

KIC 010471270

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})
010471270-01	OBS	No	0.933748	131.531879	65.7	4.371	8.1	10.4	0.89	5883	0.72	2469.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010471270-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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.

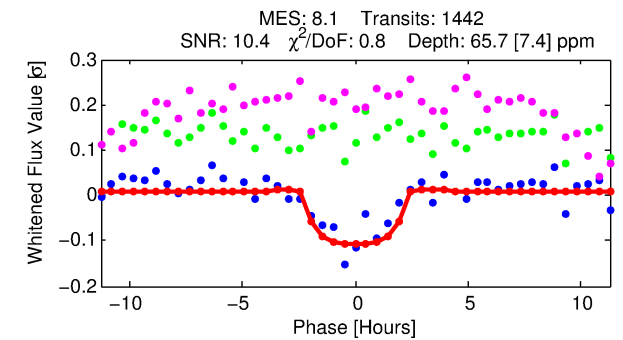
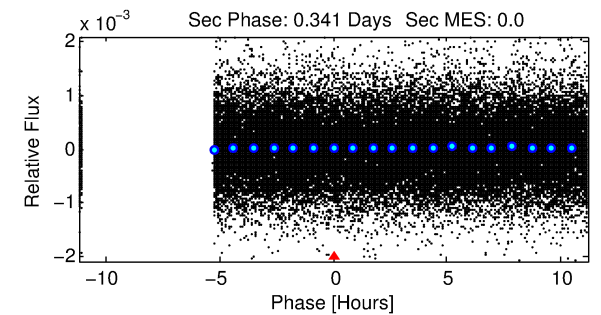
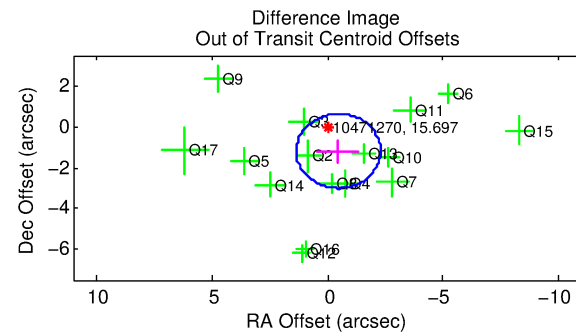
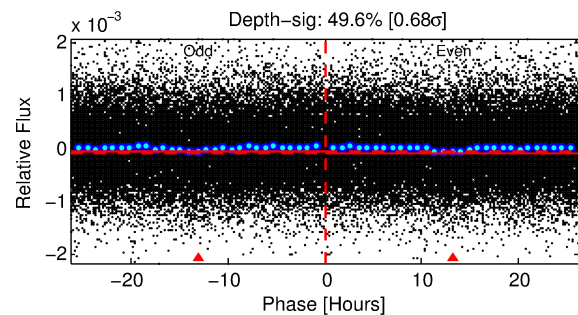
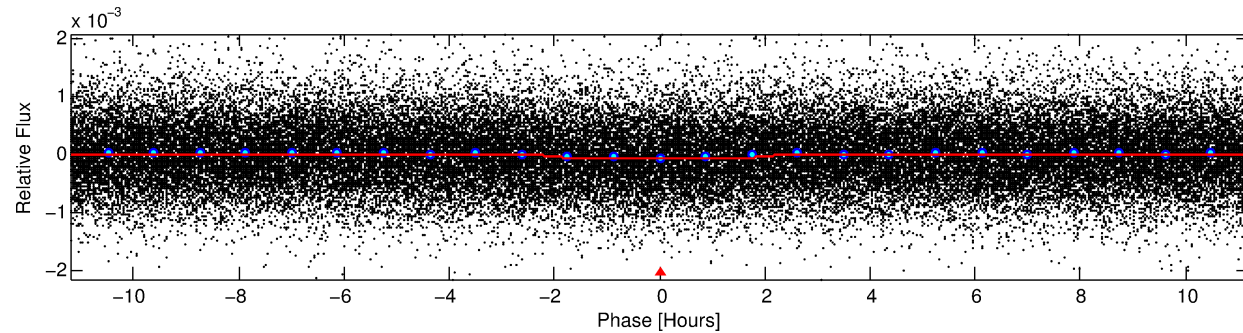
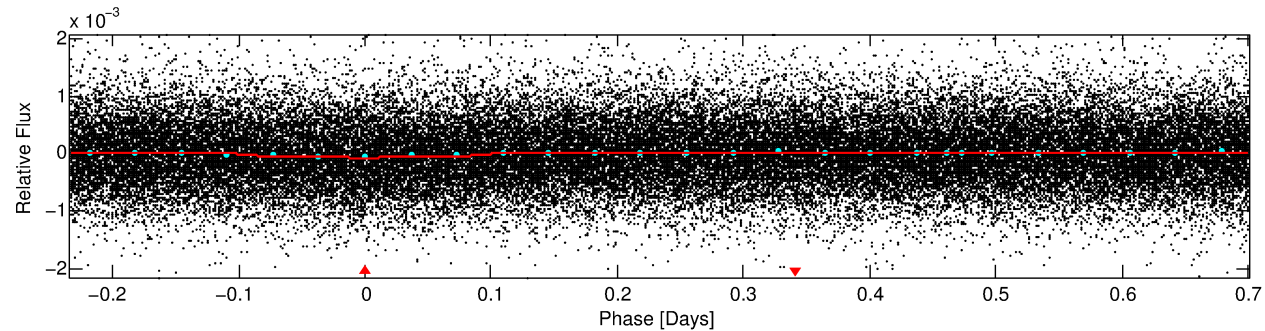
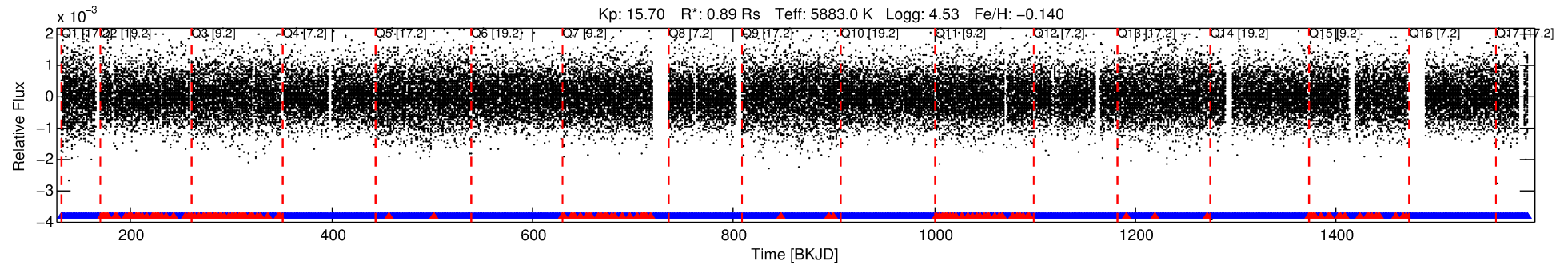
Ephemeris Match Information For 010471270-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
010471270-01	10471270	V2083-Cyg-pri	10342012	1:2	1487.0	282	-246	6.90	15.69	3004.90	Direct-PRF	0	0.22	0.98

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10471270 Candidate: 1 of 1 Period: 0.934 d



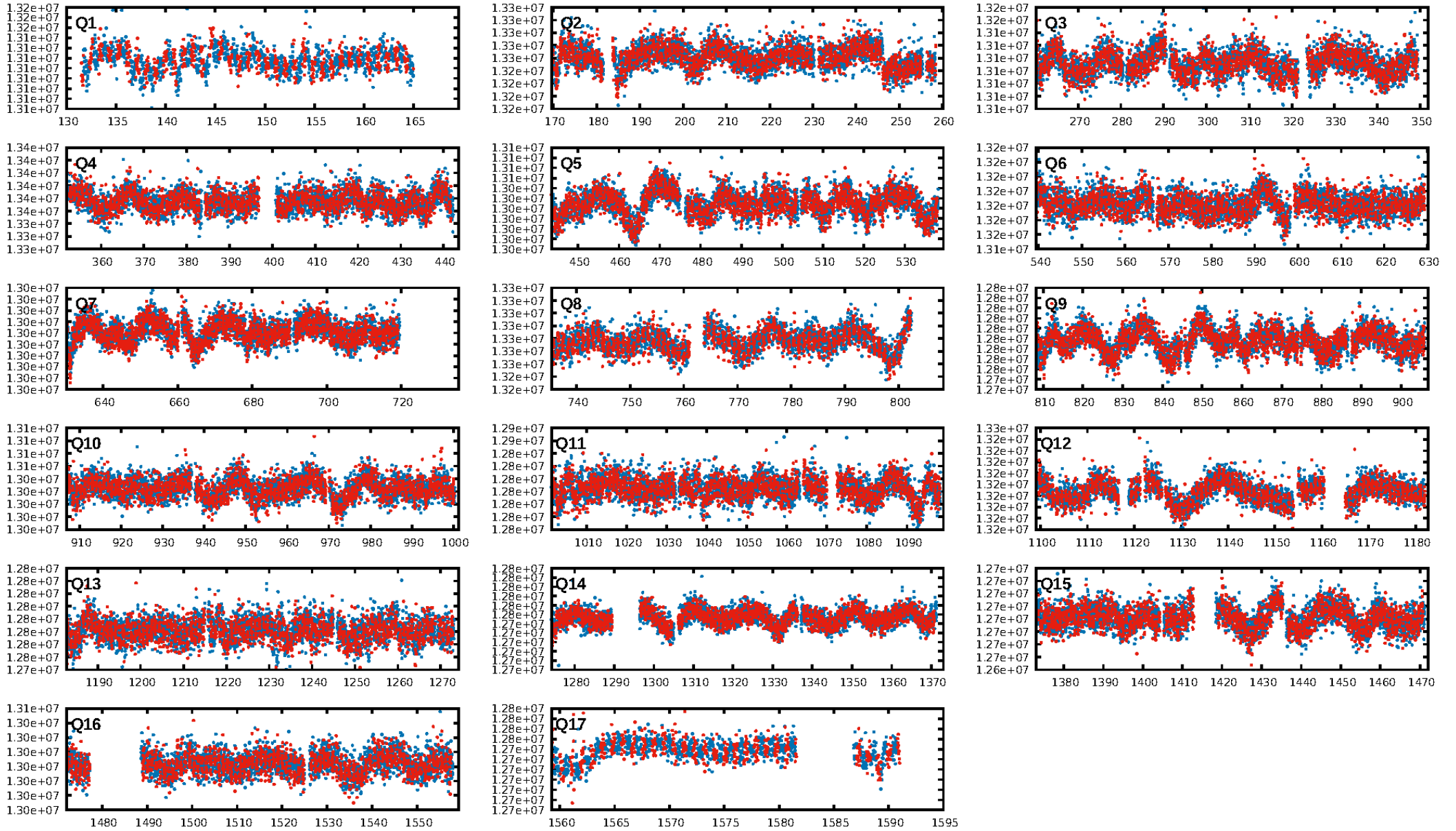
DV Fit Results:

Period = 0.93375 [0.00001] d
Epoch = 131.5319 [0.0047] BKJD
Rp/R* = 0.0074 [0.0093]
a/R* = 1.72 [6.60]
b = 0.23 [23.60]
Seff = 2469.22 [923.31]
Teq = 1797 [168] K
Rp = 0.72 [0.93] Re
a = 0.0186 [0.0046] AU
Ag = N/A
Teffp = N/A

