

KIC 003239171

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})
003239171-01	OBS	4967.01	43.582218	148.414887	339.1	7.179	8.1	8.3	1.03	6225	2.07	22.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003239171-01	OBS	PC	0.61	0	0	0	0	CENT_FEW_DIFFS

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

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

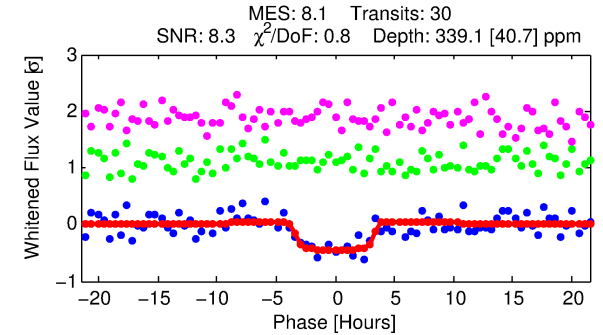
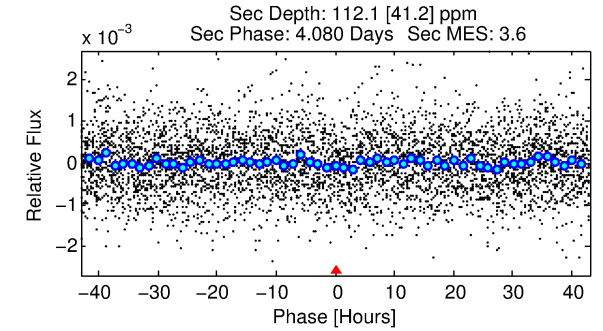
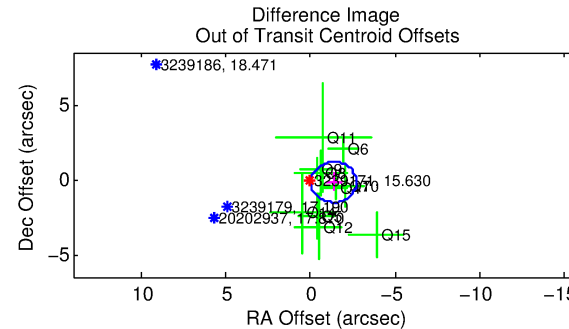
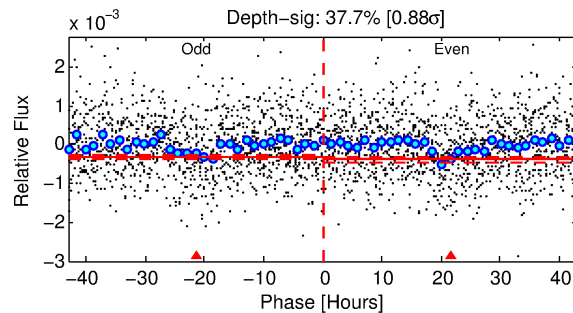
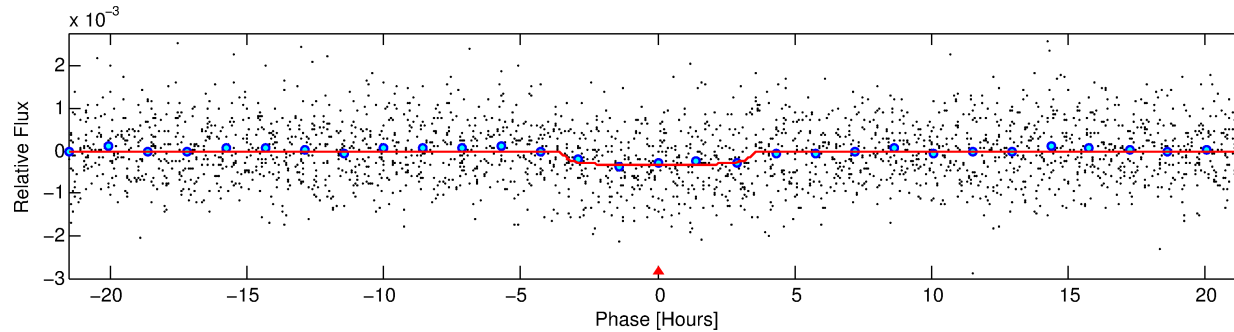
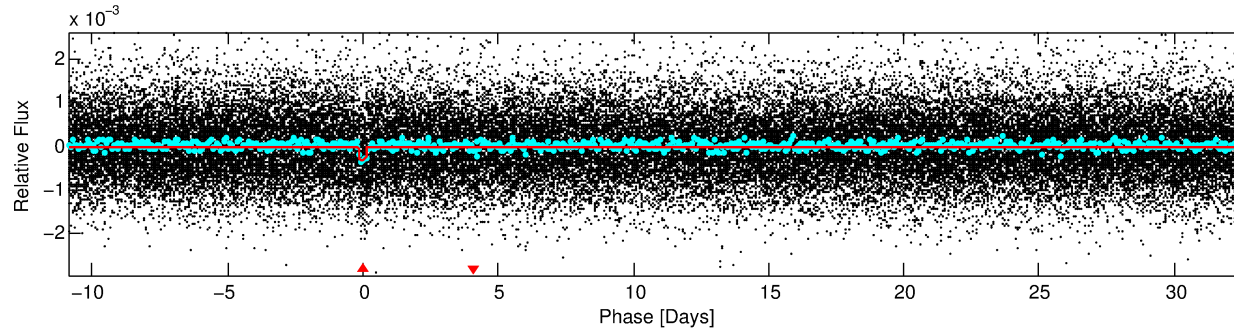
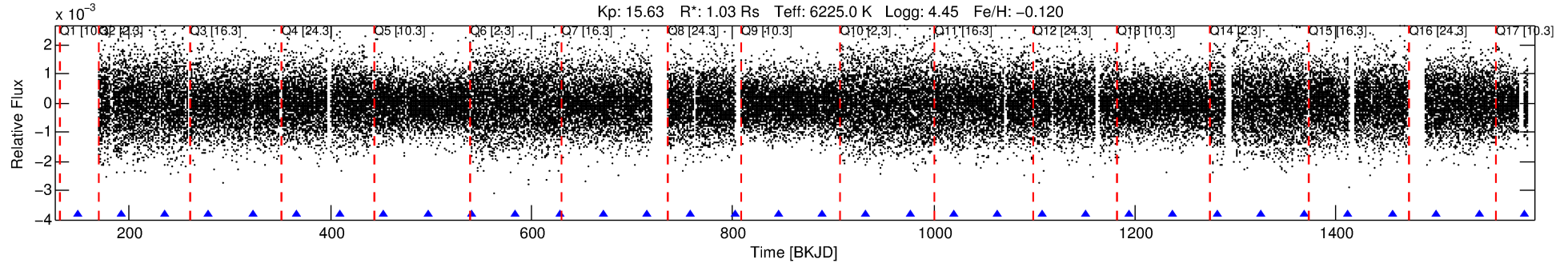
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003239171-01

No Significant Match Found

DV One-Page Summary

KIC: 3239171 Candidate: 1 of 1 Period: 43.582 d
KOI: K04967.01 Corr: 0.954



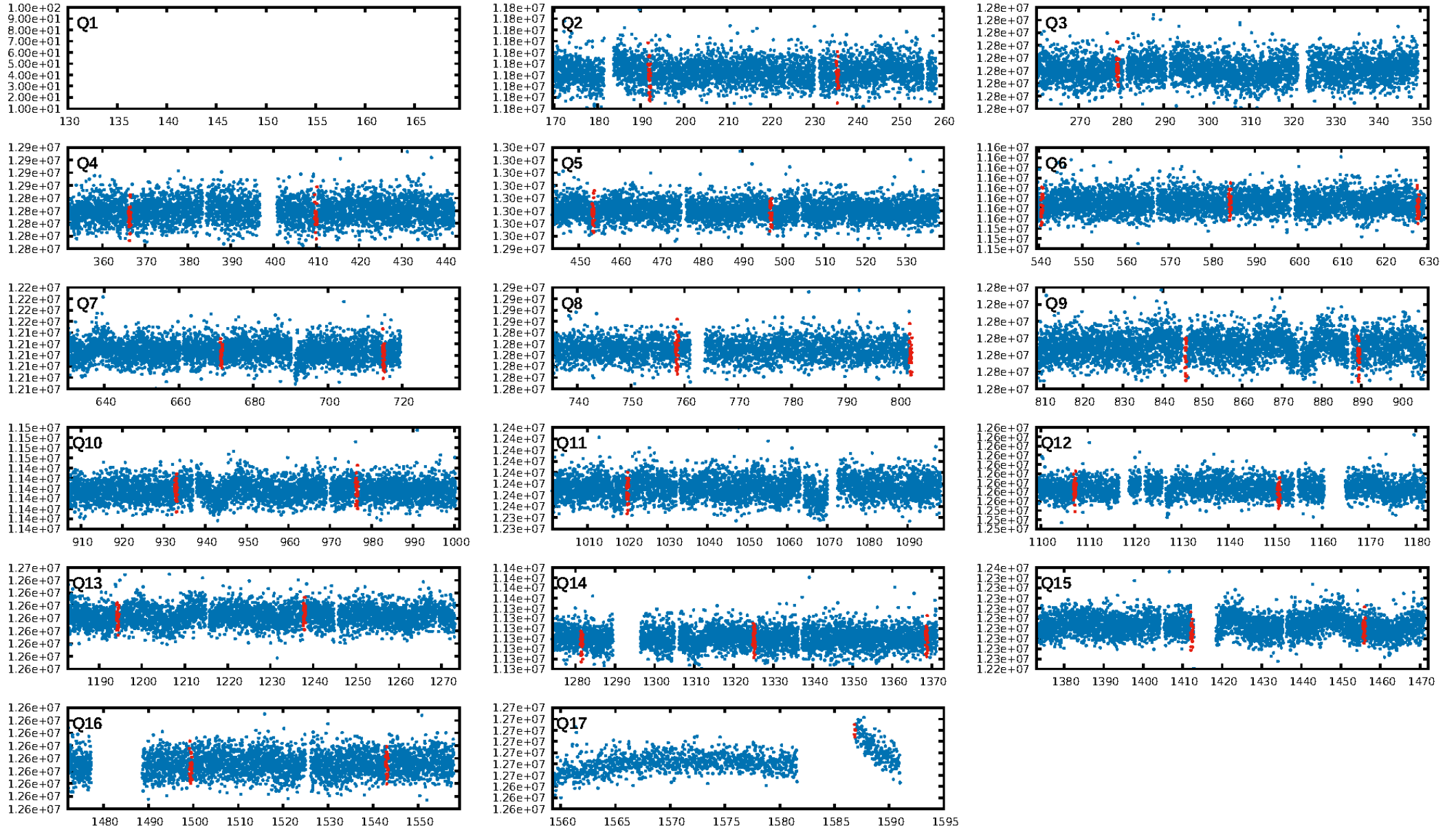
DV Fit Results:

