

KIC 011912916

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})
011912916-01	OBS	4475.01	3.747861	134.176692	253.5	4.630	14.4	15.7	0.83	5514	1.91	267.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011912916-01	OBS	FP	0.00	0	0	1	1	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 011912916-01

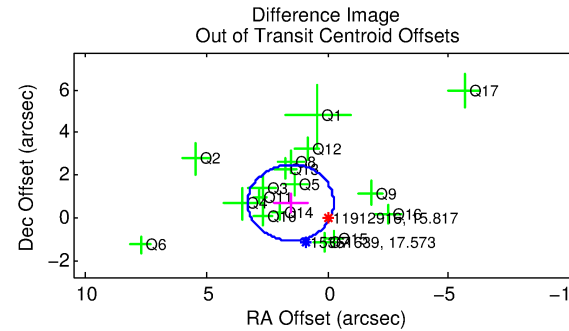
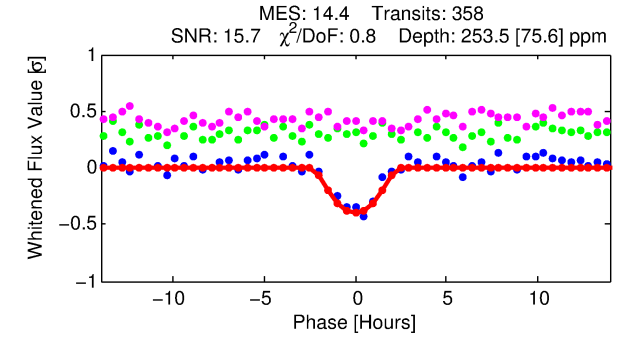
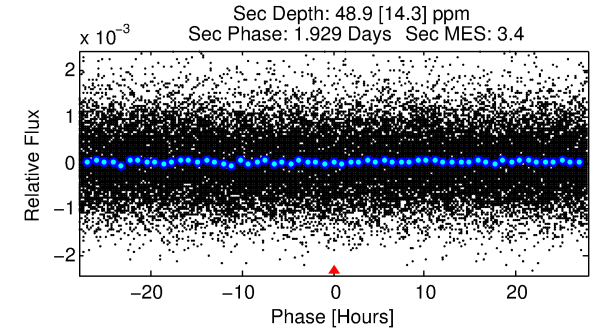
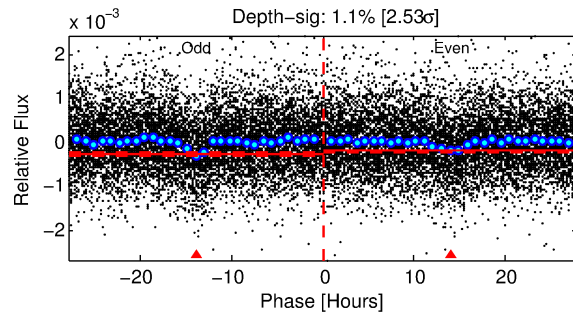
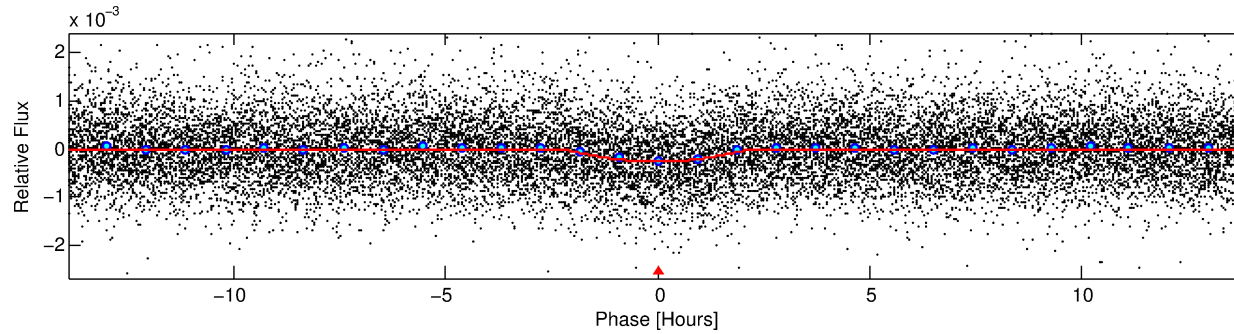
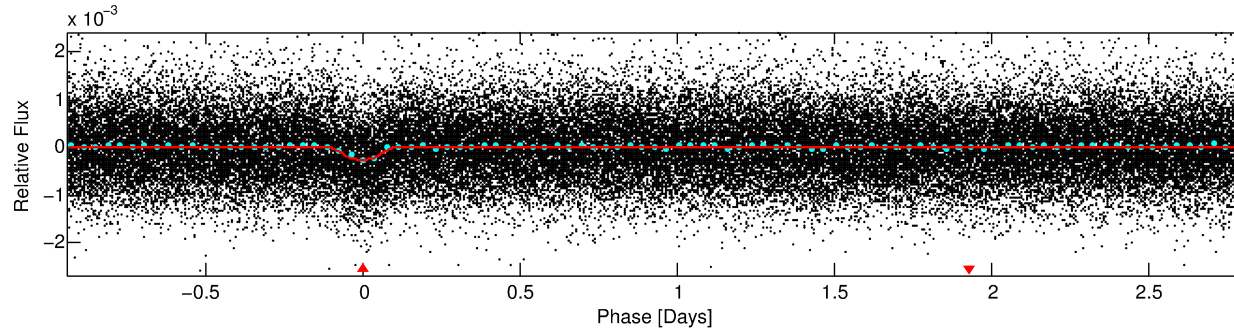
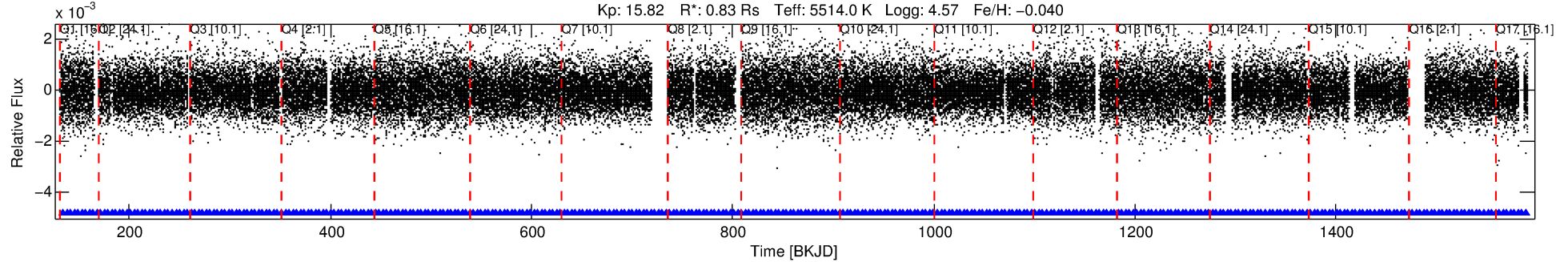
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
011912916-01	11912916	011913071-pri	11913071	1:1	236.0	44	39	9.53	15.82	747.04	Direct-PRF	0	0.39	0.47

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: 11912916 Candidate: 1 of 1 Period: 3.748 d
KOI: K04475.01 Corr: 0.869

Kp: 15.82 R*: 0.83 Rs Teff: 5514.0 K Logg: 4.57 Fe/H: -0.040



DV Fit Results:

Period = 3.74786 [0.00003] d
Epoch = 134.1767 [0.0066] BKJD
Rp/R* = 0.0212 [0.0071]
a/R* = 1.98 [0.37]
b = 0.98 [0.02]
Seff = 267.32 [73.50]
Teq = 1031 [71] K
Rp = 1.91 [0.75] Re
a = 0.0460 [0.0078] AU
Ag = 15.56 [12.06] [1.21σ]
Teffp = 3166 [589] K [3.60σ]

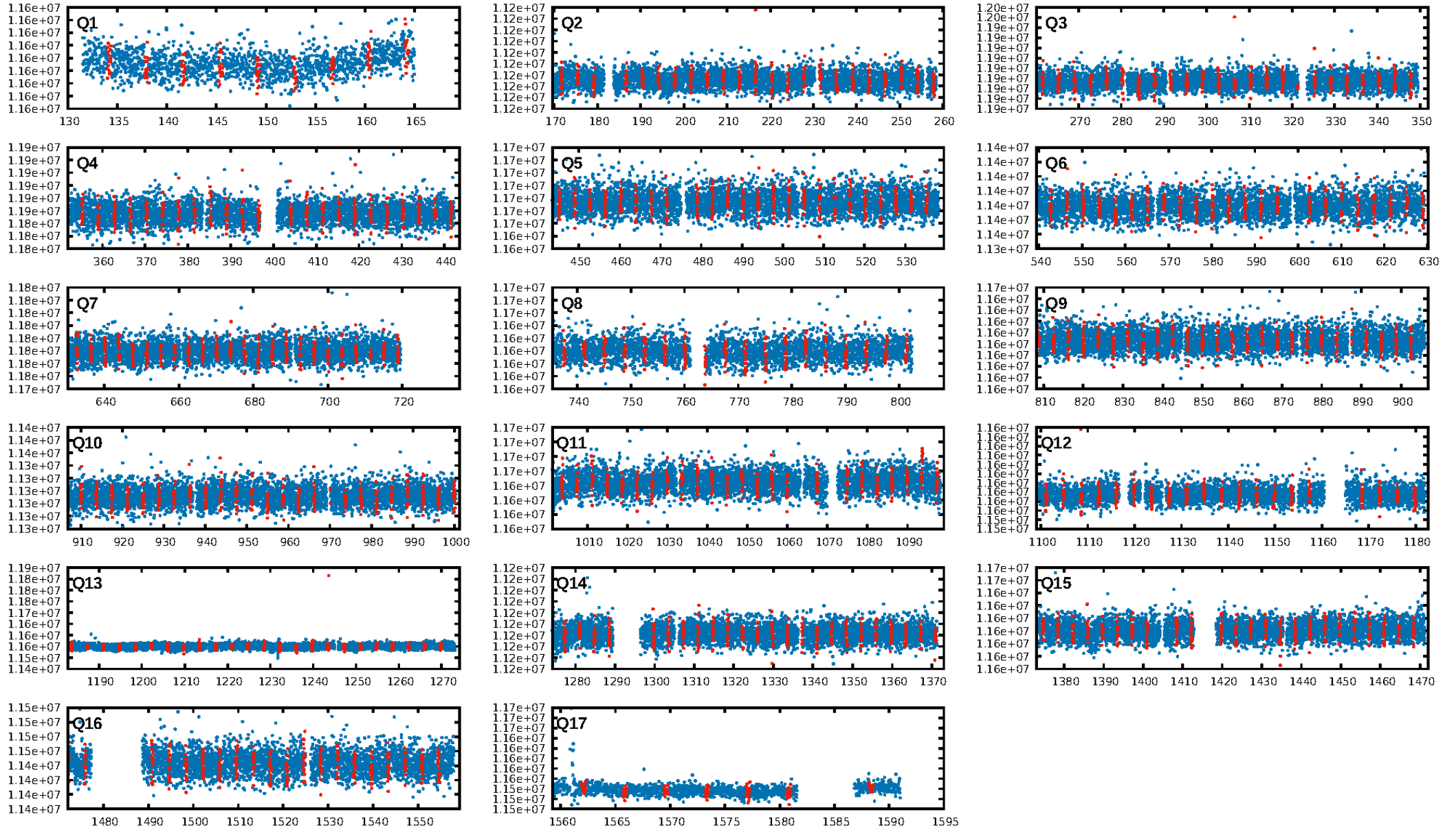
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.04e-47
RollingBand-fgt: 1.00 [342/342]
GhostDiagnostic-chr: -0.04407
Centroid-sig: 0.0%
Centroid-so: 2.194 arcsec [2.57σ]
OotOffset-rm: 1.684 arcsec [2.85σ]
KicOffset-rm: 1.716 arcsec [2.67σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

