

KIC 009367382

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})
009367382-01	OBS	No	1.061774	131.603776	43.3	11.286	14.4	19.1	1.91	7375	1.27	17813.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009367382-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

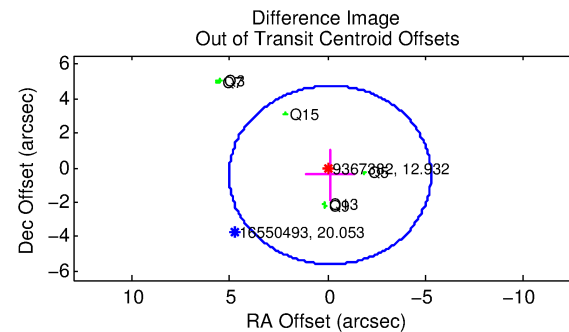
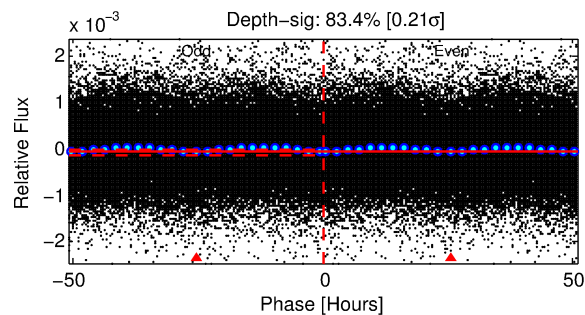
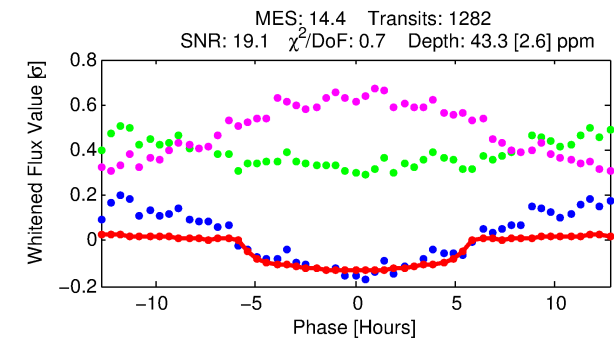
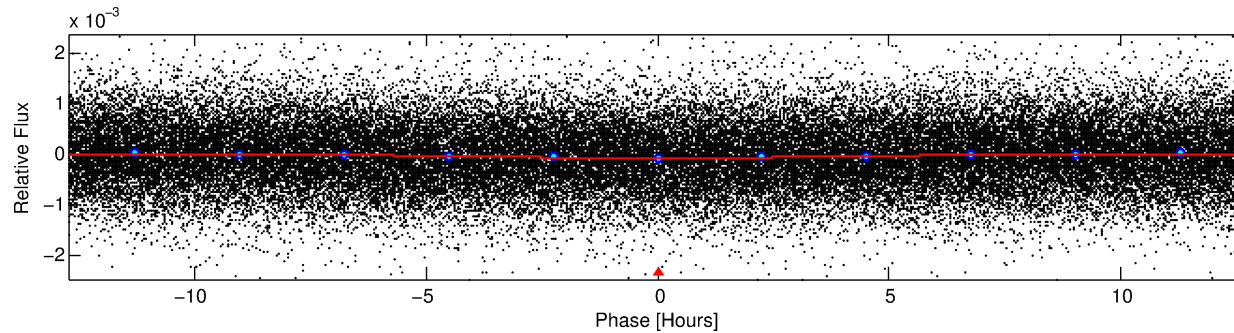
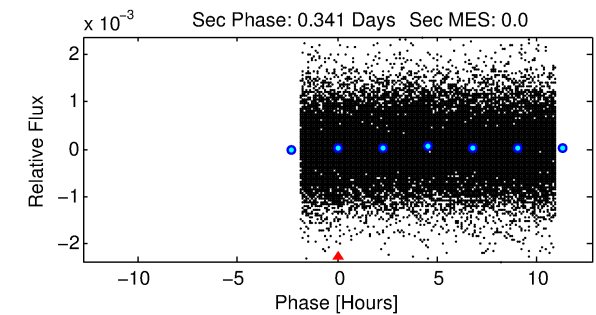
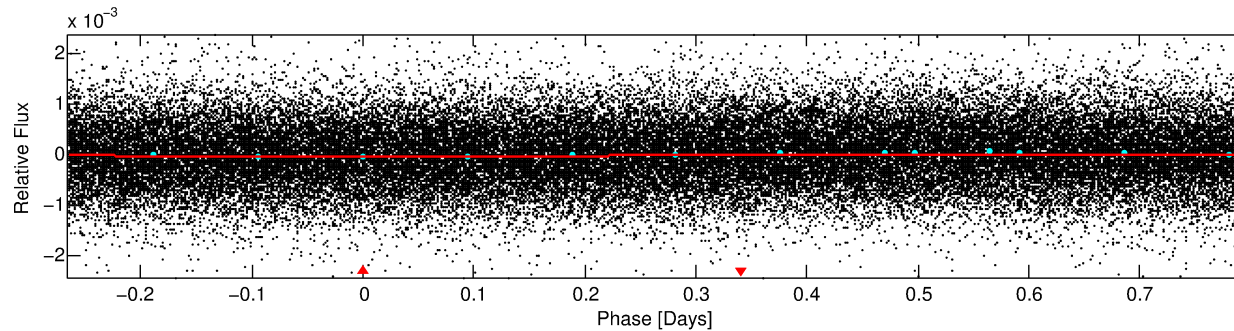
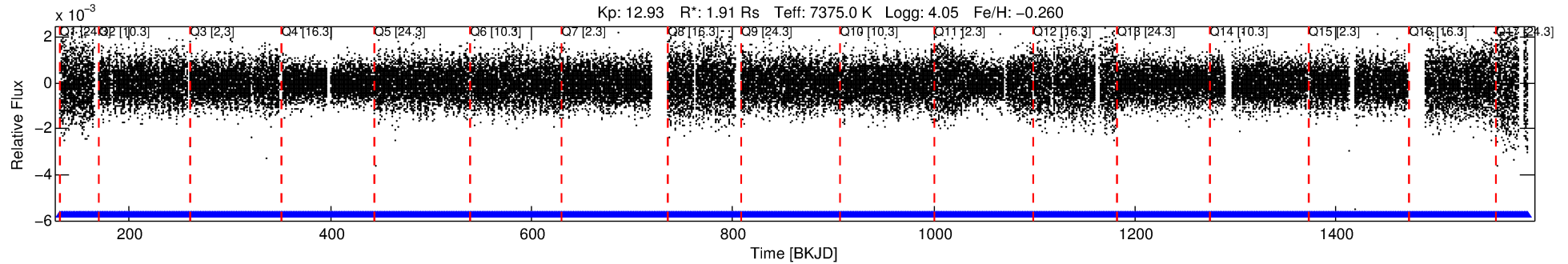
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009367382-01

No Significant Match Found

DV One-Page Summary

KIC: 9367382 Candidate: 1 of 1 Period: 1.062 d



DV Fit Results:

Period = 1.06177 [0.00001] d
Epoch = 131.6038 [0.0066] BKJD
Rp/R* = 0.0061 [0.0044]
a/R* = 1.02 [0.17]
b = 0.01 [332.39]
Seff = 17813.12 [7252.67]
Teff = 2946 [300] K
Rp = 1.27 [0.98] Re
a = 0.0233 [0.0057] AU
Ag = N/A
Teffp = N/A

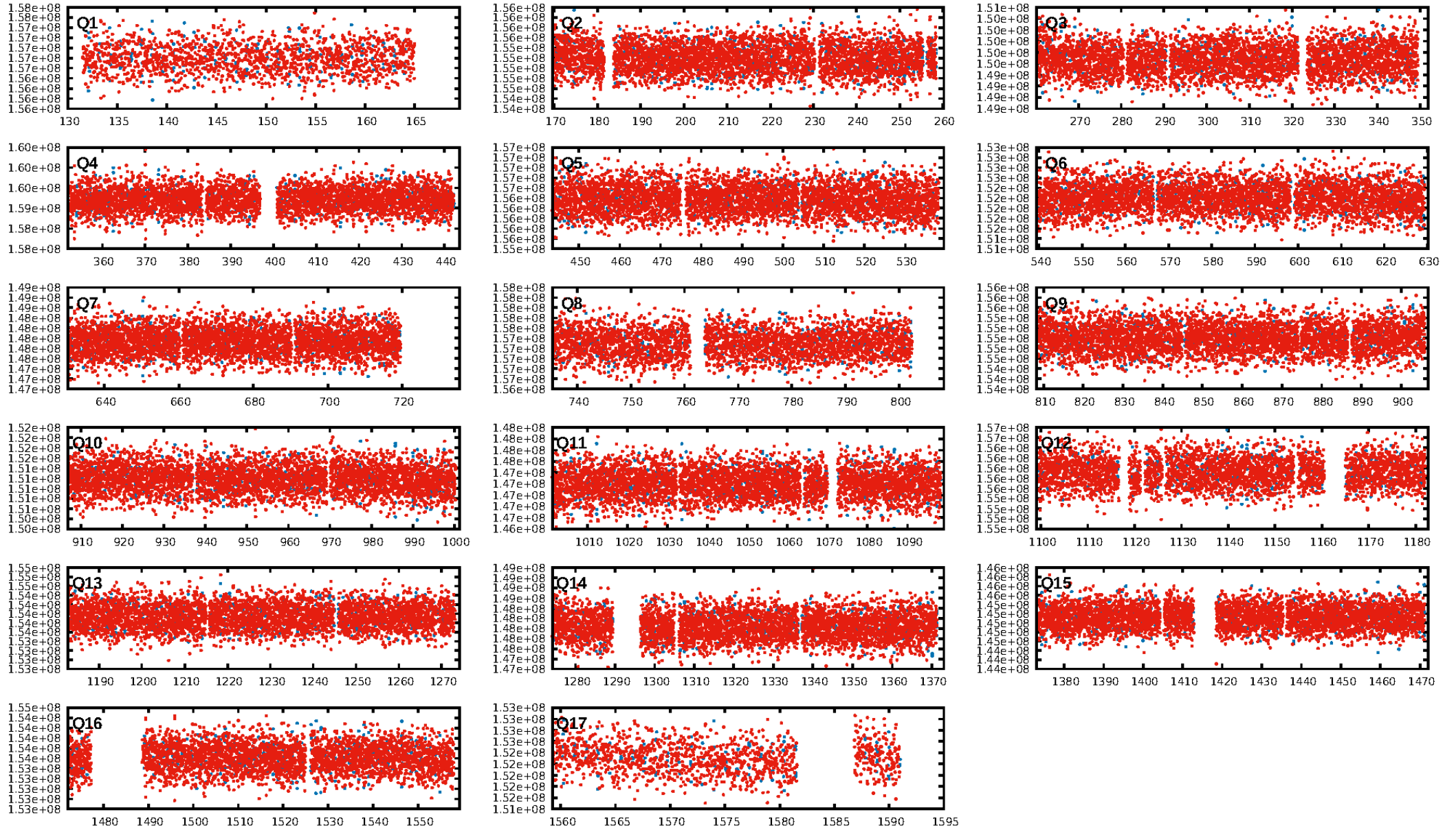
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1225/1225]
GhostDiagnostic-chr: 2.436
Centroid-sig: 17.2%
Centroid-so: 0.386 arcsec [1.08 σ]
OotOffset-rm: 0.449 arcsec [0.26 σ]
KicOffset-rm: 0.550 arcsec [0.35 σ]
OotOffset-st: 0/3/0/3 [6]
KicOffset-st: 0/3/0/3 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [17/17]

