

KIC 006937529

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})
006937529-01	OBS	4382.01	2.946452	132.432083	50.3	3.291	11.0	10.9	1.17	6481	0.99	1189.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006937529-01	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.

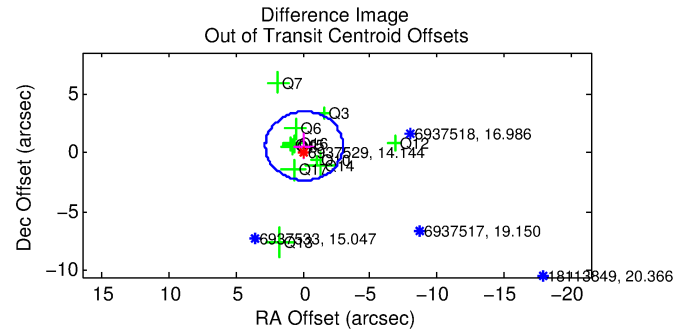
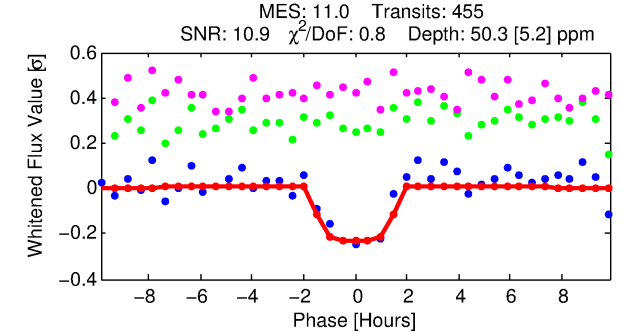
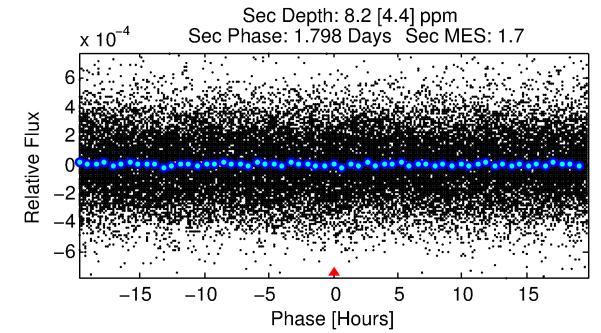
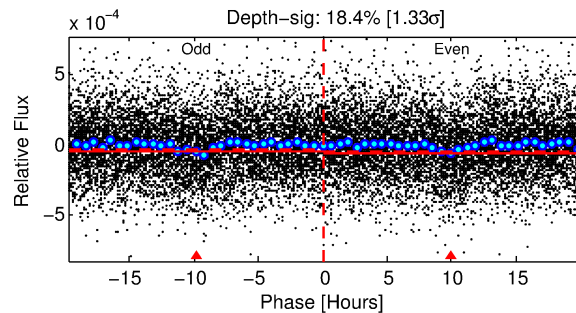
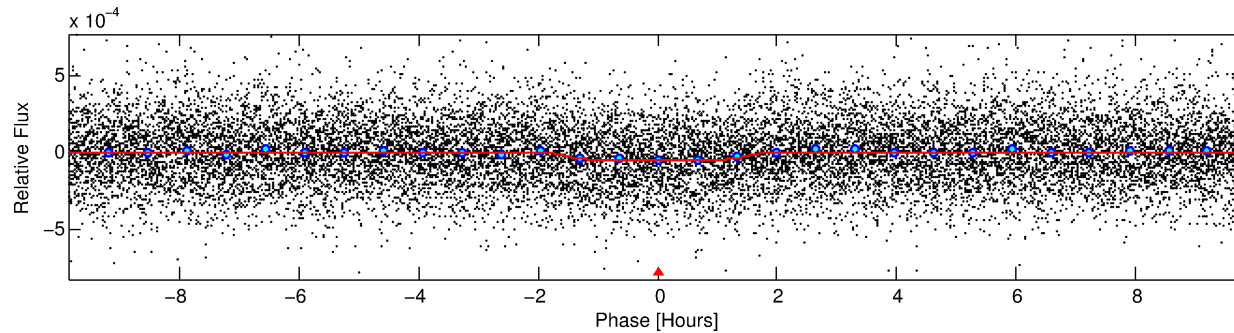
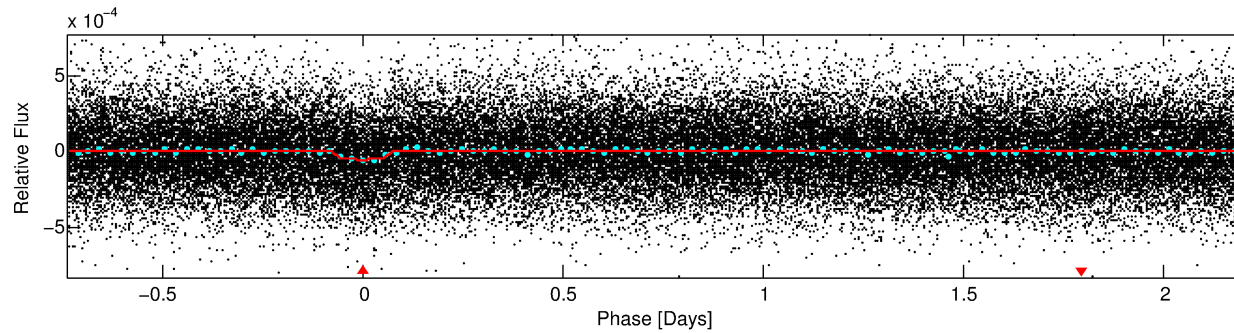
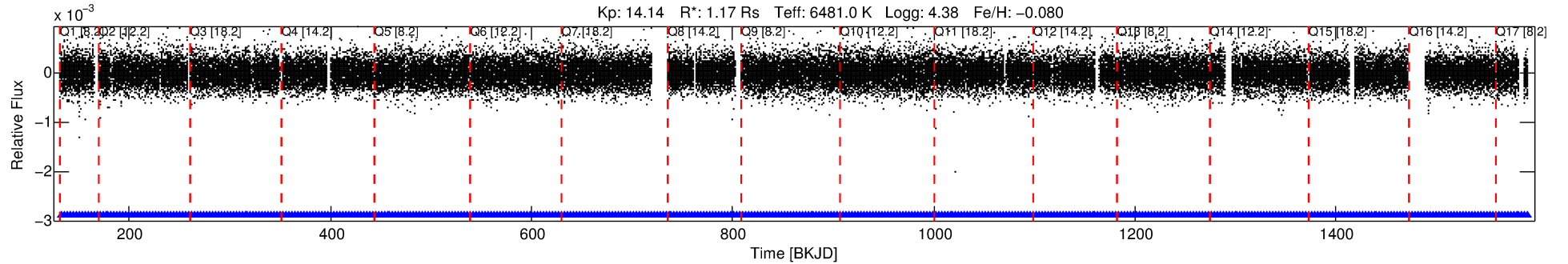
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006937529-01

No Significant Match Found

DV One-Page Summary

KIC: 6937529 Candidate: 1 of 1 Period: 2.946 d
KOI: K04382.01 Corr: 0.914



DV Fit Results:

Period = 2.94645 [0.00002] d
Epoch = 132.4321 [0.0044] BKJD
Rp/R* = 0.0077 [0.0033]
a/R* = 2.96 [6.60]
b = 0.92 [0.42]
Seff = 1189.69 [407.82]
Teq = 1498 [128] K
Rp = 0.99 [0.51] Re
a = 0.0427 [0.0096] AU
Ag = 8.39 [8.97] [0.82 σ]
Teffp = 3941 [1012] K [2.40 σ]

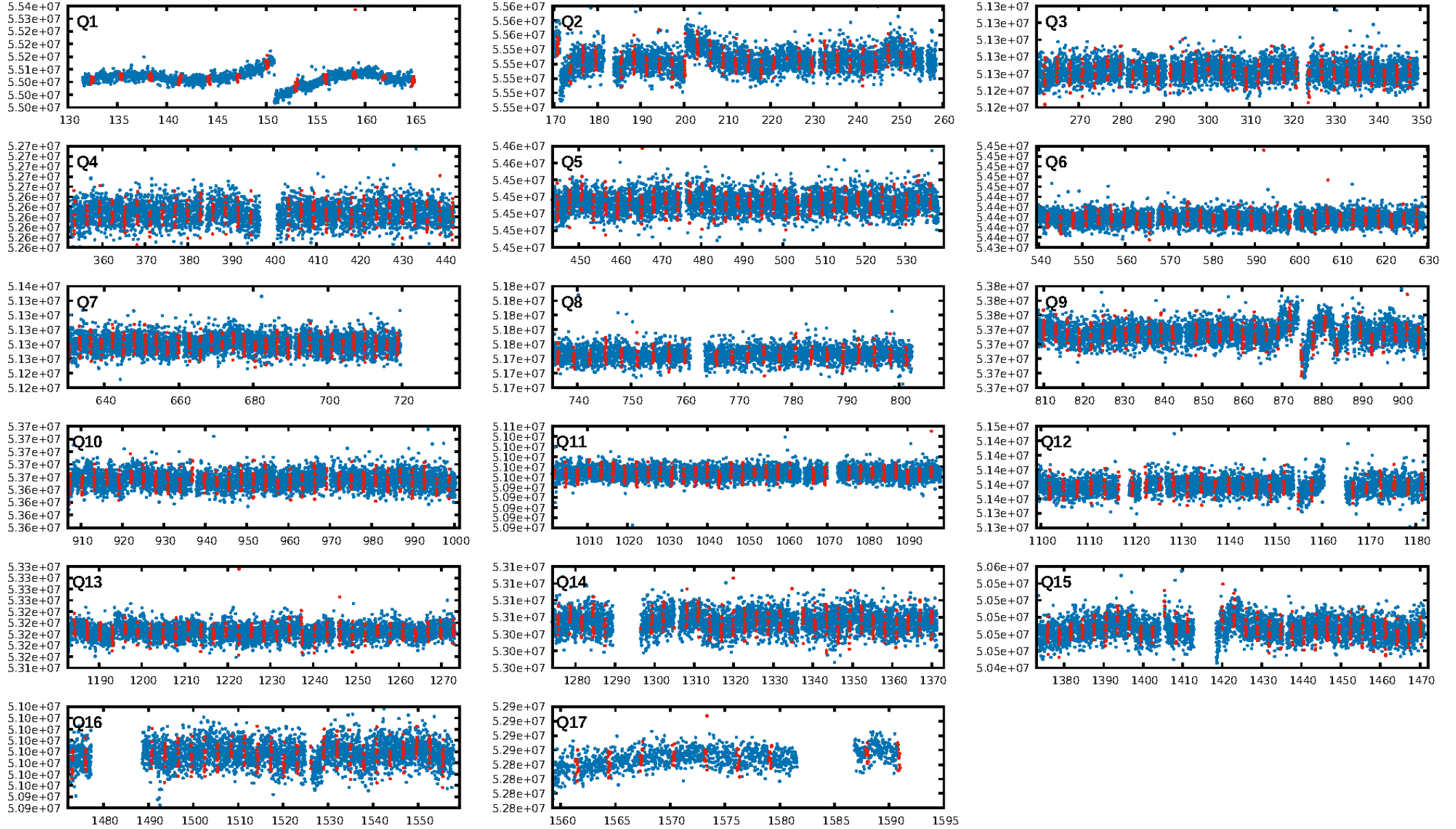
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.52e-27
RollingBand-fgt: 1.00 [434/434]
GhostDiagnostic-chr: -2.721
Centroid-sig: 4.0%
Centroid-so: 2.036 arcsec [2.17 σ]
OotOffset-rm: 0.586 arcsec [0.61 σ]
OotOffset-st: 3/3/3/2 [11]
KicOffset-rm: 0.238 arcsec [0.26 σ]
KicOffset-st: 3/3/3/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

