

KIC 010602088

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})
010602088-01	OBS	No	4.098868	133.351440	77.5	23.288	7.7	8.5	0.67	4267	0.70	69.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010602088-01	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.

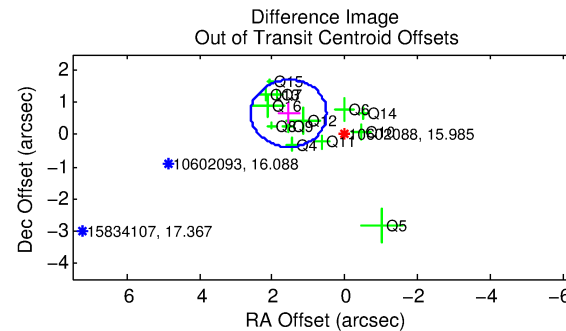
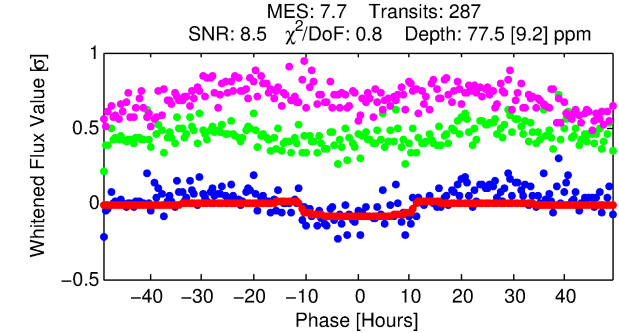
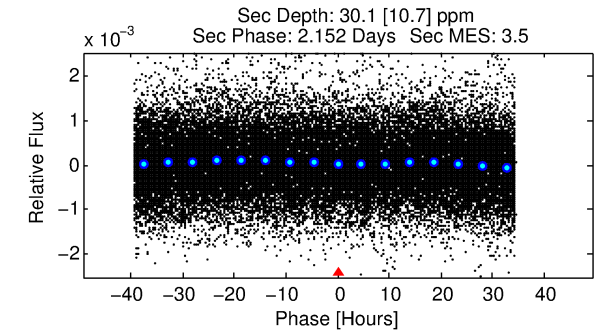
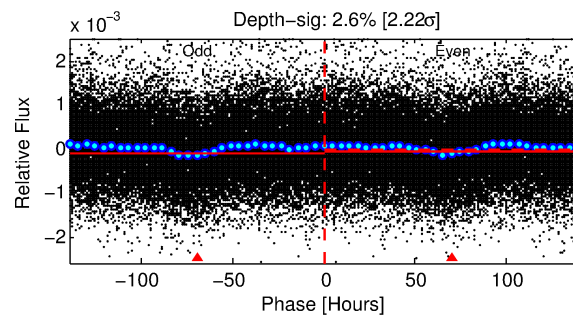
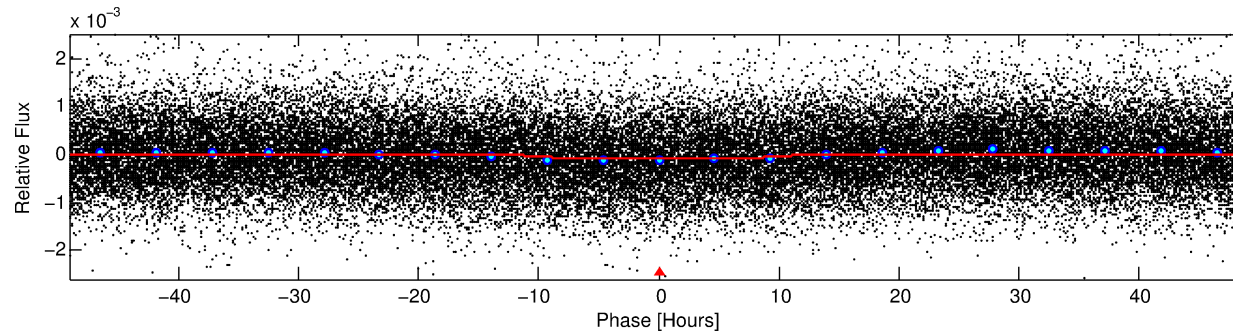
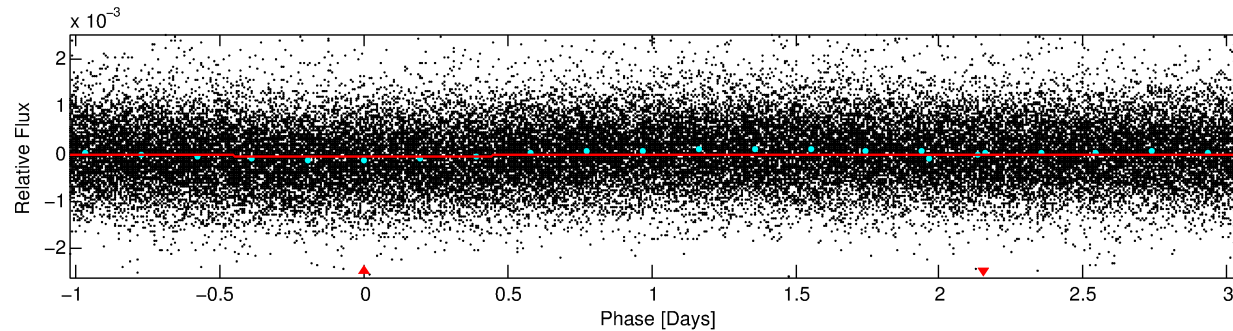
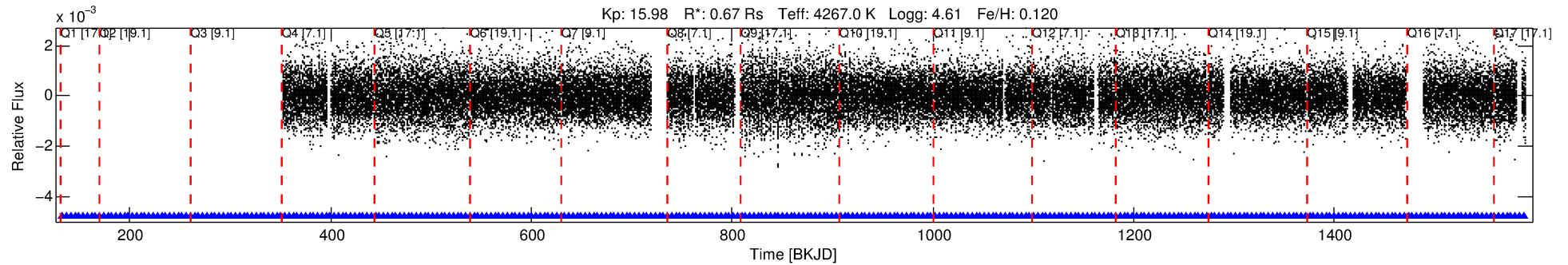
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010602088-01

No Significant Match Found

DV One-Page Summary

KIC: 10602088 Candidate: 1 of 1 Period: 4.099 d



DV Fit Results:

Period = 4.09887 [0.00017] d
Epoch = 133.3514 [0.0353] BKJD
Rp/R* = 0.0096 [0.0030]
a/R* = 1.16 [0.33]
b = 0.86 [0.34]
Seff = 69.70 [13.06]
Teq = 737 [35] K
Rp = 0.70 [0.23] Re
a = 0.0437 [0.0033] AU
Ag = 64.96 [46.96] [1.36 σ]
Teff = 3234 [592] K [4.21 σ]

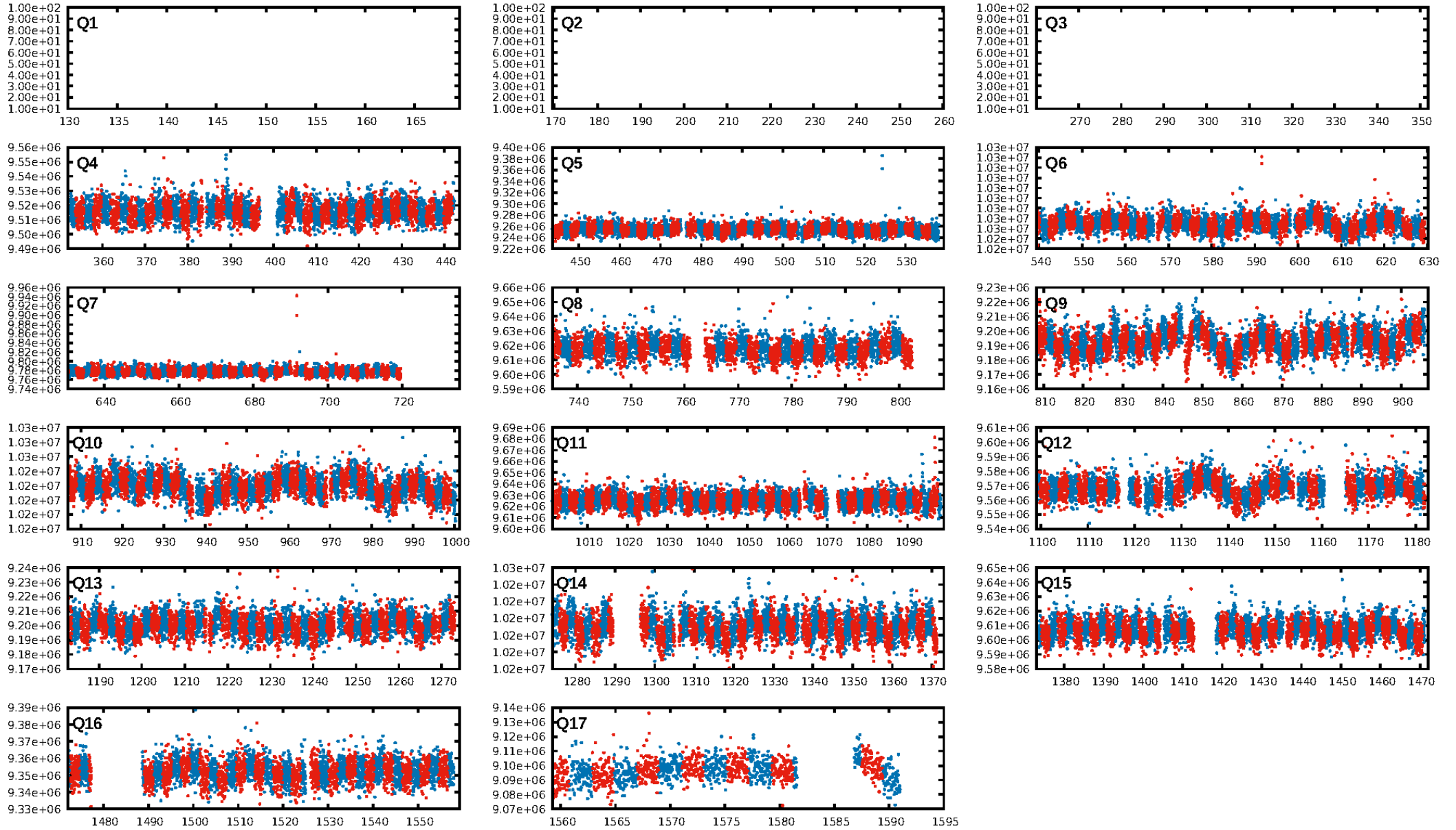
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.74e-15
RollingBand-fgt: 1.00 [280/280]
GhostDiagnostic-chr: 0.6384
Centroid-sig: 17.5%
Centroid-so: 1.732 arcsec [1.68 σ]
OotOffset-rm: 1.681 arcsec [4.82 σ]
KicOffset-rm: 3.932 arcsec [16.13 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [14/14]

