

KIC 006947666

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})
006947666-02	OBS	No	56.692069	131.901390	1977.5	9.009	12.9	14.8	1.10	6146	8.81	18.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006947666-02	OBS	FP	0.00	1	0	0	0	MOD_TER_ALT—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.

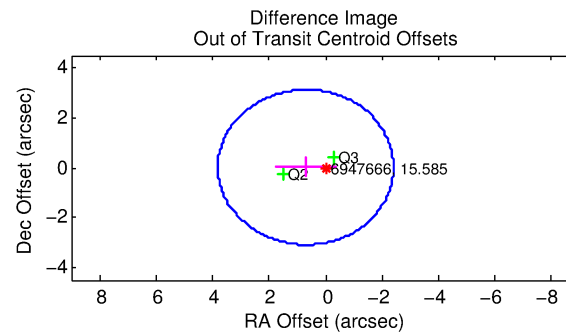
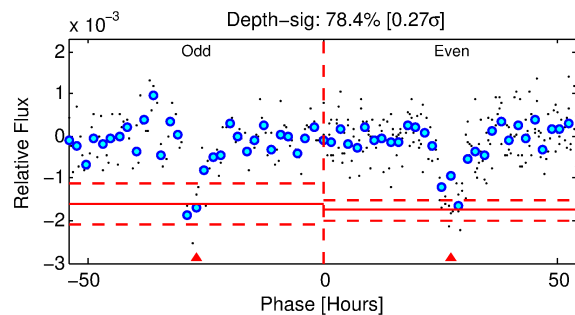
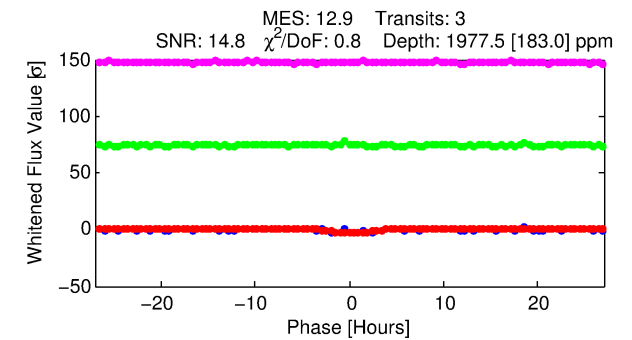
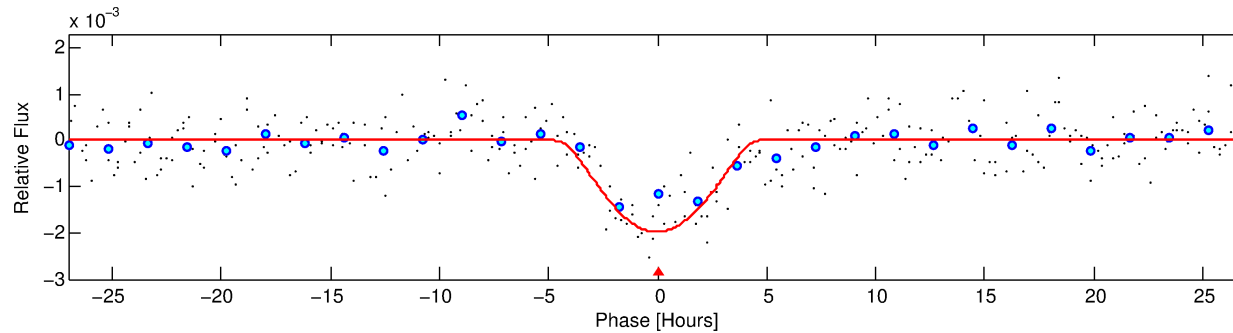
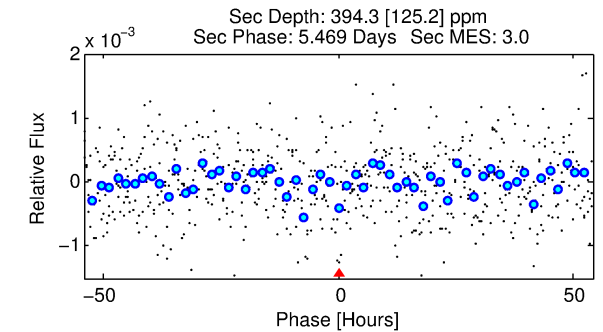
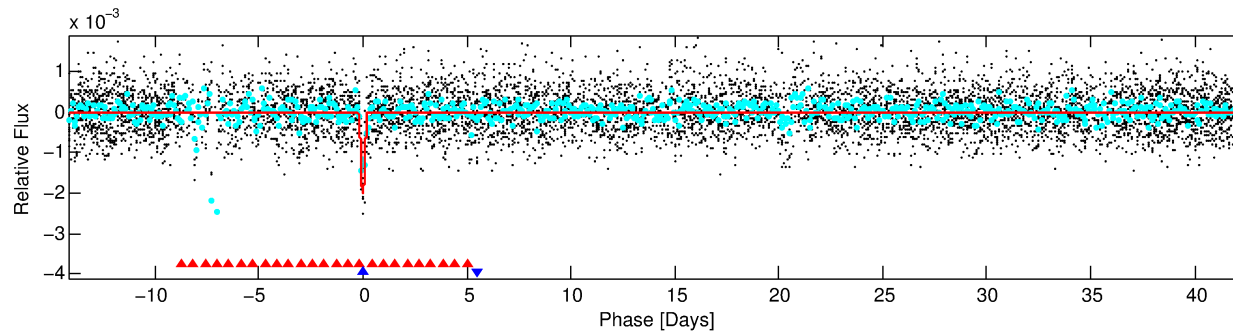
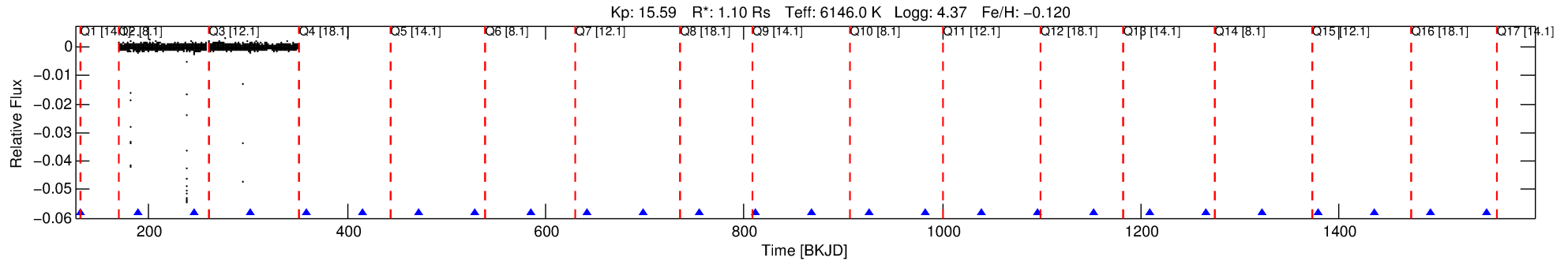
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006947666-02

