

KIC 009941066

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})
009941066-01	OBS	1584.01	5.870666	137.245793	493.3	2.640	19.5	21.1	0.61	4166	1.63	34.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009941066-01	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.

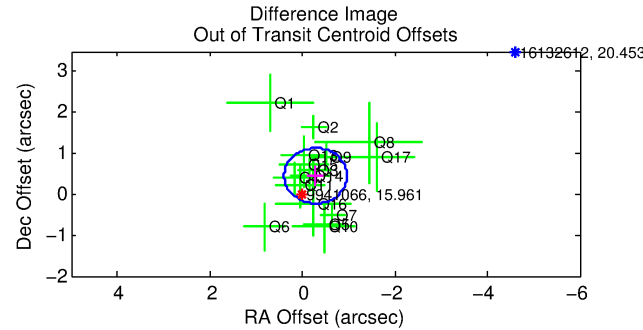
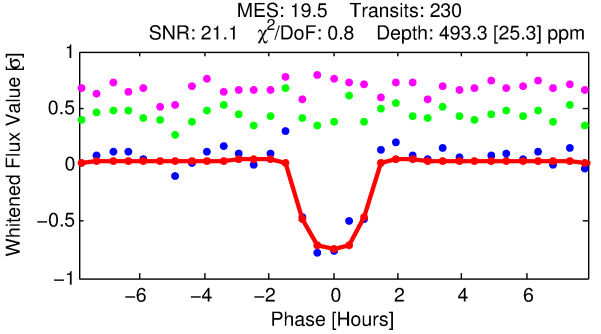
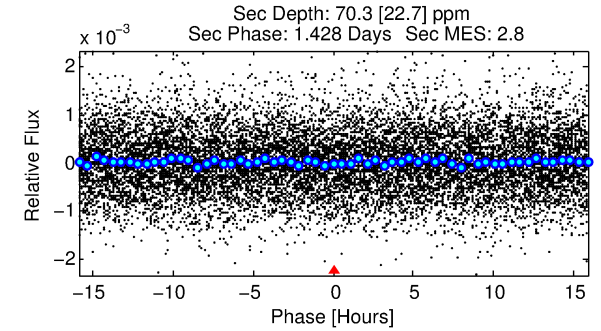
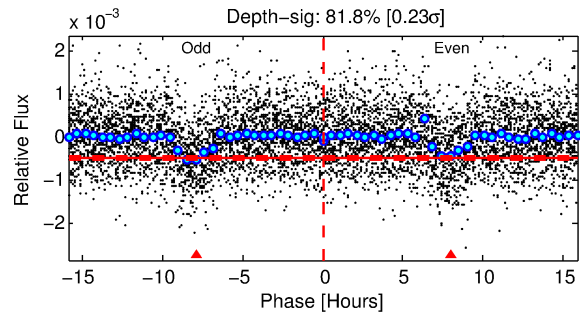
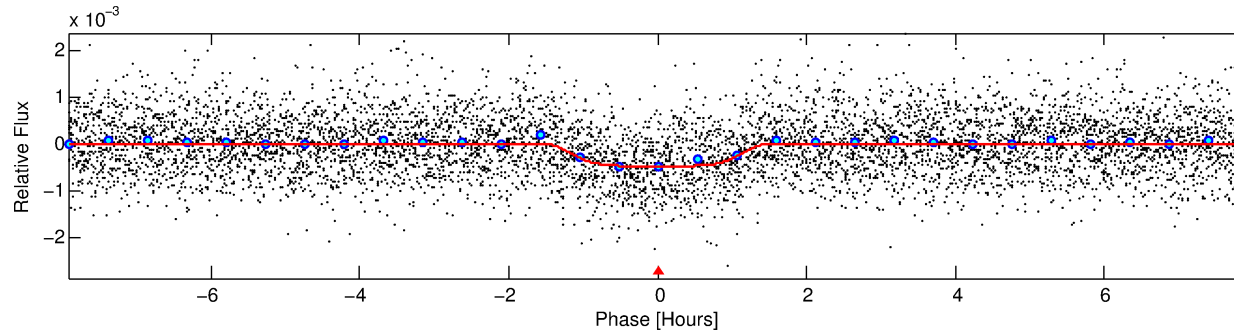
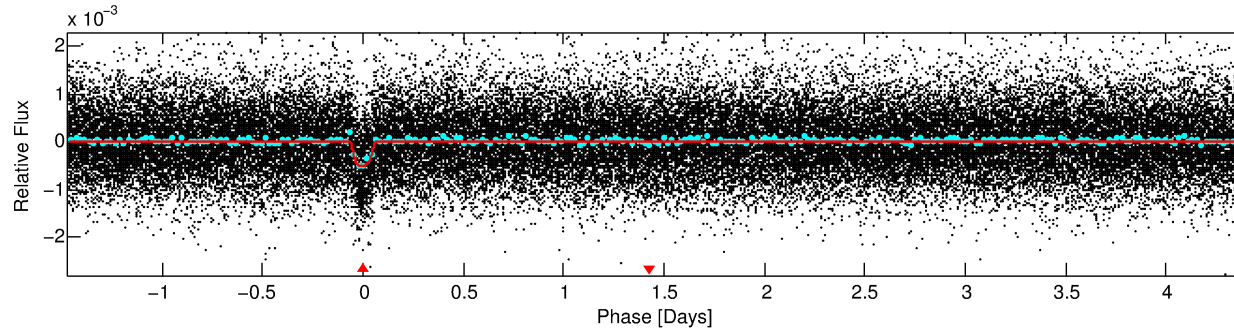
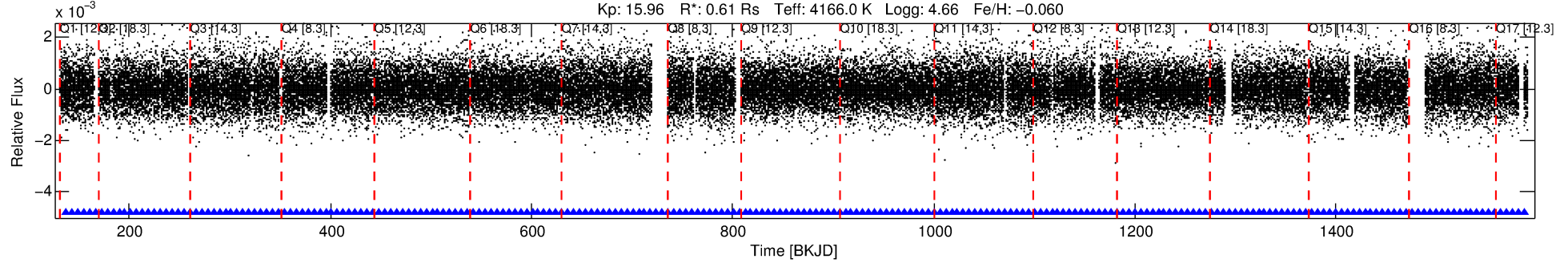
Ephemeris Match Information For 009941066-01

No Significant Match Found

DV One-Page Summary

KIC: 9941066 Candidate: 1 of 1 Period: 5.871 d
KOI: K01584.01 Corr: 0.963

Kp: 15.96 R*: 0.61 Rs Teff: 4166.0 K Logg: 4.66 Fe/H: -0.060



DV Fit Results:

Period = 5.87067 [0.00002] d
Epoch = 137.2458 [0.0024] BKJD
Rp/R* = 0.0244 [0.0068]
a/R* = 8.83 [9.29]
b = 0.88 [0.27]
Seff = 34.09 [3.19]
Teq = 616 [14] K
Rp = 1.63 [0.46] Re
a = 0.0544 [0.0020] AU
Ag = 43.10 [27.82] [1.51σ]
Teffp = 2441 [396] K [4.61σ]

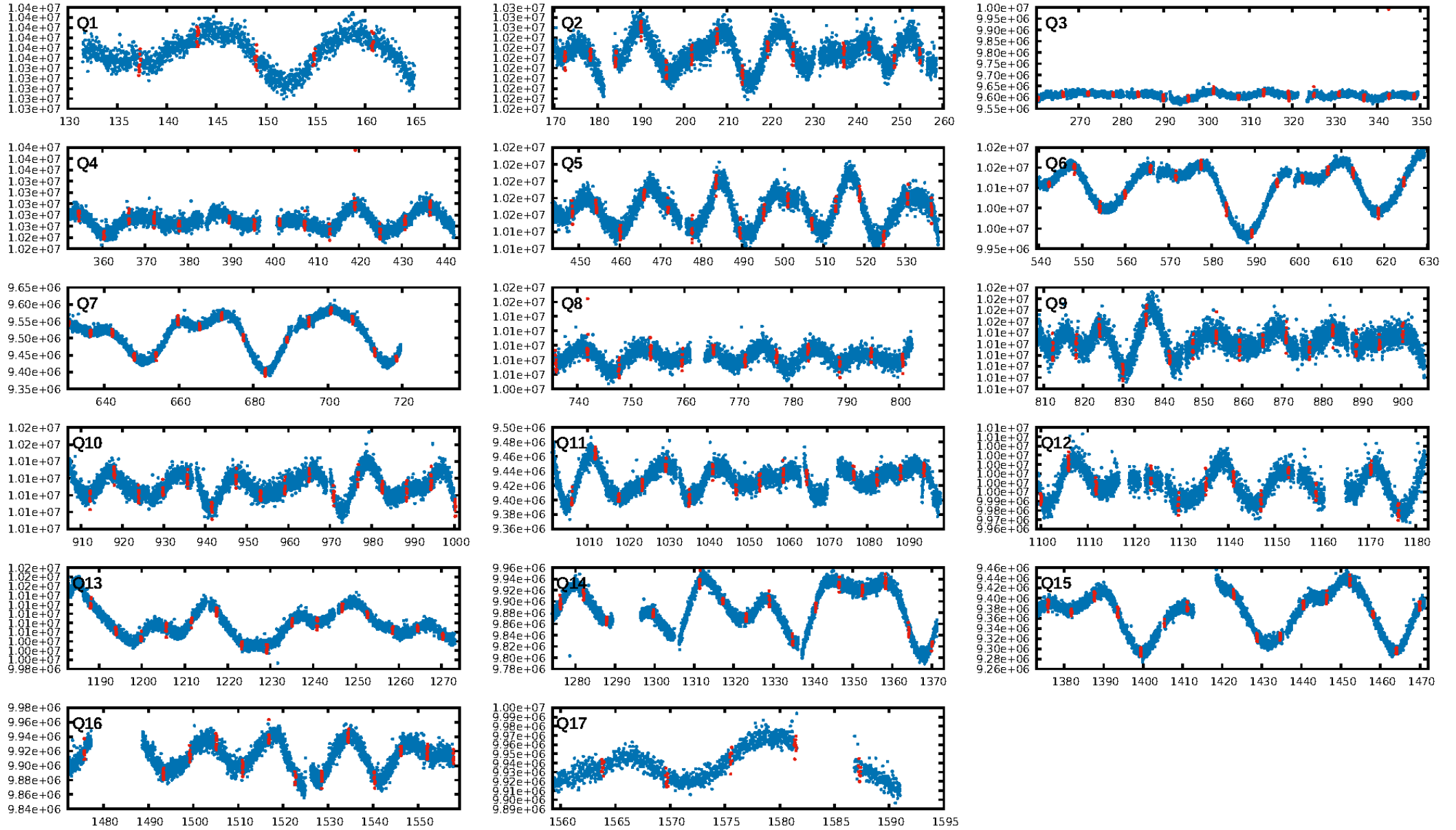
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.55e-83
RollingBand-fgt: 1.00 [220/220]
GhostDiagnostic-chr: 3.374
Centroid-sig: 0.6%
Centroid-so: 1.195 arcsec [1.83σ]
OotOffset-rm: 0.532 arcsec [2.36σ]
KicOffset-rm: 0.485 arcsec [2.16σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