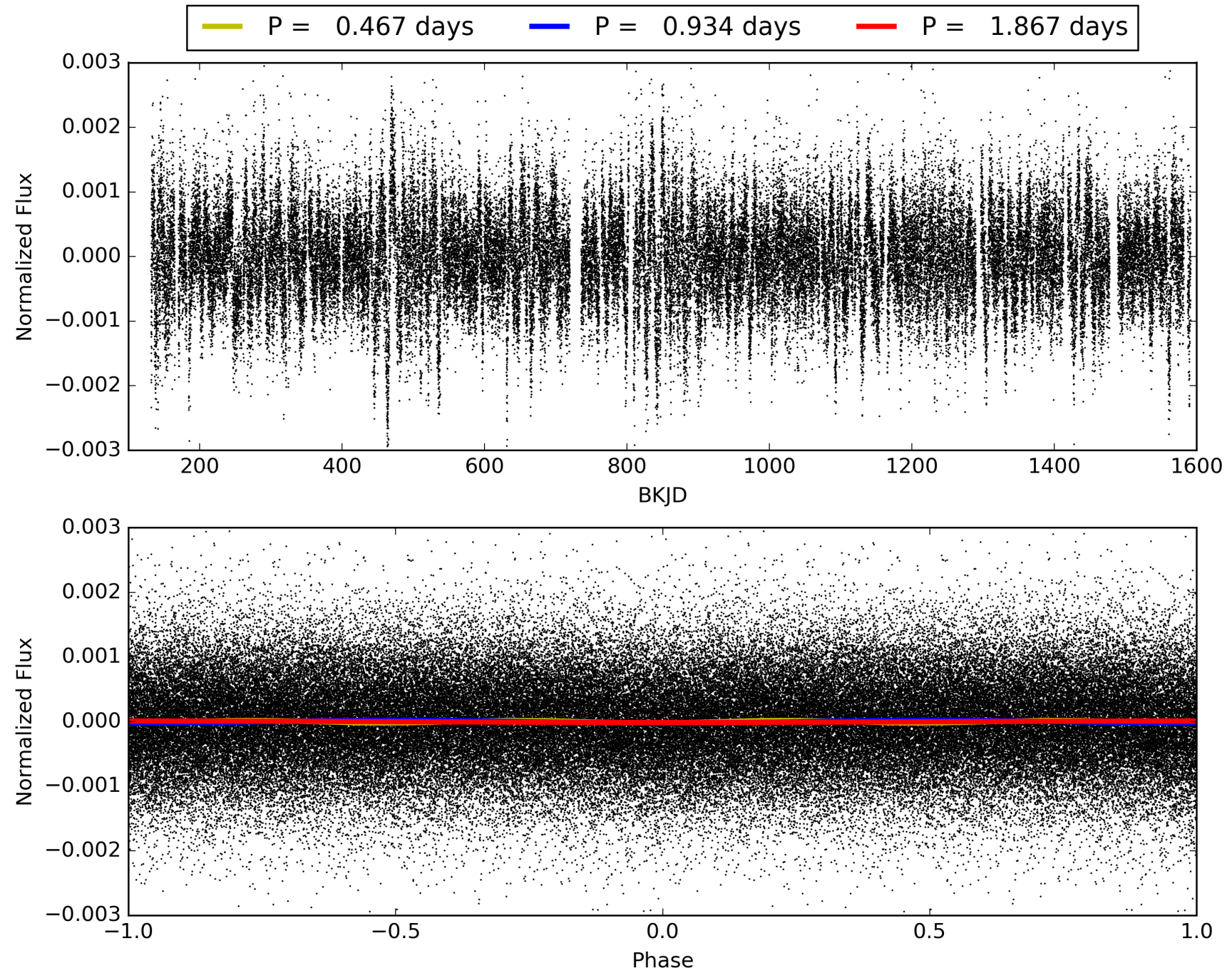
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.47e-16
RollingBand-fgt: 0.89 [1225/1376]
GhostDiagnostic-chr: 0.1856
Centroid-sig: 0.0%
Centroid-so: 5.463 arcsec [3.77 σ]
OotOffset-rm: 1.278 arcsec [2.10 σ]
KicOffset-rm: 1.323 arcsec [2.11 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010471270-01, PDC Light Curves

