

KIC 009909965

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})
009909965-01	OBS	7252.01	10.217368	139.098692	116.3	3.281	8.4	9.1	1.05	6211	1.21	176.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009909965-01	OBS	PC	0.79	0	0	0	0	NO_COMMENT

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.

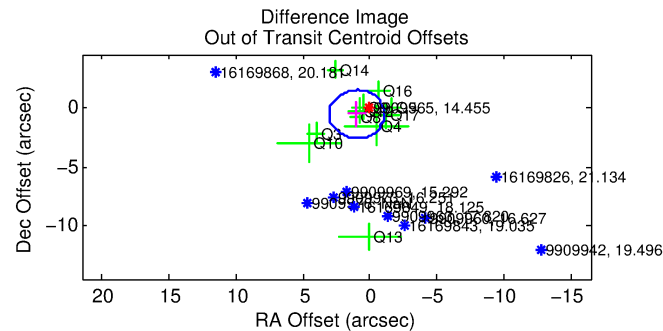
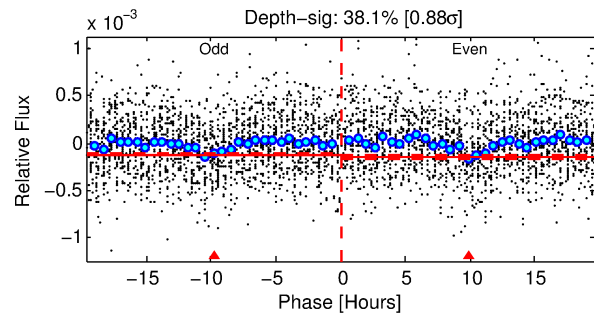
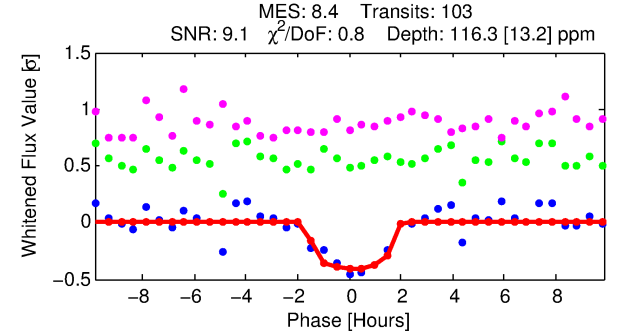
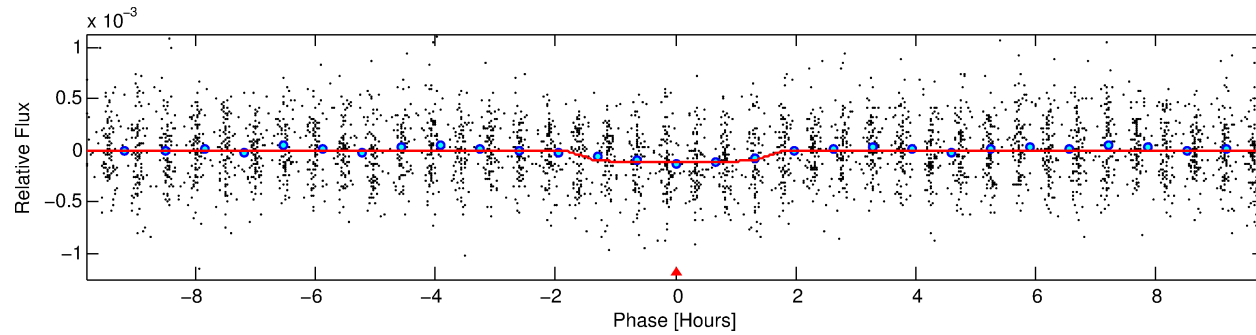
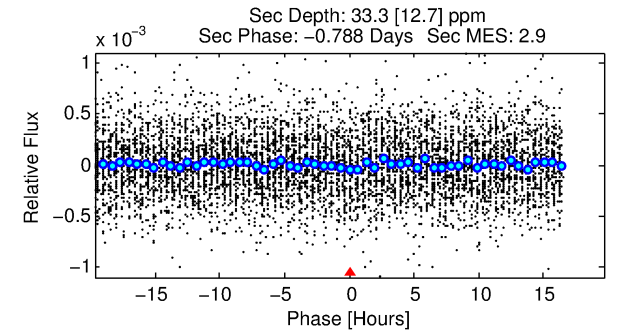
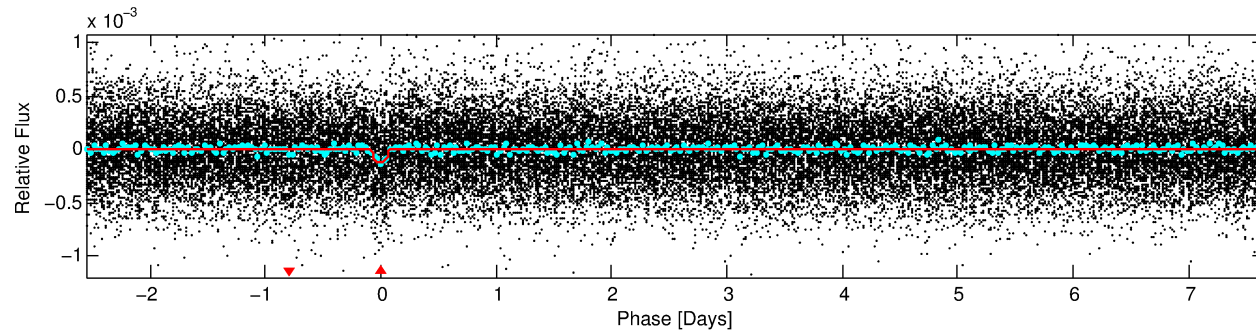
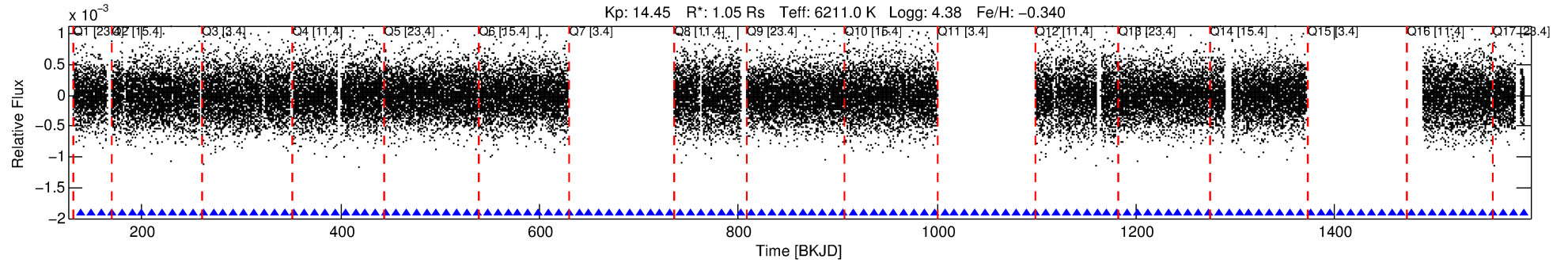
Ephemeris Match Information For 009909965-01

No Significant Match Found

DV One-Page Summary

KIC: 9909965 Candidate: 1 of 1 Period: 10.217 d

KOI: K07252.01 Corr: 0.787



DV Fit Results:

Period = 10.21737 [0.00011] d
Epoch = 139.0987 [0.0082] BKJD
Rp/R* = 0.0105 [0.0088]
a/R* = 17.91 [78.74]
b = 0.68 [3.59]
Seff = 176.60 [69.06]
Teff = 930 [91] K
Rp = 1.21 [1.07] Re
a = 0.0916 [0.0225] AU
Ag = 105.13 [185.12] [0.56σ]
Teffp = 4602 [1989] K [1.84σ]

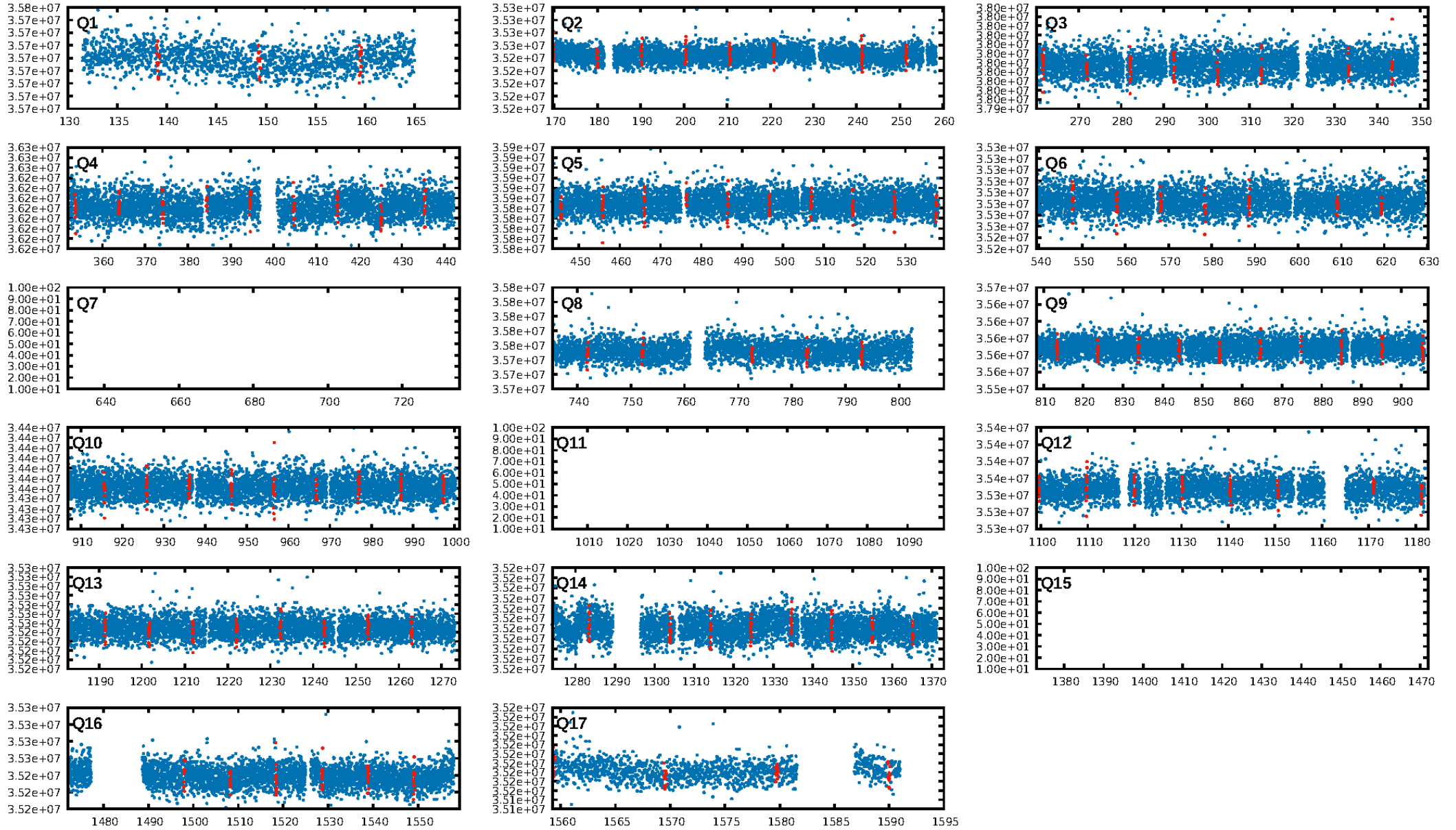
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.55e-17
RollingBand-fgt: 1.00 [96/96]
GhostDiagnostic-chr: 0.2752
Centroid-sig: 23.7%
Centroid-so: 2.295 arcsec [1.41σ]
OotOffset-rm: 1.128 arcsec [1.65σ]
KicOffset-rm: 1.095 arcsec [1.55σ]
OotOffset-st: 2/1/4/4 [11]
KicOffset-st: 2/1/4/4 [11]
DiffImageQuality-fgm: 0.18 [2/11]
DiffImageOverlap-fno: 1.00 [14/14]

