

KIC 011912911

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})
011912911-01	OBS	4607.01	3.747853	134.176889	146.8	4.265	12.0	11.8	0.78	5340	1.13	217.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011912911-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 011912911-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
011912911-01	11912911	011913071-pri	11913071	1:1	255.6	54	35	9.53	15.52	1285.70	Direct-PRF	0	0.27	0.46

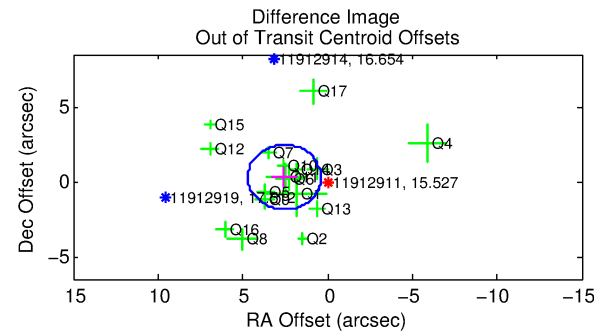
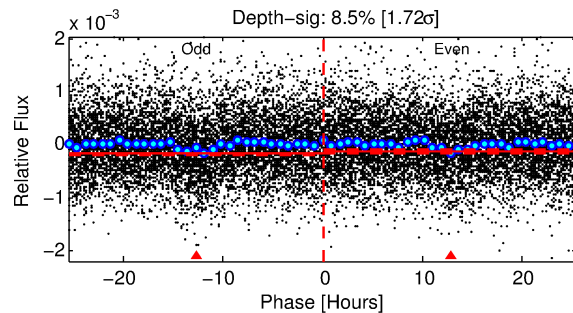
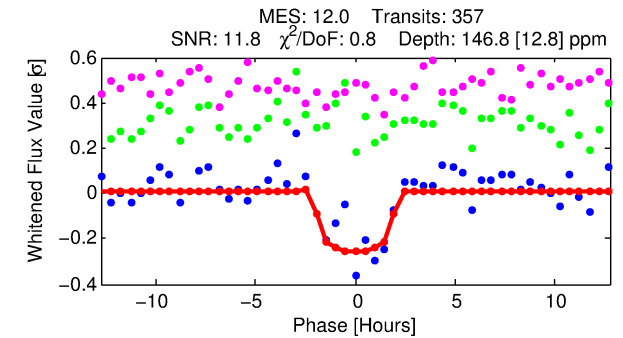
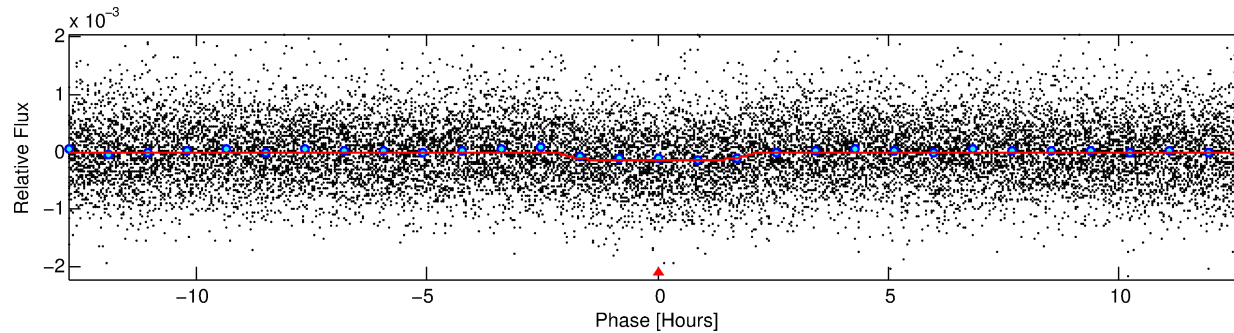
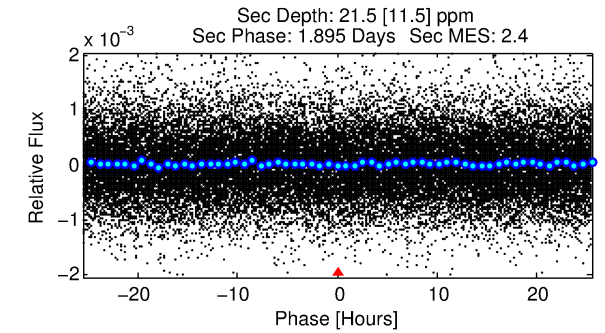
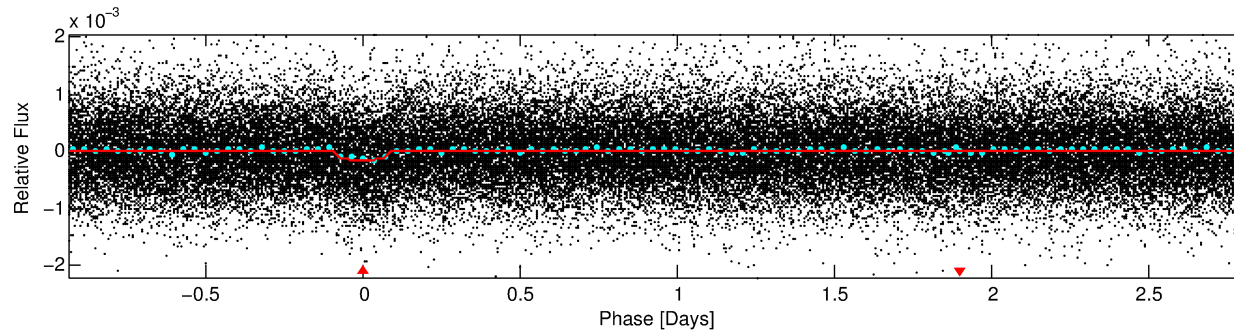
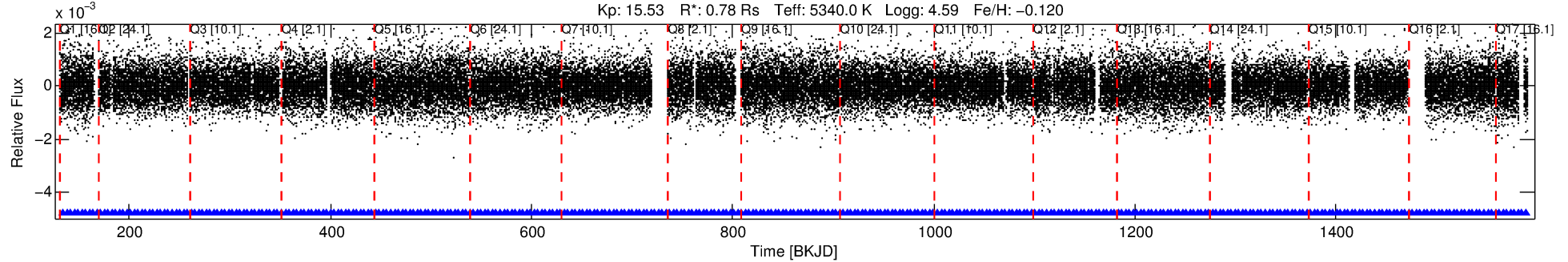
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11912911 Candidate: 1 of 1 Period: 3.748 d

KOI: K04607.01 Corr: 0.972

Kp: 15.53 R*: 0.78 Rs Teff: 5340.0 K Logg: 4.59 Fe/H: -0.120



DV Fit Results:

Period = 3.74785 [0.00003] d
Epoch = 134.1769 [0.0053] BKJD
Rp/R* = 0.0134 [0.0058]
a/R* = 3.26 [5.60]
b = 0.90 [0.41]
Seff = 217.59 [55.97]
Teq = 979 [63] K
Rp = 1.13 [0.53] Re
a = 0.0450 [0.0069] AU
Ag = 18.68 [19.41] [0.91σ]
Teffp = 3148 [805] K [2.68σ]

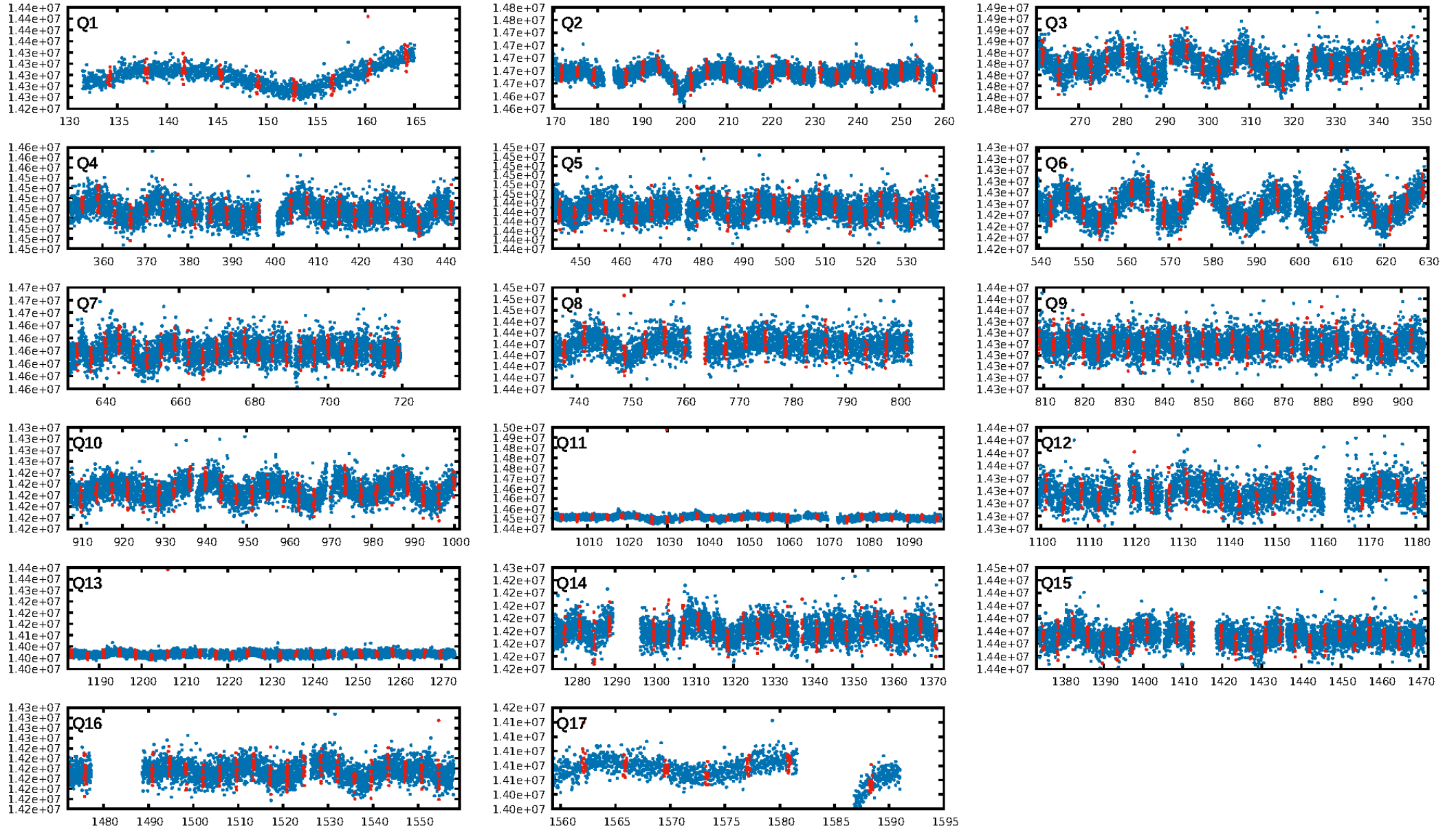
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.13e-33
RollingBand-fgt: 1.00 [341/341]
GhostDiagnostic-chr: 0.08282
Centroid-sig: 0.0%
Centroid-so: 3.112 arcsec [3.02σ]
OotOffset-rm: 2.559 arcsec [3.56σ]
KicOffset-rm: 2.570 arcsec [3.85σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