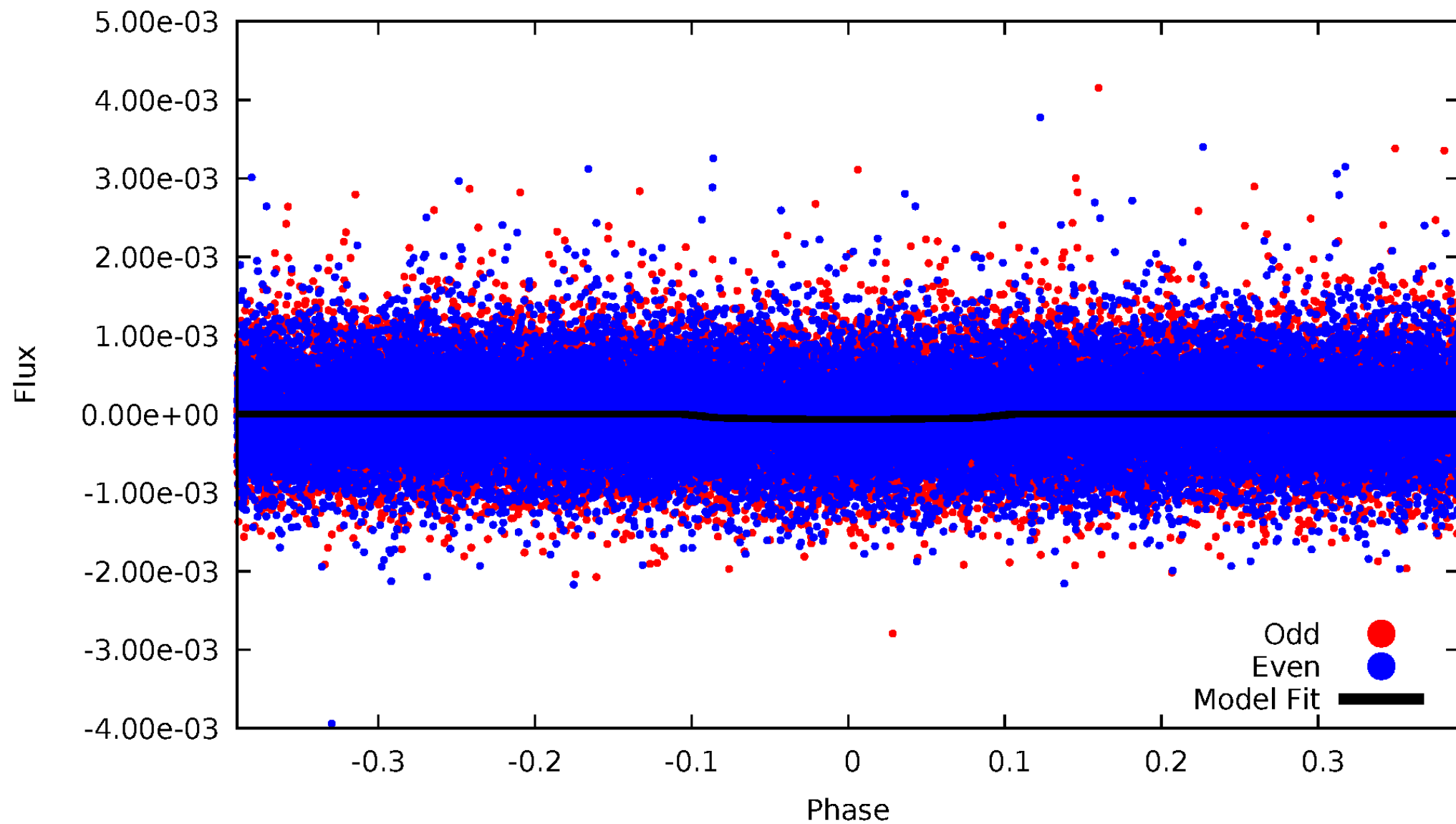


TCE 010471270-01



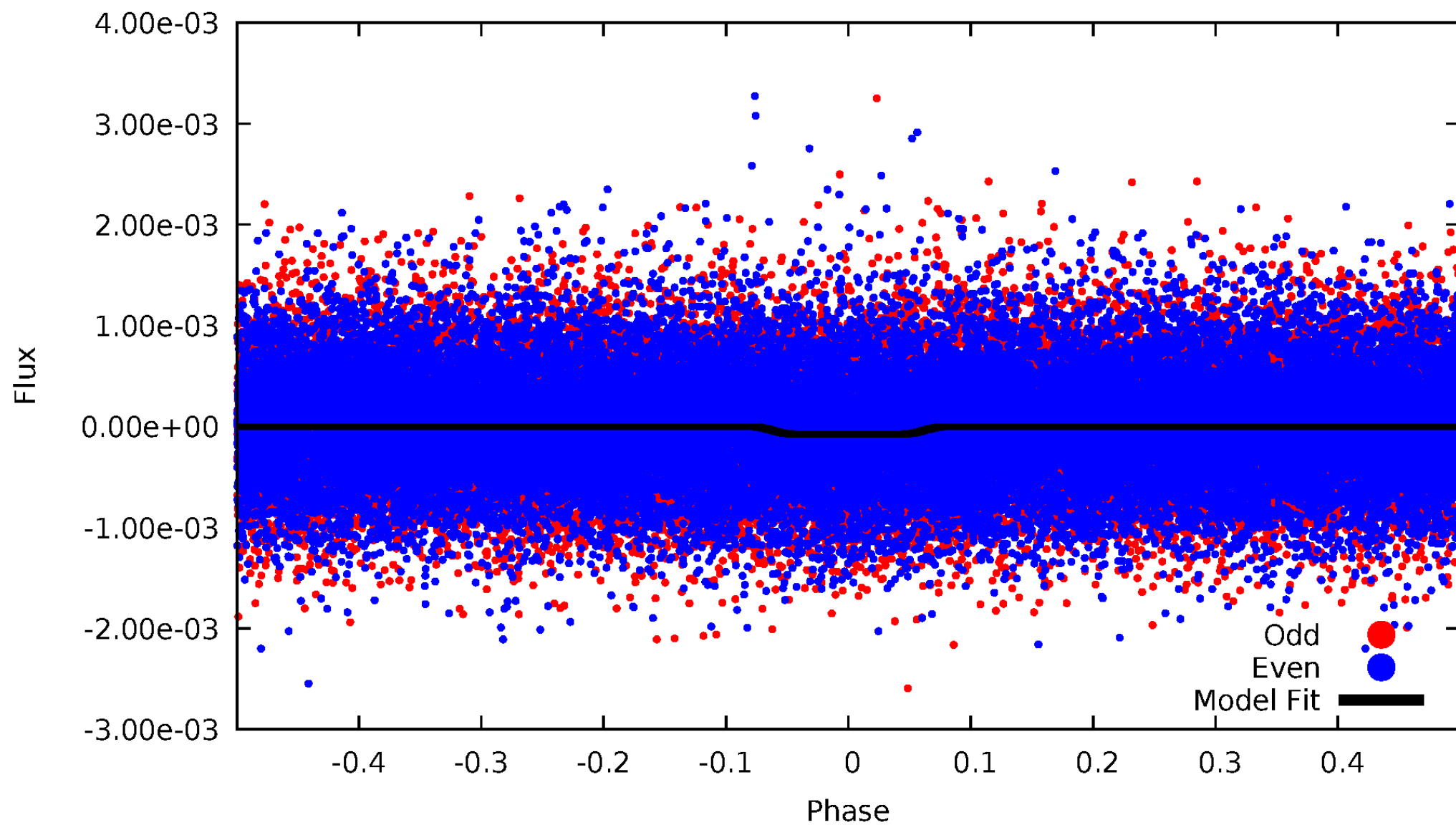
DV Odd/Even

TCE 010471270-01



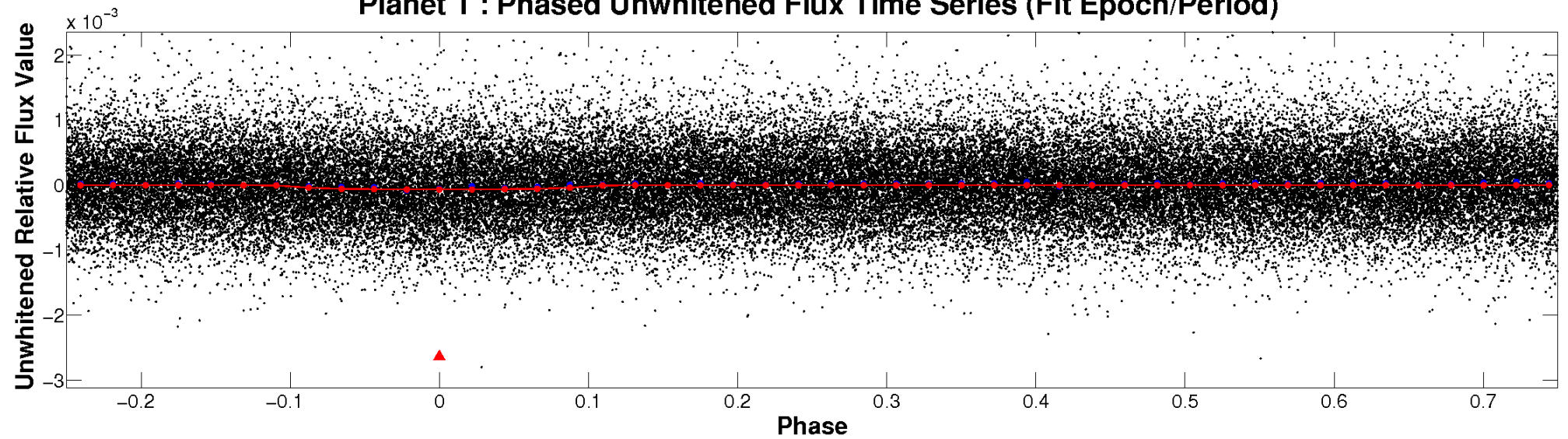
ALT Odd/Even

TCE 010471270-01

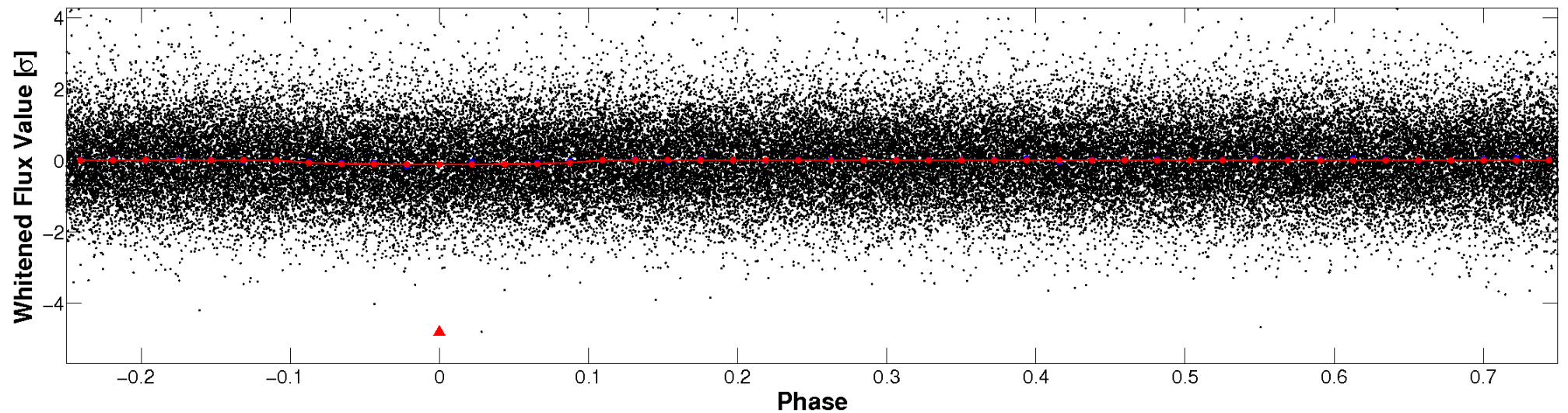


Non-Whitened Vs. Whitened Light Curve

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

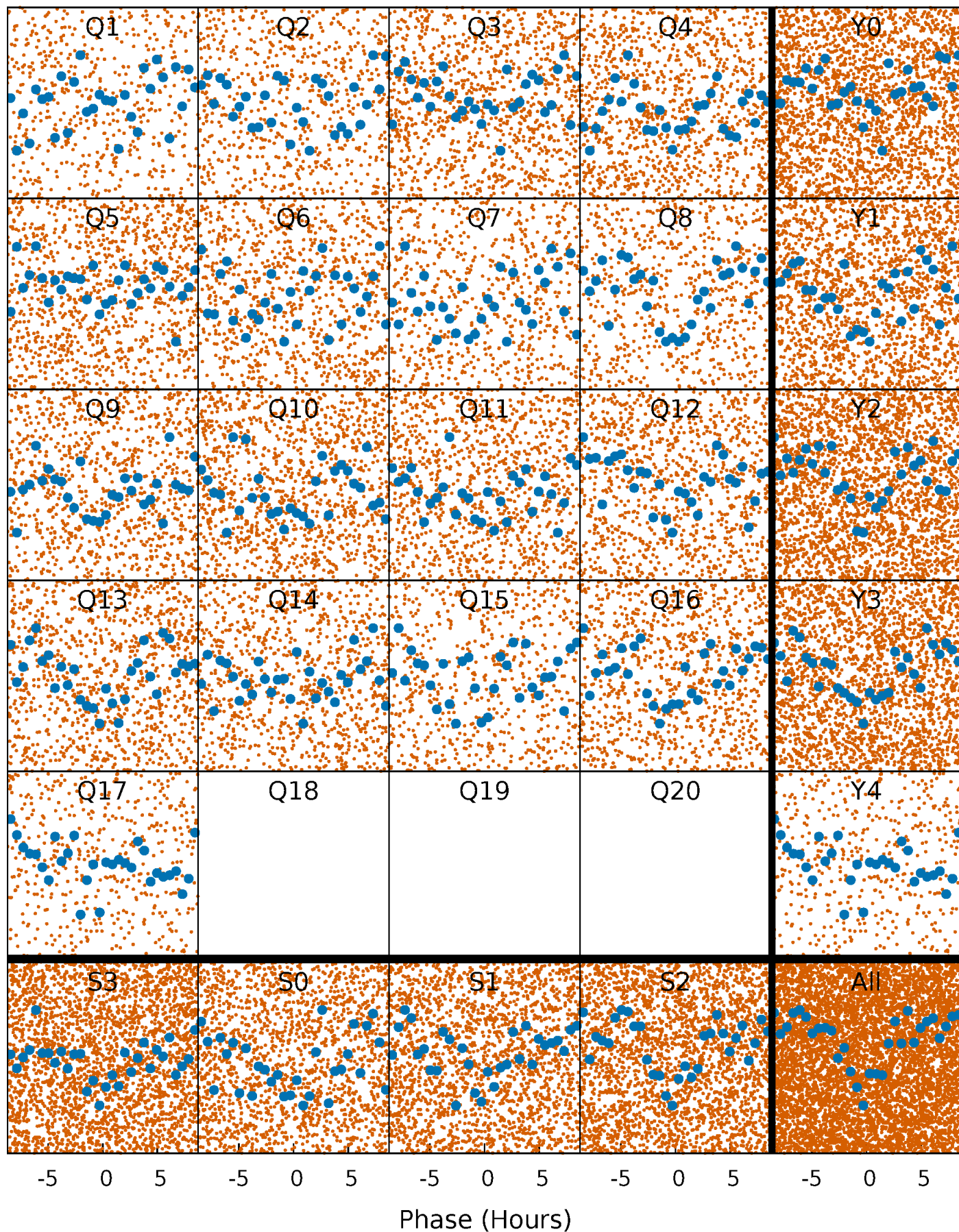


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



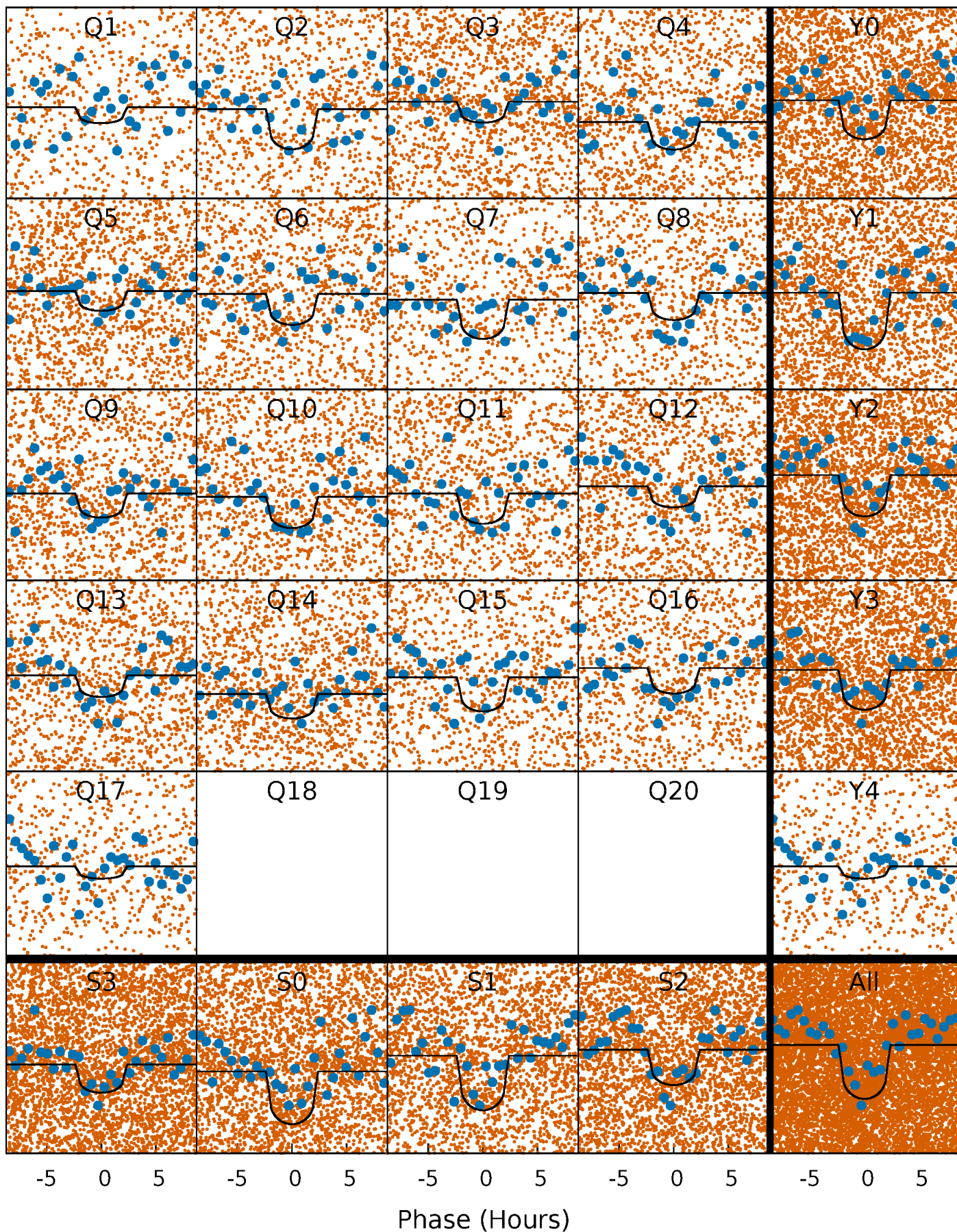
PDC Quarter-Phased Transit Curves

TCE 010471270-01 P= 0.933748 Days $T_0=131.531879$ (BKJD)



