

KIC 004937327

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})
004937327-01	OBS	No	69.845280	186.208768	523.6	29.801	8.8	9.6	75.81	4311	352.34	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004937327-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

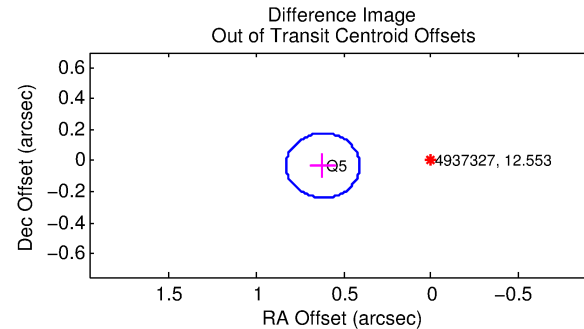
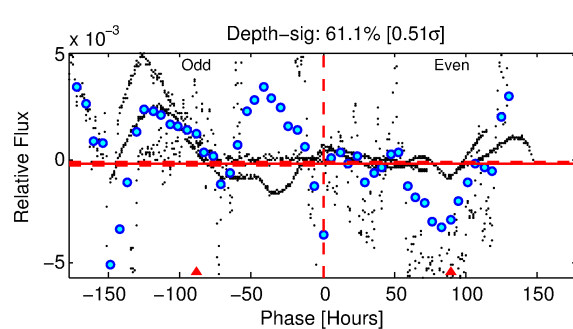
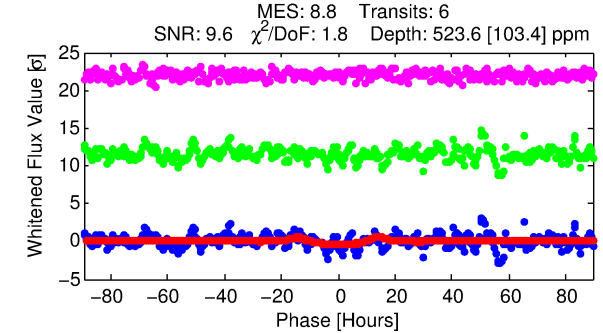
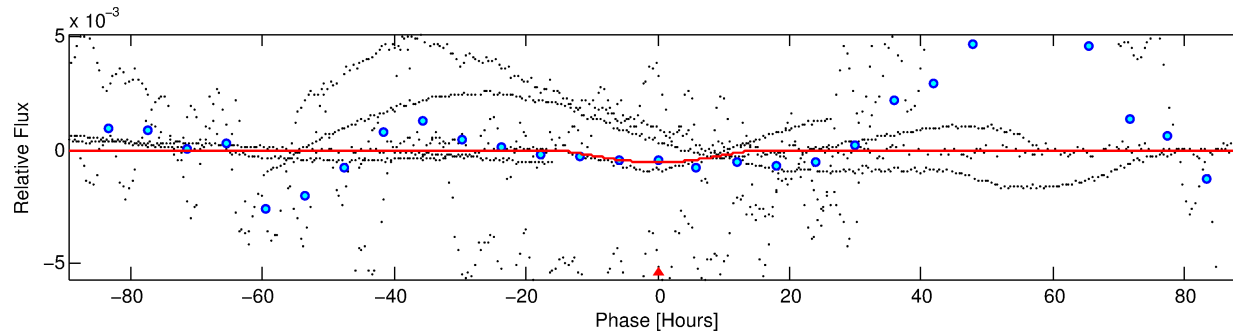
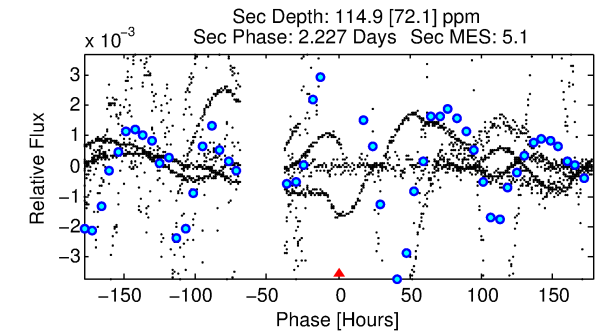
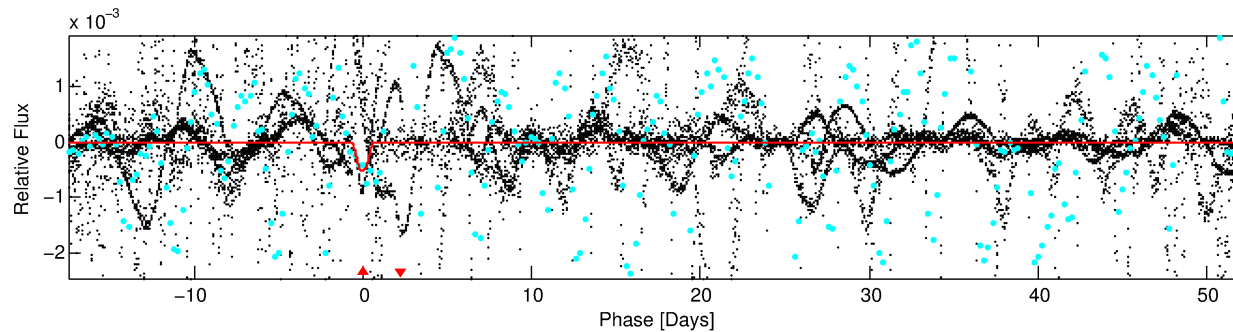
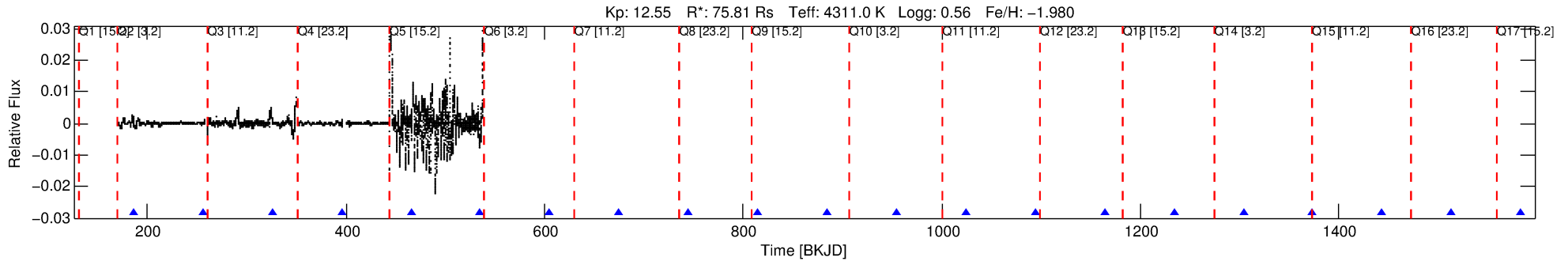
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004937327-01

No Significant Match Found

DV One-Page Summary

KIC: 4937327 Candidate: 1 of 1 Period: 69.845 d



DV Fit Results:

Period = 69.84528 [0.01937] d
Epoch = 186.2088 [0.0405] BKJD
Rp/R* = 0.0426 [0.0540]
a/R* = 5.39 [1.52]
b = 1.00 [0.08]
Seff = N/A
Teq = N/A
Rp = 352.34 [449.82] Re
a = N/A
Ag = N/A
Teffp = N/A

