

KIC 010854546

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})
010854546-01	OBS	2104.01	2.168455	132.140989	477.4	1.543	37.7	44.3	1.11	6153	2.86	1394.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010854546-01	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.

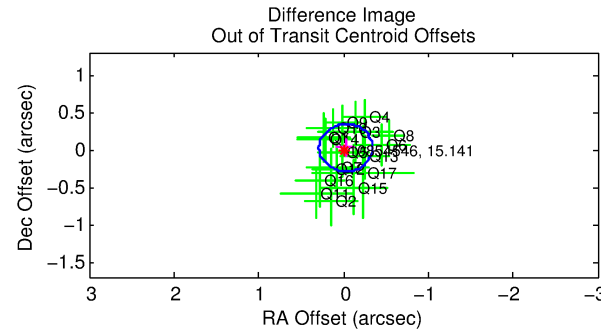
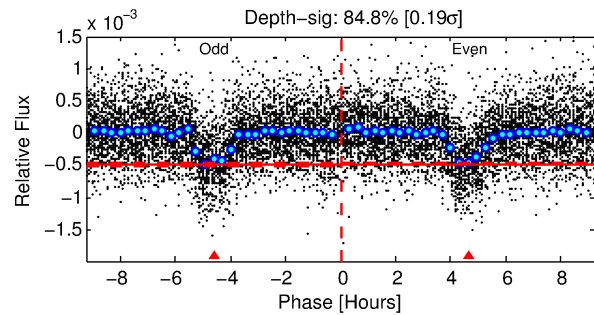
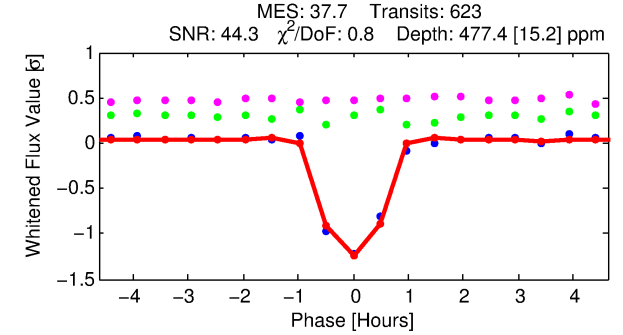
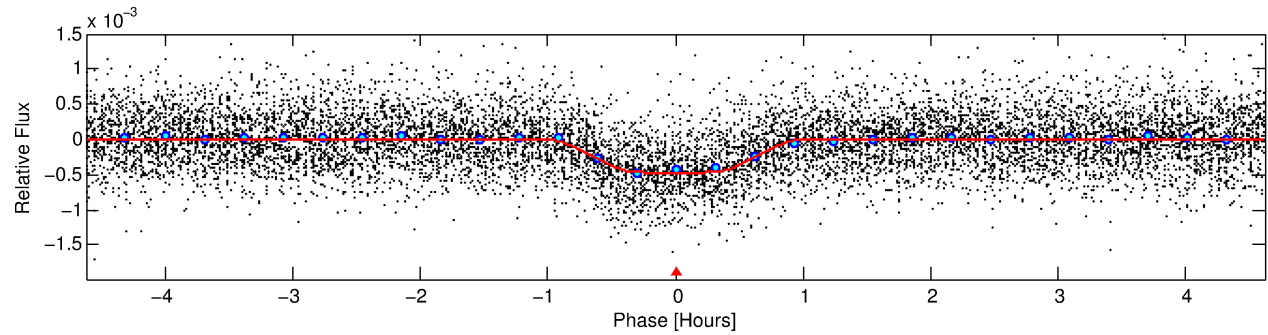
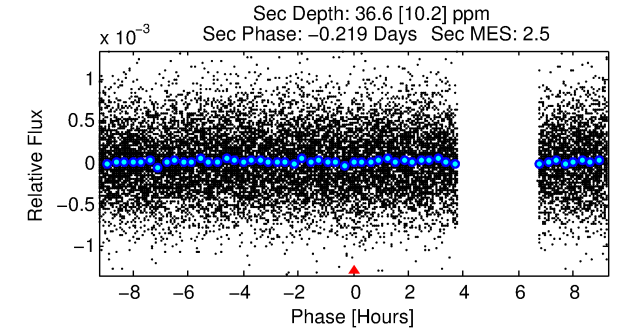
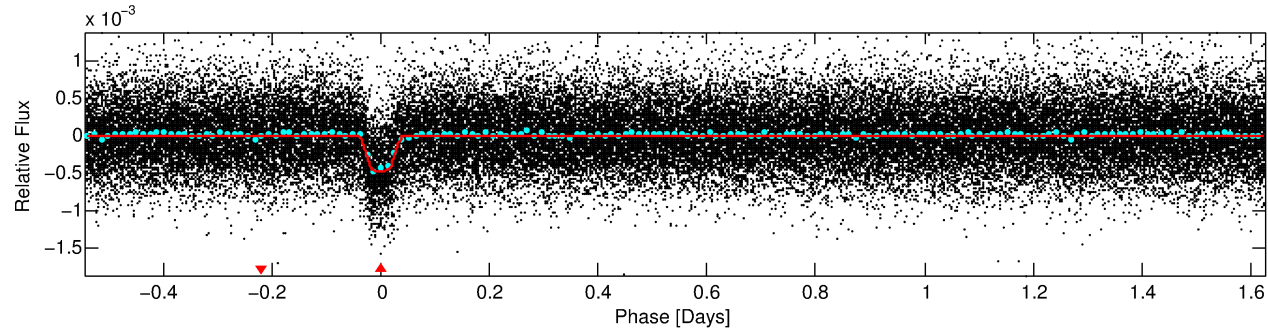
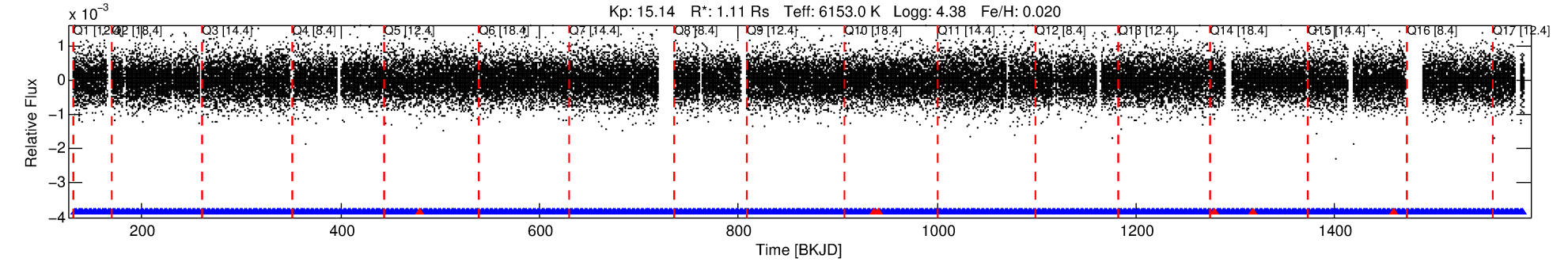
Ephemeris Match Information For 010854546-01

No Significant Match Found

DV One-Page Summary

KIC: 10854546 Candidate: 1 of 1 Period: 2.168 d

KOI: K02104.01 Corr: 0.964



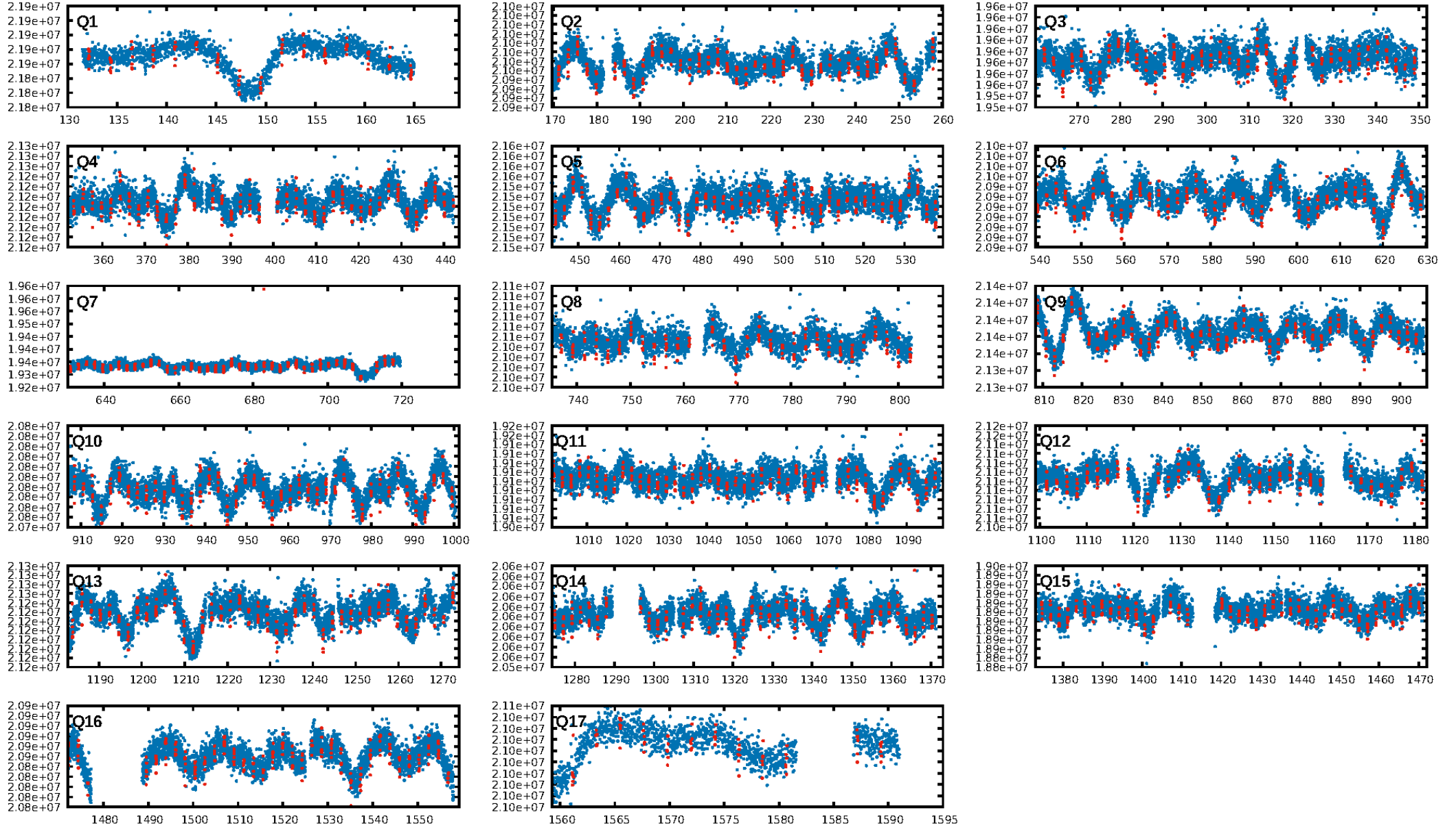
DV Fit Results:

