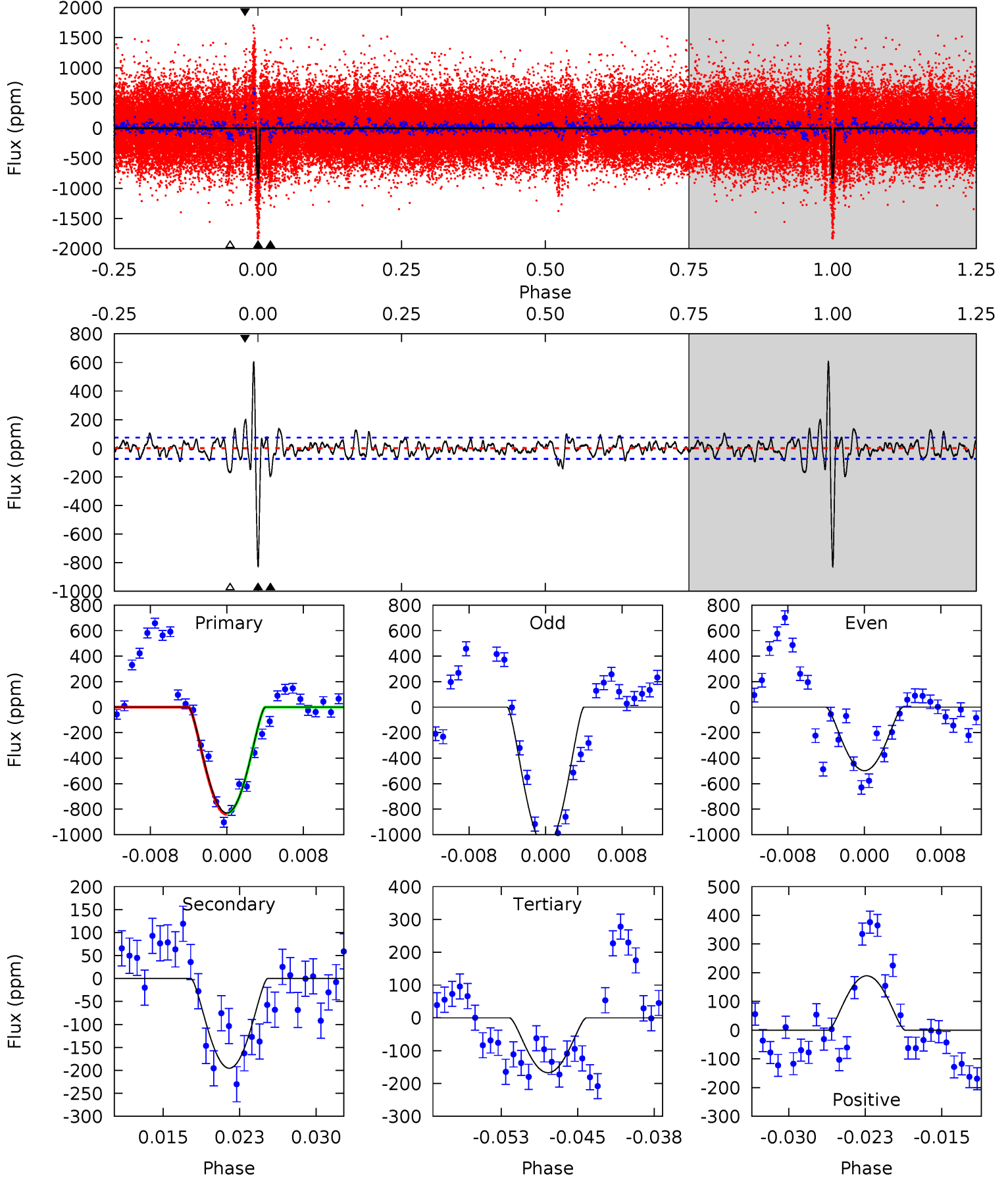
TCE 008884796-01 P=375.255518 Days $T_0=137.426102$ (BKJD)



