

KIC 010493253

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})
010493253-01	OBS	8210.01	89.660046	183.107478	924.1	3.819	8.0	6.0	21.29	4742	64.46	820.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010493253-01	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_DV—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.

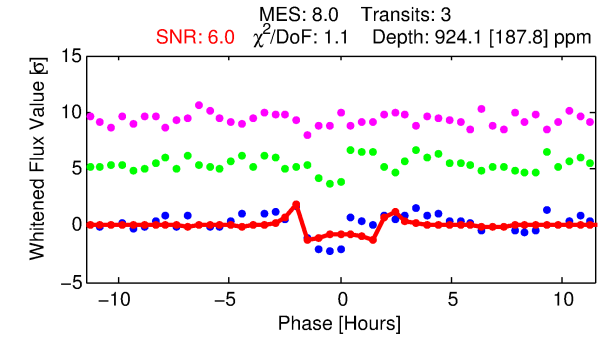
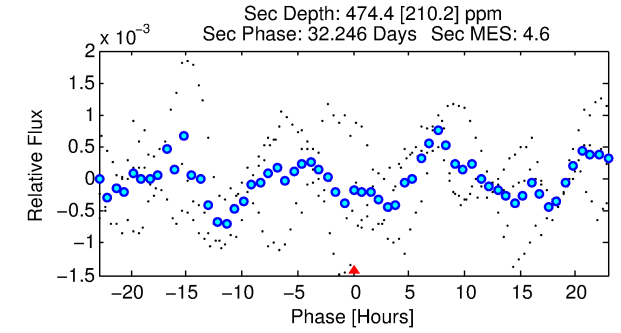
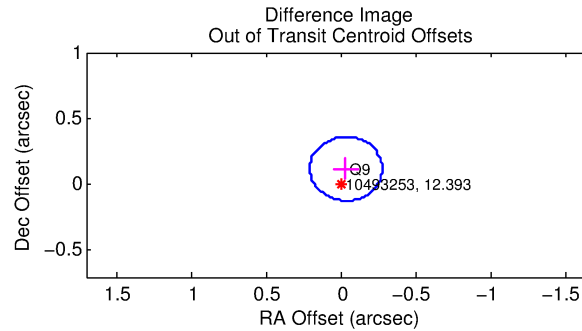
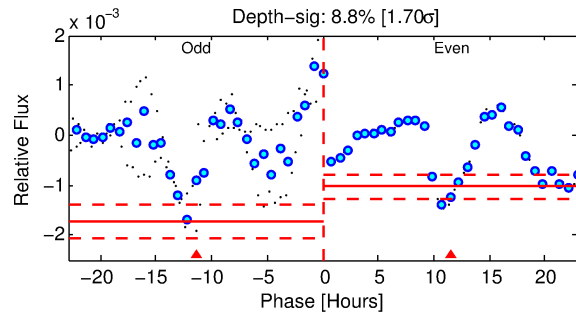
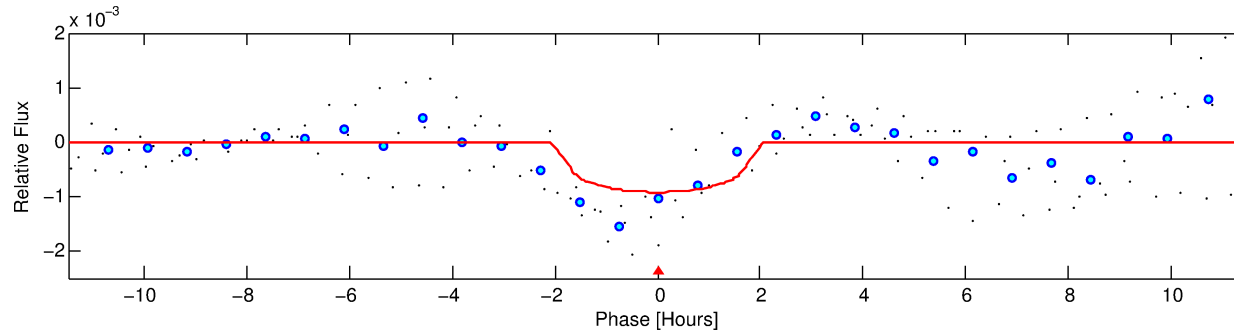
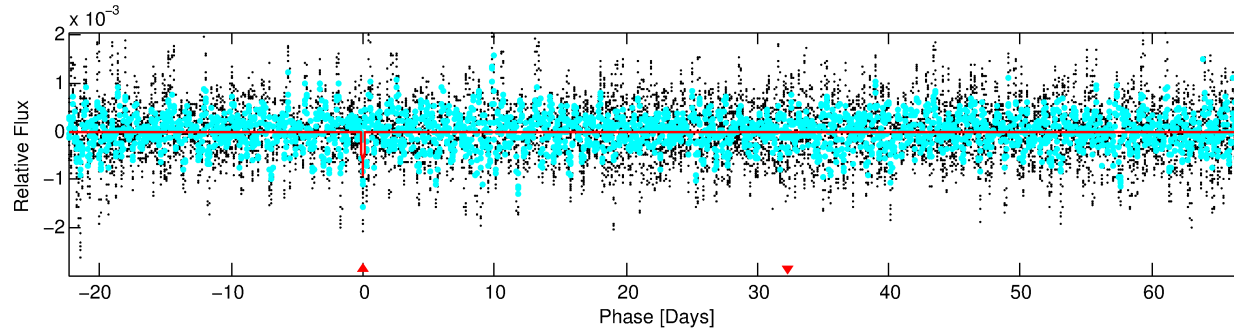
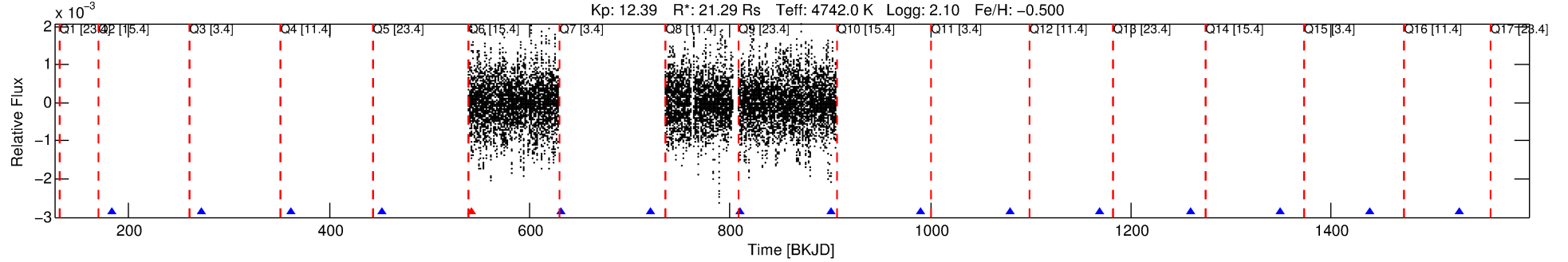
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010493253-01