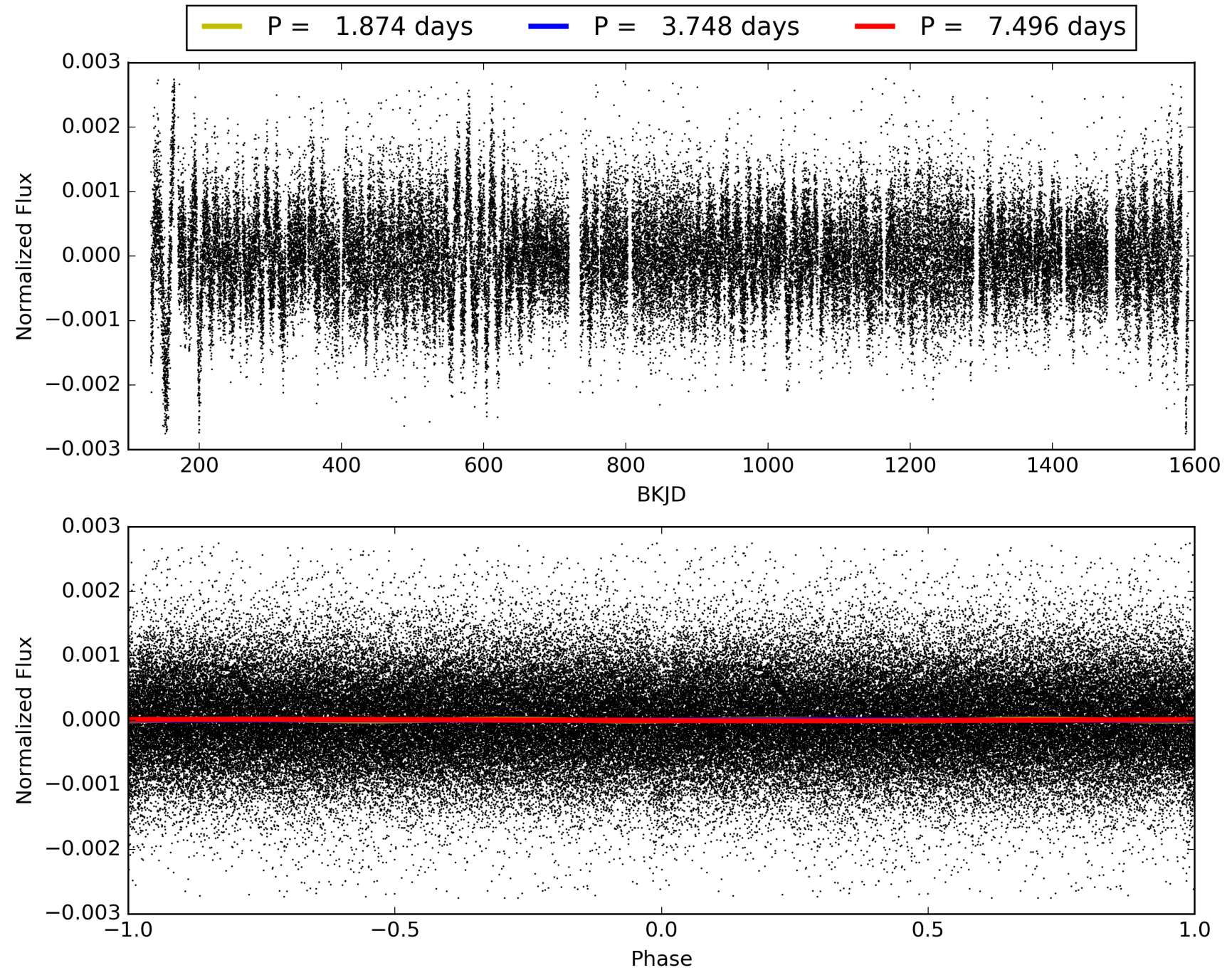
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:21:11 Z

