

KIC 005551672

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})
005551672-01	OBS	3119.01	2.184420	133.679604	1402.7	1.133	16.3	19.0	0.25	3421	1.12	18.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005551672-01	OBS	PC	0.01	0	0	0	0	CENT_KIC_POS

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

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

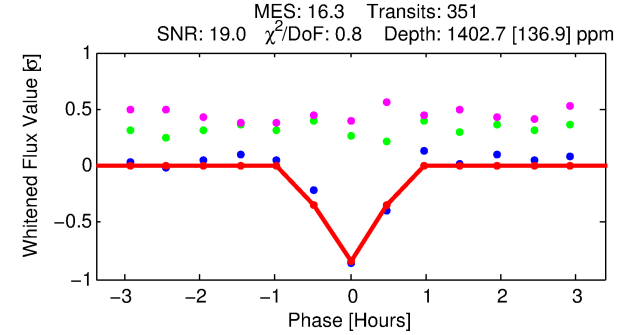
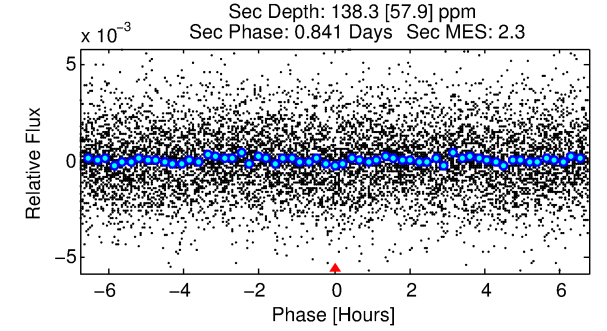
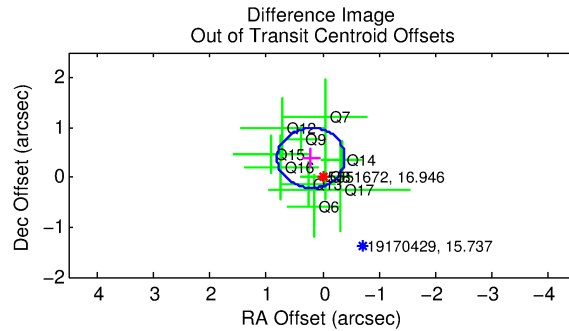
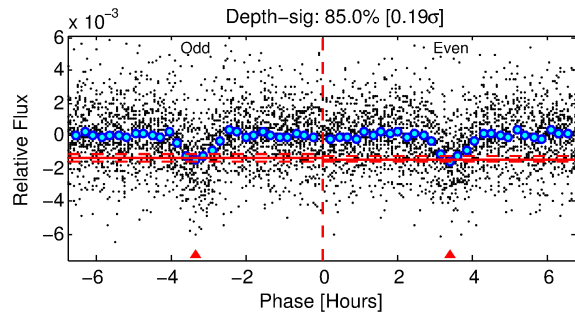
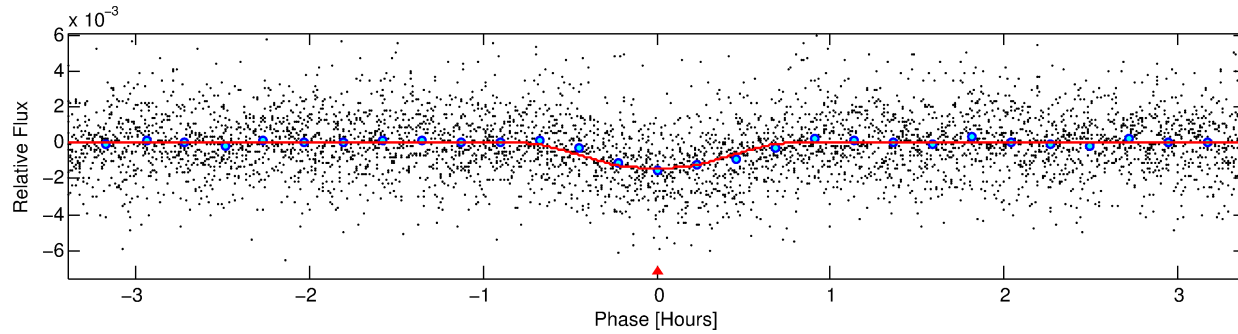
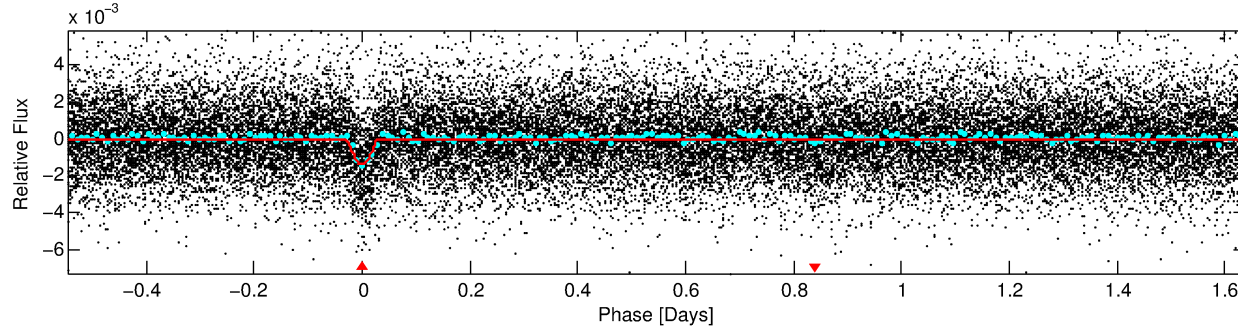
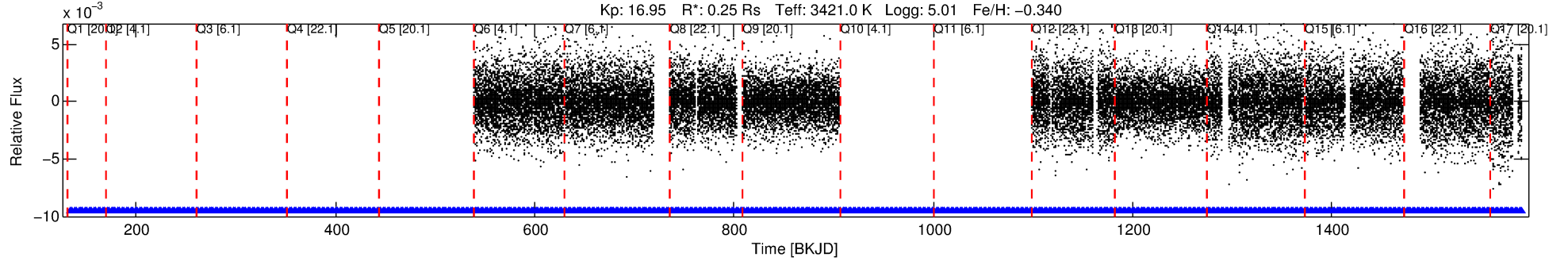
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005551672-01

No Significant Match Found

DV One-Page Summary

KIC: 5551672 Candidate: 1 of 1 Period: 2.184 d
KOI: K03119.01 Corr: 0.931



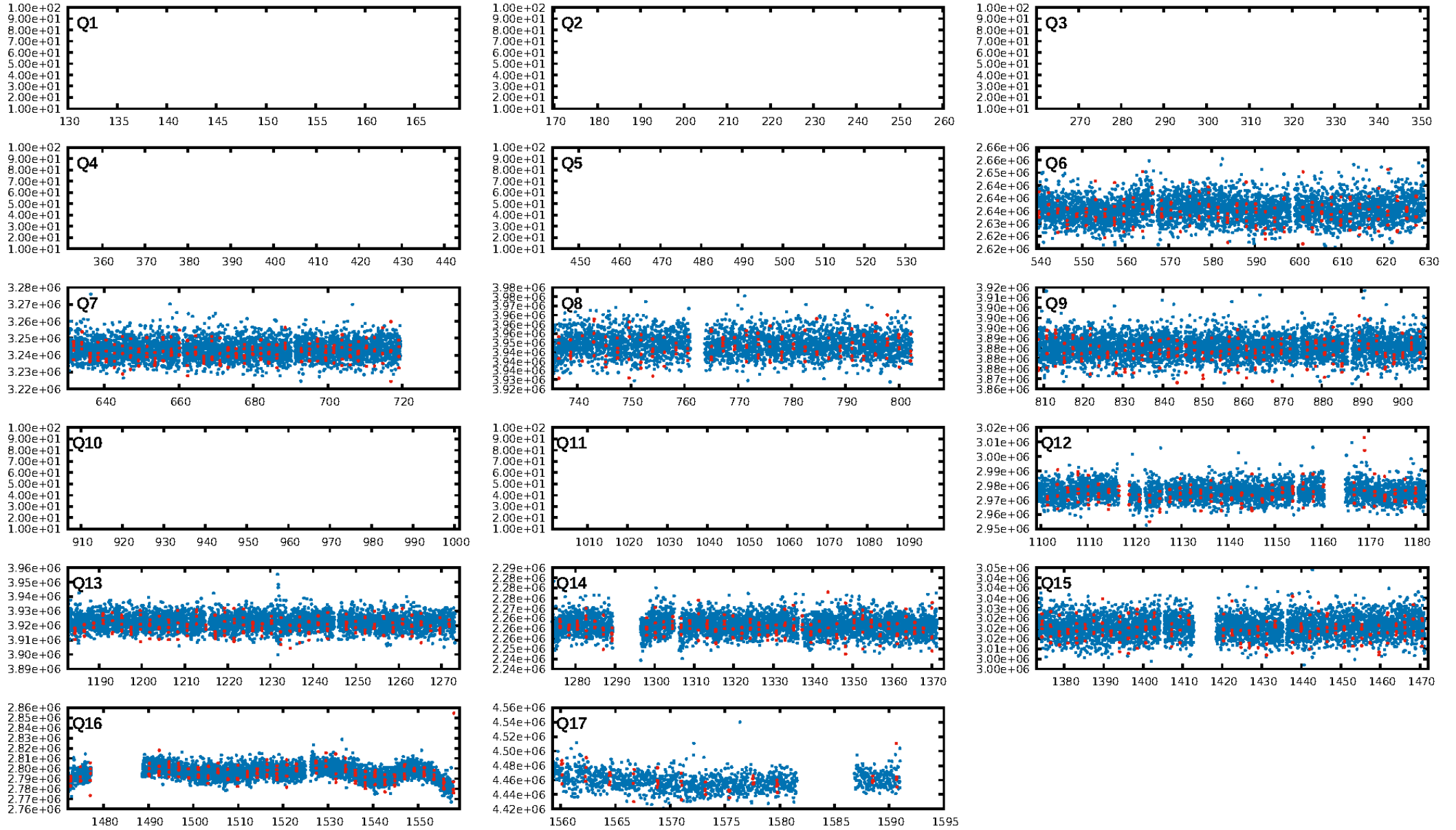
DV Fit Results:

