

KIC 006203955

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})
006203955-01	OBS	5249.01	19.453054	139.350758	159.3	5.504	7.6	8.8	1.01	6372	1.47	72.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006203955-01	OBS	PC	0.95	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.

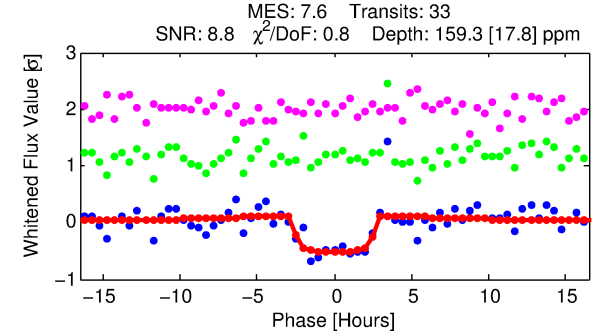
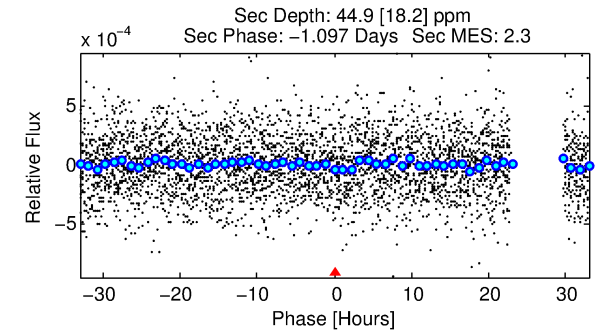
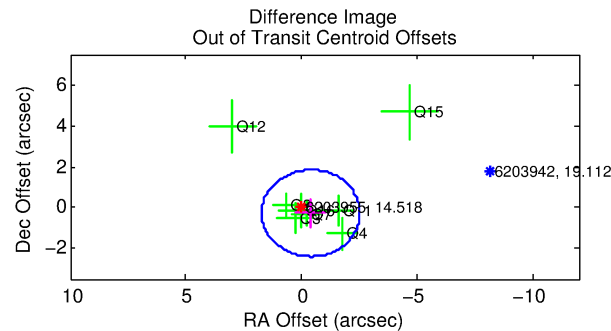
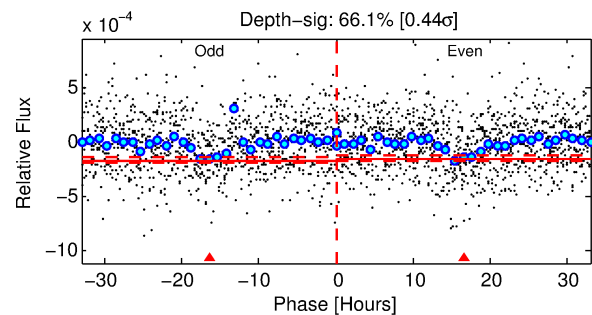
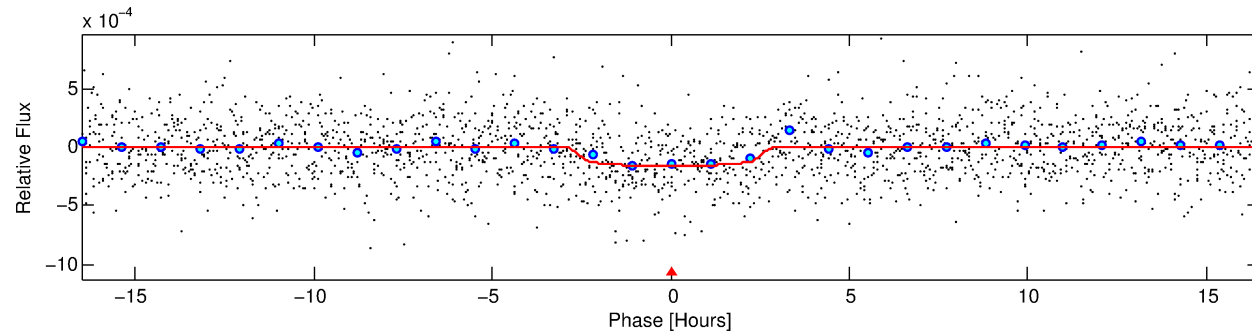
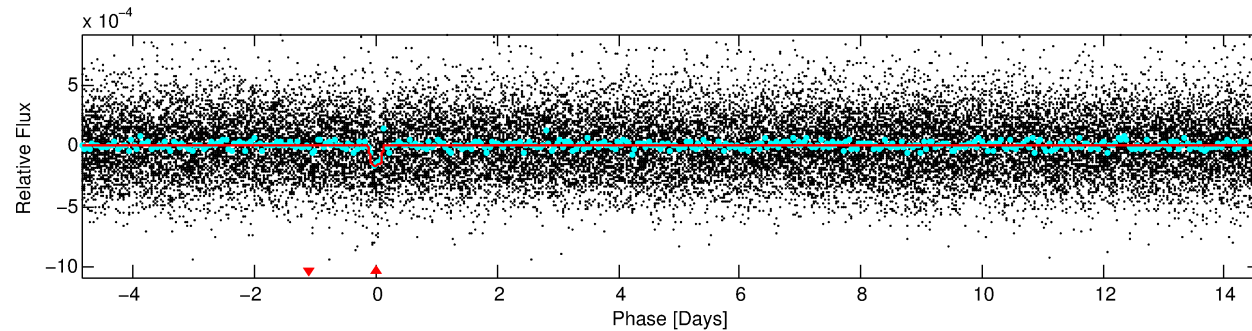
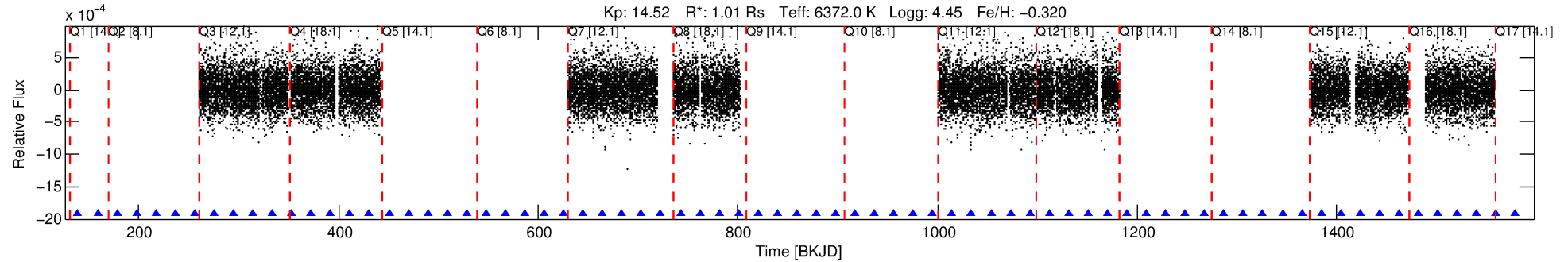
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006203955-01

No Significant Match Found

DV One-Page Summary

KIC: 6203955 Candidate: 1 of 1 Period: 19.453 d
KOI: K05249.01 Corr: 0.942



DV Fit Results:

Period = 19.45305 [0.00024] d
Epoch = 139.3508 [0.0108] BKJD
Rp/R* = 0.0133 [0.0046]
a/R* = 13.68 [25.95]
b = 0.88 [0.50]
Seff = 72.72 [30.40]
Teq = 745 [78] K
Rp = 1.47 [0.68] Re
a = 0.1447 [0.0381] AU
Ag = 237.77 [211.95] [1.12 σ]
Teffp = 4521 [922] K [4.08 σ]

