

KIC 003002478

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})
003002478-01	OBS	2380.01	6.357087	135.472722	257.2	1.479	14.8	16.9	0.96	5982	1.82	227.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003002478-01	OBS	PC	1.00	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.

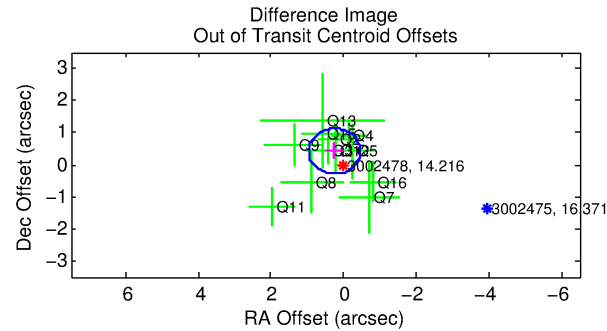
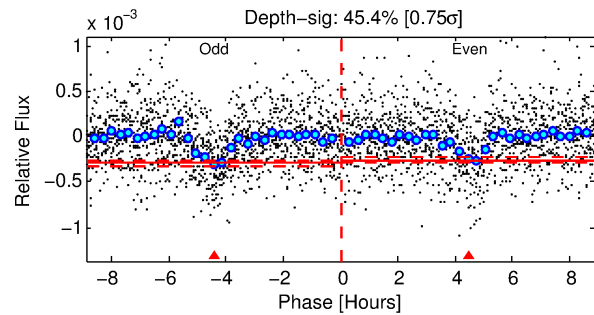
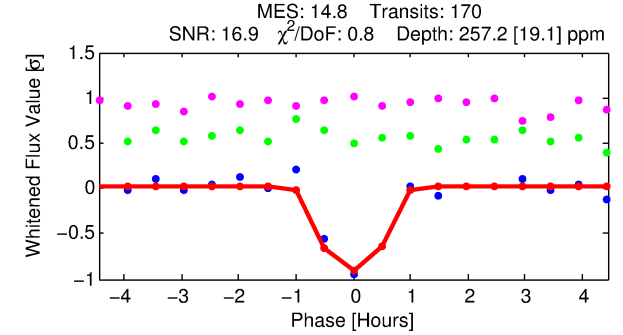
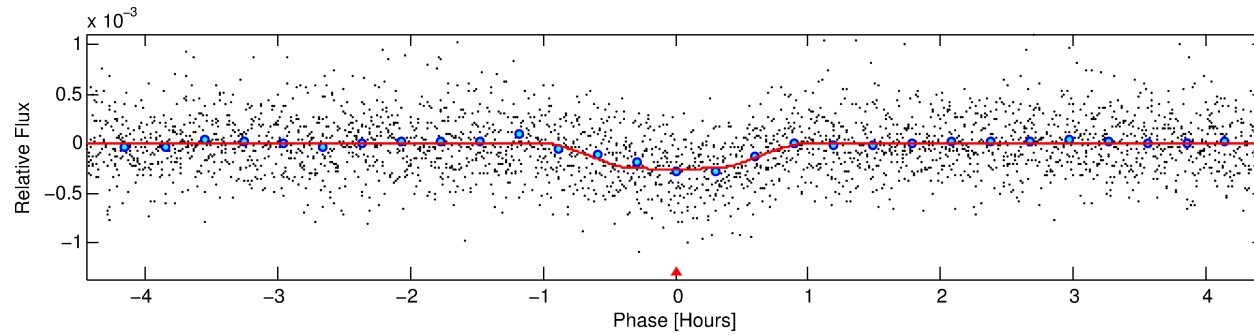
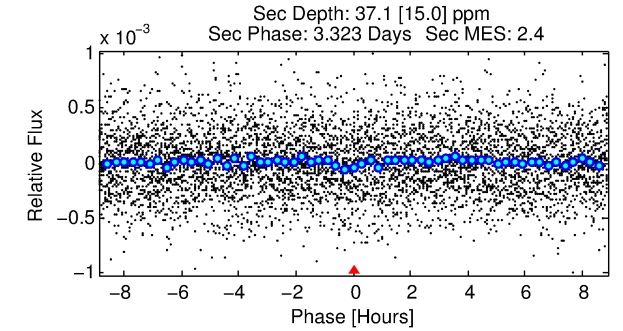
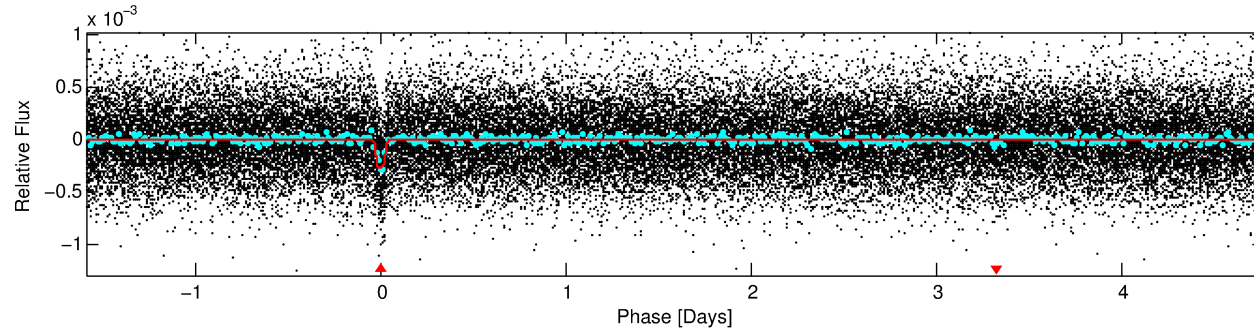
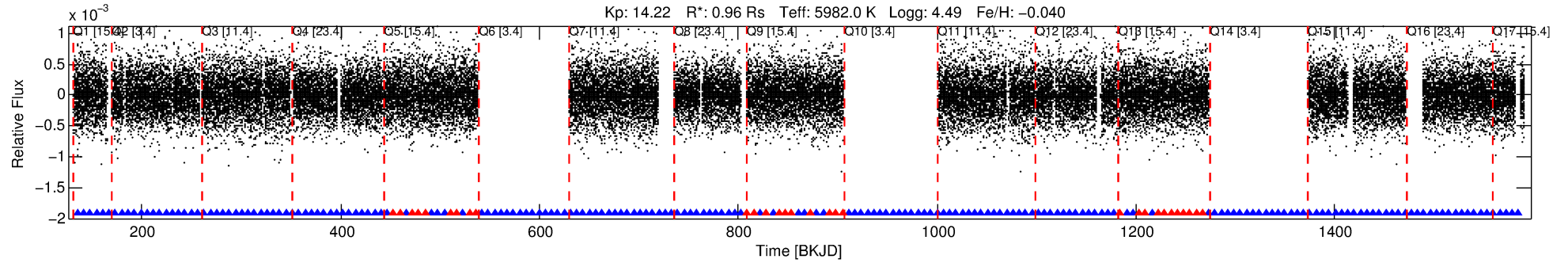
Ephemeris Match Information For 003002478-01

No Significant Match Found

DV One-Page Summary

KIC: 3002478 Candidate: 1 of 1 Period: 6.357 d

KOI: K02380.01 Corr: 0.950



DV Fit Results:

Period = 6.35709 [0.00002] d
Epoch = 135.4727 [0.0020] BKJD
Rp/R* = 0.0174 [0.0084]
a/R* = 15.87 [38.34]
b = 0.90 [0.55]
Seff = 227.40 [95.40]
Teff = 990 [104] K
Rp = 1.82 [1.05] Re
a = 0.0682 [0.0183] AU
Ag = 28.66 [32.23] [0.86 σ]
Teffp = 3542 [939] K [2.70 σ]

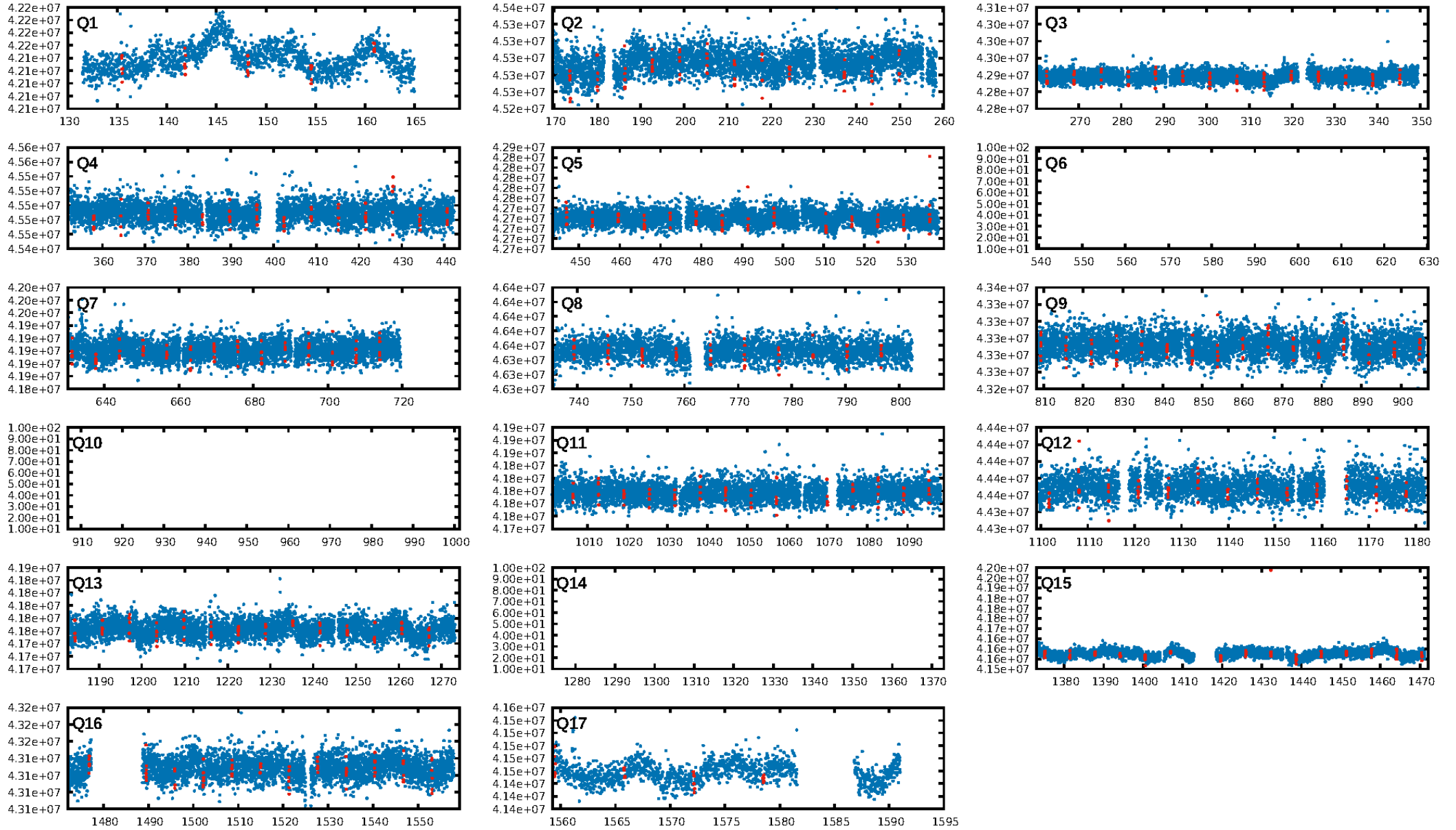
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.90e-47
RollingBand-fgt: 0.81 [131/161]
GhostDiagnostic-chr: 6.448
Centroid-sig: 0.0%
Centroid-so: 1.962 arcsec [2.24 σ]
OotOffset-rm: 0.488 arcsec [2.07 σ]
KicOffset-rm: 0.206 arcsec [0.86 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [14/14]

