

KIC 009950106

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})
009950106-01	OBS	No	362.067549	156.317220	2281.0	13.264	10.0	10.7	0.96	6184	4.61	1.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009950106-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—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.

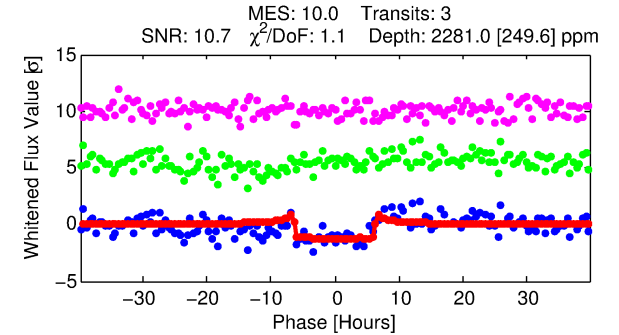
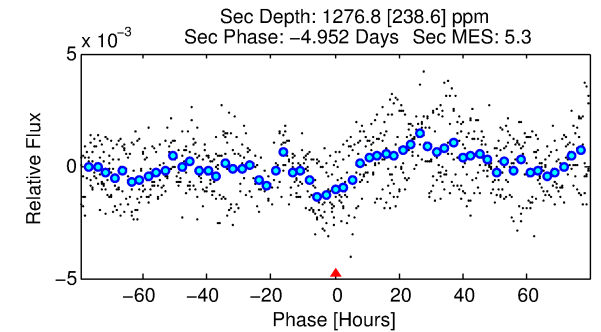
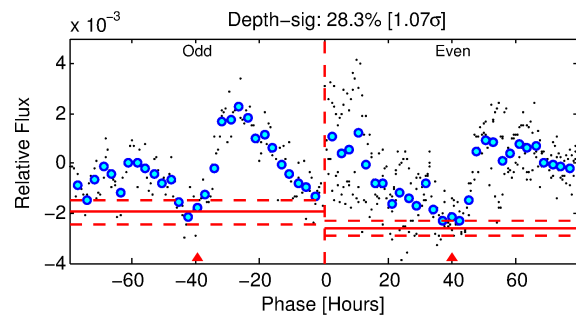
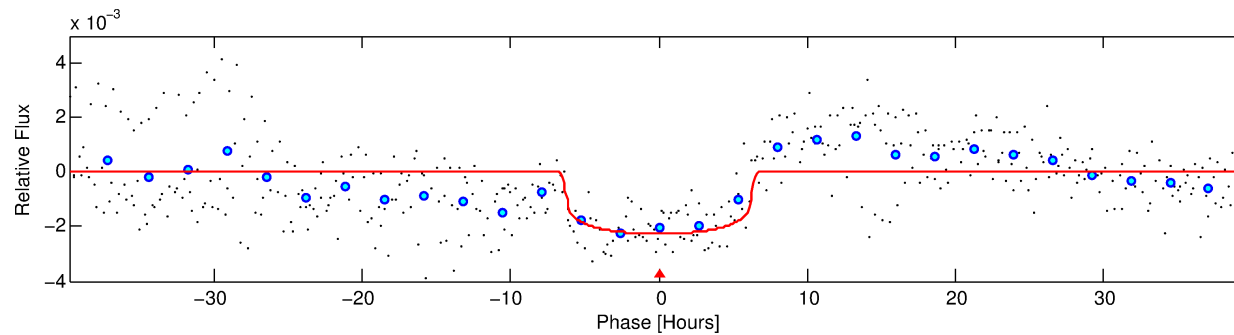
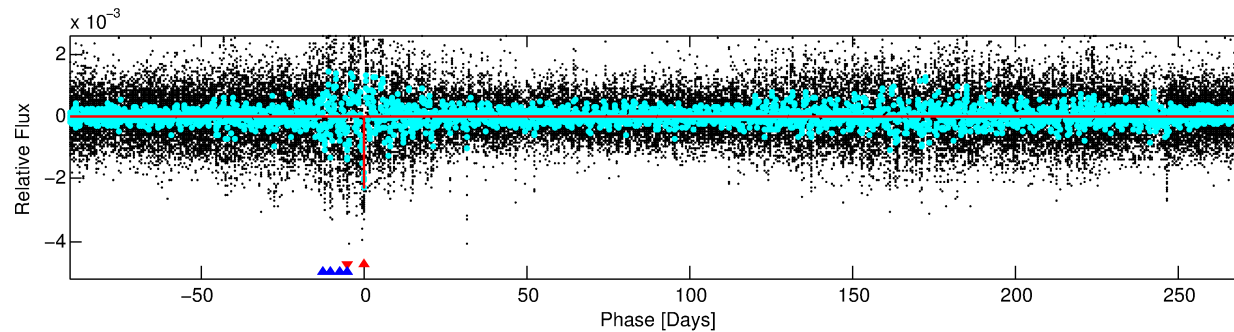
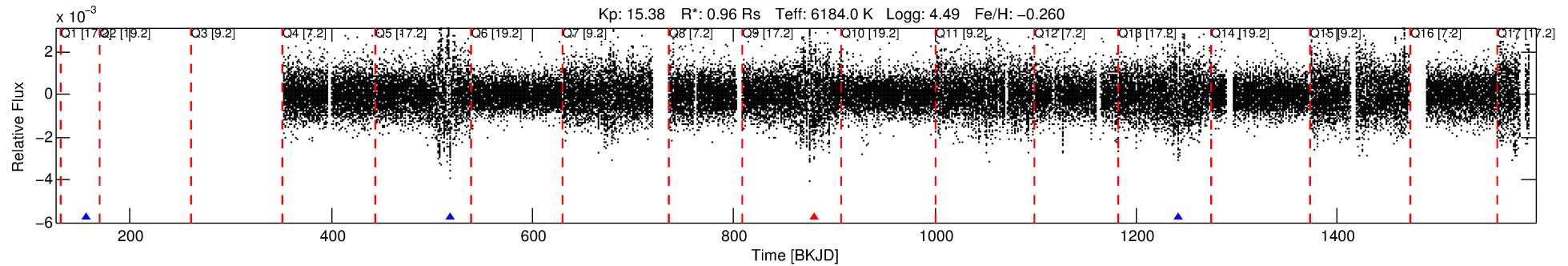
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009950106-01

No Significant Match Found

DV One-Page Summary

KIC: 9950106 Candidate: 1 of 2 Period: 362.068 d



DV Fit Results:

Period = 362.06755 [0.00695] d
Epoch = 156.3172 [0.0150] BKJD
Rp/R* = 0.0441 [0.0071]
a/R* = 211.20 [152.51]
b = 0.25 [2.67]
Seff = 1.19 [0.53]
Teq = 267 [29] K
Rp = 4.61 [1.73] Re
a = 1.0049 [0.2858] AU
Ag = 33315.58 [18456.31] [1.81 σ]
Teffp = 5567 [559] K [9.46 σ]