No Significant Match Found

DV One-Page Summary

KIC: 10493253 Candidate: 1 of 1 Period: 89.660 d



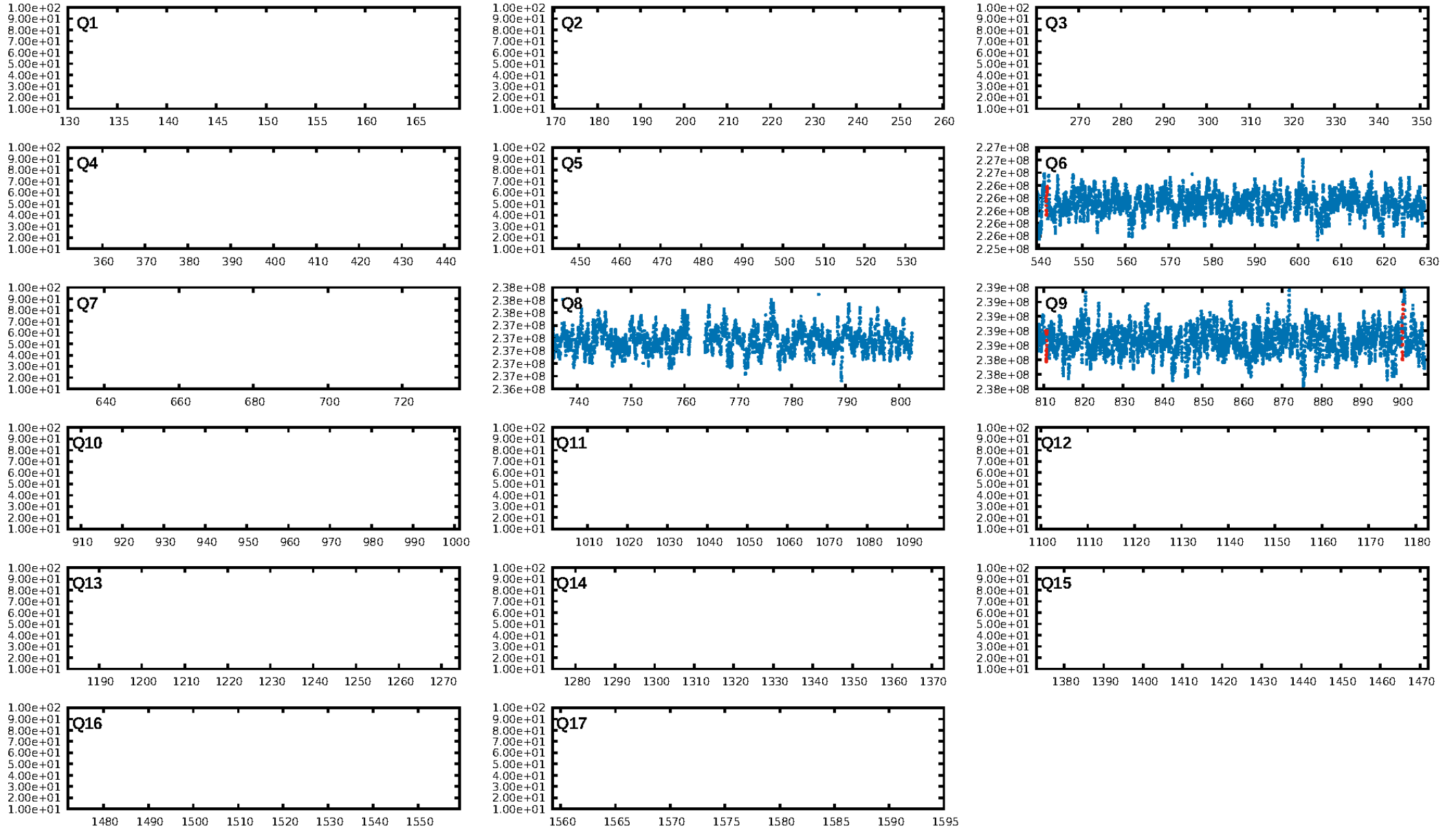
DV Fit Results:

Period = 89.66005 [0.00182] d
Epoch = 183.1075 [0.0111] BKJD
Rp/R* = 0.0277 [0.0323]
a/R* = 167.60 [671.39]
b = 0.43 [7.76]
Seff = 820.49 [562.05]
Teq = 1365 [234] K
Rp = 64.46 [81.68] Re
a = 0.5003 [0.2223] AU
Ag = 15.72 [38.79] [0.38 σ]
Teffp = 4202 [2494] K [1.13 σ]

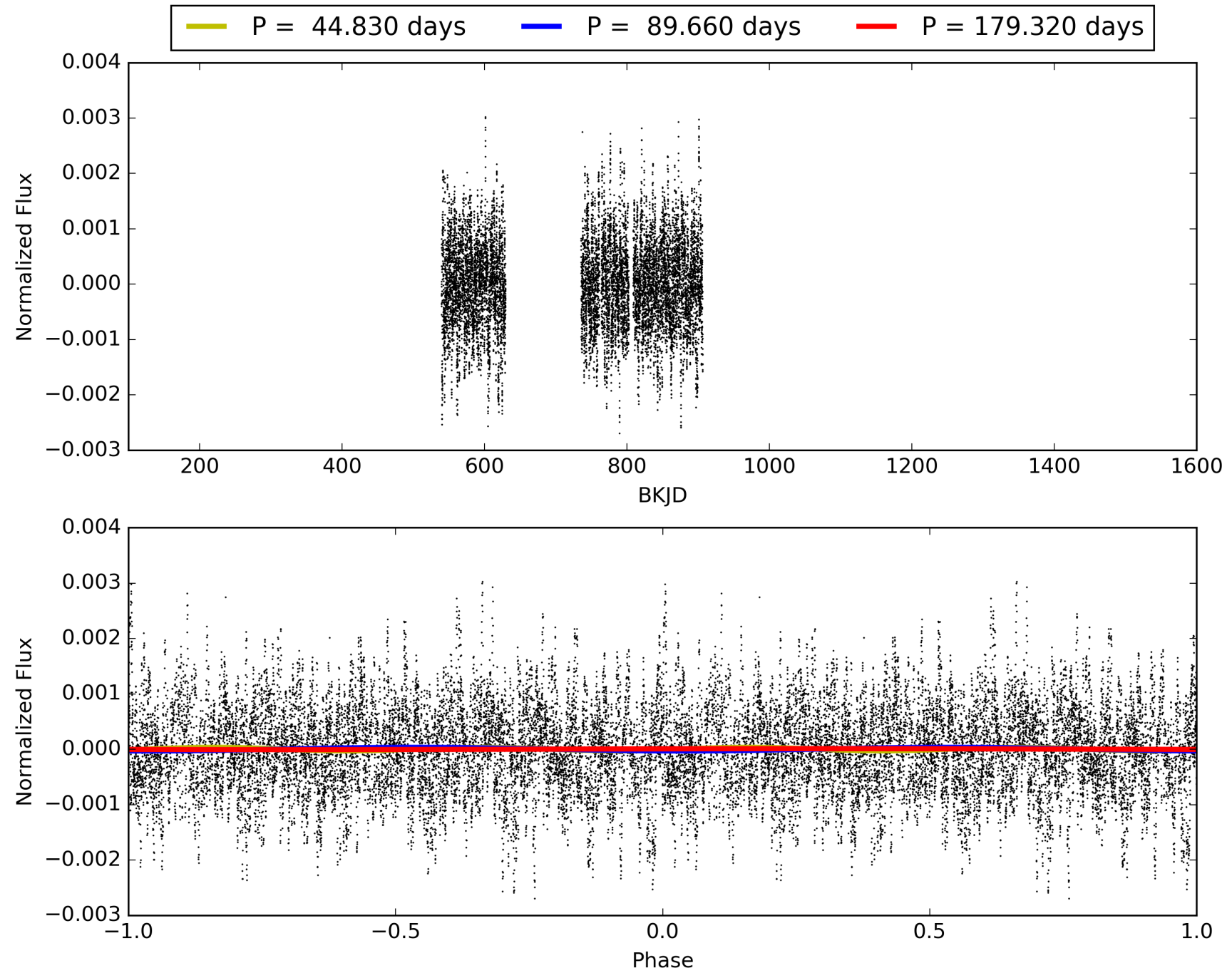
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.9%
ModelChiSquareGof-sig: 46.5%
Bootstrap-pfa: 9.13e-13
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.8639
Centroid-sig: 0.6%
Centroid-so: 0.663 arcsec [1.88 σ]
OotOffset-rm: 0.124 arcsec [1.54 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-rm: 0.228 arcsec [2.77 σ]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 010493253-01, PDC Light Curves