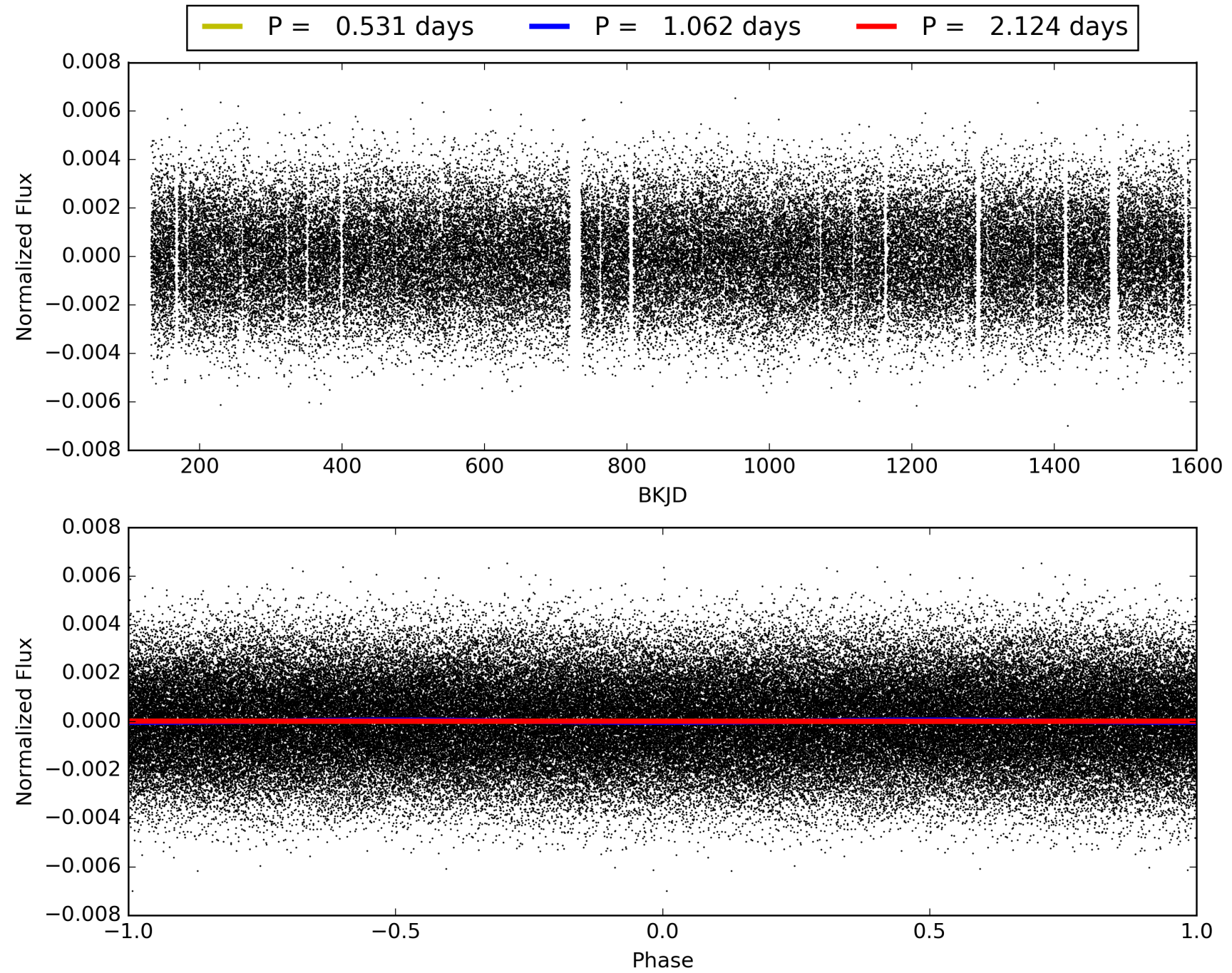
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:37:52 Z