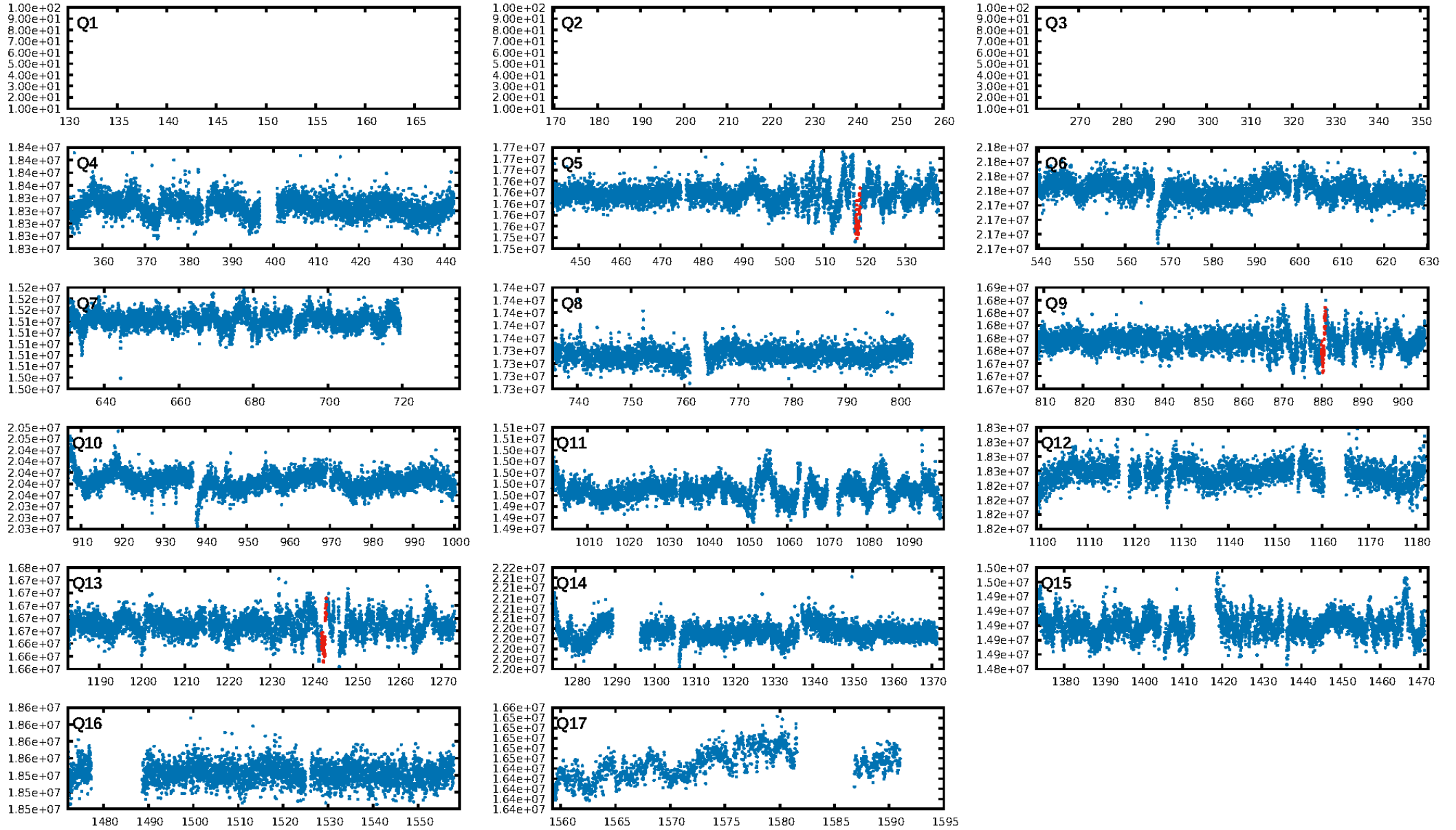
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 98.3% [2.39 σ]
ModelChiSquare2-sig: 9.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.71e-13
RollingBand-figt: 0.67 [2/3]
GhostDiagnostic-chr: 66.66
Centroid-sig: N/A
Centroid-so: 4.946 arcsec [26.76 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

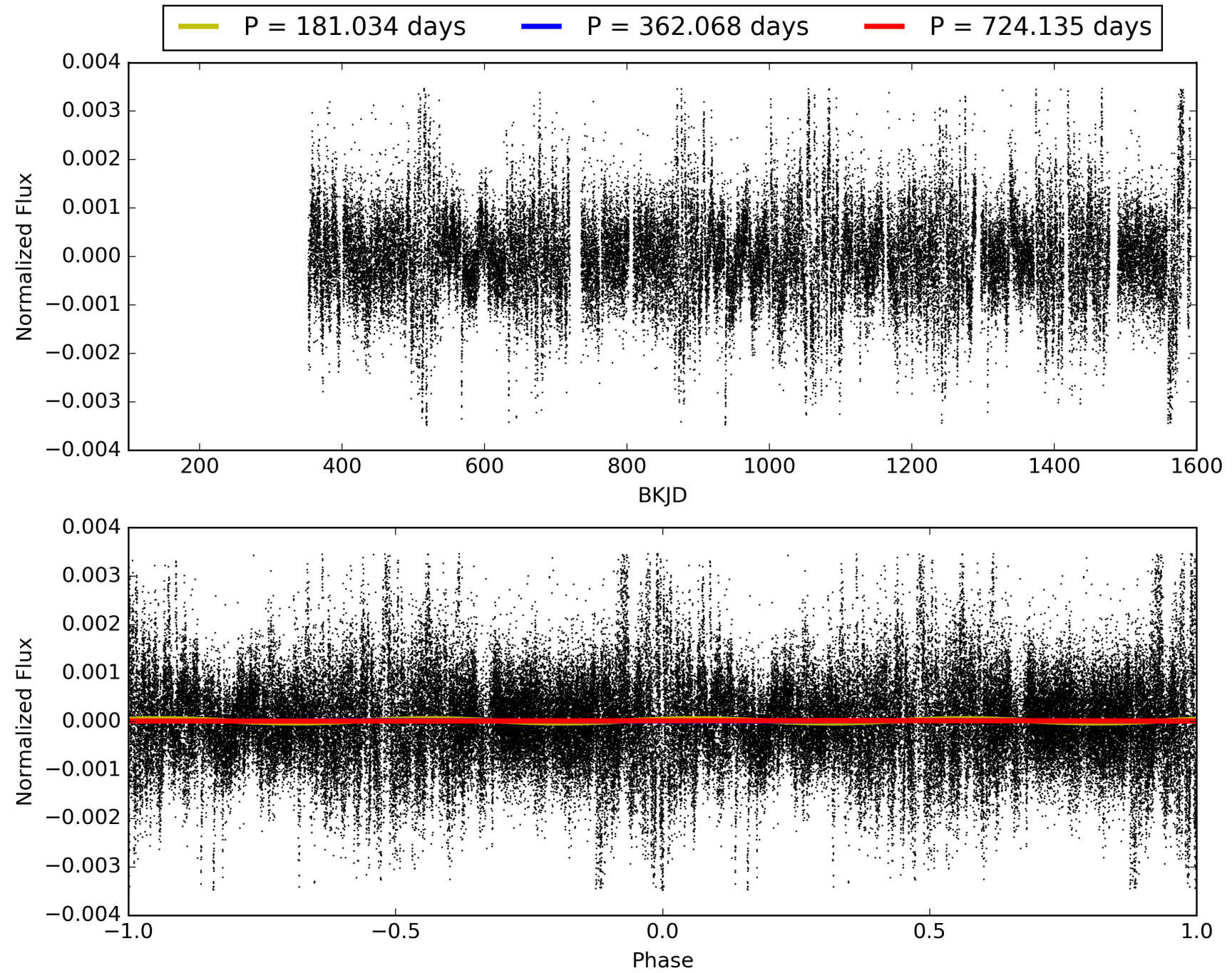
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:33:13 Z

