

KIC 009715359

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})
009715359-01	OBS	No	1.601127	132.432004	9.9	7.125	8.9	8.8	2.41	8592	0.81	24017.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009715359-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

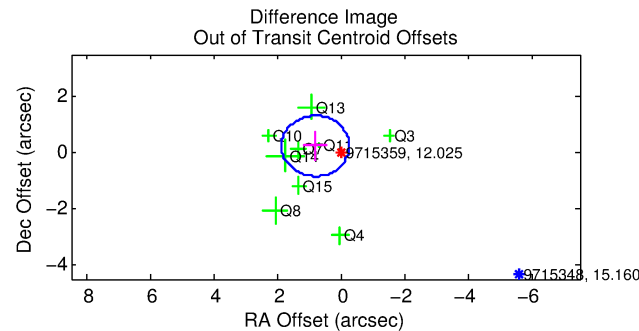
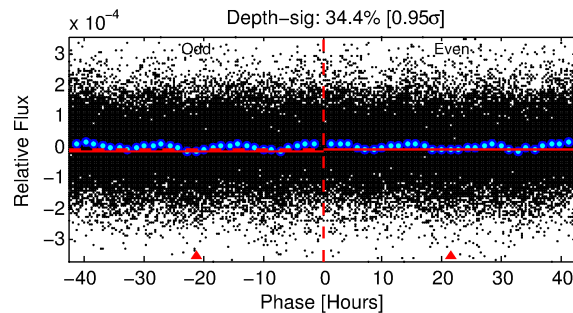
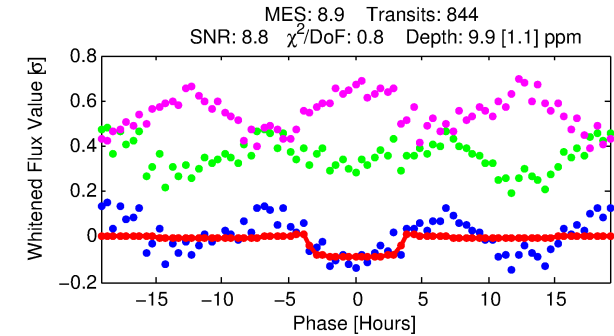
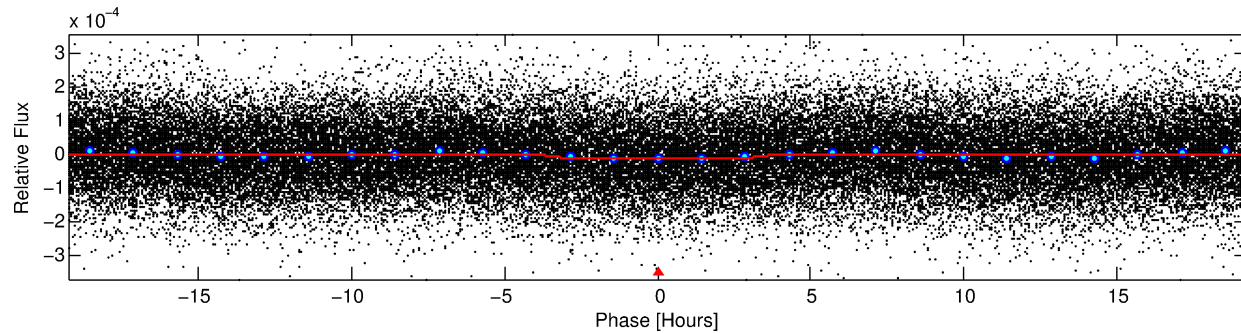
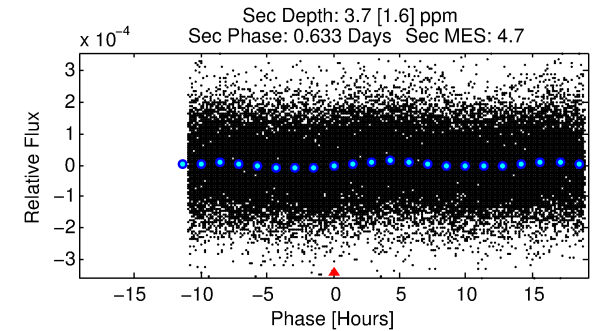
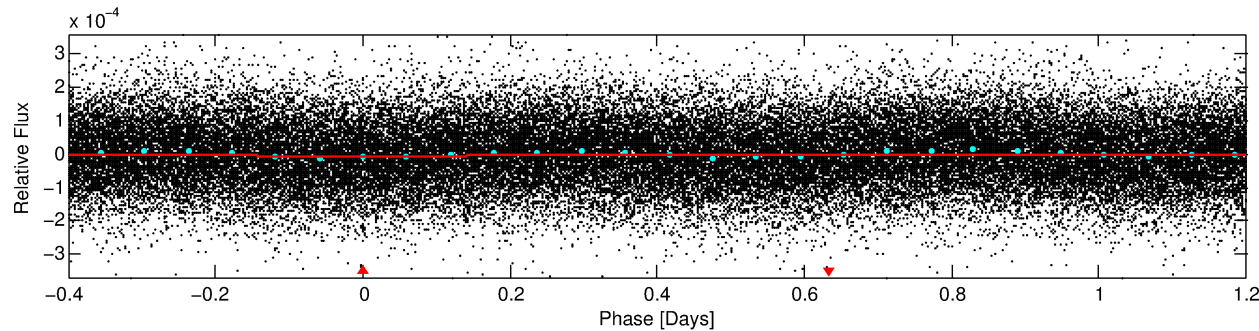
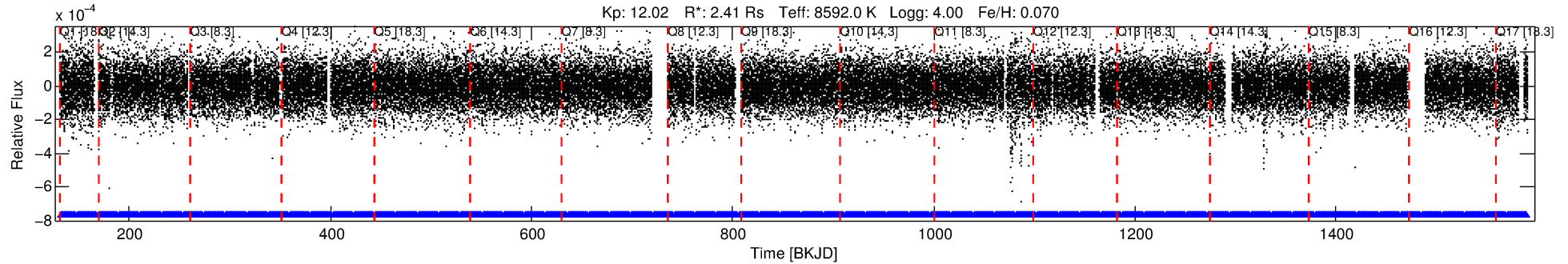
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009715359-01

No Significant Match Found

DV One-Page Summary

KIC: 9715359 Candidate: 1 of 1 Period: 1.601 d



DV Fit Results:

Period = 1.60113 [0.00002] d
Epoch = 132.4320 [0.0072] BKJD
Rp/R* = 0.0031 [0.0005]
a/R* = 1.53 [0.91]
b = 0.65 [0.92]
Seff = 24017.54 [10046.53]
Teq = 3174 [332] K
Rp = 0.80 [0.27] Re
a = 0.0344 [0.0085] AU
Ag = 3.71 [2.50] [1.09σ]
Teffp = 6813 [1004] K [3.44σ]

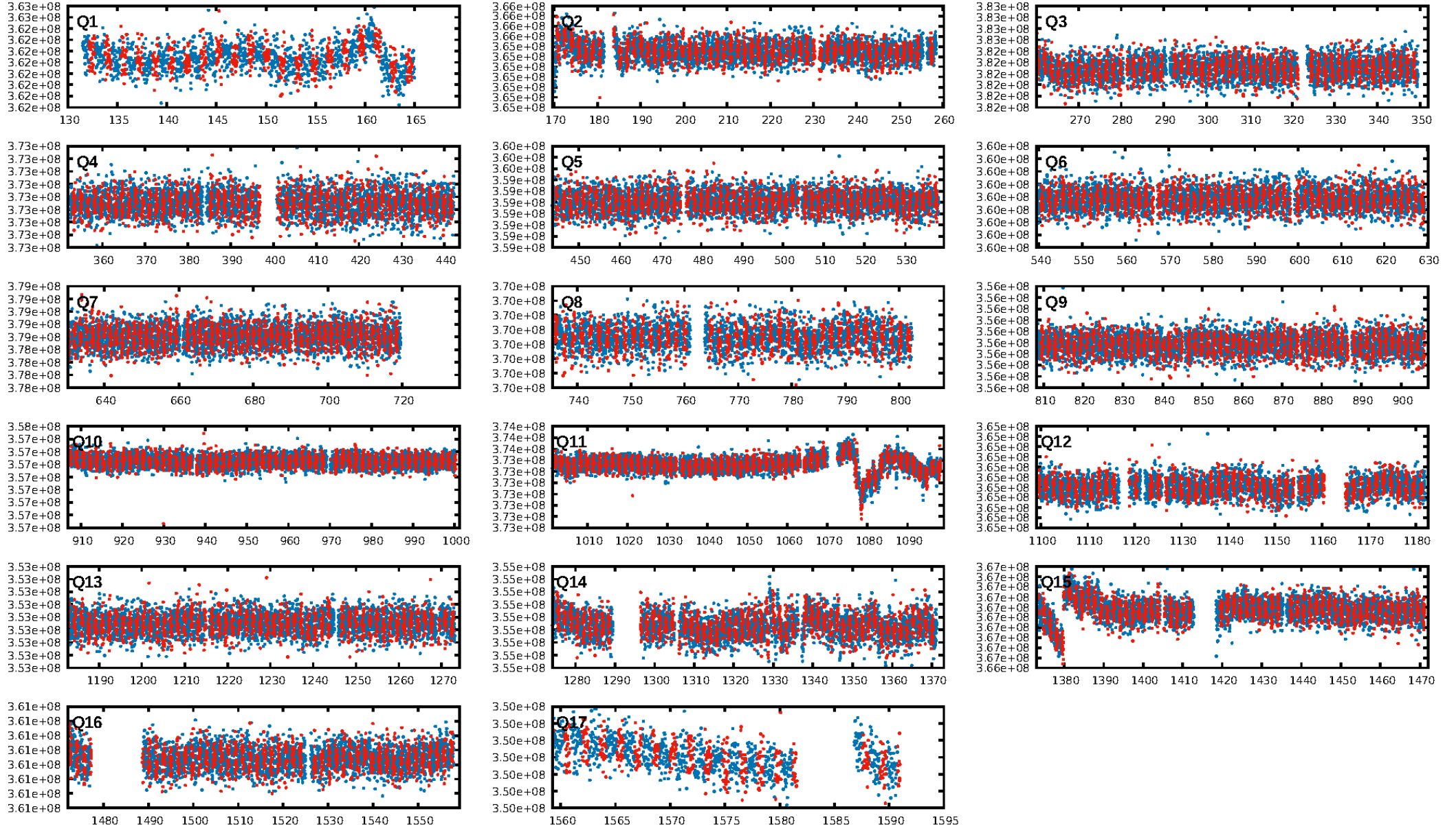
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.29e-15
RollingBand-fgt: 1.00 [806/806]
GhostDiagnostic-chr: 3.899
Centroid-sig: 71.9%
Centroid-so: 0.472 arcsec [0.48σ]
OotOffset-rm: 0.858 arcsec [2.39σ]
OotOffset-st: 2/4/2/1 [9]
KicOffset-rm: 0.861 arcsec [2.24σ]
KicOffset-st: 2/4/2/1 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 1.00 [17/17]

