

KIC 003437739

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 _⊕)
003437739-01	OBS	6333.01	1.891319	132.658036	63.7	6.013	8.9	9.2	1.10	6387	1.02	1856.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003437739-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—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.

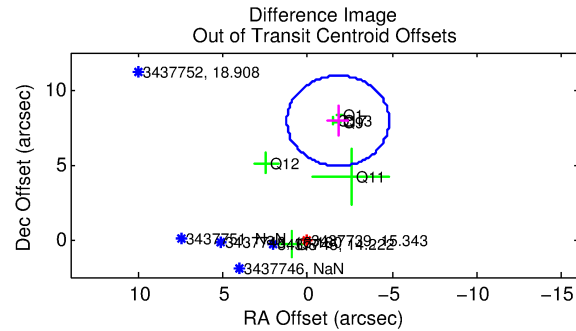
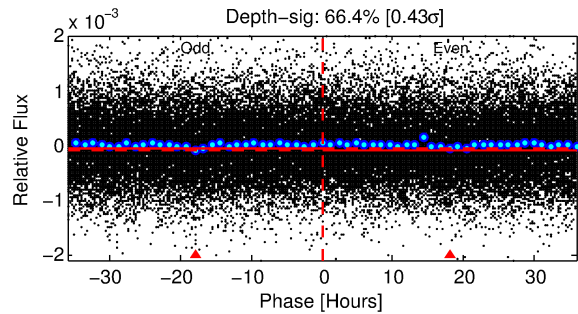
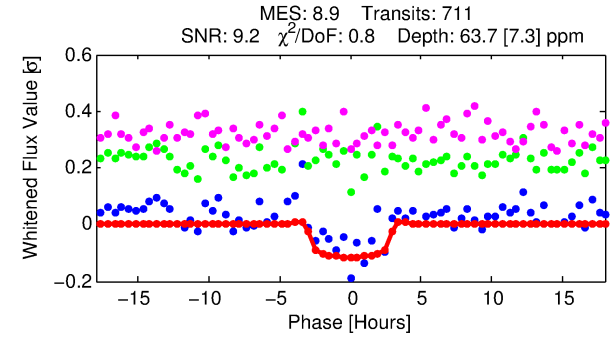
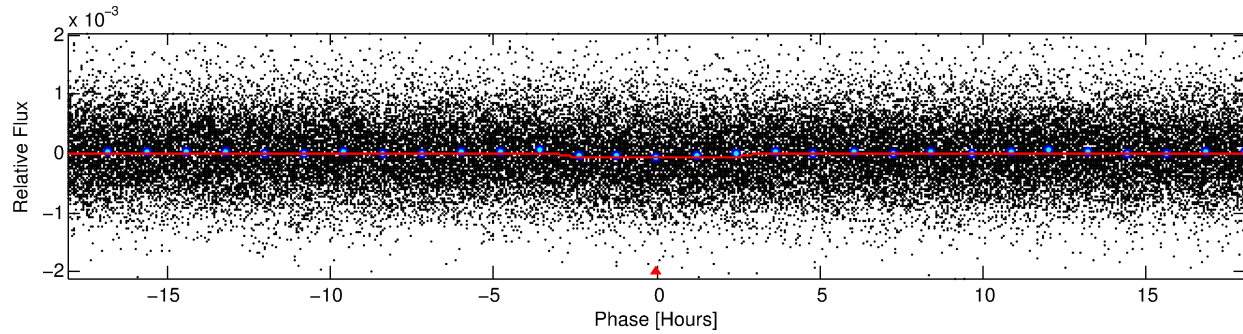
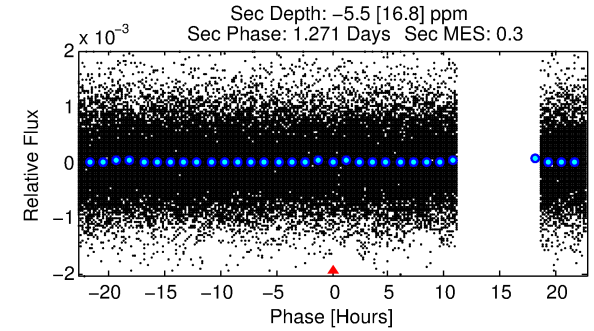
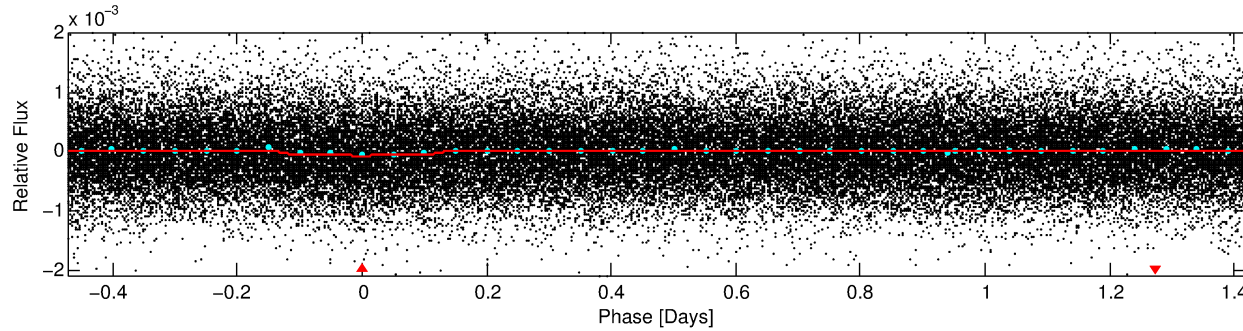
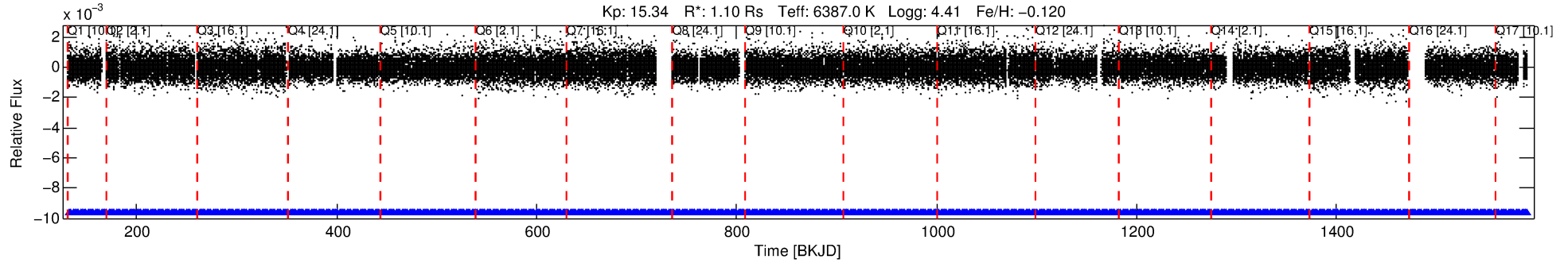
Ephemeris Match Information For 003437739-01

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
003437739-01	3437739	6286.01	2708156	1:1	2553.8	-643	0	10.67	15.34	10014.00	Col-Anomaly	0	1.95	1.46

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: 3437739 Candidate: 1 of 1 Period: 1.891 d
KOI: K06333.01 Corr: 0.989



DV Fit Results:

Period = 1.89132 [0.00003] d
Epoch = 132.6580 [0.0076] BKJD
Rp/R* = 0.0085 [0.0040]
a/R* = 1.48 [2.14]
b = 0.89 [0.64]
Seff = 1856.25 [710.98]
Teff = 1674 [160] K
Rp = 1.02 [0.58] Re
a = 0.0313 [0.0078] AU
Ag = N/A
Teffp = N/A

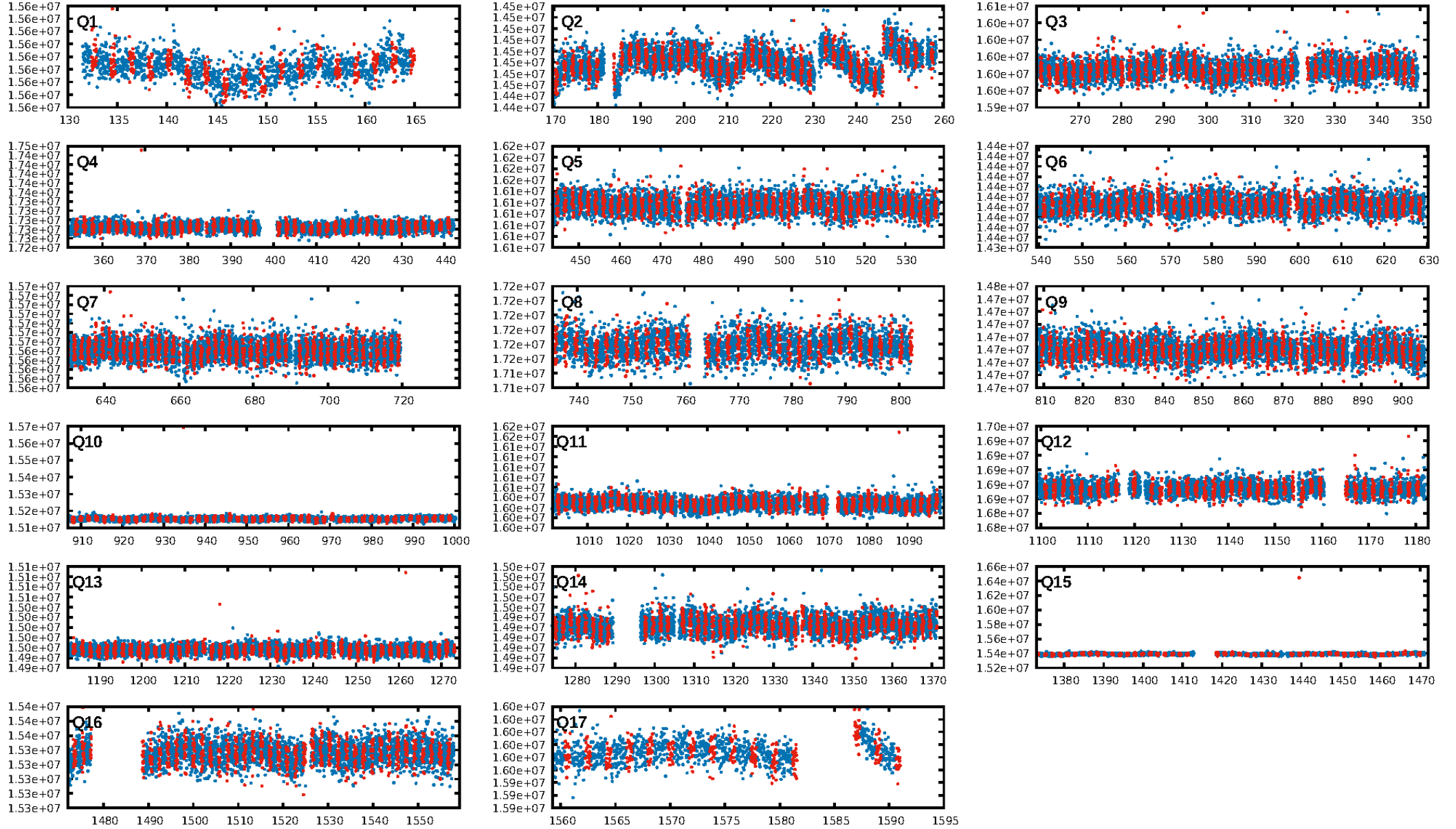
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.47e-18
RollingBand-fgt: 1.00 [678/678]
GhostDiagnostic-chr: 0.2906
Centroid-sig: 0.0%
Centroid-so: 6.118 arcsec [5.36σ]
OotOffset-rm: 8.123 arcsec [8.08σ]
KicOffset-rm: 7.522 arcsec [7.87σ]
OotOffset-st: 0/1/2/4 [7]
KicOffset-st: 0/1/2/4 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [17/17]