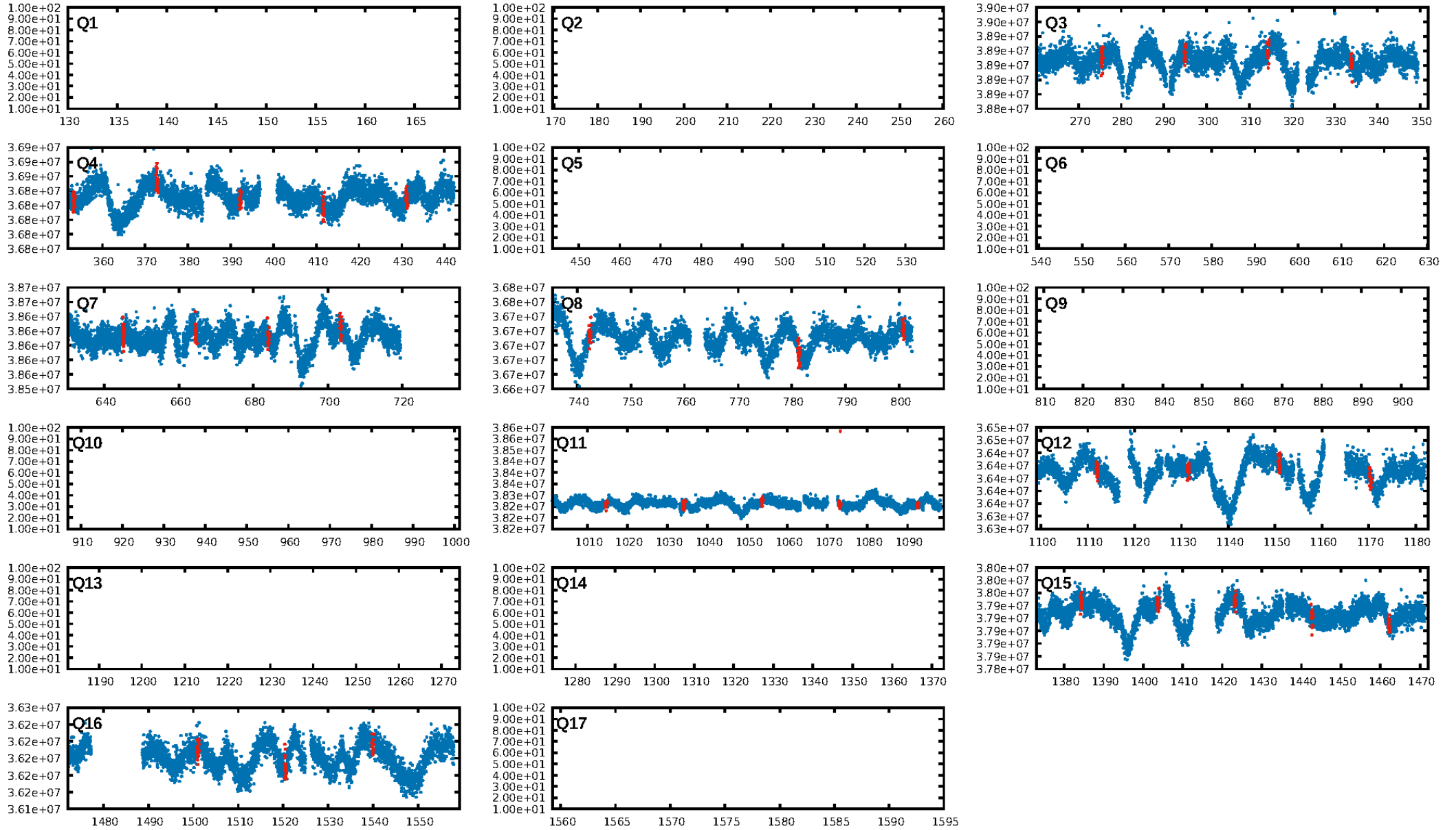
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.62e-14
RollingBand-fgt: 1.00 [33/33]
GhostDiagnostic-chr: 1.749
Centroid-sig: 58.5%
Centroid-so: 0.452 arcsec [0.35 σ]
OotOffset-rm: 0.490 arcsec [0.69 σ]
OotOffset-st: 0/4/4/0 [8]
KicOffset-rm: 0.615 arcsec [0.86 σ]
KicOffset-st: 0/4/4/0 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 1.00 [8/8]

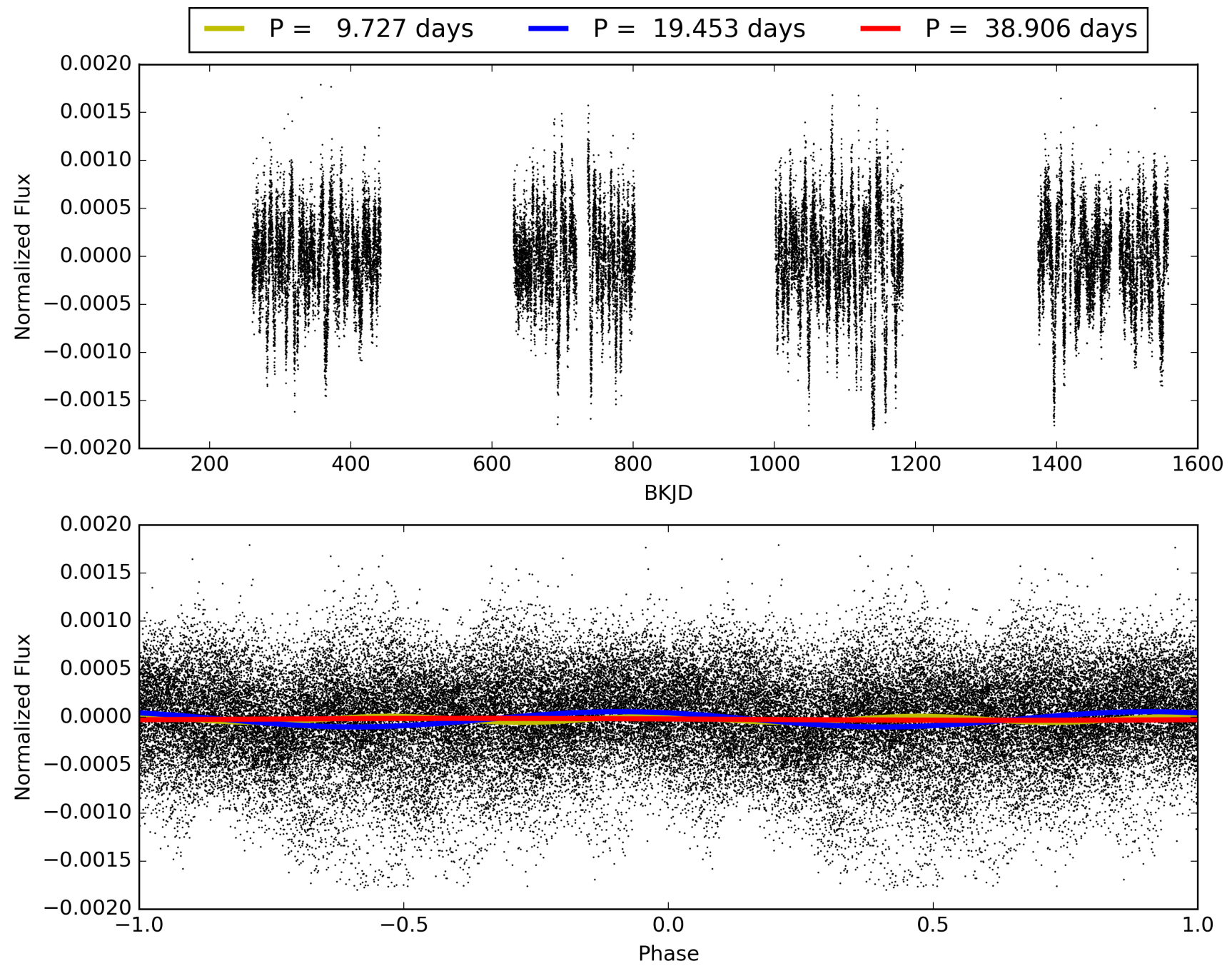
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:23:50 Z