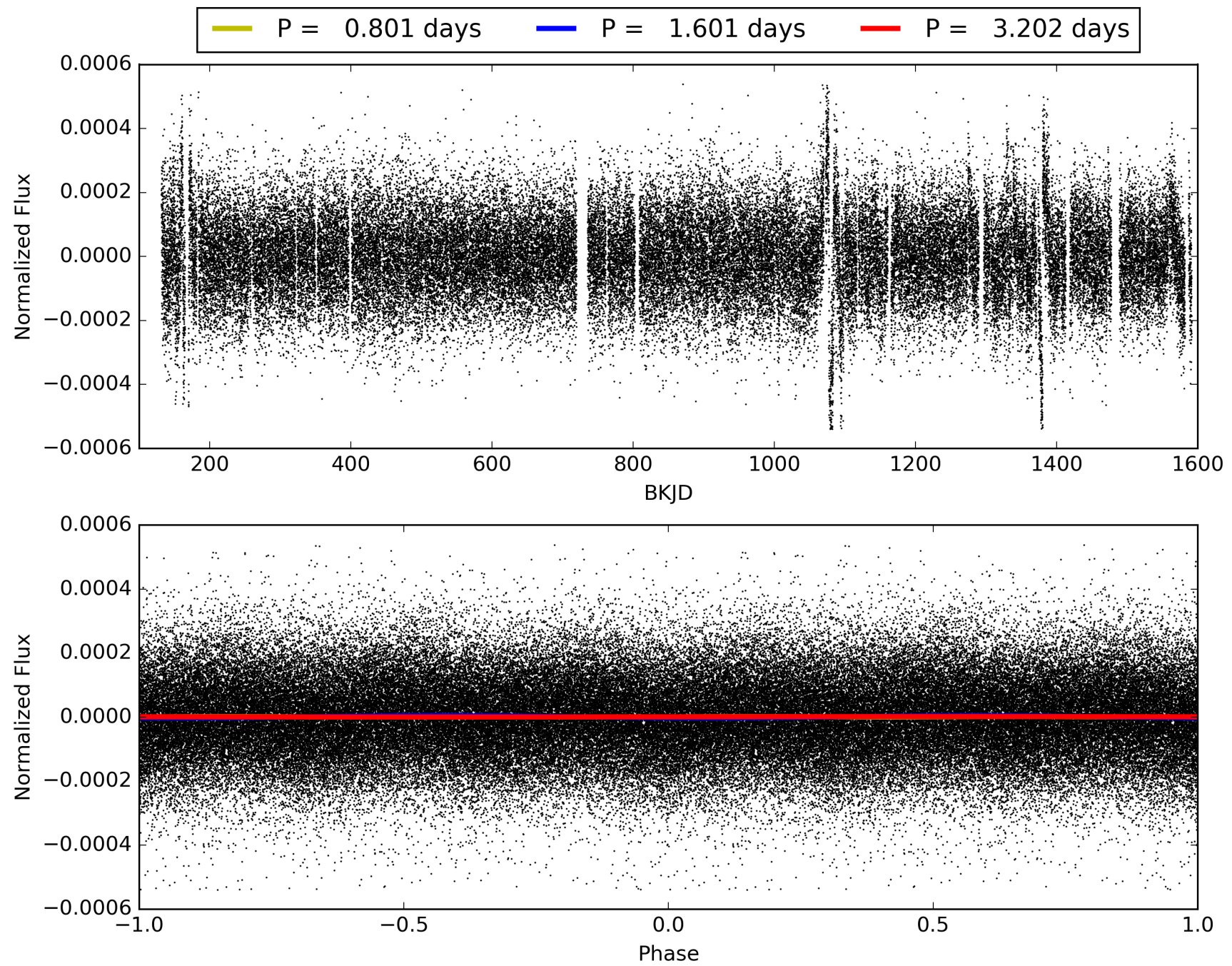
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:44:05 Z

