

KIC 008355178

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})
008355178-01	OBS	6178.01	13.032801	133.669628	231.4	3.995	9.8	10.3	1.00	6122	1.66	101.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008355178-01	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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 008355178-01

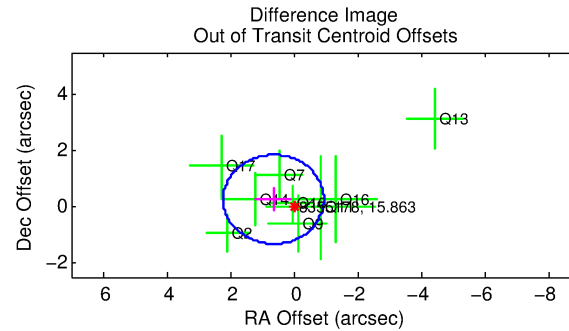
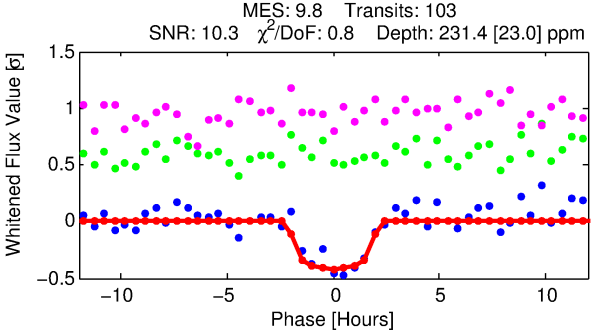
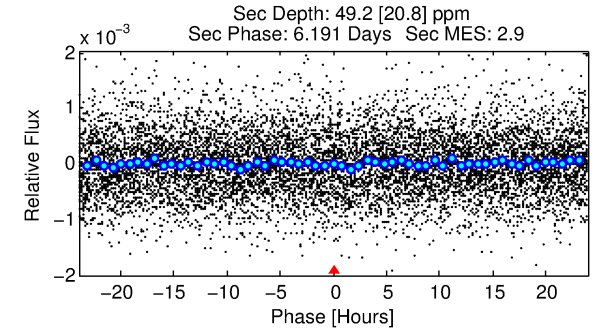
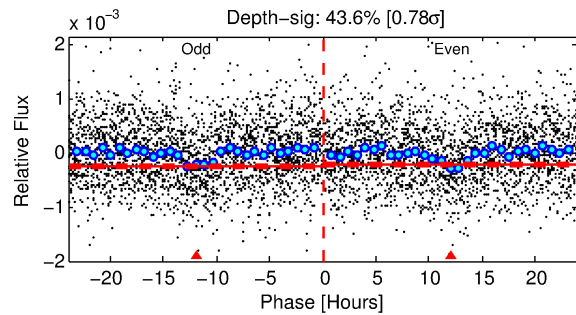
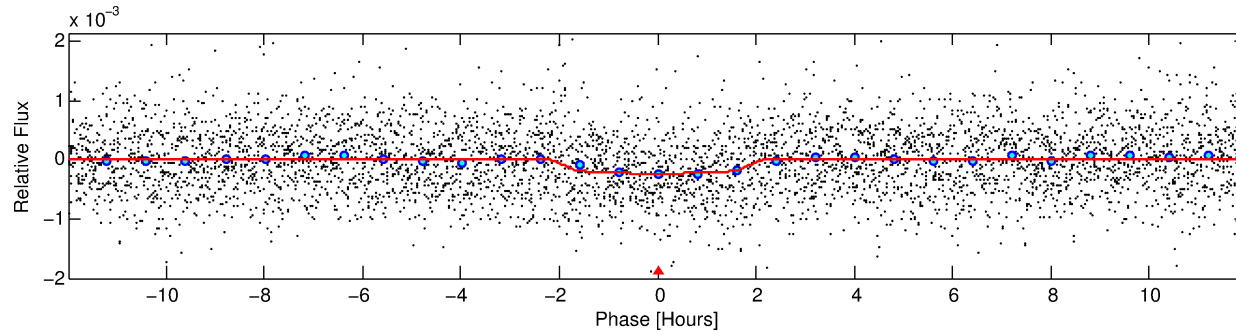
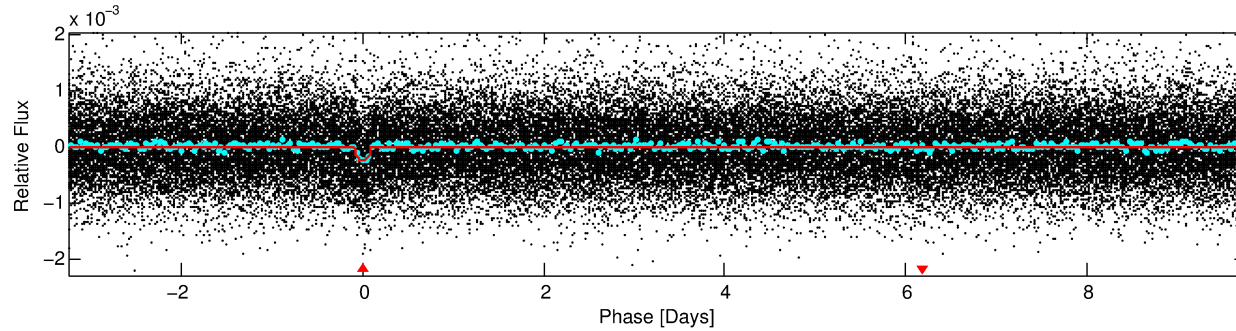
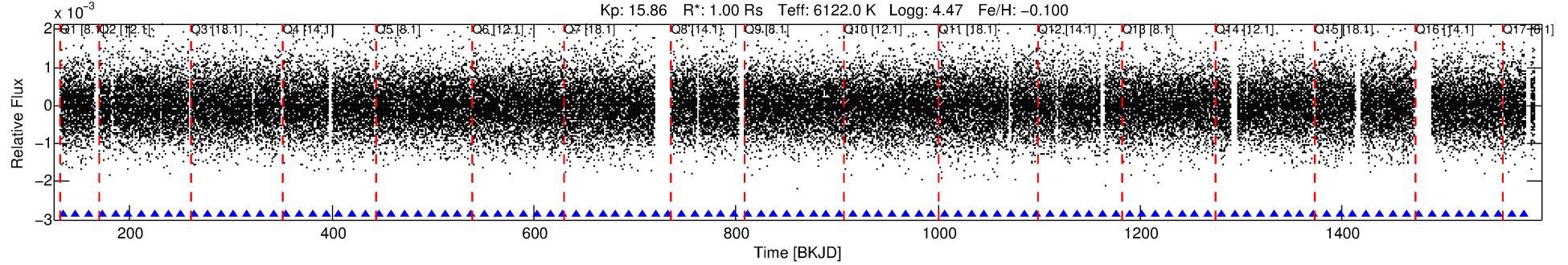
No Significant Match Found

DV One-Page Summary

KIC: 8355178 Candidate: 1 of 1 Period: 13.033 d

KOI: K06178.01 Corr: 0.979

Kp: 15.86 R*: 1.00 Rs Teff: 6122.0 K Logg: 4.47 Fe/H: -0.100



DV Fit Results:

Period = 13.03280 [0.00013] d
Epoch = 133.6696 [0.0082] BKJD
Rp/R* = 0.0153 [0.0136]
a/R* = 16.30 [73.08]
b = 0.78 [2.31]
Seff = 101.53 [39.63]
Teq = 809 [79] K
Rp = 1.66 [1.55] Re
a = 0.1109 [0.0269] AU
Ag = 120.69 [225.53] [0.53σ]
Teff = 4148 [1908] K [1.75σ]

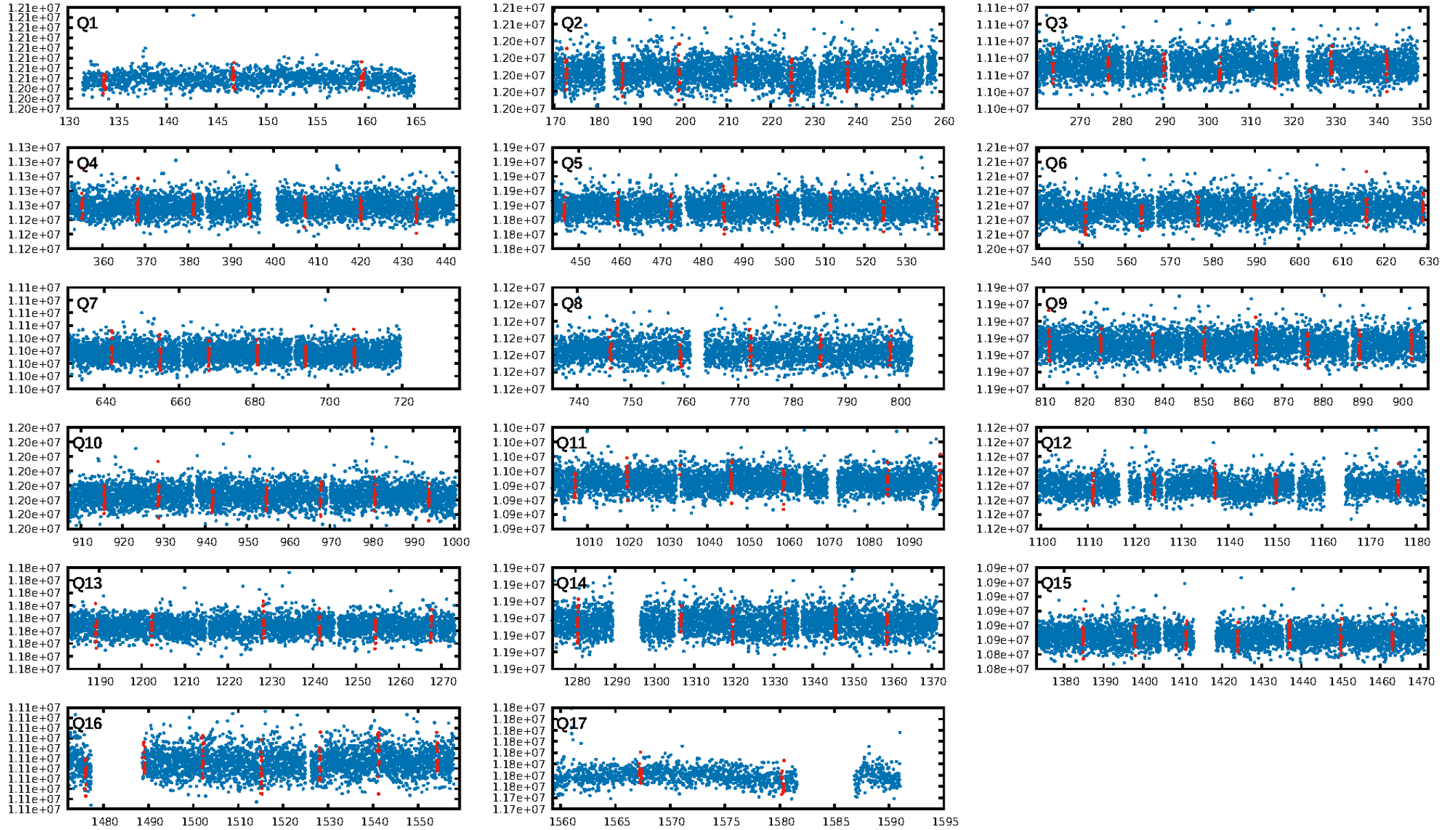
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.46e-22
RollingBand-fgt: 1.00 [98/98]
GhostDiagnostic-chr: 2.823
Centroid-sig: N/A
Centroid-so: 1.479 arcsec [1.18σ]
OotOffset-rm: 0.689 arcsec [1.30σ]
KicOffset-rm: 0.499 arcsec [0.77σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