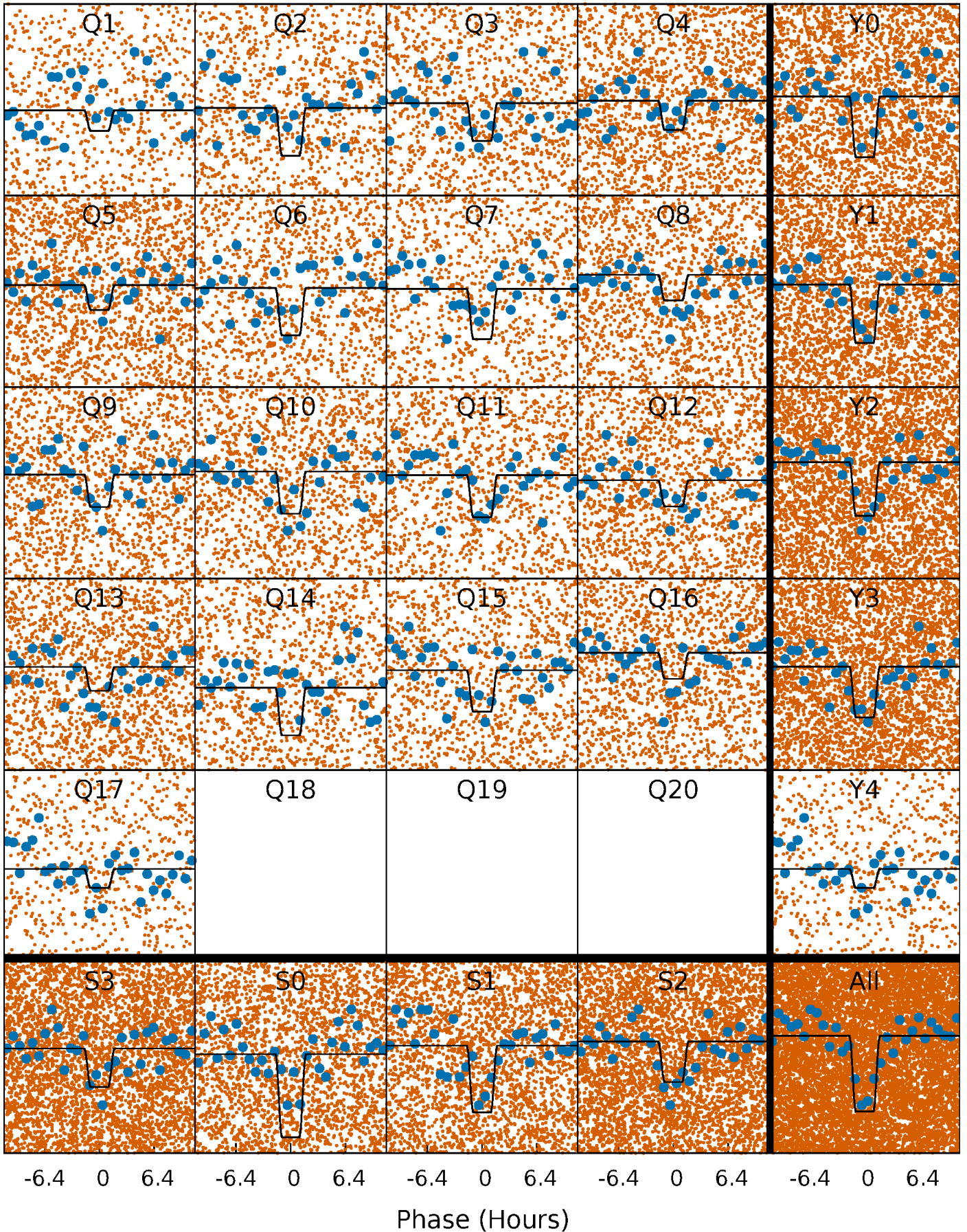
DV Quarter-Phased Transit Curves

TCE 010471270-01 P= 0.933748 Days $T_0=131.531879$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

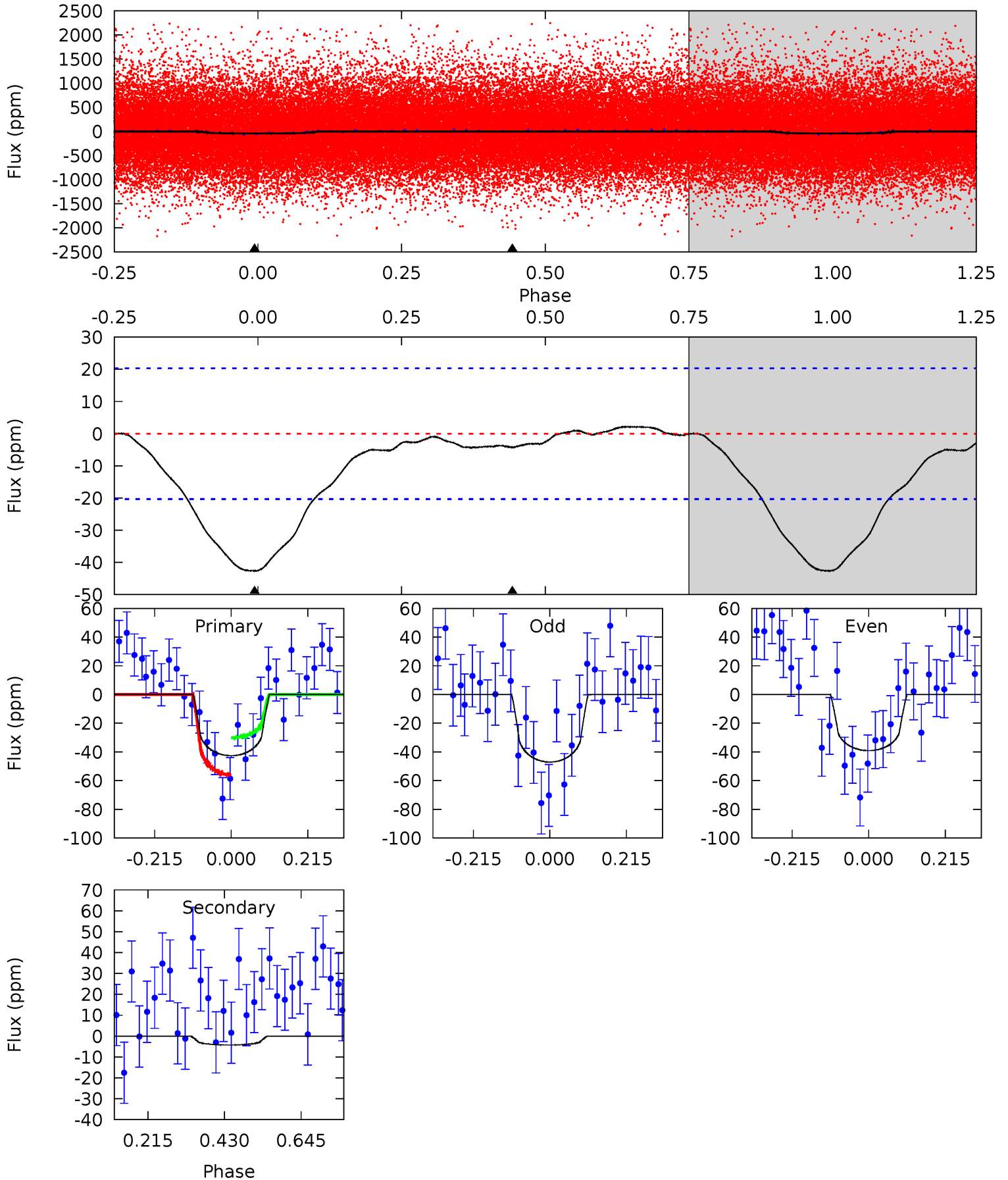
TCE 010471270-01 P= 0.933740 Days $T_0=131.524285$ (BKJD)



DV Model-Shift Uniqueness Test

010471270-01, P = 0.933748 Days, E = 130.598131 Days

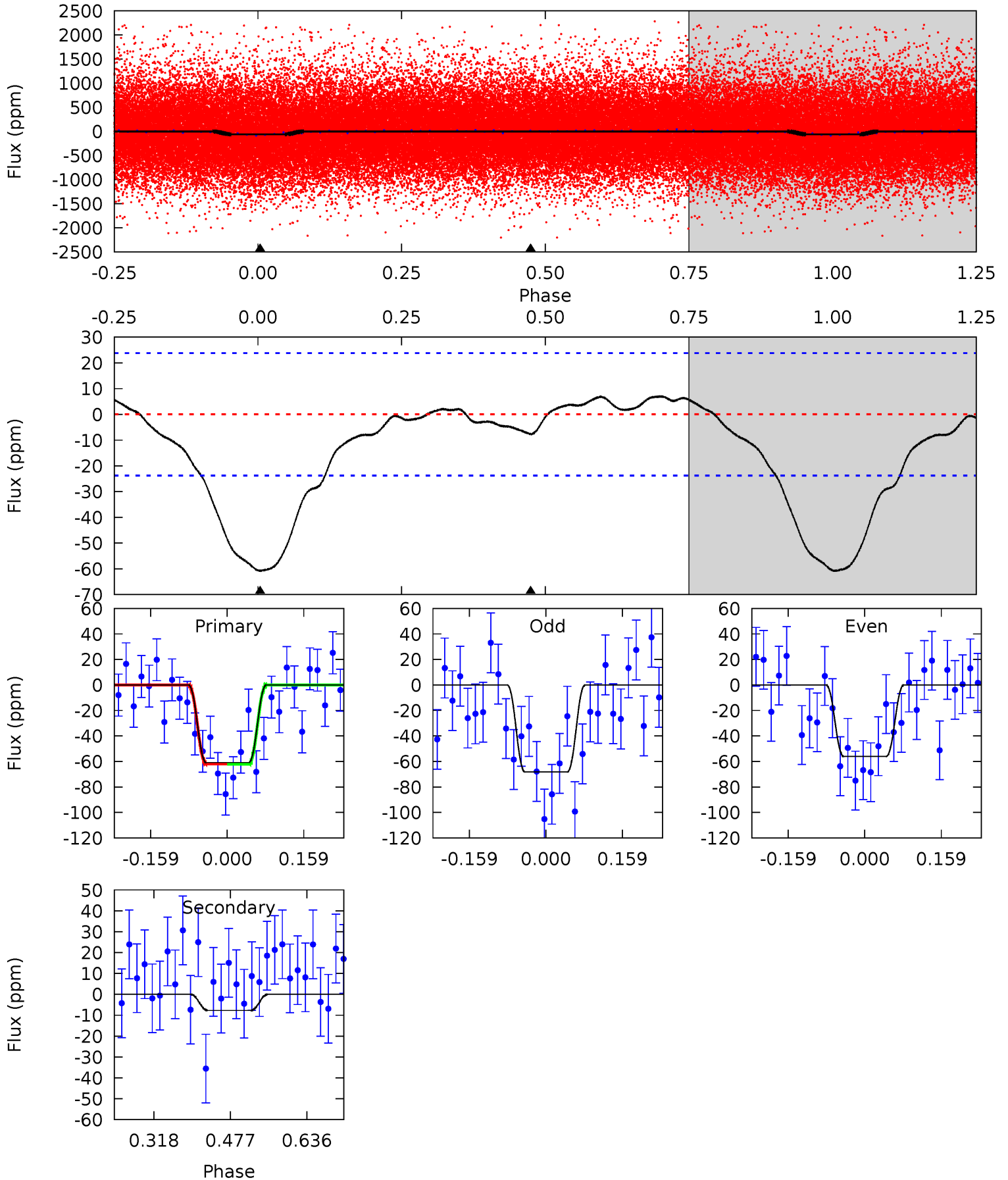
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	0.92	0	0	4.40	1.24	0.47	9.22	9.22	0.92	0.92	0.85	0.94	0.05	2.80