Period = 43.58222 [0.00091] d
Epoch = 148.4149 [0.0168] BKJD
Rp/R* = 0.0184 [0.0097]
a/R* = 31.25 [84.33]
b = 0.76 [1.49]
Seff = 22.94 [8.96]
Teq = 558 [55] K
Rp = 2.07 [1.26] Re
a = 0.2497 [0.0623] AU
Ag = 897.05 [1053.64] [0.85 σ]
Teffp = 4722 [1332] K [3.12 σ]

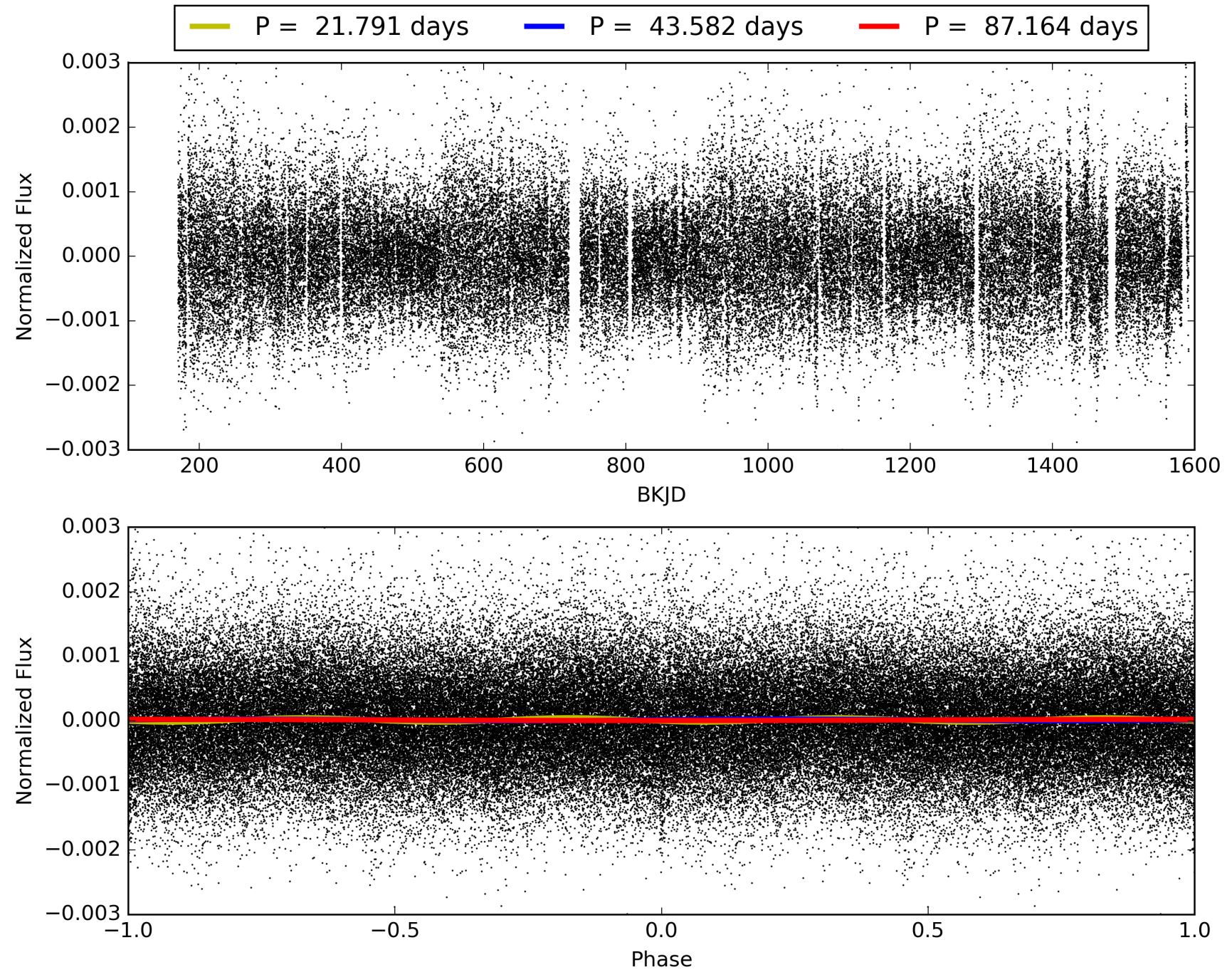
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.30e-16
RollingBand-fgt: 1.00 [30/30]
GhostDiagnostic-chr: 2.732
Centroid-sig: 0.0%
Centroid-so: 2.274 arcsec [1.64 σ]
OotOffset-rm: 1.368 arcsec [3.04 σ]
KicOffset-rm: 1.144 arcsec [2.54 σ]
OotOffset-st: 3/3/3/2 [11]
KicOffset-st: 3/3/3/2 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 003239171-01, PDC Light Curves