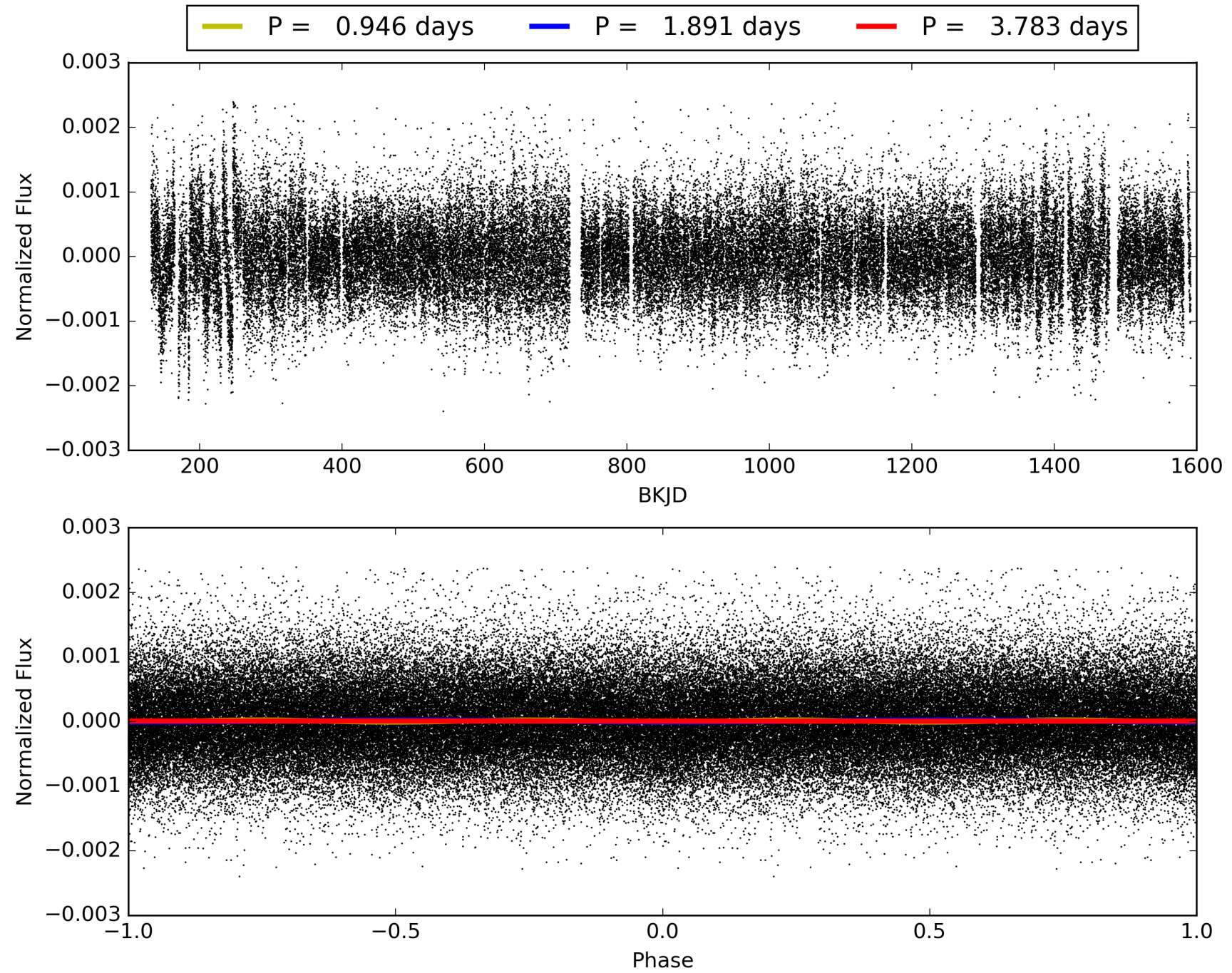
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:41:30 Z