Alt Model-Shift Uniqueness Test

010471270-01, P = 0.933740 Days, E = 130.590545 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	1.45	0	0	4.47	1.41	0.95	11.4	11.4	1.45	1.45	1.13	0.99	0.10	0.04



Stellar Parameters For KIC 010471270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5883^{+159}_{-176}	$4.530^{+0.048}_{-0.192}$	$-0.140^{+0.300}_{-0.300}$	$0.892^{+0.263}_{-0.082}$	$0.985^{+0.117}_{-0.130}$	$1.952^{+0.378}_{-0.941}$
	+3%/-3%	+1%/-4%	+214%/-214%	+29%/-9%	+12%/-13%	+19%/-48%
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 010471270-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 5	$0.98^{+0.82}_{-0.59}$	2565^{+171}_{-125}	2847^{+1624}_{-5745}	$0.614^{+4.545}_{-0.632}$
Alt.	-8 ± 5	$1.13^{+0.85}_{-0.68}$	2565^{+175}_{-117}	3205^{+1419}_{-5725}	$1.034^{+5.541}_{-0.850}$

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

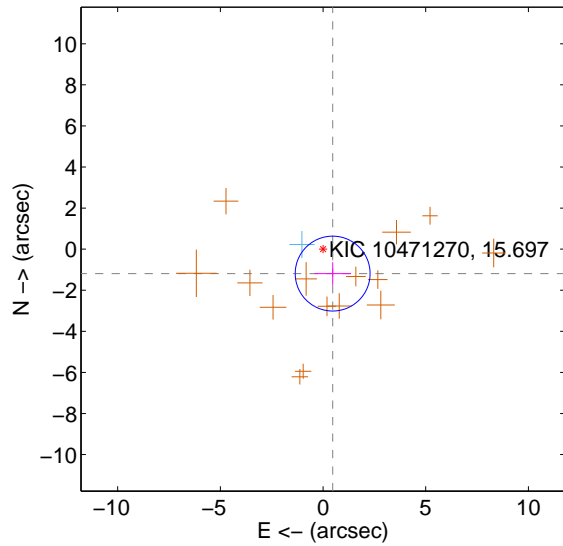
Supplemental centroid analysis for 010471270-01. Kepler magnitude: 15.70. Transit SNR 10.38

There are 1 quarters with good PRF difference image offsets

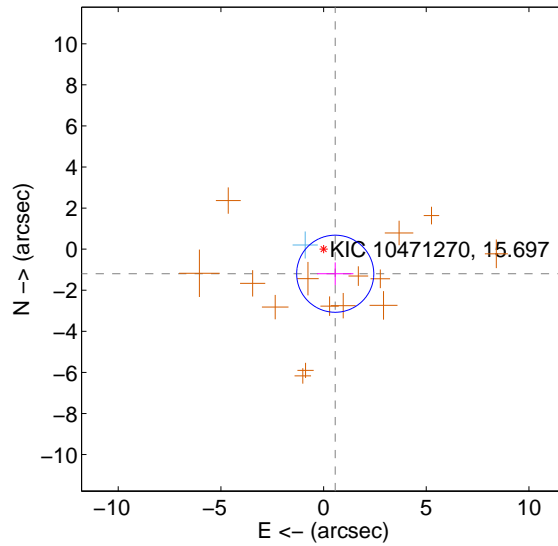
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.278 ± 0.607	2.10	-0.469 ± 0.884	-1.189 ± 0.552
PRF-fit source offset from KIC position	1.323 ± 0.626	2.11	-0.567 ± 0.883	-1.195 ± 0.551
photometric centroid source offset	5.46 ± 1.45	3.77	4.71 ± 1.49	-2.77 ± 1.34

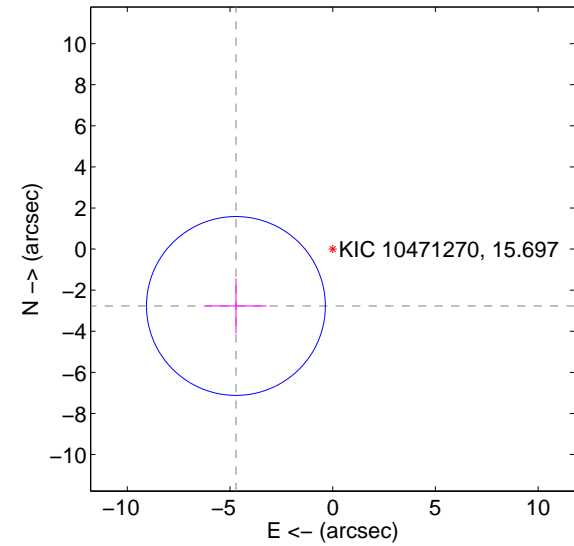
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

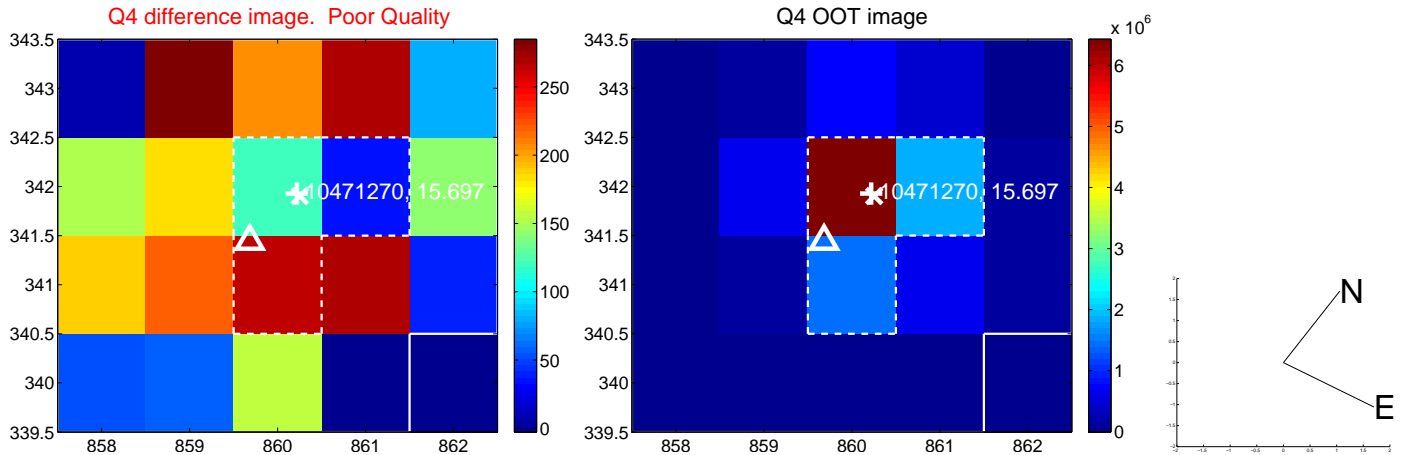
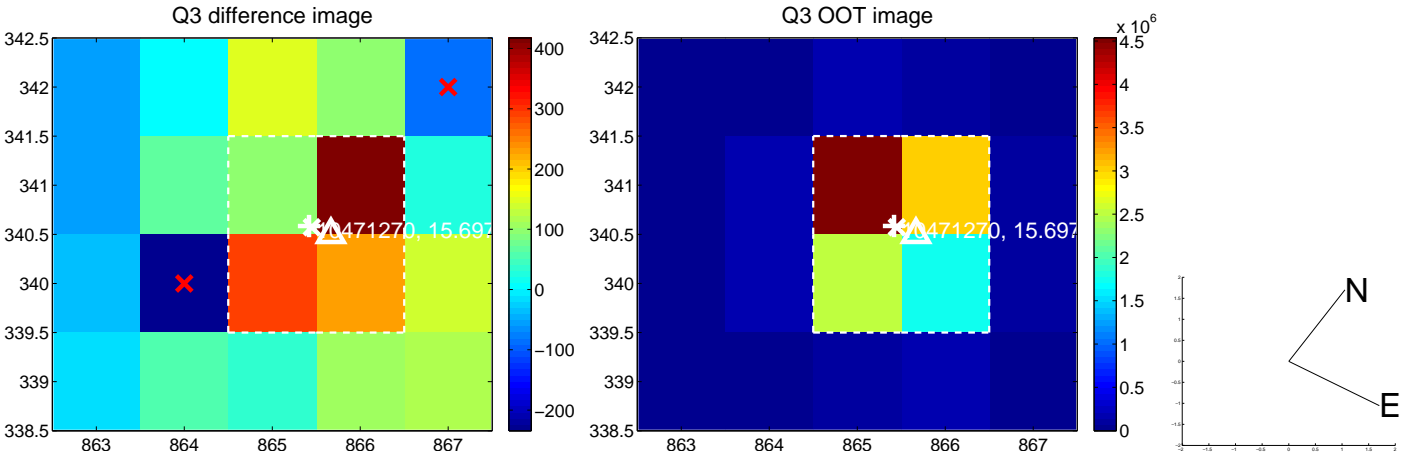
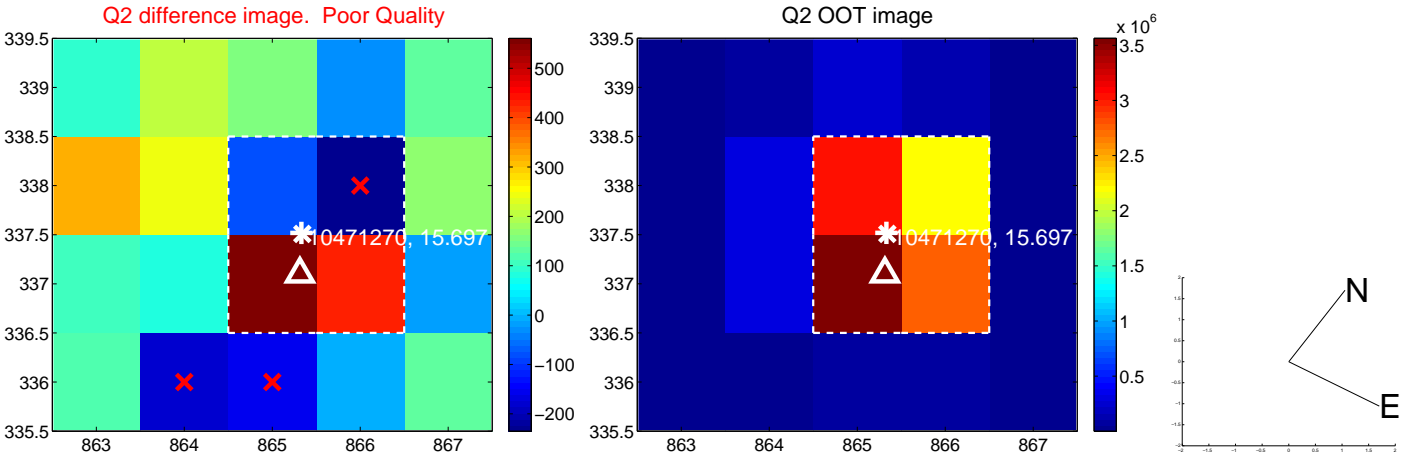
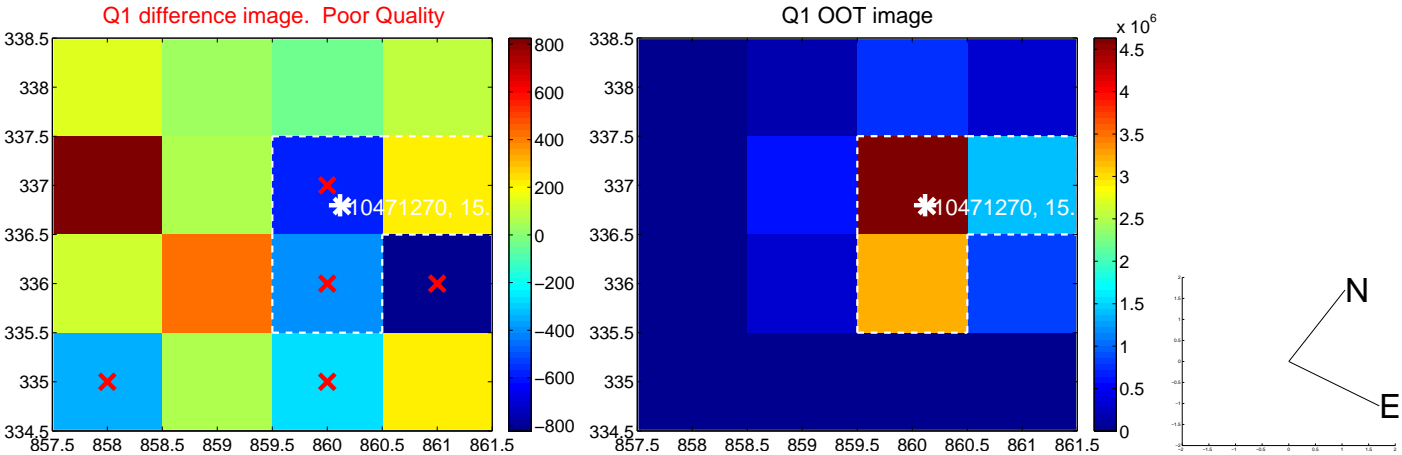


