

KIC 010341917

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
010341917-01	OBS	2823.01	0.933781	132.423574	161.7	3.558	16.6	17.3	0.81	5402	1.26	1528.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010341917-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH

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 010341917-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
010341917-01	10341917	2605.01	10407221	1:1	387.6	-56	11	15.65	15.81	3.27	Col-Anomaly	1	3.46	2.15

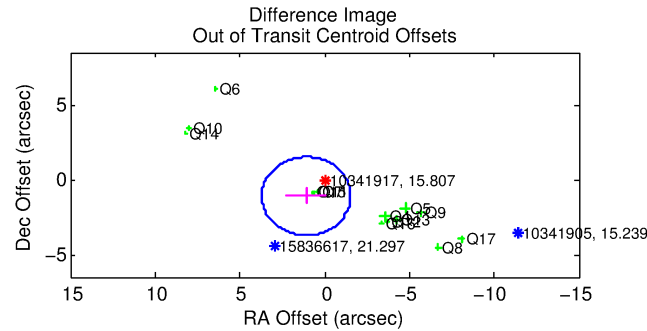
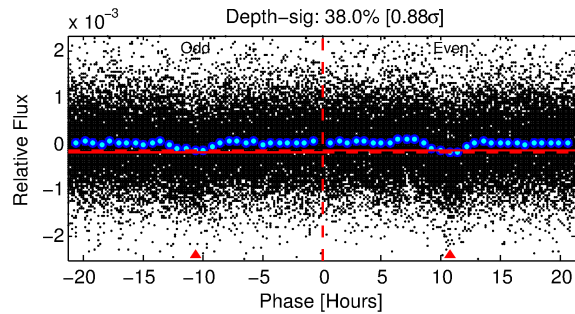
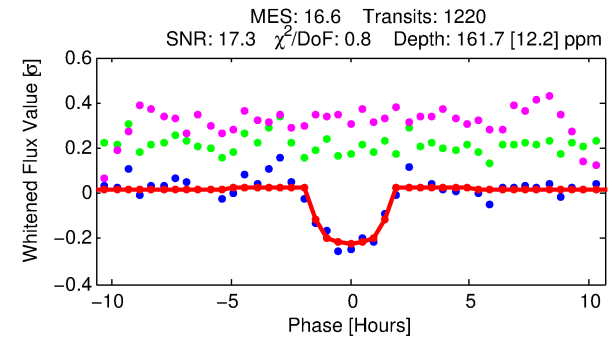
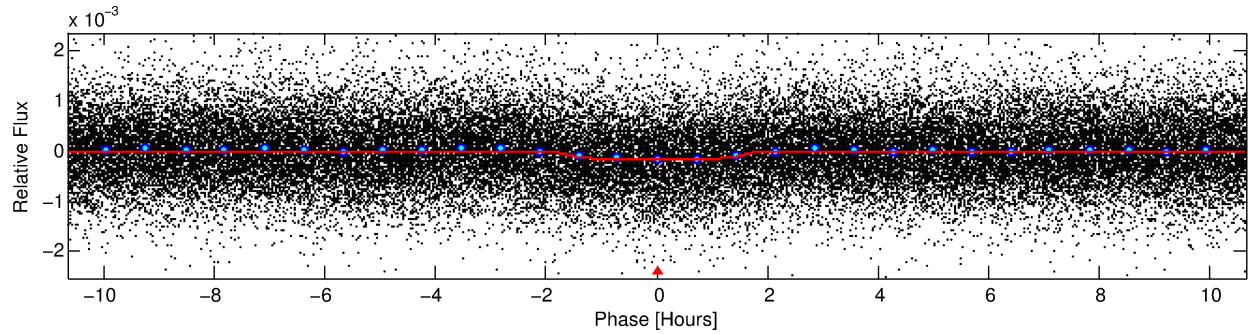
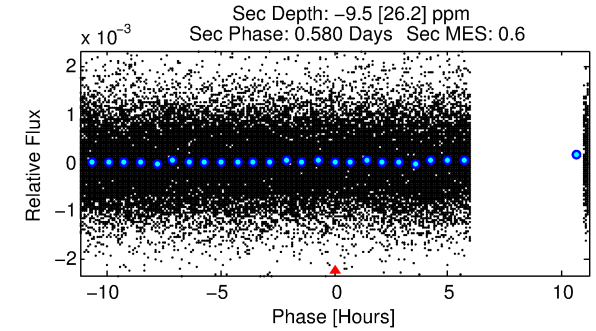
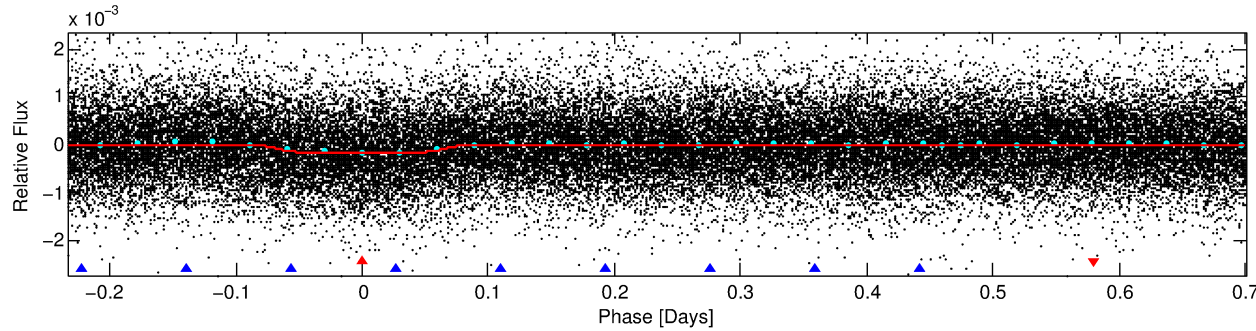
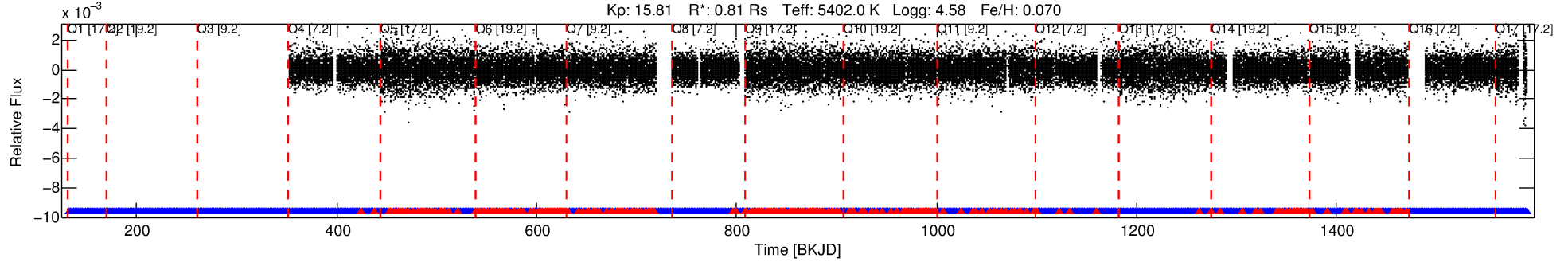
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10341917 Candidate: 1 of 2 Period: 0.934 d

KOI: K02823 Corr: No Ephemeris Match

Kp: 15.81 R*: 0.81 Rs Teff: 5402.0 K Logg: 4.58 Fe/H: 0.070



DV Fit Results:

Period = 0.93378 [0.00001] d
Epoch = 132.4236 [0.0023] BKJD
Rp/R* = 0.0142 [0.0036]
a/R* = 1.30 [0.59]
b = 0.91 [0.21]
Seff = 1528.36 [453.65]
Teq = 1594 [118] K
Rp = 1.27 [0.42] Re
a = 0.0182 [0.0033] AU
Ag = N/A
Teffp = N/A

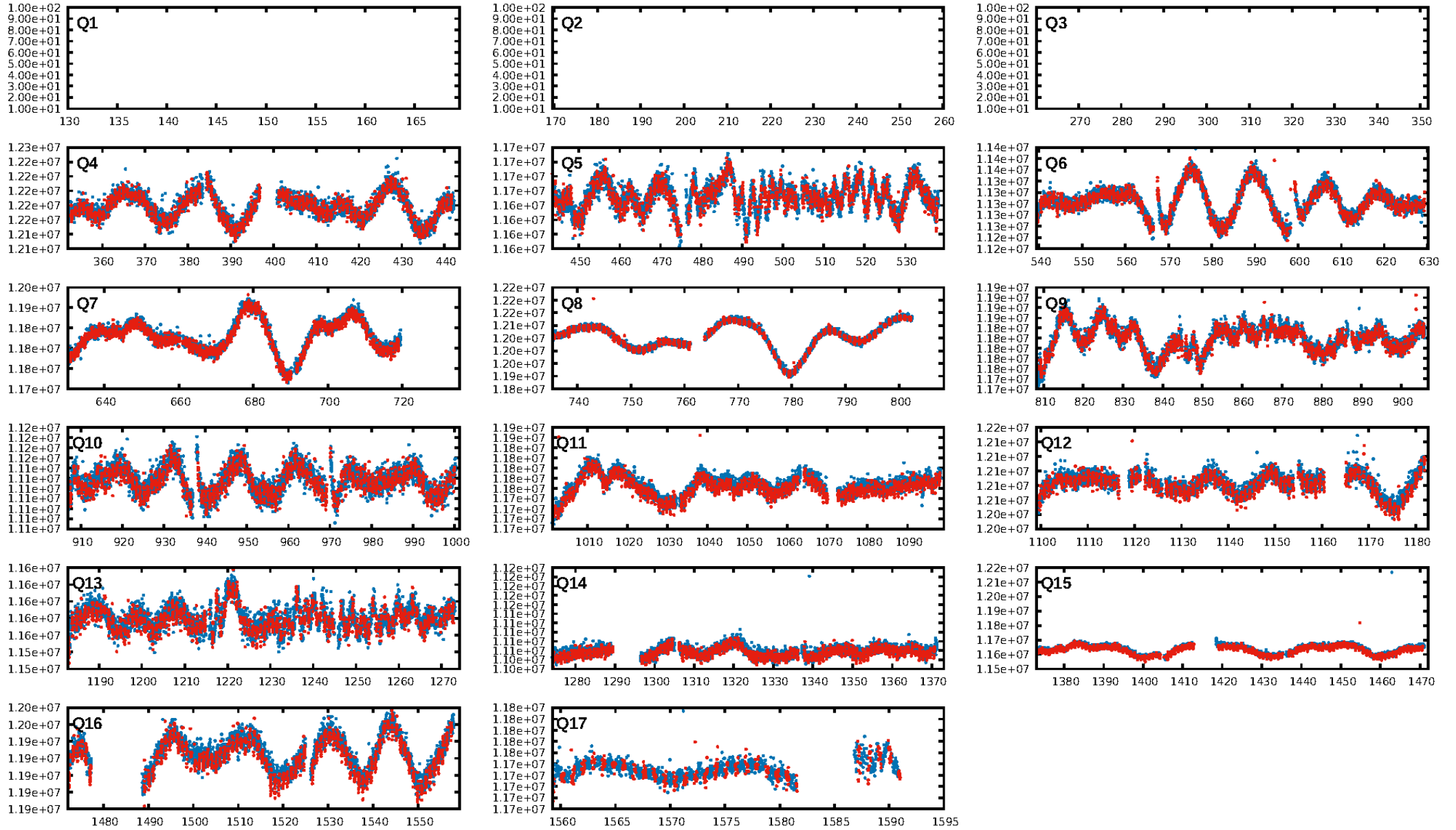
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [669.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.14e-55
RollingBand-fgt: 0.76 [904/1190]
GhostDiagnostic-chr: -0.2714
Centroid-sig: 0.0%
Centroid-so: 4.684 arcsec [5.50σ]
OotOffset-rm: 1.550 arcsec [1.78σ]
KicOffset-rm: 4.315 arcsec [5.76σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

