

KIC 008082001

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})
008082001-01	OBS	1570.01	6.338545	133.003291	704.2	3.426	48.0	54.6	1.03	6108	3.24	271.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008082001-01	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.

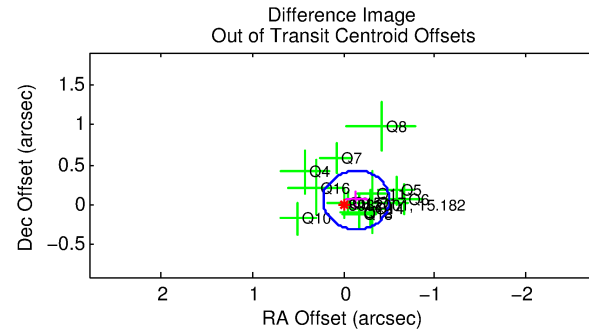
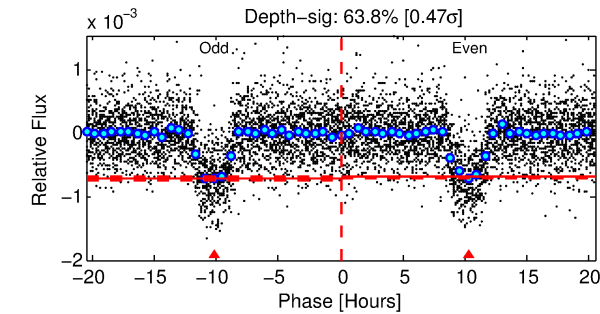
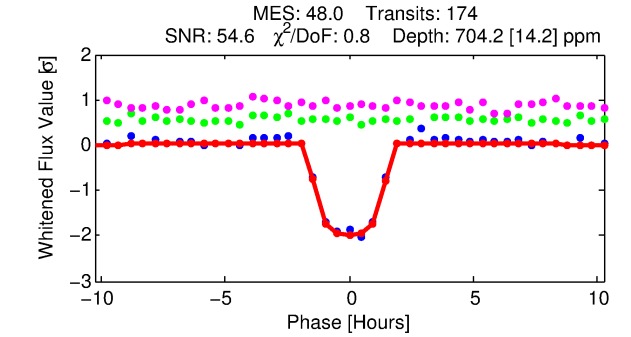
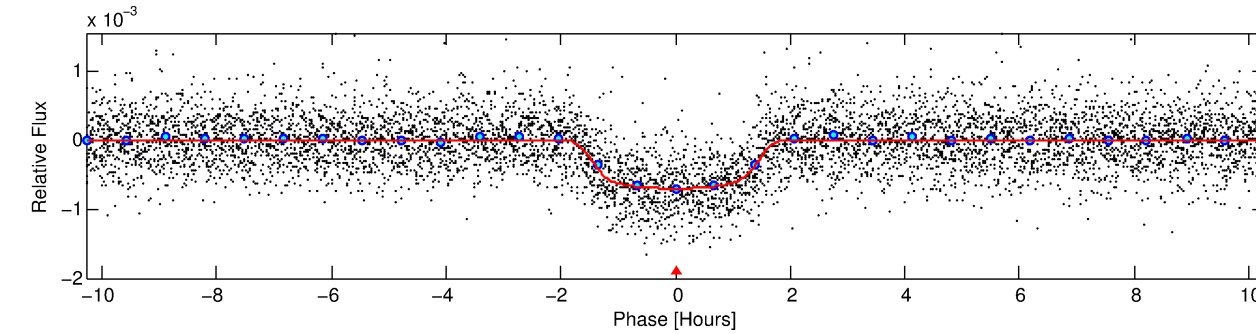
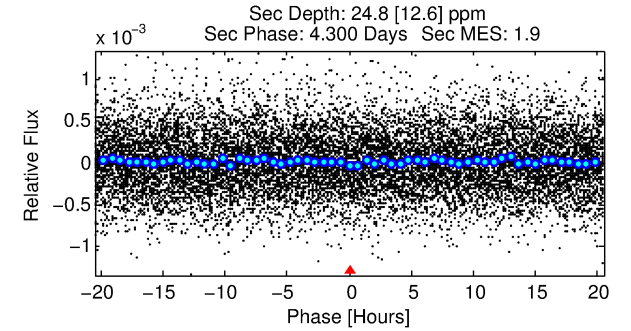
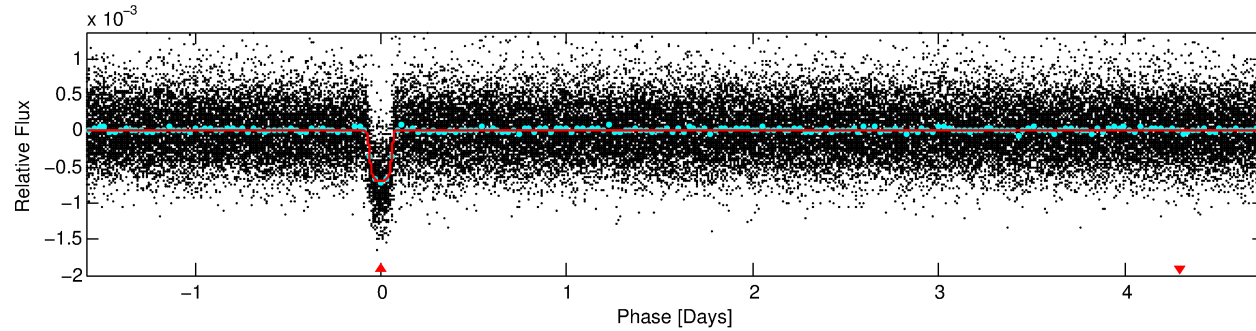
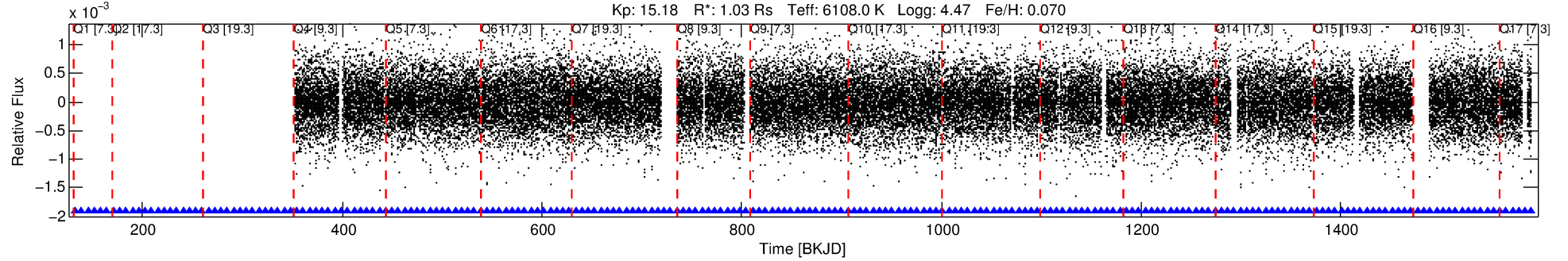
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008082001-01

No Significant Match Found

DV One-Page Summary

KIC: 8082001 Candidate: 1 of 1 Period: 6.339 d
KOI: K01570.01 Corr: 0.979



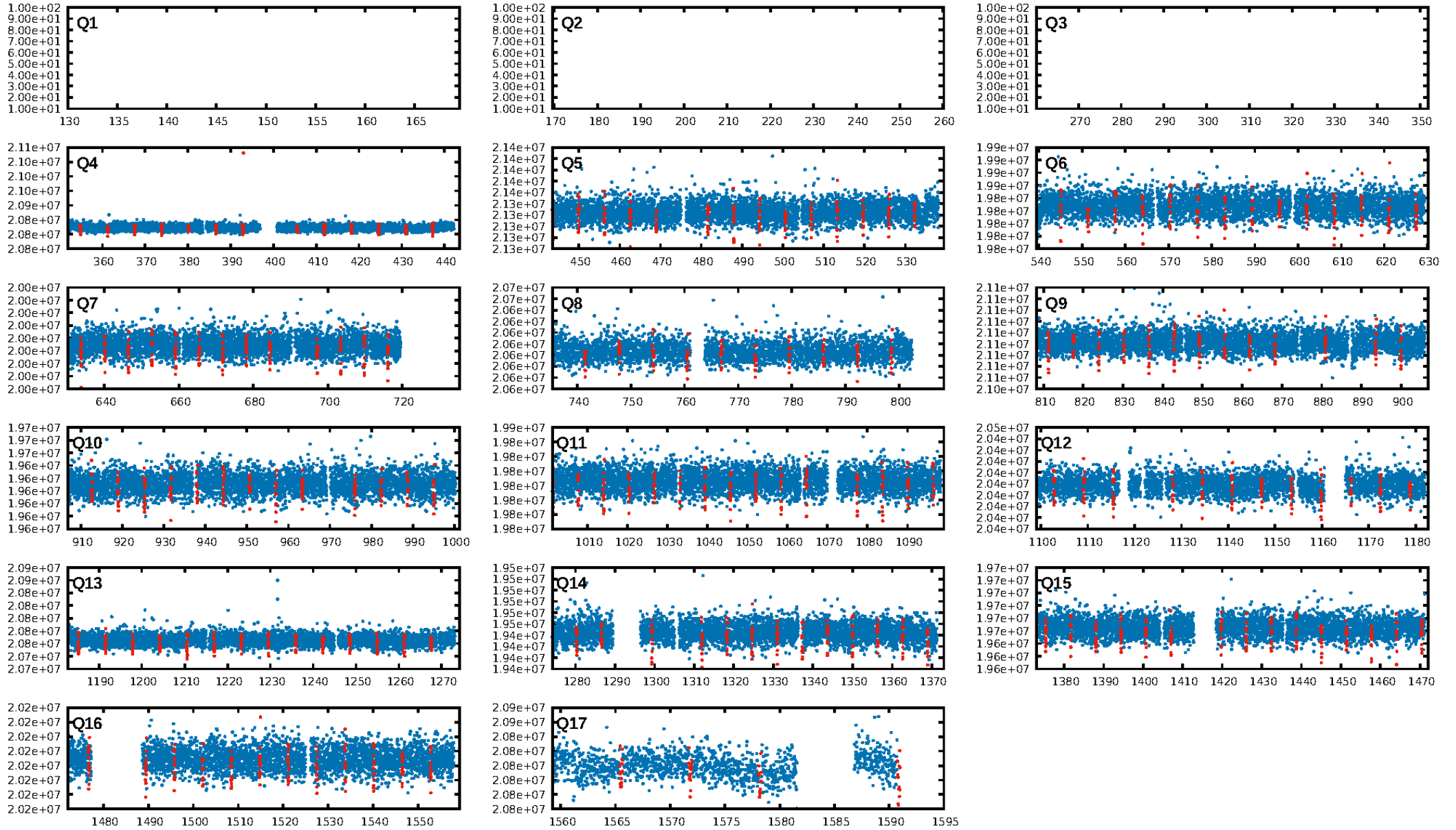
DV Fit Results:

Period = 6.33855 [0.00001] d
Epoch = 133.0033 [0.0014] BKJD
 R_p/R^* = 0.0288 [0.0012]
 a/R^* = 7.03 [1.38]
 b = 0.90 [0.04]
 S_{eff} = 271.06 [118.41]
 T_{eq} = 1035 [113] K
 R_p = 3.24 [1.08] R_e
 a = 0.0699 [0.0195] AU
 A_g = 6.35 [4.17] [1.28 σ]
 T_{eff} = 2540 [341] K [4.19 σ]

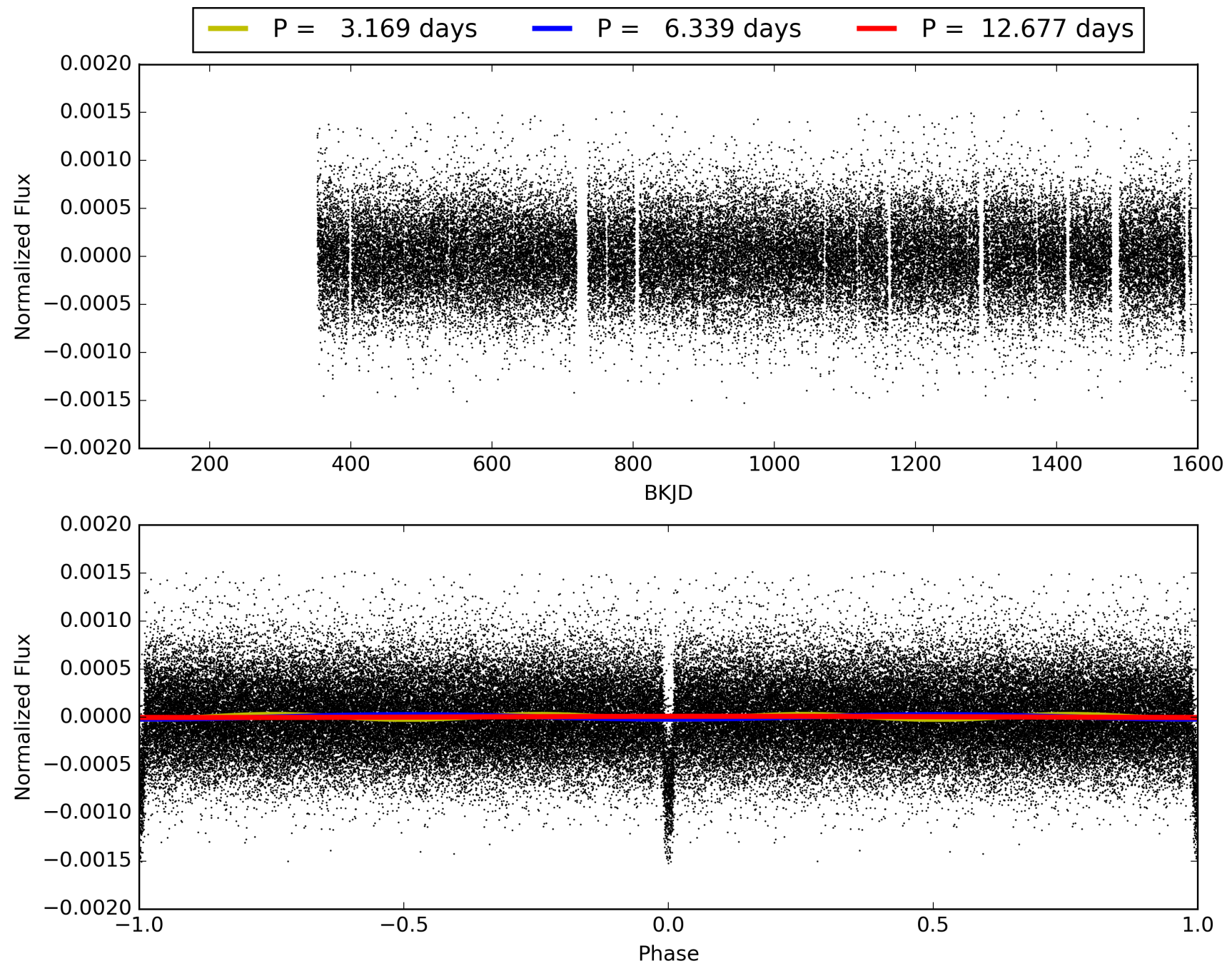
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [169/169]
GhostDiagnostic-chr: 8.307
Centroid-sig: 0.0%
Centroid-so: 0.312 arcsec [1.08 σ]
OotOffset-rm: 0.152 arcsec [1.24 σ]
KicOffset-rm: 0.217 arcsec [2.16 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 008082001-01, PDC Light Curves