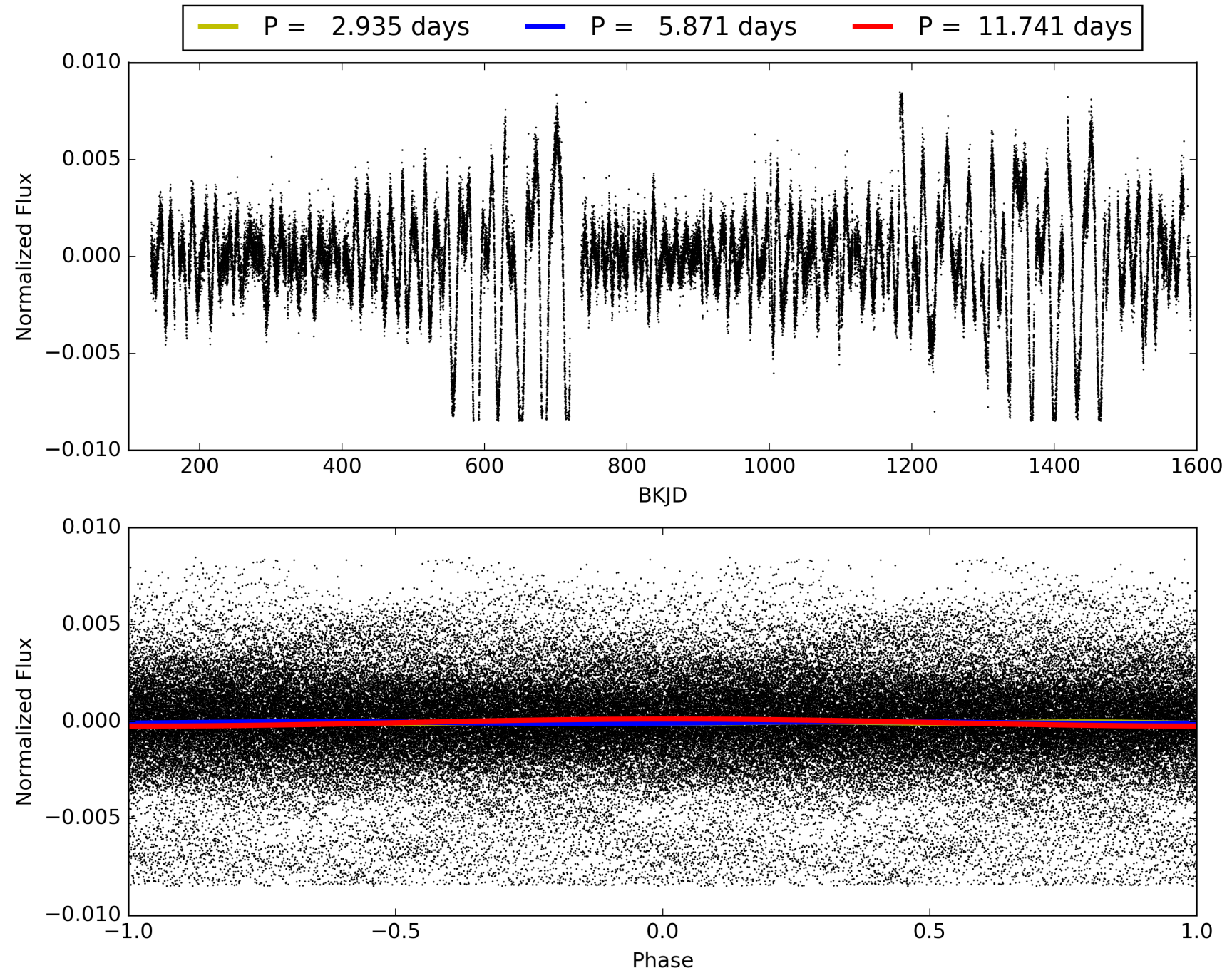
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:57:21 Z

