

KIC 010203349

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})
010203349-01	OBS	2212.01	17.146471	140.661381	430.6	4.240	24.5	26.9	1.41	5559	3.61	102.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010203349-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

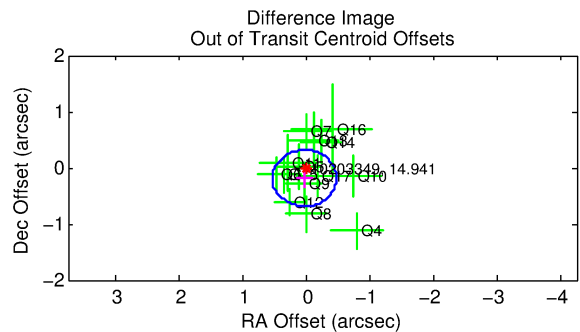
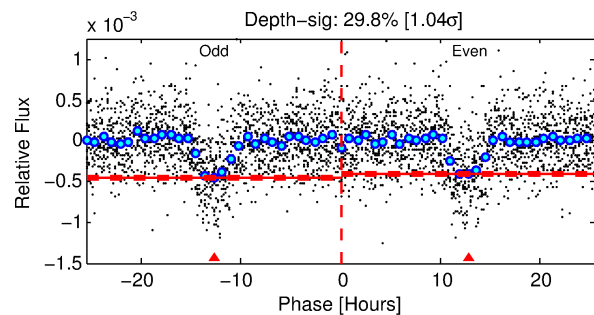
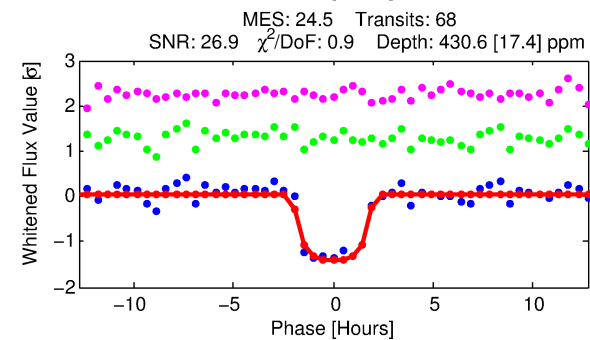
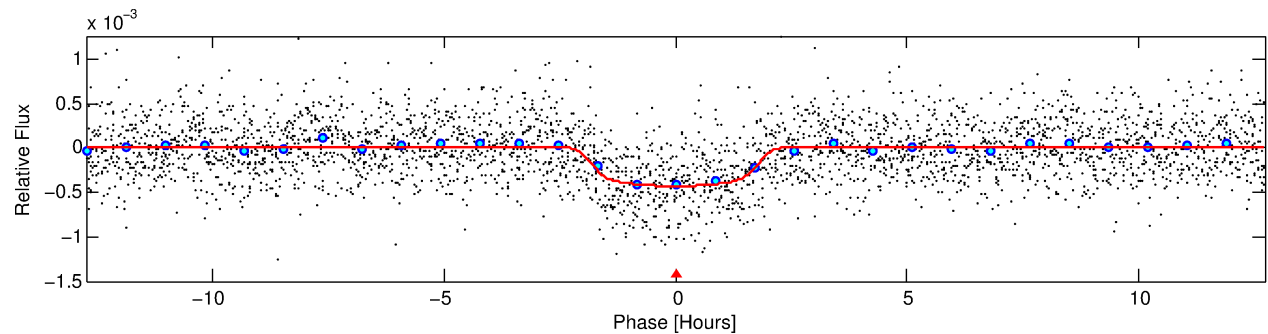
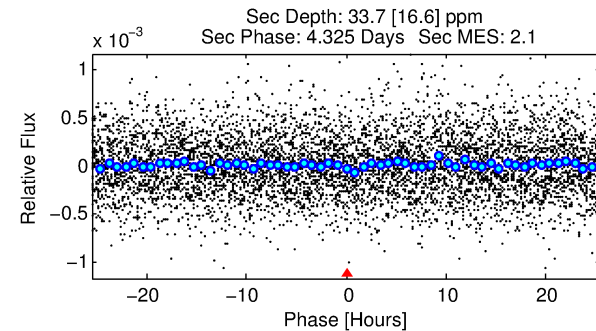
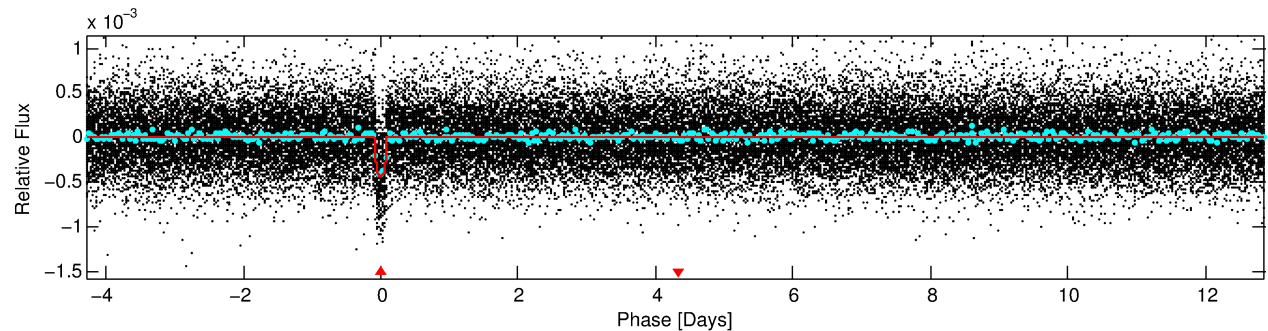
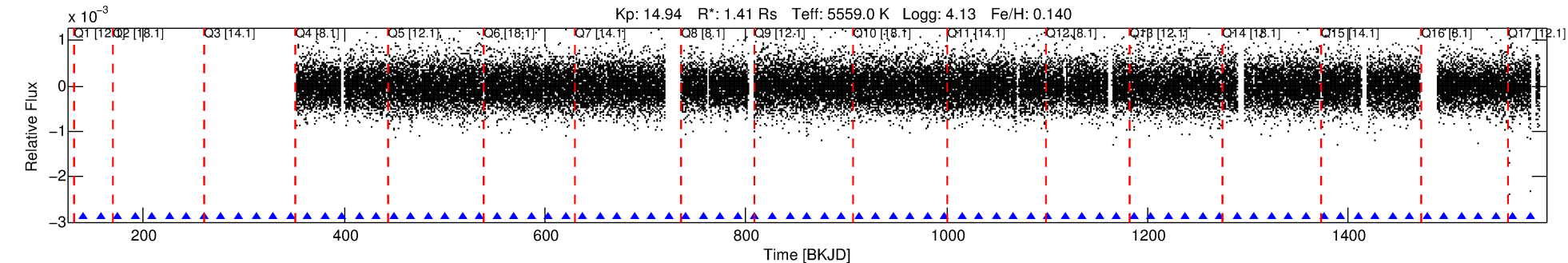
Ephemeris Match Information For 010203349-01