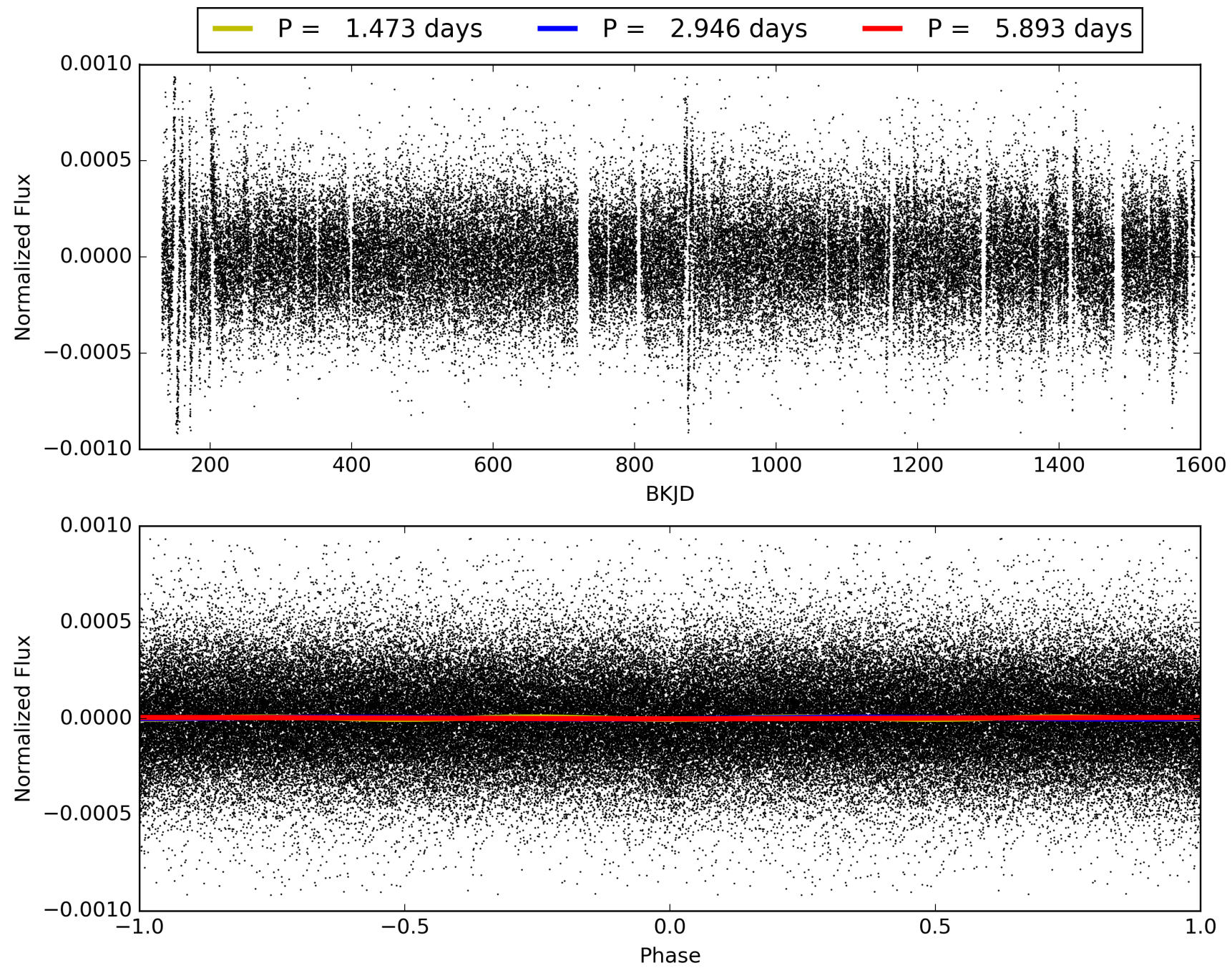
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:30:57 Z