DV Model-Shift Uniqueness Test

008884796-01, P = 375.119173 Days, E = 137.738968 Days

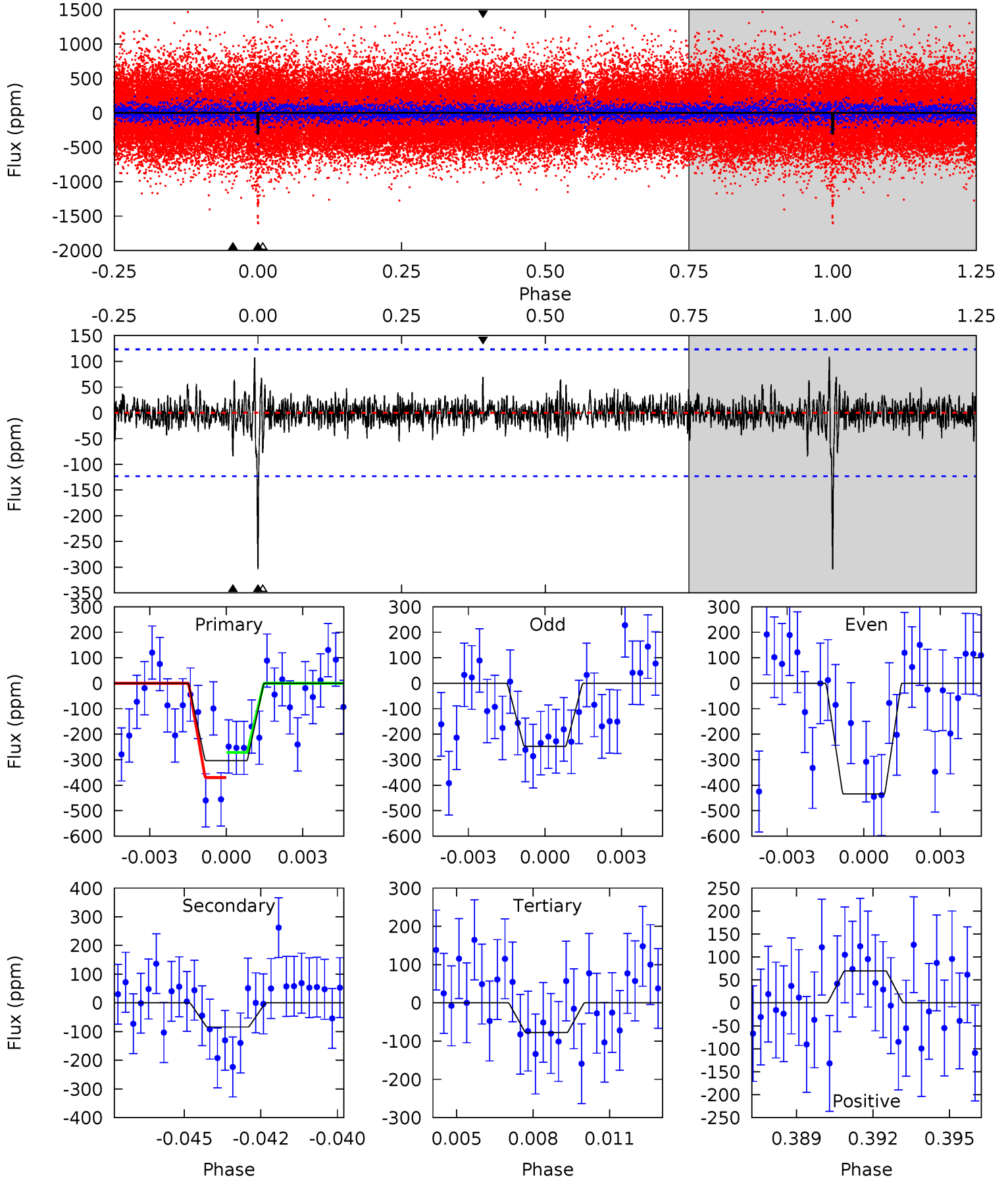
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.7	13.4	11.4	12.9	5.08	2.67	3.54	45.3	43.8	1.93	0.42	20.3	0.86	0.42	0.30