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

TCE 009950106-01, PDC Light Curves

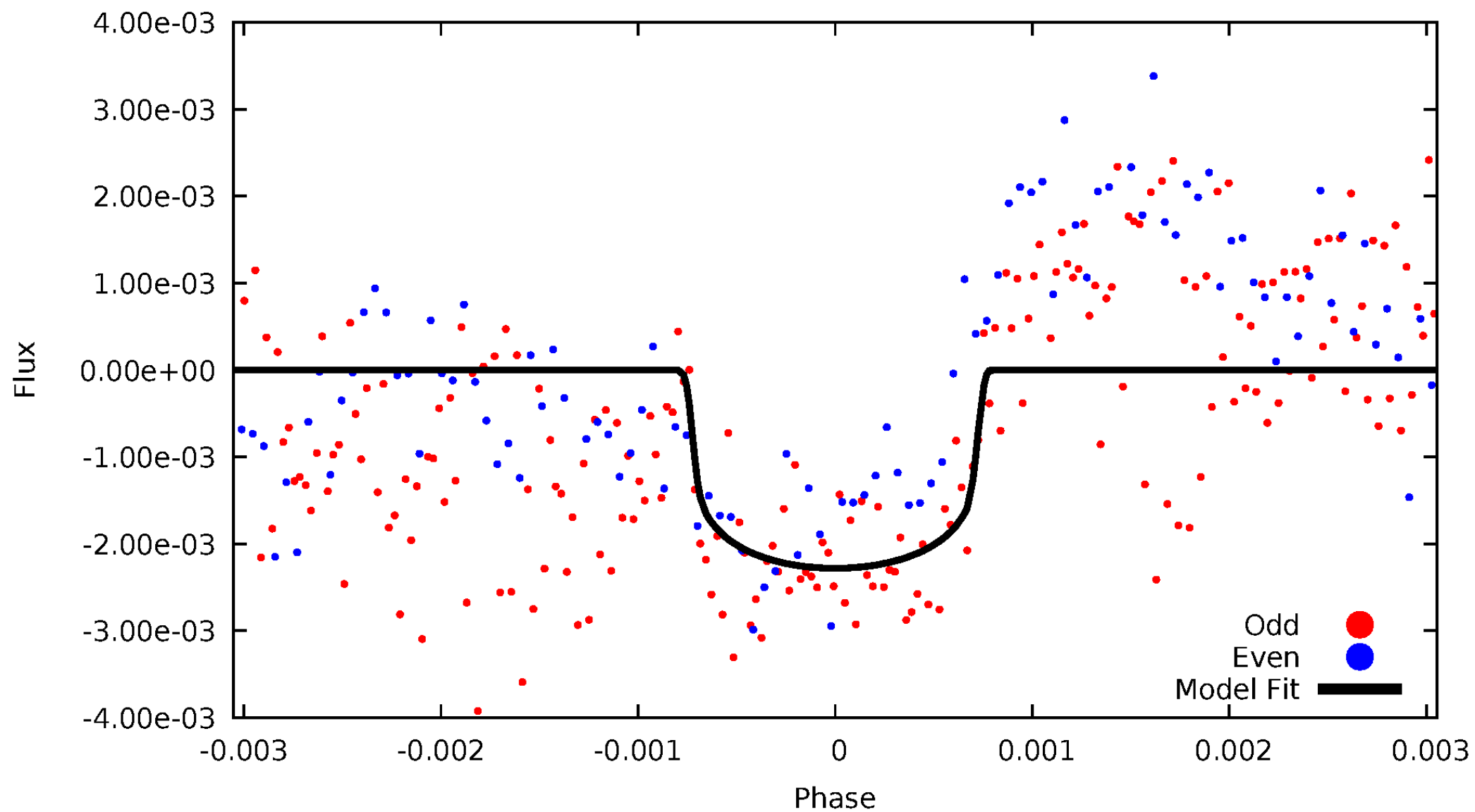


TCE 009950106-01



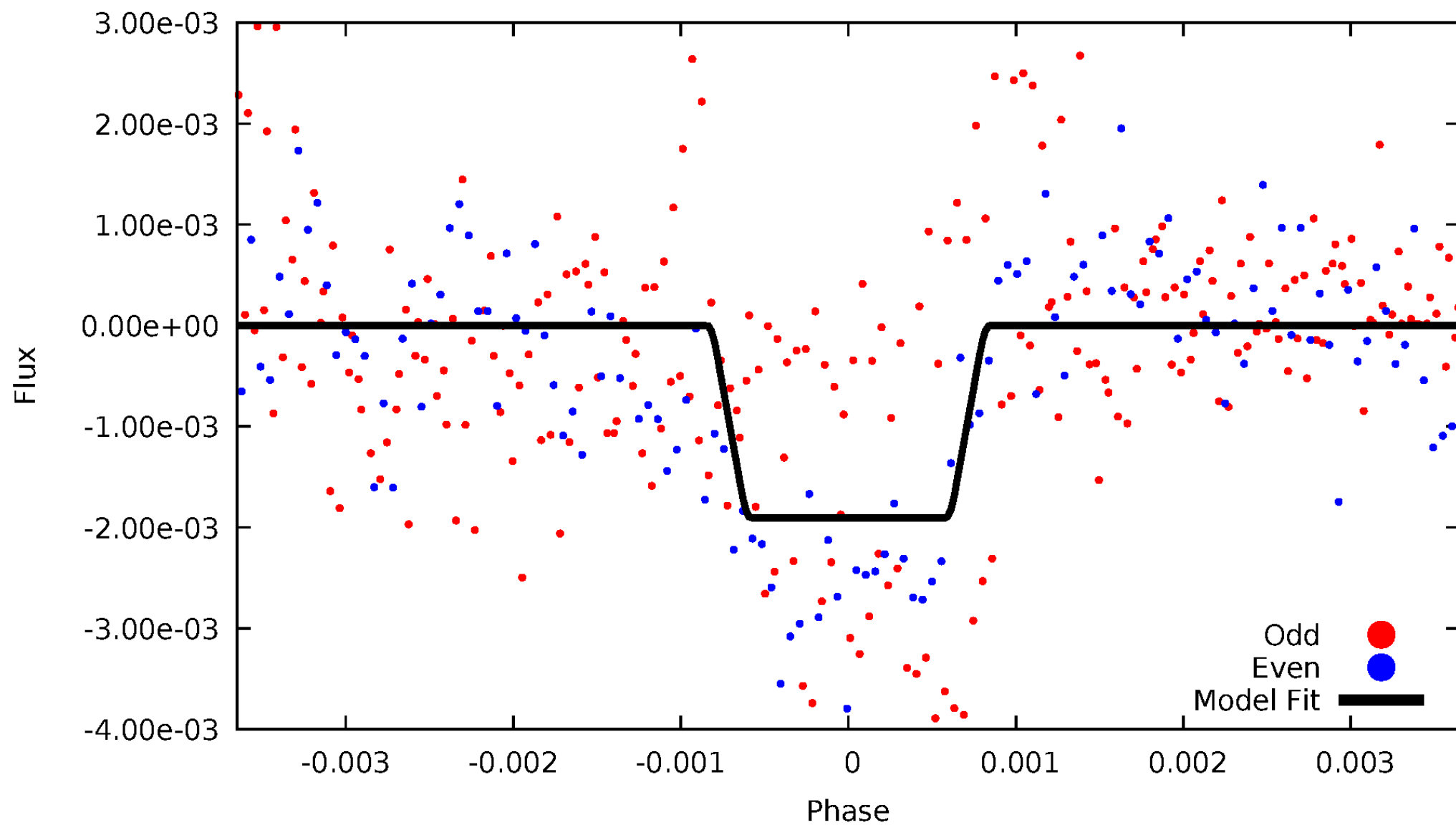
DV Odd/Even

TCE 009950106-01



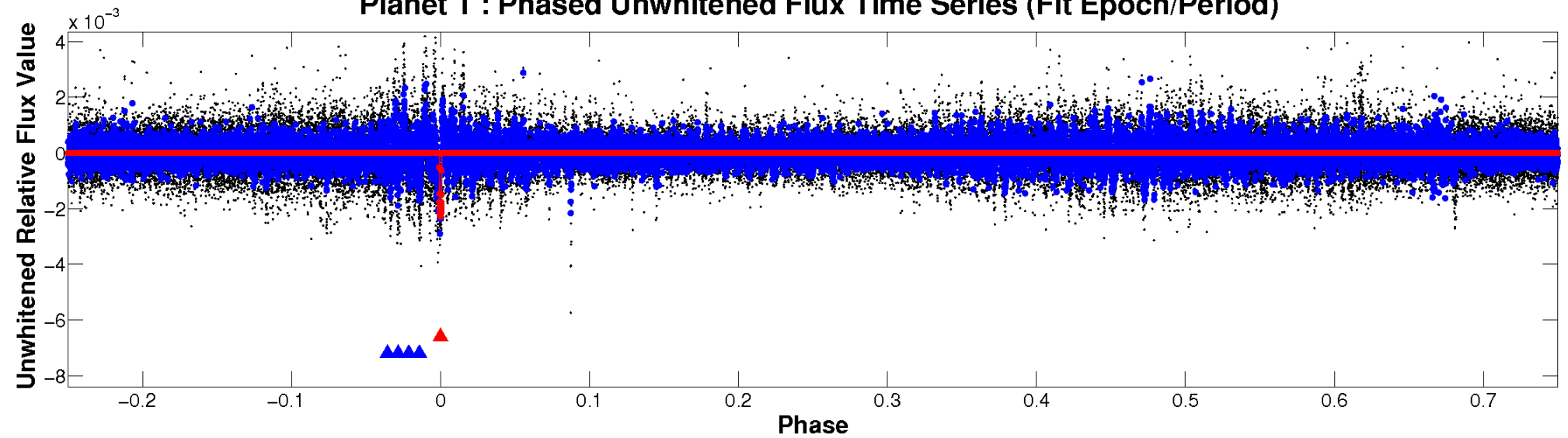