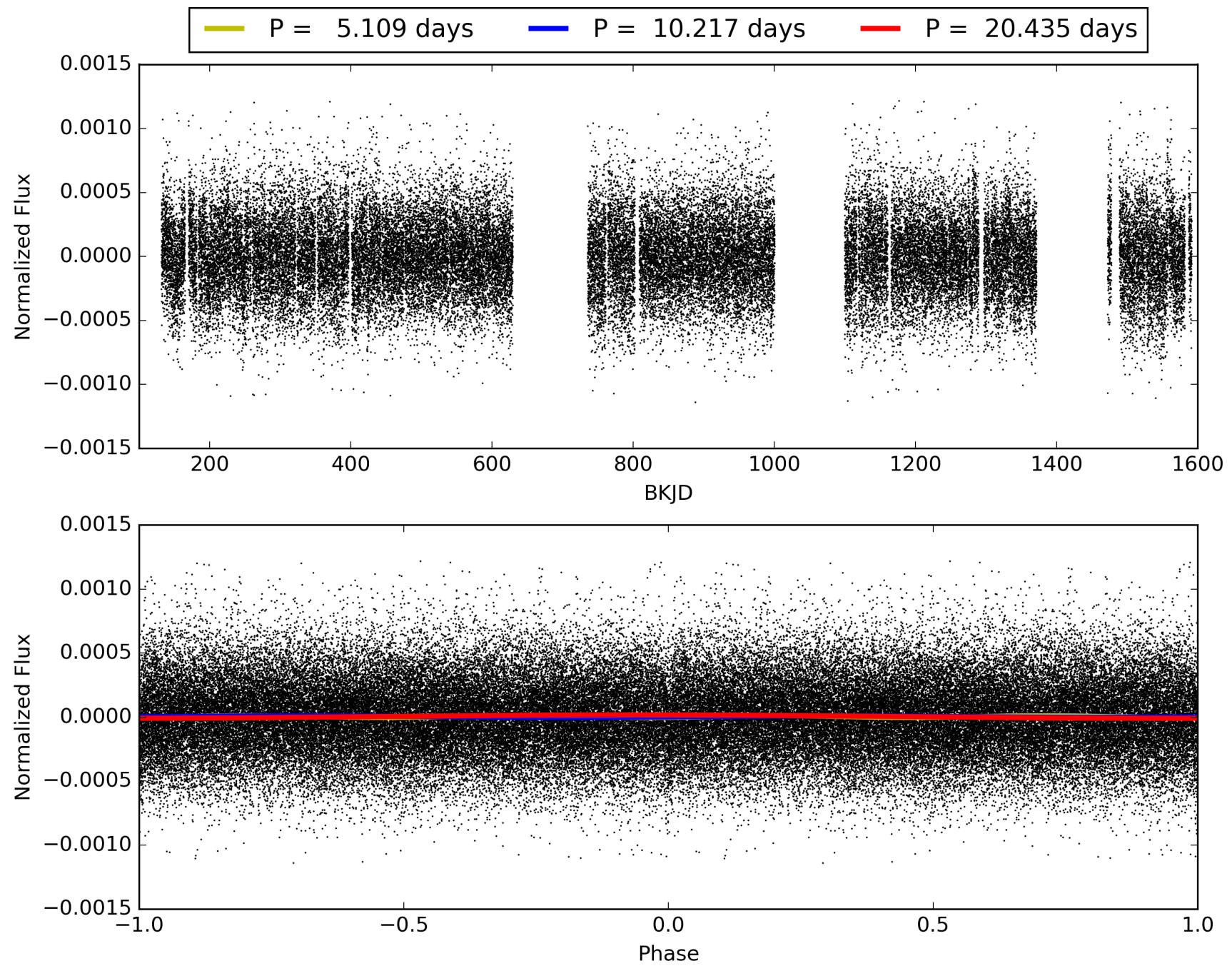
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:08:35 Z