Period = 2.18442 [0.00001] d
Epoch = 133.6796 [0.0010] BKJD
Rp/R* = 0.0410 [0.0103]
a/R* = 7.78 [7.83]
b = 0.90 [0.22]
Seff = 18.52 [2.77]
Teq = 529 [20] K
Rp = 1.12 [0.33] Re
a = 0.0203 [0.0023] AU
Ag = 25.18 [16.81] [1.44 σ]
Teffp = 1832 [302] K [4.30 σ]

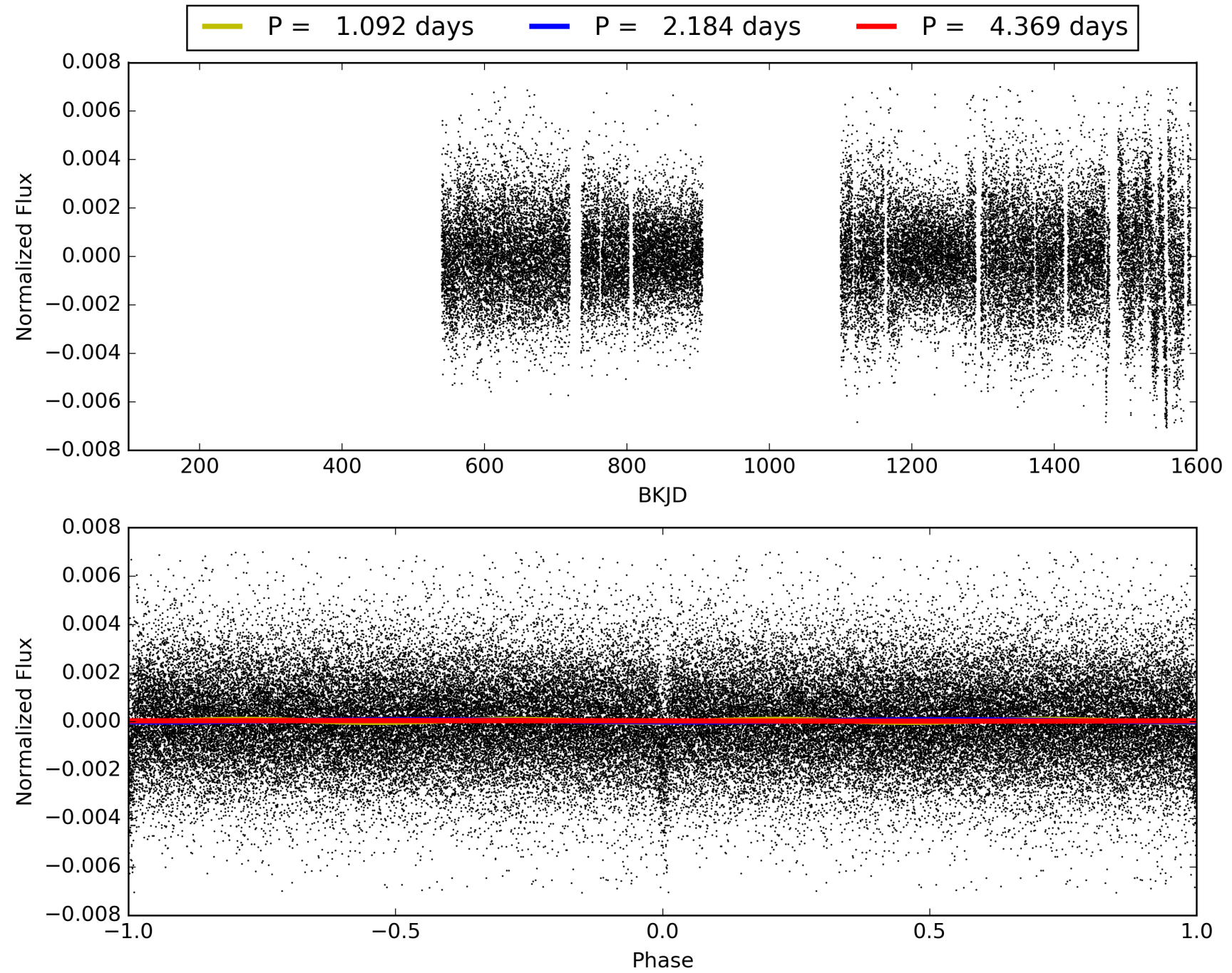
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.67e-60
RollingBand-fgt: 1.00 [339/339]
GhostDiagnostic-chr: 2.357
Centroid-sig: N/A
Centroid-so: 2.075 arcsec [3.23 σ]
OotOffset-rm: 0.436 arcsec [2.19 σ]
KicOffset-rm: 1.795 arcsec [9.05 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.90 [9/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 005551672-01, PDC Light Curves

