

KIC 003433668

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})
003433668-01	OBS	3415.01	15.022038	143.687487	103.3	4.694	11.0	12.6	1.38	5831	1.70	138.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003433668-01	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.

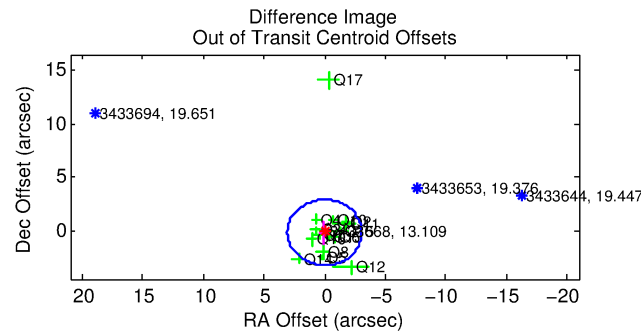
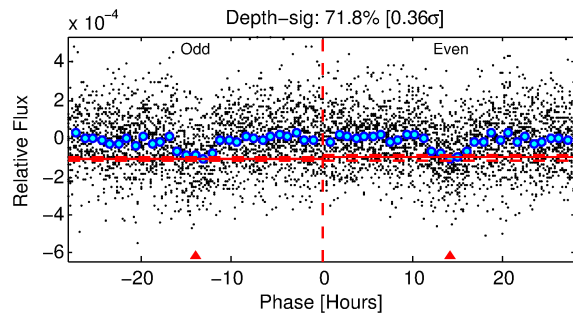
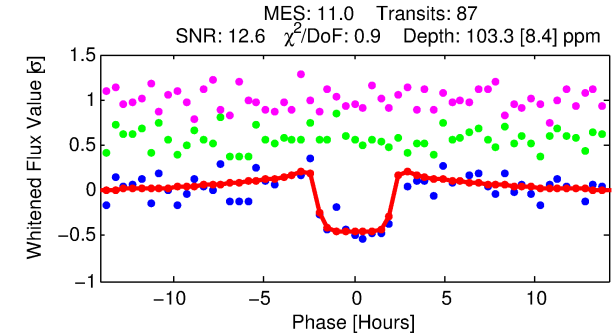
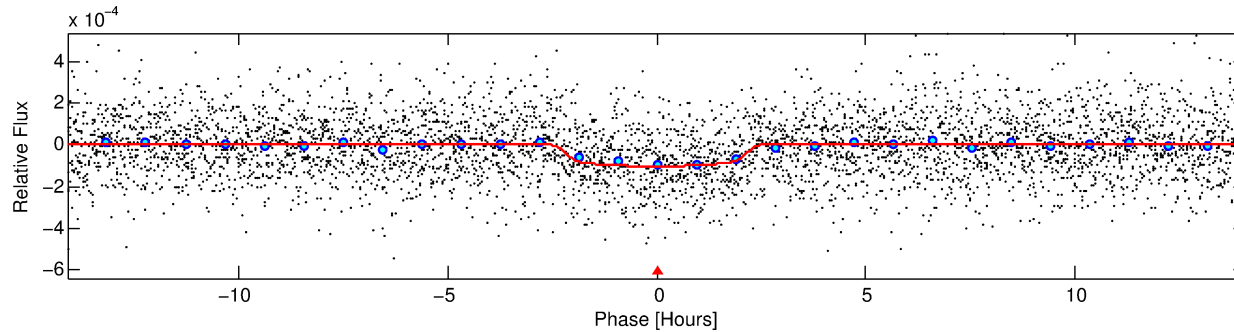
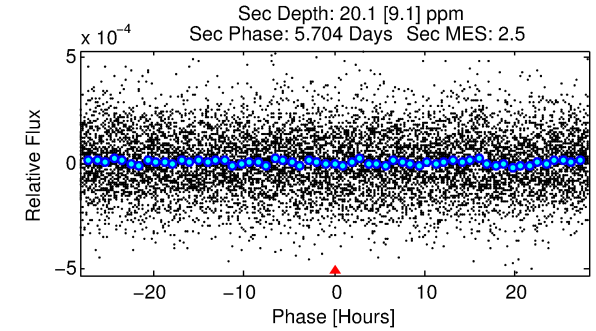
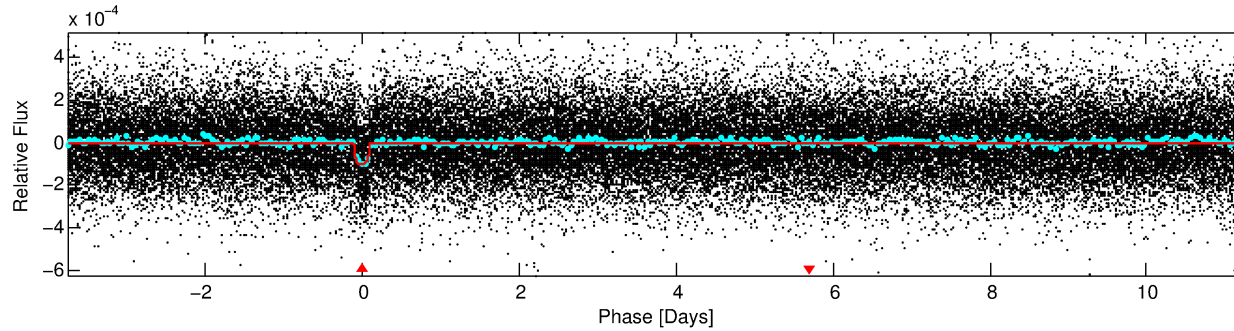
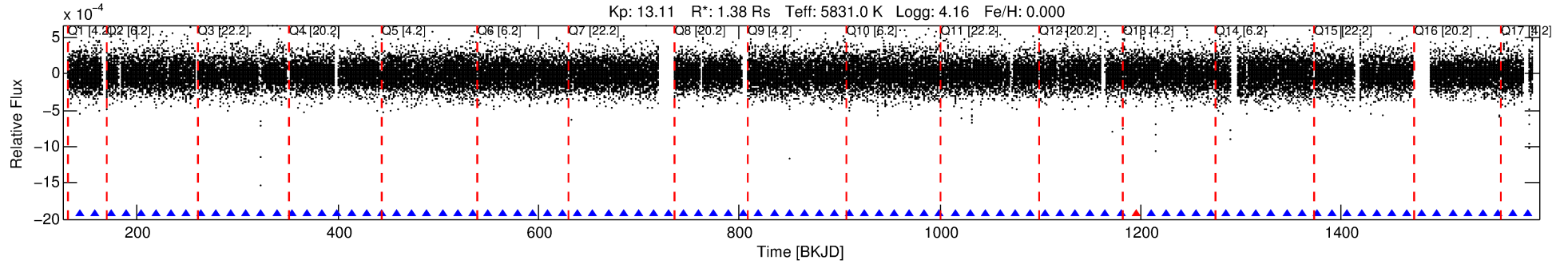
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003433668-01

No Significant Match Found

DV One-Page Summary

KIC: 3433668 Candidate: 1 of 1 Period: 15.022 d
KOI: K03415.01 Corr: 0.966



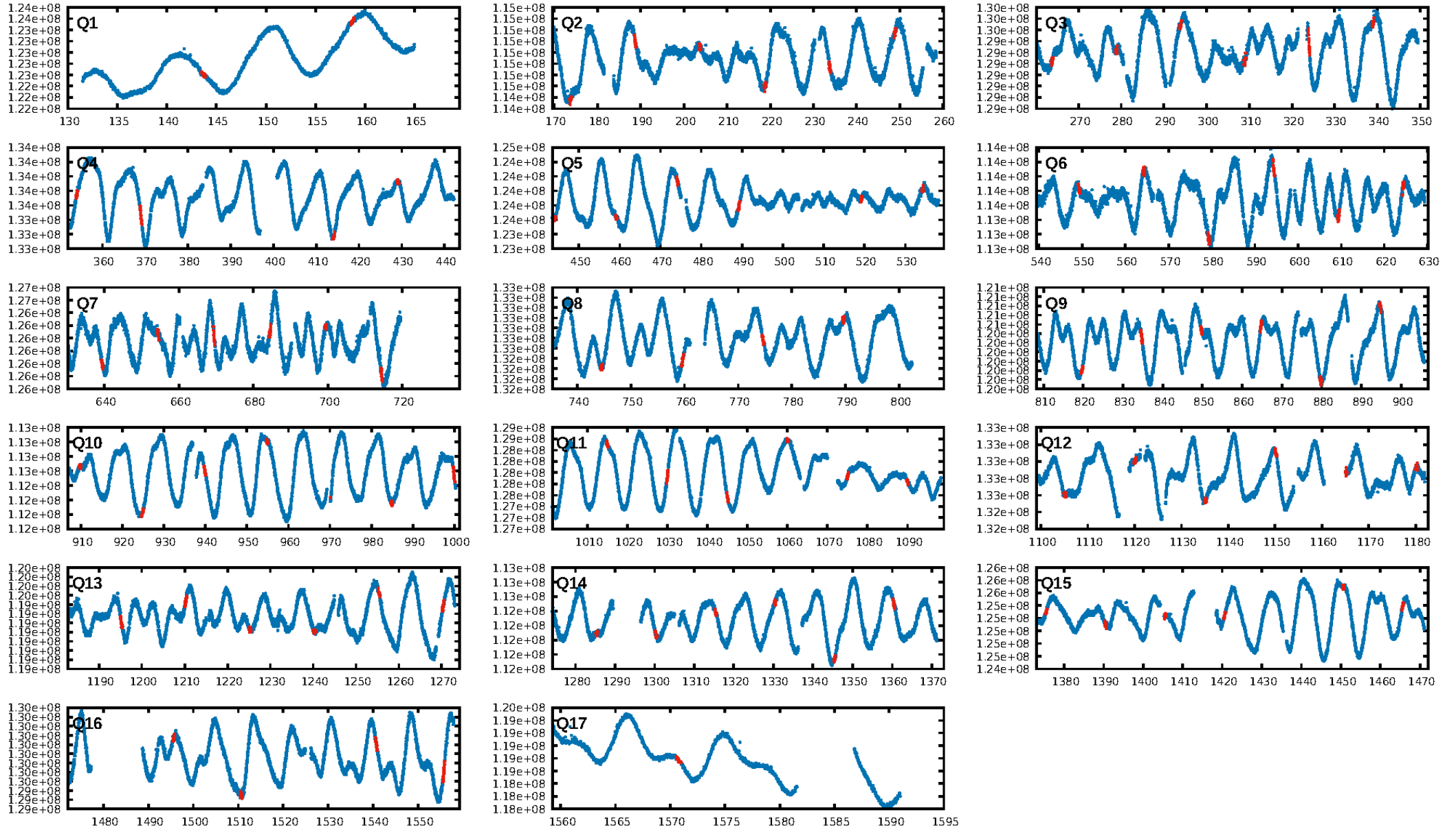
DV Fit Results:

Period = 15.02204 [0.00011] d
Epoch = 143.6875 [0.0058] BKJD
Rp/R* = 0.0112 [0.0024]
a/R* = 10.47 [10.84]
b = 0.92 [0.18]
Seff = 138.22 [44.73]
Teq = 874 [71] K
Rp = 1.70 [0.51] Re
a = 0.1196 [0.0239] AU
Ag = 55.05 [38.48] [1.40σ]
Teffp = 3682 [580] K [4.81σ]

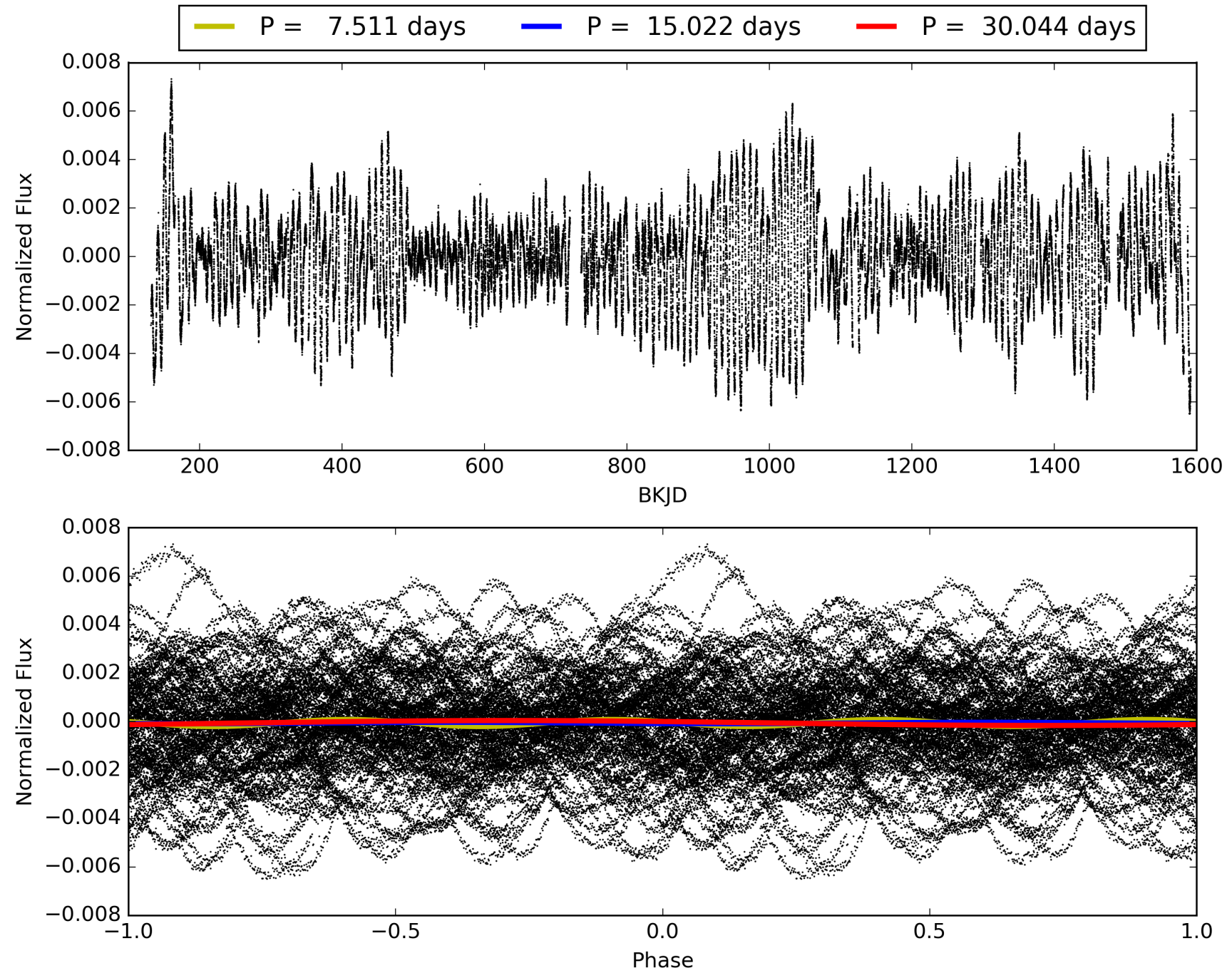
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 7.80e-25
RollingBand-fgt: 0.99 [83/84]
GhostDiagnostic-chr: 17.41
Centroid-sig: 1.9%
Centroid-so: 2.109 arcsec [2.26σ]
OotOffset-rm: 0.160 arcsec [0.16σ]
KicOffset-rm: 0.570 arcsec [0.90σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003433668-01, PDC Light Curves

