

KIC 003870389

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})
003870389-01	OBS	No	0.551199	131.750269	24.0	4.749	8.0	5.3	0.92	5896	0.46	5215.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003870389-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

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

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

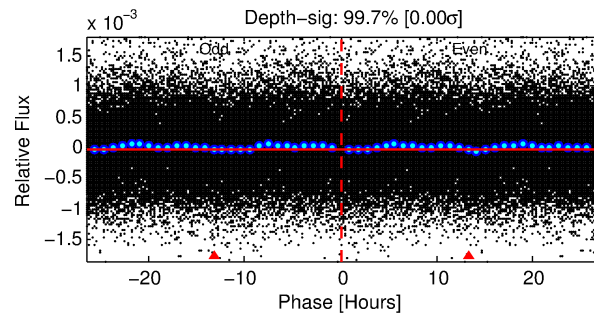
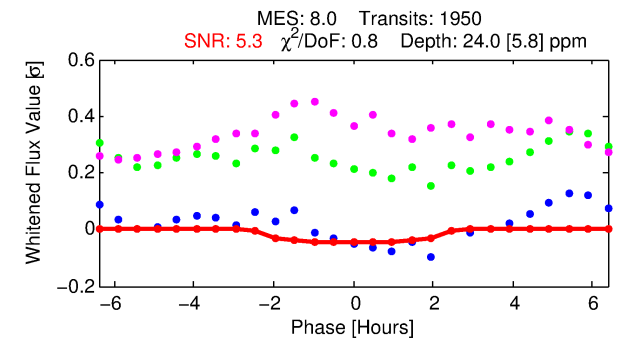
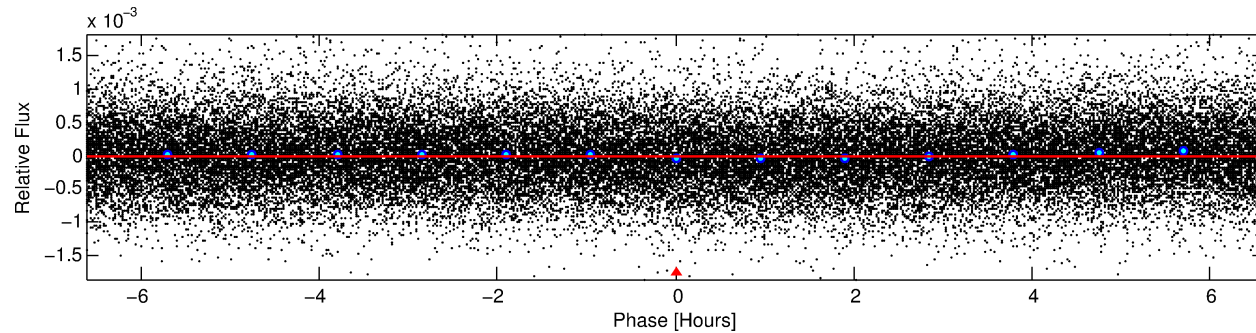
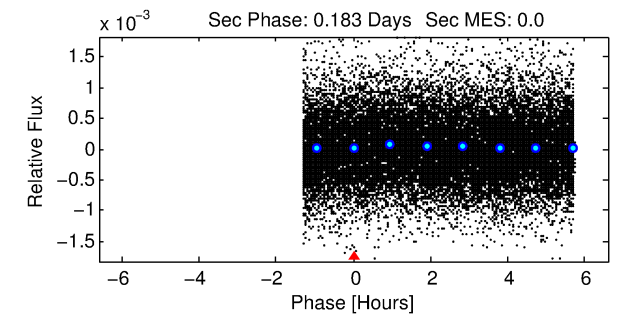
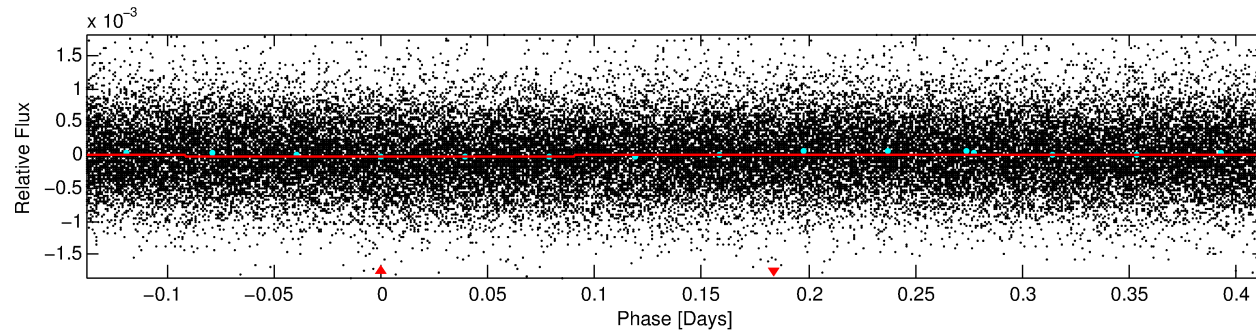
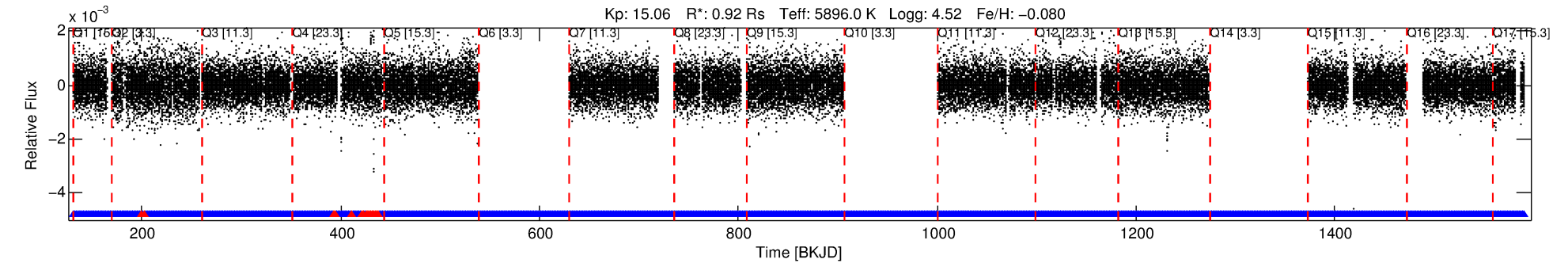
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003870389-01

No Significant Match Found

DV One-Page Summary

KIC: 3870389 Candidate: 1 of 1 Period: 0.551 d



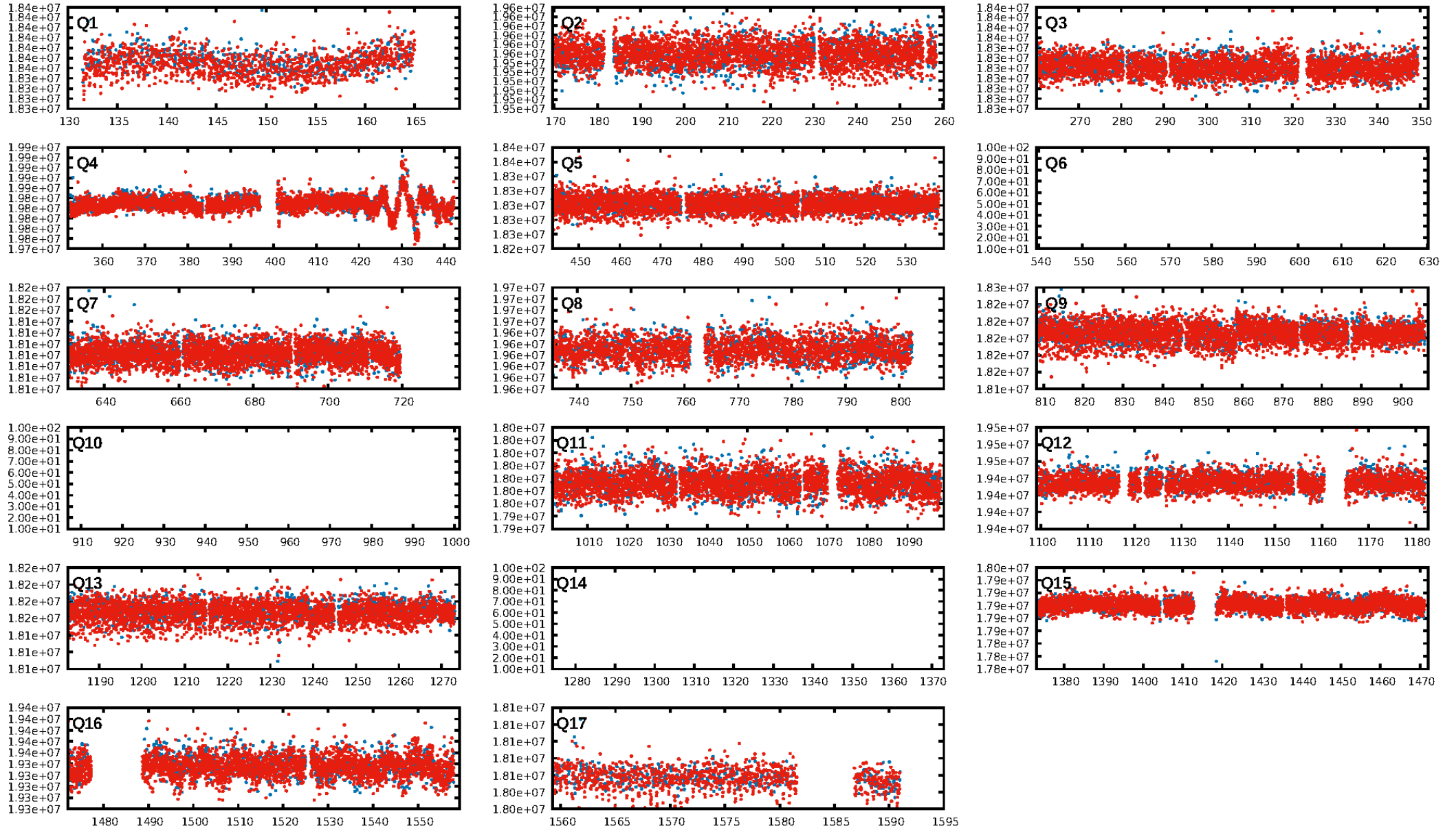
DV Fit Results:

Period = 0.55120 [0.00002] d
Epoch = 131.7503 [0.0099] BKJD
Rp/R* = 0.0046 [0.0100]
a/R* = 1.09 [1.61]
b = 0.51 [14.78]
Seff = 5215.67 [1865.58]
Teq = 2167 [194] K
Rp = 0.46 [1.01] Re
a = 0.0132 [0.0031] AU
Ag = N/A
Teffp = N/A