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

TCE 009941066-01, PDC Light Curves

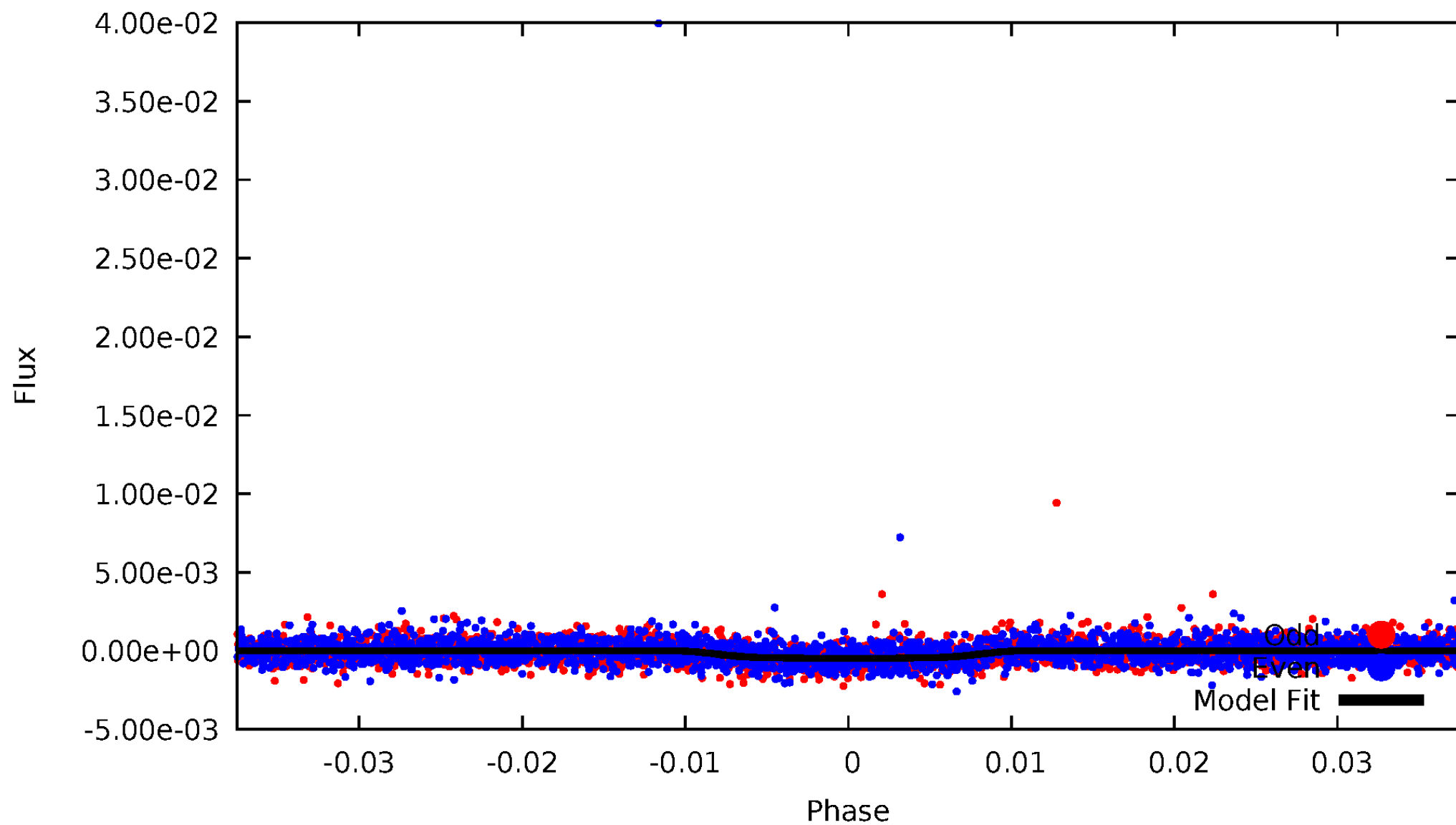


TCE 009941066-01



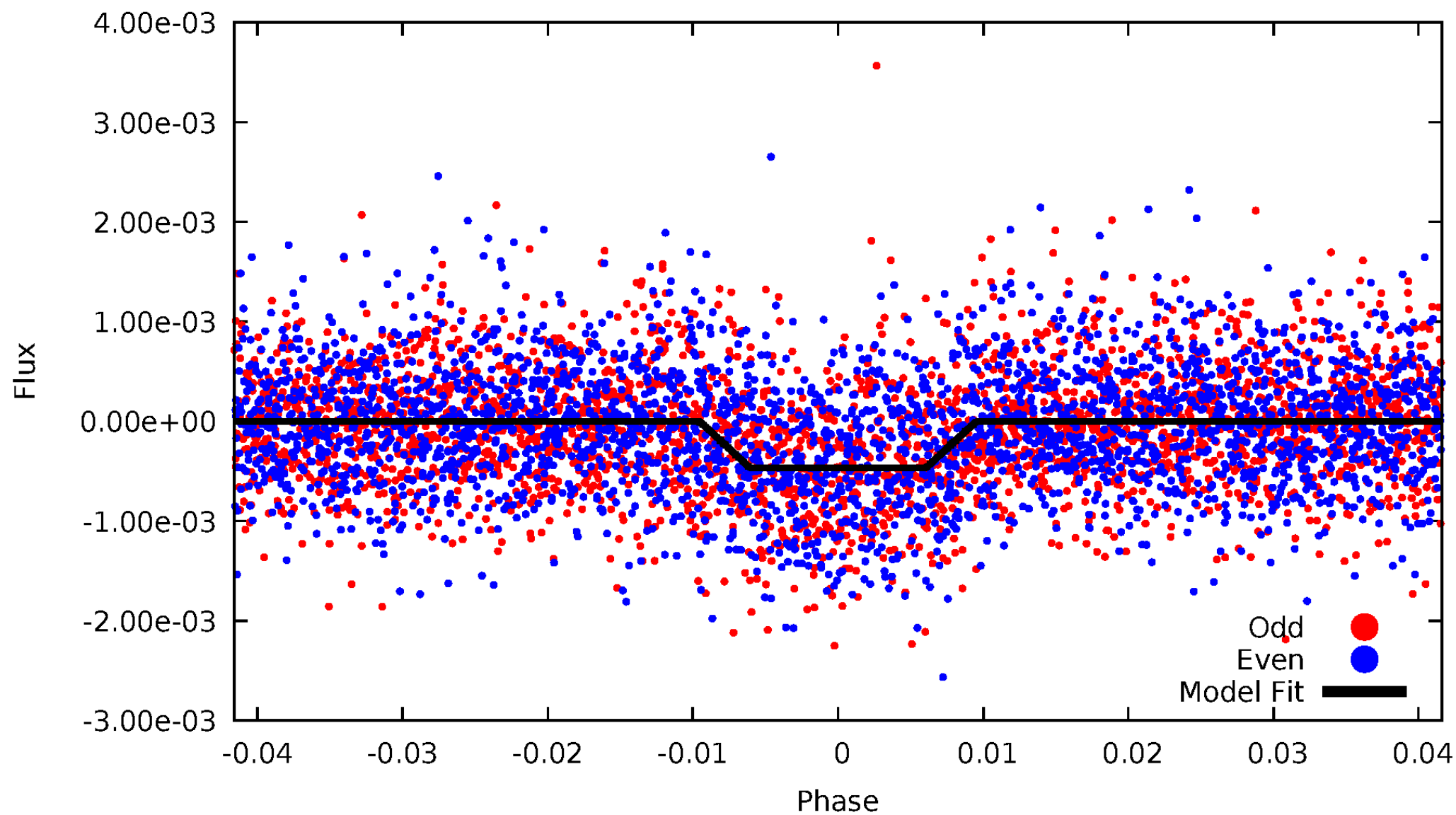
DV Odd/Even

TCE 009941066-01

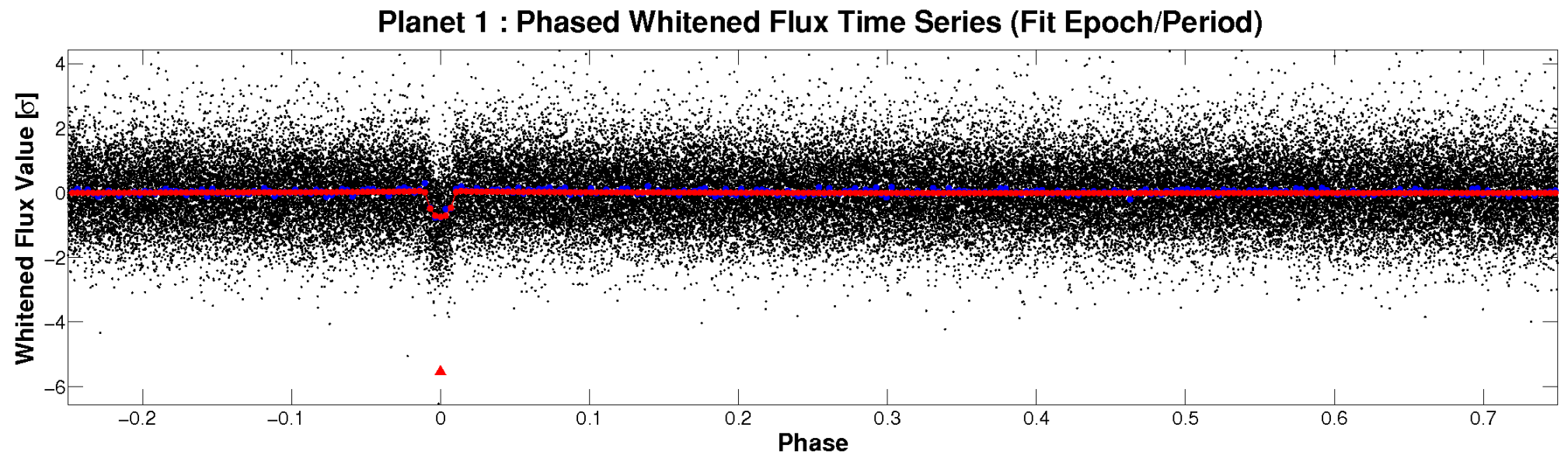
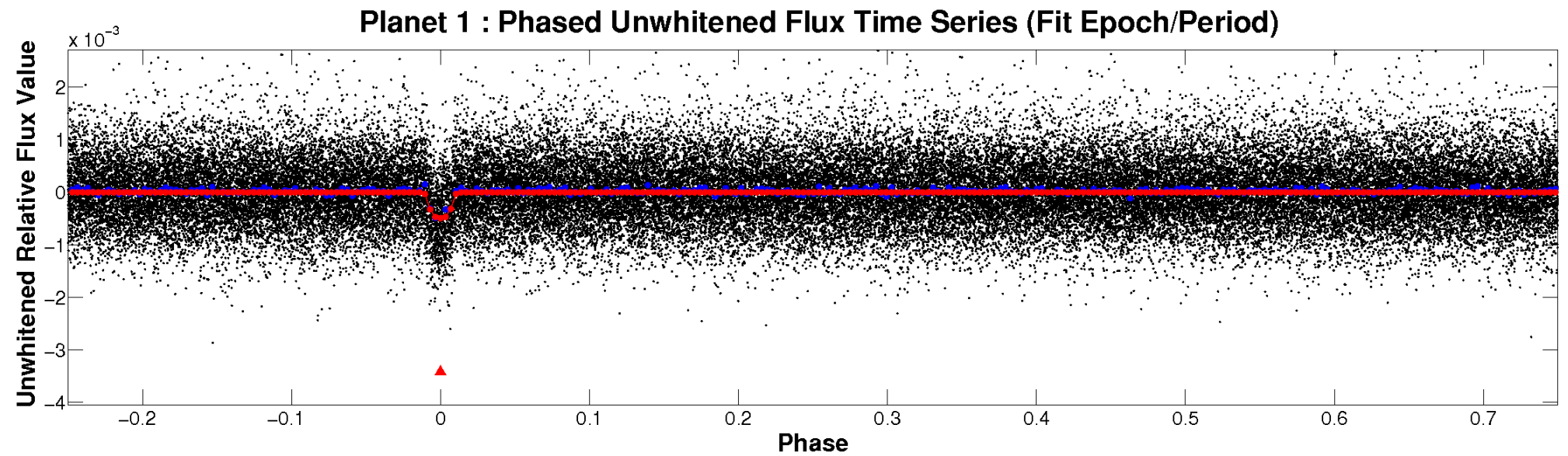


ALT Odd/Even

TCE 009941066-01

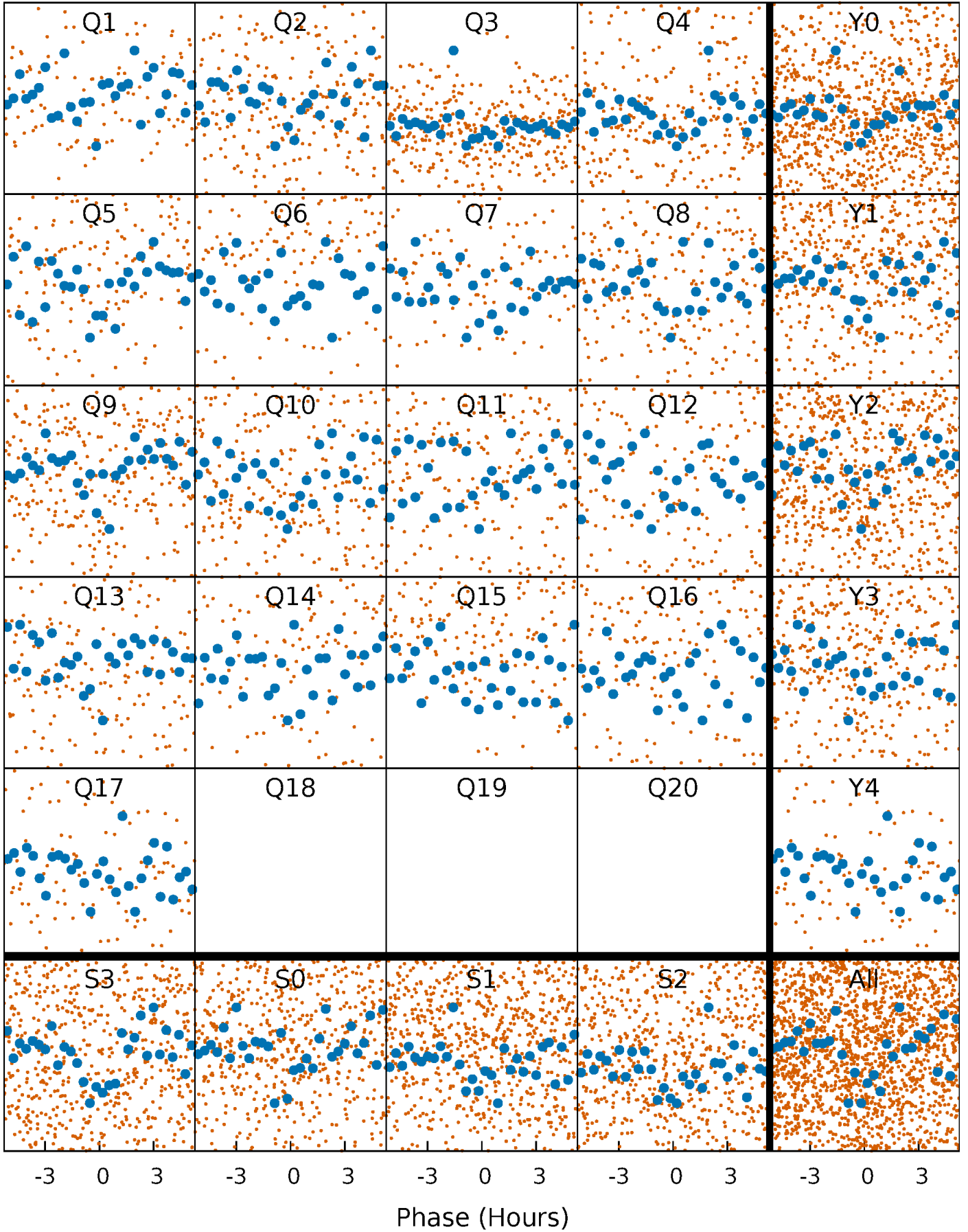


Non-Whitened Vs. Whitened Light Curve



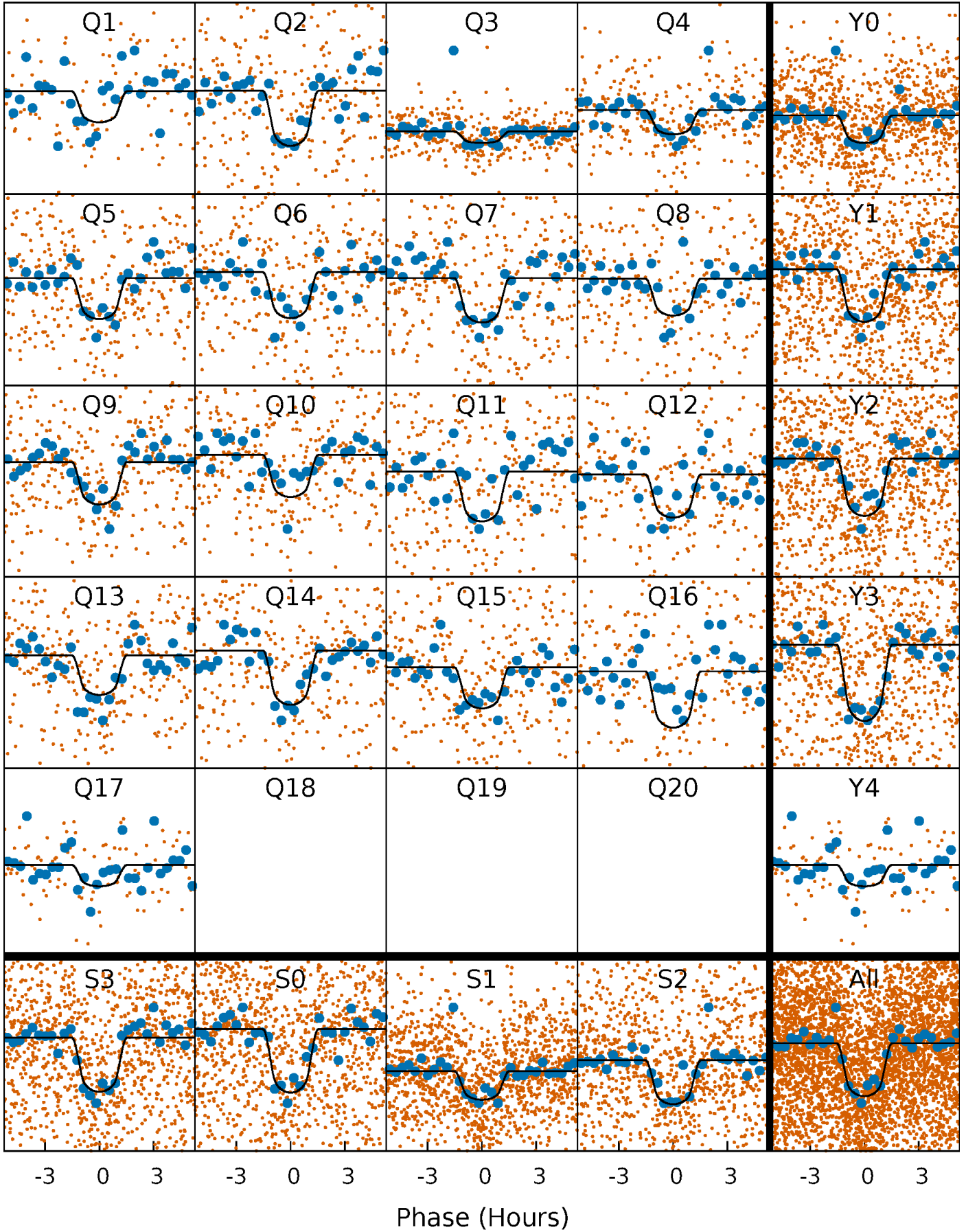
PDC Quarter-Phased Transit Curves

TCE 009941066-01 P= 5.870666 Days $T_0=137.245793$ (BKJD)