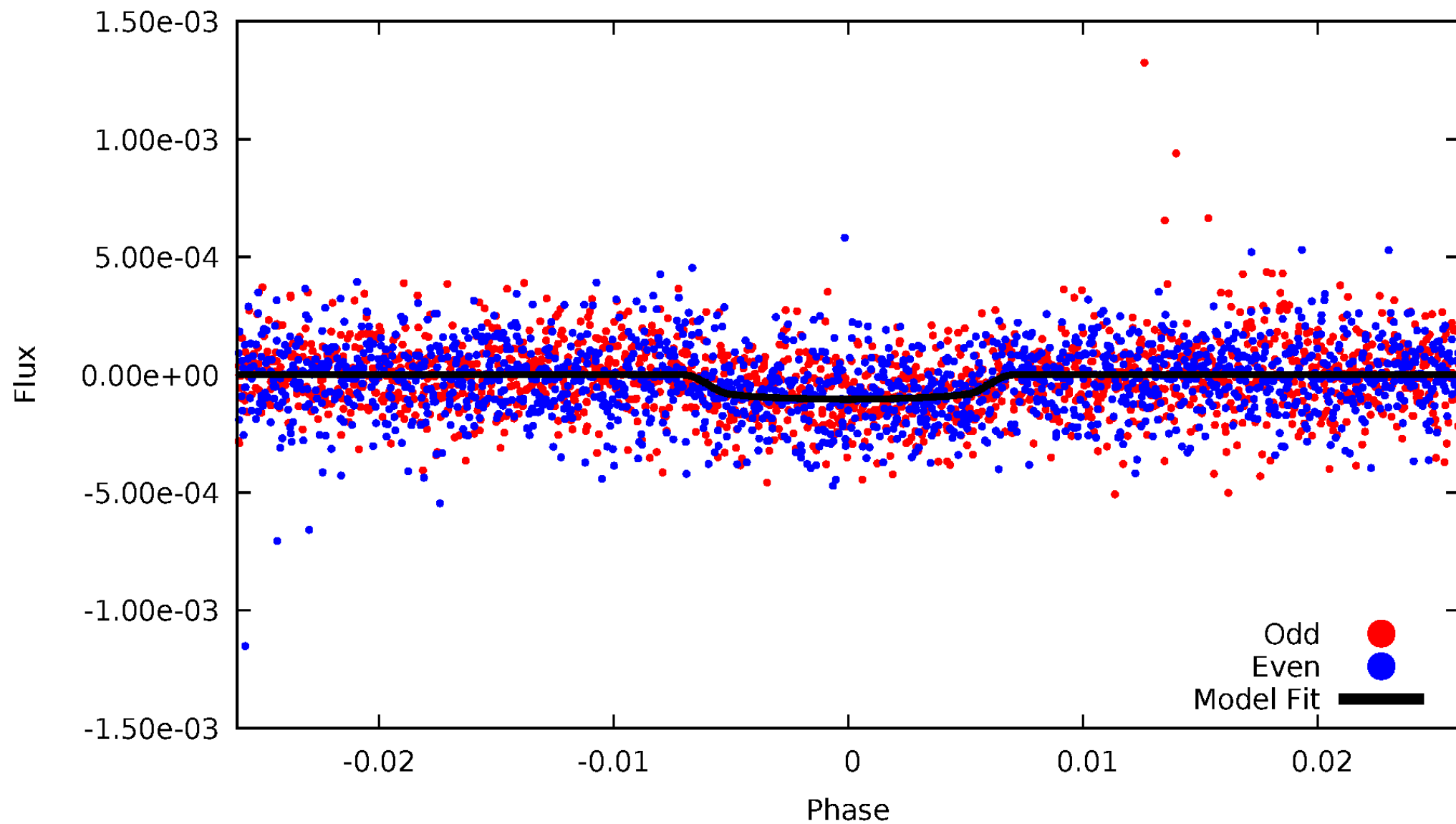


TCE 003433668-01



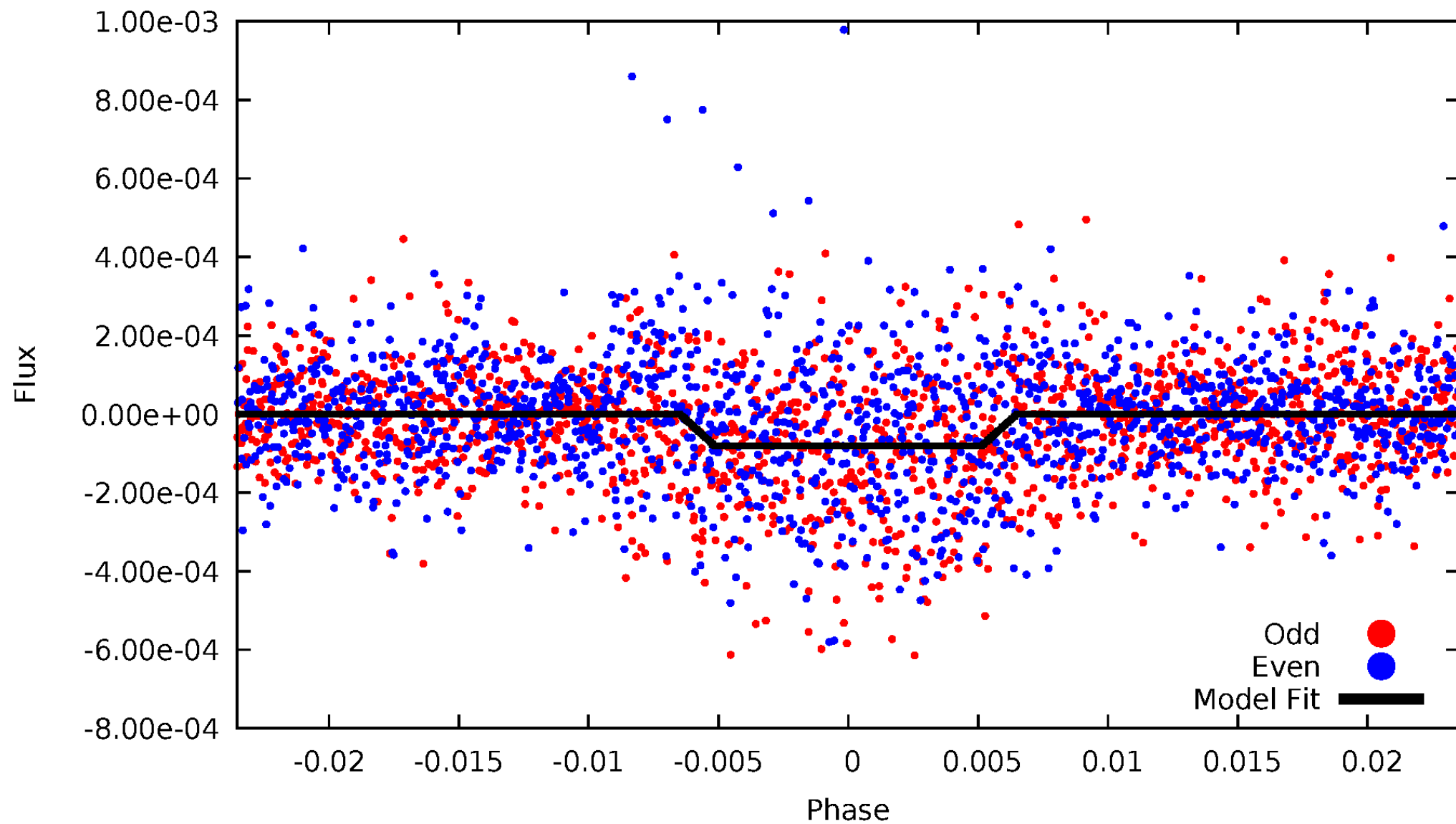
DV Odd/Even

TCE 003433668-01



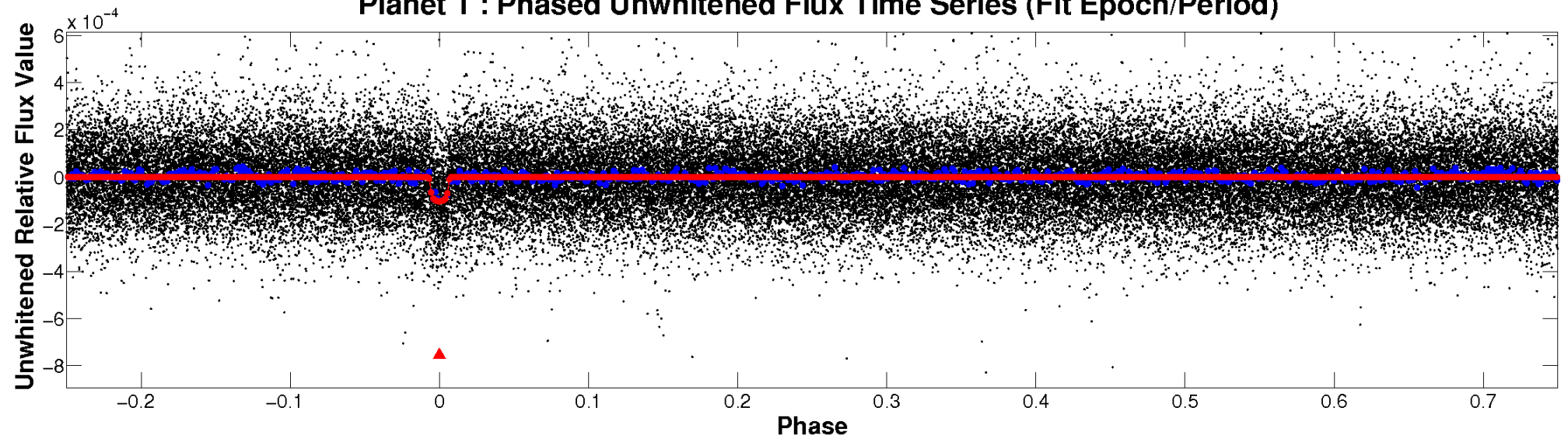
ALT Odd/Even

TCE 003433668-01

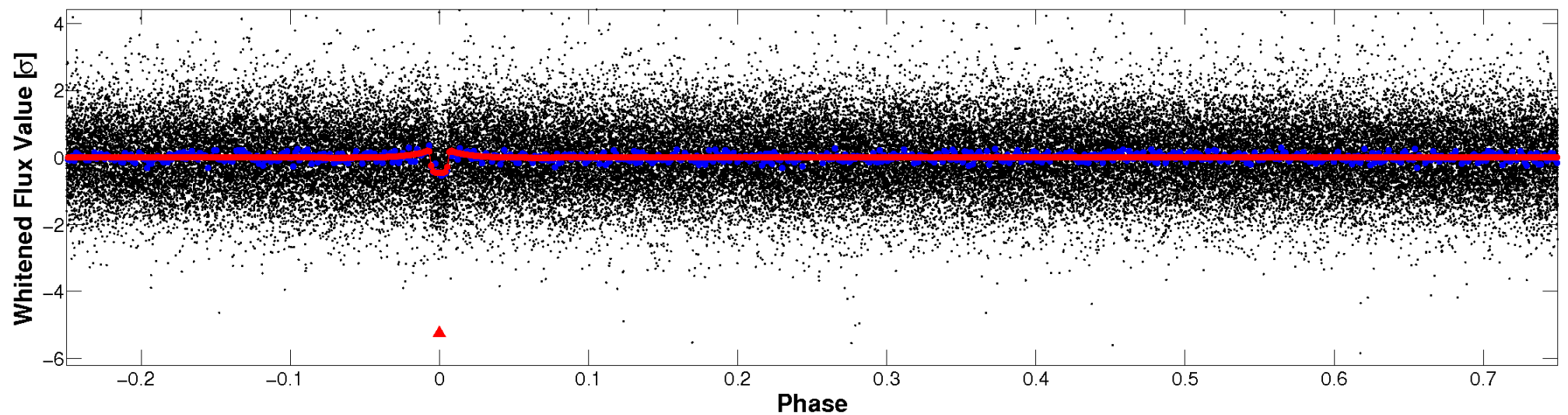


Non-Whitened Vs. Whitened Light Curve

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

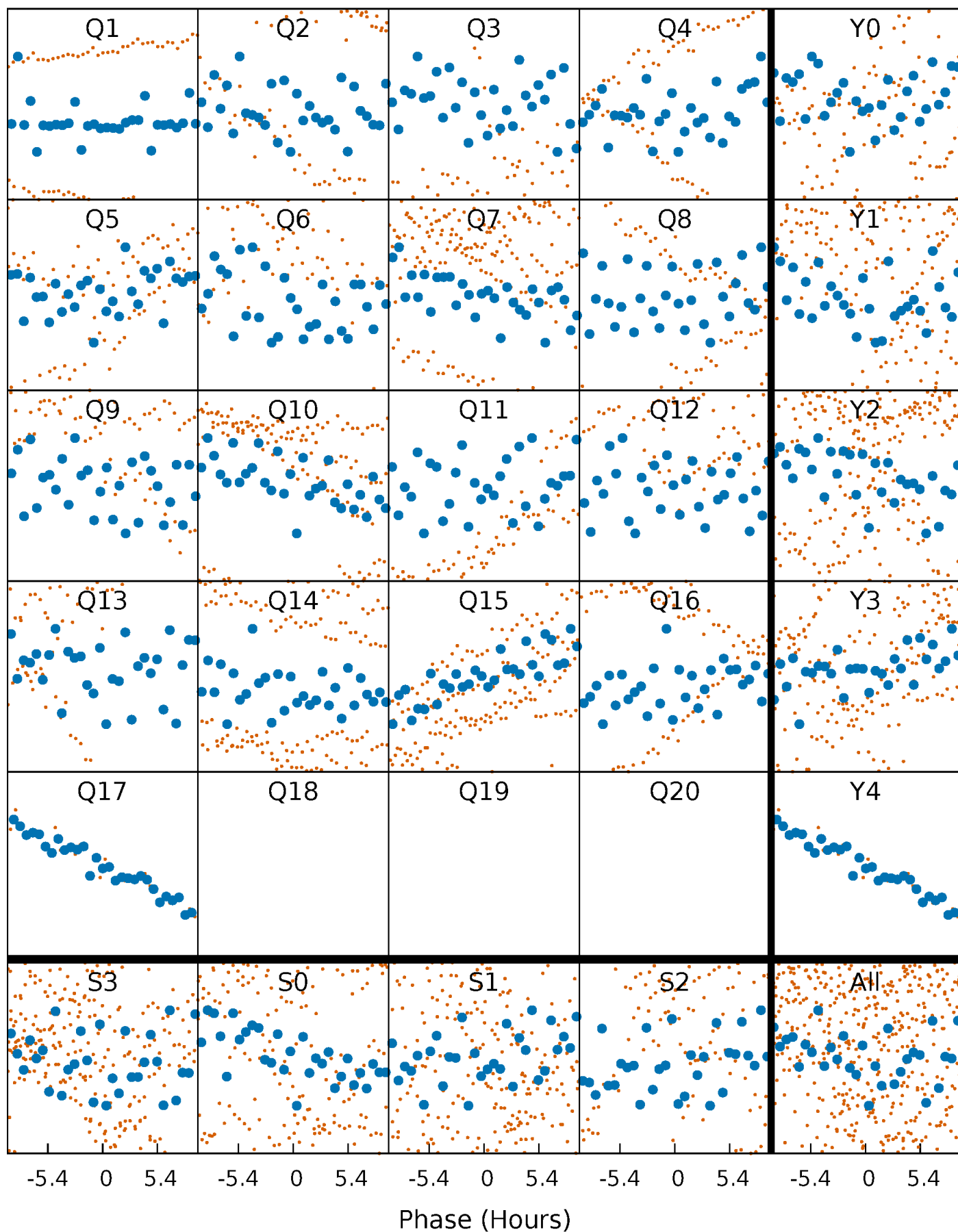