No Significant Match Found

DV One-Page Summary

KIC: 10203349 Candidate: 1 of 1 Period: 17.146 d

KOI: K02212.01 Corr: 0.952



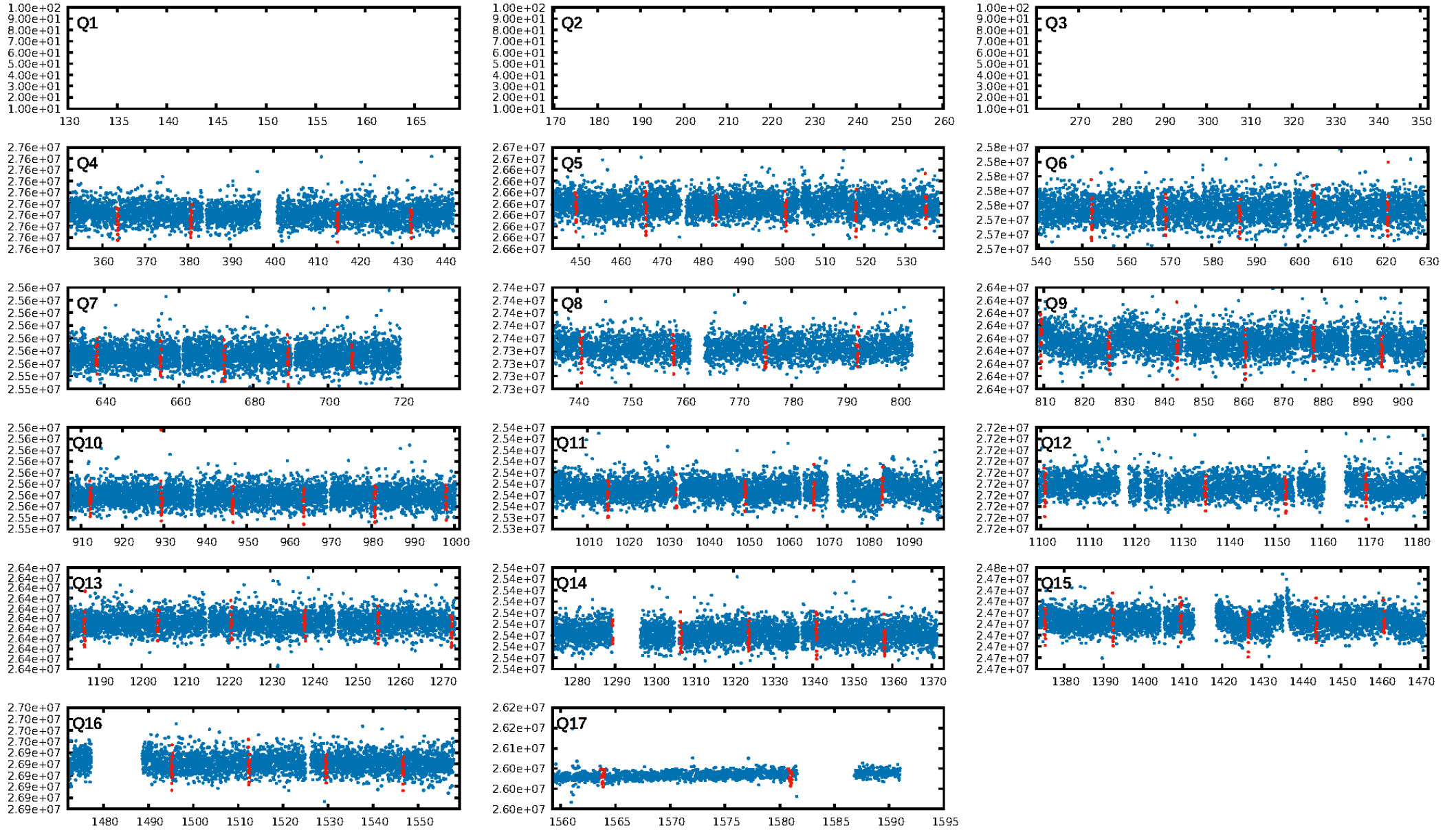
DV Fit Results:

Period = 17.14647 [0.00009] d
Epoch = 140.6614 [0.0045] BKJD
Rp/R* = 0.0234 [0.0017]
a/R* = 13.67 [4.17]
b = 0.92 [0.05]
Seff = 102.46 [37.07]
Teff = 811 [73] K
Rp = 3.61 [0.87] Re
a = 0.1290 [0.0287] AU
Ag = 23.68 [14.79] [1.53σ]
Teffp = 2767 [357] K [5.37σ]

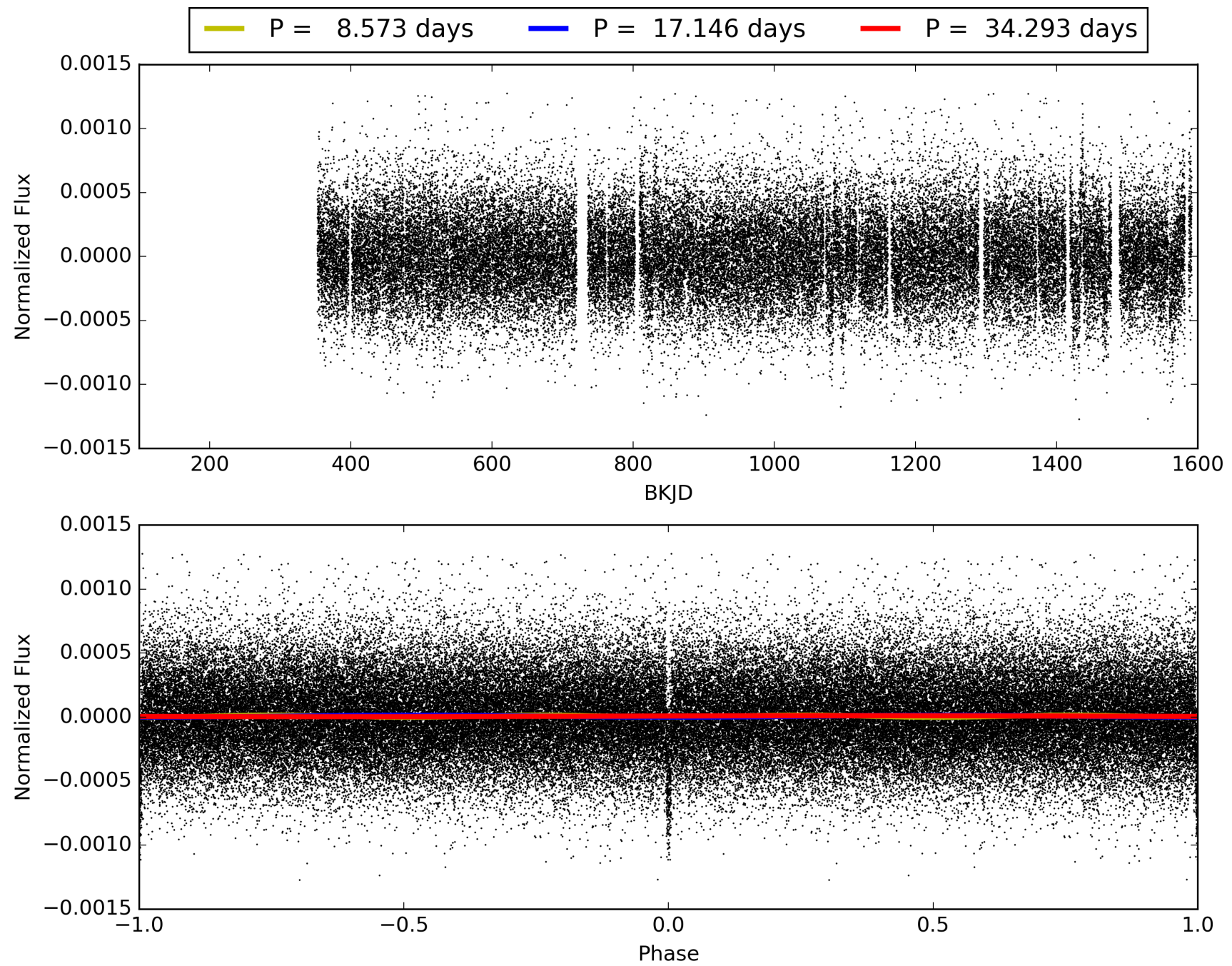
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.76e-134
RollingBand-fgt: 1.00 [66/66]
GhostDiagnostic-chr: 3.787
Centroid-sig: 18.9%
Centroid-so: 0.722 arcsec [1.46σ]
OotOffset-rm: 0.191 arcsec [1.14σ]
KicOffset-rm: 0.464 arcsec [2.62σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010203349-01, PDC Light Curves