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

TCE 003437739-01, PDC Light Curves

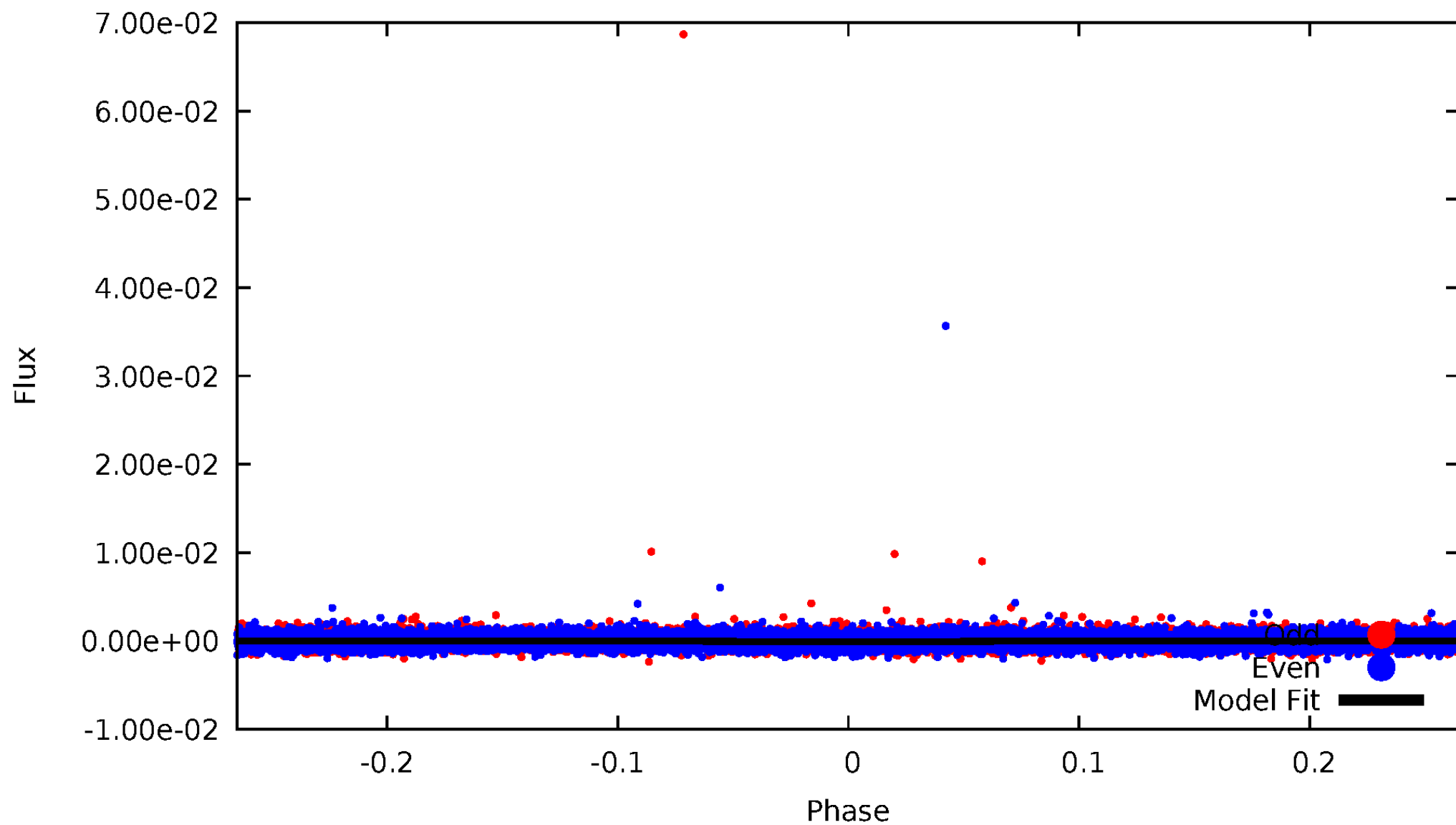


TCE 003437739-01



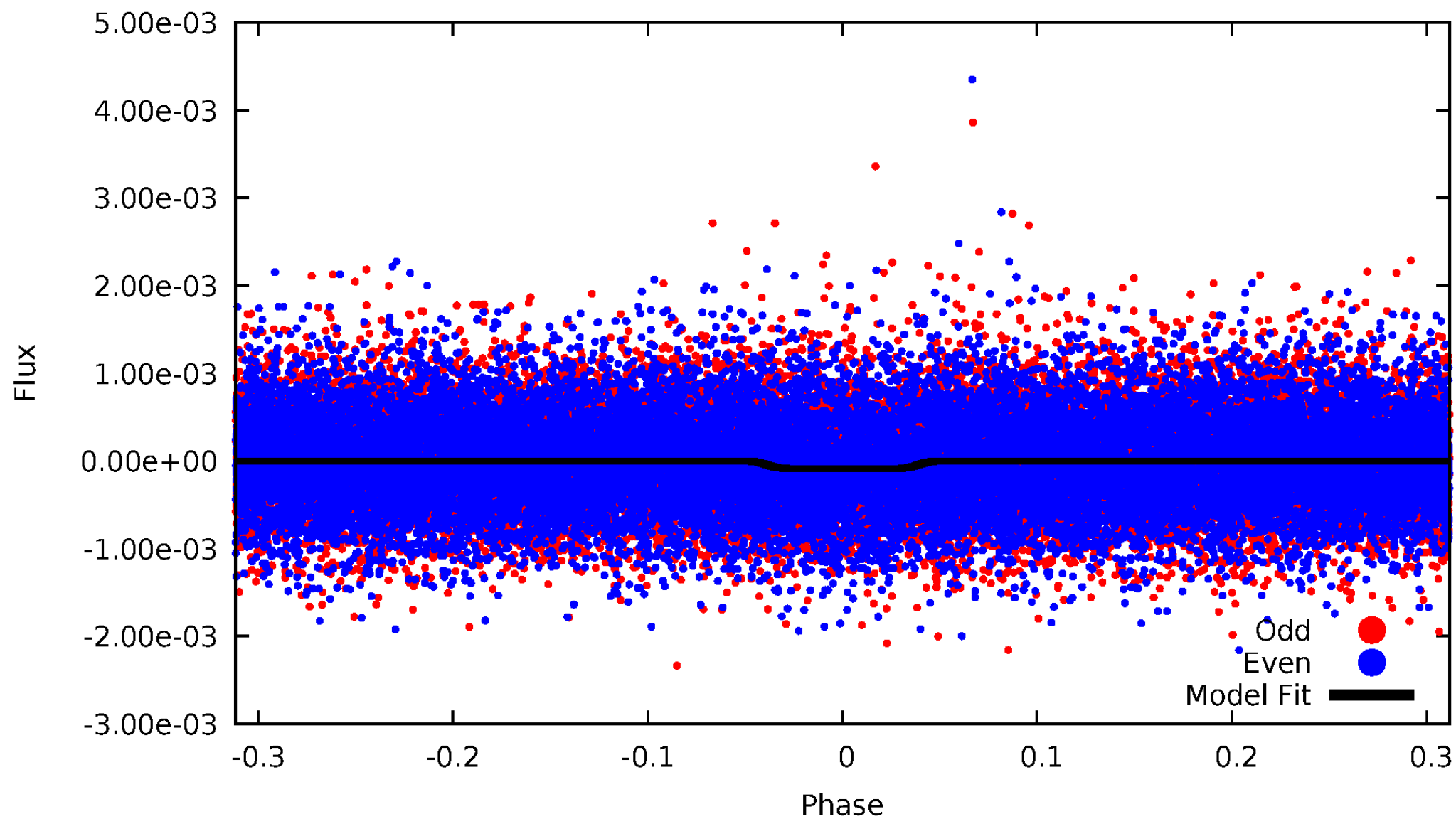
DV Odd/Even

TCE 003437739-01



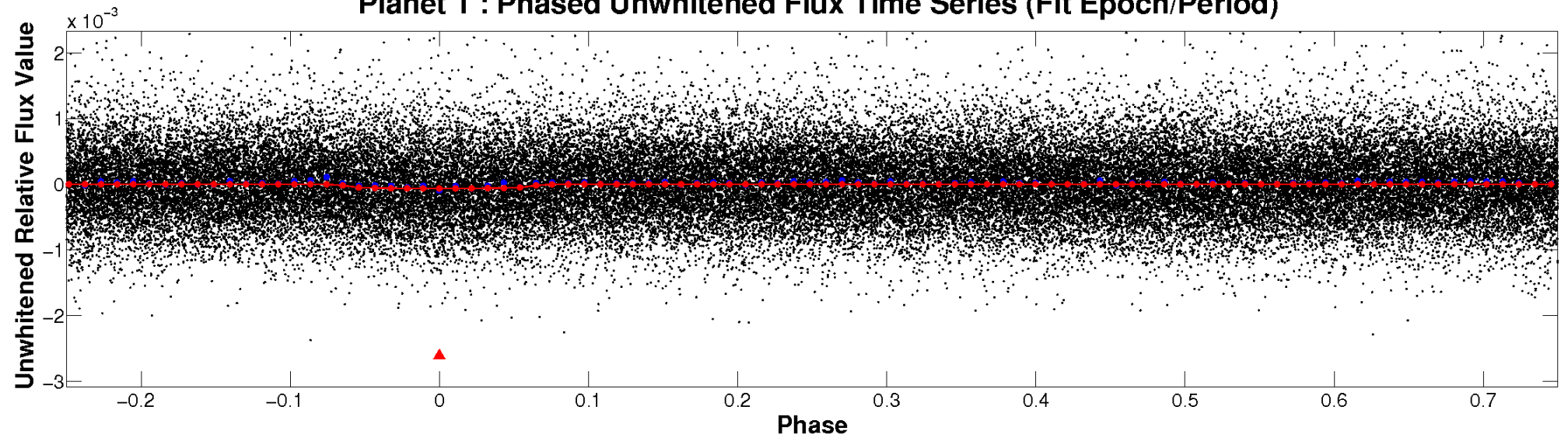
ALT Odd/Even

TCE 003437739-01

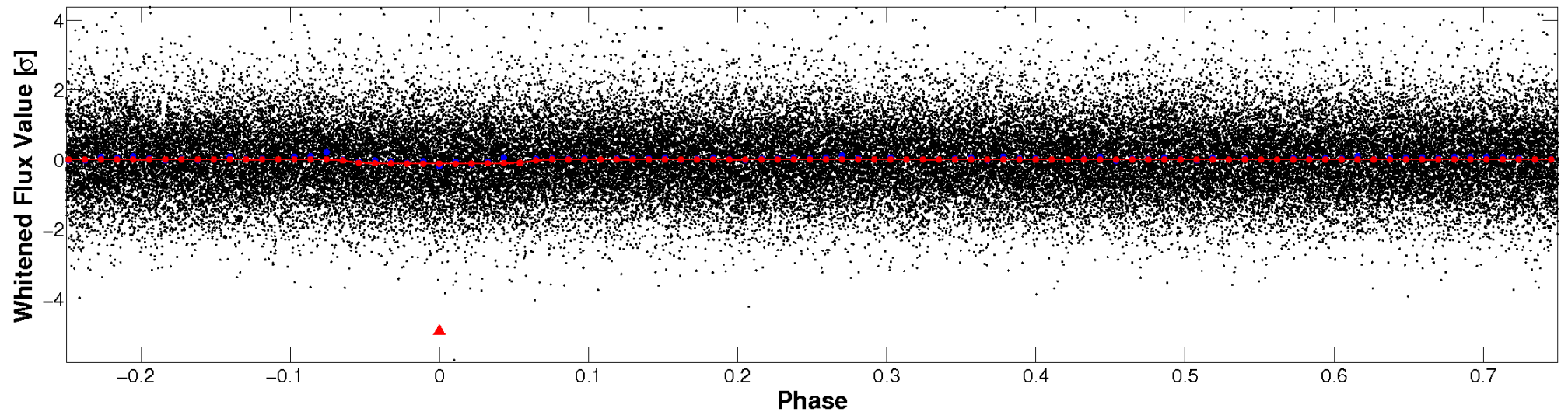


Non-Whitened Vs. Whitened Light Curve

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

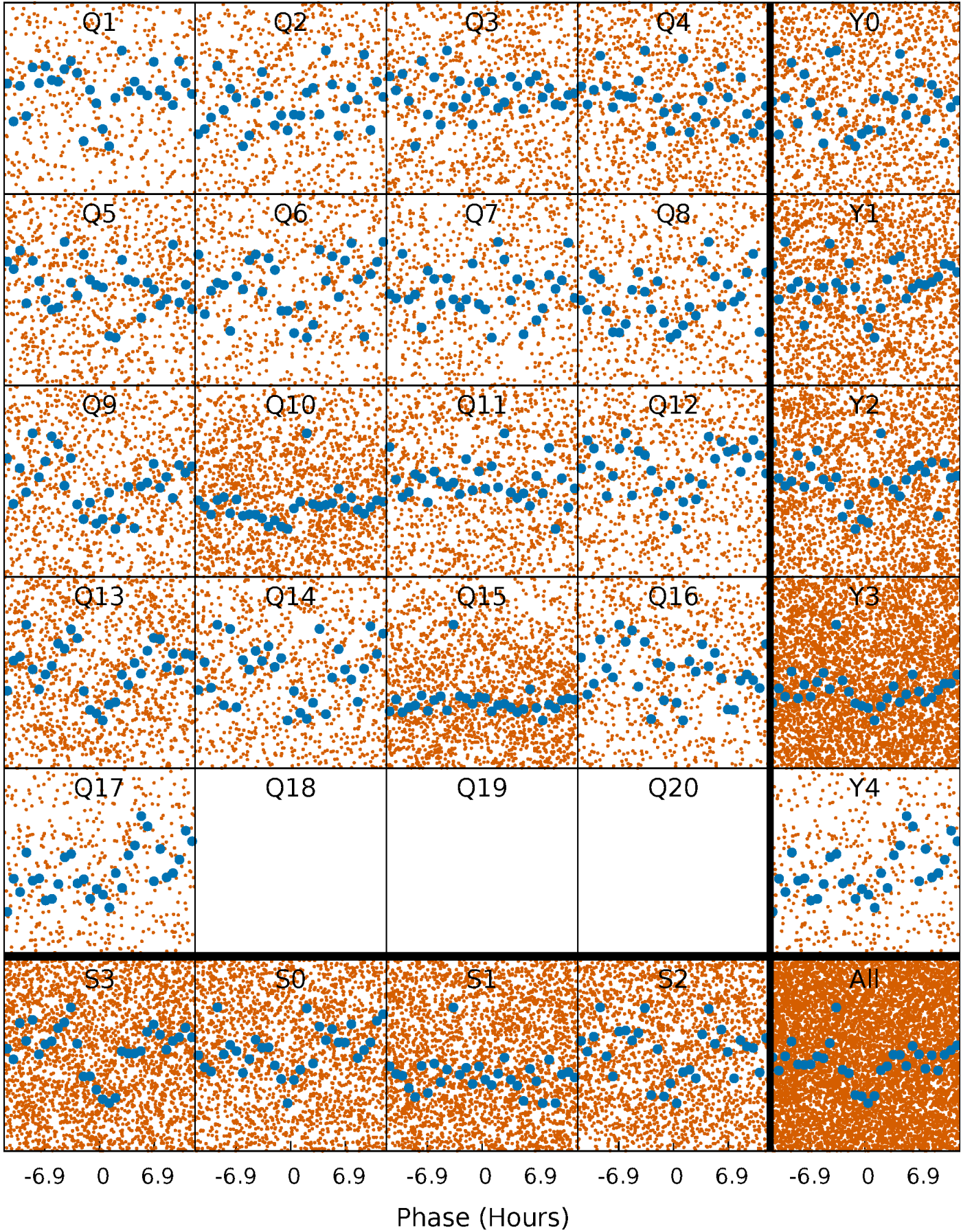


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



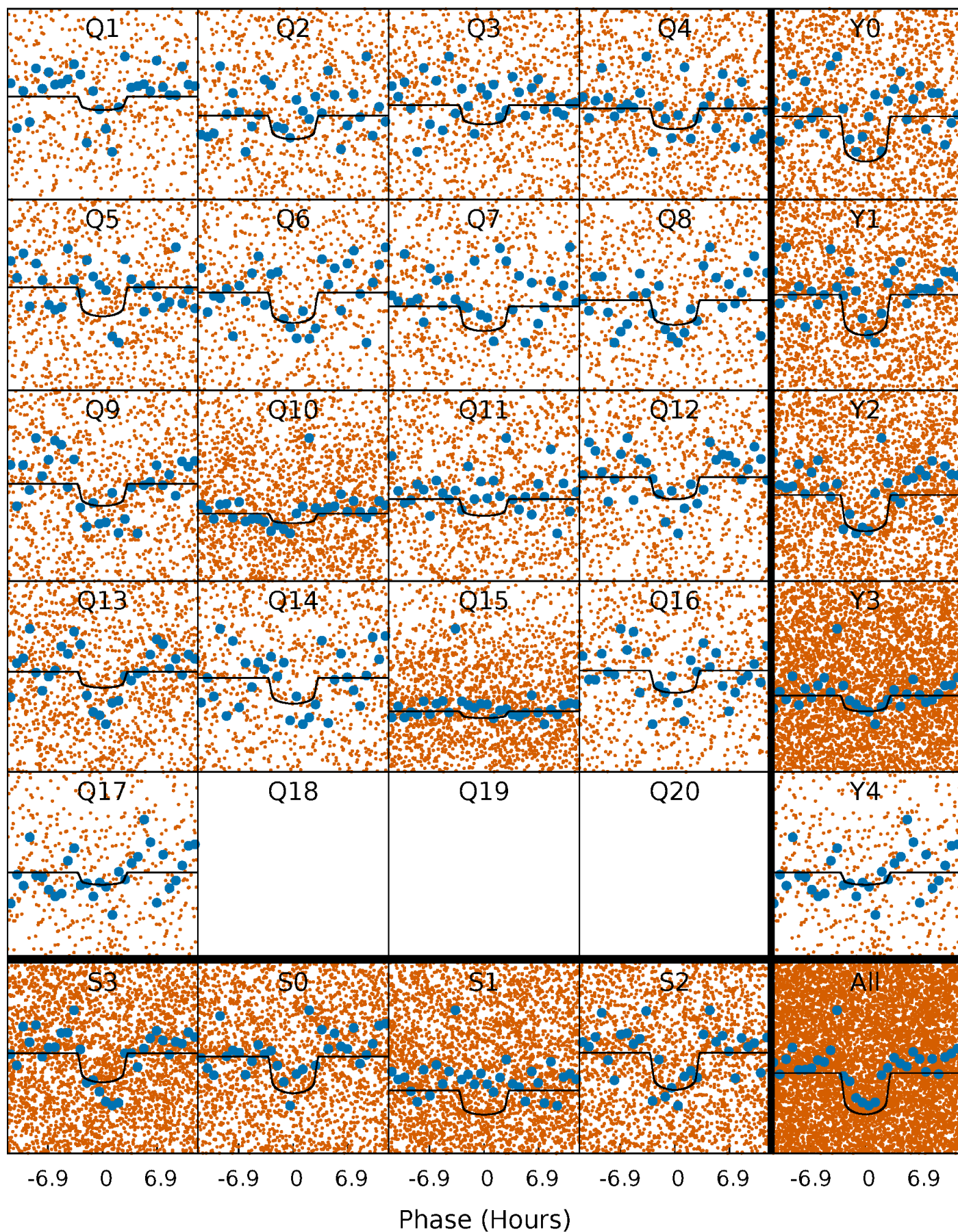
PDC Quarter-Phased Transit Curves

TCE 003437739-01 P= 1.891319 Days $T_0=132.658036$ (BKJD)



