

KIC 003967018

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})
003967018-01	OBS	No	0.632820	132.004974	36.8	1.043	8.3	8.8	1.15	6067	0.70	7522.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967018-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

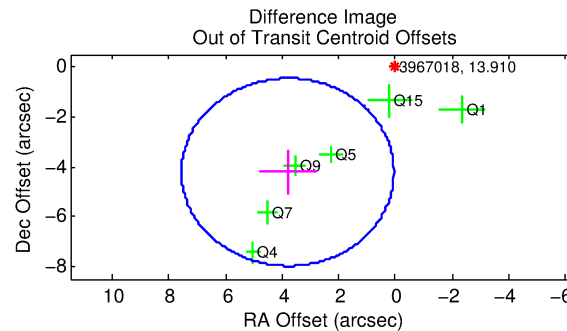
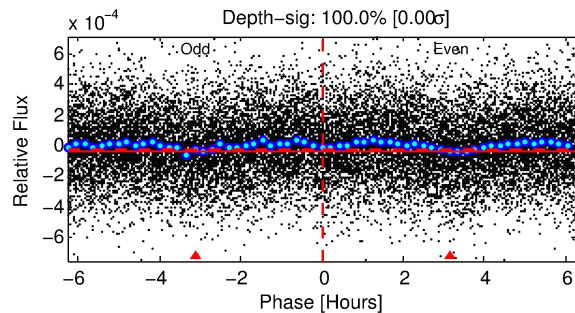
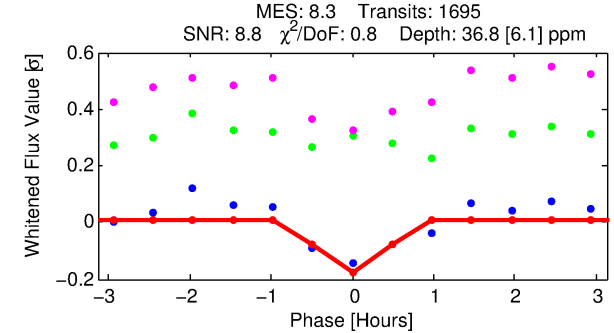
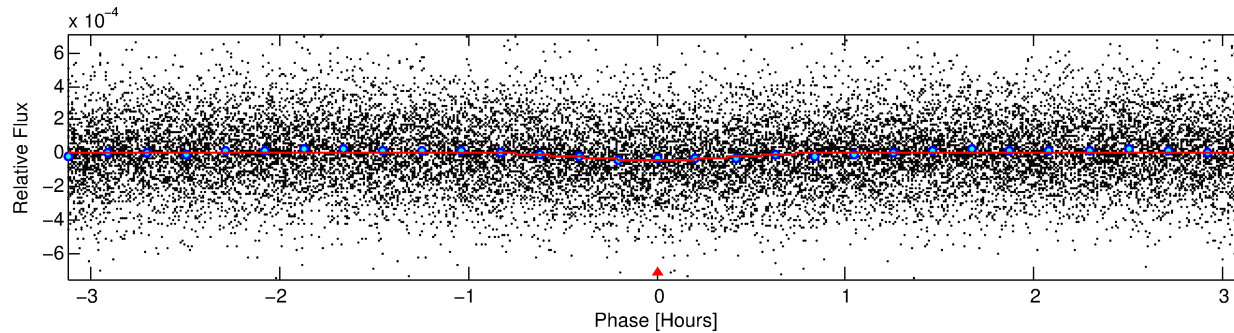
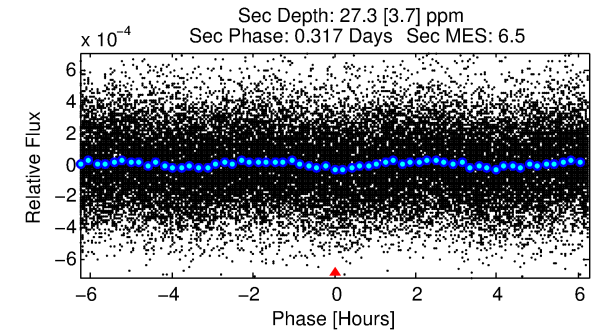
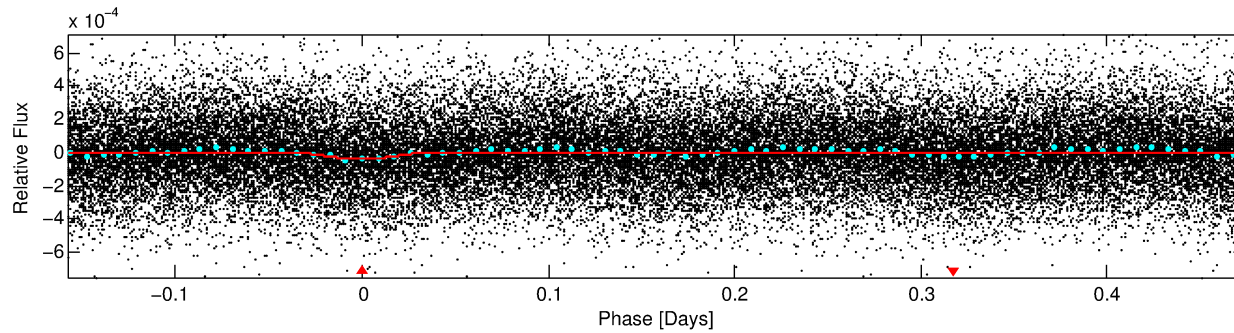
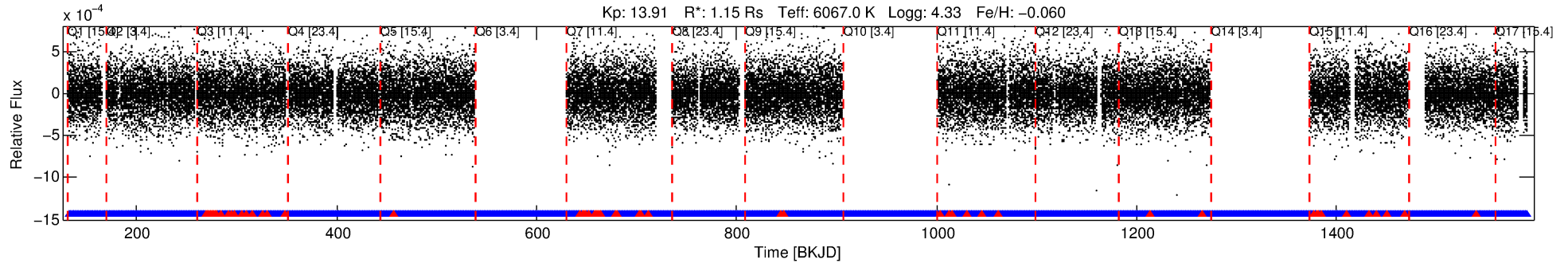
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967018-01

No Significant Match Found

DV One-Page Summary

KIC: 3967018 Candidate: 1 of 1 Period: 0.633 d



DV Fit Results:

Period = 0.63282 [0.00001] d
Epoch = 132.0050 [0.0020] BKJD
Rp/R* = 0.0056 [0.0099]
a/R* = 4.63 [37.61]
b = 0.18 [46.60]
Seff = 7522.78 [2970.55]
Teff = 2375 [234] K
Rp = 0.70 [1.26] Re
a = 0.0146 [0.0038] AU
Ag = 6.50 [23.05] [0.24σ]
Teffp = 5861 [5175] K [0.67σ]

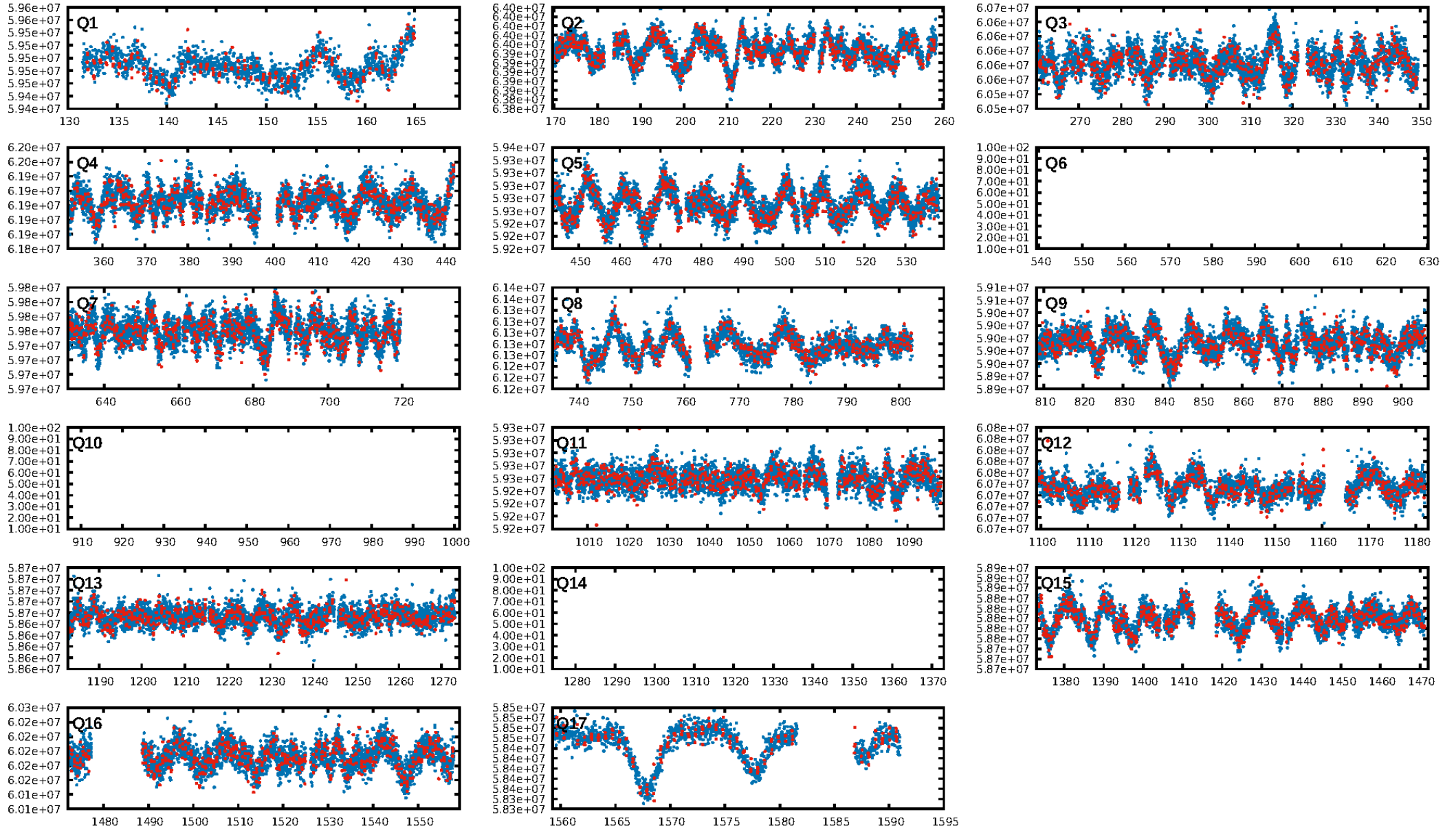
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.47e-16
RollingBand-fgt: 0.96 [1539/1601]
GhostDiagnostic-chr: -0.008
Centroid-sig: 0.0%
Centroid-so: 6.609 arcsec [4.11σ]
OotOffset-rm: 5.681 arcsec [4.53σ]
KicOffset-rm: 5.814 arcsec [5.27σ]
OotOffset-st: 0.2/1/3 [6]
KicOffset-st: 0.2/1/3 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [14/14]