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



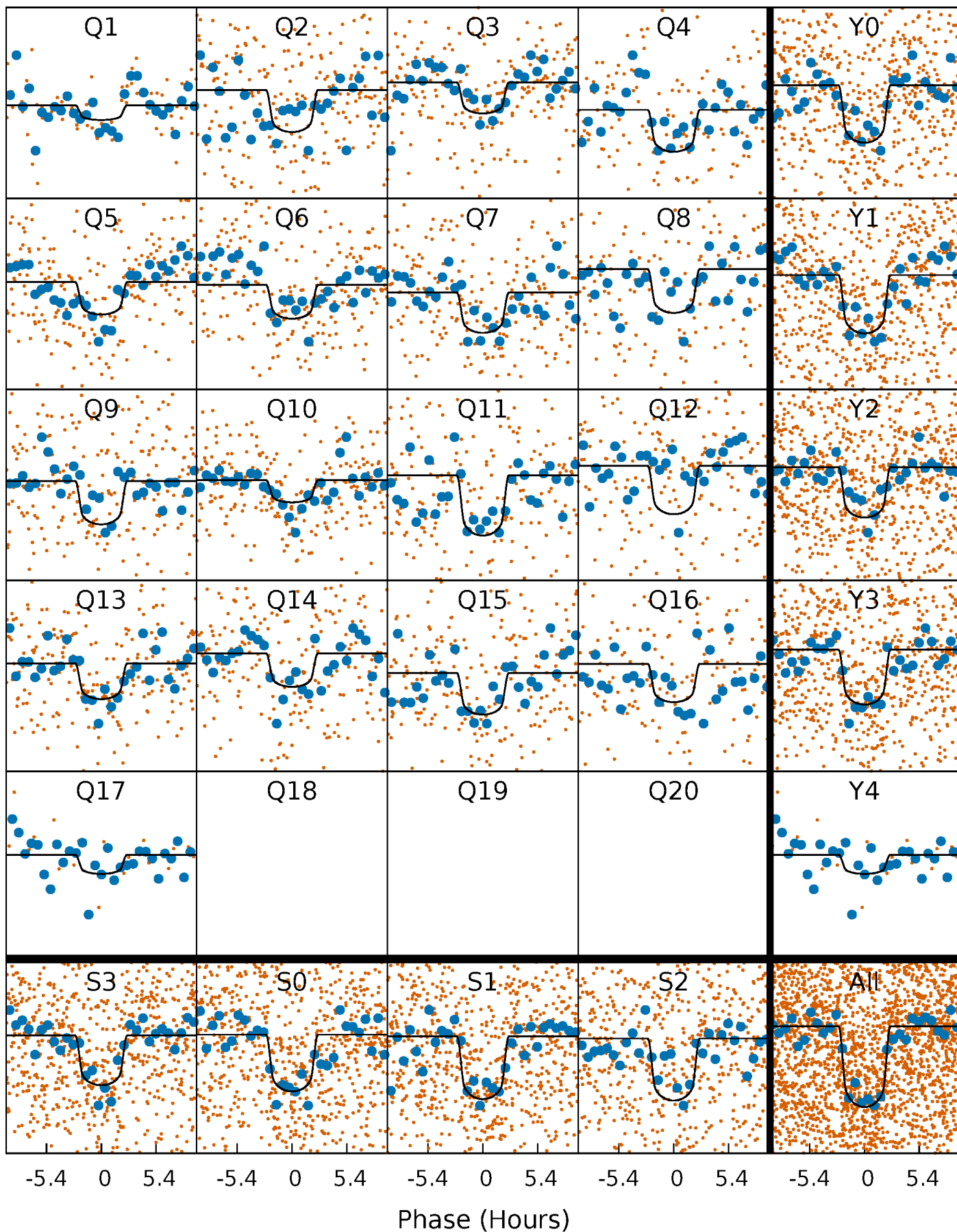
PDC Quarter-Phased Transit Curves

TCE 003433668-01 P= 15.022038 Days $T_0=143.687487$ (BKJD)



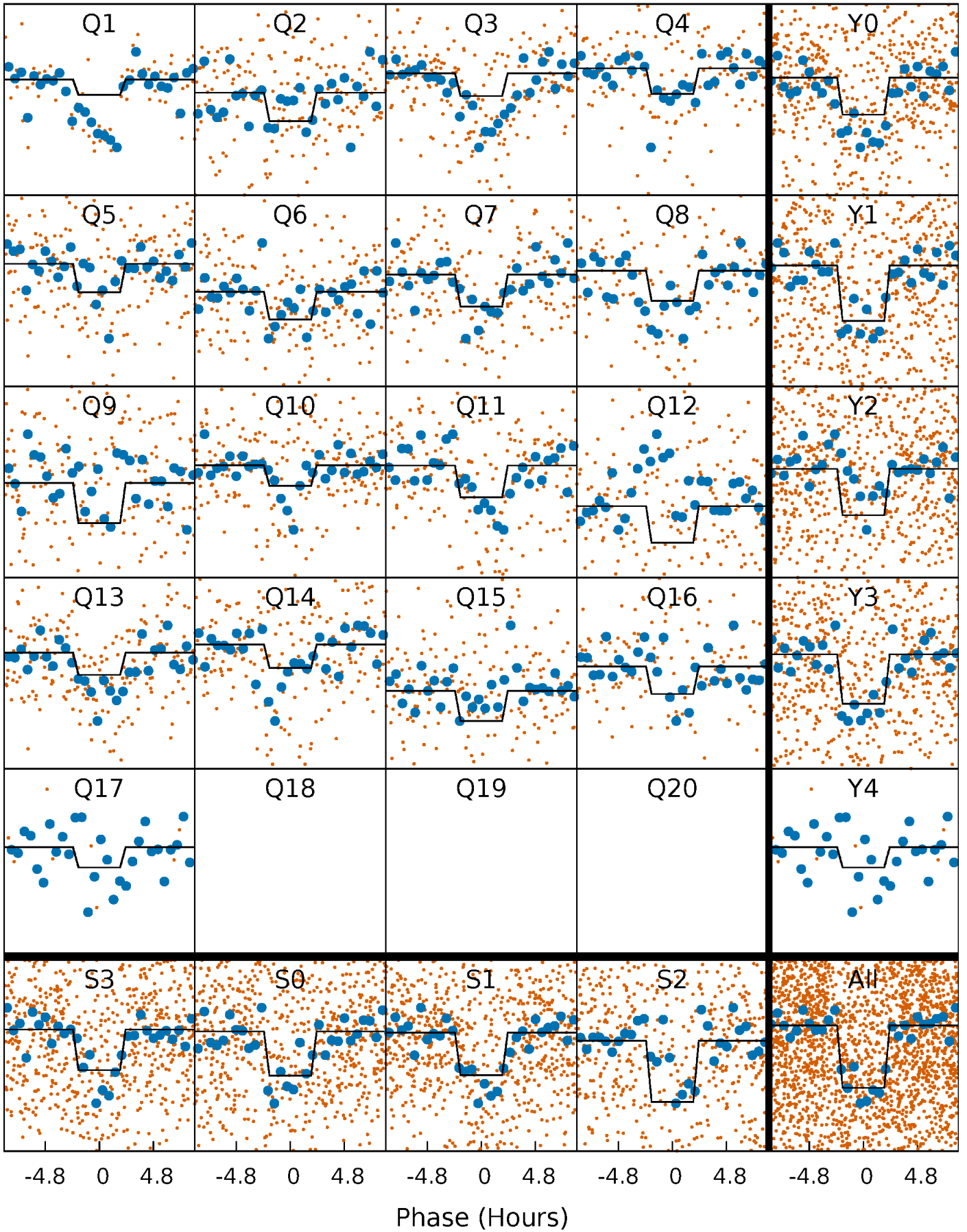
DV Quarter-Phased Transit Curves

TCE 003433668-01 P= 15.022038 Days $T_0=143.687487$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

