

KIC 009714550

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})
009714550-01	OBS	3048.01	4.732900	131.580240	138.7	1.689	12.9	13.8	0.80	5595	0.96	198.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009714550-01	OBS	PC	1.00	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 009714550-01

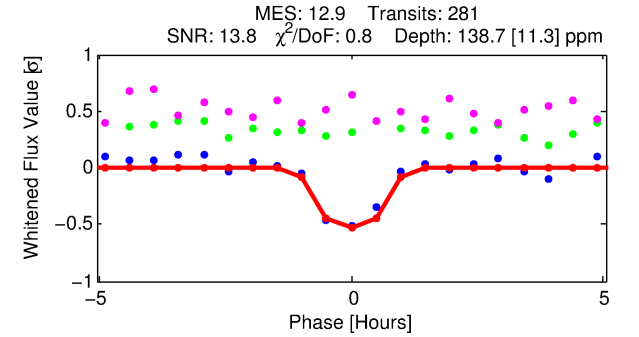
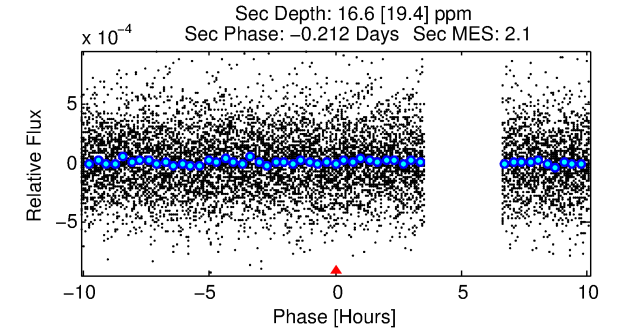
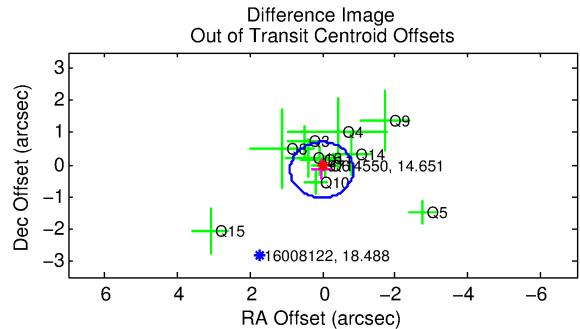
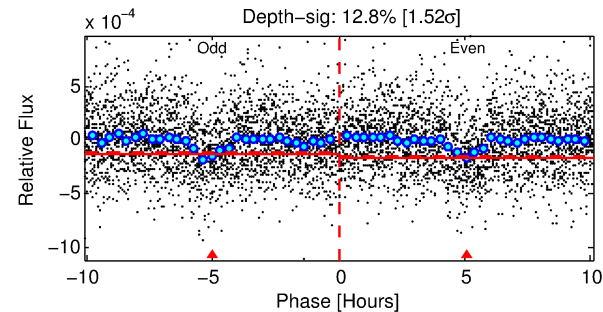
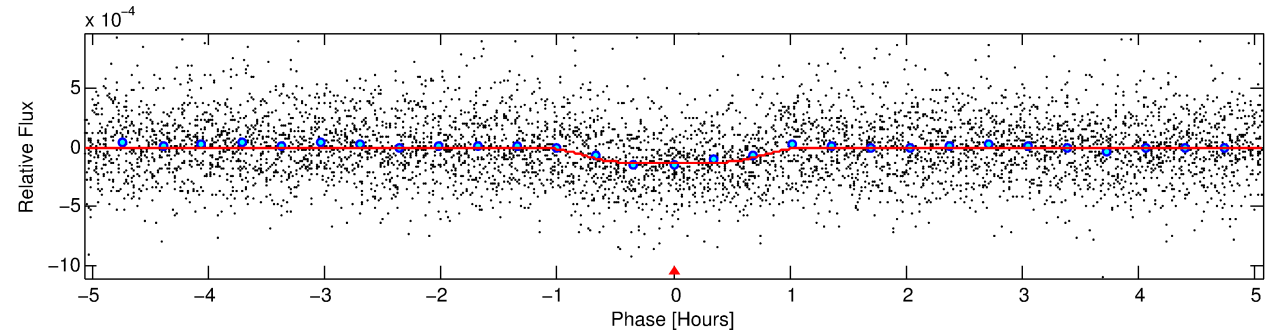
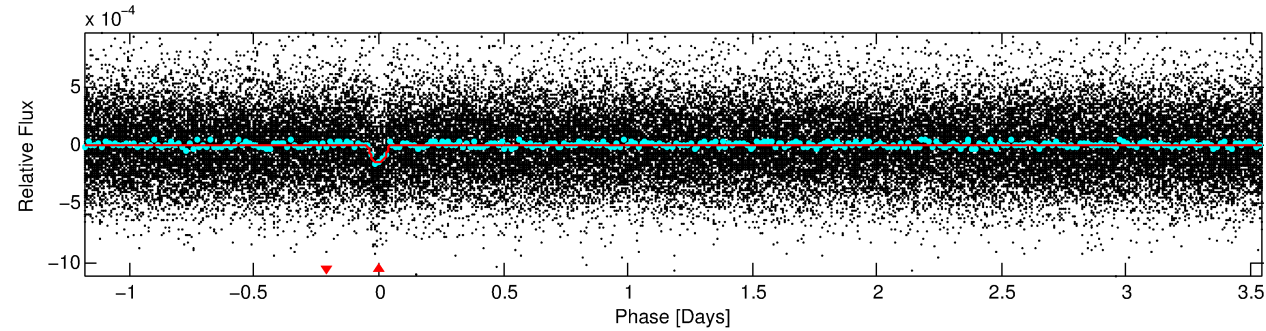
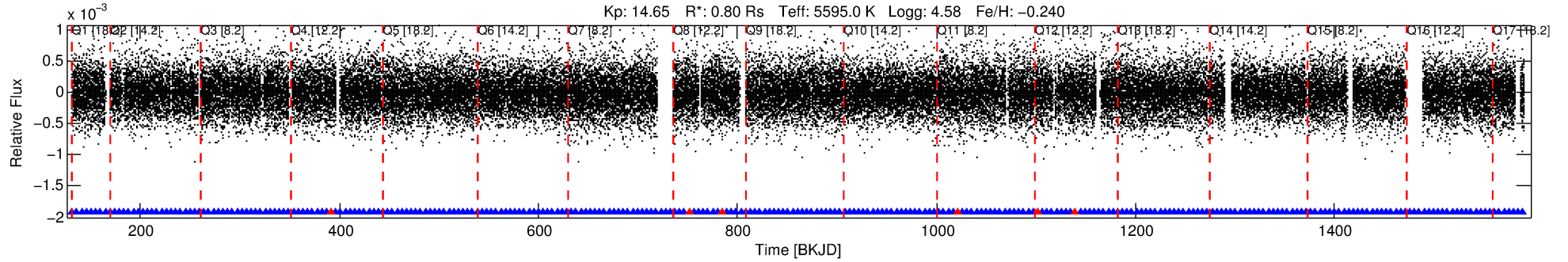
No Significant Match Found

DV One-Page Summary

KIC: 9714550 Candidate: 1 of 1 Period: 4.733 d

KOI: K03048.01 Corr: 0.957

Kp: 14.65 R*: 0.80 Rs Teff: 5595.0 K Logg: 4.58 Fe/H: -0.240



DV Fit Results:

Period = 4.73290 [0.00002] d
Epoch = 131.5802 [0.0027] BKJD
Rp/R* = 0.0110 [0.0069]
a/R* = 19.09 [51.29]
b = 0.48 [4.40]
Seff = 198.85 [53.83]
Teff = 958 [65] K
Rp = 0.96 [0.63] Re
a = 0.0529 [0.0090] AU
Ag = 27.92 [48.42] [0.56σ]
Teffp = 3403 [1463] K [1.67σ]

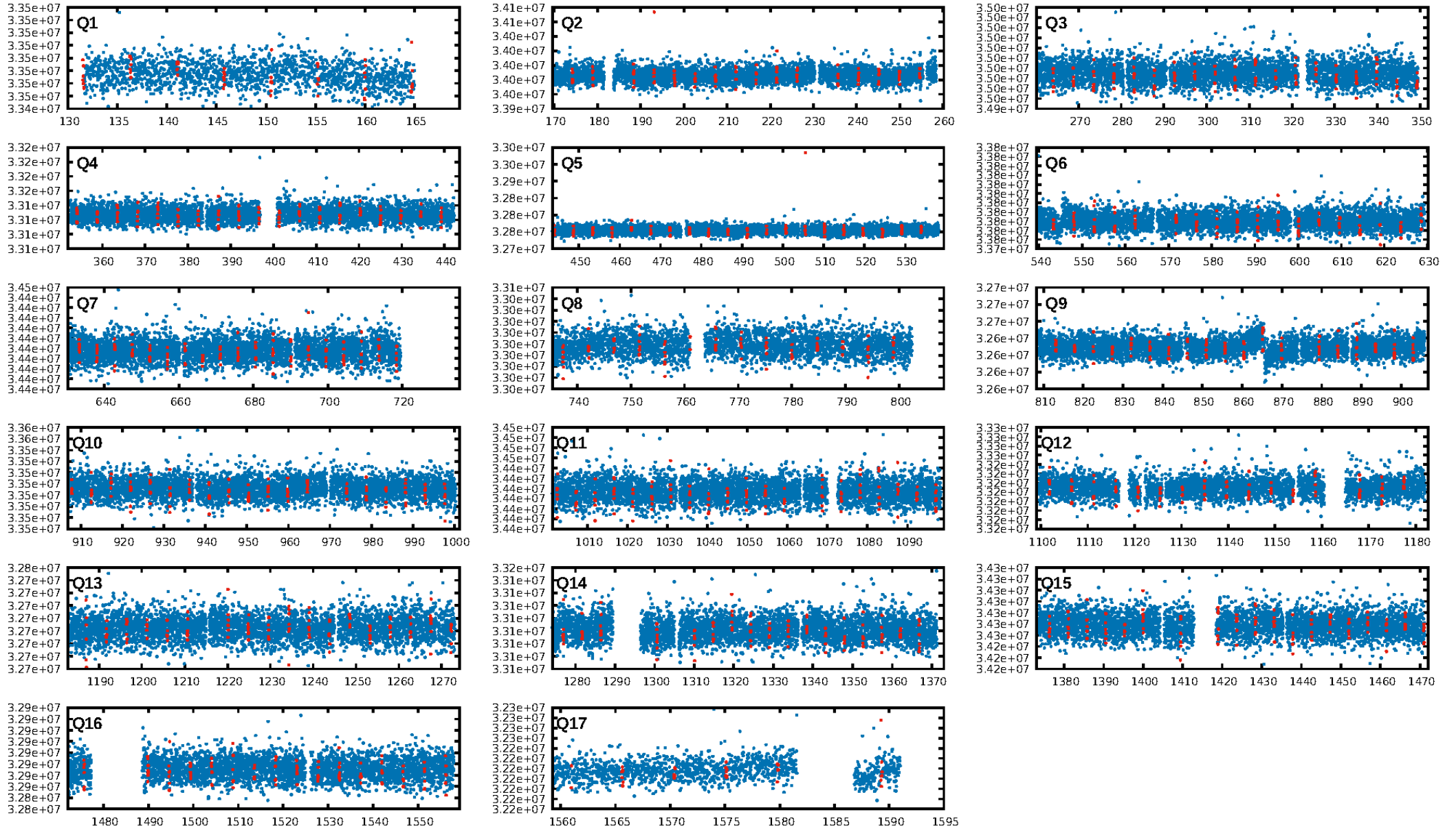
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.93e-38
RollingBand-fgt: 0.98 [262/268]
GhostDiagnostic-chr: 4.721
Centroid-sig: 86.5%
Centroid-so: 0.327 arcsec [0.30σ]
OotOffset-rm: 0.166 arcsec [0.57σ]
KicOffset-rm: 0.113 arcsec [0.28σ]
OotOffset-st: 3/3/2 [11]
KicOffset-st: 3/3/2 [11]
DiffImageQuality-fgm: 0.91 [10/11]
DiffImageOverlap-fno: 1.00 [17/17]