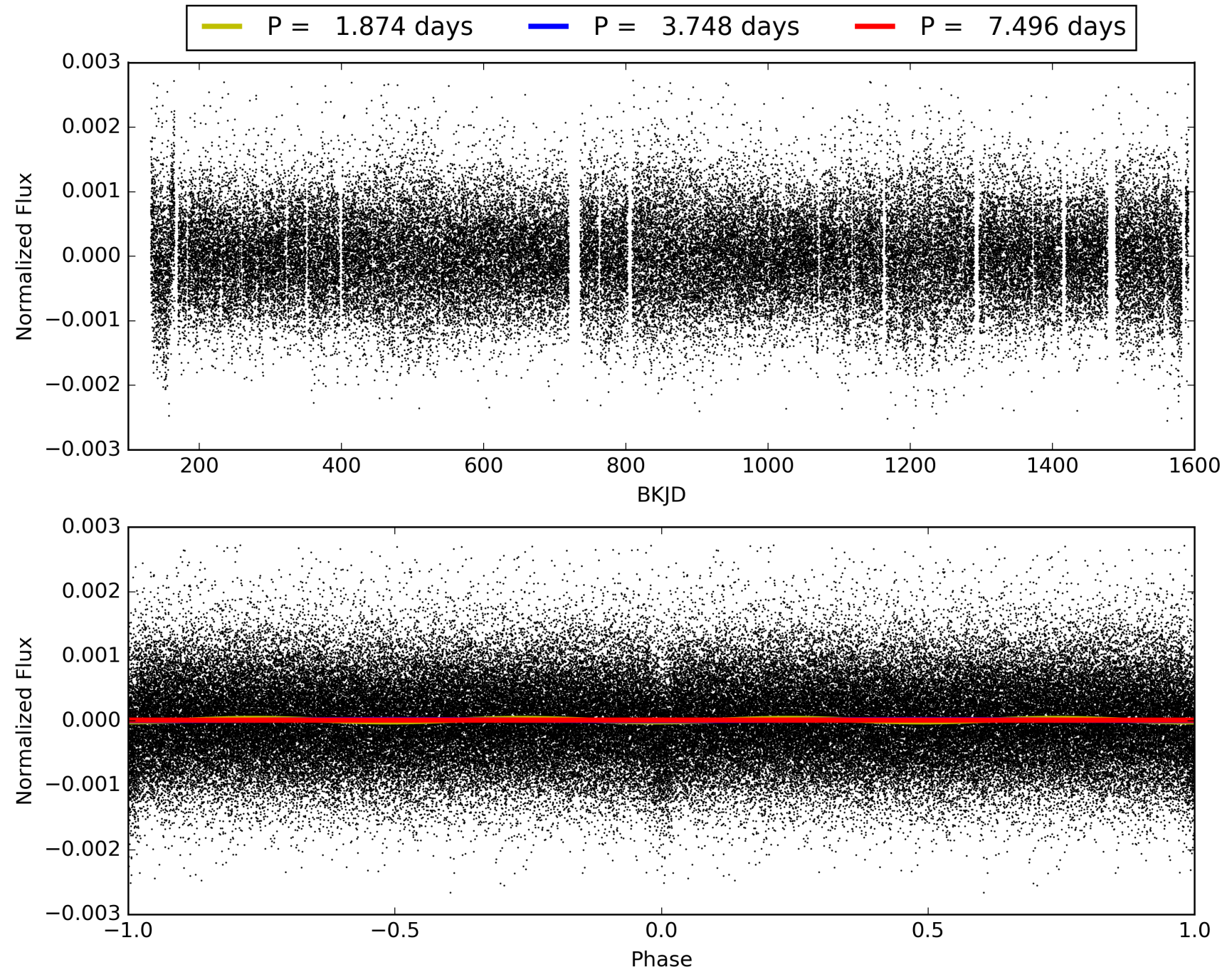
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:41:42 Z