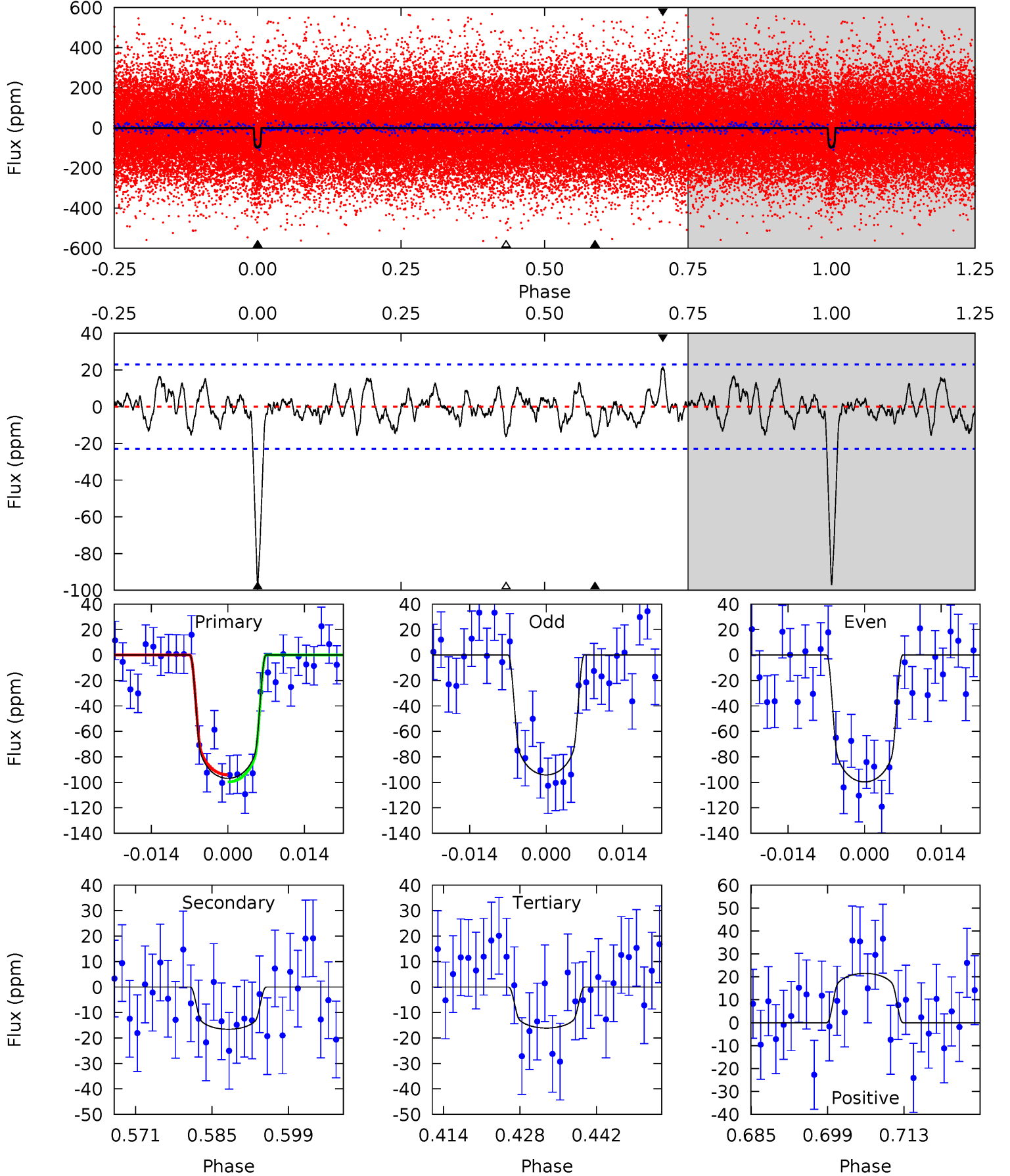
TCE 003433668-01 P= 15.022018 Days $T_0=143.689148$ (BKJD)



DV Model-Shift Uniqueness Test

003433668-01, P = 15.022038 Days, E = 128.665449 Days

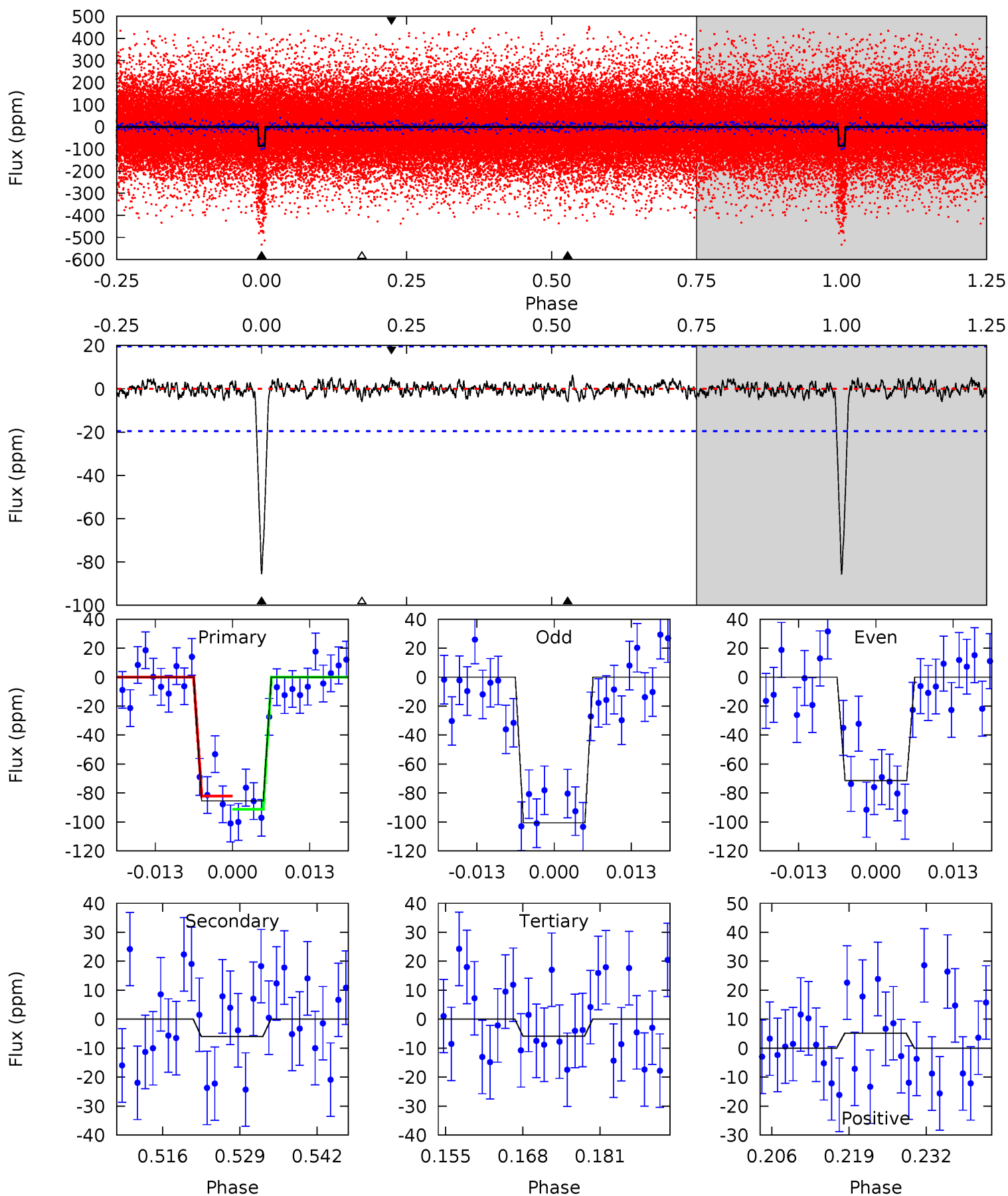
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	3.58	3.47	4.64	4.96	2.45	1.39	17.4	16.3	0.10	-1.06	0.60	1.04	0.18	0.61



Alt Model-Shift Uniqueness Test

003433668-01, P = 15.022018 Days, E = 128.667130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	1.53	1.50	1.31	4.98	2.49	0.51	20.3	20.5	0.03	0.22	3.72	0.96	0.07	1.16



Stellar Parameters For KIC 003433668

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5831^{+105}_{-117}	$4.162^{+0.182}_{-0.098}$	$0.000^{+0.150}_{-0.150}$	$1.382^{+0.221}_{-0.295}$	$1.011^{+0.093}_{-0.078}$	$0.540^{+0.516}_{-0.163}$
	+2%/-2%	+4%/-2%	+inf%/-inf%	+16%/-21%	+9%/-8%	+96%/-30%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 003433668-01 / KOI 3415.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 5	$1.64^{+0.43}_{-0.38}$	1212^{+54}_{-68}	3865^{+415}_{-337}	48^{+38}_{-21}
Alt.	-6 ± 4	$1.31^{+0.43}_{-0.38}$	1218^{+55}_{-71}	3486^{+523}_{-552}	26^{+33}_{-18}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