No Significant Match Found

DV One-Page Summary

KIC: 6947666 Candidate: 2 of 2 Period: 56.692 d



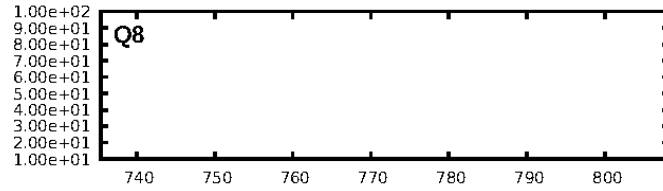
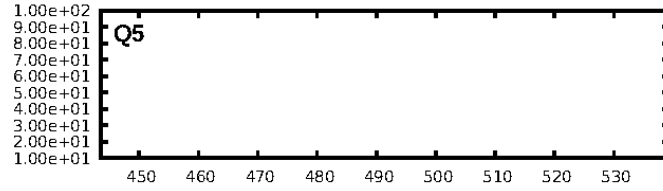
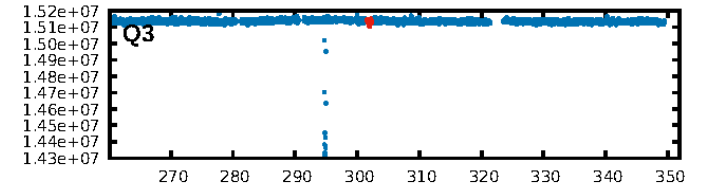
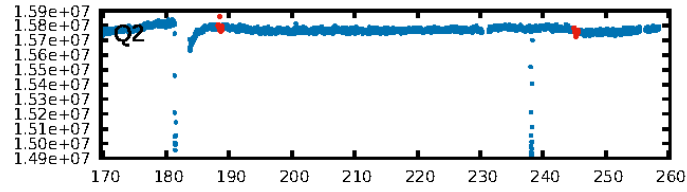
DV Fit Results:

Period = 56.69207 [0.00807] d
Epoch = 131.9014 [0.0204] BKJD
Rp/R* = 0.0736 [0.1559]
a/R* = 19.29 [9.39]
b = 1.00 [0.23]
Seff = 18.02 [7.17]
Teq = 525 [52] K
Rp = 8.81 [18.85] Re
a = 0.2919 [0.0760] AU
Ag = 238.28 [1015.30] [0.23σ]
Teffp = 3191 [3389] K [0.79σ]

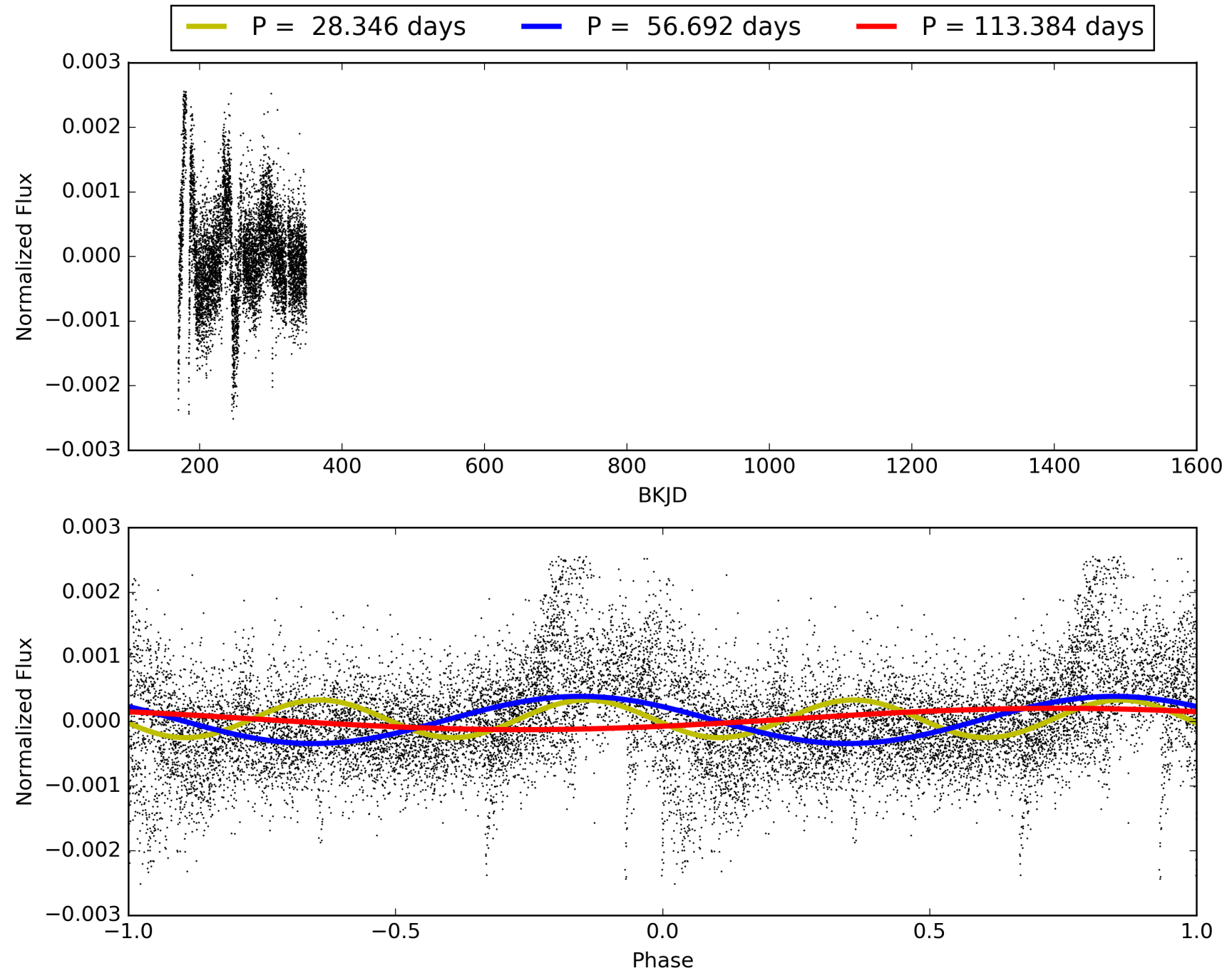
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 74.0% [1.13σ]
ModelChiSquare2-sig: 79.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.73e-39
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.97
Centroid-sig: 66.4%
Centroid-so: 0.312 arcsec [0.51σ]
OotOffset-rm: 0.701 arcsec [0.68σ]
KicOffset-rm: 0.778 arcsec [0.80σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 006947666-02, PDC Light Curves