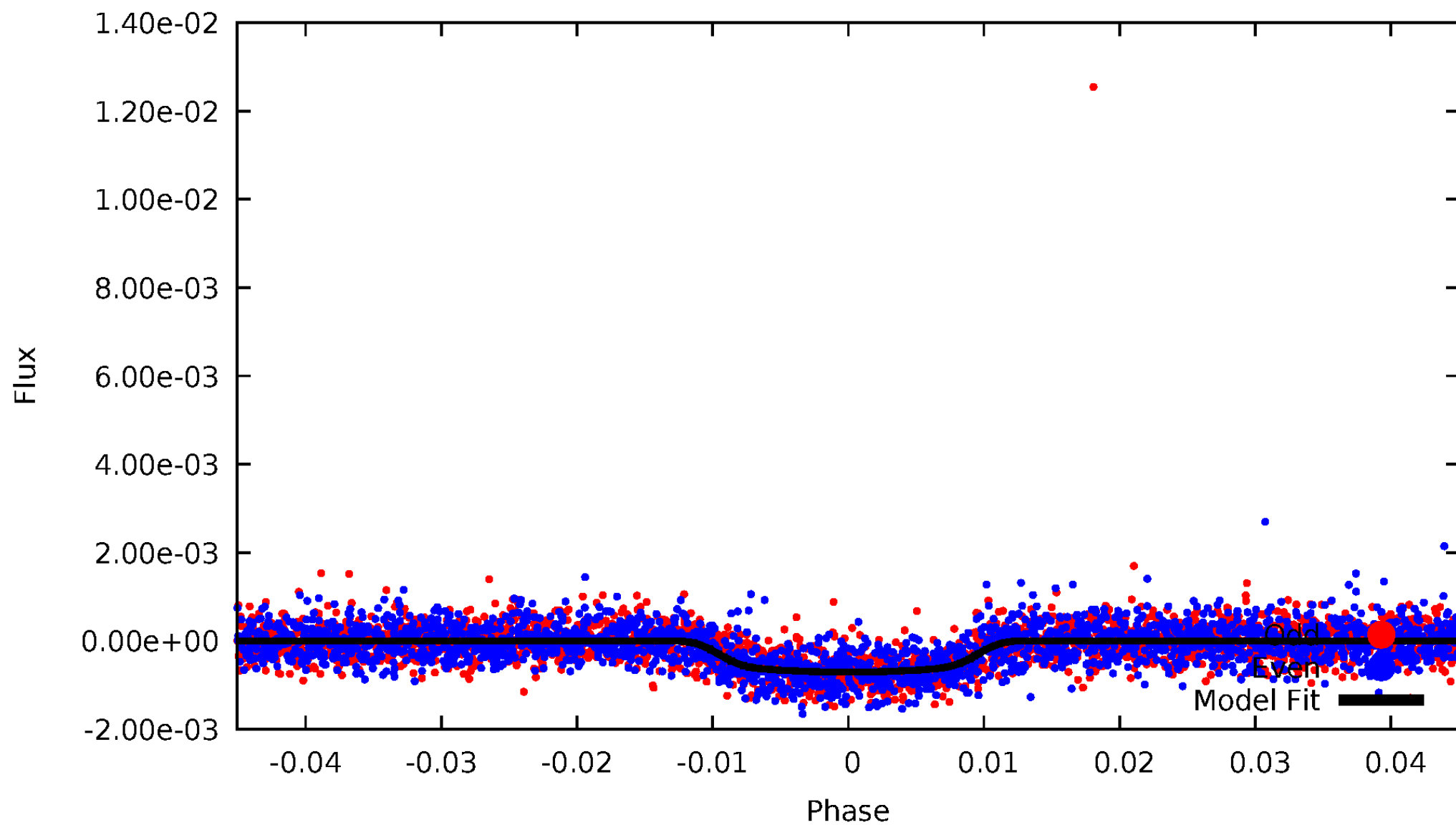


TCE 008082001-01



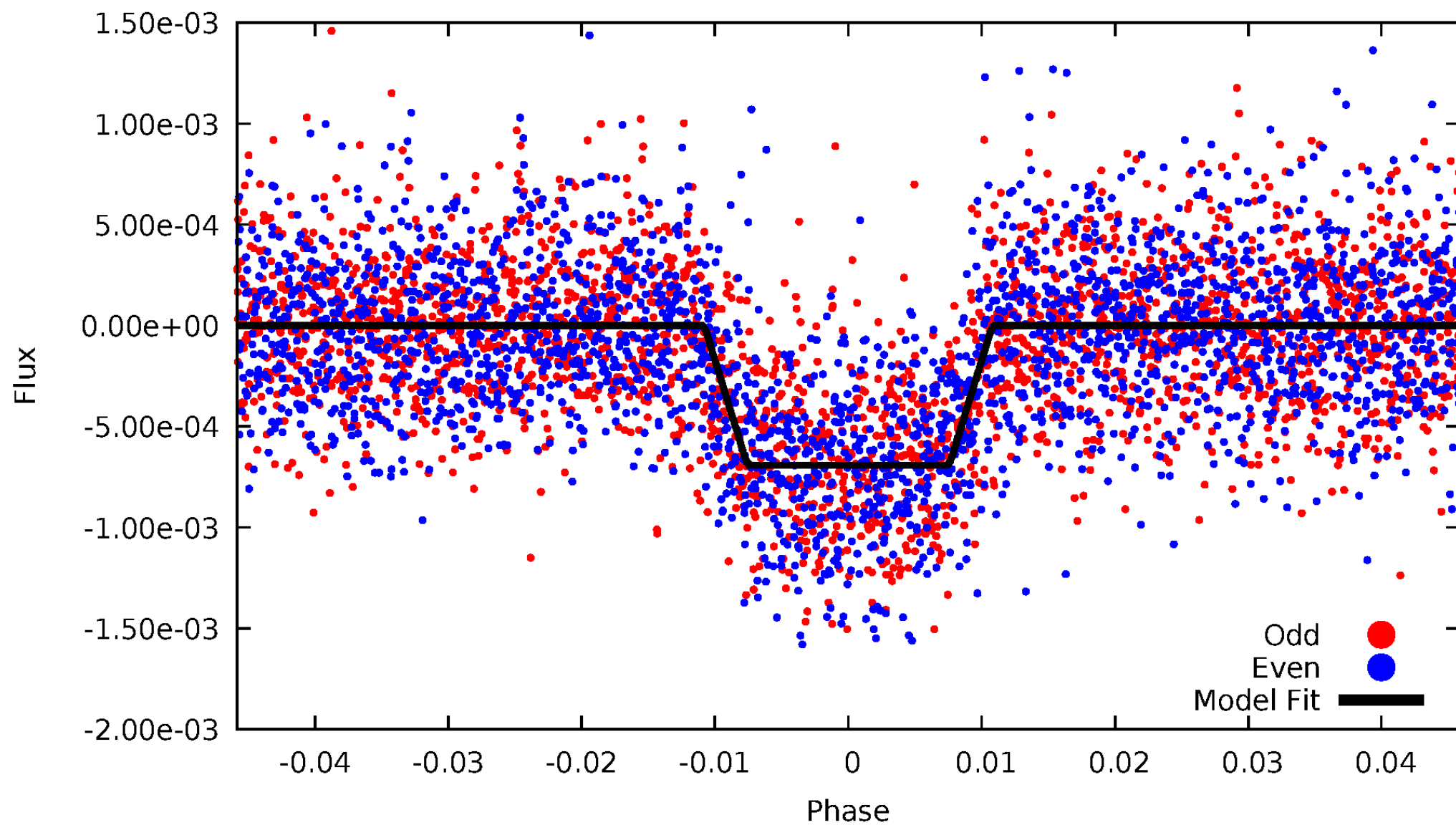
DV Odd/Even

TCE 008082001-01



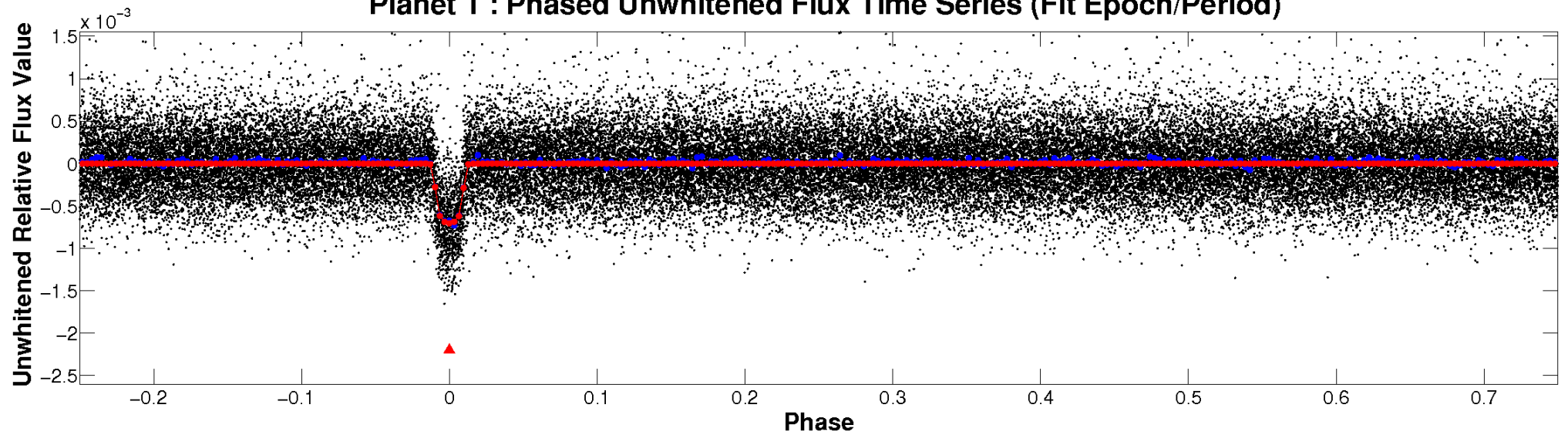
ALT Odd/Even

TCE 008082001-01

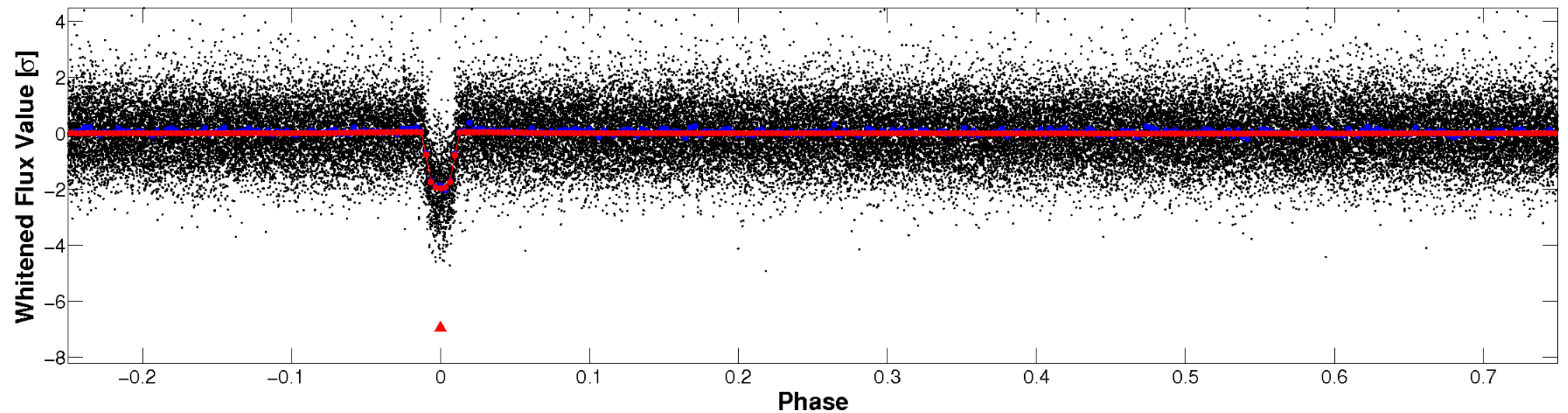


Non-Whitened Vs. Whitened Light Curve

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

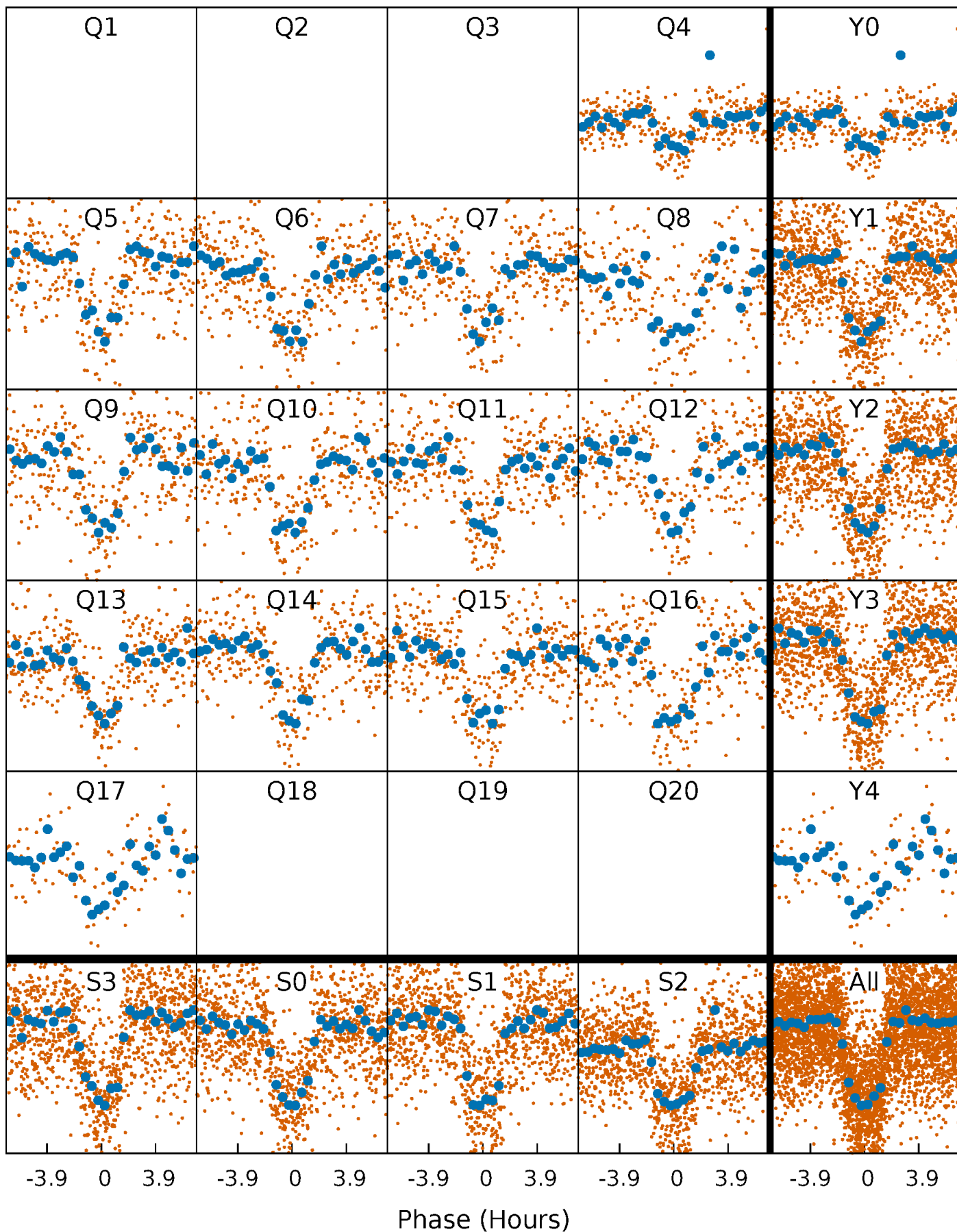


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