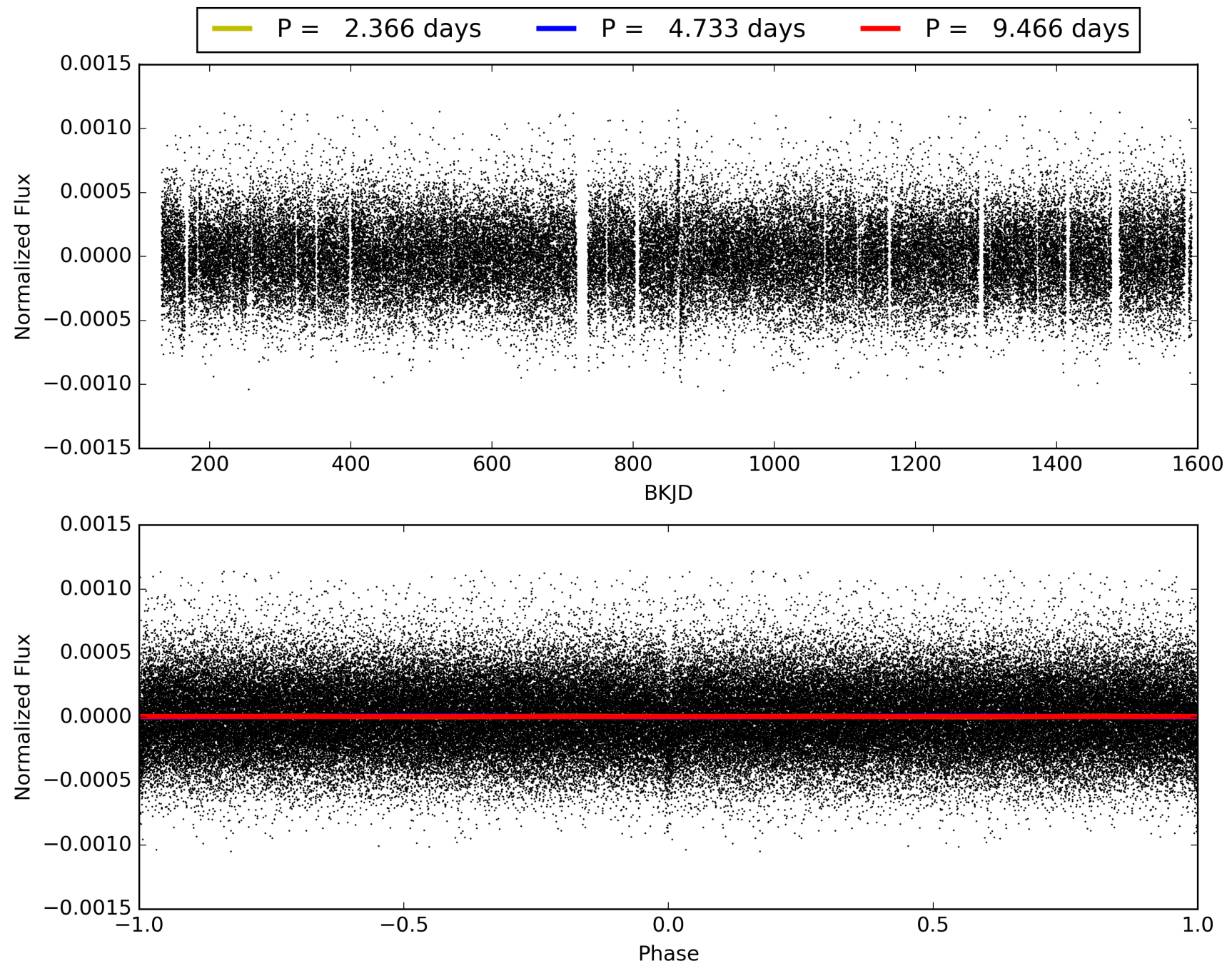
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:07:03 Z

