

KIC 008183288

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})
008183288-01	OBS	3255.01	66.650485	171.180863	532.3	5.946	21.1	23.4	0.68	4550	1.81	2.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008183288-01	OBS	PC	0.95	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.

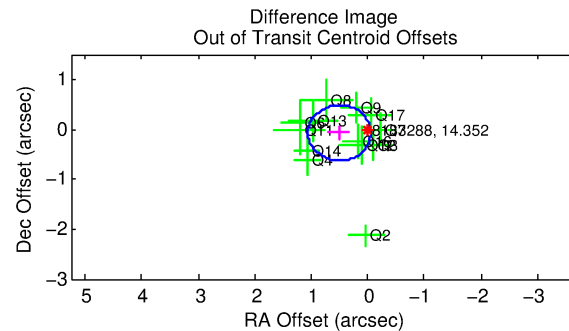
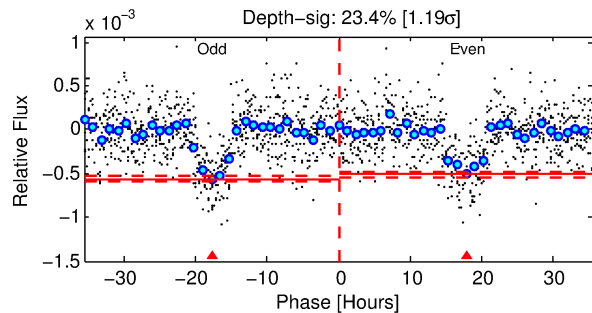
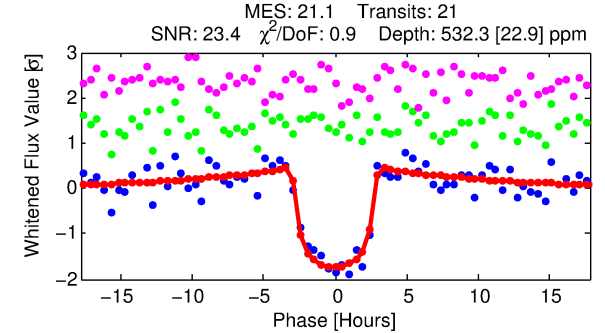
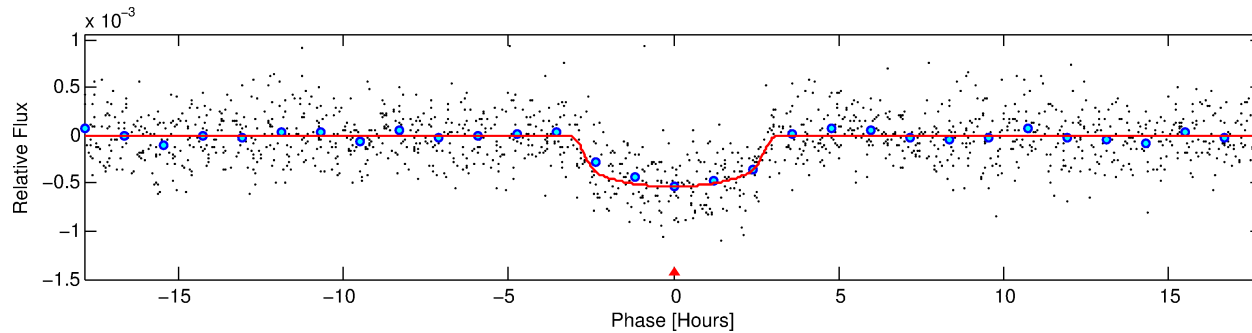
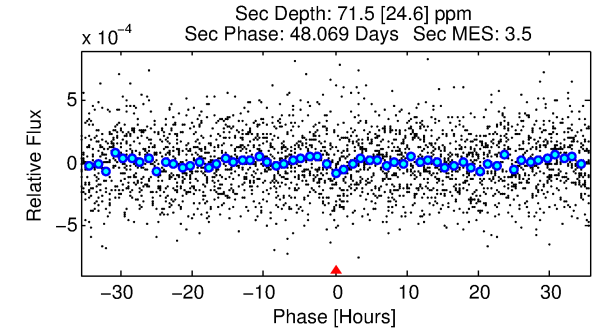
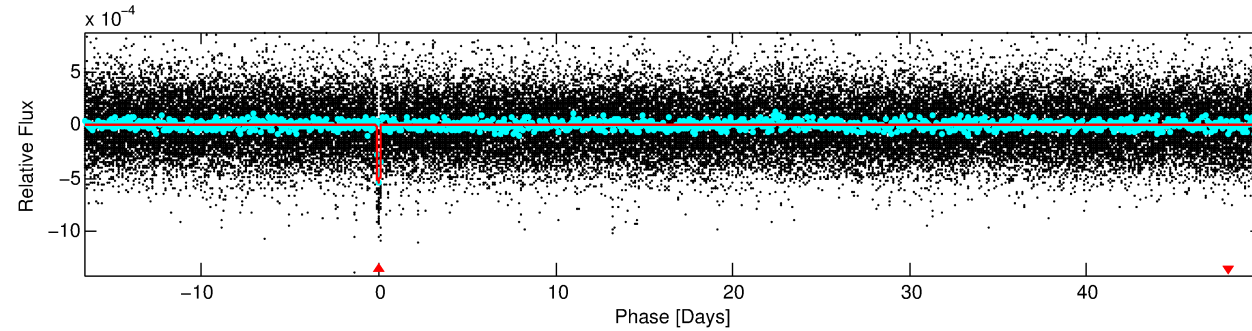
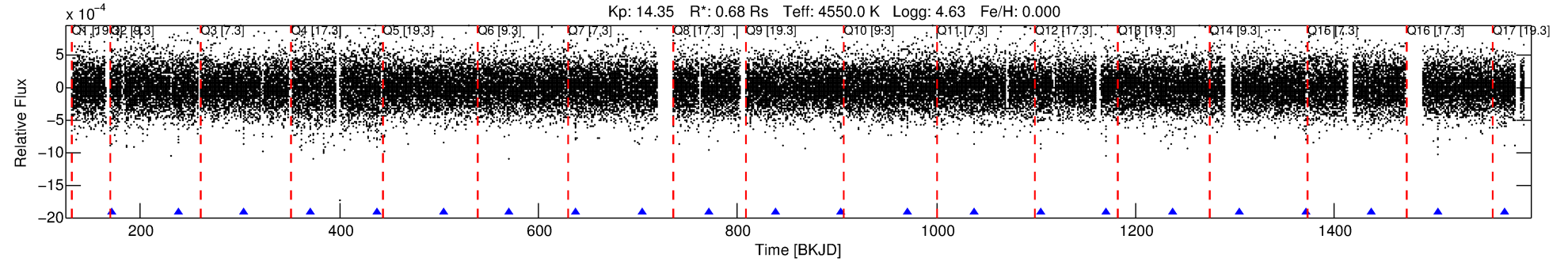
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008183288-01

No Significant Match Found

DV One-Page Summary

KIC: 8183288 Candidate: 1 of 1 Period: 66.650 d
KOI: K03255.01 Name: Kepler-437b Corr: 0.972