Period = 2.16846 [0.00000] d
Epoch = 132.1410 [0.0005] BKJD
 R_p/R^* = 0.0237 [0.0029]
 a/R^* = 5.33 [3.19]
 b = 0.90 [0.13]
 Seff = 1394.21 [596.27]
 T_{eq} = 1558 [167] K
 R_p = 2.86 [1.01] R_{e}
 a = 0.0337 [0.0093] AU
 A_g = 2.78 [1.52] [1.17 σ]
 T_{eff} = 3111 [313] K [4.38 σ]

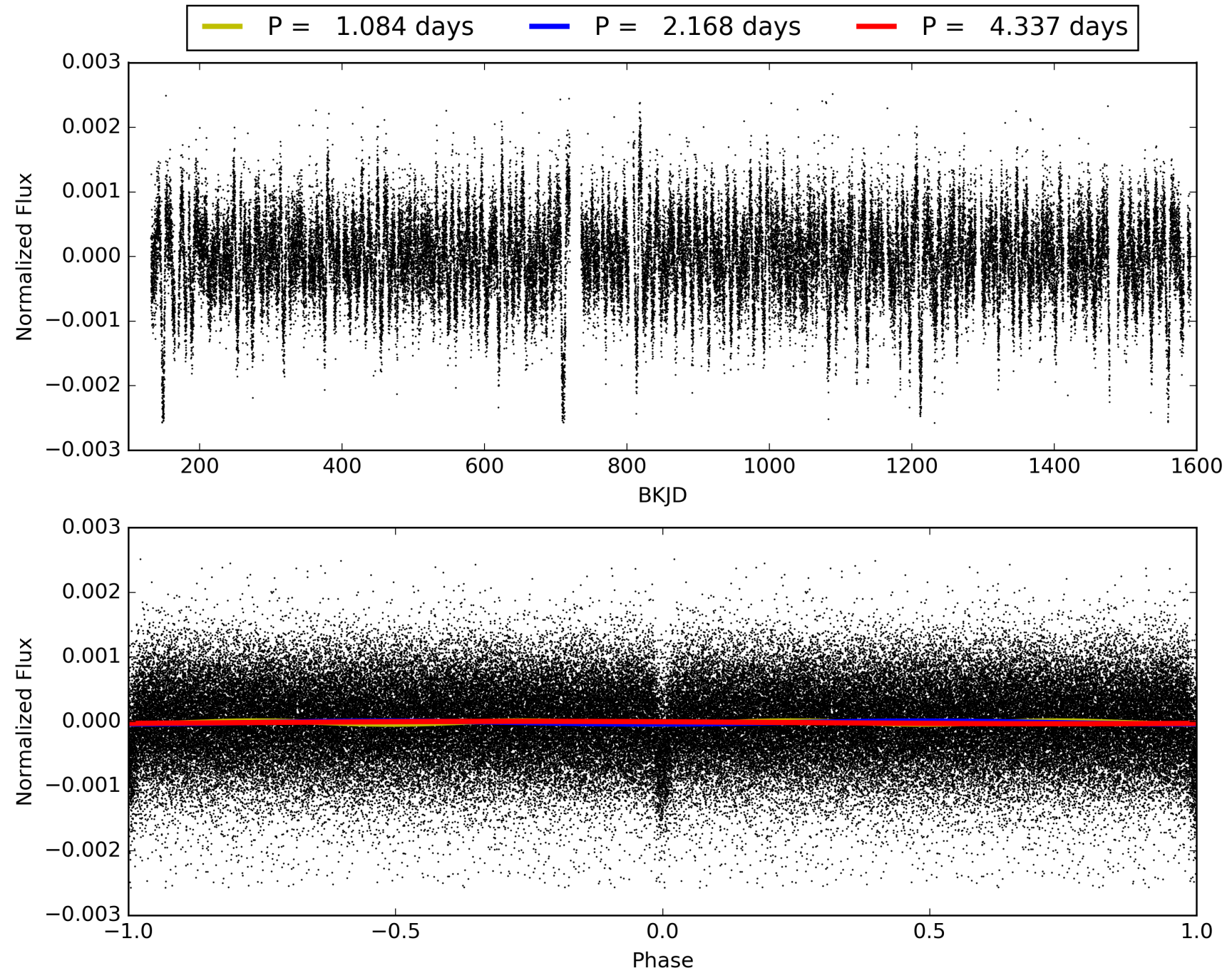
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.64e-295
RollingBand-fgt: 0.99 [589/595]
GhostDiagnostic-chr: 8.371
Centroid-sig: 1.5%
Centroid-so: 0.521 arcsec [1.49 σ]
OotOffset-rm: 0.037 arcsec [0.35 σ]
KicOffset-rm: 0.049 arcsec [0.47 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010854546-01, PDC Light Curves

