

KIC 003338421

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})
003338421-01	OBS	No	195.772809	179.484012	251.0	2.843	8.1	8.2	2.58	6022	4.58	15.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003338421-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

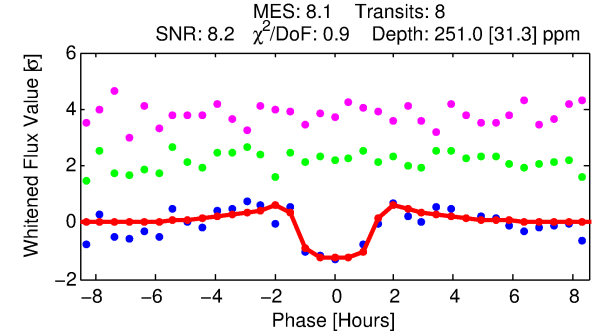
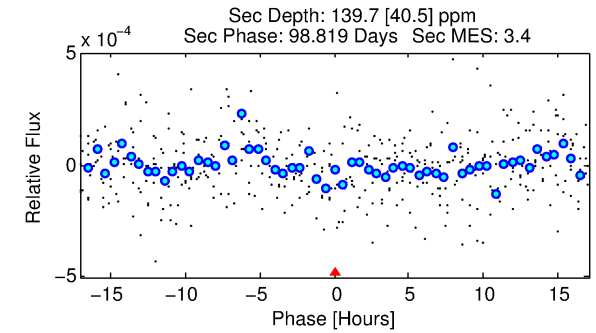
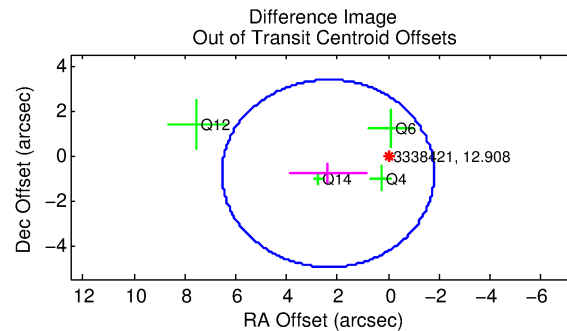
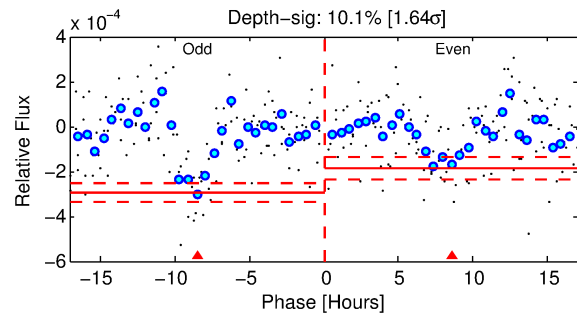
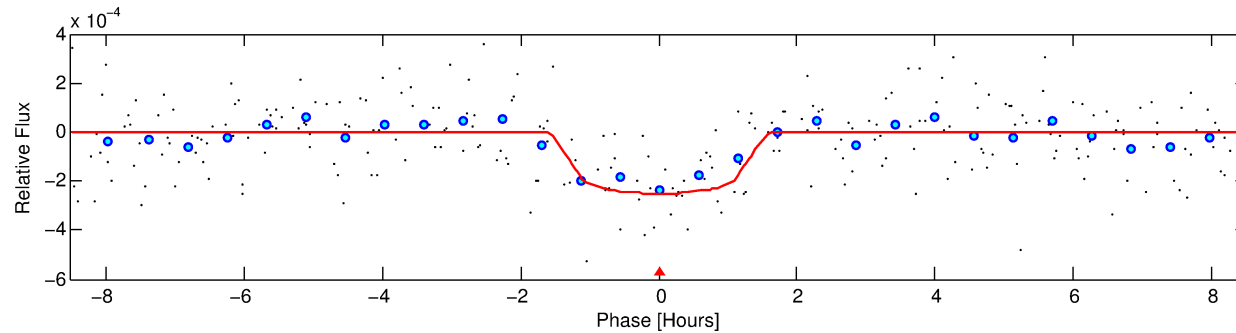
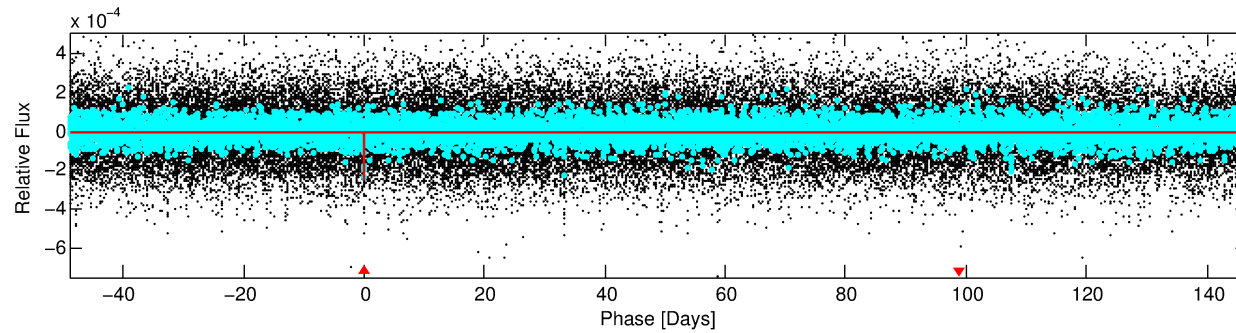
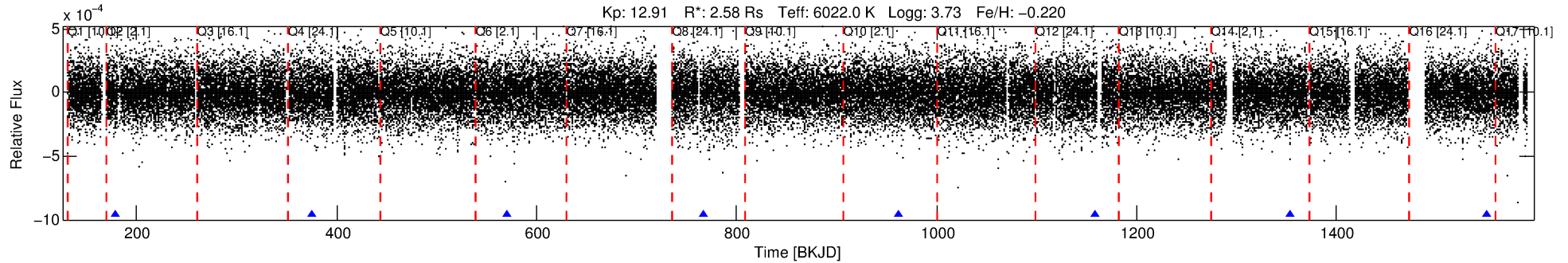
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003338421-01

No Significant Match Found

DV One-Page Summary

KIC: 3338421 Candidate: 1 of 1 Period: 195.773 d



DV Fit Results:

Period = 195.77281 [0.00129] d
Epoch = 179.4840 [0.0055] BKJD
Rp/R* = 0.0162 [0.0119]
a/R* = 315.30 [1156.39]
b = 0.82 [1.48]
Seff = 15.07 [8.62]
Teff = 502 [72] K
Rp = 4.58 [3.79] Re
a = 0.7219 [0.2584] AU
Ag = 1913.44 [3046.89] [0.63 σ]
Teffp = 5138 [1921] K [2.41 σ]