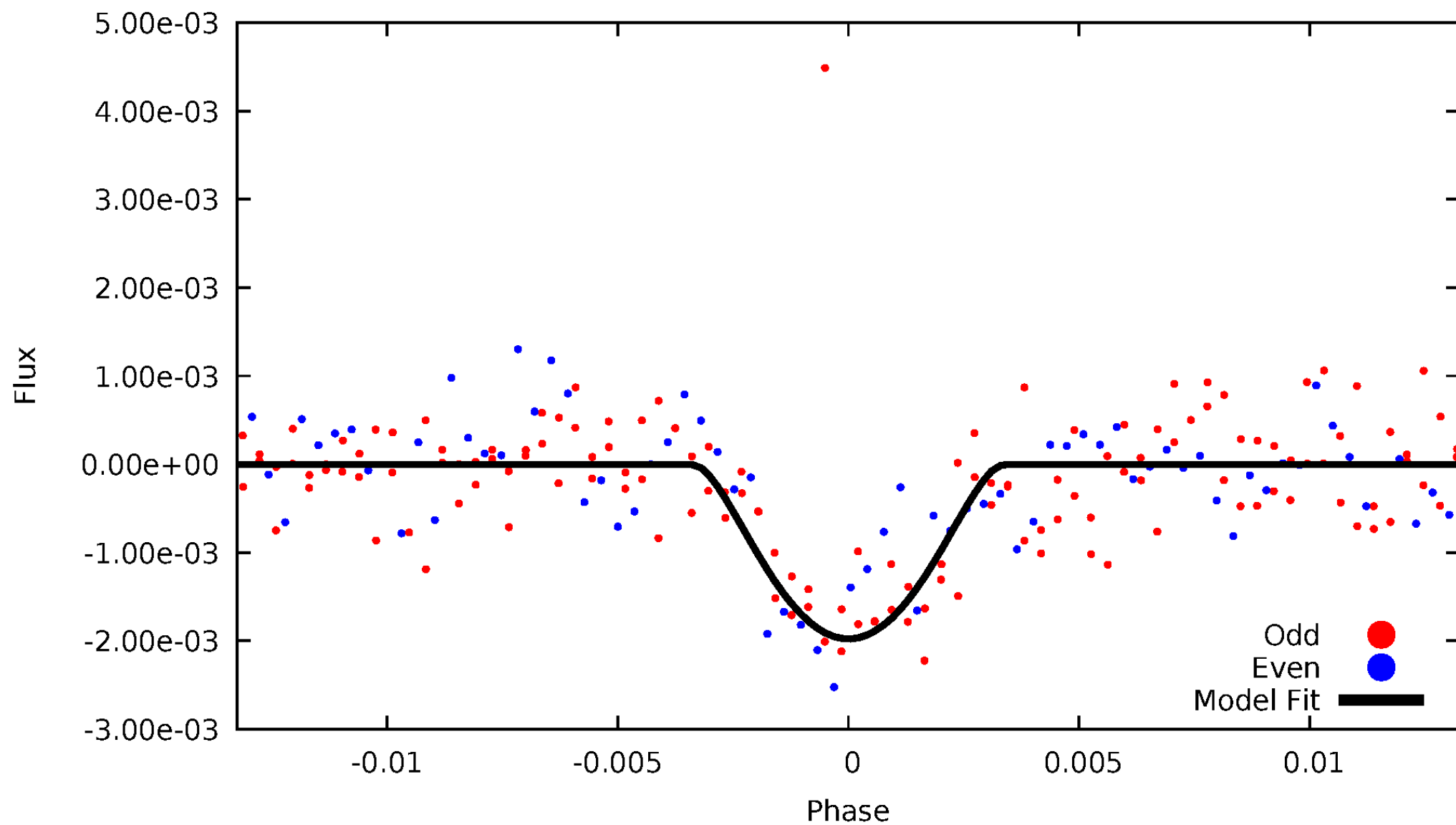


TCE 006947666-02



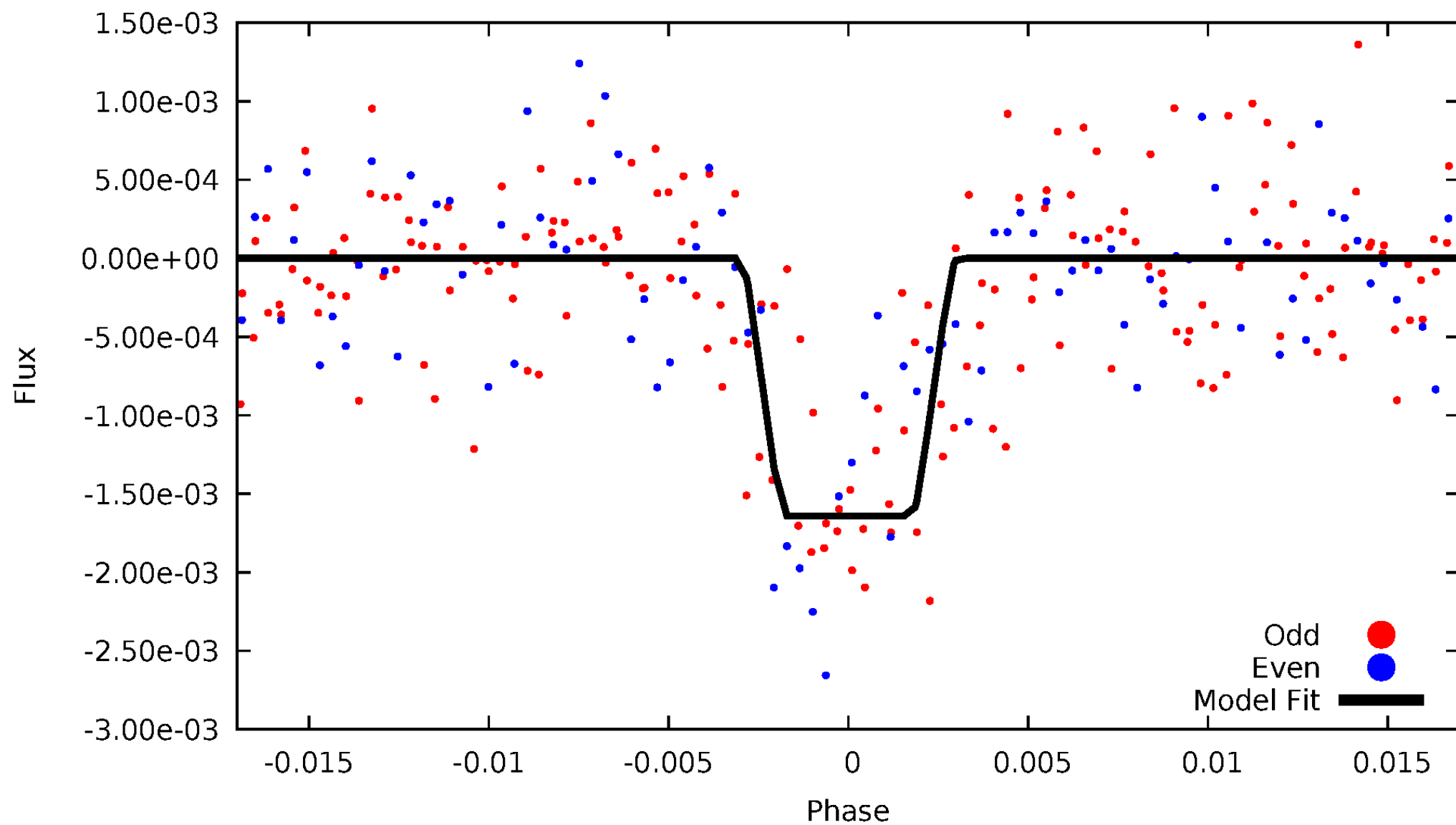
DV Odd/Even

TCE 006947666-02



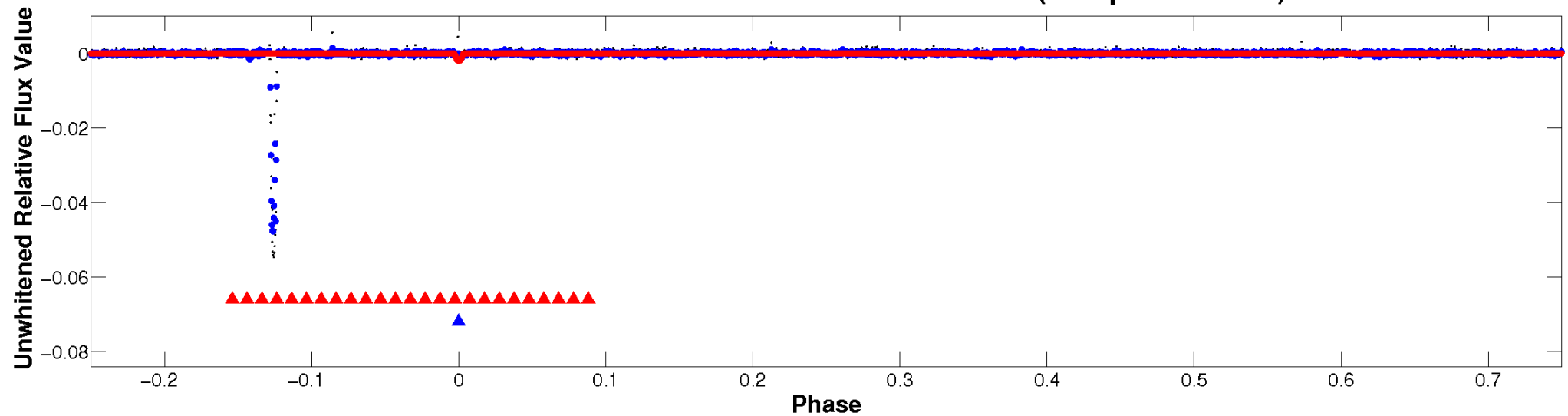
ALT Odd/Even

TCE 006947666-02

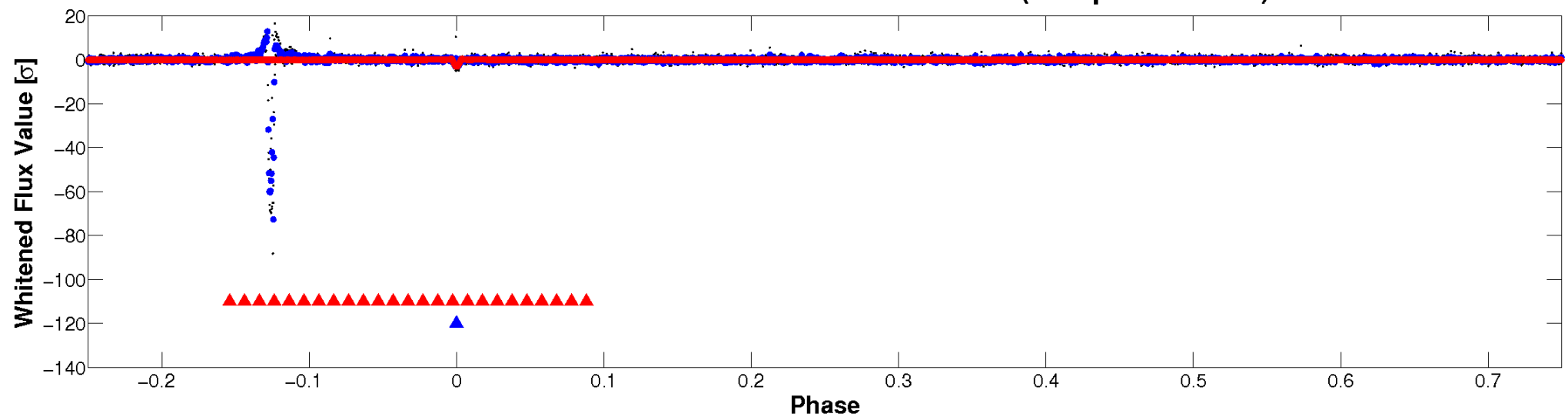


