

KIC 008432962

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})
008432962-01	OBS	No	0.731564	131.707414	144.3	1.430	7.2	7.1	1.63	6985	2.28	19900.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008432962-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—HALO_GHOST

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

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

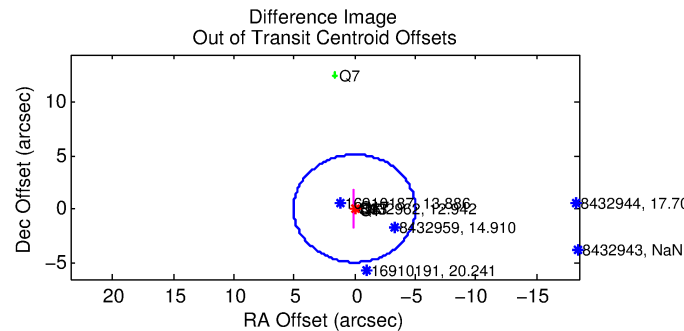
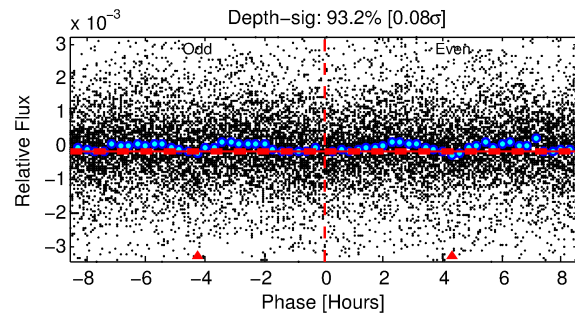
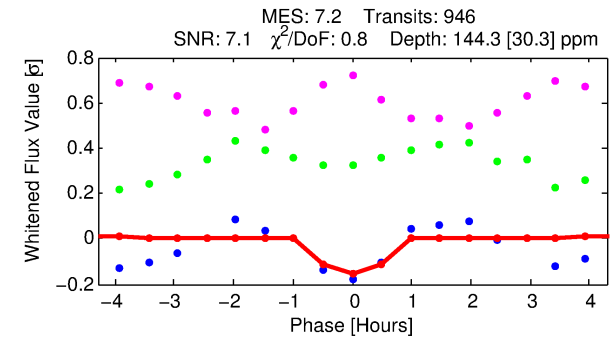
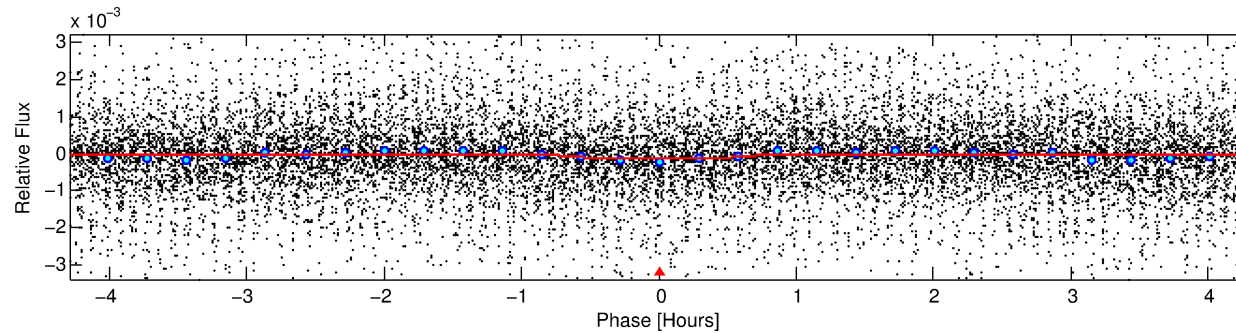
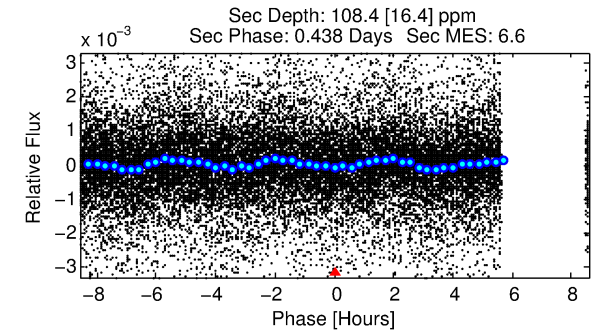
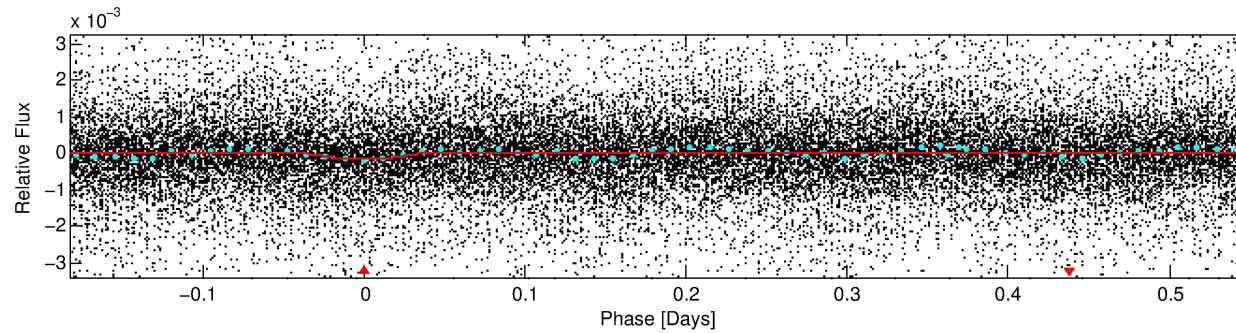
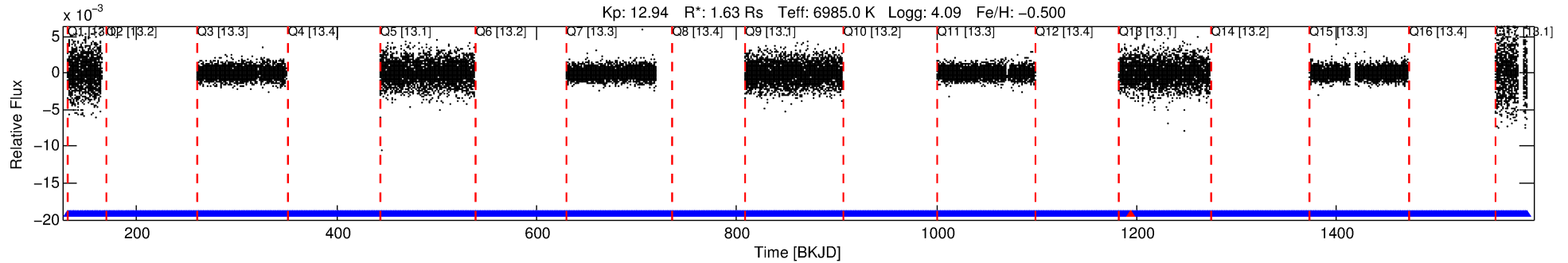
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008432962-01

No Significant Match Found

DV One-Page Summary

KIC: 8432962 Candidate: 1 of 1 Period: 0.732 d



DV Fit Results:

Period = 0.73156 [0.00002] d
Epoch = 131.7074 [0.0028] BKJD
Rp/R* = 0.0128 [0.0086]
a/R* = 2.04 [6.37]
b = 0.90 [0.88]
Seff = 19900.29 [8966.27]
Teq = 3029 [341] K
Rp = 2.28 [1.67] Re
a = 0.0169 [0.0044] AU
Ag = 3.26 [4.62] [0.49σ]
Teffp = 6292 [2150] K [1.50σ]

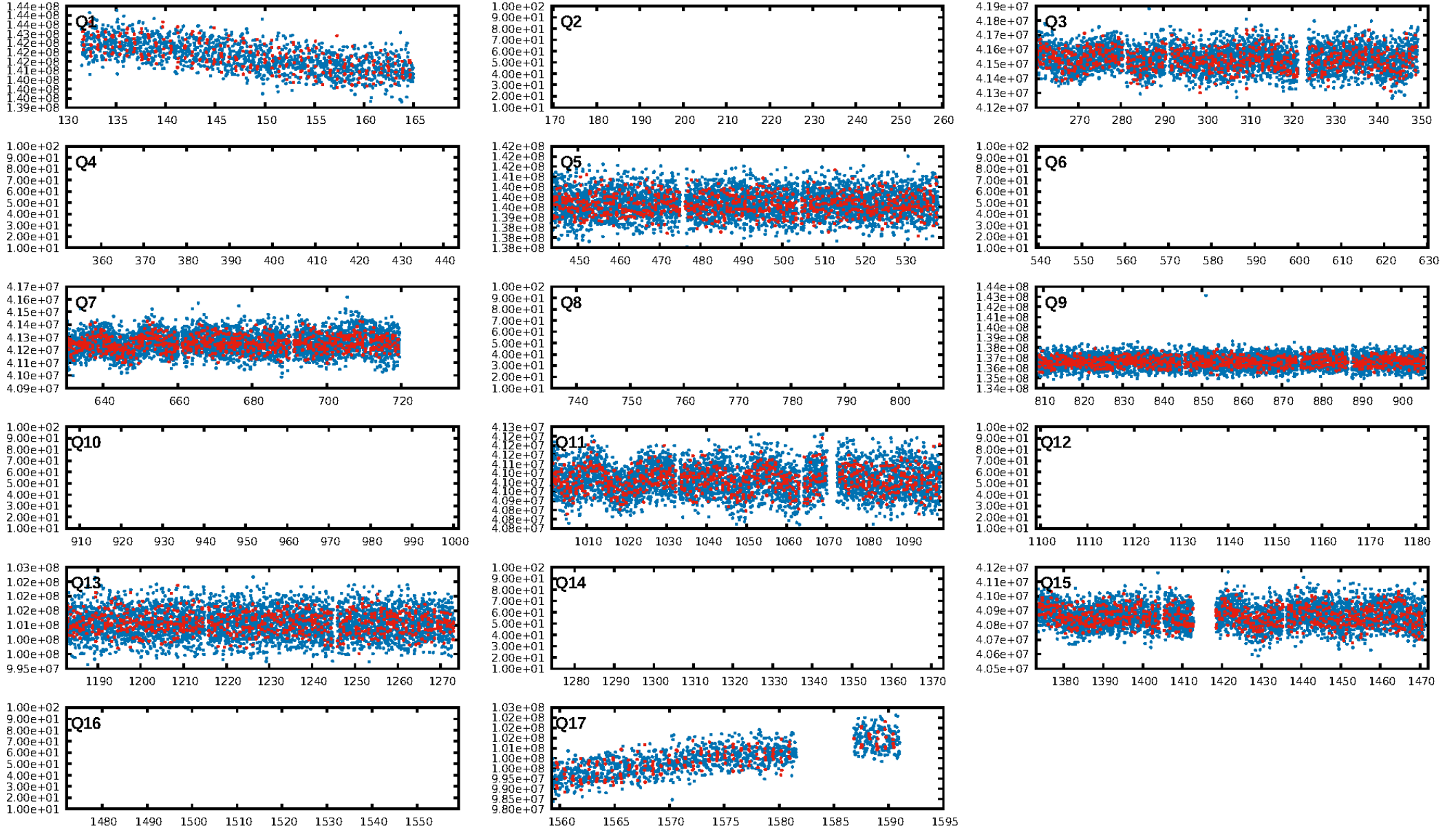
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 4.85e-14
RollingBand-fgt: 1.00 [864/865]
GhostDiagnostic-chr: -0.2216
Centroid-sig: 34.2%
Centroid-so: 0.728 arcsec [1.22σ]
OotOffset-rm: 0.096 arcsec [0.06σ]
KicOffset-rm: 1.351 arcsec [9.91σ]
OotOffset-st: 0.1/0/5 [6]
KicOffset-st: 0.1/0/5 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [9/9]