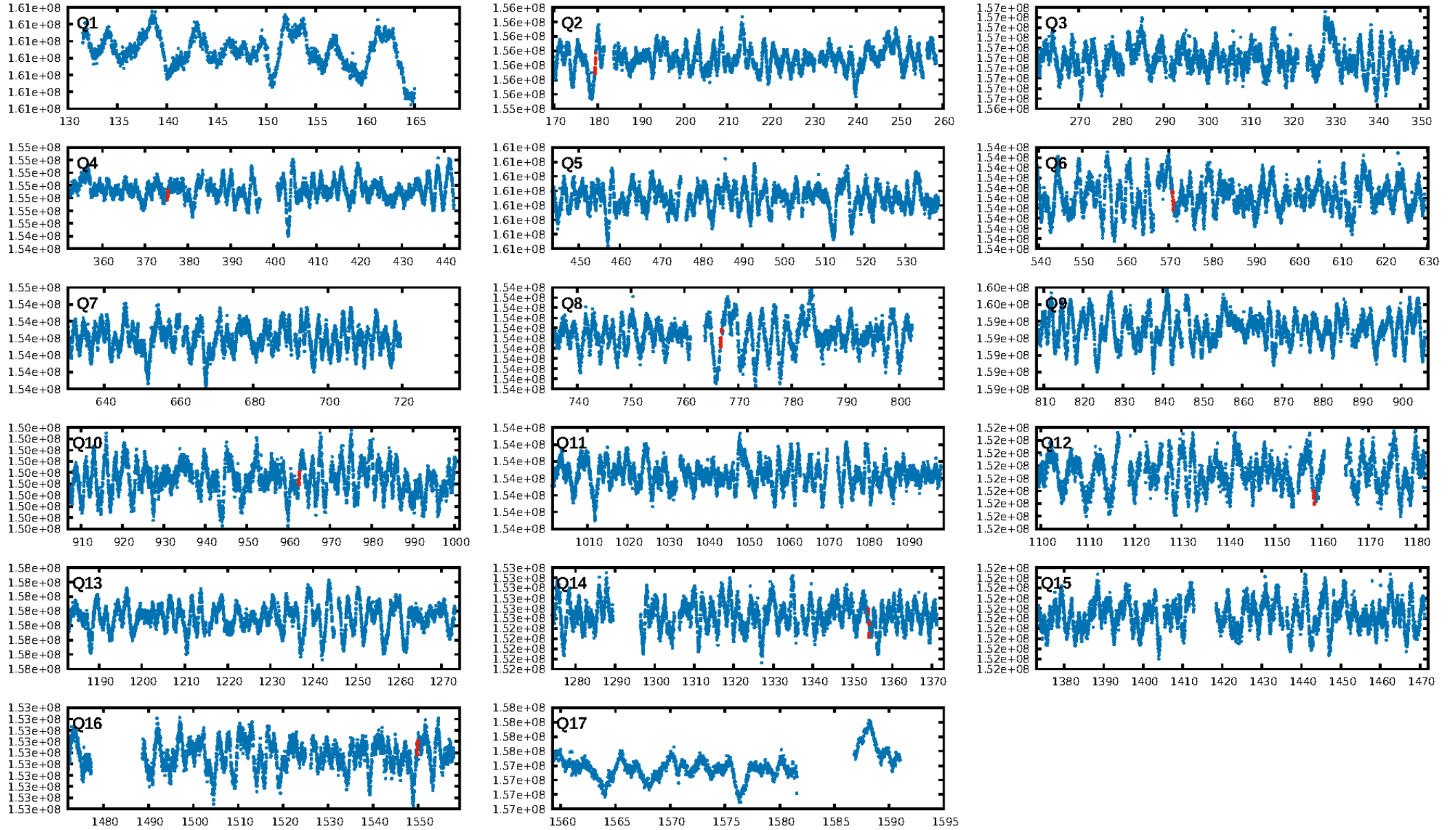
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.2%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: 1.14e-12
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -5.379
Centroid-sig: 93.8%
Centroid-so: 0.447 arcsec [0.44 σ]
OotOffset-rm: 2.496 arcsec [1.79 σ]
OotOffset-st: 2/0/2/0 [4]
KicOffset-rm: 2.500 arcsec [2.14 σ]
KicOffset-st: 2/0/2/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [8/8]

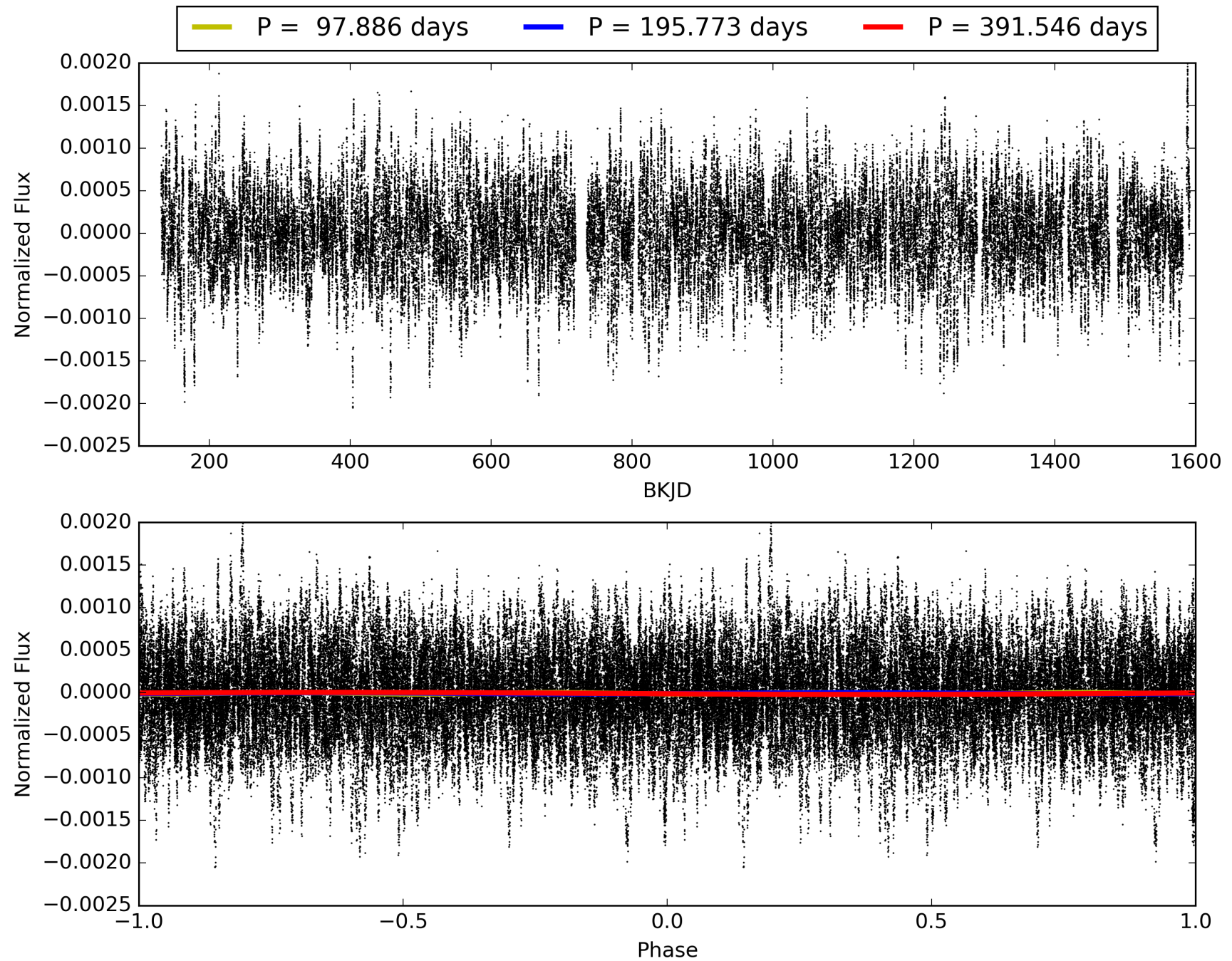
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:07:38 Z