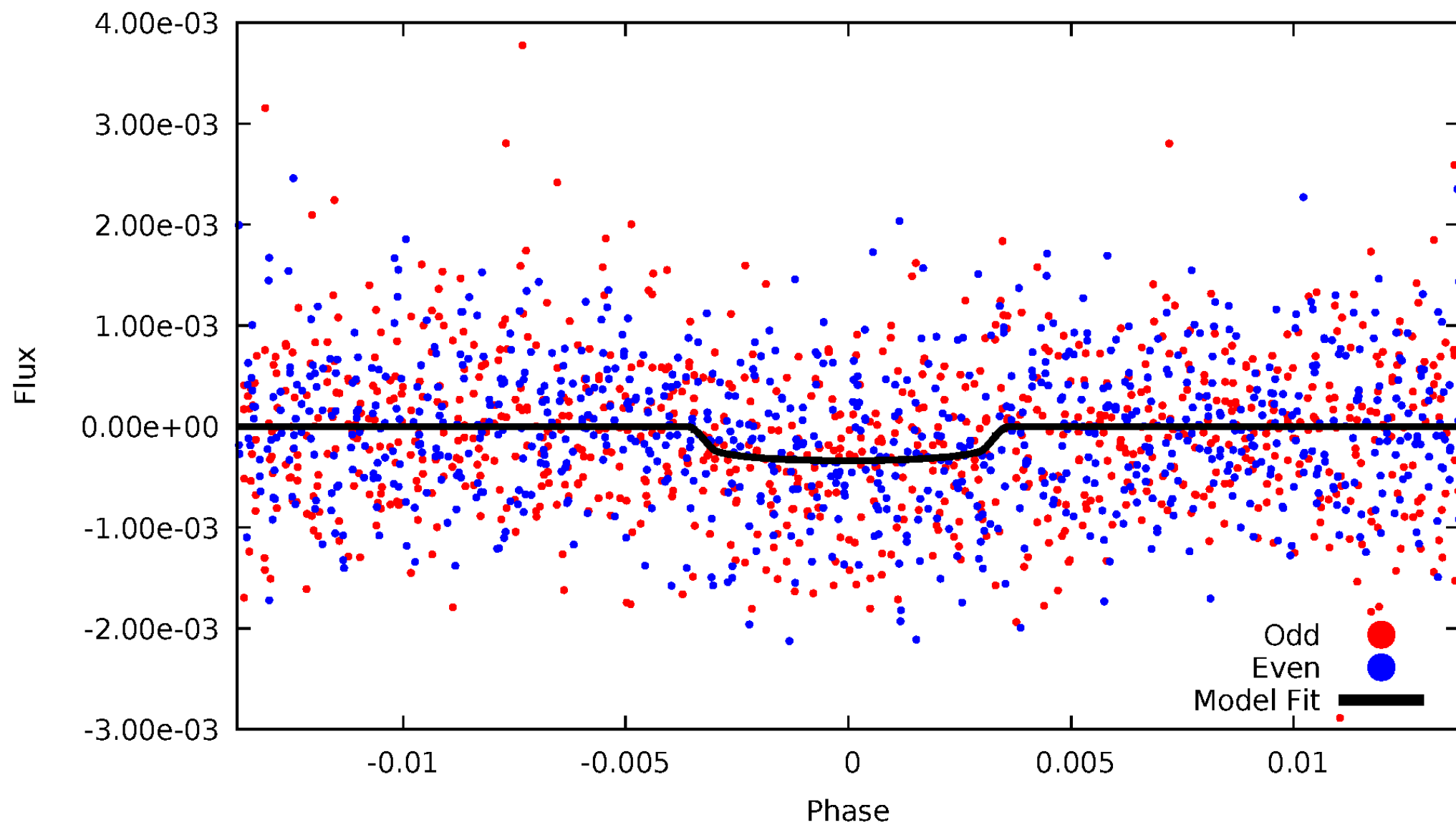


TCE 003239171-01



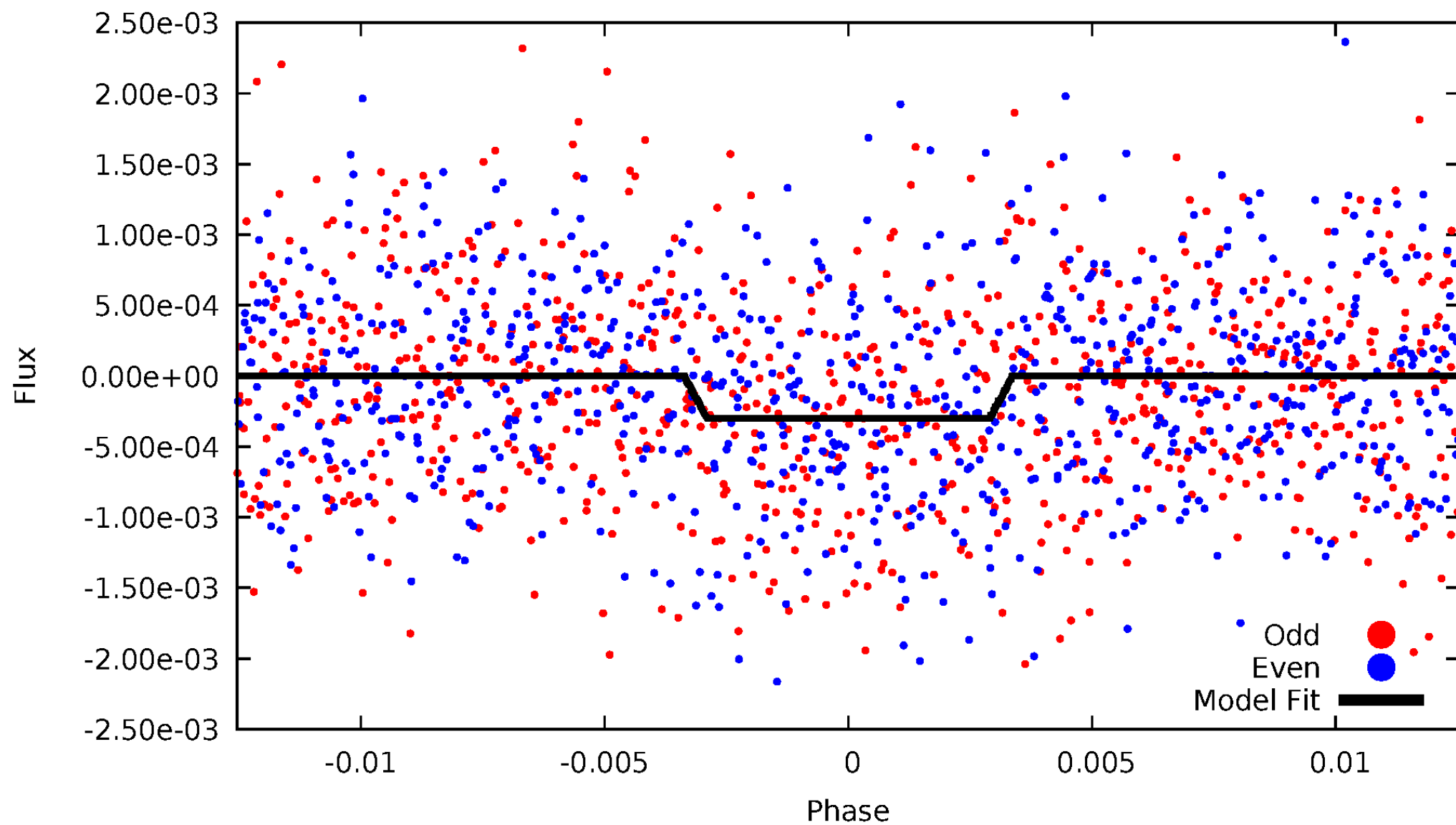
DV Odd/Even

TCE 003239171-01



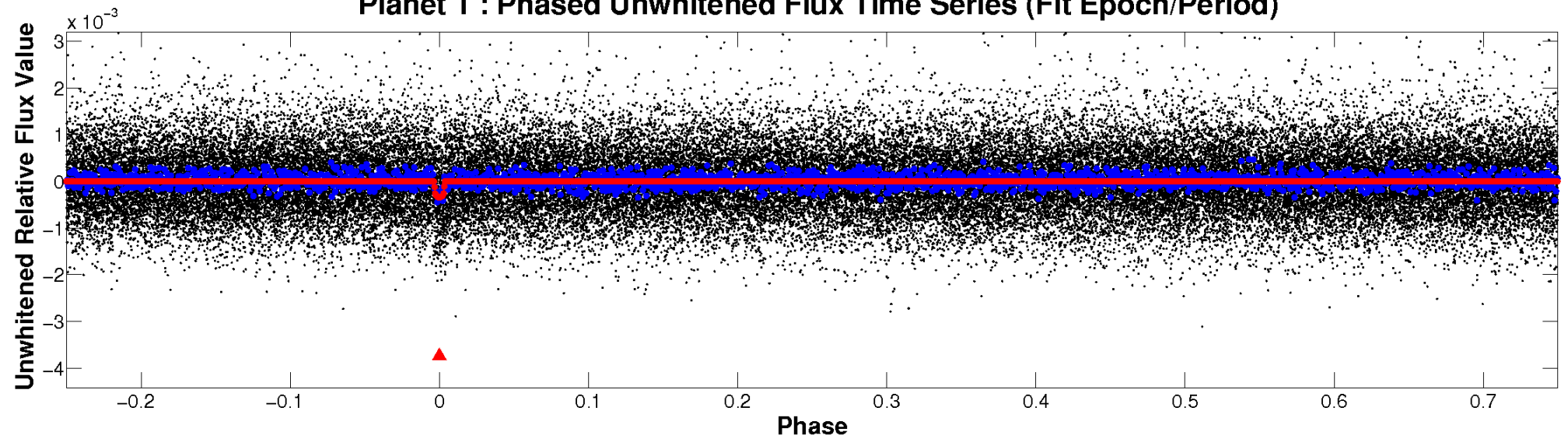
ALT Odd/Even

TCE 003239171-01

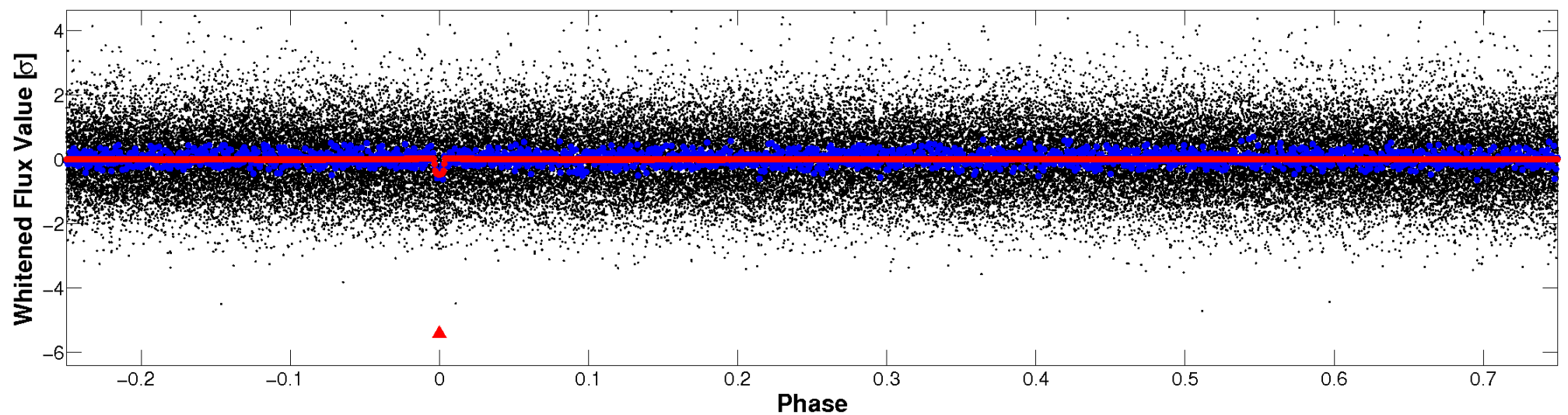


Non-Whitened Vs. Whitened Light Curve

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

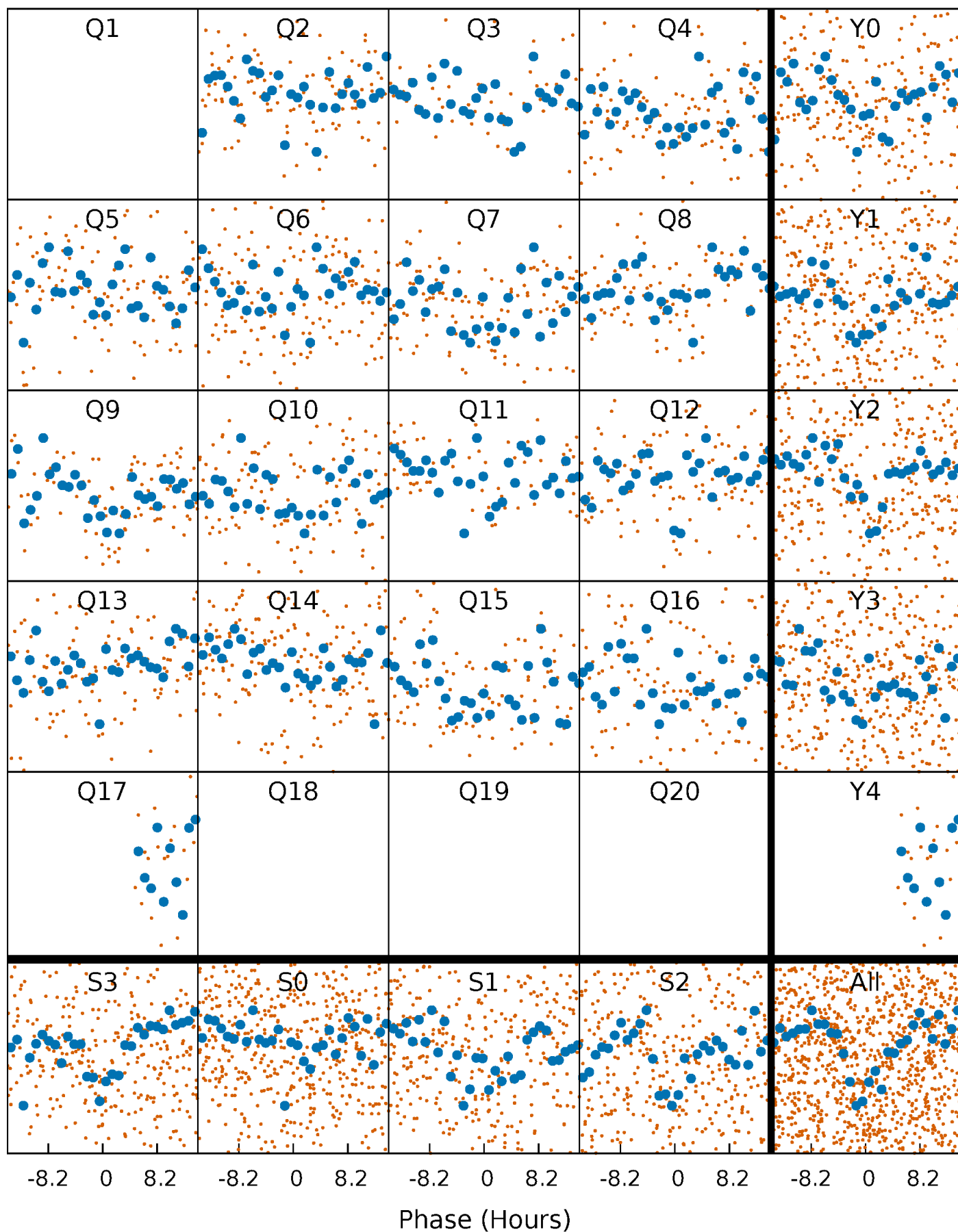


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