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

TCE 009715359-01, PDC Light Curves

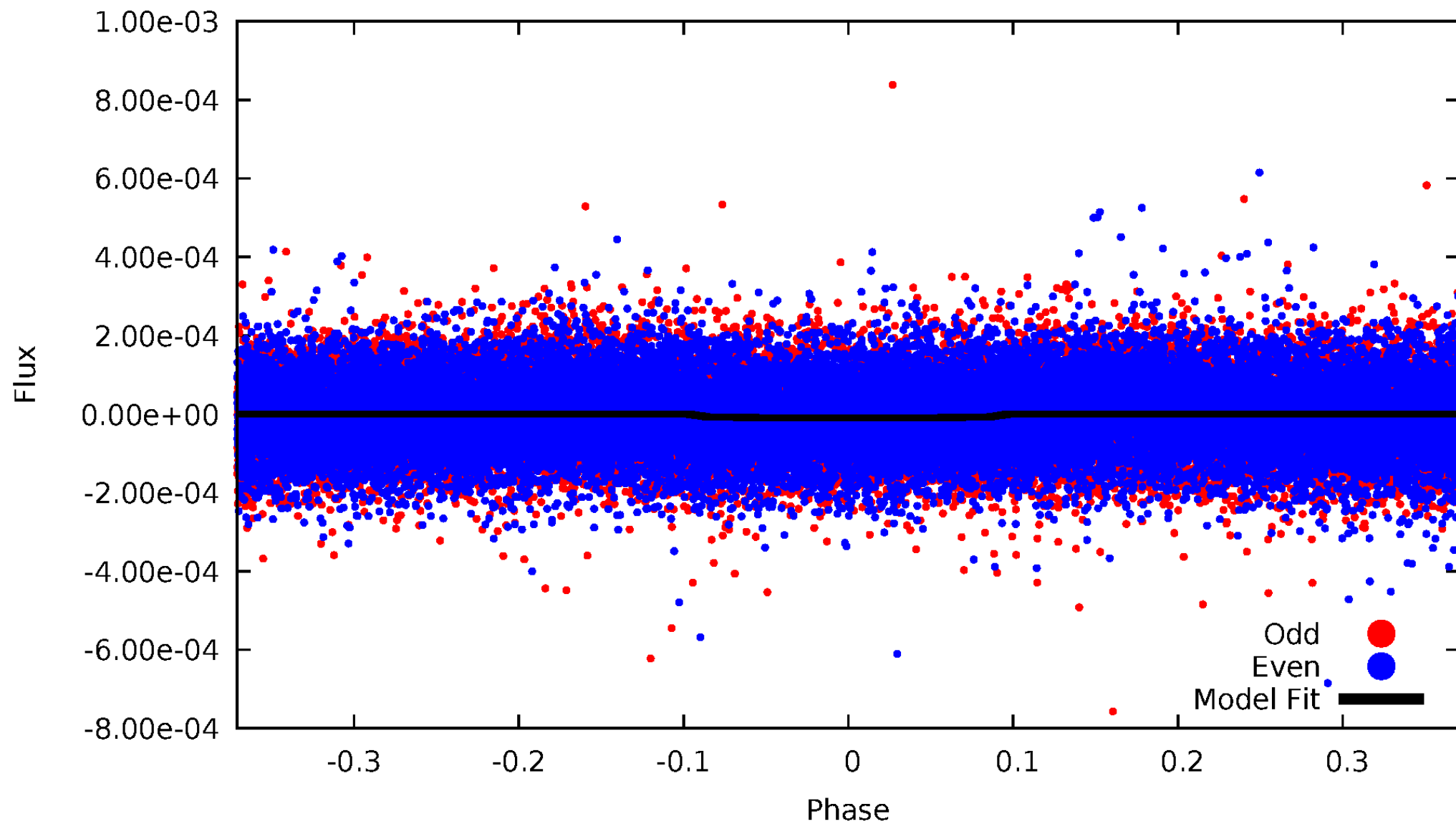


TCE 009715359-01



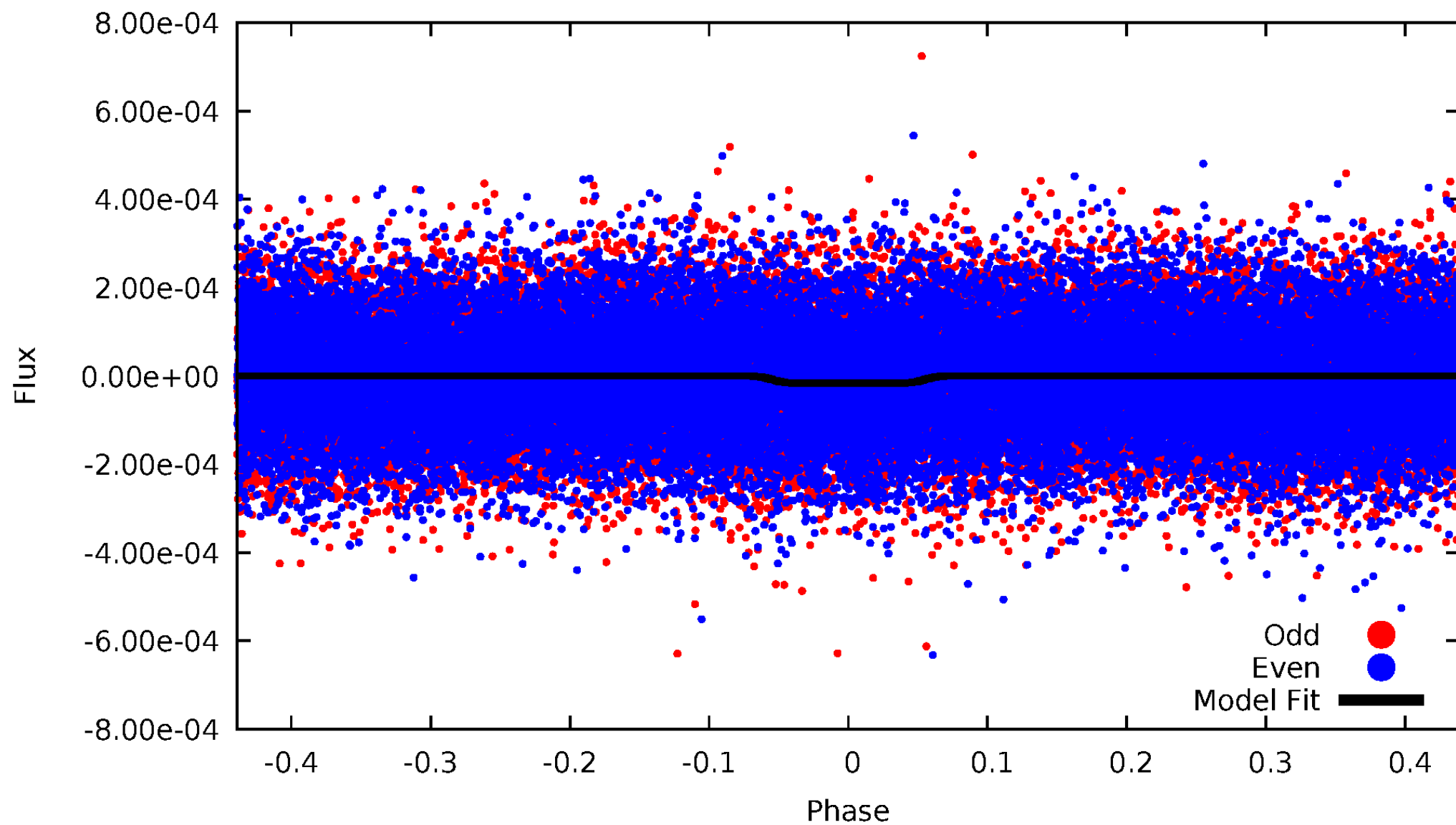
DV Odd/Even

TCE 009715359-01



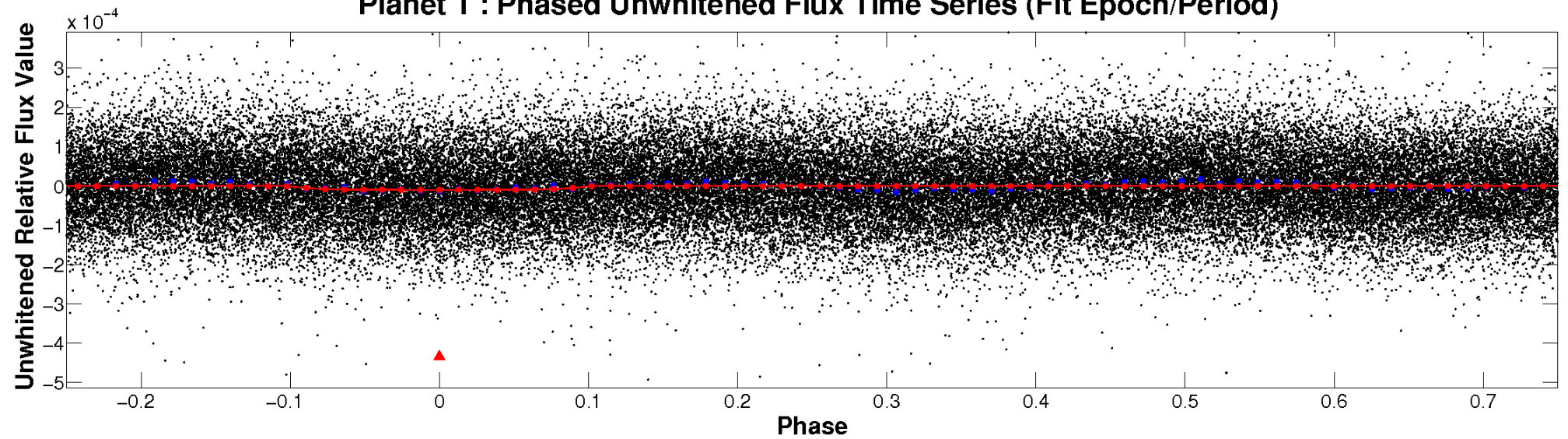
ALT Odd/Even

TCE 009715359-01

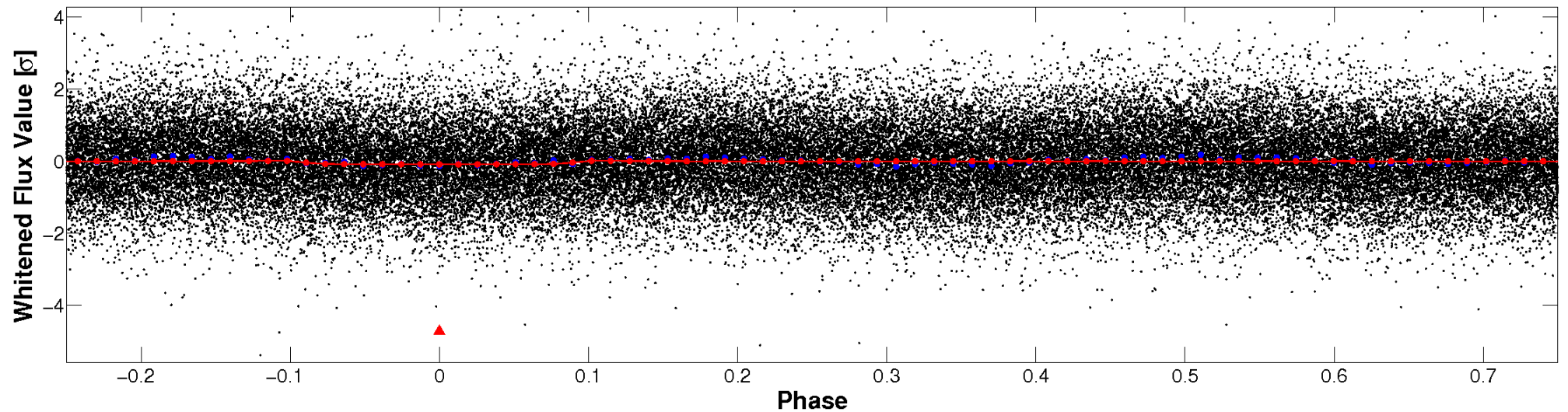


Non-Whitened Vs. Whitened Light Curve

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

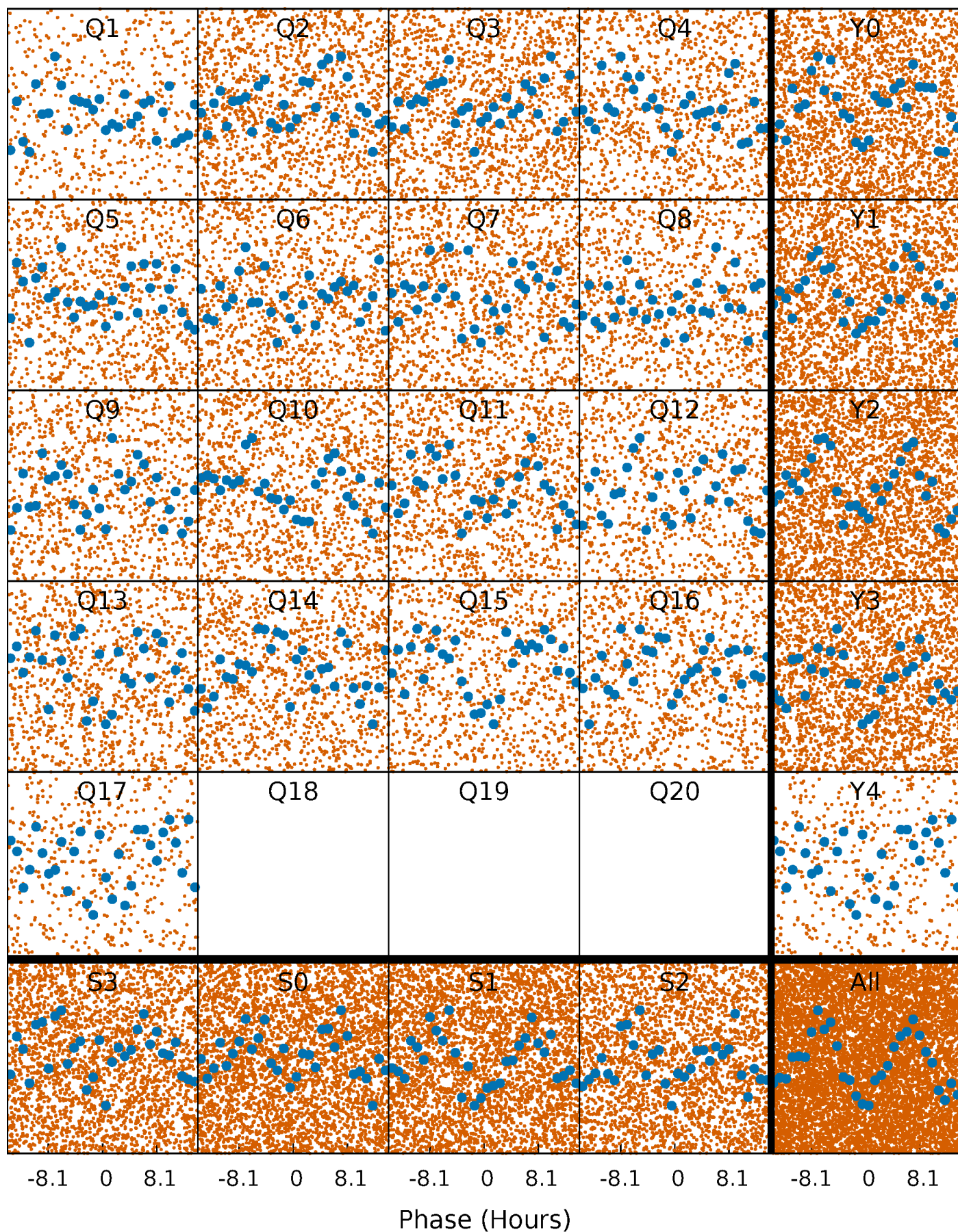


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



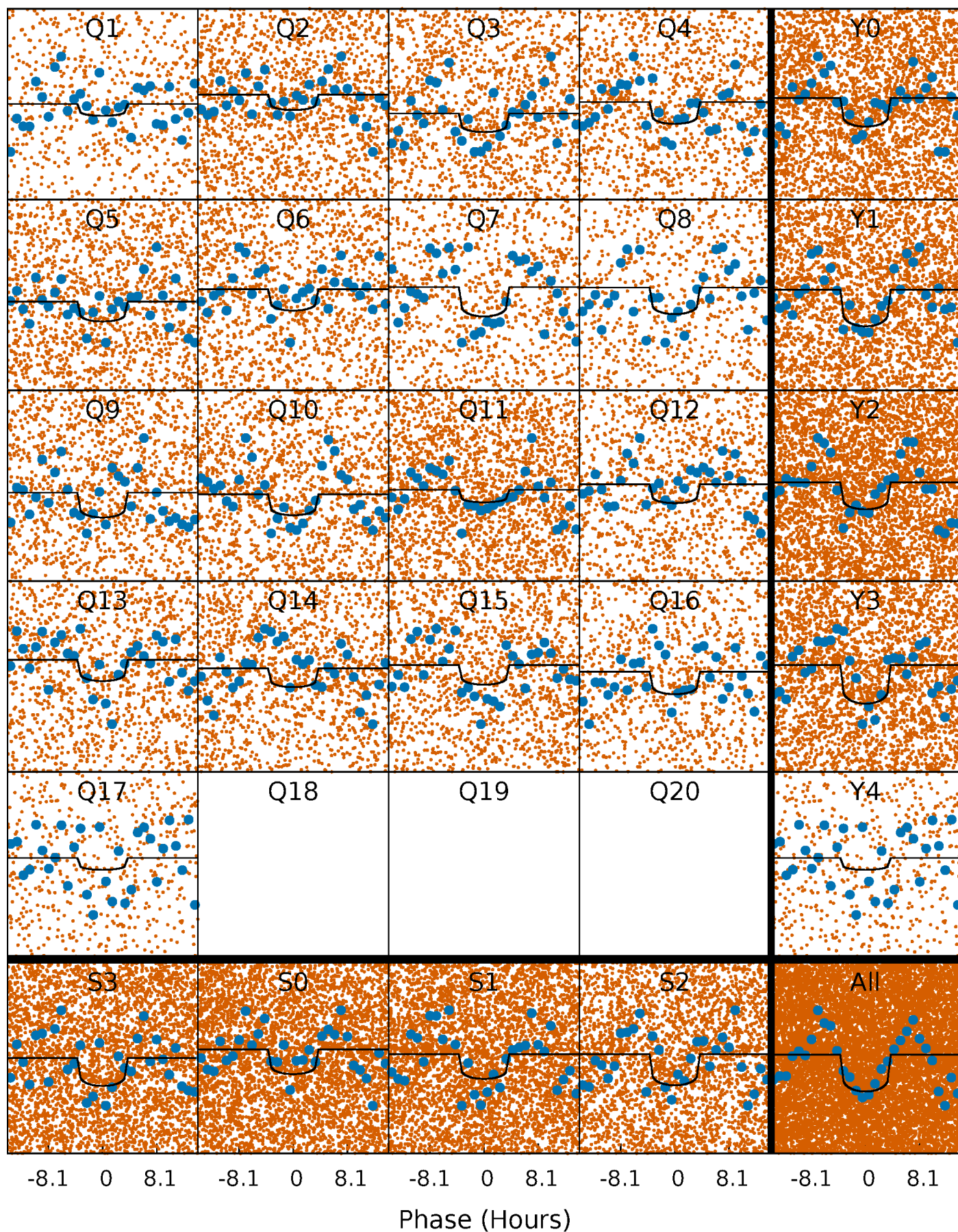
PDC Quarter-Phased Transit Curves

TCE 009715359-01 P= 1.601127 Days $T_0=132.432004$ (BKJD)



