

KIC 010935993

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})
010935993-01	OBS	3367.01	25.373565	151.871212	388.1	3.553	9.2	10.5	0.97	6195	2.44	42.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010935993-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

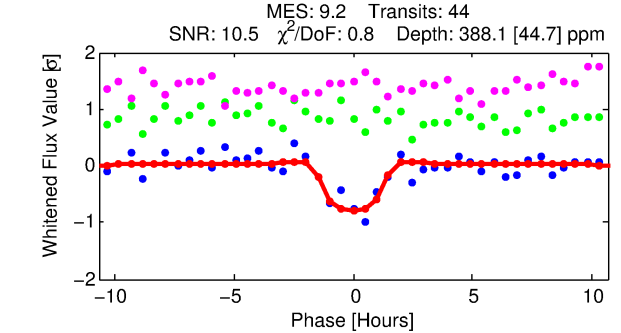
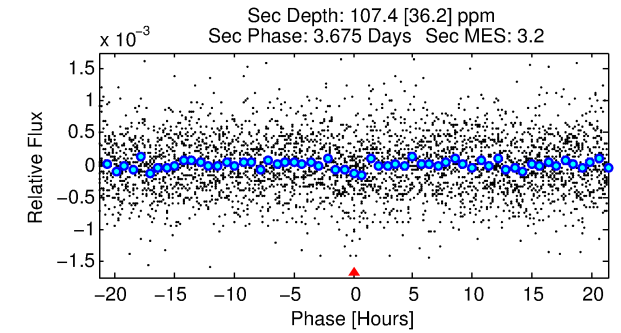
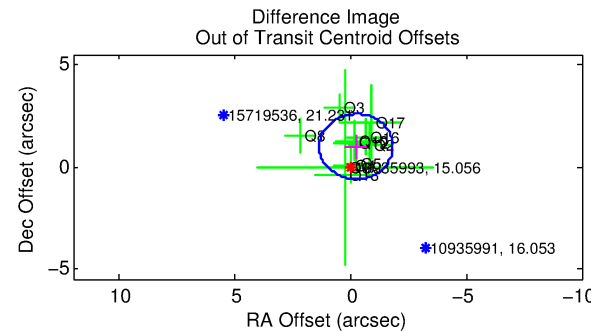
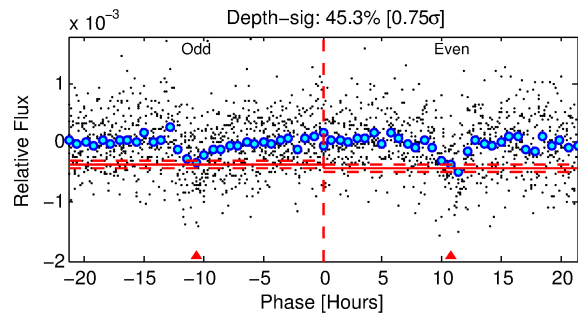
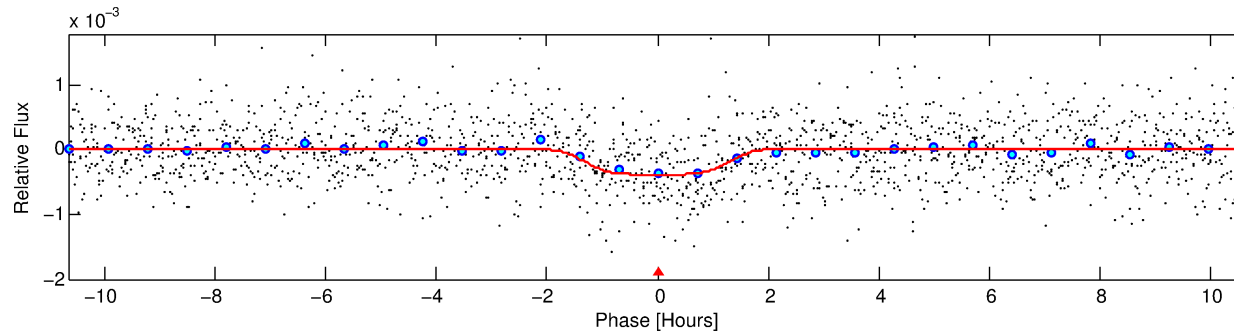
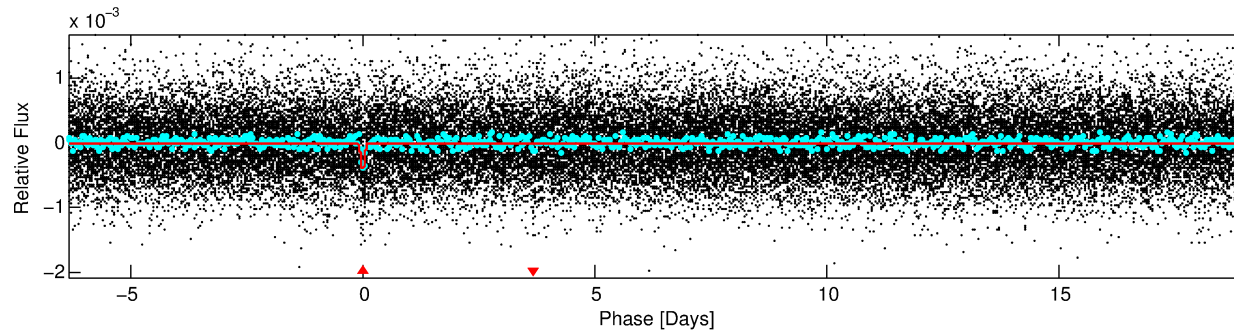
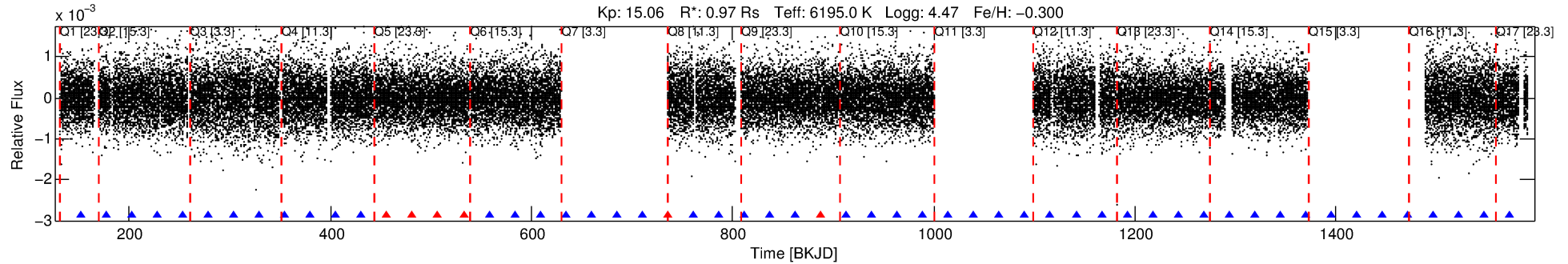
Ephemeris Match Information For 010935993-01

No Significant Match Found

DV One-Page Summary

KIC: 10935993 Candidate: 1 of 1 Period: 25.374 d

KOI: K03367.01 Corr: 0.879



DV Fit Results:

Period = 25.37357 [0.00024] d
Epoch = 151.8712 [0.0073] BKJD
Rp/R* = 0.0231 [0.0021]
a/R* = 18.64 [5.39]
b = 0.96 [0.02]
Seff = 42.97 [18.00]
Teq = 653 [68] K
Rp = 2.44 [0.80] Re
a = 0.1693 [0.0454] AU
Ag = 284.82 [156.43] [1.81 σ]
Teffp = 4147 [426] K [8.11 σ]

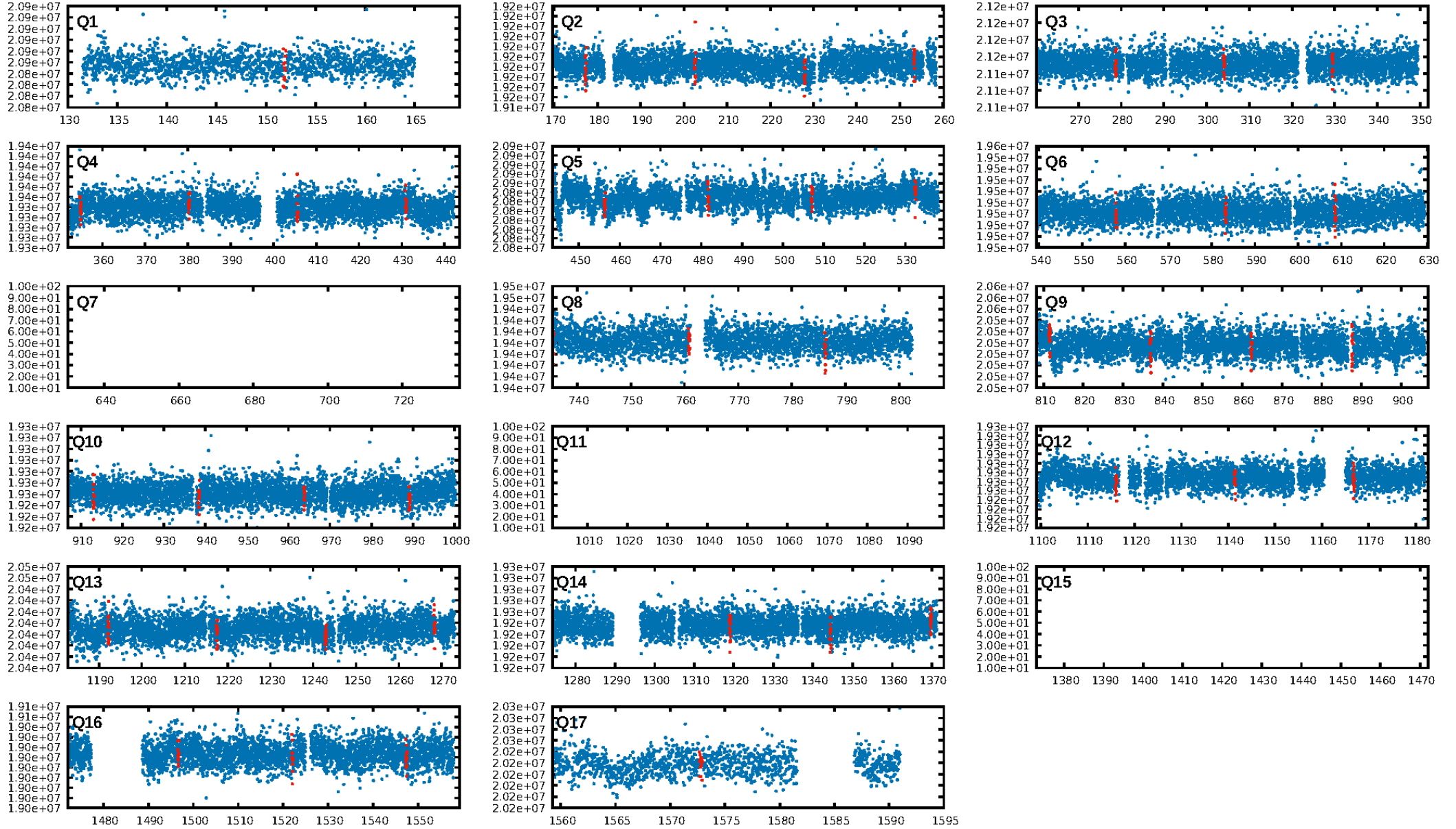
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.87e-20
RollingBand-fgt: 0.86 [36/42]
GhostDiagnostic-chr: -2.9
Centroid-sig: 76.7%
Centroid-so: 1.125 arcsec [1.03 σ]
OotOffset-rm: 1.008 arcsec [1.90 σ]
KicOffset-rm: 0.562 arcsec [1.21 σ]
OotOffset-st: 3/1/4/3 [11]
KicOffset-st: 3/1/4/3 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [14/14]