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

TCE 009909965-01, PDC Light Curves

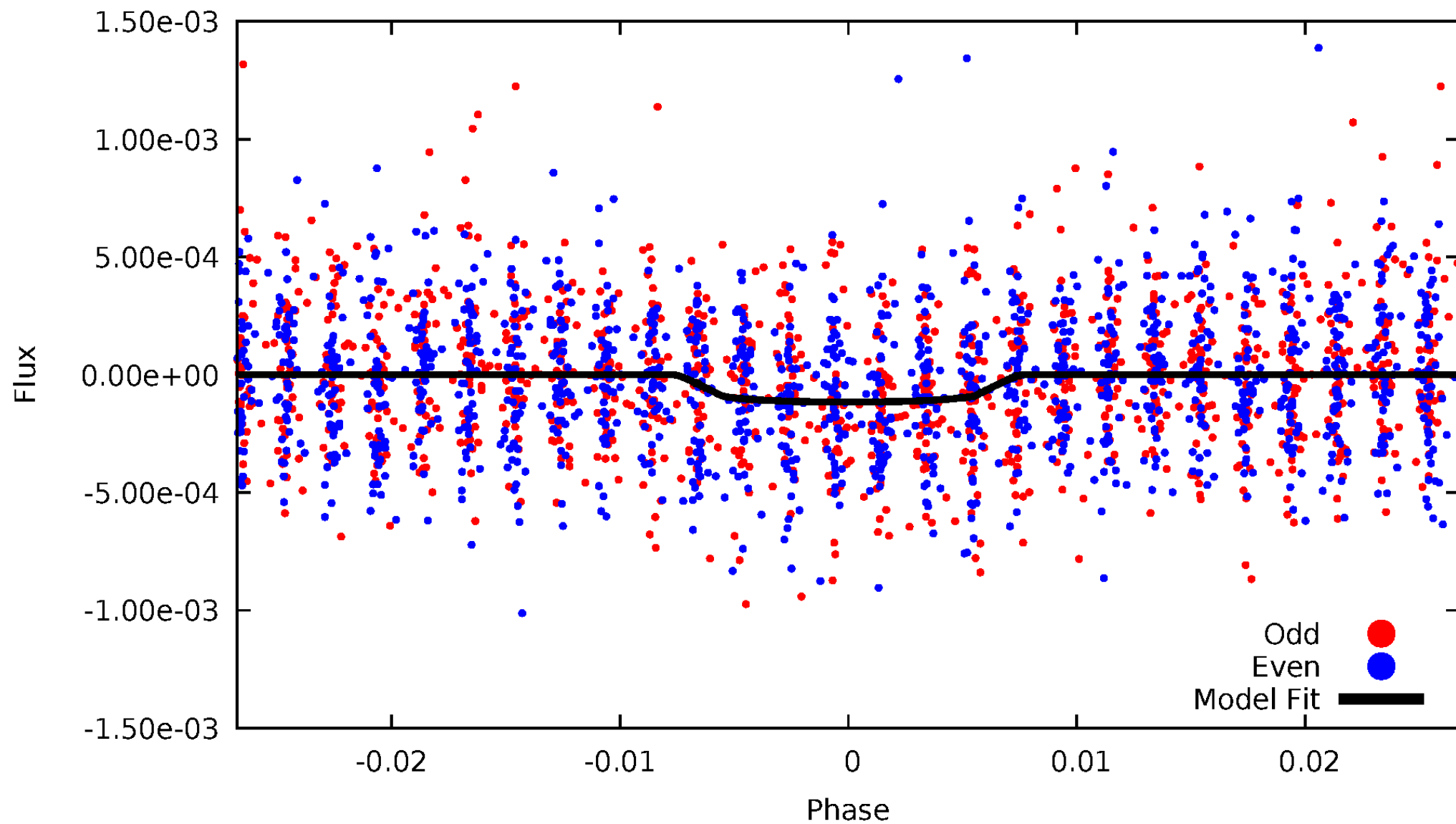


TCE 009909965-01



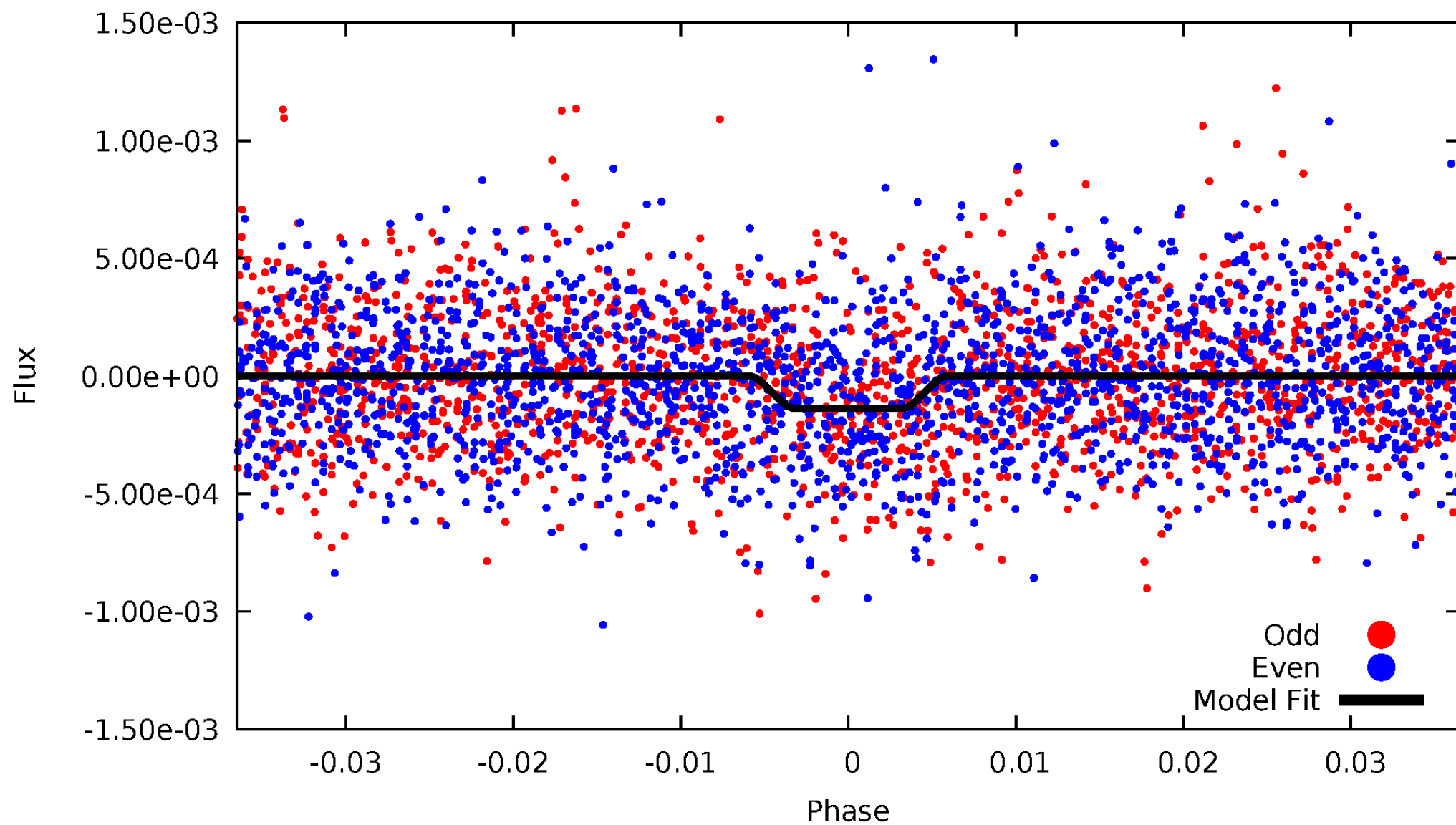
DV Odd/Even

TCE 009909965-01

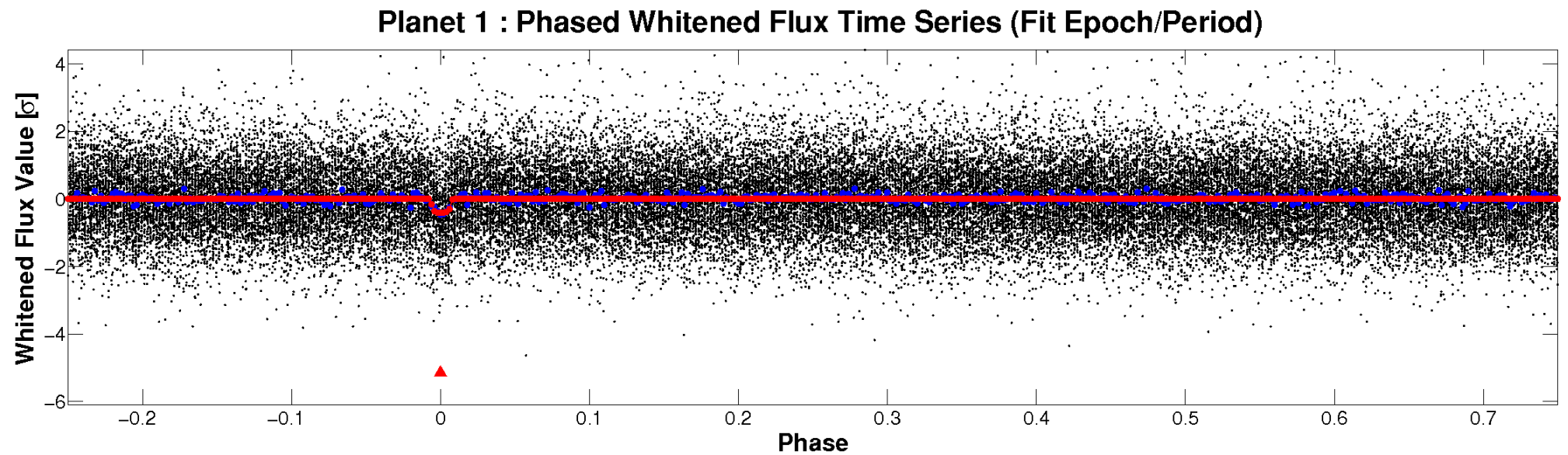
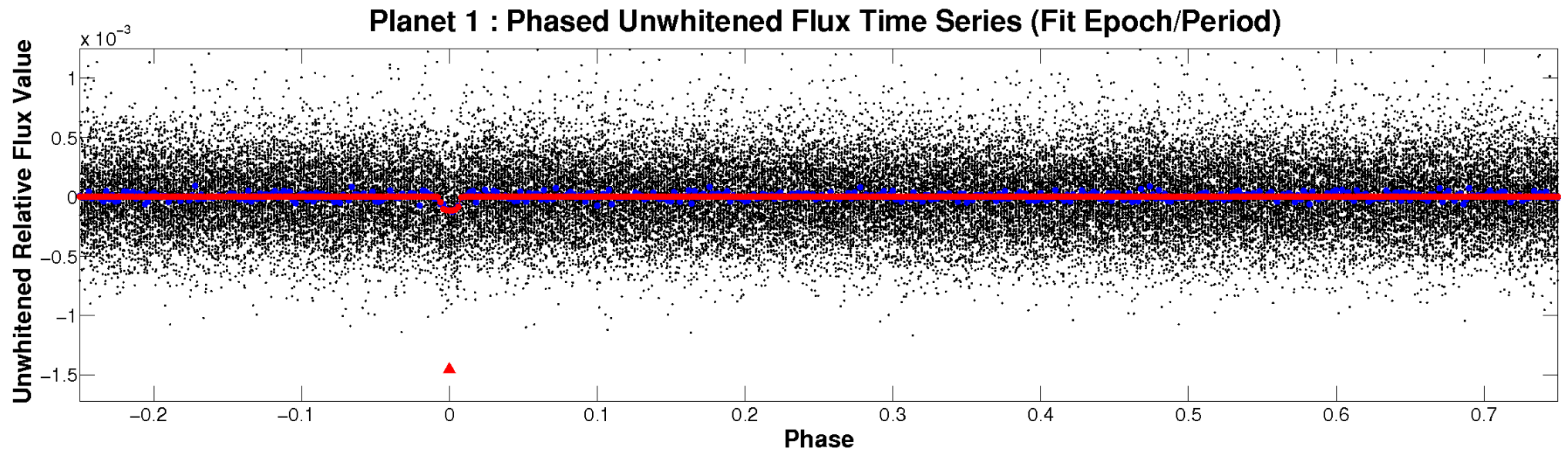


ALT Odd/Even

TCE 009909965-01

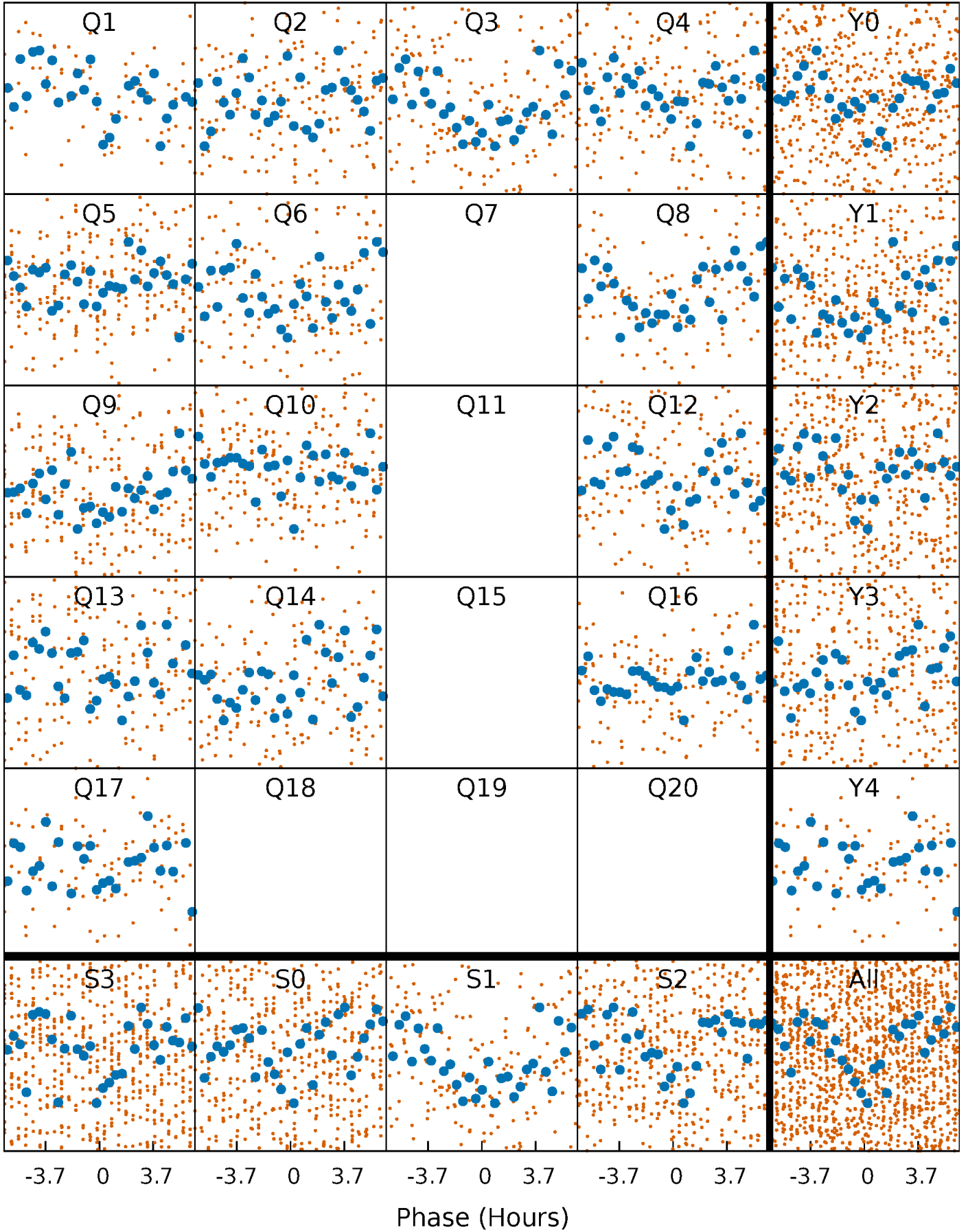


Non-Whitened Vs. Whitened Light Curve



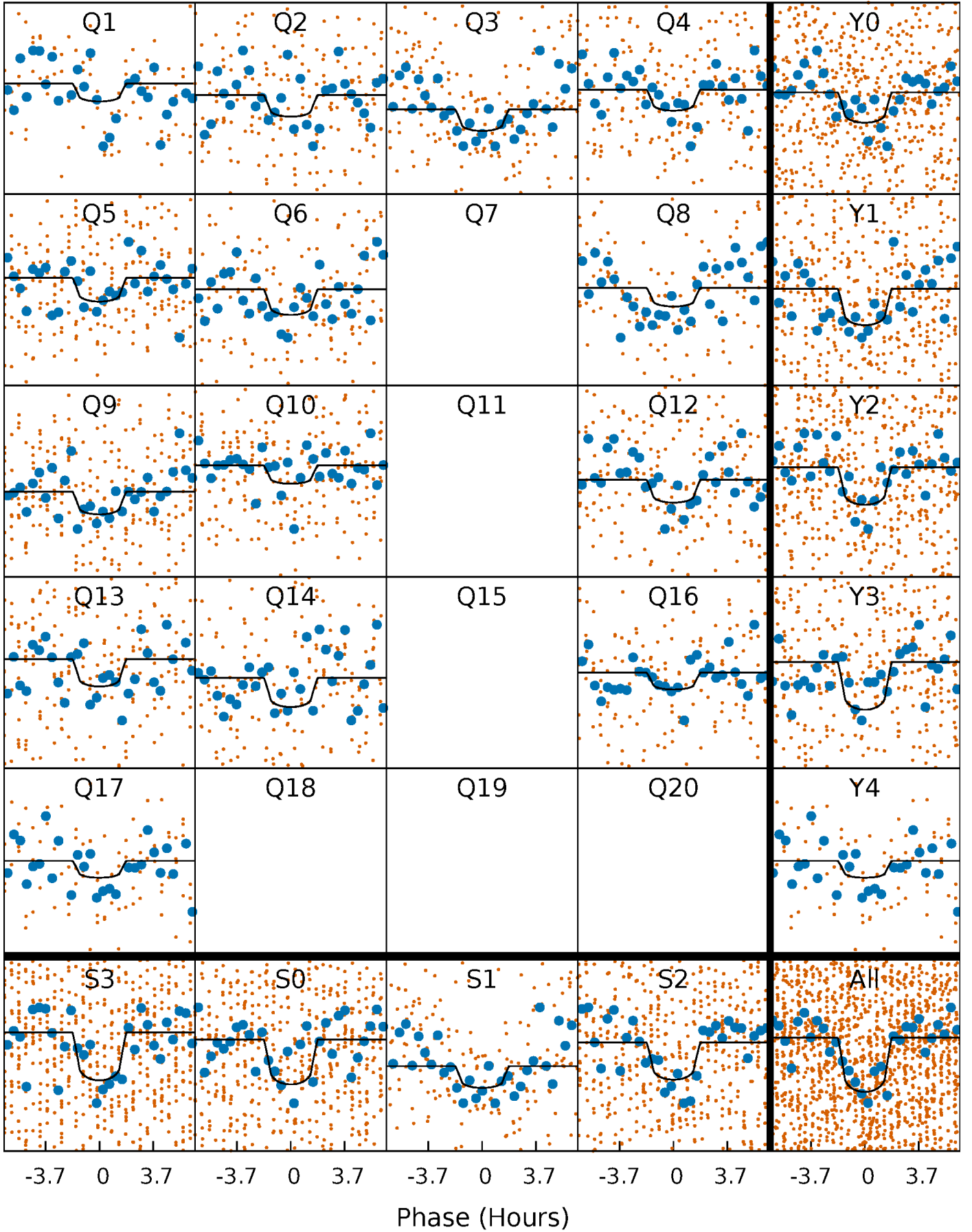
PDC Quarter-Phased Transit Curves

TCE 009909965-01 P= 10.217368 Days $T_0=139.098692$ (BKJD)



