

KIC 006388770

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})
006388770-01	OBS	3035.01	21.341873	134.102193	174.0	38.049	14.9	18.1	1.31	6324	3.45	106.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006388770-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

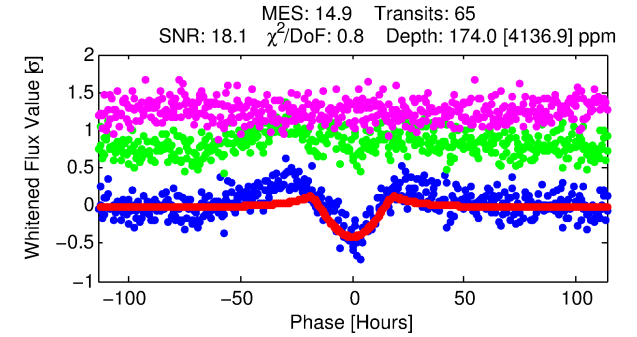
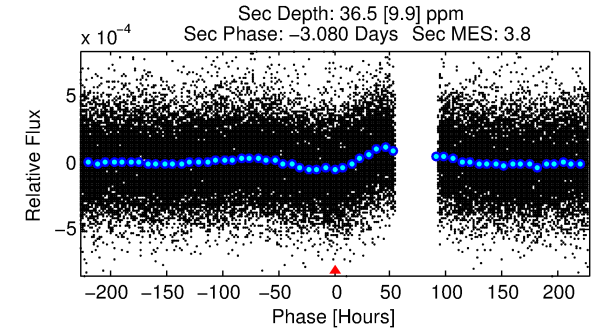
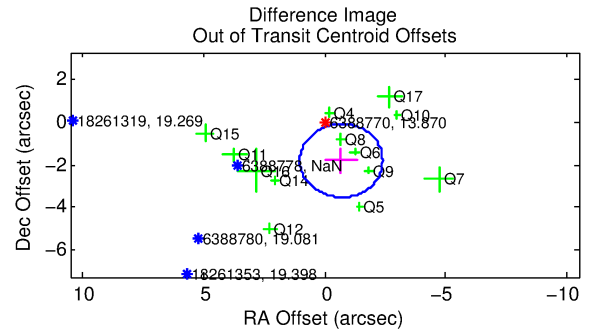
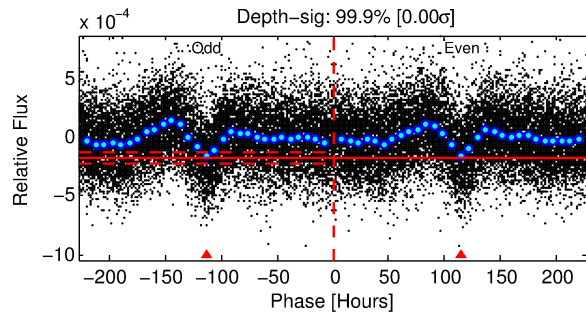
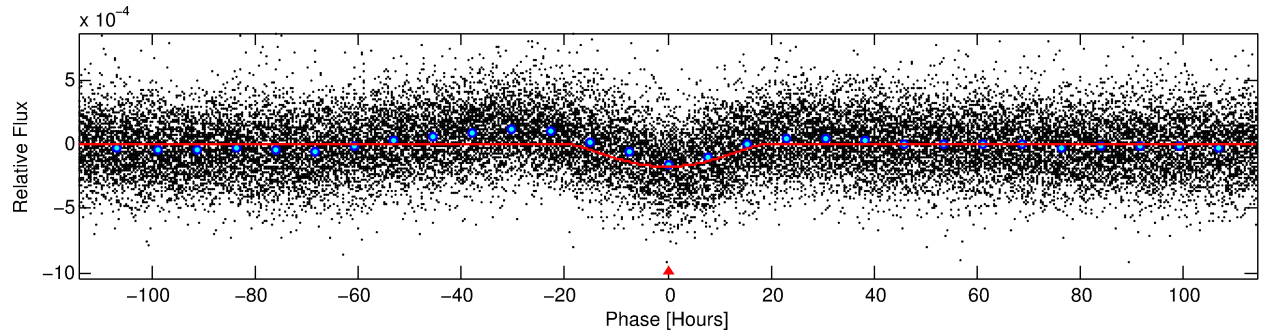
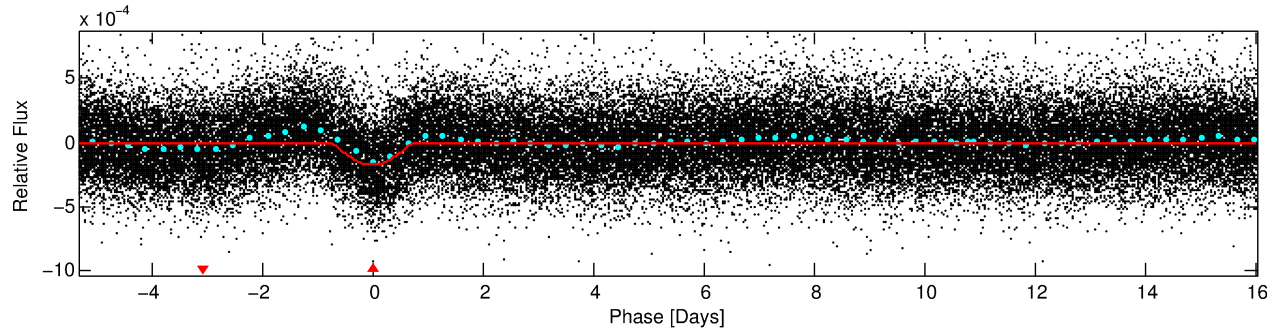
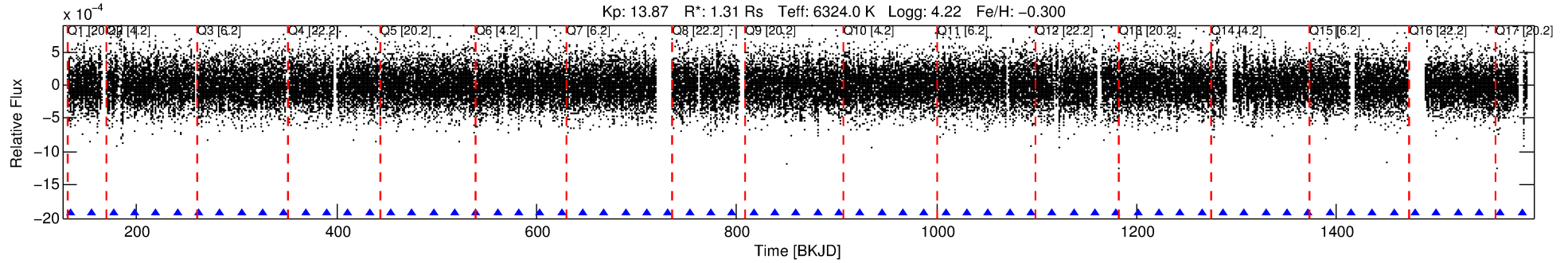
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006388770-01

No Significant Match Found

DV One-Page Summary

KIC: 6388770 Candidate: 1 of 1 Period: 21.342 d
KOI: K03035.01 Corr: 0.817



DV Fit Results:

Period = 21.34187 [0.00102] d
Epoch = 134.1022 [0.0396] BKJD
Rp/R* = 0.0241 [0.0276]
a/R* = 1.38 [0.17]
b = 1.00 [0.44]
Seff = 106.08 [42.44]
Teq = 818 [82] K
Rp = 3.45 [4.09] Re
a = 0.1527 [0.0385] AU
Ag = 39.39 [92.30] [0.42 σ]
Teffp = 3170 [1836] K [1.28 σ]

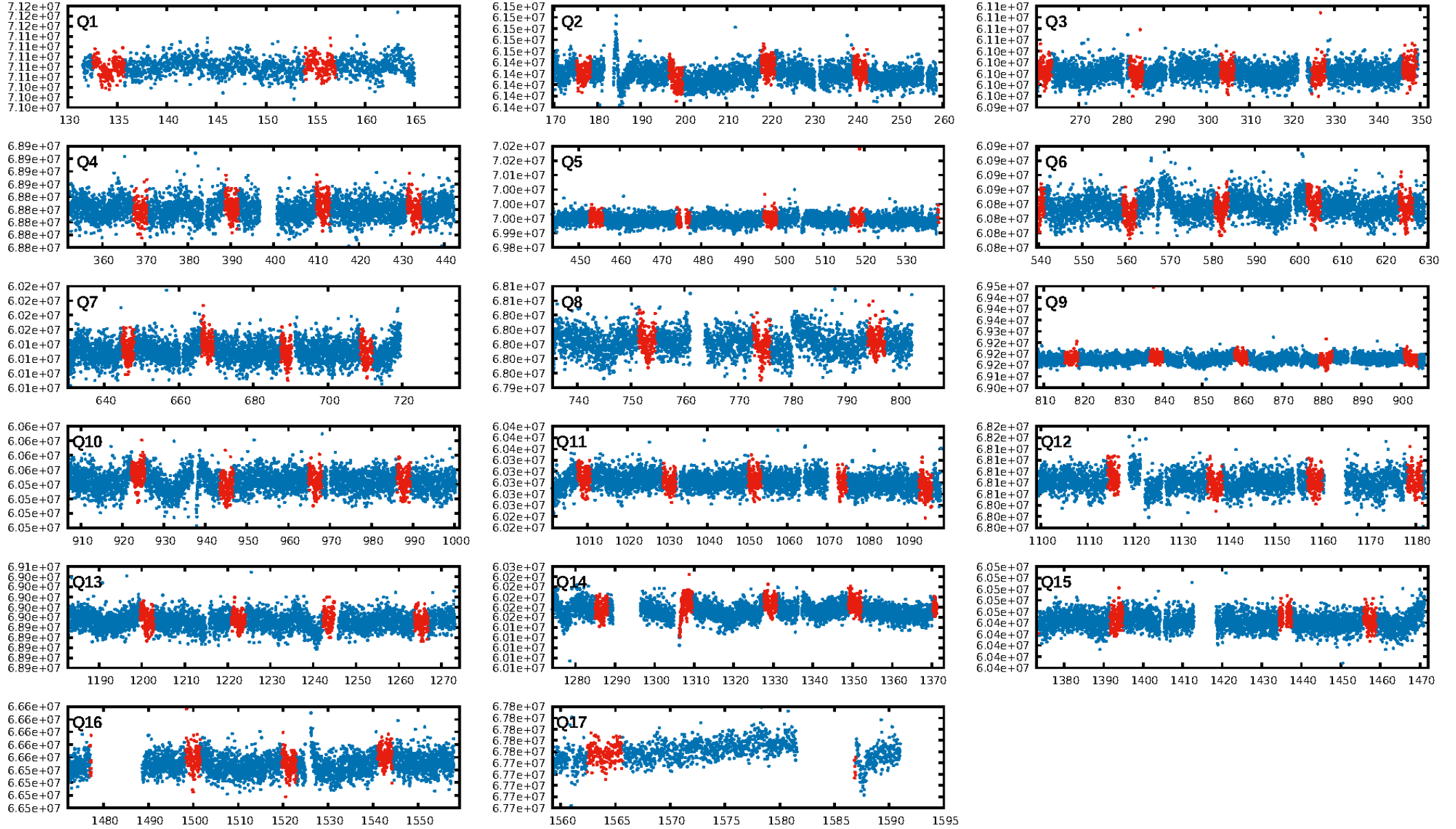
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.58e-45
RollingBand-fgt: 1.00 [62/62]
GhostDiagnostic-chr: -6.147
Centroid-sig: 0.1%
Centroid-so: 0.787 arcsec [2.08 σ]
OotOffset-rm: 1.937 arcsec [3.40 σ]
KicOffset-rm: 0.734 arcsec [1.27 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [16/16]