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

TCE 011912916-01, PDC Light Curves

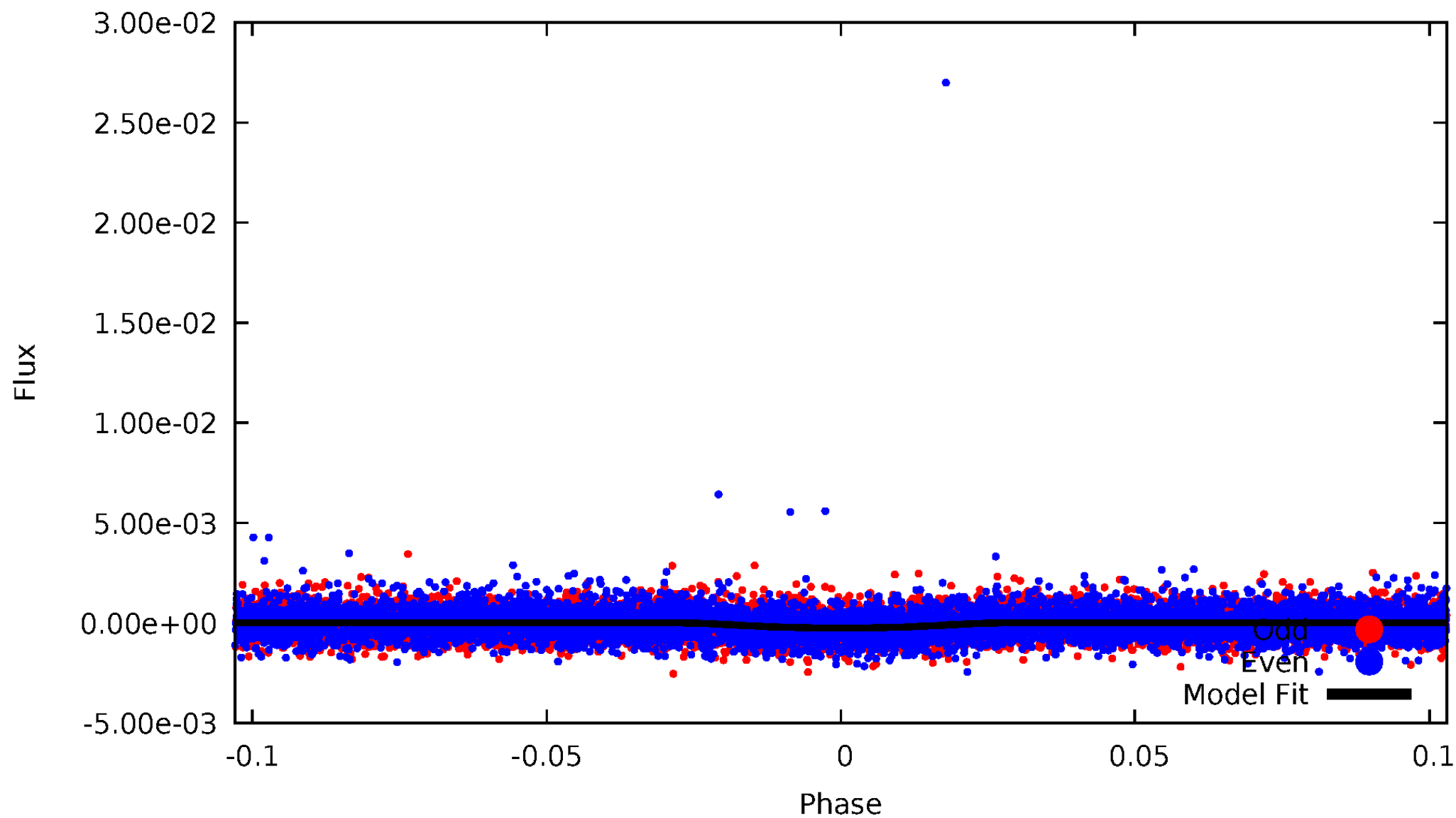


TCE 011912916-01



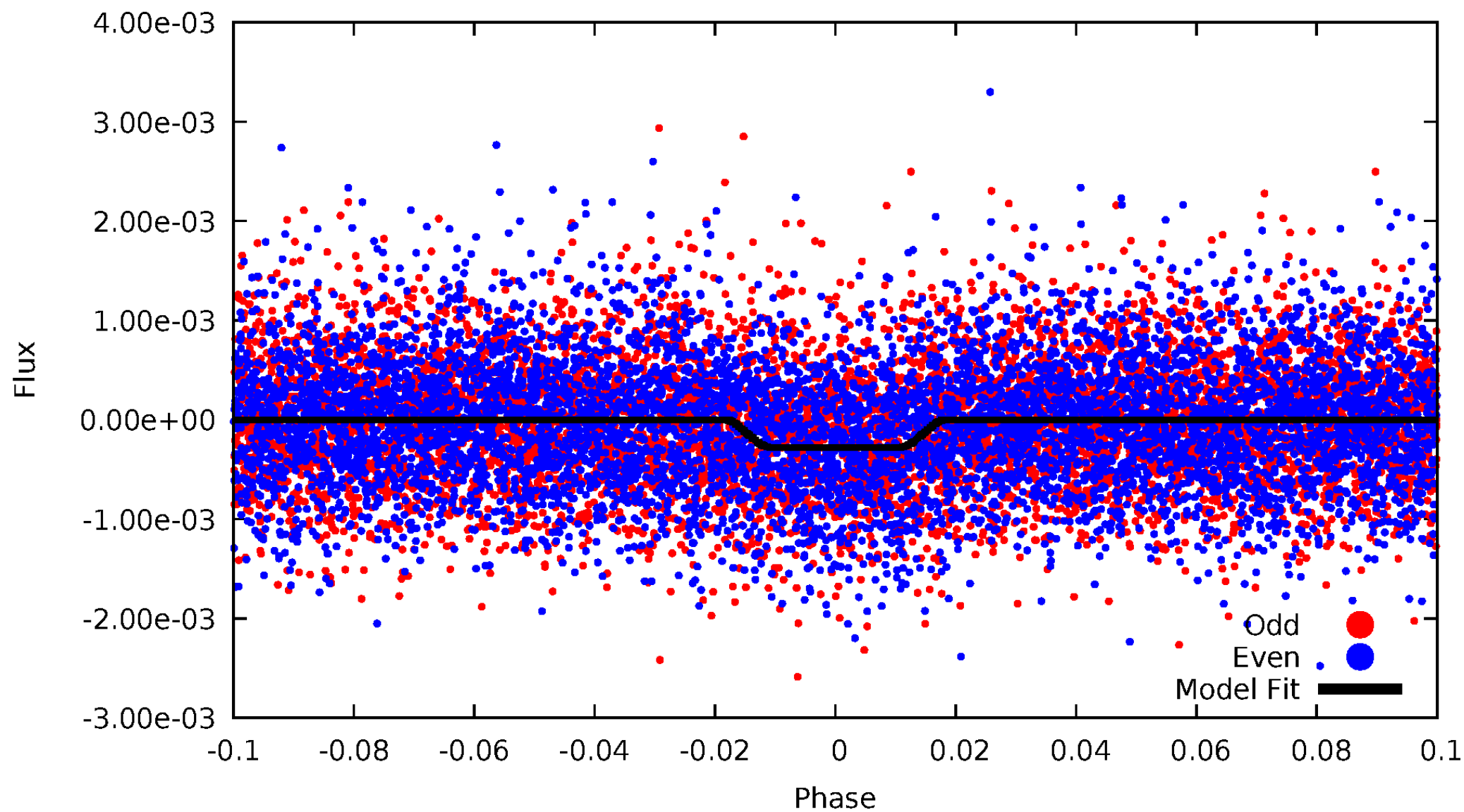
DV Odd/Even

TCE 011912916-01



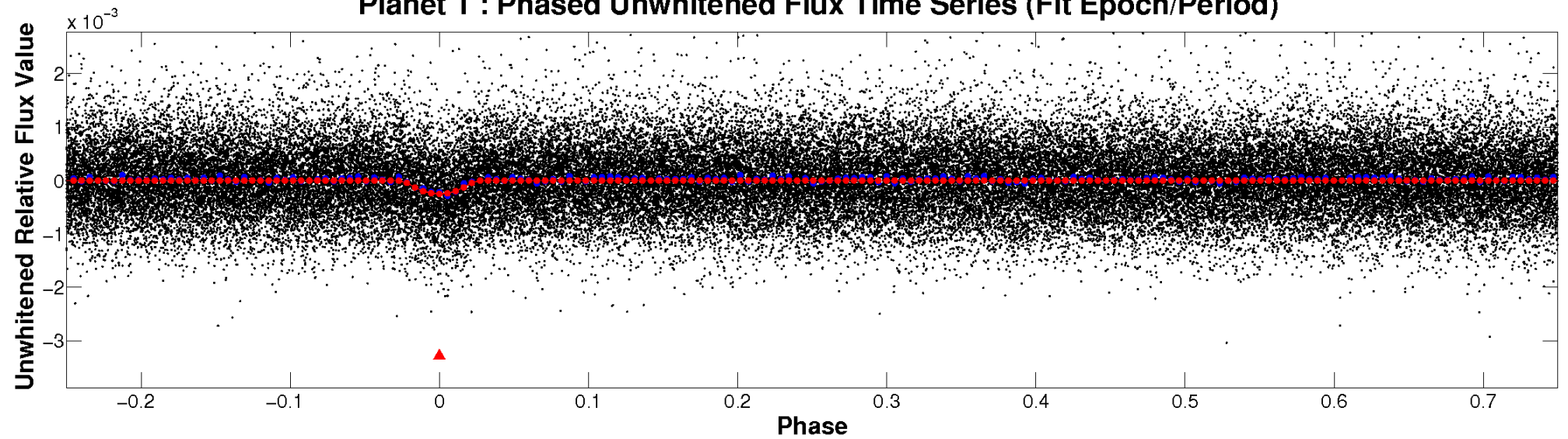
ALT Odd/Even

TCE 011912916-01

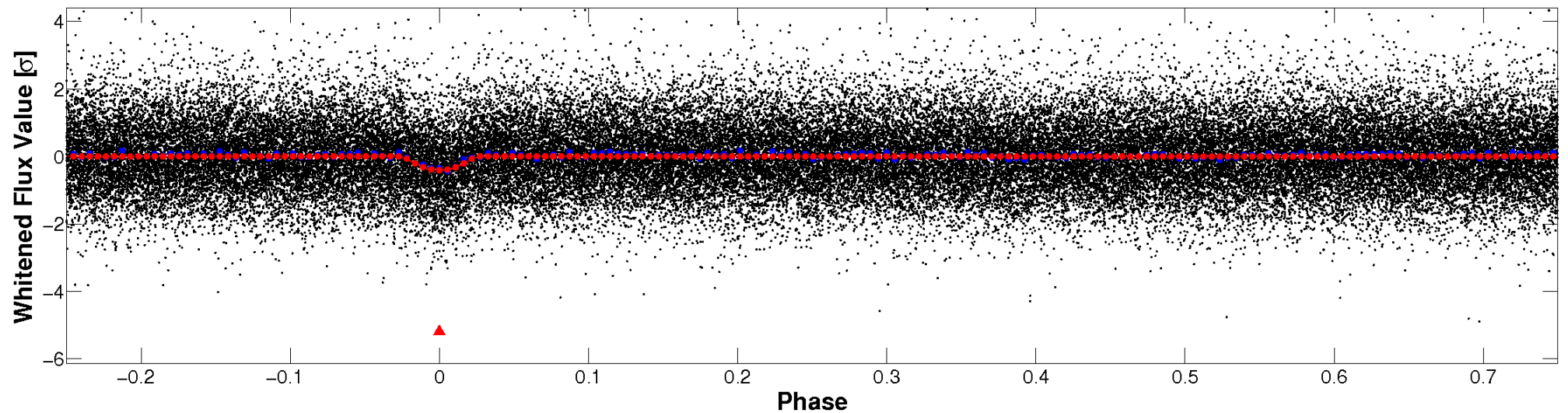


Non-Whitened Vs. Whitened Light Curve

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

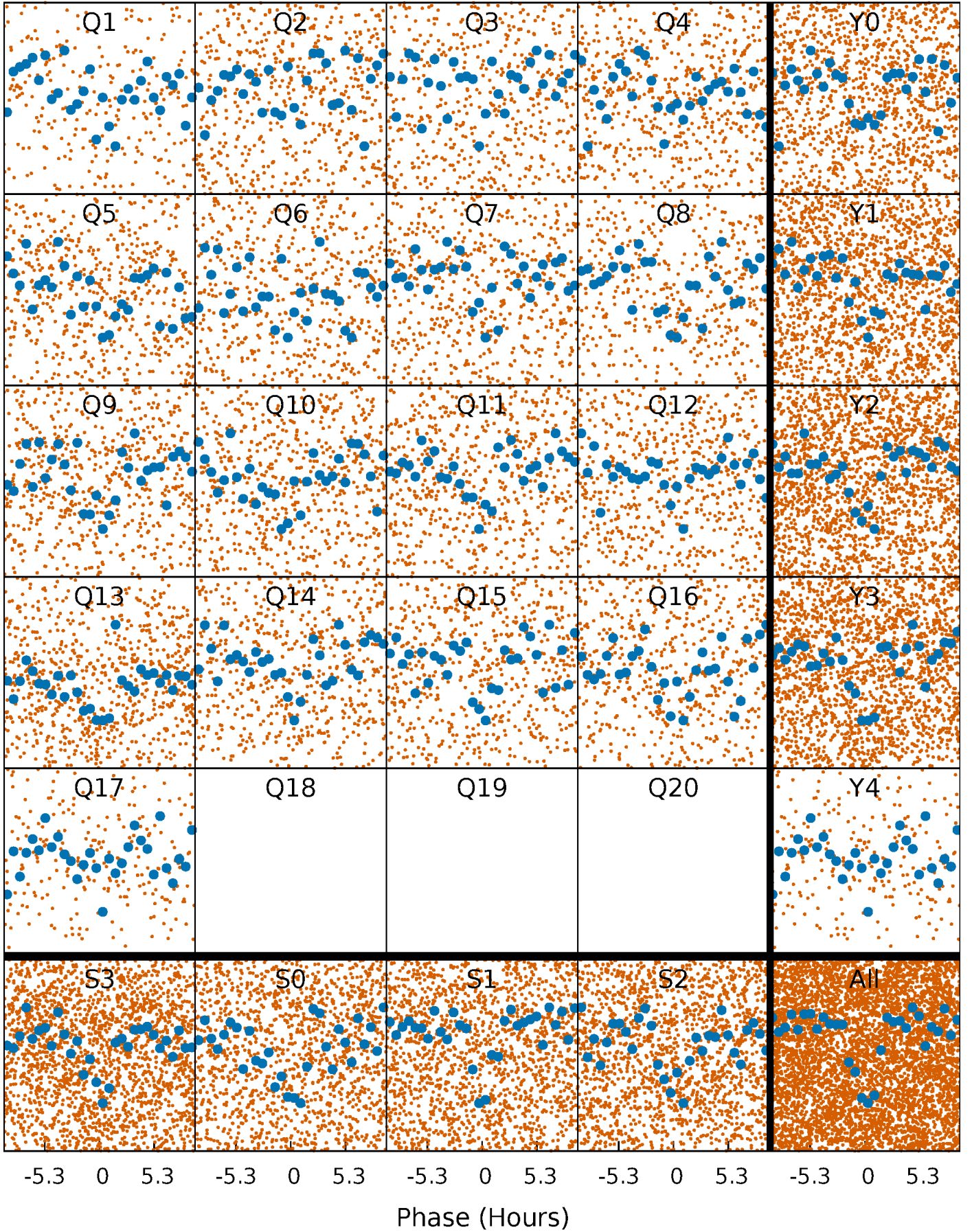


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



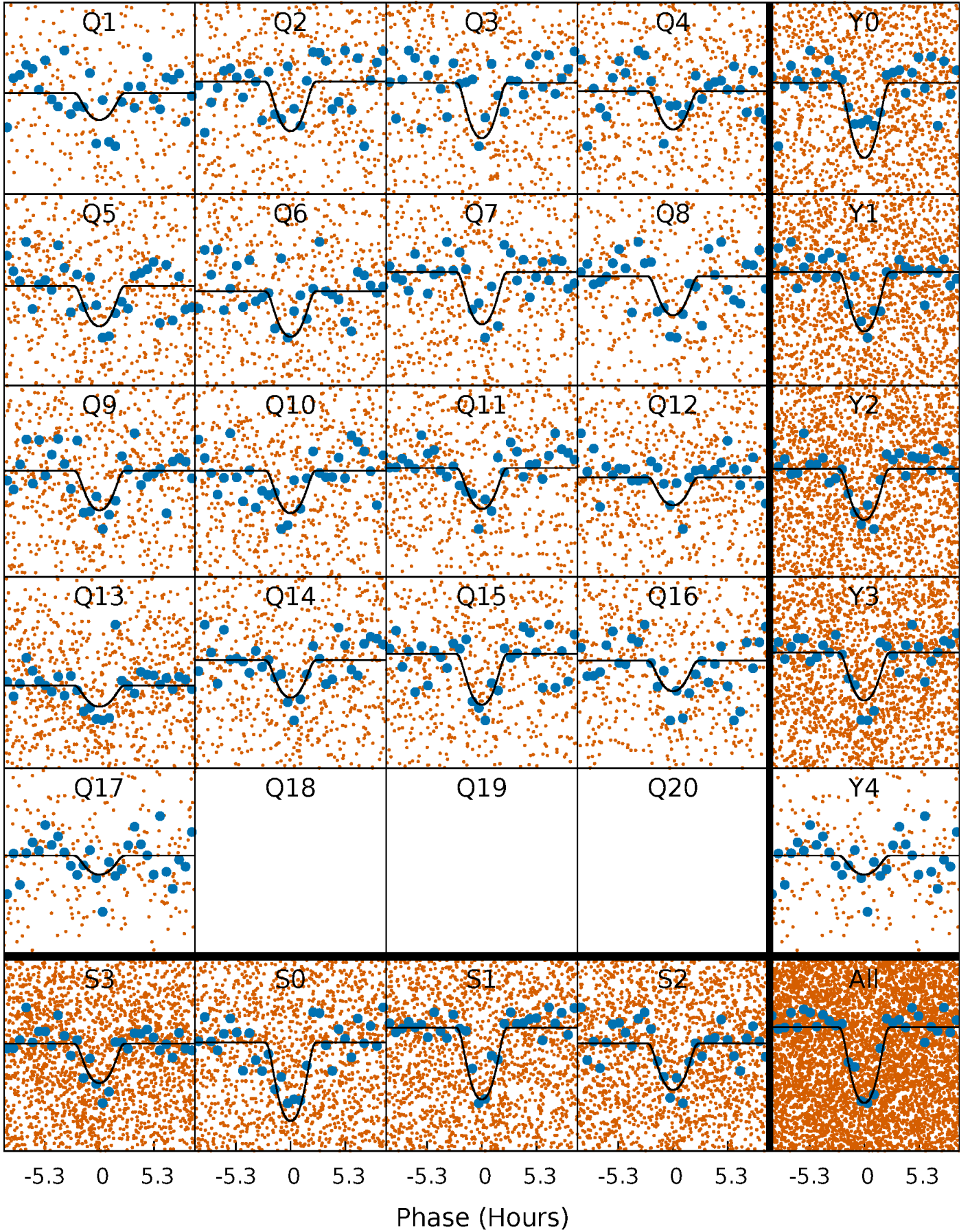
PDC Quarter-Phased Transit Curves

TCE 011912916-01 P= 3.747861 Days $T_0=134.176692$ (BKJD)



