

KIC 003424439

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})
003424439-01	OBS	No	0.738164	132.077129	39.9	2.693	7.8	6.7	0.90	5865	0.68	3563.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003424439-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

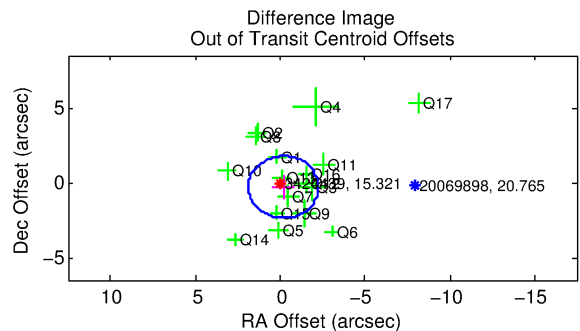
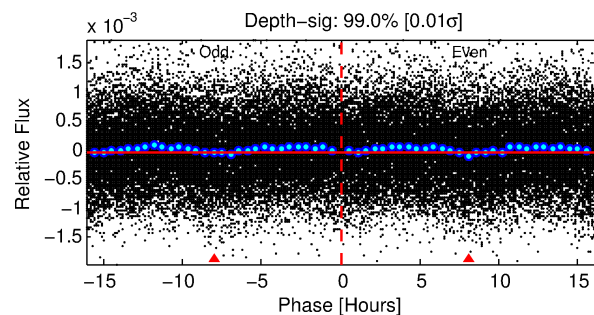
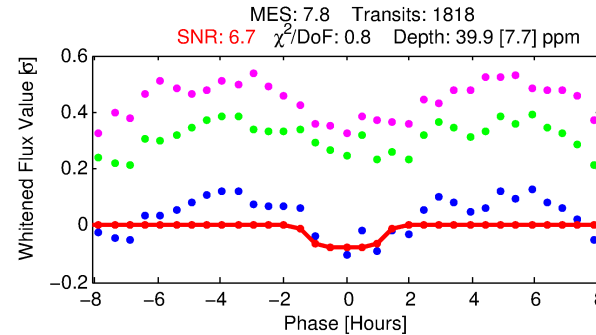
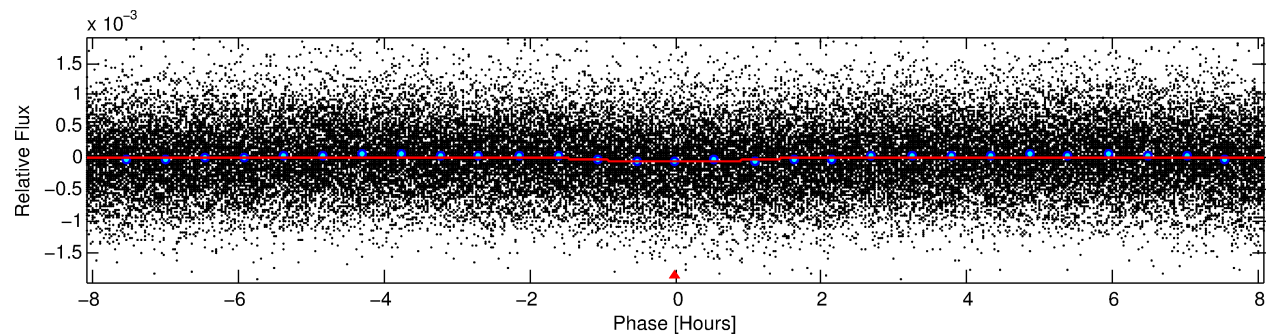
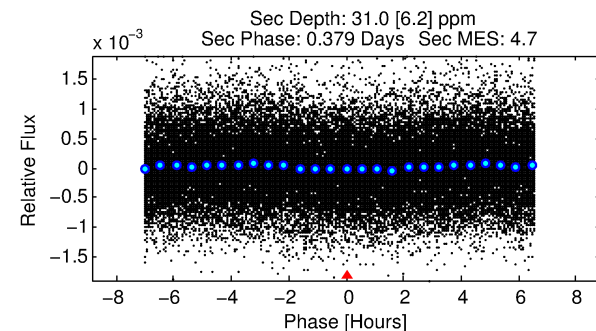
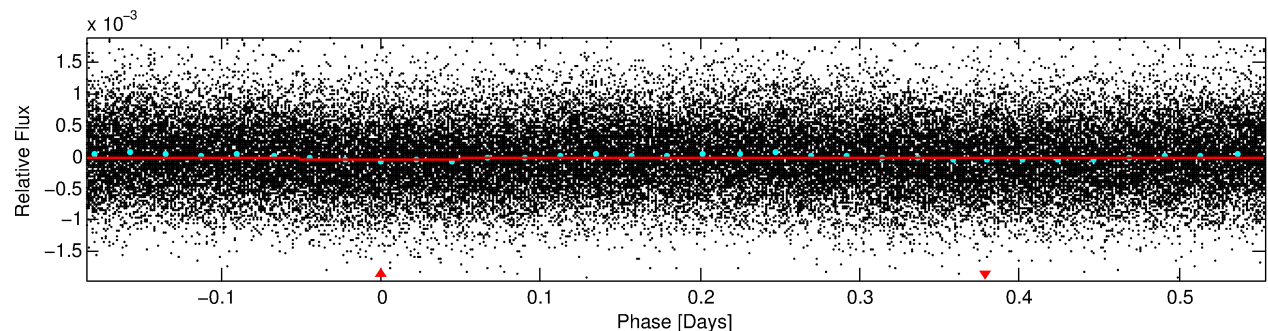
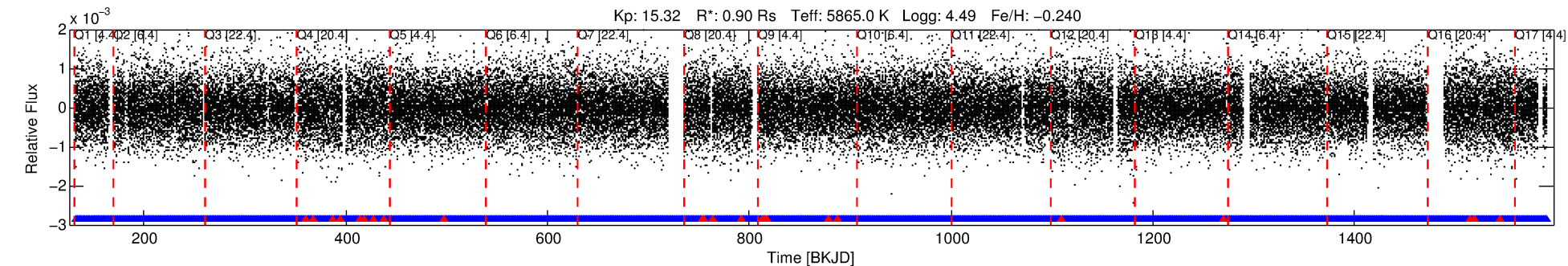
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003424439-01

No Significant Match Found

DV One-Page Summary

KIC: 3424439 Candidate: 1 of 1 Period: 0.738 d



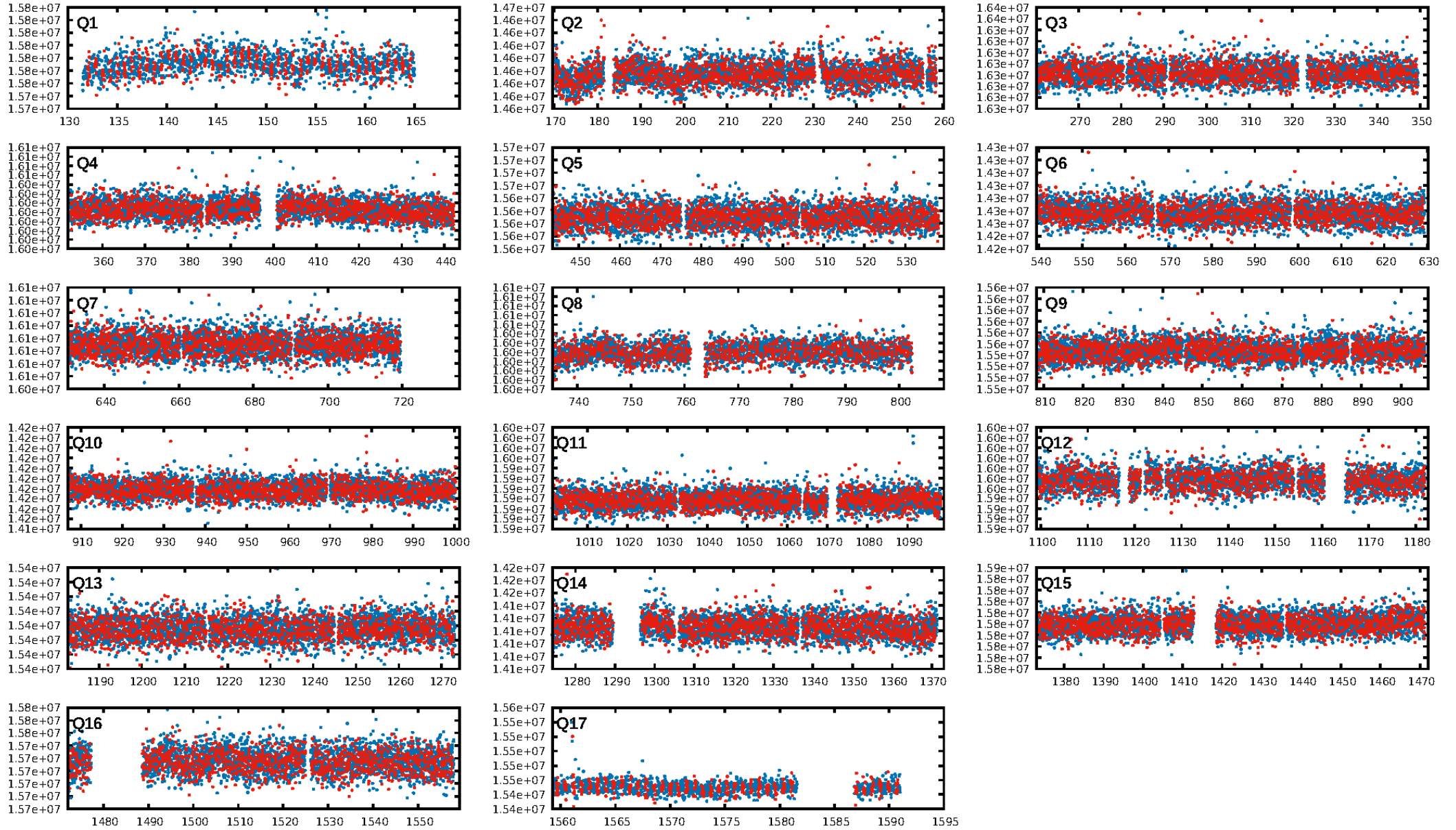
DV Fit Results:

Period = 0.73816 [0.00002] d
Epoch = 132.0771 [0.0054] BKJD
Rp/R* = 0.0069 [0.0077]
a/R* = 1.32 [3.23]
b = 0.90 [1.18]
Seff = 3563.48 [1331.45]
Teff = 1970 [184] K
Rp = 0.68 [0.78] Re
a = 0.0156 [0.0038] AU
Ag = 9.01 [20.44] [0.39 σ]
Teffp = 5278 [2960] K [1.12 σ]

