

KIC 004650674

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})
004650674-01	OBS	1341.01	4.514335	134.033082	223.0	3.164	24.8	25.4	1.22	5940	2.12	544.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004650674-01	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.

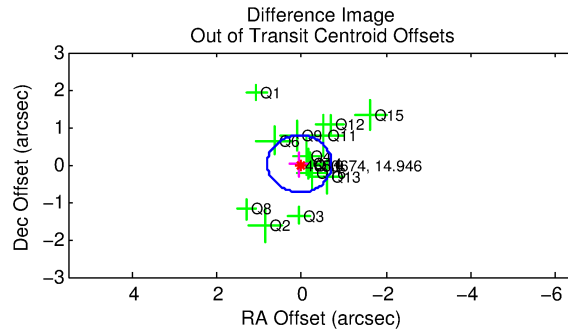
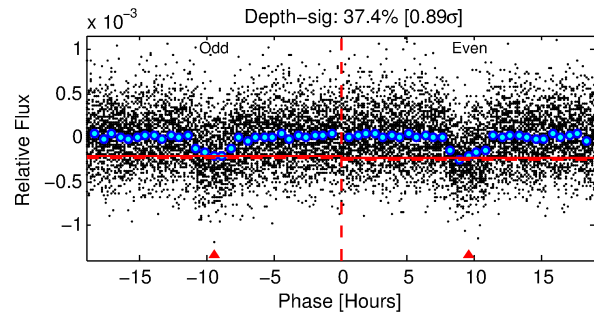
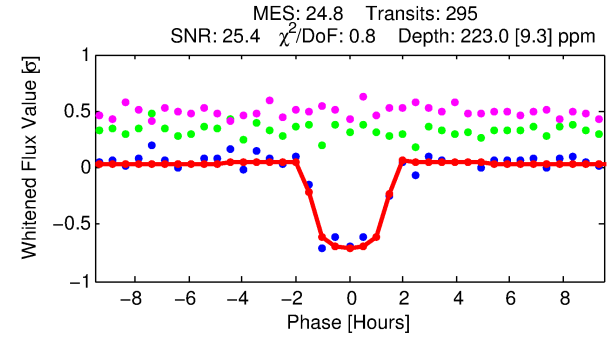
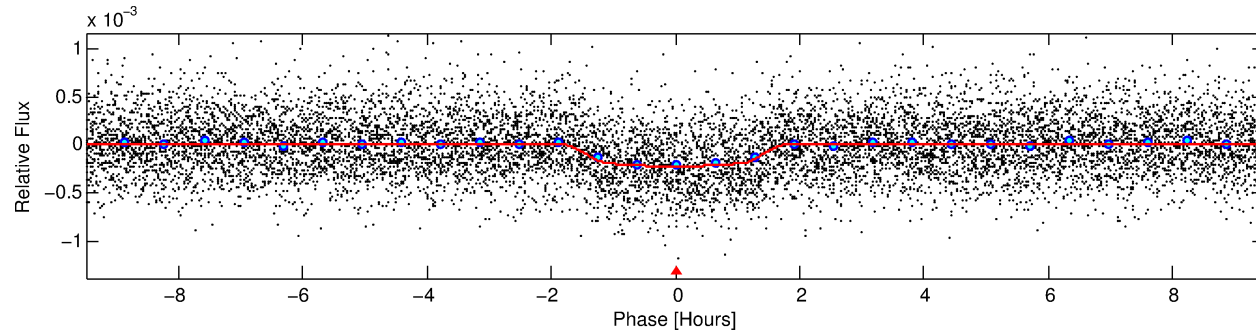
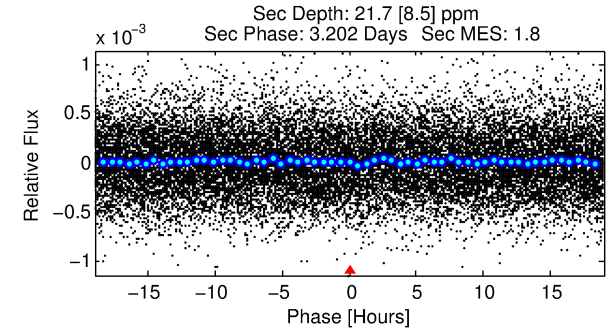
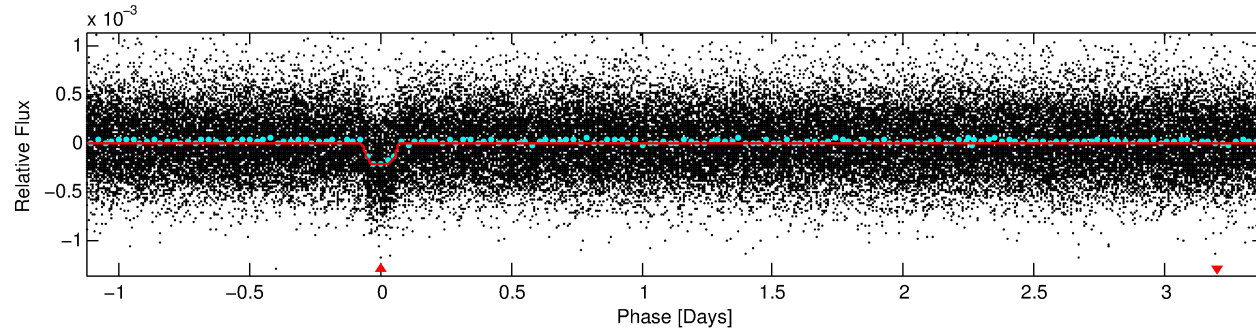
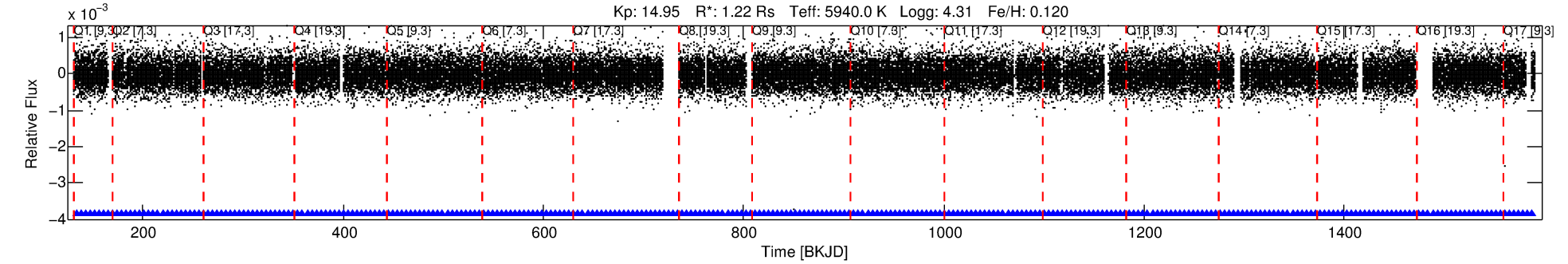
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004650674-01

No Significant Match Found

DV One-Page Summary

KIC: 4650674 Candidate: 1 of 1 Period: 4.514 d
KOI: K01341.01 Corr: 0.965



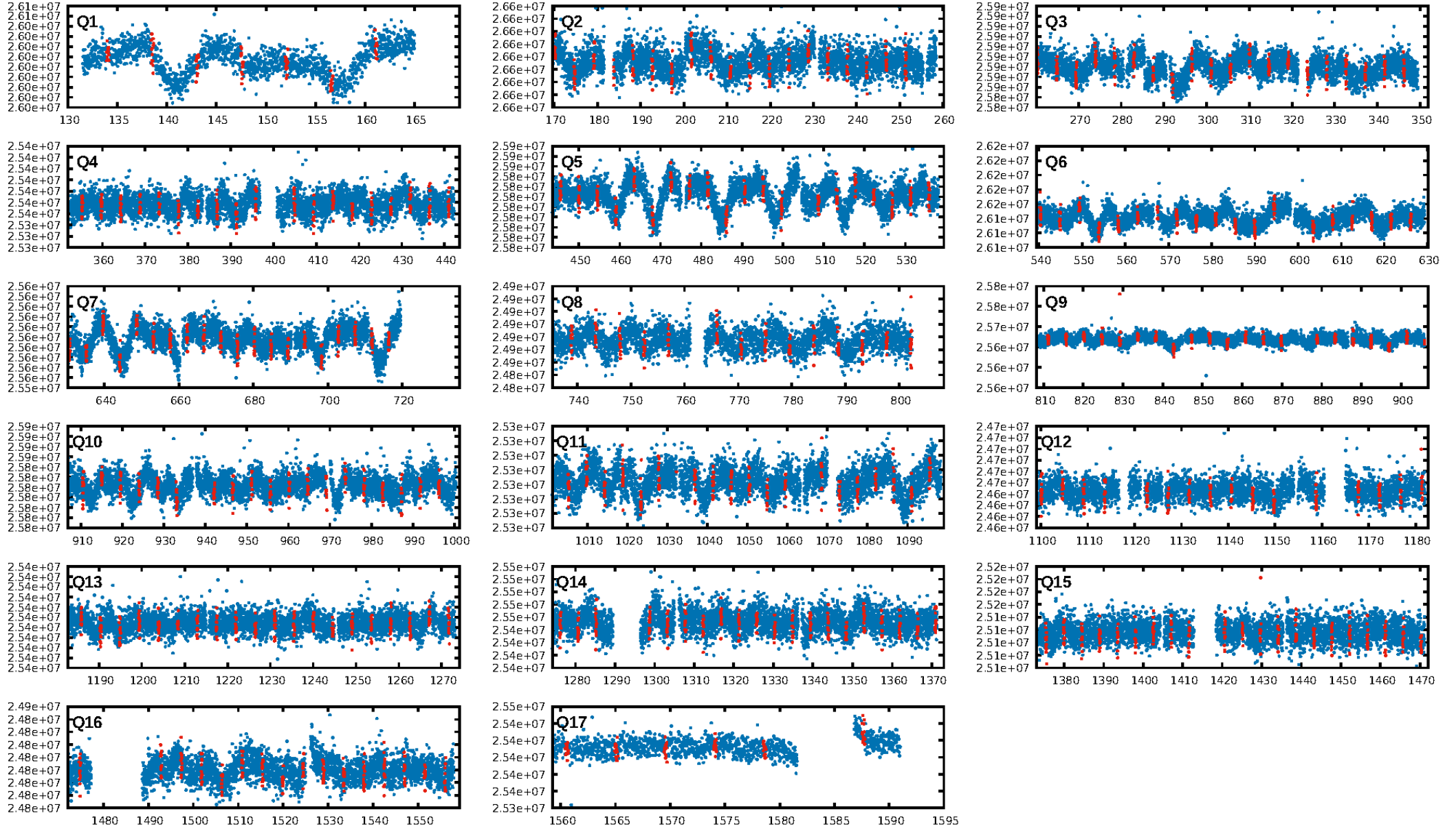
DV Fit Results:

Period = 4.51433 [0.00001] d
Epoch = 134.0331 [0.0020] BKJD
Rp/R* = 0.0160 [0.0037]
a/R* = 5.56 [6.03]
b = 0.88 [0.29]
Seff = 544.04 [117.81]
Teff = 1231 [67] K
Rp = 2.12 [0.61] Re
a = 0.0550 [0.0079] AU
Ag = 8.03 [5.16] [1.36σ]
Teffp = 3205 [488] K [4.01σ]