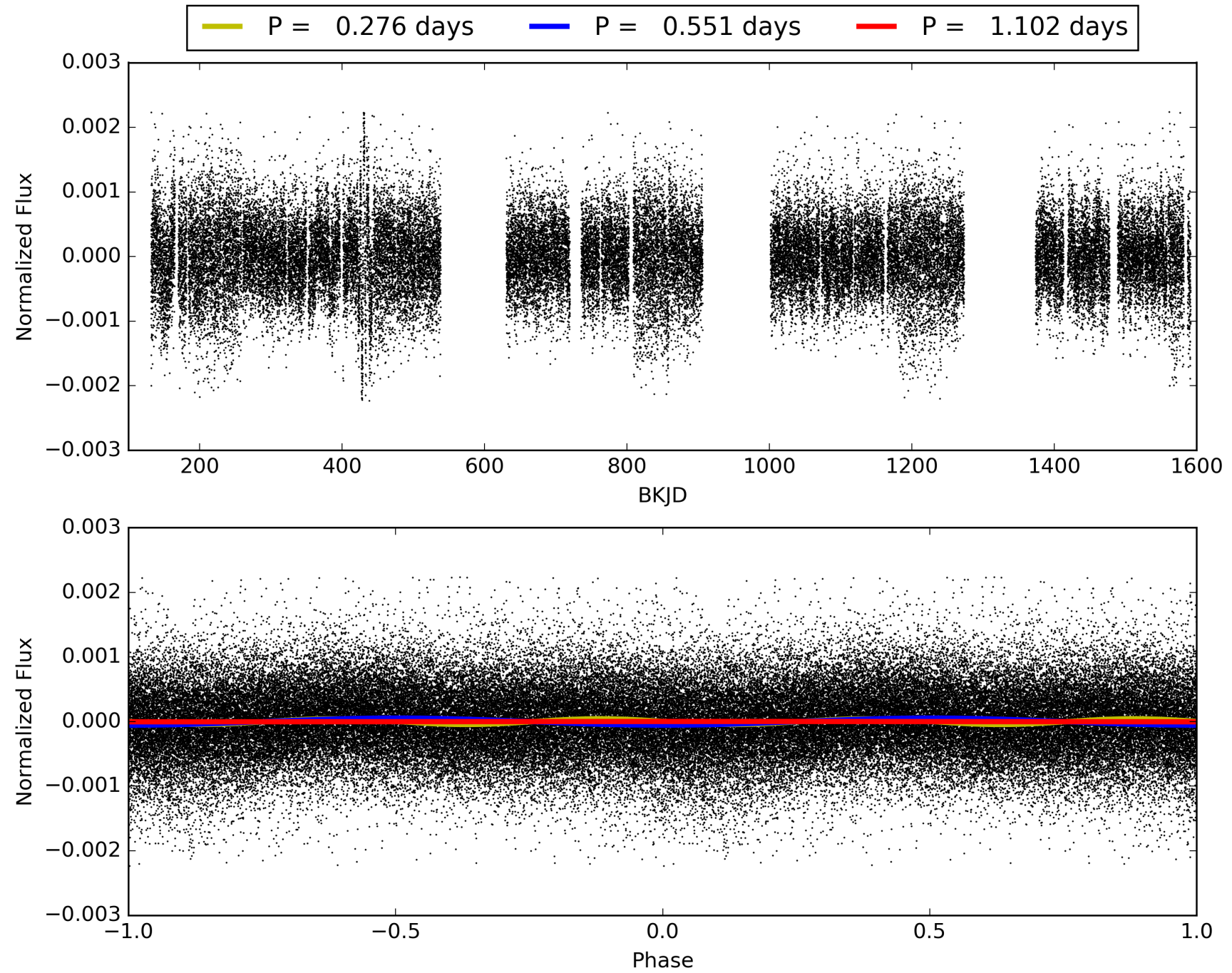
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1817/1840]
GhostDiagnostic-chr: 0.2558
Centroid-sig: N/A
Centroid-so: 7.799 arcsec [2.37σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003870389-01, PDC Light Curves