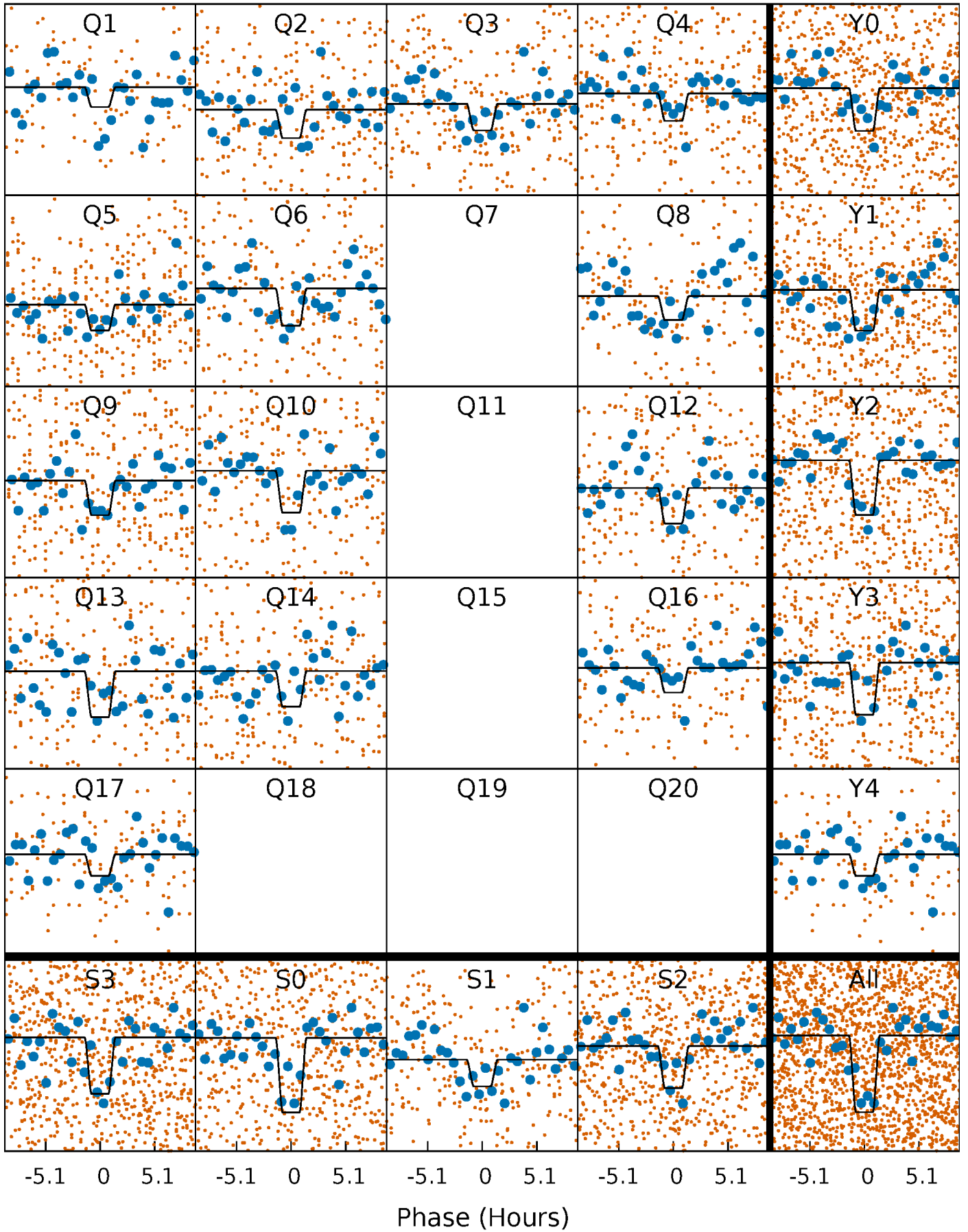
DV Quarter-Phased Transit Curves

TCE 009909965-01 P= 10.217368 Days $T_0=139.098692$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

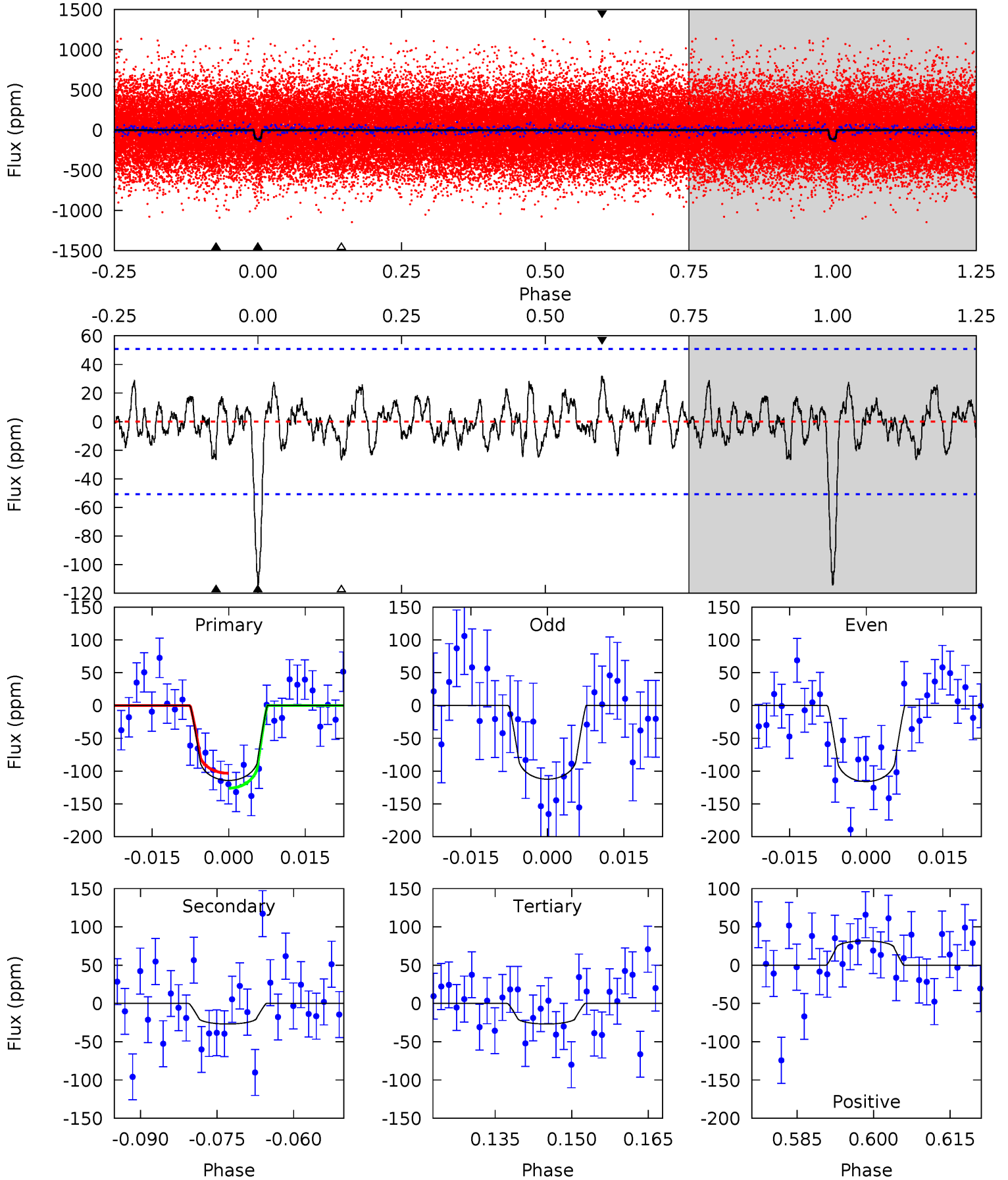
TCE 009909965-01 P= 10.217222 Days $T_0=139.111442$ (BKJD)