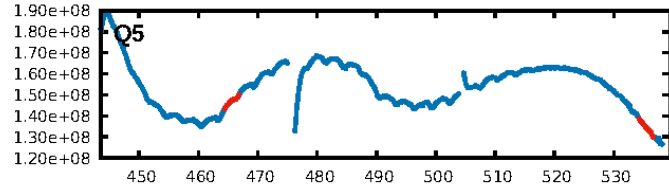
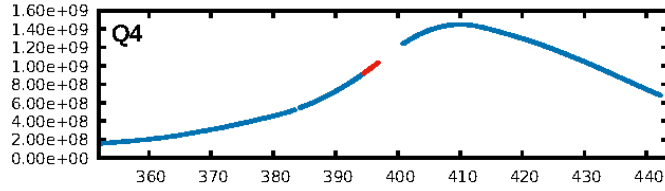
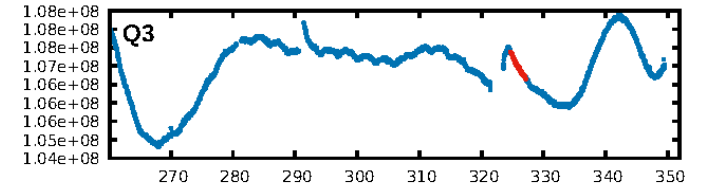
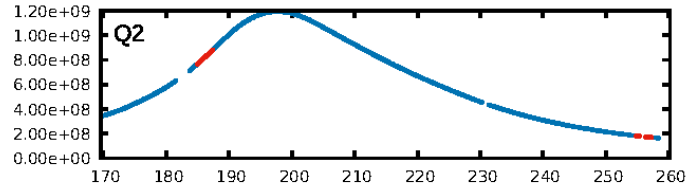
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 53.7%
Bootstrap-pfa: 4.09e-14
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -1.571
Centroid-sig: 32.2%
Centroid-so: 0.691 arcsec [0.99σ]
OotOffset-rm: 0.619 arcsec [8.87σ]
KicOffset-rm: 0.664 arcsec [9.51σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

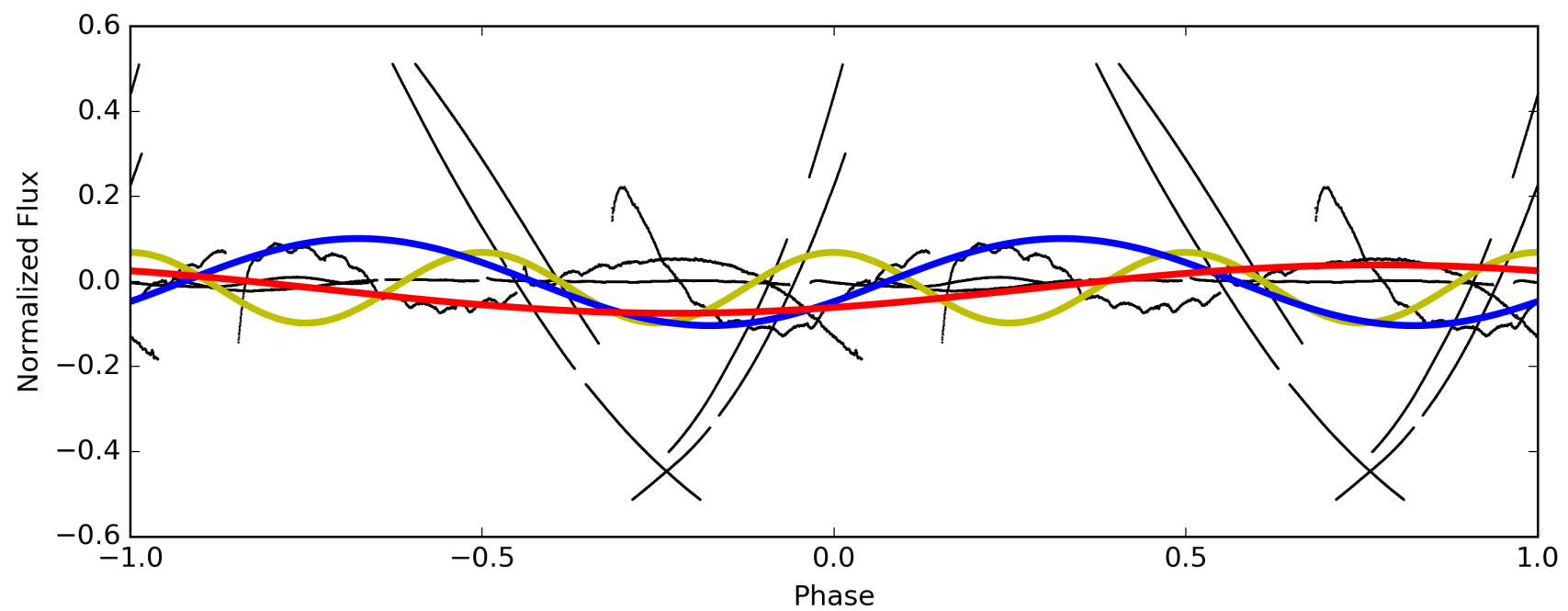
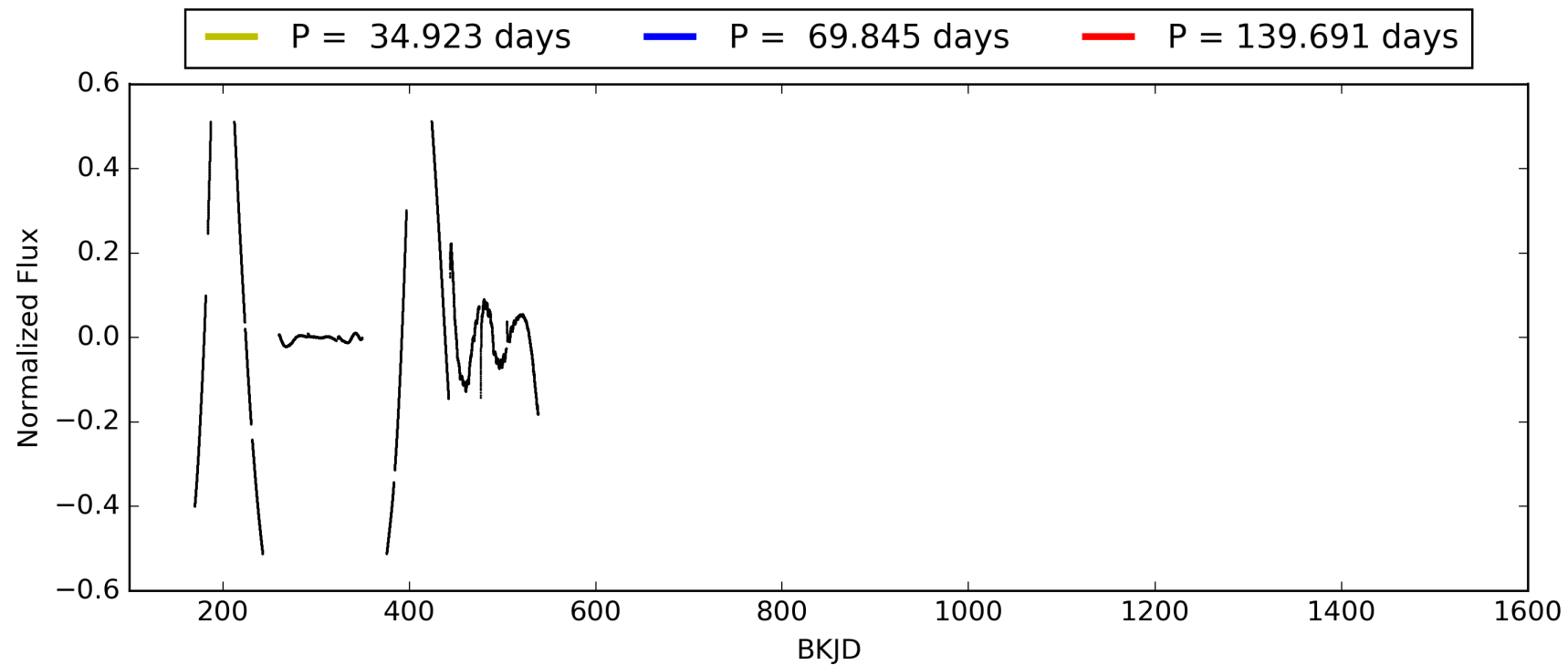
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:48:35 Z