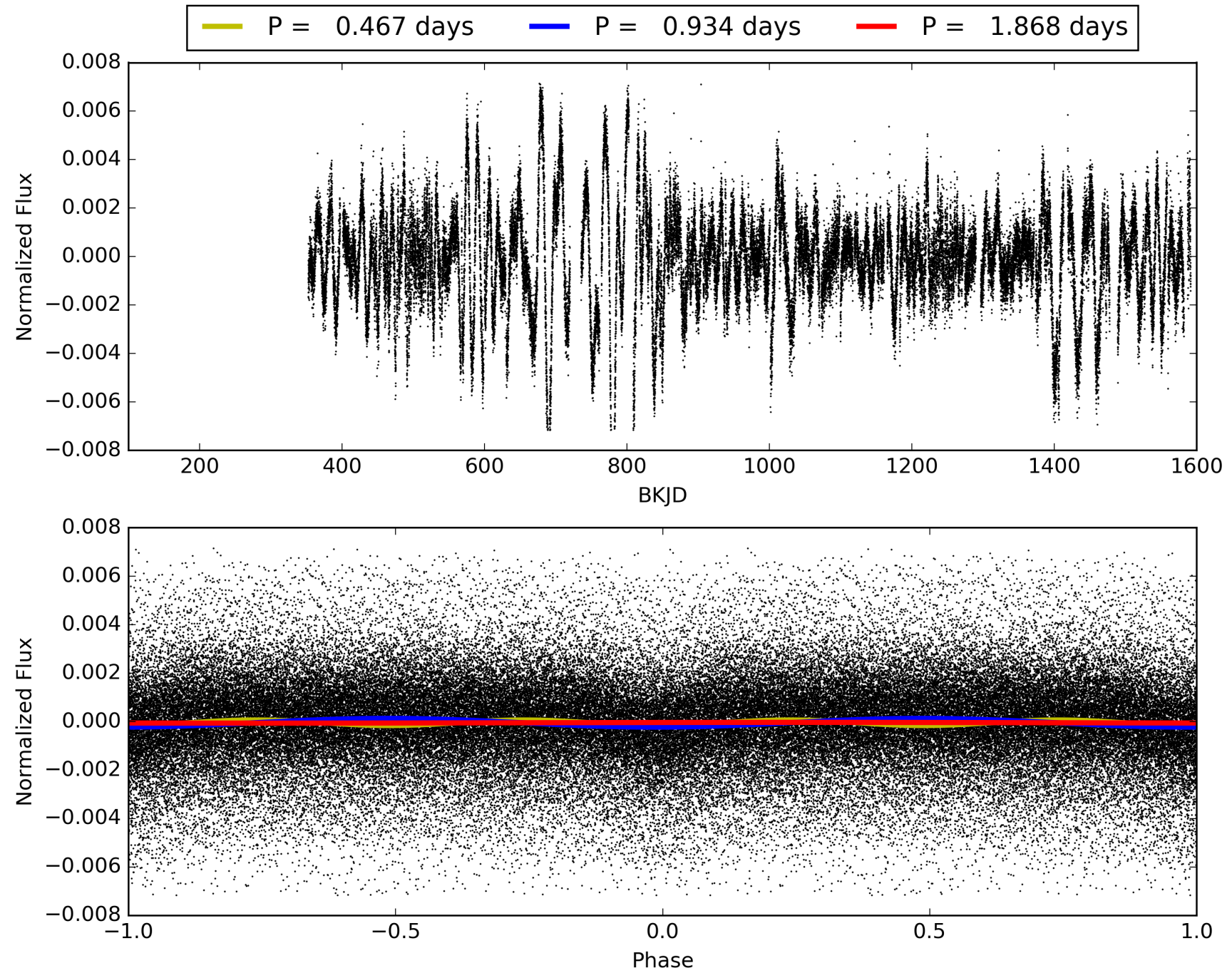
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:57:15 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010341917-01, PDC Light Curves