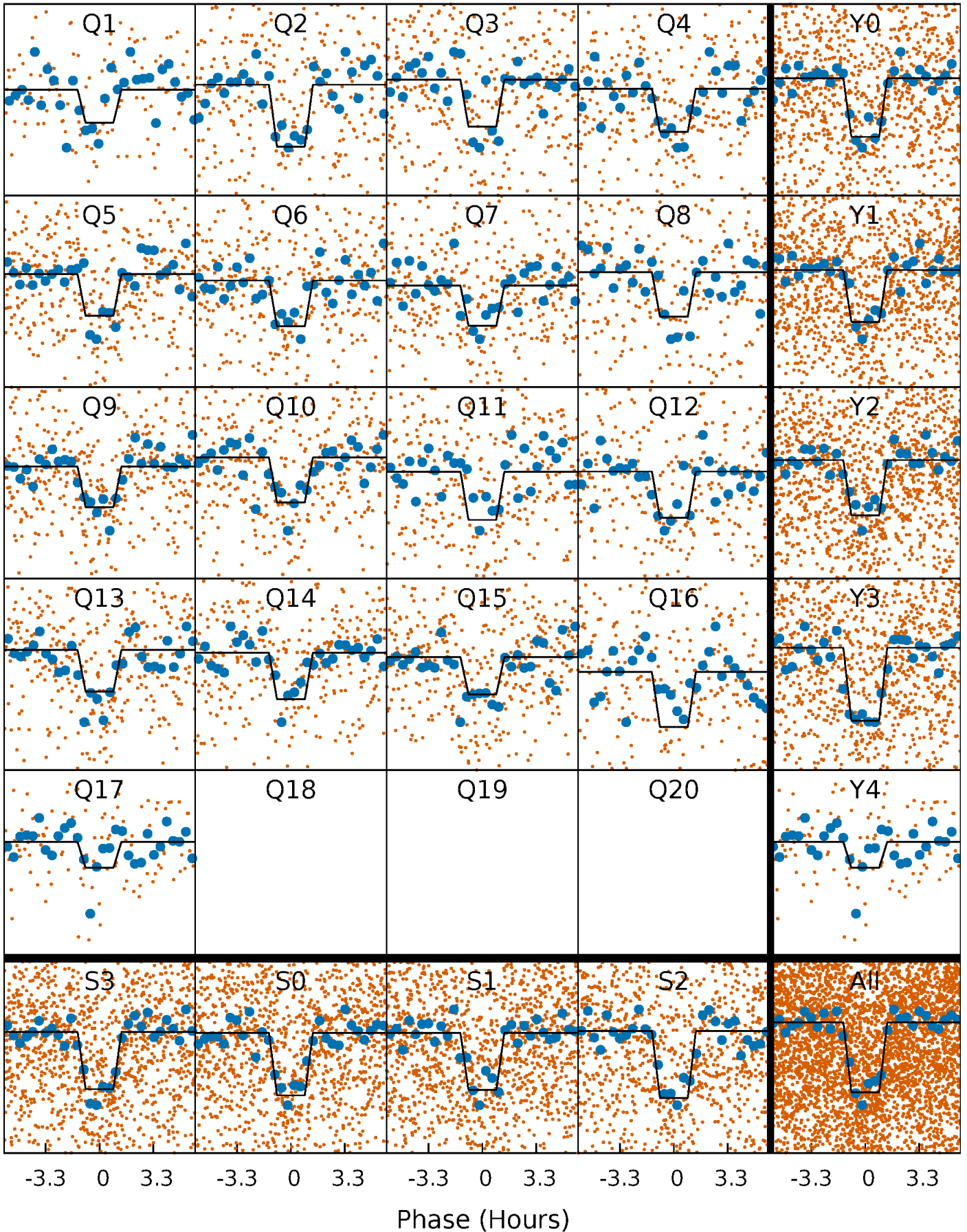
DV Quarter-Phased Transit Curves

TCE 009941066-01 P= 5.870666 Days $T_0=137.245793$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

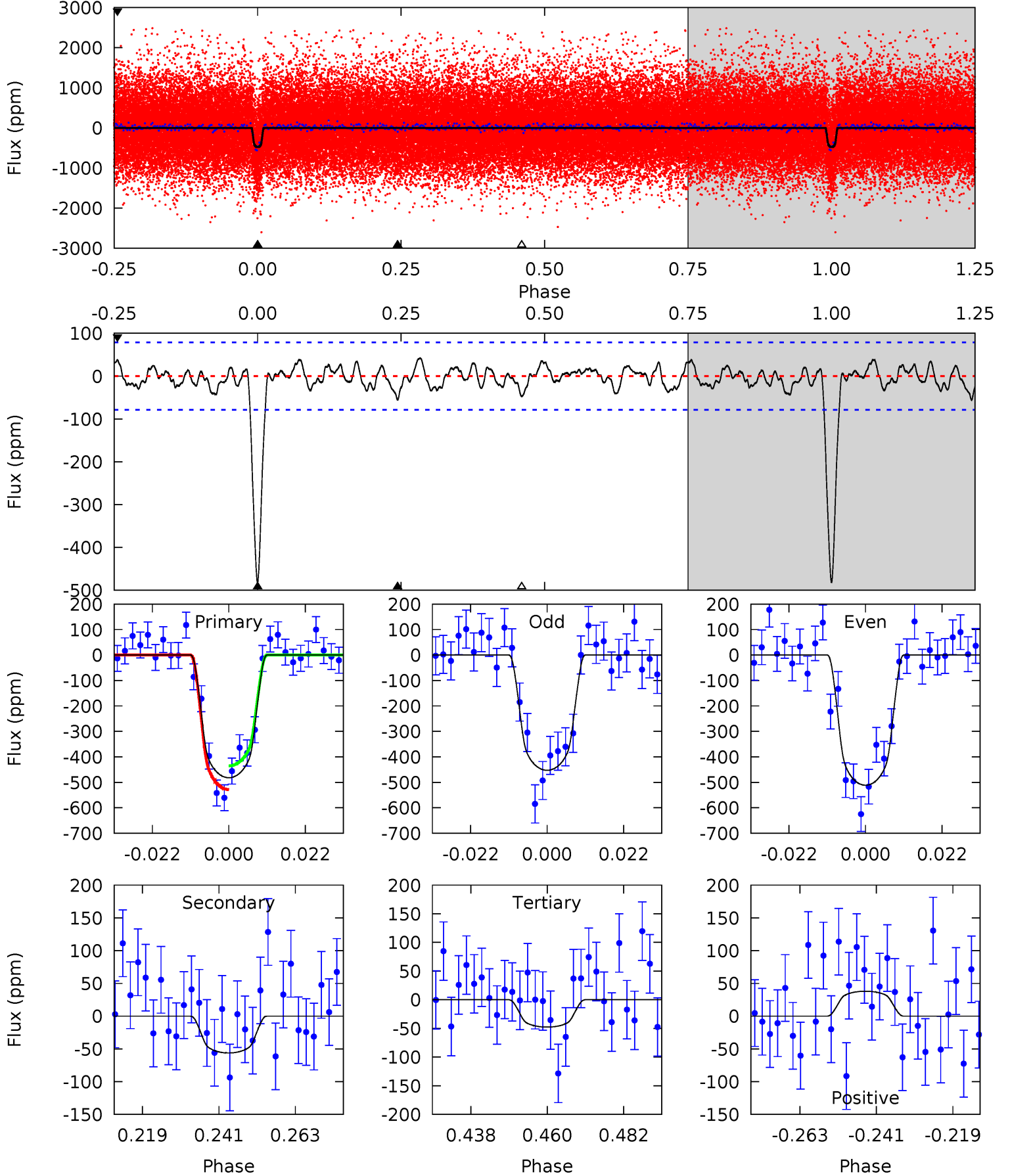
TCE 009941066-01 P= 5.870686 Days $T_0=137.241745$ (BKJD)



