

KIC 011656918

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})
011656918-01	OBS	1945.01	62.138726	161.146614	899.6	4.402	29.3	34.0	1.62	5123	5.42	17.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011656918-01	OBS	PC	0.99	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.

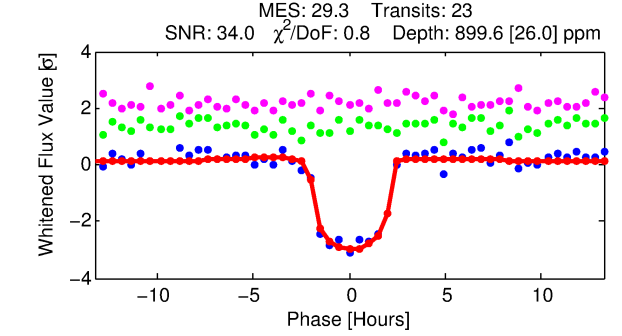
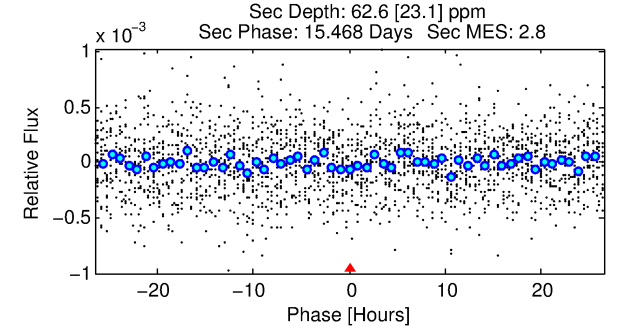
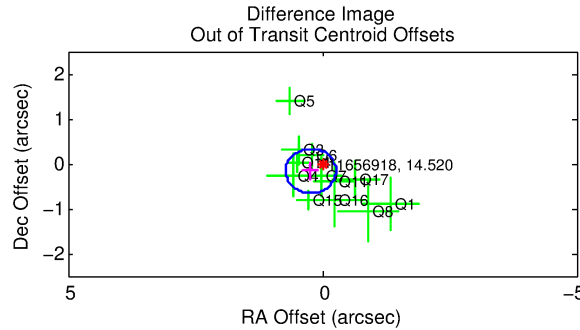
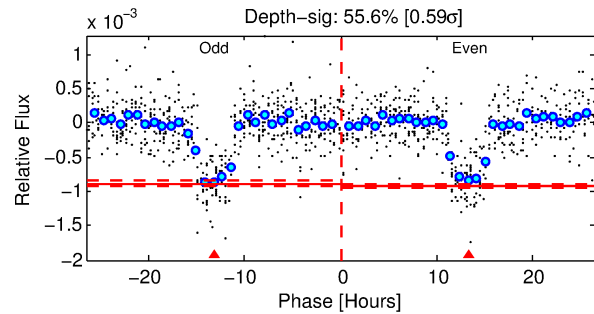
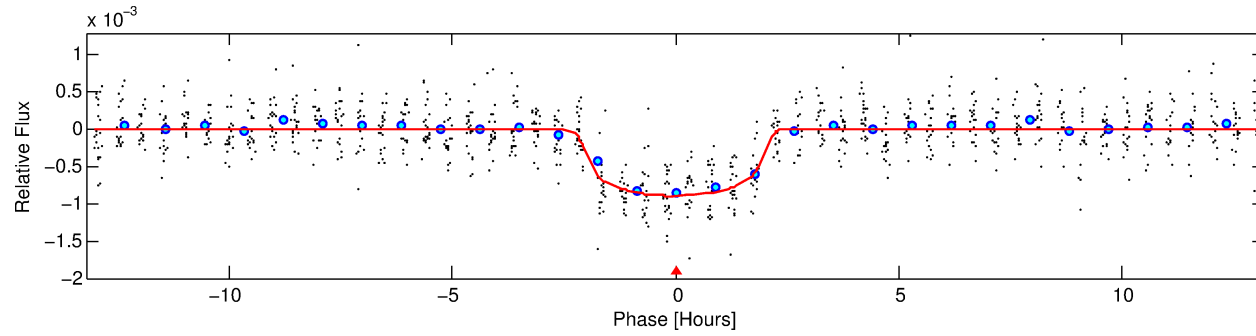
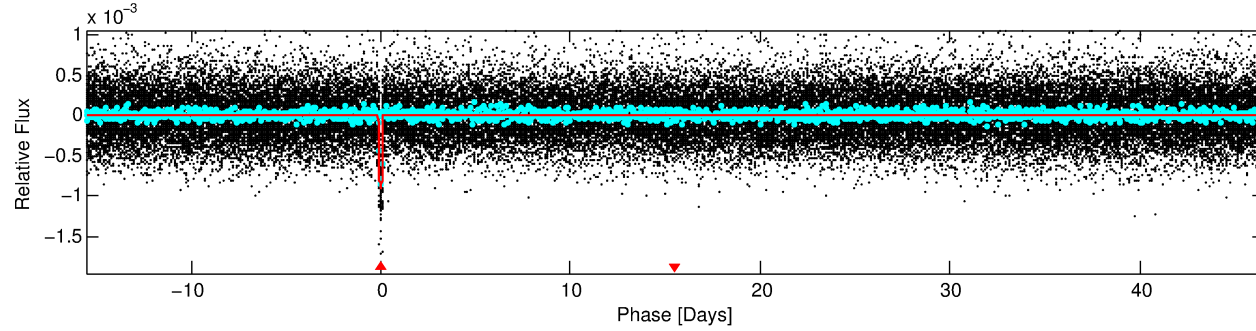
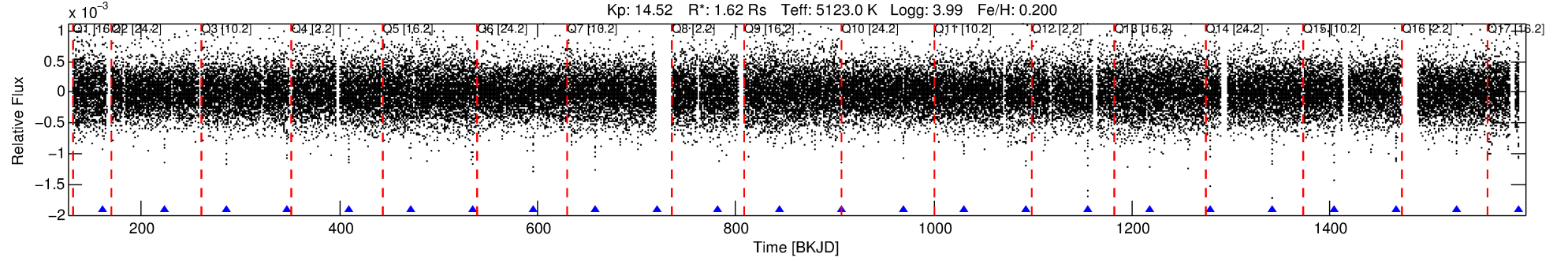
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011656918-01

No Significant Match Found

DV One-Page Summary

KIC: 11656918 Candidate: 1 of 1 Period: 62.139 d
KOI: K01945.01 Corr: 0.972



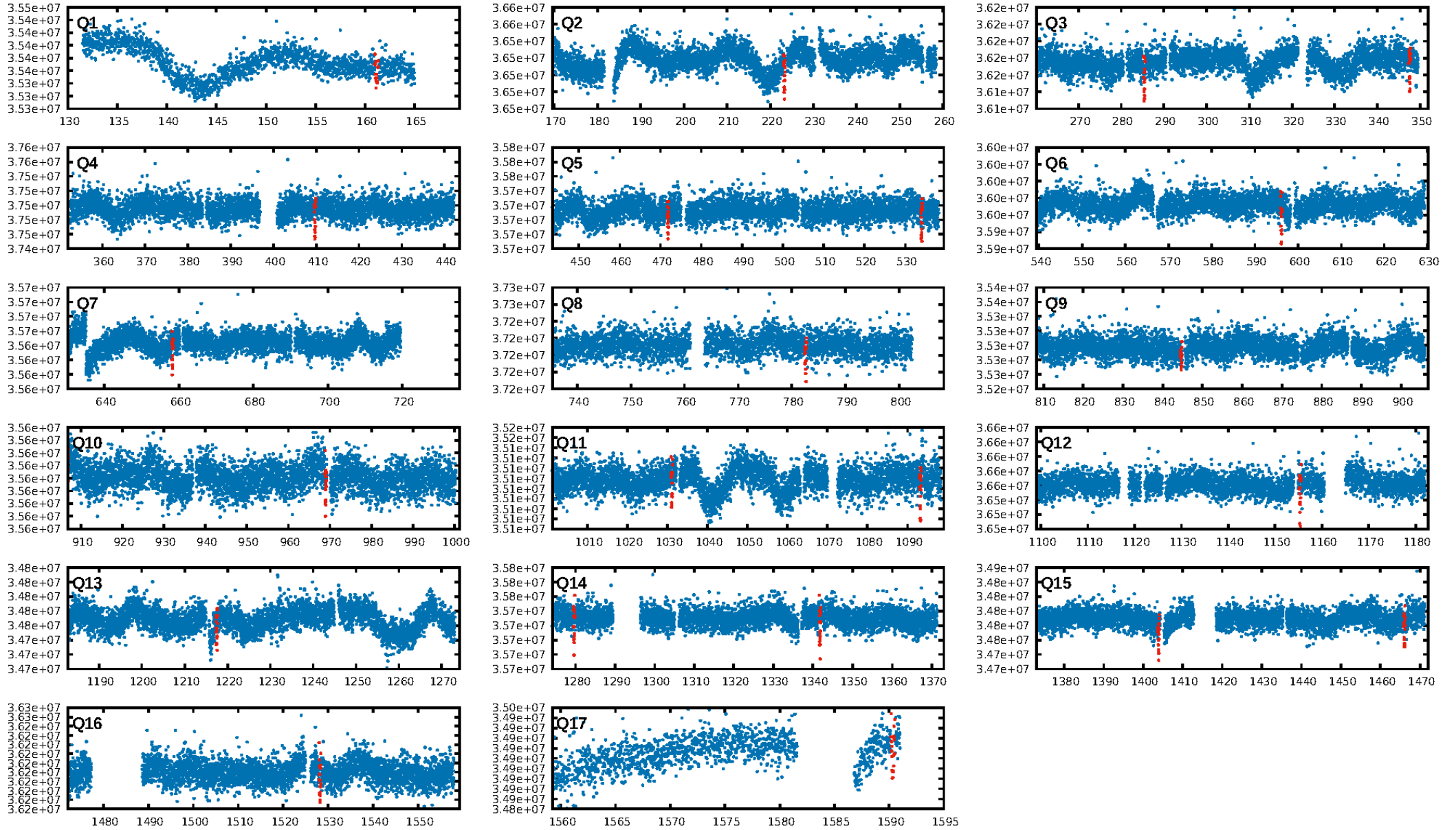
DV Fit Results:

Period = 62.13873 [0.00021] d
Epoch = 161.1466 [0.0029] BKJD
Rp/R* = 0.0306 [0.0045]
a/R* = 71.29 [37.63]
b = 0.79 [0.26]
Seff = 17.91 [15.83]
Teq = 525 [116] K
Rp = 5.41 [2.72] Re
a = 0.3009 [0.1567] AU
Ag = 106.41 [106.47] [0.99 σ]
Teffp = 2605 [311] K [6.27 σ]

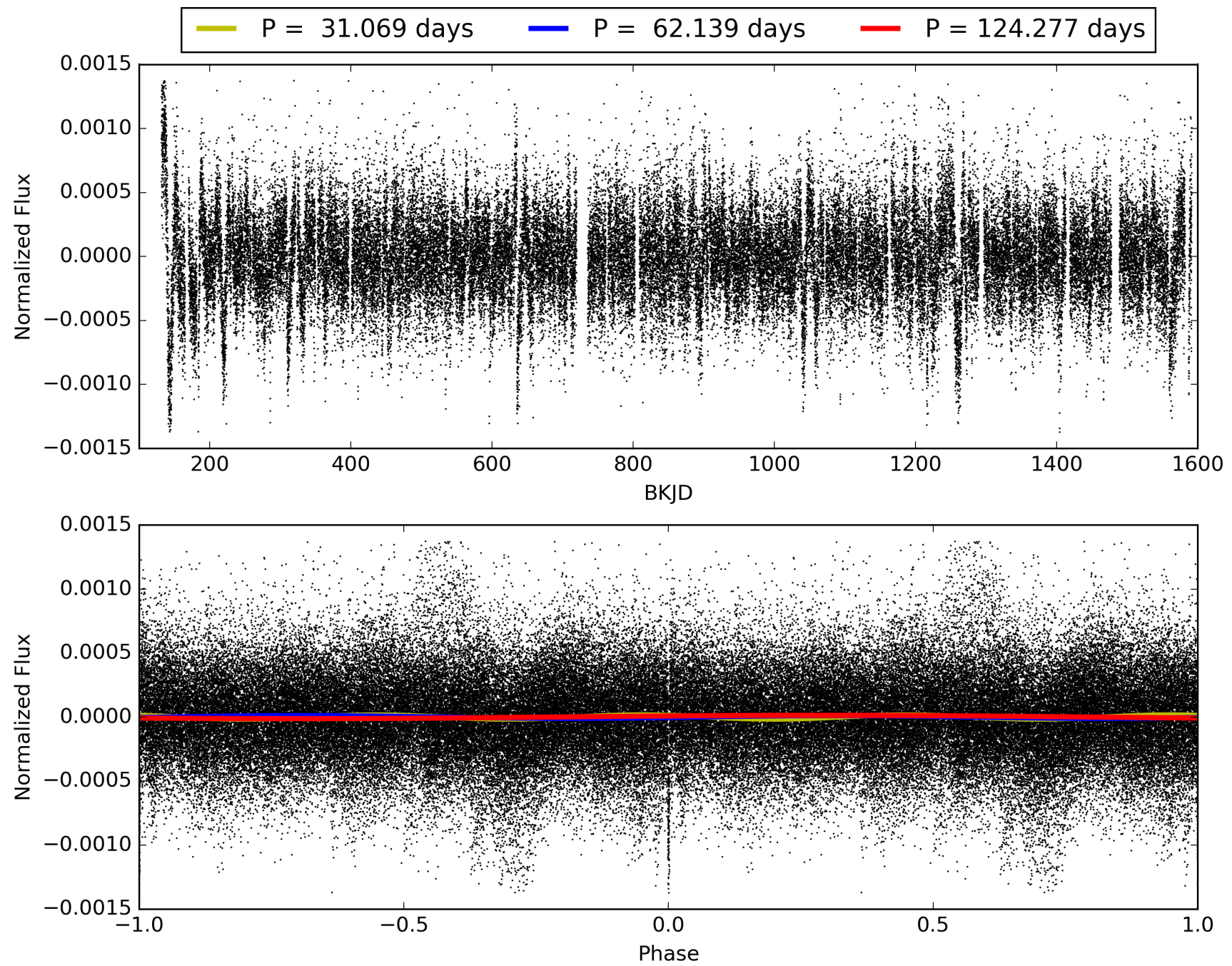
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.48e-187
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 3.671
Centroid-sig: 7.3%
Centroid-so: 0.659 arcsec [1.58 σ]
OotOffset-rm: 0.283 arcsec [1.72 σ]
KicOffset-rm: 0.178 arcsec [1.08 σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 011656918-01, PDC Light Curves