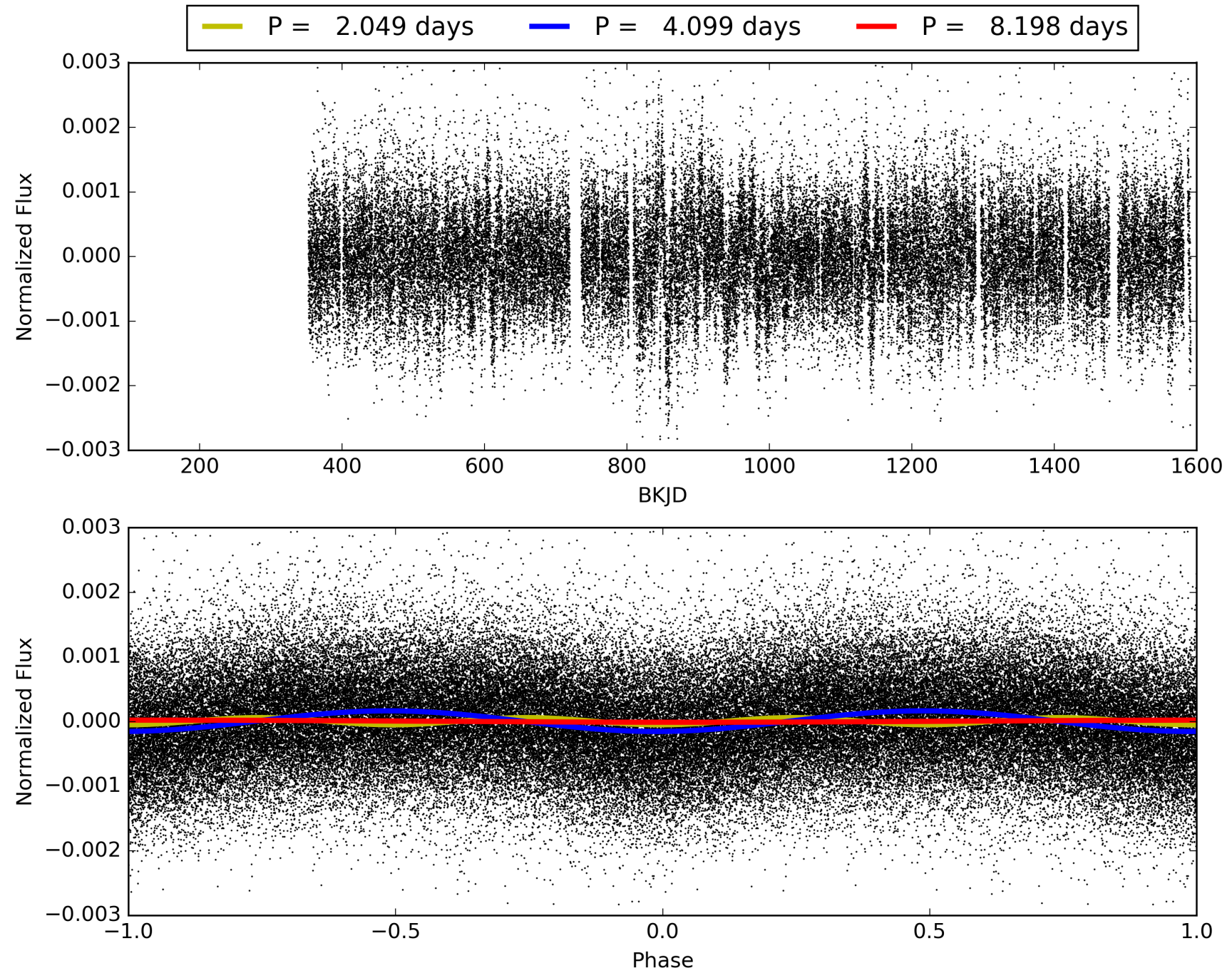
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:59:40 Z