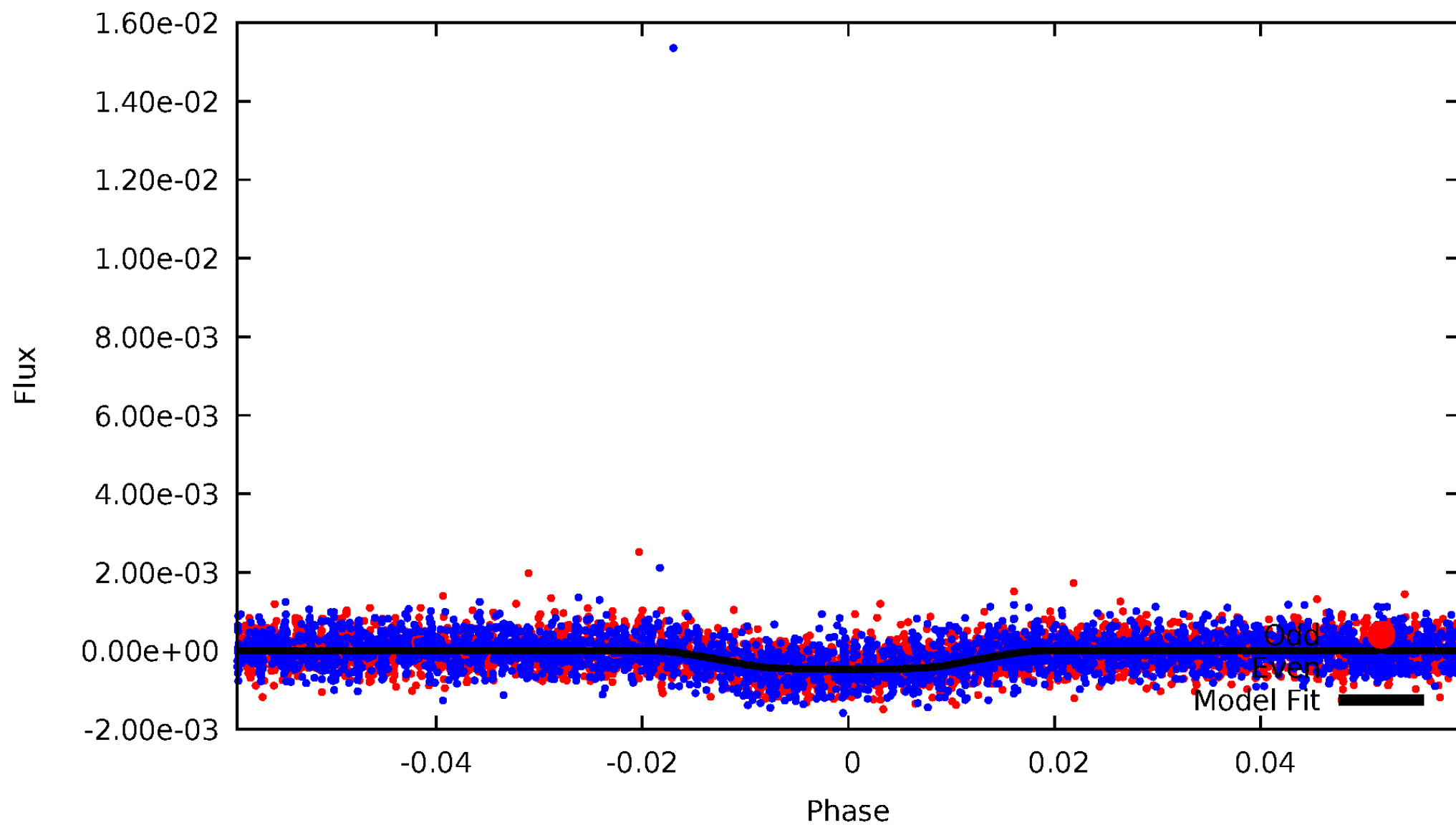


TCE 010854546-01



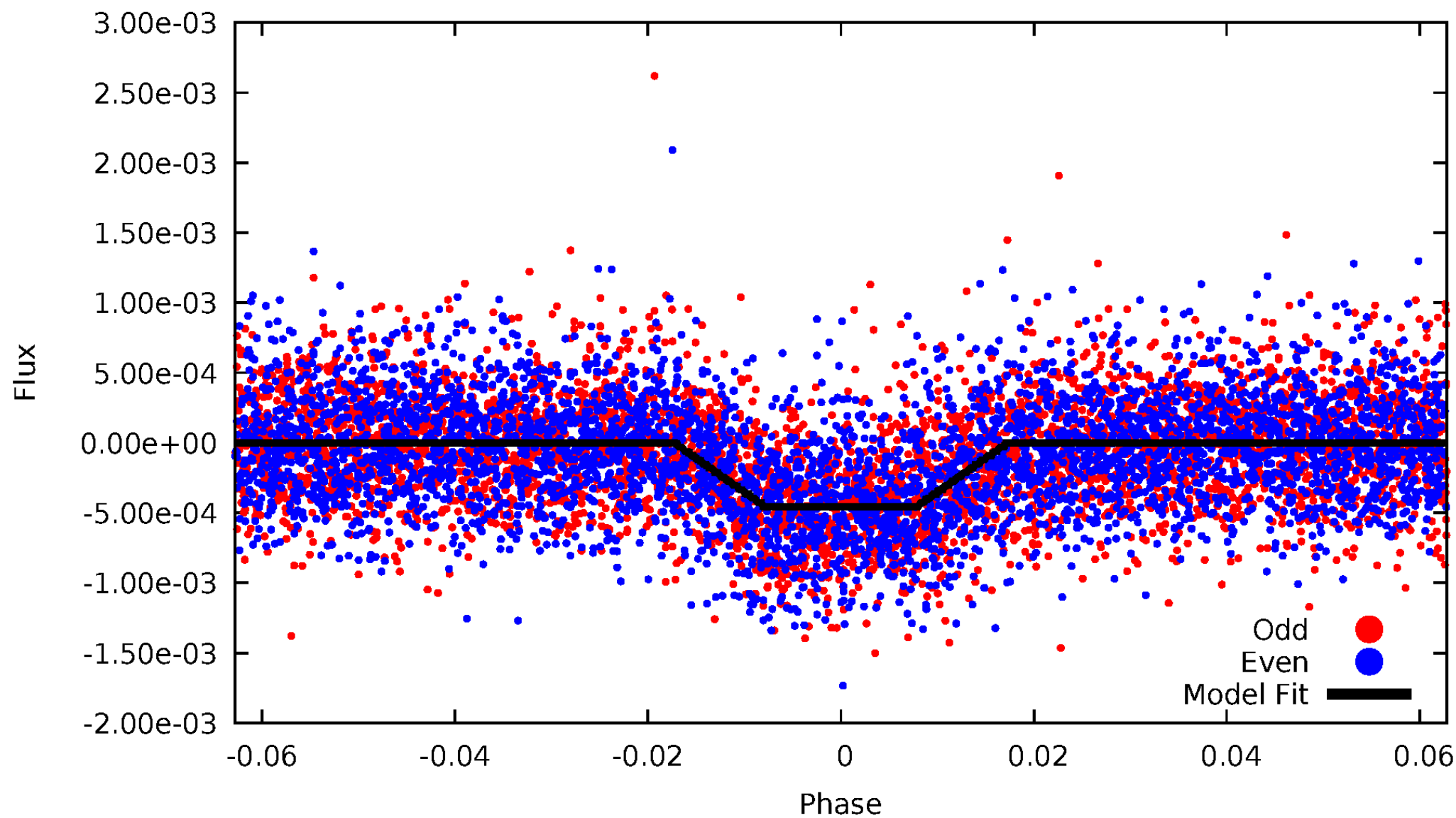
DV Odd/Even

TCE 010854546-01



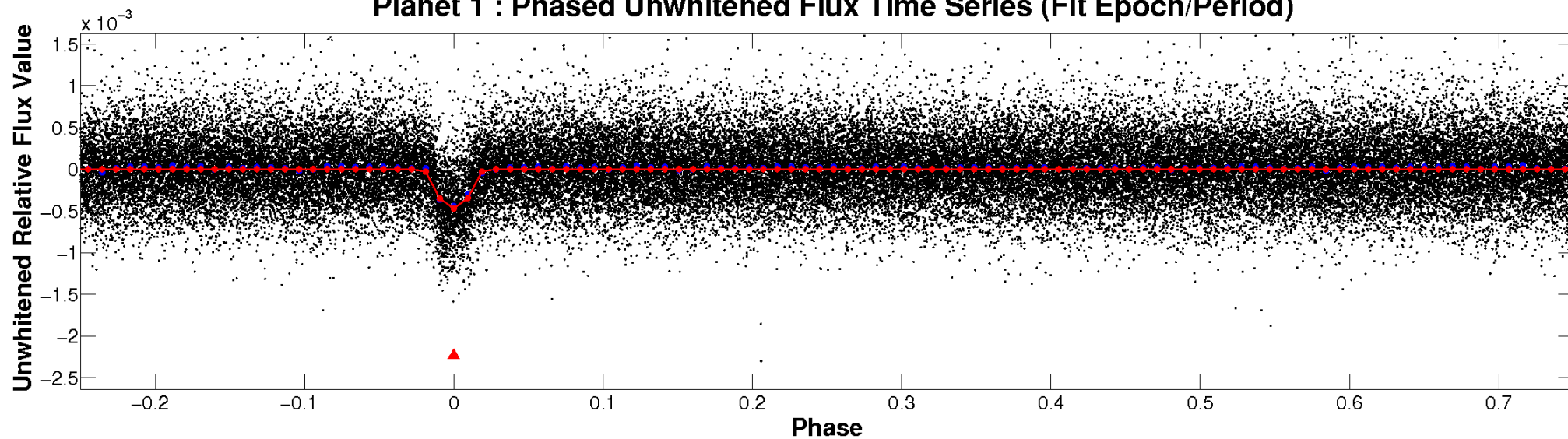
ALT Odd/Even

TCE 010854546-01

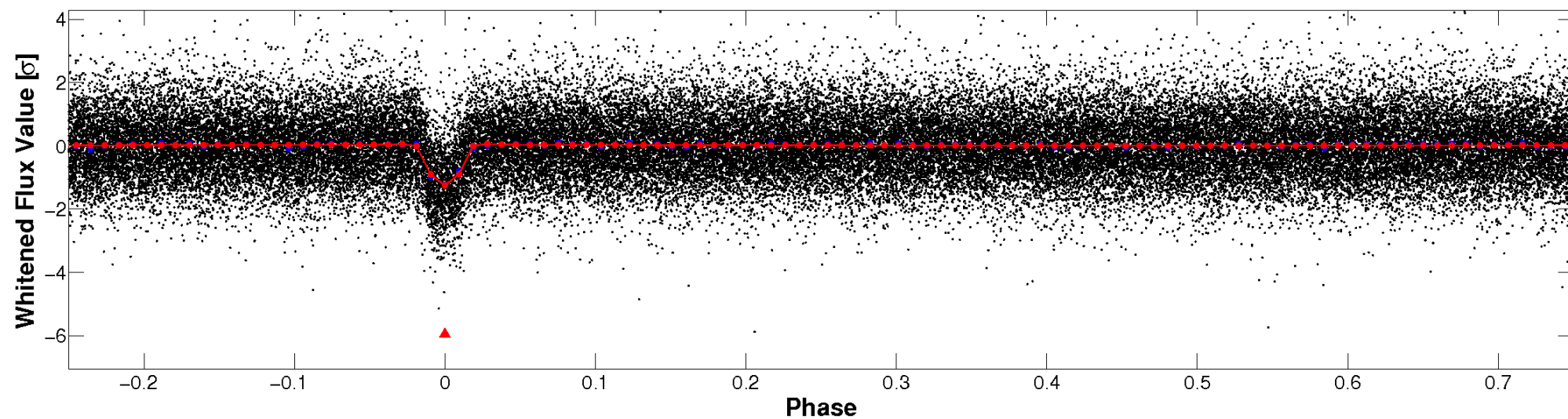


Non-Whitened Vs. Whitened Light Curve

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

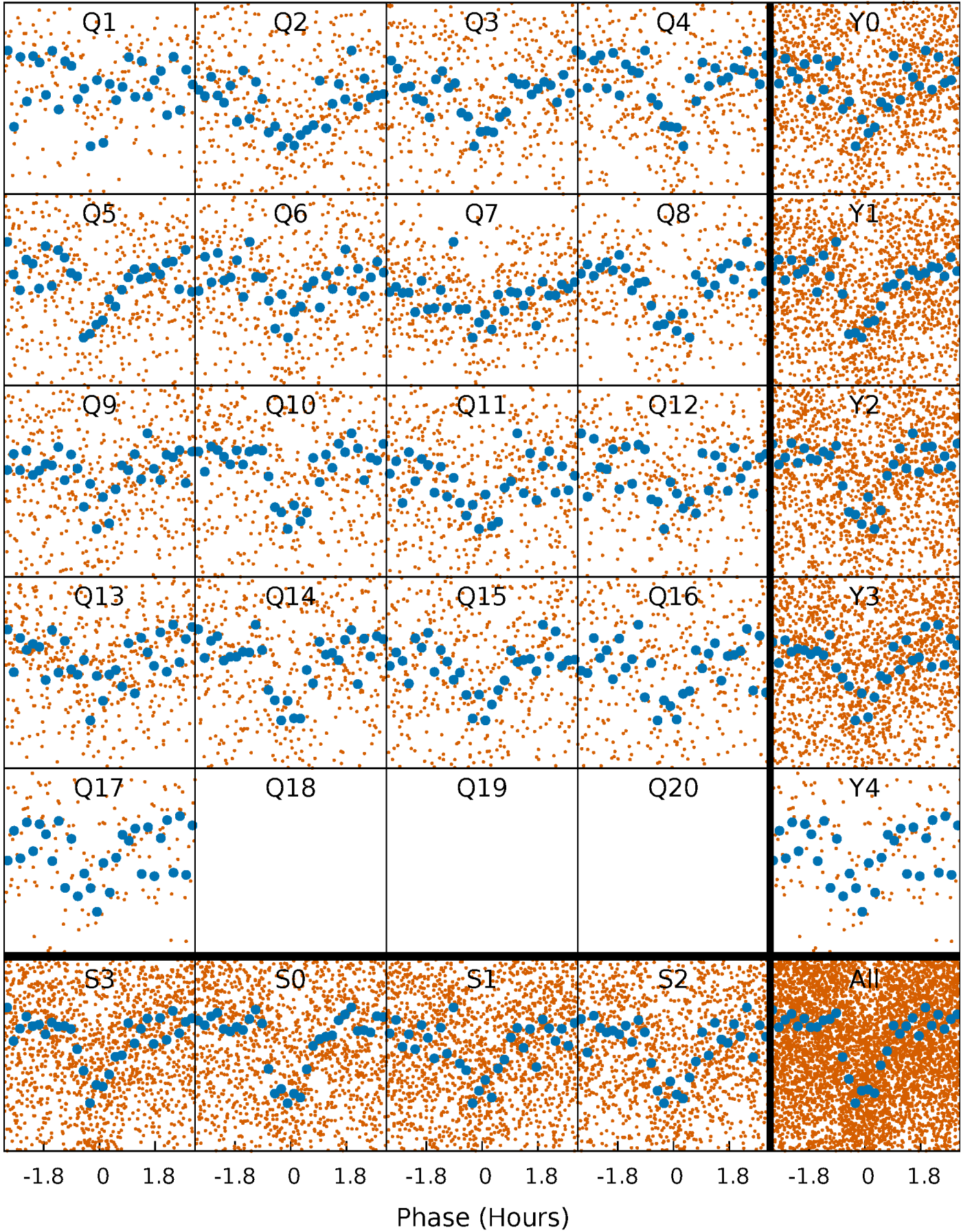


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



