

KIC 005003342

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})
005003342-01	OBS	No	0.509496	131.778125	32.6	5.348	8.6	11.6	0.86	5927	0.53	5449.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005003342-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

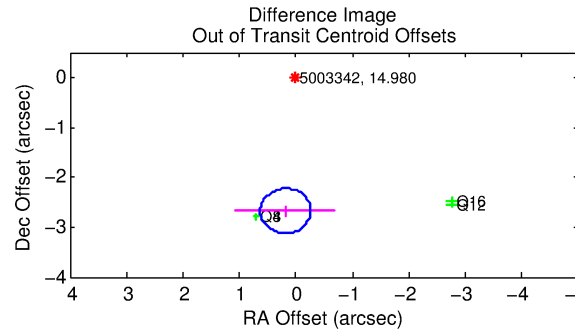
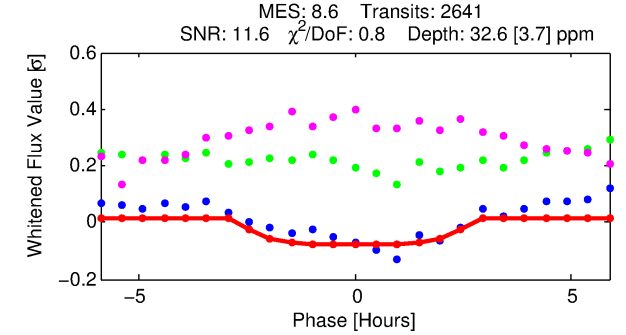
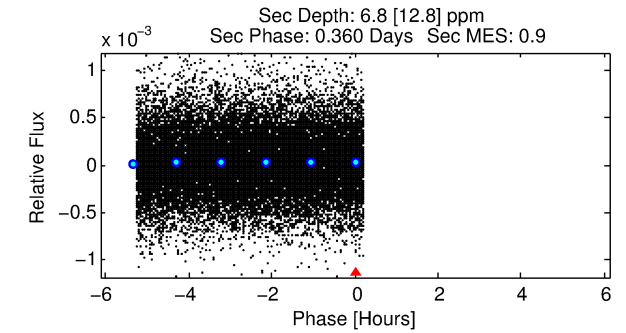
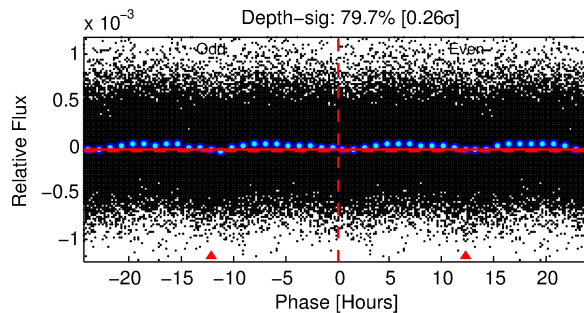
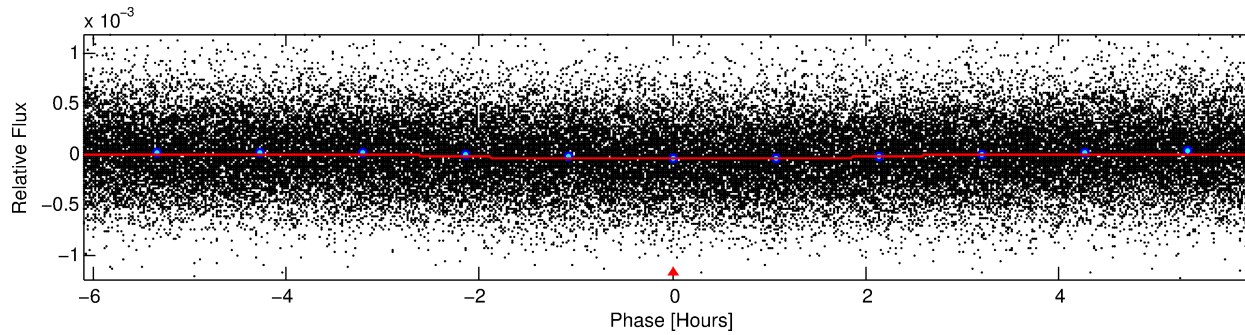
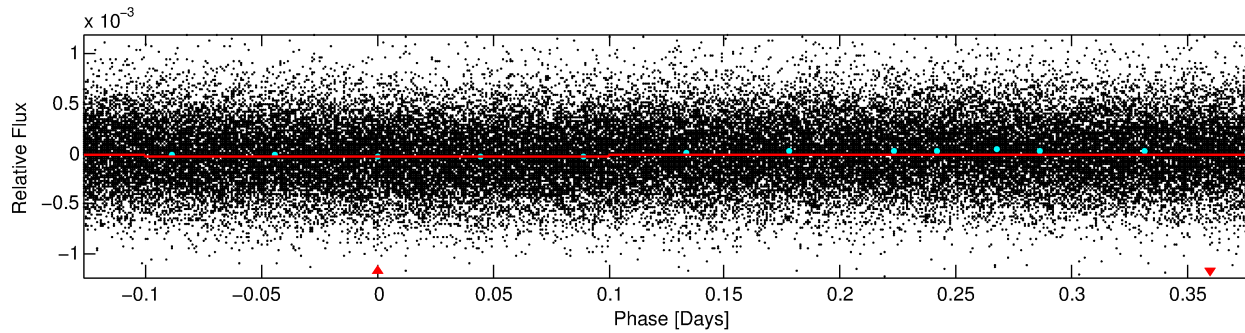
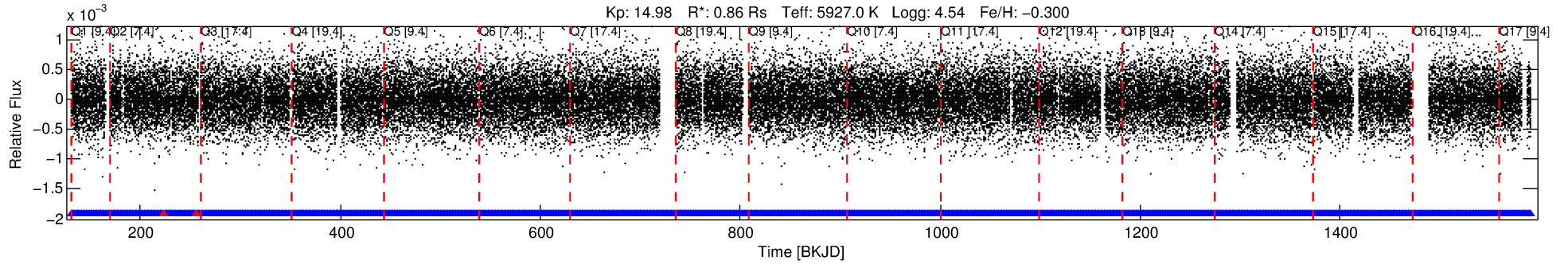
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005003342-01

No Significant Match Found

DV One-Page Summary

KIC: 5003342 Candidate: 1 of 1 Period: 0.509 d



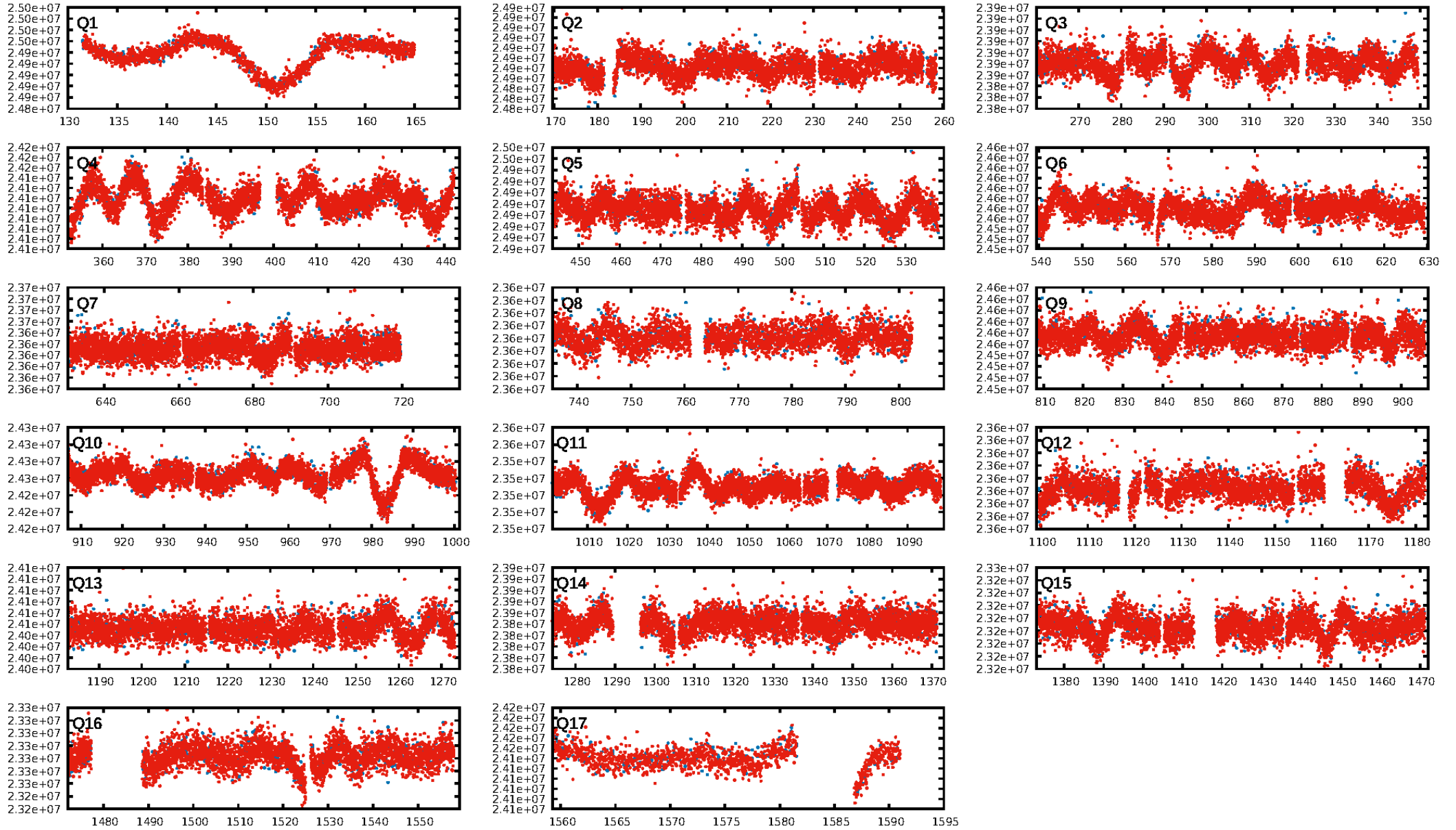
DV Fit Results:

Period = 0.50950 [0.00001] d
Epoch = 131.7781 [0.0043] BKJD
Rp/R* = 0.0057 [0.0037]
a/R* = 1.01 [0.09]
b = 0.75 [1.96]
Seff = 5449.78 [2189.96]
Teq = 2191 [220] K
Rp = 0.53 [0.38] Re
a = 0.0122 [0.0032] AU
Ag = 1.97 [4.58] [0.21 σ]
Teffp = 4012 [2307] K [0.79 σ]