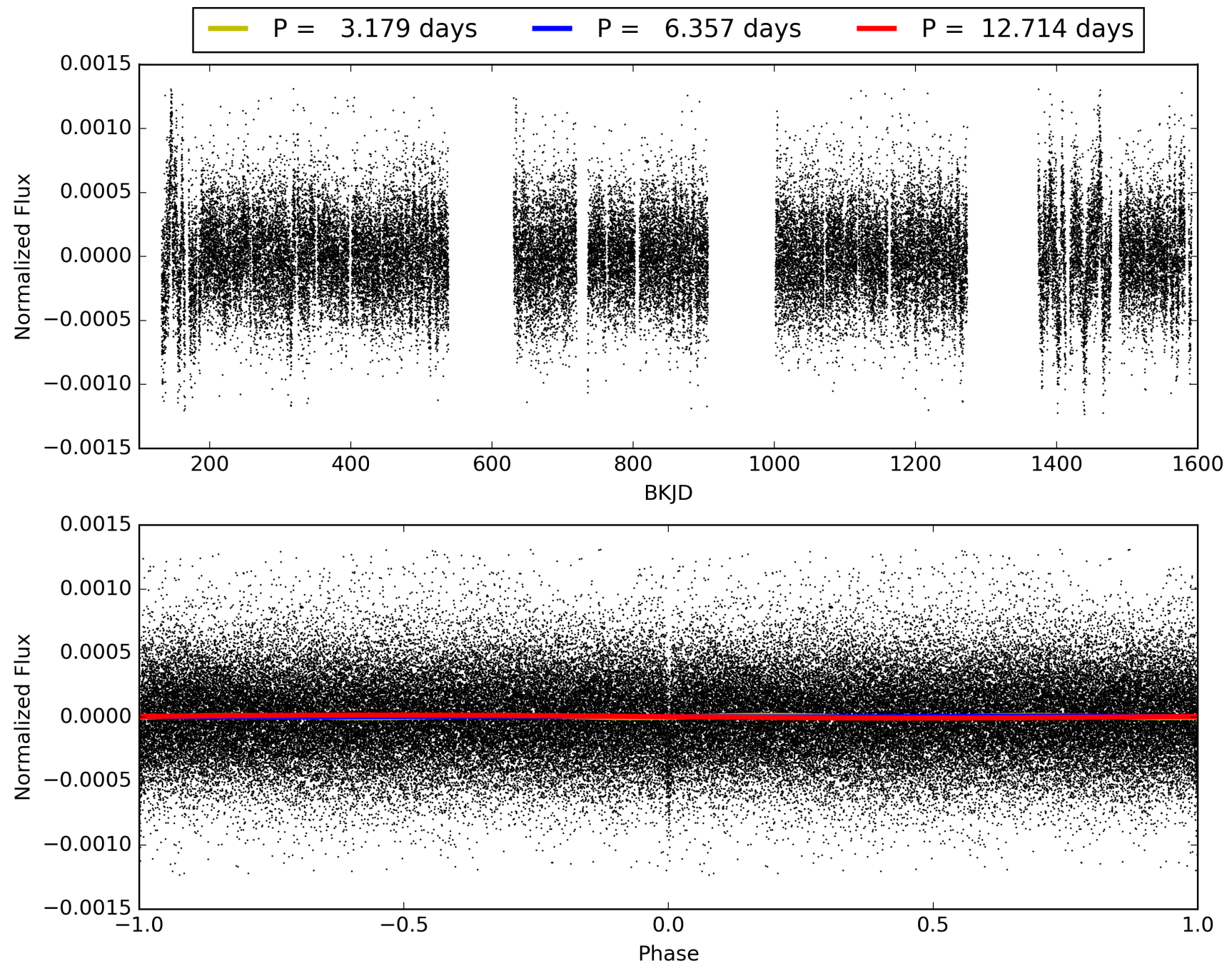
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:16:22 Z