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

TCE 010602088-01, PDC Light Curves

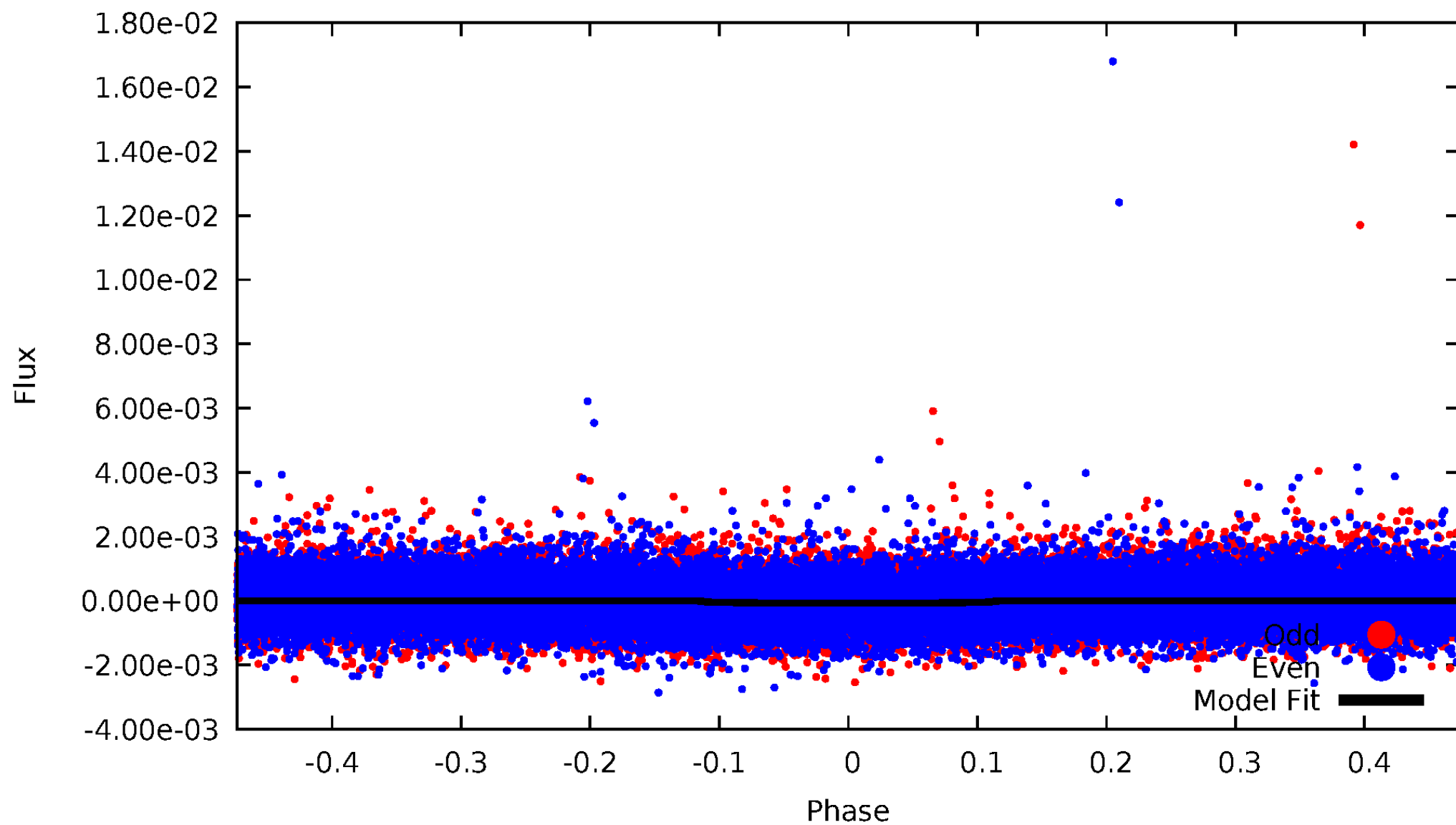


TCE 010602088-01



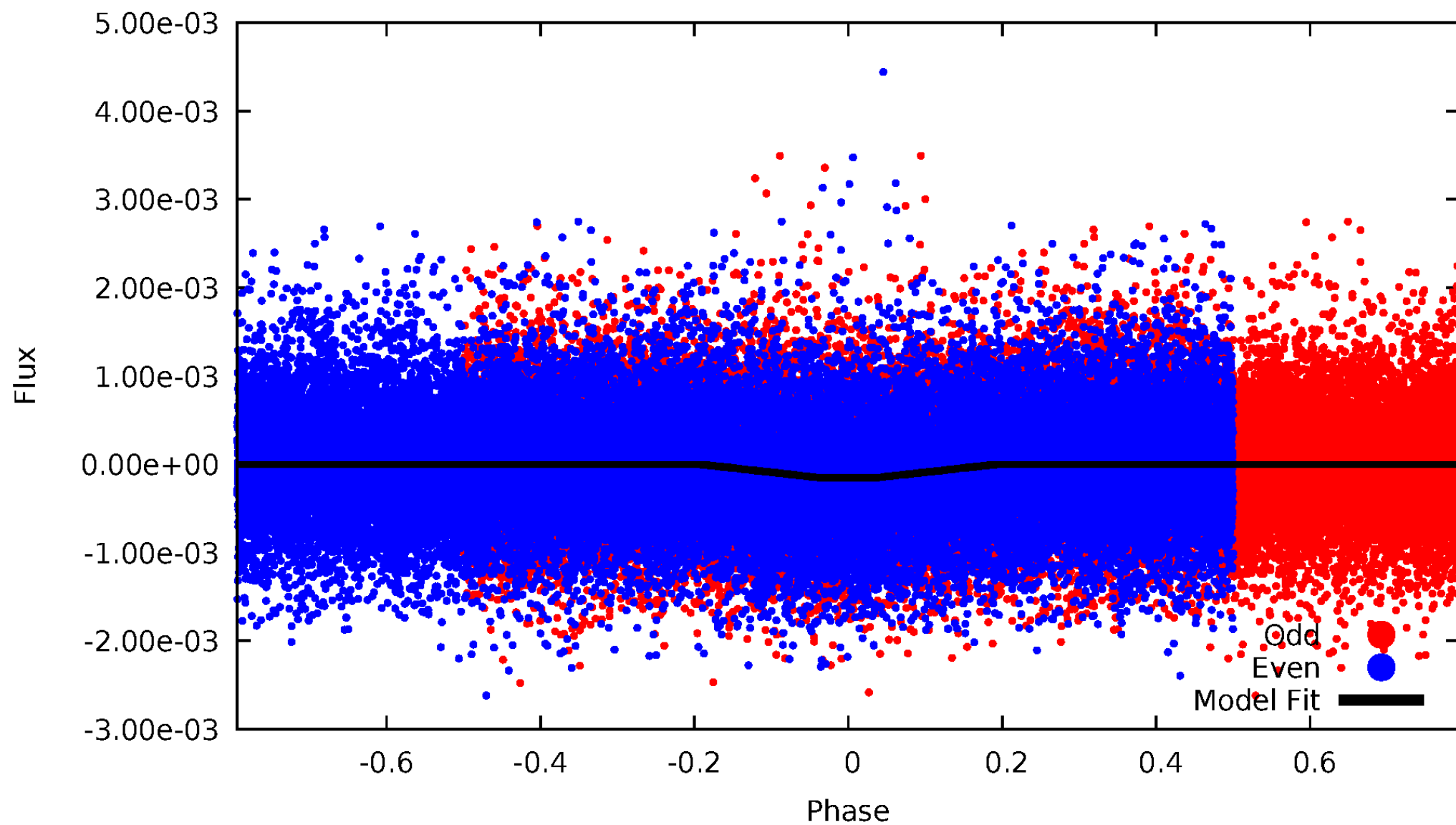
DV Odd/Even

TCE 010602088-01



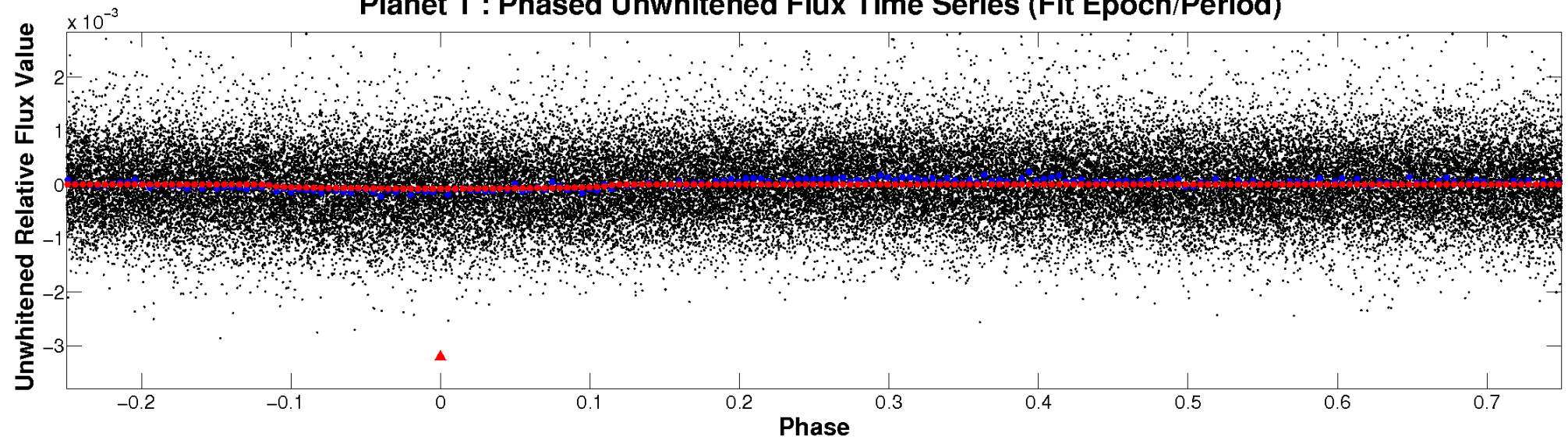
ALT Odd/Even

TCE 010602088-01

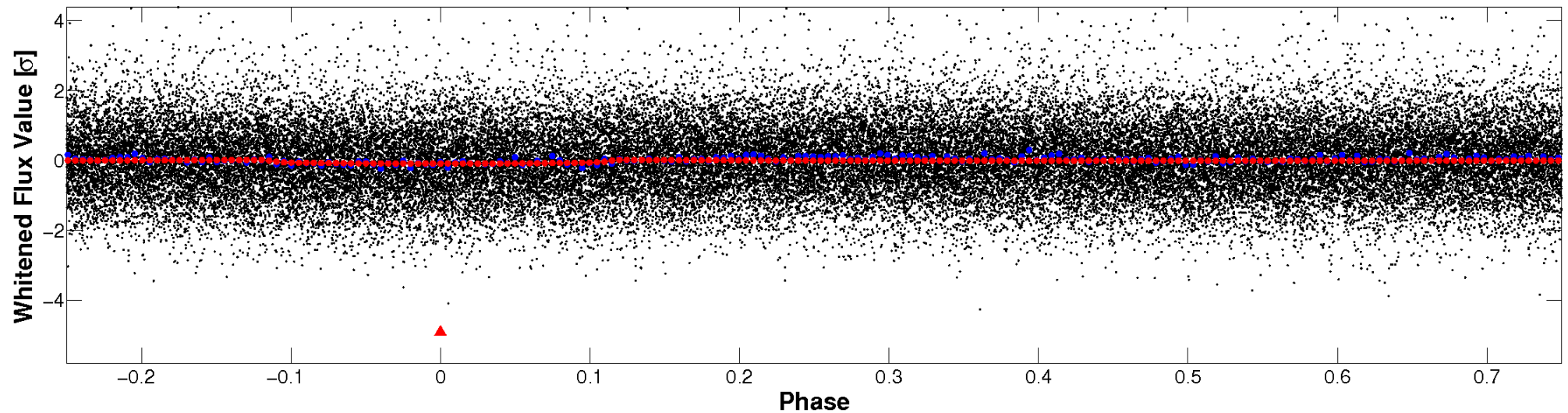


Non-Whitened Vs. Whitened Light Curve

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

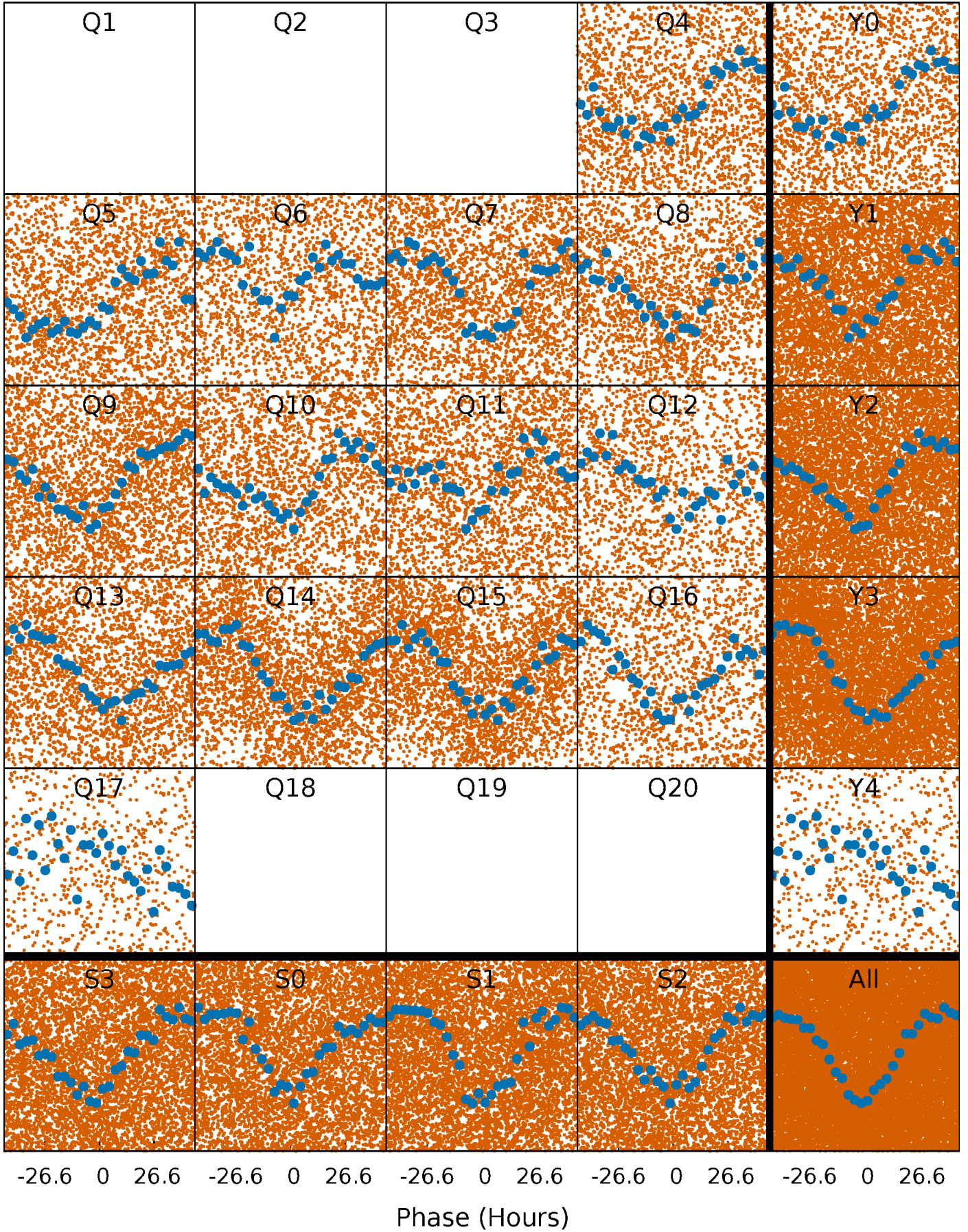


