

KIC 010079317

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})
010079317-01	OBS	8194.01	236.257735	153.951406	212.4	3.675	9.1	7.0	2.05	6645	3.68	10.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010079317-01	OBS	FP	0.02	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

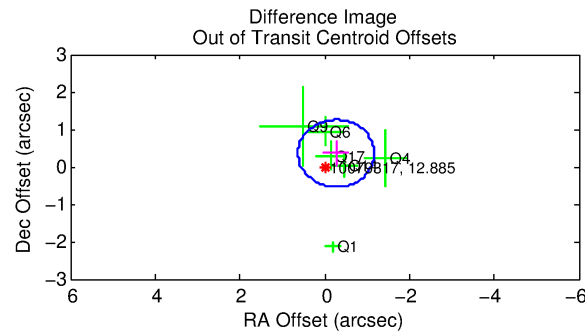
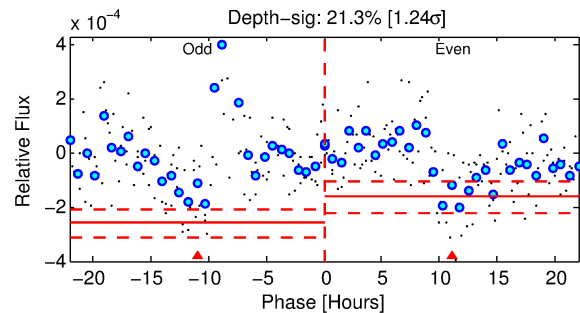
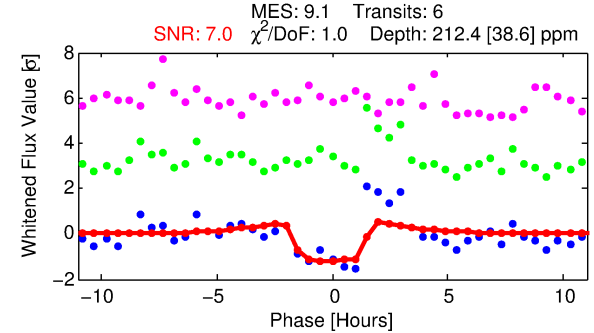
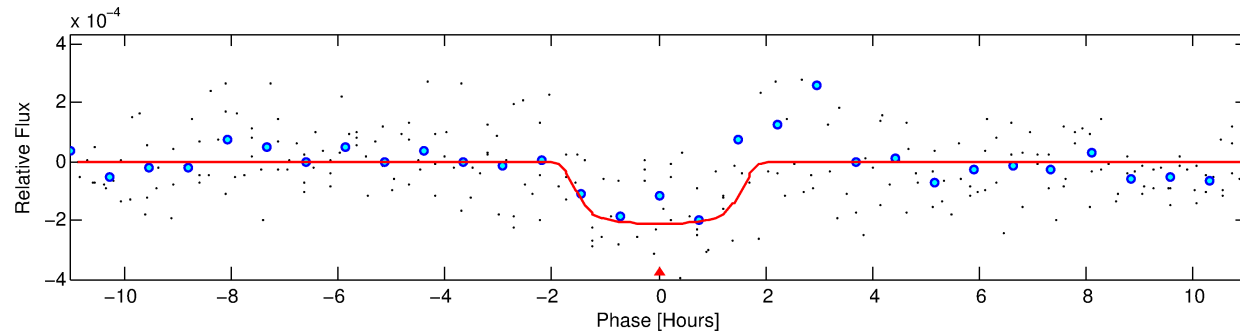
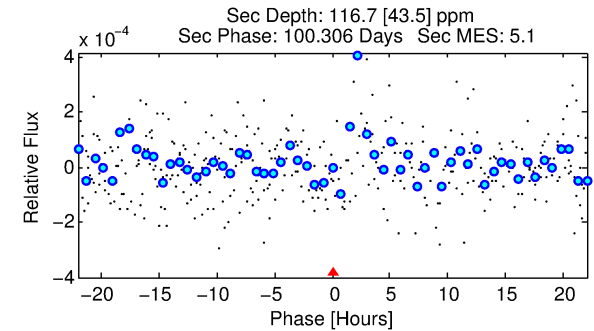
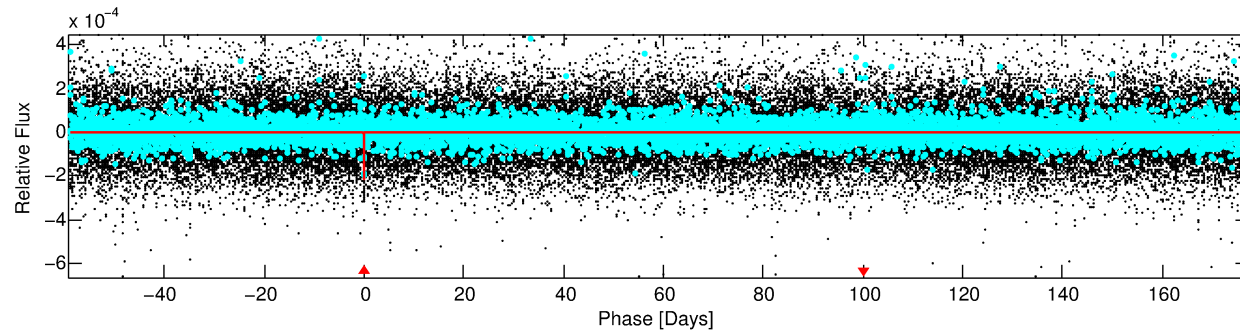
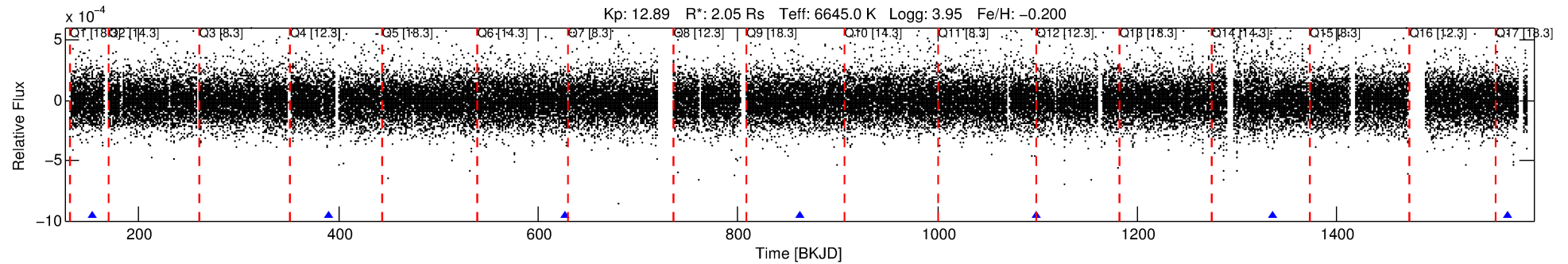
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010079317-01

No Significant Match Found

DV One-Page Summary

KIC: 10079317 Candidate: 1 of 1 Period: 236.258 d



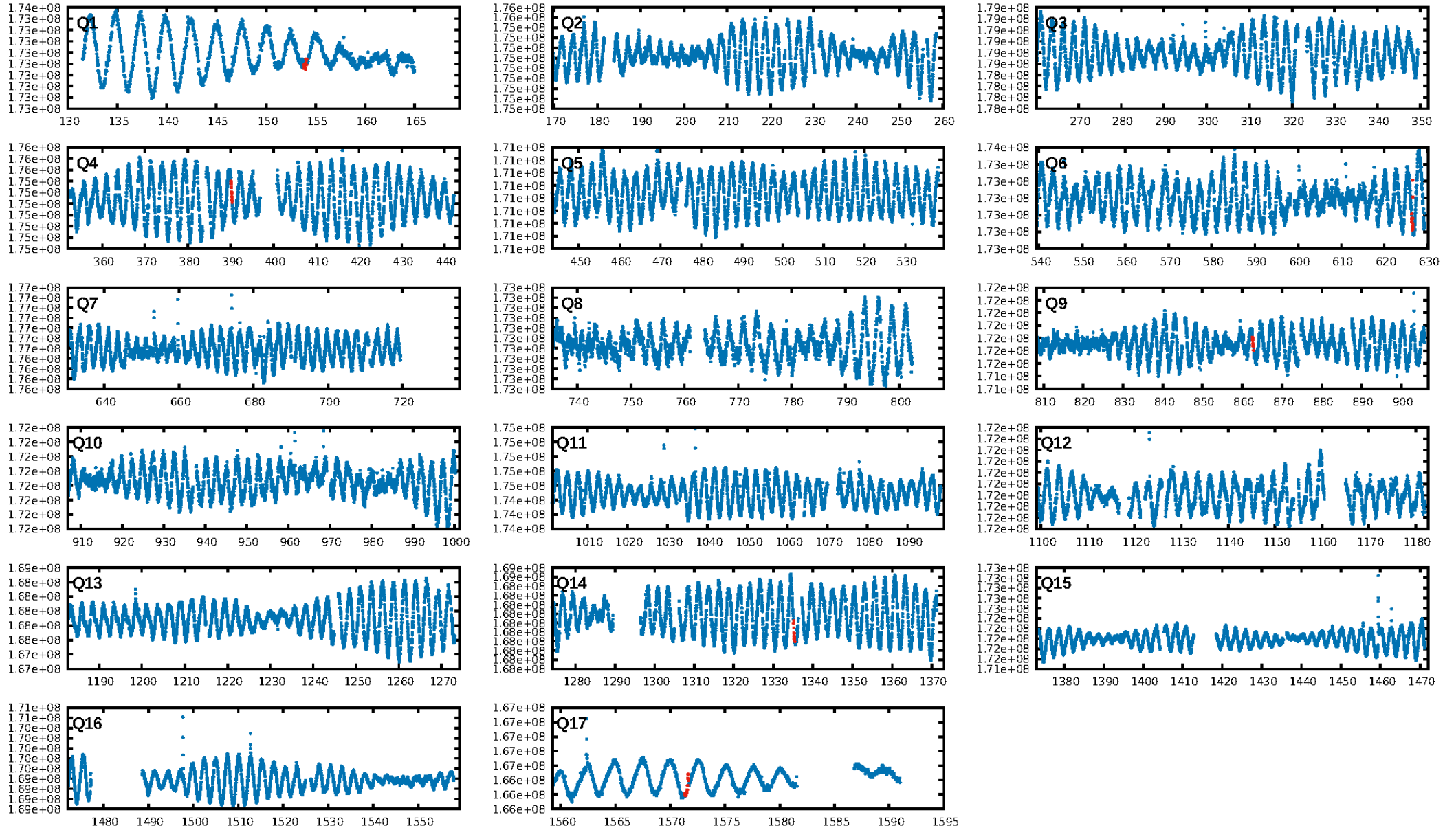
DV Fit Results:

Period = 236.25774 [0.00237] d
Epoch = 153.9514 [0.0081] BKJD
Rp/R* = 0.0164 [0.0030]
a/R* = 179.52 [145.94]
b = 0.95 [0.09]
Seff = 10.64 [5.03]
Teq = 460 [54] K
Rp = 3.68 [1.31] Re
a = 0.8324 [0.2409] AU
Ag = 3286.75 [2270.03] [1.45σ]
Teffp = 5391 [717] K [6.86σ]

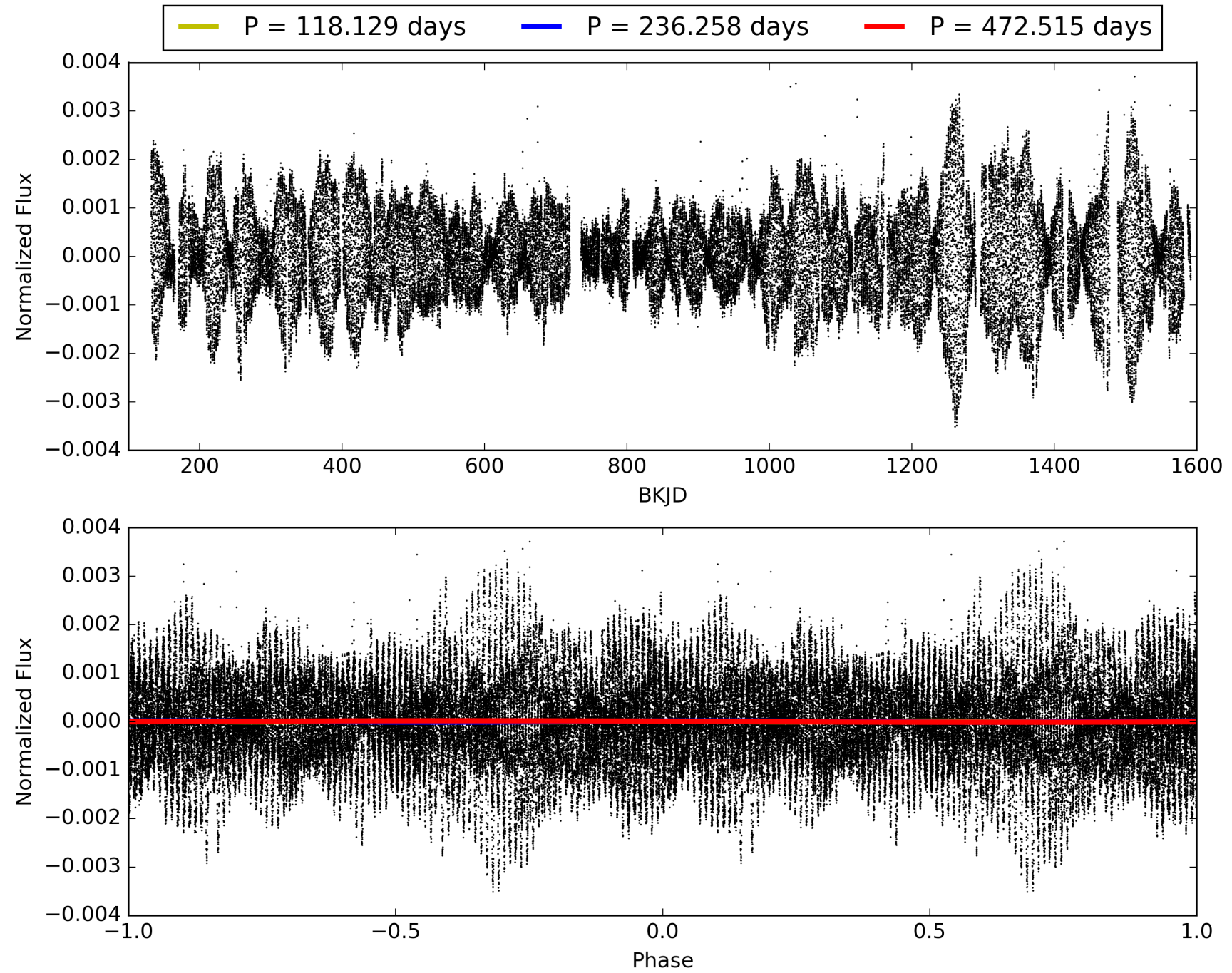
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.9%
ModelChiSquareGof-sig: 85.0%
Bootstrap-pfa: 1.03e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.184
Centroid-sig: 70.9%
Centroid-so: 0.337 arcsec [0.33σ]
OotOffset-rm: 0.444 arcsec [1.48σ]
KicOffset-rm: 0.404 arcsec [1.08σ]
OotOffset-st: 2/0/1/3 [6]
KicOffset-st: 2/0/1/3 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 010079317-01, PDC Light Curves