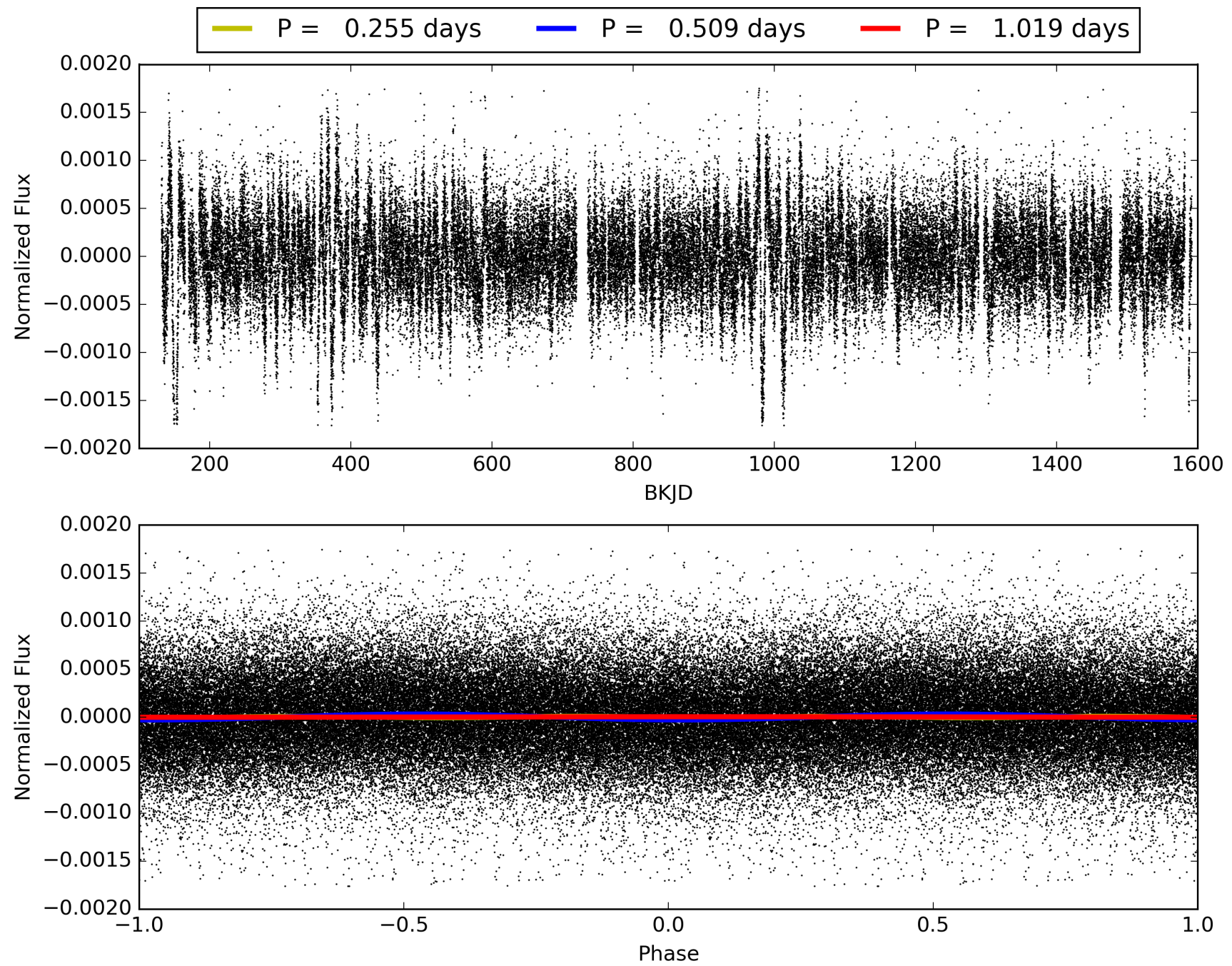
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2520/2522]
GhostDiagnostic-chr: -1.298
Centroid-sig: 0.0%
Centroid-so: 9.447 arcsec [11.12 σ]
OotOffset-rm: 2.683 arcsec [18.02 σ]
KicOffset-rm: 2.515 arcsec [18.30 σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005003342-01, PDC Light Curves