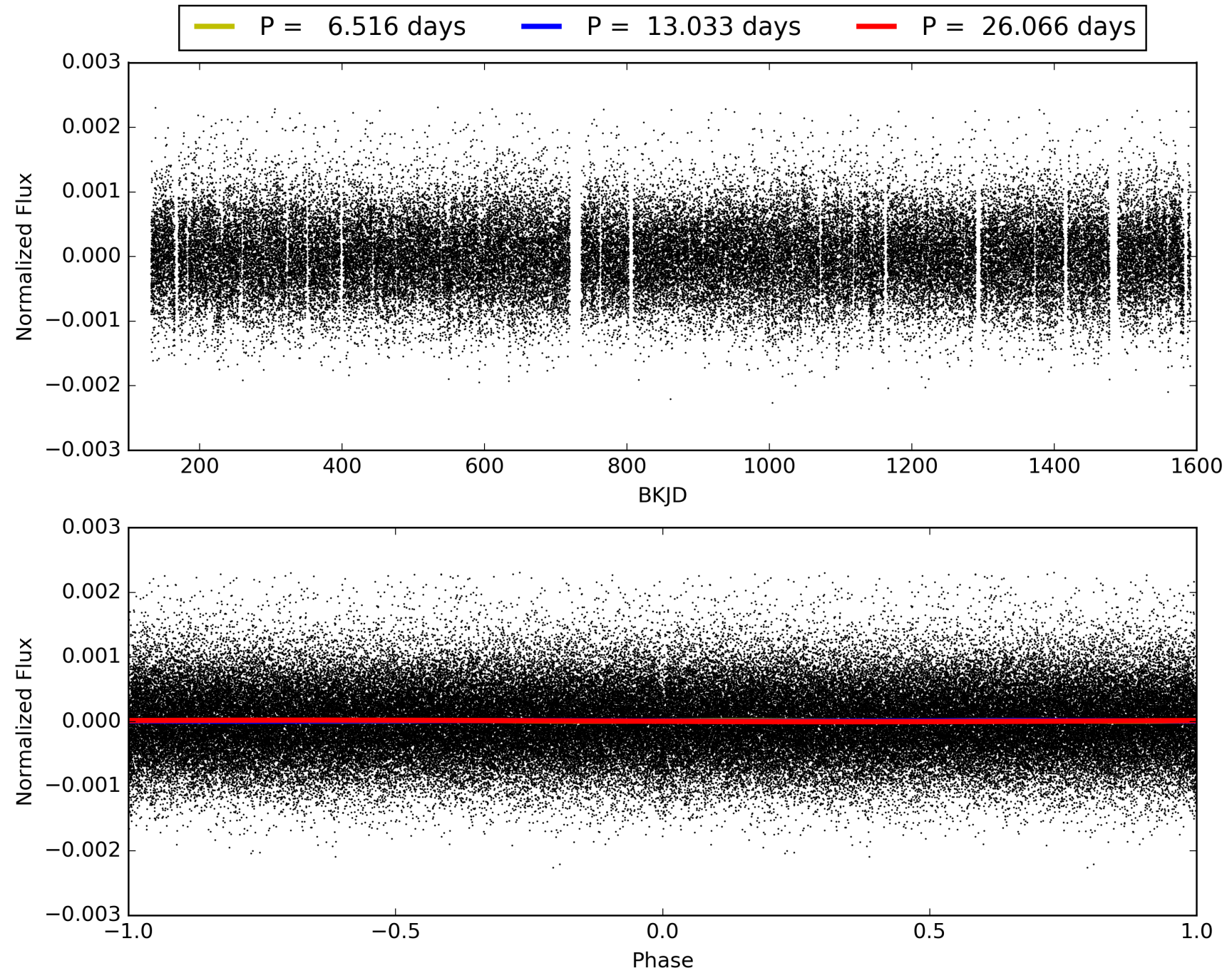
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:27:59 Z