Alt Model-Shift Uniqueness Test

008884796-01, $P = 375.255518$ Days, $E = 137.426102$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	3.60	3.33	2.98	5.28	3.01	0.78	9.68	10.0	0.27	0.61	3.99	1.30	0.26	2.09



Stellar Parameters For KIC 008884796

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6061^{+163}_{-200}	$4.474^{+0.070}_{-0.210}$	$-0.260^{+0.300}_{-0.300}$	$0.951^{+0.303}_{-0.101}$	$0.981^{+0.129}_{-0.116}$	$1.608^{+0.472}_{-0.873}$
	+3%/-3%	+2%/-5%	+115%/-115%	+32%/-11%	+13%/-12%	+29%/-54%
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 008884796-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-195 ± 15	$8.60^{+8.66}_{-5.47}$	368^{+27}_{-20}	3154^{+1207}_{-525}	1419^{+9253}_{-1048}
Alt.	-84 ± 23	$7.01^{+7.49}_{-5.02}$	367^{+27}_{-18}	2977^{+1481}_{-539}	970^{+11152}_{-761}

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

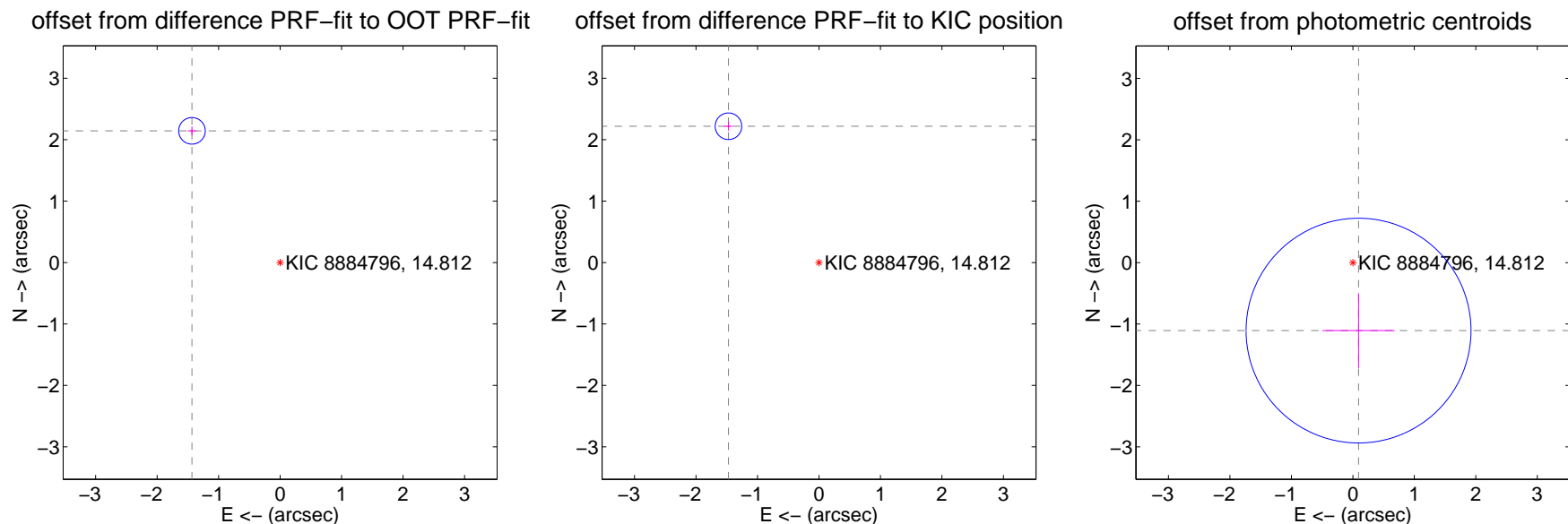
DV Centroid Data

Supplemental centroid analysis for 008884796-01. Kepler magnitude: 14.81. Transit SNR 15.52