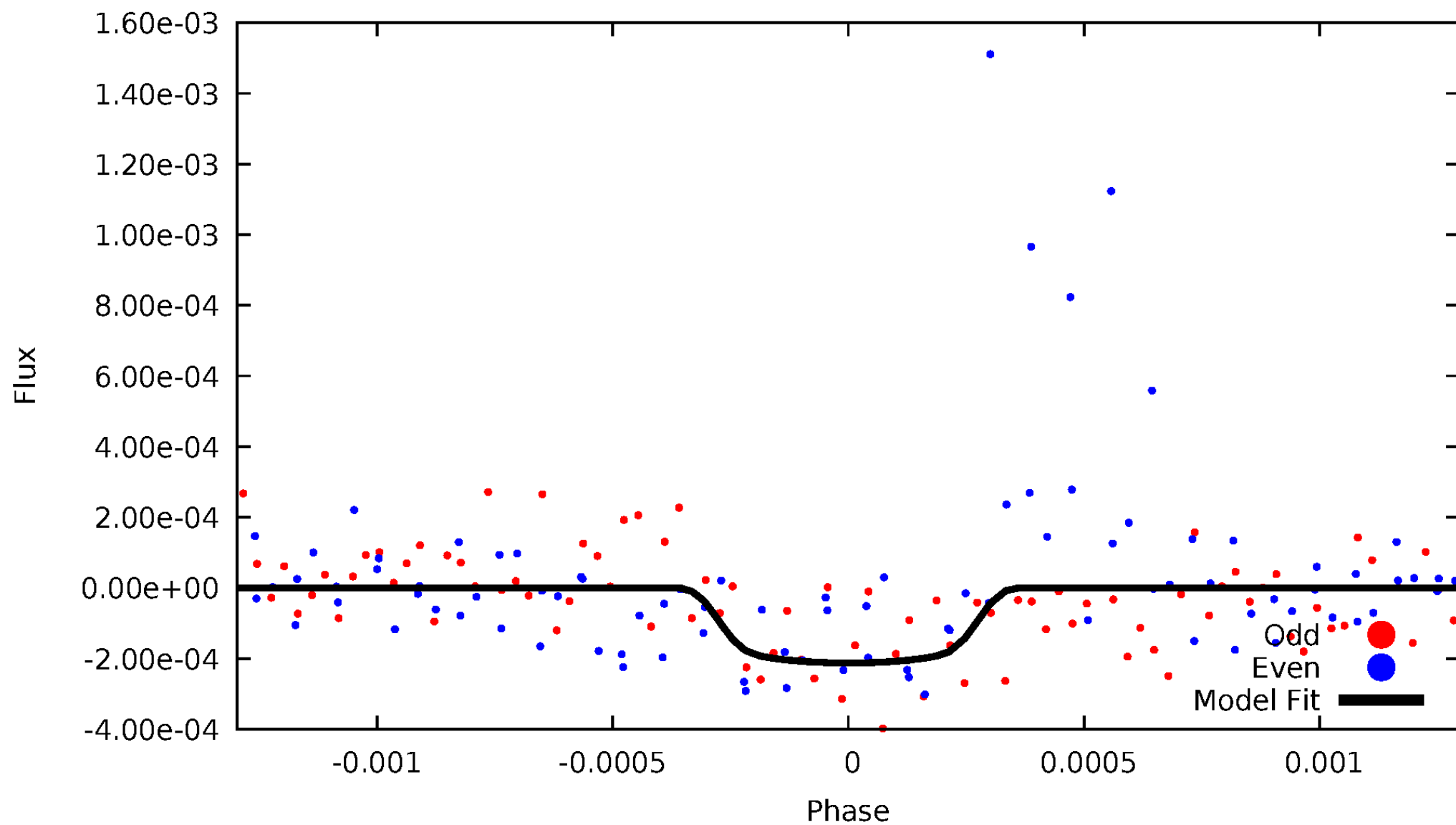


TCE 010079317-01



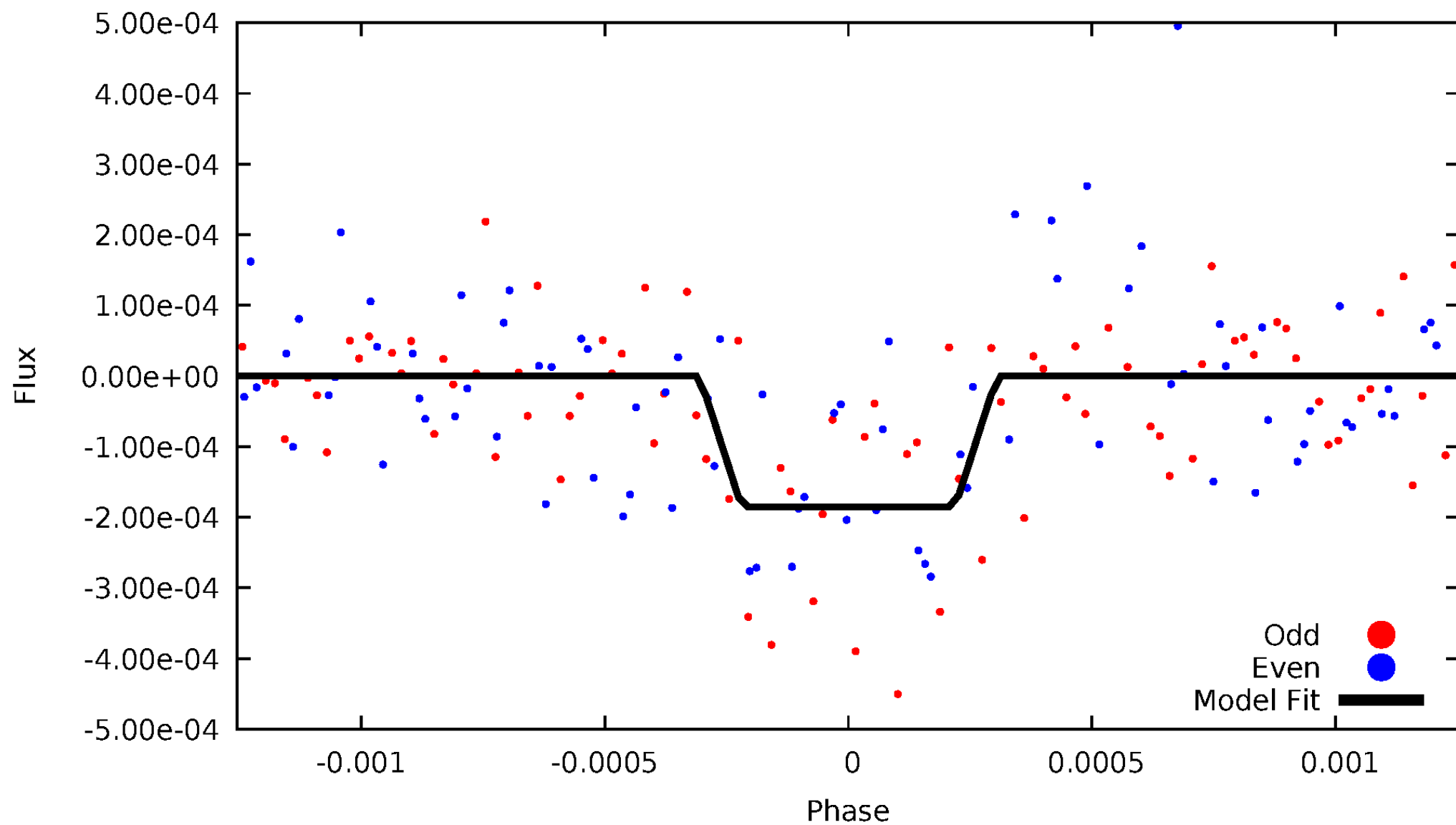
DV Odd/Even

TCE 010079317-01



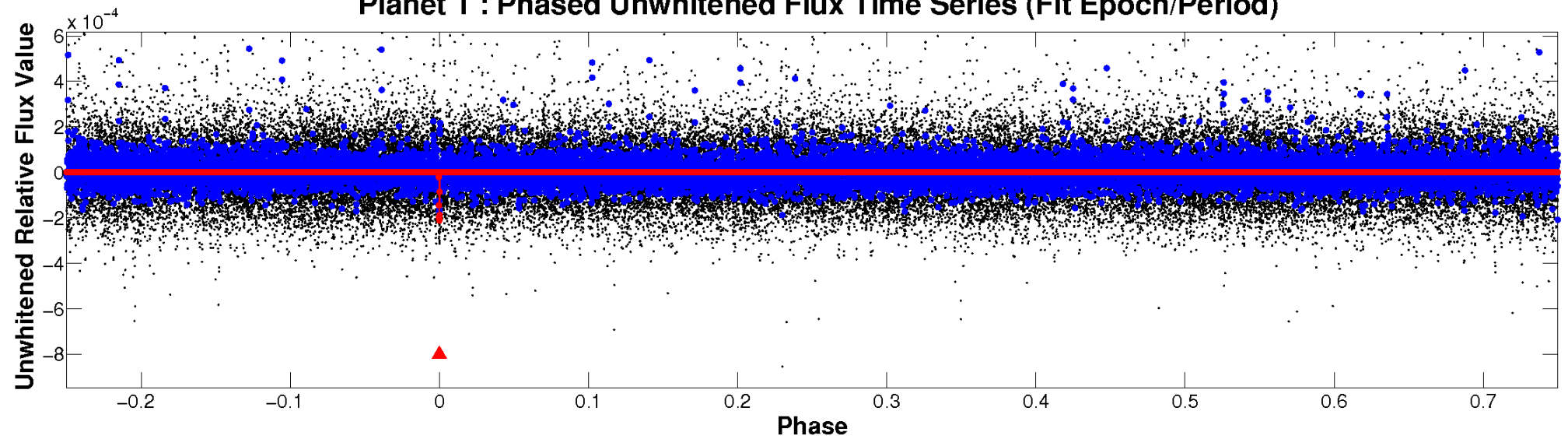
ALT Odd/Even

TCE 010079317-01

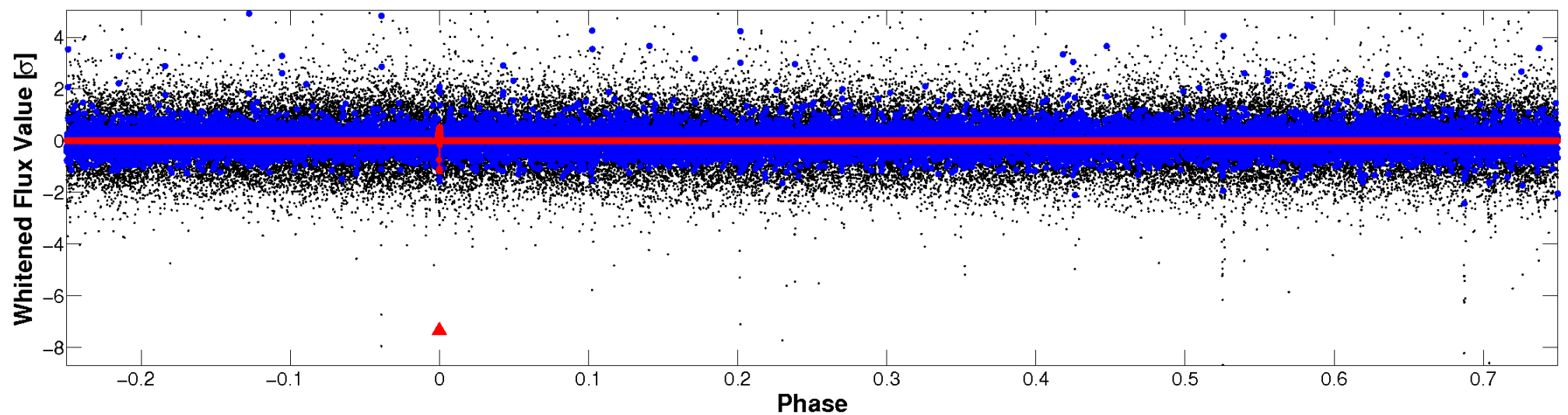


Non-Whitened Vs. Whitened Light Curve