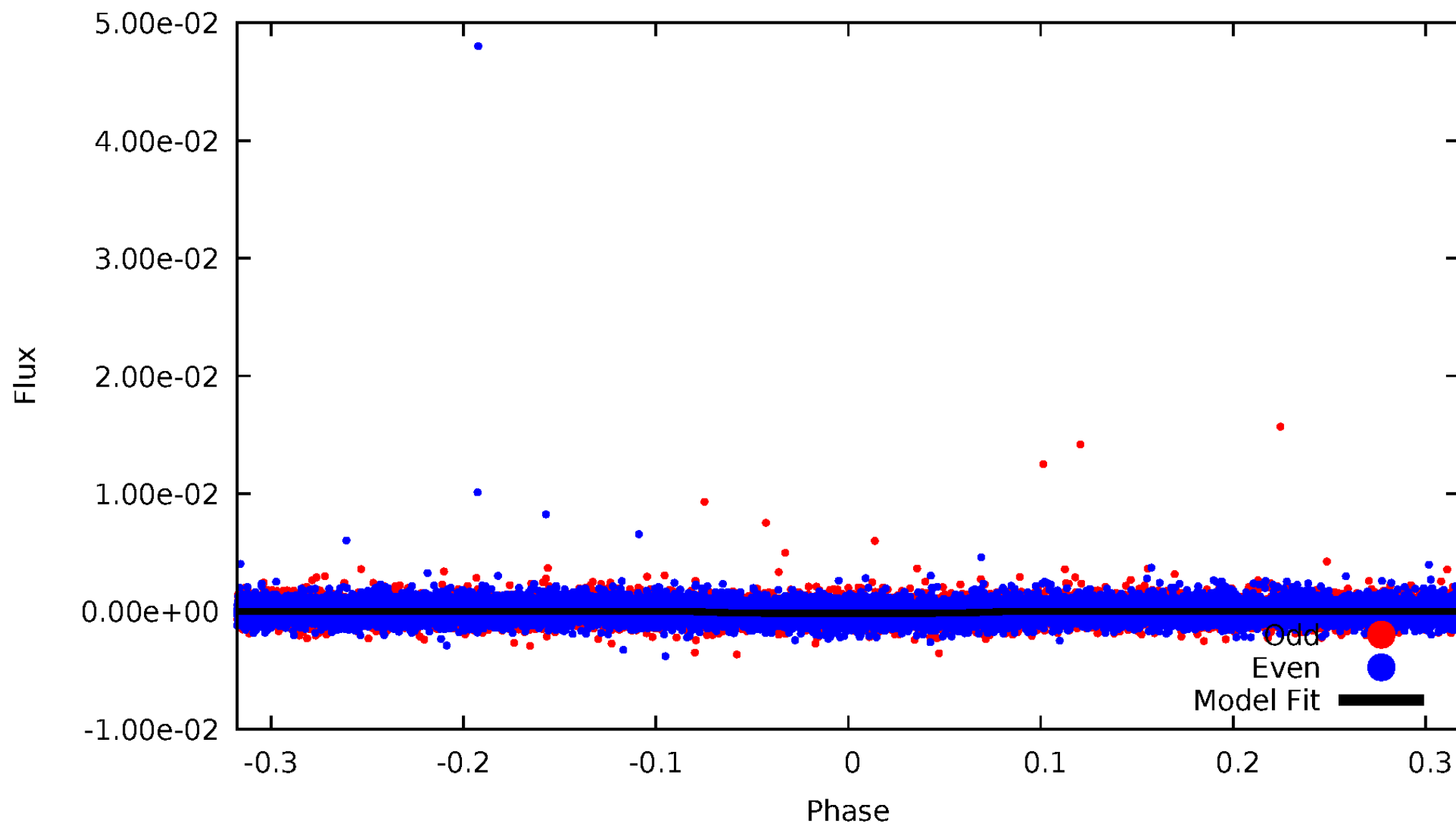


TCE 010341917-01



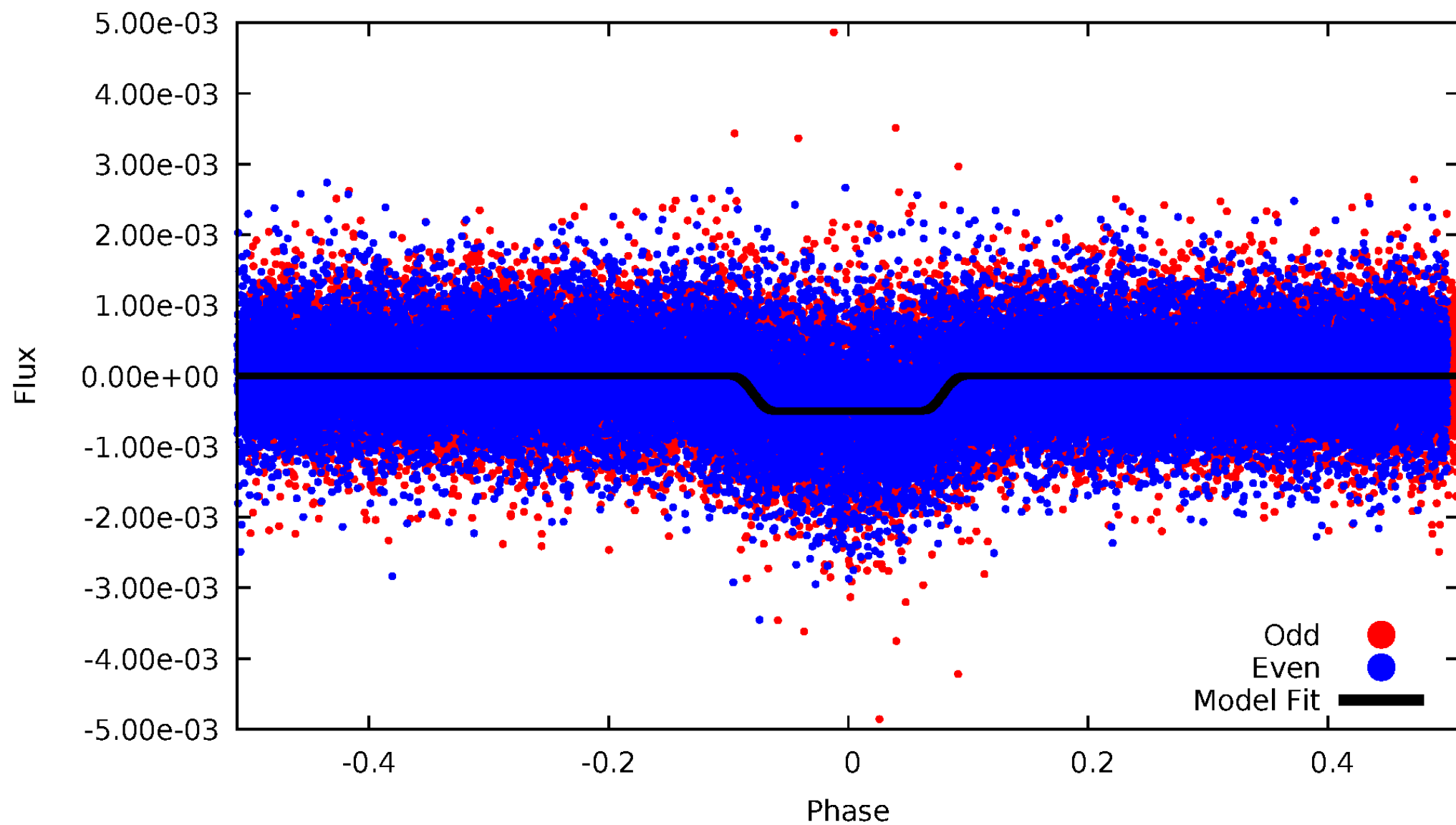
DV Odd/Even

TCE 010341917-01

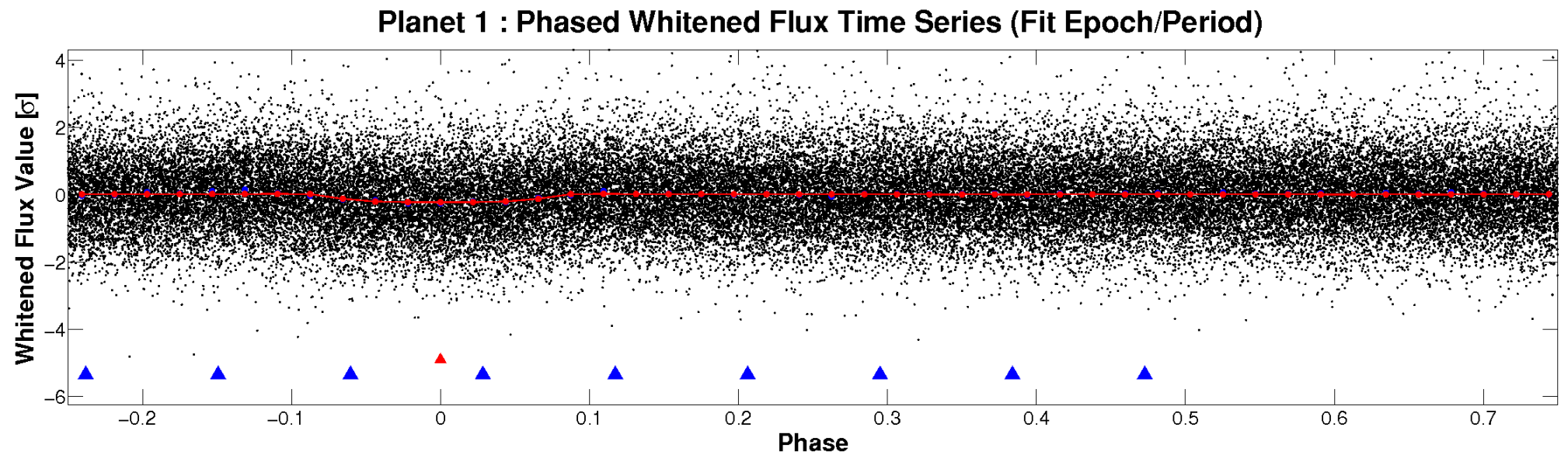
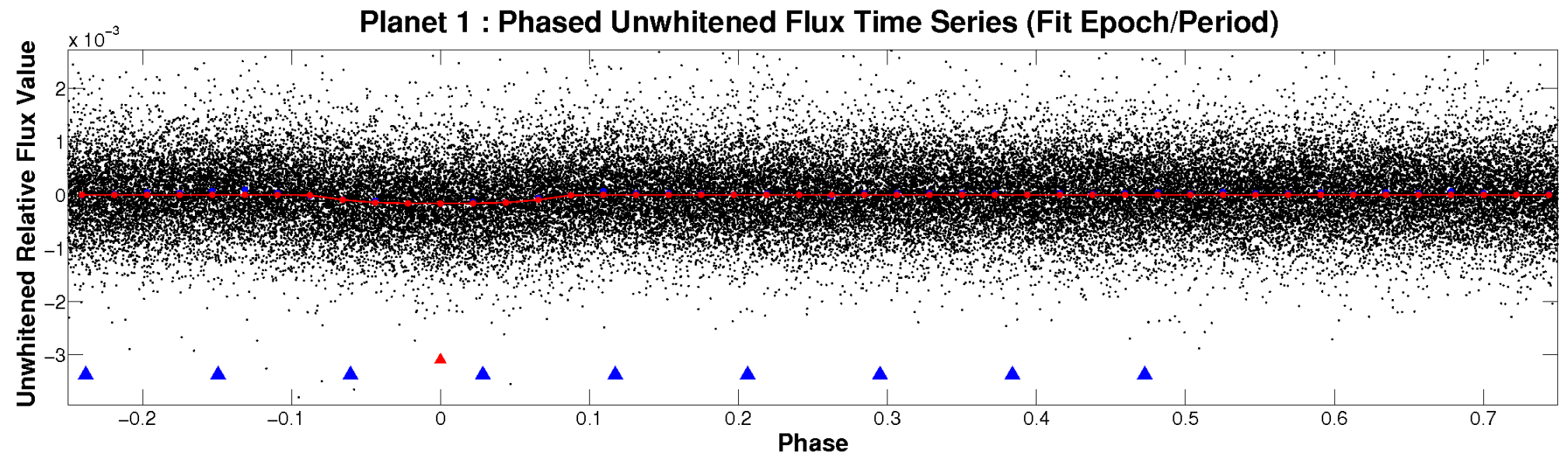