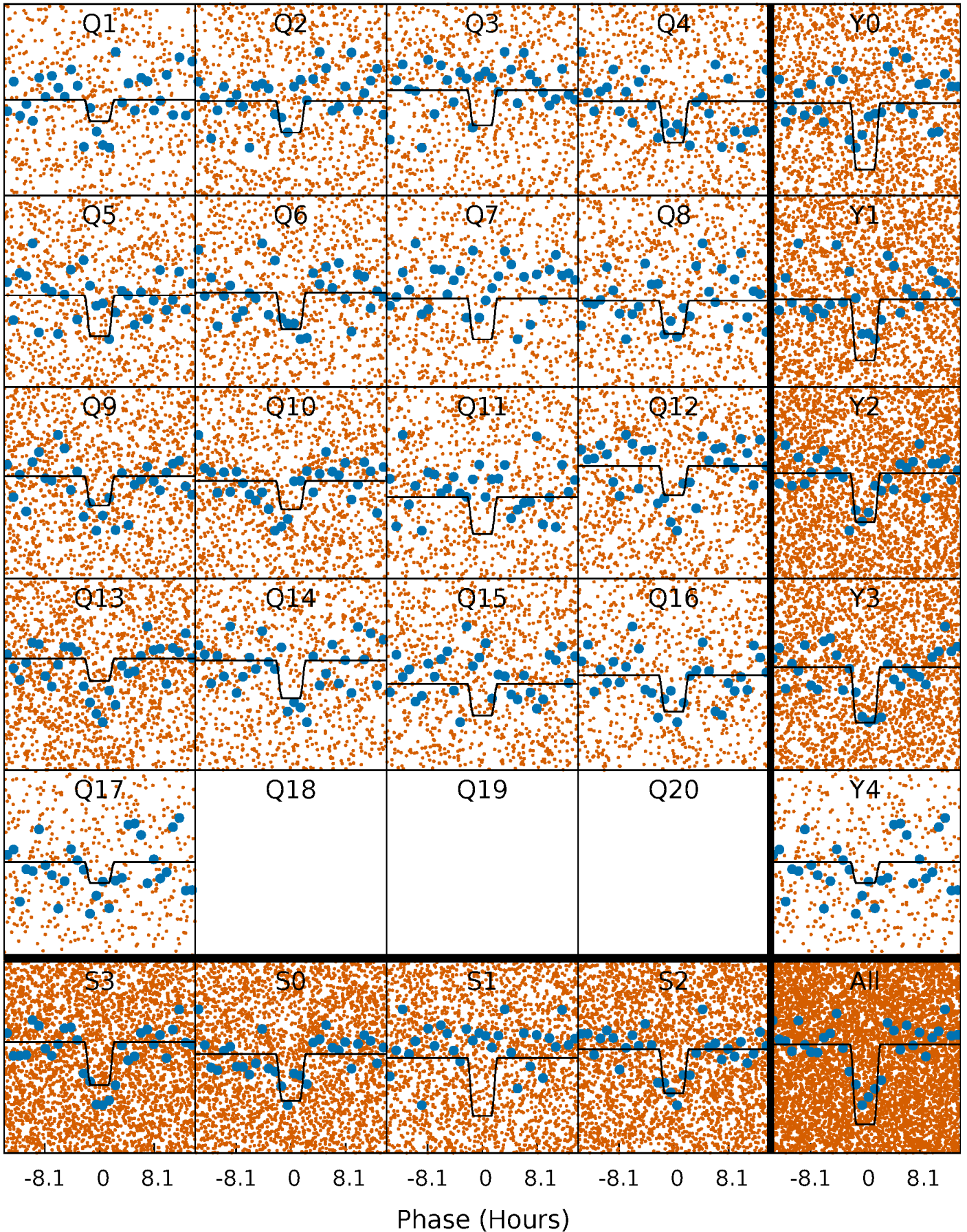
DV Quarter-Phased Transit Curves

TCE 003437739-01 P= 1.891319 Days $T_0=132.658036$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

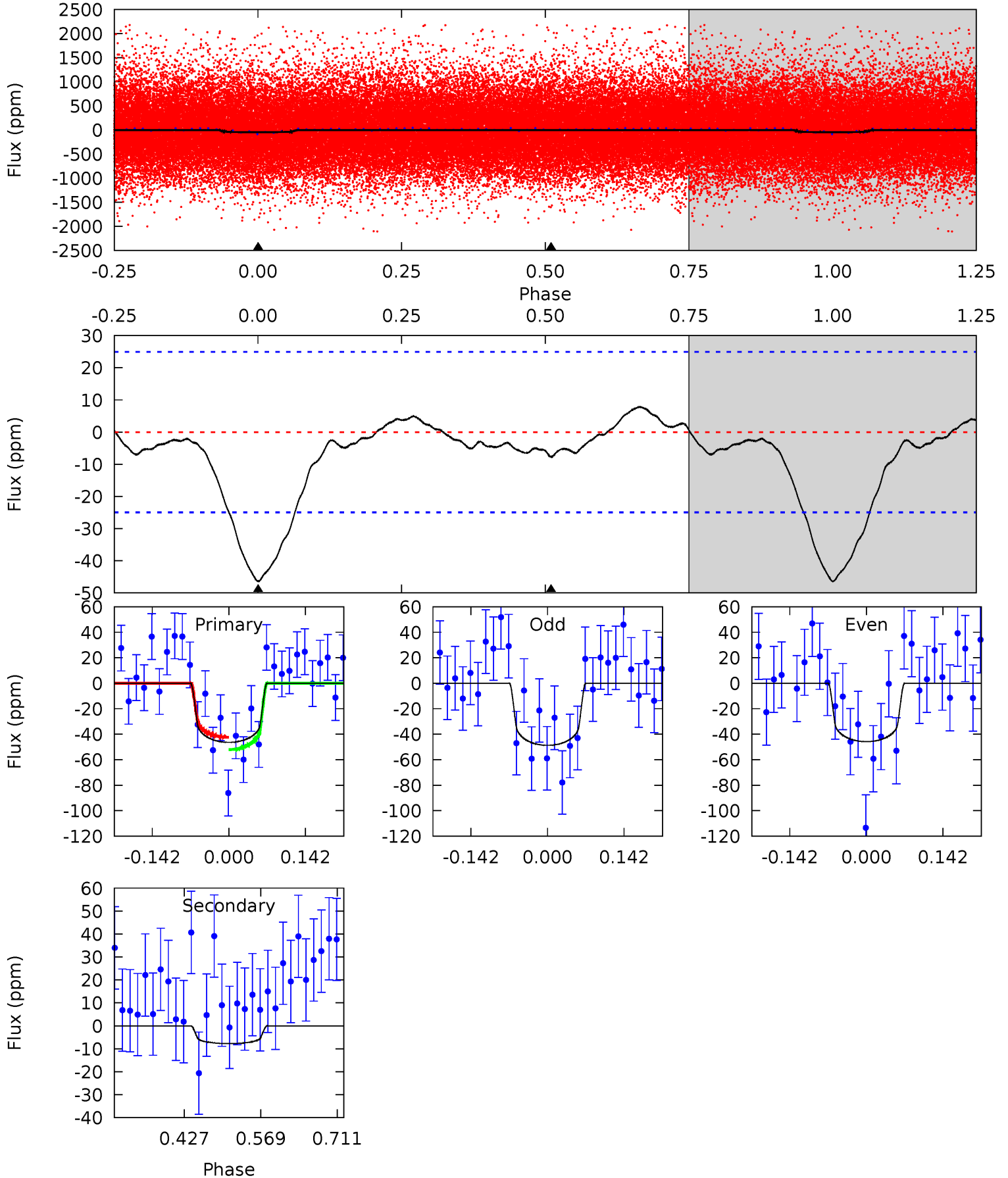
TCE 003437739-01 P= 1.891298 Days $T_0=132.670497$ (BKJD)



DV Model-Shift Uniqueness Test

003437739-01, P = 1.891319 Days, E = 130.766717 Days

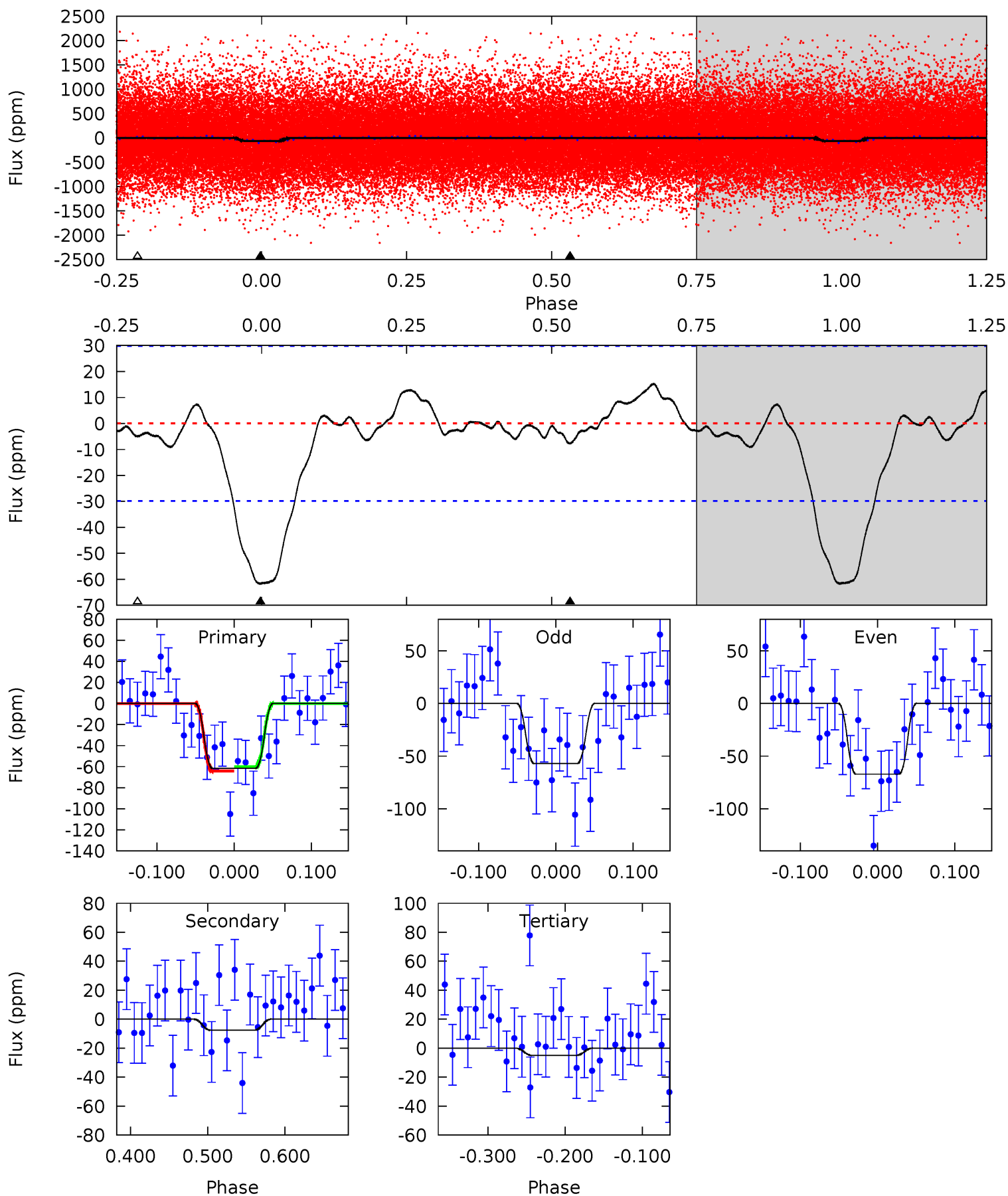
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.35	1.39	0	0	4.49	1.47	0.70	8.35	8.35	1.39	1.39	0.26	0.74	0.14	0.87