There are 0 quarters with good PRF difference image offsets

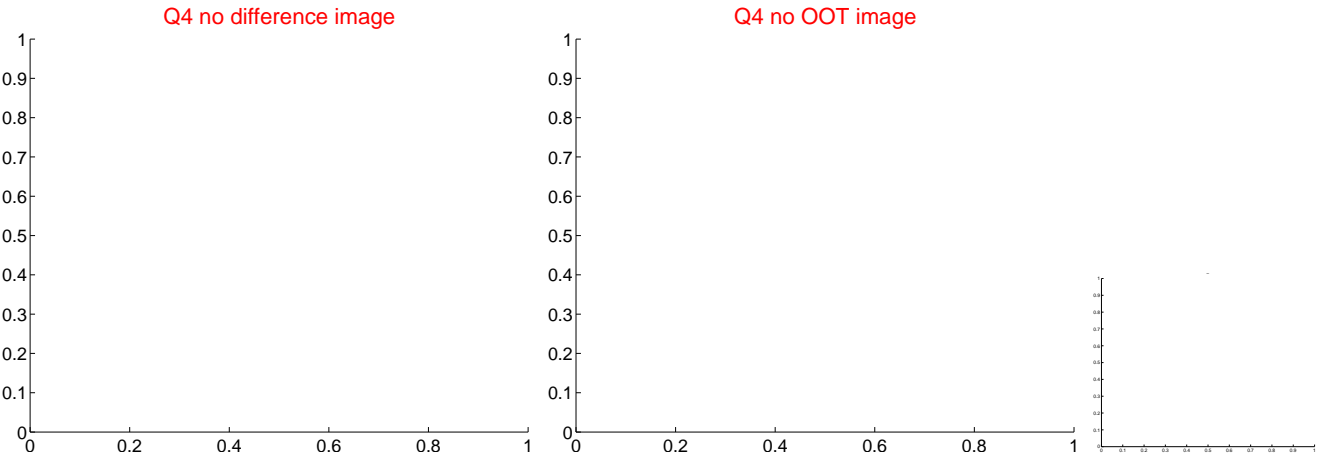
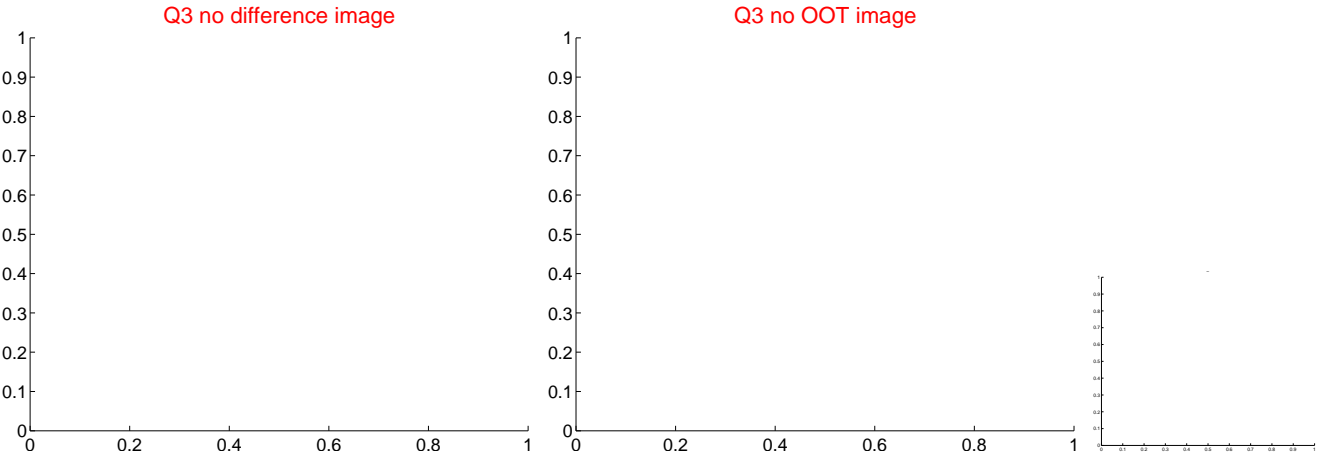
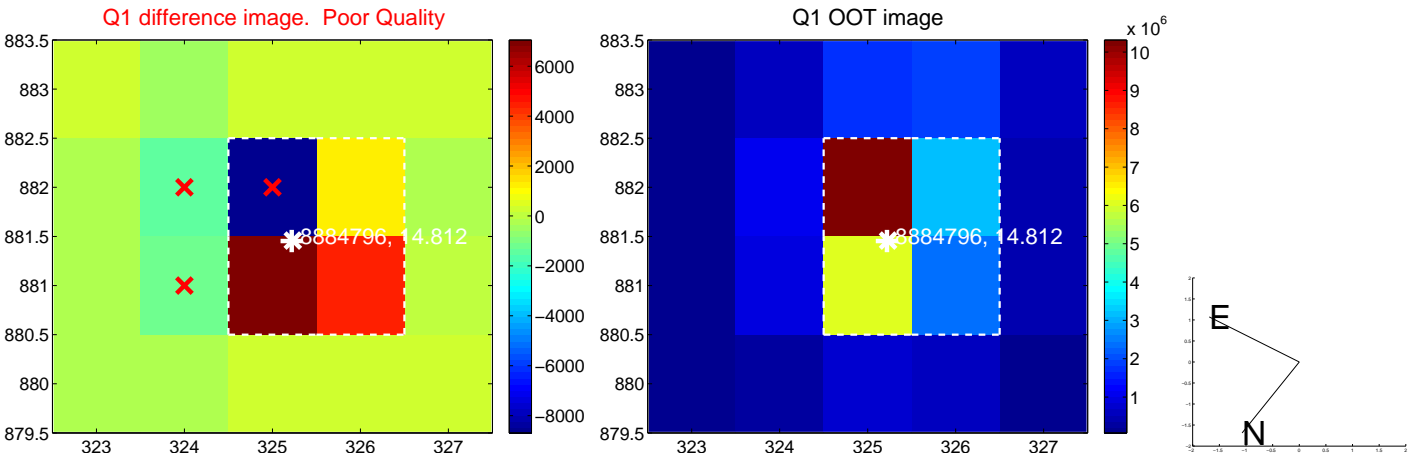
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.579 \pm 0.072	35.79	1.434 \pm 0.072	2.144 \pm 0.072
PRF-fit source offset from KIC position	2.662 \pm 0.072	36.95	1.472 \pm 0.072	2.218 \pm 0.072
photometric centroid source offset	1.11 \pm 0.61	1.82	-0.09 \pm 0.59	-1.11 \pm 0.61

