

KIC 005786821

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})
005786821-01	OBS	No	359.752877	149.090263	888.4	15.390	8.9	9.5	0.85	5356	2.70	0.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005786821-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

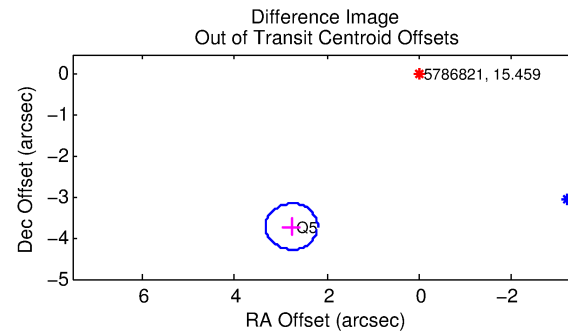
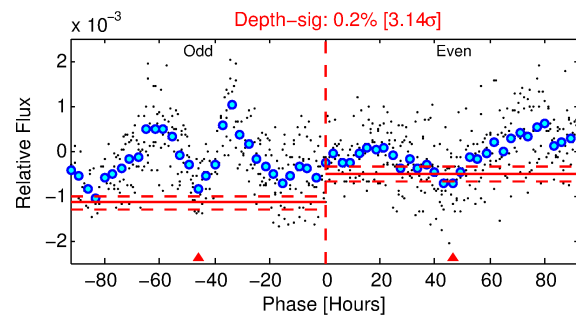
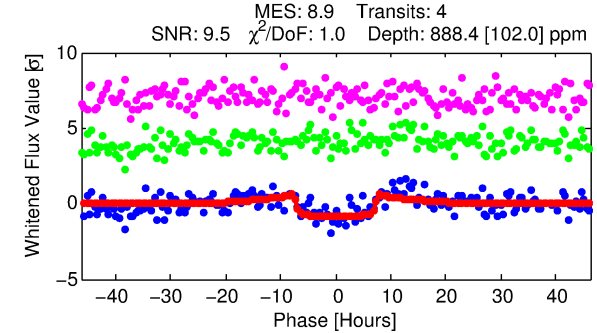
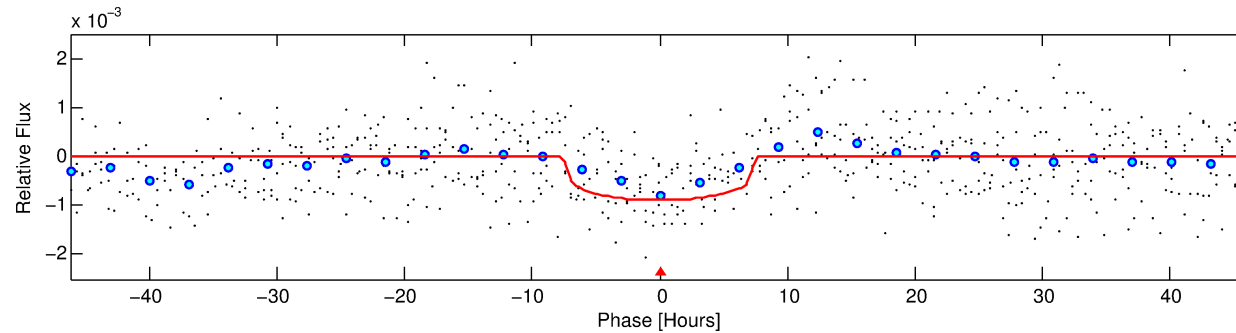
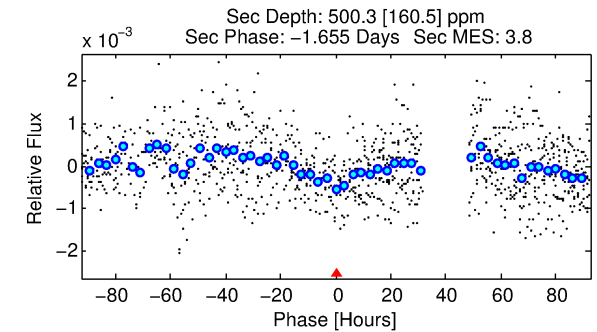
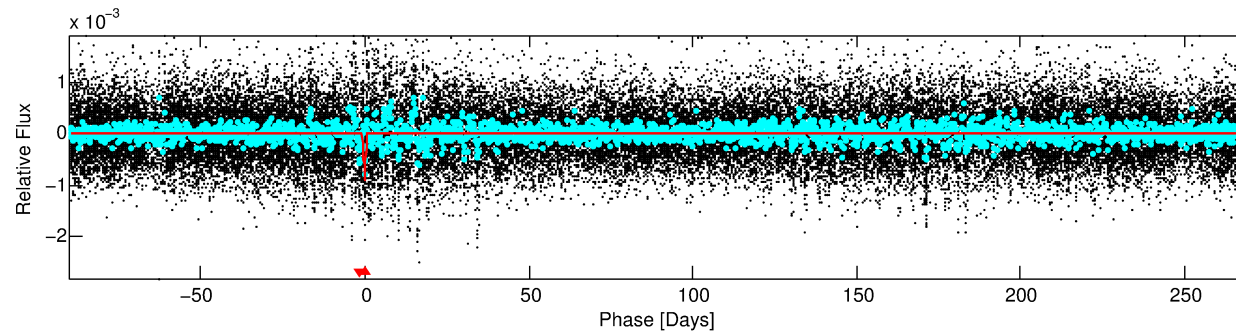
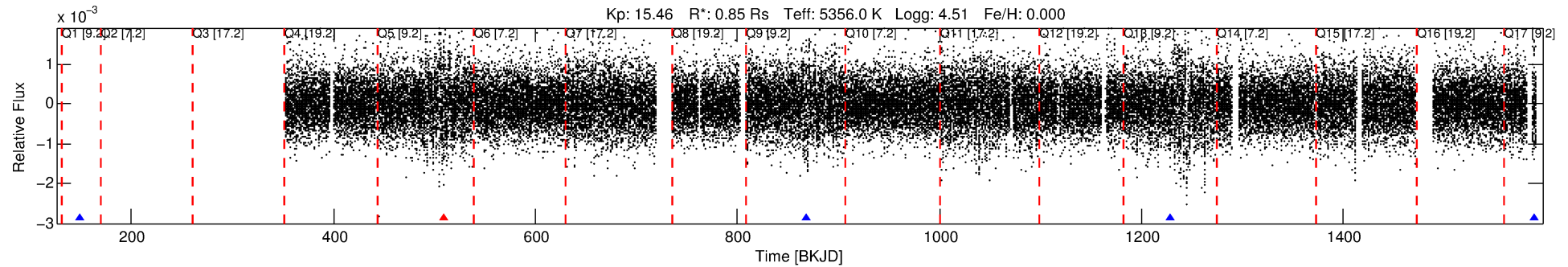
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005786821-01

No Significant Match Found

DV One-Page Summary

KIC: 5786821 Candidate: 1 of 1 Period: 359.753 d



DV Fit Results:

Period = 359.75288 [0.00855] d
Epoch = 149.0903 [0.0241] BKJD
Rp/R* = 0.0290 [0.0084]
a/R* = 136.59 [145.85]
b = 0.69 [0.83]
Seff = 0.61 [0.17]
Teq = 225 [15] K
Rp = 2.70 [0.94] Re
a = 0.9412 [0.1523] AU
Ag = 33433.48 [23477.06] [1.42σ]
Teff = 4703 [794] K [5.64σ]