Alt Model-Shift Uniqueness Test

003437739-01, P = 1.891298 Days, E = 130.779199 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.42	1.17	0.76	0	4.56	1.65	0.92	8.66	9.42	0.41	1.17	0.77	0.89	0.20	0.31



Stellar Parameters For KIC 003437739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6387^{+172}_{-211}	$4.410^{+0.065}_{-0.195}$	$-0.120^{+0.250}_{-0.300}$	$1.105^{+0.330}_{-0.141}$	$1.145^{+0.162}_{-0.162}$	$1.195^{+0.342}_{-0.638}$
	+3%/-3%	+1%/-4%	+208%/-250%	+30%/-13%	+14%/-14%	+29%/-53%
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 003437739-01 / KOI 6333.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 6	$1.07^{+0.48}_{-0.50}$	2378^{+152}_{-125}	3840^{+1312}_{-921}	$3.247^{+11.551}_{-2.453}$
Alt.	-8 ± 7	$1.16^{+0.54}_{-0.53}$	2383^{+162}_{-121}	3642^{+1244}_{-5653}	$2.474^{+8.375}_{-2.201}$

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

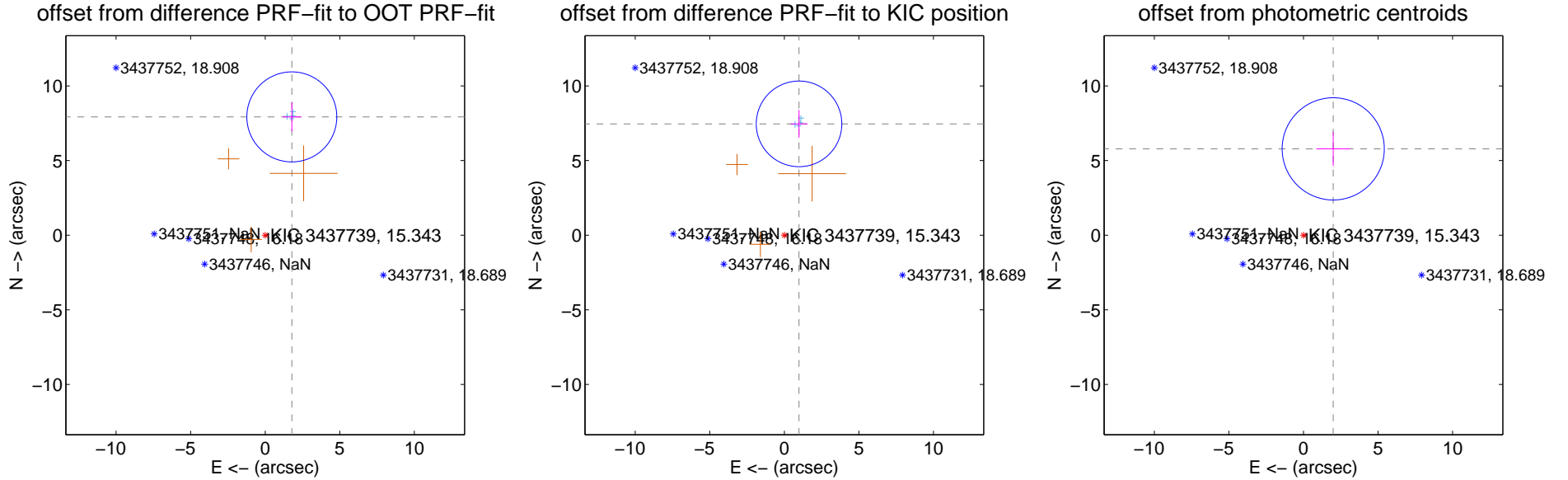
DV Centroid Data

Supplemental centroid analysis for 003437739-01. Kepler magnitude: 15.34. Transit SNR 9.18

There are 4 quarters with good PRF difference image offsets

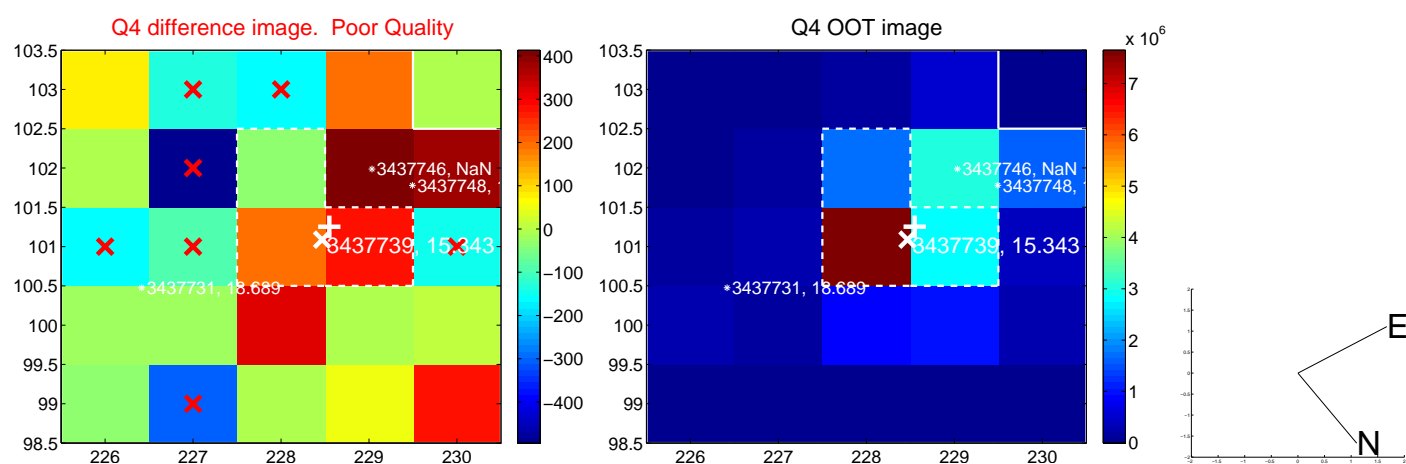
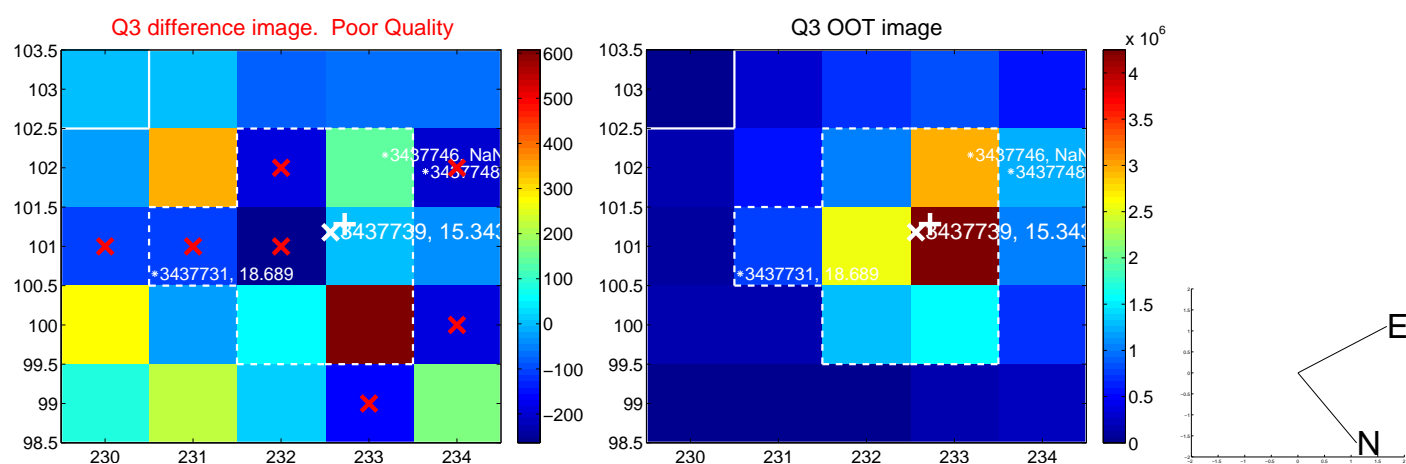
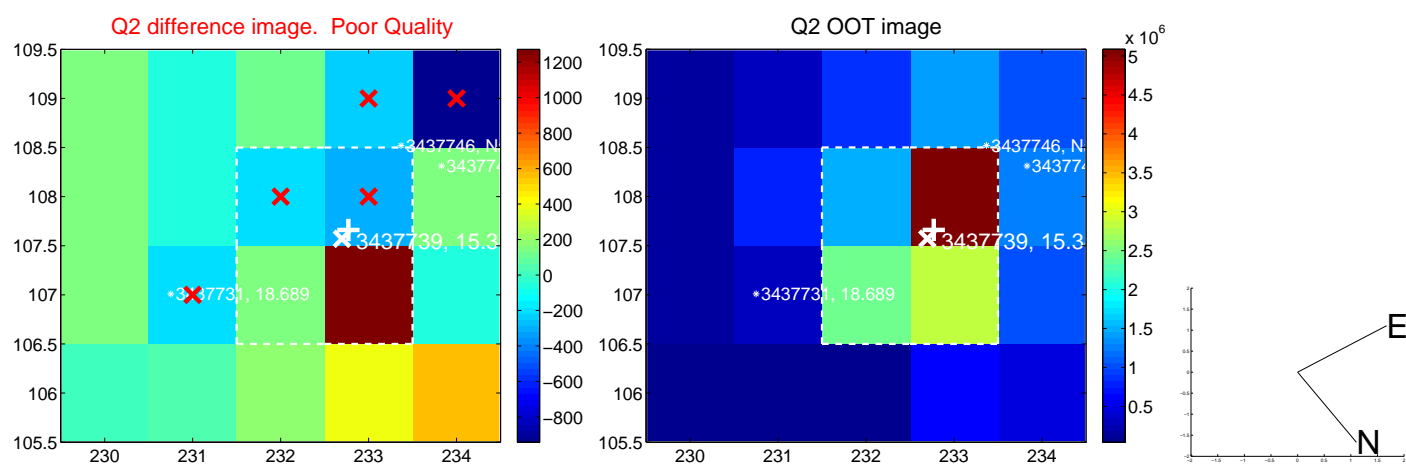
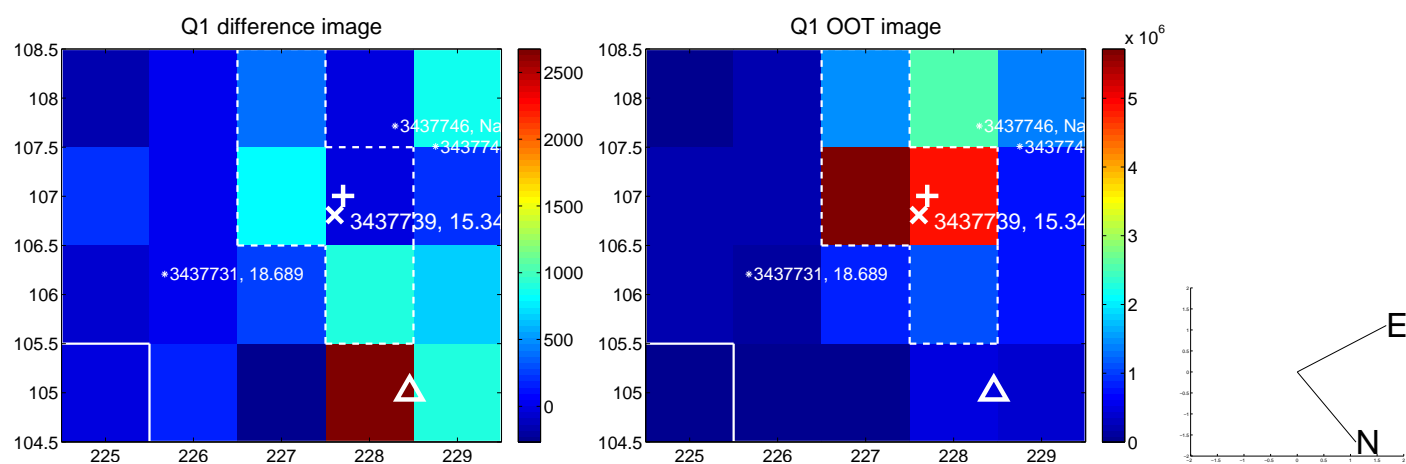
The direct PRF centroid is offset from the target star catalog position by about 0.92 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.123 \pm 1.005	8.08	-1.785 \pm 0.621	7.925 \pm 0.976
PRF-fit source offset from KIC position	7.522 \pm 0.956	7.87	-0.986 \pm 0.568	7.457 \pm 0.931
photometric centroid source offset	6.12 \pm 1.14	5.36	-2.00 \pm 1.14	5.78 \pm 1.14