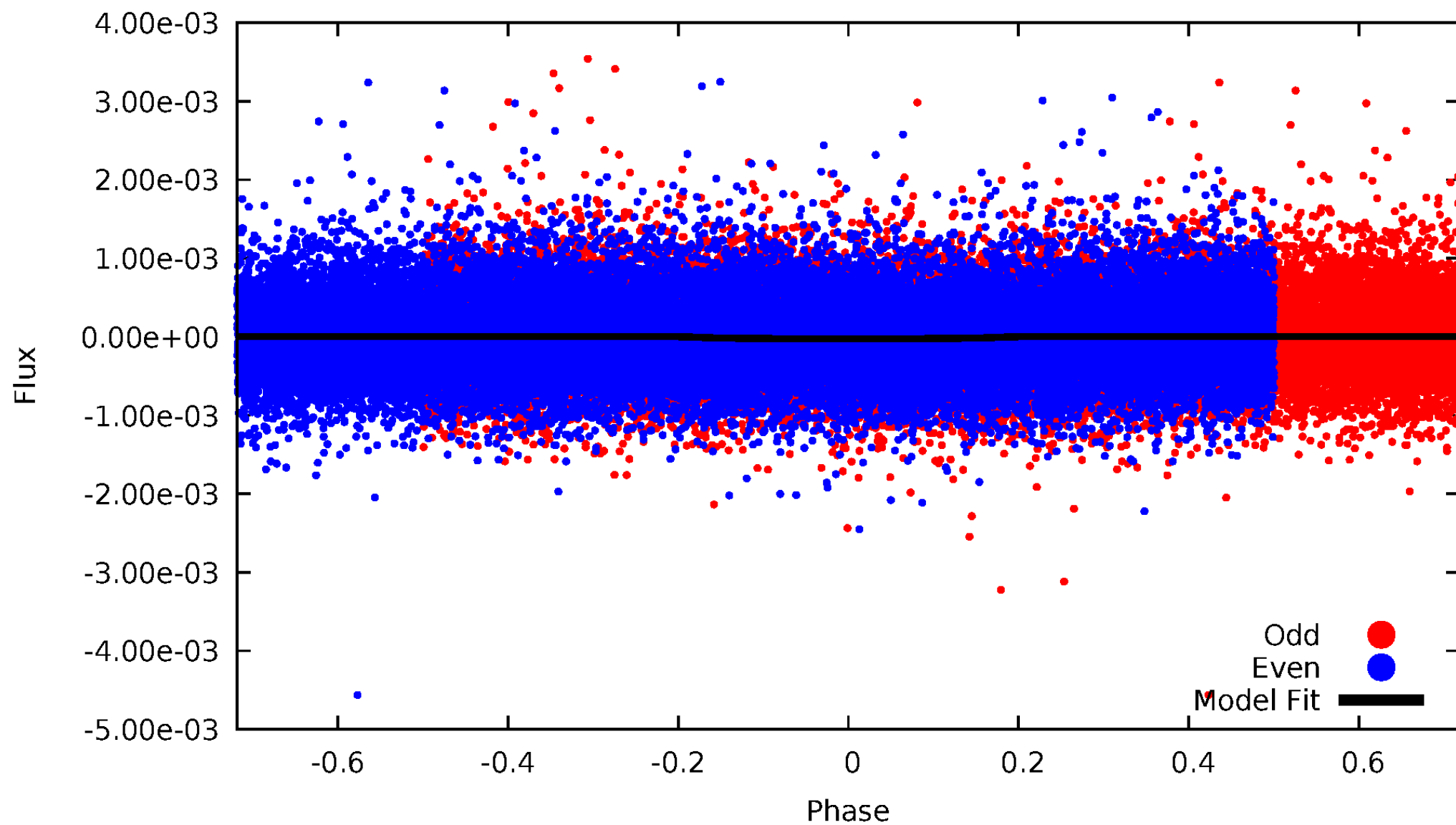


TCE 003870389-01



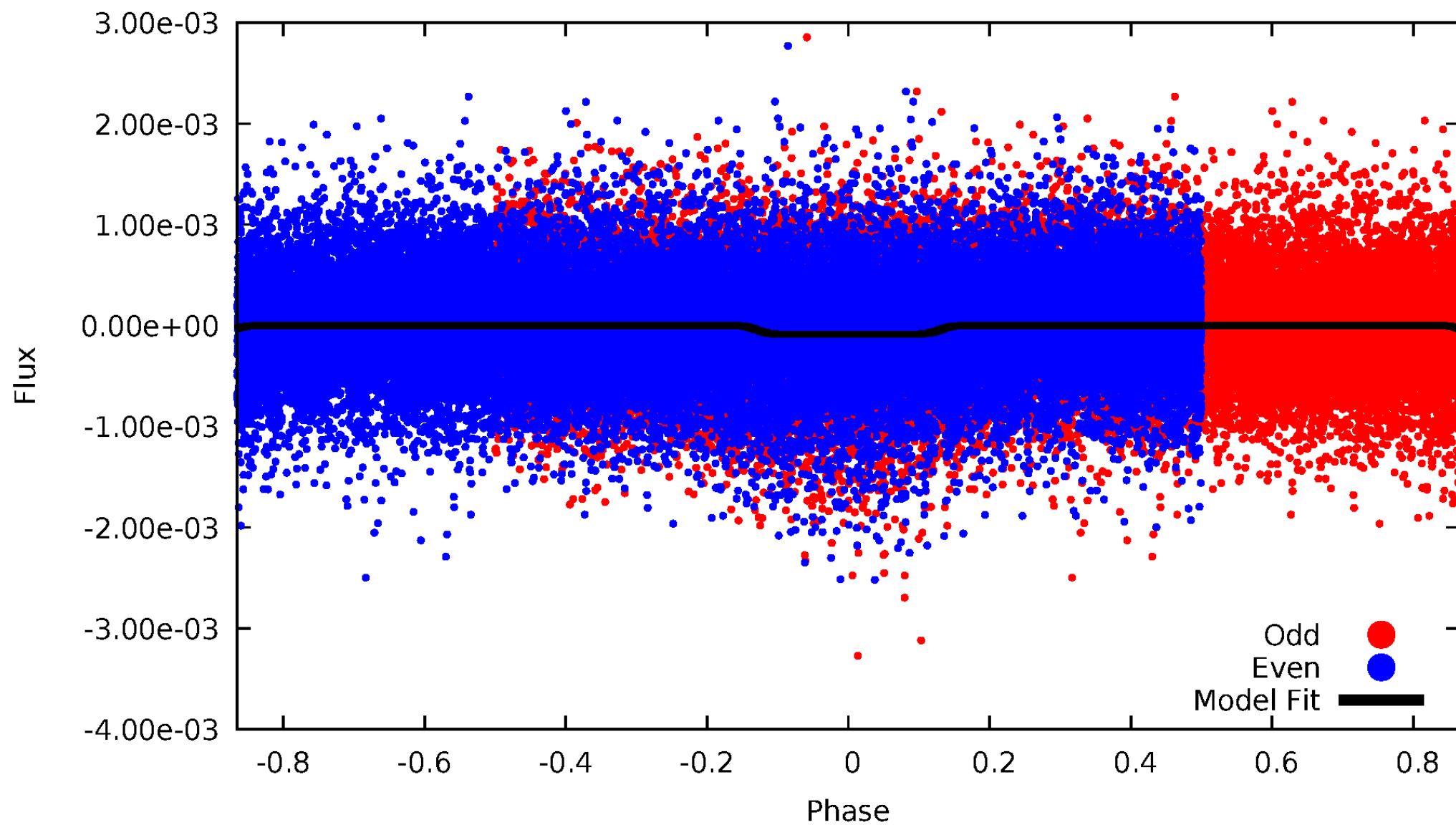
DV Odd/Even

TCE 003870389-01



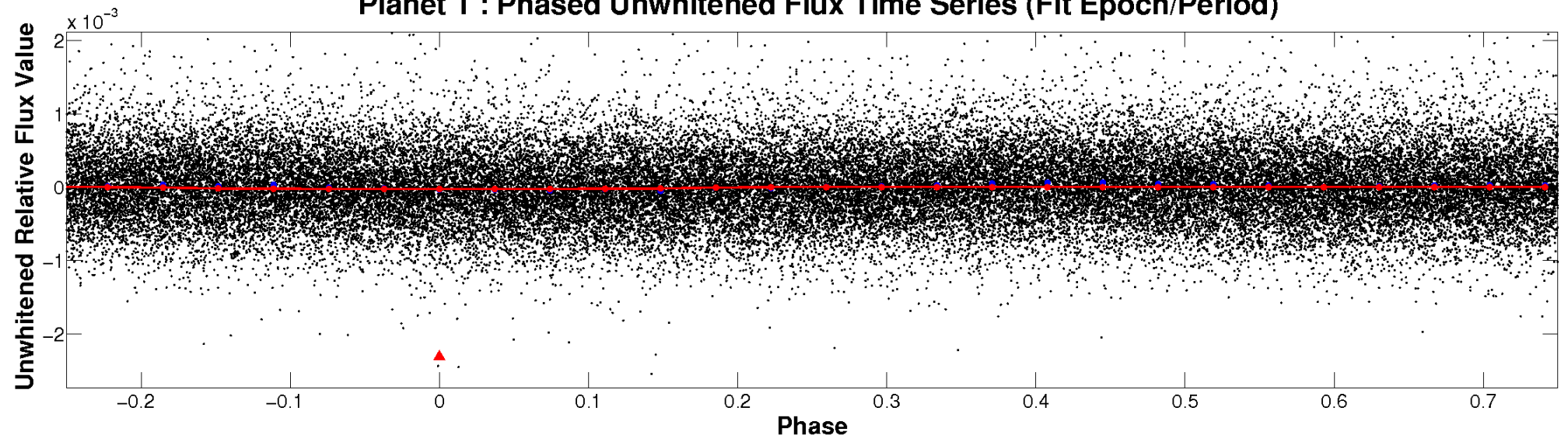
ALT Odd/Even

TCE 003870389-01

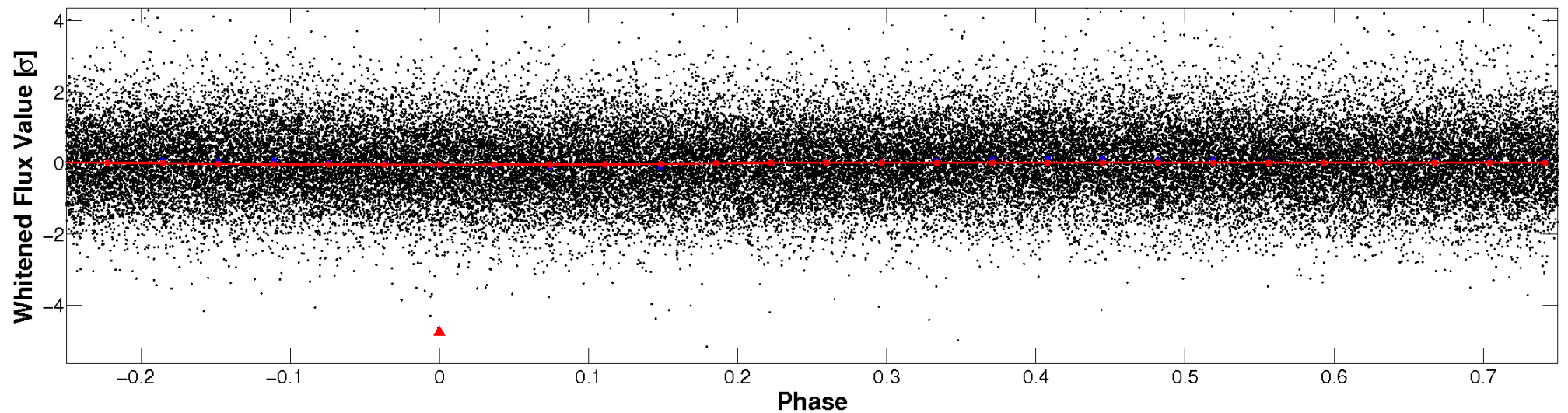


Non-Whitened Vs. Whitened Light Curve

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

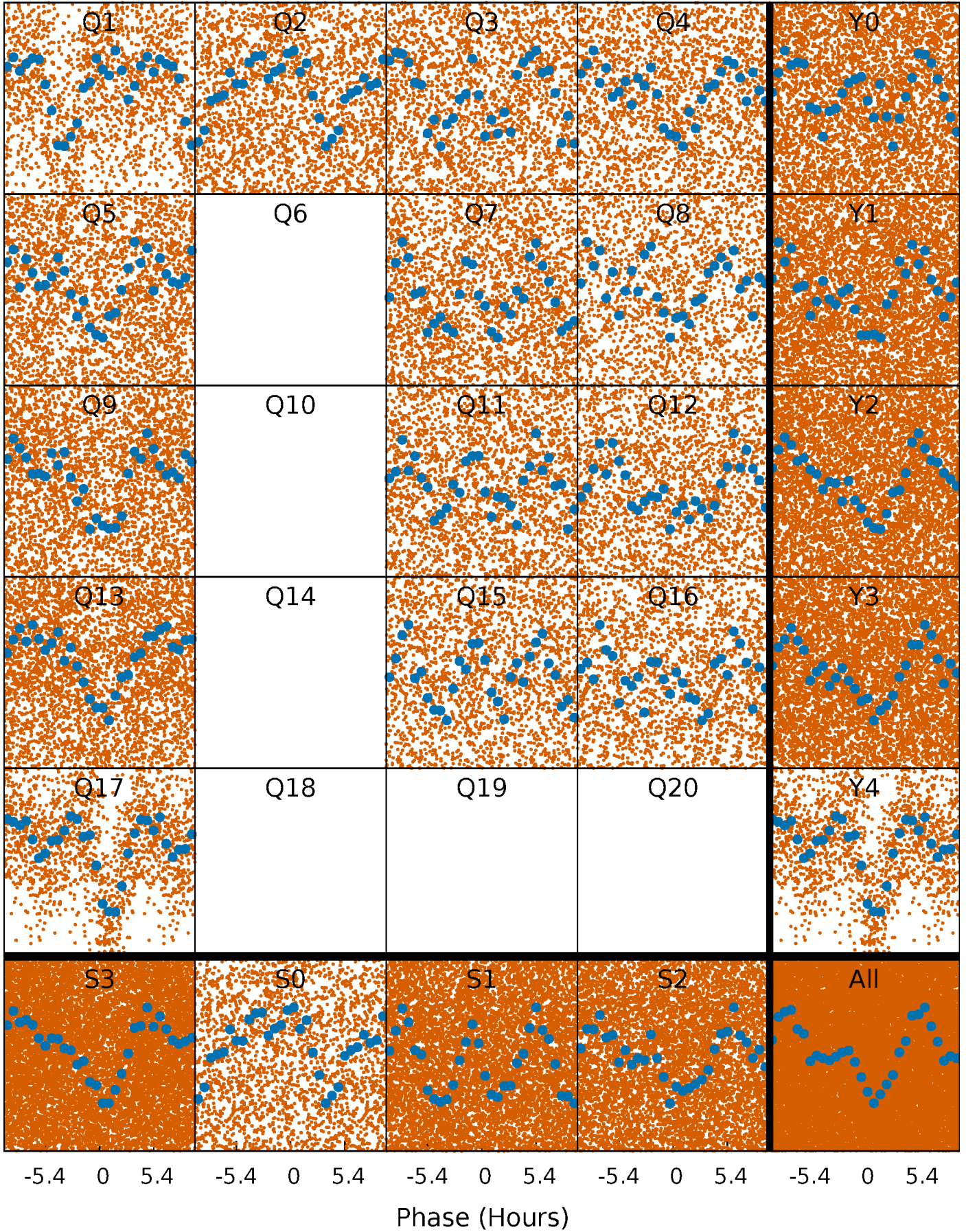


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



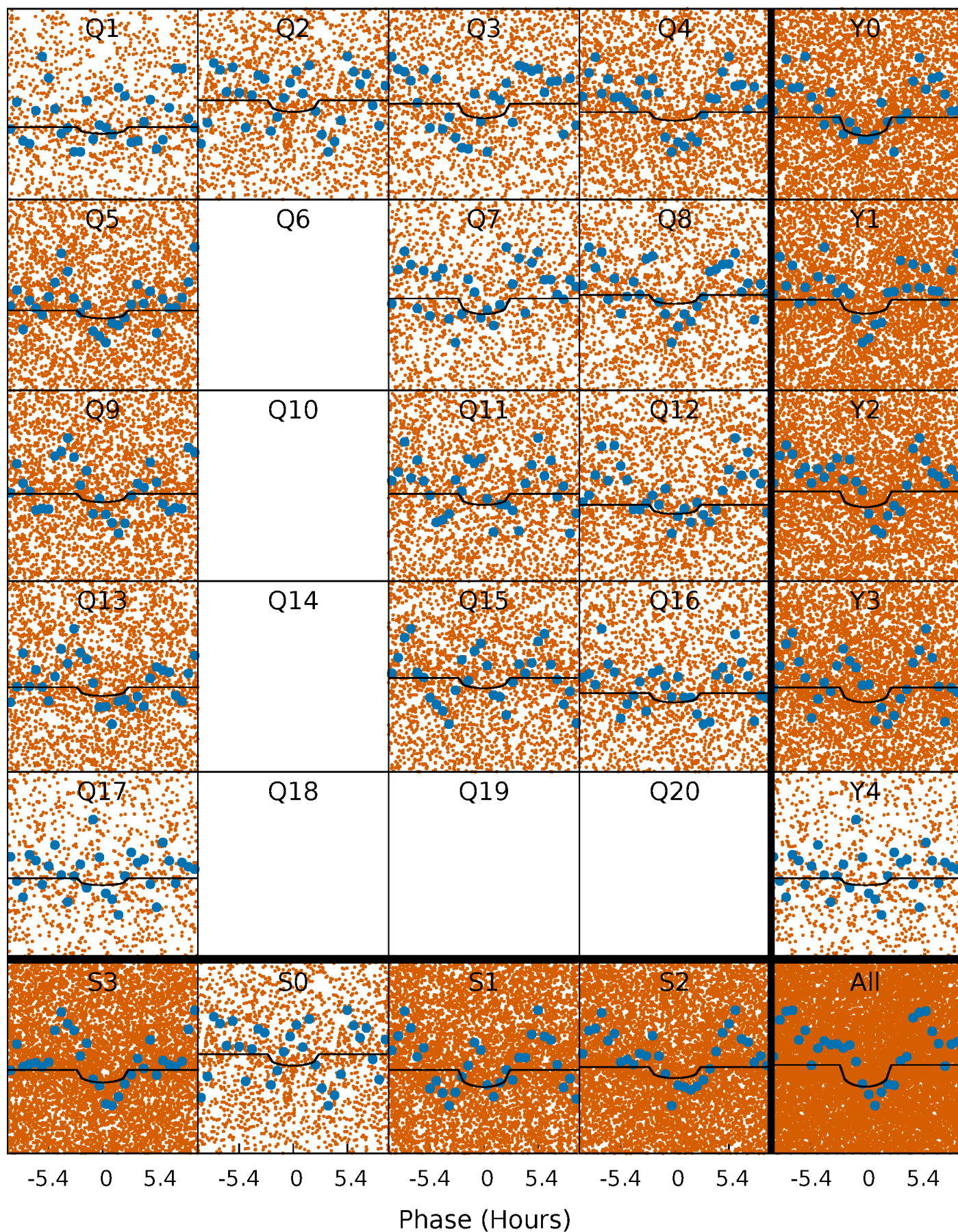
PDC Quarter-Phased Transit Curves

TCE 003870389-01 P= 0.551199 Days $T_0=131.750269$ (BKJD)