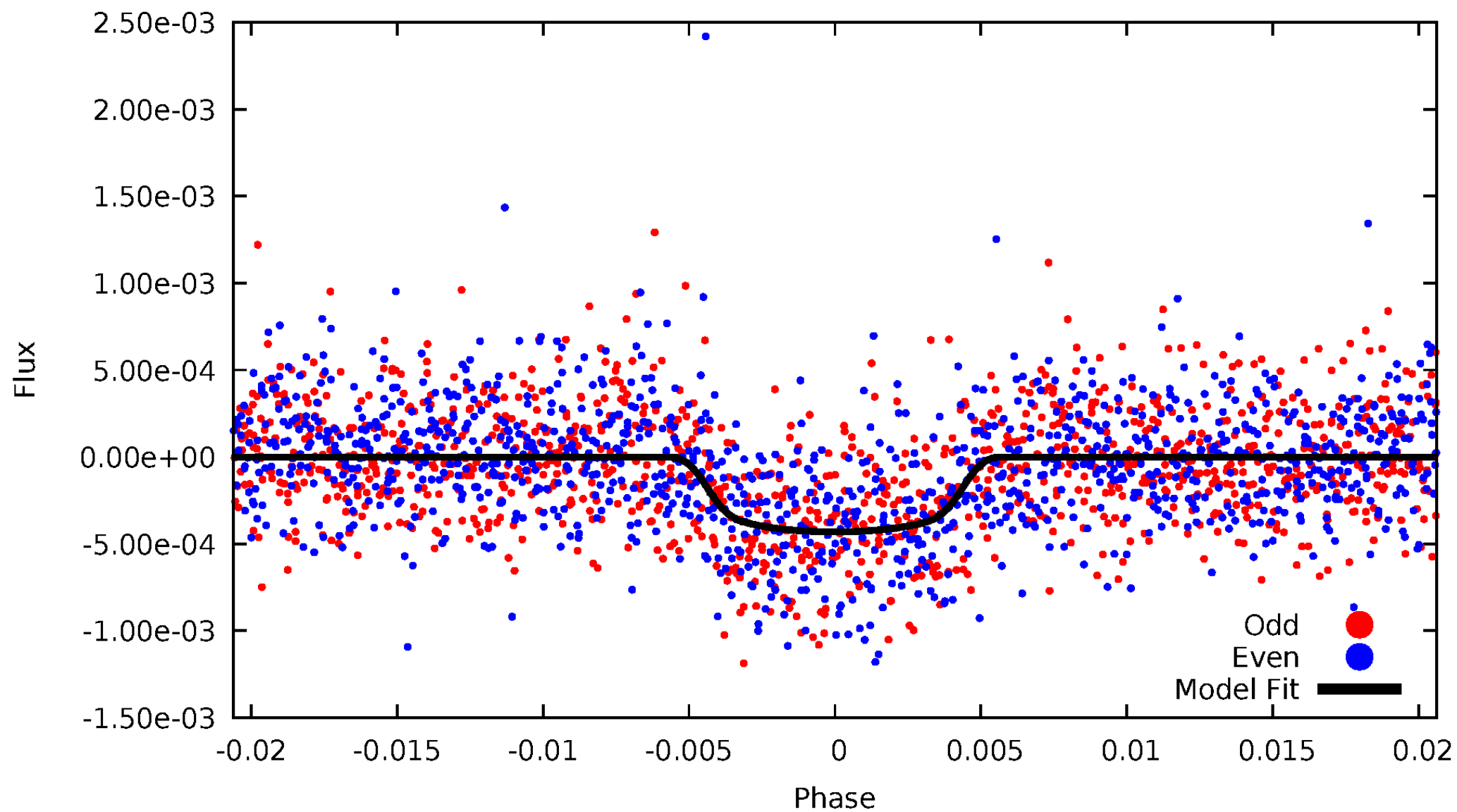


TCE 010203349-01



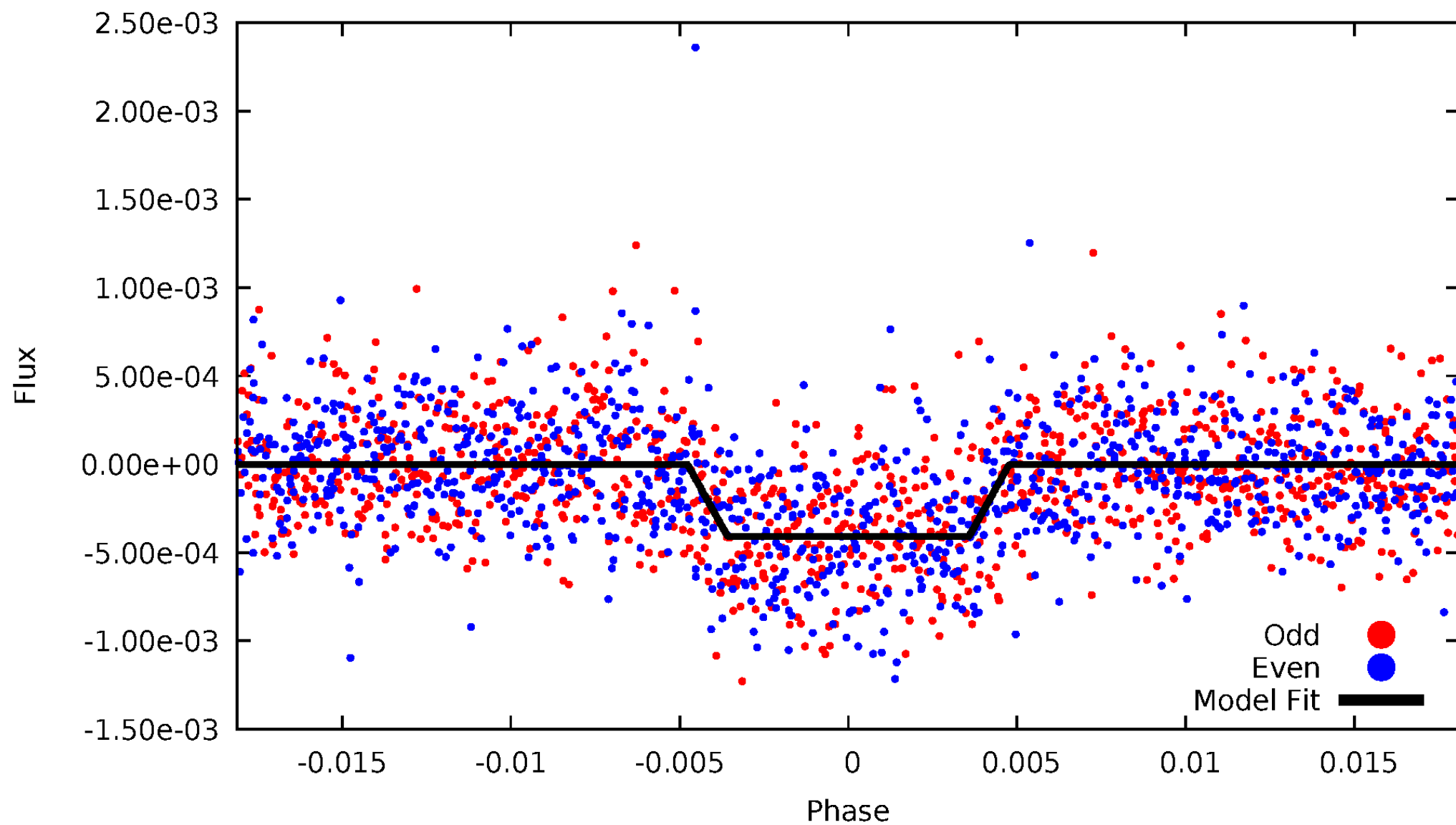
DV Odd/Even

TCE 010203349-01



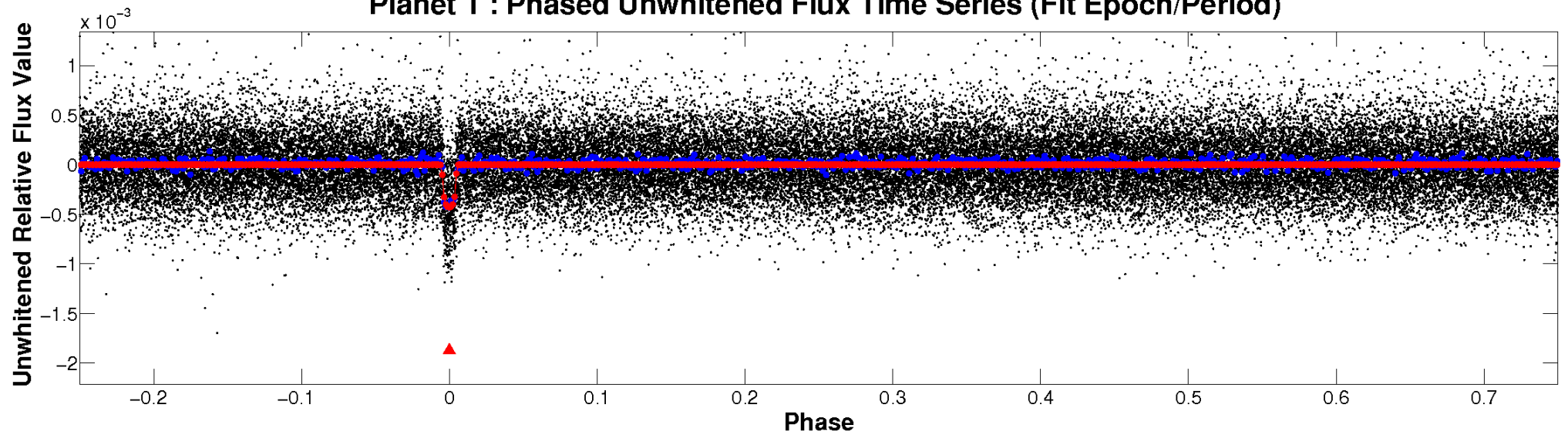
ALT Odd/Even

TCE 010203349-01

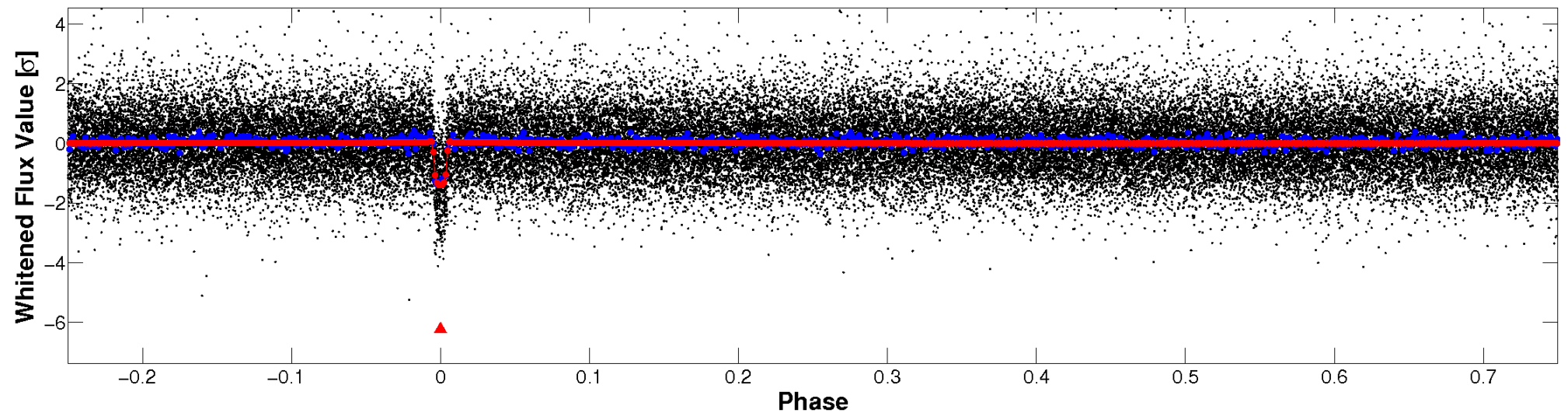


Non-Whitened Vs. Whitened Light Curve