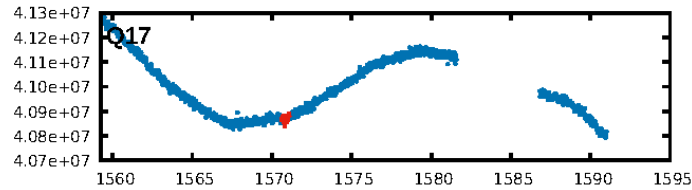
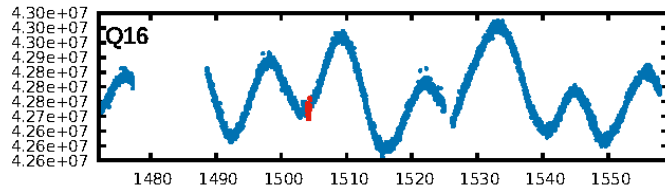
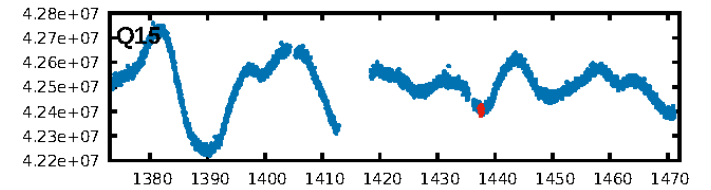
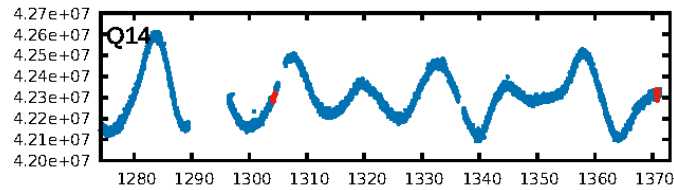
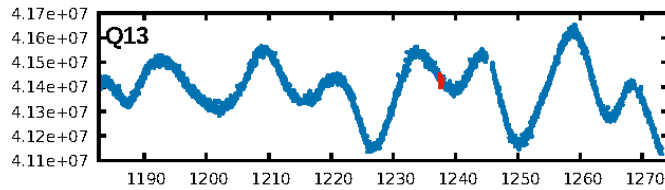
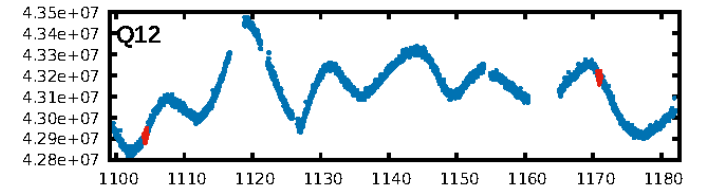
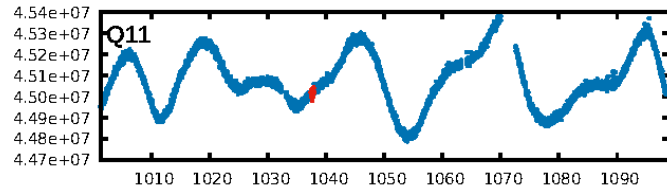
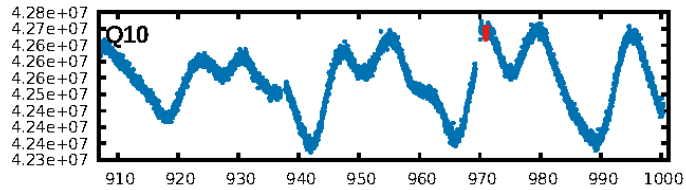
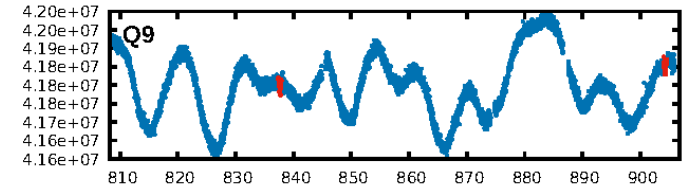
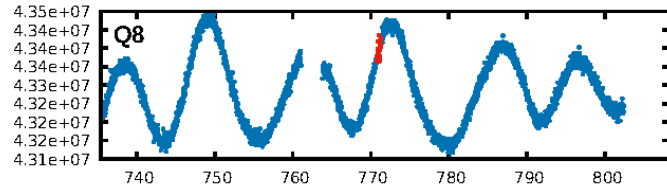
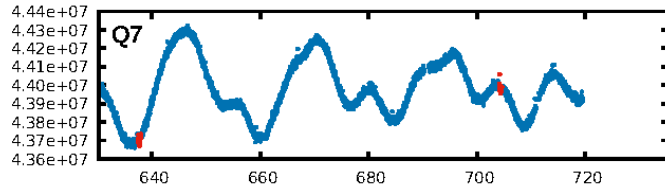
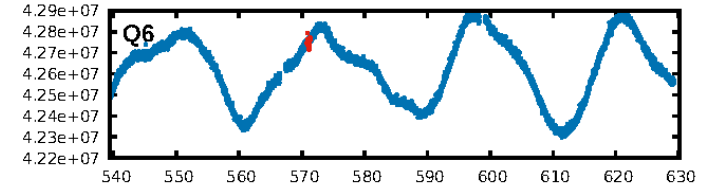
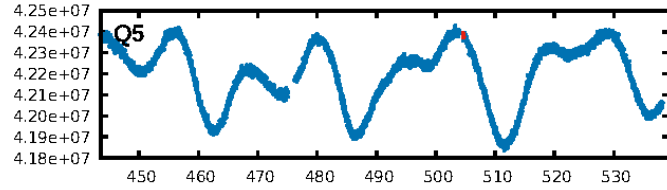
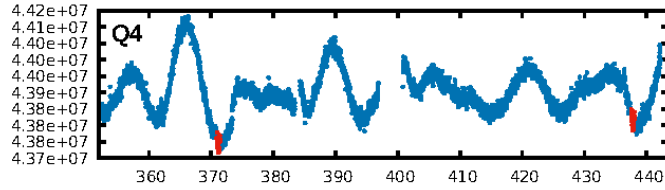
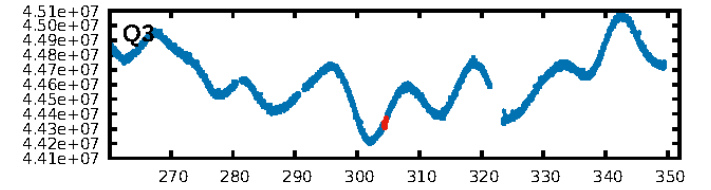
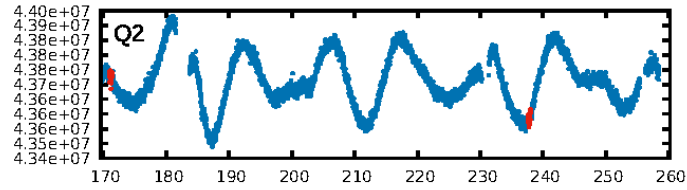
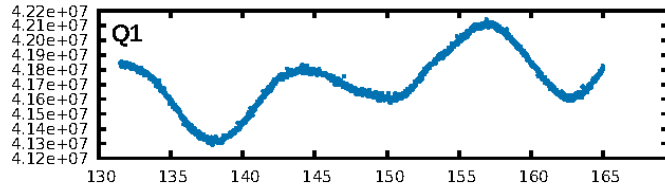
DV Fit Results:

Period = 66.65048 [0.00038] d
Epoch = 171.1809 [0.0051] BKJD
Rp/R* = 0.0244 [0.0043]
a/R* = 50.90 [30.42]
b = 0.83 [0.22]
Seff = 2.14 [0.19]
Teq = 309 [7] K
Rp = 1.81 [0.33] Re
a = 0.2874 [0.0114] AU
Ag = 992.91 [493.90] [2.01σ]
Teffp = 2678 [334] K [7.09σ]

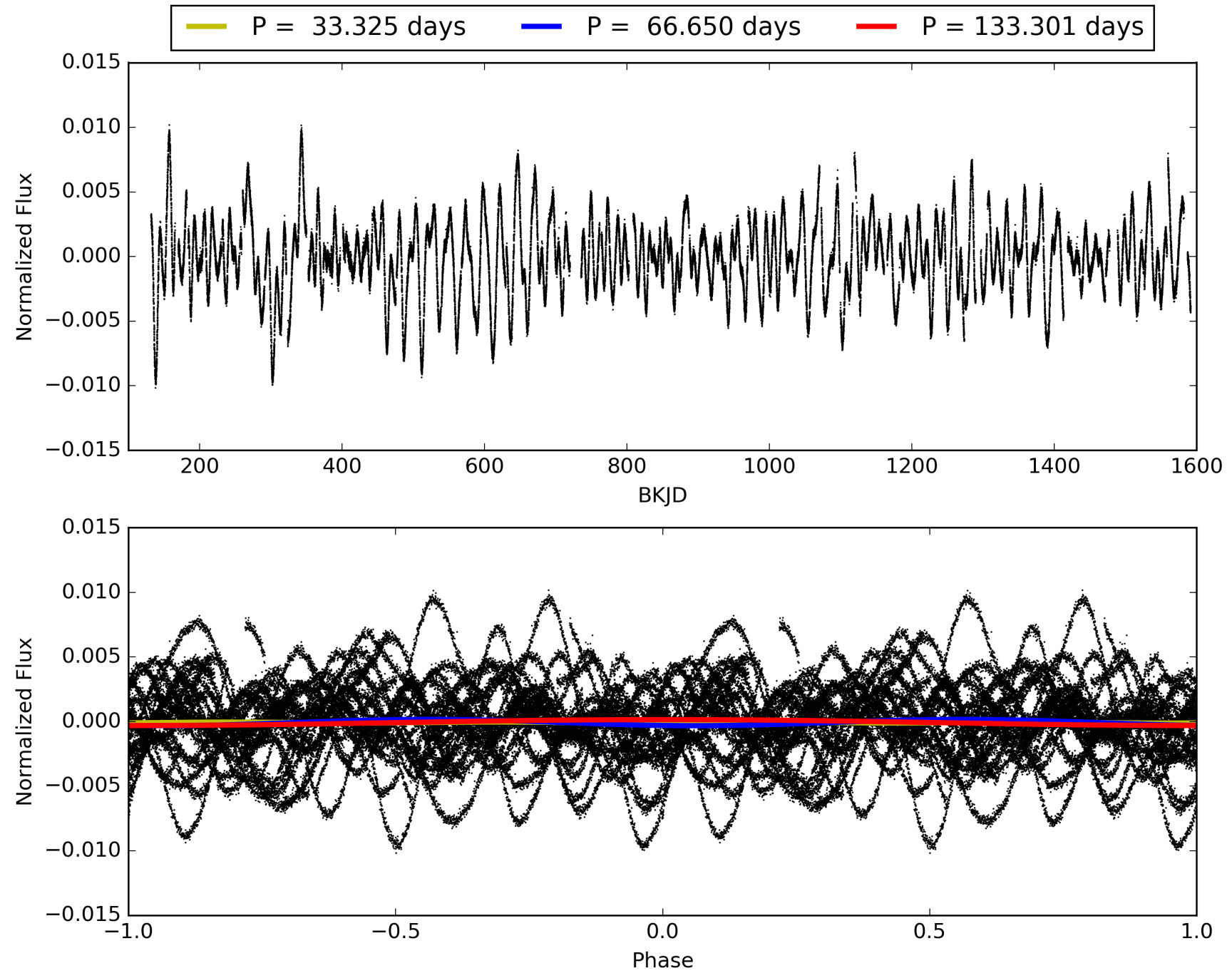
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.43e-66
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 3.022
Centroid-sig: 9.8%
Centroid-so: 0.491 arcsec [1.05σ]
OotOffset-rm: 0.511 arcsec [2.76σ]
KicOffset-rm: 0.429 arcsec [2.43σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 008183288-01, PDC Light Curves

