

KIC 008573193

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})
008573193-01	OBS	4337.01	8.185075	134.557256	109.7	4.422	11.0	12.2	0.91	5984	1.08	149.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008573193-01	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.

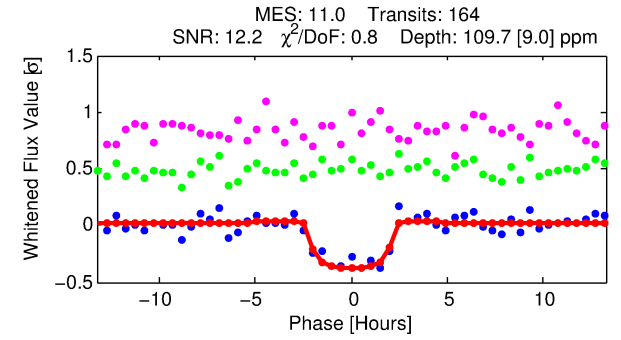
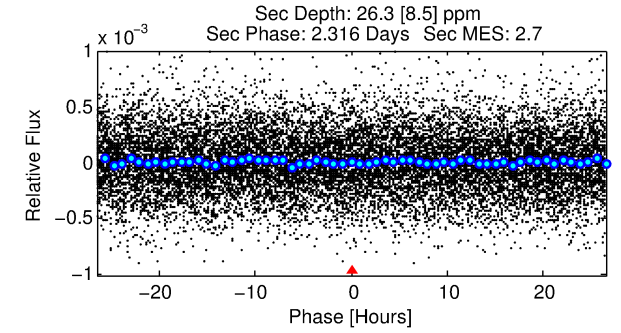
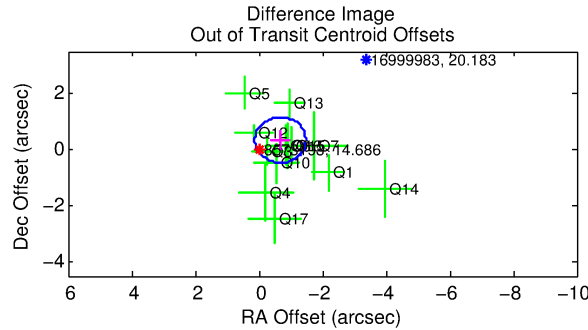
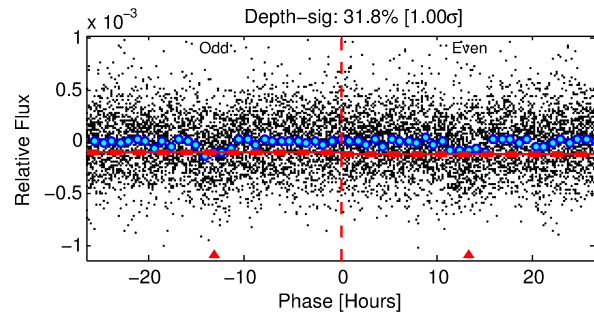
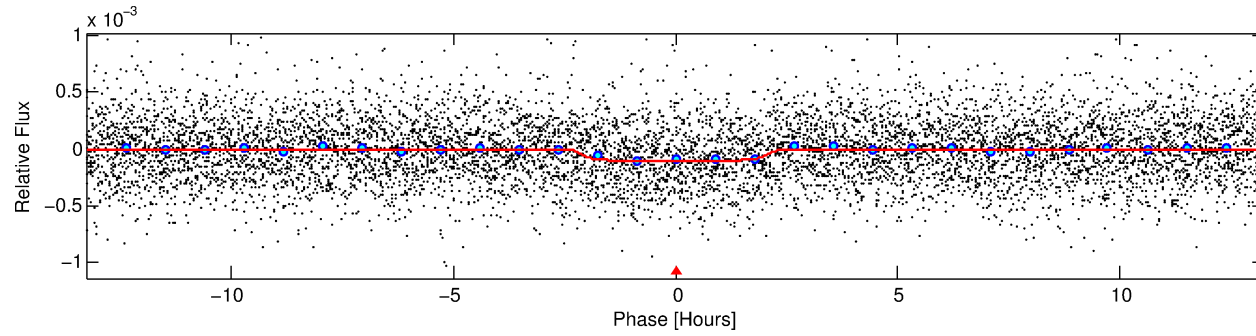
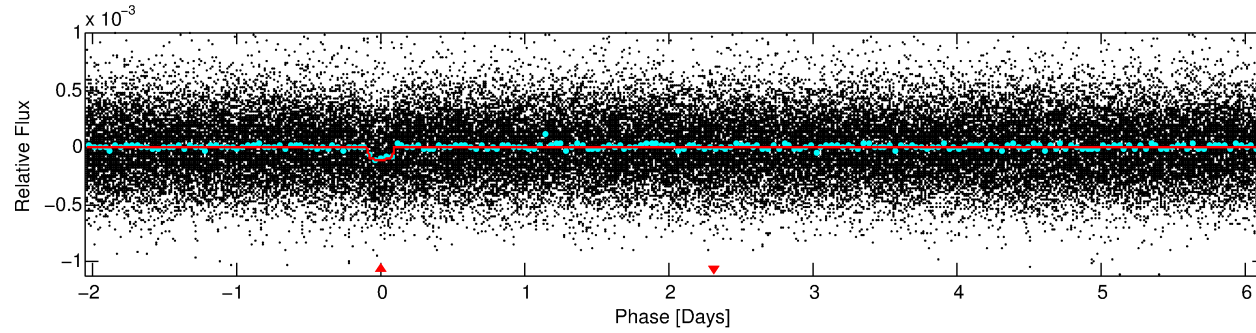
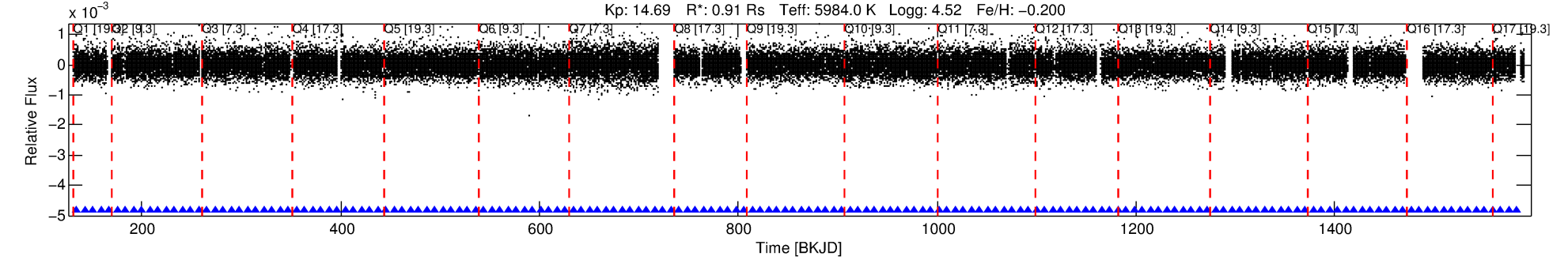
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008573193-01

No Significant Match Found

DV One-Page Summary

KIC: 8573193 Candidate: 1 of 1 Period: 8.185 d
KOI: K04337.01 Corr: 0.967



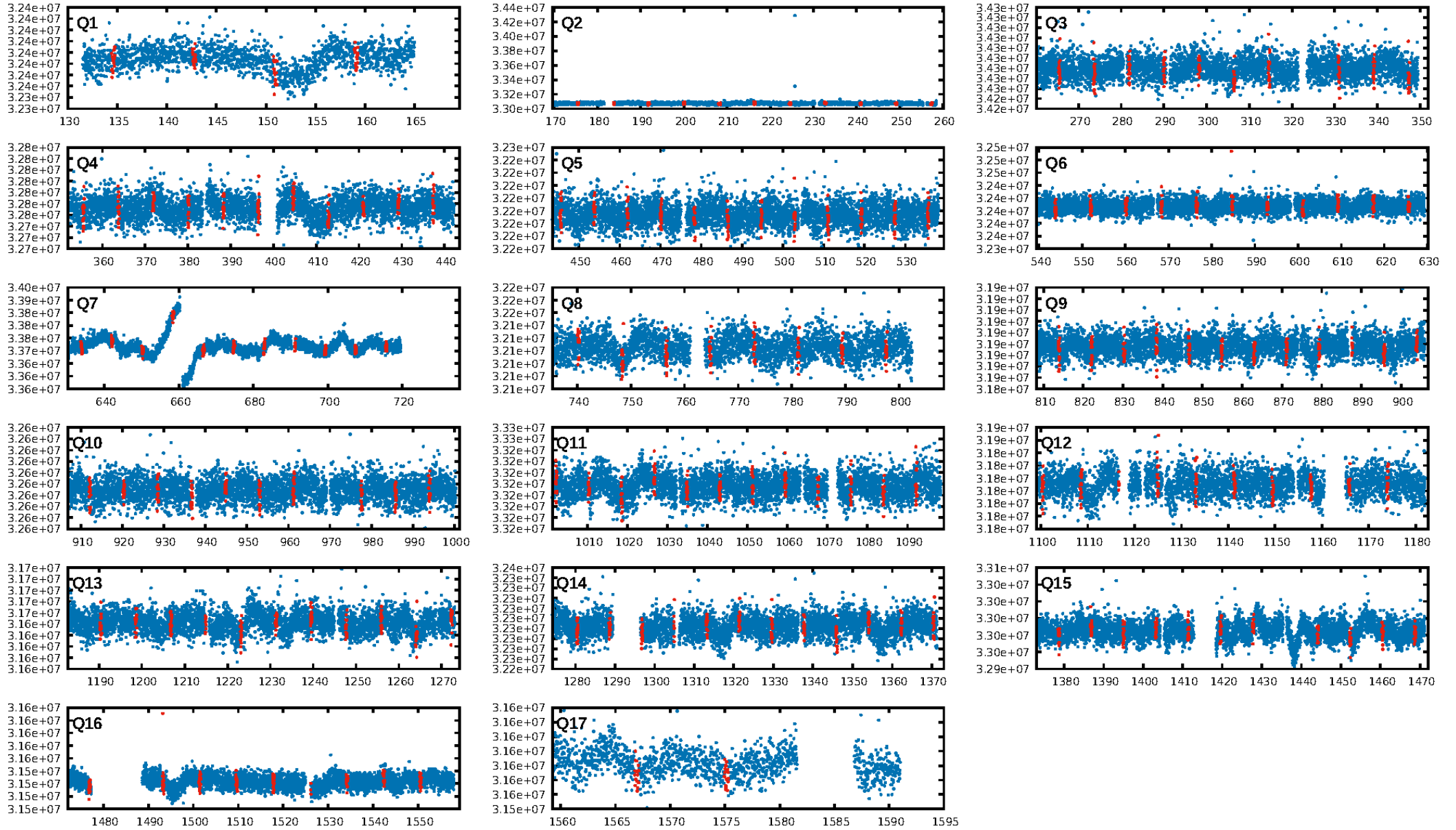
DV Fit Results:

Period = 8.18508 [0.00007] d
Epoch = 134.5573 [0.0064] BKJD
Rp/R* = 0.0109 [0.0053]
a/R* = 7.88 [18.89]
b = 0.85 [0.83]
Seff = 149.82 [53.26]
Teff = 892 [79] K
Rp = 1.08 [0.59] Re
a = 0.0793 [0.0178] AU
Ag = 78.79 [84.69] [0.92 σ]
Teffp = 4109 [1057] K [3.04 σ]

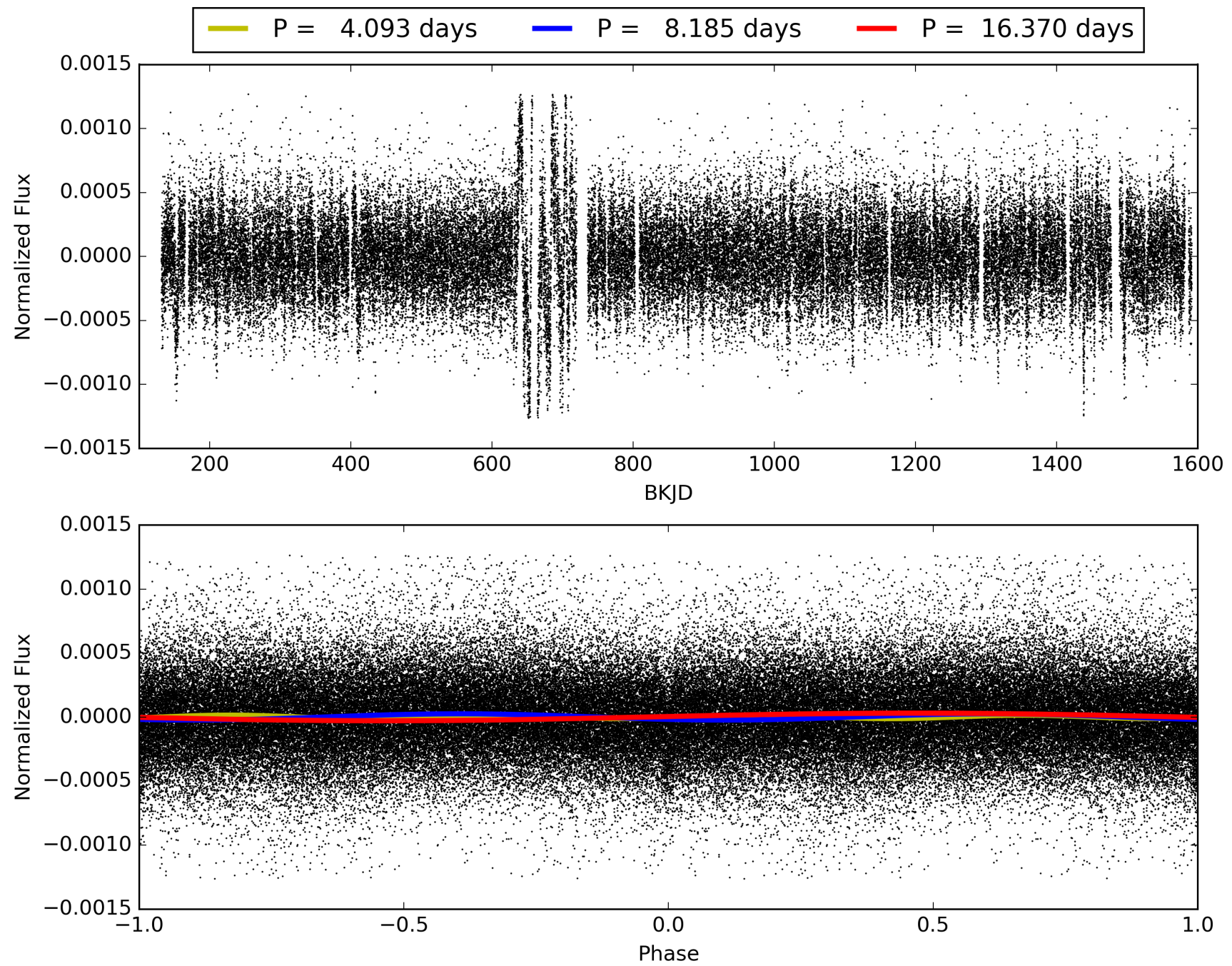
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.62e-27
RollingBand-fgt: 1.00 [158/158]
GhostDiagnostic-chr: 1.677
Centroid-sig: 36.1%
Centroid-so: 0.976 arcsec [0.89 σ]
OotOffset-rm: 0.755 arcsec [2.82 σ]
KicOffset-rm: 0.774 arcsec [2.68 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008573193-01, PDC Light Curves