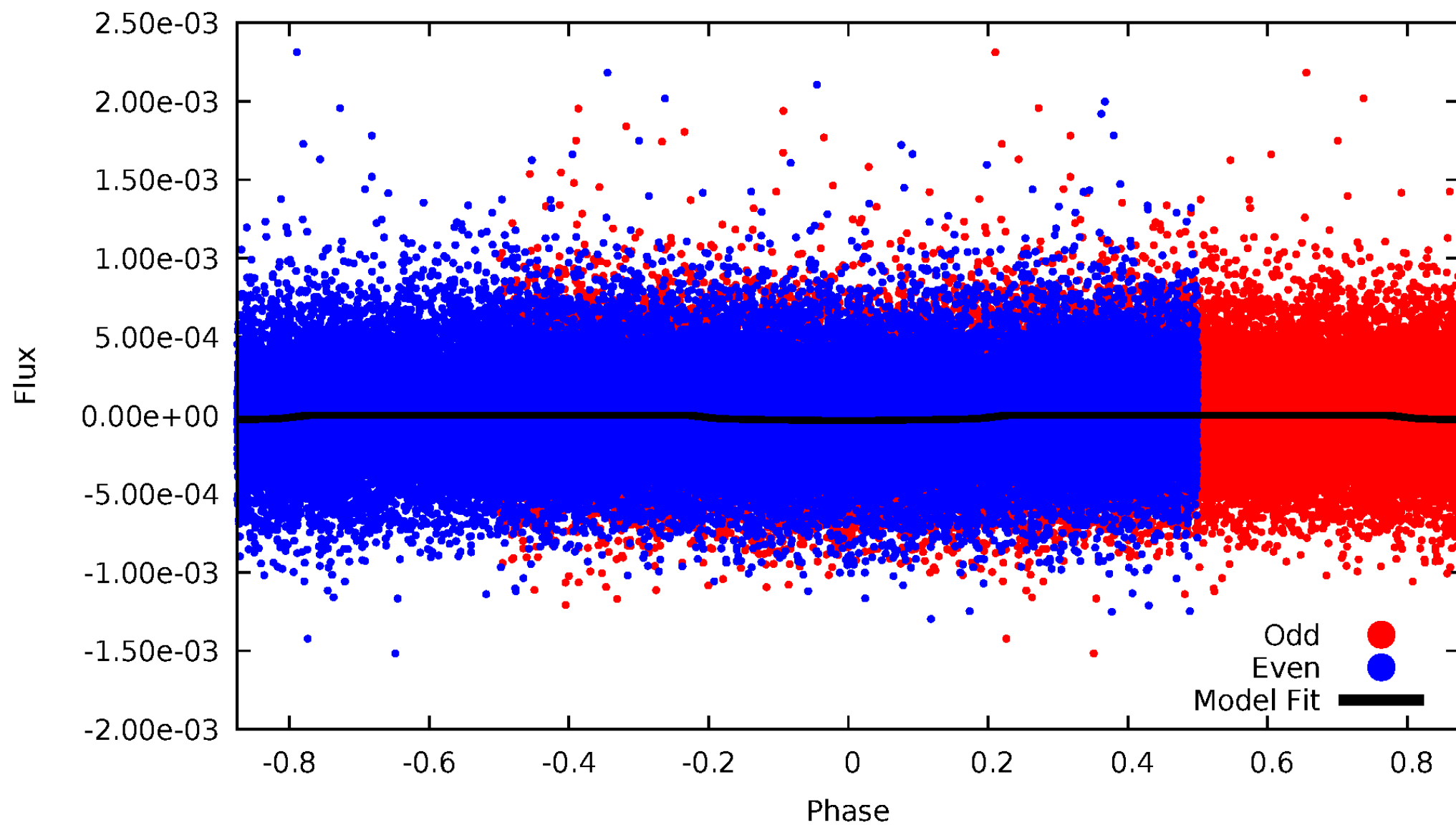


TCE 005003342-01



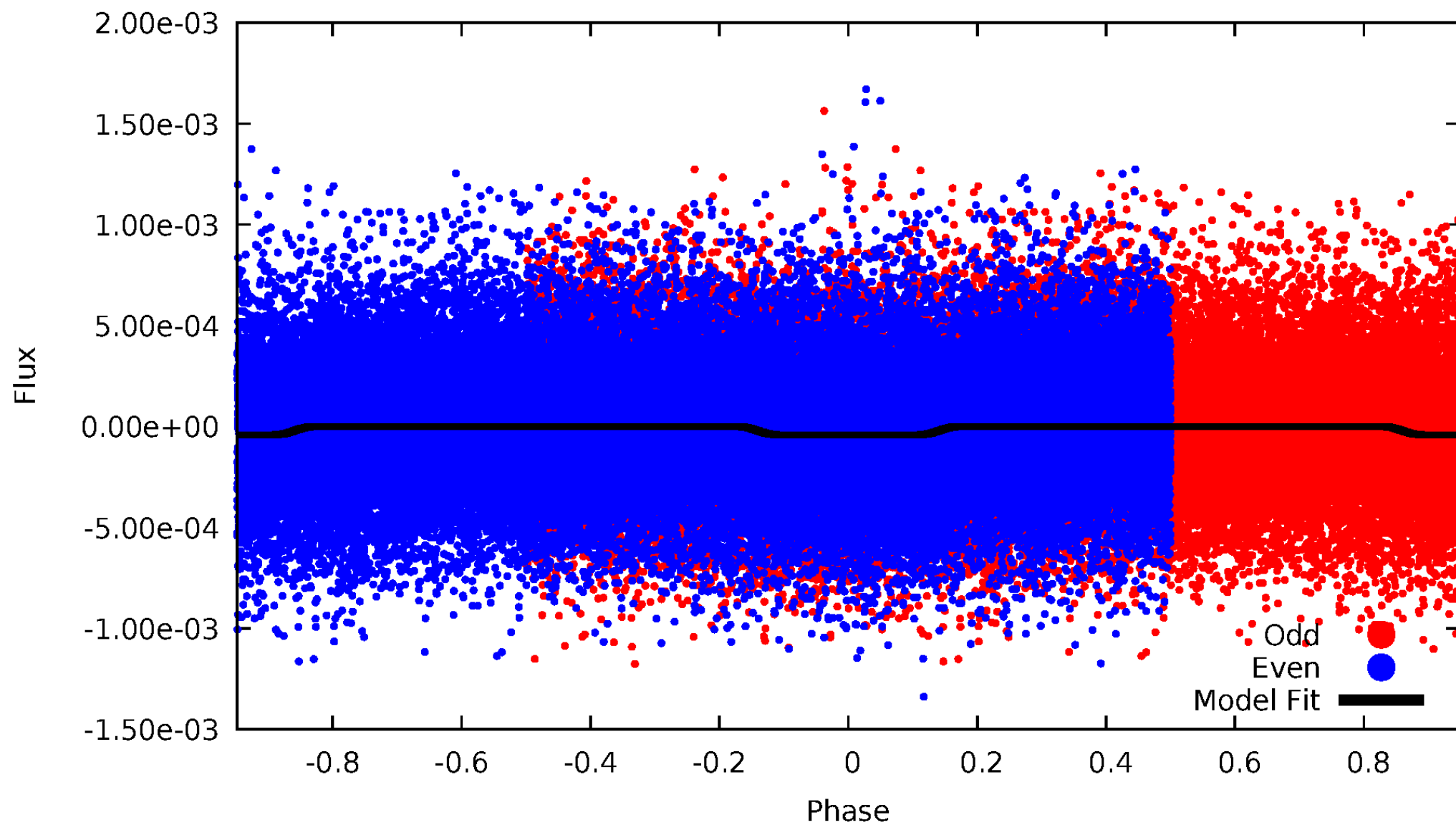
DV Odd/Even

TCE 005003342-01



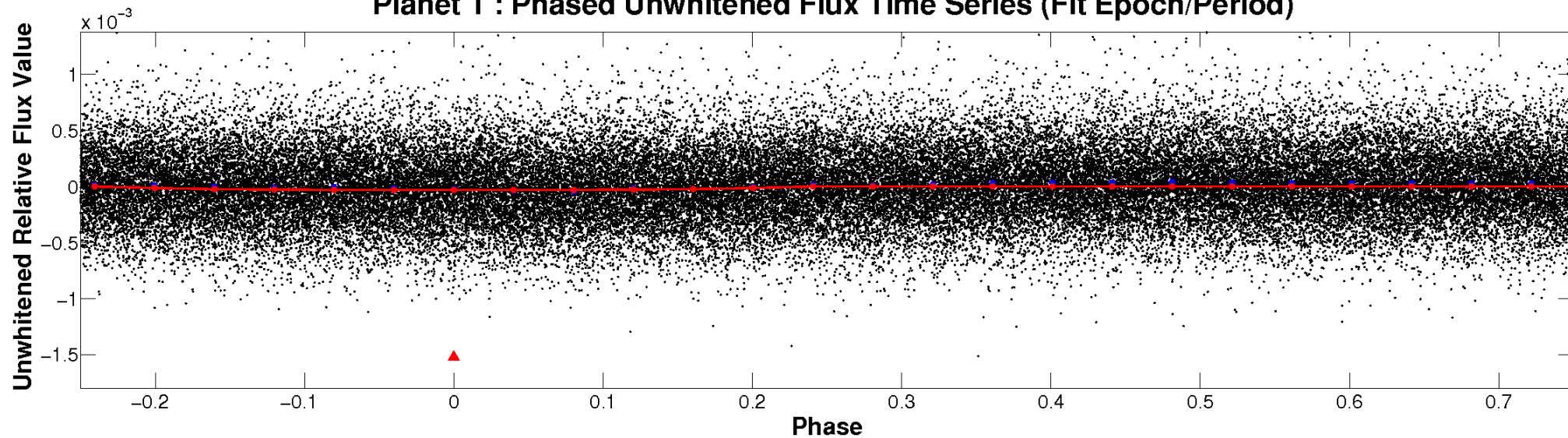
ALT Odd/Even

TCE 005003342-01

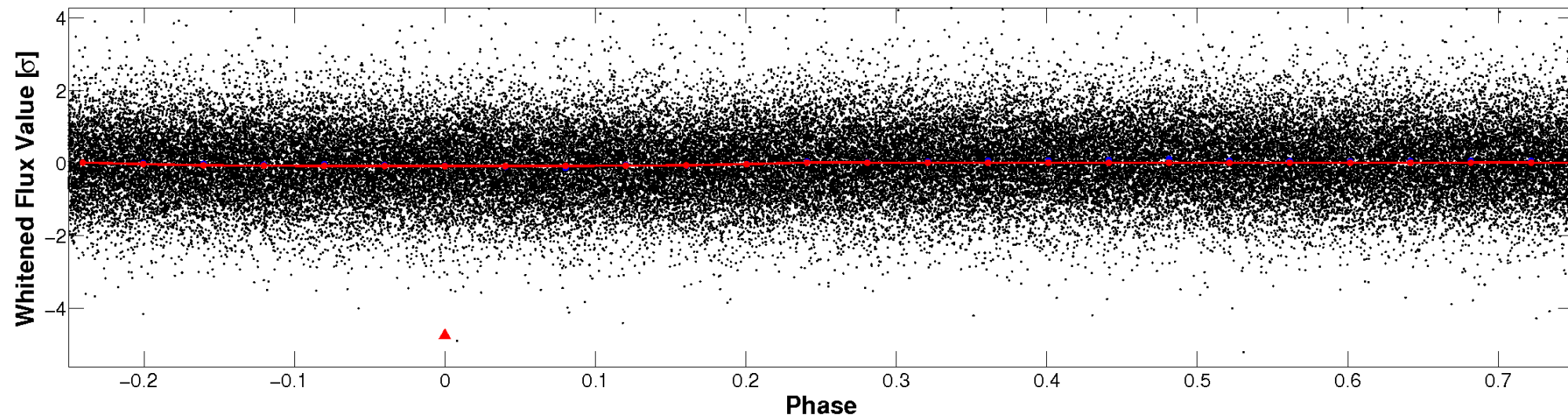


Non-Whitened Vs. Whitened Light Curve

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

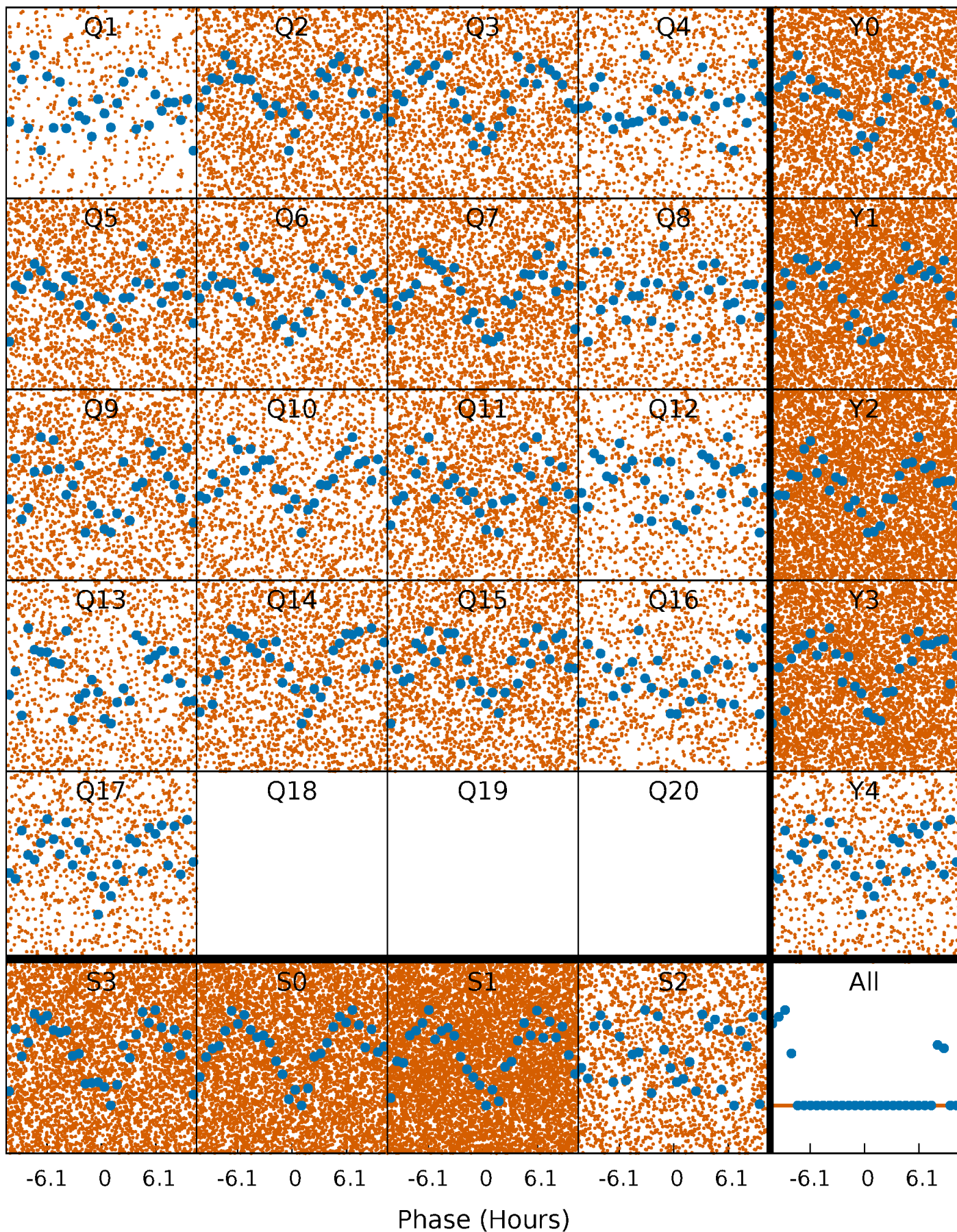


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



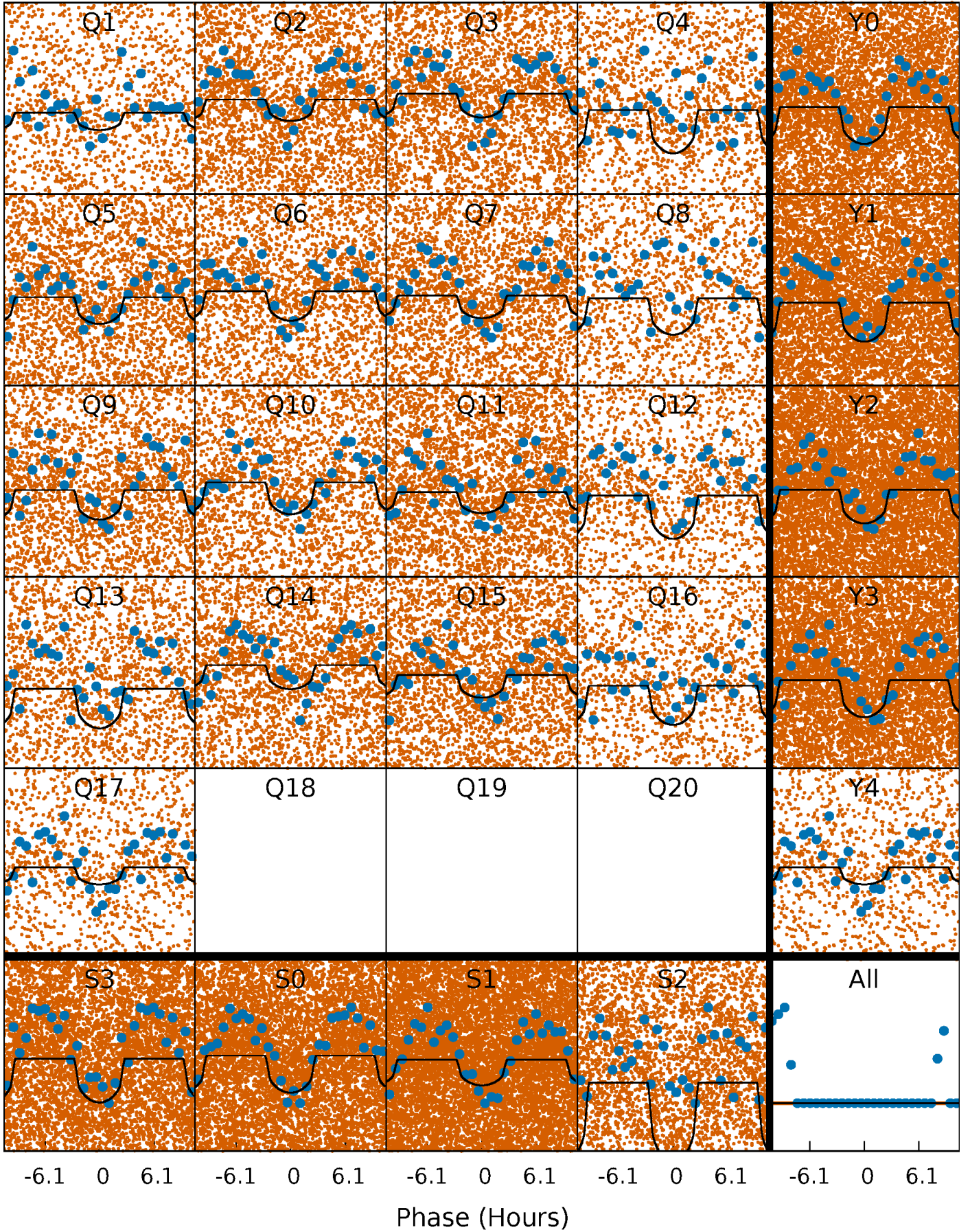
PDC Quarter-Phased Transit Curves

TCE 005003342-01 P= 0.509496 Days $T_0=131.778125$ (BKJD)