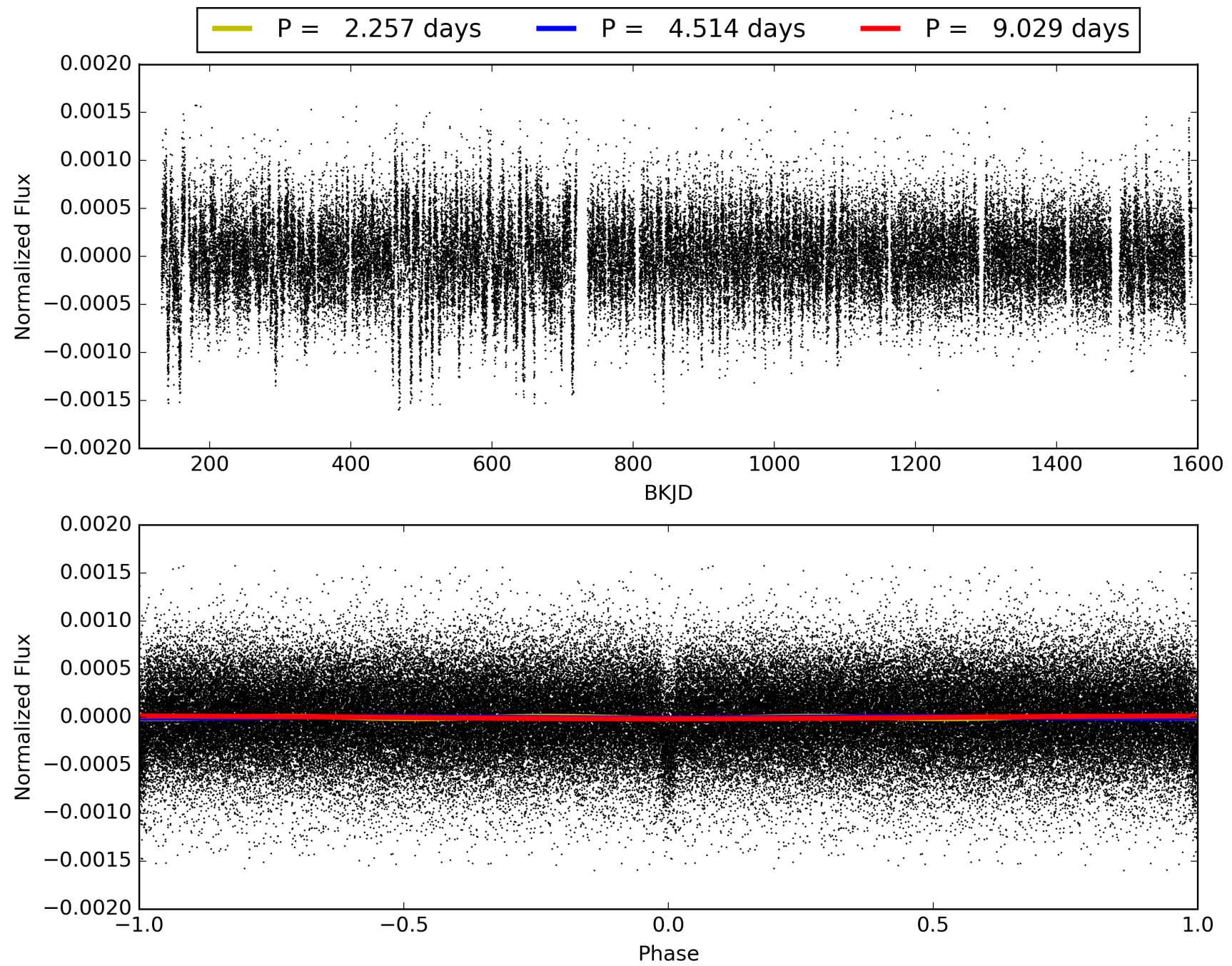
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.99e-133
RollingBand-fgt: 1.00 [282/282]
GhostDiagnostic-chr: 2.681
Centroid-sig: 51.2%
Centroid-so: 0.344 arcsec [0.70σ]
OotOffset-rm: 0.051 arcsec [0.20σ]
KicOffset-rm: 0.144 arcsec [0.49σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004650674-01, PDC Light Curves