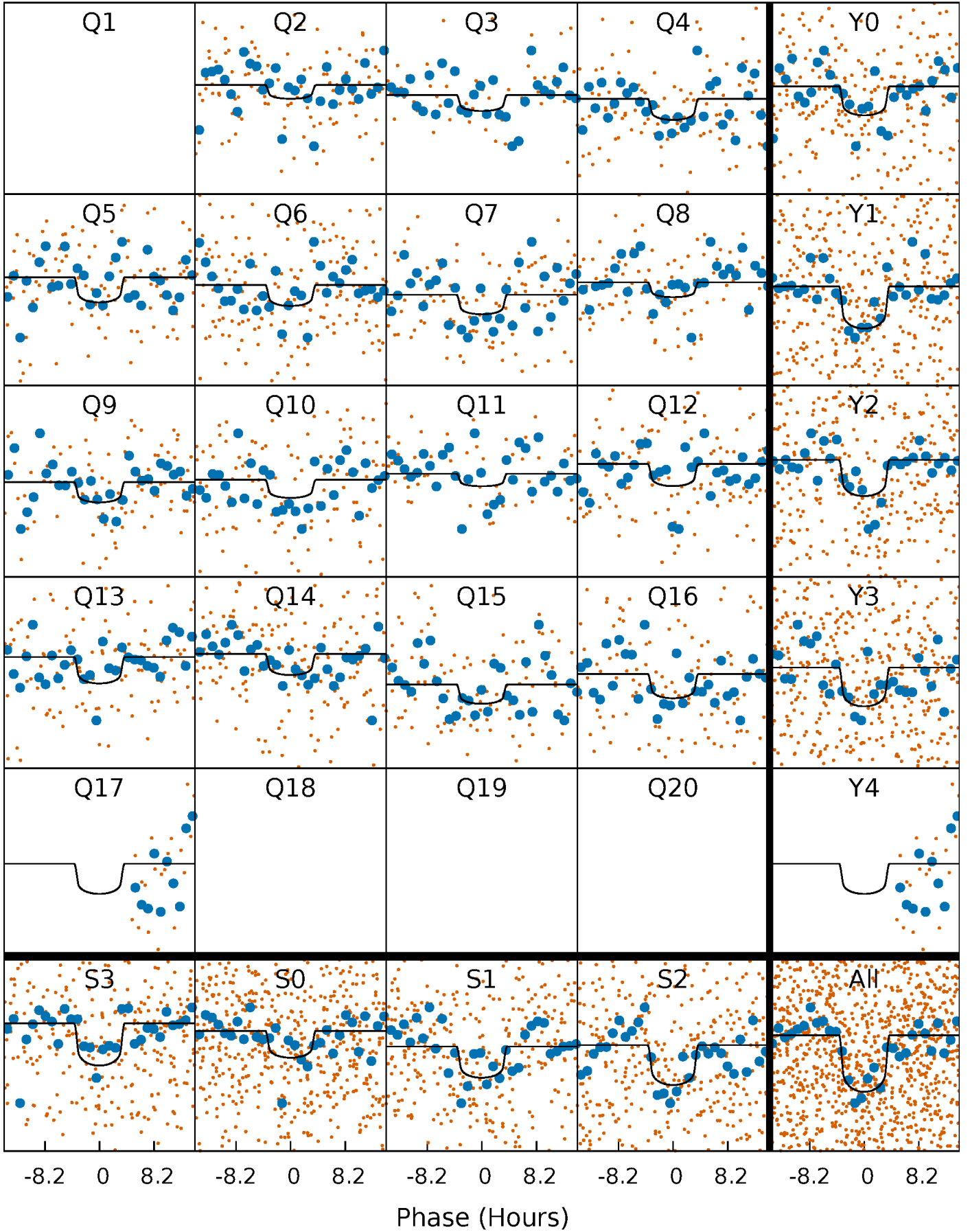
PDC Quarter-Phased Transit Curves

TCE 003239171-01 P= 43.582218 Days $T_0=148.414887$ (BKJD)



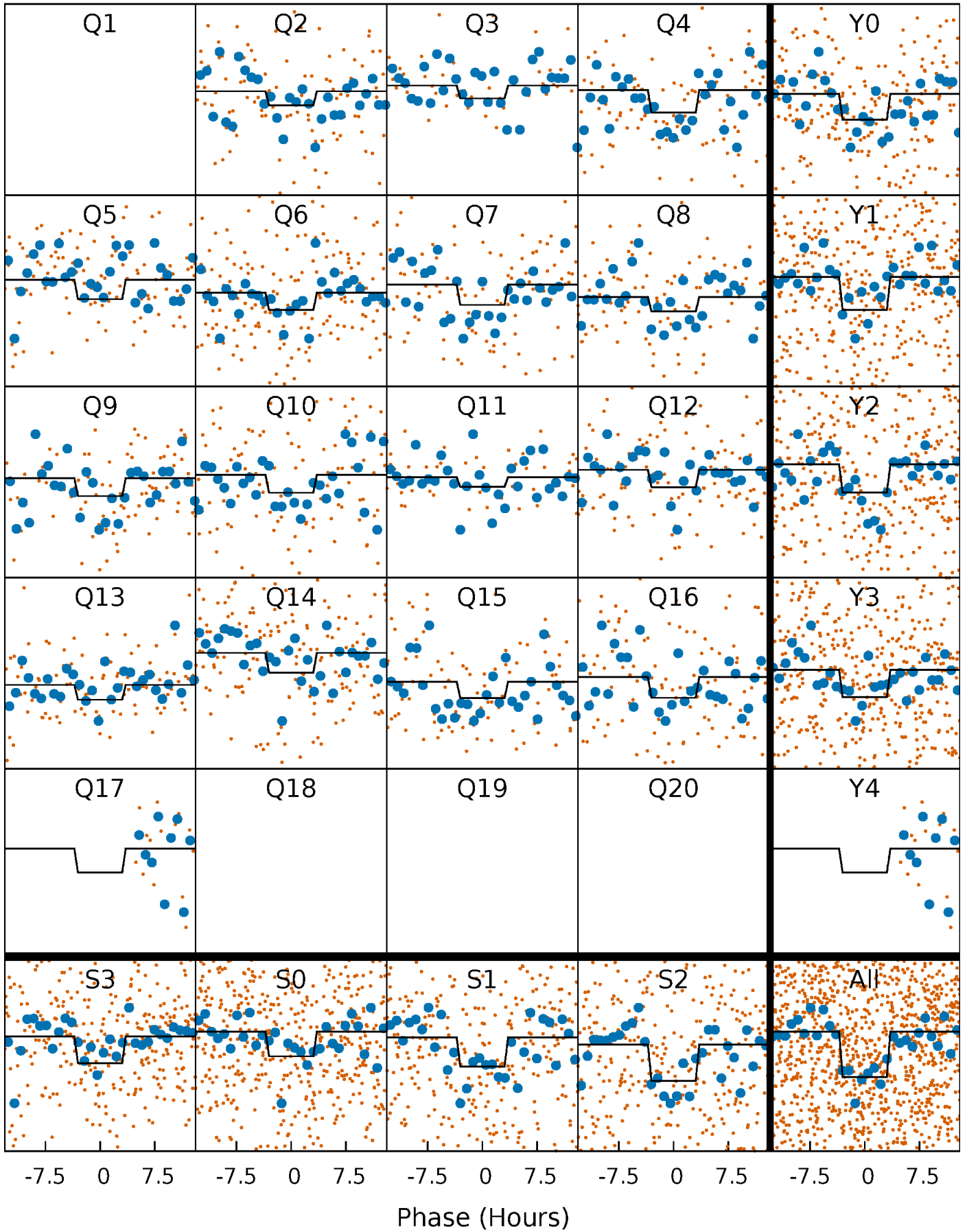
DV Quarter-Phased Transit Curves

TCE 003239171-01 P= 43.582218 Days $T_0=148.414887$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

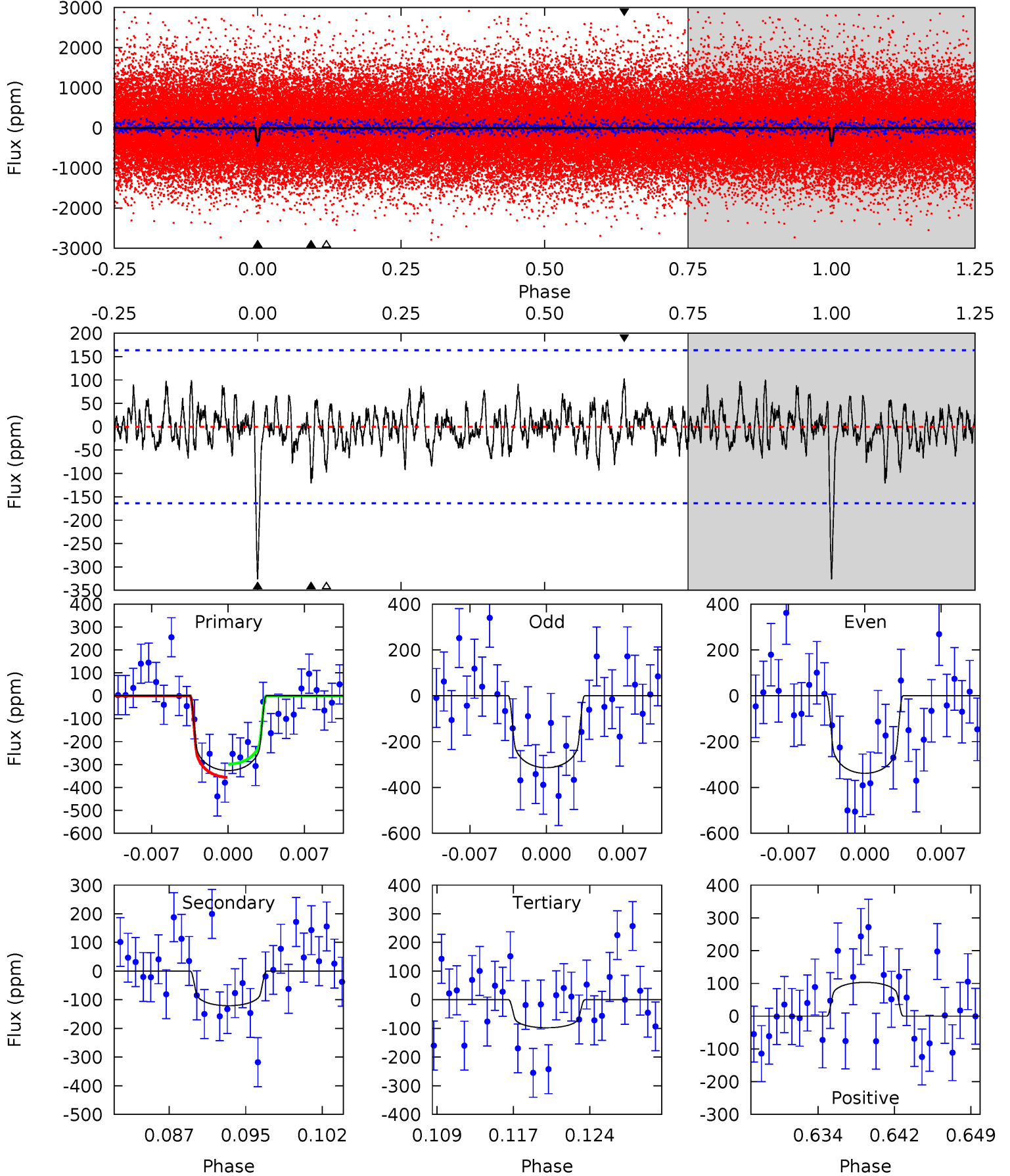
TCE 003239171-01 P= 43.581999 Days $T_0=148.421371$ (BKJD)