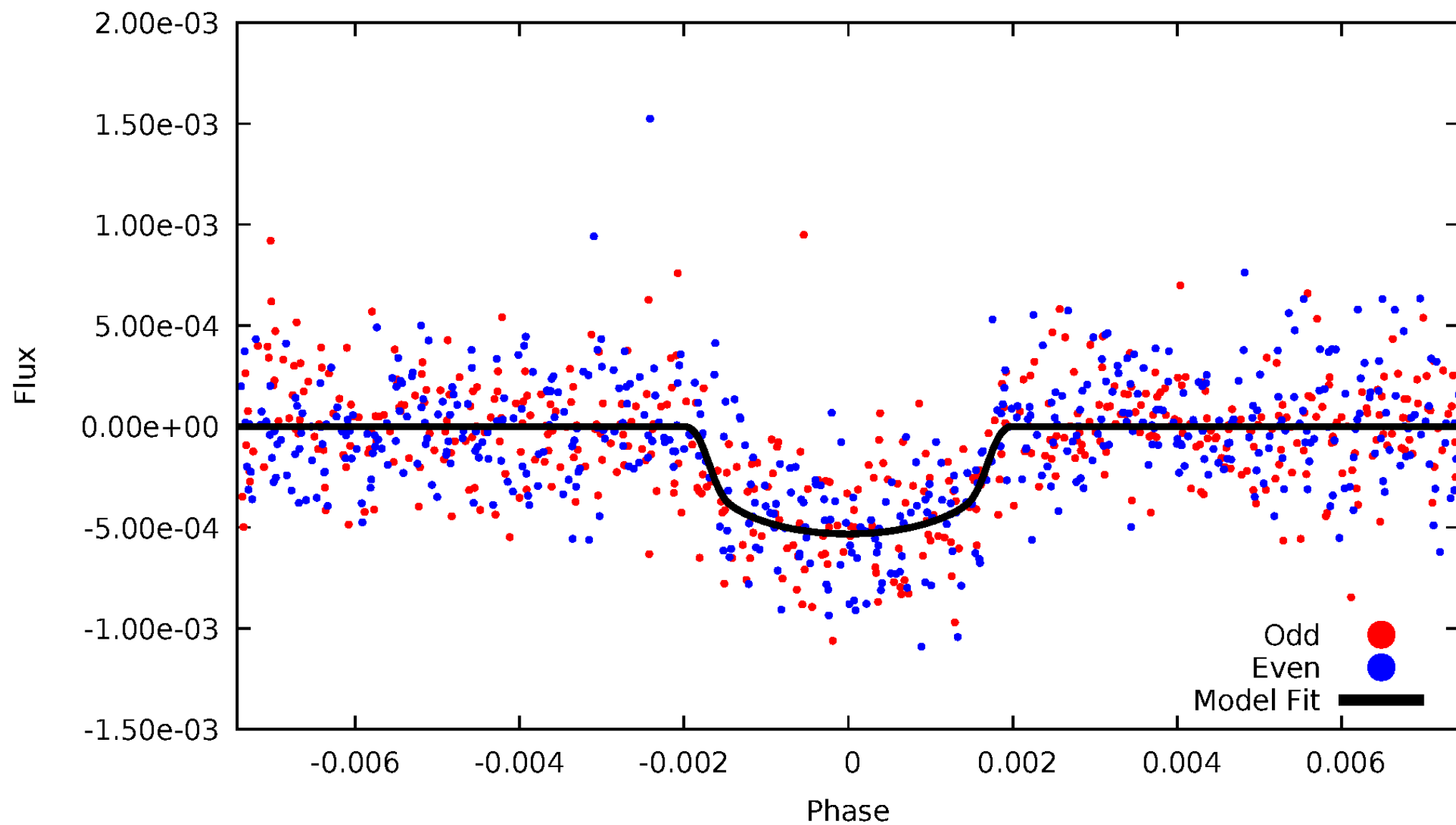


TCE 008183288-01



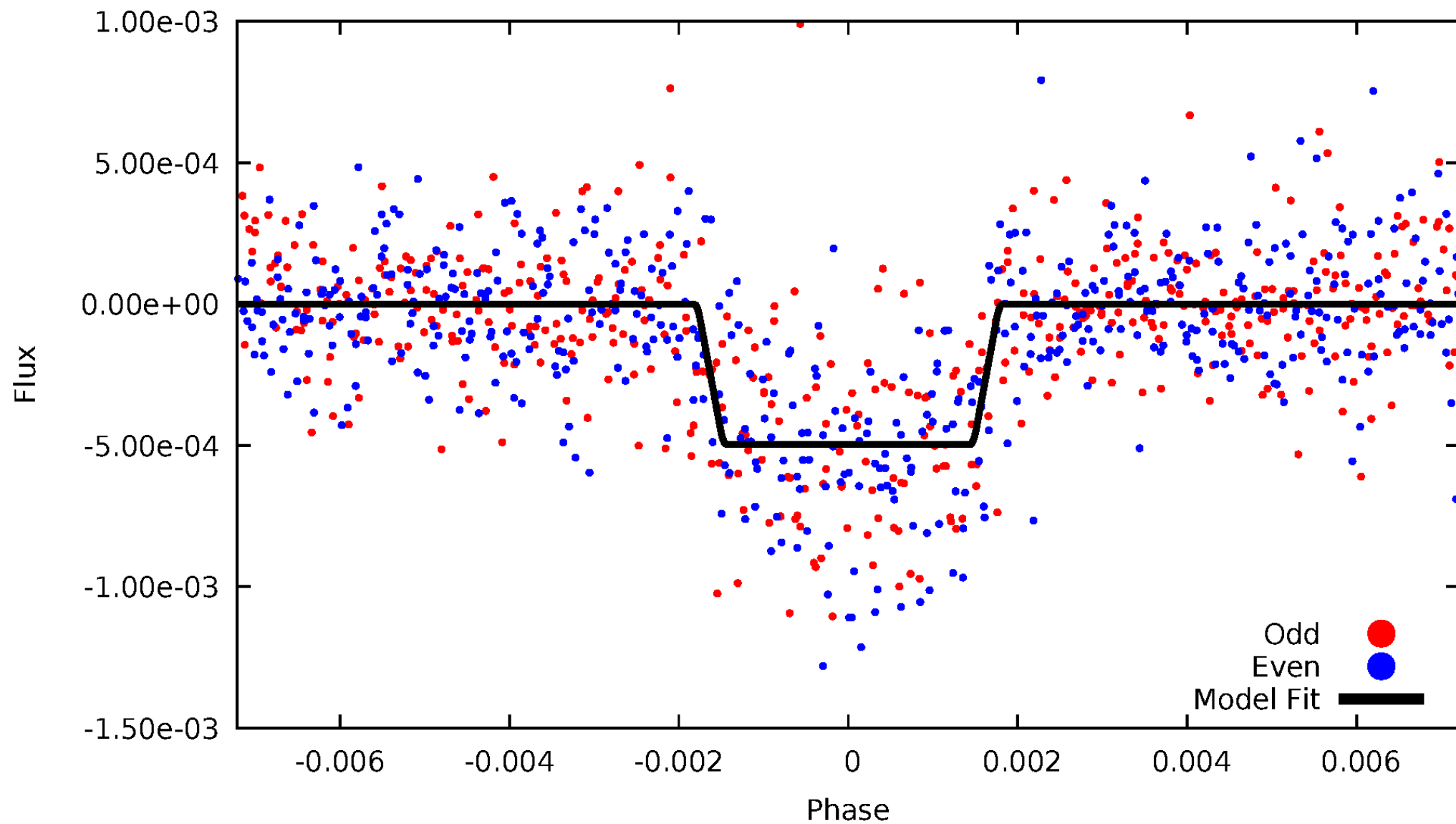
DV Odd/Even

TCE 008183288-01



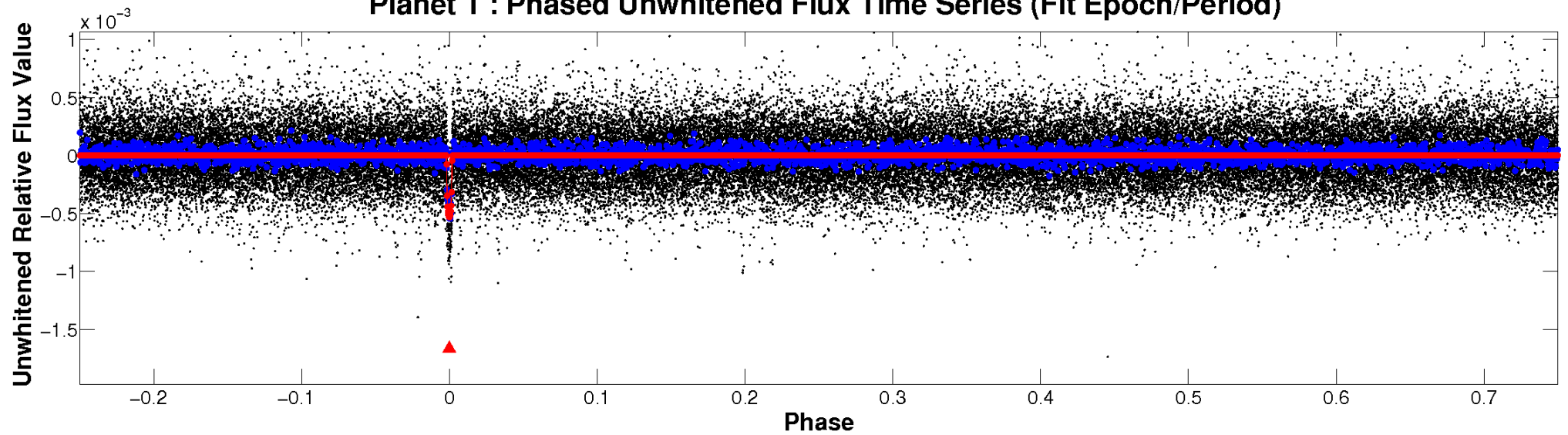
ALT Odd/Even

TCE 008183288-01

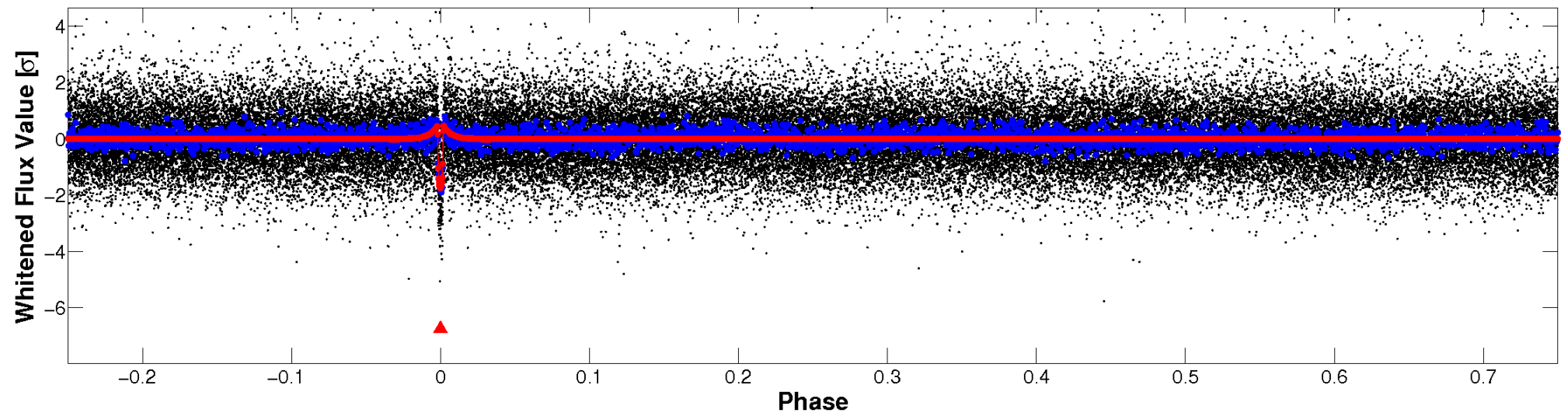


Non-Whitened Vs. Whitened Light Curve

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

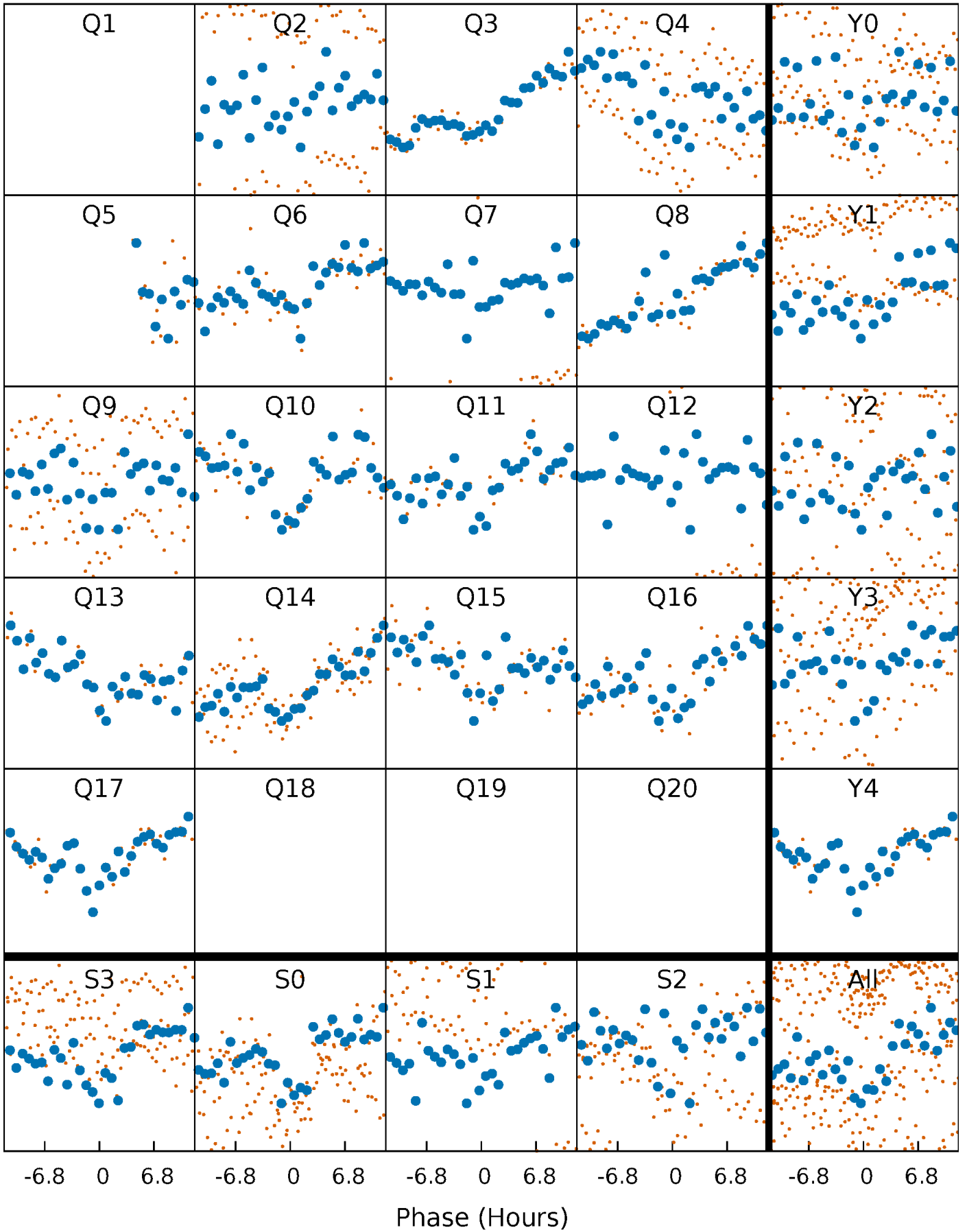