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

TCE 003338421-01, PDC Light Curves

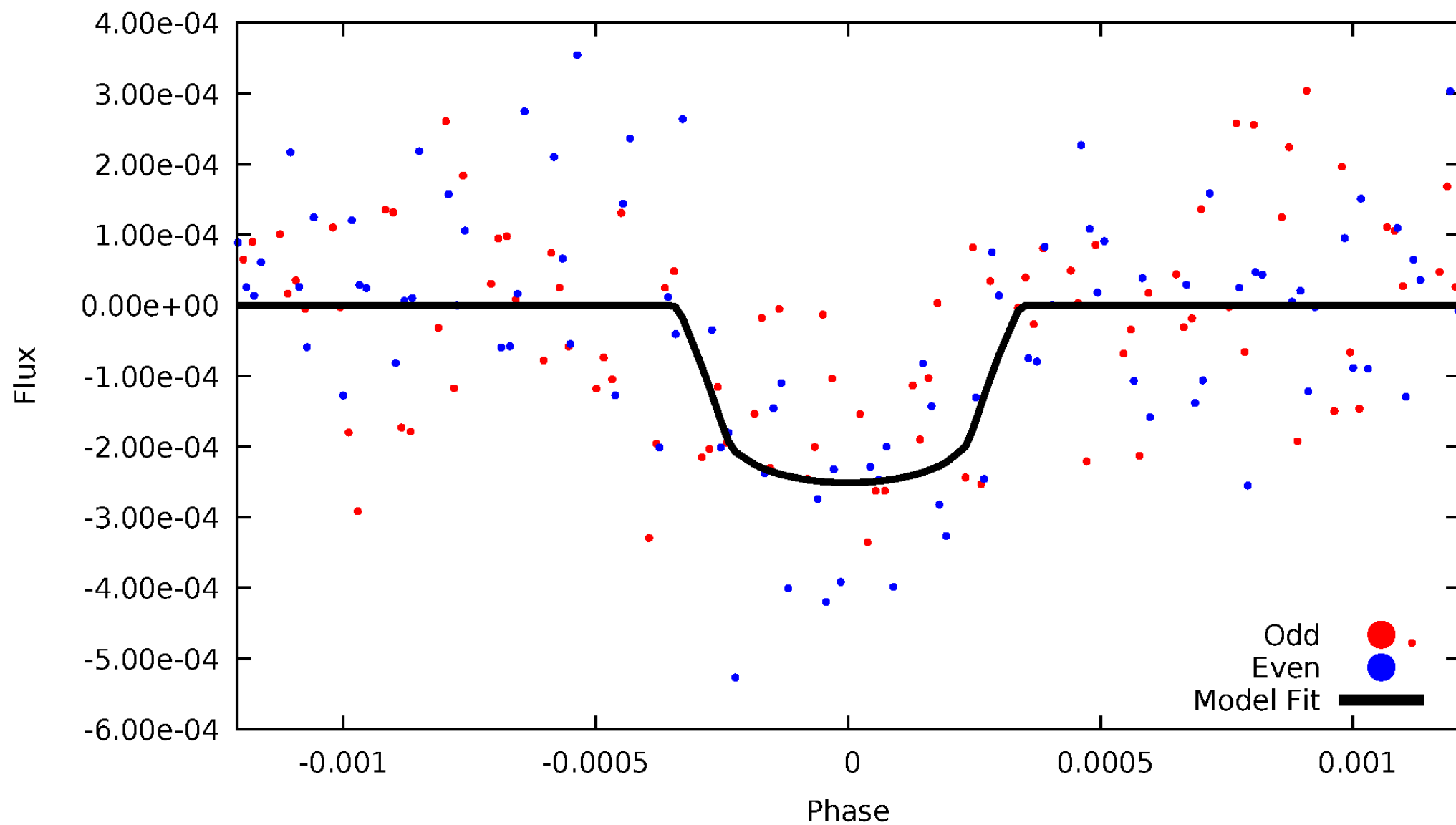


TCE 003338421-01



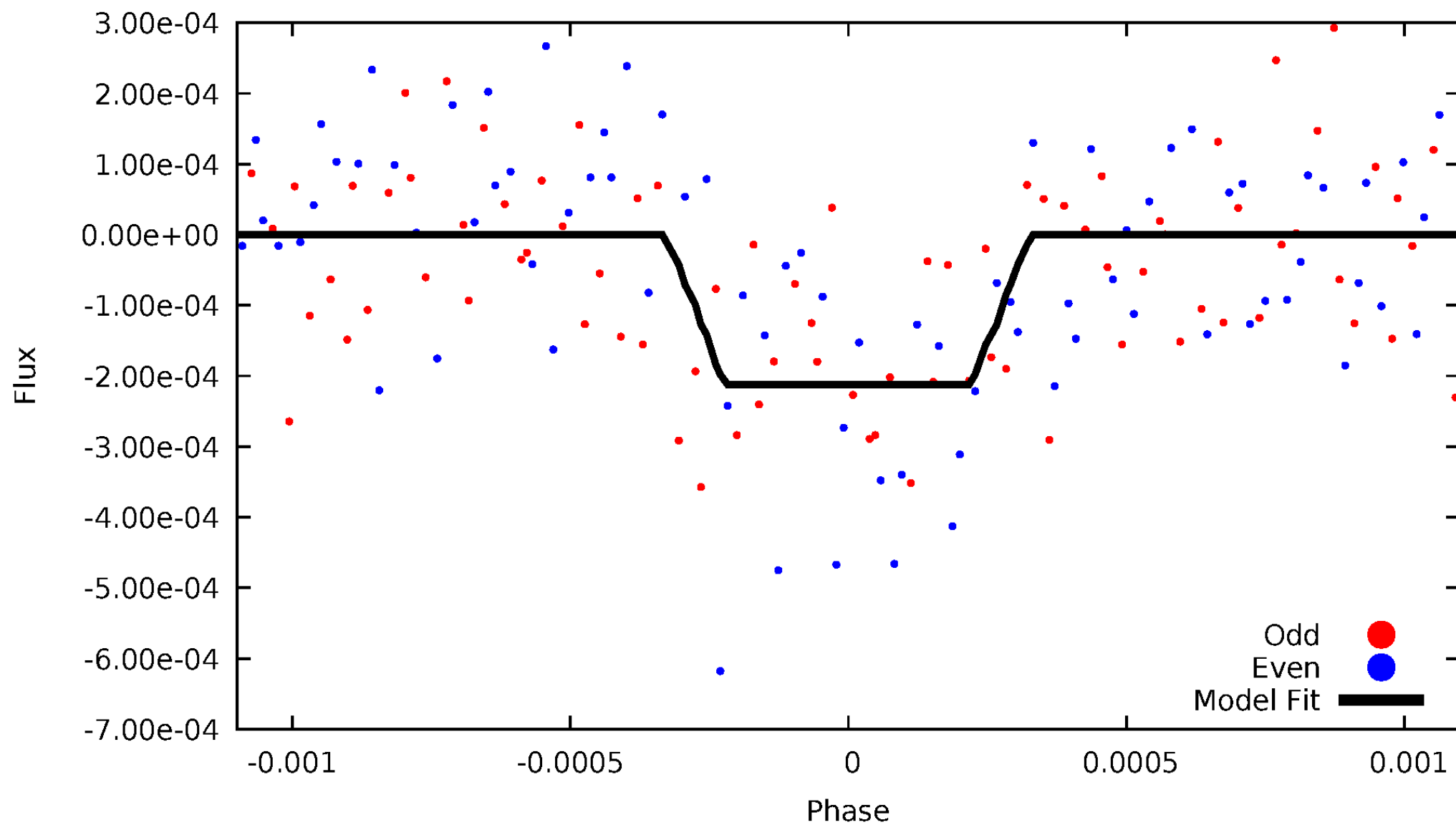
DV Odd/Even

TCE 003338421-01



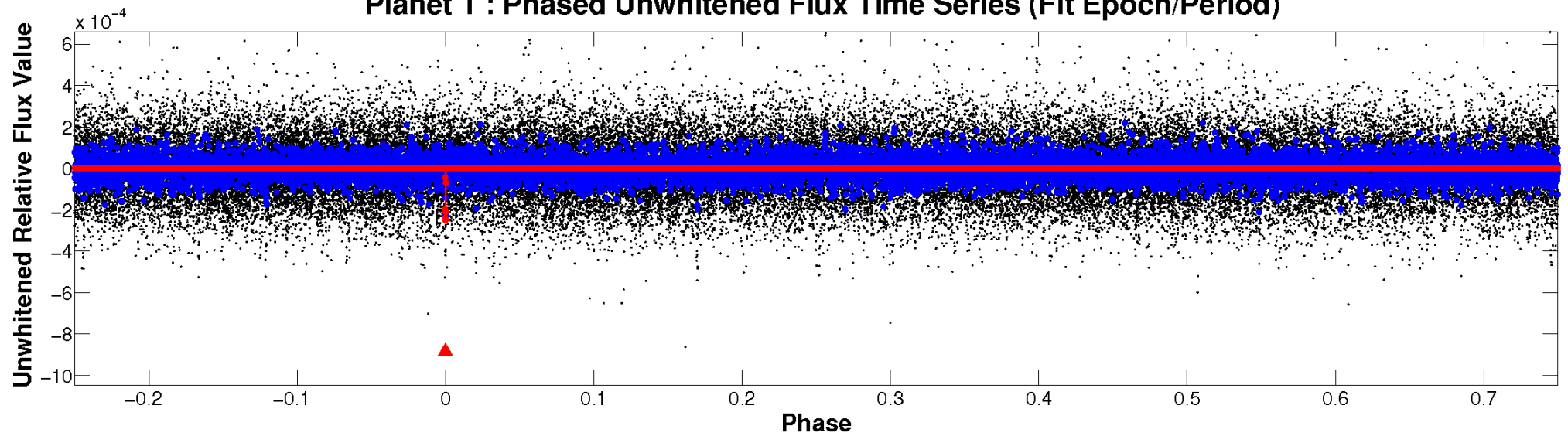
ALT Odd/Even

TCE 003338421-01

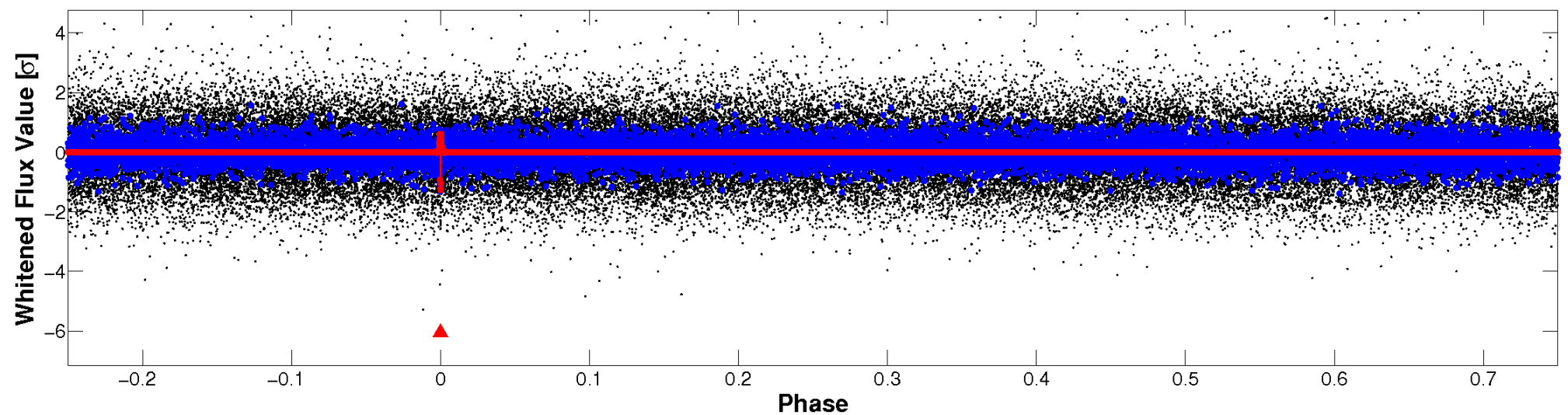