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

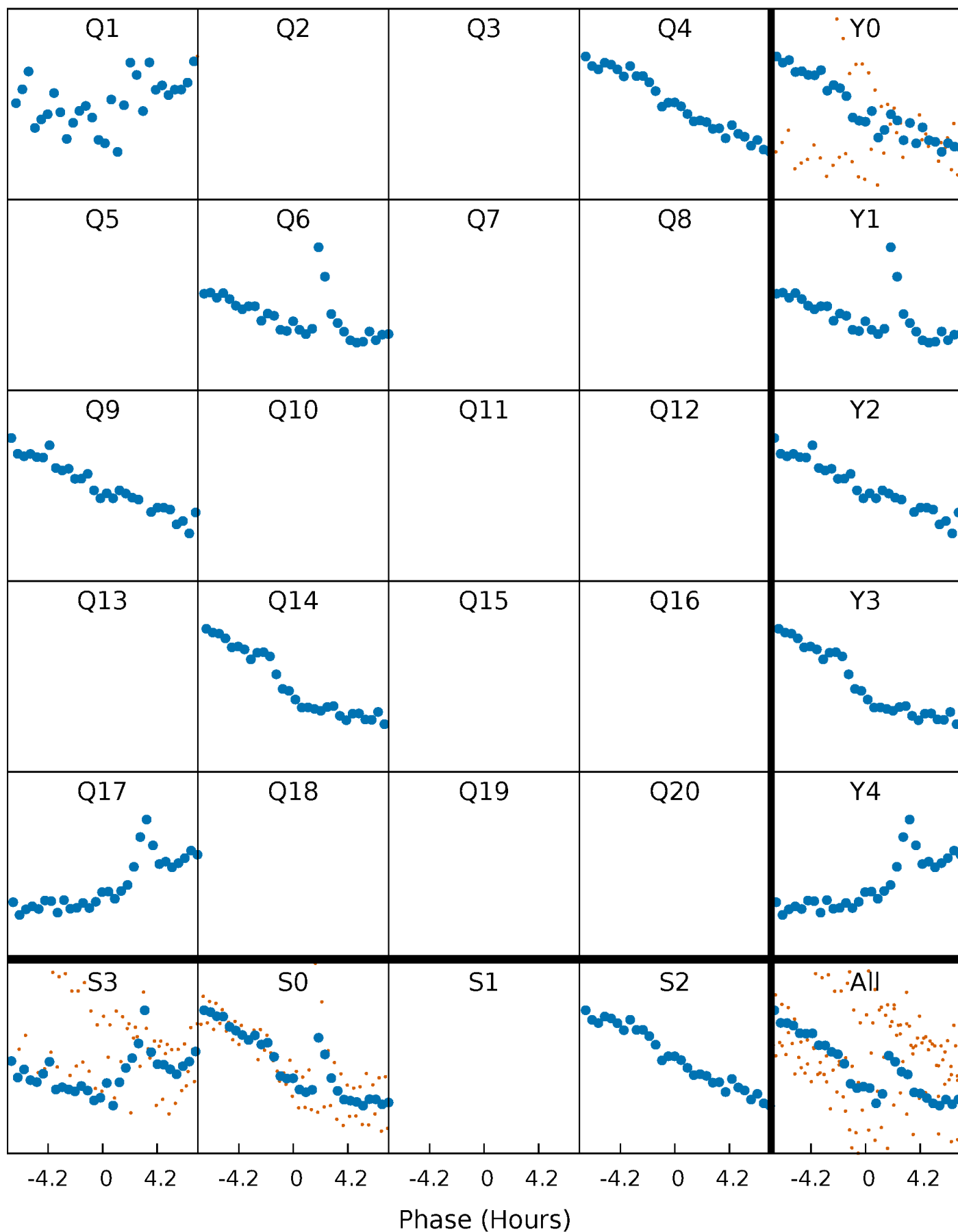


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



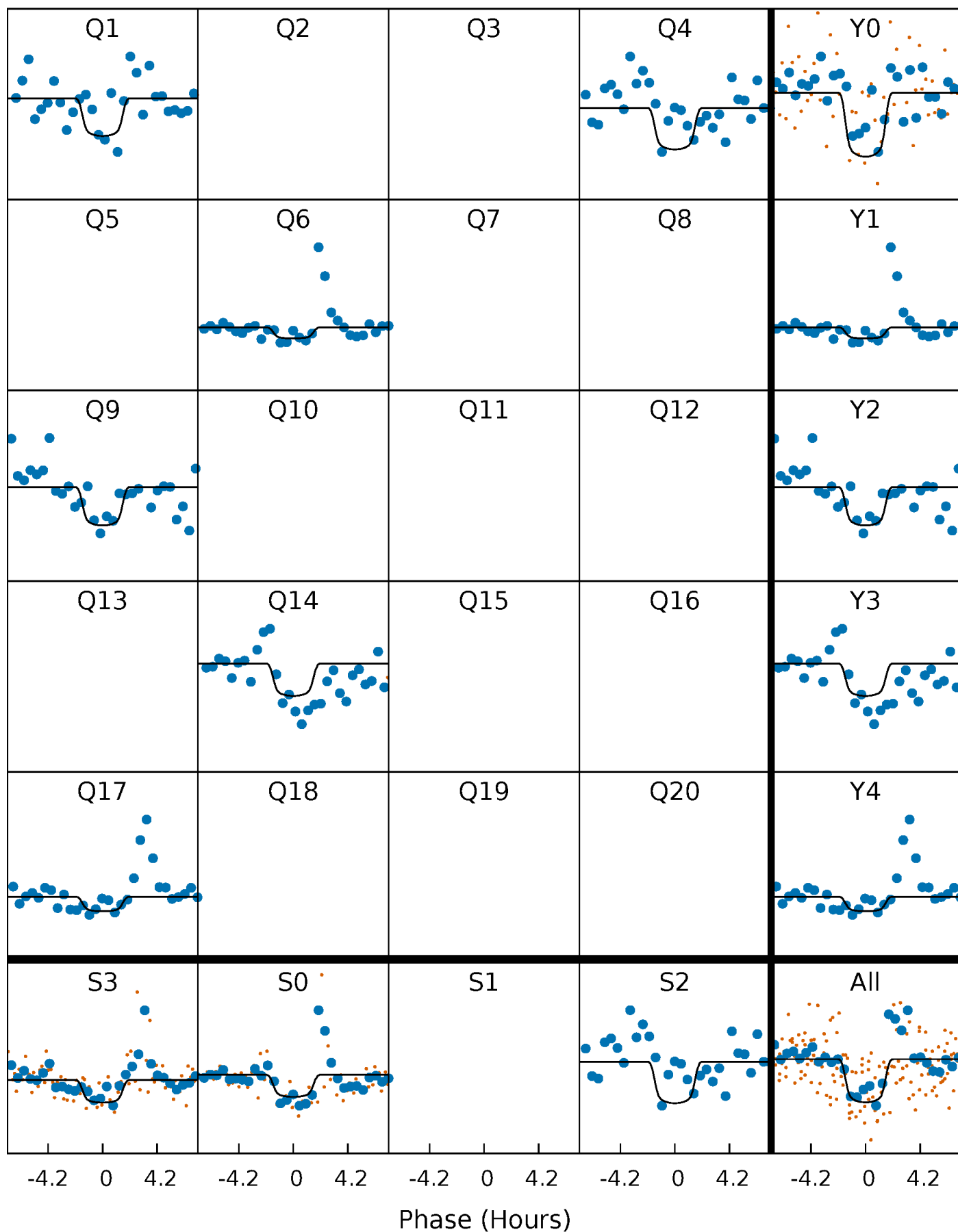
PDC Quarter-Phased Transit Curves

TCE 010079317-01 P=236.257735 Days $T_0=153.951406$ (BKJD)