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

TCE 009367382-01, PDC Light Curves

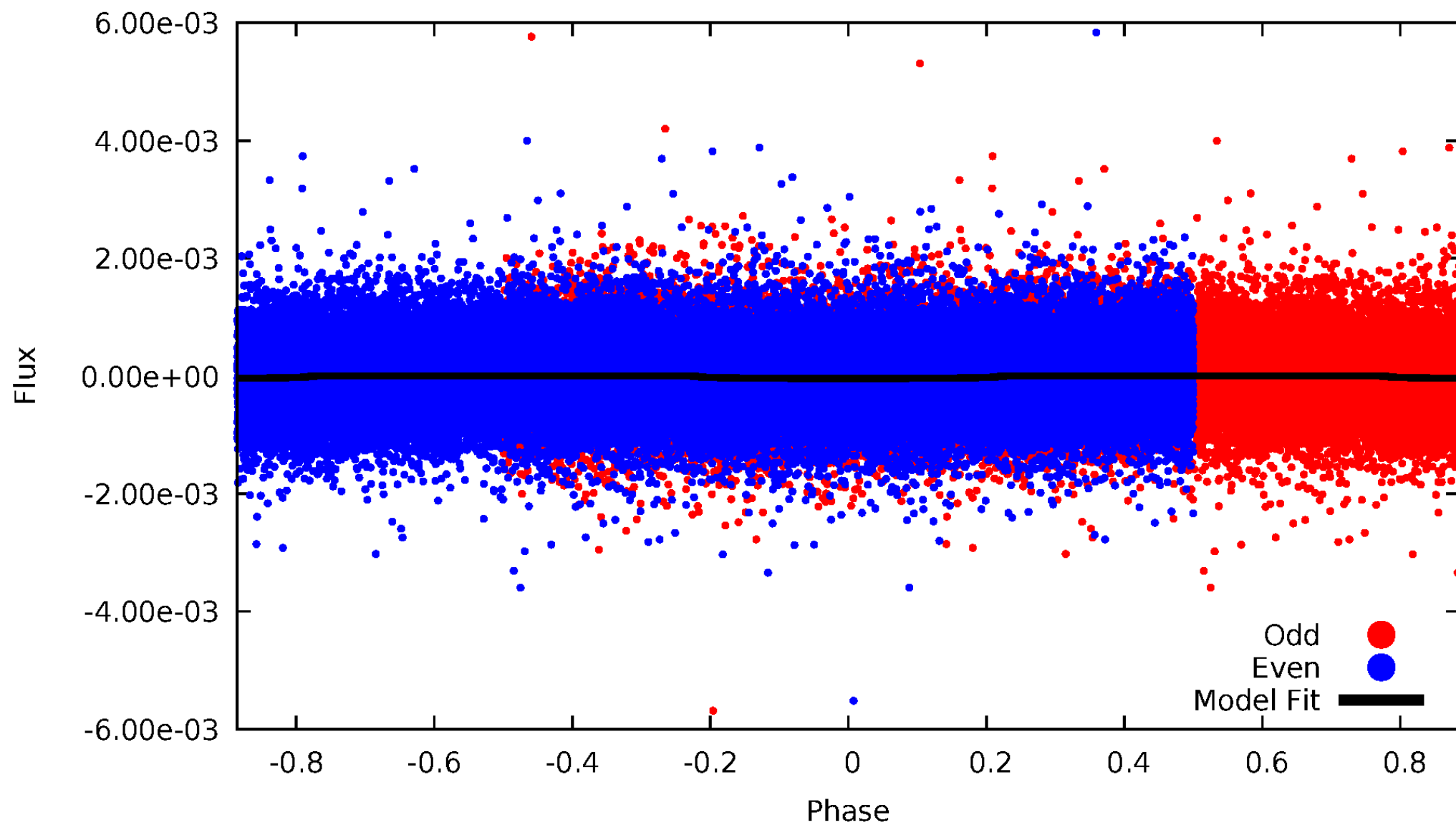


TCE 009367382-01



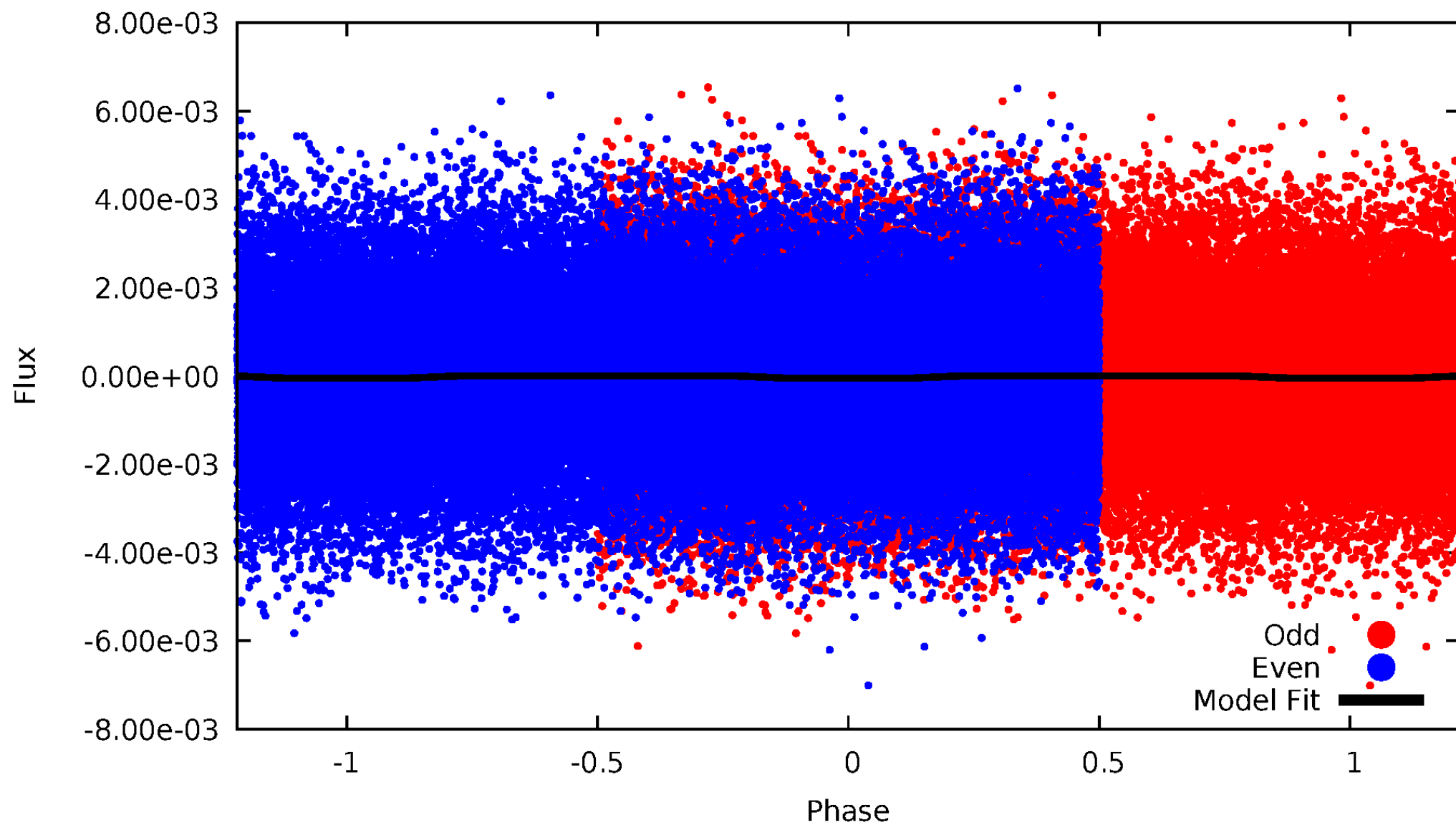
DV Odd/Even

TCE 009367382-01



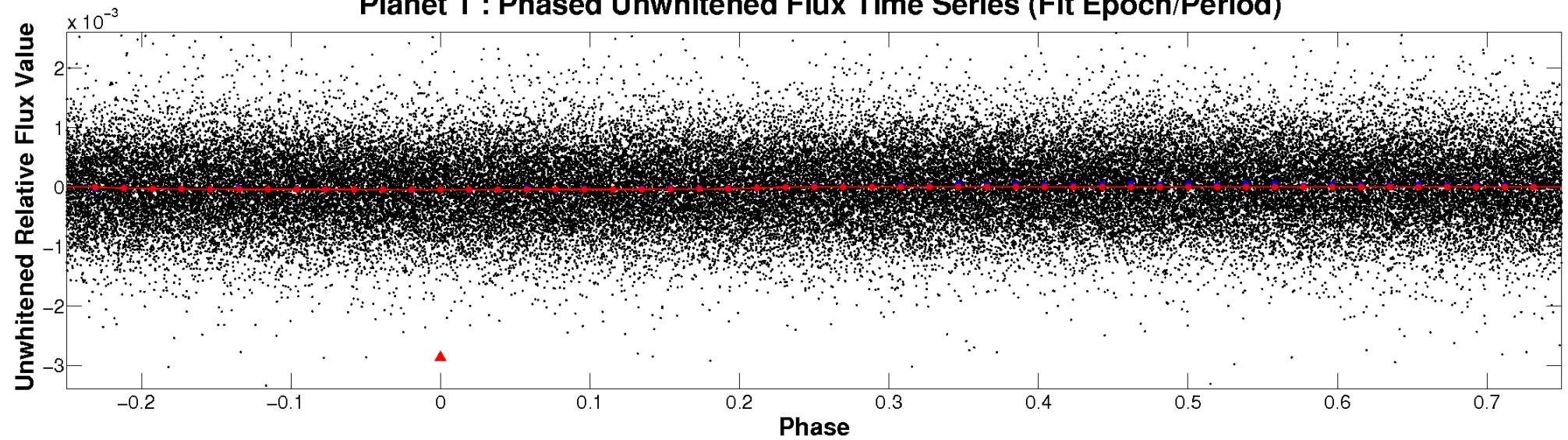
ALT Odd/Even

TCE 009367382-01

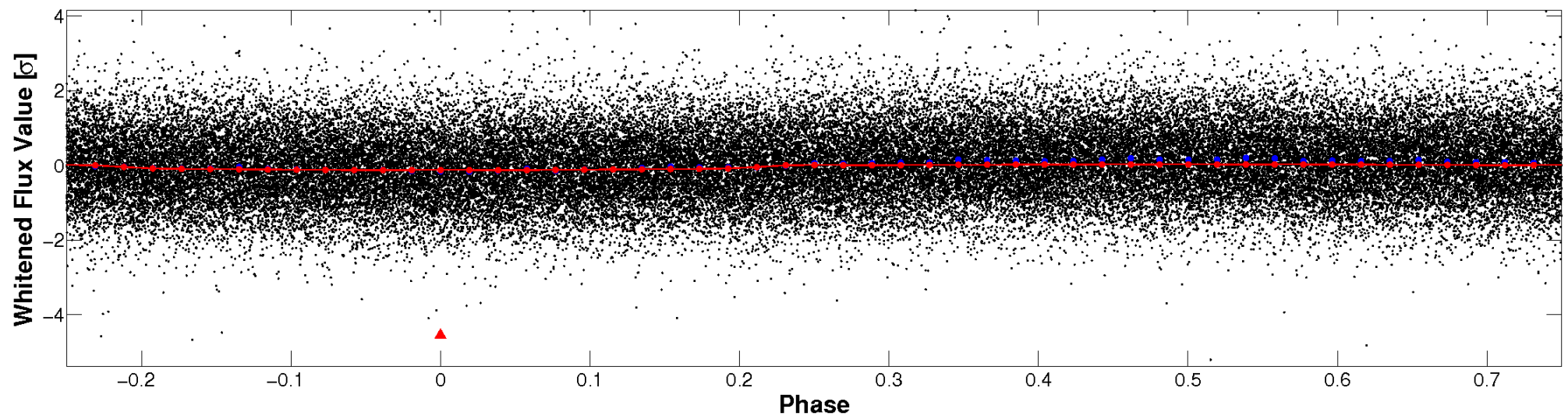


Non-Whitened Vs. Whitened Light Curve

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

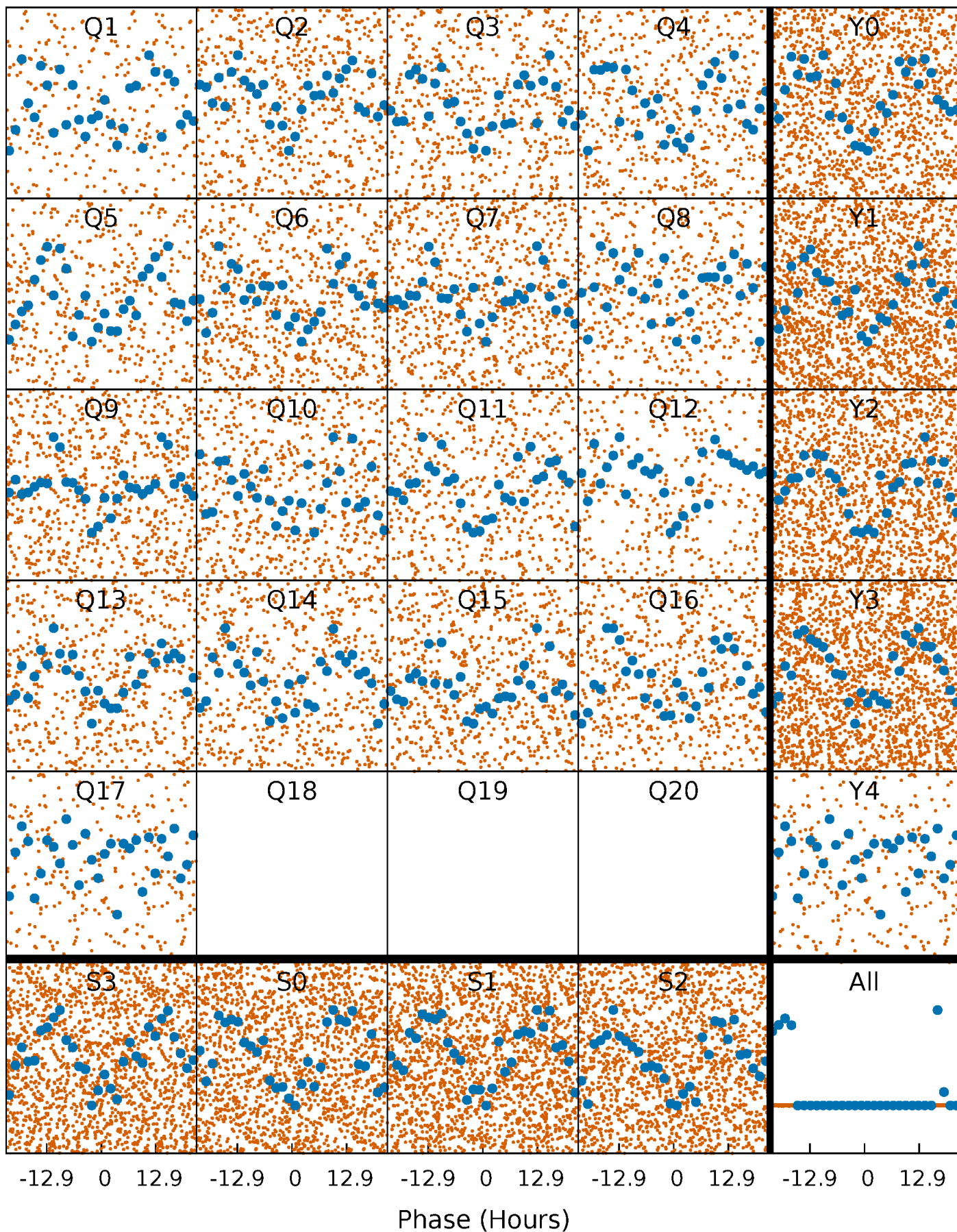