Non-Whitened Vs. Whitened Light Curve

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

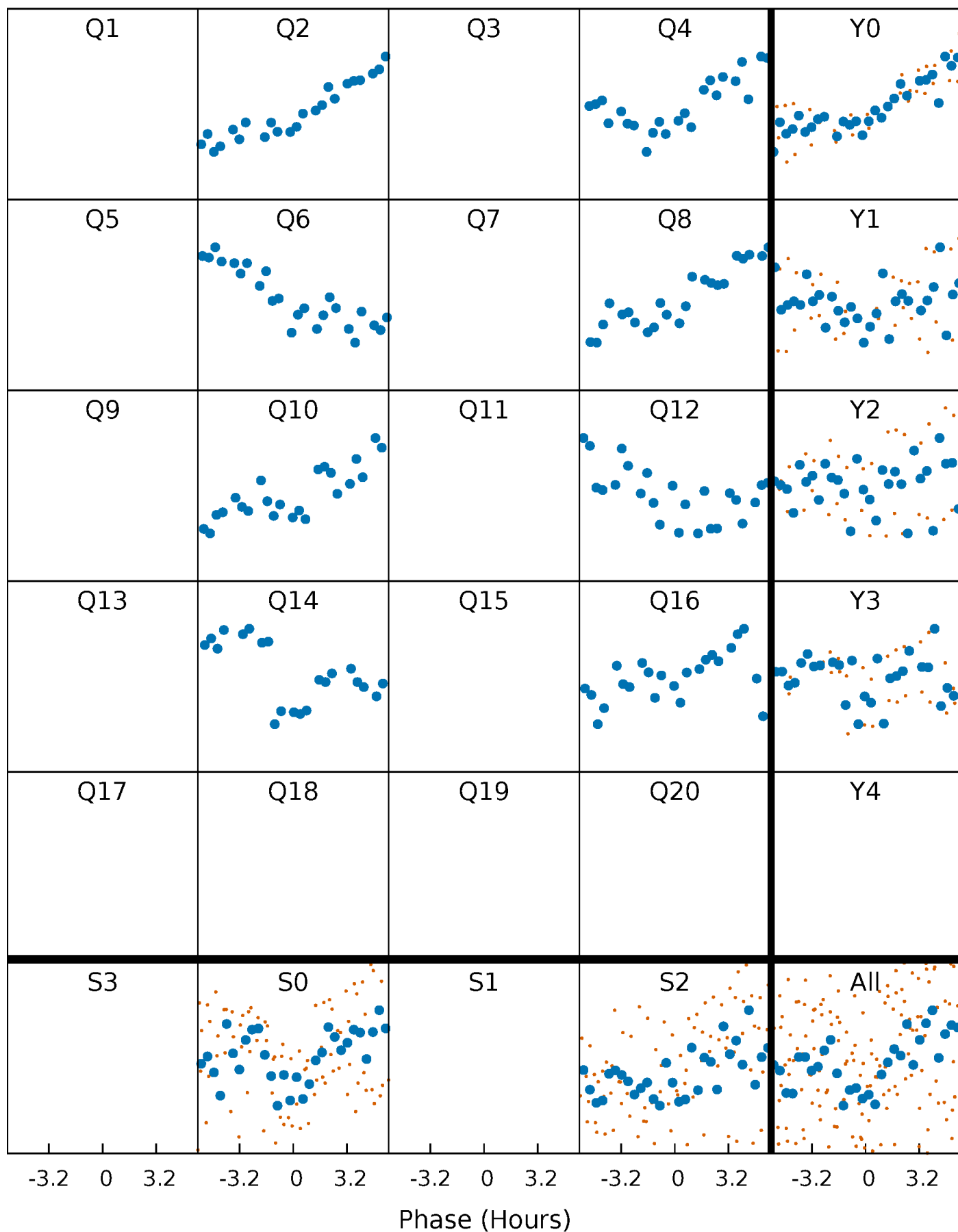


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



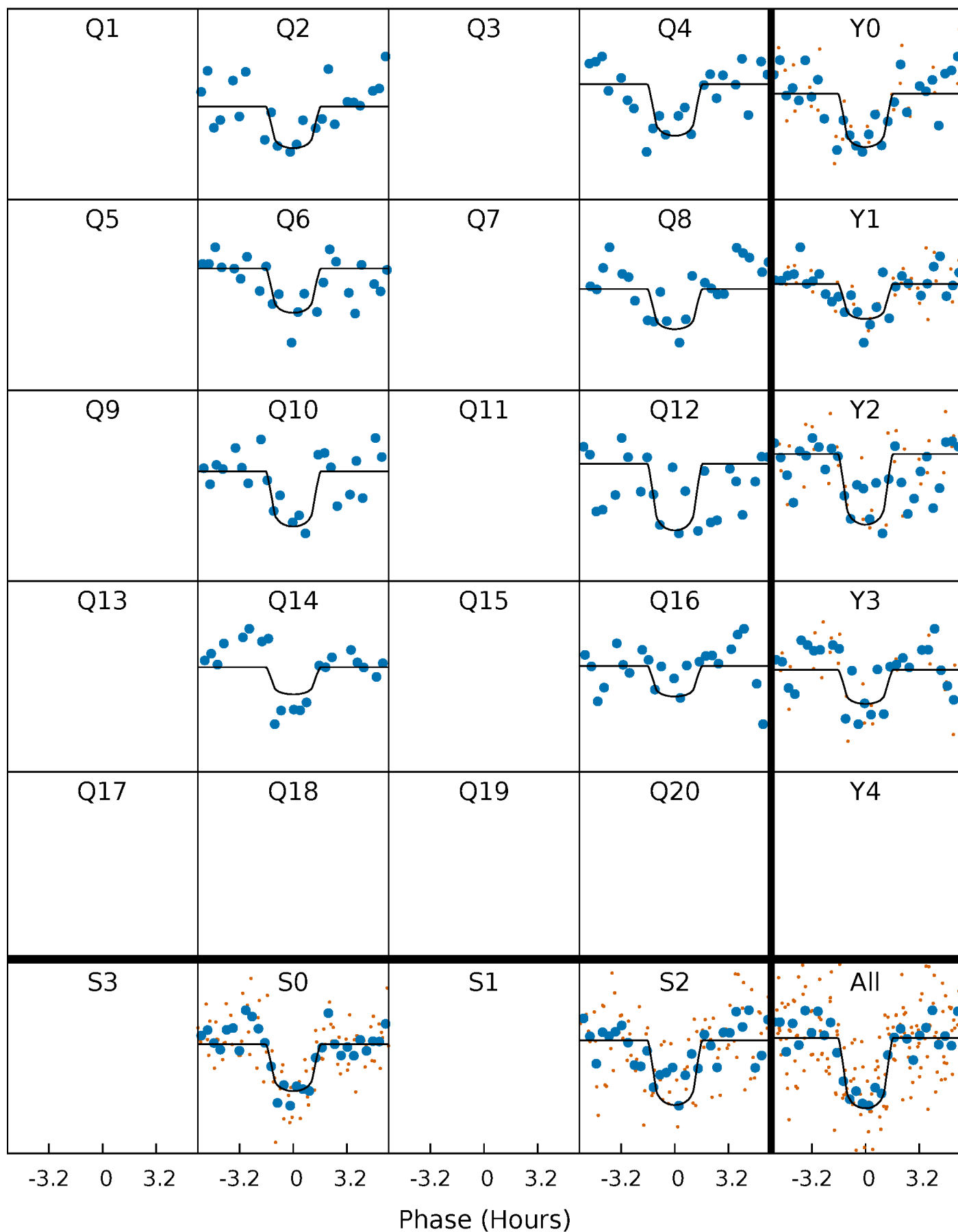
PDC Quarter-Phased Transit Curves

TCE 003338421-01 P=195.772809 Days $T_0=179.484012$ (BKJD)