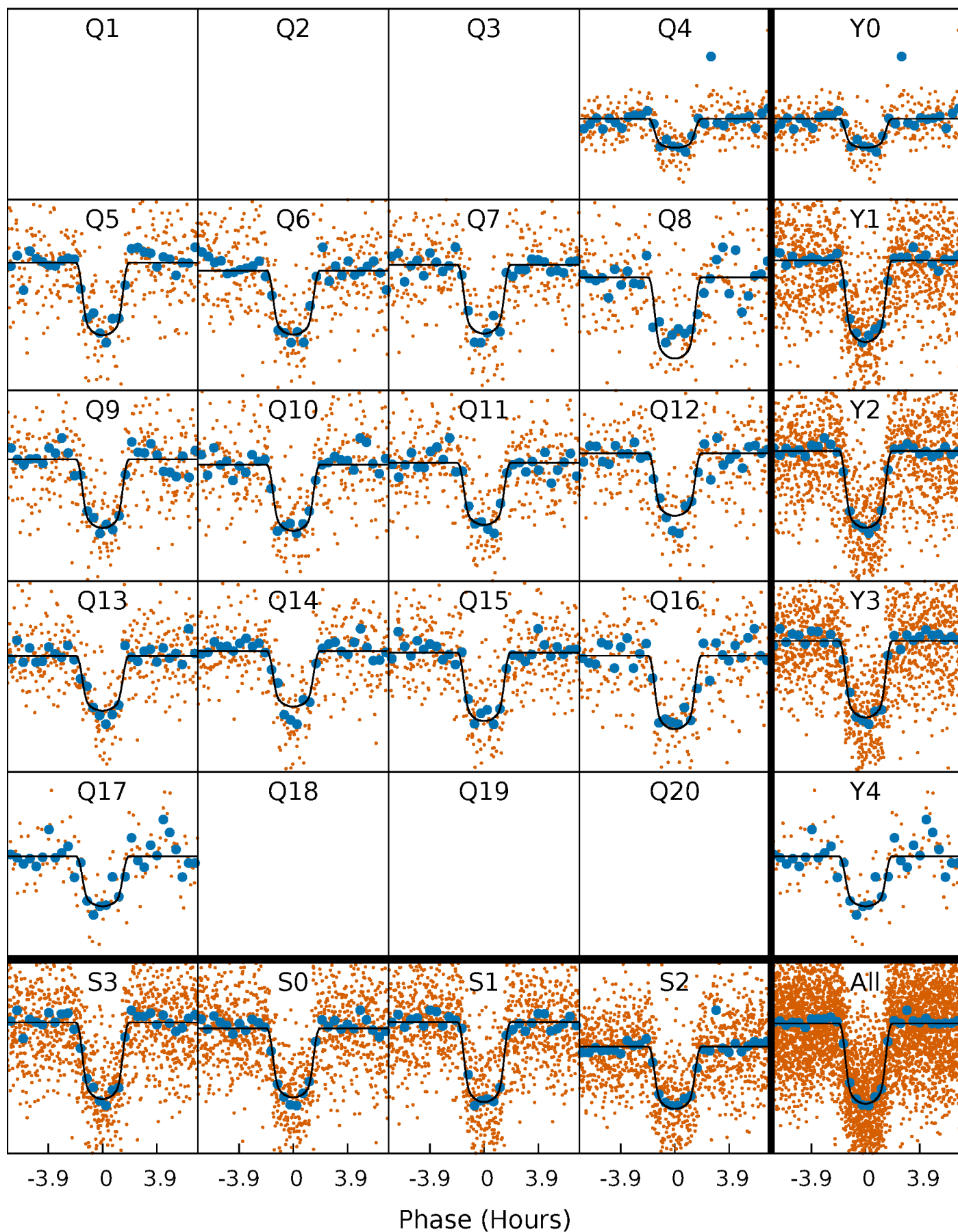
PDC Quarter-Phased Transit Curves

TCE 008082001-01 P= 6.338545 Days $T_0=133.003291$ (BKJD)



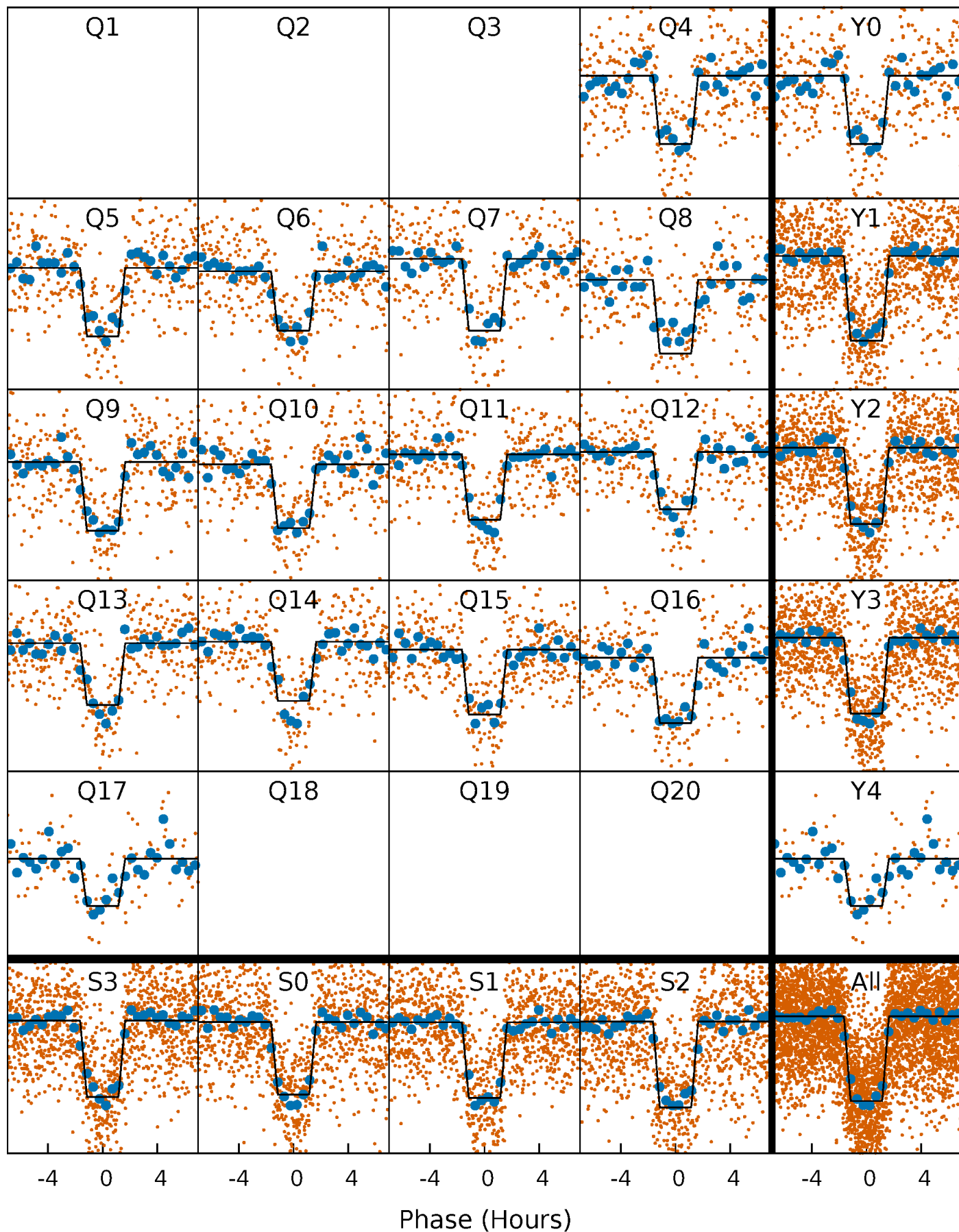
DV Quarter-Phased Transit Curves

TCE 008082001-01 P= 6.338545 Days $T_0=133.003291$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

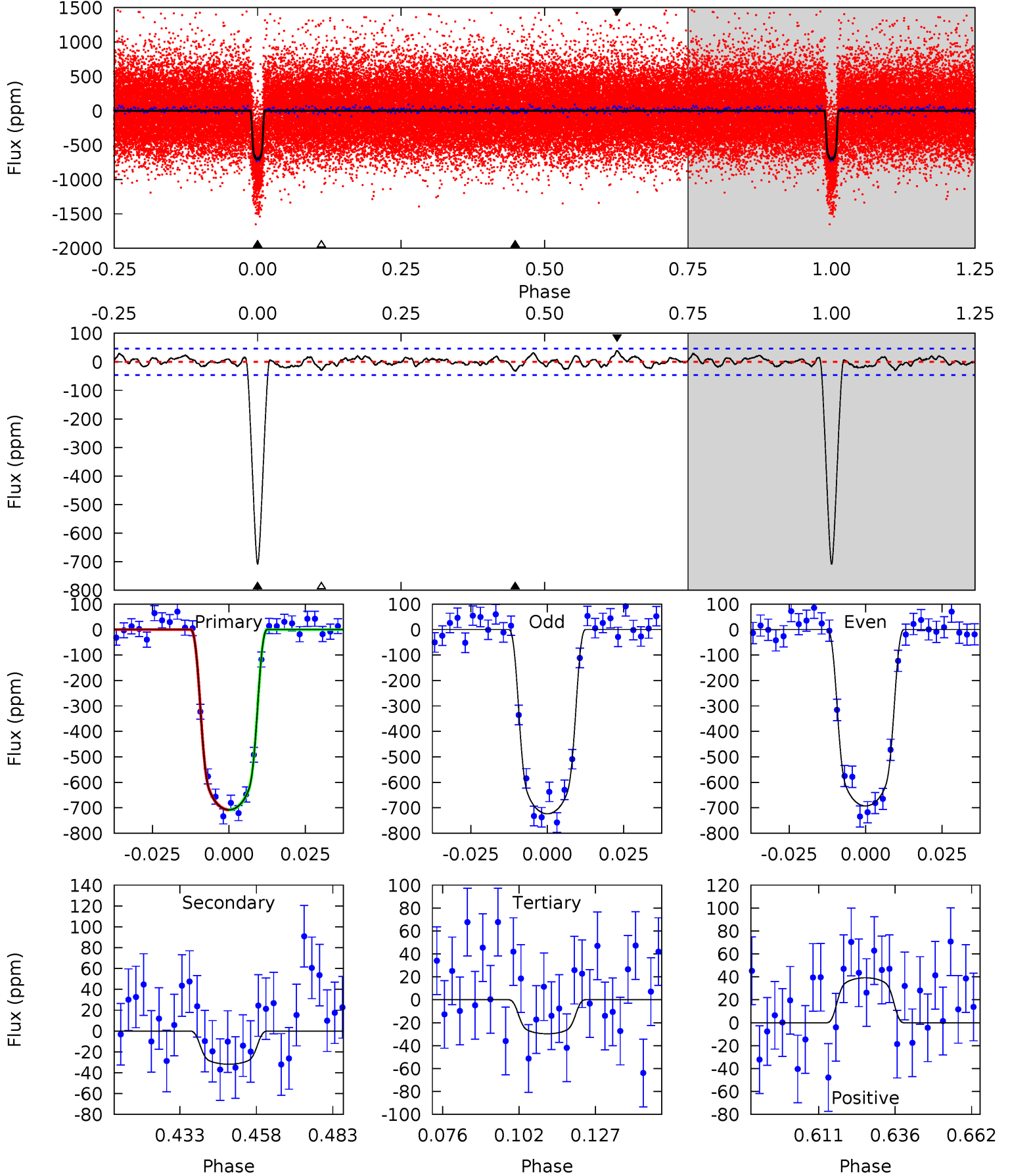
TCE 008082001-01 P= 6.338558 Days $T_0=133.001860$ (BKJD)