DV Model-Shift Uniqueness Test

003239171-01, $P = 43.582218$ Days, $E = 148.414887$ Days

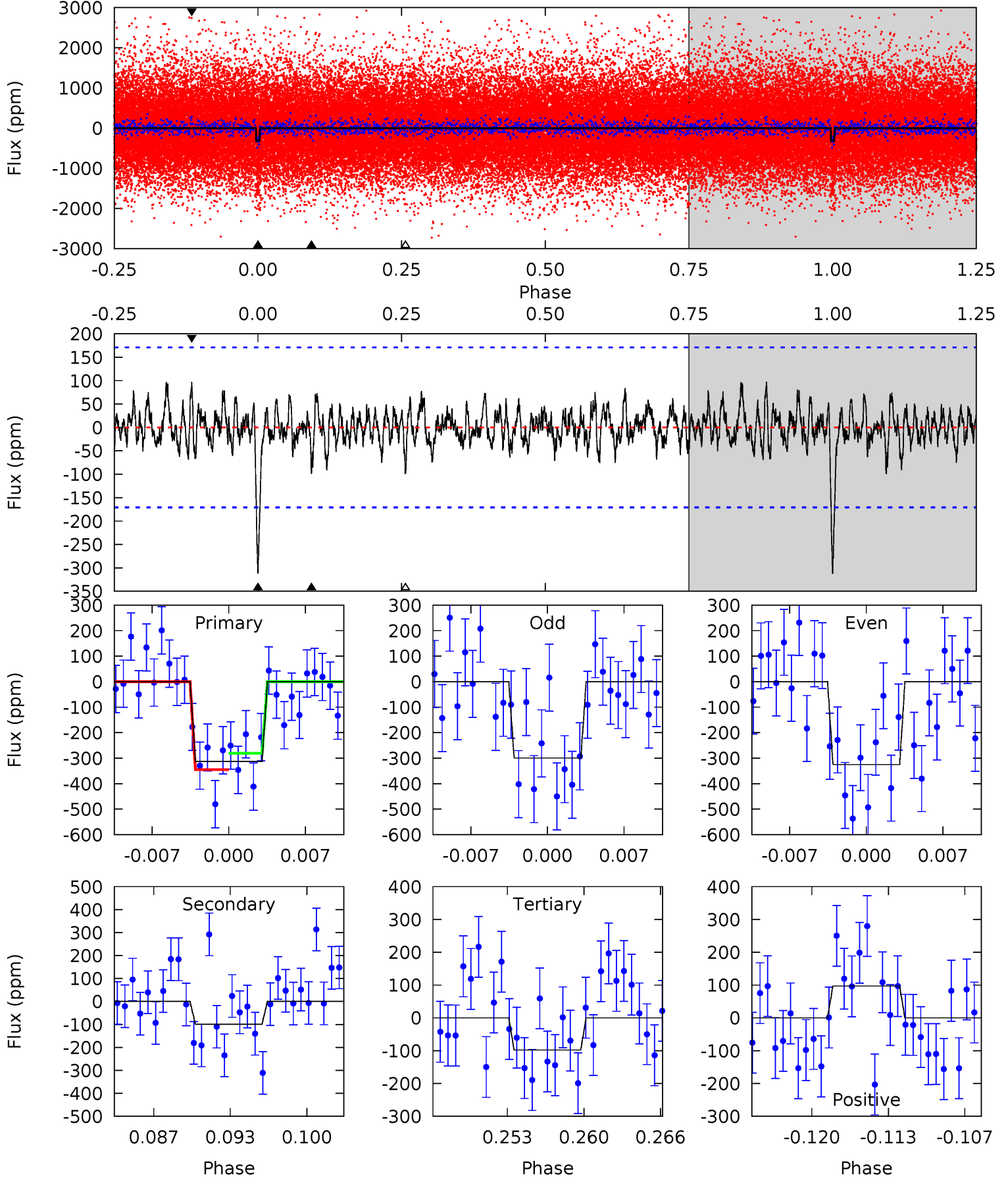
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	3.75	3.04	3.20	5.09	2.68	1.02	7.10	6.93	0.71	0.55	0.38	1.01	0.24	0.90



Alt Model-Shift Uniqueness Test

003239171-01, P = 43.581999 Days, E = 148.421371 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	2.96	2.92	2.90	5.10	2.71	0.91	6.41	6.43	0.04	0.06	0.38	0.90	0.24	0.95



Stellar Parameters For KIC 003239171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6225^{+194}_{-237}	$4.450^{+0.065}_{-0.195}$	$-0.120^{+0.250}_{-0.300}$	$1.031^{+0.309}_{-0.111}$	$1.091^{+0.155}_{-0.141}$	$1.400^{+0.389}_{-0.733}$
	+3%/-4%	+1%/-4%	+208%/-250%	+30%/-11%	+14%/-13%	+28%/-52%
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 003239171-01 / KOI 4967.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-121±32	$2.17^{+1.21}_{-1.15}$	793^{+57}_{-42}	4830^{+2187}_{-758}	806^{+3190}_{-475}
Alt.	-99±33	$2.08^{+1.17}_{-1.07}$	788^{+56}_{-39}	4700^{+1903}_{-747}	745^{+2595}_{-473}

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 $A_{obs} \gg 1.0$

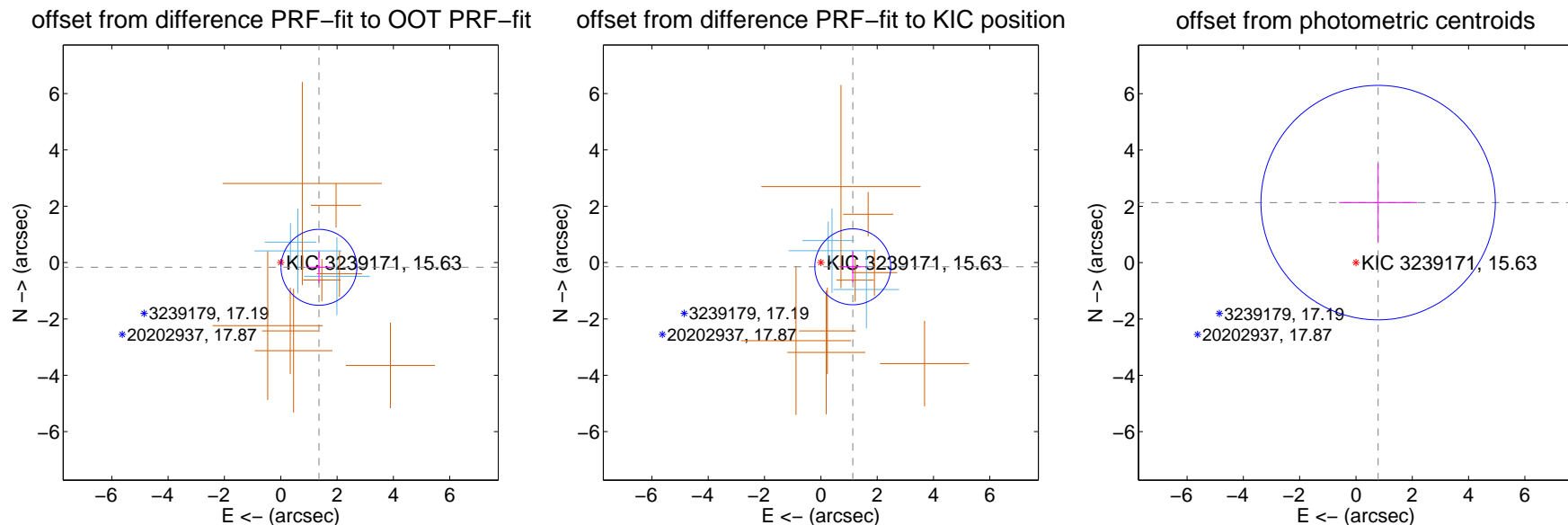
DV Centroid Data

Supplemental centroid analysis for 003239171-01. Kepler magnitude: 15.63. Transit SNR 8.31

