

KIC 003328052

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 _⊕)
003328052-01	OBS	3011.01	2.115518	131.999218	219.1	3.639	18.9	20.5	1.02	6208	1.78	1267.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003328052-01	OBS	FP	0.00	0	0	1	1	HALO_GHOST—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.

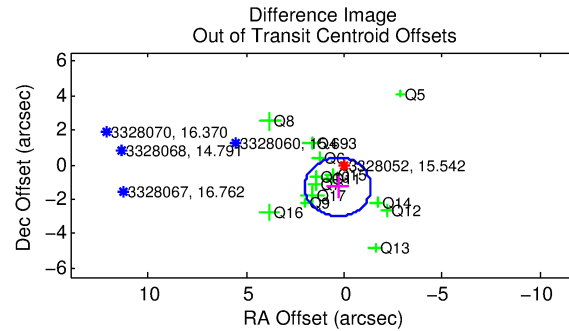
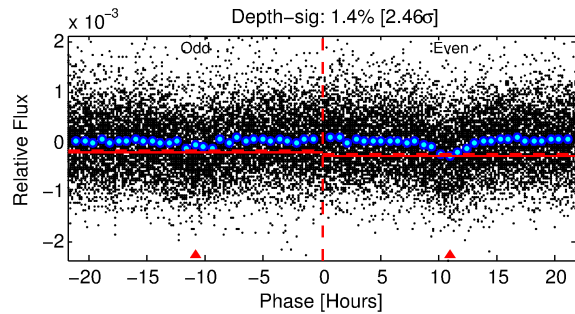
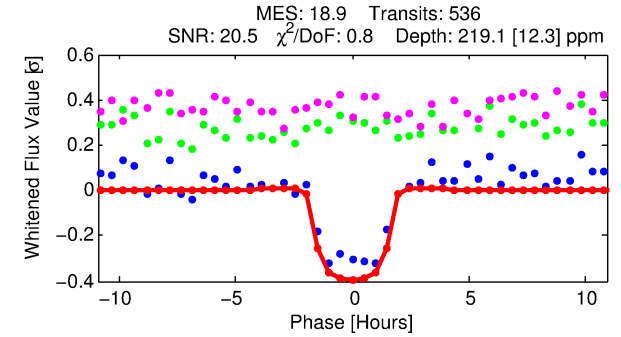
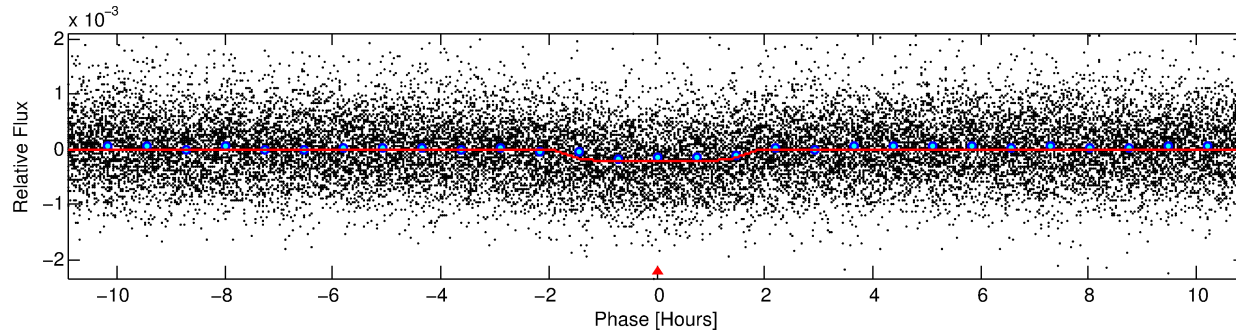
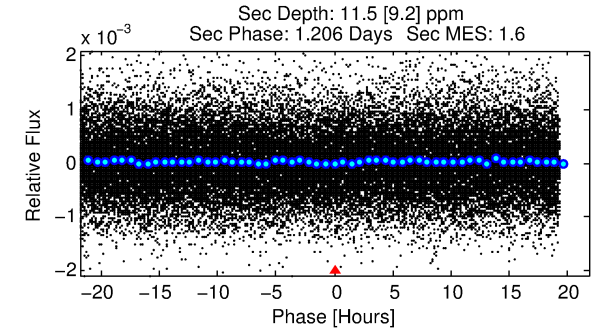
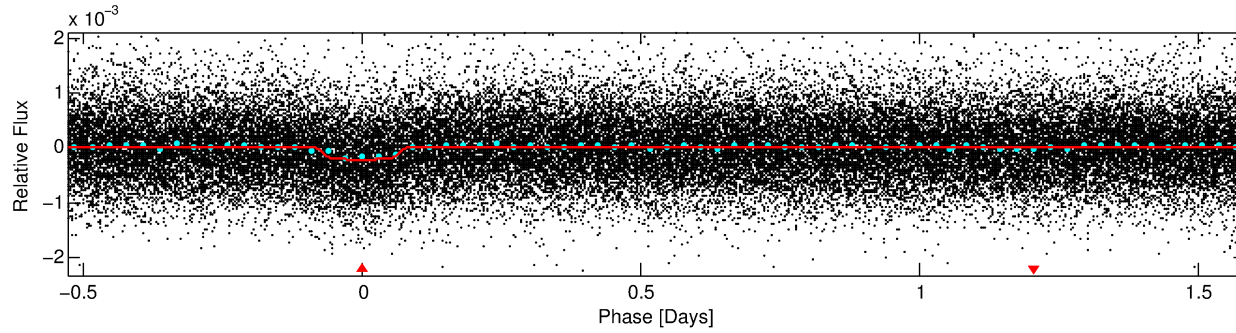
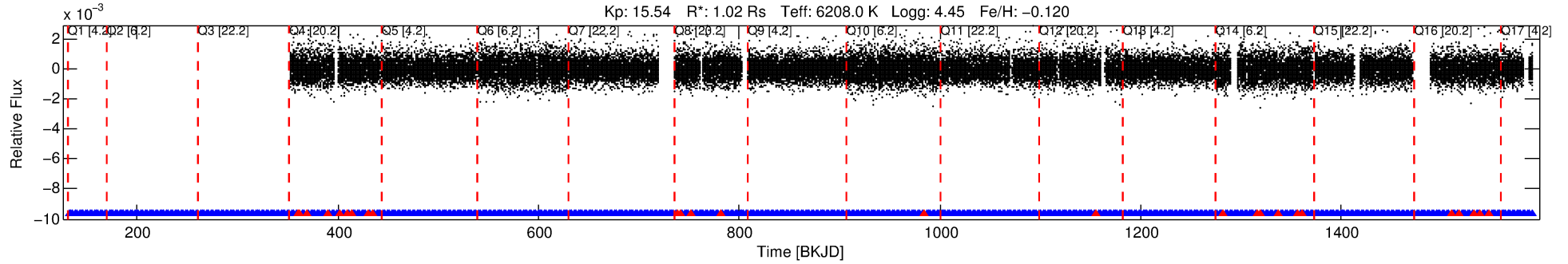
Ephemeris Match Information For 003328052-01

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
003328052-01	3328052	003327980-pri	3327980	1:2	64.2	-10	-12	12.12	15.54	1942.50	Direct-PRF	0	0.45	0.45

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: 3328052 Candidate: 1 of 1 Period: 2.116 d
KOI: K03011.01 Corr: 0.949



DV Fit Results:

Period = 2.11552 [0.00001] d
Epoch = 131.9992 [0.0026] BKJD
Rp/R* = 0.0159 [0.0031]
a/R* = 2.30 [1.96]
b = 0.90 [0.23]
Seff = 1267.69 [544.53]
Teq = 1522 [163] K
Rp = 1.78 [0.68] Re
a = 0.0332 [0.0090] AU
Ag = 2.20 [2.14] [0.56σ]
Teffp = 2866 [647] K [2.02σ]

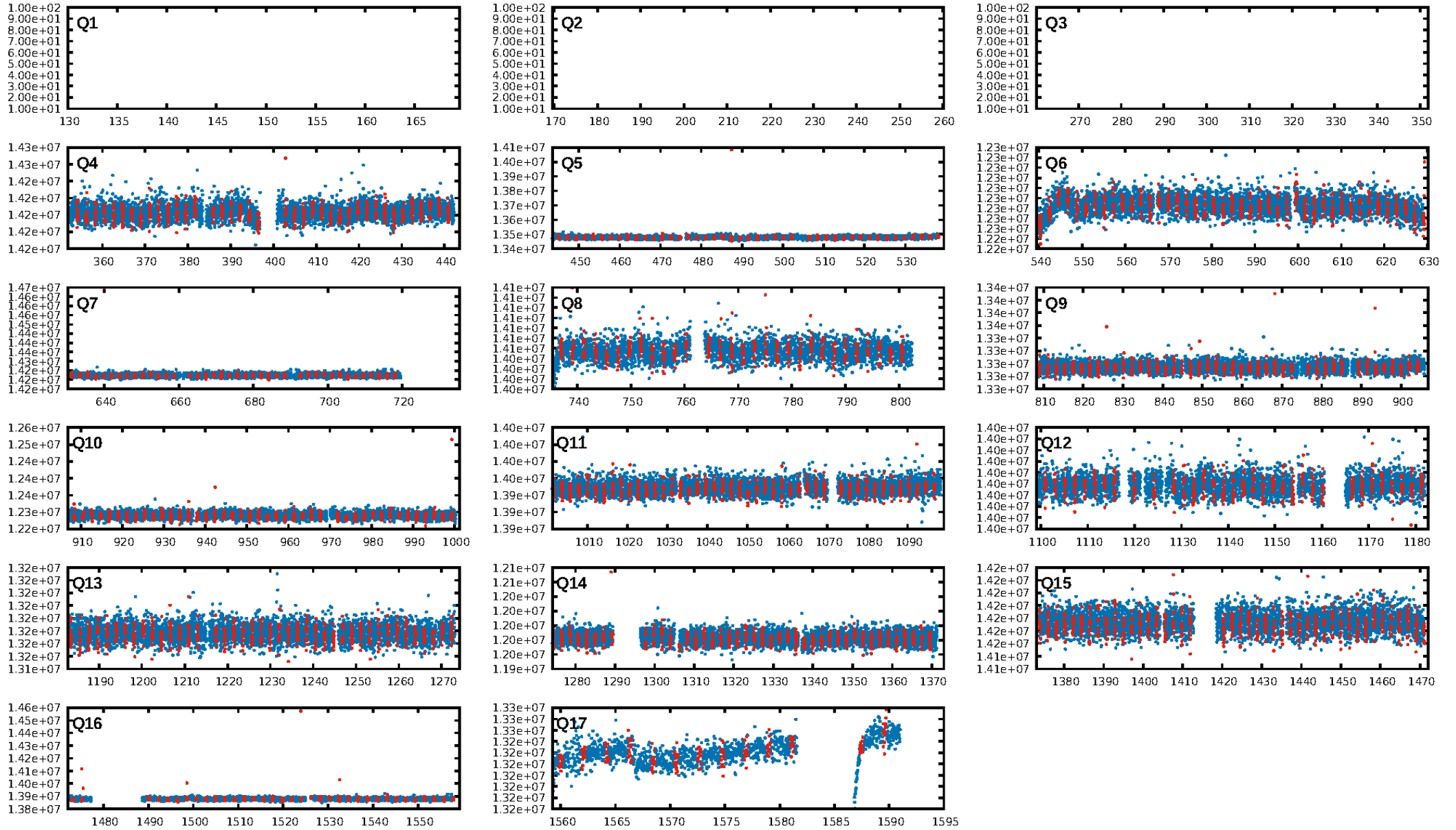
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.57e-80
RollingBand-fgt: 0.95 [497/523]
GhostDiagnostic-chr: 0.1661
Centroid-sig: 0.0%
AUOffset-so: 1.916 arcsec [2.96σ]
OotOffset-rm: 1.327 arcsec [2.36σ]
KicOffset-rm: 1.513 arcsec [2.75σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

