

KIC 010471328

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})
010471328-01	OBS	No	0.933667	131.591238	51.2	4.973	7.4	6.5	0.83	5450	0.61	1622.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010471328-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—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.

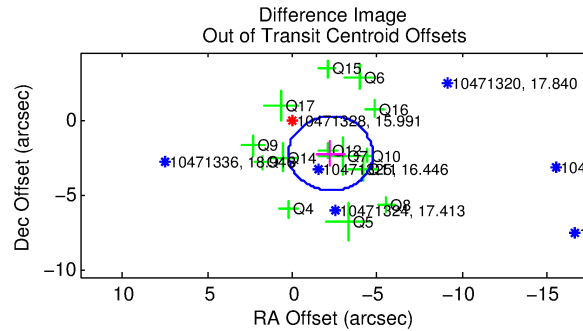
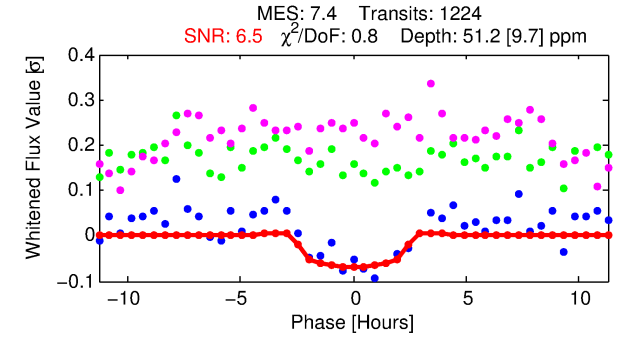
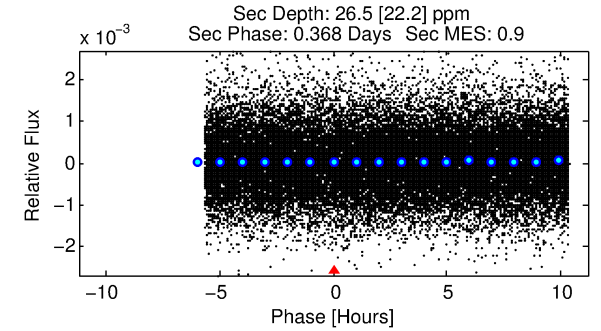
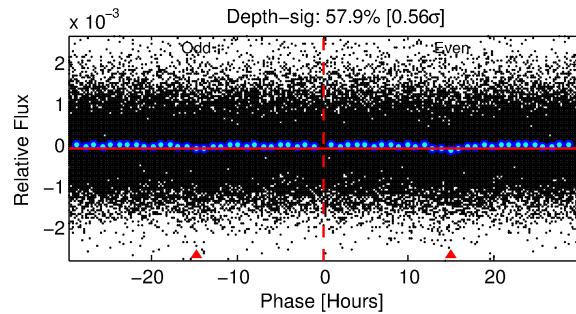
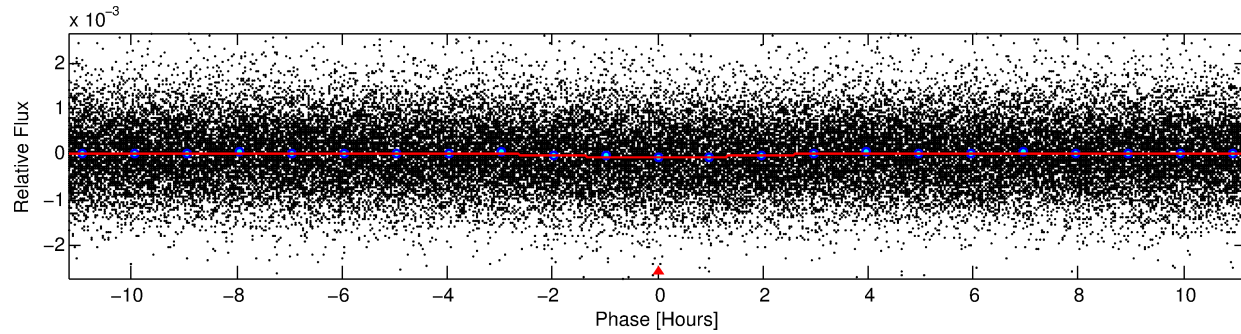
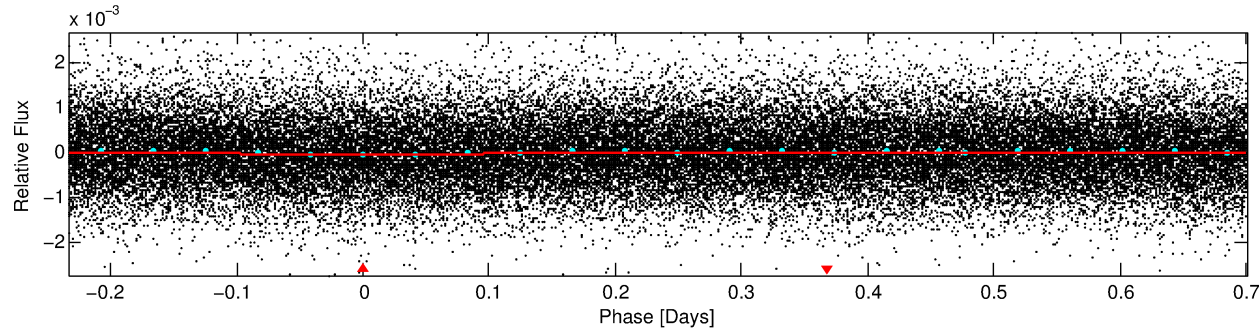
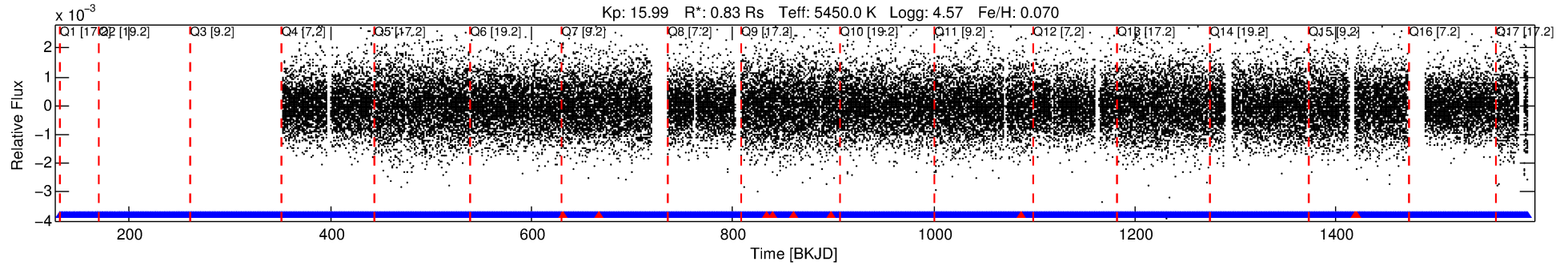
Ephemeris Match Information For 010471328-01

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
010471328-01	10471328	V2083-Cyg-pri	10342012	1:2	1485.2	306	-214	6.90	15.99	3888.70	Direct-PRF	0	1.19	1.27

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: 10471328 Candidate: 1 of 1 Period: 0.934 d



DV Fit Results:

Period = 0.93367 [0.00002] d
Epoch = 131.5912 [0.0092] BKJD
Rp/R* = 0.0068 [0.0117]
a/R* = 1.41 [4.70]
b = 0.58 [7.93]
Seff = 1622.84 [514.88]
Teq = 1618 [128] K
Rp = 0.61 [1.06] Re
a = 0.0183 [0.0036] AU
Ag = 13.07 [46.52] [0.26 σ]
Teff = 4758 [4222] K [0.74 σ]

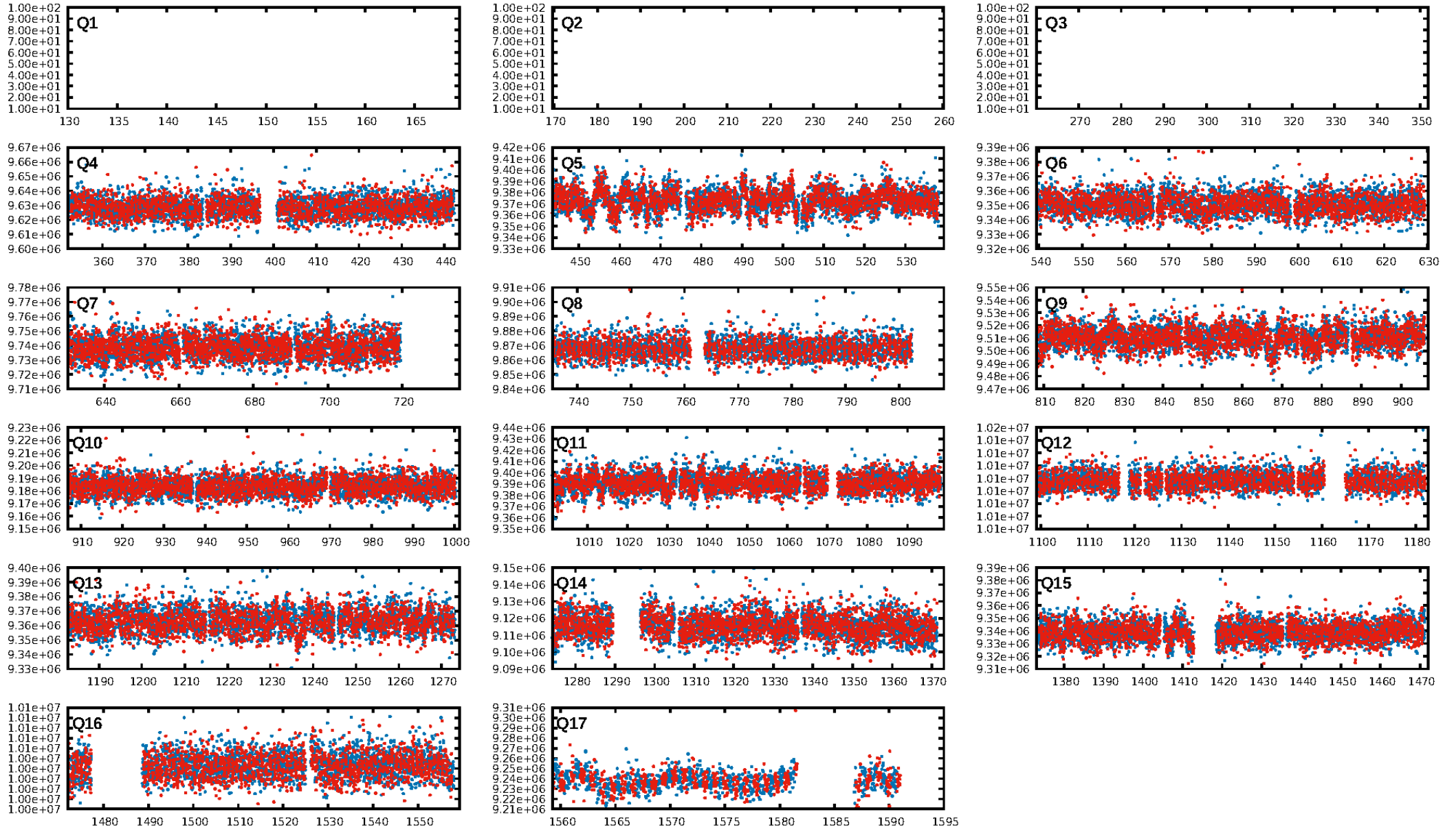
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.35e-13
RollingBand-fgt: 0.99 [1185/1194]
GhostDiagnostic-chr: -0.3303
Centroid-sig: 1.0%
Centroid-so: 4.560 arcsec [2.34 σ]
OotOffset-rm: 3.208 arcsec [3.88 σ]
KicOffset-rm: 3.556 arcsec [4.27 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