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

TCE 004937327-01, PDC Light Curves

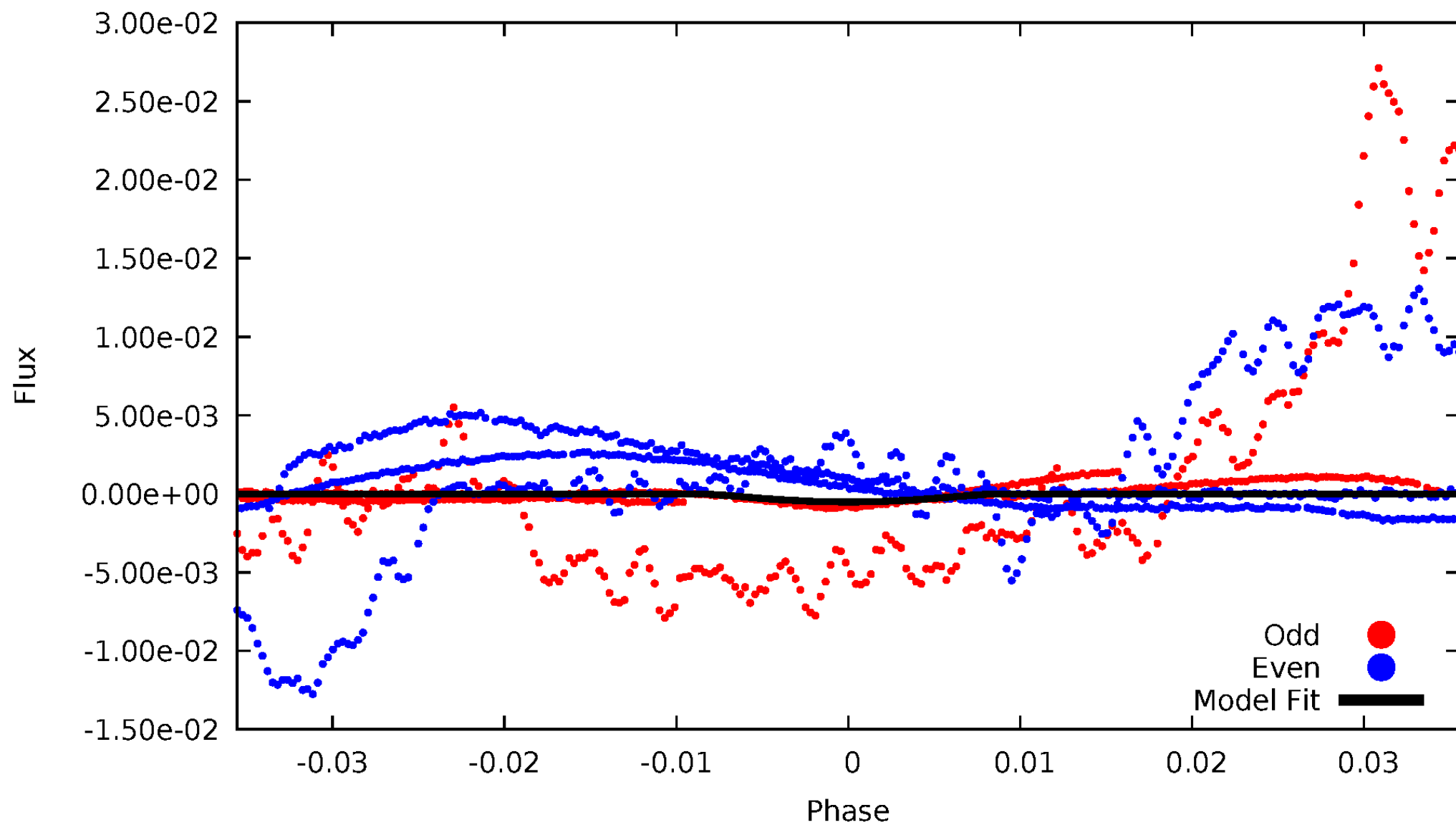


TCE 004937327-01



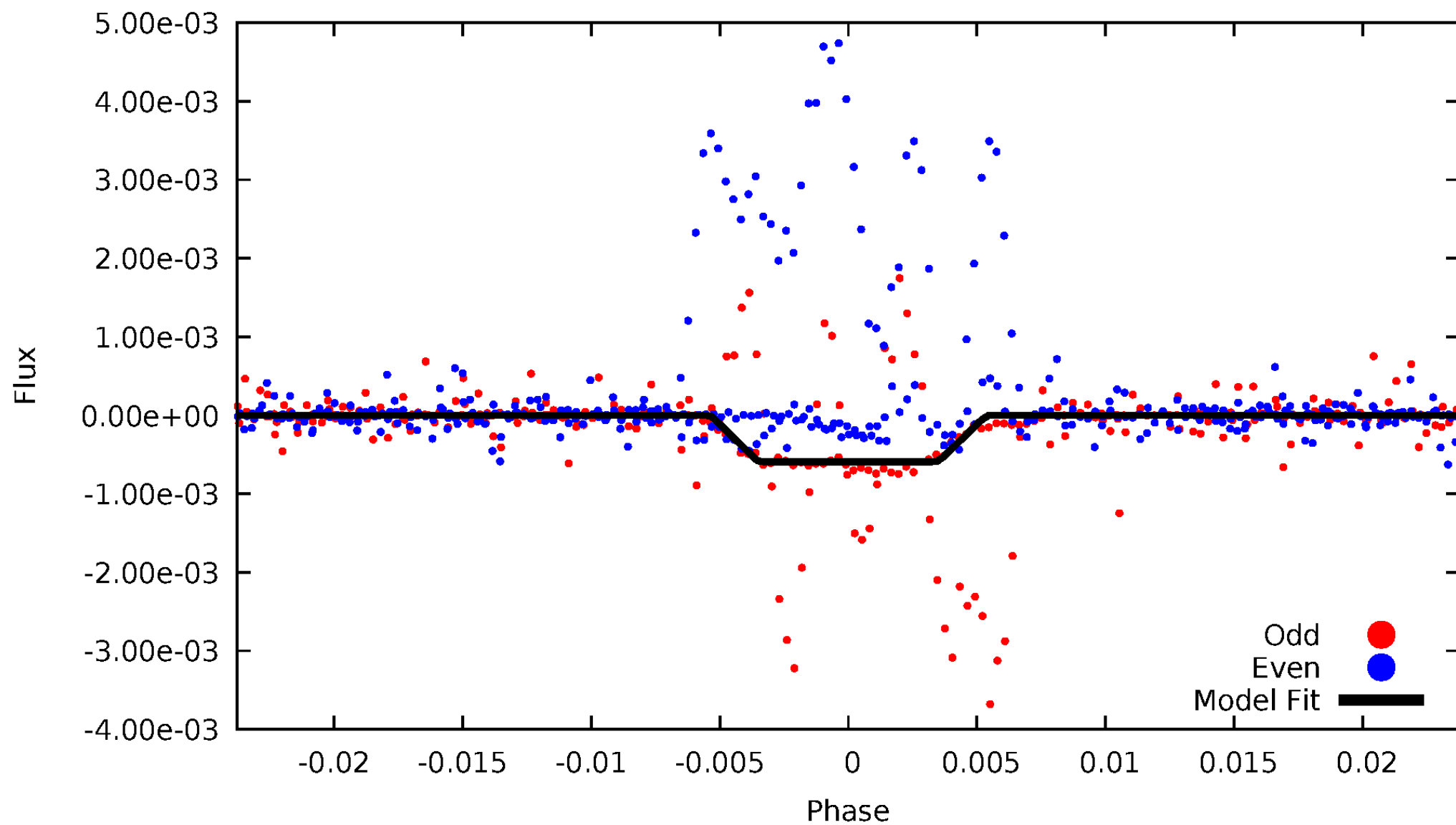
DV Odd/Even

TCE 004937327-01



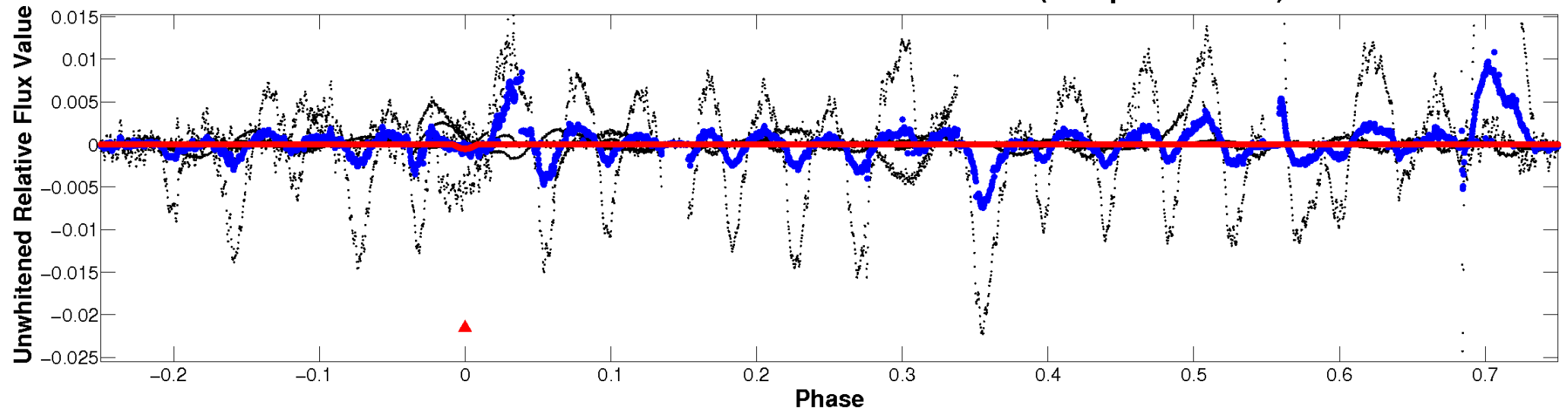
ALT Odd/Even