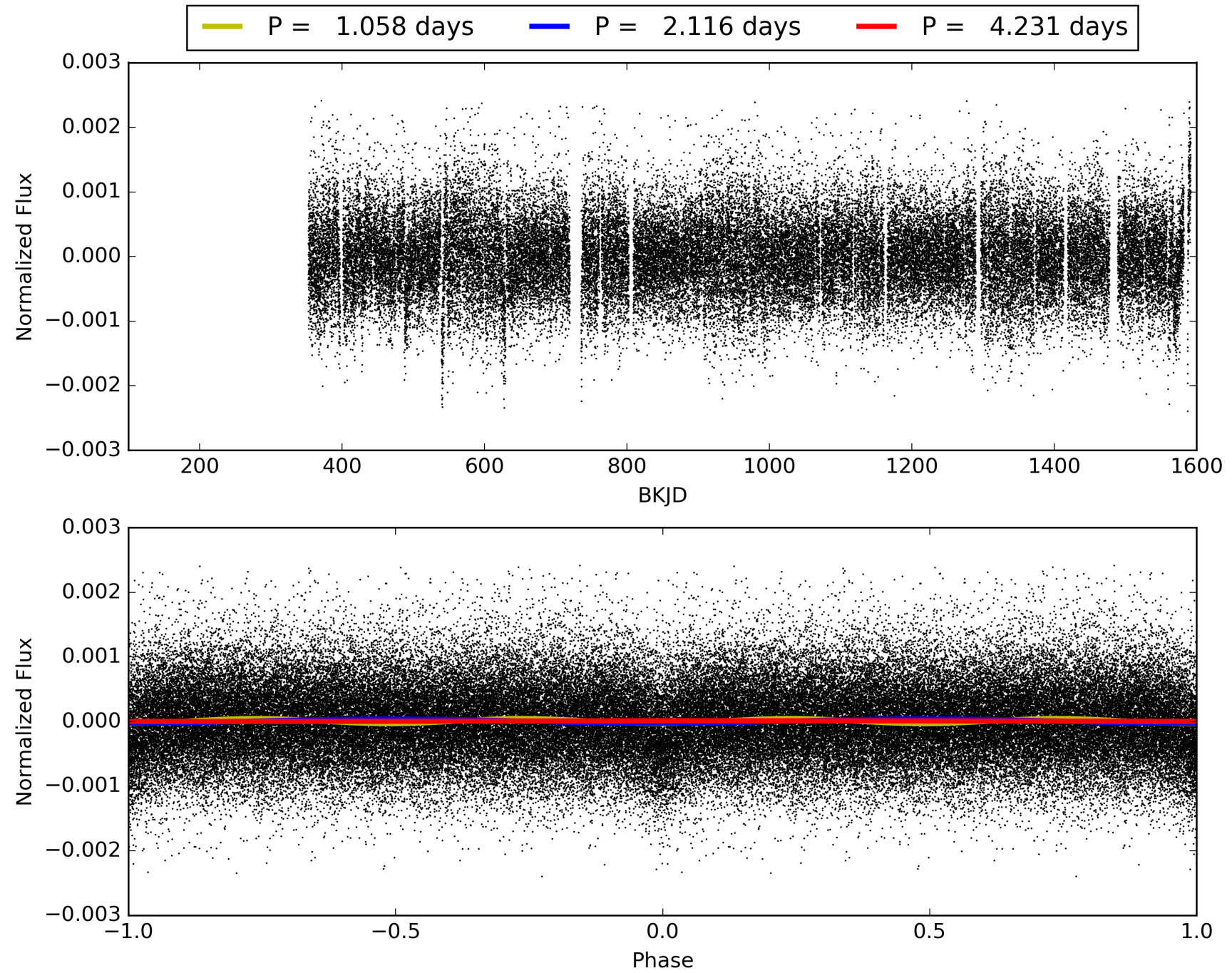
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:58:56 Z

