

KIC 004366323

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})
004366323-01	OBS	3258.01	40.351155	153.412149	549.9	3.960	10.3	11.3	0.82	5665	2.13	12.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004366323-01	OBS	PC	0.74	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.

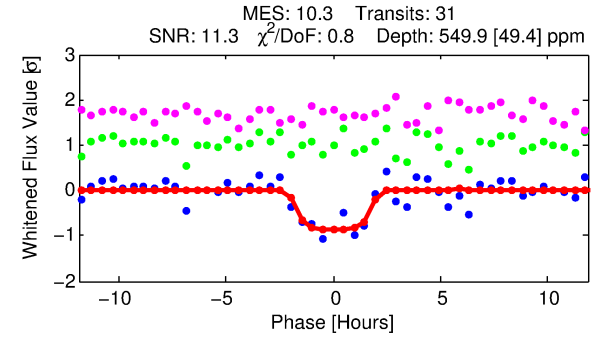
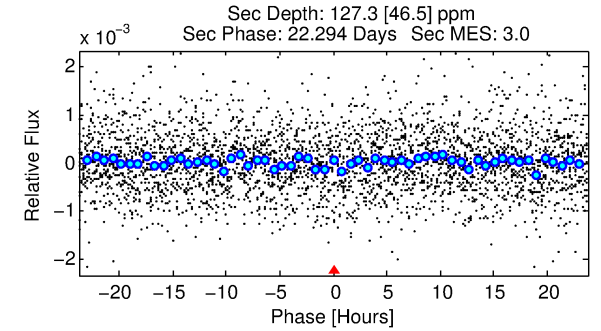
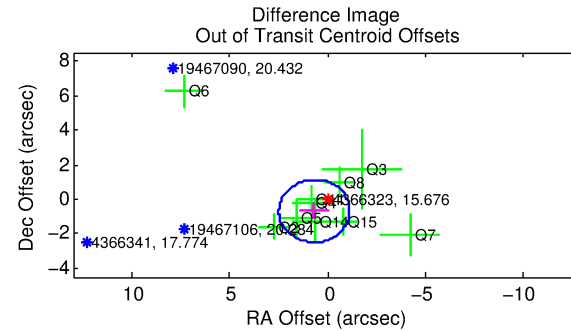
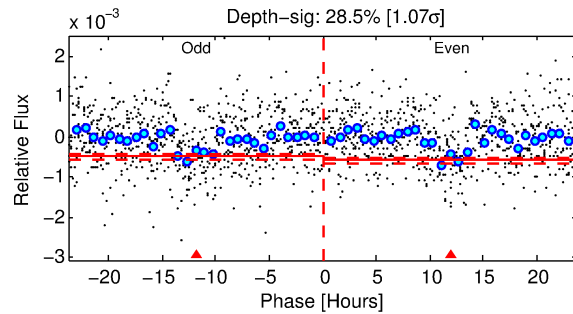
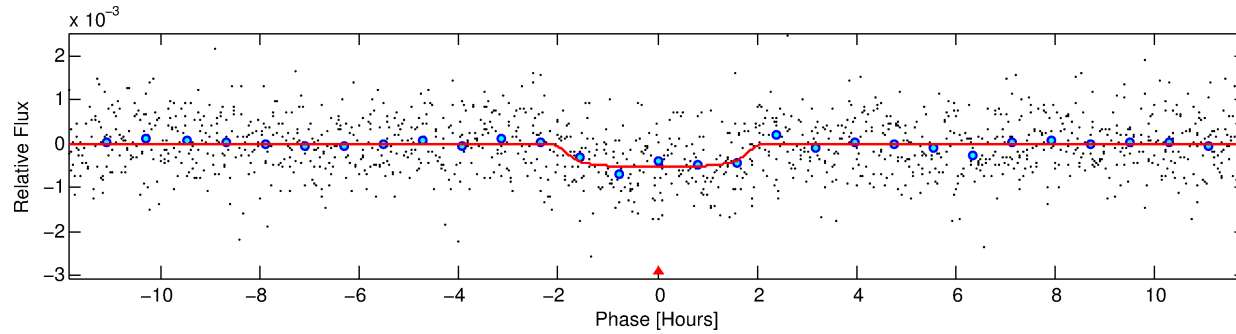
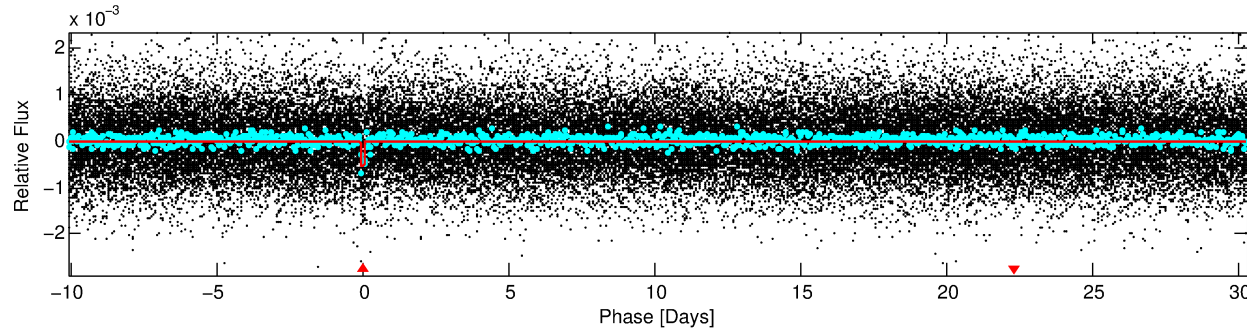
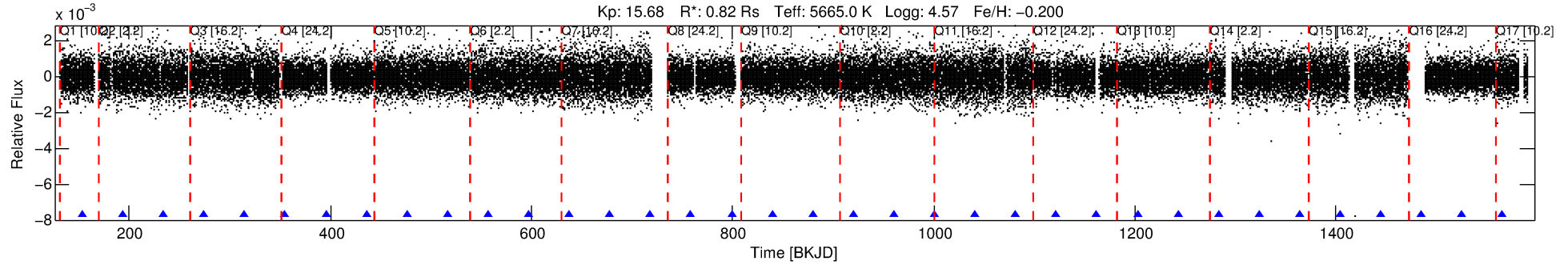
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004366323-01

No Significant Match Found

DV One-Page Summary

KIC: 4366323 Candidate: 1 of 1 Period: 40.351 d
KOI: K03258.01 Corr: 0.983



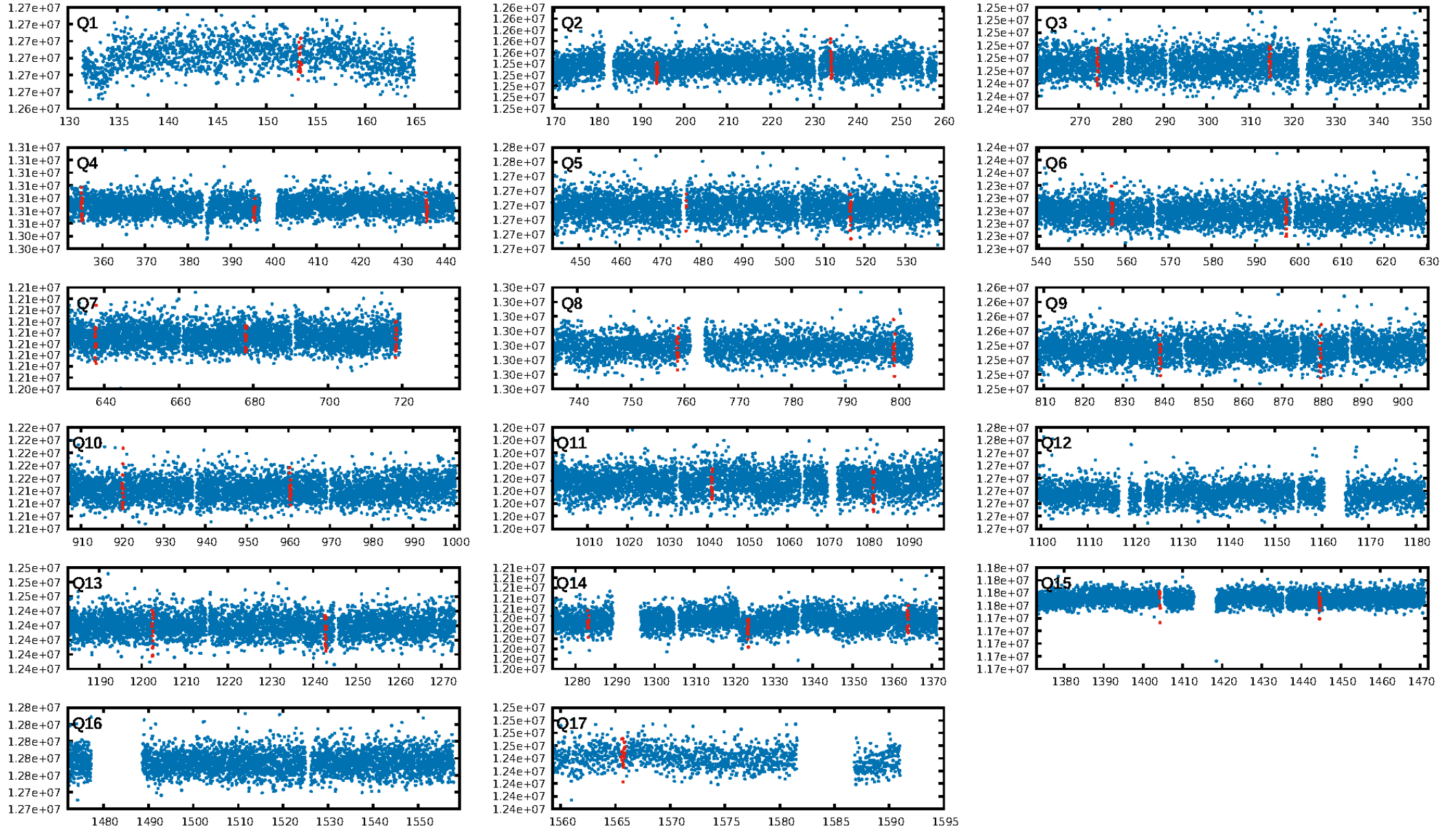
DV Fit Results:

Period = 40.35116 [0.00040] d
Epoch = 153.4121 [0.0072] BKJD
Rp/R* = 0.0238 [0.0159]
a/R* = 50.56 [149.68]
b = 0.79 [1.42]
Seff = 12.49 [3.43]
Teq = 479 [33] K
Rp = 2.13 [1.49] Re
a = 0.2229 [0.0379] AU
Ag = 769.61 [1085.04] [0.71 σ]
Teff = 3903 [1359] K [2.52 σ]