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

TCE 006937529-01, PDC Light Curves

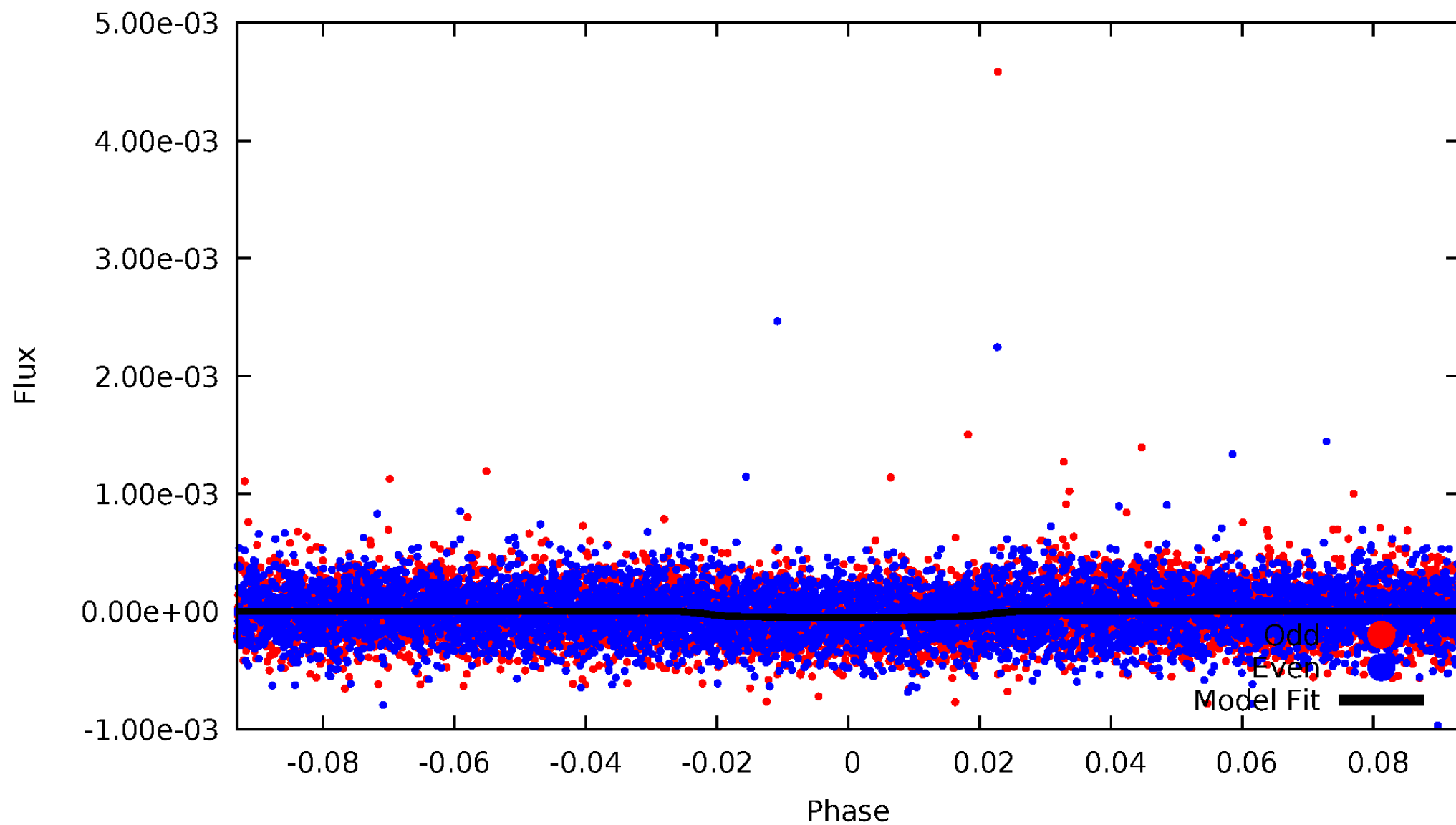


TCE 006937529-01



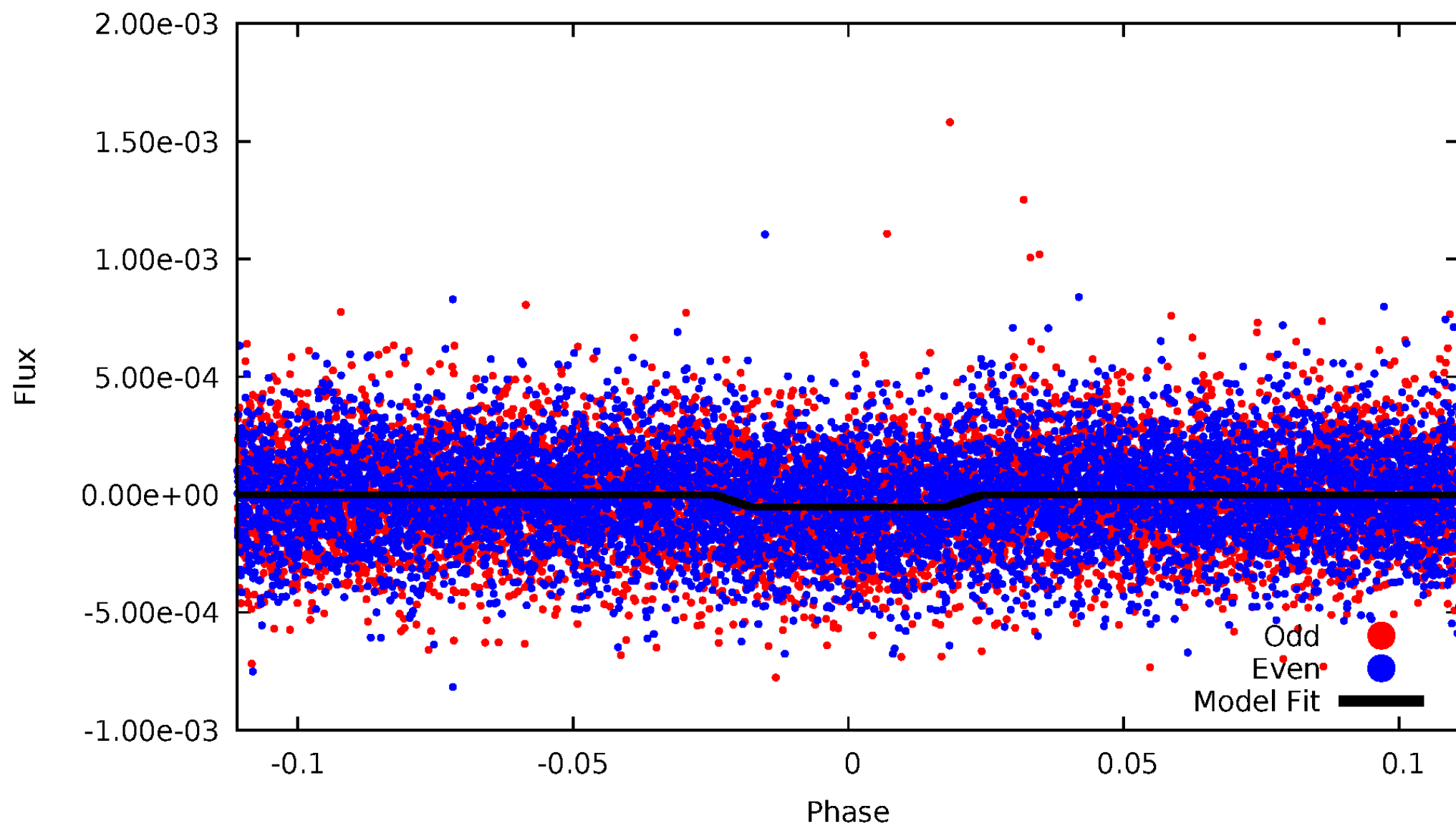
DV Odd/Even

TCE 006937529-01

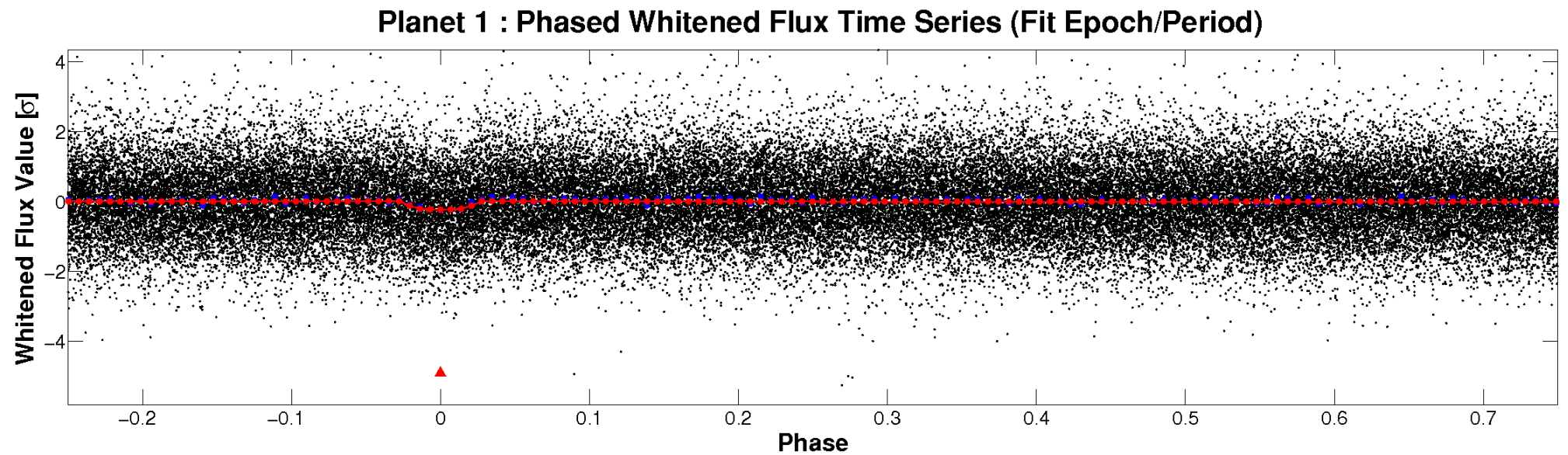
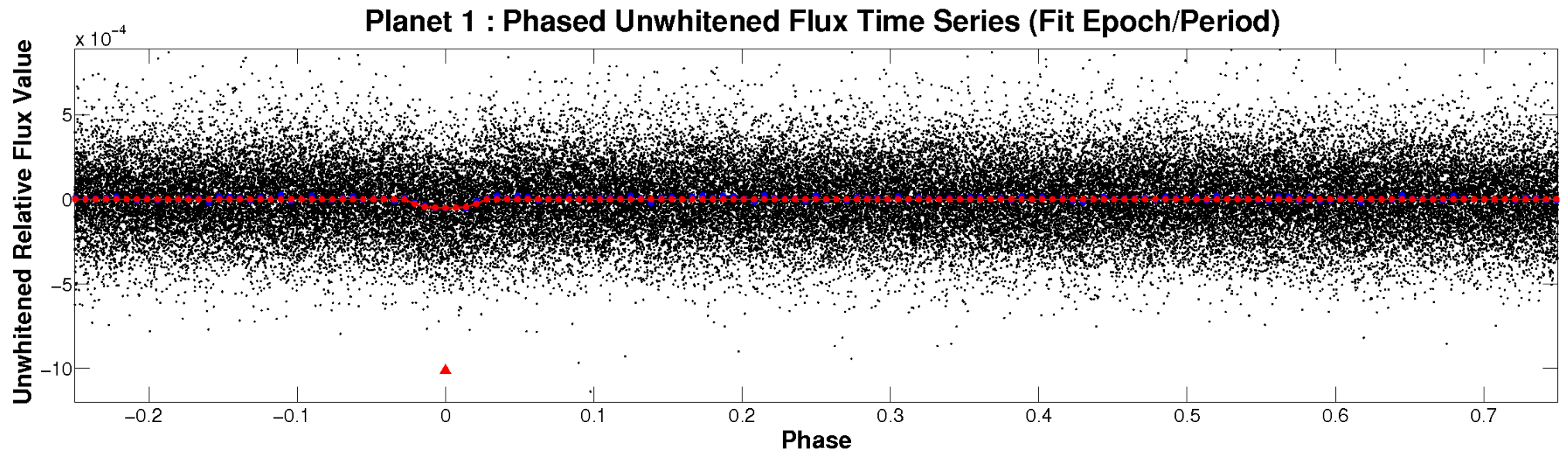


ALT Odd/Even

TCE 006937529-01

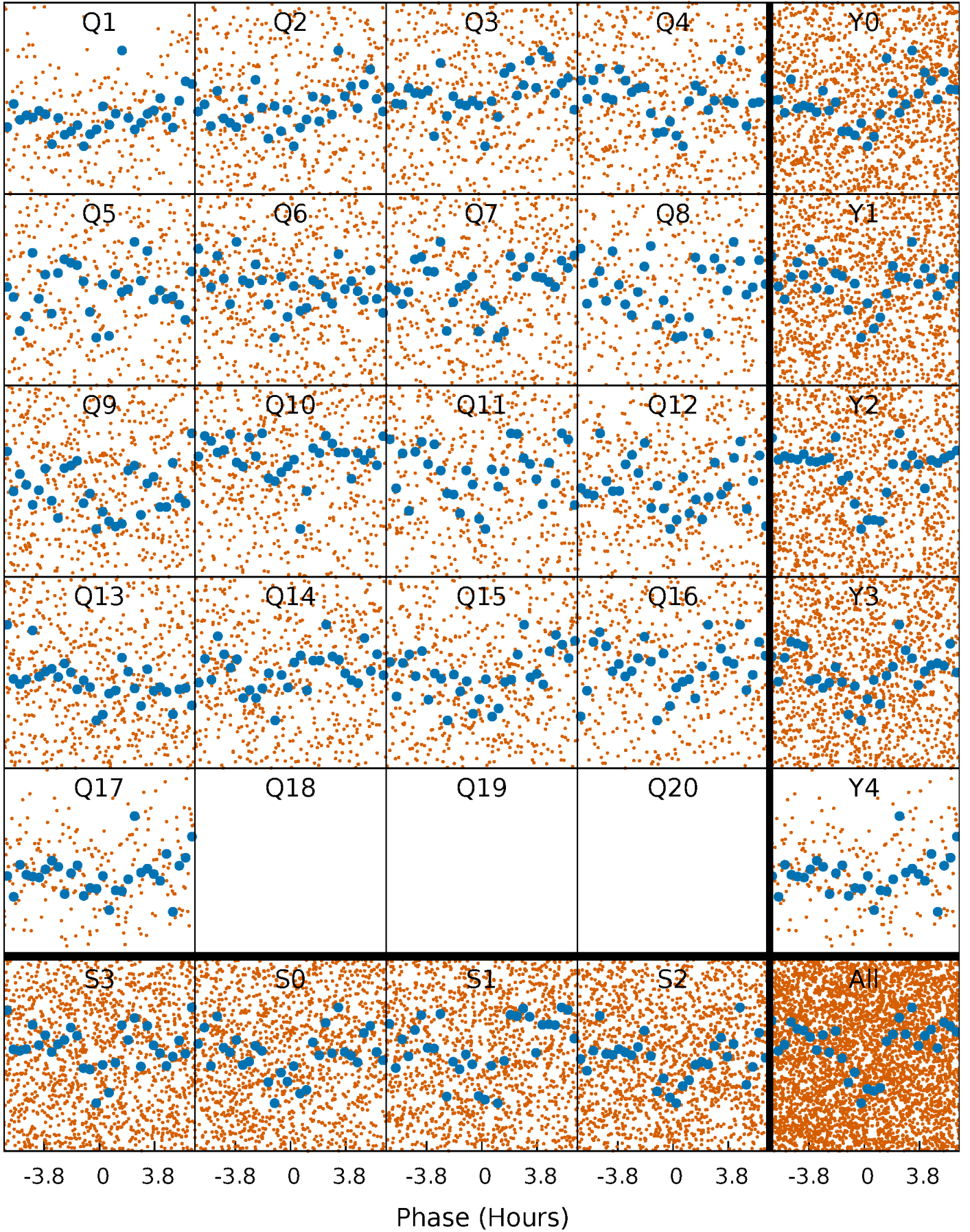


Non-Whitened Vs. Whitened Light Curve



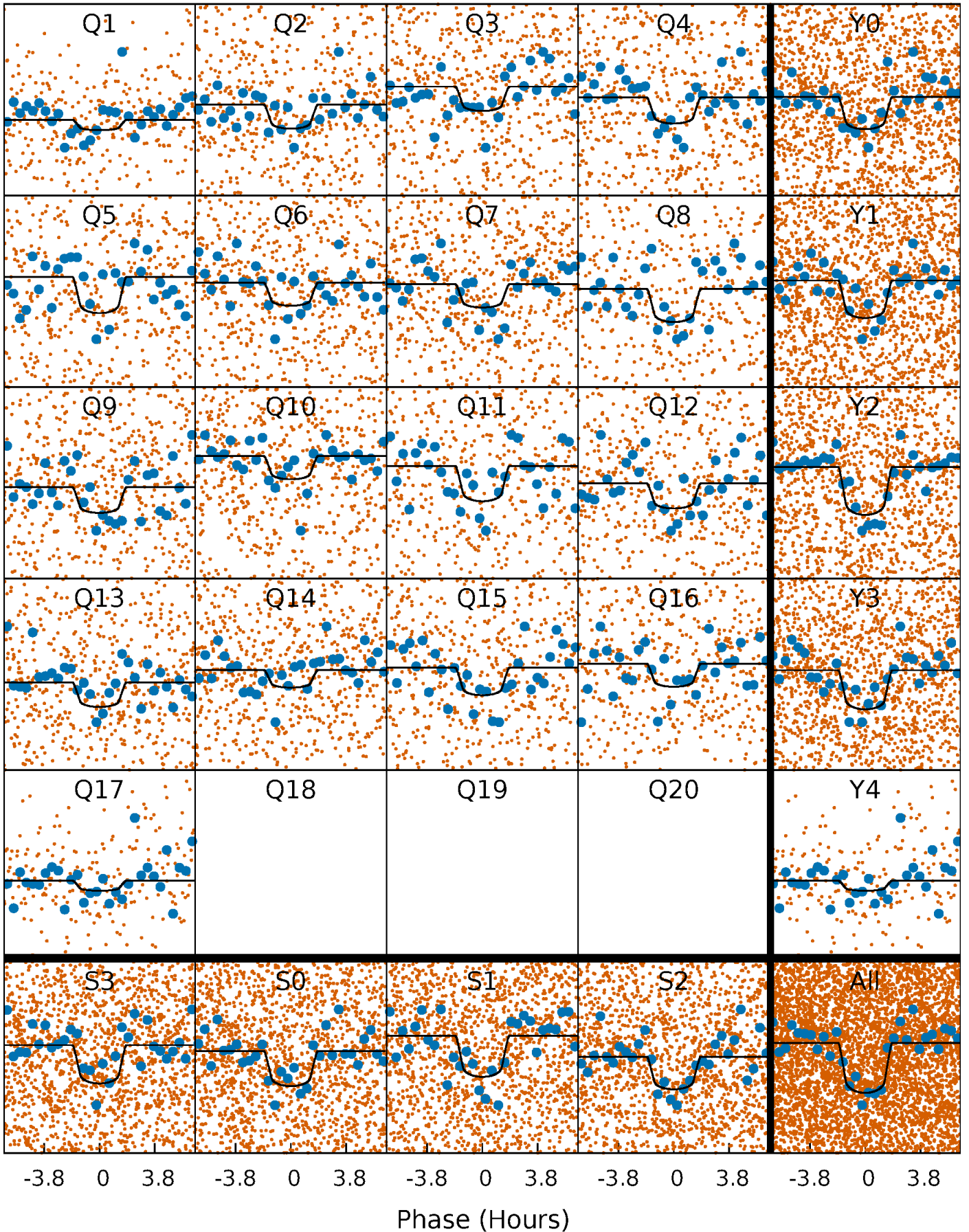
PDC Quarter-Phased Transit Curves

TCE 006937529-01 P= 2.946452 Days $T_0=132.432083$ (BKJD)