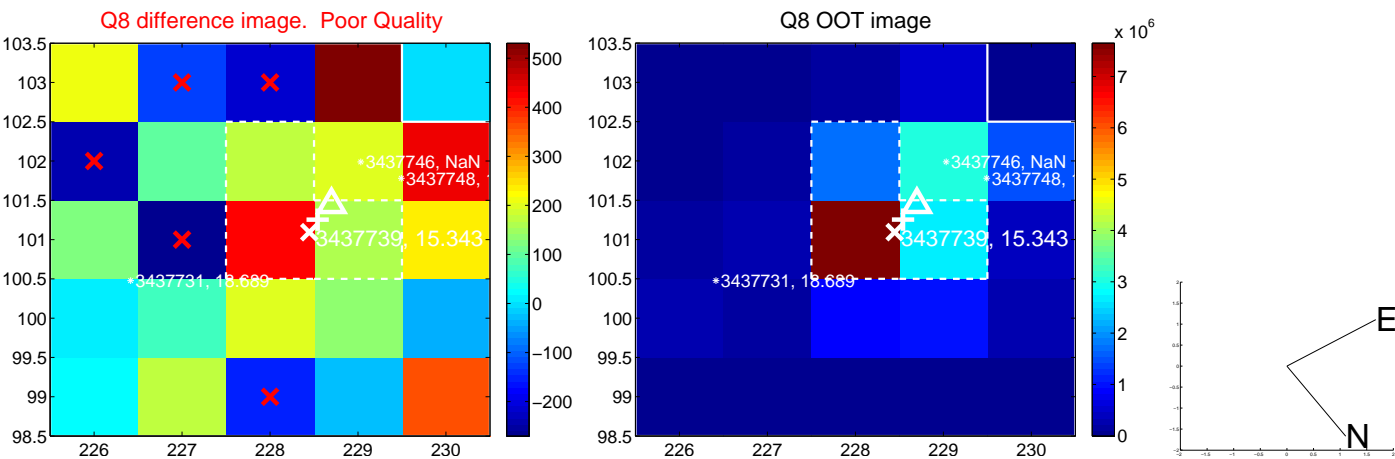
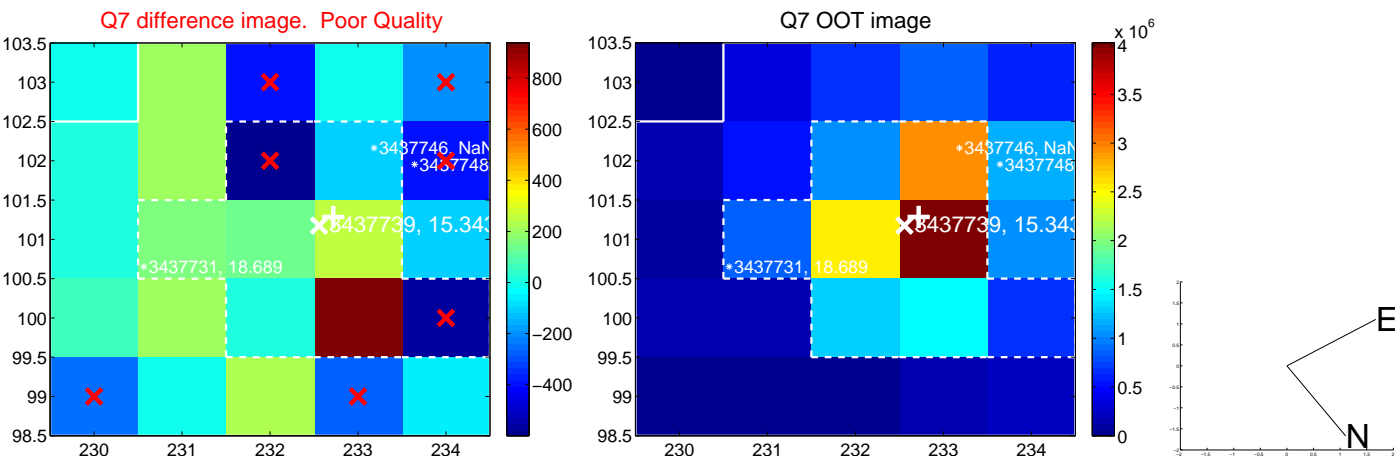
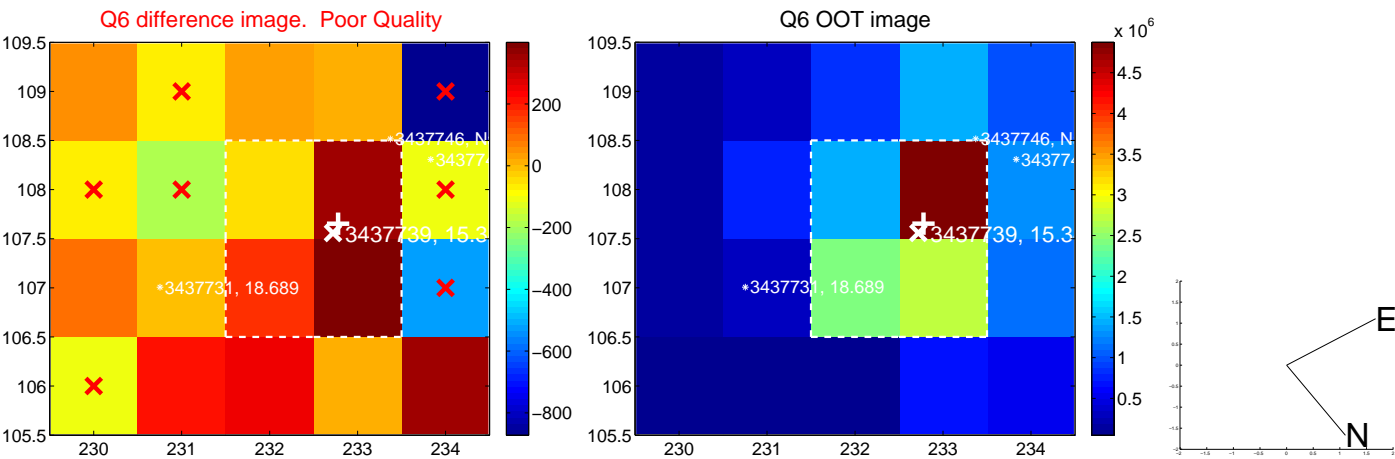
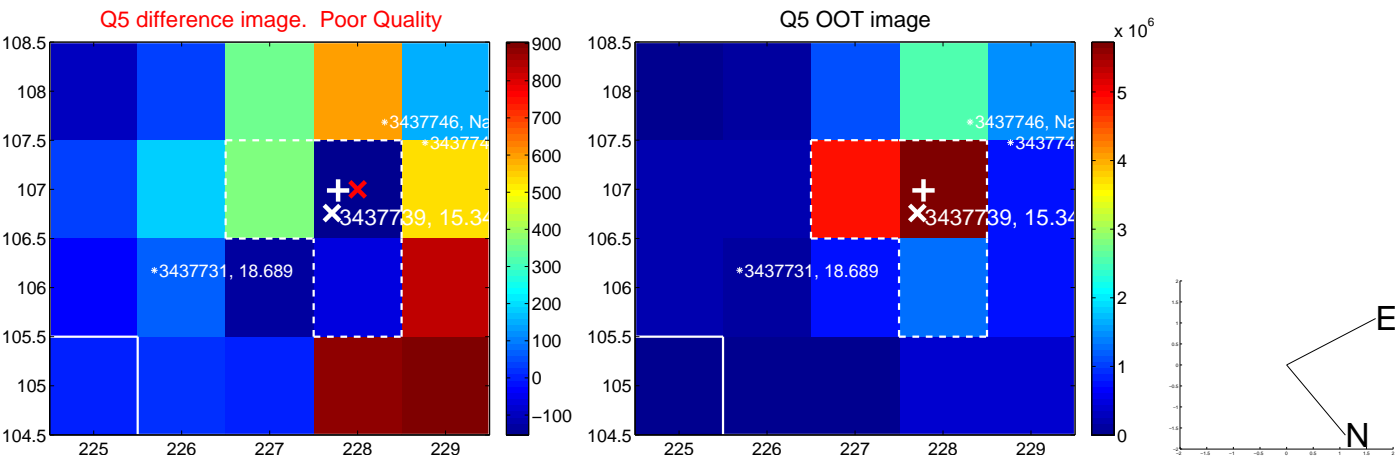