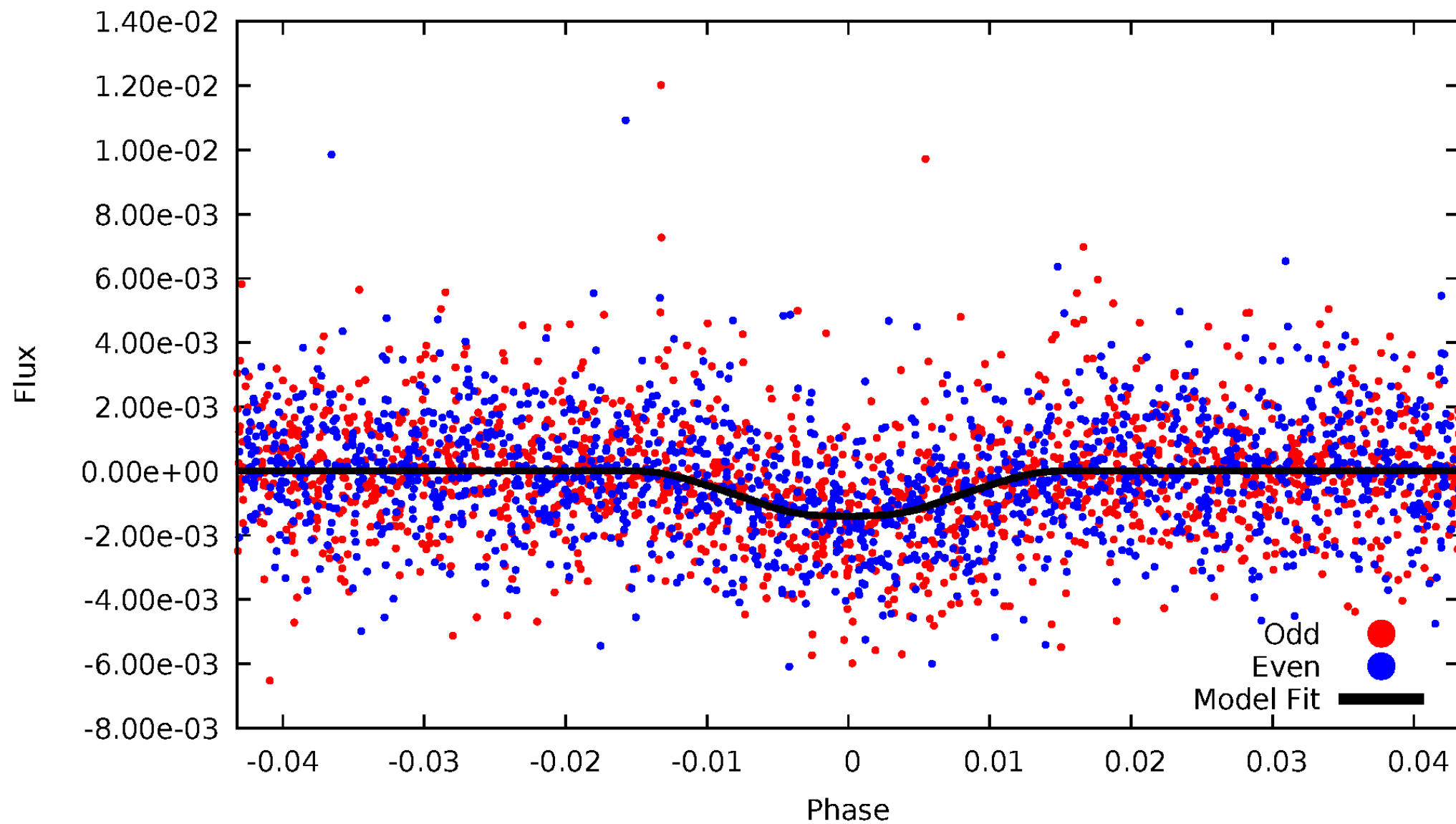


TCE 005551672-01



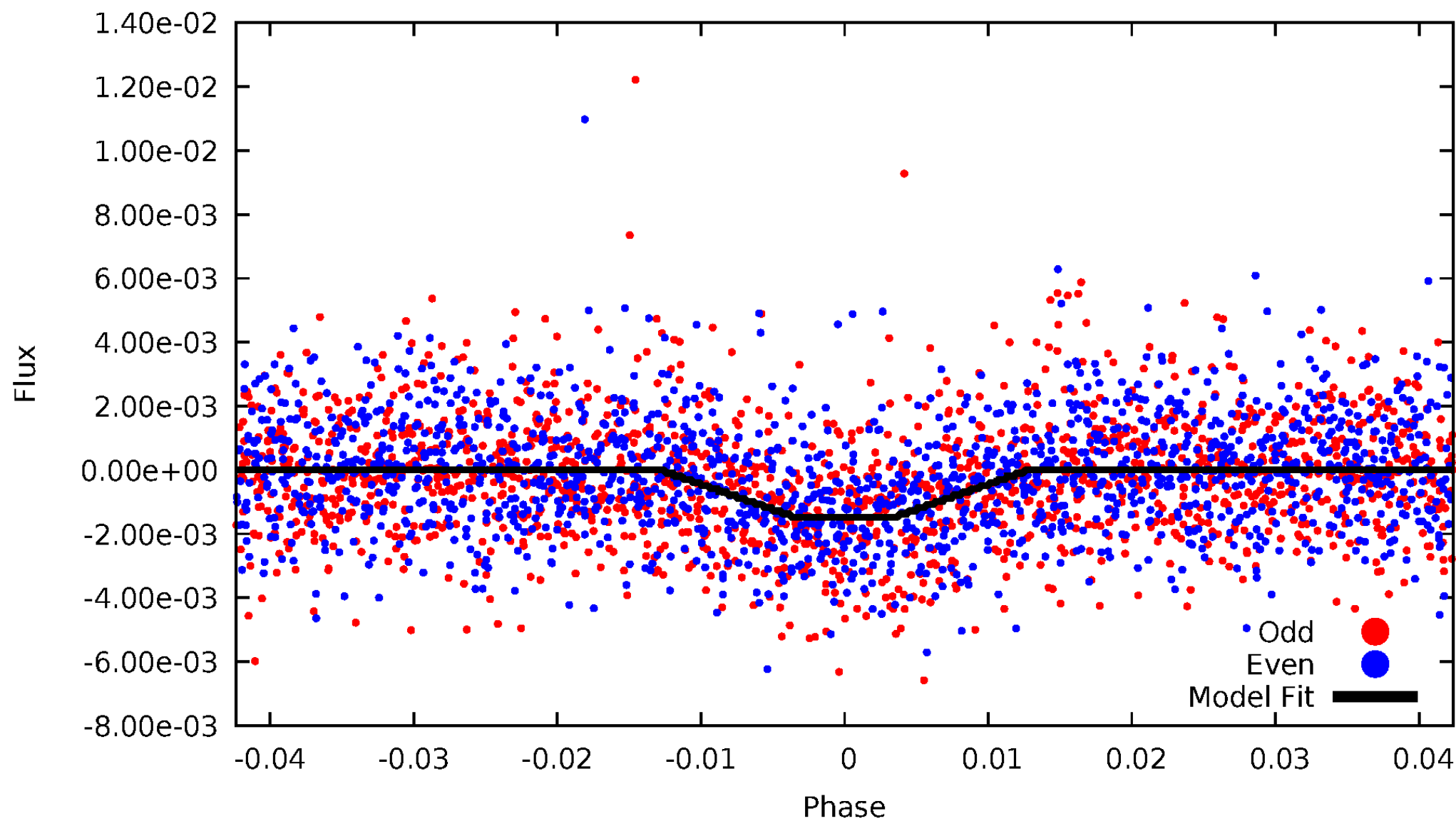
DV Odd/Even

TCE 005551672-01



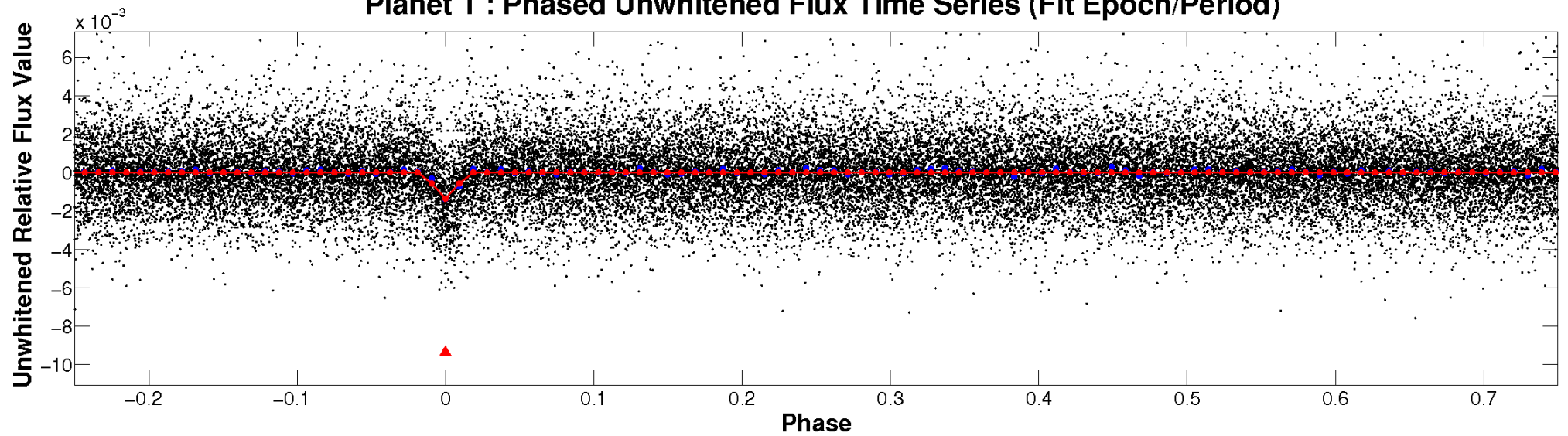
ALT Odd/Even

TCE 005551672-01

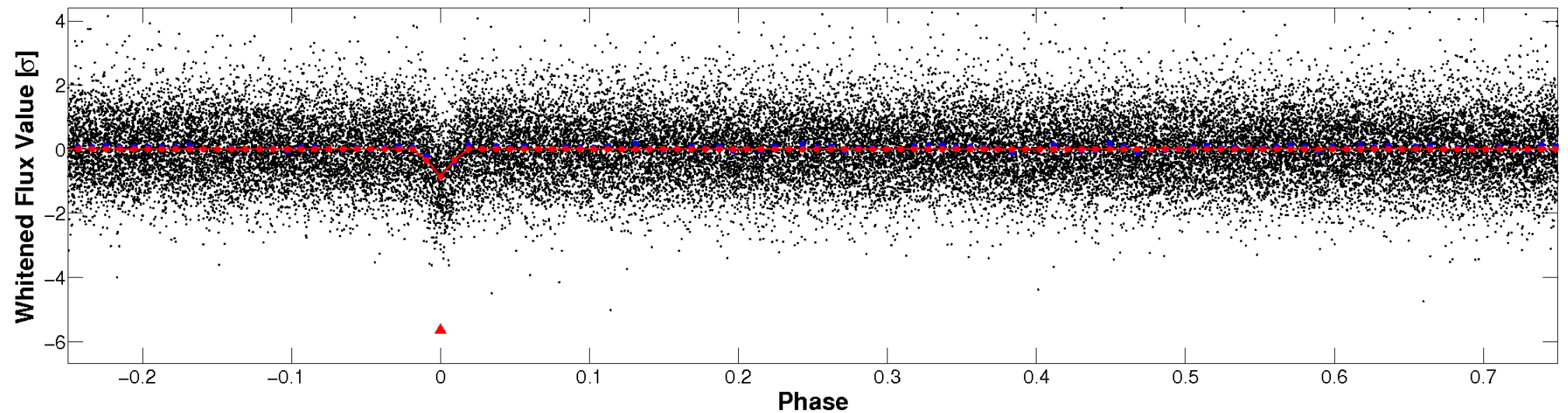


Non-Whitened Vs. Whitened Light Curve