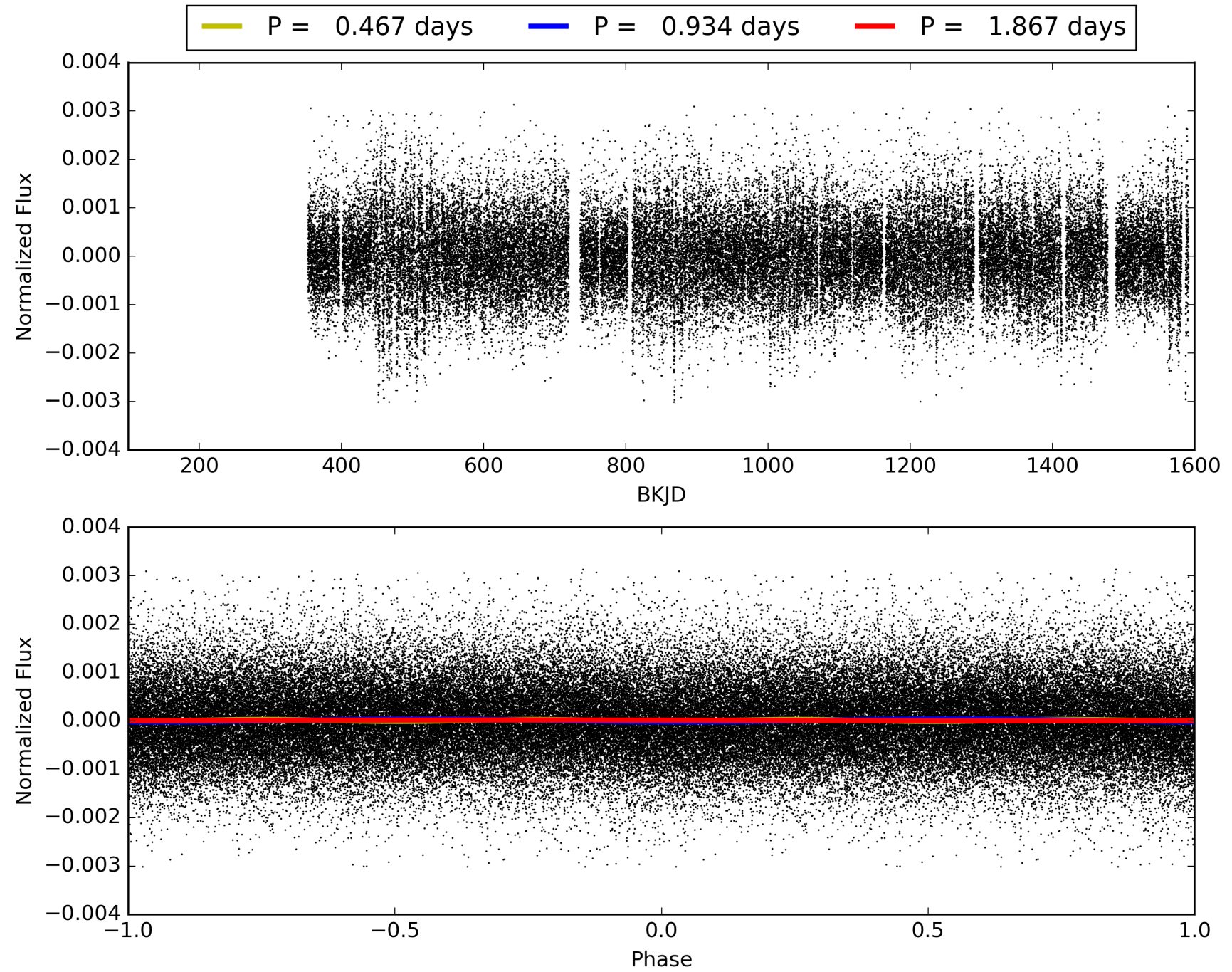
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:40:34 Z