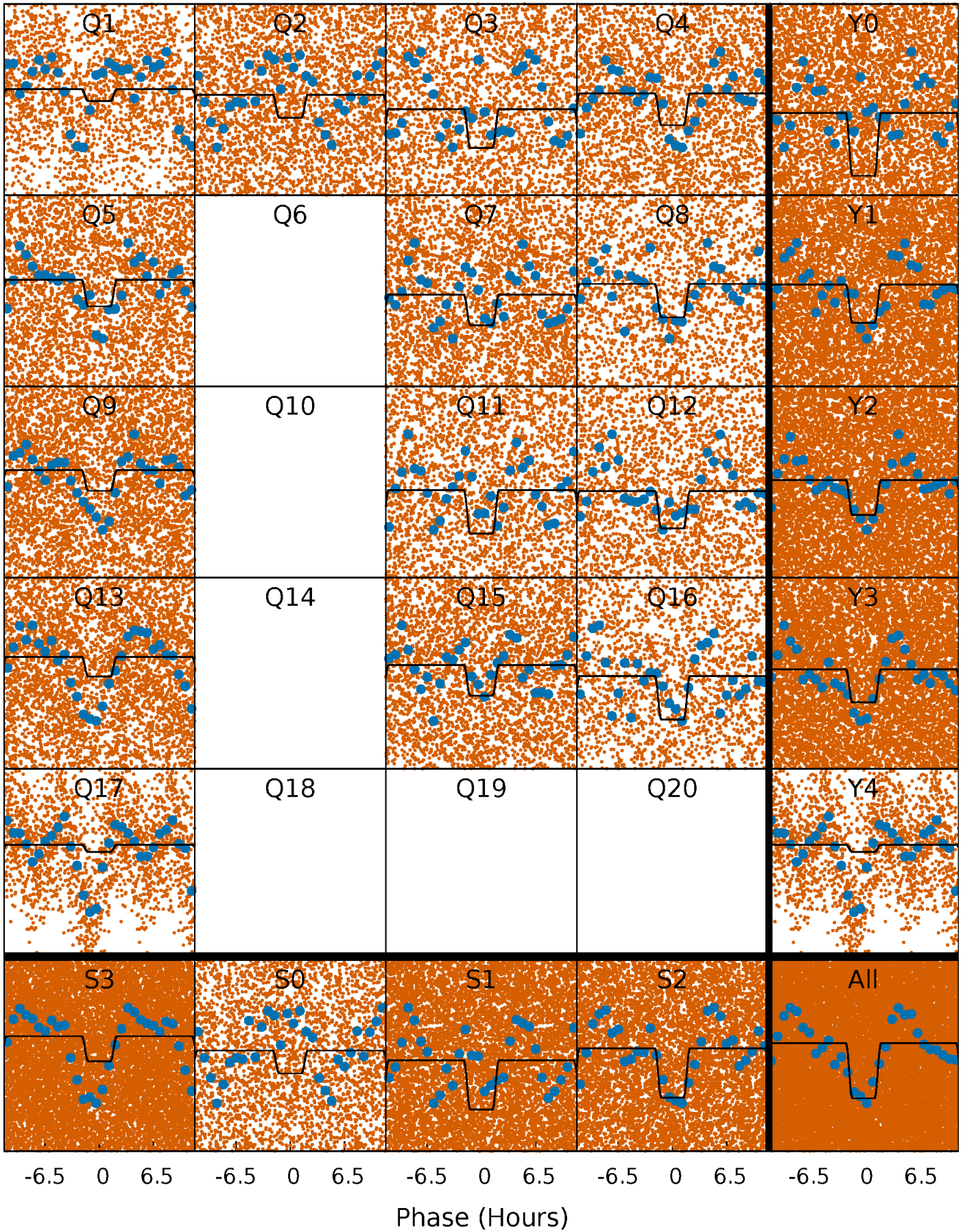
DV Quarter-Phased Transit Curves

TCE 003870389-01 P= 0.551199 Days $T_0=131.750269$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

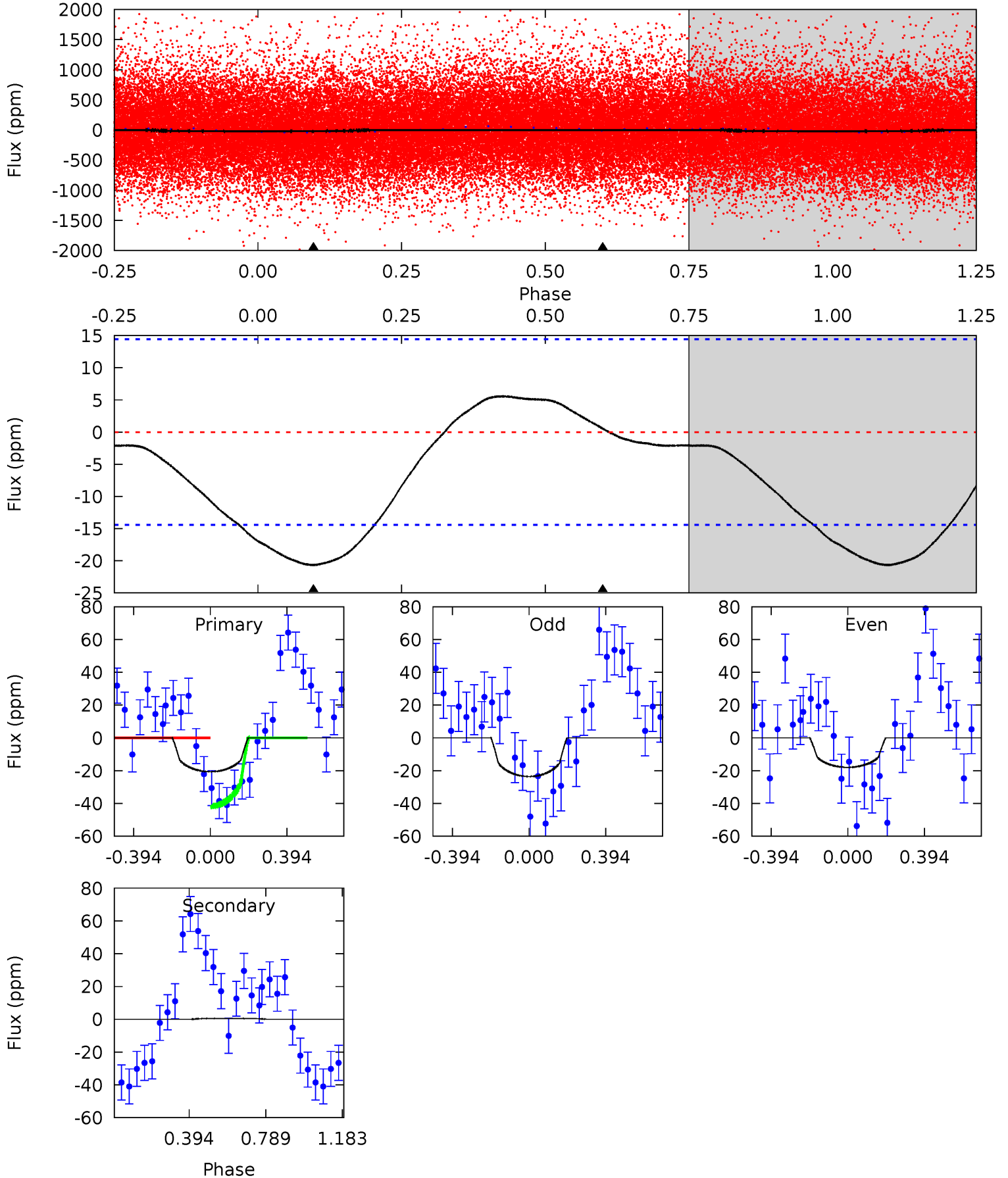
TCE 003870389-01 P= 0.551248 Days $T_0=131.712486$ (BKJD)