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

TCE 008355178-01, PDC Light Curves

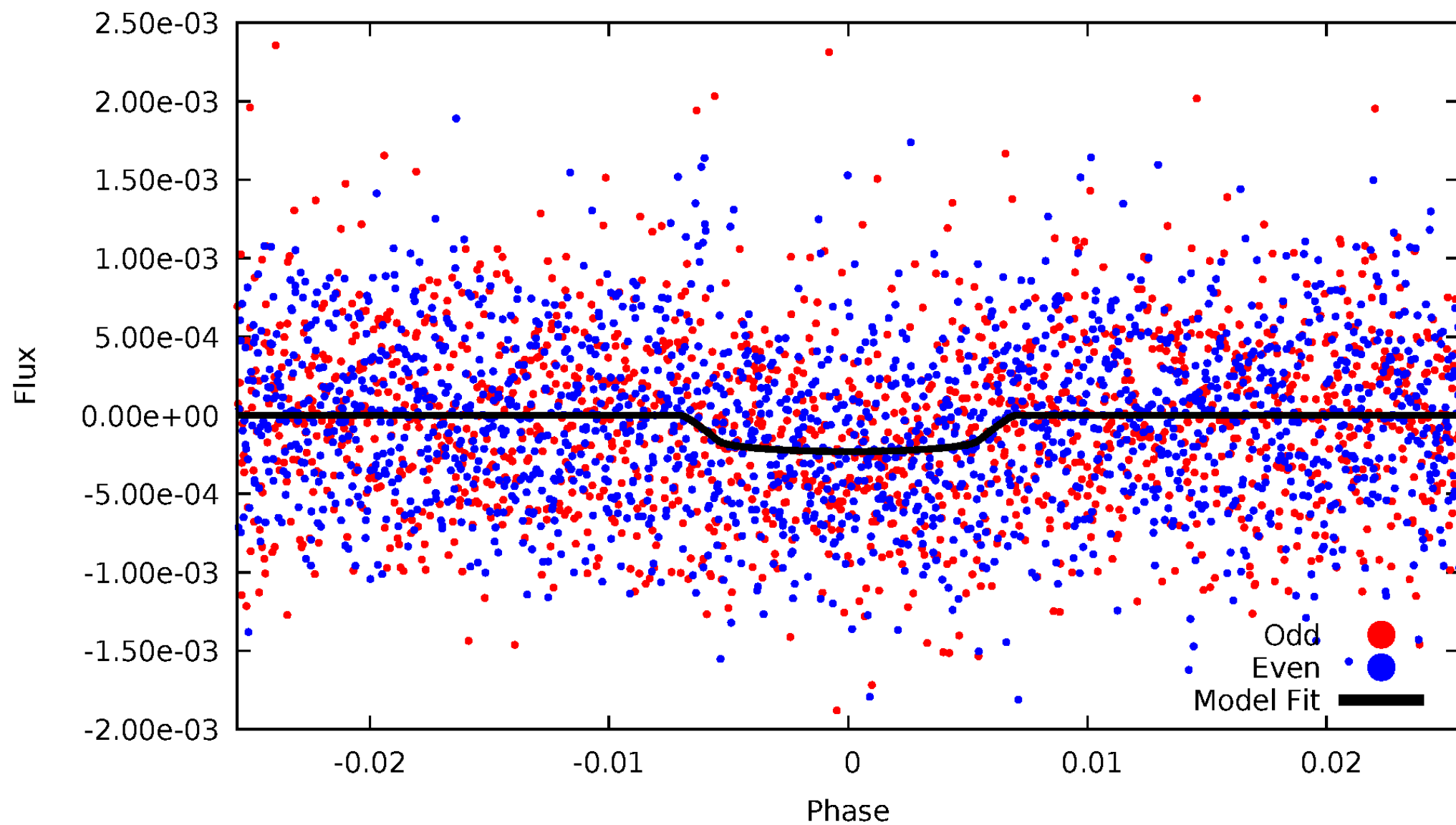


TCE 008355178-01



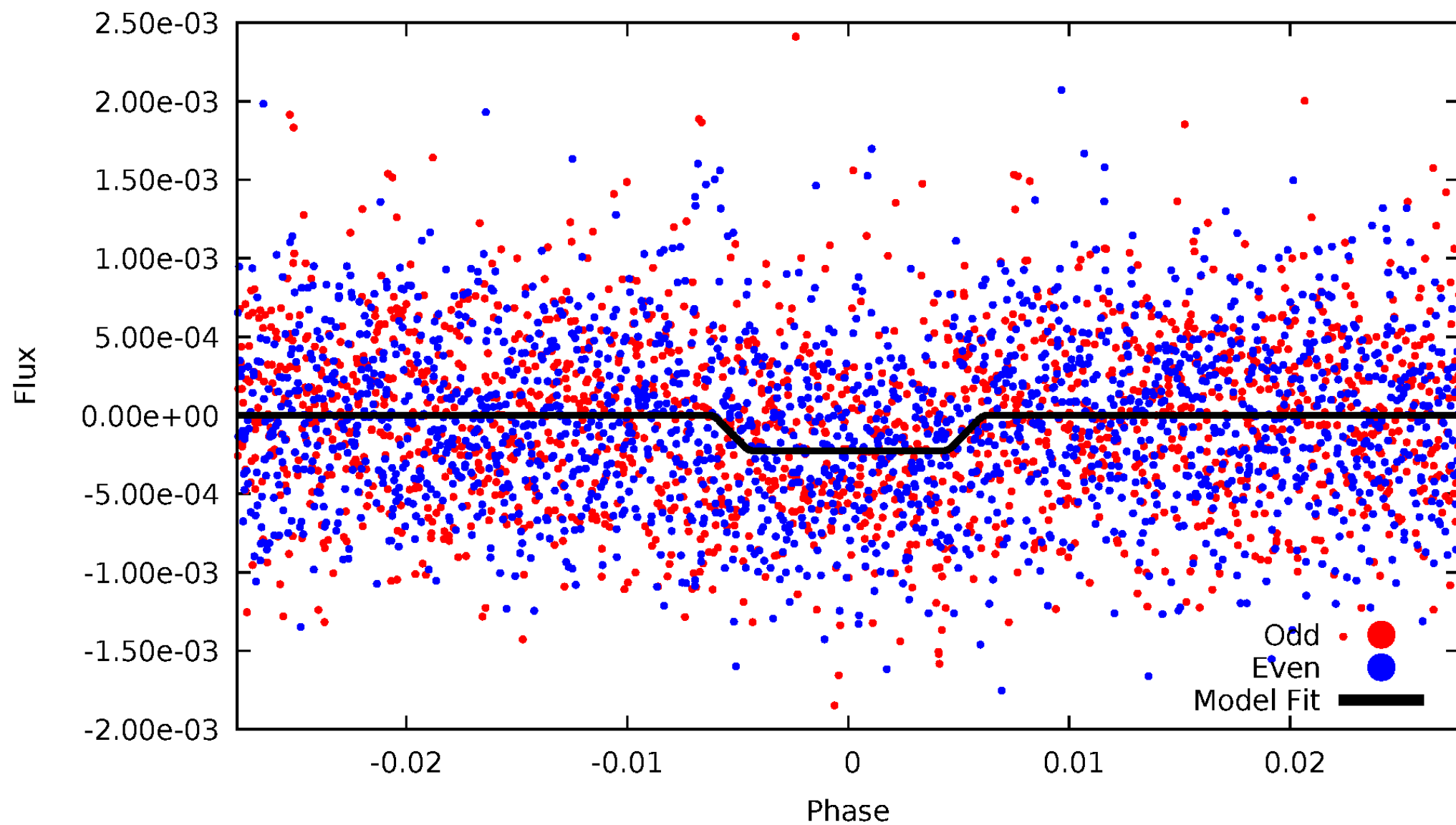
DV Odd/Even

TCE 008355178-01



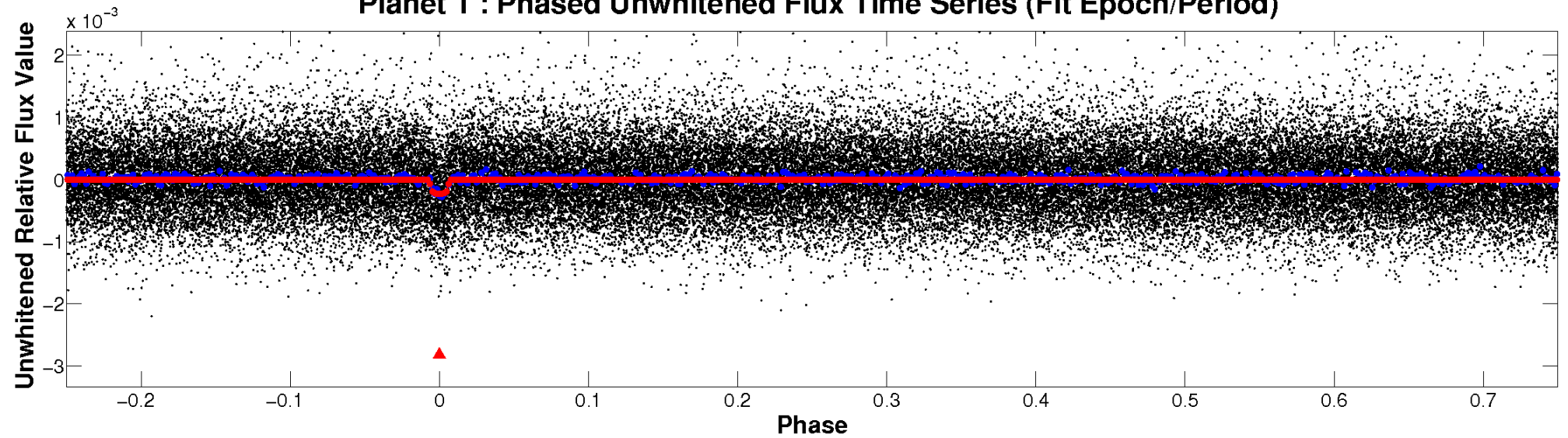
ALT Odd/Even

TCE 008355178-01

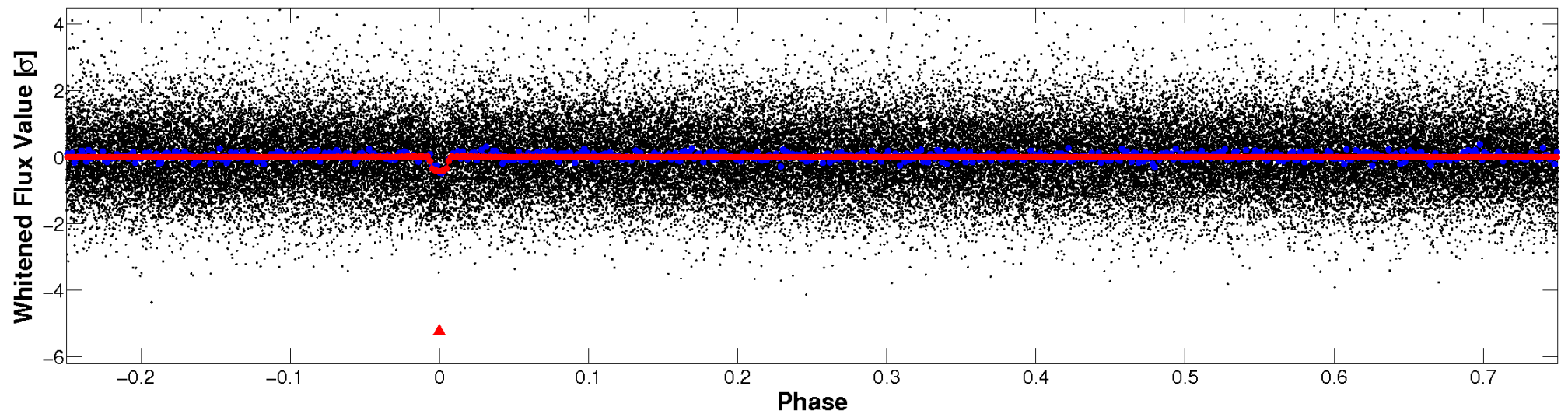


Non-Whitened Vs. Whitened Light Curve

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

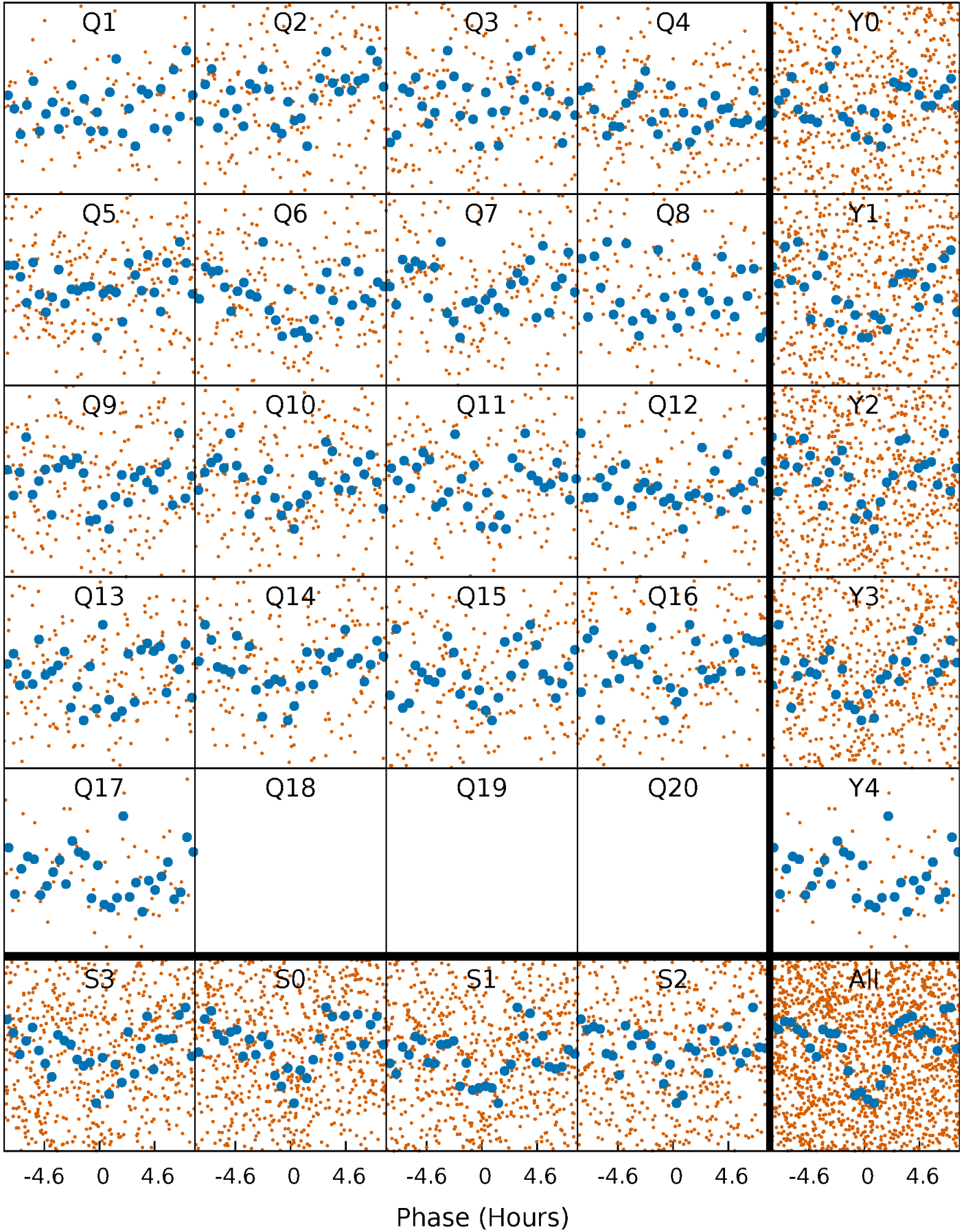


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



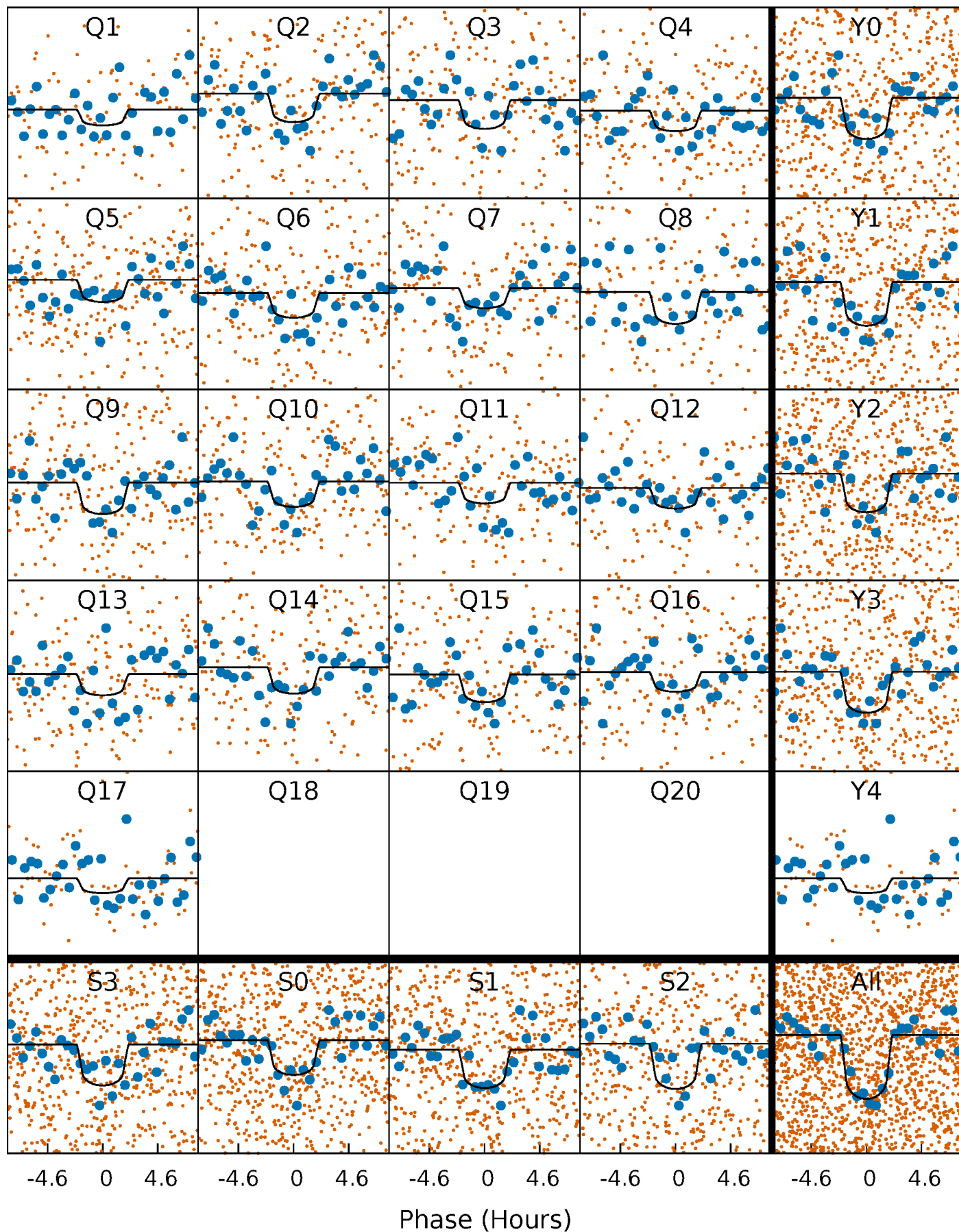
PDC Quarter-Phased Transit Curves

TCE 008355178-01 P= 13.032801 Days $T_0=133.669628$ (BKJD)