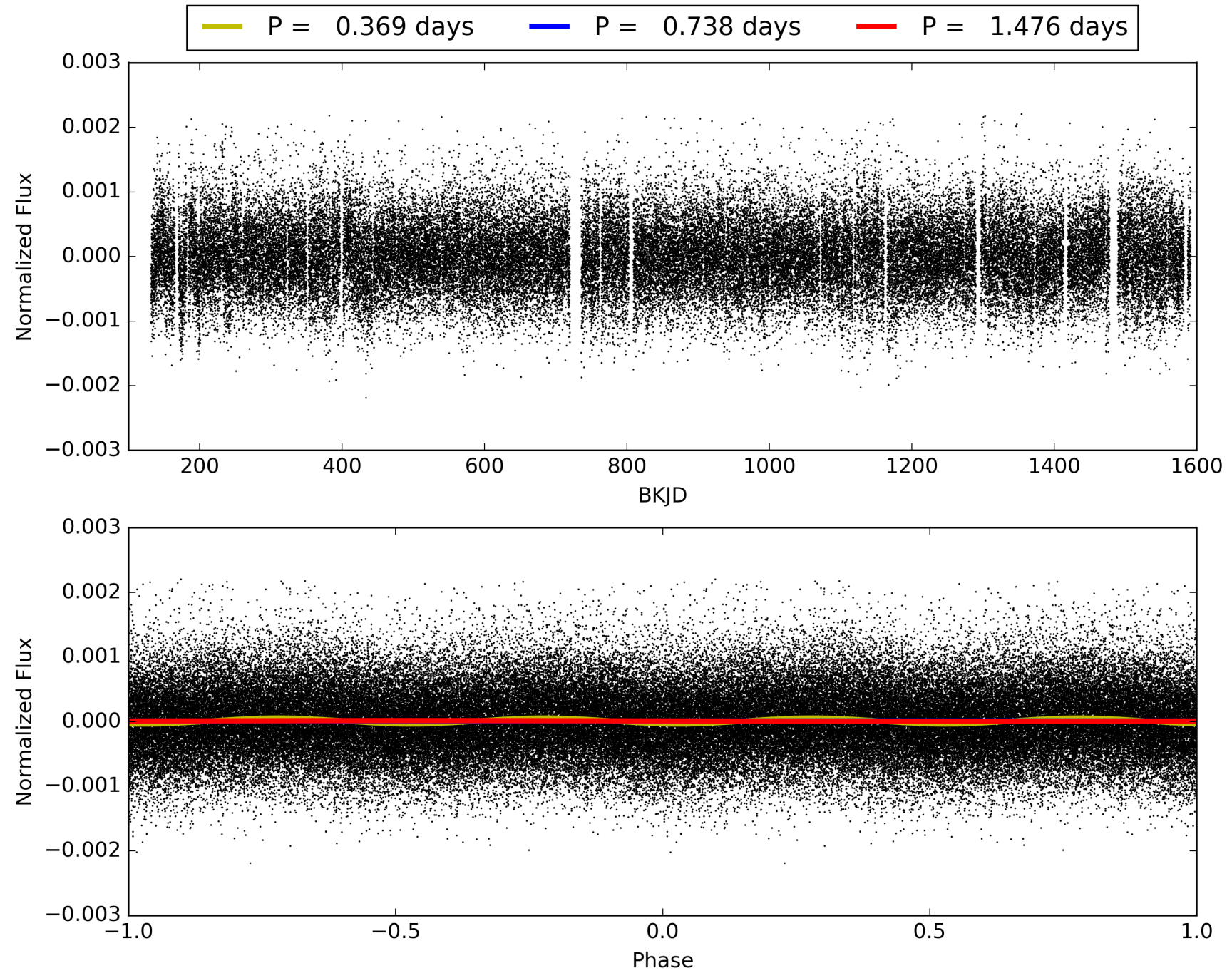
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.87e-16
RollingBand-fgt: 0.99 [1714/1737]
GhostDiagnostic-chr: 0.009788
Centroid-sig: 1.7%
Centroid-so: 4.374 arcsec [2.00 σ]
OotOffset-rm: 0.355 arcsec [0.52 σ]
KicOffset-rm: 0.453 arcsec [0.61 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003424439-01, PDC Light Curves