DV Model-Shift Uniqueness Test

009941066-01, P = 5.870666 Days, E = 131.375127 Days

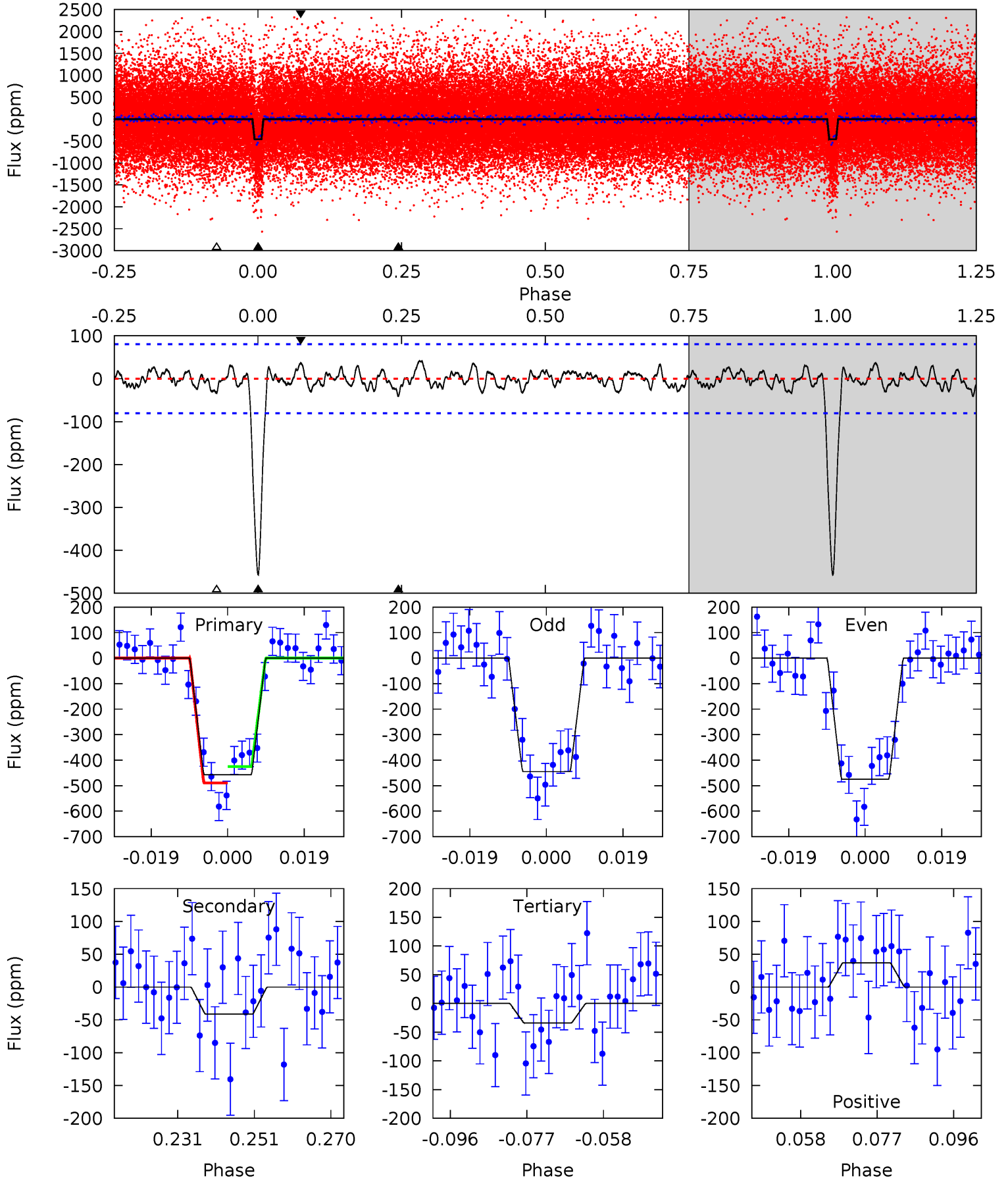
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	3.49	2.96	2.36	4.87	2.29	1.18	26.9	27.5	0.53	1.13	1.82	0.93	0.08	2.89



Alt Model-Shift Uniqueness Test

009941066-01, P = 5.870686 Days, E = 131.371059 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.9	2.51	2.07	2.26	4.90	2.34	0.94	25.8	25.7	0.44	0.25	0.92	0.99	0.08	1.95



Stellar Parameters For KIC 009941066

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4166^{+83}_{-83}	$4.660^{+0.024}_{-0.022}$	$-0.060^{+0.150}_{-0.150}$	$0.612^{+0.027}_{-0.030}$	$0.624^{+0.029}_{-0.033}$	$3.841^{+0.409}_{-0.338}$
	+2%/-2%	+1%/-0%	+250%/-250%	+4%/-5%	+5%/-5%	+11%/-9%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 009941066-01 / KOI 1584.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-56 ± 16	$1.63^{+0.44}_{-0.46}$	861^{+19}_{-20}	2866^{+300}_{-224}	34^{+34}_{-15}
Alt.	-41 ± 16	$1.46^{+0.47}_{-0.46}$	860^{+19}_{-18}	2823^{+357}_{-264}	31^{+41}_{-16}

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

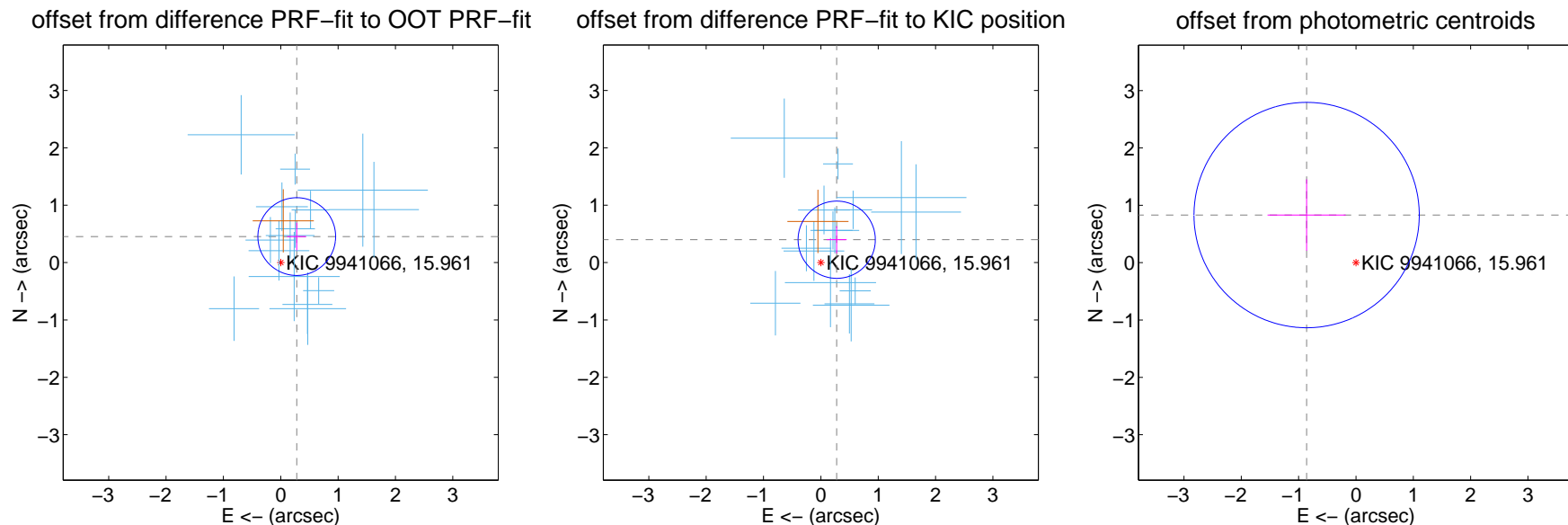
DV Centroid Data

Supplemental centroid analysis for 009941066-01. Kepler magnitude: 15.96. Transit SNR 21.08

There are 15 quarters with good PRF difference image offsets

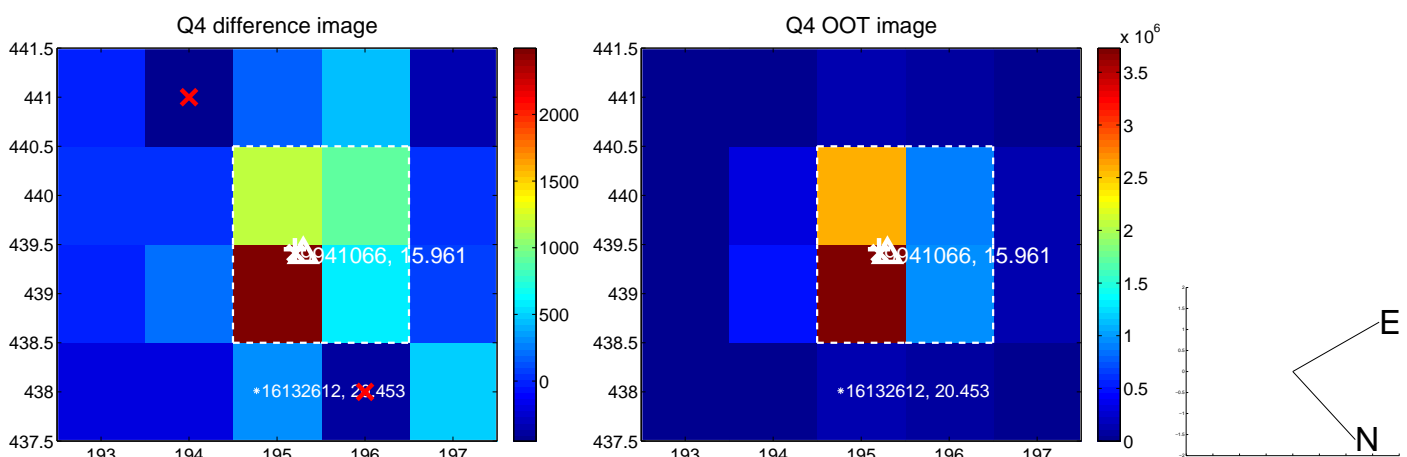
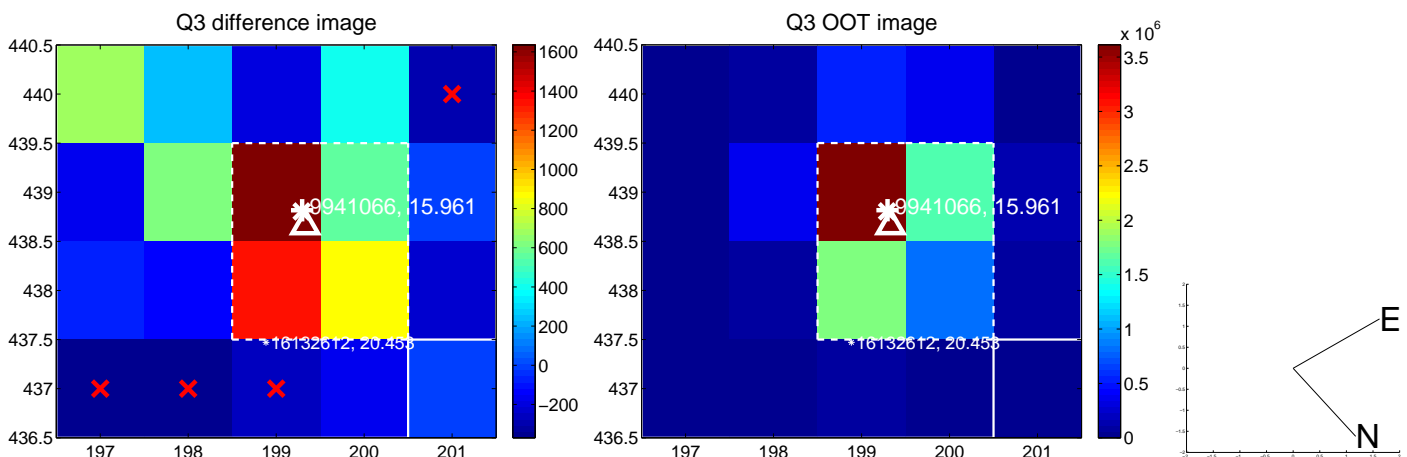
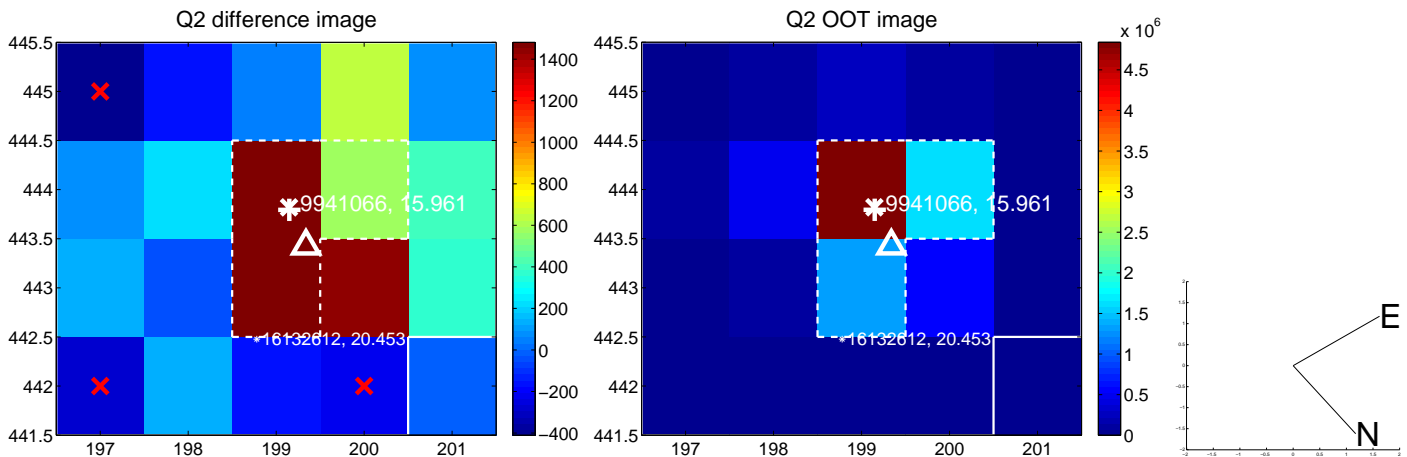
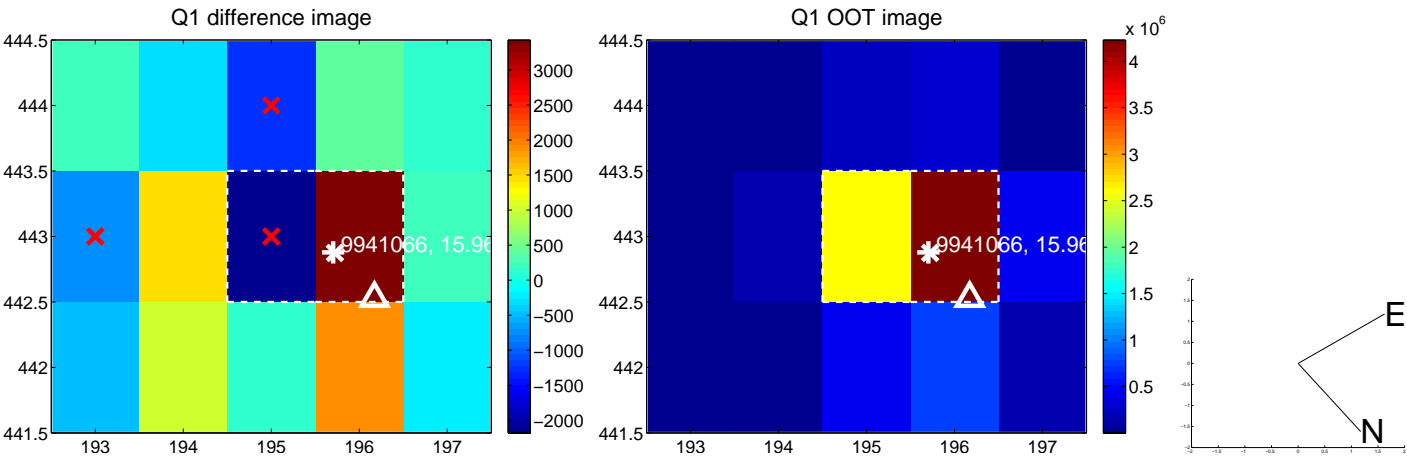
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.532 ± 0.226	2.36	-0.279 ± 0.166	0.453 ± 0.241
PRF-fit source offset from KIC position	0.485 ± 0.224	2.16	-0.276 ± 0.174	0.398 ± 0.238
photometric centroid source offset	1.20 ± 0.65	1.83	0.86 ± 0.68	0.83 ± 0.62