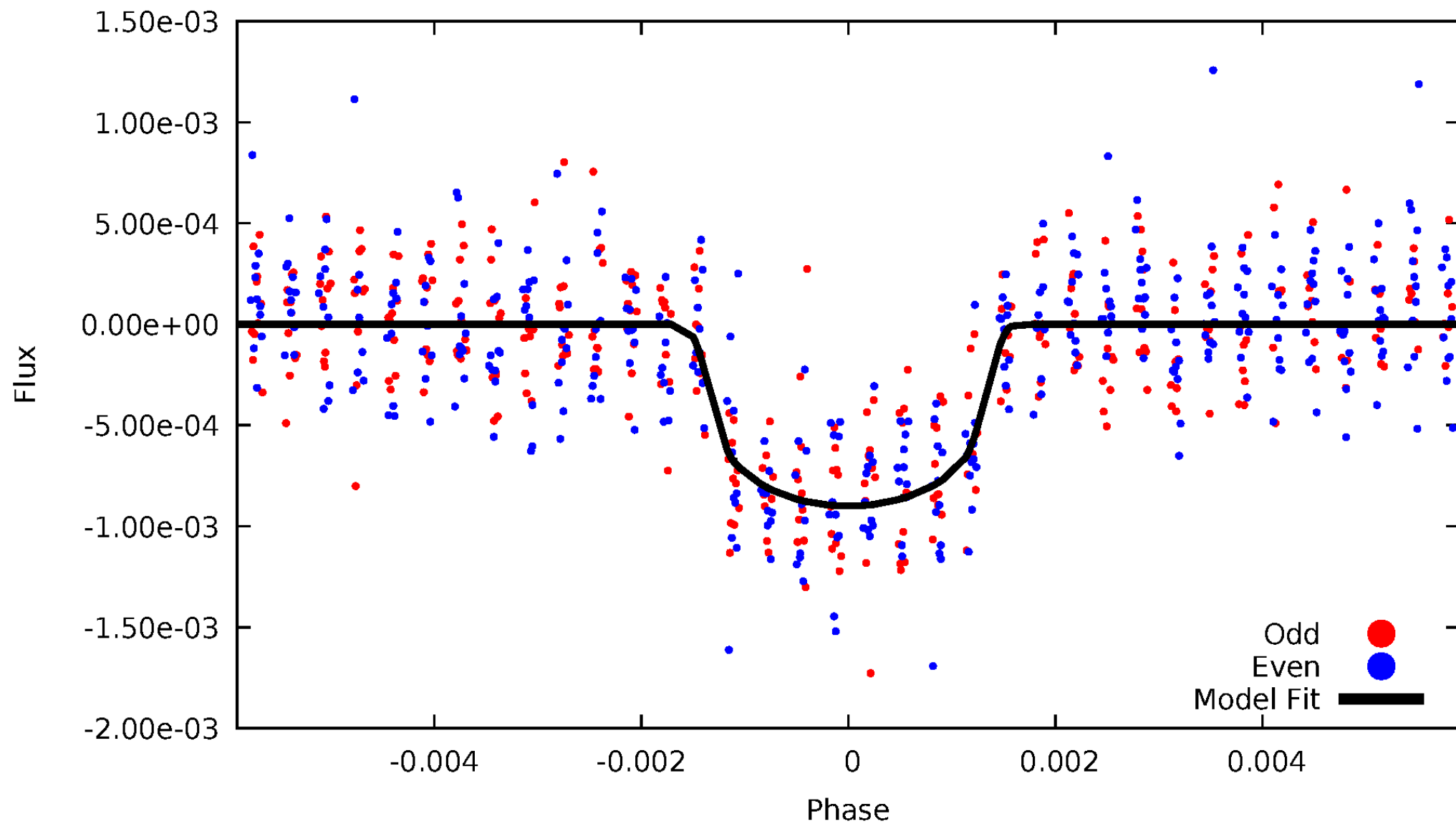


TCE 011656918-01



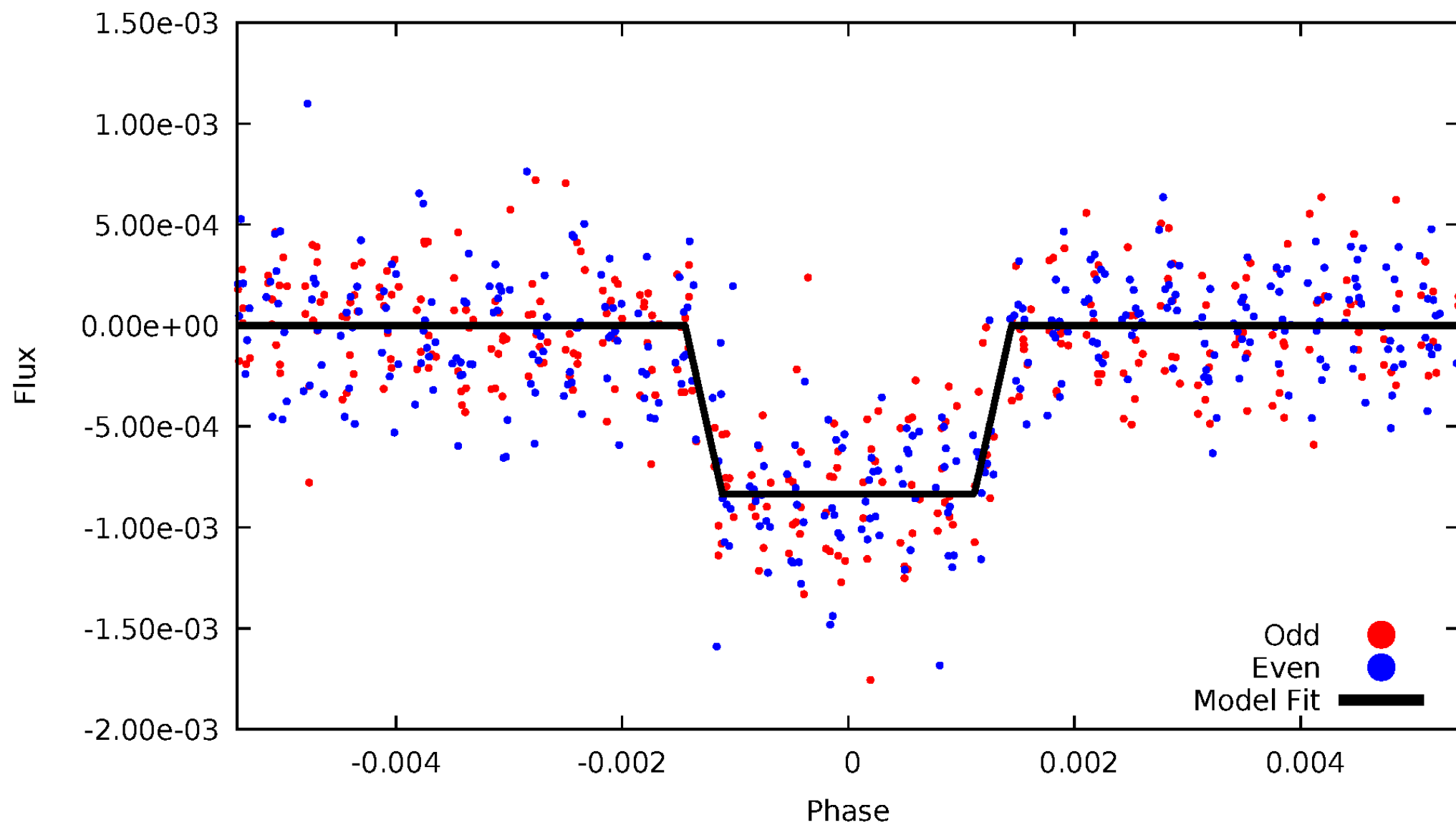
DV Odd/Even

TCE 011656918-01



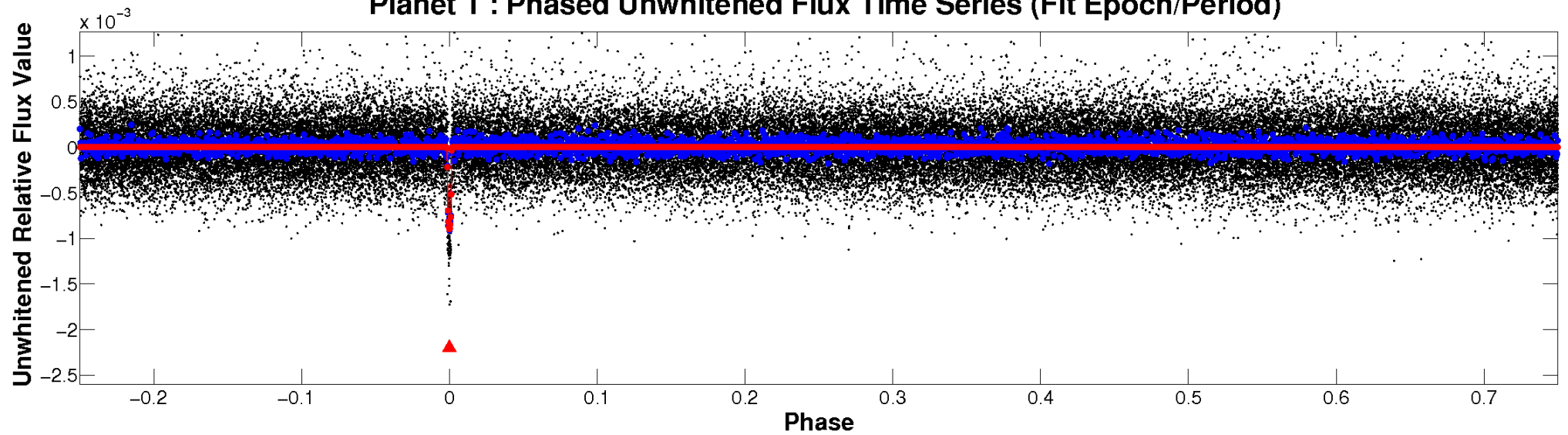
ALT Odd/Even

TCE 011656918-01

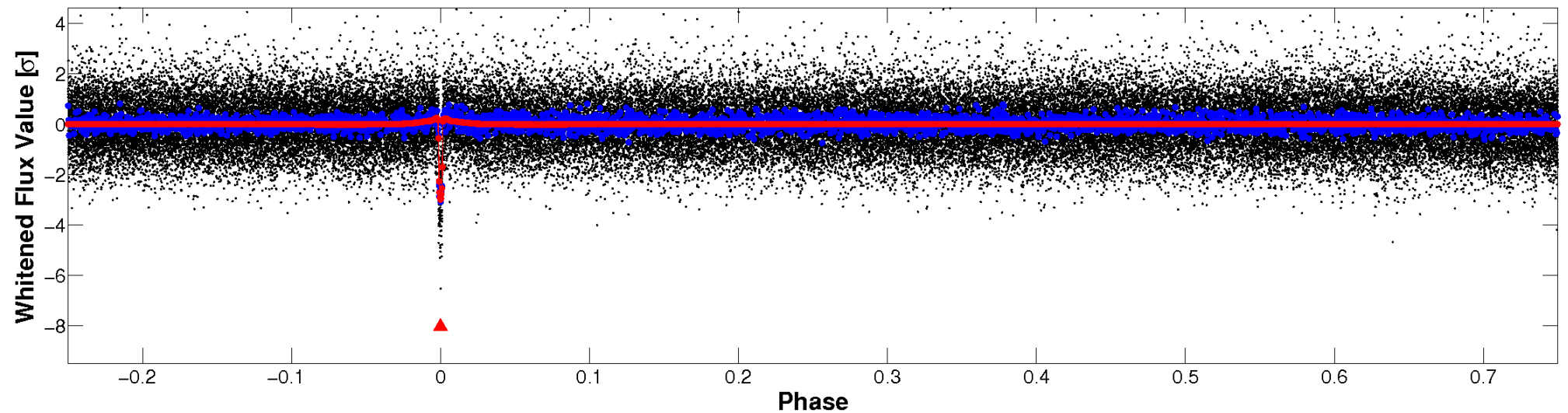


Non-Whitened Vs. Whitened Light Curve

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

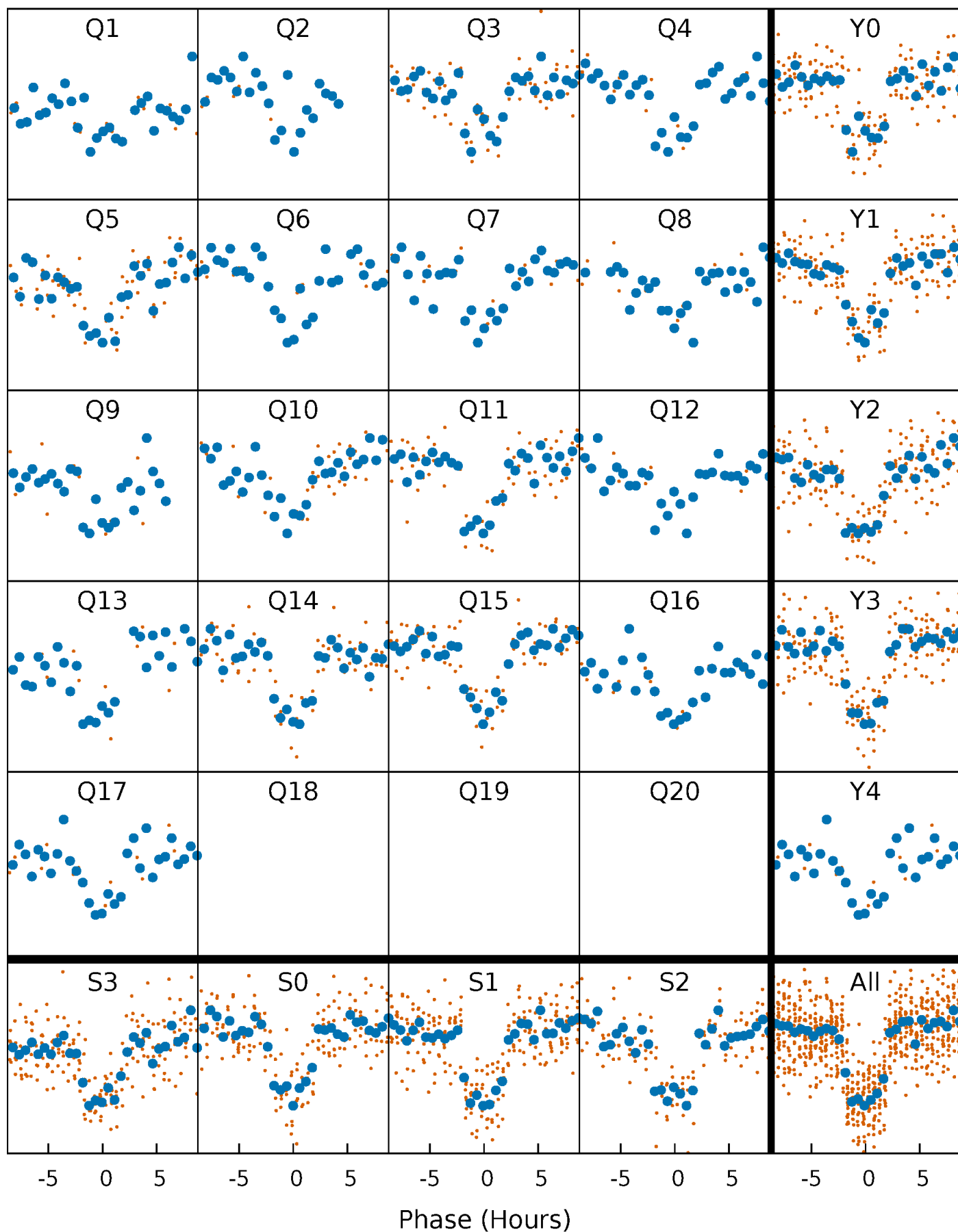