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



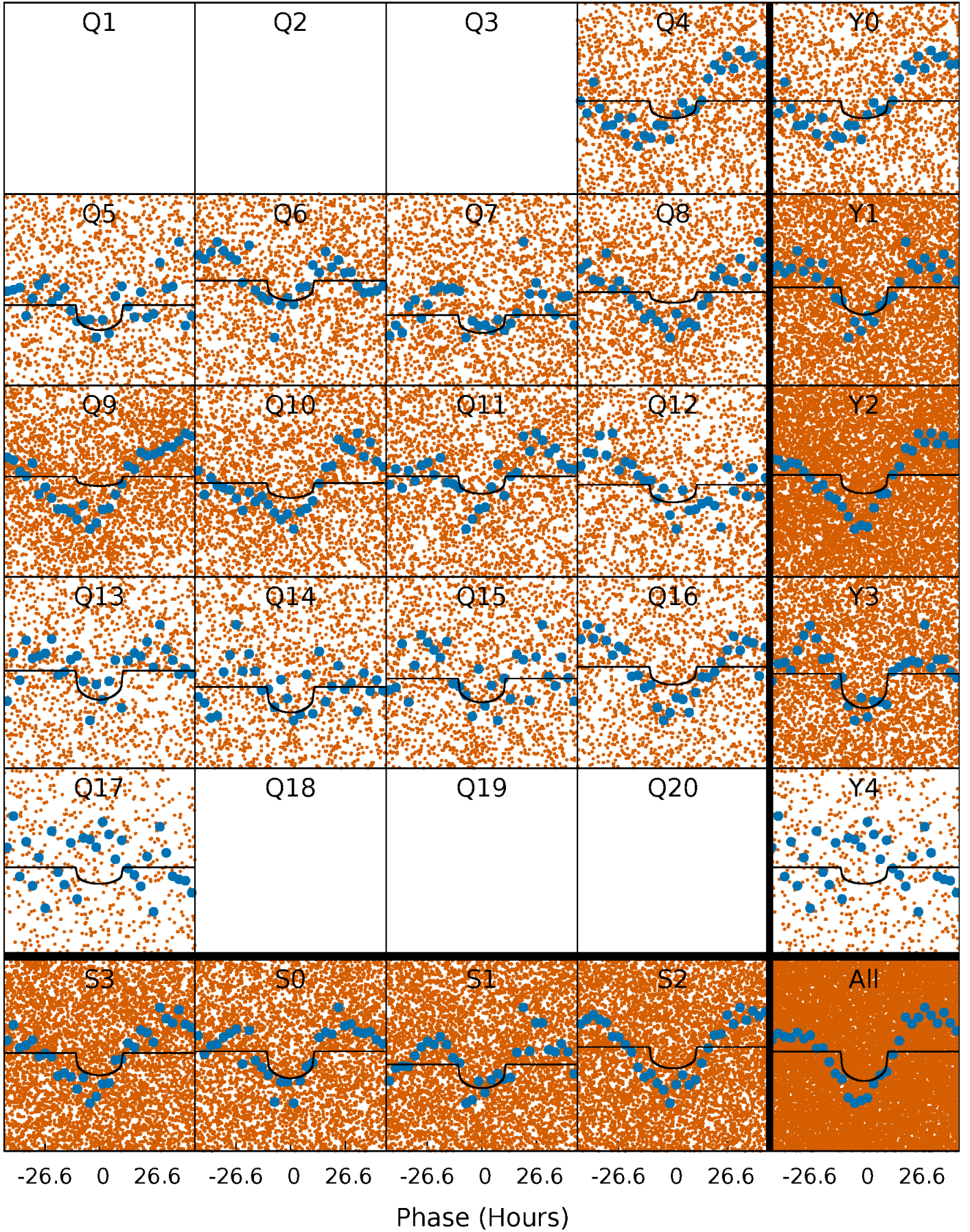
PDC Quarter-Phased Transit Curves

TCE 010602088-01 P= 4.098868 Days $T_0=133.351440$ (BKJD)



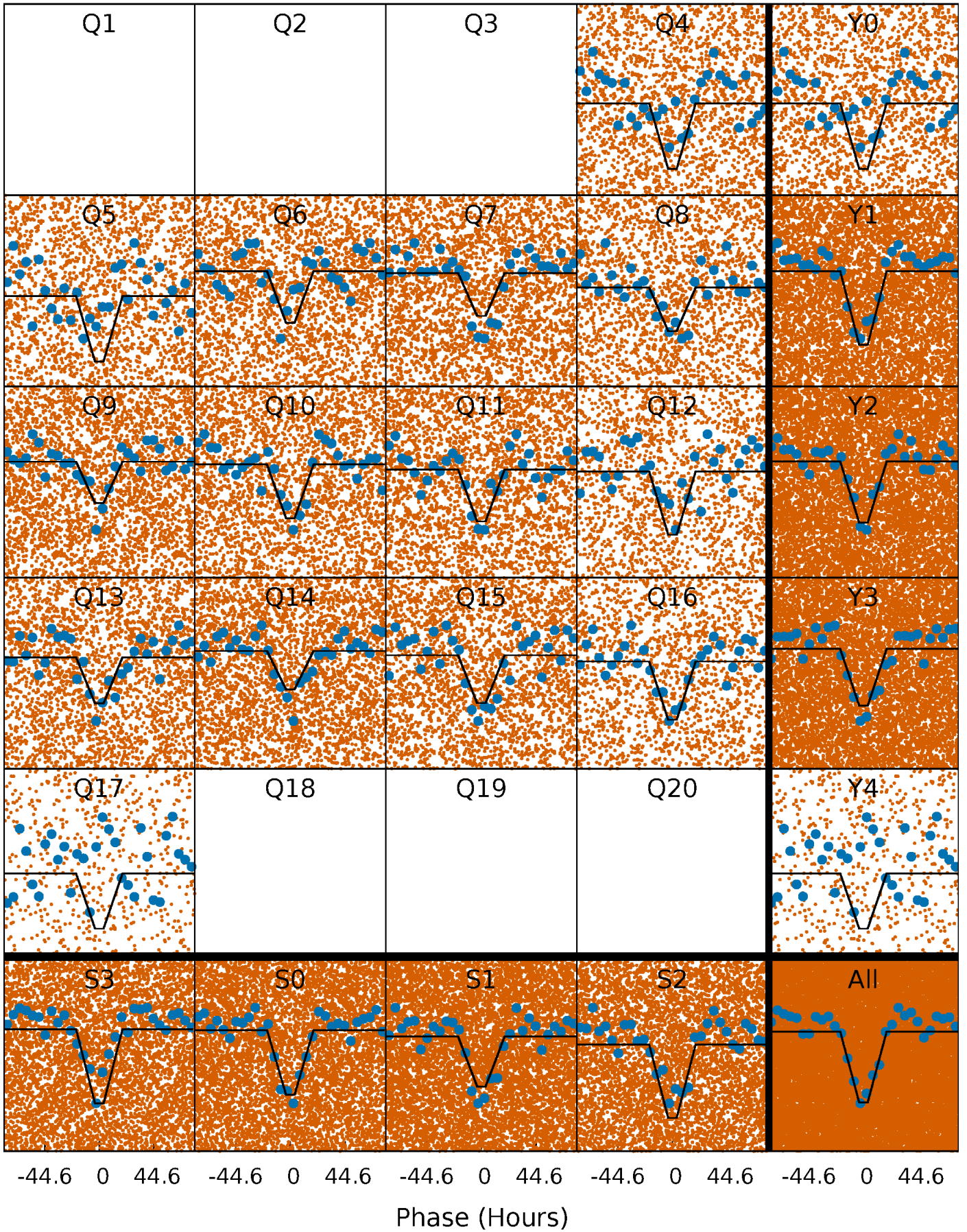
DV Quarter-Phased Transit Curves

TCE 010602088-01 P= 4.098868 Days $T_0=133.351440$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

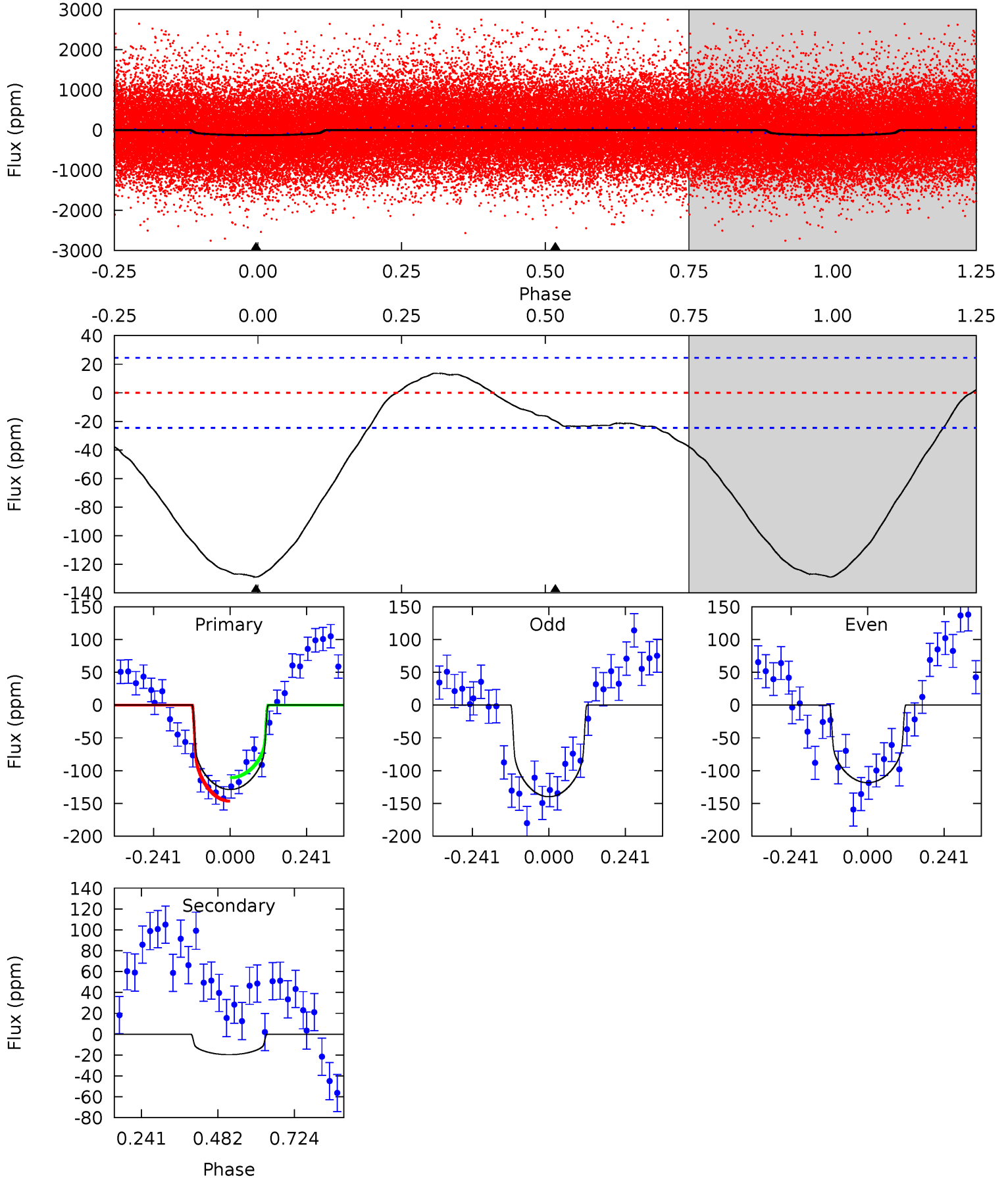
TCE 010602088-01 P= 4.098587 Days $T_0=133.362080$ (BKJD)