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



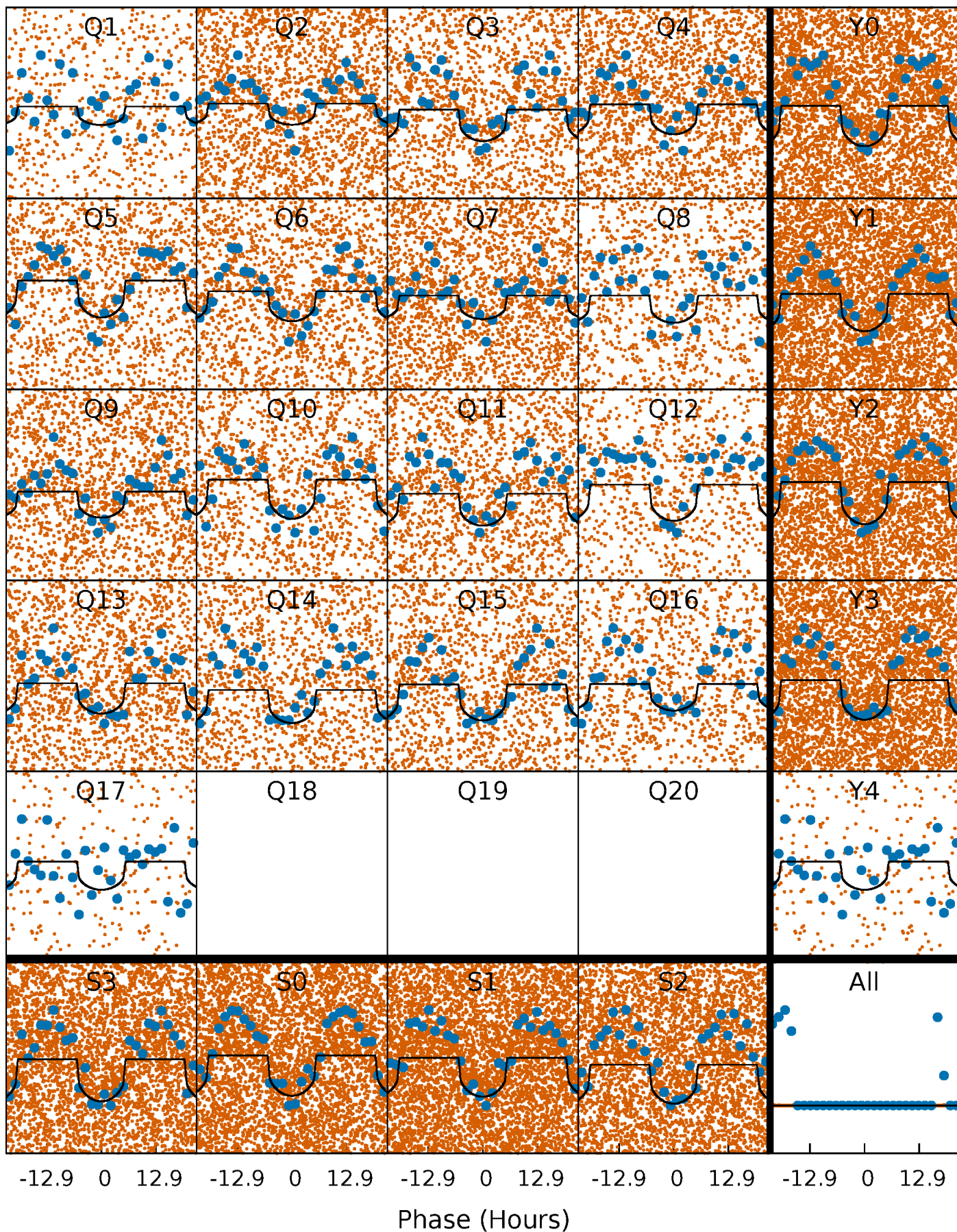
PDC Quarter-Phased Transit Curves

TCE 009367382-01 P= 1.061774 Days $T_0=131.603776$ (BKJD)



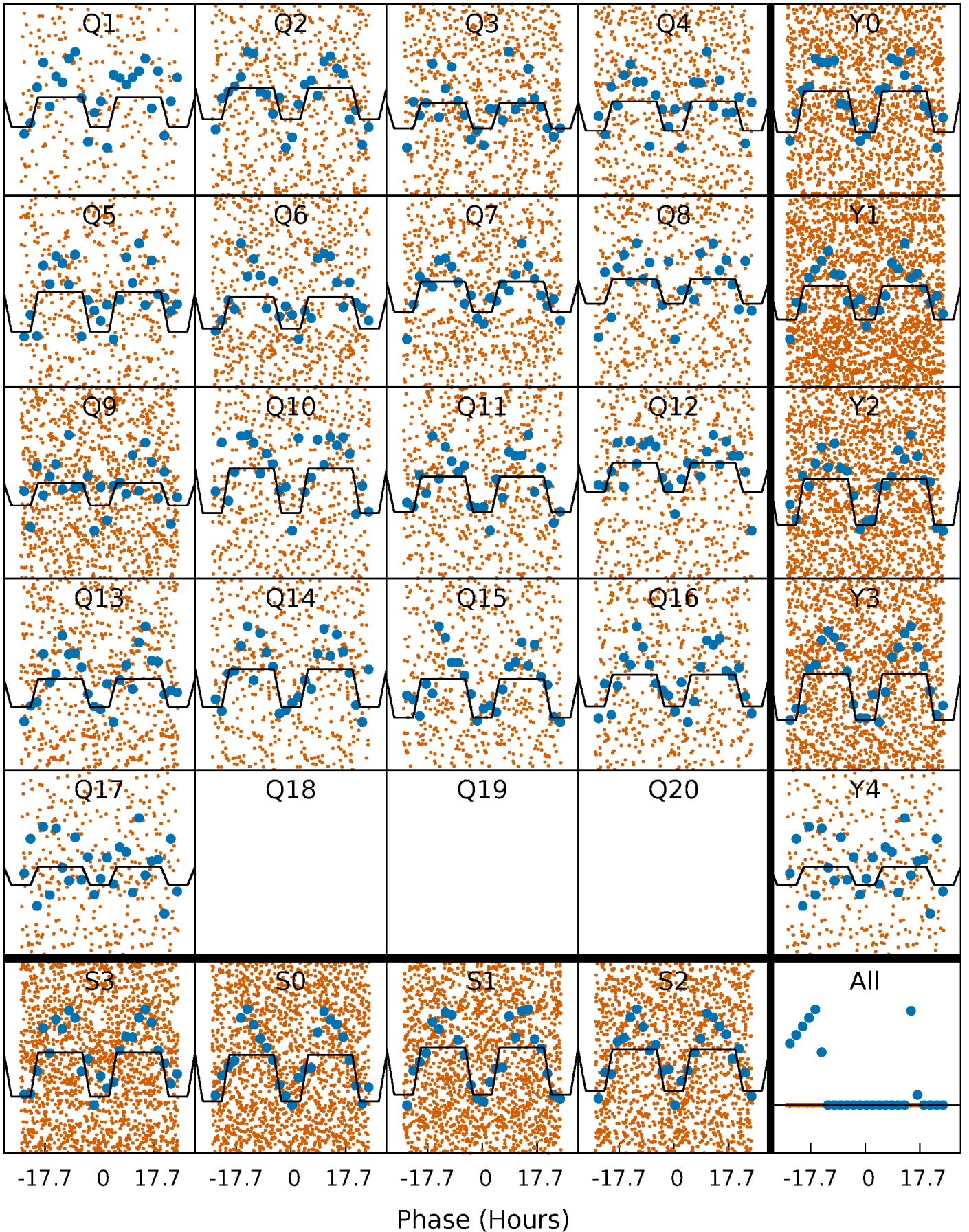
DV Quarter-Phased Transit Curves

TCE 009367382-01 P= 1.061774 Days $T_0=131.603776$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

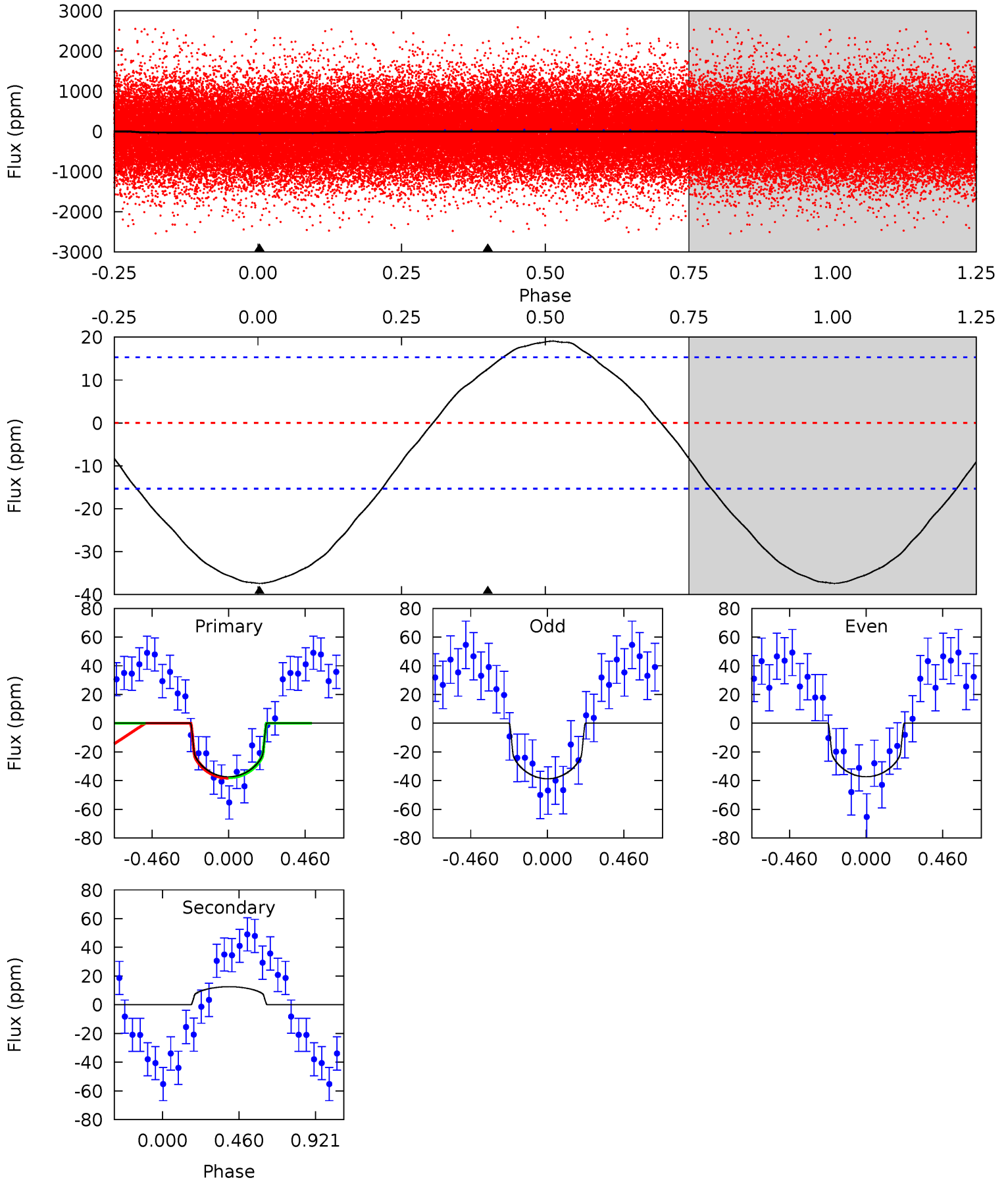
TCE 009367382-01 P= 1.061725 Days $T_0=131.629498$ (BKJD)