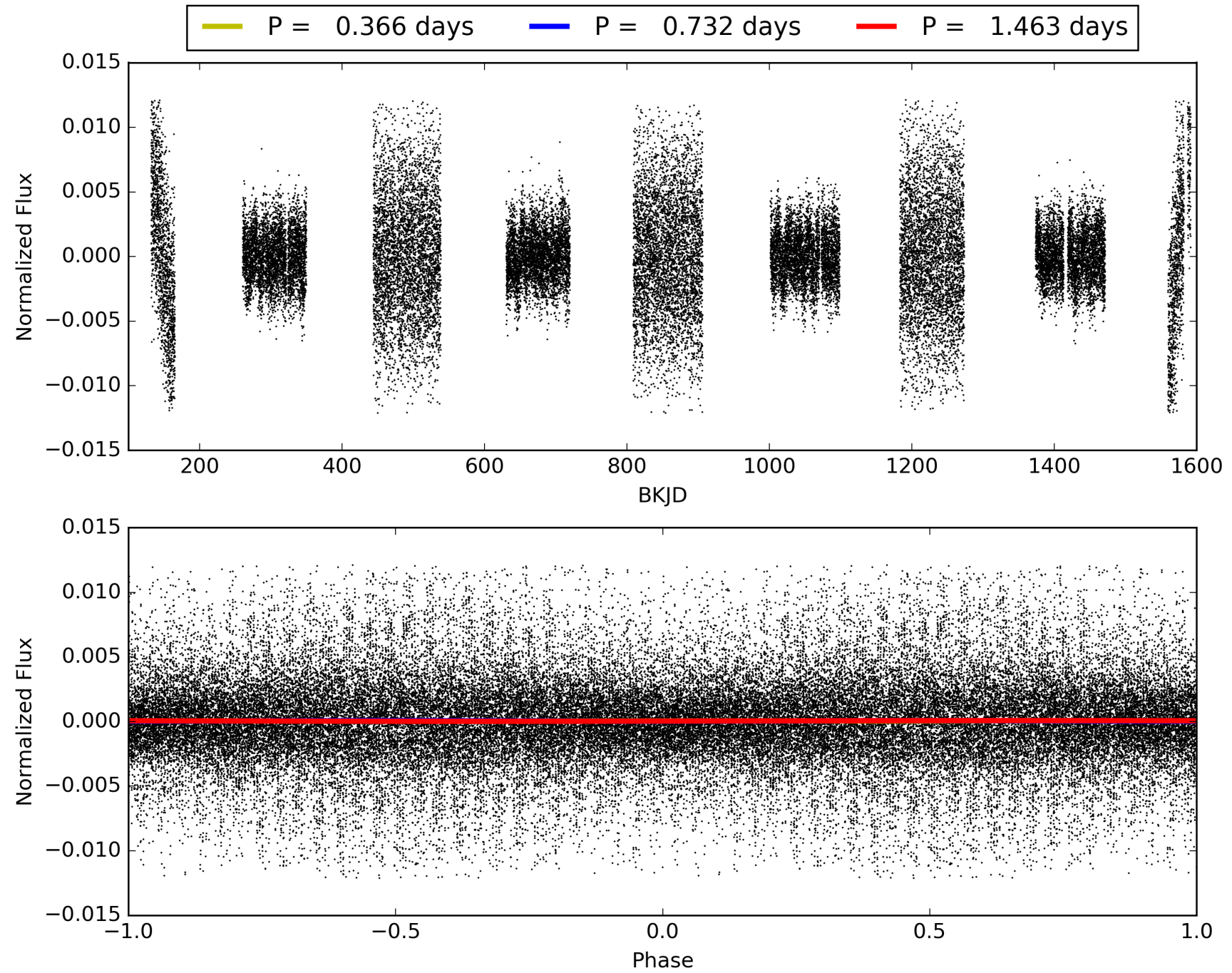
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:33:42 Z