ALT Odd/Even

TCE 009950106-01

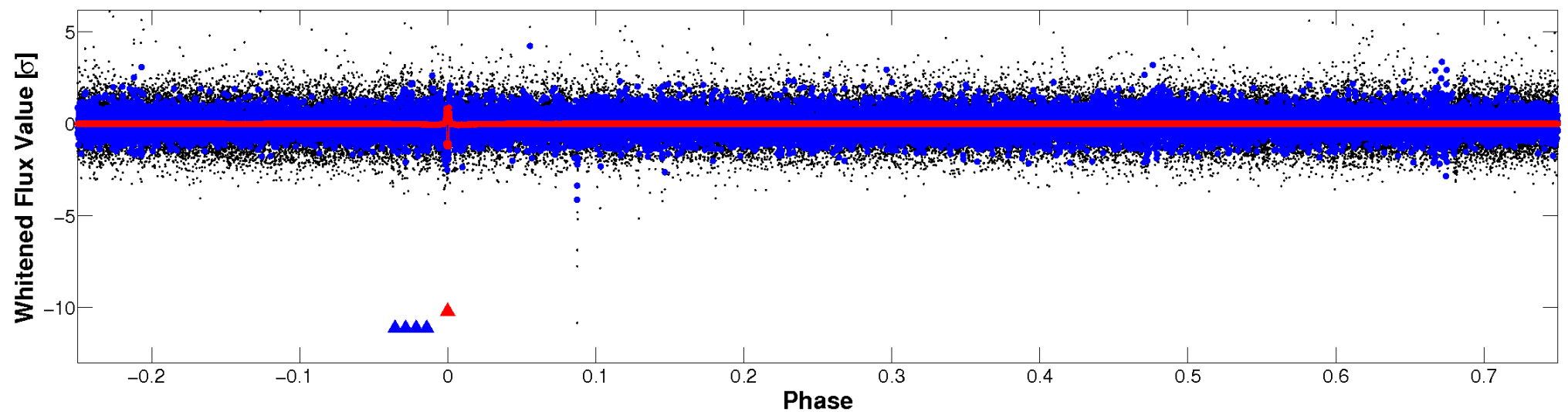


Non-Whitened Vs. Whitened Light Curve

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

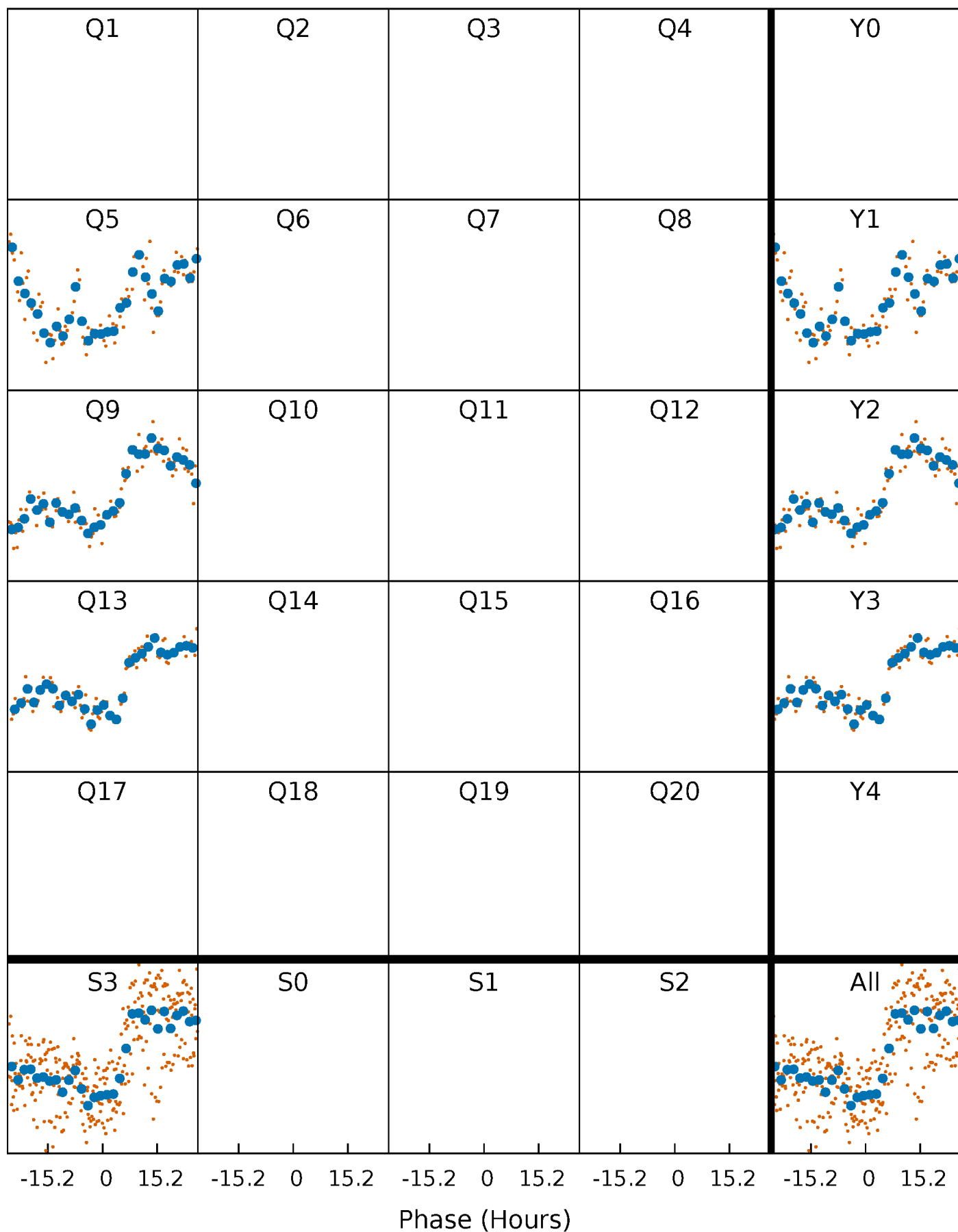


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