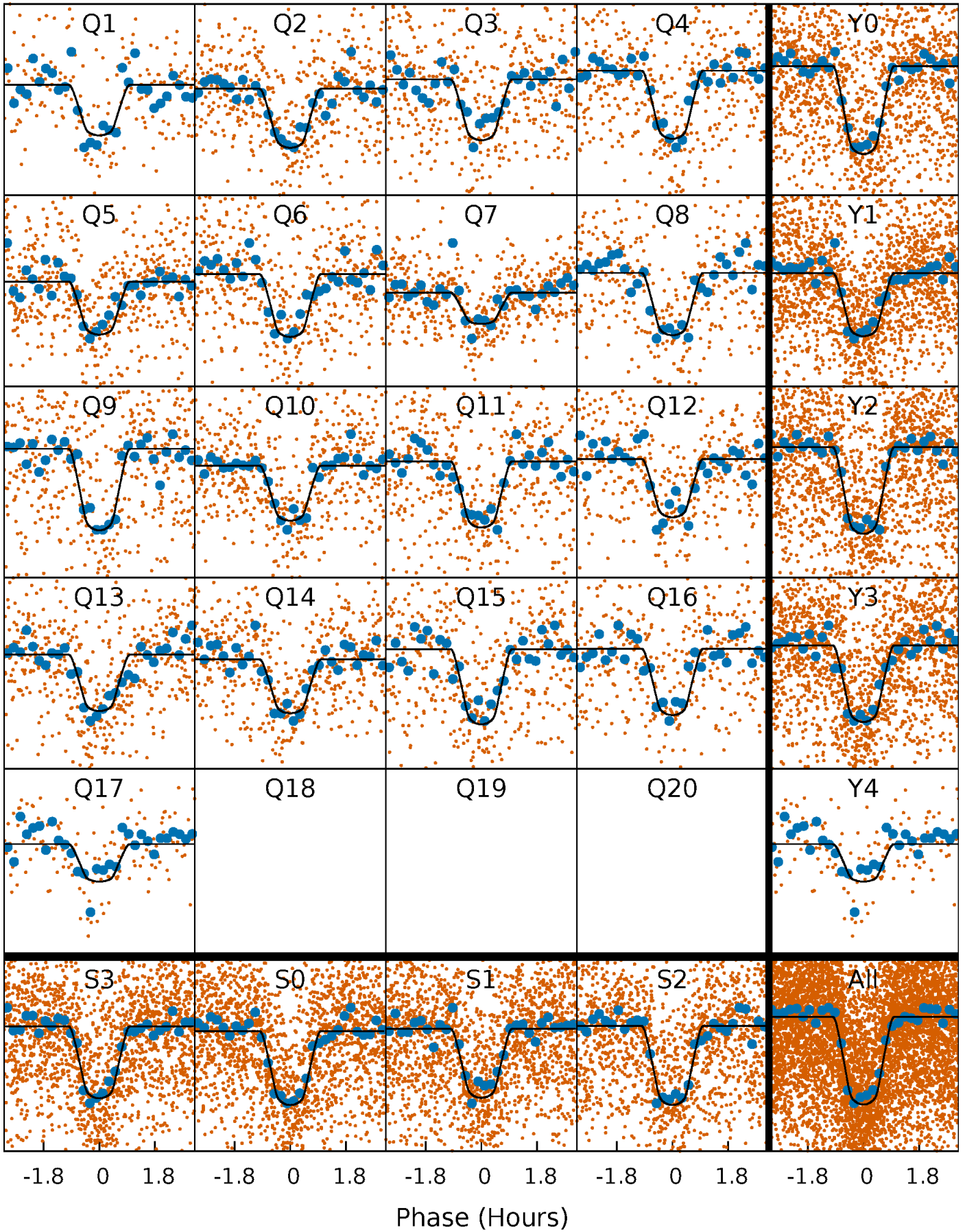
PDC Quarter-Phased Transit Curves

TCE 010854546-01 P= 2.168455 Days $T_0=132.140989$ (BKJD)



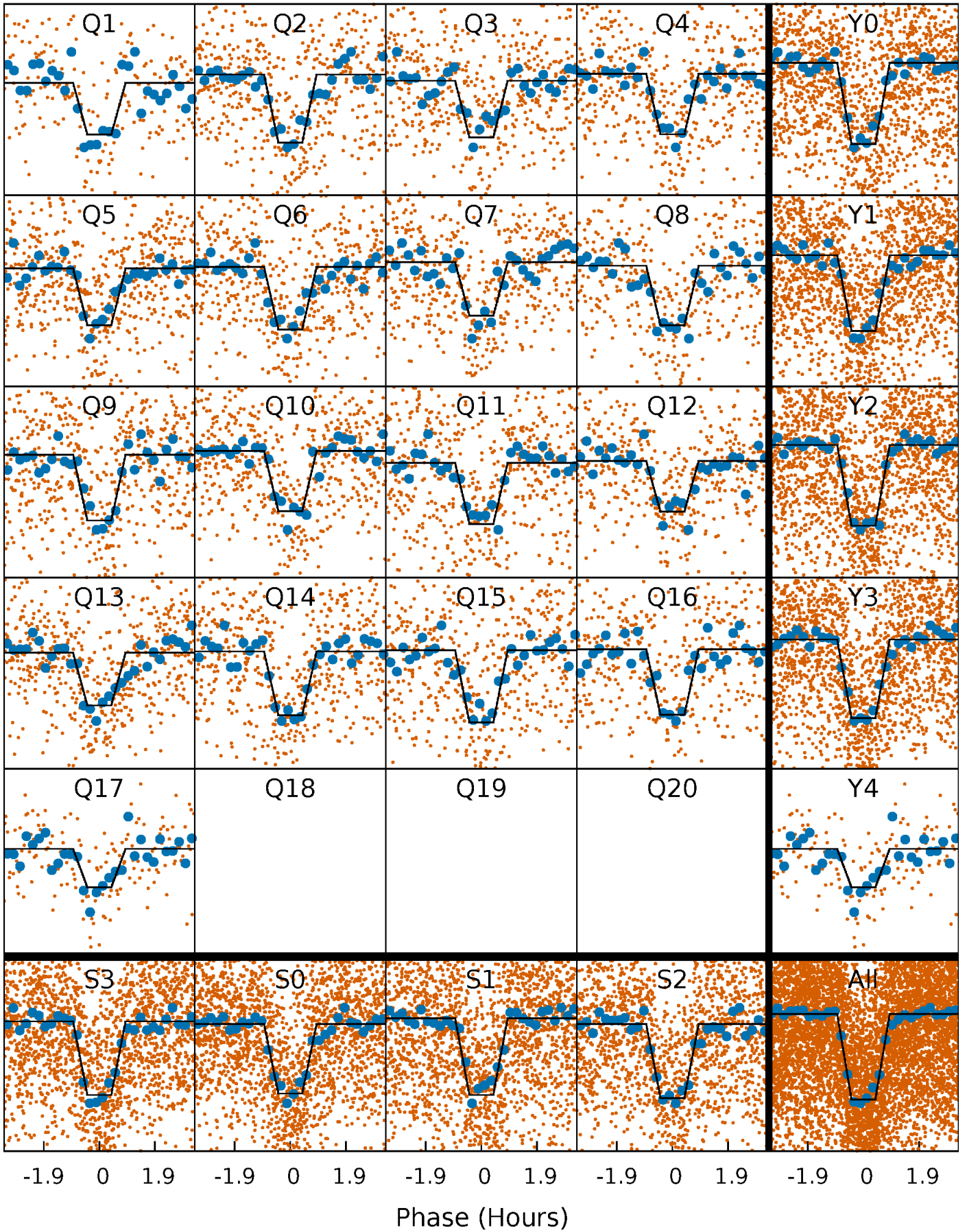
DV Quarter-Phased Transit Curves

TCE 010854546-01 P= 2.168455 Days $T_0=132.140989$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

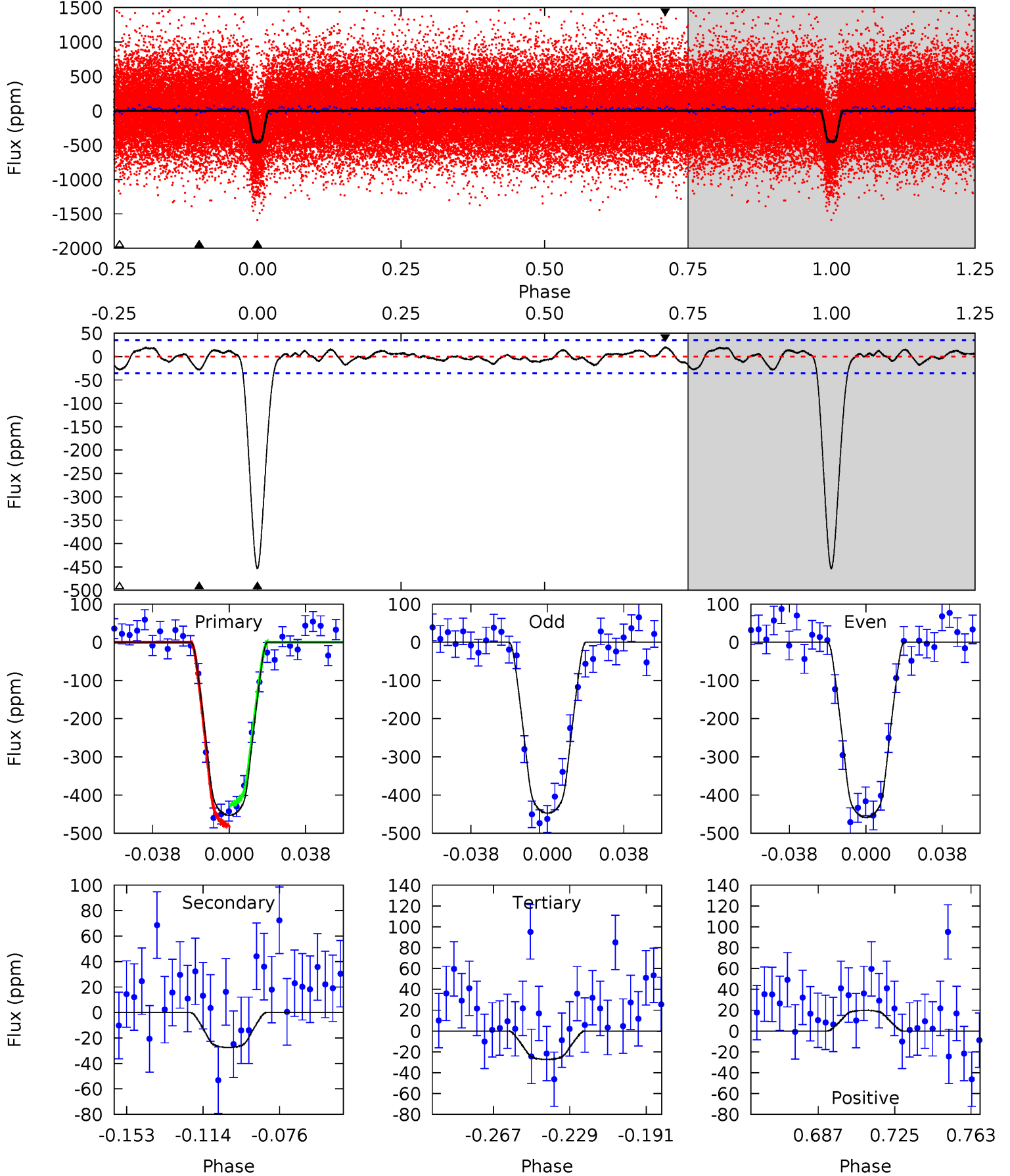
TCE 010854546-01 P= 2.168451 Days $T_0=132.141384$ (BKJD)