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

TCE 006203955-01, PDC Light Curves

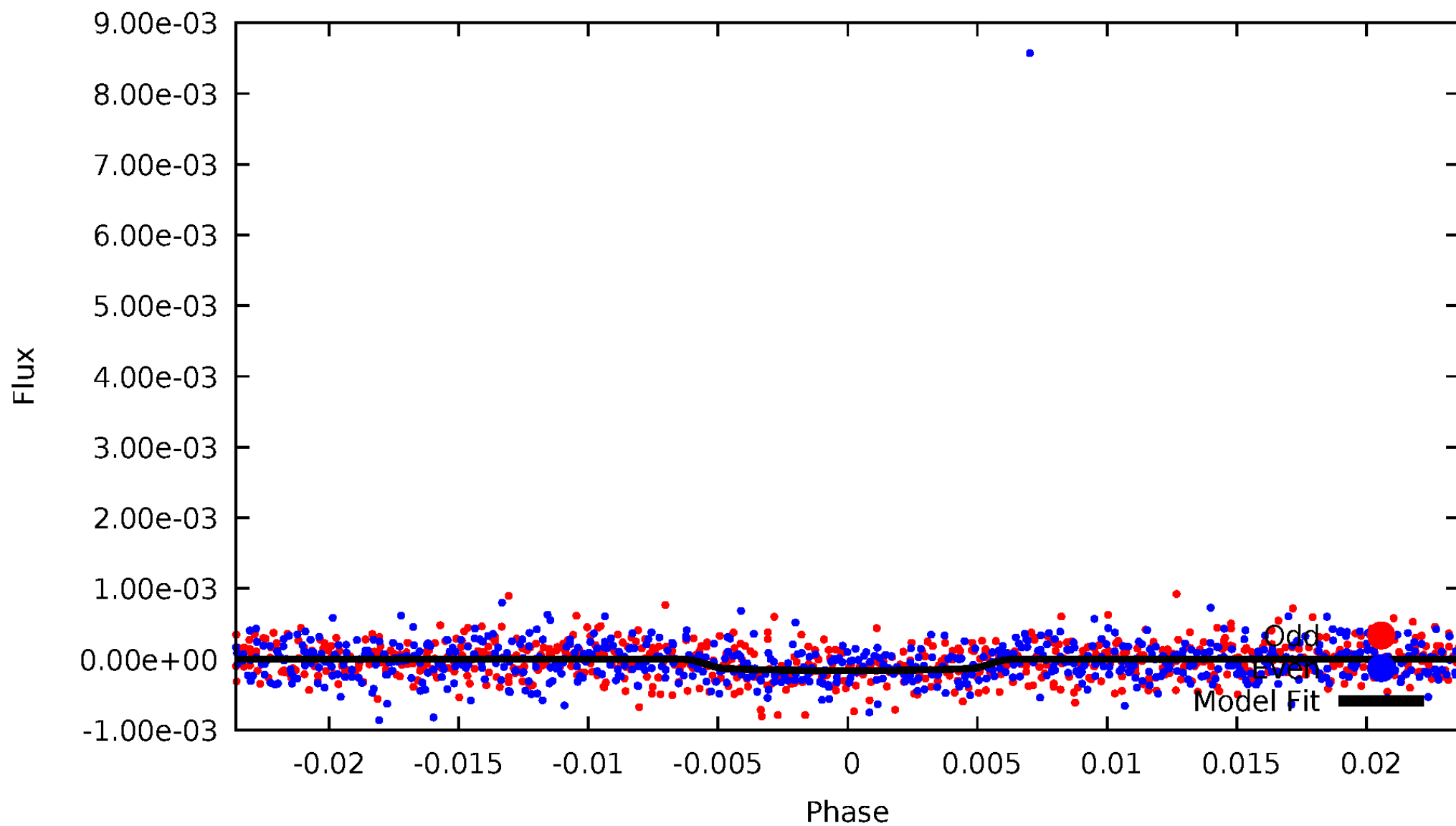


TCE 006203955-01



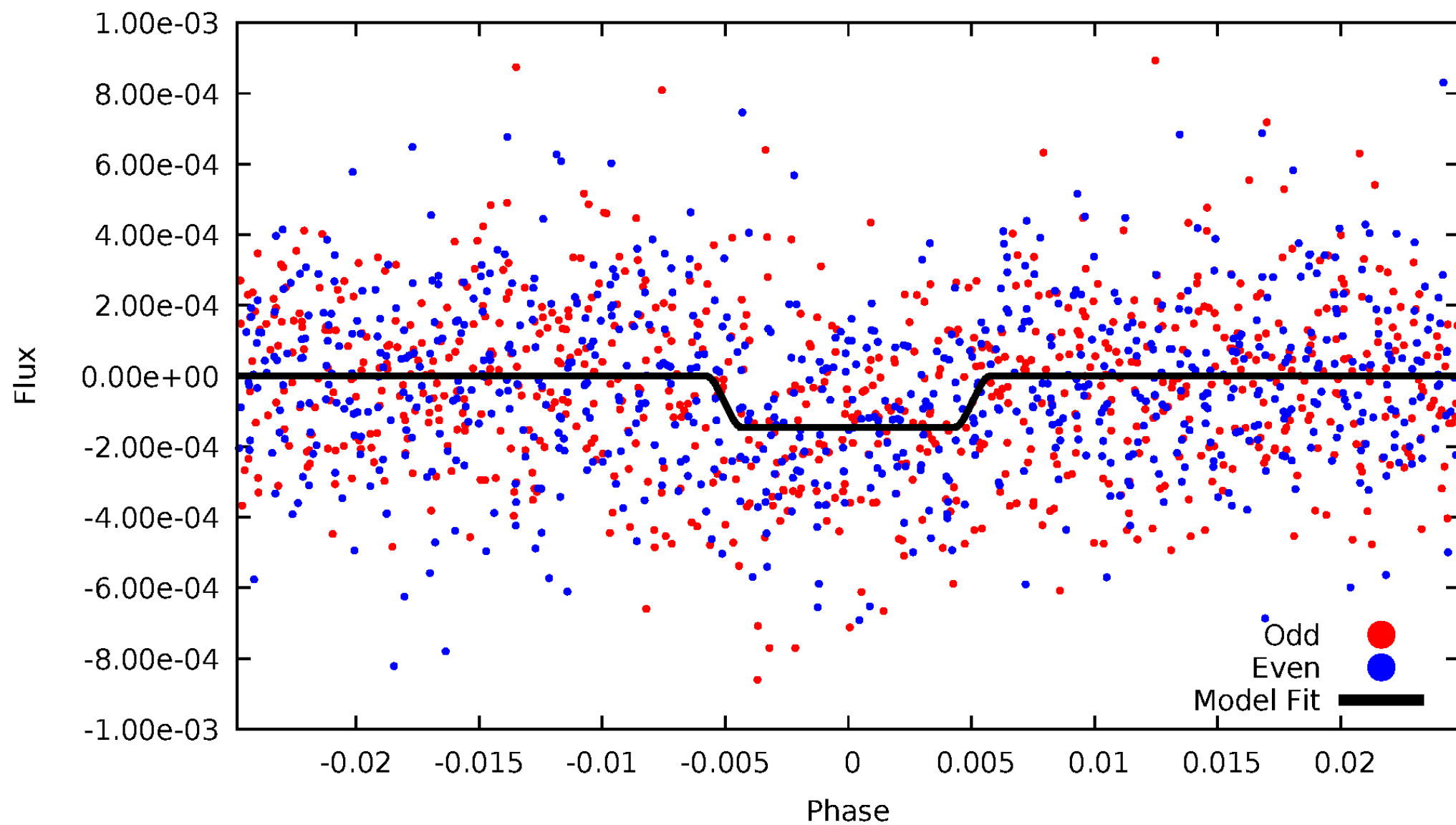
DV Odd/Even

TCE 006203955-01

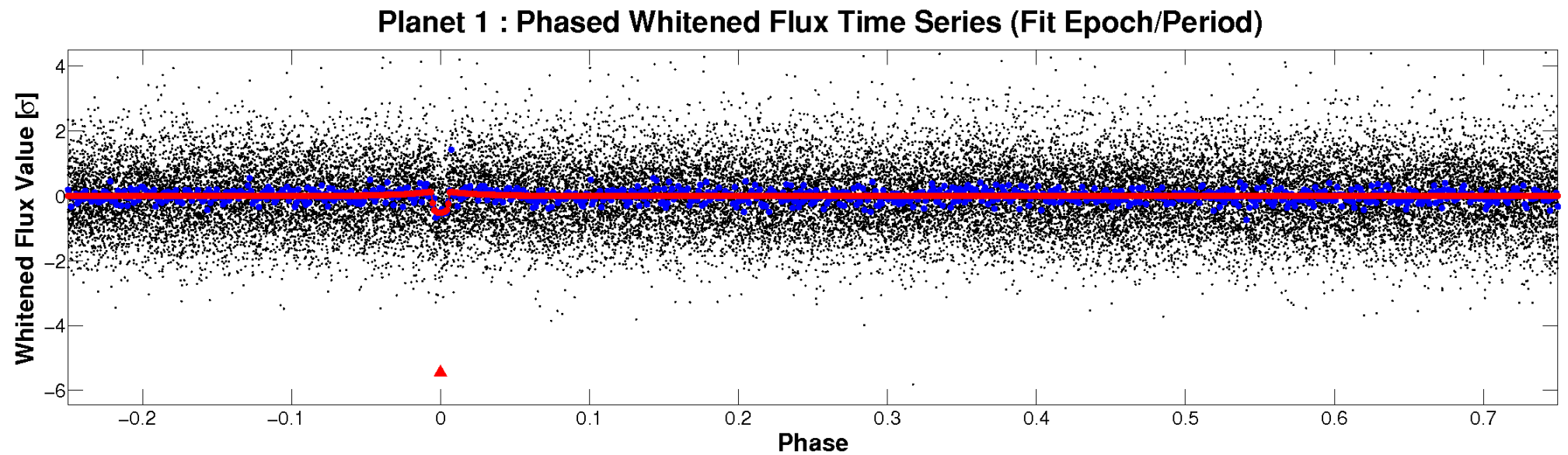
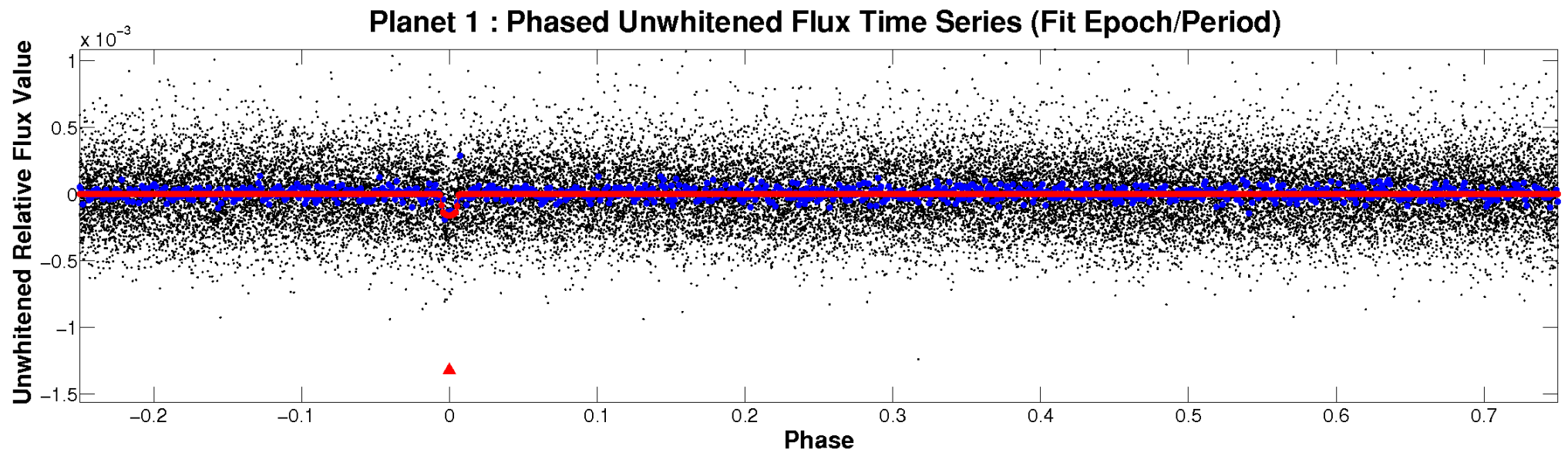