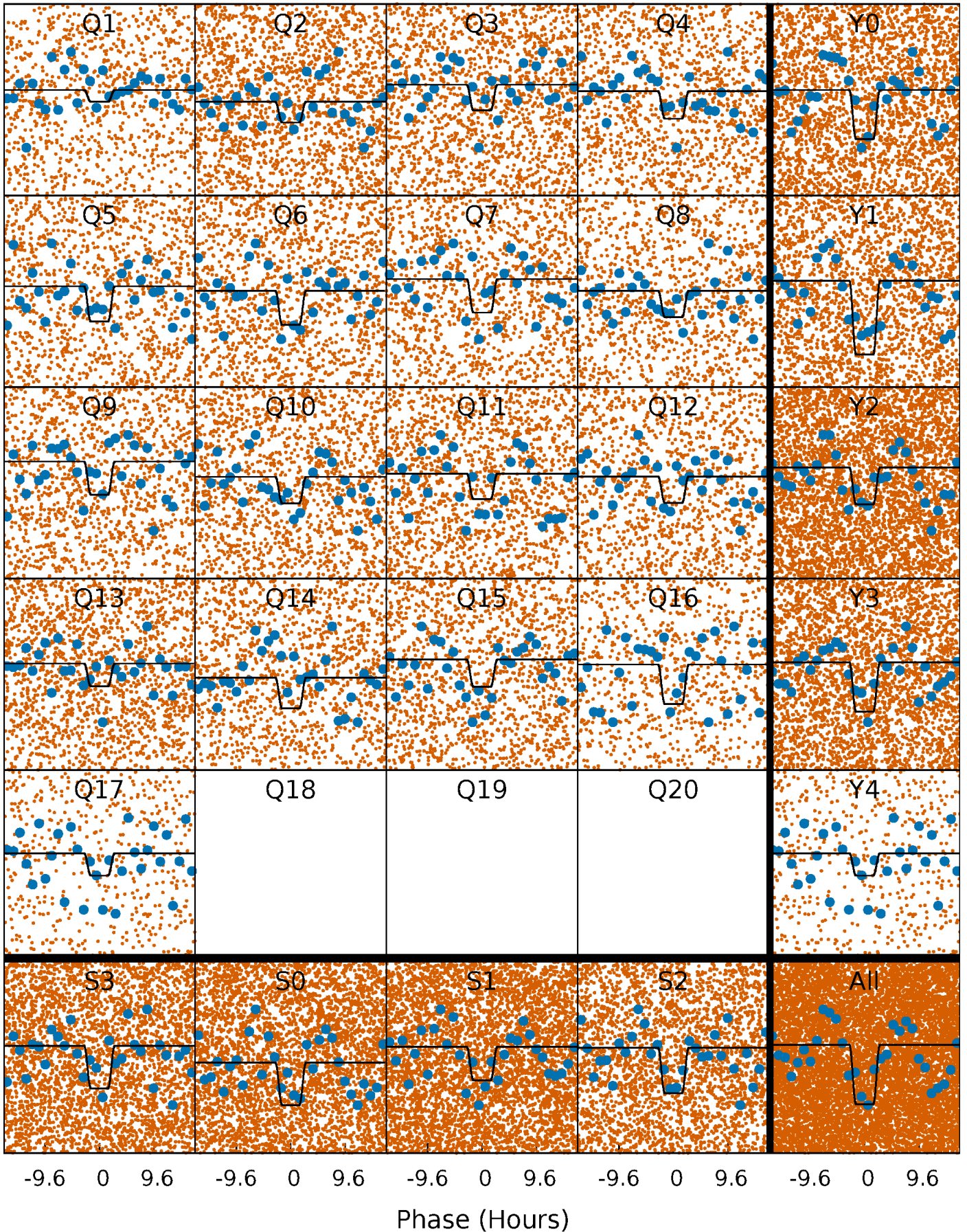
DV Quarter-Phased Transit Curves

TCE 009715359-01 P= 1.601127 Days $T_0=132.432004$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

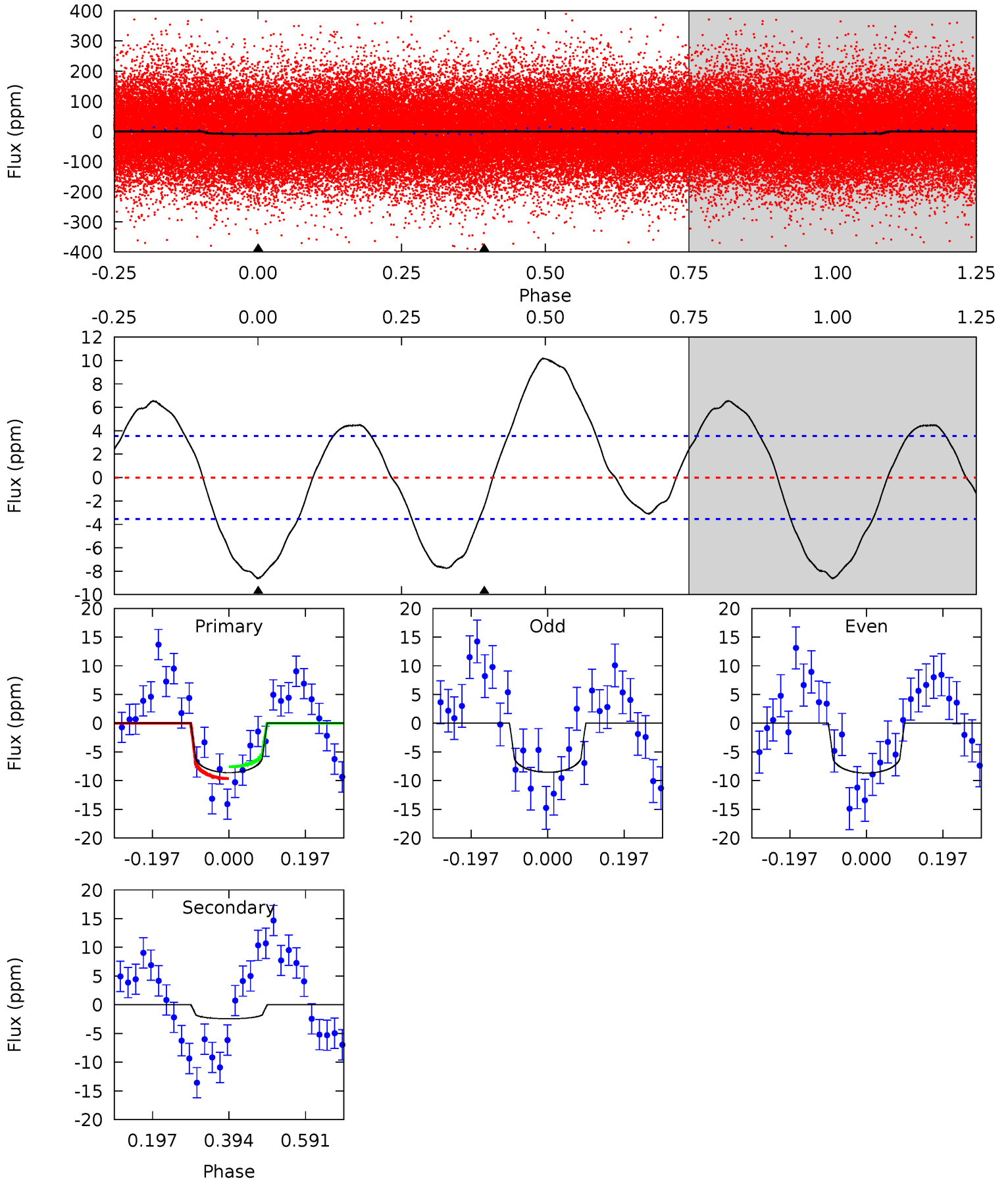
TCE 009715359-01 P= 1.601224 Days $T_0=132.379545$ (BKJD)



DV Model-Shift Uniqueness Test

009715359-01, P = 1.601127 Days, E = 130.830877 Days

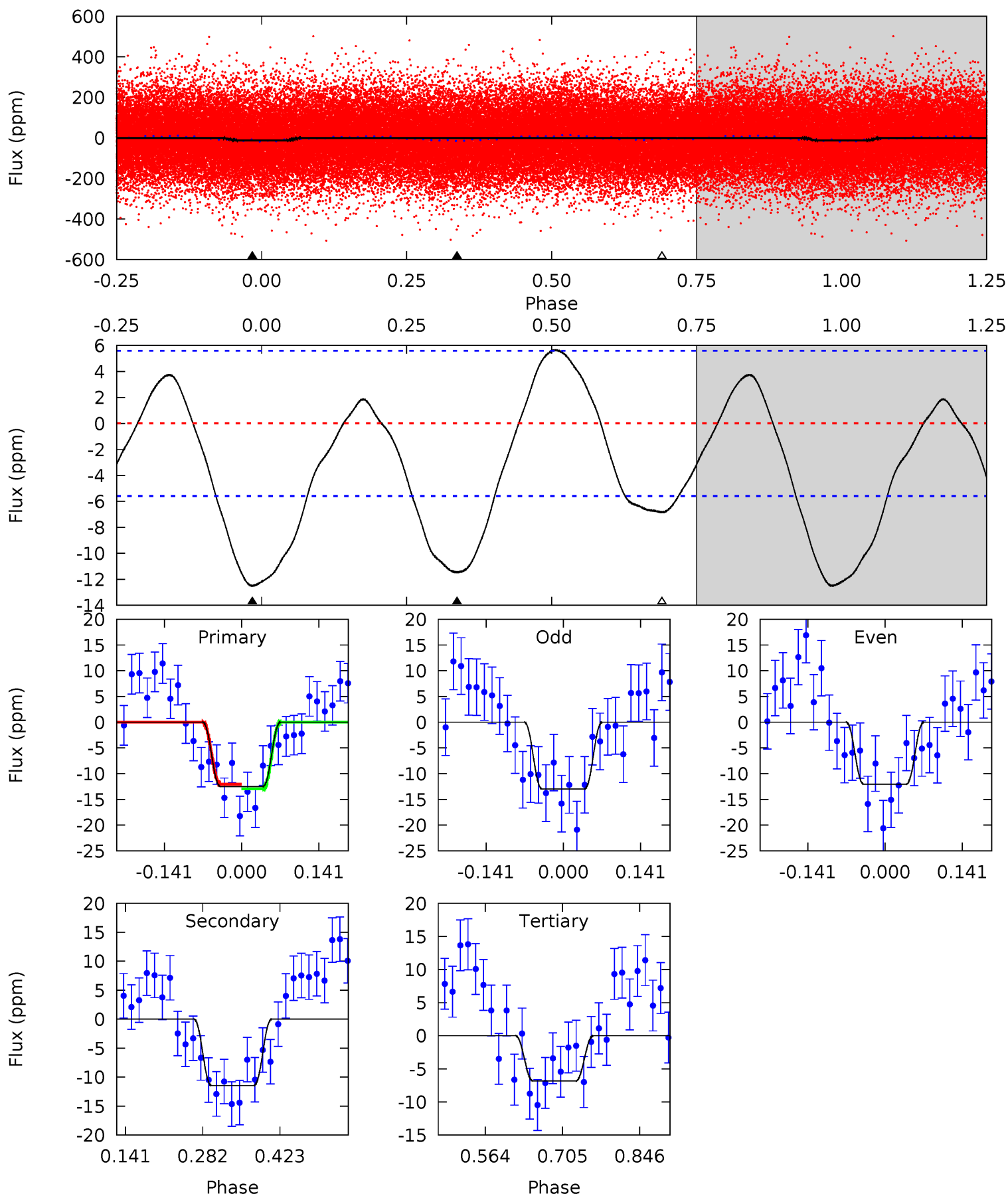
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	3.04	0	0	4.42	1.29	3.58	10.7	10.7	3.04	3.04	0.09	1.08	0.54	1.28