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

TCE 011912911-01, PDC Light Curves

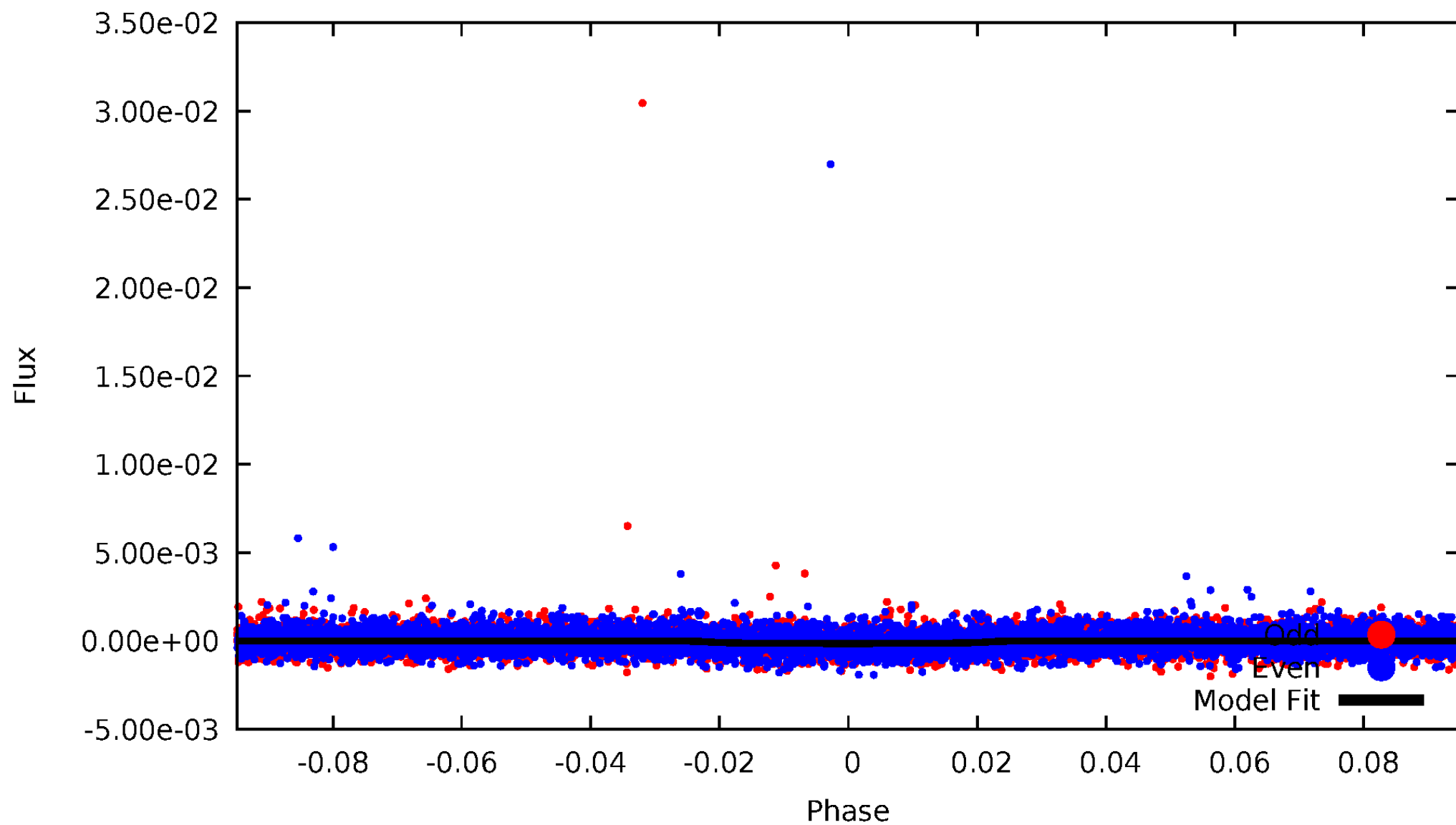


TCE 011912911-01



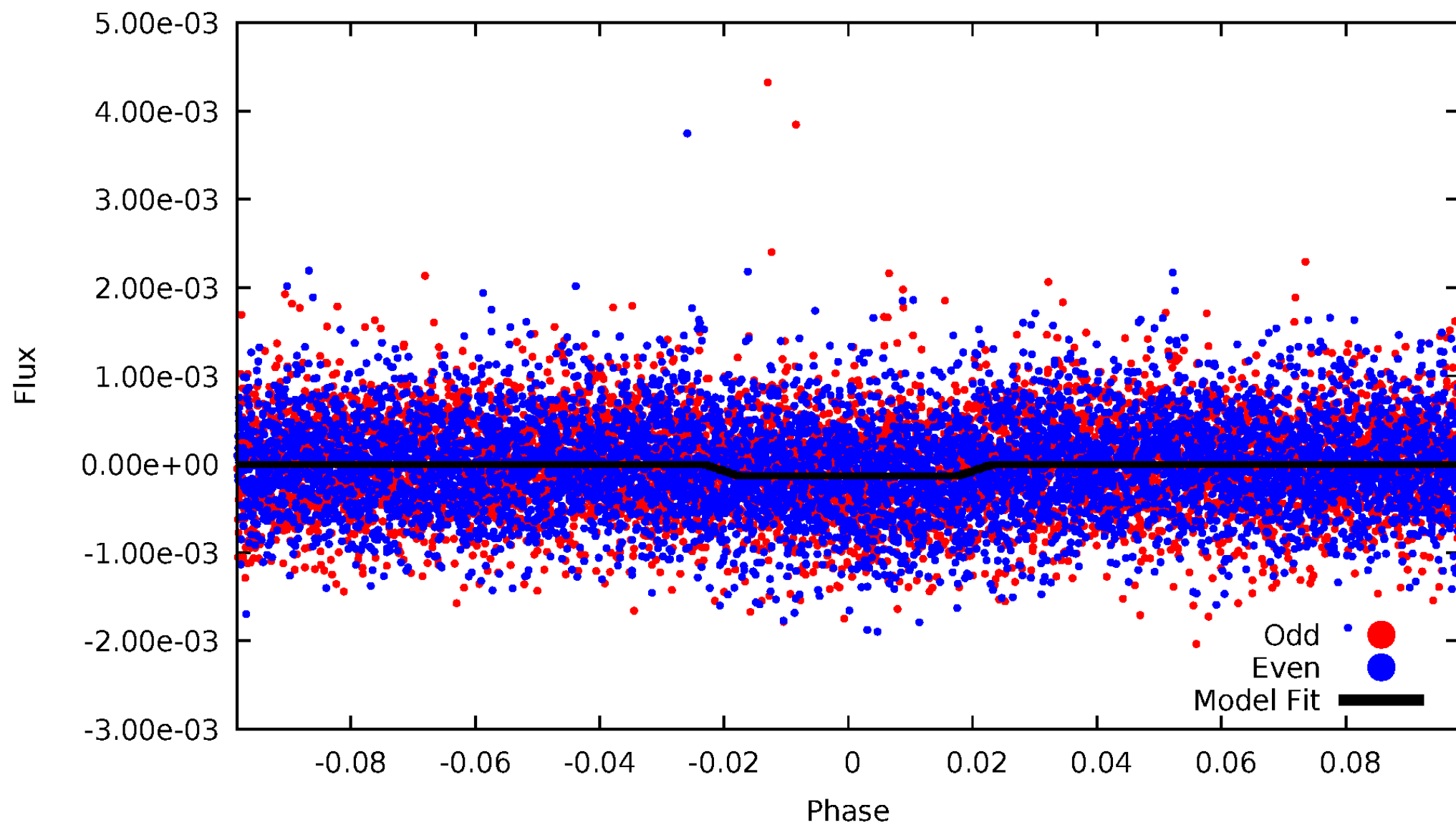
DV Odd/Even

TCE 011912911-01



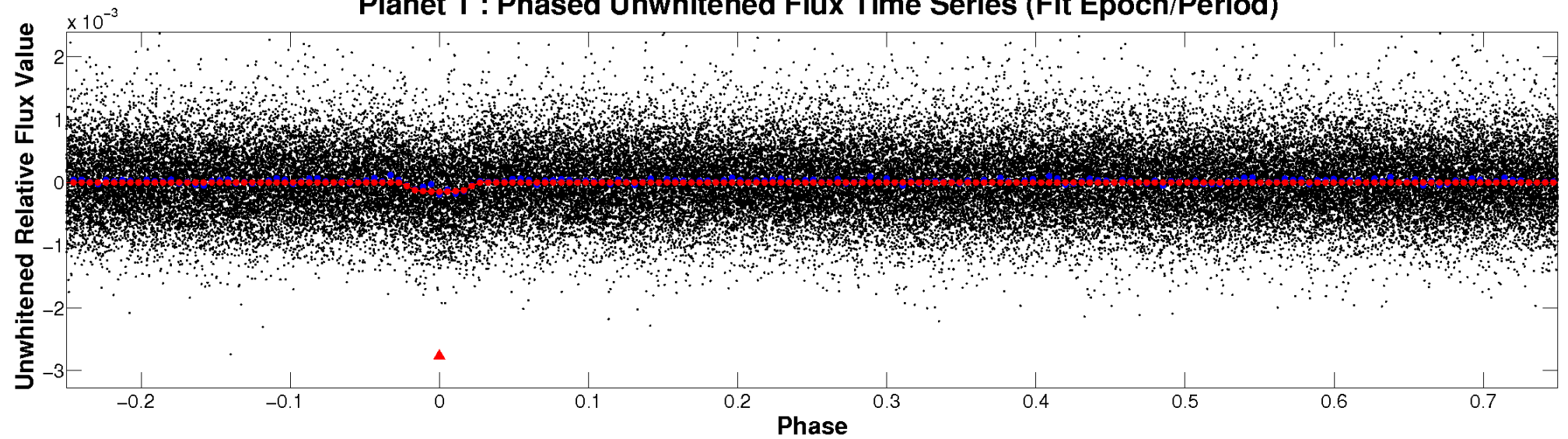
ALT Odd/Even

TCE 011912911-01

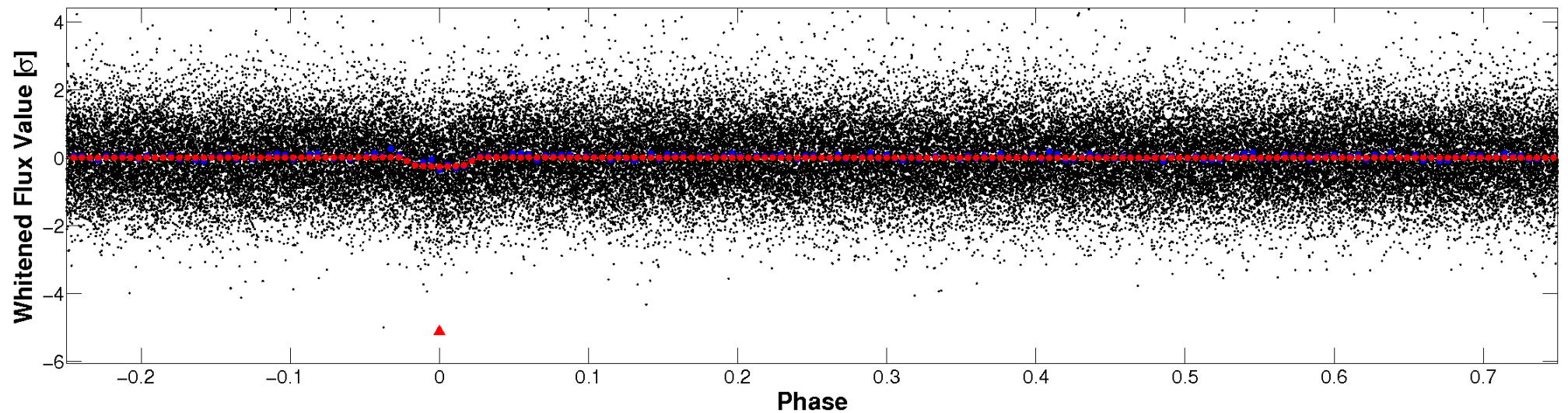


Non-Whitened Vs. Whitened Light Curve

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

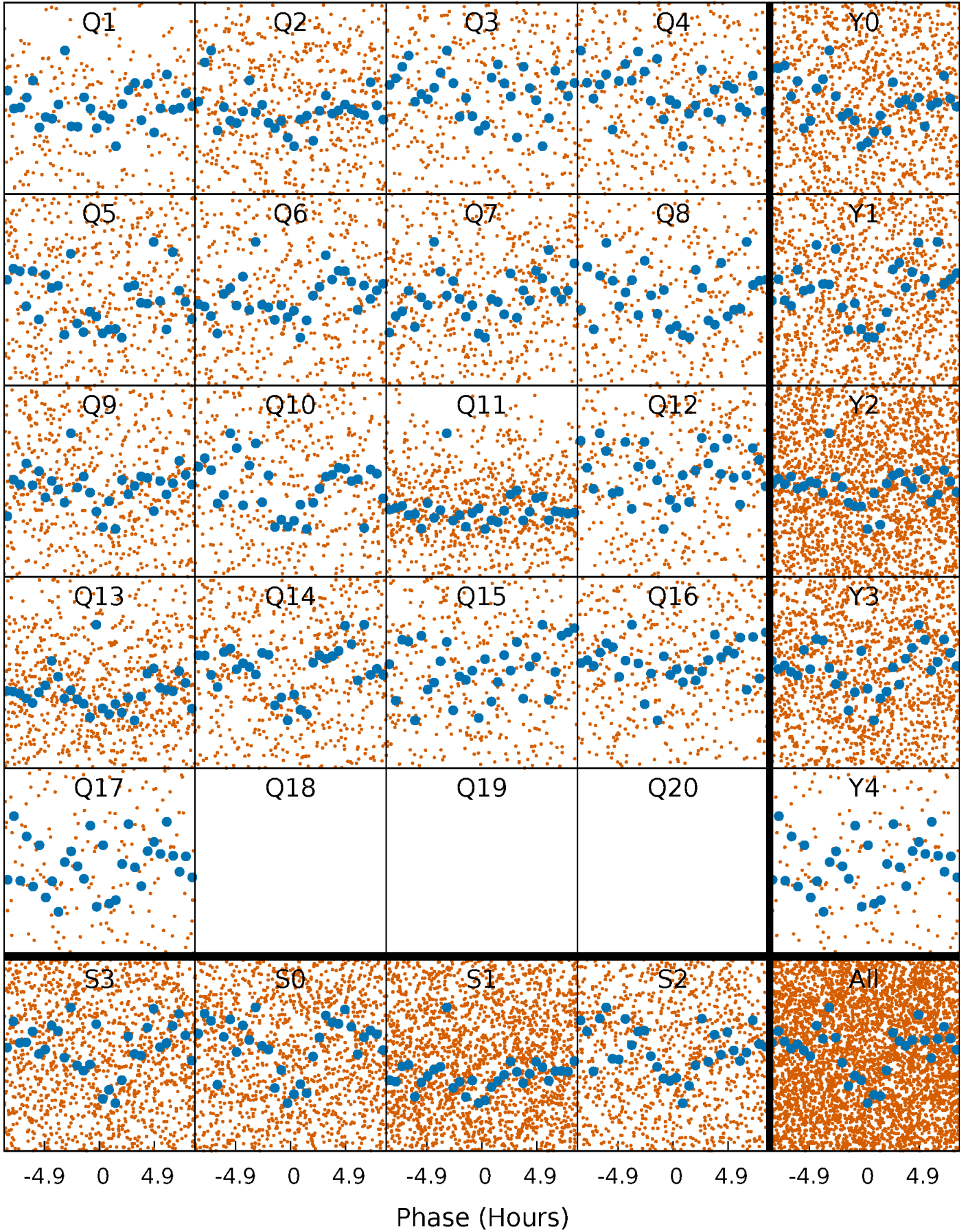


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



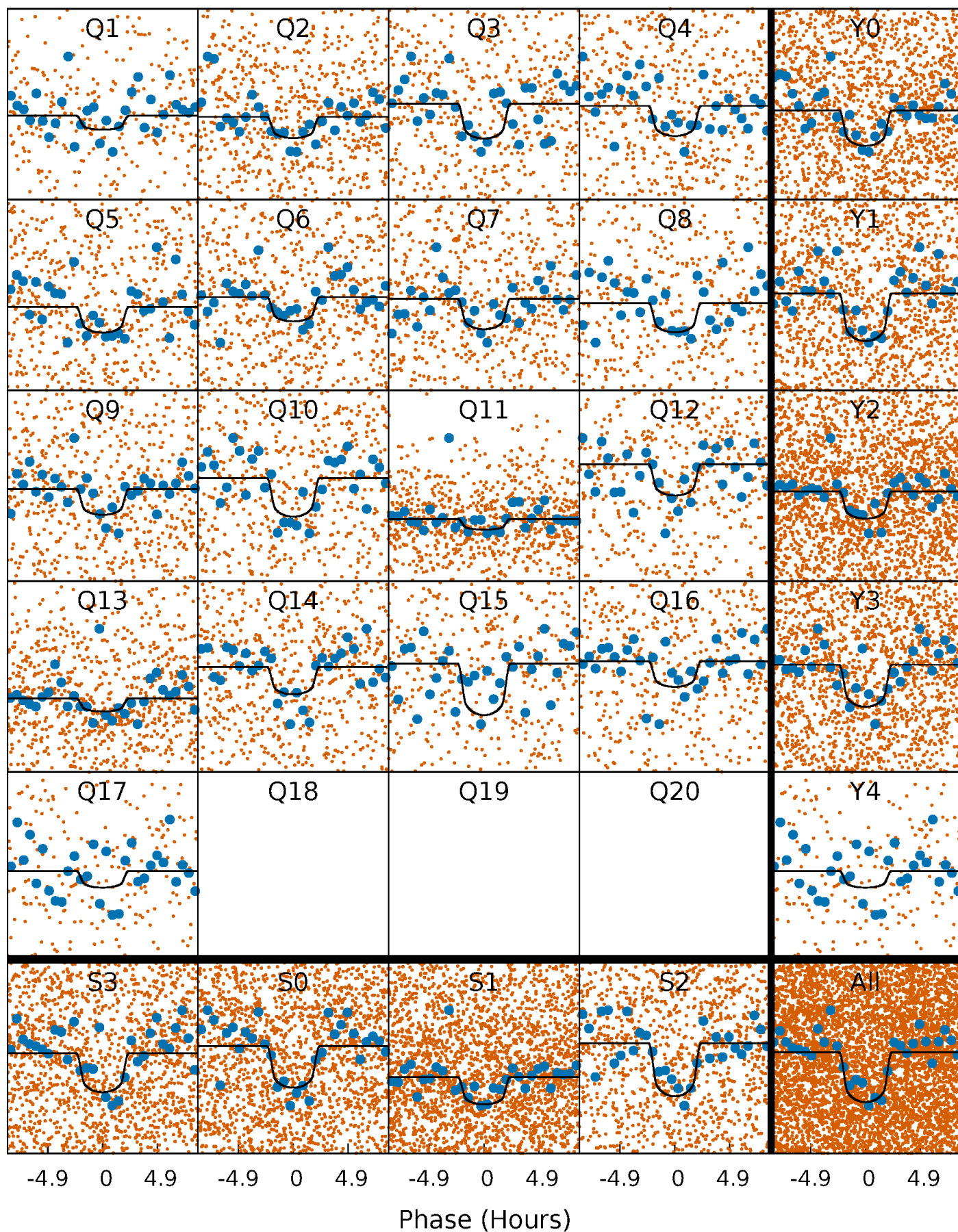
PDC Quarter-Phased Transit Curves

TCE 011912911-01 P= 3.747853 Days $T_0=134.176889$ (BKJD)