DV Model-Shift Uniqueness Test

009367382-01, P = 1.061774 Days, E = 130.542002 Days

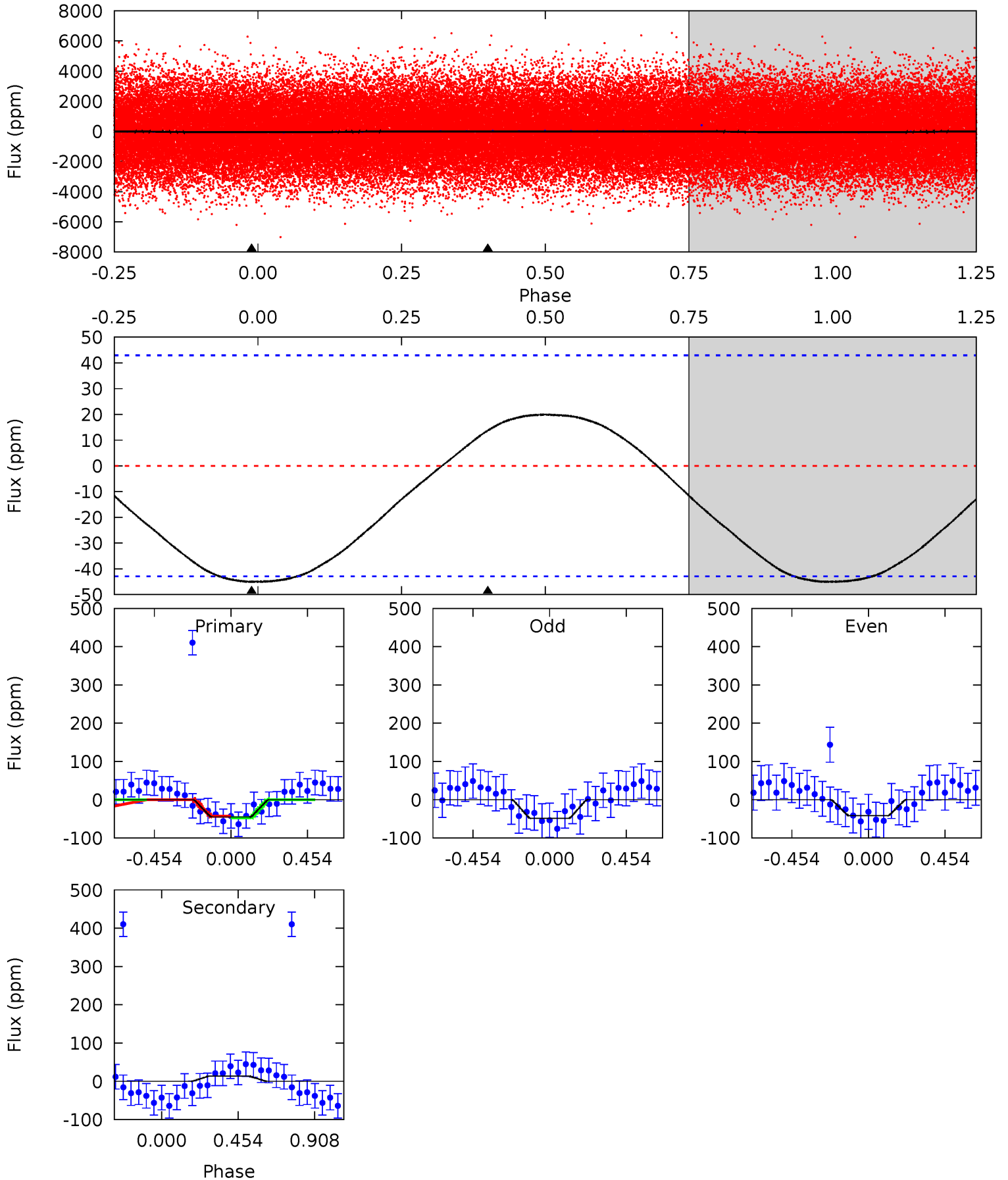
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	-3.48	0	0	4.23	0.74	1.30	10.3	10.3	-3.48	-3.48	0.19	1.04	0.34	0.05



Alt Model-Shift Uniqueness Test

009367382-01, P = 1.061725 Days, E = 130.567773 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.45	-1.35	0	0	4.24	0.75	0.59	4.45	4.45	-1.35	-1.35	0.32	1.17	0.31	0.19



Stellar Parameters For KIC 009367382

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7375^{+232}_{-310}	$4.051^{+0.209}_{-0.171}$	$-0.260^{+0.250}_{-0.350}$	$1.911^{+0.533}_{-0.533}$	$1.498^{+0.220}_{-0.269}$	$0.302^{+0.370}_{-0.147}$
	+3%/-4%	+5%/-4%	+96%/-135%	+28%/-28%	+15%/-18%	+123%/-49%
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 009367382-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	13 ± 4	$1.30^{+0.85}_{-0.70}$	4093^{+341}_{-309}	-5623^{+970}_{-2737}	$-2.185^{+1.443}_{-7.776}$
Alt.	14 ± 10	$1.53^{+0.94}_{-0.80}$	4083^{+331}_{-337}	-5220^{+1073}_{-2142}	$-1.498^{+1.261}_{-5.498}$

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 $A_{obs} \gg 1.0$

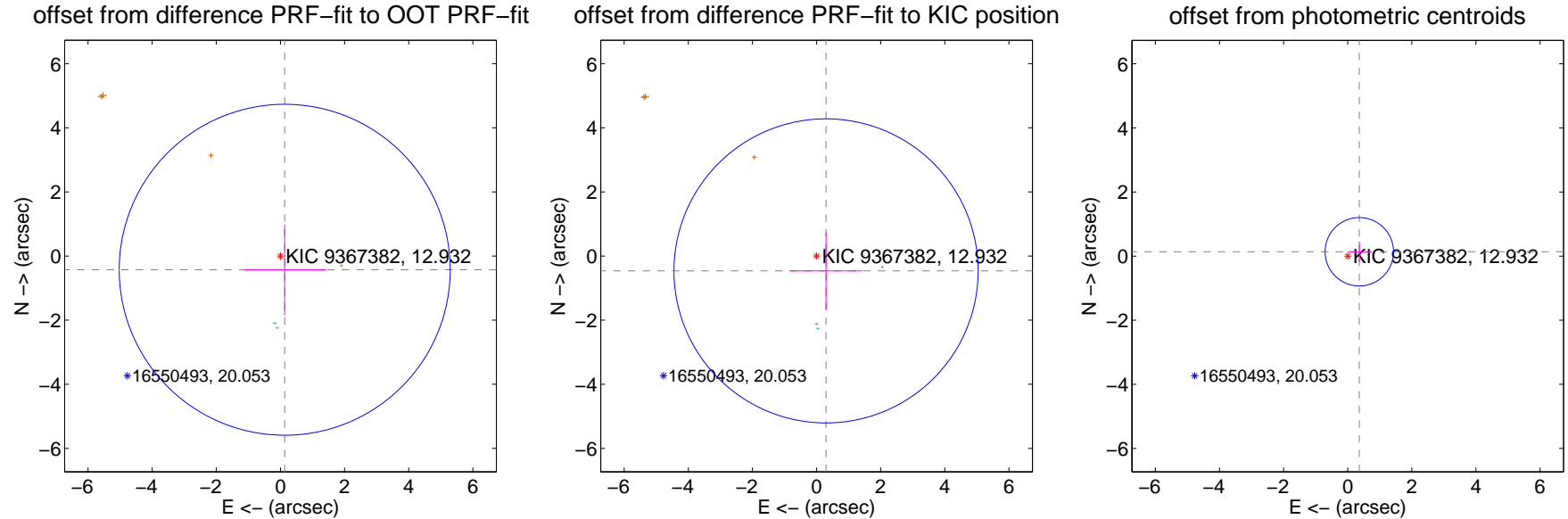
DV Centroid Data

Supplemental centroid analysis for 009367382-01. Kepler magnitude: 12.93. Transit SNR 19.07