Alt Model-Shift Uniqueness Test

009715359-01, P = 1.601224 Days, E = 130.778321 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	9.20	5.49	0	4.49	1.47	3.31	4.54	10.0	3.71	9.20	0.37	1.42	0.31	0.37



Stellar Parameters For KIC 009715359

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8592^{+235}_{-404}	$3.999^{+0.210}_{-0.140}$	$0.070^{+0.250}_{-0.550}$	$2.414^{+0.547}_{-0.684}$	$2.118^{+0.314}_{-0.538}$	$0.212^{+0.295}_{-0.087}$
	+3%/-5%	+5%/-4%	+357%/-786%	+23%/-28%	+15%/-25%	+139%/-41%
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 009715359-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$0.78^{+0.20}_{-0.18}$	4368^{+326}_{-342}	5610^{+915}_{-665}	$2.463^{+2.088}_{-1.059}$
Alt.	-11 ± 1	$1.04^{+0.22}_{-0.21}$	4376^{+297}_{-337}	7596^{+762}_{-712}	$6.973^{+3.696}_{-2.316}$

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

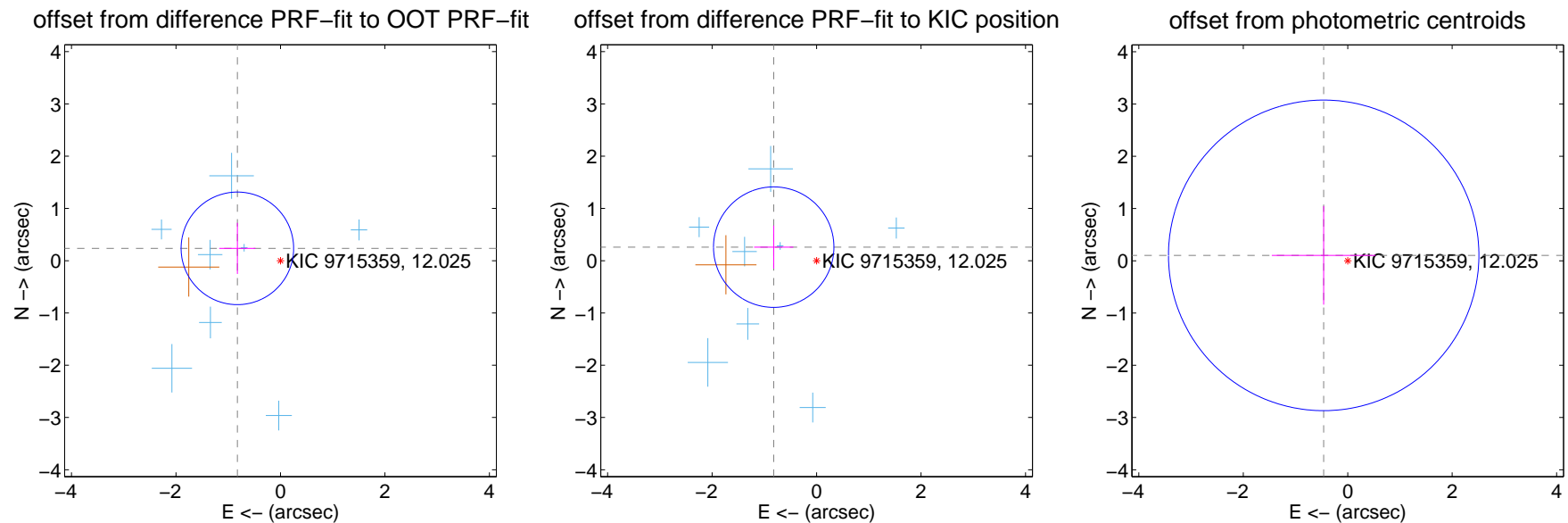
DV Centroid Data

Supplemental centroid analysis for 009715359-01. Kepler magnitude: 12.03. Transit SNR 8.81

There are 8 quarters with good PRF difference image offsets

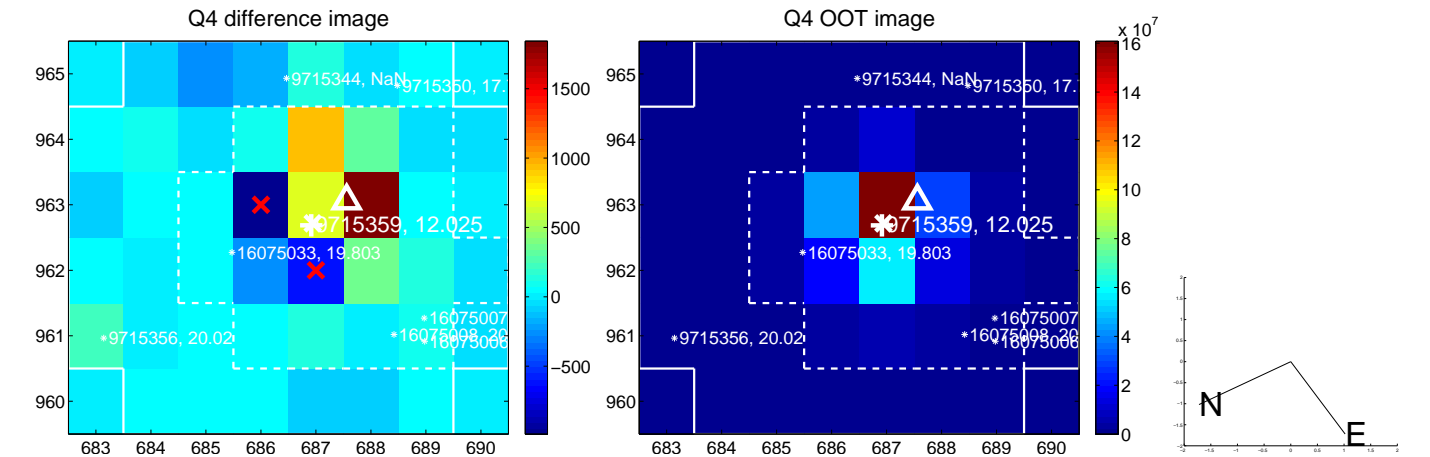
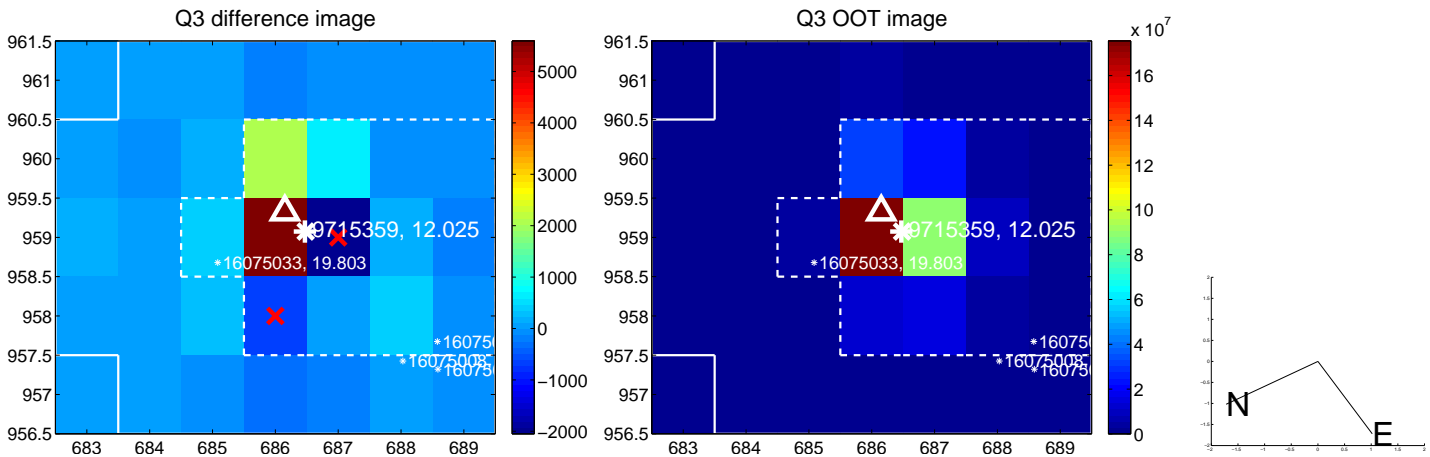
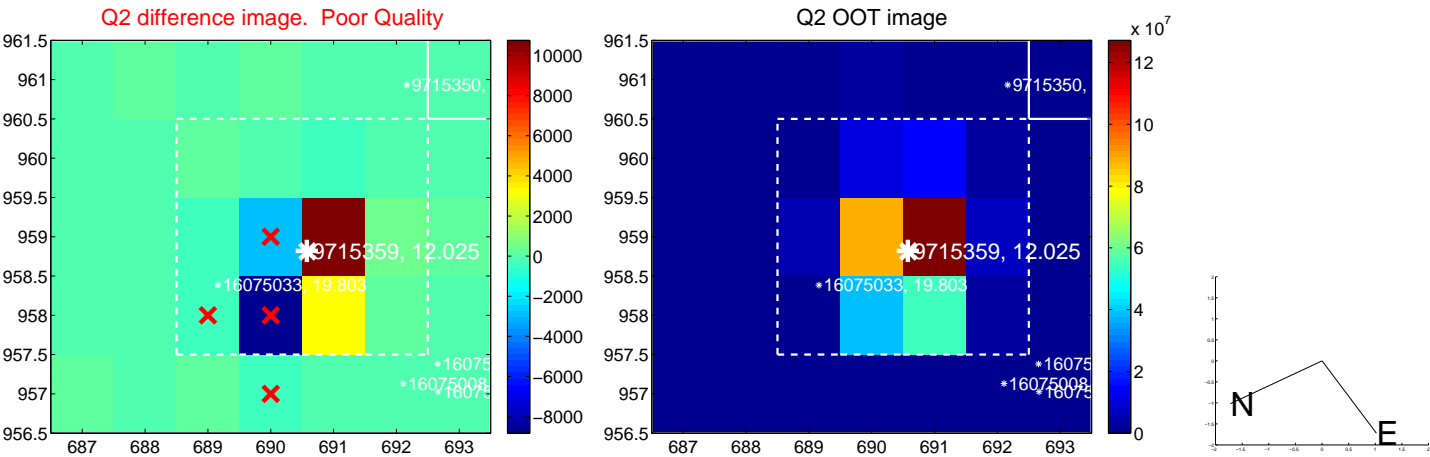
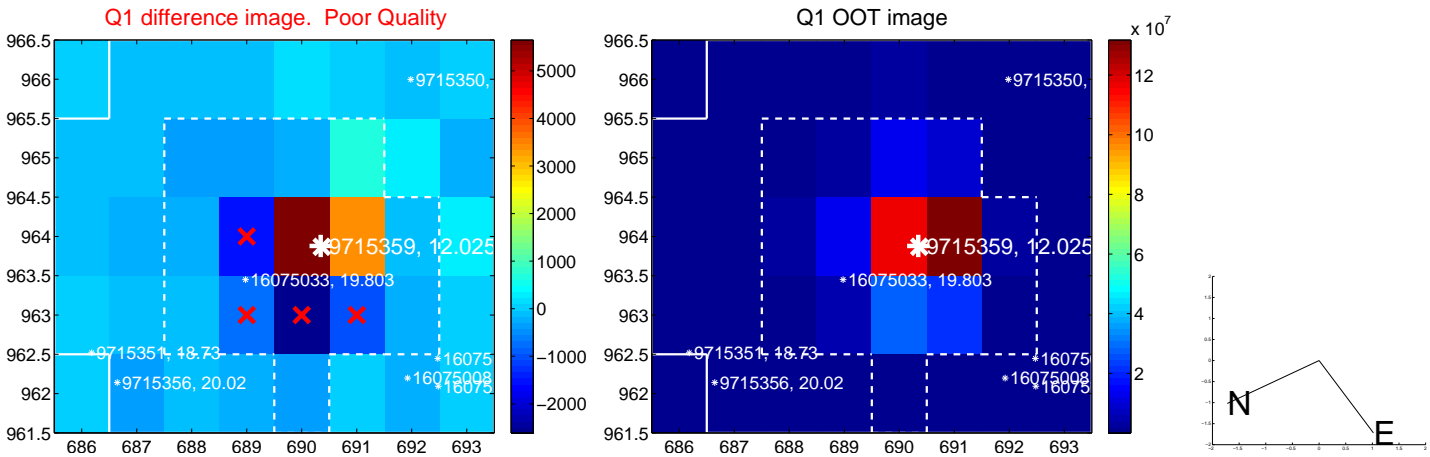
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.858 ± 0.359	2.39	0.825 ± 0.347	0.236 ± 0.489
PRF-fit source offset from KIC position	0.861 ± 0.384	2.24	0.821 ± 0.376	0.260 ± 0.412
photometric centroid source offset	0.47 ± 0.99	0.48	0.46 ± 0.99	0.10 ± 0.94