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

TCE 010471328-01, PDC Light Curves

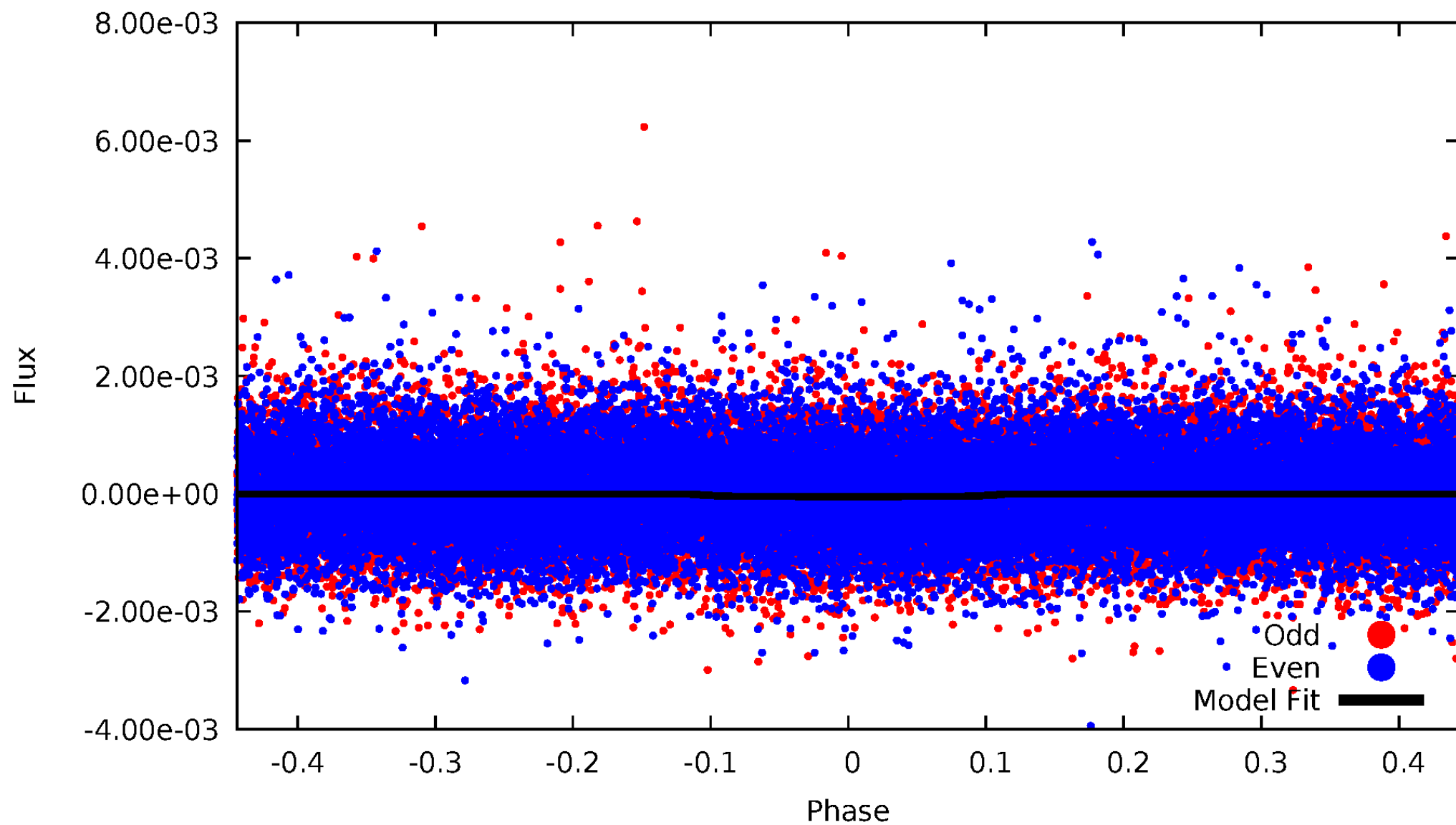


TCE 010471328-01



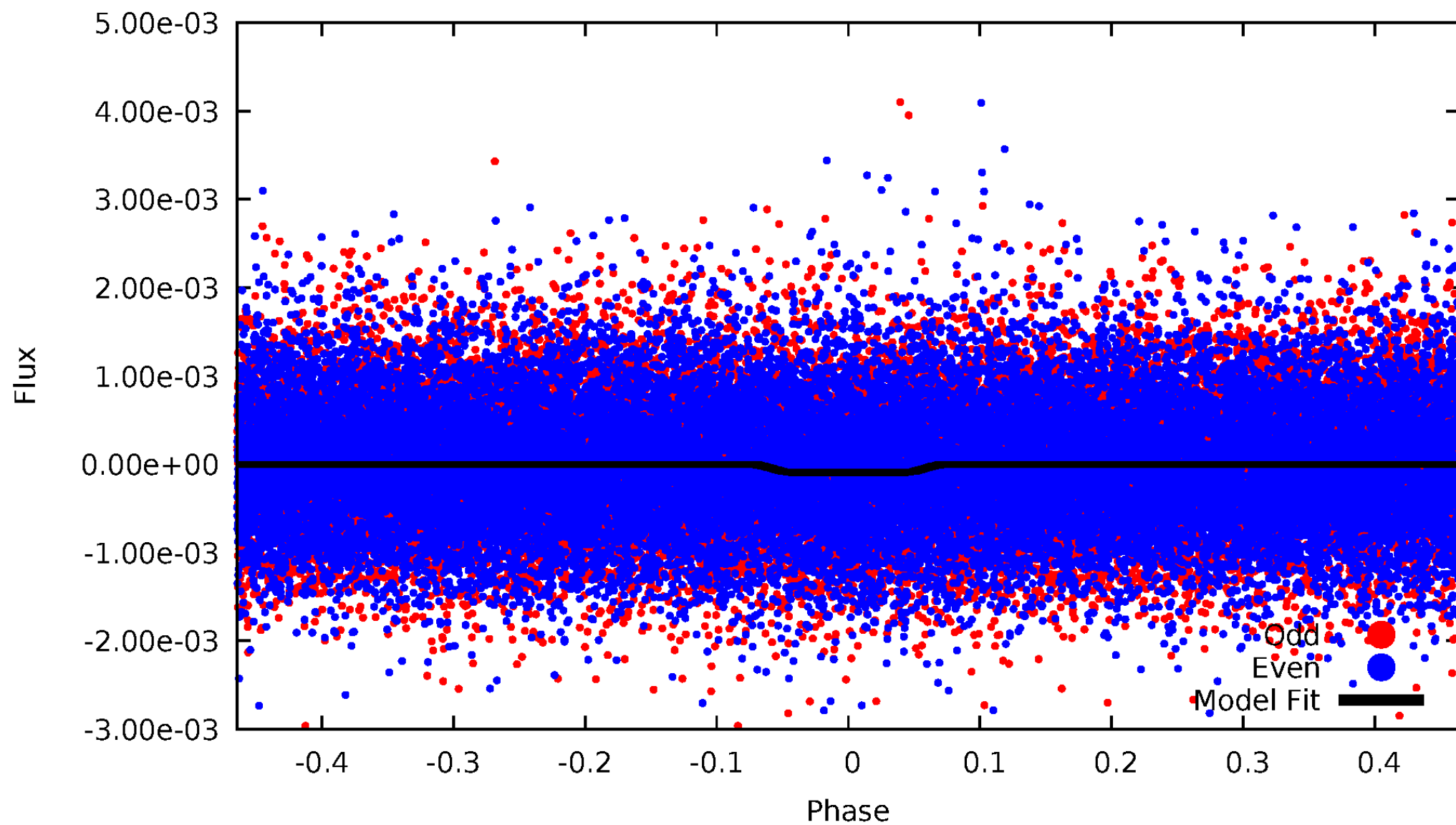
DV Odd/Even

TCE 010471328-01



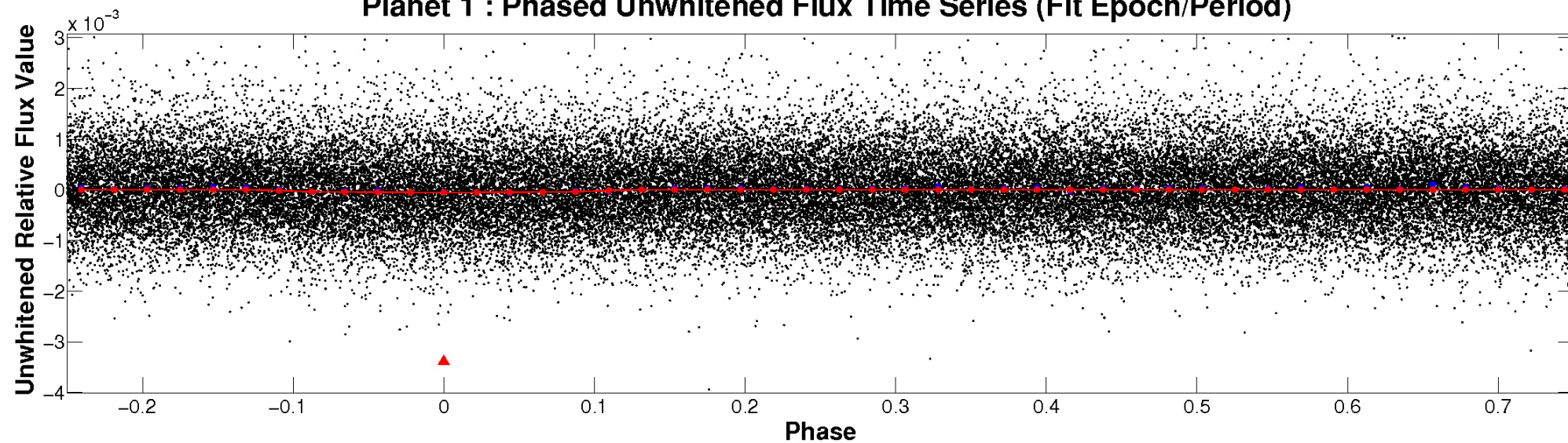
ALT Odd/Even

TCE 010471328-01

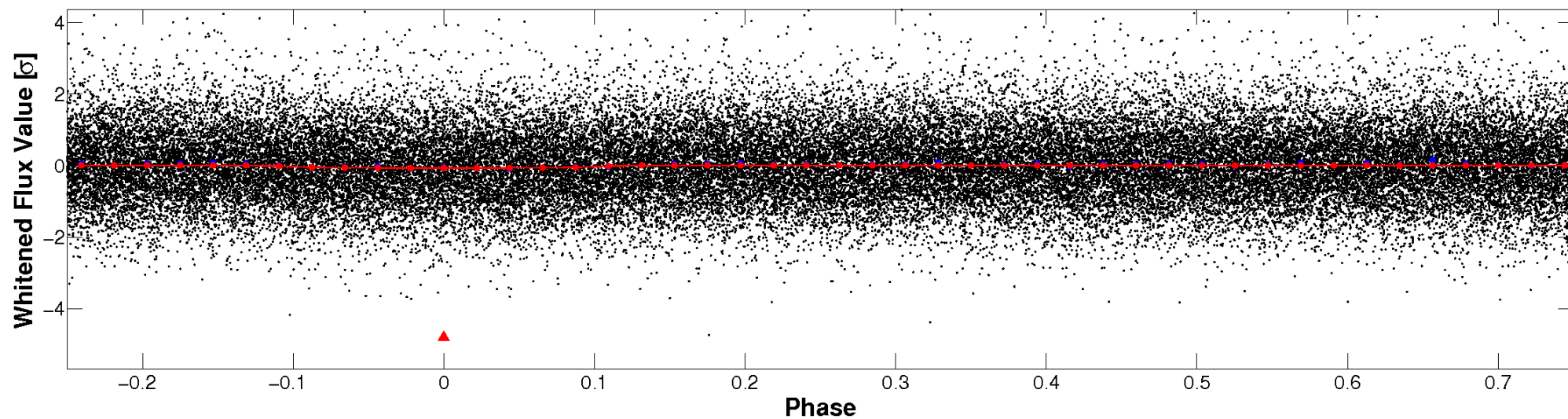


Non-Whitened Vs. Whitened Light Curve

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

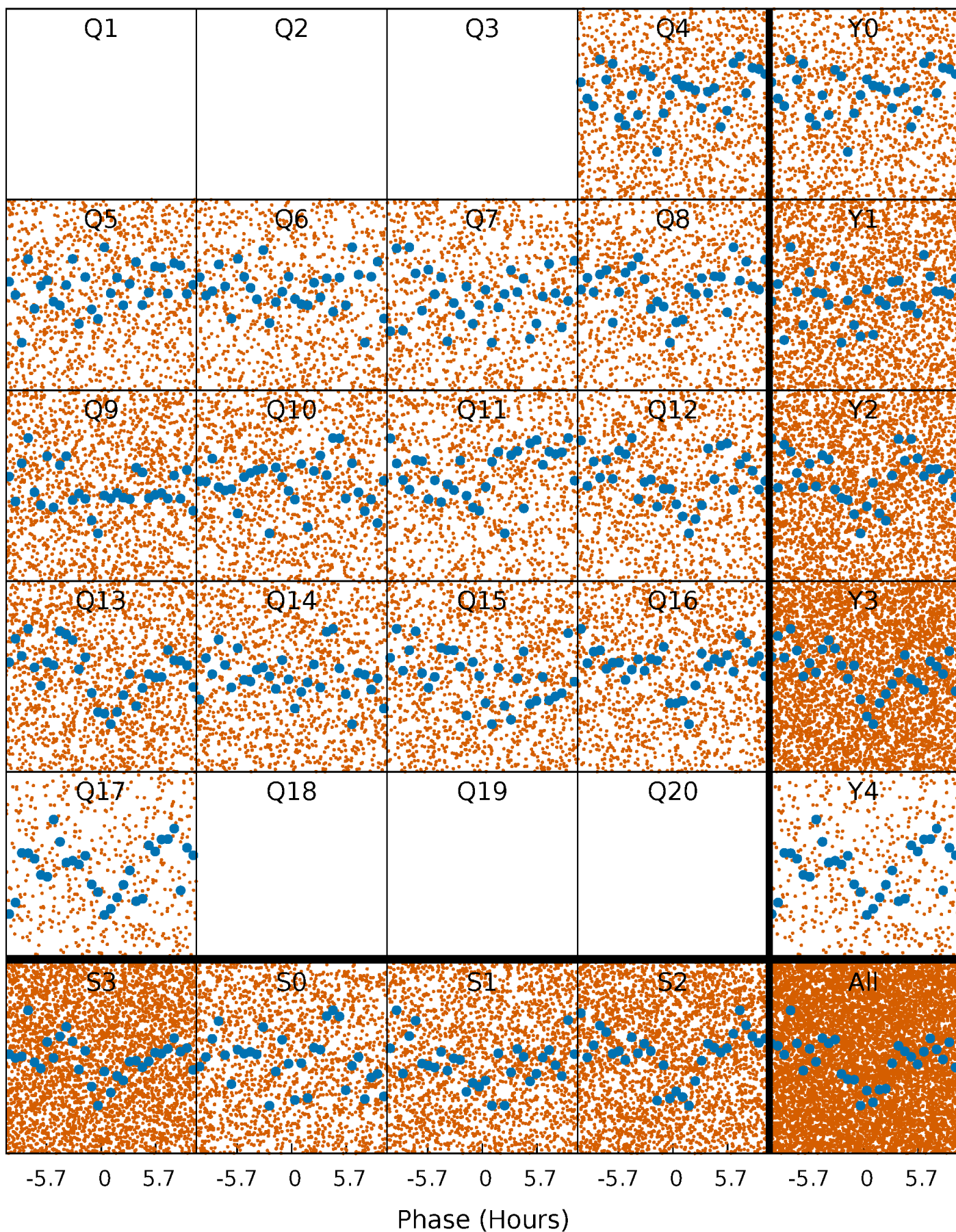