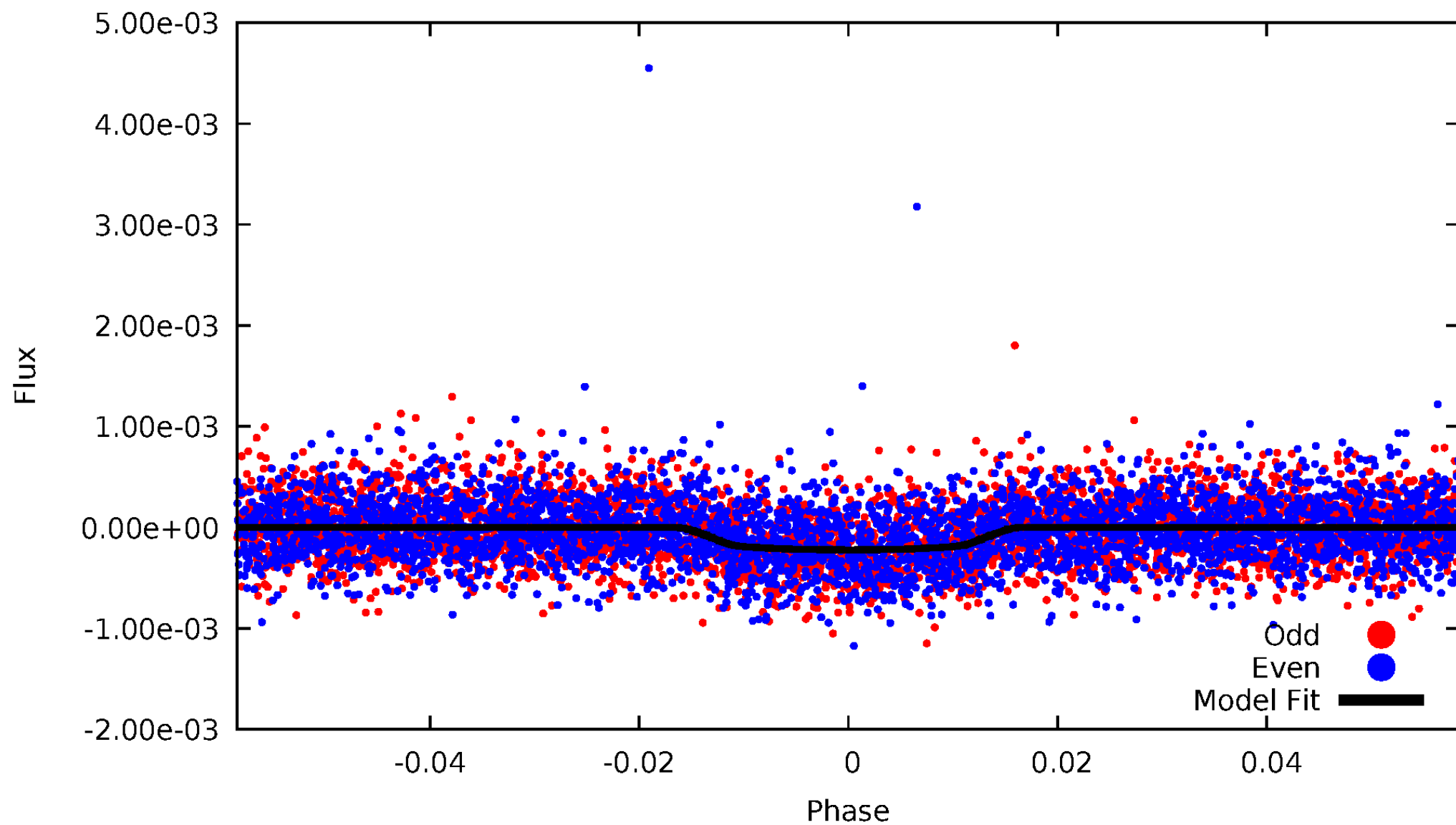


TCE 004650674-01



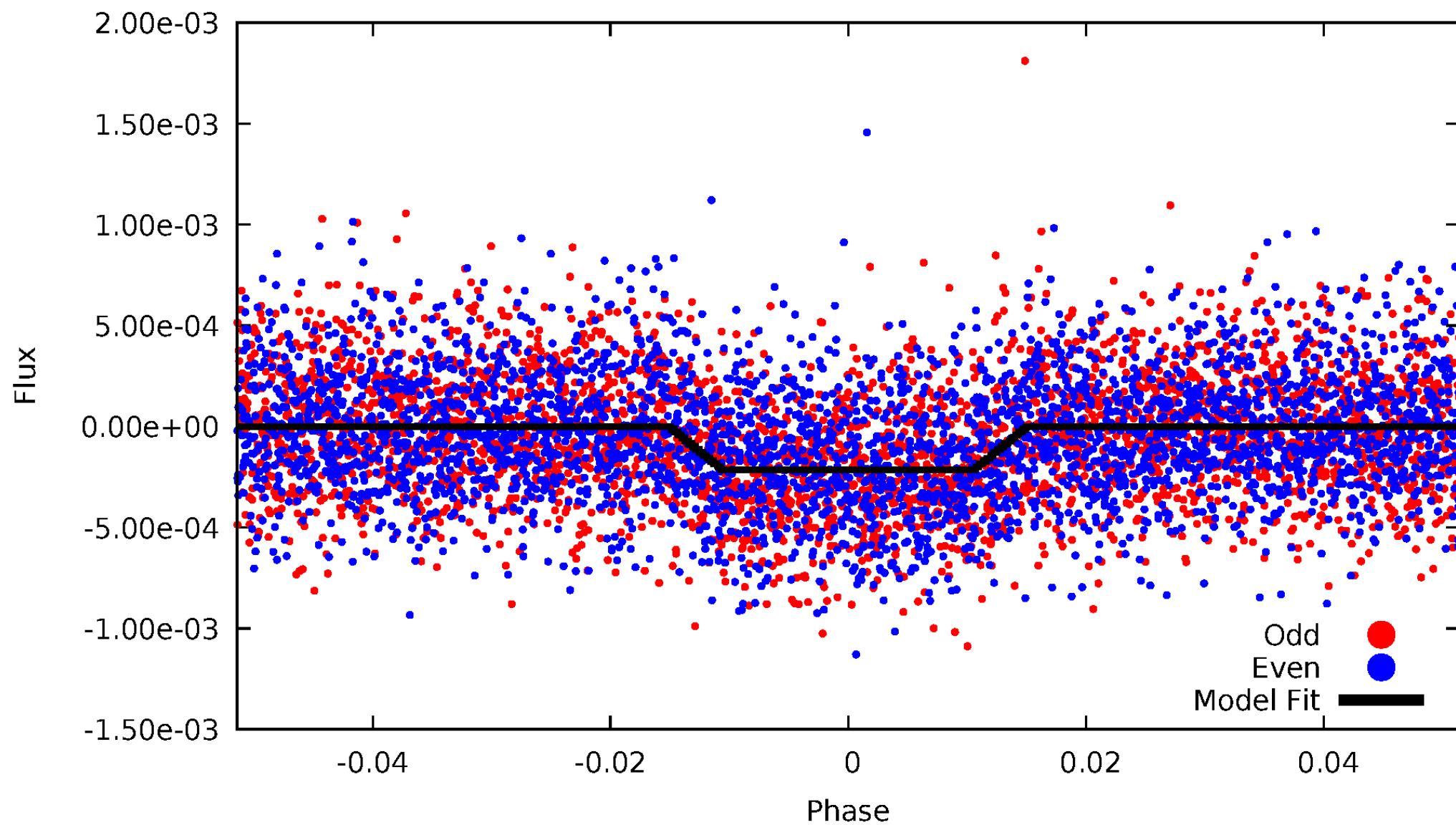
DV Odd/Even

TCE 004650674-01



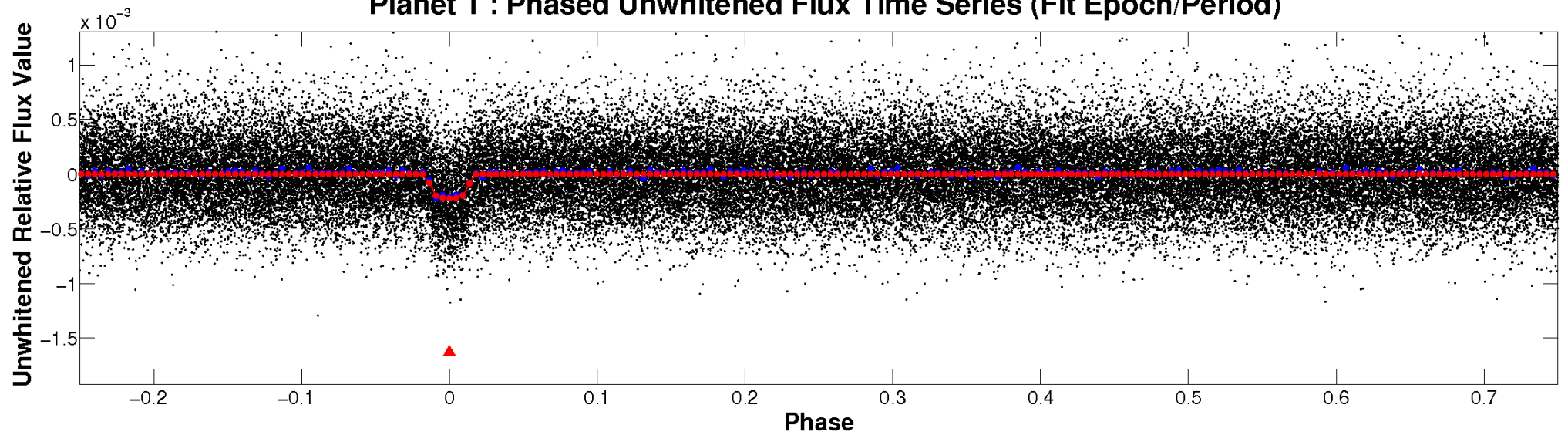
ALT Odd/Even

TCE 004650674-01

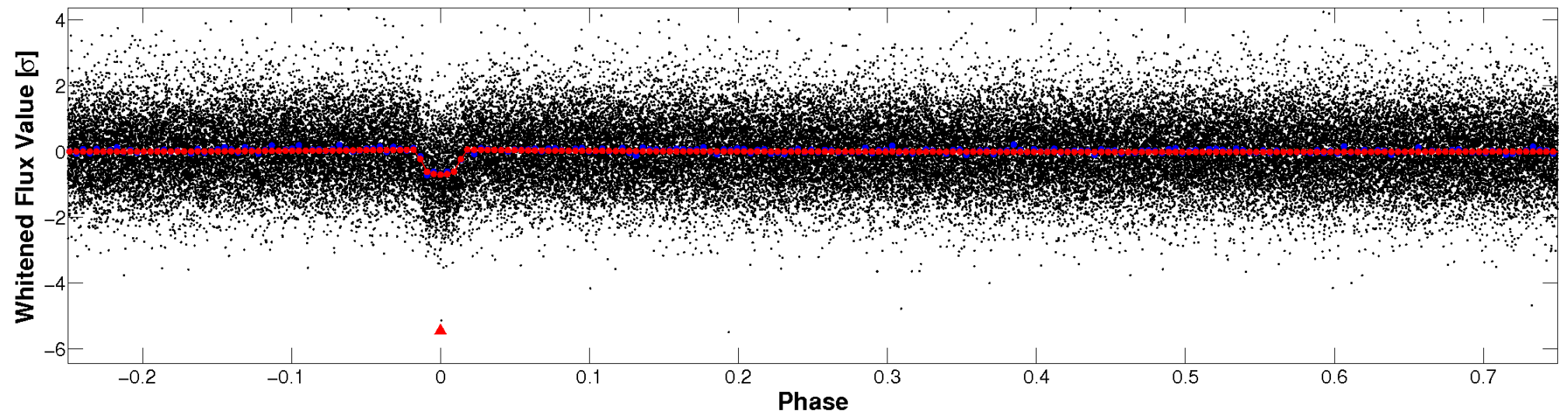


Non-Whitened Vs. Whitened Light Curve

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

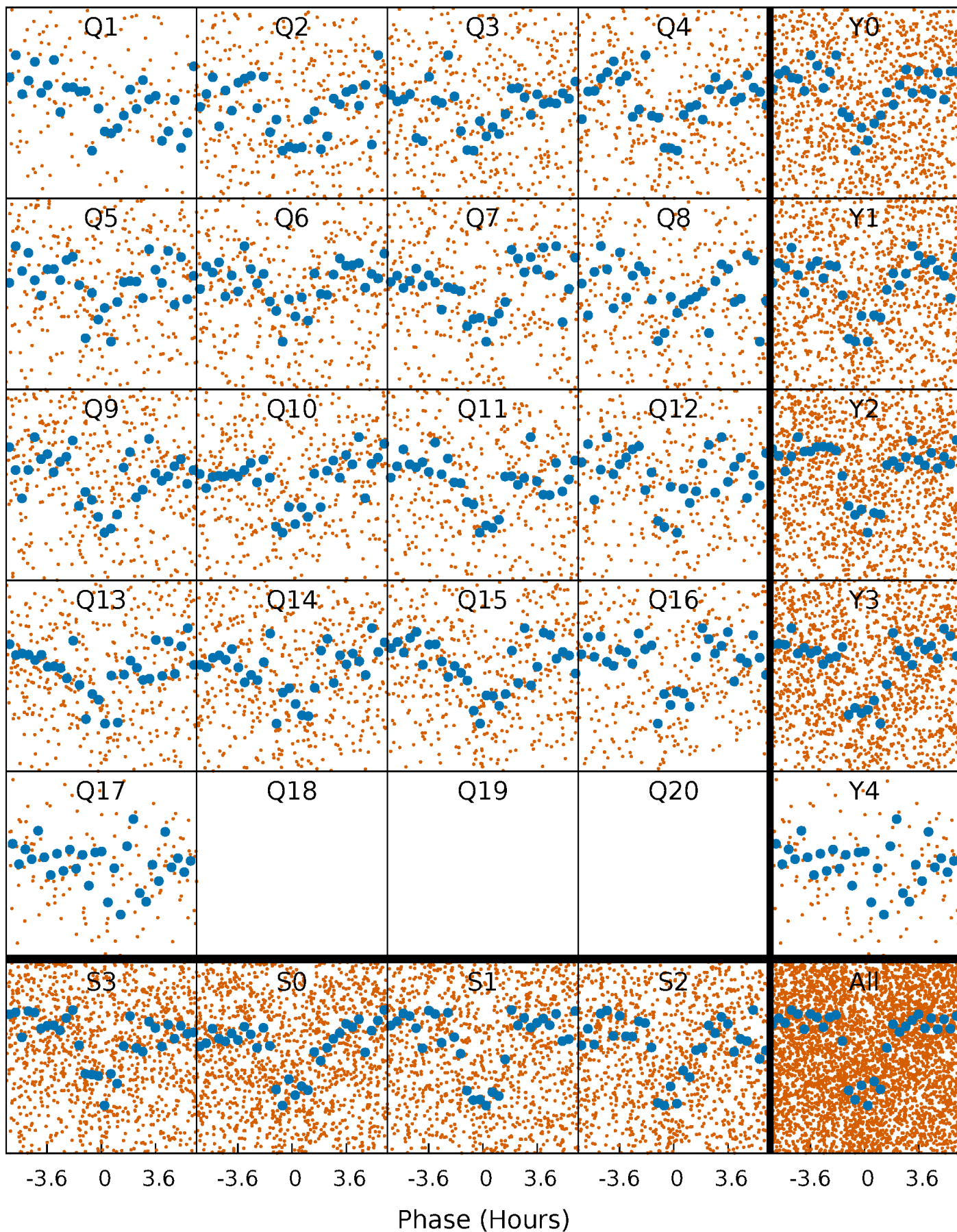


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



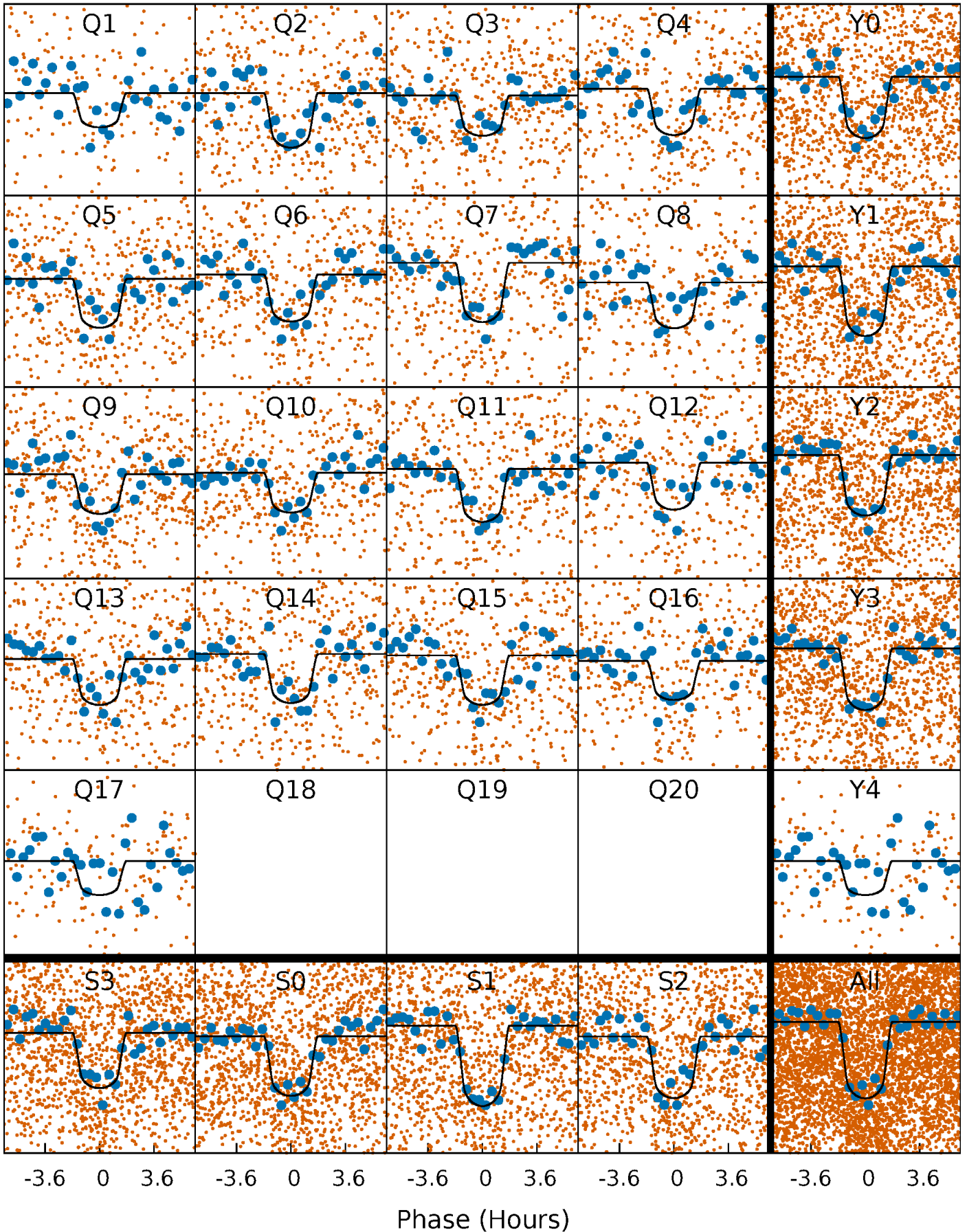
PDC Quarter-Phased Transit Curves

TCE 004650674-01 P= 4.514335 Days $T_0=134.033082$ (BKJD)