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

TCE 008432962-01, PDC Light Curves

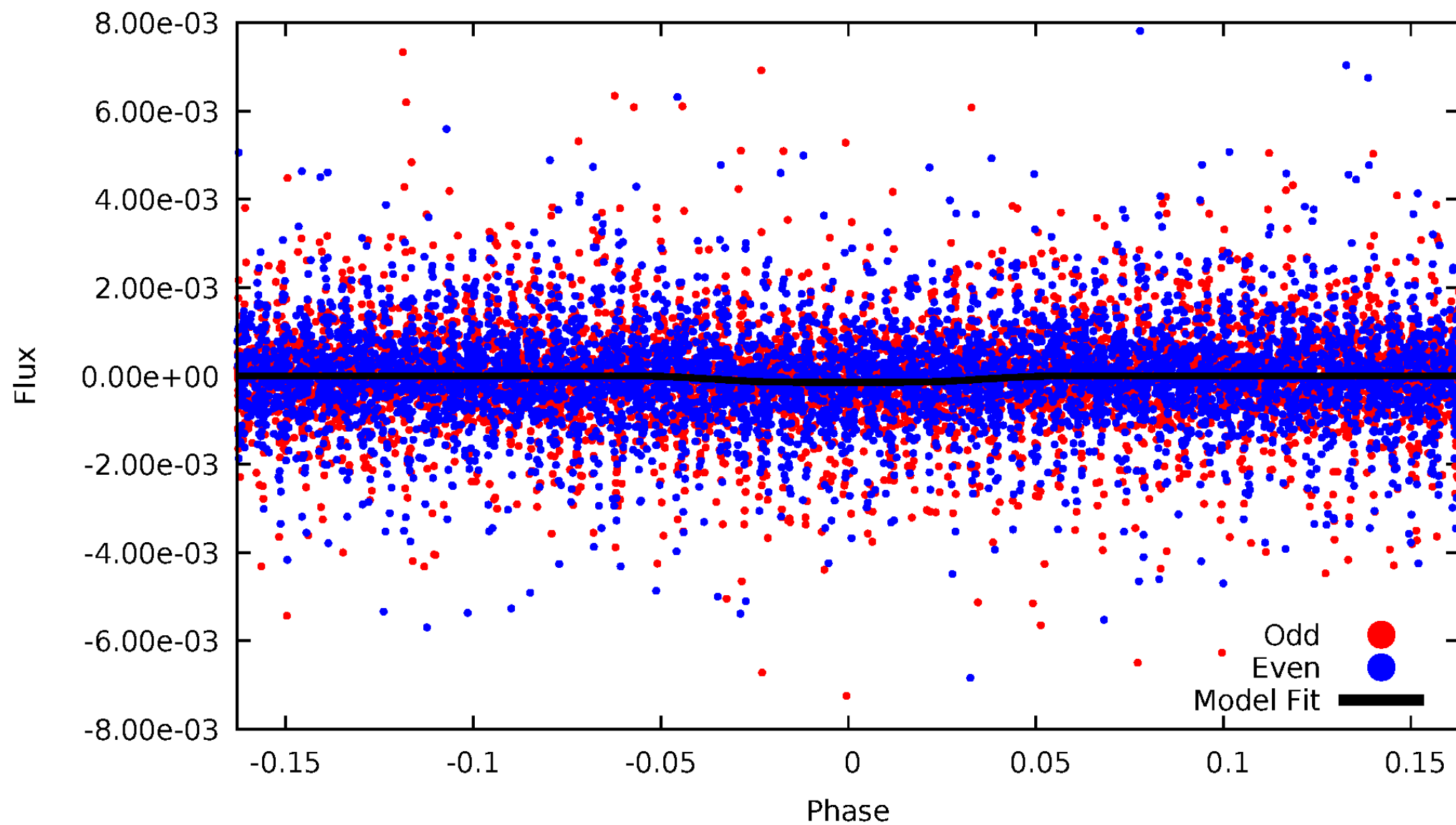


TCE 008432962-01



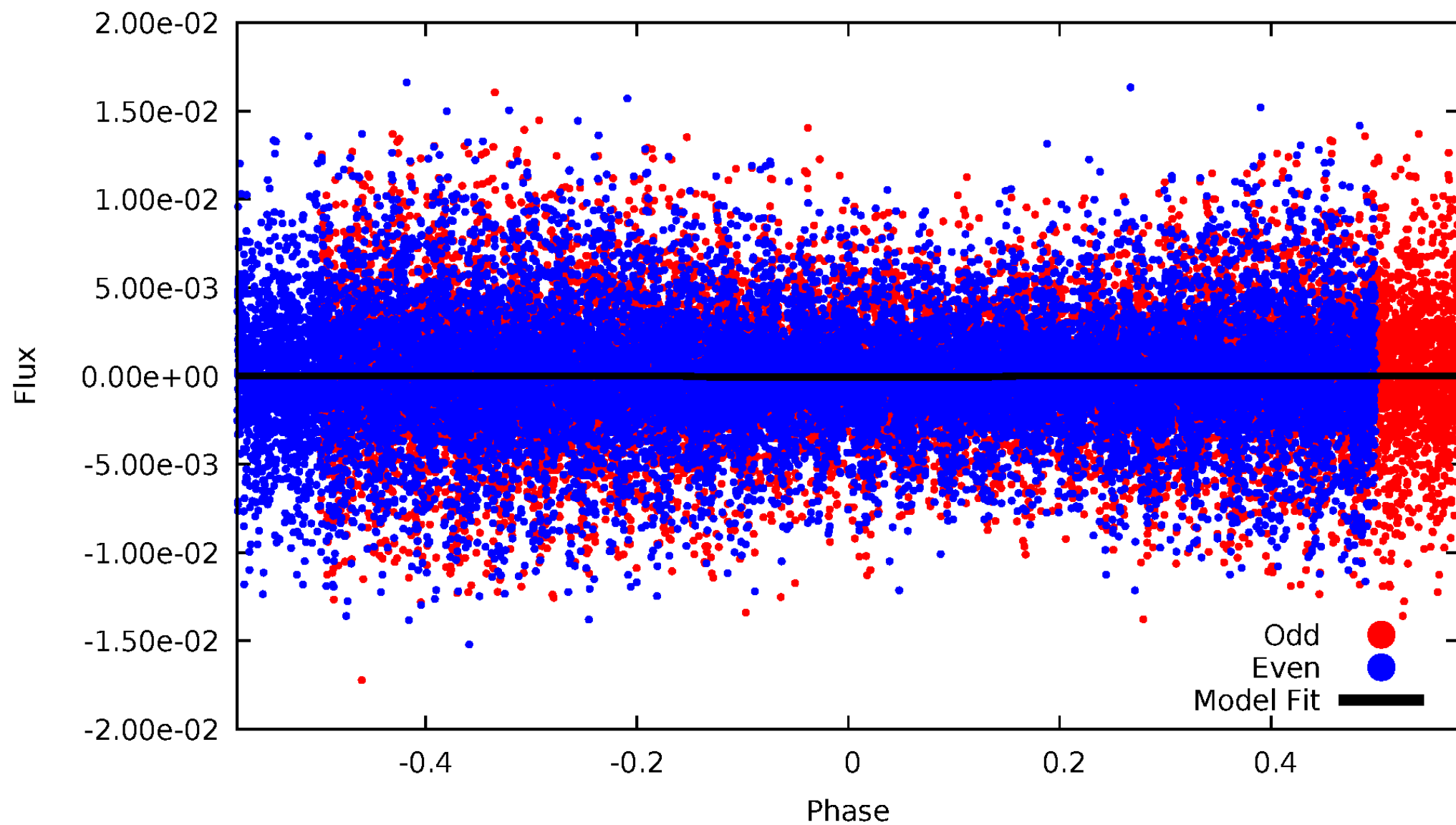
DV Odd/Even

TCE 008432962-01

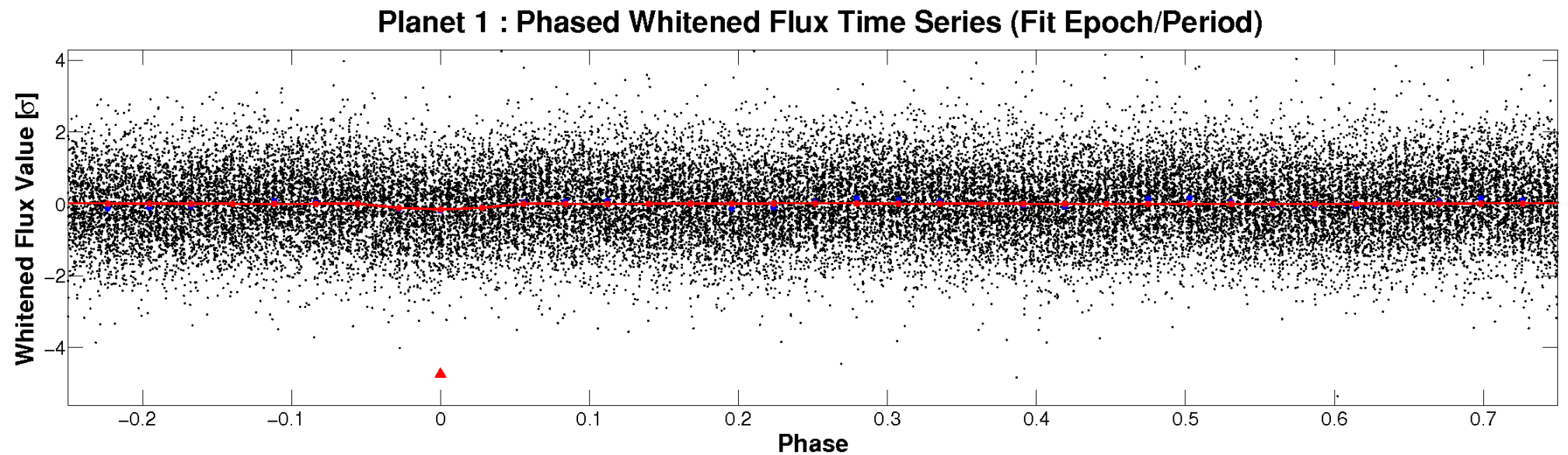
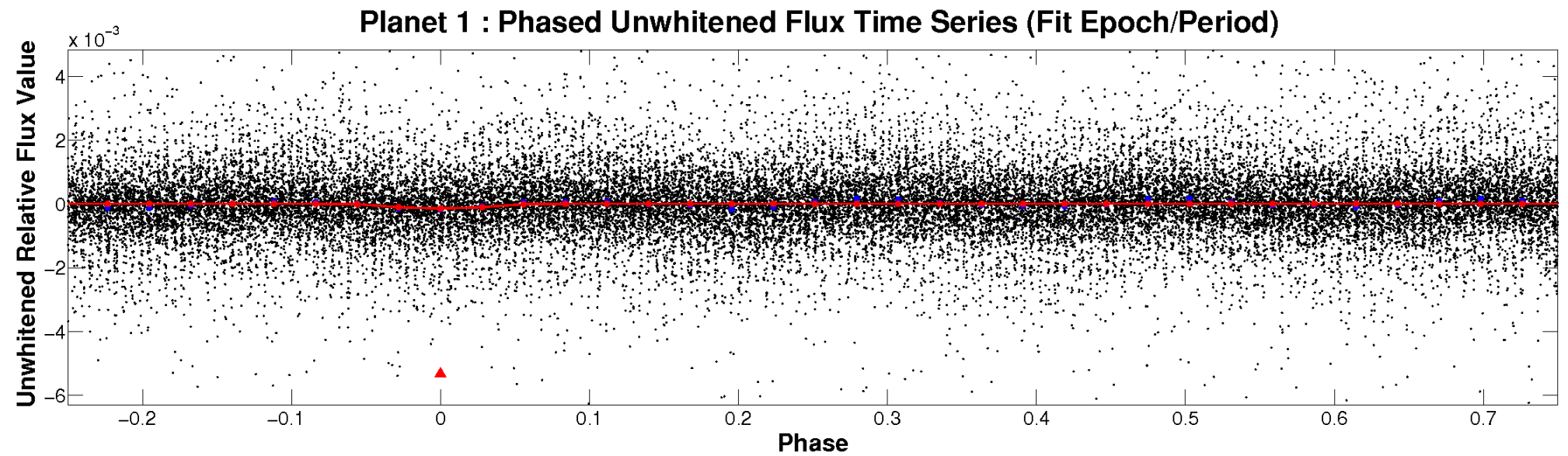