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

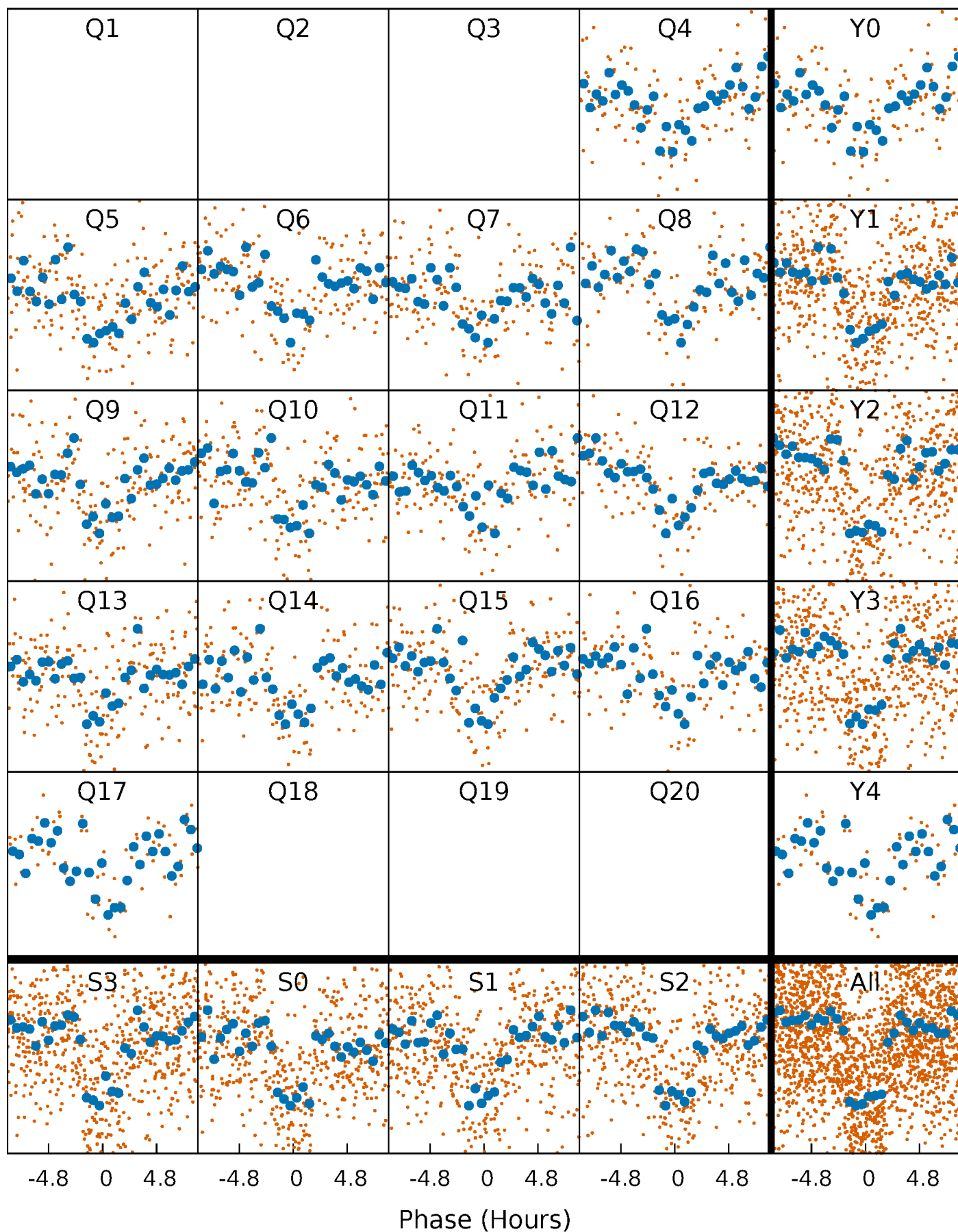


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



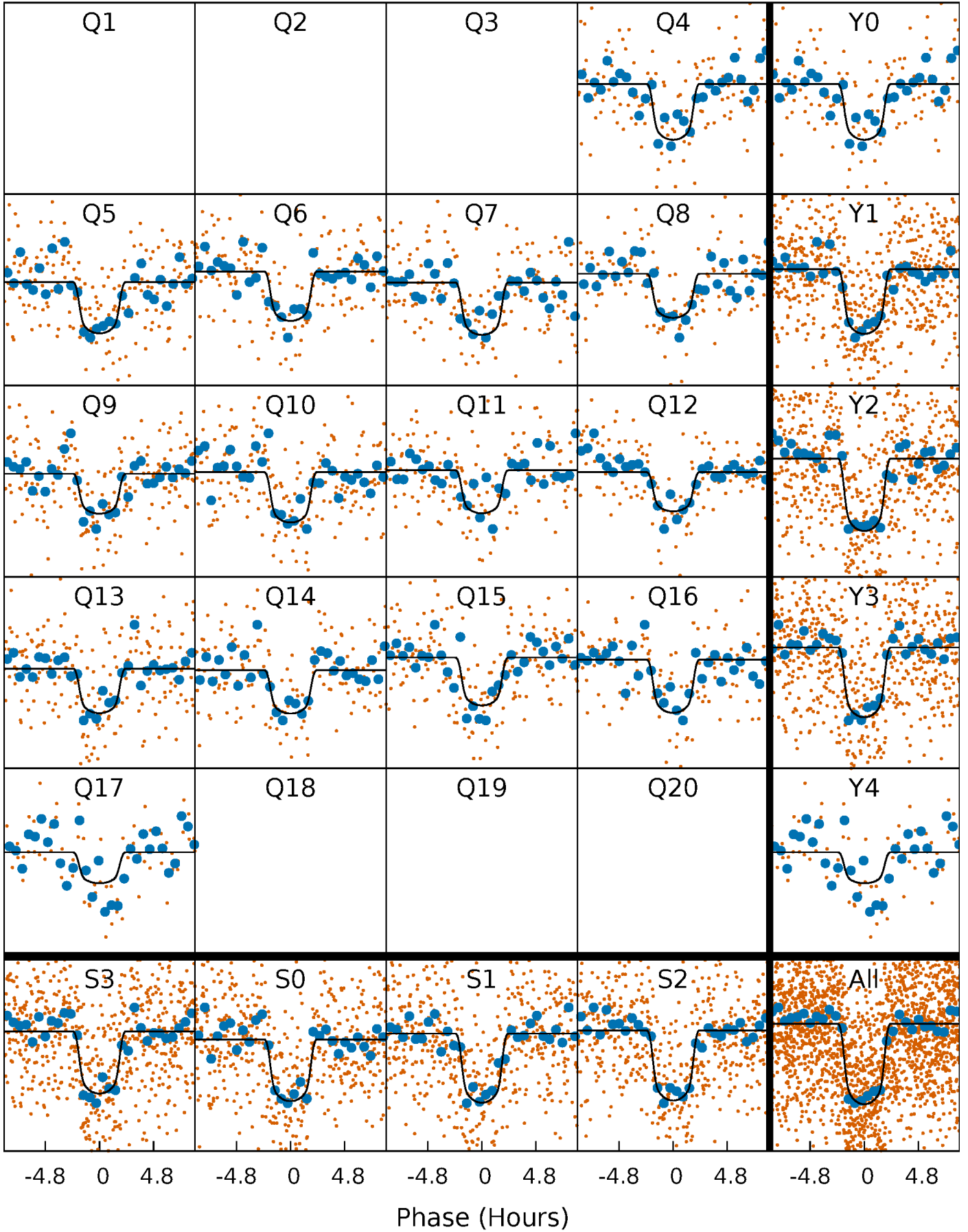
PDC Quarter-Phased Transit Curves

TCE 010203349-01 P= 17.146471 Days $T_0=140.661381$ (BKJD)