DV Model-Shift Uniqueness Test

003870389-01, P = 0.551199 Days, E = 131.199070 Days

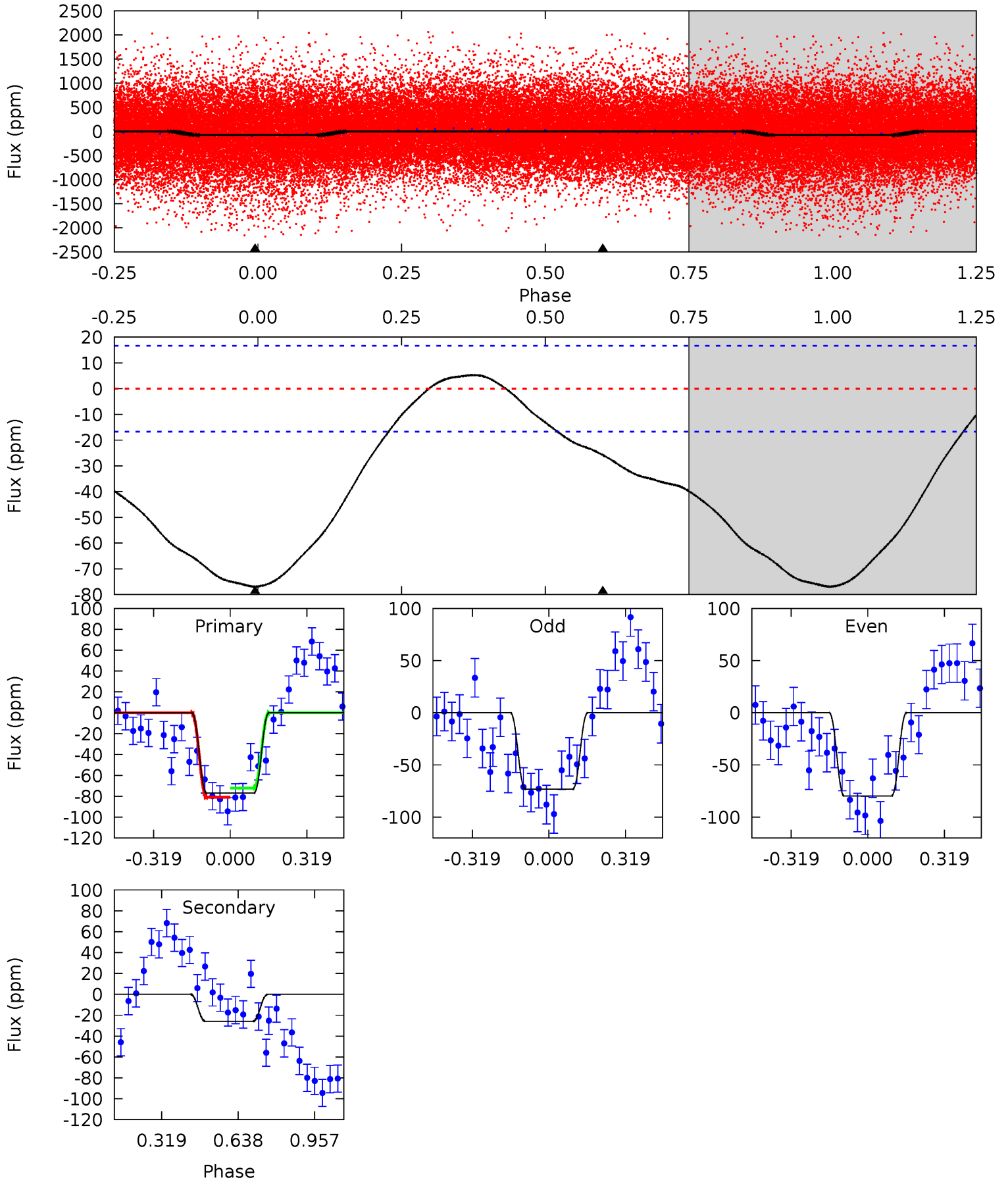
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.11	-0.16	0	0	4.27	0.85	1.13	6.11	6.11	-0.16	-0.16	0.83	0.92	0.21	6.22



Alt Model-Shift Uniqueness Test

003870389-01, P = 0.551248 Days, E = 131.161238 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	6.67	0	0	4.32	1.00	1.24	19.9	19.9	6.67	6.67	0.84	1.34	0.06	1.07



Stellar Parameters For KIC 003870389

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5896^{+158}_{-176}	$4.518^{+0.046}_{-0.184}$	$-0.080^{+0.300}_{-0.300}$	$0.916^{+0.253}_{-0.084}$	$1.008^{+0.115}_{-0.127}$	$1.849^{+0.434}_{-0.903}$
	+3%/-3%	+1%/-4%	+375%/-375%	+28%/-9%	+11%/-13%	+23%/-49%
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 003870389-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 3	$0.88^{+0.82}_{-0.57}$	3092^{+200}_{-144}	-3206^{+6250}_{-696}	$-0.033^{+0.566}_{-0.767}$
Alt.	-26 ± 4	$1.17^{+0.98}_{-0.77}$	3090^{+183}_{-134}	4080^{+2777}_{-1049}	$1.784^{+13.390}_{-1.251}$

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

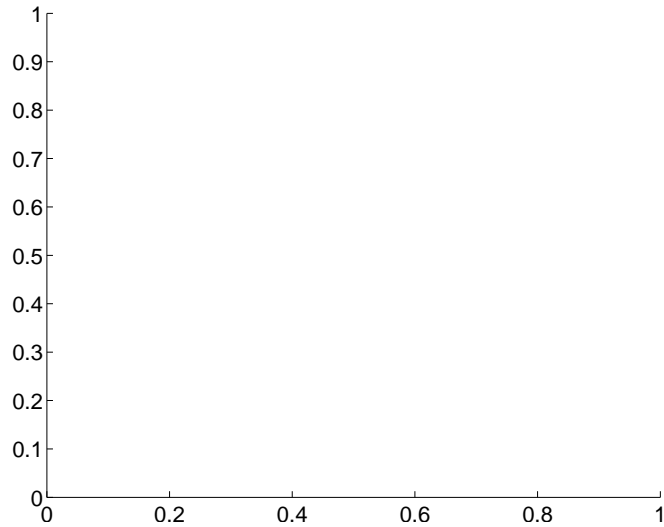
Supplemental centroid analysis for 003870389-01. Kepler magnitude: 15.06. Transit SNR 5.25

There are 0 quarters with good PRF difference image offsets

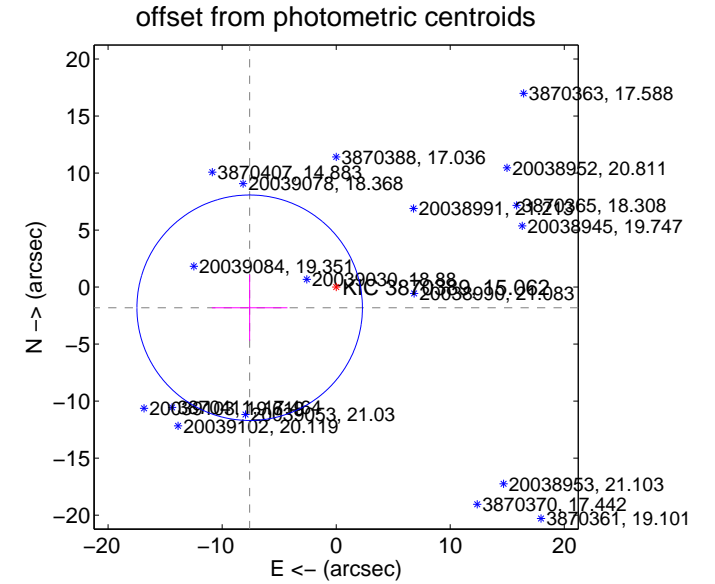
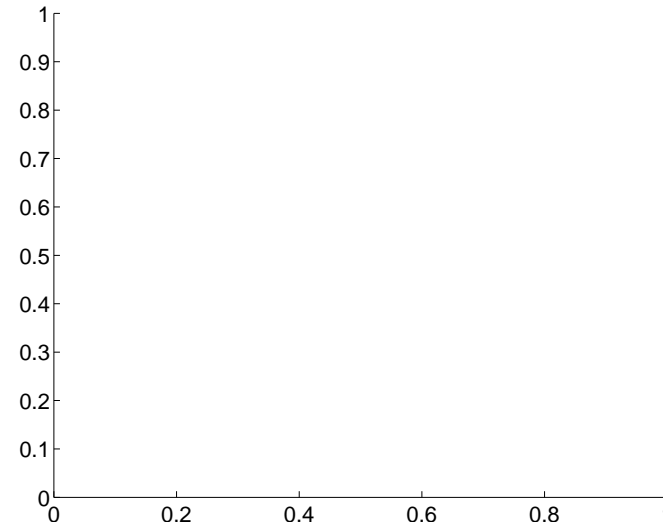
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	7.80 ± 3.30	2.37	7.59 ± 3.32	-1.81 ± 2.89