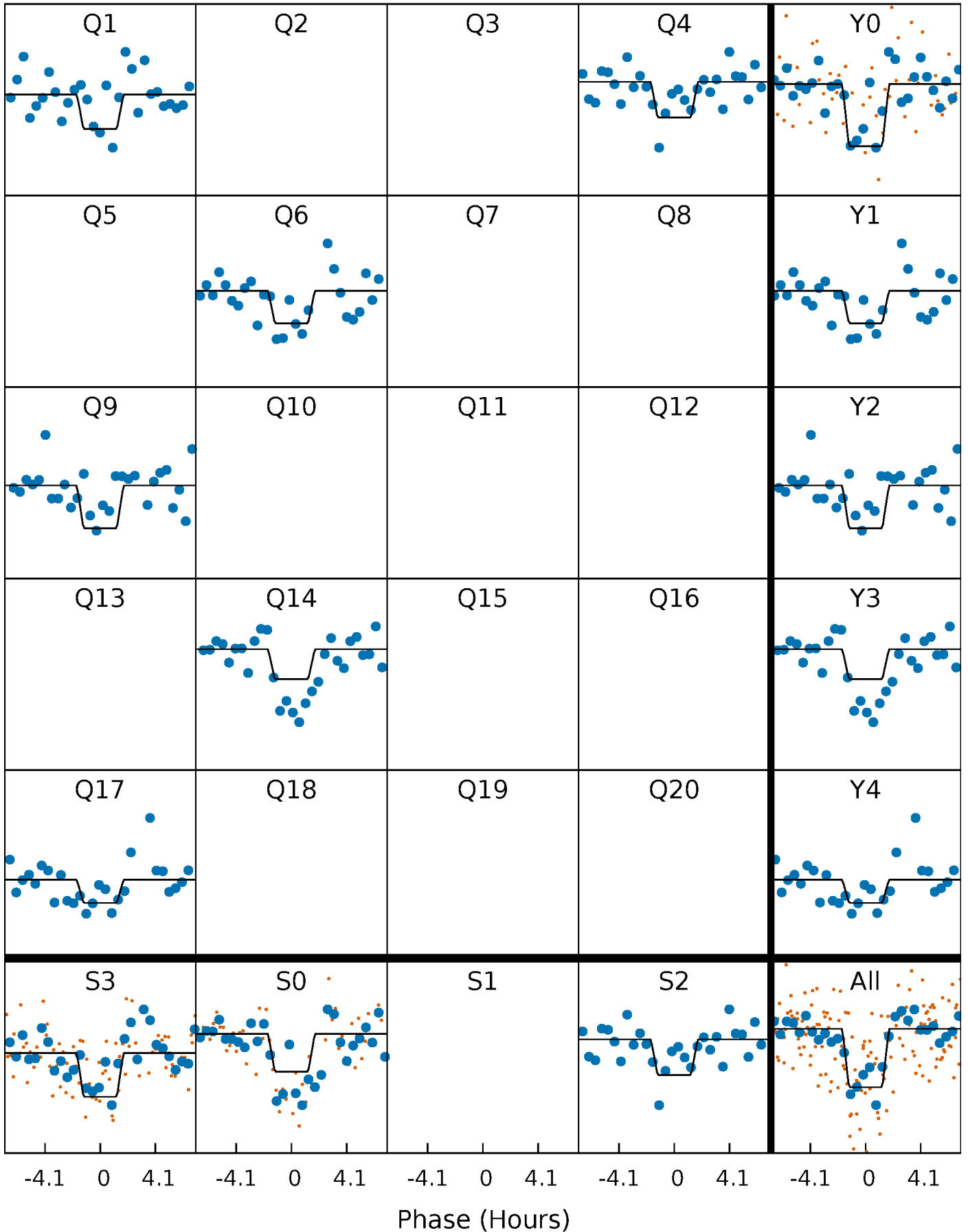
DV Quarter-Phased Transit Curves

TCE 010079317-01 P=236.257735 Days $T_0=153.951406$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

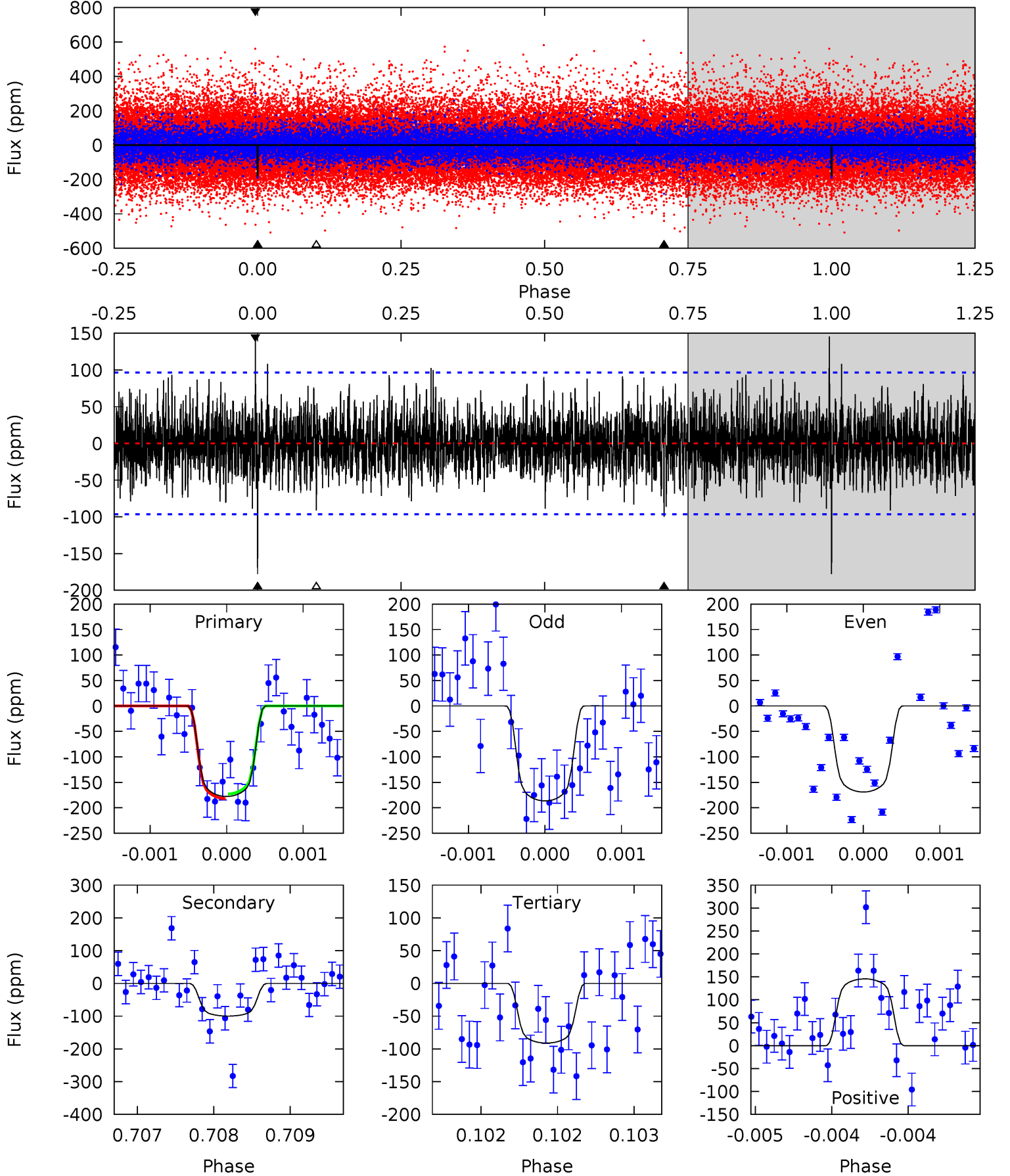
TCE 010079317-01 P=236.256728 Days $T_0=153.949785$ (BKJD)