There are 3 quarters with good PRF difference image offsets

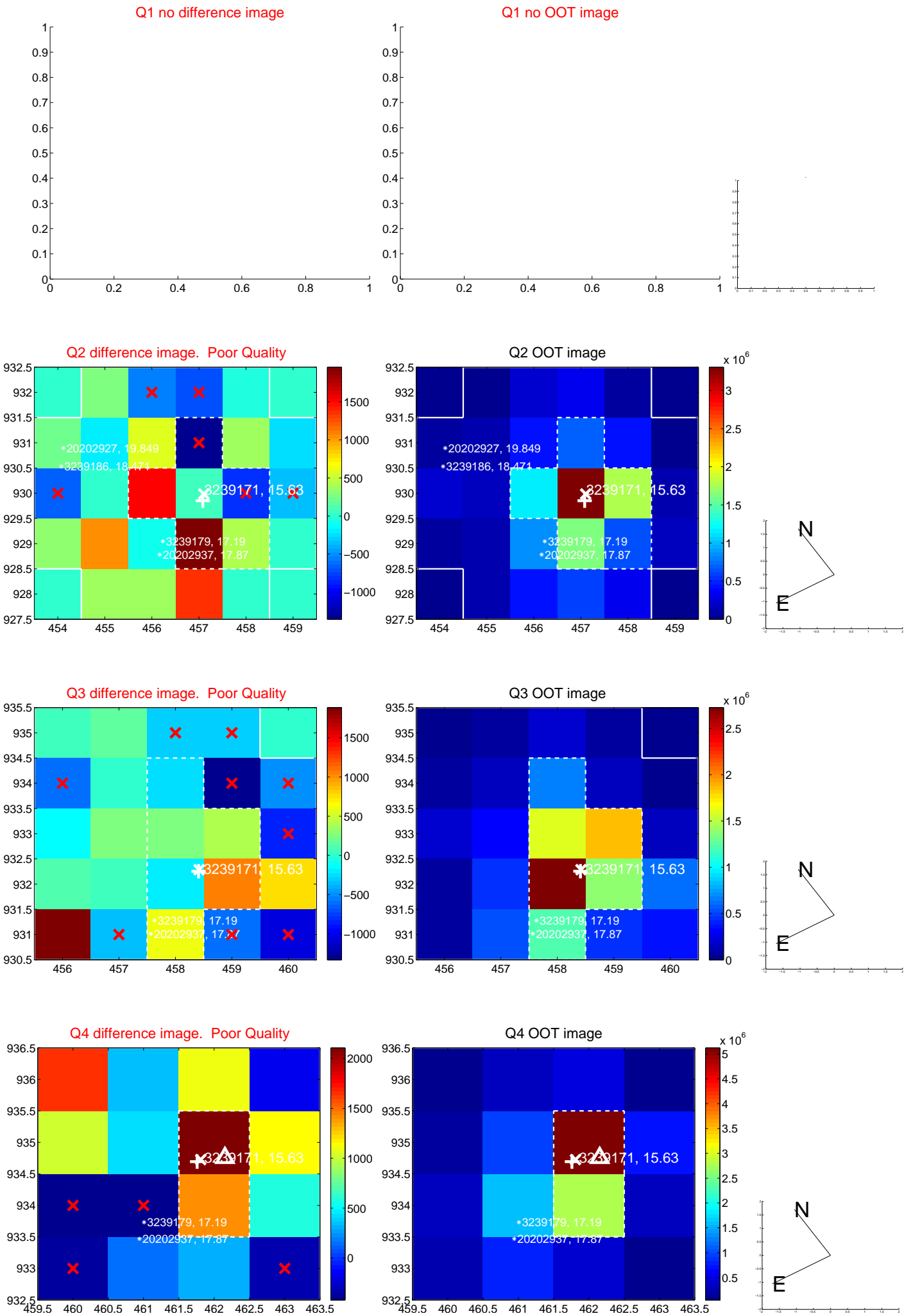
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.368 ± 0.449	3.04	-1.357 ± 0.448	-0.168 ± 0.549
PRF-fit source offset from KIC position	1.144 ± 0.450	2.54	-1.134 ± 0.448	-0.150 ± 0.549
photometric centroid source offset	2.27 ± 1.39	1.64	-0.79 ± 1.39	2.13 ± 1.39

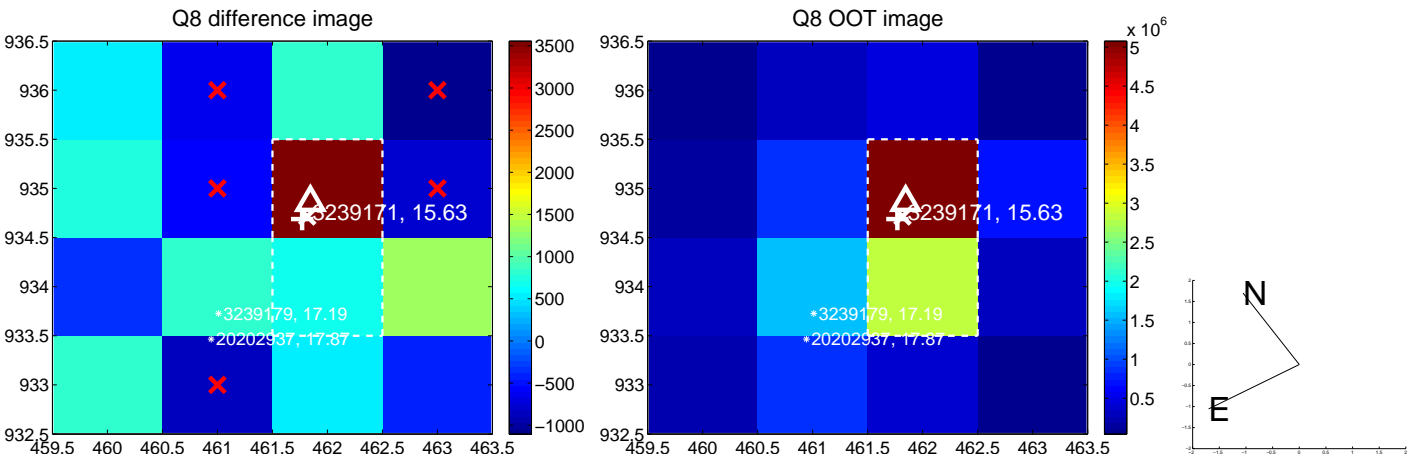
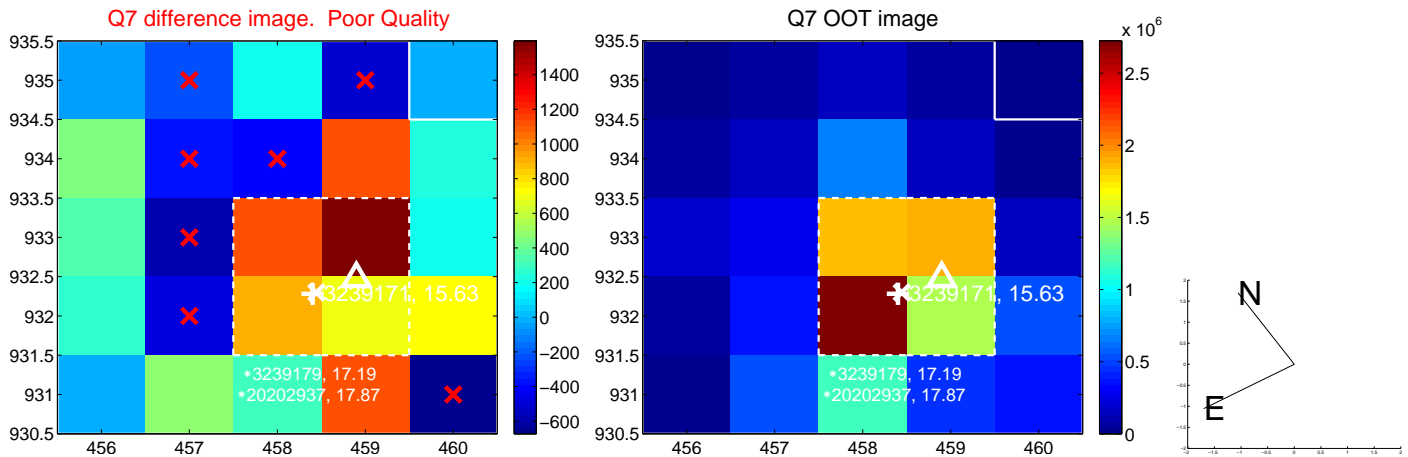
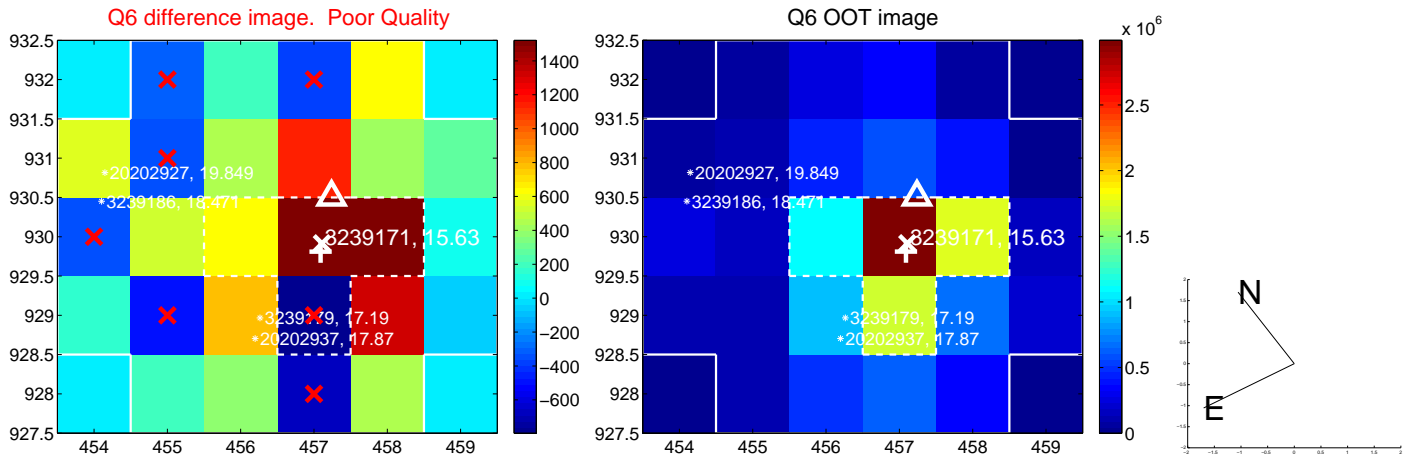
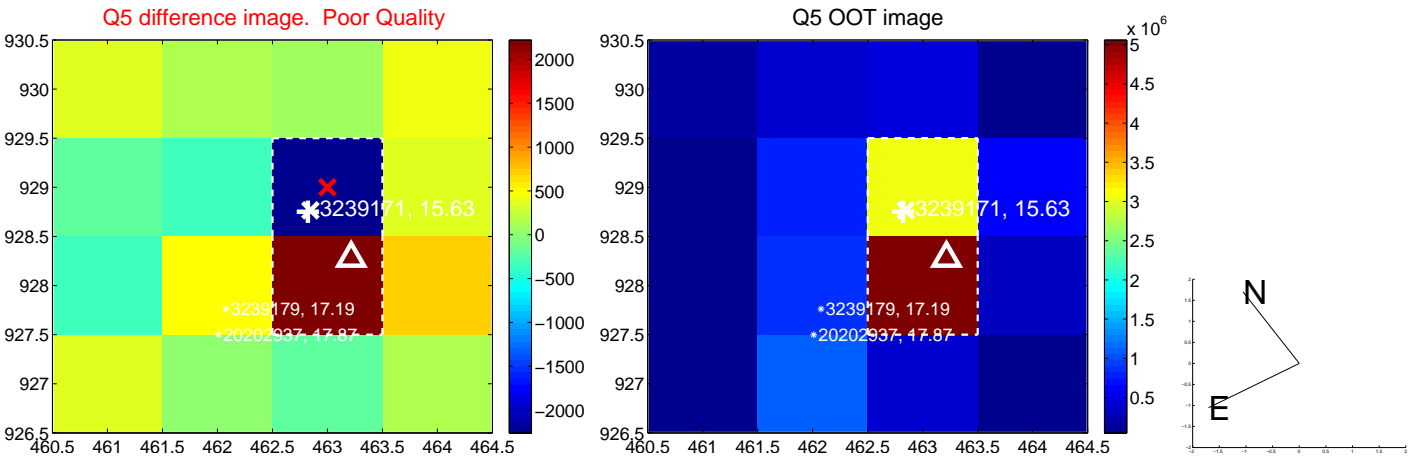