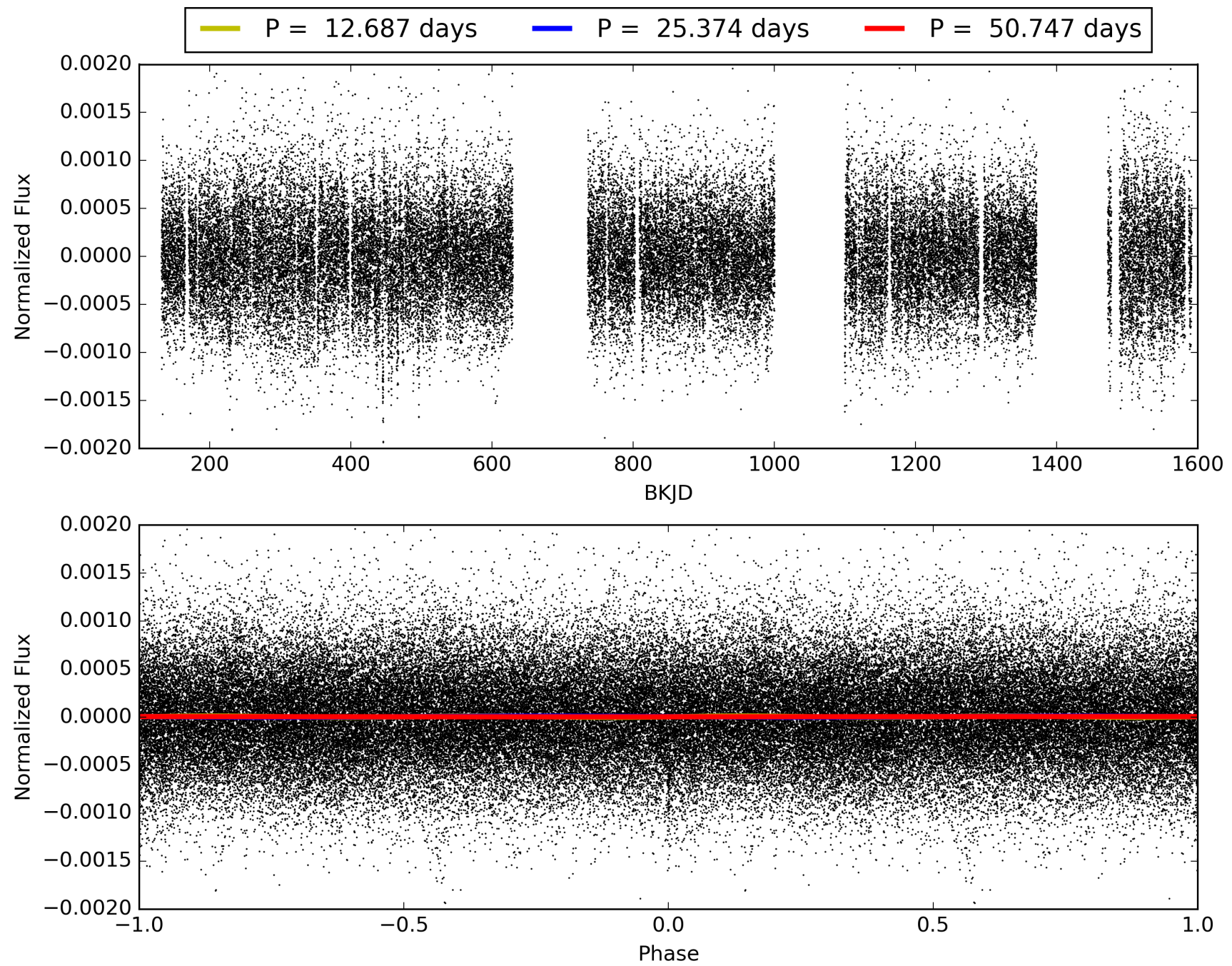
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:06:19 Z