ALT Odd/Even

TCE 010341917-01

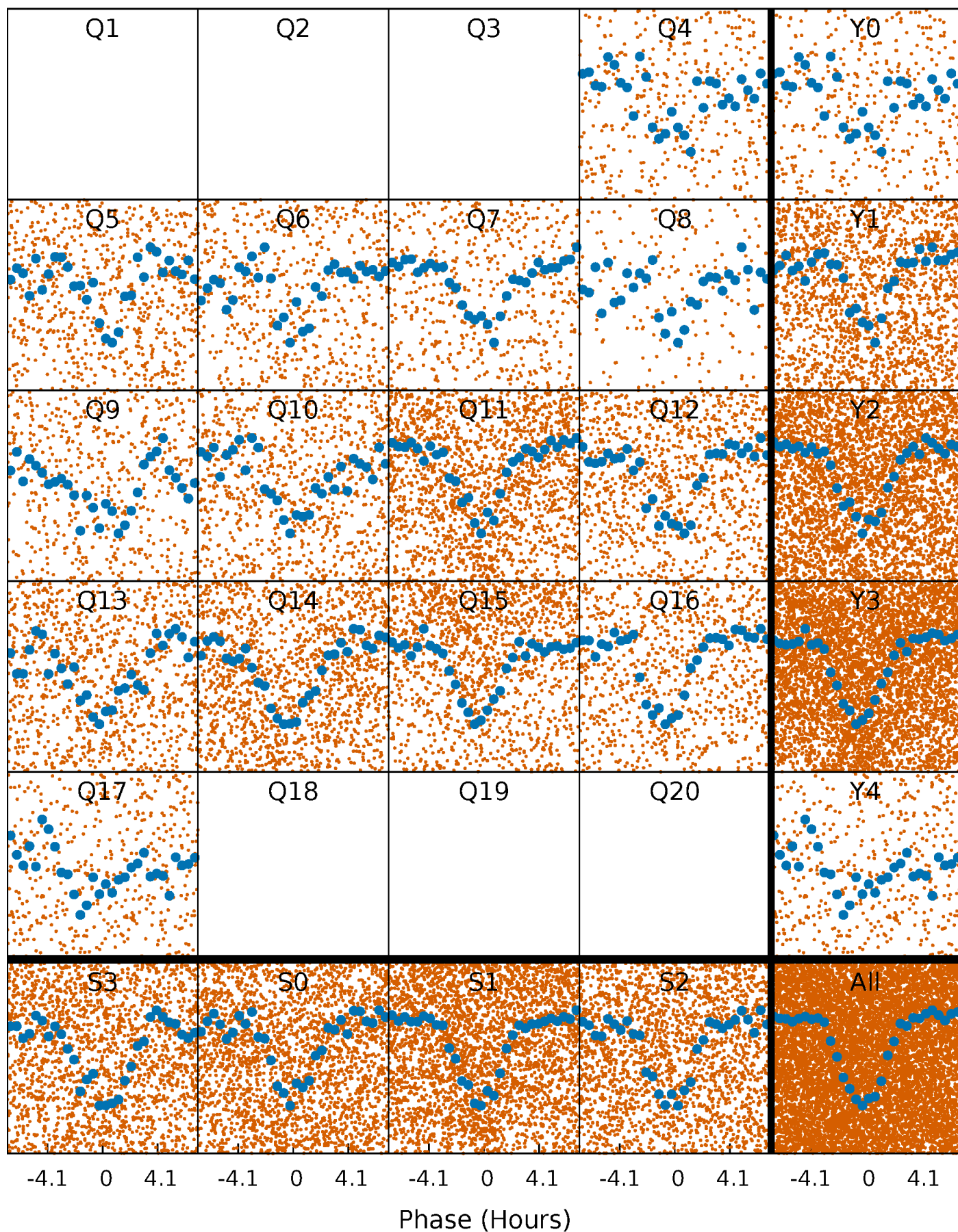


Non-Whitened Vs. Whitened Light Curve



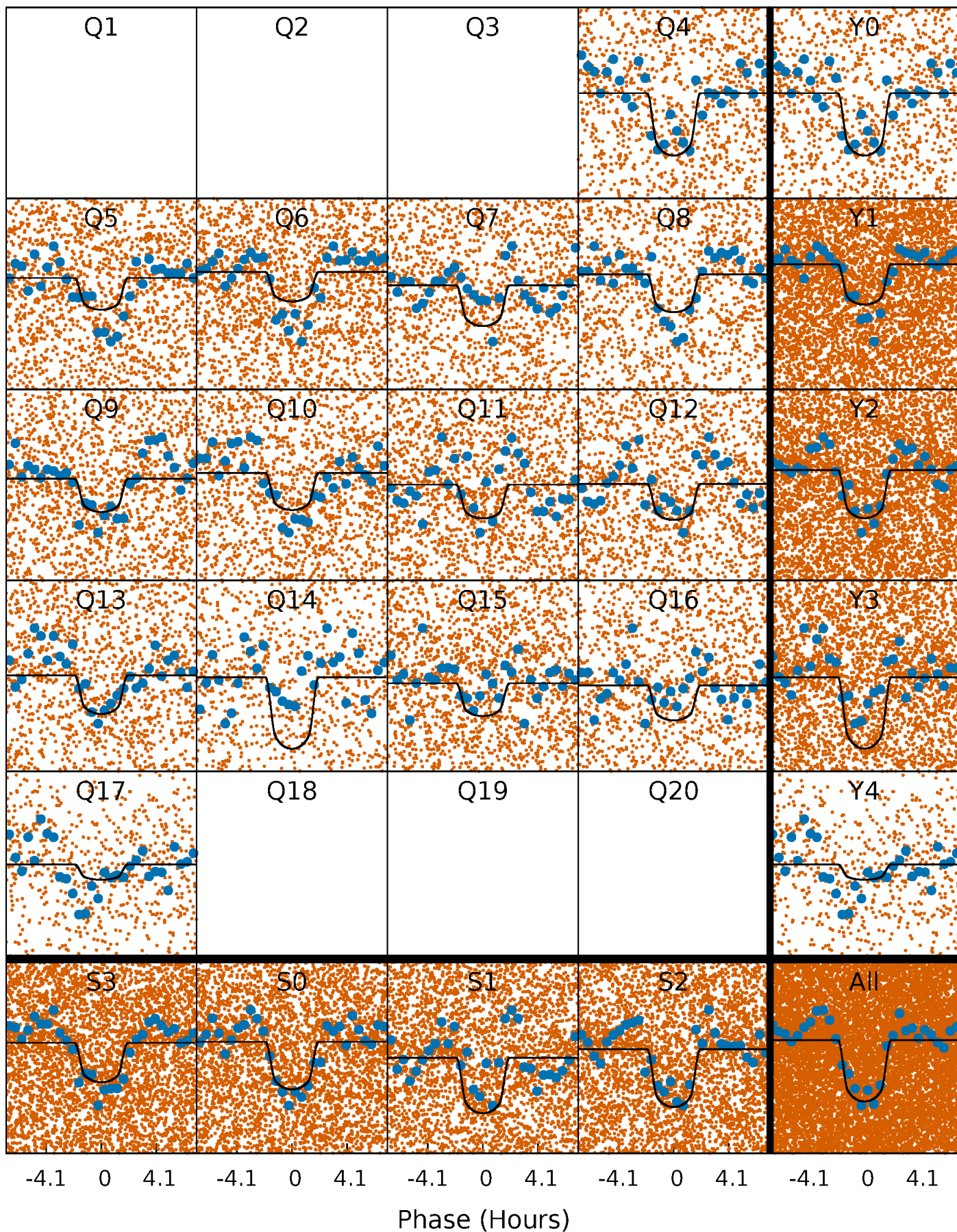
PDC Quarter-Phased Transit Curves

TCE 010341917-01 P= 0.933781 Days $T_0=132.423574$ (BKJD)



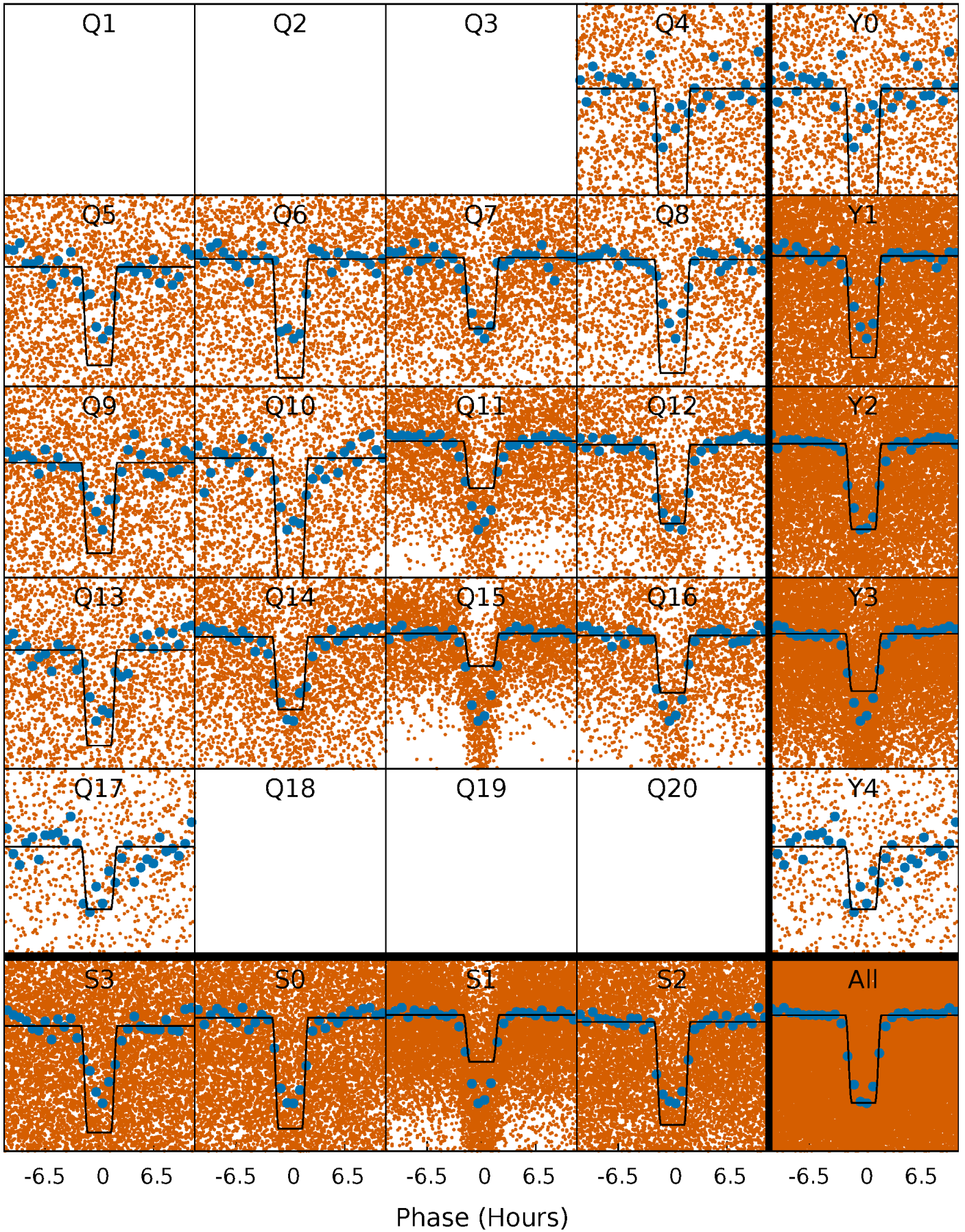
DV Quarter-Phased Transit Curves

TCE 010341917-01 P= 0.933781 Days $T_0=132.423574$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

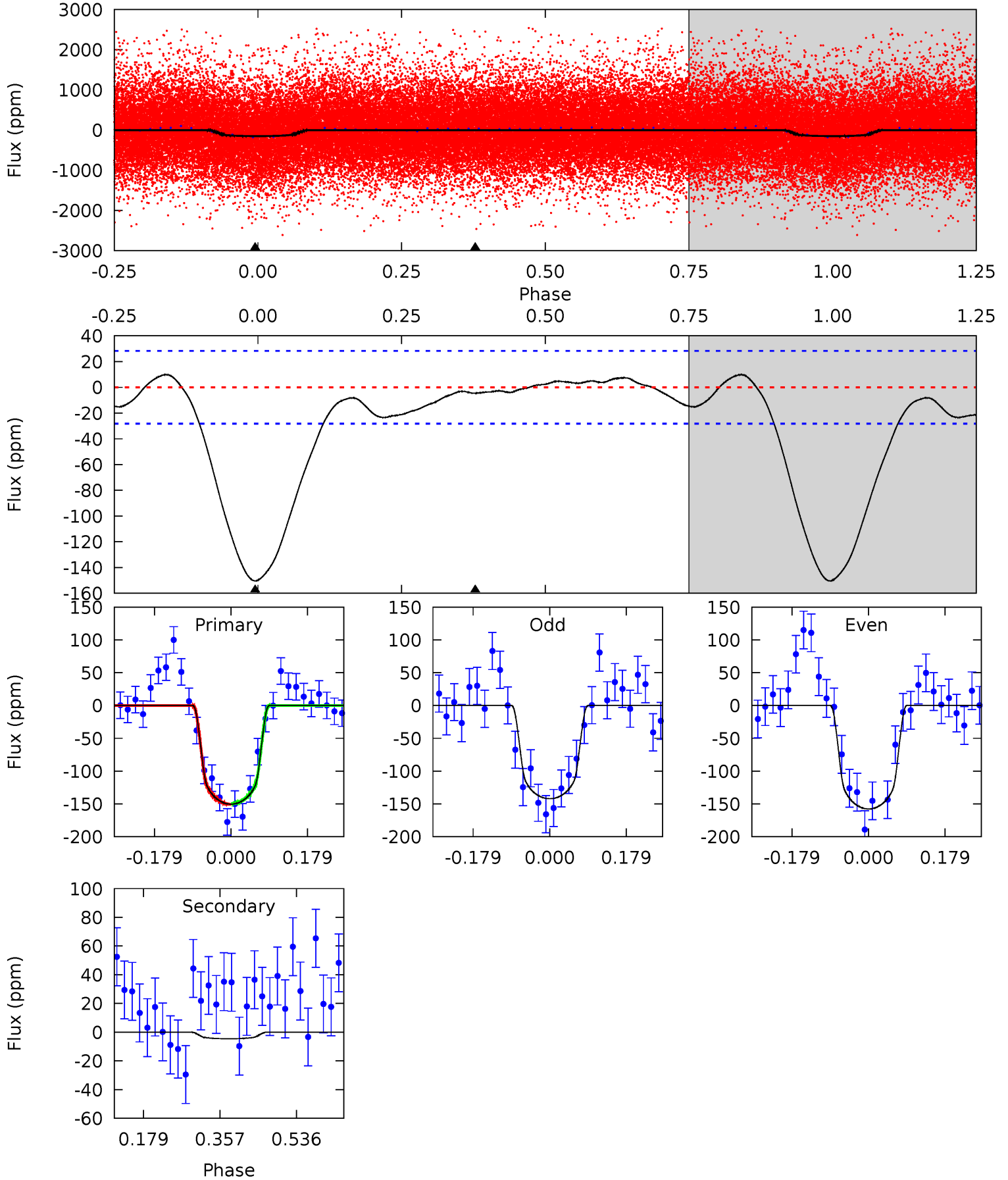
TCE 010341917-01 P= 0.933759 Days $T_0=132.438196$ (BKJD)