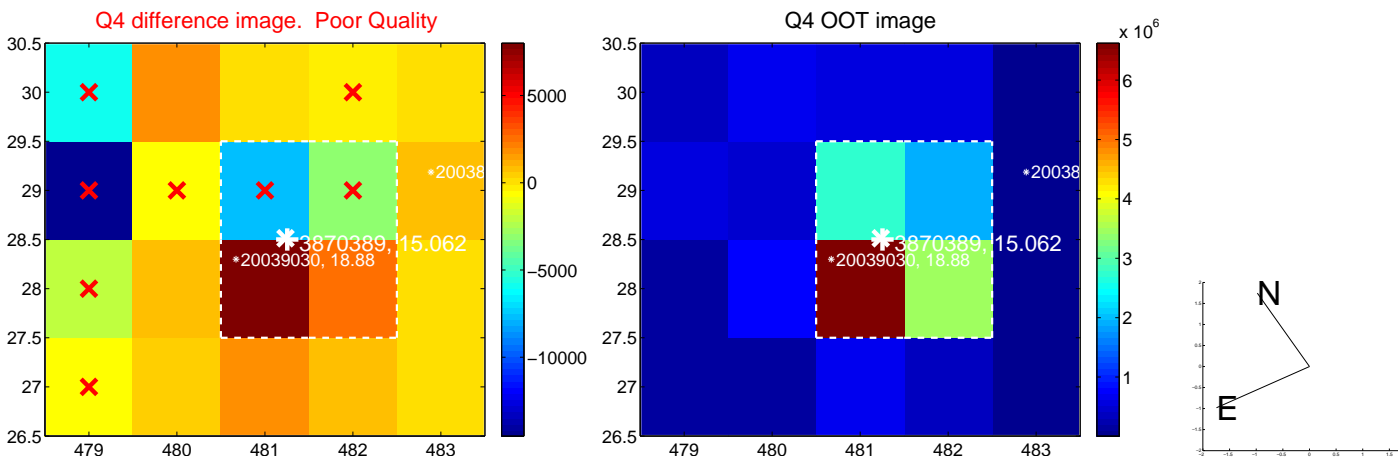
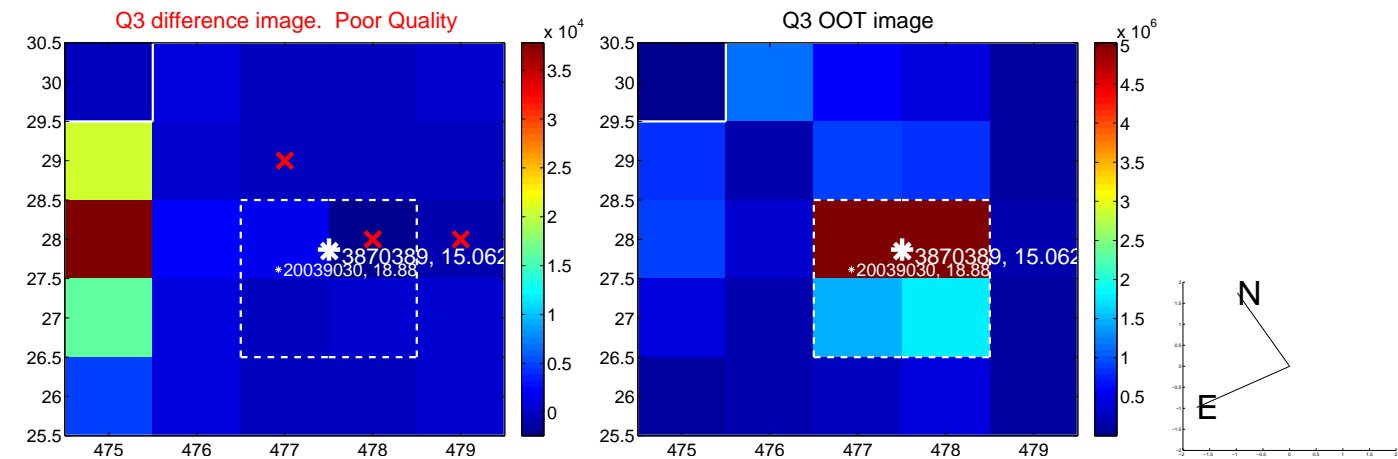
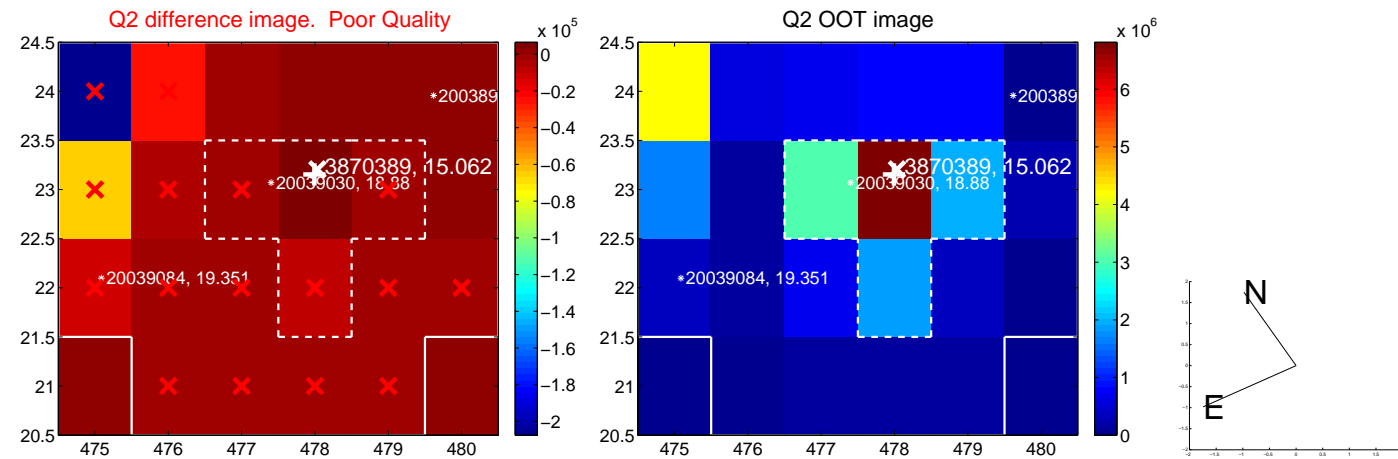
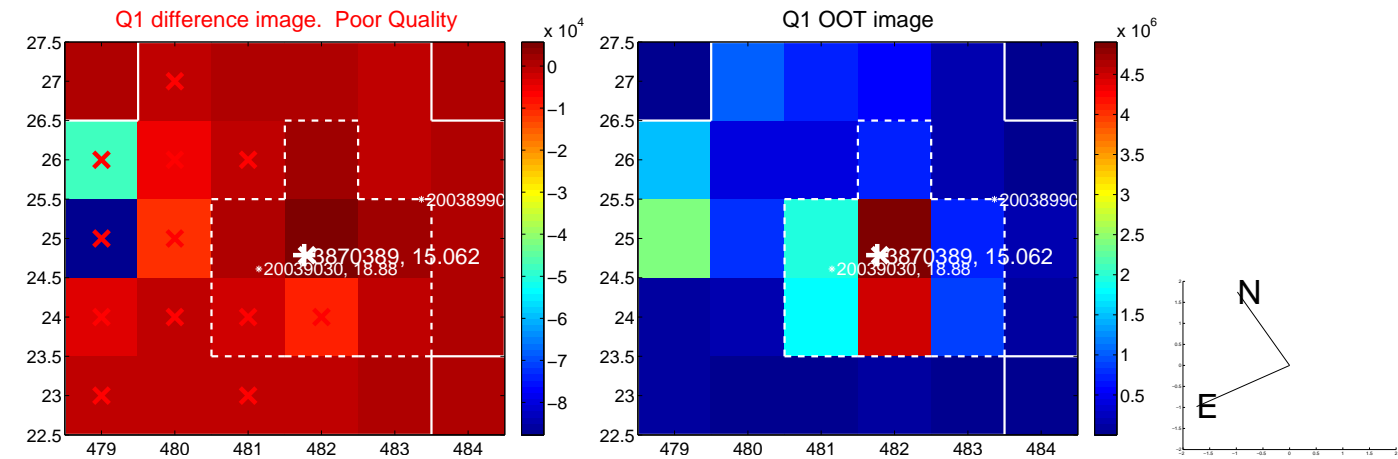
There is no PRF-fit offset from OOT-fit



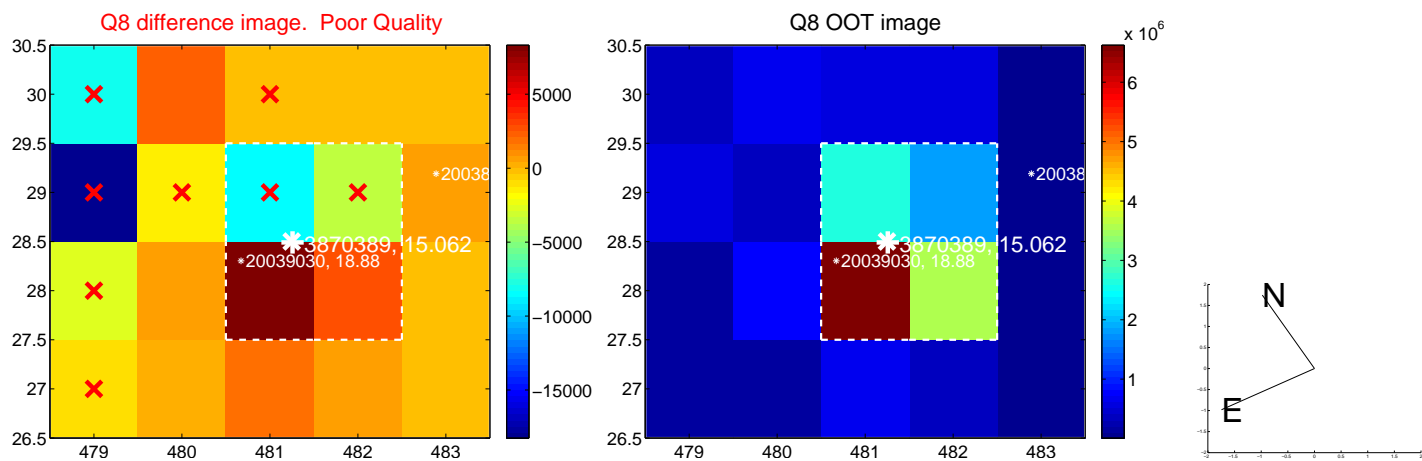
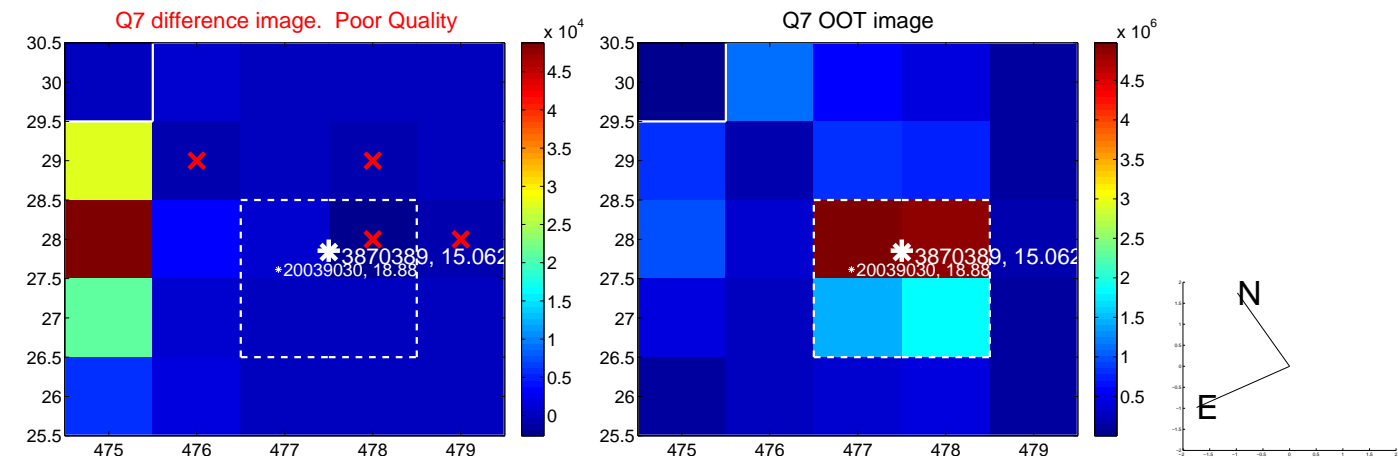
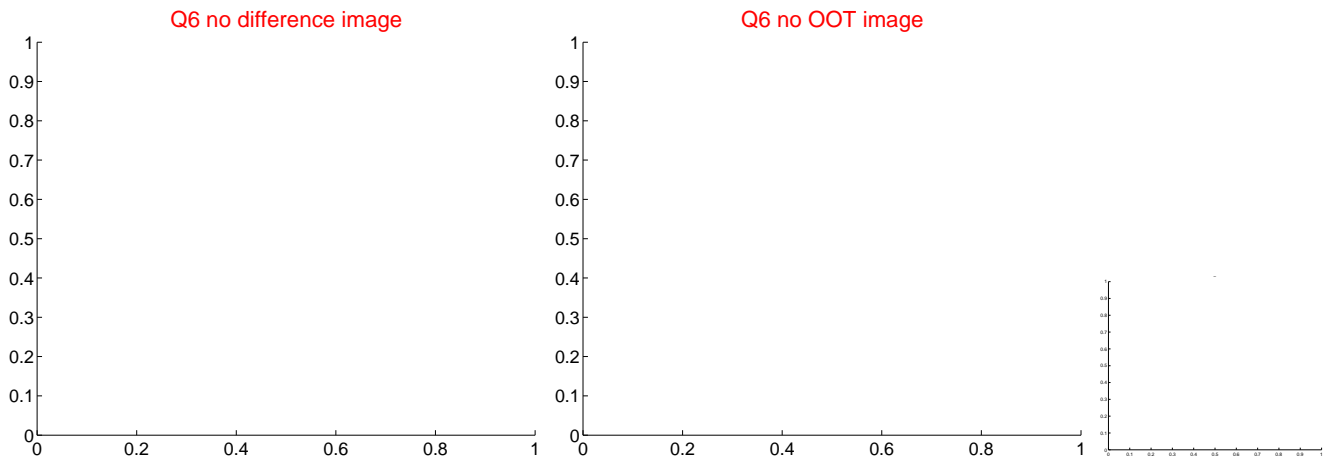
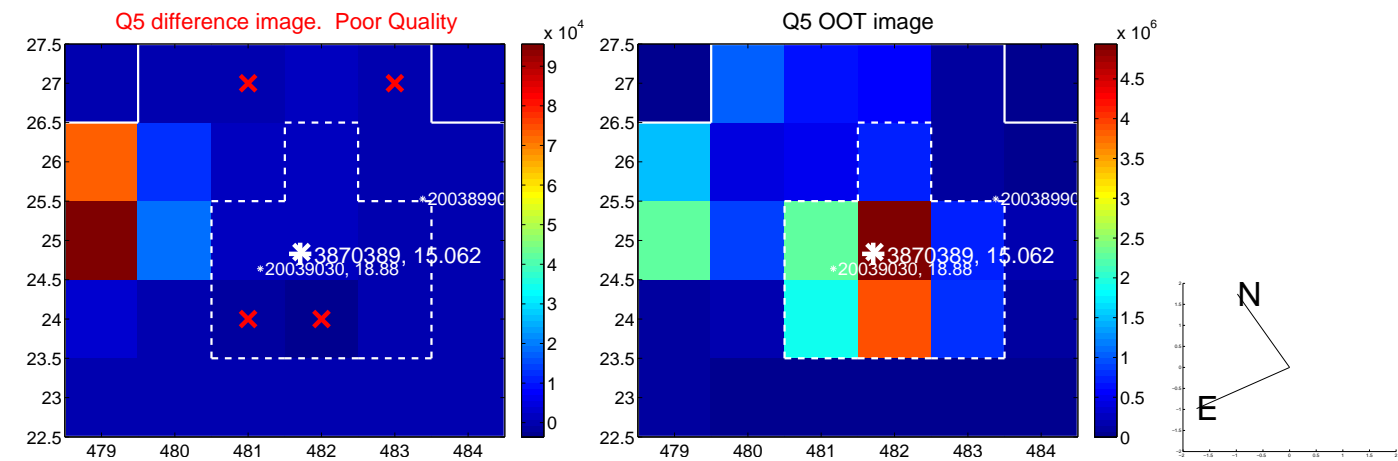
There is no PRF-fit offset from KIC