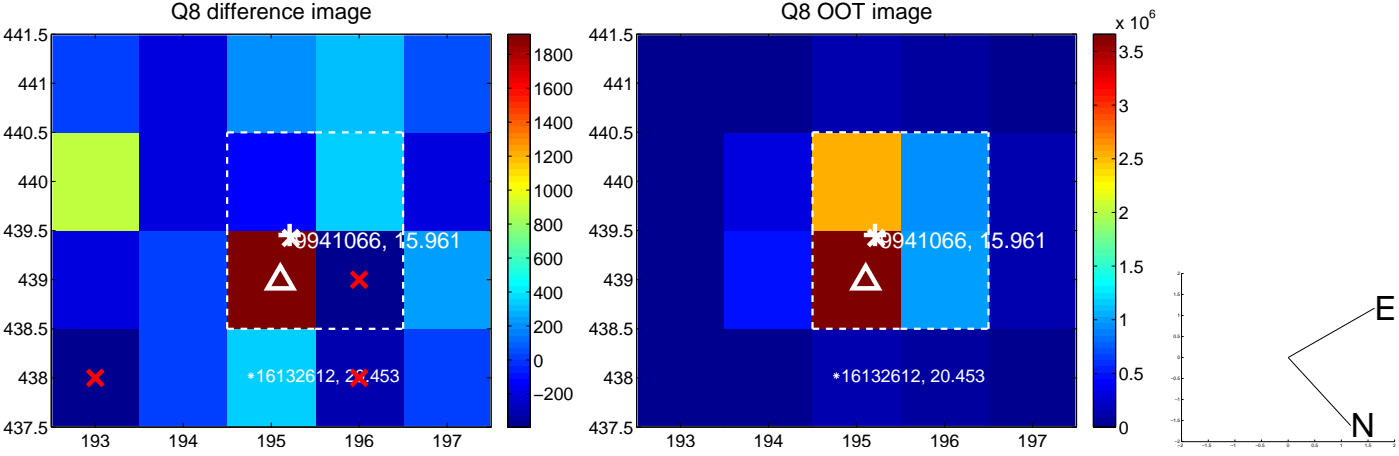
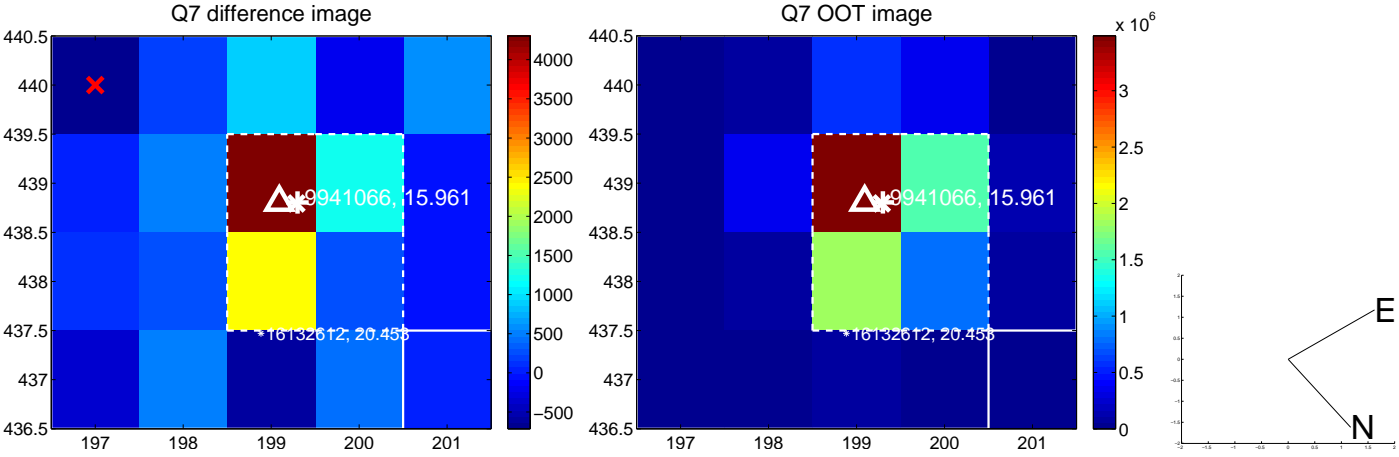
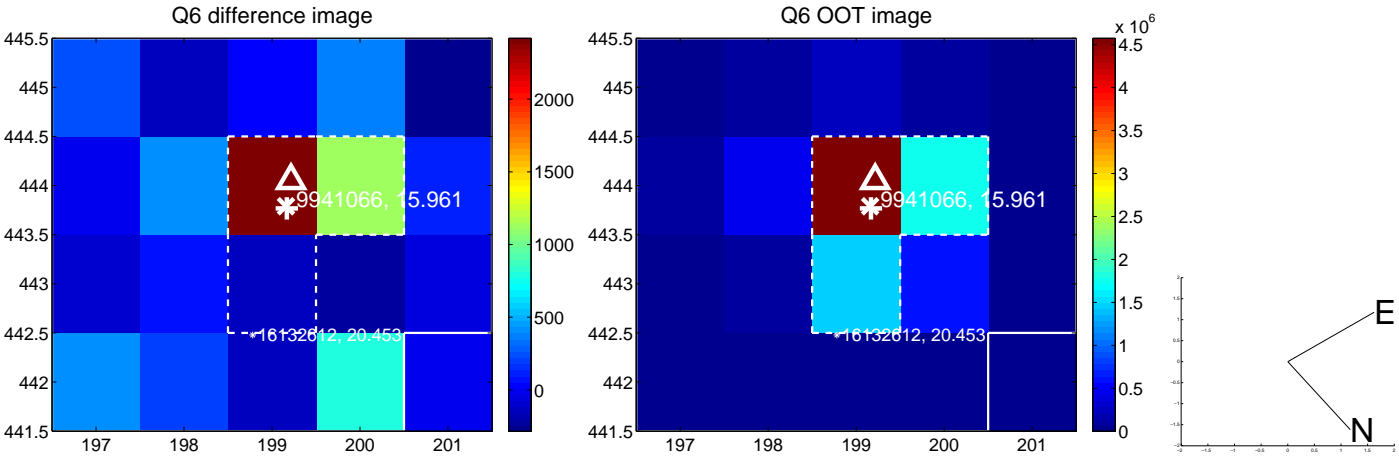
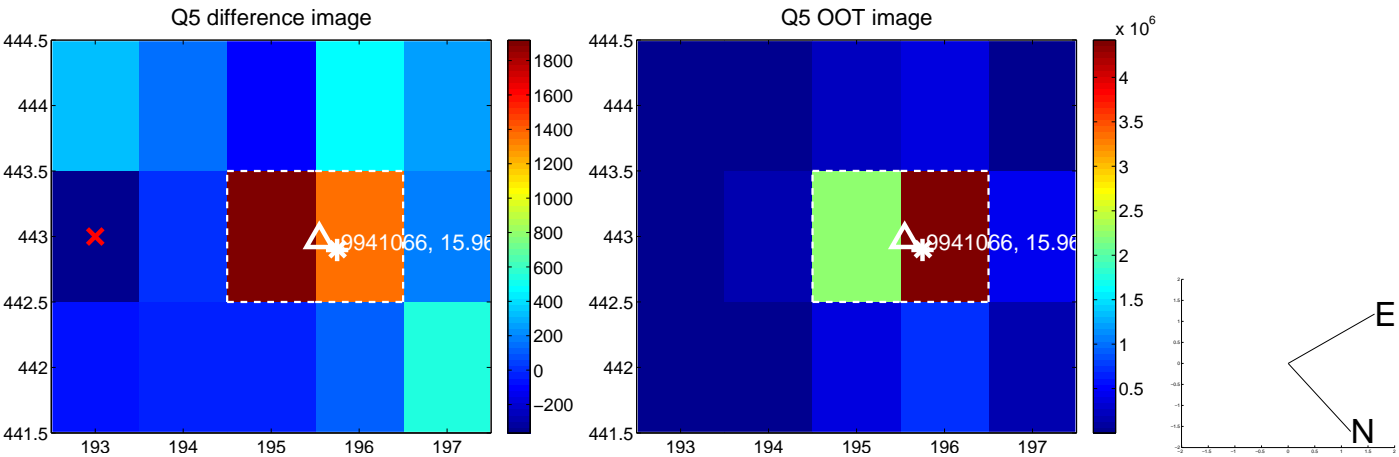