TCE 004937327-01

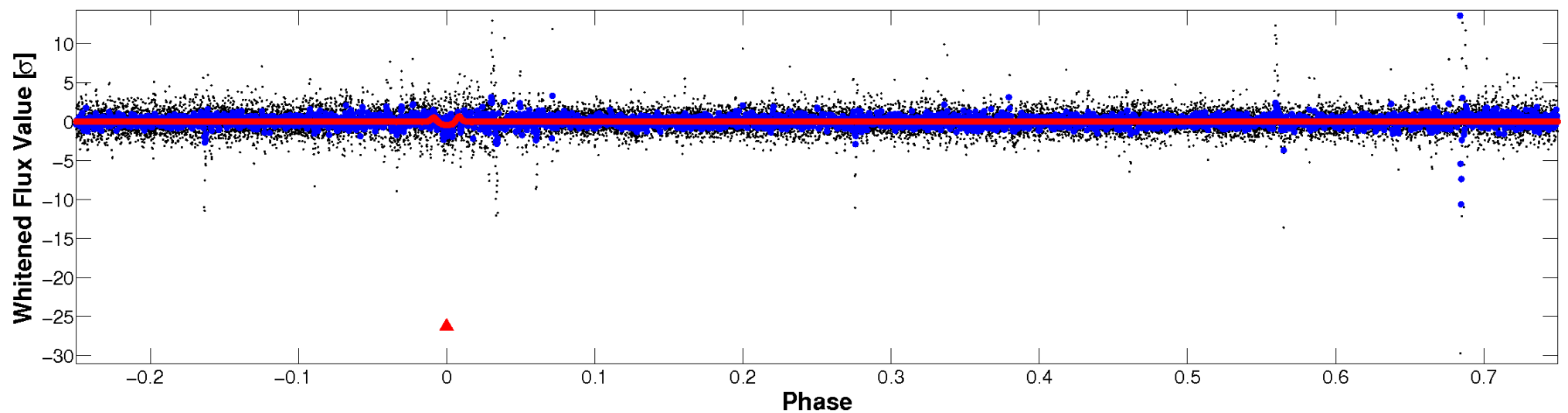


Non-Whitened Vs. Whitened Light Curve

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

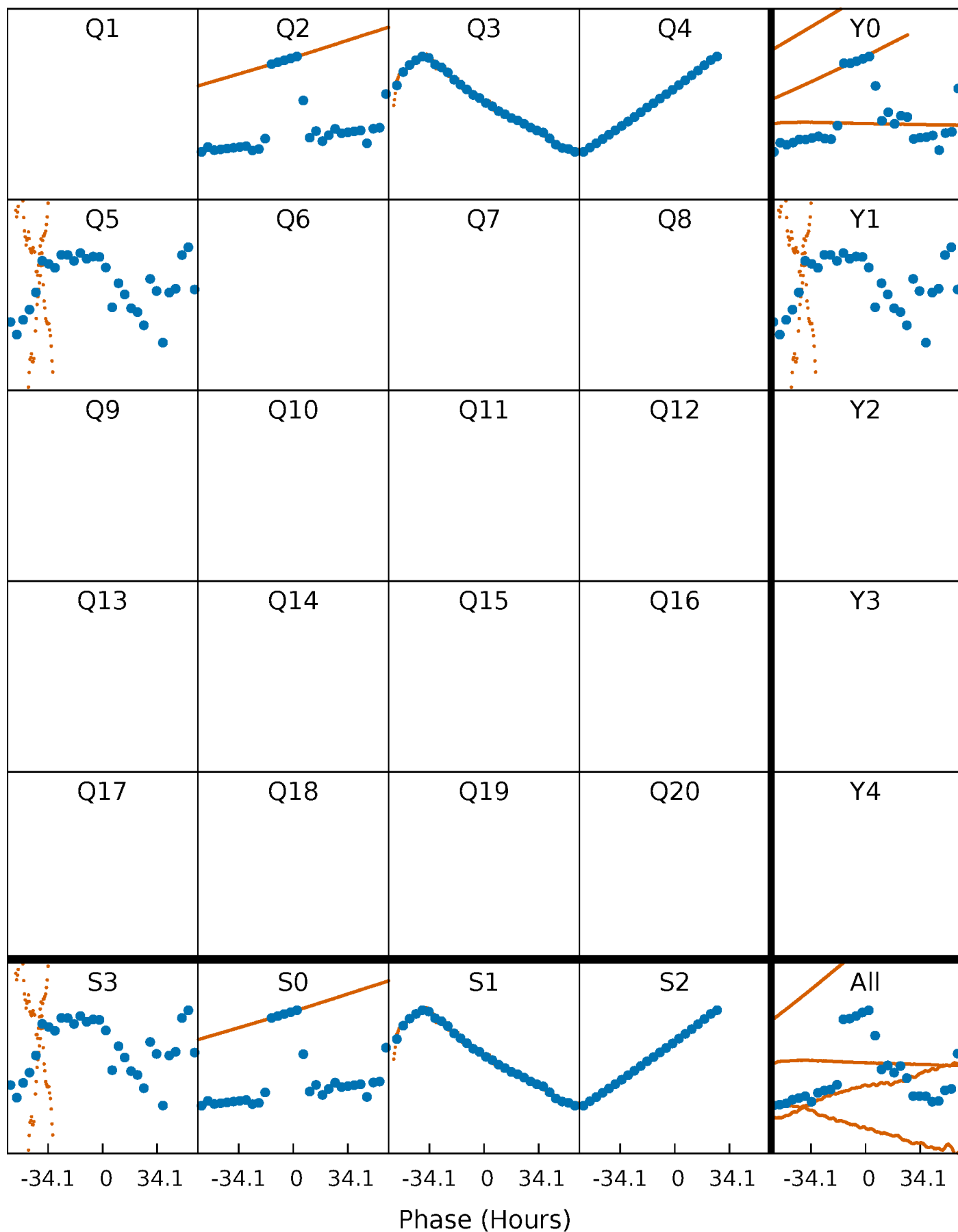


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



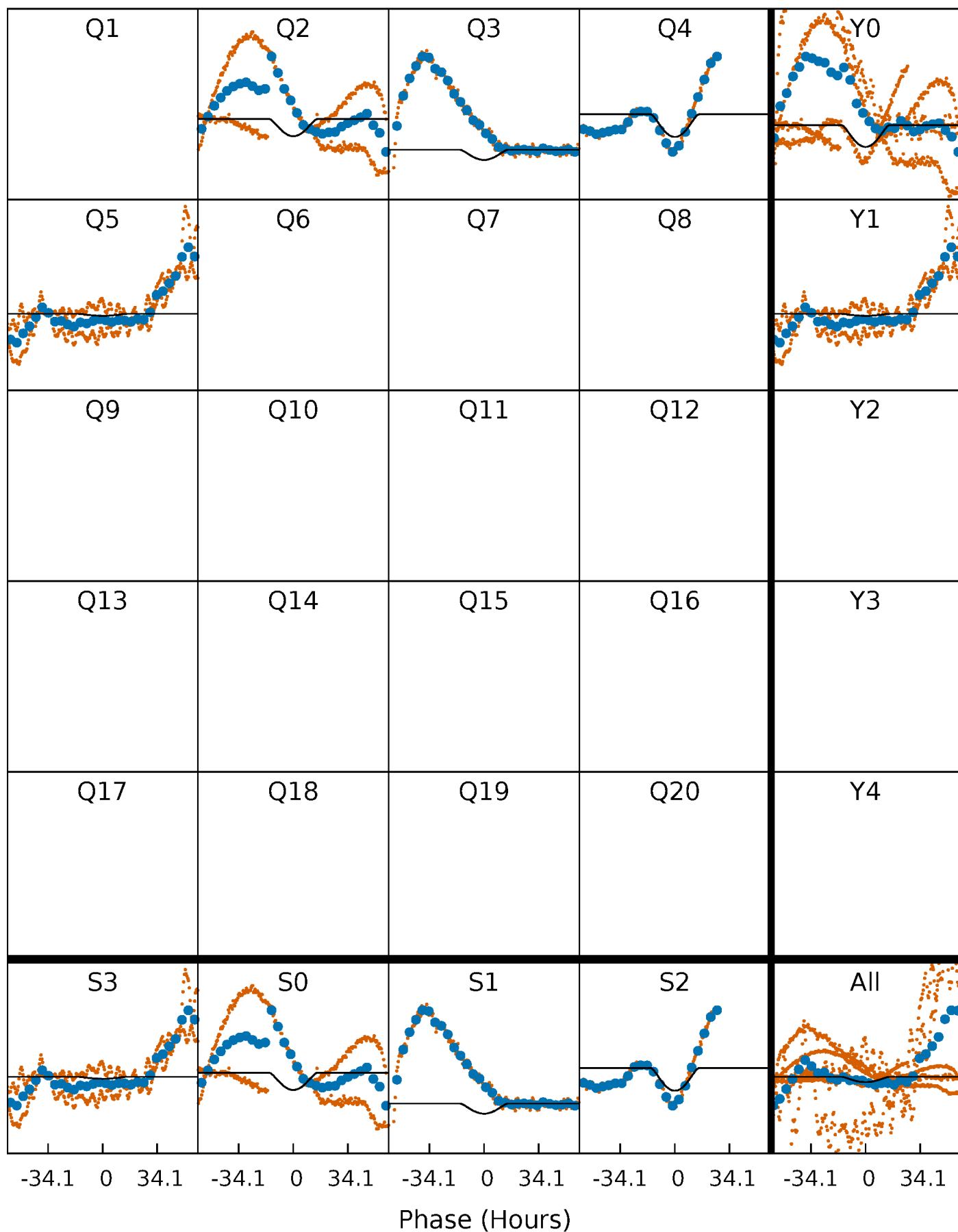