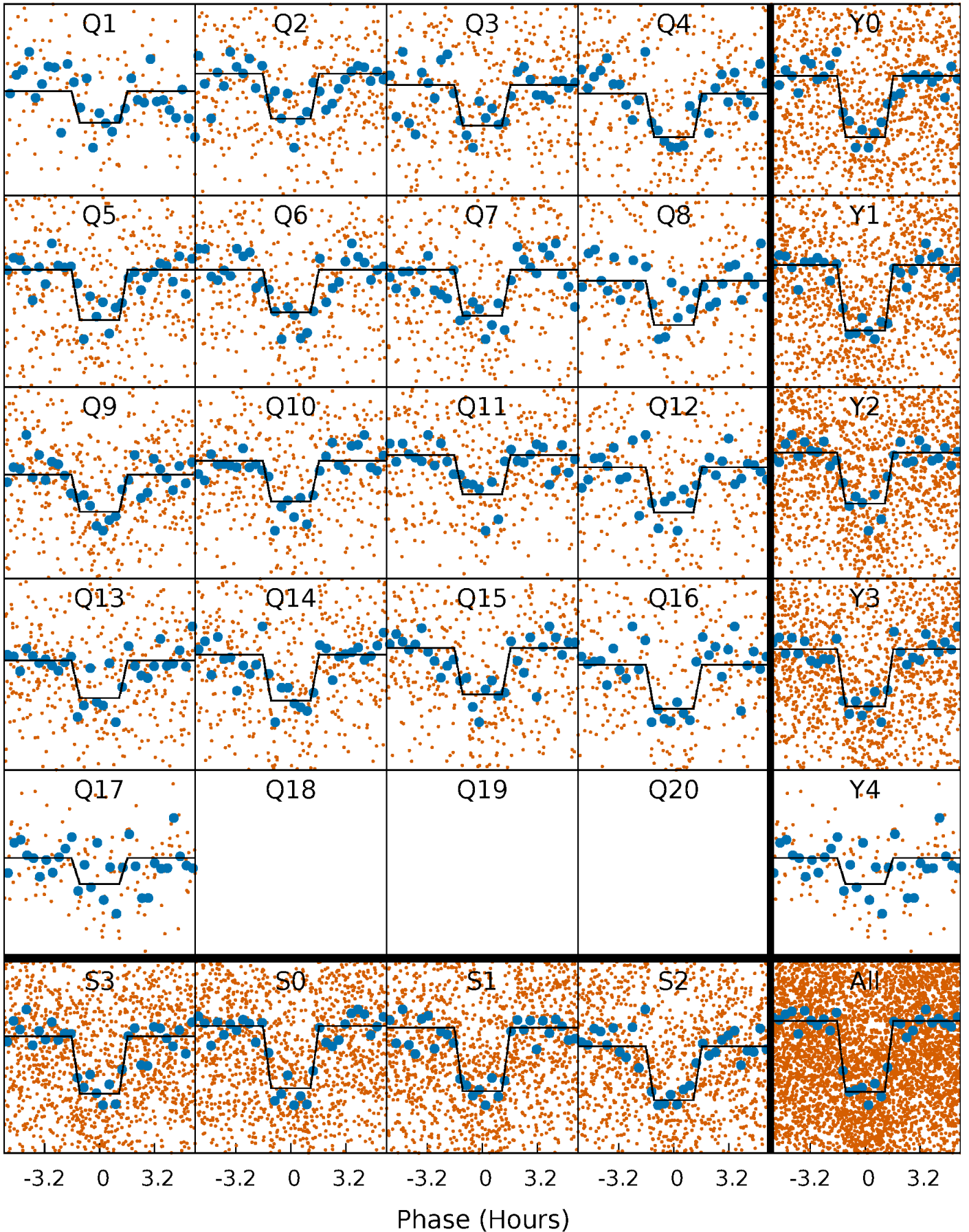
DV Quarter-Phased Transit Curves

TCE 004650674-01 P= 4.514335 Days $T_0=134.033082$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

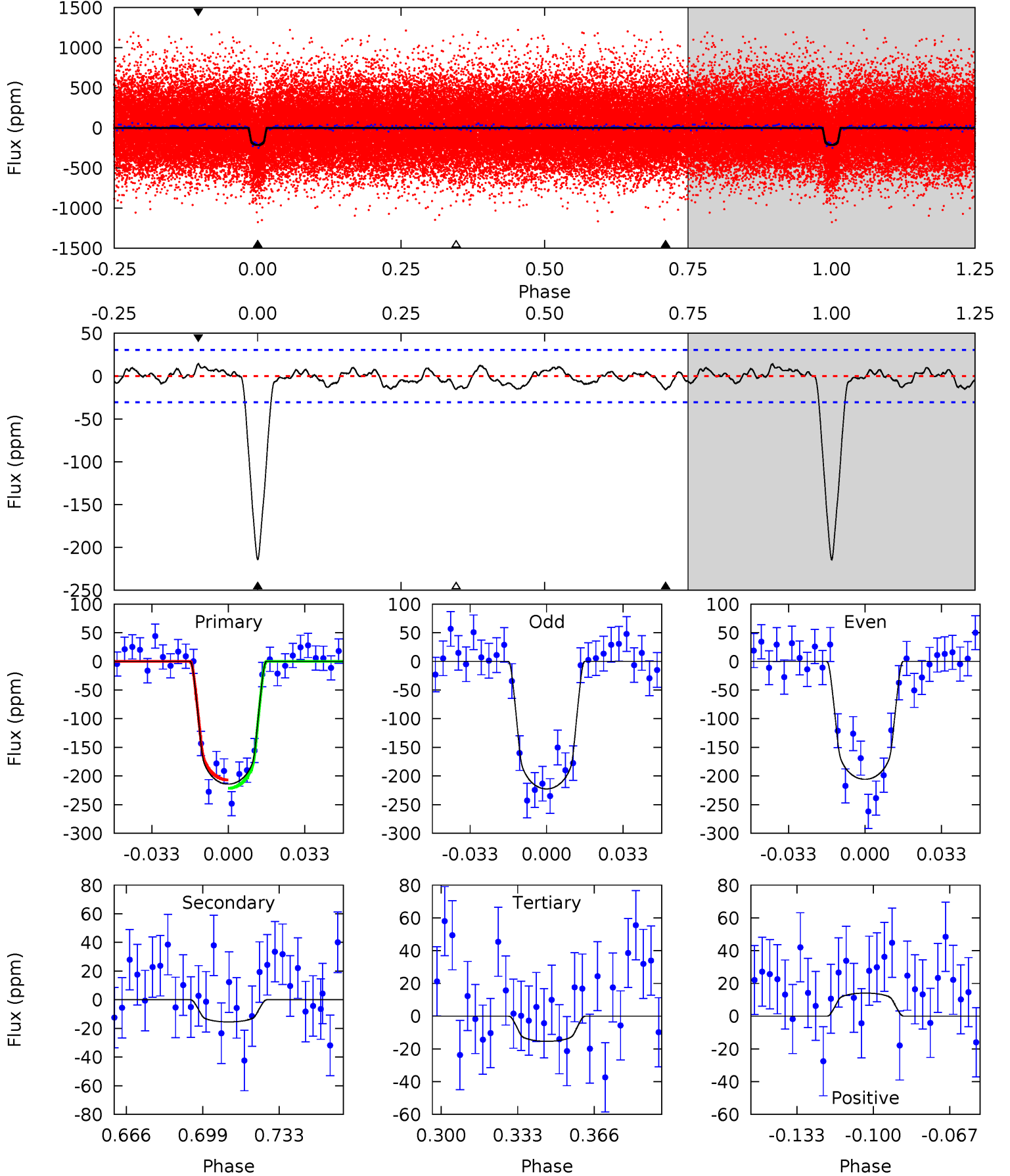
TCE 004650674-01 P= 4.514377 Days $T_0=134.025807$ (BKJD)



DV Model-Shift Uniqueness Test

004650674-01, P = 4.514335 Days, E = 129.518747 Days

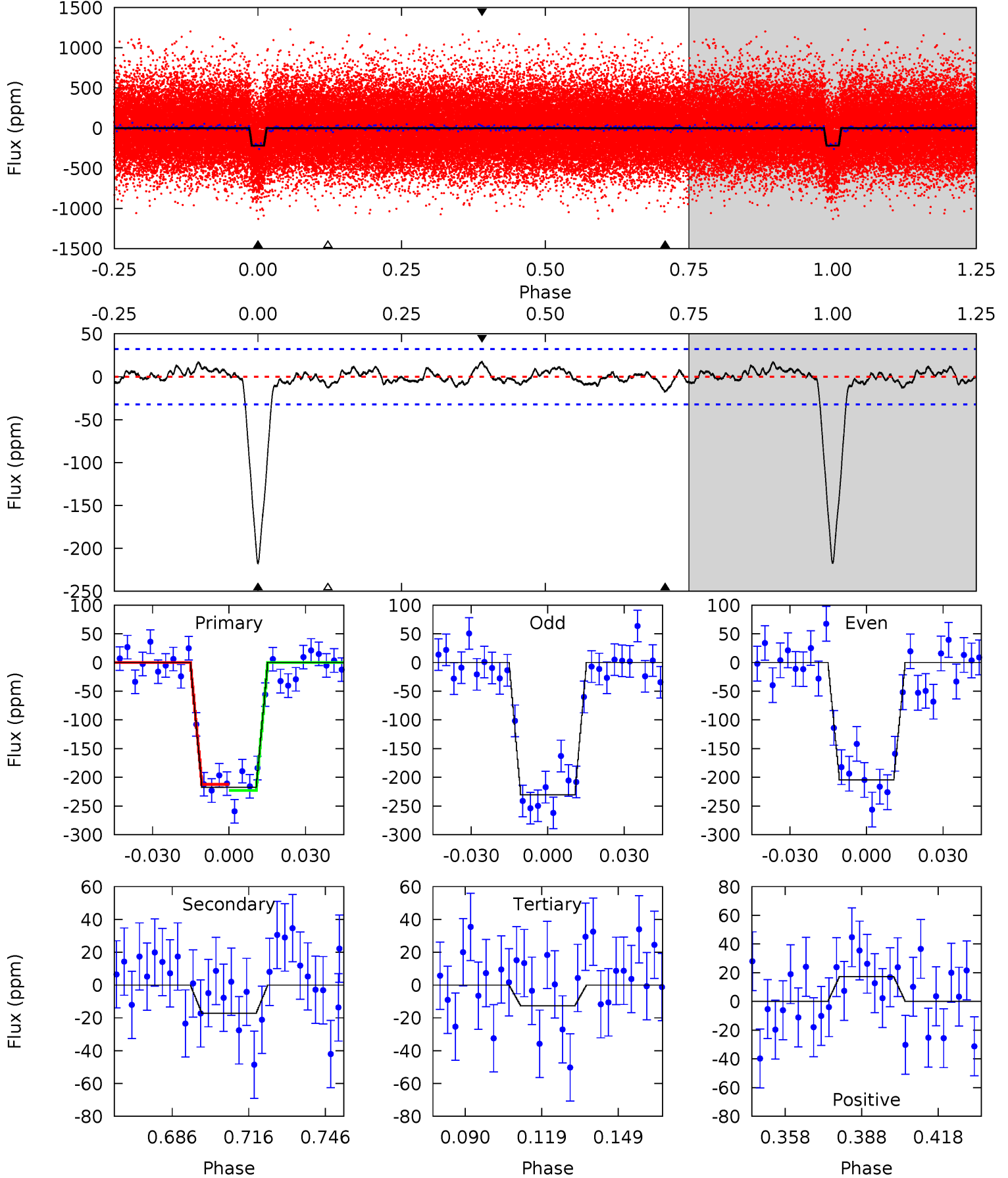
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	2.43	2.41	2.21	4.79	2.13	1.05	31.2	31.4	0.02	0.22	1.31	0.99	0.06	1.14