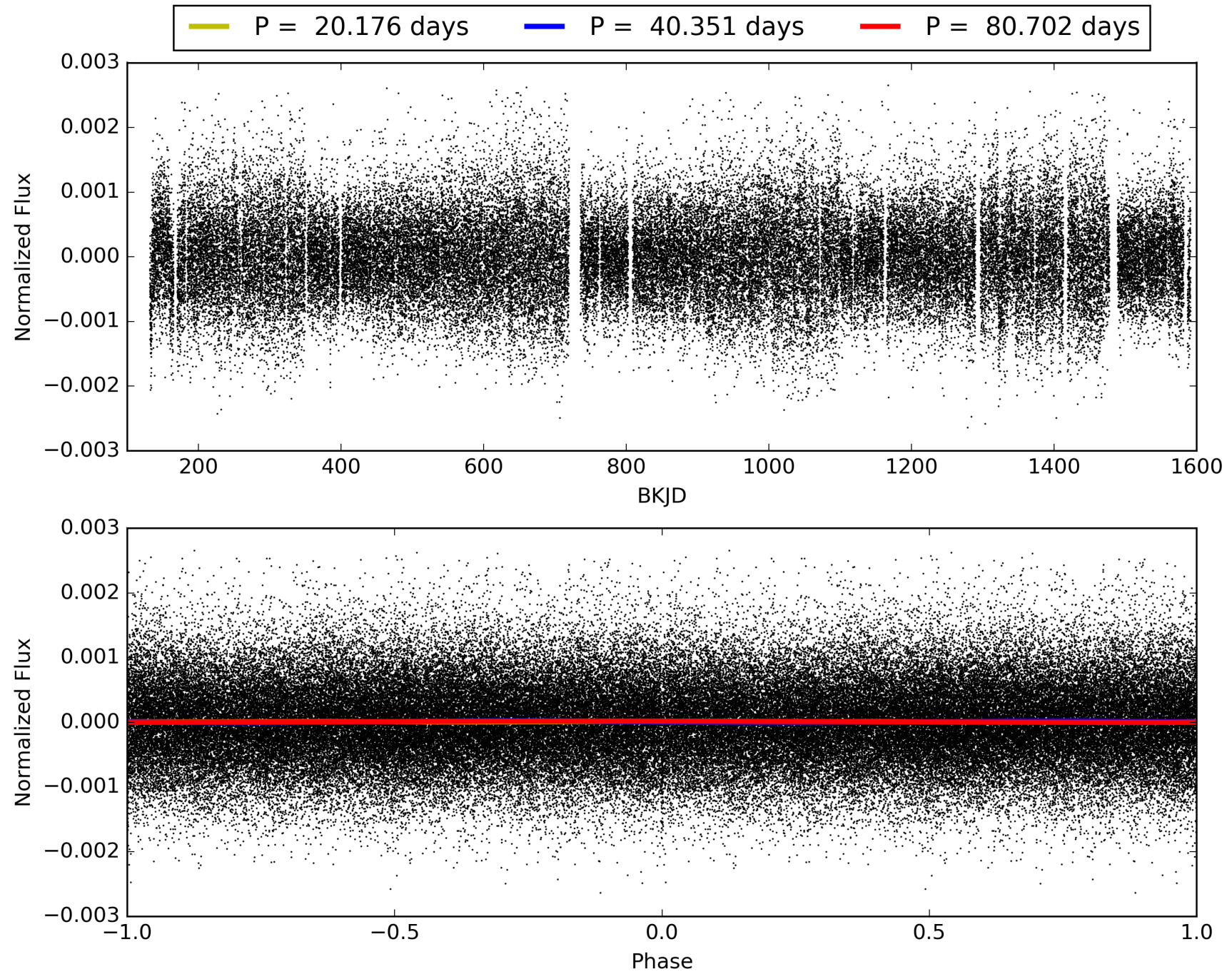
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 79.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.54e-24
RollingBand-fgt: 1.00 [29/29]
GhostDiagnostic-chr: -5.061
Centroid-sig: 78.8%
Centroid-so: 0.788 arcsec [0.55 σ]
OotOffset-rm: 0.964 arcsec [1.59 σ]
KicOffset-rm: 0.936 arcsec [1.60 σ]
OotOffset-st: 3/4/2/1 [10]
KicOffset-st: 3/4/2/1 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 004366323-01, PDC Light Curves