PDC Quarter-Phased Transit Curves

TCE 004937327-01 P= 69.845280 Days $T_0=186.208768$ (BKJD)



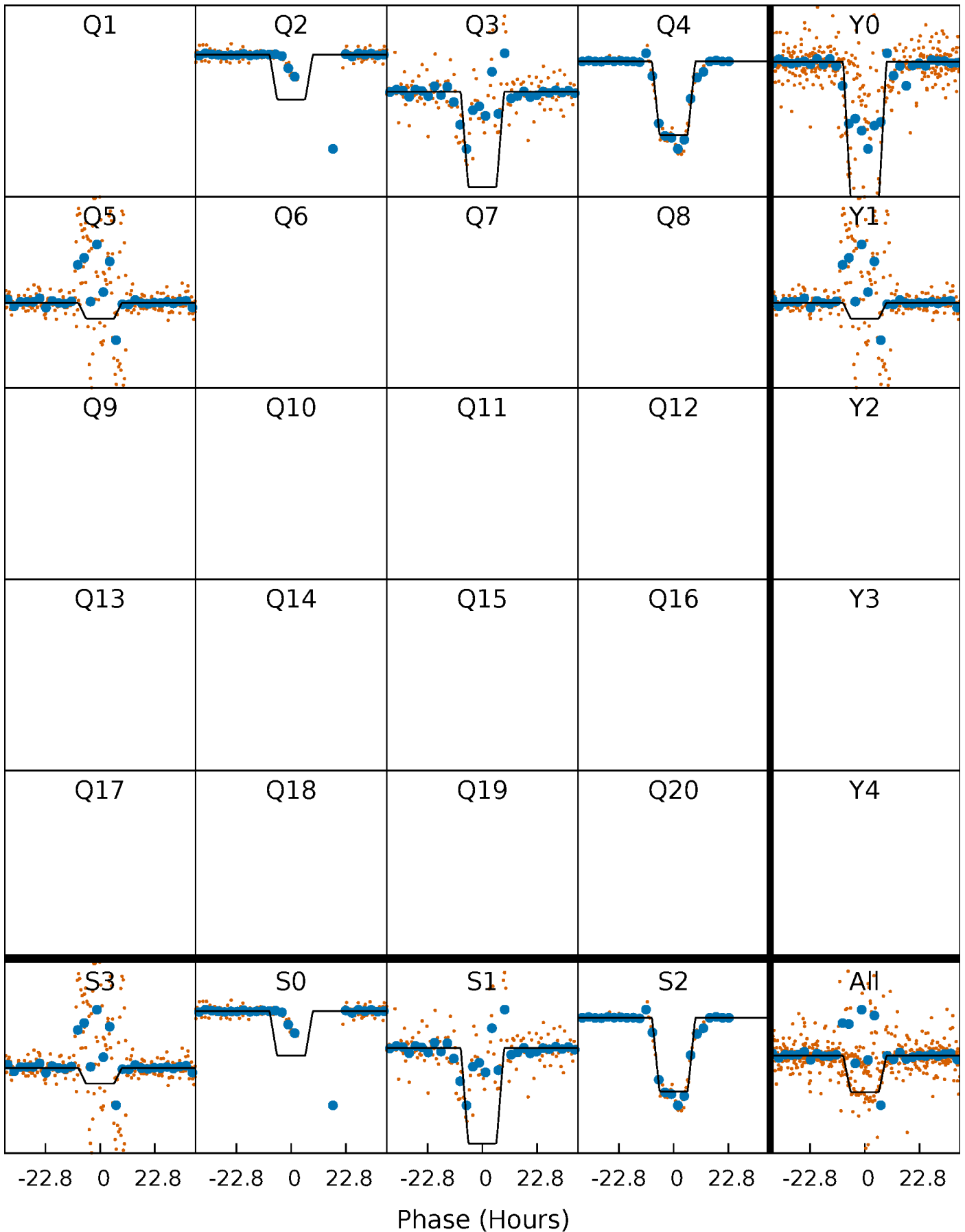
DV Quarter-Phased Transit Curves

TCE 004937327-01 P= 69.845280 Days $T_0=186.208768$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