ALT Odd/Even

TCE 006203955-01

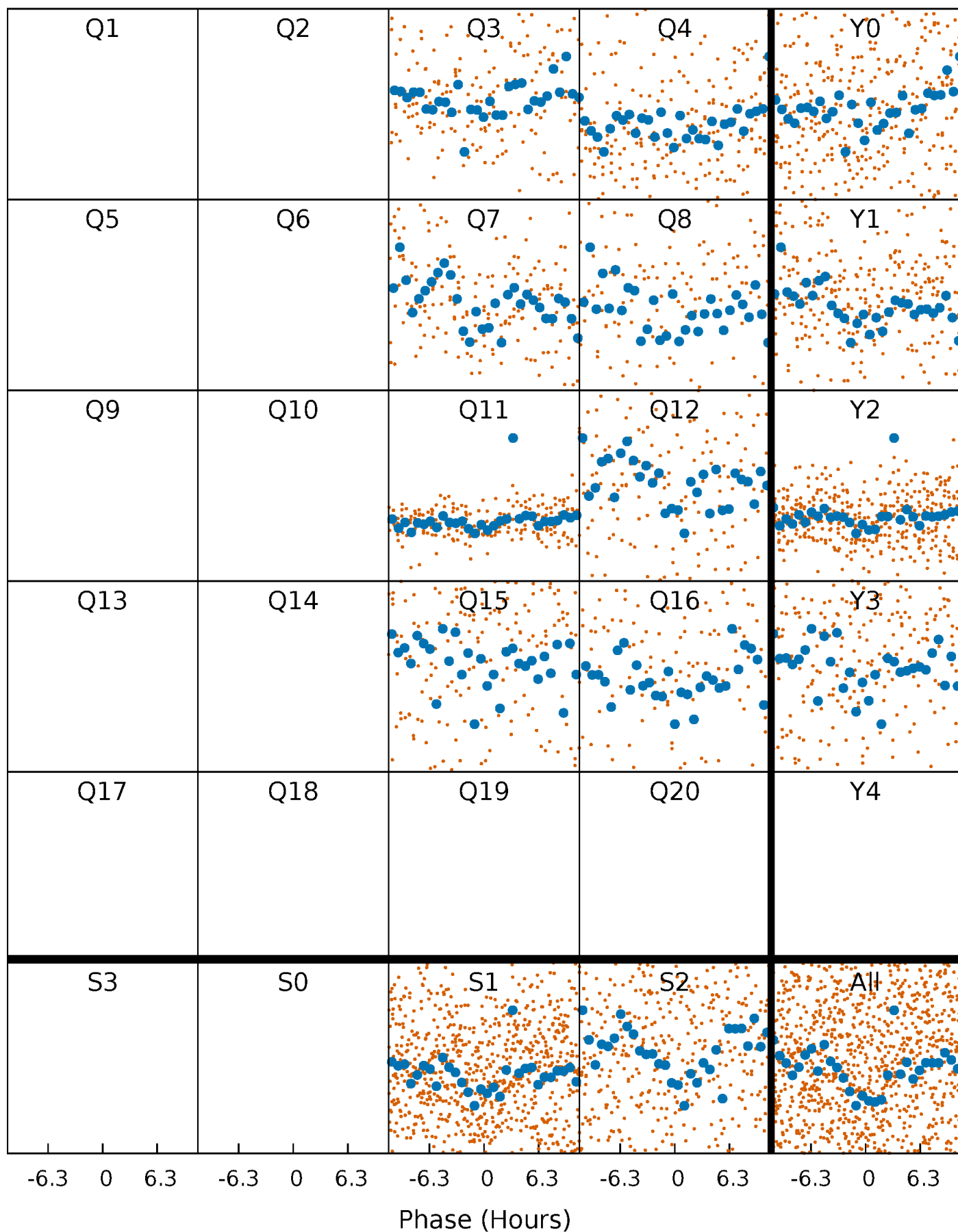


Non-Whitened Vs. Whitened Light Curve



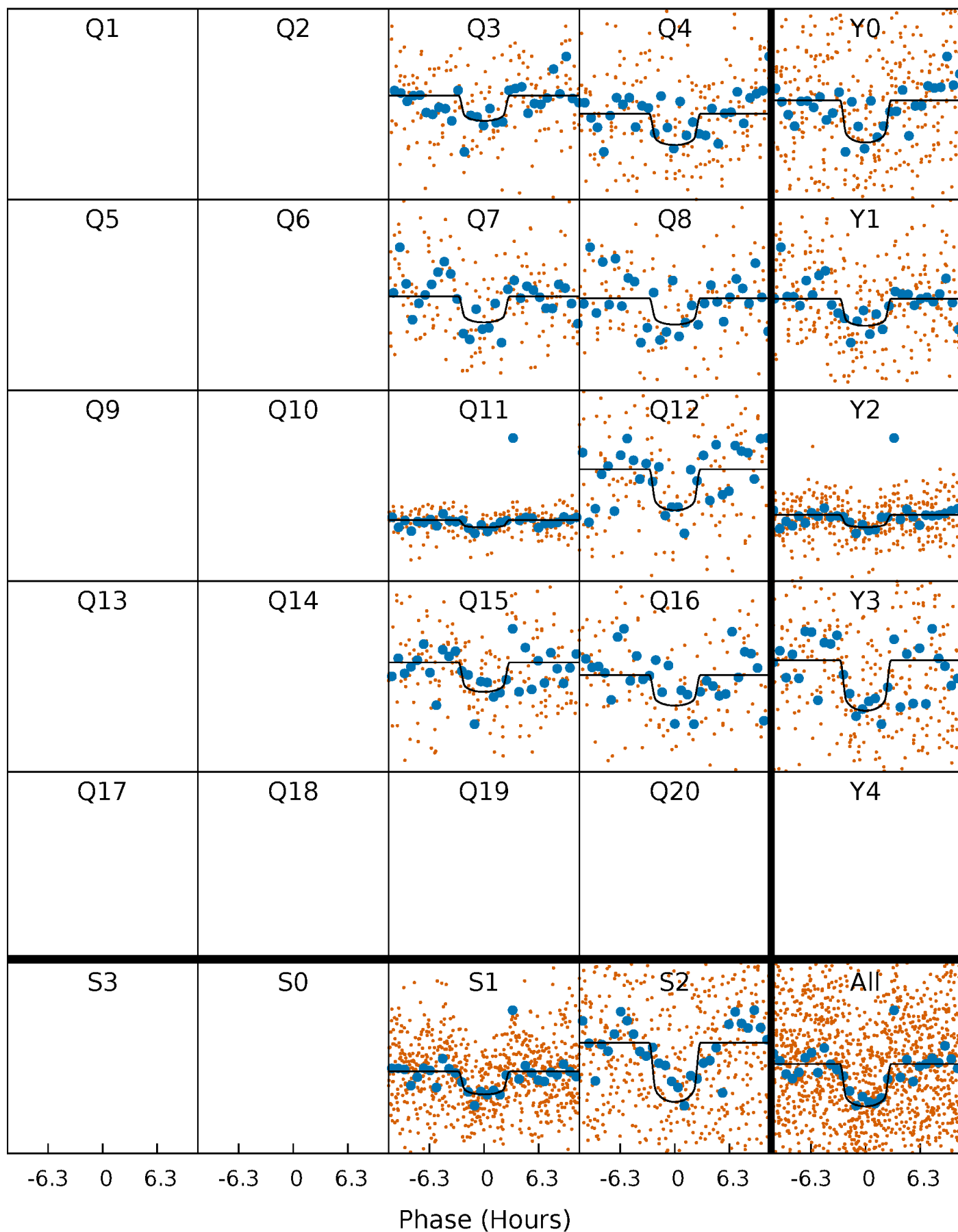
PDC Quarter-Phased Transit Curves

TCE 006203955-01 P= 19.453054 Days $T_0=139.350758$ (BKJD)