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

TCE 009714550-01, PDC Light Curves

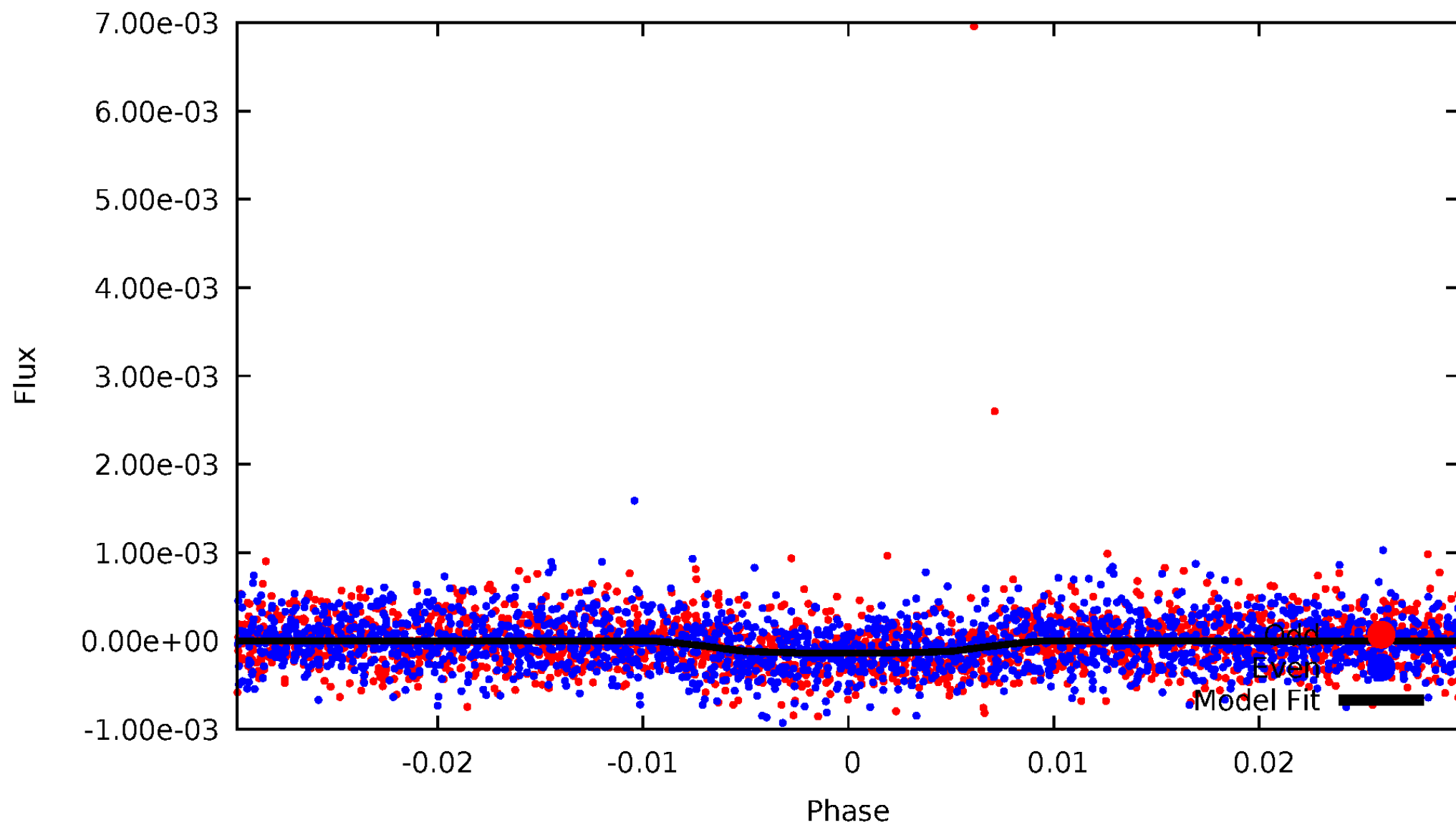


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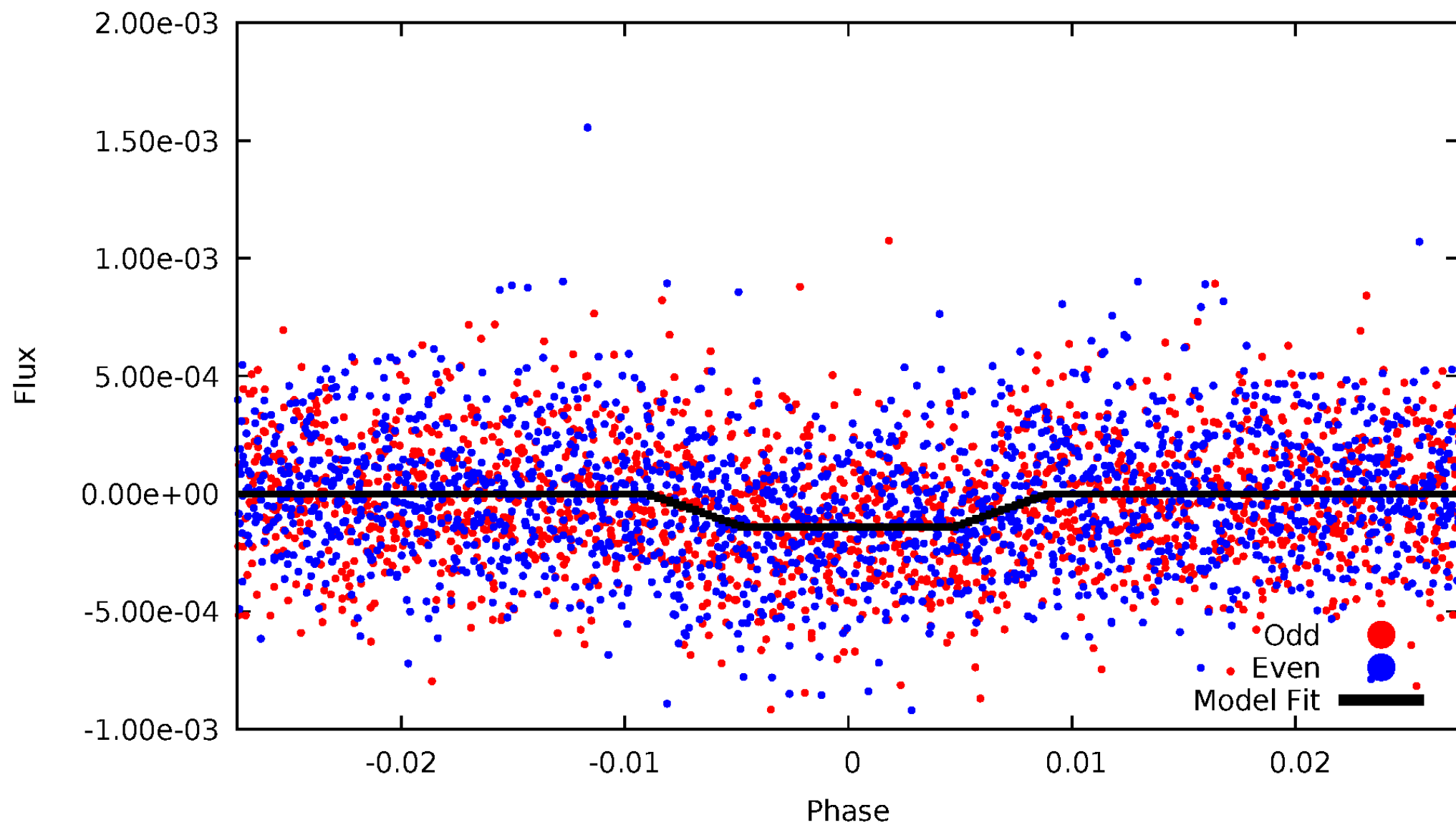
DV Odd/Even

TCE 009714550-01

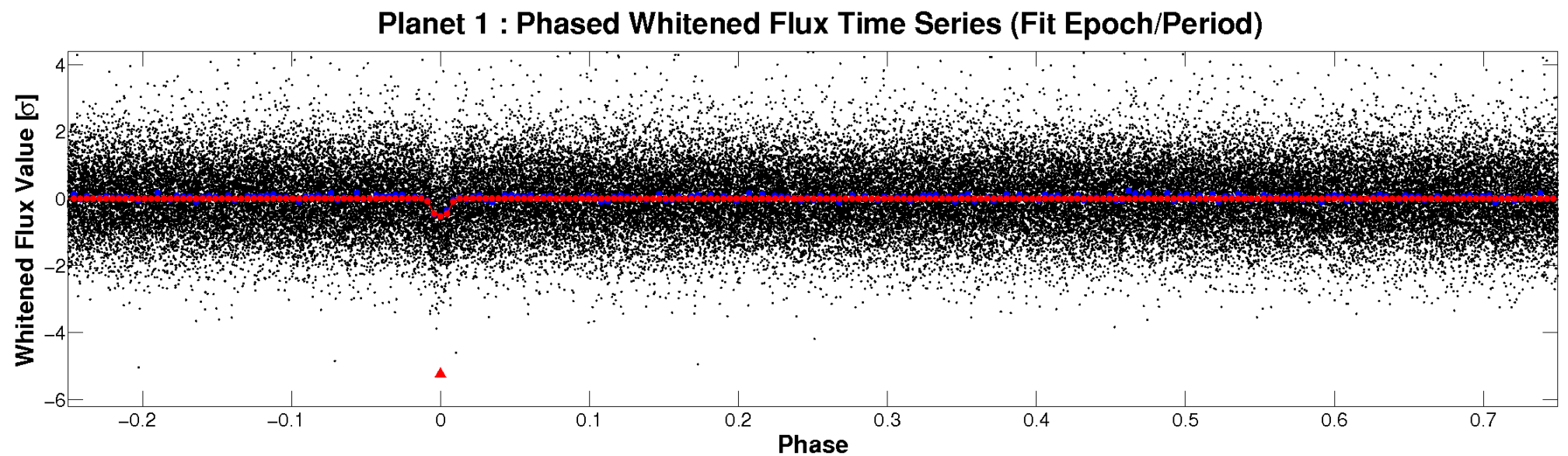
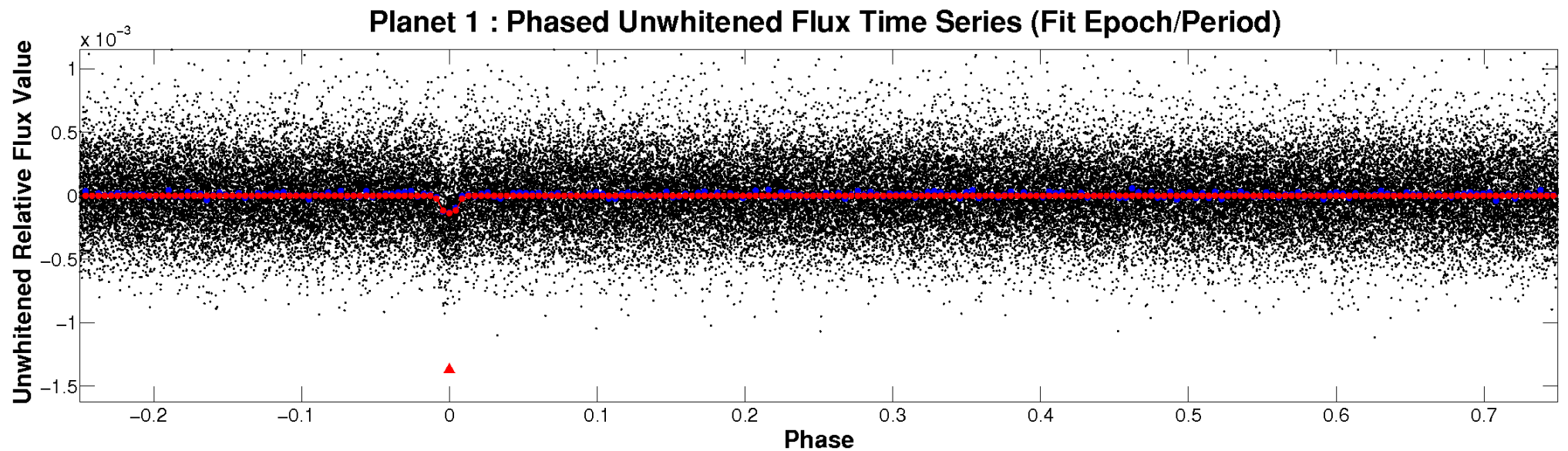