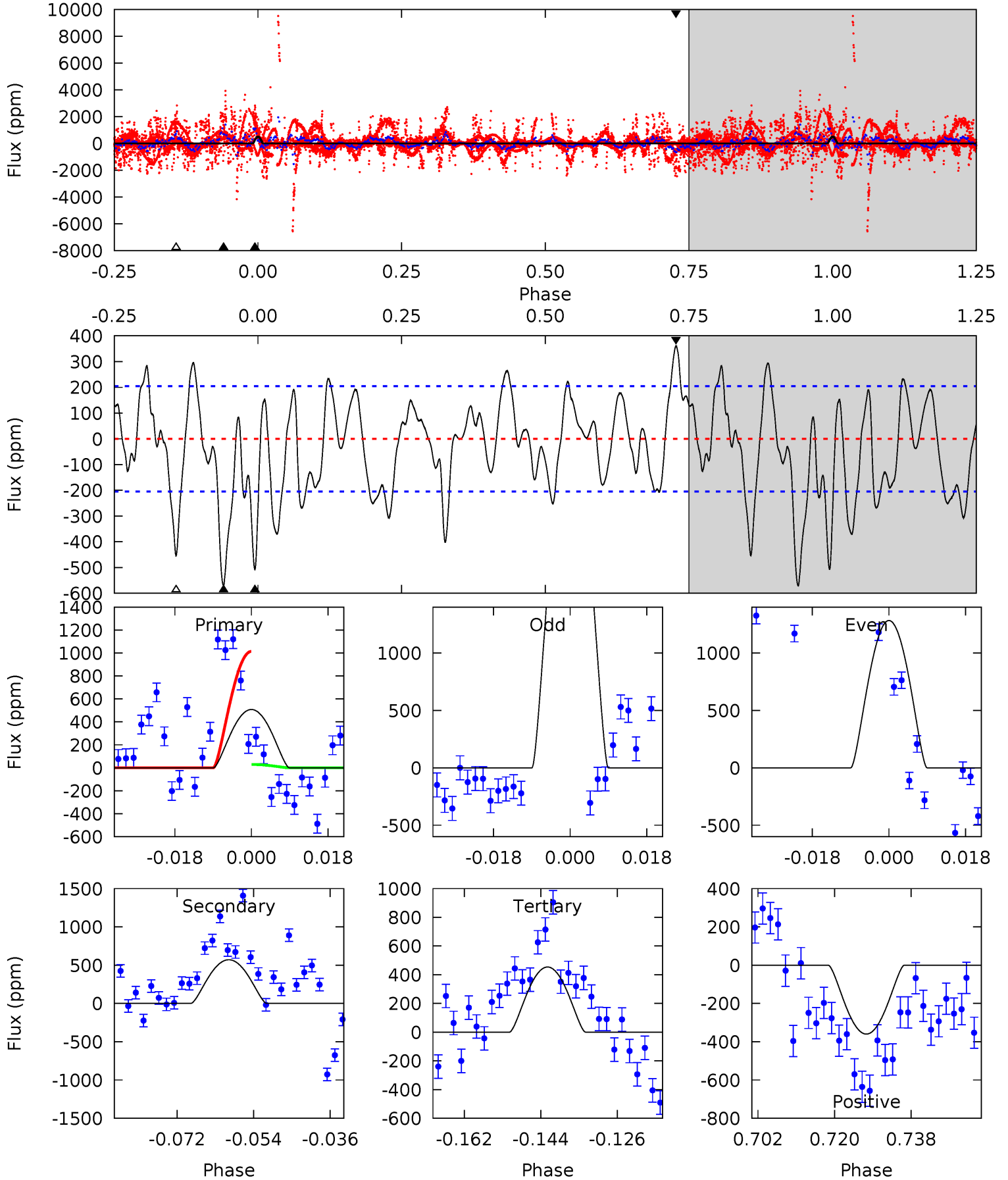
TCE 004937327-01 P= 69.842945 Days $T_0=186.233916$ (BKJD)



DV Model-Shift Uniqueness Test

004937327-01, P = 69.845280 Days, E = 116.363488 Days

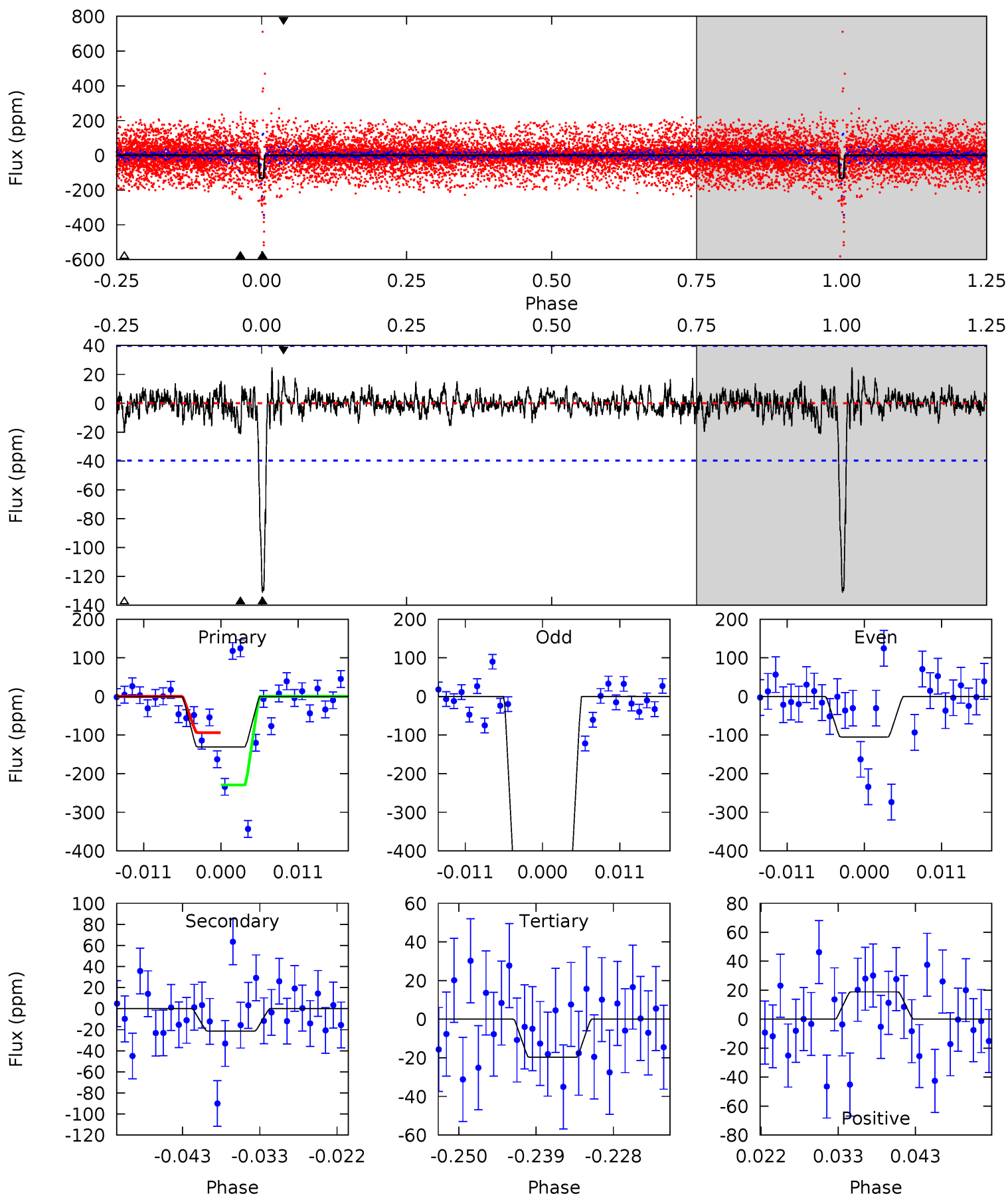
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	13.7	10.9	8.63	4.91	2.37	3.74	1.29	3.55	2.81	5.06	8.27	16.0	0.39	13.0