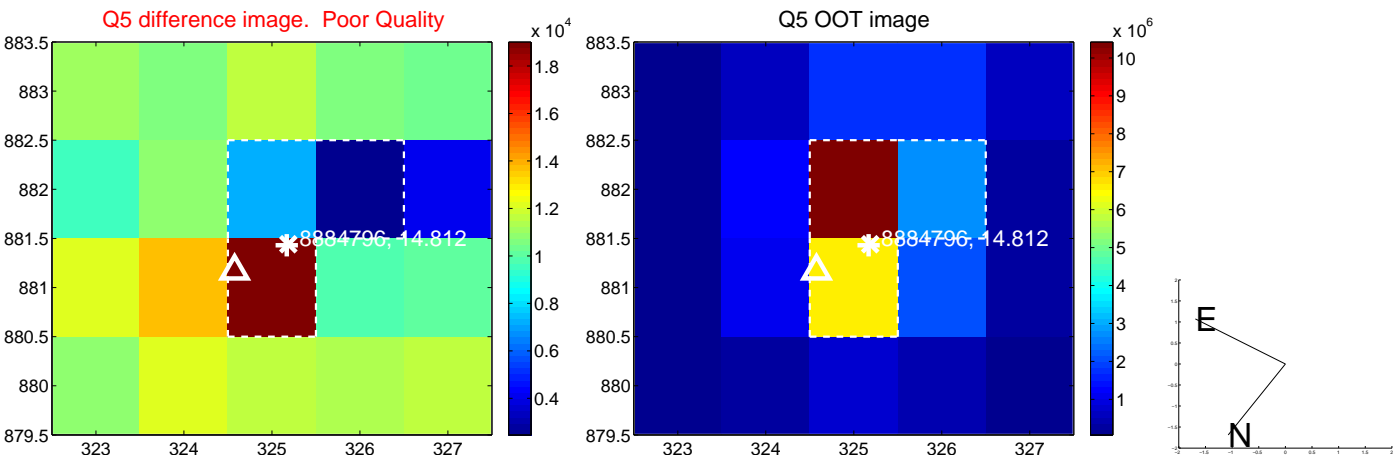


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



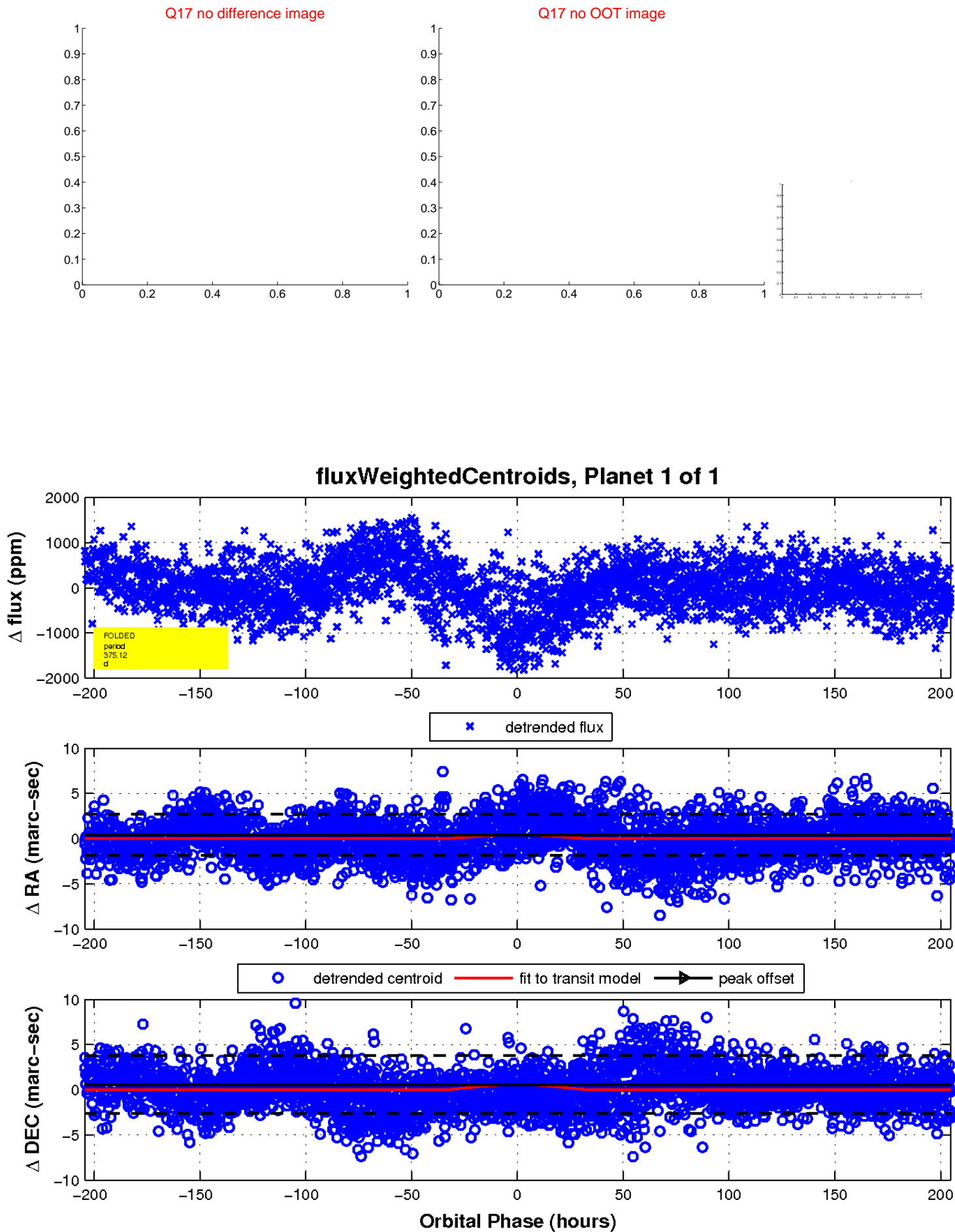
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