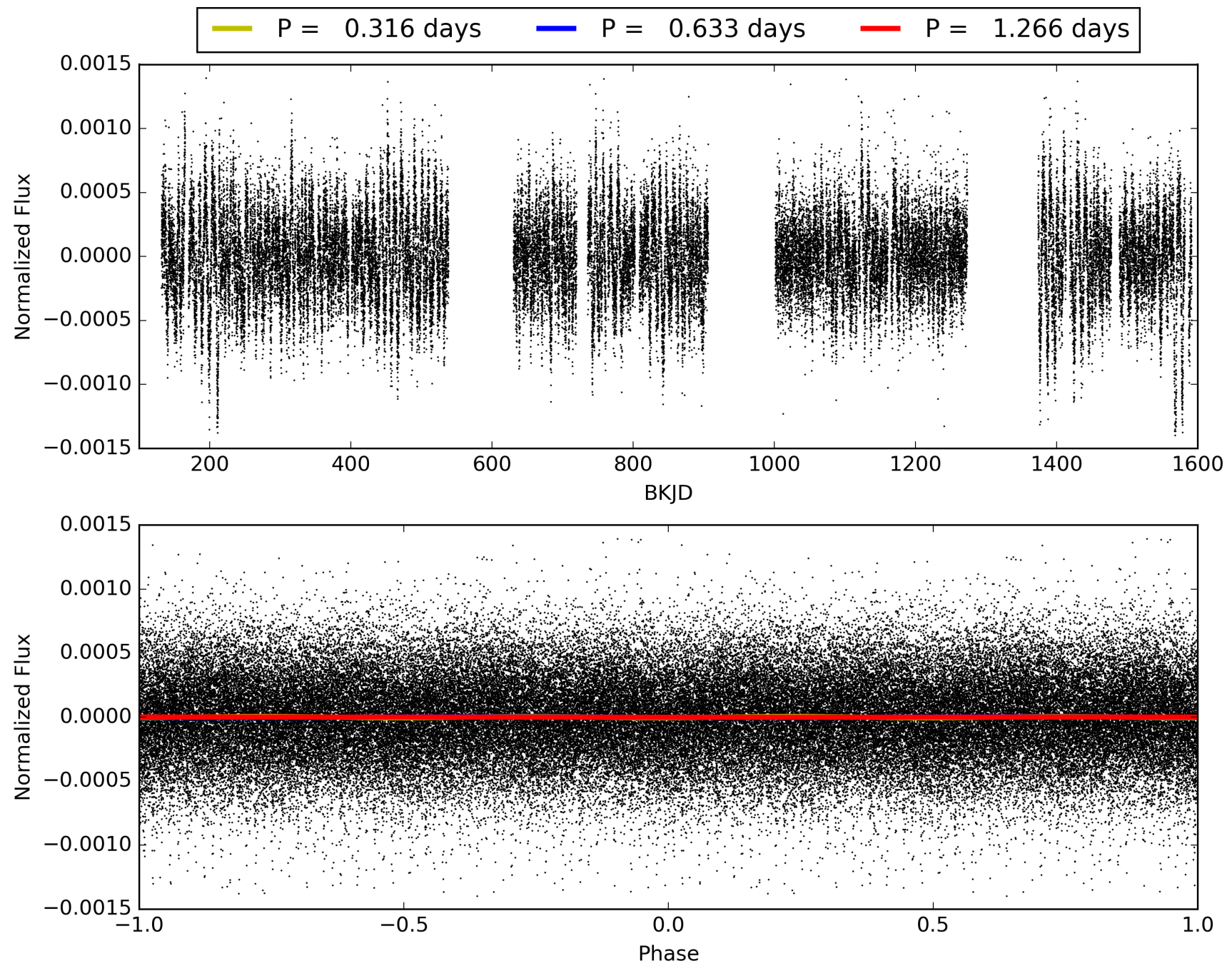
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:44:22 Z