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



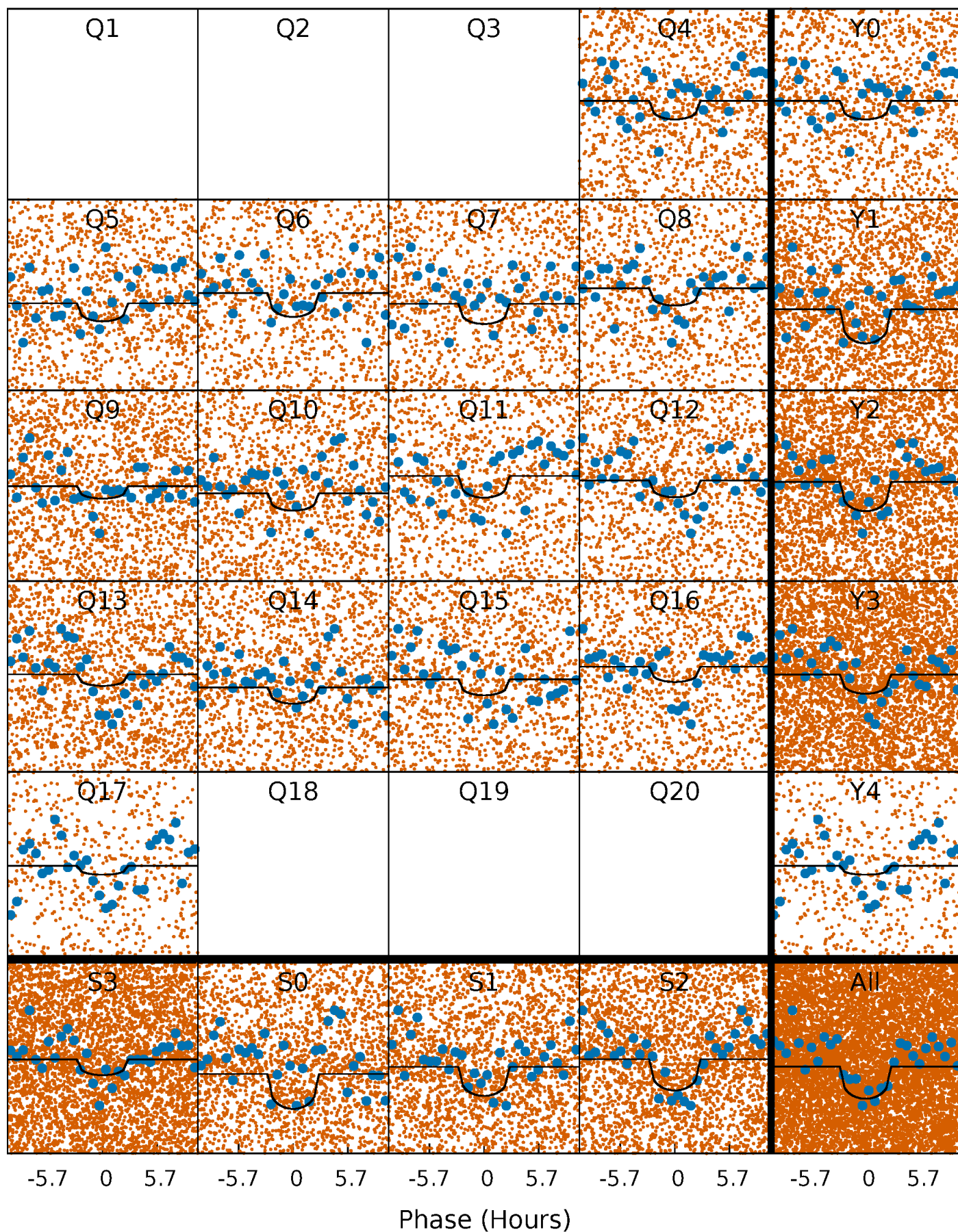
PDC Quarter-Phased Transit Curves

TCE 010471328-01 P= 0.933667 Days $T_0=131.591238$ (BKJD)



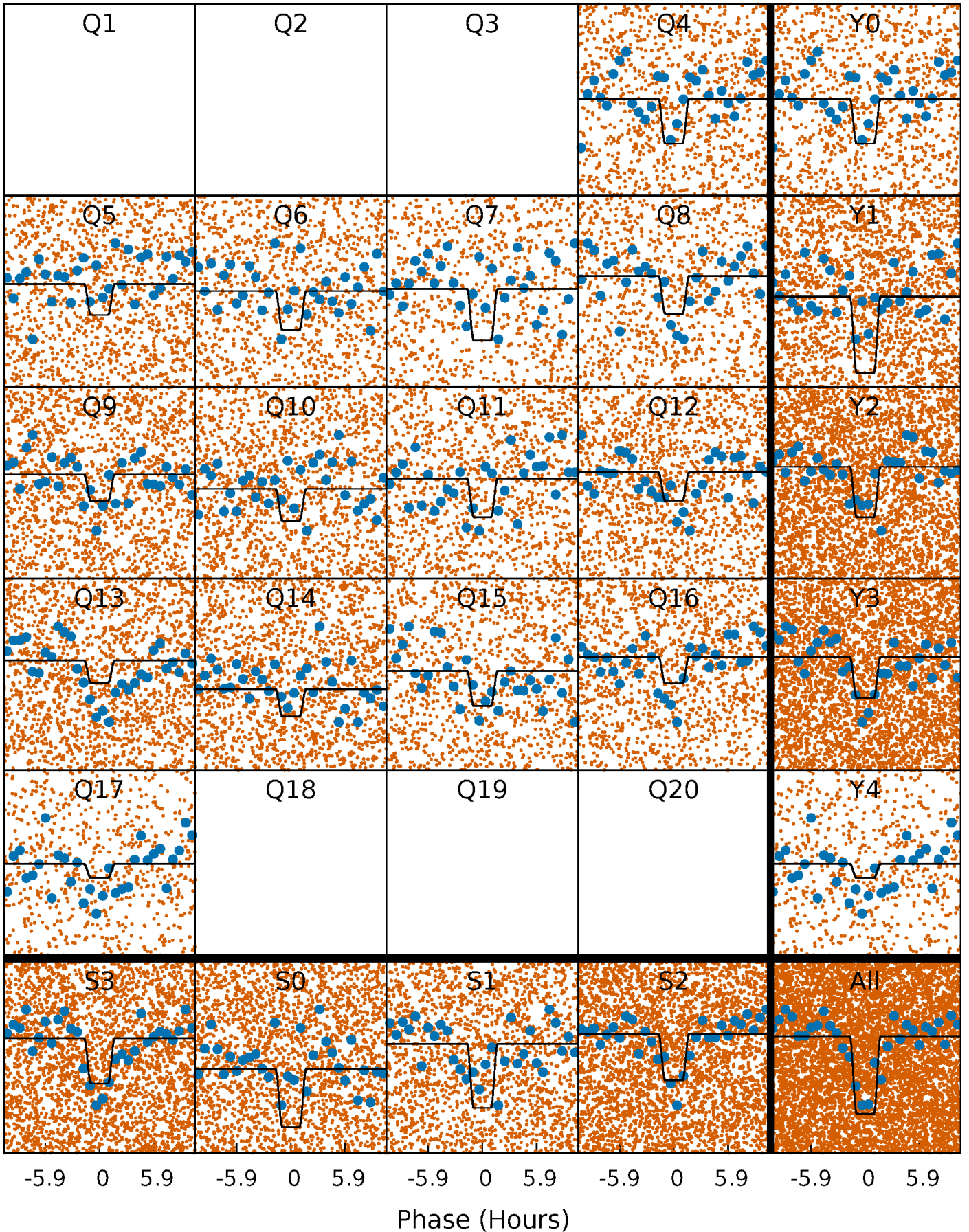
DV Quarter-Phased Transit Curves

TCE 010471328-01 P= 0.933667 Days $T_0=131.591238$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

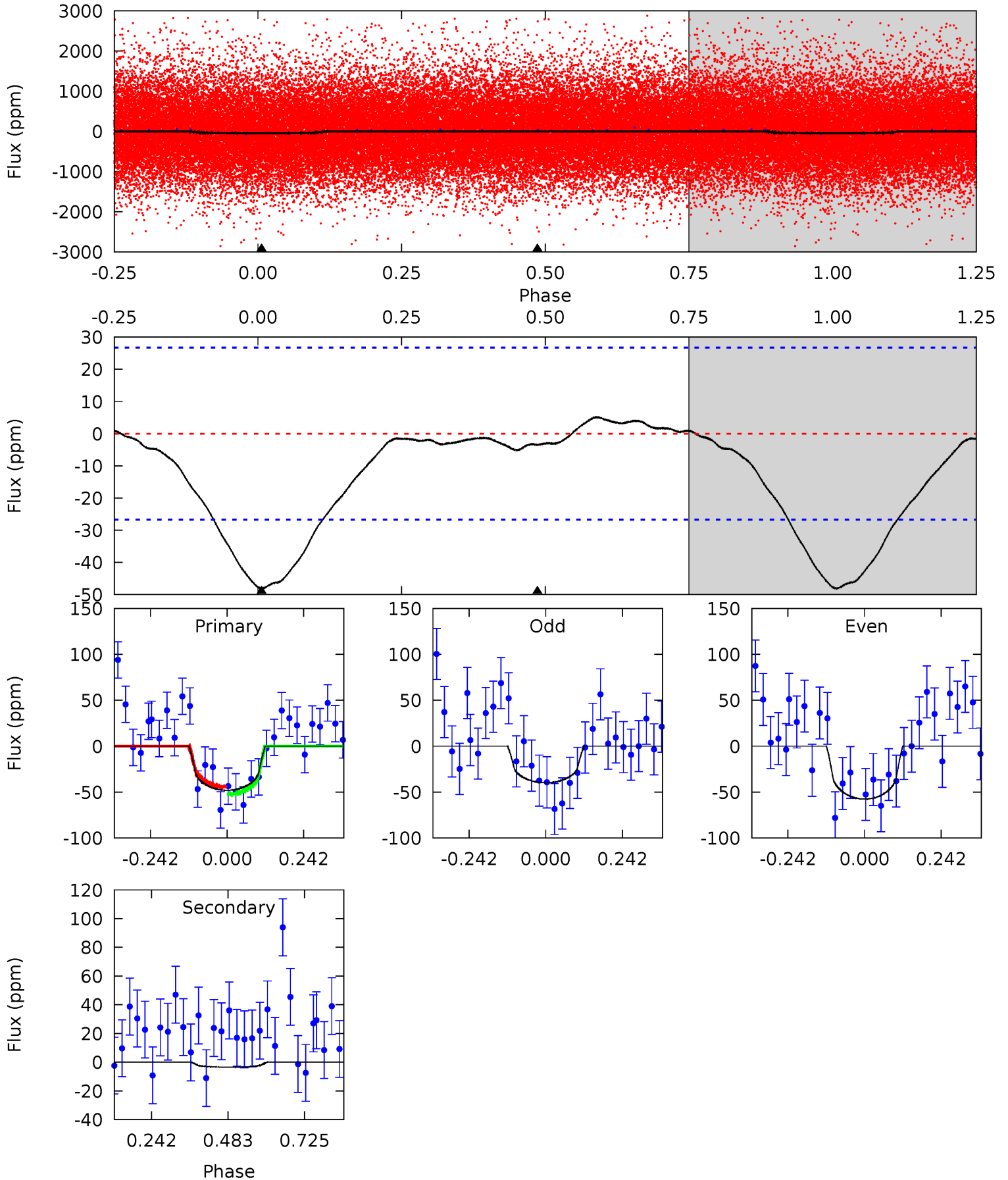
TCE 010471328-01 P= 0.933759 Days $T_0=131.505921$ (BKJD)