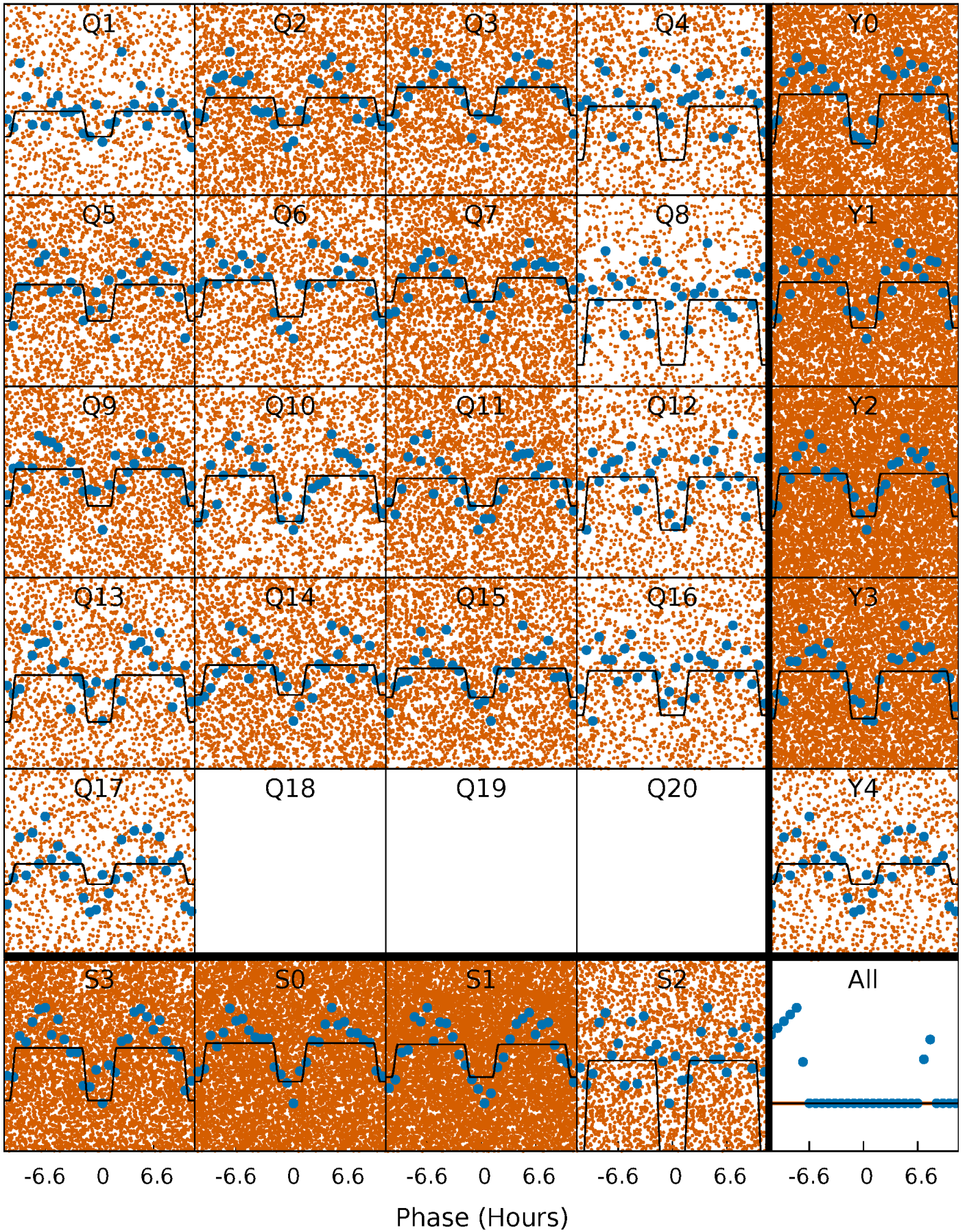
DV Quarter-Phased Transit Curves

TCE 005003342-01 P= 0.509496 Days $T_0=131.778125$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

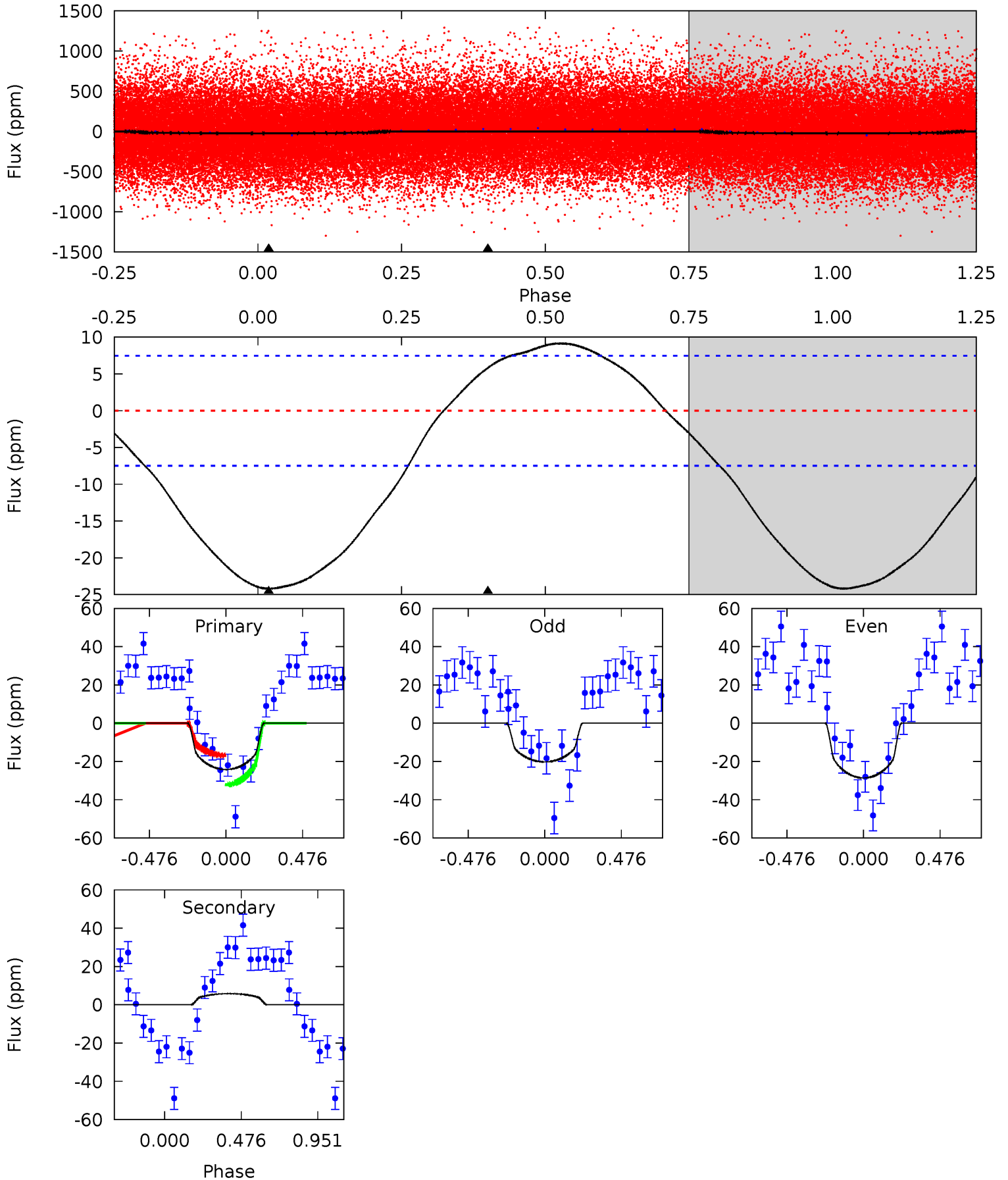
TCE 005003342-01 P= 0.509509 Days $T_0=131.777941$ (BKJD)



DV Model-Shift Uniqueness Test

005003342-01, P = 0.509496 Days, E = 131.268629 Days

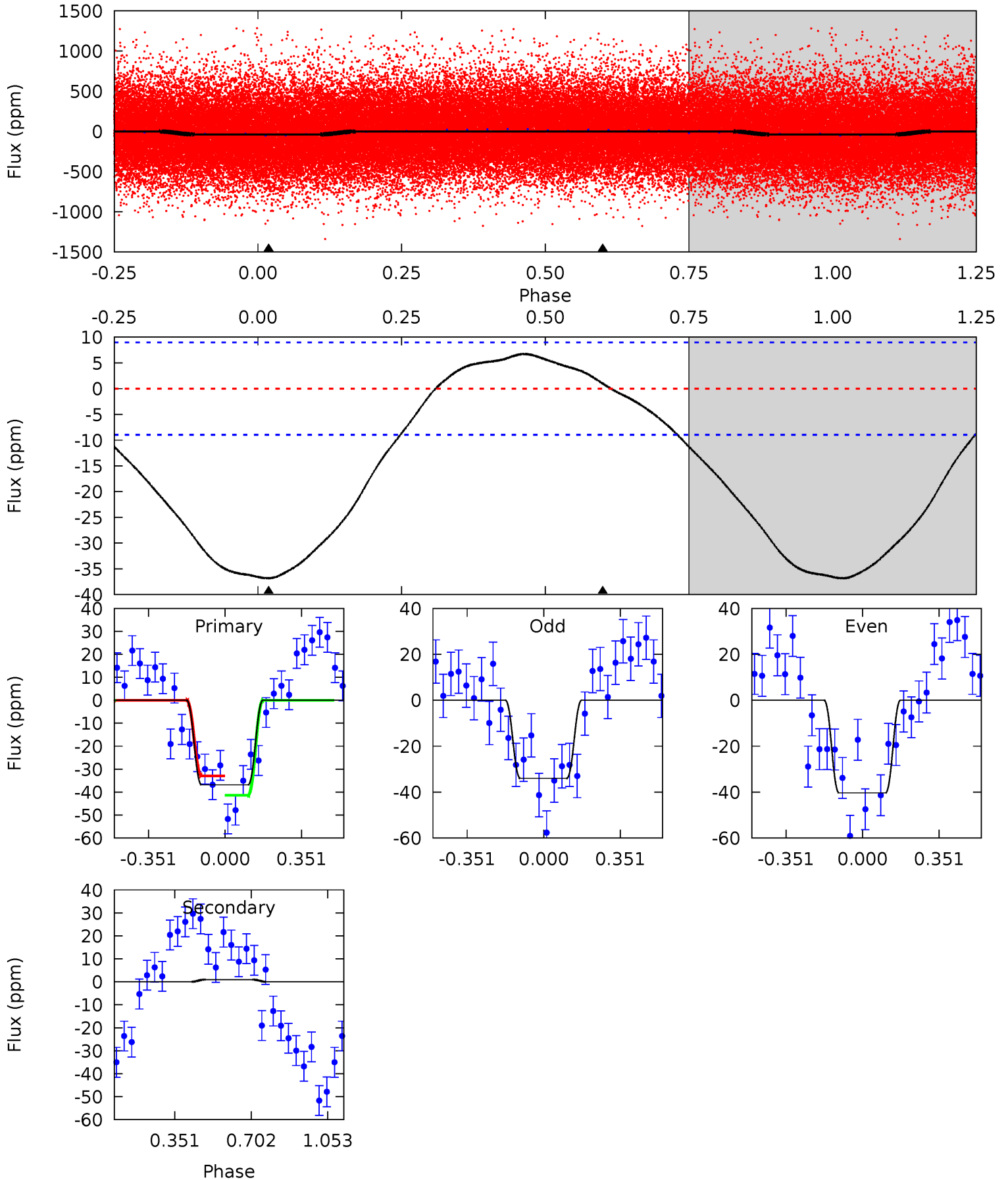
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	-3.29	0	0	4.23	0.71	1.32	13.7	13.7	-3.29	-3.29	2.38	1.02	0.27	4.22