ALT Odd/Even

TCE 009714550-01

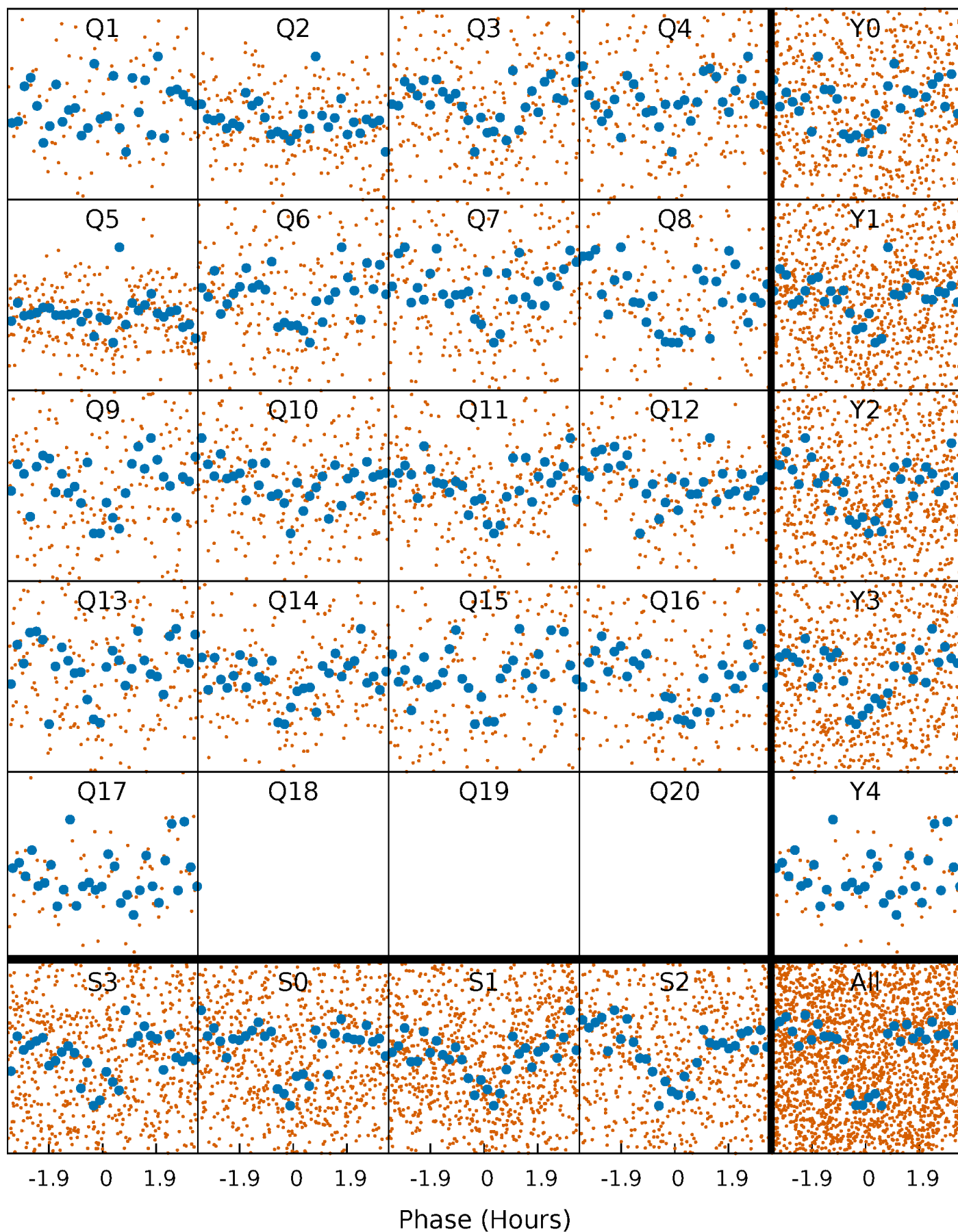


Non-Whitened Vs. Whitened Light Curve



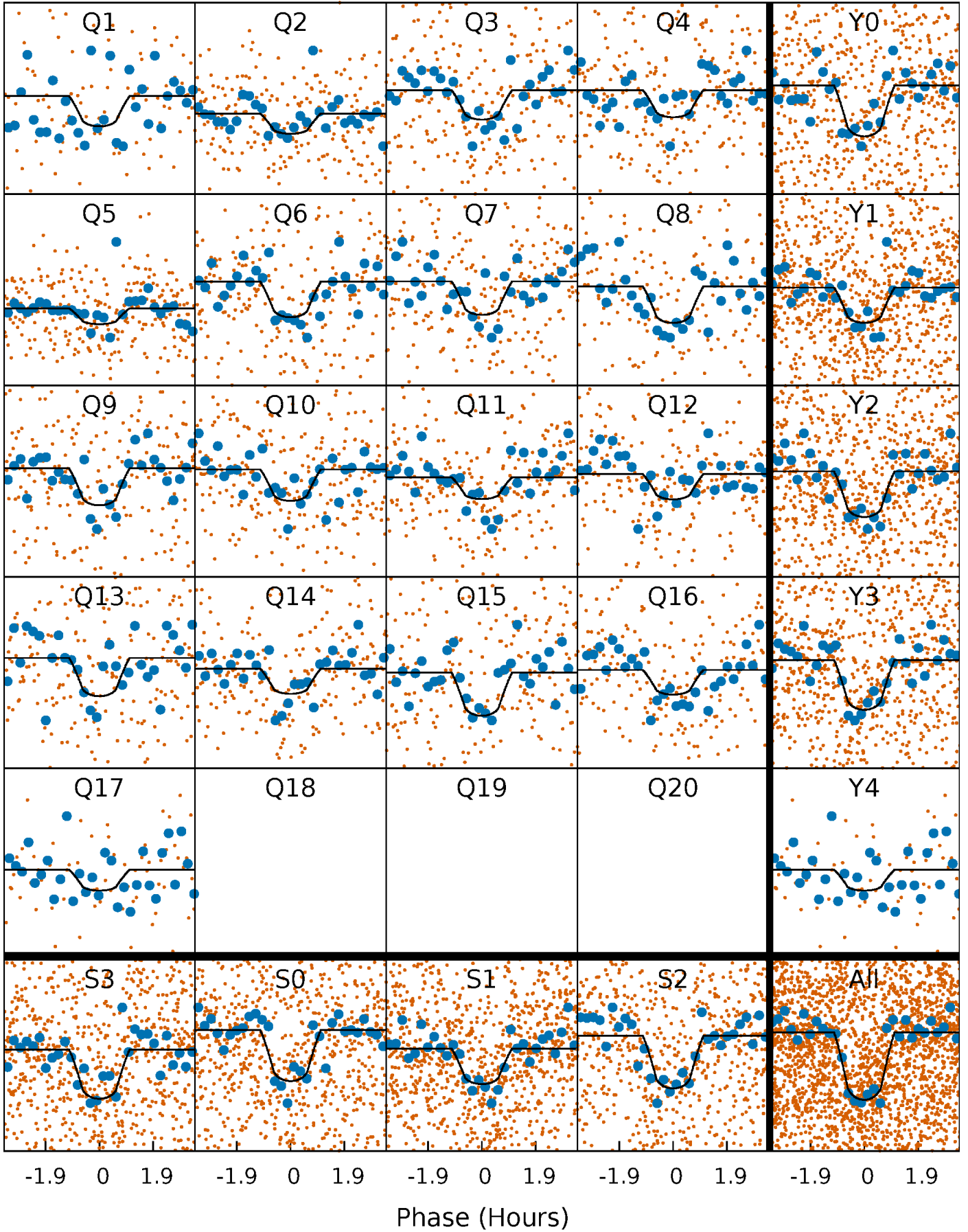
PDC Quarter-Phased Transit Curves

TCE 009714550-01 P= 4.732900 Days $T_0=131.580240$ (BKJD)



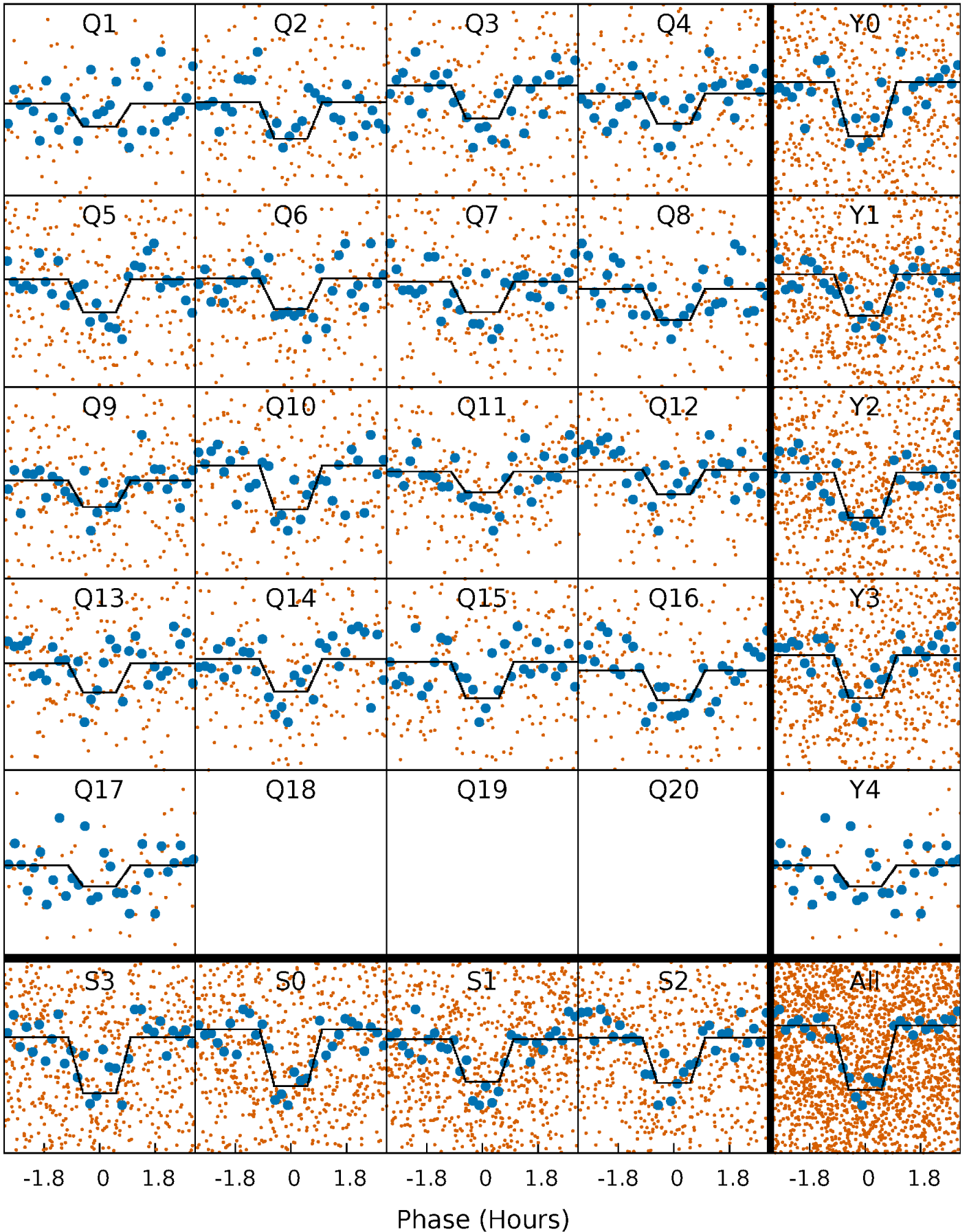
DV Quarter-Phased Transit Curves

TCE 009714550-01 P= 4.732900 Days $T_0=131.580240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