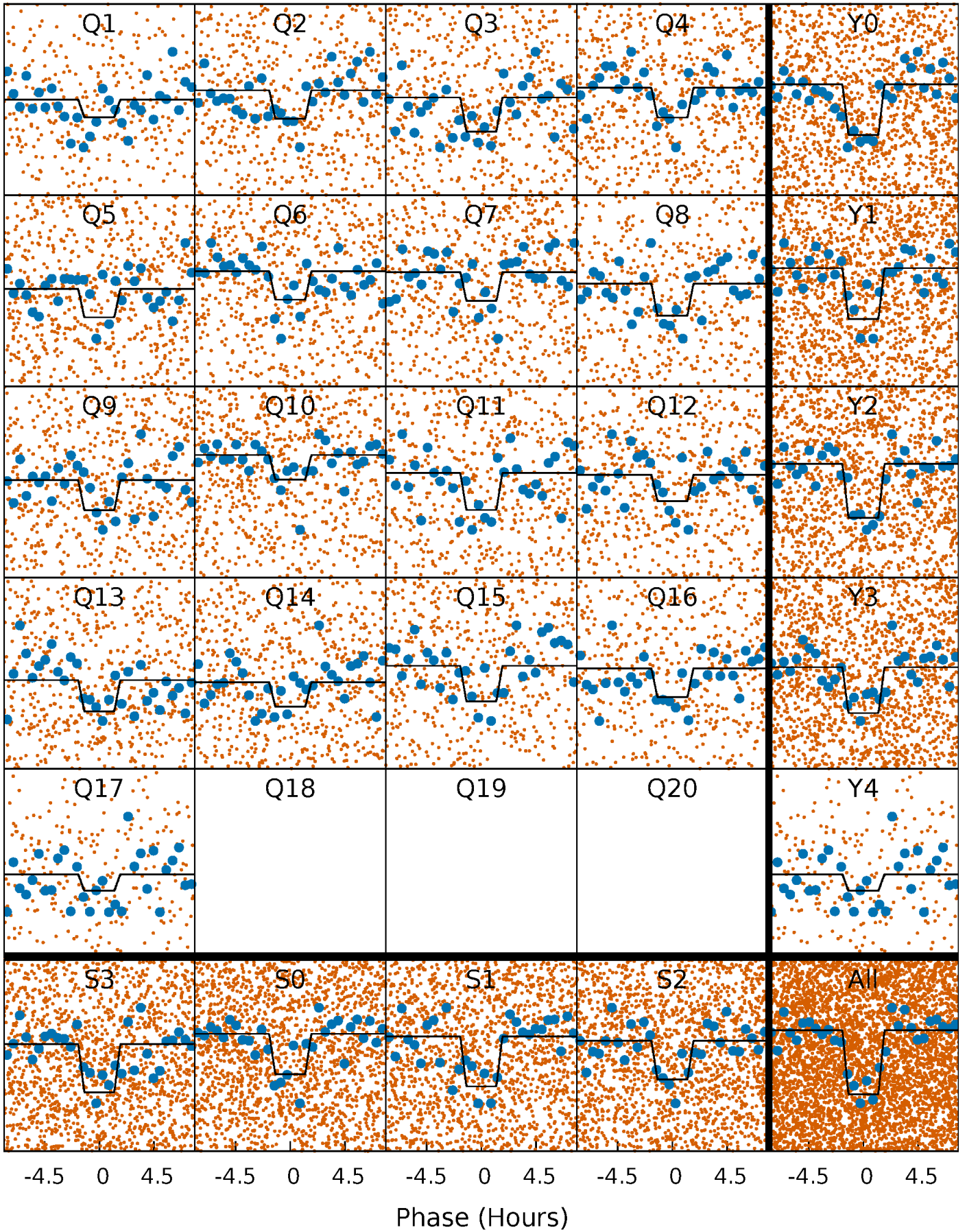
DV Quarter-Phased Transit Curves

TCE 006937529-01 P= 2.946452 Days $T_0=132.432083$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

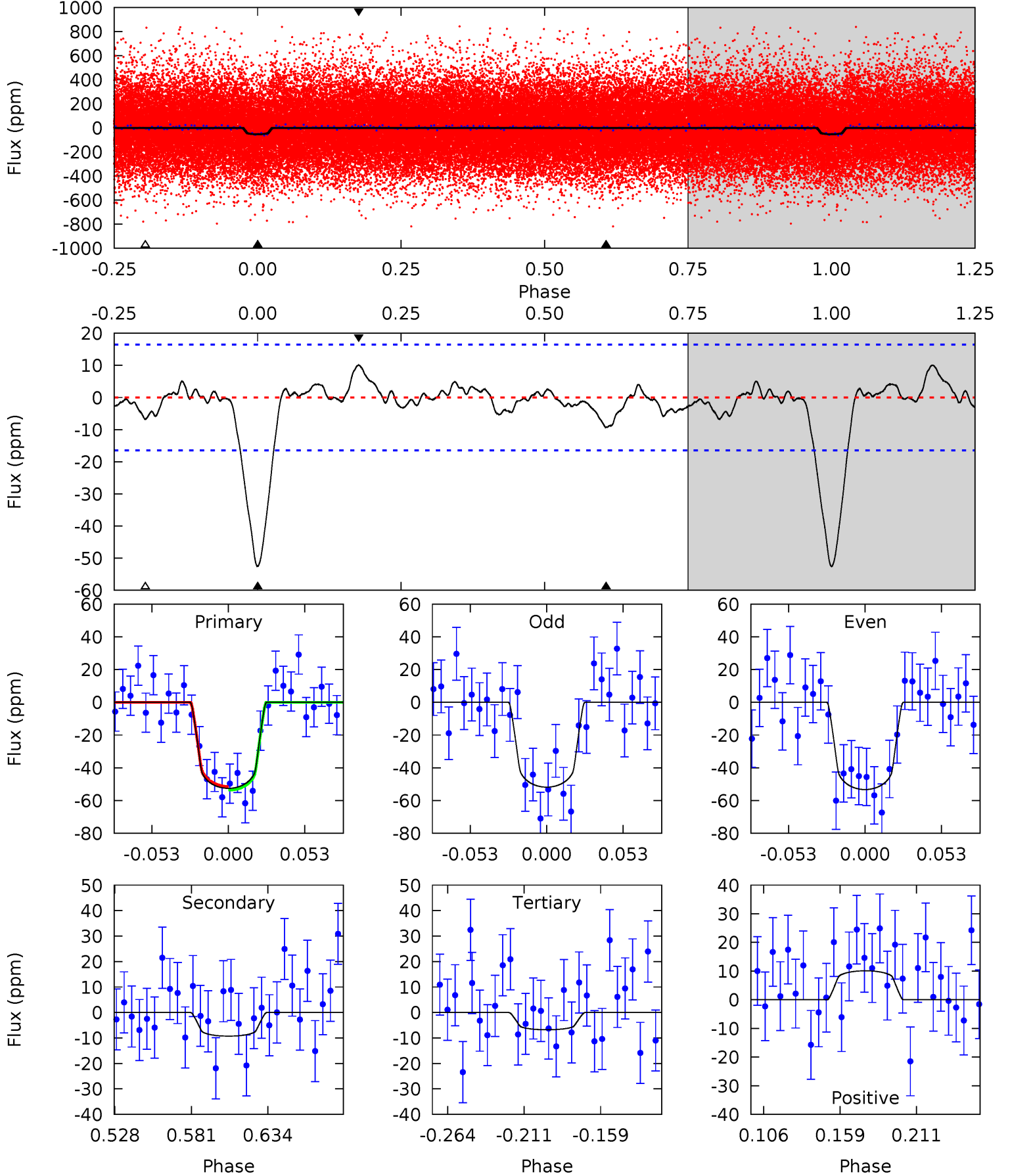
TCE 006937529-01 P= 2.946436 Days $T_0=132.436580$ (BKJD)



DV Model-Shift Uniqueness Test

006937529-01, P = 2.946452 Days, E = 129.485631 Days

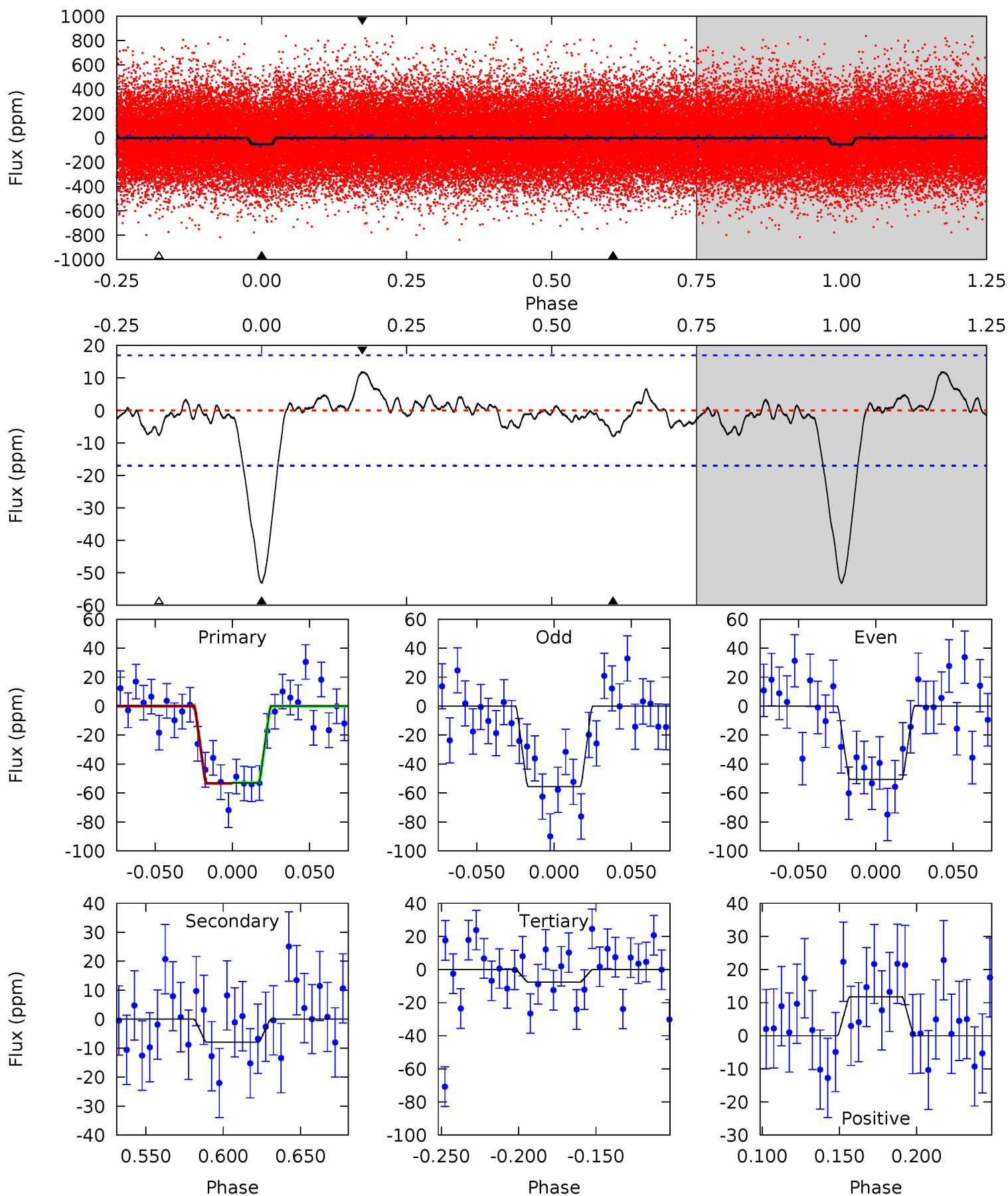
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	2.65	1.93	2.88	4.70	1.94	0.87	13.1	12.1	0.72	-0.23	0.21	0.94	0.16	0.30