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



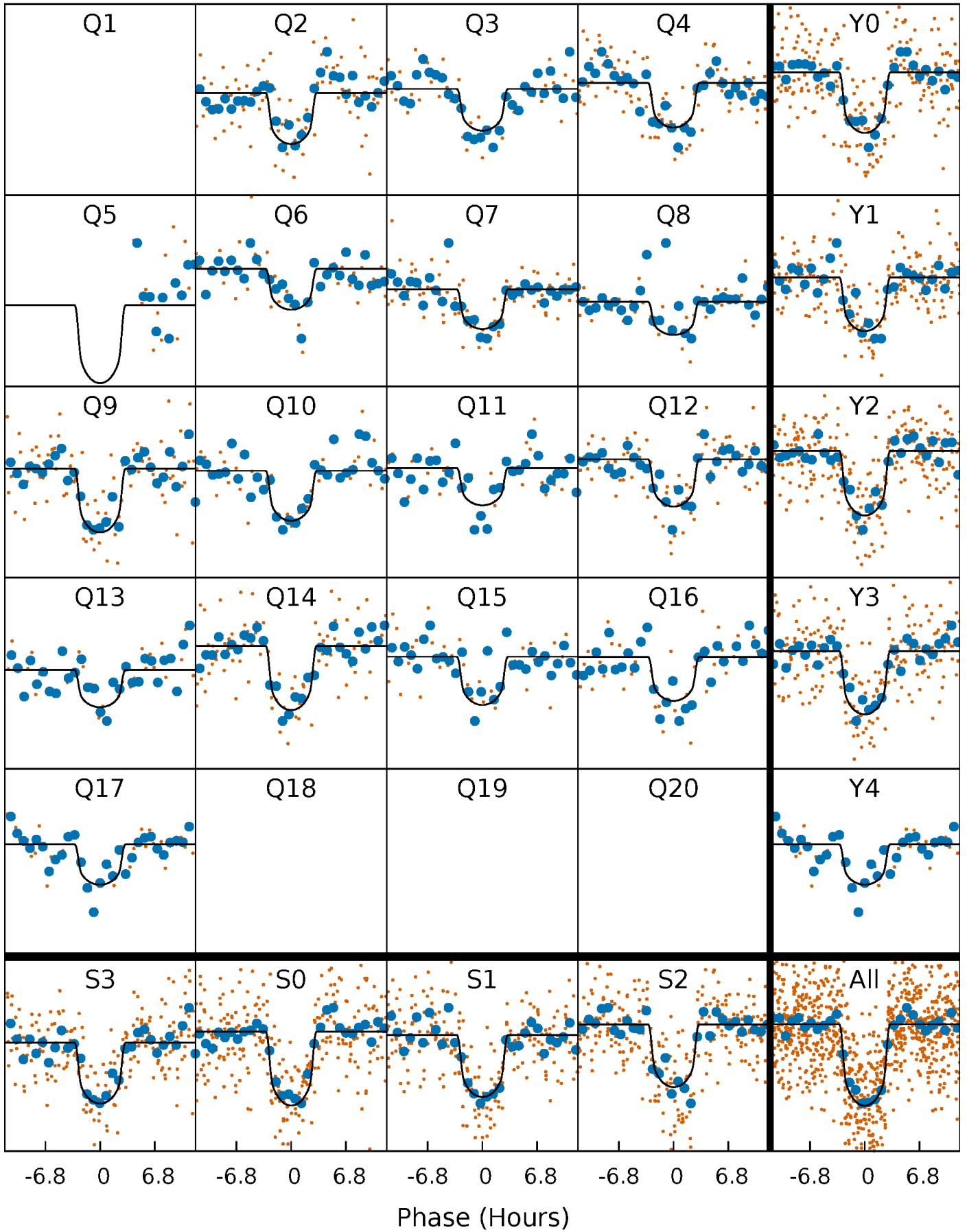
PDC Quarter-Phased Transit Curves

TCE 008183288-01 P= 66.650485 Days $T_0=171.180863$ (BKJD)



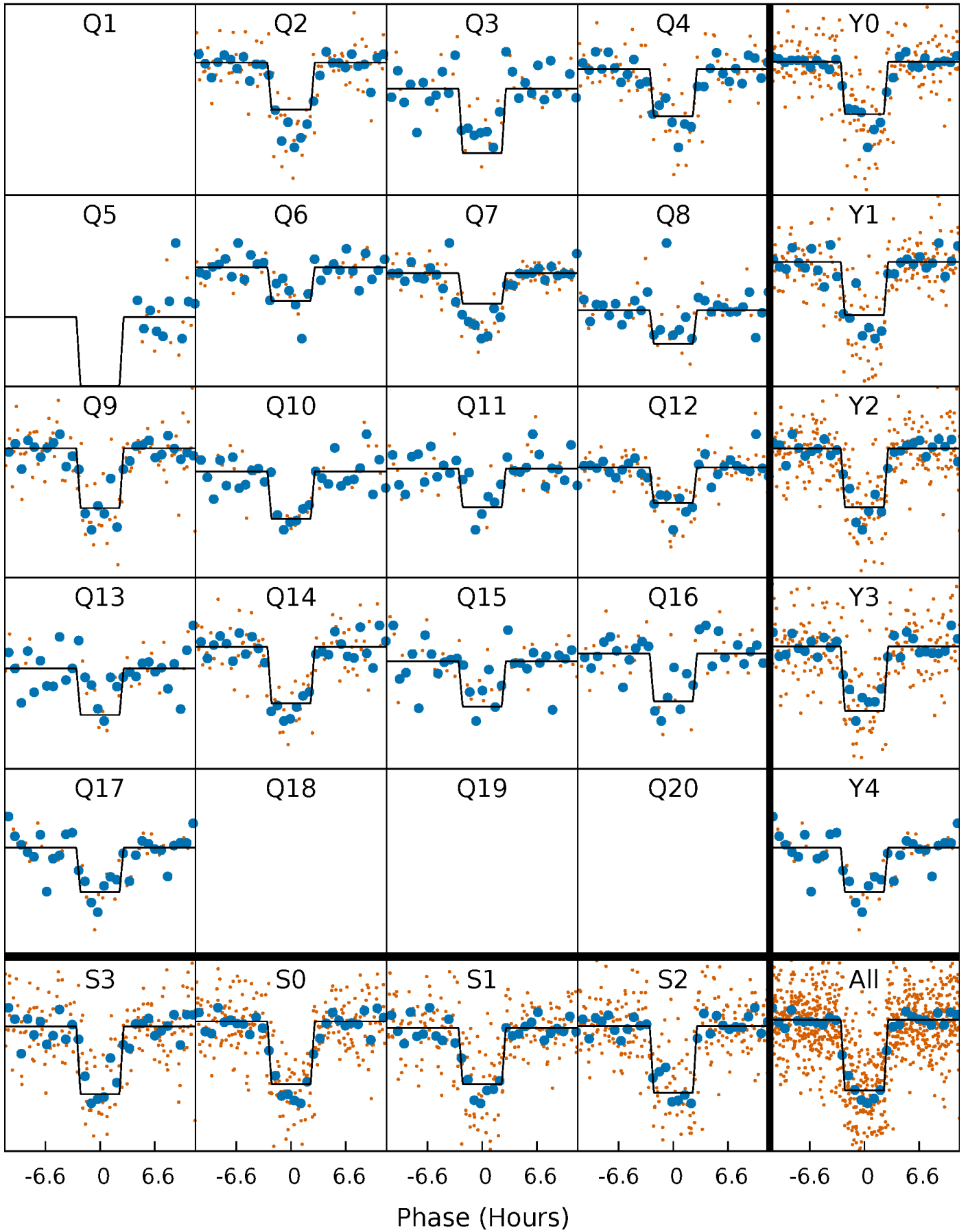
DV Quarter-Phased Transit Curves

TCE 008183288-01 P= 66.650485 Days $T_0=171.180863$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