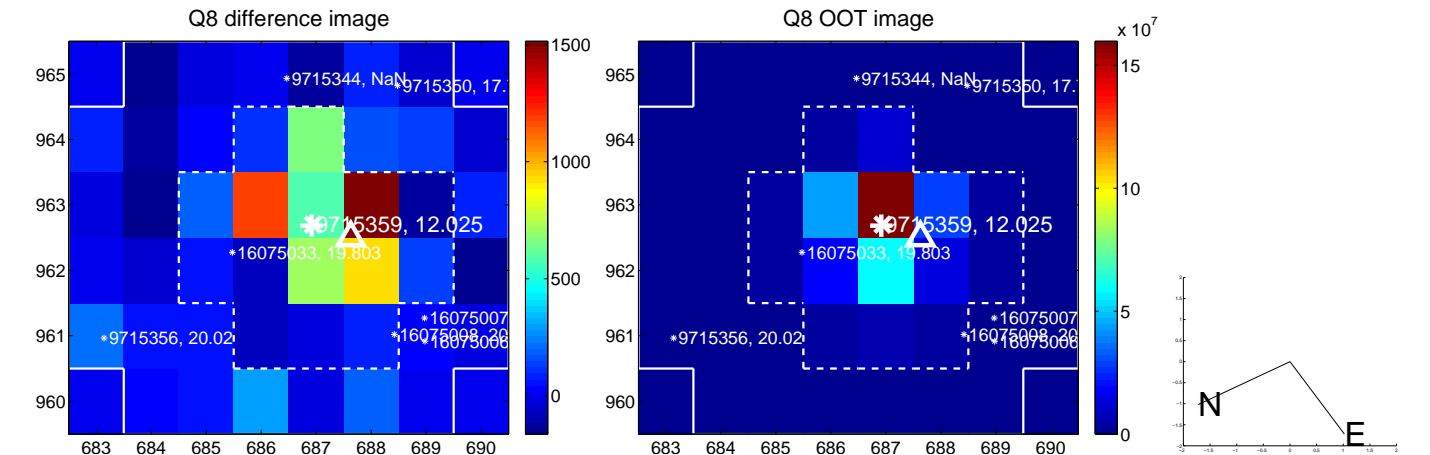
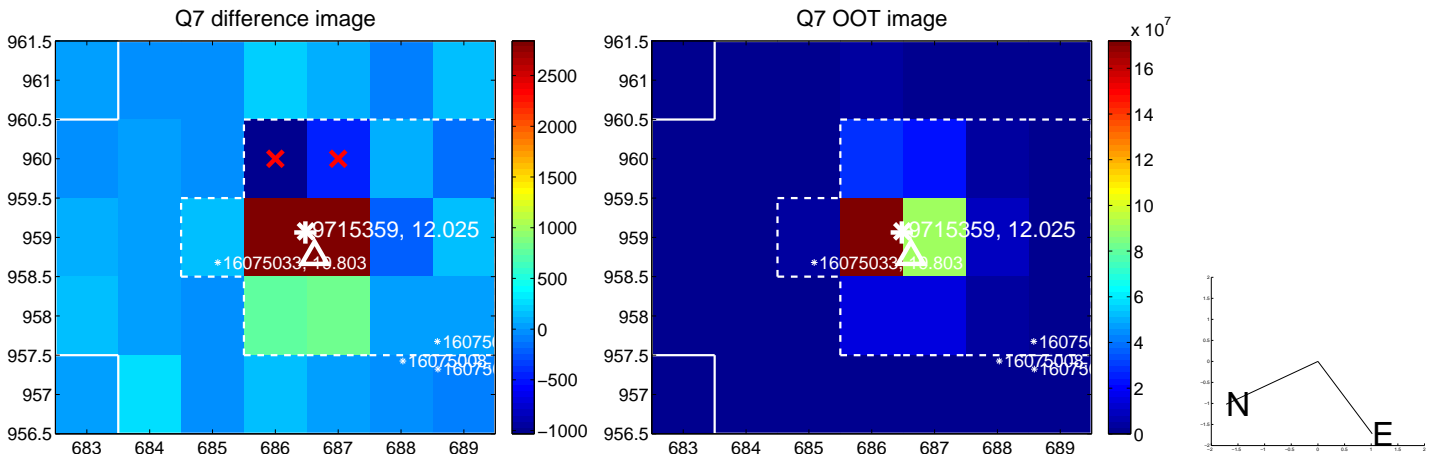
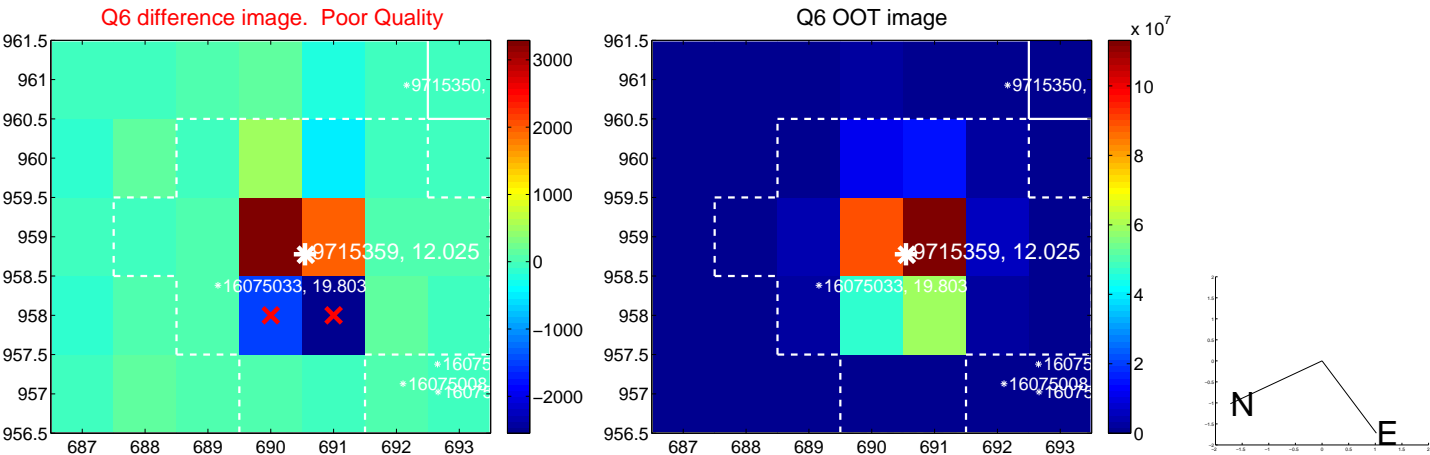
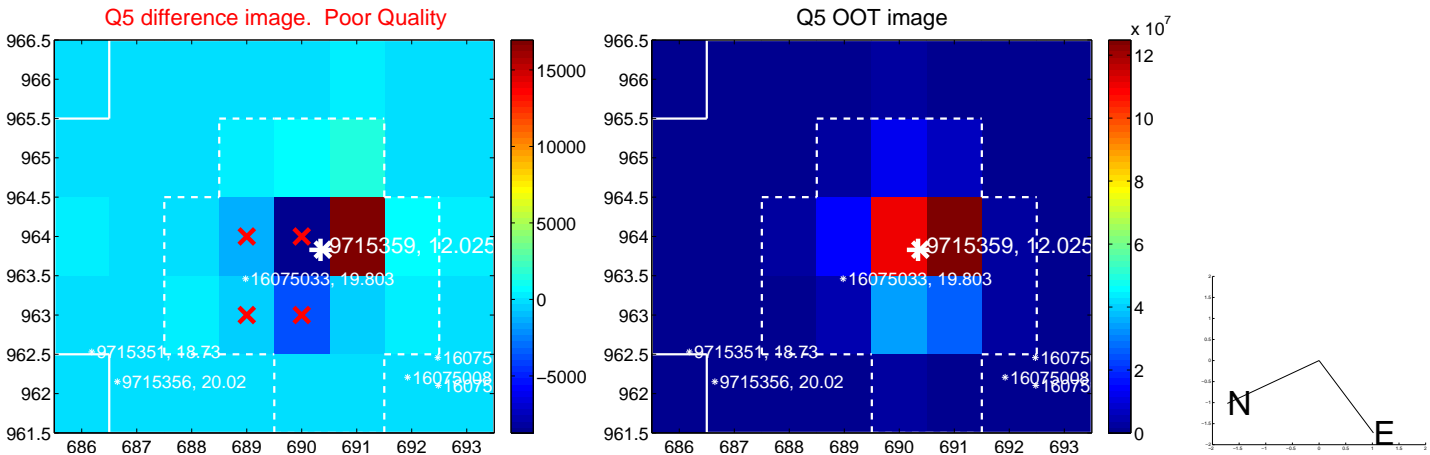