DV Model-Shift Uniqueness Test

010854546-01, P = 2.168455 Days, E = 129.972534 Days

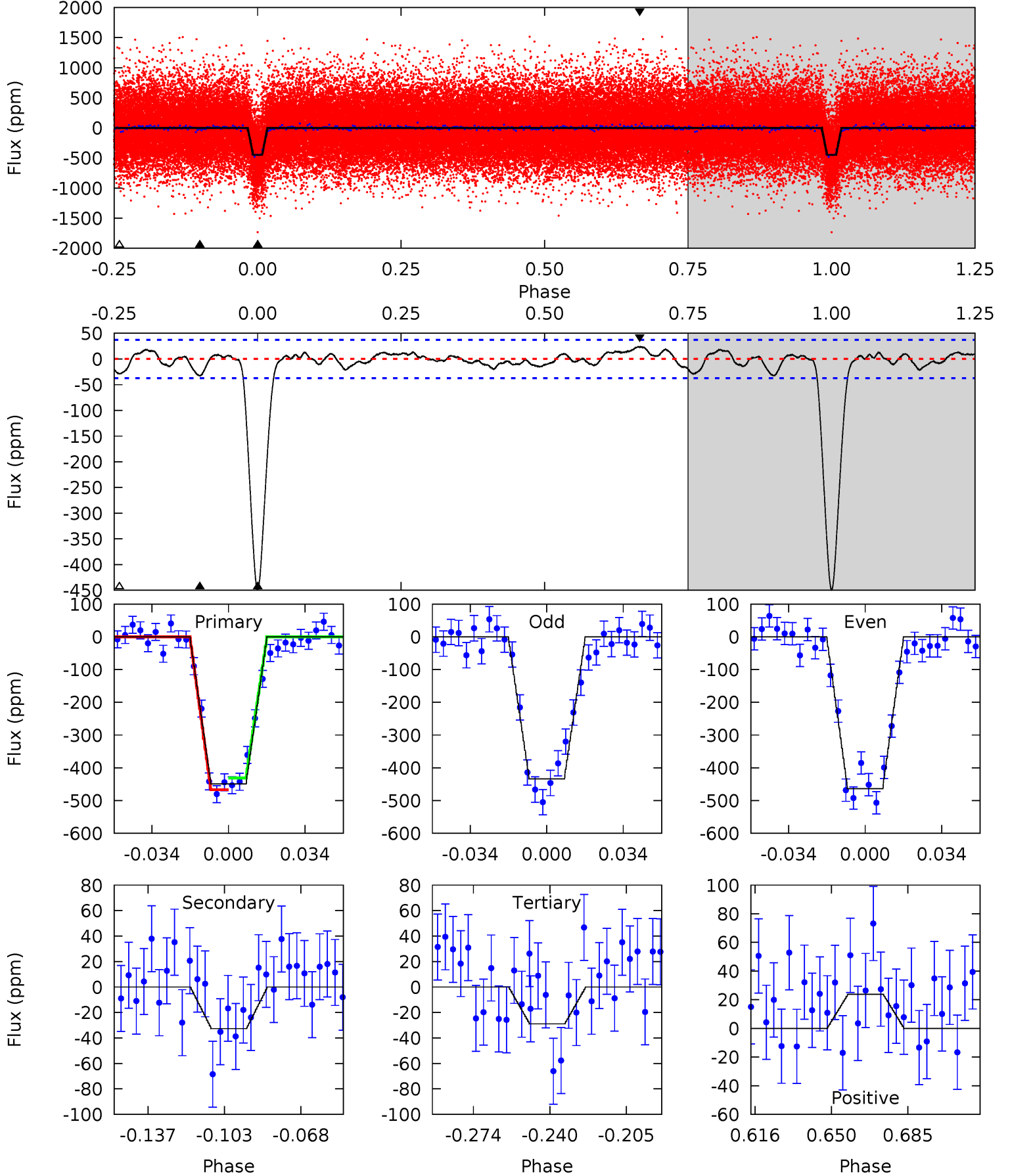
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.4	3.72	3.70	2.69	4.76	2.07	1.26	57.7	58.7	0.02	1.04	0.76	1.00	0.04	3.72



Alt Model-Shift Uniqueness Test

010854546-01, P = 2.168451 Days, E = 129.972933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.6	4.19	3.71	3.06	4.78	2.12	1.38	53.9	54.5	0.48	1.13	1.91	0.99	0.05	2.30



Stellar Parameters For KIC 010854546

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6153^{+193}_{-236}	$4.382^{+0.087}_{-0.217}$	$0.020^{+0.250}_{-0.300}$	$1.109^{+0.366}_{-0.157}$	$1.077^{+0.181}_{-0.120}$	$1.112^{+0.434}_{-0.594}$
	+3%/-4%	+2%/-5%	+1250%/-1500%	+33%/-14%	+17%/-11%	+39%/-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 010854546-01 / KOI 2104.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 7	$2.98^{+0.63}_{-0.46}$	2219^{+166}_{-129}	3321^{+215}_{-234}	$1.898^{+0.970}_{-0.749}$
Alt.	-33 ± 8	$2.70^{+0.52}_{-0.47}$	2204^{+185}_{-121}	3536^{+257}_{-236}	$2.733^{+1.436}_{-0.998}$

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 $A_{obs} \gg 1.0$

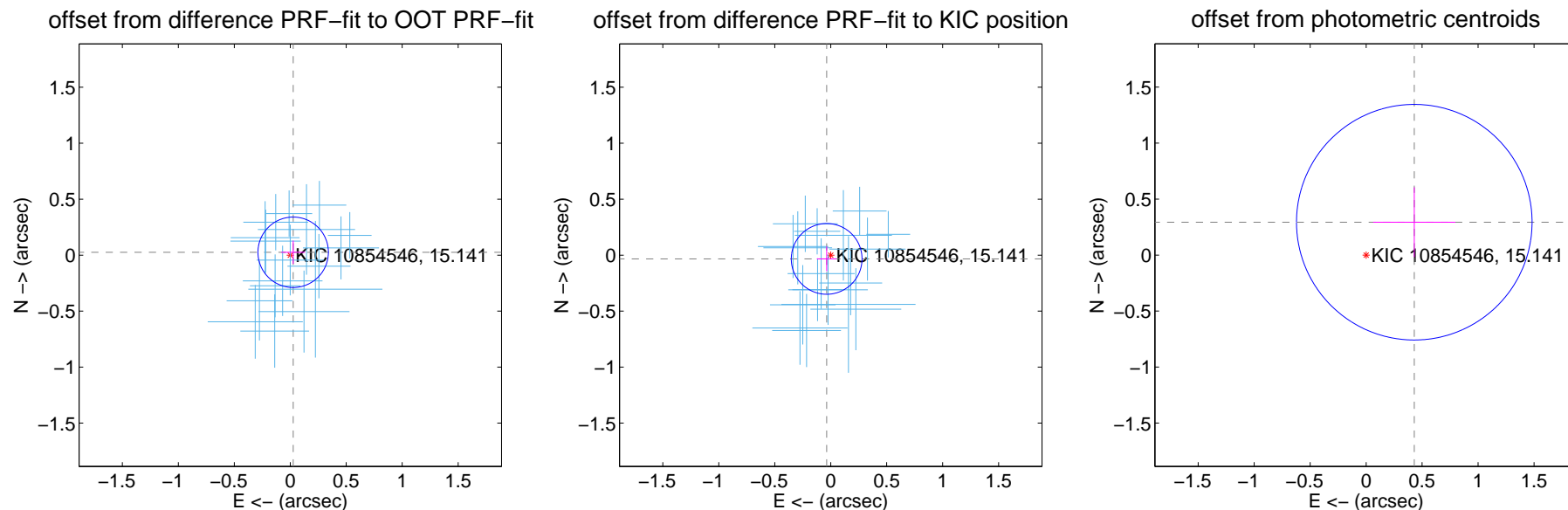
DV Centroid Data

Supplemental centroid analysis for 010854546-01. Kepler magnitude: 15.14. Transit SNR 44.31