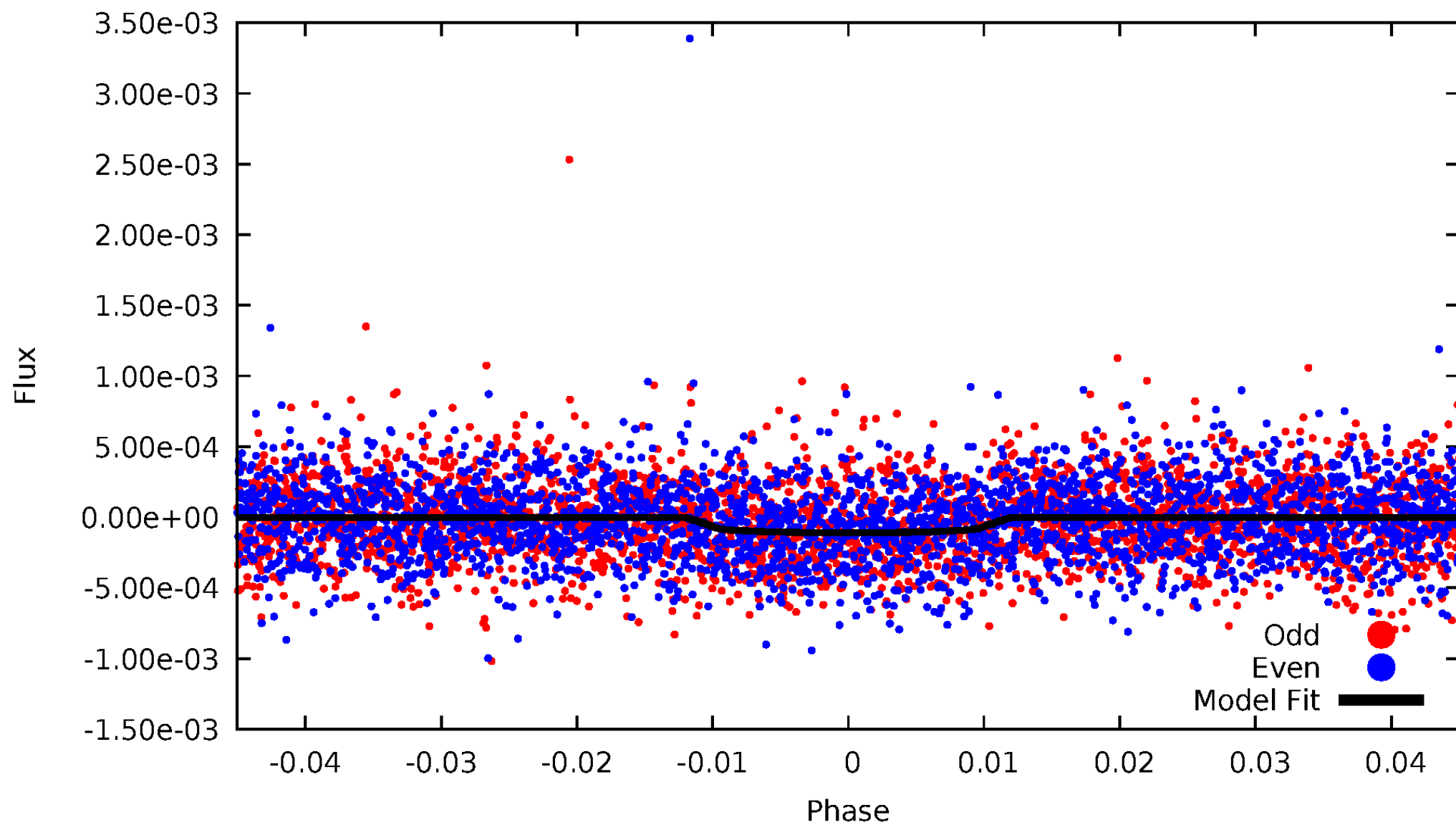


TCE 008573193-01



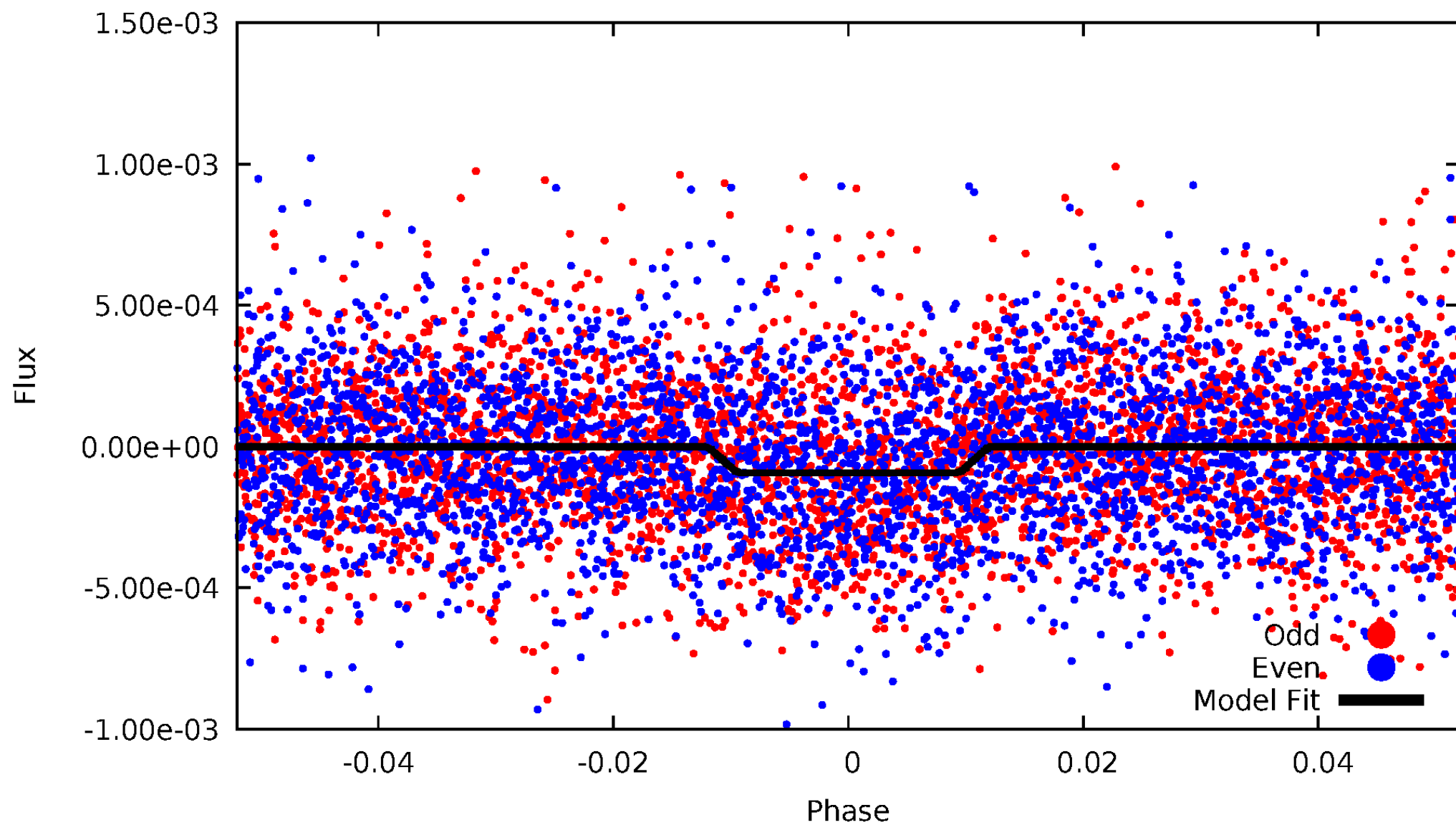
DV Odd/Even

TCE 008573193-01



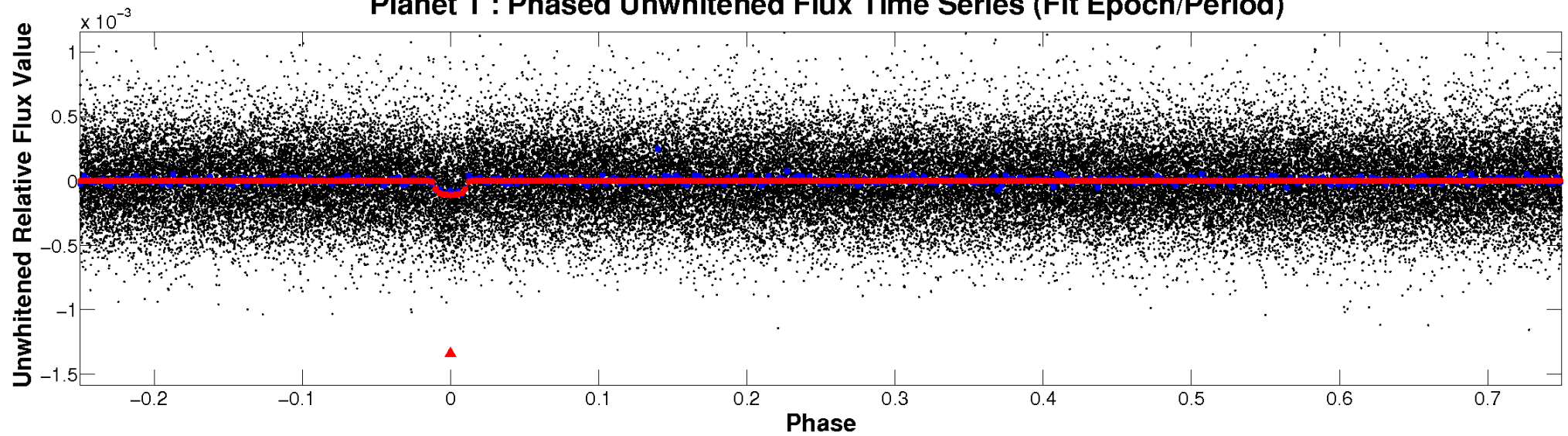
ALT Odd/Even

TCE 008573193-01

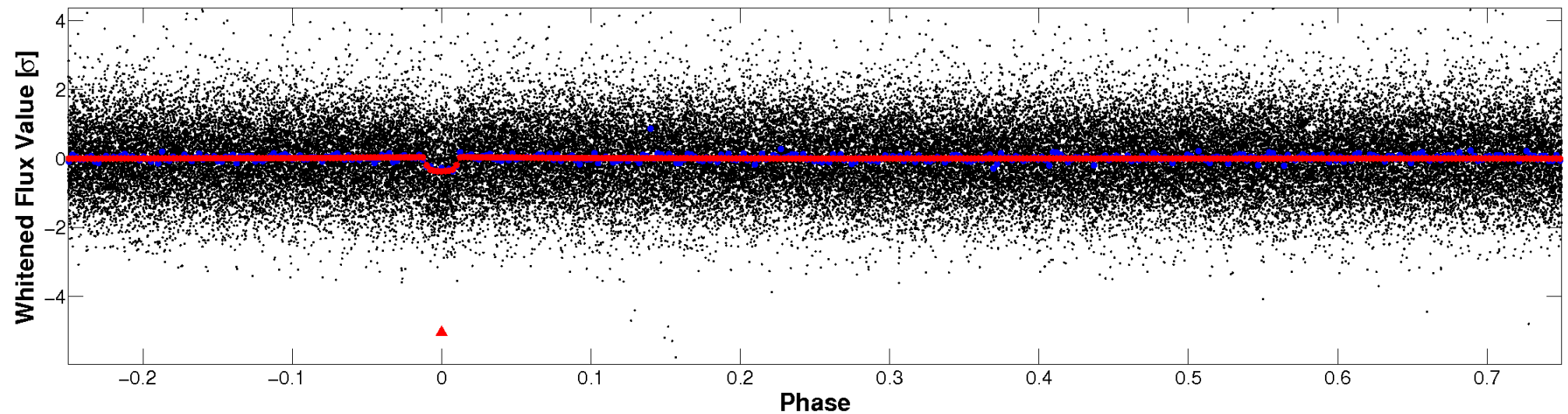


Non-Whitened Vs. Whitened Light Curve

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

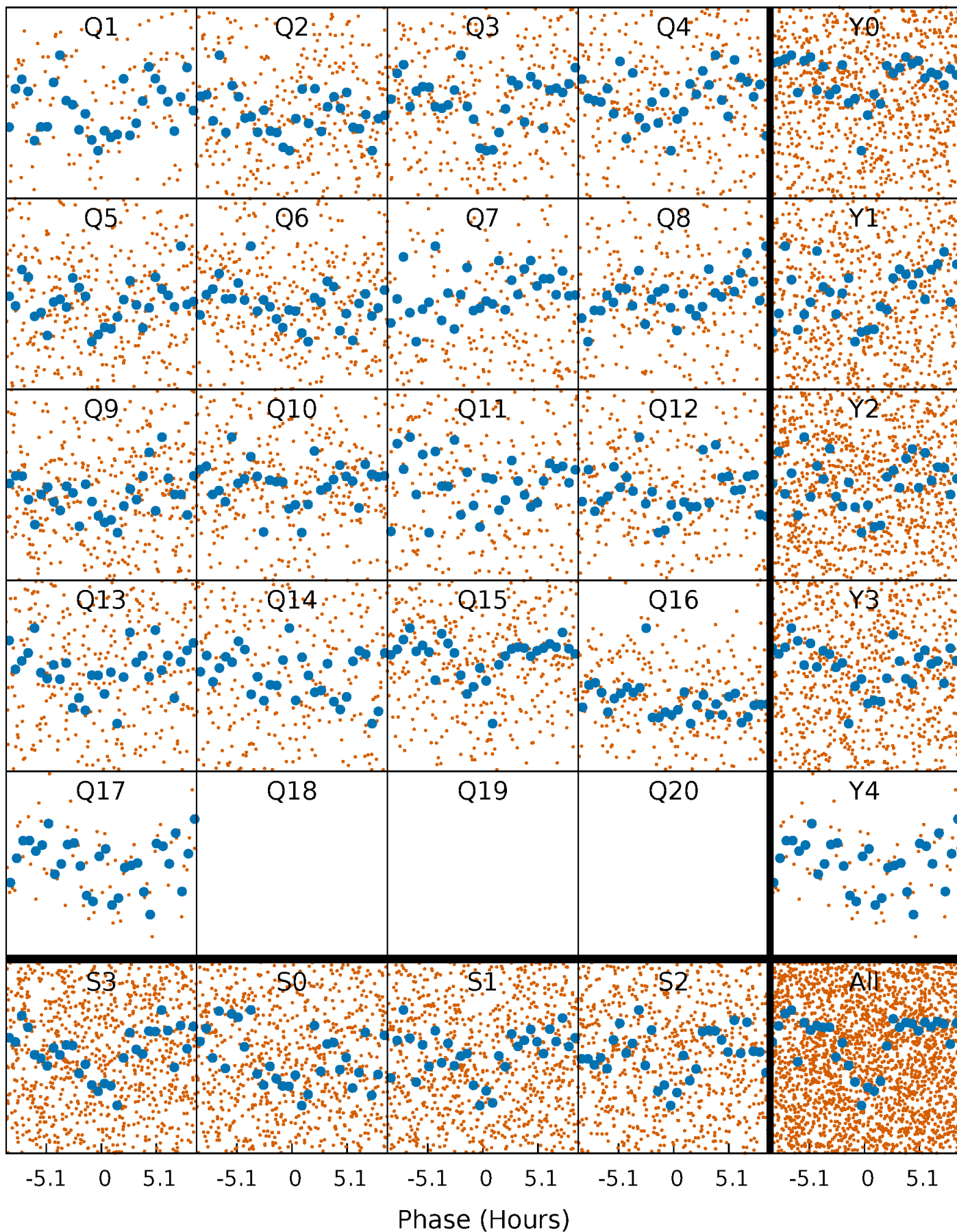