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

TCE 003002478-01, PDC Light Curves

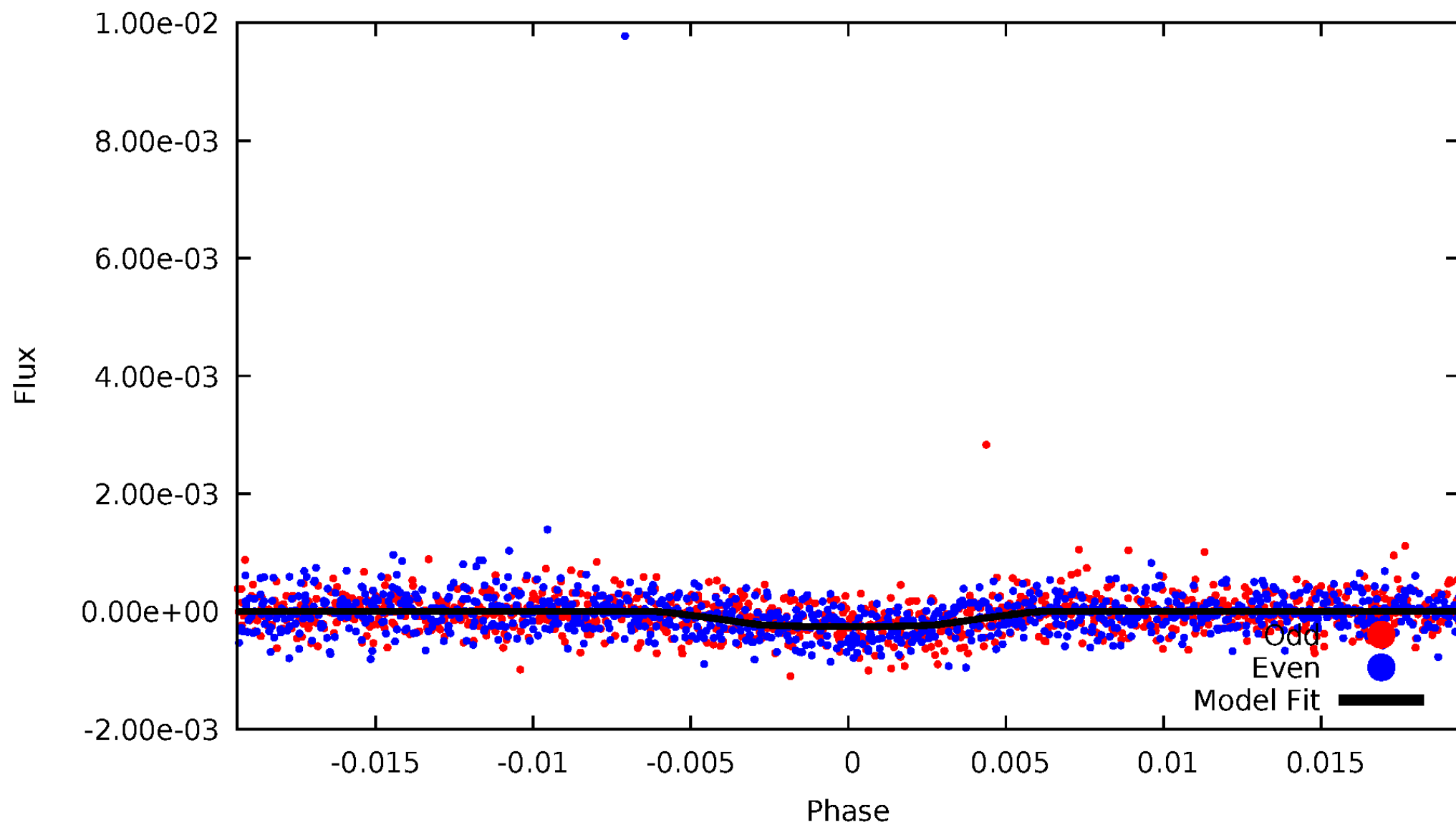


TCE 003002478-01



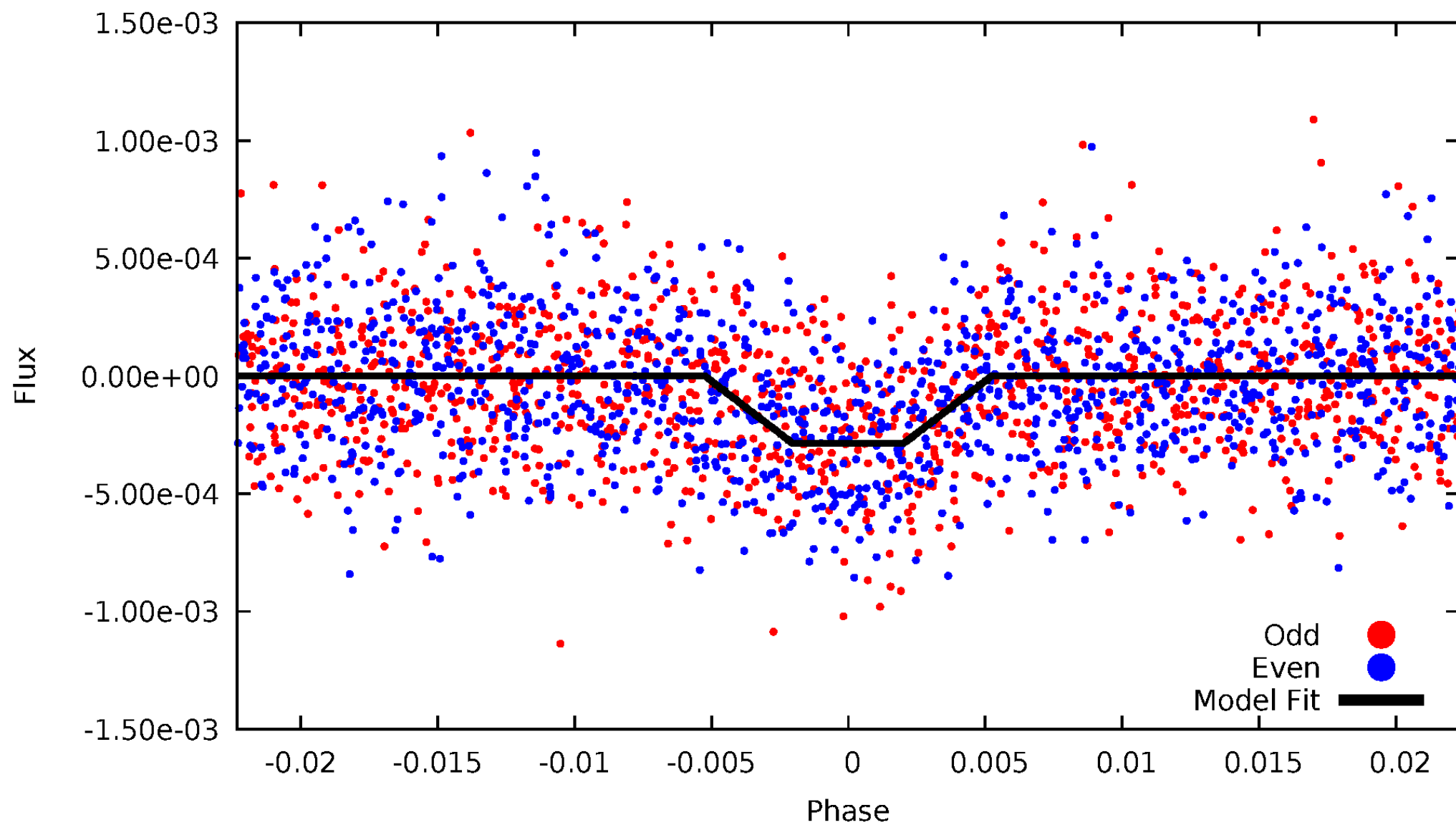
DV Odd/Even

TCE 003002478-01



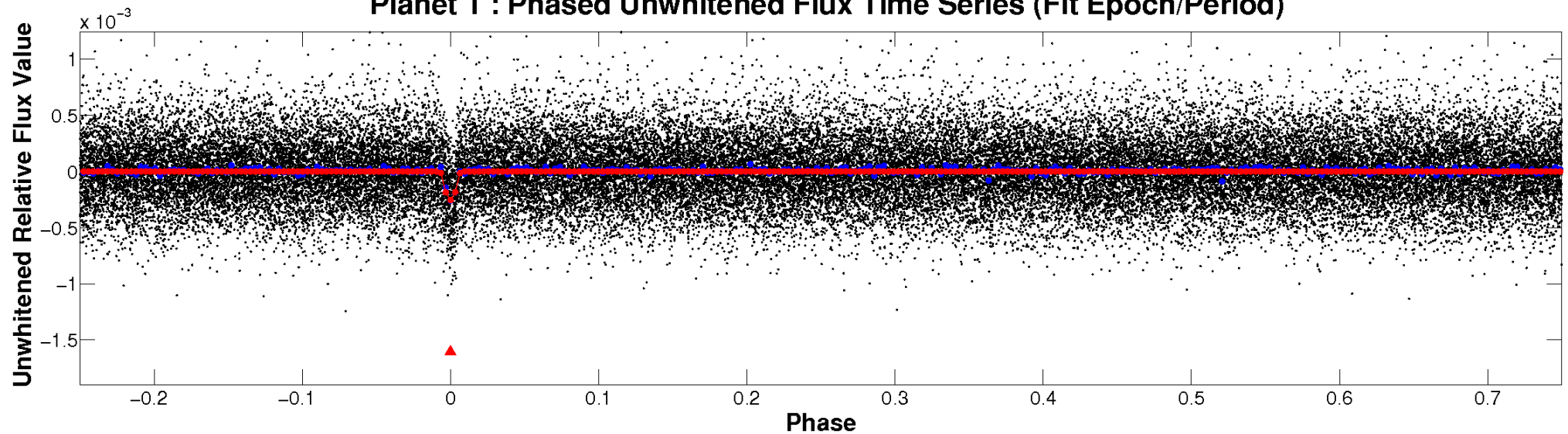
ALT Odd/Even

TCE 003002478-01

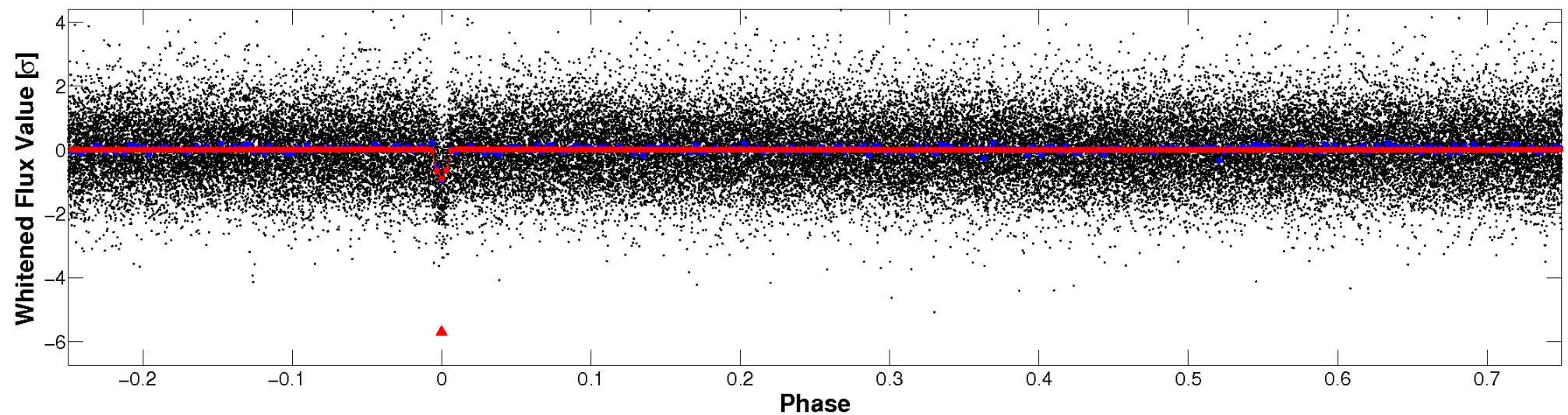


Non-Whitened Vs. Whitened Light Curve

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