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



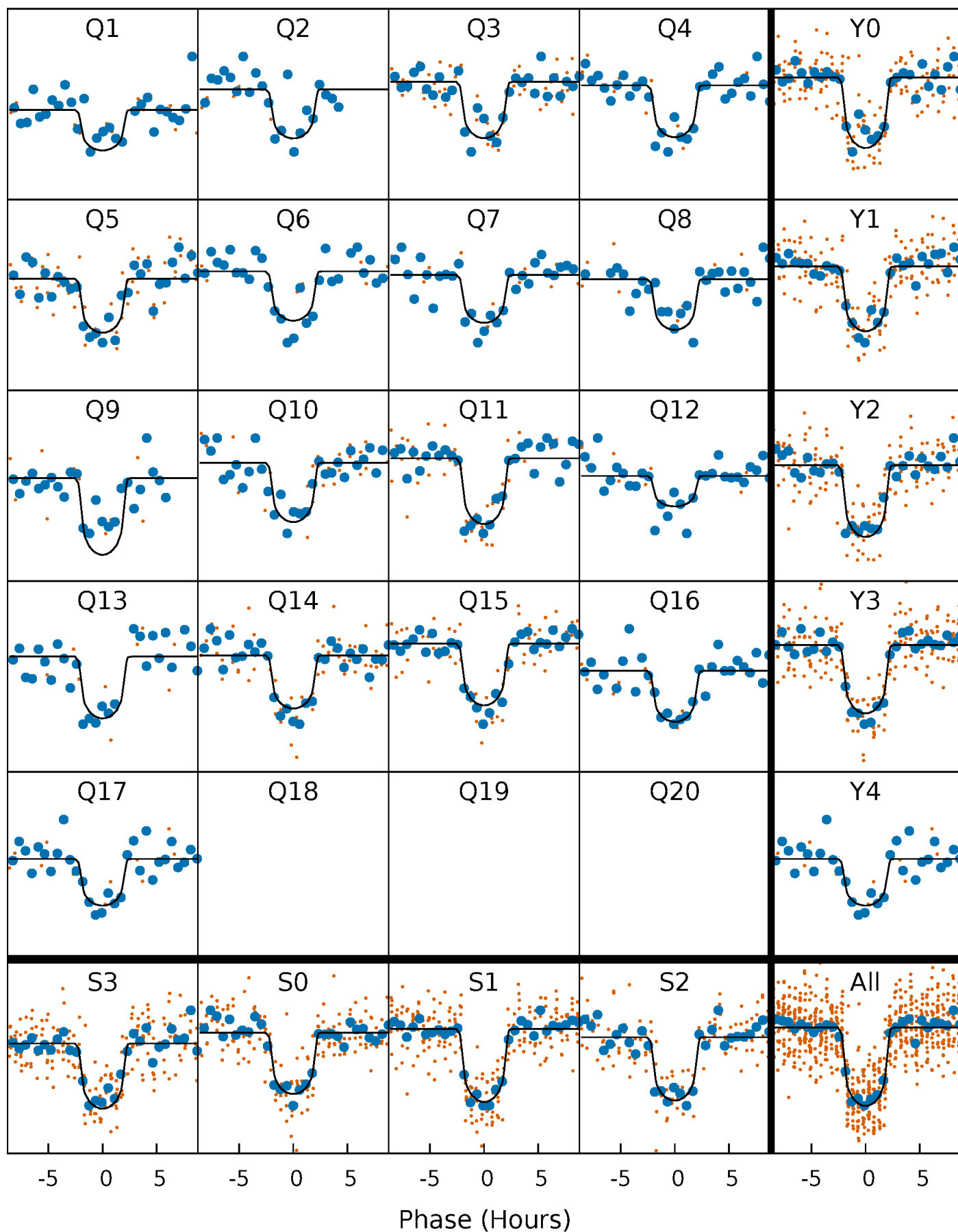
PDC Quarter-Phased Transit Curves

TCE 011656918-01 P= 62.138726 Days $T_0=161.146614$ (BKJD)



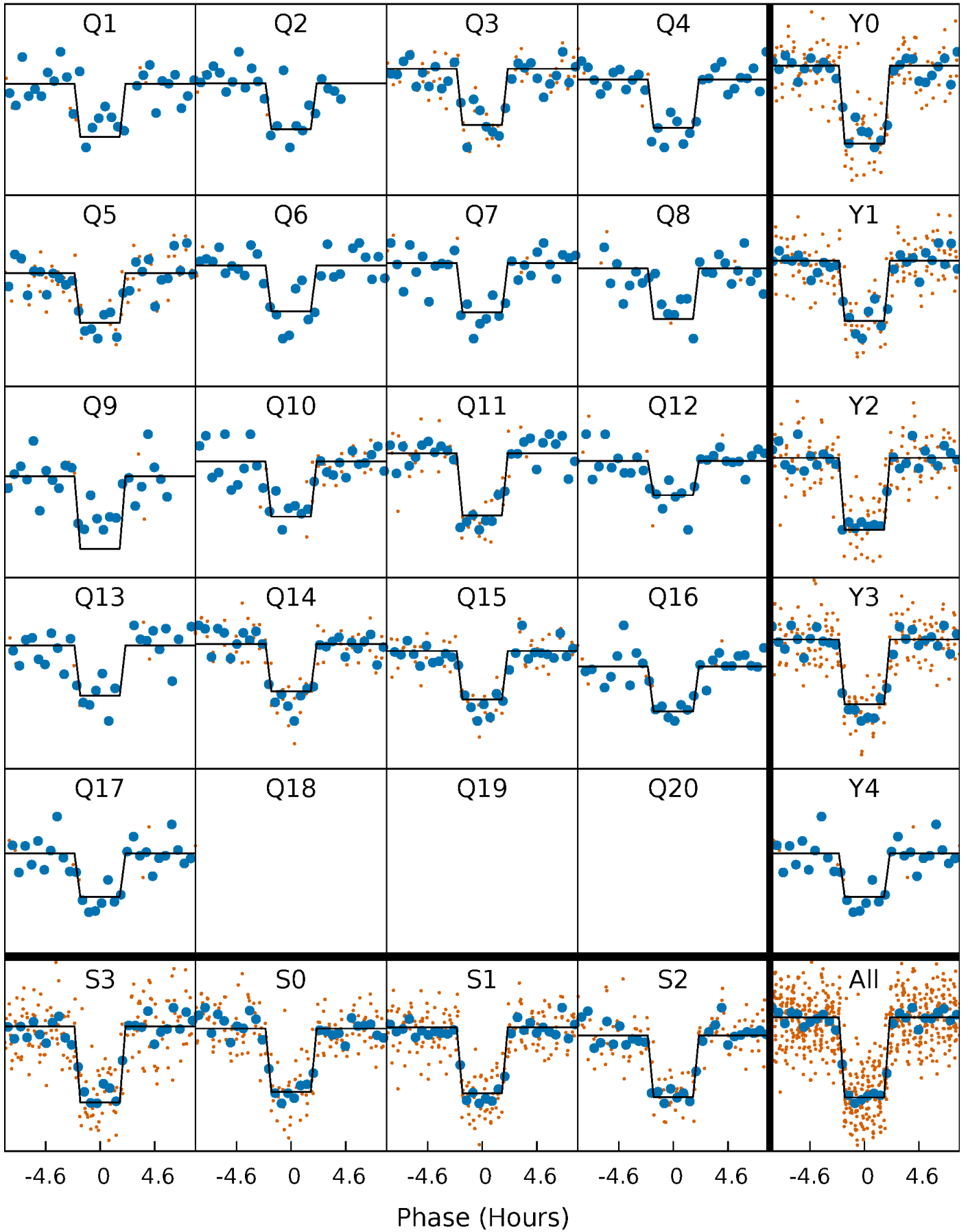
DV Quarter-Phased Transit Curves

TCE 011656918-01 P= 62.138726 Days $T_0=161.146614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