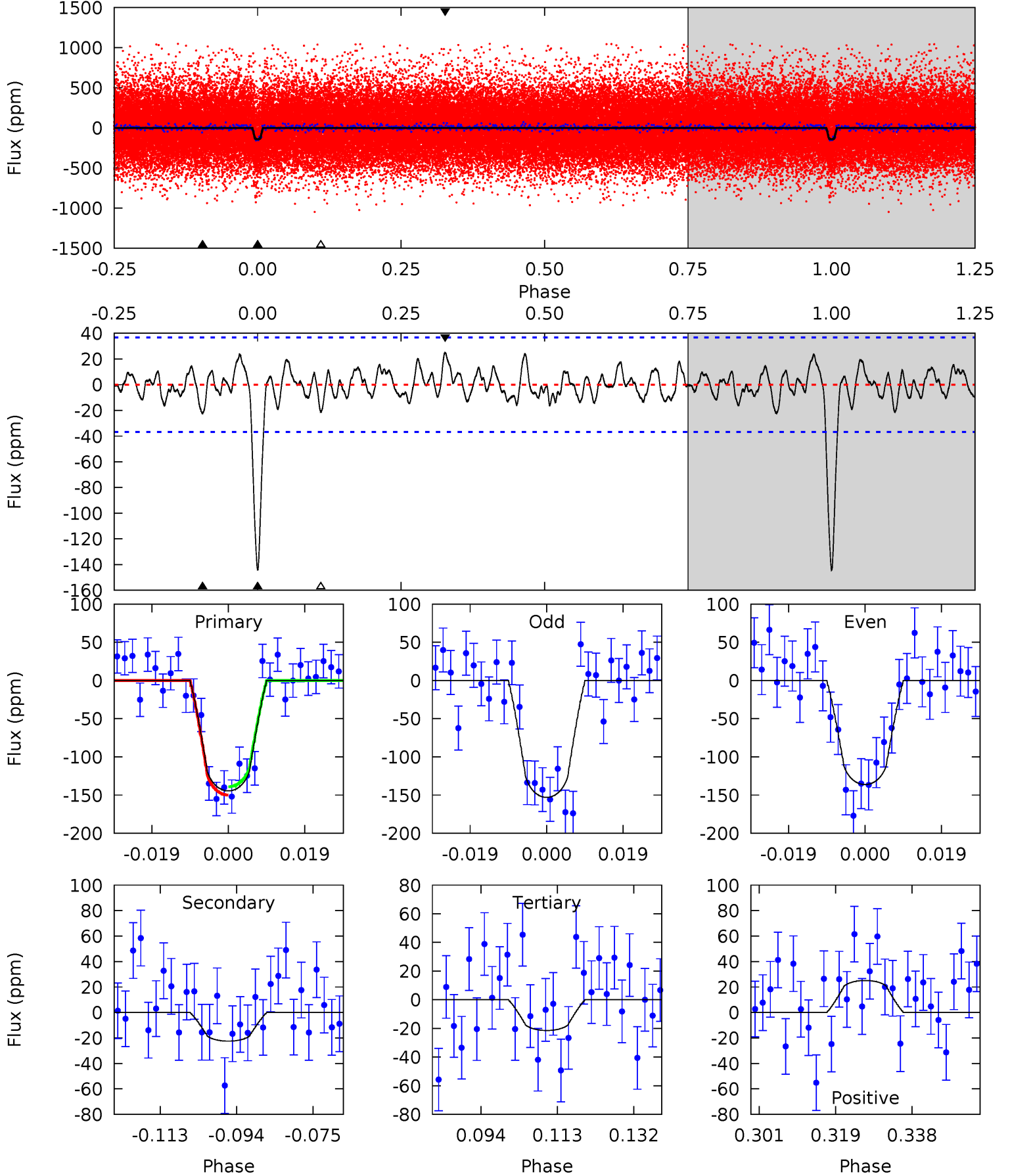
TCE 009714550-01 P= 4.732930 Days $T_0=131.577139$ (BKJD)



DV Model-Shift Uniqueness Test

009714550-01, P = 4.732900 Days, E = 126.847340 Days

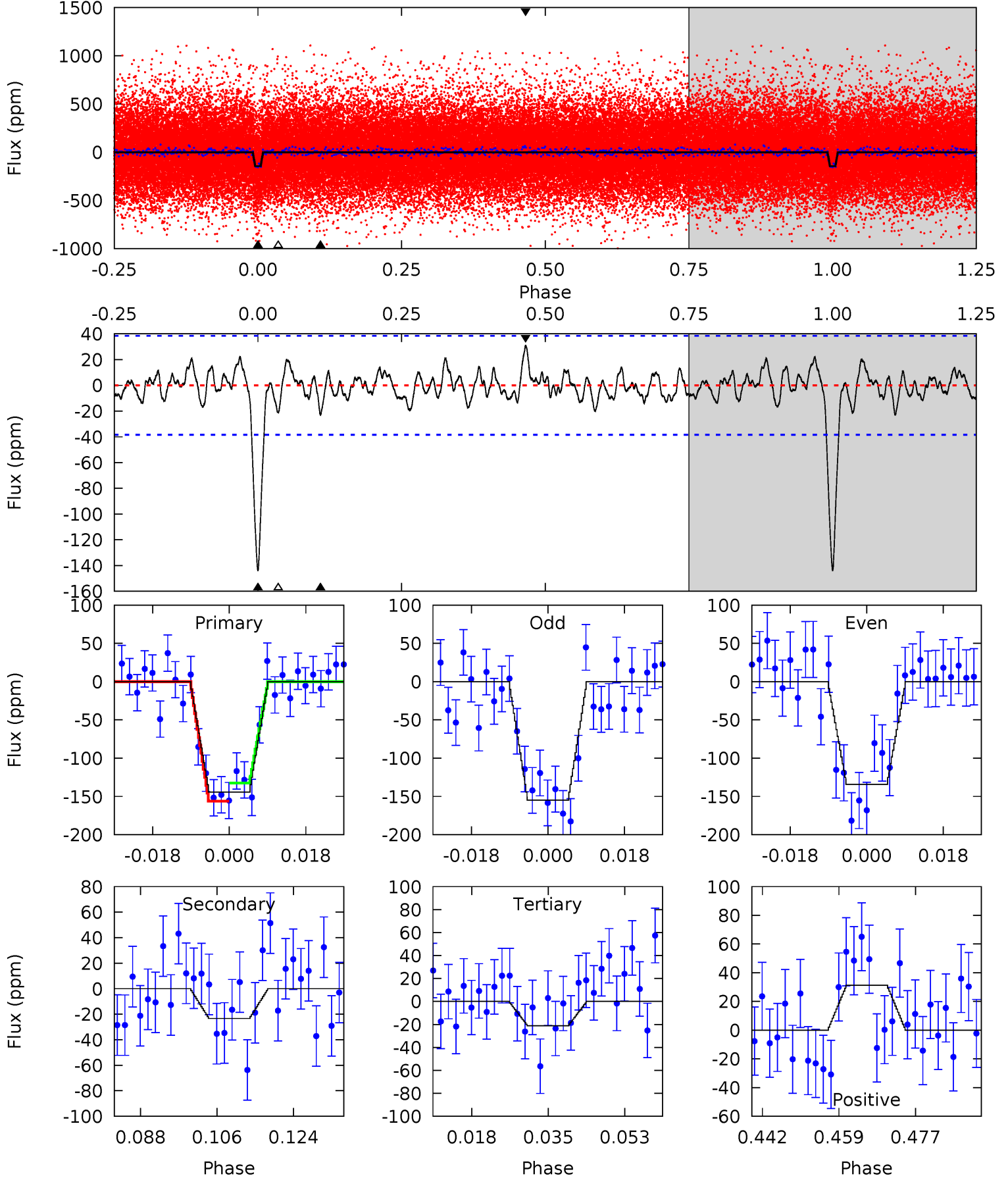
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	3.00	2.86	3.35	4.90	2.35	1.20	16.4	15.9	0.14	-0.35	1.12	0.92	0.15	0.73



Alt Model-Shift Uniqueness Test

009714550-01, P = 4.732930 Days, E = 126.844209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	2.98	2.71	4.01	4.92	2.37	1.13	15.7	14.5	0.27	-1.02	1.32	0.99	0.18	1.52



Stellar Parameters For KIC 009714550

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5595^{+150}_{-150}	$4.581^{+0.034}_{-0.136}$	$-0.240^{+0.300}_{-0.300}$	$0.796^{+0.161}_{-0.069}$	$0.890^{+0.082}_{-0.100}$	$2.487^{+0.432}_{-0.948}$
	+3%/-3%	+1%/-3%	+125%/-125%	+20%/-9%	+9%/-11%	+17%/-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 009714550-01 / KOI 3048.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 7	$1.00^{+0.63}_{-0.54}$	1365^{+66}_{-55}	3954^{+1497}_{-655}	33^{+134}_{-21}
Alt.	-23 ± 8	$1.10^{+0.63}_{-0.60}$	1363^{+69}_{-54}	3884^{+1395}_{-630}	30^{+112}_{-20}

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

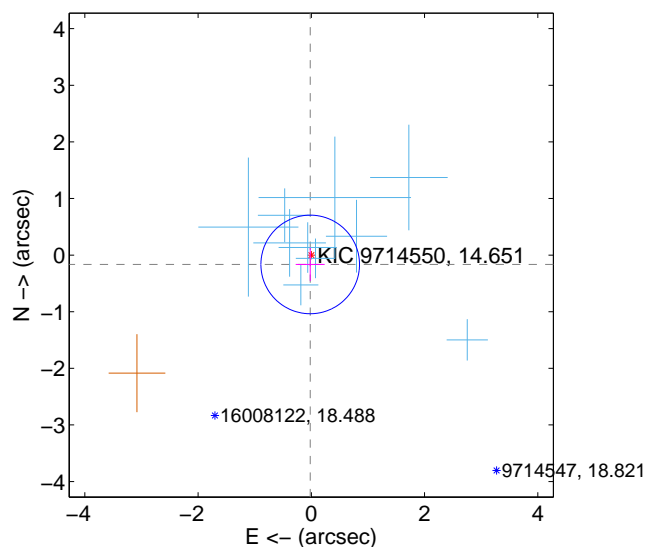
Supplemental centroid analysis for 009714550-01. Kepler magnitude: 14.65. Transit SNR 13.80