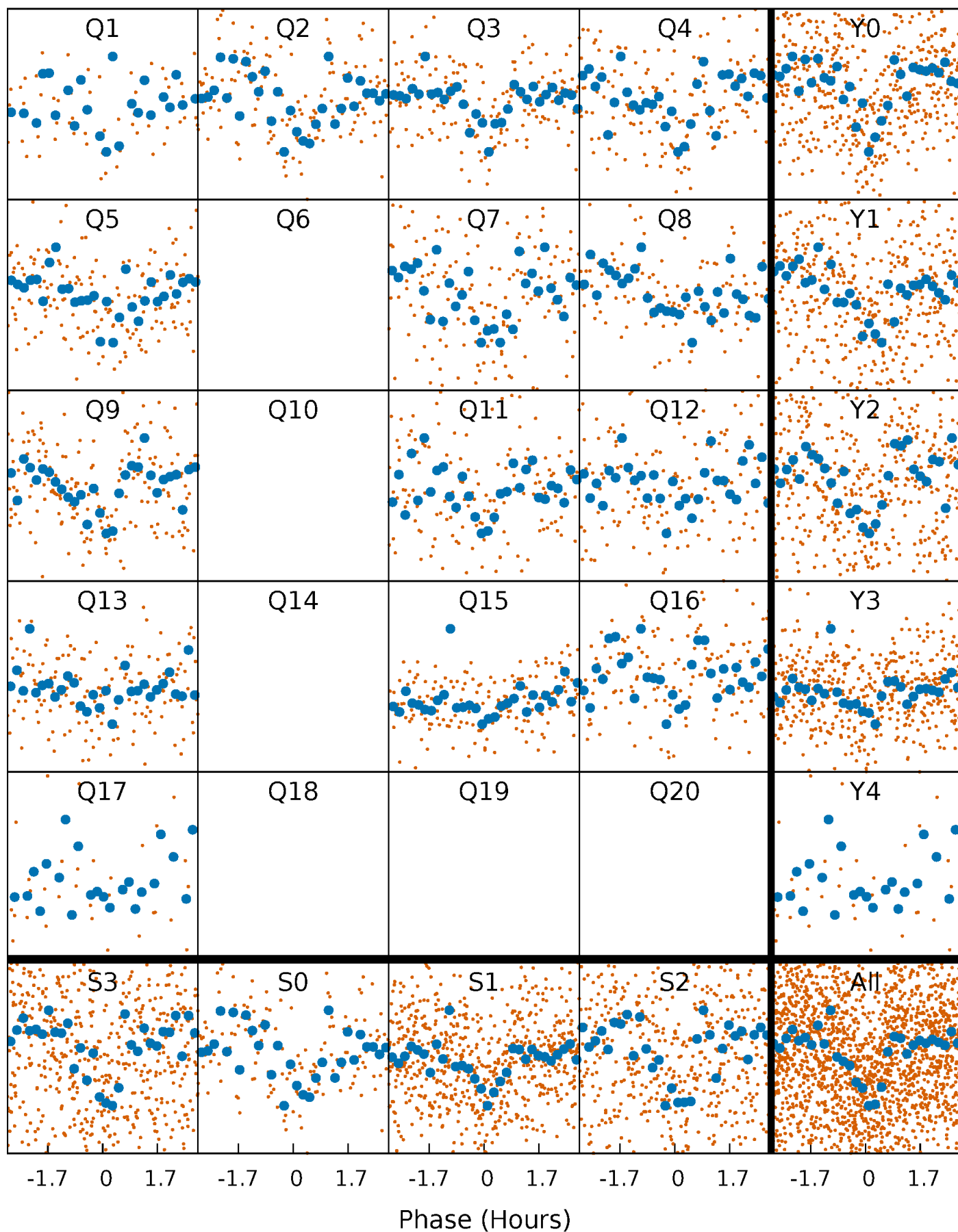


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



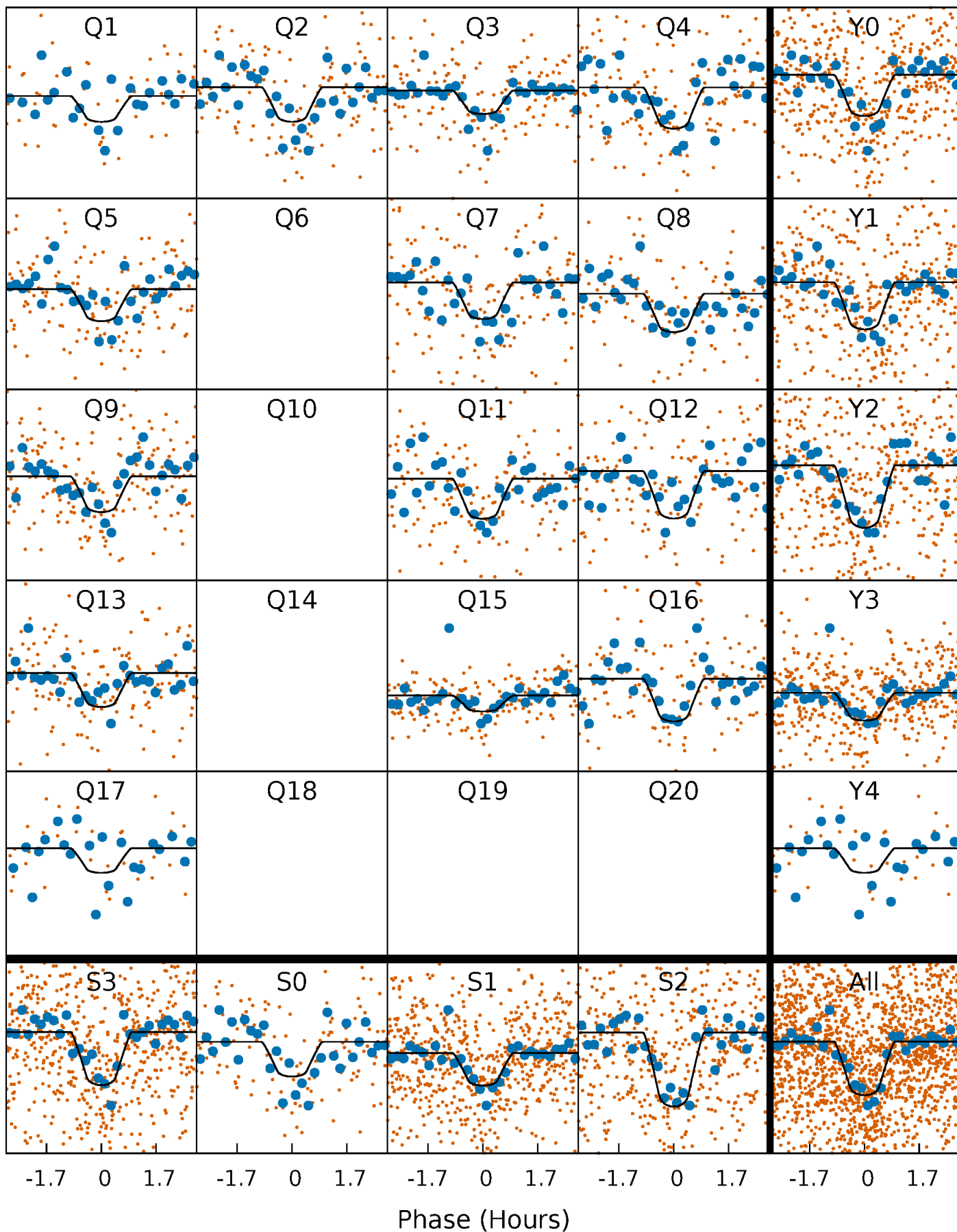
PDC Quarter-Phased Transit Curves

TCE 003002478-01 P= 6.357087 Days $T_0=135.472722$ (BKJD)



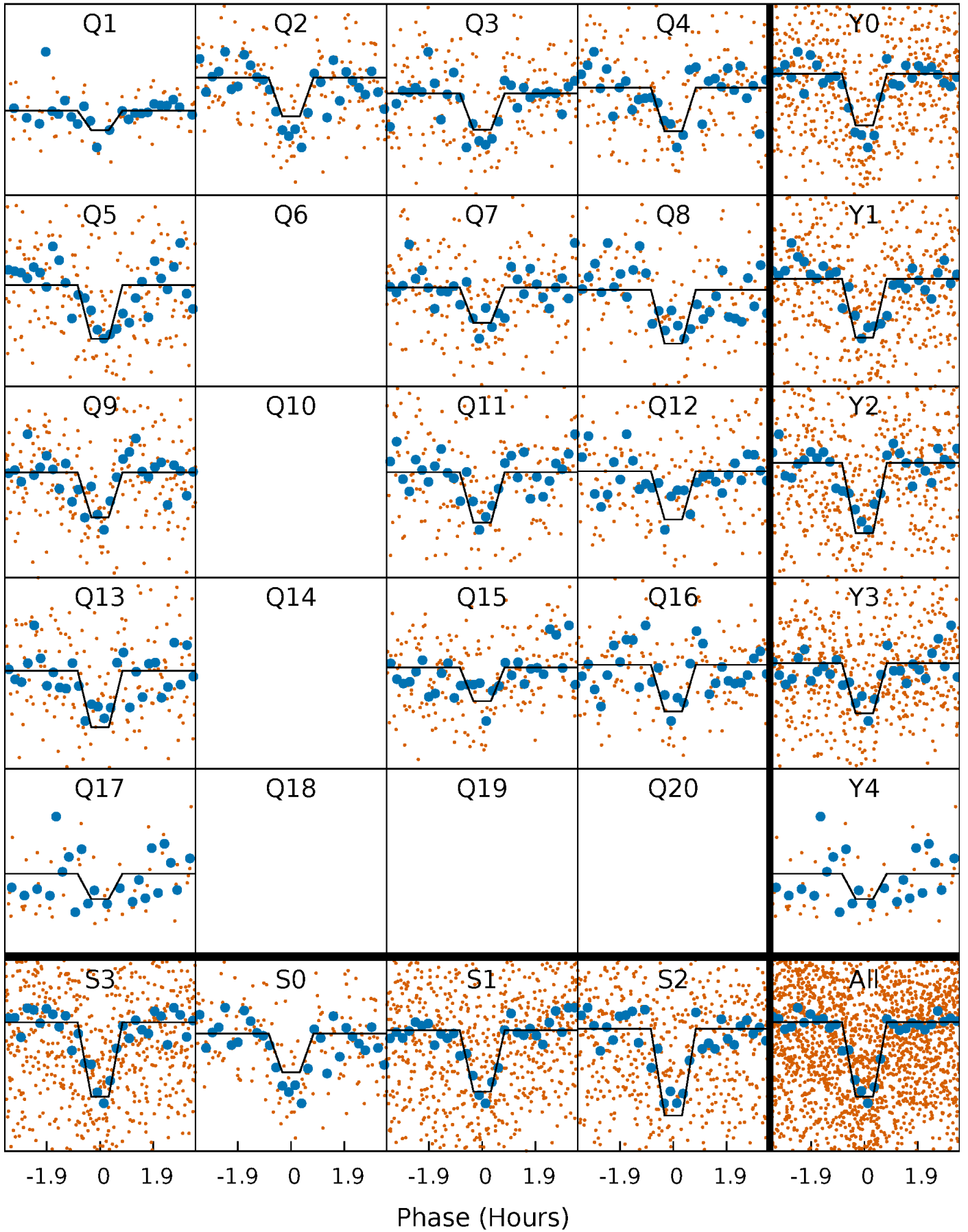
DV Quarter-Phased Transit Curves

TCE 003002478-01 P= 6.357087 Days $T_0=135.472722$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