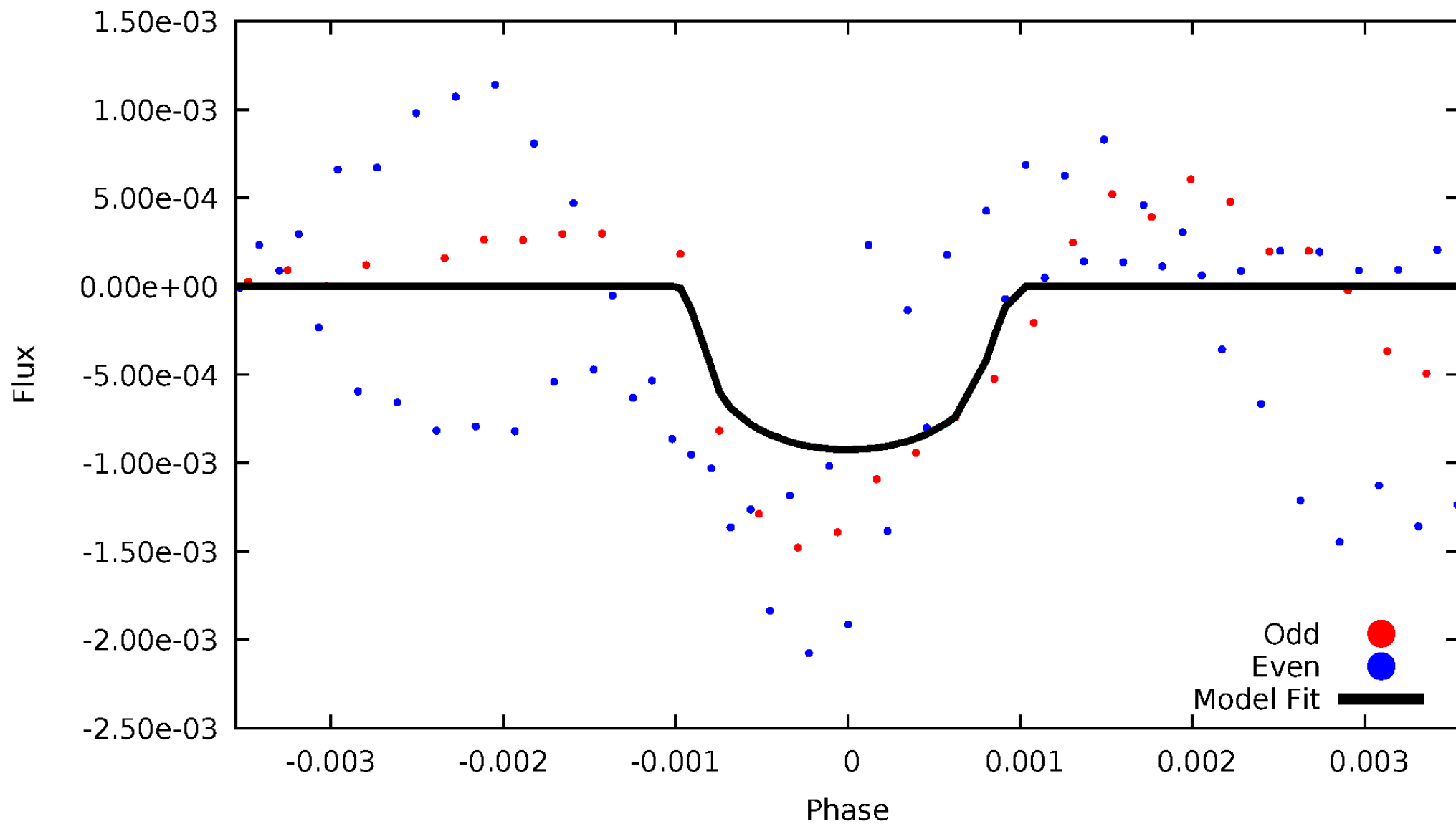


TCE 010493253-01



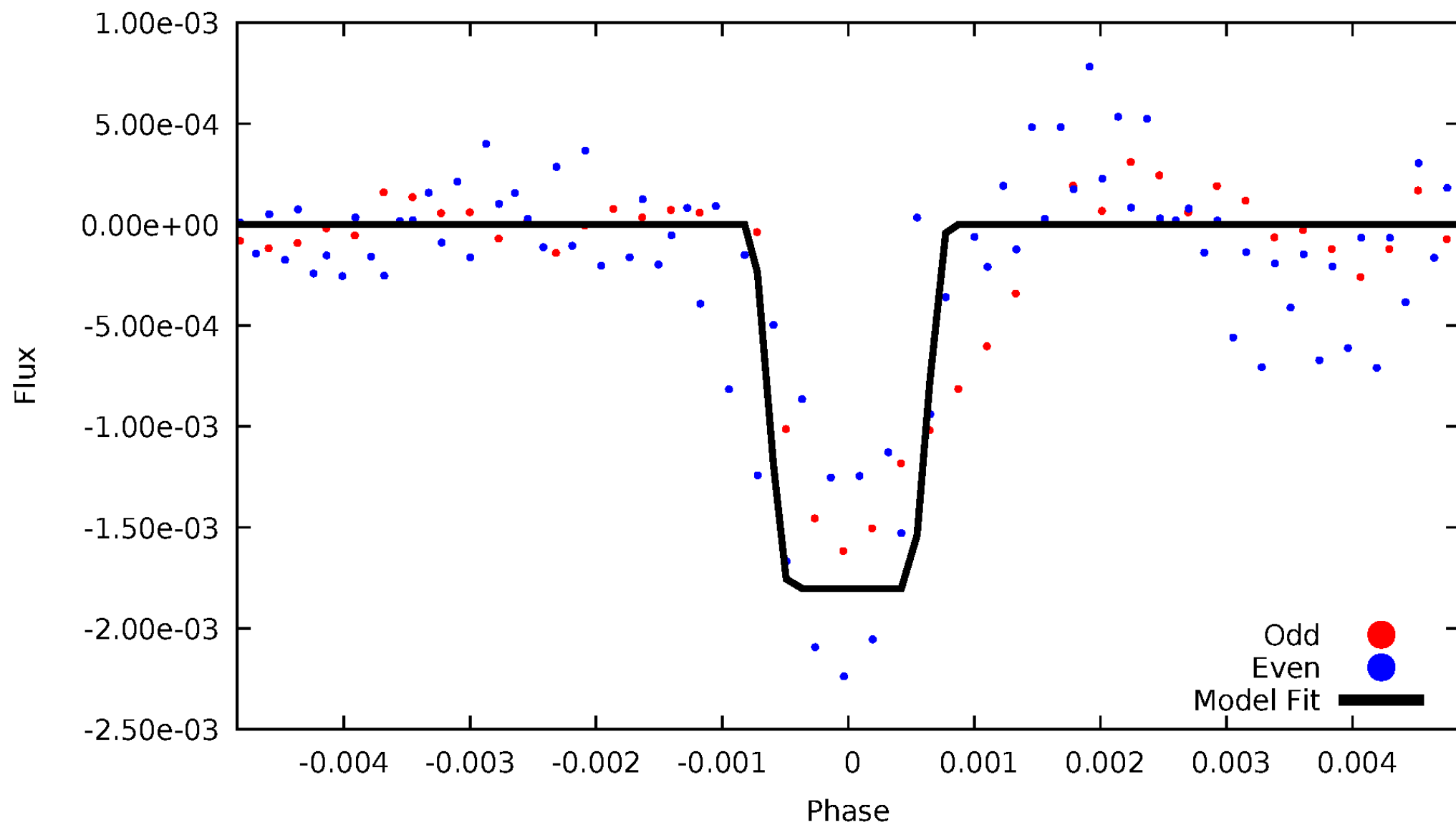
DV Odd/Even

TCE 010493253-01



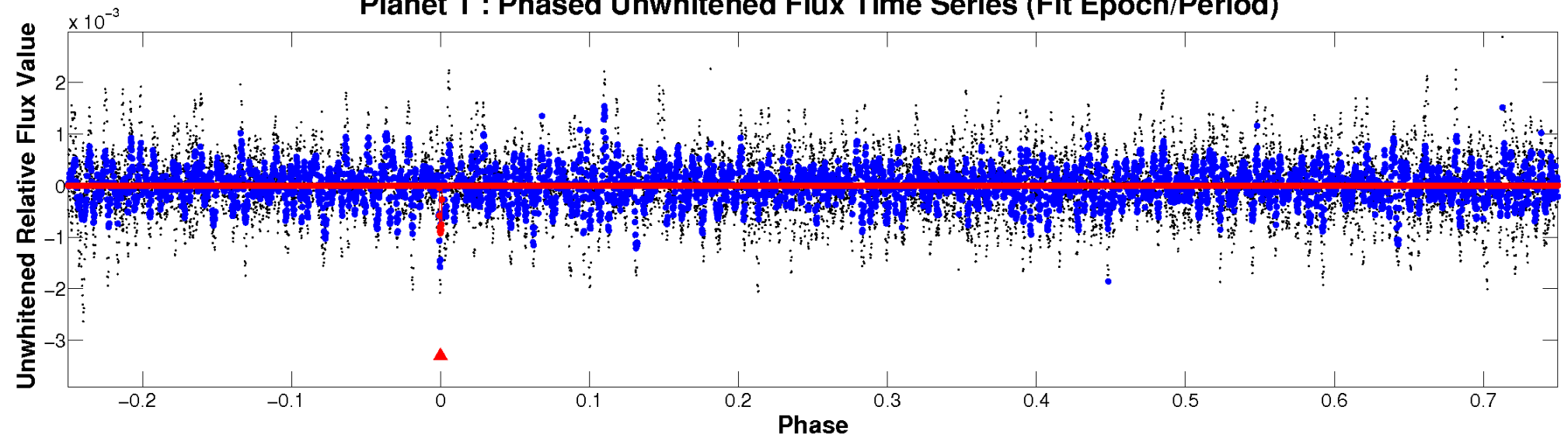
ALT Odd/Even

TCE 010493253-01

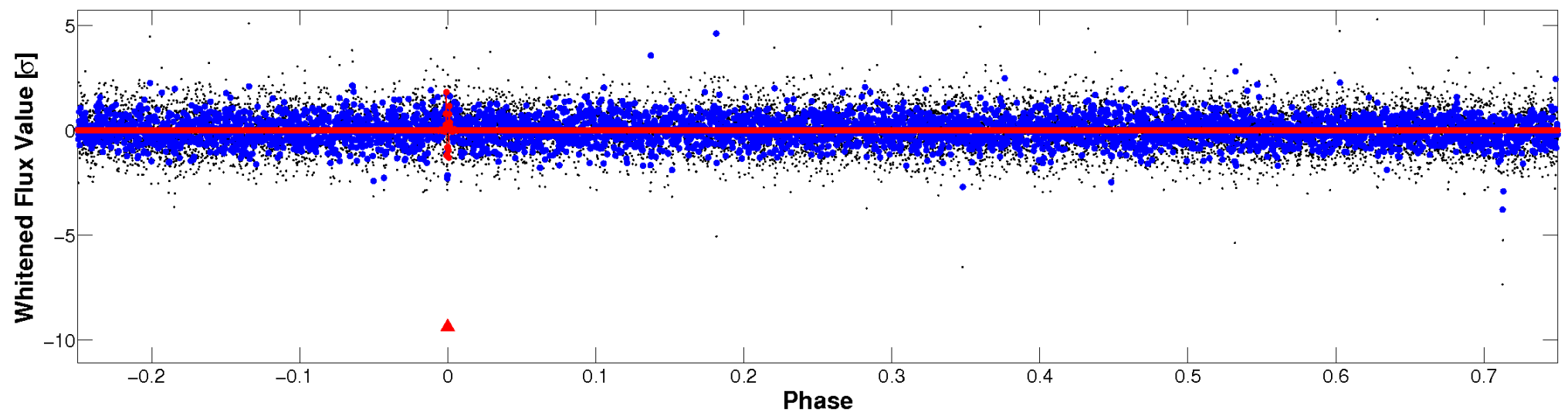