DV Model-Shift Uniqueness Test

010602088-01, P = 4.098868 Days, E = 133.351440 Days

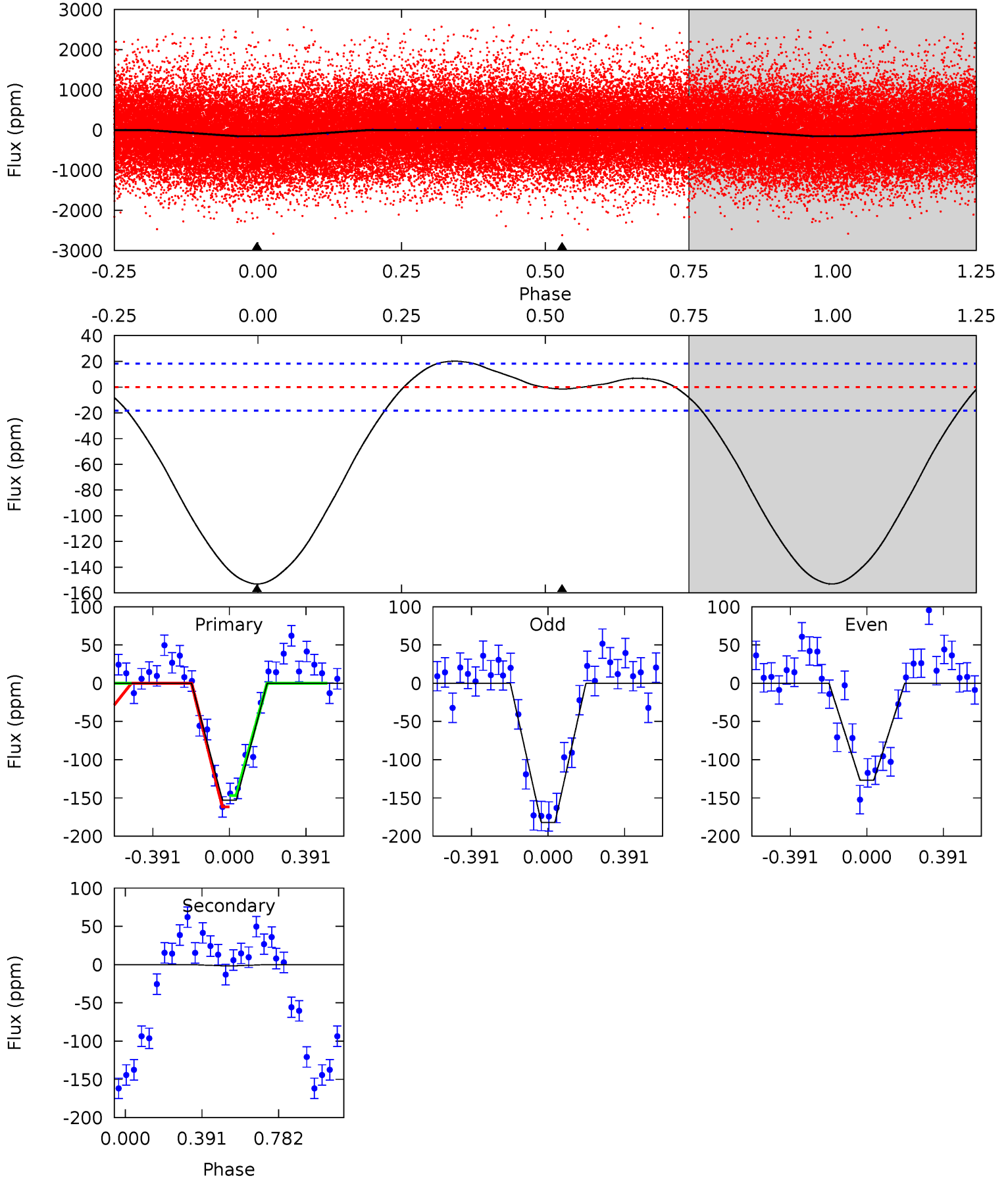
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.0	3.51	0	0	4.38	1.17	3.69	23.0	23.0	3.51	3.51	1.91	1.12	0.10	3.18



Alt Model-Shift Uniqueness Test

010602088-01, P = 4.098587 Days, E = 133.362080 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.7	0.35	0	0	4.27	0.86	2.61	35.7	35.7	0.35	0.35	6.47	0.85	0.12	1.66



Stellar Parameters For KIC 010602088

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4267^{+150}_{-165}	$4.608^{+0.056}_{-0.016}$	$0.120^{+0.250}_{-0.300}$	$0.670^{+0.033}_{-0.062}$	$0.662^{+0.052}_{-0.057}$	$3.109^{+0.784}_{-0.240}$
	+4%/-4%	+1%/-0%	+208%/-250%	+5%/-9%	+8%/-9%	+25%/-8%
Source	KIC0	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 010602088-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 6	$0.69^{+0.21}_{-0.22}$	1019^{+41}_{-43}	3262^{+457}_{-294}	41^{+51}_{-19}
Alt.	-2 ± 4	$0.89^{+0.23}_{-0.22}$	1020^{+43}_{-39}	2209^{+445}_{-4635}	$2.304^{+7.122}_{-6.518}$

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

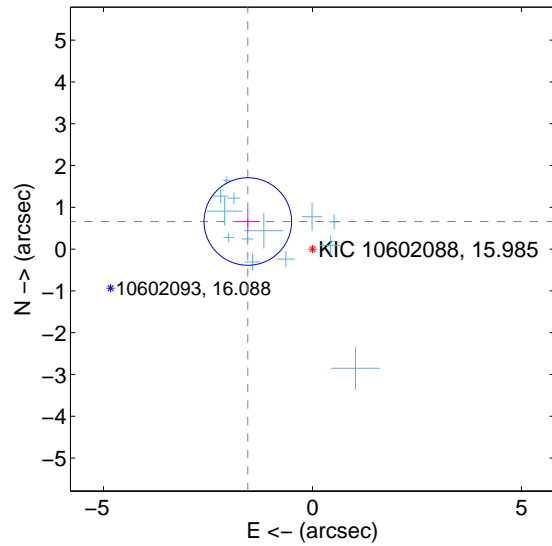
Supplemental centroid analysis for 010602088-01. Kepler magnitude: 15.98. Transit SNR 8.47

There are 13 quarters with good PRF difference image offsets

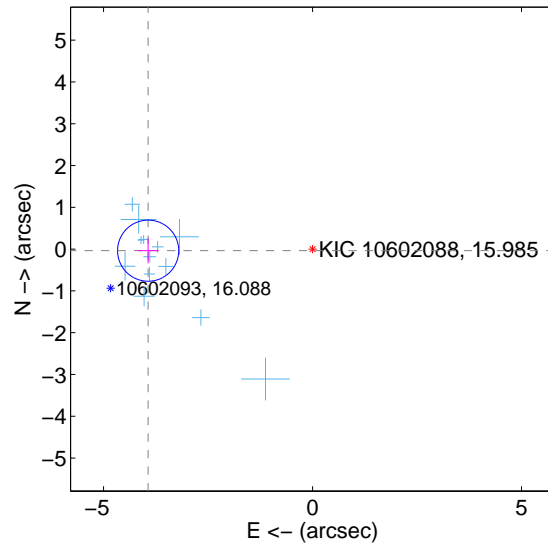
The OOT PRF centroid is offset from the target star catalog position by about 2.07 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.681 ± 0.349	4.82	1.546 ± 0.291	0.660 ± 0.282
PRF-fit source offset from KIC position	3.932 ± 0.244	16.13	3.932 ± 0.246	-0.038 ± 0.301
photometric centroid source offset	1.73 ± 1.03	1.68	1.73 ± 1.03	-0.12 ± 0.65

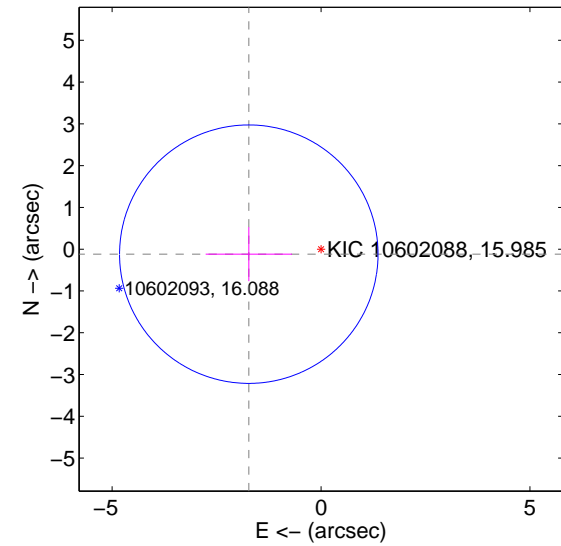
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