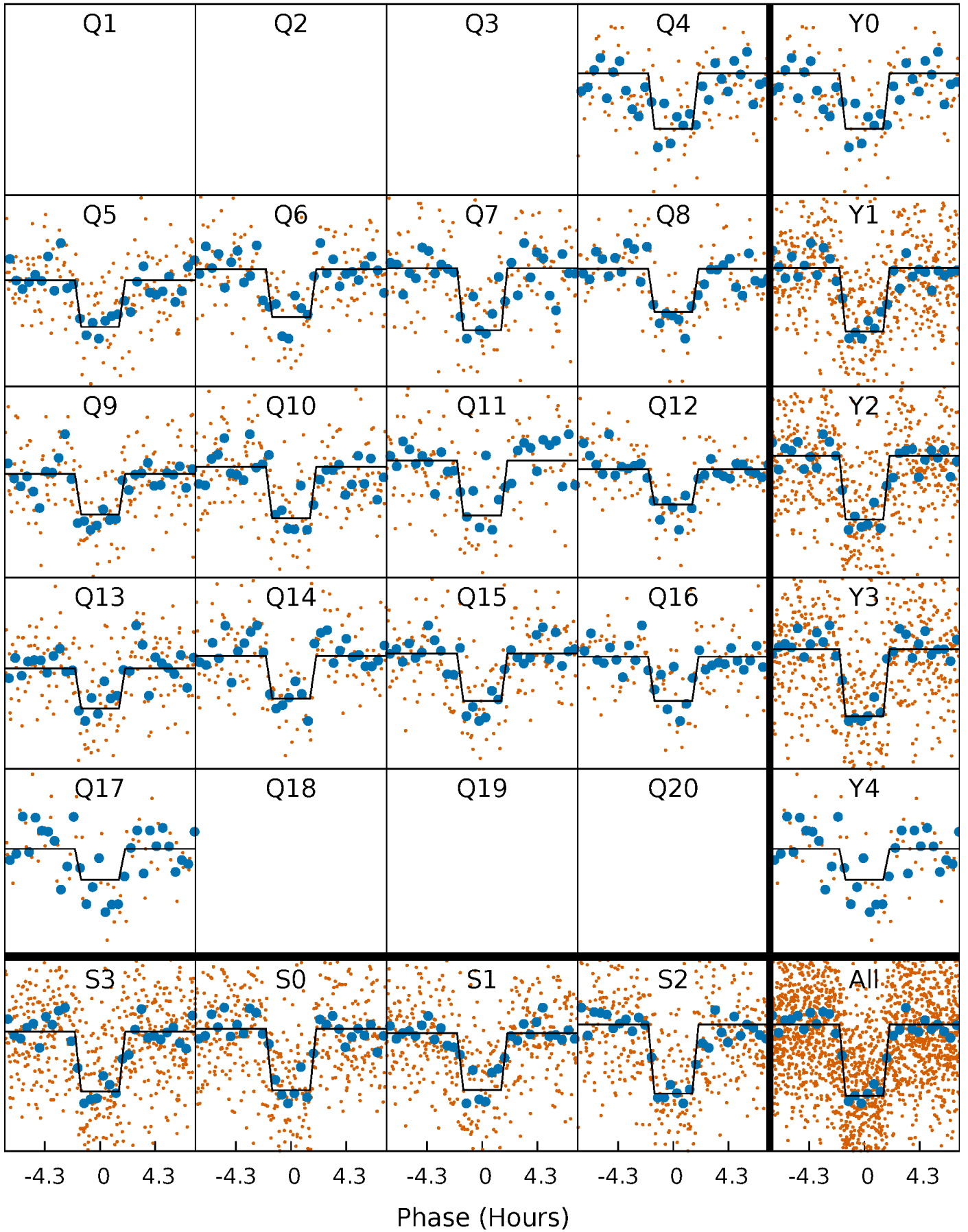
DV Quarter-Phased Transit Curves

TCE 010203349-01 P= 17.146471 Days $T_0=140.661381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

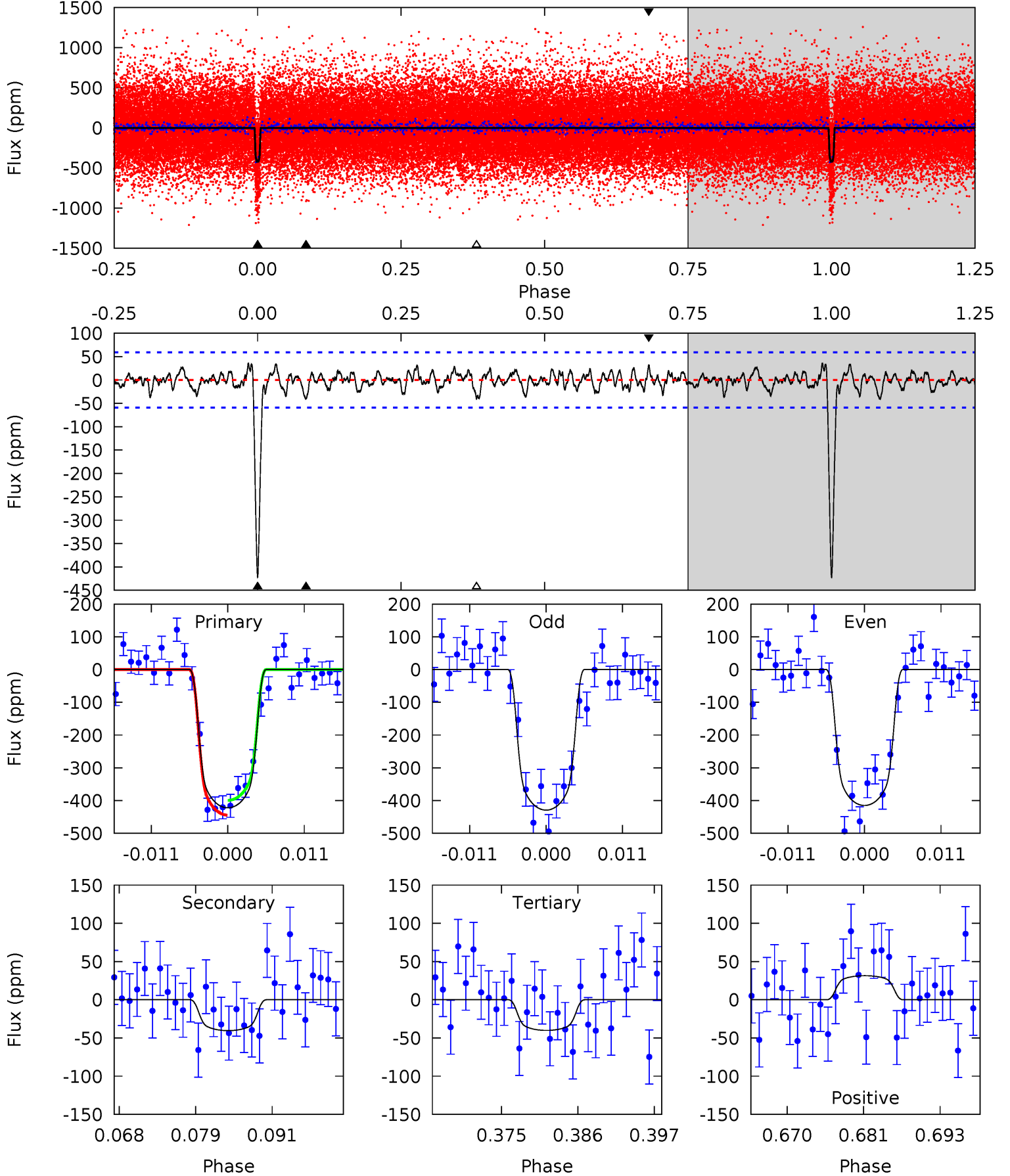
TCE 010203349-01 P= 17.146423 Days $T_0=140.665371$ (BKJD)