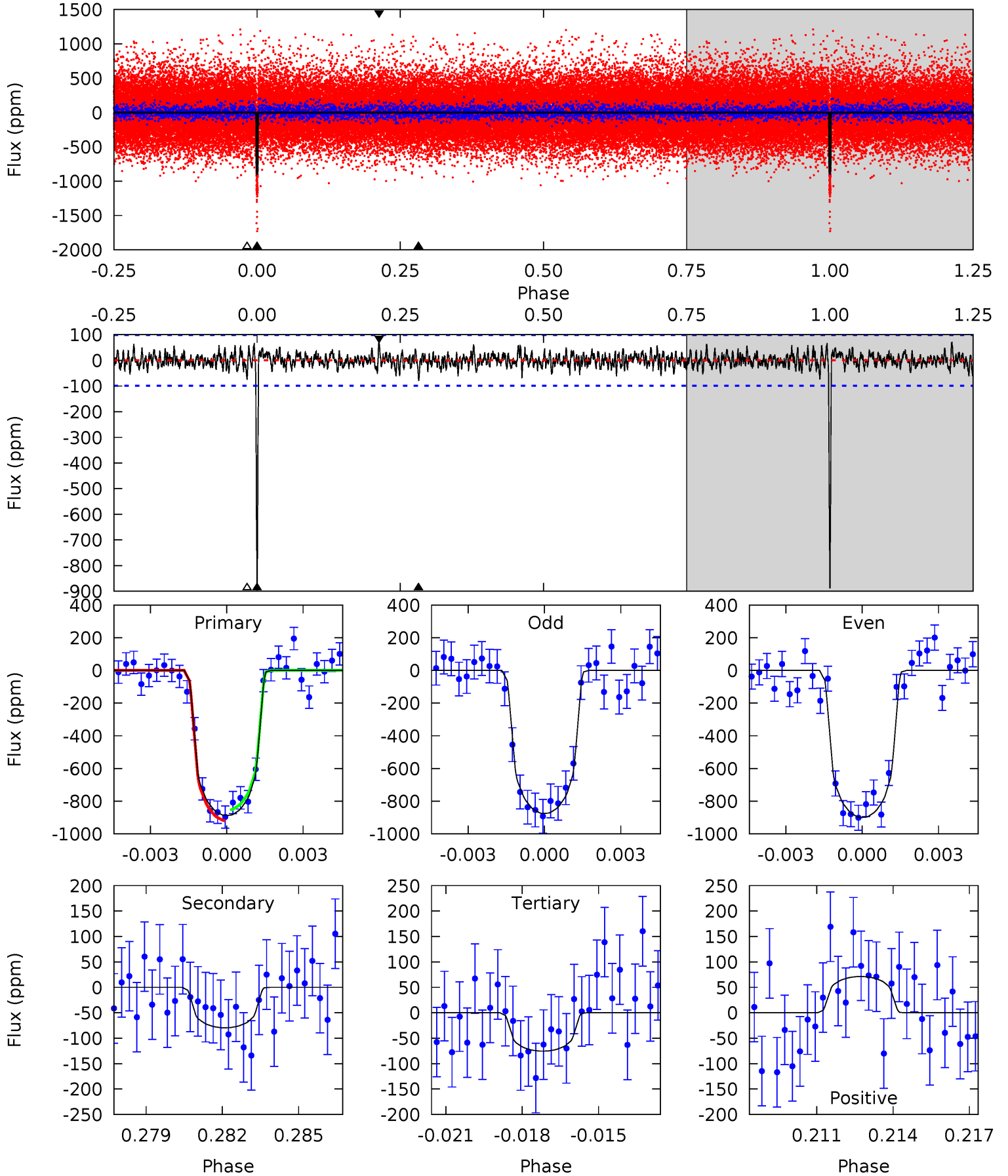
TCE 011656918-01 P= 62.138937 Days $T_0=161.143796$ (BKJD)



DV Model-Shift Uniqueness Test

011656918-01, P = 62.138726 Days, E = 99.007888 Days

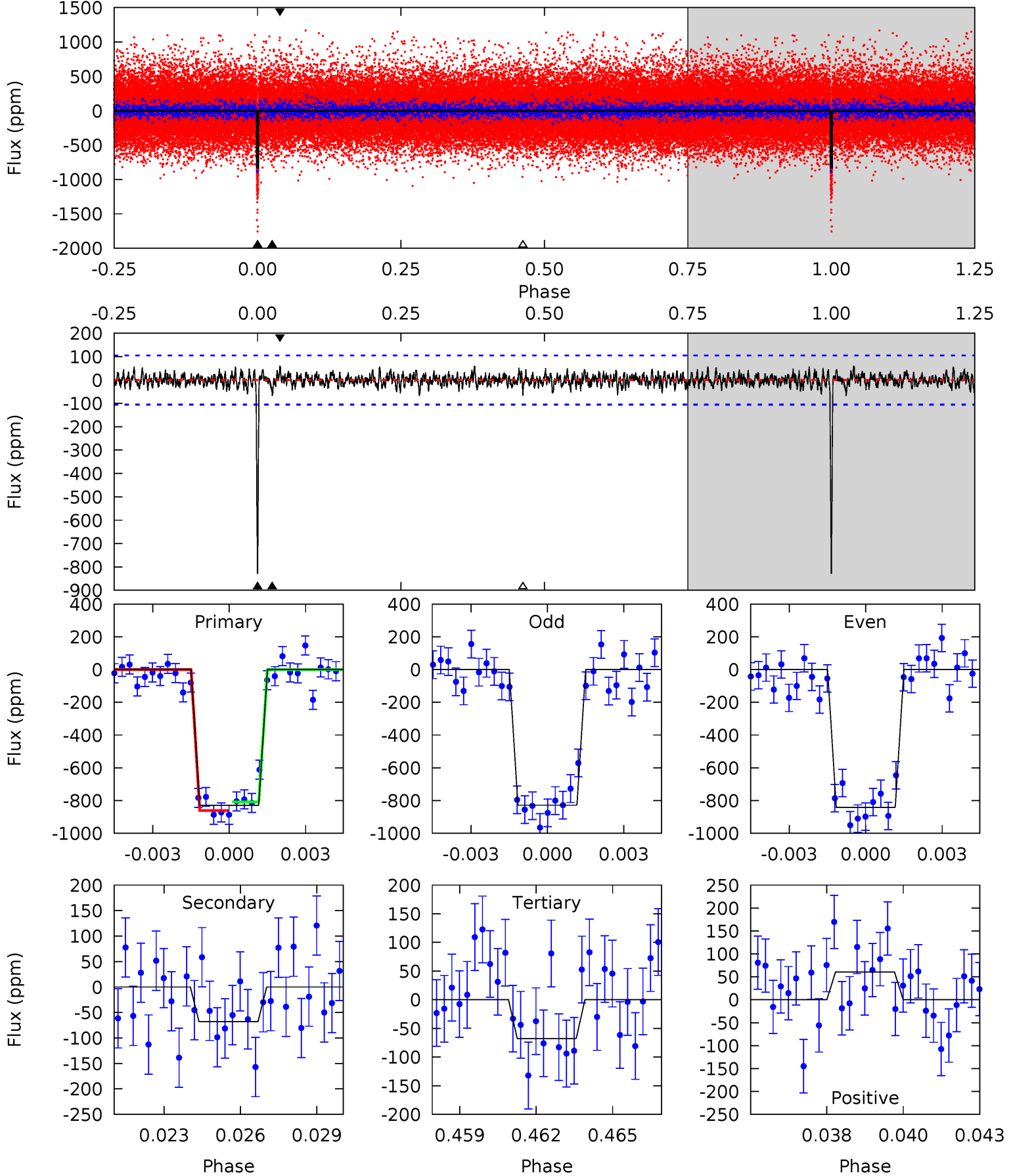
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.2	4.23	4.01	3.79	5.25	2.96	1.11	43.2	43.4	0.21	0.44	0.65	0.99	0.07	1.74



Alt Model-Shift Uniqueness Test

011656918-01, P = 62.138937 Days, E = 99.004859 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.4	3.40	3.38	3.03	5.26	2.98	0.96	38.0	38.4	0.02	0.37	0.35	0.95	0.07	1.31



Stellar Parameters For KIC 011656918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5123^{+81}_{-81}	$3.992^{+0.535}_{-0.094}$	$0.200^{+0.150}_{-0.150}$	$1.621^{+0.260}_{-0.779}$	$0.941^{+0.072}_{-0.109}$	$0.311^{+1.799}_{-0.089}$
	+2%/-2%	+13%/-2%	+75%/-75%	+16%/-48%	+8%/-12%	+578%/-29%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011656918-01 / KOI 1945.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-80 ± 19	$4.98^{+1.14}_{-1.32}$	719^{+38}_{-93}	3293^{+197}_{-184}	160^{+138}_{-60}
Alt.	-68 ± 20	$4.66^{+1.15}_{-1.27}$	715^{+43}_{-100}	3259^{+232}_{-209}	153^{+148}_{-63}

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

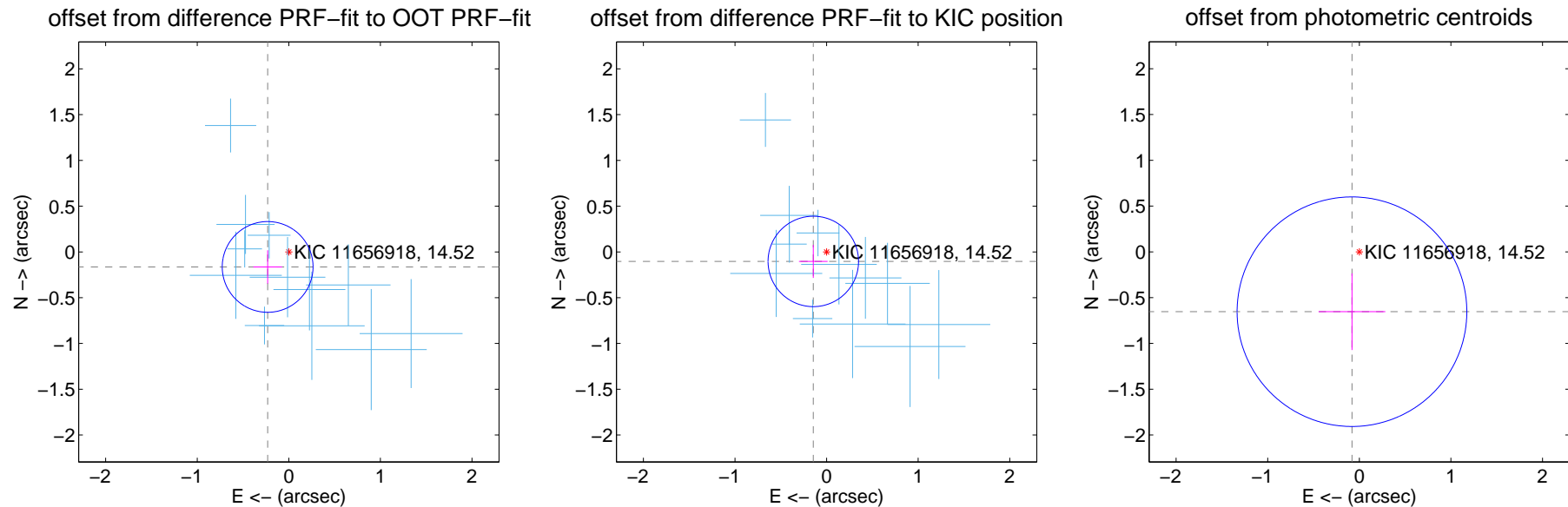
DV Centroid Data

Supplemental centroid analysis for 011656918-01. Kepler magnitude: 14.52. Transit SNR 34.01