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

TCE 003967018-01, PDC Light Curves

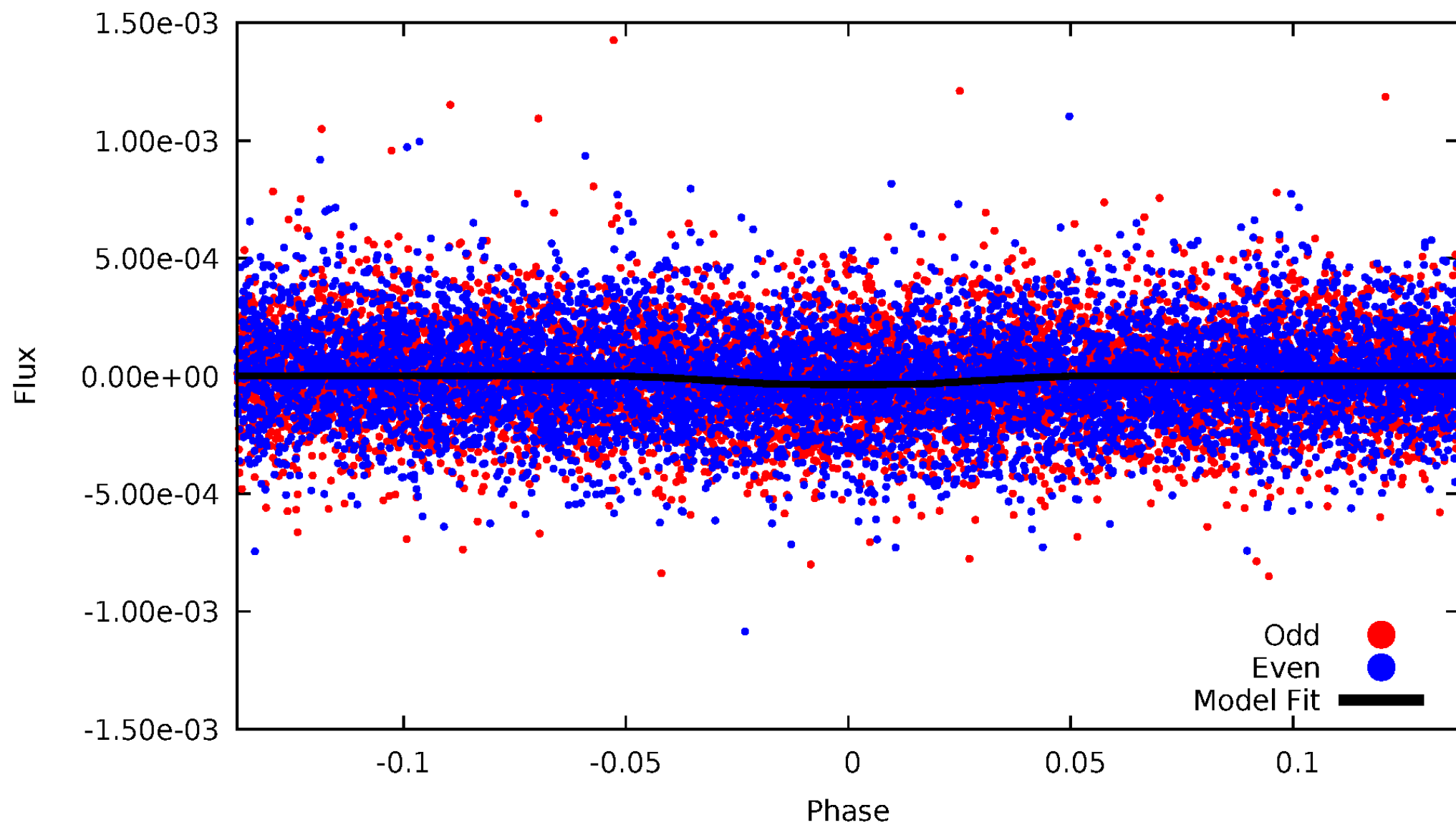


TCE 003967018-01



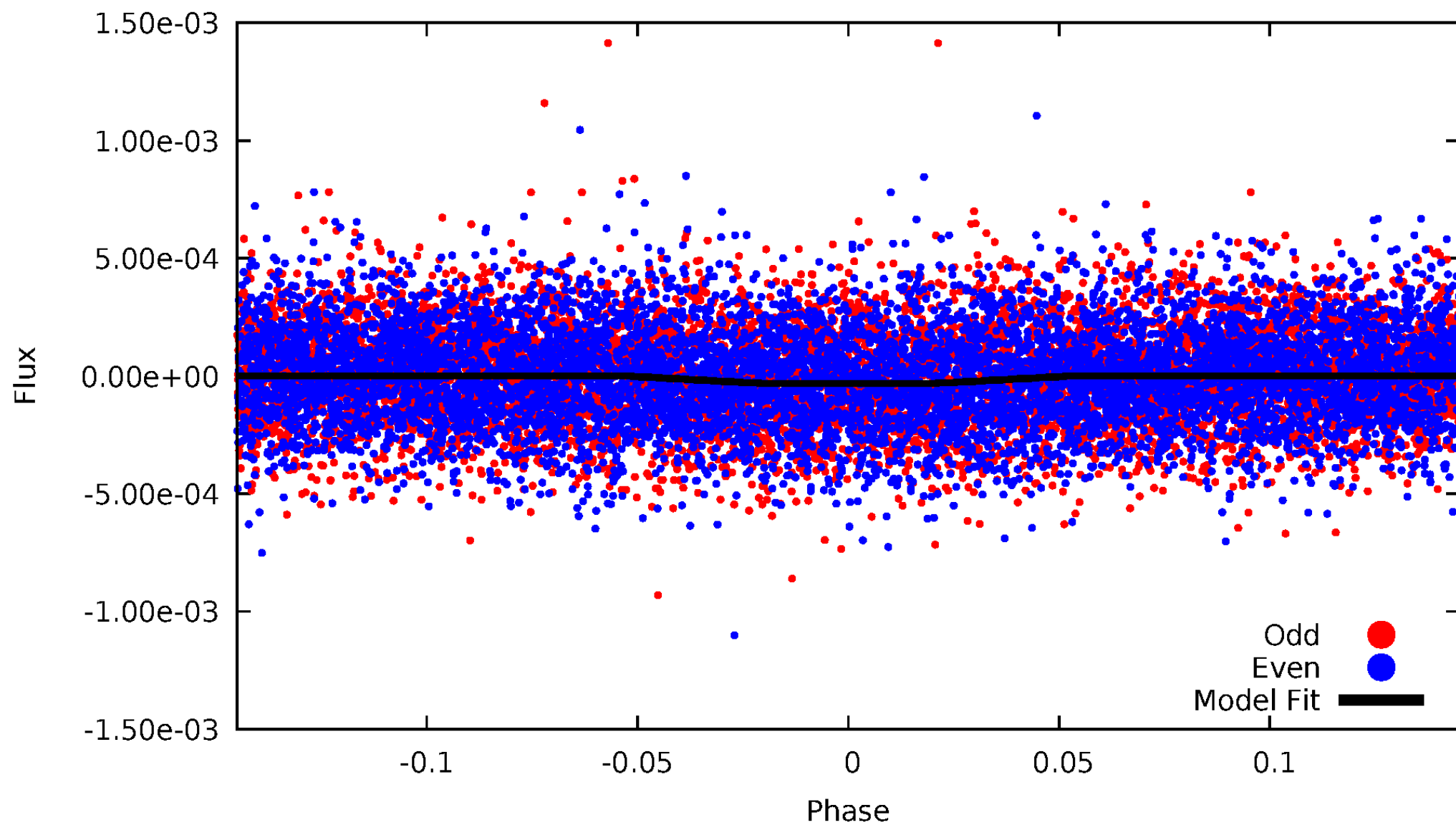
DV Odd/Even

TCE 003967018-01



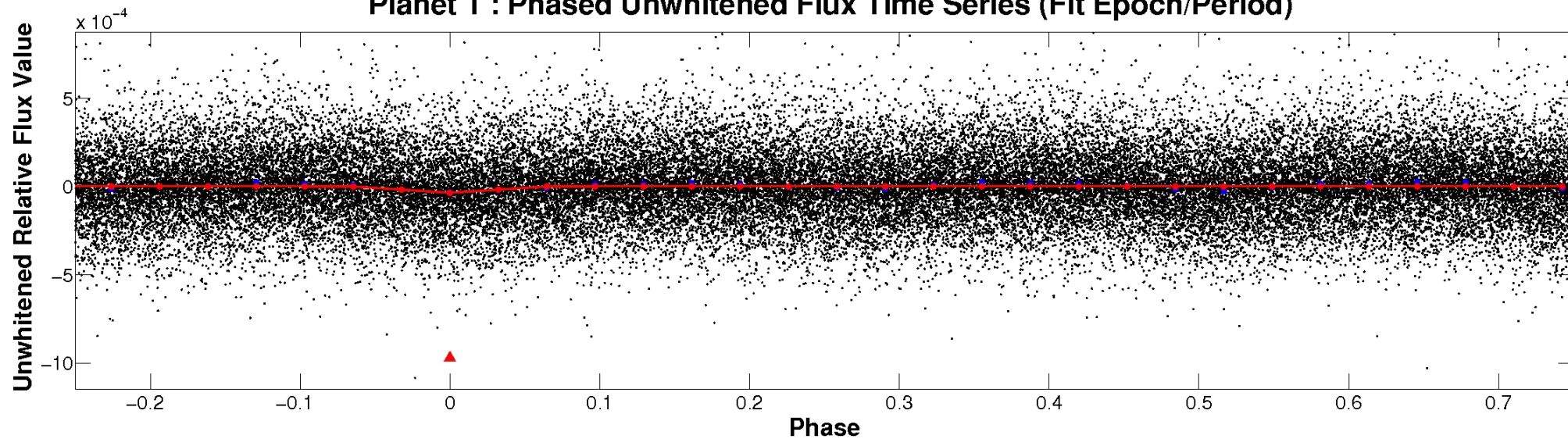
ALT Odd/Even

TCE 003967018-01

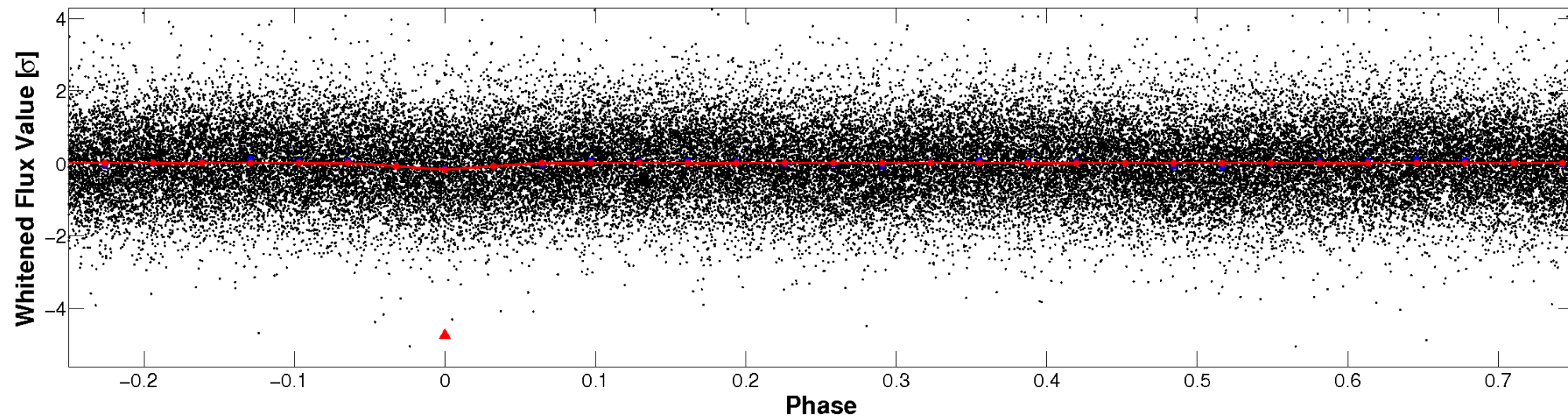


Non-Whitened Vs. Whitened Light Curve

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

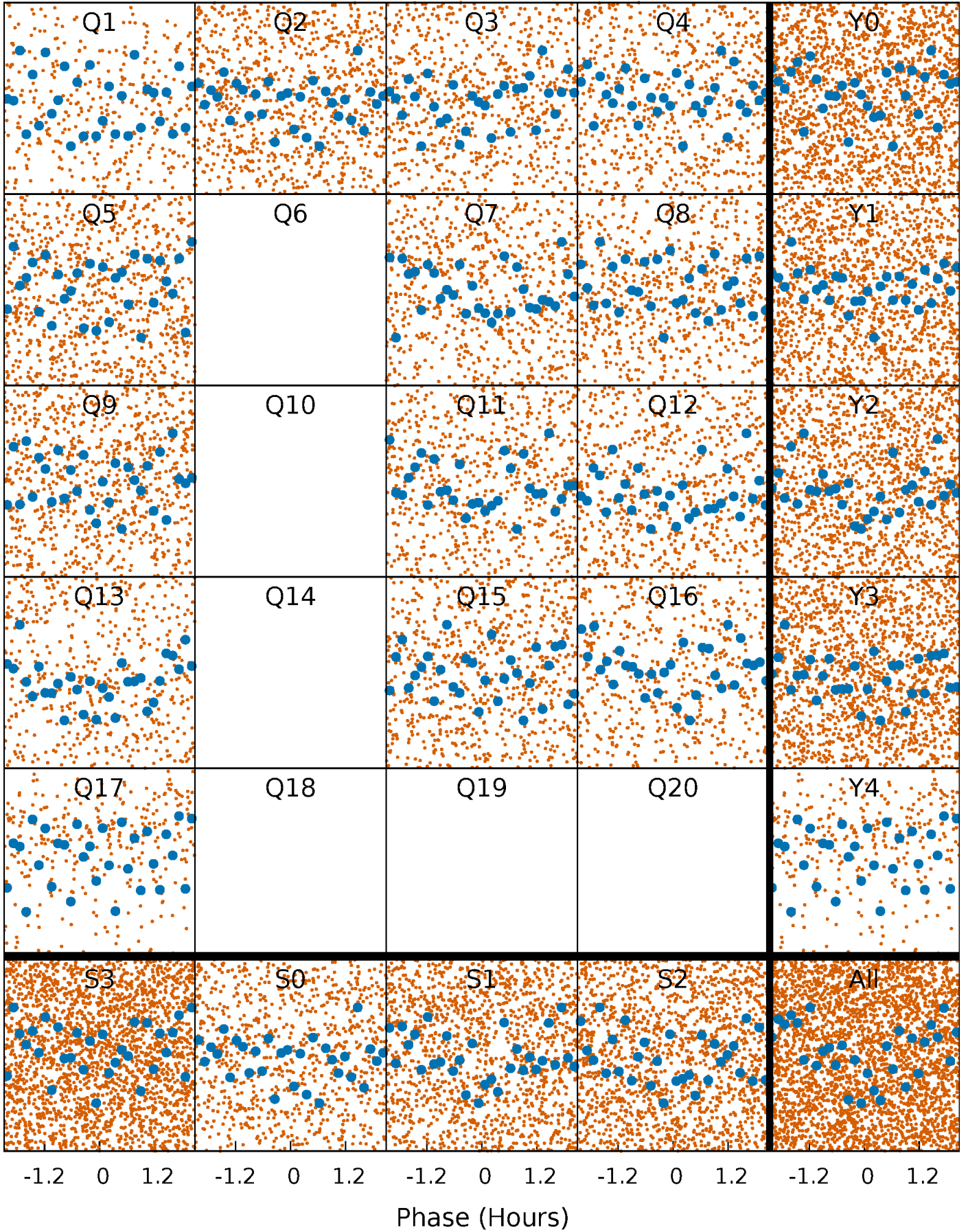