DV Model-Shift Uniqueness Test

009909965-01, P = 10.217368 Days, E = 128.881324 Days

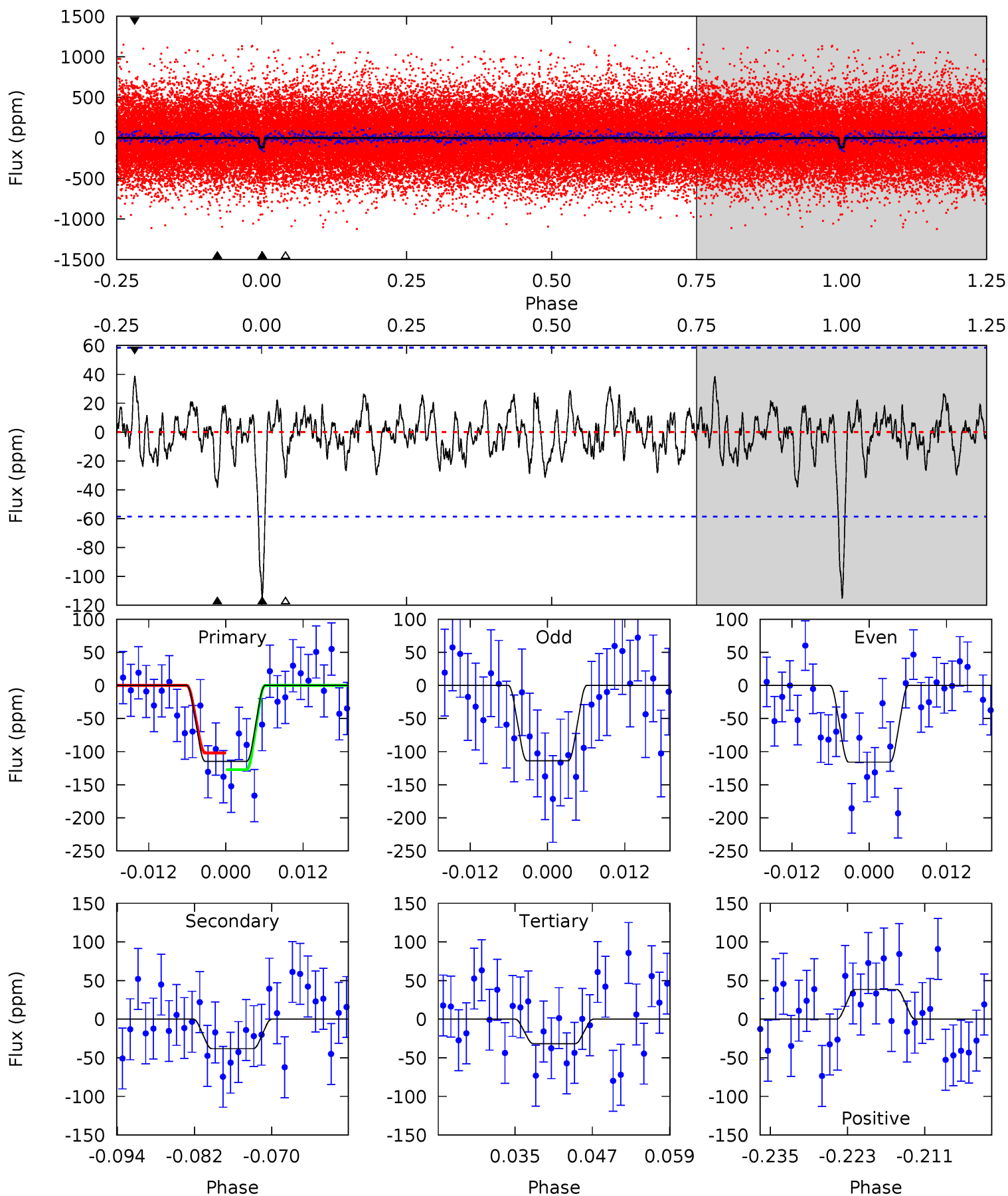
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	2.62	2.61	3.10	4.95	2.43	1.08	8.53	8.04	0.00	-0.49	0.18	1.00	0.22	1.11



Alt Model-Shift Uniqueness Test

009909965-01, $P = 10.217222$ Days, $E = 128.894220$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.80	3.25	2.71	3.28	5.00	2.52	1.05	7.08	6.52	0.54	-0.02	0.09	1.05	0.25	1.08



Stellar Parameters For KIC 009909965

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6211^{+169}_{-225}	$4.384^{+0.108}_{-0.201}$	$-0.340^{+0.300}_{-0.300}$	$1.054^{+0.303}_{-0.163}$	$0.980^{+0.147}_{-0.107}$	$1.177^{+0.551}_{-0.597}$
	+3%/-4%	+2%/-5%	+88%/-88%	+29%/-15%	+15%/-11%	+47%/-51%
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 009909965-01 / KOI 7252.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27 ± 10	$1.37^{+1.07}_{-0.86}$	1309^{+91}_{-76}	4323^{+2267}_{-818}	62^{+351}_{-43}
Alt.	-38 ± 12	$1.44^{+1.11}_{-0.81}$	1312^{+83}_{-79}	4531^{+2155}_{-859}	84^{+324}_{-59}

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

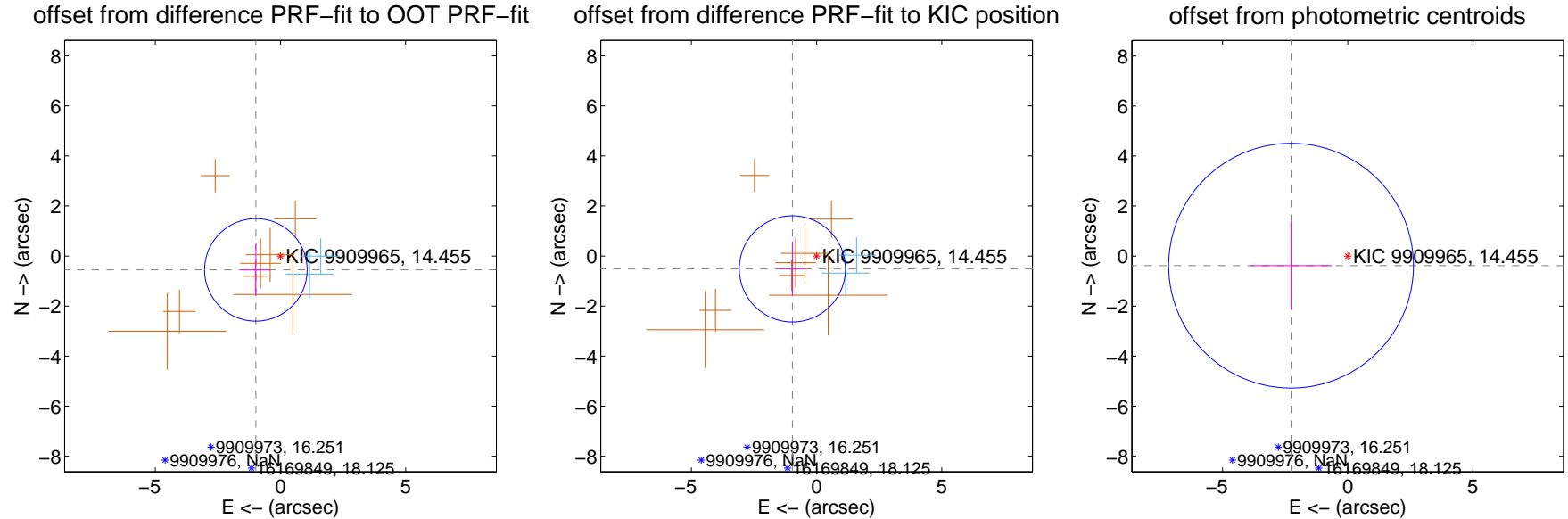
DV Centroid Data

Supplemental centroid analysis for 009909965-01. Kepler magnitude: 14.46. Transit SNR 9.15

There are 2 quarters with good PRF difference image offsets

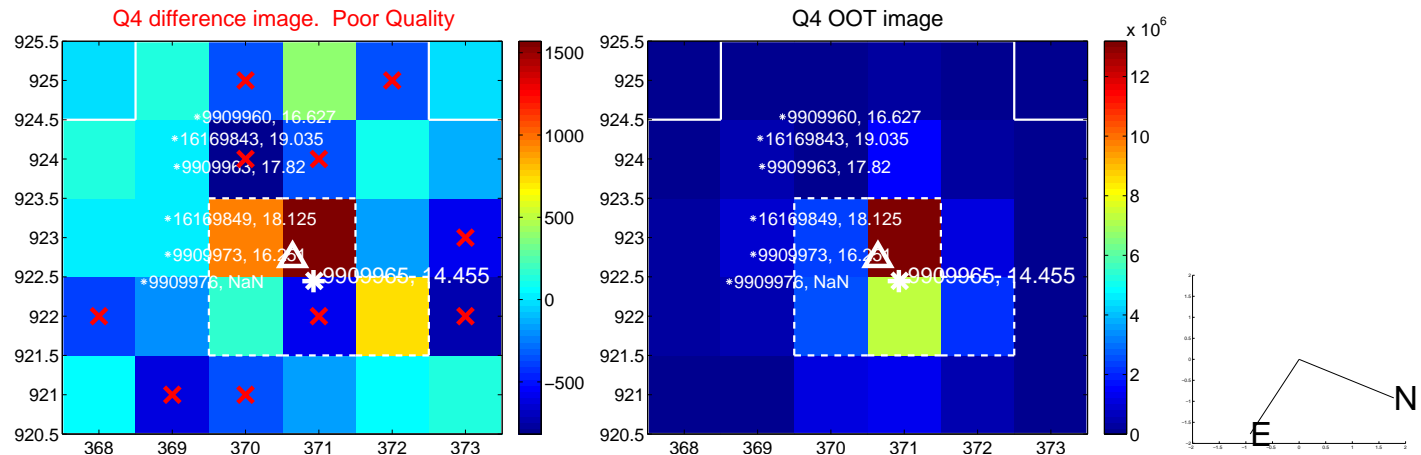
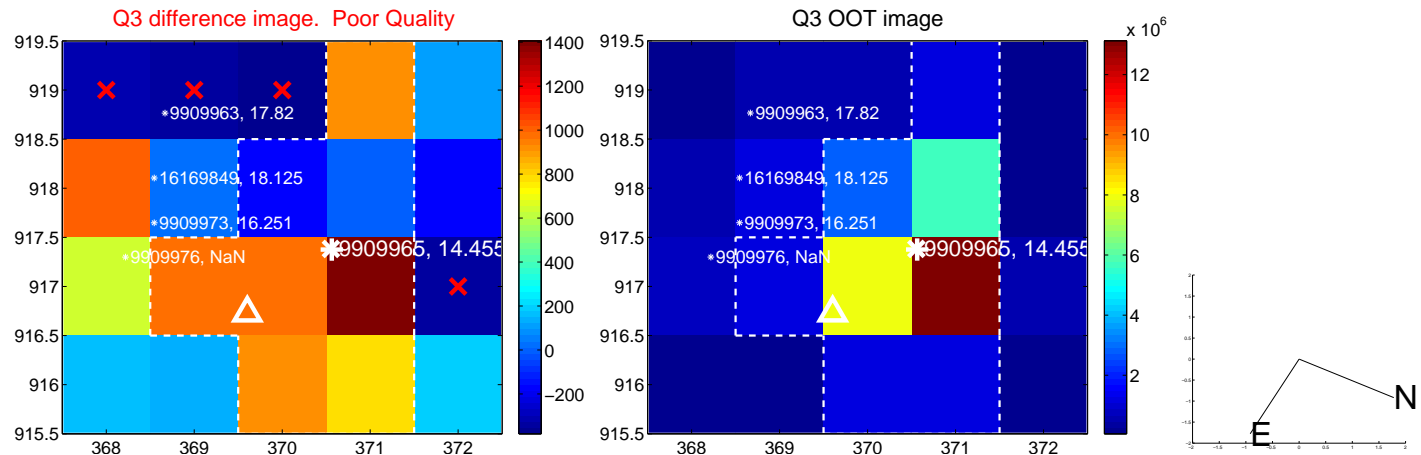
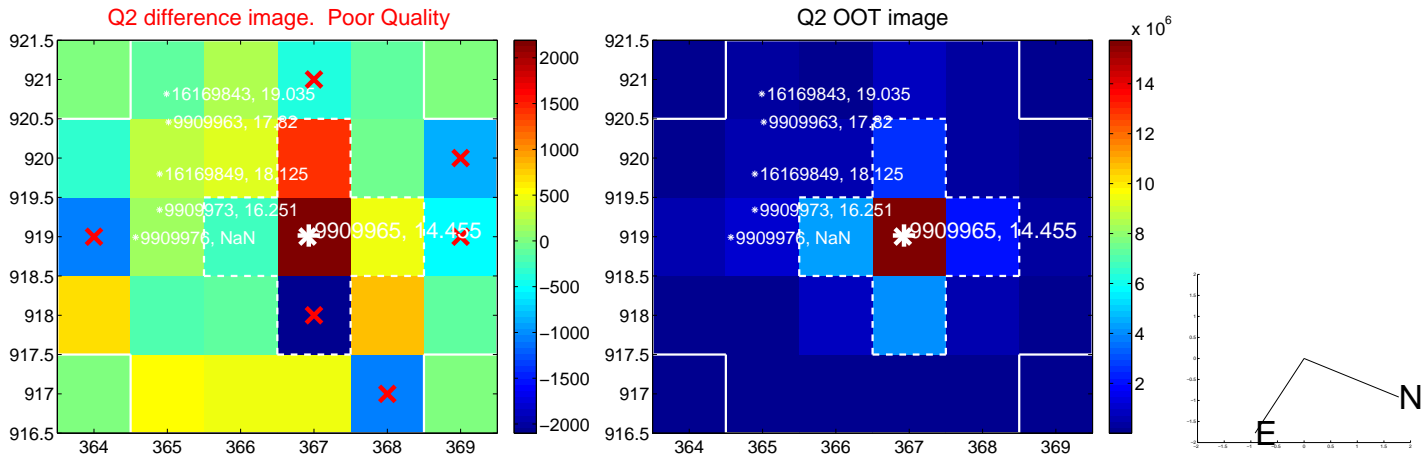
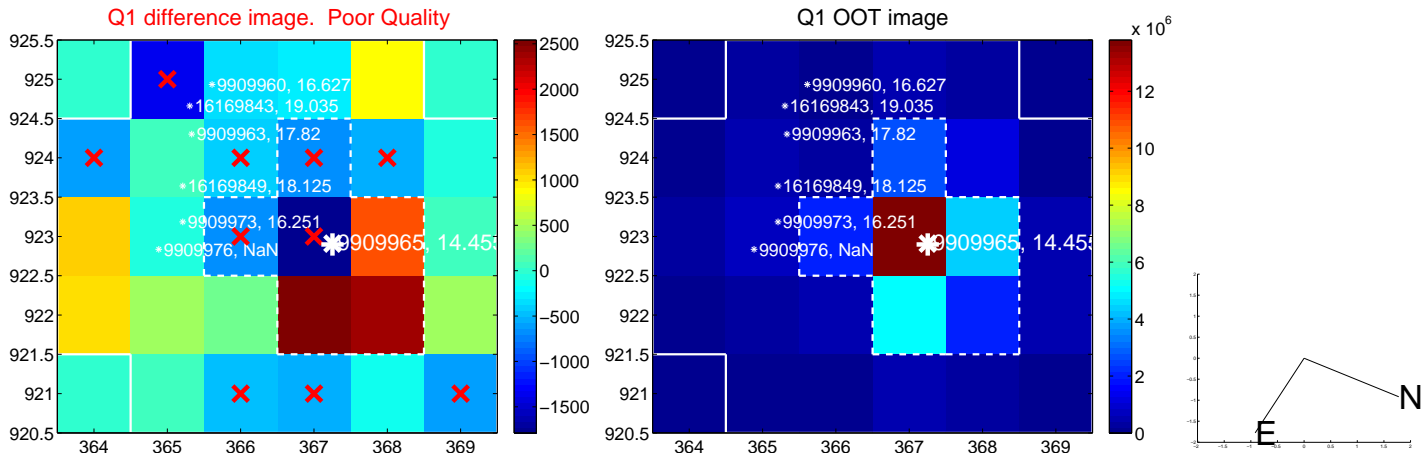
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.128 ± 0.683	1.65	0.982 ± 0.590	-0.555 ± 1.050
PRF-fit source offset from KIC position	1.095 ± 0.707	1.55	0.966 ± 0.529	-0.515 ± 1.091
photometric centroid source offset	2.29 ± 1.63	1.41	2.26 ± 1.63	-0.38 ± 1.74