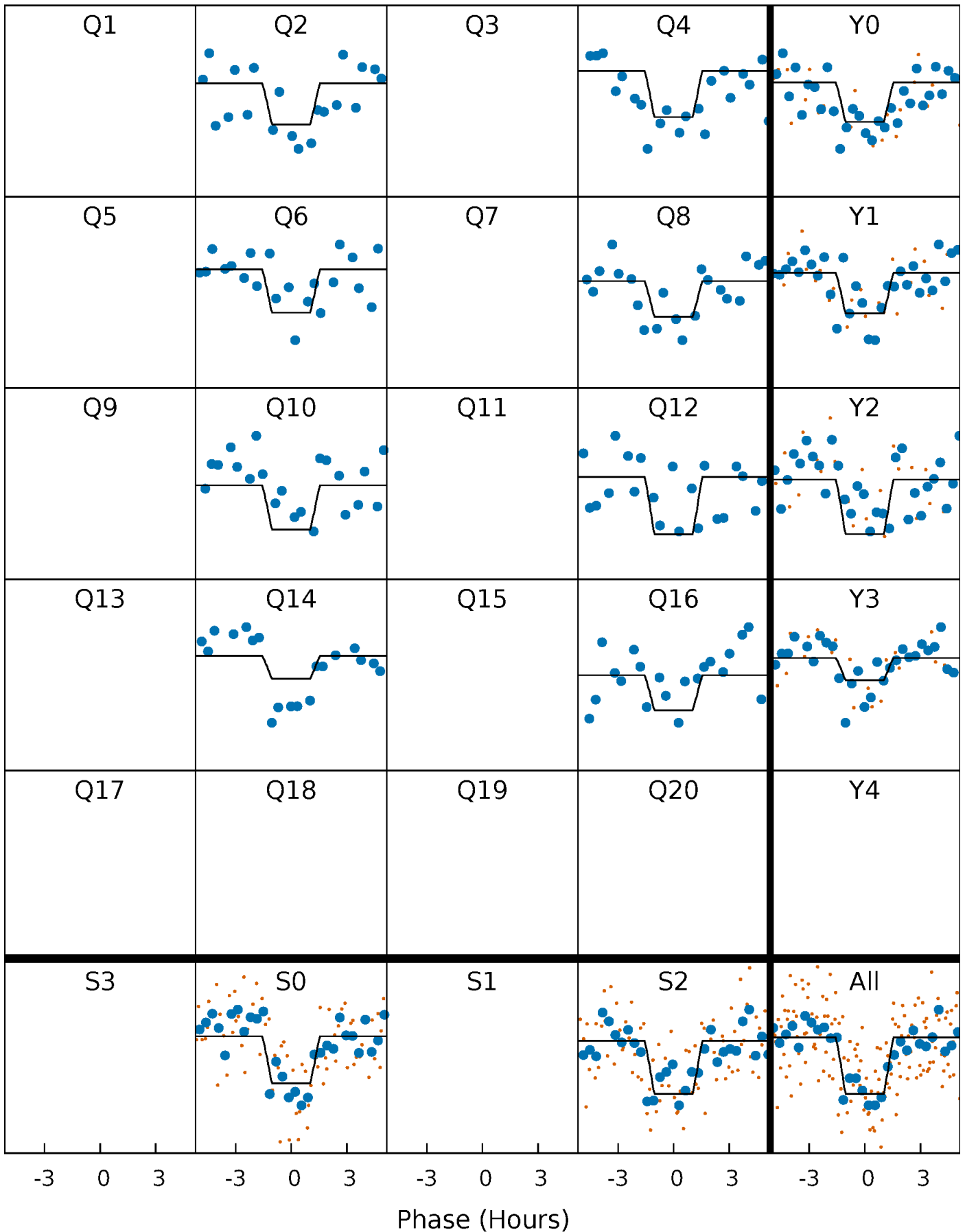
DV Quarter-Phased Transit Curves

TCE 003338421-01 P=195.772809 Days $T_0=179.484012$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

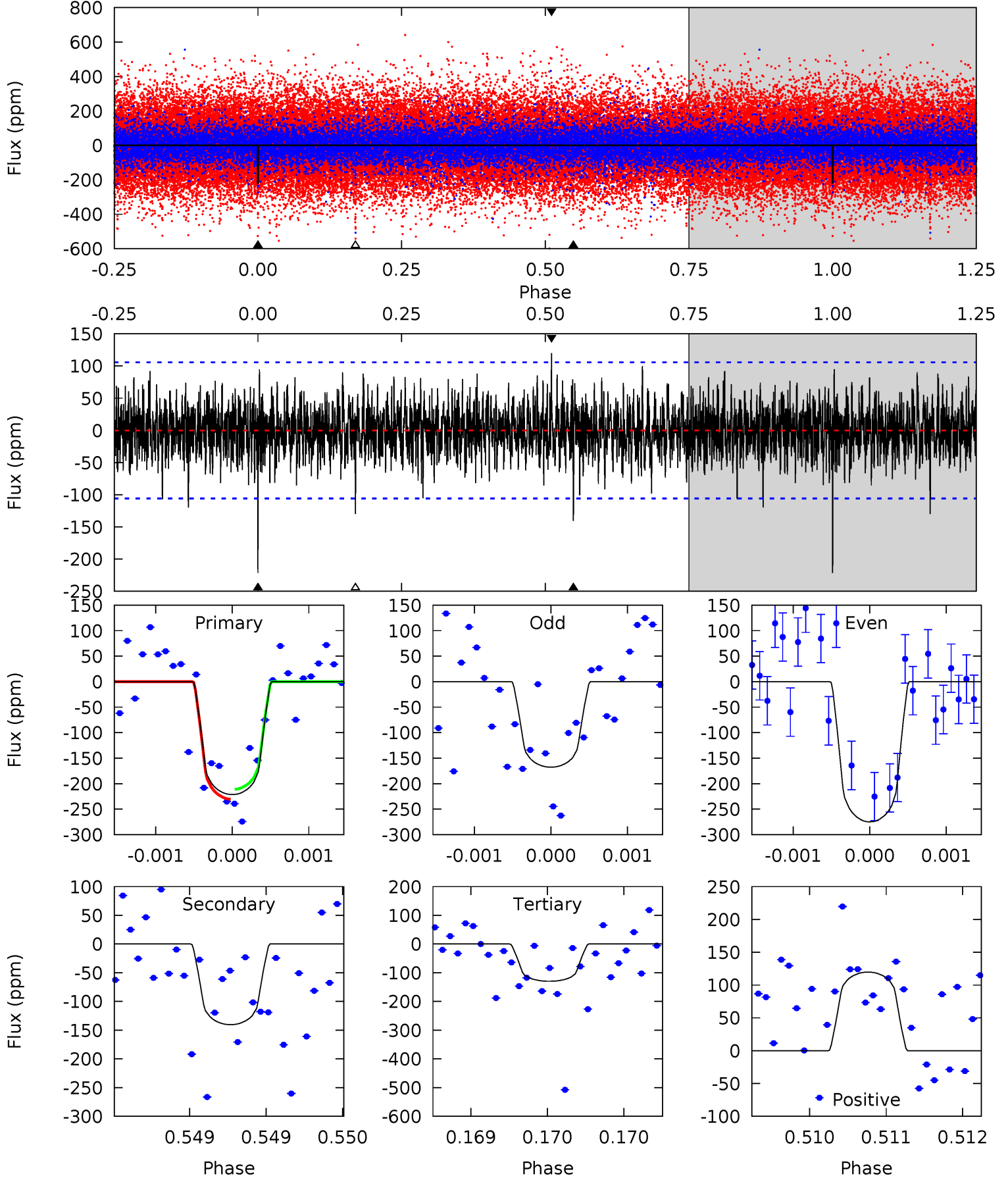
TCE 003338421-01 P=195.778146 Days $T_0=179.453307$ (BKJD)