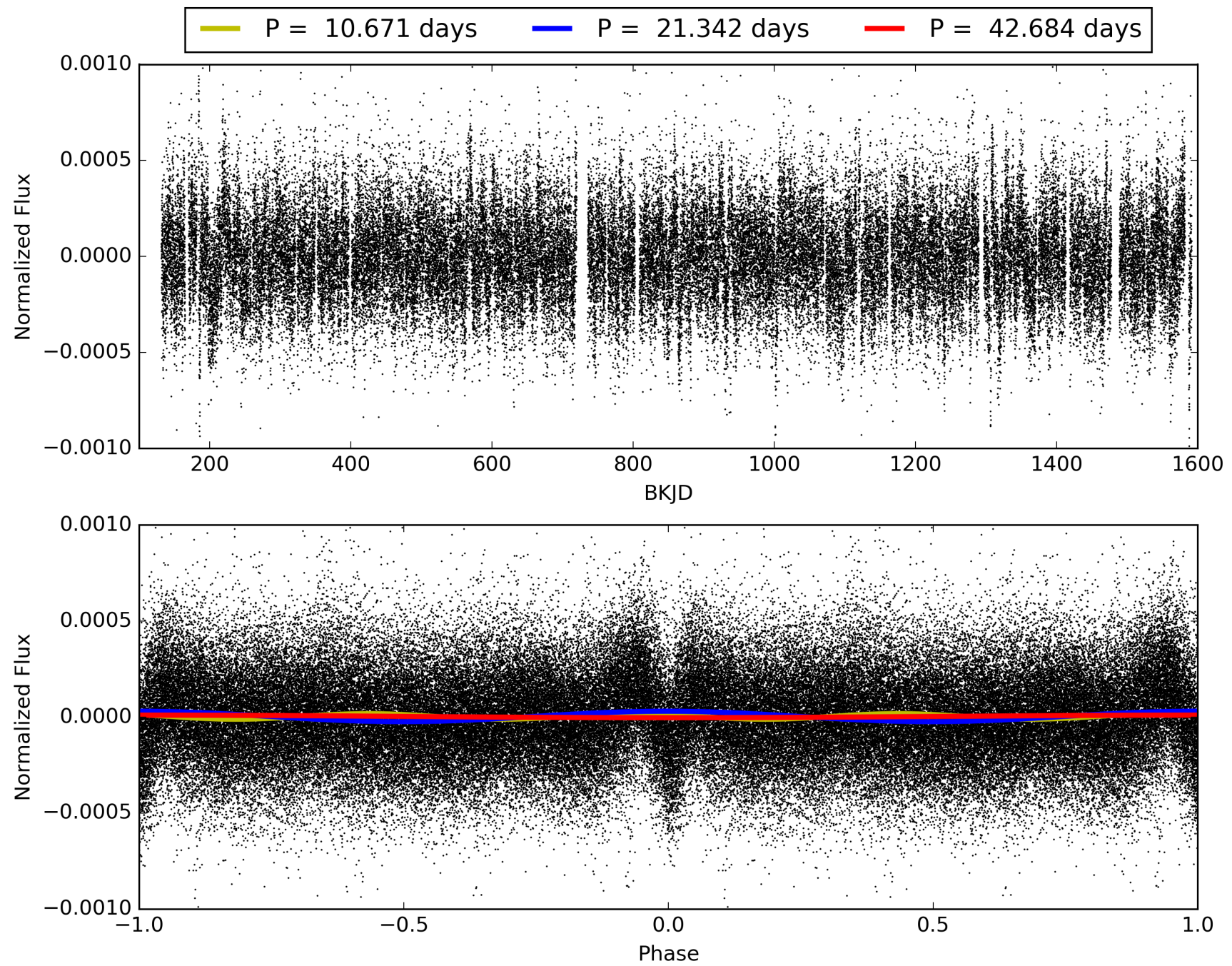
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:12:53 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006388770-01, PDC Light Curves

