

KIC 010991114

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})
010991114-01	OBS	4374.01	3.703903	132.691105	124.2	1.440	10.7	13.0	0.78	5496	0.89	248.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010991114-01	OBS	PC	1.00	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.

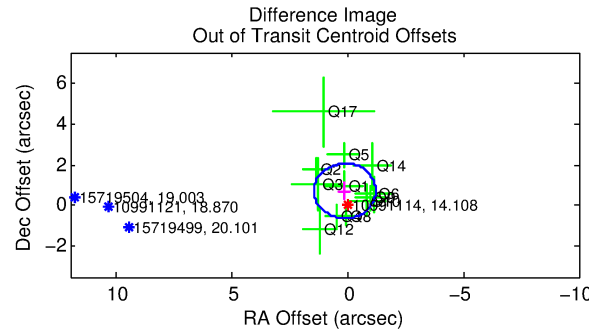
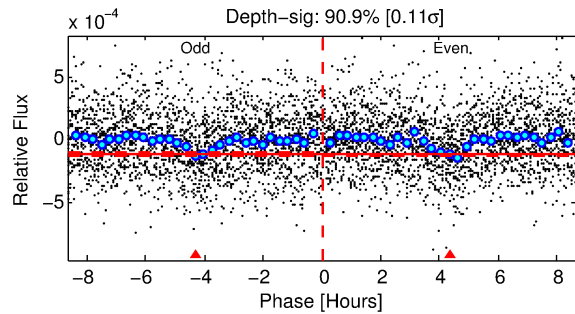
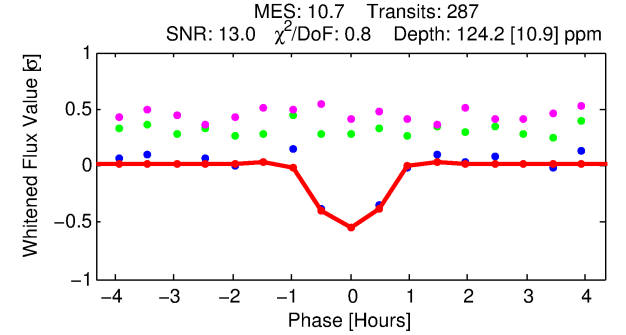
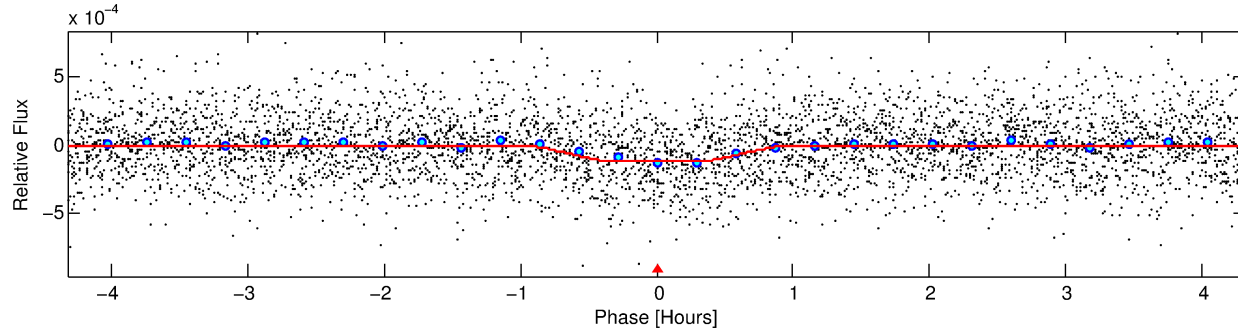
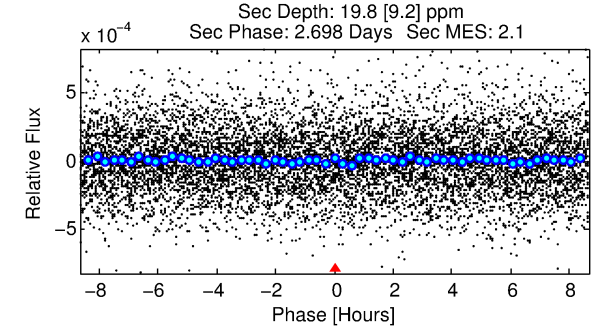
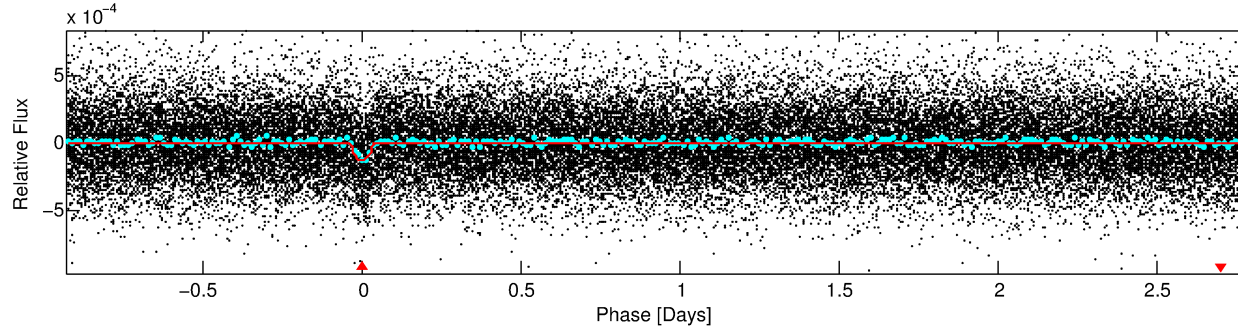
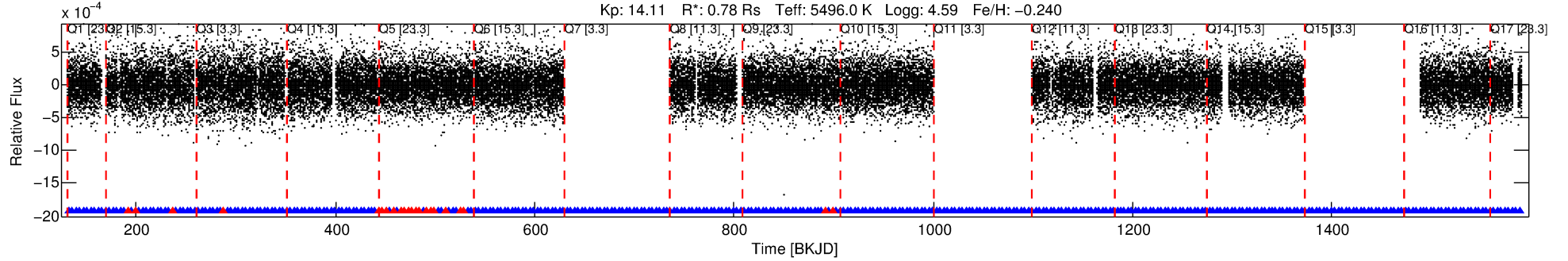
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010991114-01

No Significant Match Found

DV One-Page Summary

KIC: 10991114 Candidate: 1 of 1 Period: 3.704 d
KOI: K04374.01 Corr: 0.913



DV Fit Results:

Period = 3.70390 [0.00001] d
Epoch = 132.6911 [0.0022] BKJD
Rp/R* = 0.0105 [0.0062]
a/R* = 17.26 [42.74]
b = 0.50 [3.75]
Seff = 248.19 [62.17]
Teq = 1012 [63] K
Rp = 0.89 [0.56] Re
a = 0.0445 [0.0071] AU
Ag = 27.57 [35.83] [0.74σ]
Teffp = 3586 [1151] K [2.23σ]

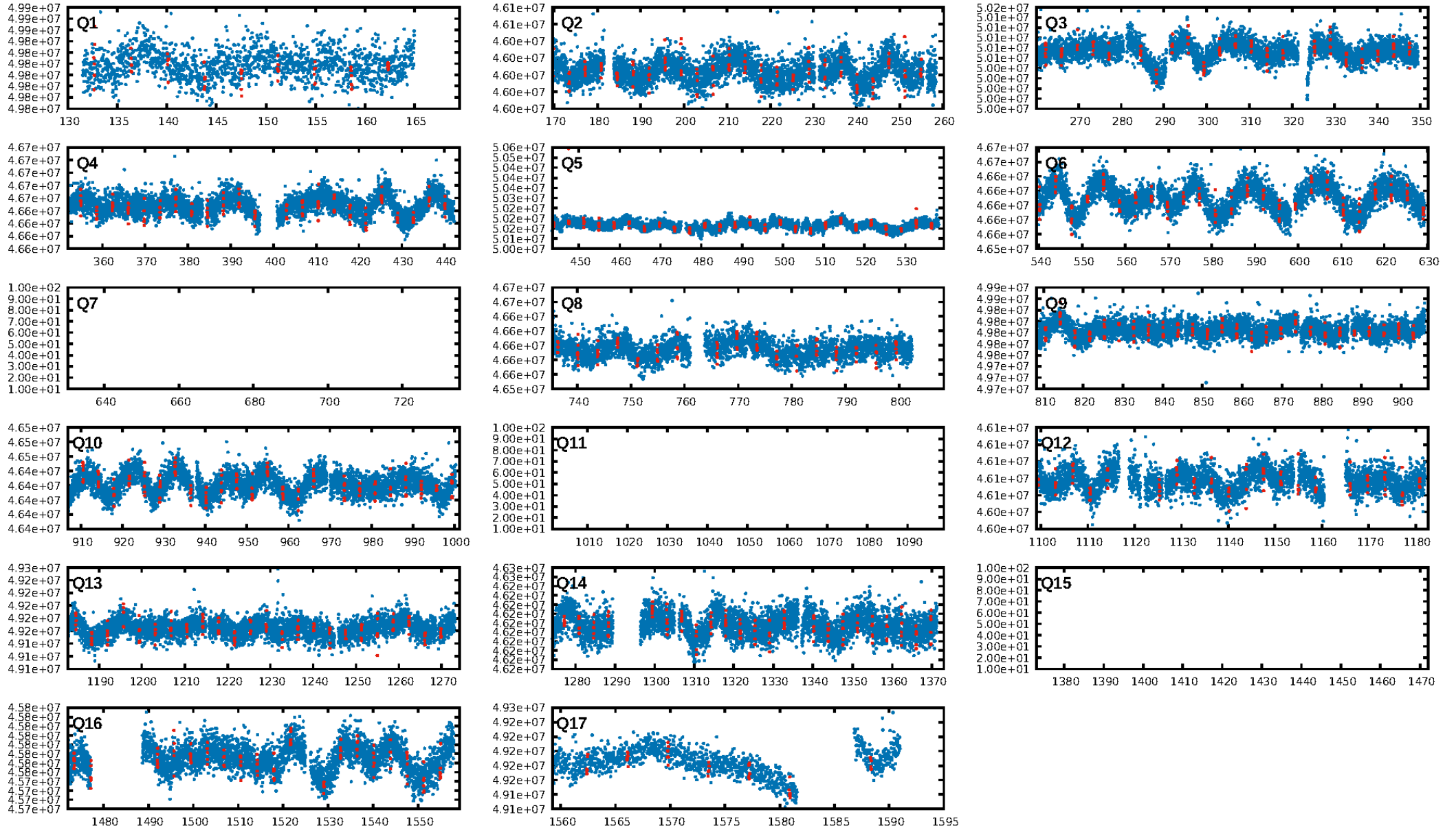
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.24e-26
RollingBand-fgt: 0.92 [249/271]
GhostDiagnostic-chr: 5.625
Centroid-sig: 34.5%
Centroid-so: 1.239 arcsec [1.01σ]
OotOffset-rm: 0.720 arcsec [1.61σ]
KicOffset-rm: 0.639 arcsec [1.46σ]
OotOffset-st: 4/1/3/4 [12]
KicOffset-st: 4/1/3/4 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [14/14]