Alt Model-Shift Uniqueness Test

004650674-01, P = 4.514377 Days, E = 129.511430 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.4	2.57	1.88	2.58	4.81	2.17	0.91	30.5	29.8	0.69	-0.02	1.94	0.98	0.07	0.79



Stellar Parameters For KIC 004650674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5940^{+71}_{-79}	$4.306^{+0.115}_{-0.115}$	$0.120^{+0.150}_{-0.150}$	$1.215^{+0.207}_{-0.155}$	$1.091^{+0.073}_{-0.079}$	$0.857^{+0.430}_{-0.287}$
	+1%/-1%	+3%/-3%	+125%/-125%	+17%/-13%	+7%/-7%	+50%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004650674-01 / KOI 1341.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 6	$2.12^{+0.49}_{-0.50}$	1720^{+73}_{-69}	3404^{+382}_{-344}	$5.592^{+5.158}_{-2.712}$
Alt.	-17 ± 7	$1.92^{+0.57}_{-0.47}$	1720^{+77}_{-65}	3566^{+467}_{-328}	$7.494^{+7.288}_{-3.586}$

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

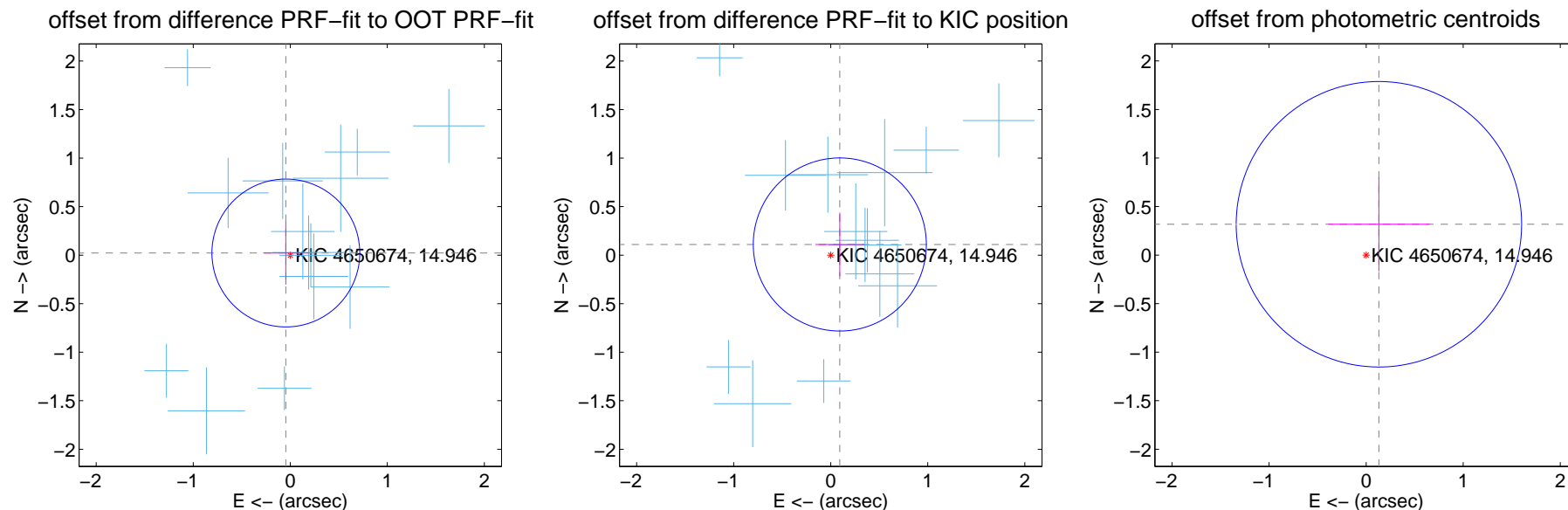
DV Centroid Data

Supplemental centroid analysis for 004650674-01. Kepler magnitude: 14.95. Transit SNR 25.36

There are 14 quarters with good PRF difference image offsets

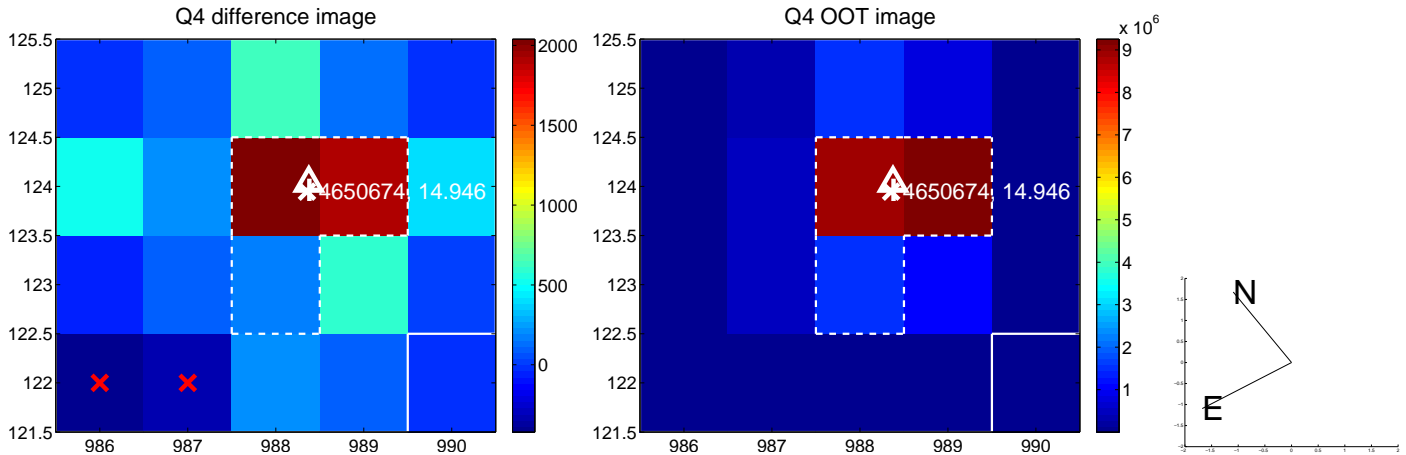
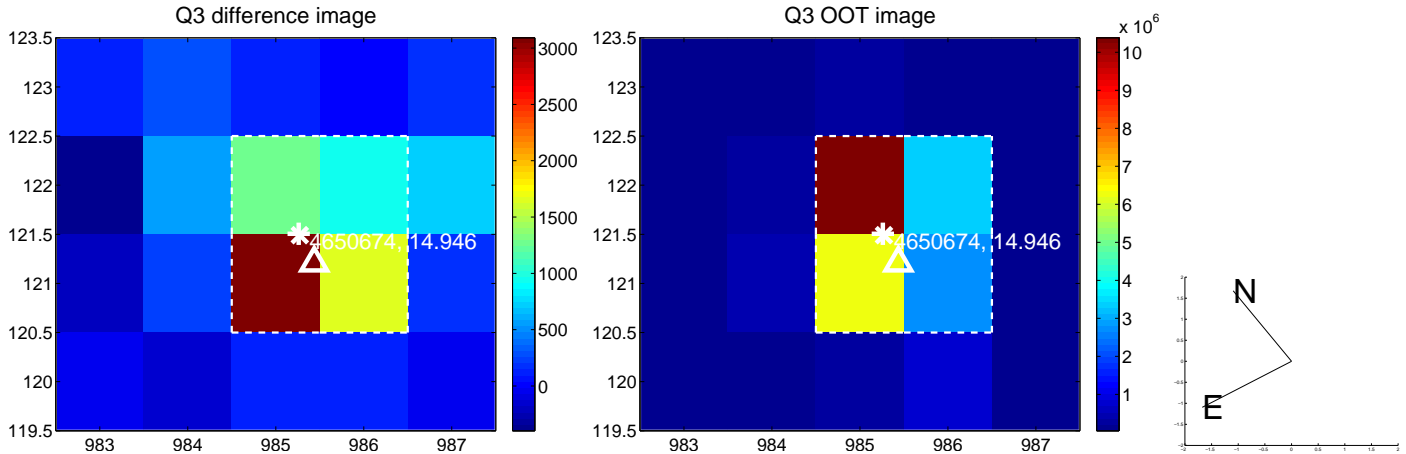
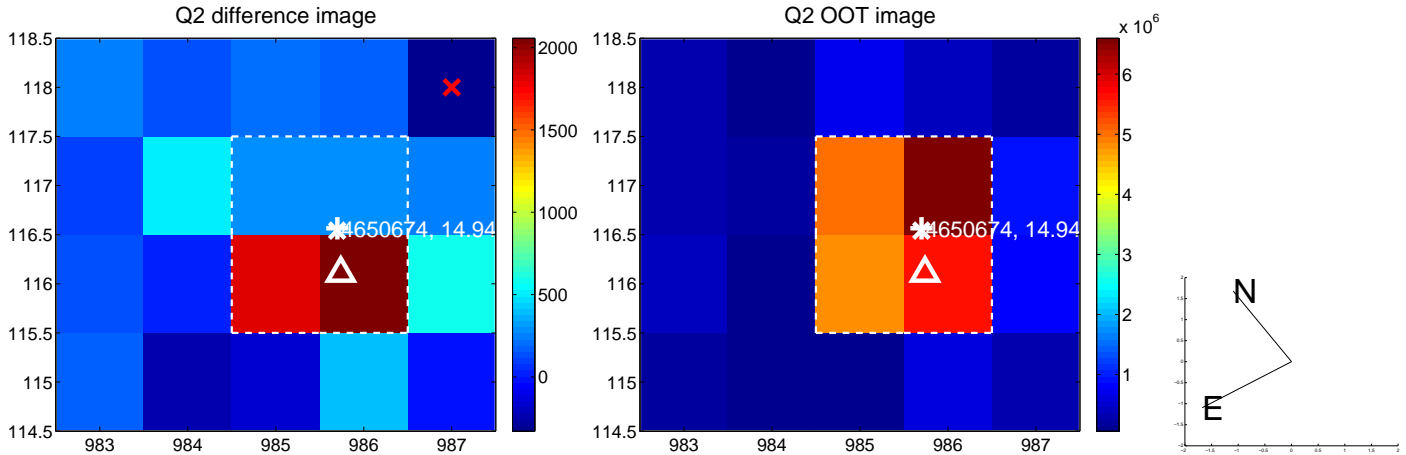
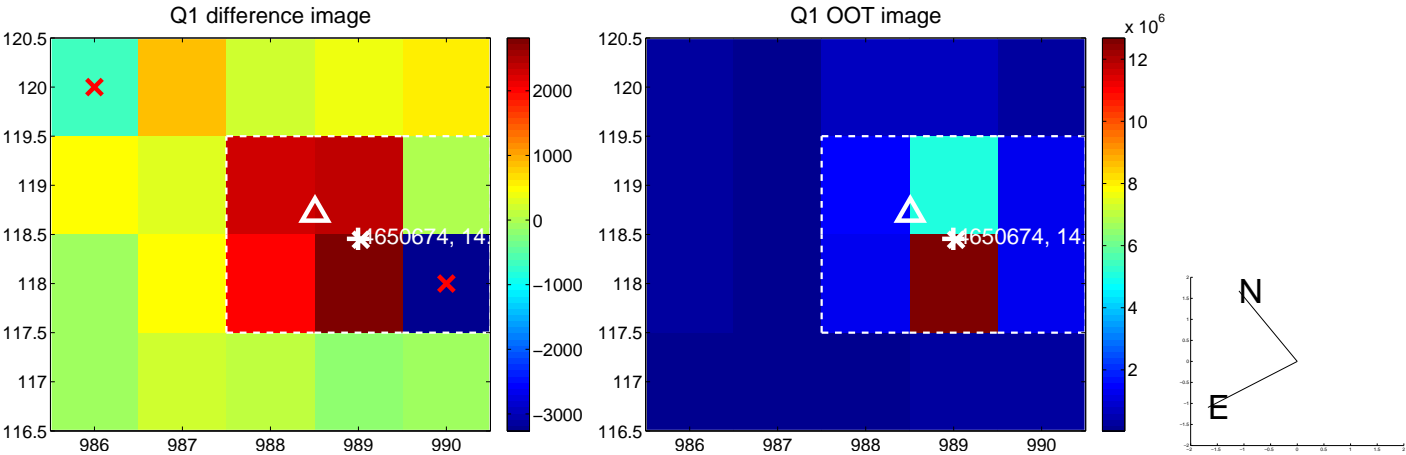
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.254	0.20	0.045 ± 0.234	0.022 ± 0.325
PRF-fit source offset from KIC position	0.144 ± 0.297	0.49	-0.094 ± 0.251	0.110 ± 0.327
photometric centroid source offset	0.34 ± 0.49	0.70	-0.13 ± 0.52	0.32 ± 0.48