DV Model-Shift Uniqueness Test

008082001-01, P = 6.338545 Days, E = 133.003291 Days

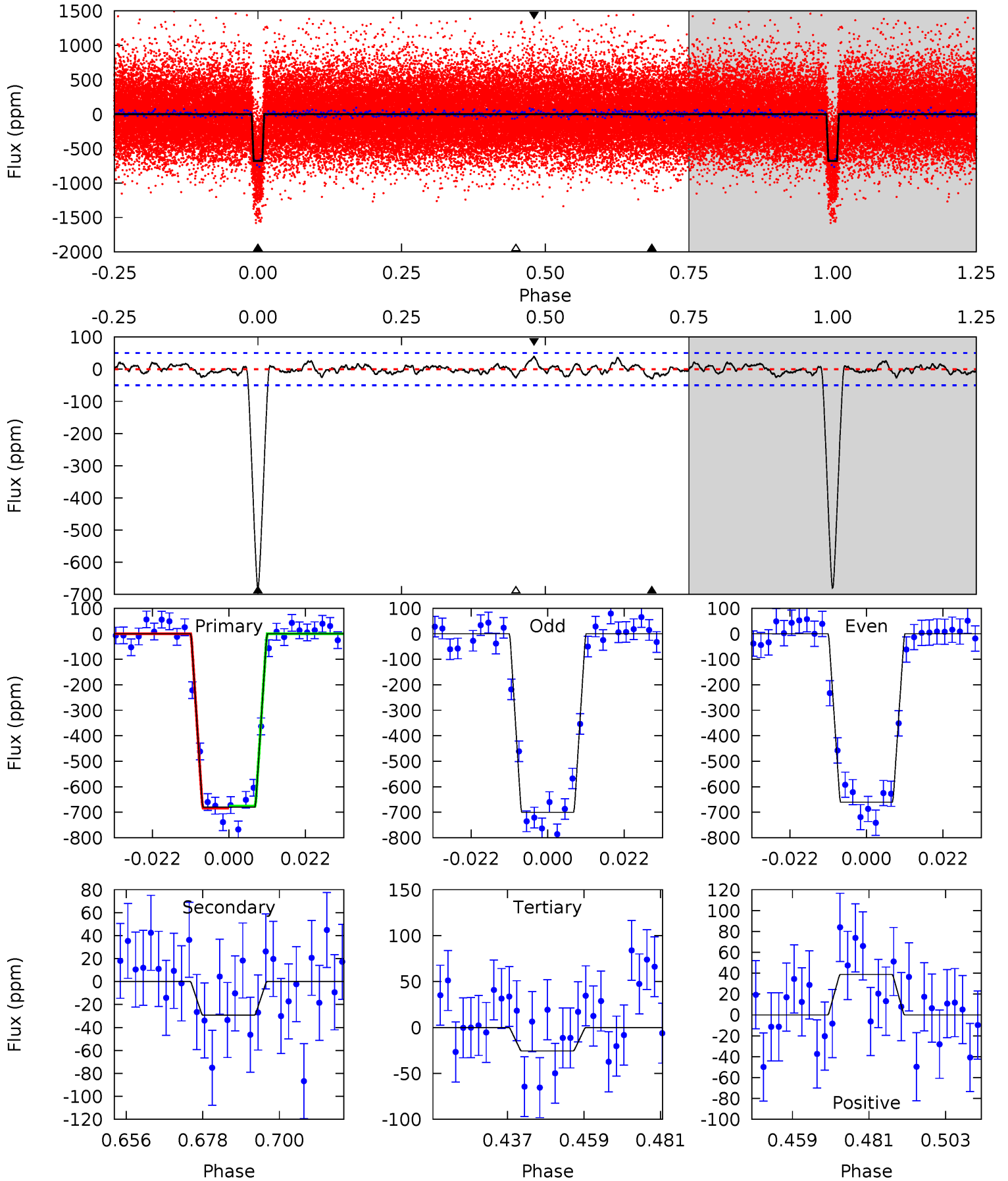
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.0	3.33	3.10	4.09	4.84	2.23	1.25	70.9	69.9	0.22	-0.76	1.62	0.98	0.05	0.00



Alt Model-Shift Uniqueness Test

008082001-01, P = 6.338558 Days, E = 133.001860 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.1	2.84	2.49	3.77	4.87	2.29	1.09	63.6	62.3	0.36	-0.92	1.95	1.00	0.05	0.35



Stellar Parameters For KIC 008082001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+193}_{-236}	$4.466^{+0.056}_{-0.224}$	$0.070^{+0.250}_{-0.350}$	$1.030^{+0.341}_{-0.114}$	$1.132^{+0.151}_{-0.166}$	$1.457^{+0.335}_{-0.785}$
	+3%/-4%	+1%/-5%	+357%/-500%	+33%/-11%	+13%/-15%	+23%/-54%
Source	KIC0	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 008082001-01 / KOI 1570.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-32 ± 10	$3.37^{+0.61}_{-0.34}$	1481^{+114}_{-88}	3234^{+161}_{-183}	$6.983^{+2.974}_{-2.631}$
Alt.	-29 ± 10	$3.08^{+0.57}_{-0.33}$	1478^{+113}_{-78}	3279^{+203}_{-250}	$7.518^{+3.837}_{-3.239}$

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 $A_{obs} \gg 1.0$

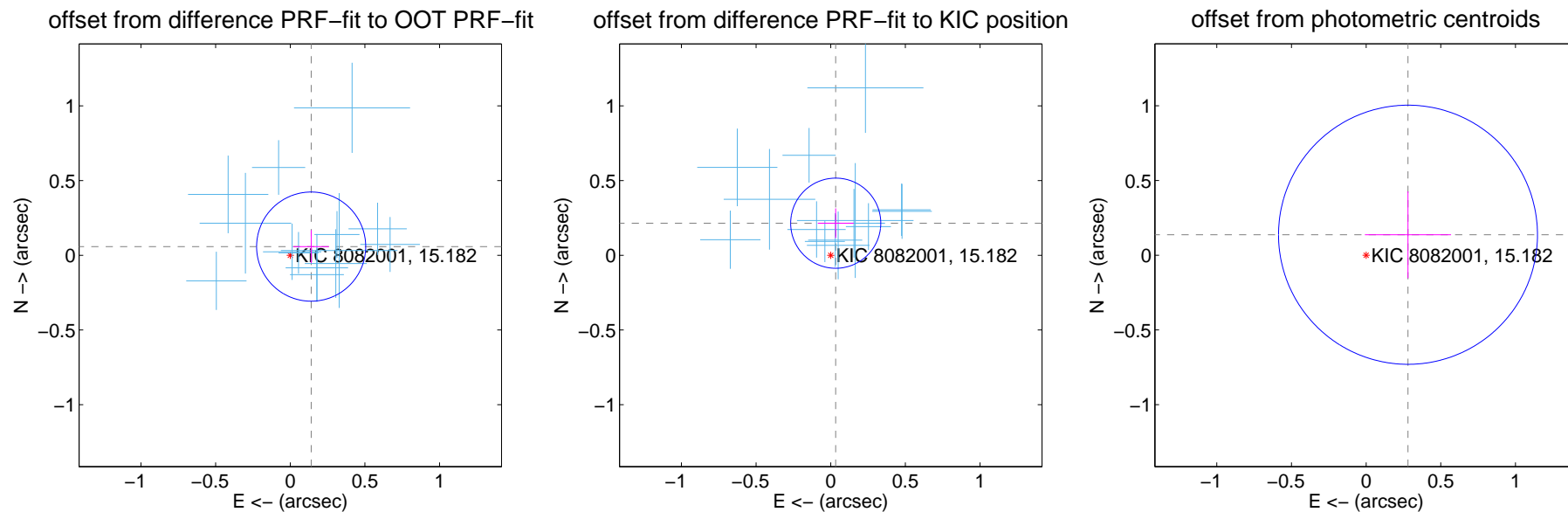
DV Centroid Data

Supplemental centroid analysis for 008082001-01. Kepler magnitude: 15.18. Transit SNR 54.57

There are 14 quarters with good PRF difference image offsets

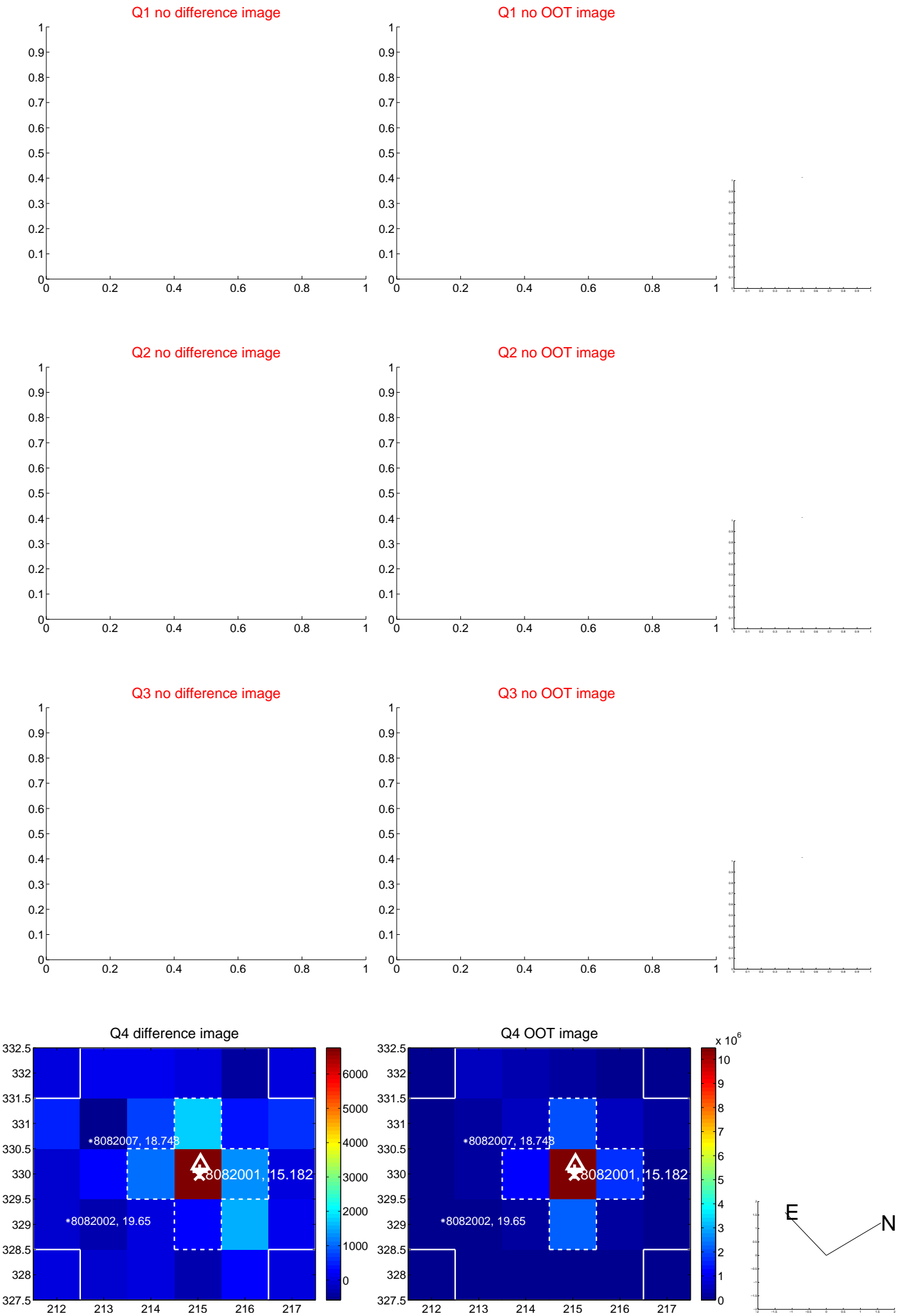
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.122	1.24	-0.140 ± 0.119	0.058 ± 0.110
PRF-fit source offset from KIC position	0.217 ± 0.101	2.16	-0.033 ± 0.120	0.215 ± 0.099
photometric centroid source offset	0.31 ± 0.29	1.08	-0.28 ± 0.29	0.14 ± 0.29