offset from photometric centroids

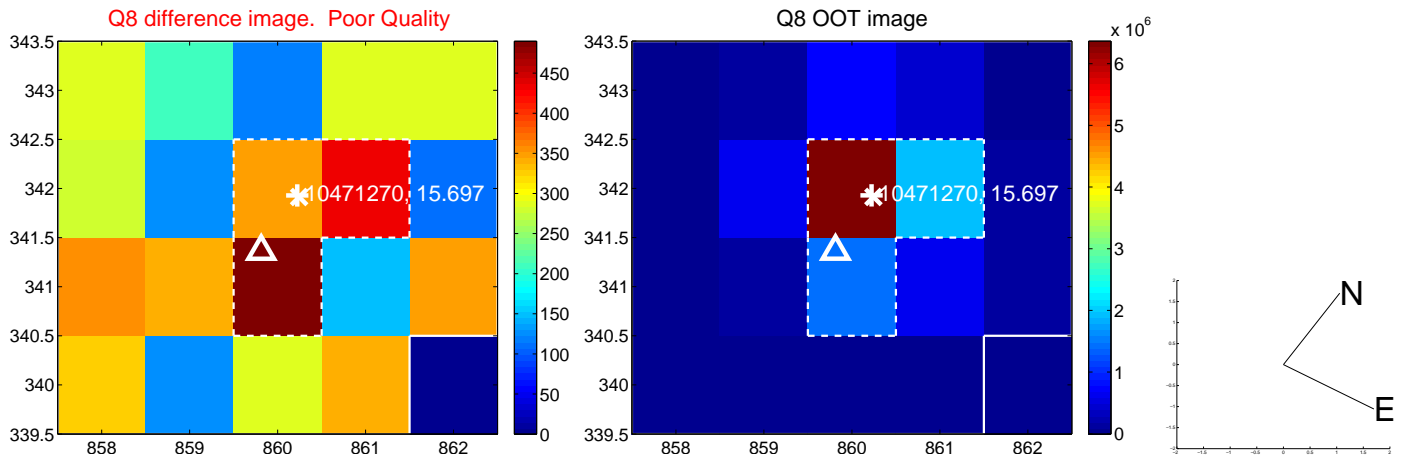
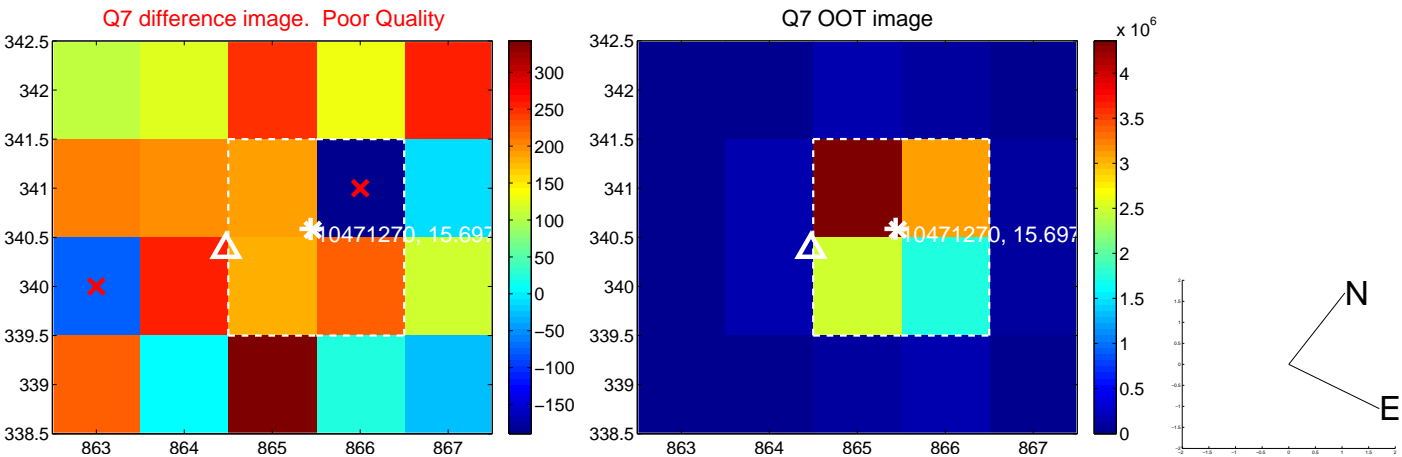
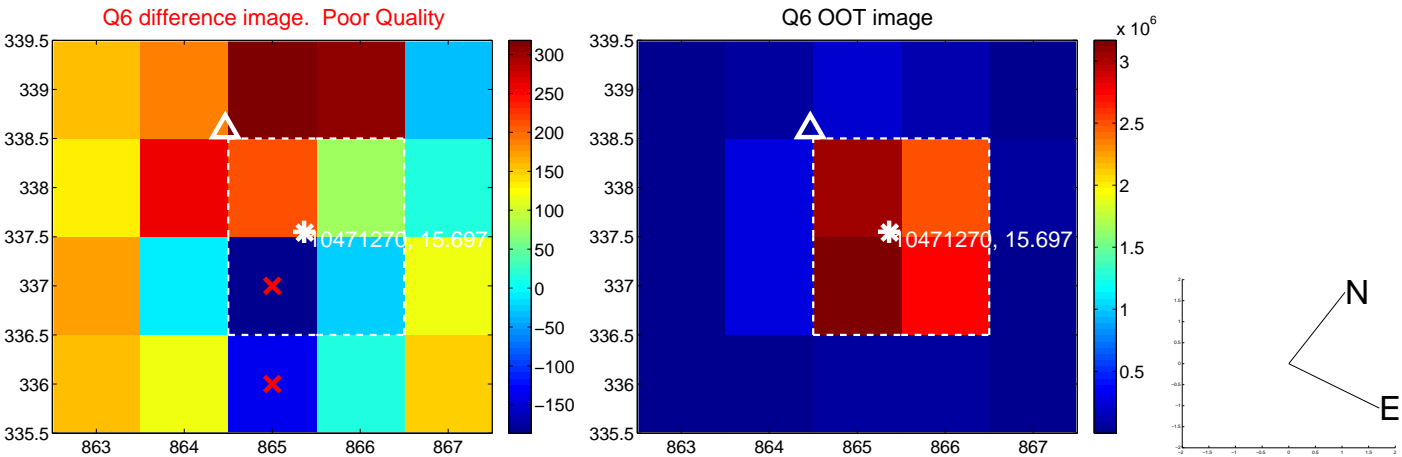
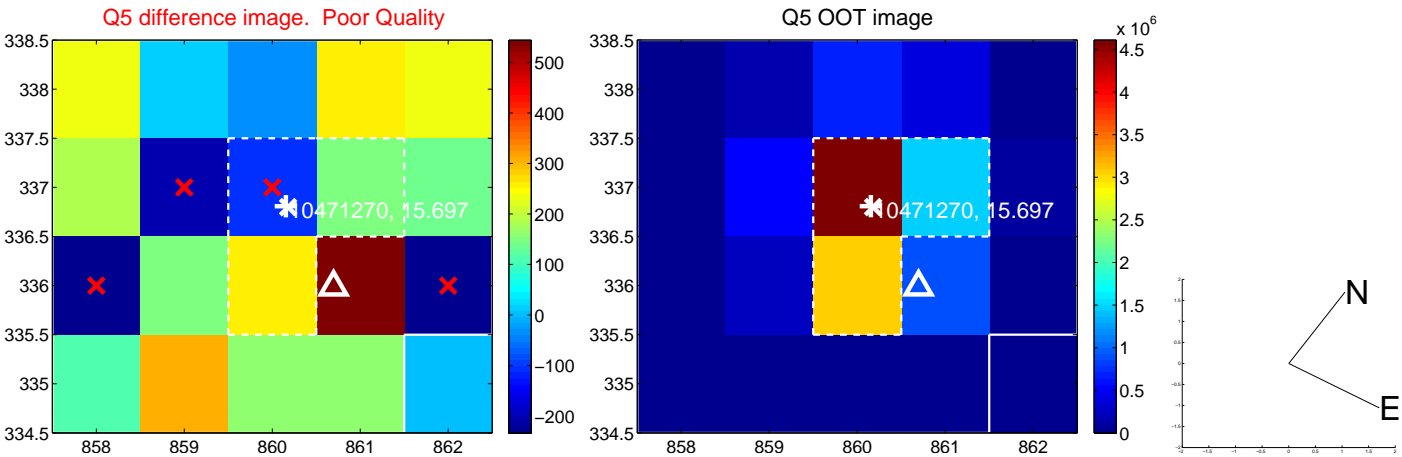