Alt Model-Shift Uniqueness Test

005003342-01, P = 0.509509 Days, E = 131.268432 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	-0.46	0	0	4.29	0.93	1.65	17.6	17.6	-0.46	-0.46	1.53	0.87	0.15	1.99



Stellar Parameters For KIC 005003342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5927^{+158}_{-175}	$4.544^{+0.037}_{-0.213}$	$-0.300^{+0.300}_{-0.300}$	$0.860^{+0.260}_{-0.087}$	$0.944^{+0.117}_{-0.117}$	$2.090^{+0.441}_{-1.125}$
	+3%/-3%	+1%/-5%	+100%/-100%	+30%/-10%	+12%/-12%	+21%/-54%
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 005003342-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	6 ± 2	$0.60^{+0.36}_{-0.33}$	3135^{+232}_{-138}	-4196^{+517}_{-1462}	$-1.234^{+0.786}_{-5.176}$
Alt.	1 ± 2	$0.64^{+0.39}_{-0.33}$	3142^{+222}_{-147}	-3411^{+815}_{-662}	$-0.144^{+0.373}_{-0.865}$

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 $A_{obs} \gg 1.0$

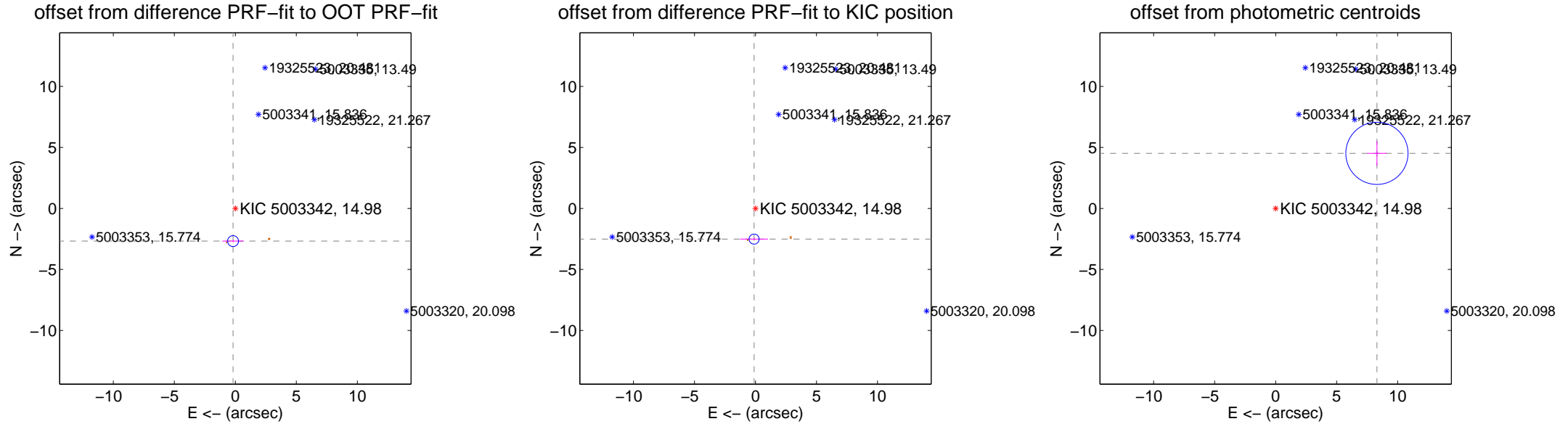
DV Centroid Data

Supplemental centroid analysis for 005003342-01. Kepler magnitude: 14.98. Transit SNR 11.58

There are 0 quarters with good PRF difference image offsets

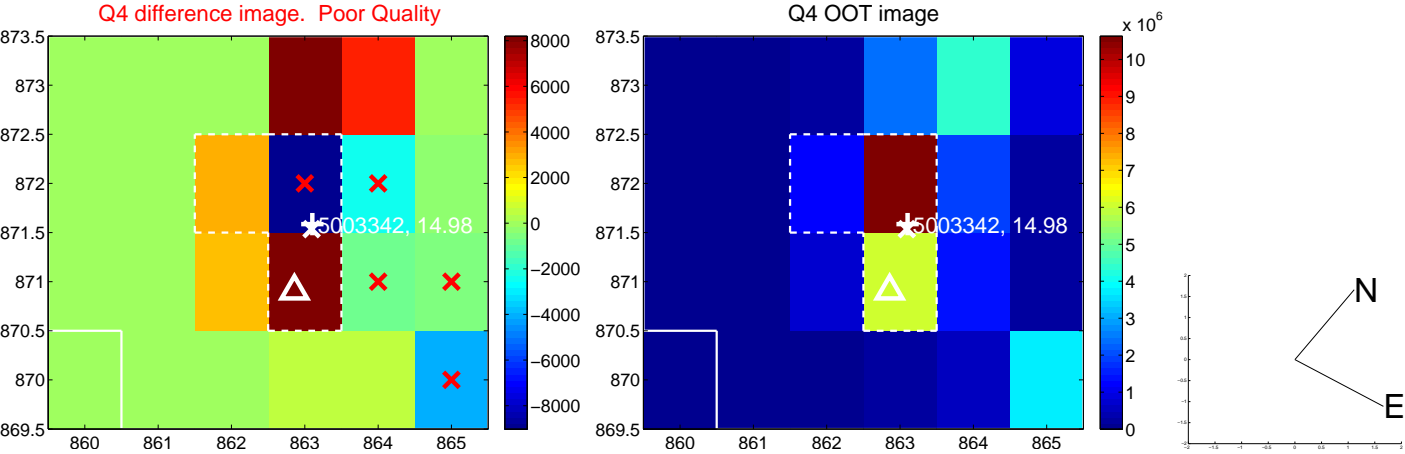
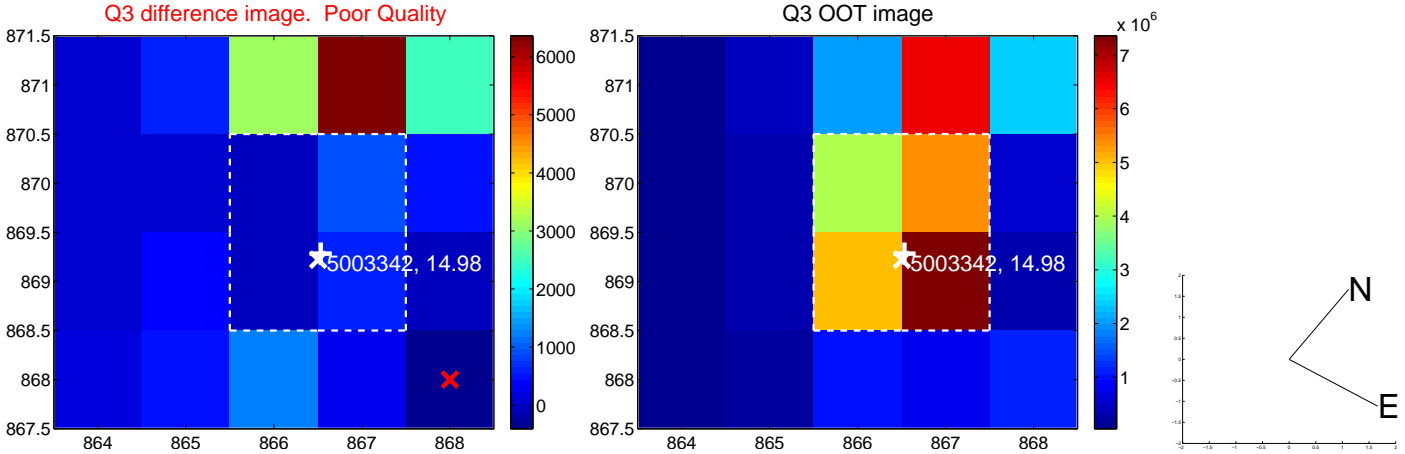
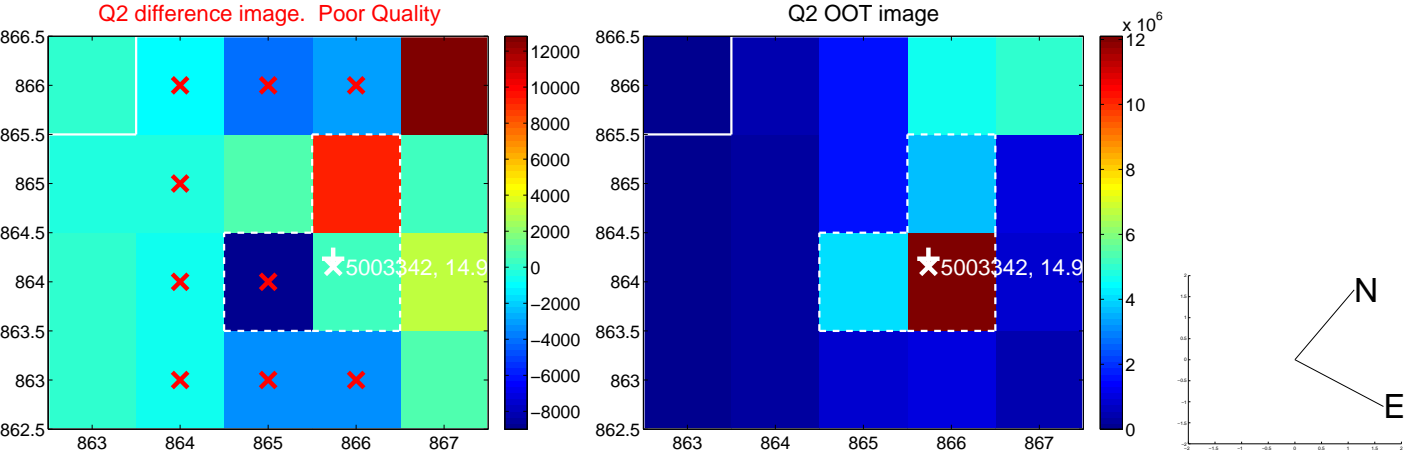
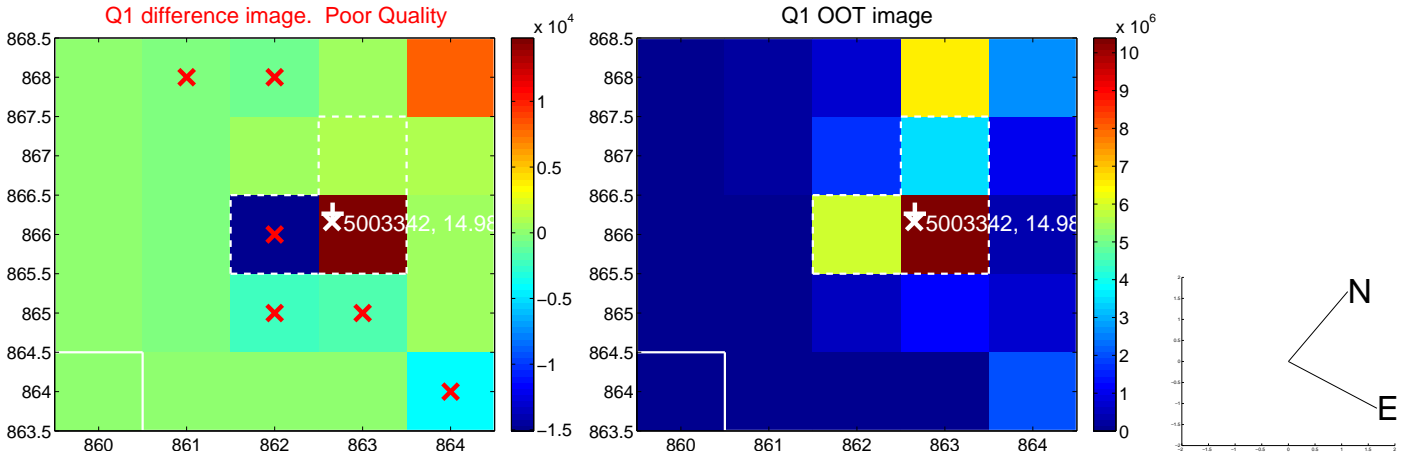
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.683 ± 0.149	18.02	0.187 ± 0.871	-2.677 ± 0.099
PRF-fit source offset from KIC position	2.515 ± 0.137	18.30	0.114 ± 1.141	-2.513 ± 0.096
photometric centroid source offset	9.45 ± 0.85	11.12	-8.30 ± 0.79	4.52 ± 1.01