DV Model-Shift Uniqueness Test

010471328-01, P = 0.933667 Days, E = 131.591238 Days

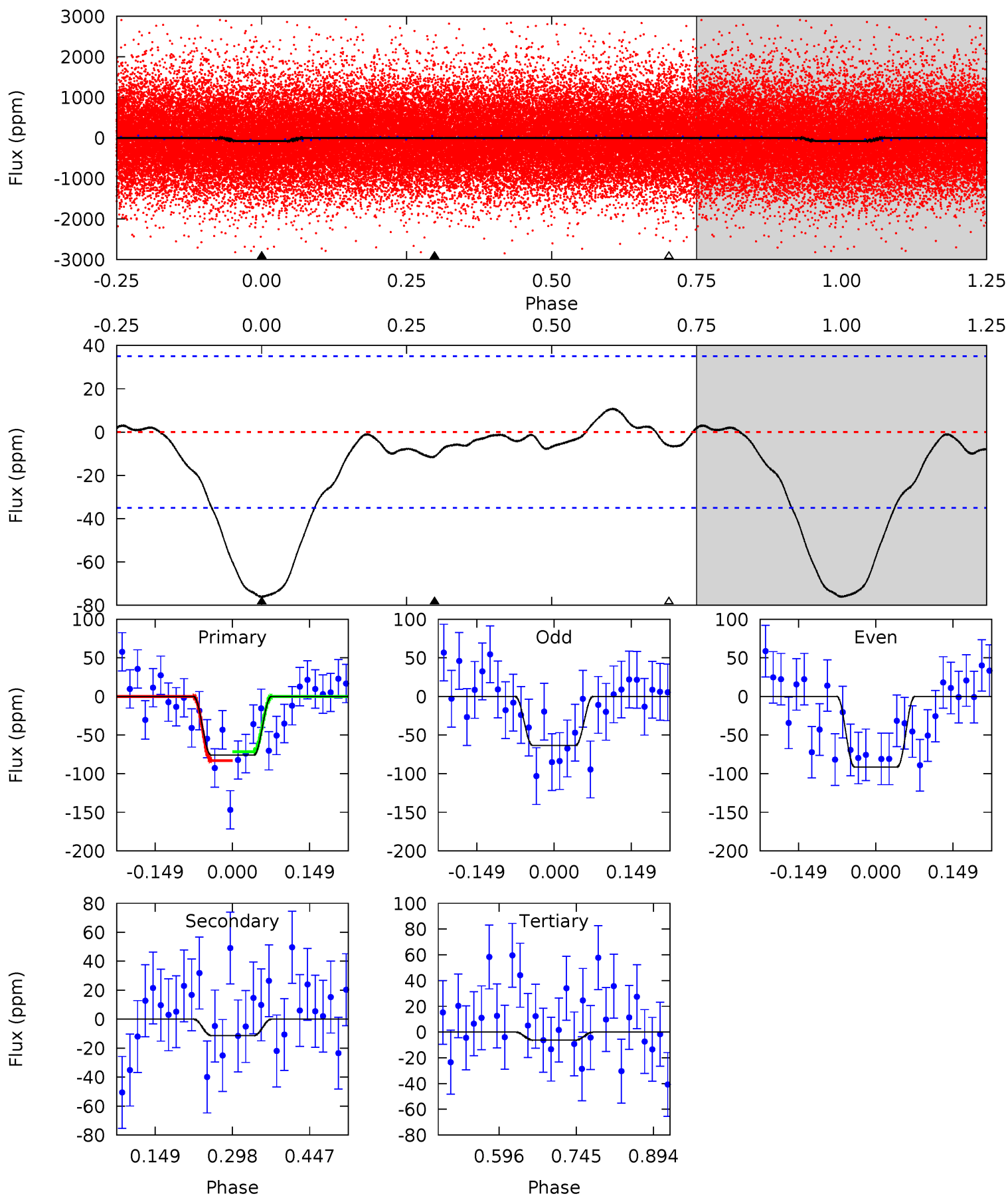
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	0.57	0	0	4.38	1.17	0.19	7.87	7.87	0.57	0.57	1.45	0.87	0.10	0.65



Alt Model-Shift Uniqueness Test

010471328-01, P = 0.933759 Days, E = 131.505921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	1.44	0.79	0	4.48	1.44	0.62	8.93	9.72	0.65	1.44	1.78	1.01	0.12	0.73



Stellar Parameters For KIC 010471328

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5450^{+179}_{-179}	$4.573^{+0.028}_{-0.161}$	$0.070^{+0.250}_{-0.300}$	$0.830^{+0.186}_{-0.066}$	$0.939^{+0.074}_{-0.111}$	$2.316^{+0.367}_{-0.981}$
	+3%/-3%	+1%/-4%	+357%/-429%	+22%/-8%	+8%/-12%	+16%/-42%
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 010471328-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 6	$1.04^{+0.93}_{-0.68}$	2310^{+130}_{-96}	2377^{+1602}_{-5315}	$0.407^{+3.888}_{-0.675}$
Alt.	-11 ± 8	$1.29^{+0.94}_{-0.84}$	2321^{+132}_{-113}	3009^{+1444}_{-5416}	$1.032^{+7.194}_{-0.846}$

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 $A_{obs} \gg 1.0$

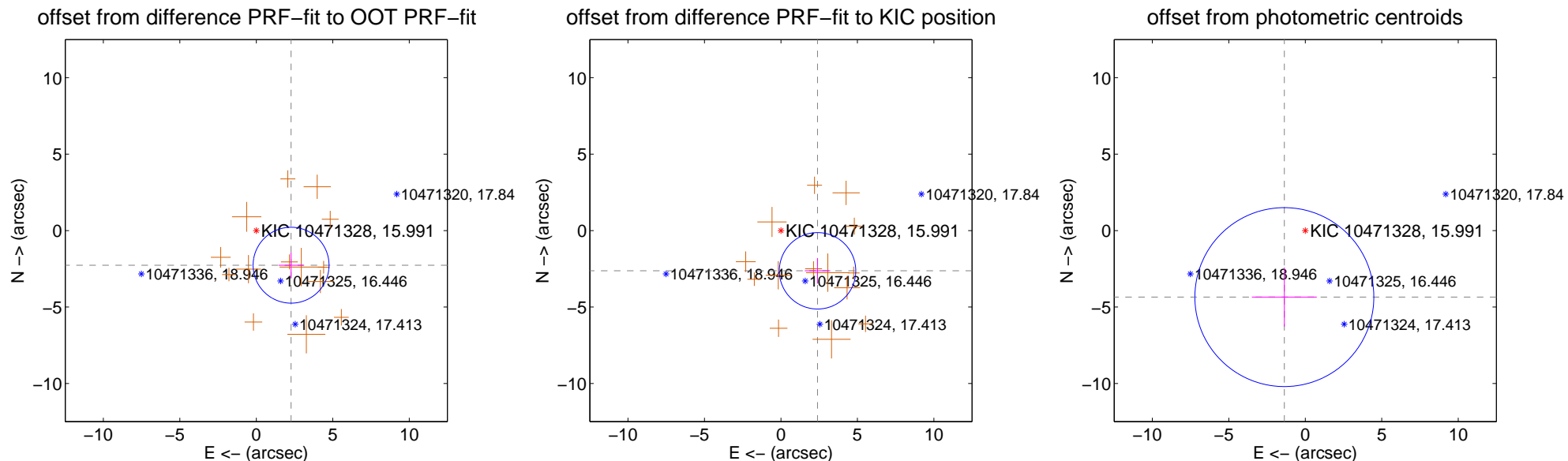
DV Centroid Data

Supplemental centroid analysis for 010471328-01. Kepler magnitude: 15.99. Transit SNR 6.45

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.208 ± 0.827	3.88	-2.273 ± 0.815	-2.264 ± 0.839
PRF-fit source offset from KIC position	3.556 ± 0.833	4.27	-2.393 ± 0.829	-2.631 ± 0.836
photometric centroid source offset	4.56 ± 1.95	2.34	1.37 ± 2.12	-4.35 ± 1.93



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.