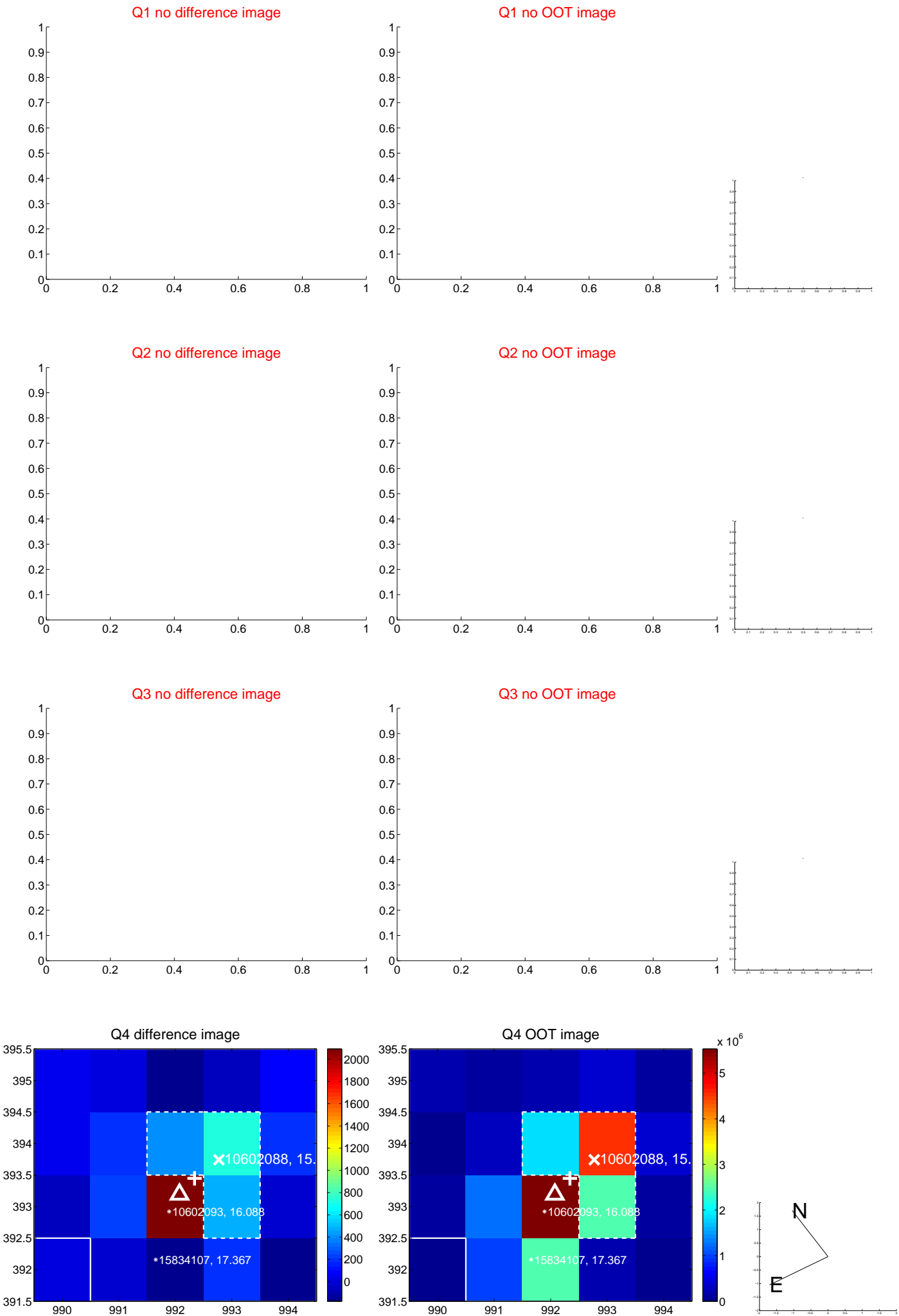


offset from photometric centroids

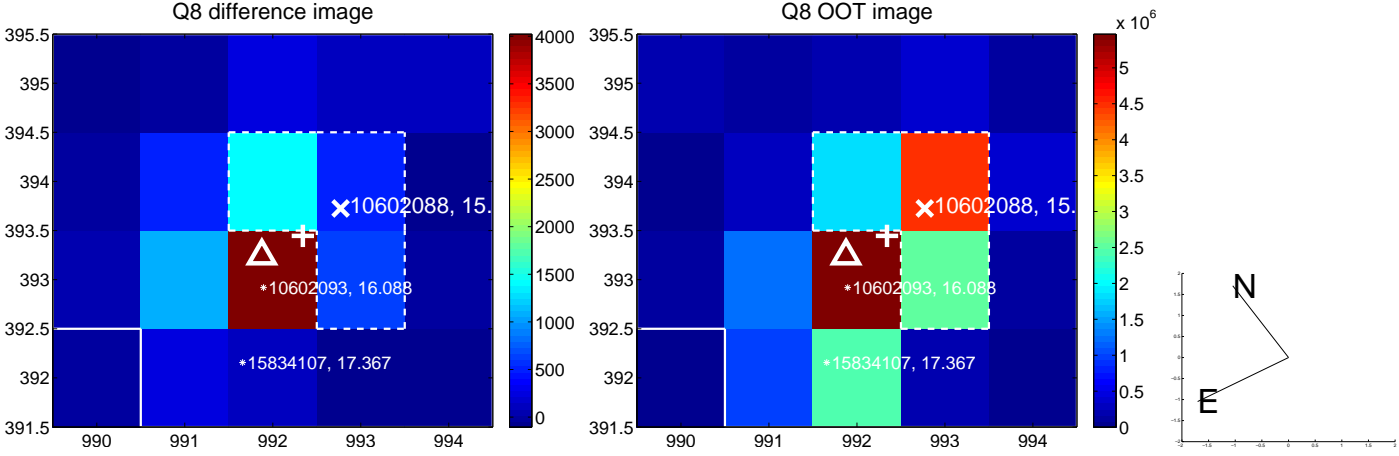
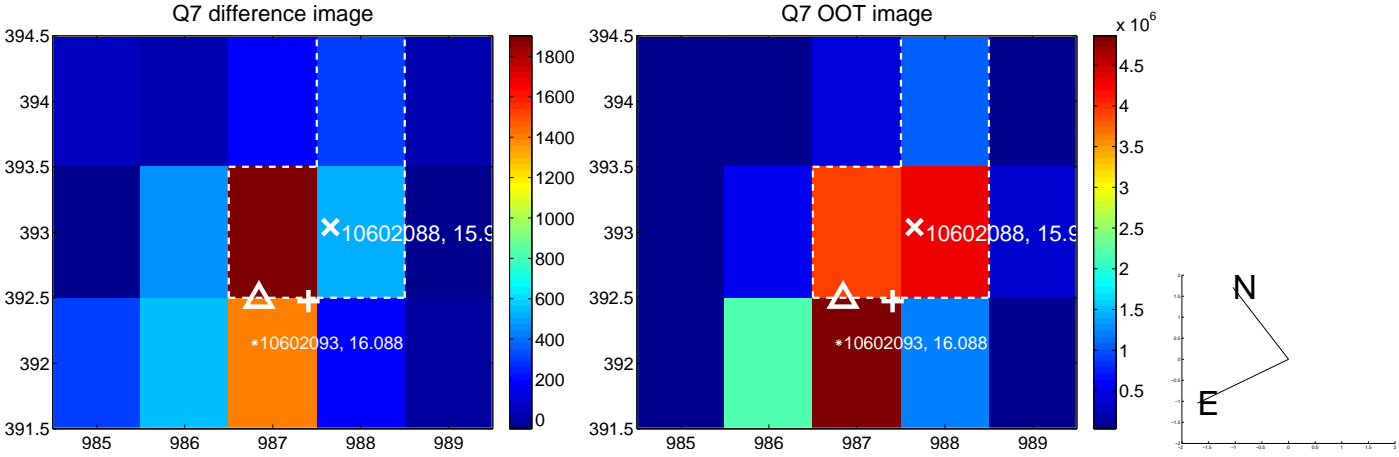
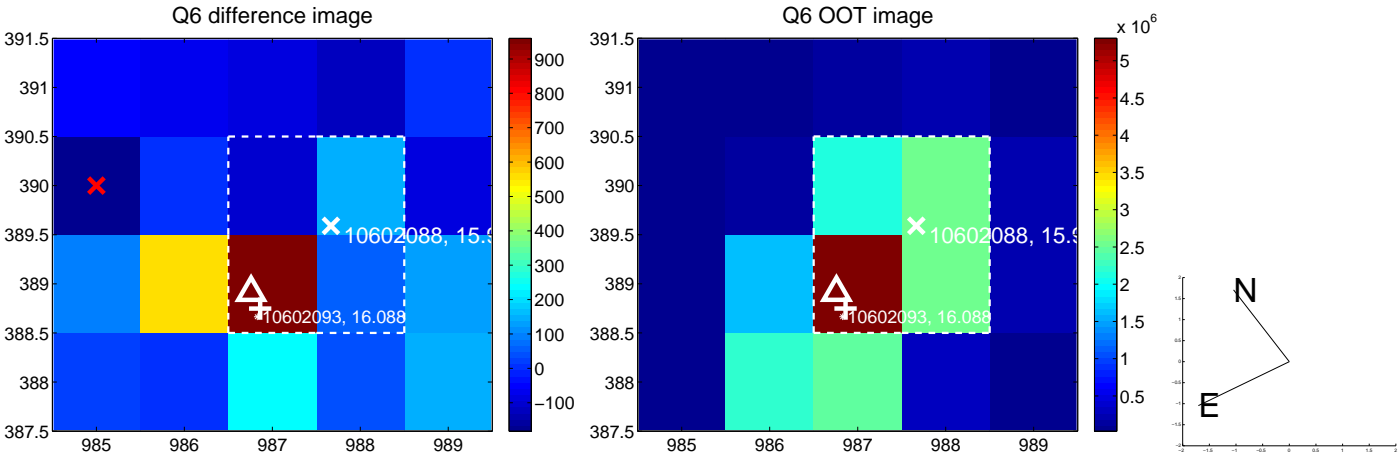
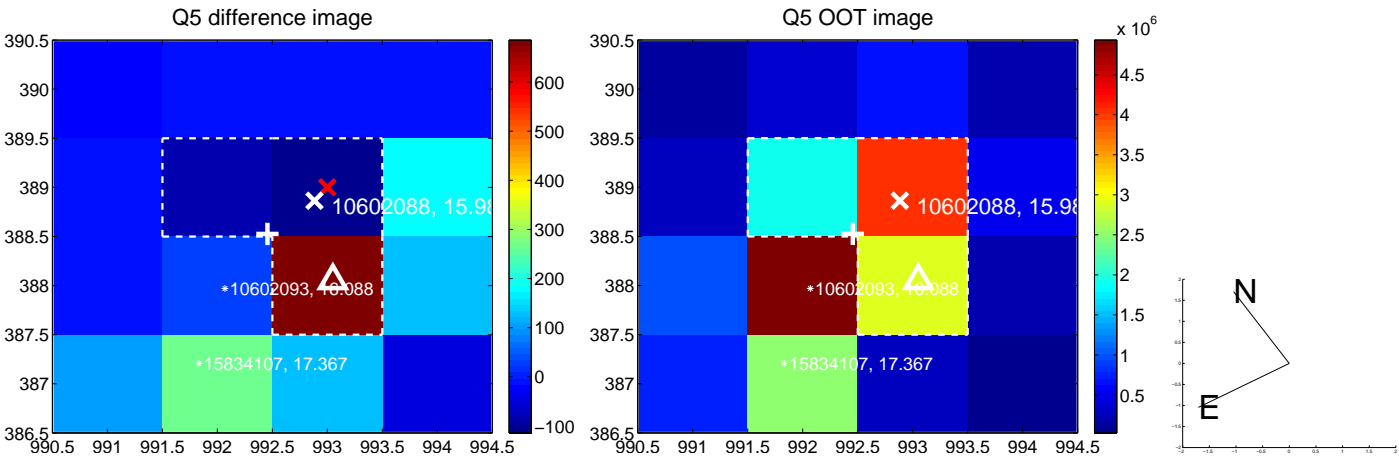