There are 2 quarters with good PRF difference image offsets

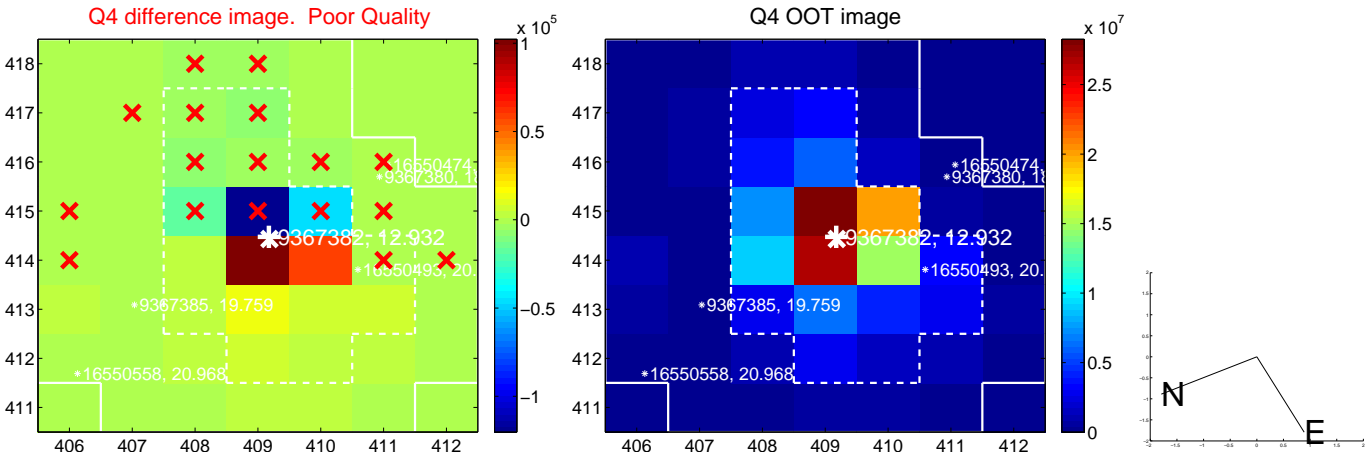
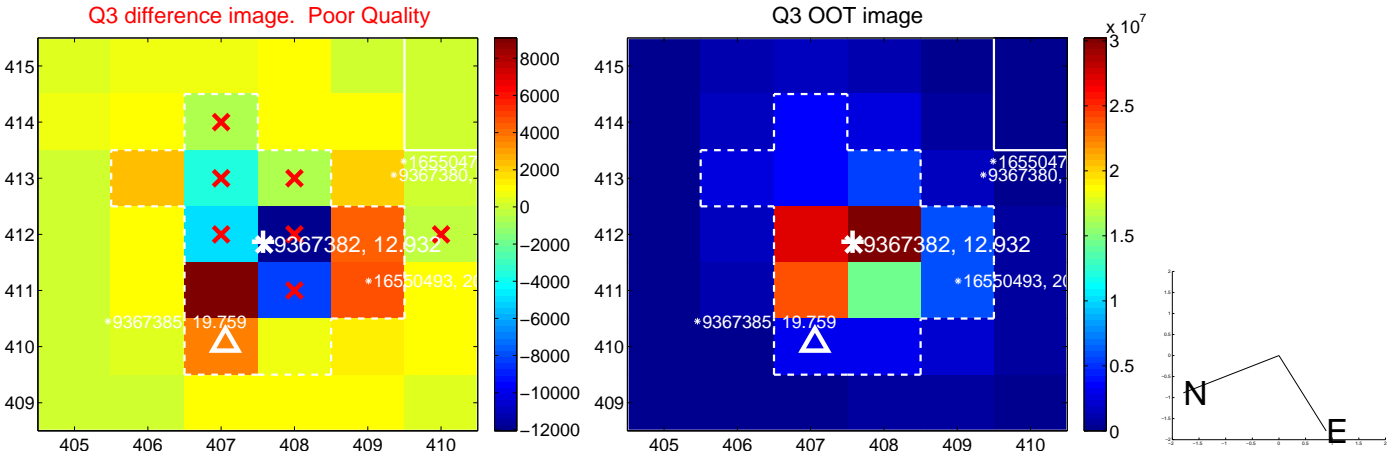
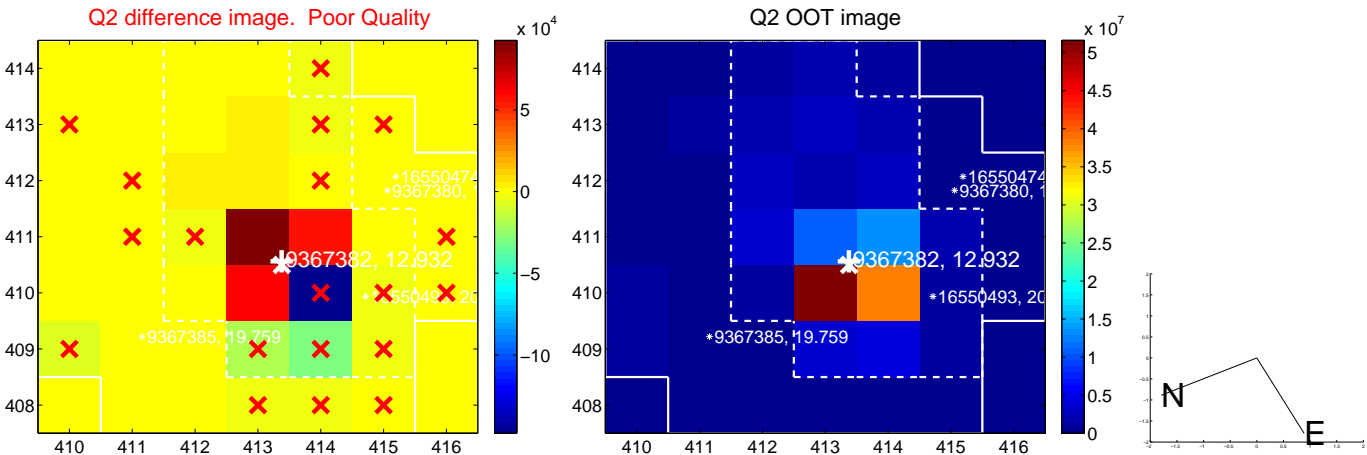
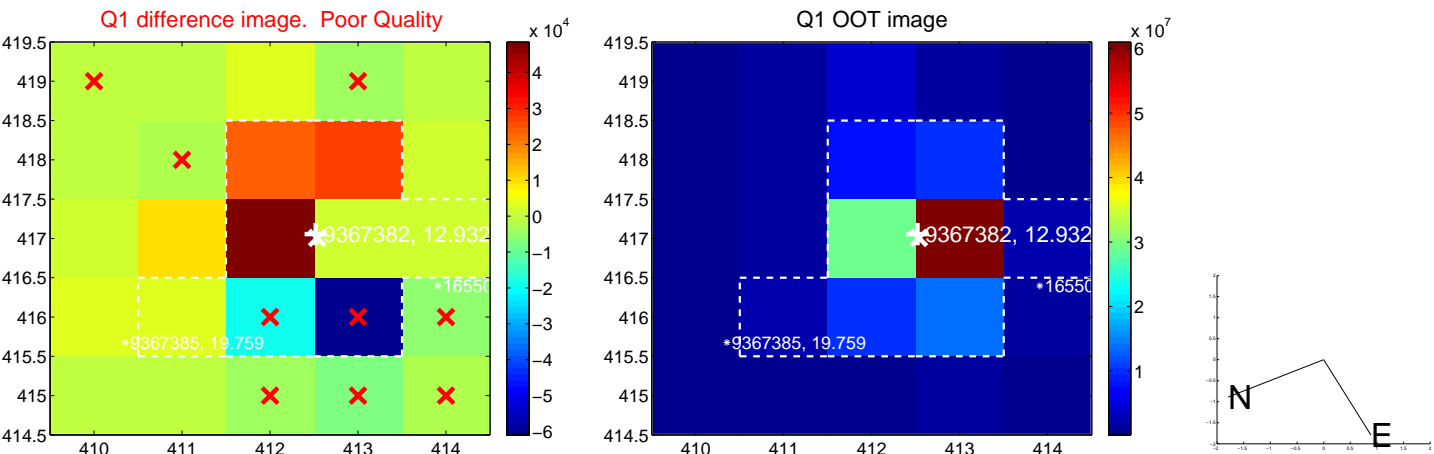
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.449 ± 1.721	0.26	-0.133 ± 1.279	-0.429 ± 1.419
PRF-fit source offset from KIC position	0.550 ± 1.581	0.35	-0.295 ± 1.139	-0.464 ± 1.203
photometric centroid source offset	0.39 ± 0.36	1.08	-0.36 ± 0.36	0.14 ± 0.32