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

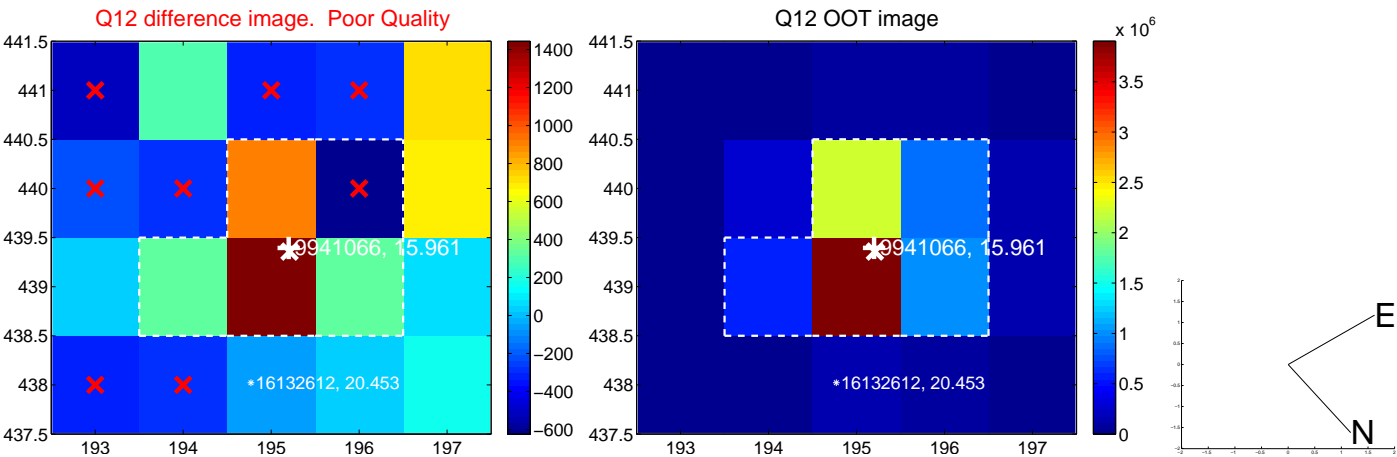
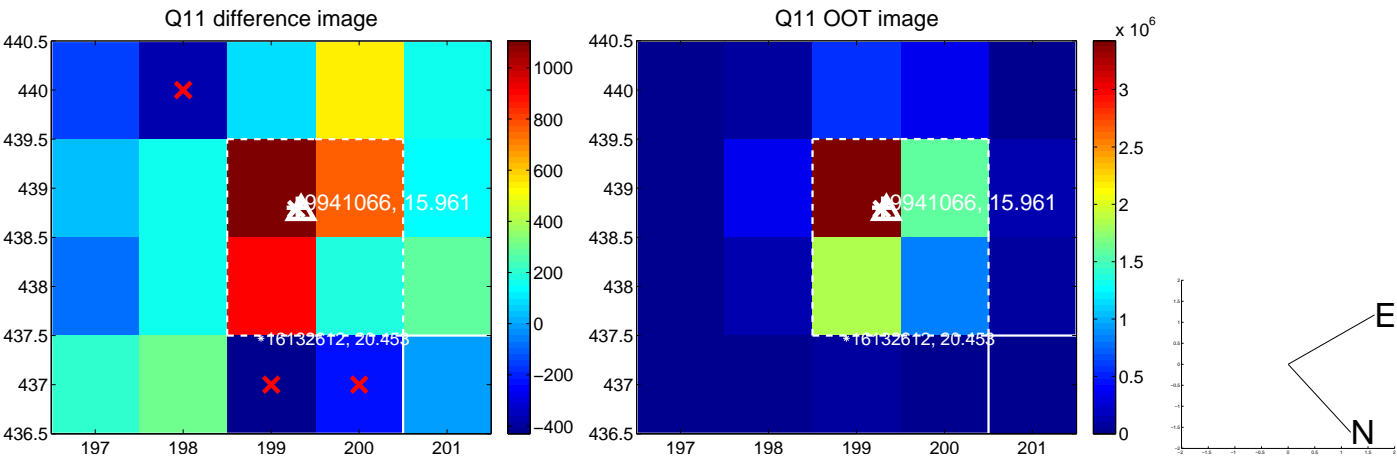
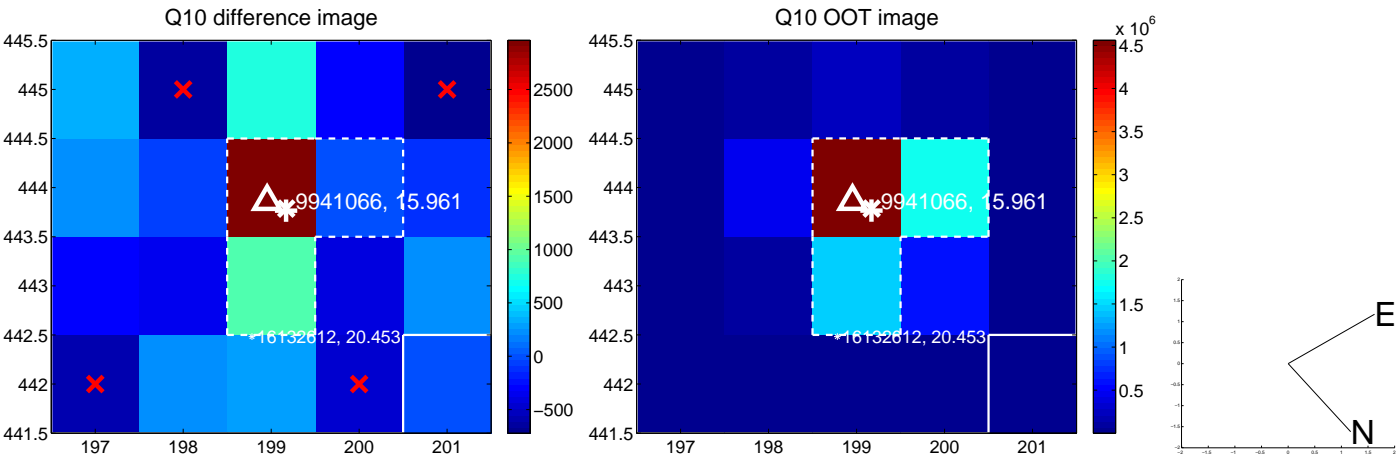
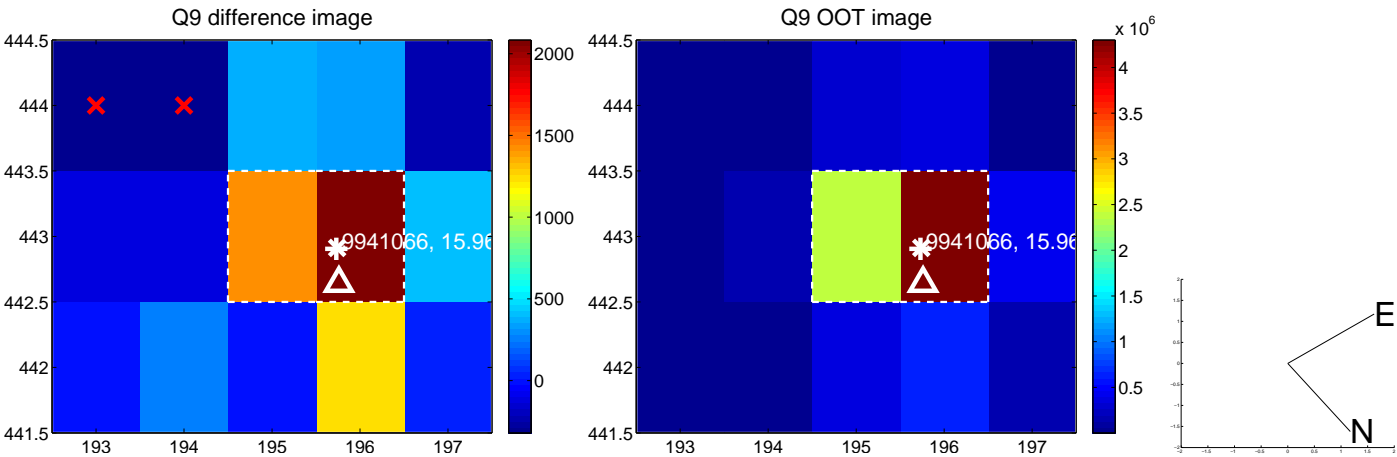
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