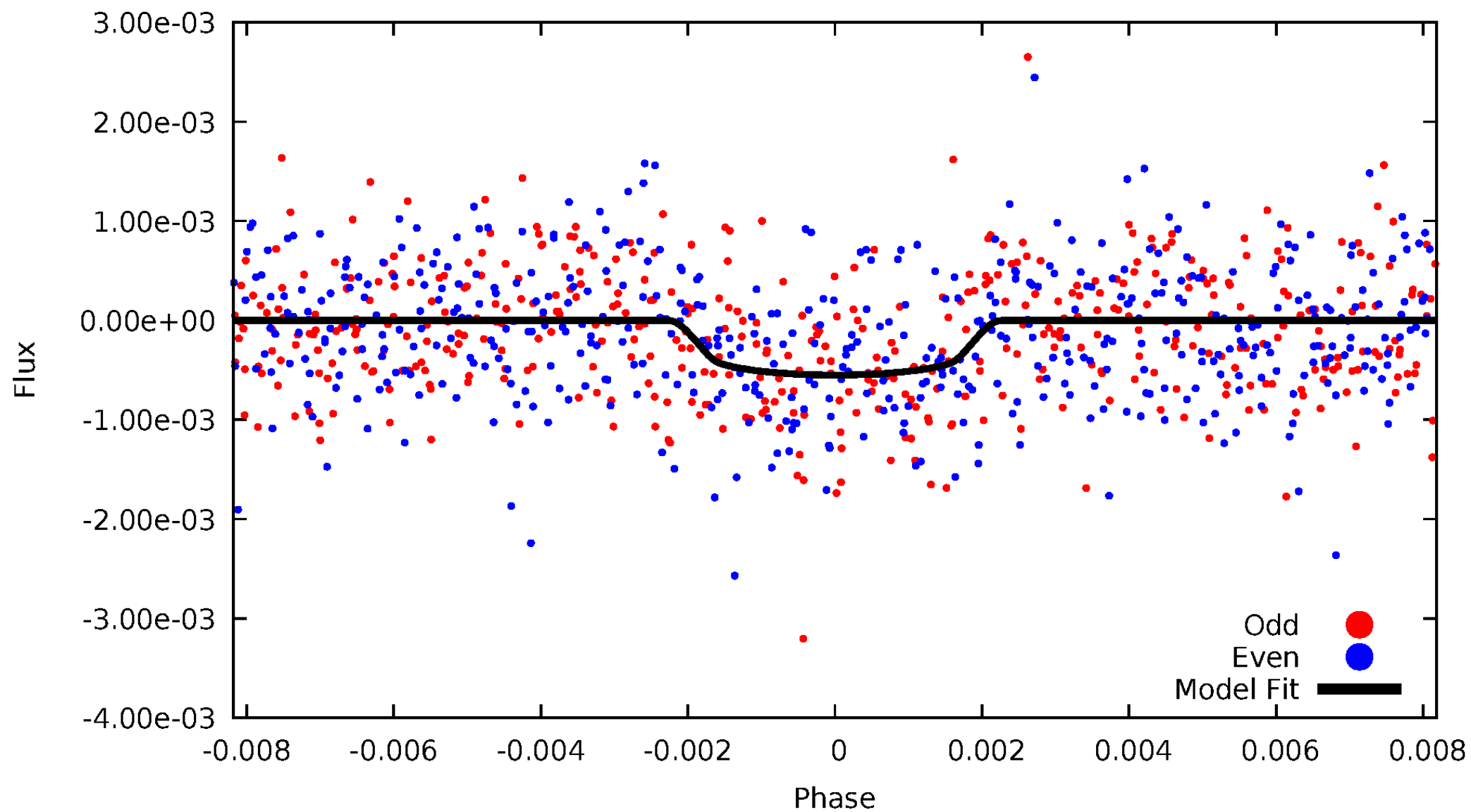


TCE 004366323-01



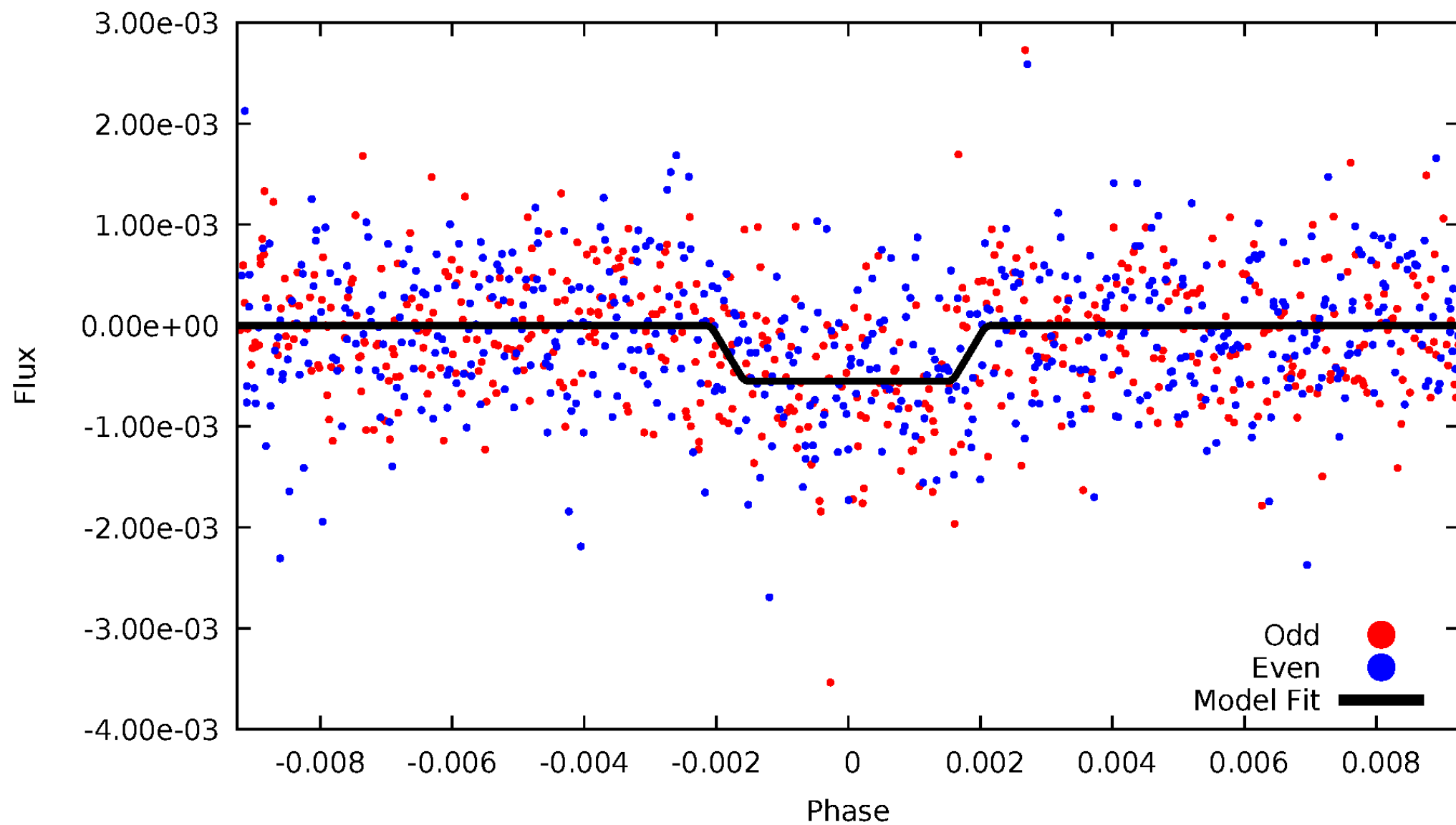
DV Odd/Even

TCE 004366323-01



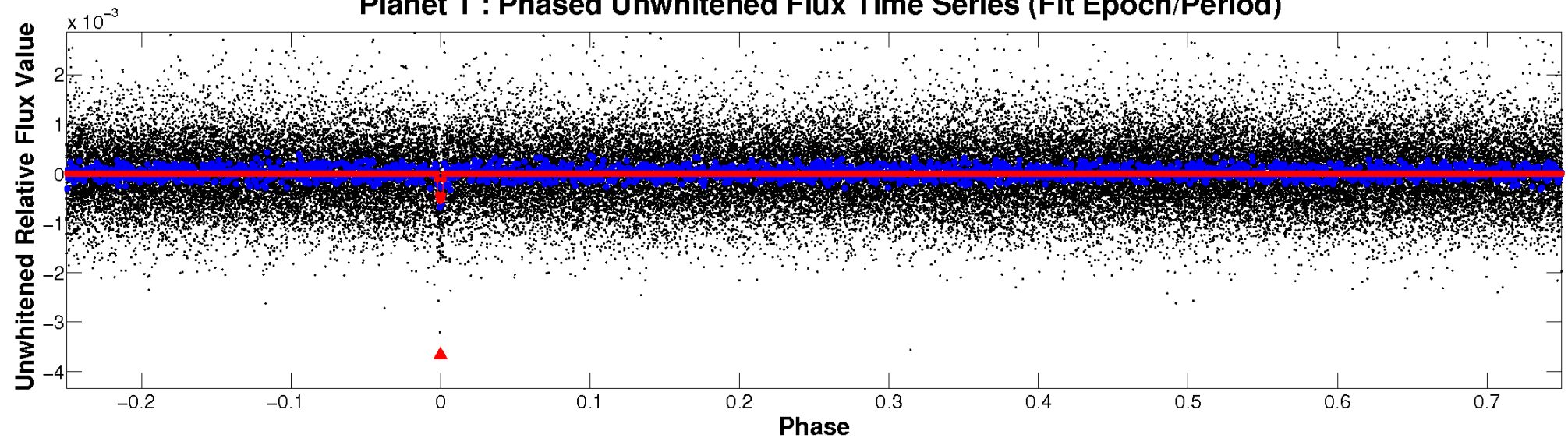
ALT Odd/Even

TCE 004366323-01

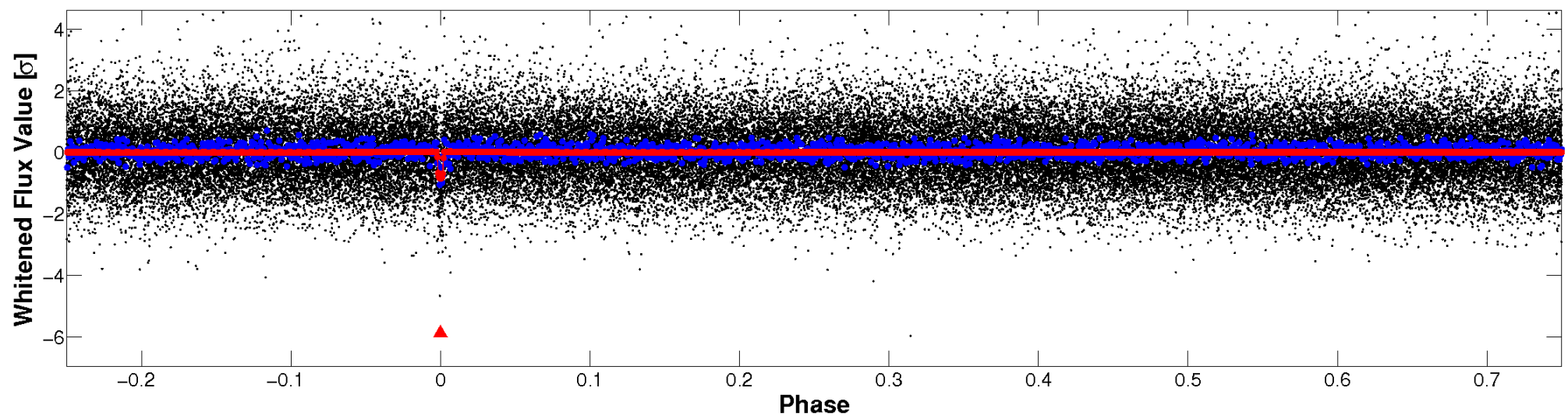


Non-Whitened Vs. Whitened Light Curve

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

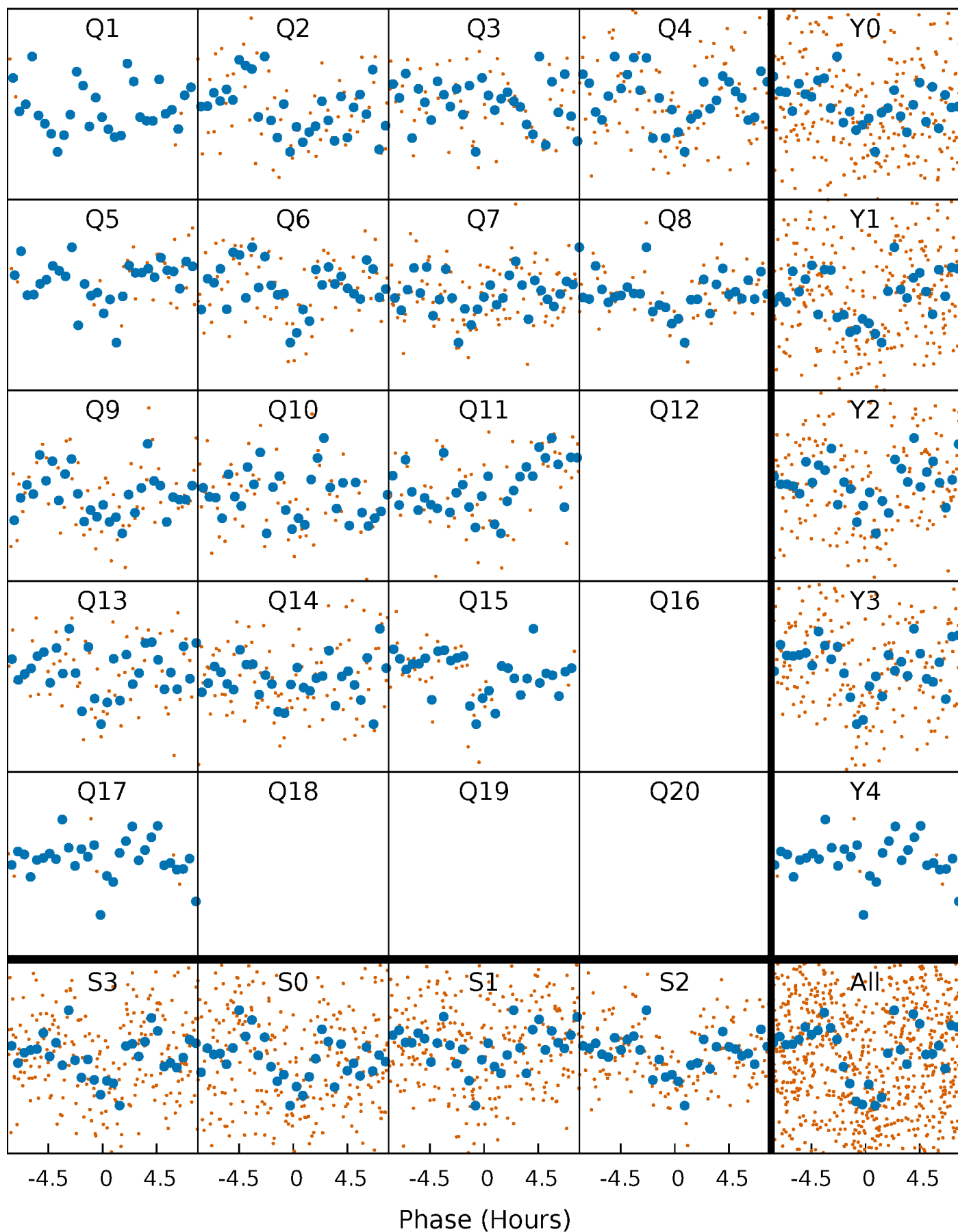


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