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

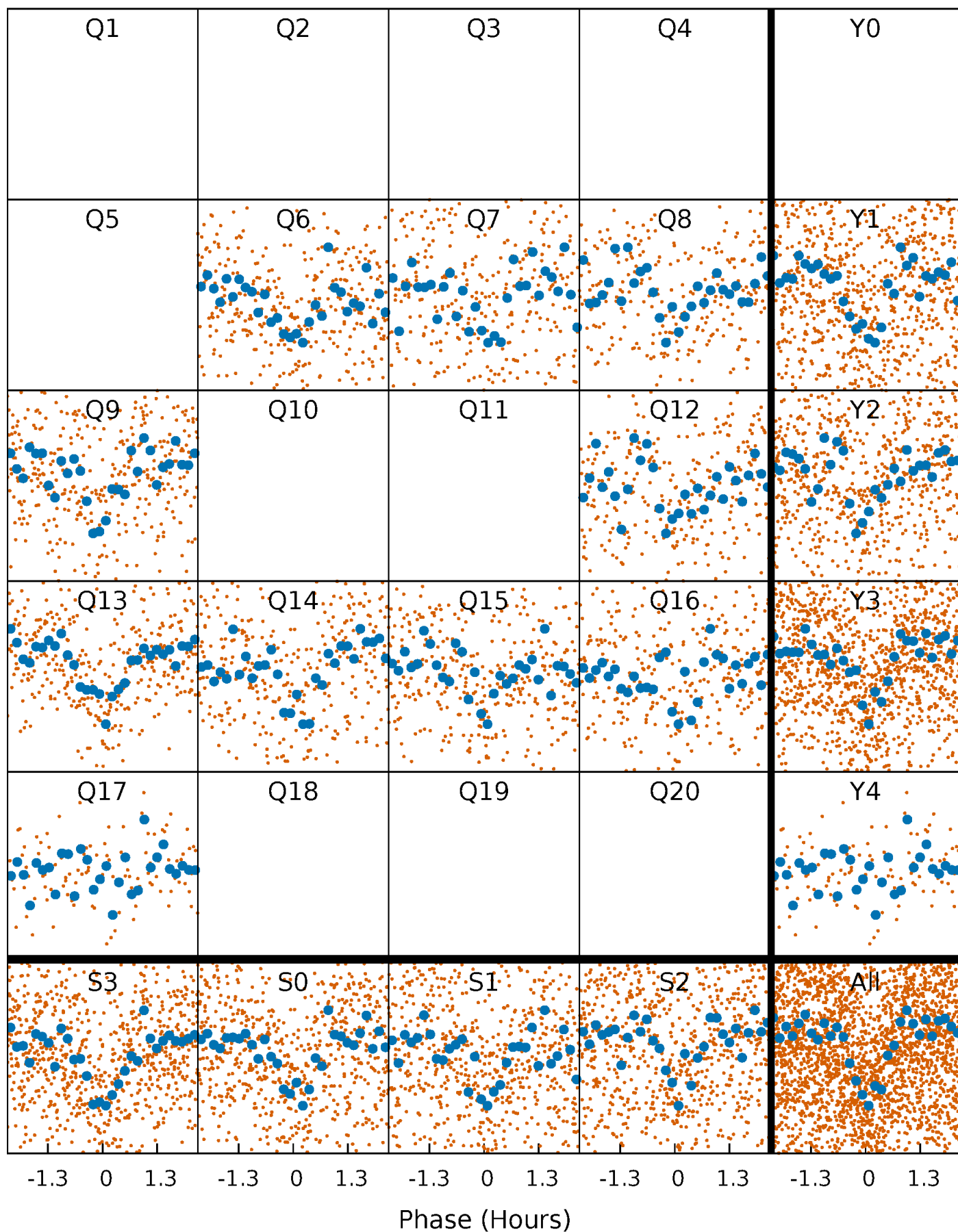


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



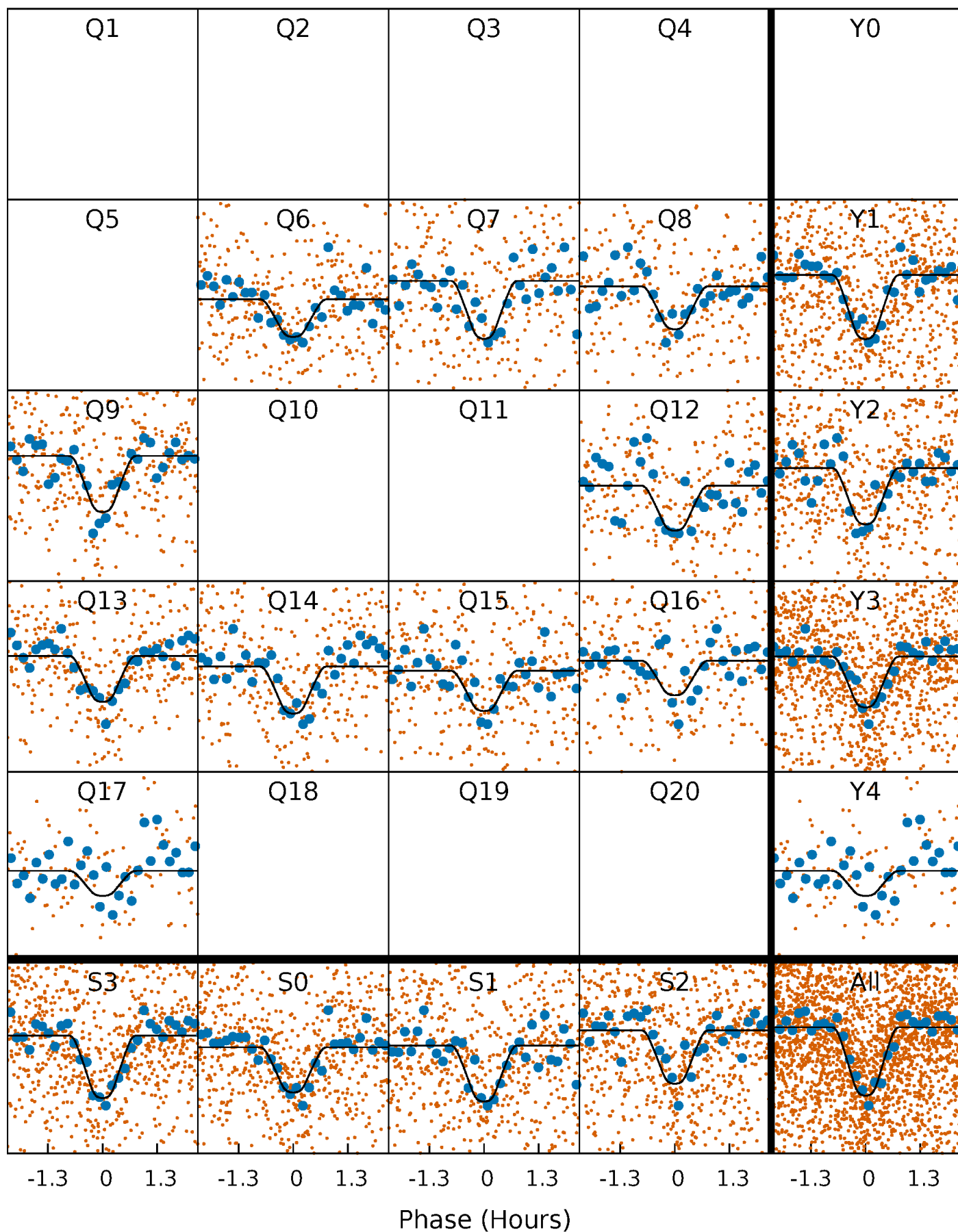
PDC Quarter-Phased Transit Curves

TCE 005551672-01 P= 2.184420 Days $T_0=133.679604$ (BKJD)