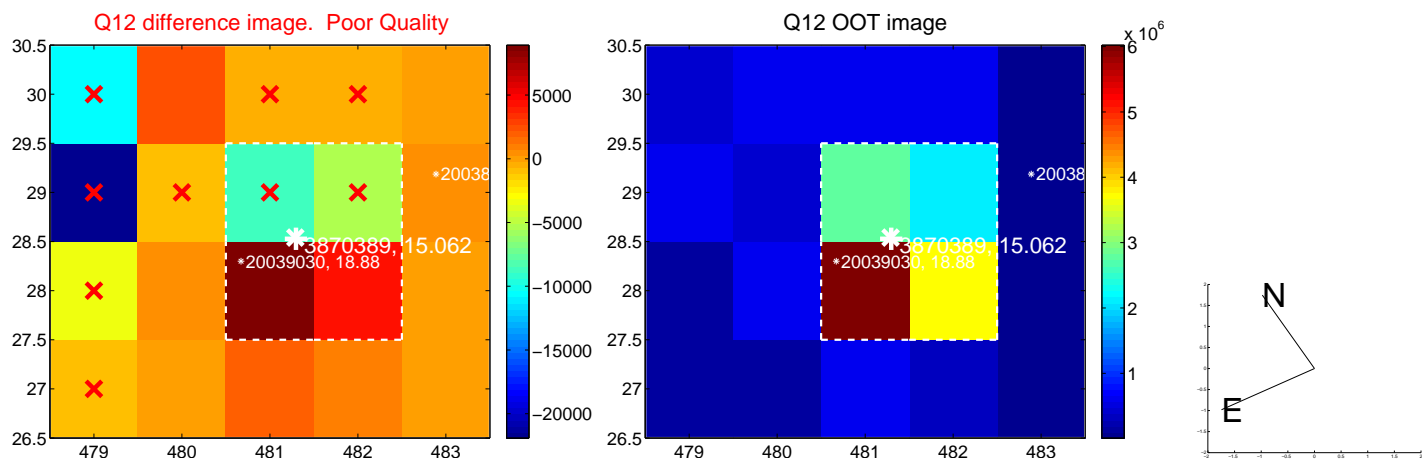
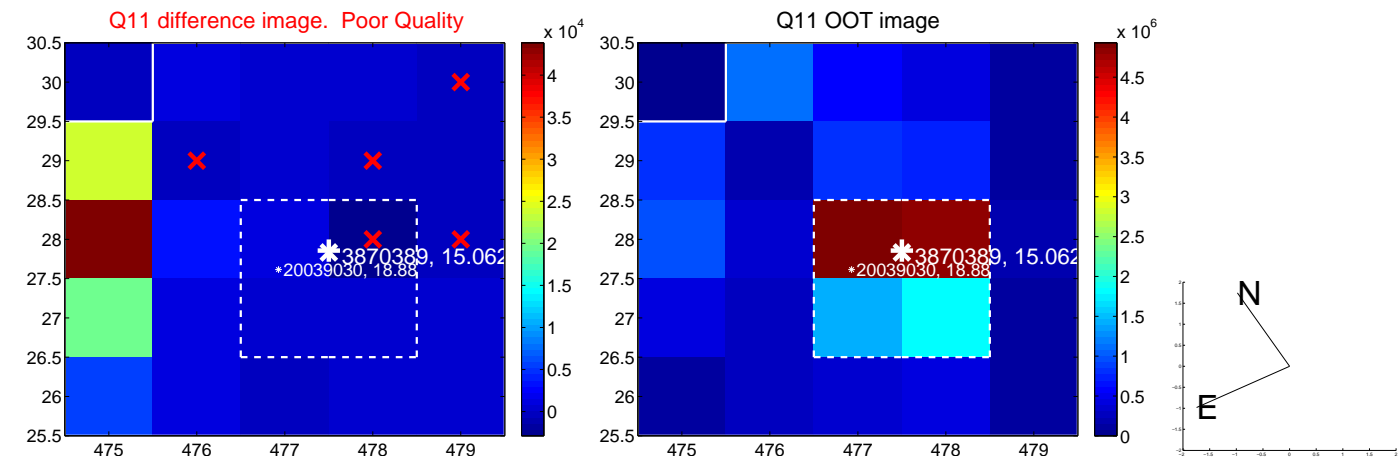
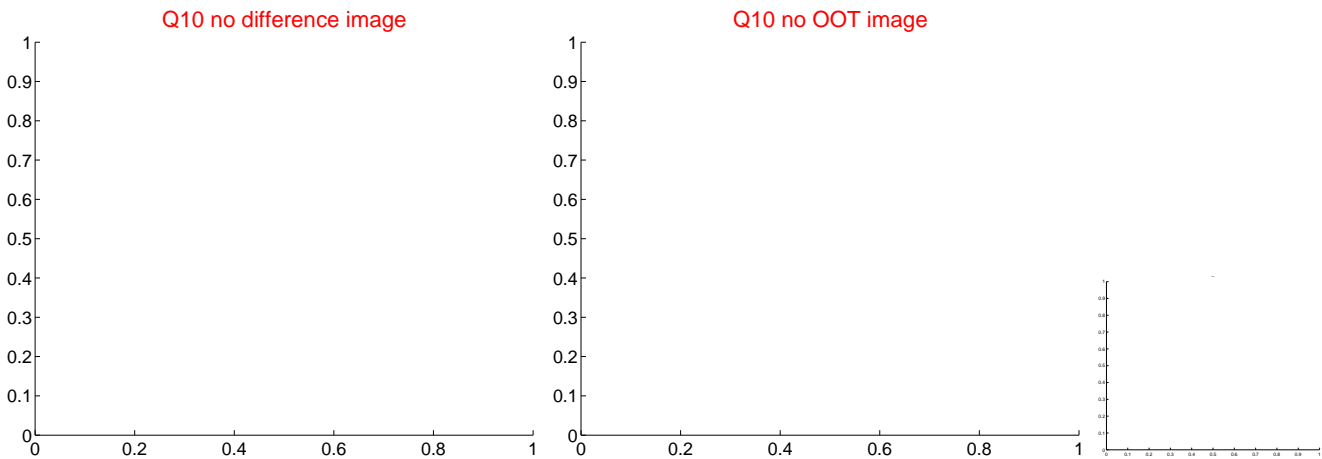
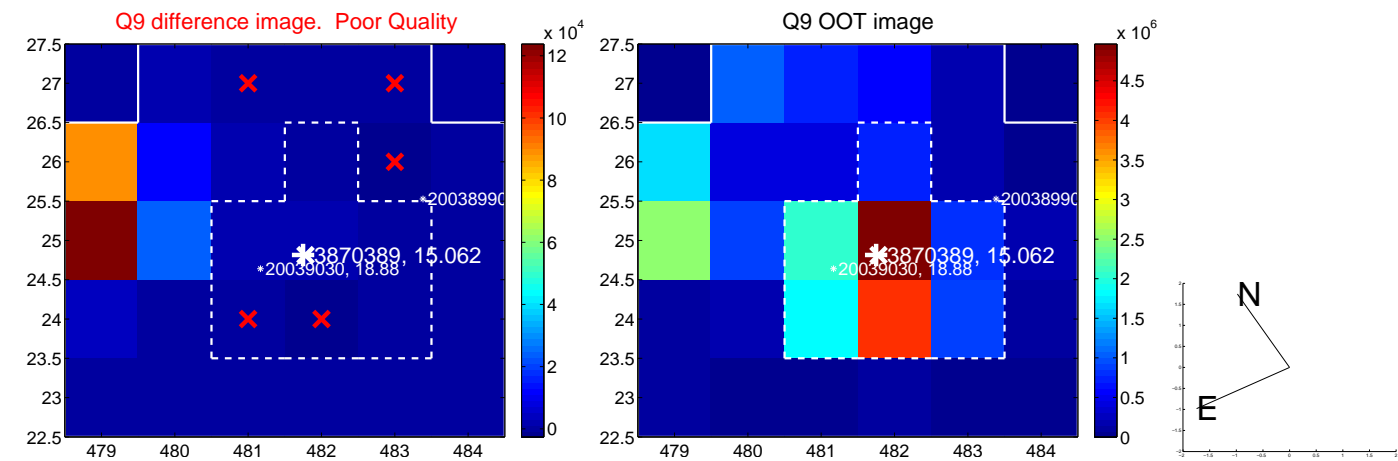
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