DV Model-Shift Uniqueness Test

010079317-01, P = 236.257735 Days, E = 153.951406 Days

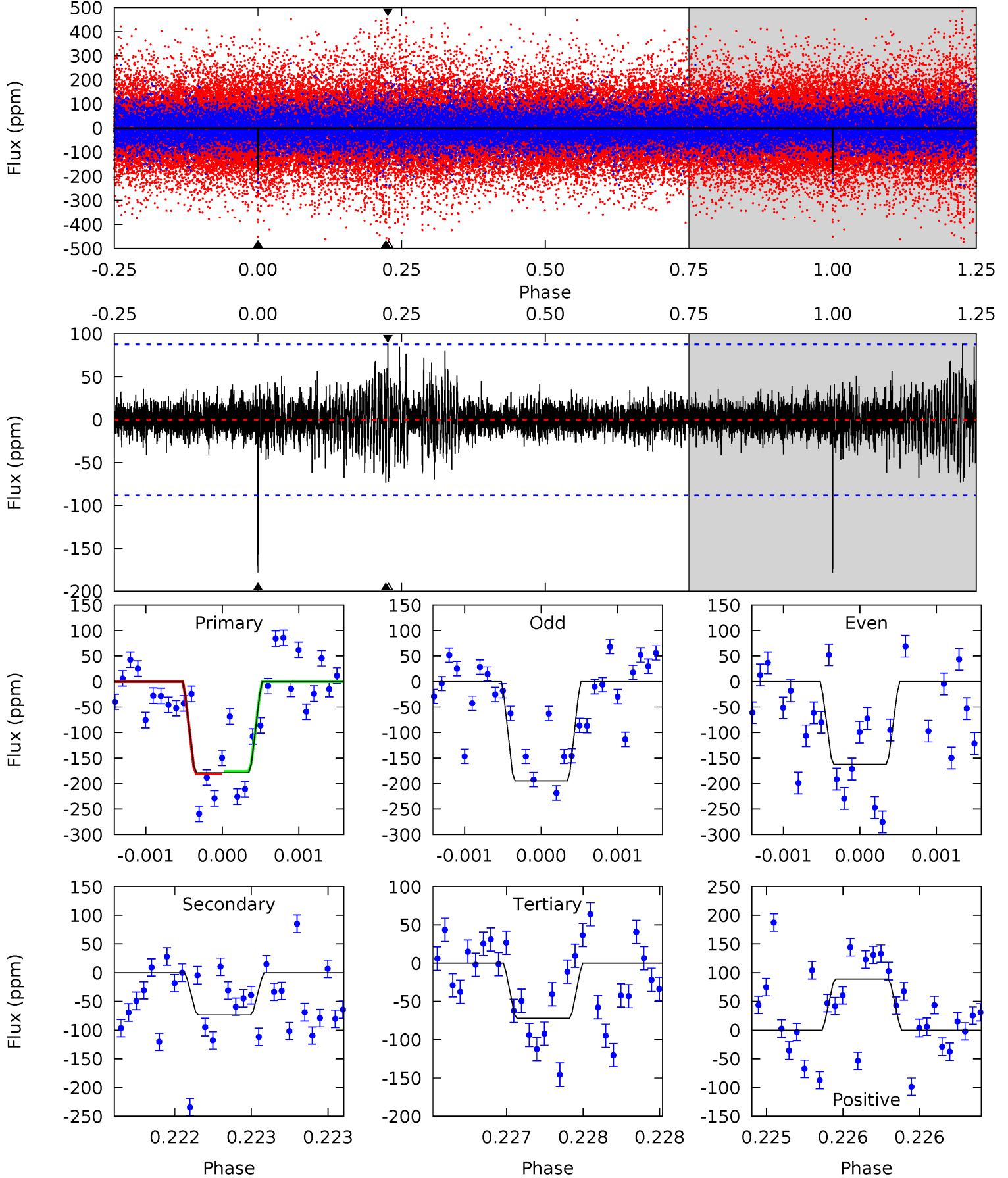
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.70	5.20	8.31	5.51	3.38	1.61	4.94	1.83	0.50	-2.61	0.50	1.09	0.45	0.26



Alt Model-Shift Uniqueness Test

010079317-01, P = 236.256728 Days, E = 153.949785 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.61	4.53	5.60	5.54	3.43	0.99	6.69	5.62	0.09	-0.98	1.00	1.11	0.33	0.15



Stellar Parameters For KIC 010079317

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6645^{+167}_{-200}	$3.952^{+0.266}_{-0.114}$	$-0.200^{+0.300}_{-0.250}$	$2.054^{+0.421}_{-0.632}$	$1.382^{+0.198}_{-0.242}$	$0.225^{+0.340}_{-0.088}$
	+3%/-3%	+7%/-3%	+150%/-125%	+20%/-31%	+14%/-18%	+151%/-39%
Source	PHO1	FLK73	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 010079317-01 / KOI 8194.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-100 ± 18	$3.50^{+0.84}_{-0.76}$	633^{+41}_{-50}	5232^{+530}_{-419}	3078^{+2011}_{-1074}
Alt.	-73 ± 16	$2.92^{+0.85}_{-0.78}$	635^{+39}_{-52}	5304^{+749}_{-496}	3317^{+2690}_{-1424}

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 $A_{\text{obs}} \gg 1.0$

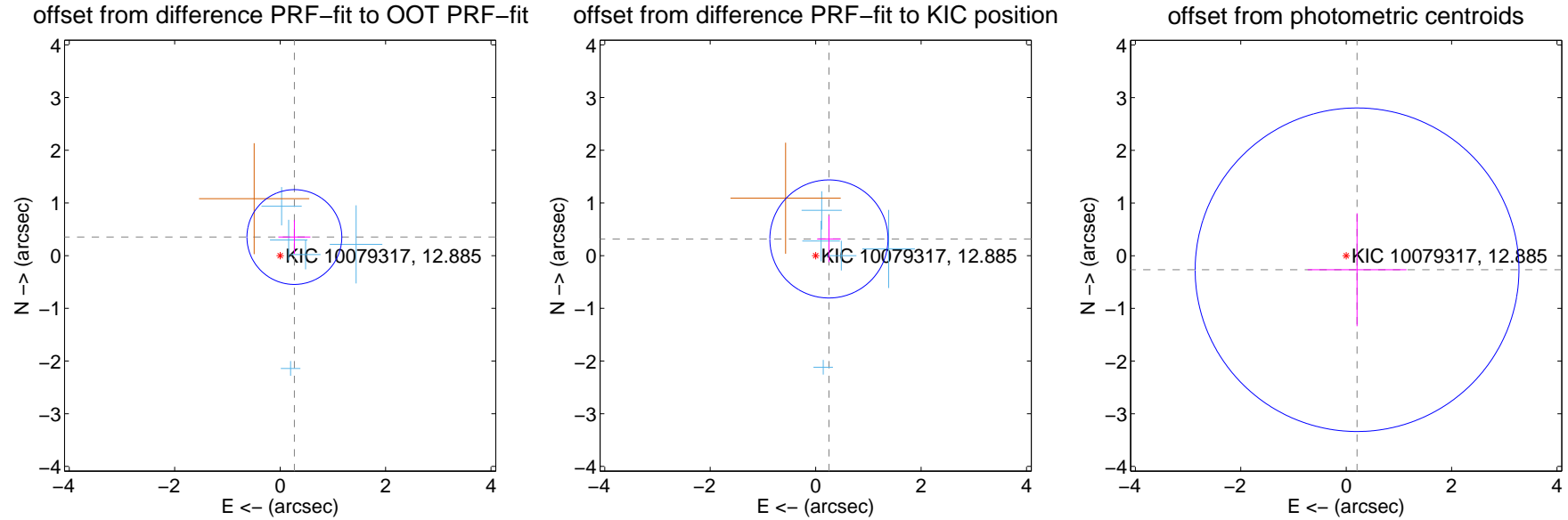
DV Centroid Data

Supplemental centroid analysis for 010079317-01. Kepler magnitude: 12.88. Transit SNR 6.97

There are 5 quarters with good PRF difference image offsets

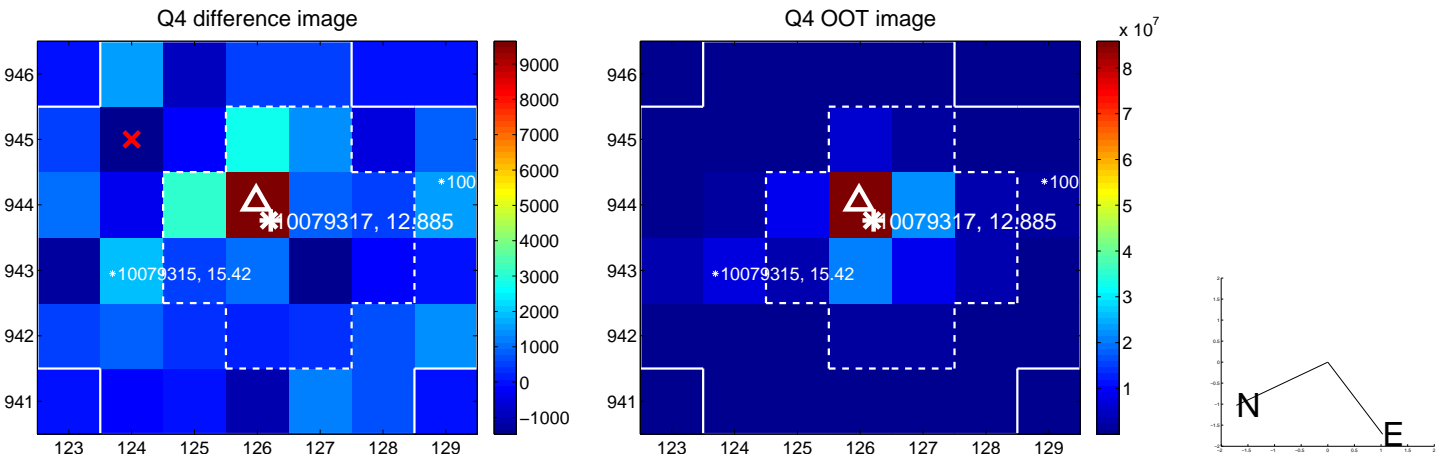
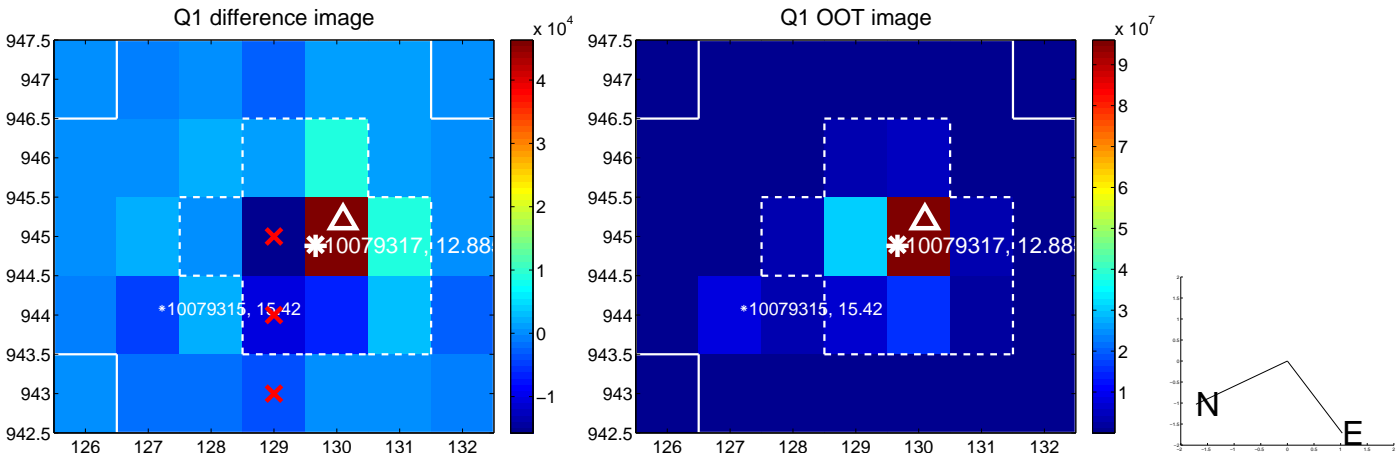
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.444 ± 0.300	1.48	-0.270 ± 0.303	0.353 ± 0.319
PRF-fit source offset from KIC position	0.404 ± 0.373	1.08	-0.252 ± 0.224	0.317 ± 0.437
photometric centroid source offset	0.34 ± 1.02	0.33	-0.21 ± 0.94	-0.27 ± 1.07