DV Model-Shift Uniqueness Test

010341917-01, P = 0.933781 Days, E = 132.423574 Days

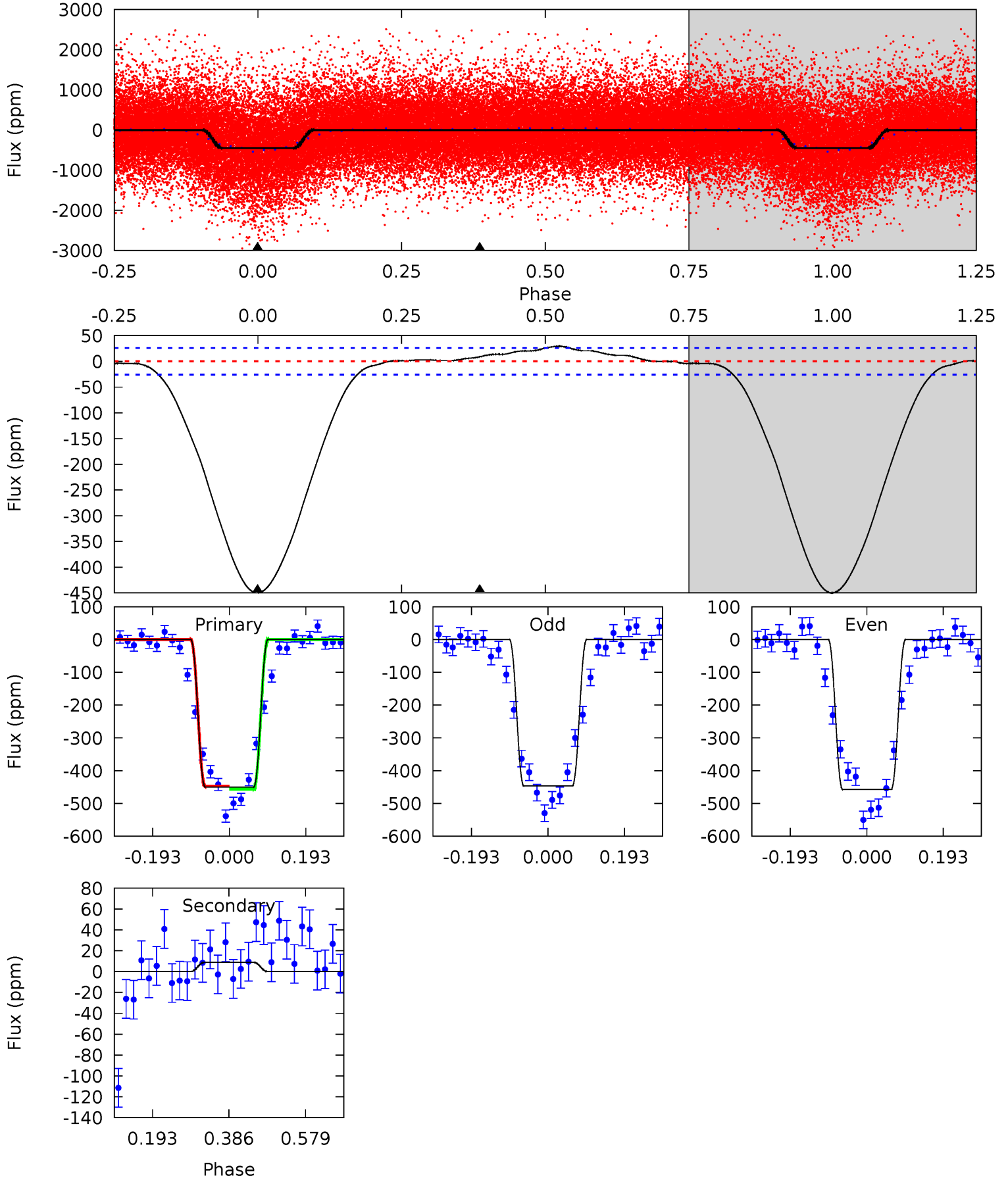
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	0.72	0	0	4.44	1.34	1.27	23.7	23.7	0.72	0.72	1.22	0.98	0.06	0.08



Alt Model-Shift Uniqueness Test

010341917-01, P = 0.933759 Days, E = 132.438196 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
76.9	-1.53	0	0	4.42	1.30	1.38	76.9	76.9	-1.53	-1.53	0.97	1.02	0.06	0.84



Stellar Parameters For KIC 010341917

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5402^{+185}_{-185}	$4.581^{+0.026}_{-0.145}$	$0.070^{+0.250}_{-0.300}$	$0.815^{+0.172}_{-0.057}$	$0.931^{+0.064}_{-0.100}$	$2.419^{+0.337}_{-0.987}$
	+3%/-3%	+1%/-3%	+357%/-429%	+21%/-7%	+7%/-11%	+14%/-41%
Source	KIC0	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 010341917-01 / KOI 2823.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 6	$1.31^{+0.37}_{-0.35}$	2265^{+125}_{-89}	2517^{+686}_{-5282}	$0.501^{+1.029}_{-0.622}$
Alt.	9 ± 6	$2.06^{+0.38}_{-0.36}$	2279^{+121}_{-93}	-2955^{+184}_{-191}	$-0.354^{+0.222}_{-0.356}$

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

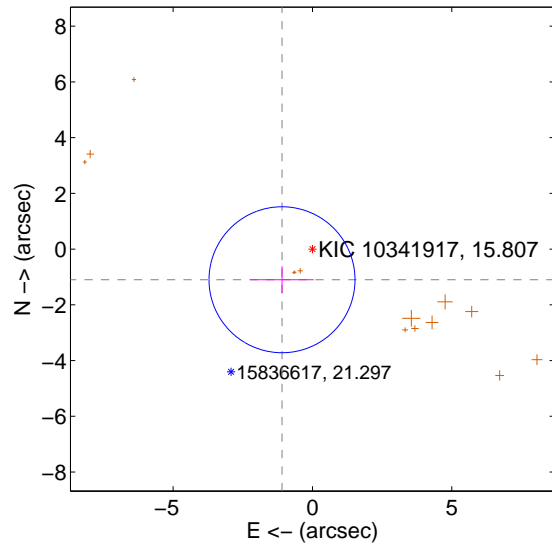
Supplemental centroid analysis for 010341917-01. Kepler magnitude: 15.81. Transit SNR 17.30

There are 0 quarters with good PRF difference image offsets

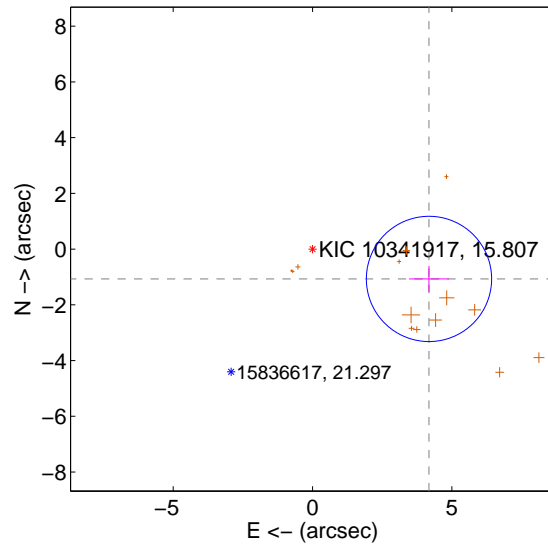
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.550 ± 0.873	1.78	1.092 ± 1.140	-1.100 ± 0.484
PRF-fit source offset from KIC position	4.315 ± 0.749	5.76	-4.180 ± 0.713	-1.071 ± 0.464
photometric centroid source offset	4.68 ± 0.85	5.50	4.61 ± 0.85	-0.81 ± 0.80

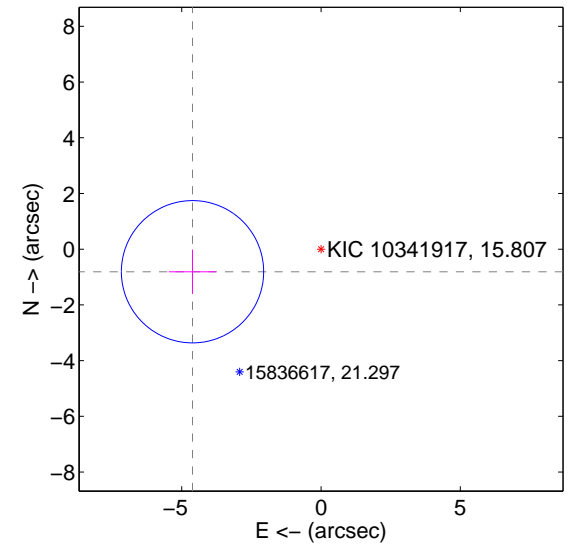
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