DV Model-Shift Uniqueness Test

003338421-01, P = 195.772809 Days, E = 179.484012 Days

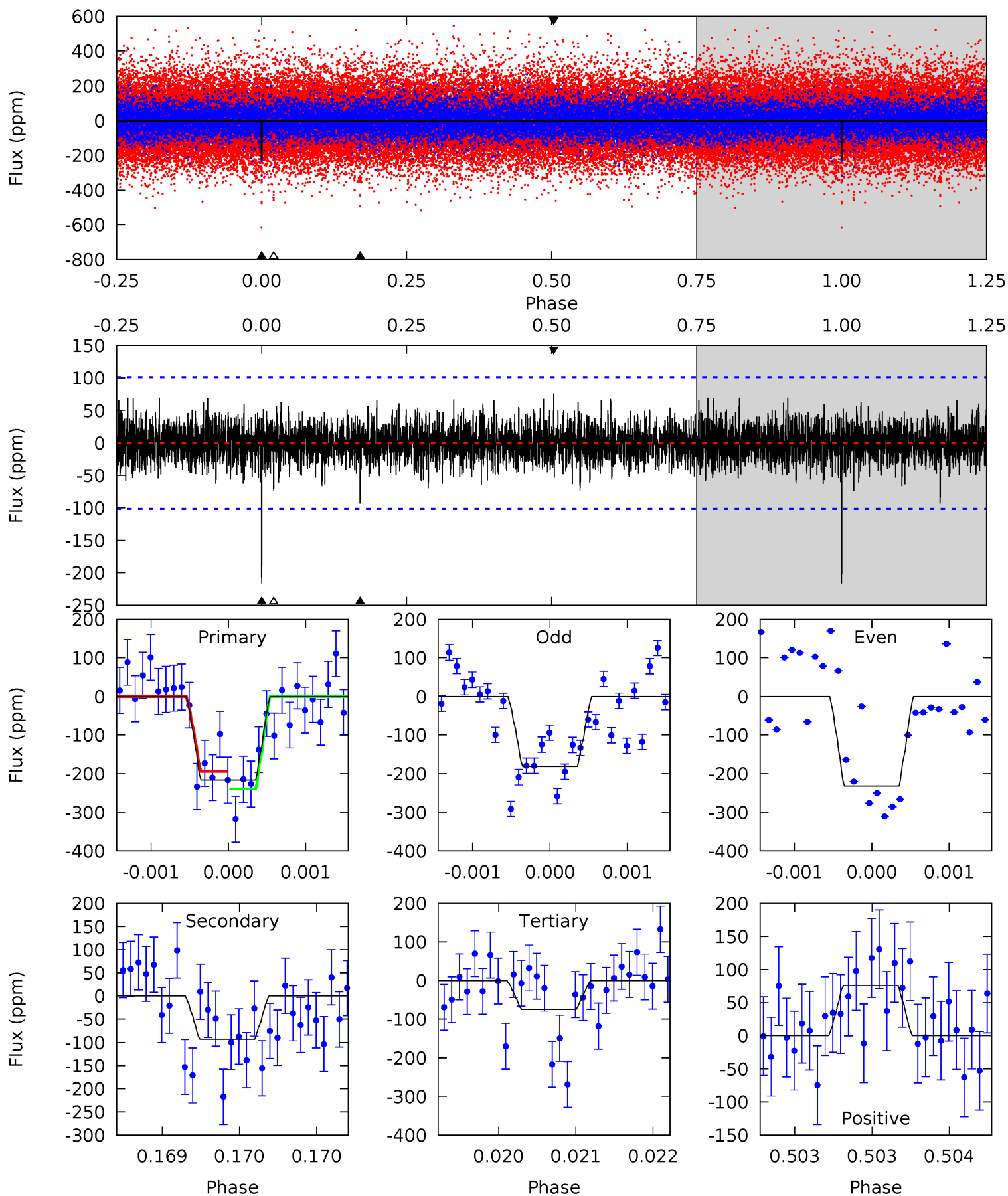
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	7.32	6.77	6.25	5.52	3.40	1.59	4.78	5.30	0.56	1.08	2.80	1.09	0.35	0.51



Alt Model-Shift Uniqueness Test

003338421-01, P = 195.778146 Days, E = 179.453307 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	5.09	4.06	4.14	5.54	3.42	1.15	7.73	7.66	1.03	0.95	1.38	1.11	0.26	1.25



Stellar Parameters For KIC 003338421

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6022^{+180}_{-162}	$3.731^{+0.323}_{-0.108}$	$-0.220^{+0.350}_{-0.300}$	$2.582^{+0.429}_{-1.000}$	$1.311^{+0.204}_{-0.306}$	$0.107^{+0.276}_{-0.035}$
	+3%/-3%	+9%/-3%	+159%/-136%	+17%/-39%	+16%/-23%	+257%/-32%
Source	PHO1	FLK73	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 003338421-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-140 ± 19	$4.51^{+3.48}_{-2.46}$	692^{+44}_{-62}	5048^{+2494}_{-959}	1946^{+7678}_{-1341}
Alt.	-93 ± 18	$4.20^{+3.02}_{-2.62}$	693^{+42}_{-65}	4823^{+2976}_{-879}	1507^{+9697}_{-1007}

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

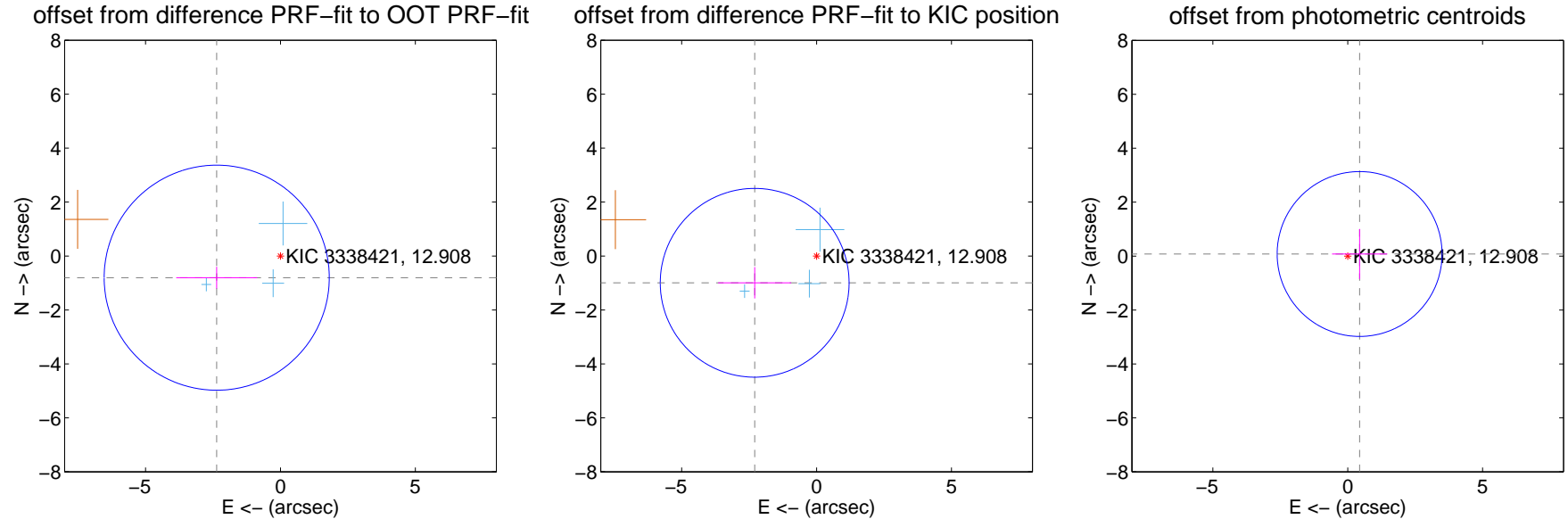
DV Centroid Data

Supplemental centroid analysis for 003338421-01. Kepler magnitude: 12.91. Transit SNR 8.20

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.496 ± 1.391	1.79	2.363 ± 1.502	-0.803 ± 0.402
PRF-fit source offset from KIC position	2.500 ± 1.167	2.14	2.295 ± 1.353	-0.993 ± 0.582
photometric centroid source offset	0.45 ± 1.02	0.44	-0.44 ± 1.02	0.08 ± 0.93