Alt Model-Shift Uniqueness Test

006937529-01, P = 2.946436 Days, E = 129.490144 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	2.20	2.10	3.26	4.71	1.96	0.95	12.6	11.4	0.10	-1.06	0.69	0.99	0.18	0.08



Stellar Parameters For KIC 006937529

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6481^{+145}_{-193}	$4.378^{+0.069}_{-0.172}$	$-0.080^{+0.250}_{-0.300}$	$1.171^{+0.322}_{-0.138}$	$1.194^{+0.164}_{-0.164}$	$1.046^{+0.327}_{-0.488}$
	+2%/-3%	+2%/-4%	+312%/-375%	+27%/-12%	+14%/-14%	+31%/-47%
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 006937529-01 / KOI 4382.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 4	$0.98^{+0.49}_{-0.43}$	2116^{+146}_{-91}	4279^{+1263}_{-667}	$9.293^{+20.134}_{-5.812}$
Alt.	-8 ± 4	$0.98^{+0.47}_{-0.42}$	2113^{+145}_{-98}	4138^{+1196}_{-644}	$7.393^{+19.633}_{-4.612}$

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

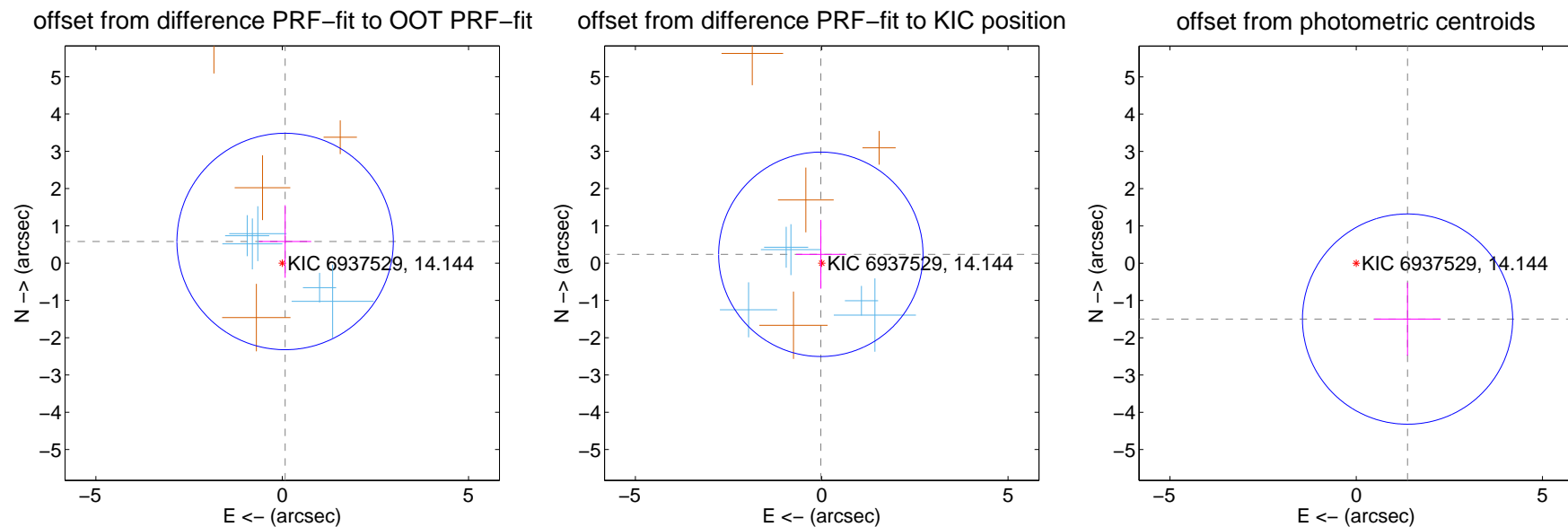
DV Centroid Data

Supplemental centroid analysis for 006937529-01. Kepler magnitude: 14.14. Transit SNR 10.88

There are 5 quarters with good PRF difference image offsets

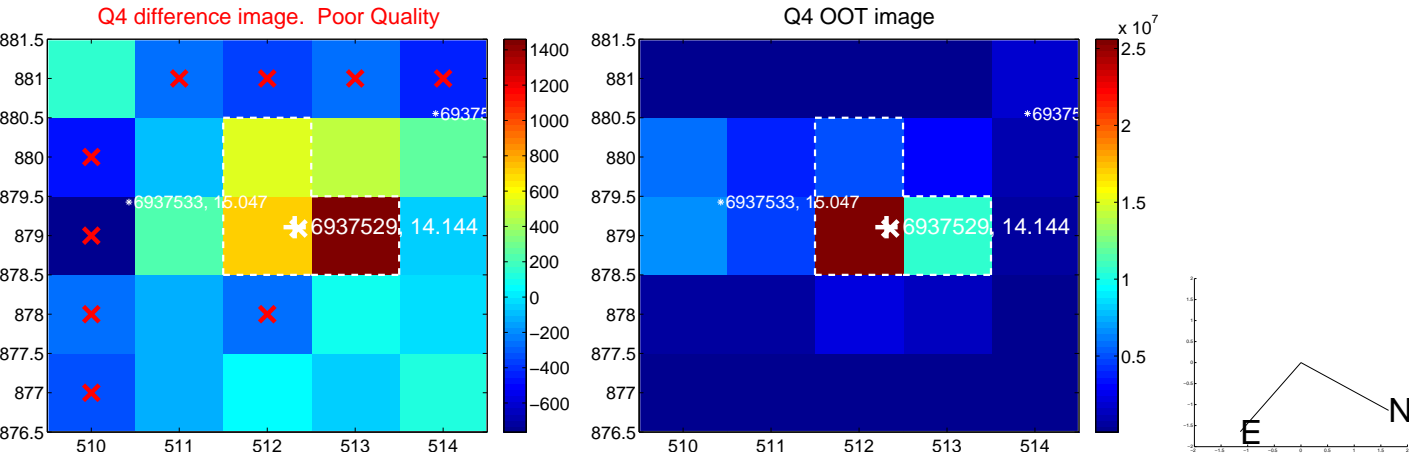
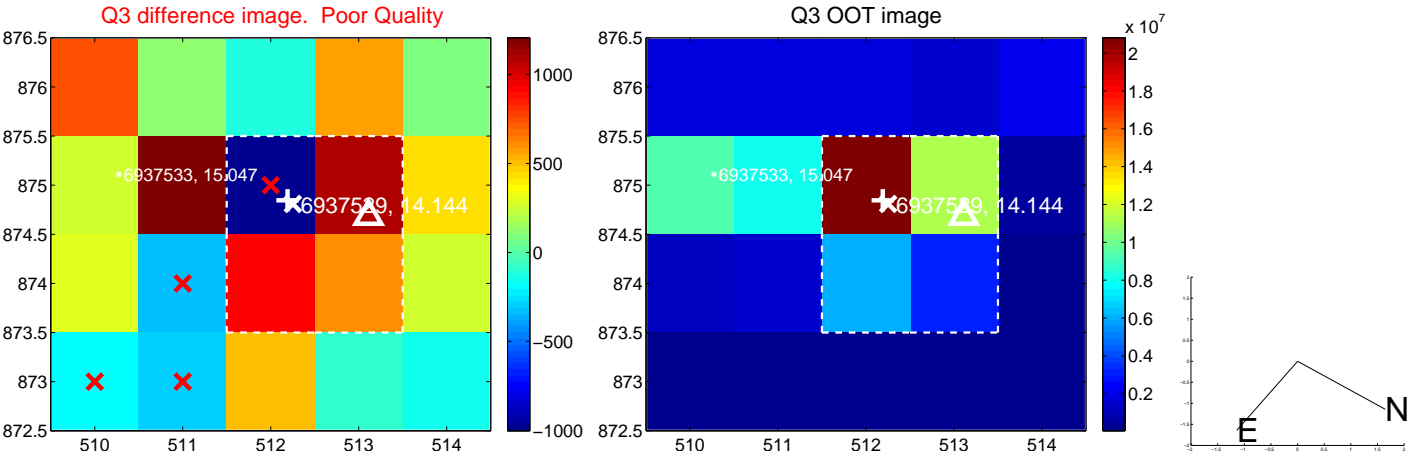
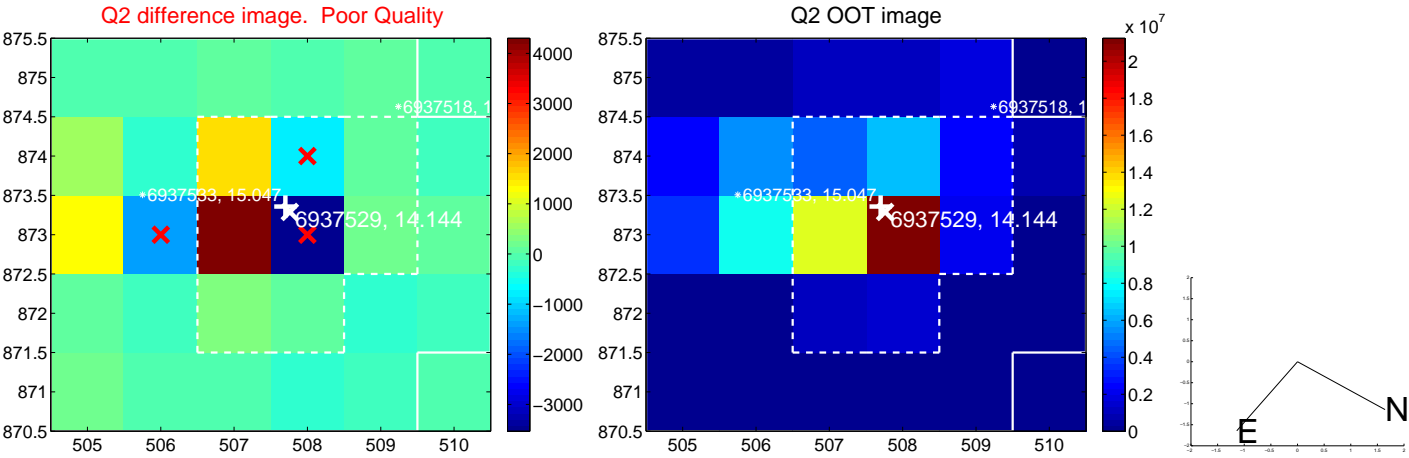
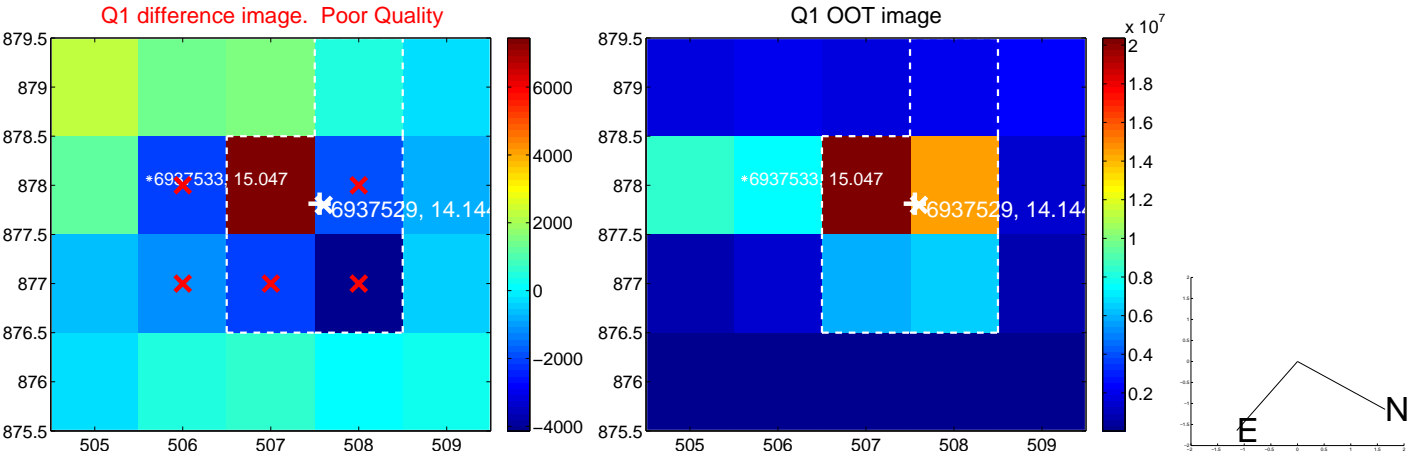
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.586 ± 0.968	0.61	-0.078 ± 0.702	0.581 ± 0.974
PRF-fit source offset from KIC position	0.238 ± 0.914	0.26	0.024 ± 0.665	0.237 ± 0.923
photometric centroid source offset	2.04 ± 0.94	2.17	-1.38 ± 0.89	-1.50 ± 0.98