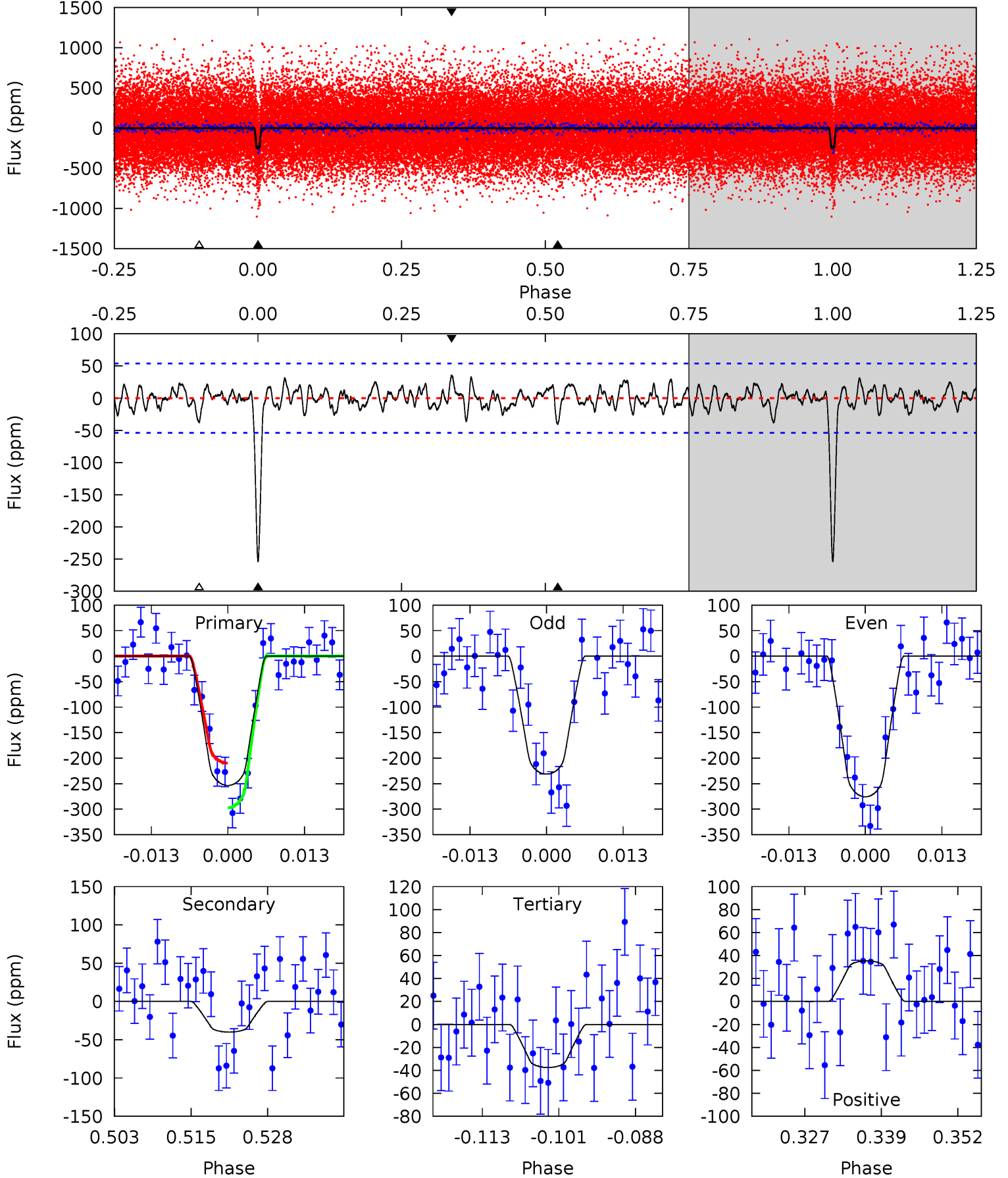
TCE 003002478-01 P= 6.357049 Days $T_0=135.479009$ (BKJD)



DV Model-Shift Uniqueness Test

003002478-01, P = 6.357087 Days, E = 129.115635 Days

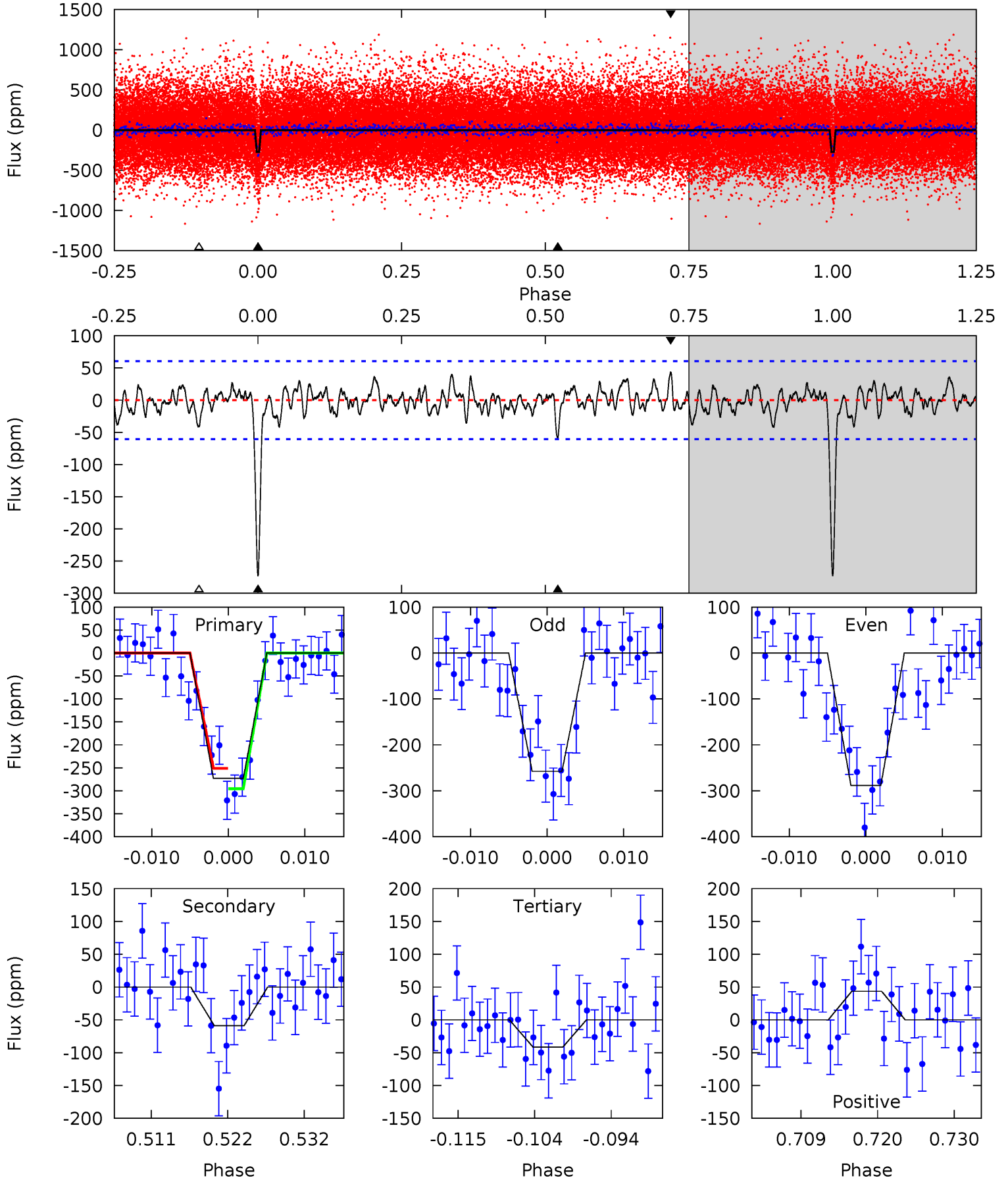
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	3.70	3.47	3.27	4.98	2.50	1.18	19.9	20.1	0.23	0.43	2.05	1.01	0.12	4.05



Alt Model-Shift Uniqueness Test

003002478-01, P = 6.357049 Days, E = 129.121960 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	4.88	3.44	3.61	5.02	2.56	1.22	19.2	19.0	1.44	1.27	1.29	0.97	0.14	1.84



Stellar Parameters For KIC 003002478

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+180}_{-198}	$4.493^{+0.052}_{-0.221}$	$-0.040^{+0.250}_{-0.300}$	$0.960^{+0.300}_{-0.100}$	$1.047^{+0.129}_{-0.142}$	$1.667^{+0.365}_{-0.912}$
	+3%/-3%	+1%/-5%	+625%/-750%	+31%/-10%	+12%/-14%	+22%/-55%
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 003002478-01 / KOI 2380.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 11	$1.97^{+0.95}_{-0.92}$	1418^{+105}_{-69}	3912^{+1010}_{-528}	26^{+58}_{-15}
Alt.	-59 ± 12	$1.84^{+0.98}_{-0.81}$	1415^{+100}_{-74}	4270^{+1175}_{-601}	44^{+93}_{-25}

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

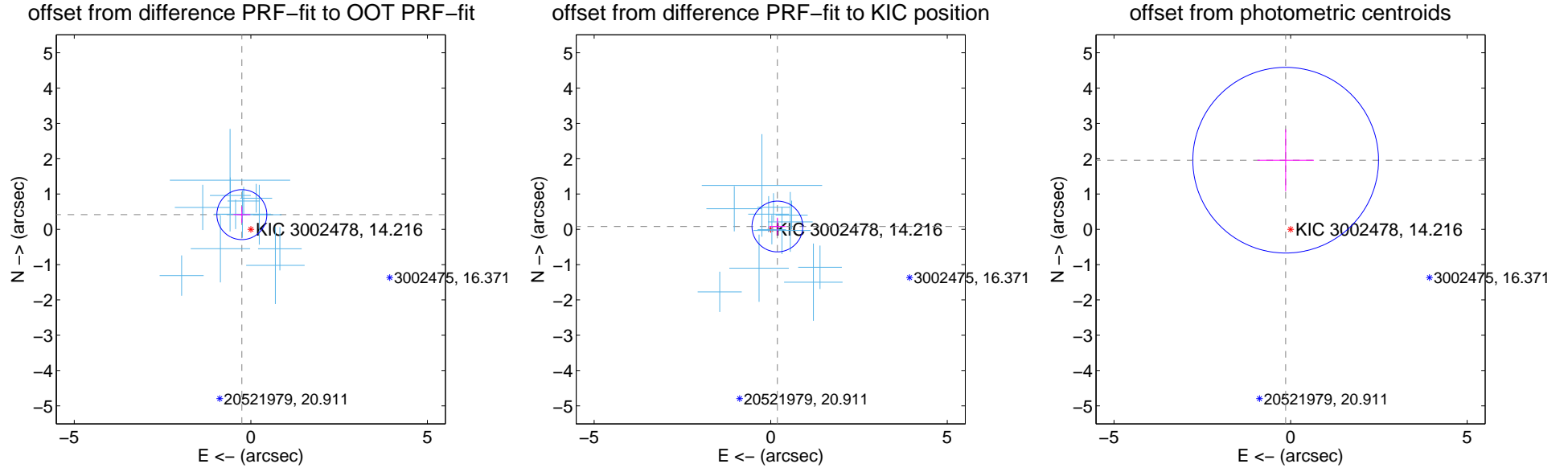
DV Centroid Data

Supplemental centroid analysis for 003002478-01. Kepler magnitude: 14.22. Transit SNR 16.87