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



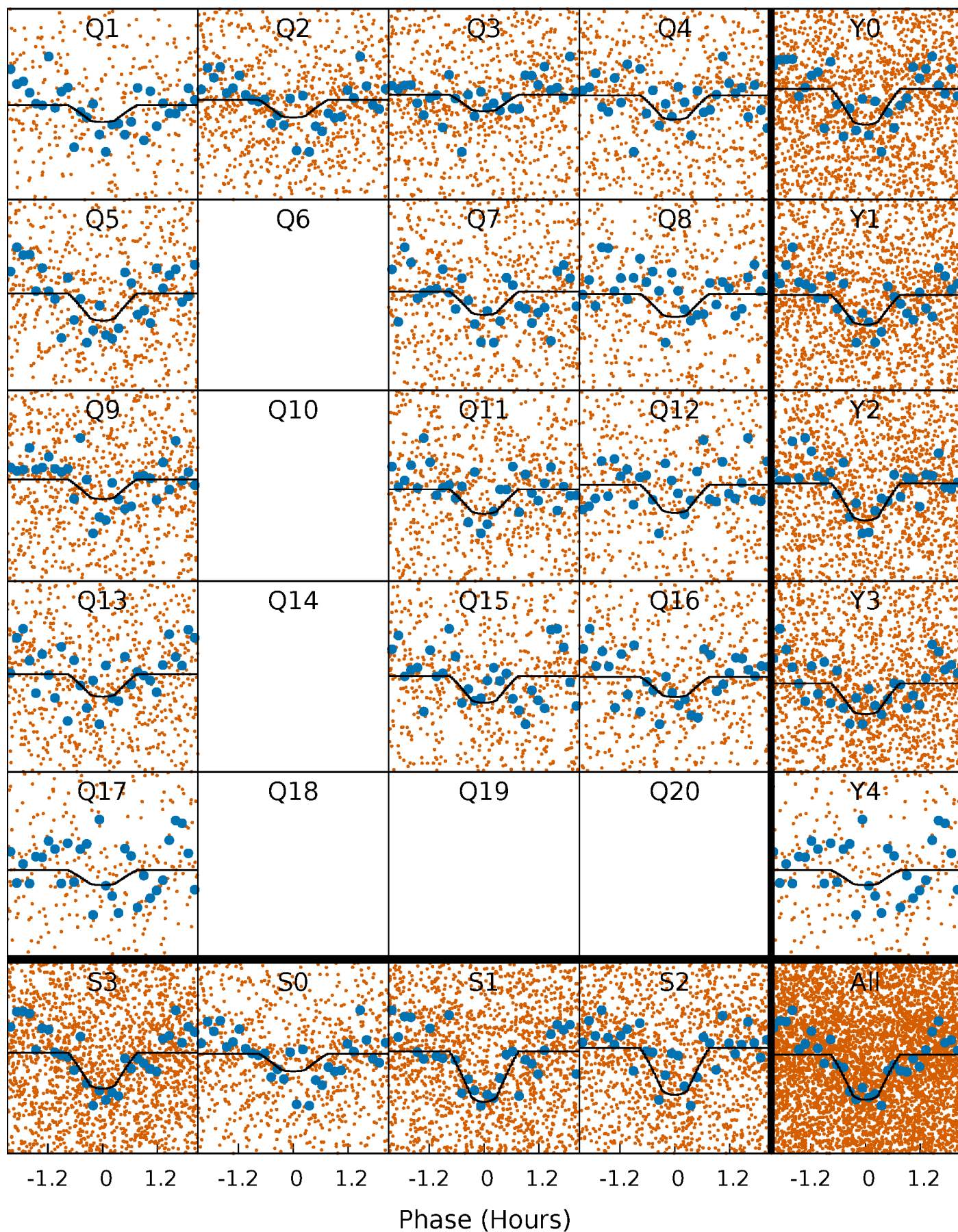
PDC Quarter-Phased Transit Curves

TCE 003967018-01 P= 0.632820 Days $T_0=132.004974$ (BKJD)



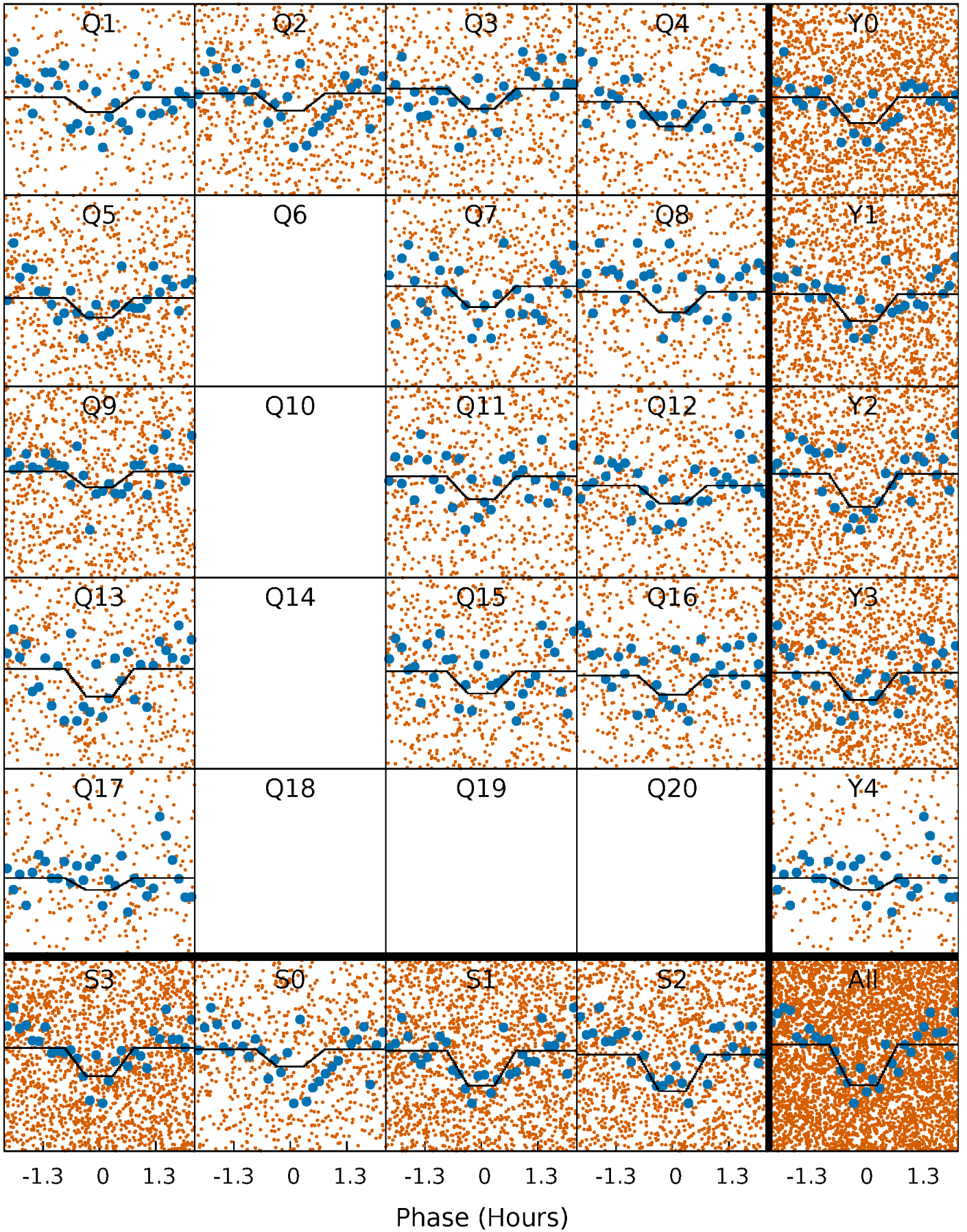
DV Quarter-Phased Transit Curves

TCE 003967018-01 P= 0.632820 Days $T_0=132.004974$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

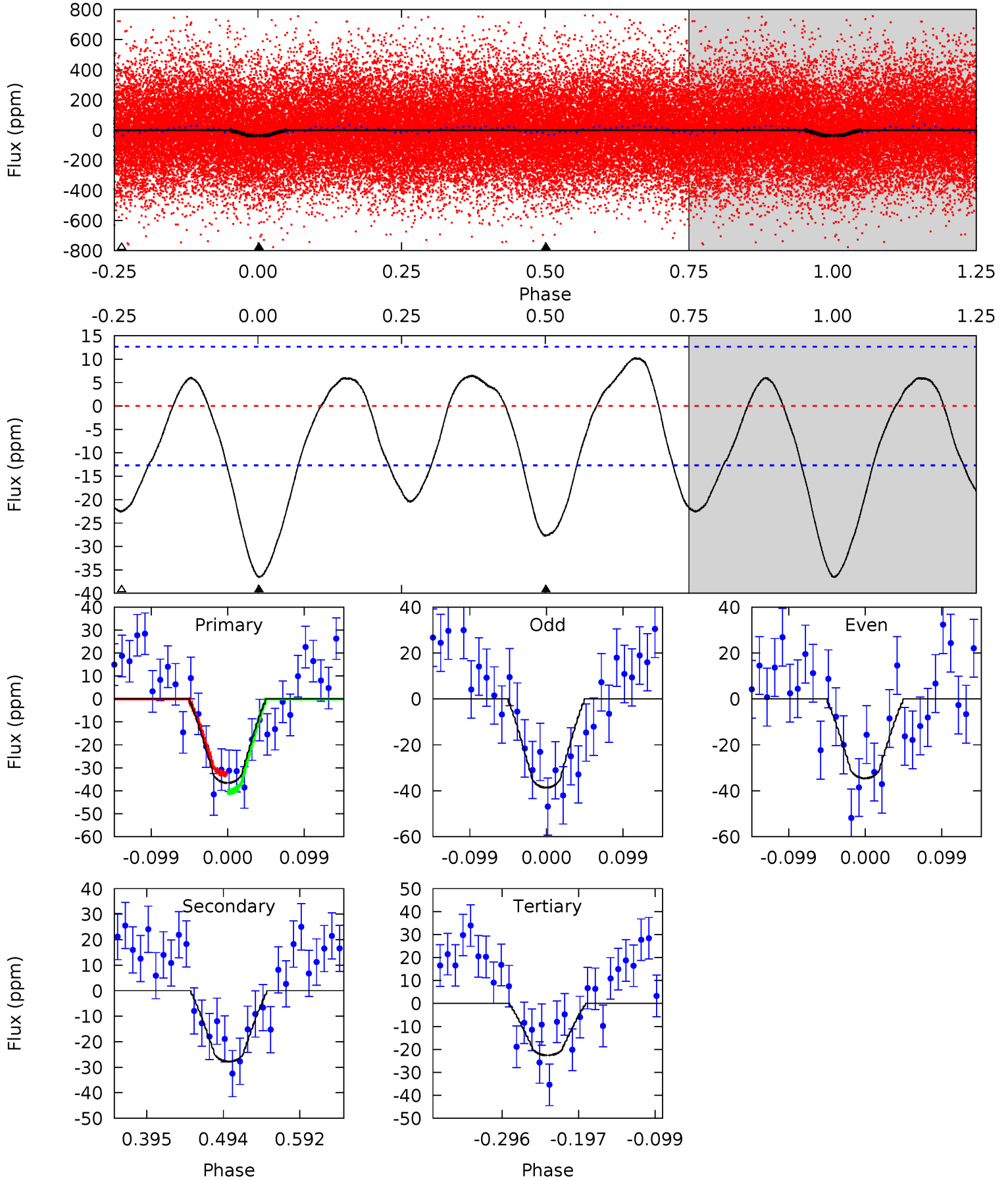
TCE 003967018-01 P= 0.632822 Days $T_0=132.004449$ (BKJD)