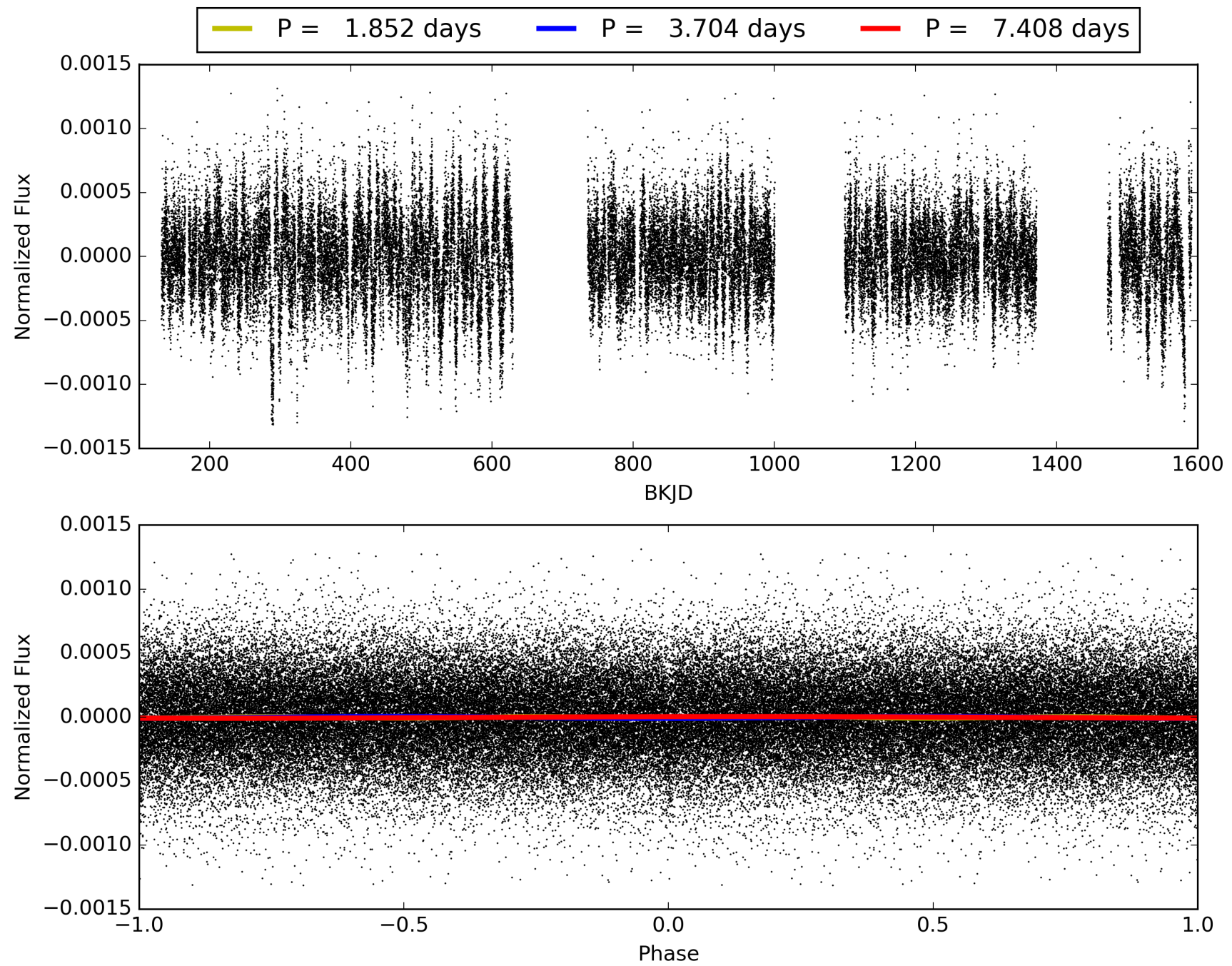
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:05:48 Z