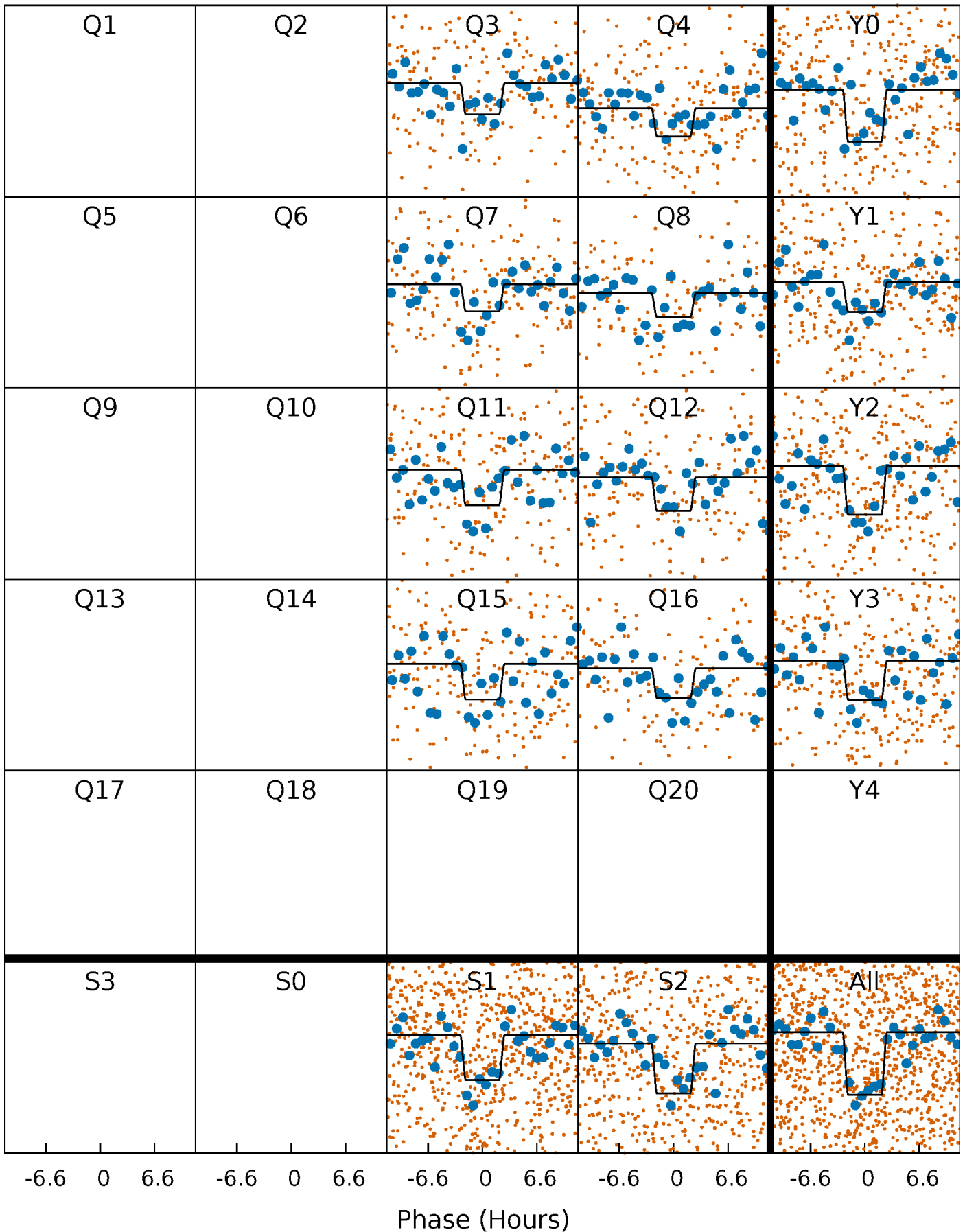
DV Quarter-Phased Transit Curves

TCE 006203955-01 P= 19.453054 Days $T_0=139.350758$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

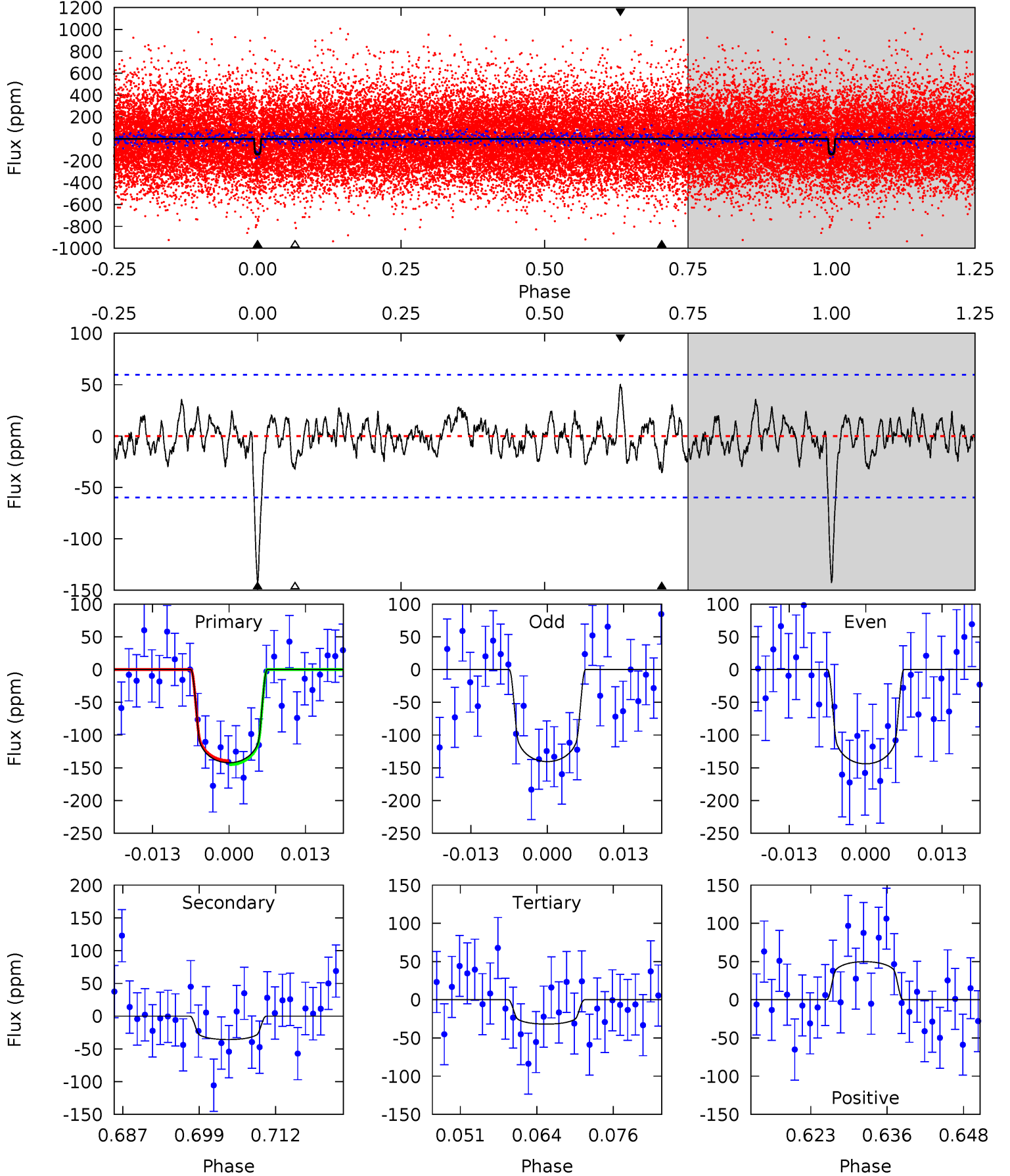
TCE 006203955-01 P= 19.453165 Days $T_0=139.353231$ (BKJD)



DV Model-Shift Uniqueness Test

006203955-01, P = 19.453054 Days, E = 139.350758 Days

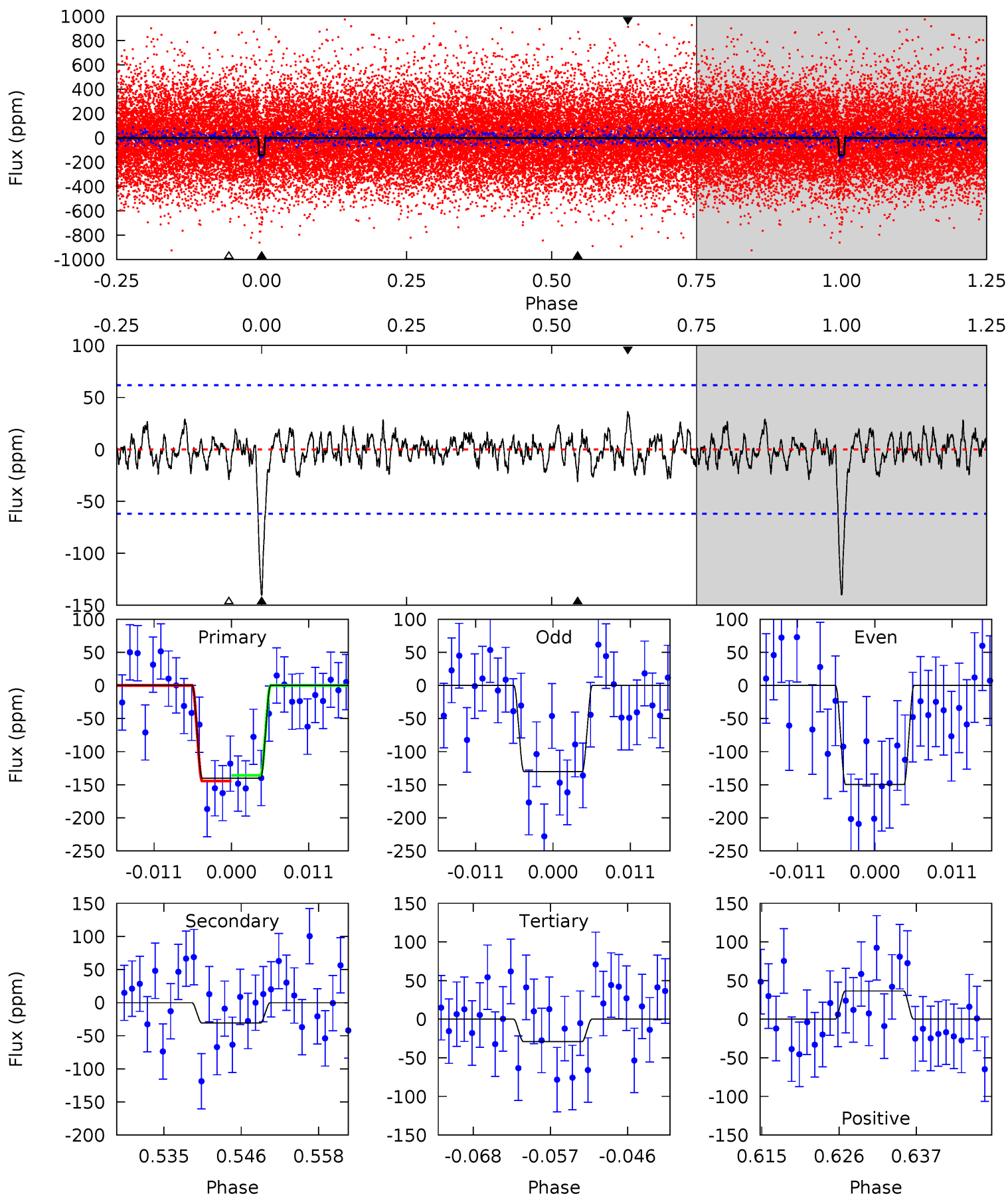
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	2.99	2.66	4.16	4.98	2.49	1.09	9.22	7.72	0.33	-1.17	0.14	0.95	0.26	0.25