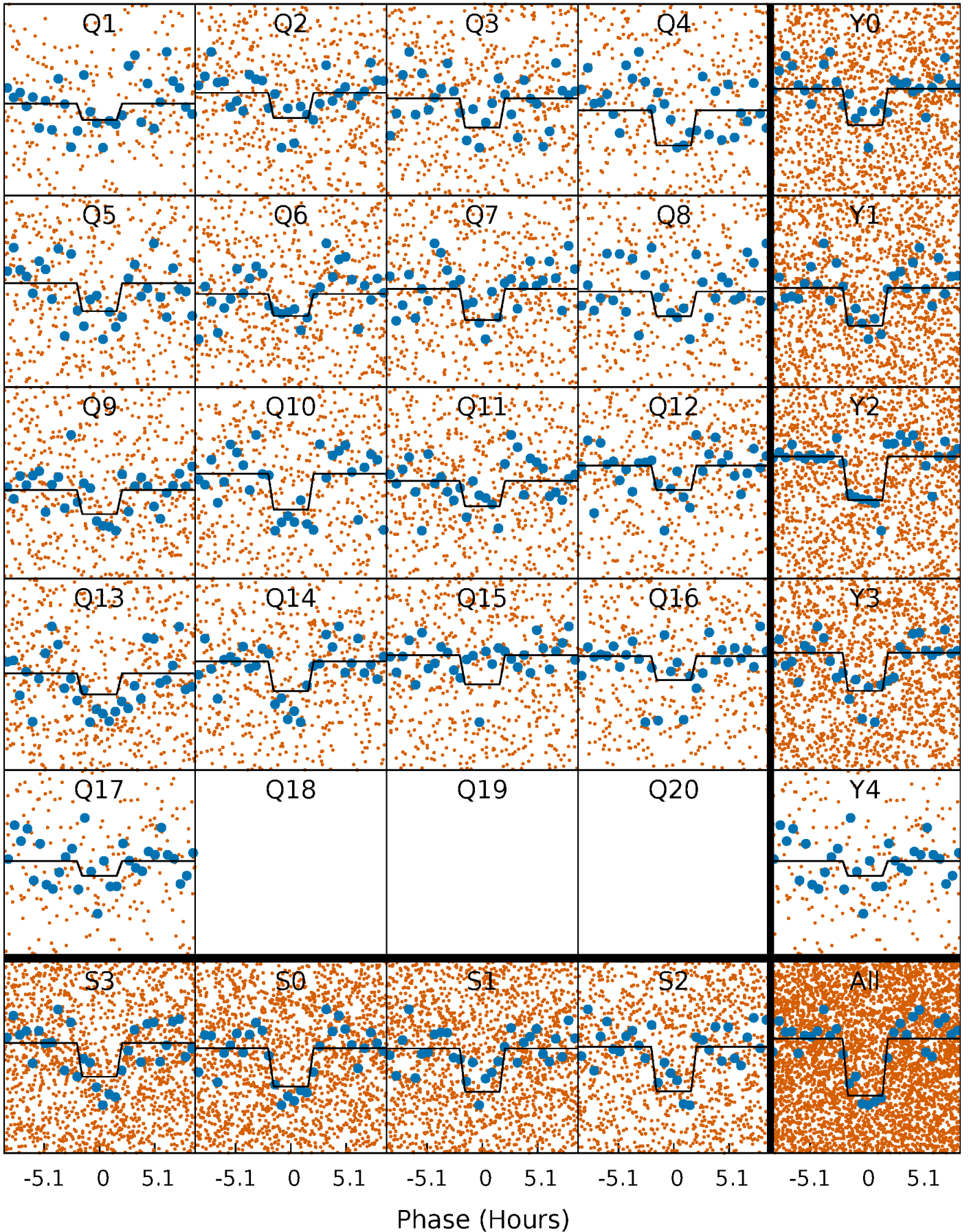
DV Quarter-Phased Transit Curves

TCE 011912911-01 P= 3.747853 Days $T_0=134.176889$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

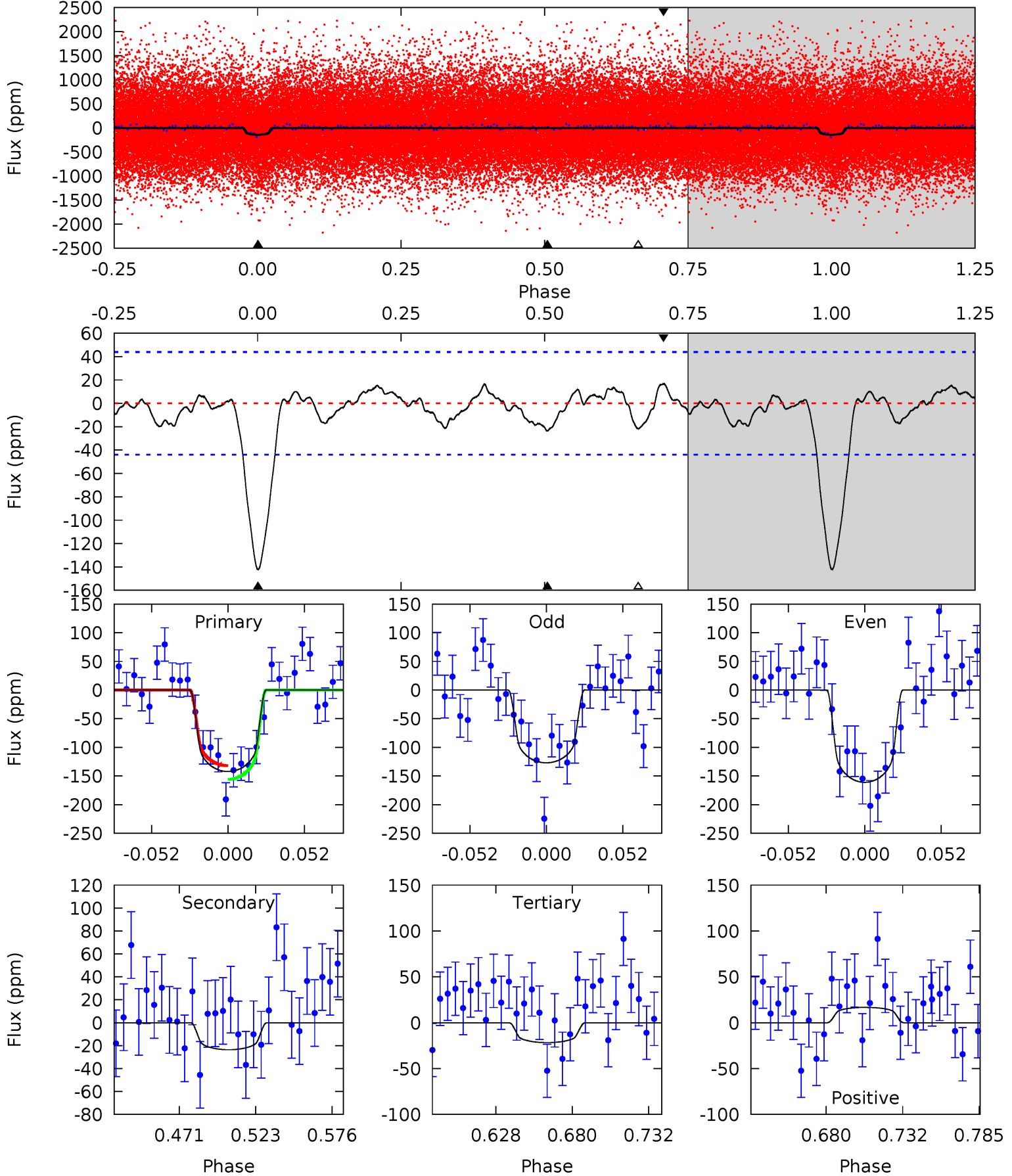
TCE 011912911-01 P= 3.747884 Days $T_0=134.171412$ (BKJD)



DV Model-Shift Uniqueness Test

011912911-01, P = 3.747853 Days, E = 130.429036 Days

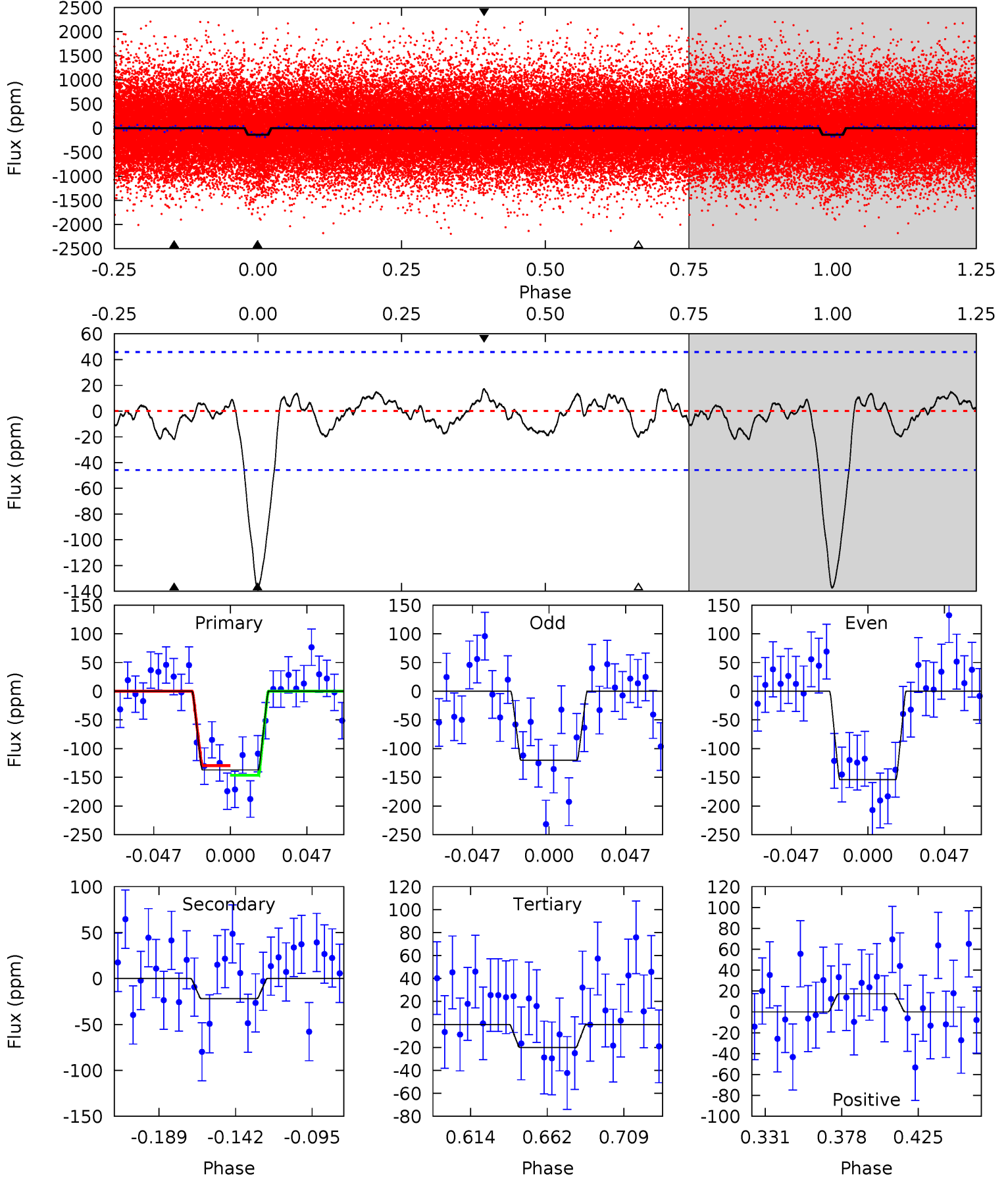
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	2.53	2.33	1.79	4.70	1.94	0.99	12.9	13.4	0.20	0.74	1.83	0.89	0.11	1.29