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

TCE 010991114-01, PDC Light Curves

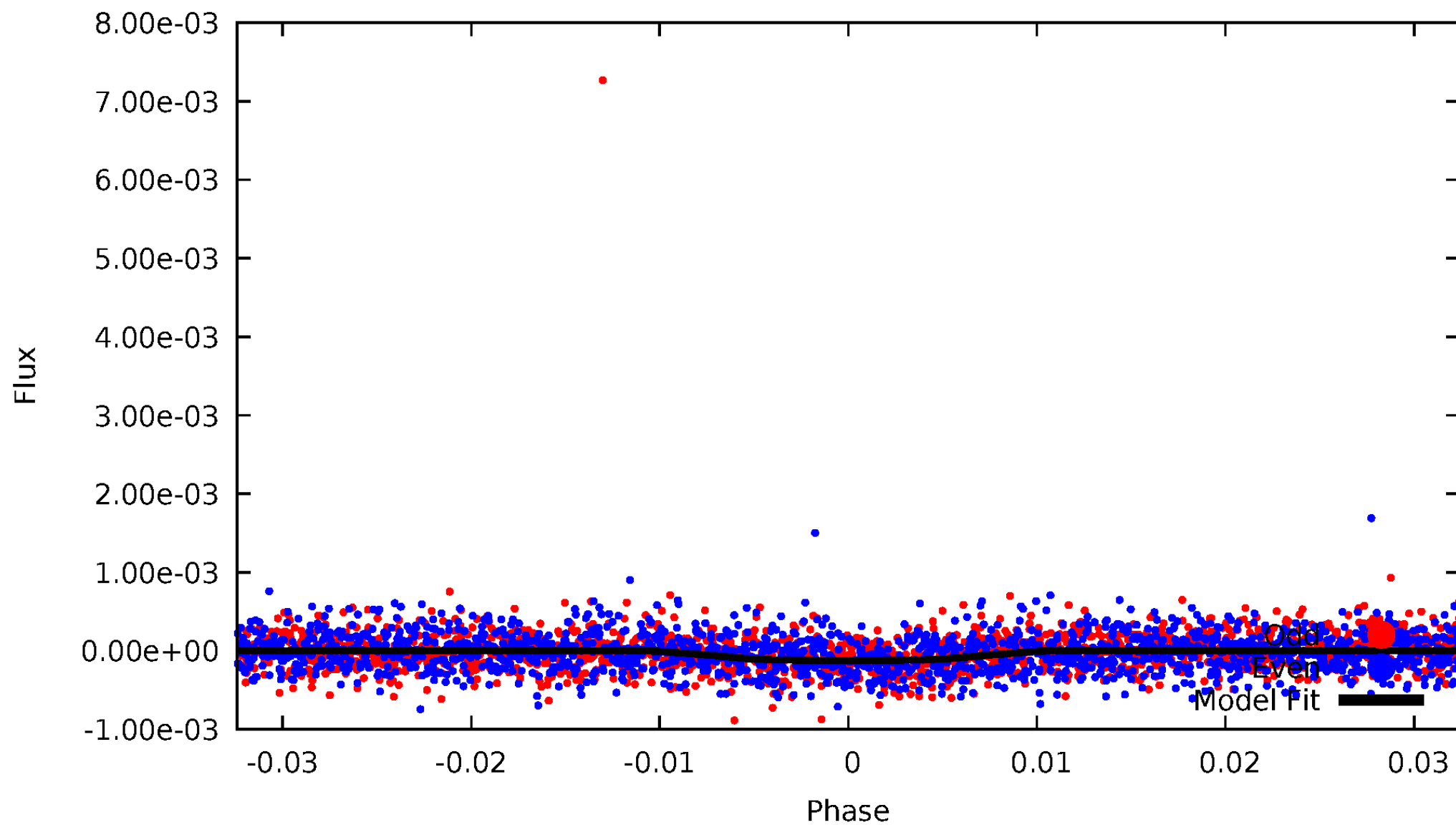


TCE 010991114-01



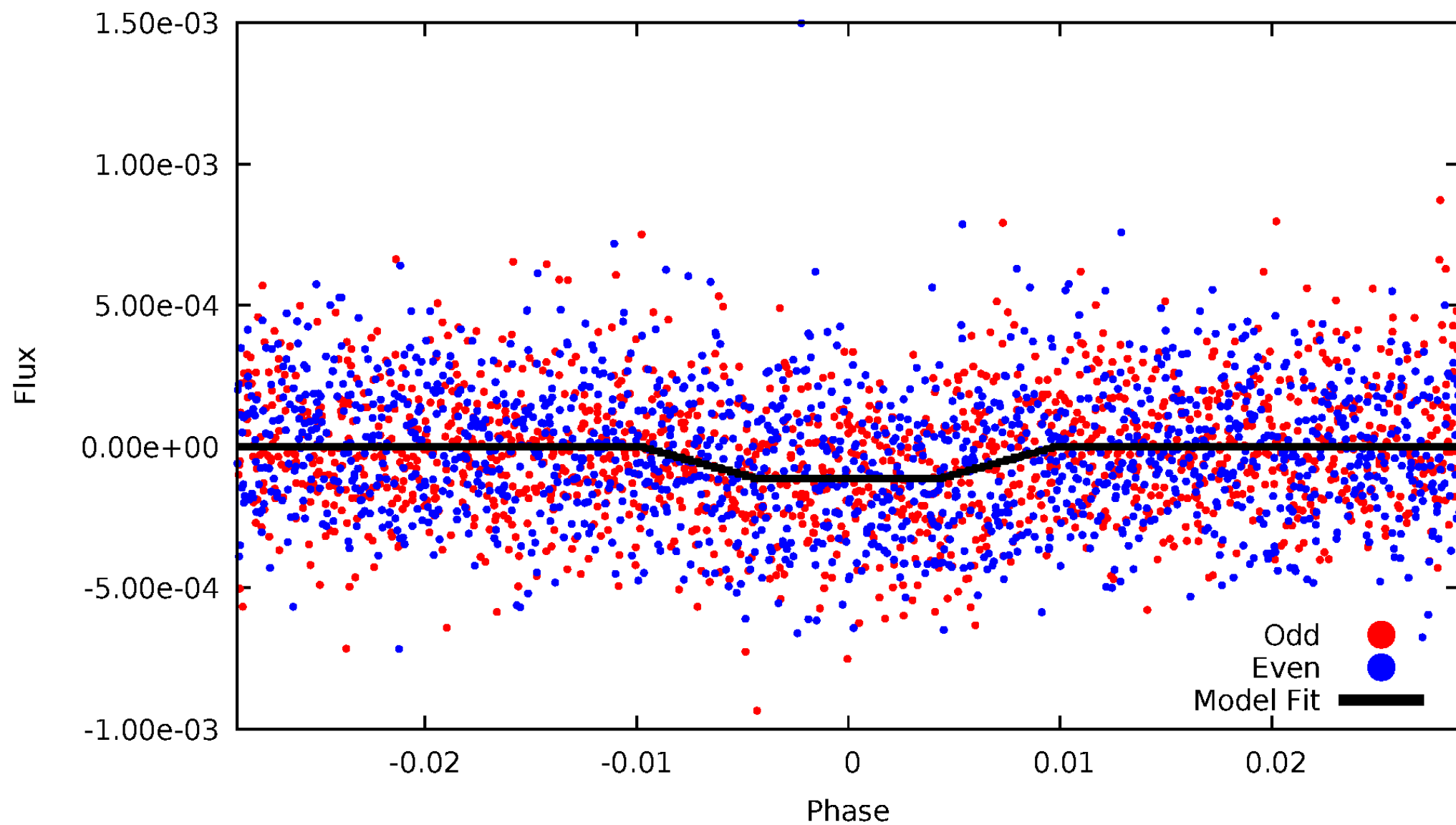
DV Odd/Even

TCE 010991114-01

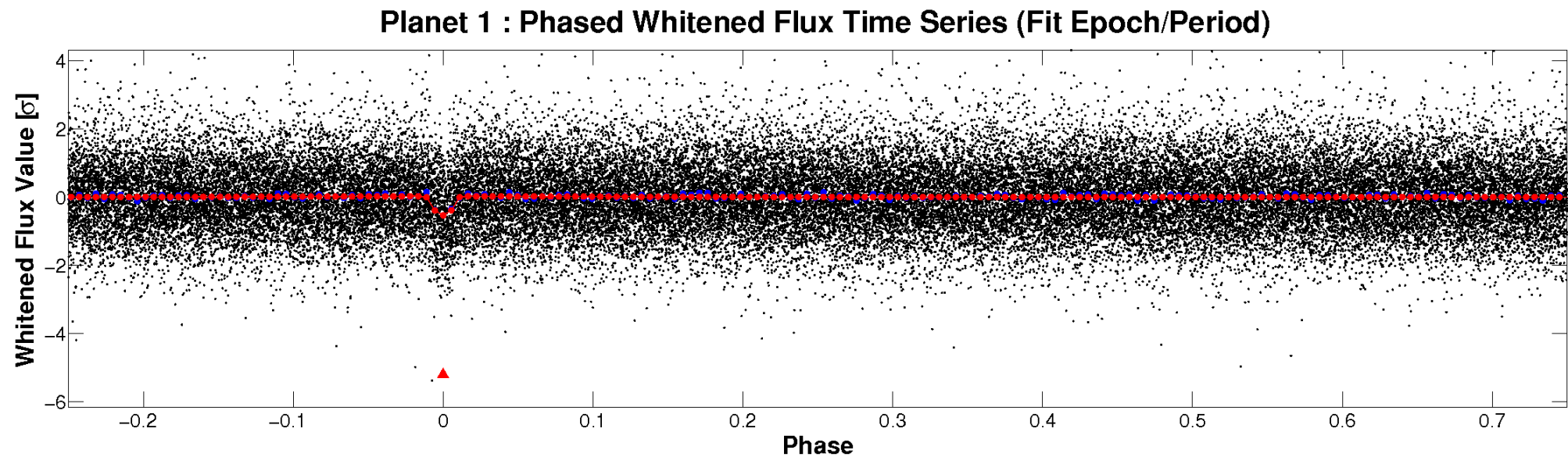
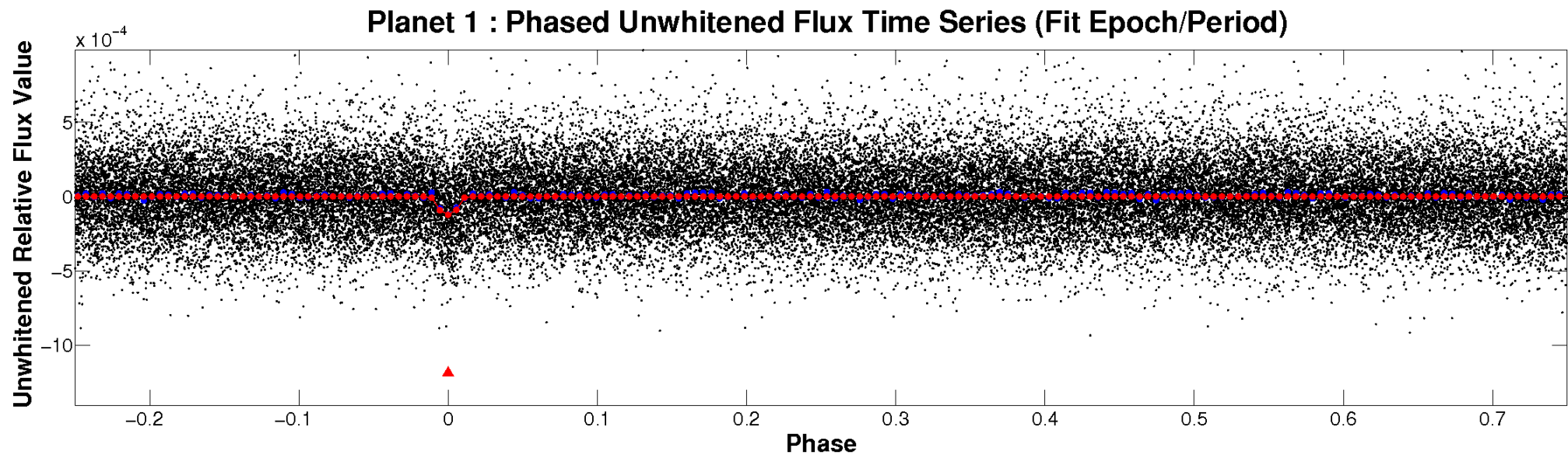