ALT Odd/Even

TCE 008432962-01

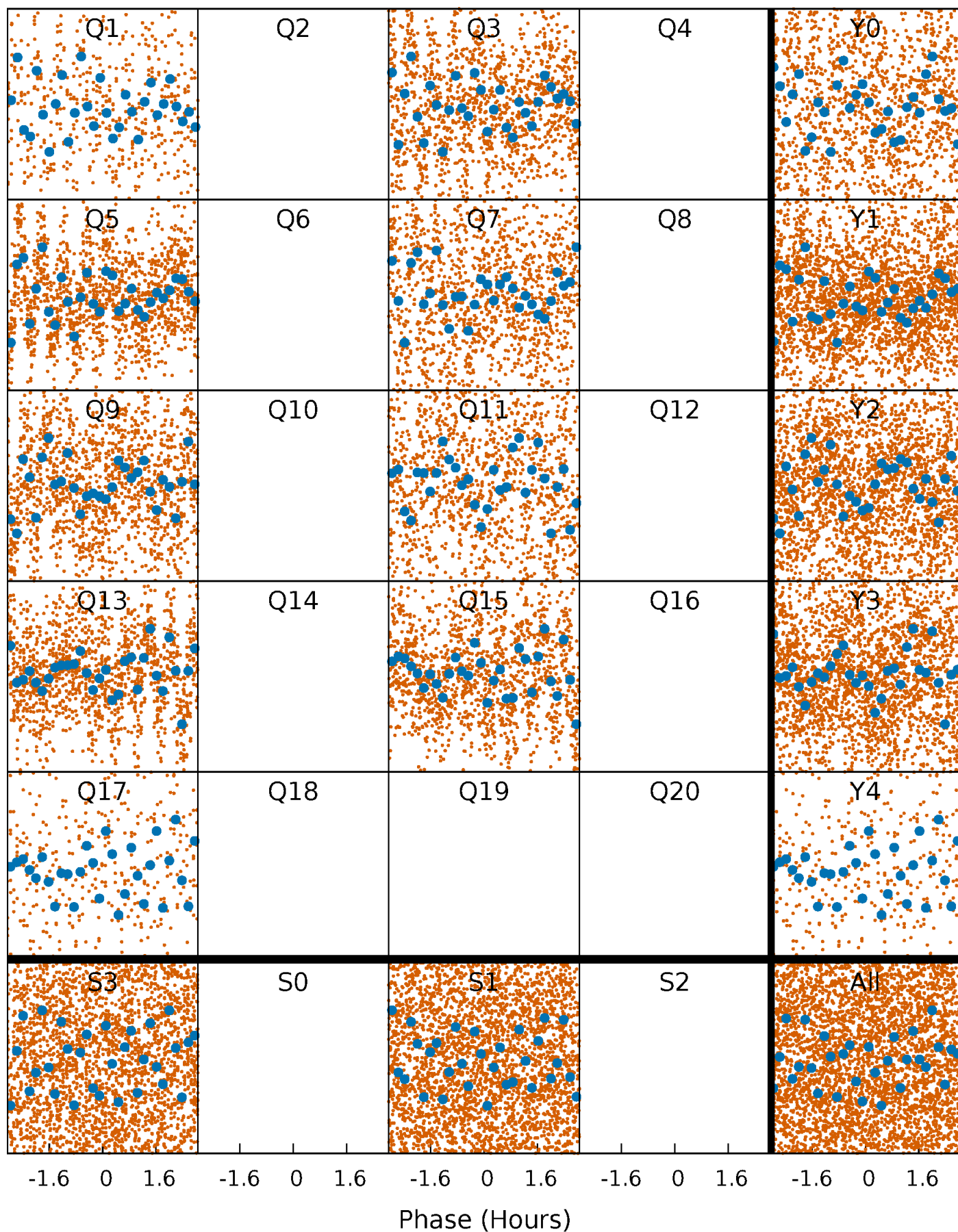


Non-Whitened Vs. Whitened Light Curve



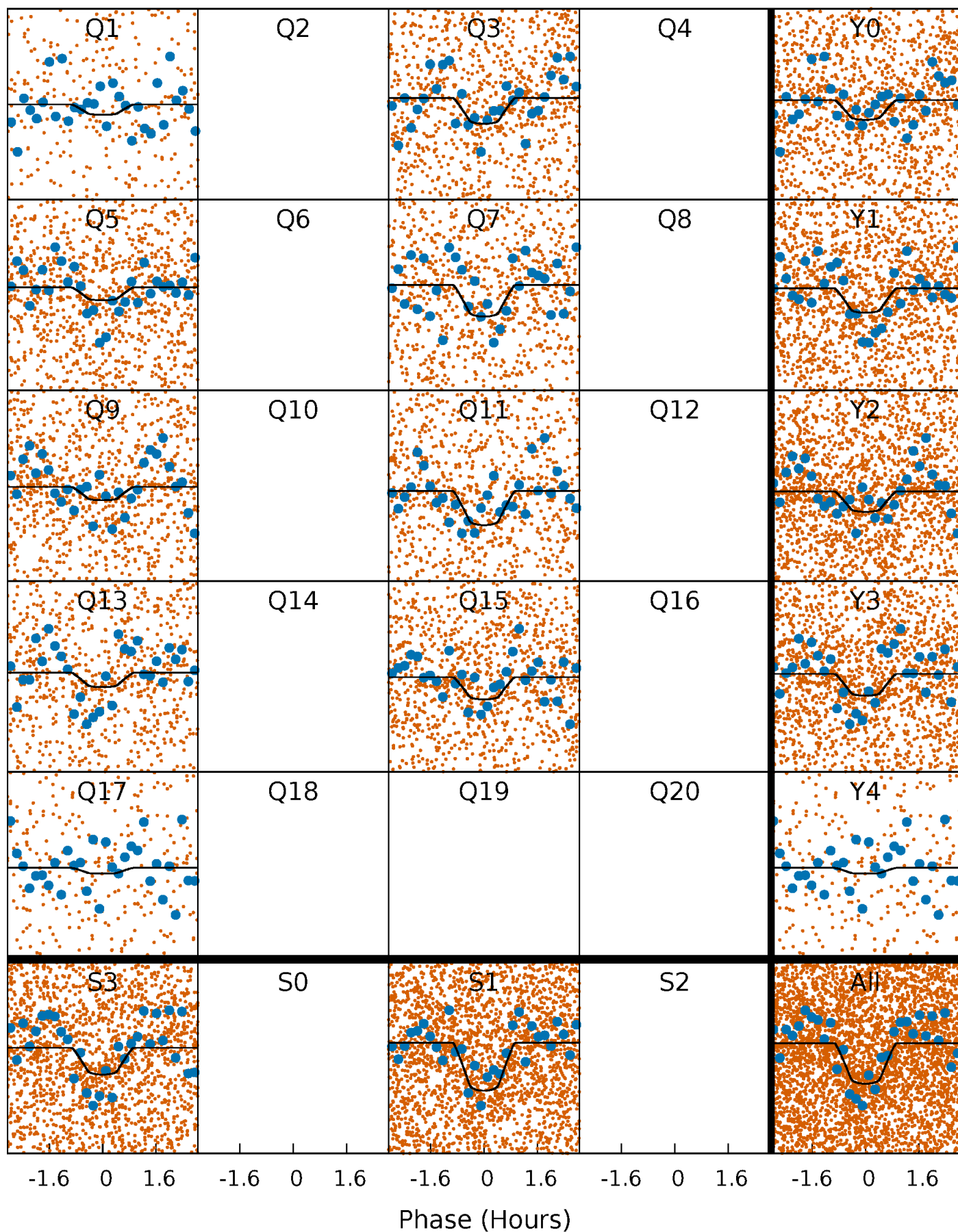
PDC Quarter-Phased Transit Curves

TCE 008432962-01 P= 0.731564 Days $T_0=131.707414$ (BKJD)



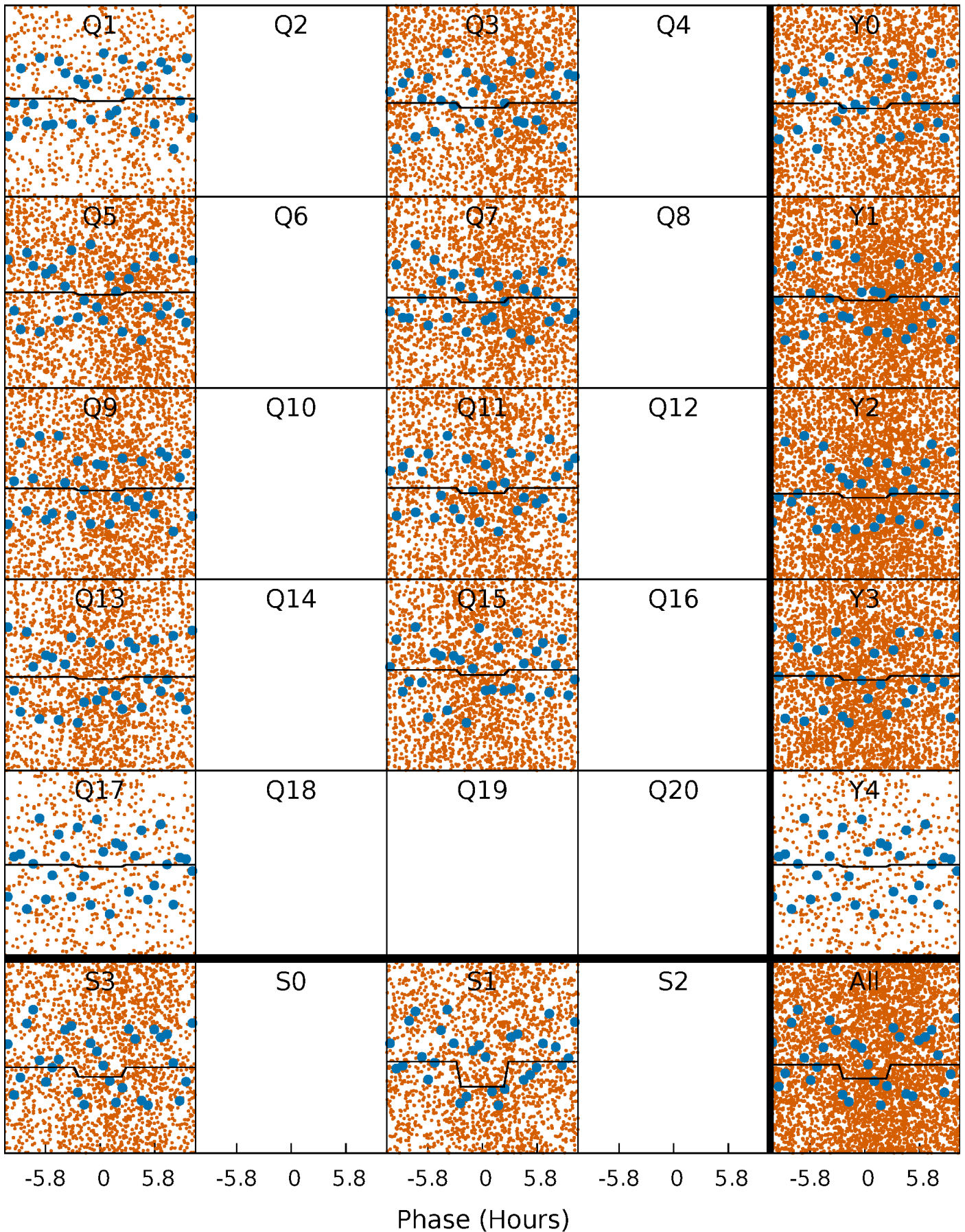
DV Quarter-Phased Transit Curves

TCE 008432962-01 P= 0.731564 Days $T_0=131.707414$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

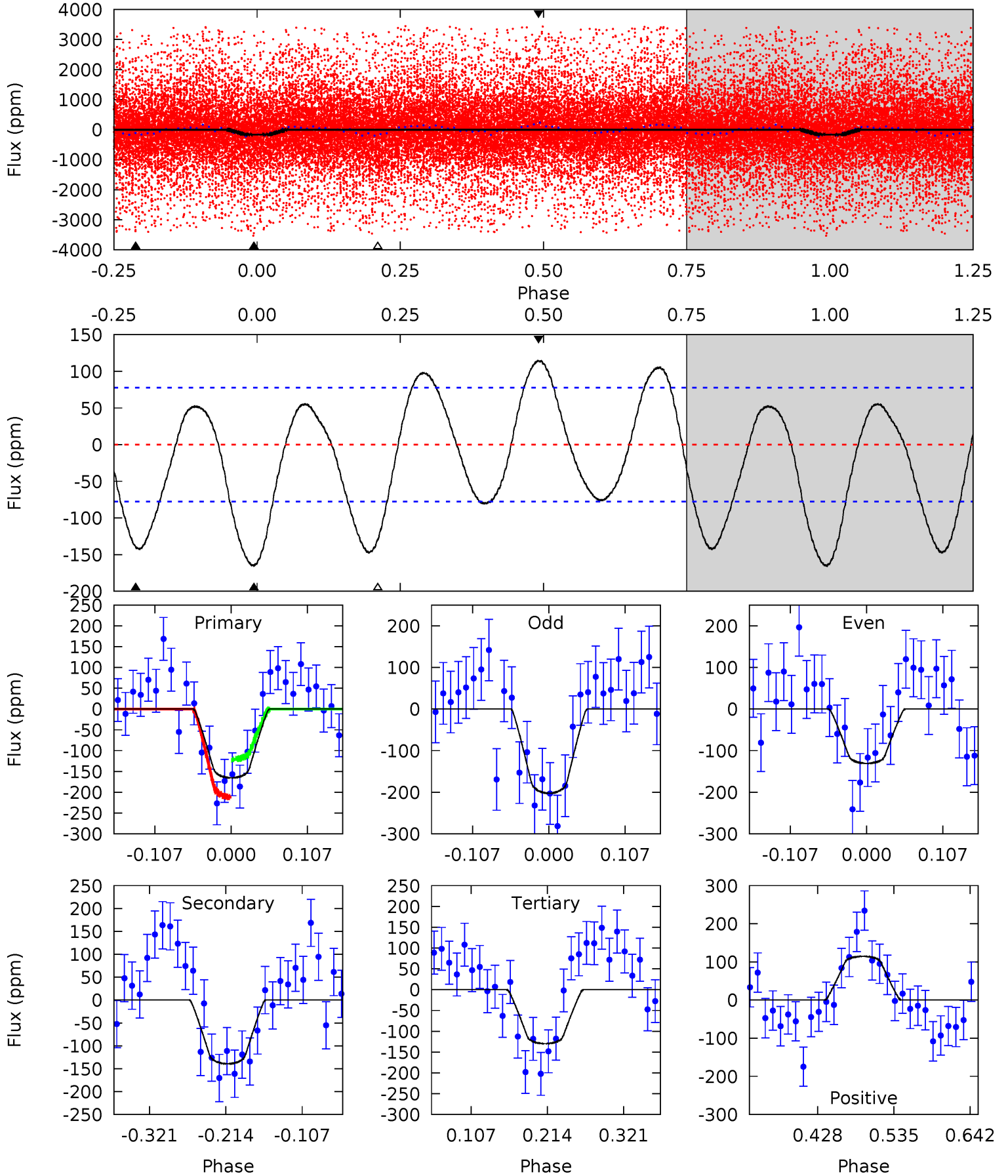
TCE 008432962-01 P= 0.731531 Days $T_0=131.675775$ (BKJD)