Alt Model-Shift Uniqueness Test

004937327-01, P = 69.842945 Days, E = 116.390971 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	2.68	2.48	2.37	5.01	2.55	0.67	14.0	14.1	0.19	0.31	42.2	-1.85	0.16	8.59



Stellar Parameters For KIC 004937327

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4311^{+86}_{-95}	$0.558^{+0.192}_{-0.048}$	$-1.980^{+0.250}_{-0.050}$	$75.815^{+4.985}_{-11.631}$	$0.758^{+0.079}_{-0.015}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+34%/-9%	+13%/-3%	+7%/-15%	+10%/-2%	+83%/-17%
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 004937327-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-571 ± 42	$450.86^{+370.62}_{-294.62}$	4149^{+152}_{-226}	-3233^{+7620}_{-325}	$0.147^{+1.052}_{-0.103}$
Alt.	-21 ± 8	$361.70^{+383.63}_{-242.98}$	4144^{+152}_{-221}	-3596^{+254}_{-114}	$0.008^{+0.065}_{-0.006}$

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 $A_{obs} \gg 1.0$

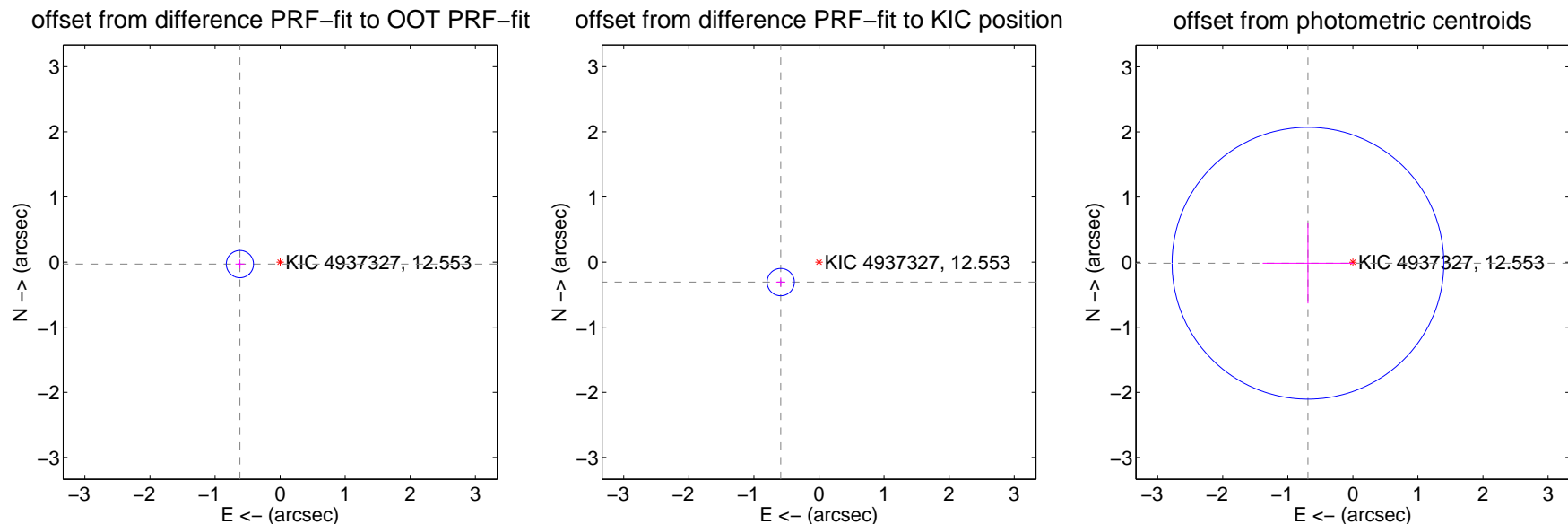
DV Centroid Data

Supplemental centroid analysis for 004937327-01. Kepler magnitude: 12.55. Transit SNR 9.58

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.619 ± 0.070	8.87	0.618 ± 0.070	-0.031 ± 0.070
PRF-fit source offset from KIC position	0.664 ± 0.070	9.51	0.588 ± 0.070	-0.307 ± 0.070
photometric centroid source offset	0.69 ± 0.70	0.99	0.69 ± 0.70	-0.02 ± 0.62