ALT Odd/Even

TCE 010991114-01



Non-Whitened Vs. Whitened Light Curve



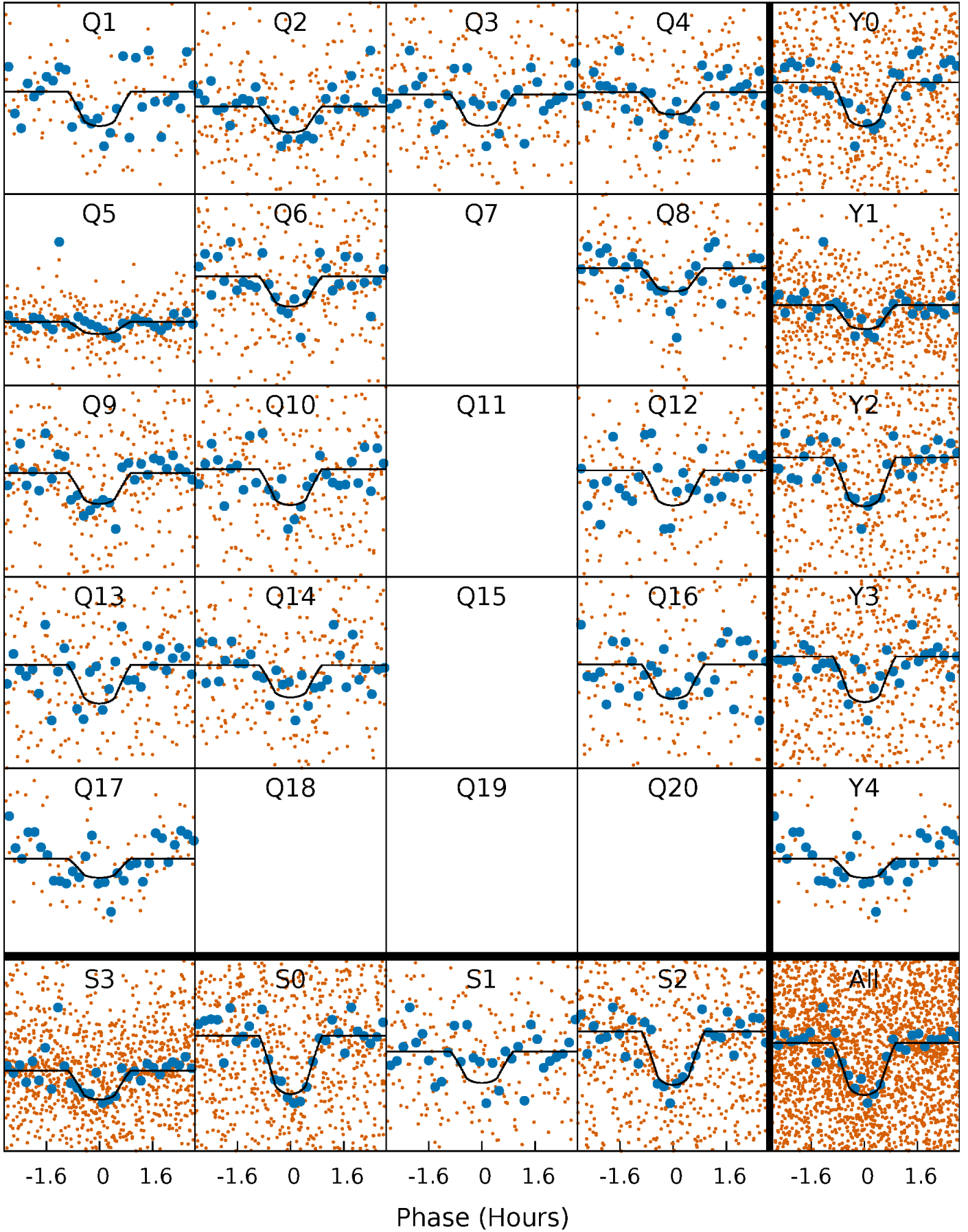
PDC Quarter-Phased Transit Curves

TCE 010991114-01 P= 3.703903 Days $T_0=132.691105$ (BKJD)



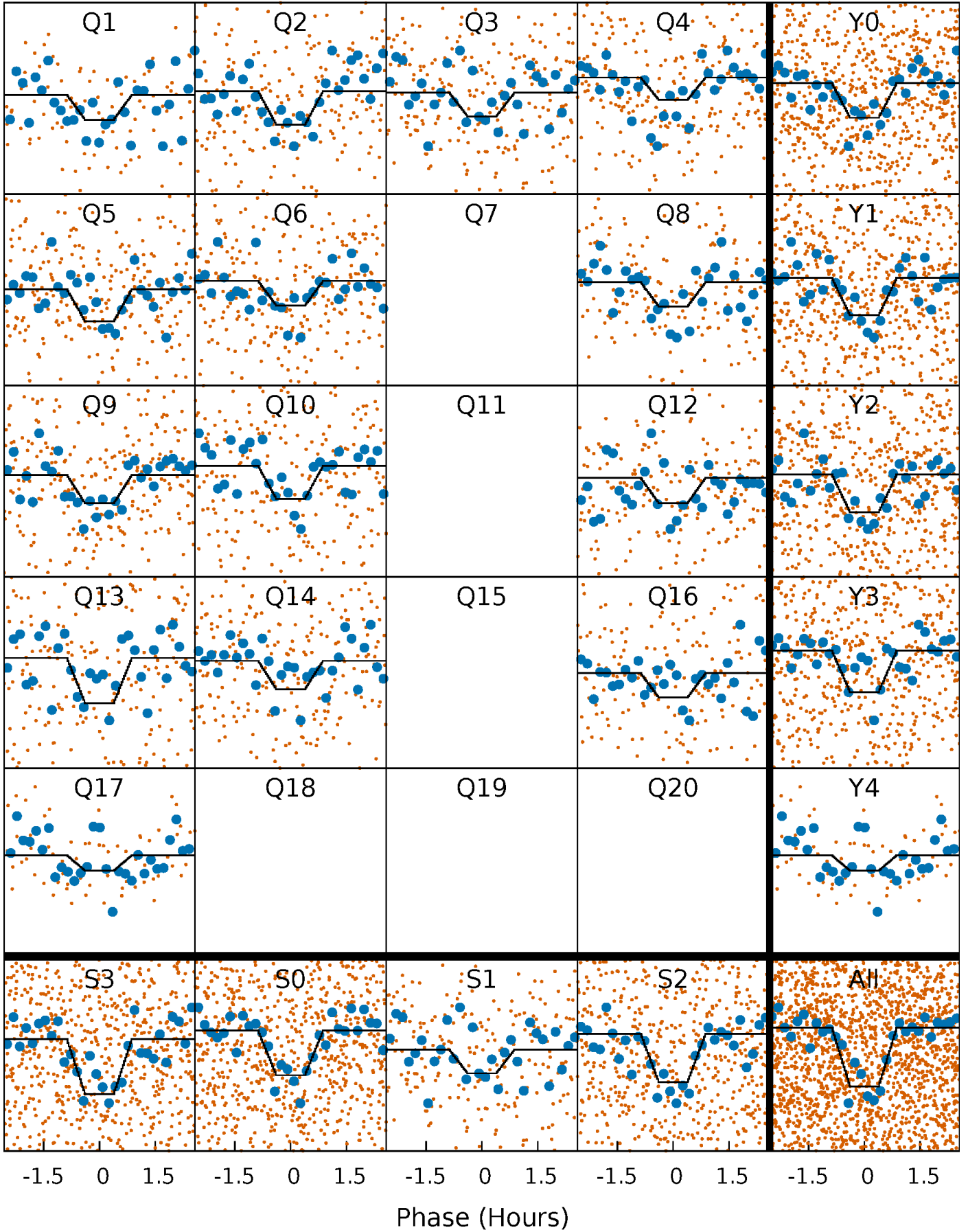
DV Quarter-Phased Transit Curves

TCE 010991114-01 P= 3.703903 Days $T_0=132.691105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

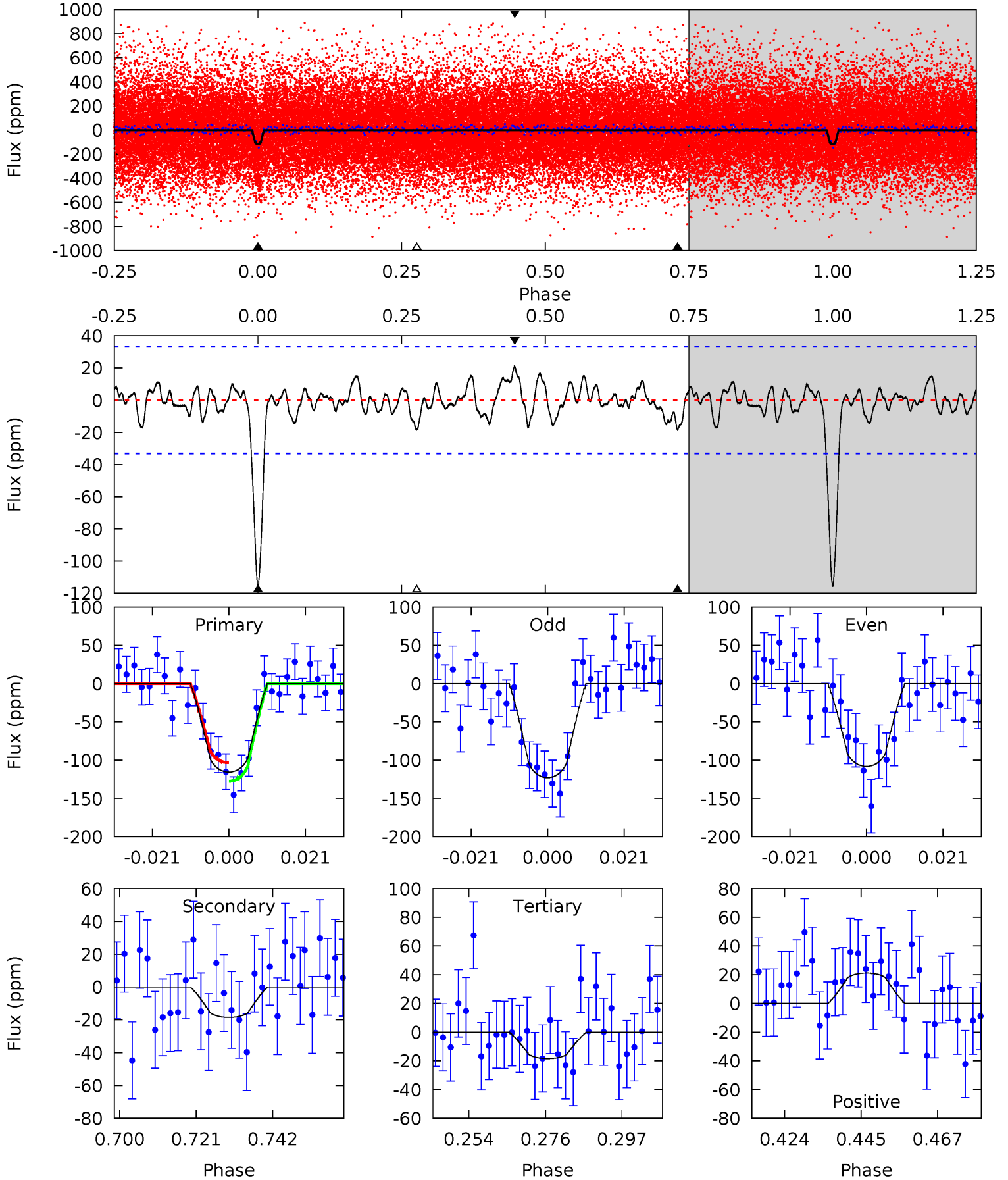
TCE 010991114-01 P= 3.703861 Days $T_0=132.697344$ (BKJD)