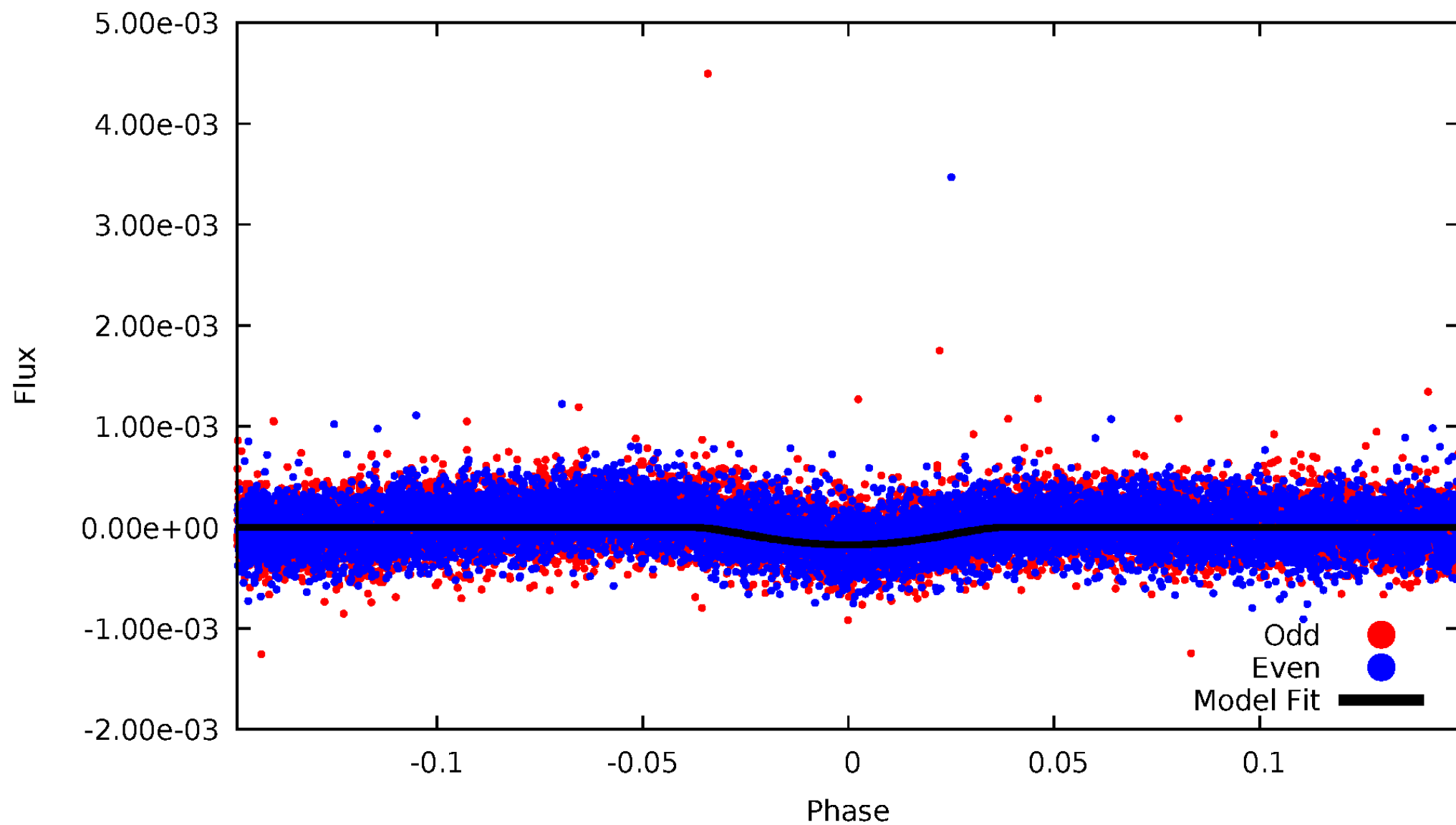


TCE 006388770-01



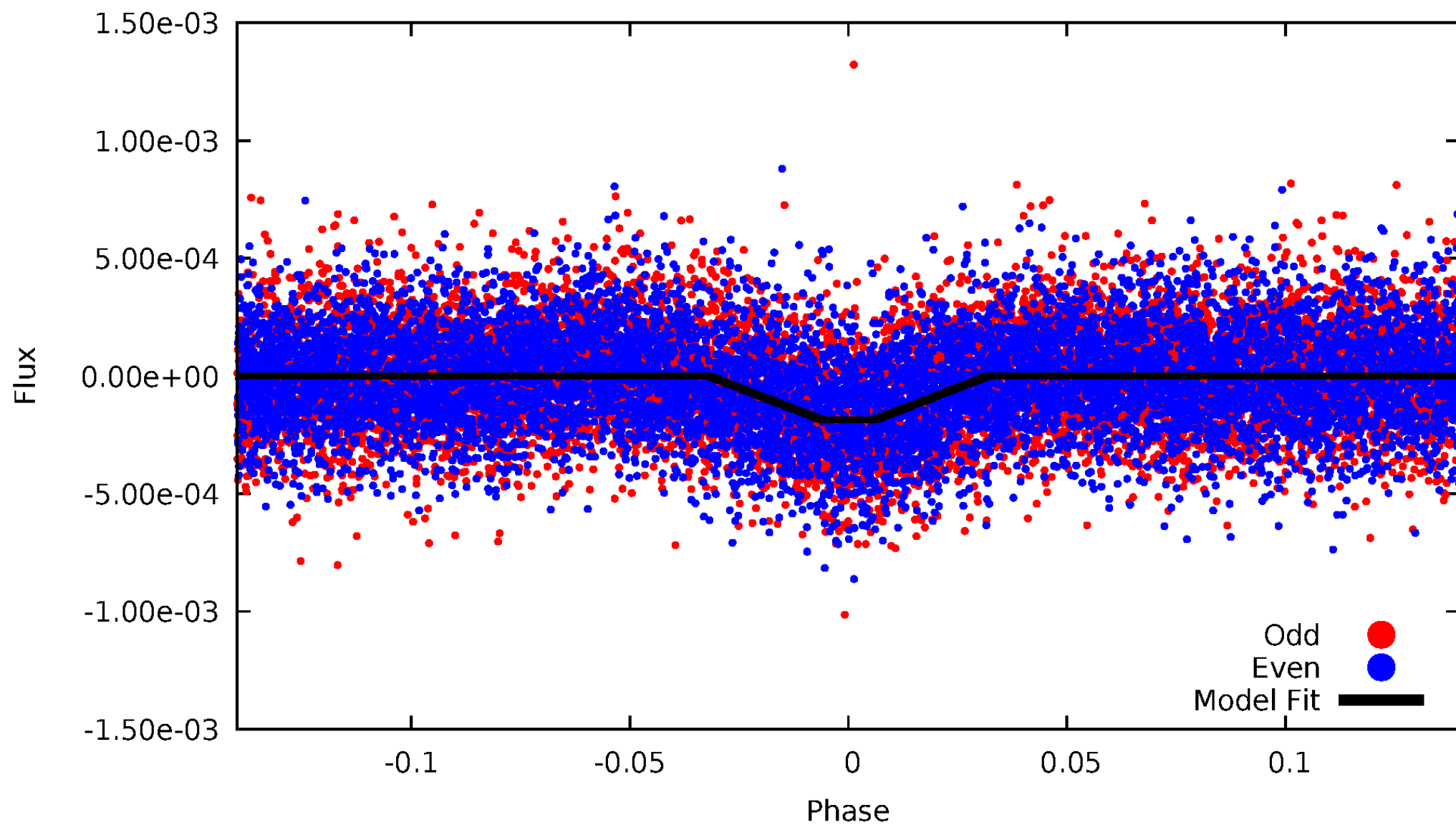
DV Odd/Even

TCE 006388770-01



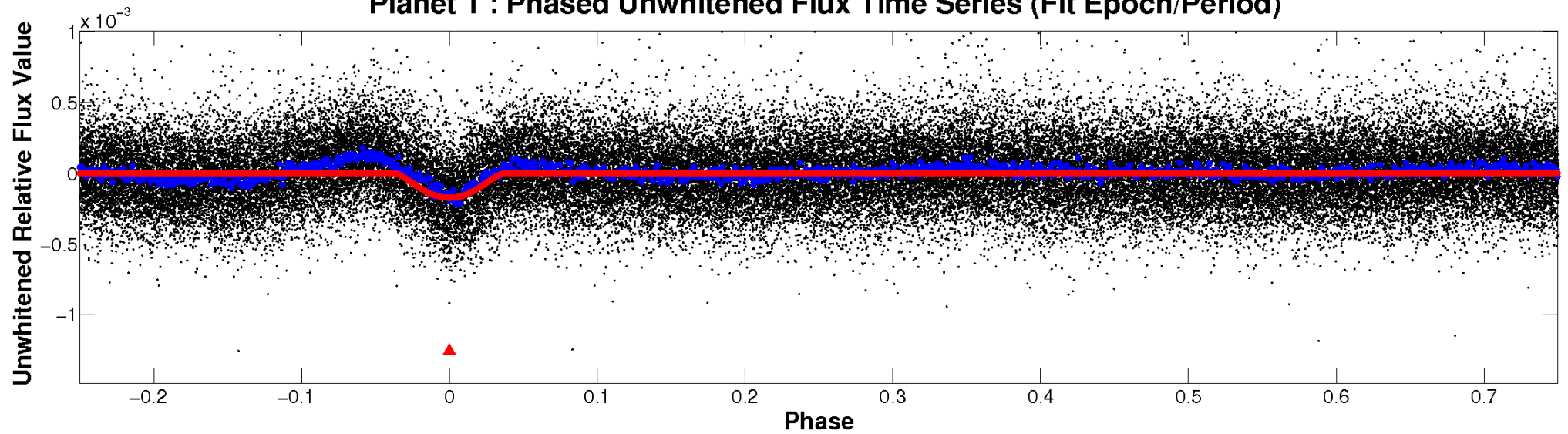
ALT Odd/Even

TCE 006388770-01

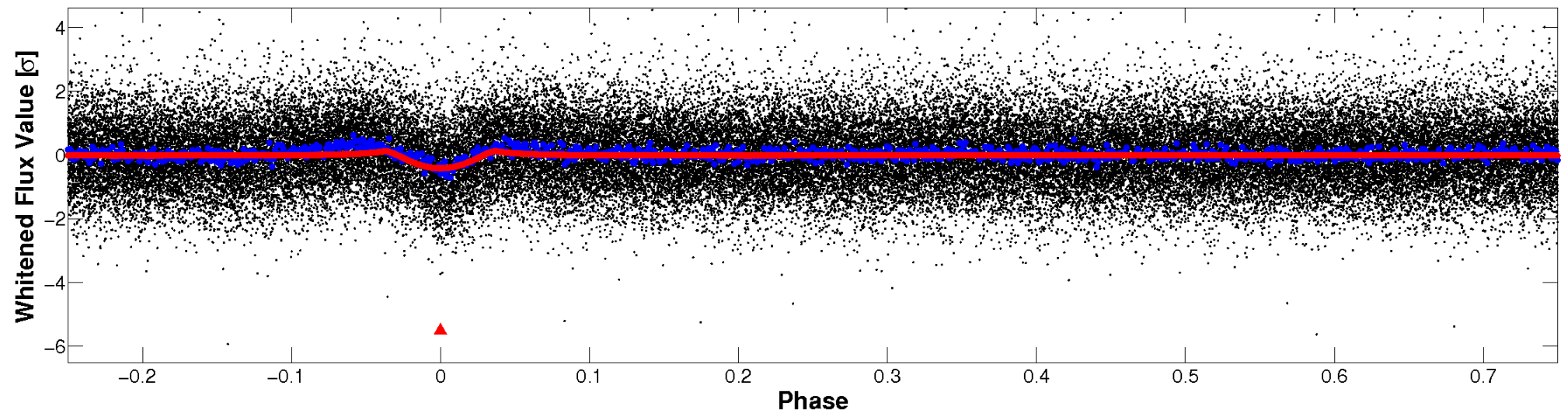


Non-Whitened Vs. Whitened Light Curve

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

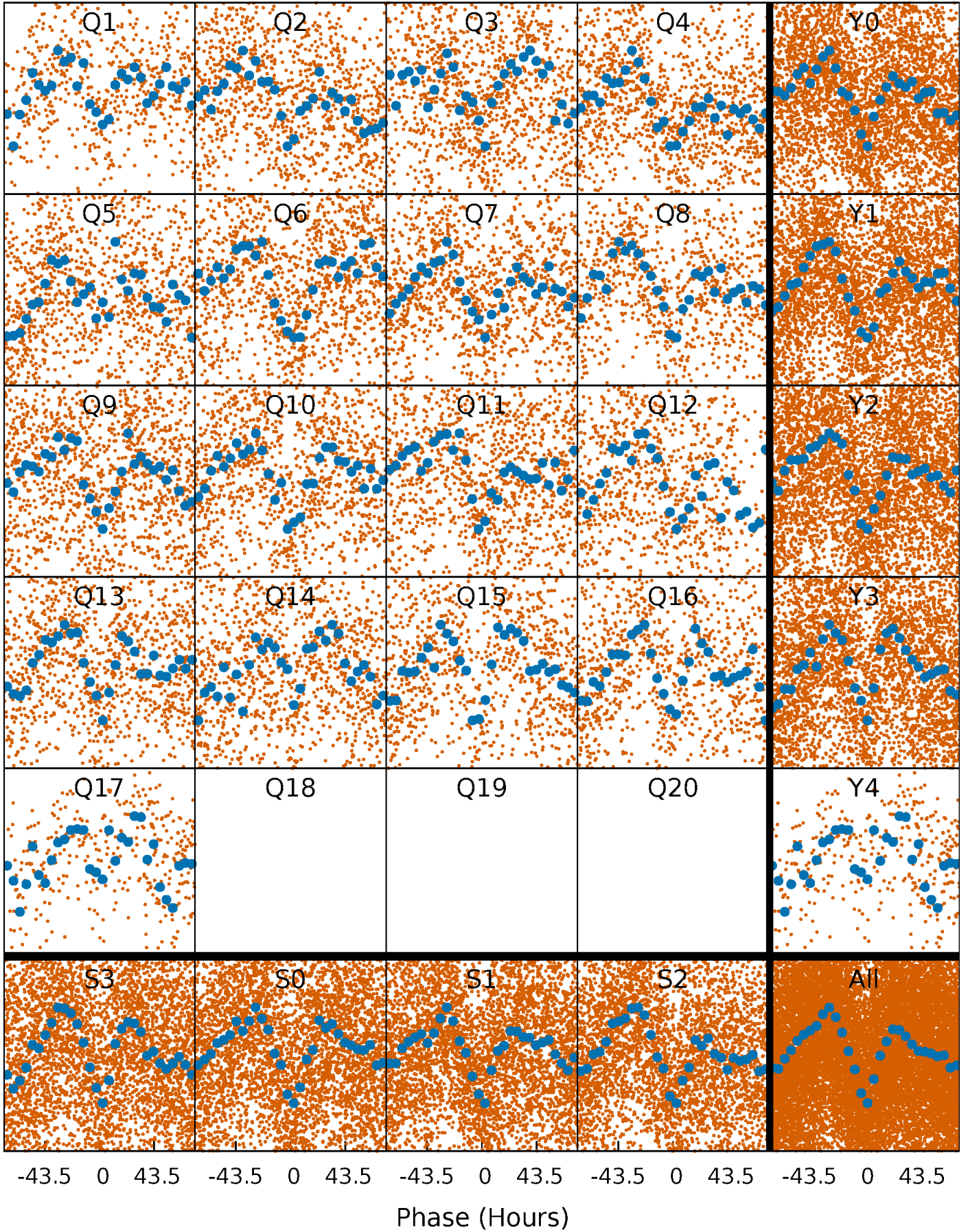


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