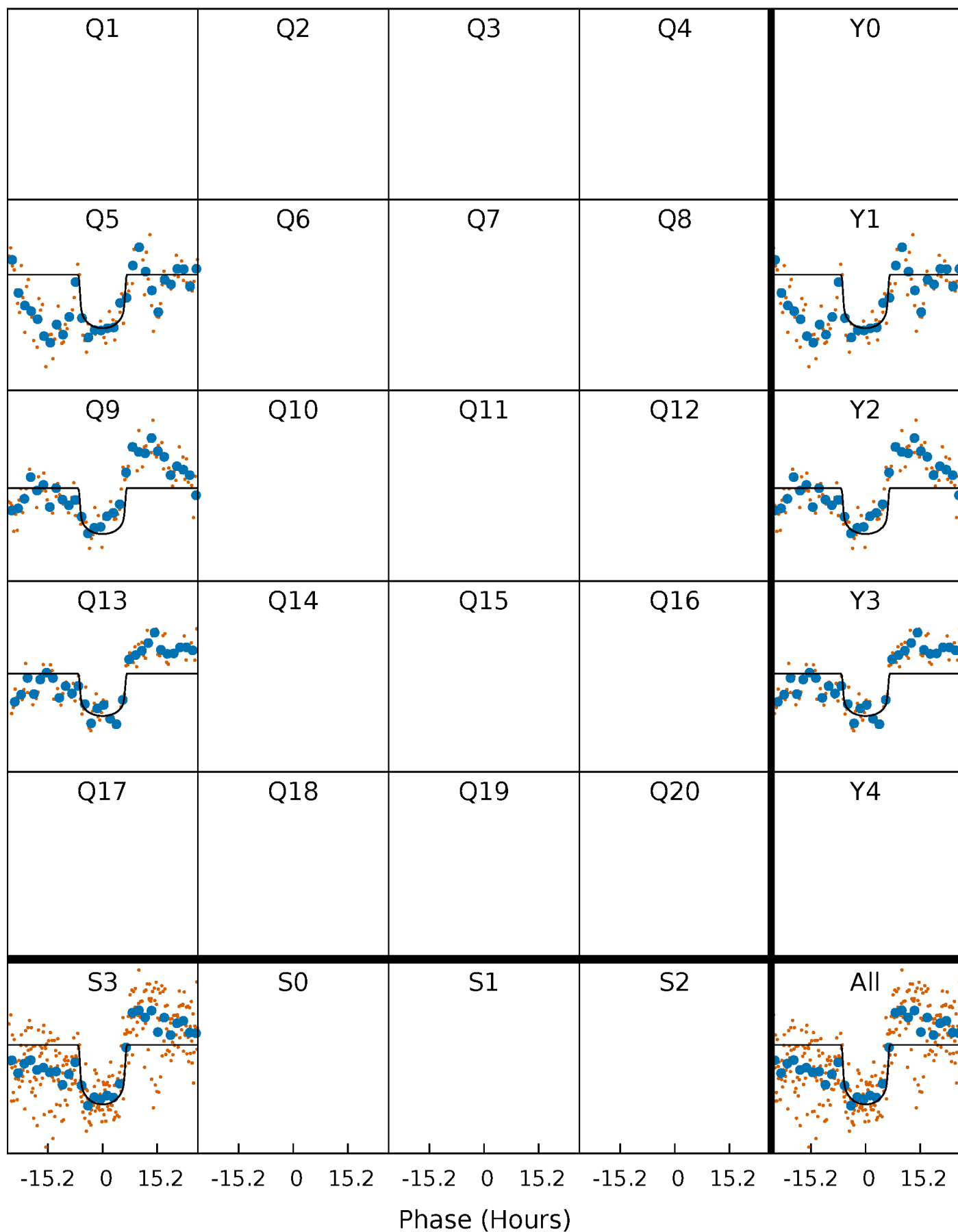
PDC Quarter-Phased Transit Curves

TCE 009950106-01 P=362.067549 Days $T_0=156.317220$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009950106-01 $P=362.067549$ Days $T_0=156.317220$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