DV Model-Shift Uniqueness Test

010991114-01, P = 3.703903 Days, E = 128.987202 Days

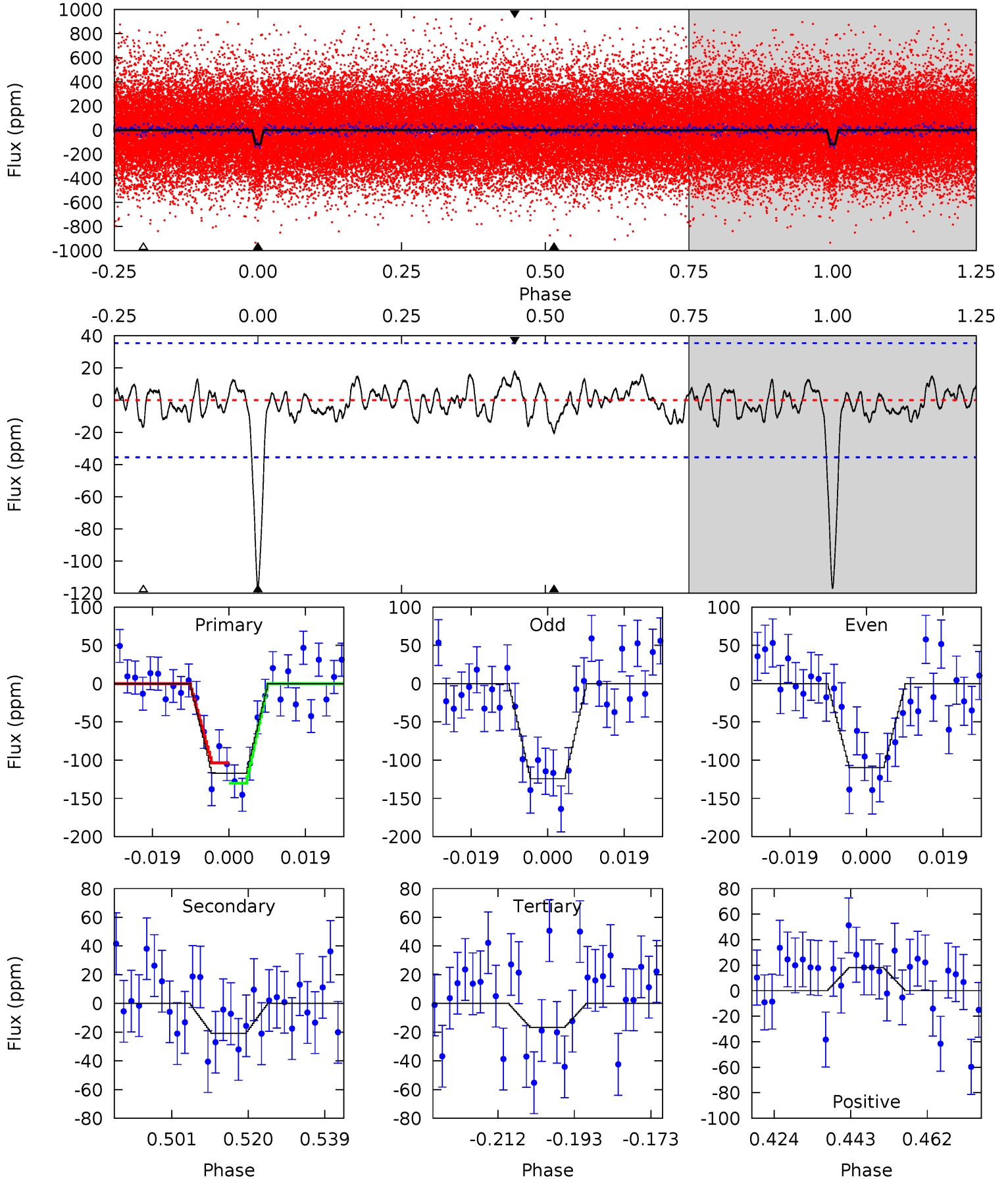
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	2.72	2.71	3.11	4.88	2.30	1.08	14.3	13.9	0.02	-0.39	1.09	0.94	0.15	1.79



Alt Model-Shift Uniqueness Test

010991114-01, P = 3.703861 Days, E = 128.993483 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	2.87	2.31	2.50	4.90	2.34	1.02	13.9	13.7	0.56	0.37	1.01	1.15	0.13	1.85



Stellar Parameters For KIC 010991114

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+149}_{-149}	$4.592^{+0.032}_{-0.120}$	$-0.240^{+0.300}_{-0.300}$	$0.776^{+0.152}_{-0.065}$	$0.869^{+0.074}_{-0.102}$	$2.619^{+0.437}_{-0.969}$
	+3%/-3%	+1%/-3%	+125%/-125%	+20%/-8%	+9%/-12%	+17%/-37%
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 010991114-01 / KOI 4374.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 7	$0.93^{+0.52}_{-0.48}$	1439^{+66}_{-54}	3799^{+1276}_{-574}	22^{+77}_{-14}
Alt.	-21 ± 7	$0.94^{+0.53}_{-0.50}$	1438^{+64}_{-55}	3856^{+1287}_{-541}	24^{+84}_{-14}

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

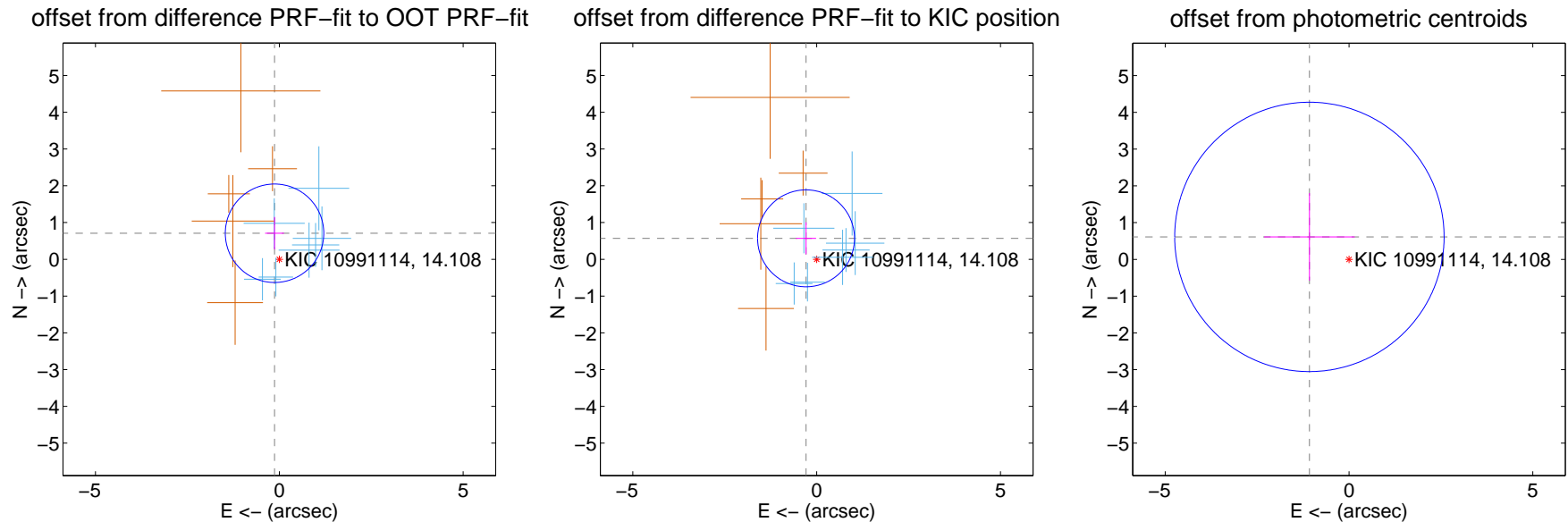
DV Centroid Data

Supplemental centroid analysis for 010991114-01. Kepler magnitude: 14.11. Transit SNR 12.98

There are 7 quarters with good PRF difference image offsets

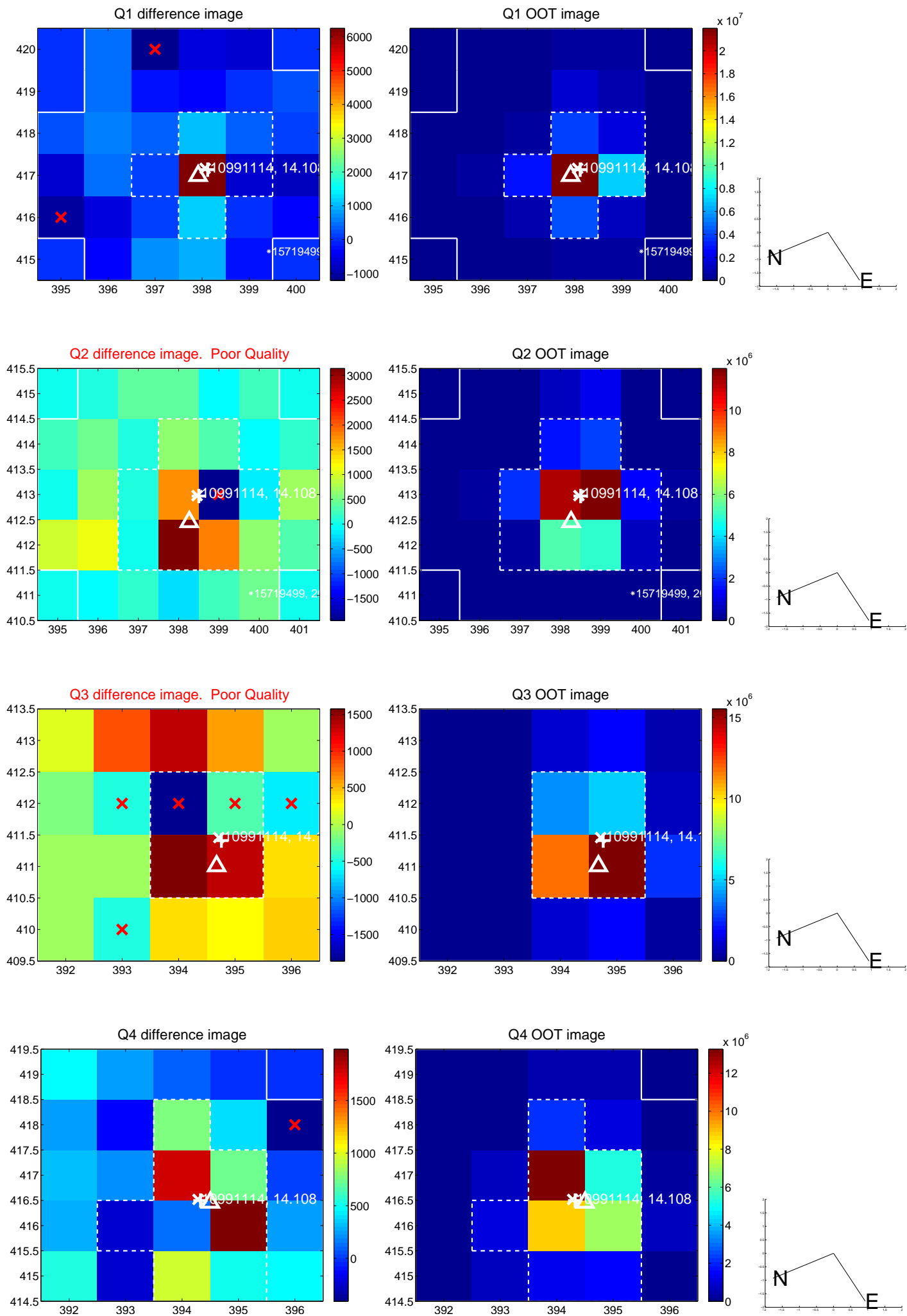
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.720 ± 0.446	1.61	0.130 ± 0.257	0.709 ± 0.442
PRF-fit source offset from KIC position	0.639 ± 0.439	1.46	0.289 ± 0.275	0.571 ± 0.435
photometric centroid source offset	1.24 ± 1.22	1.01	1.08 ± 1.23	0.61 ± 1.19