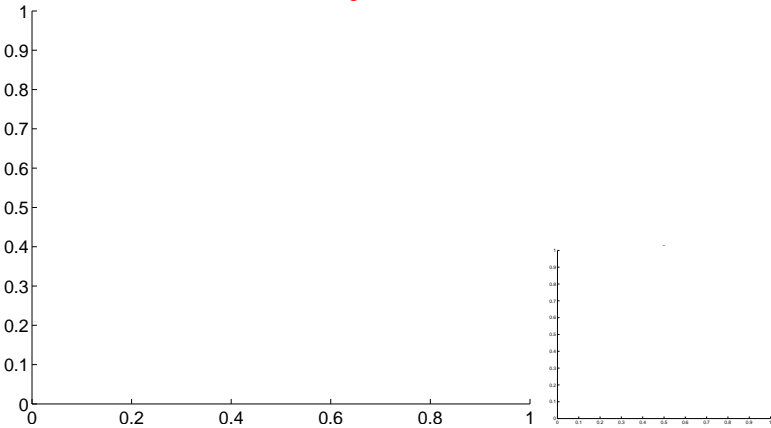
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

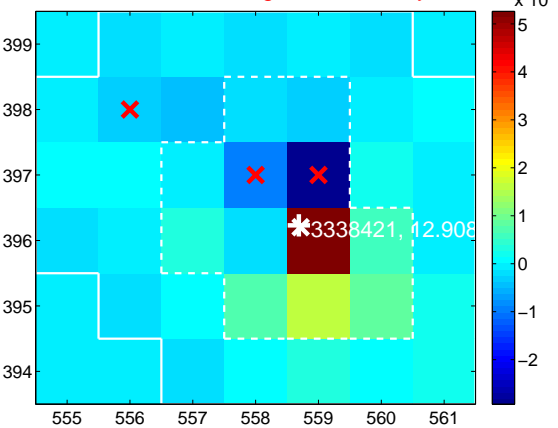
Q1 no difference image



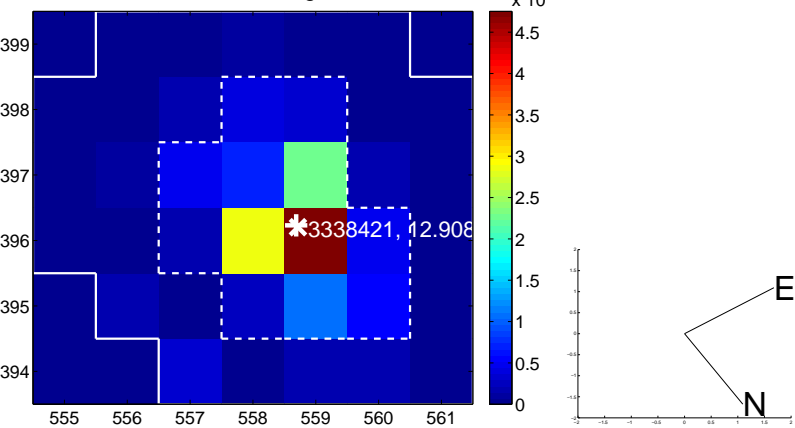
Q1 no OOT image



Q2 difference image. Poor Quality



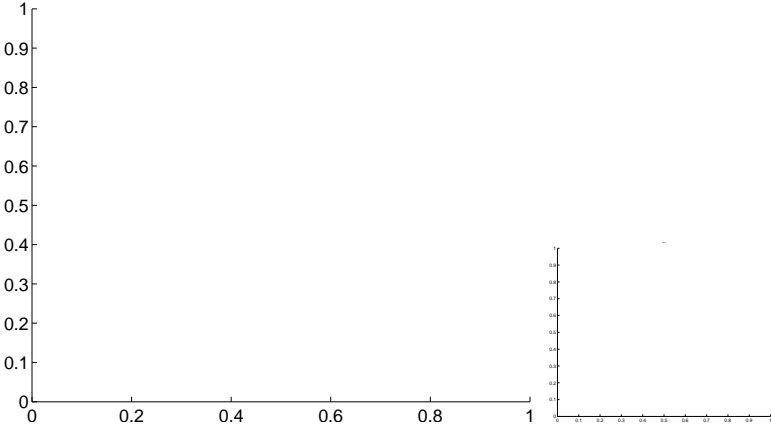
Q2 OOT image



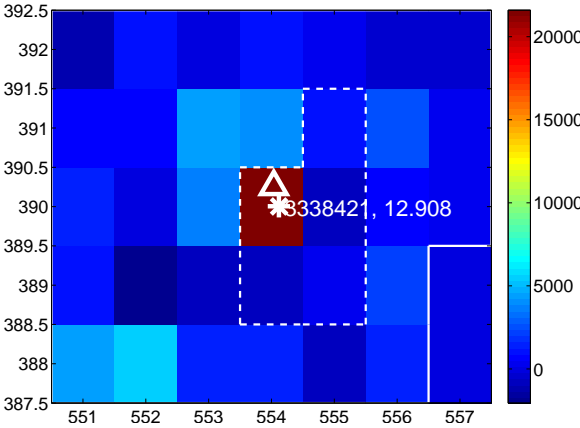
Q3 no difference image



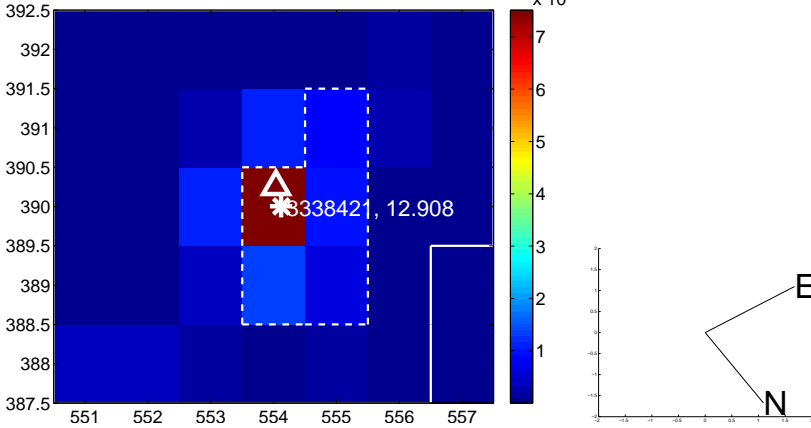
Q3 no OOT image



Q4 difference image



Q4 OOT image



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

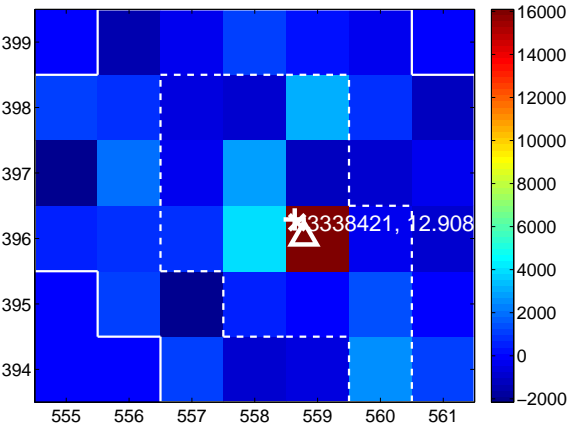
Q5 no difference image



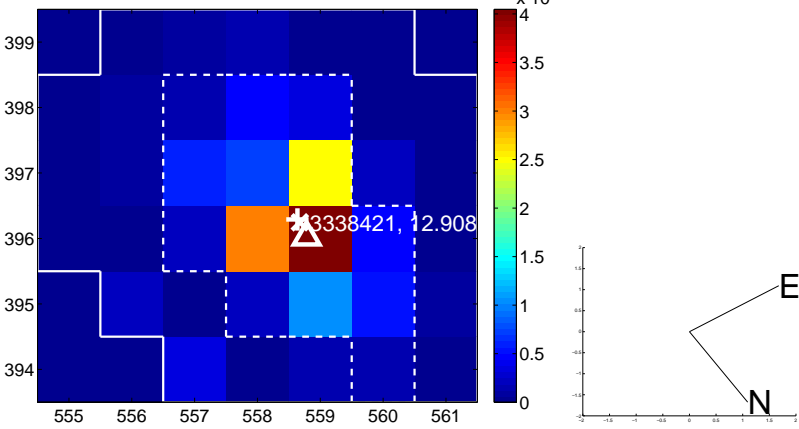
Q5 no OOT image



Q6 difference image



Q6 OOT image



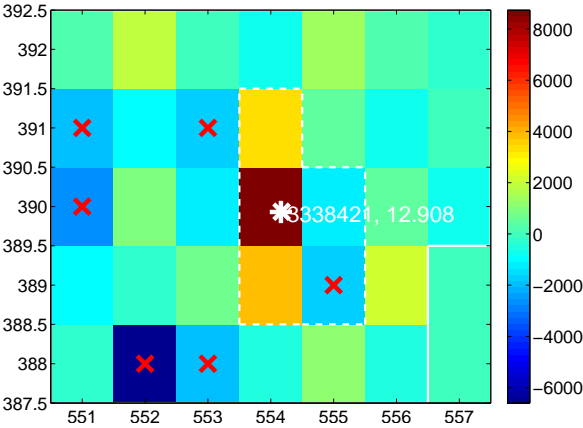
Q7 no difference image