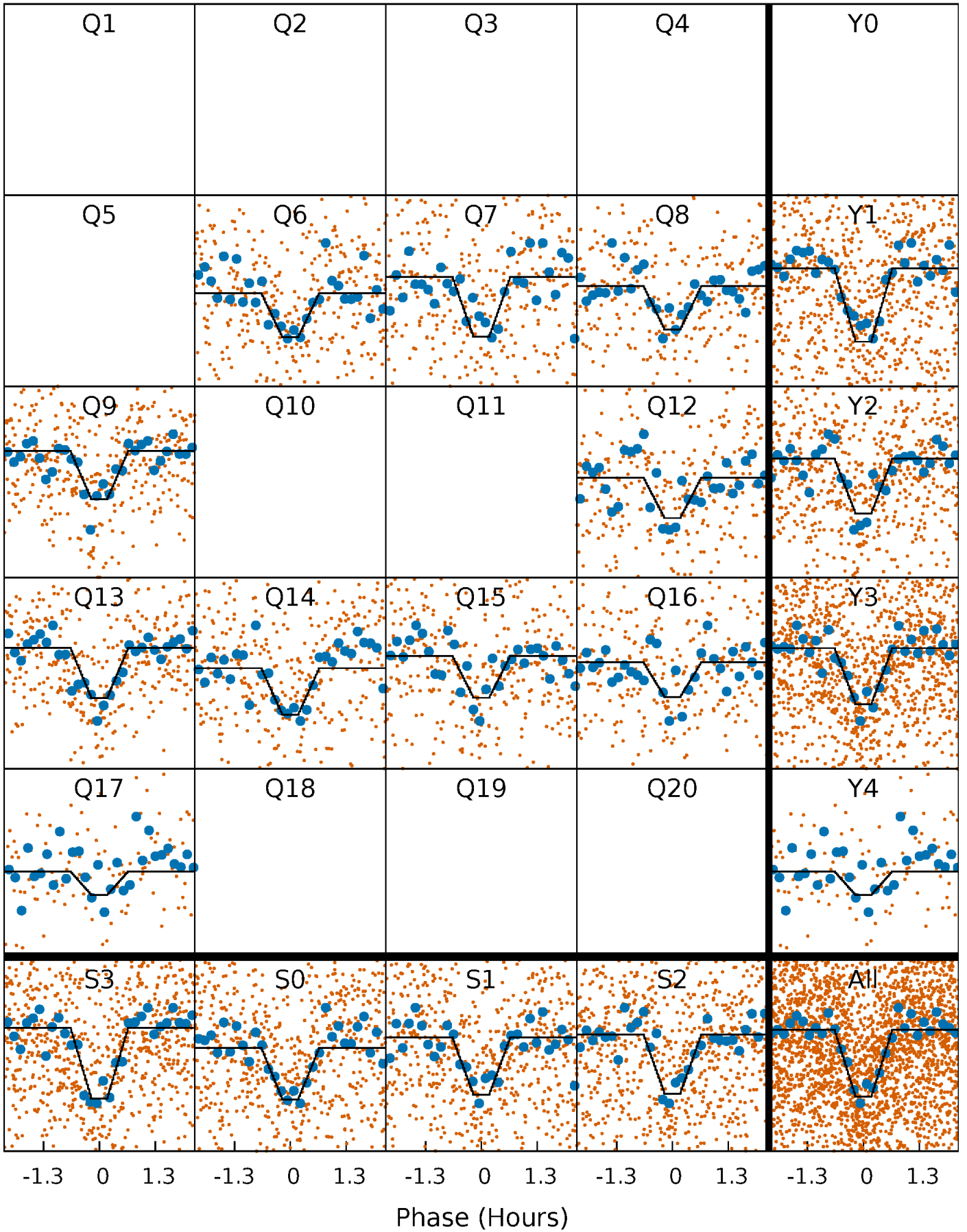
DV Quarter-Phased Transit Curves

TCE 005551672-01 P= 2.184420 Days $T_0=133.679604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

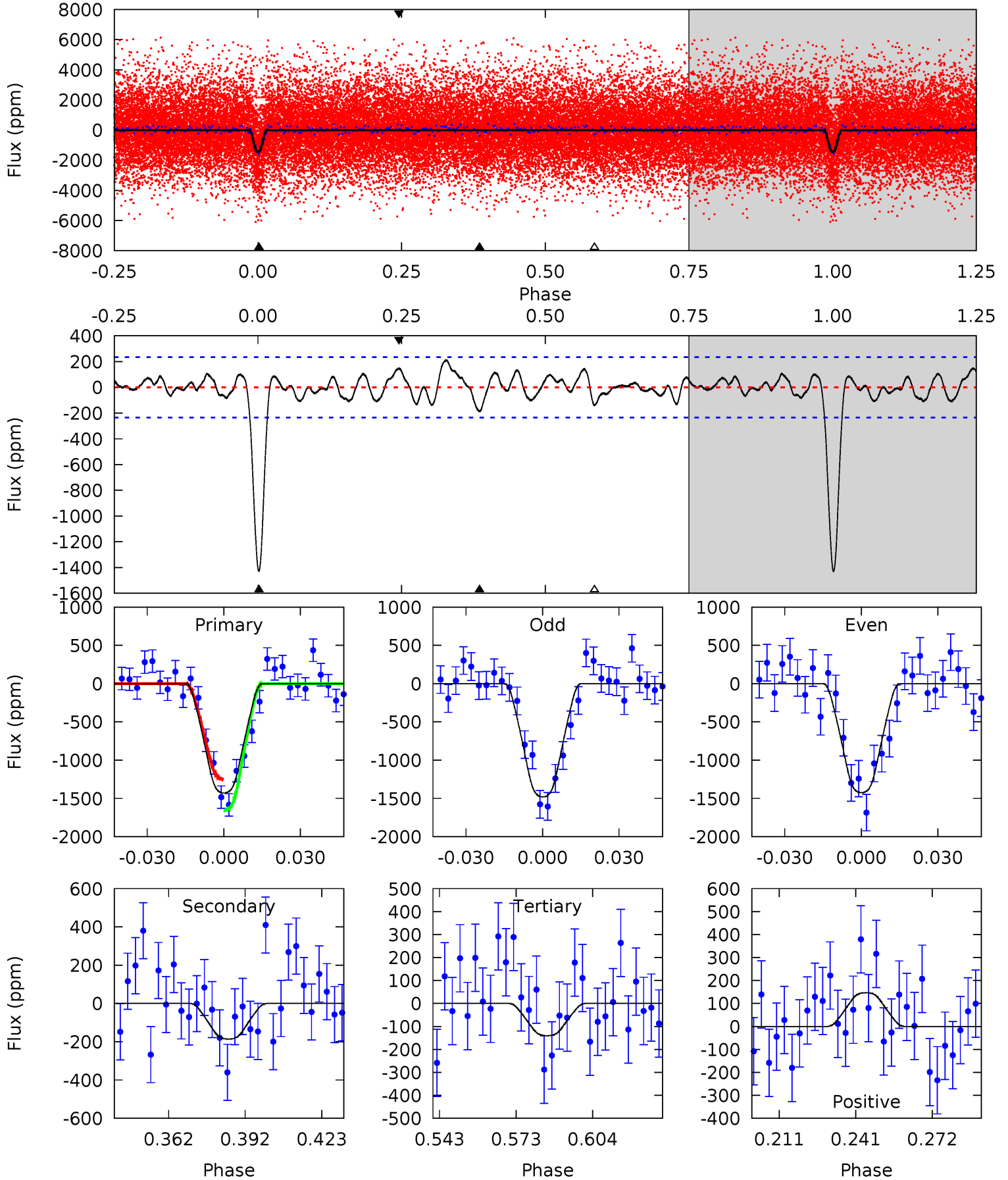
TCE 005551672-01 P= 2.184432 Days $T_0=133.676882$ (BKJD)



DV Model-Shift Uniqueness Test

005551672-01, P = 2.184420 Days, E = 133.679604 Days

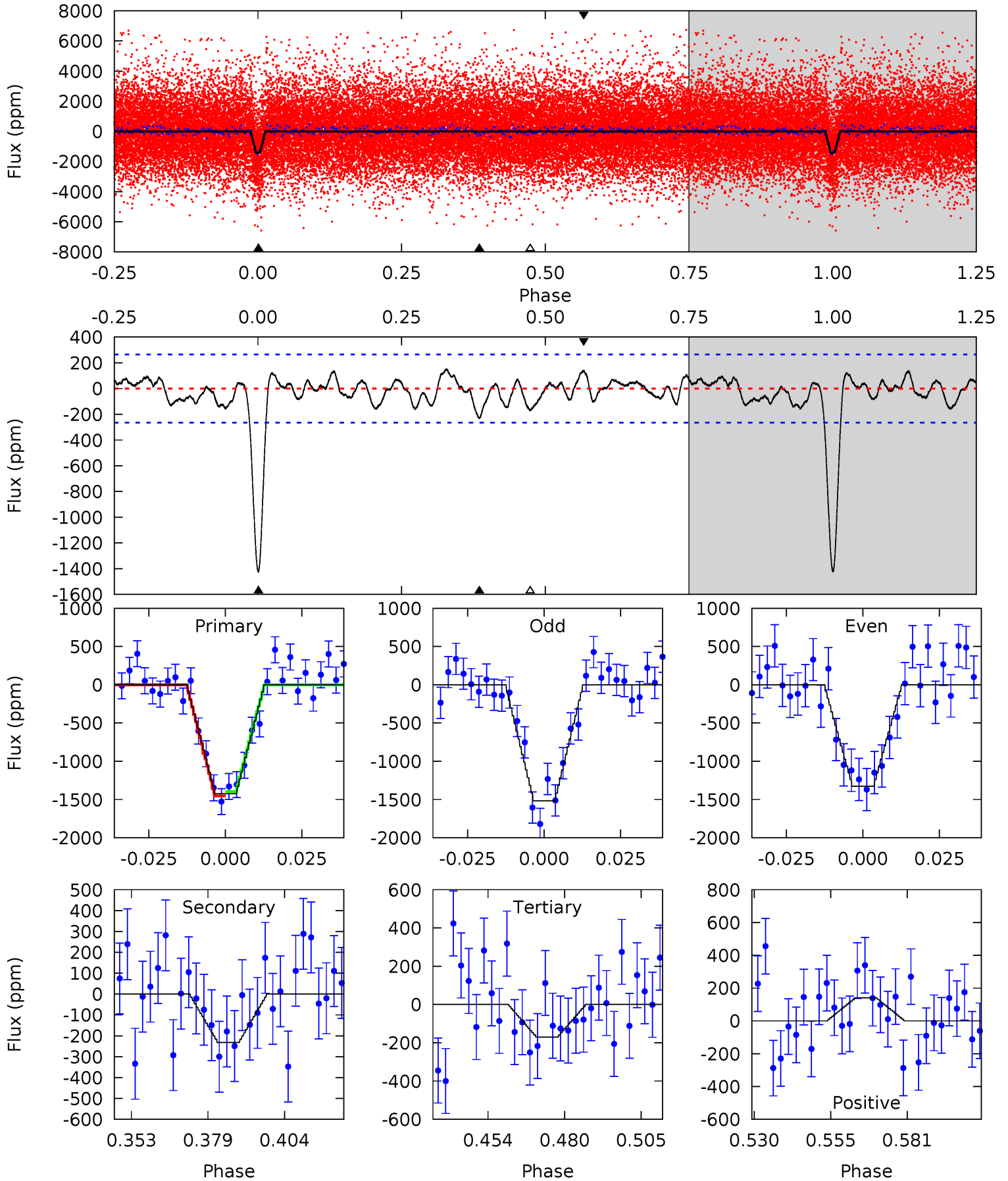
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.3	3.82	2.88	3.01	4.81	2.17	1.40	26.5	26.3	0.93	0.81	0.56	0.98	0.13	4.22