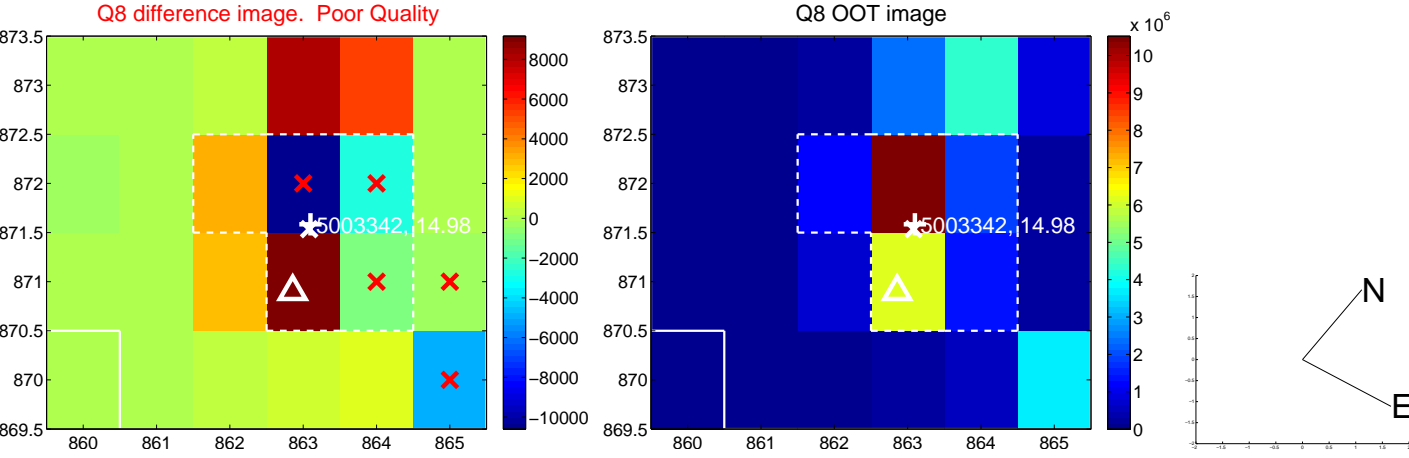
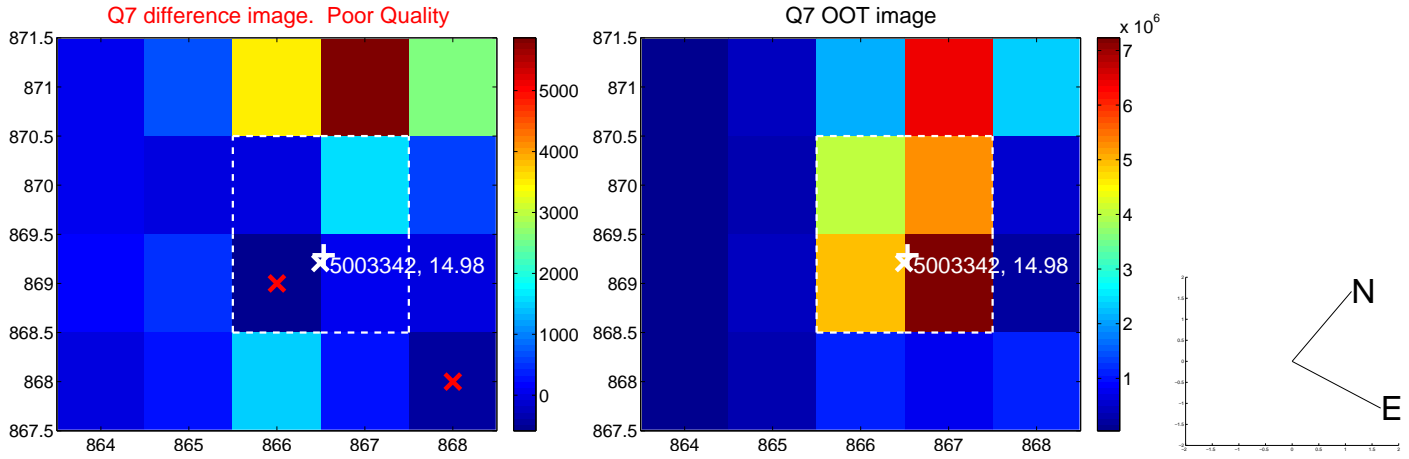
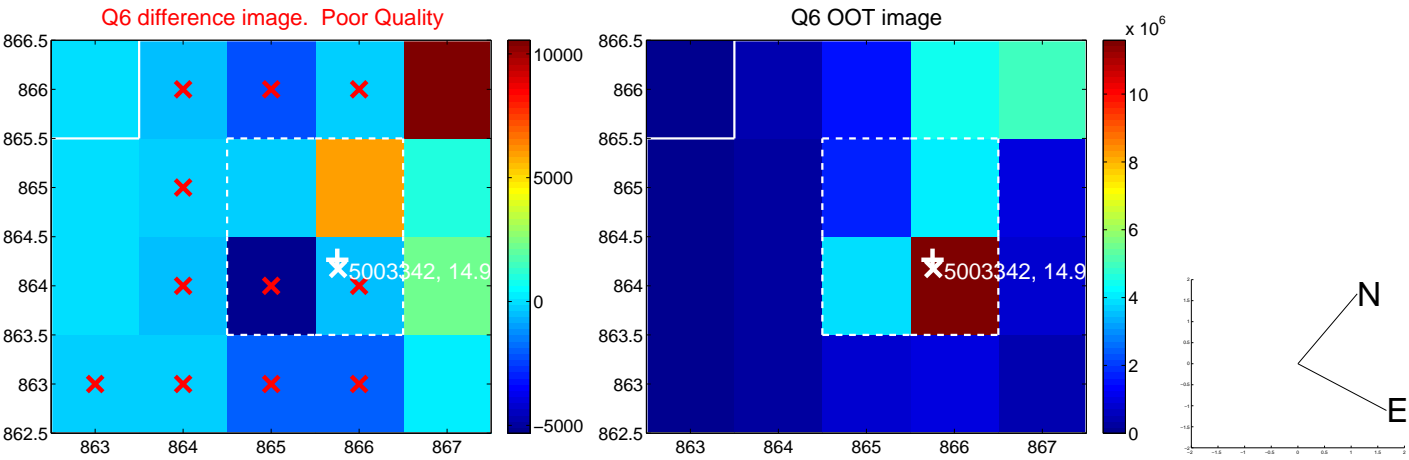
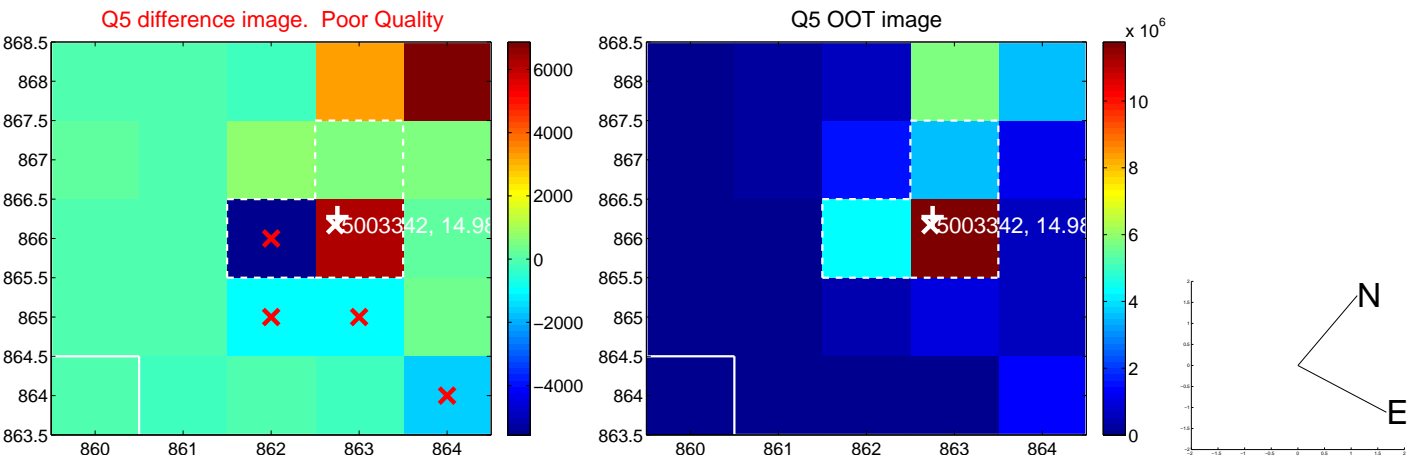