Alt Model-Shift Uniqueness Test

011912911-01, P = 3.747884 Days, E = 130.423528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	2.26	2.06	1.79	4.72	1.98	0.92	12.1	12.4	0.19	0.46	1.73	0.96	0.11	0.88



Stellar Parameters For KIC 011912911

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5340^{+175}_{-159}	$4.593^{+0.030}_{-0.120}$	$-0.120^{+0.300}_{-0.300}$	$0.777^{+0.143}_{-0.061}$	$0.871^{+0.070}_{-0.104}$	$2.616^{+0.428}_{-0.959}$
	+3%/-3%	+1%/-3%	+250%/-250%	+18%/-8%	+8%/-12%	+16%/-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 011912911-01 / KOI 4607.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 9	$1.20^{+0.49}_{-0.55}$	1397^{+70}_{-58}	3562^{+919}_{-467}	17^{+43}_{-10}
Alt.	-22 ± 10	$0.99^{+0.55}_{-0.46}$	1390^{+66}_{-58}	3754^{+1052}_{-581}	24^{+64}_{-16}

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 $A_{obs} \gg 1.0$

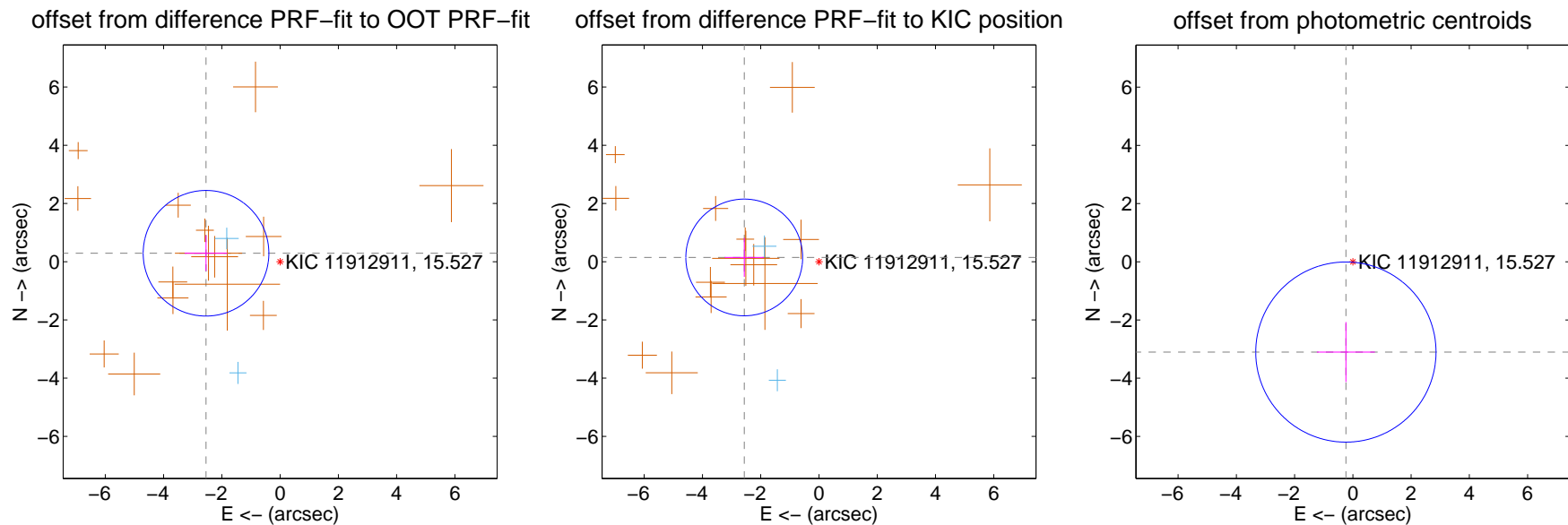
DV Centroid Data

Supplemental centroid analysis for 011912911-01. Kepler magnitude: 15.53. Transit SNR 11.81

There are 2 quarters with good PRF difference image offsets

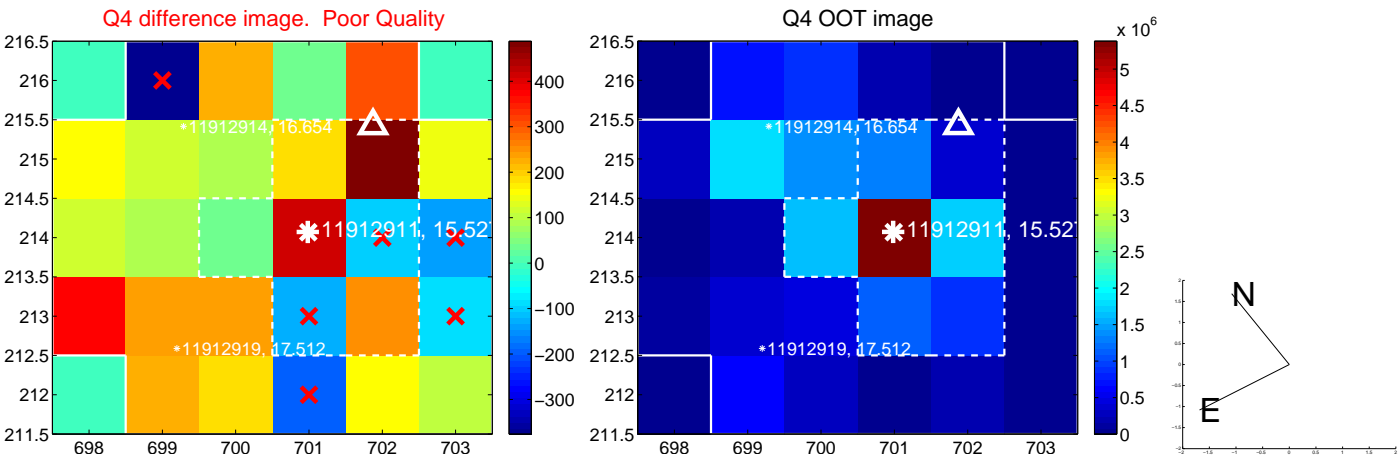
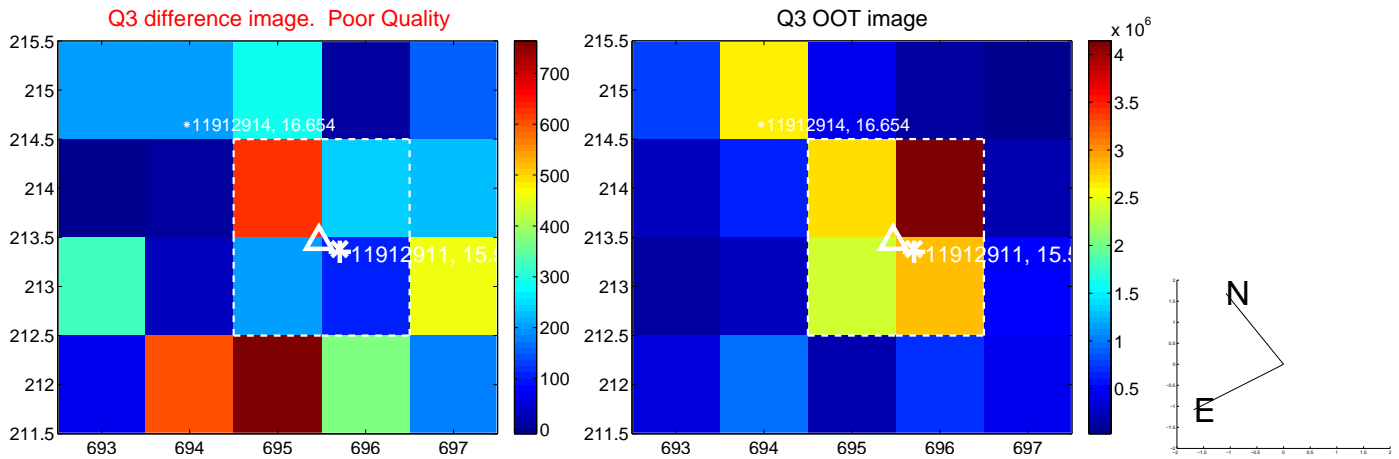
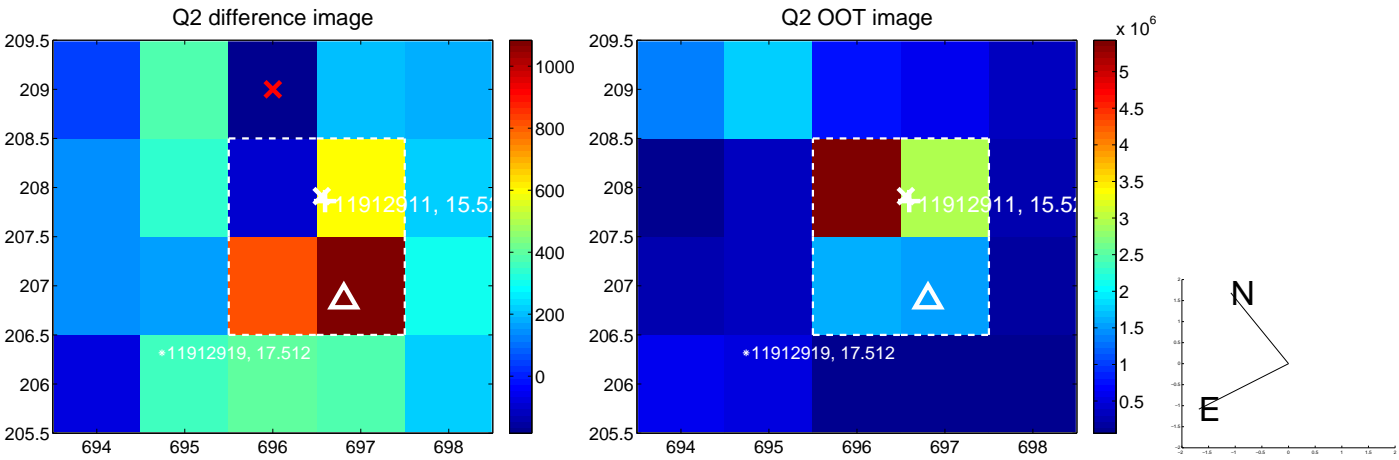
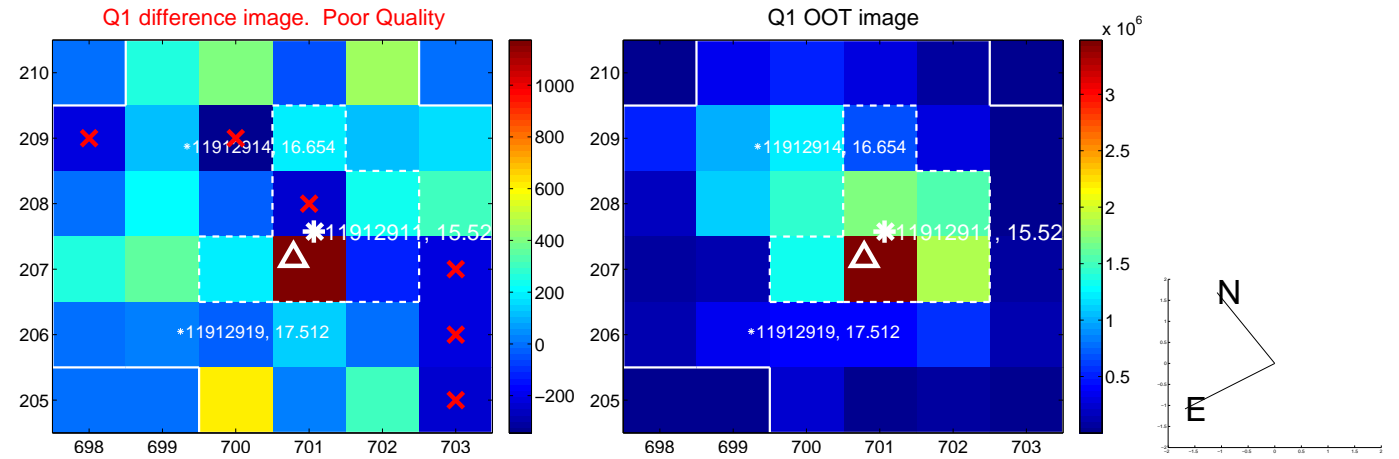
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.559 ± 0.719	3.56	2.543 ± 0.732	0.290 ± 0.614
PRF-fit source offset from KIC position	2.570 ± 0.668	3.85	2.565 ± 0.674	0.146 ± 0.668
photometric centroid source offset	3.11 ± 1.03	3.02	0.24 ± 1.00	-3.10 ± 1.03