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



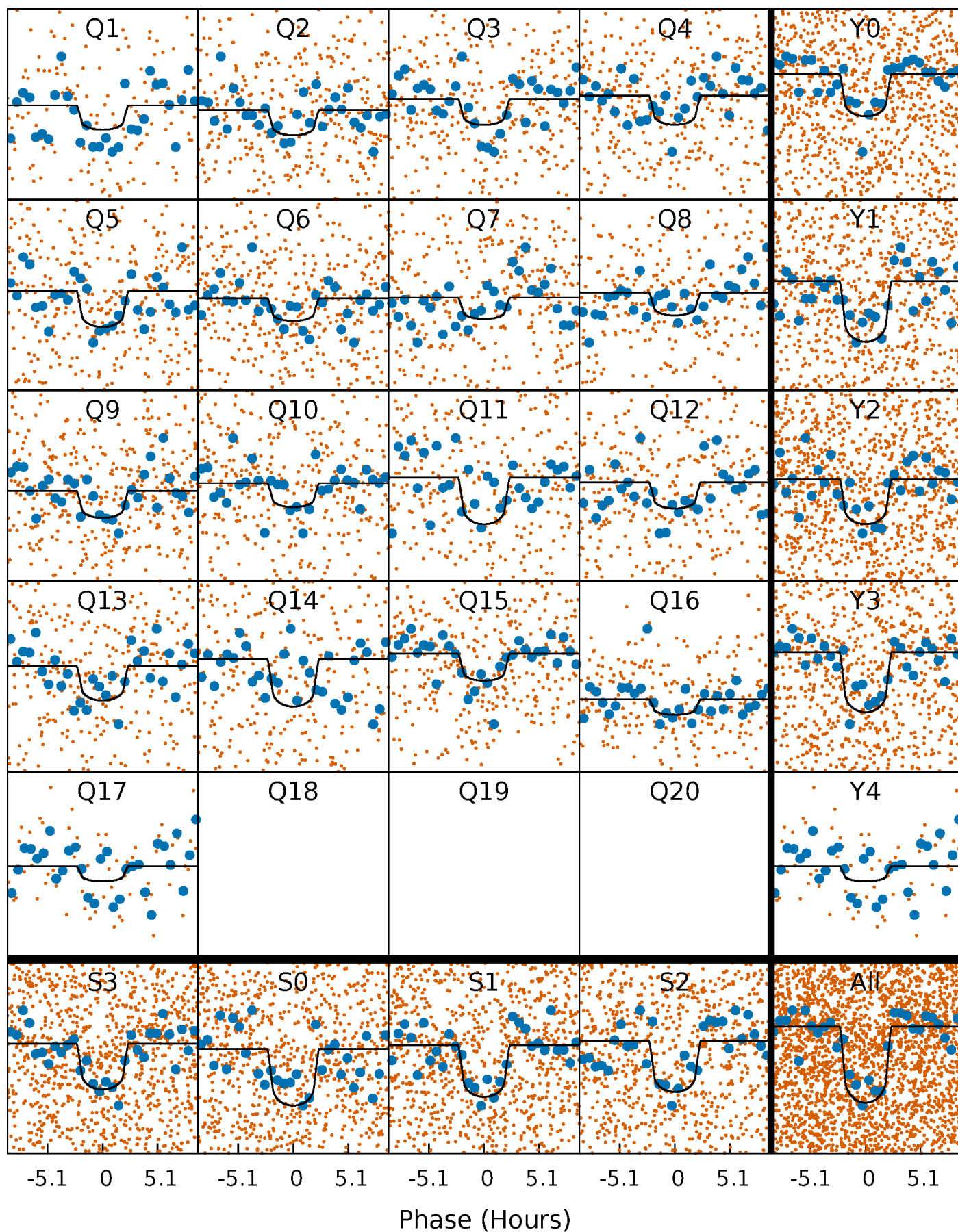
PDC Quarter-Phased Transit Curves

TCE 008573193-01 P= 8.185075 Days $T_0=134.557256$ (BKJD)



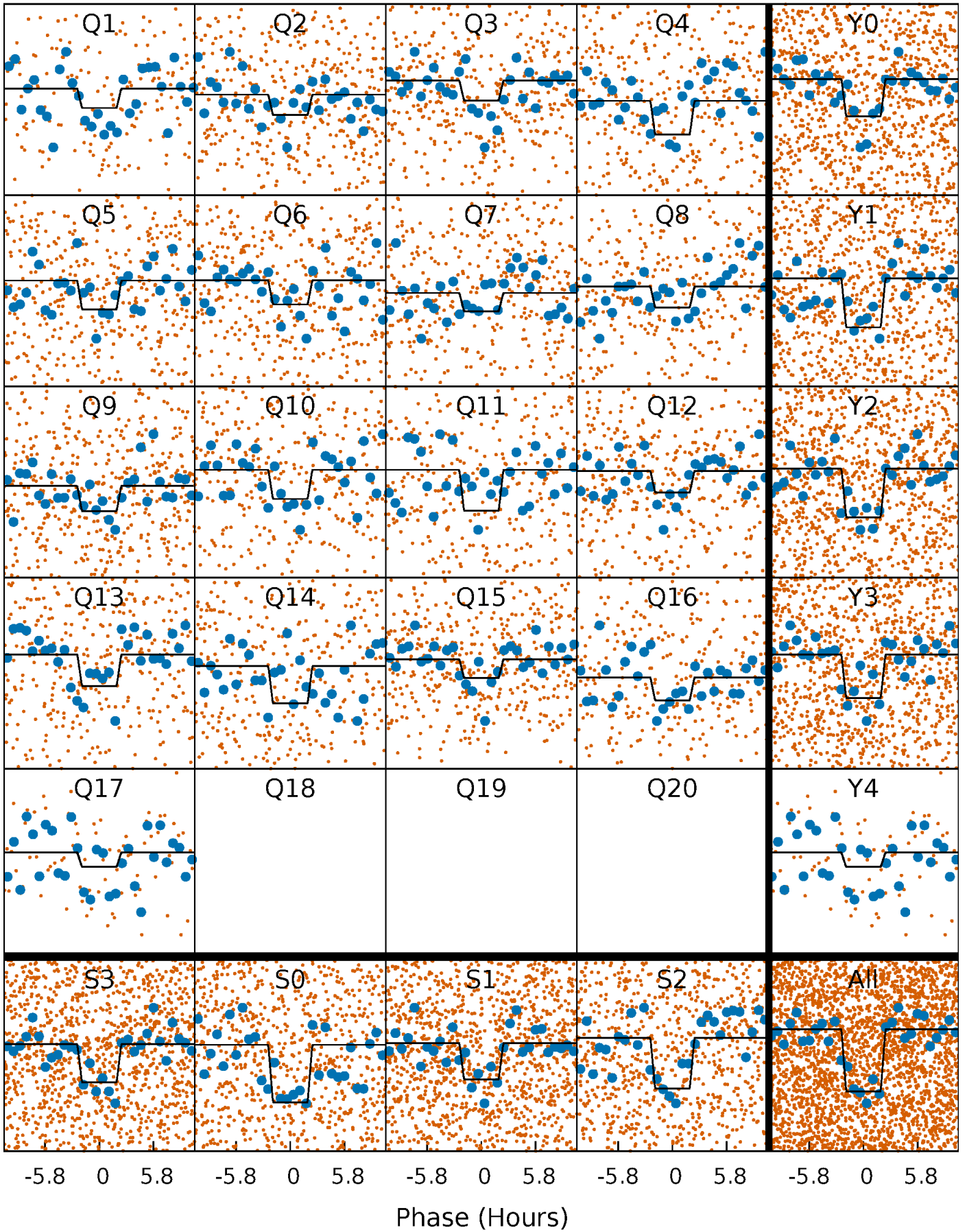
DV Quarter-Phased Transit Curves

TCE 008573193-01 P= 8.185075 Days $T_0=134.557256$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