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

TCE 010935993-01, PDC Light Curves

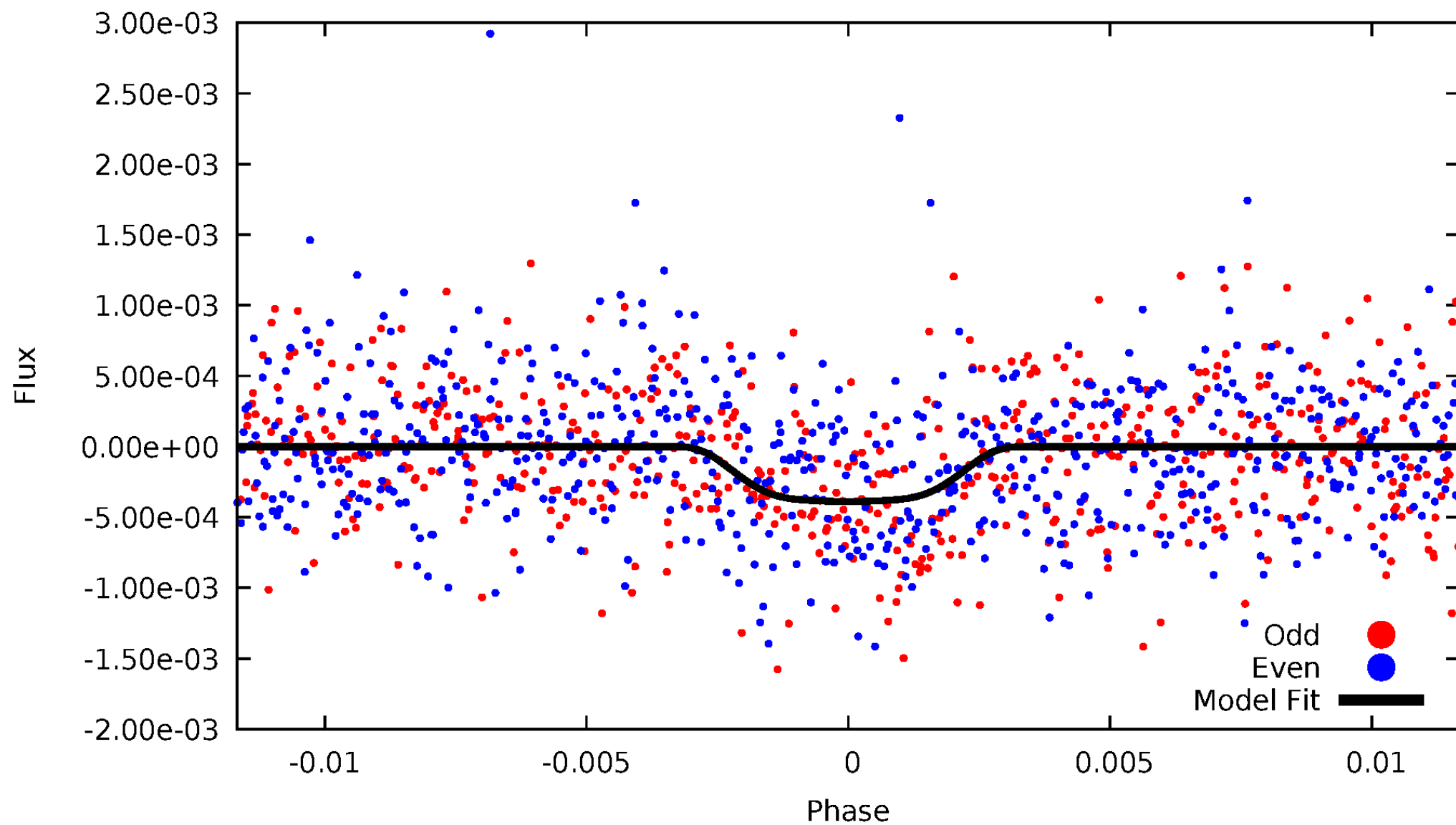


TCE 010935993-01



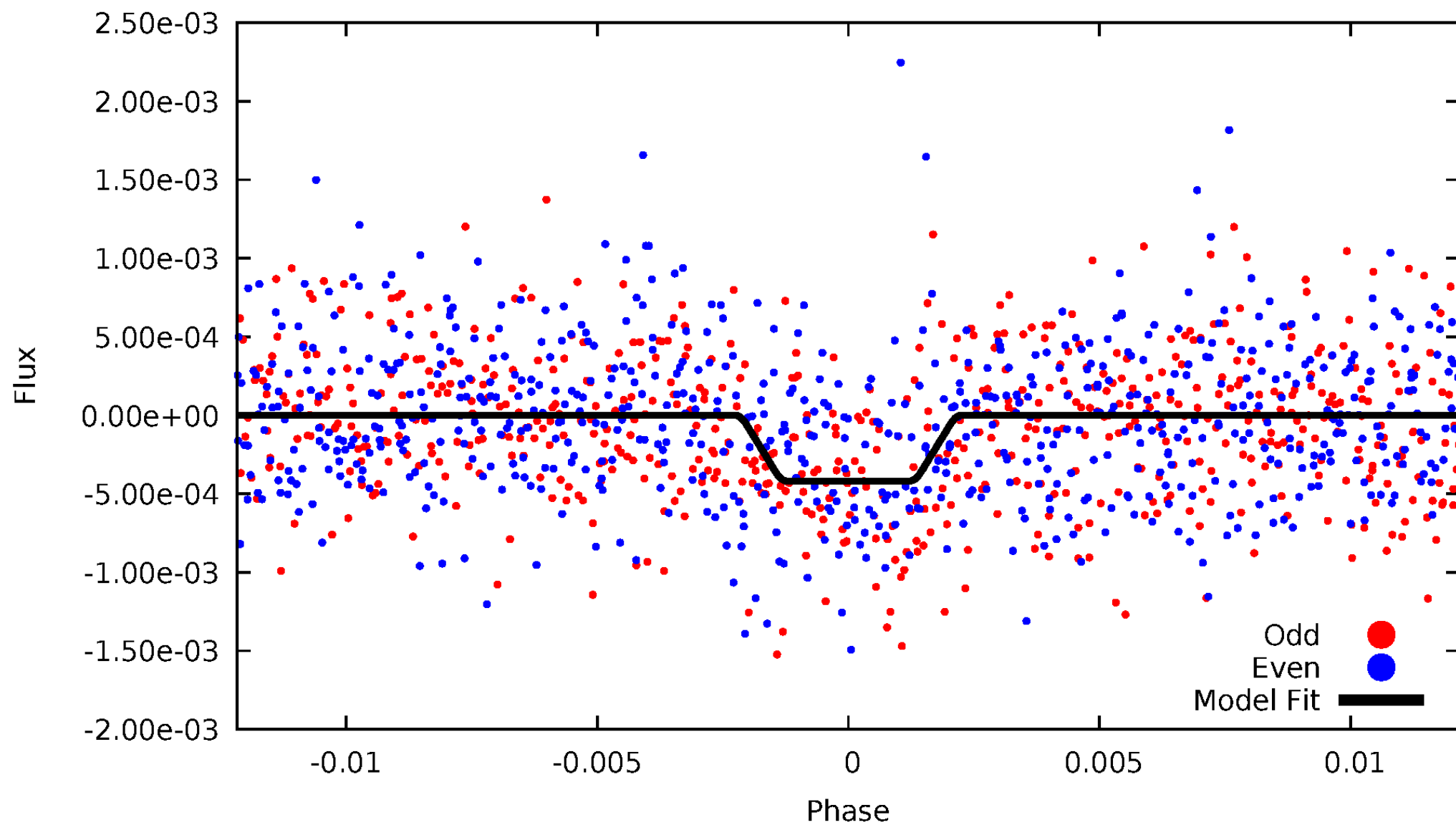
DV Odd/Even

TCE 010935993-01



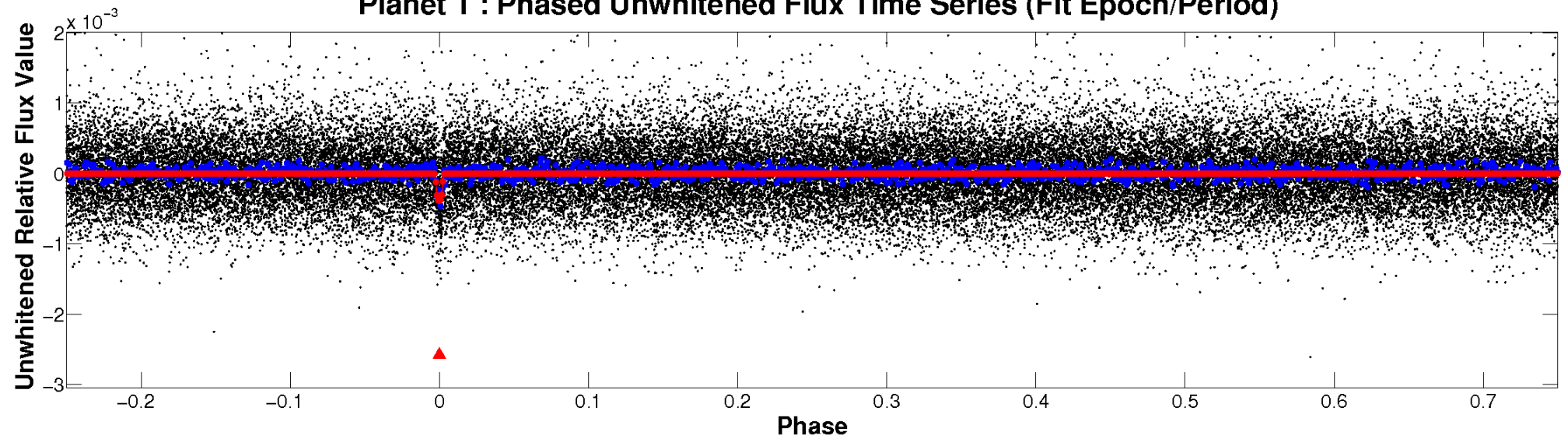
ALT Odd/Even

TCE 010935993-01

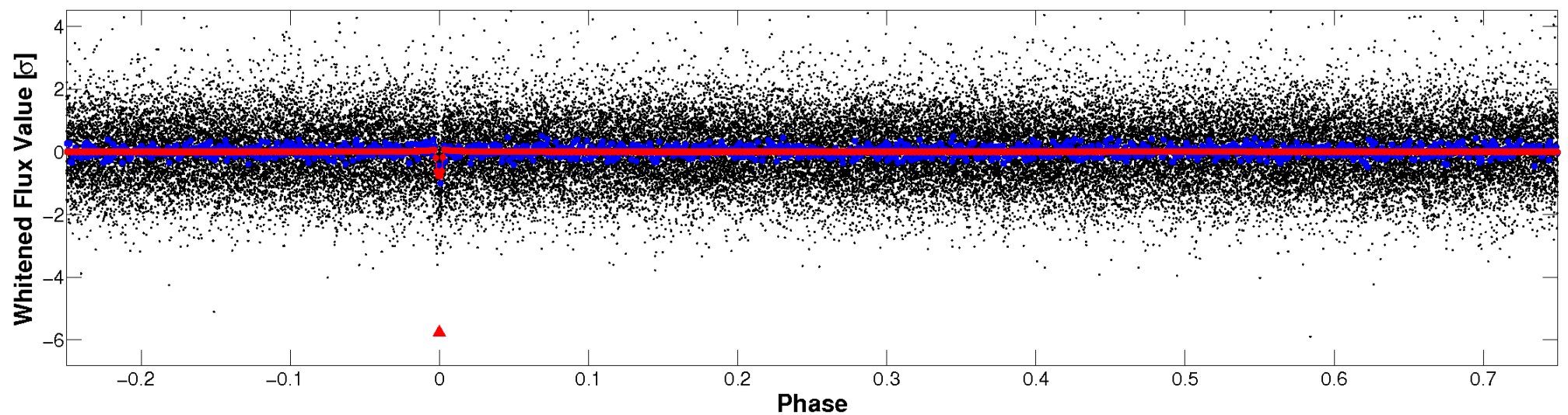


Non-Whitened Vs. Whitened Light Curve

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

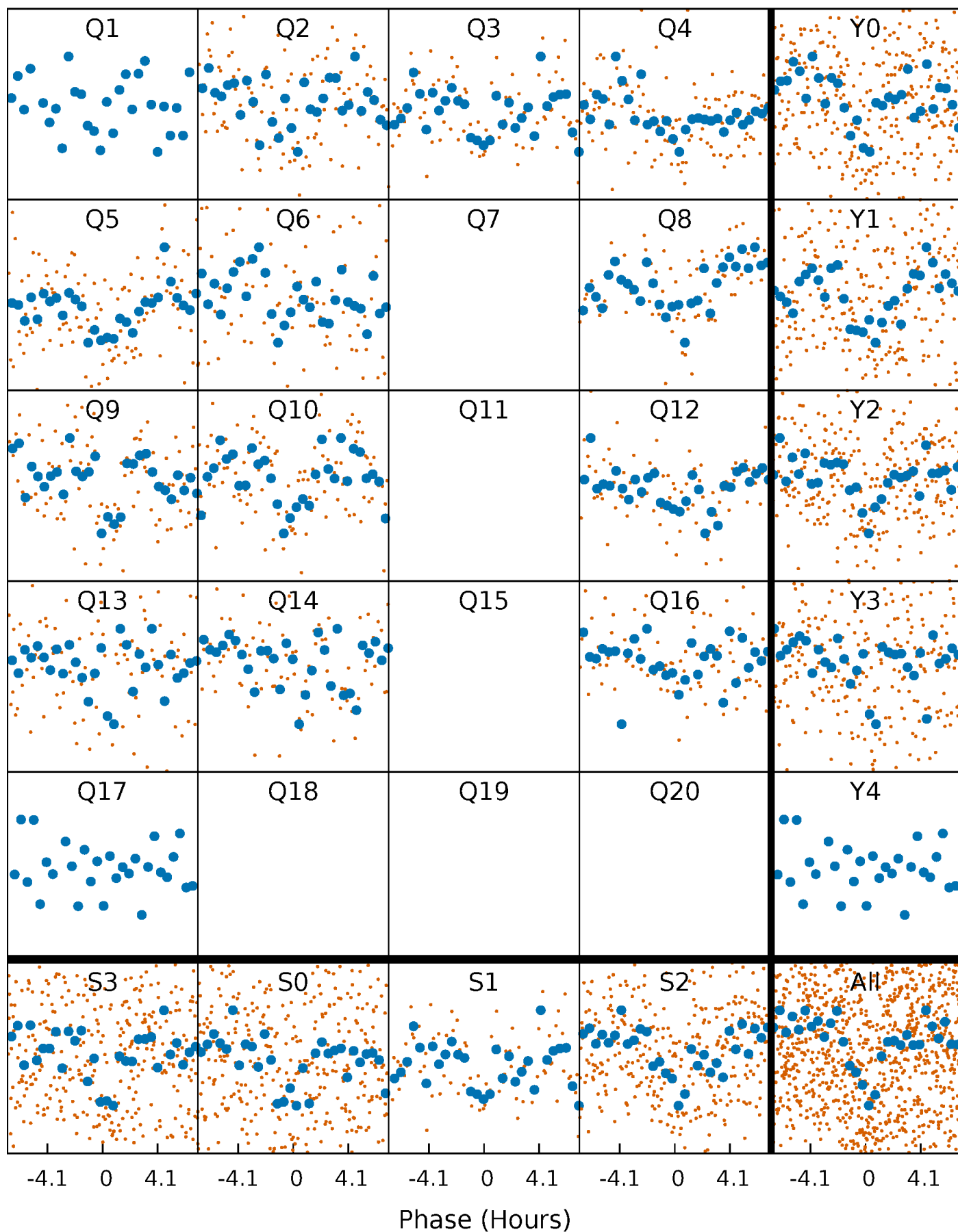


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



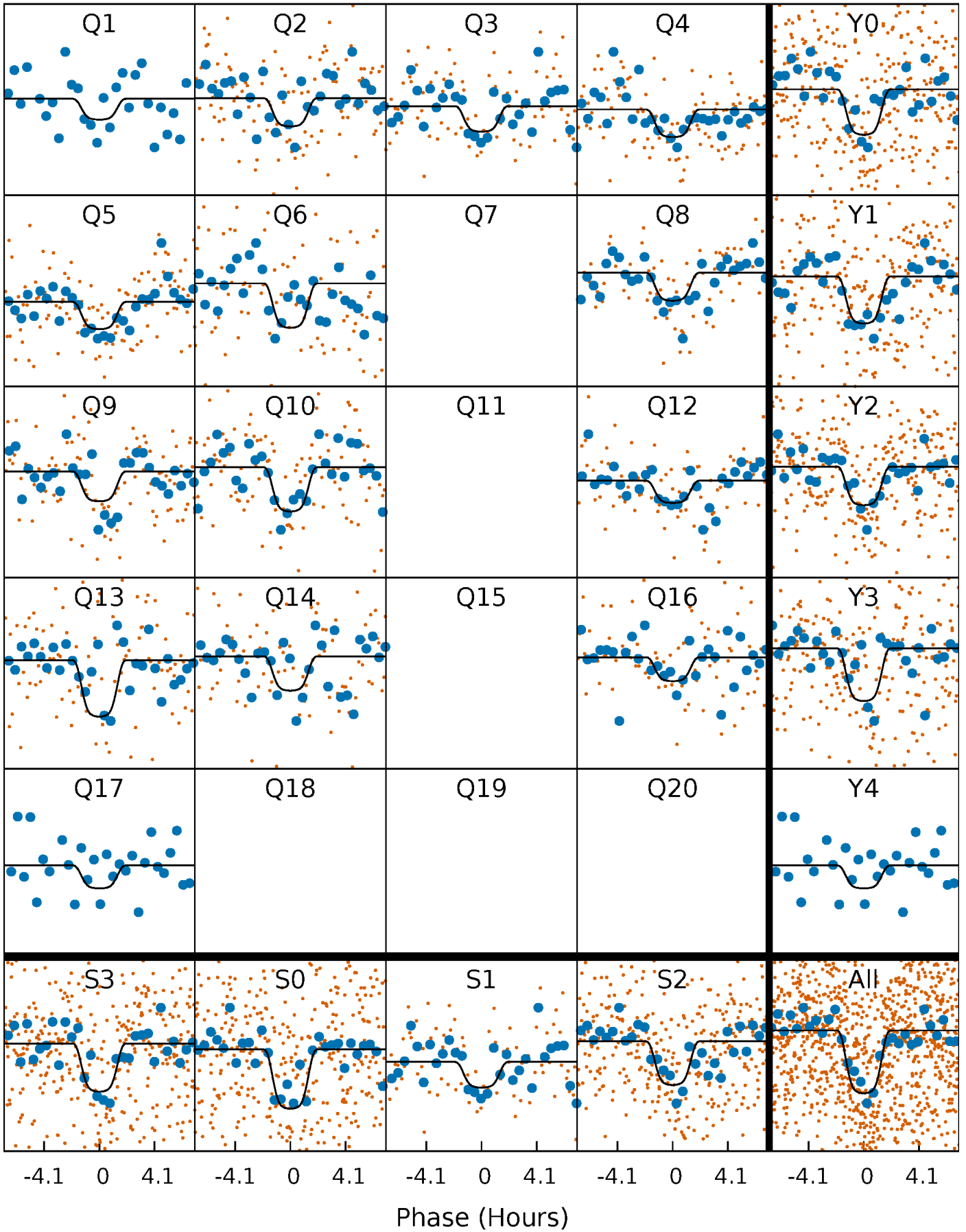
PDC Quarter-Phased Transit Curves

TCE 010935993-01 P= 25.373565 Days $T_0=151.871212$ (BKJD)