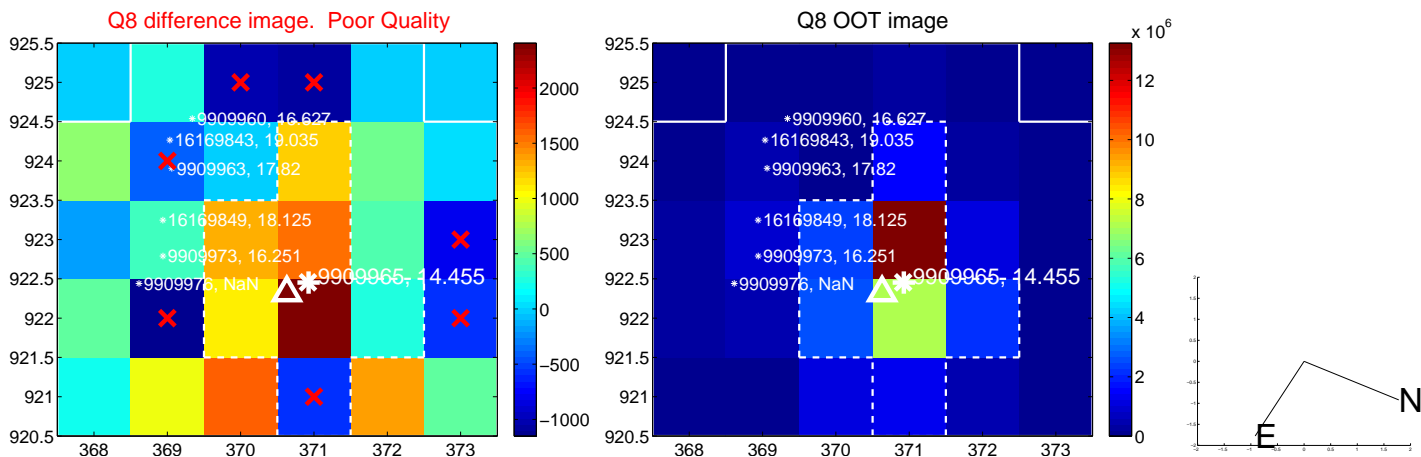
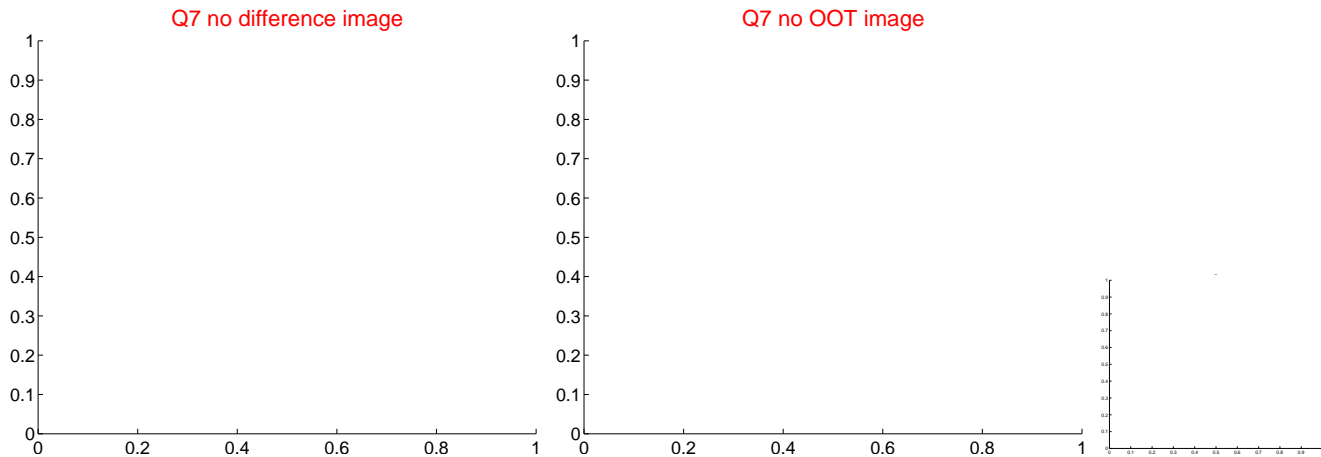
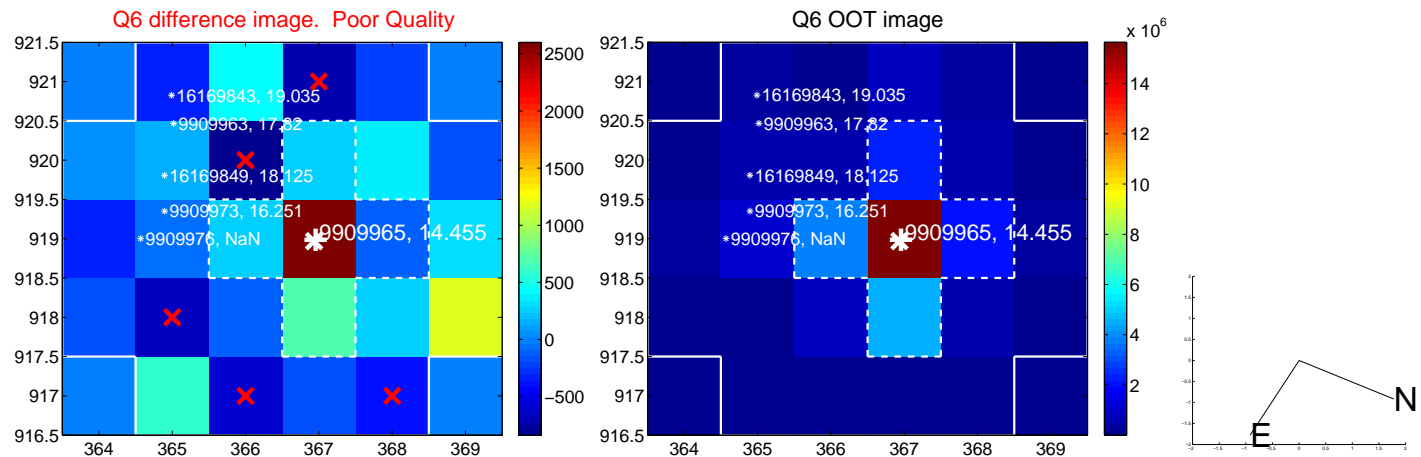
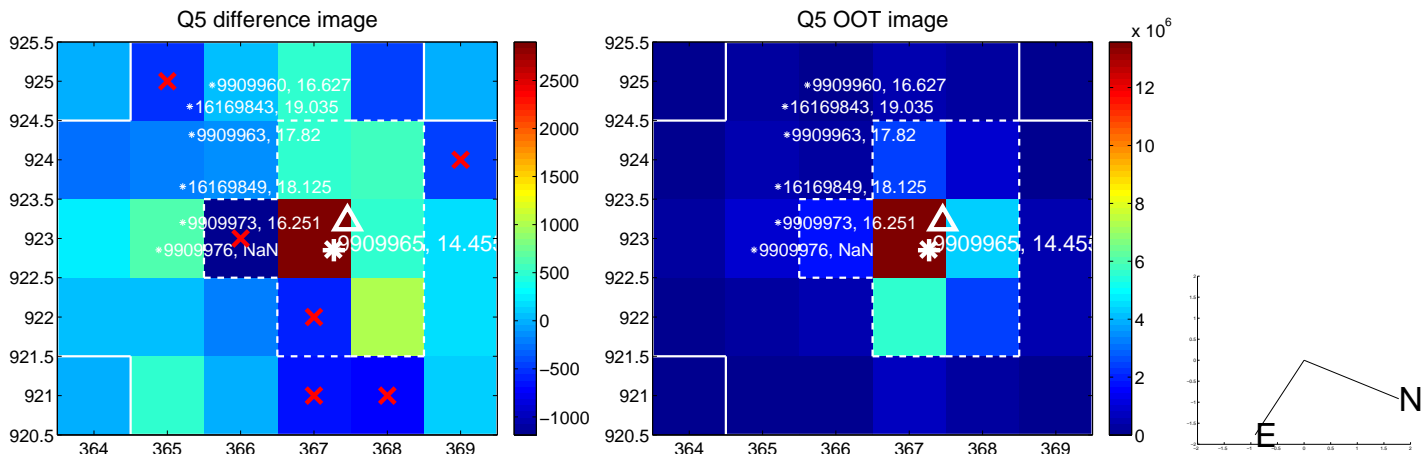