There are 12 quarters with good PRF difference image offsets

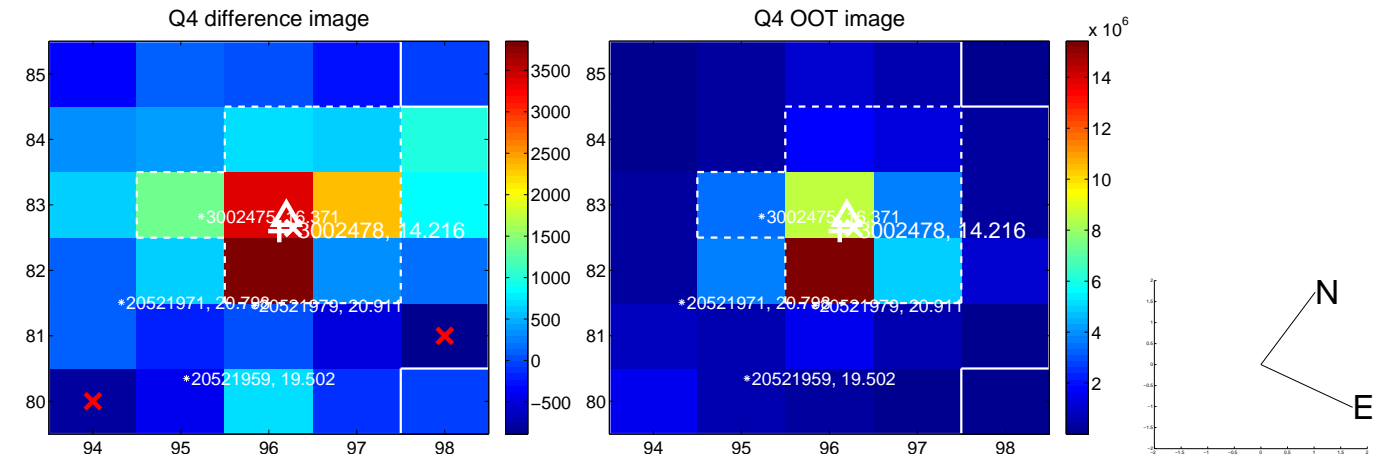
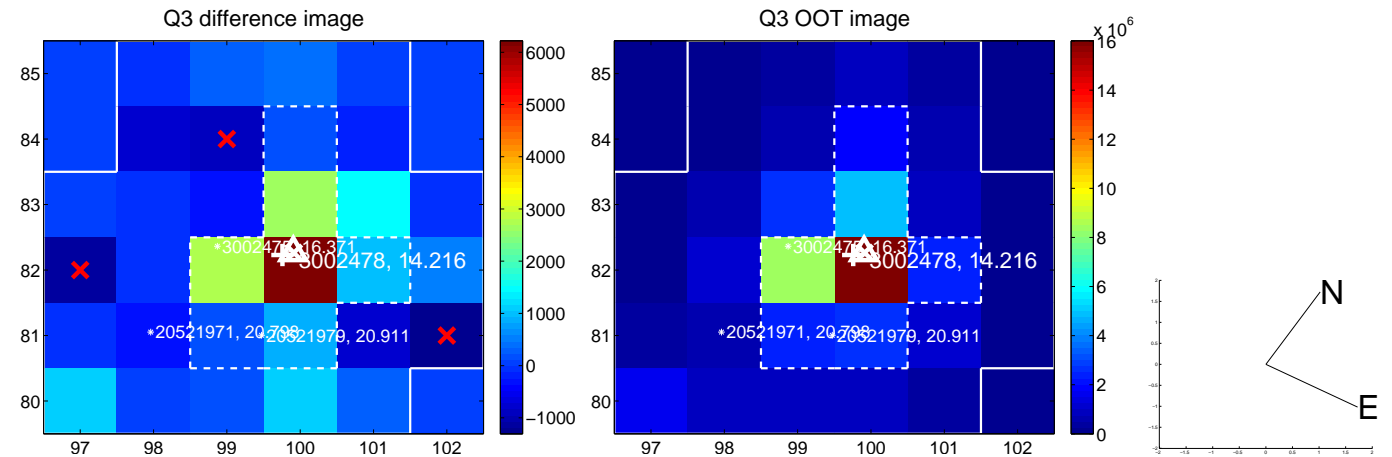
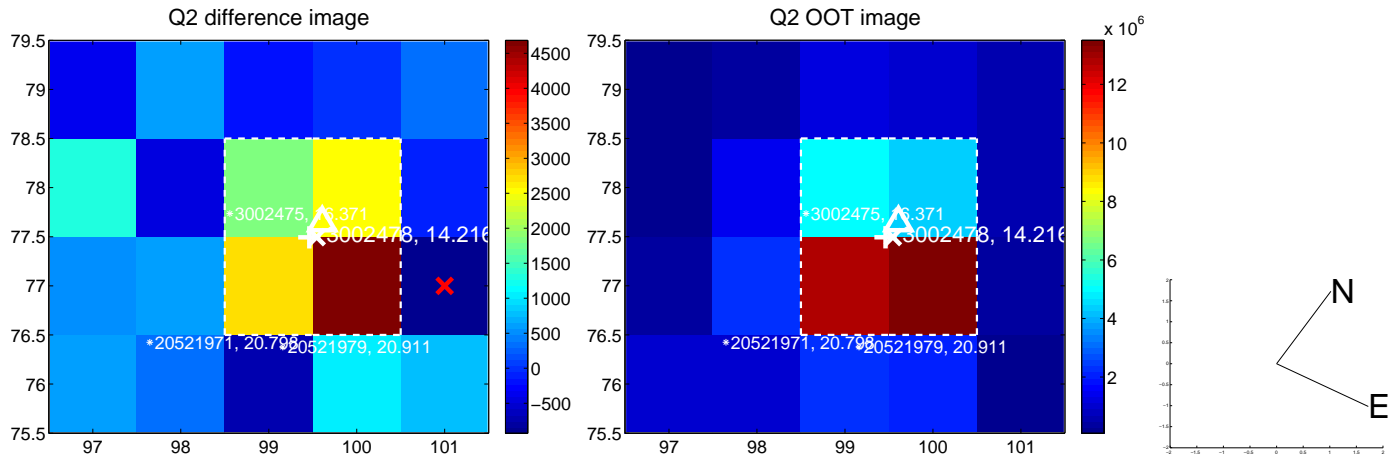
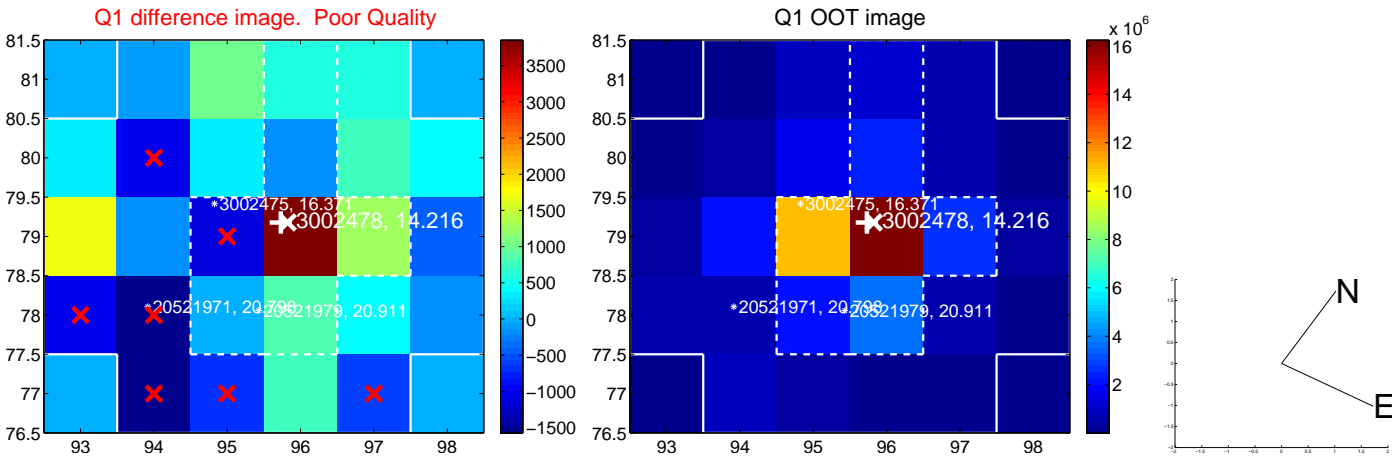
The direct PRF centroid is offset from the target star catalog position by about 0.78 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.488 ± 0.236	2.07	0.254 ± 0.240	0.416 ± 0.234
PRF-fit source offset from KIC position	0.206 ± 0.240	0.86	-0.189 ± 0.238	0.080 ± 0.251
photometric centroid source offset	1.96 ± 0.88	2.24	0.14 ± 0.80	1.96 ± 0.88