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

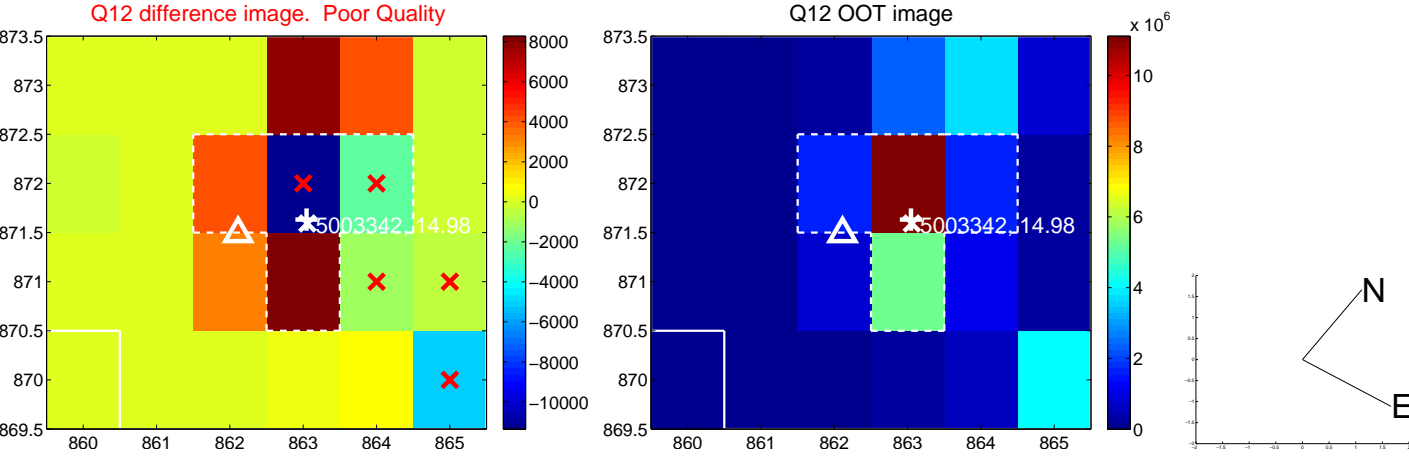
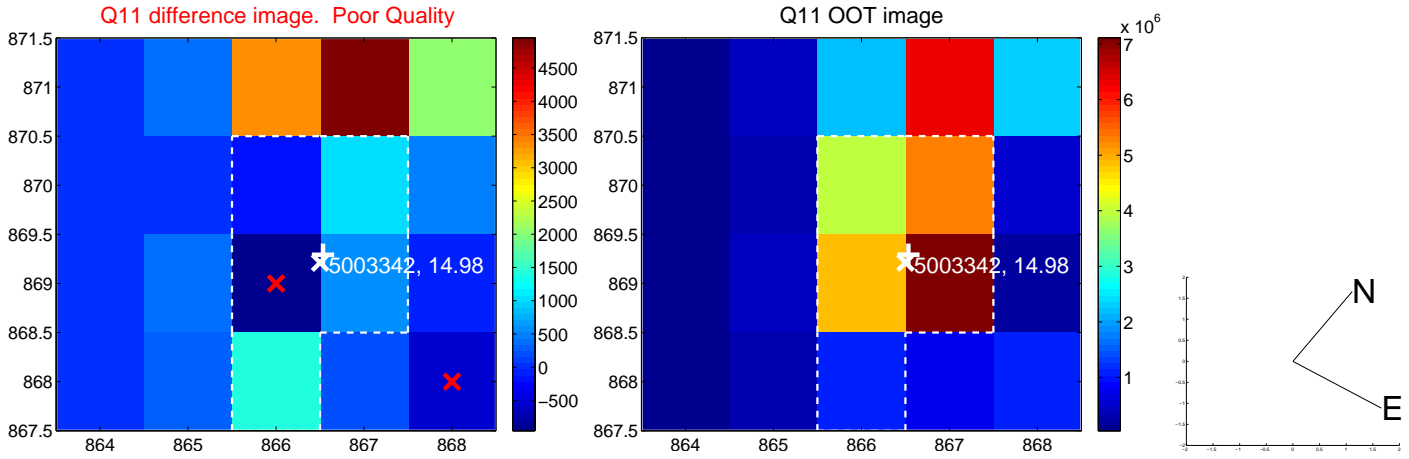
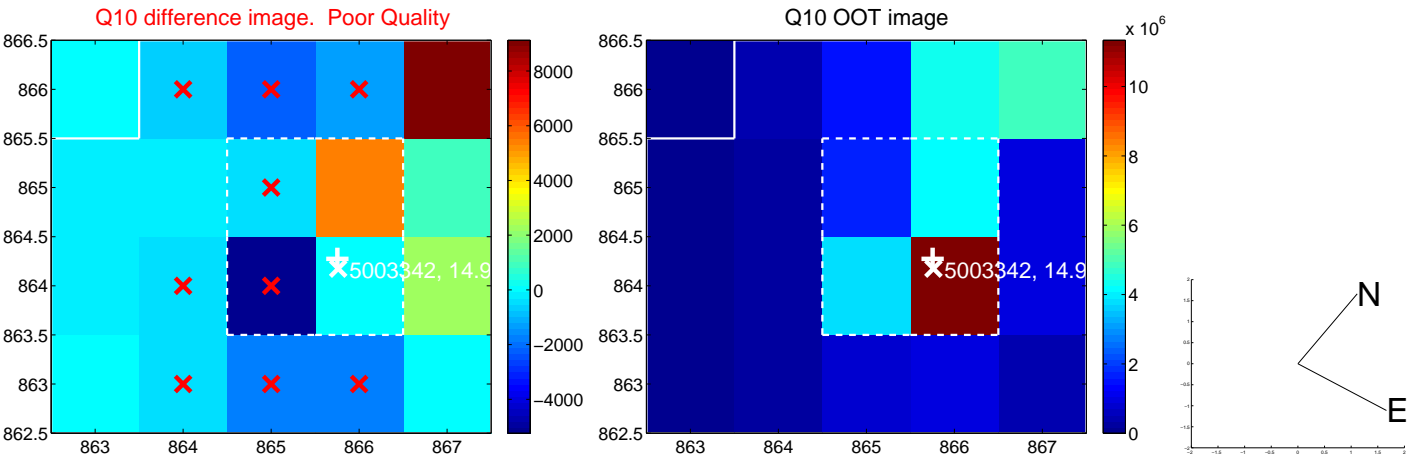
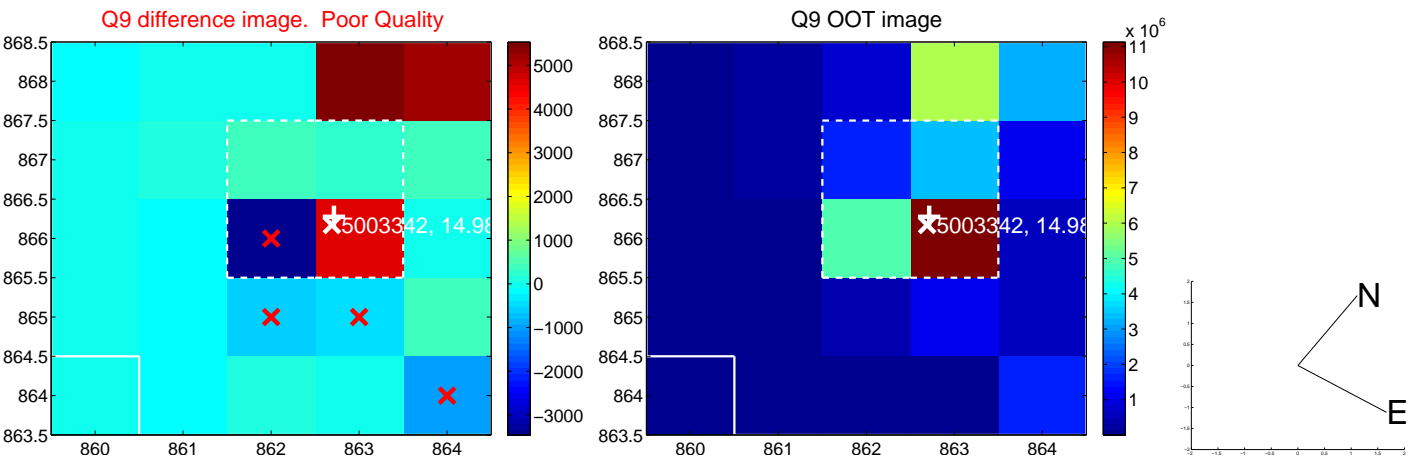
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