There are 10 quarters with good PRF difference image offsets

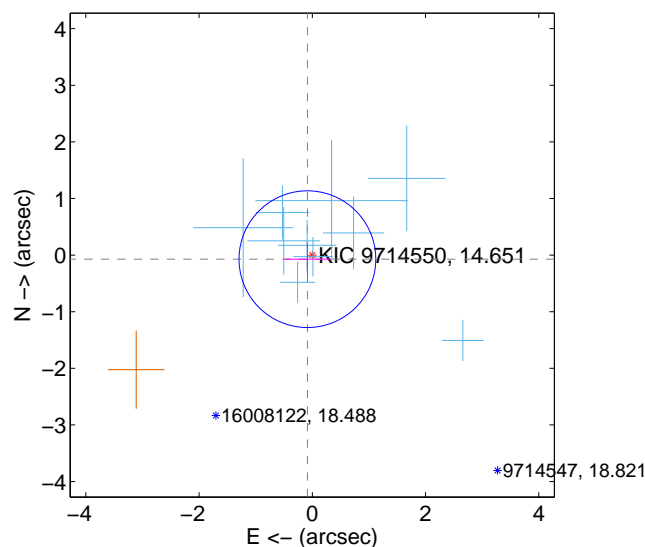
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.166 ± 0.290	0.57	0.020 ± 0.256	-0.165 ± 0.291
PRF-fit source offset from KIC position	0.113 ± 0.402	0.28	0.087 ± 0.410	-0.072 ± 0.286
photometric centroid source offset	0.33 ± 1.08	0.30	-0.32 ± 1.08	0.04 ± 1.12

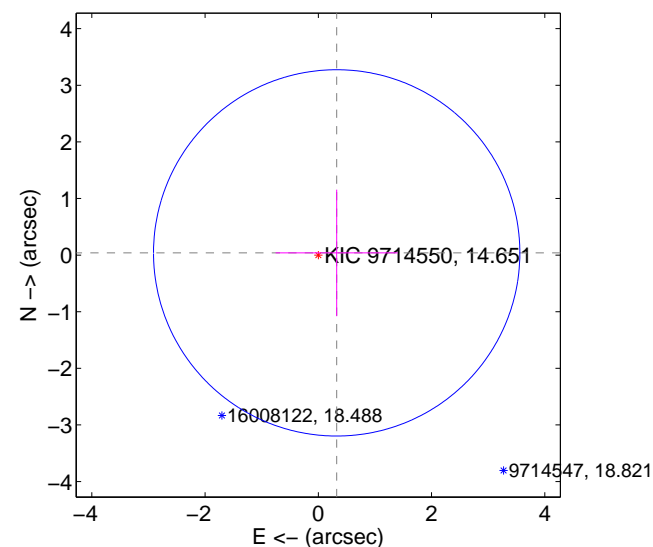
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

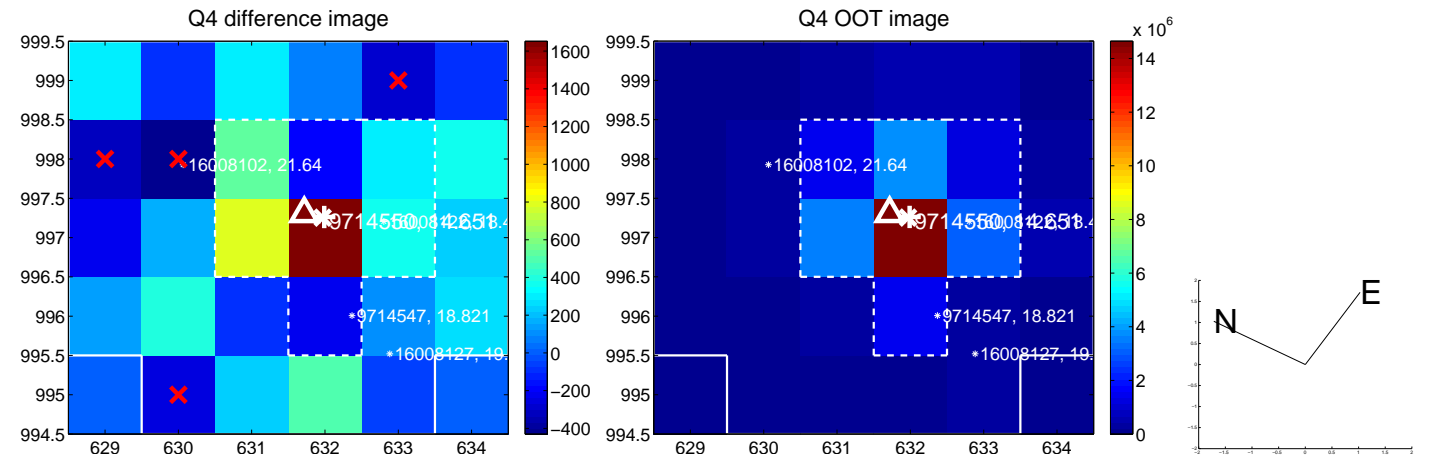
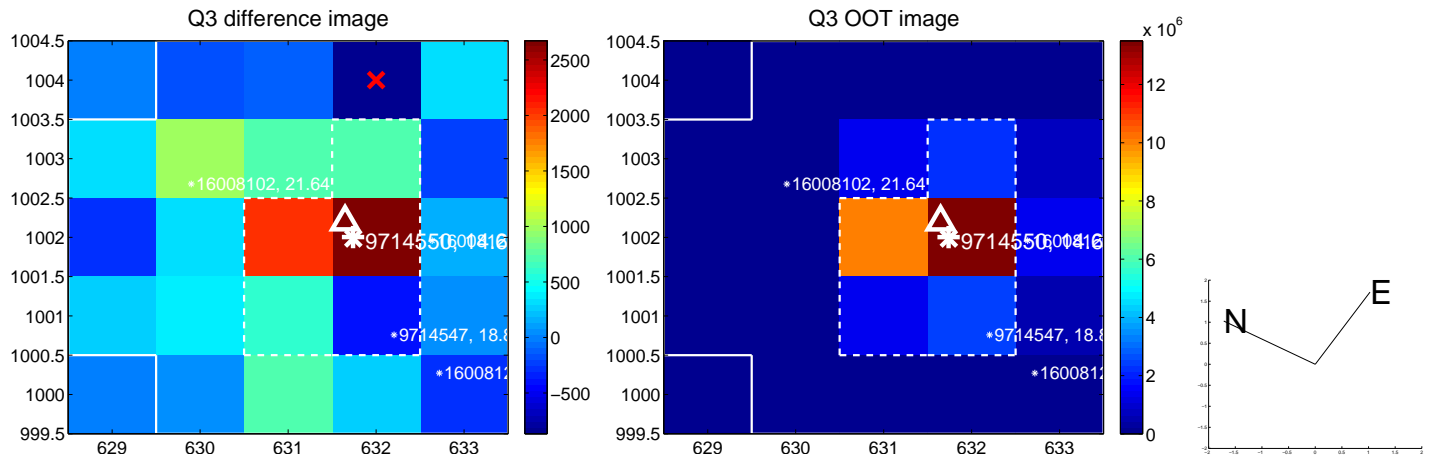
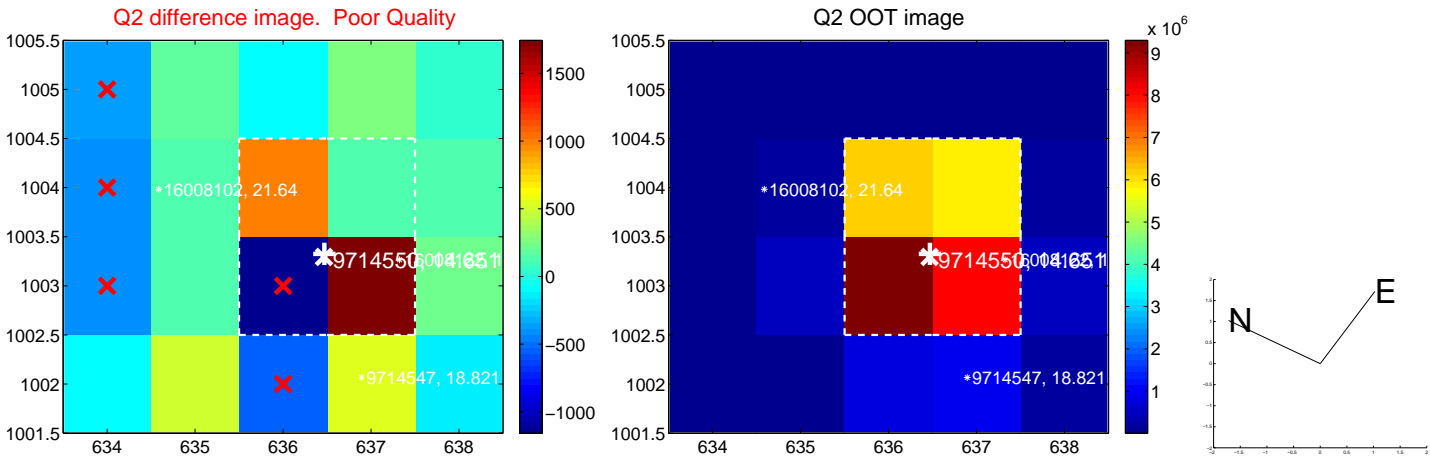
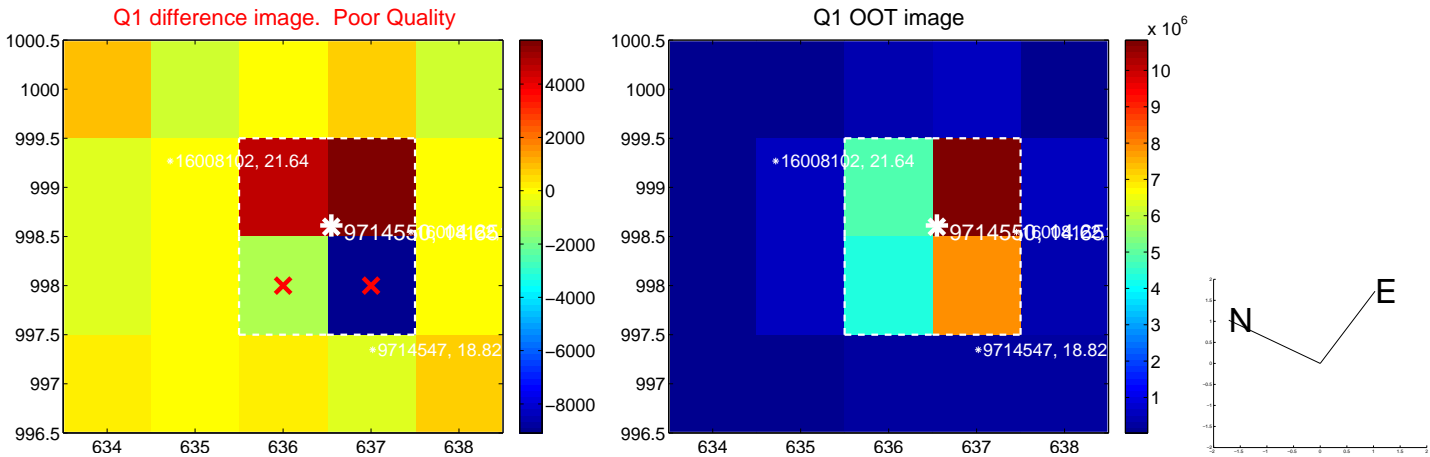