Non-Whitened Vs. Whitened Light Curve

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

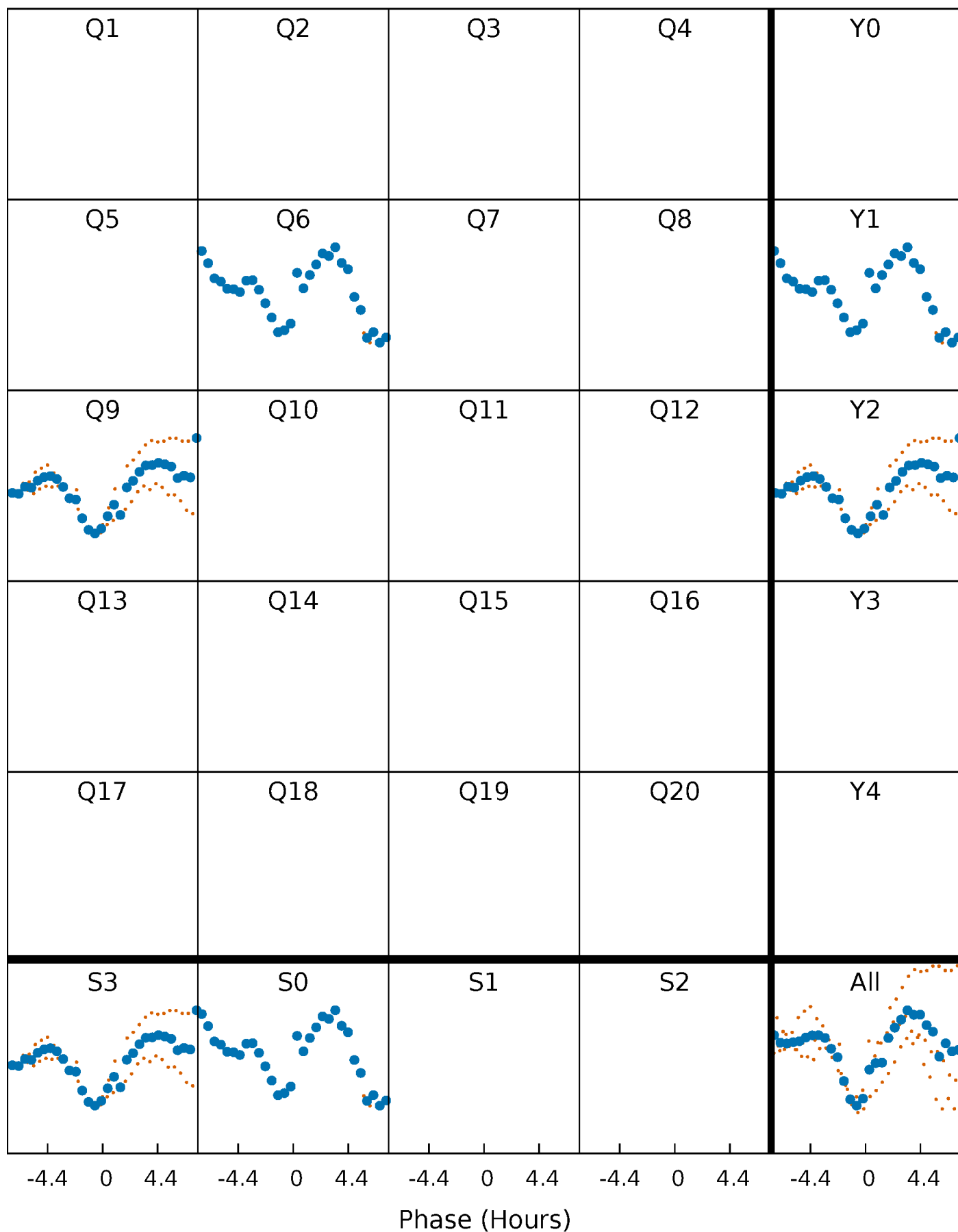


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



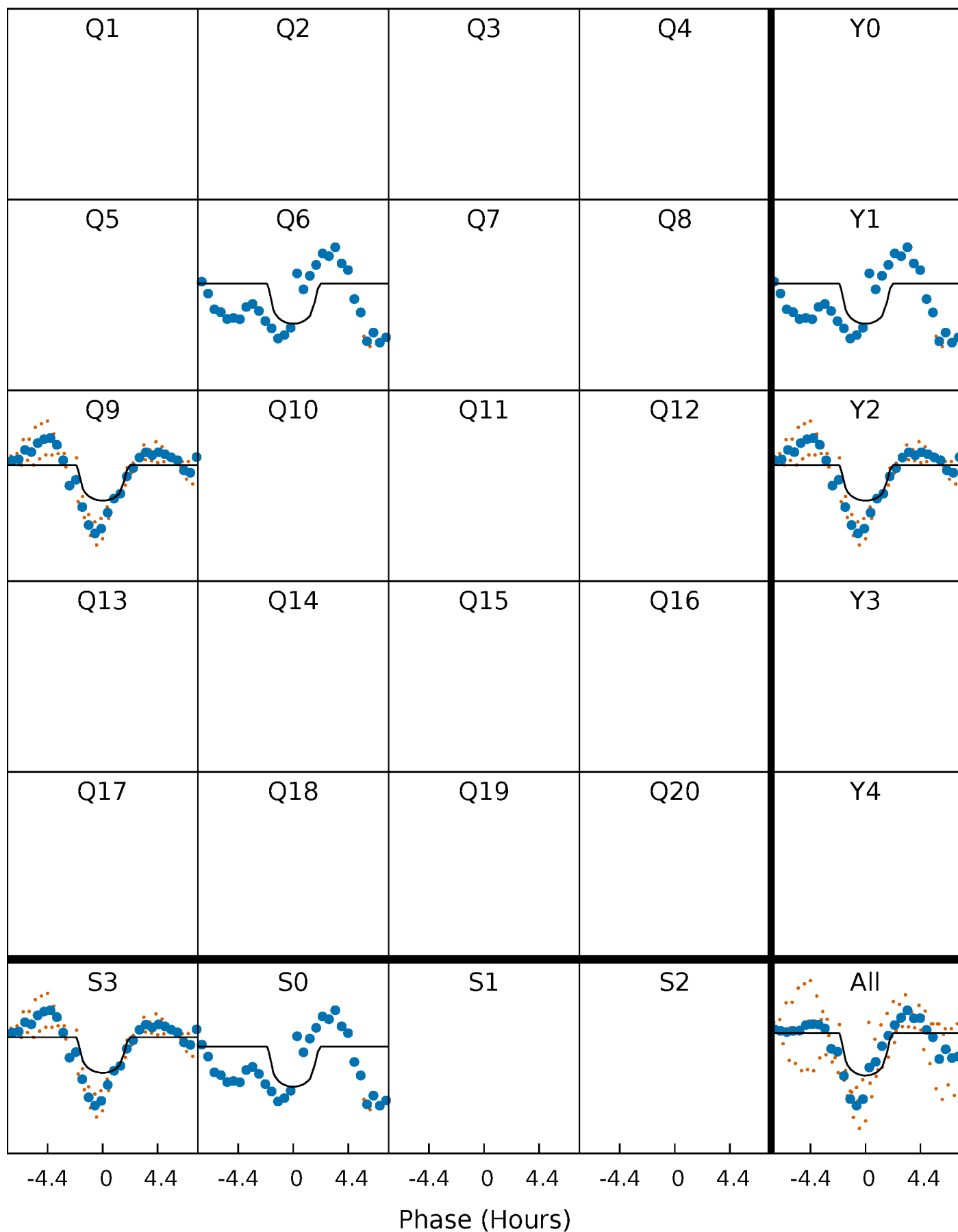
PDC Quarter-Phased Transit Curves