DV Model-Shift Uniqueness Test

003967018-01, P = 0.632820 Days, E = 131.372154 Days

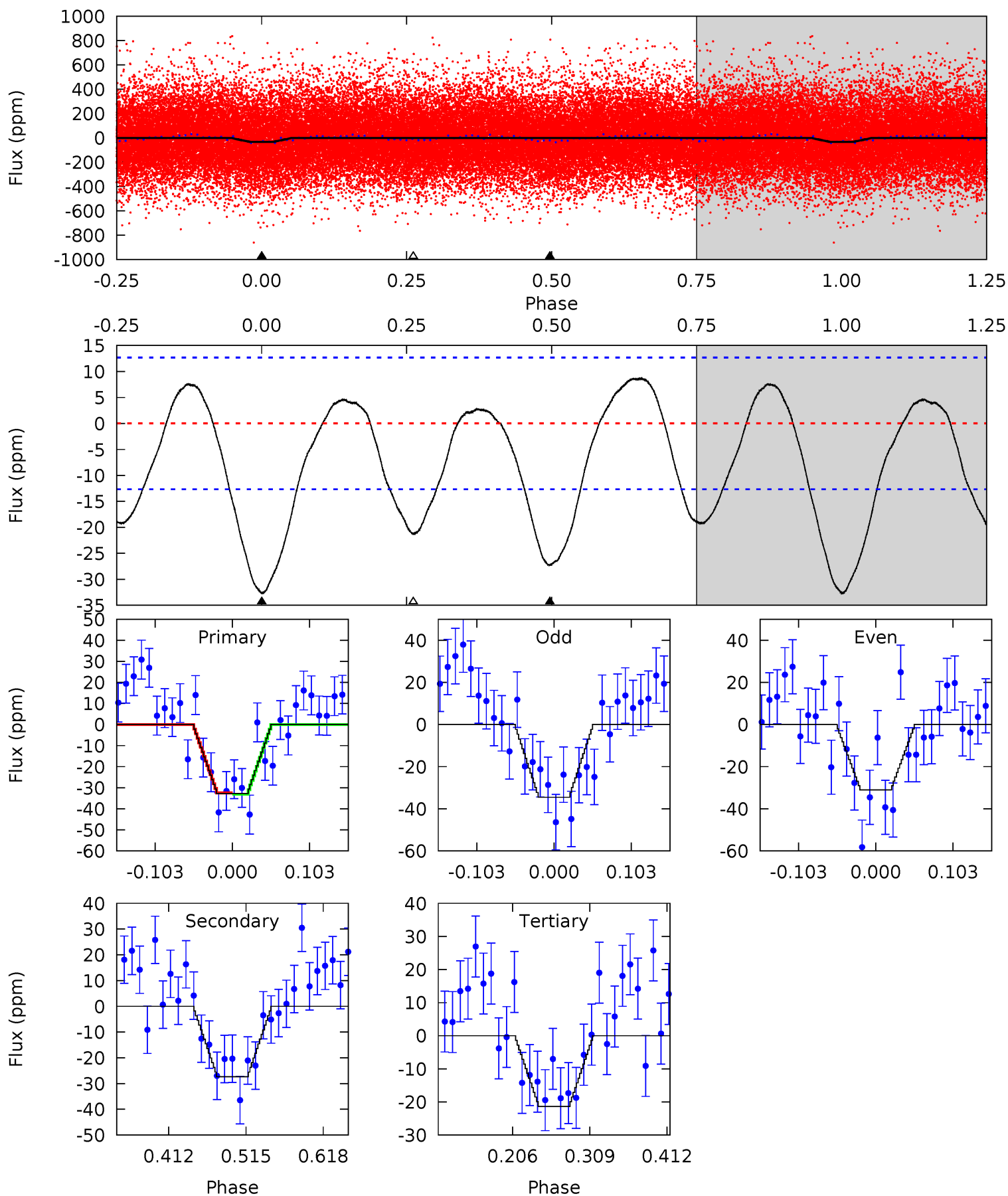
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	10.0	8.13	0	4.57	1.65	3.71	5.05	13.2	1.87	10.0	0.73	0.89	0.22	1.40



Alt Model-Shift Uniqueness Test

003967018-01, P = 0.632822 Days, E = 131.371627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	9.85	7.69	0	4.56	1.63	3.46	4.11	11.8	2.16	9.85	0.62	0.94	0.21	0.12



Stellar Parameters For KIC 003967018

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6067^{+190}_{-211}	$4.332^{+0.132}_{-0.198}$	$-0.060^{+0.250}_{-0.300}$	$1.148^{+0.362}_{-0.195}$	$1.030^{+0.159}_{-0.130}$	$0.959^{+0.593}_{-0.495}$
	+3%/-3%	+3%/-5%	+417%/-500%	+32%/-17%	+15%/-13%	+62%/-52%
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 003967018-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 3	$1.19^{+1.03}_{-0.79}$	3312^{+261}_{-181}	4512^{+3491}_{-1174}	$2.273^{+17.386}_{-1.645}$
Alt.	-27 ± 3	$1.12^{+1.17}_{-0.78}$	3349^{+239}_{-214}	4656^{+4072}_{-1297}	$2.547^{+25.380}_{-1.946}$

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 $A_{\text{obs}} \gg 1.0$

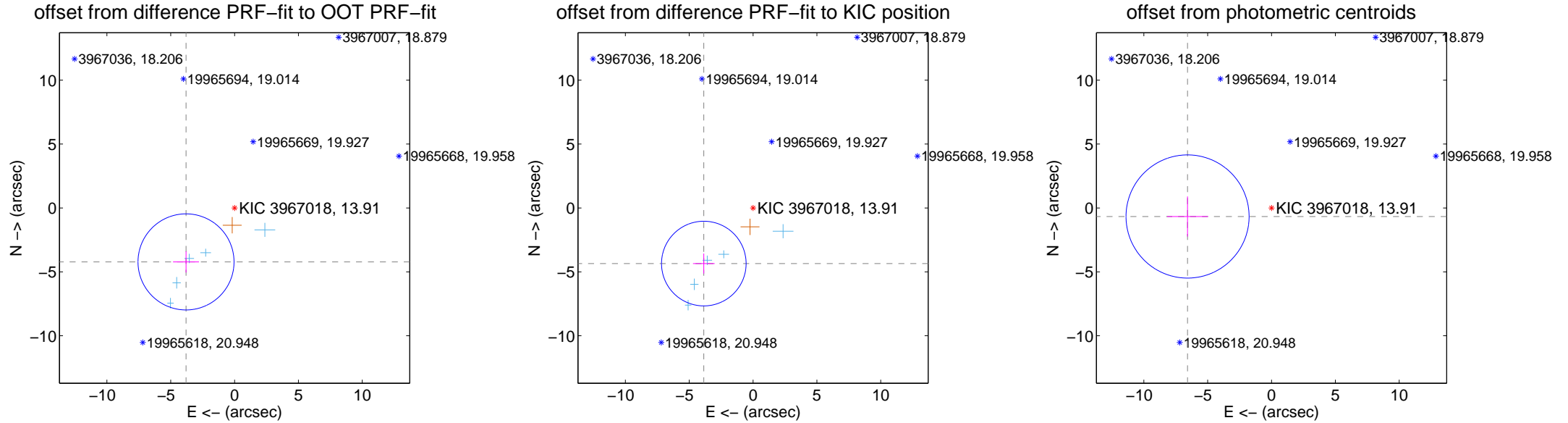
DV Centroid Data

Supplemental centroid analysis for 003967018-01. Kepler magnitude: 13.91. Transit SNR 8.79

There are 5 quarters with good PRF difference image offsets

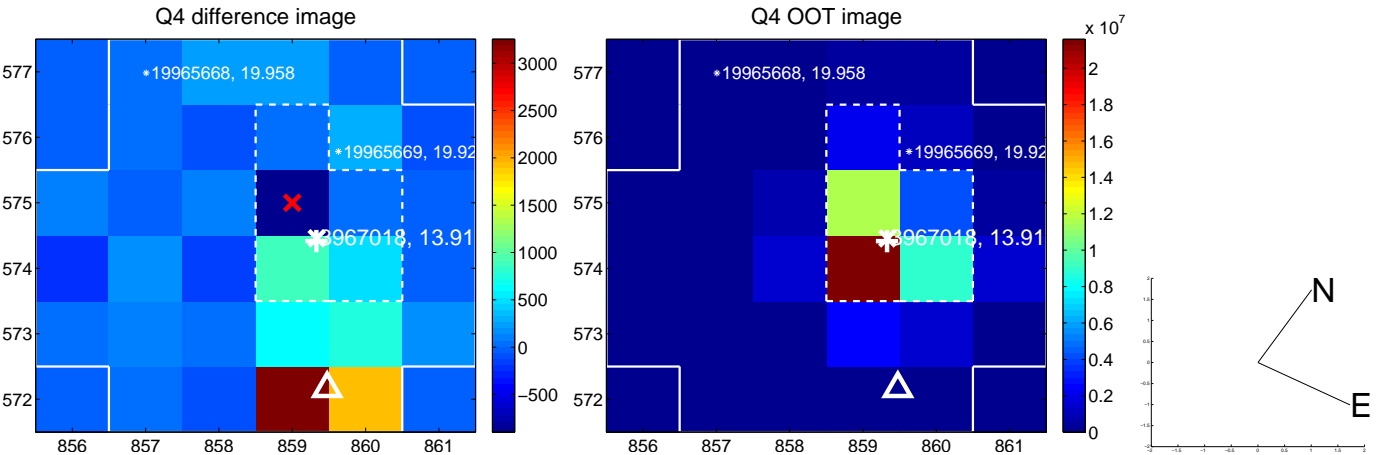
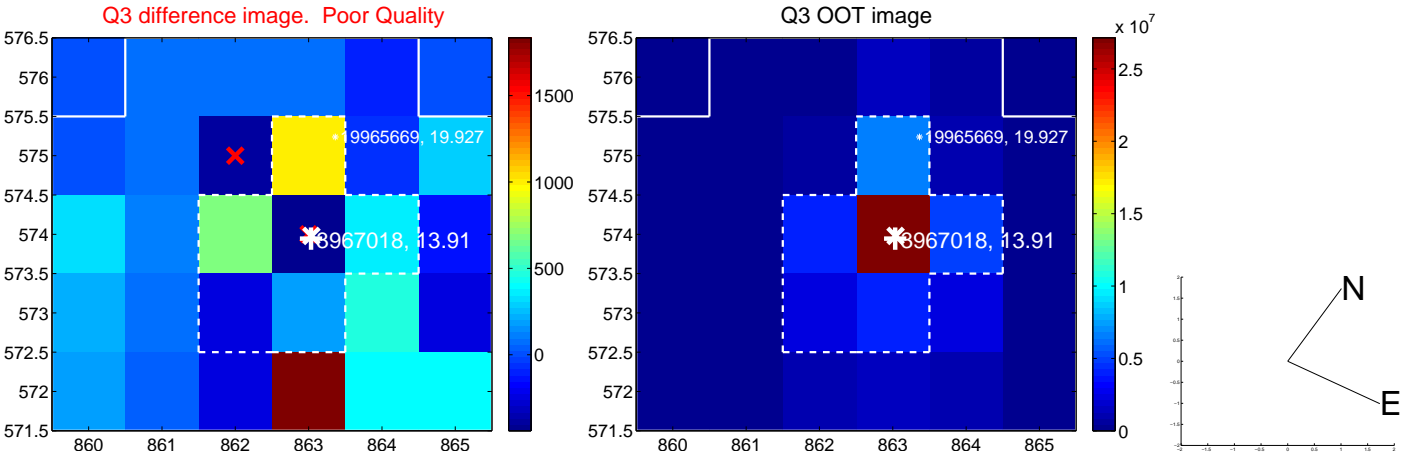
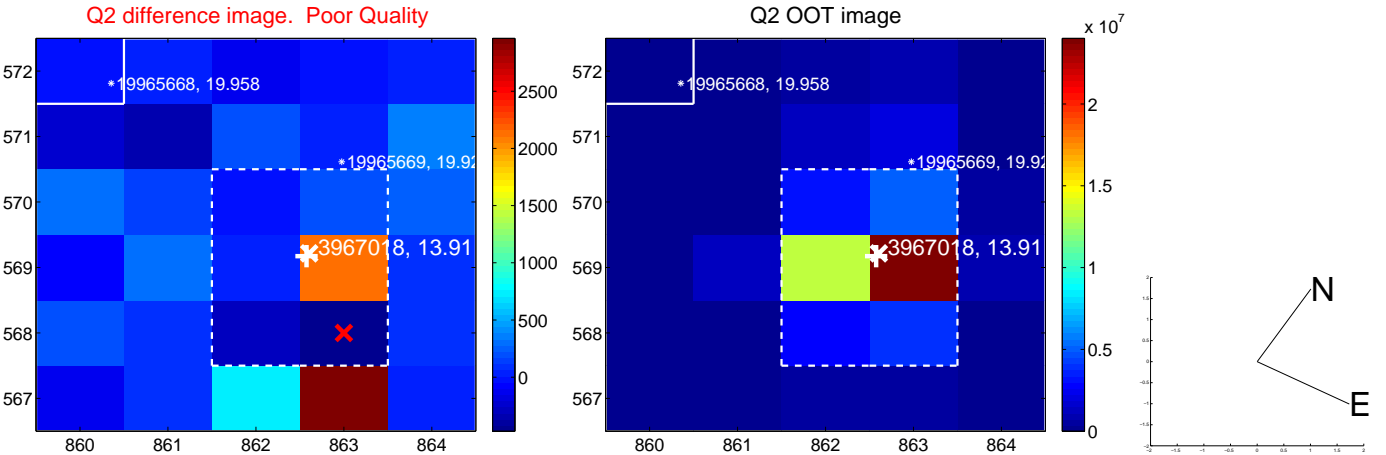
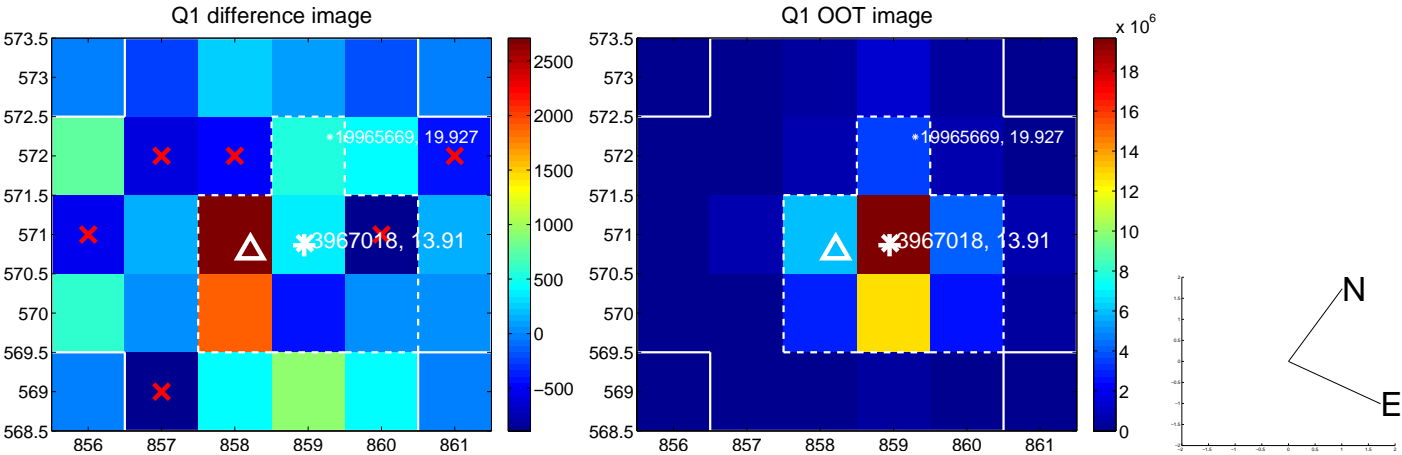
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.681 ± 1.253	4.53	3.802 ± 1.013	-4.221 ± 0.833
PRF-fit source offset from KIC position	5.814 ± 1.104	5.27	3.856 ± 0.845	-4.351 ± 0.785
photometric centroid source offset	6.61 ± 1.61	4.11	6.58 ± 1.61	-0.67 ± 1.57