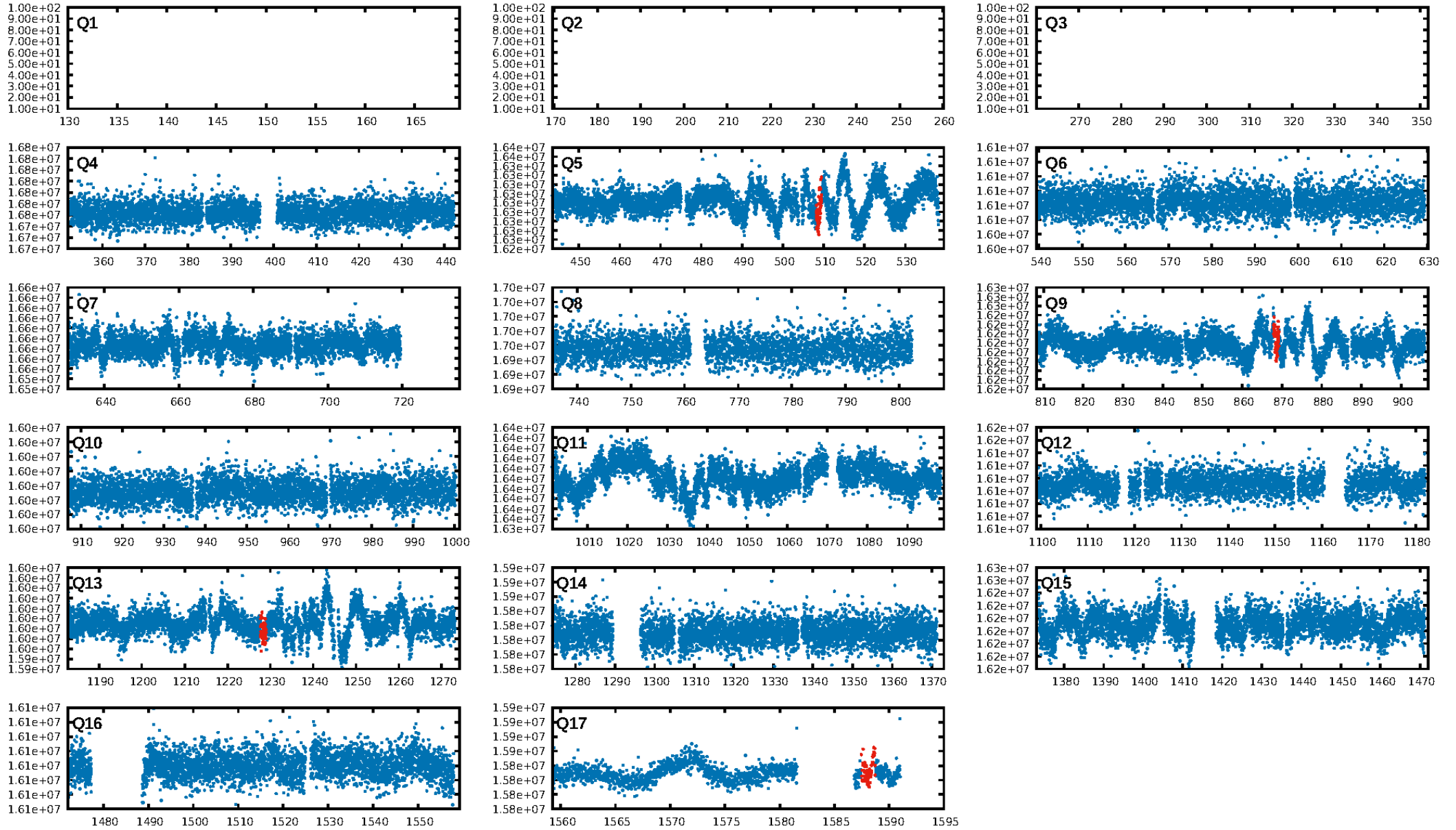
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.47e-12
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -3.854
Centroid-sig: 0.4%
Centroid-so: 3.153 arcsec [1.63σ]
OotOffset-rm: 4.631 arcsec [24.64σ]
KicOffset-rm: 4.561 arcsec [24.27σ]
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]

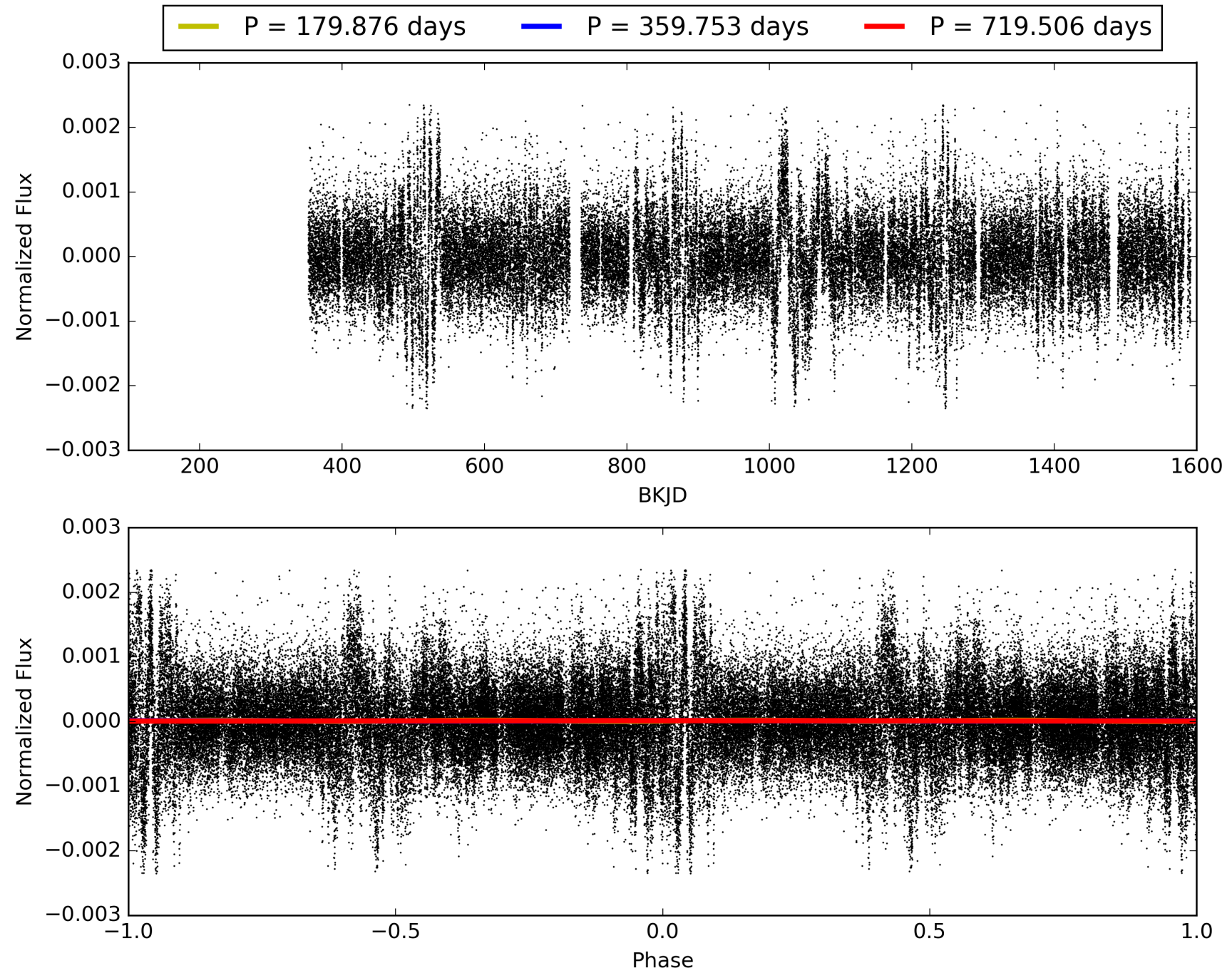
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:21:24 Z