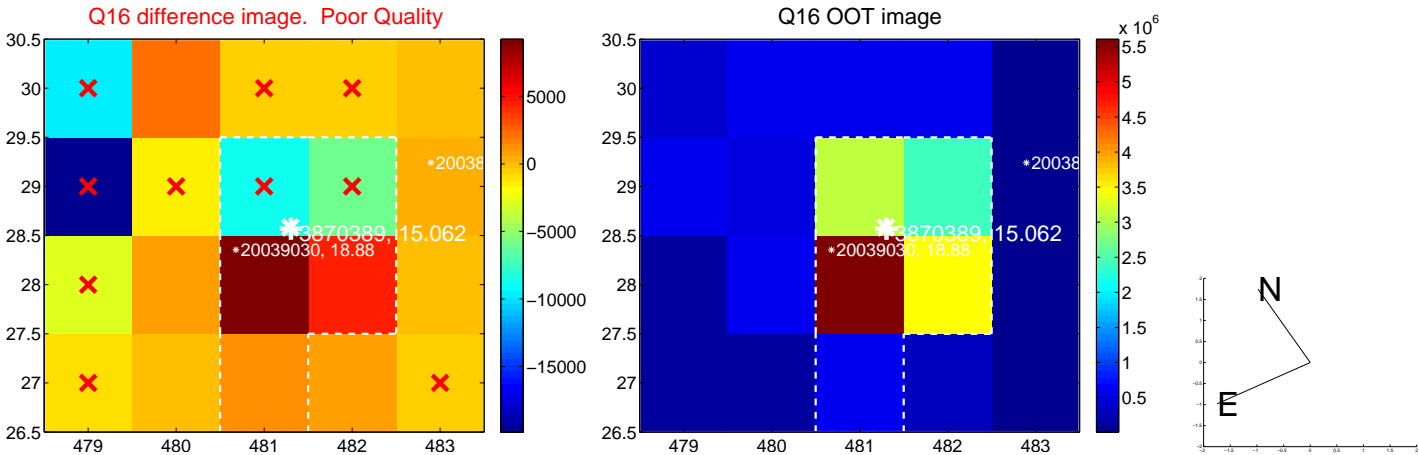
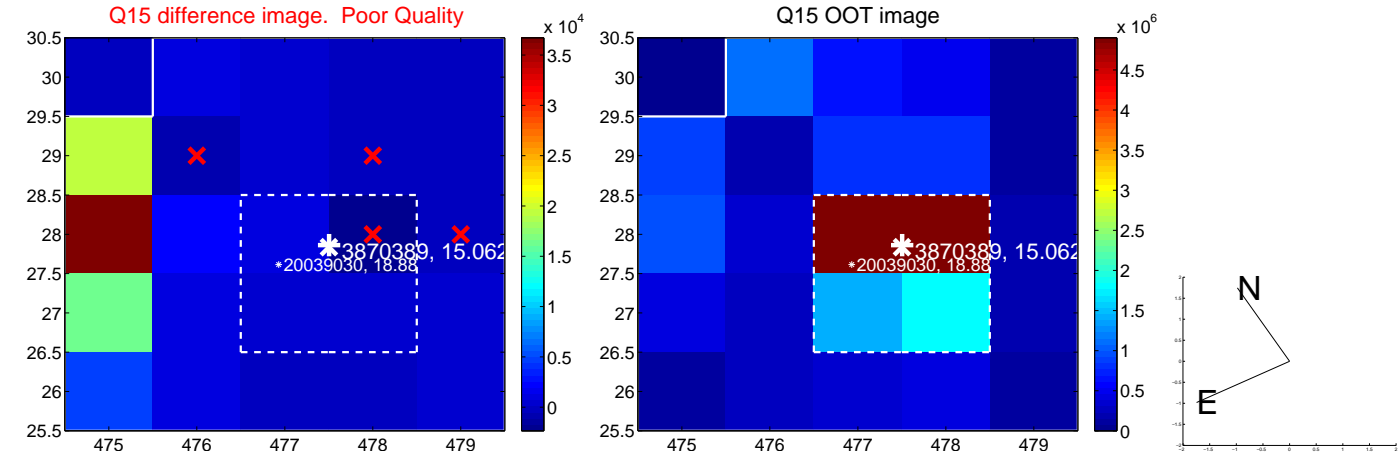
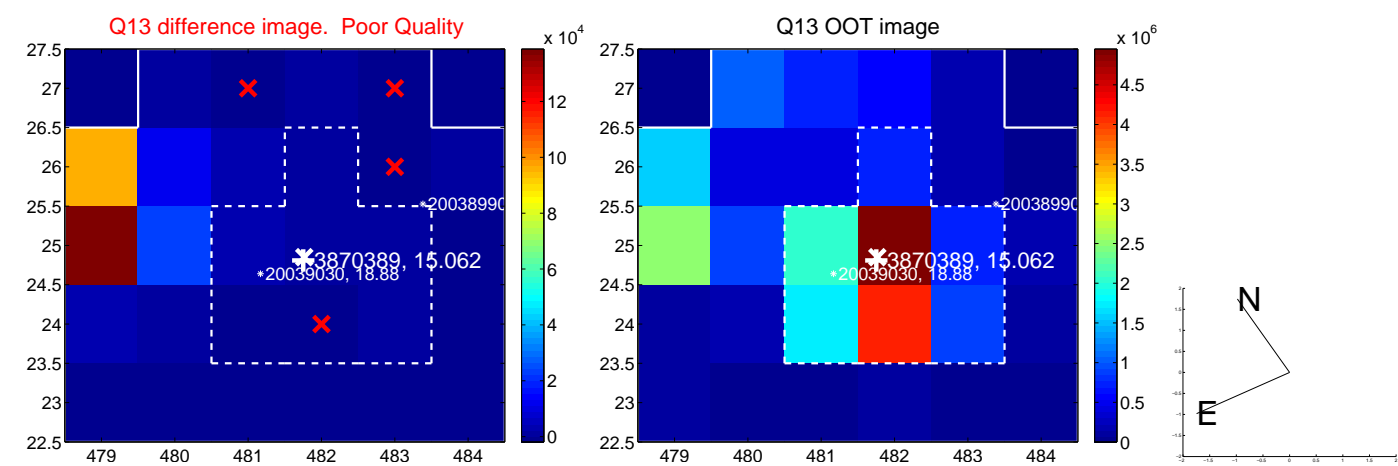
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



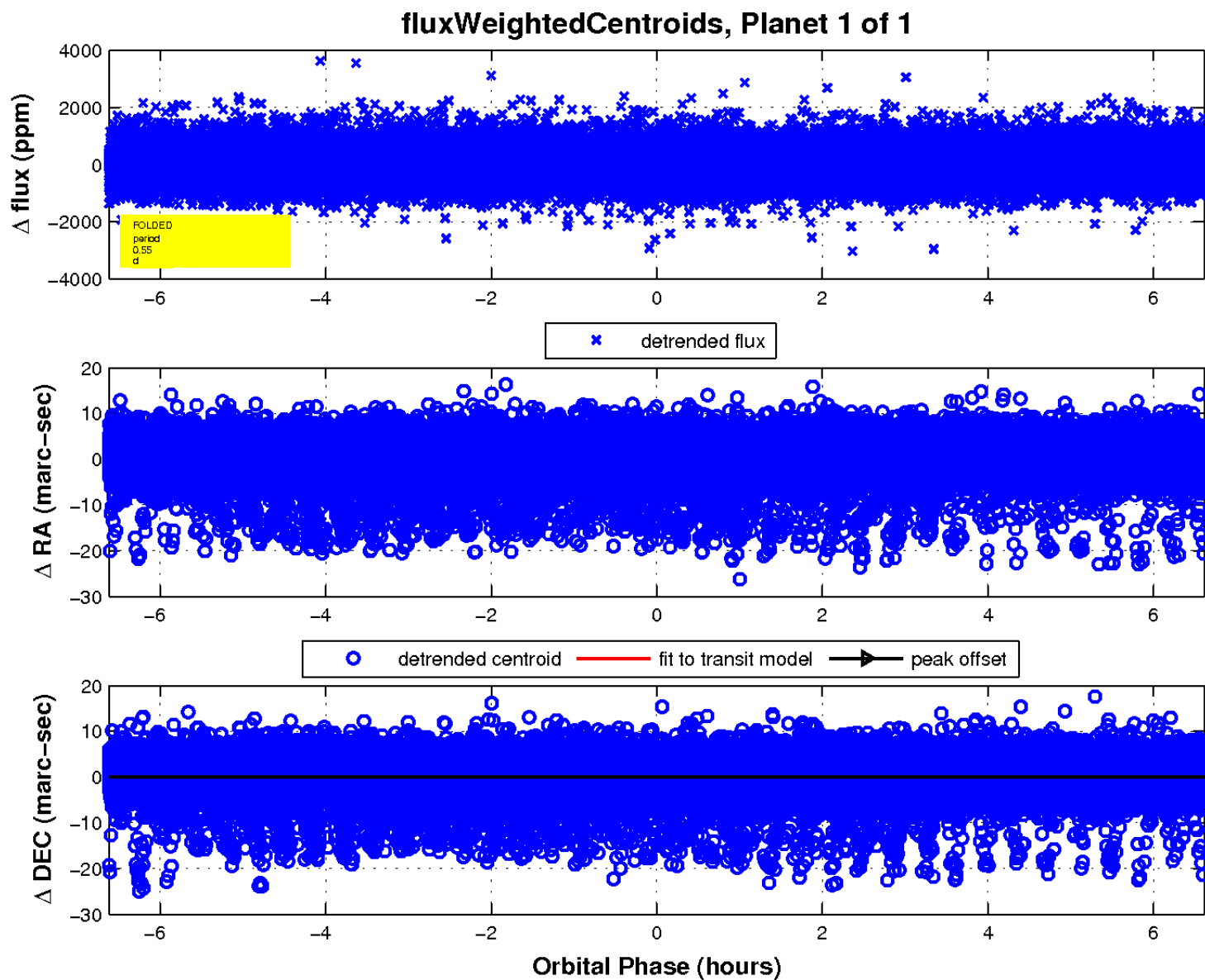
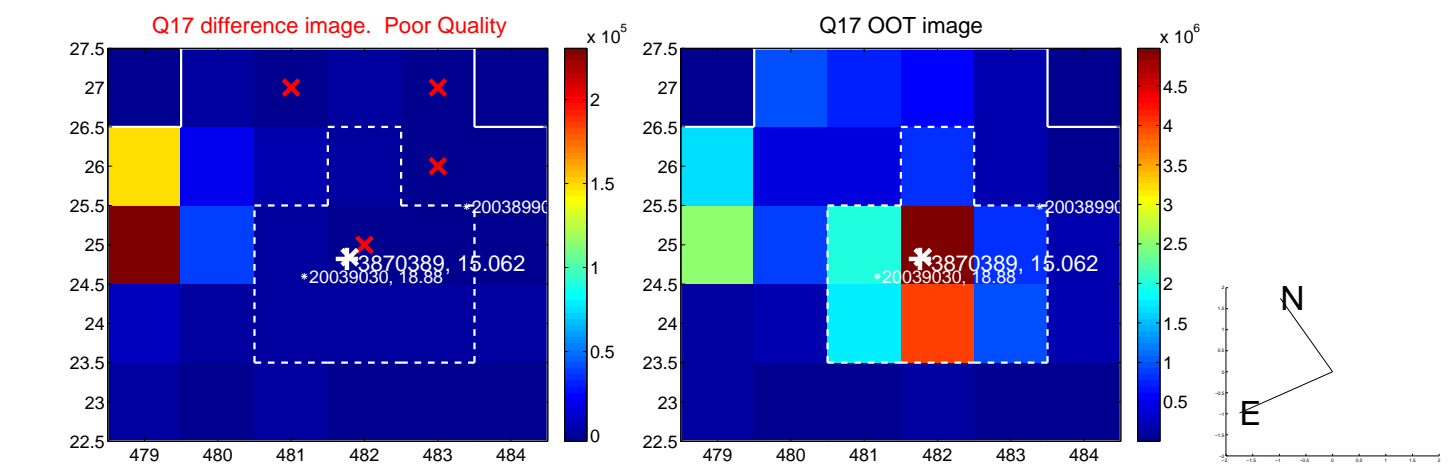
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