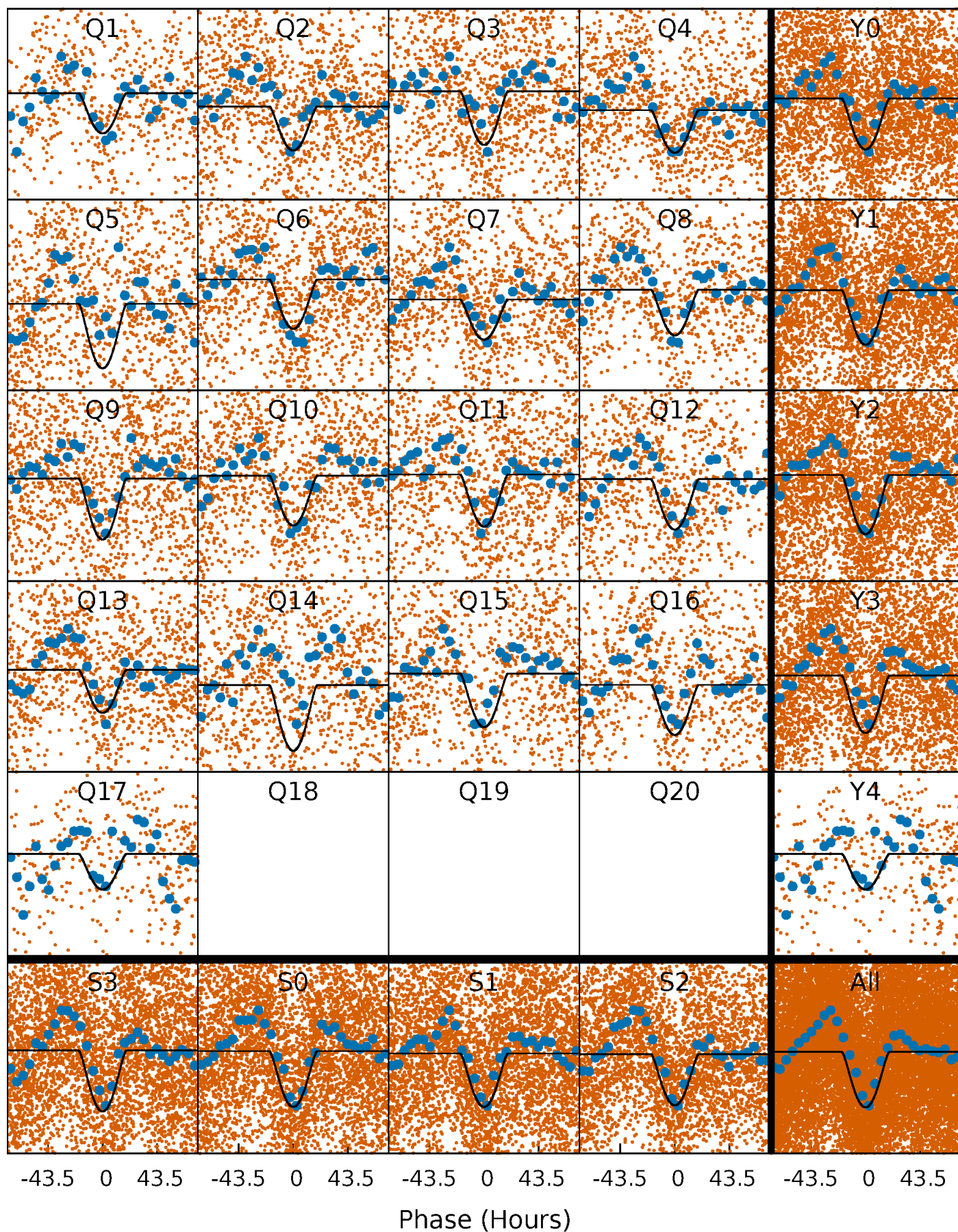
PDC Quarter-Phased Transit Curves

TCE 006388770-01 P= 21.341873 Days $T_0=134.102193$ (BKJD)



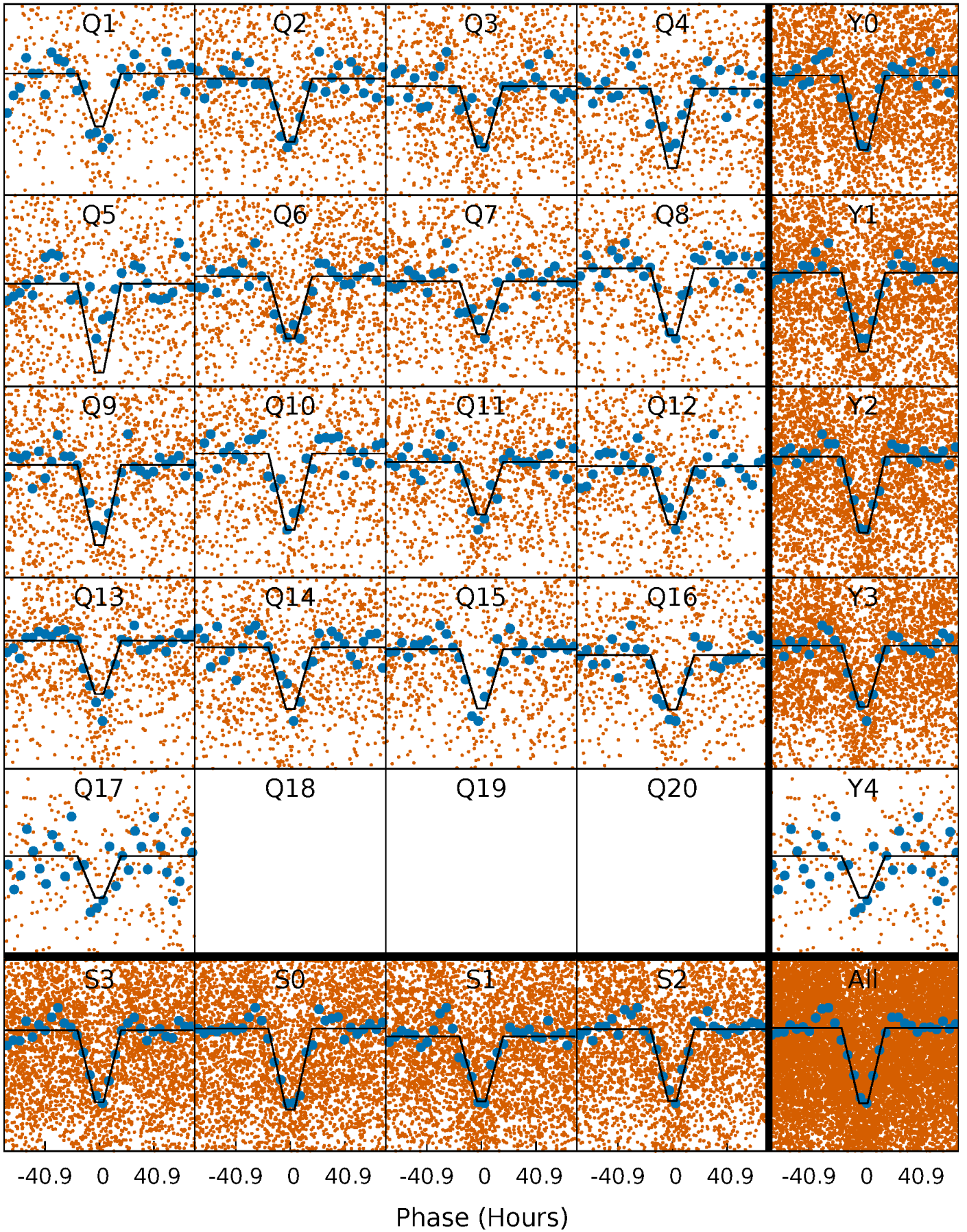
DV Quarter-Phased Transit Curves

TCE 006388770-01 P= 21.341873 Days $T_0=134.102193$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

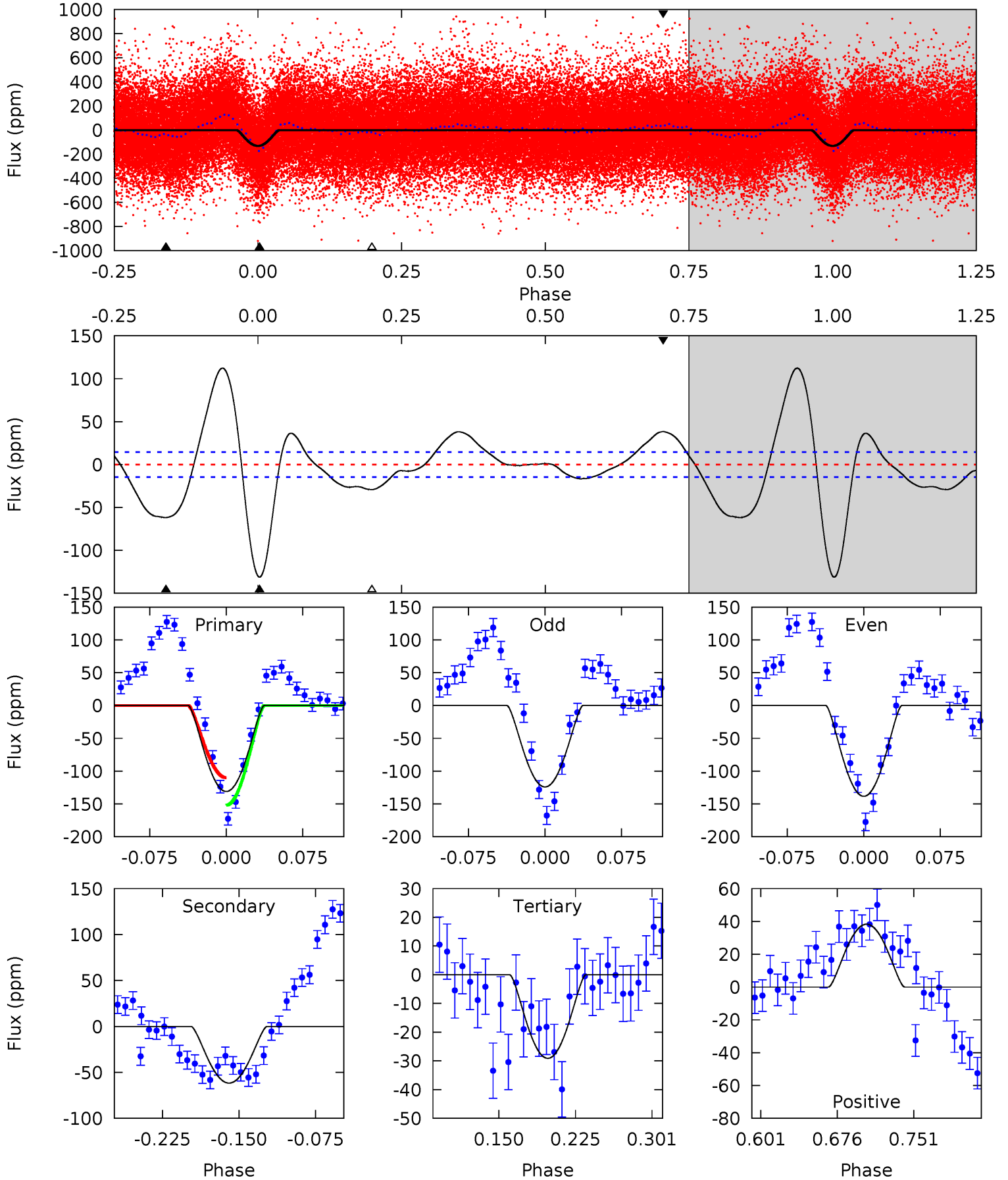
TCE 006388770-01 P= 21.340959 Days $T_0=134.159107$ (BKJD)