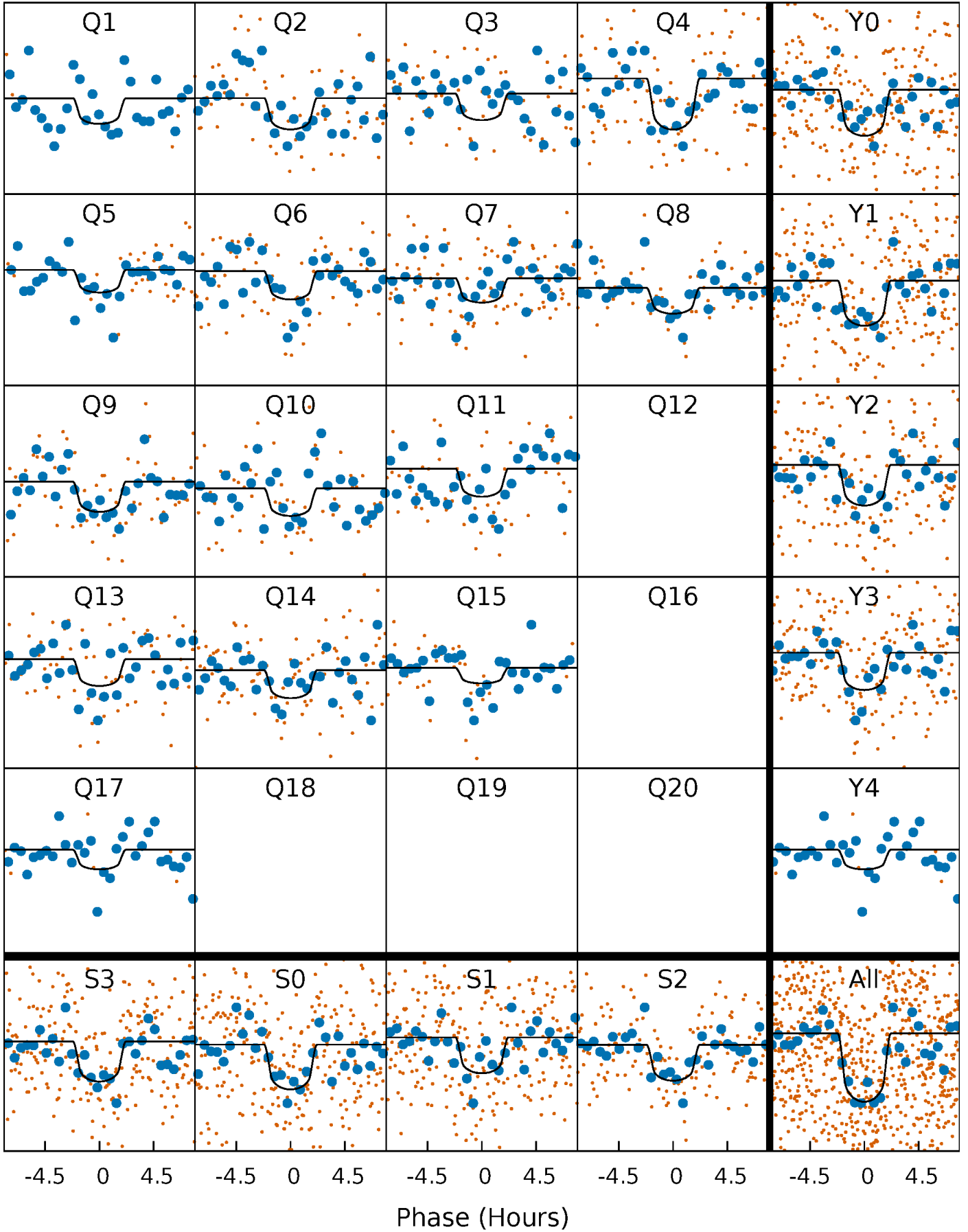
PDC Quarter-Phased Transit Curves

TCE 004366323-01 P= 40.351155 Days $T_0=153.412149$ (BKJD)



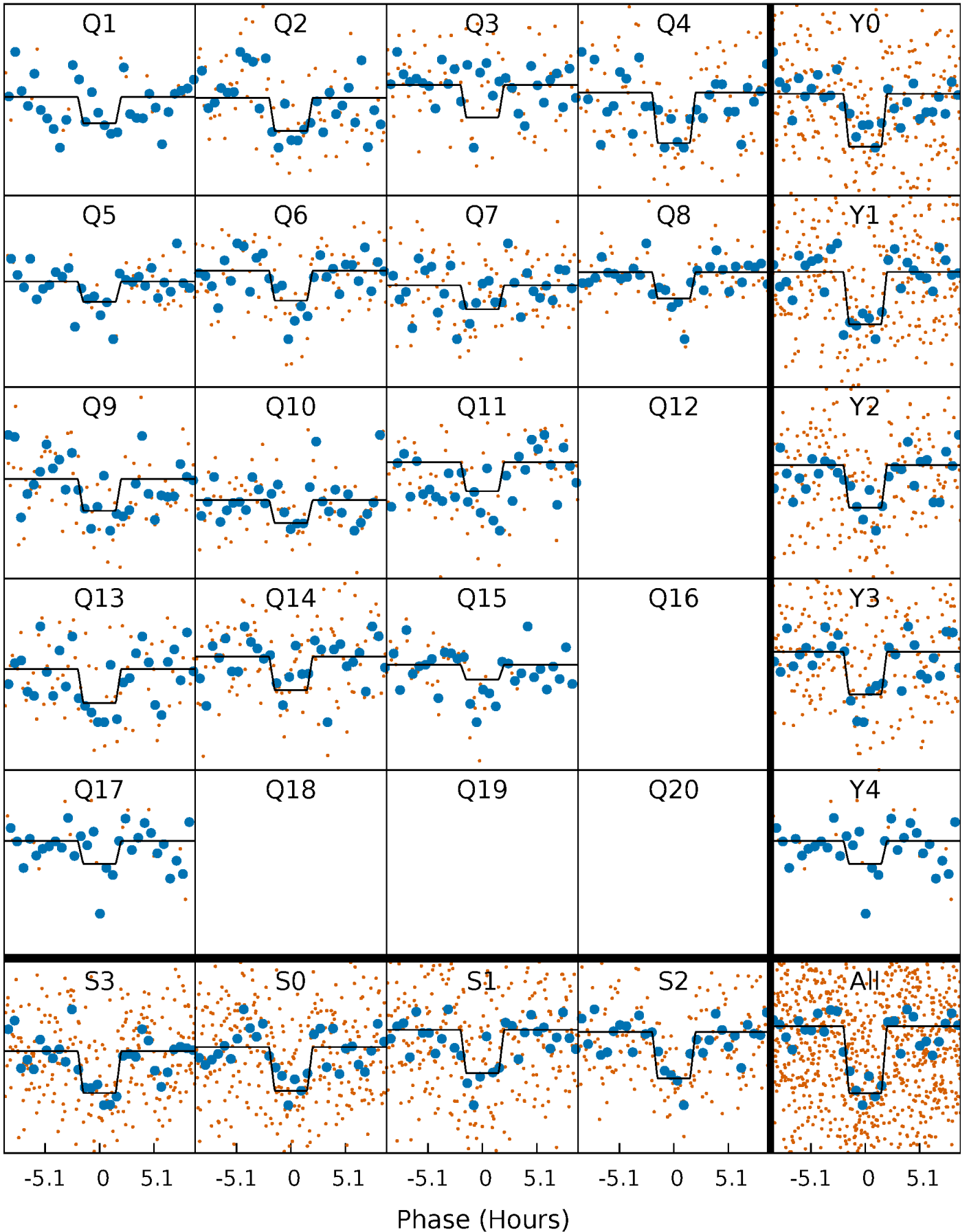
DV Quarter-Phased Transit Curves

TCE 004366323-01 P= 40.351155 Days $T_0=153.412149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

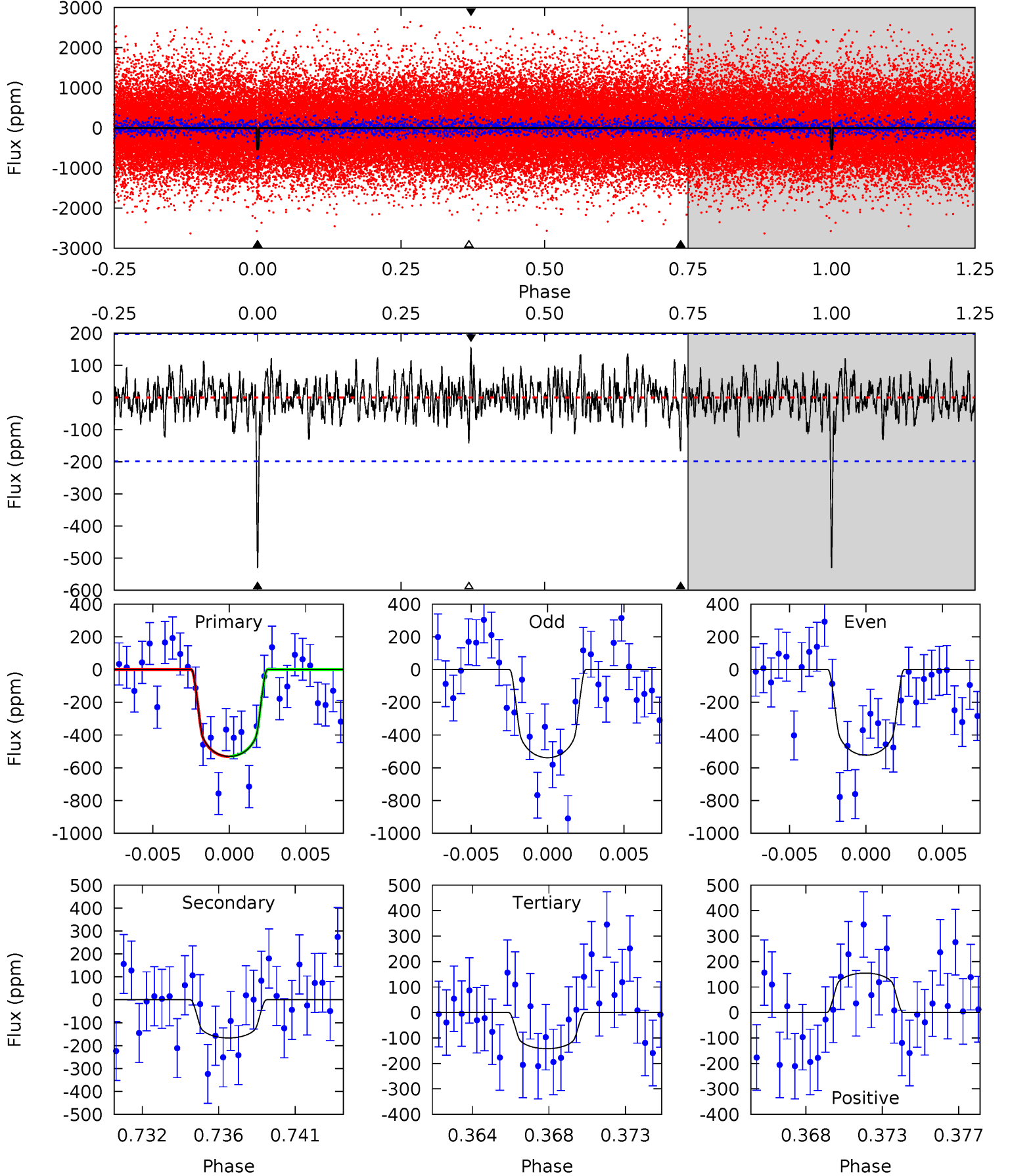
TCE 004366323-01 P= 40.350808 Days $T_0=153.416443$ (BKJD)