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

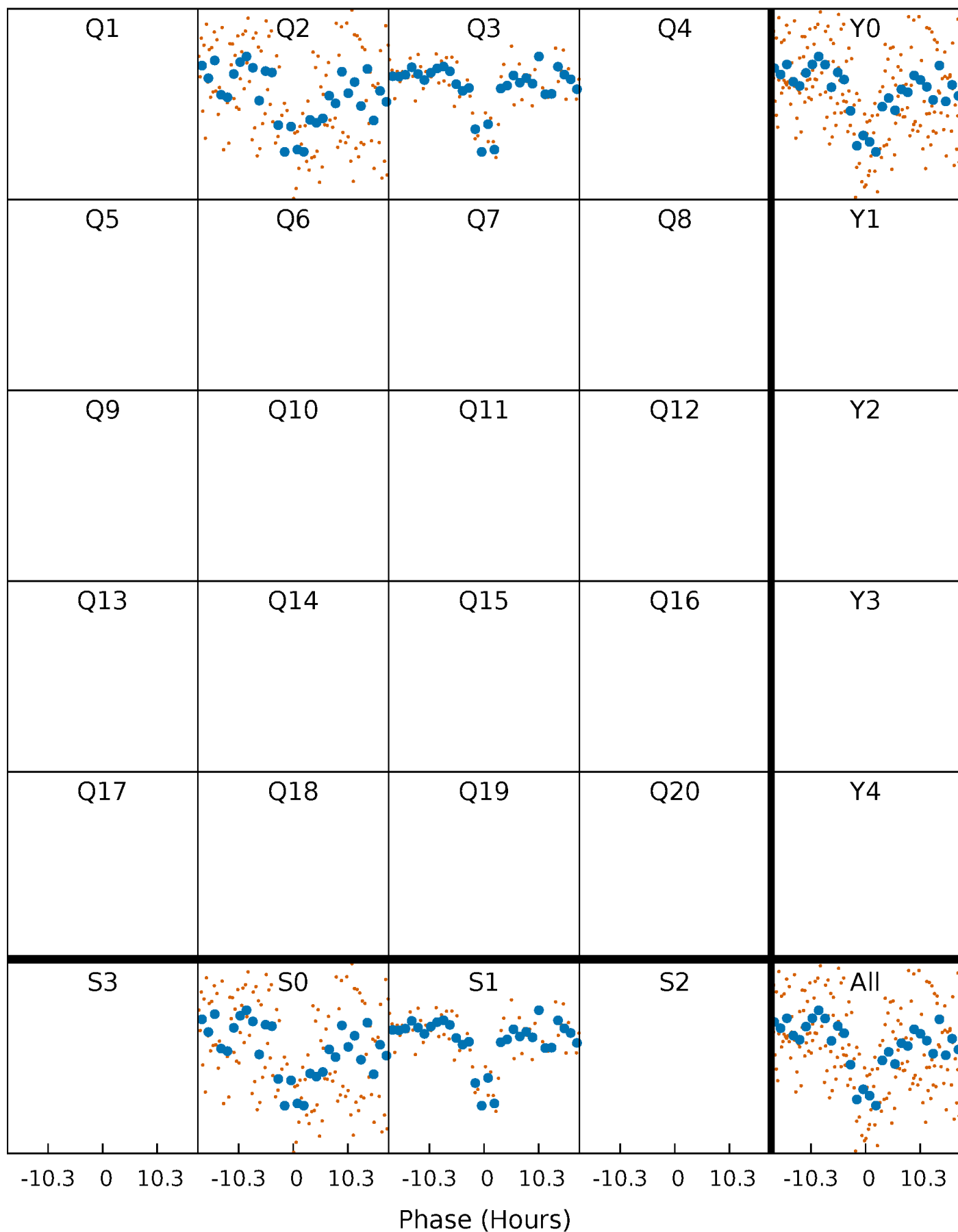


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



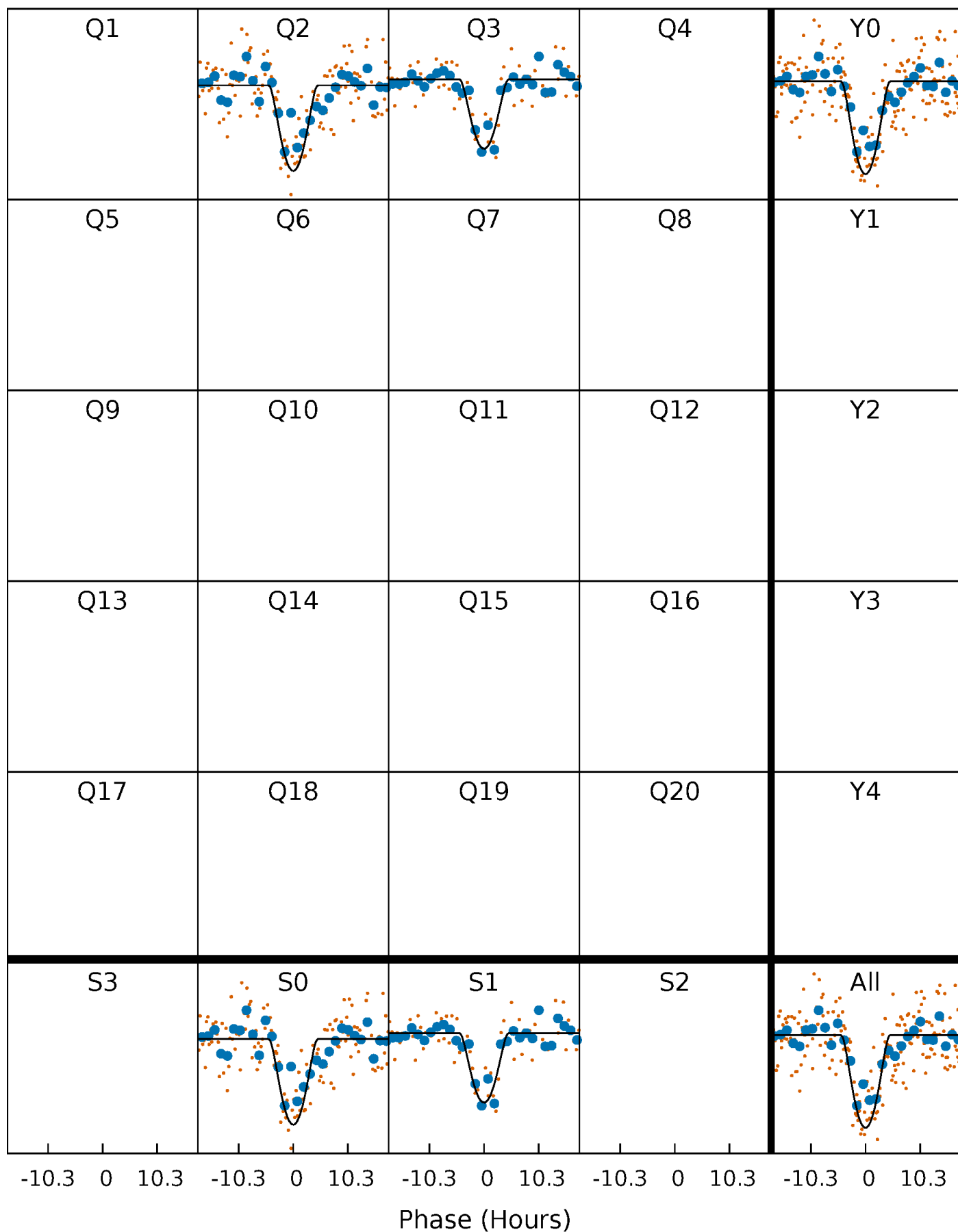
PDC Quarter-Phased Transit Curves