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

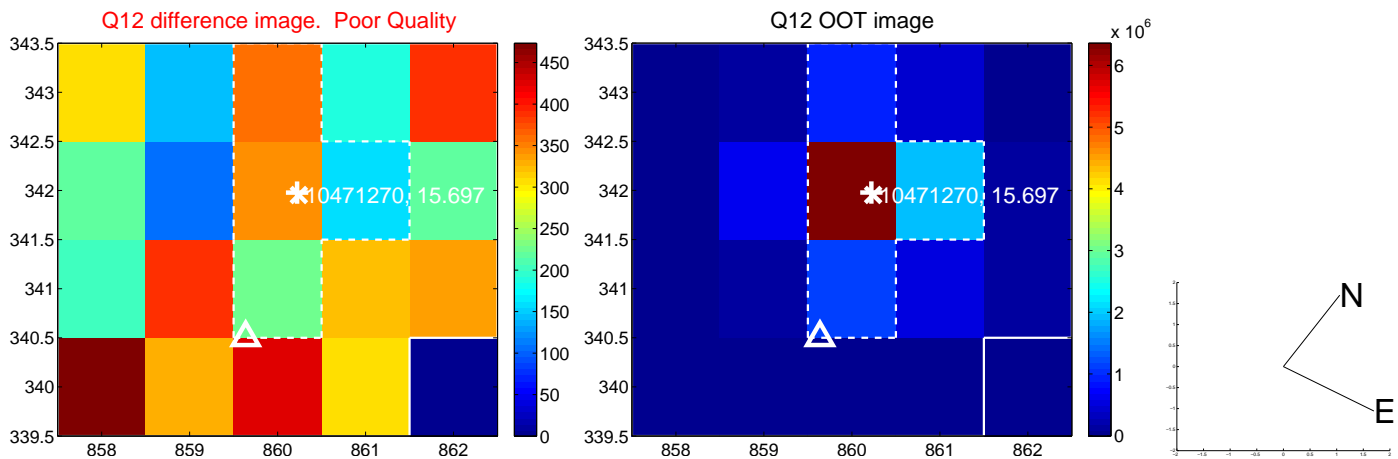
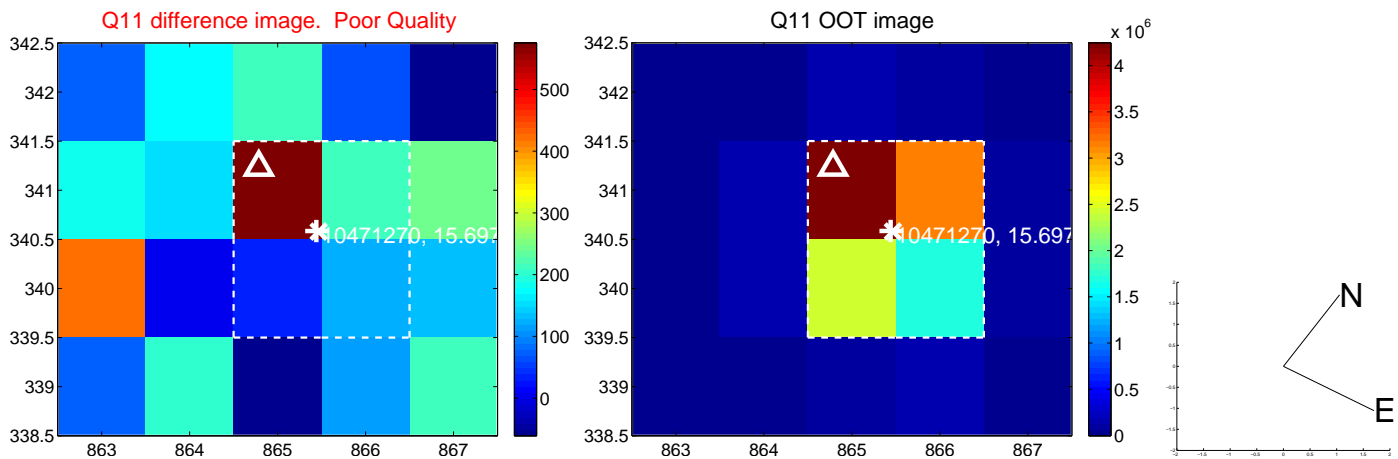
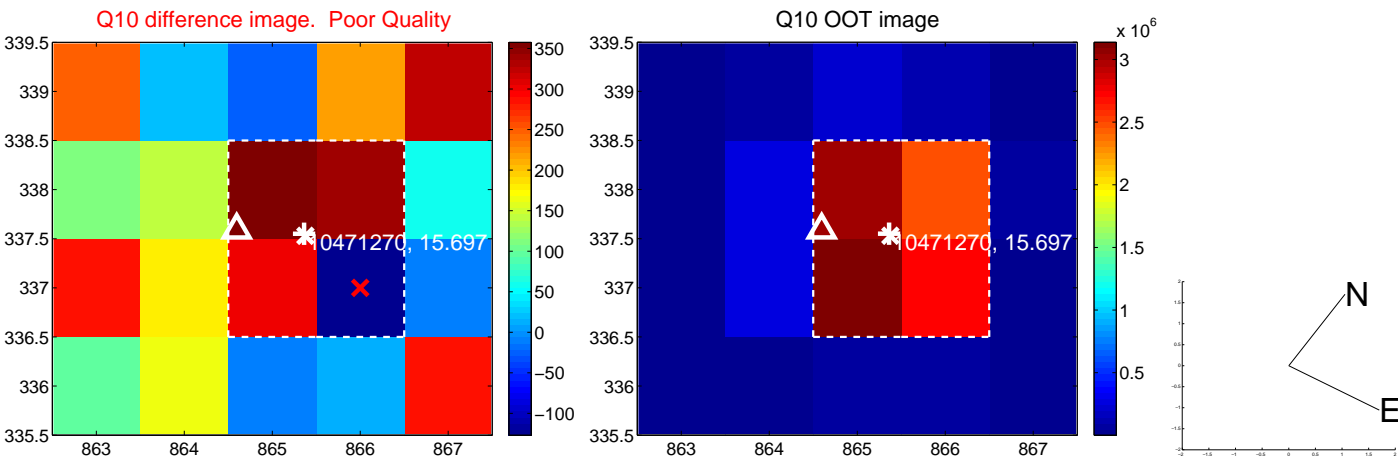
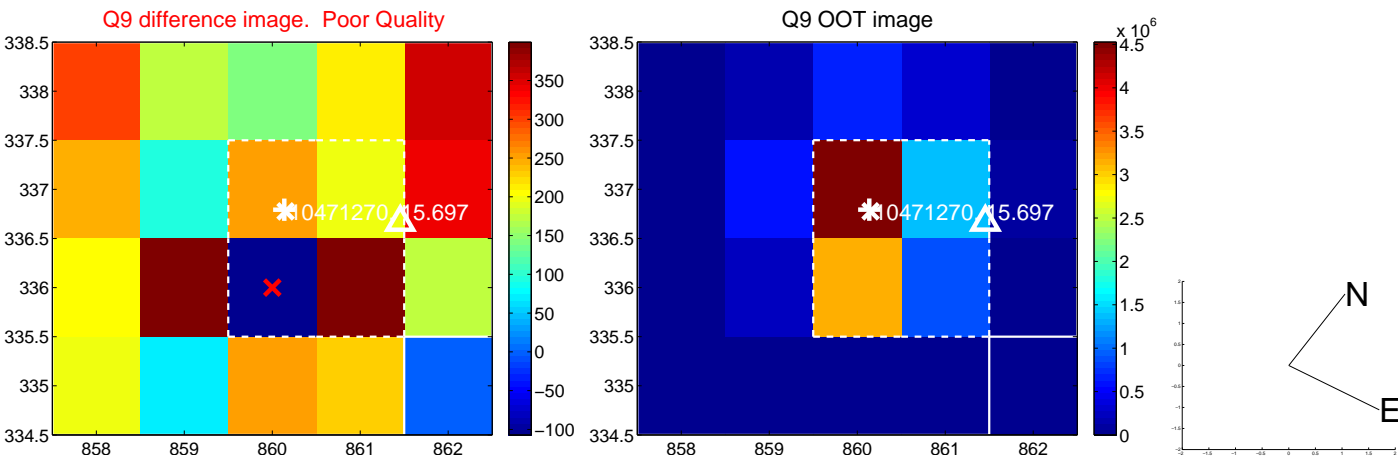
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