TCE 010493253-01 P= 89.660046 Days $T_0=183.107478$ (BKJD)



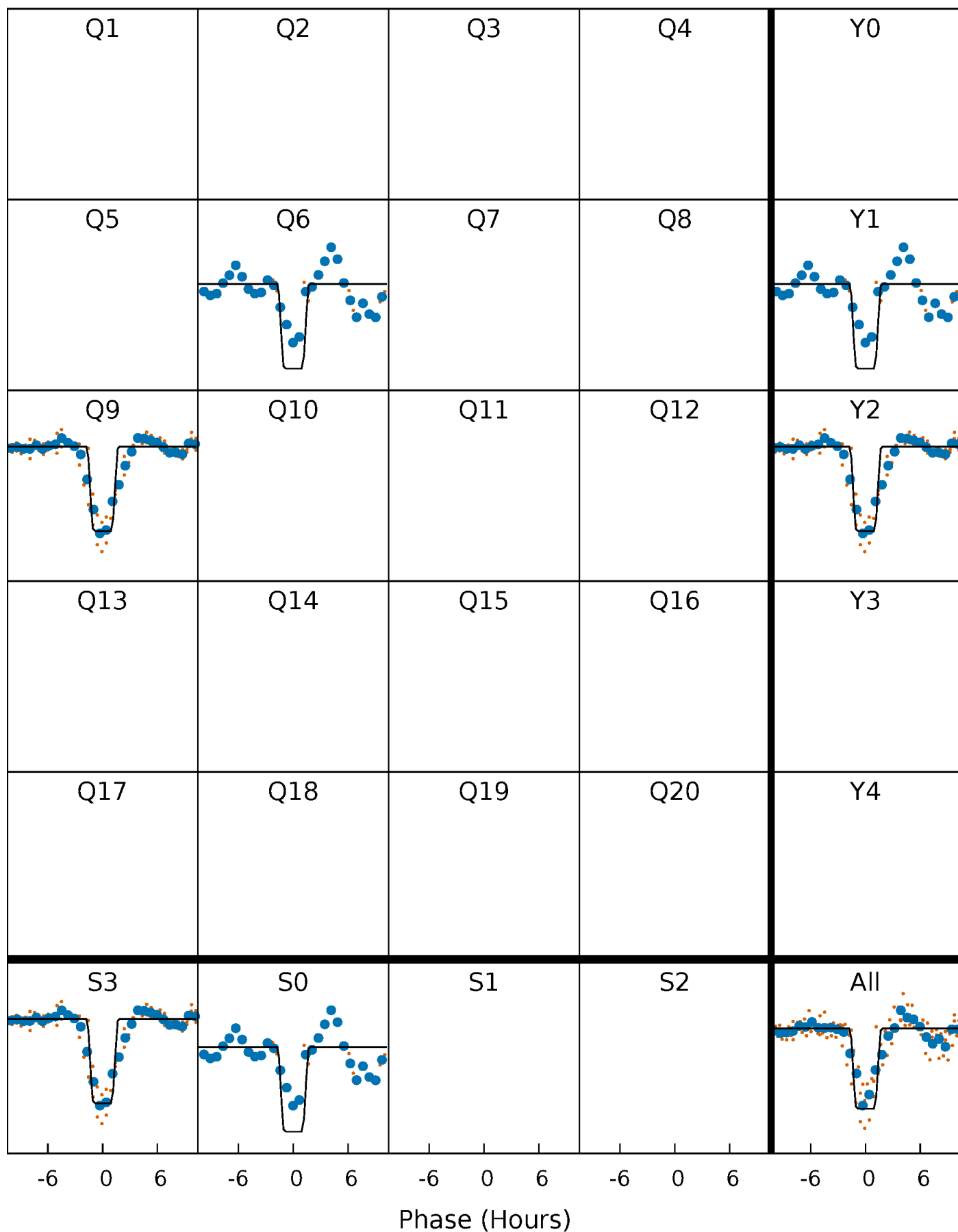
DV Quarter-Phased Transit Curves

TCE 010493253-01 P= 89.660046 Days $T_0=183.107478$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