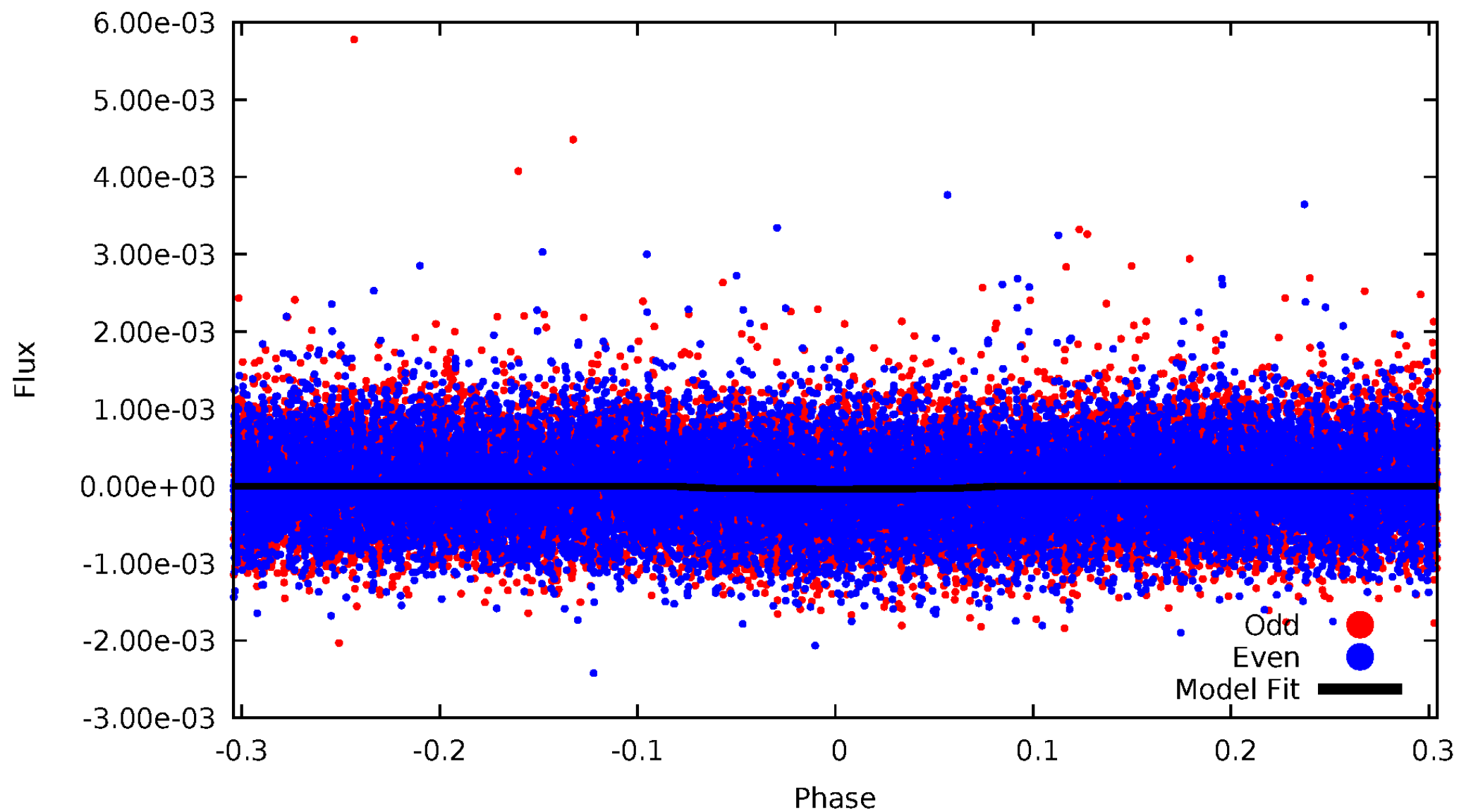


TCE 003424439-01



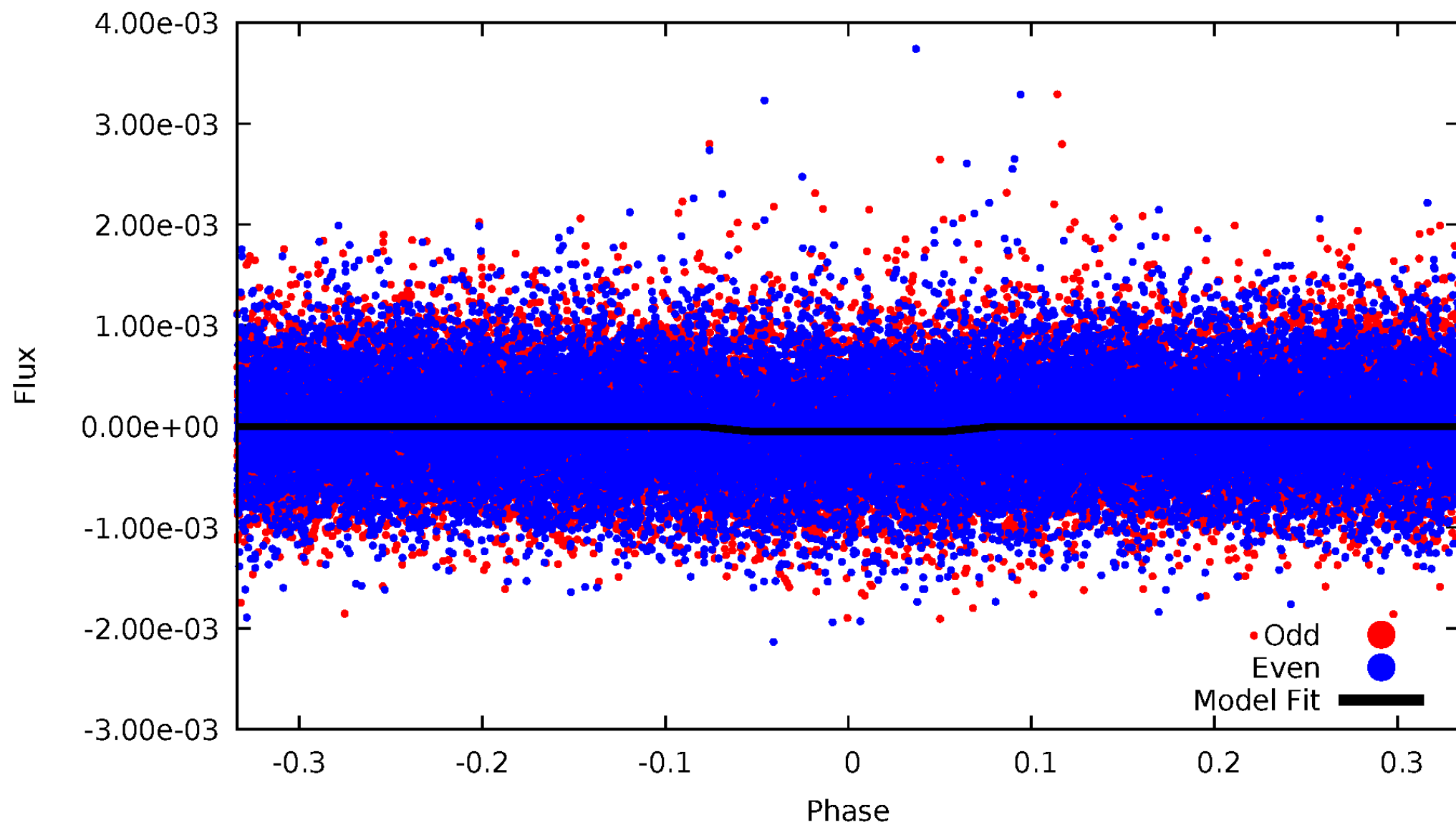
DV Odd/Even

TCE 003424439-01



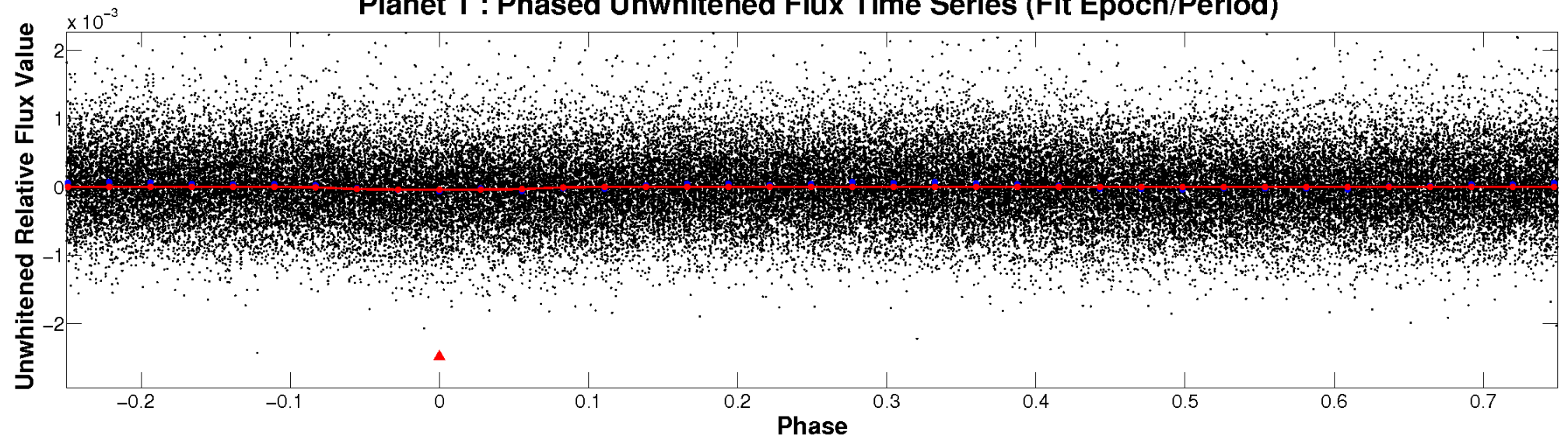
ALT Odd/Even

TCE 003424439-01

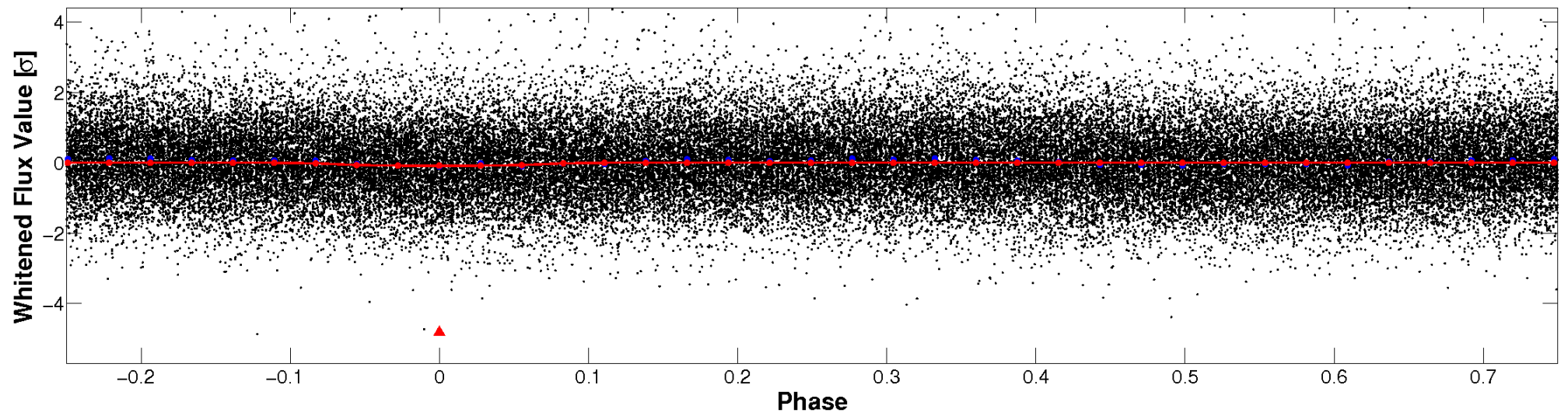


Non-Whitened Vs. Whitened Light Curve

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

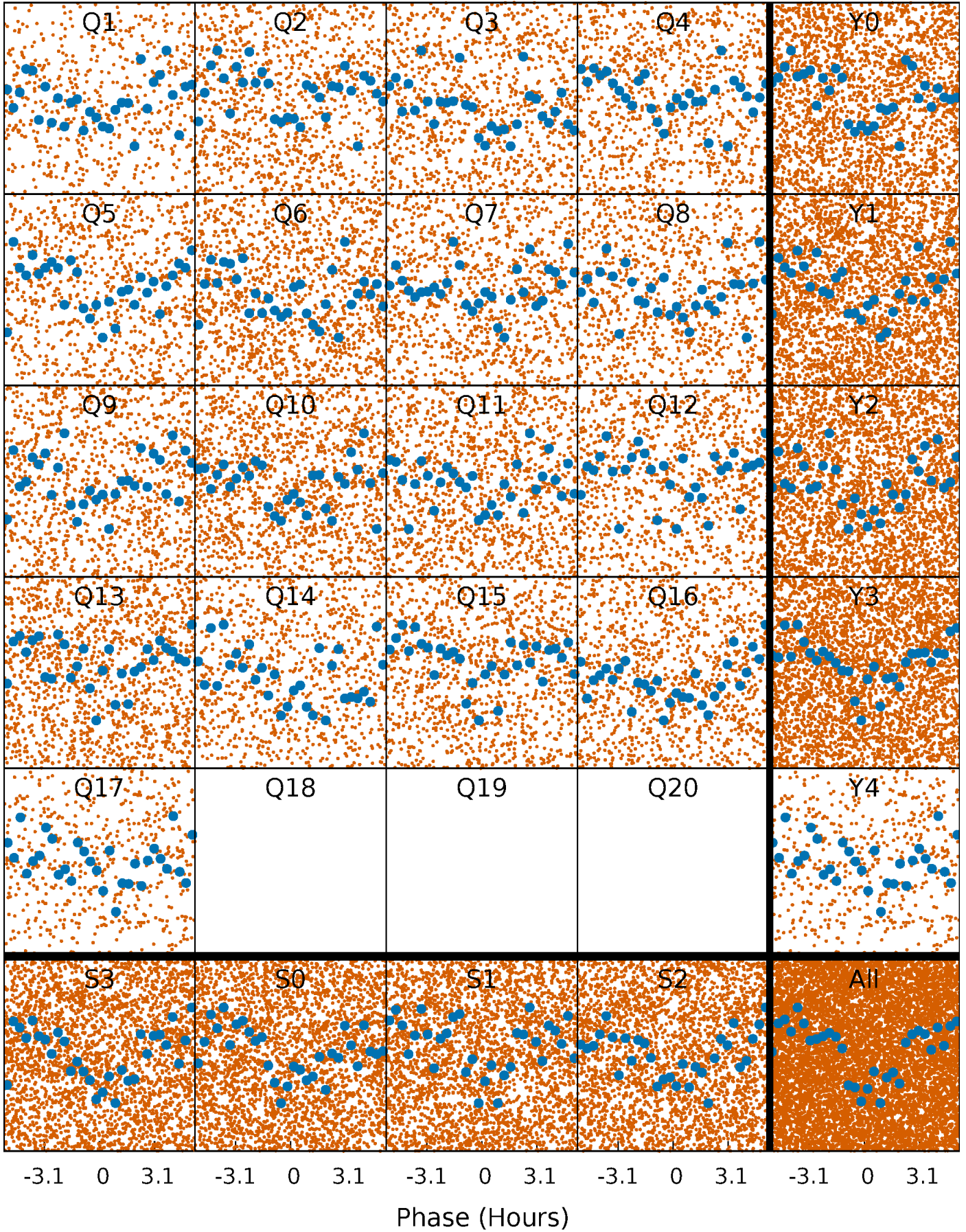


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



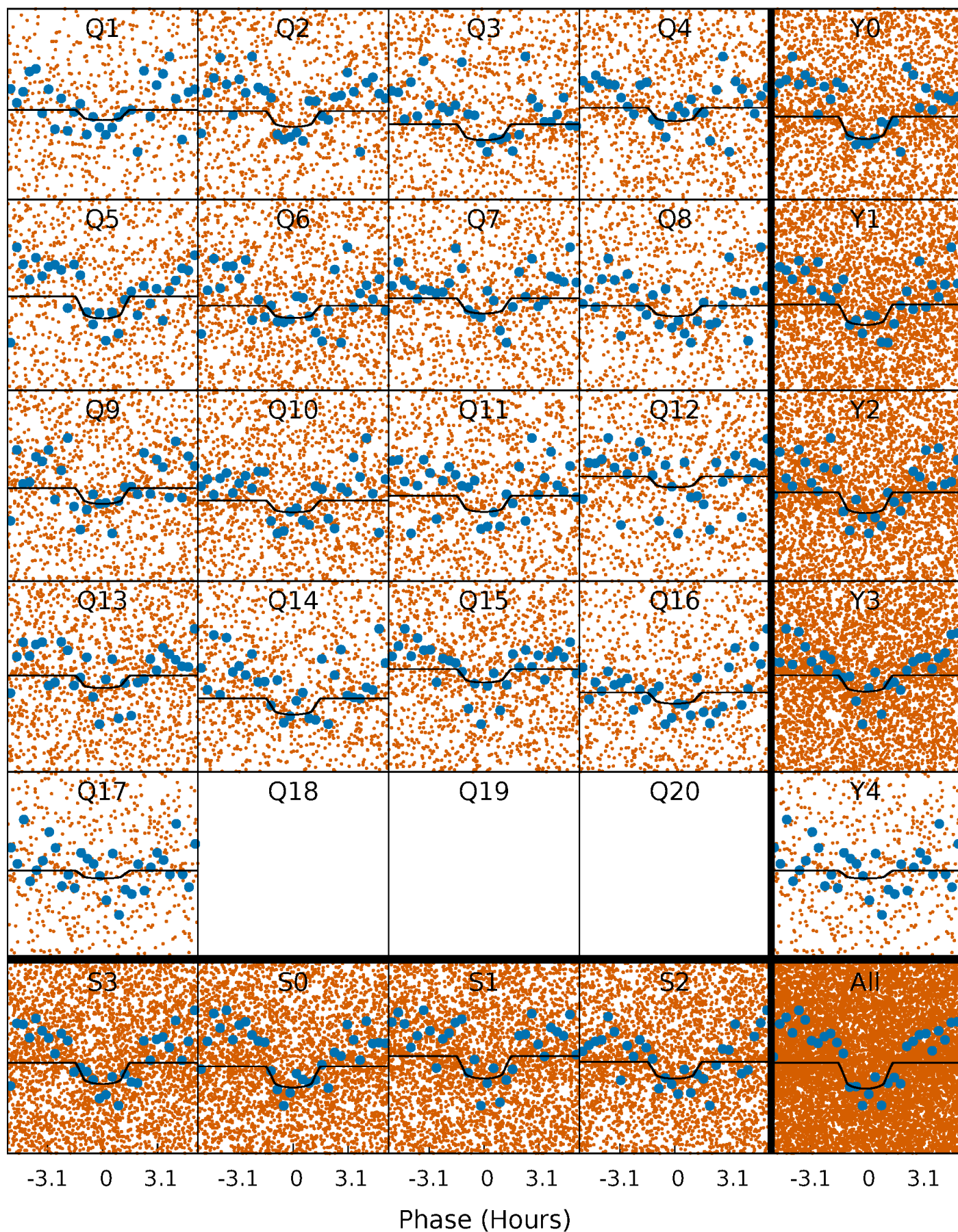
PDC Quarter-Phased Transit Curves

TCE 003424439-01 P= 0.738164 Days $T_0=132.077129$ (BKJD)