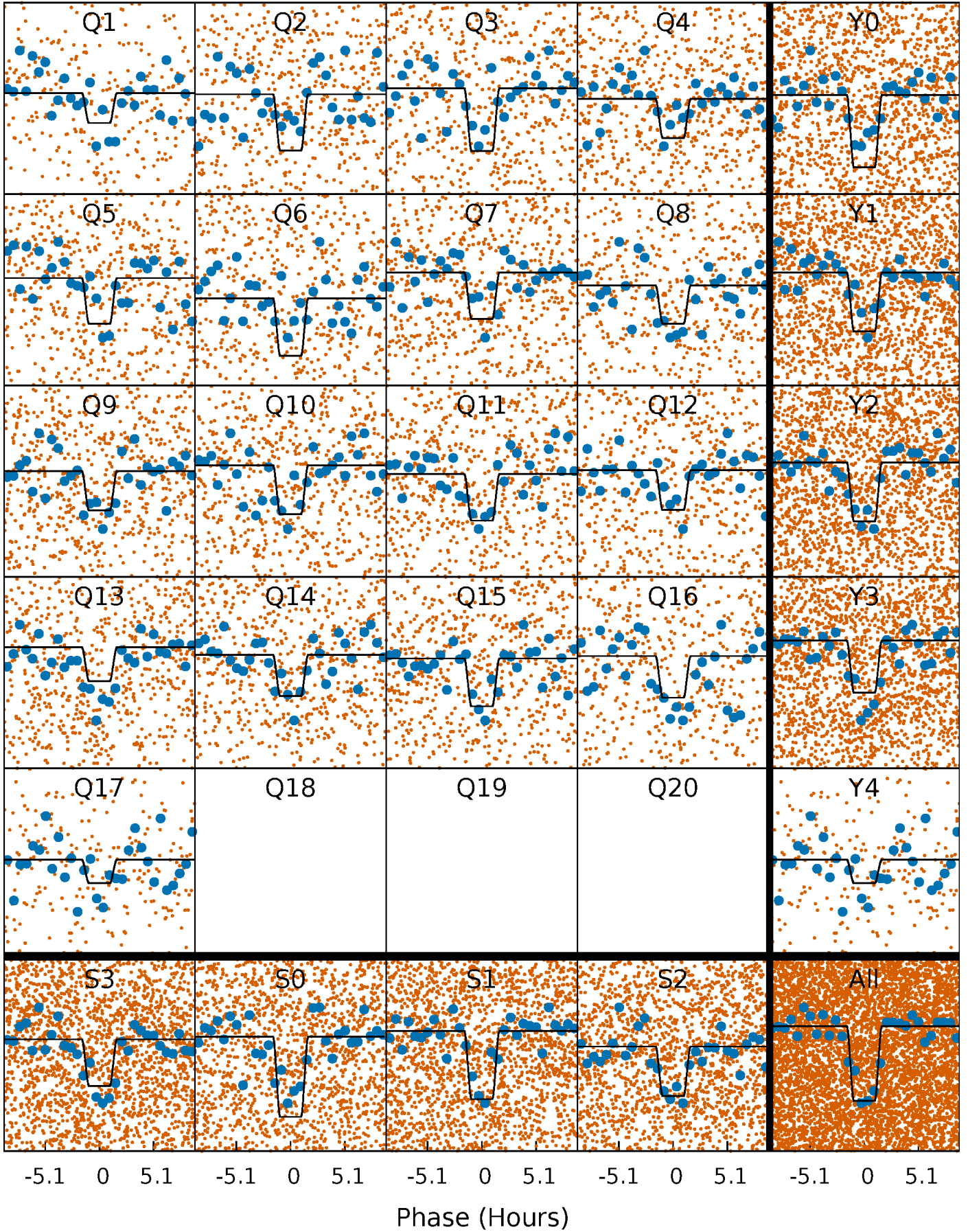
DV Quarter-Phased Transit Curves

TCE 011912916-01 P= 3.747861 Days $T_0=134.176692$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

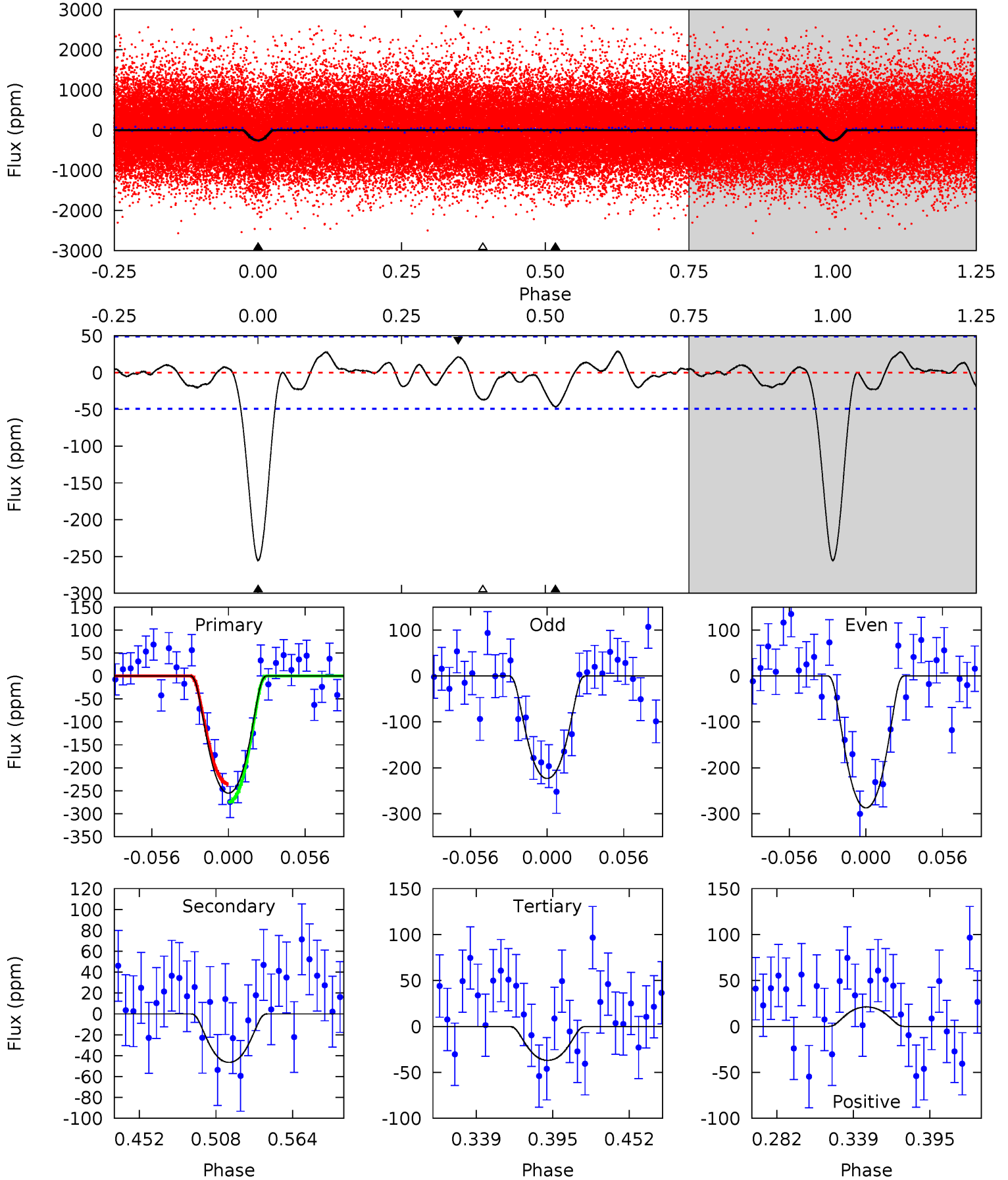
TCE 011912916-01 P= 3.747863 Days $T_0=134.178834$ (BKJD)



DV Model-Shift Uniqueness Test

011912916-01, P = 3.747861 Days, E = 130.428831 Days

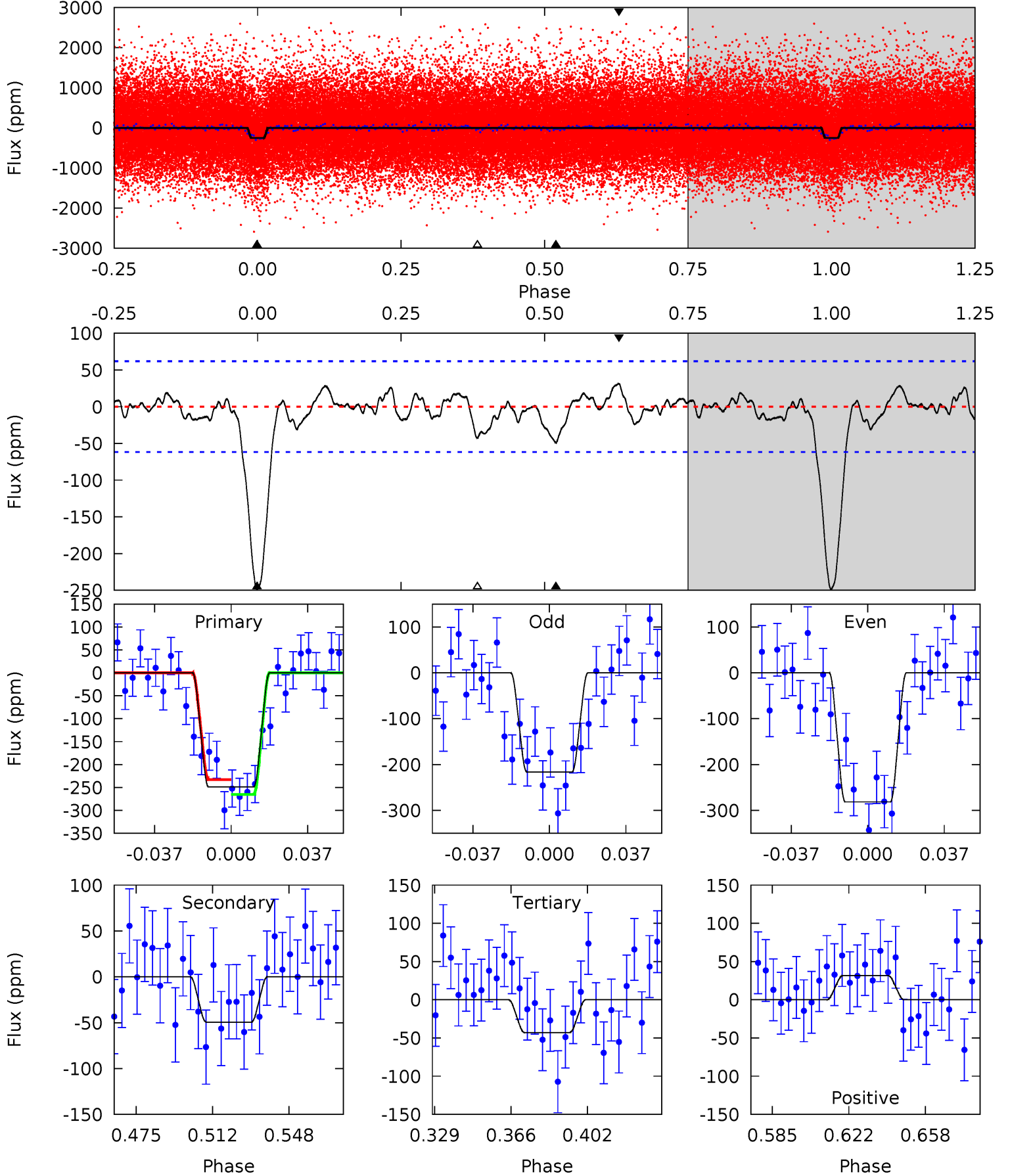
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.4	4.43	3.53	2.02	4.68	1.91	1.26	20.8	22.3	0.91	2.41	3.07	0.98	0.10	1.91