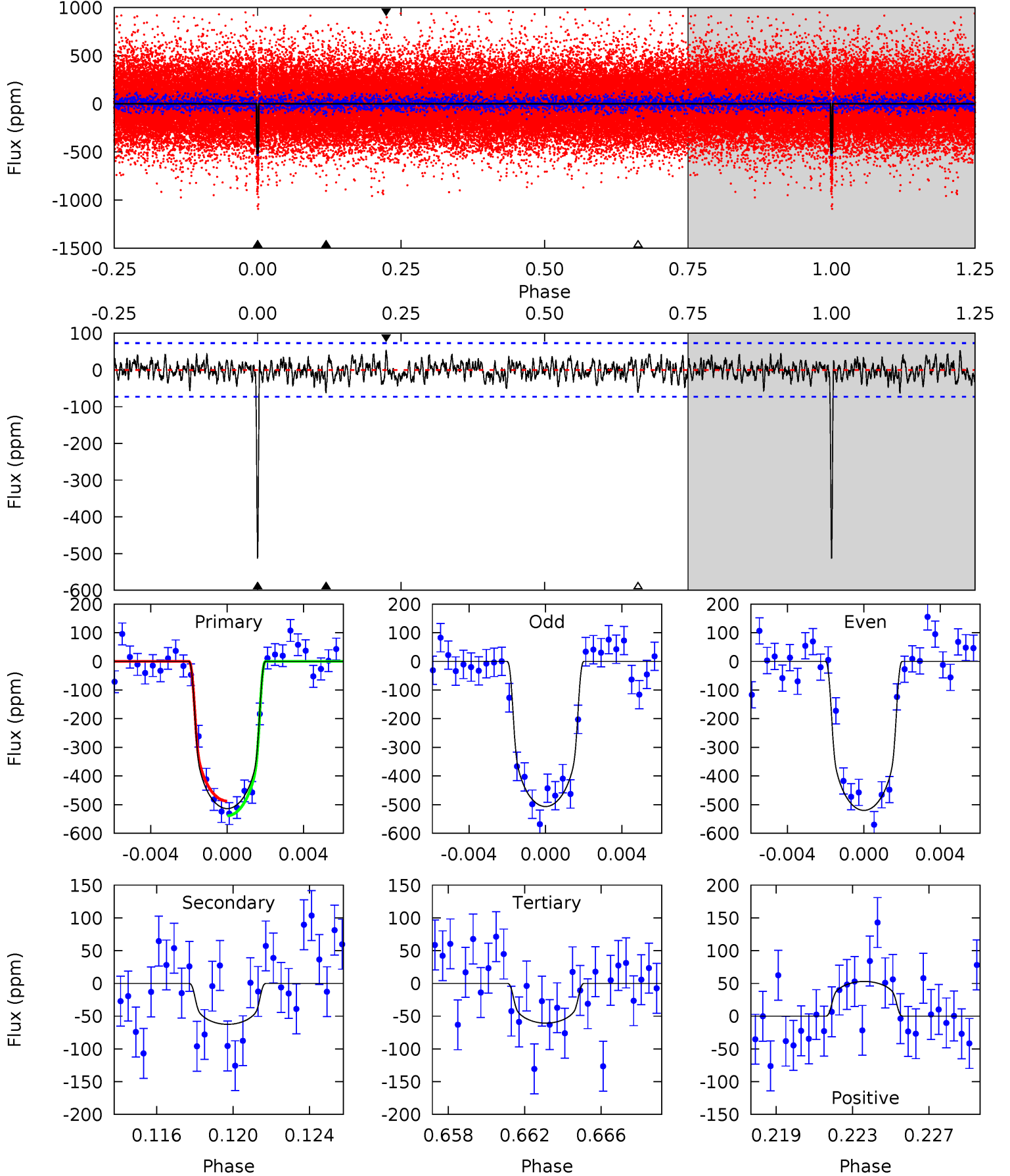
TCE 008183288-01 P= 66.650170 Days $T_0=171.185424$ (BKJD)



DV Model-Shift Uniqueness Test

008183288-01, P = 66.650485 Days, E = 104.530378 Days

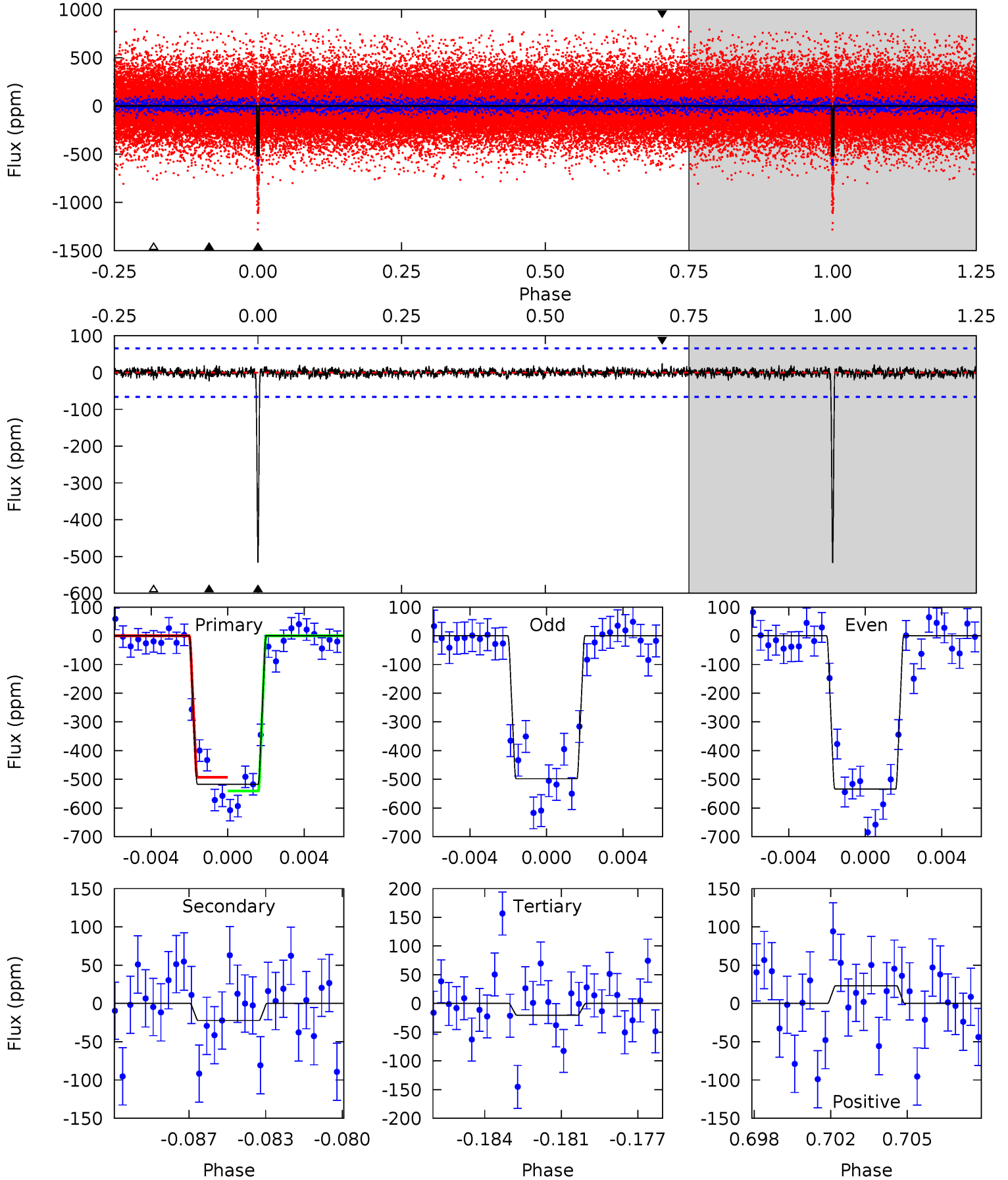
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.5	4.45	4.32	3.76	5.20	2.88	1.29	32.2	32.8	0.13	0.68	0.48	1.01	0.09	1.83



Alt Model-Shift Uniqueness Test

008183288-01, P = 66.650170 Days, E = 104.535254 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.8	1.76	1.62	1.83	5.22	2.91	0.49	39.2	39.0	0.14	-0.07	1.43	1.08	0.04	1.89



Stellar Parameters For KIC 008183288

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4550^{+81}_{-81}	$4.627^{+0.020}_{-0.030}$	$0.000^{+0.150}_{-0.150}$	$0.679^{+0.033}_{-0.027}$	$0.713^{+0.031}_{-0.035}$	$3.205^{+0.314}_{-0.346}$
	+2%/-2%	+0%/-1%	+inf%/-inf%	+5%/-4%	+4%/-5%	+10%/-11%
Source	SPE85	SPE85	SPE85	DSEP		

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

Secondary Eclipse Parameters for KIC 008183288-01 / KOI 3255.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 14	$1.81^{+0.31}_{-0.33}$	432^{+10}_{-8}	3132^{+195}_{-192}	885^{+448}_{-320}
Alt.	-22 ± 13	$1.66^{+0.34}_{-0.31}$	433^{+9}_{-9}	2755^{+240}_{-271}	350^{+301}_{-191}

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

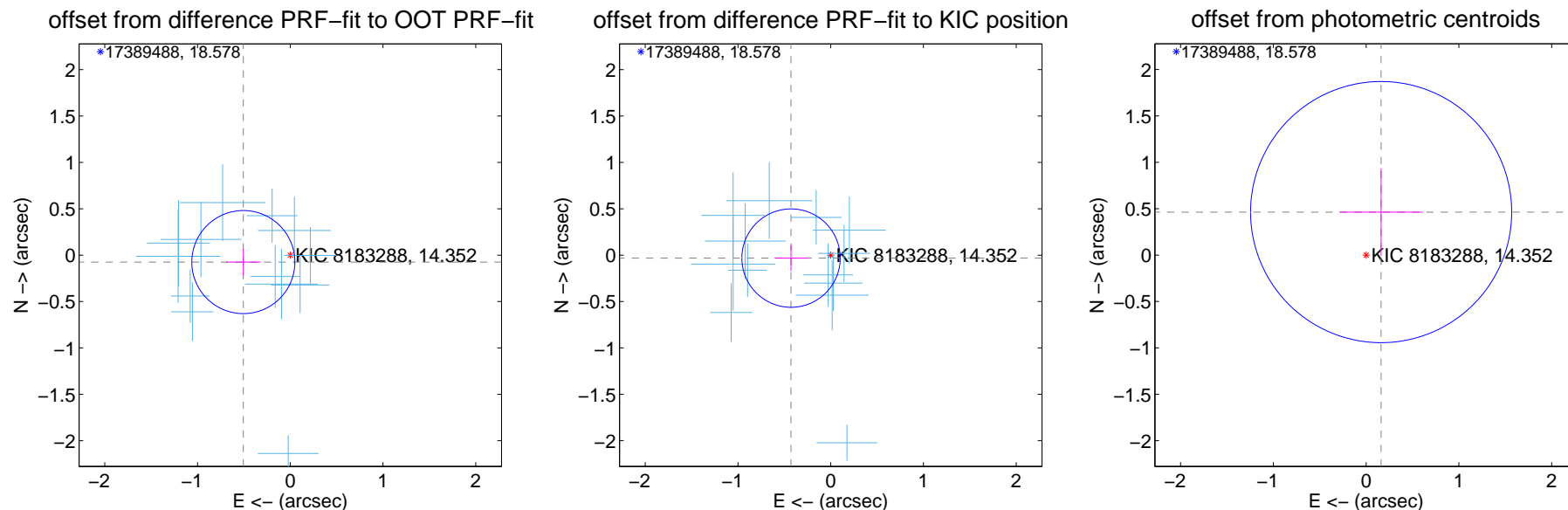
DV Centroid Data

Supplemental centroid analysis for 008183288-01. Kepler magnitude: 14.35. Transit SNR 23.40