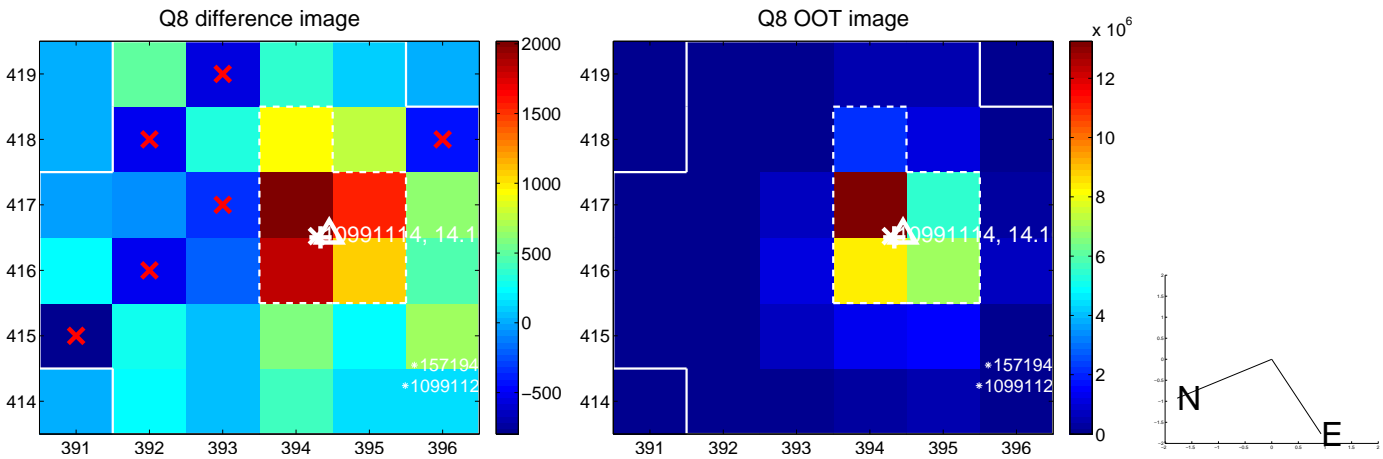
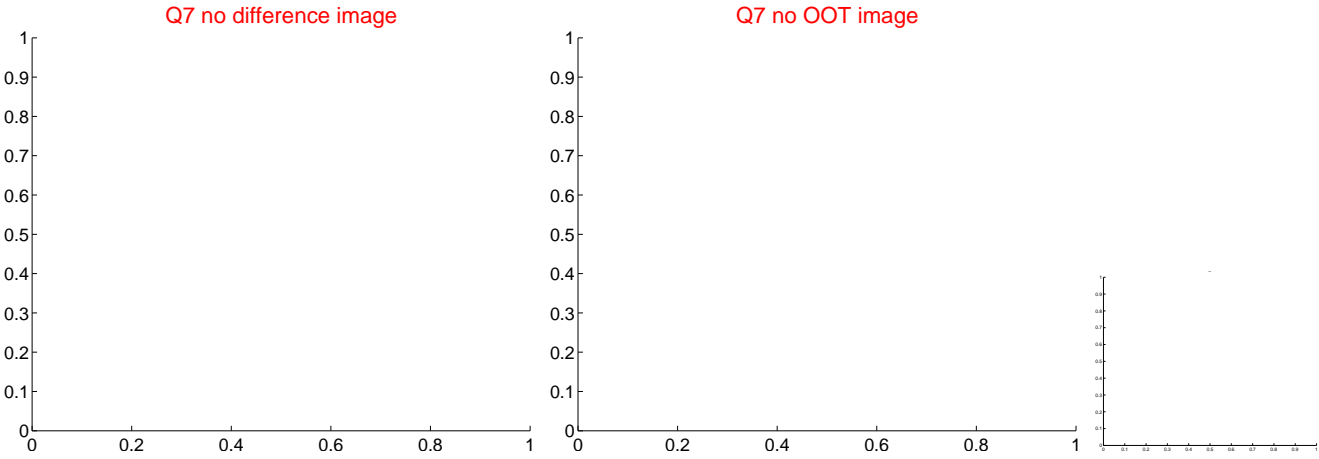
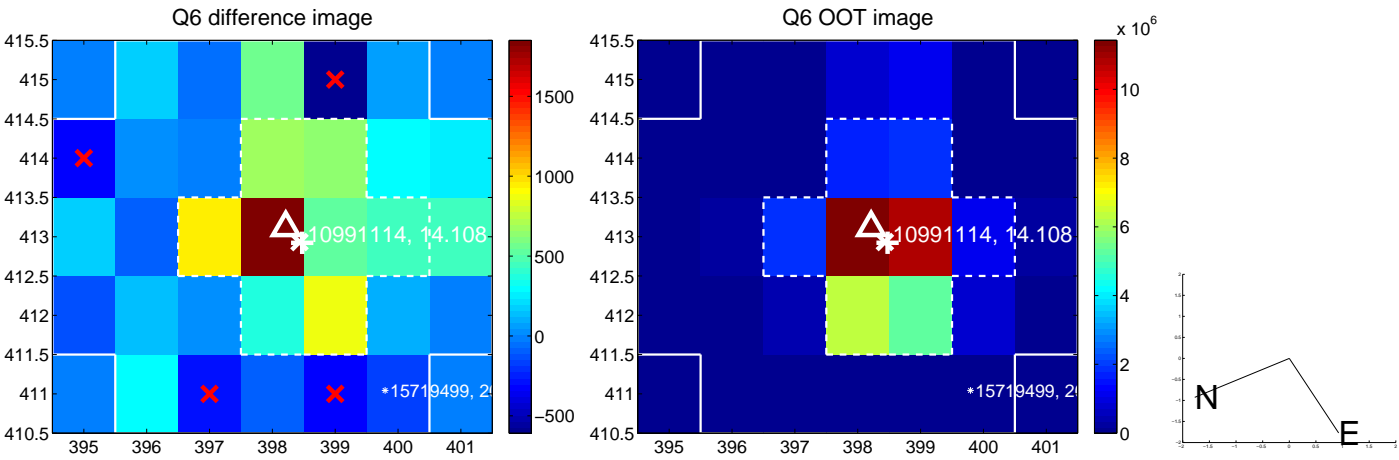
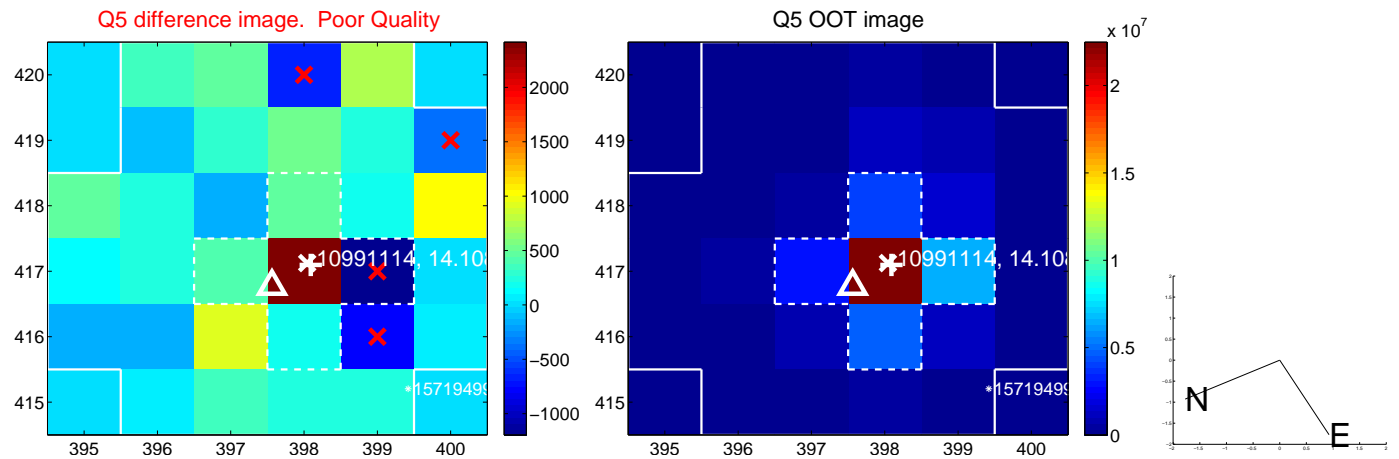