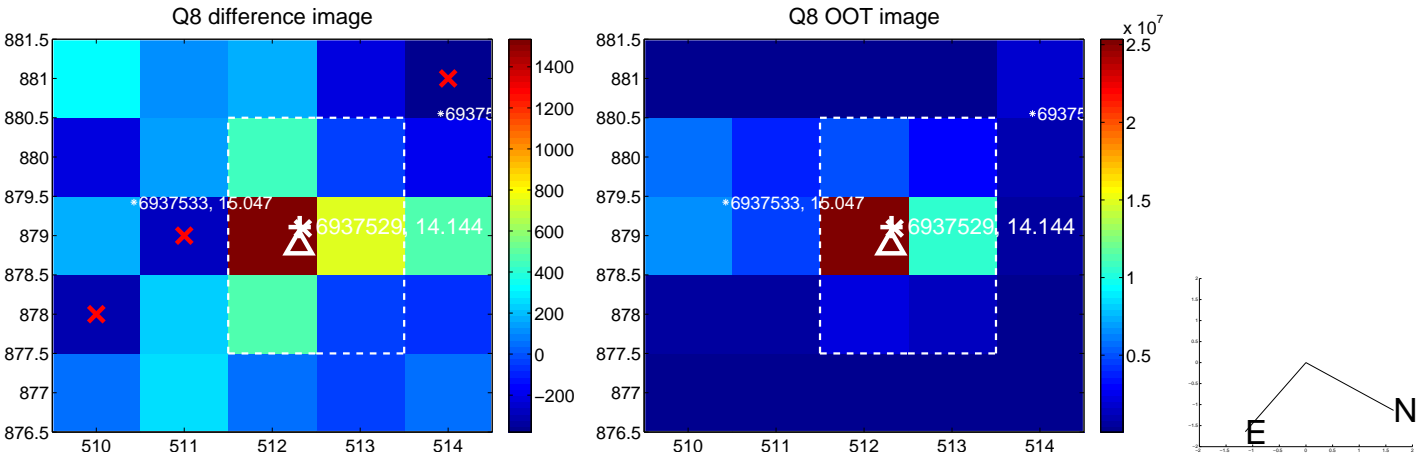
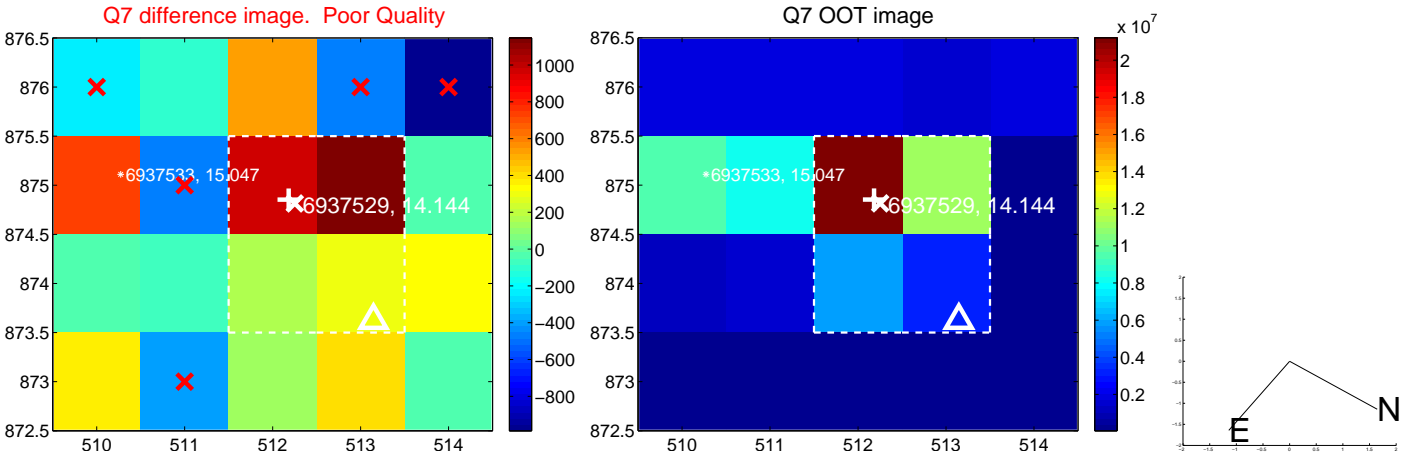
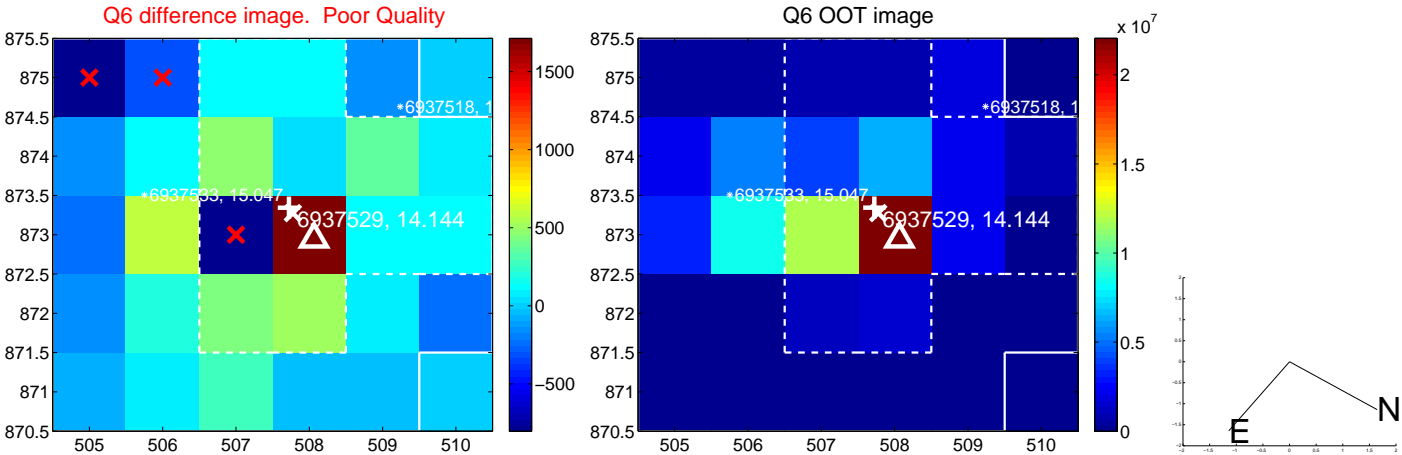
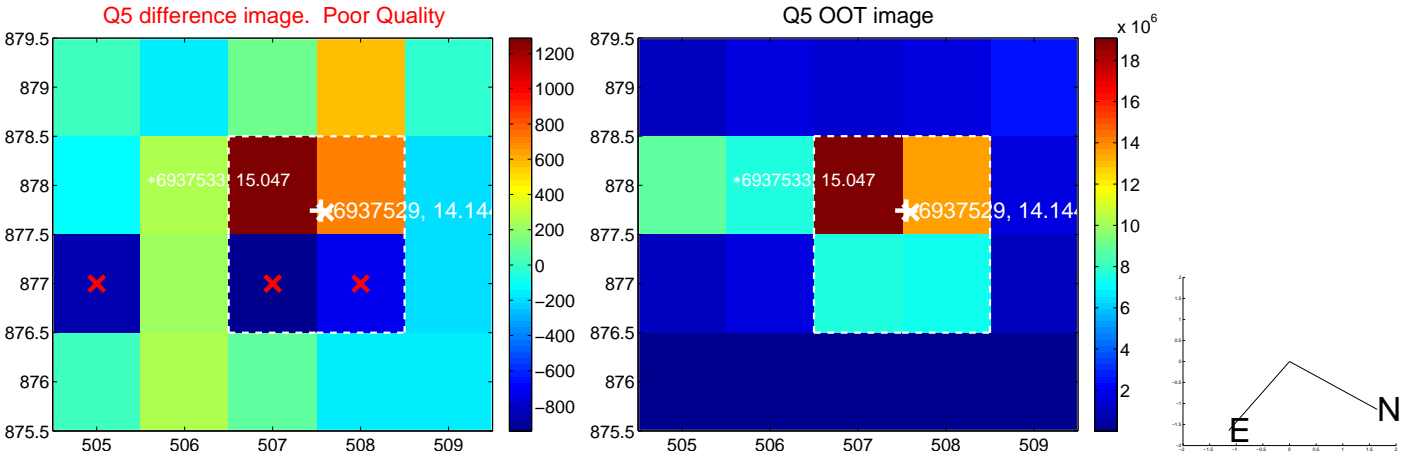