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

TCE 005786821-01, PDC Light Curves

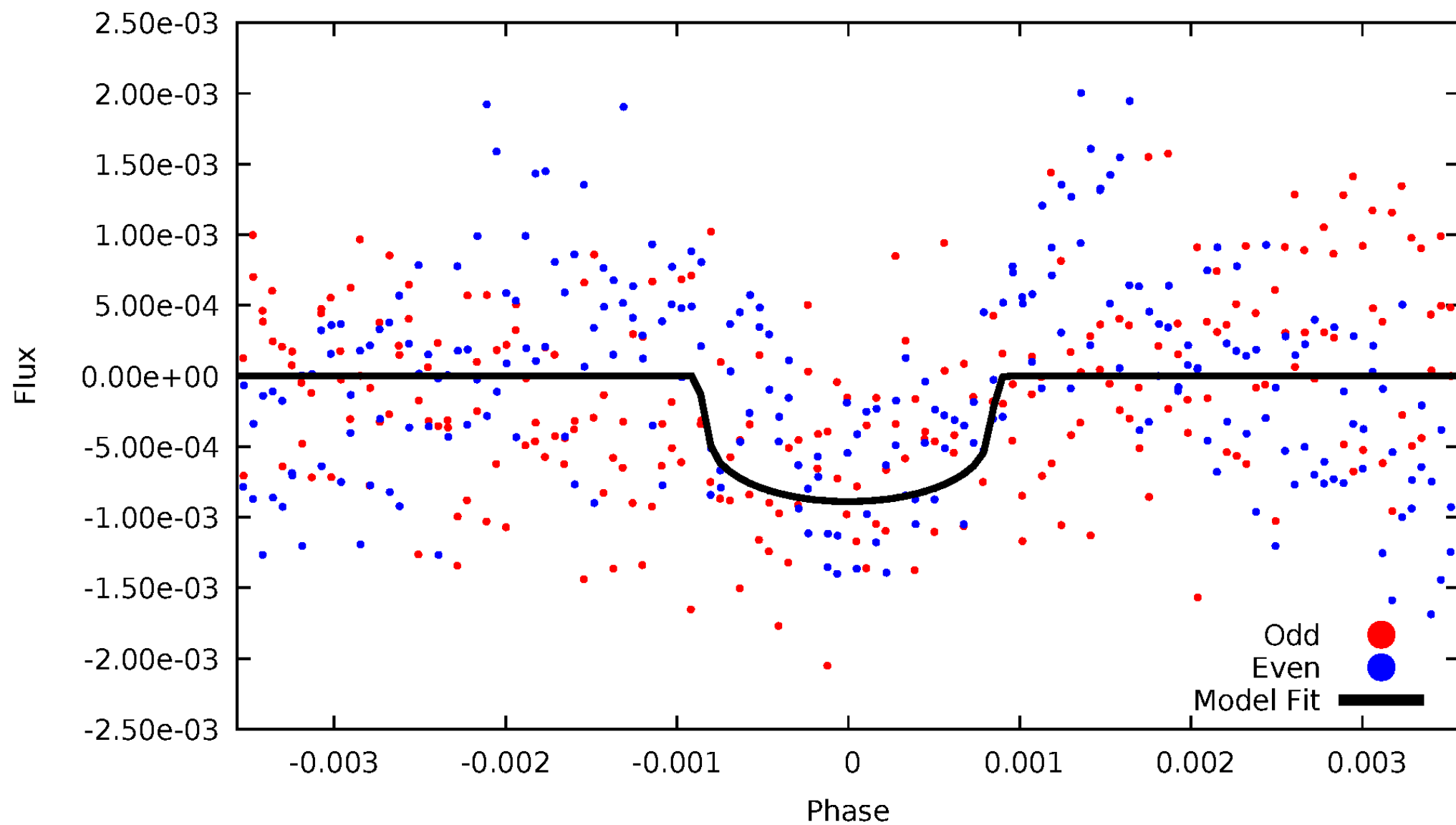


TCE 005786821-01