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

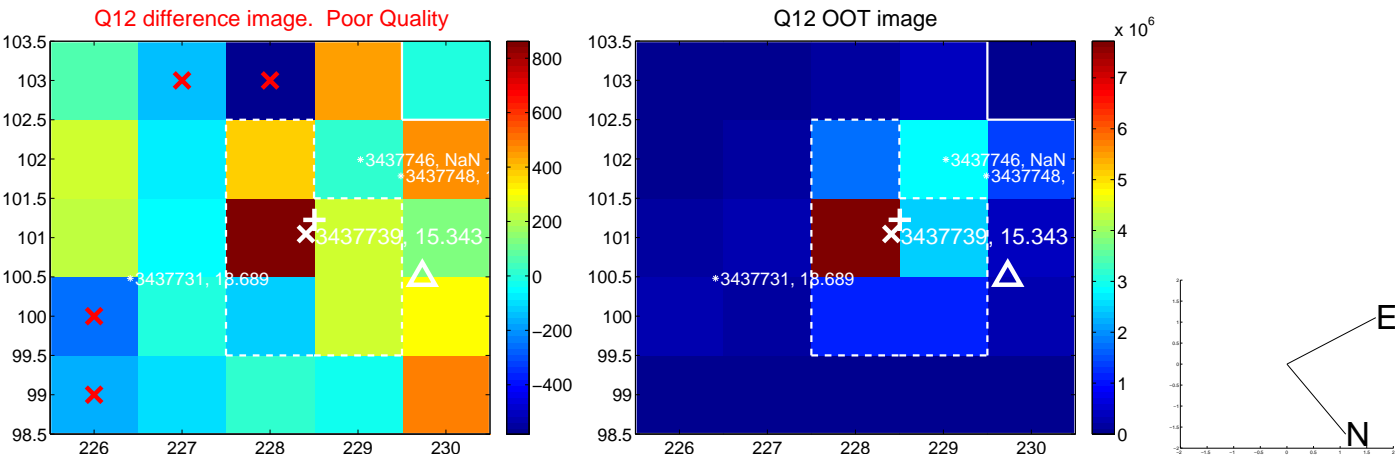
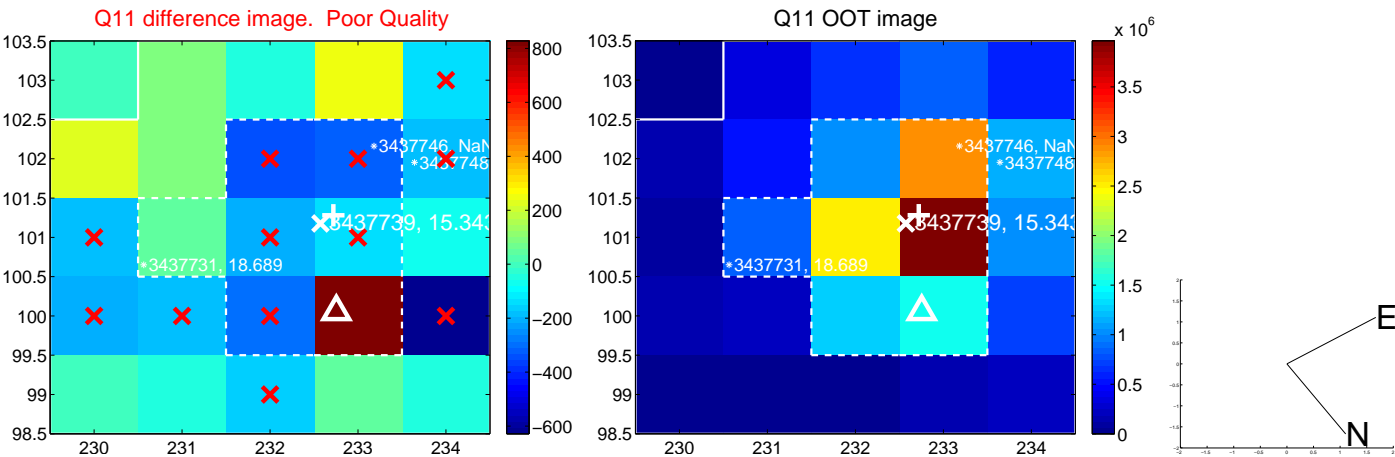
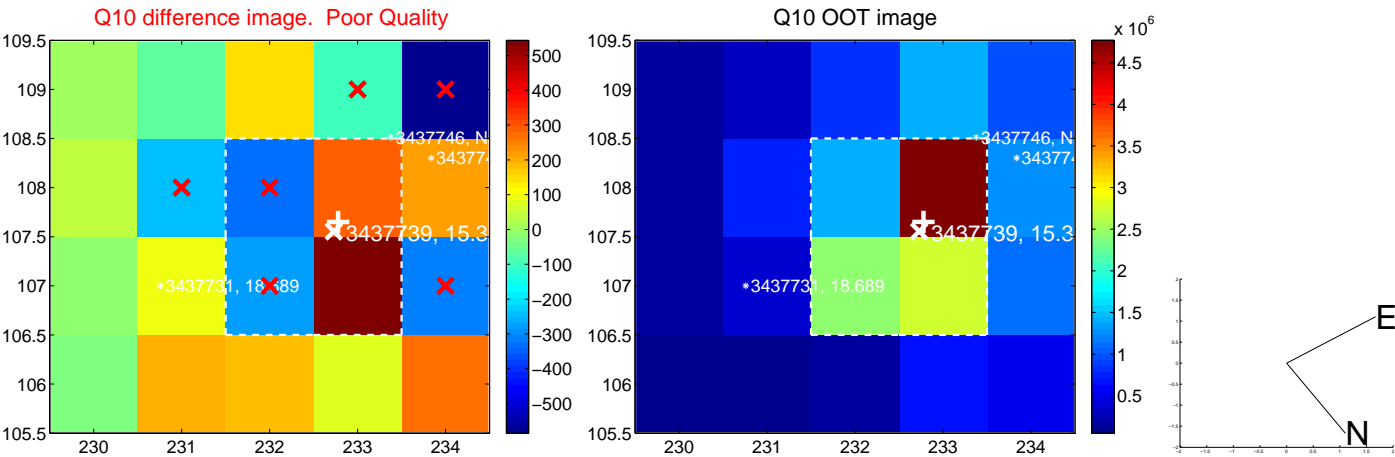
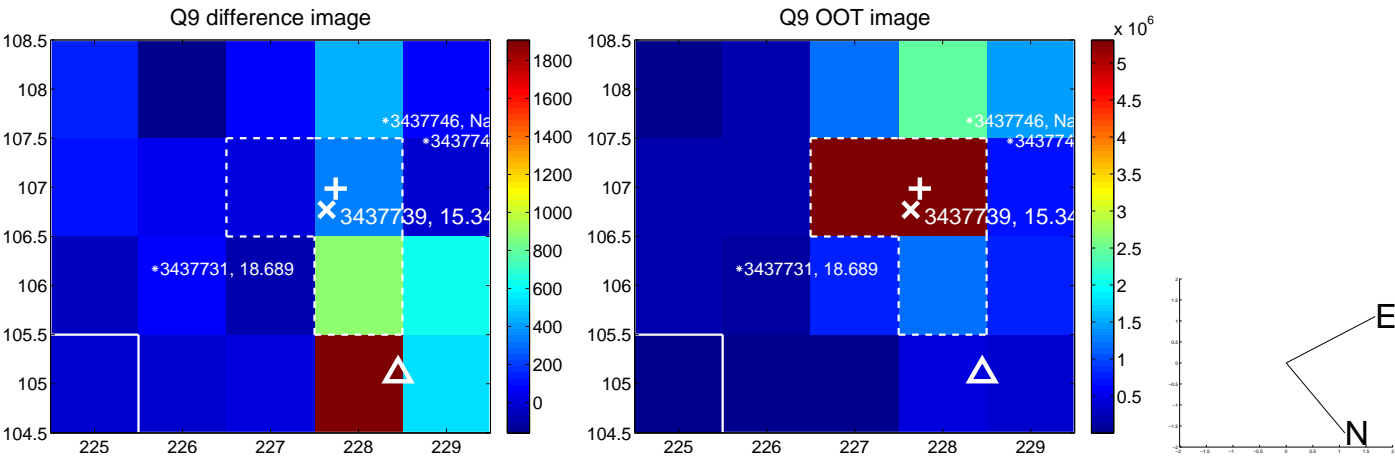
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