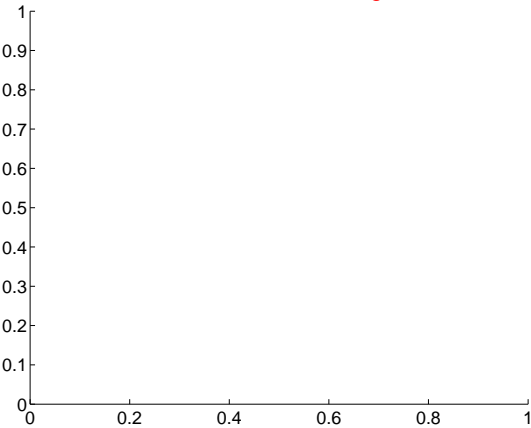
Q1 no difference image



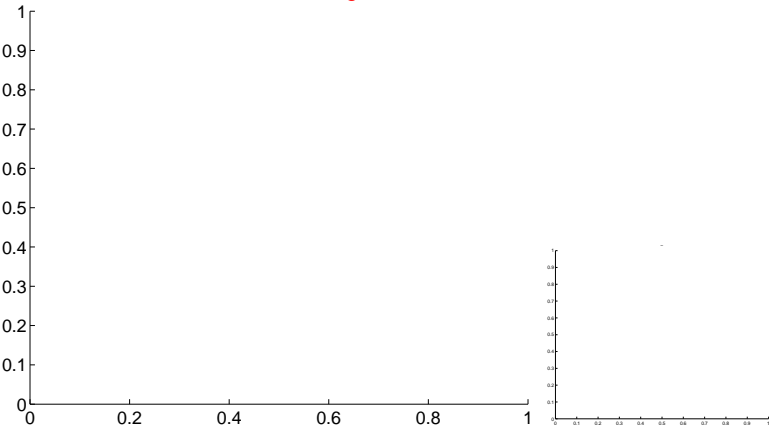
Q1 no OOT image



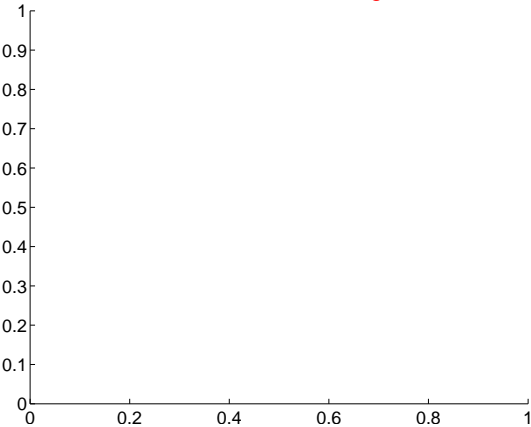
Q2 no difference image



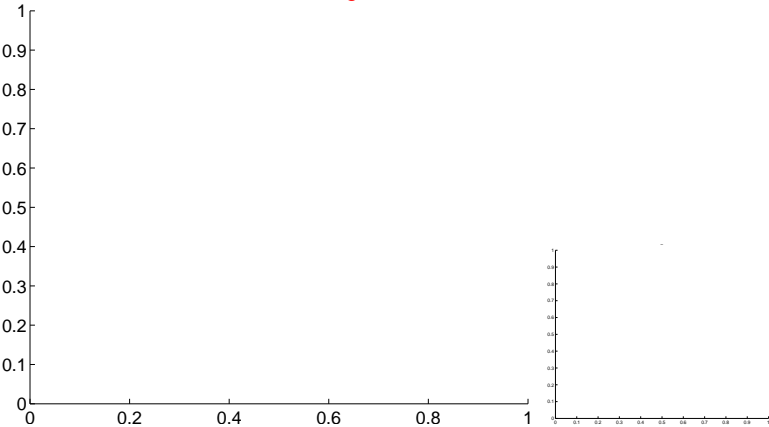
Q2 no OOT image



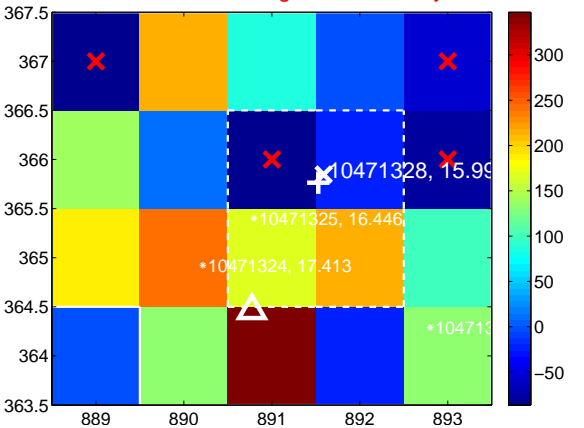
Q3 no difference image



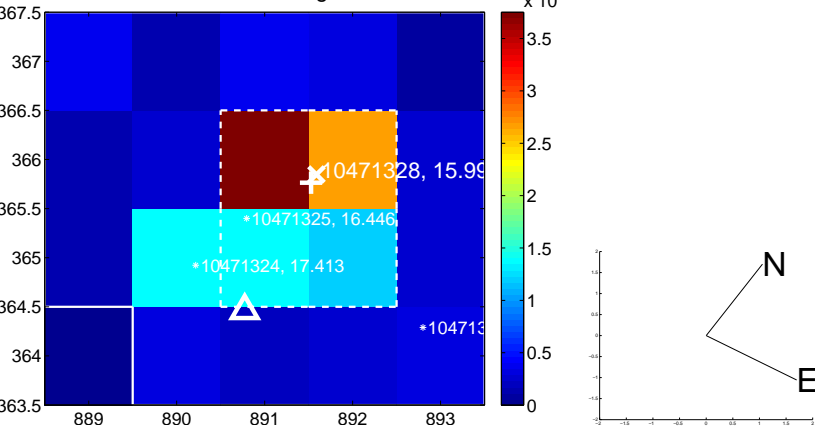
Q3 no OOT image



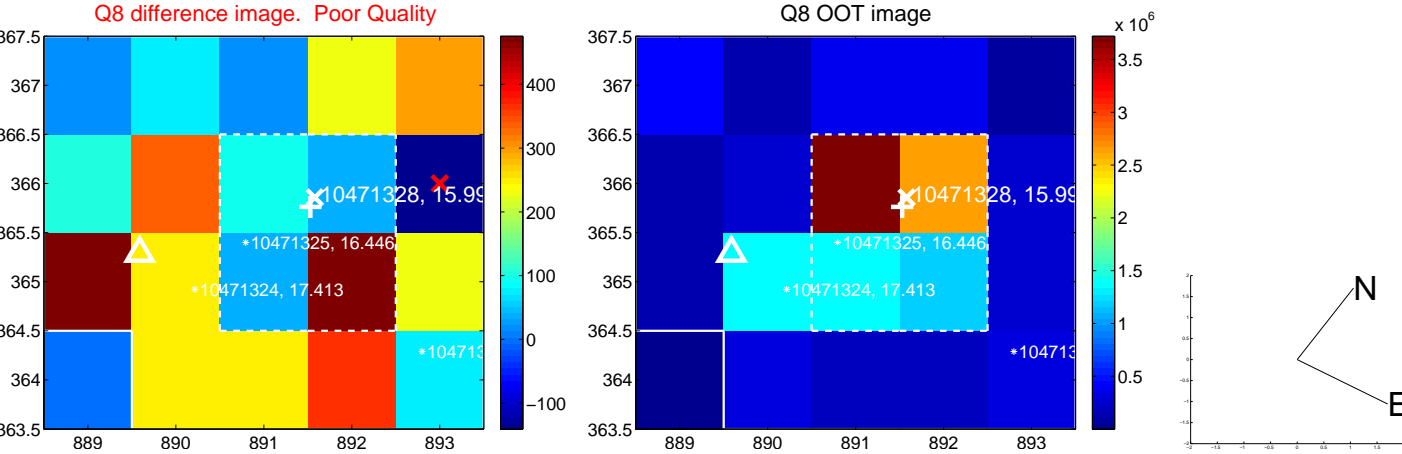
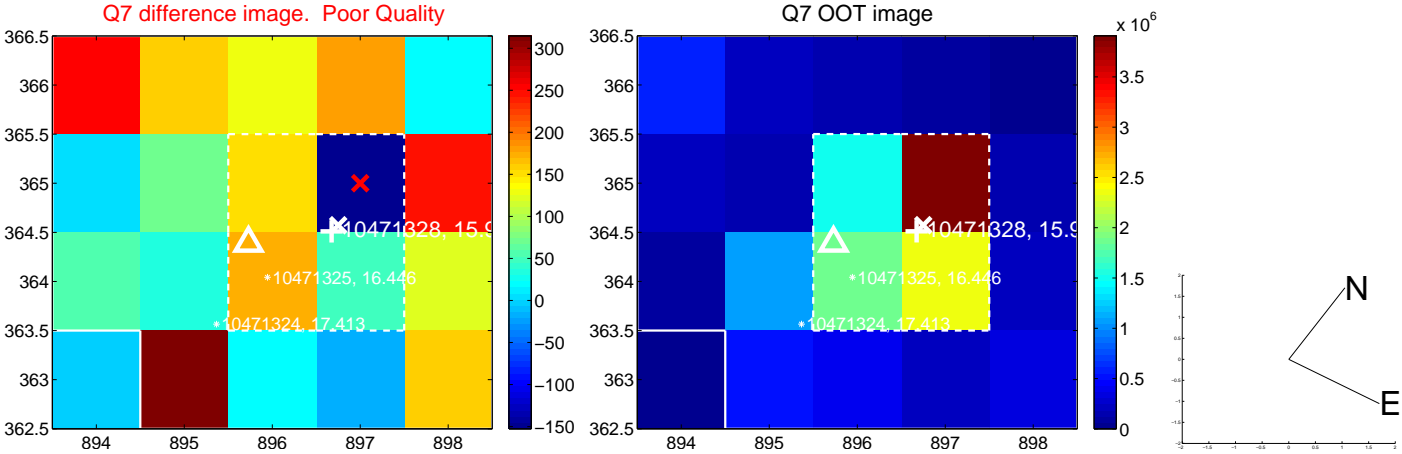
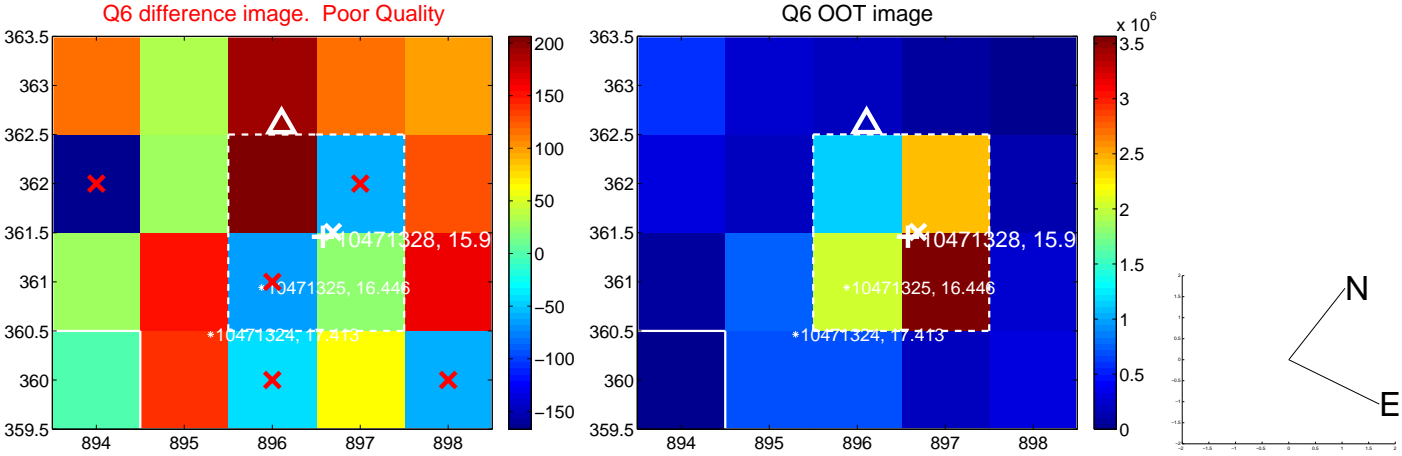
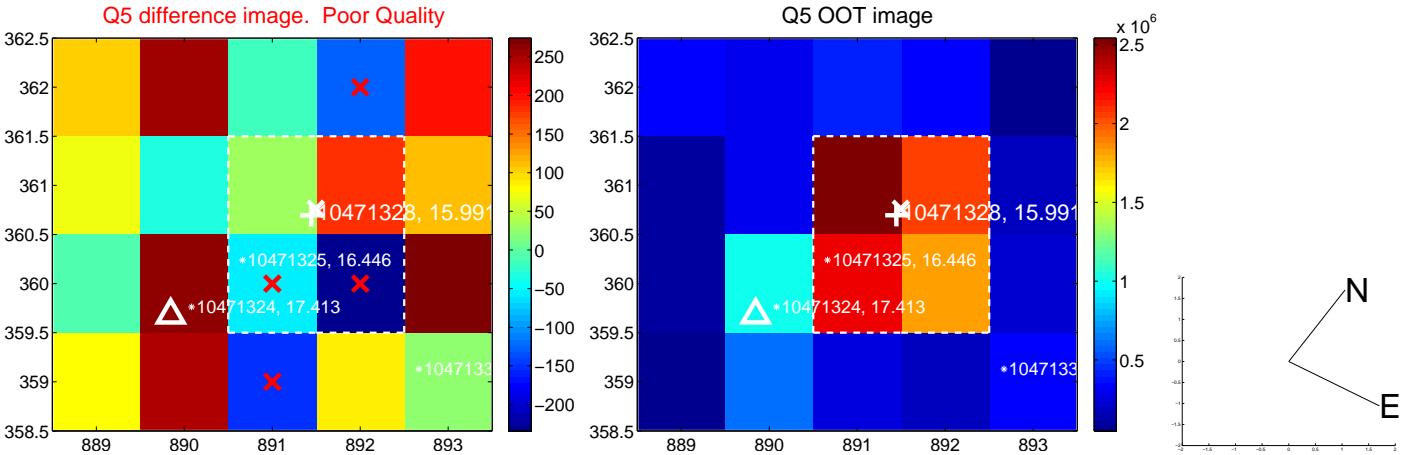
Q4 difference image. Poor Quality