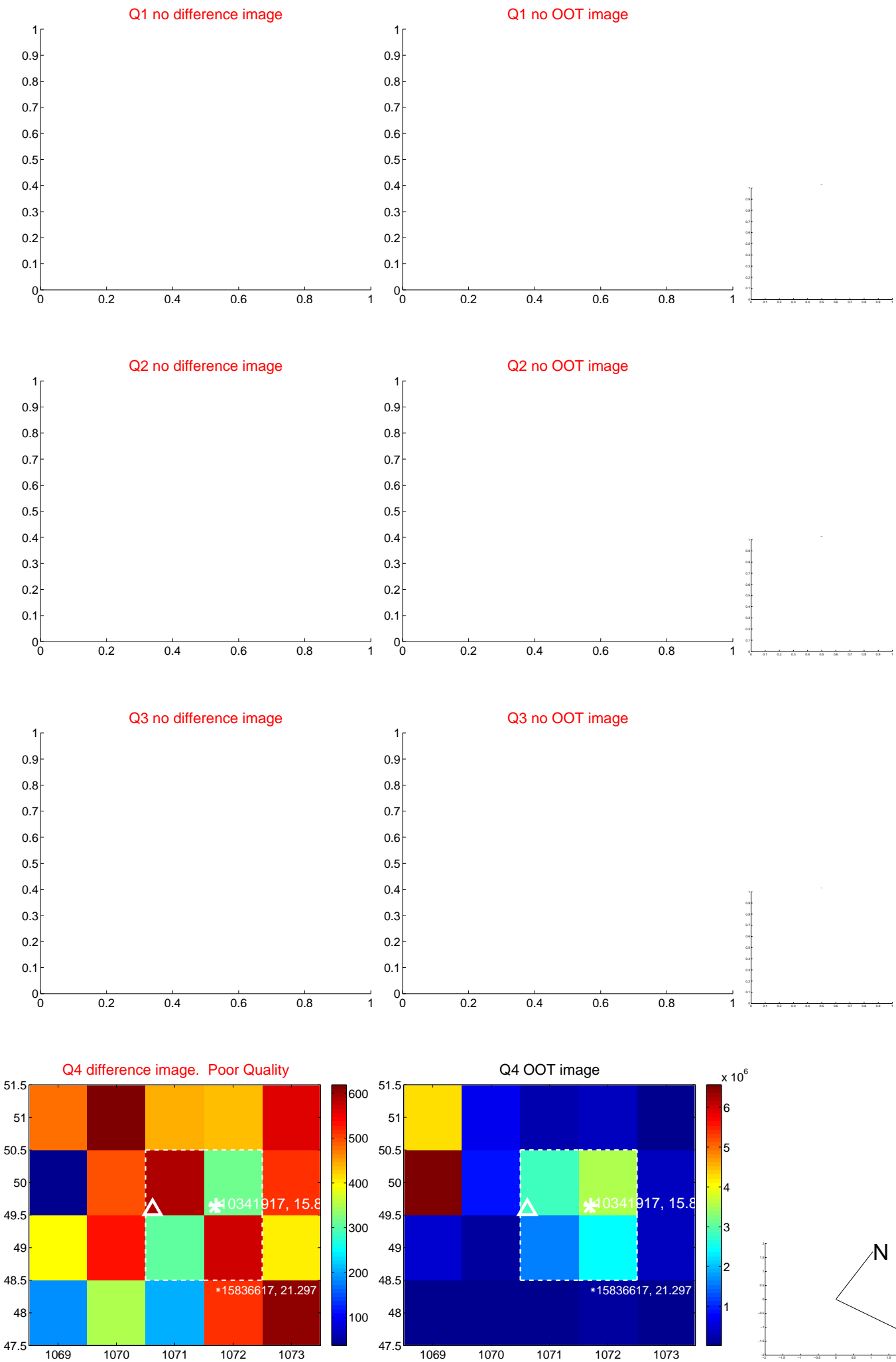


offset from photometric centroids

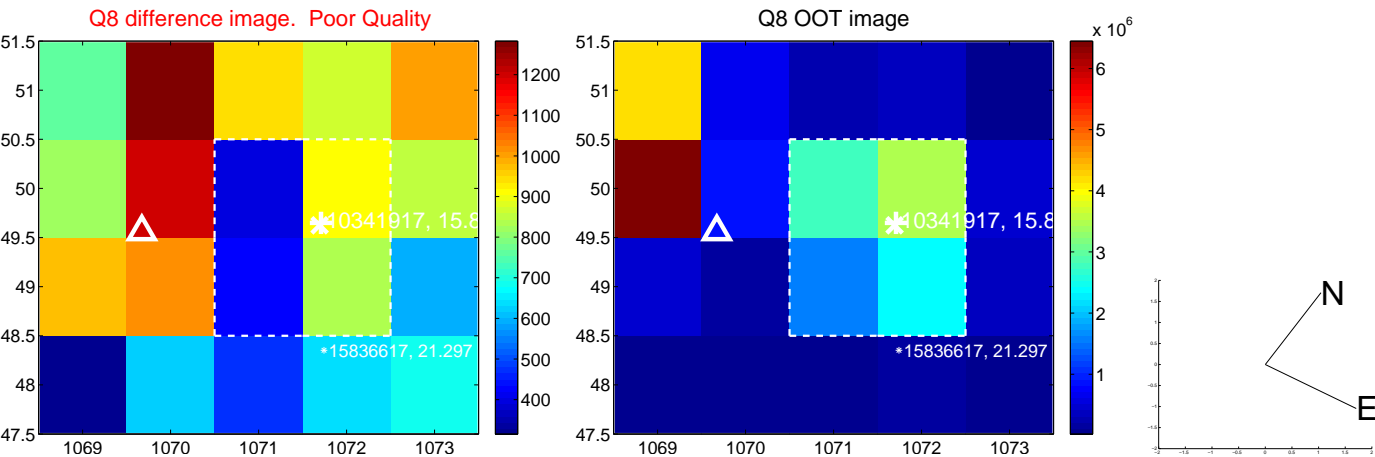
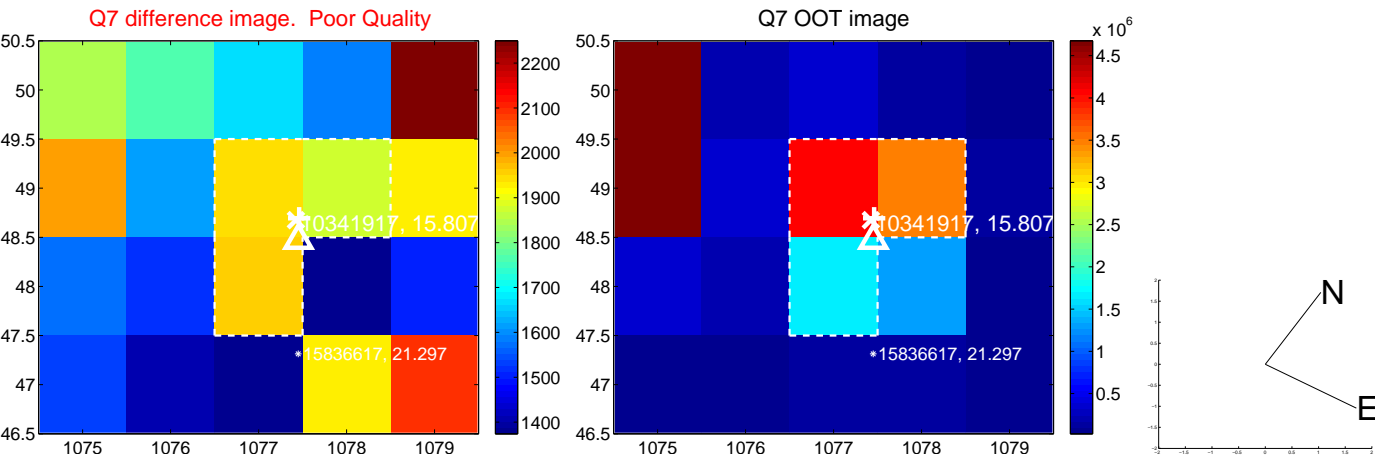
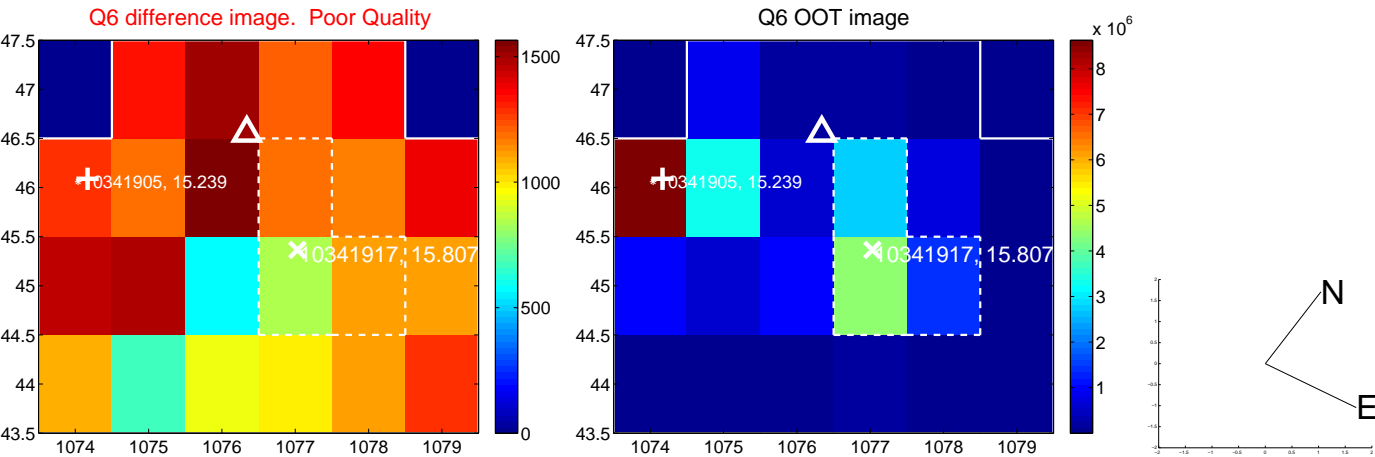
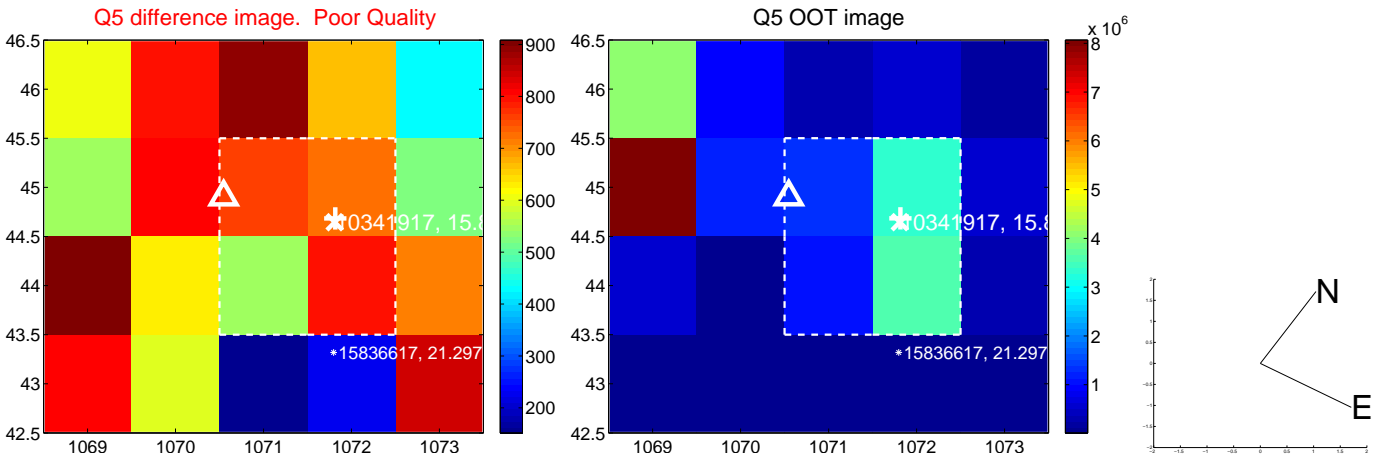