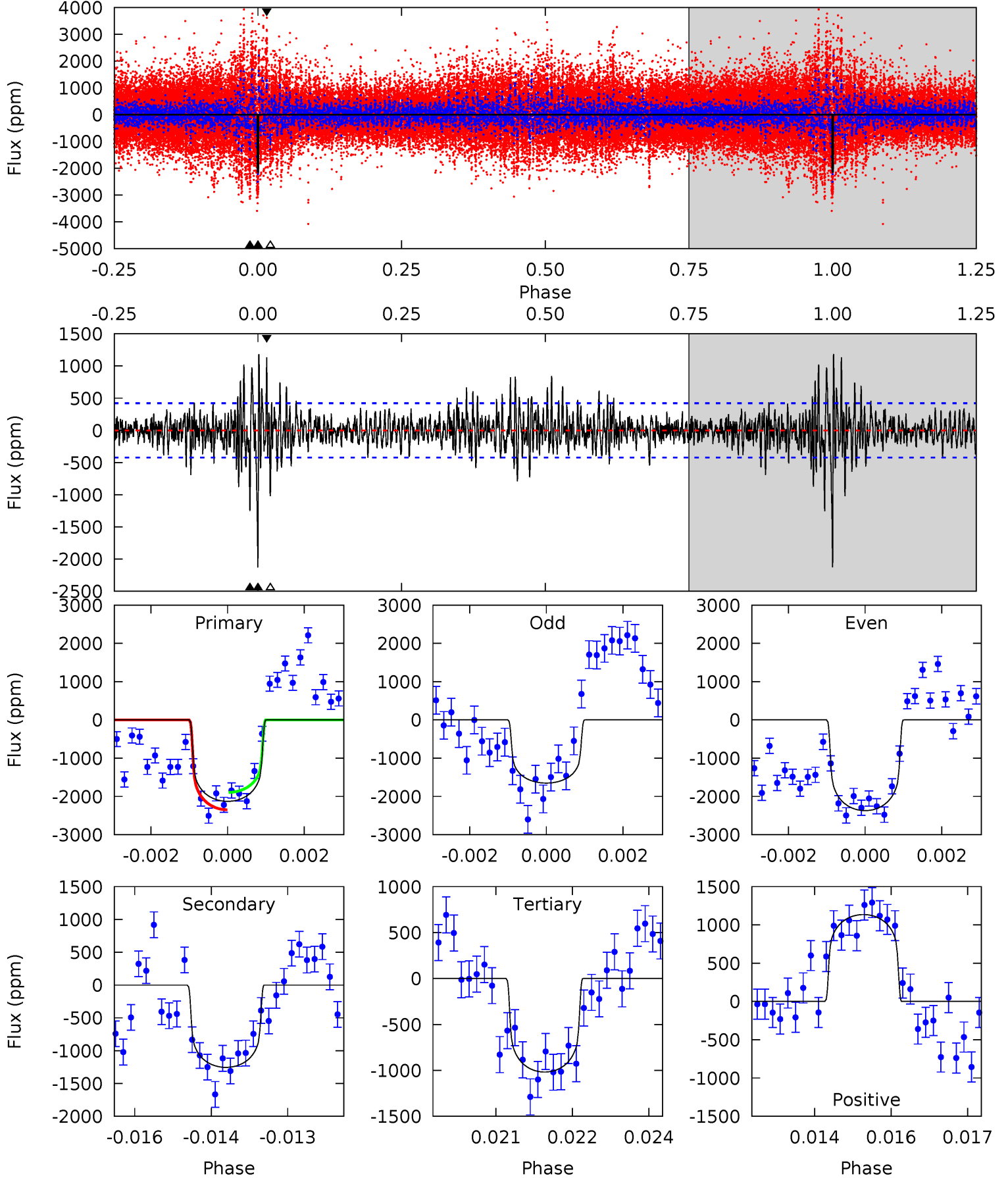
TCE 009950106-01 P=362.014571 Days $T_0=156.418473$ (BKJD)



DV Model-Shift Uniqueness Test

009950106-01, P = 362.067549 Days, E = 156.317220 Days

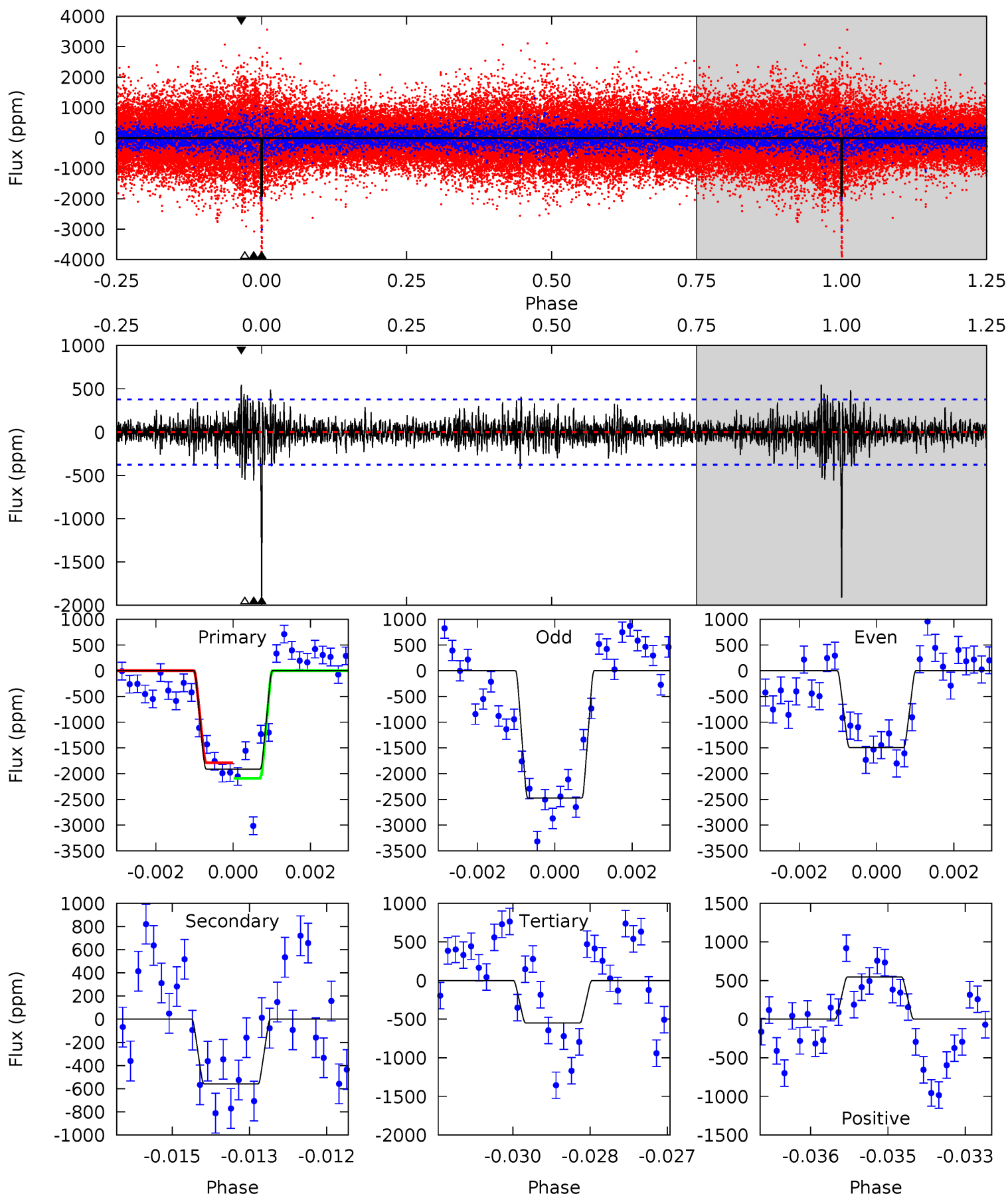
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	15.9	12.9	14.4	5.37	3.16	2.74	14.1	12.6	3.00	1.51	4.29	0.94	0.36	2.89



Alt Model-Shift Uniqueness Test

009950106-01, P = 362.014571 Days, E = 156.418473 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	7.94	7.81	7.77	5.36	3.15	1.49	19.3	19.4	0.13	0.17	6.77	0.73	0.22	2.14