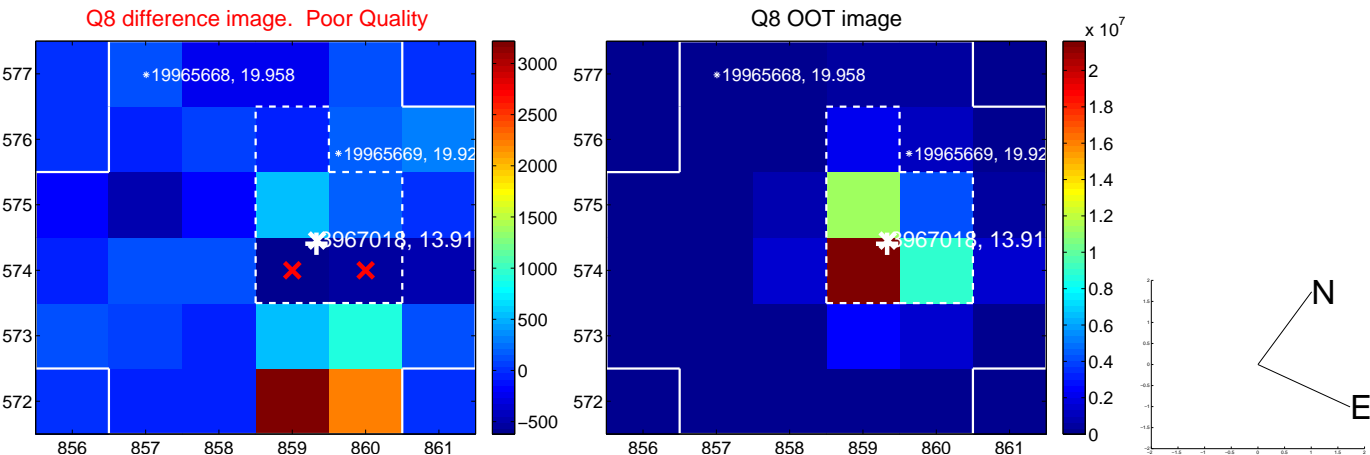
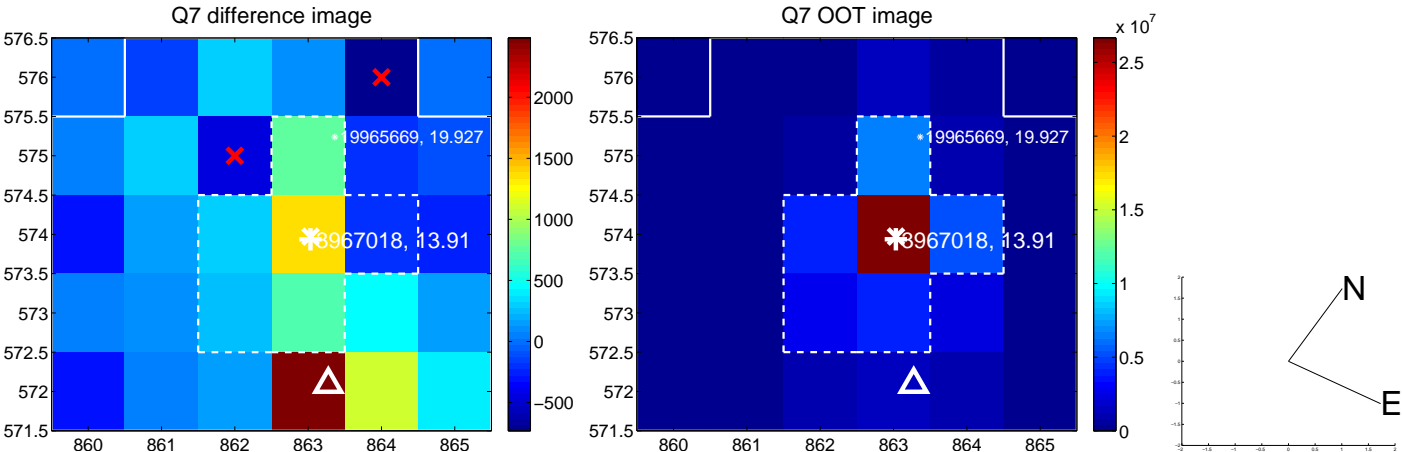
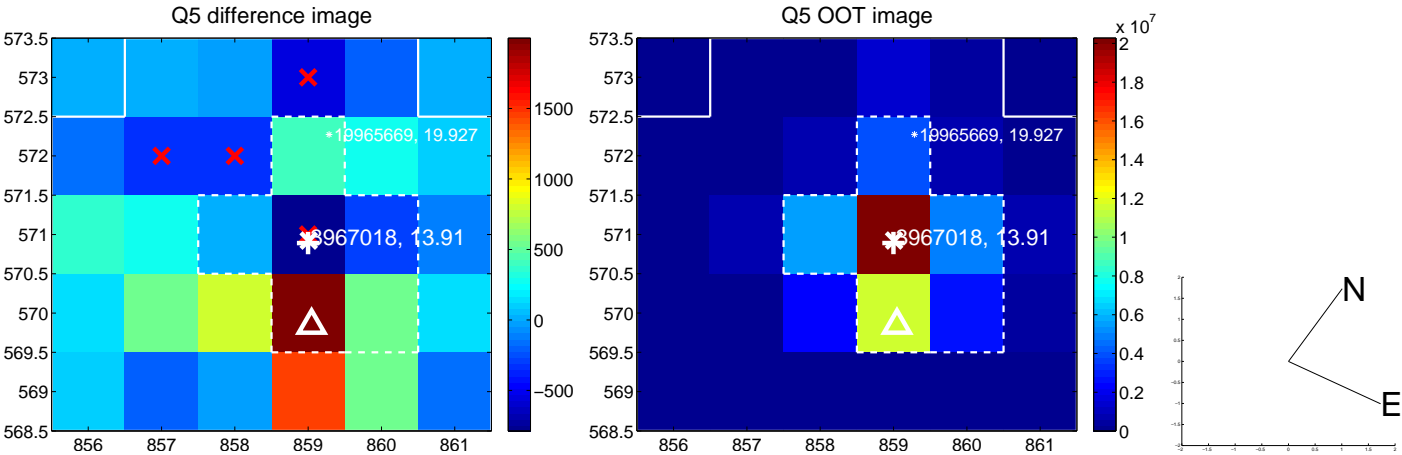