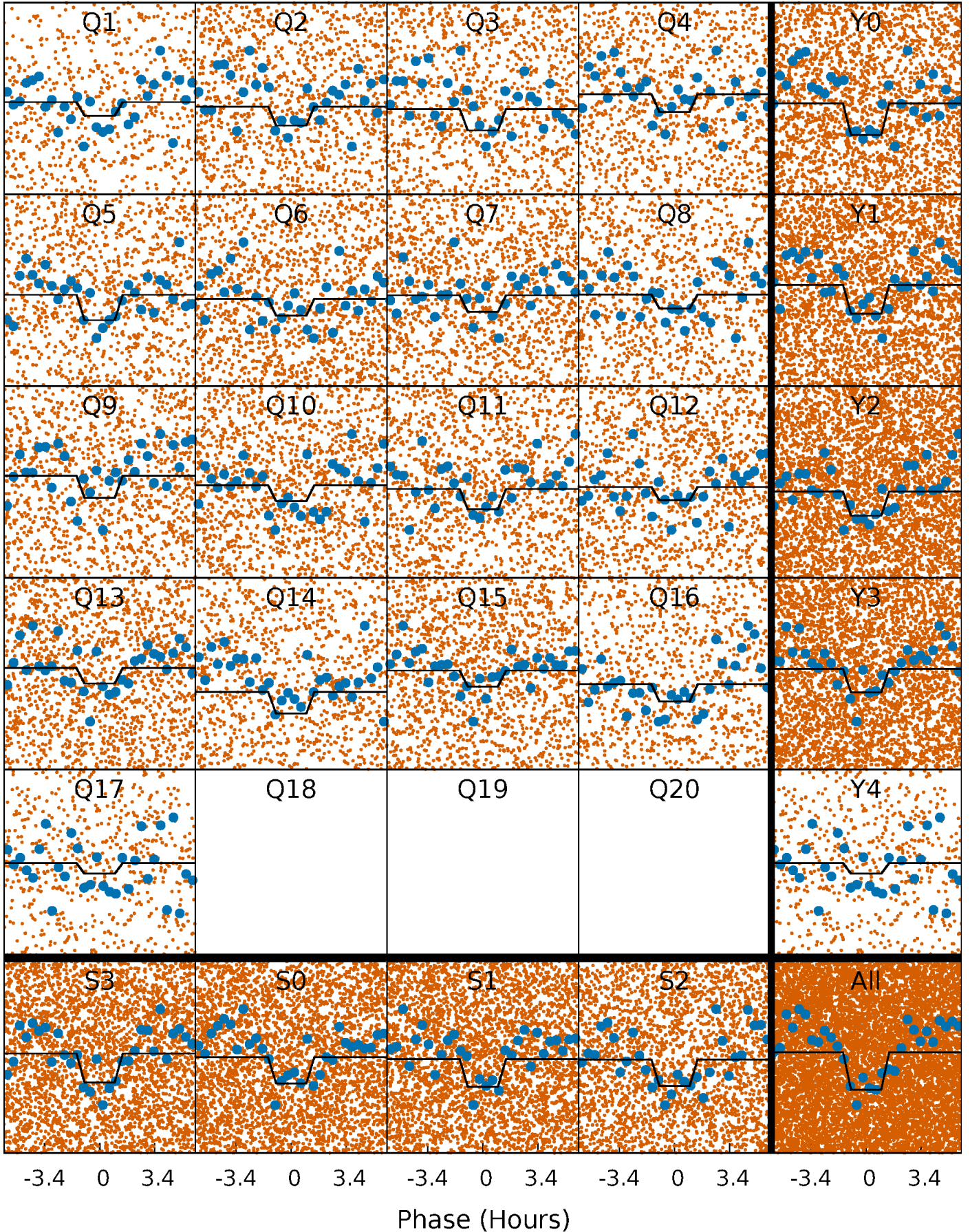
DV Quarter-Phased Transit Curves

TCE 003424439-01 P= 0.738164 Days $T_0=132.077129$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

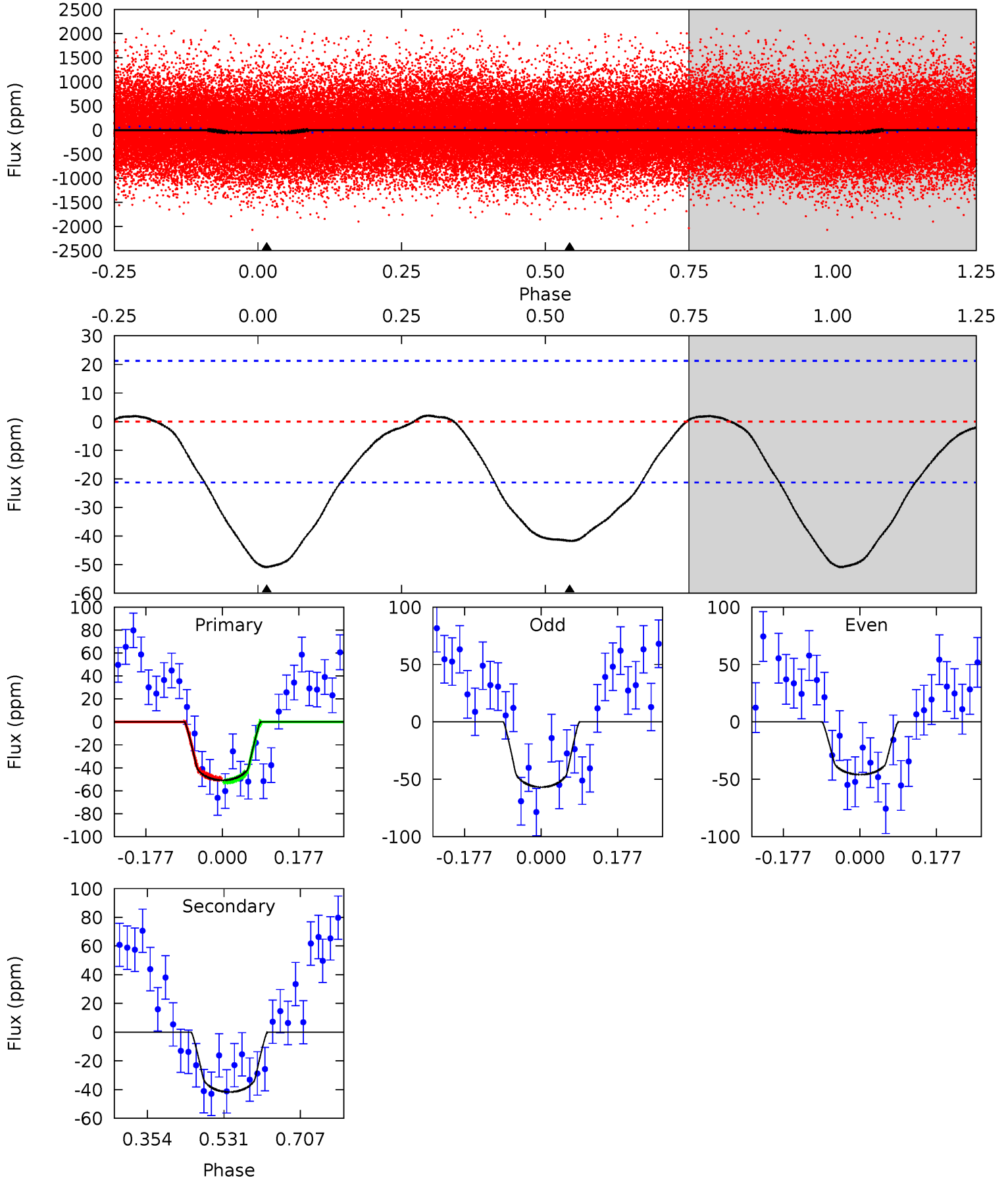
TCE 003424439-01 P= 0.738178 Days $T_0=132.076196$ (BKJD)