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

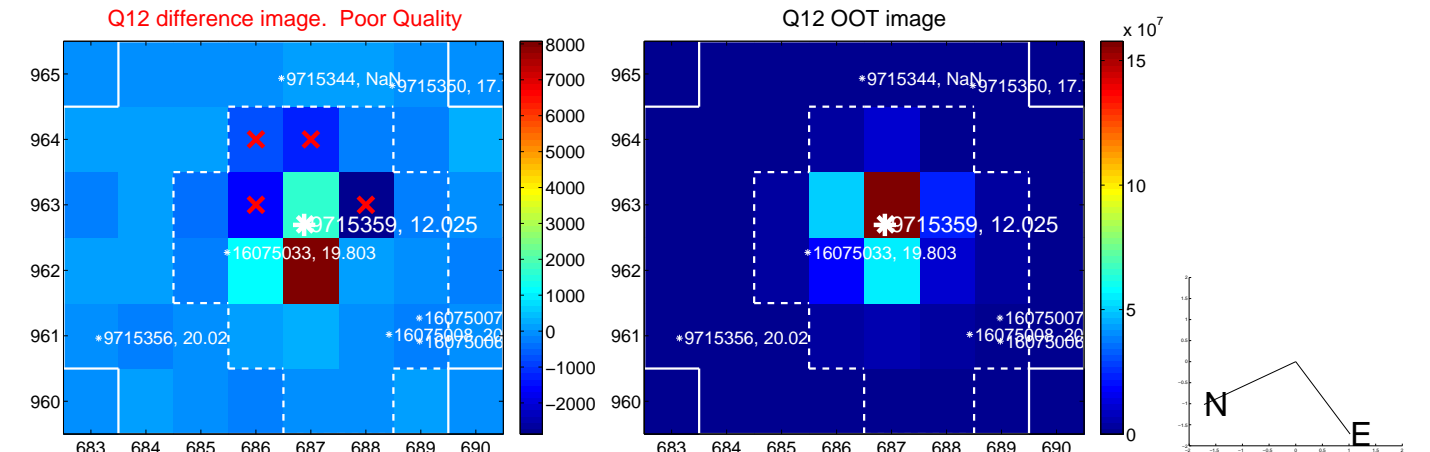
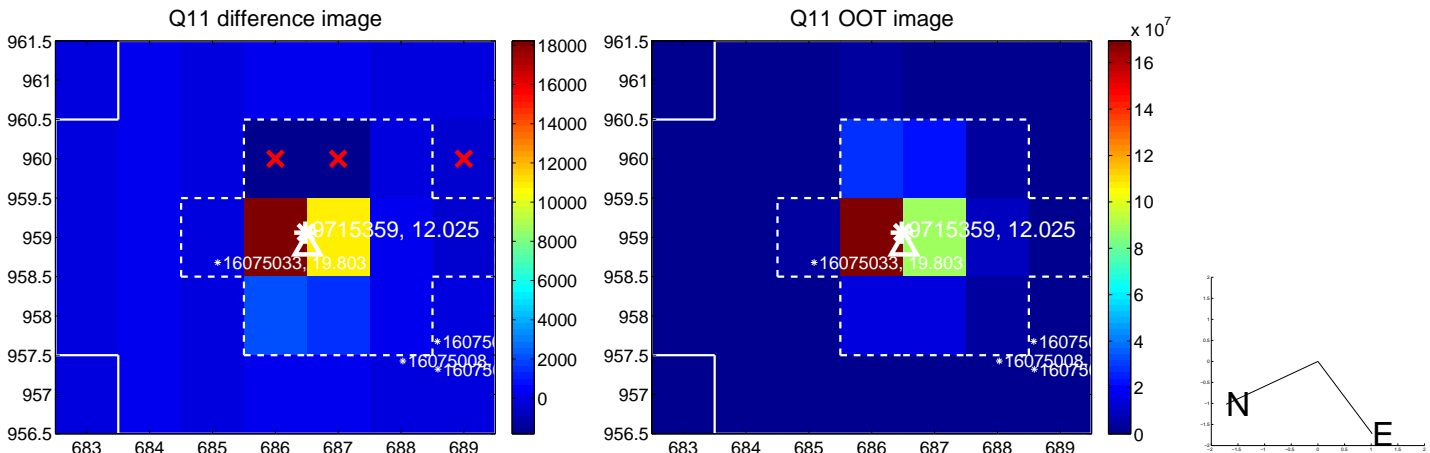
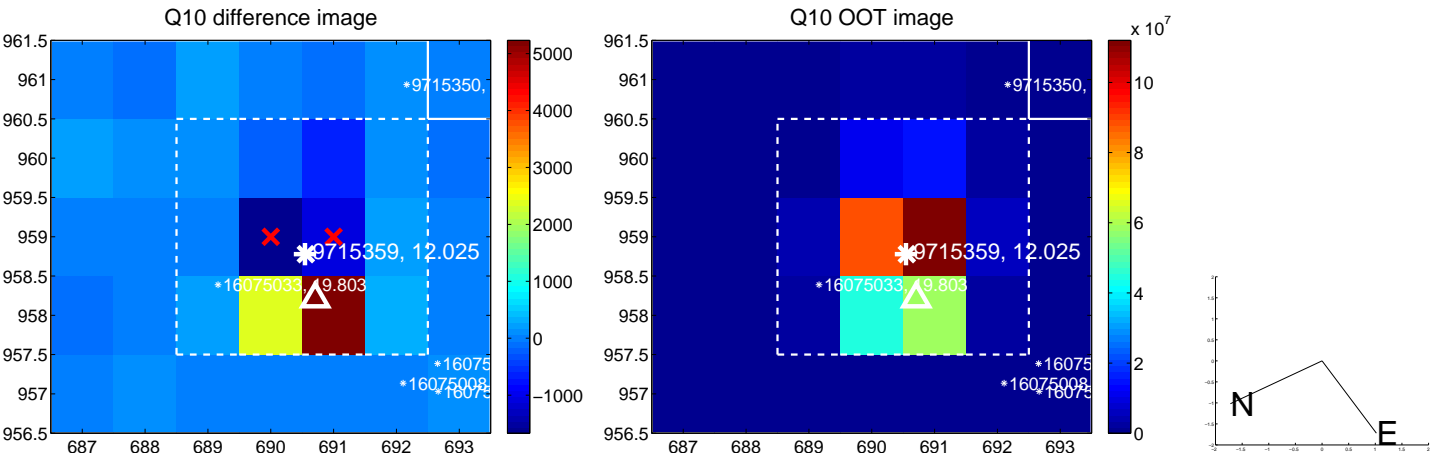
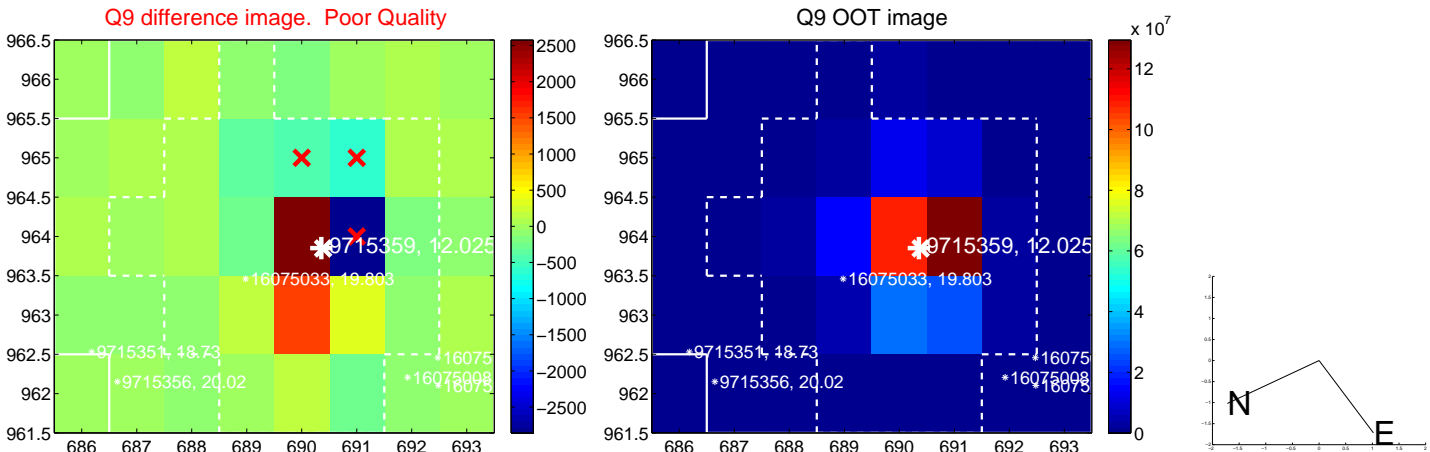
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