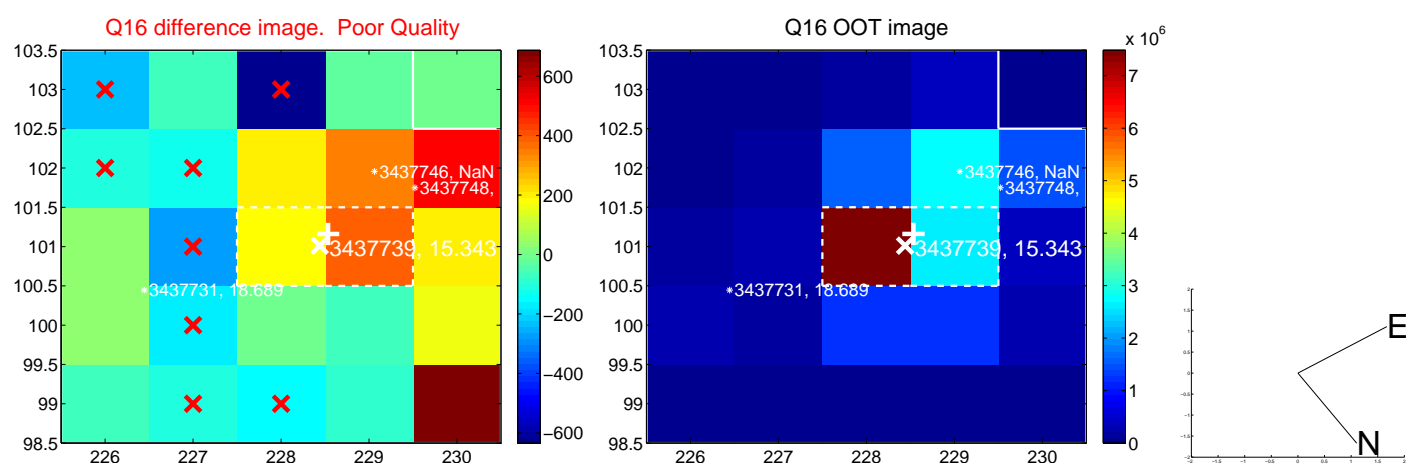
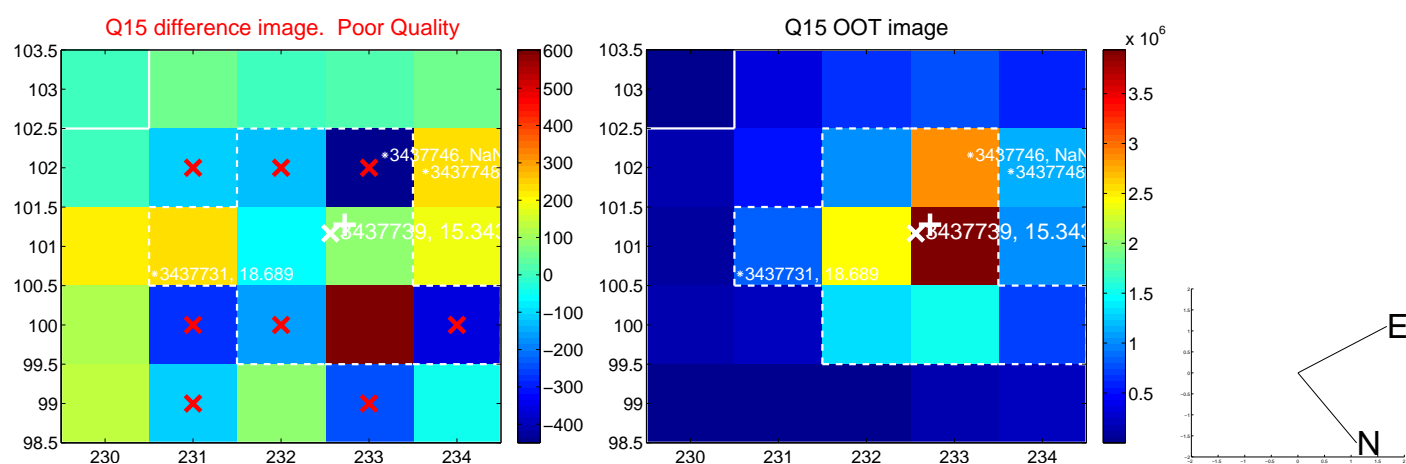
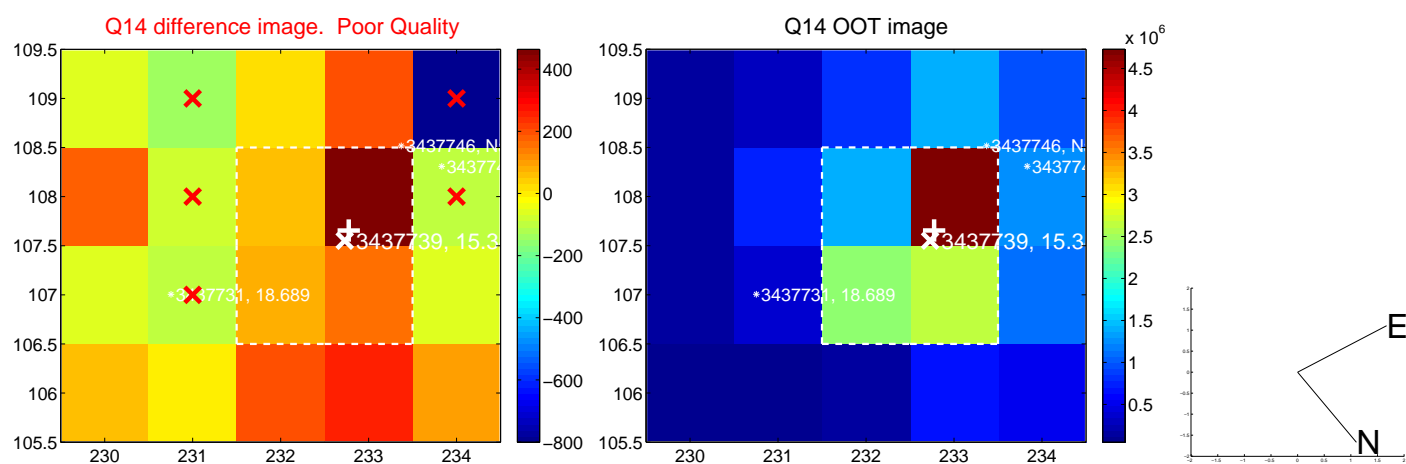
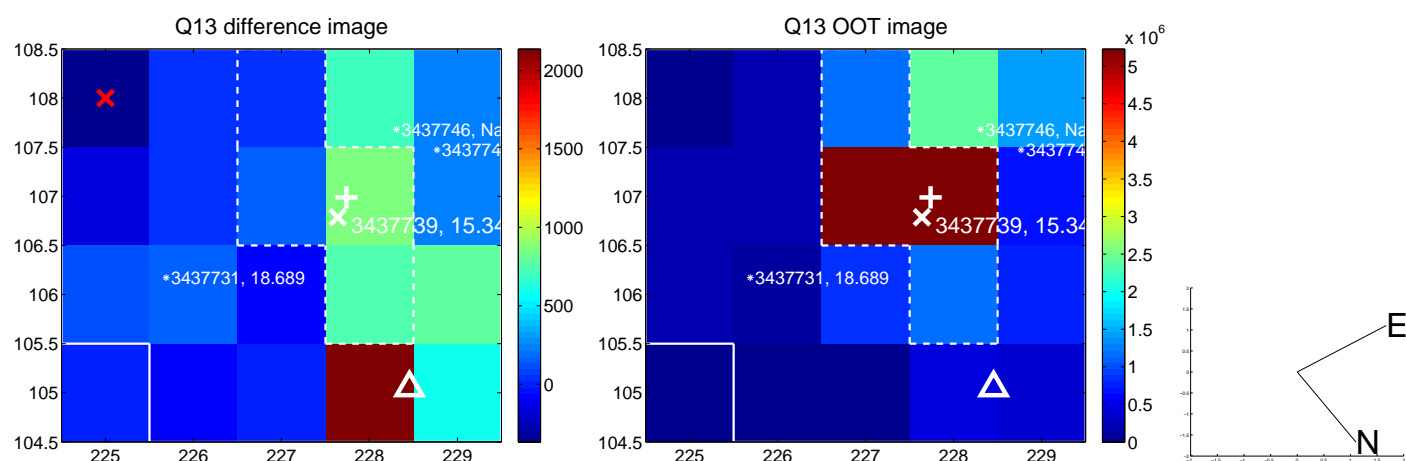
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



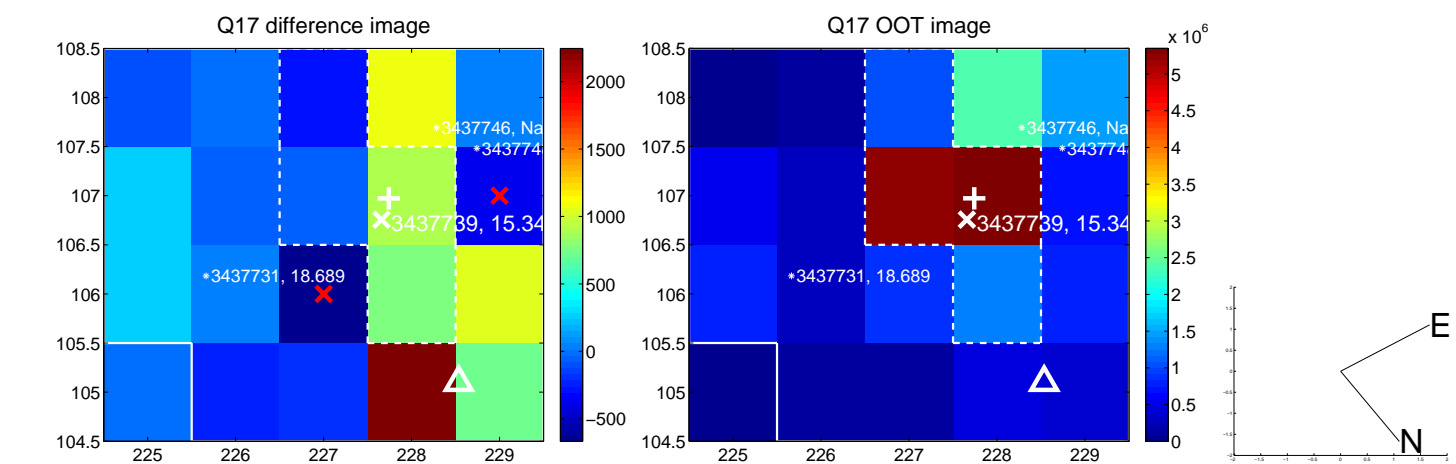
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



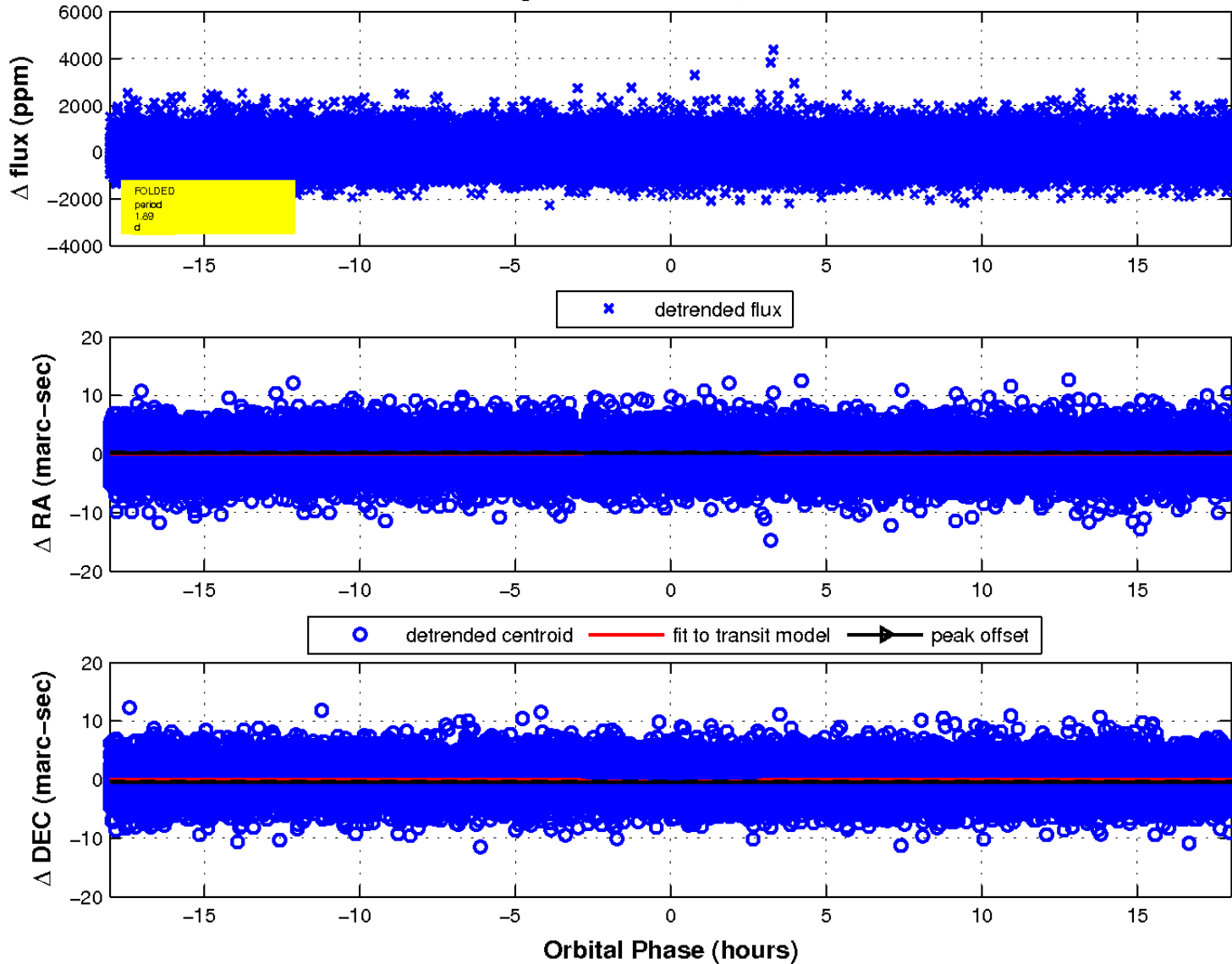
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