Alt Model-Shift Uniqueness Test

005551672-01, P = 2.184432 Days, E = 133.676882 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	4.24	3.12	2.57	4.85	2.24	1.32	23.0	23.5	1.12	1.67	1.73	1.00	0.10	0.53



Stellar Parameters For KIC 005551672

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3421^{+67}_{-51}	$5.014^{+0.045}_{-0.045}$	$-0.340^{+0.150}_{-0.100}$	$0.250^{+0.040}_{-0.030}$	$0.236^{+0.052}_{-0.032}$	$21.170^{+5.794}_{-4.550}$
	+2%/-1%	+1%/-1%	+44%/-29%	+16%/-12%	+22%/-14%	+27%/-21%
Source	SPE70	PHO2	SPE70	DSEP		

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

Secondary Eclipse Parameters for KIC 005551672-01 / KOI 3119.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-186 ± 49	$1.13^{+0.29}_{-0.29}$	741^{+22}_{-21}	2526^{+208}_{-167}	33^{+29}_{-13}
Alt.	-232 ± 55	$1.05^{+0.29}_{-0.26}$	742^{+21}_{-20}	2641^{+230}_{-173}	48^{+43}_{-20}

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

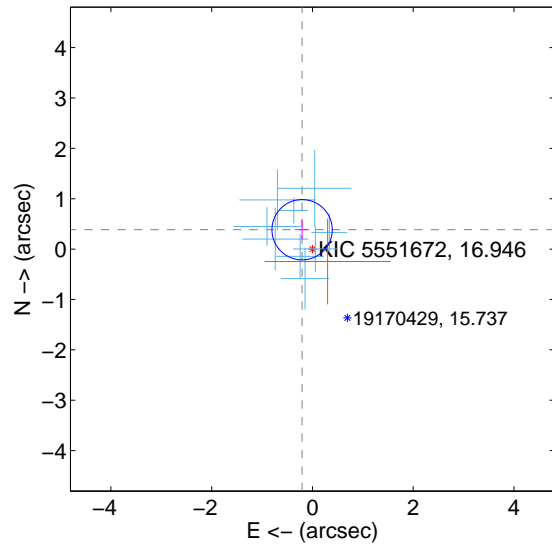
Supplemental centroid analysis for 005551672-01. Kepler magnitude: 16.95. Transit SNR 18.96

There are 9 quarters with good PRF difference image offsets

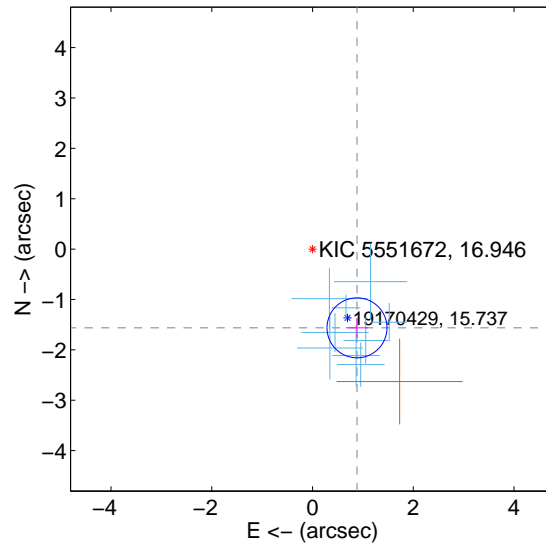
The OOT PRF centroid is offset from the target star catalog position by about 2.78 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.436 ± 0.199	2.19	0.205 ± 0.141	0.385 ± 0.192
PRF-fit source offset from KIC position	1.795 ± 0.198	9.05	-0.883 ± 0.220	-1.563 ± 0.191
photometric centroid source offset	2.07 ± 0.64	3.23	-1.15 ± 0.75	-1.73 ± 0.59

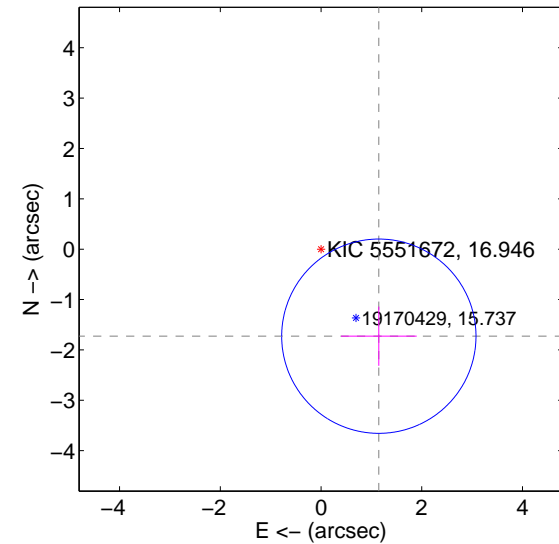
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