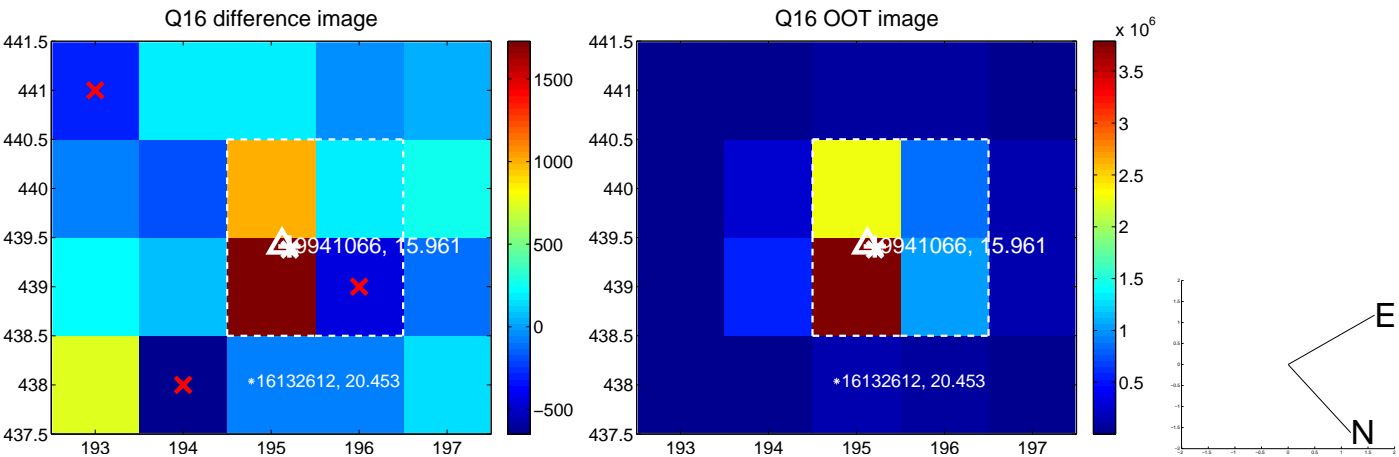
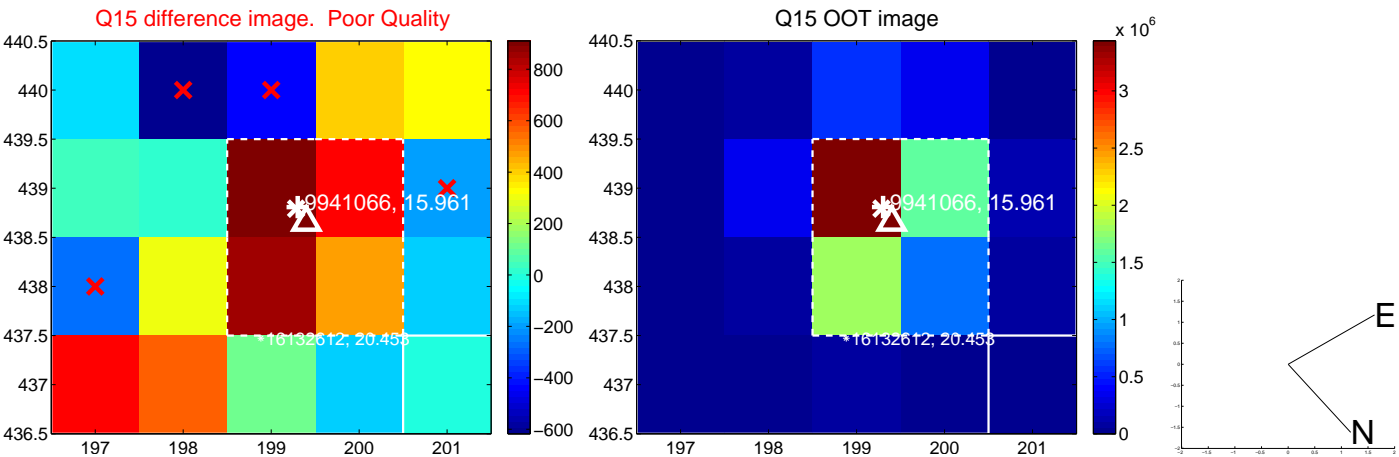
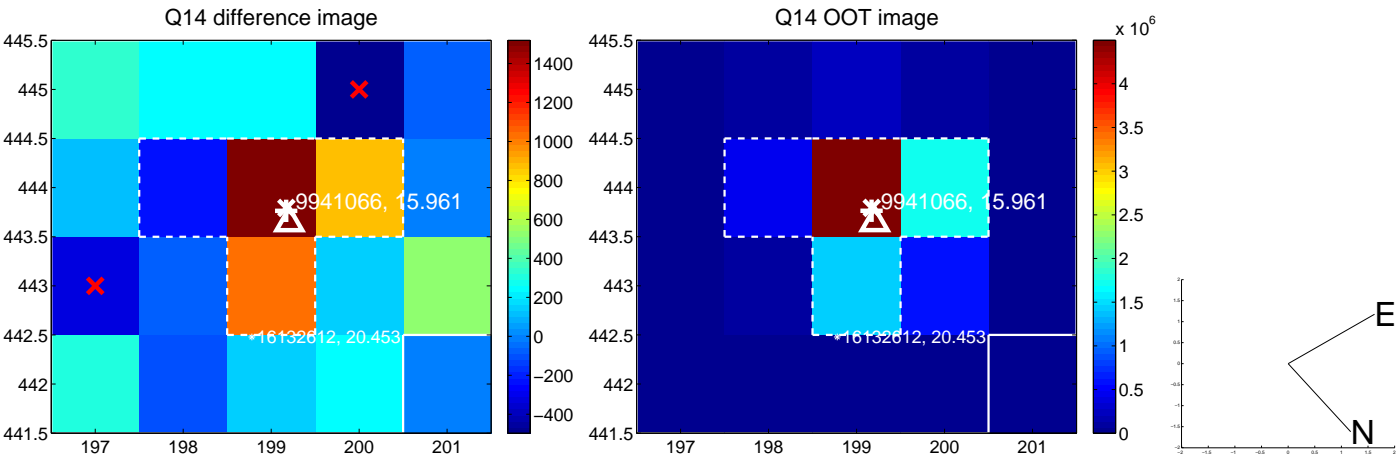
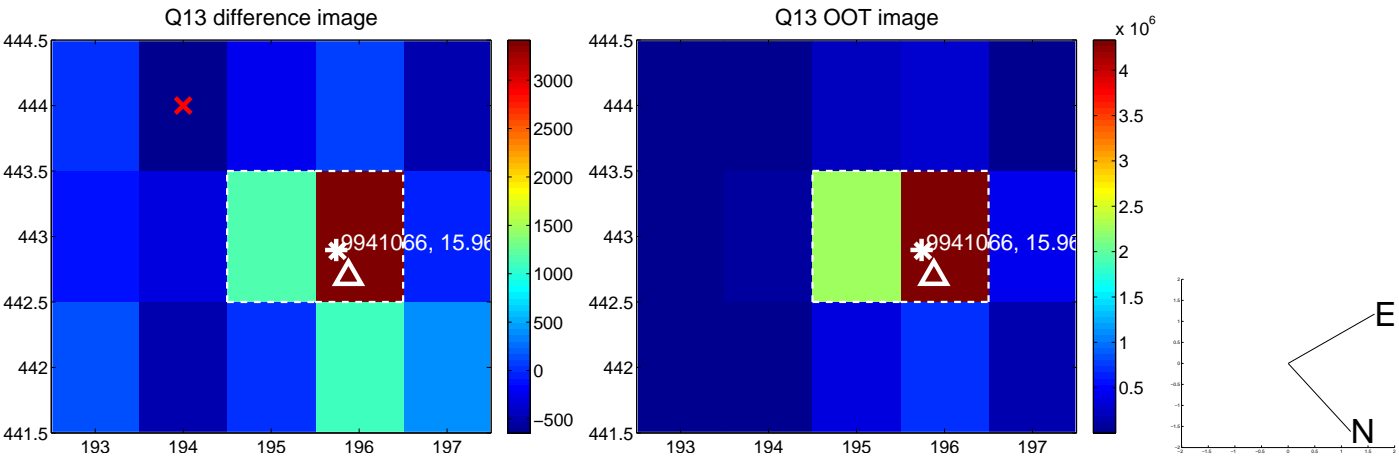
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



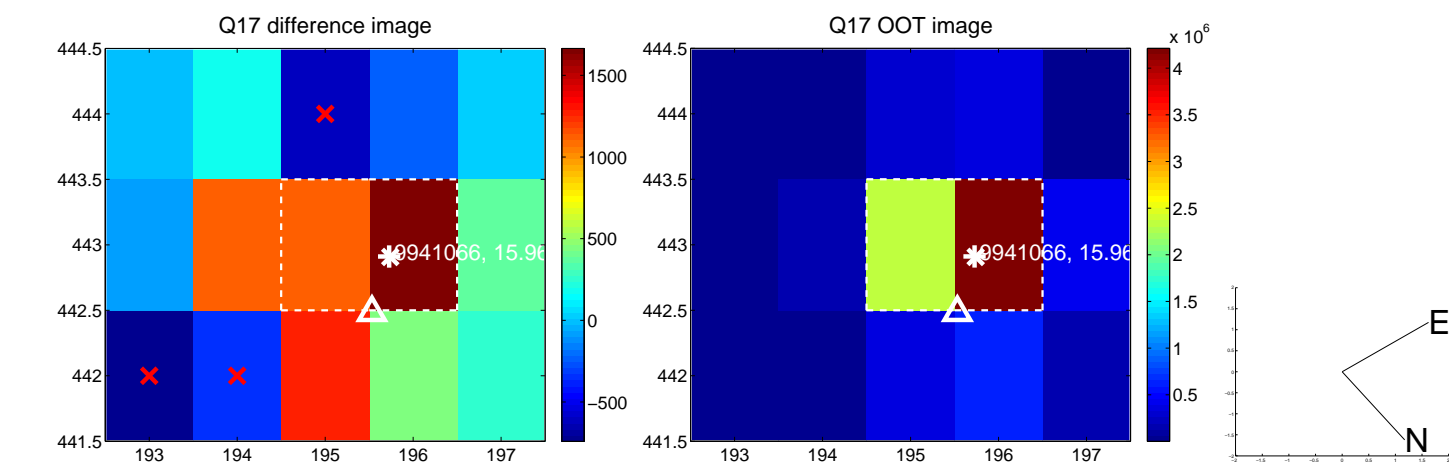
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



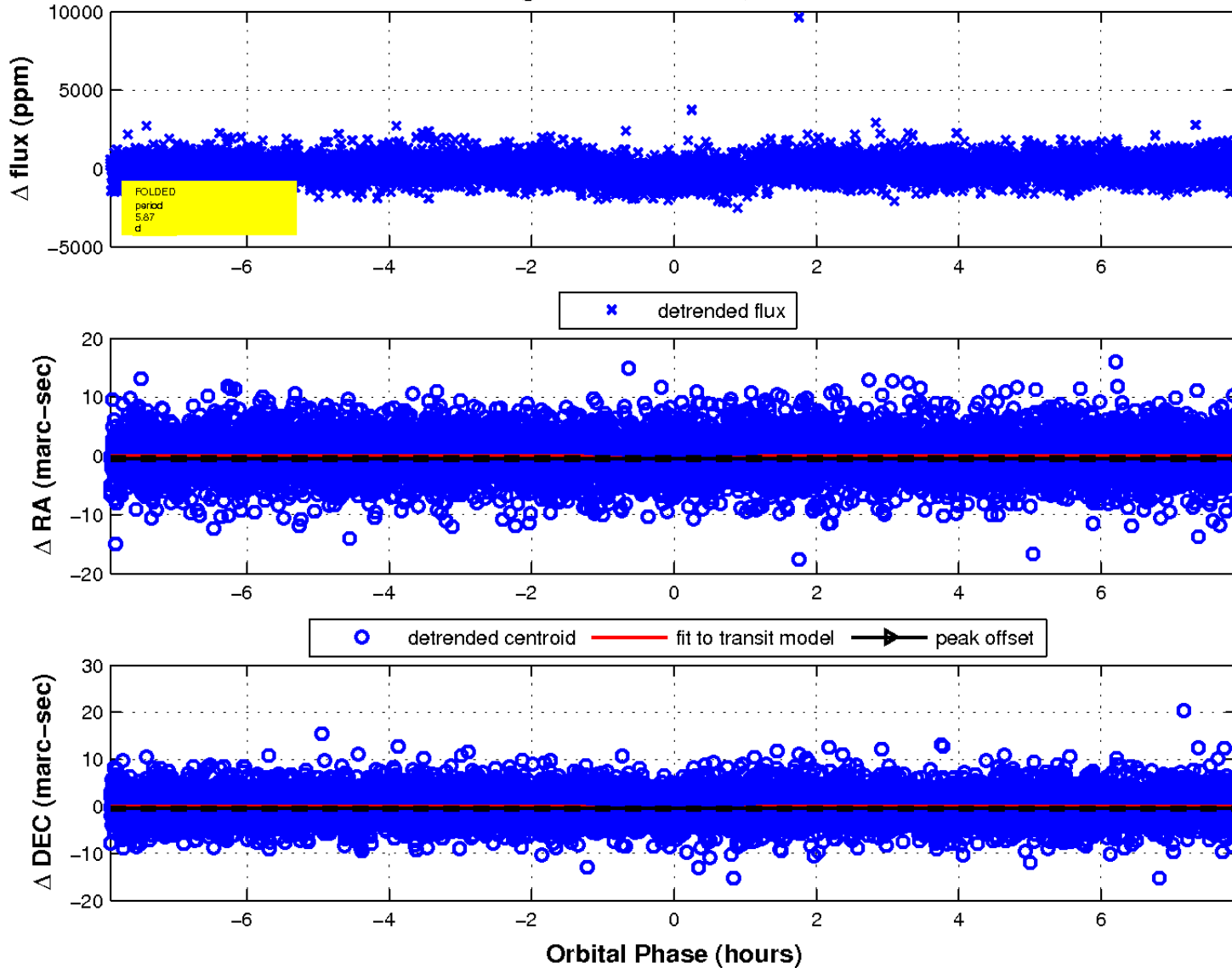
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