DV Model-Shift Uniqueness Test

004366323-01, P = 40.351155 Days, E = 113.060994 Days

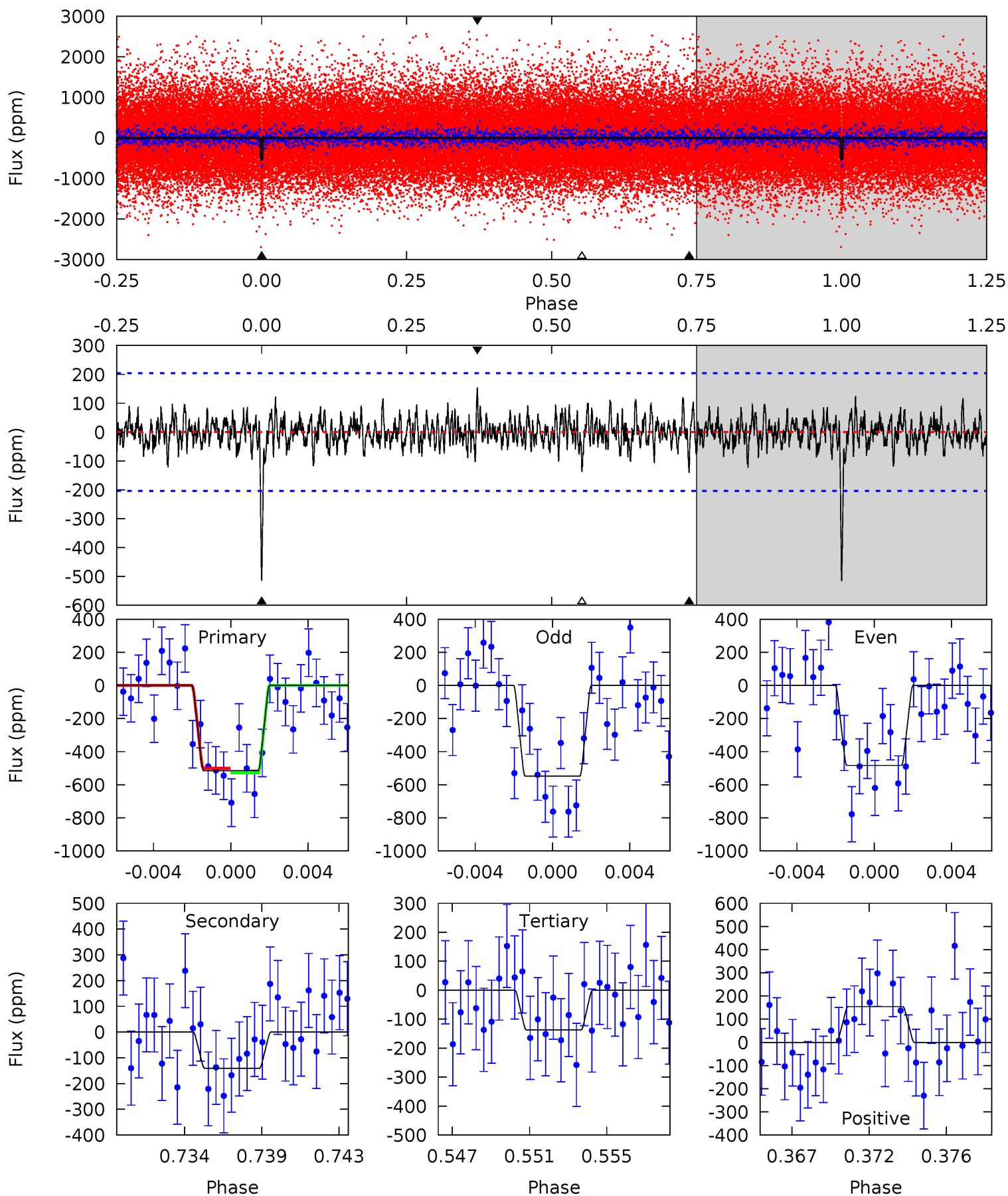
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	4.35	3.71	4.04	5.18	2.84	1.16	10.1	9.82	0.64	0.31	0.20	1.25	0.23	0.04



Alt Model-Shift Uniqueness Test

004366323-01, $P = 40.350808$ Days, $E = 113.065635$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	3.58	3.49	3.92	5.19	2.86	1.03	9.60	9.17	0.09	-0.34	0.83	1.25	0.23	0.36



Stellar Parameters For KIC 004366323

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5665^{+152}_{-169}	$4.568^{+0.036}_{-0.135}$	$-0.200^{+0.300}_{-0.300}$	$0.820^{+0.166}_{-0.071}$	$0.916^{+0.082}_{-0.112}$	$2.336^{+0.433}_{-0.881}$
	+3%/-3%	+1%/-3%	+150%/-150%	+20%/-9%	+9%/-12%	+19%/-38%
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 004366323-01 / KOI 3258.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-167 ± 38	$2.30^{+1.46}_{-1.39}$	682^{+35}_{-26}	4269^{+2253}_{-665}	829^{+4493}_{-518}
Alt.	-141 ± 39	$2.43^{+1.39}_{-1.35}$	680^{+35}_{-26}	4084^{+1658}_{-629}	643^{+2746}_{-397}

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

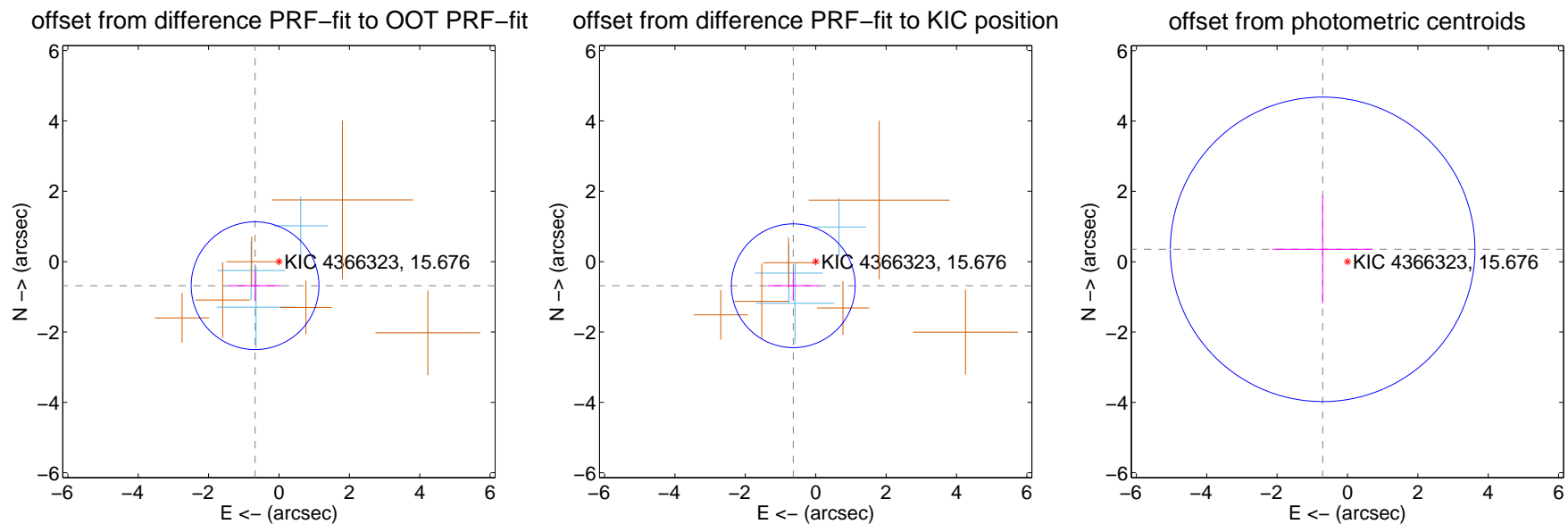
DV Centroid Data

Supplemental centroid analysis for 004366323-01. Kepler magnitude: 15.68. Transit SNR 11.31

There are 3 quarters with good PRF difference image offsets

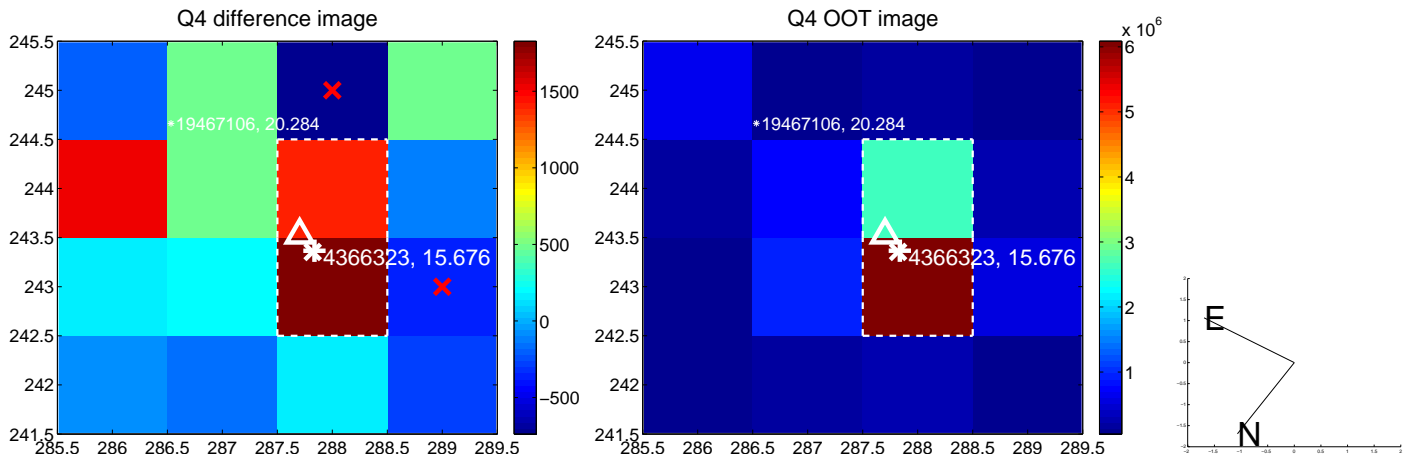
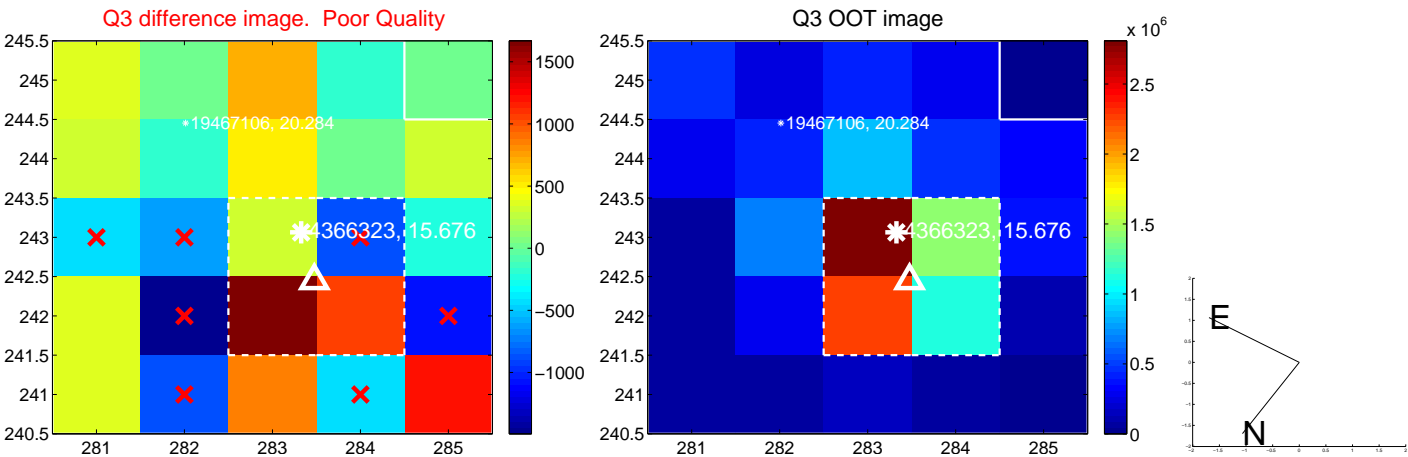
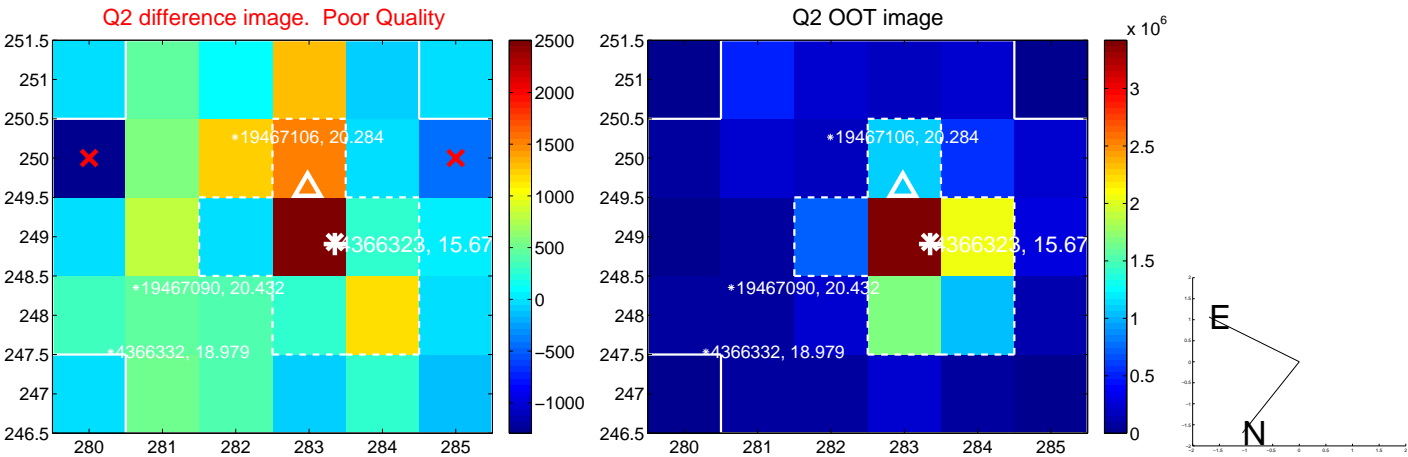
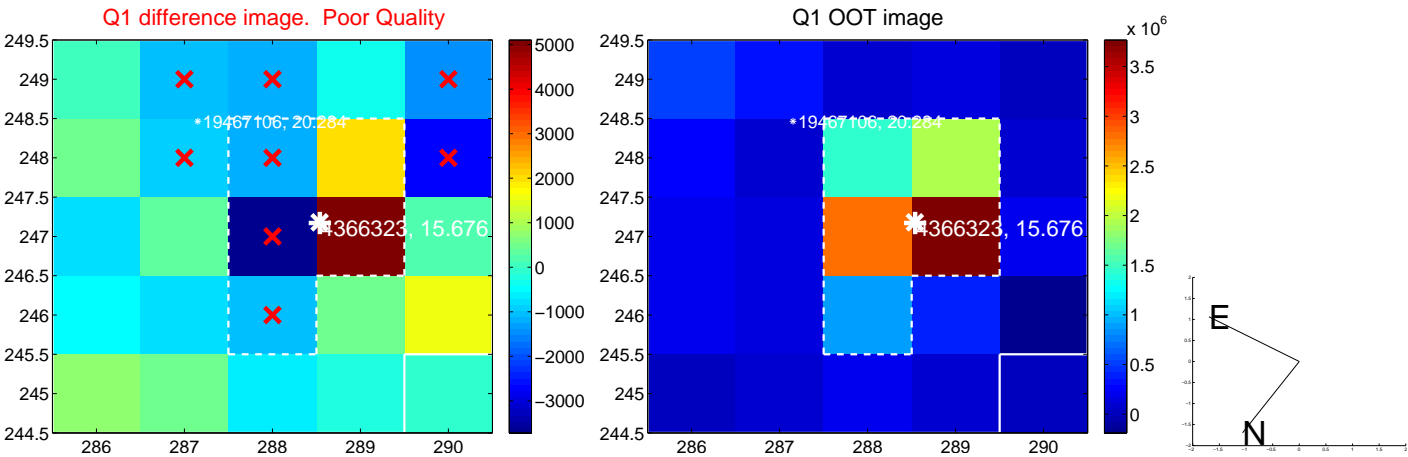
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.964 ± 0.605	1.59	0.680 ± 0.743	-0.684 ± 0.427
PRF-fit source offset from KIC position	0.936 ± 0.586	1.60	0.637 ± 0.736	-0.686 ± 0.416
photometric centroid source offset	0.79 ± 1.44	0.55	0.71 ± 1.42	0.35 ± 1.53