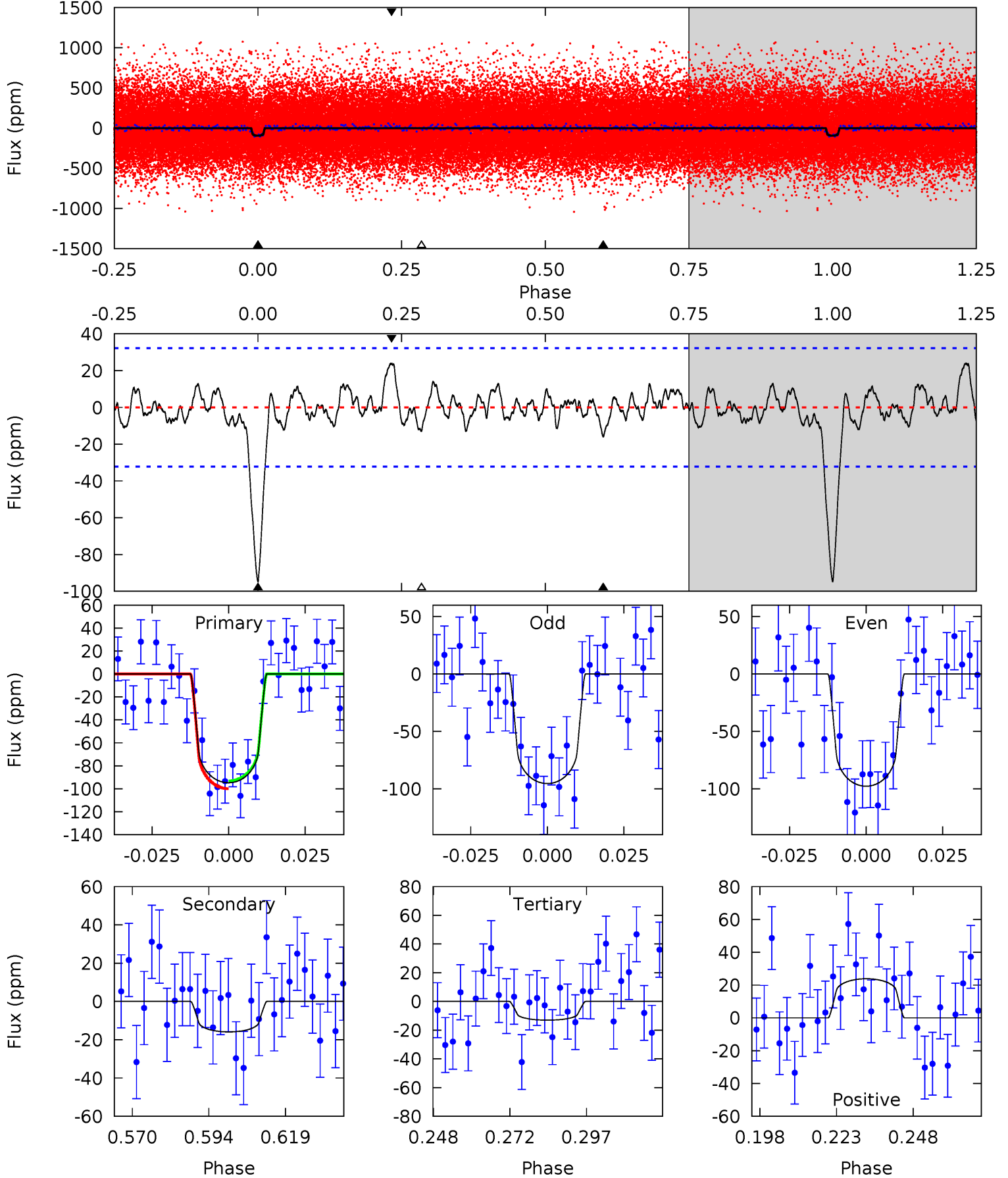
TCE 008573193-01 P= 8.185200 Days $T_0=134.542742$ (BKJD)



DV Model-Shift Uniqueness Test

008573193-01, P = 8.185075 Days, E = 126.372181 Days

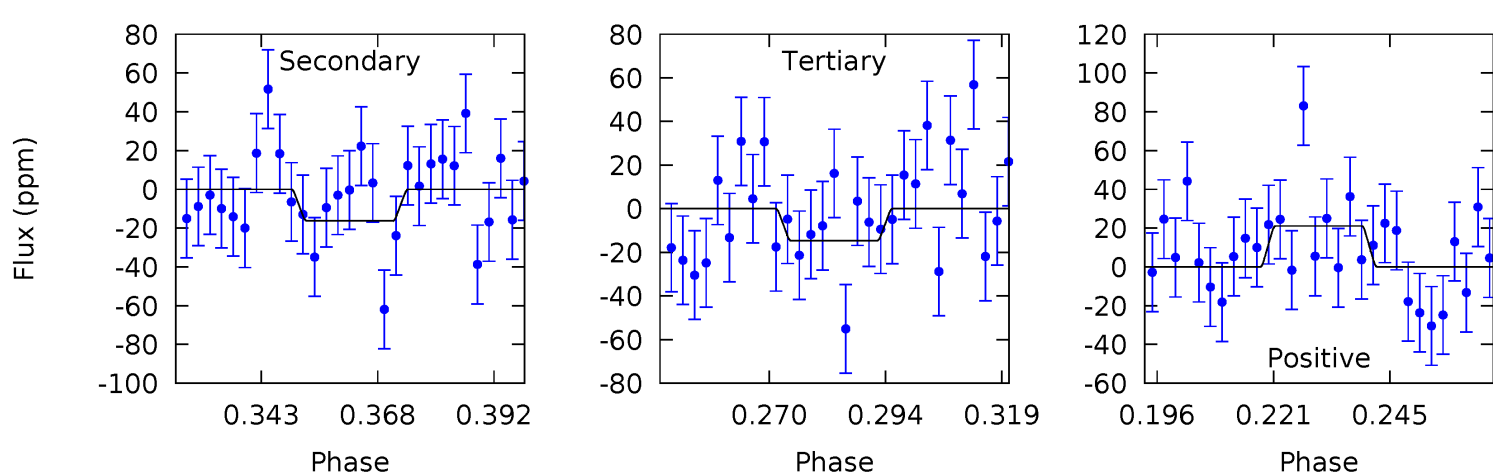
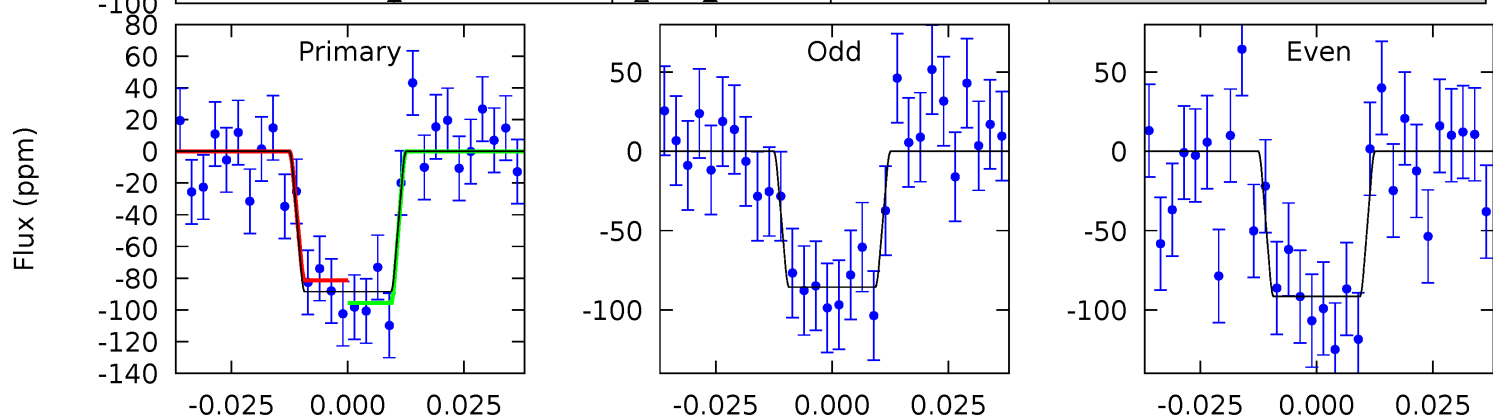
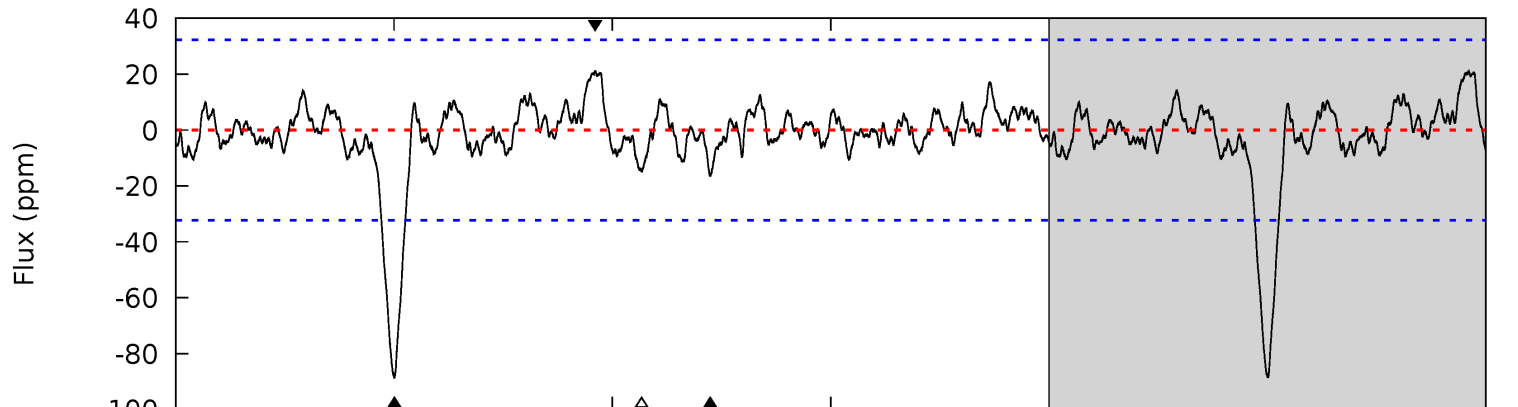
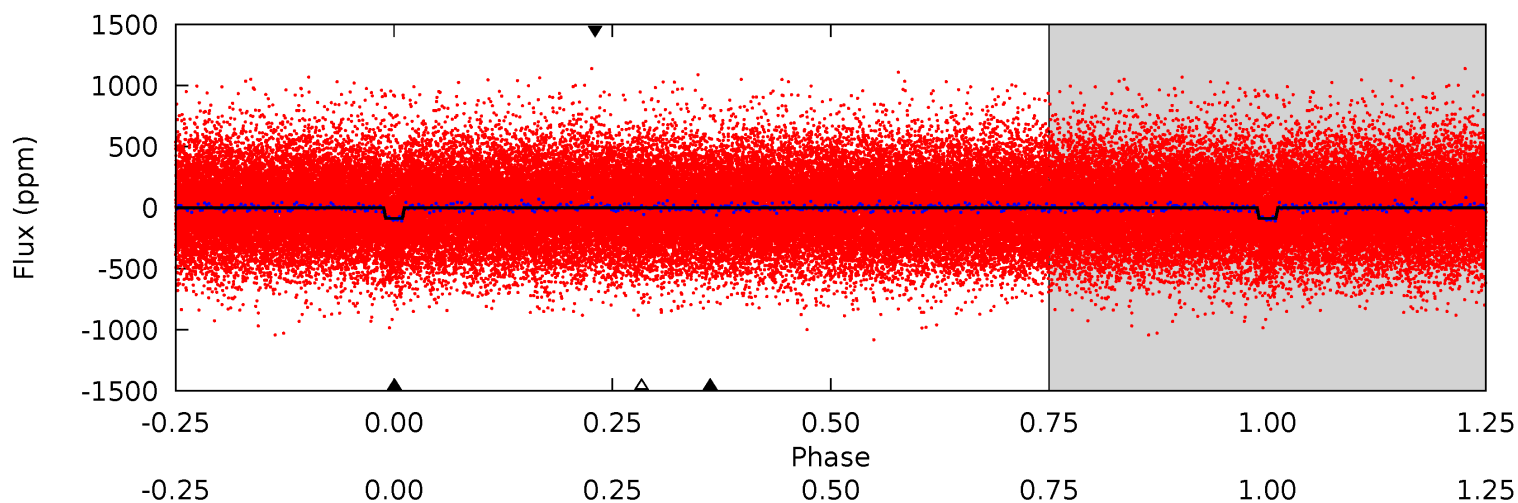
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	2.39	1.96	3.59	4.85	2.25	1.01	12.3	10.7	0.43	-1.19	0.17	0.92	0.20	0.51