TCE 006947666-02 P= 56.692069 Days $T_0=131.901390$ (BKJD)



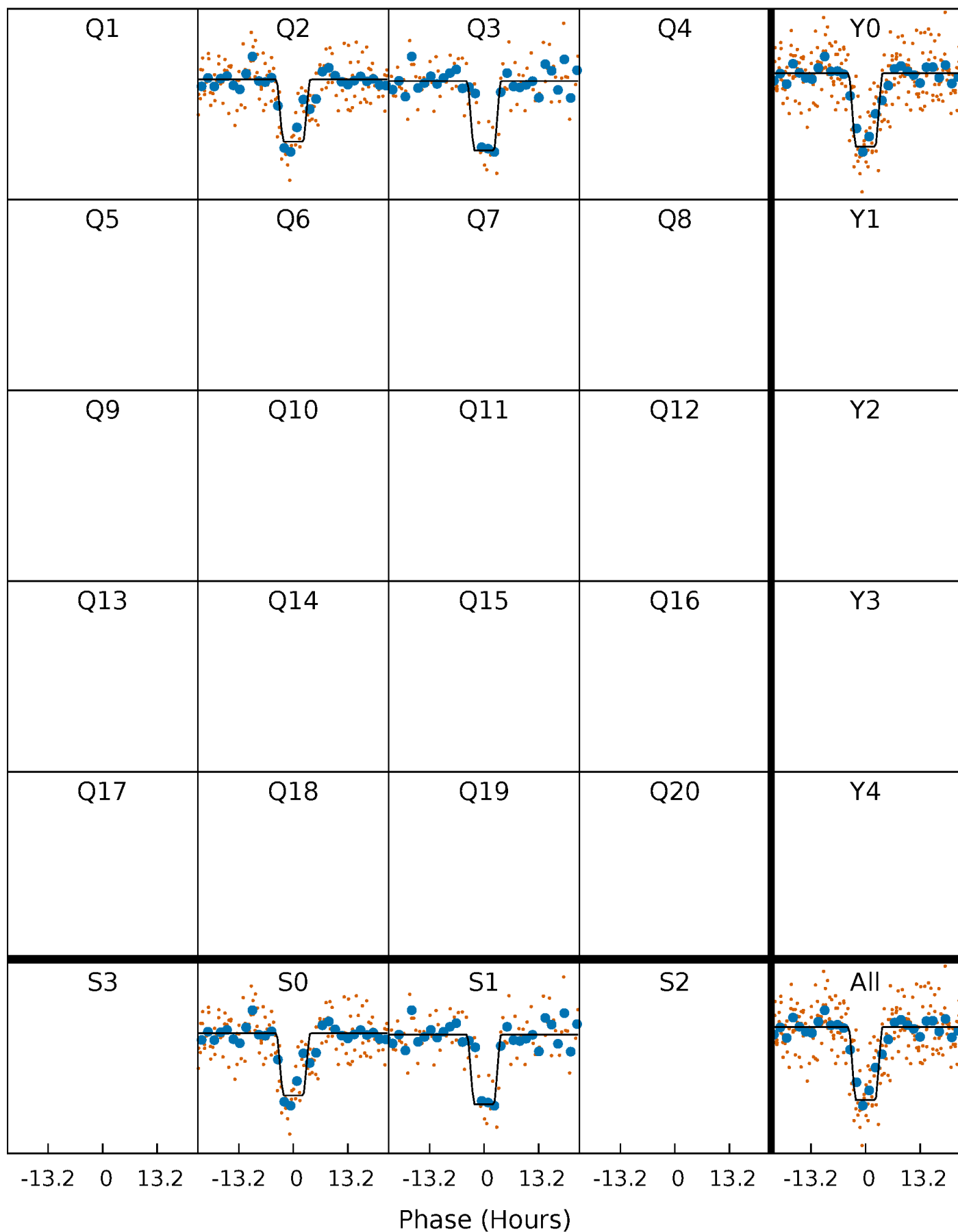
DV Quarter-Phased Transit Curves

TCE 006947666-02 P= 56.692069 Days $T_0=131.901390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