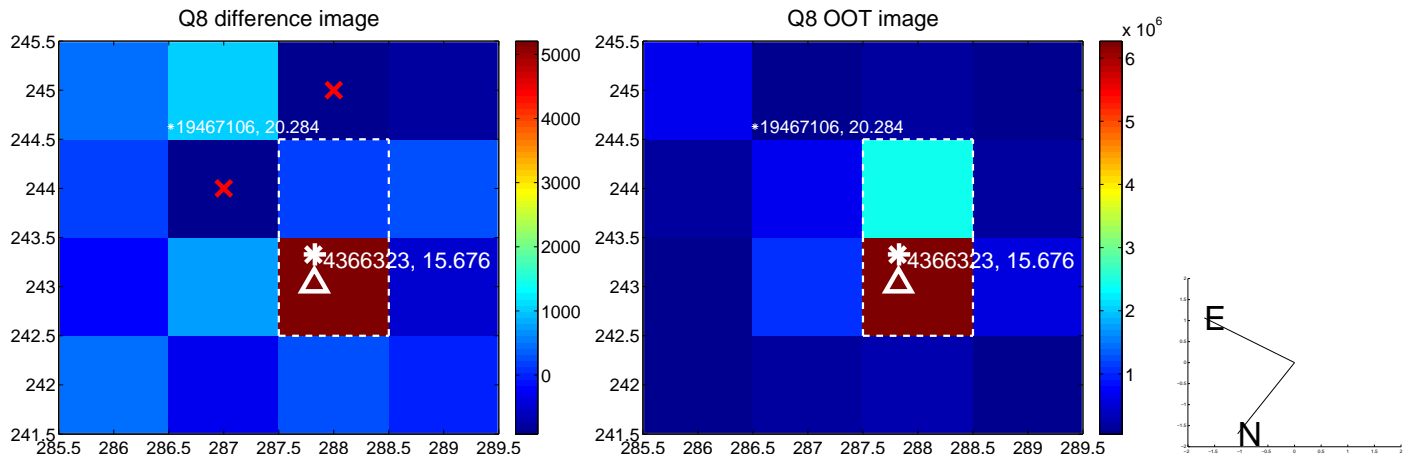
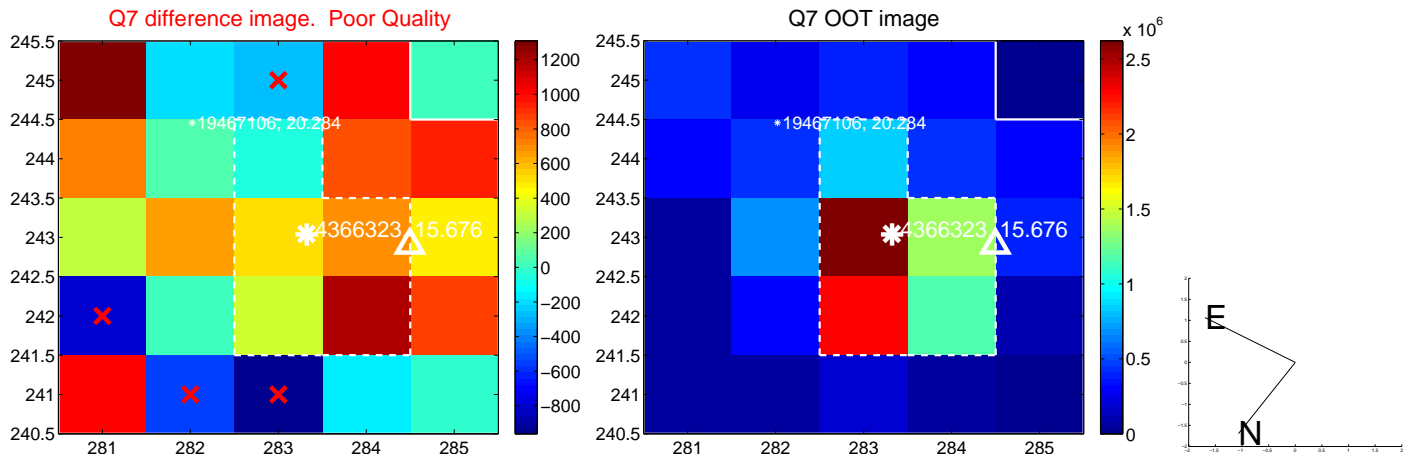
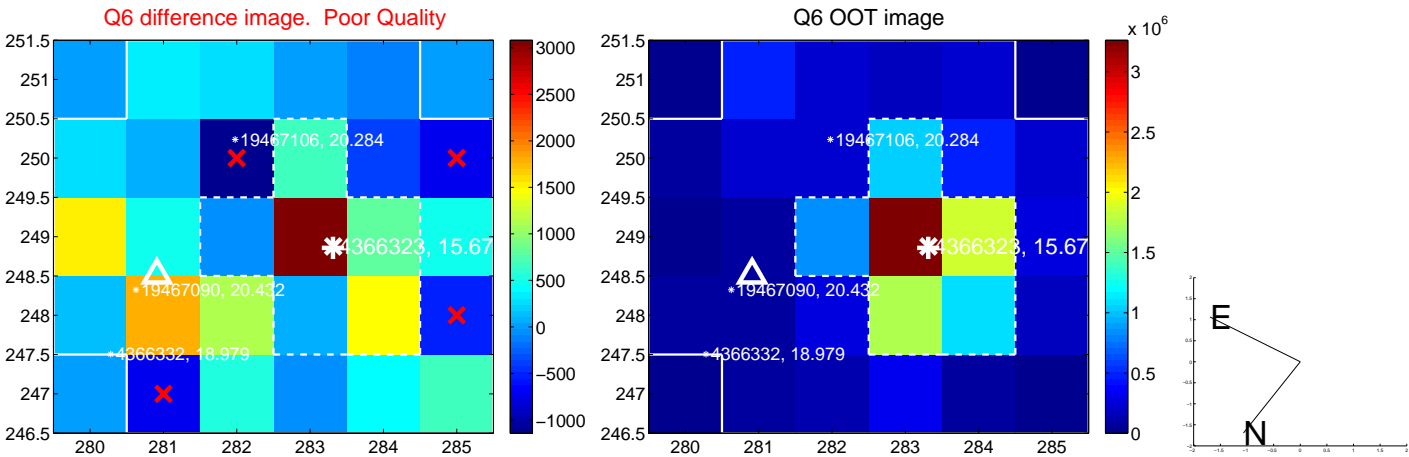
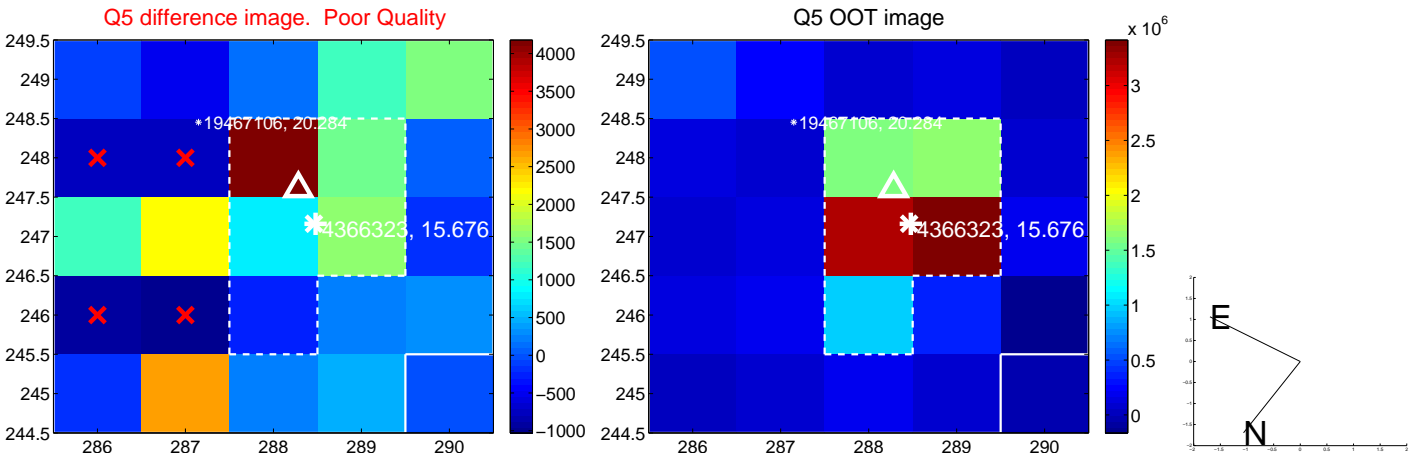