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

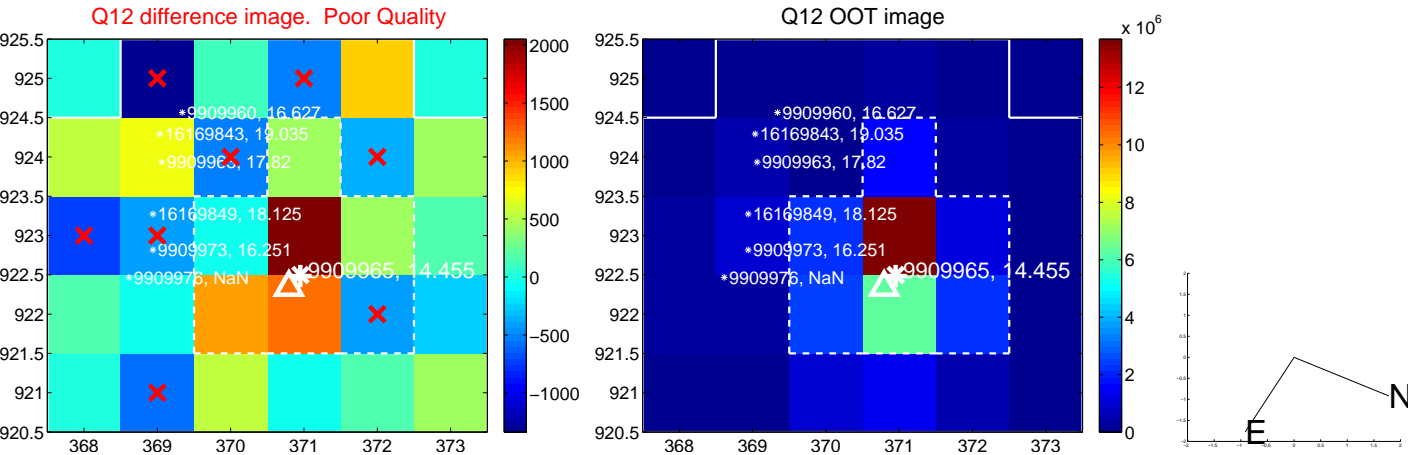
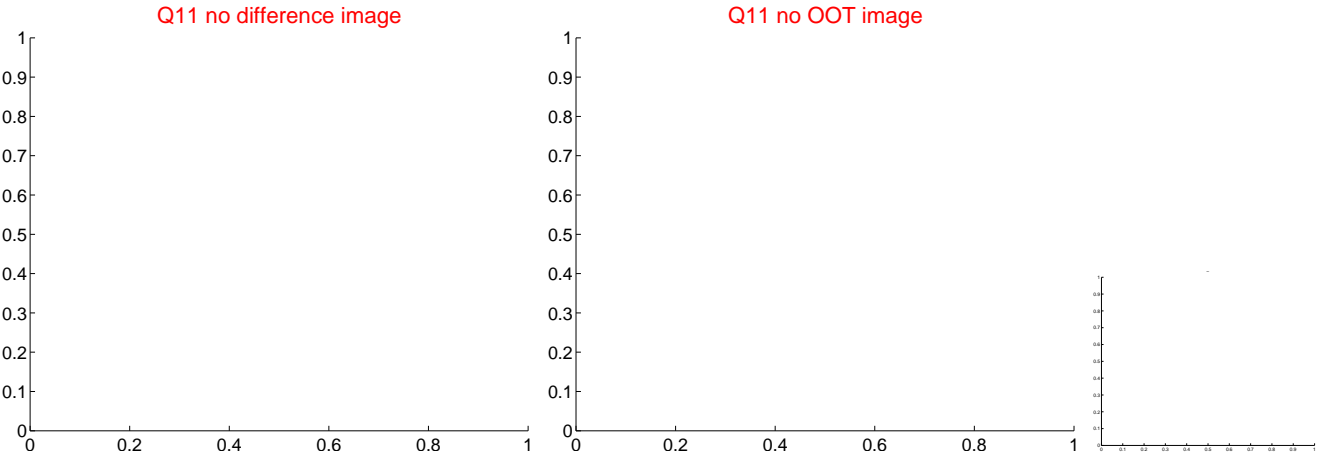
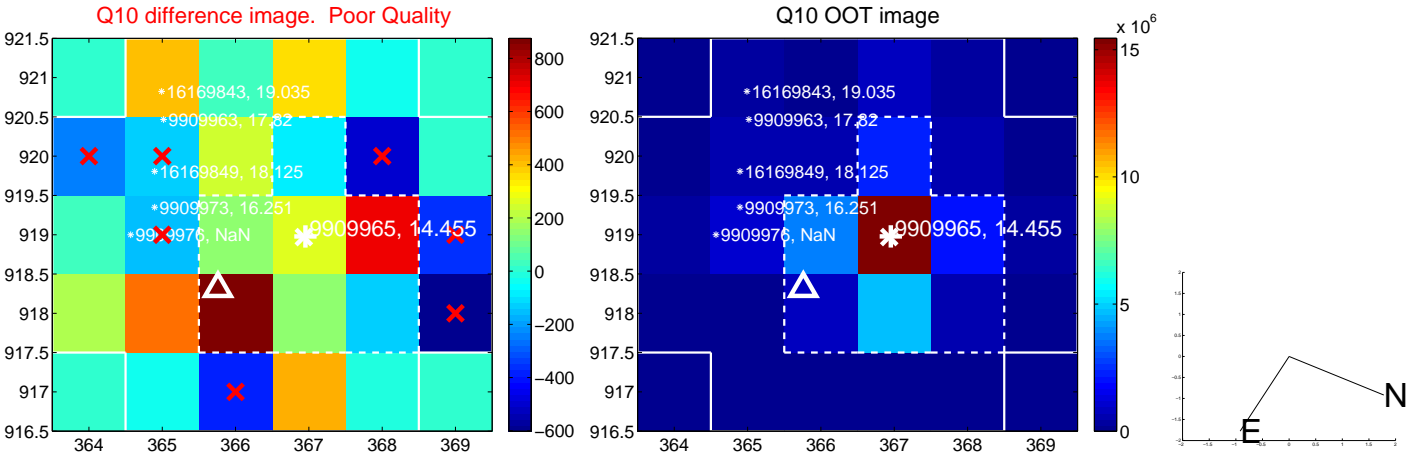
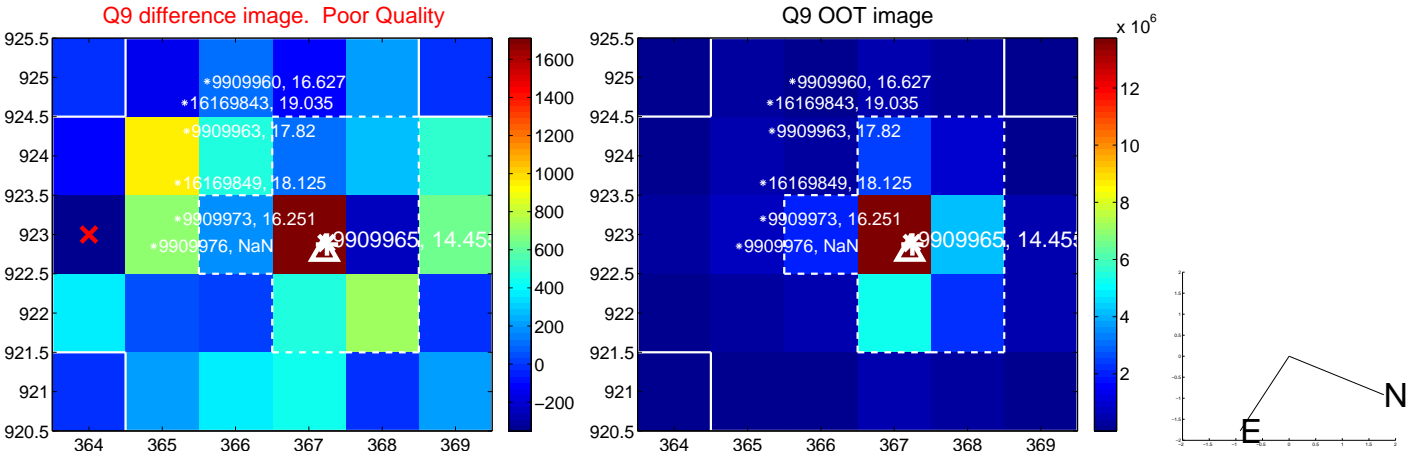
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