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

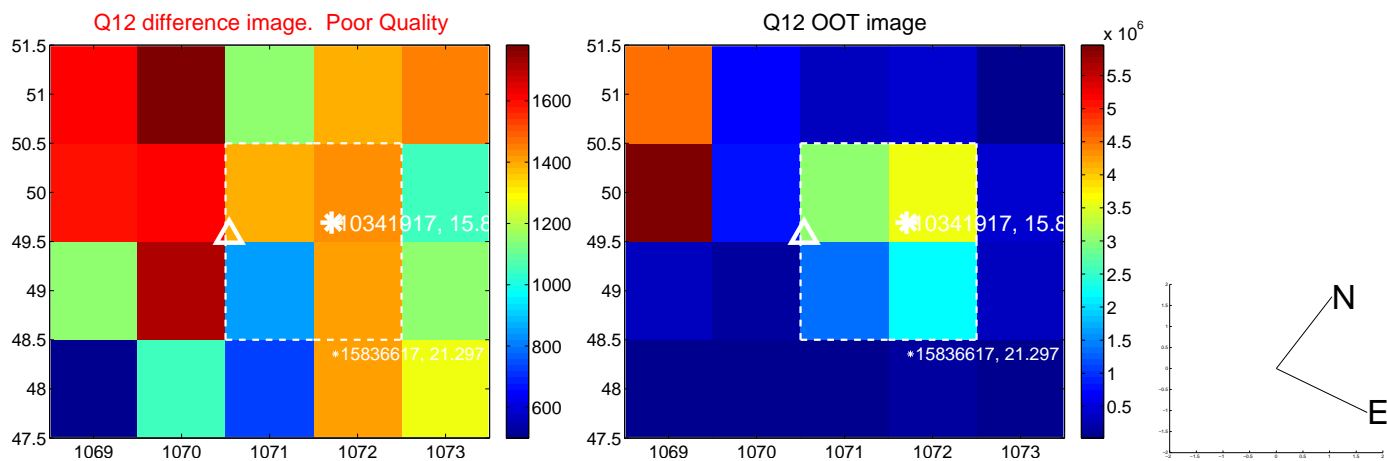
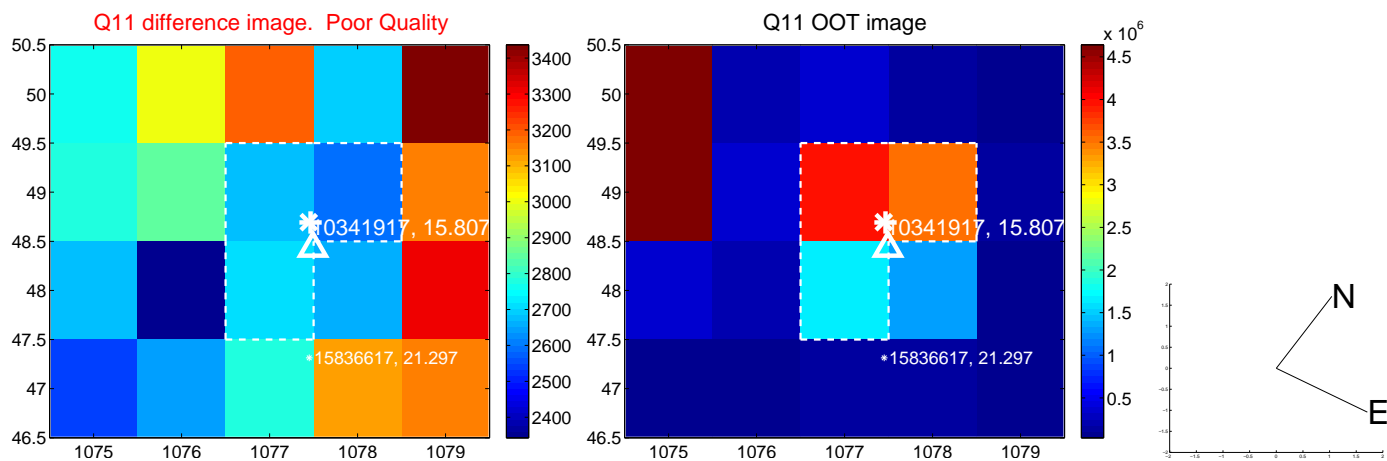
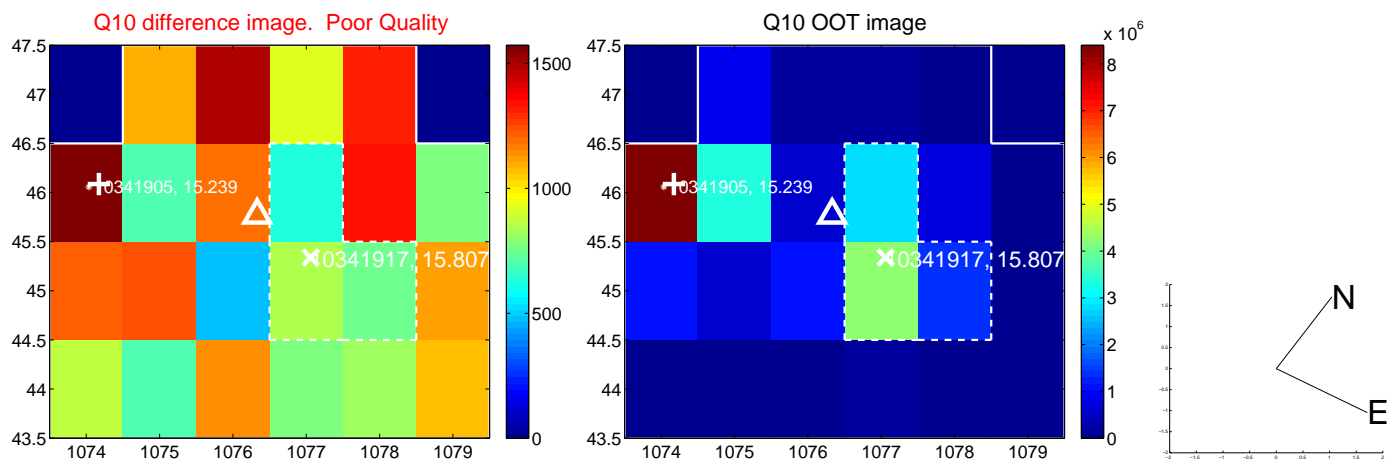
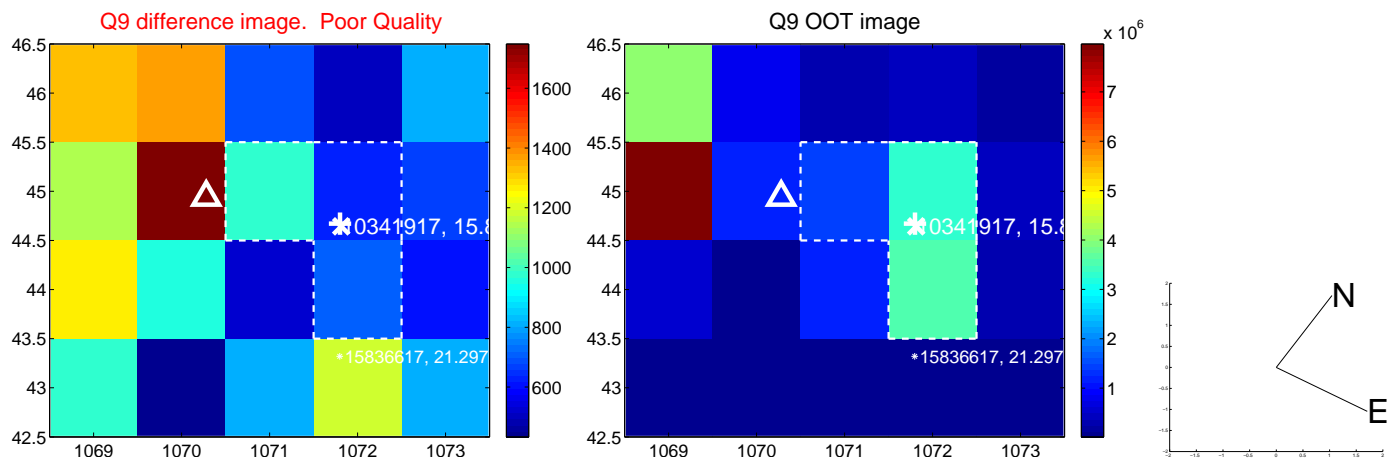
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