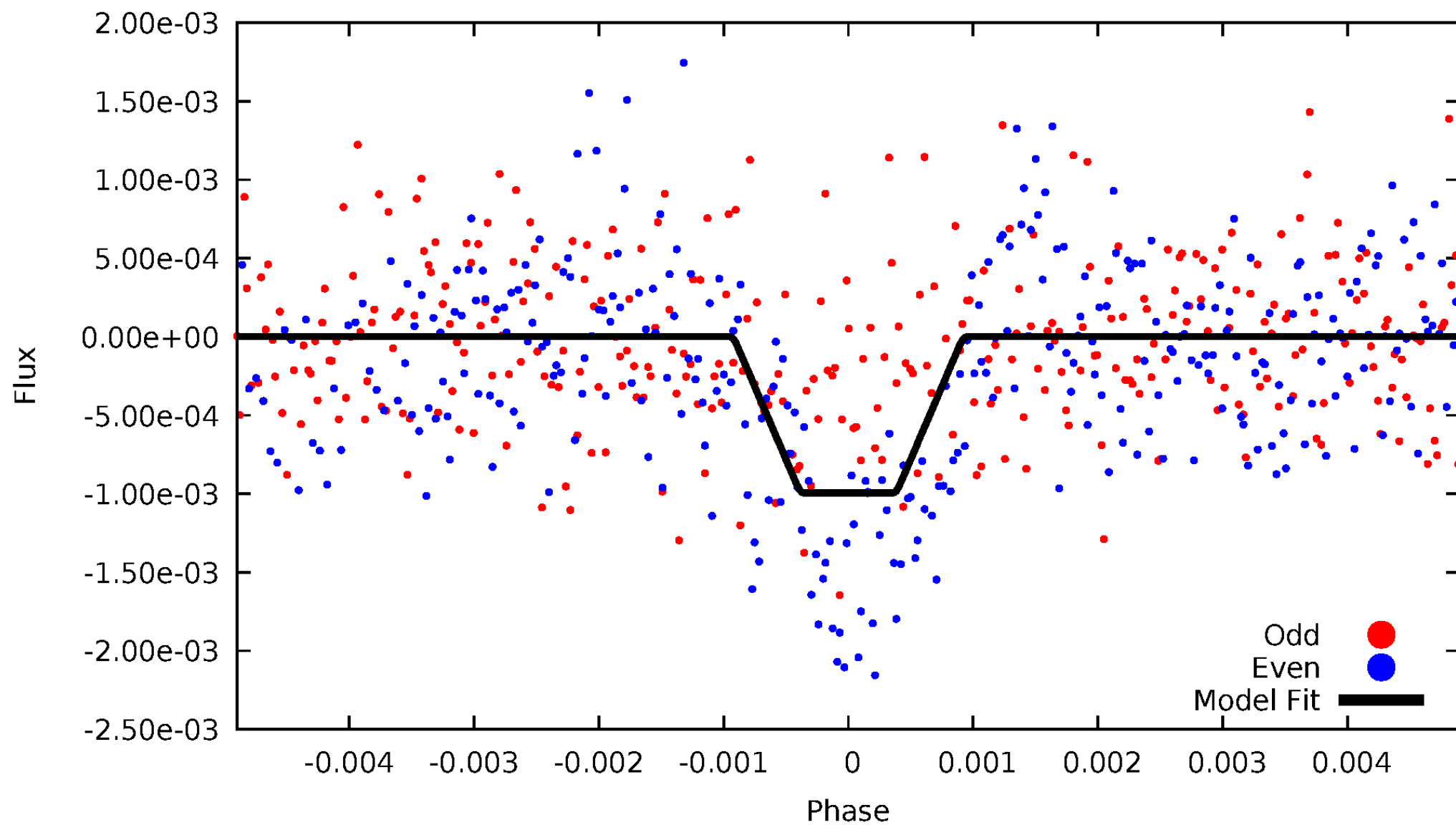
DV Odd/Even

TCE 005786821-01

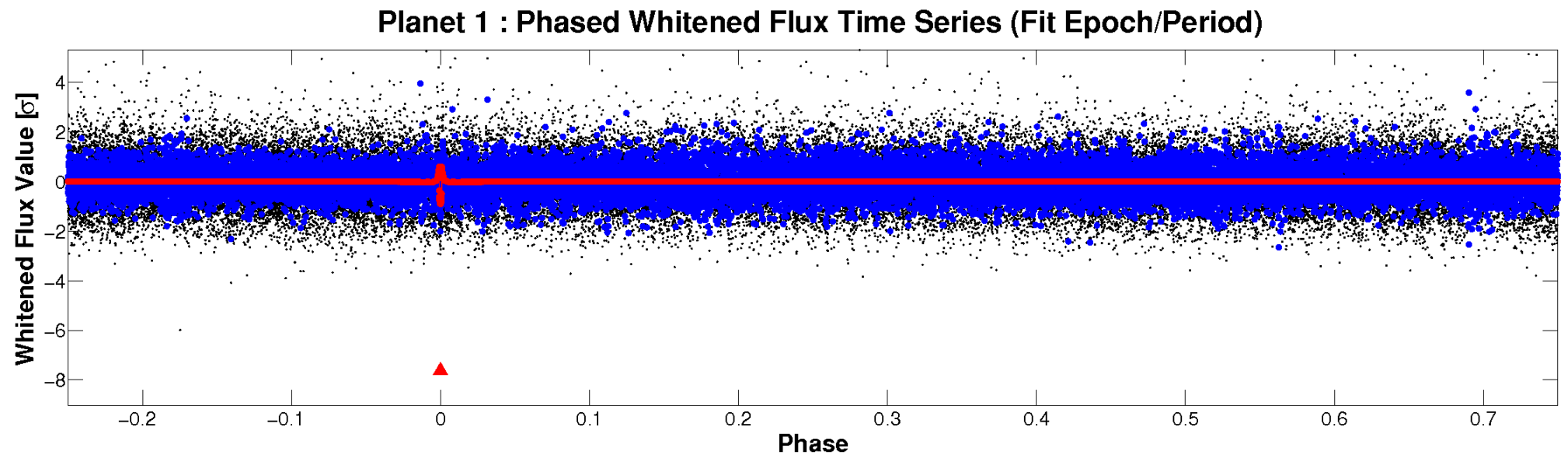
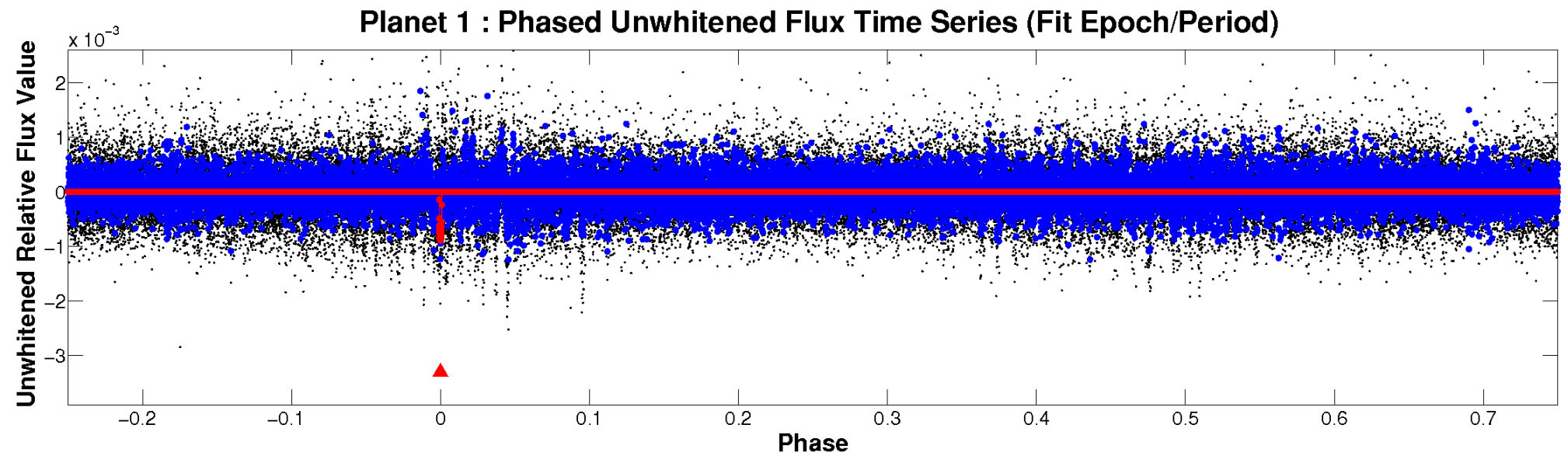