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

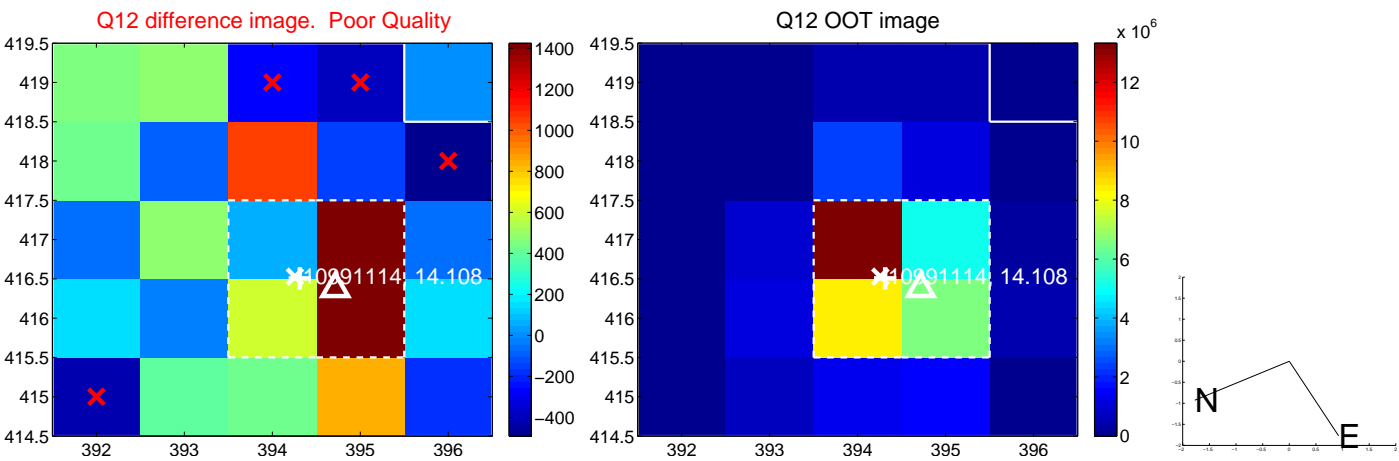
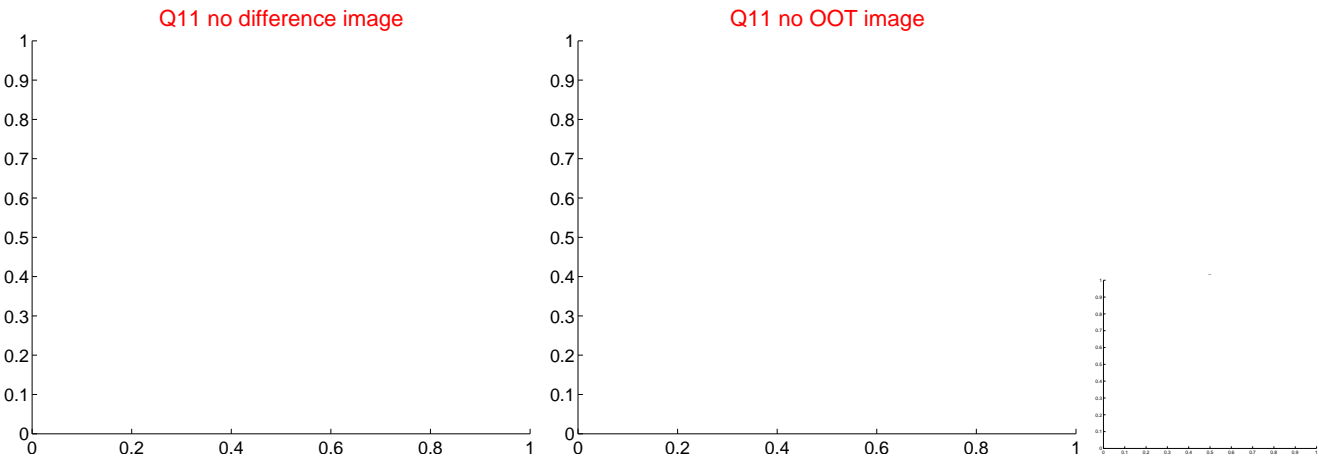
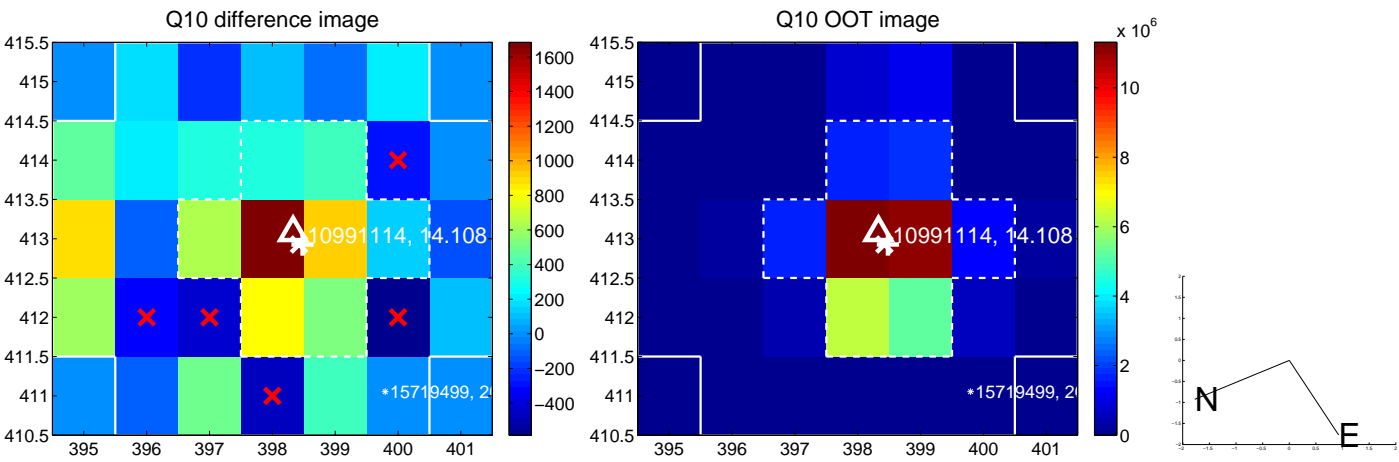
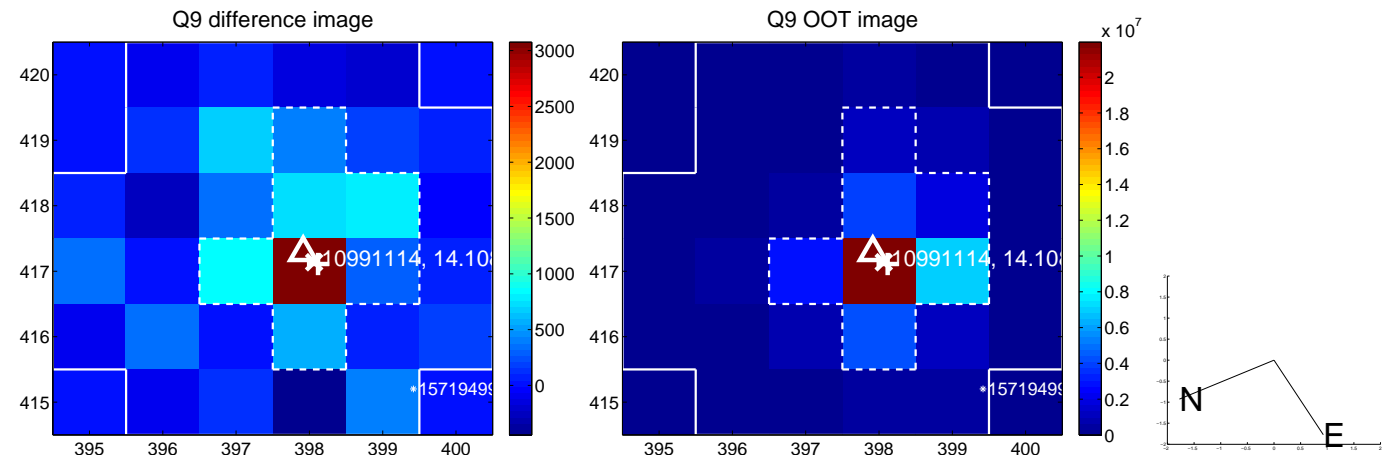
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