Stellar Parameters For KIC 009950106

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6184^{+197}_{-241}	$4.488^{+0.056}_{-0.224}$	$-0.260^{+0.250}_{-0.300}$	$0.959^{+0.326}_{-0.102}$	$1.031^{+0.144}_{-0.144}$	$1.647^{+0.378}_{-0.935}$
	+3%/-4%	+1%/-5%	+96%/-115%	+34%/-11%	+14%/-14%	+23%/-57%
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 009950106-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1254 ± 79	$4.82^{+1.04}_{-0.90}$	381^{+27}_{-20}	5562^{+525}_{-417}	29103^{+14117}_{-8902}
Alt.	-559 ± 70	$4.75^{+1.04}_{-0.89}$	380^{+29}_{-21}	4691^{+415}_{-308}	13405^{+6779}_{-4317}

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

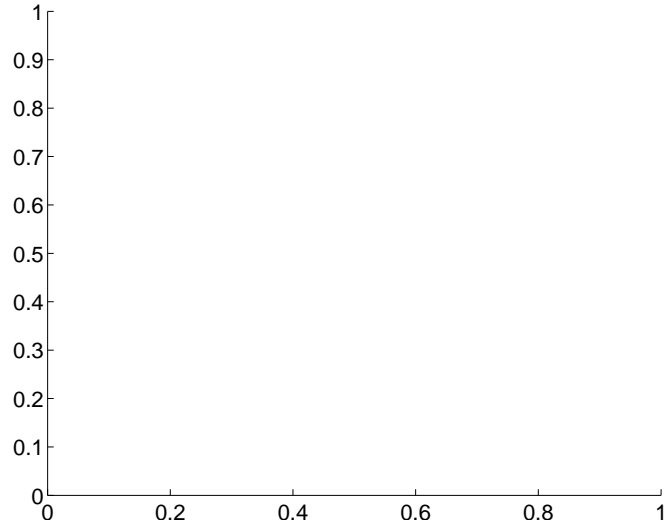
Supplemental centroid analysis for 009950106-01. Kepler magnitude: 15.38. Transit SNR 10.71

There are 0 quarters with good PRF difference image offsets

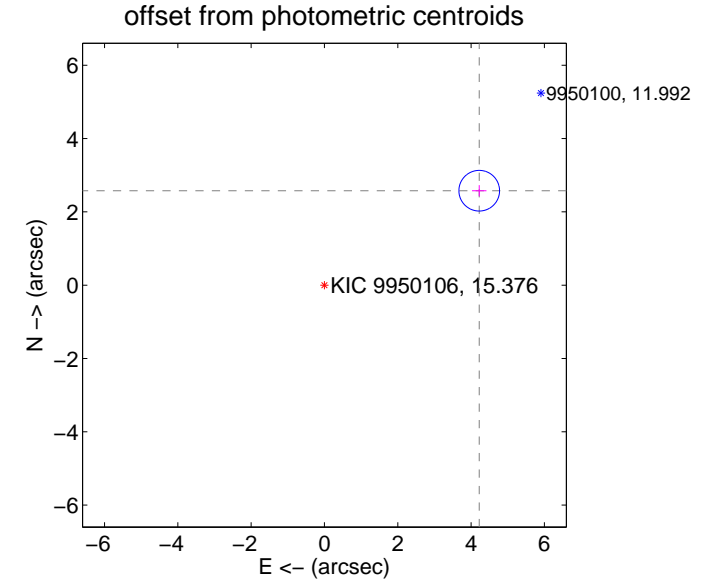
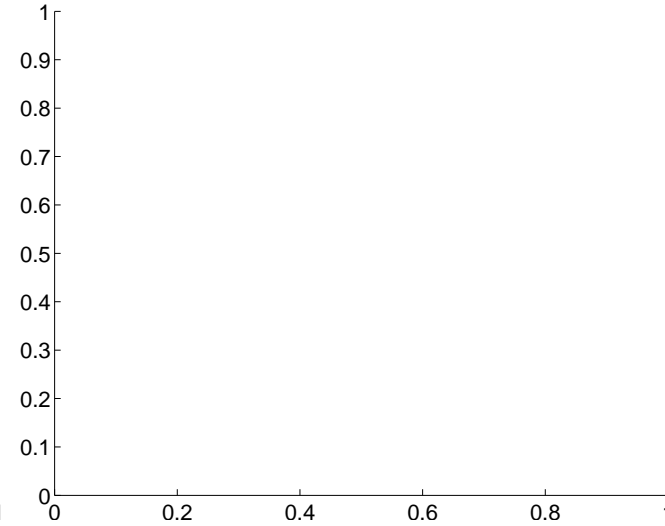
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	4.95 ± 0.18	26.76	-4.22 ± 0.20	2.58 ± 0.15