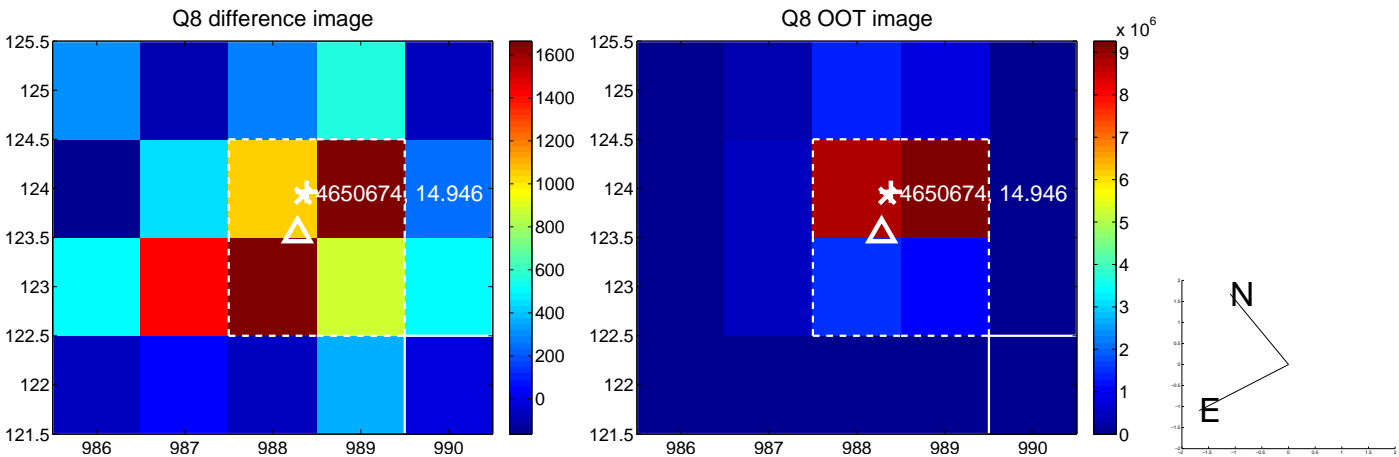
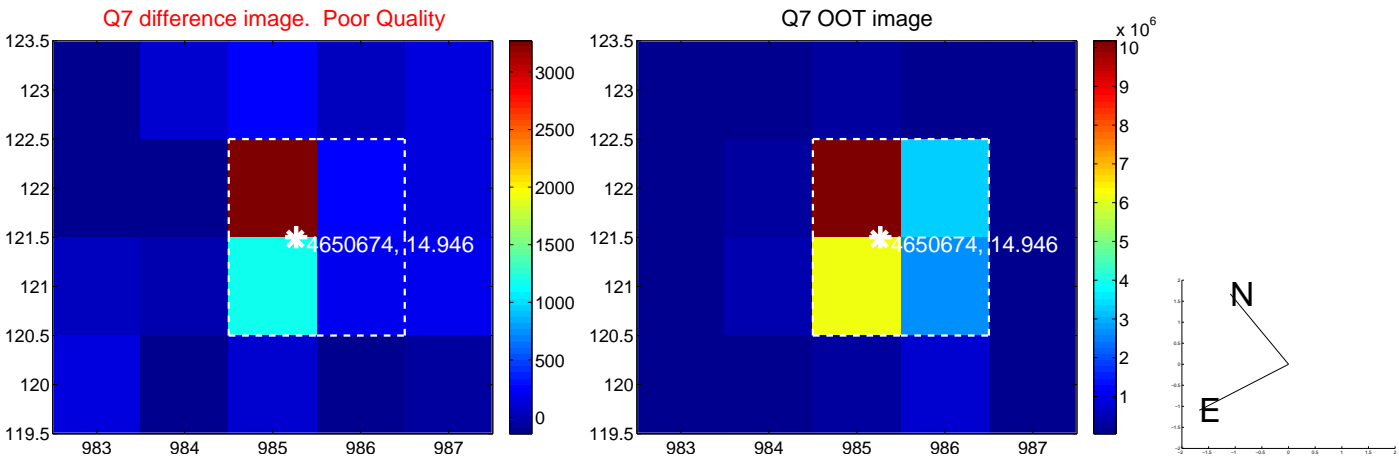
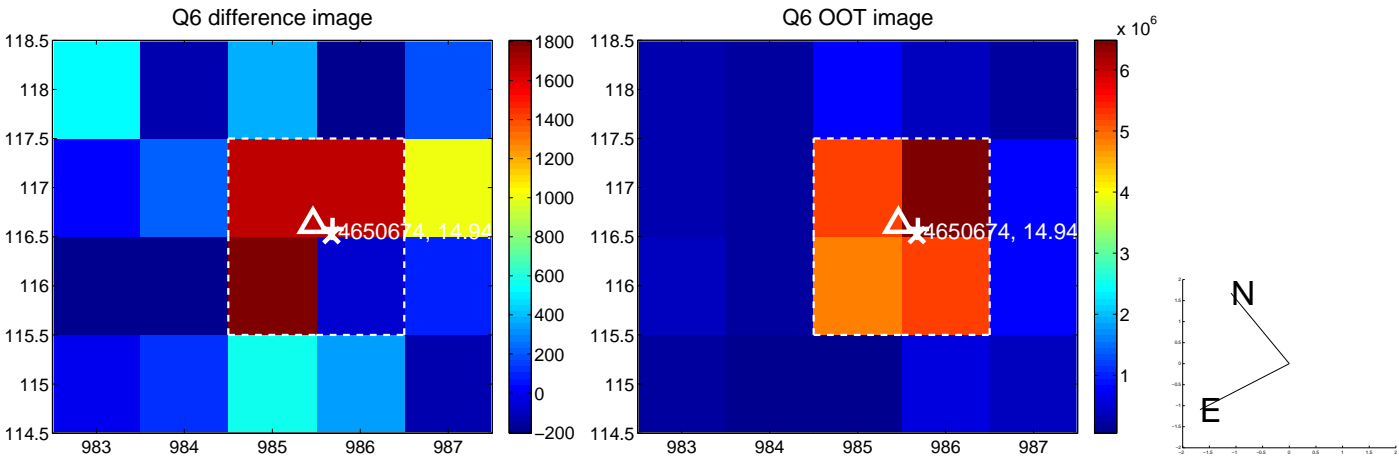
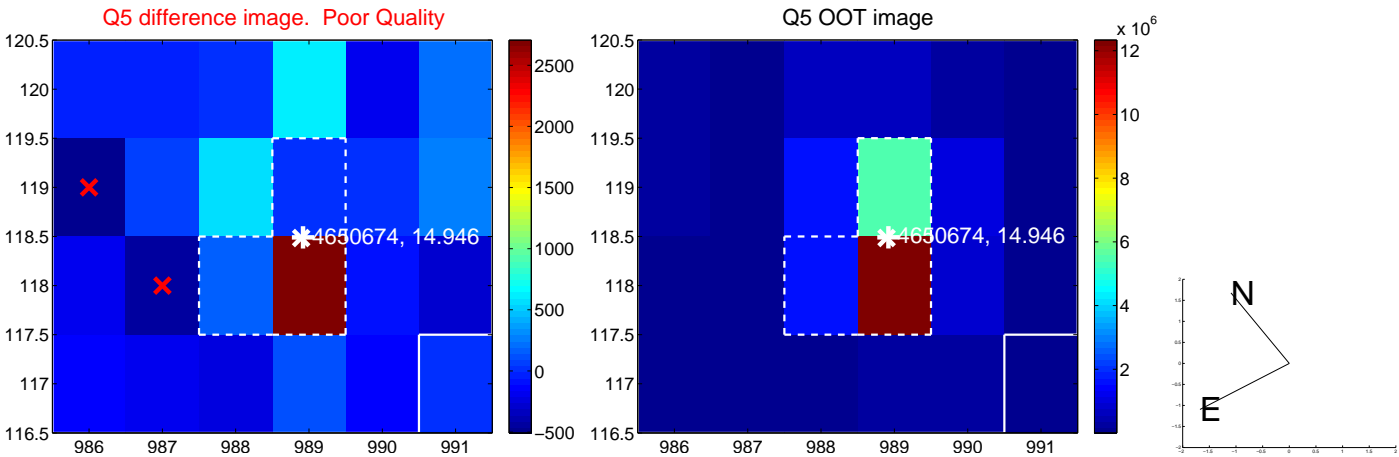