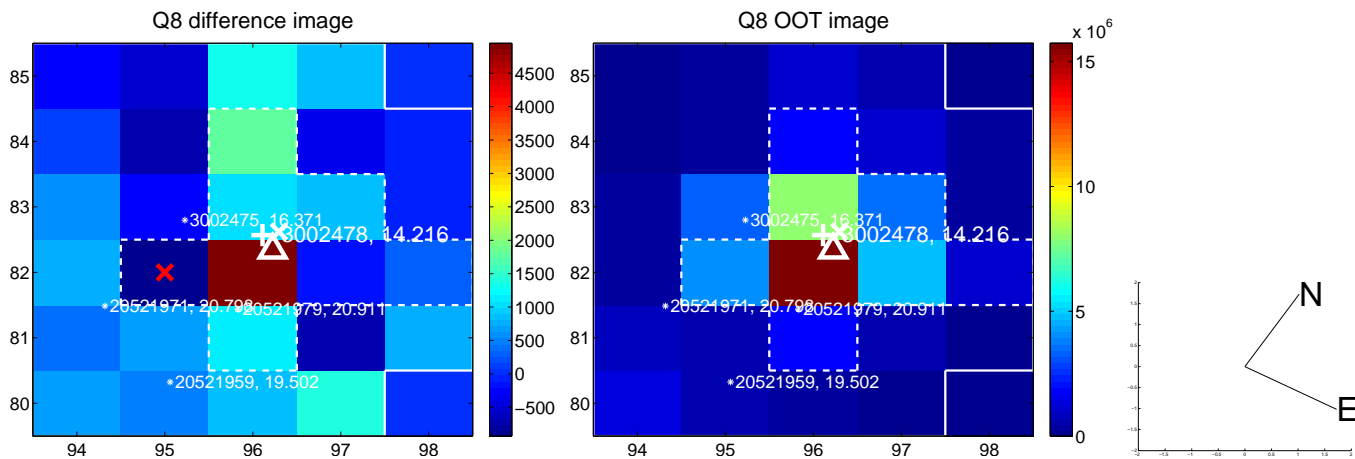
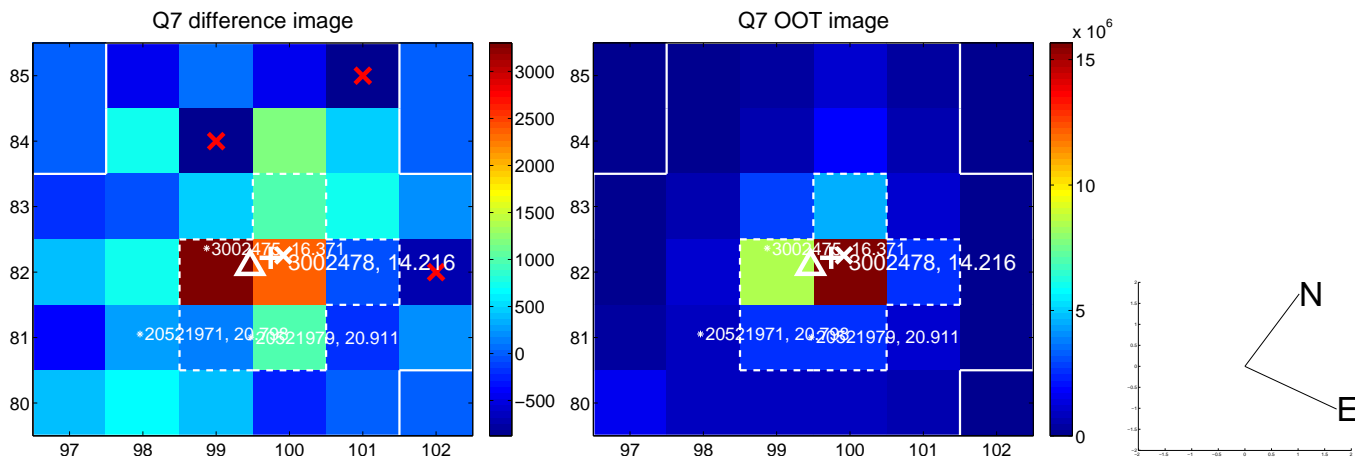
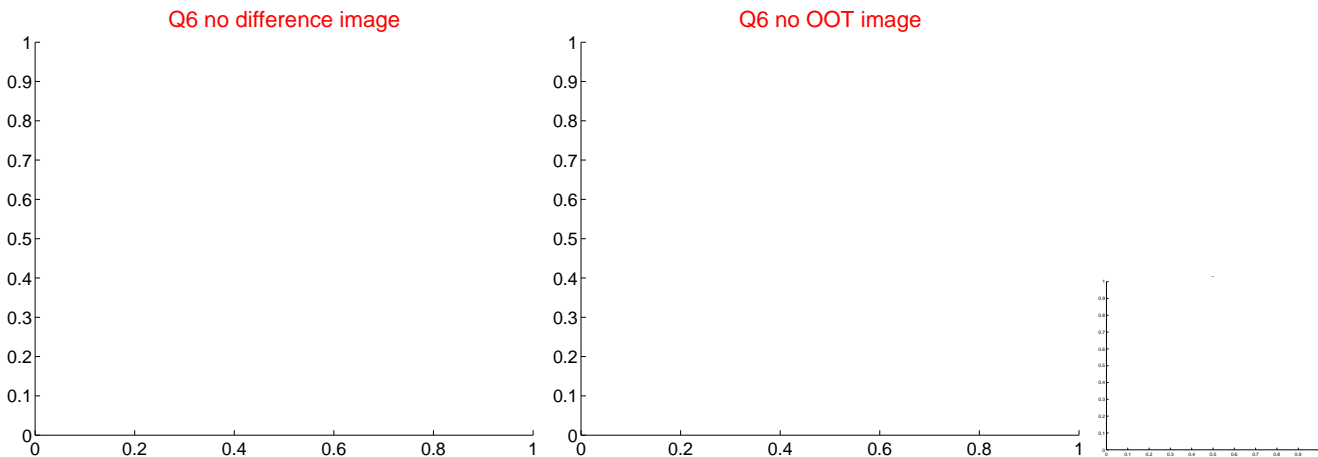
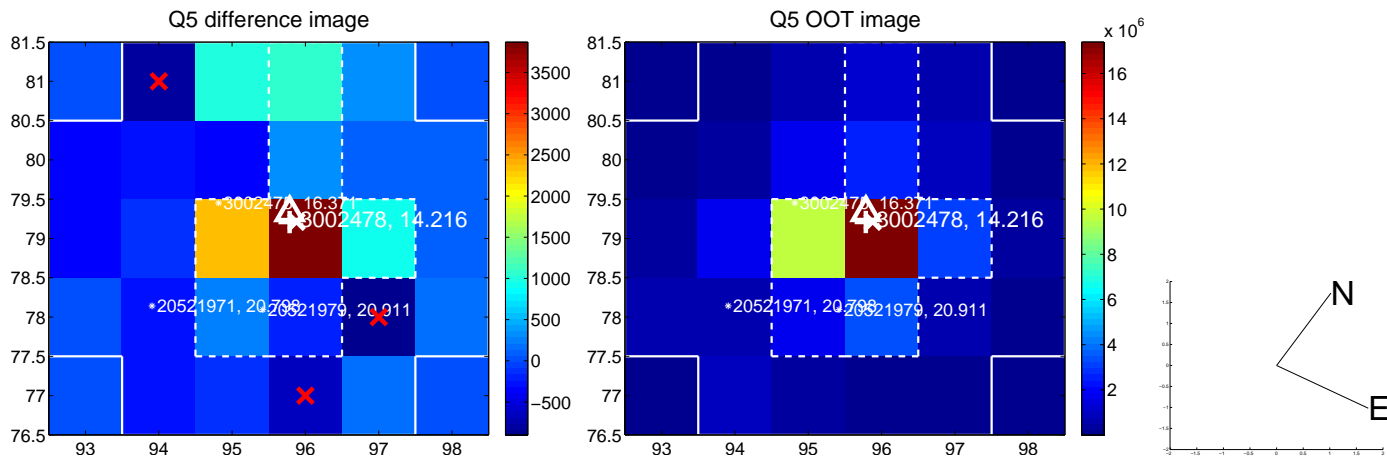


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

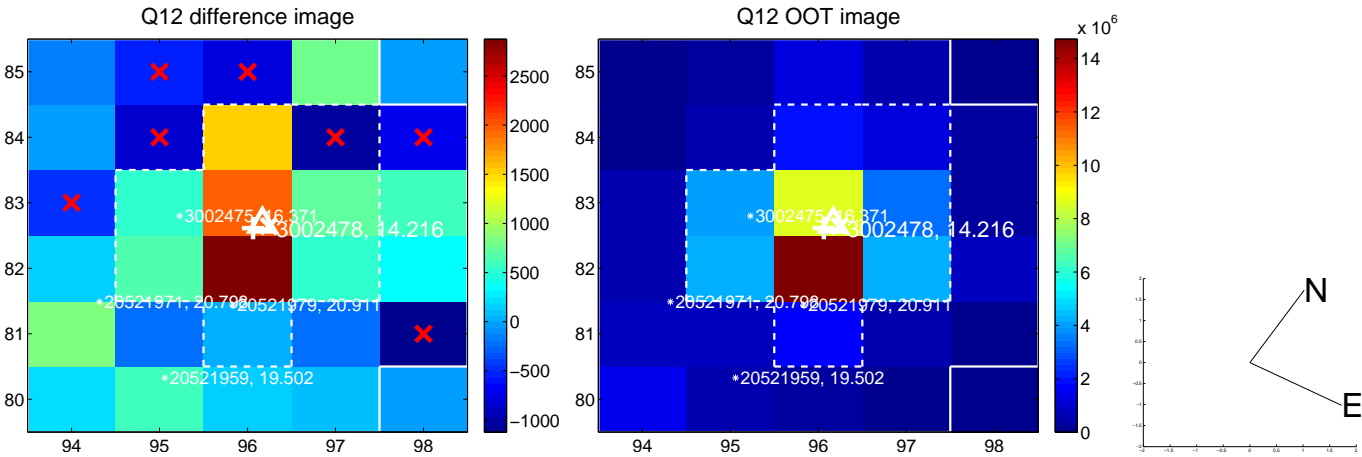
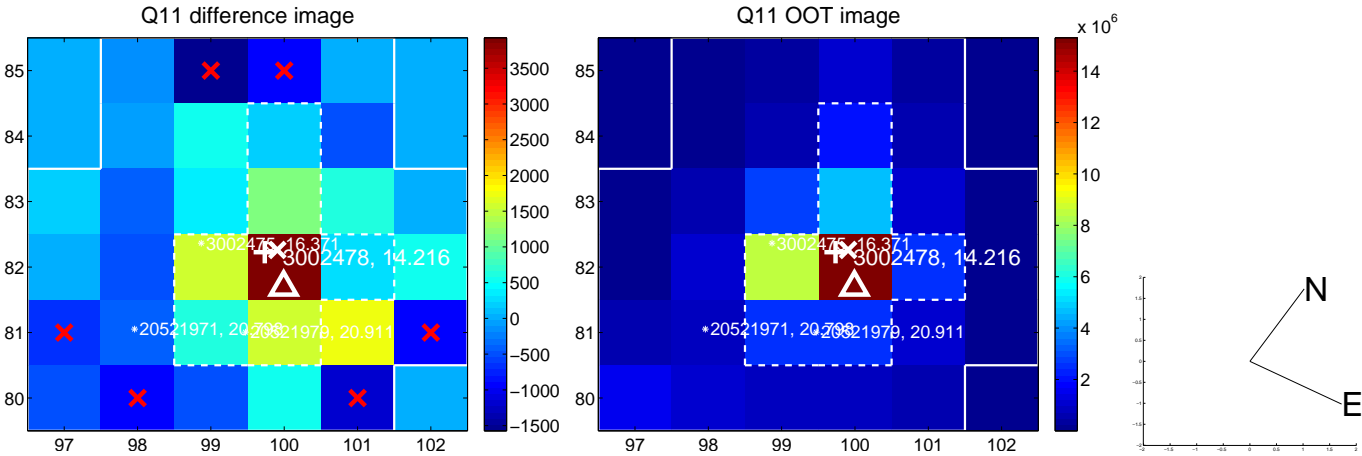
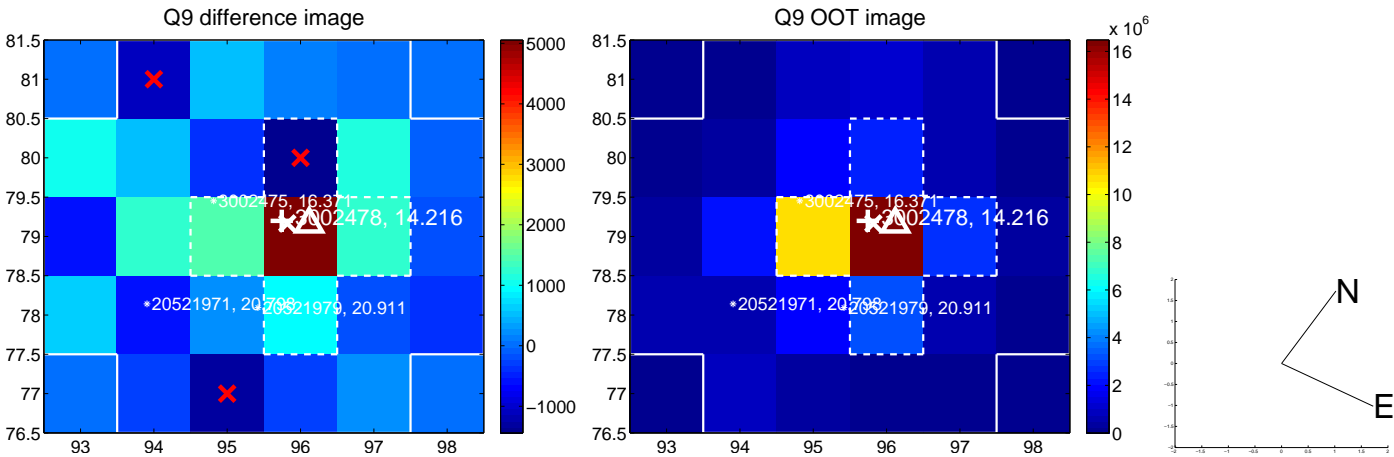
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