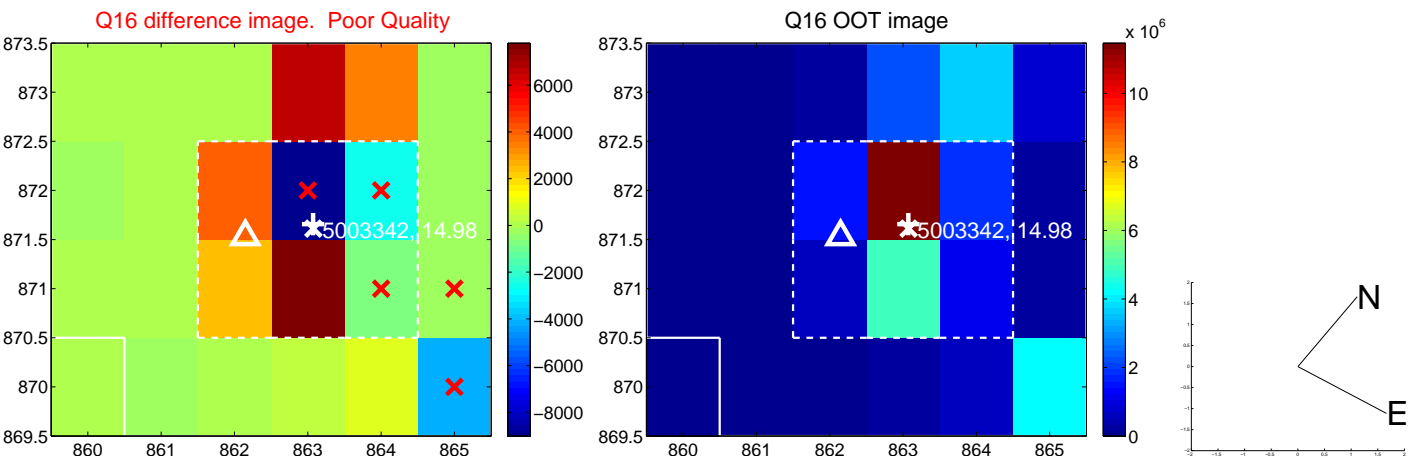
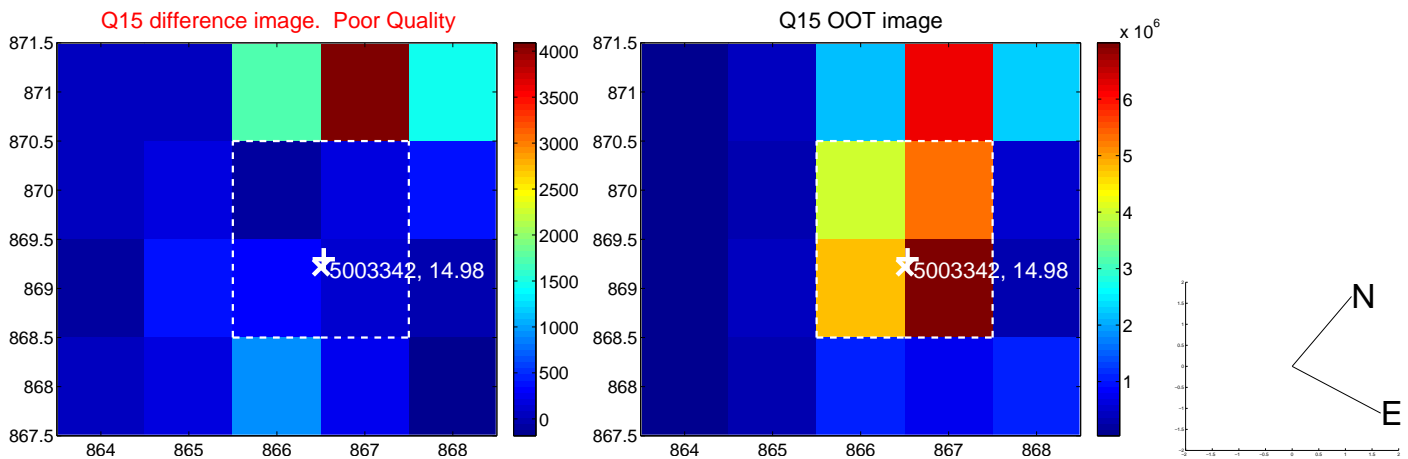
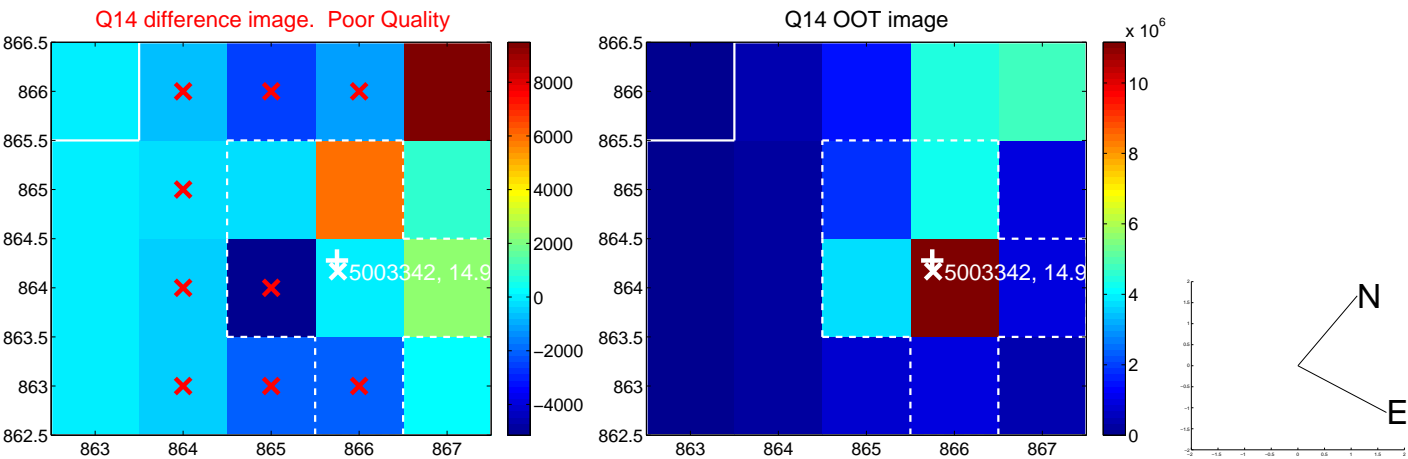
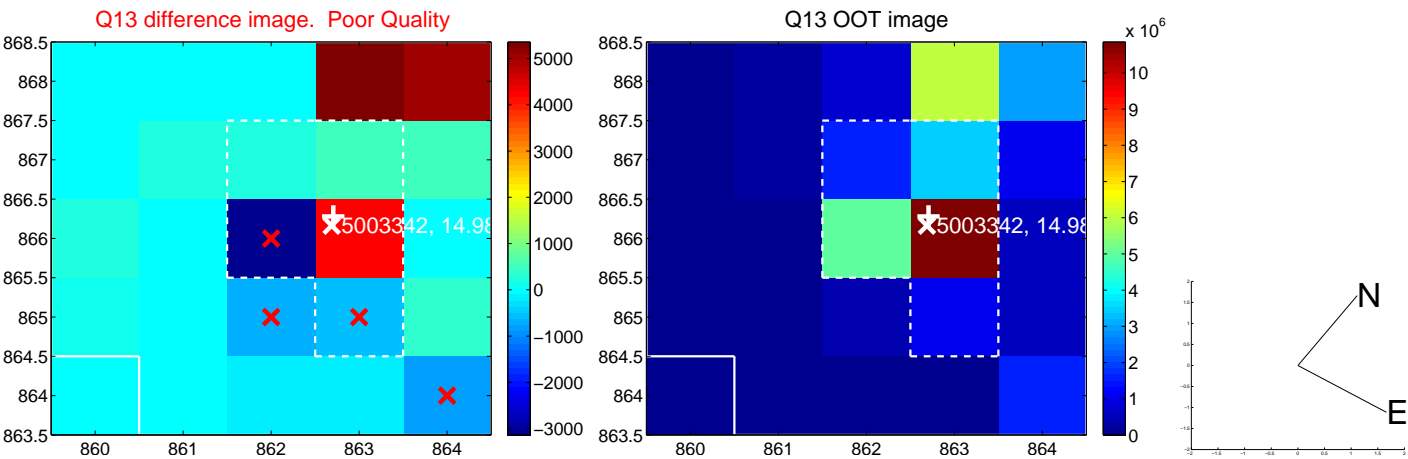
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



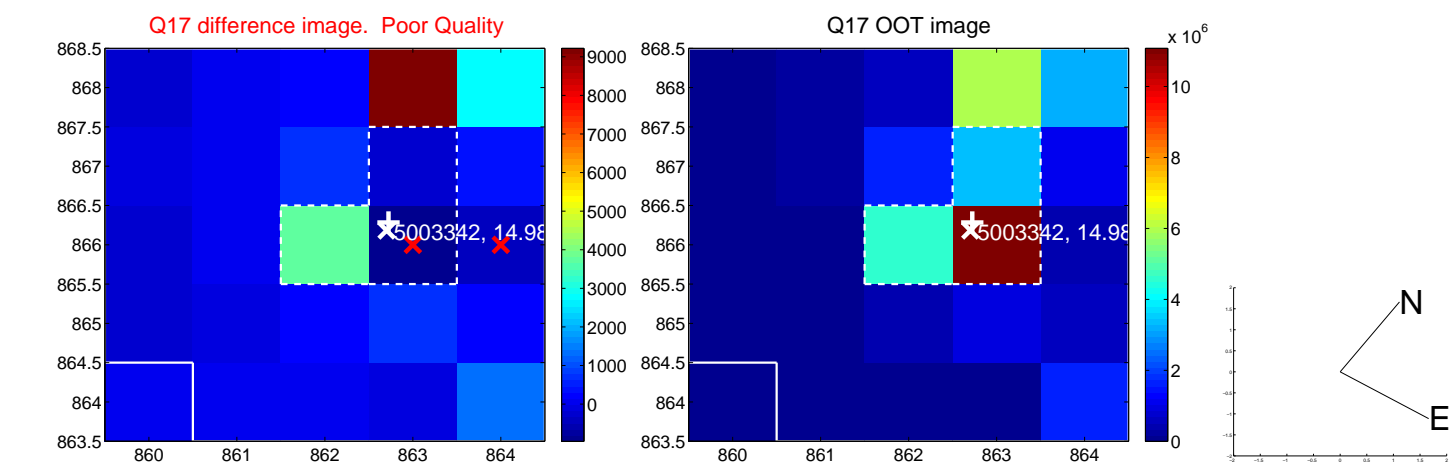
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



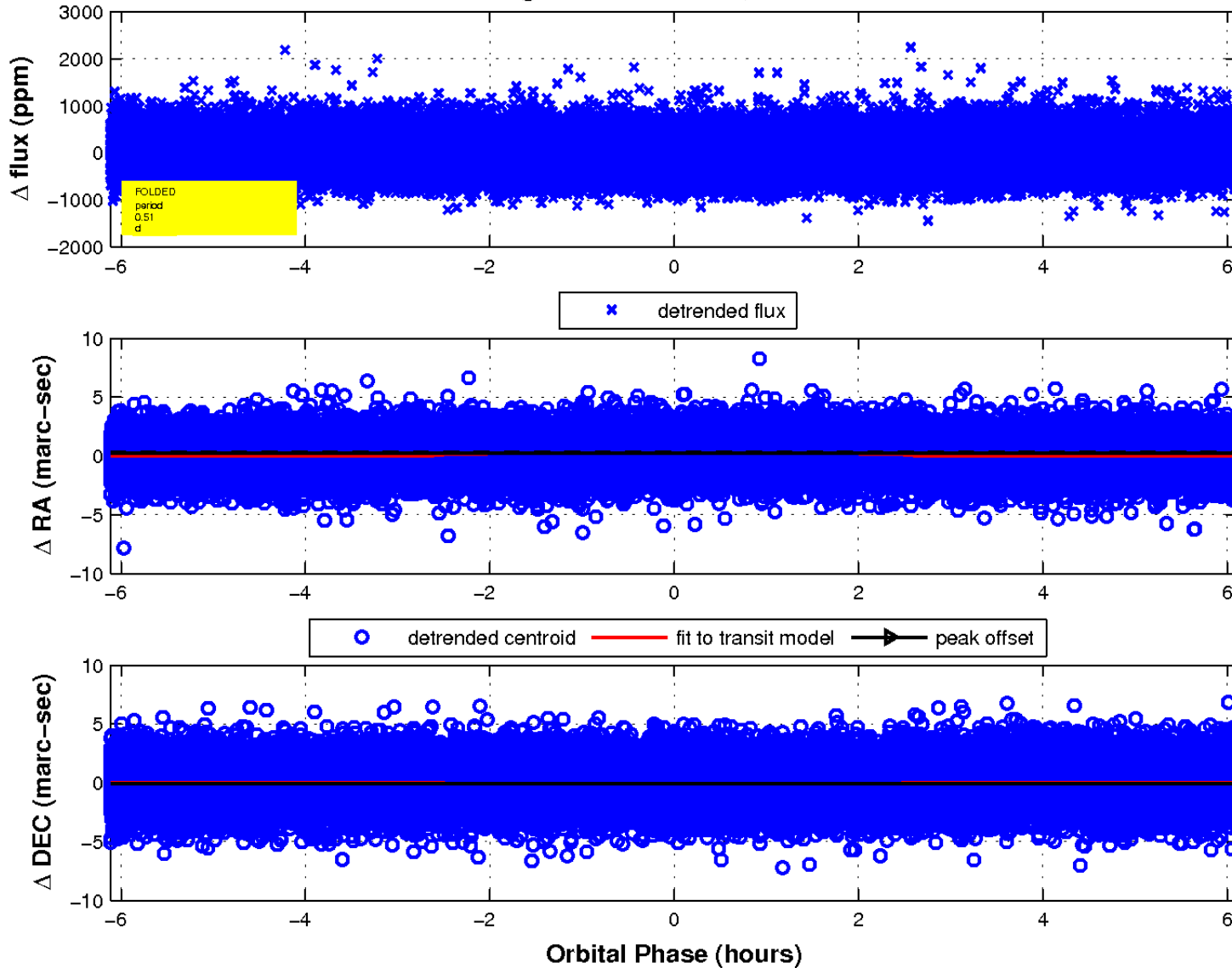
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