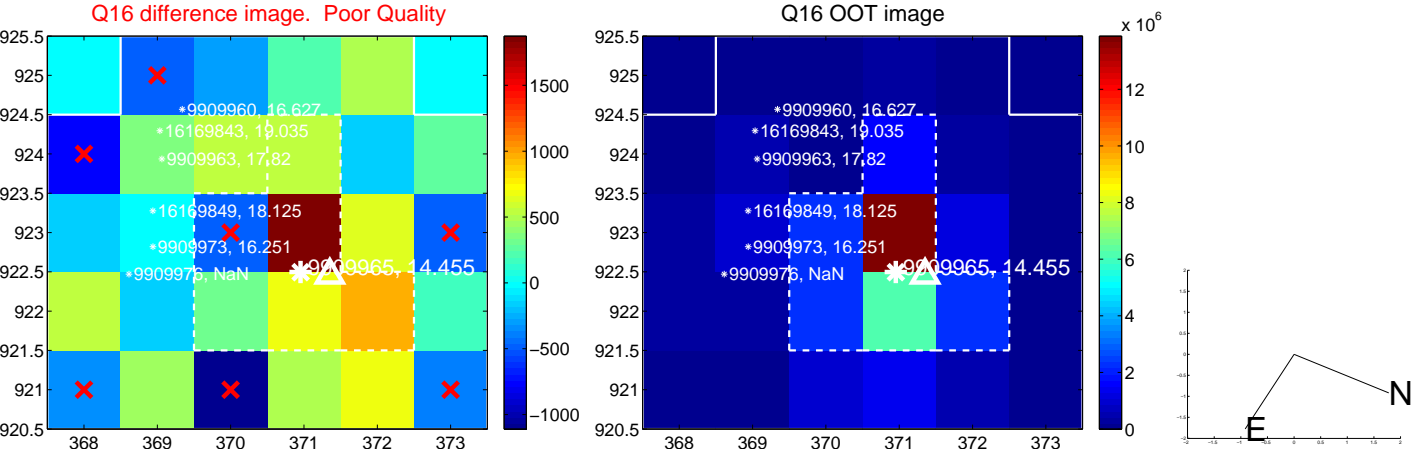
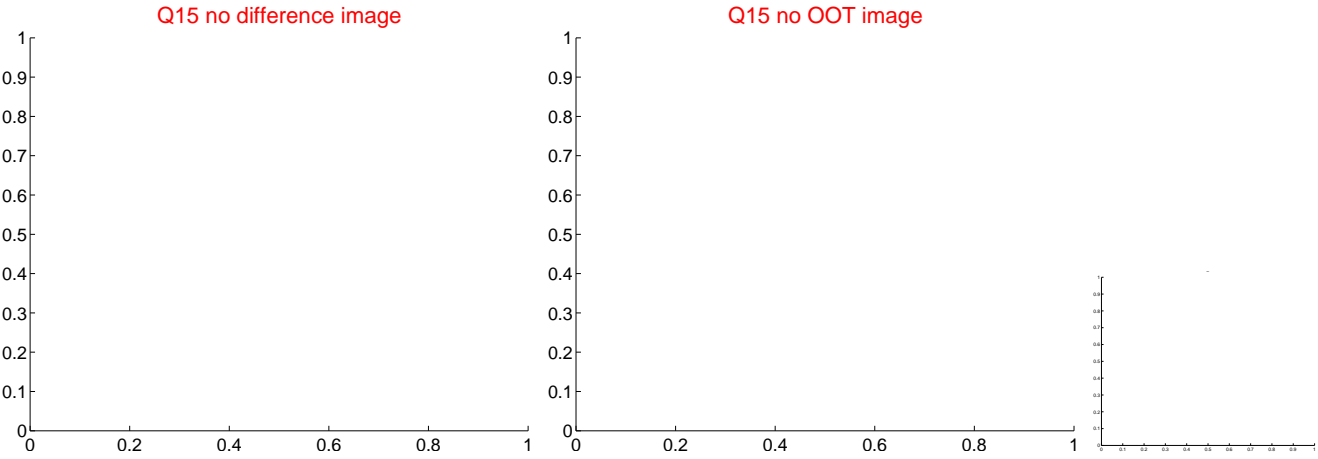
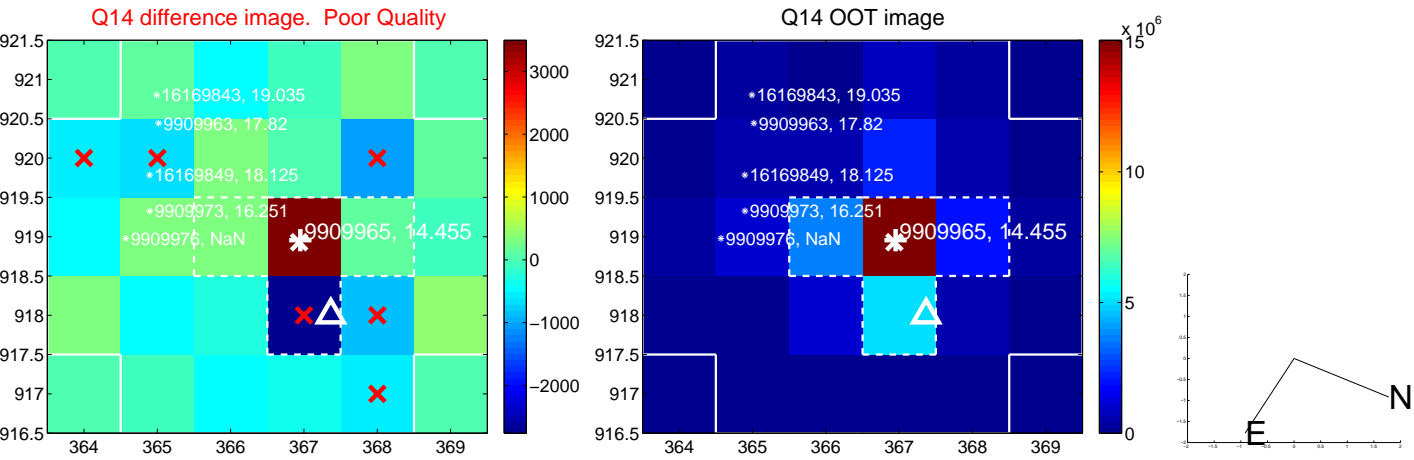
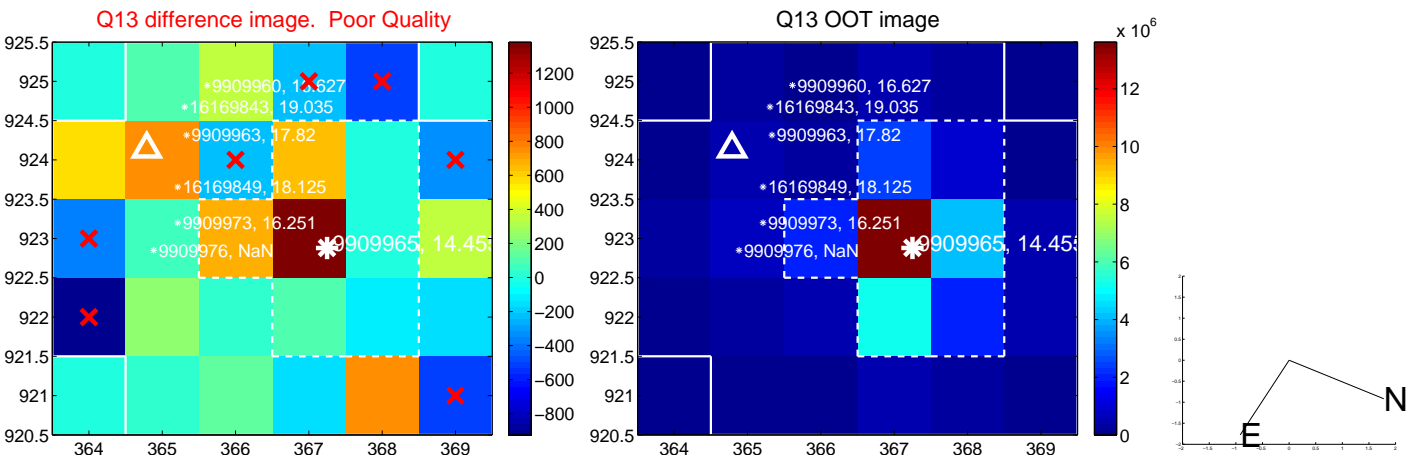
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



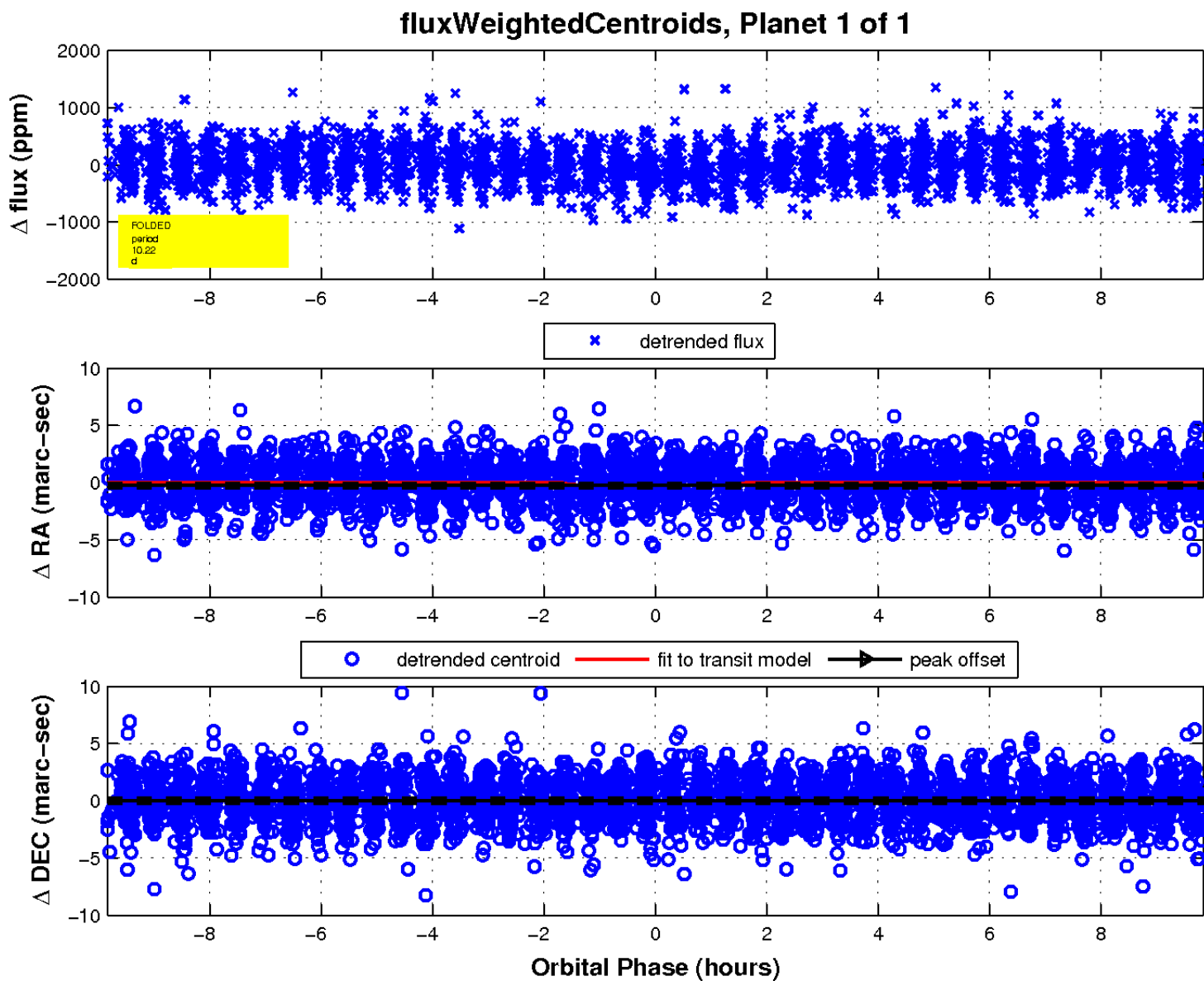
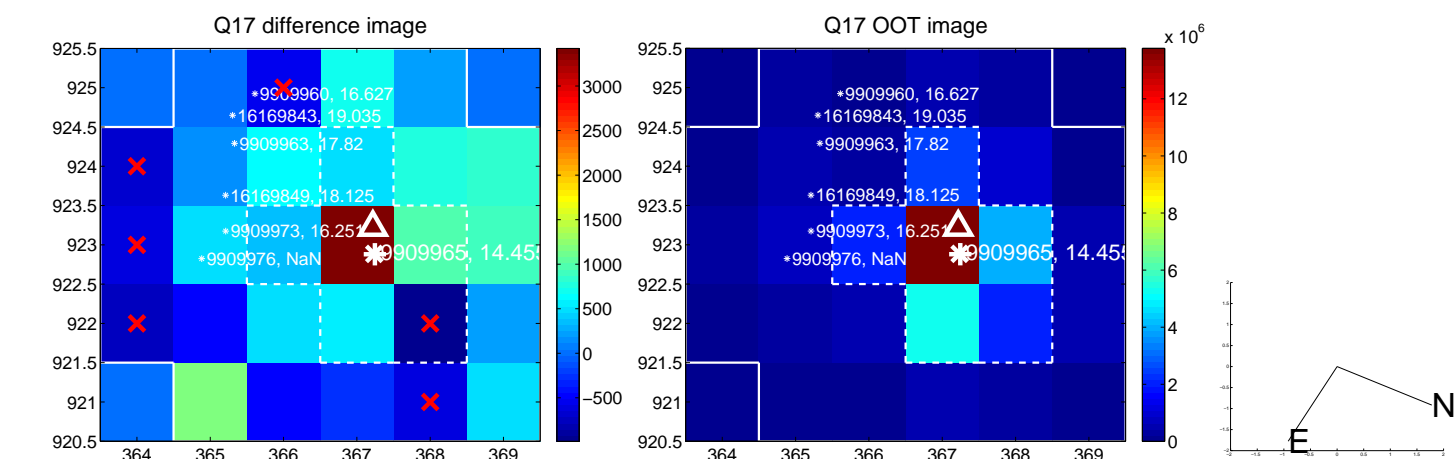
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