DV Model-Shift Uniqueness Test

010203349-01, $P = 17.146471$ Days, $E = 140.661381$ Days

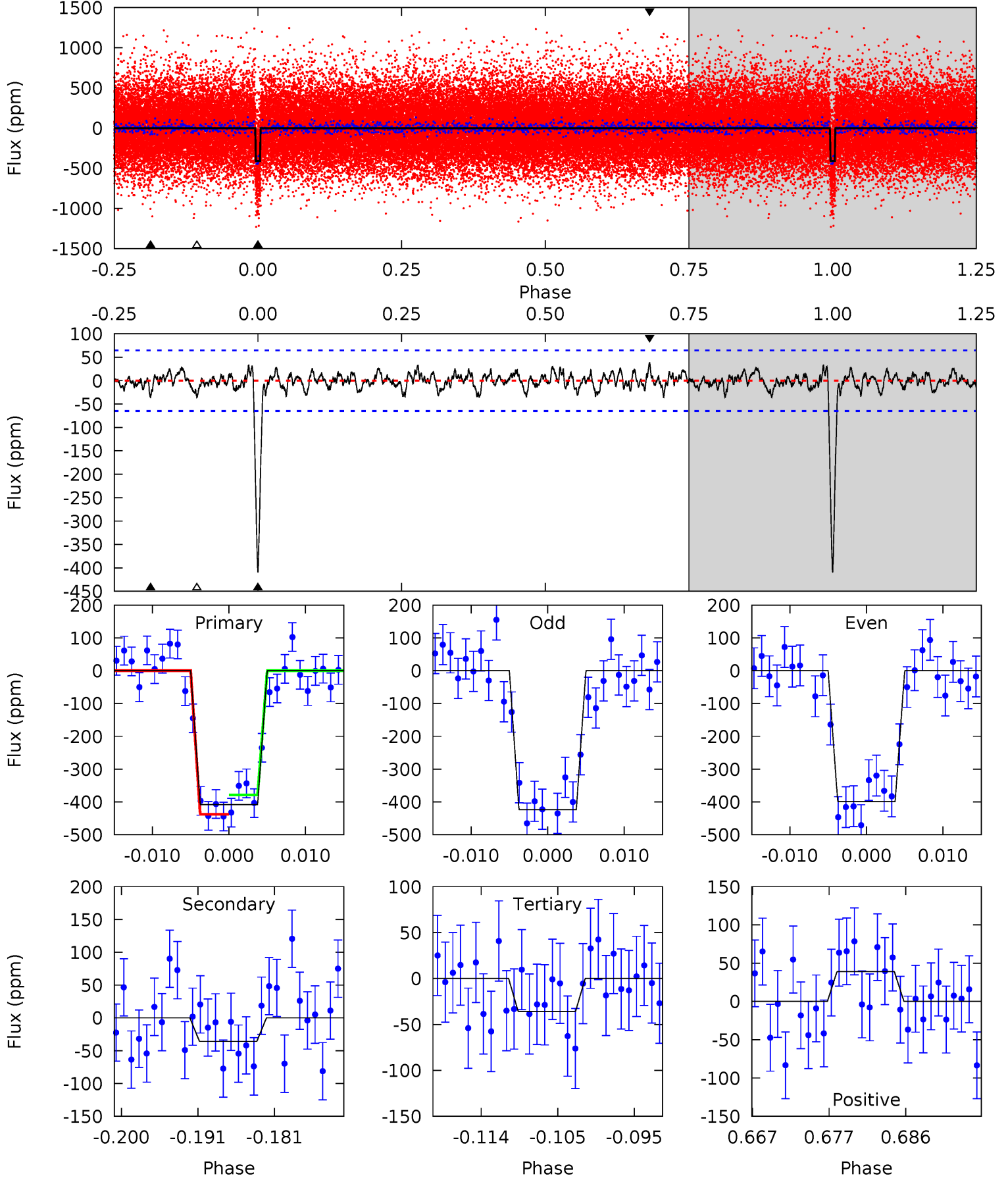
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.7	3.42	3.39	2.66	5.00	2.53	1.14	32.3	33.1	0.02	0.75	0.60	1.02	0.08	1.92



Alt Model-Shift Uniqueness Test

010203349-01, P = 17.146423 Days, E = 140.665371 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.8	2.79	2.78	3.02	5.04	2.59	1.03	29.0	28.8	0.00	-0.24	0.94	0.96	0.09	2.28



Stellar Parameters For KIC 010203349

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5559^{+83}_{-72}	$4.127^{+0.210}_{-0.090}$	$0.140^{+0.150}_{-0.100}$	$1.412^{+0.216}_{-0.324}$	$0.974^{+0.073}_{-0.058}$	$0.487^{+0.539}_{-0.150}$
	+1%/-1%	+5%/-2%	+107%/-71%	+15%/-23%	+7%/-6%	+111%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010203349-01 / KOI 2212.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-40 ± 12	$3.51^{+0.44}_{-0.49}$	1120^{+54}_{-71}	3404^{+171}_{-195}	31^{+13}_{-10}
Alt.	-36 ± 13	$3.02^{+0.42}_{-0.43}$	1125^{+51}_{-75}	3494^{+223}_{-260}	36^{+19}_{-15}

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 $A_{obs} \gg 1.0$

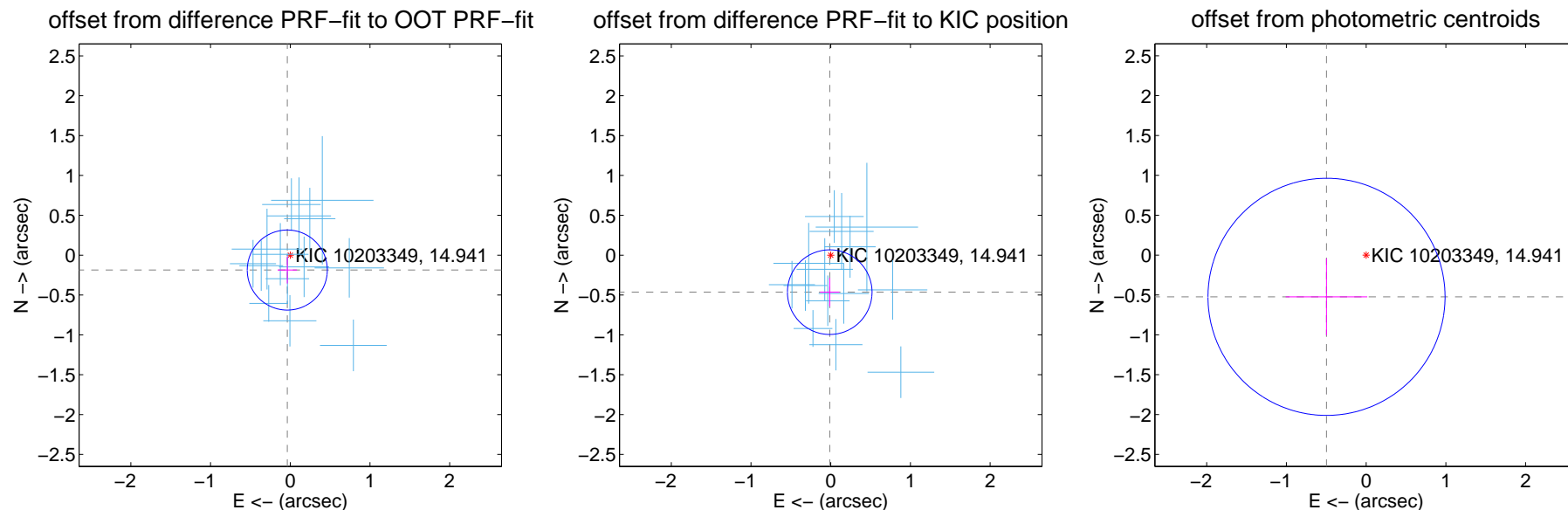
DV Centroid Data

Supplemental centroid analysis for 010203349-01. Kepler magnitude: 14.94. Transit SNR 26.93