Alt Model-Shift Uniqueness Test

011912916-01, P = 3.747863 Days, E = 130.430971 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	3.81	3.31	2.44	4.77	2.09	1.06	15.9	16.8	0.50	1.37	2.52	1.01	0.11	1.24



Stellar Parameters For KIC 011912916

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5514^{+166}_{-166}	$4.569^{+0.034}_{-0.136}$	$-0.040^{+0.300}_{-0.300}$	$0.826^{+0.164}_{-0.070}$	$0.926^{+0.074}_{-0.111}$	$2.312^{+0.418}_{-0.905}$
	+3%/-3%	+1%/-3%	+750%/-750%	+20%/-8%	+8%/-12%	+18%/-39%
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 011912916-01 / KOI 4475.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-46 ± 10	$1.98^{+0.69}_{-0.68}$	1468^{+71}_{-60}	3557^{+556}_{-358}	14^{+18}_{-7}
Alt.	-49 ± 13	$1.54^{+0.67}_{-0.67}$	1470^{+66}_{-64}	3918^{+959}_{-518}	24^{+49}_{-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 $A_{\text{obs}} \gg 1.0$

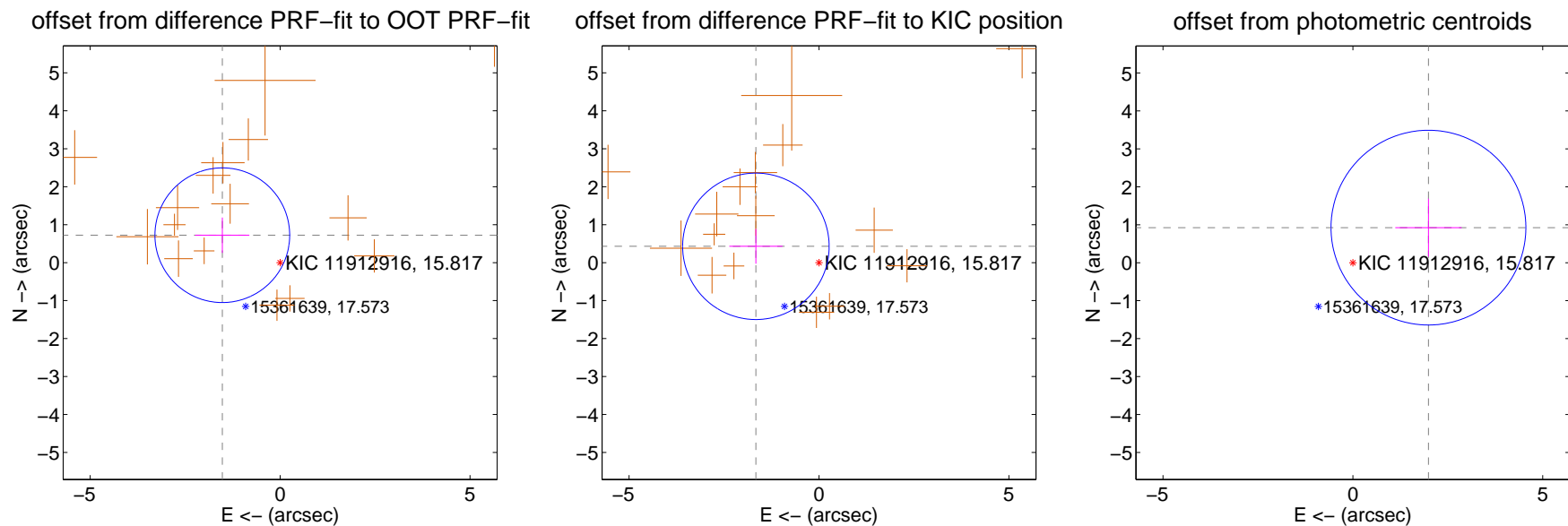
DV Centroid Data

Supplemental centroid analysis for 011912916-01. Kepler magnitude: 15.82. Transit SNR 15.72

There are 1 quarters with good PRF difference image offsets

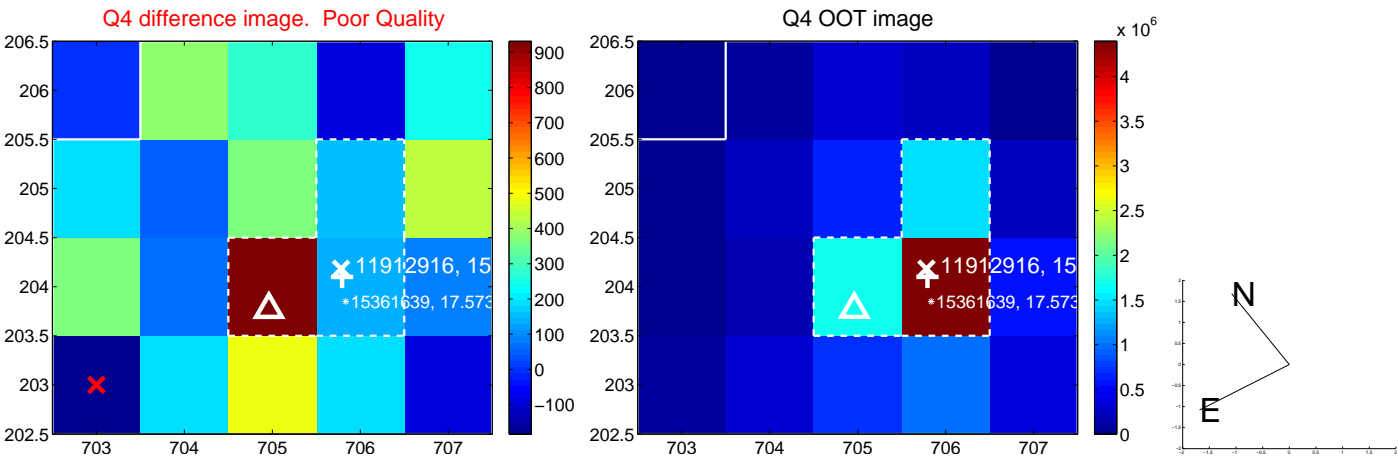
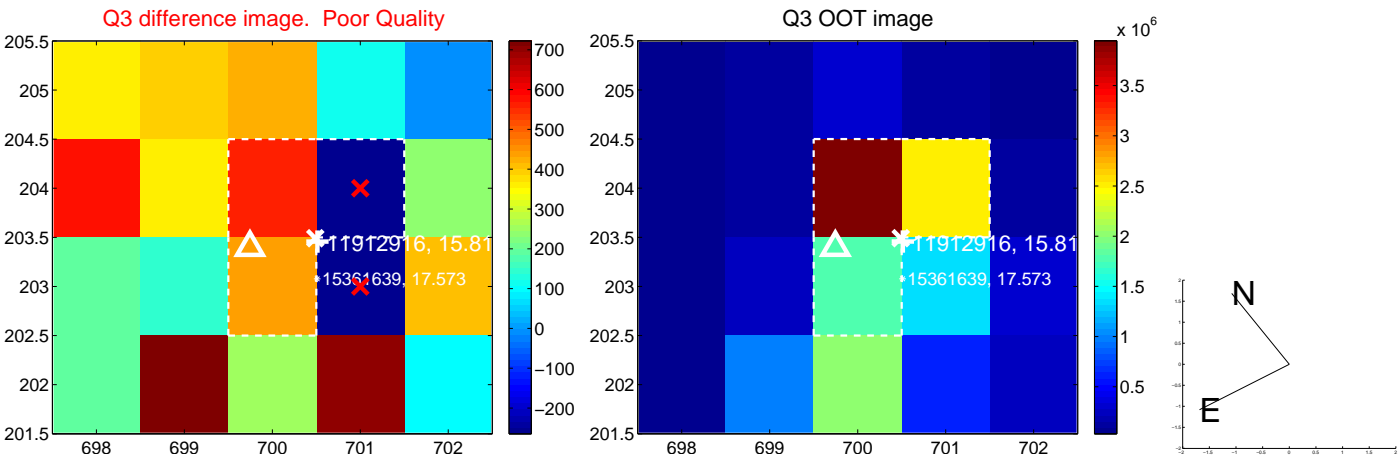
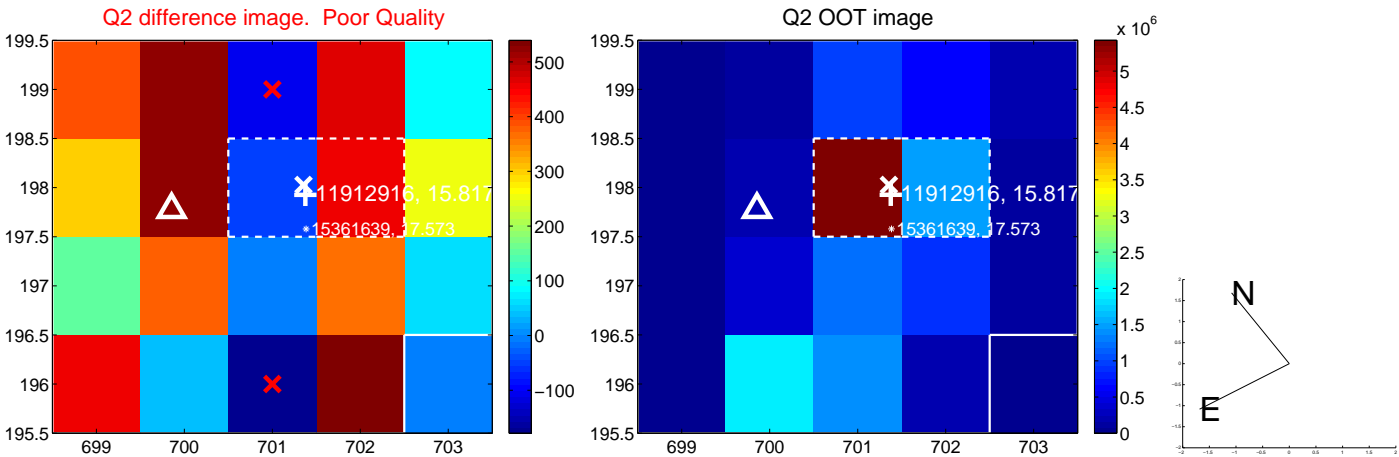
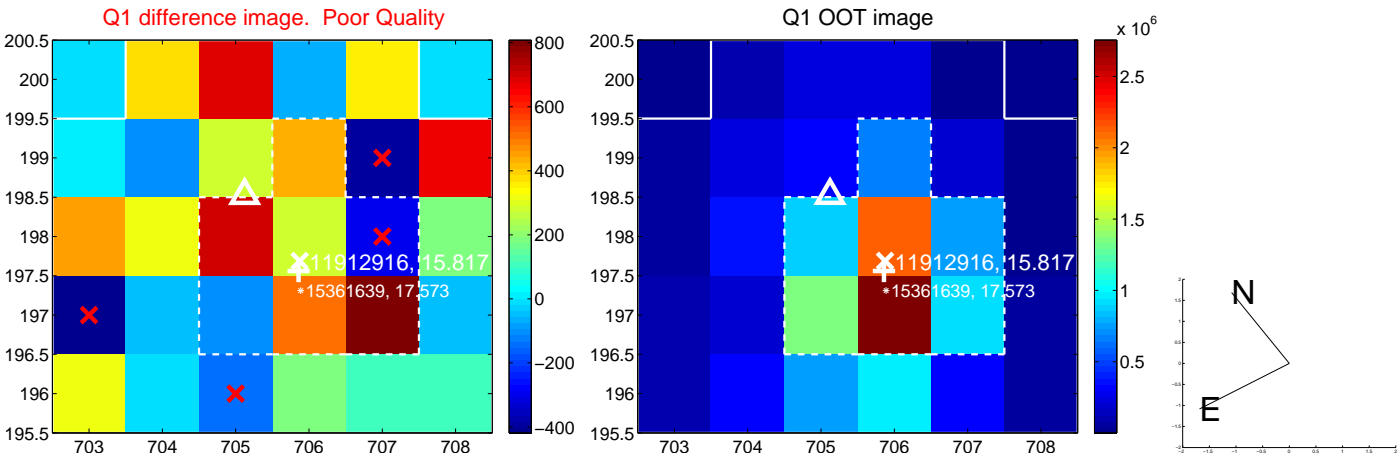
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.684 ± 0.591	2.85	1.522 ± 0.712	0.722 ± 0.465
PRF-fit source offset from KIC position	1.716 ± 0.643	2.67	1.661 ± 0.699	0.430 ± 0.458
photometric centroid source offset	2.19 ± 0.86	2.57	-1.99 ± 0.87	0.92 ± 0.76