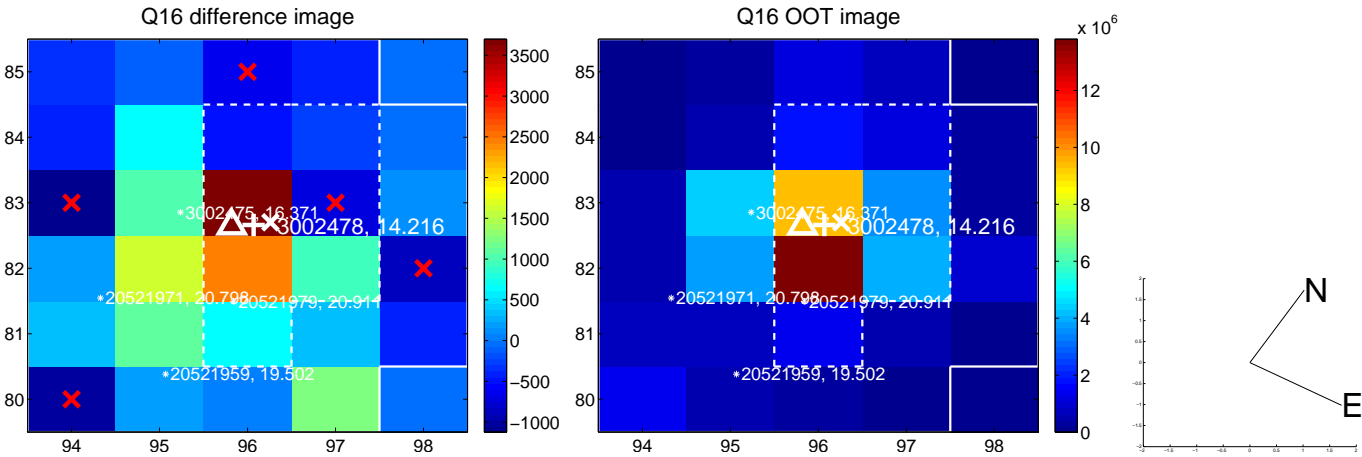
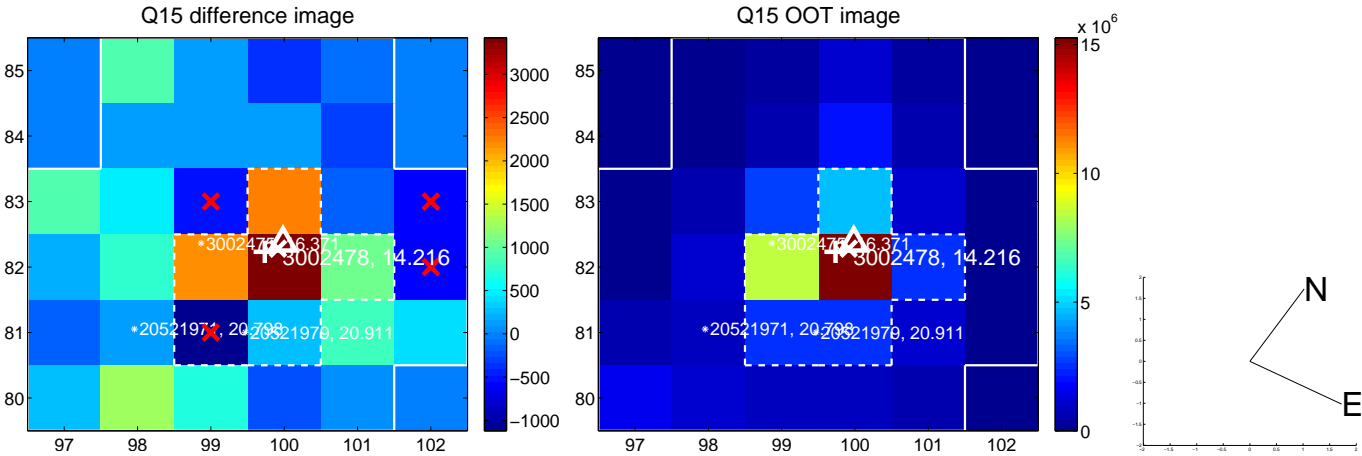
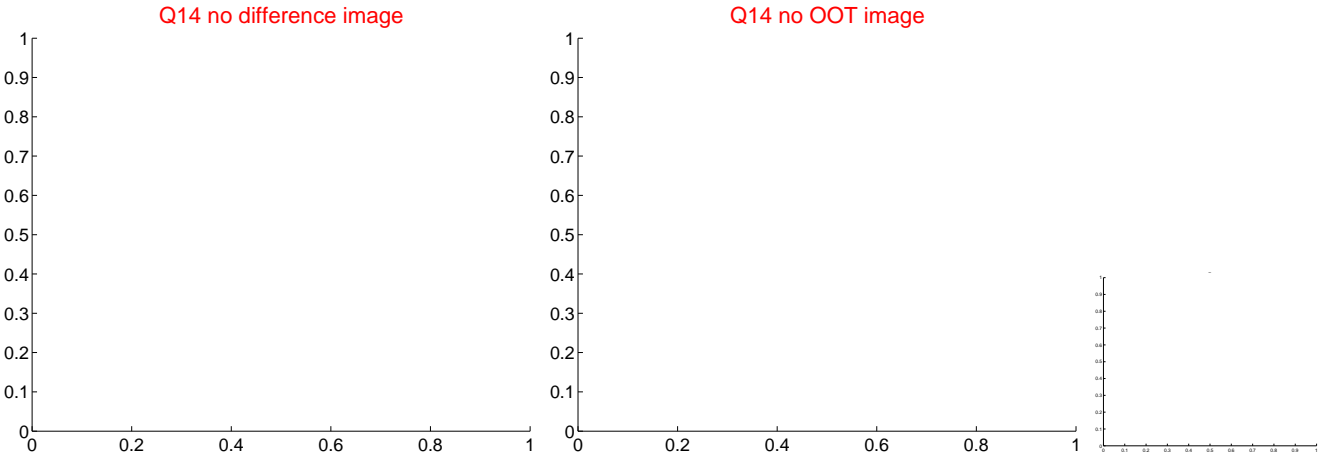
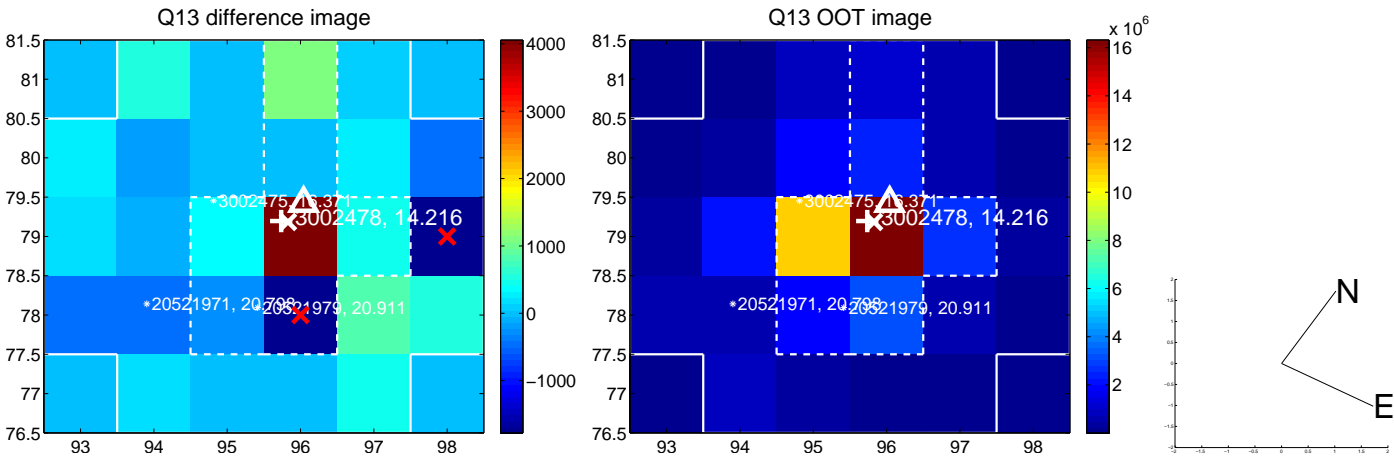
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