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

TCE 003328052-01, PDC Light Curves

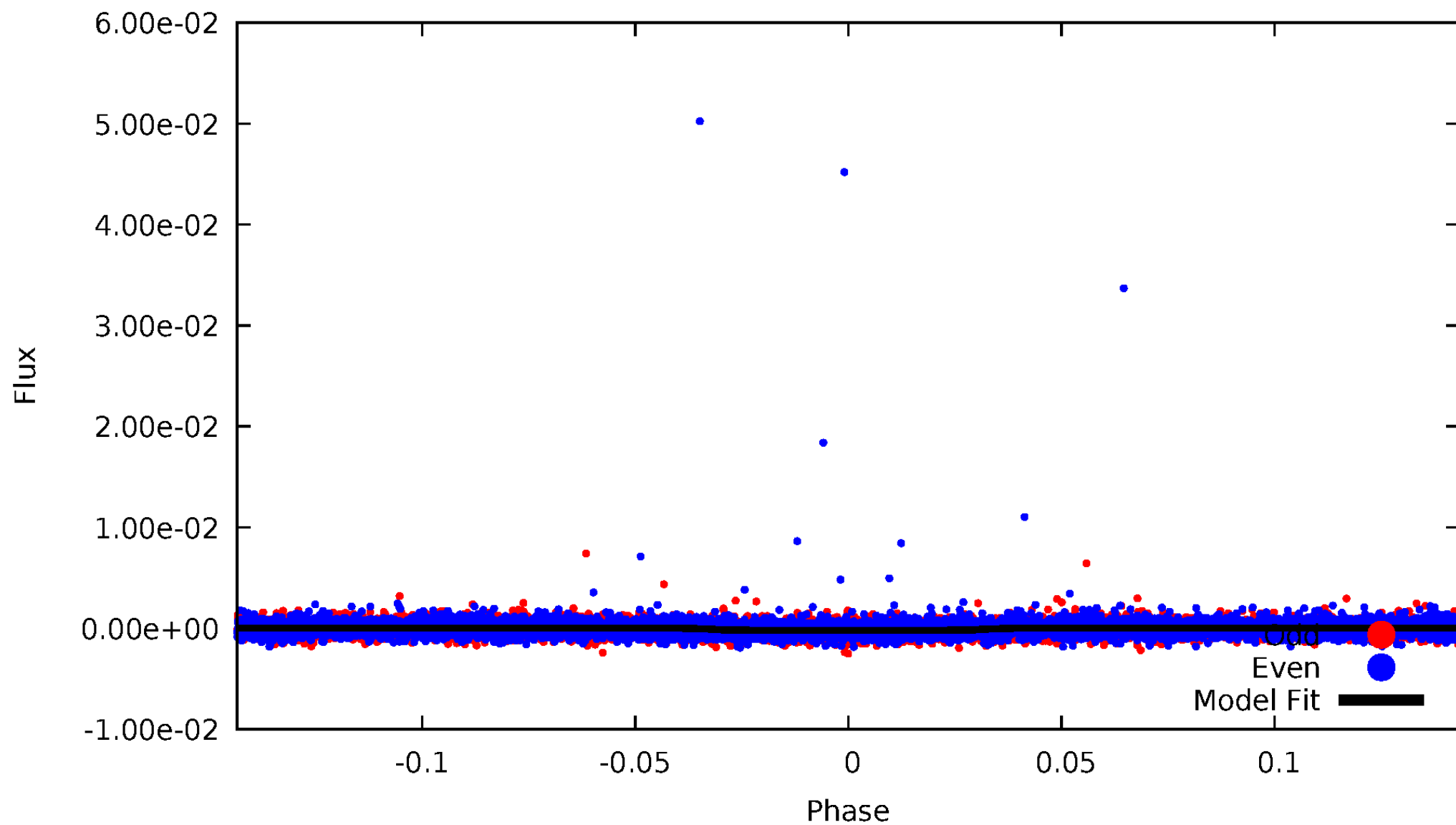


TCE 003328052-01



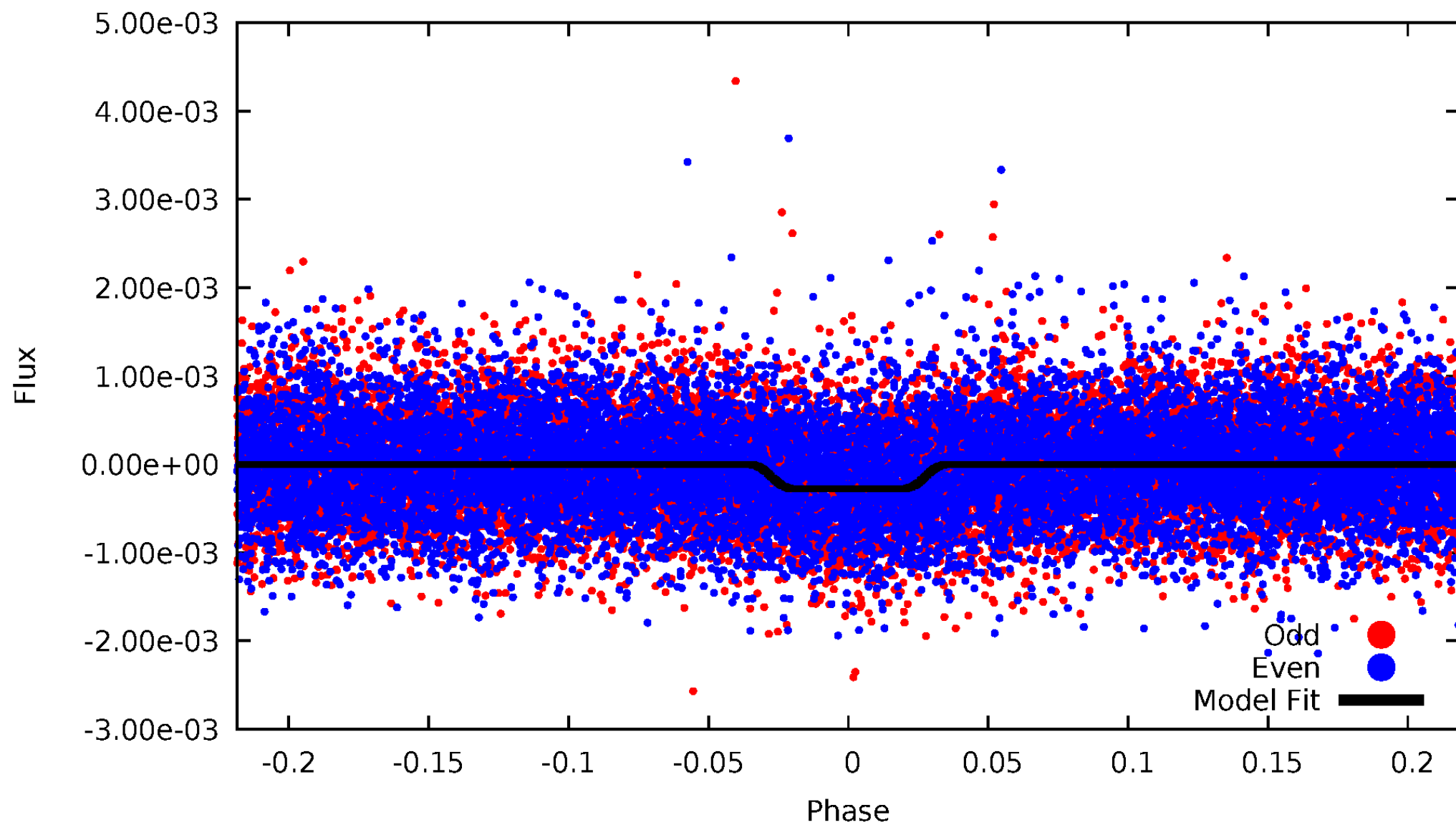
DV Odd/Even

TCE 003328052-01



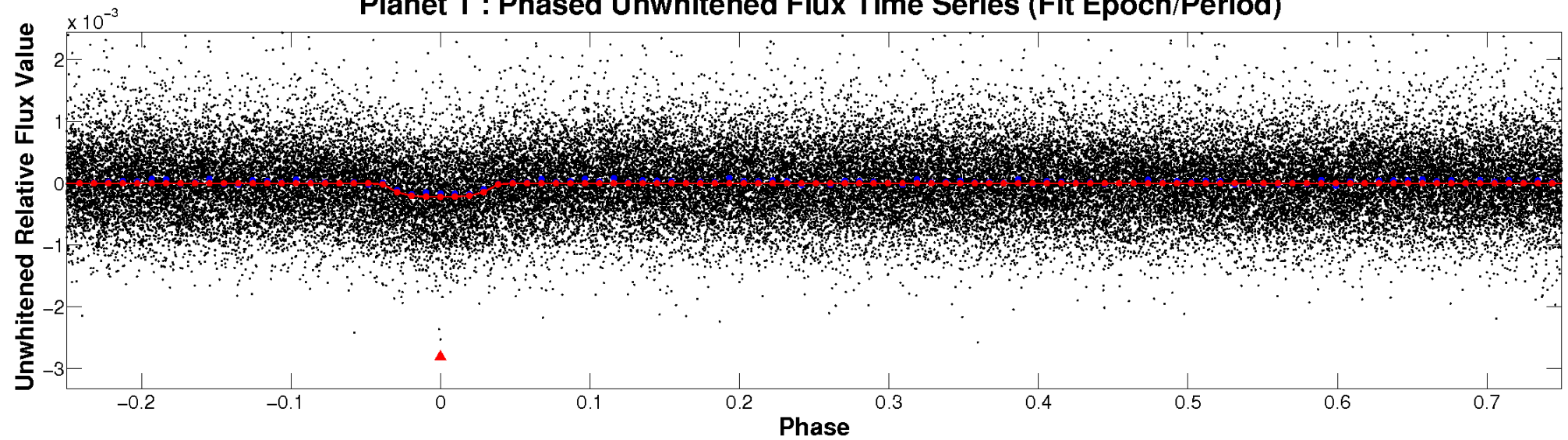
ALT Odd/Even

TCE 003328052-01

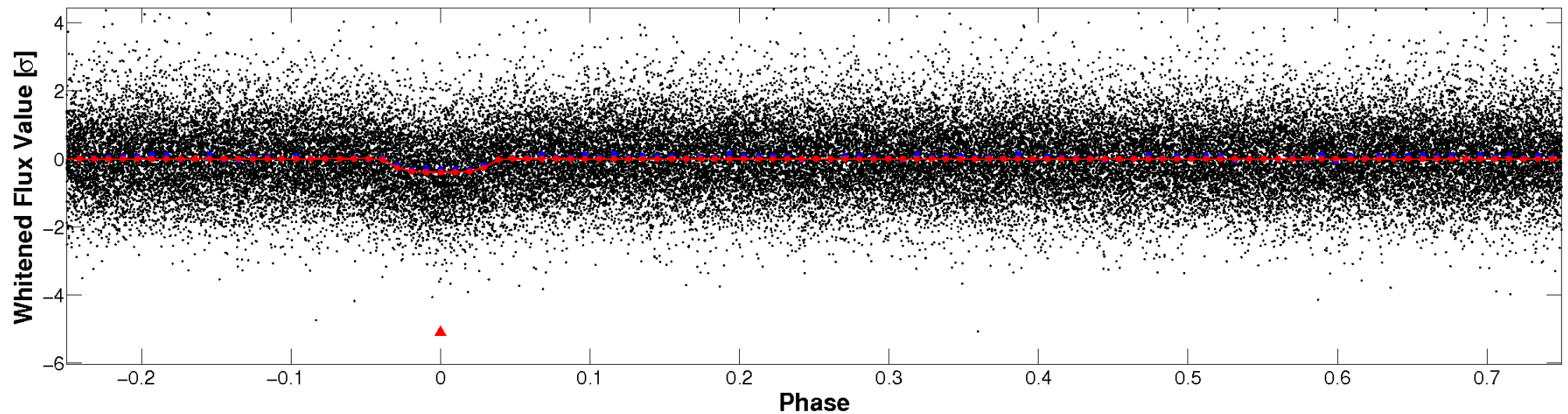


Non-Whitened Vs. Whitened Light Curve

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

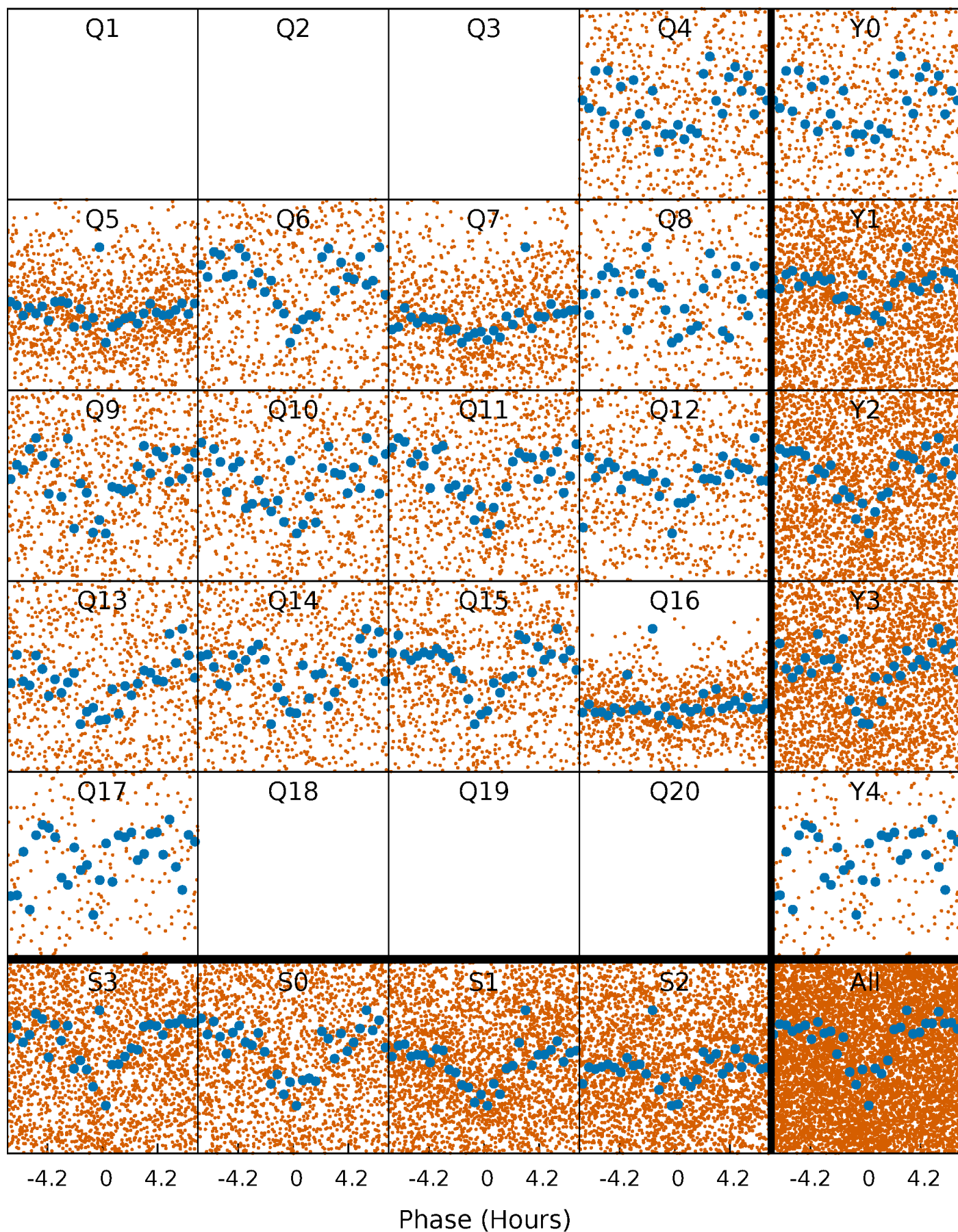