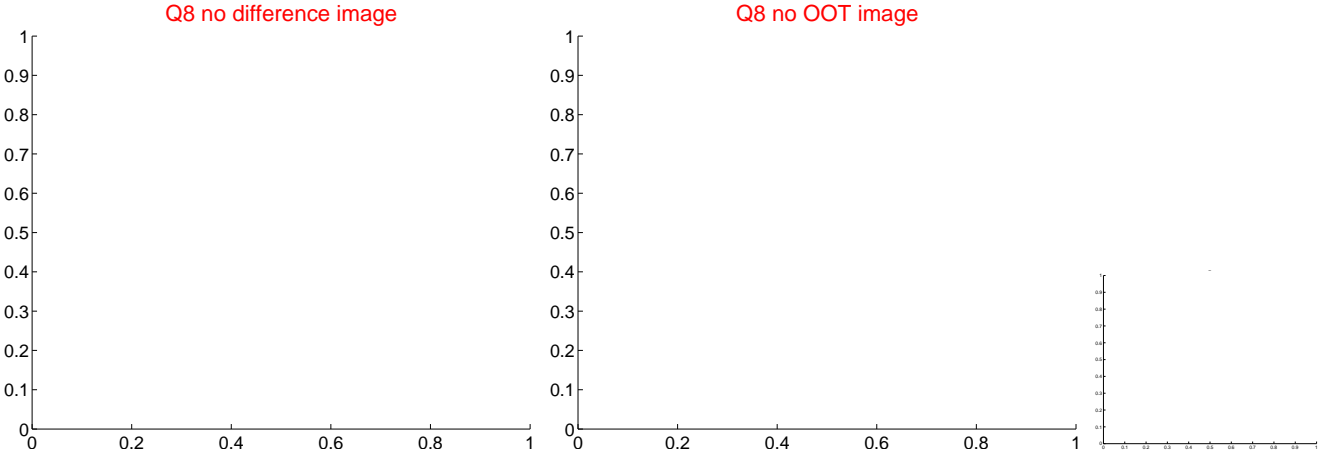
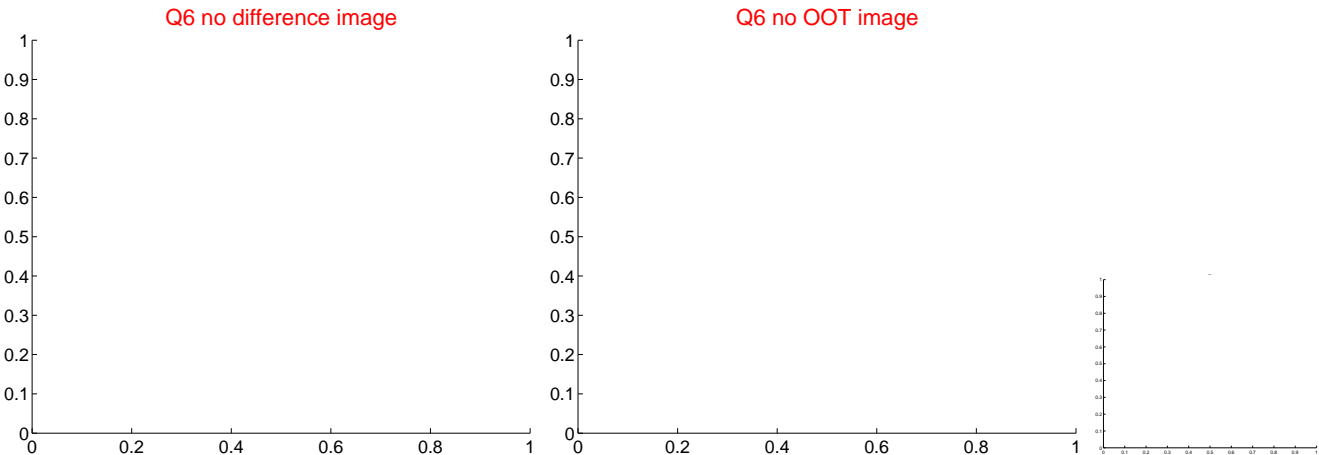
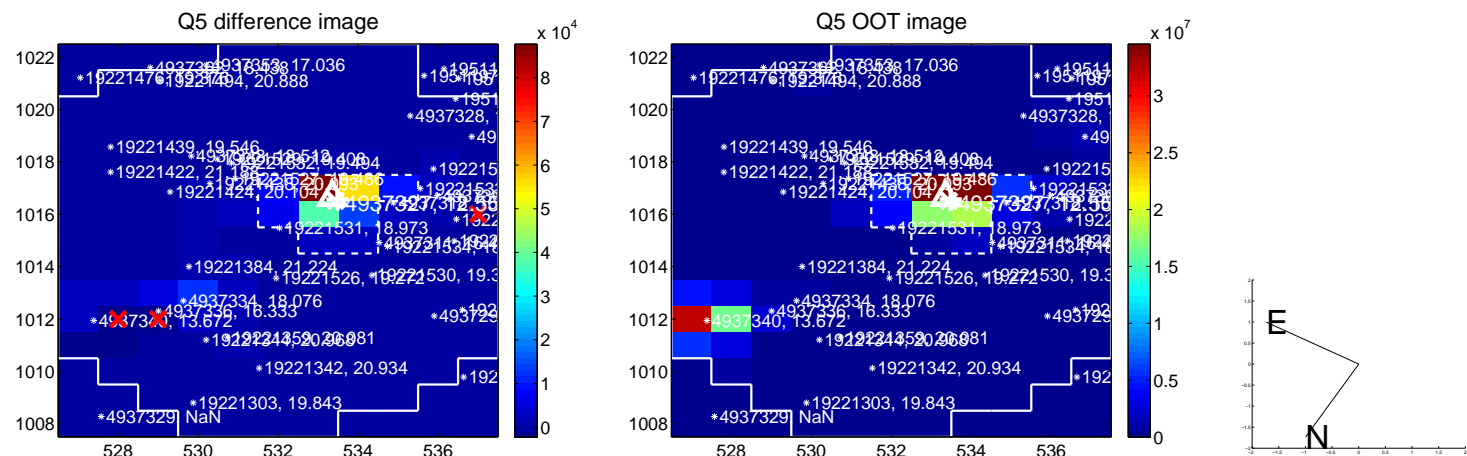


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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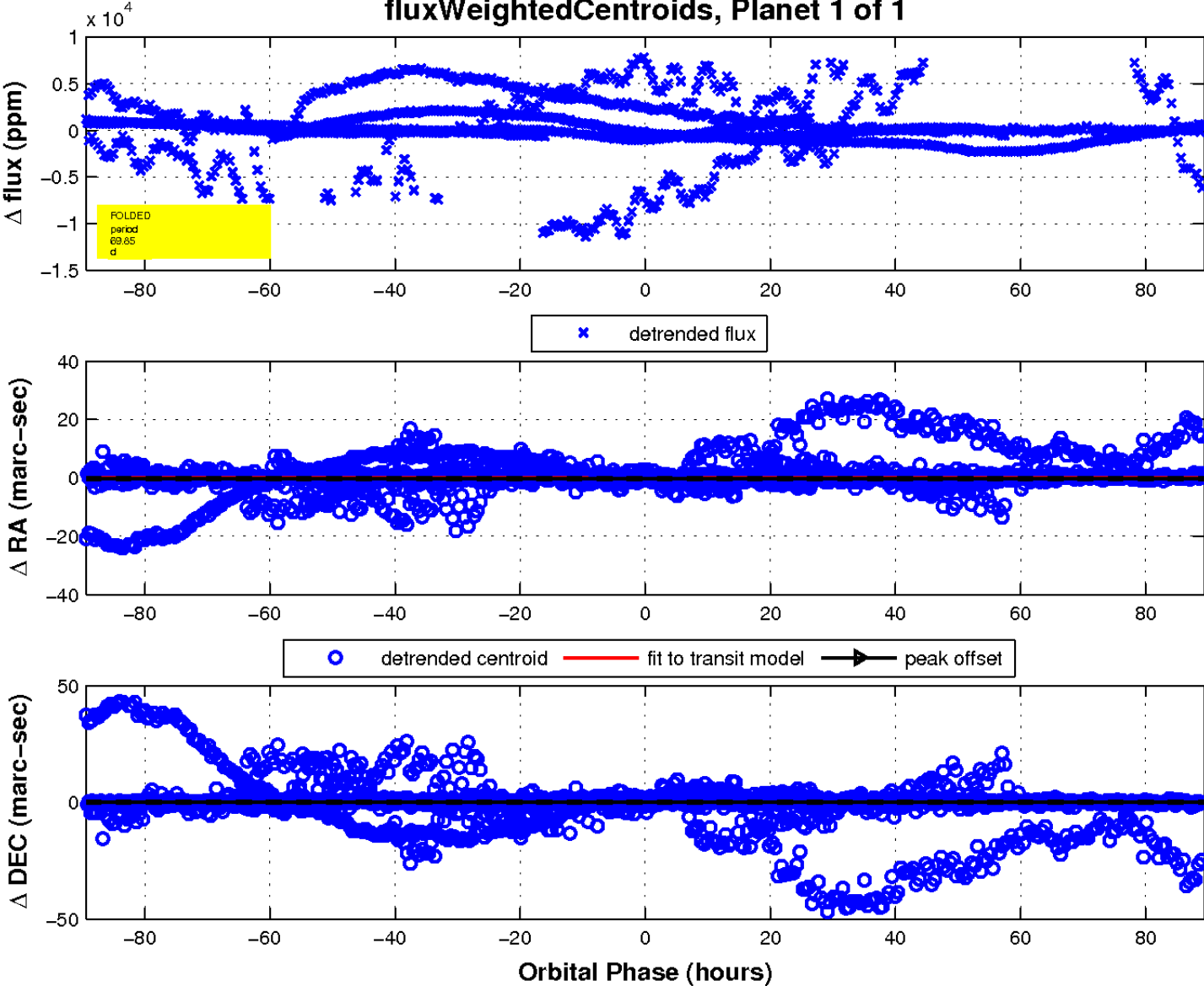
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