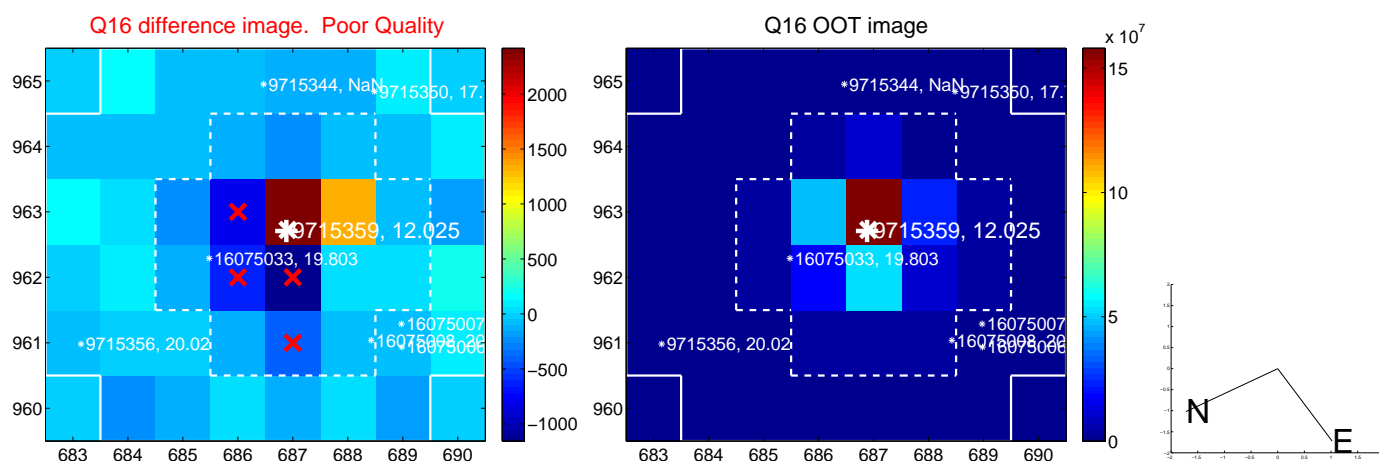
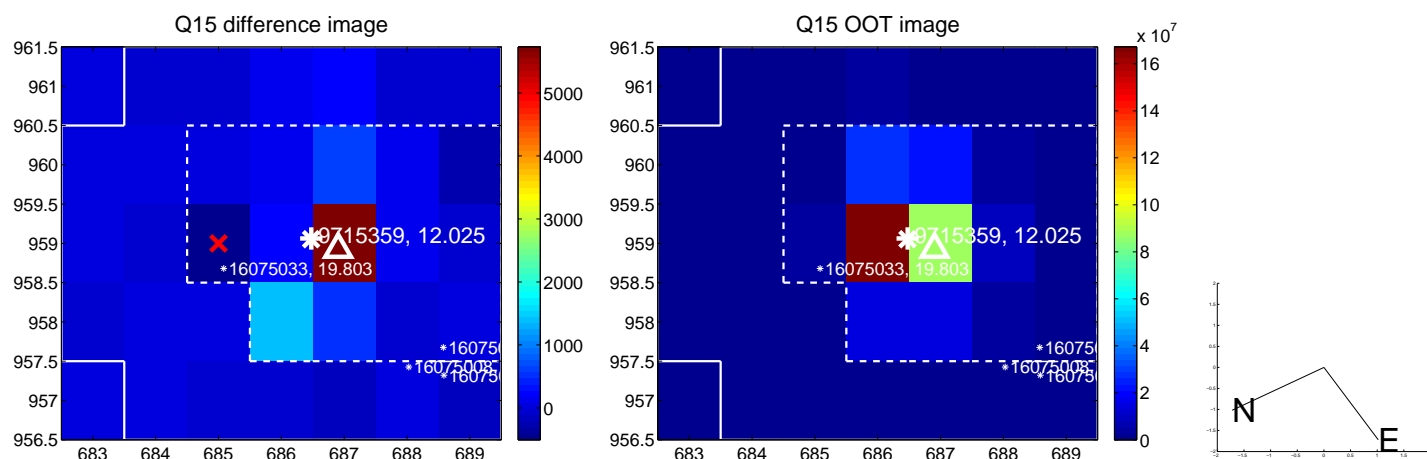
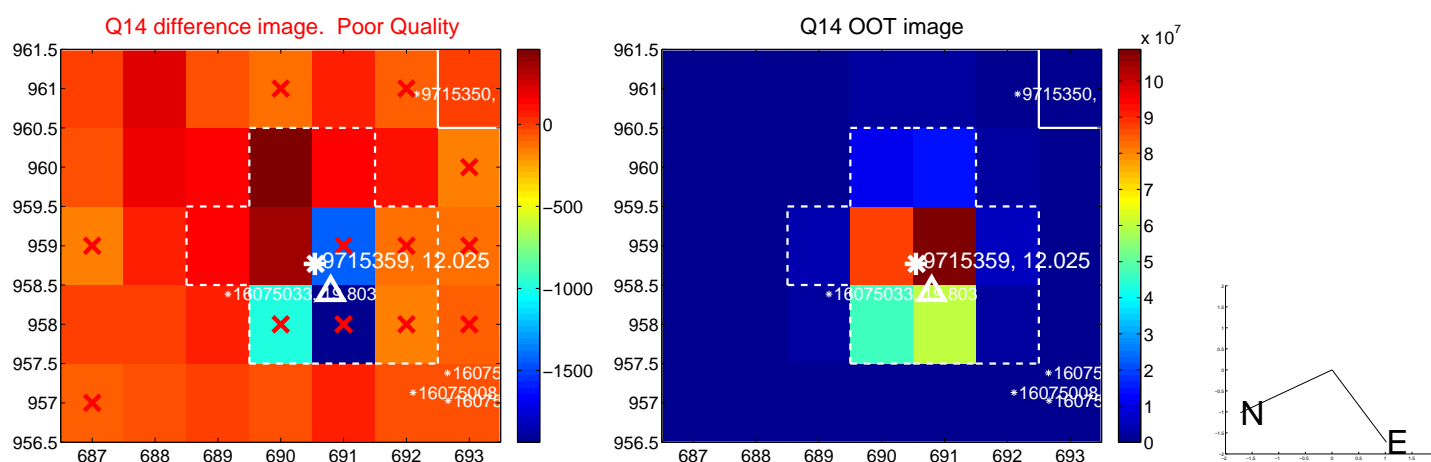
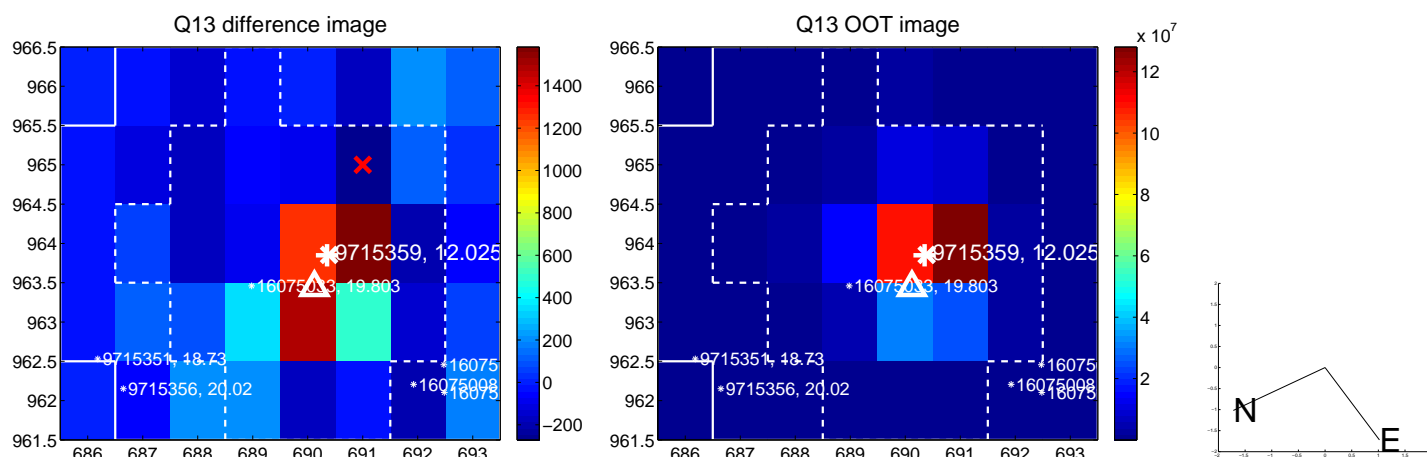
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



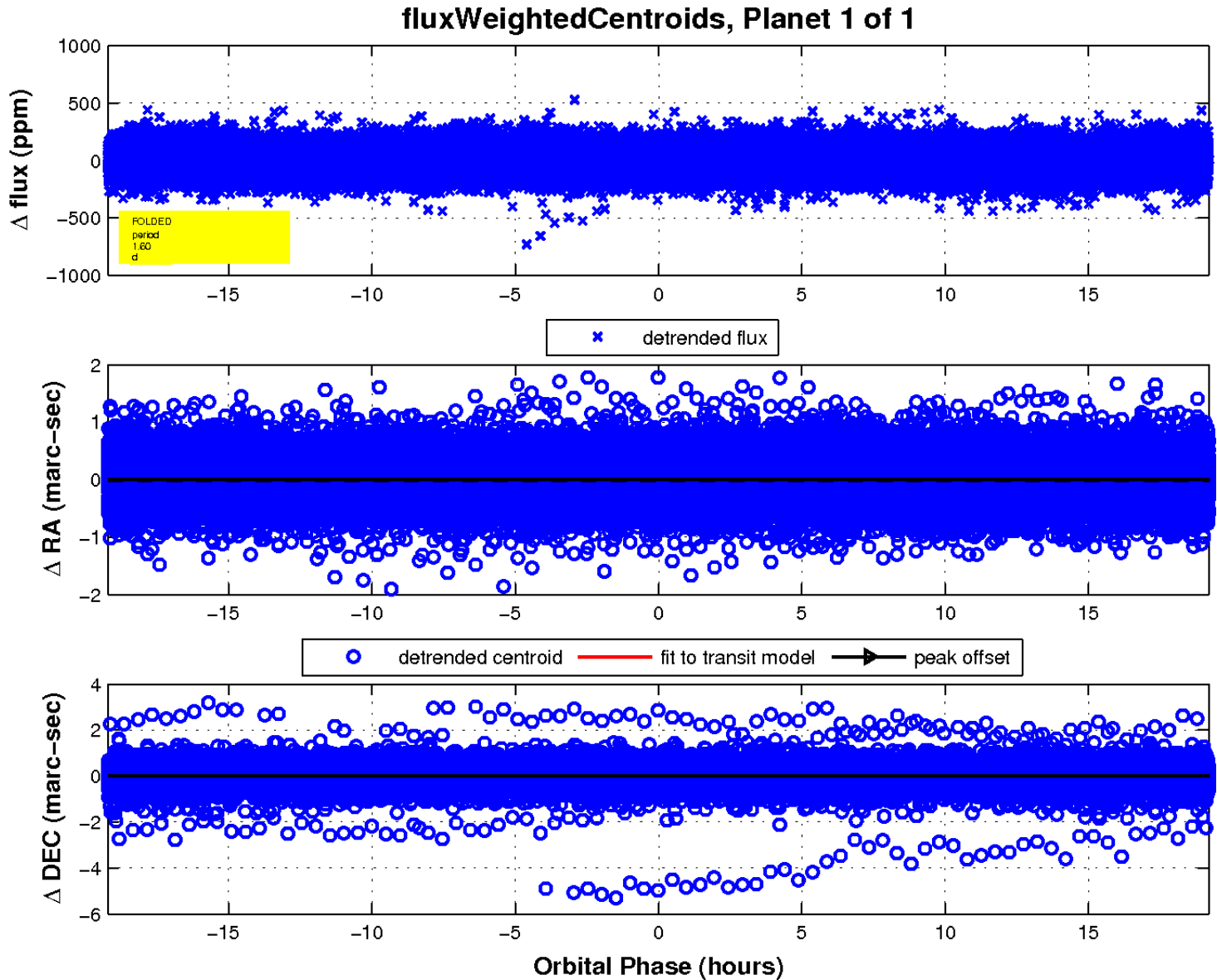
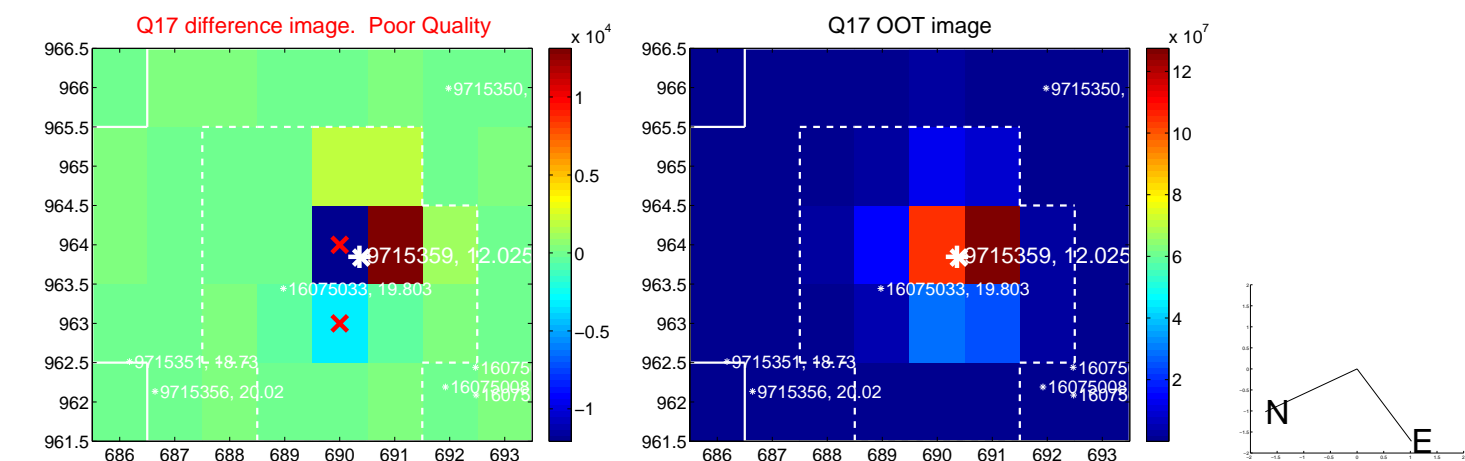
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