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

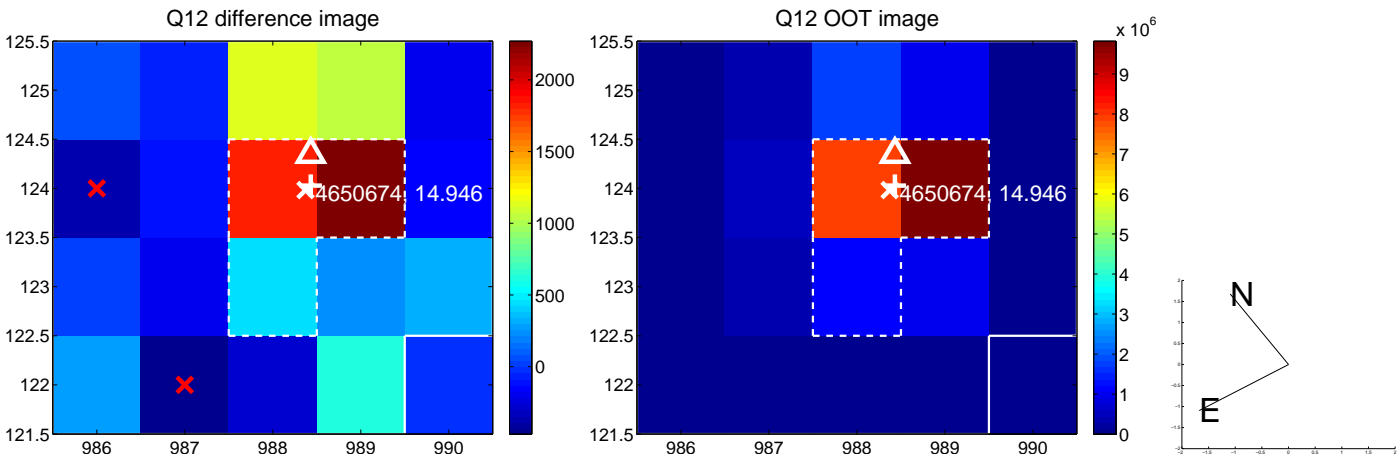
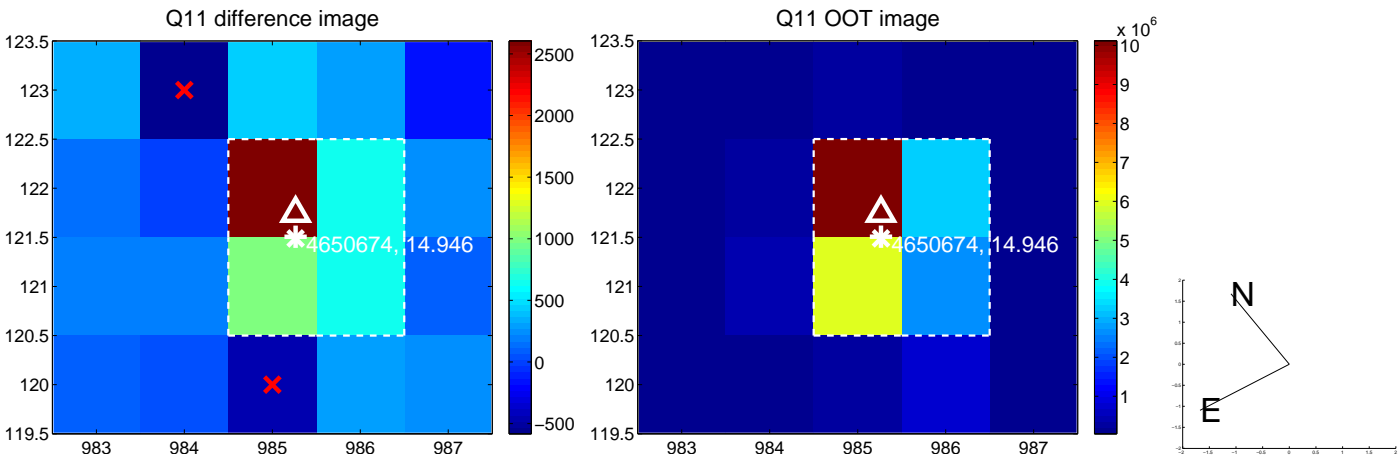
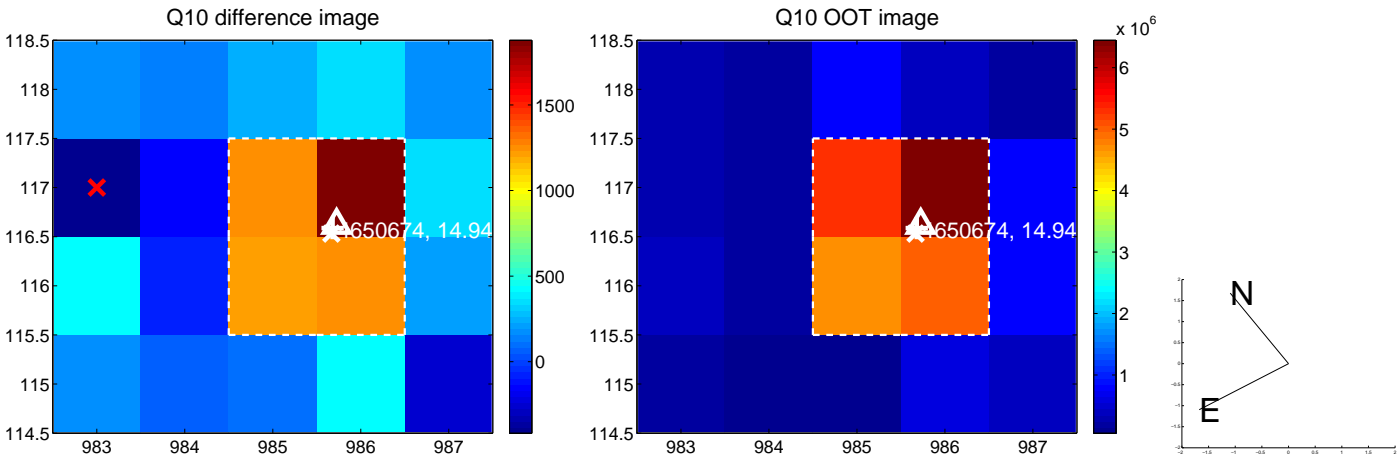
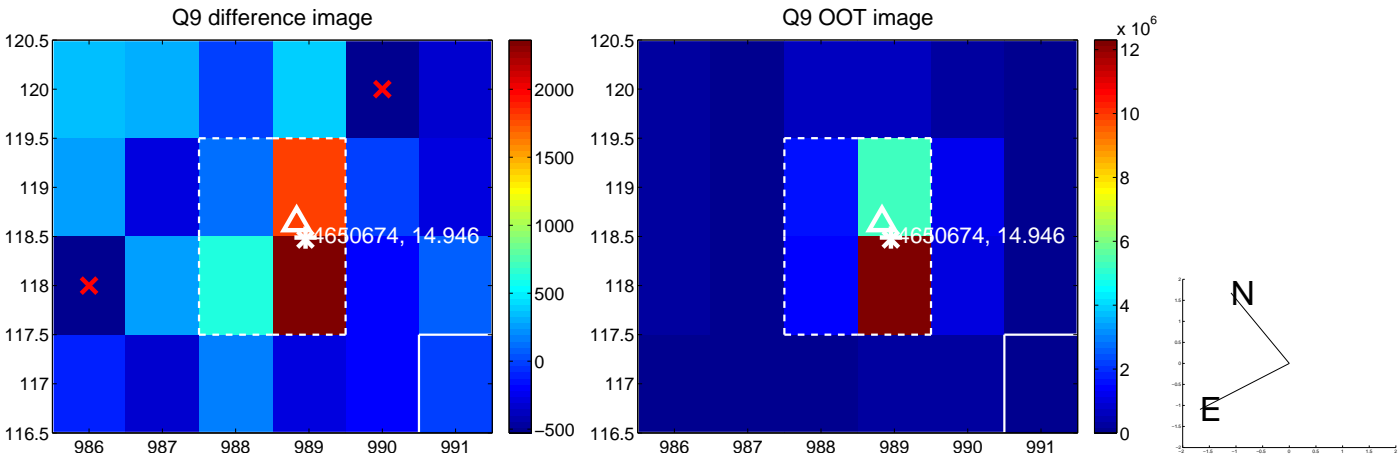
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