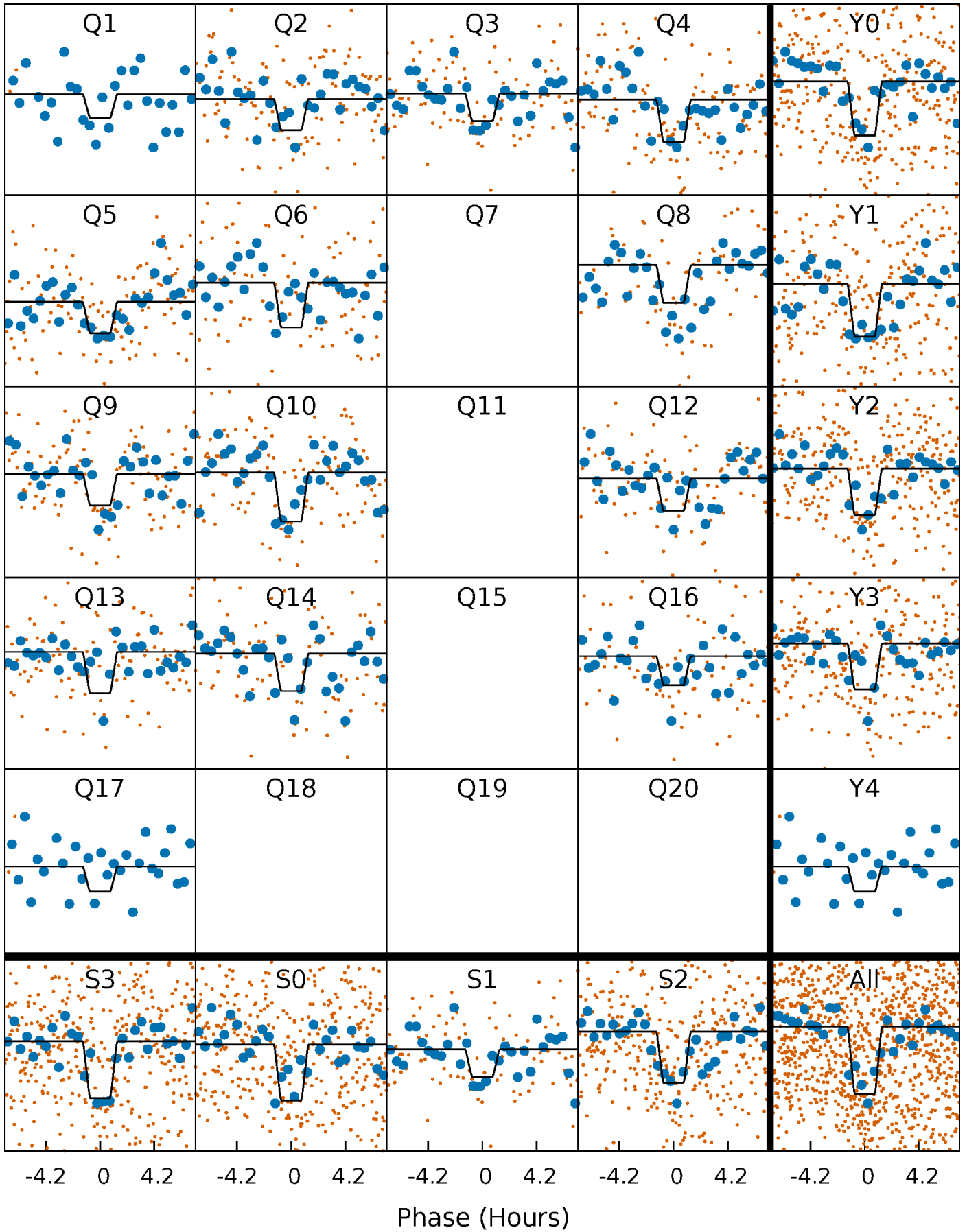
DV Quarter-Phased Transit Curves

TCE 010935993-01 P= 25.373565 Days $T_0=151.871212$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

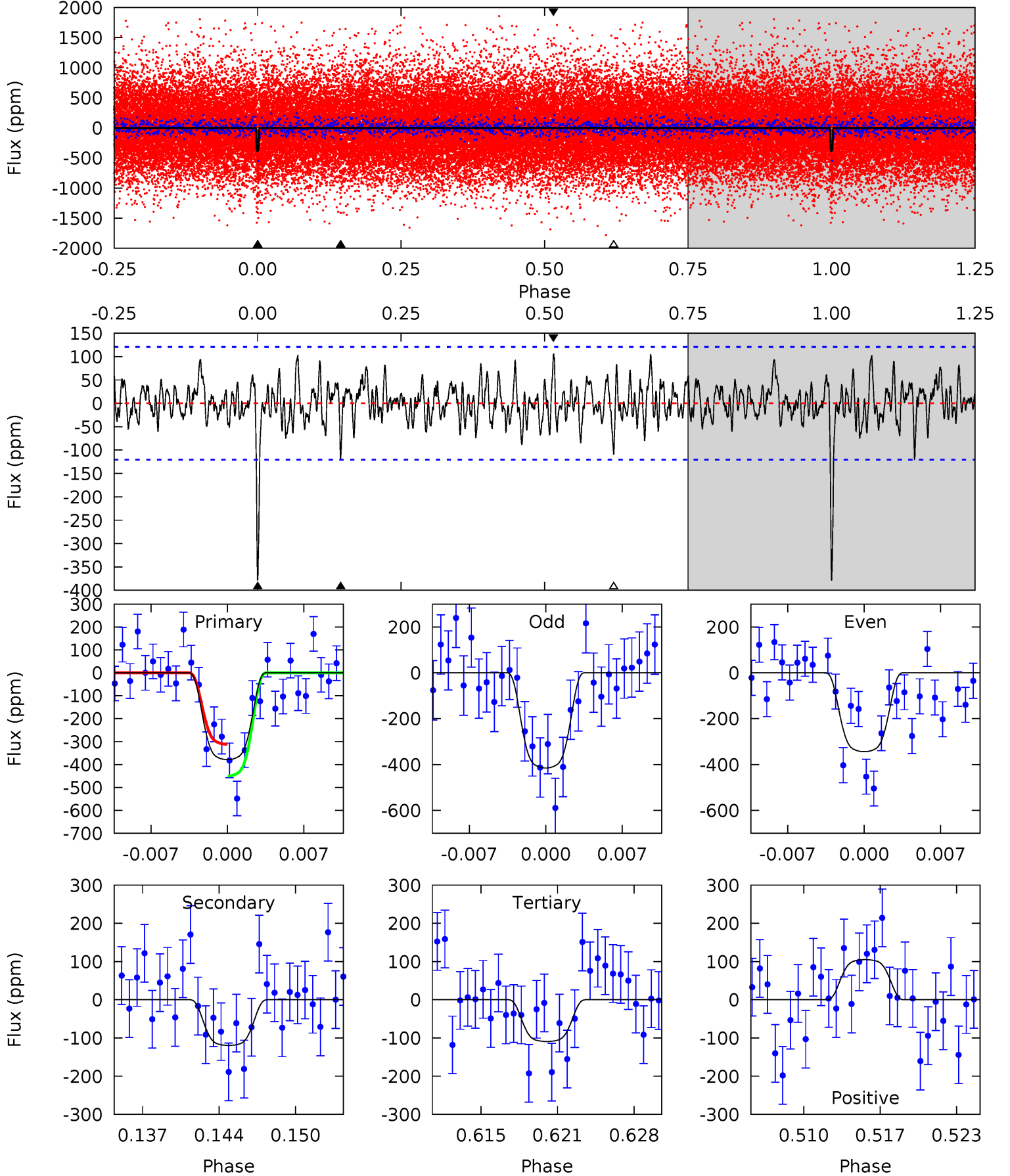
TCE 010935993-01 P= 25.373818 Days $T_0=151.869136$ (BKJD)



DV Model-Shift Uniqueness Test

010935993-01, P = 25.373565 Days, E = 126.497647 Days

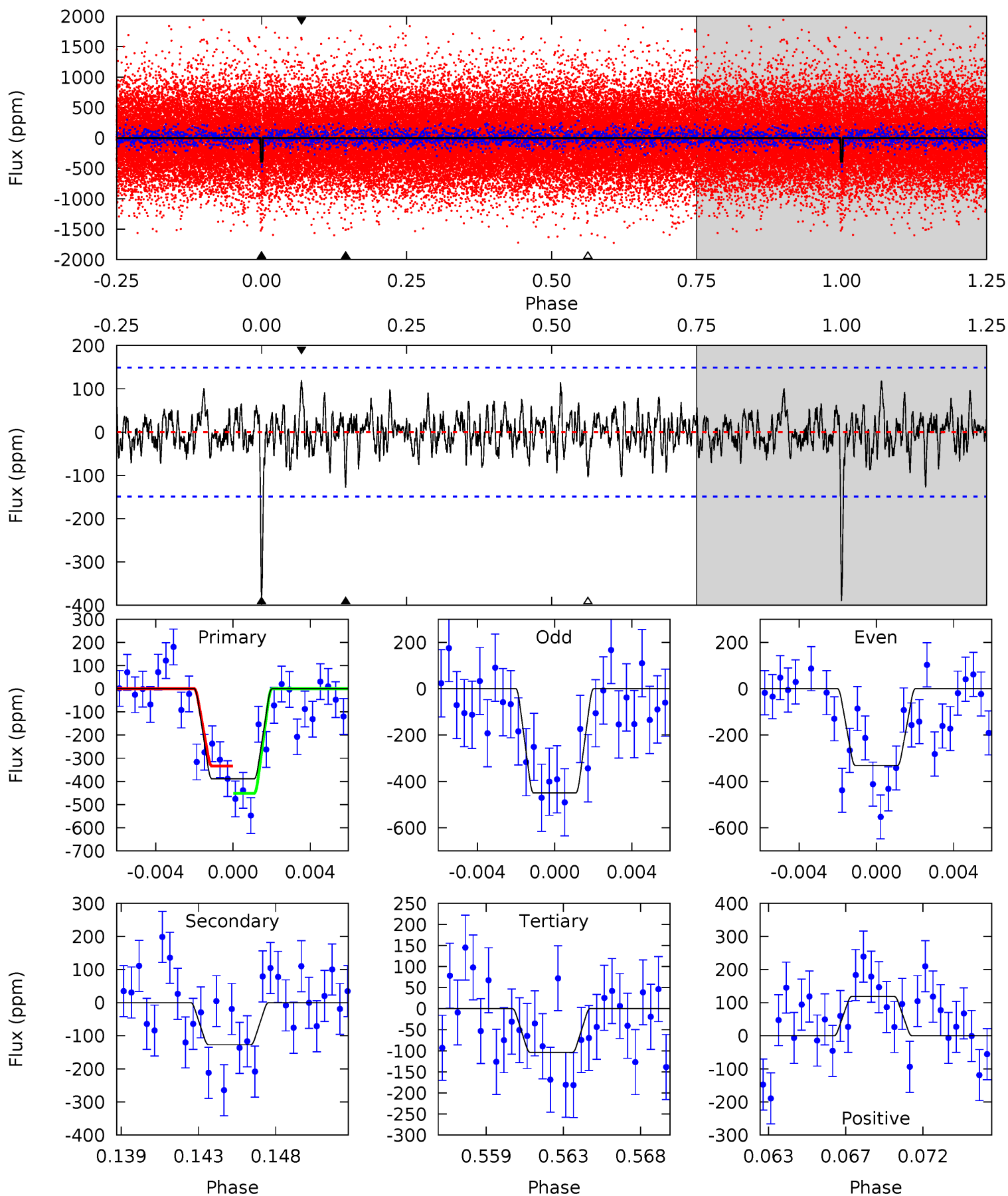
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	5.06	4.62	4.44	5.11	2.72	1.43	11.4	11.6	0.43	0.61	1.51	0.92	0.22	2.94