DV Model-Shift Uniqueness Test

003424439-01, P = 0.738164 Days, E = 131.338965 Days

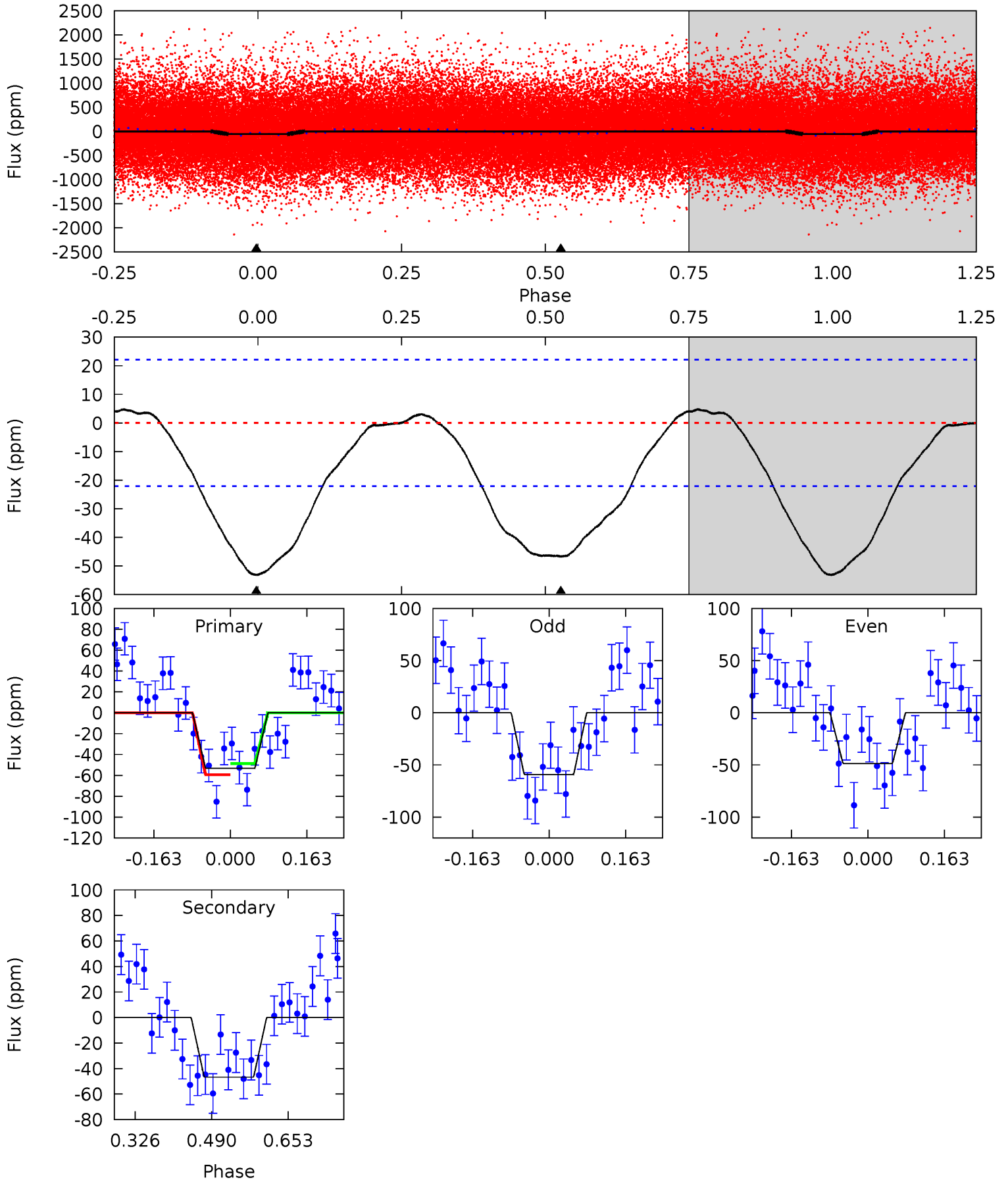
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	8.72	0	0	4.44	1.35	0.59	10.6	10.6	8.72	8.72	1.15	0.88	0.04	0.25



Alt Model-Shift Uniqueness Test

003424439-01, P = 0.738178 Days, E = 131.338018 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	9.43	0	0	4.46	1.39	0.77	10.7	10.7	9.43	9.43	1.08	0.86	0.08	1.08



Stellar Parameters For KIC 003424439

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5865^{+157}_{-174}	$4.493^{+0.065}_{-0.195}$	$-0.240^{+0.300}_{-0.300}$	$0.904^{+0.257}_{-0.092}$	$0.929^{+0.110}_{-0.099}$	$1.769^{+0.571}_{-0.884}$
	+3%/-3%	+1%/-4%	+125%/-125%	+28%/-10%	+12%/-11%	+32%/-50%
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 003424439-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 5	$0.85^{+0.74}_{-0.54}$	2793^{+198}_{-124}	5238^{+3985}_{-1285}	$7.810^{+51.757}_{-5.659}$
Alt.	-47 ± 5	$0.89^{+0.72}_{-0.57}$	2797^{+181}_{-139}	5241^{+3851}_{-1192}	$7.863^{+53.496}_{-5.491}$

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 $A_{obs} \gg 1.0$

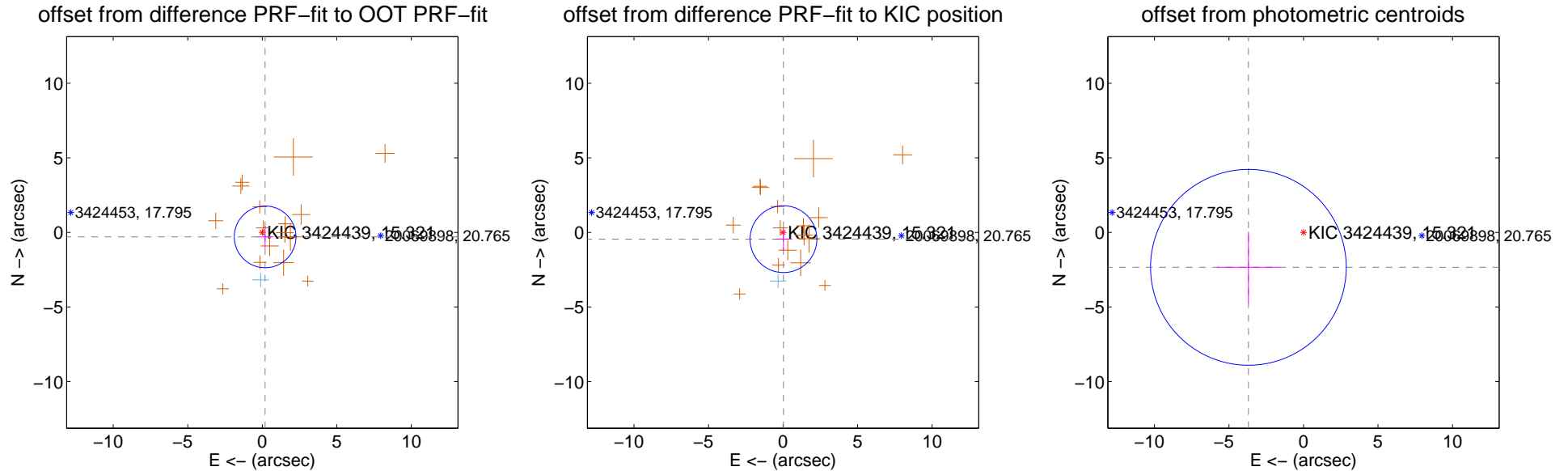
DV Centroid Data

Supplemental centroid analysis for 003424439-01. Kepler magnitude: 15.32. Transit SNR 6.71

There are 1 quarters with good PRF difference image offsets

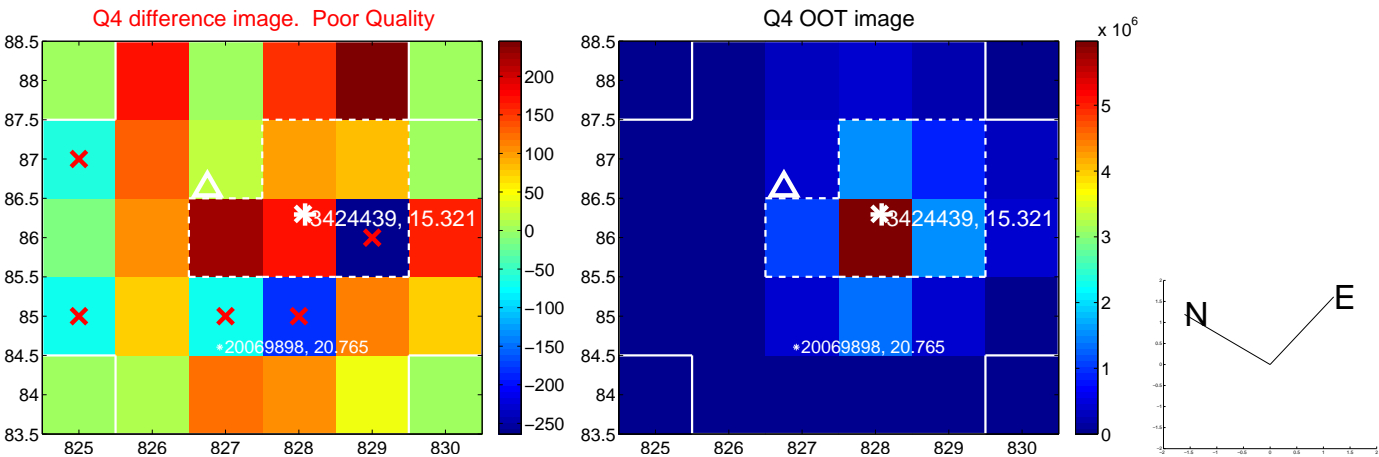
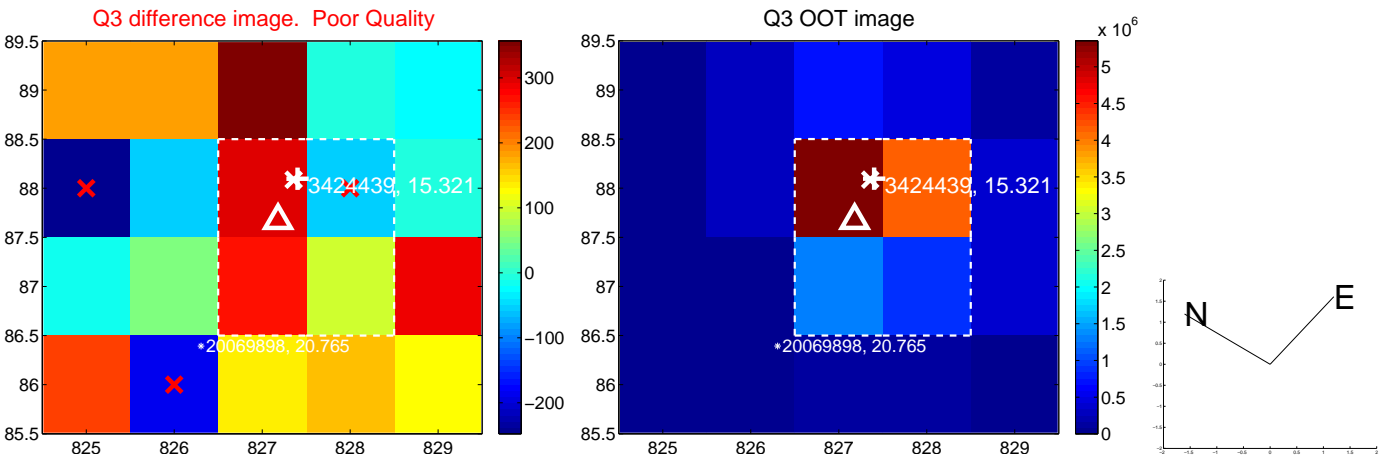
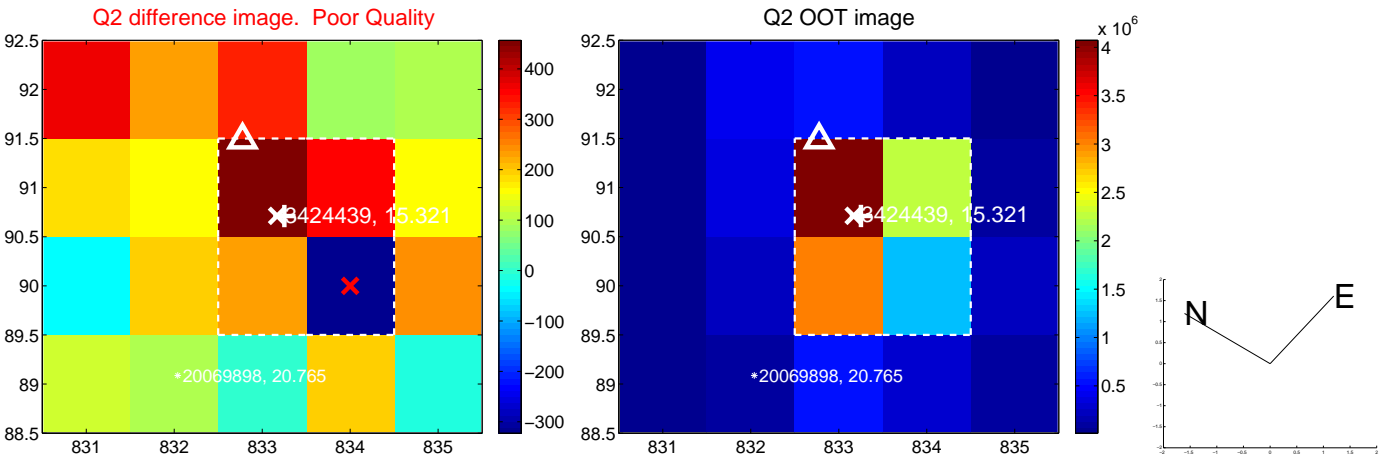
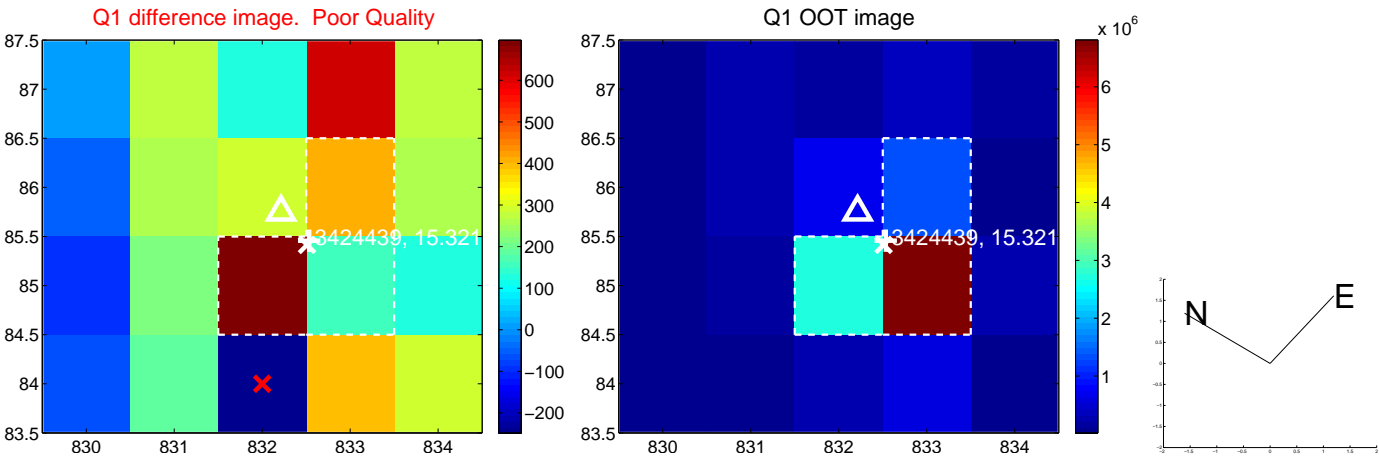
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.355 ± 0.689	0.52	-0.191 ± 0.562	-0.300 ± 0.735
PRF-fit source offset from KIC position	0.453 ± 0.747	0.61	-0.029 ± 0.565	-0.452 ± 0.747
photometric centroid source offset	4.37 ± 2.19	2.00	3.70 ± 2.10	-2.34 ± 2.39