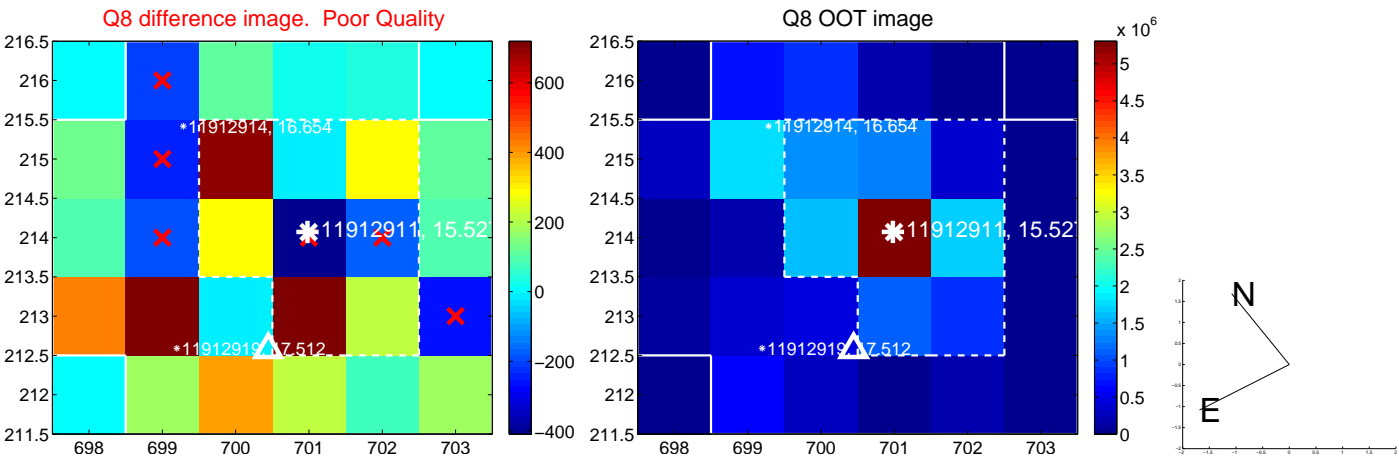
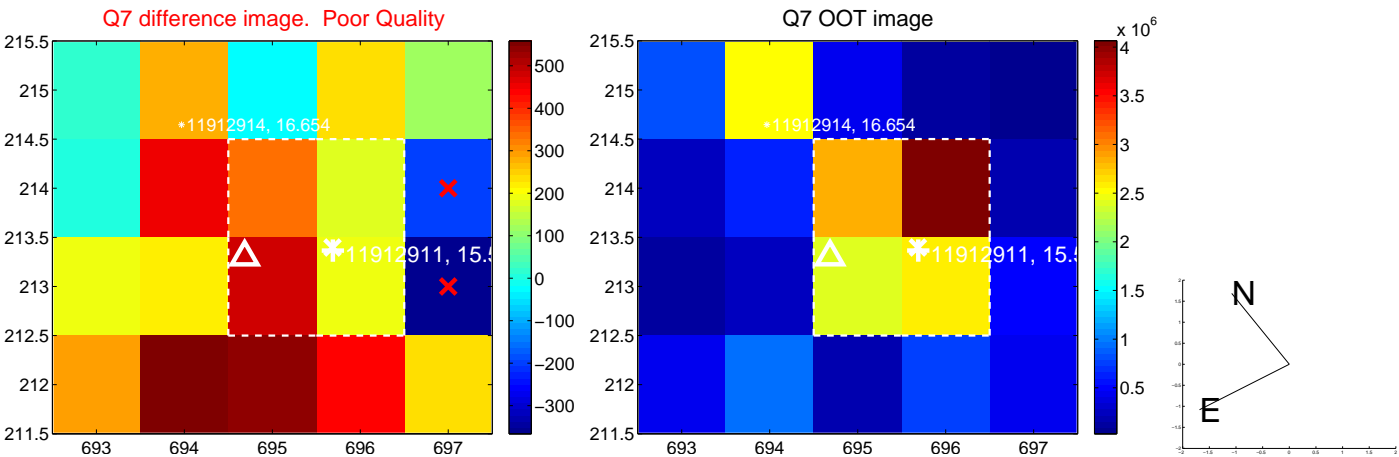
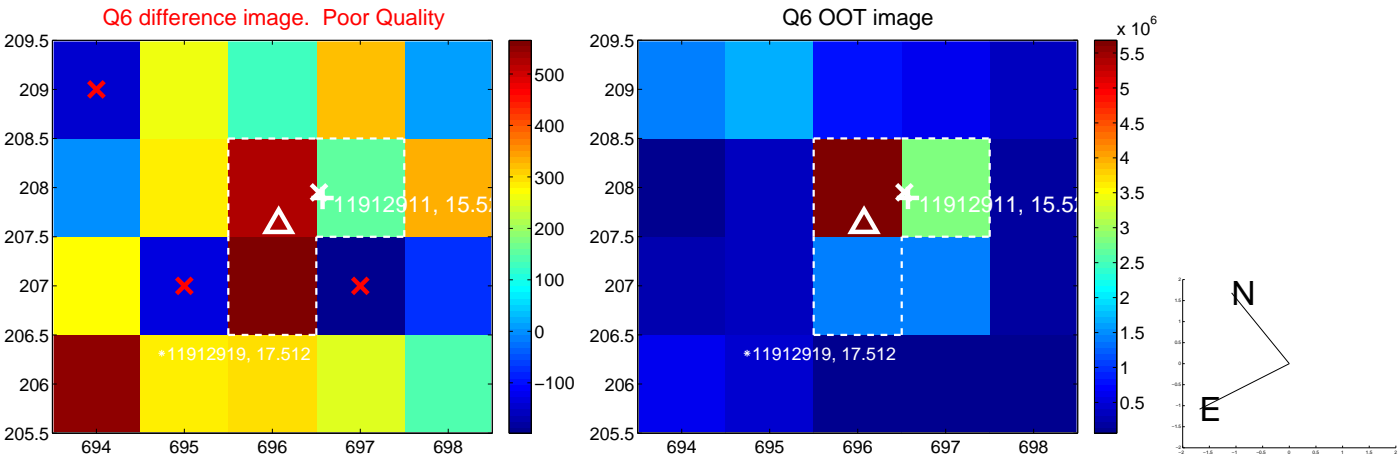
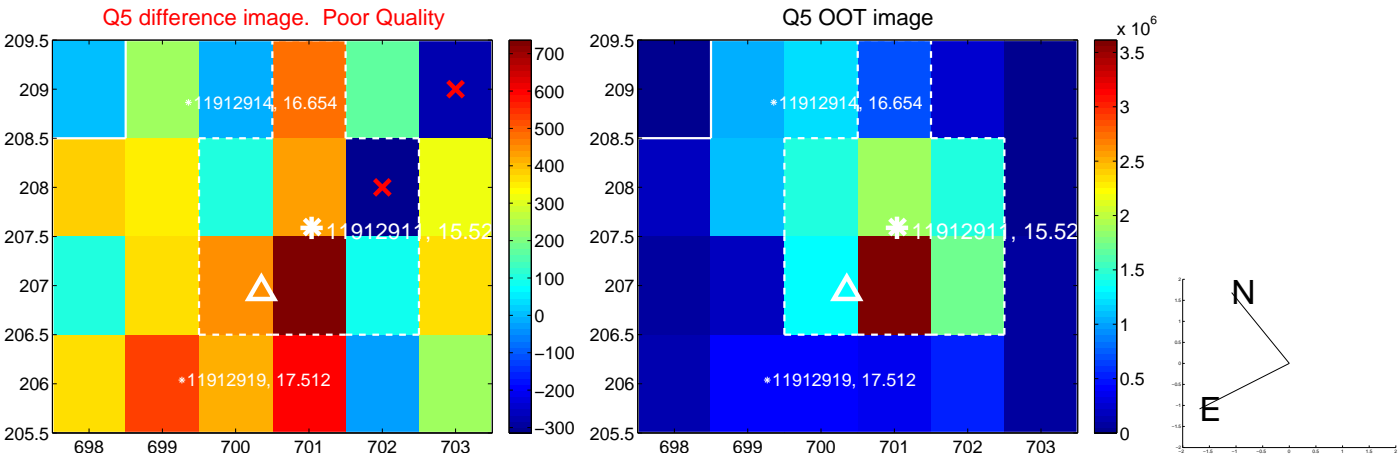