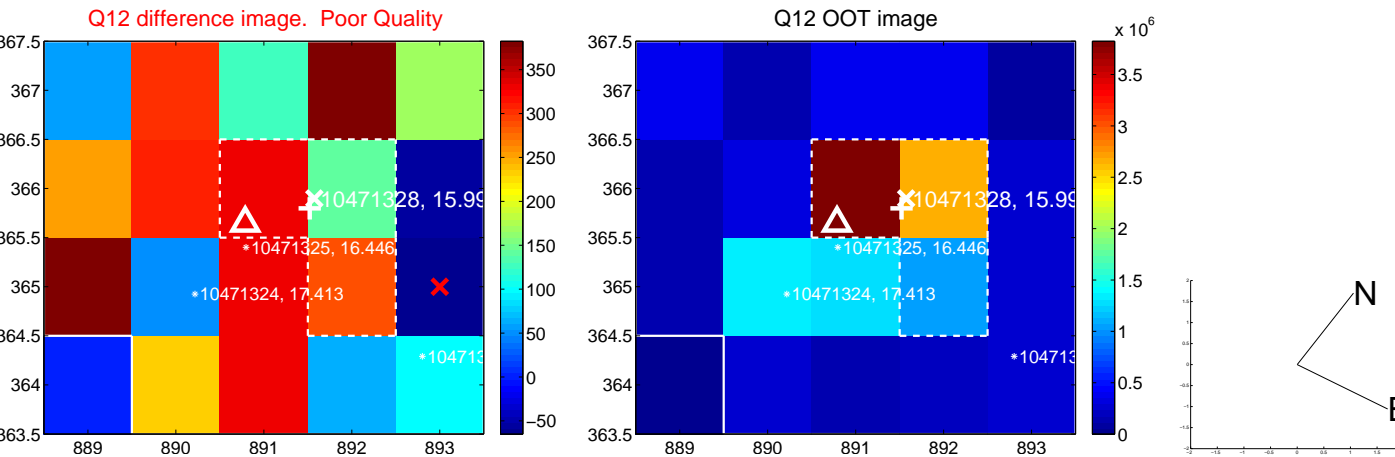
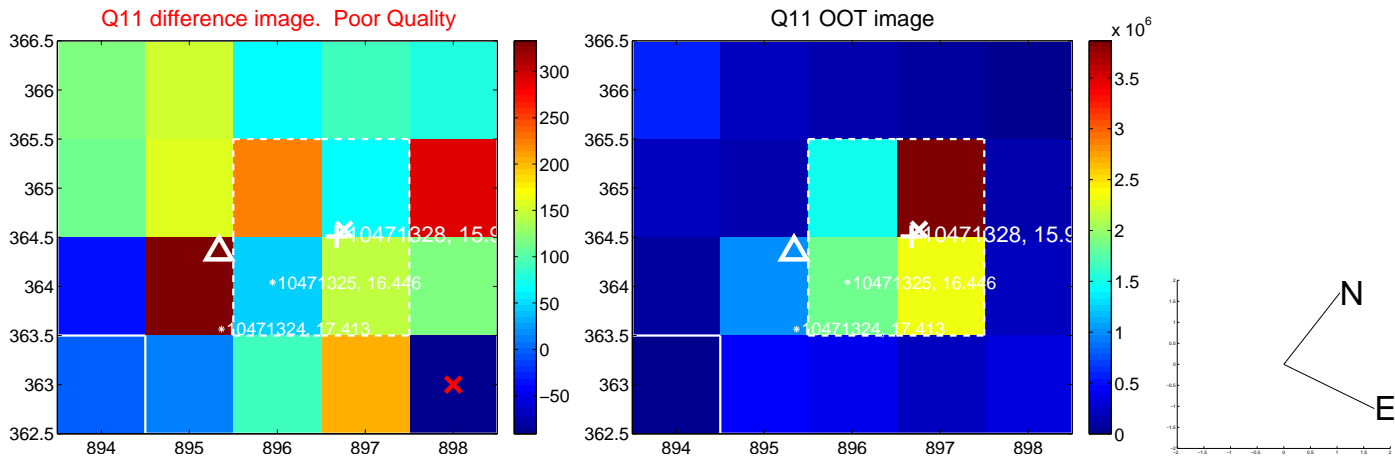
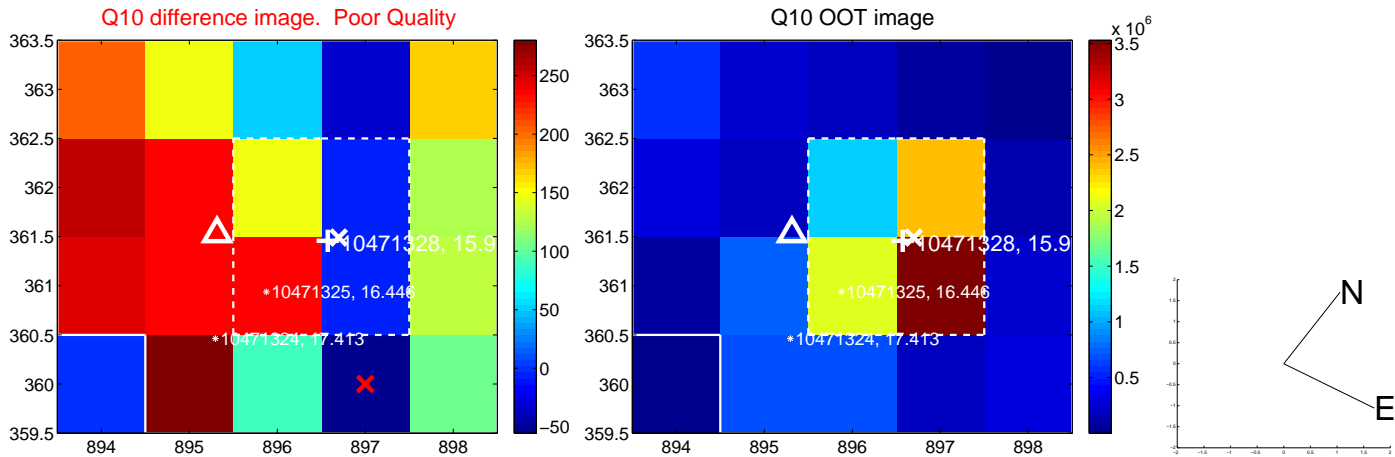
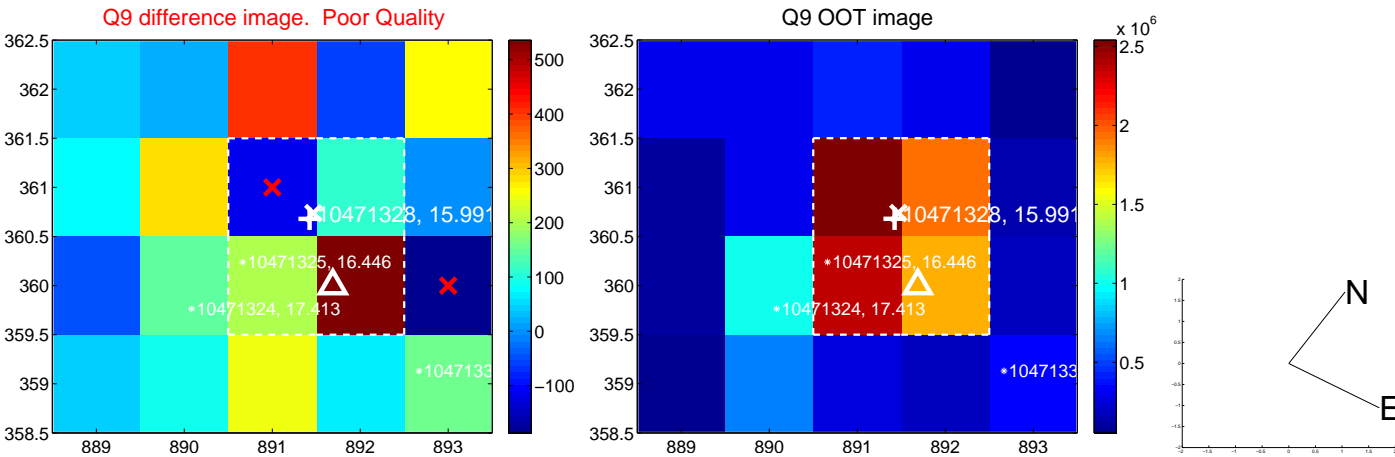
Q4 OOT image