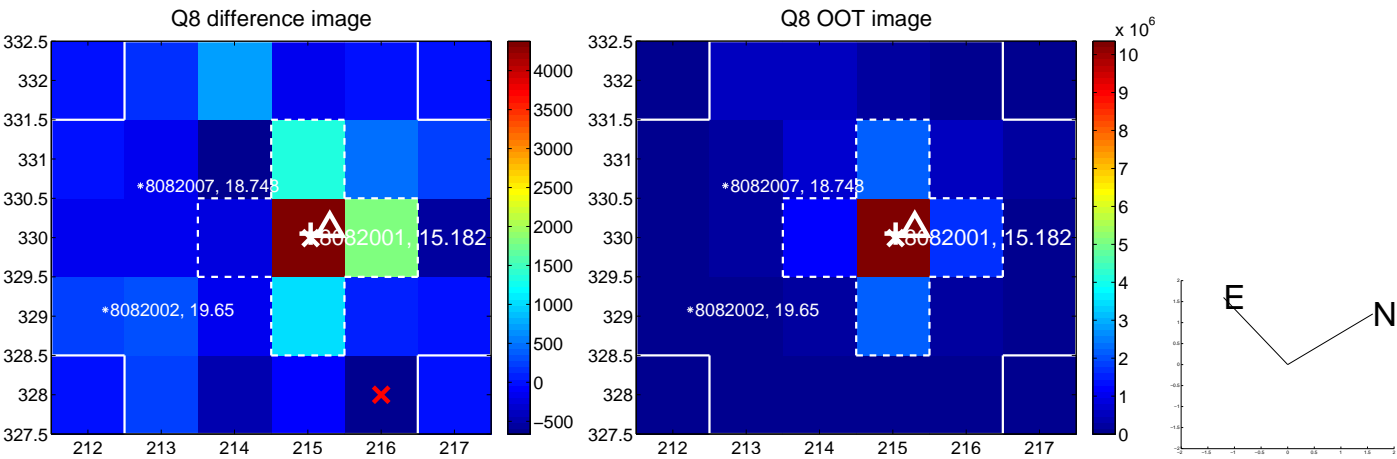
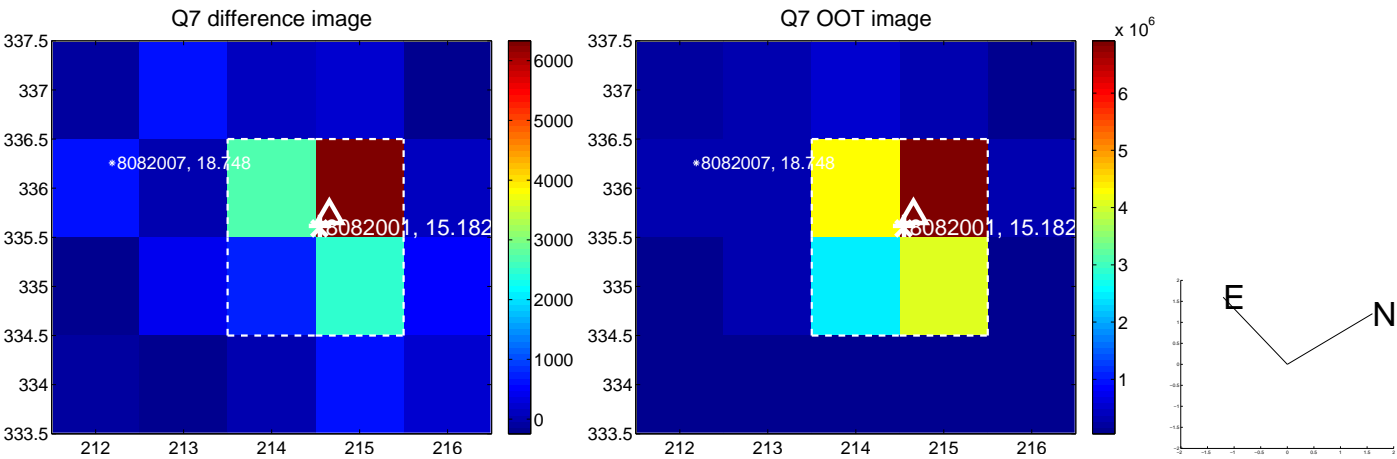
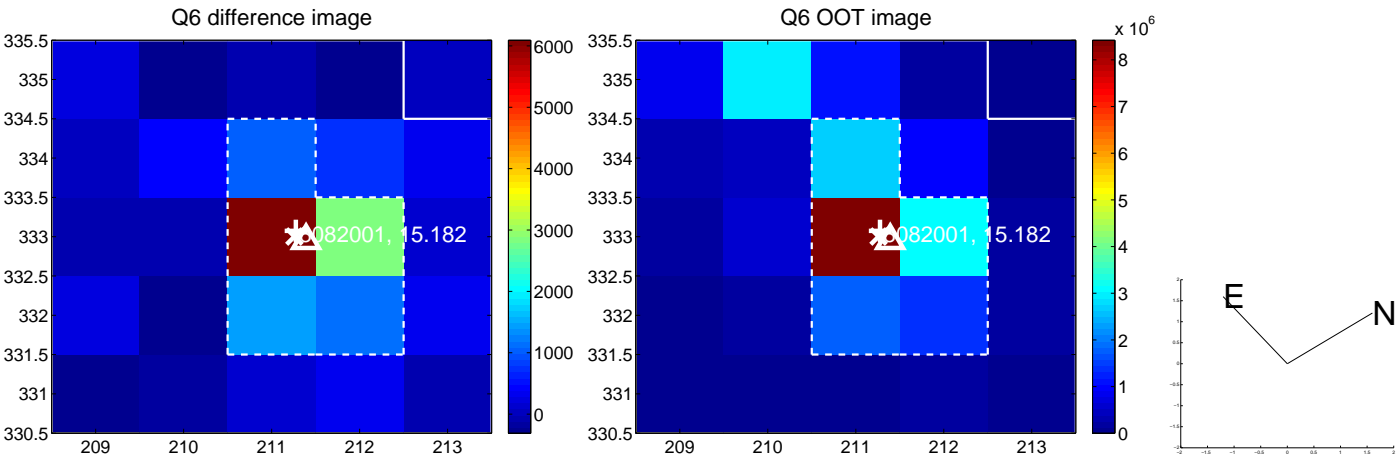
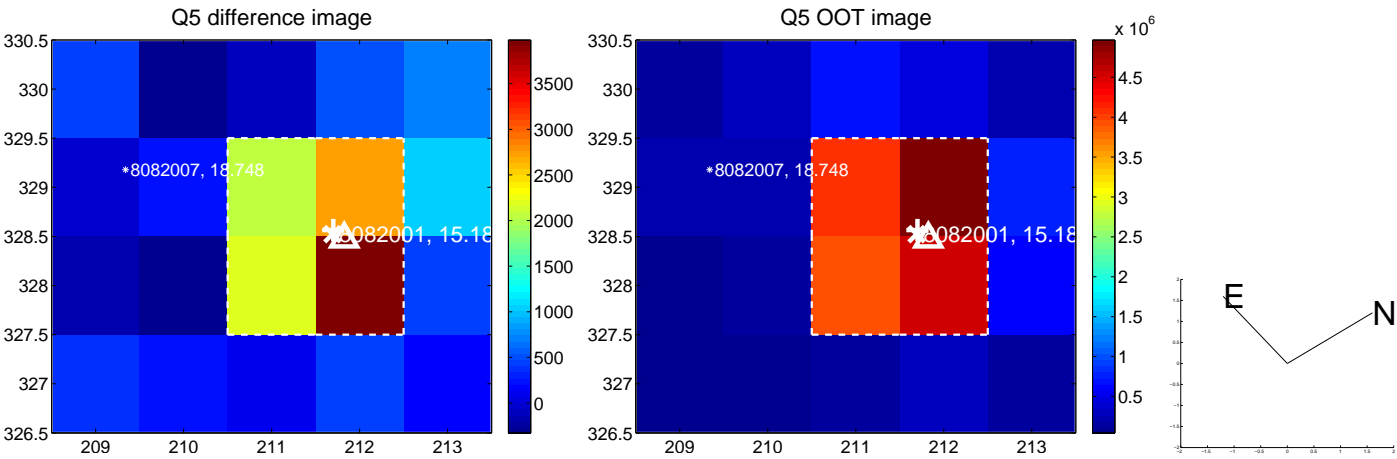