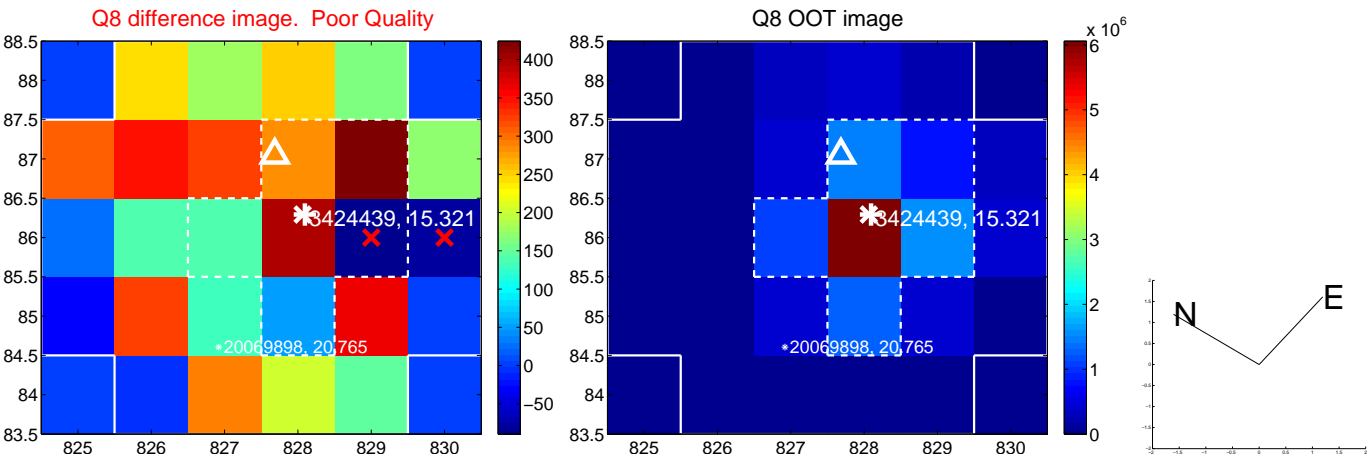
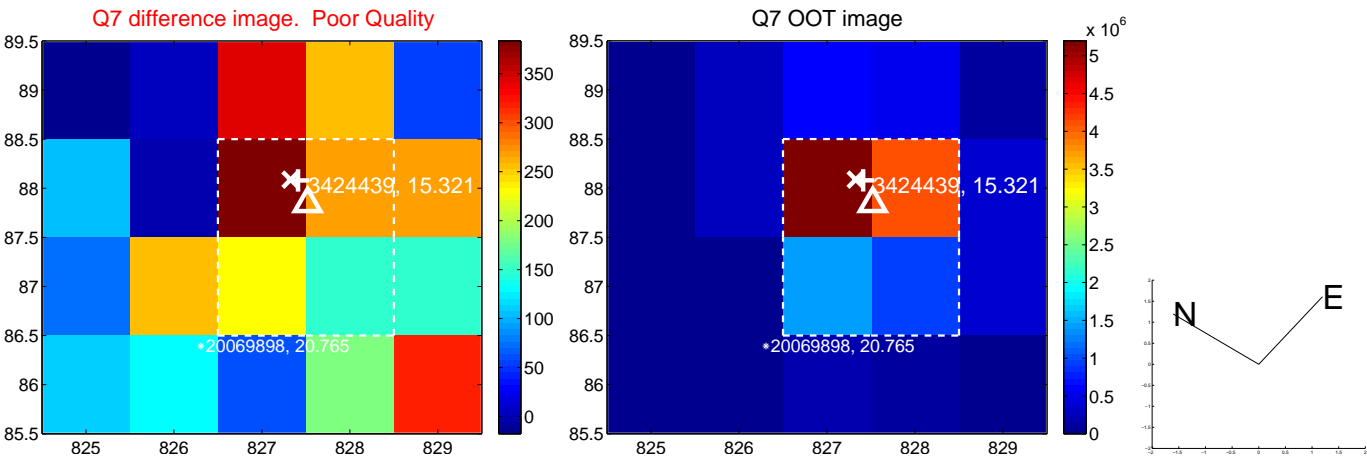
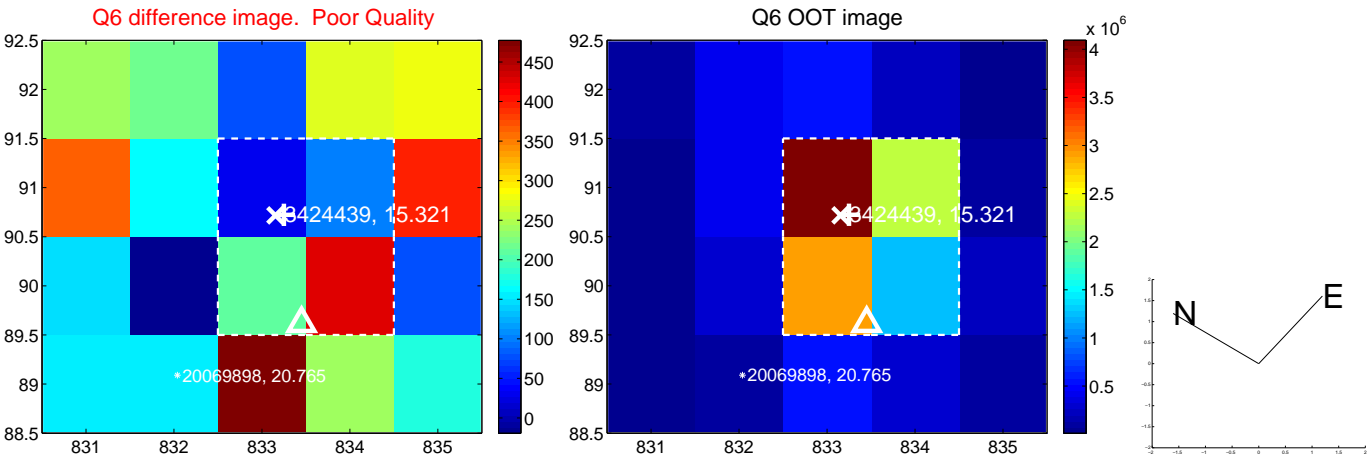
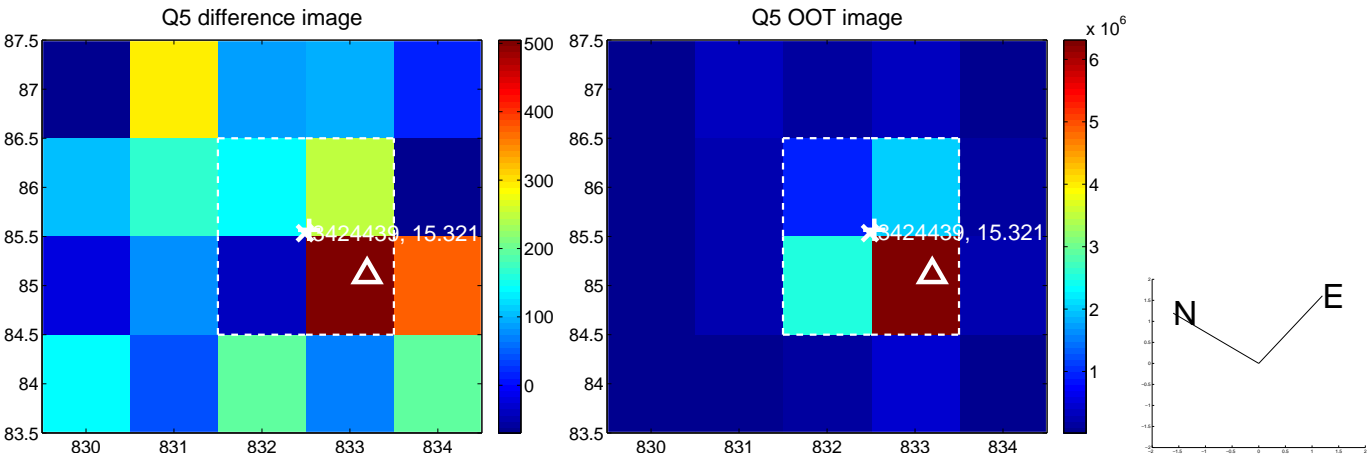