Alt Model-Shift Uniqueness Test

006203955-01, $P = 19.453165$ Days, $E = 139.353231$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	2.49	2.35	2.95	5.00	2.53	0.88	8.98	8.38	0.14	-0.46	0.80	0.92	0.21	0.35



Stellar Parameters For KIC 006203955

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6372^{+176}_{-242}	$4.453^{+0.054}_{-0.216}$	$-0.320^{+0.250}_{-0.300}$	$1.015^{+0.311}_{-0.133}$	$1.066^{+0.143}_{-0.143}$	$1.435^{+0.422}_{-0.779}$
	+3%/-4%	+1%/-5%	+78%/-94%	+31%/-13%	+13%/-13%	+29%/-54%
Source	KIC0	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 006203955-01 / KOI 5249.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-36 ± 12	$1.56^{+0.60}_{-0.53}$	1067^{+79}_{-60}	4452^{+881}_{-584}	163^{+229}_{-89}
Alt.	-31 ± 12	$1.41^{+0.59}_{-0.48}$	1062^{+88}_{-52}	4458^{+1018}_{-635}	170^{+276}_{-102}

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

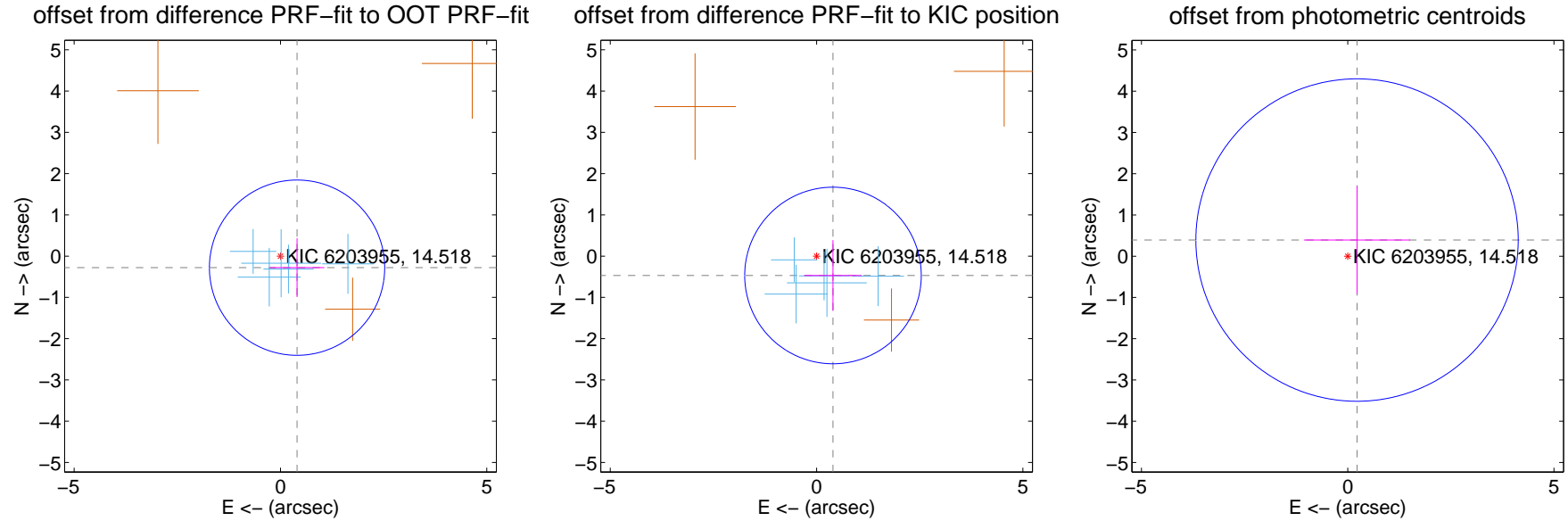
DV Centroid Data

Supplemental centroid analysis for 006203955-01. Kepler magnitude: 14.52. Transit SNR 8.79

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.490 ± 0.708	0.69	-0.402 ± 0.661	-0.279 ± 0.711
PRF-fit source offset from KIC position	0.615 ± 0.713	0.86	-0.398 ± 0.699	-0.469 ± 0.858
photometric centroid source offset	0.45 ± 1.30	0.35	-0.23 ± 1.29	0.39 ± 1.31



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.

Q1 no difference image



Q1 no OOT image



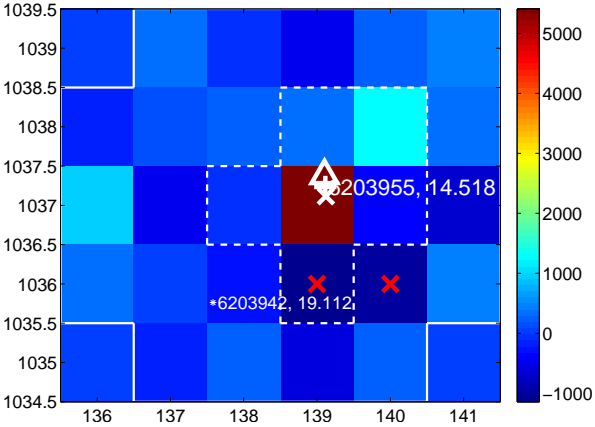
Q2 no difference image



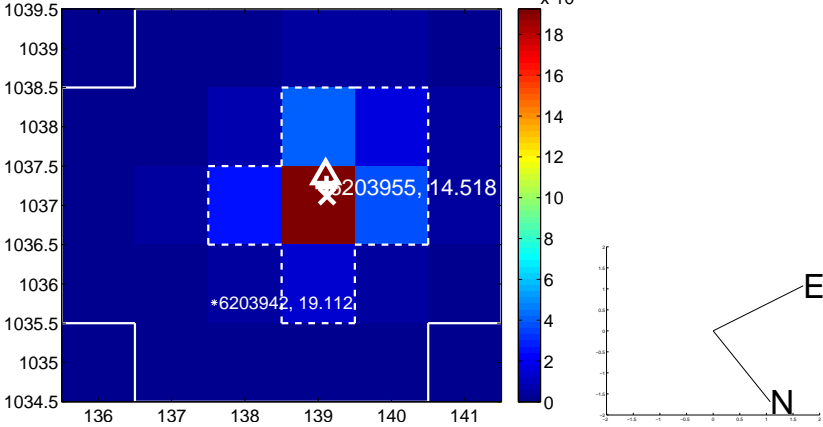
Q2 no OOT image



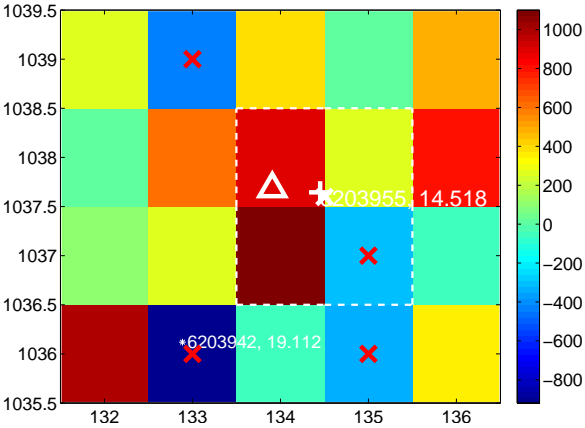
Q3 difference image



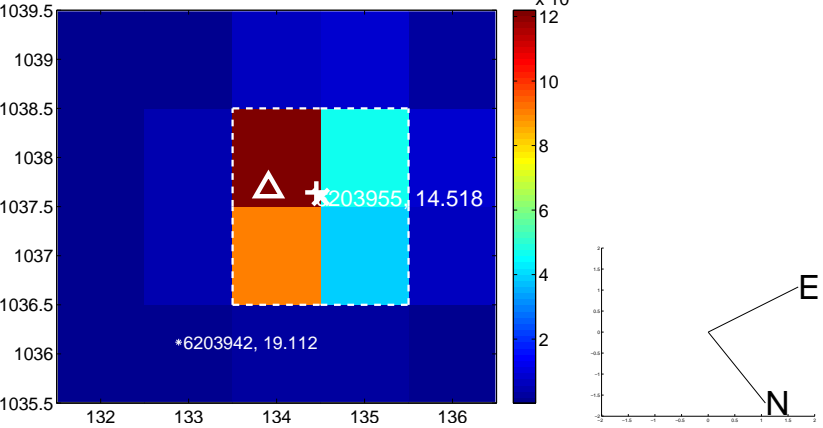
Q3 OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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