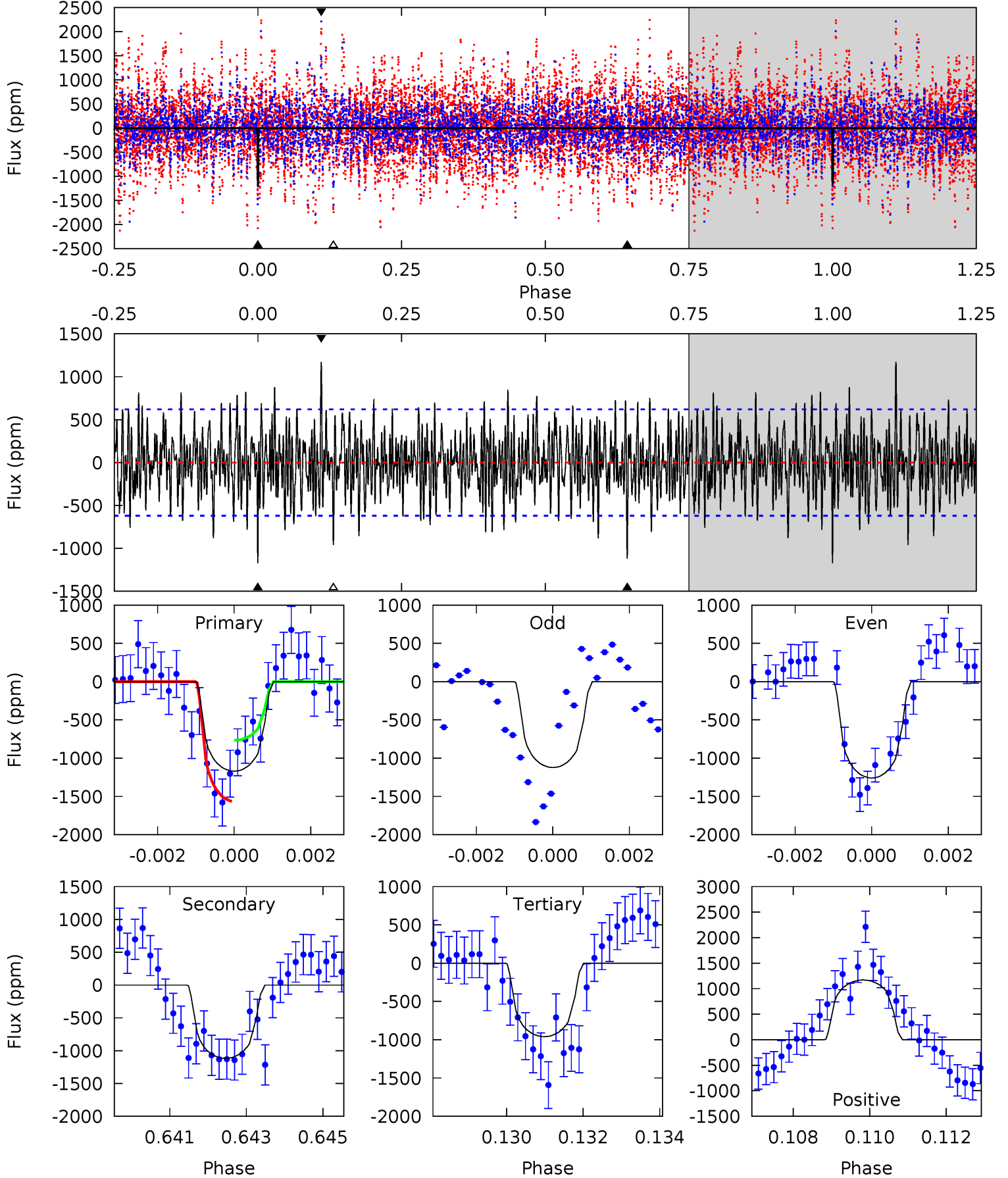
TCE 010493253-01 P= 89.665316 Days $T_0=183.048330$ (BKJD)



DV Model-Shift Uniqueness Test

010493253-01, P = 89.660046 Days, E = 183.107478 Days

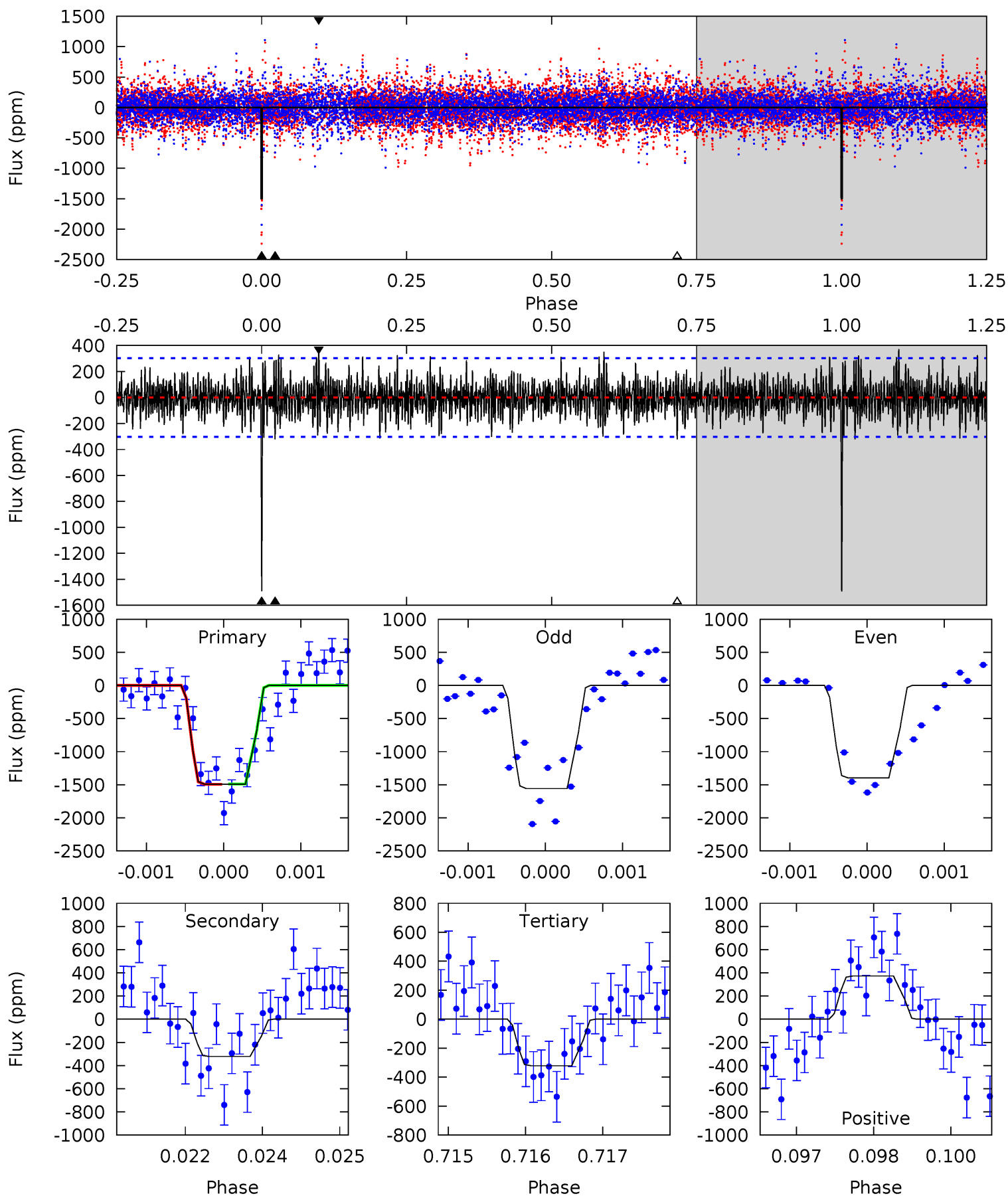
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	9.60	8.25	10.1	5.33	3.09	2.62	1.81	-0.00	1.35	-0.46	0.58	0.94	0.50	3.42