DV Model-Shift Uniqueness Test

008432962-01, P = 0.731564 Days, E = 130.975850 Days

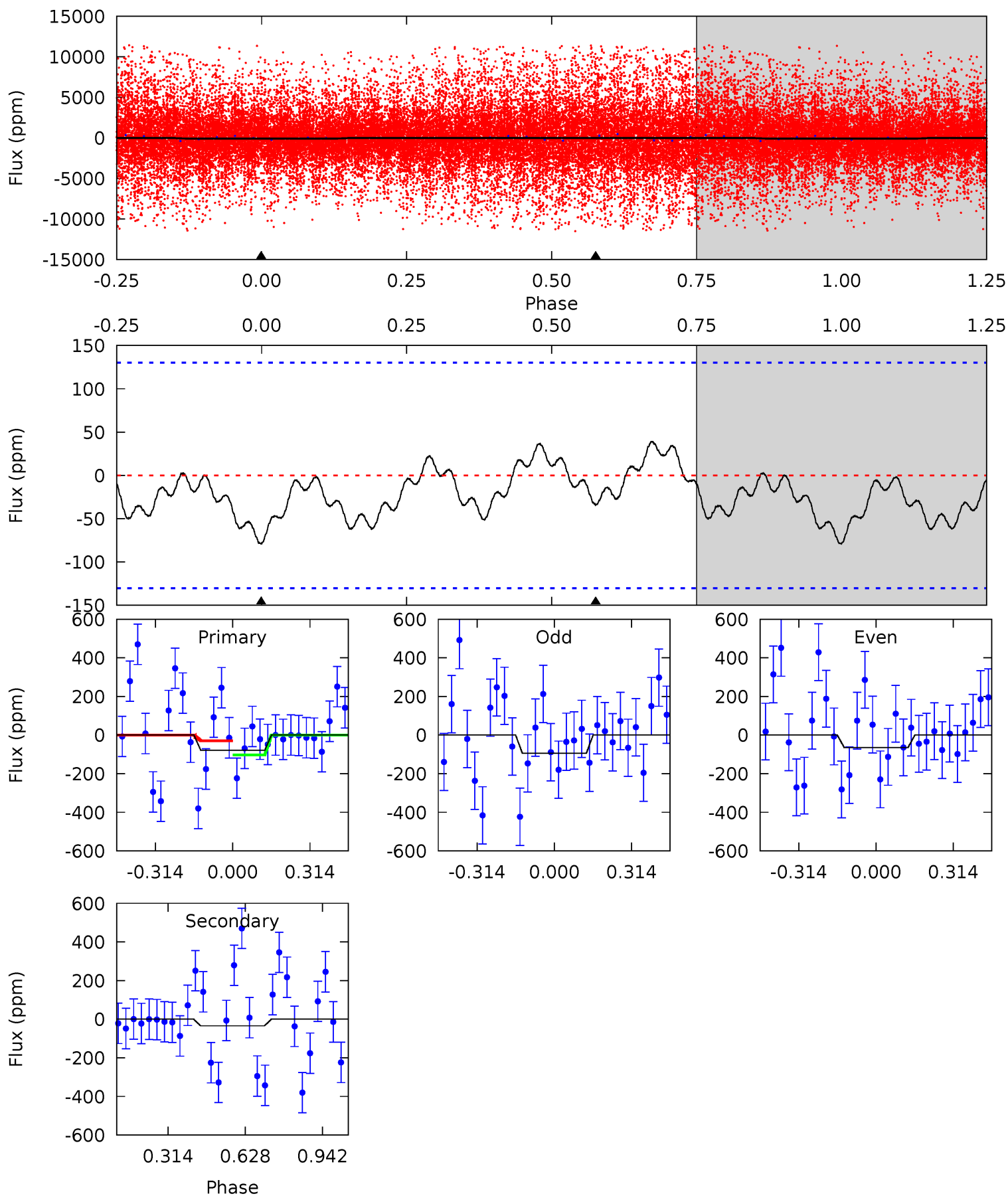
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.70	8.17	7.62	6.72	4.55	1.61	4.28	2.08	2.98	0.55	1.45	2.14	1.26	0.41	2.70



Alt Model-Shift Uniqueness Test

008432962-01, P = 0.731531 Days, E = 130.944244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.62	1.14	0	0	4.32	1.01	0.37	2.62	2.62	1.14	1.14	0.45	1.24	0.33	1.16



Stellar Parameters For KIC 008432962

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6985^{+216}_{-312}	$4.092^{+0.240}_{-0.160}$	$-0.500^{+0.250}_{-0.300}$	$1.631^{+0.460}_{-0.460}$	$1.199^{+0.189}_{-0.154}$	$0.389^{+0.575}_{-0.176}$
	+3%/-4%	+6%/-4%	+50%/-60%	+28%/-28%	+16%/-13%	+148%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008432962-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-139 ± 17	$2.29^{+1.55}_{-1.32}$	4160^{+368}_{-357}	6401^{+4584}_{-1509}	$4.260^{+17.087}_{-2.775}$
Alt.	-34 ± 30	$1.84^{+1.36}_{-1.18}$	4183^{+341}_{-342}	4647^{+3723}_{-8259}	$1.198^{+10.282}_{-1.103}$

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

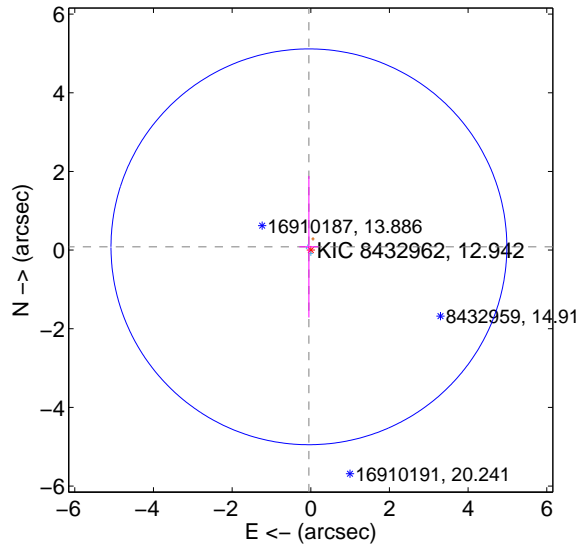
Supplemental centroid analysis for 008432962-01. Kepler magnitude: 12.94. Transit SNR 7.13

There are 3 quarters with good PRF difference image offsets

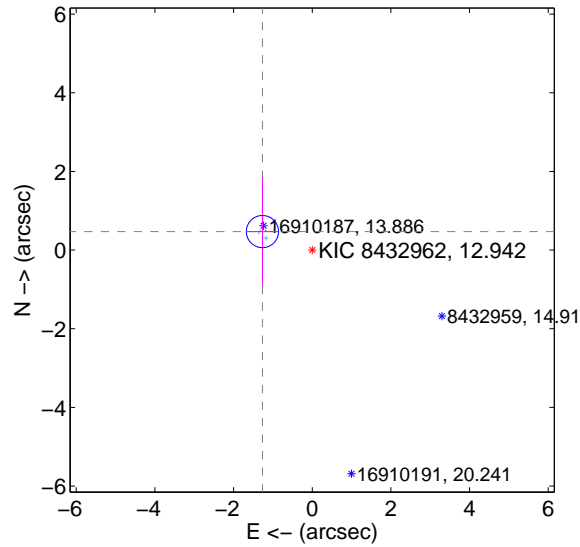
The direct PRF centroid is offset from the target star catalog position by about 1.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 1.677	0.06	0.048 ± 0.242	0.083 ± 1.798
PRF-fit source offset from KIC position	1.351 ± 0.136	9.91	1.266 ± 0.397	0.471 ± 1.381
photometric centroid source offset	0.73 ± 0.60	1.22	0.55 ± 0.66	0.48 ± 0.51

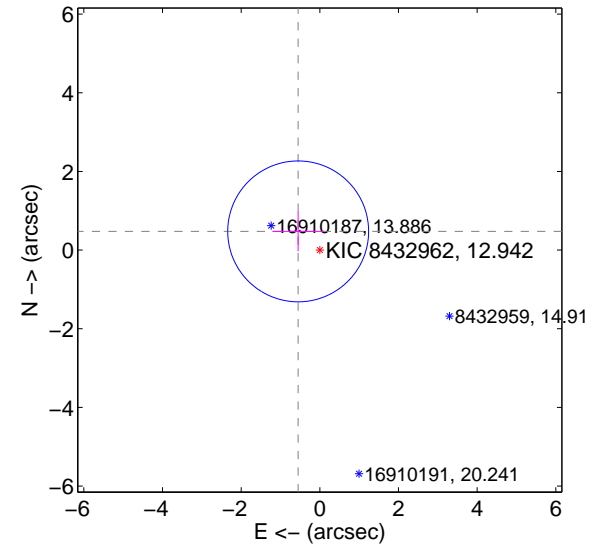
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

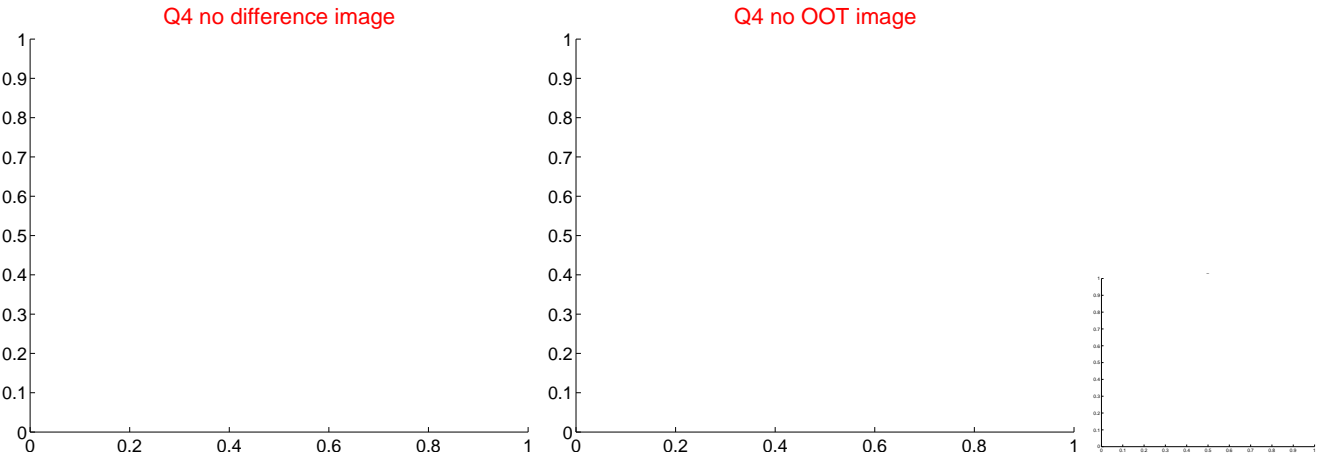
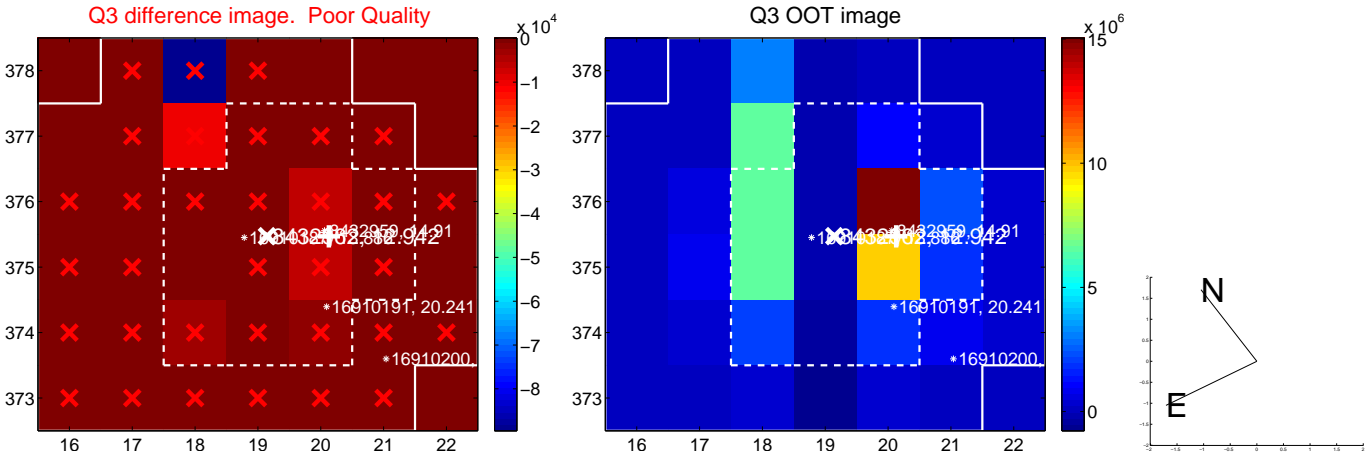
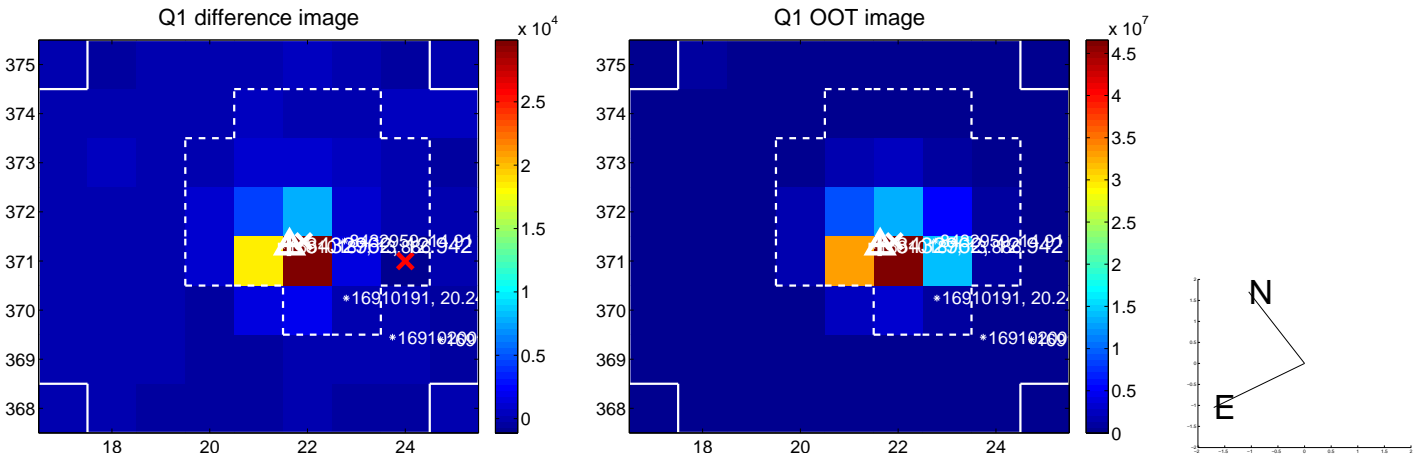