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



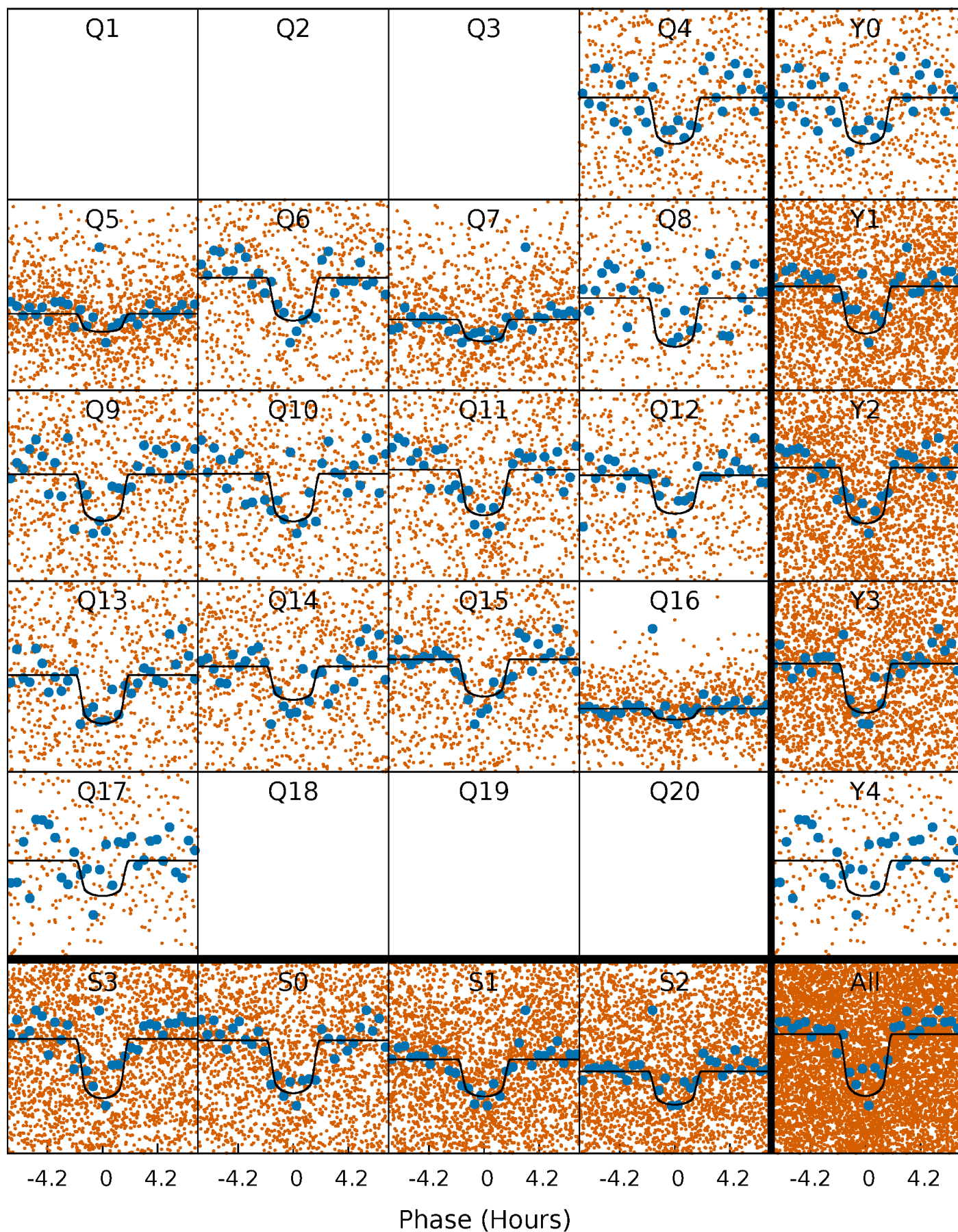
PDC Quarter-Phased Transit Curves

TCE 003328052-01 P= 2.115518 Days $T_0=131.999218$ (BKJD)



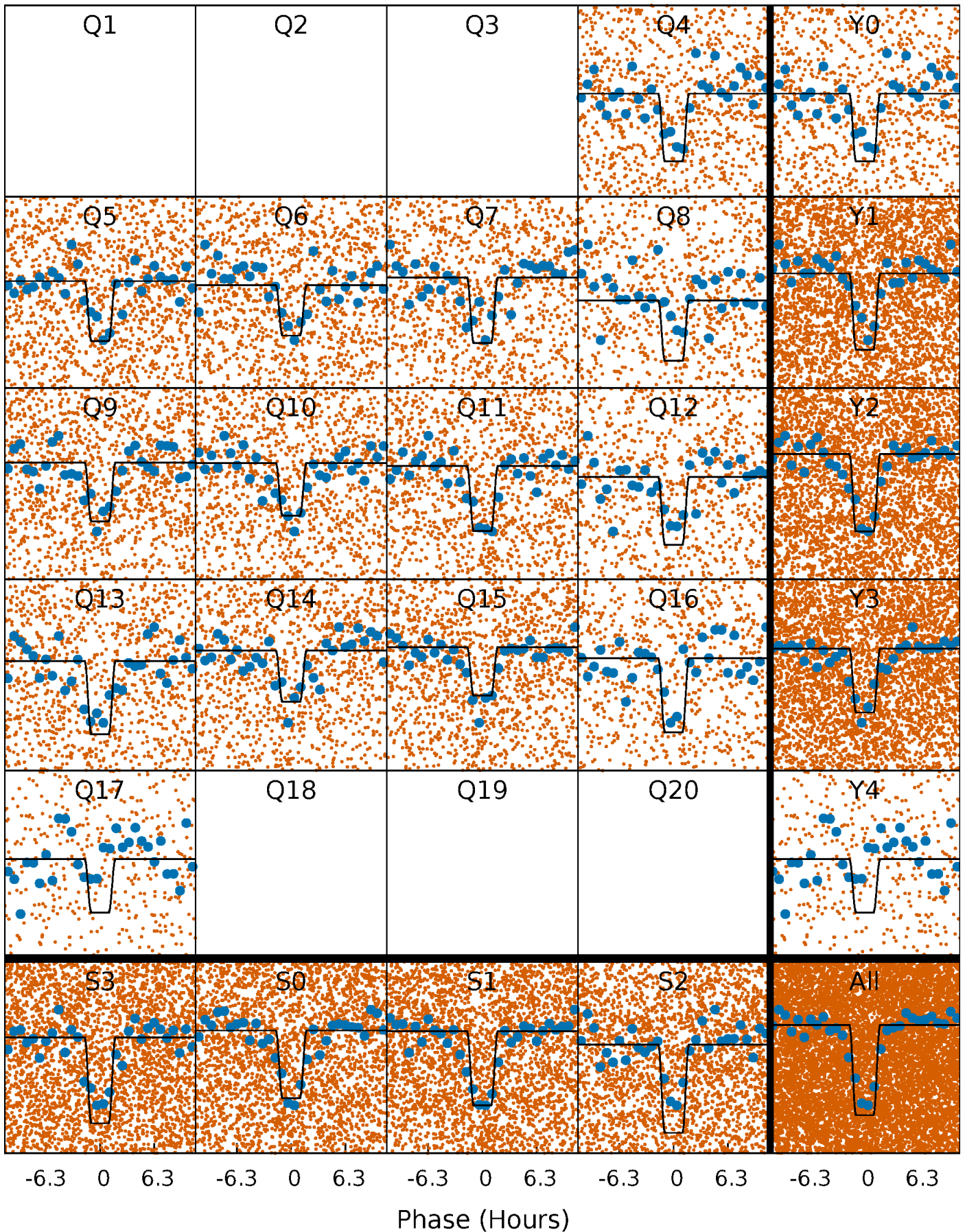
DV Quarter-Phased Transit Curves

TCE 003328052-01 P= 2.115518 Days $T_0=131.999218$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

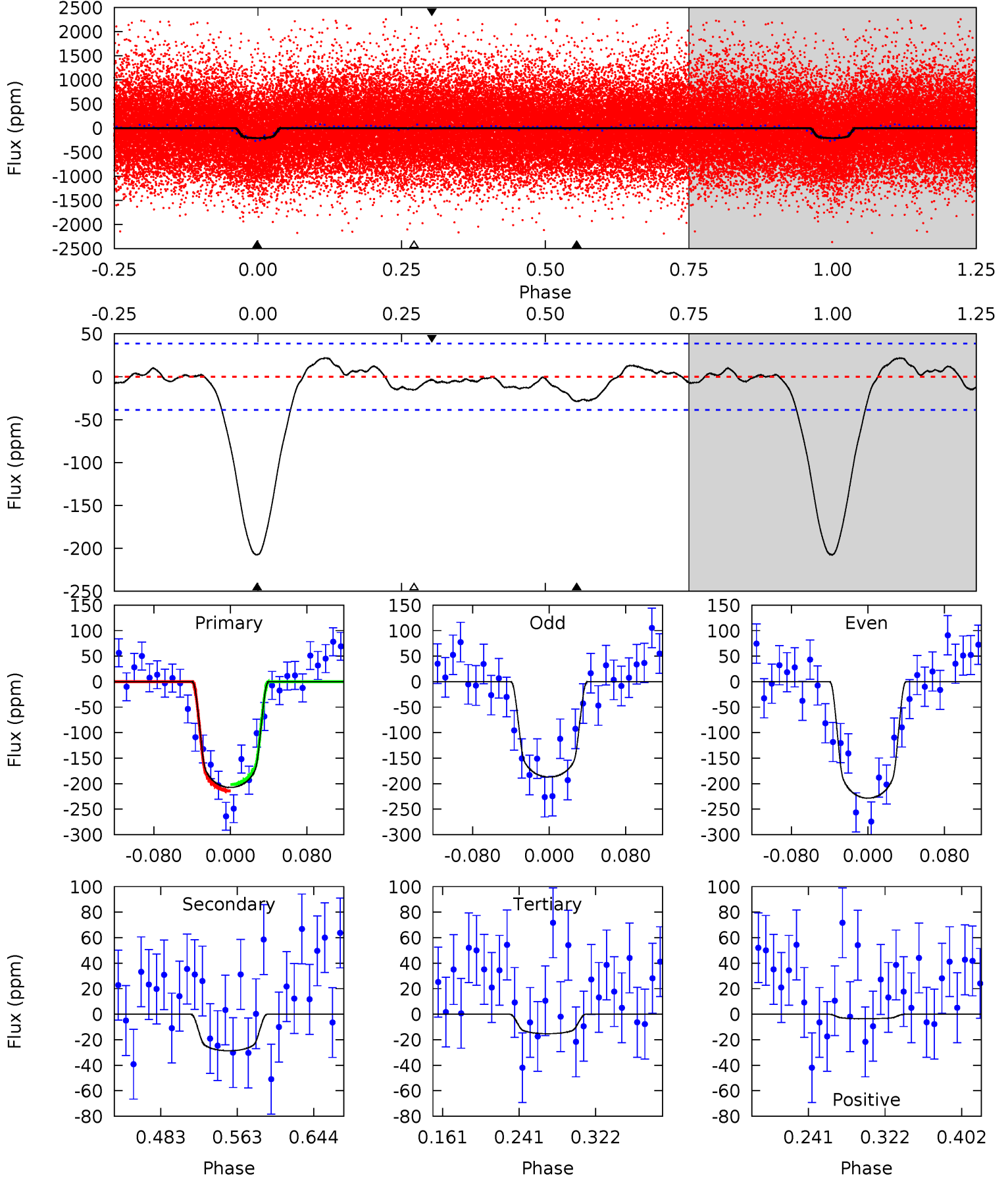
TCE 003328052-01 P= 2.115527 Days $T_0=131.990059$ (BKJD)