ALT Odd/Even

TCE 005786821-01

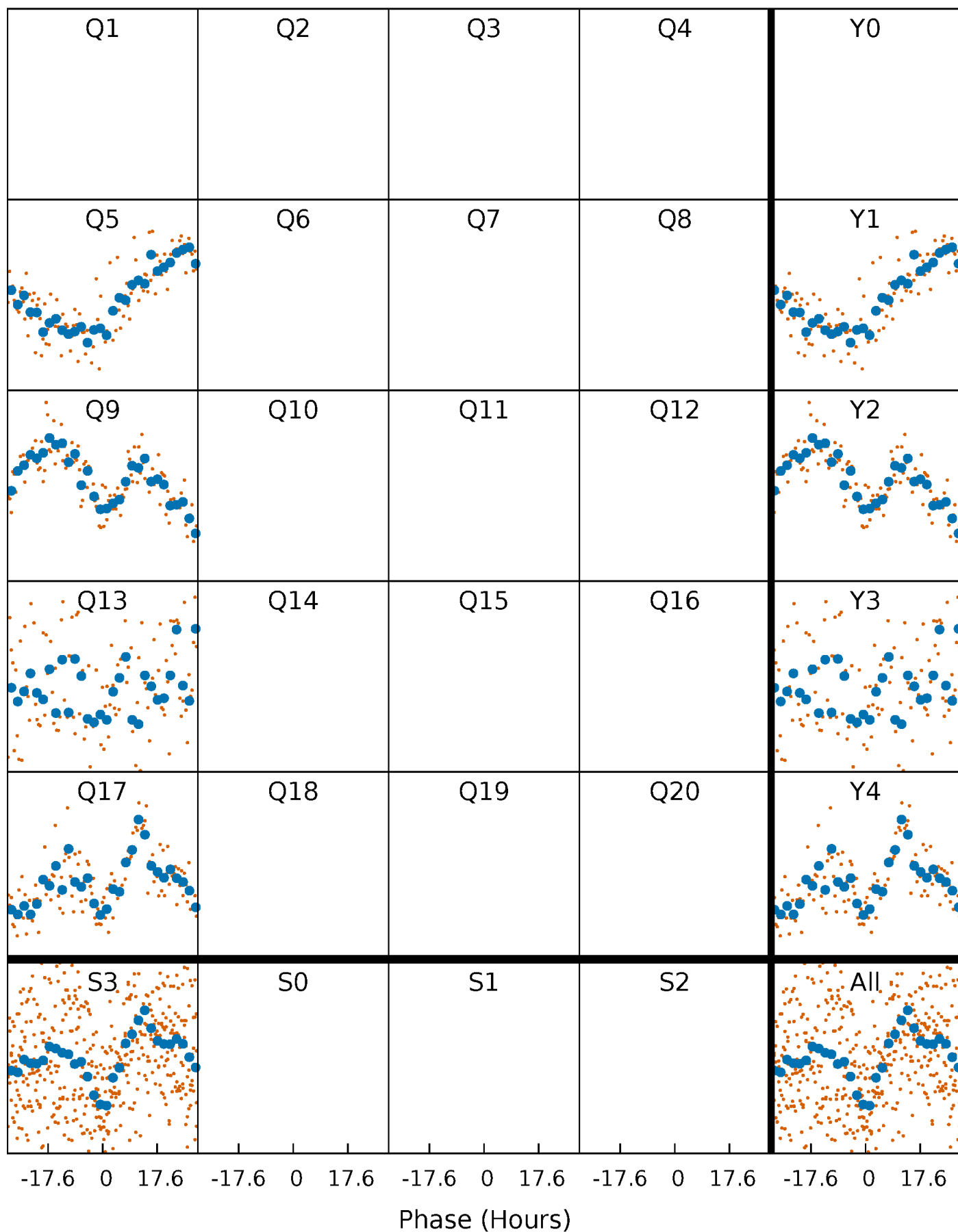


Non-Whitened Vs. Whitened Light Curve



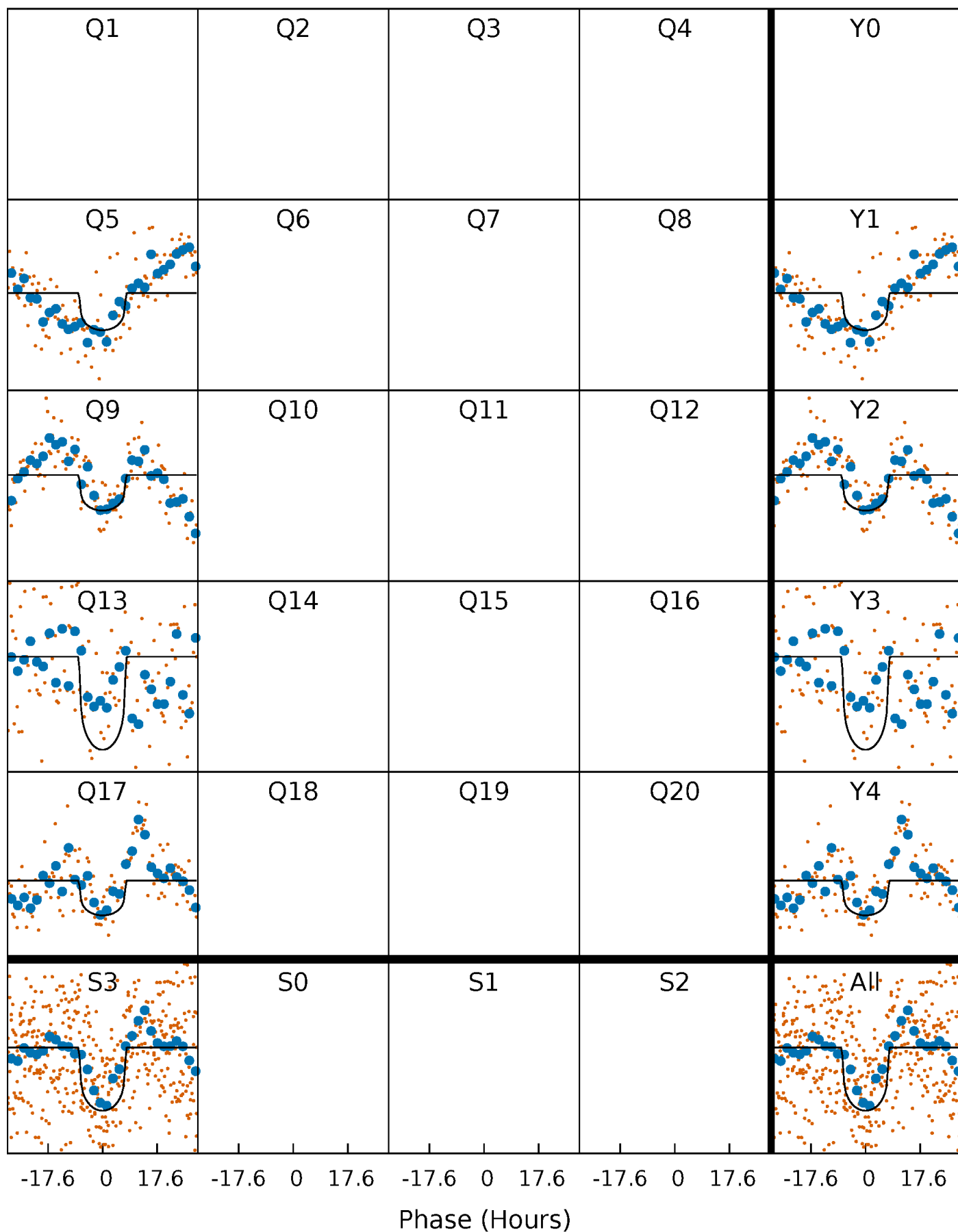
PDC Quarter-Phased Transit Curves

TCE 005786821-01 P=359.752877 Days $T_0=149.090263$ (BKJD)