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

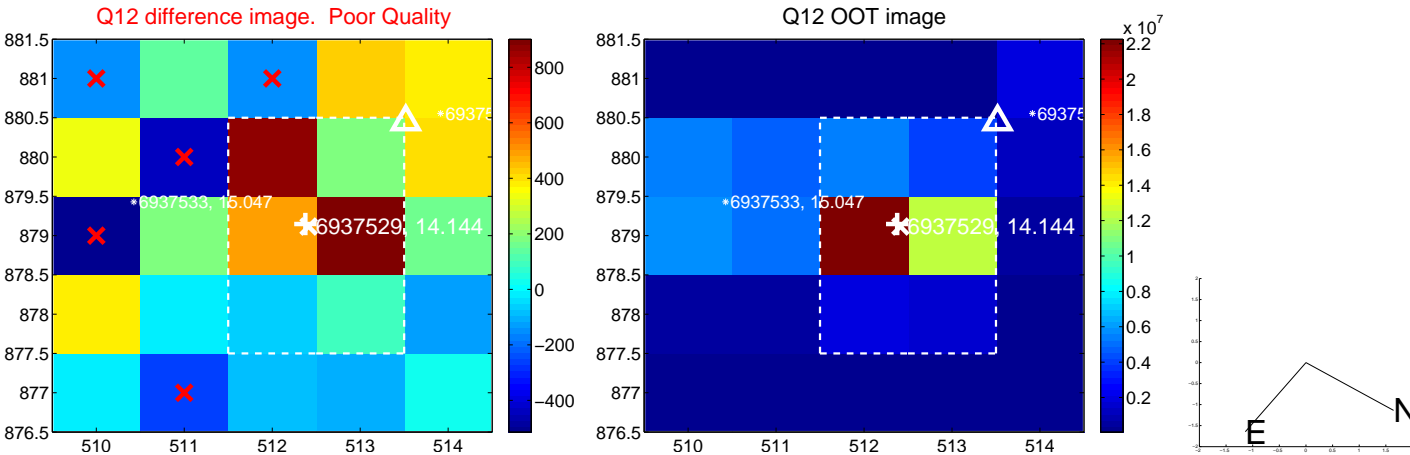
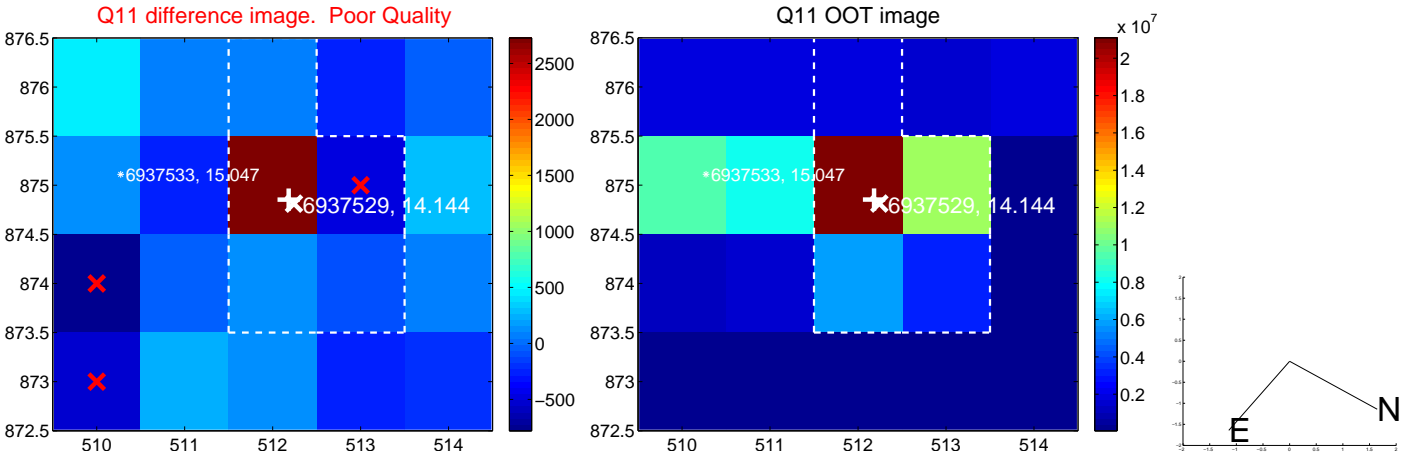
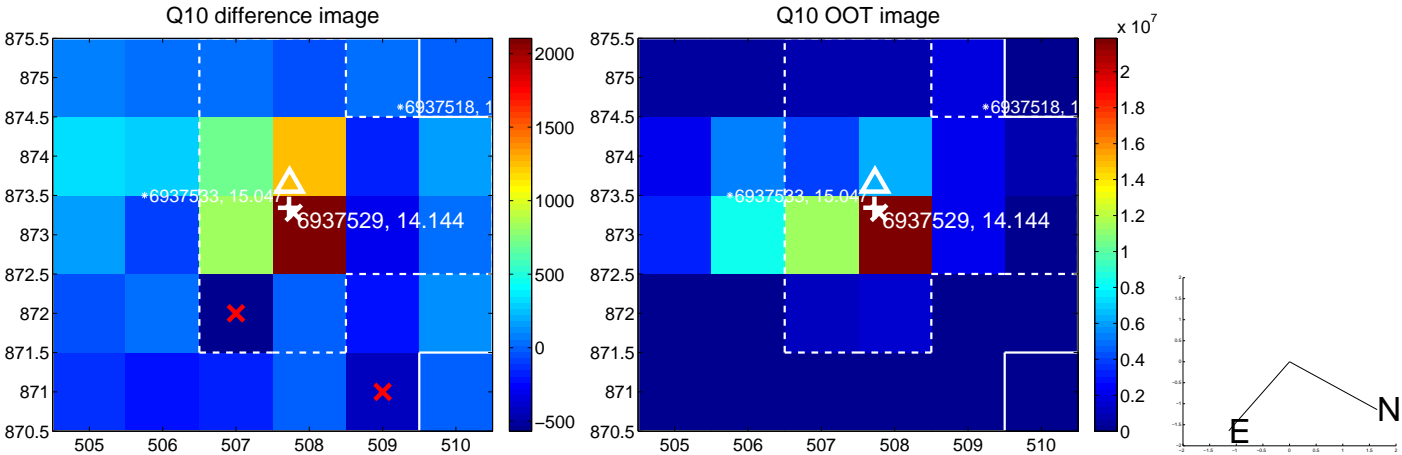
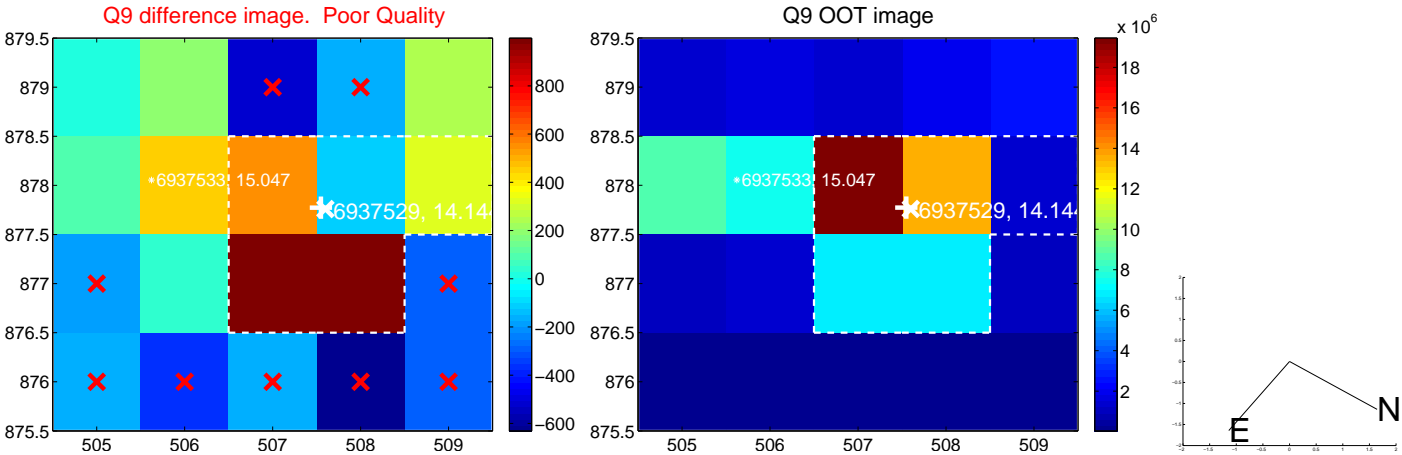
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