There are 12 quarters with good PRF difference image offsets

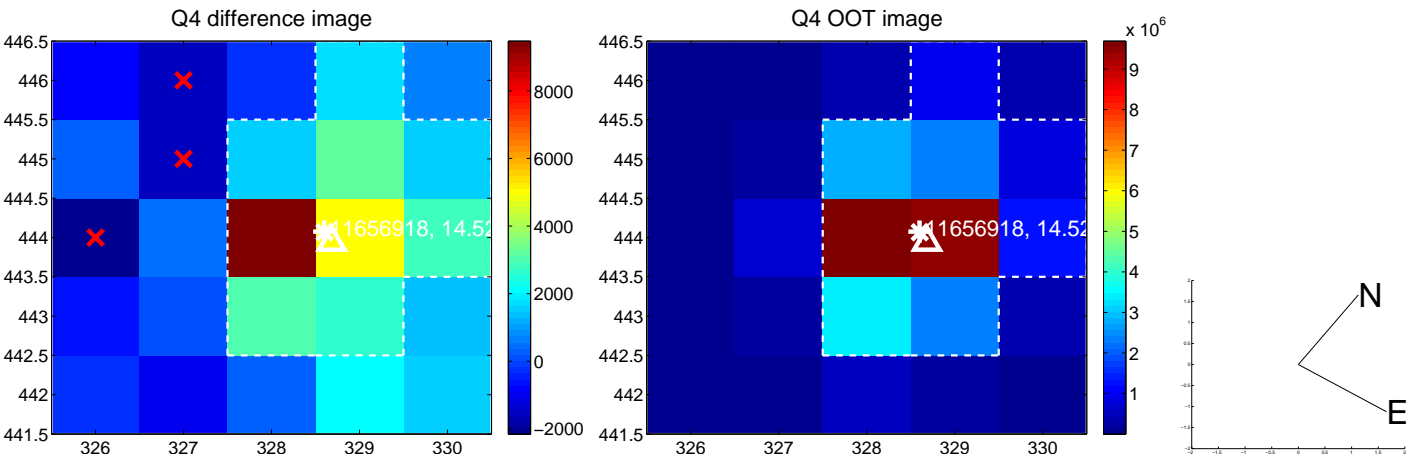
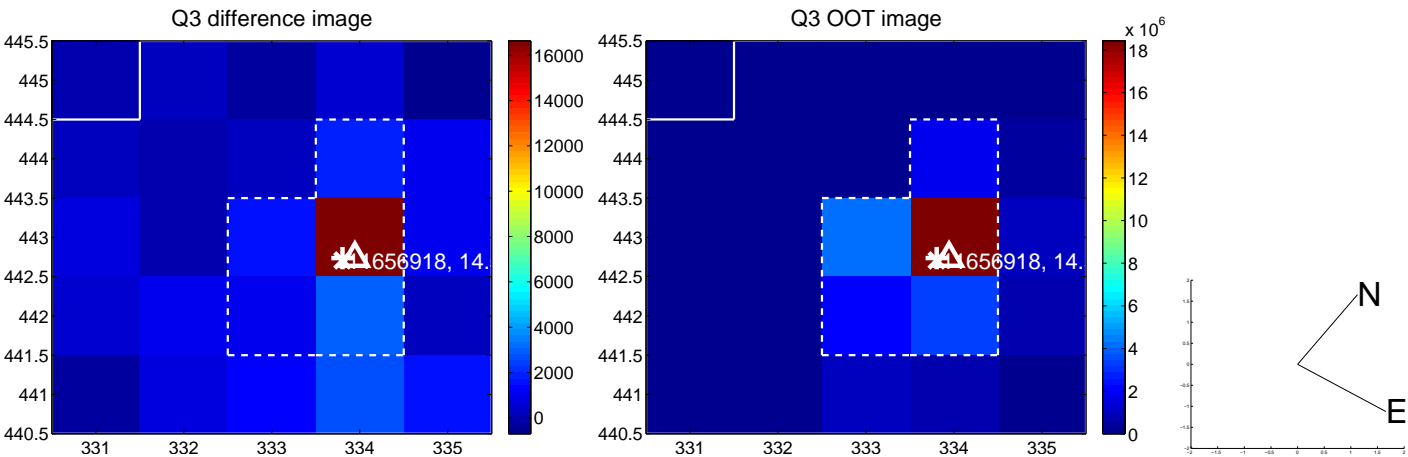
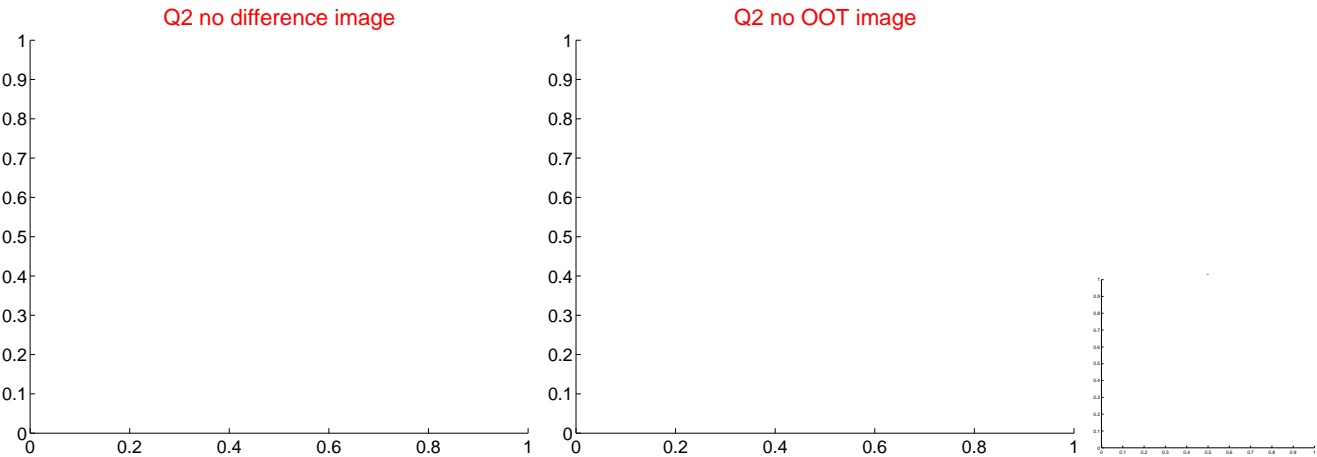
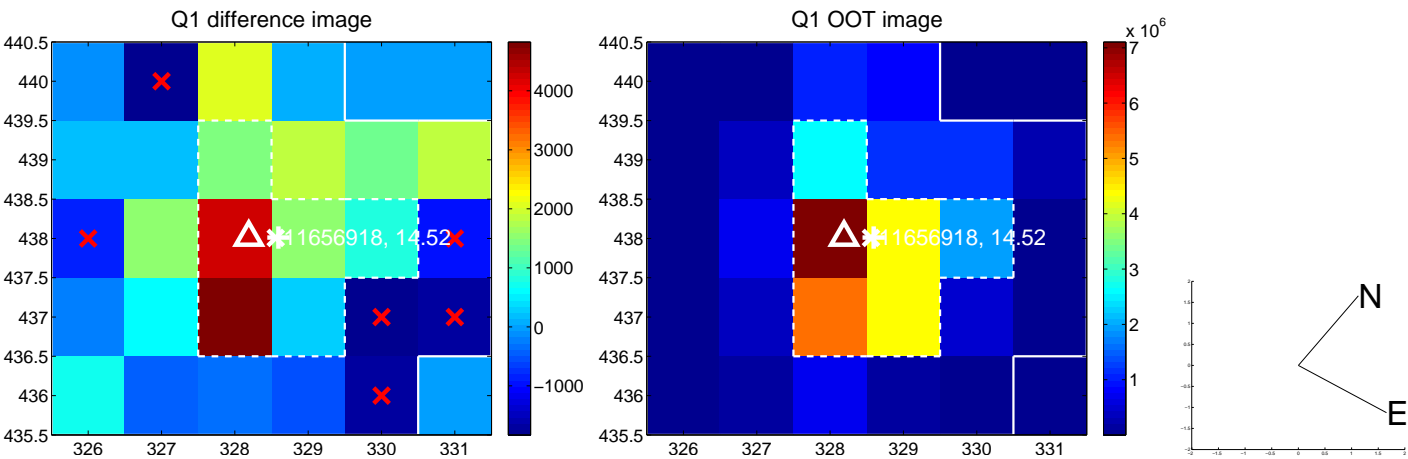
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.283 ± 0.165	1.72	0.231 ± 0.156	-0.164 ± 0.181
PRF-fit source offset from KIC position	0.178 ± 0.165	1.08	0.145 ± 0.156	-0.104 ± 0.180
photometric centroid source offset	0.66 ± 0.42	1.58	0.08 ± 0.36	-0.65 ± 0.42