Alt Model-Shift Uniqueness Test

008573193-01, P = 8.185200 Days, E = 126.357542 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	2.44	2.20	3.17	4.85	2.25	0.94	11.1	10.1	0.24	-0.74	0.44	0.99	0.19	1.07



Stellar Parameters For KIC 008573193

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+149}_{-179}	$4.521^{+0.044}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$0.906^{+0.234}_{-0.084}$	$0.993^{+0.109}_{-0.133}$	$1.883^{+0.451}_{-0.896}$
	+2%/-3%	+1%/-4%	+125%/-175%	+26%/-9%	+11%/-13%	+24%/-48%
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 008573193-01 / KOI 4337.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 7	$1.15^{+0.57}_{-0.53}$	1271^{+76}_{-56}	3860^{+1079}_{-546}	38^{+95}_{-24}
Alt.	-16 ± 7	$1.02^{+0.52}_{-0.49}$	1272^{+82}_{-57}	4081^{+1259}_{-605}	50^{+146}_{-30}

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 $A_{obs} \gg 1.0$

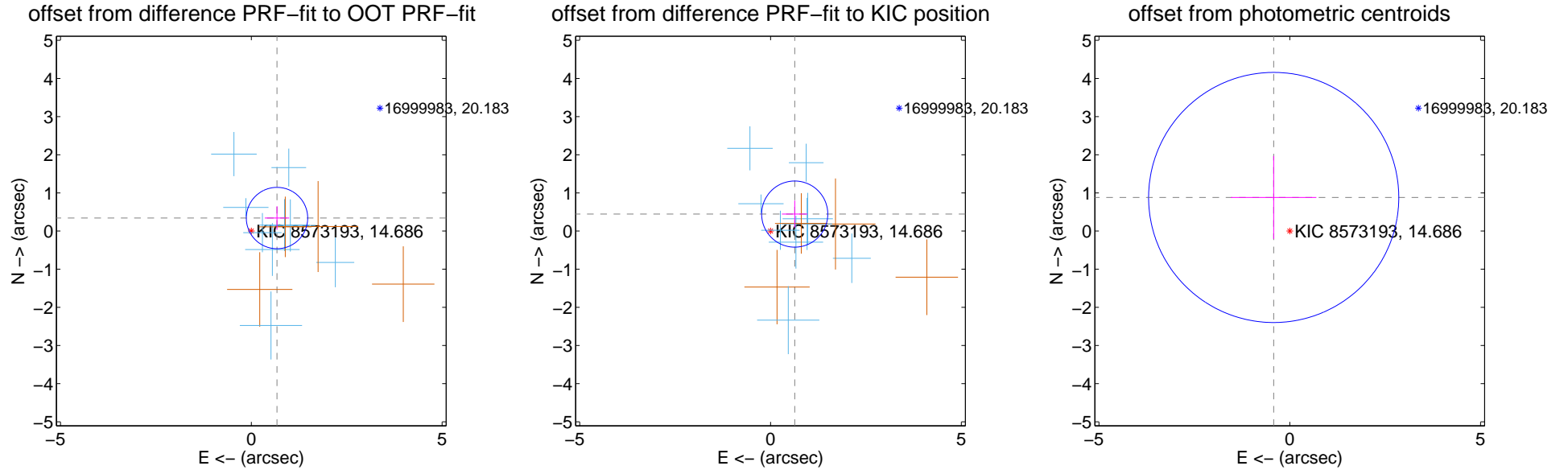
DV Centroid Data

Supplemental centroid analysis for 008573193-01. Kepler magnitude: 14.69. Transit SNR 12.20