Q5 no difference image



Q5 no OOT image



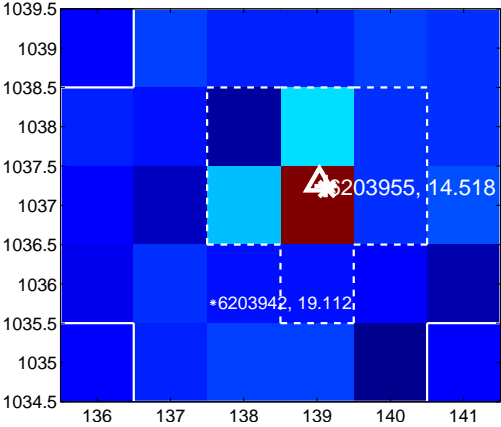
Q6 no difference image



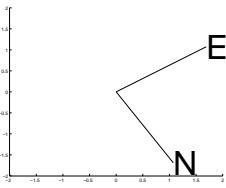
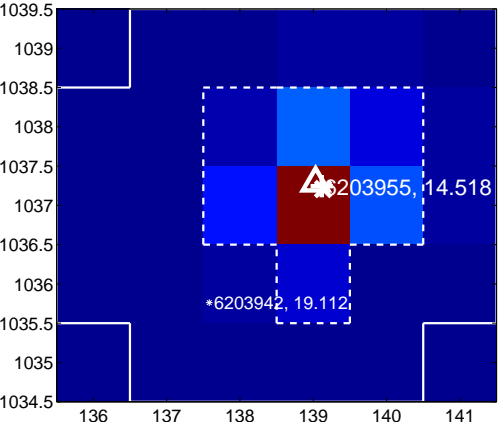
Q6 no OOT image



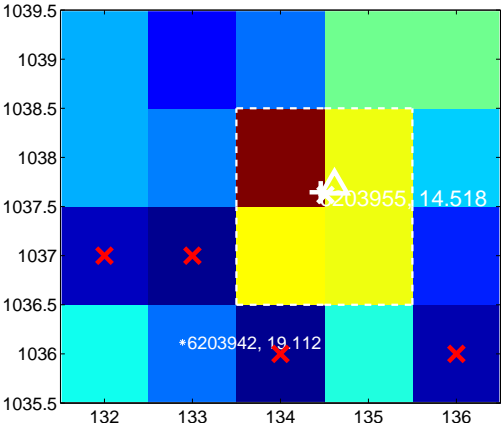
Q7 difference image



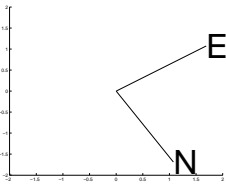
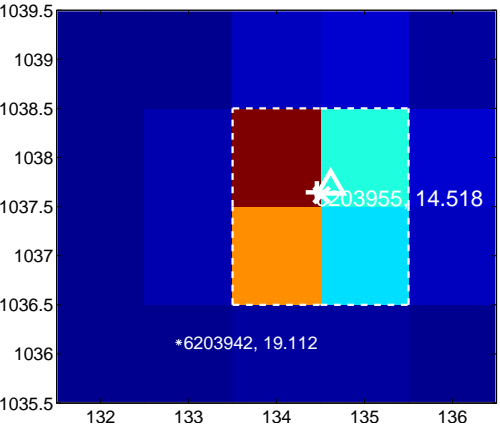
Q7 OOT image