offset from photometric centroids

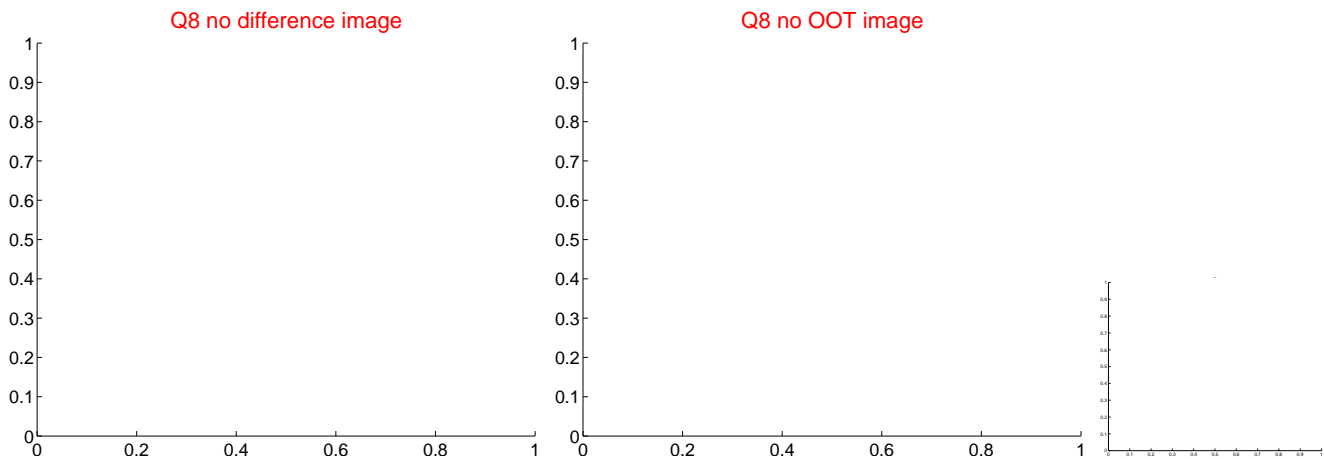
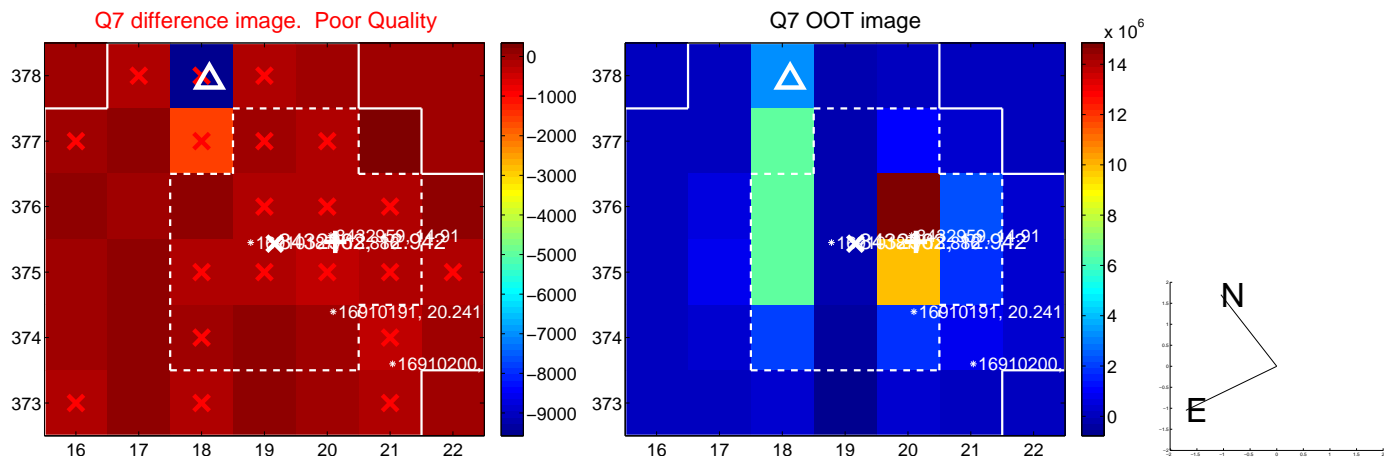
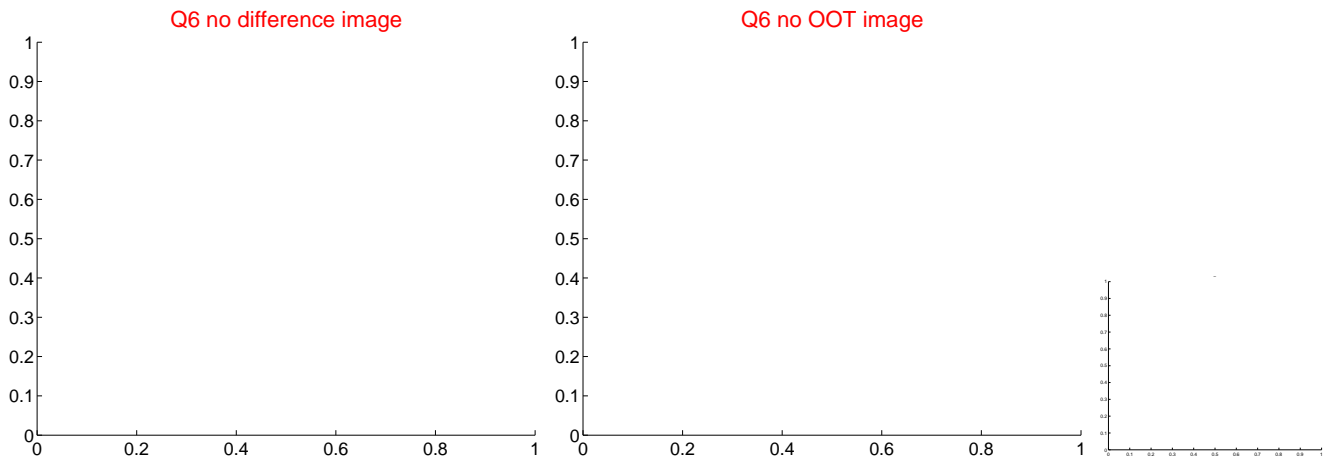
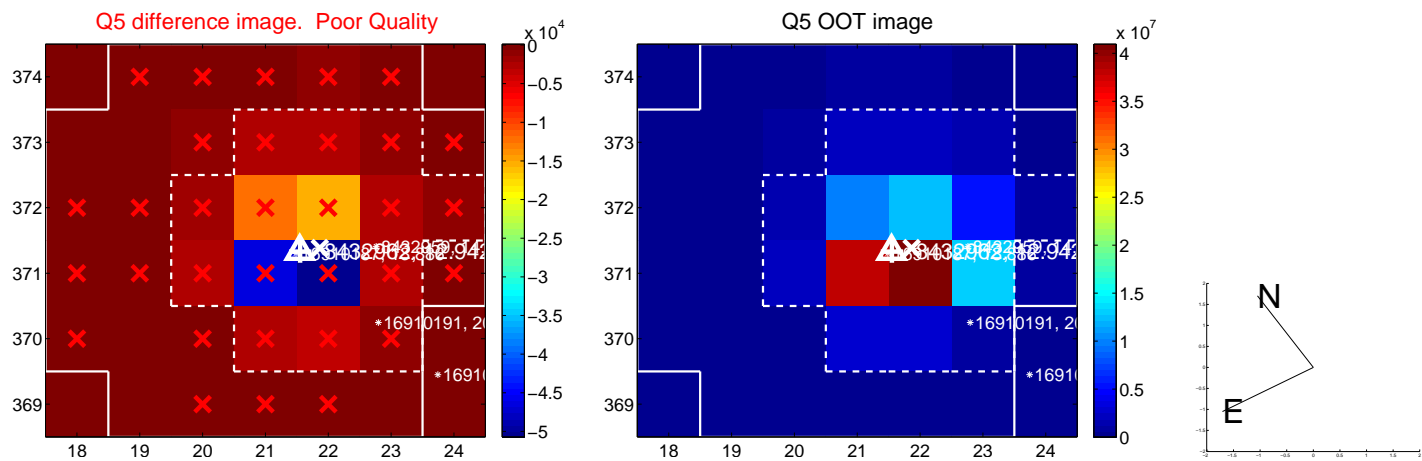