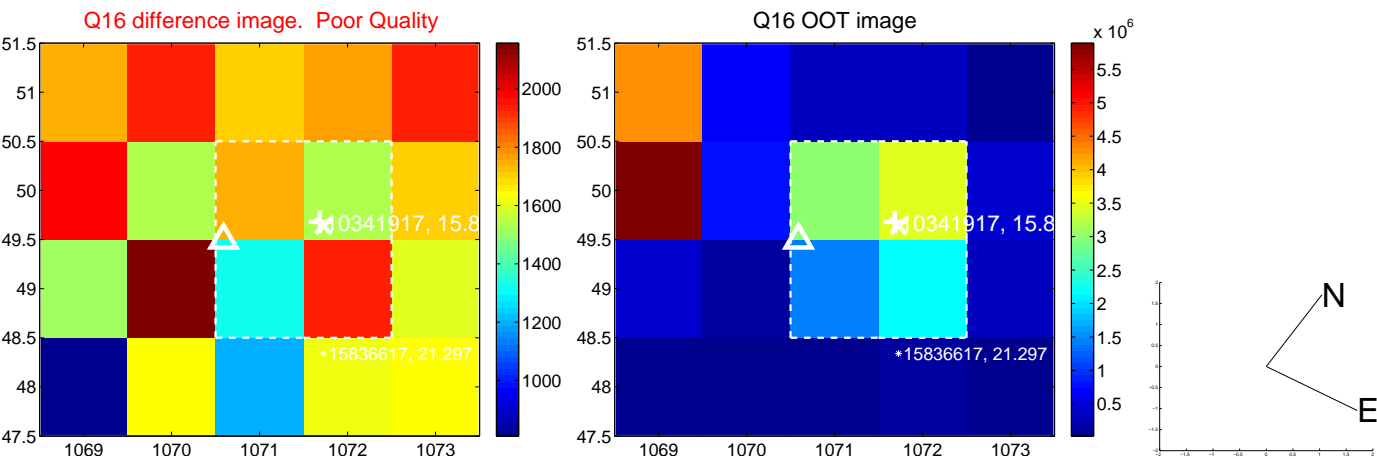
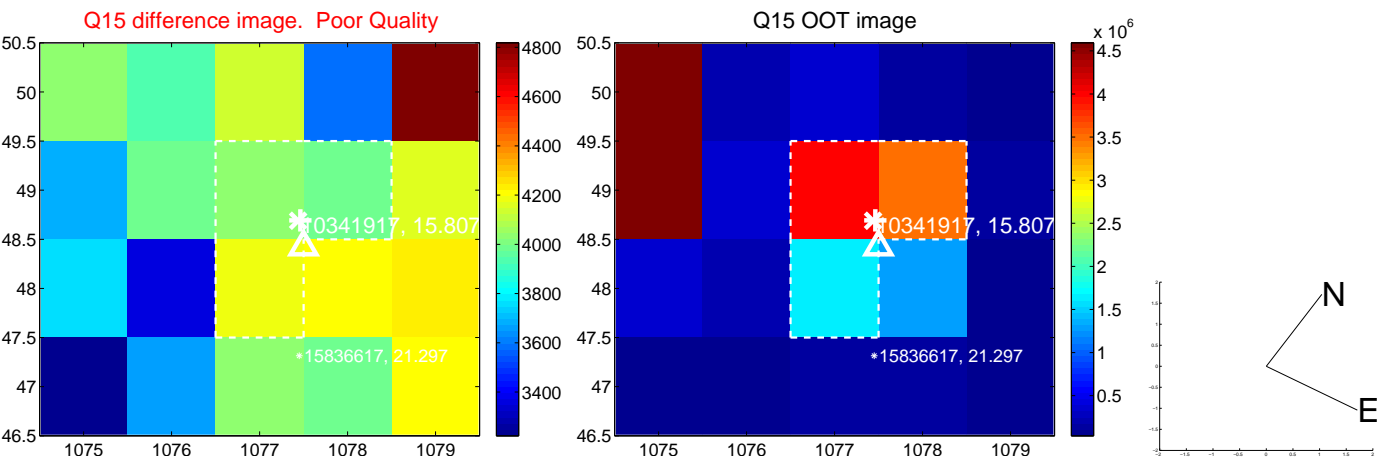
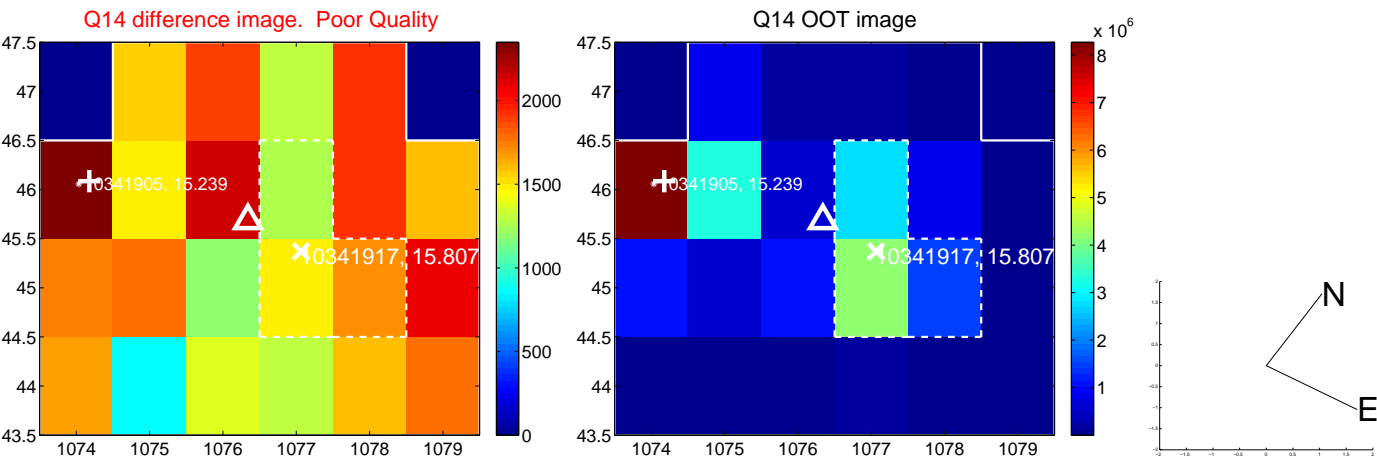
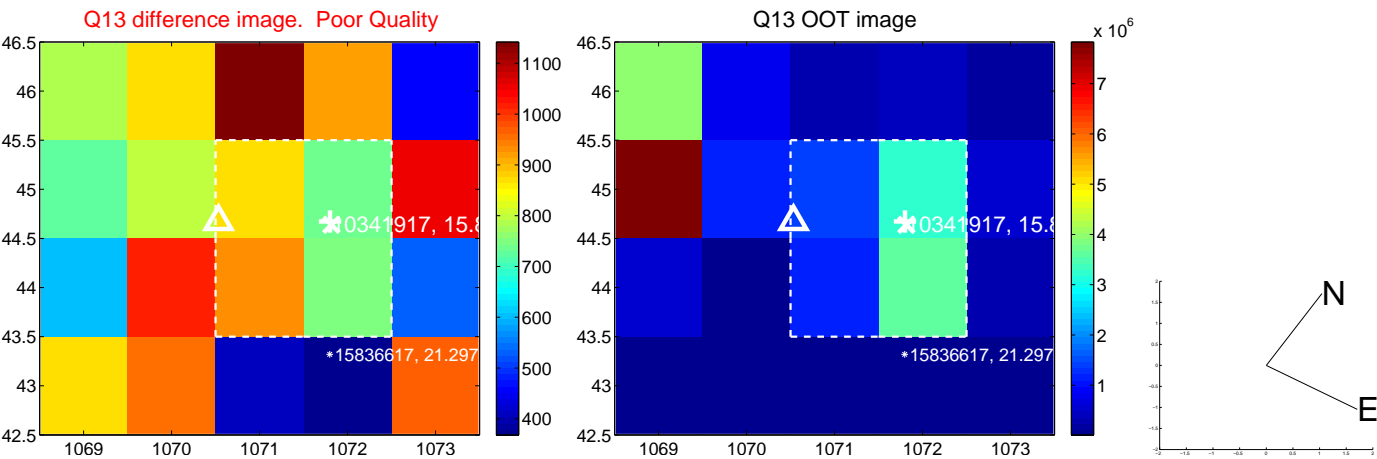
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



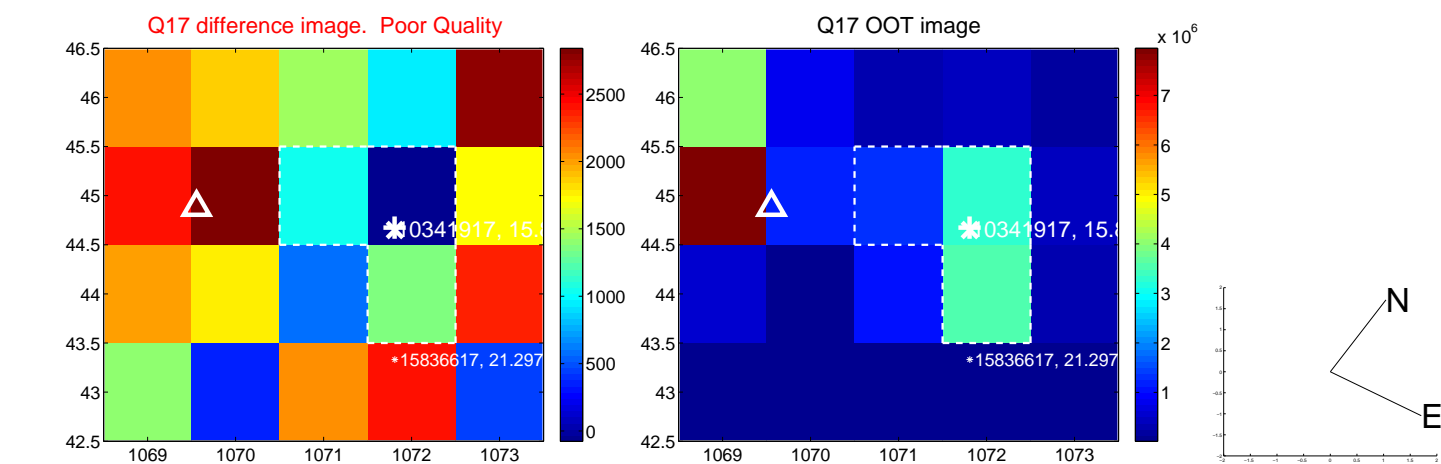
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



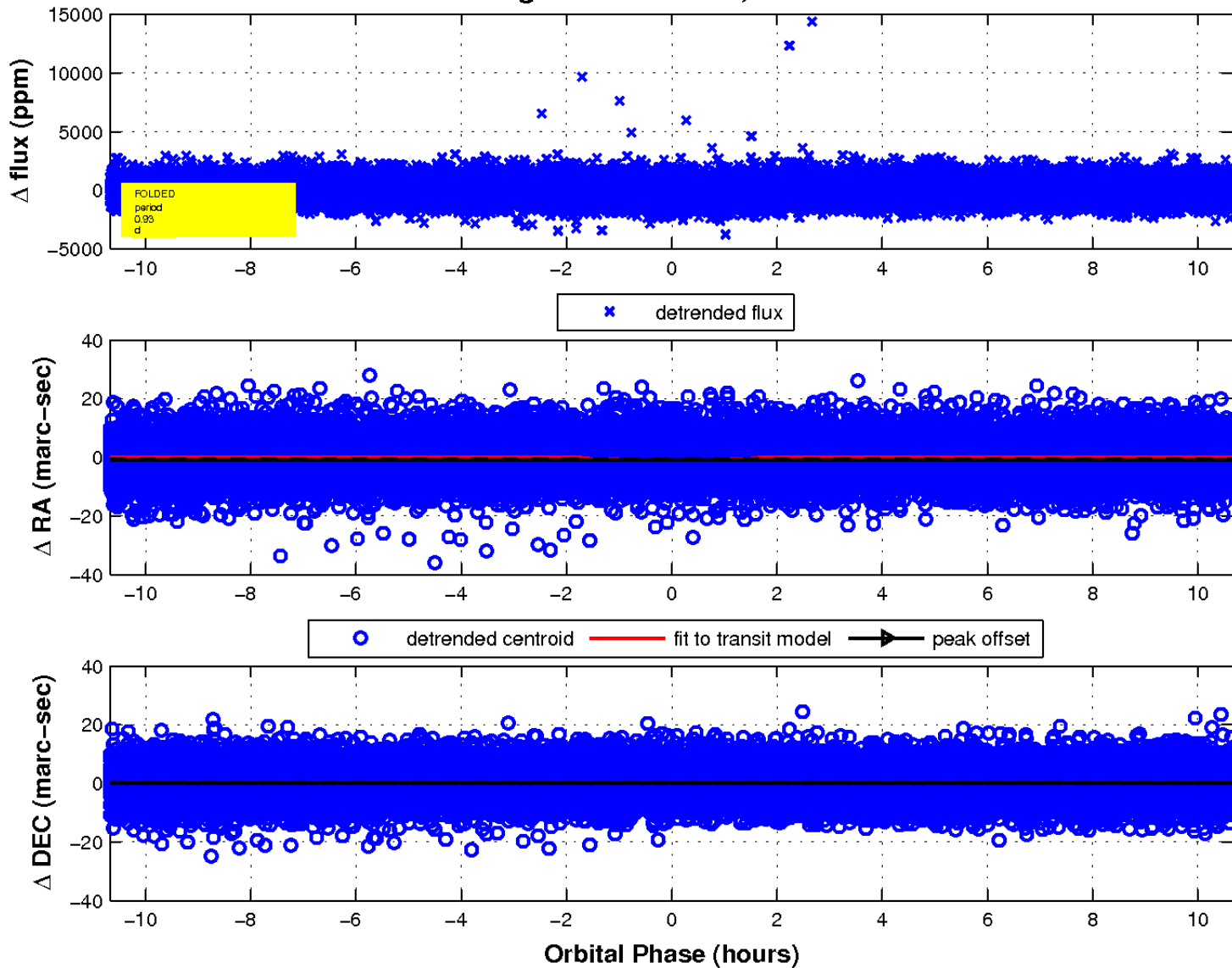
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fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination