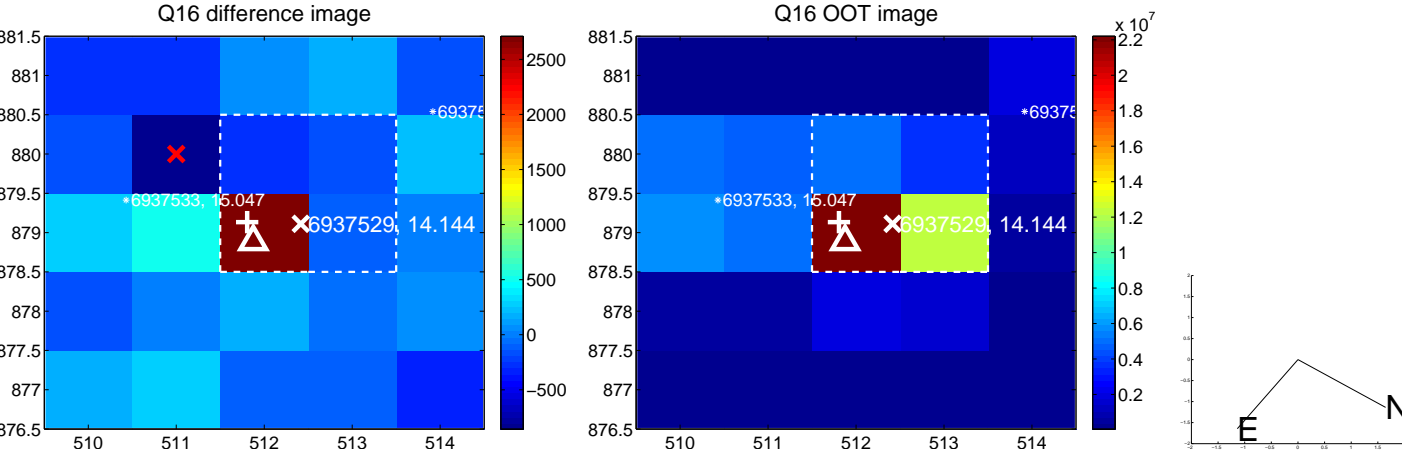
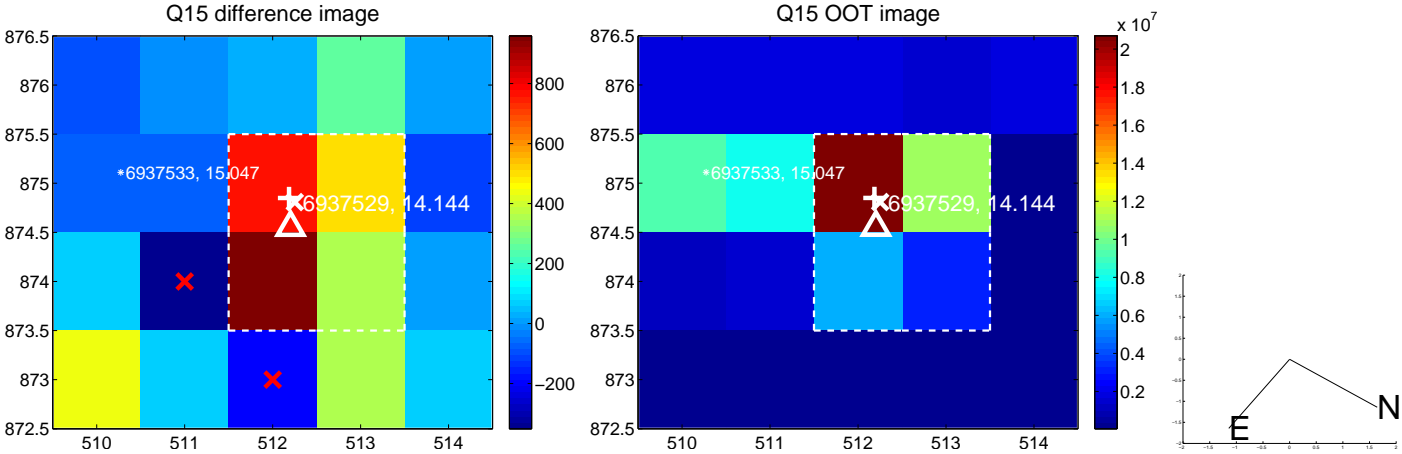
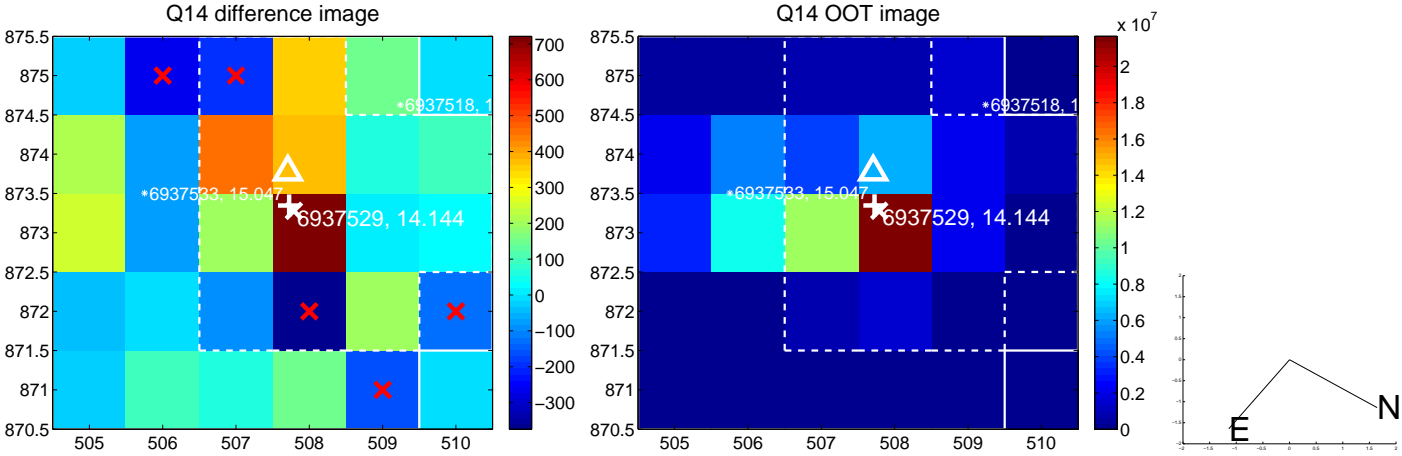
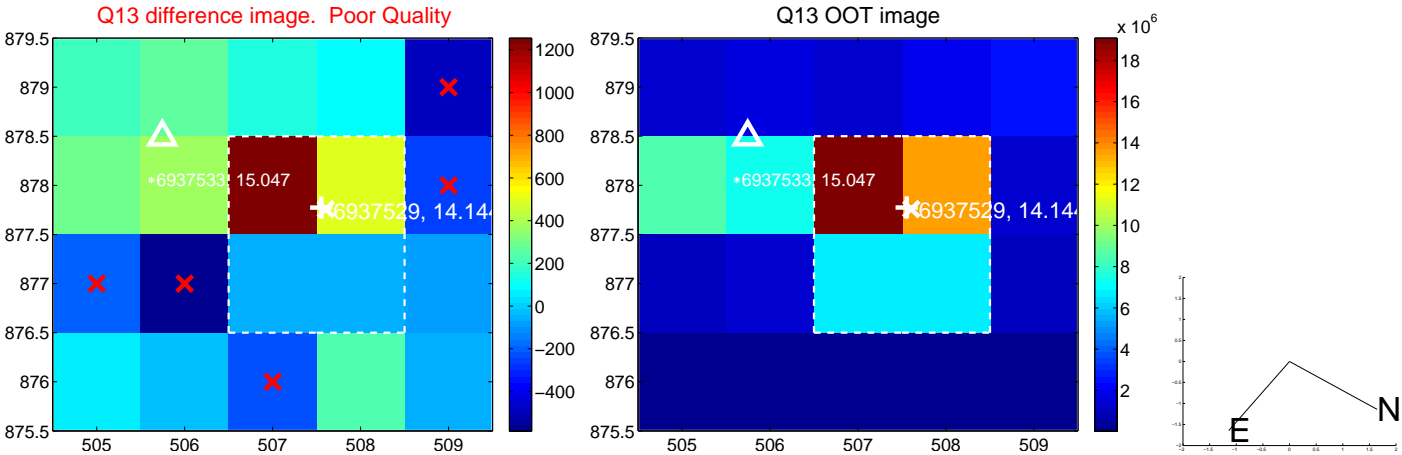
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



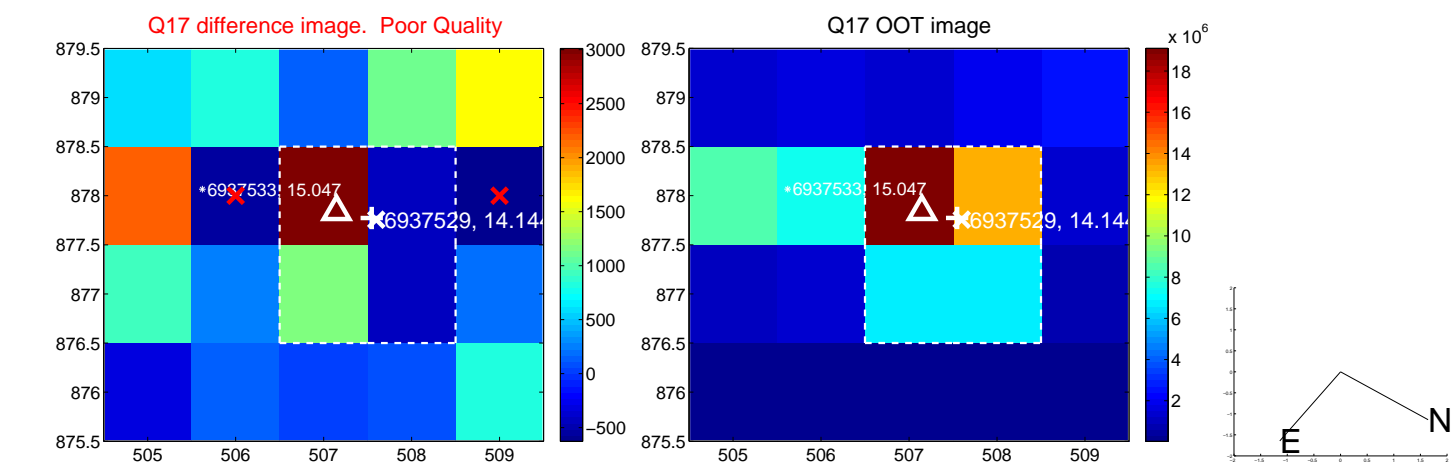
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



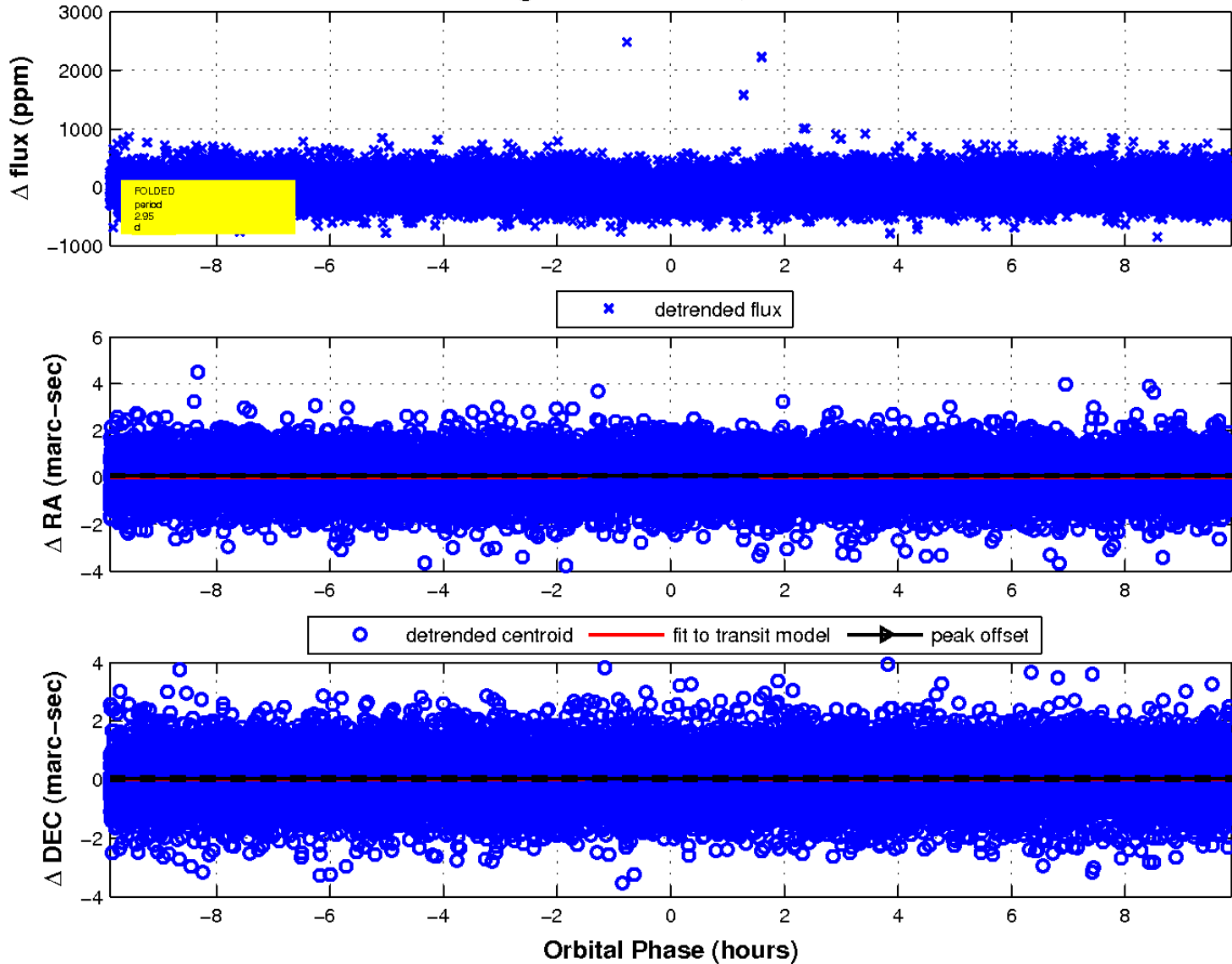
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