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

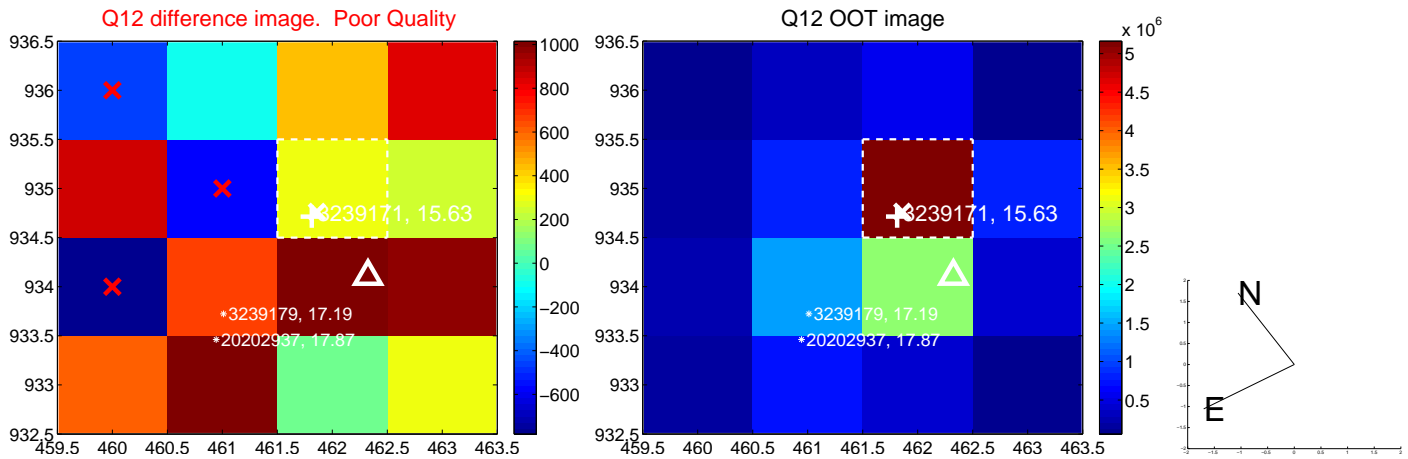
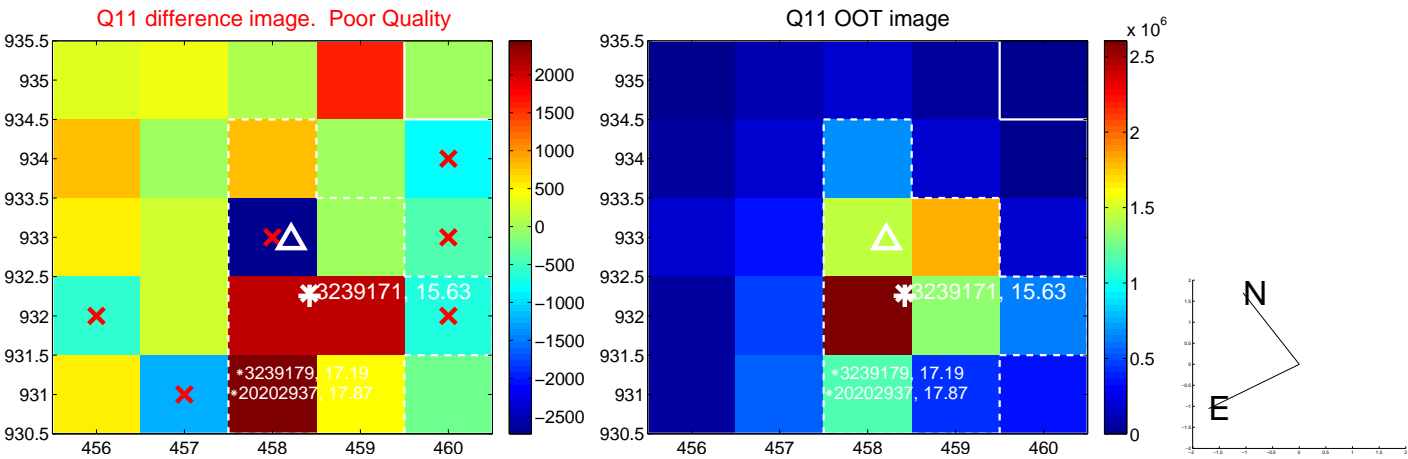
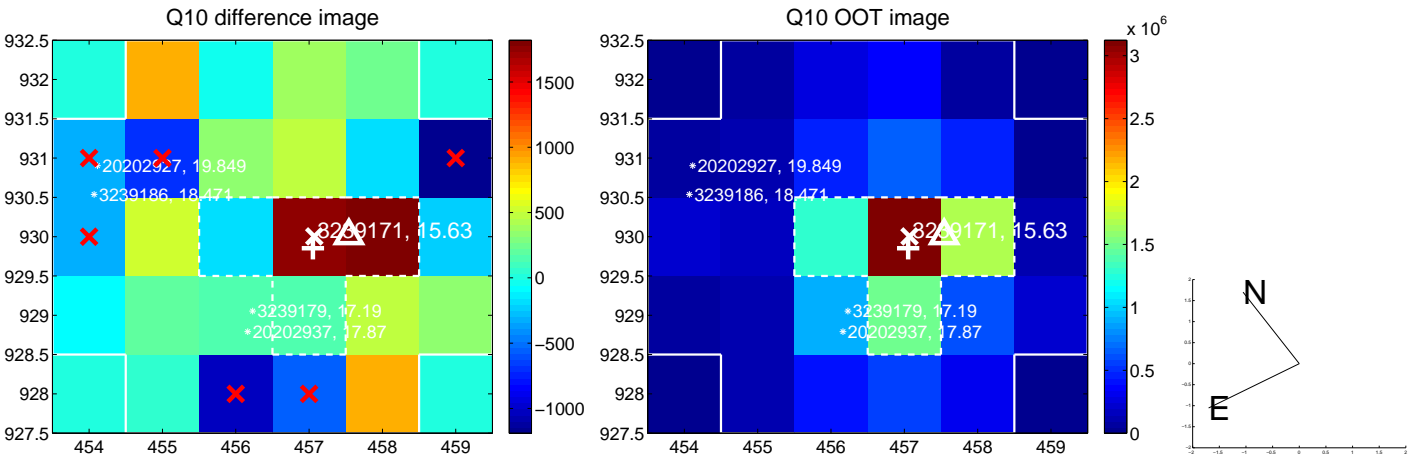
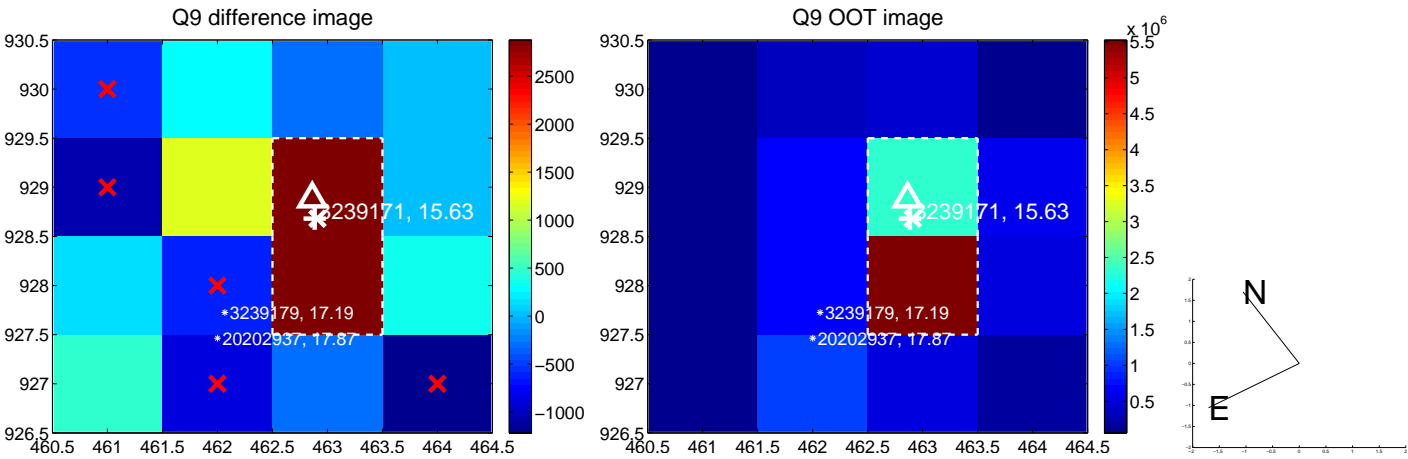
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