Alt Model-Shift Uniqueness Test

010935993-01, $P = 25.373818$ Days, $E = 126.495318$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.42	3.61	4.13	5.18	2.84	1.21	9.92	9.40	0.81	0.29	2.06	0.91	0.23	2.05



Stellar Parameters For KIC 010935993

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6195^{+169}_{-225}	$4.470^{+0.067}_{-0.216}$	$-0.300^{+0.300}_{-0.300}$	$0.966^{+0.305}_{-0.102}$	$0.998^{+0.147}_{-0.120}$	$1.561^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+100%/-100%	+32%/-11%	+15%/-12%	+29%/-54%
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 010935993-01 / KOI 3367.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-120 ± 24	$2.51^{+0.41}_{-0.32}$	923^{+73}_{-43}	4439^{+279}_{-249}	291^{+112}_{-91}
Alt.	-127 ± 29	$2.21^{+0.41}_{-0.27}$	927^{+69}_{-45}	4722^{+324}_{-310}	386^{+176}_{-124}

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

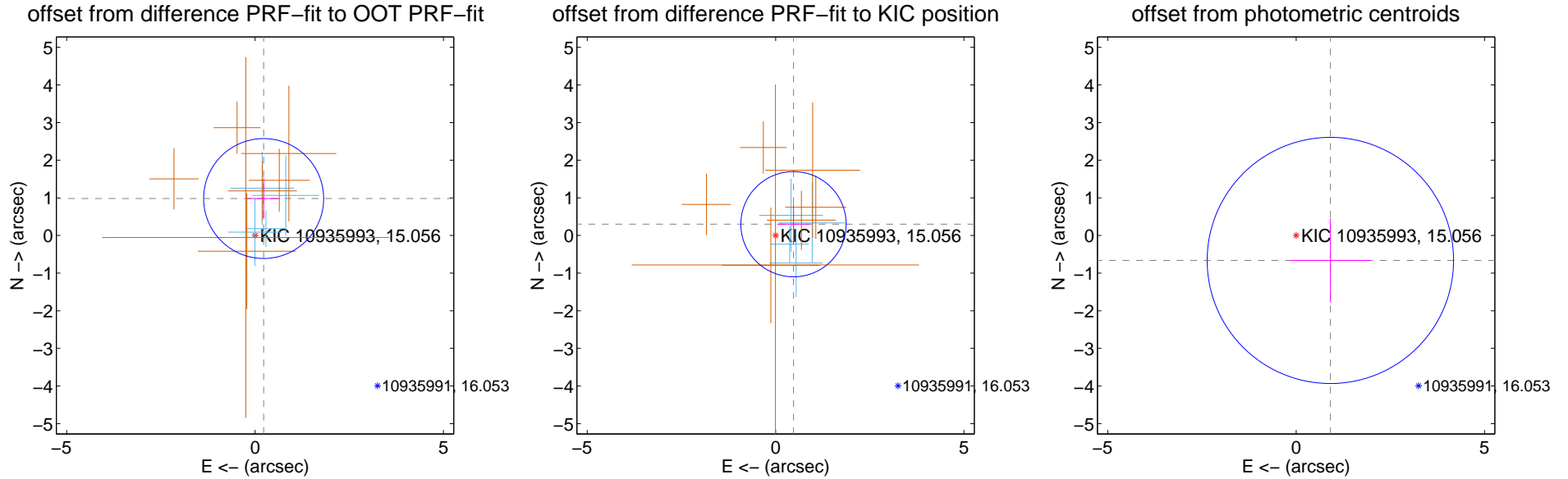
DV Centroid Data

Supplemental centroid analysis for 010935993-01. Kepler magnitude: 15.06. Transit SNR 10.47

There are 4 quarters with good PRF difference image offsets

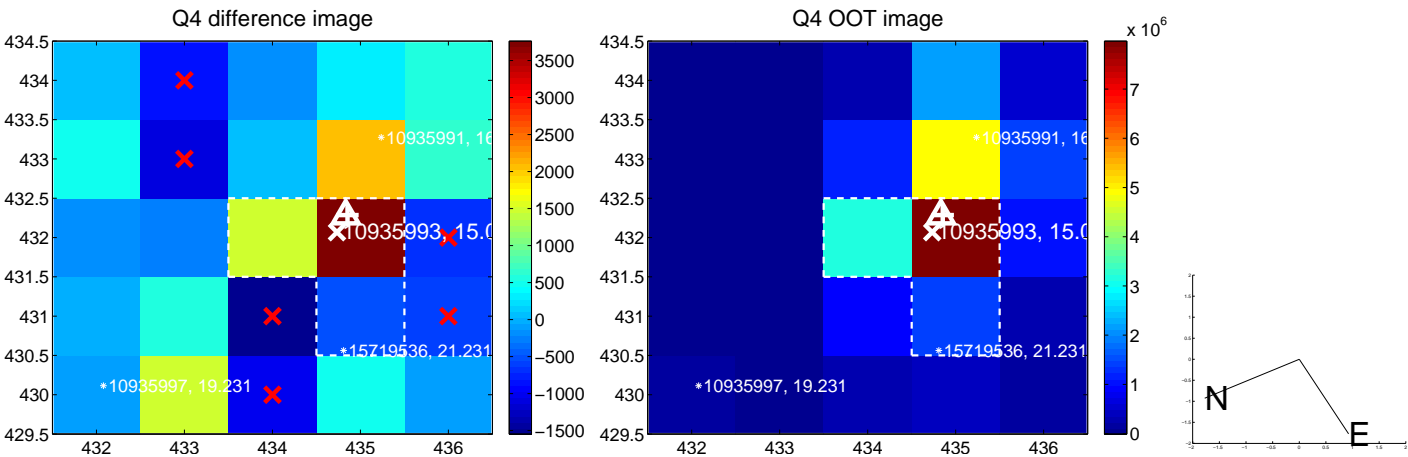
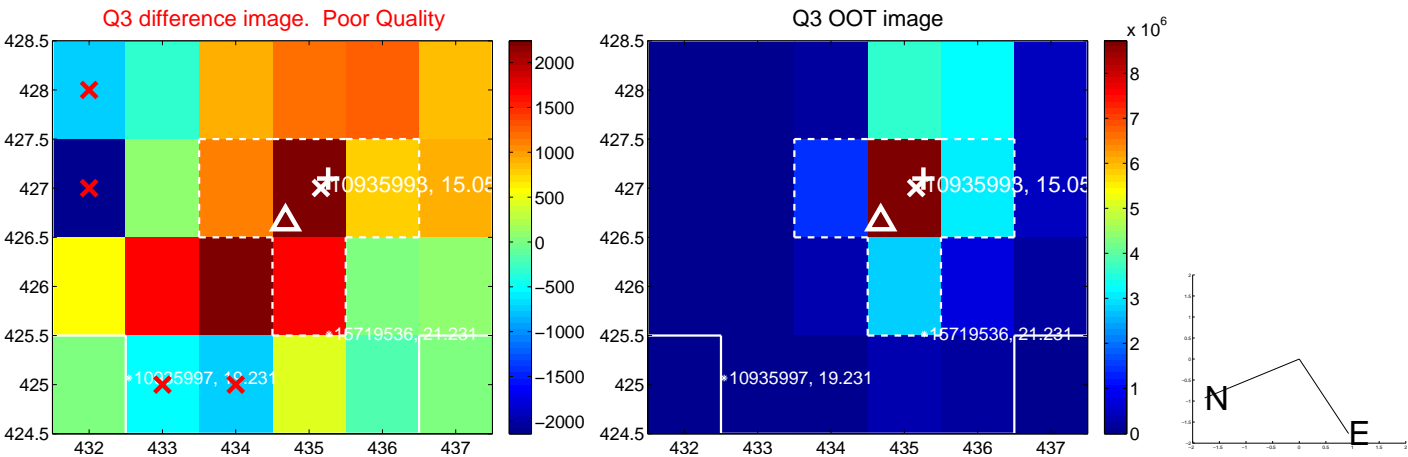
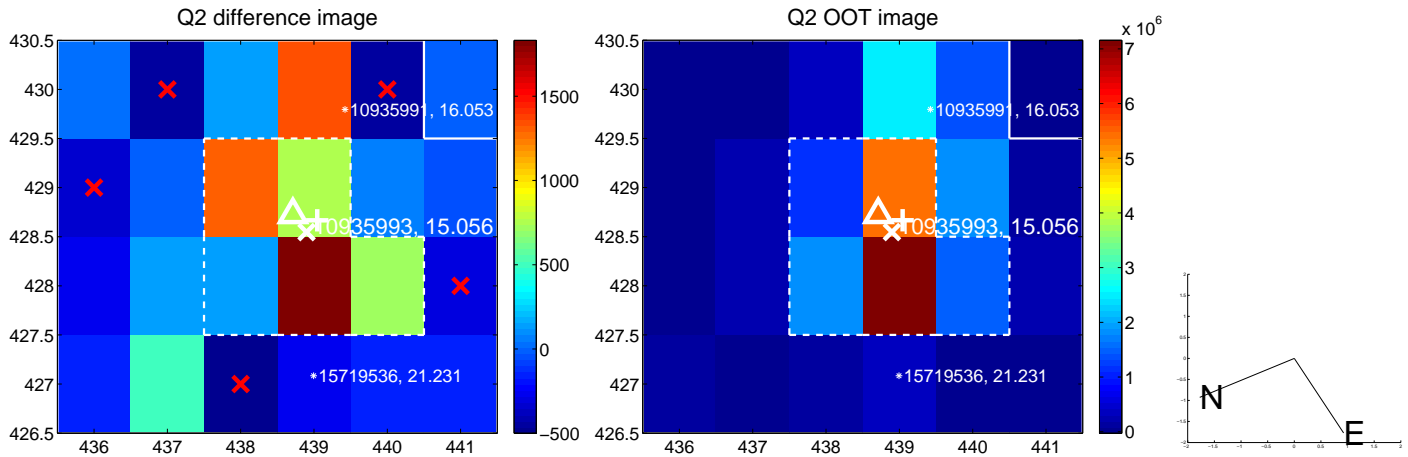
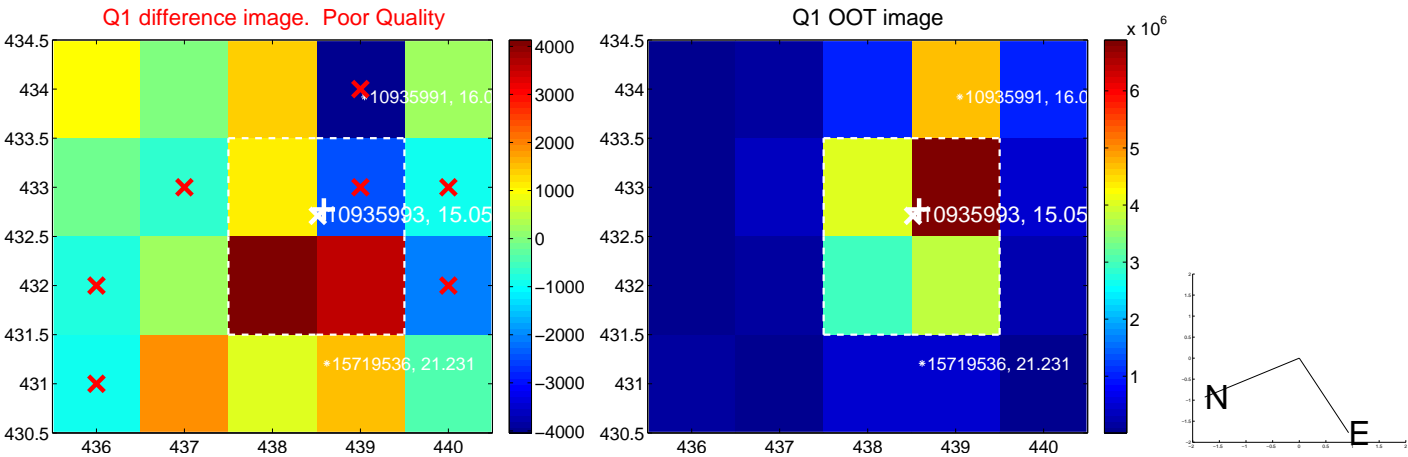
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.008 ± 0.531	1.90	-0.227 ± 0.435	0.982 ± 0.536
PRF-fit source offset from KIC position	0.562 ± 0.466	1.21	-0.475 ± 0.435	0.300 ± 0.536
photometric centroid source offset	1.12 ± 1.09	1.03	-0.91 ± 1.08	-0.66 ± 1.12