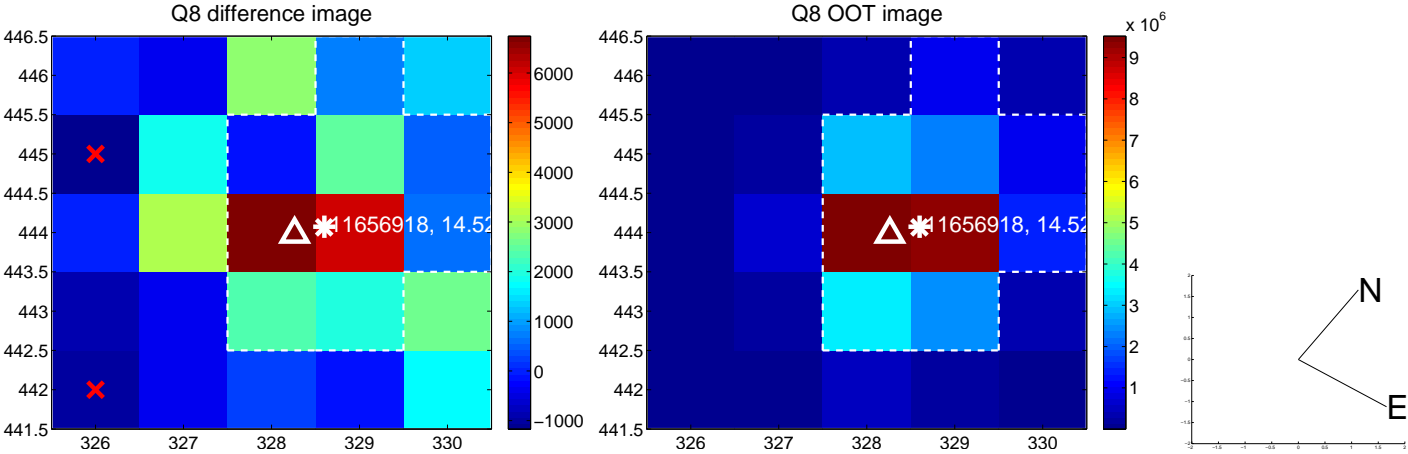
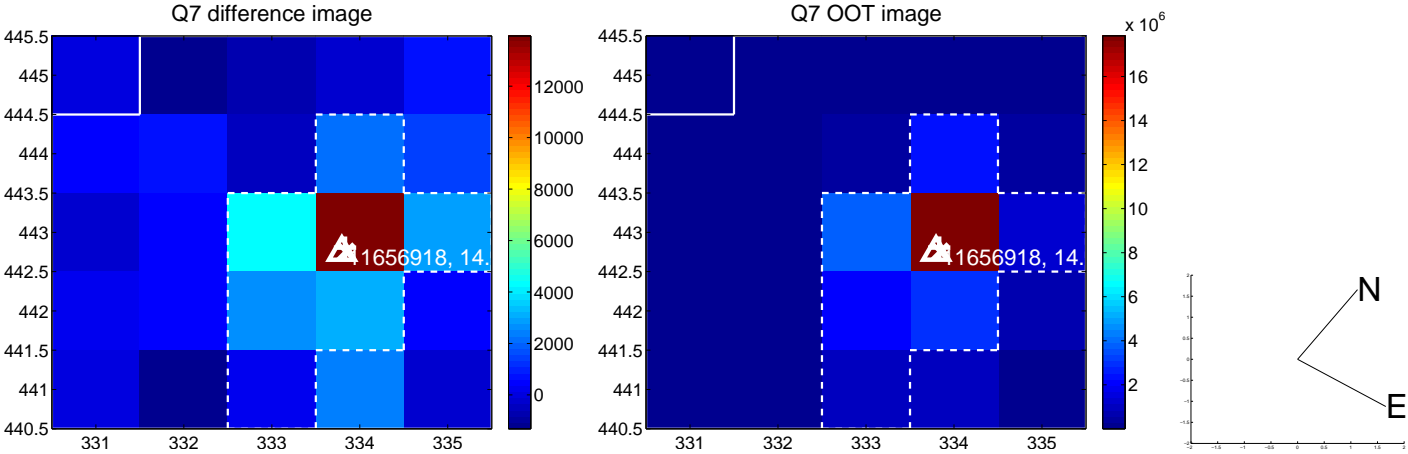
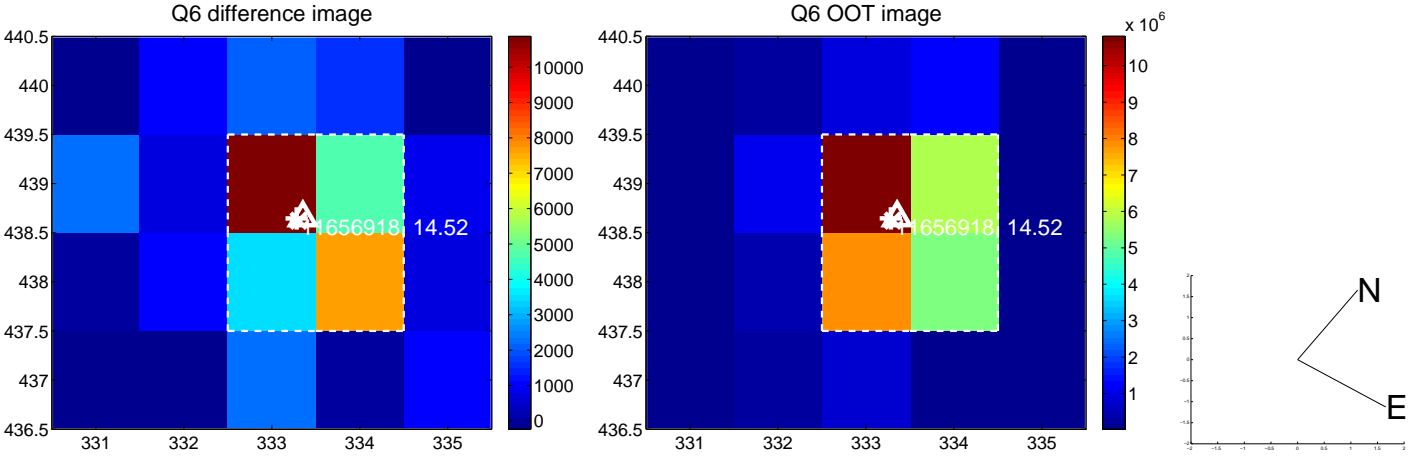
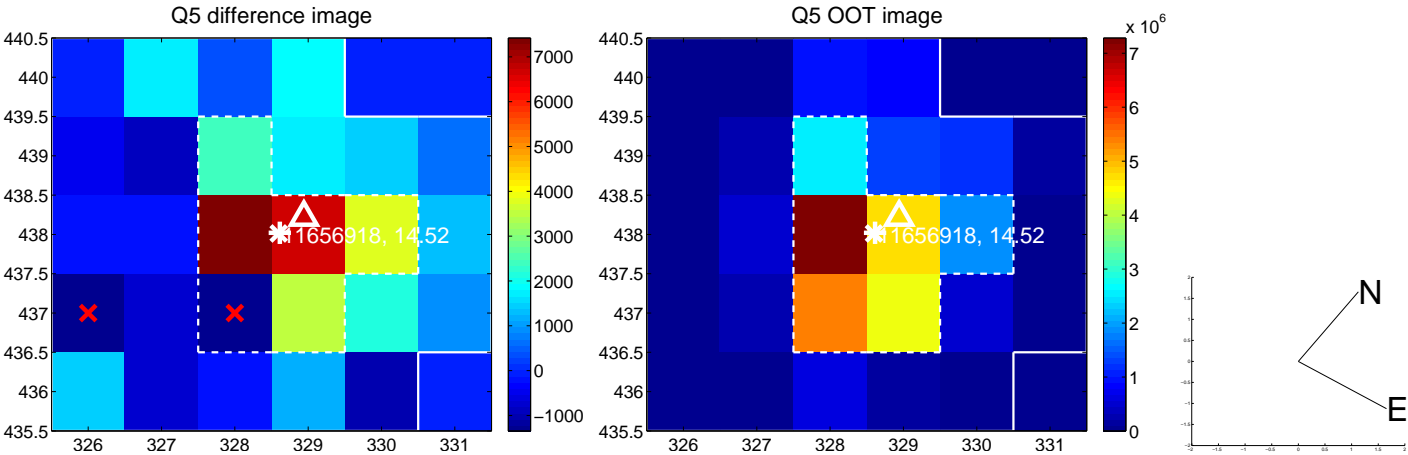


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

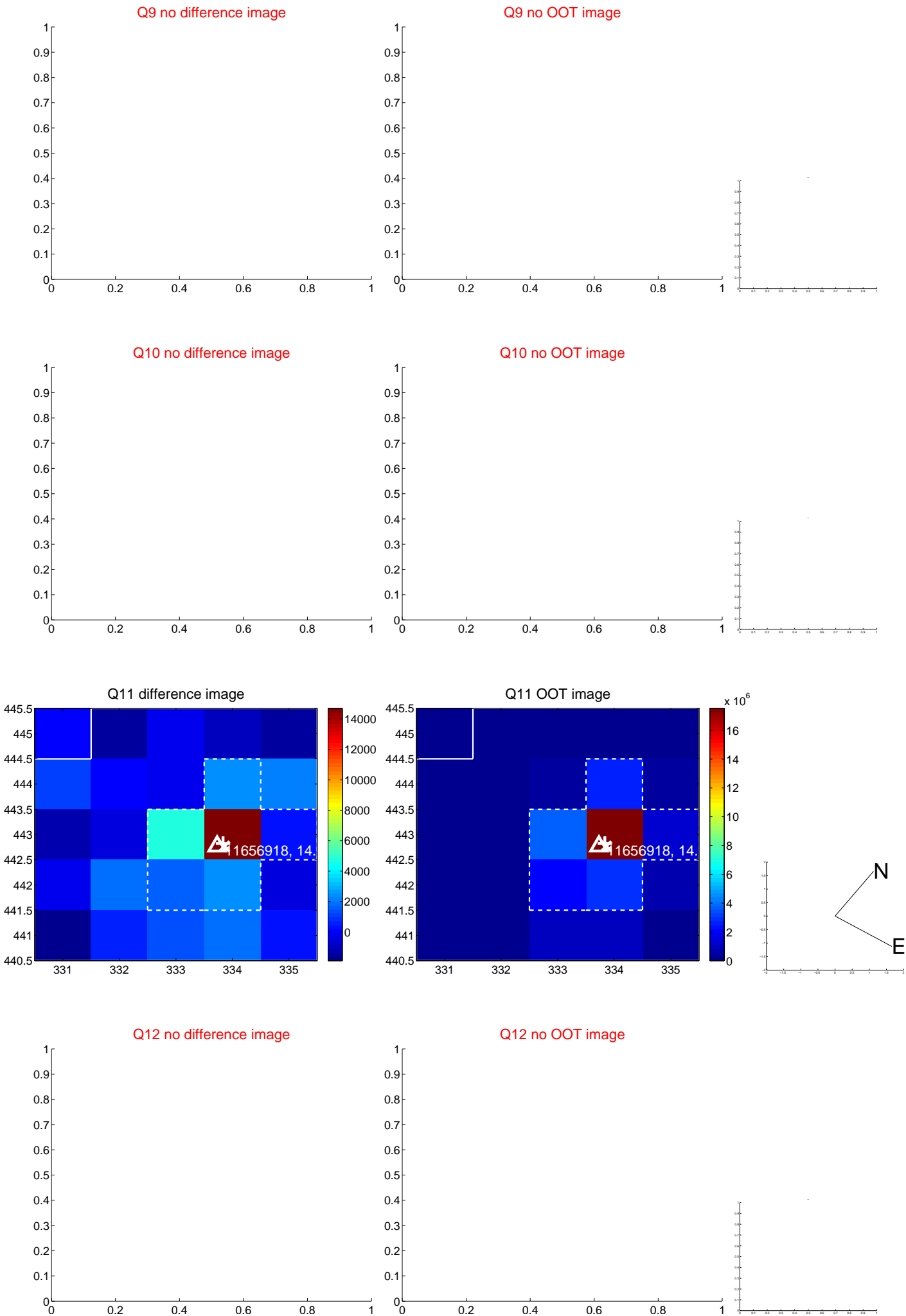
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