There are 9 quarters with good PRF difference image offsets

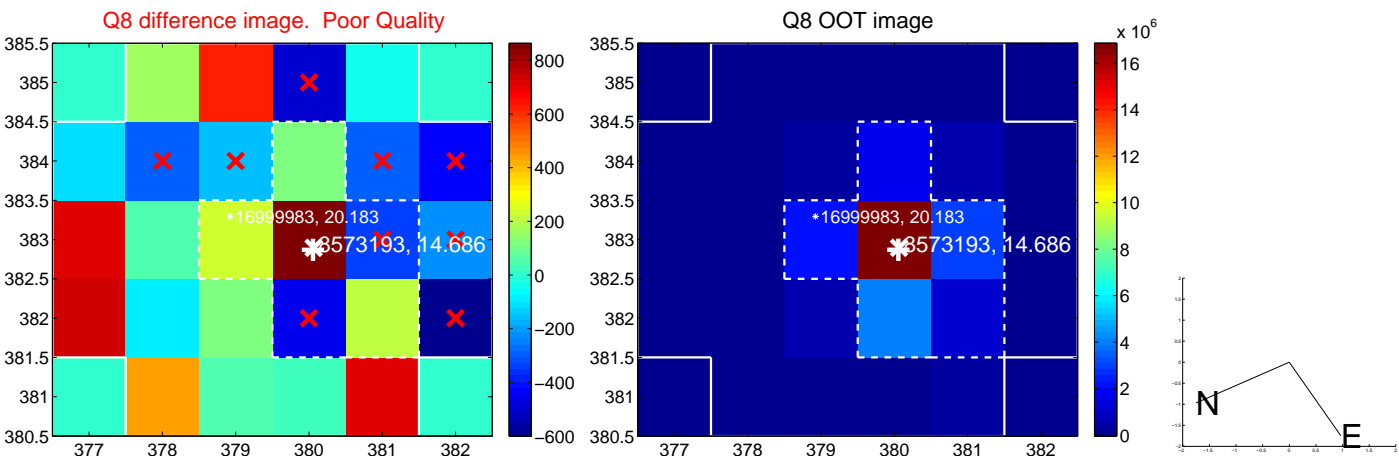
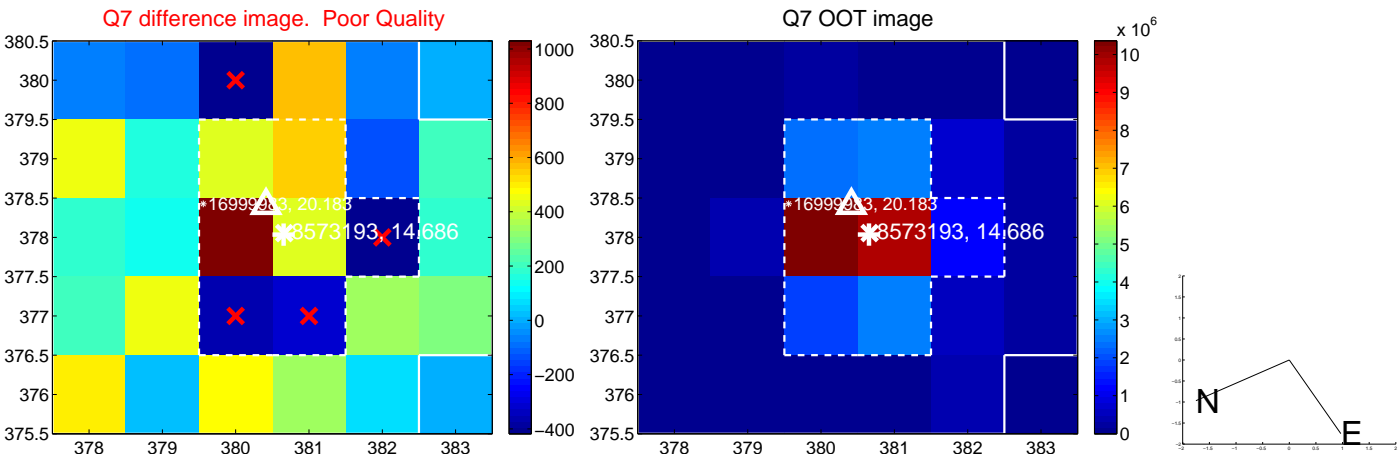
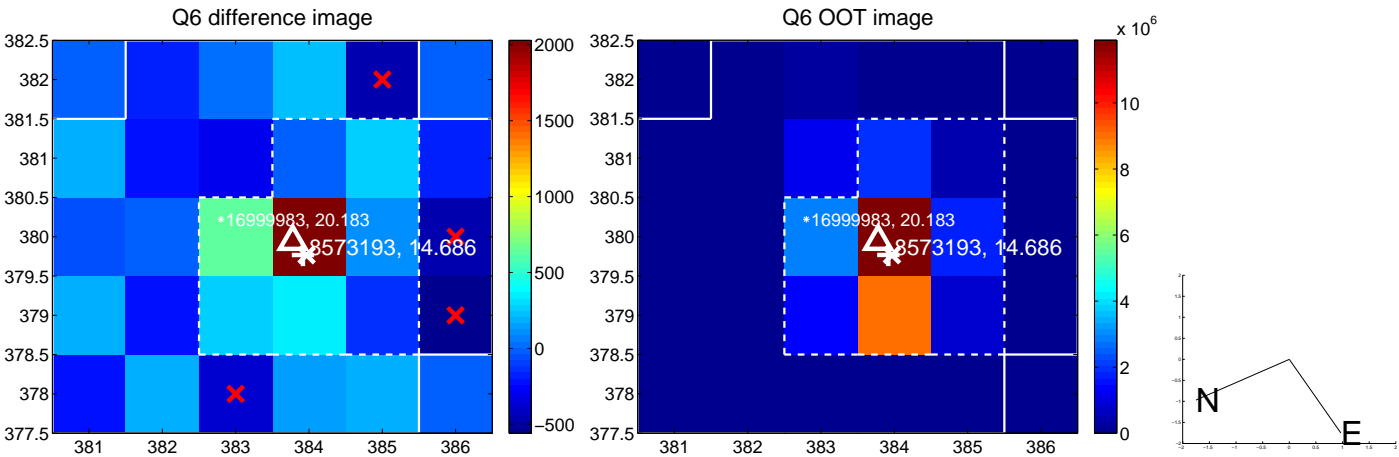
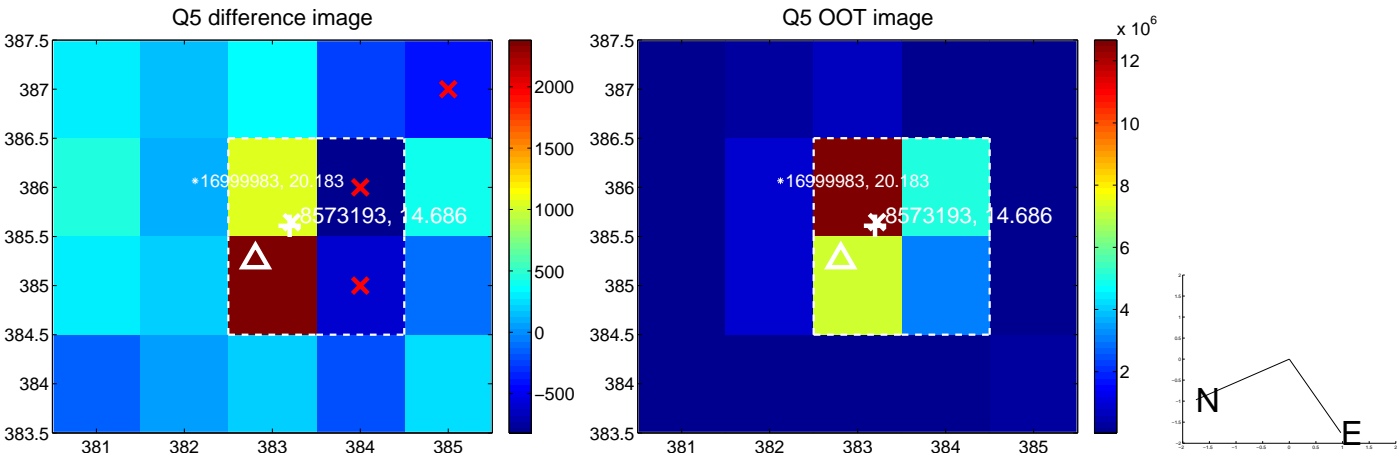
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.755 ± 0.268	2.82	-0.673 ± 0.318	0.341 ± 0.309
PRF-fit source offset from KIC position	0.774 ± 0.289	2.68	-0.633 ± 0.335	0.445 ± 0.354
photometric centroid source offset	0.98 ± 1.09	0.89	0.42 ± 1.12	0.88 ± 1.09

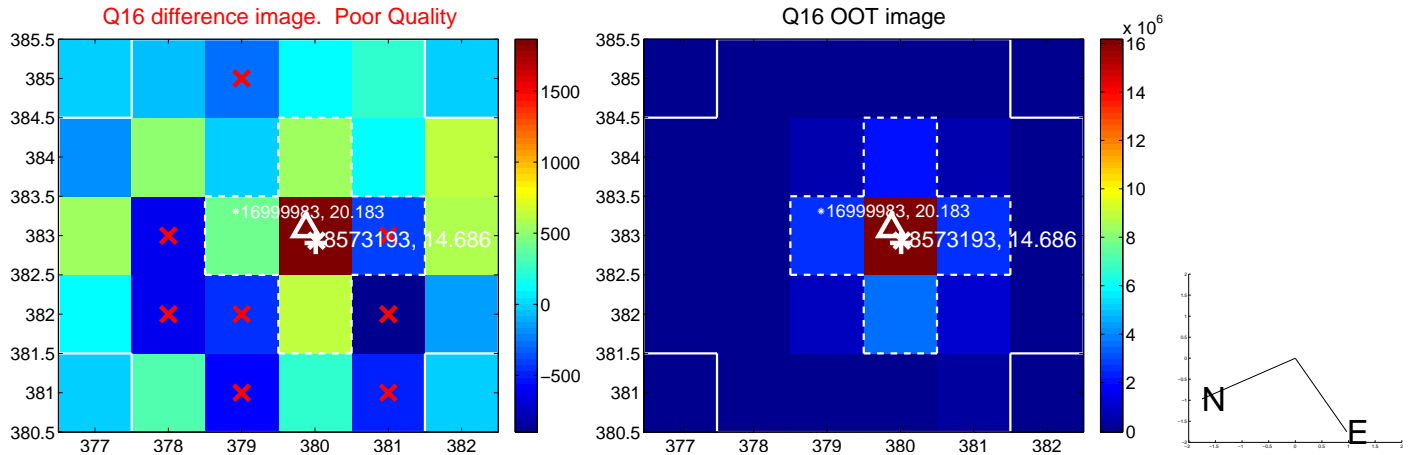
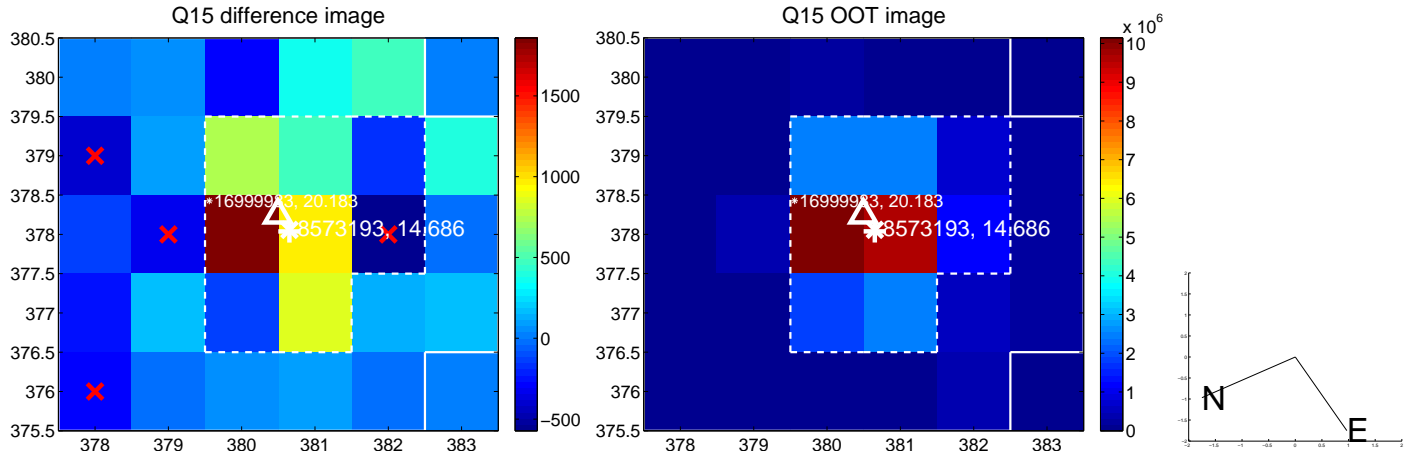
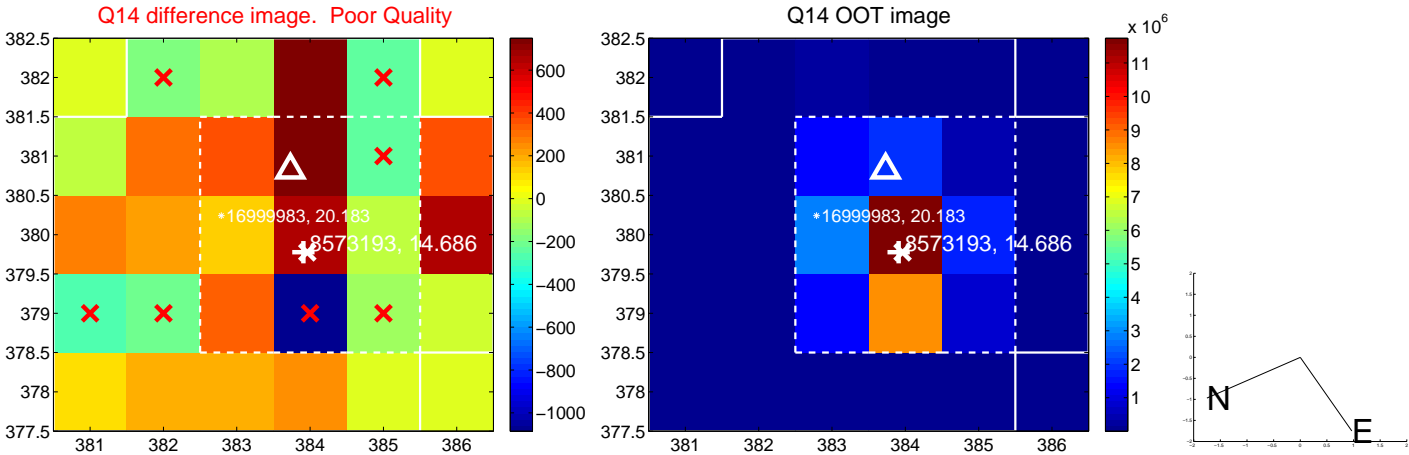
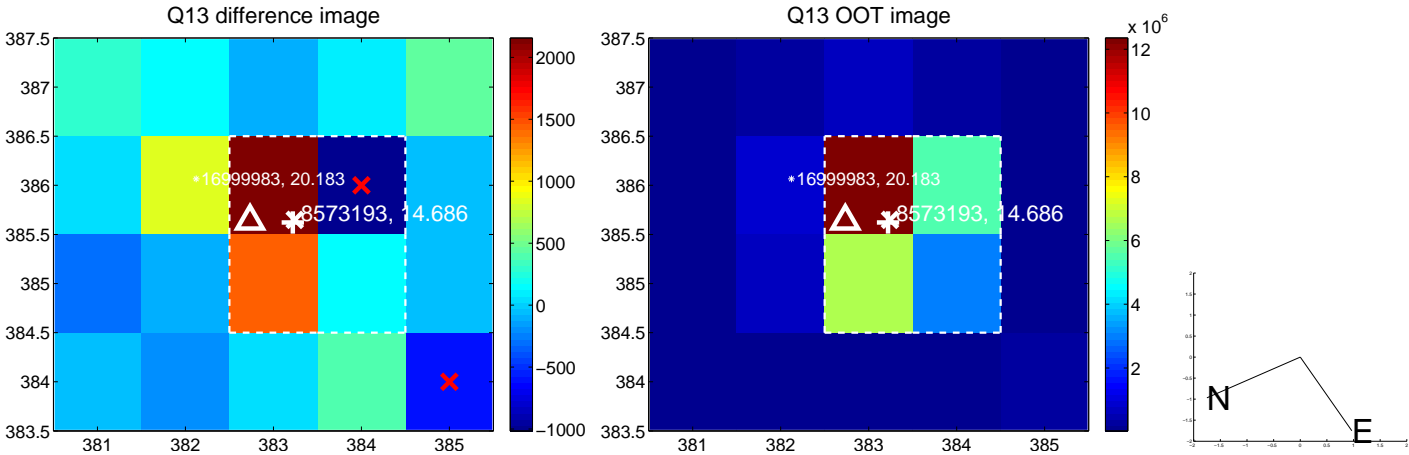