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

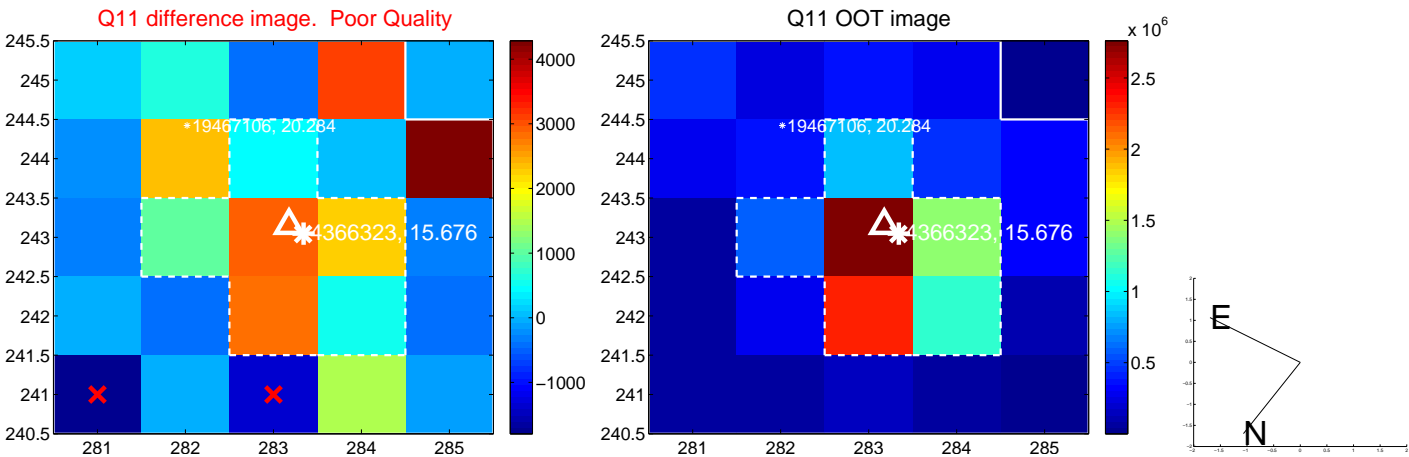
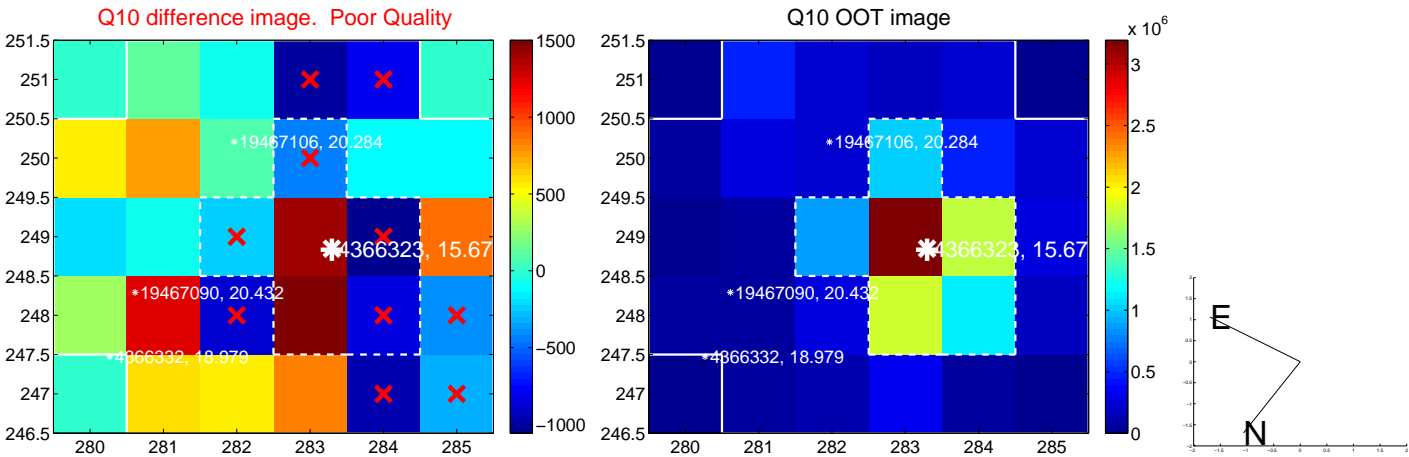
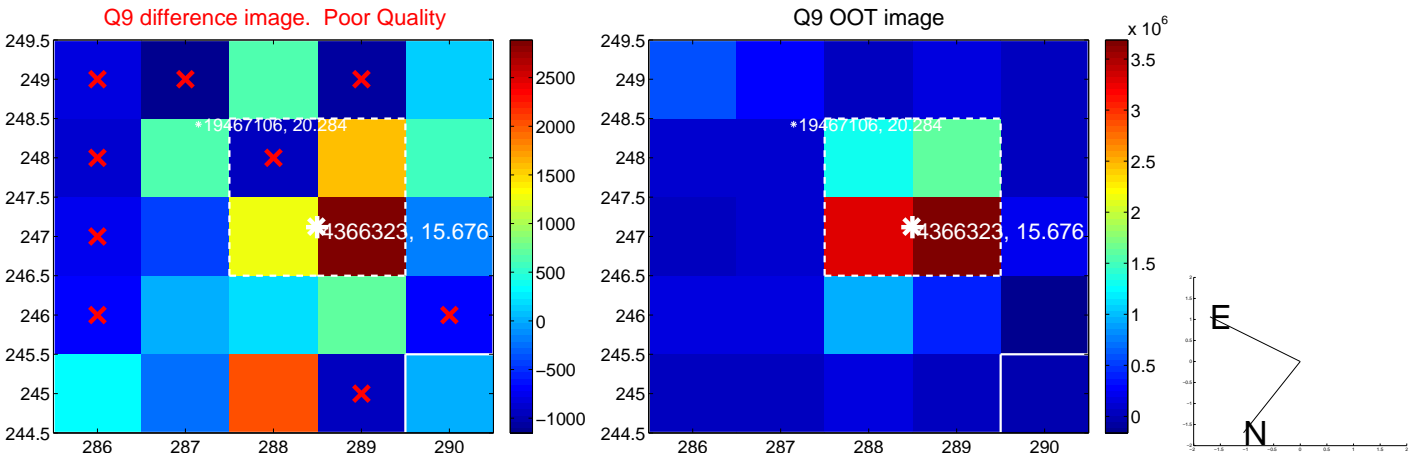
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