There are 14 quarters with good PRF difference image offsets

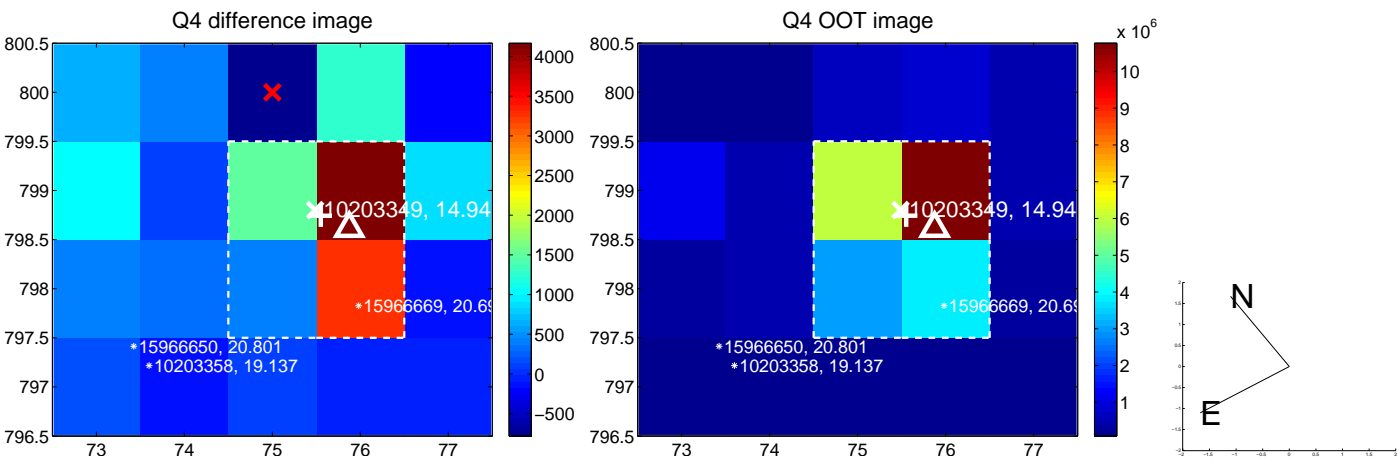
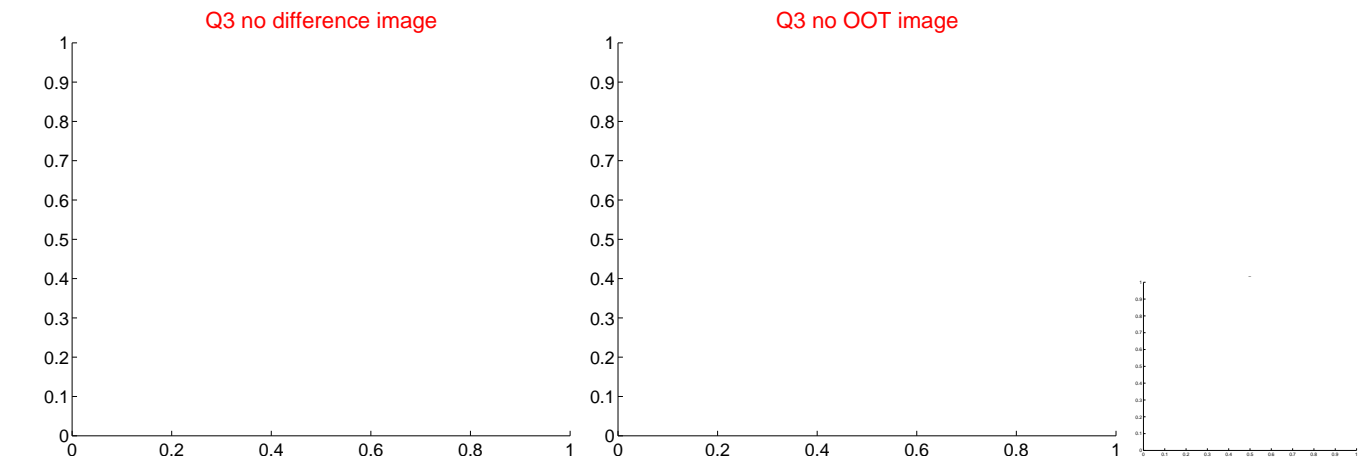
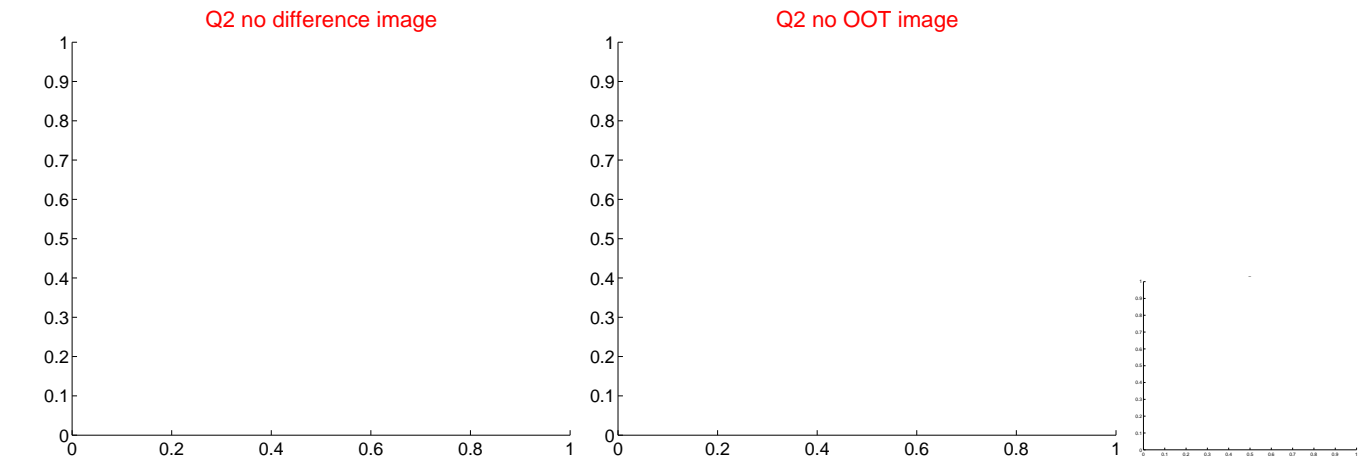
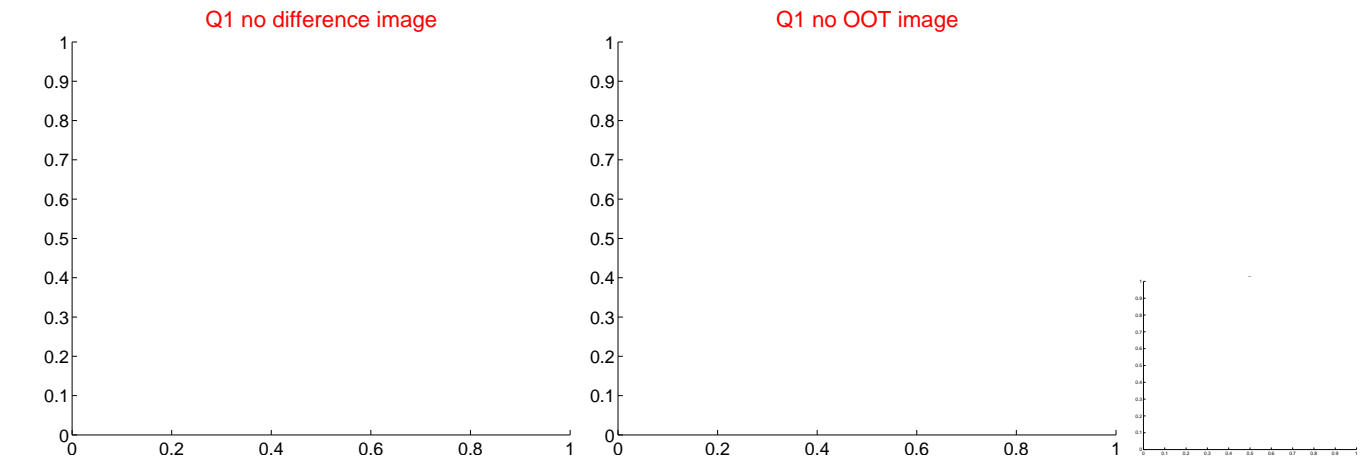
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.191 ± 0.167	1.14	0.038 ± 0.121	-0.187 ± 0.169
PRF-fit source offset from KIC position	0.464 ± 0.177	2.62	0.012 ± 0.121	-0.464 ± 0.177
photometric centroid source offset	0.72 ± 0.50	1.46	0.50 ± 0.51	-0.52 ± 0.48