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

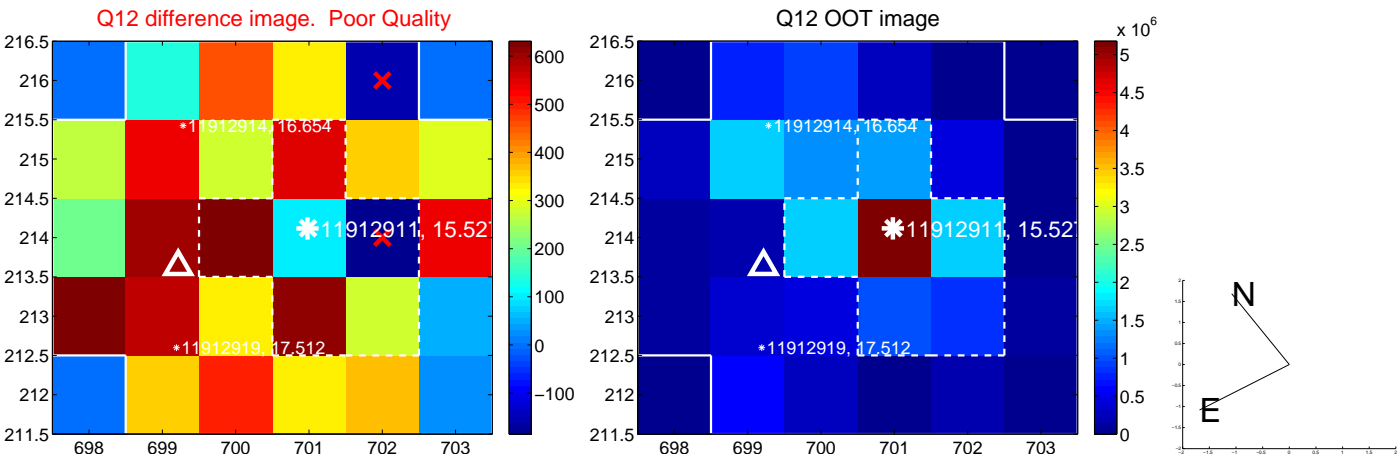
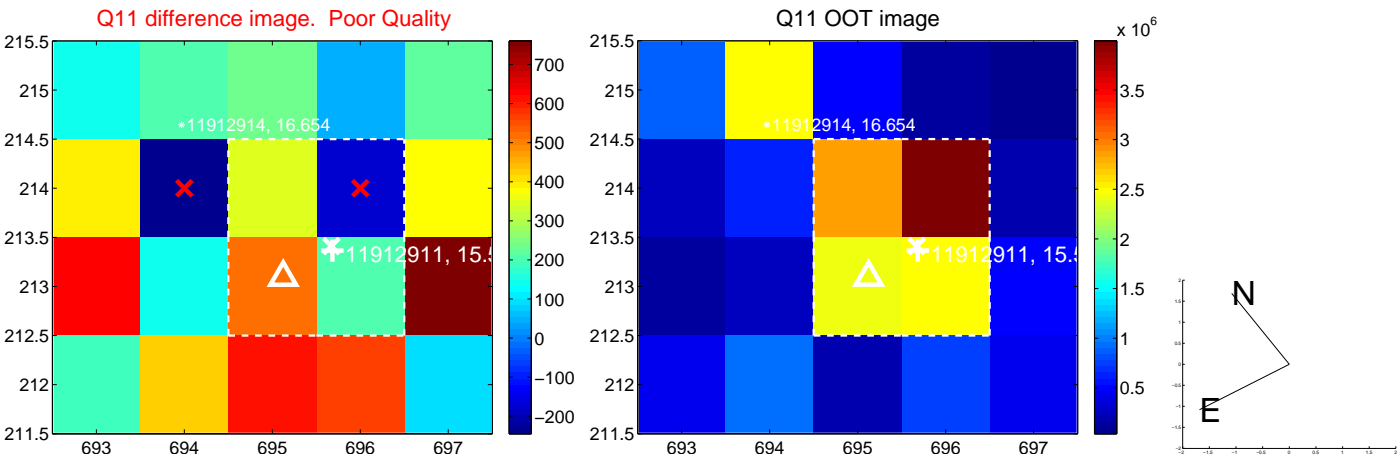
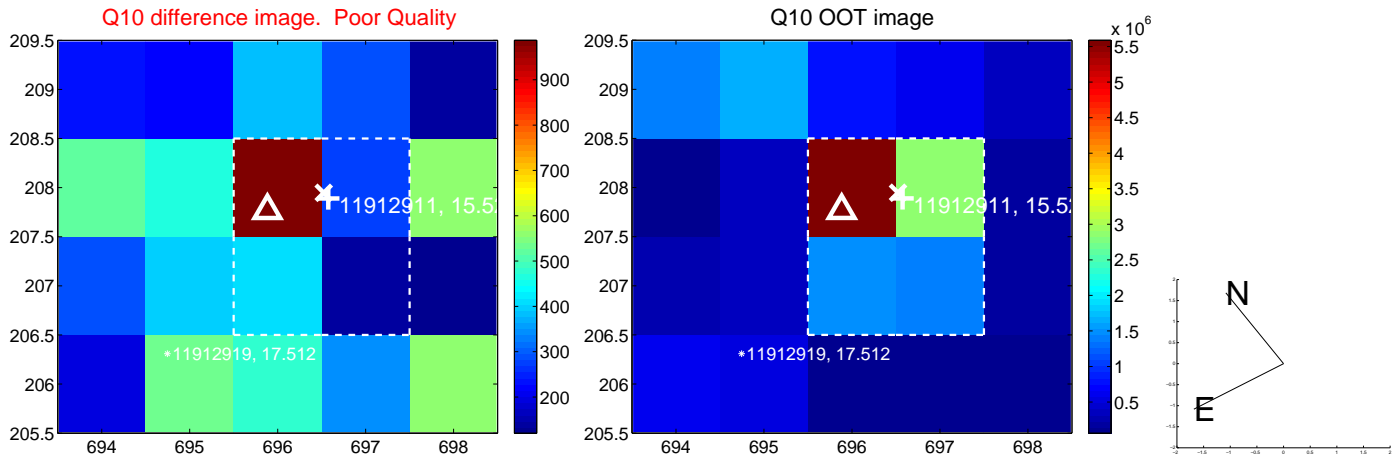
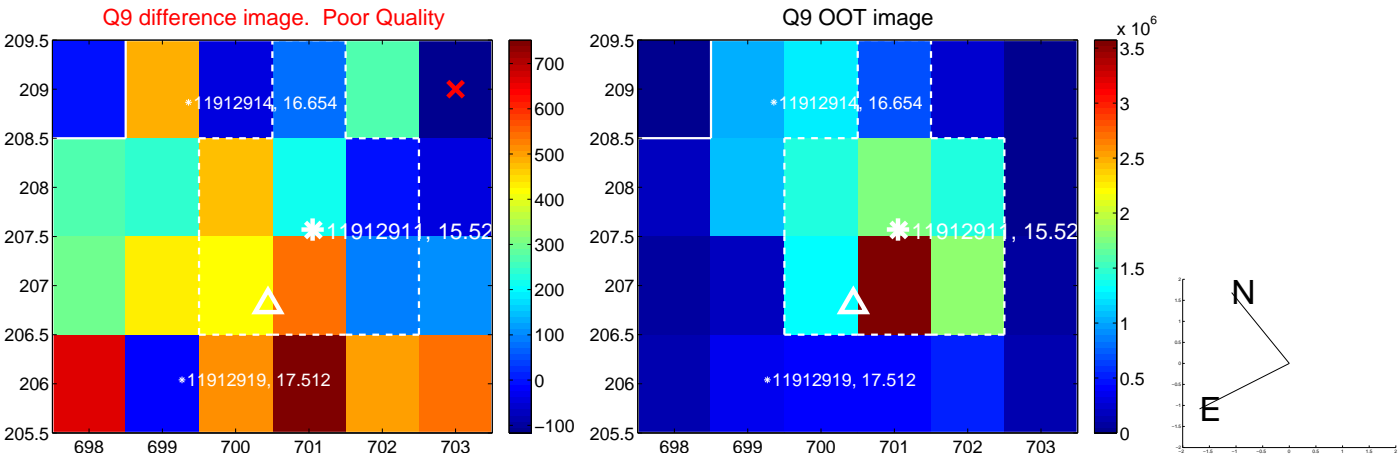
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