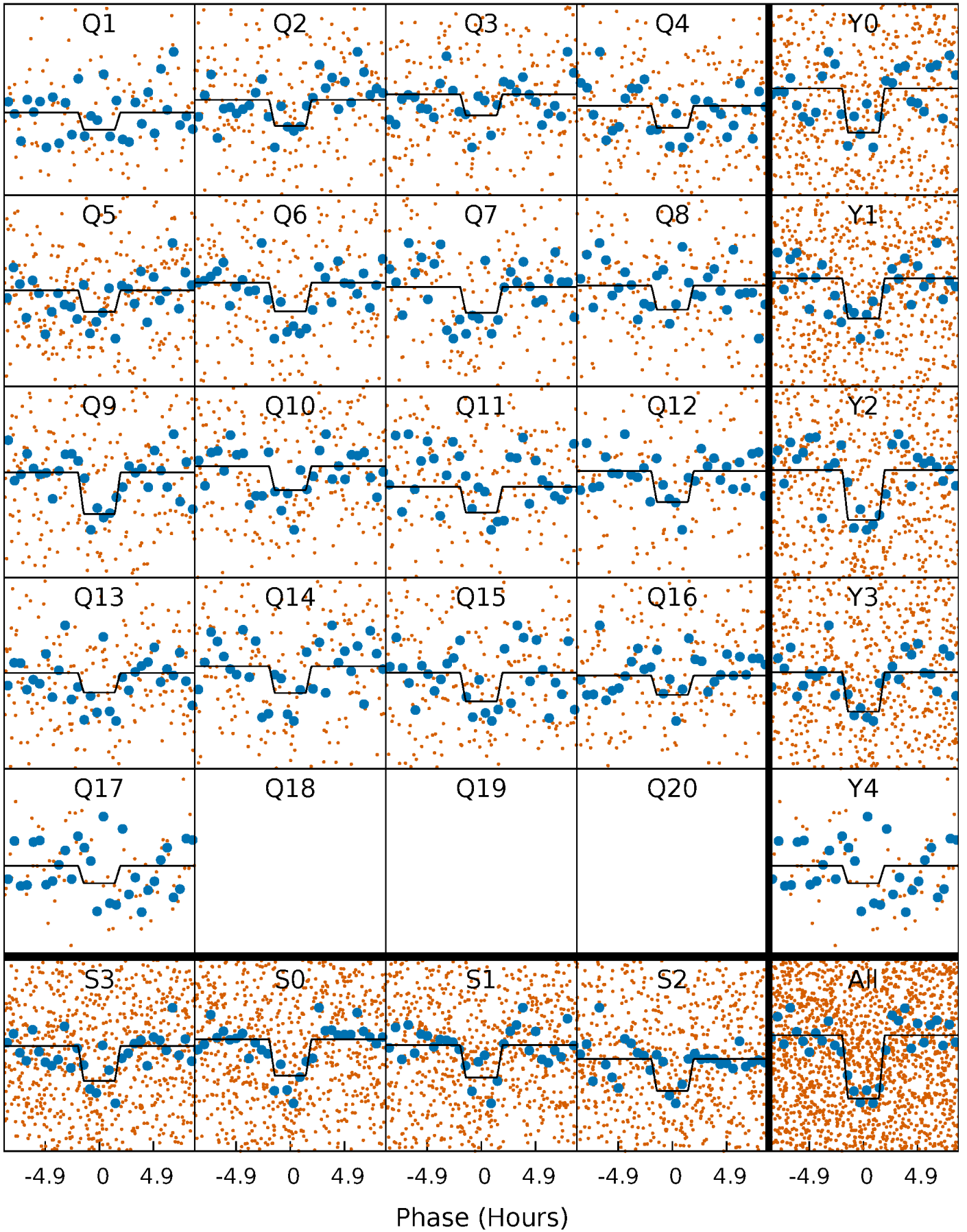
DV Quarter-Phased Transit Curves

TCE 008355178-01 P= 13.032801 Days $T_0=133.669628$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

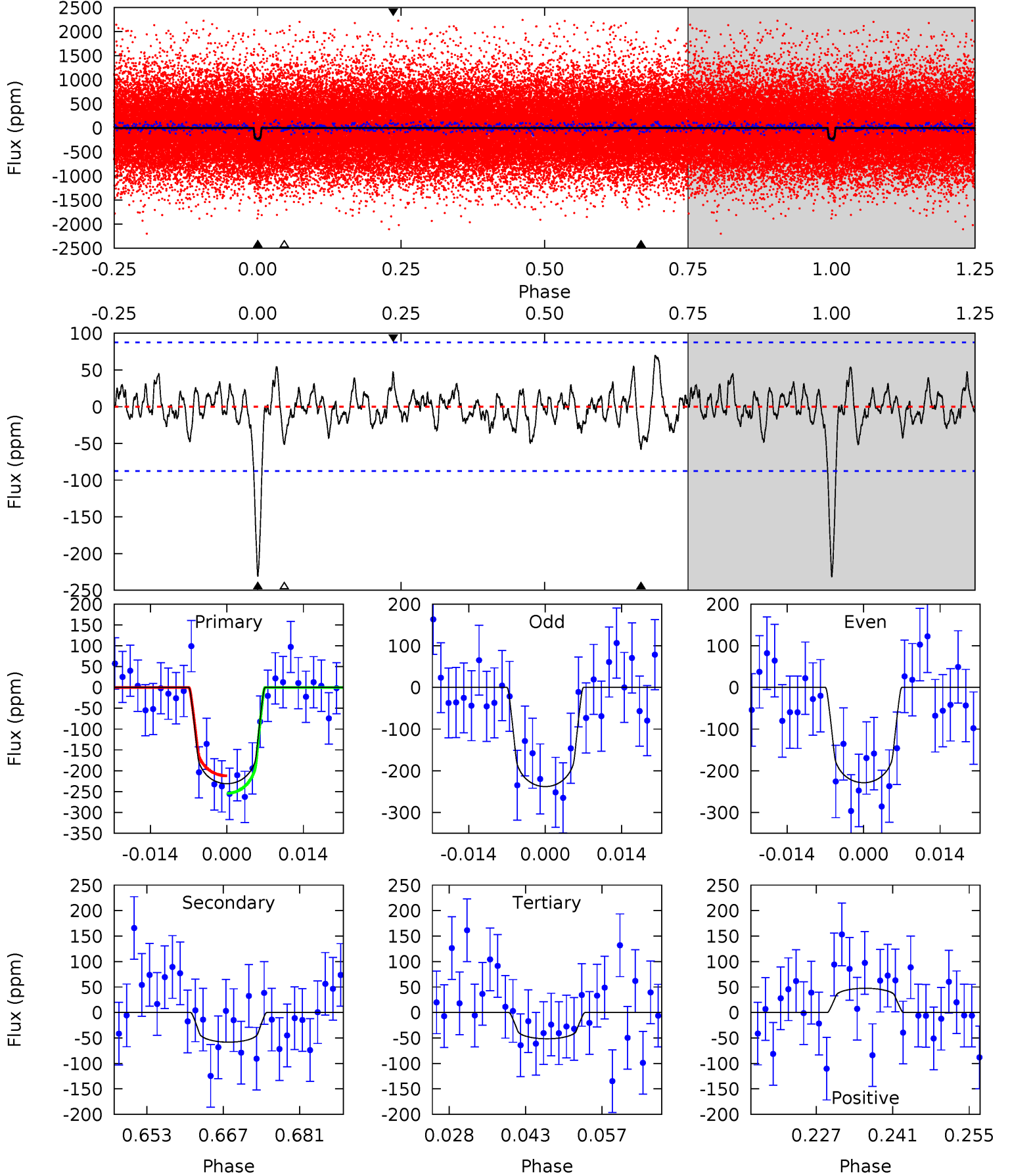
TCE 008355178-01 P= 13.032453 Days $T_0=133.696195$ (BKJD)



DV Model-Shift Uniqueness Test

008355178-01, $P = 13.032801$ Days, $E = 120.636827$ Days

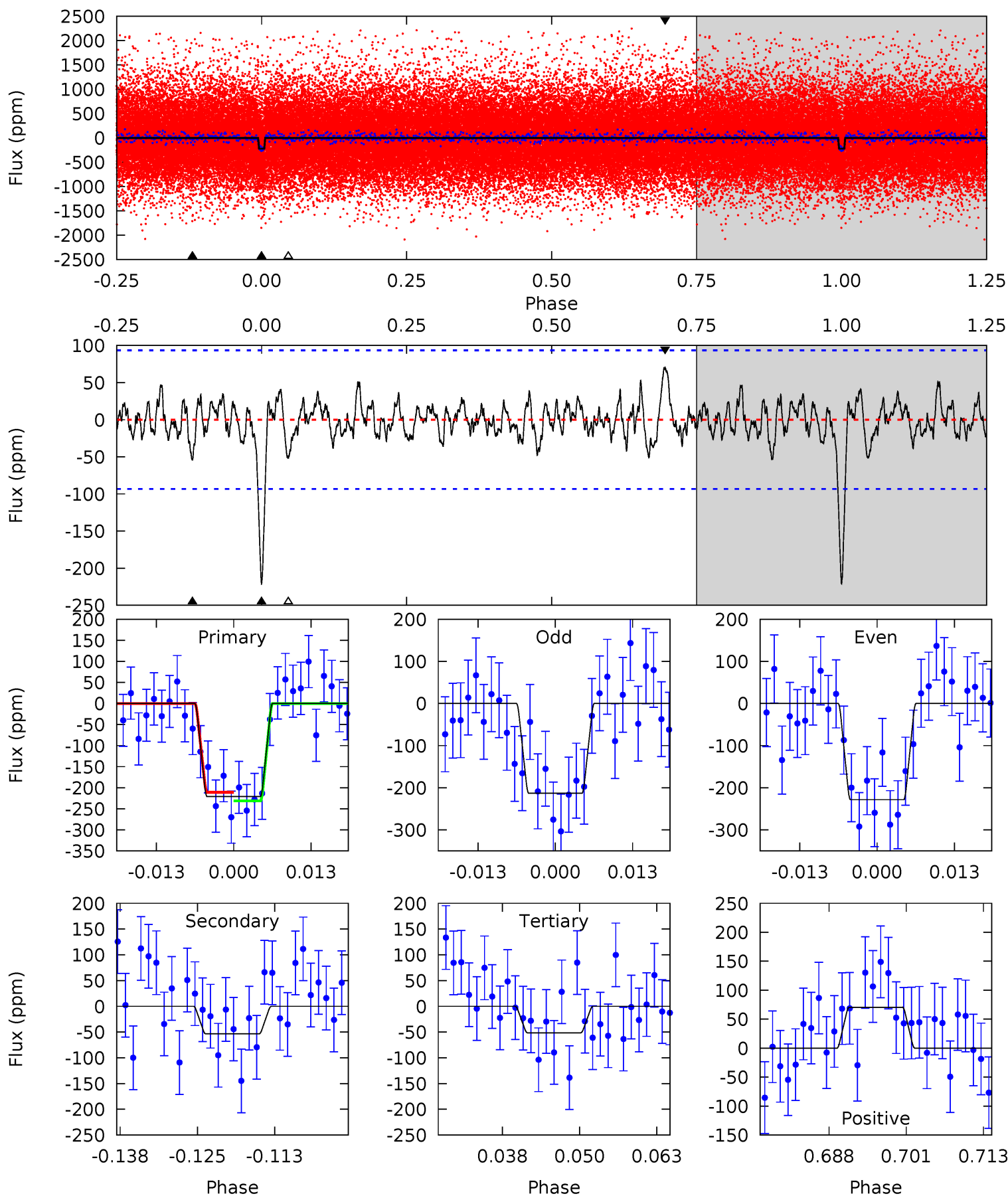
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	3.30	2.92	2.69	4.96	2.45	1.08	10.2	10.4	0.38	0.61	0.26	1.01	0.23	1.19