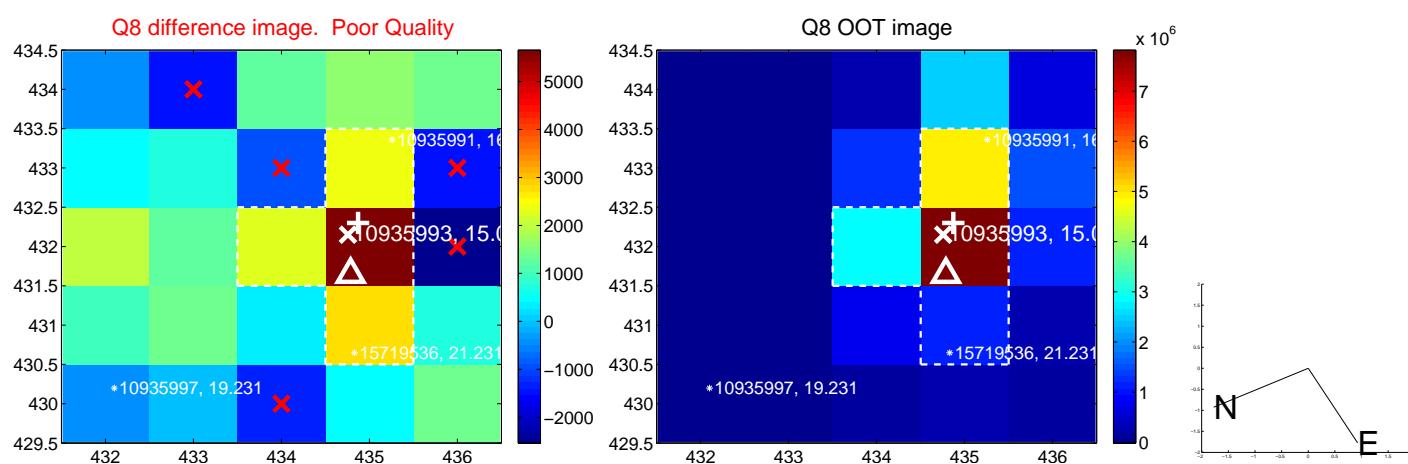
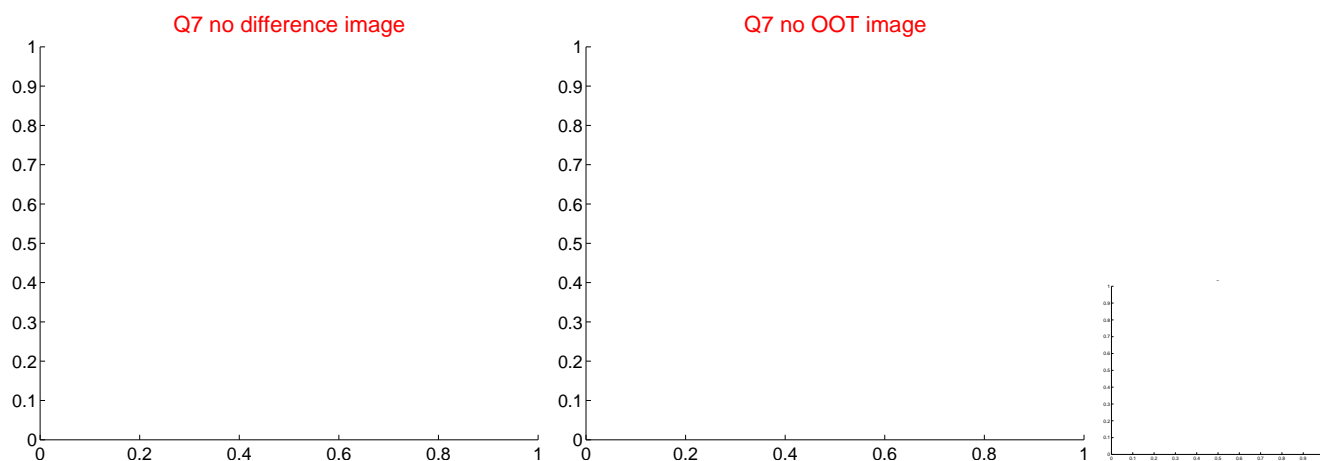
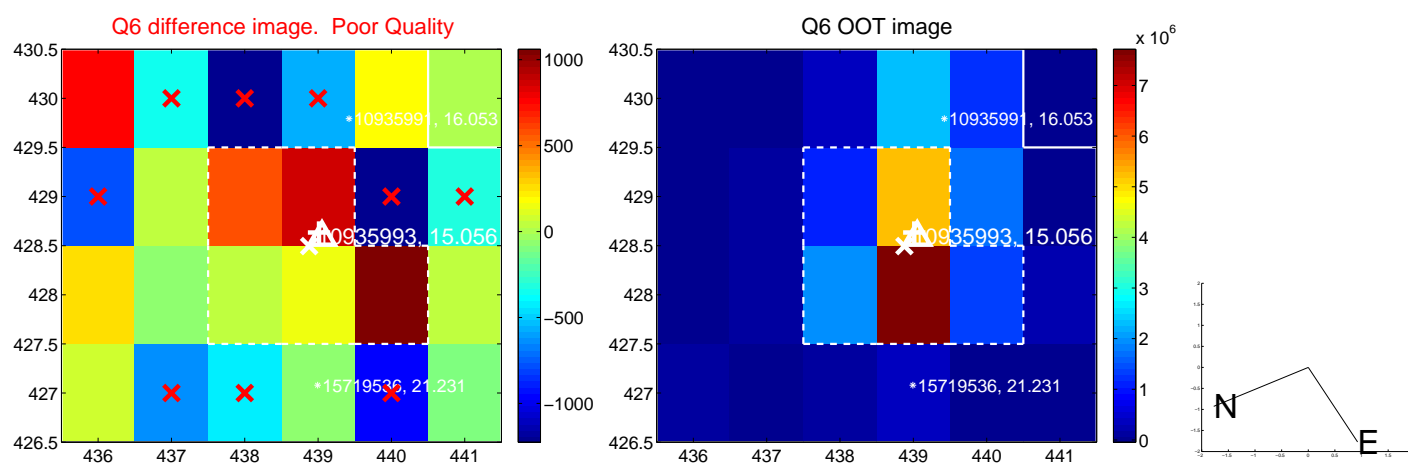
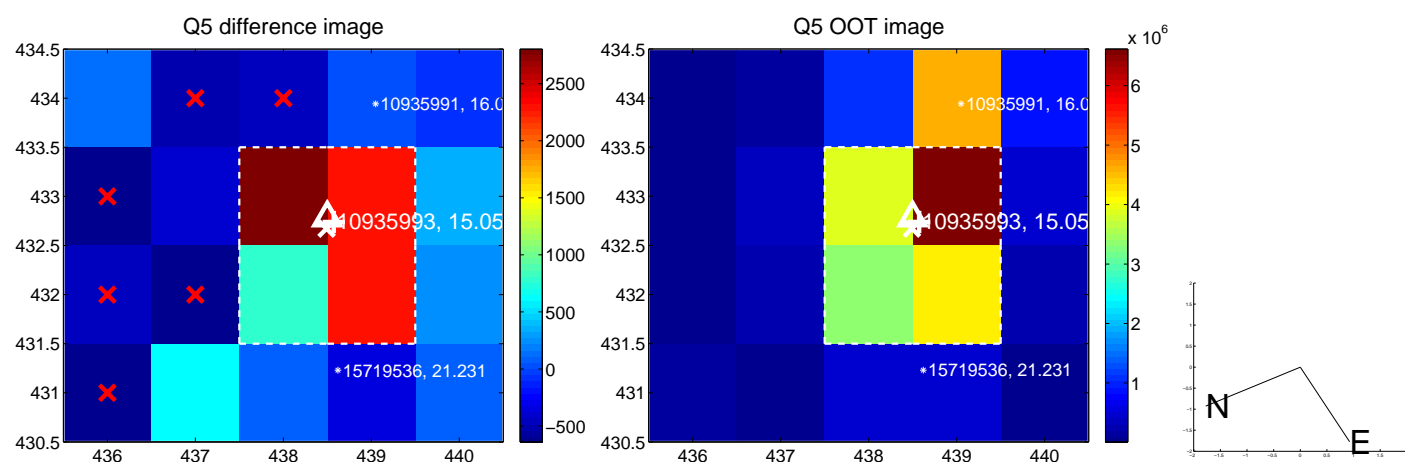