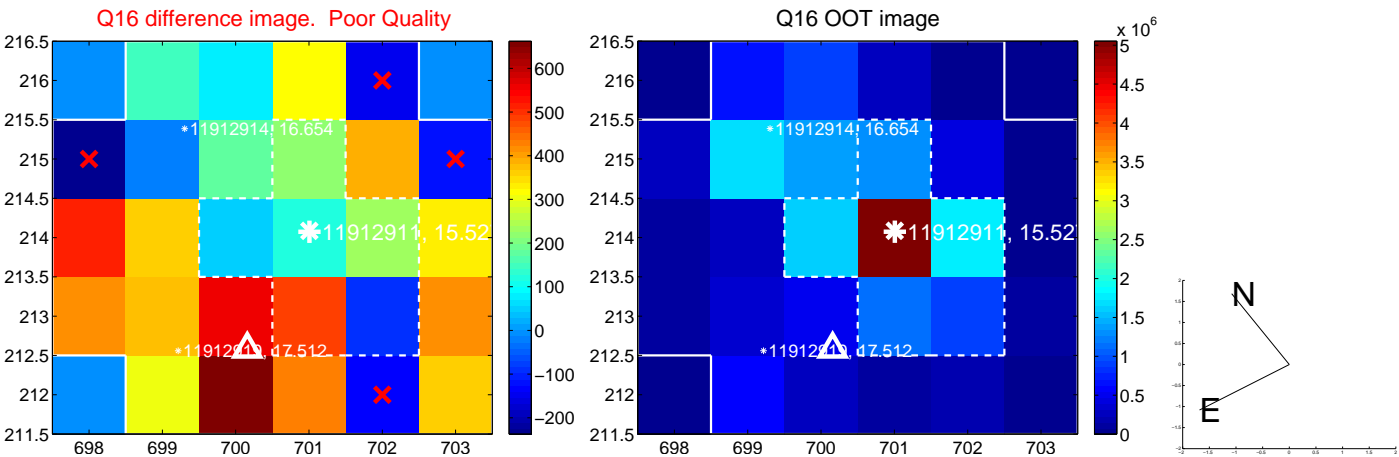
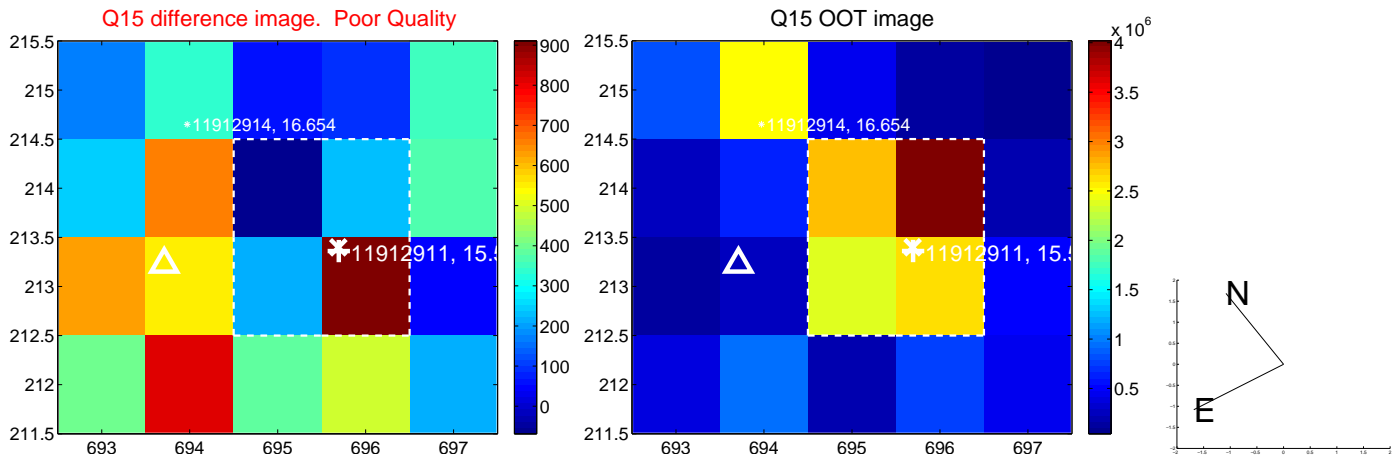
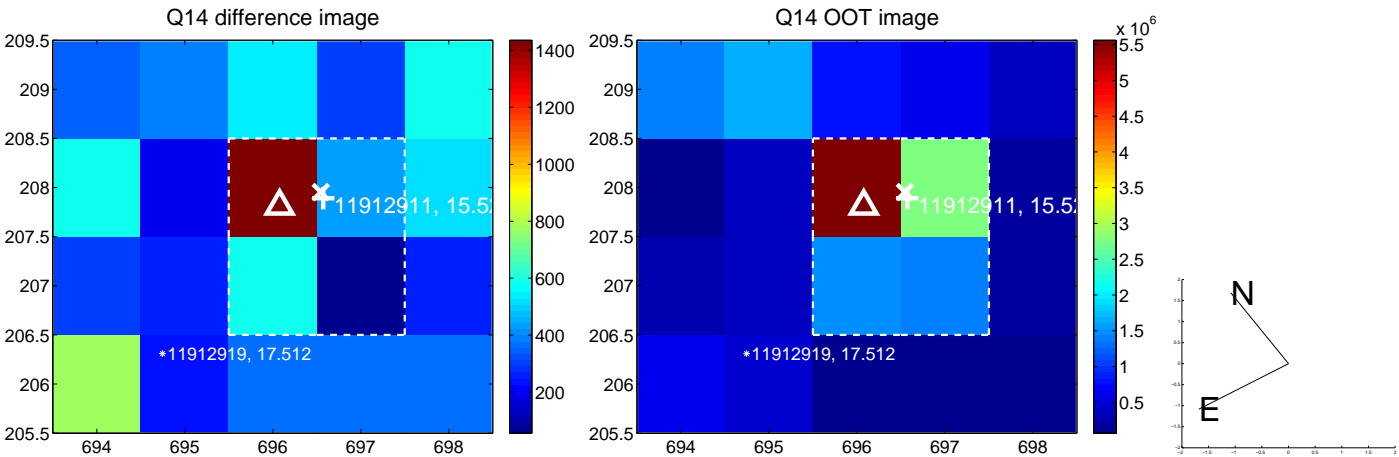
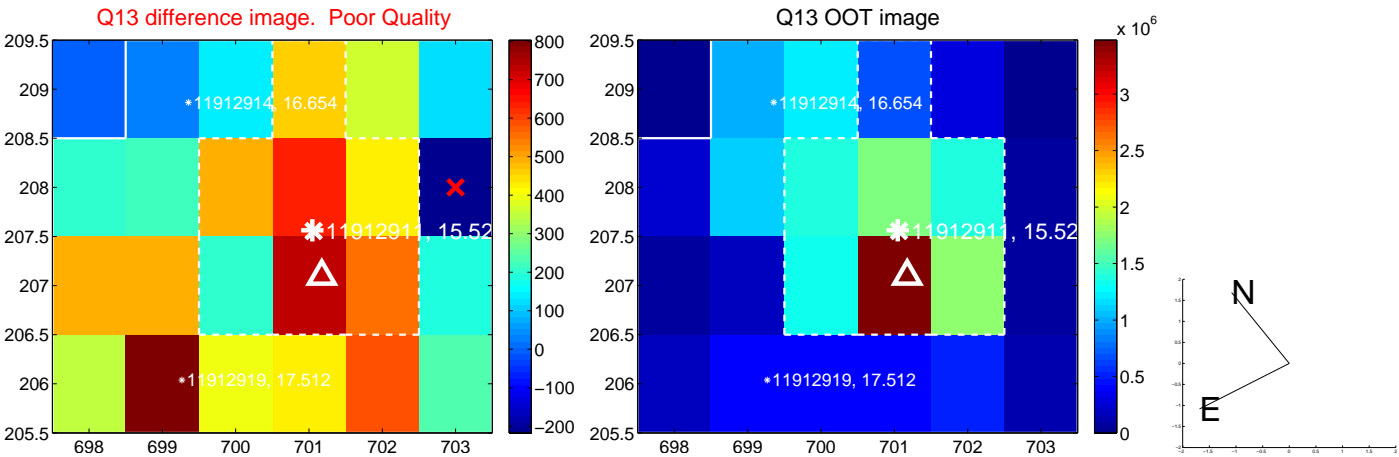
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



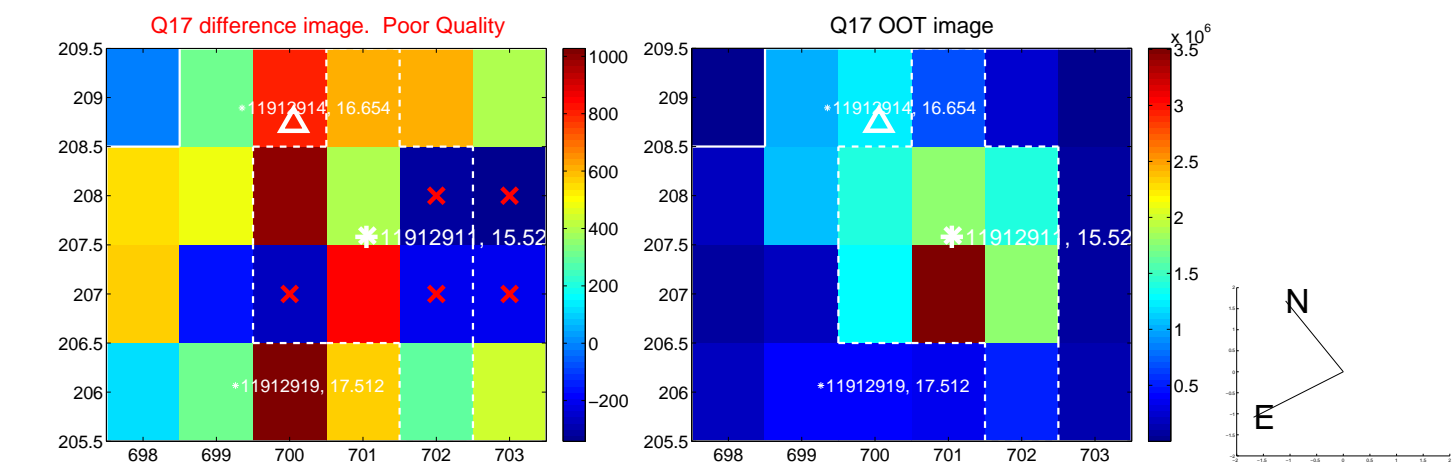
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



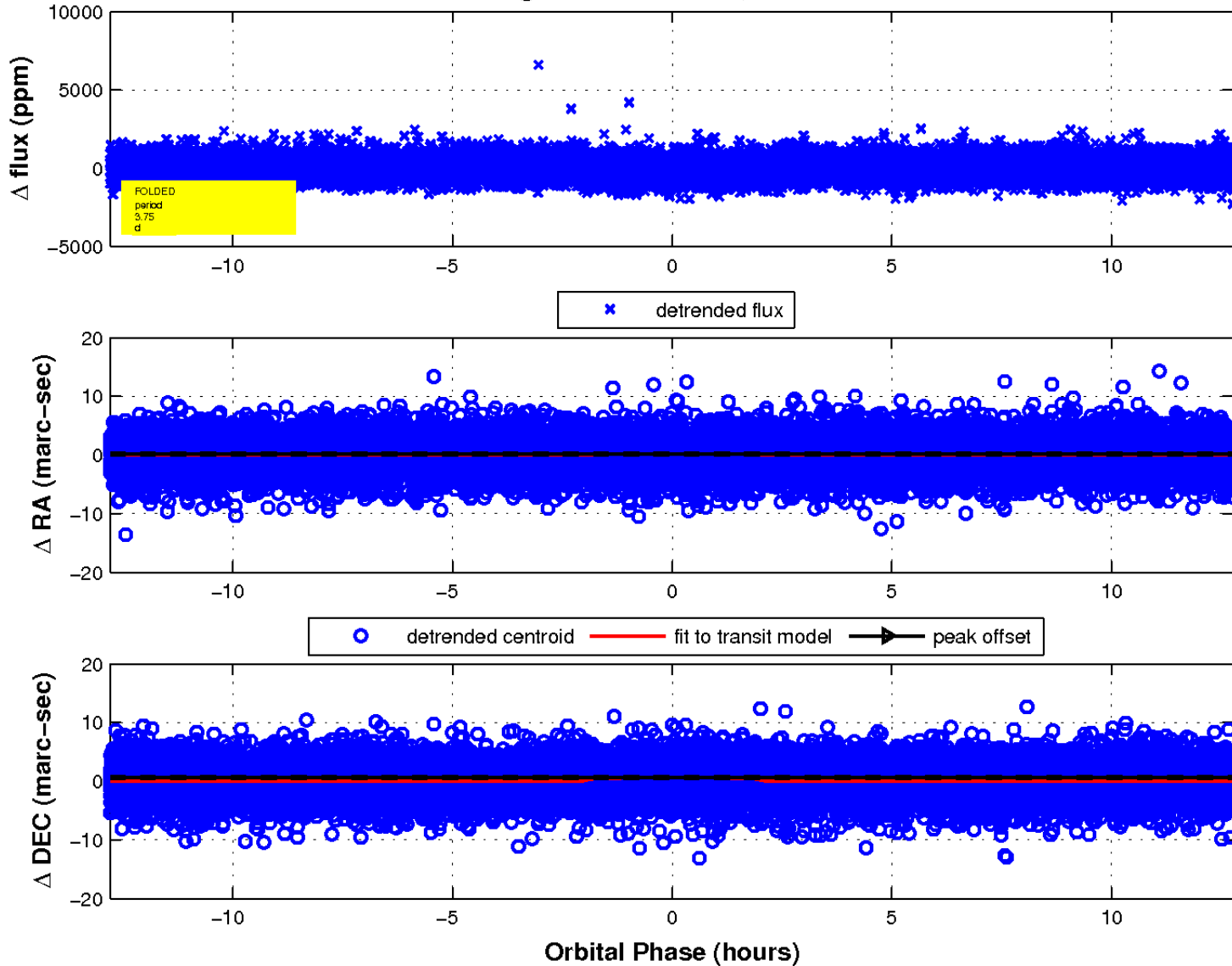
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