DV Model-Shift Uniqueness Test

006388770-01, P = 21.341873 Days, E = 112.760320 Days

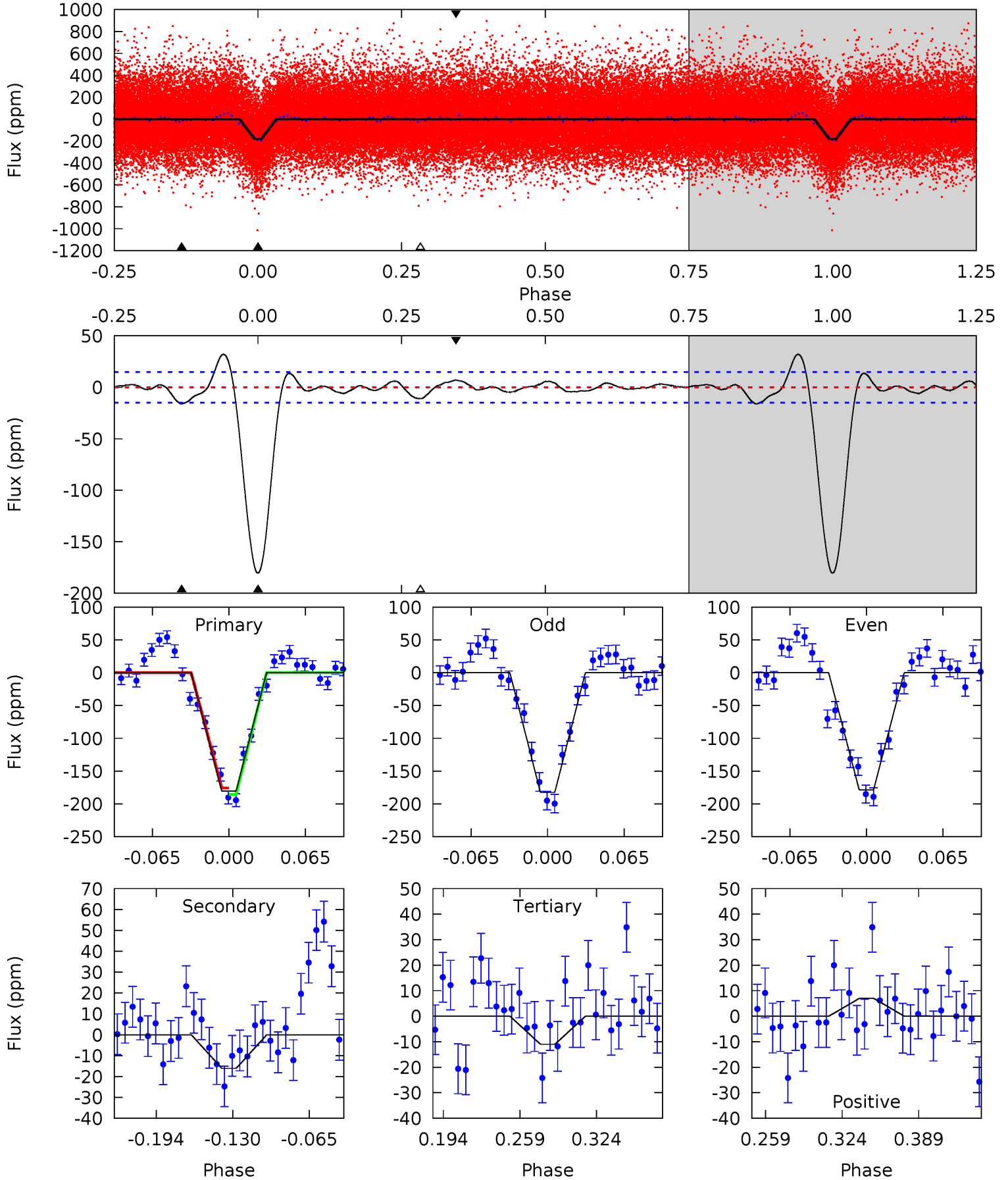
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.8	19.7	9.28	12.2	4.62	1.78	7.02	32.5	29.6	10.4	7.45	2.28	0.96	0.46	6.67



Alt Model-Shift Uniqueness Test

006388770-01, $P = 21.340959$ Days, $E = 112.818148$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.5	5.03	3.45	2.19	4.65	1.85	1.27	53.0	54.3	1.59	2.84	0.59	1.14	0.15	1.50



Stellar Parameters For KIC 006388770

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6324^{+176}_{-220}	$4.219^{+0.209}_{-0.171}$	$-0.300^{+0.300}_{-0.300}$	$1.314^{+0.383}_{-0.314}$	$1.042^{+0.172}_{-0.129}$	$0.646^{+0.663}_{-0.332}$
	+3%/-3%	+5%/-4%	+100%/-100%	+29%/-24%	+17%/-12%	+103%/-51%
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 006388770-01 / KOI 3035.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-62 ± 3	$4.34^{+3.95}_{-2.75}$	1136^{+88}_{-79}	3628^{+1656}_{-616}	43^{+272}_{-31}
Alt.	-16 ± 3	$3.34^{+3.58}_{-2.21}$	1139^{+90}_{-82}	3178^{+1417}_{-584}	18^{+143}_{-14}

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

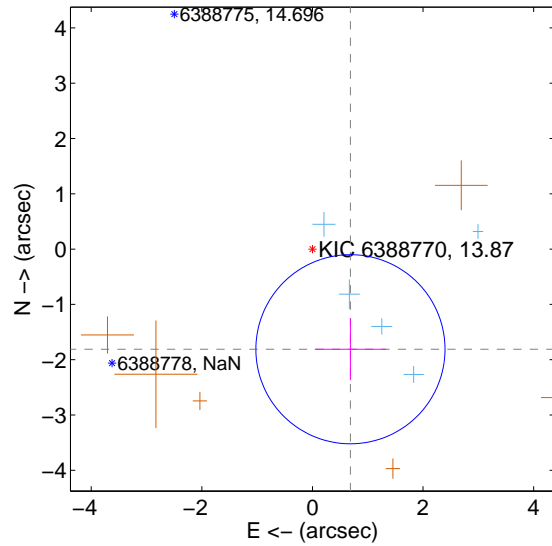
Supplemental centroid analysis for 006388770-01. Kepler magnitude: 13.87. Transit SNR 18.11

There are 5 quarters with good PRF difference image offsets

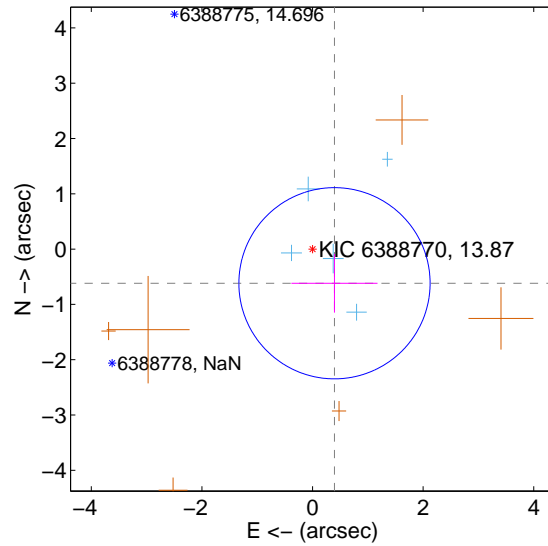
The direct PRF centroid is offset from the target star catalog position by about 1.60 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.937 ± 0.570	3.40	-0.687 ± 0.642	-1.811 ± 0.559
PRF-fit source offset from KIC position	0.734 ± 0.576	1.27	-0.397 ± 0.779	-0.618 ± 0.530
photometric centroid source offset	0.79 ± 0.38	2.08	0.62 ± 0.38	0.49 ± 0.37

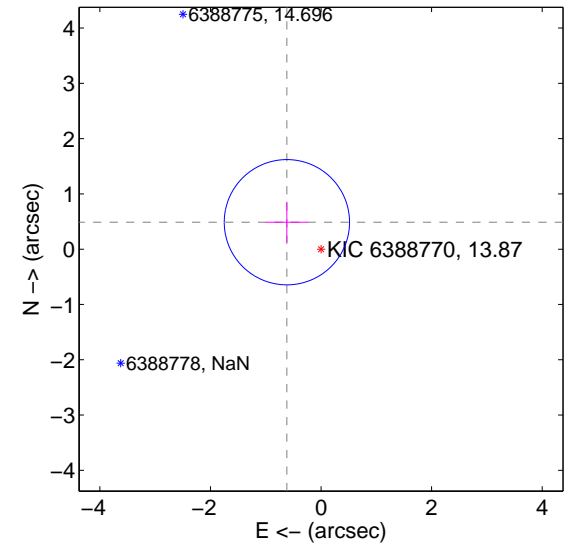
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