There are 17 quarters with good PRF difference image offsets

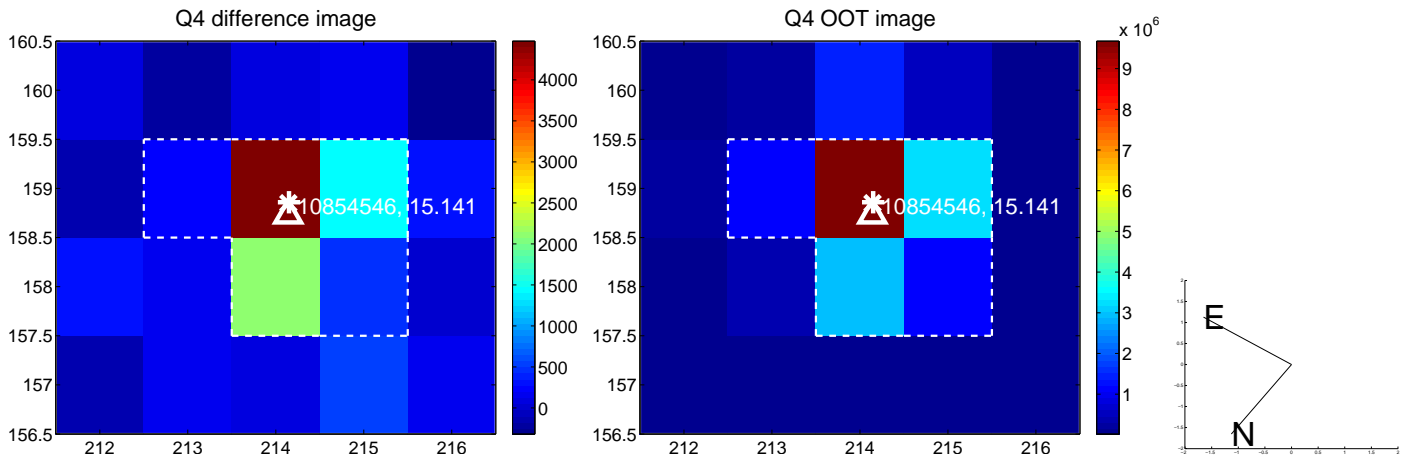
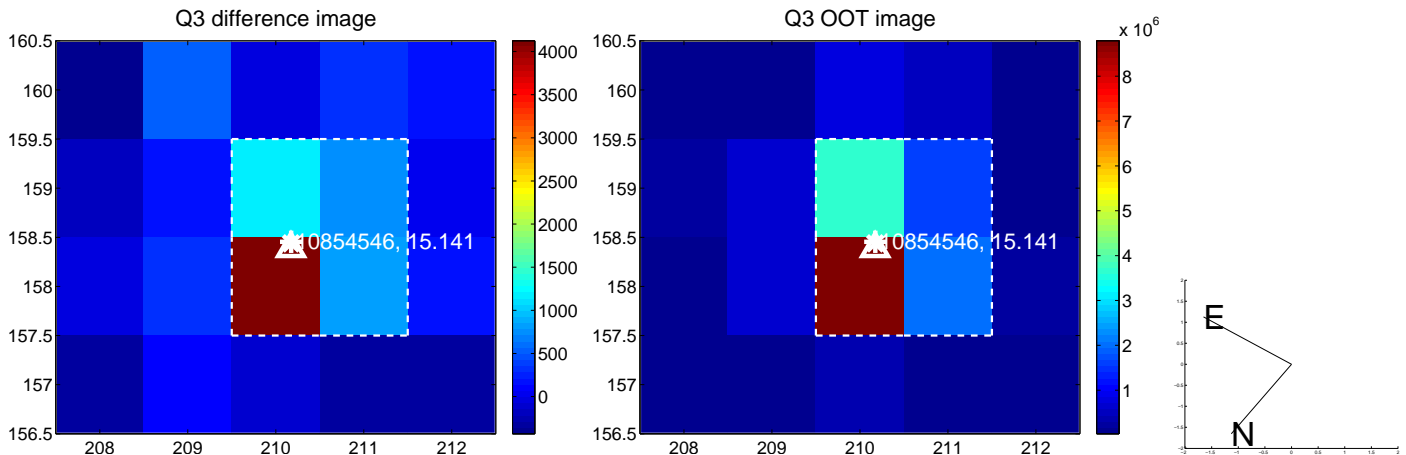
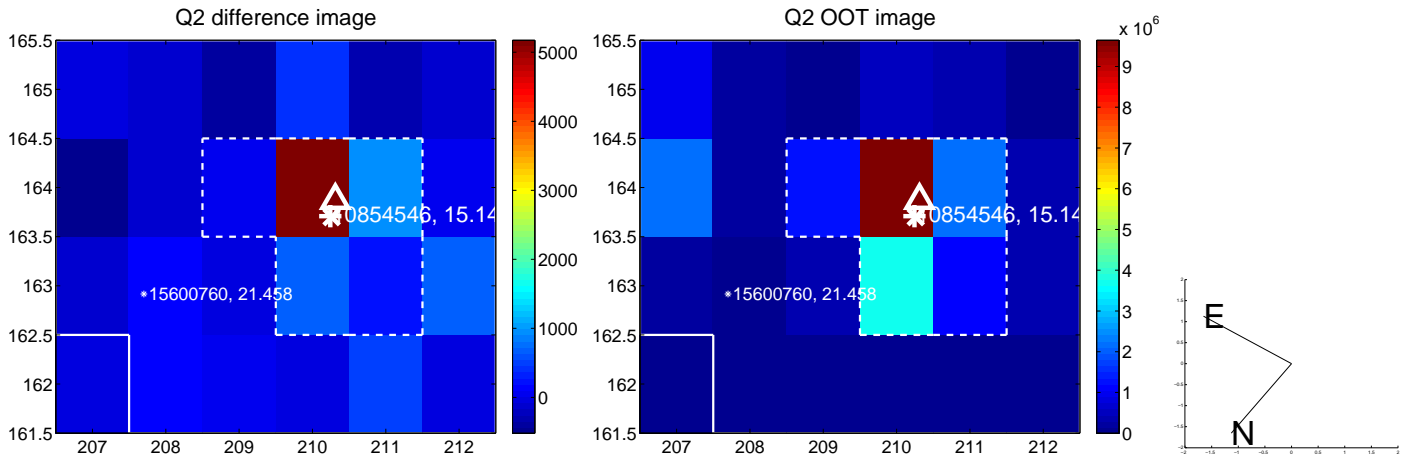
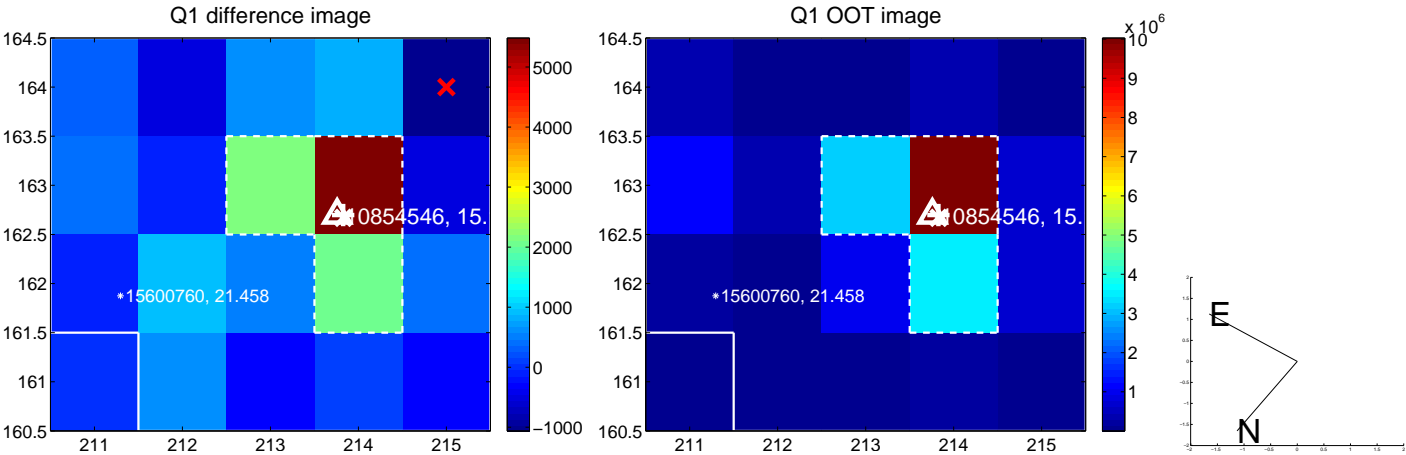
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.037 ± 0.105	0.35	-0.026 ± 0.106	0.026 ± 0.104
PRF-fit source offset from KIC position	0.049 ± 0.105	0.47	0.036 ± 0.087	-0.033 ± 0.110
photometric centroid source offset	0.52 ± 0.35	1.49	-0.43 ± 0.37	0.29 ± 0.31