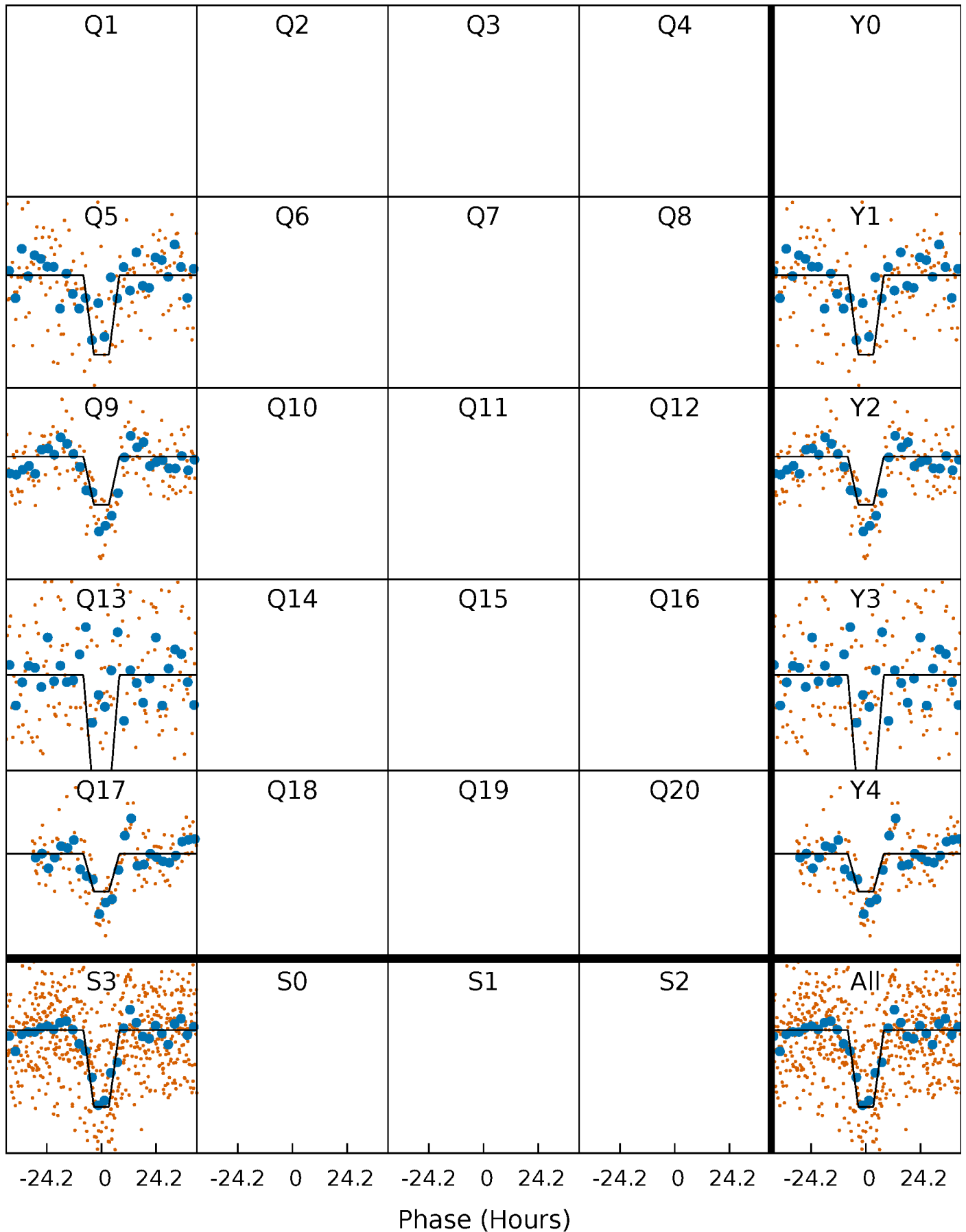
DV Quarter-Phased Transit Curves

TCE 005786821-01 P=359.752877 Days $T_0=149.090263$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

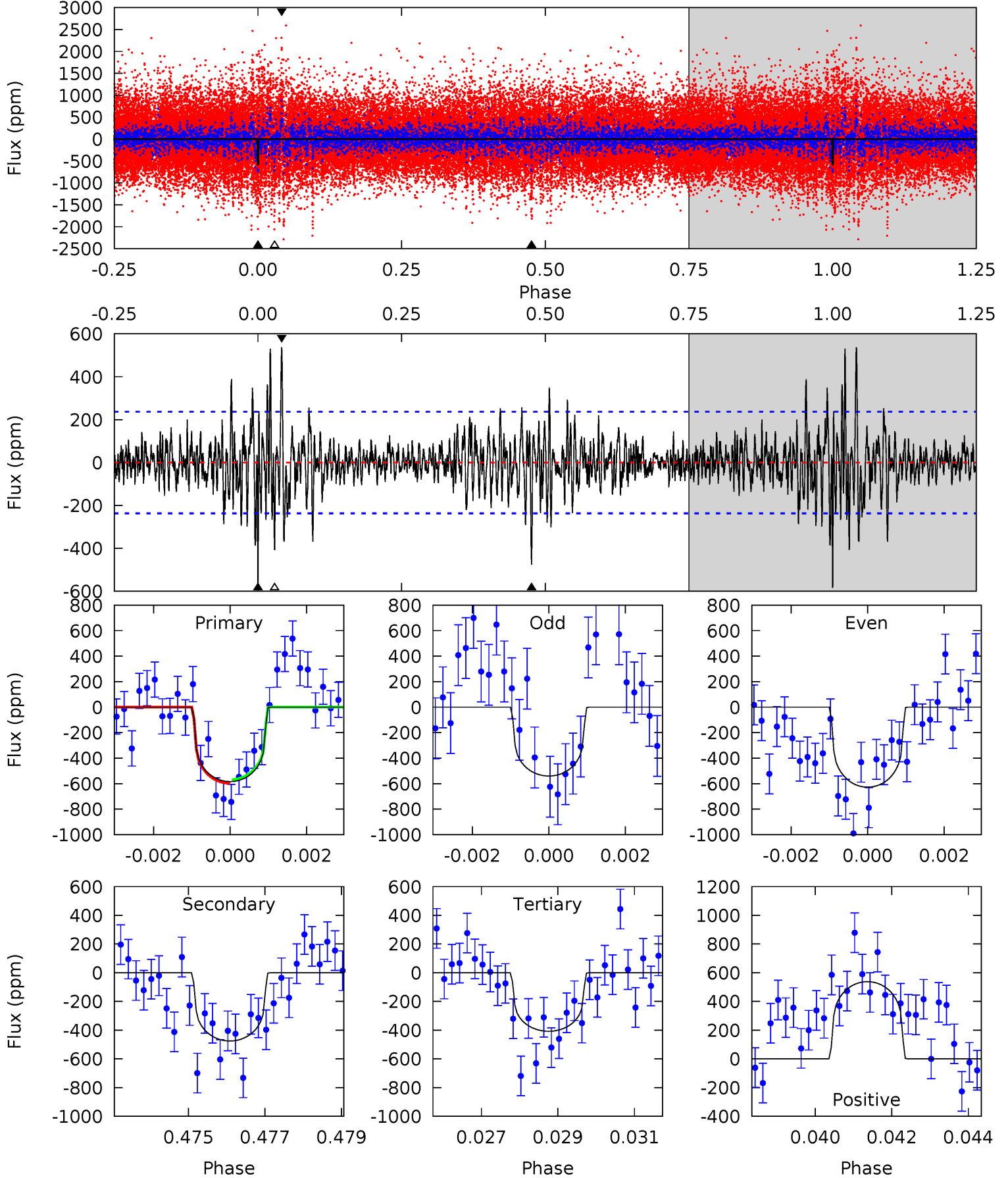
TCE 005786821-01 P=359.760068 Days $T_0=149.064152$ (BKJD)