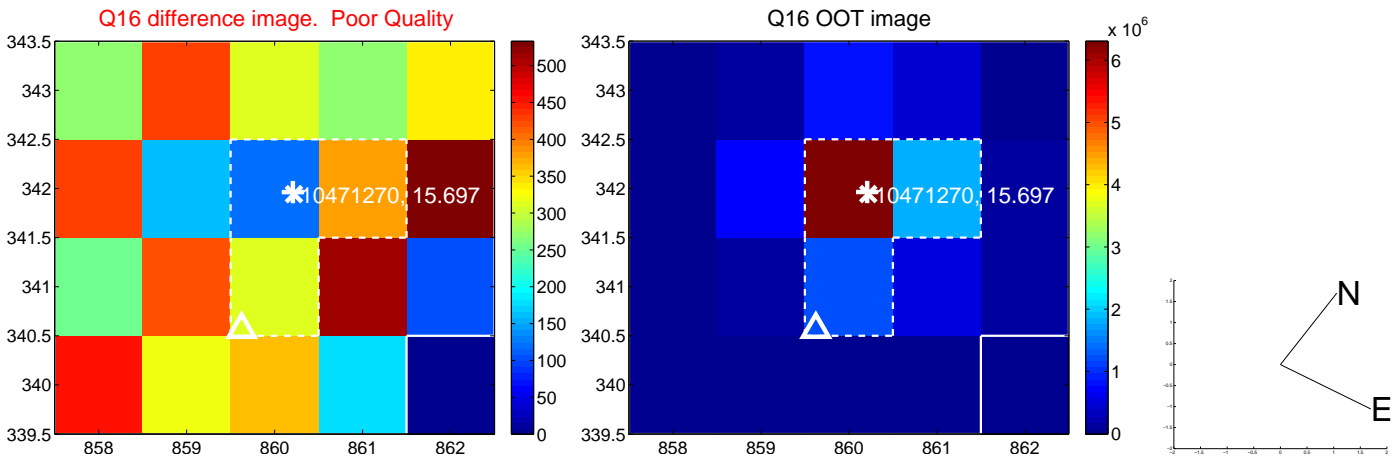
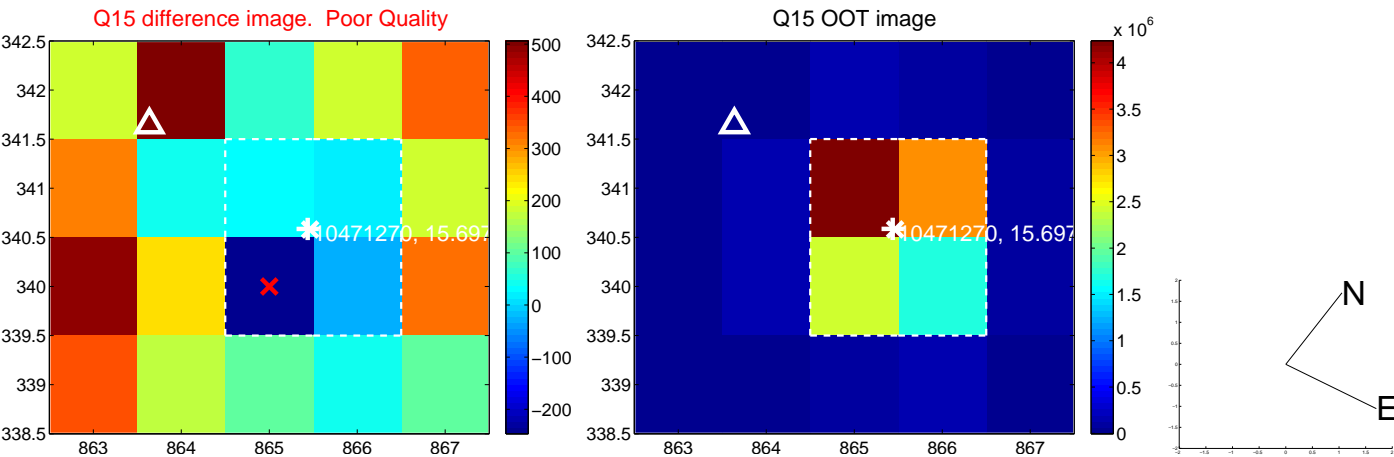
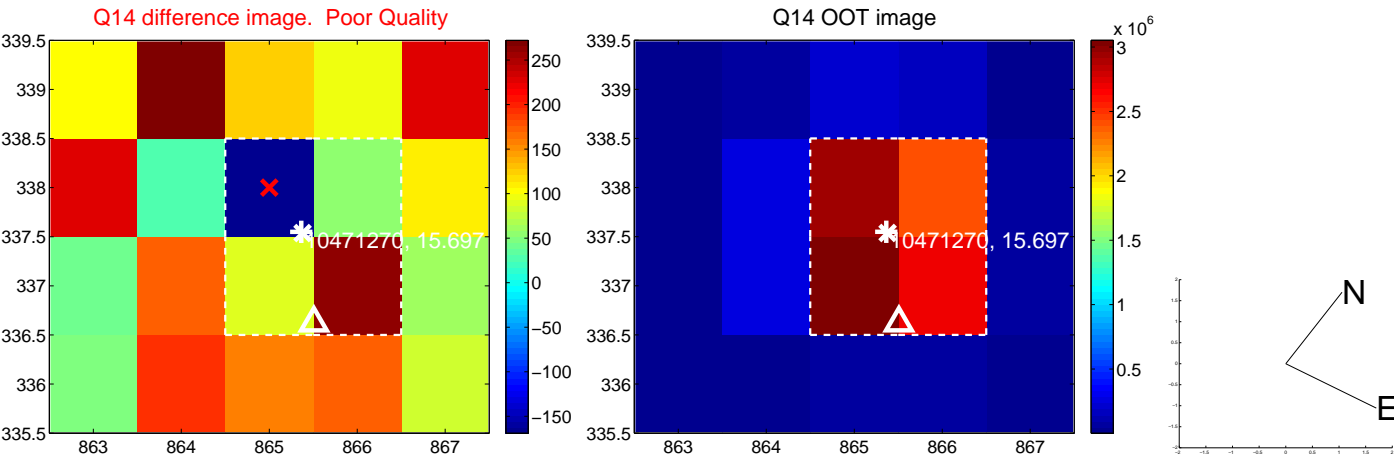
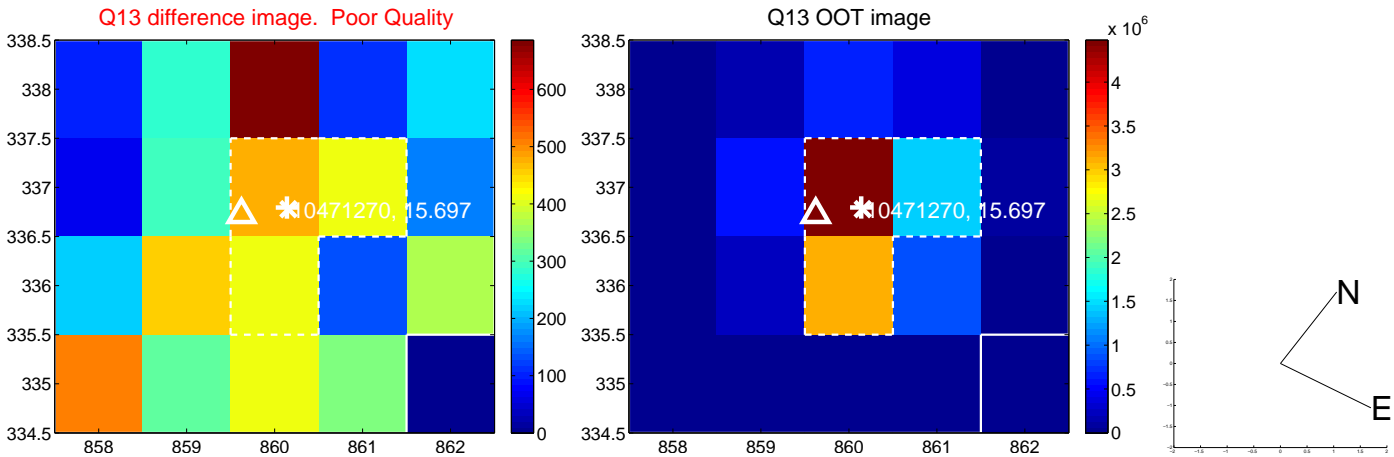
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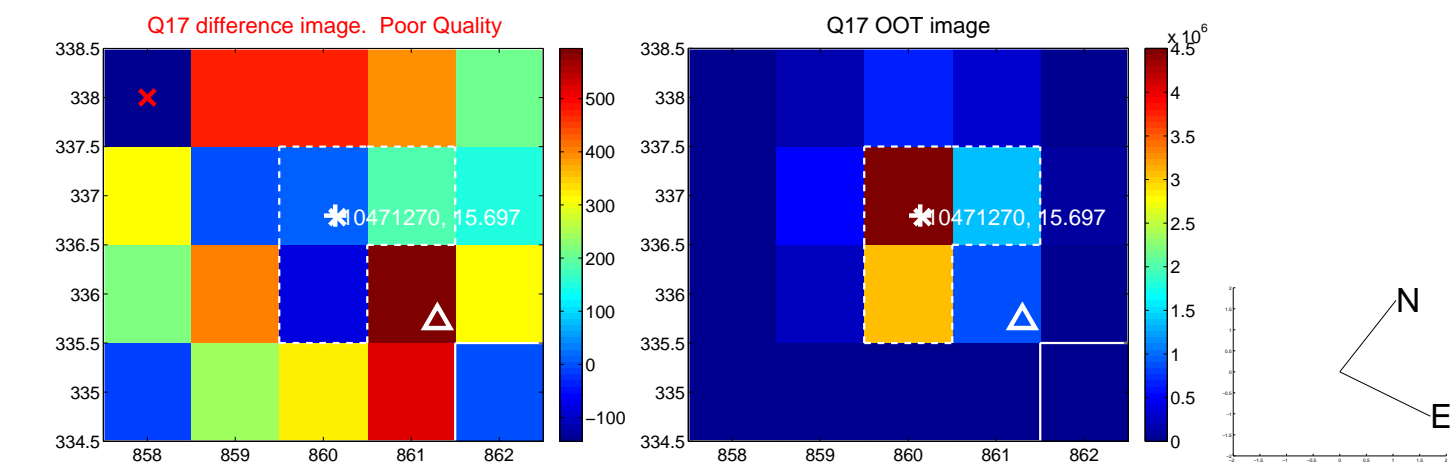
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



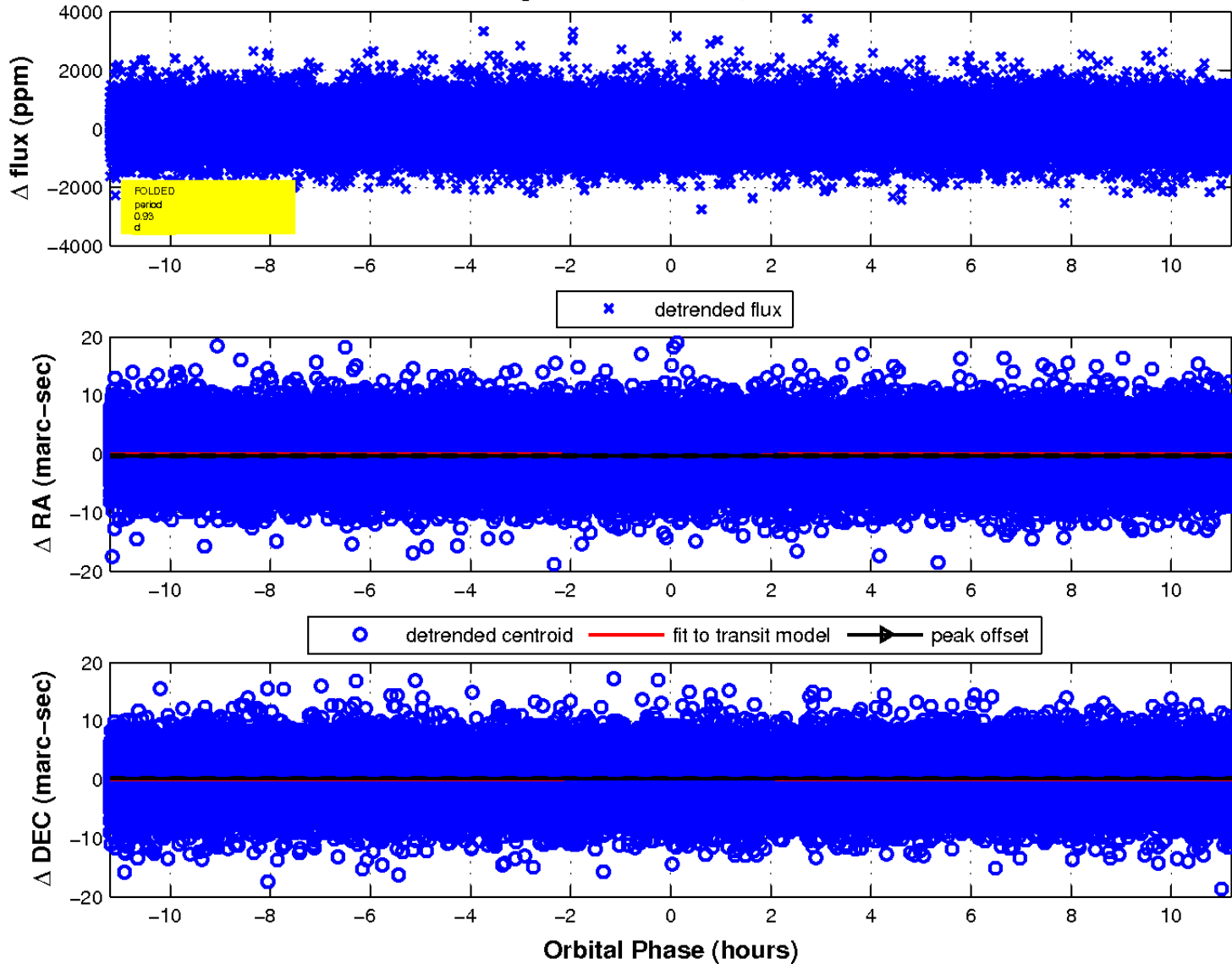
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