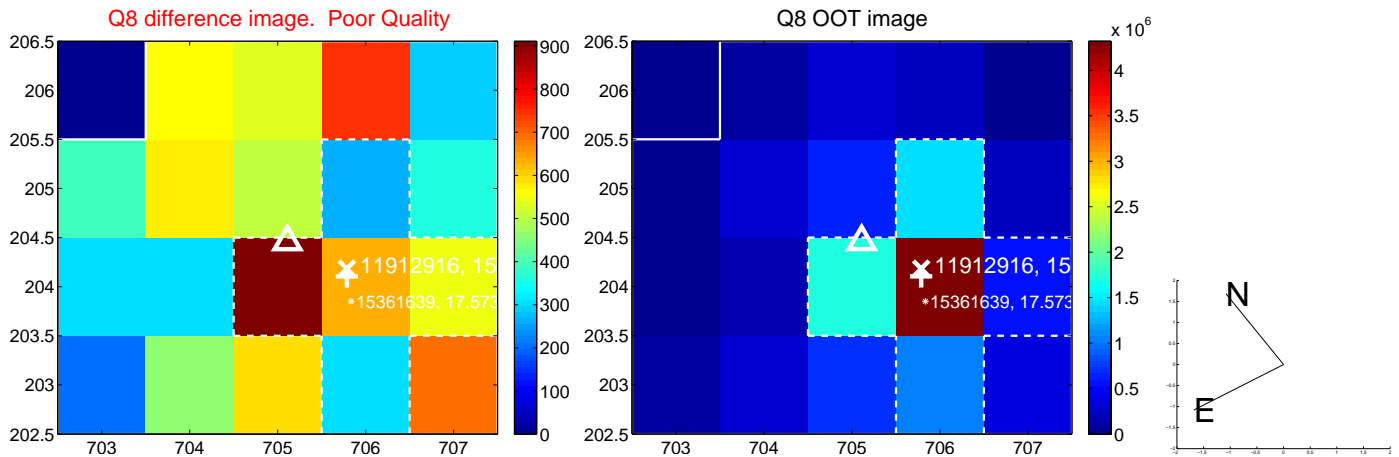
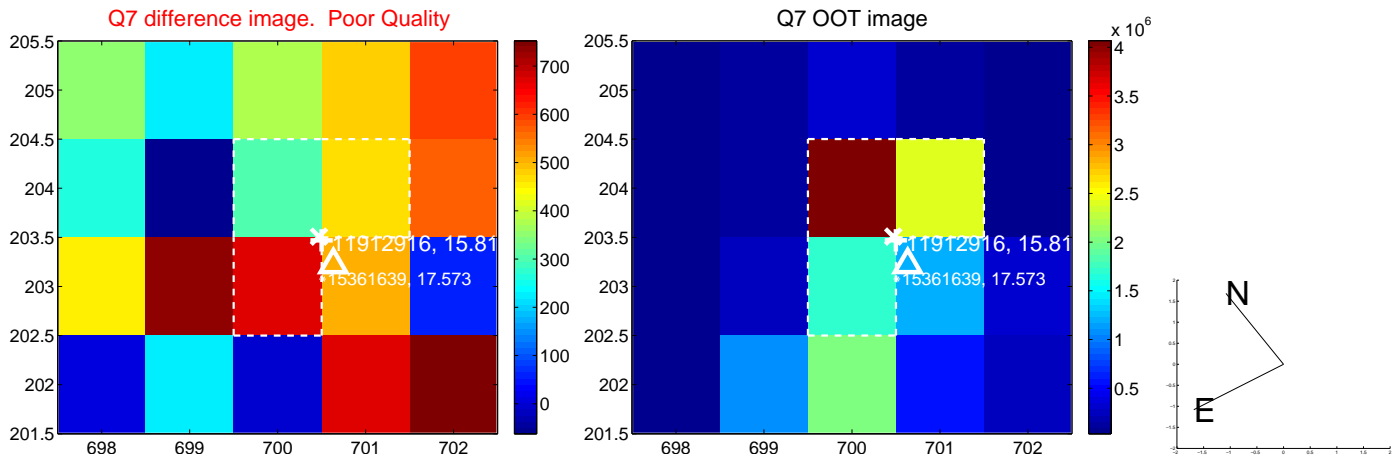
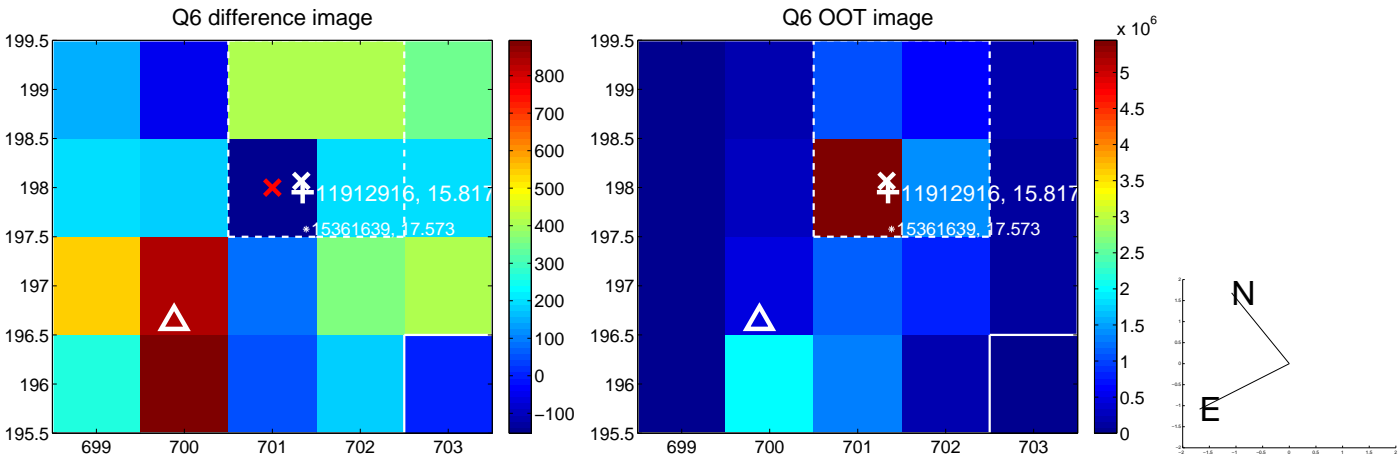
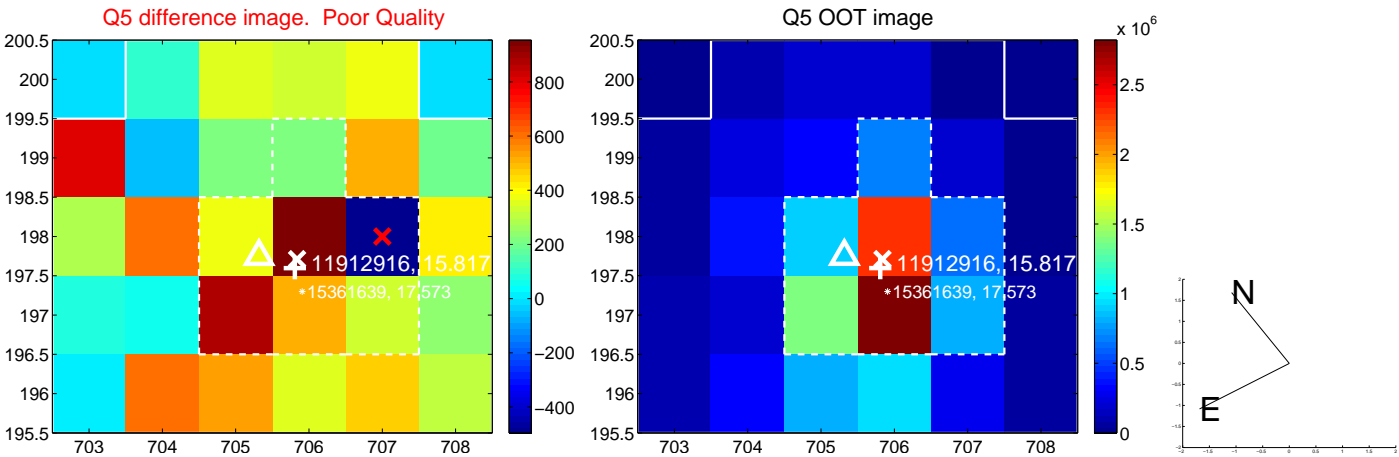