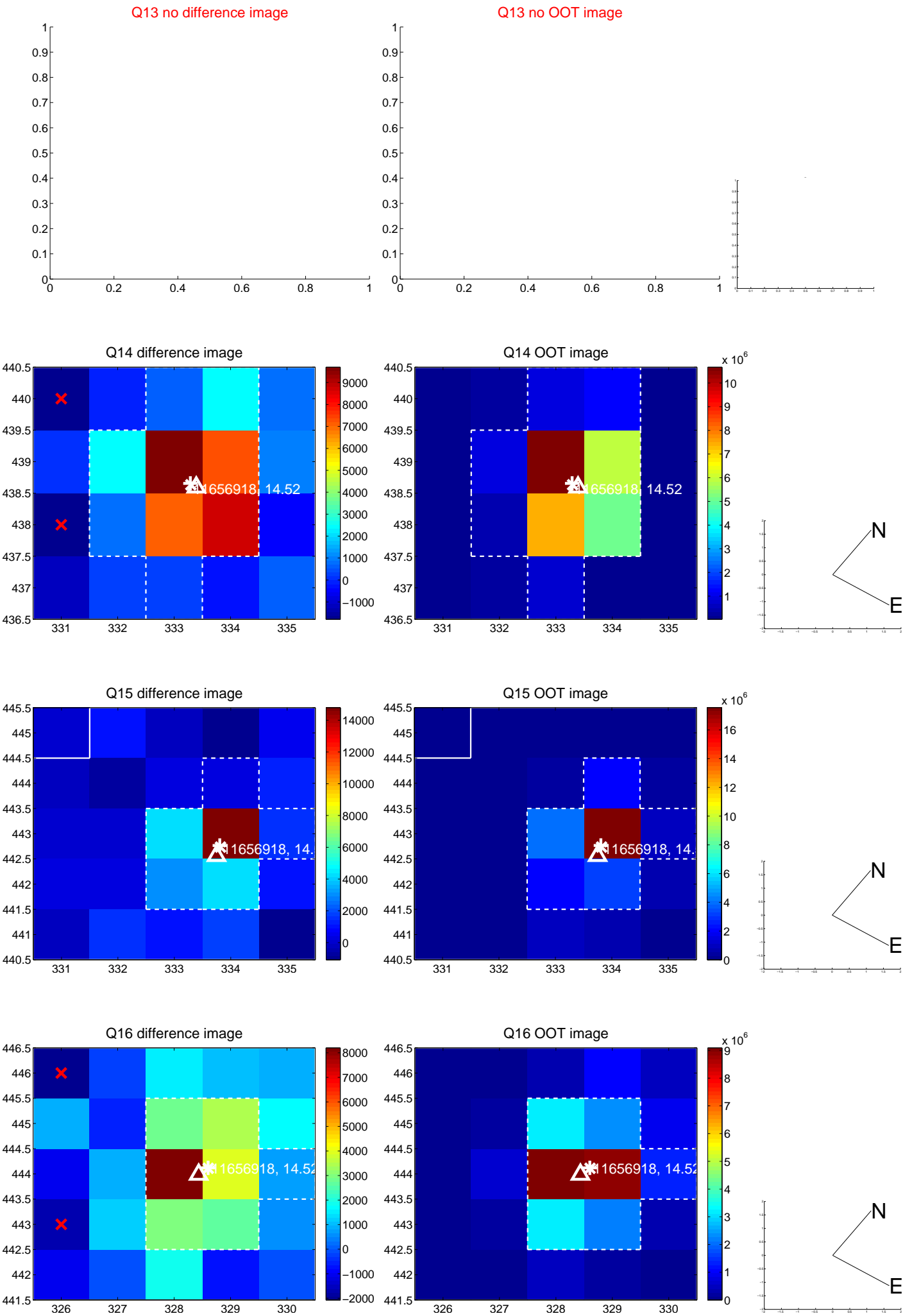
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



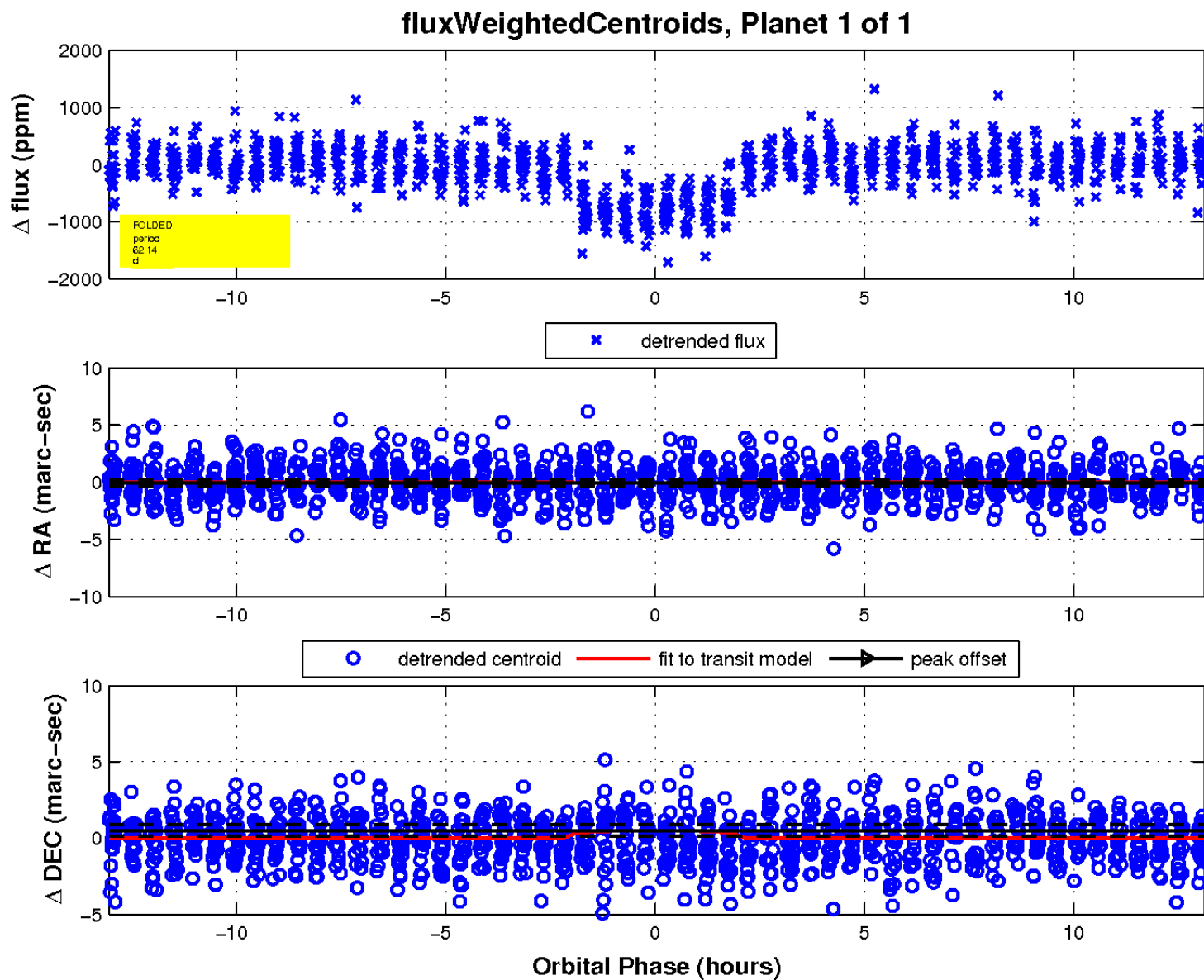
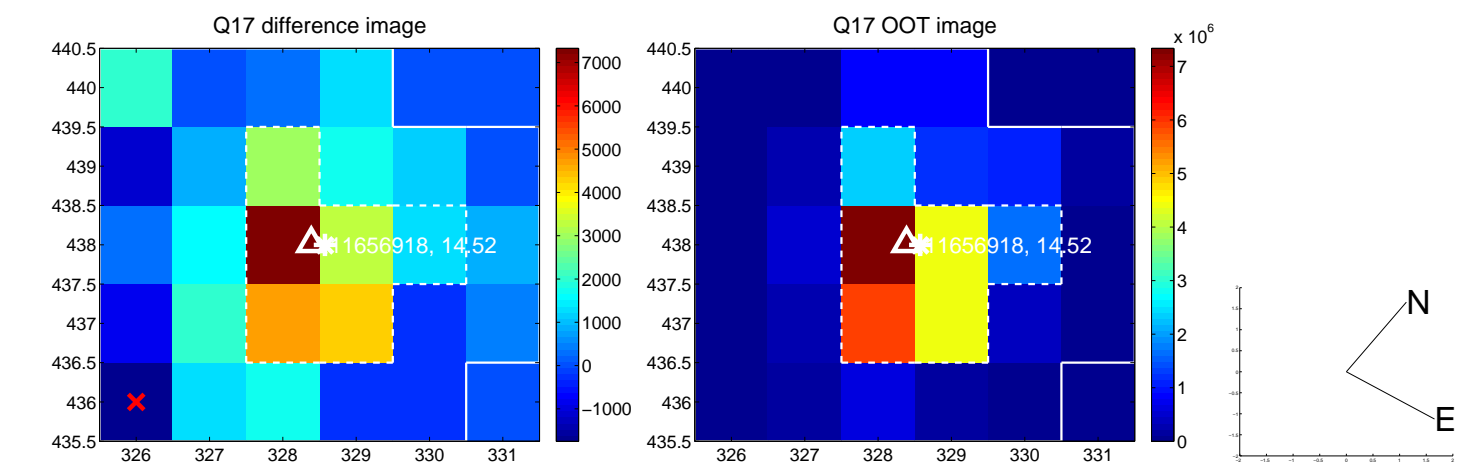
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