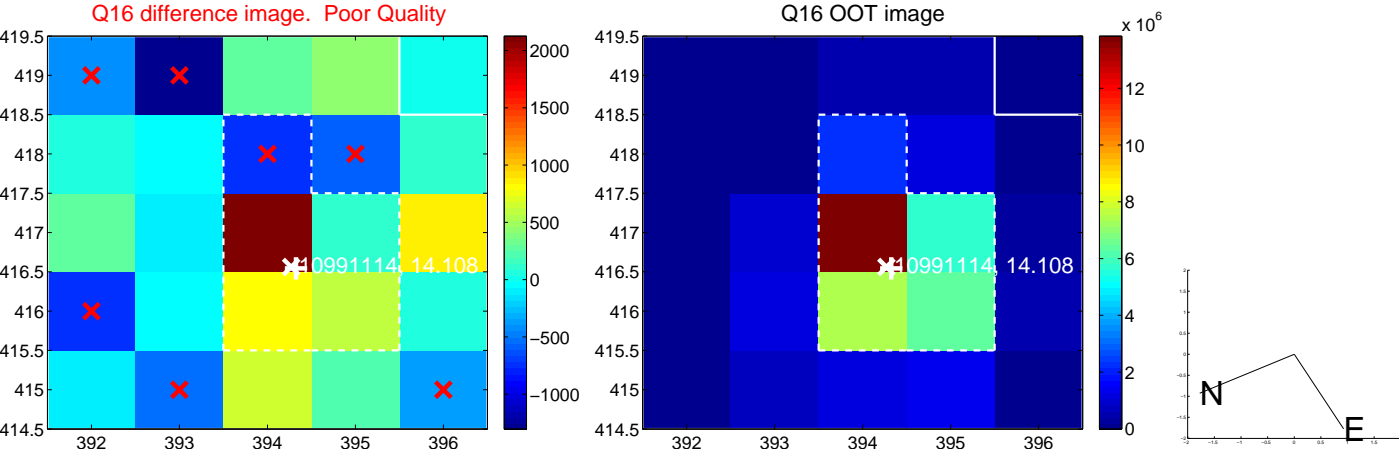
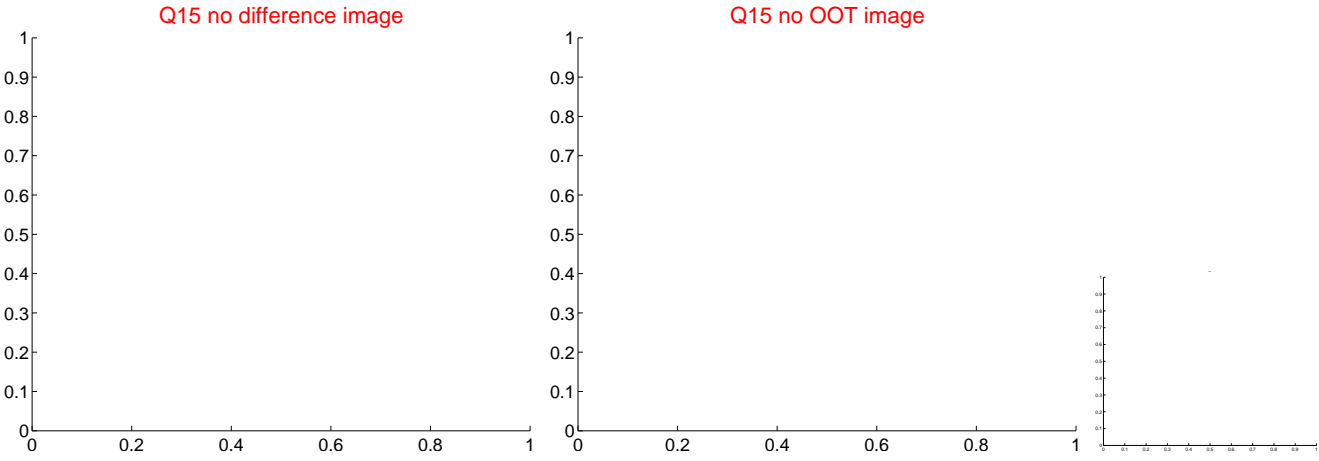
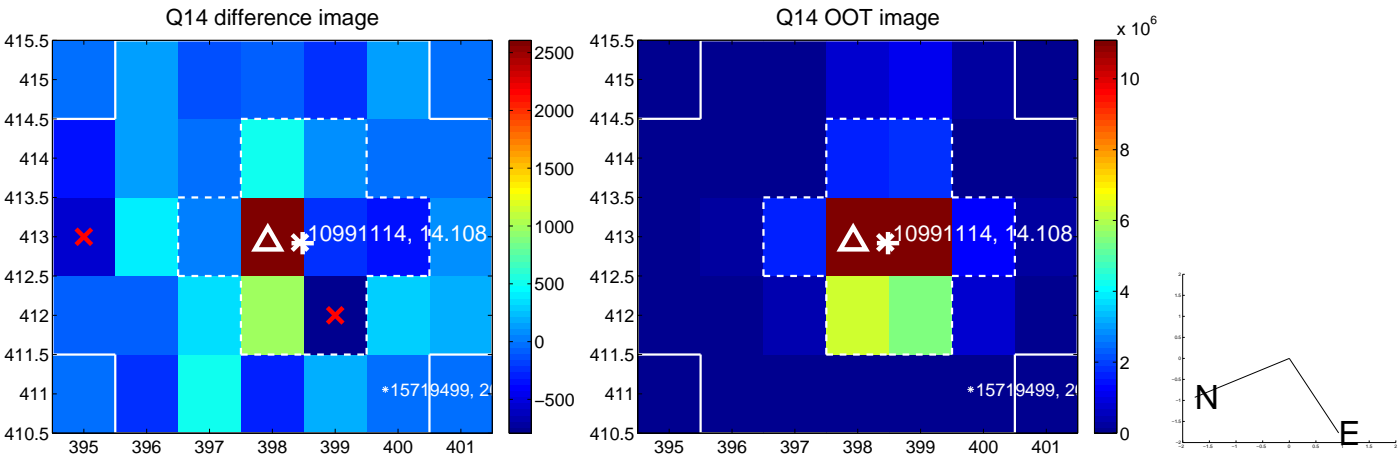
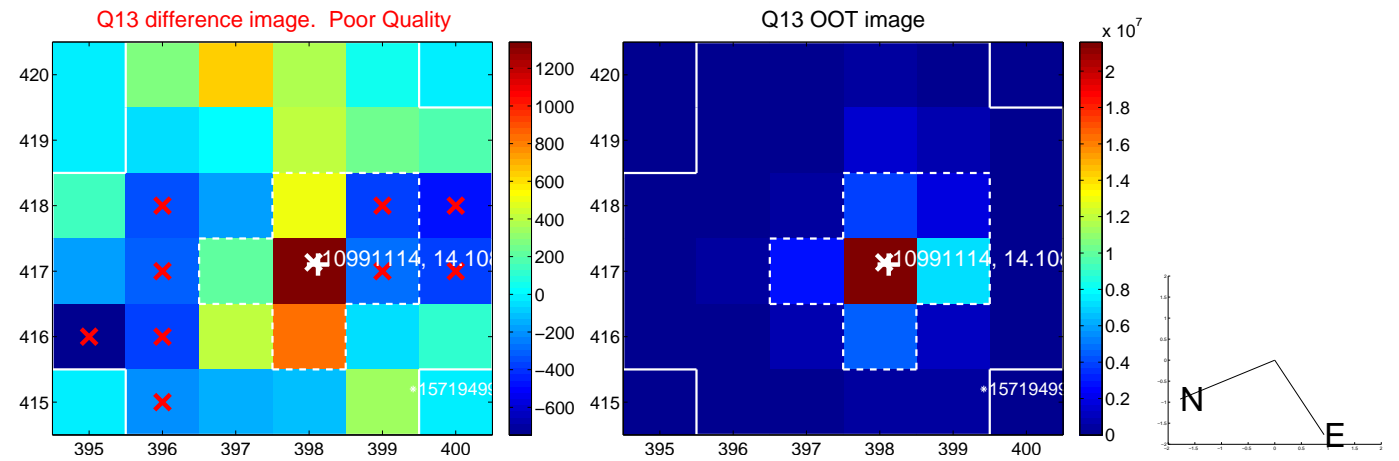
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



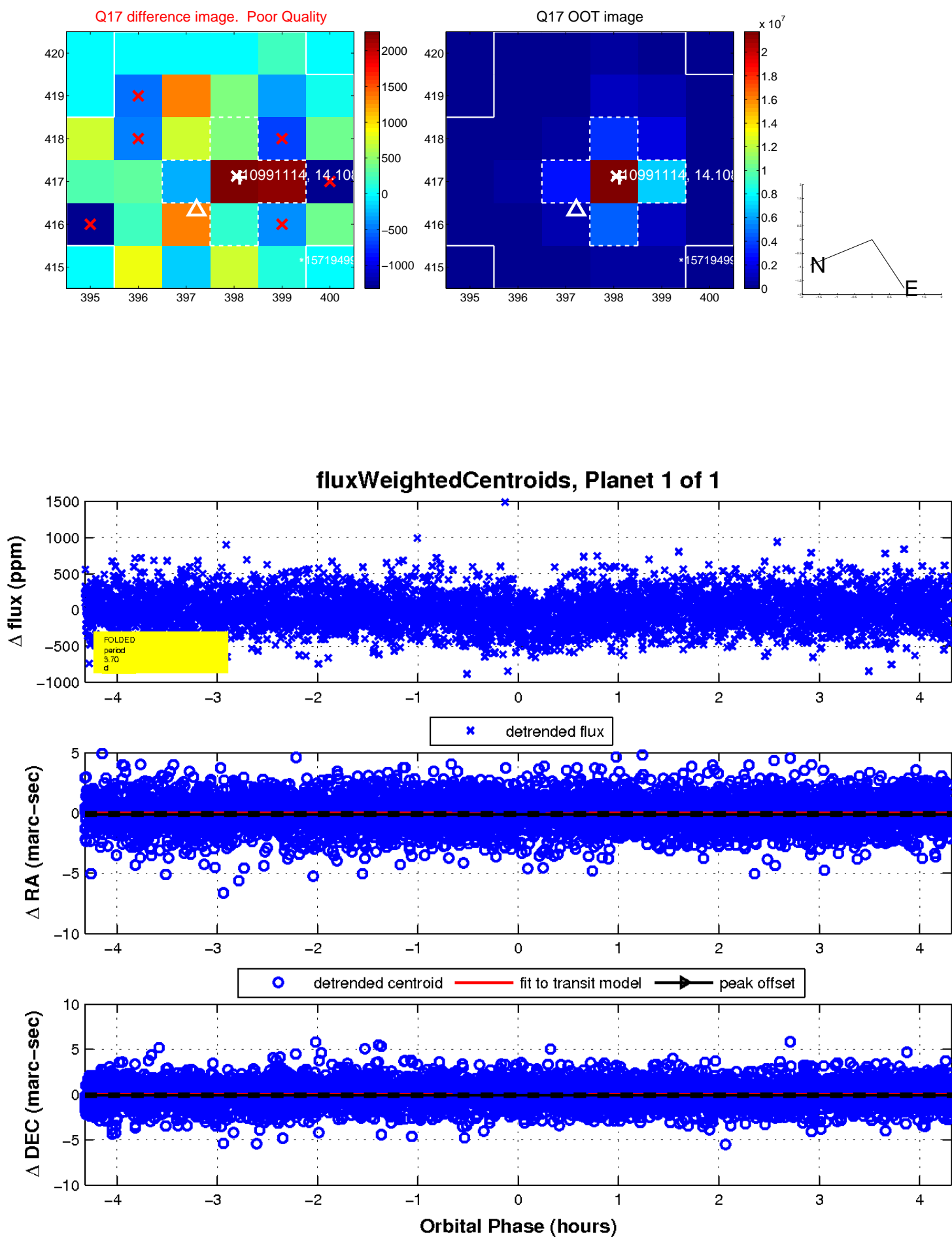
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