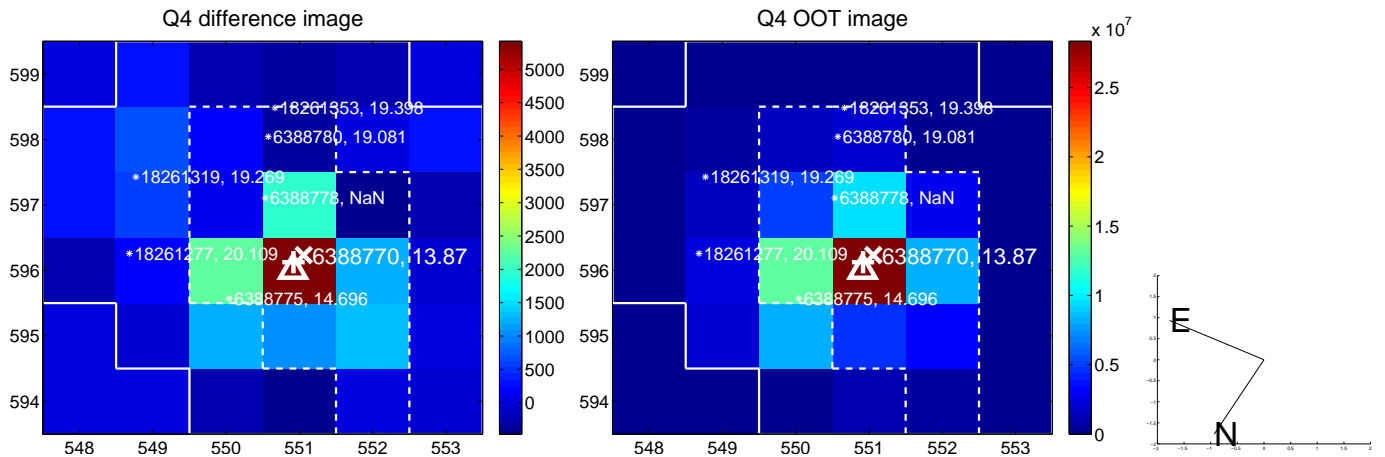
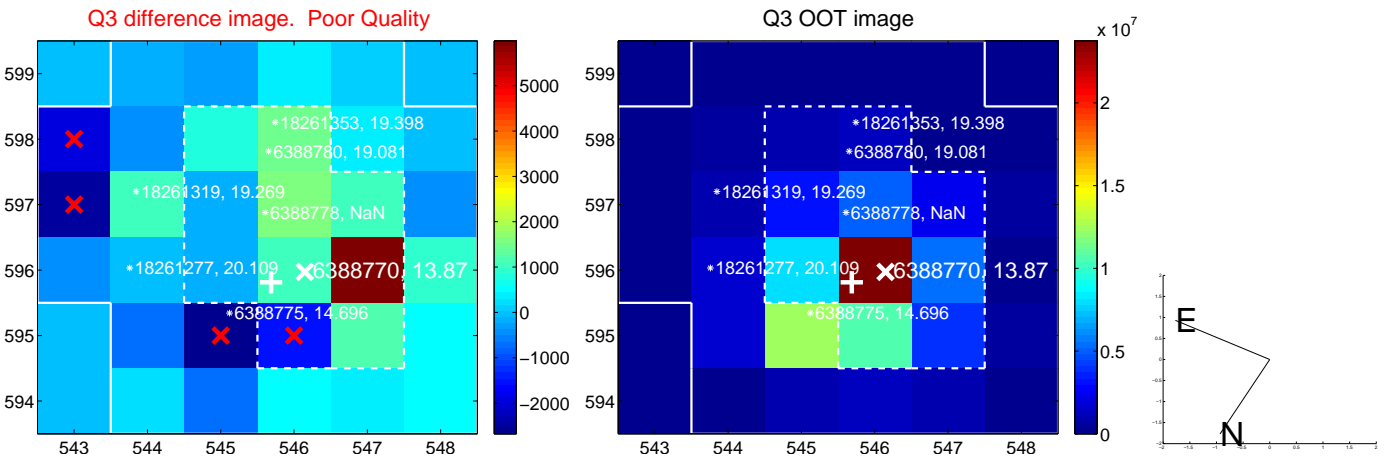
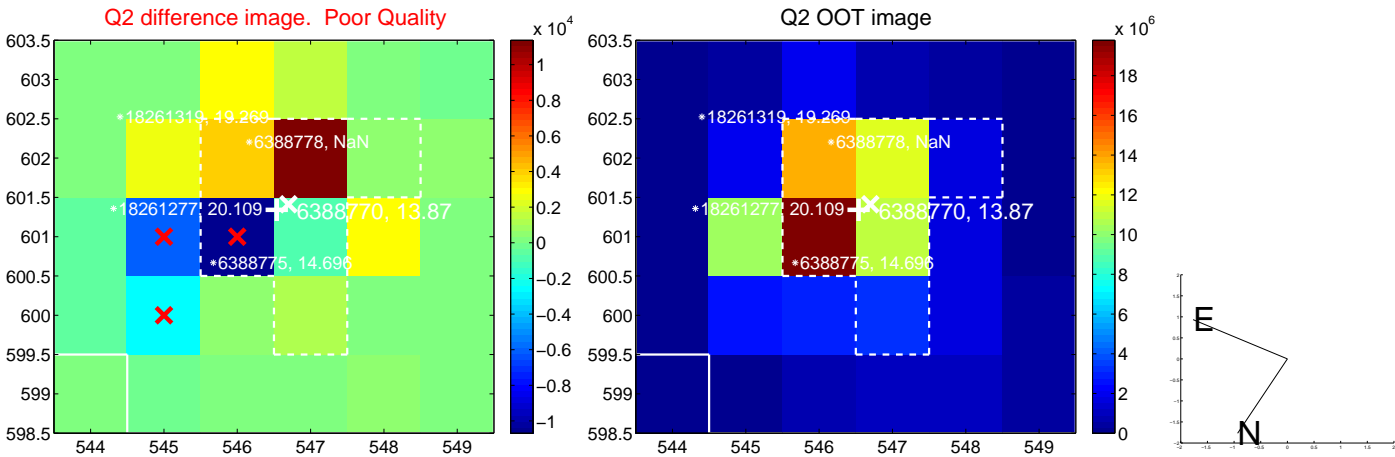
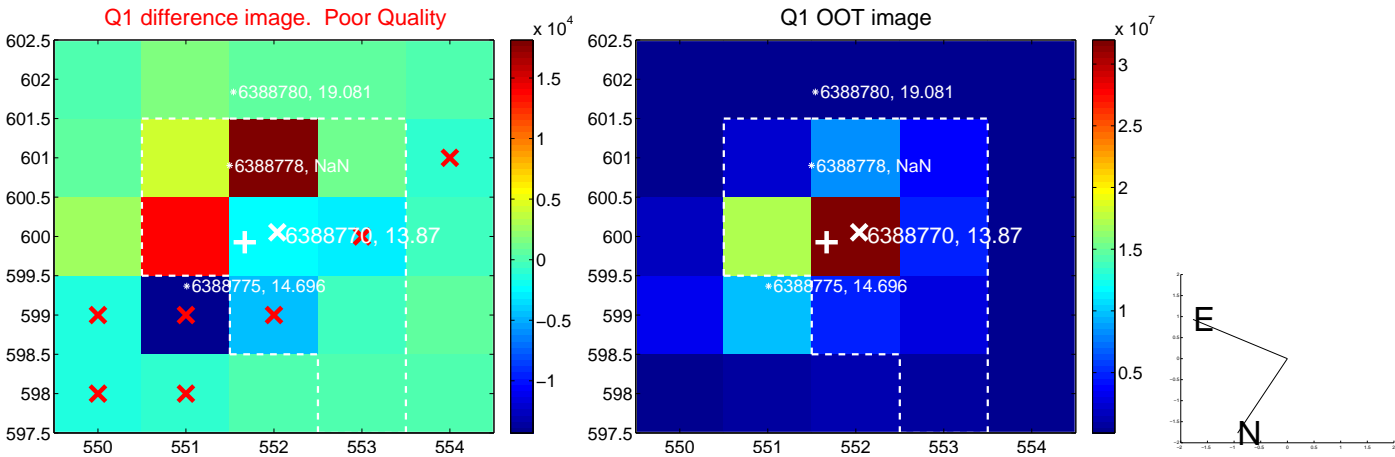


offset from photometric centroids

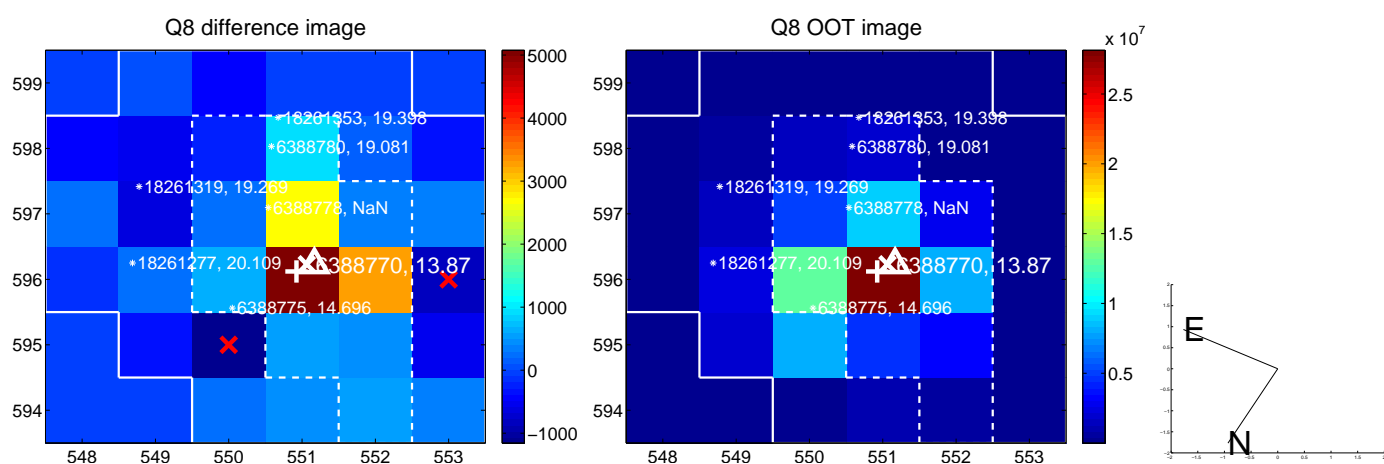
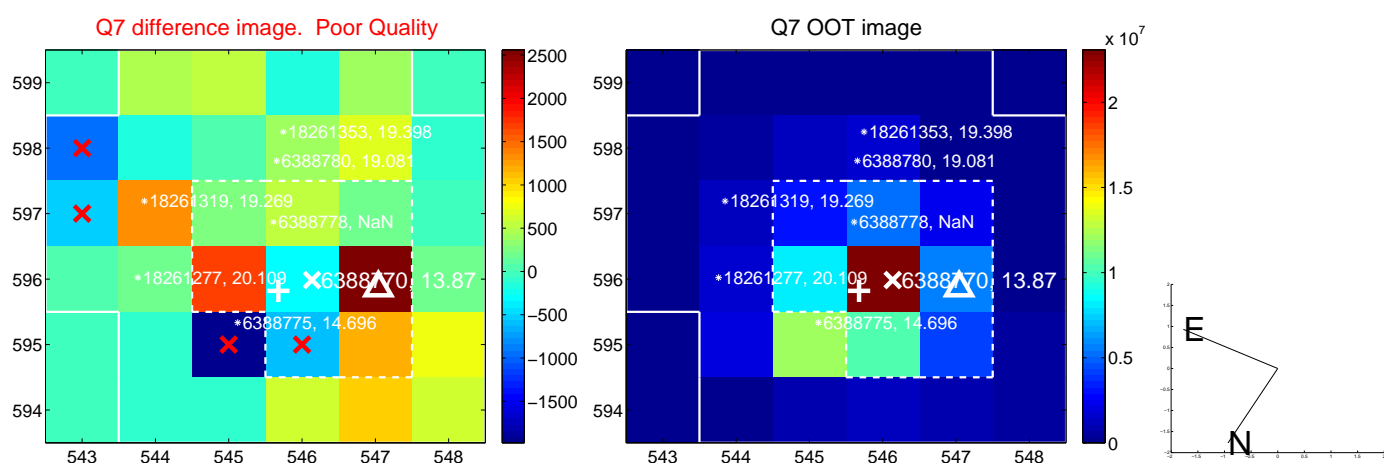
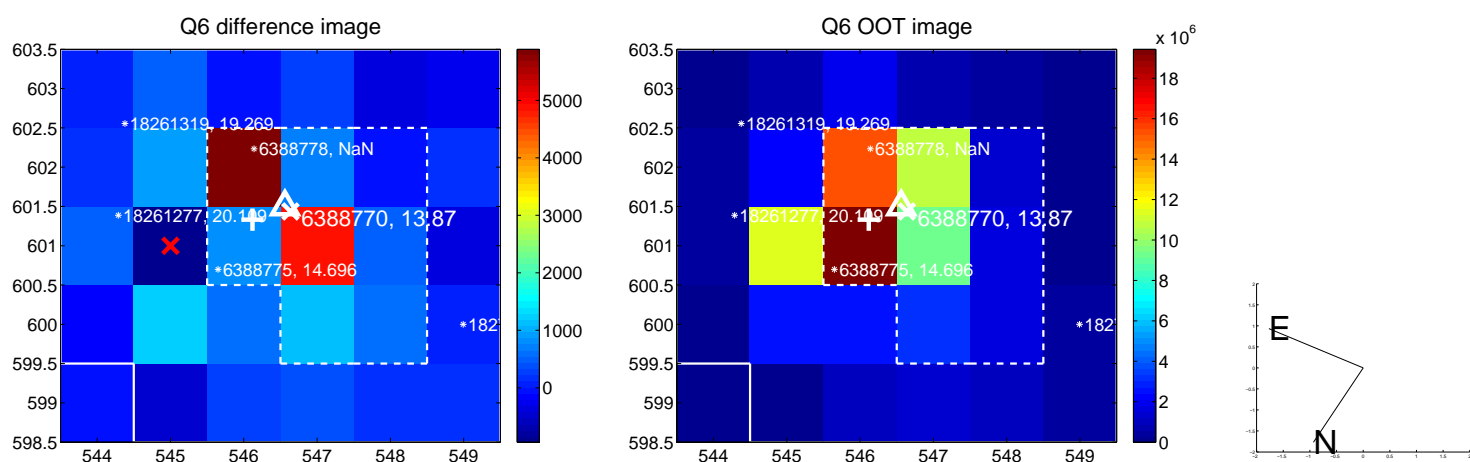
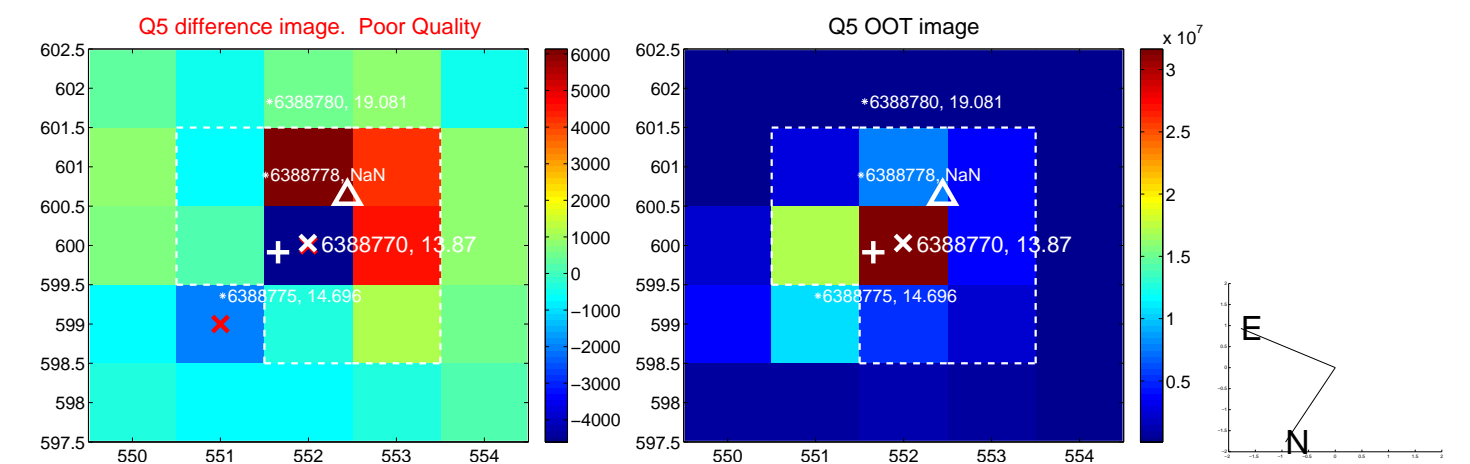