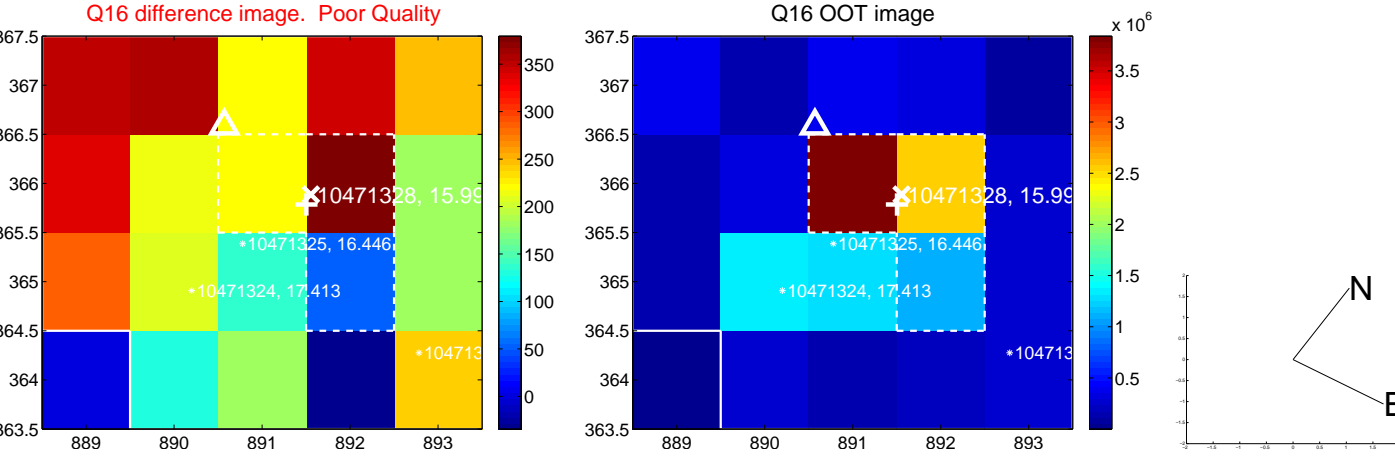
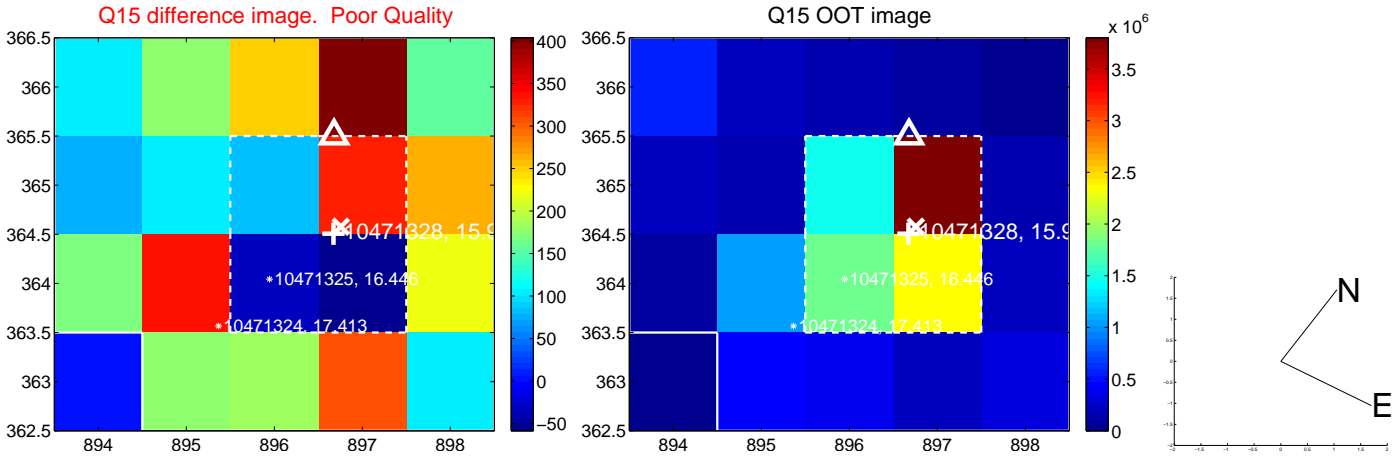
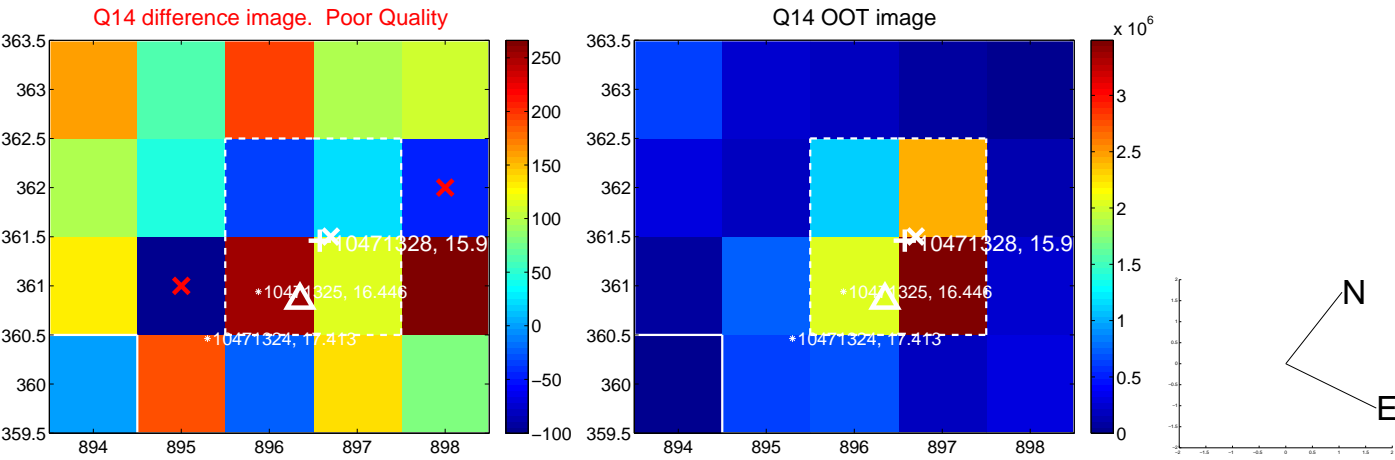
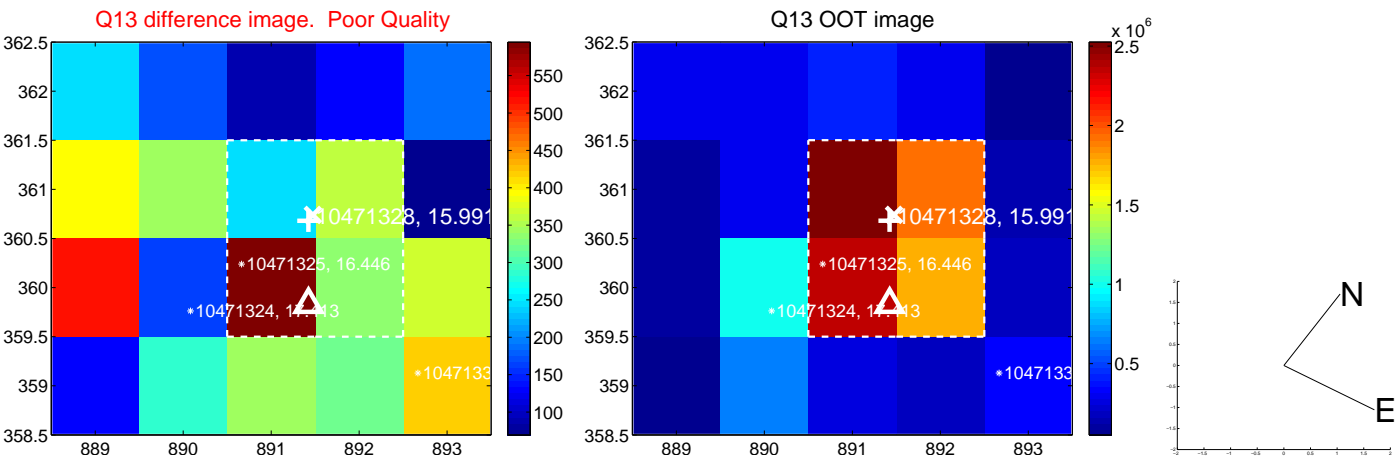
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



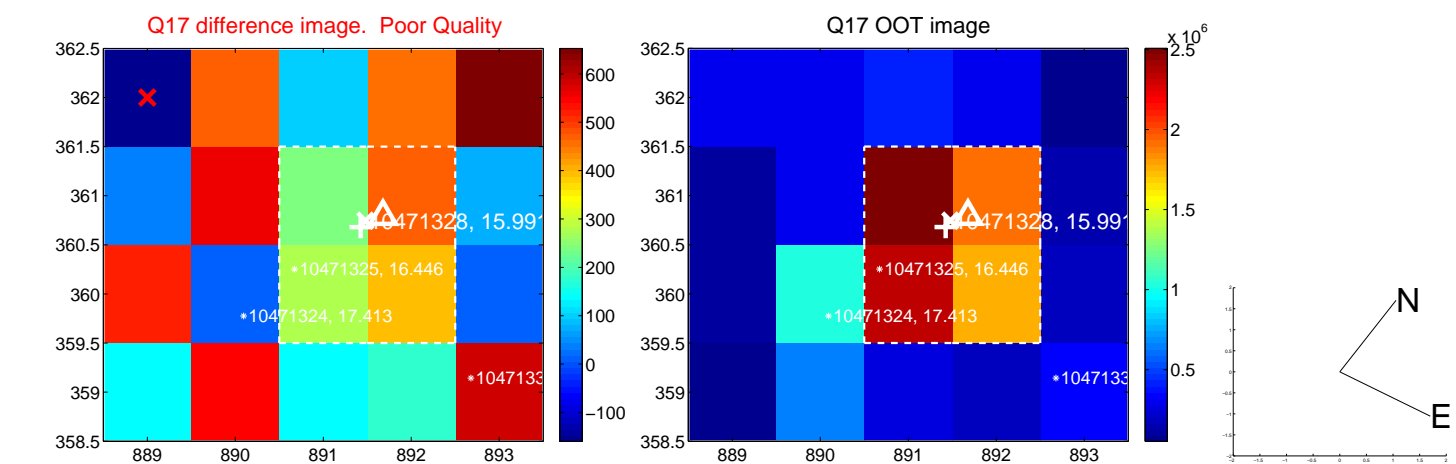
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



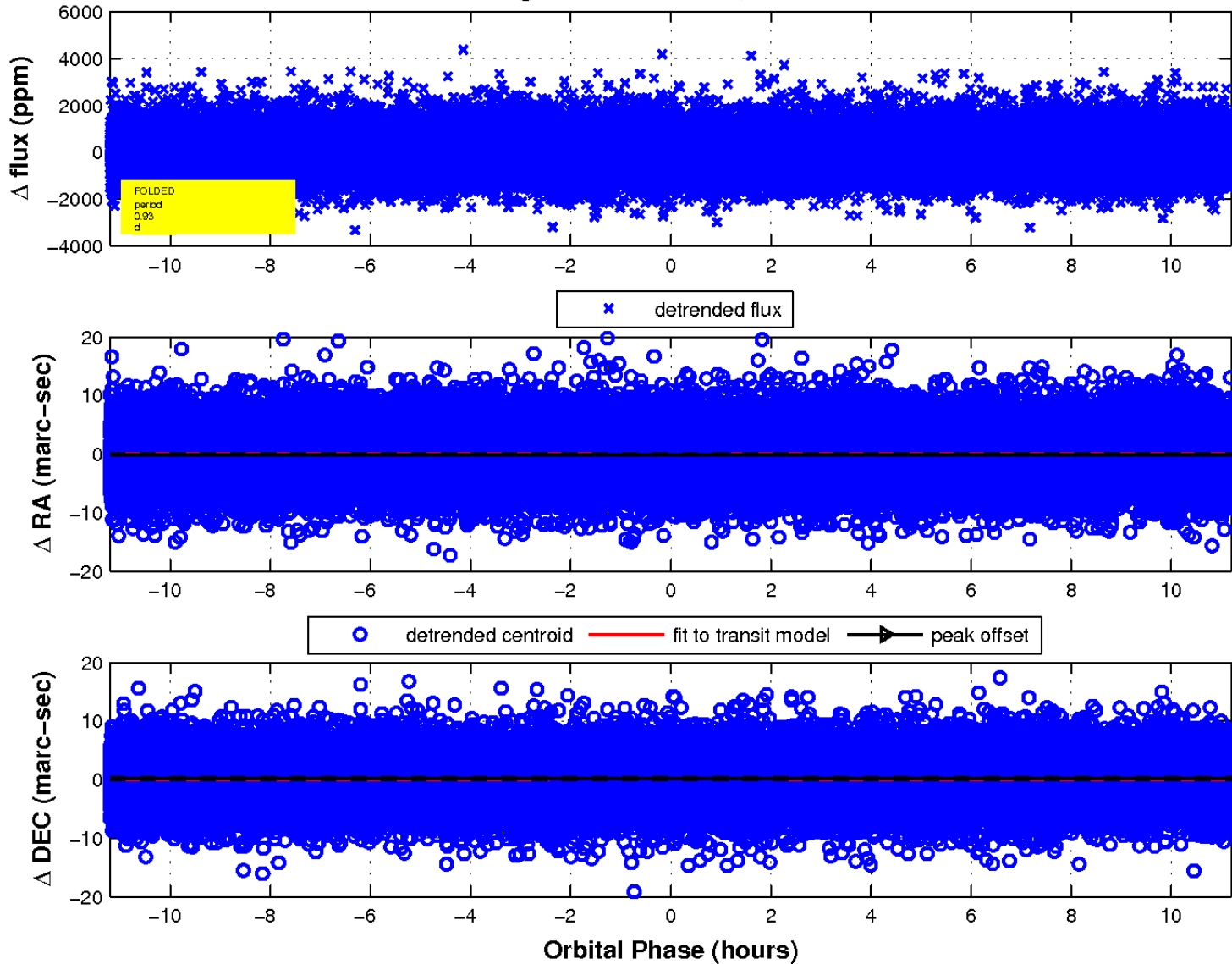
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