Alt Model-Shift Uniqueness Test

008355178-01, $P = 13.032453$ Days, $E = 120.663742$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	2.86	2.74	3.77	4.98	2.50	1.05	9.06	8.03	0.12	-0.91	0.41	0.87	0.24	0.55



Stellar Parameters For KIC 008355178

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6122^{+168}_{-232}	$4.471^{+0.050}_{-0.200}$	$-0.100^{+0.250}_{-0.350}$	$0.996^{+0.280}_{-0.120}$	$1.070^{+0.139}_{-0.139}$	$1.526^{+0.387}_{-0.746}$
	+3%/-4%	+1%/-4%	+250%/-350%	+28%/-12%	+13%/-13%	+25%/-49%
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 008355178-01 / KOI 6178.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-58 ± 18	$2.10^{+1.54}_{-1.32}$	1153^{+79}_{-57}	4182^{+2266}_{-728}	85^{+587}_{-58}
Alt.	-54 ± 19	$2.00^{+1.48}_{-1.18}$	1154^{+81}_{-59}	4177^{+1782}_{-768}	85^{+400}_{-58}

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

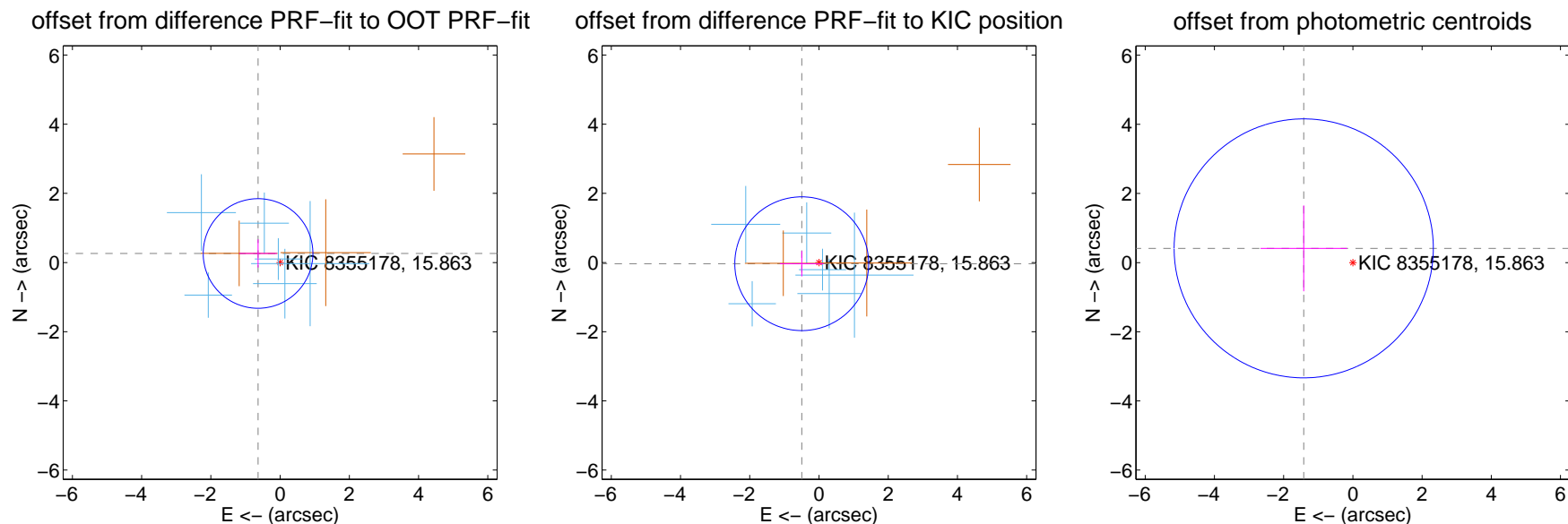
DV Centroid Data

Supplemental centroid analysis for 008355178-01. Kepler magnitude: 15.86. Transit SNR 10.30

There are 6 quarters with good PRF difference image offsets

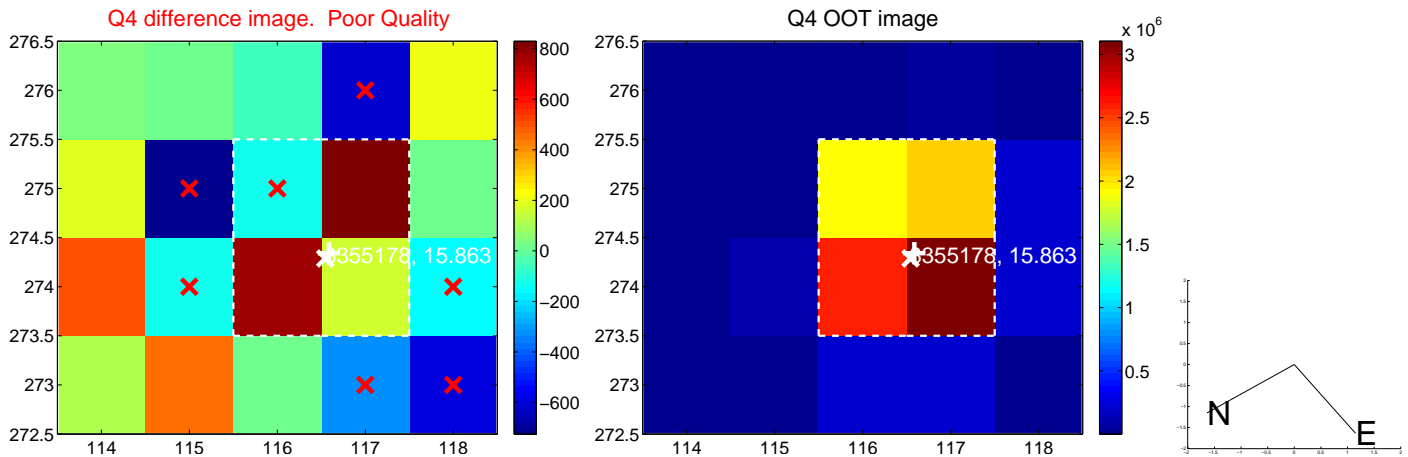
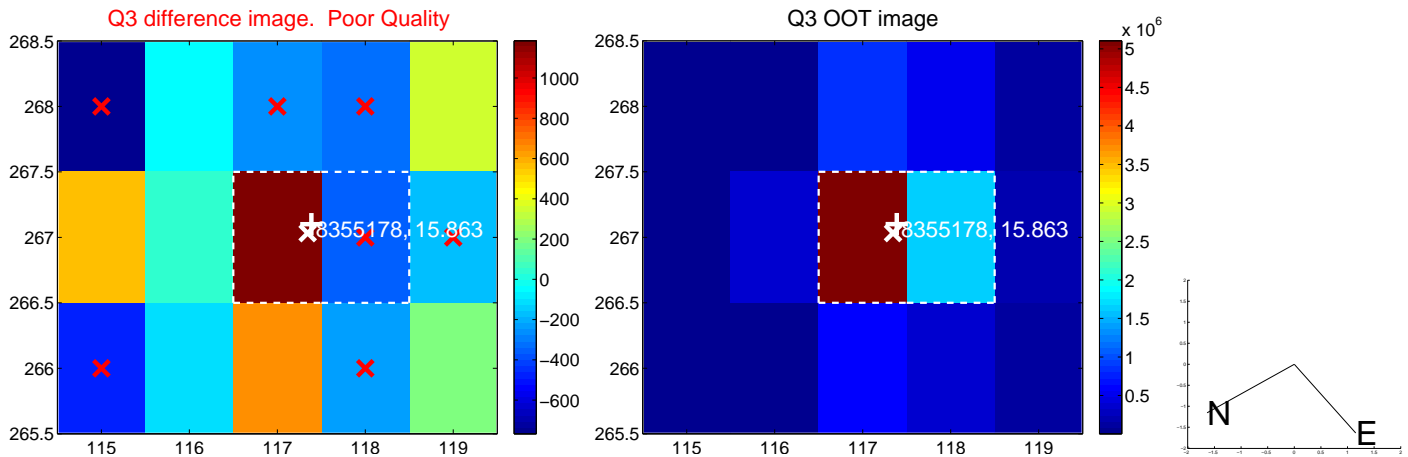
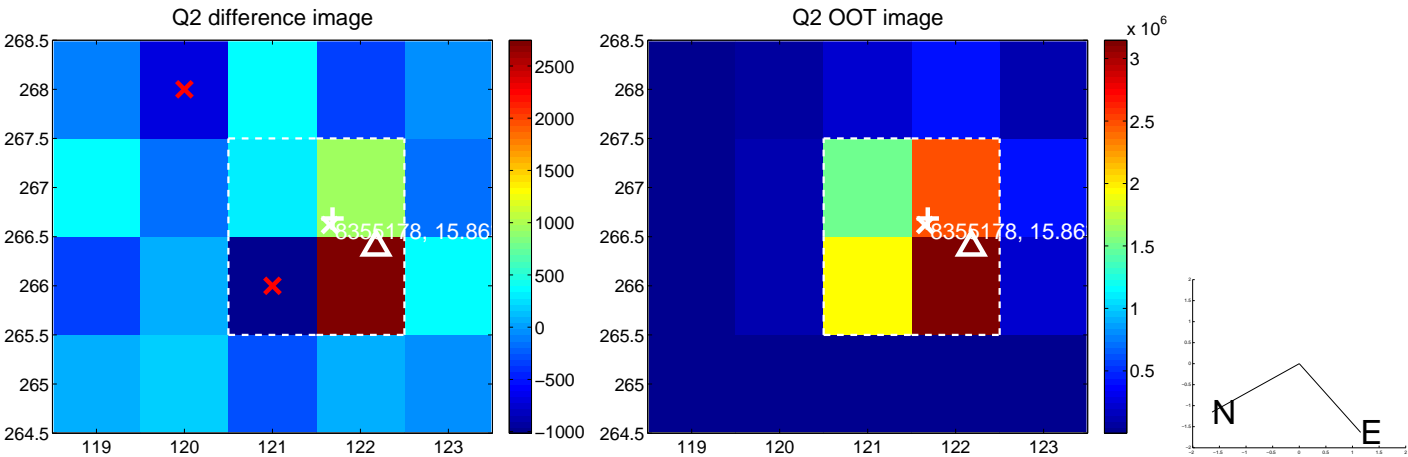
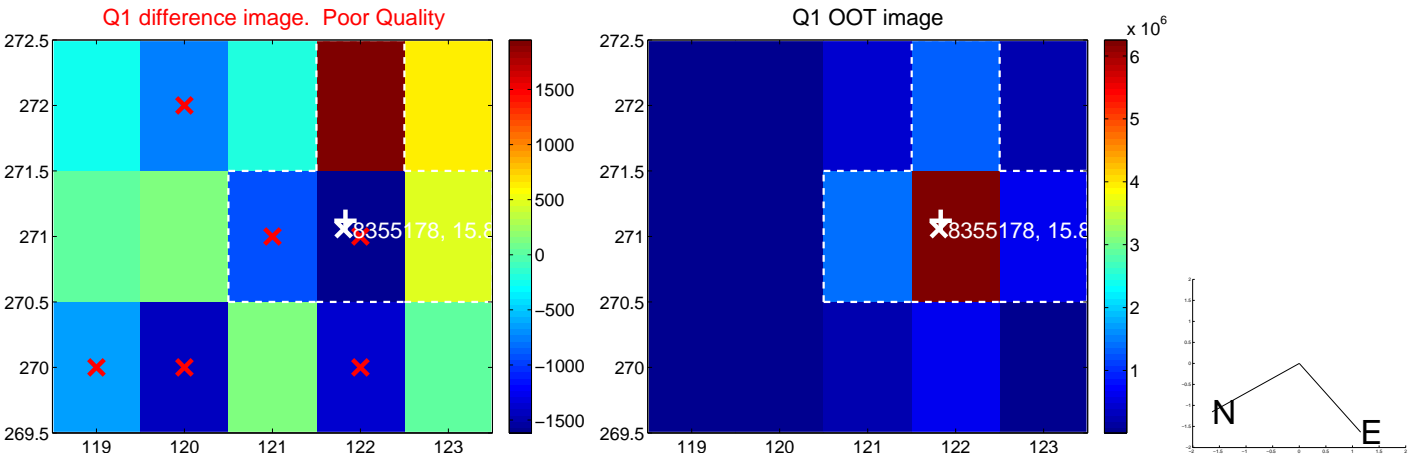
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.689 ± 0.528	1.30	0.637 ± 0.546	0.262 ± 0.407
PRF-fit source offset from KIC position	0.499 ± 0.645	0.77	0.498 ± 0.632	-0.034 ± 0.369
photometric centroid source offset	1.48 ± 1.25	1.18	1.42 ± 1.25	0.41 ± 1.24