offset from photometric centroids

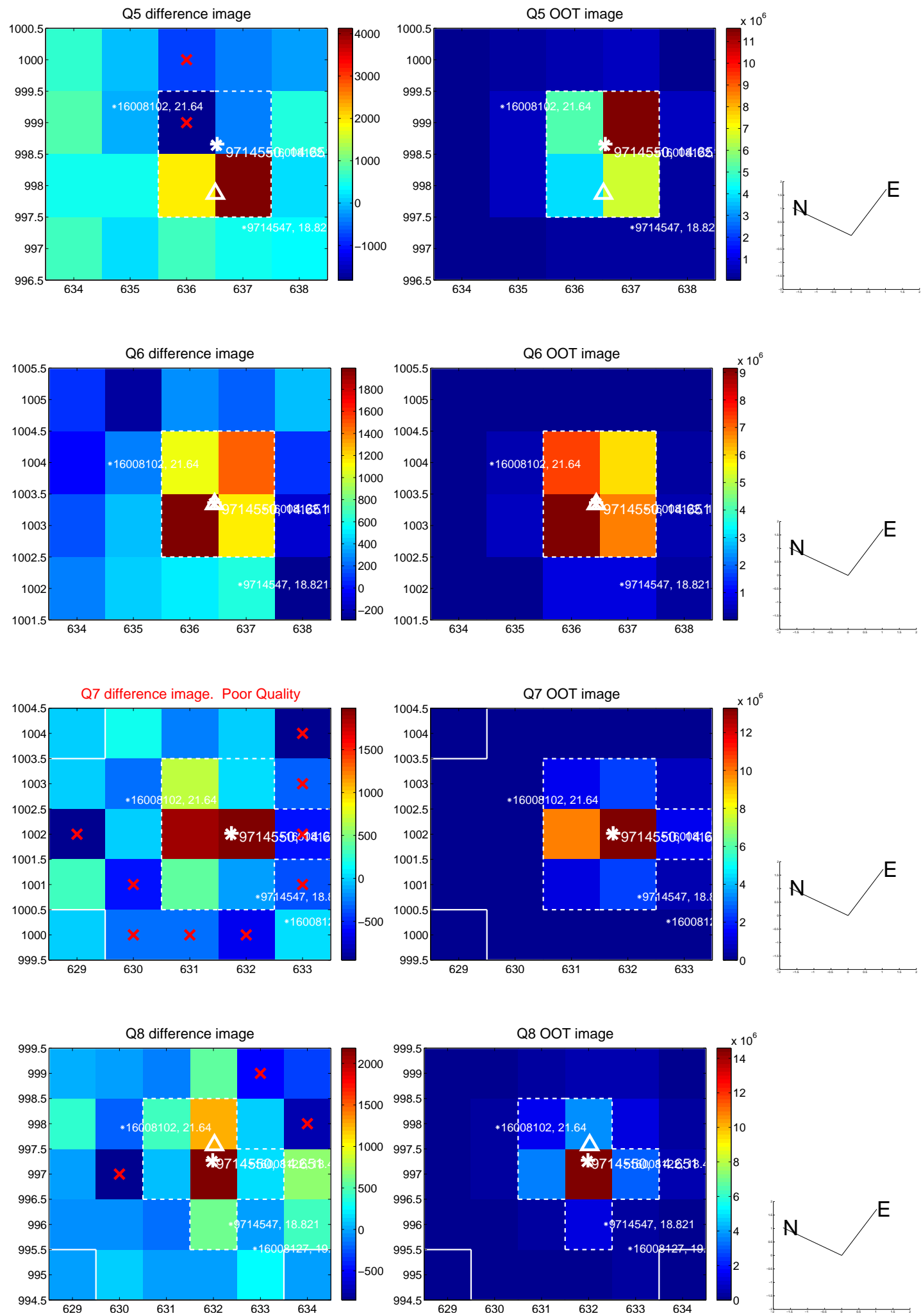


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

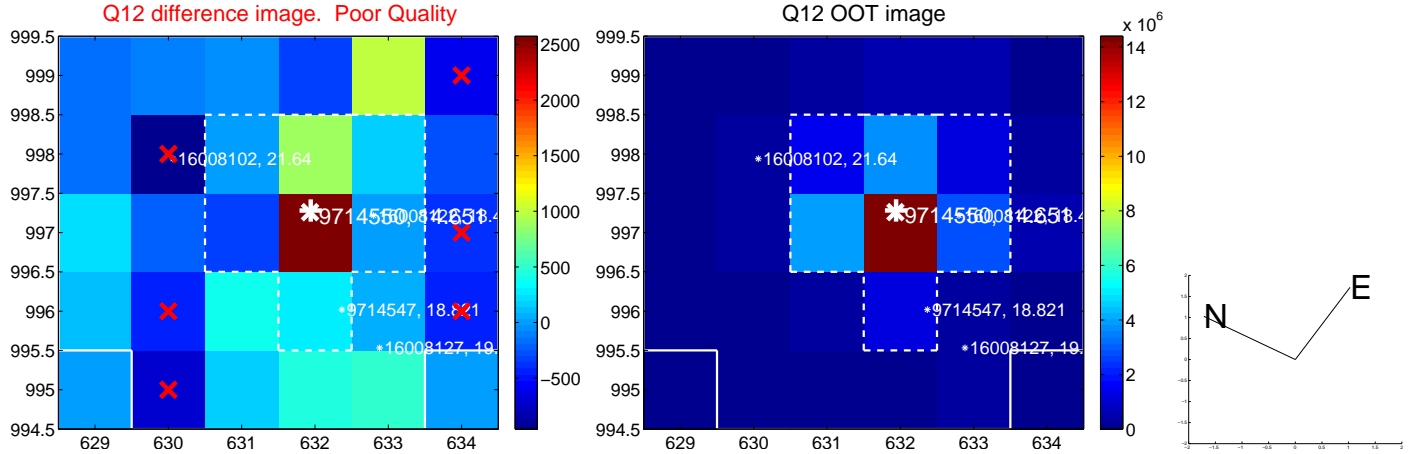
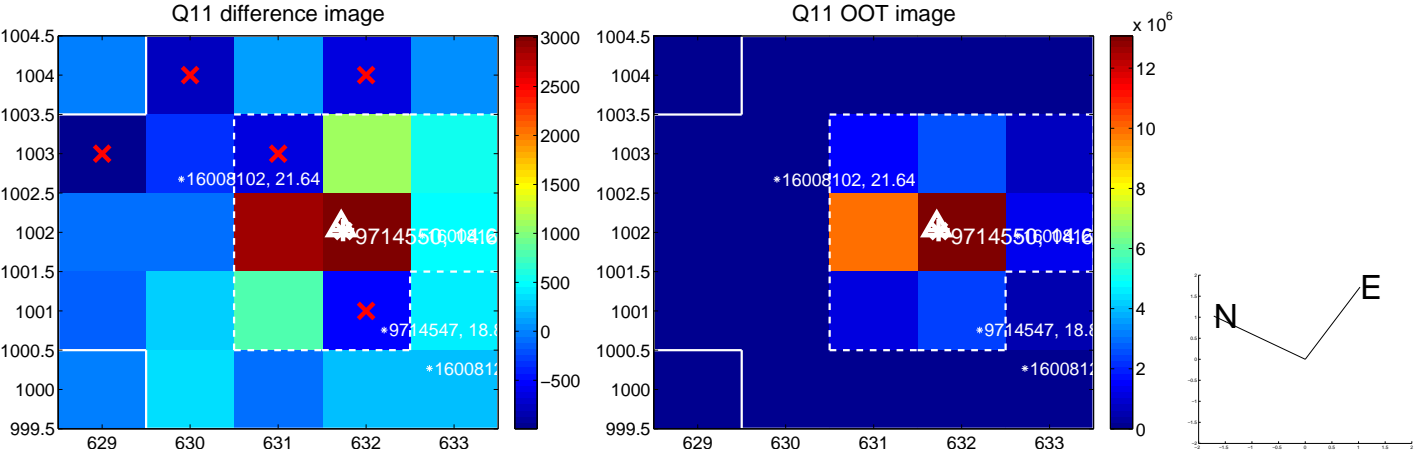
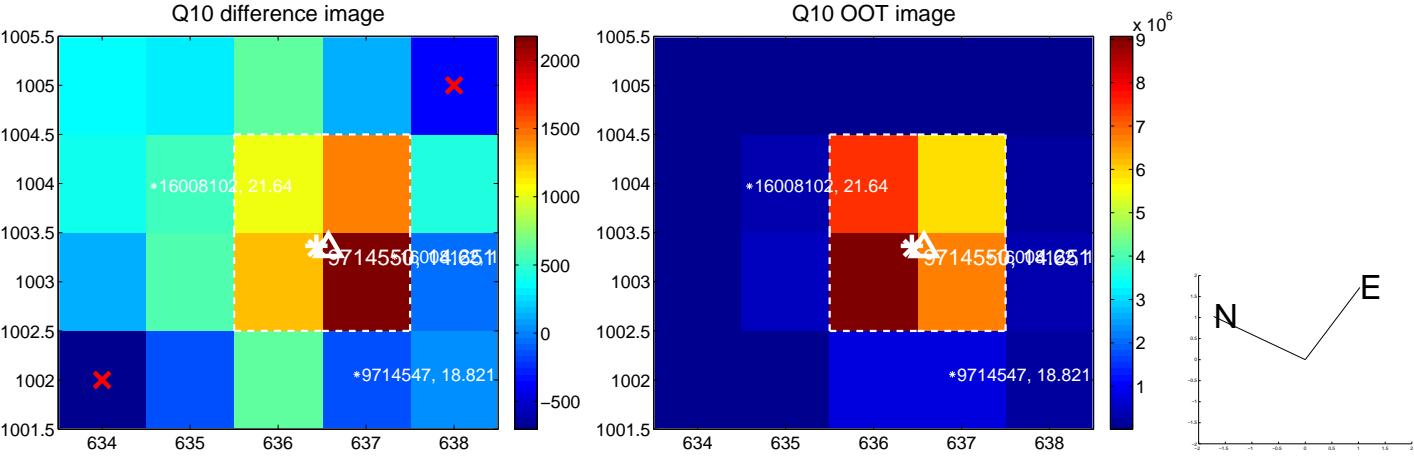
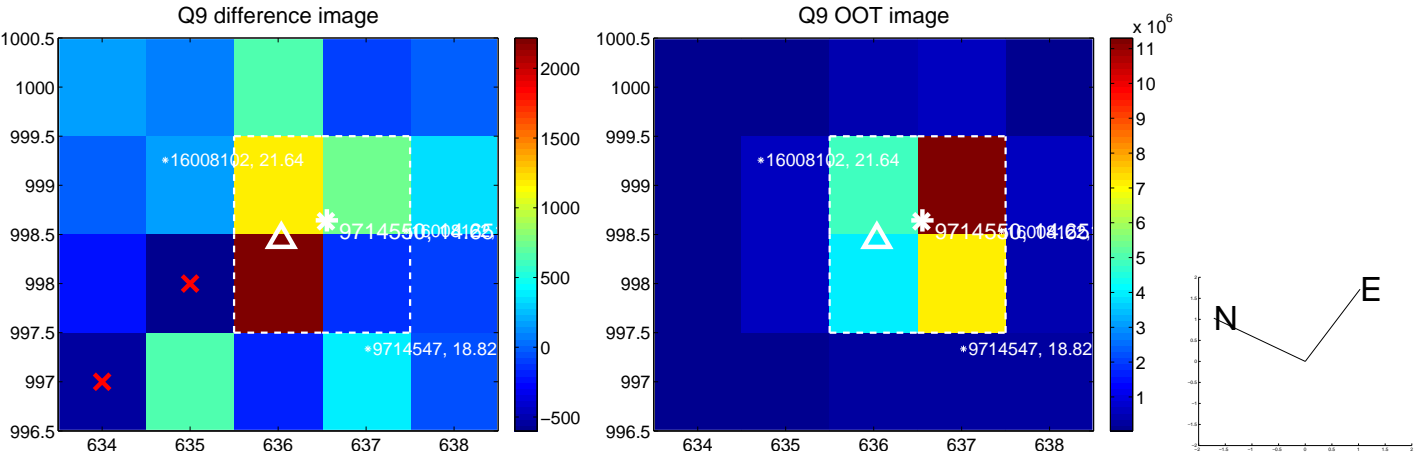
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