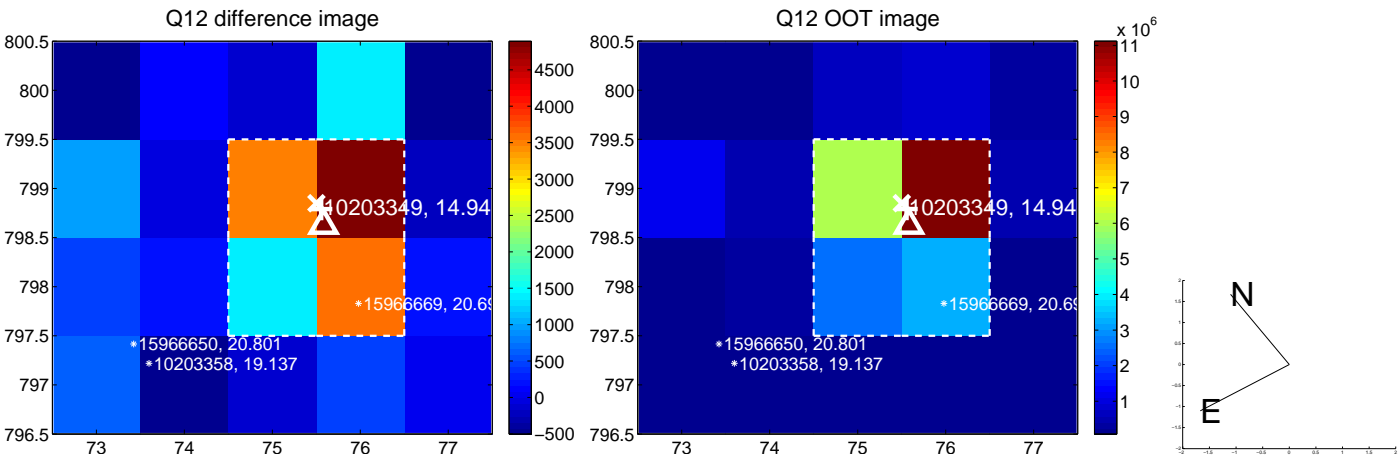
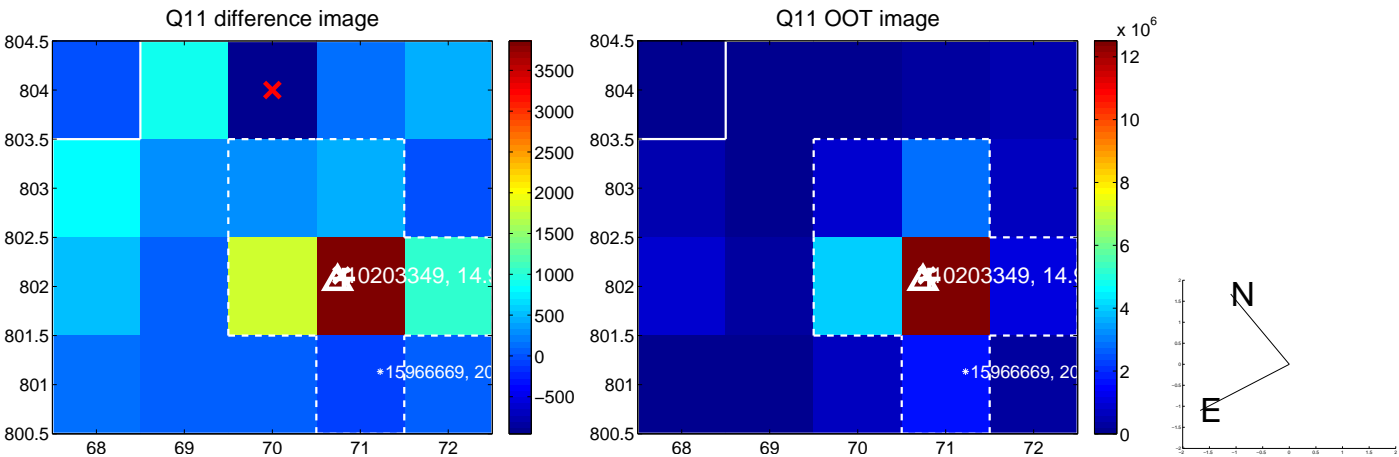
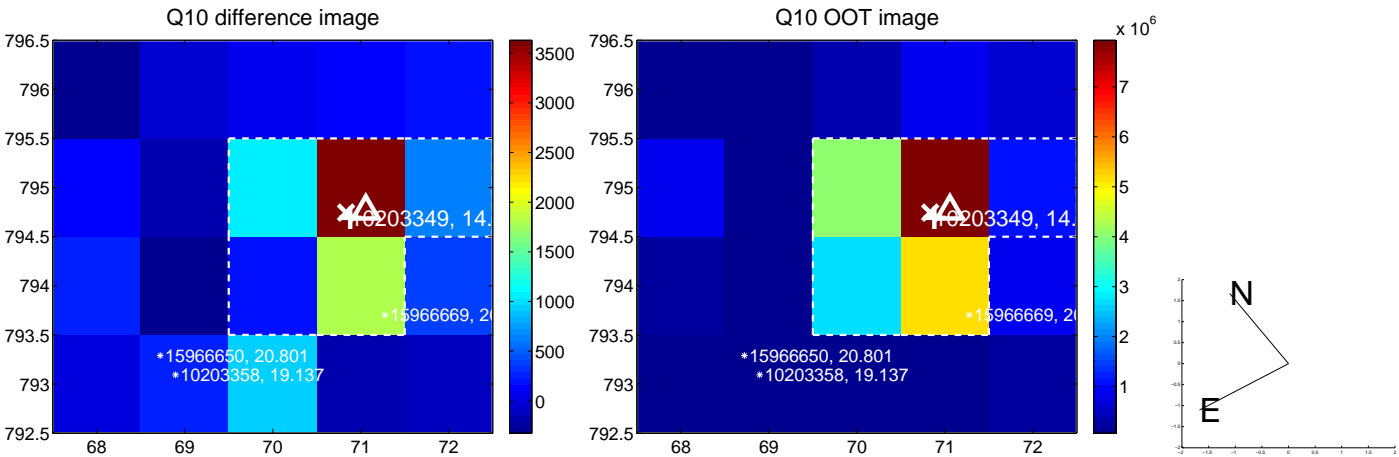
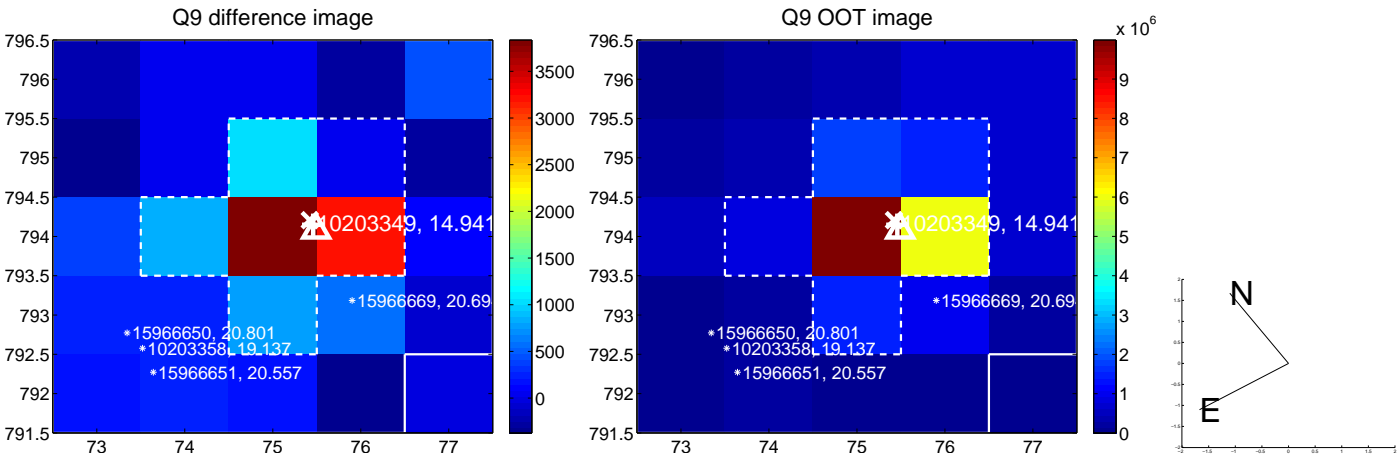


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