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

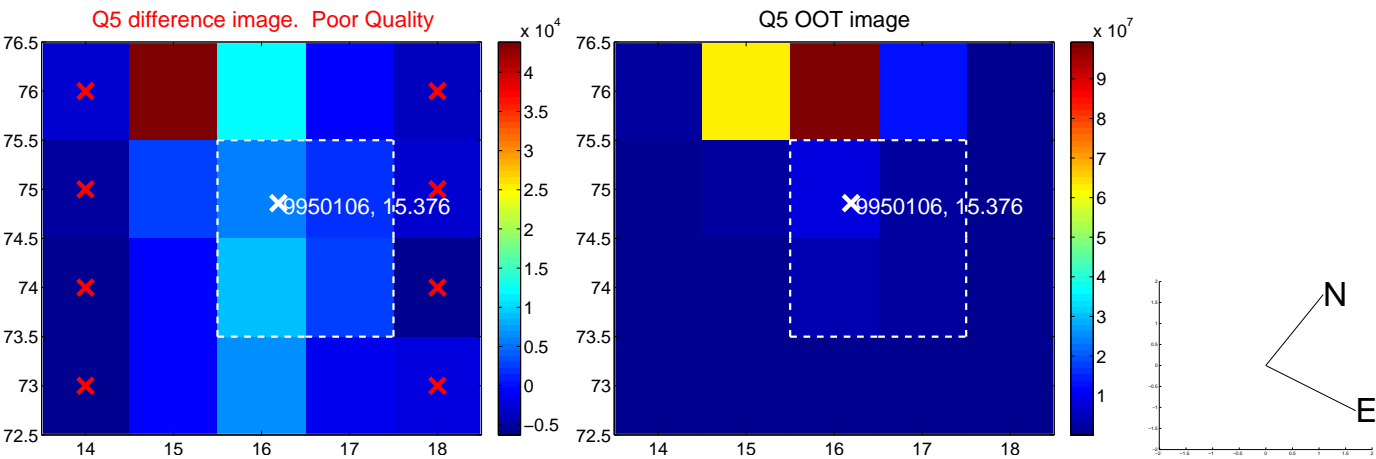


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

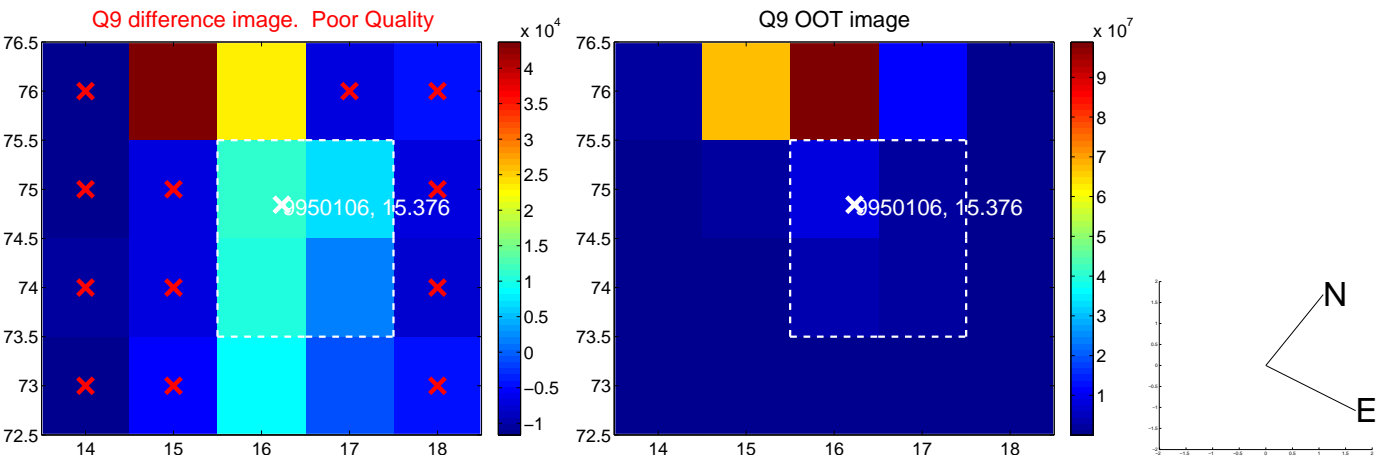
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



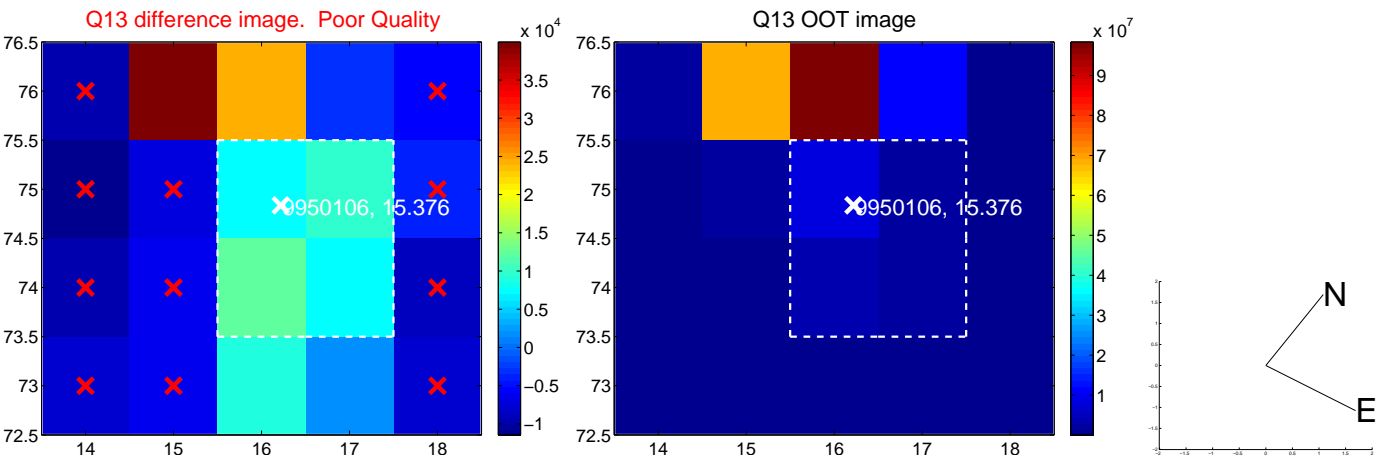
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



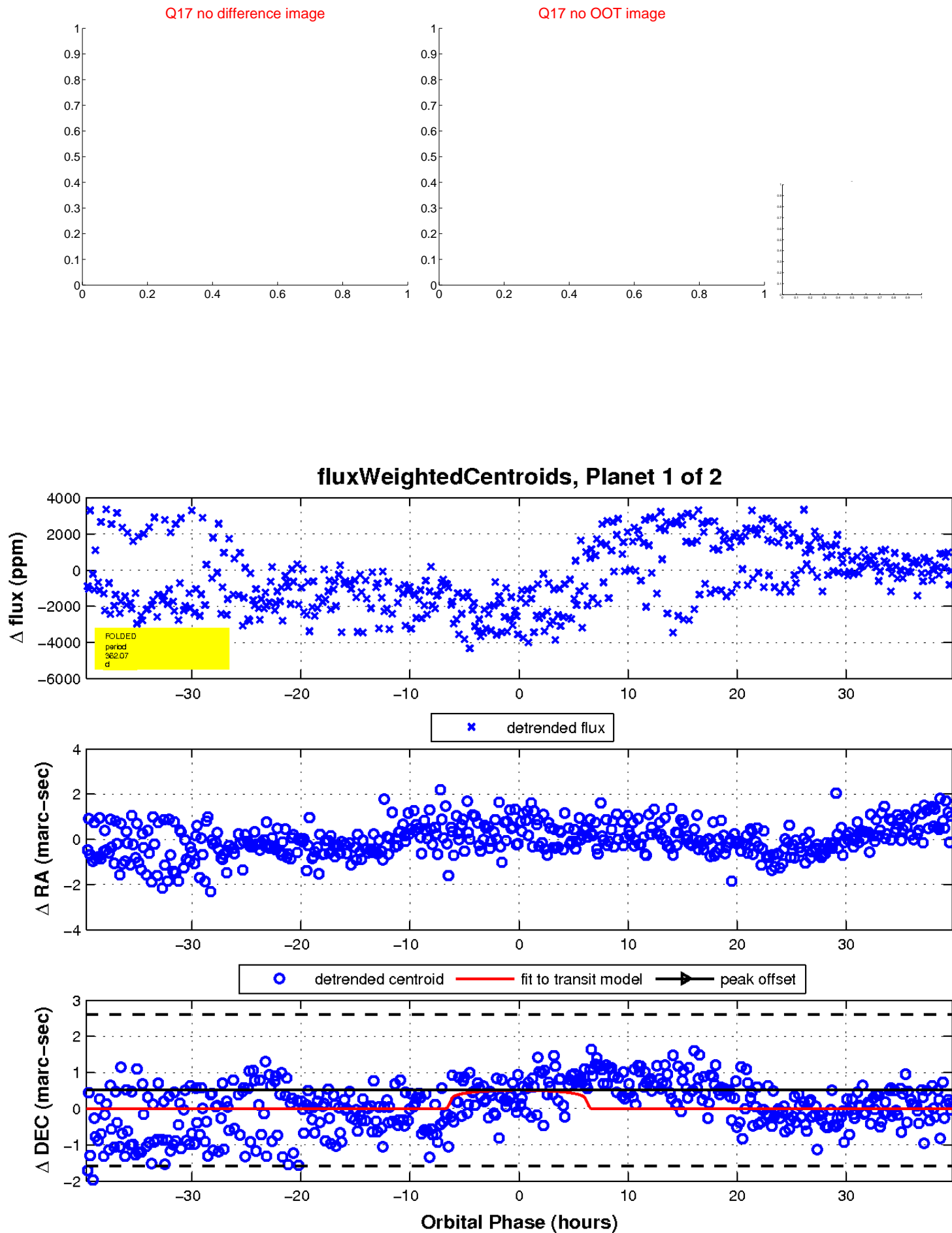
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