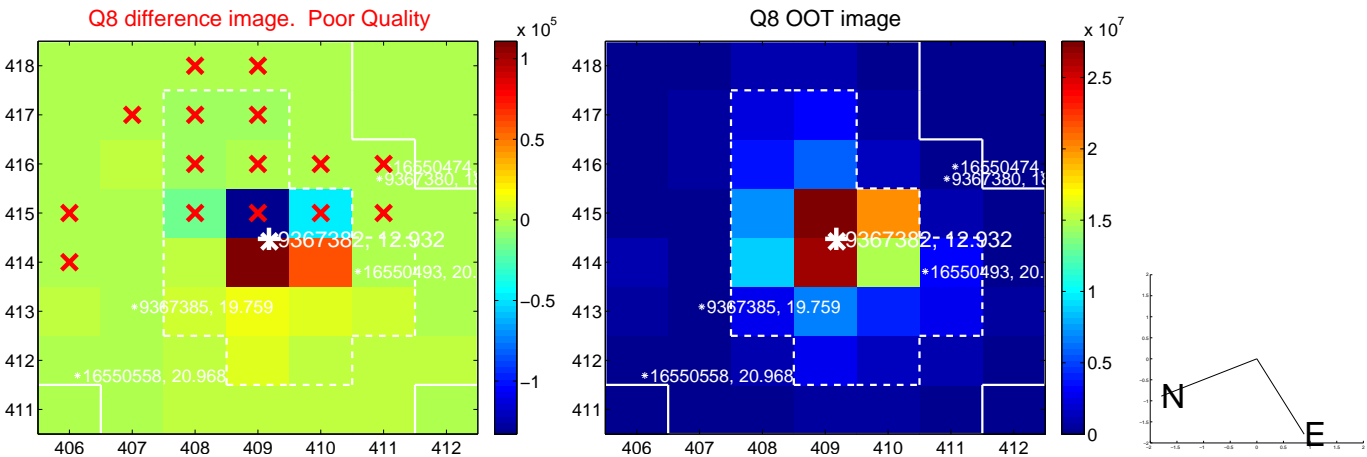
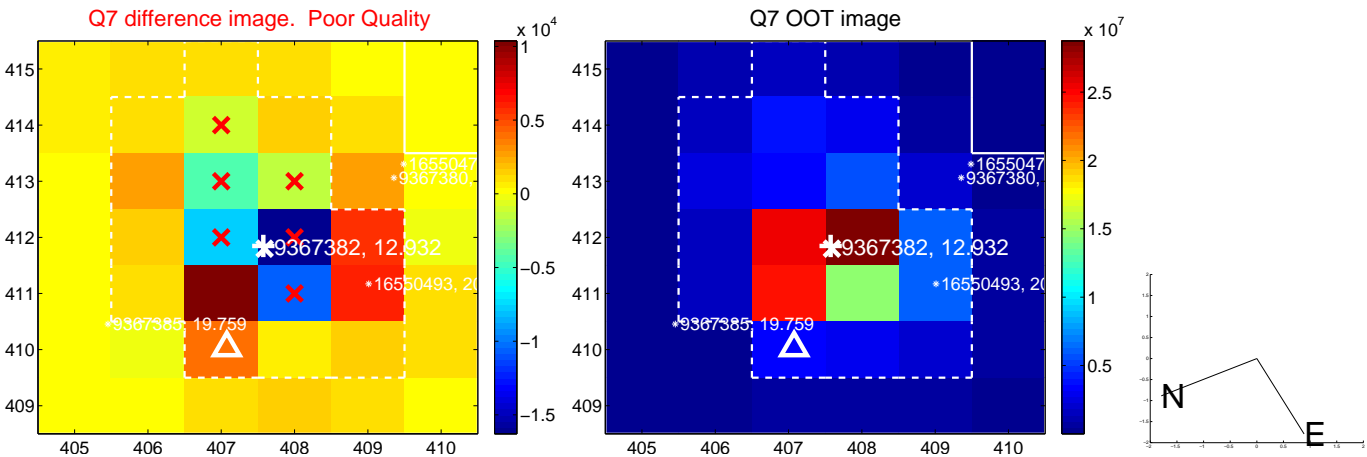
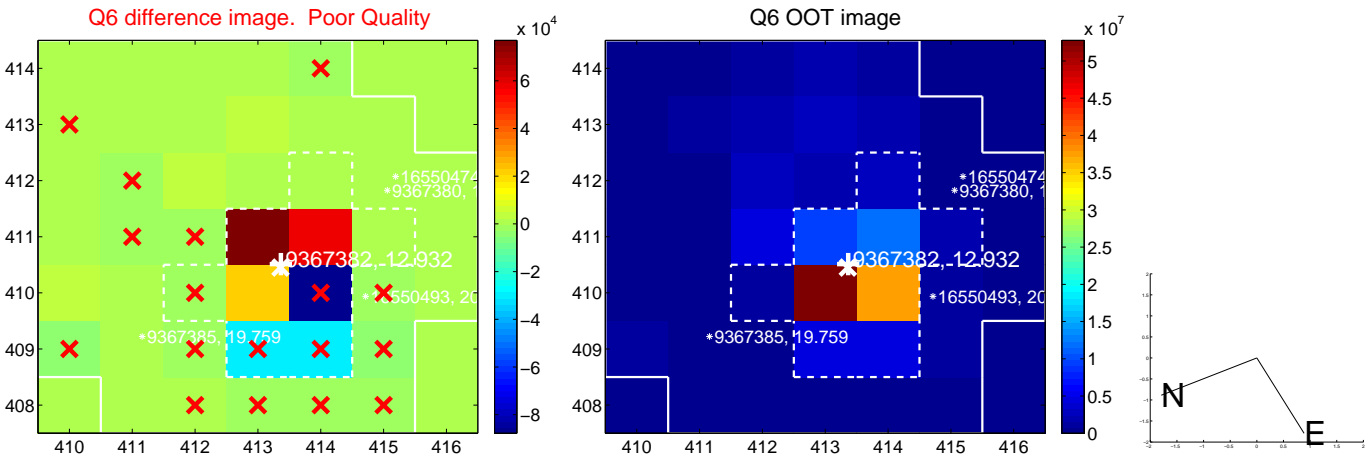
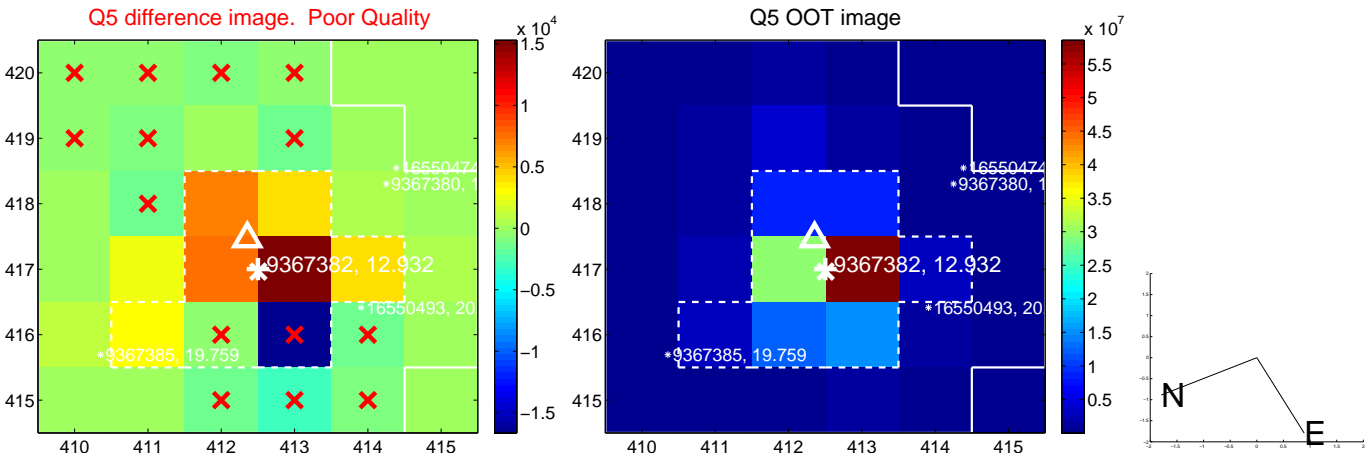


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

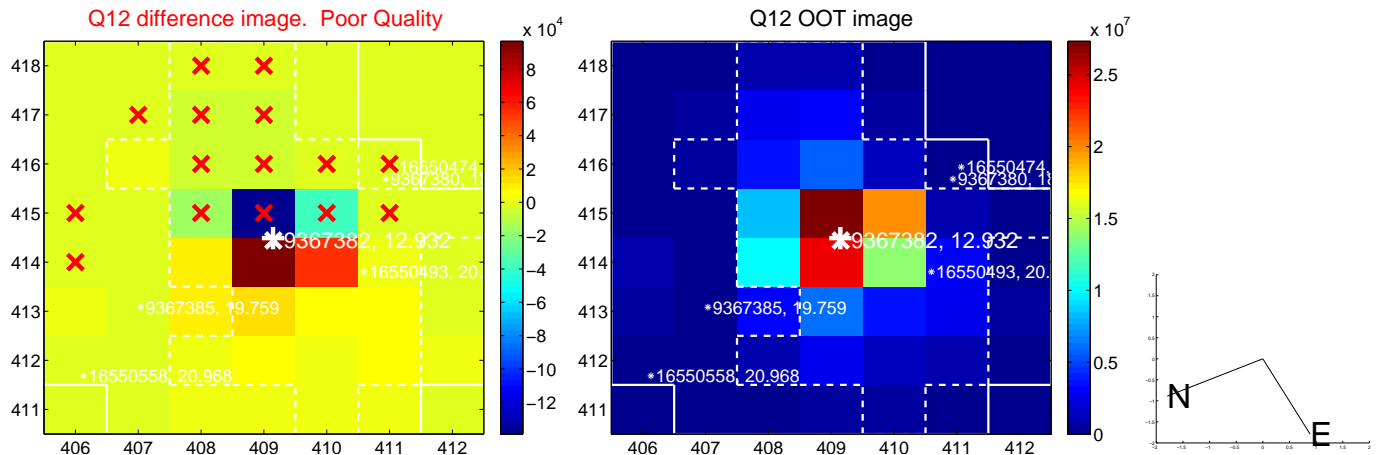
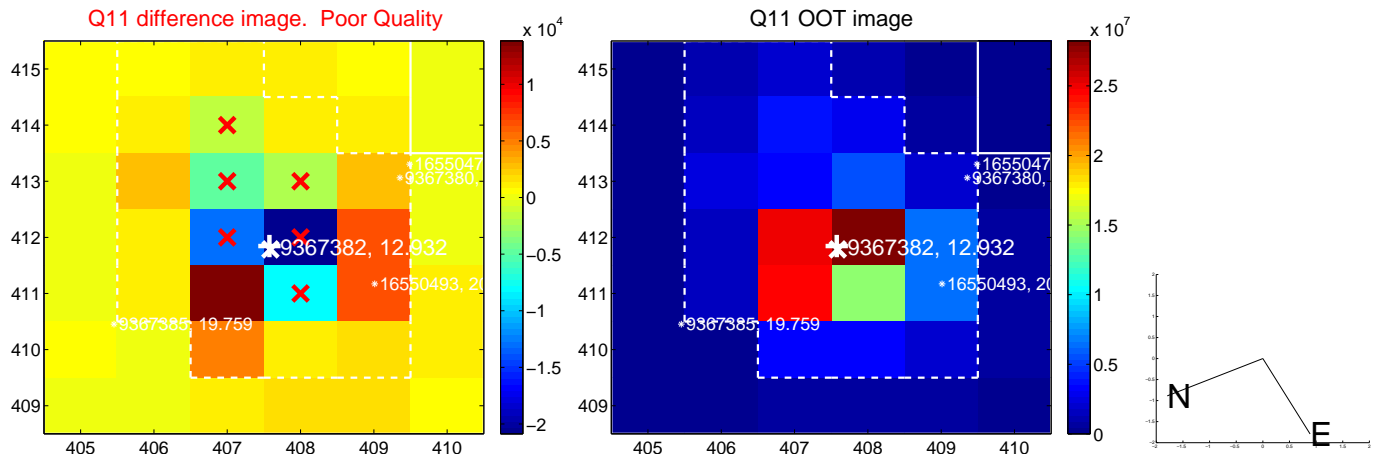
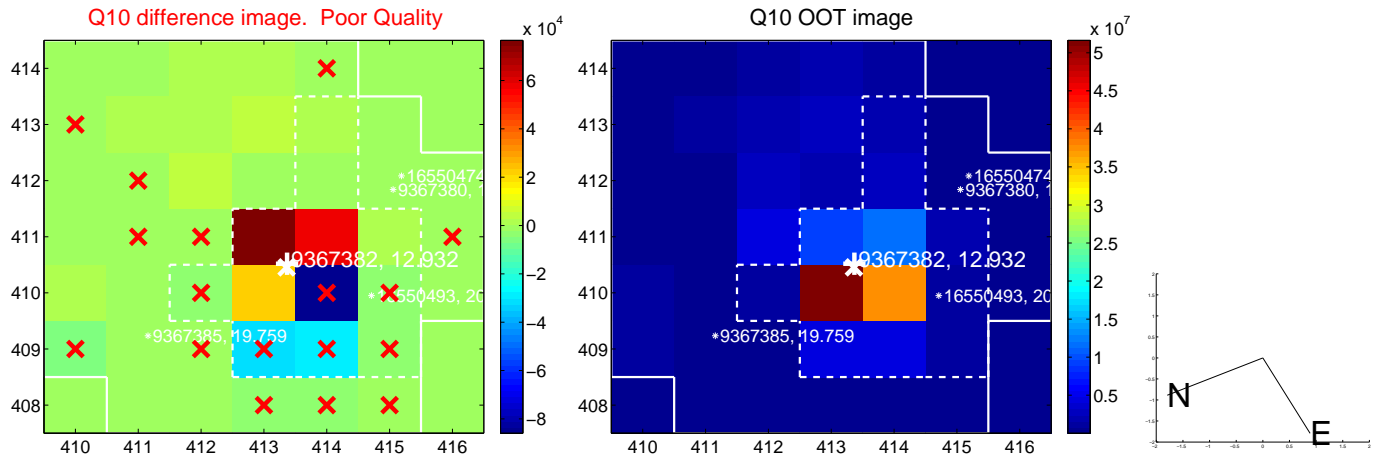
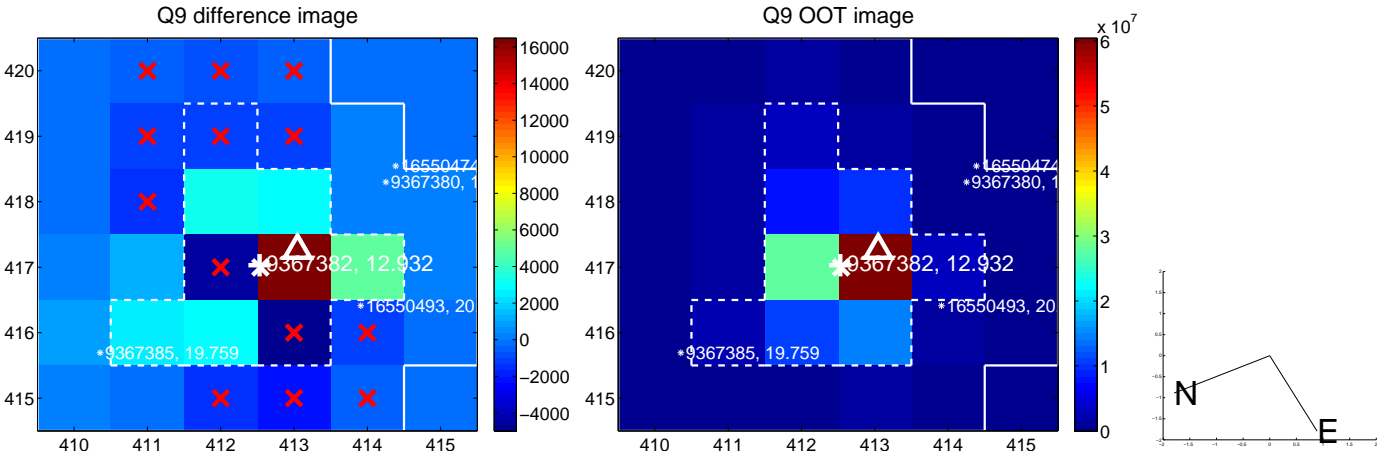
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