DV Model-Shift Uniqueness Test

003328052-01, P = 2.115518 Days, E = 131.999218 Days

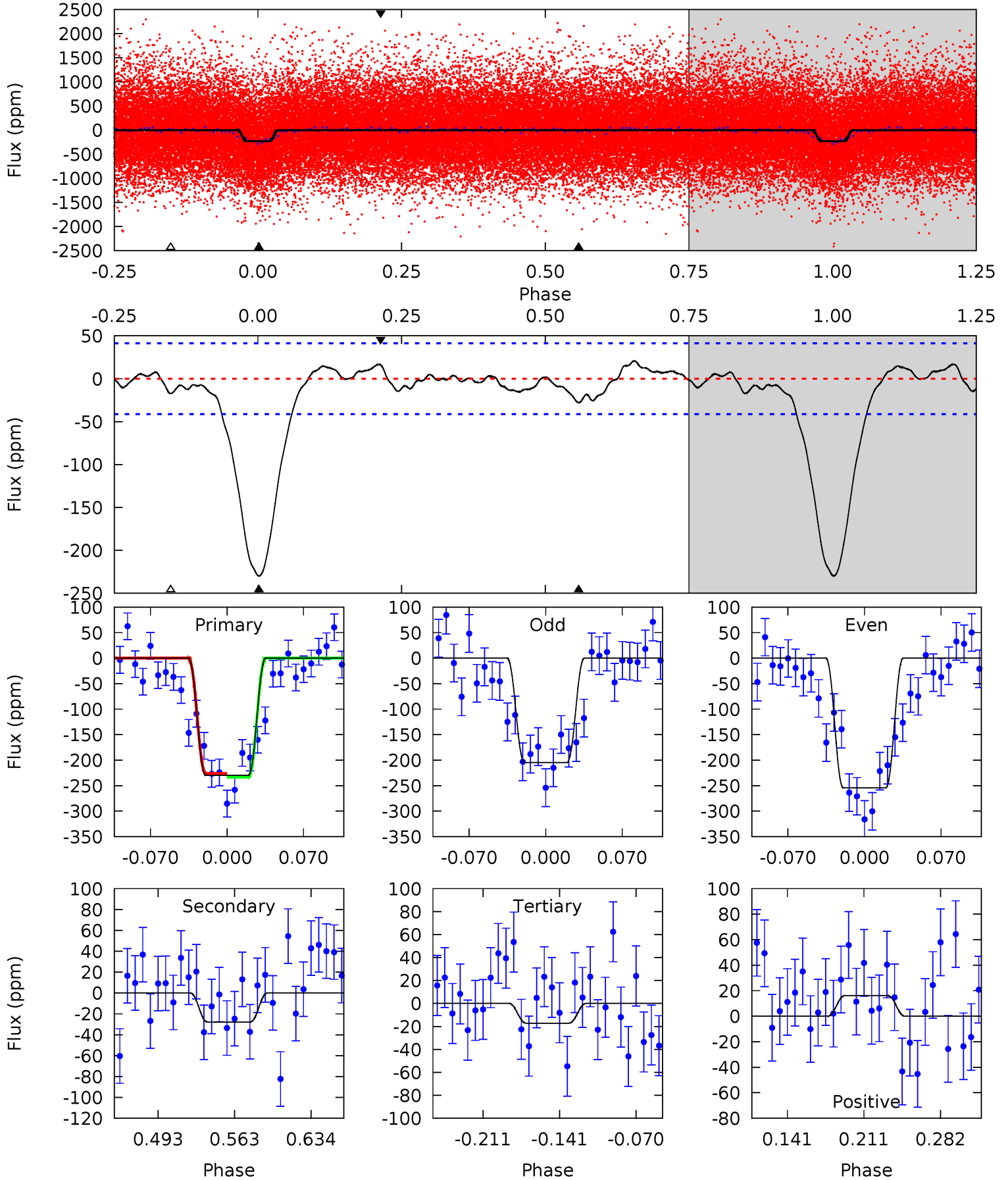
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	3.42	1.82	-0.42	4.61	1.75	1.05	22.9	25.1	1.60	3.83	2.47	0.84	0.09	0.75



Alt Model-Shift Uniqueness Test

003328052-01, P = 2.115527 Days, E = 131.990059 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	3.12	1.93	1.81	4.64	1.81	1.06	23.8	24.0	1.19	1.30	2.78	0.99	0.08	0.41



Stellar Parameters For KIC 003328052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6208^{+194}_{-259}	$4.454^{+0.054}_{-0.216}$	$-0.120^{+0.250}_{-0.300}$	$1.024^{+0.332}_{-0.111}$	$1.086^{+0.155}_{-0.141}$	$1.423^{+0.415}_{-0.767}$
	+3%/-4%	+1%/-5%	+208%/-250%	+32%/-11%	+14%/-13%	+29%/-54%
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 003328052-01 / KOI 3011.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29 ± 8	$1.87^{+0.44}_{-0.39}$	2166^{+175}_{-123}	3834^{+417}_{-321}	$4.645^{+3.267}_{-2.016}$
Alt.	-28 ± 9	$1.93^{+0.49}_{-0.44}$	2175^{+164}_{-128}	3811^{+402}_{-362}	$4.384^{+3.309}_{-1.939}$

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

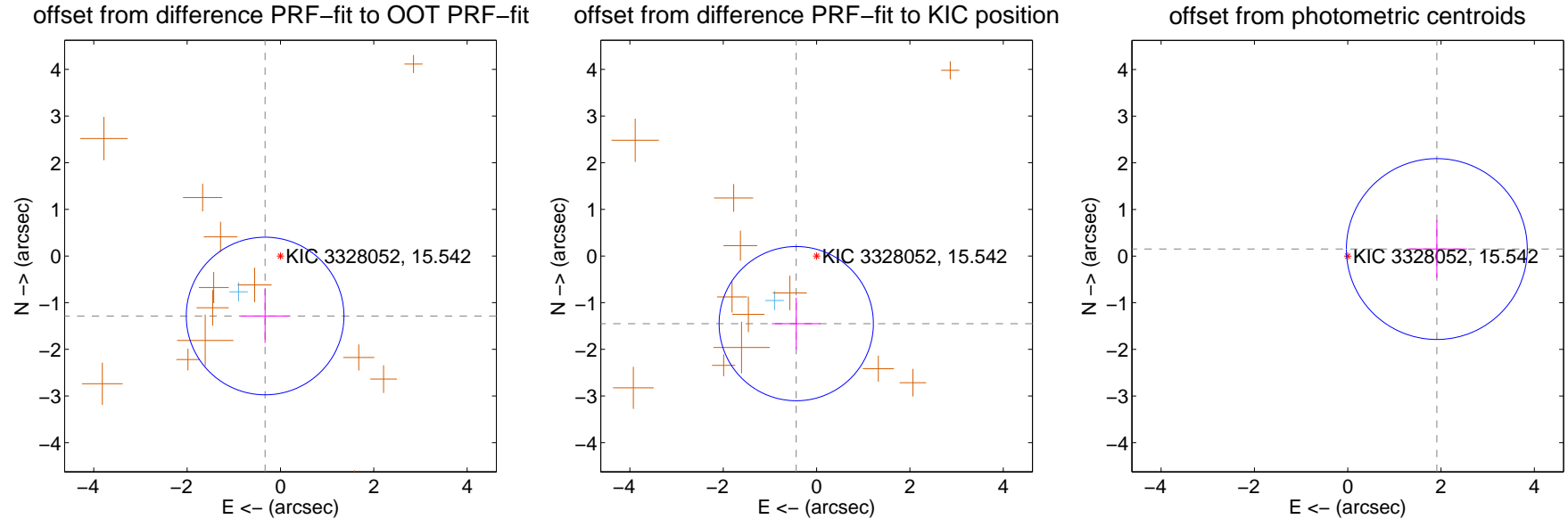
DV Centroid Data

Supplemental centroid analysis for 003328052-01. Kepler magnitude: 15.54. Transit SNR 20.53

There are 1 quarters with good PRF difference image offsets

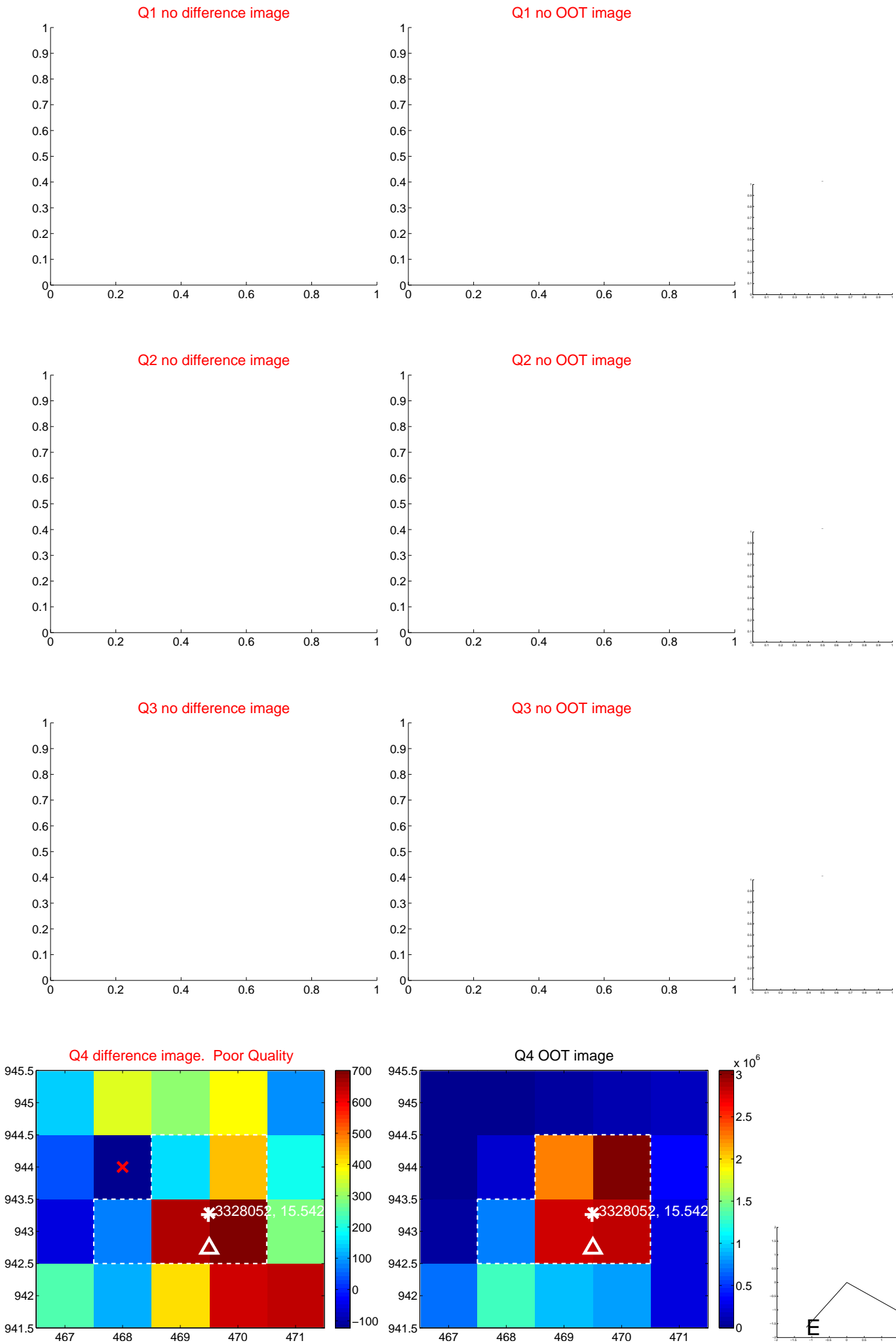
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.327 ± 0.563	2.36	0.329 ± 0.524	-1.285 ± 0.578
PRF-fit source offset from KIC position	1.513 ± 0.551	2.75	0.436 ± 0.519	-1.449 ± 0.554
photometric centroid source offset	1.92 ± 0.65	2.96	-1.91 ± 0.65	0.15 ± 0.61