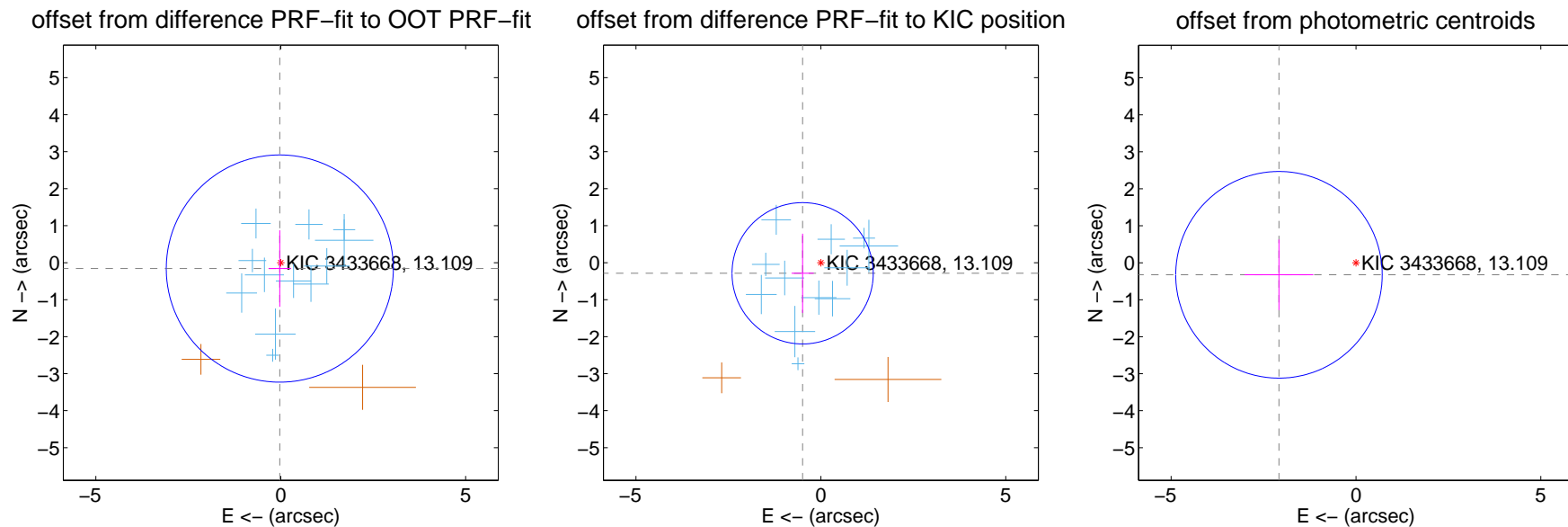
DV Centroid Data

Supplemental centroid analysis for 003433668-01. Kepler magnitude: 13.11. Transit SNR 12.57

There are 12 quarters with good PRF difference image offsets

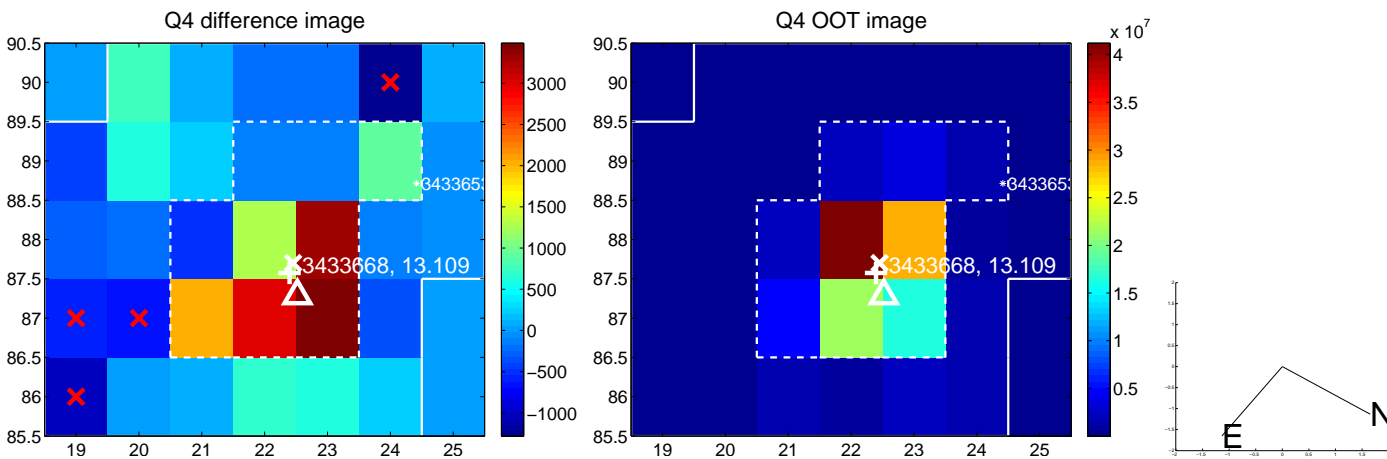
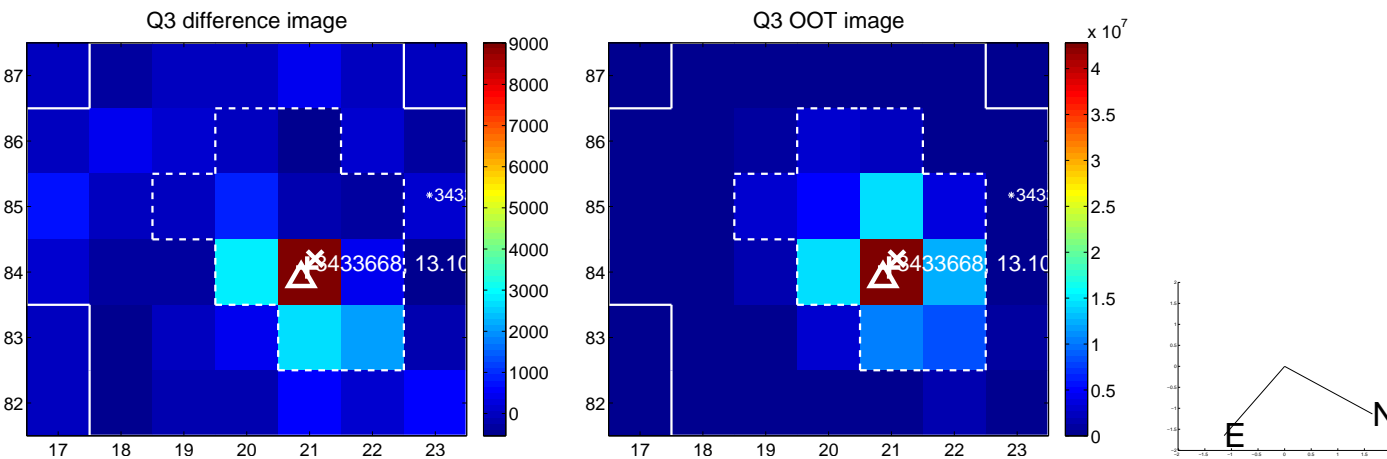
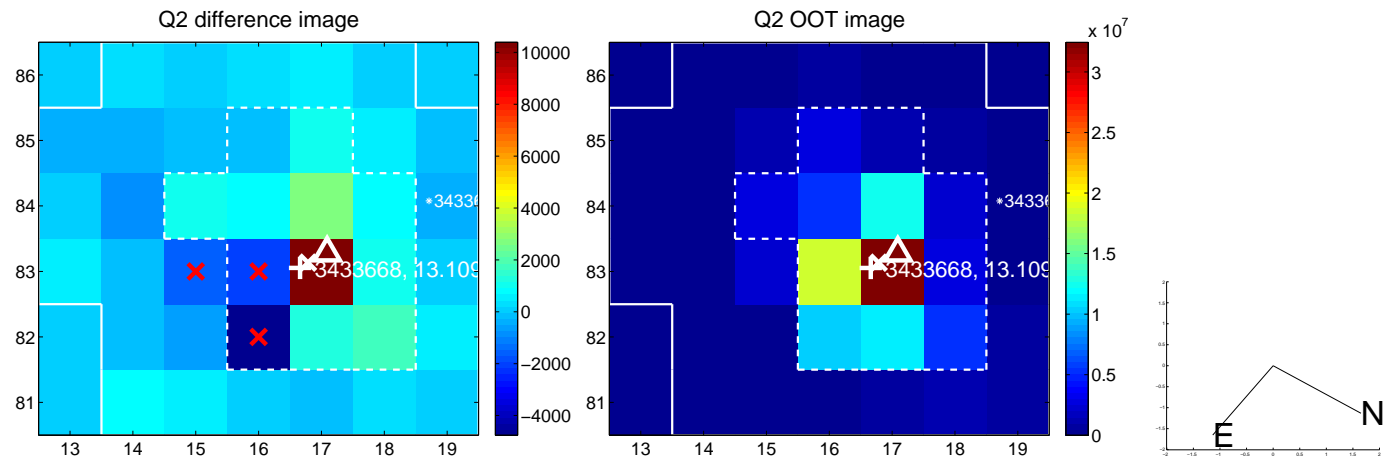
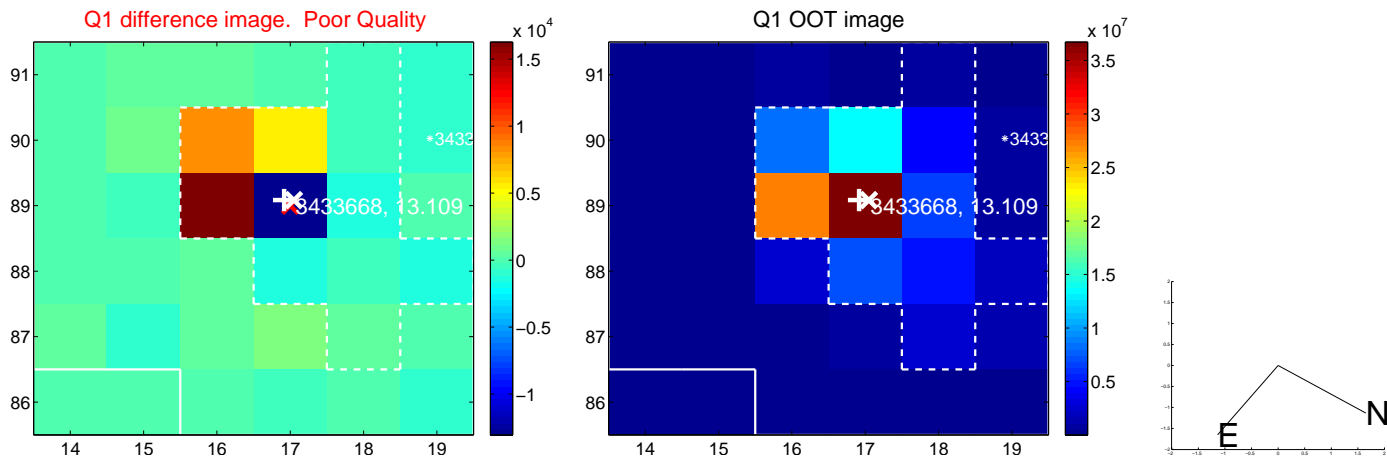
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.160 ± 1.024	0.16	0.026 ± 0.300	-0.158 ± 1.033
PRF-fit source offset from KIC position	0.570 ± 0.637	0.90	0.493 ± 0.300	-0.287 ± 1.071
photometric centroid source offset	2.11 ± 0.93	2.26	2.08 ± 0.93	-0.33 ± 0.95