There are 13 quarters with good PRF difference image offsets

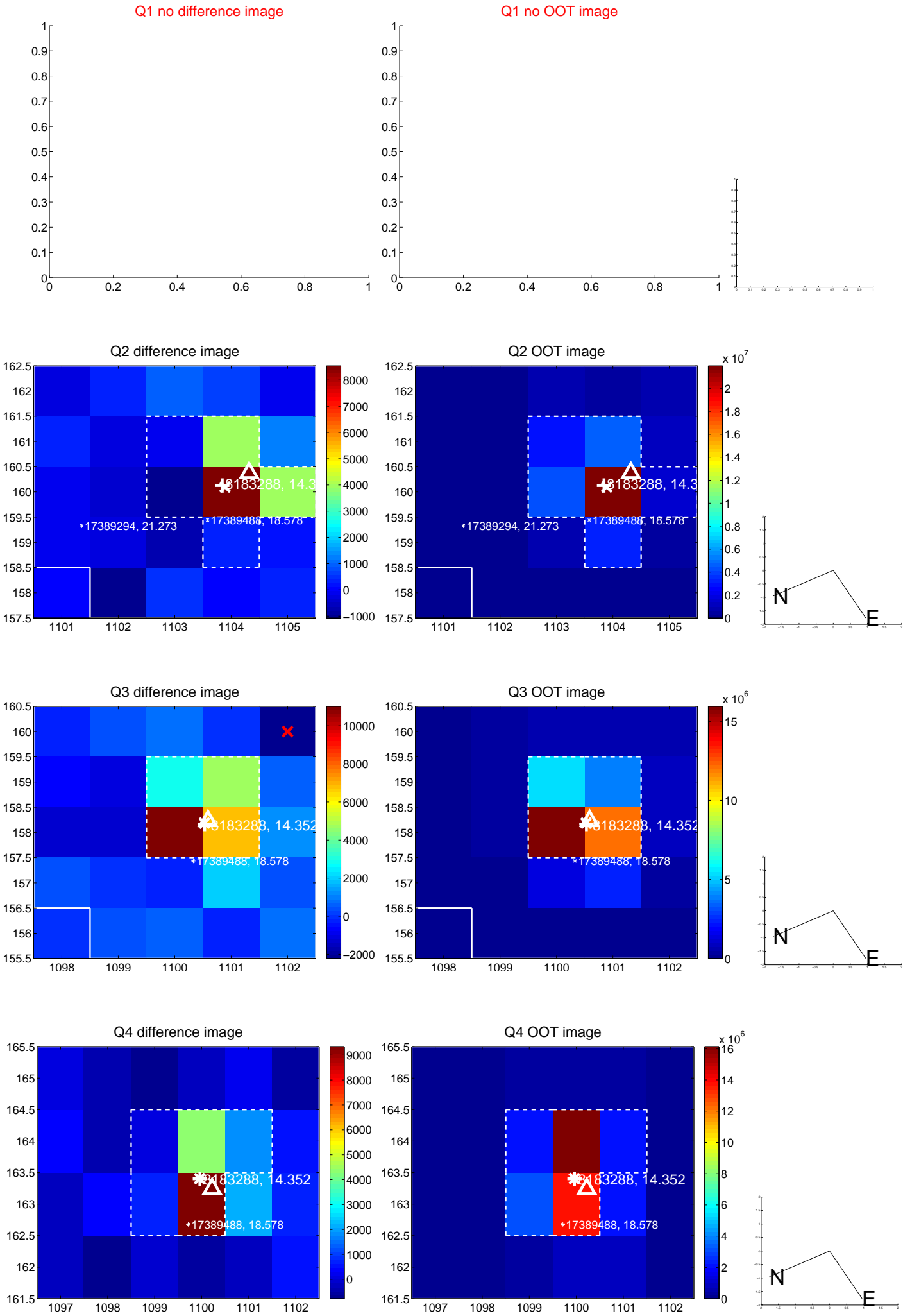
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.511 ± 0.185	2.76	0.506 ± 0.186	-0.075 ± 0.142
PRF-fit source offset from KIC position	0.429 ± 0.177	2.43	0.428 ± 0.177	-0.032 ± 0.139
photometric centroid source offset	0.49 ± 0.47	1.05	-0.16 ± 0.45	0.46 ± 0.47