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

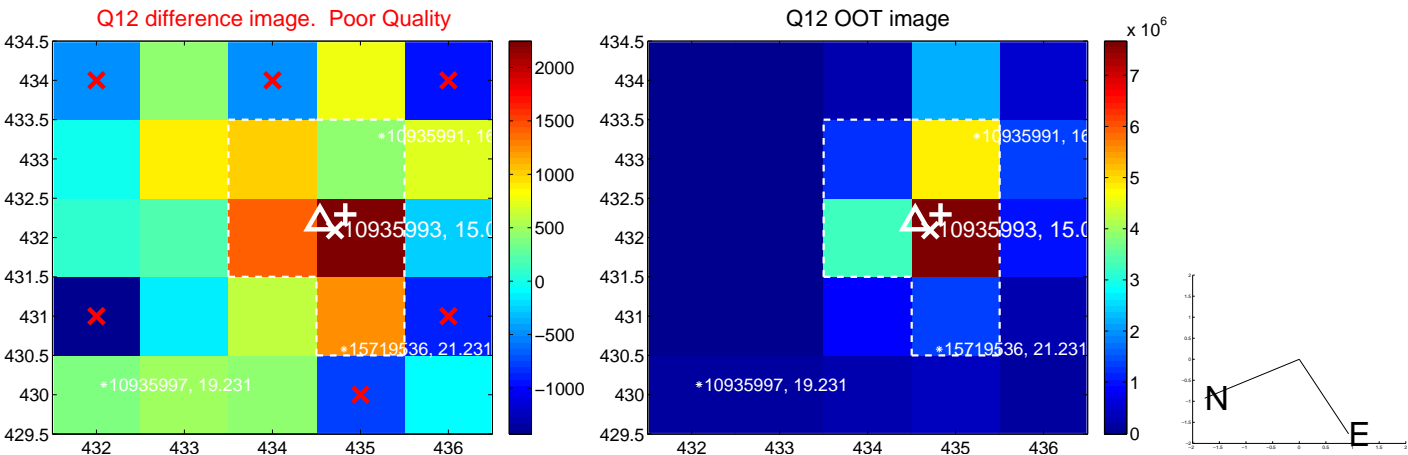
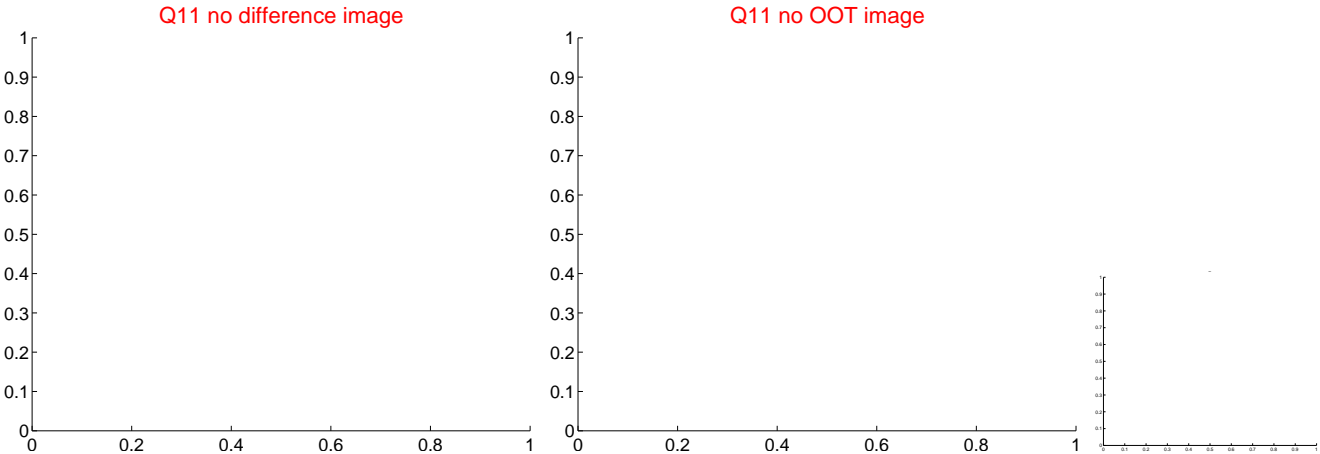
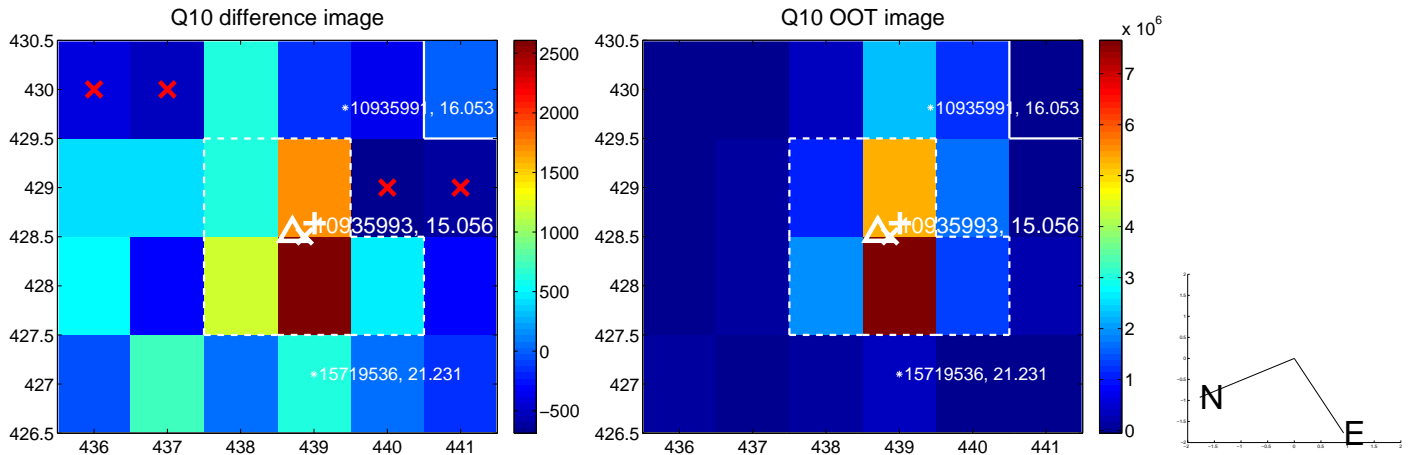
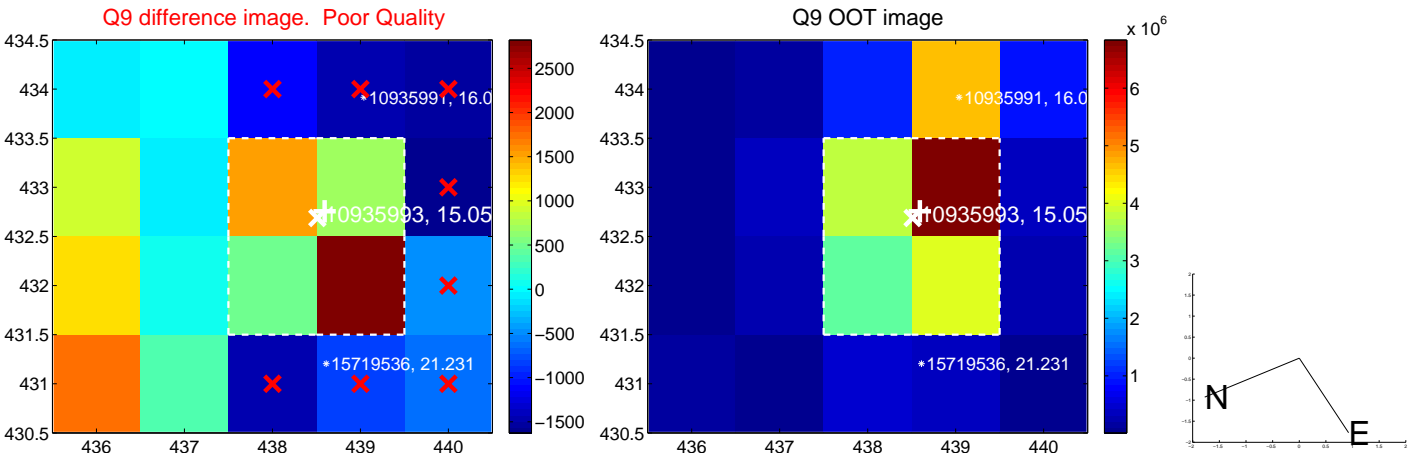
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