Alt Model-Shift Uniqueness Test

010493253-01, P = 89.665316 Days, E = 183.048330 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	5.72	5.70	6.62	5.38	3.18	1.84	20.8	19.9	0.02	-0.90	1.37	1.02	0.20	0.04



Stellar Parameters For KIC 010493253

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4742^{+106}_{-118}	$2.099^{+0.385}_{-0.165}$	$-0.500^{+0.300}_{-0.250}$	$21.291^{+4.541}_{-10.595}$	$2.075^{+0.978}_{-0.978}$	$0.000^{+0.001}_{-0.000}$
	+2%/-2%	+18%/-8%	+60%/-50%	+21%/-50%	+47%/-47%	+381%/-41%
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 010493253-01 / KOI 8210.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1117 ± 116	$75.12^{+63.51}_{-49.57}$	1878^{+140}_{-193}	4720^{+3673}_{-932}	28^{+227}_{-20}
Alt.	-322 ± 56	$103.01^{+77.44}_{-65.55}$	1861^{+148}_{-204}	3307^{+1384}_{-509}	$4.331^{+25.836}_{-2.893}$

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

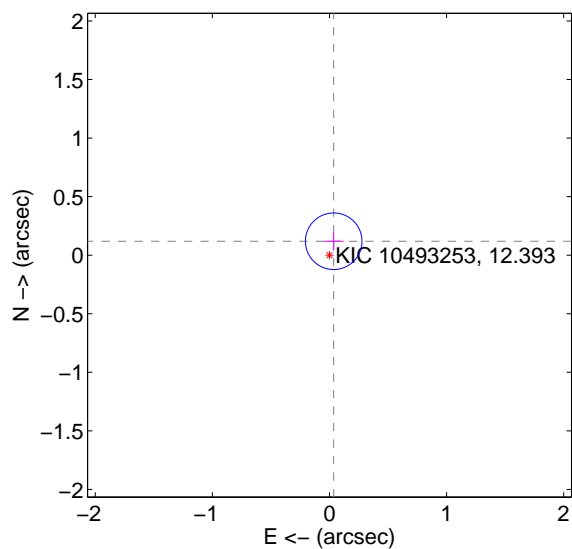
Supplemental centroid analysis for 010493253-01. Kepler magnitude: 12.39. Transit SNR 5.96

There are 1 quarters with good PRF difference image offsets

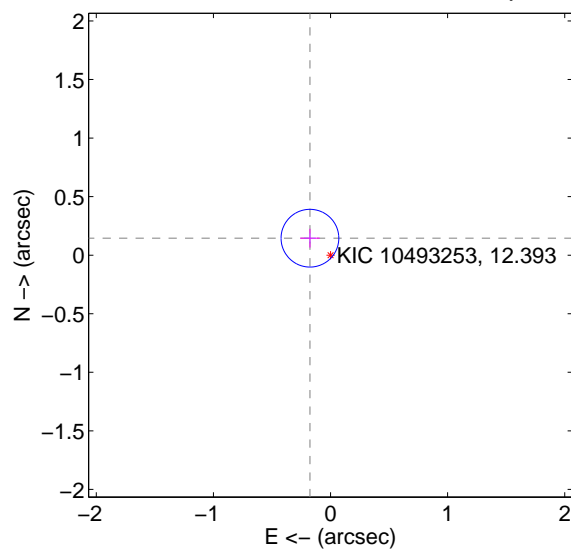
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.080	1.54	-0.036 ± 0.083	0.119 ± 0.080
PRF-fit source offset from KIC position	0.228 ± 0.082	2.77	0.176 ± 0.083	0.145 ± 0.080
photometric centroid source offset	0.66 ± 0.35	1.88	0.19 ± 0.45	-0.64 ± 0.34

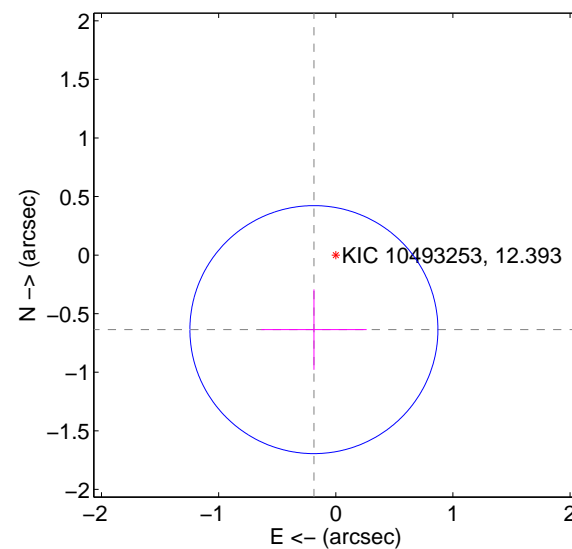
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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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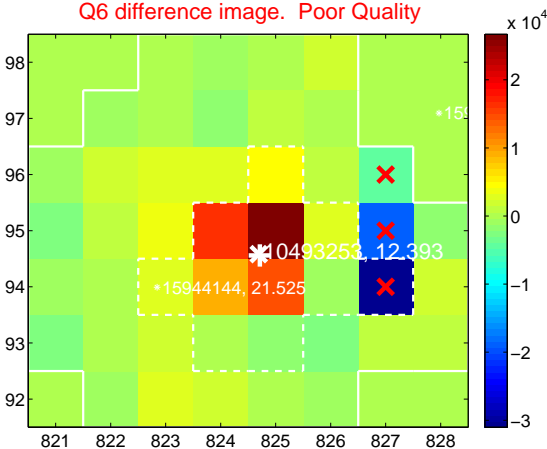
Q5 no difference image



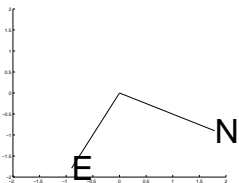
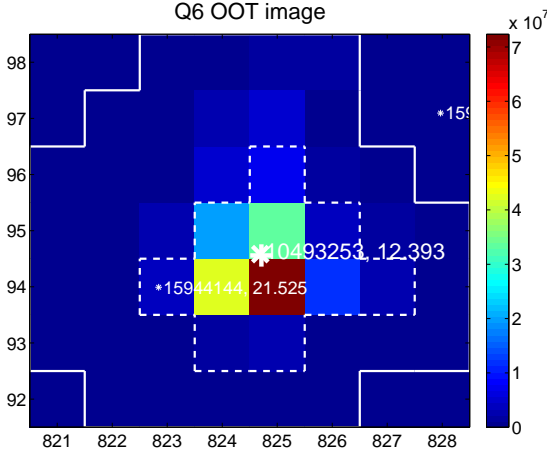
Q5 no OOT image