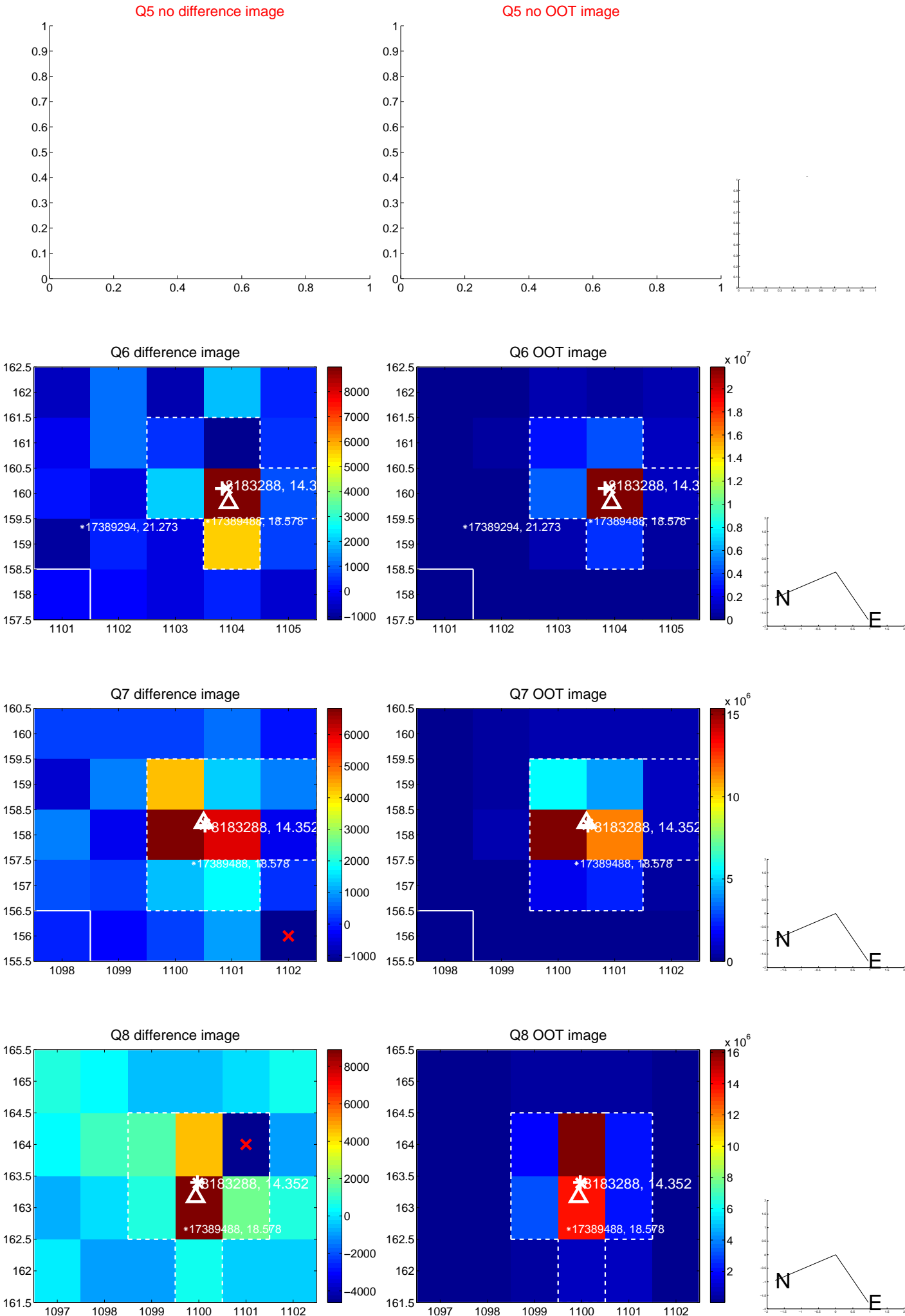


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

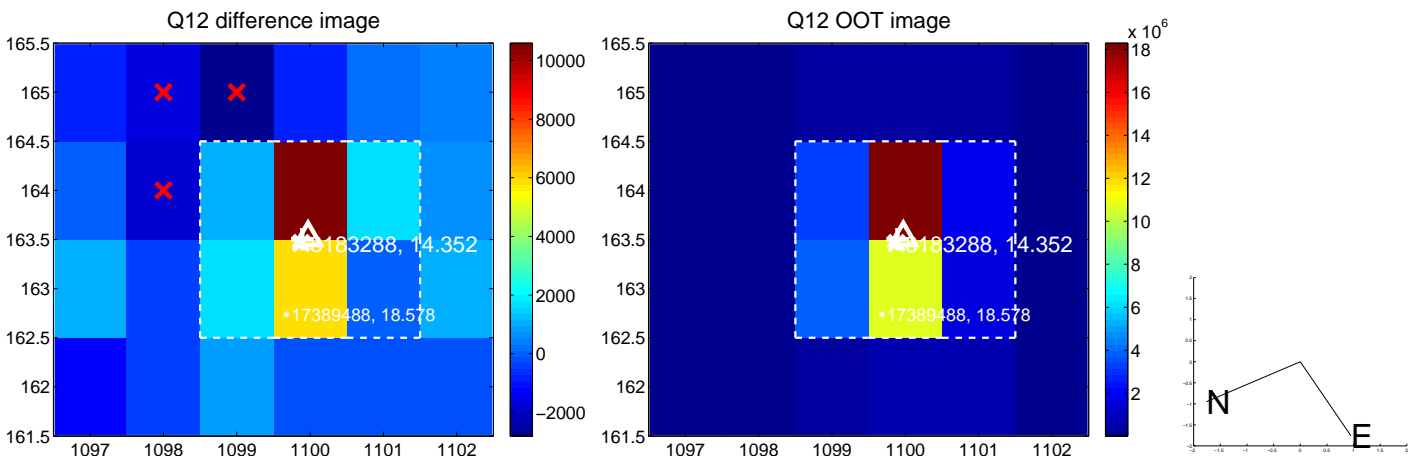
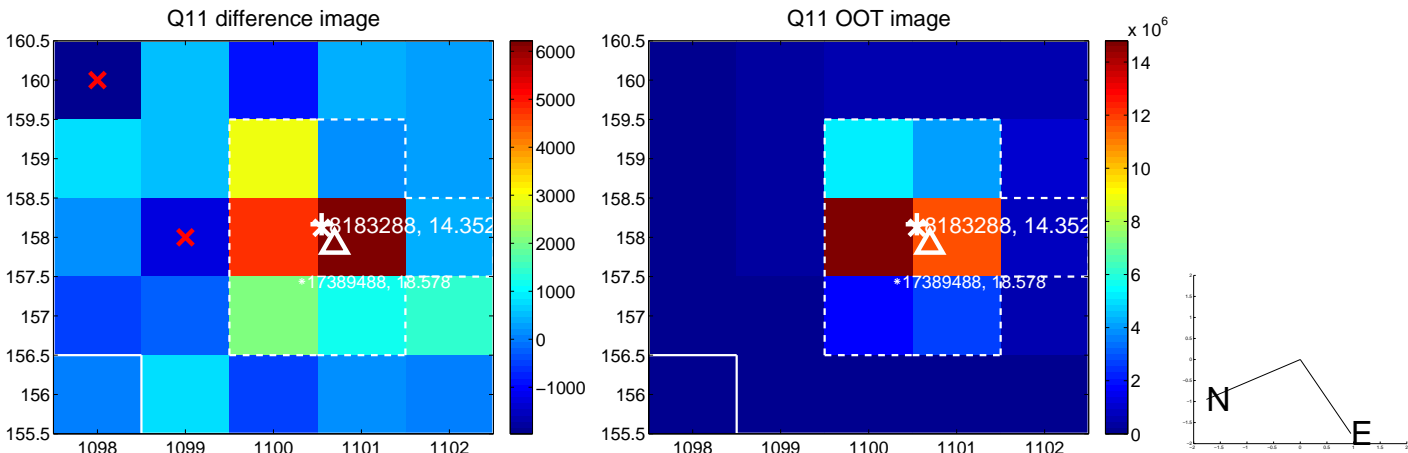
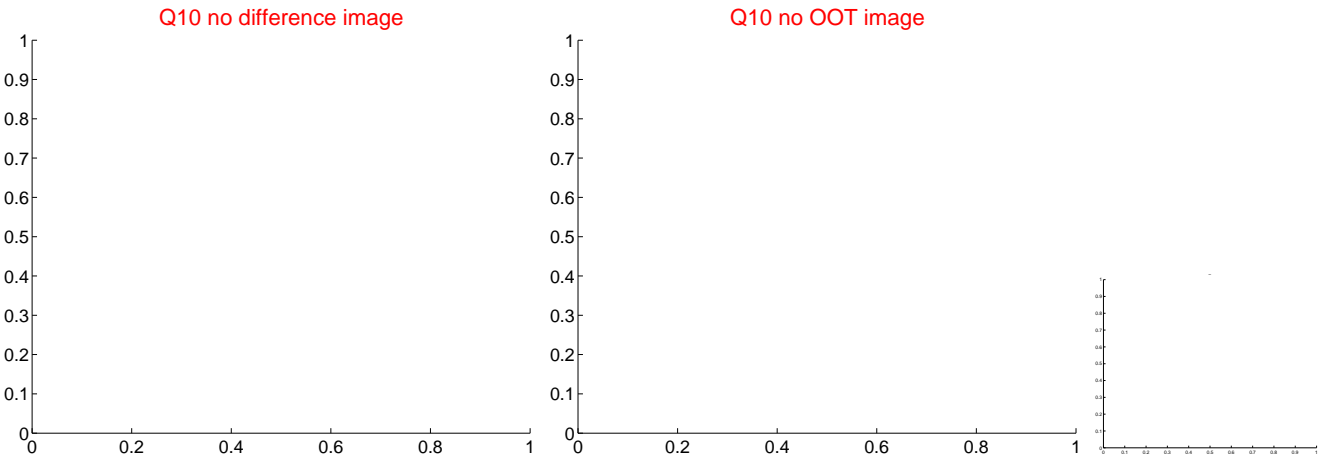
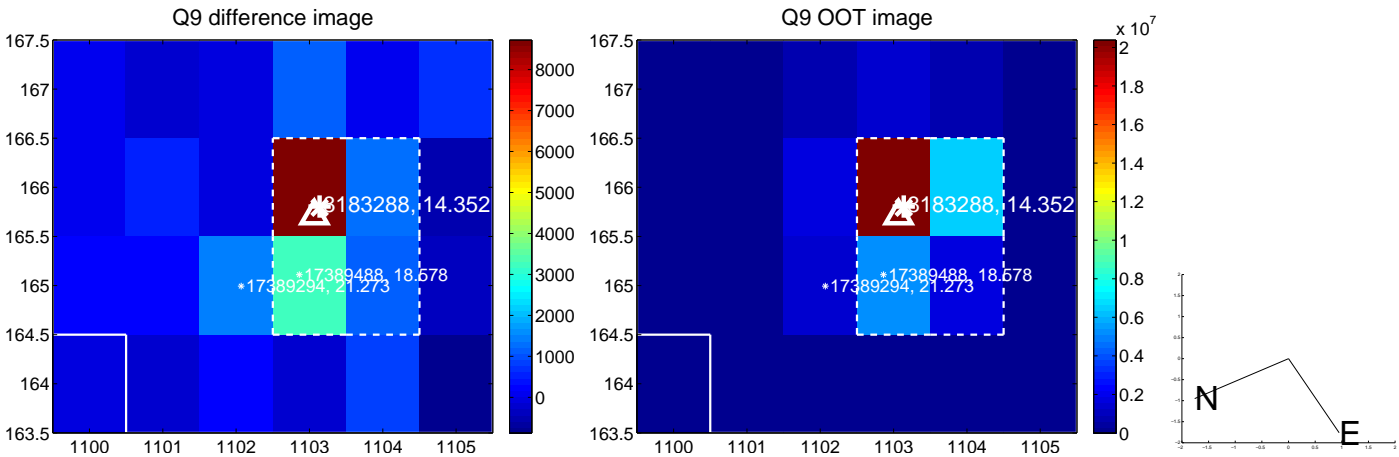
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