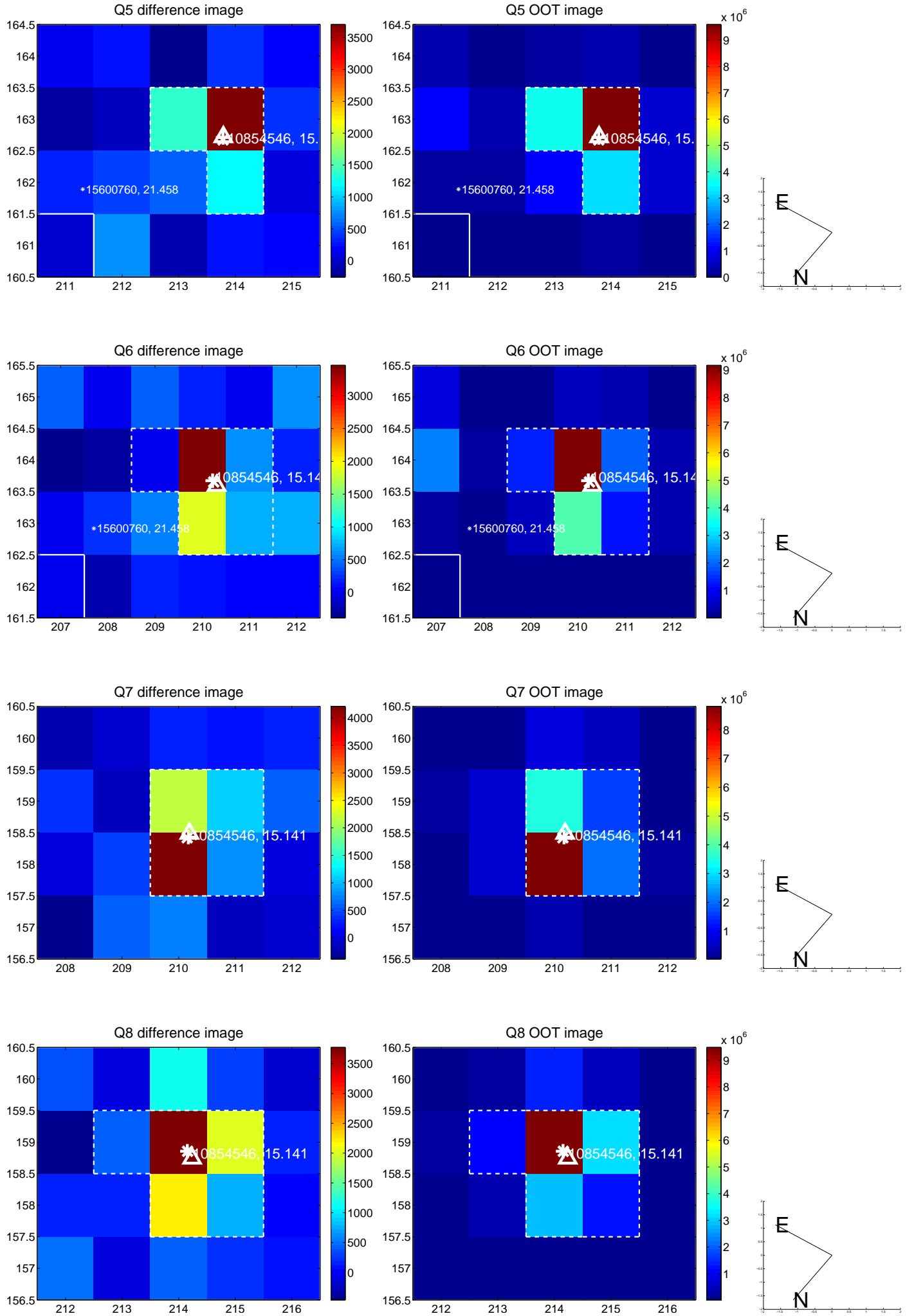


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

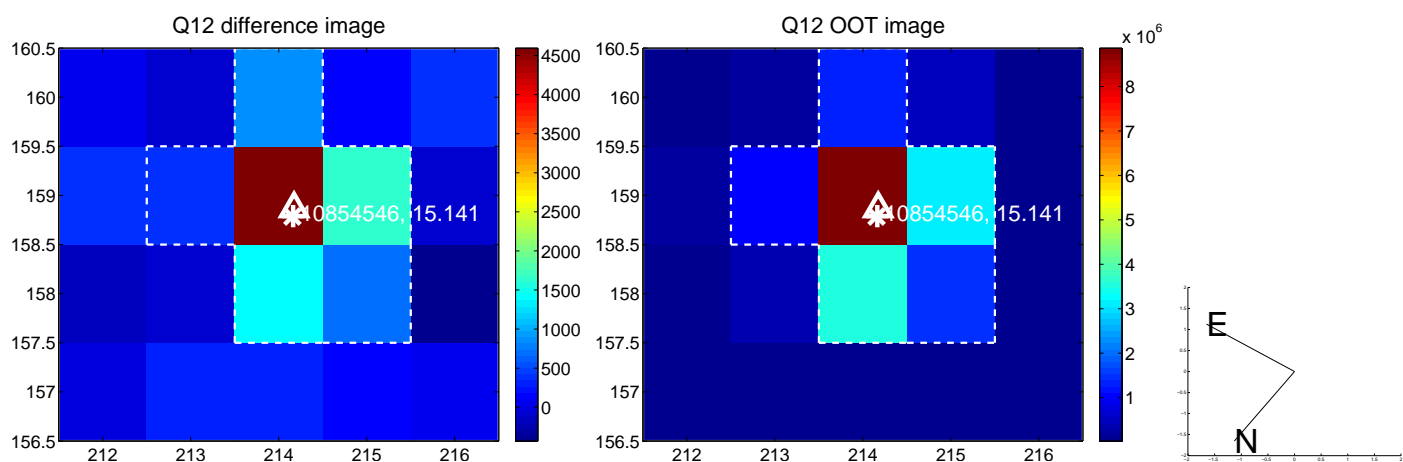
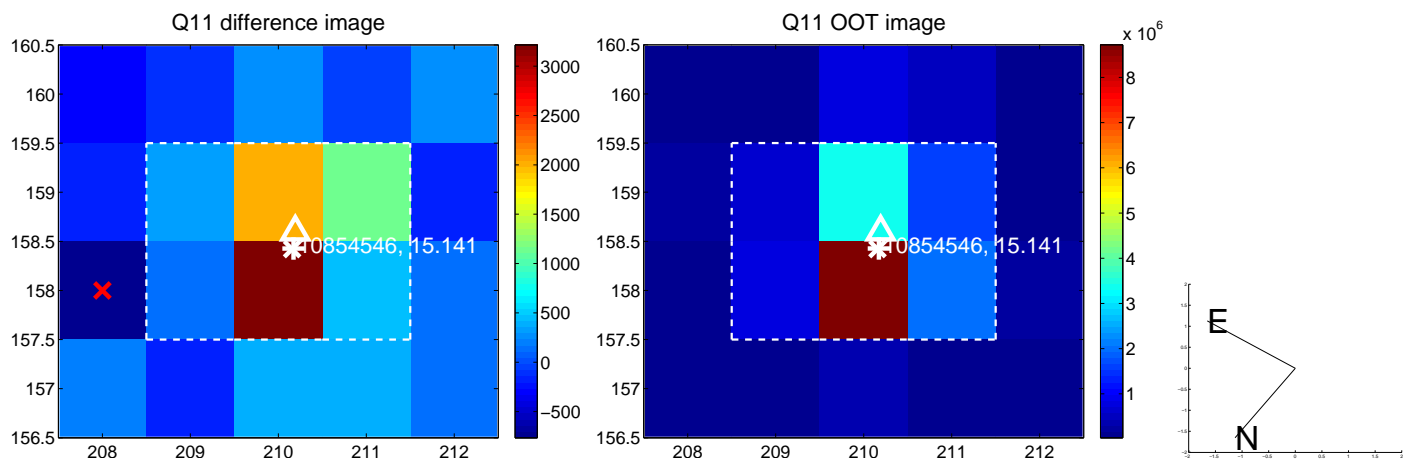
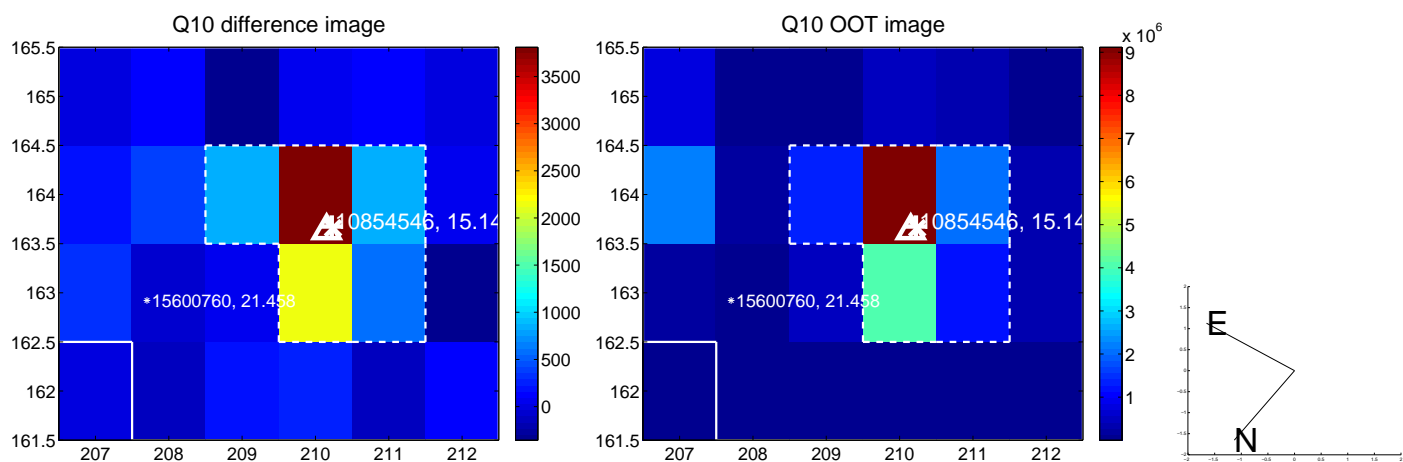
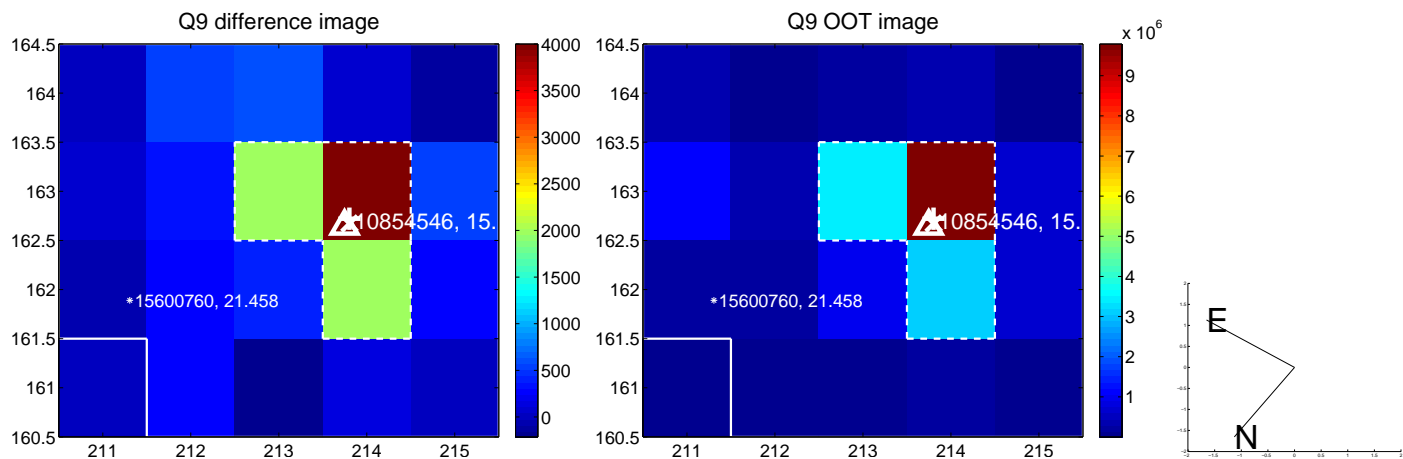
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