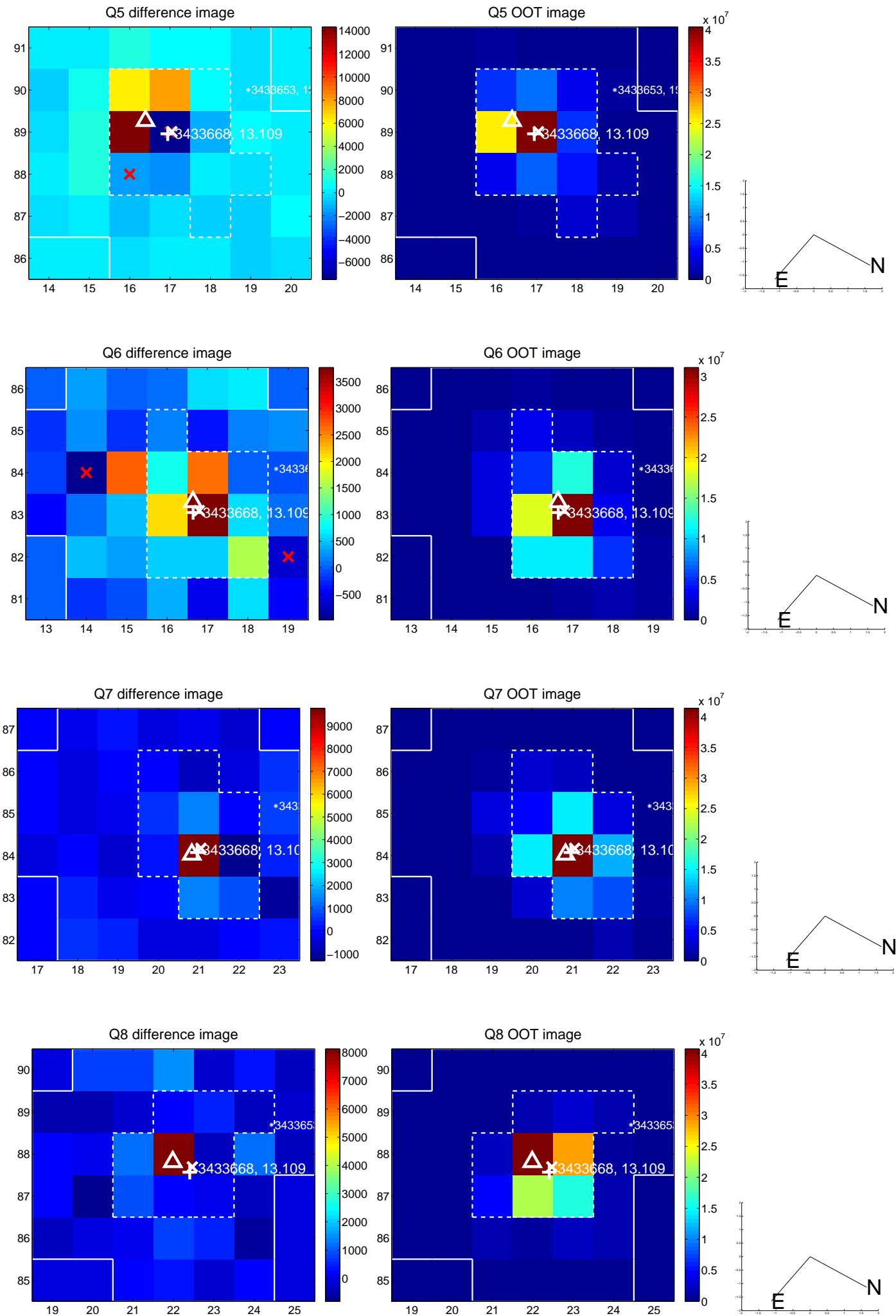


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

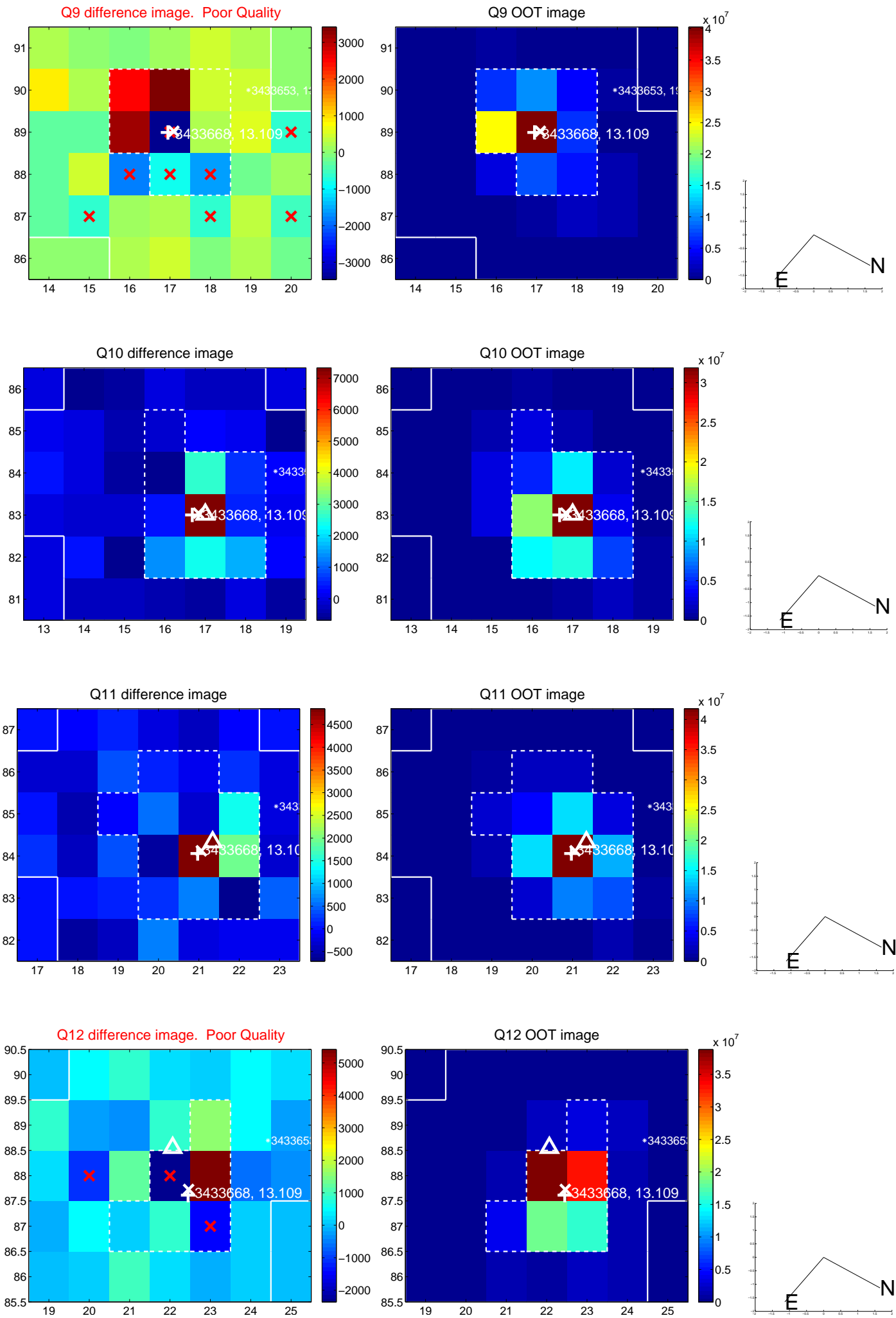
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