DV Model-Shift Uniqueness Test

005786821-01, P = 359.752877 Days, E = 149.090263 Days

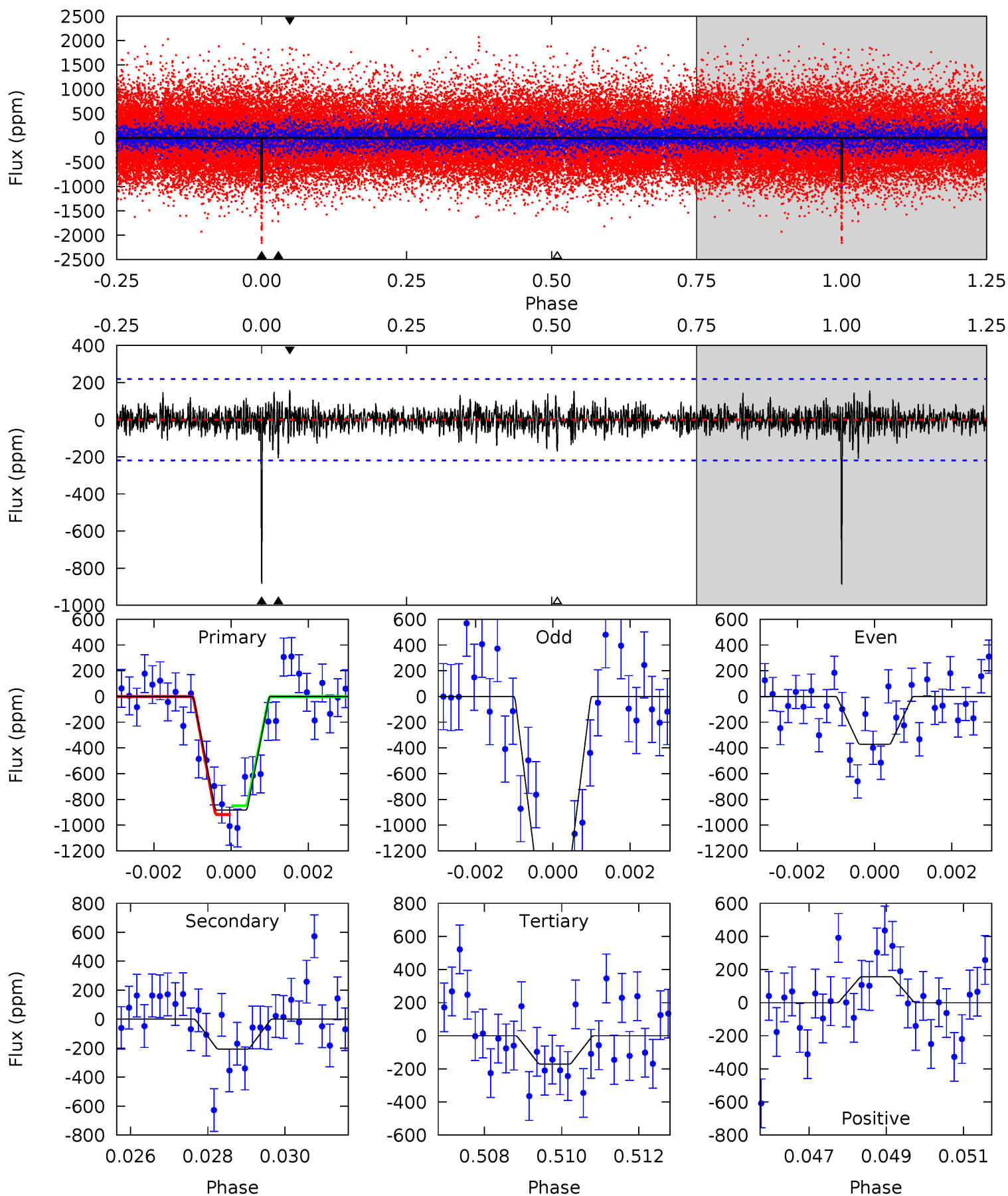
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	10.7	9.19	12.1	5.34	3.12	2.17	3.97	1.03	1.52	-1.41	0.99	1.07	0.48	0.31



Alt Model-Shift Uniqueness Test

005786821-01, P = 359.760068 Days, E = 149.064152 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	5.01	4.16	3.80	5.34	3.11	1.04	17.3	17.7	0.85	1.21	12.5	0.91	0.15	0.84



Stellar Parameters For KIC 005786821

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5356^{+185}_{-185}	$4.510^{+0.070}_{-0.130}$	$0.000^{+0.250}_{-0.300}$	$0.853^{+0.163}_{-0.088}$	$0.858^{+0.096}_{-0.078}$	$1.950^{+0.554}_{-0.725}$
	+3%/-3%	+2%/-3%	+inf%/-inf%	+19%/-10%	+11%/-9%	+28%/-37%
Source	KIC0	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 005786821-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-475 ± 44	$2.69^{+0.85}_{-0.78}$	316^{+16}_{-15}	4751^{+731}_{-460}	31528^{+31368}_{-13210}
Alt.	-206 ± 41	$2.98^{+0.88}_{-0.81}$	317^{+18}_{-16}	3940^{+487}_{-362}	11241^{+10028}_{-4871}

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 $A_{obs} \gg 1.0$

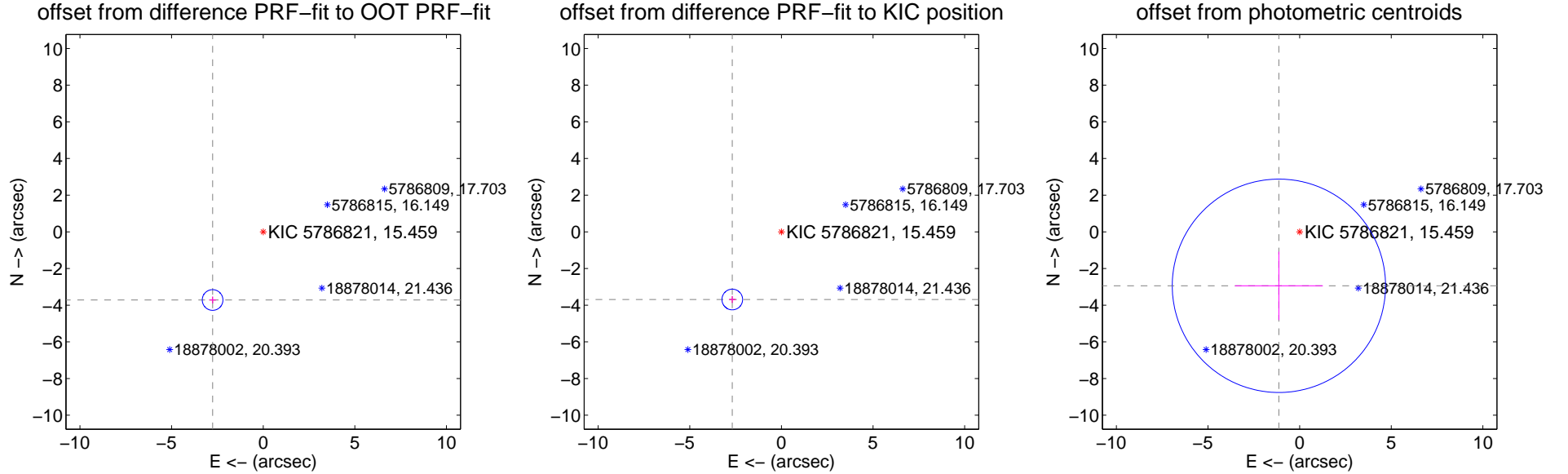
DV Centroid Data

Supplemental centroid analysis for 005786821-01. Kepler magnitude: 15.46. Transit SNR 9.46

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	4.631 ± 0.188	24.64	2.761 ± 0.187	-3.717 ± 0.188
PRF-fit source offset from KIC position	4.561 ± 0.188	24.27	2.681 ± 0.187	-3.690 ± 0.188
photometric centroid source offset	3.15 ± 1.94	1.63	1.13 ± 2.40	-2.94 ± 1.86