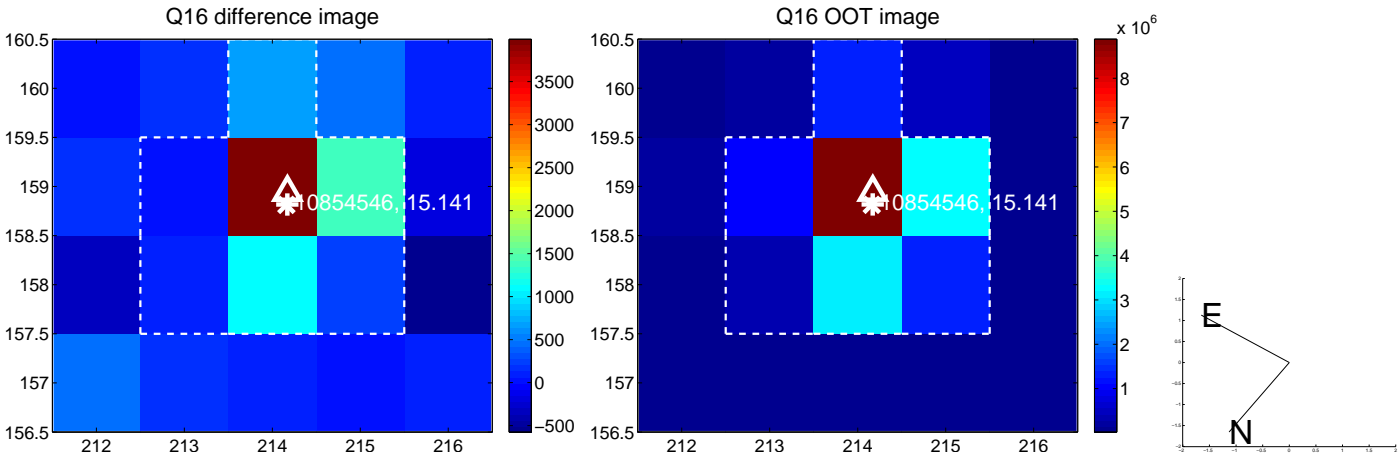
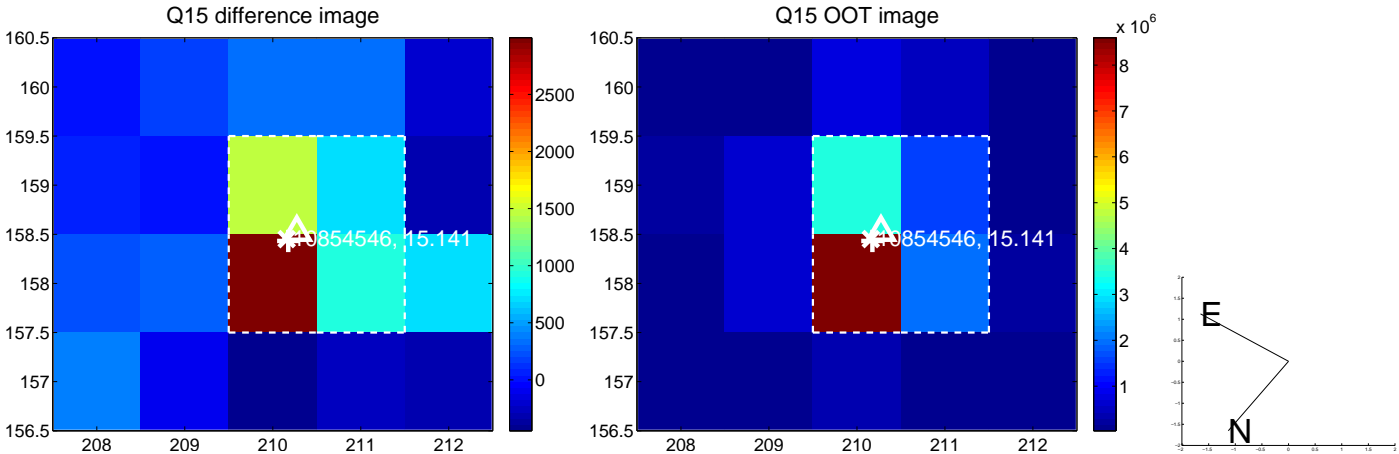
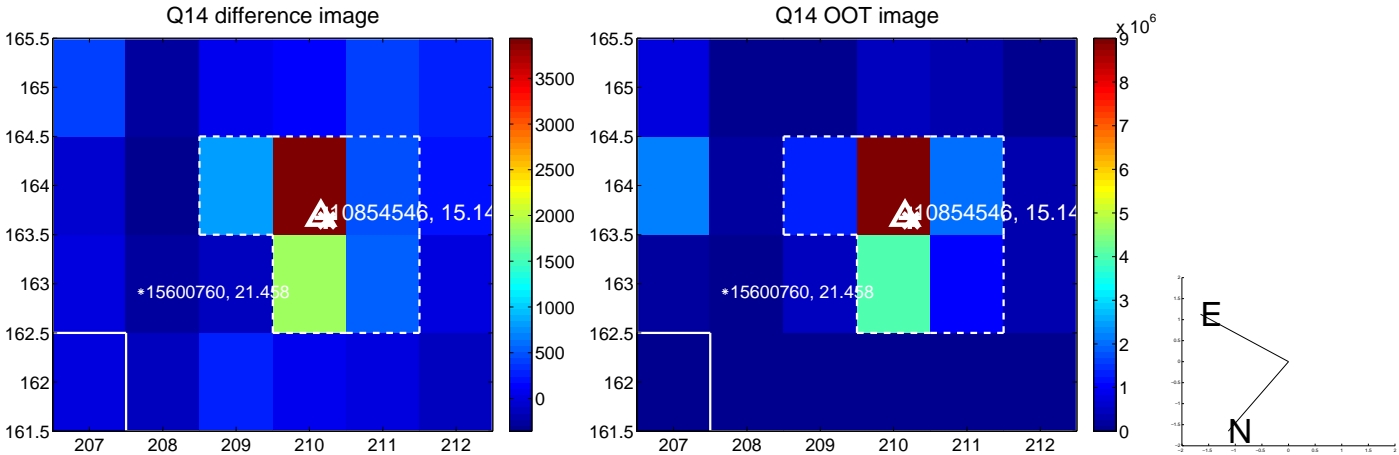
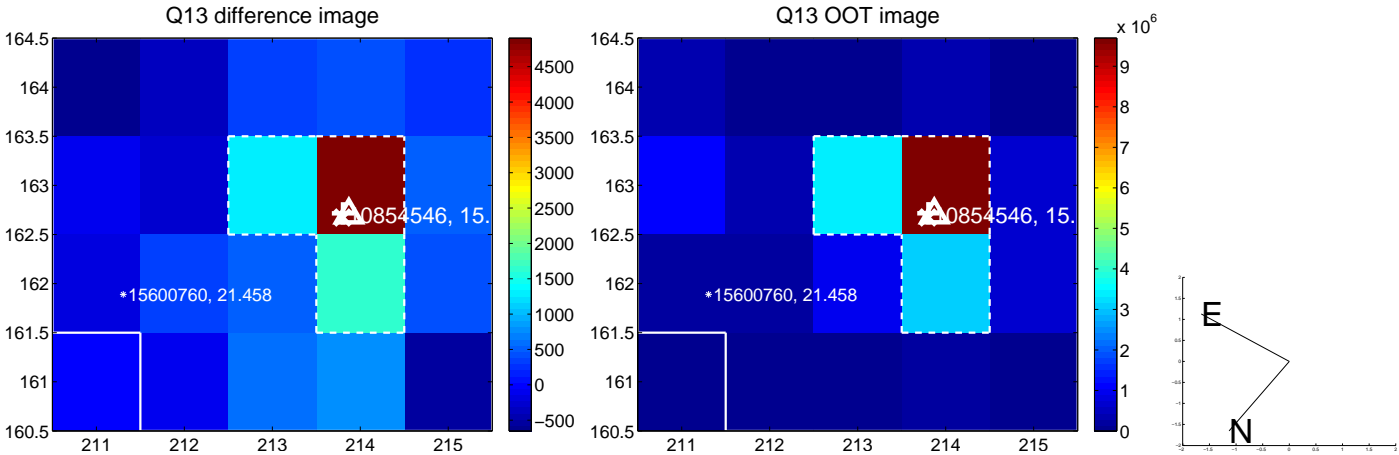
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



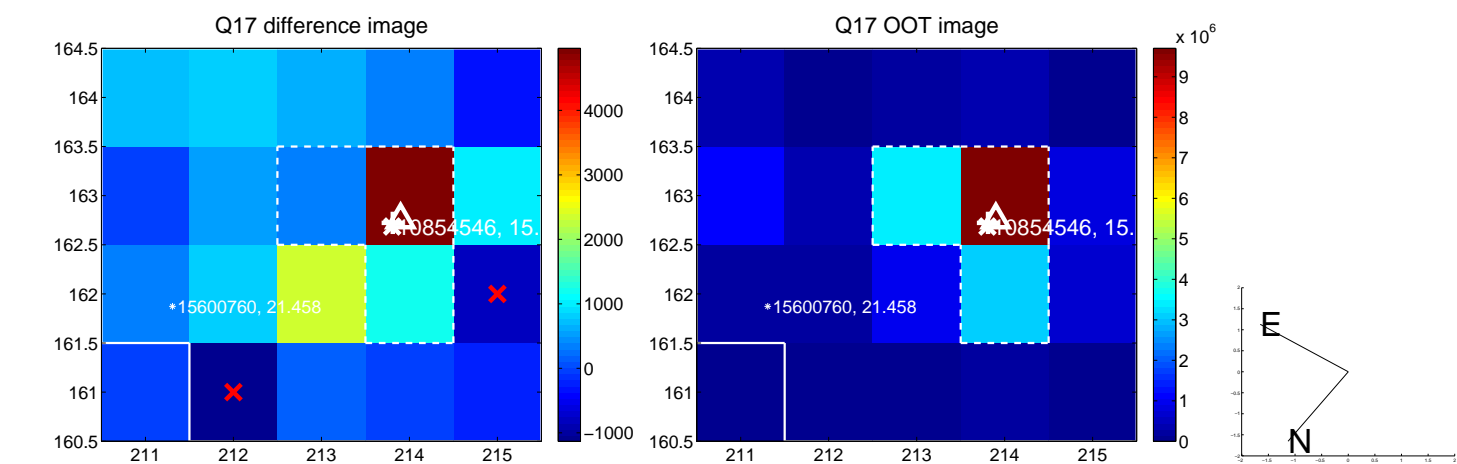
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



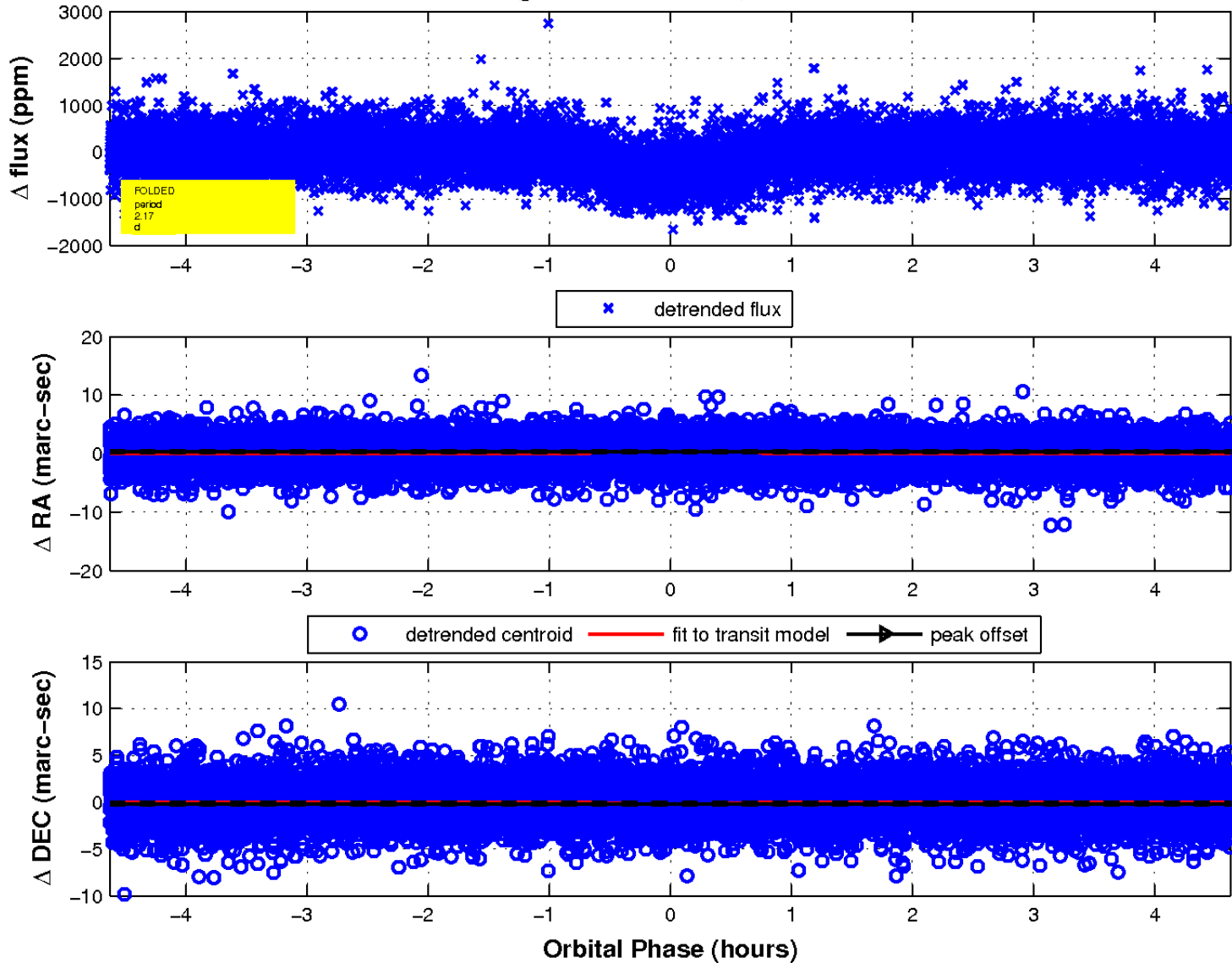
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