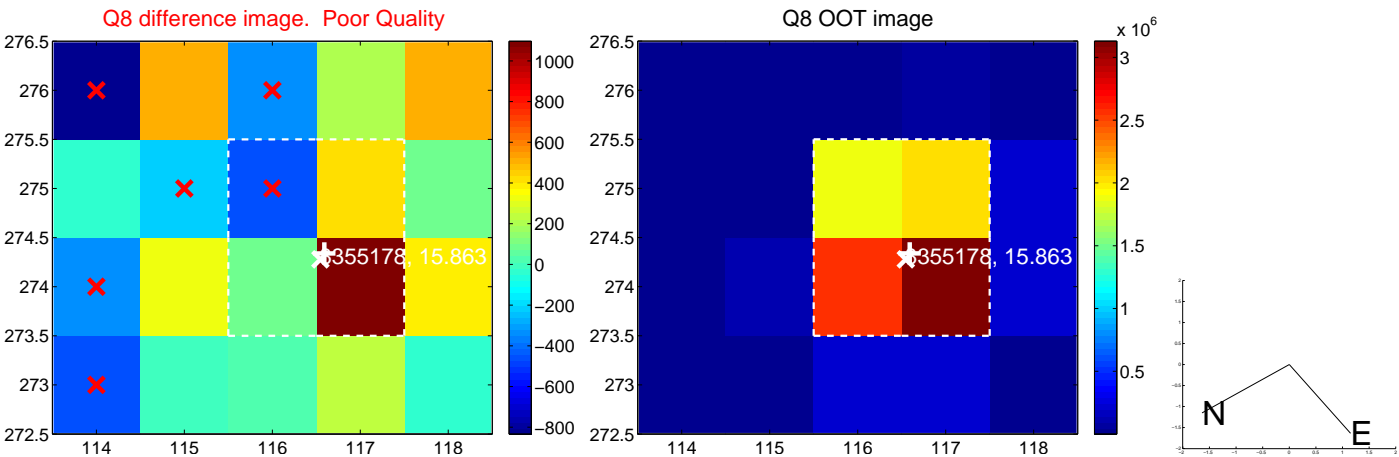
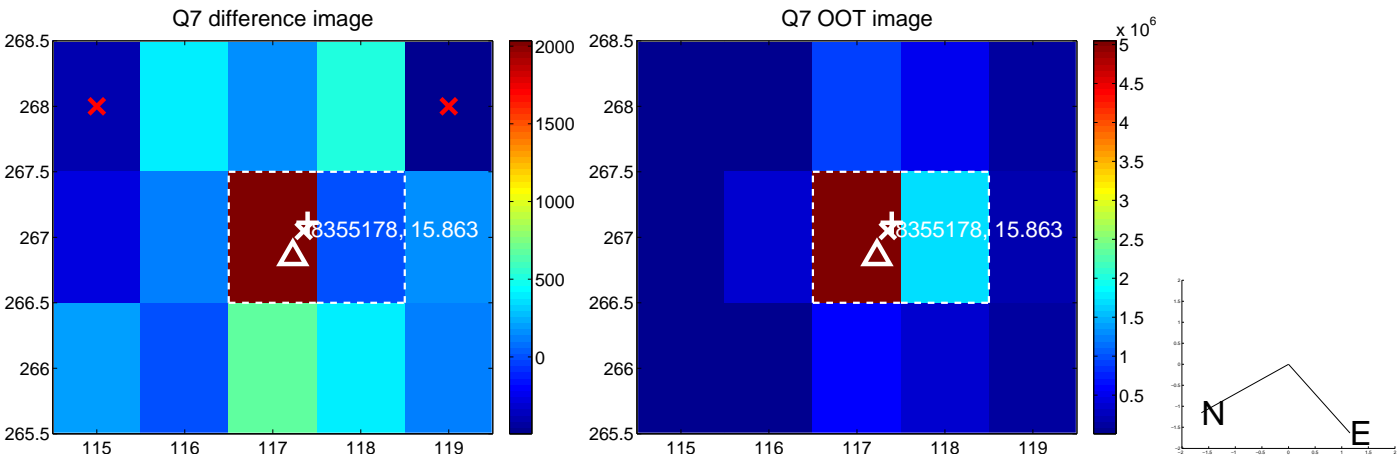
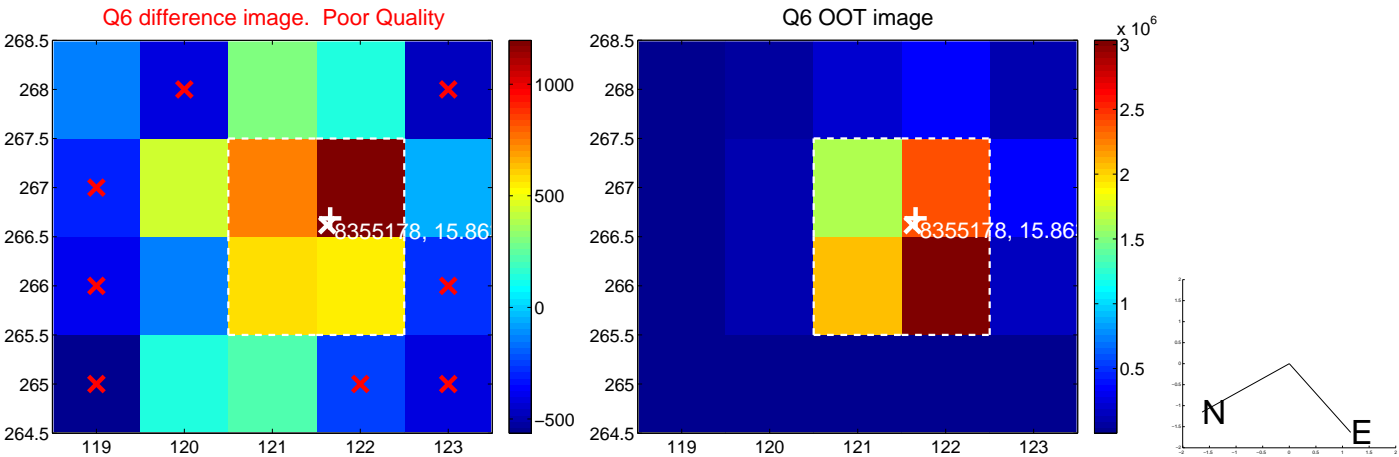
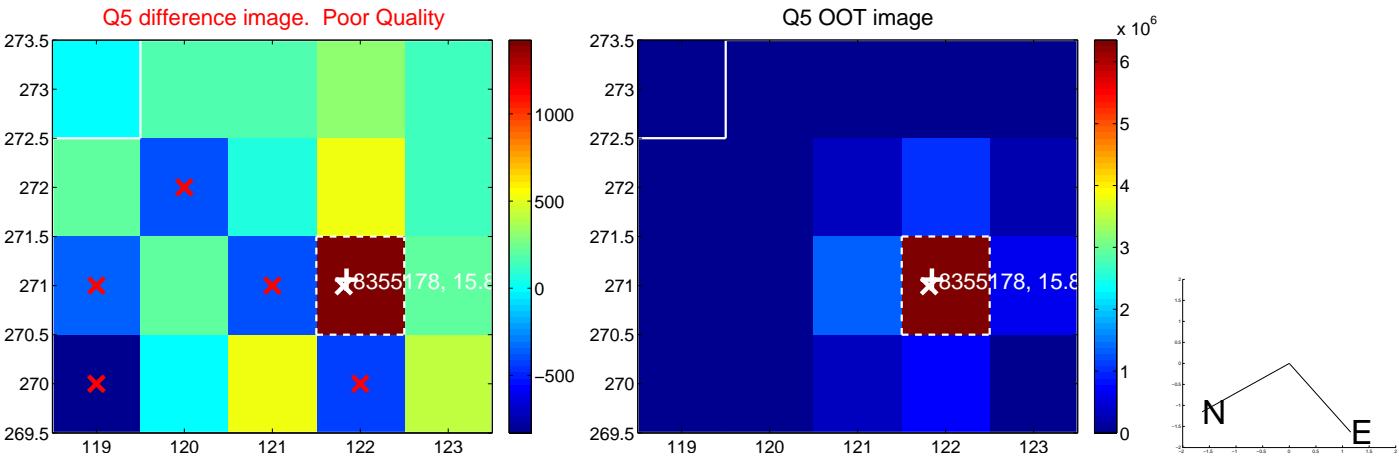