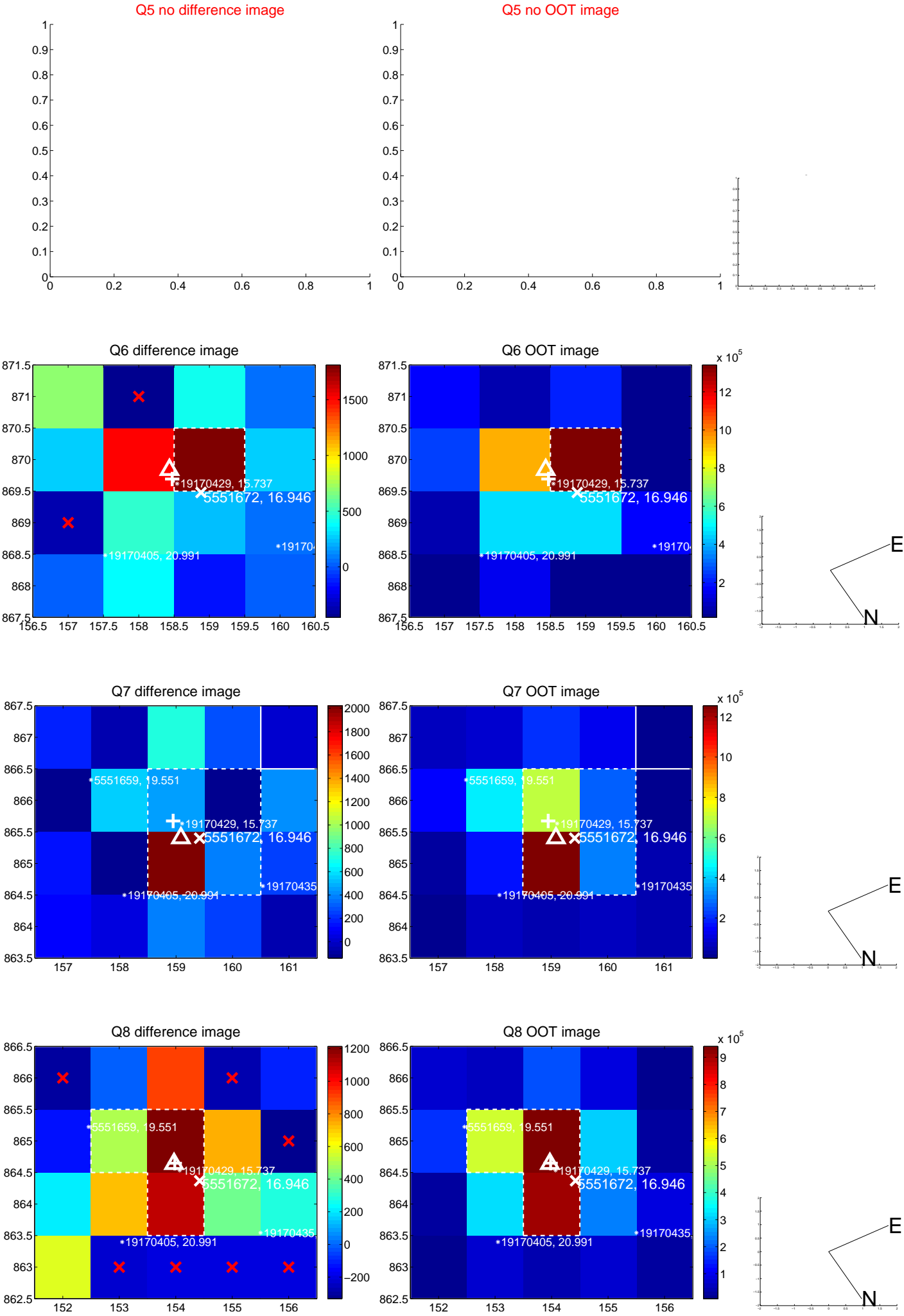


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

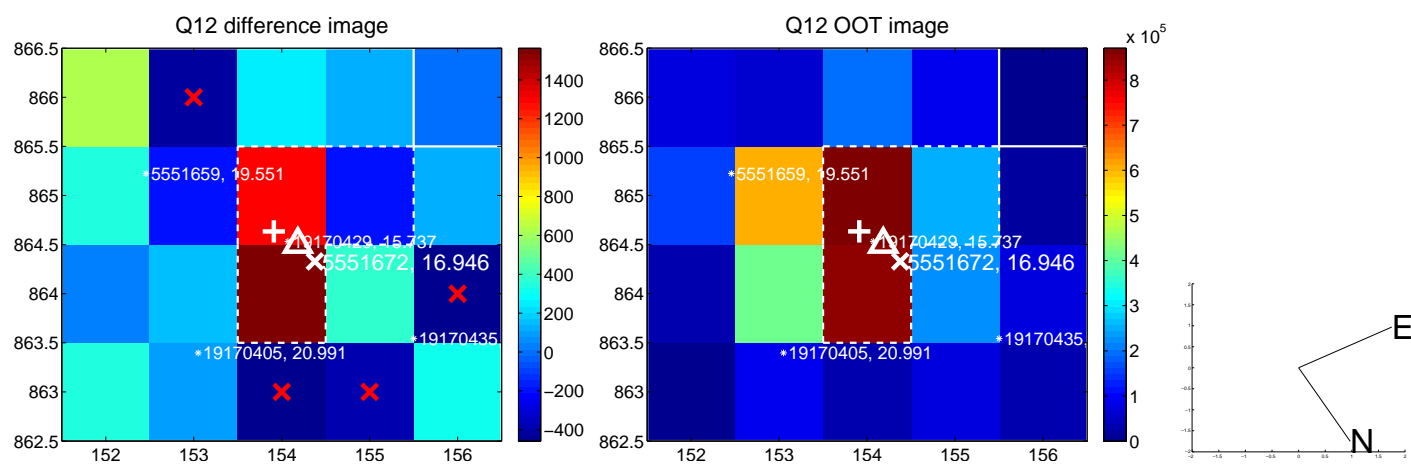
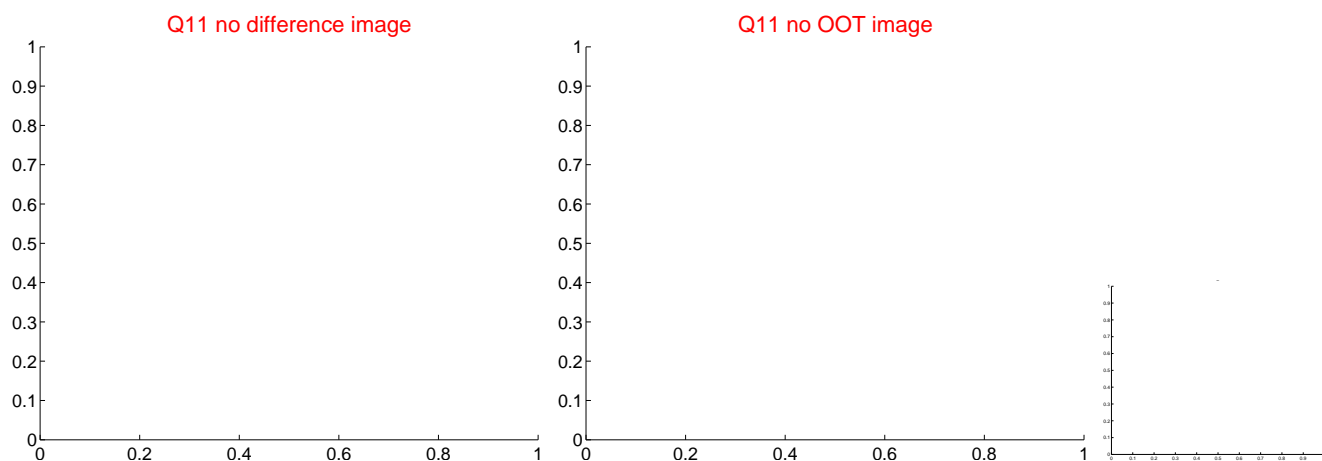
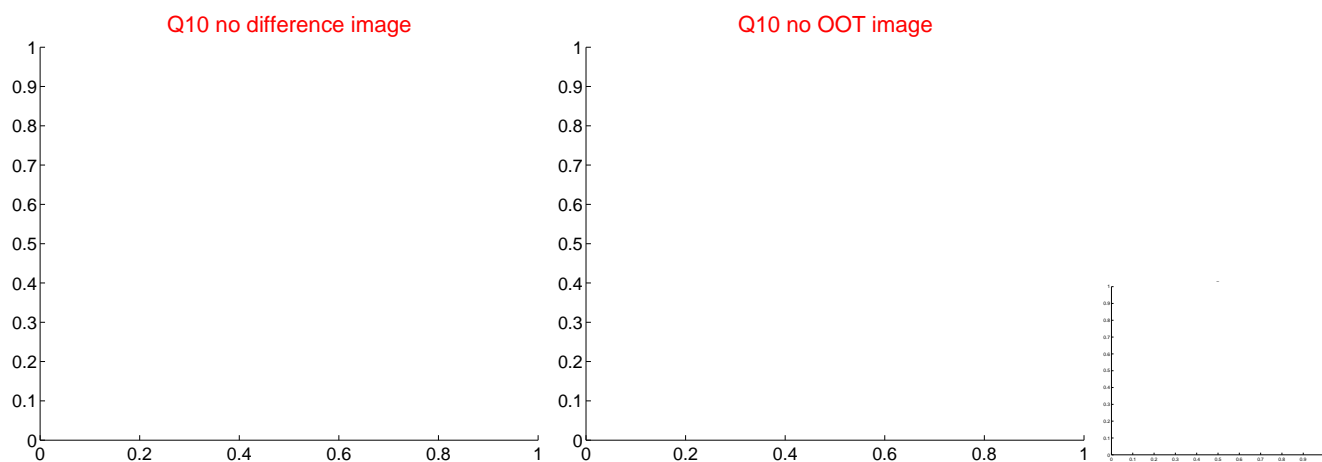
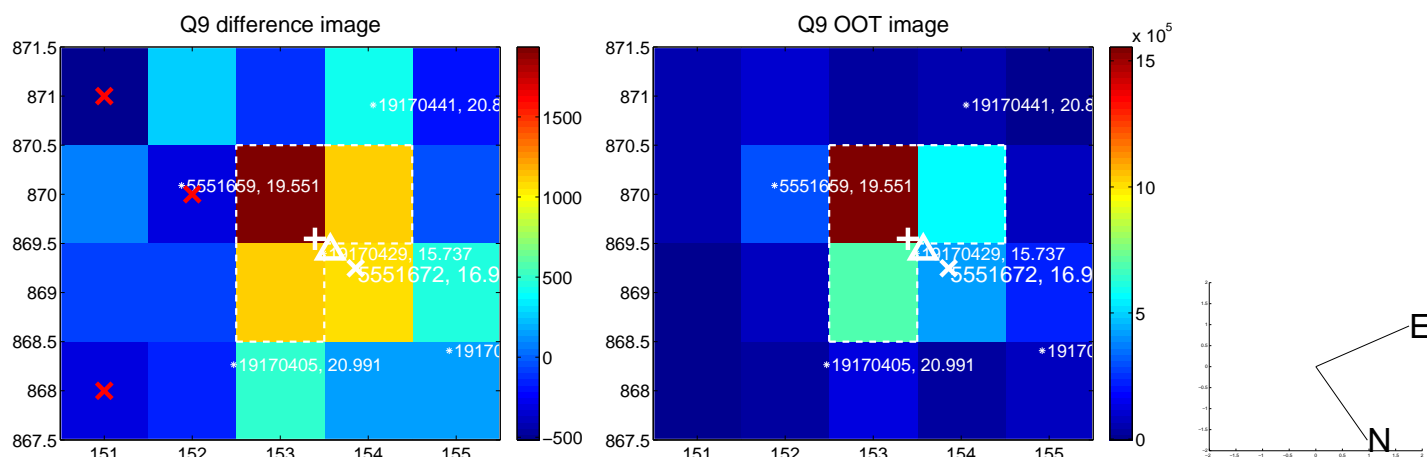
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