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

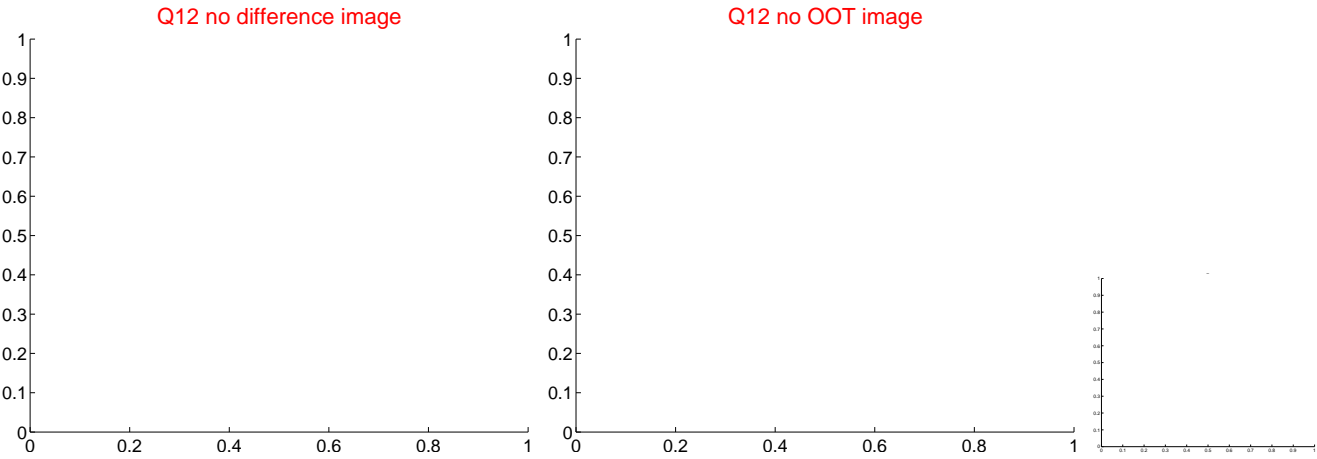
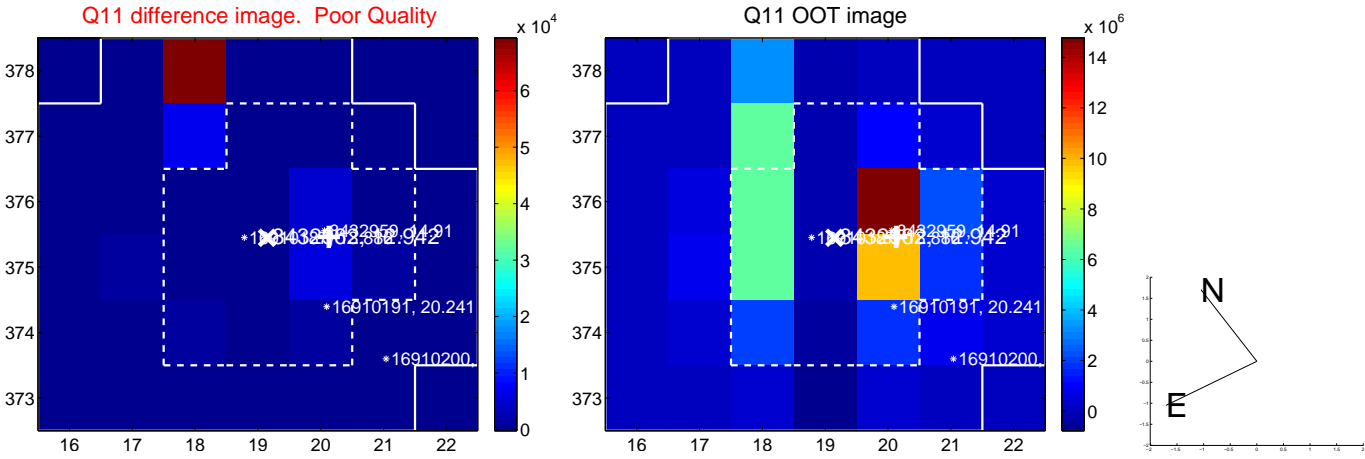
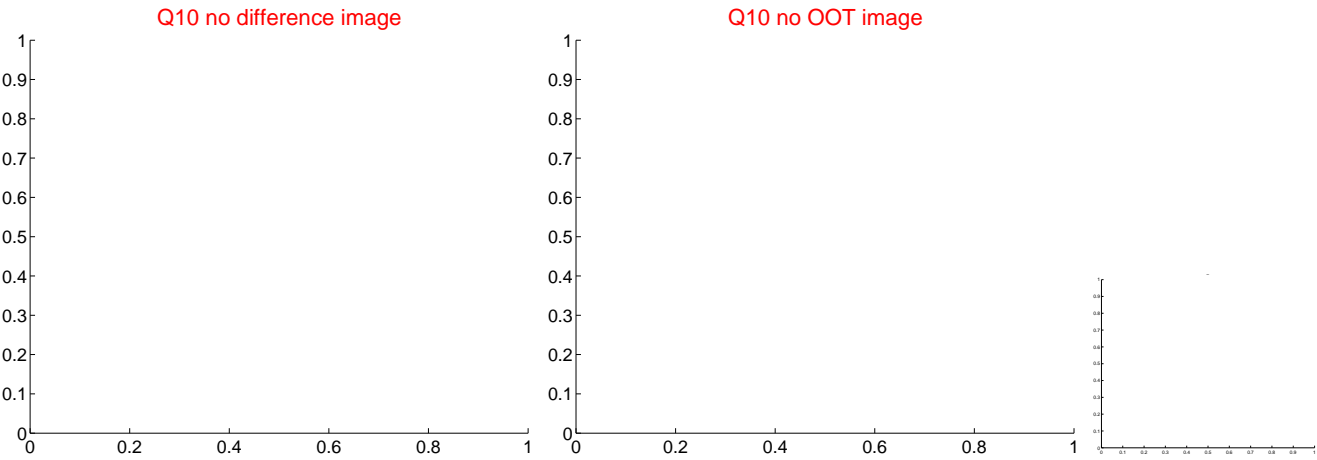
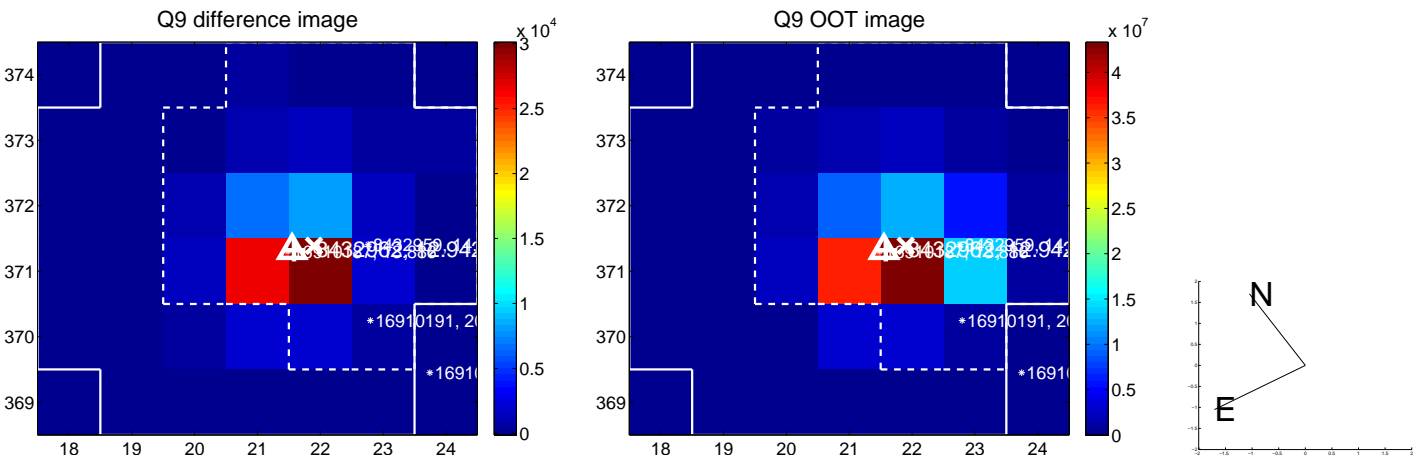
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