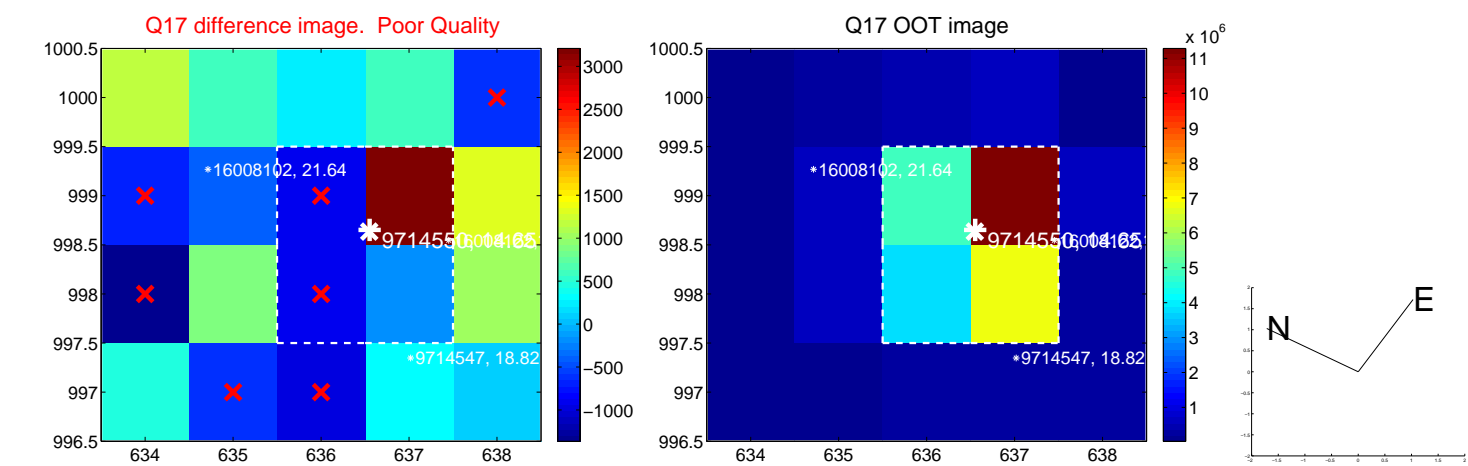
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



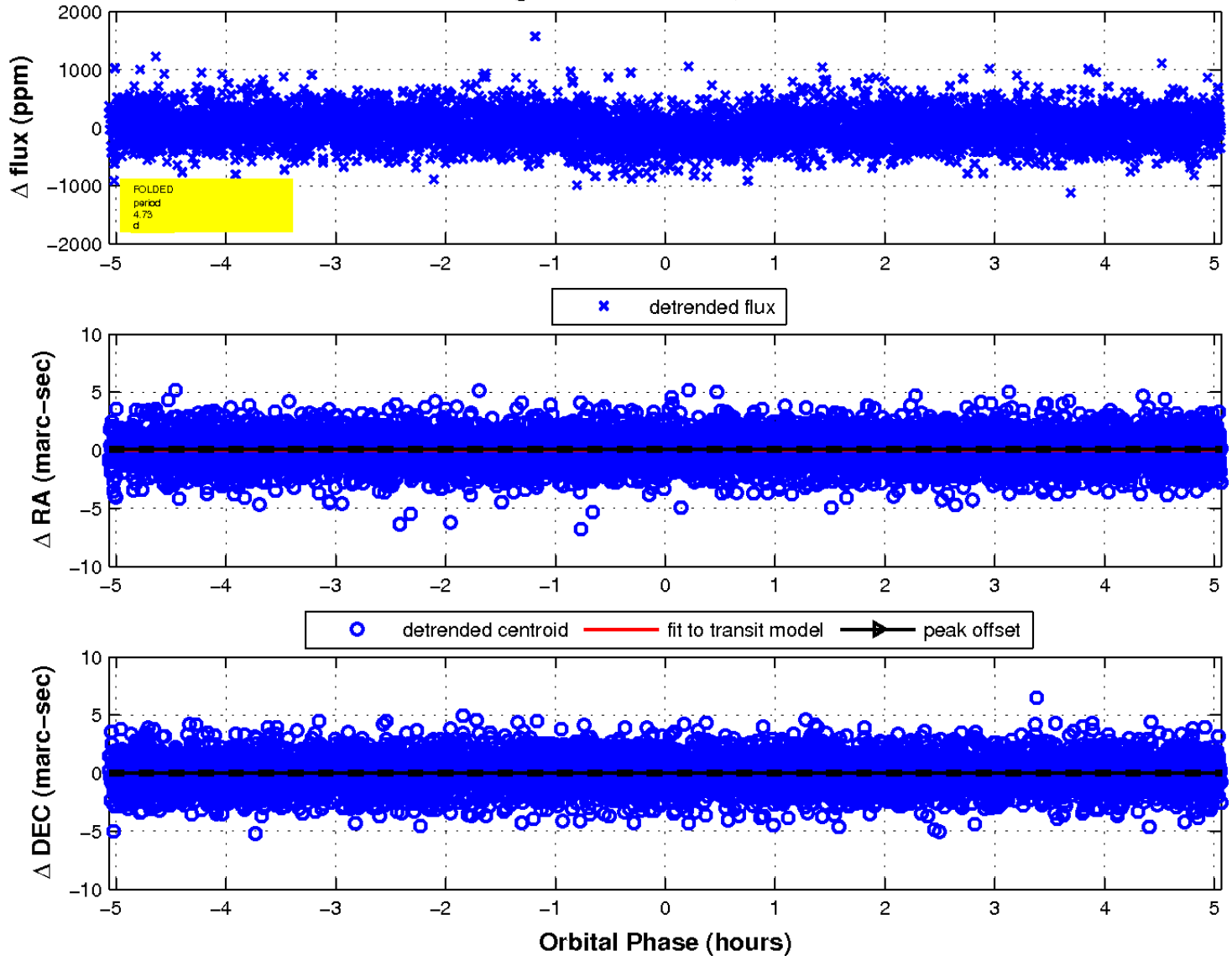
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