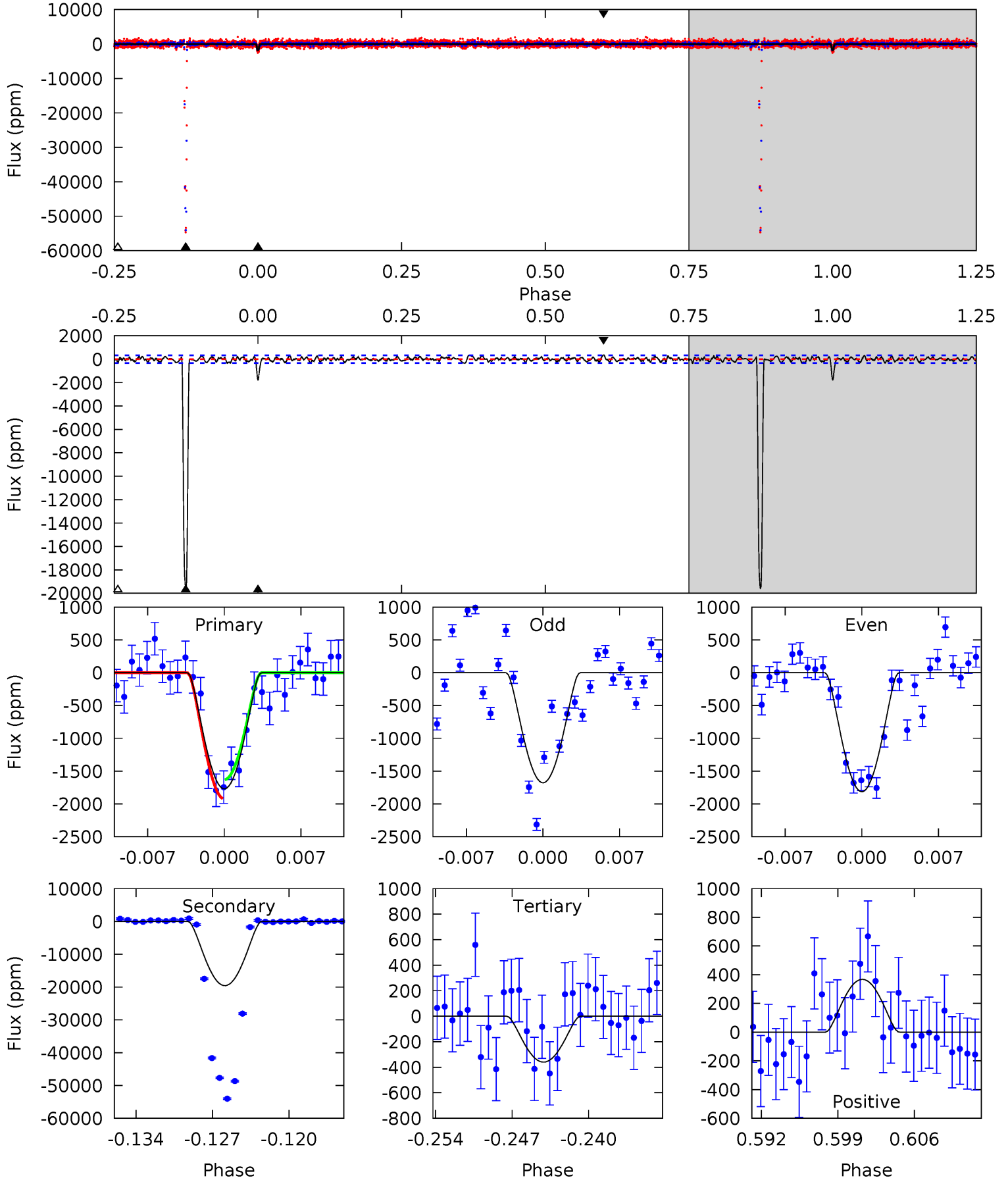
TCE 006947666-02 P= 56.639332 Days $T_0=132.024719$ (BKJD)



DV Model-Shift Uniqueness Test

006947666-02, P = 56.692069 Days, E = 131.901390 Days

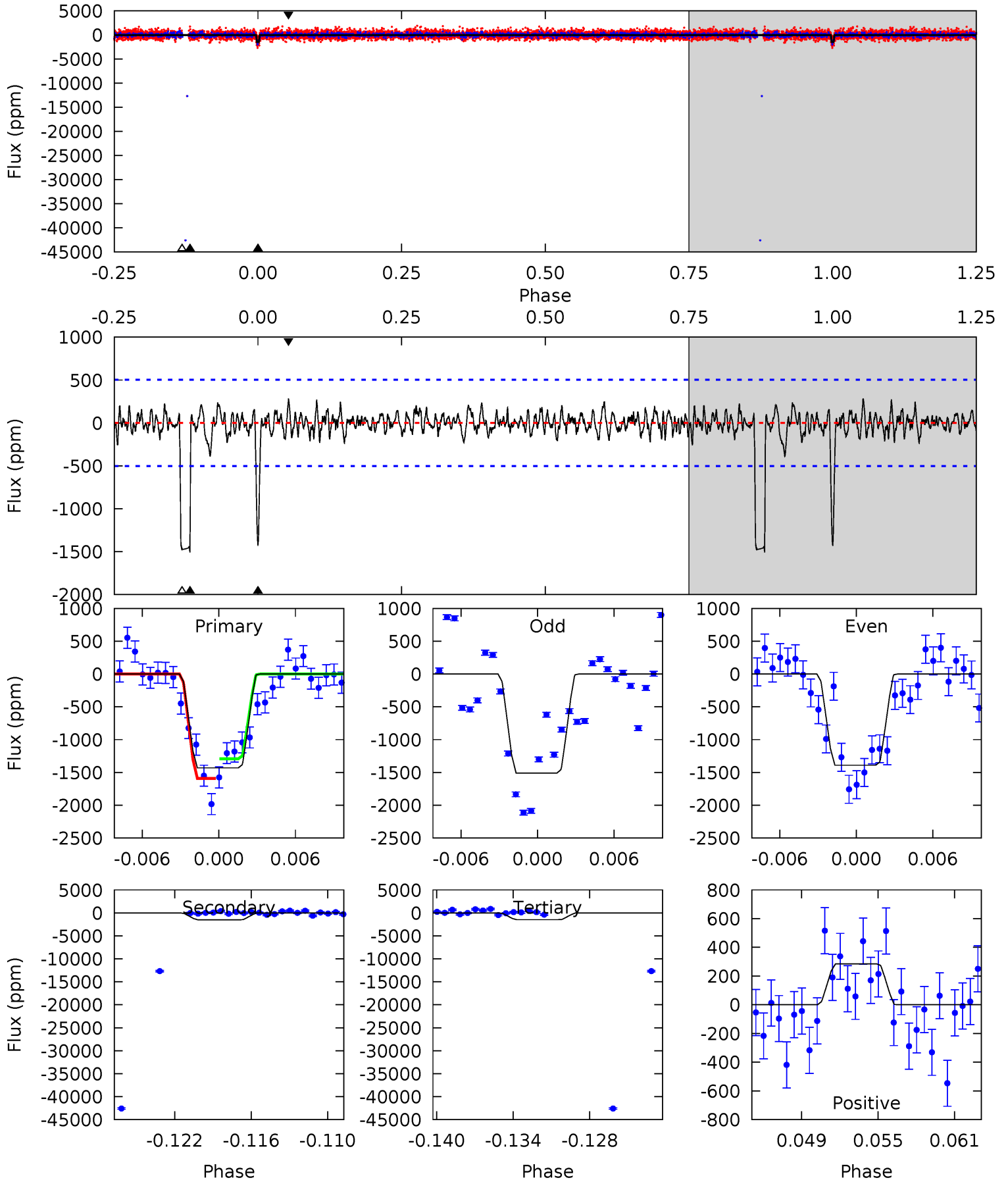
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	301.7	5.55	5.67	5.09	2.69	1.90	21.7	21.6	296.1	296.0	0.99	0.91	0.02	2.22