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

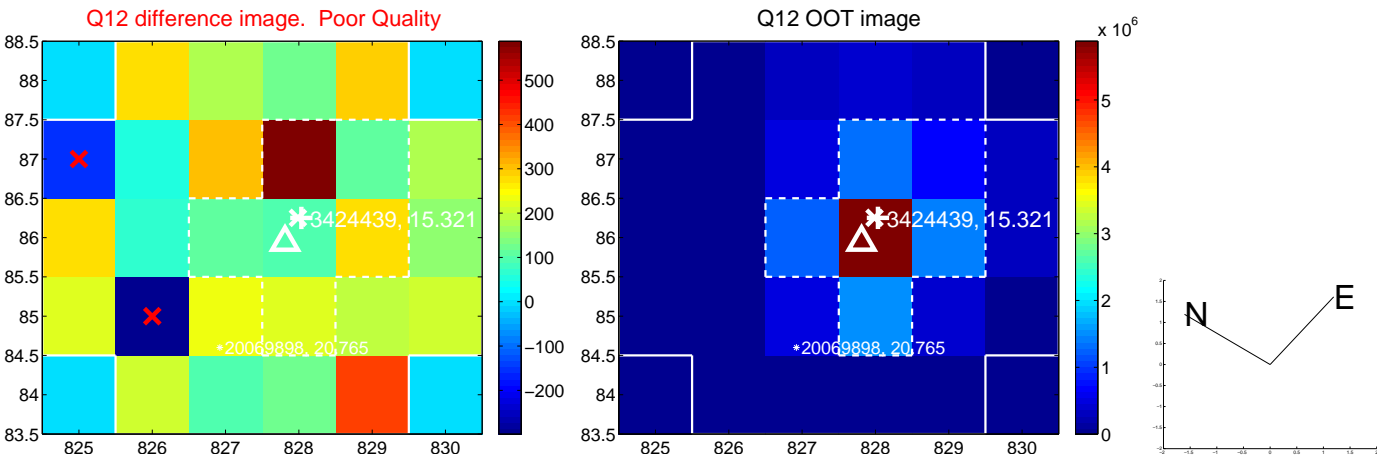
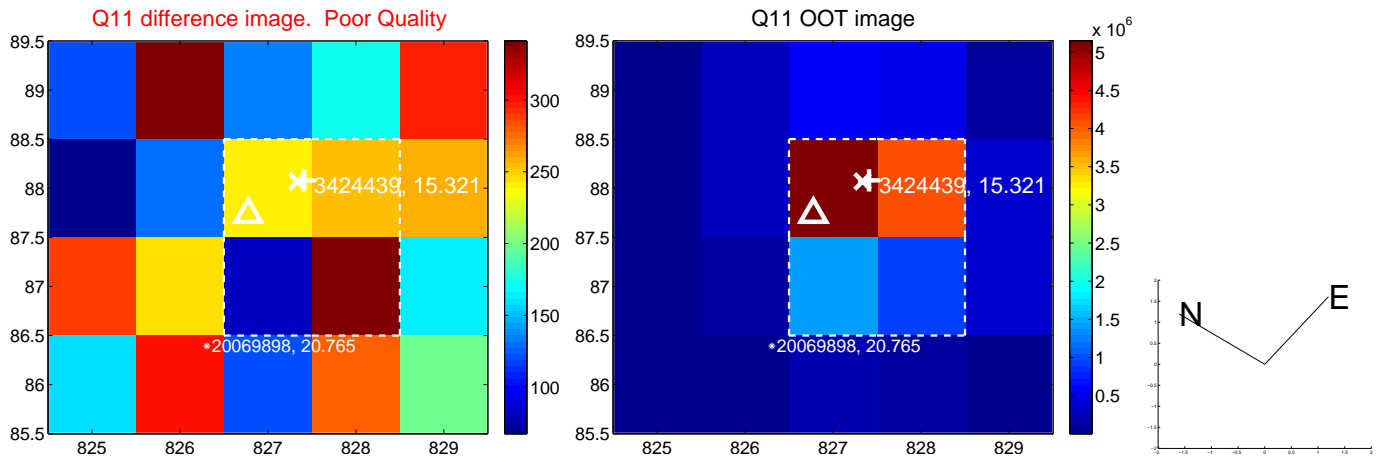
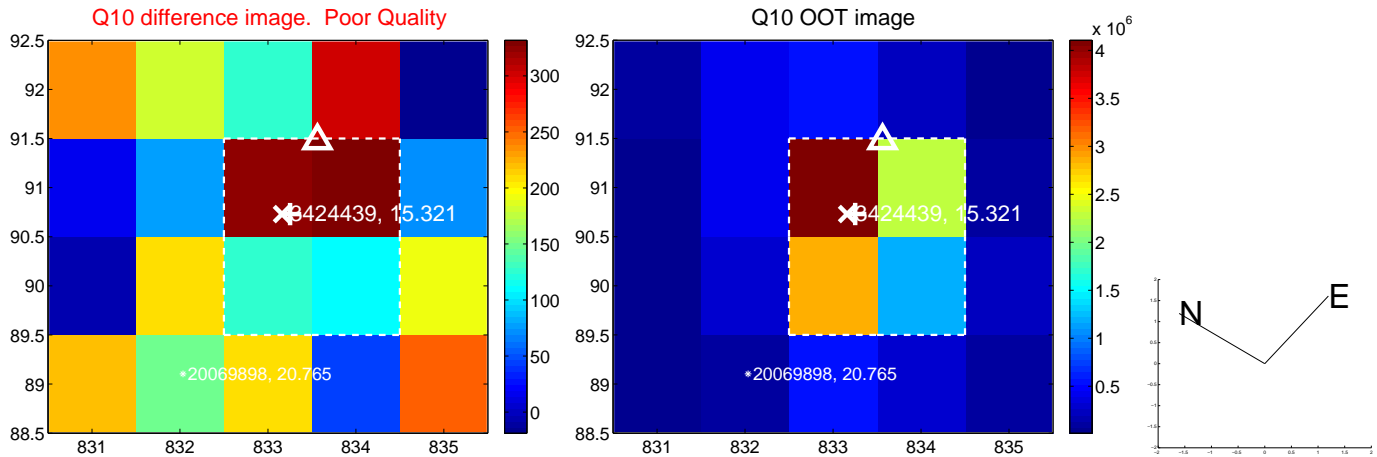
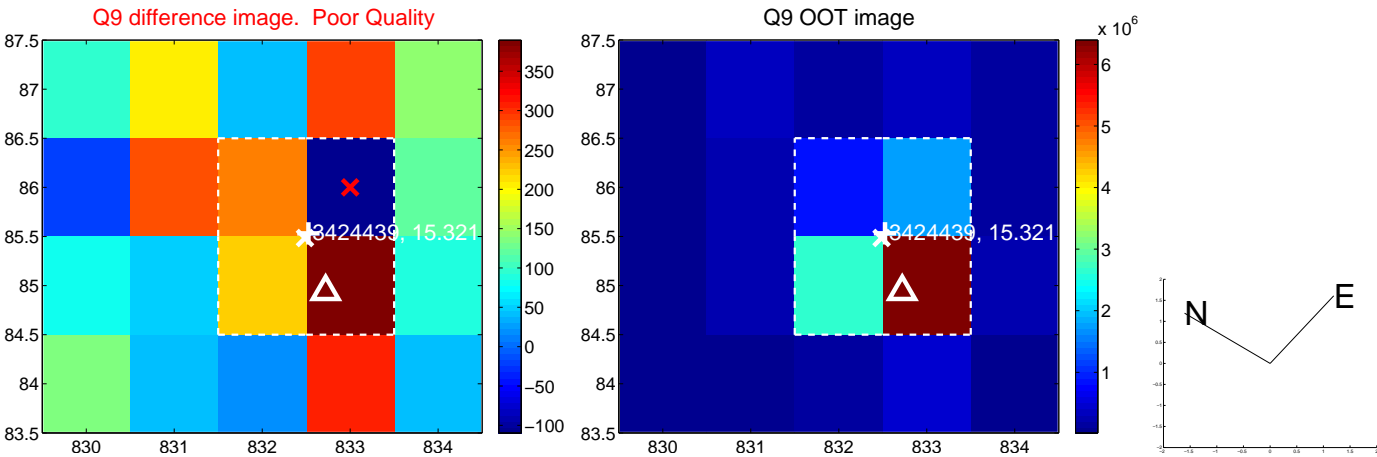
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