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

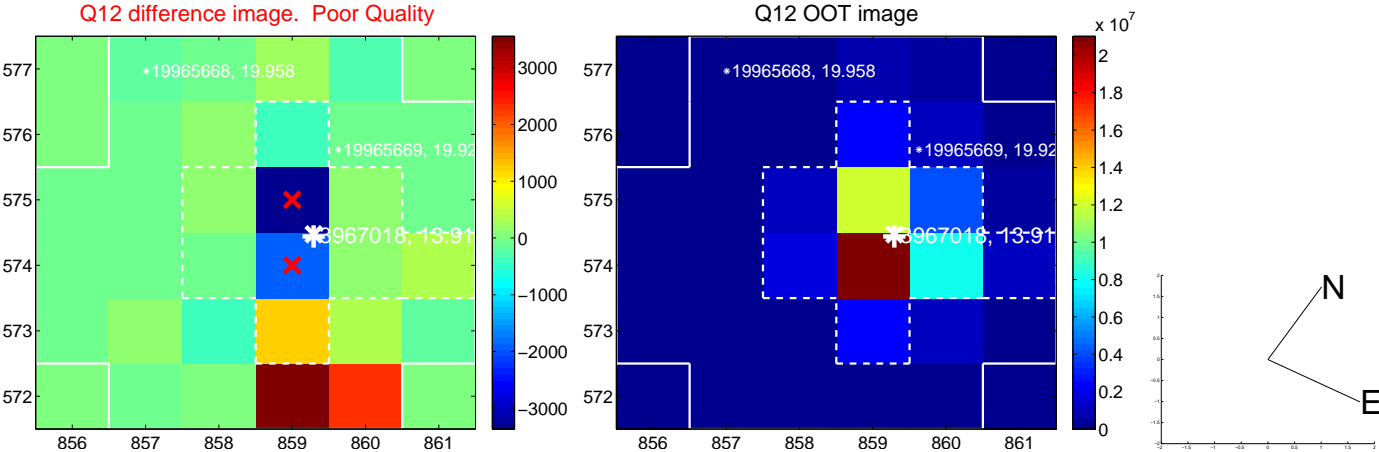
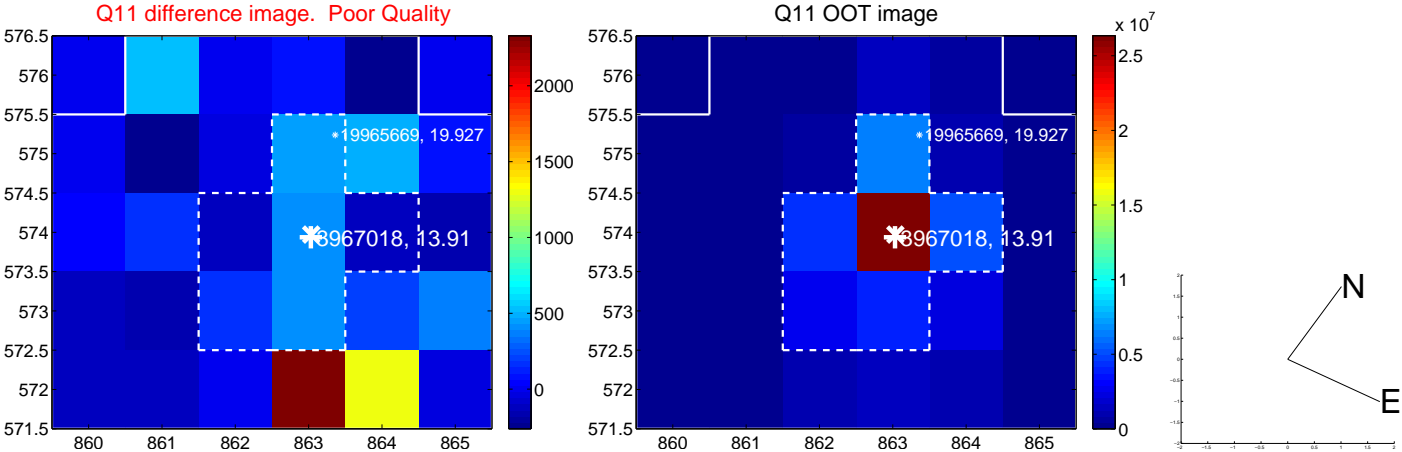
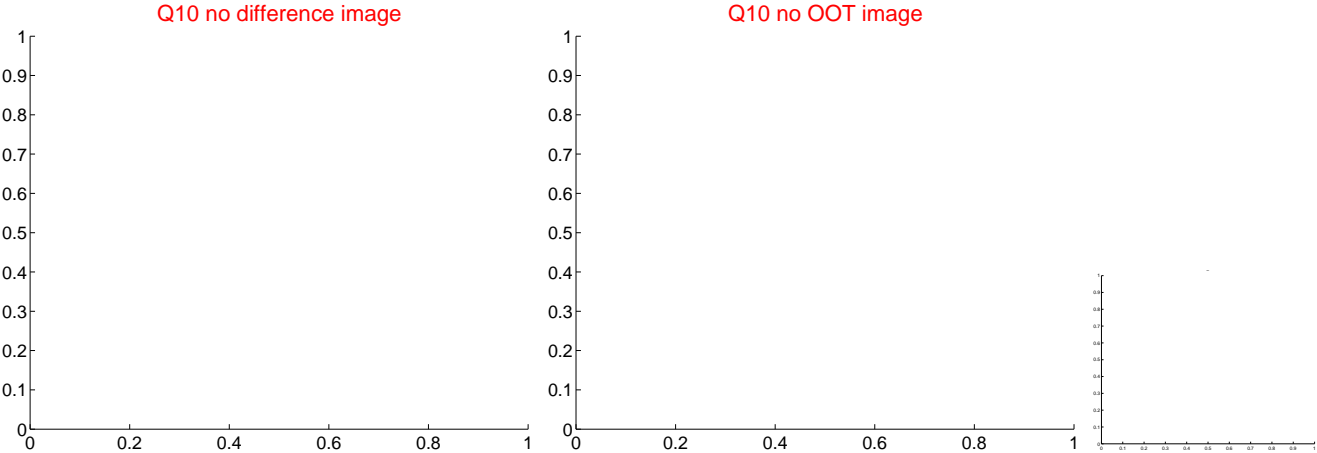
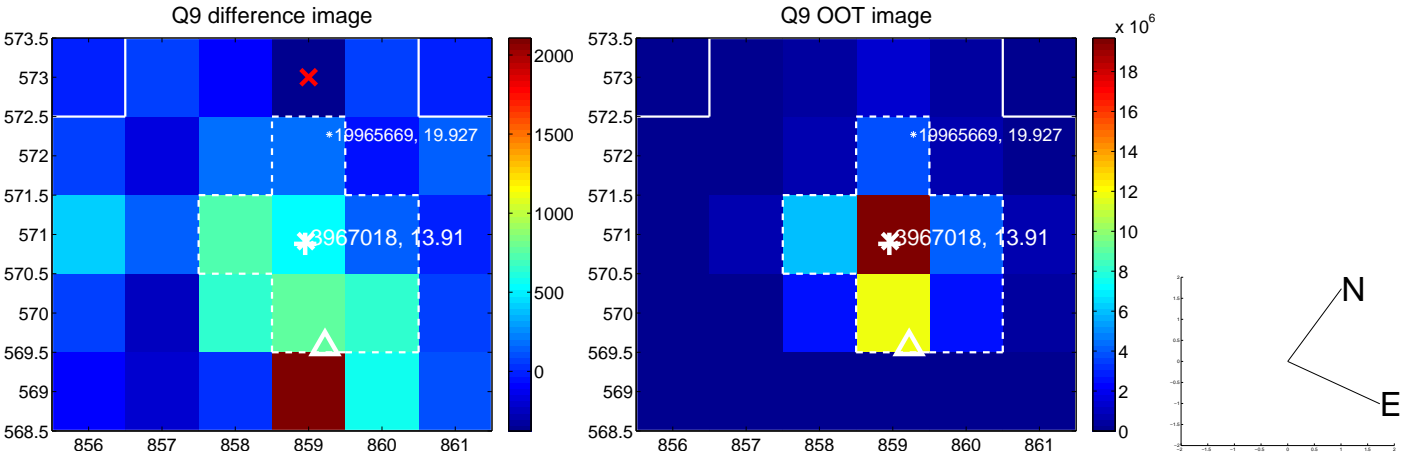
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