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

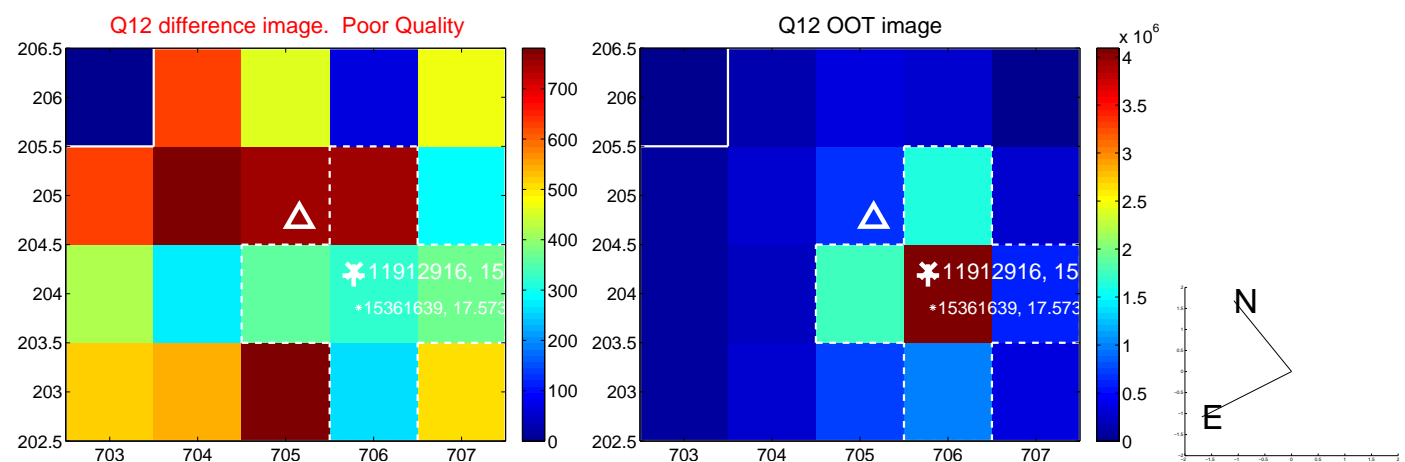
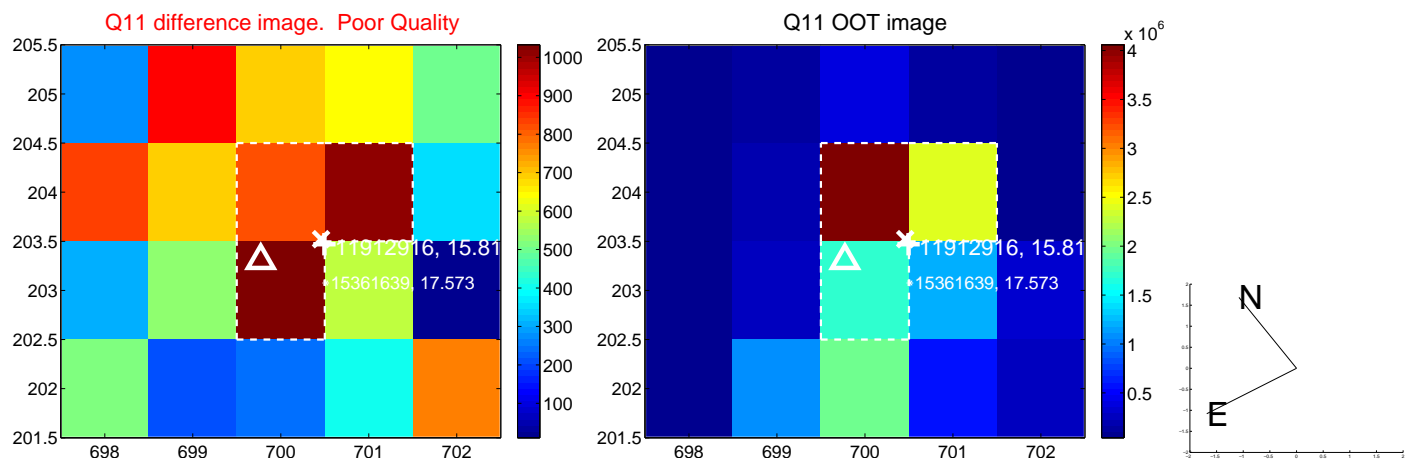
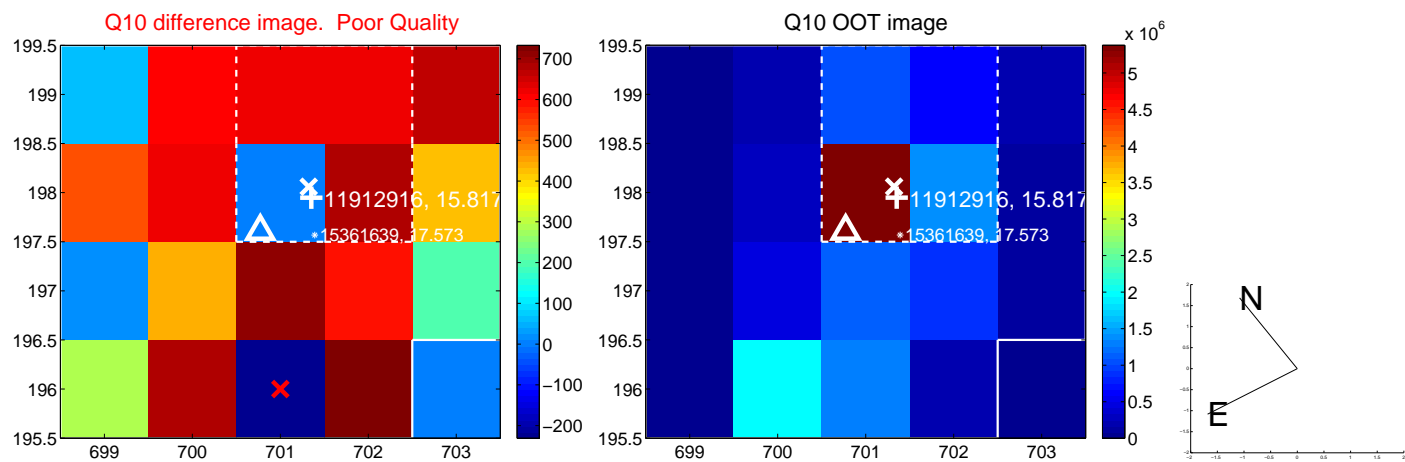
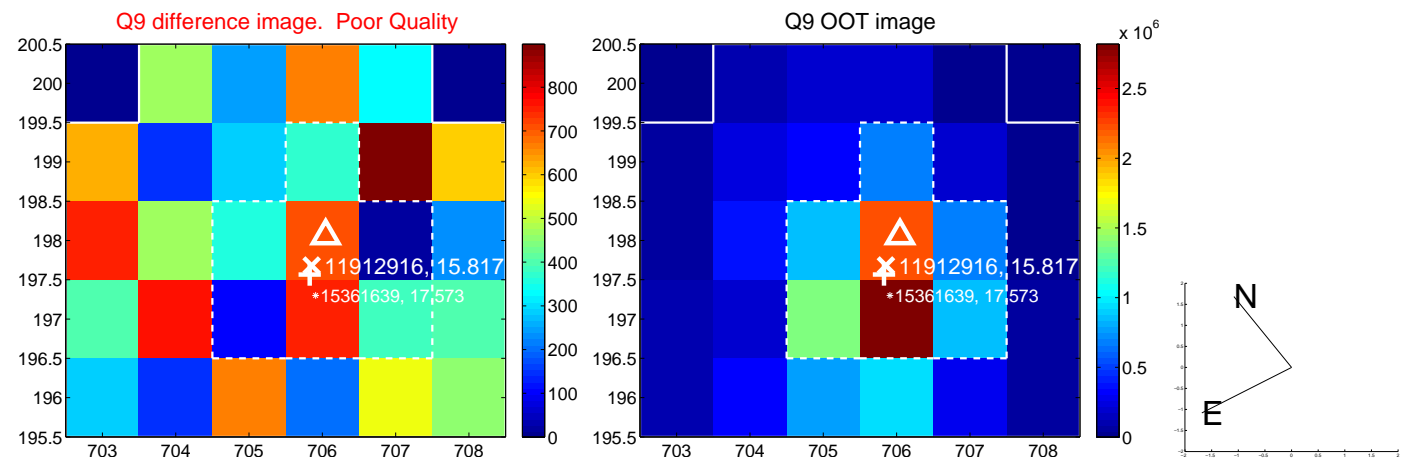
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