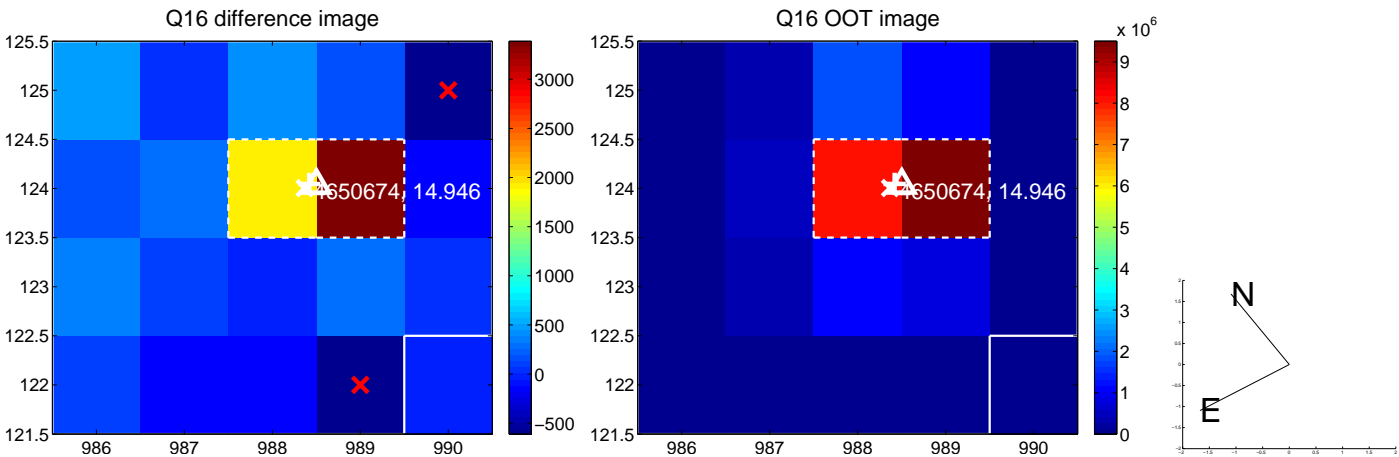
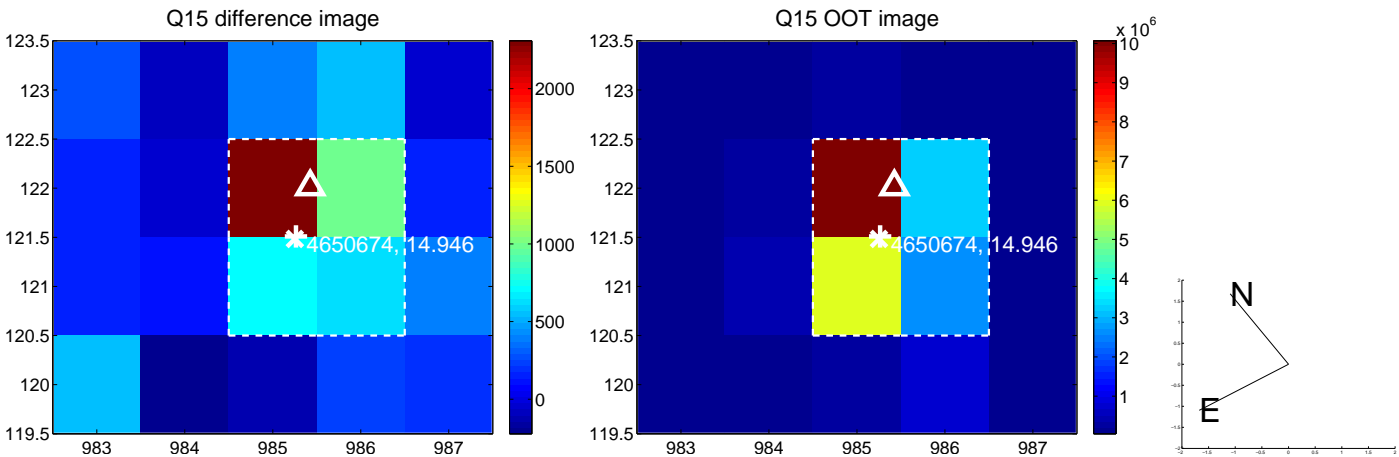
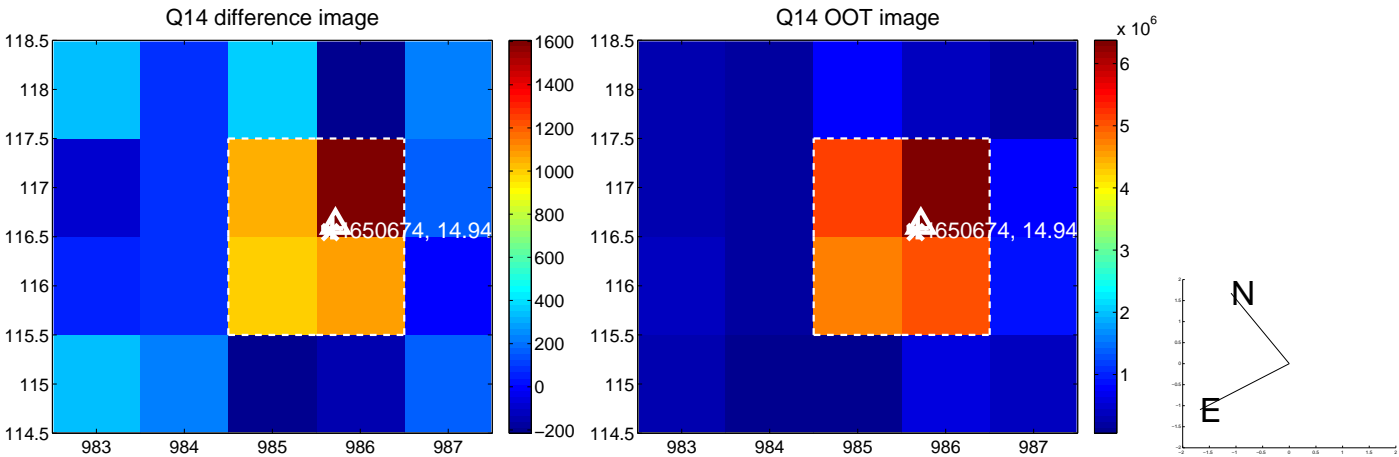
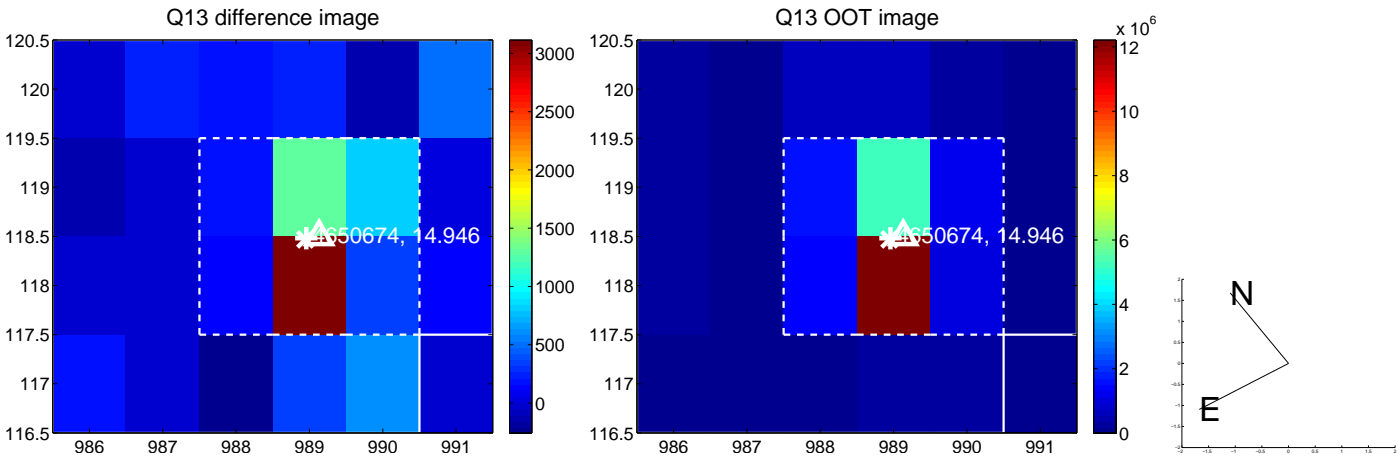
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



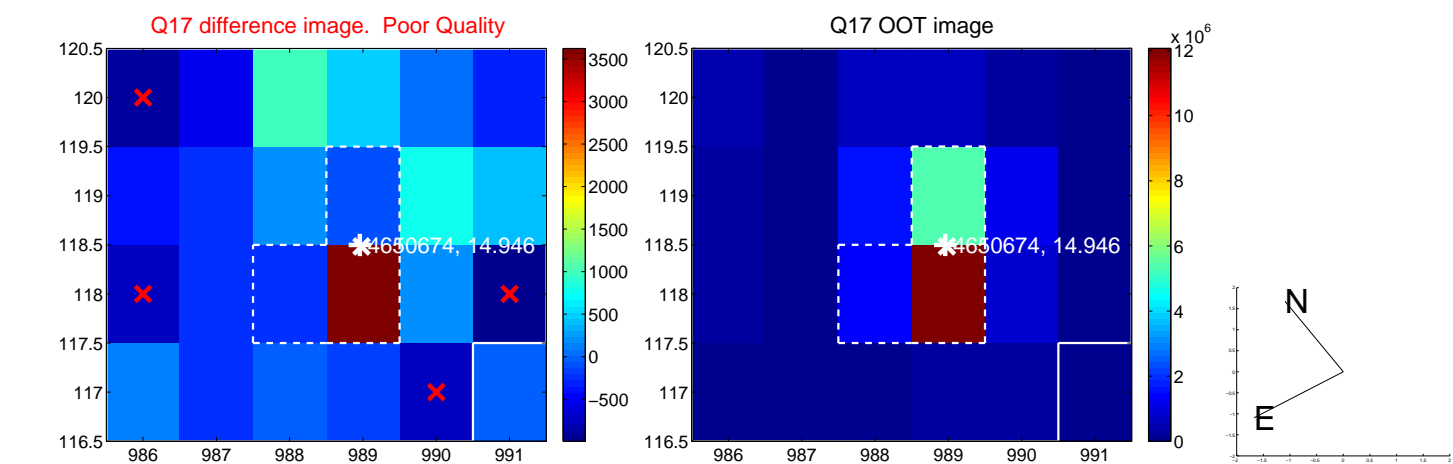
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



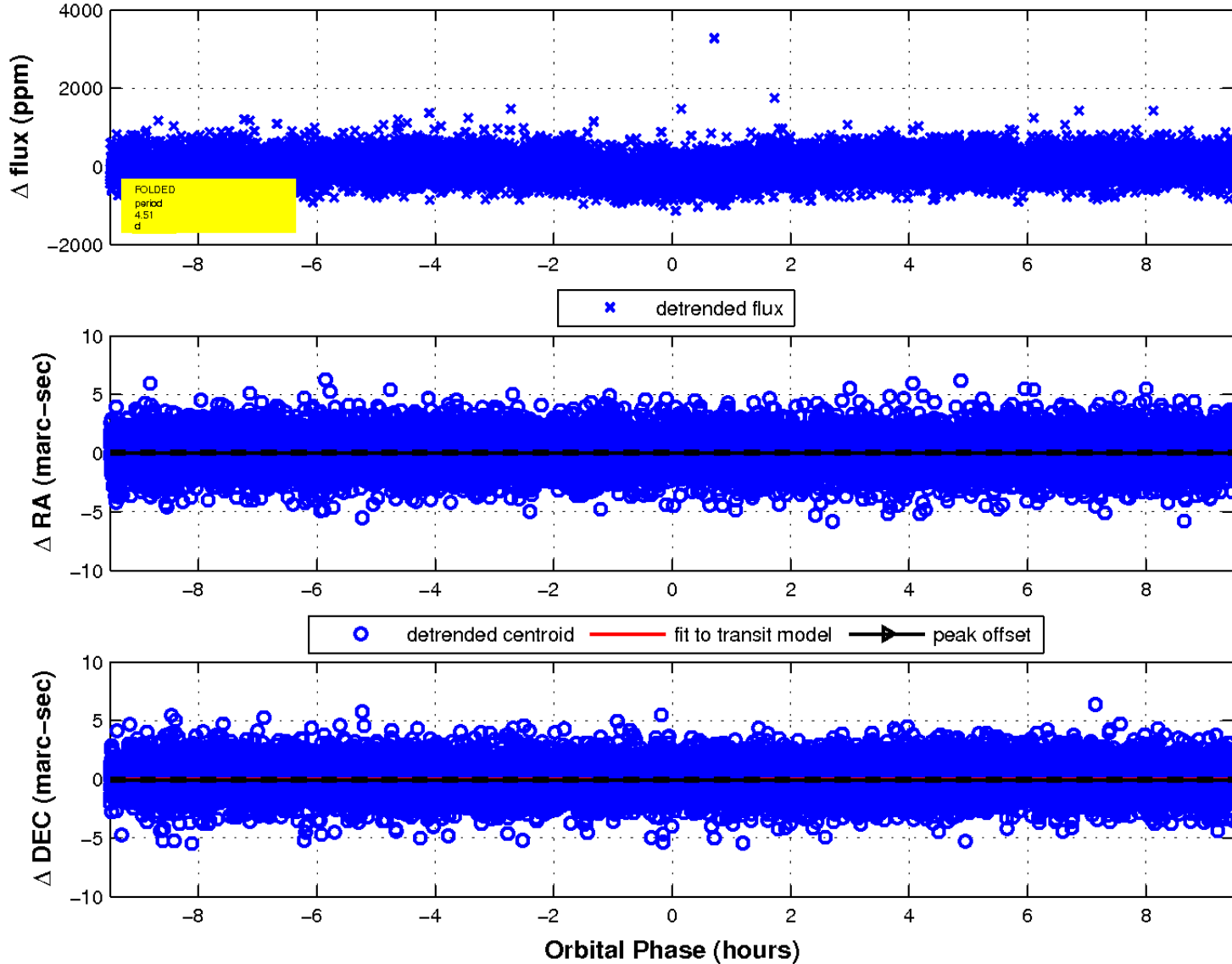
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