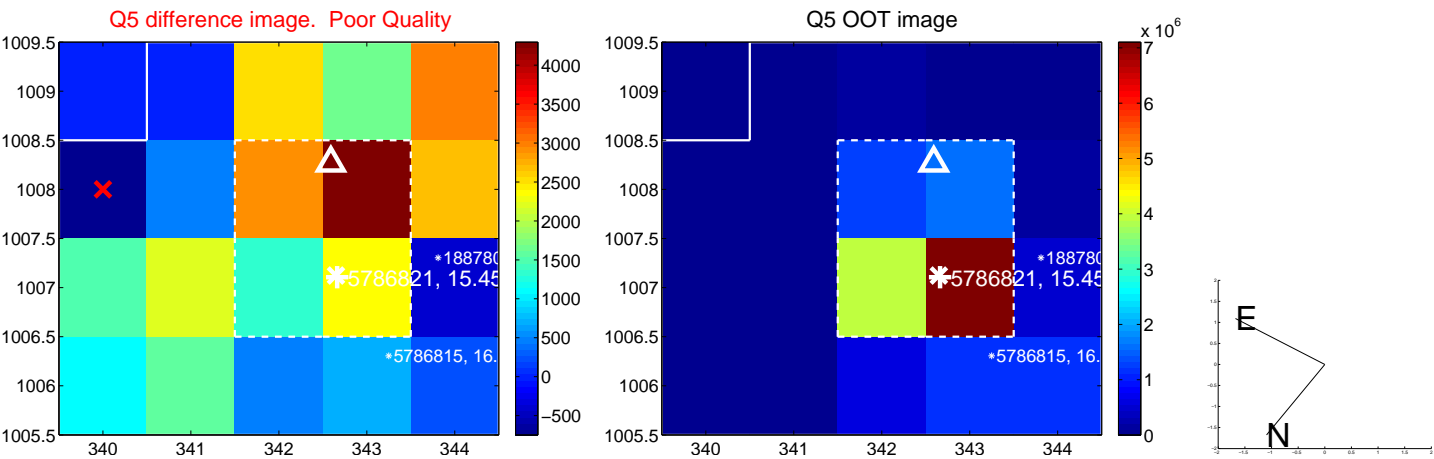


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

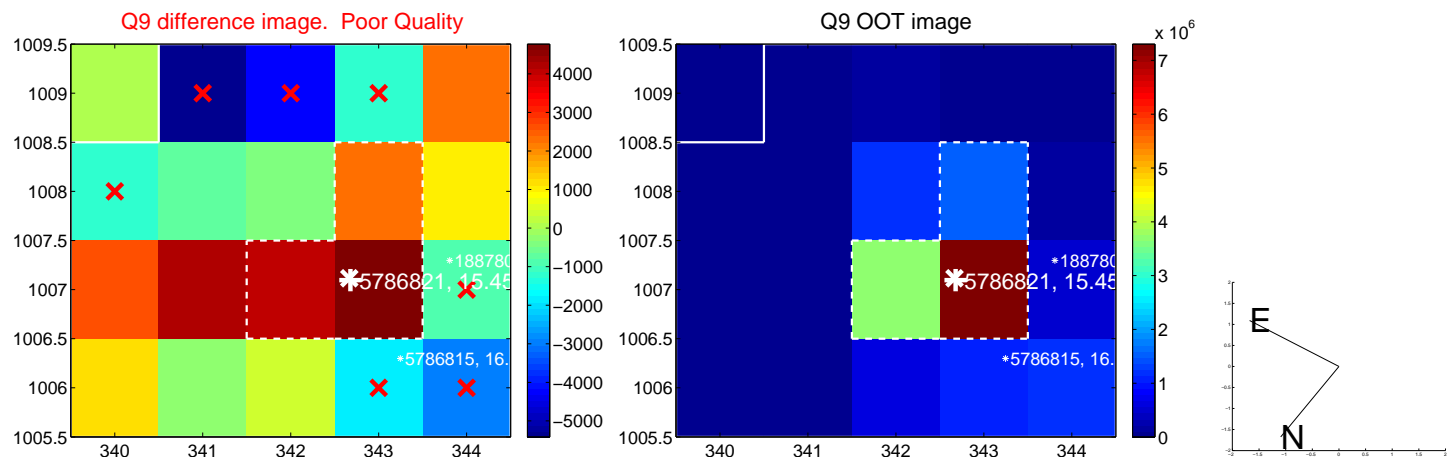
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



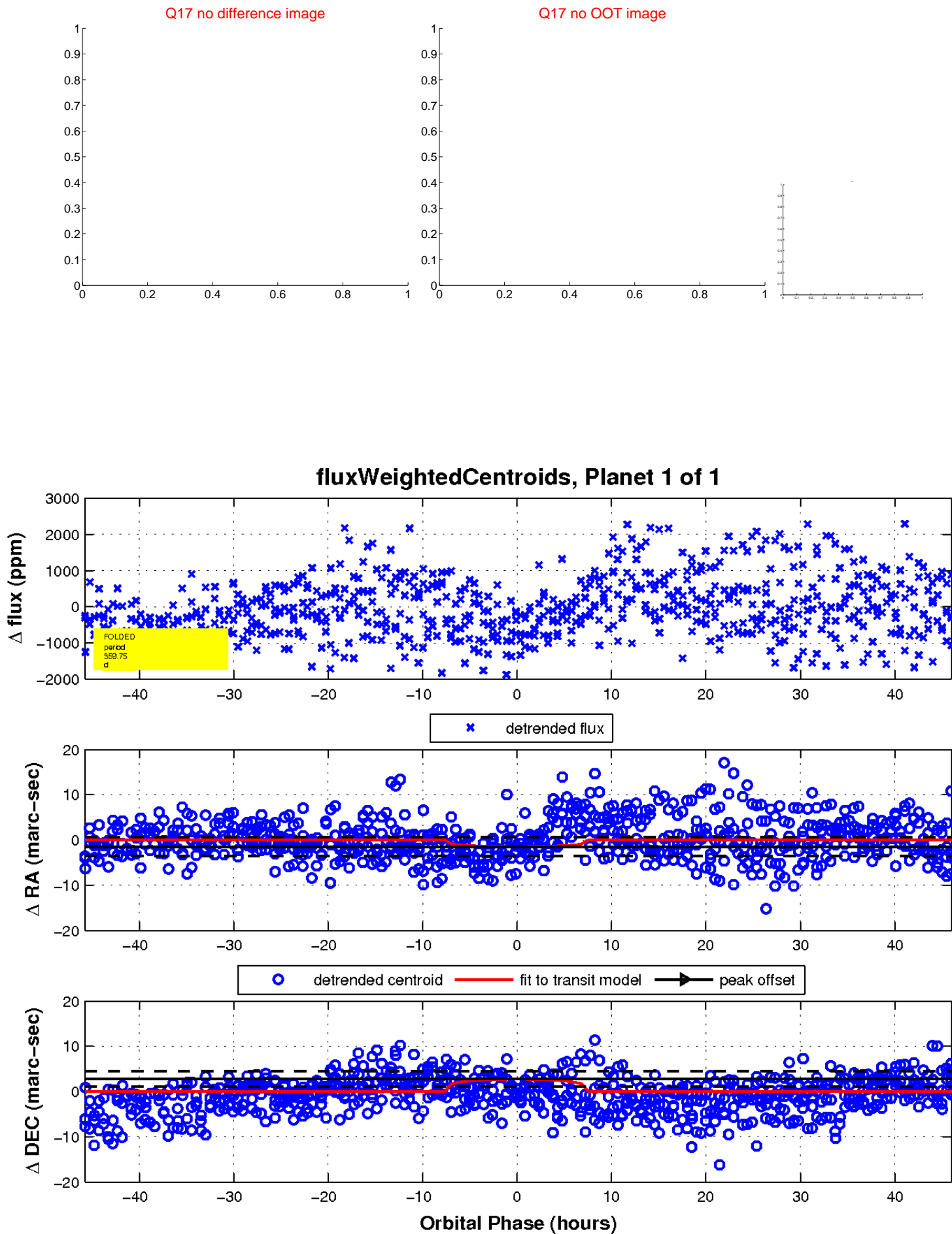
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