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

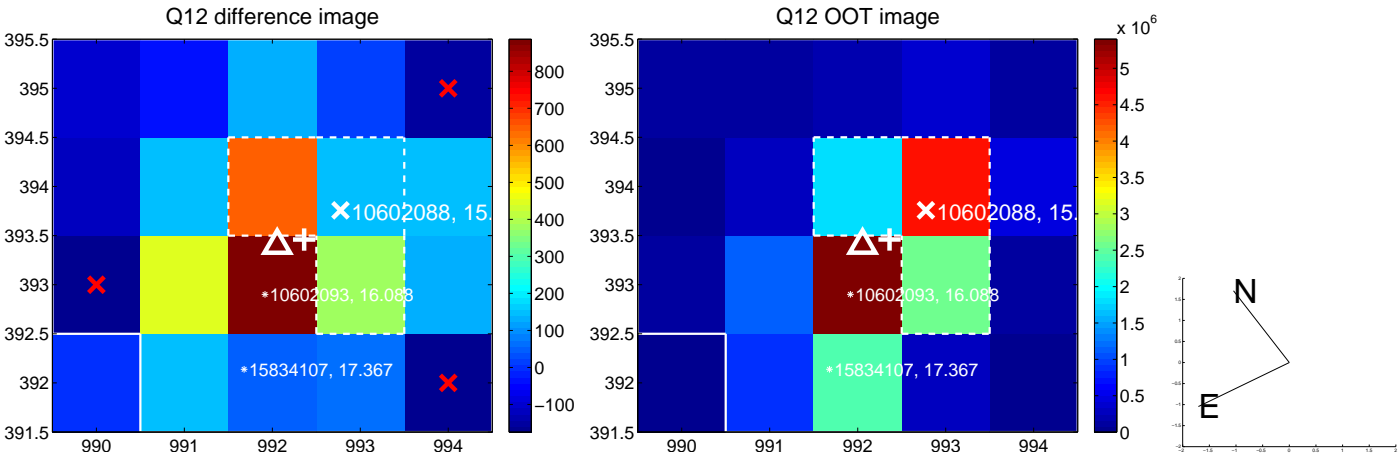
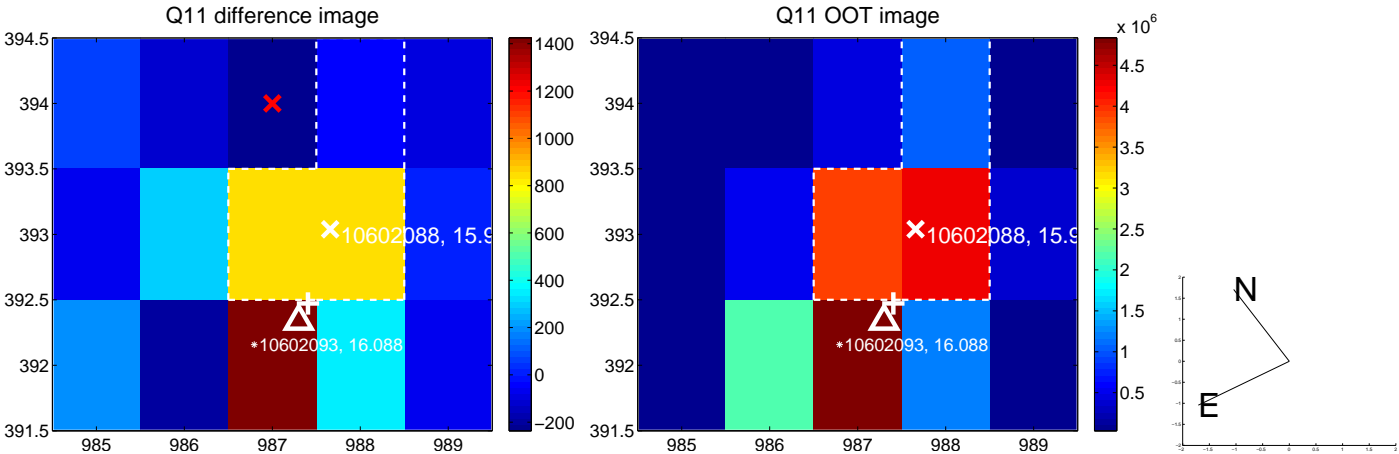
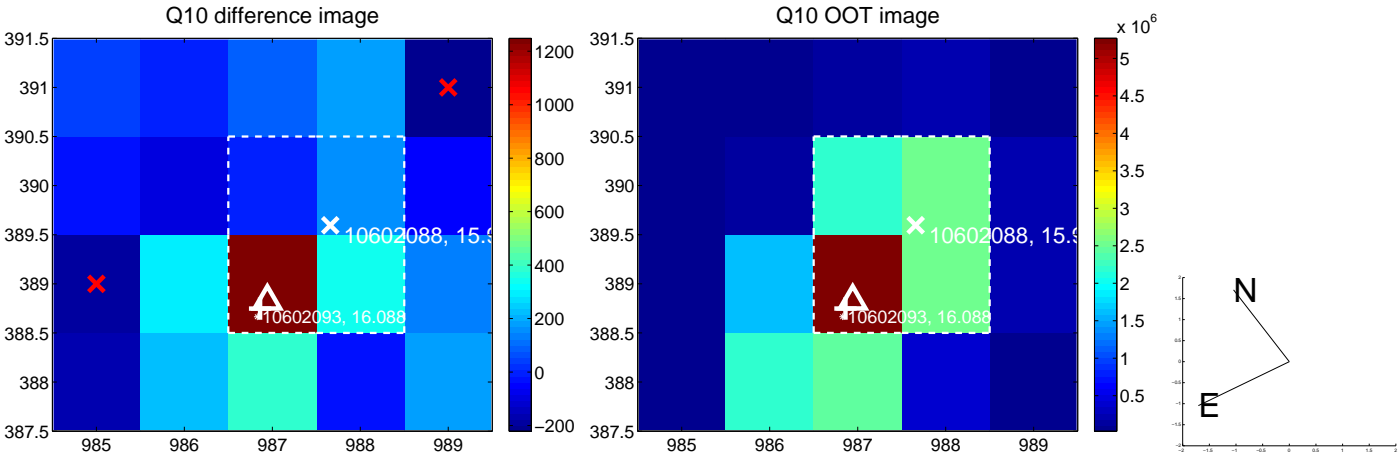
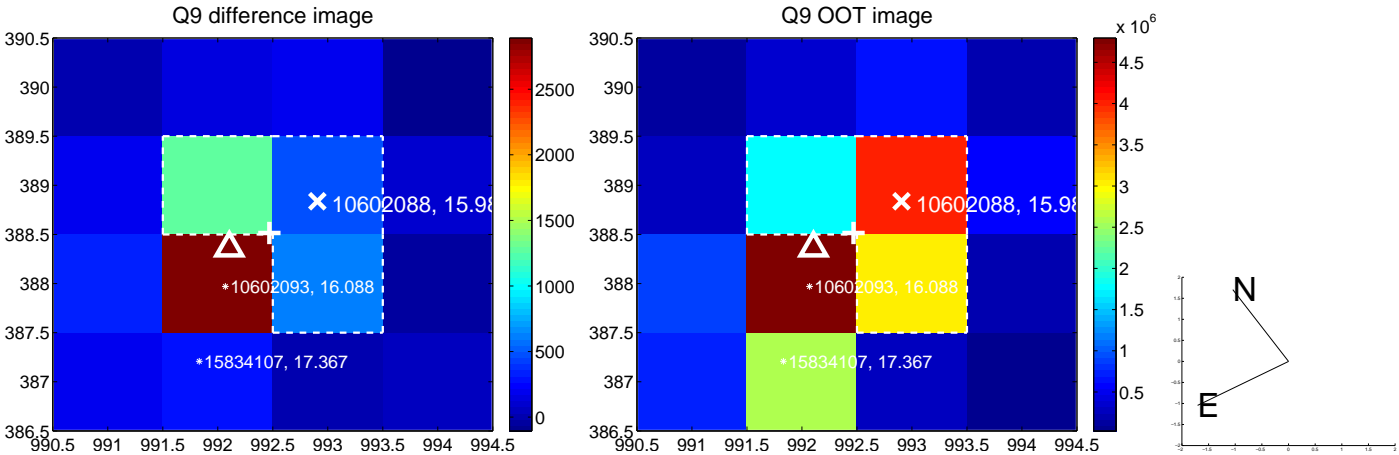
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