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

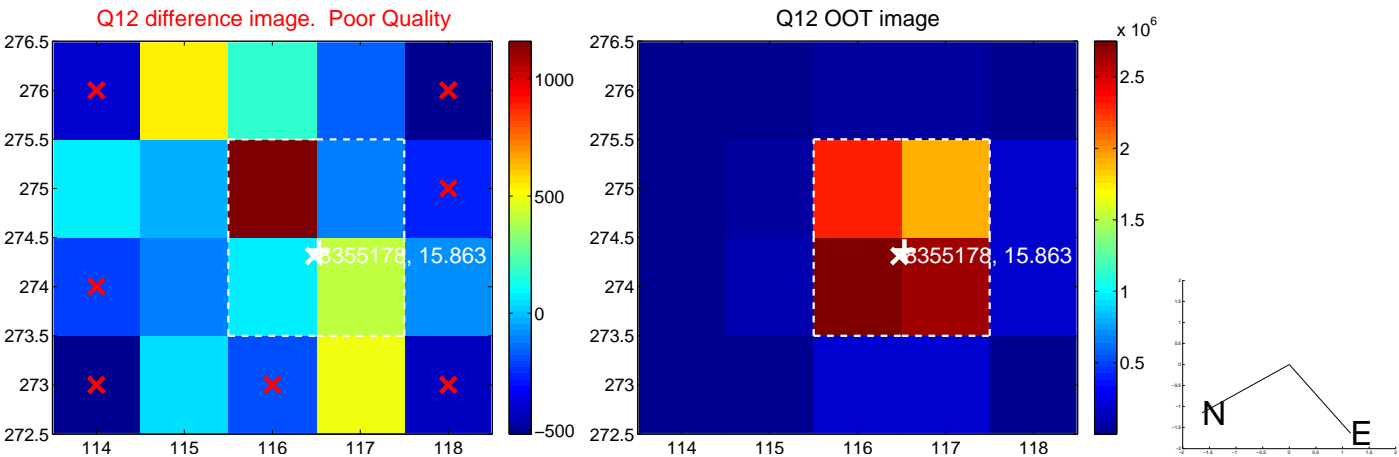
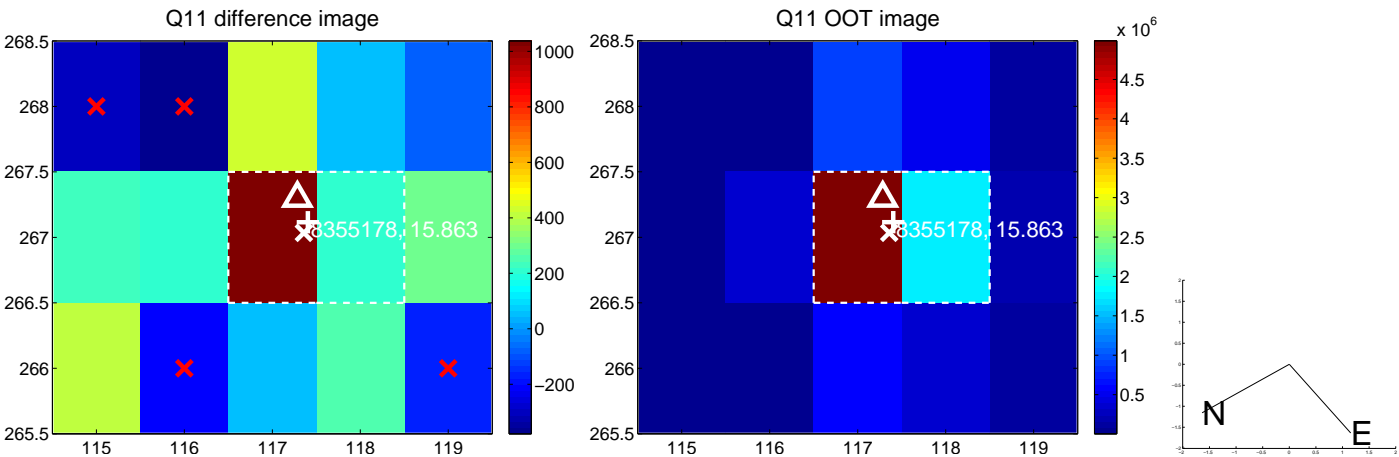
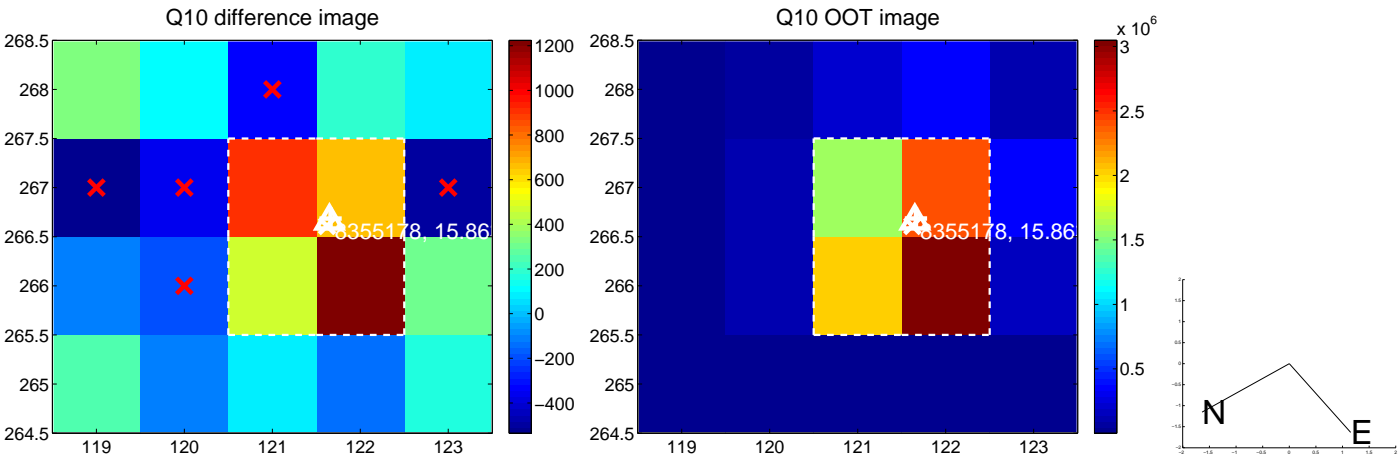
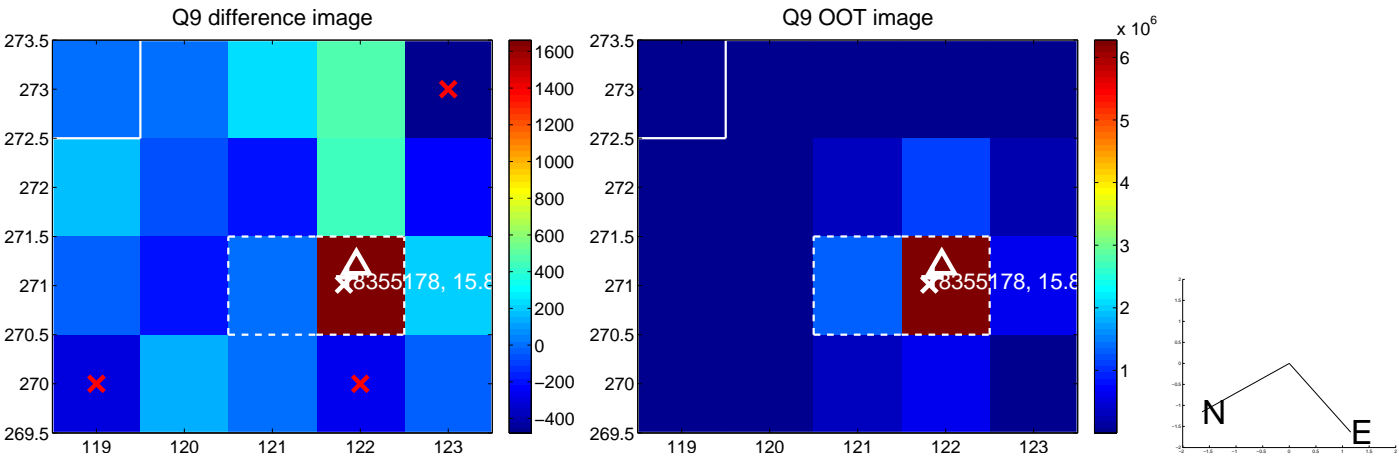
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