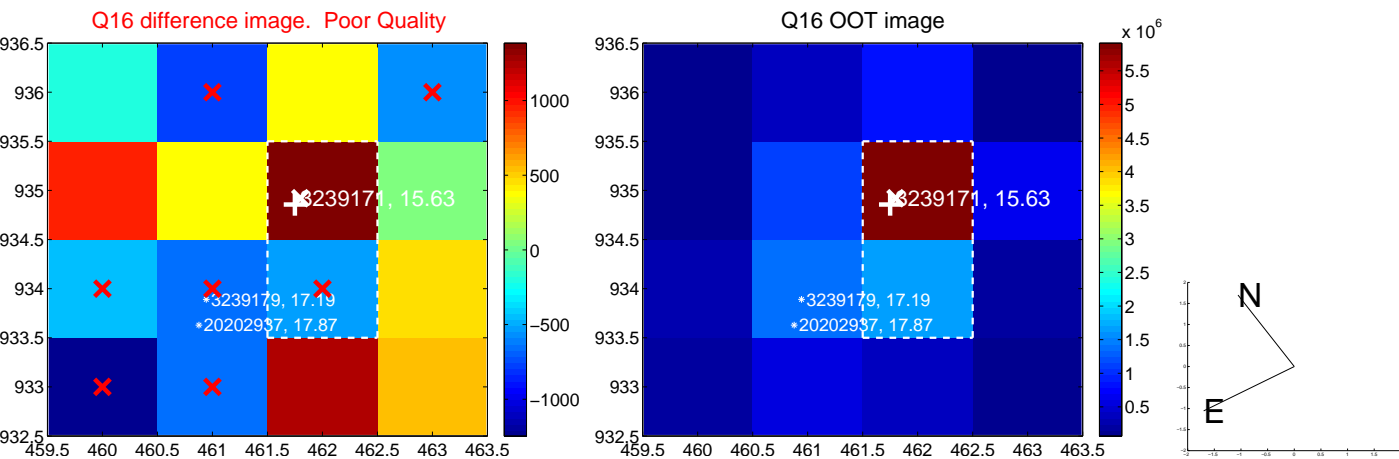
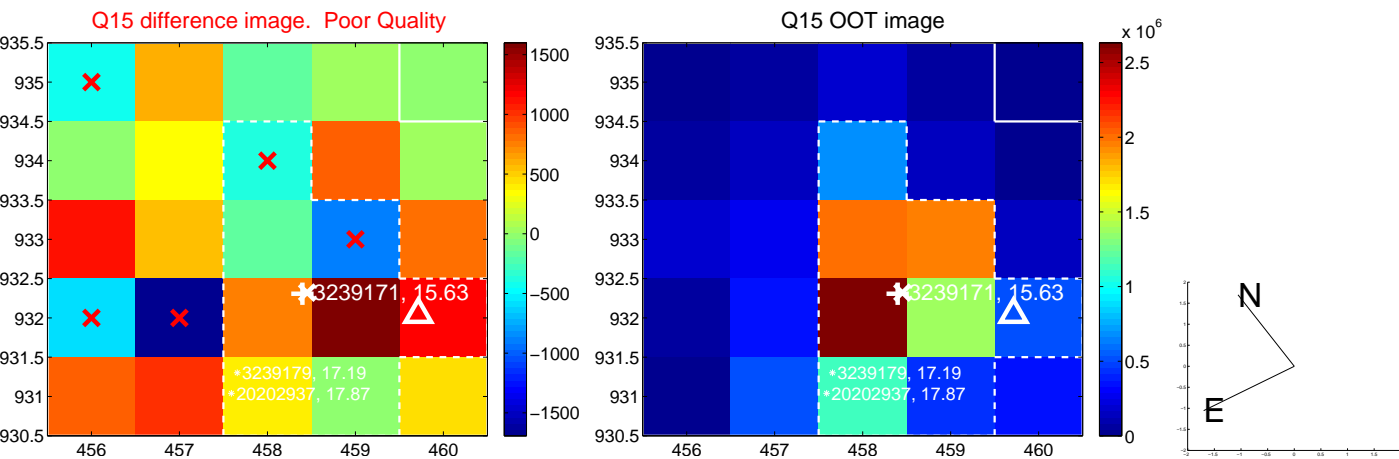
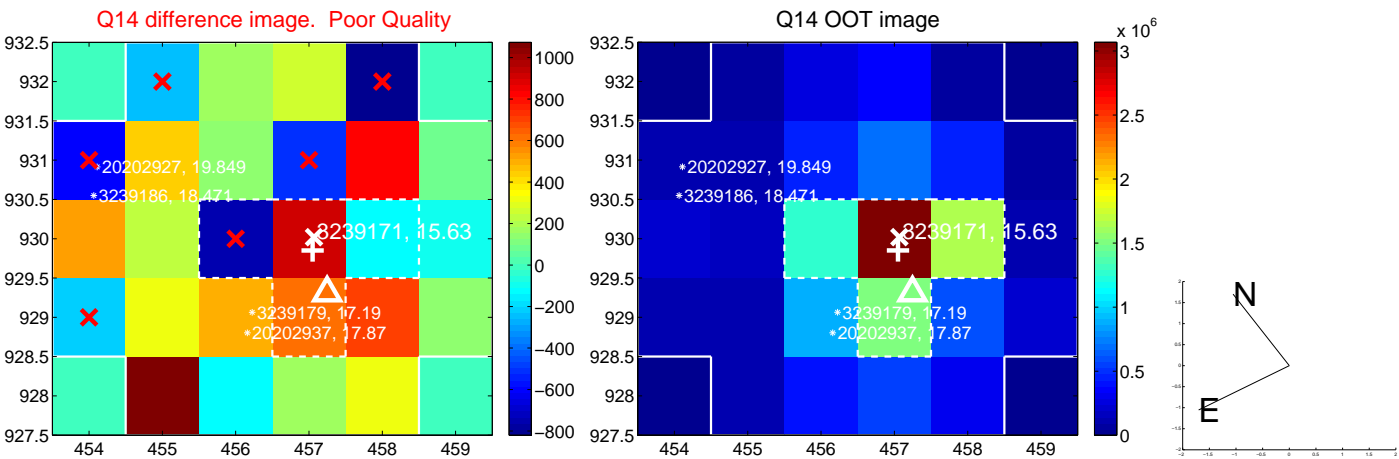
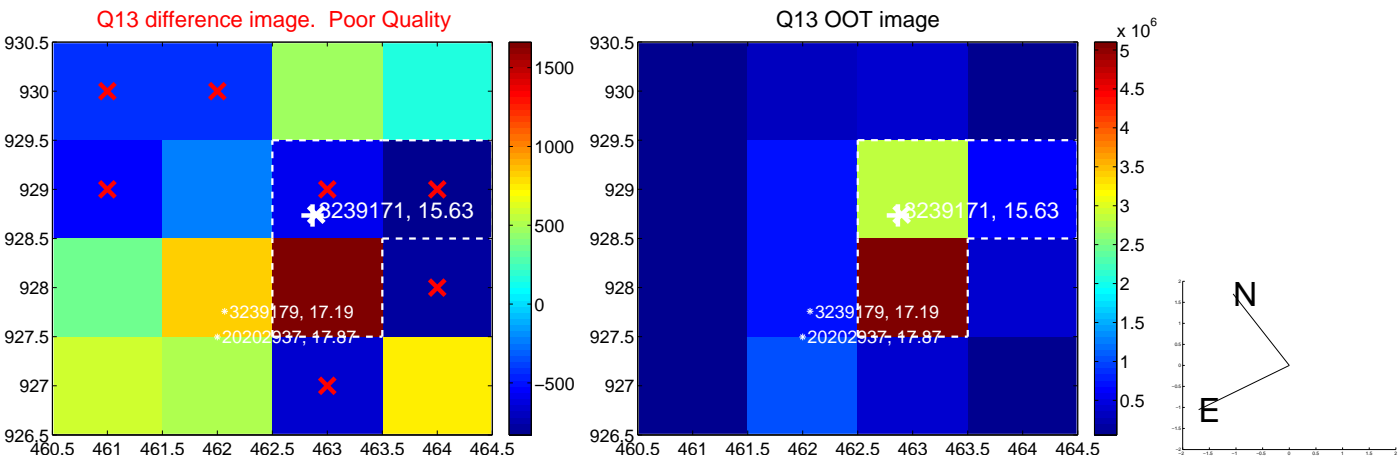
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



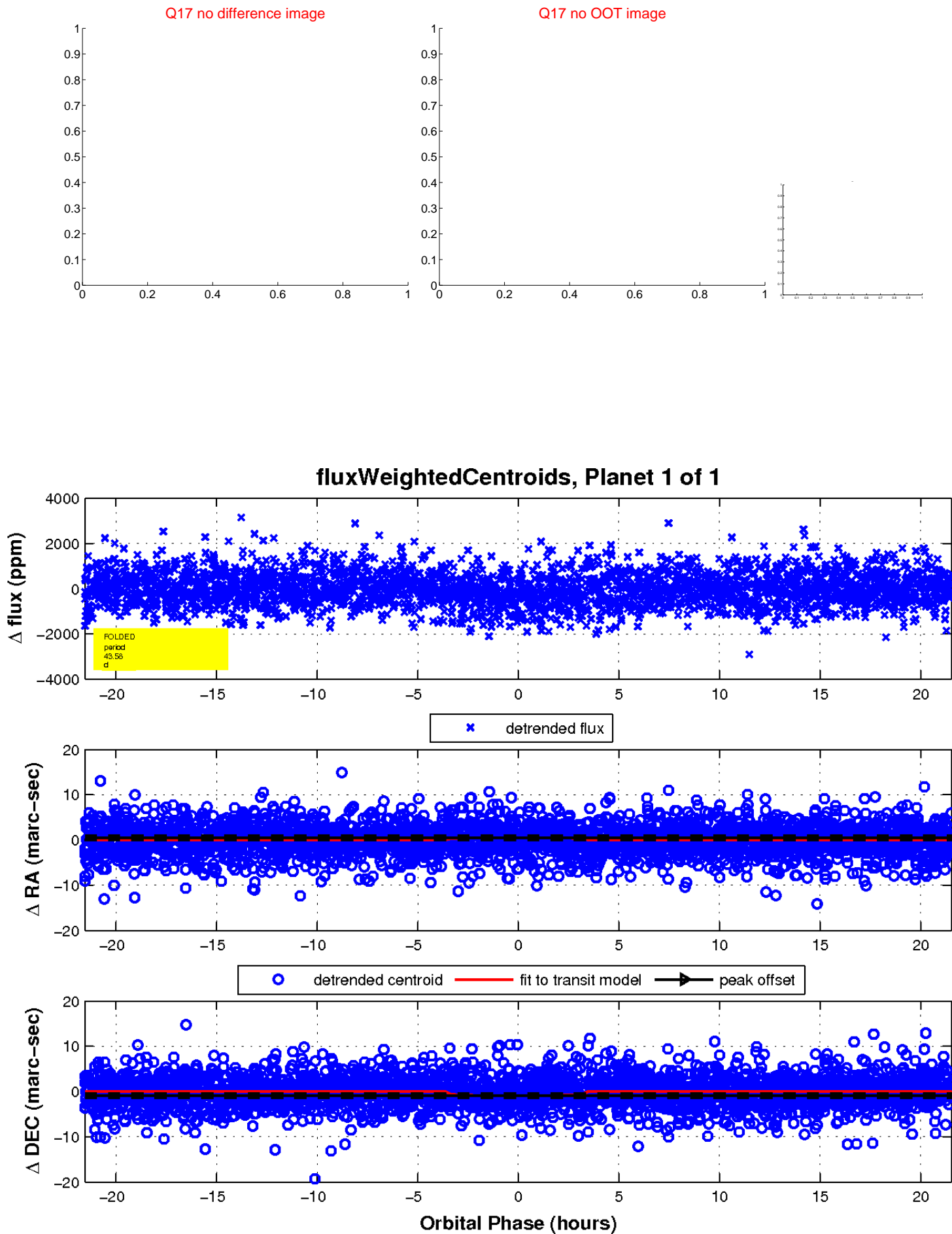
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