Alt Model-Shift Uniqueness Test

006947666-02, P = 56.639332 Days, E = 132.024719 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	15.3	15.1	2.90	5.12	2.74	1.20	-0.52	11.7	0.26	12.4	0.64	1.00	0.16	1.47



Stellar Parameters For KIC 006947666

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6146^{+193}_{-236}	$4.372^{+0.105}_{-0.195}$	$-0.120^{+0.250}_{-0.300}$	$1.096^{+0.350}_{-0.175}$	$1.028^{+0.167}_{-0.125}$	$1.099^{+0.519}_{-0.558}$
	+3%/-4%	+2%/-4%	+208%/-250%	+32%/-16%	+16%/-12%	+47%/-51%
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 006947666-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19572 ± 65	$16.98^{+15.63}_{-12.17}$	740^{+53}_{-43}	6218^{+8160}_{-1582}	3235^{+38313}_{-2354}
Alt.	-1507 ± 98	$14.26^{+15.22}_{-9.68}$	743^{+52}_{-44}	3898^{+2438}_{-826}	341^{+3104}_{-260}

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 $A_{obs} \gg 1.0$

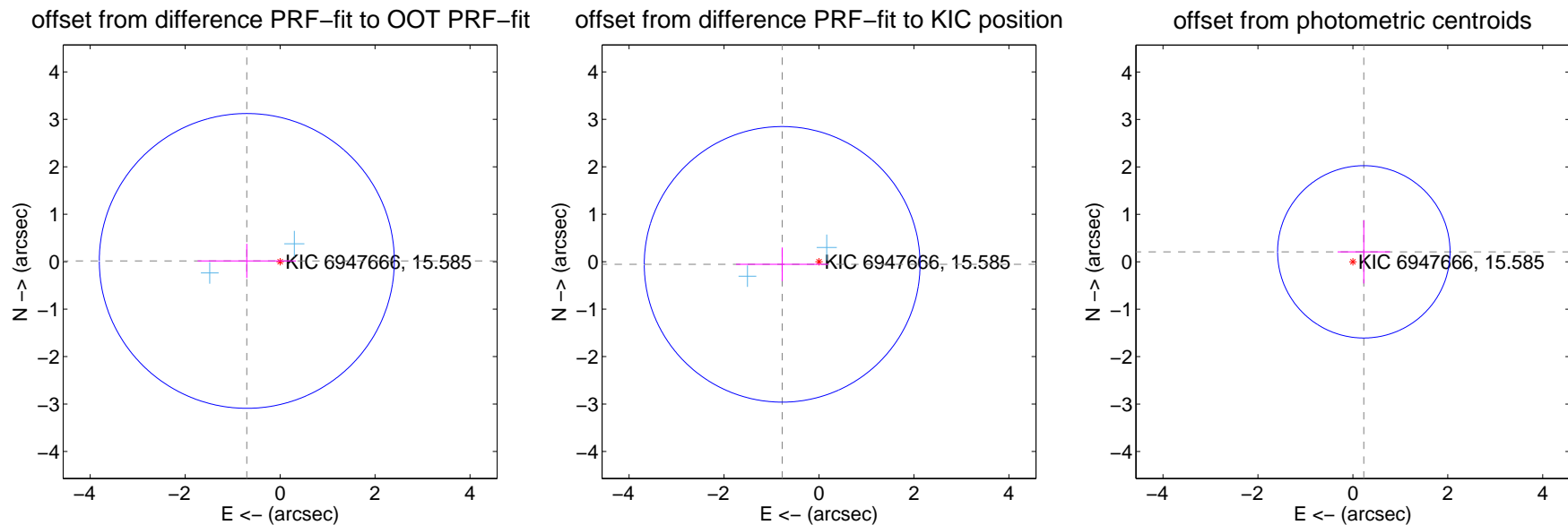
DV Centroid Data

Supplemental centroid analysis for 006947666-02. Kepler magnitude: 15.59. Transit SNR 14.79

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.701 ± 1.035	0.68	0.701 ± 1.036	0.016 ± 0.360
PRF-fit source offset from KIC position	0.778 ± 0.968	0.80	0.776 ± 0.970	-0.056 ± 0.354
photometric centroid source offset	0.31 ± 0.61	0.51	-0.23 ± 0.55	0.21 ± 0.67



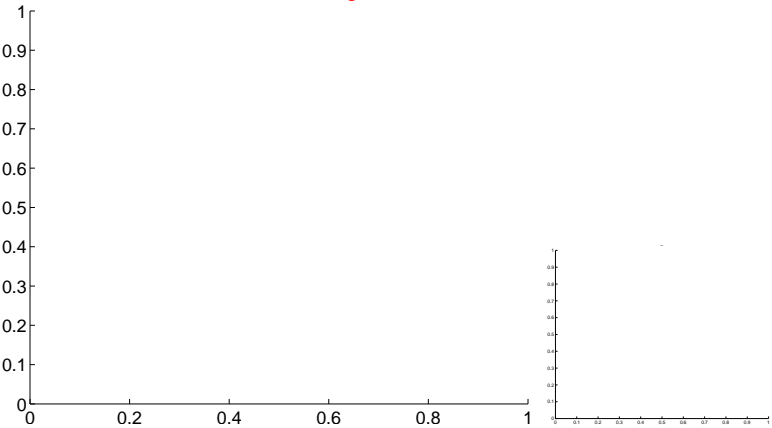
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