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

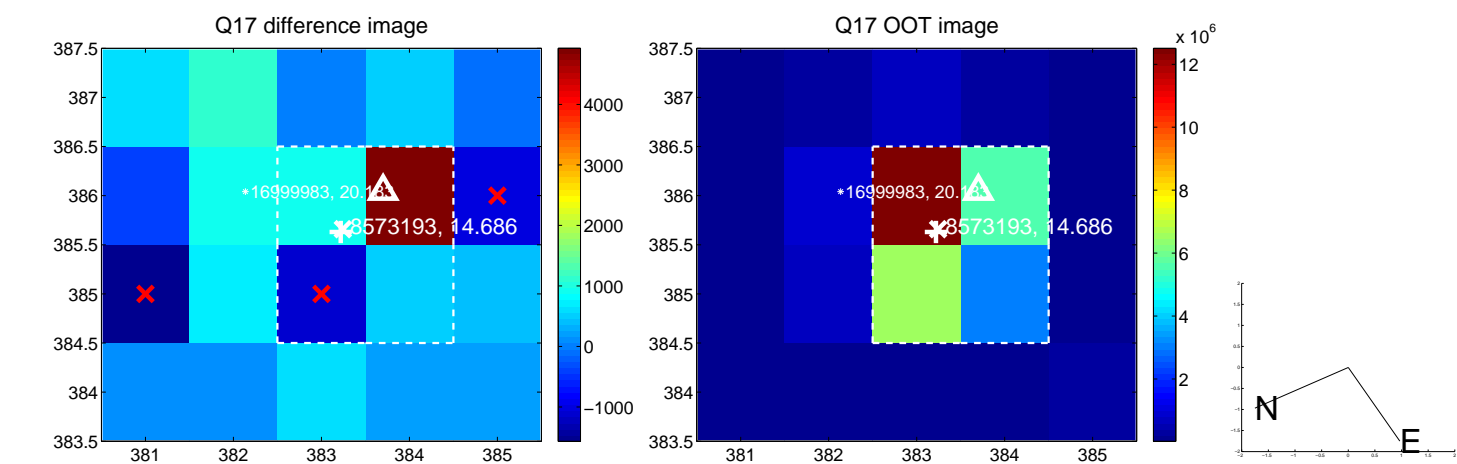
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



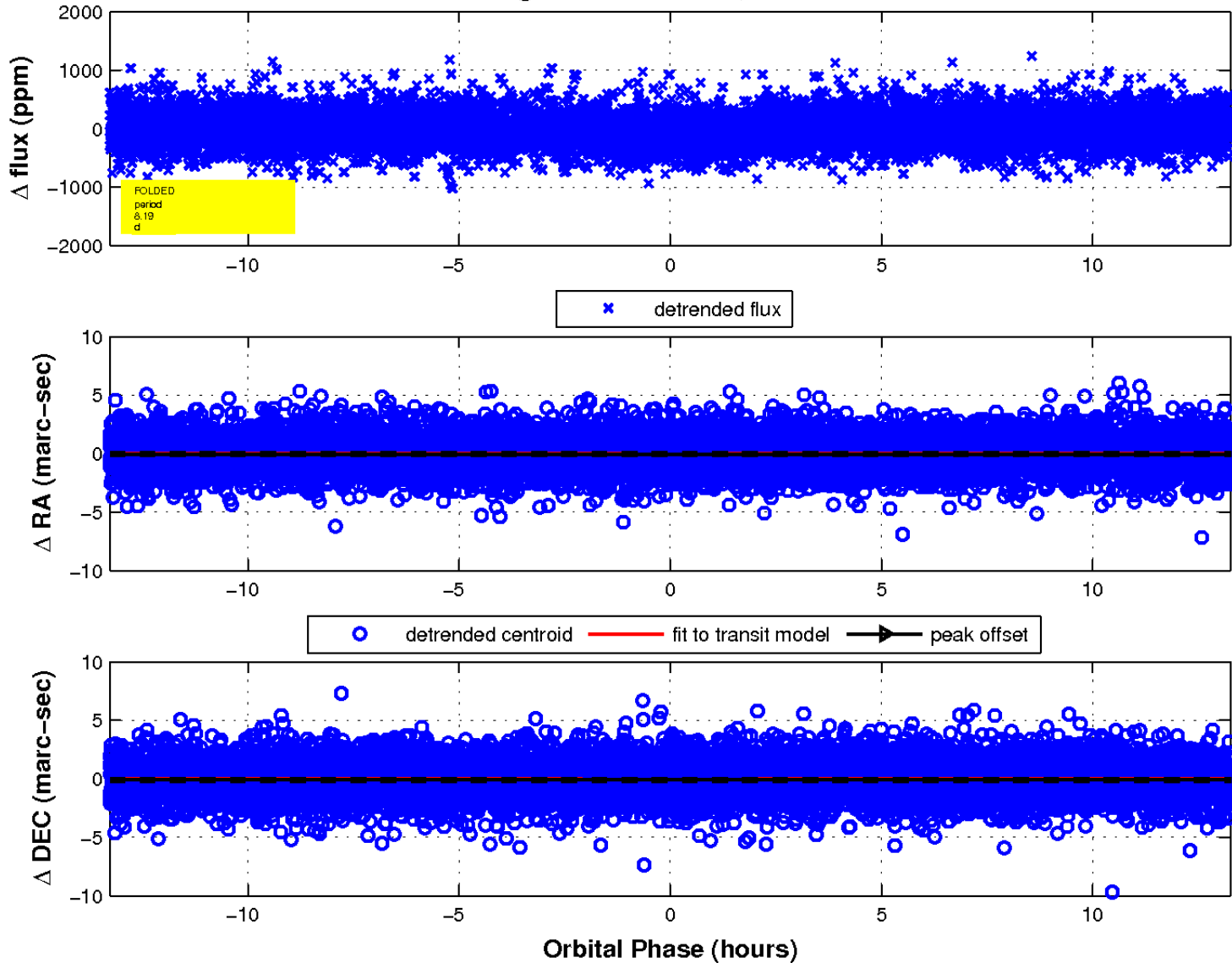
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