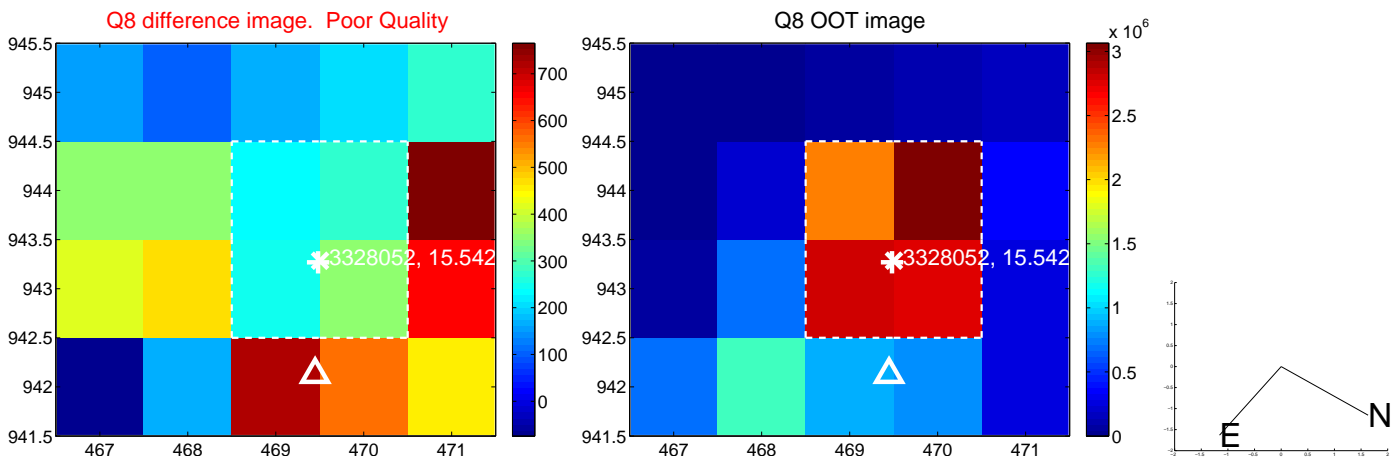
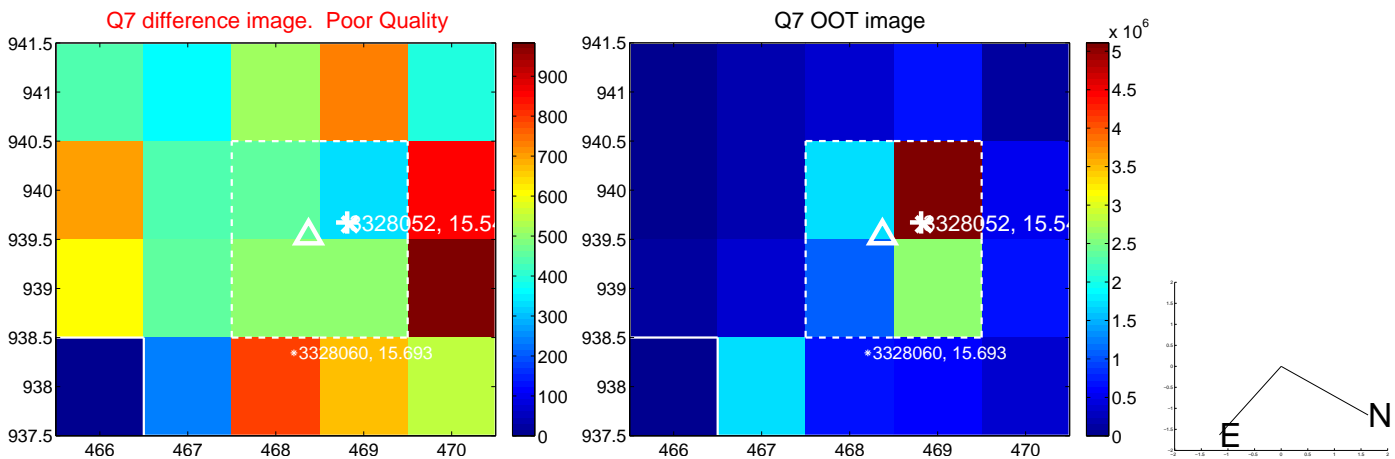
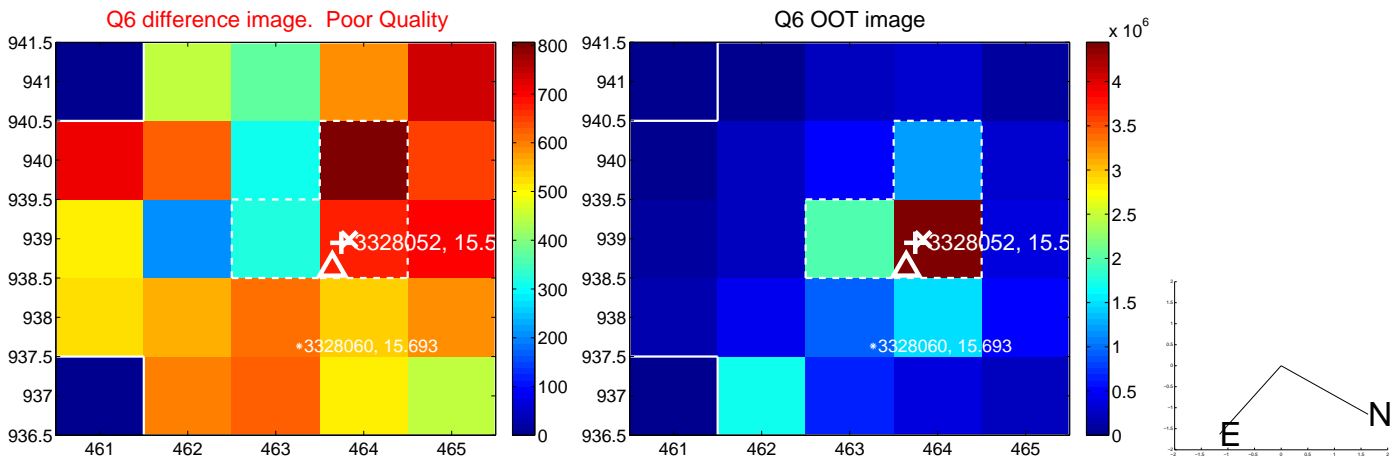
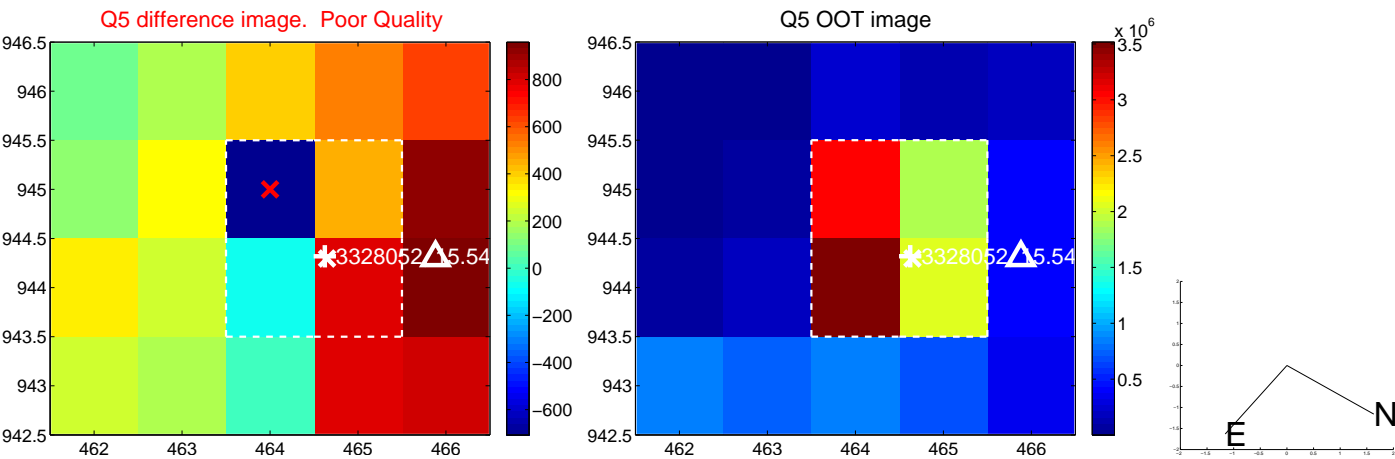