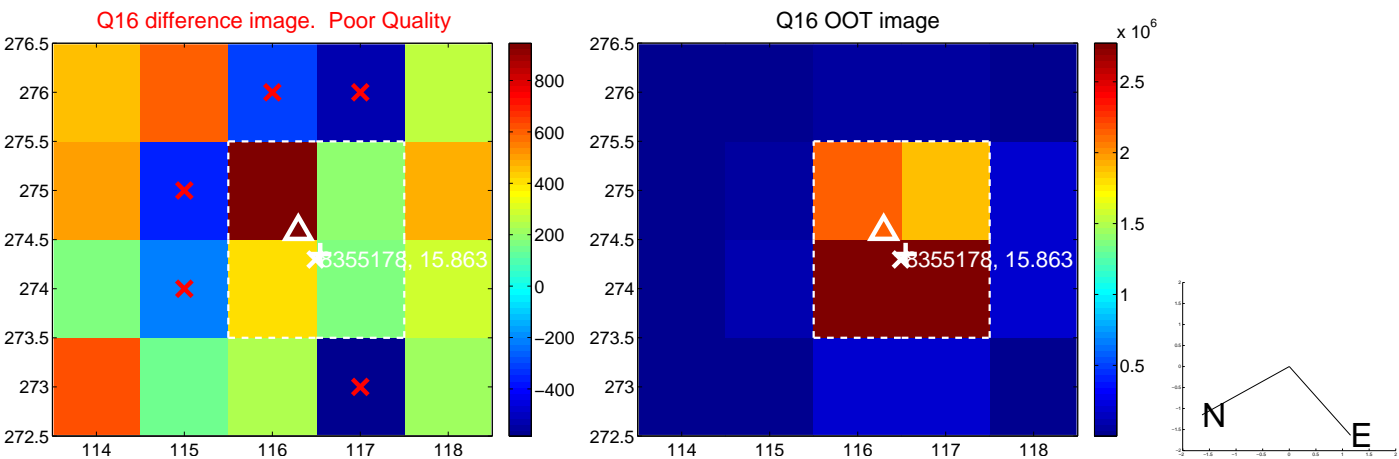
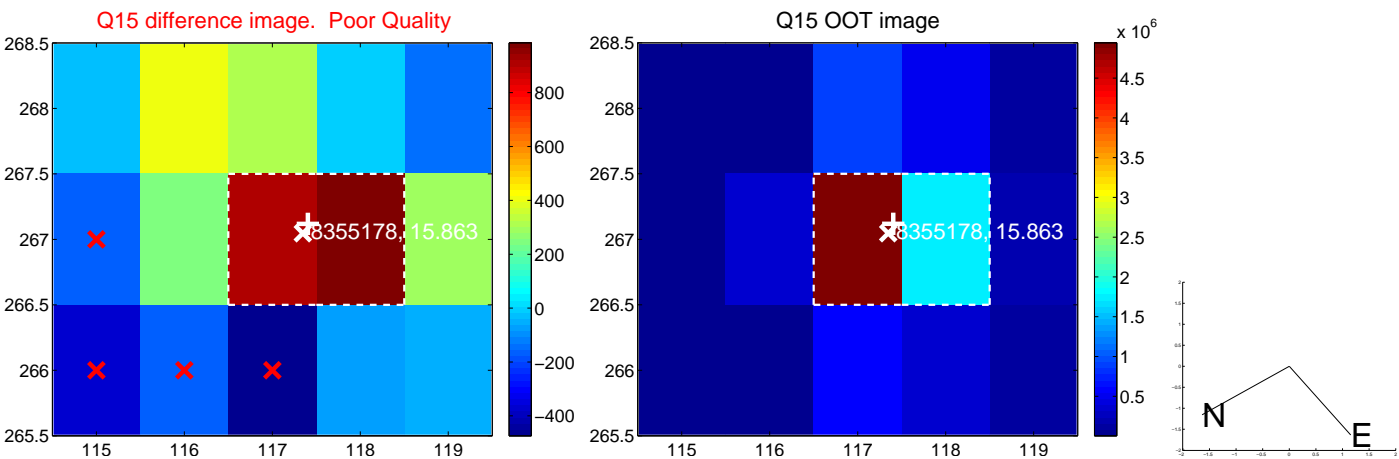
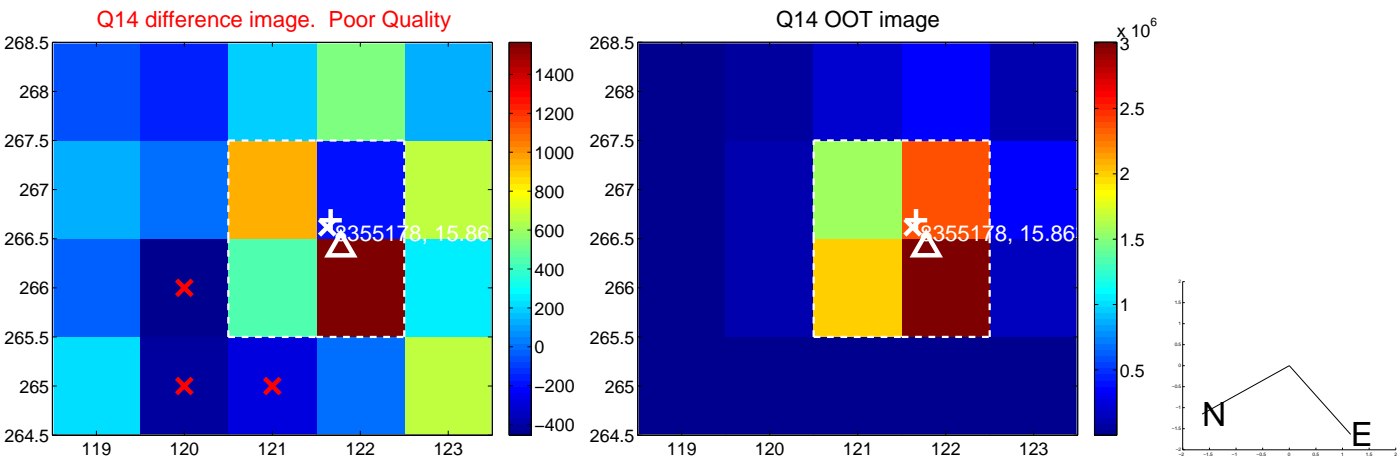
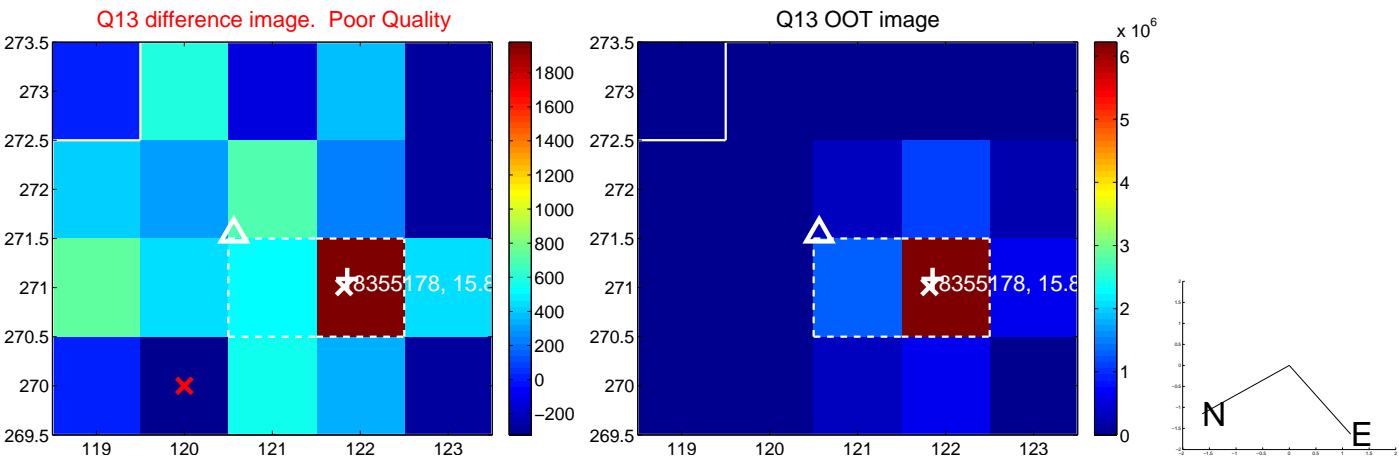
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



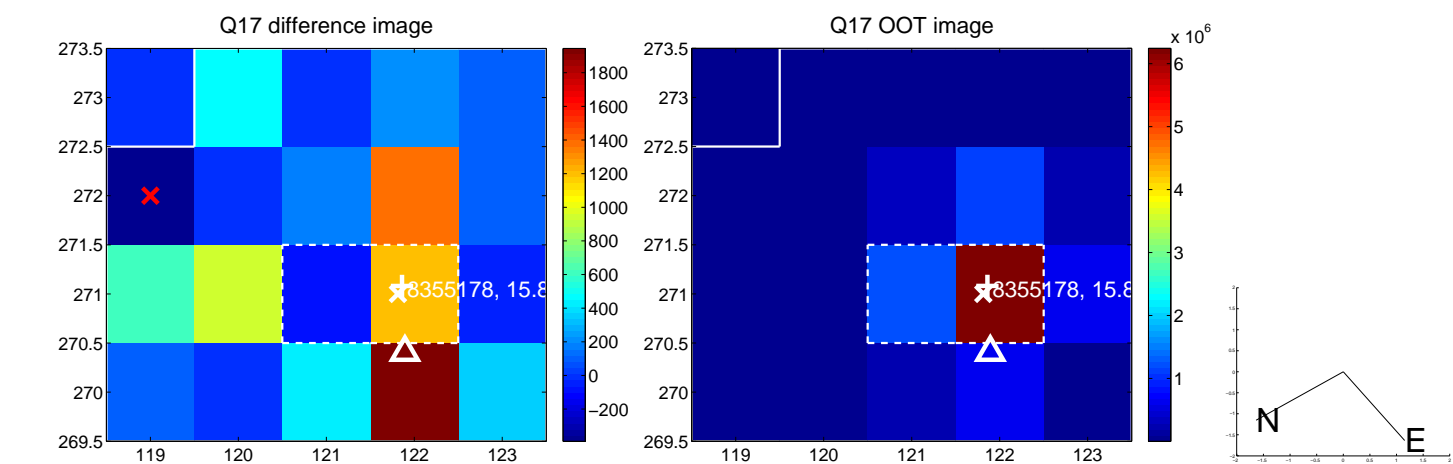
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



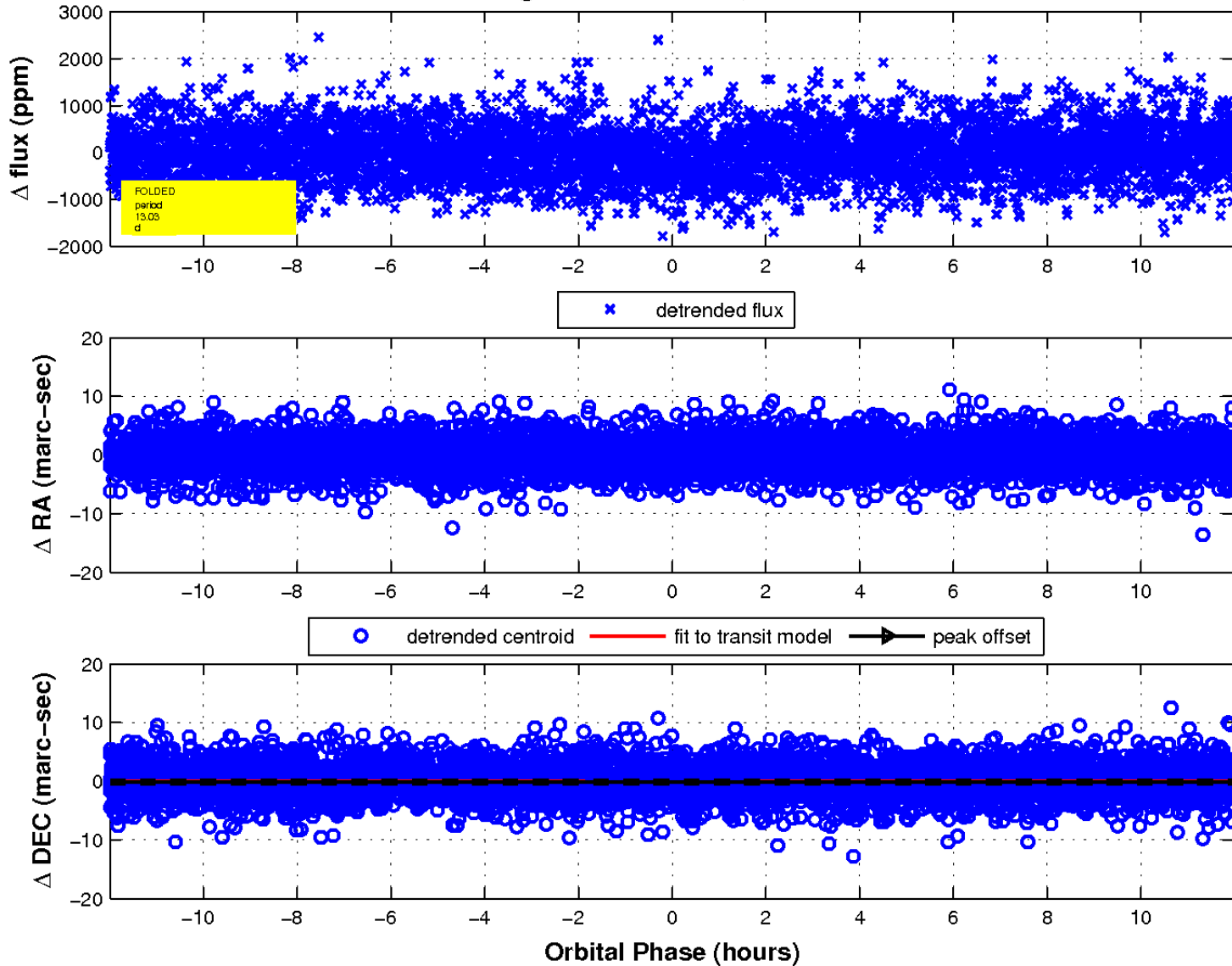
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