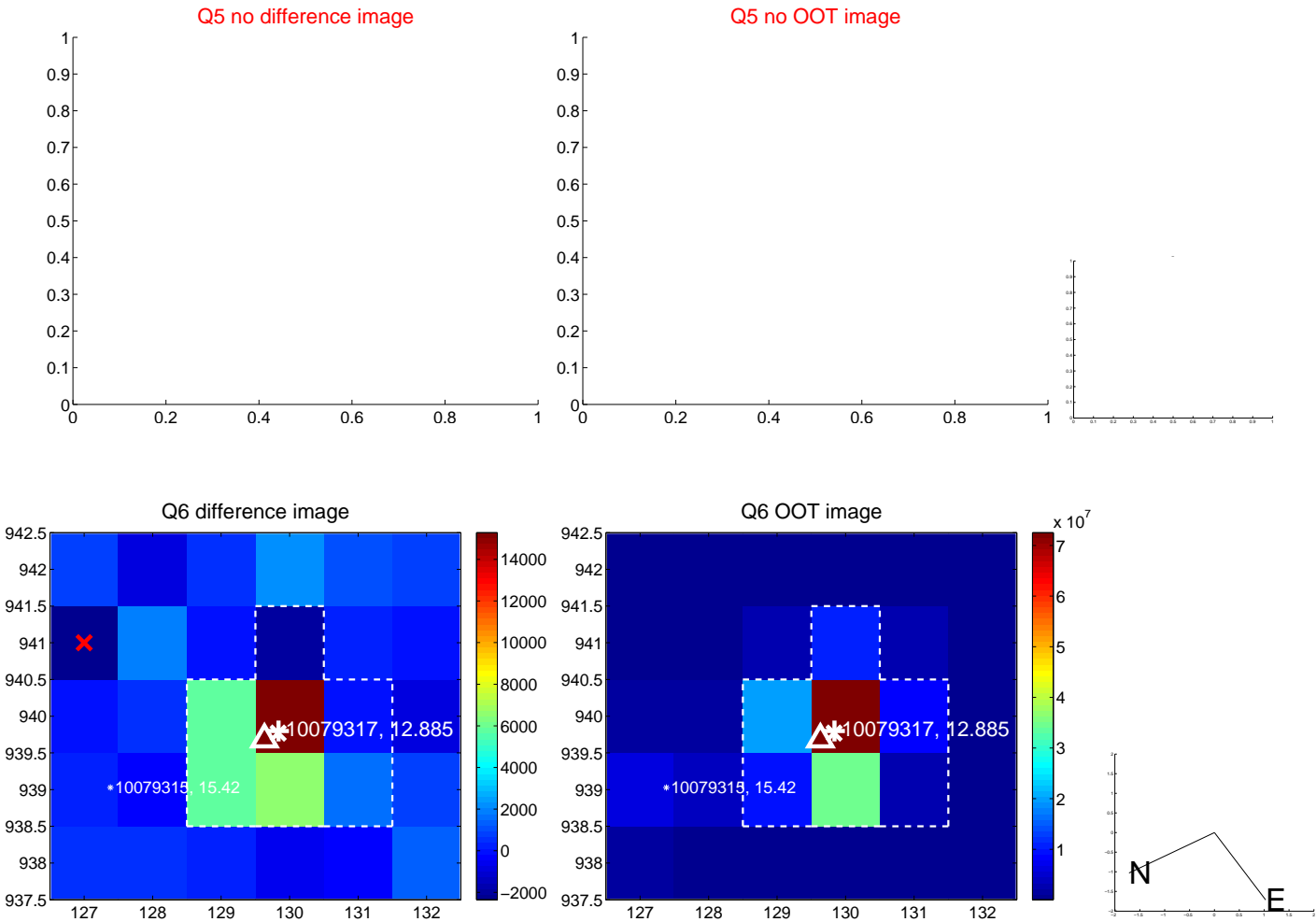


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

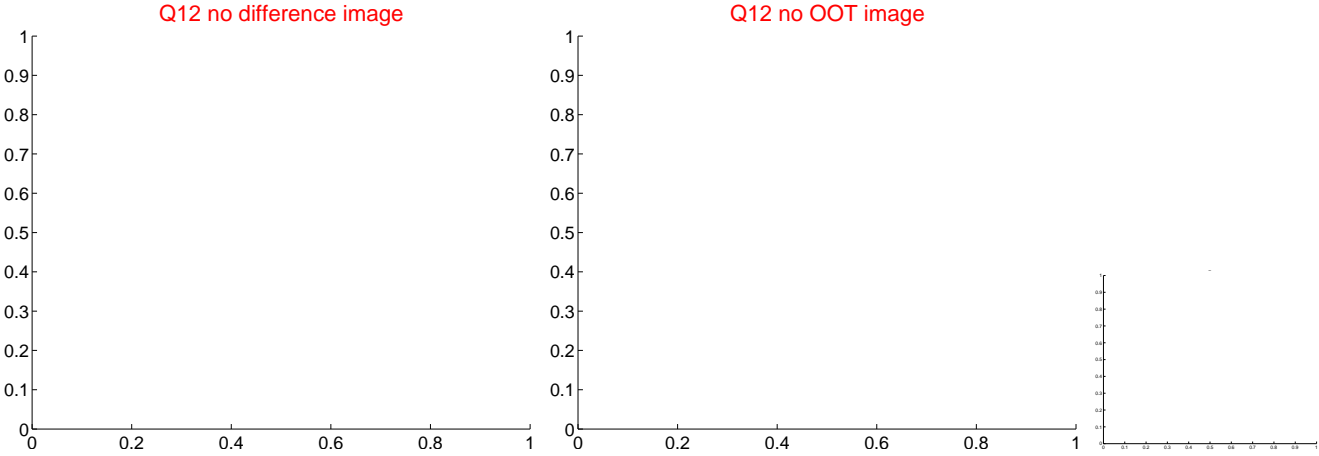
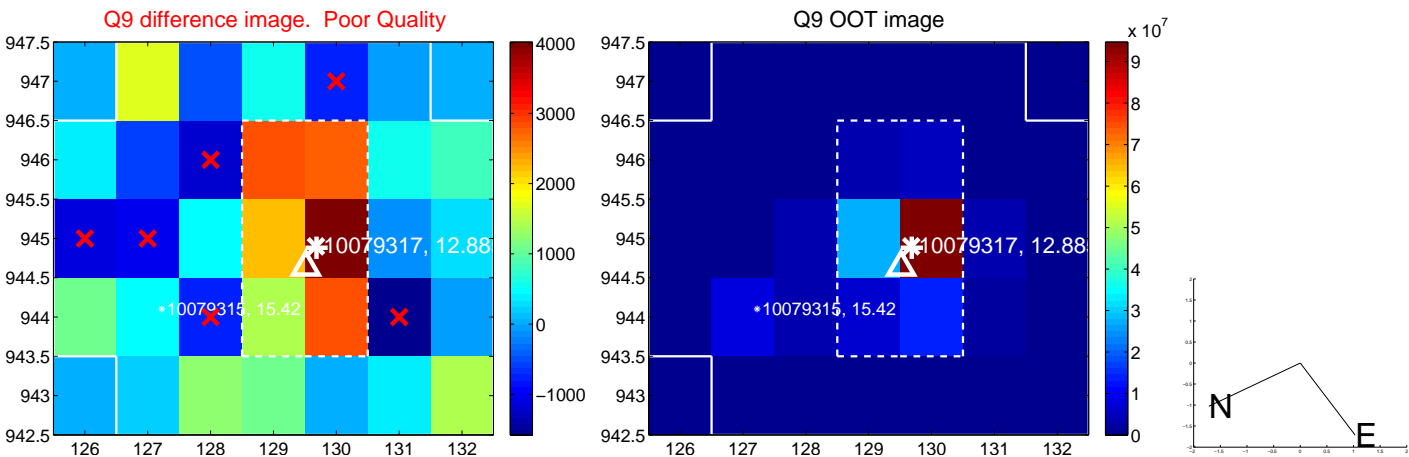
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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