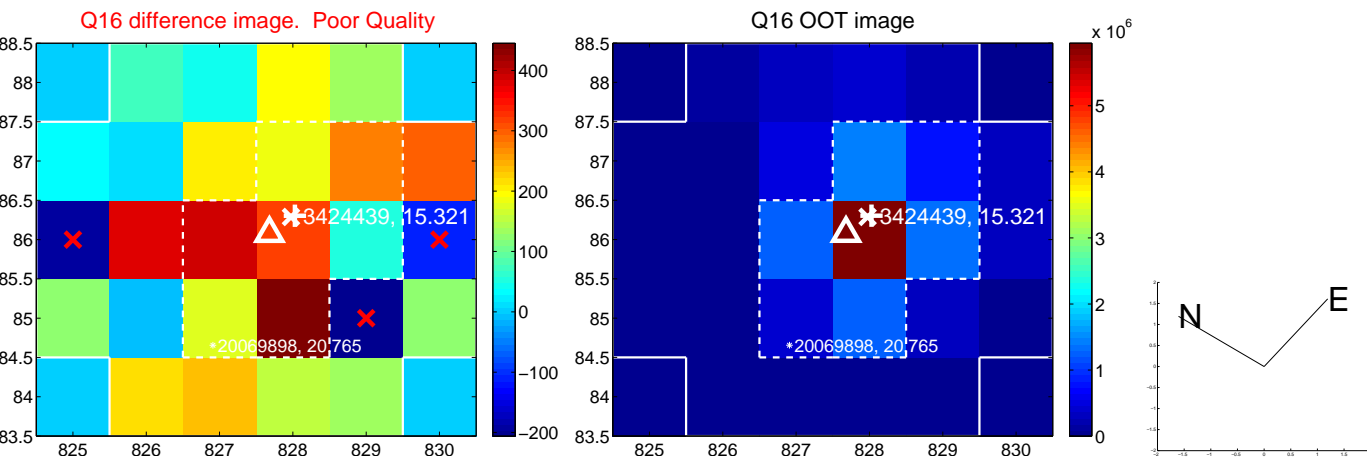
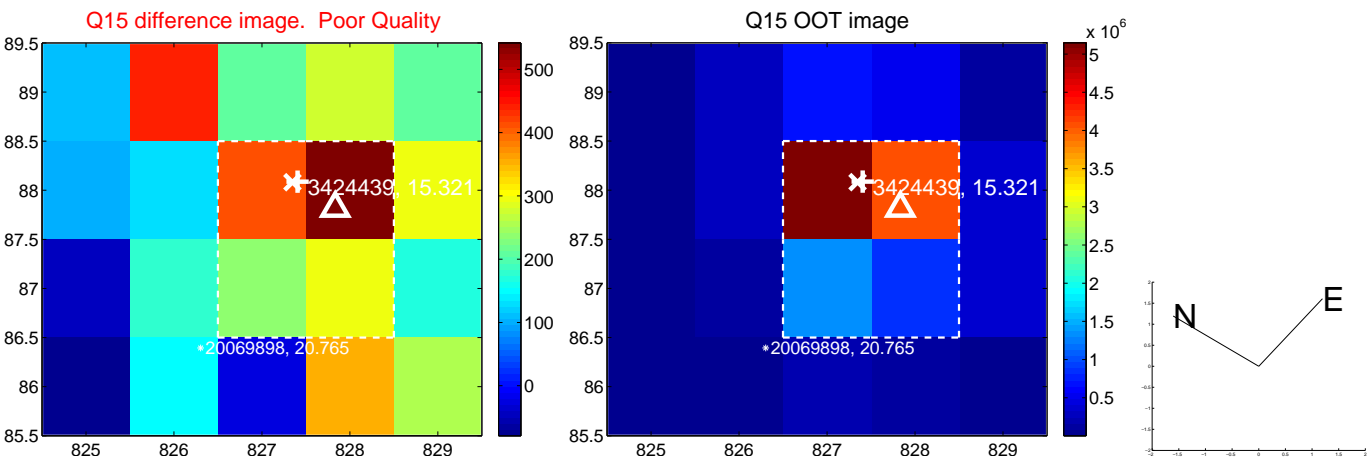
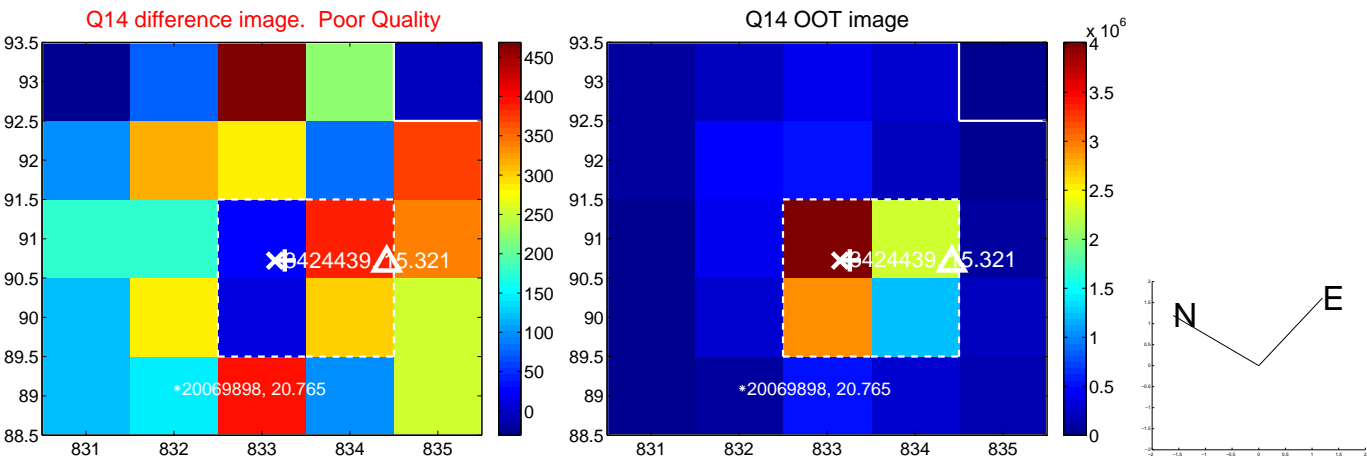
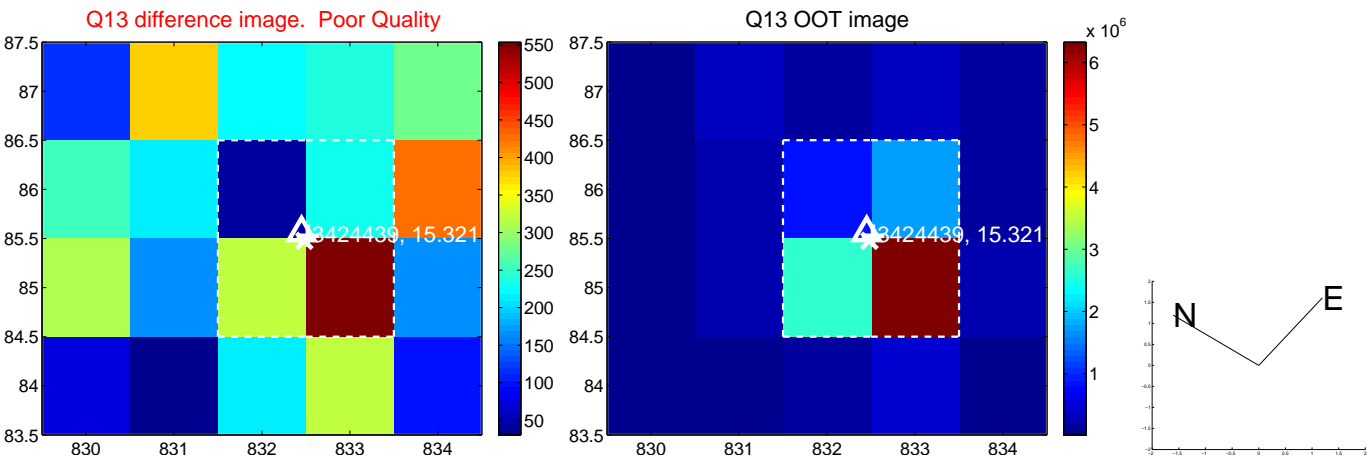
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



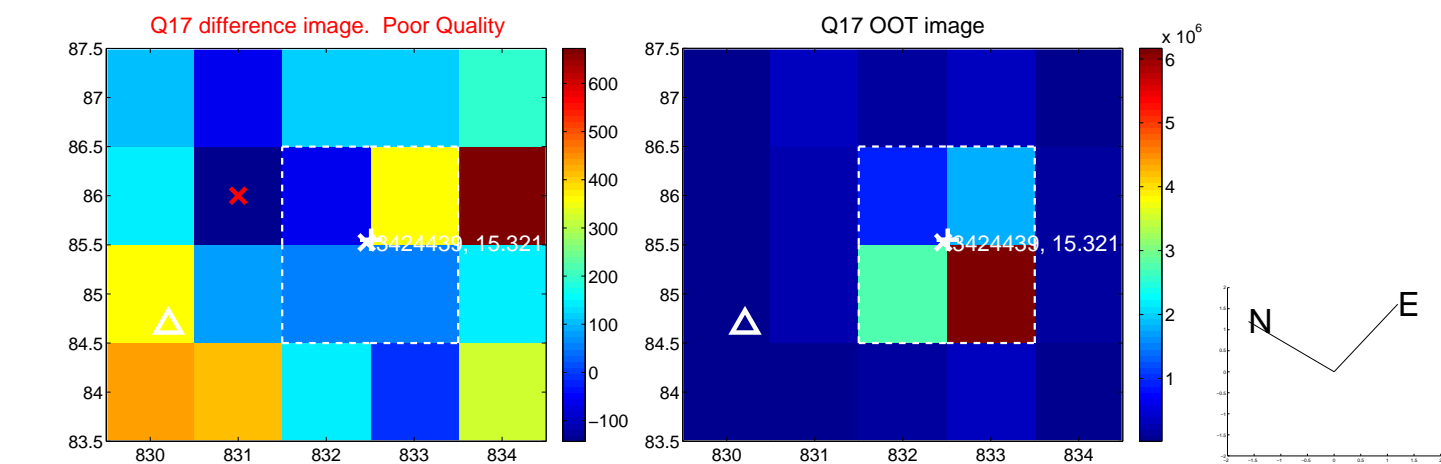
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



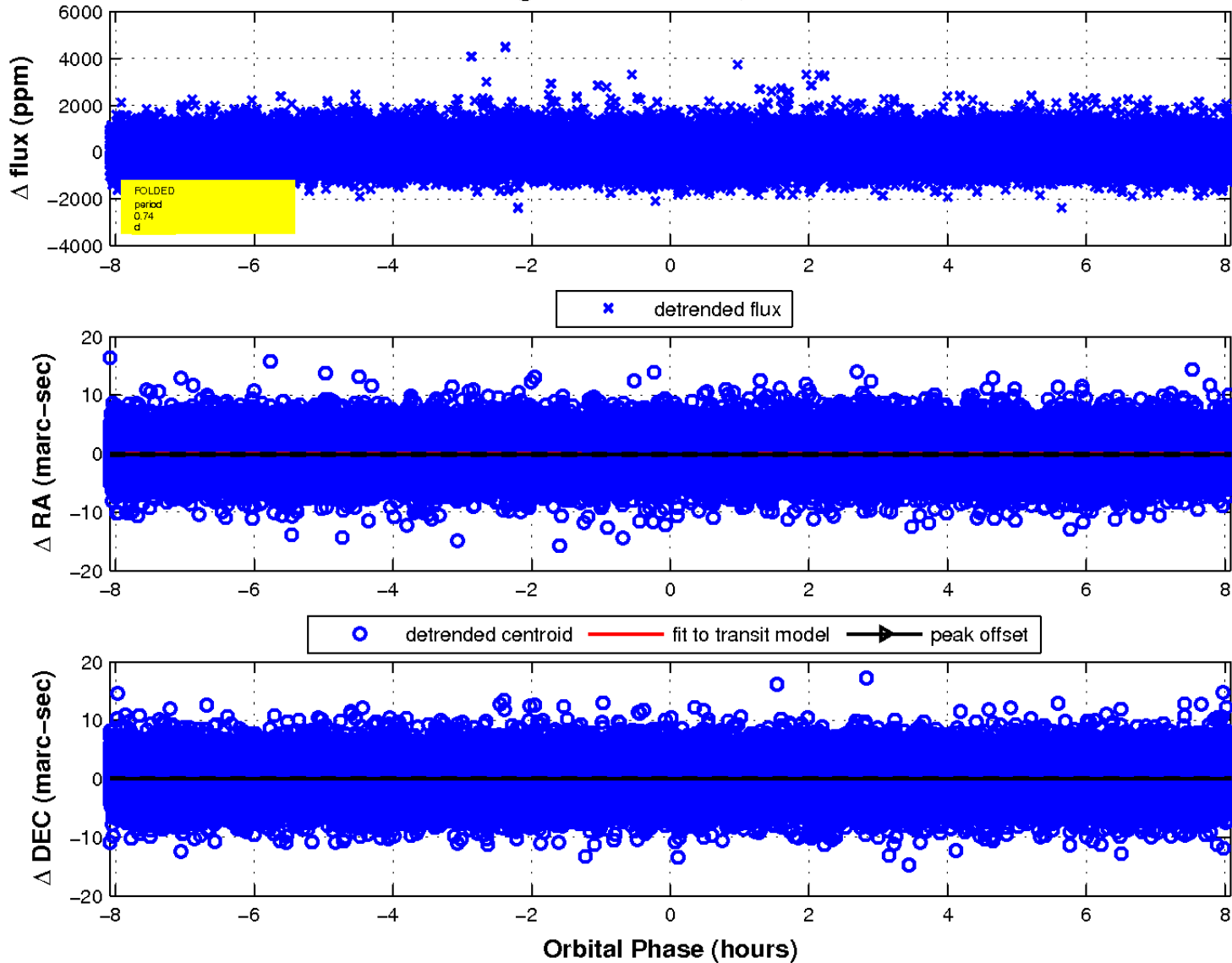
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