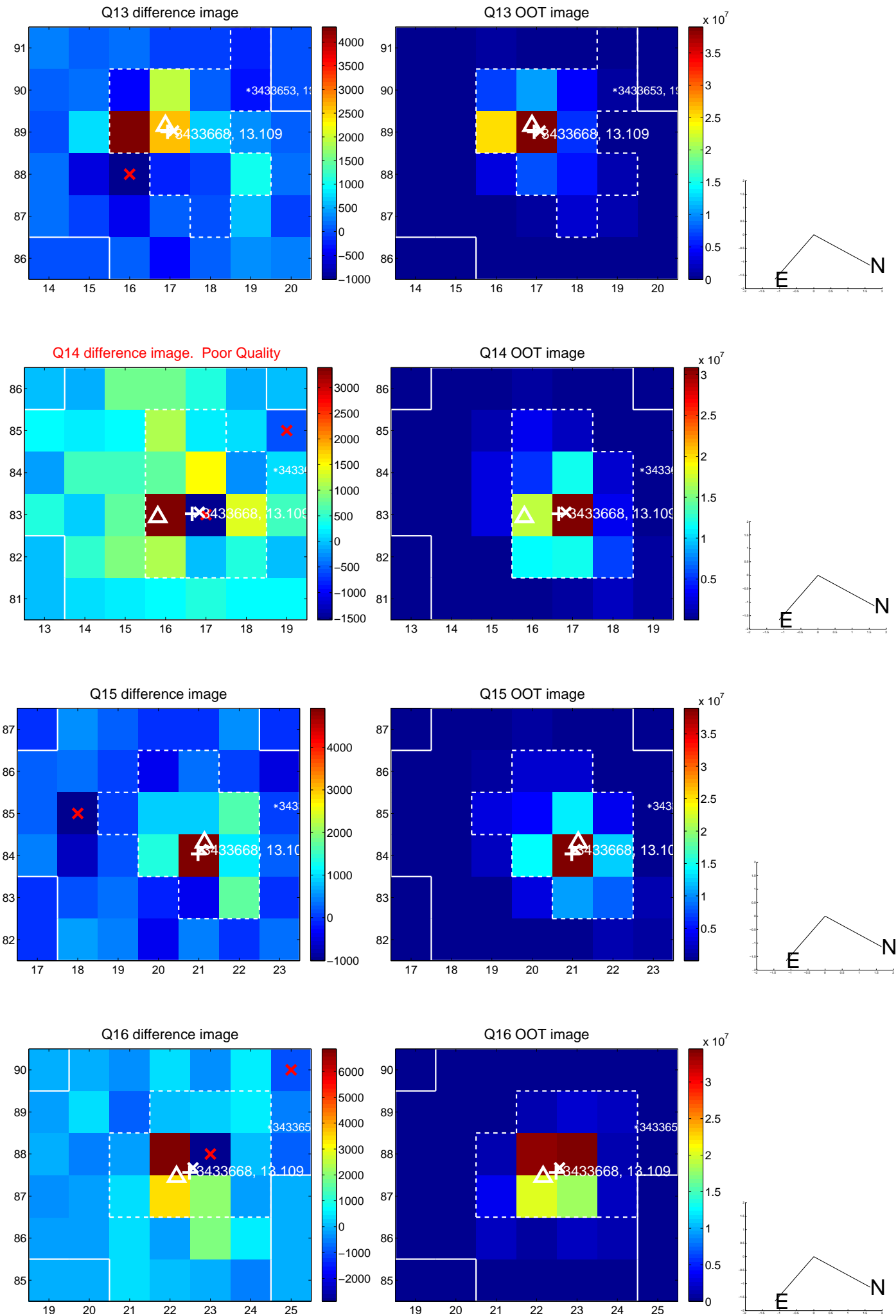
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



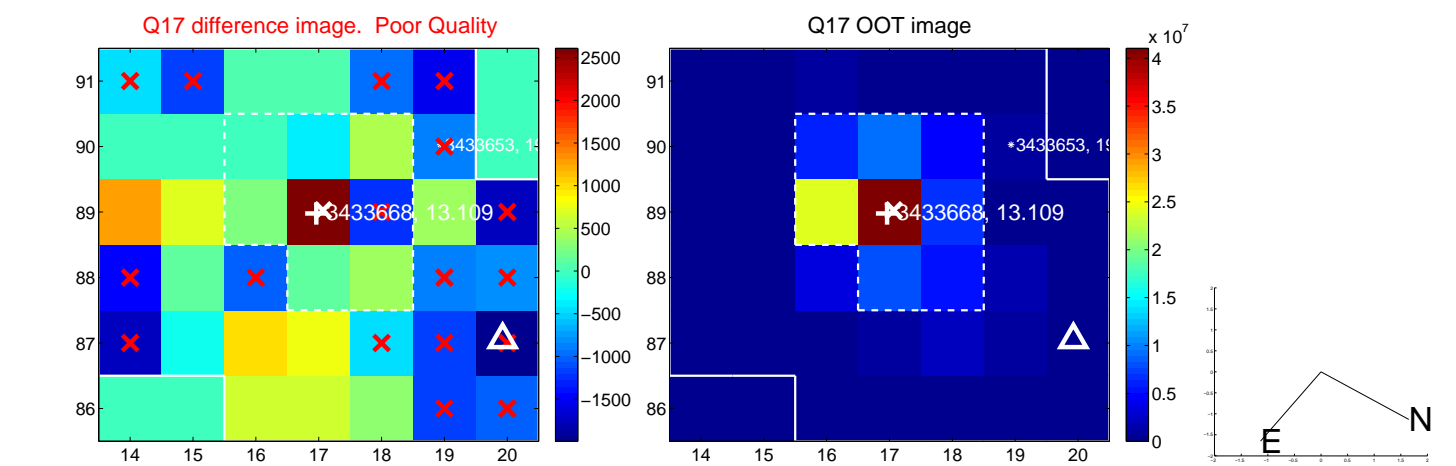
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



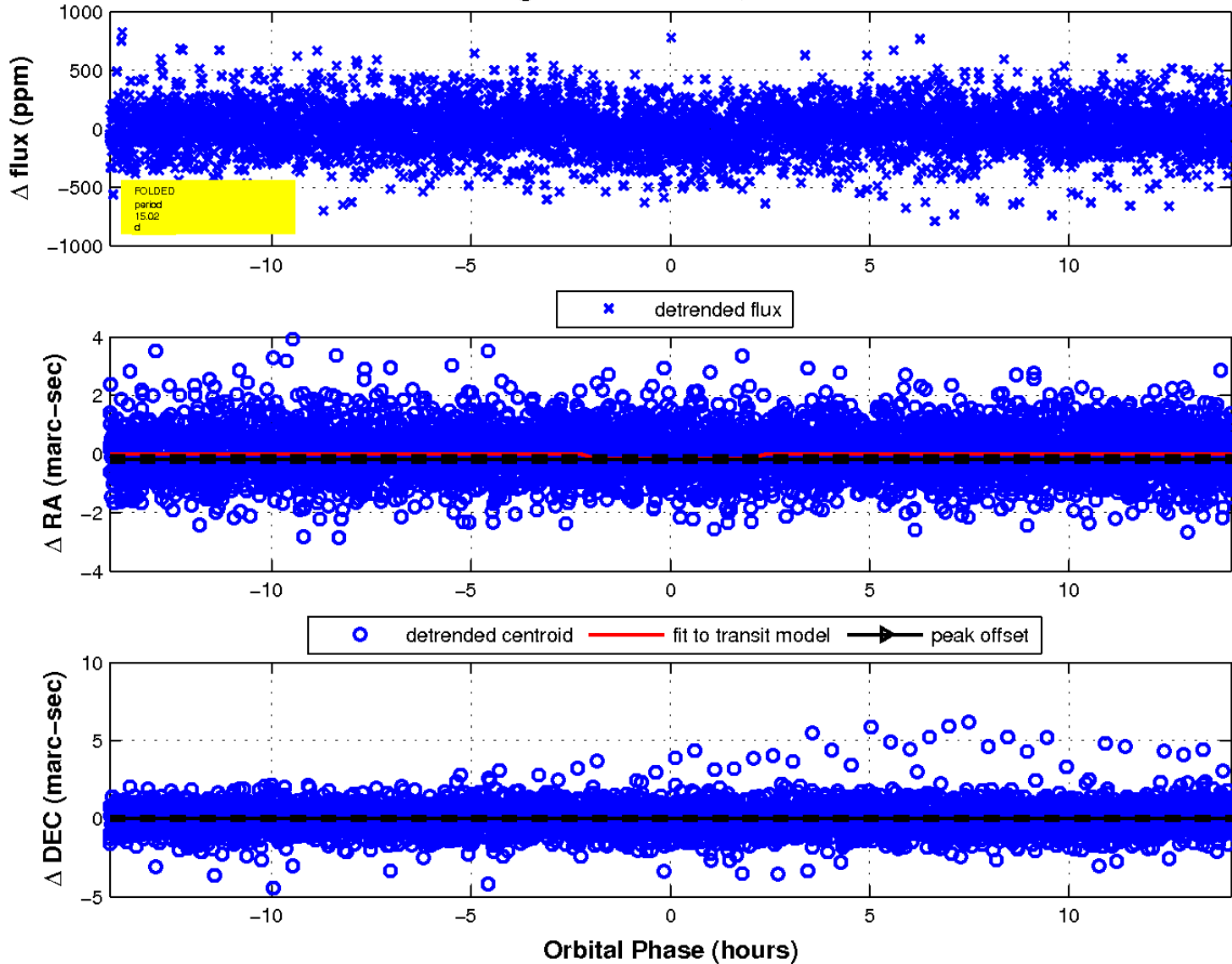
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