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

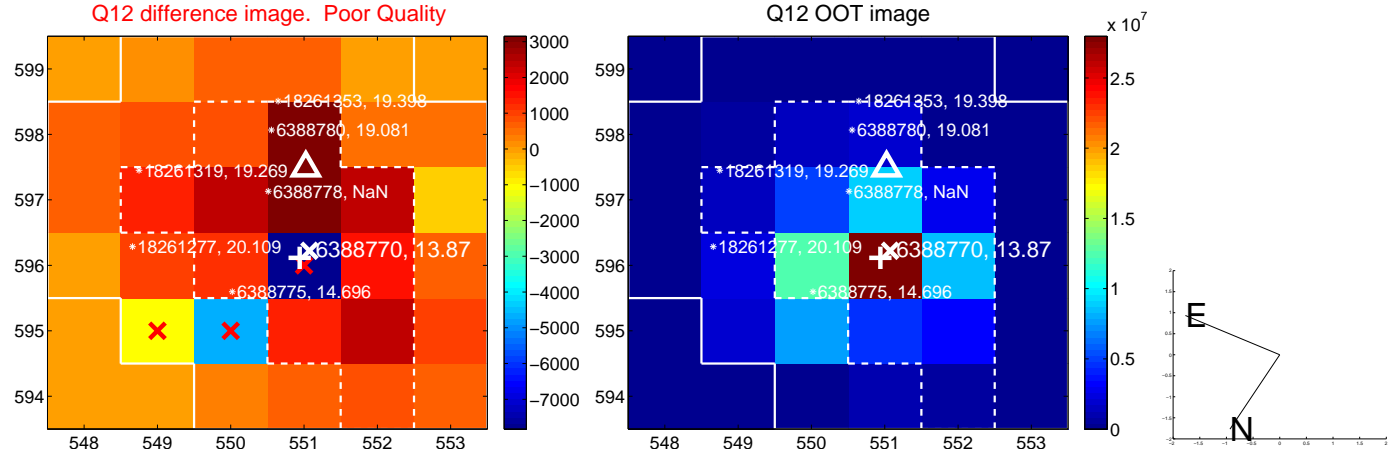
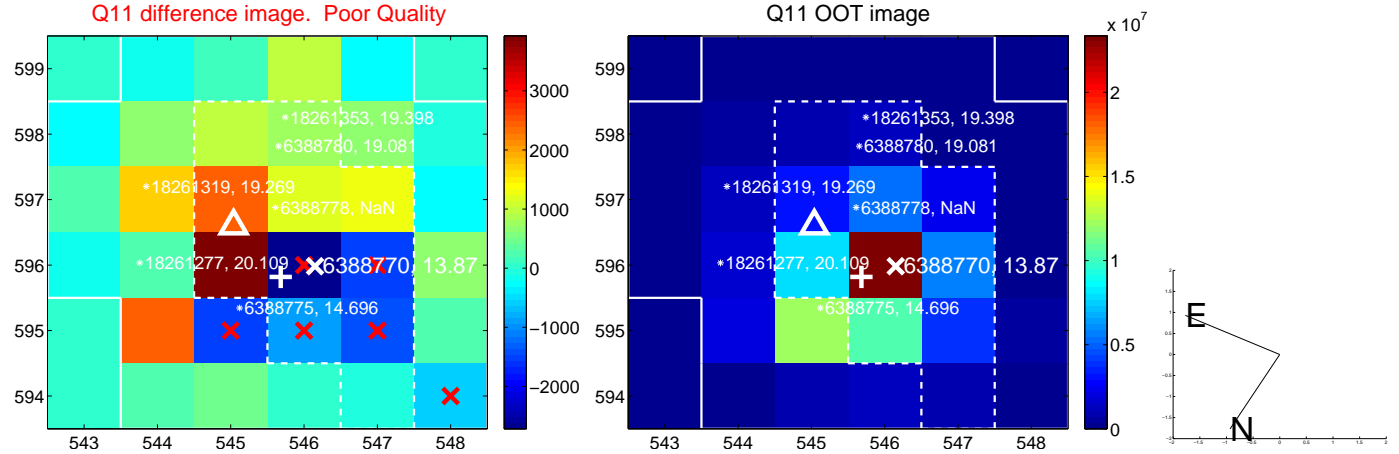
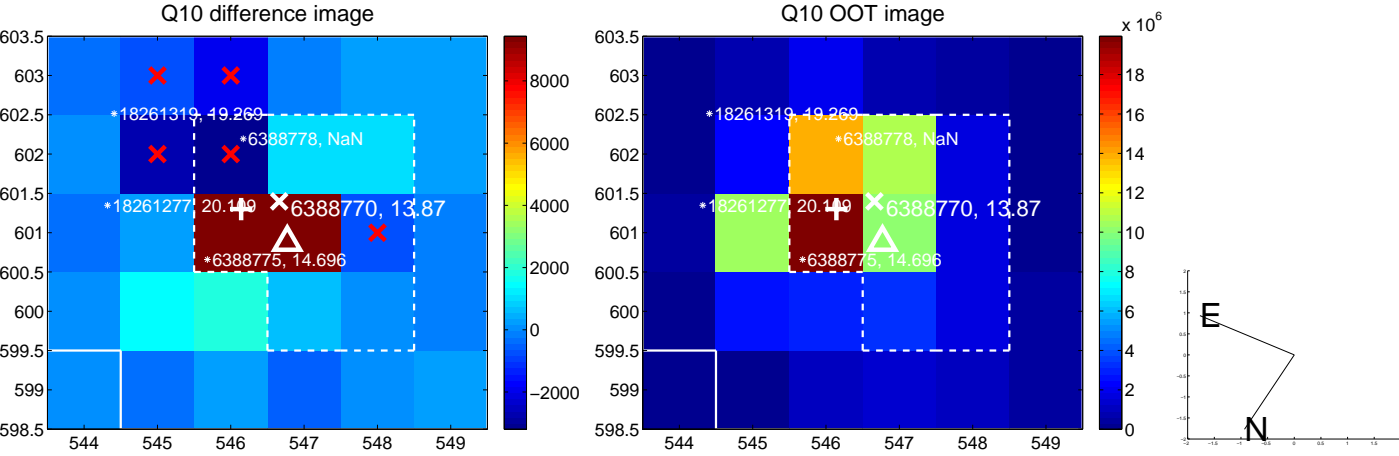
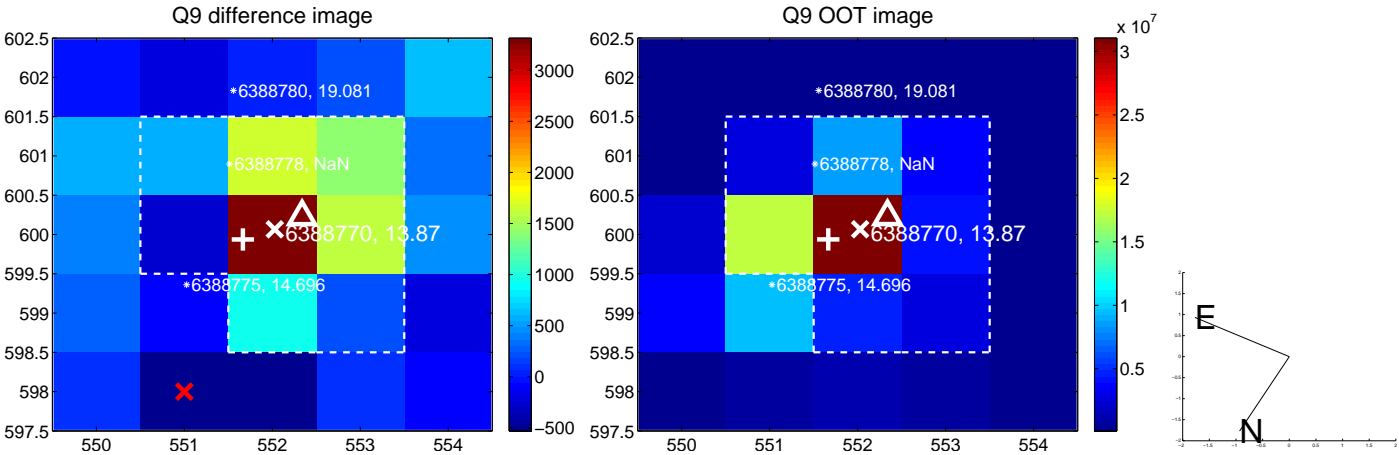
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