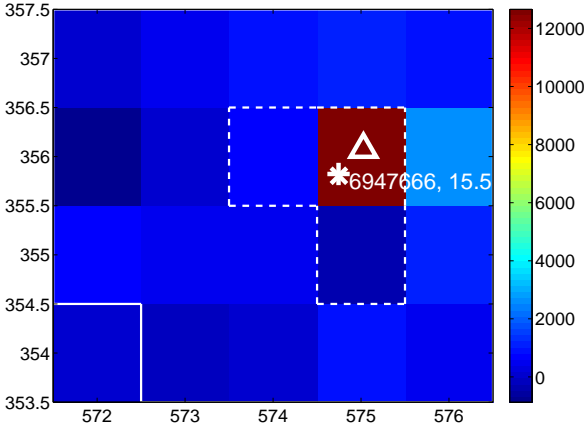
Q1 no difference image



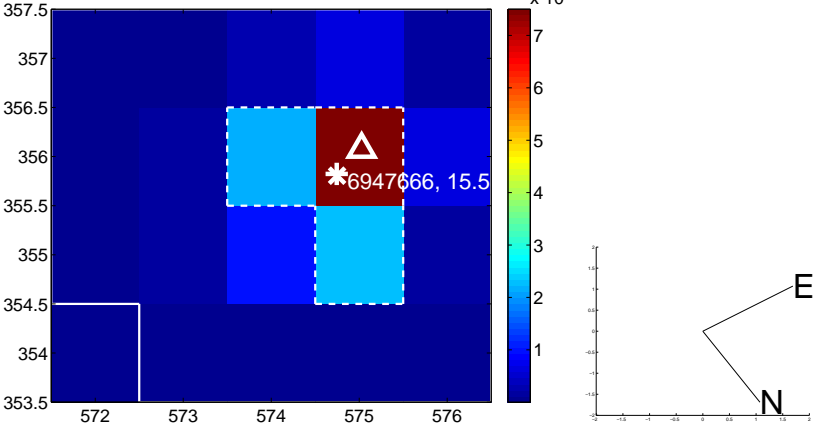
Q1 no OOT image



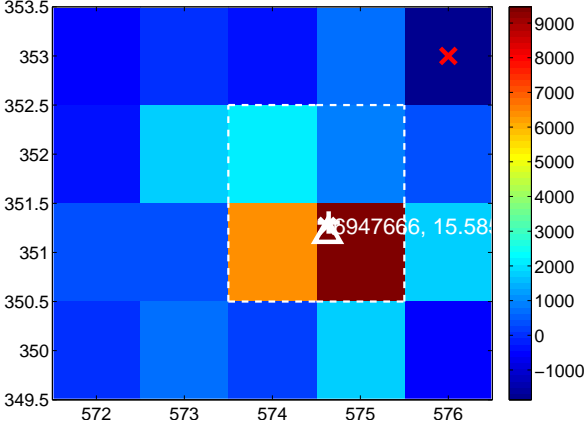
Q2 difference image



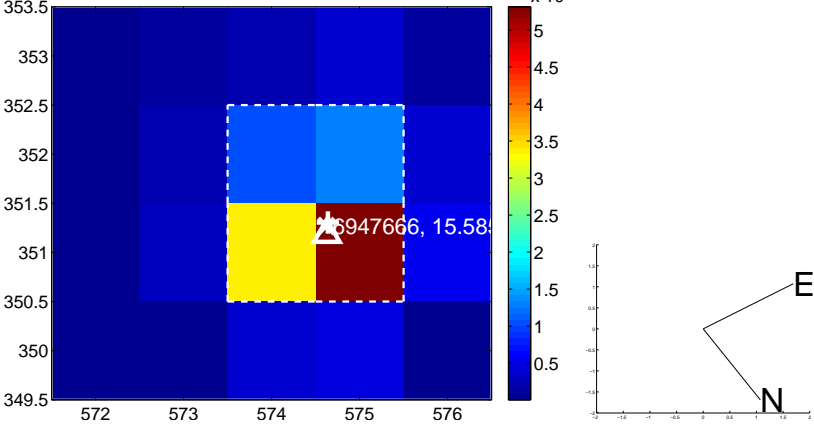
Q2 OOT image



Q3 difference image



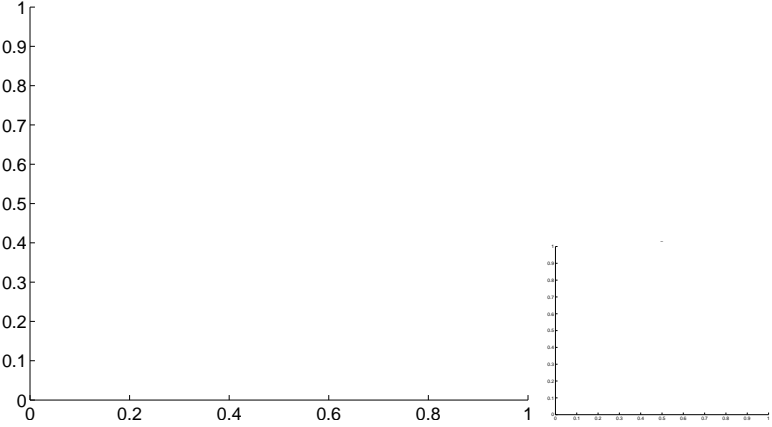
Q3 OOT image



Q4 no difference image



Q4 no OOT image



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



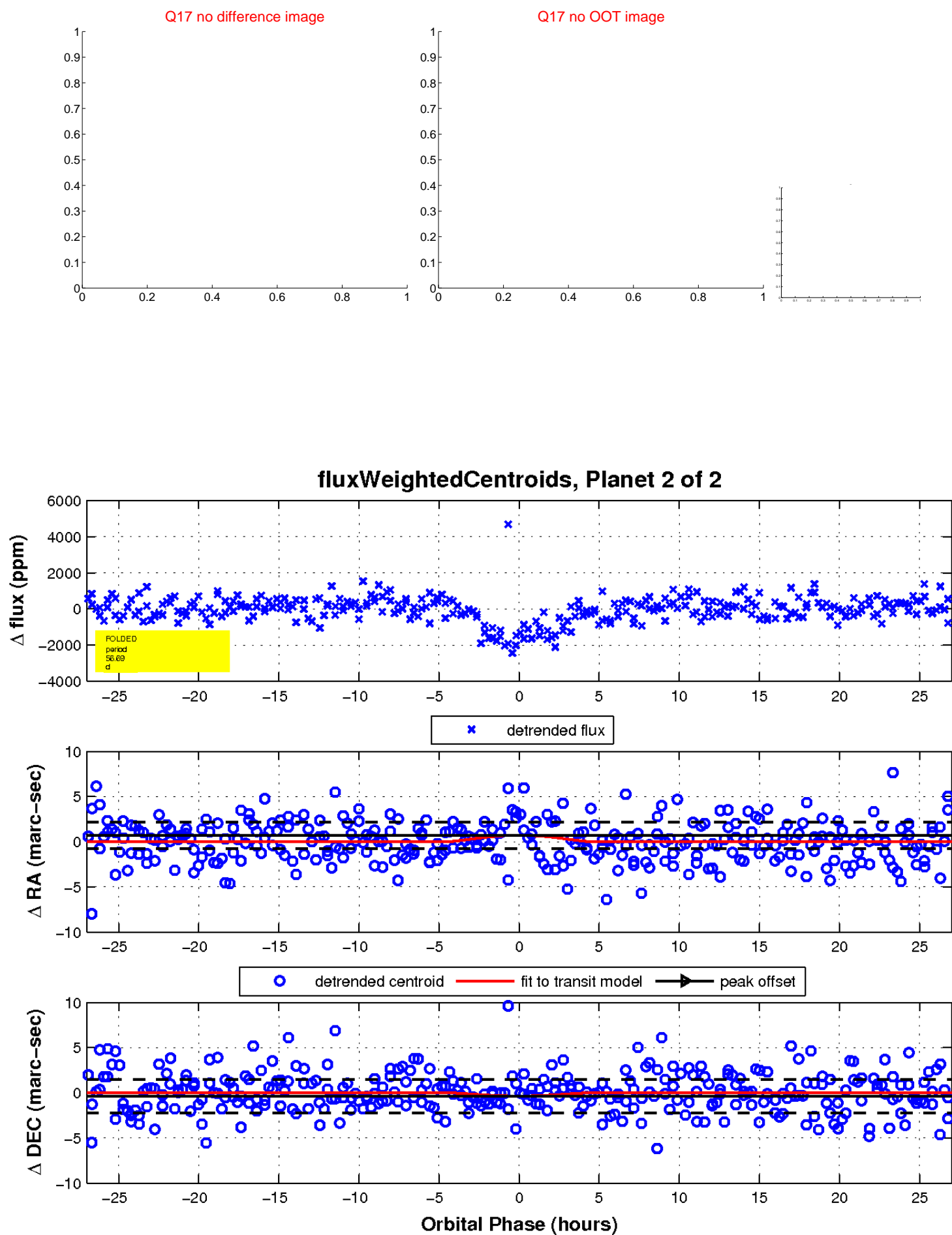
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