Q8 difference image



Q8 OOT image



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

Q9 no difference image



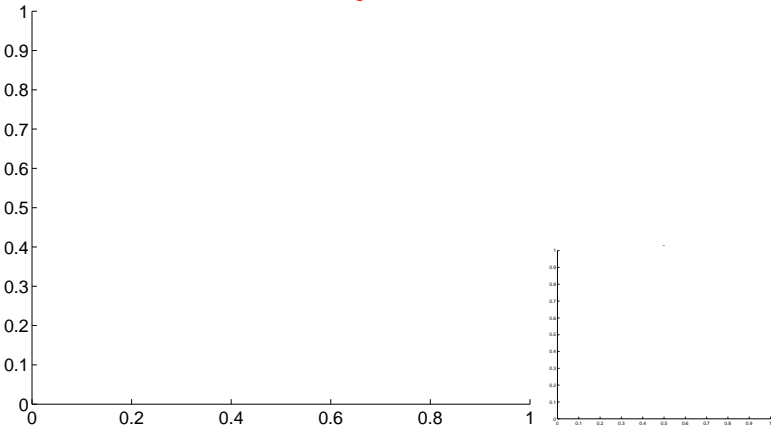
Q9 no OOT image



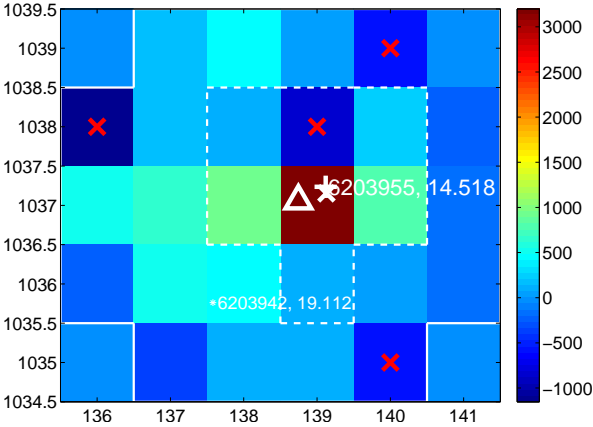
Q10 no difference image



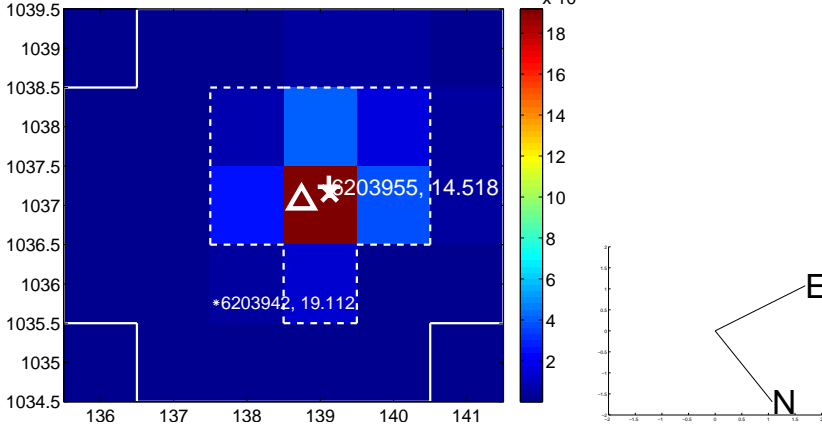
Q10 no OOT image



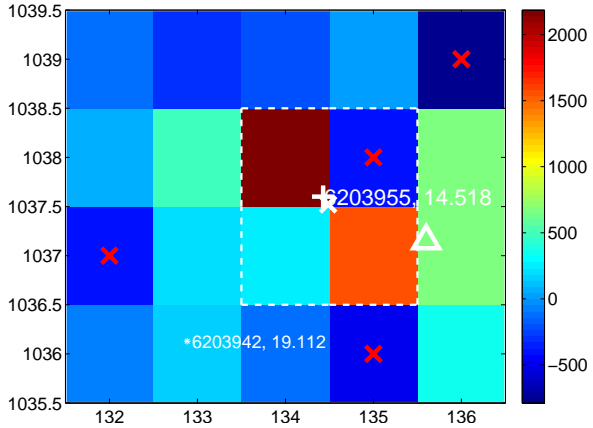
Q11 difference image



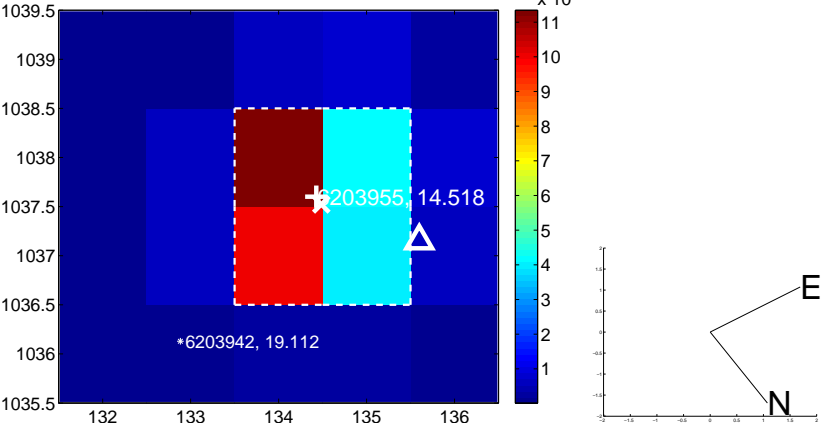
Q11 OOT image



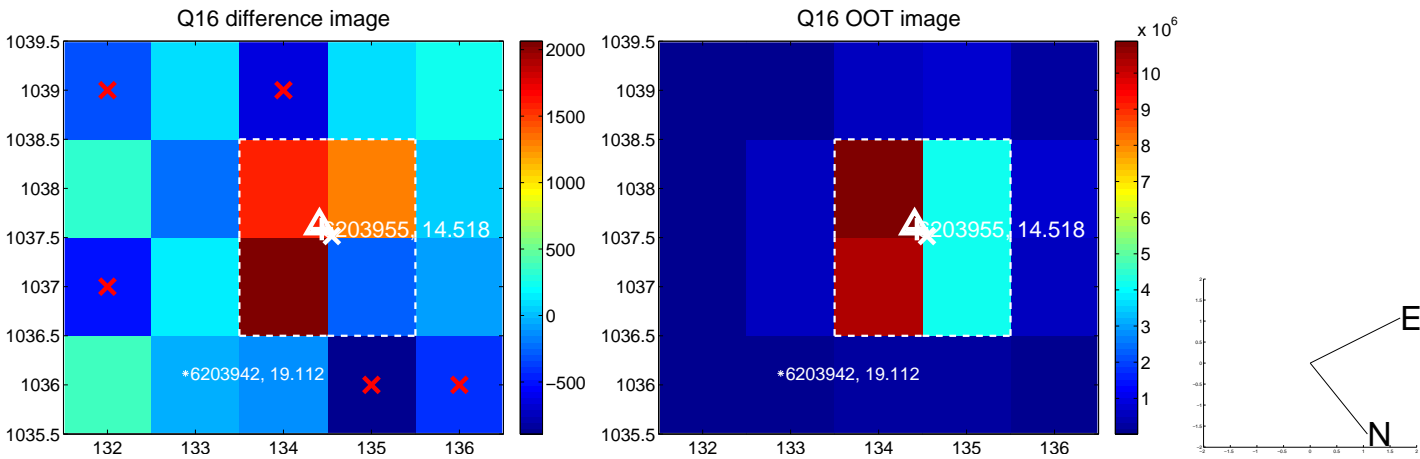
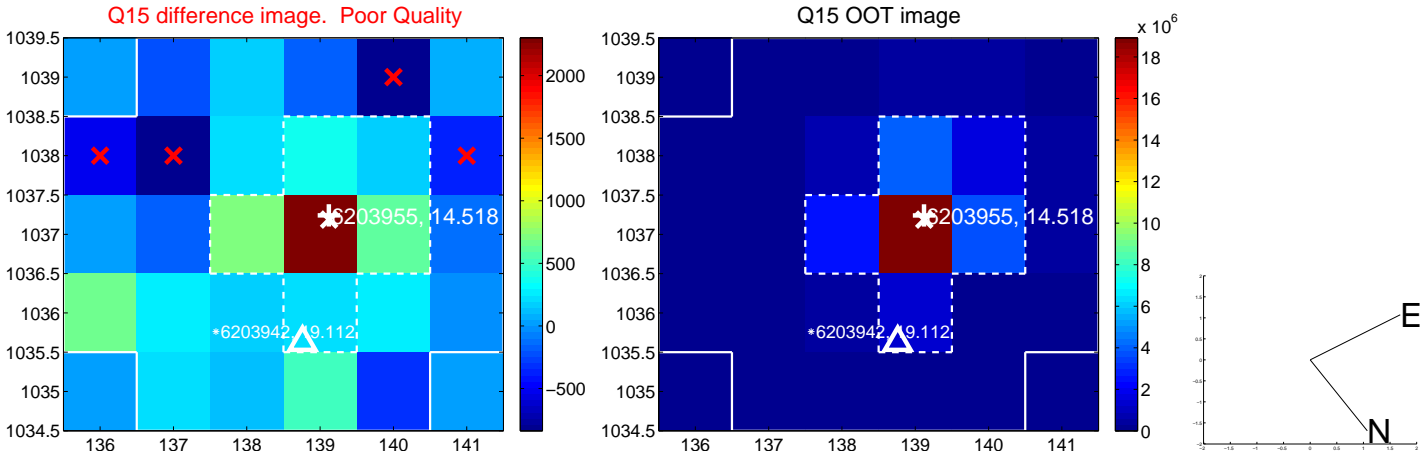
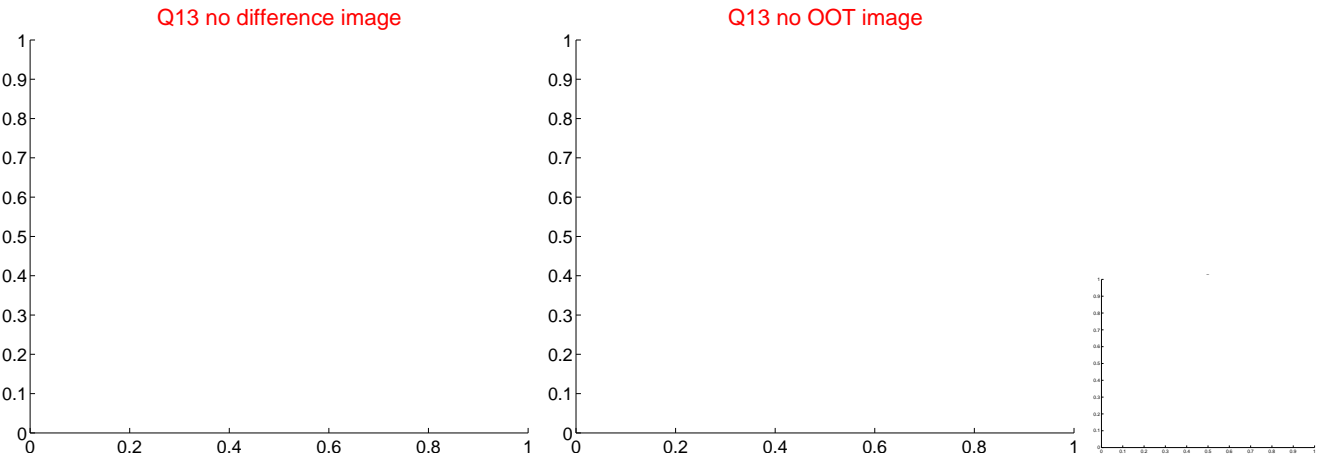
Q12 difference image. Poor Quality



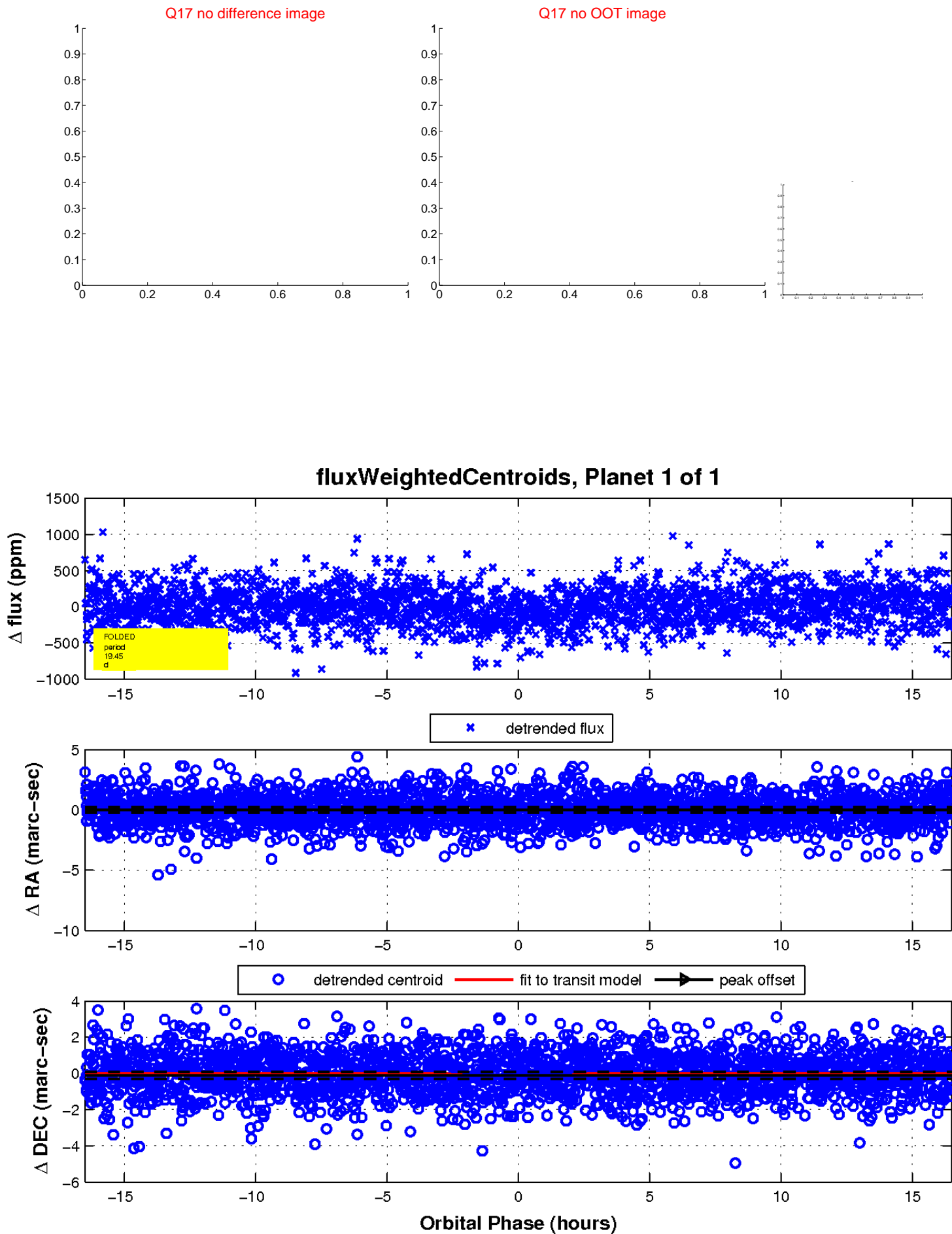
Q12 OOT image



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