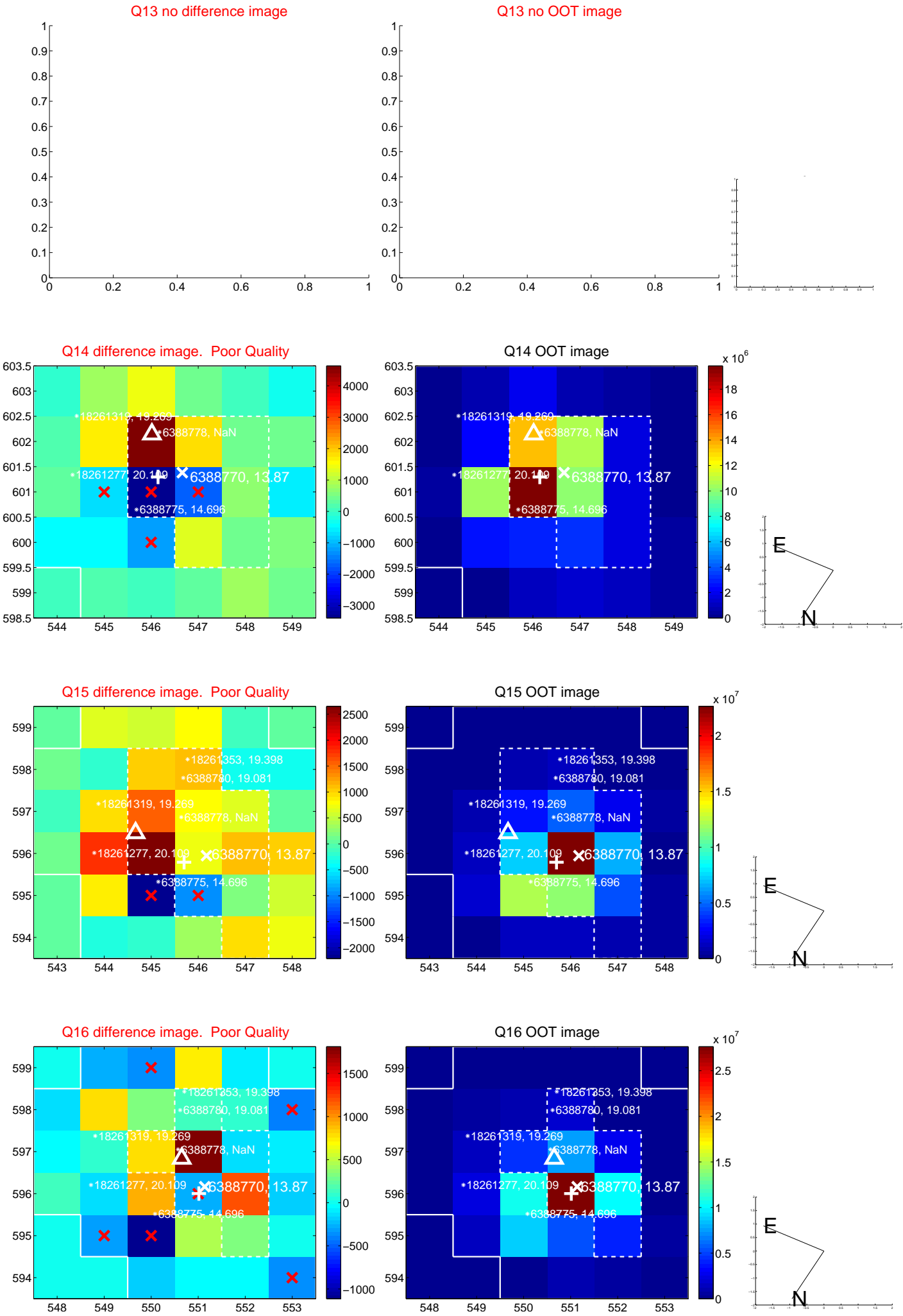
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



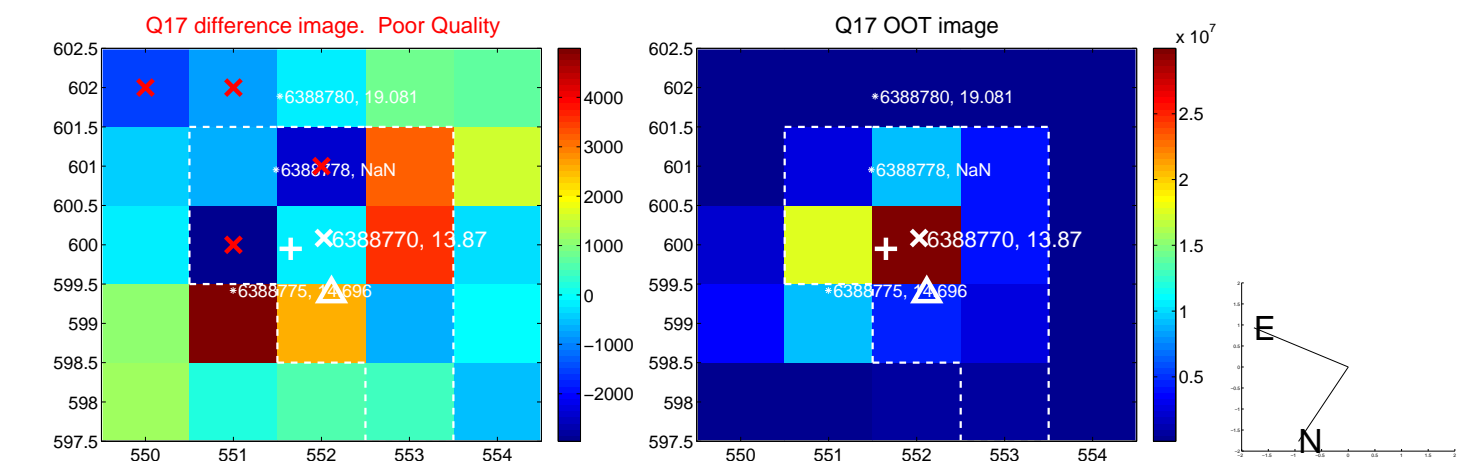
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



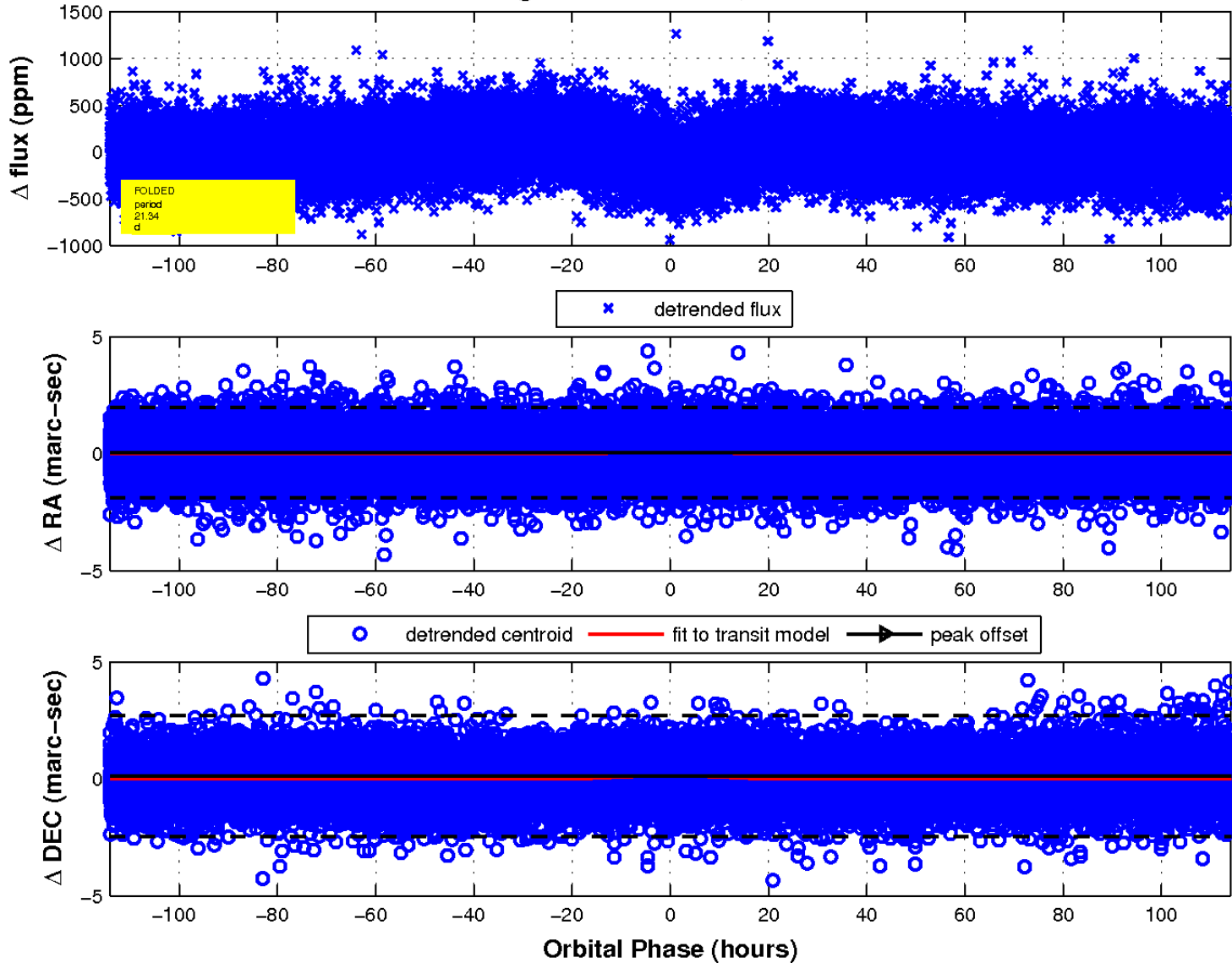
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