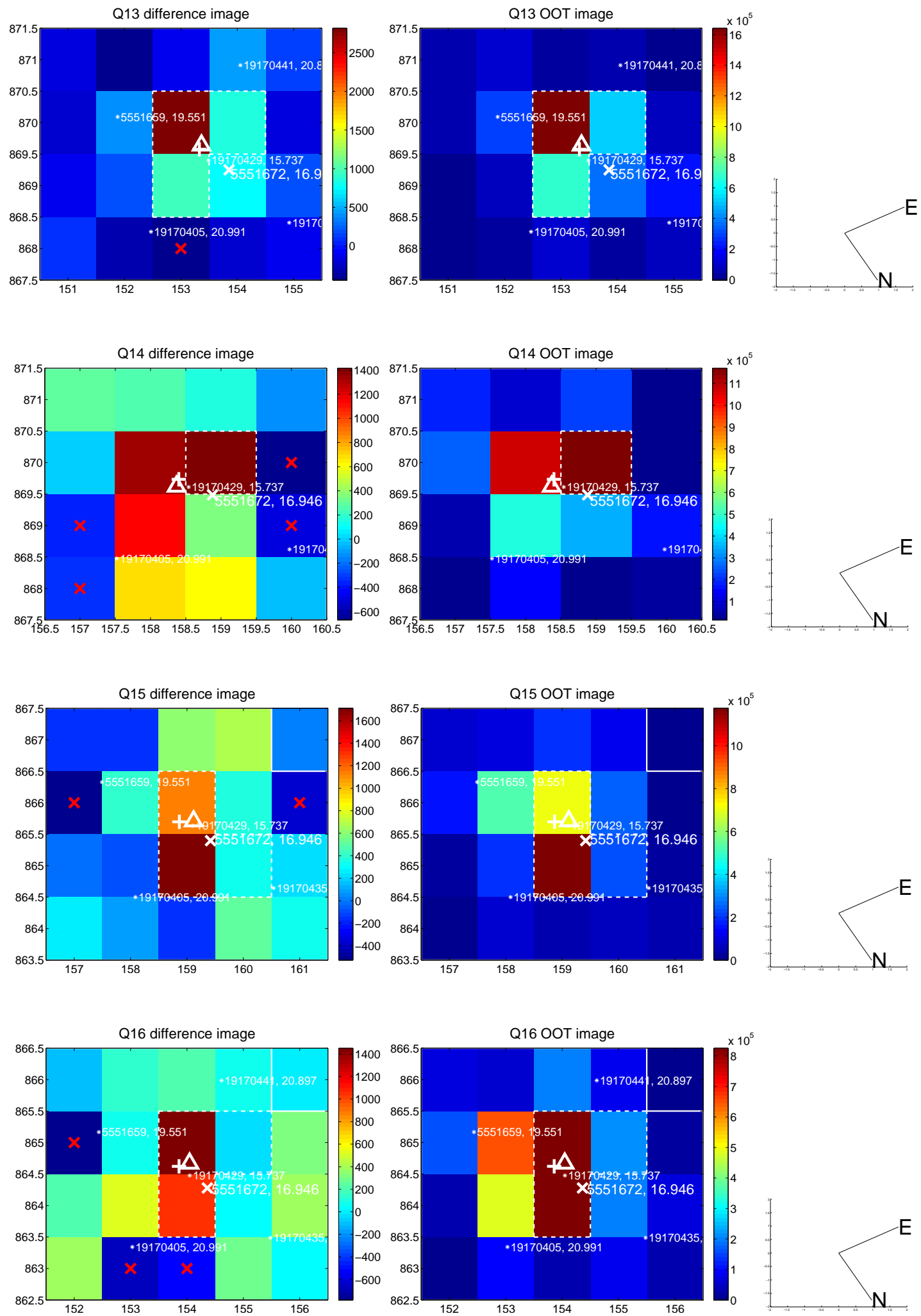
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



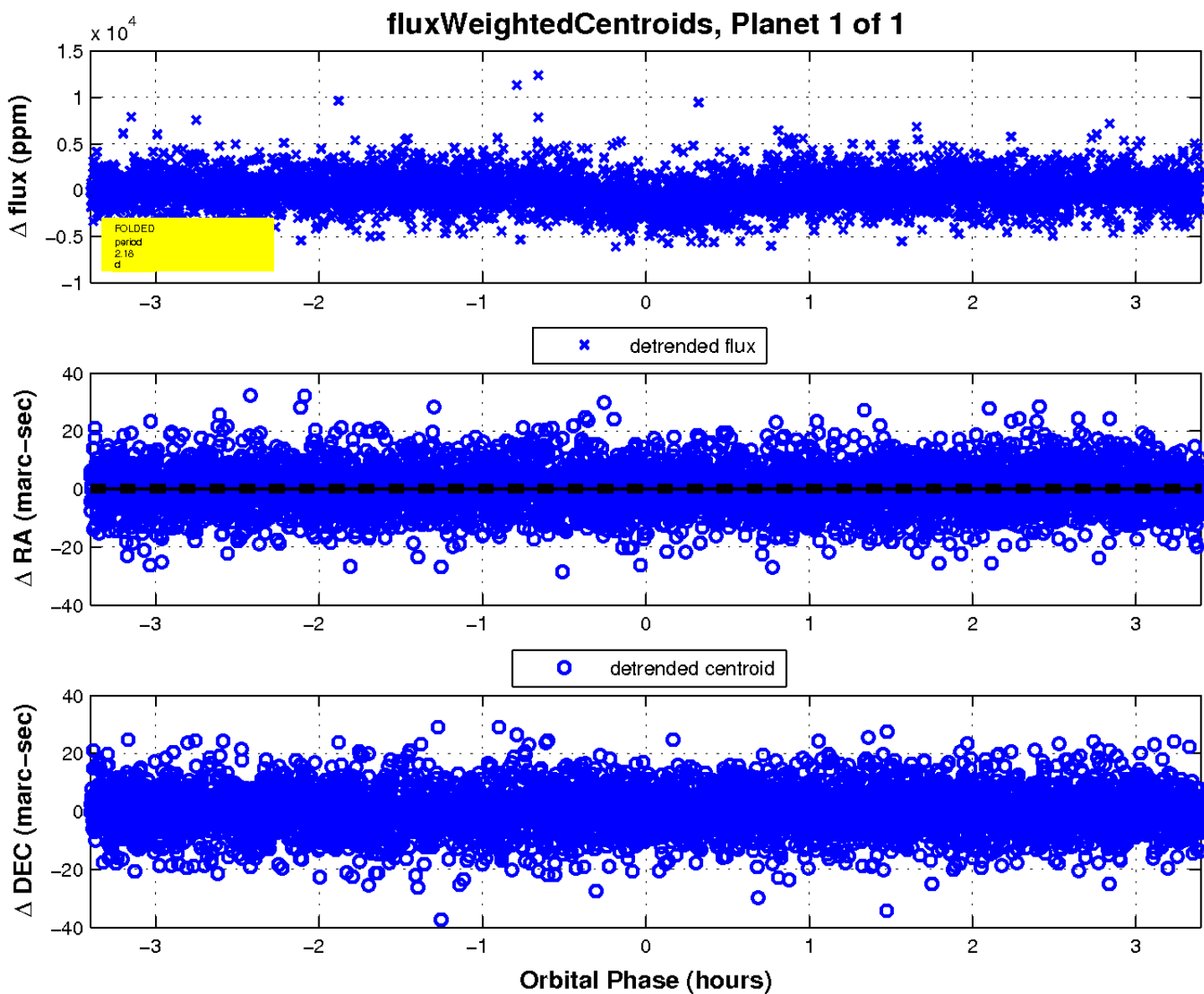
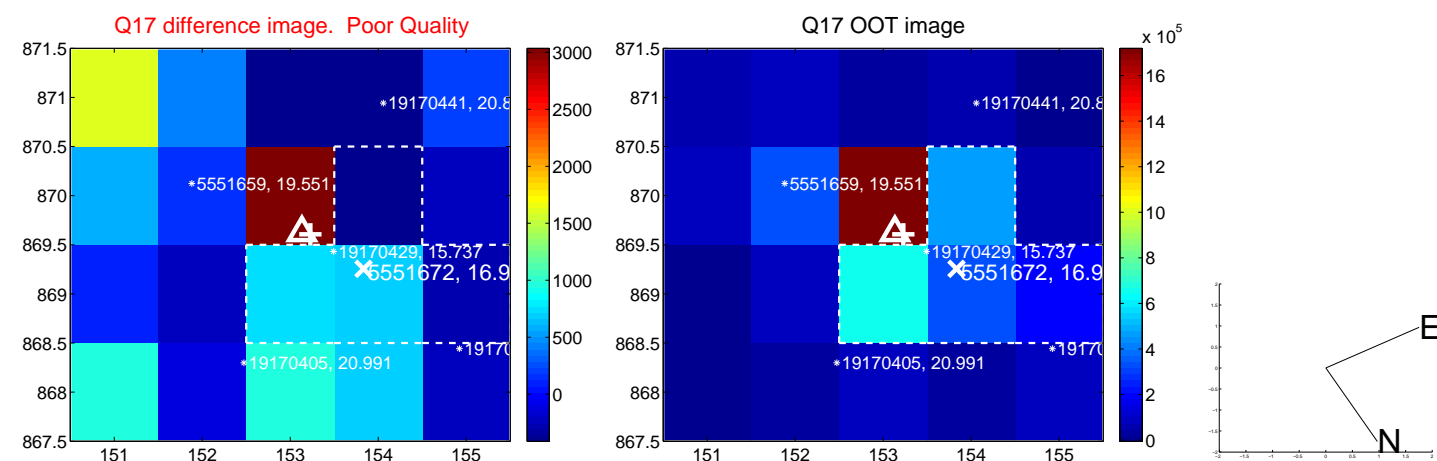
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