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

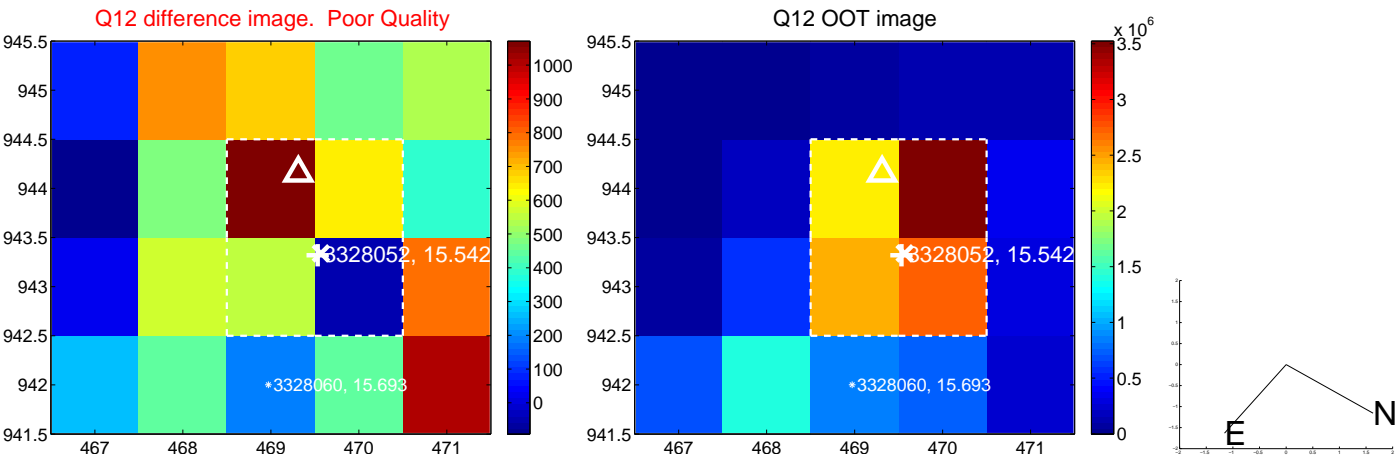
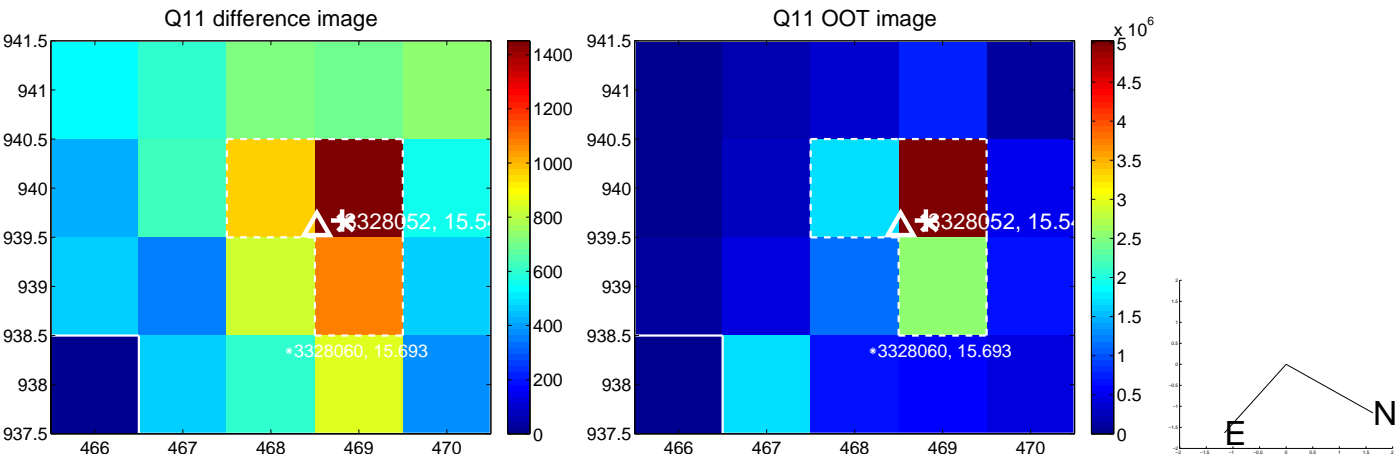
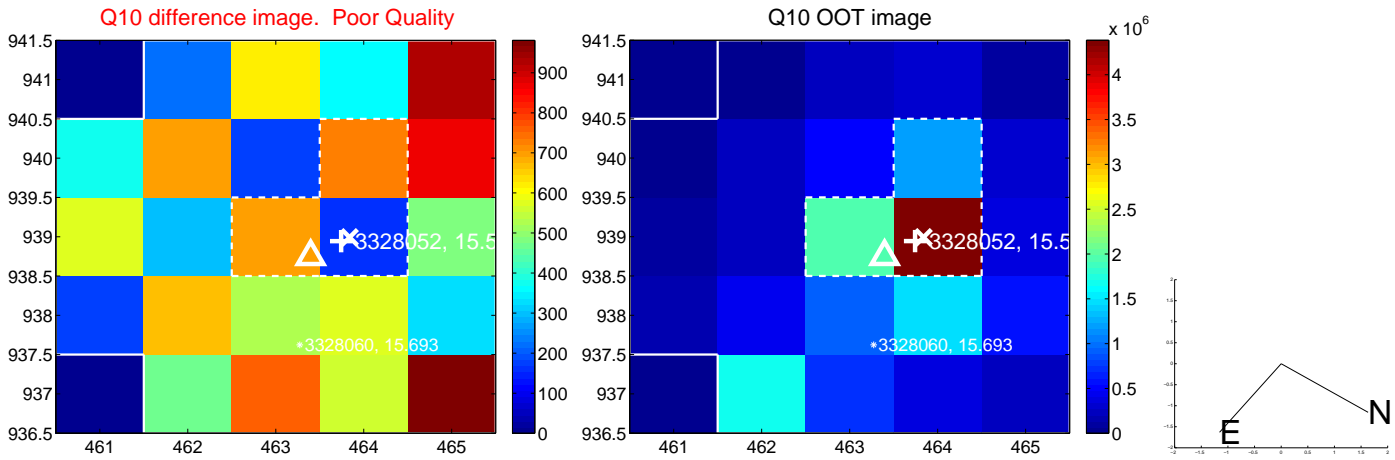
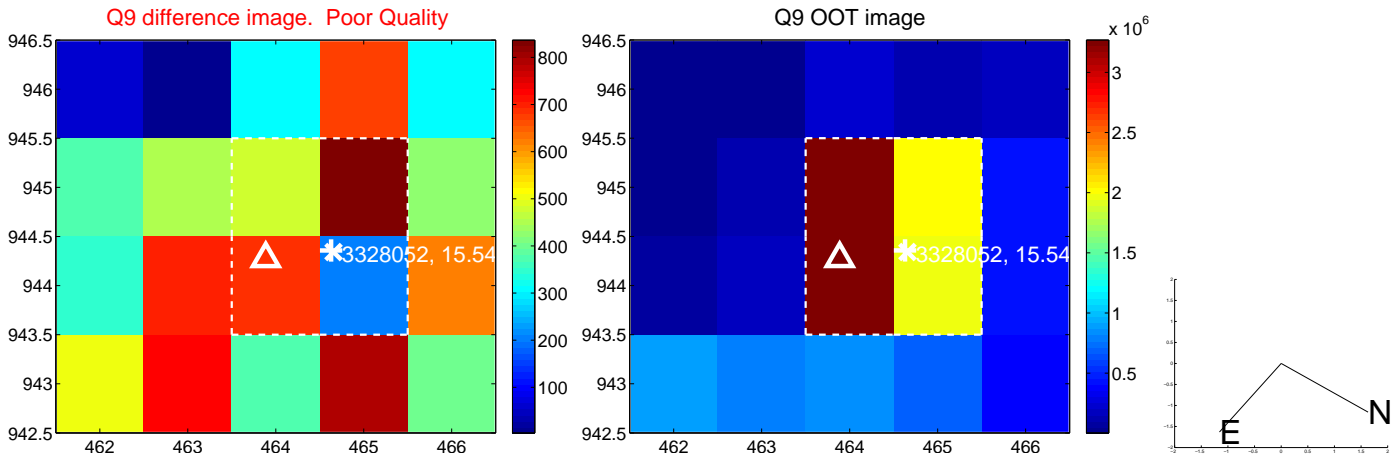
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