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

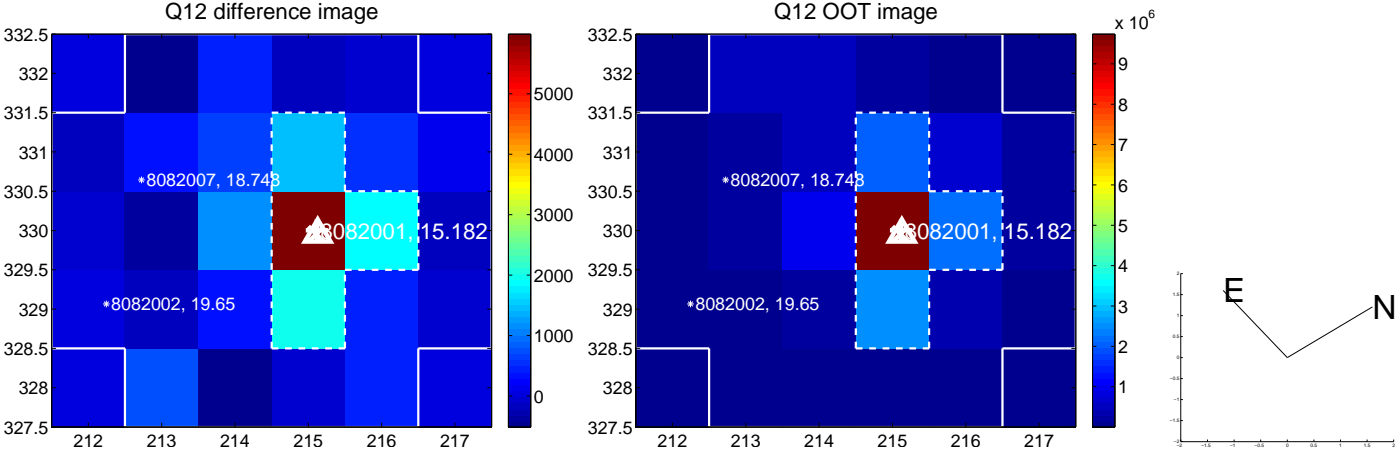
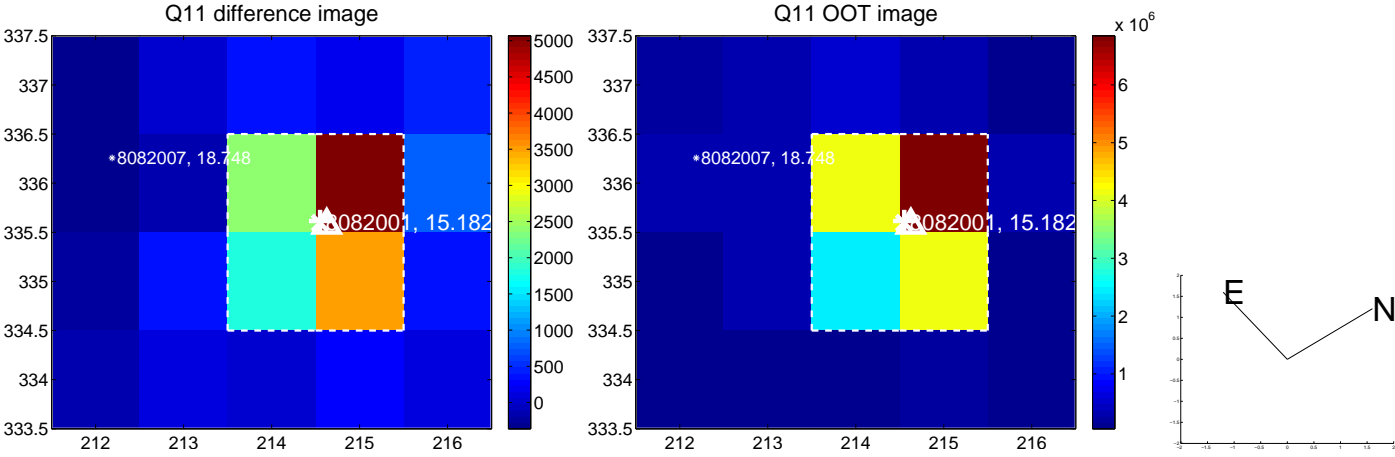
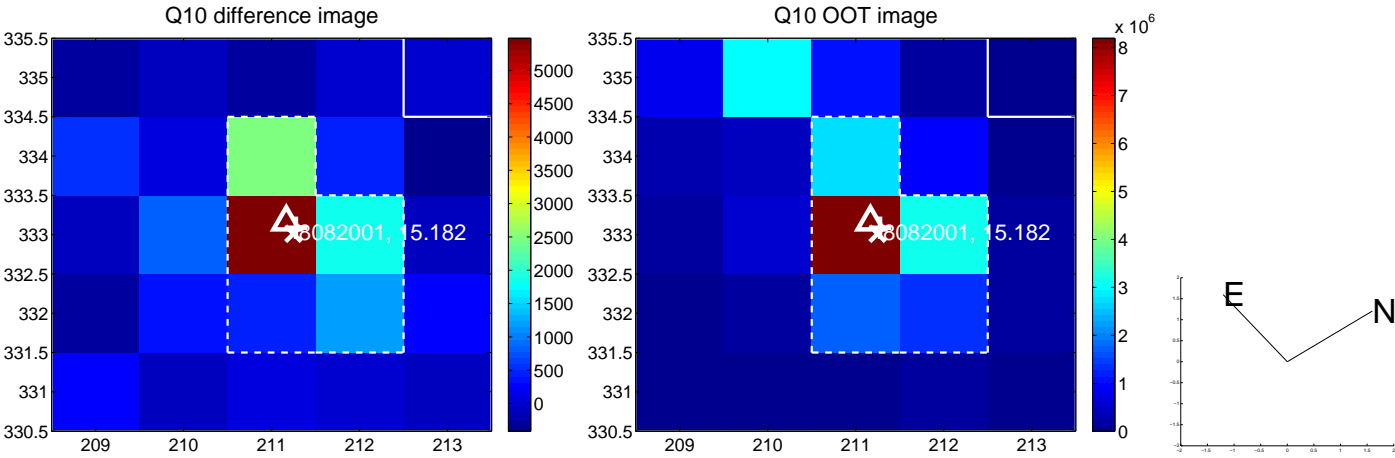
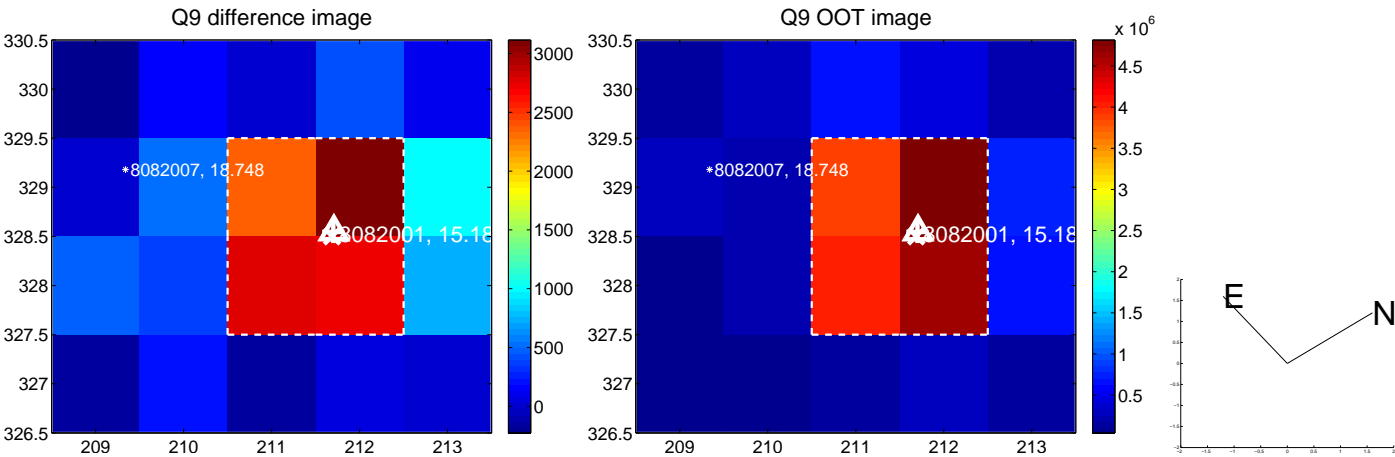
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