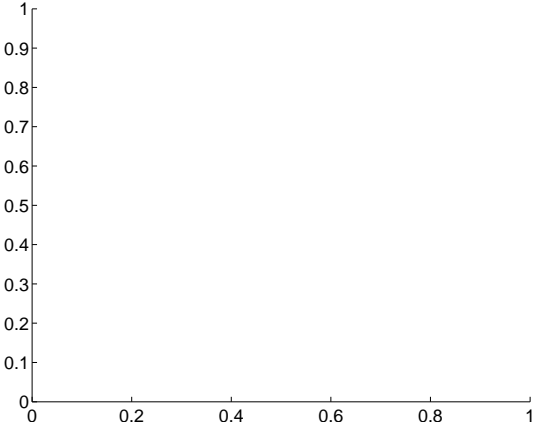
Q6 difference image. Poor Quality



Q6 OOT image



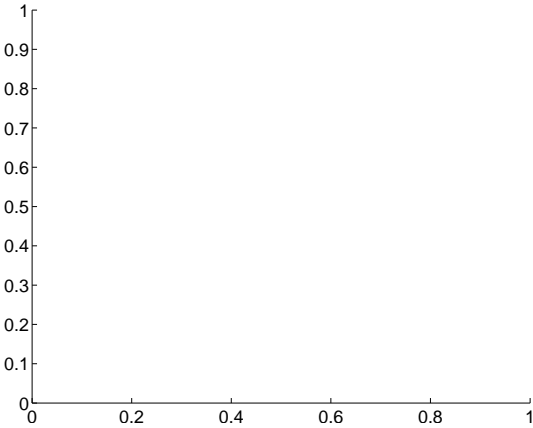
Q7 no difference image



Q7 no OOT image



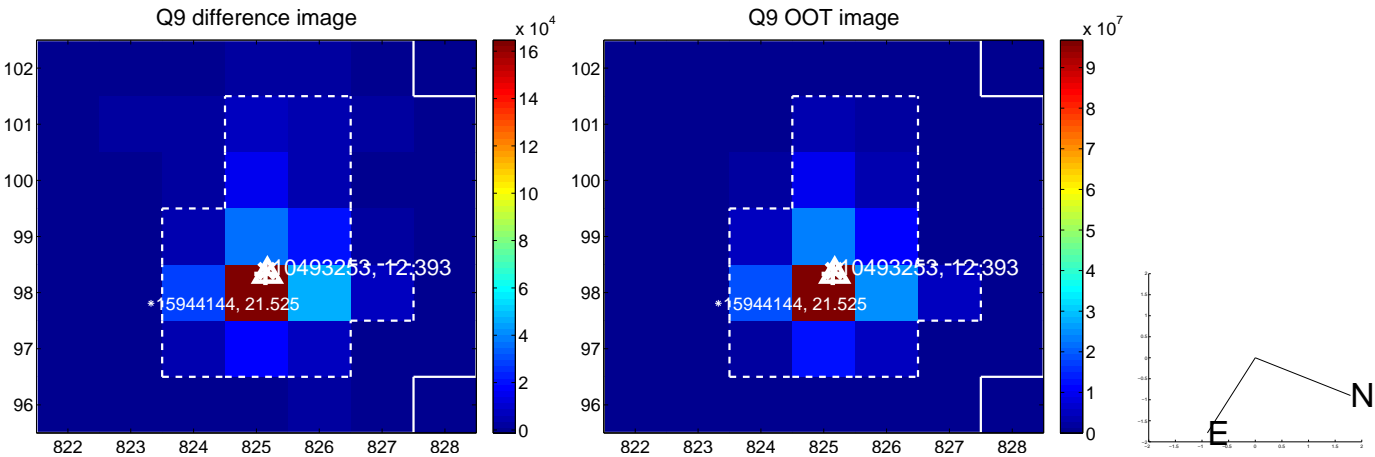
Q8 no difference image



Q8 no OOT image



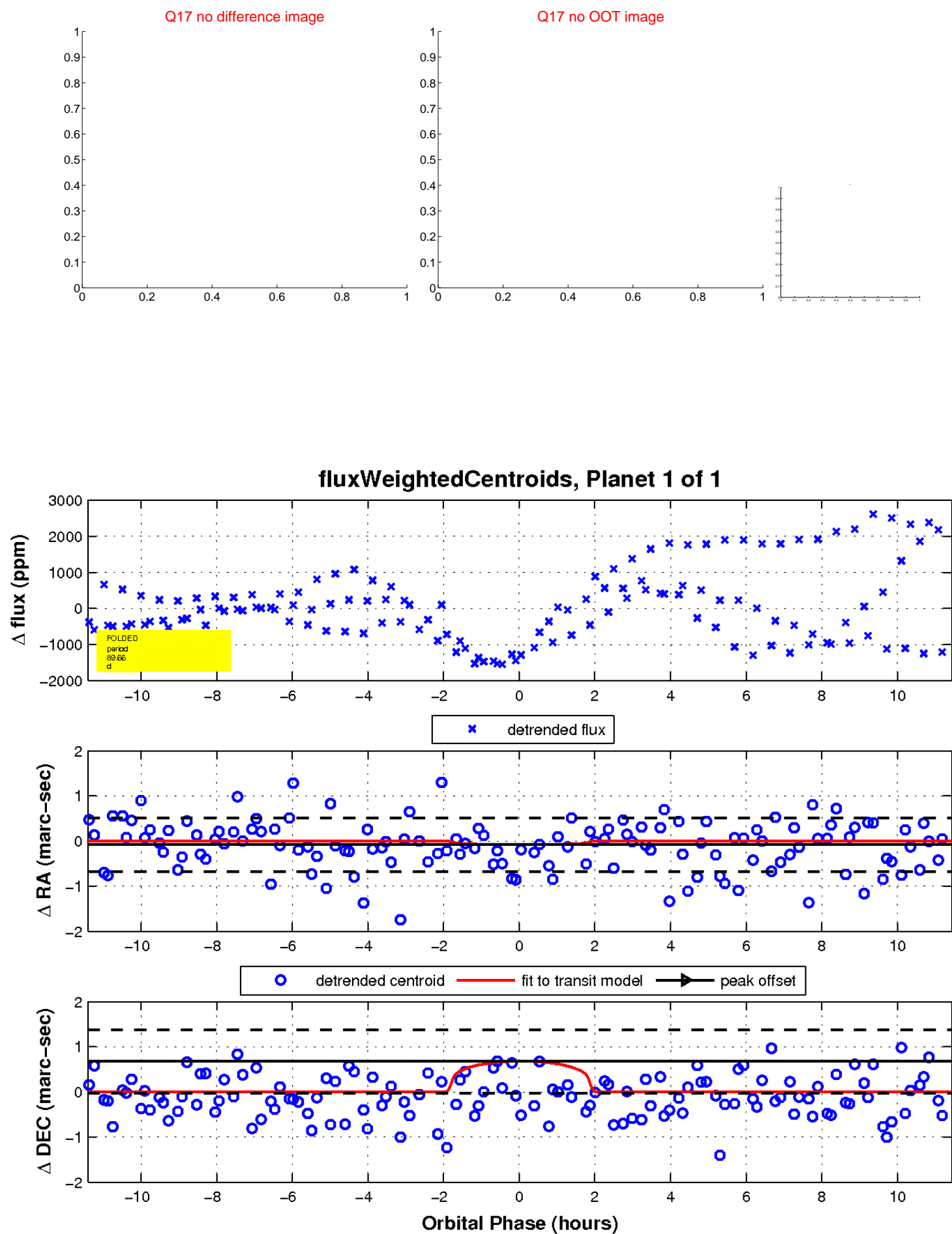
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