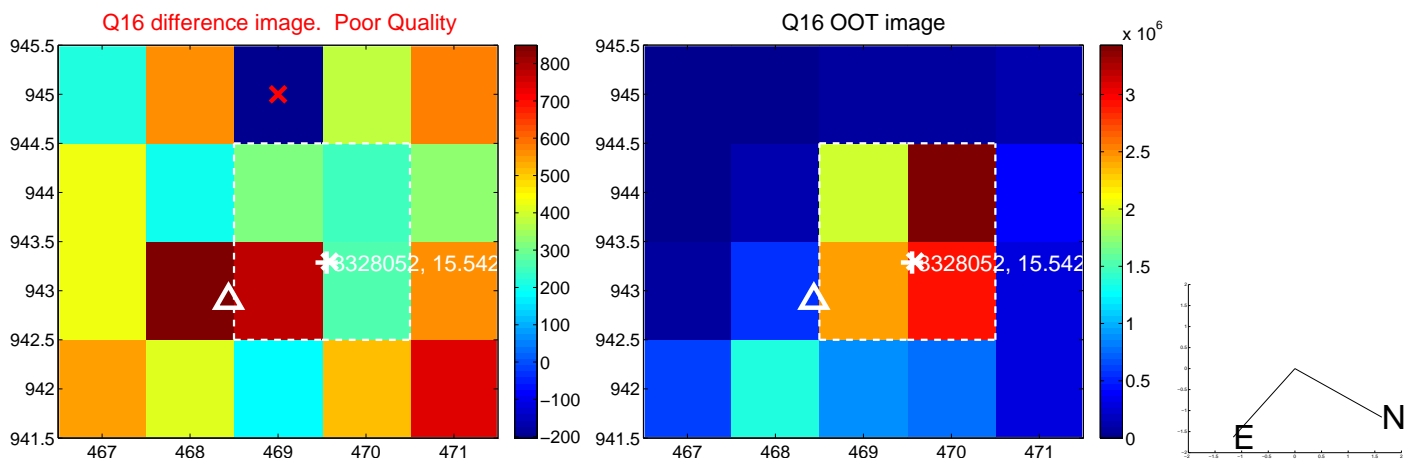
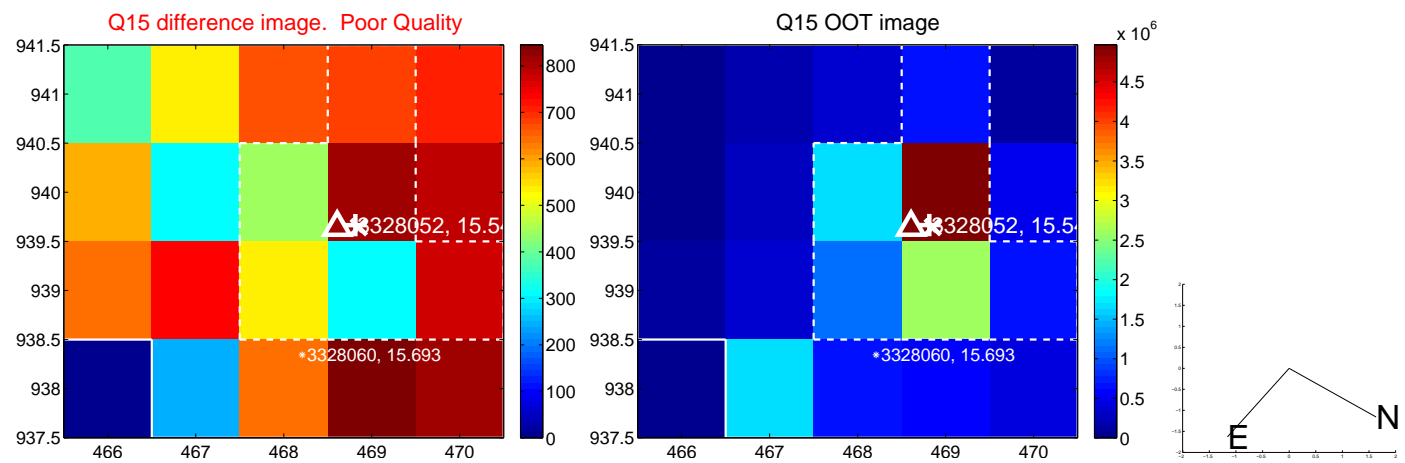
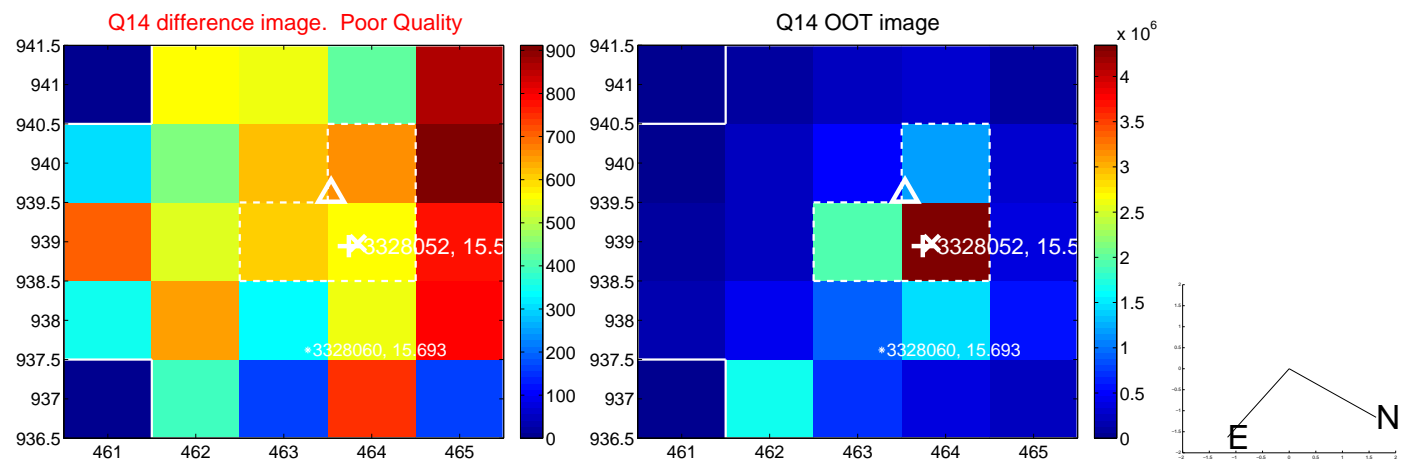
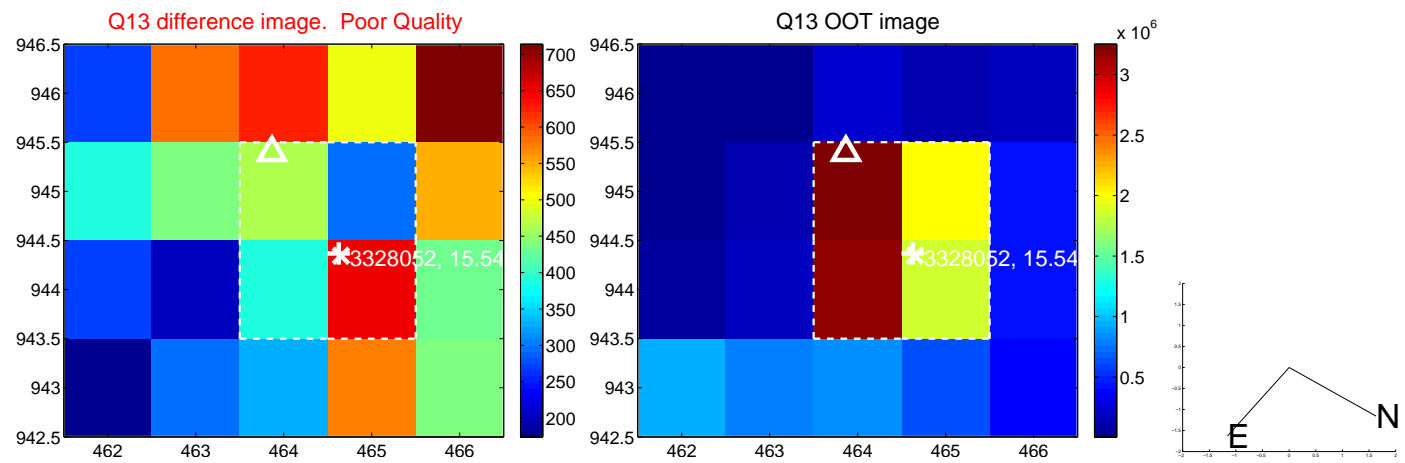
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



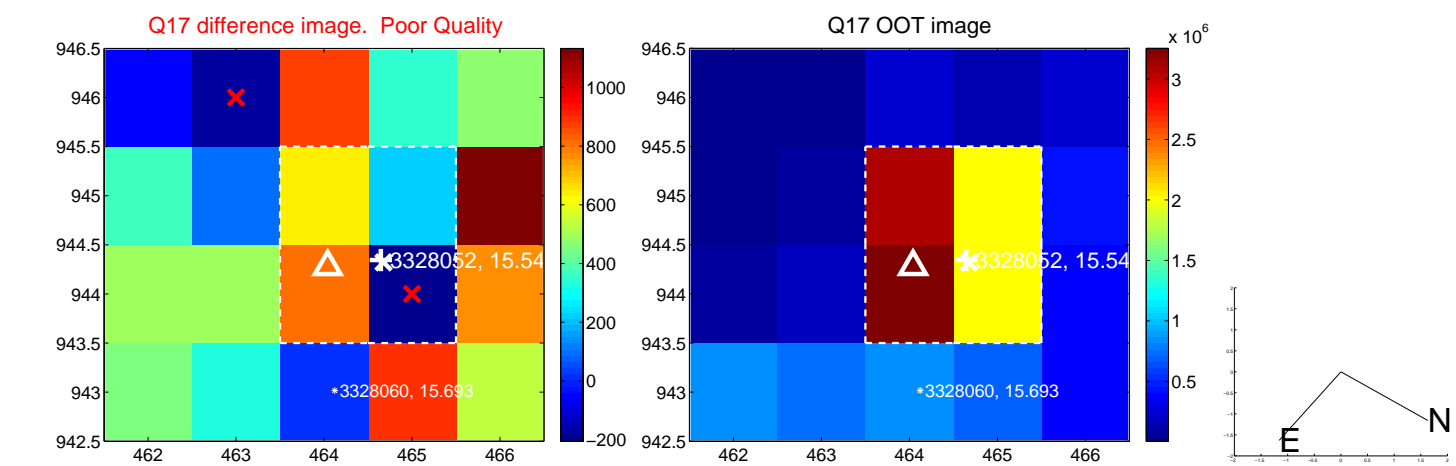
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



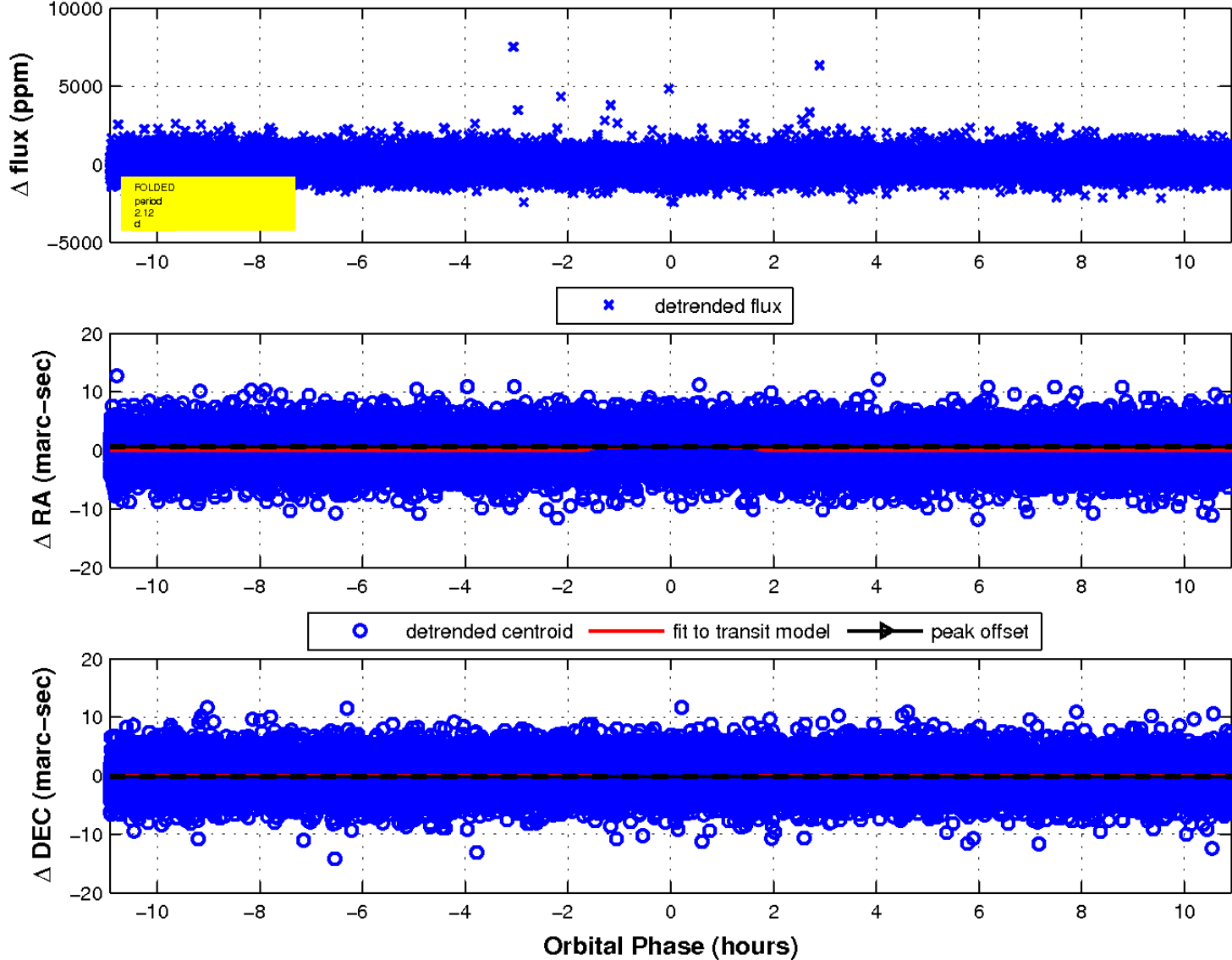
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