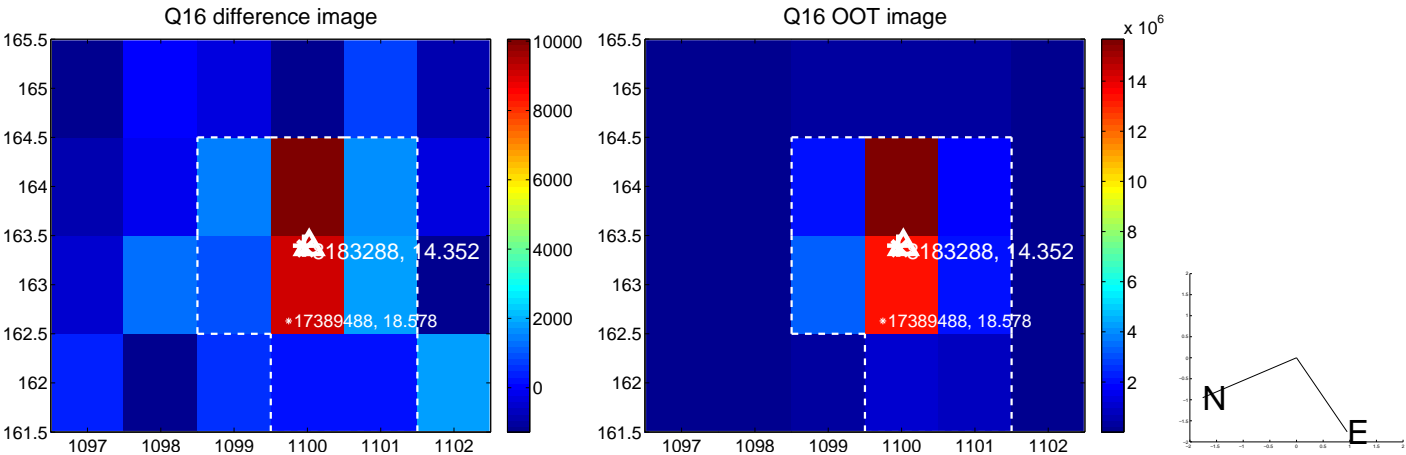
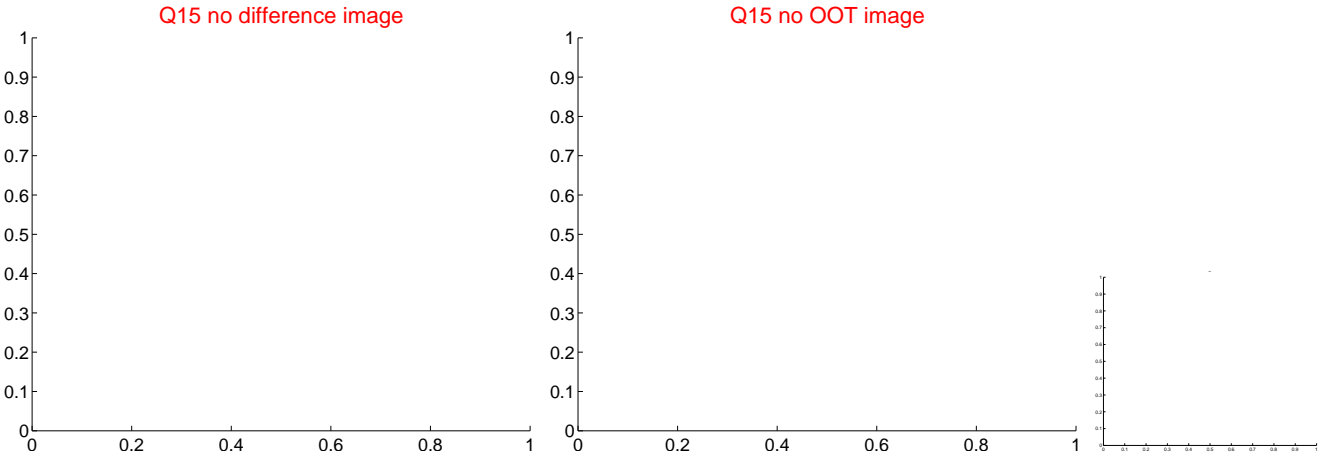
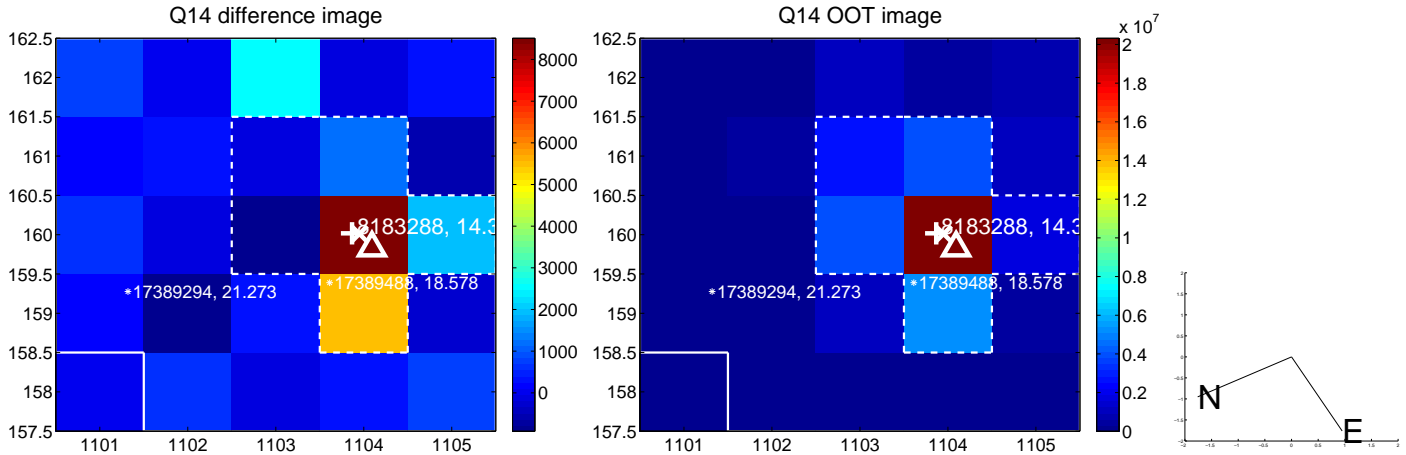
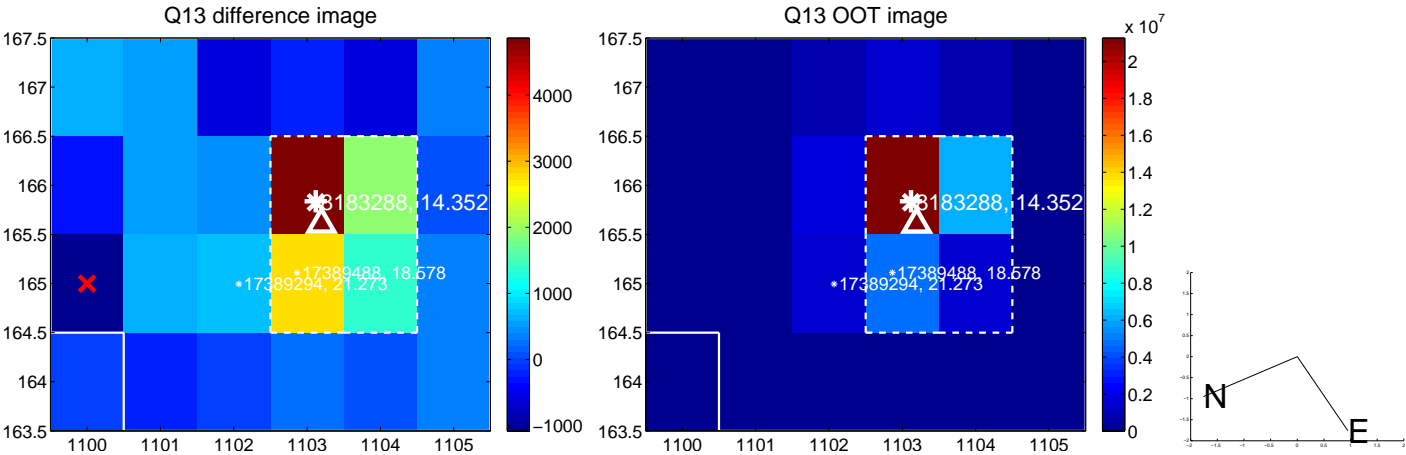
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



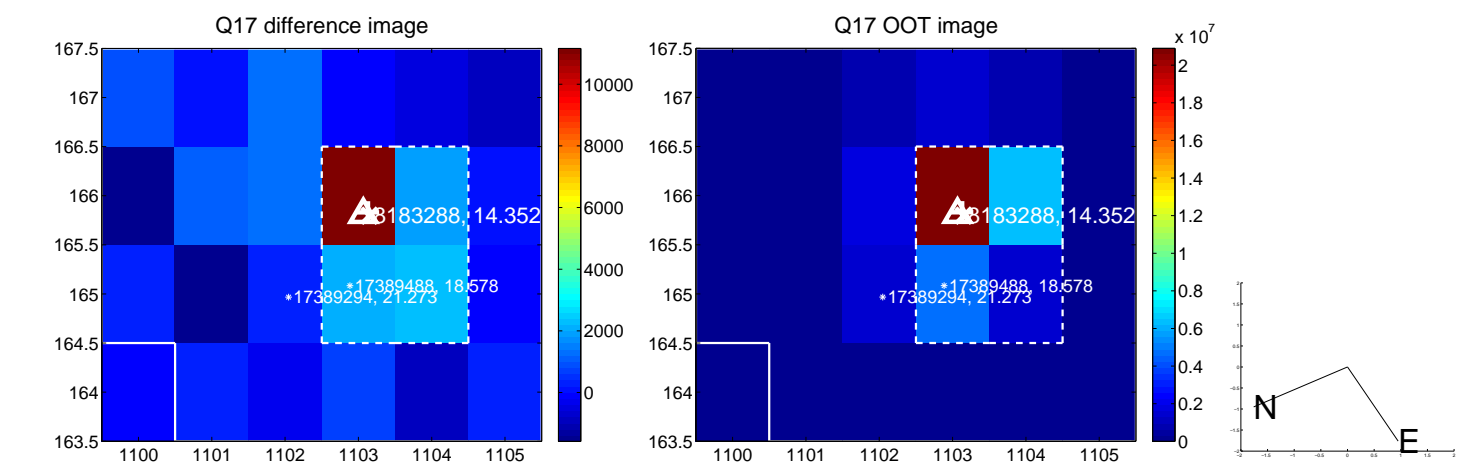
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



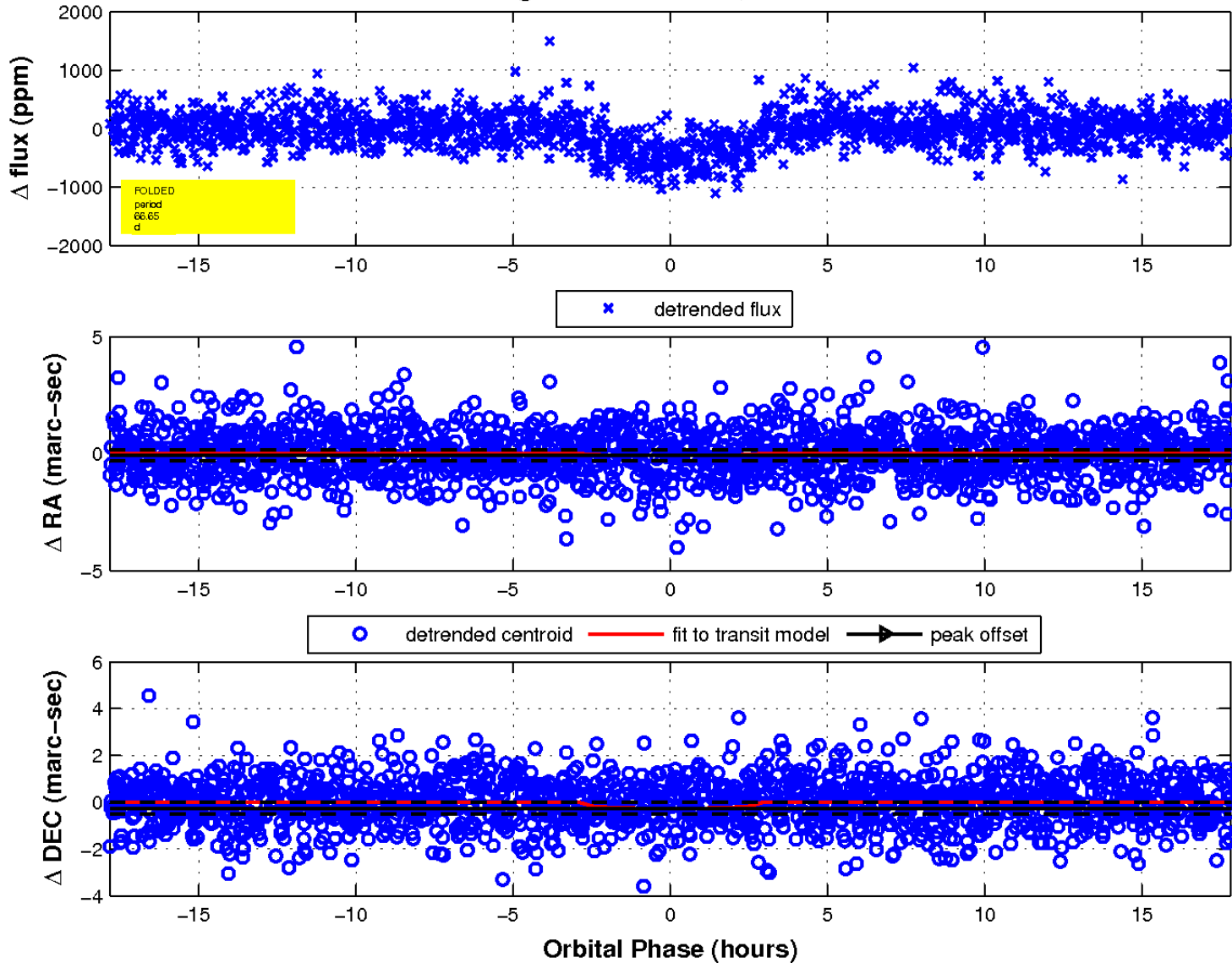
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