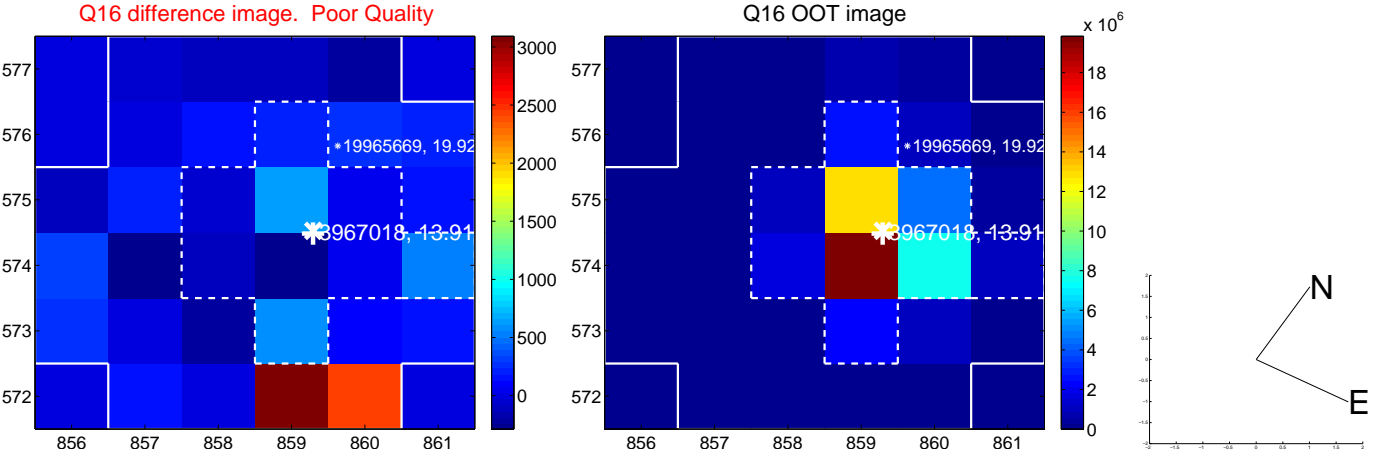
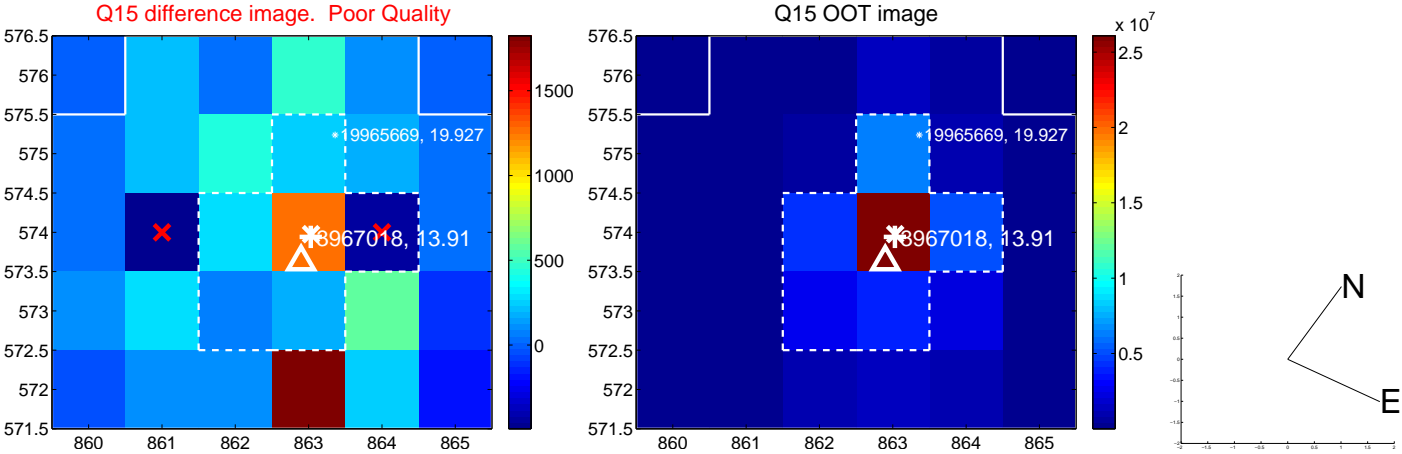
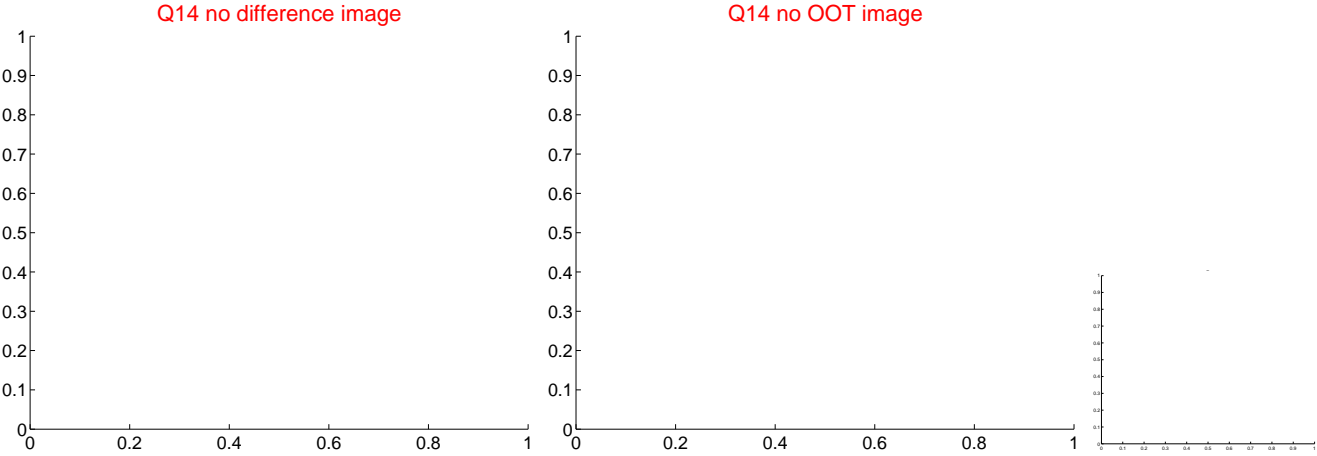
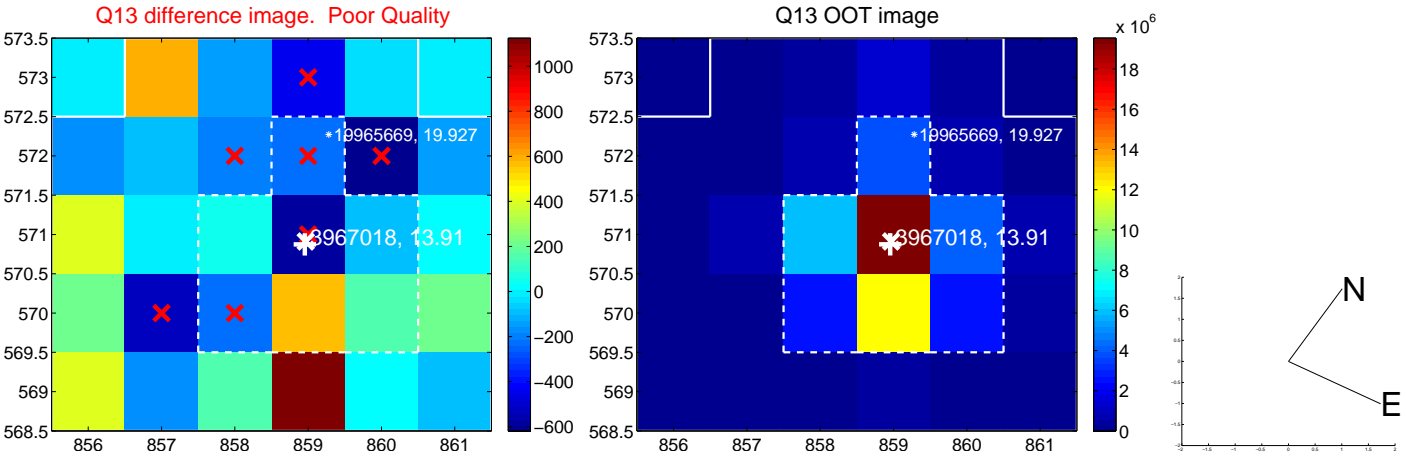
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



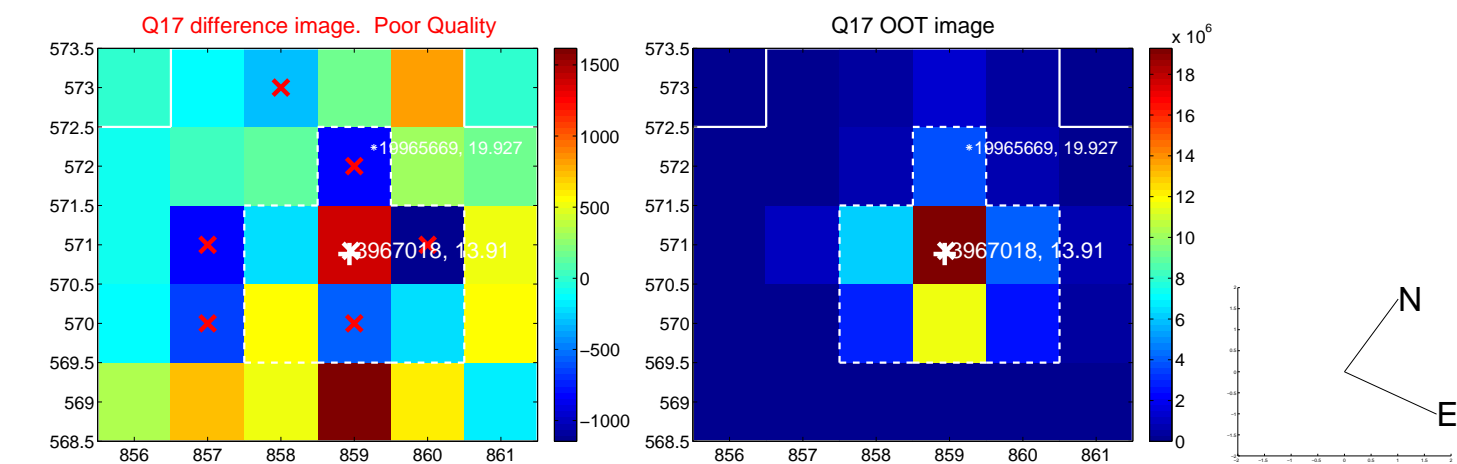
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



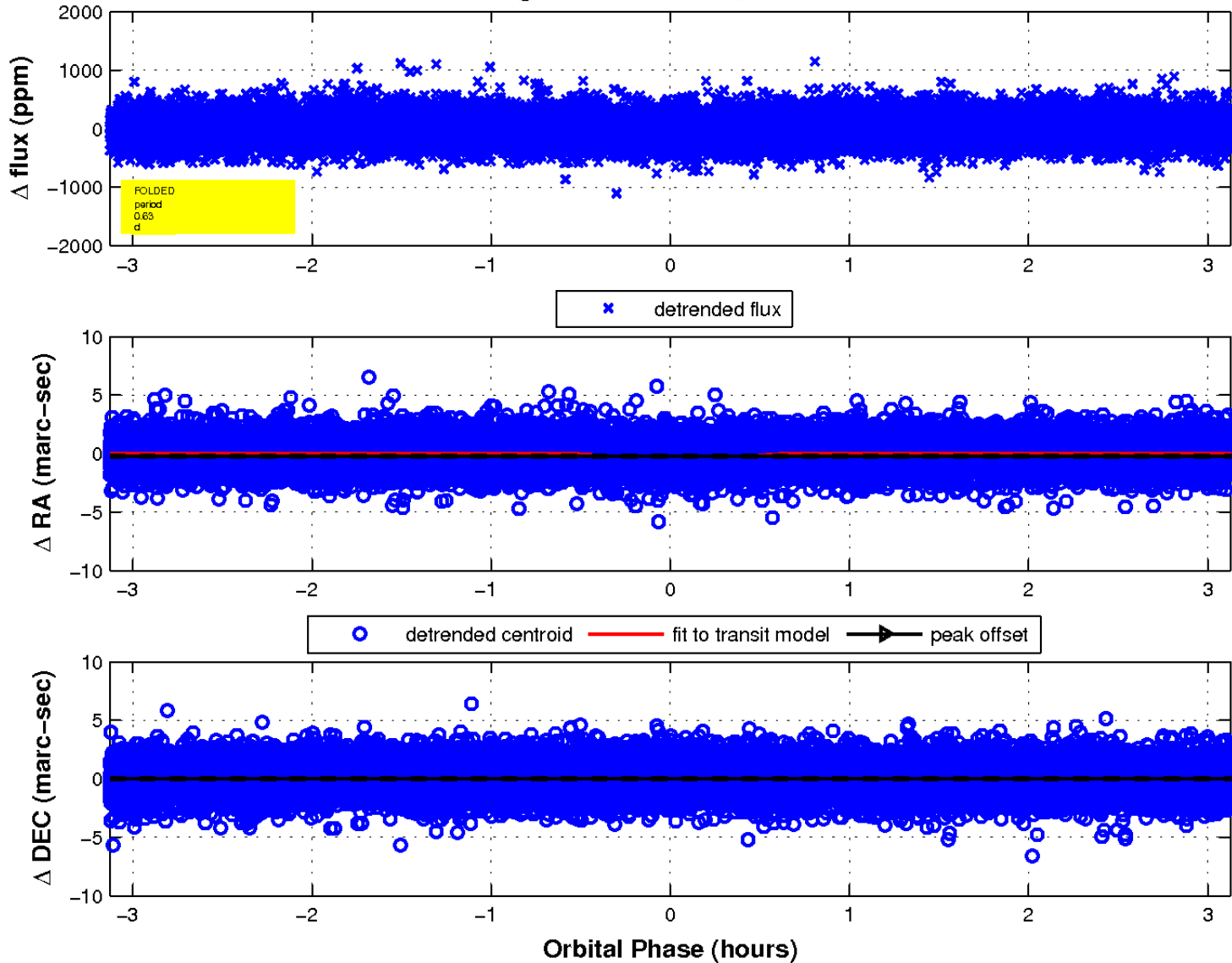
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