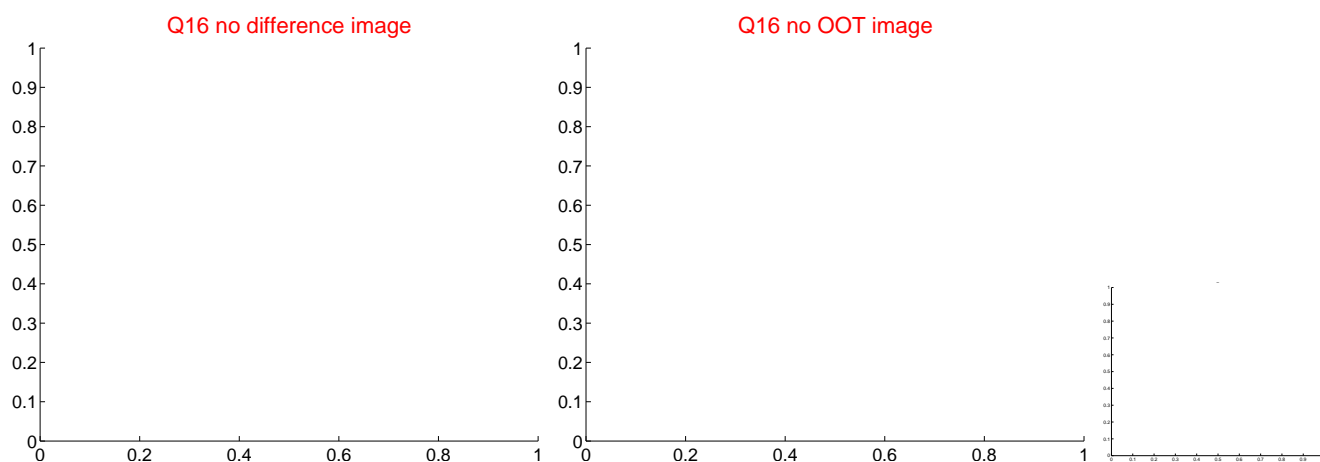
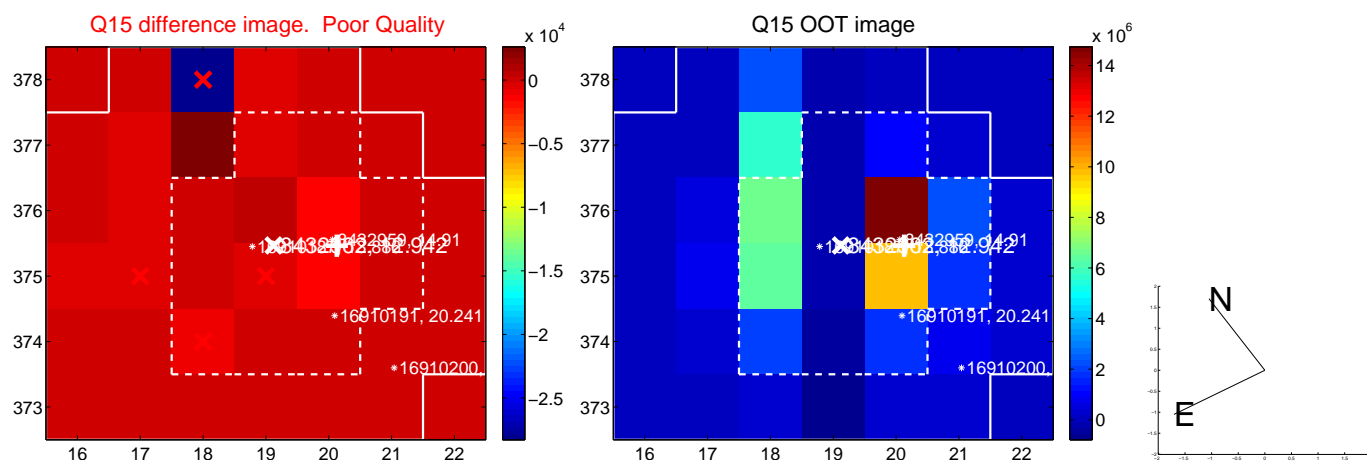
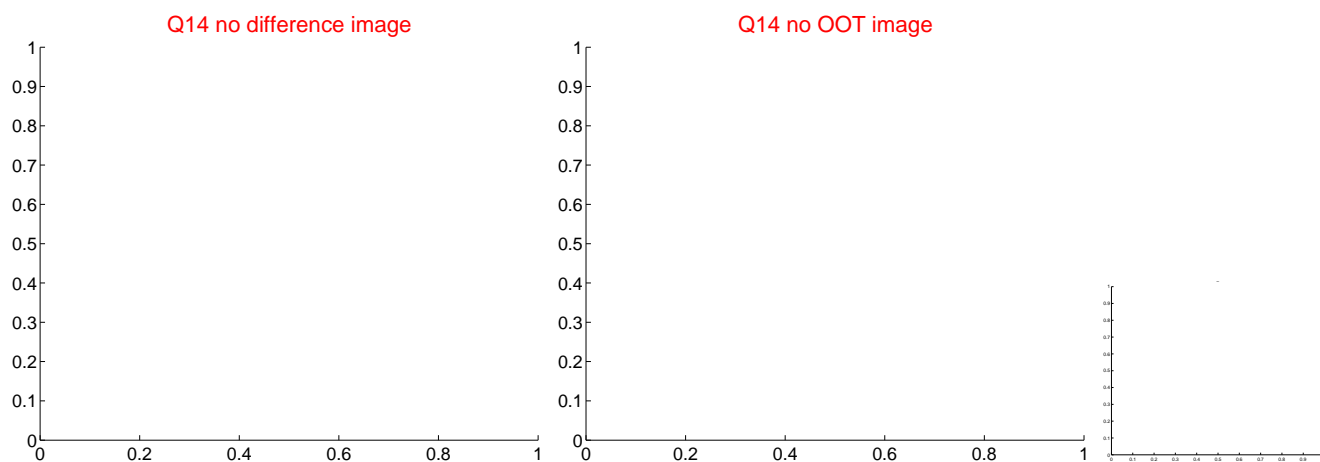
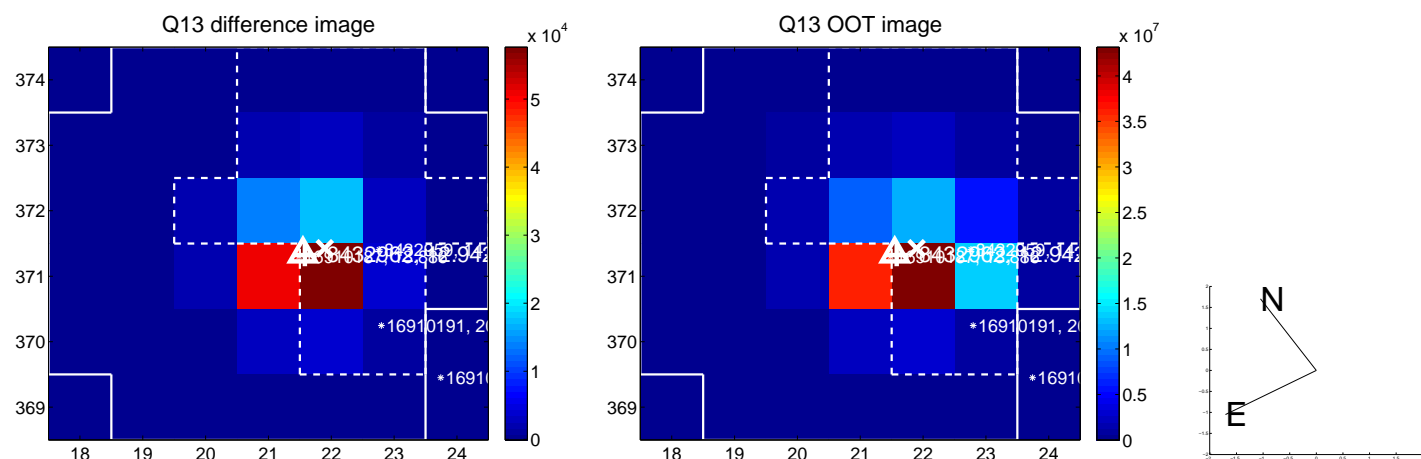
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



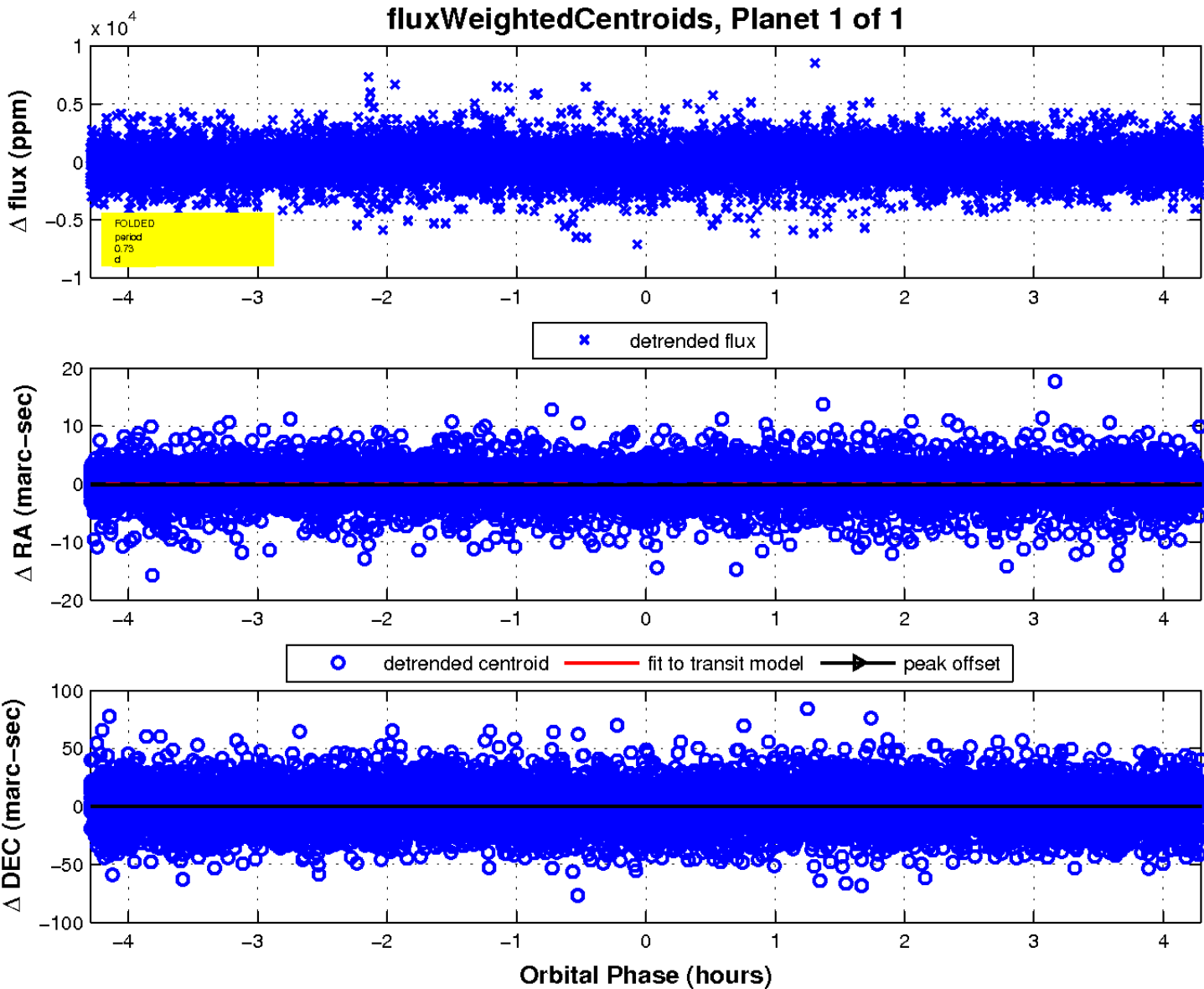
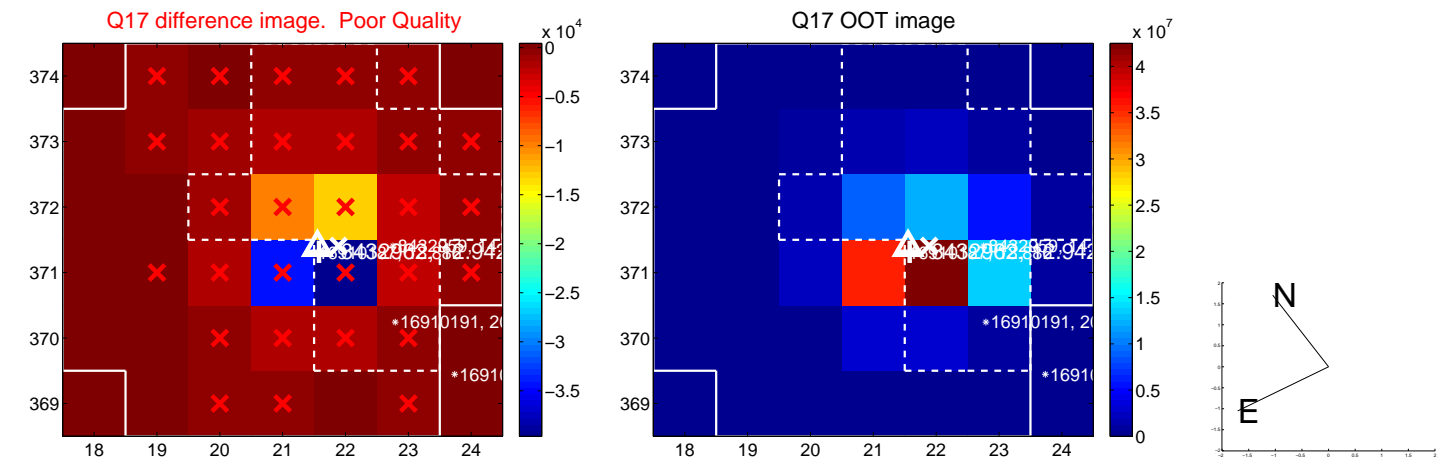
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