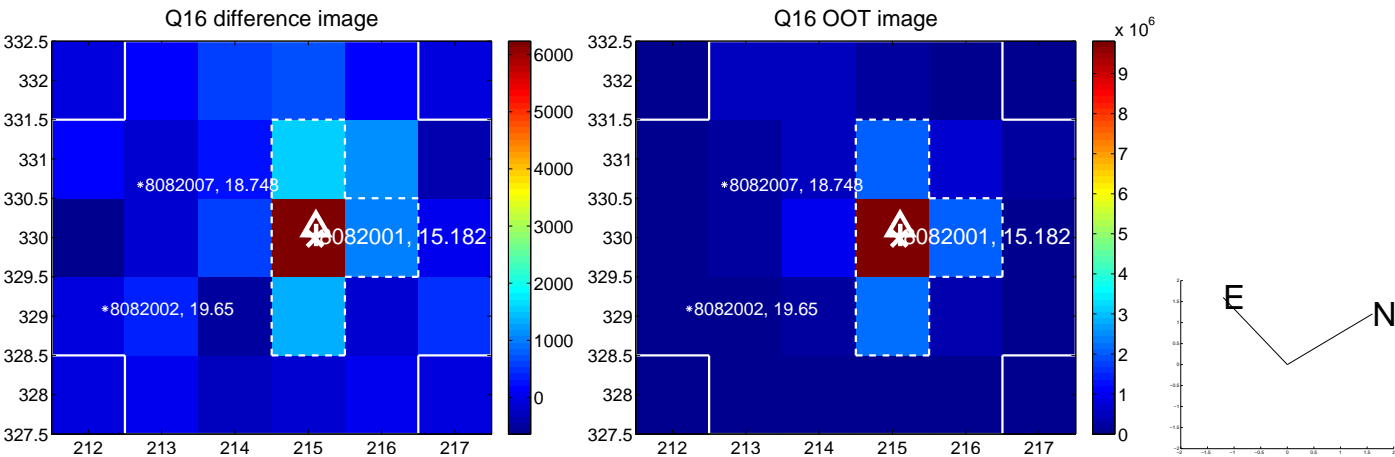
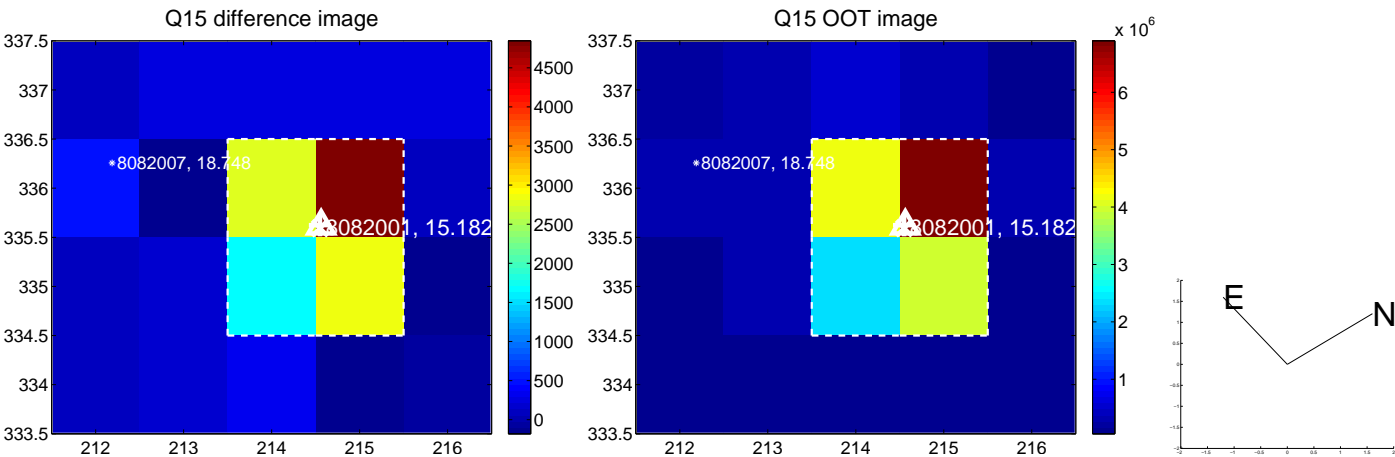
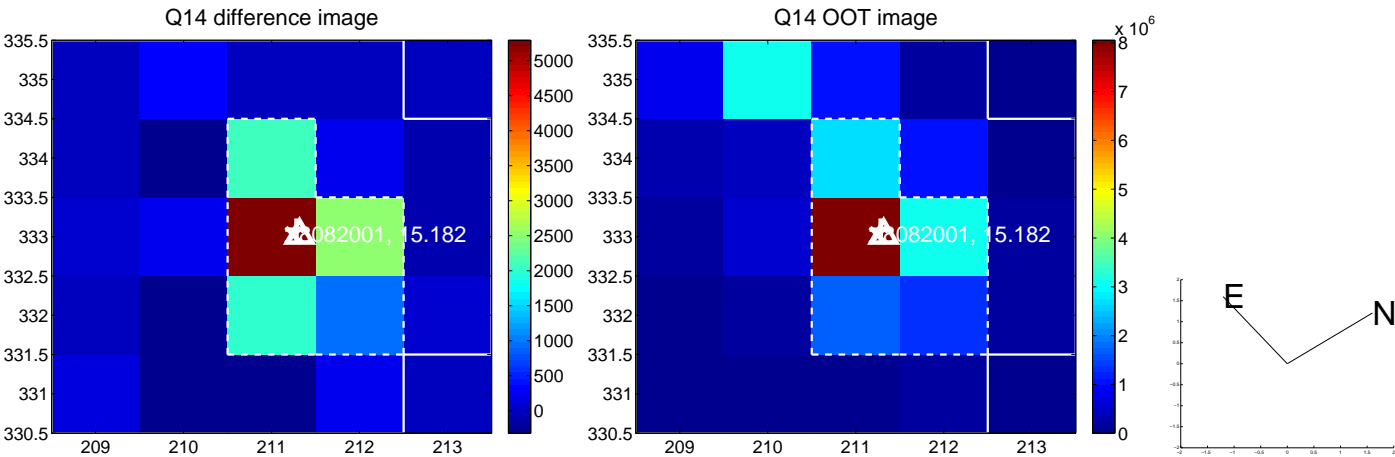
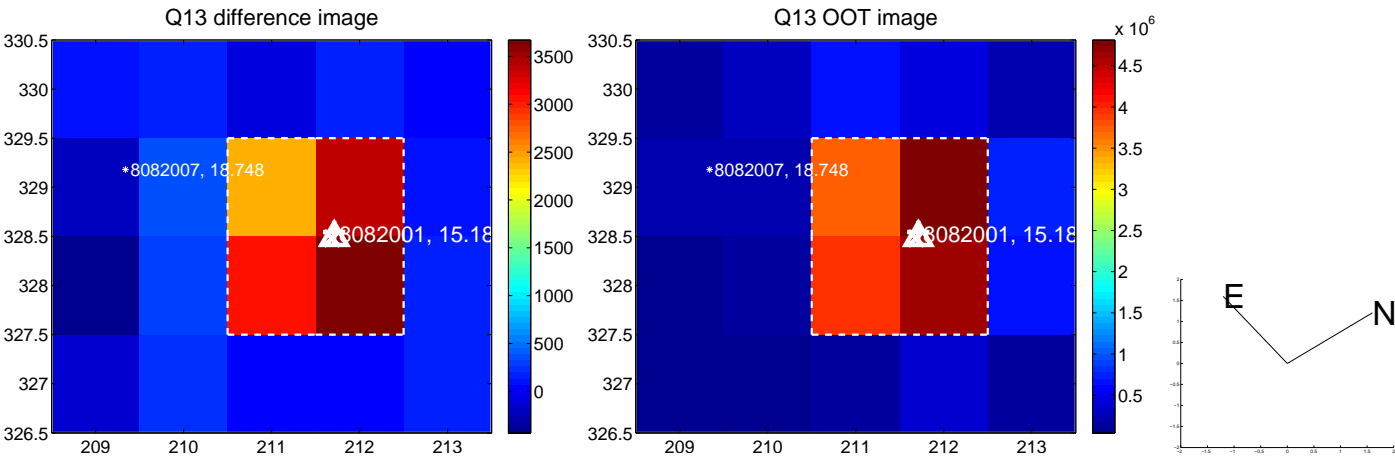
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



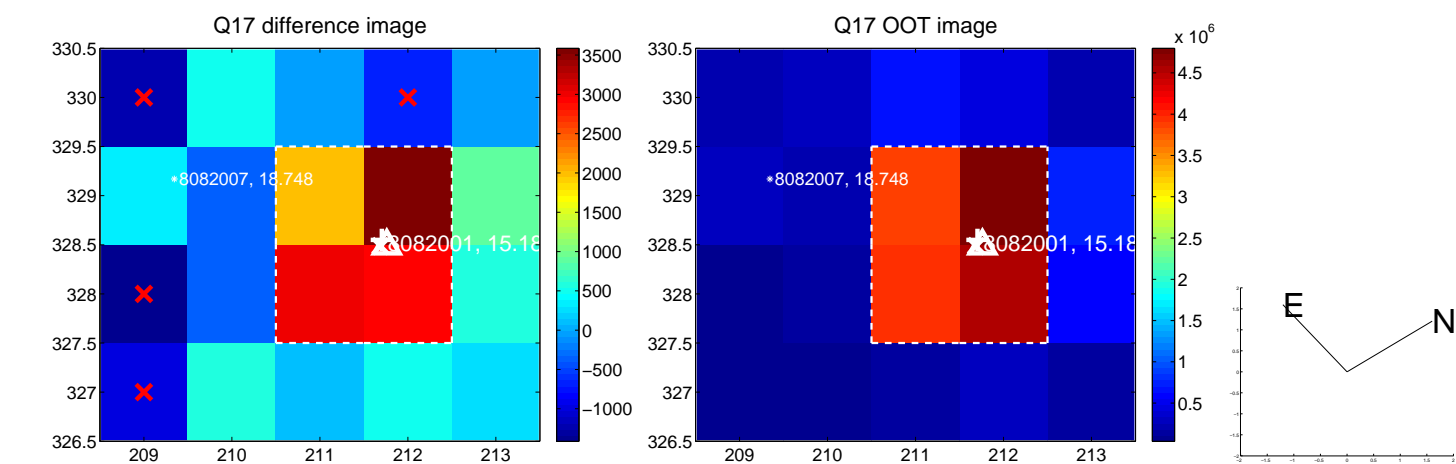
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



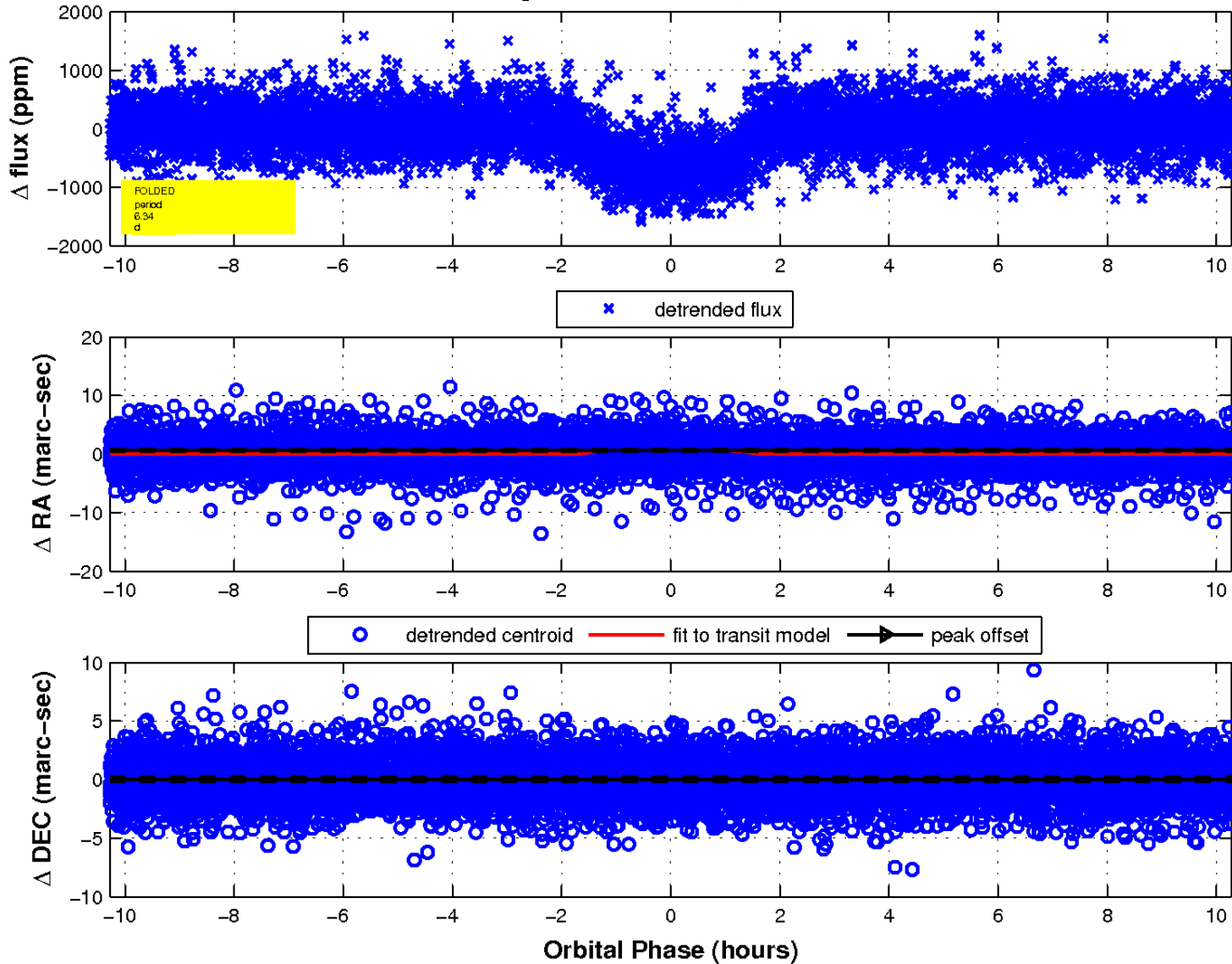
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