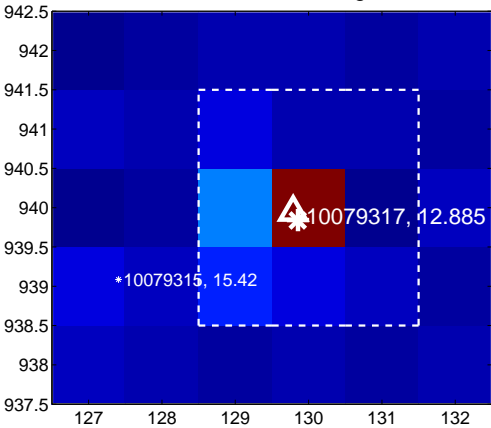
Q13 no difference image



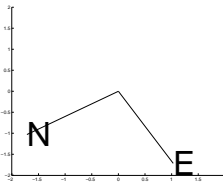
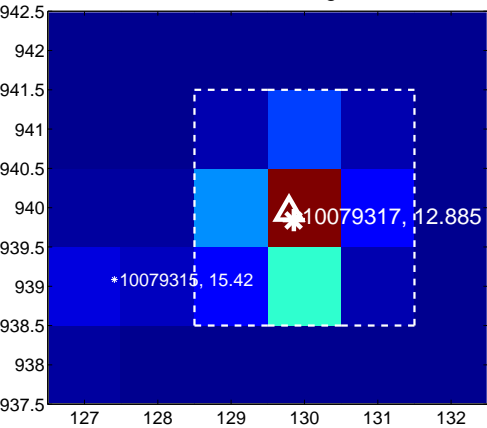
Q13 no OOT image



Q14 difference image



Q14 OOT image



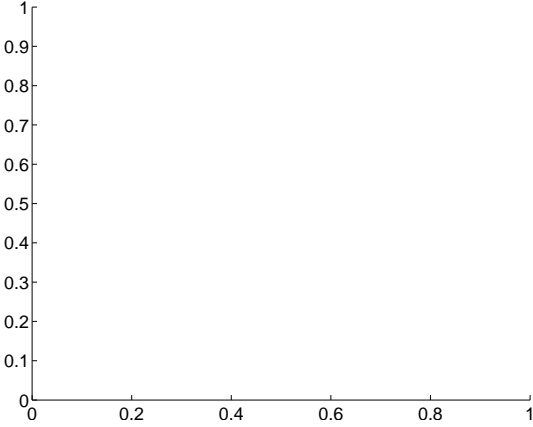
Q15 no difference image



Q15 no OOT image



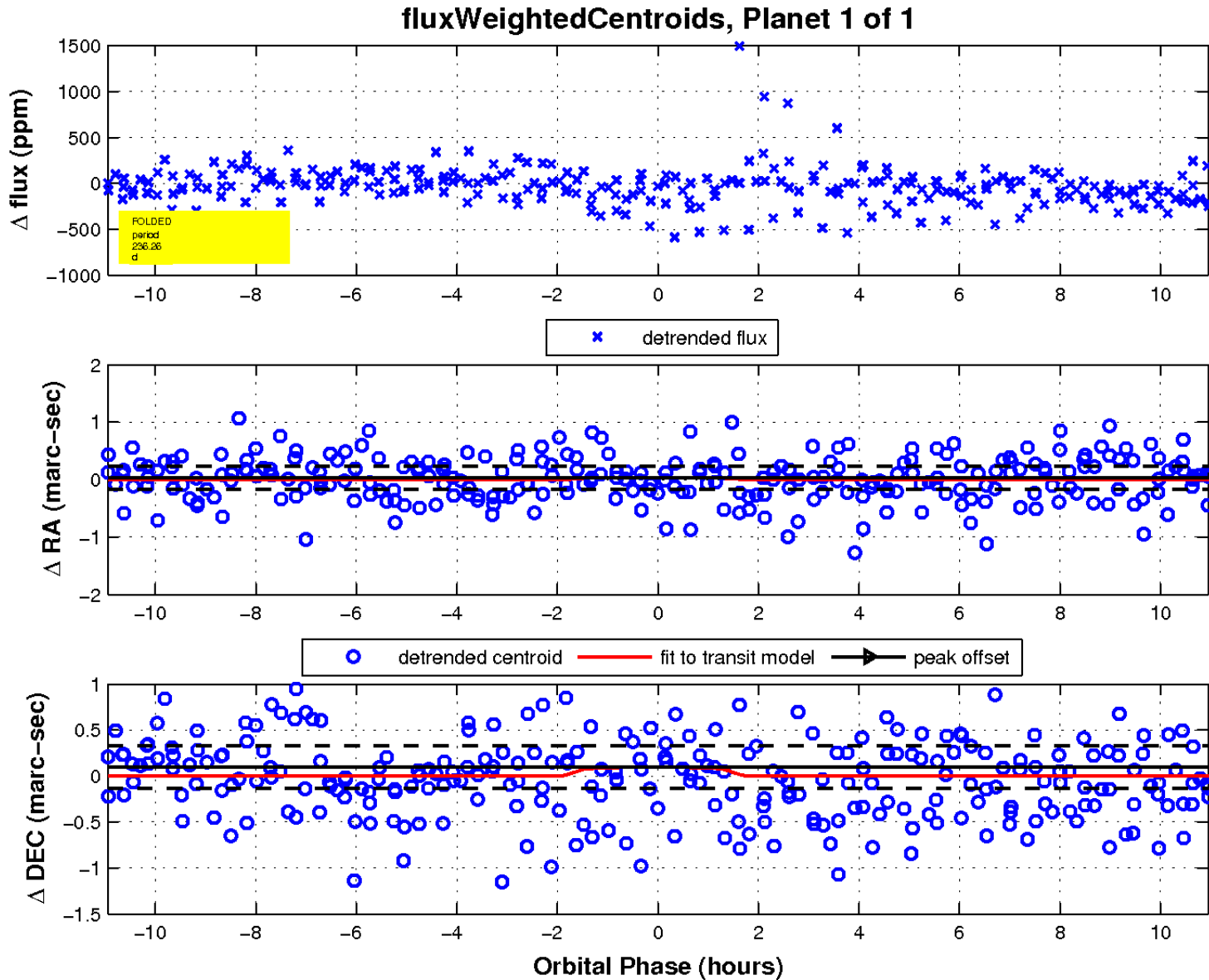
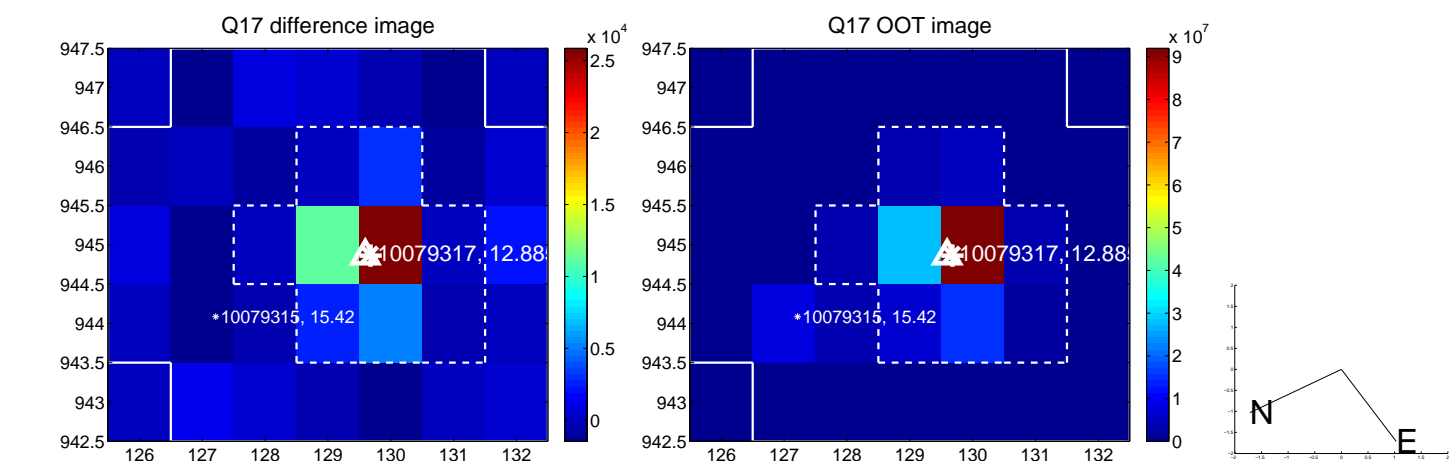
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