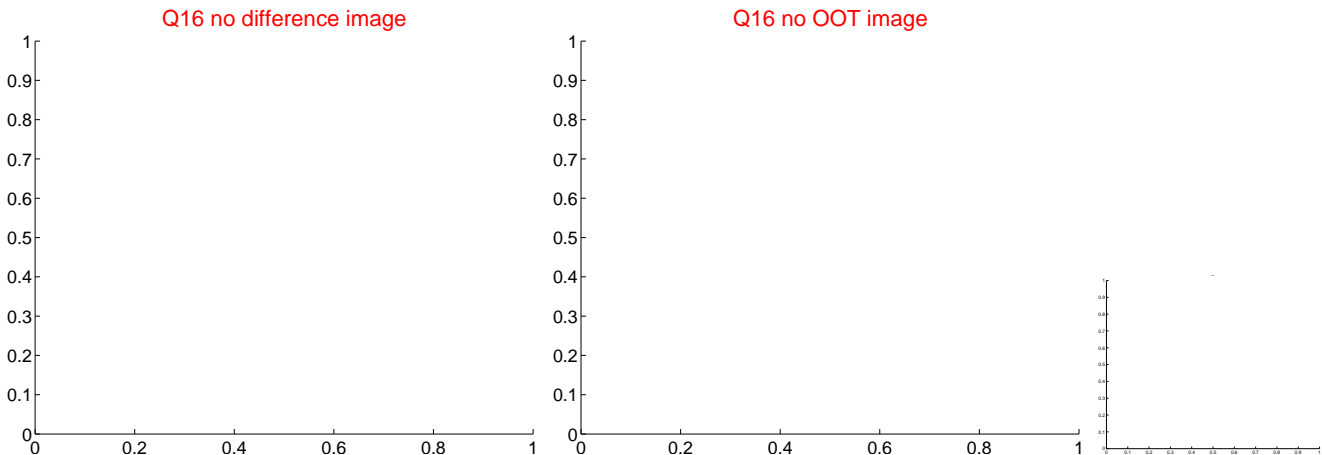
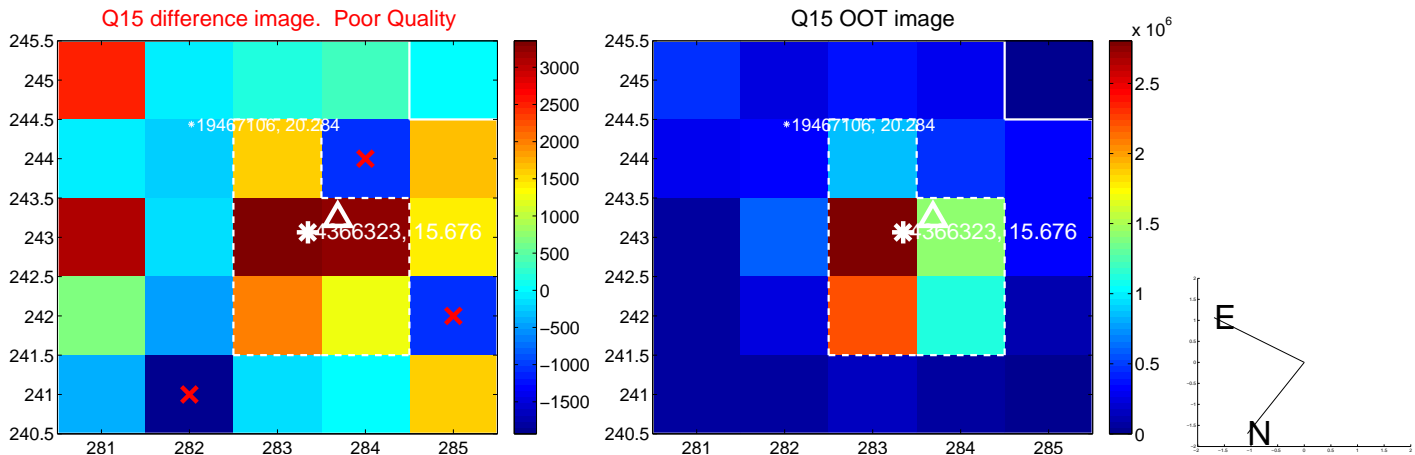
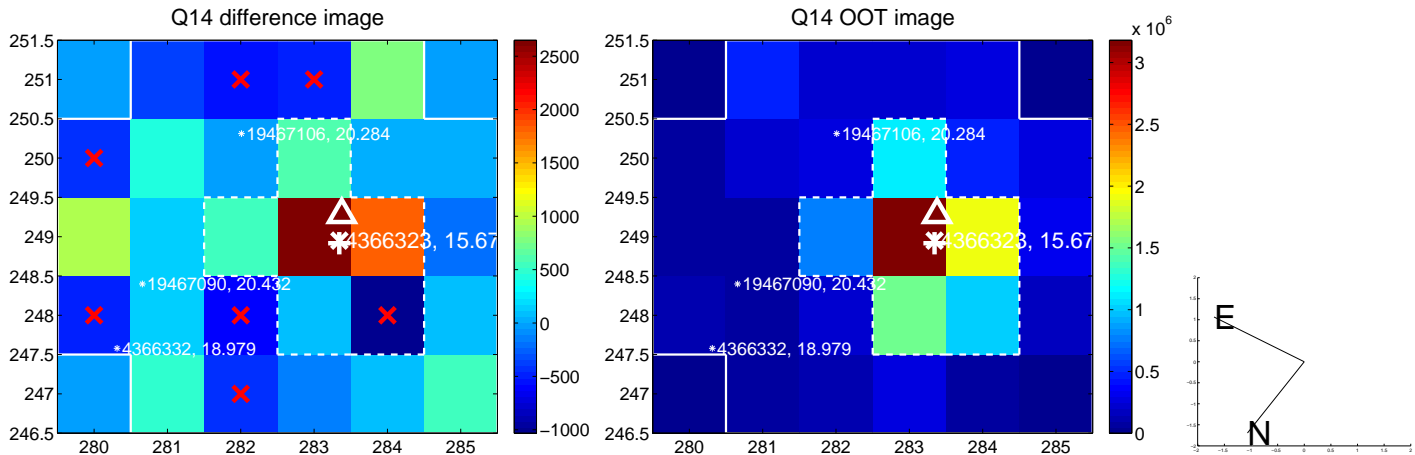
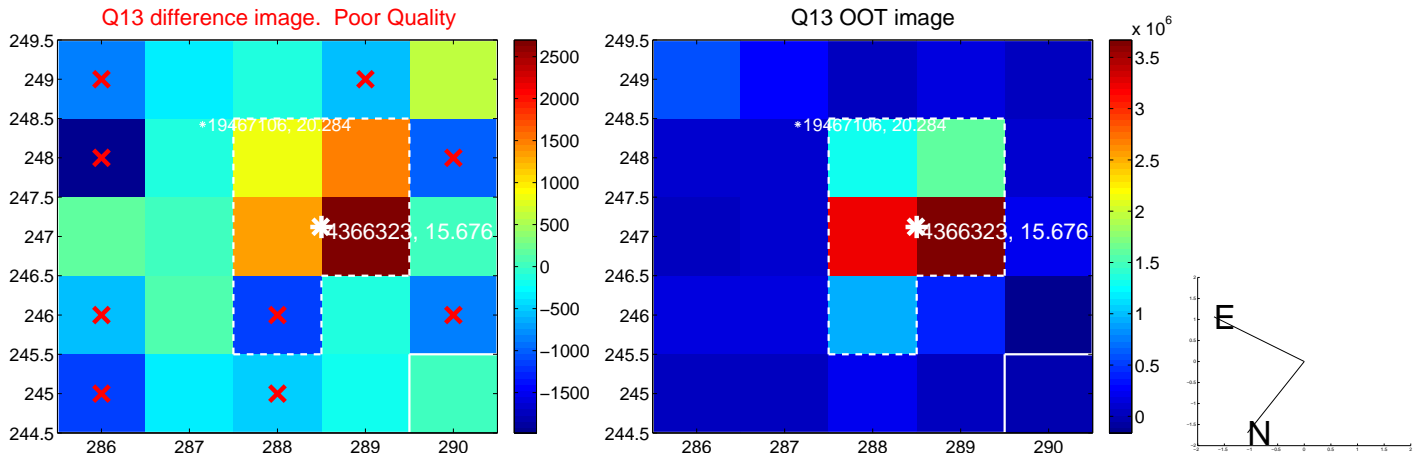
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



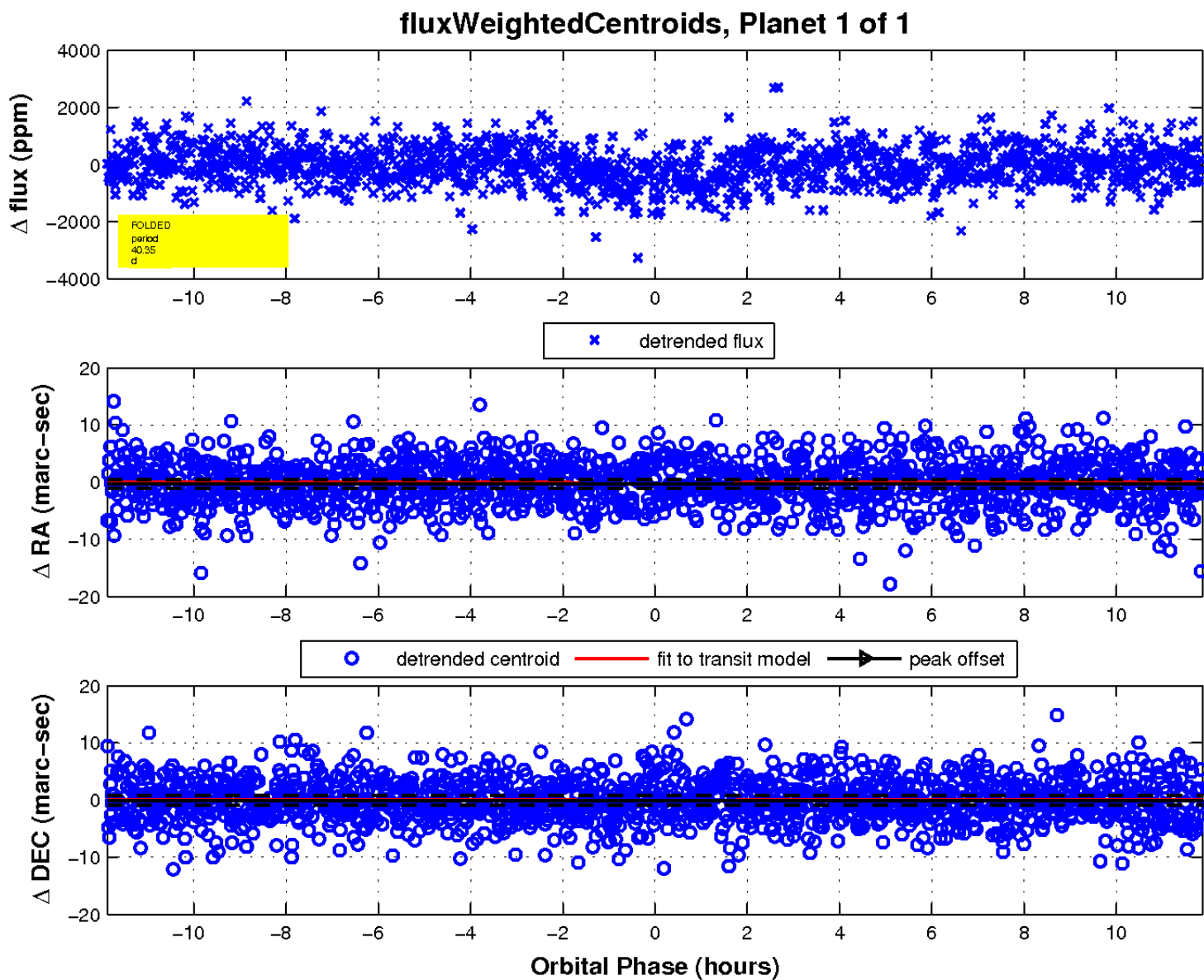
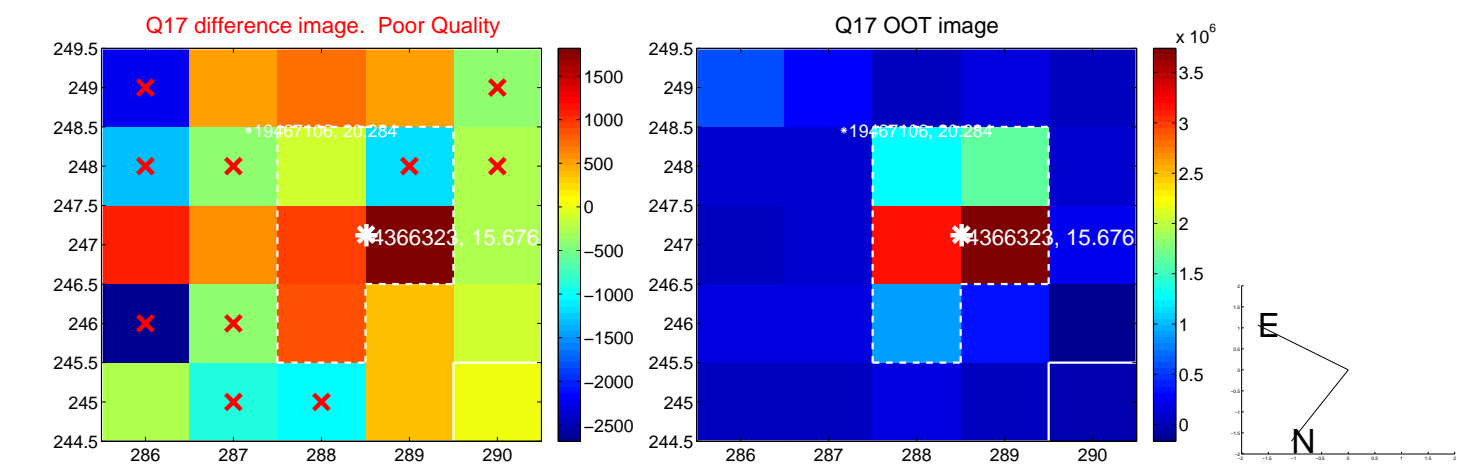
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