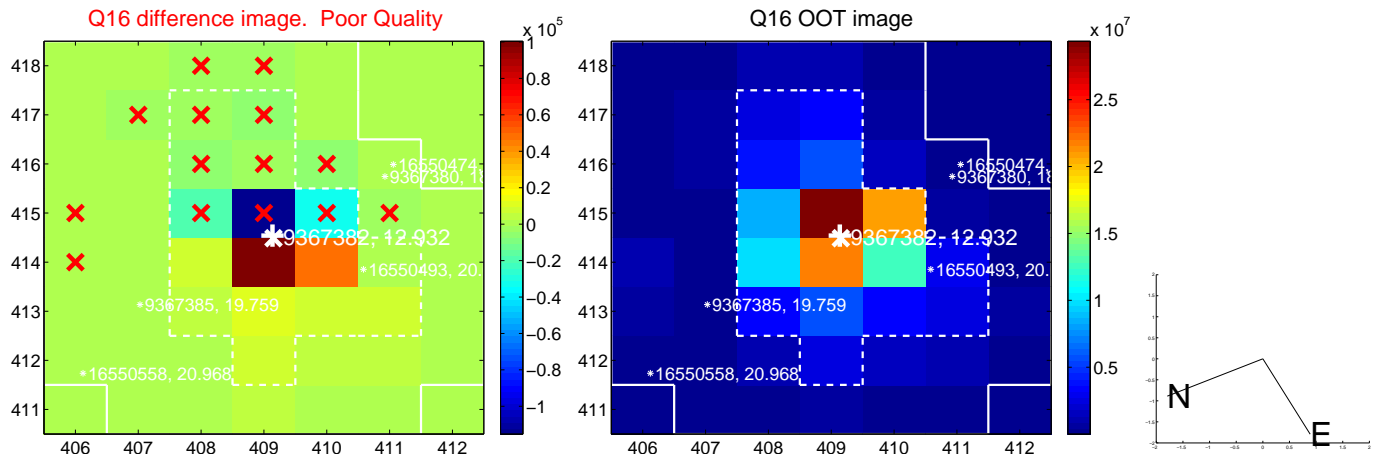
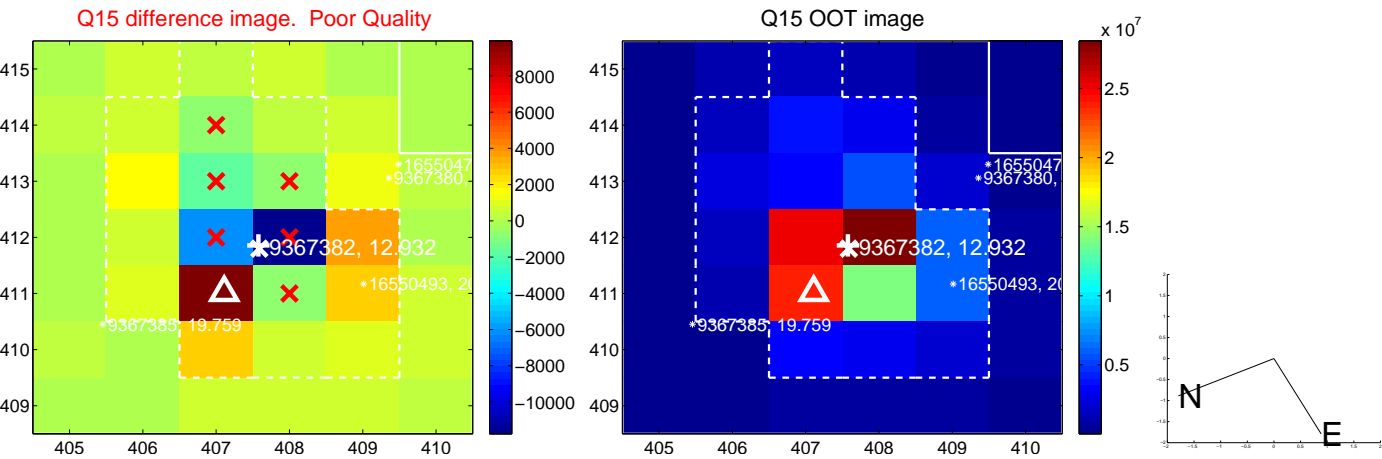
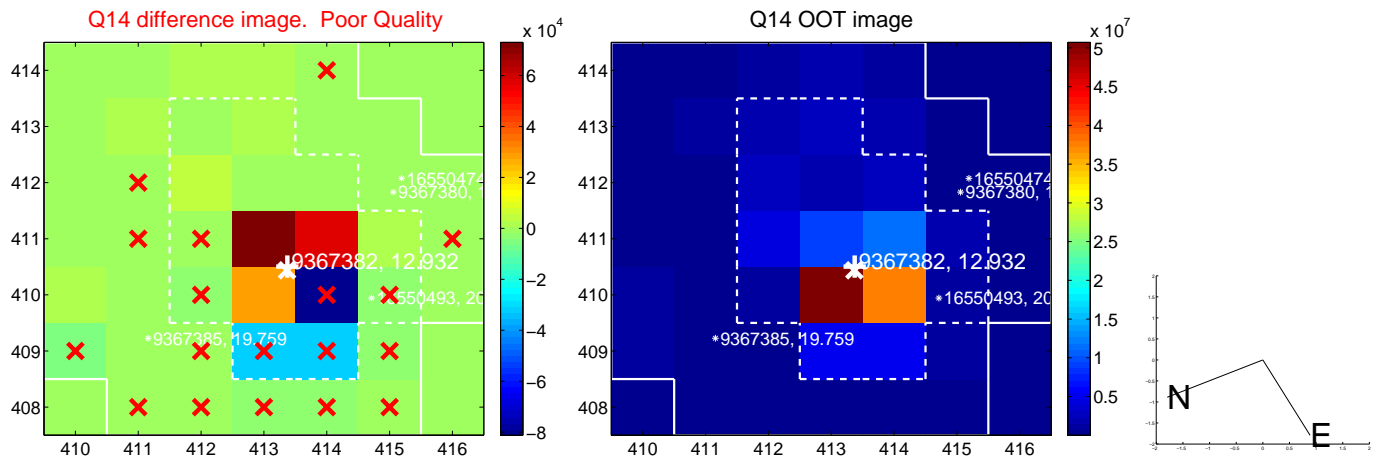
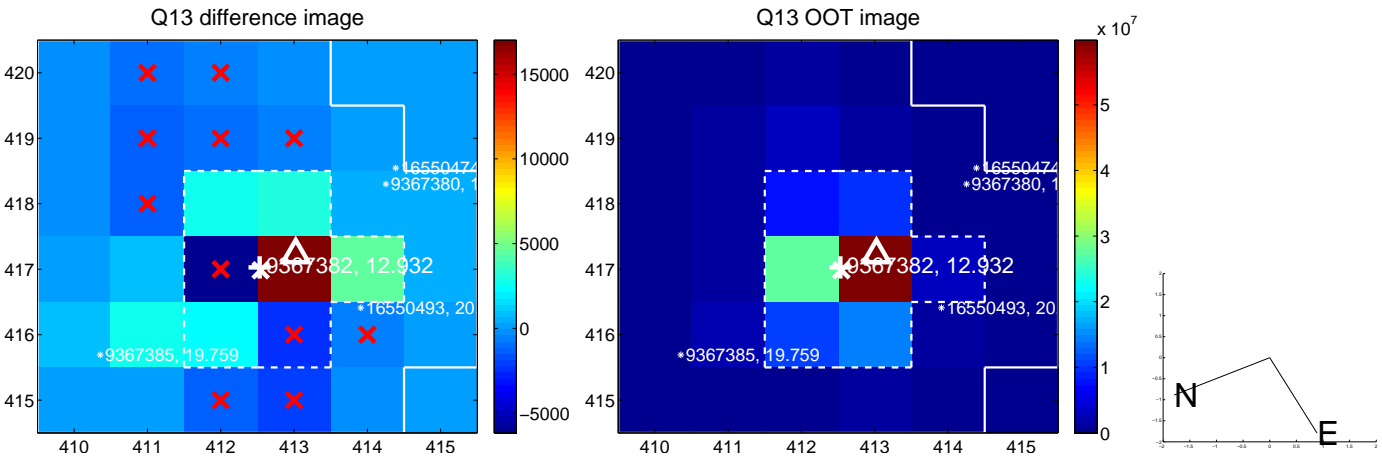
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