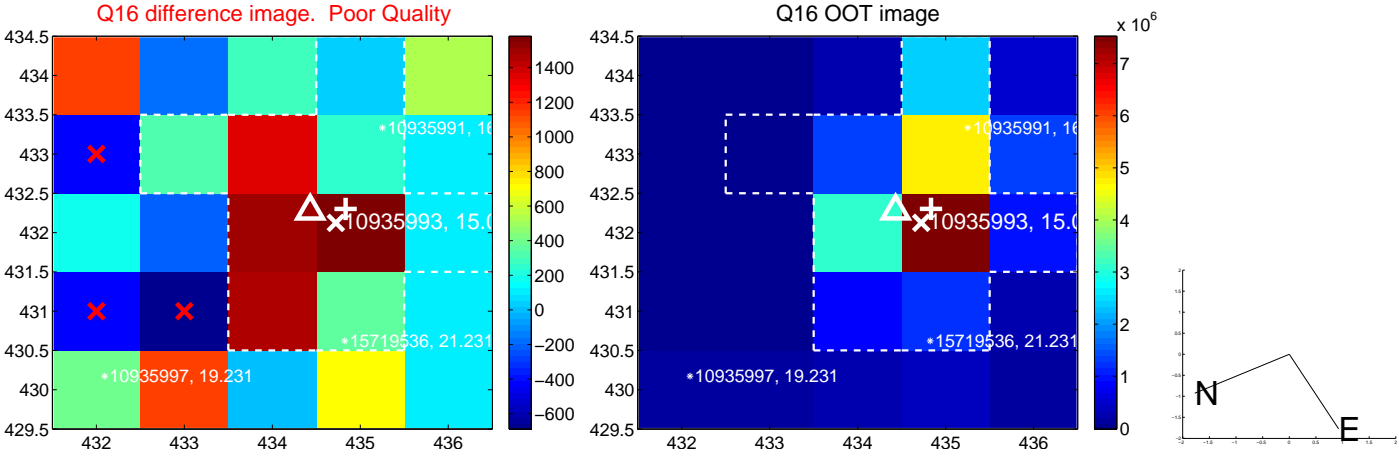
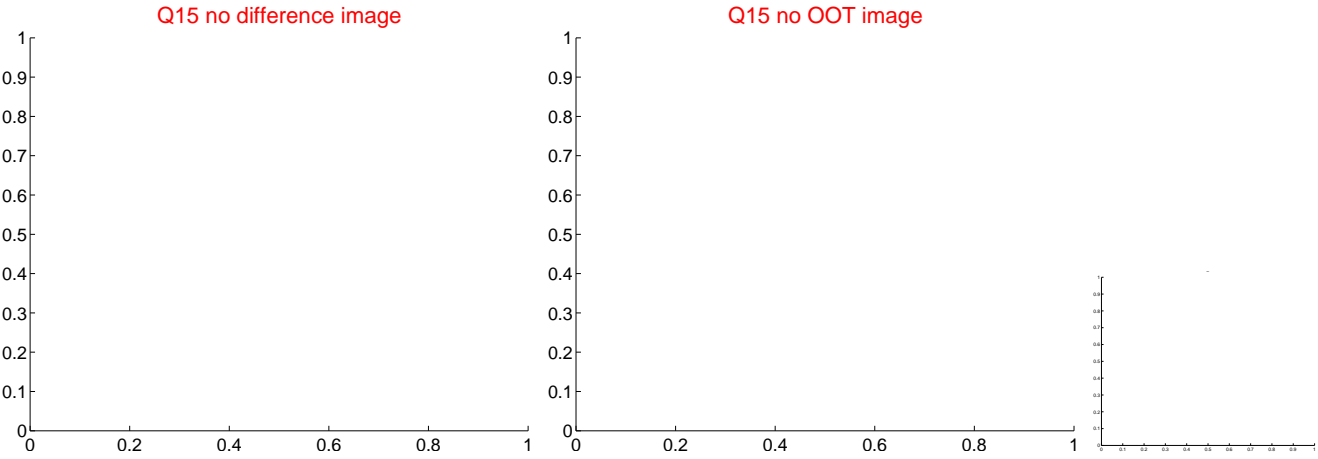
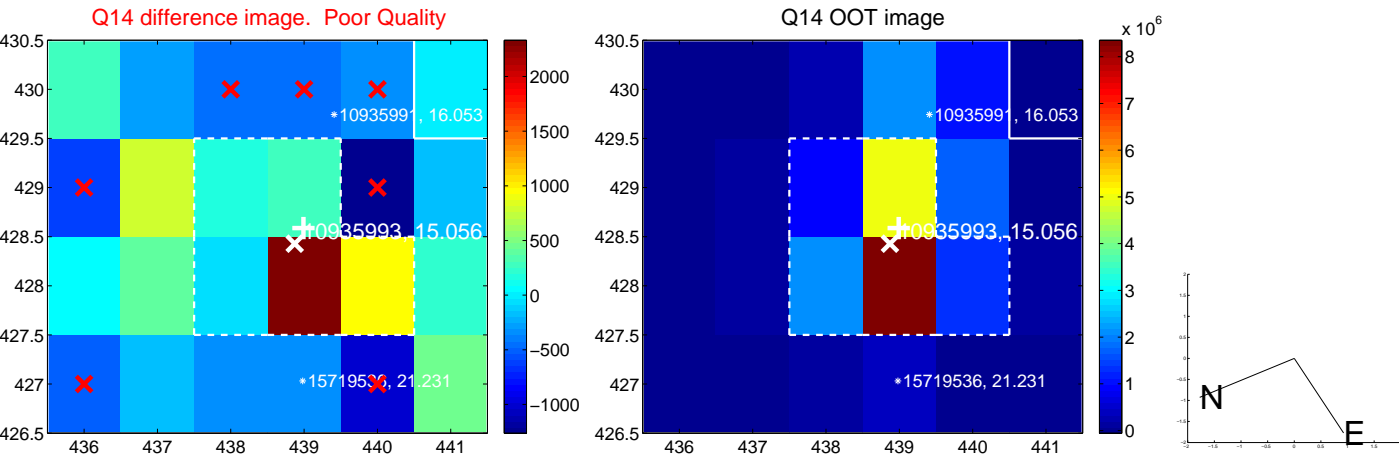
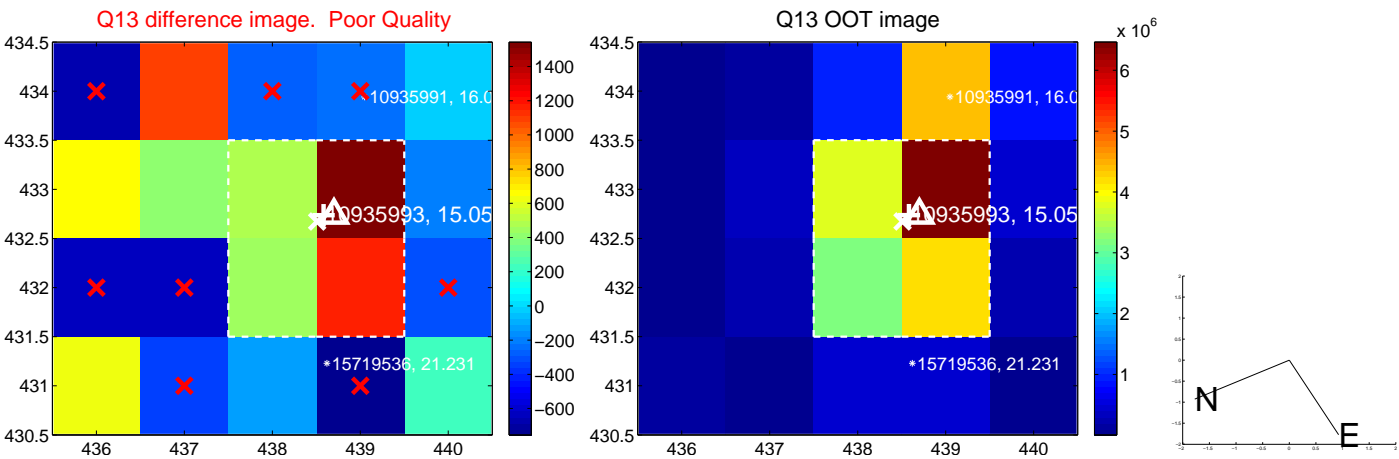
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



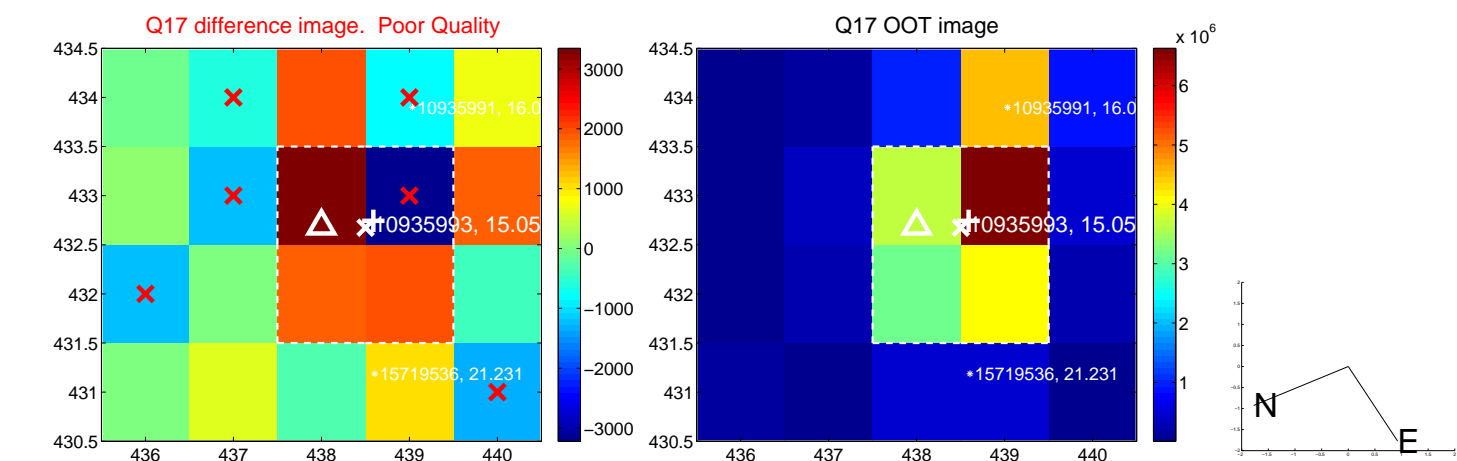
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



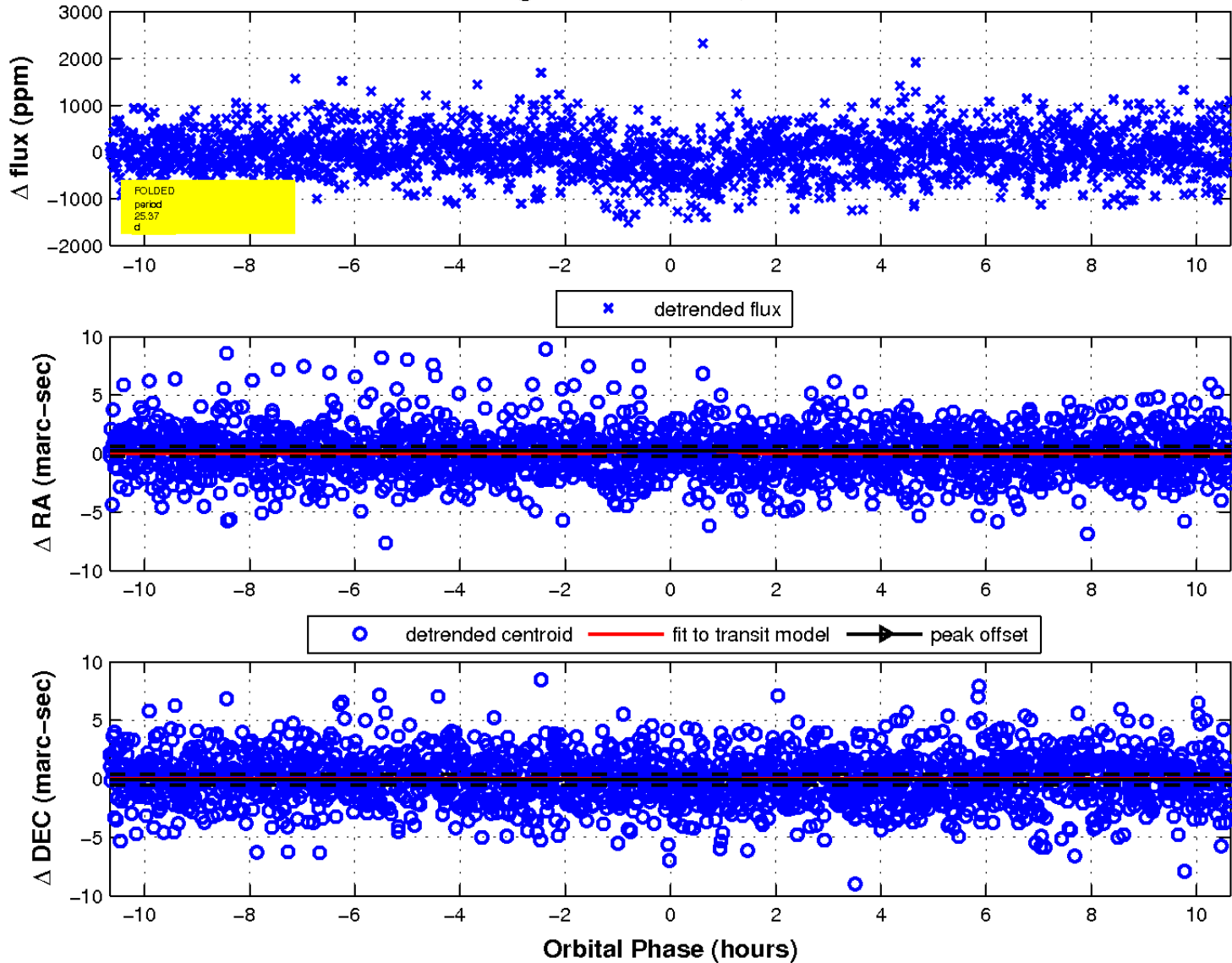
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