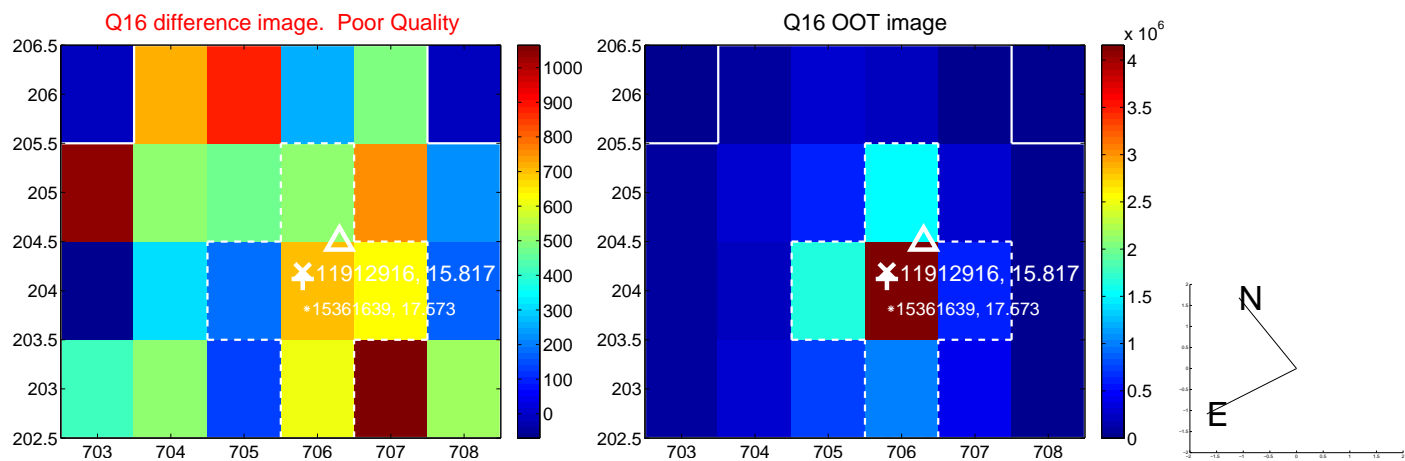
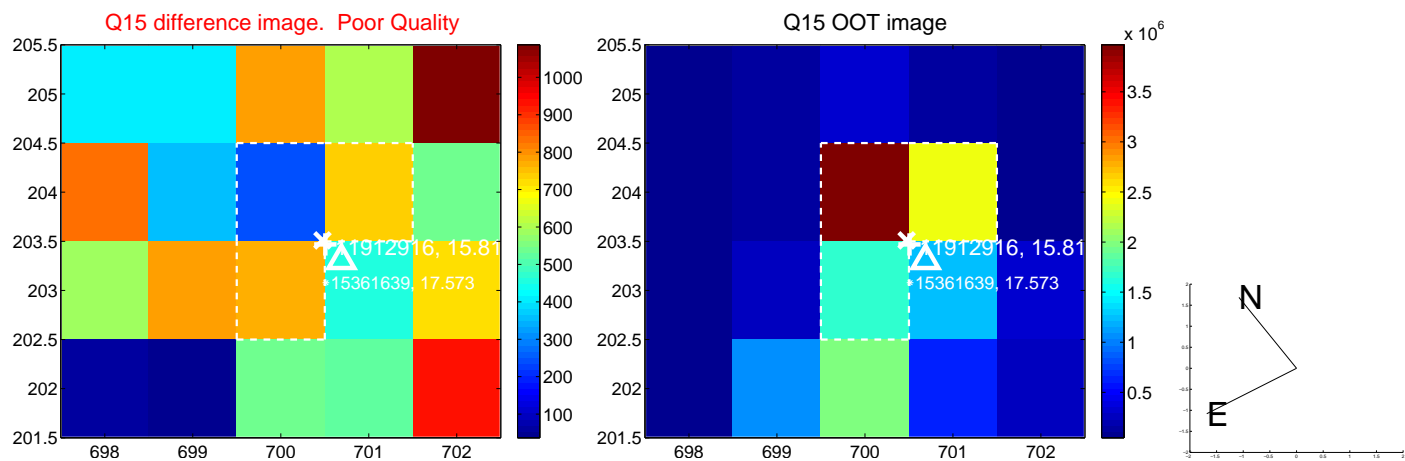
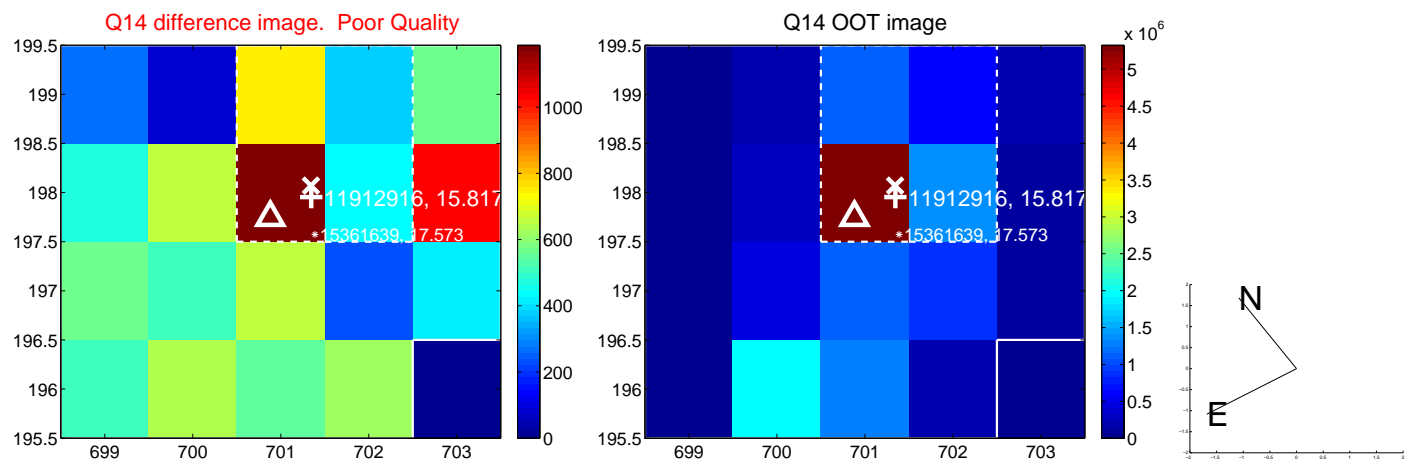
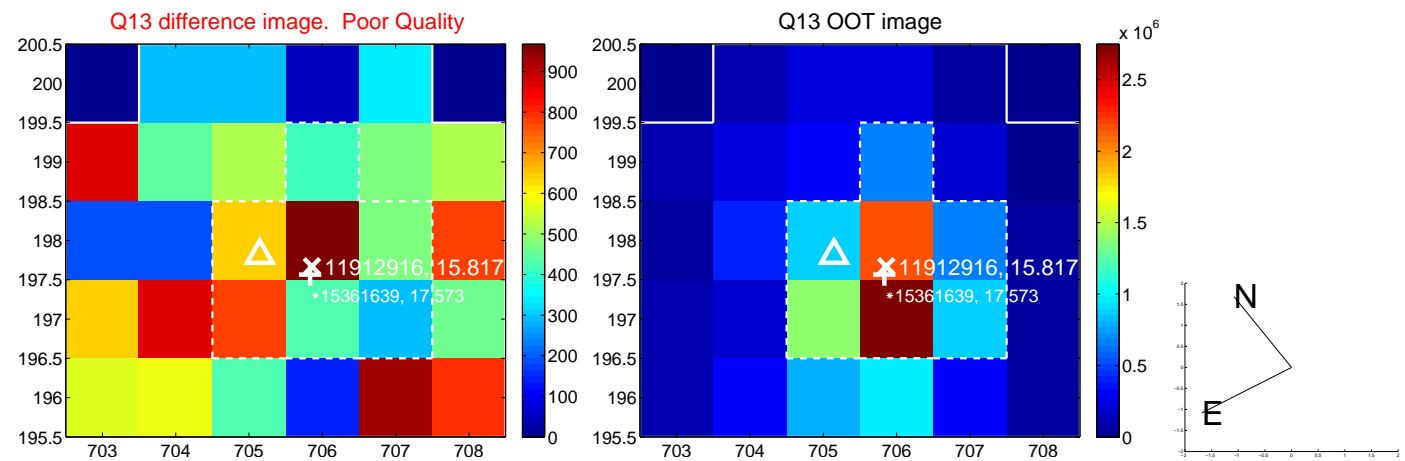
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



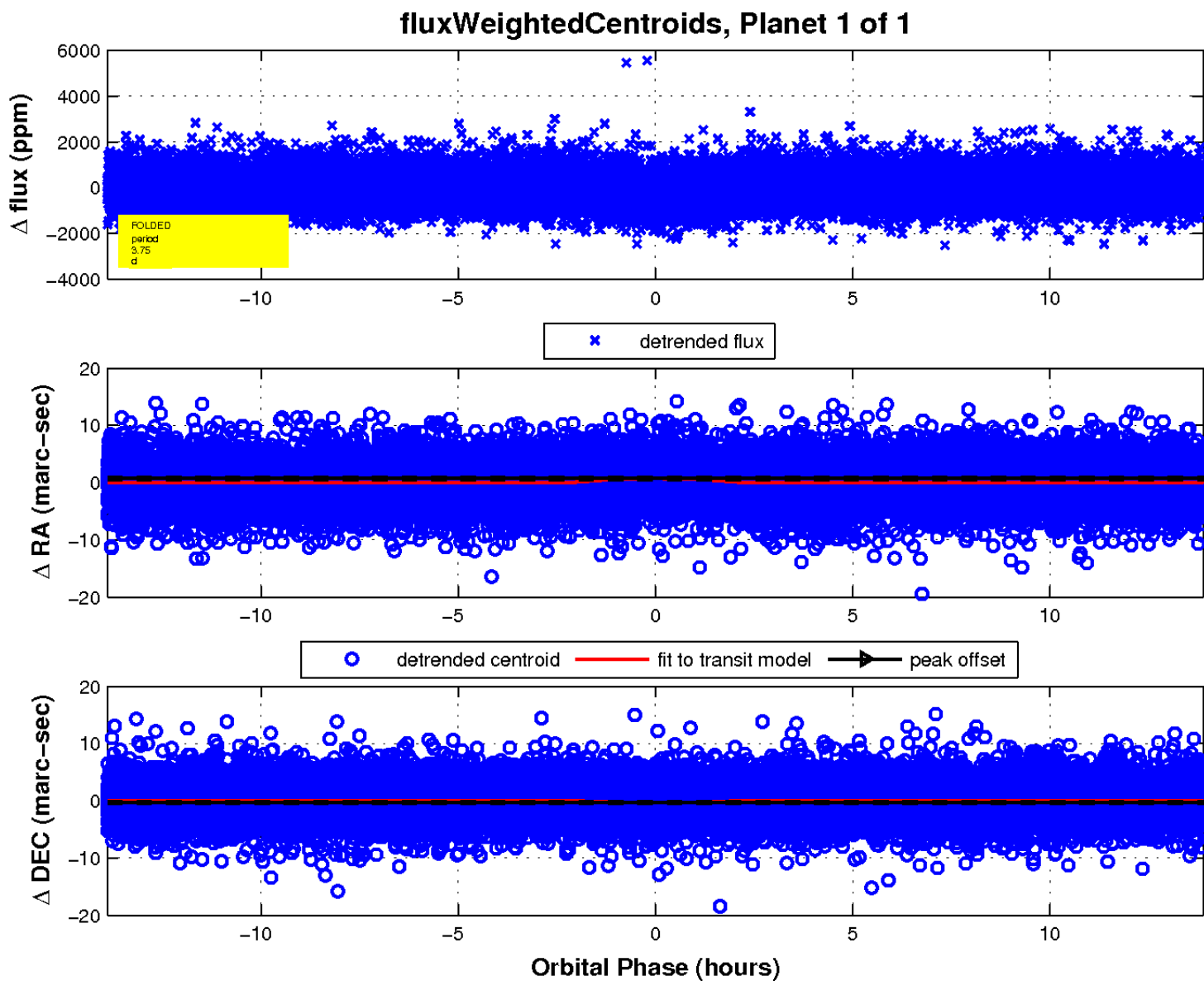
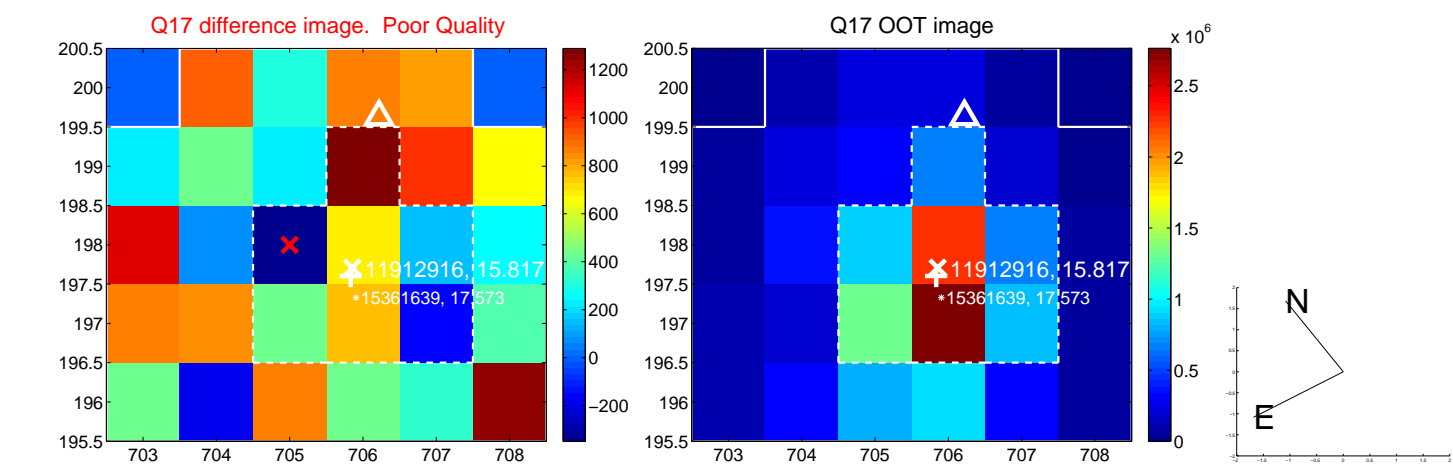
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UKIRT Image

Declination