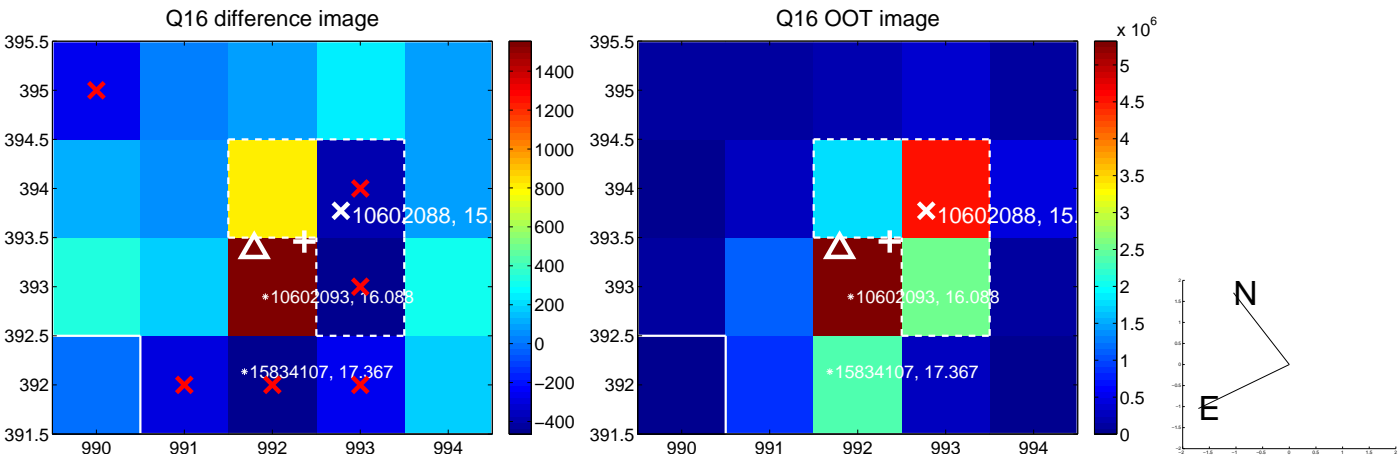
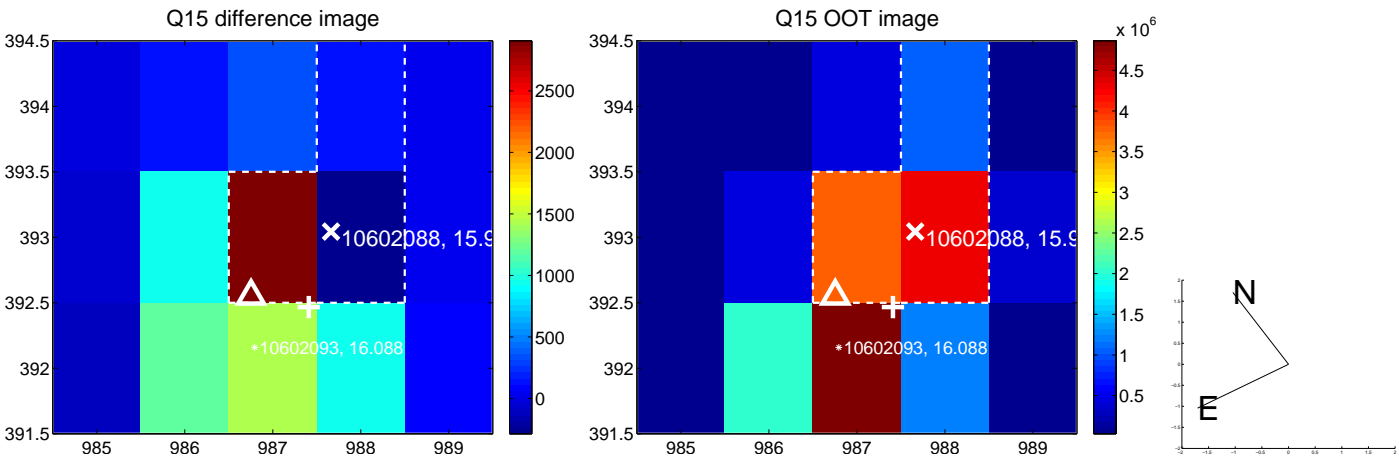
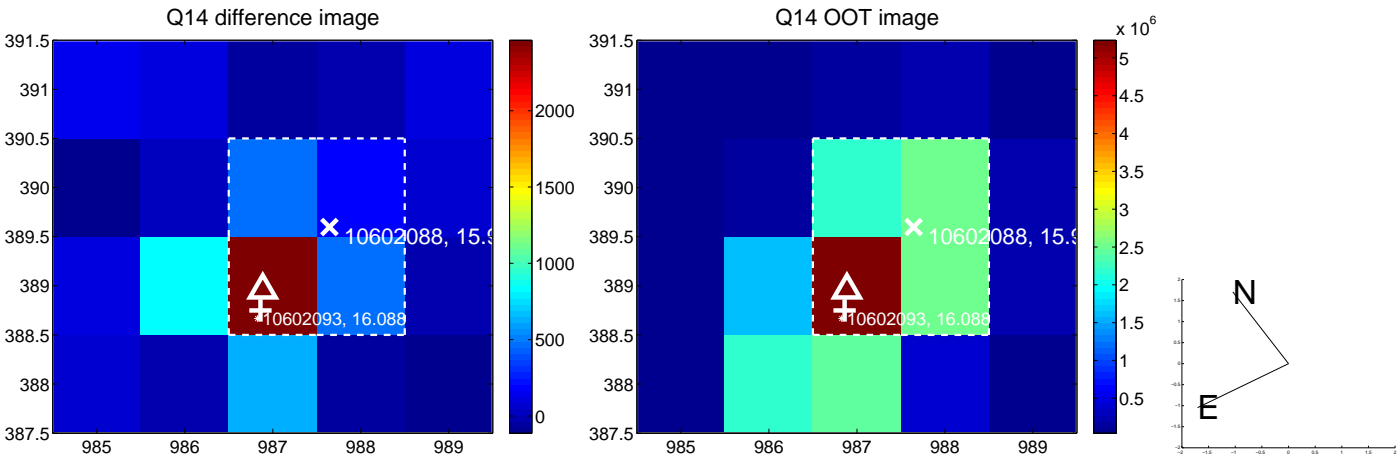
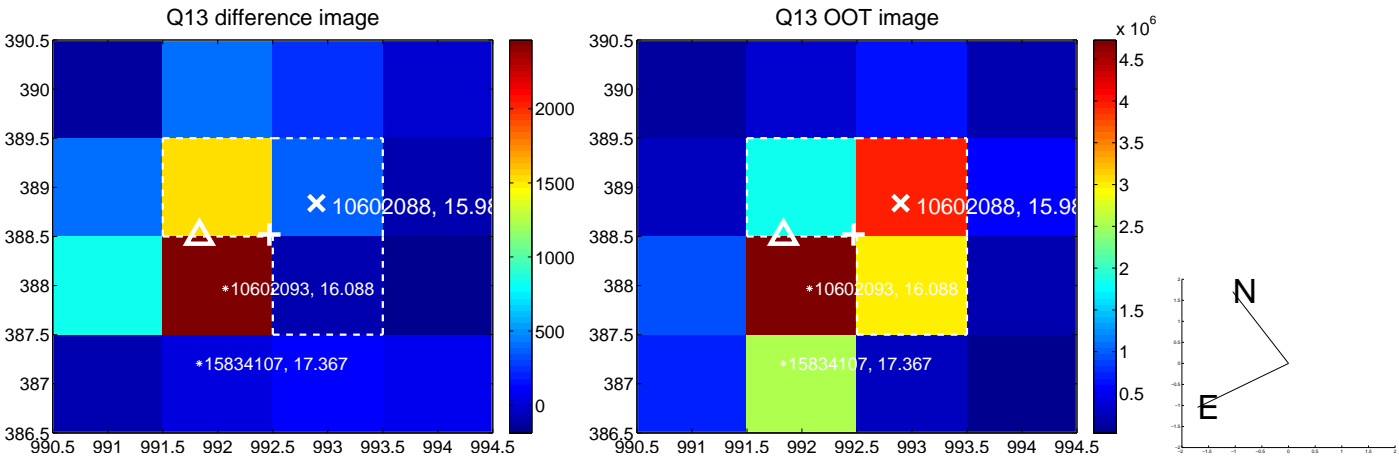
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



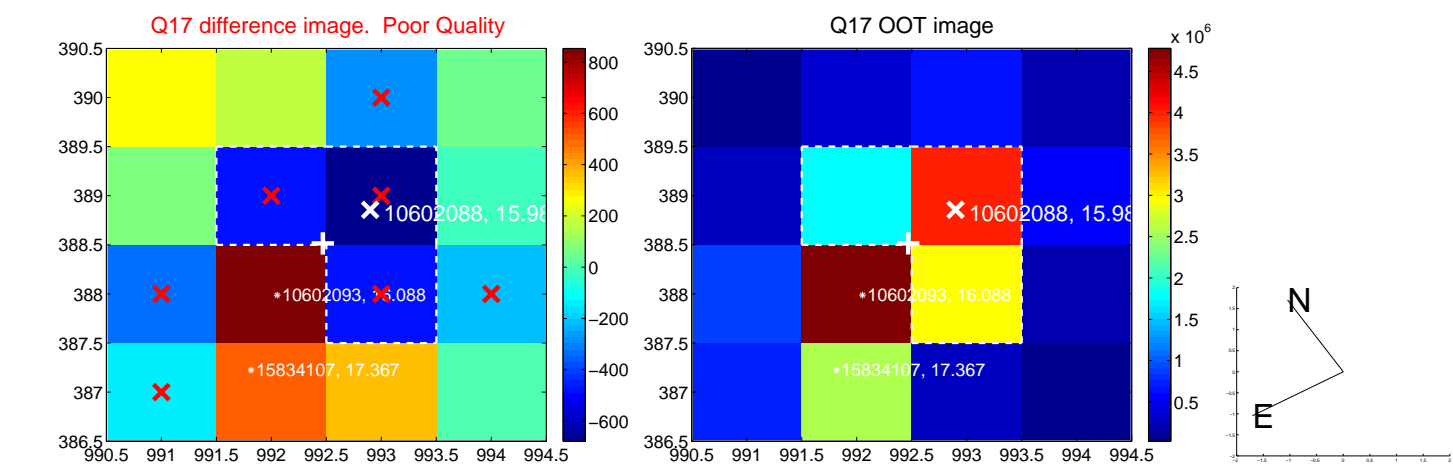
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



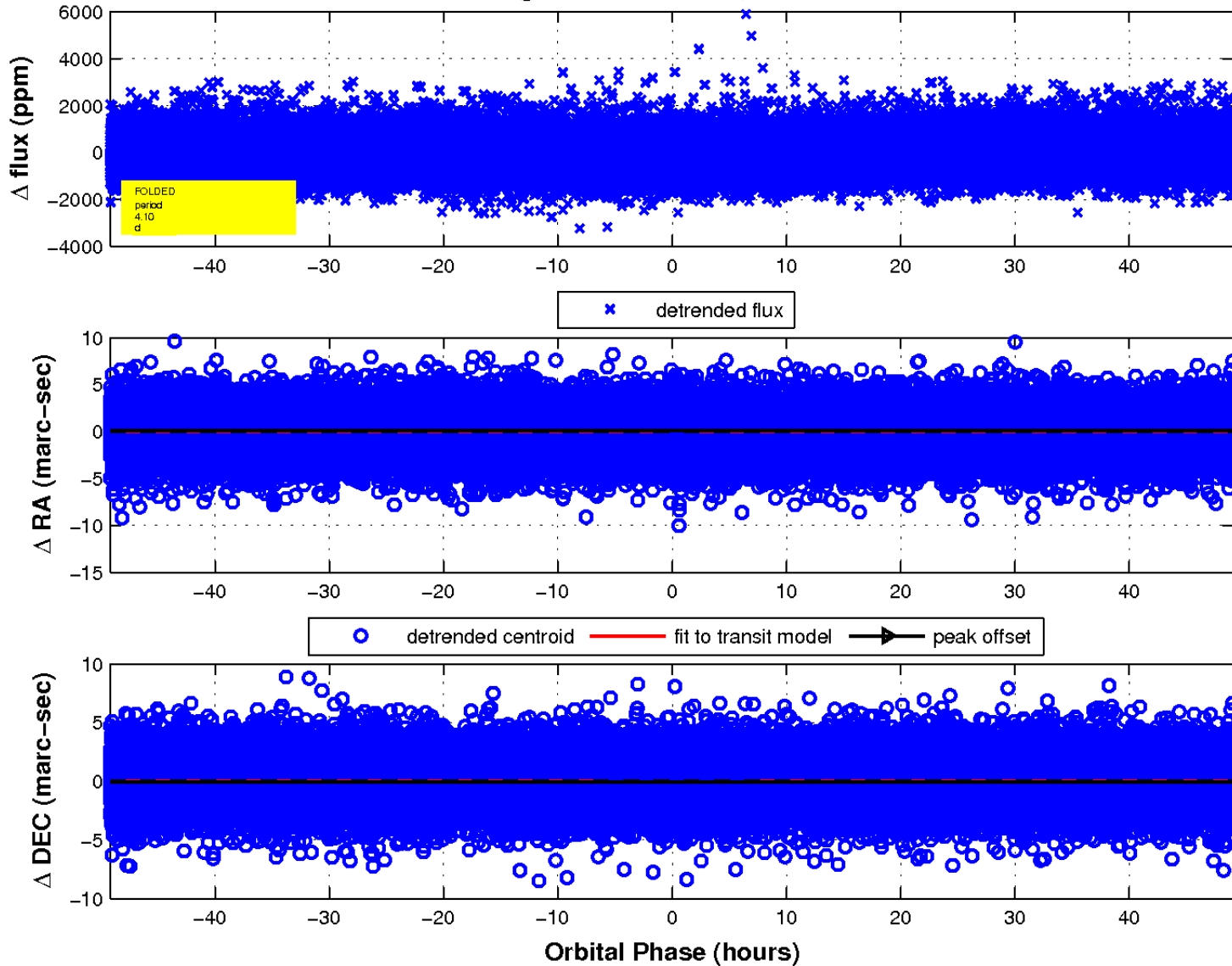
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