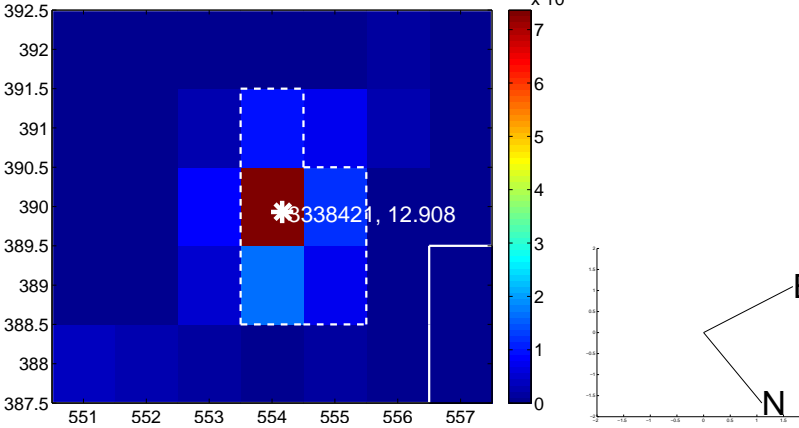
Q7 no OOT image



Q8 difference image. Poor Quality



Q8 OOT image



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

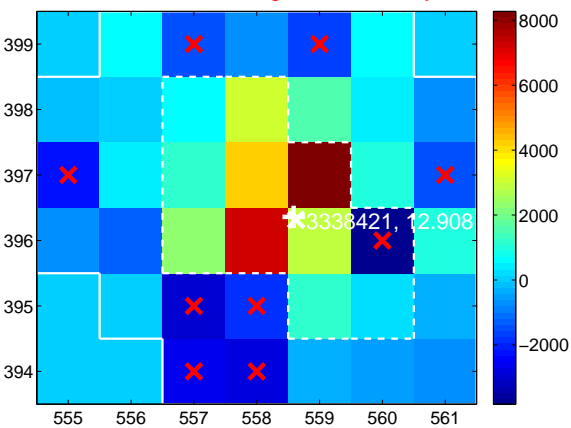
Q9 no difference image



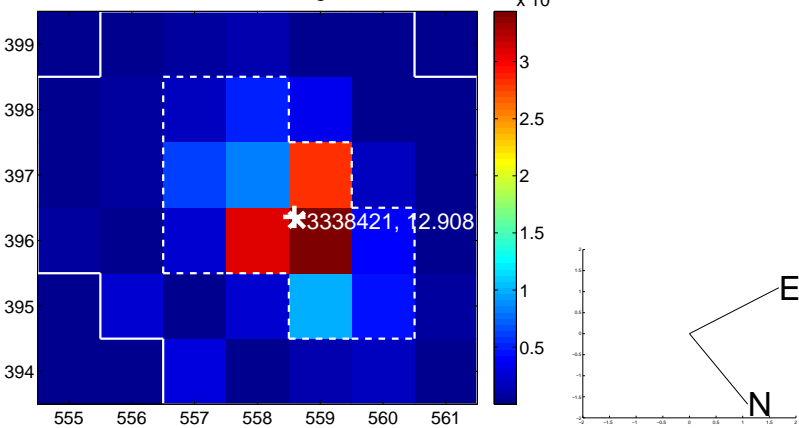
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



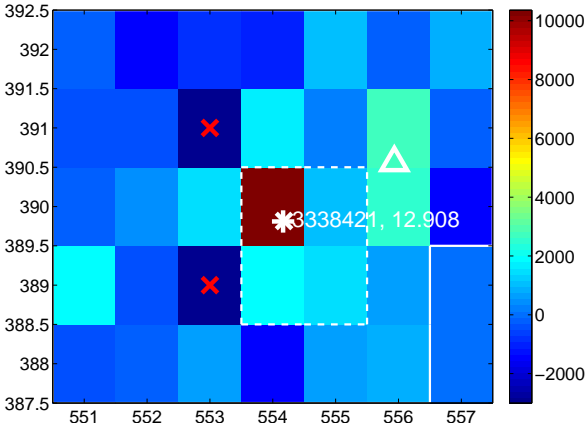
Q11 no difference image



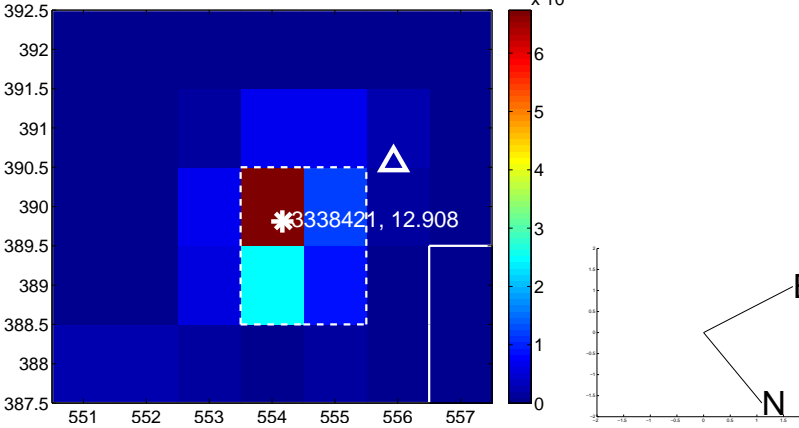
Q11 no OOT image



Q12 difference image. Poor Quality



Q12 OOT image



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

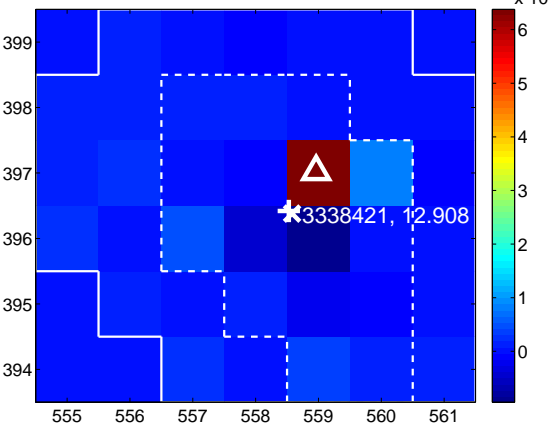
Q13 no difference image



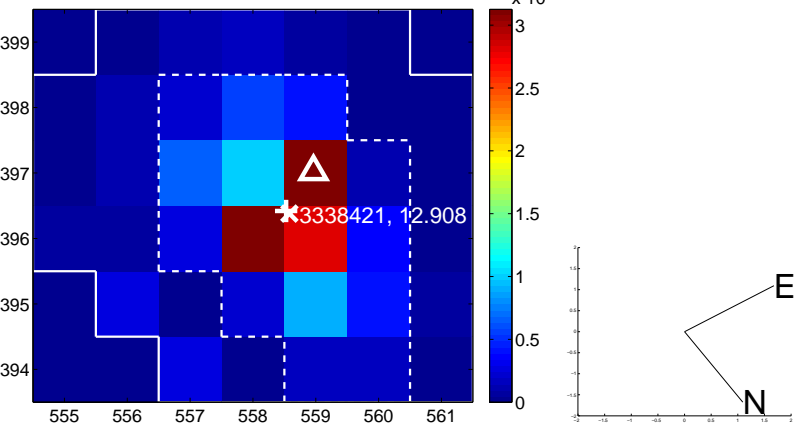
Q13 no OOT image



Q14 difference image



Q14 OOT image



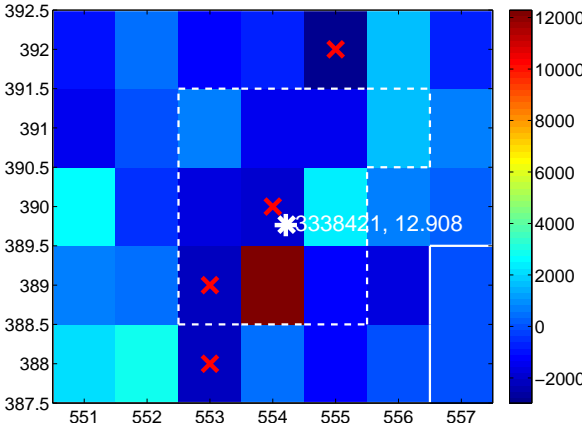
Q15 no difference image



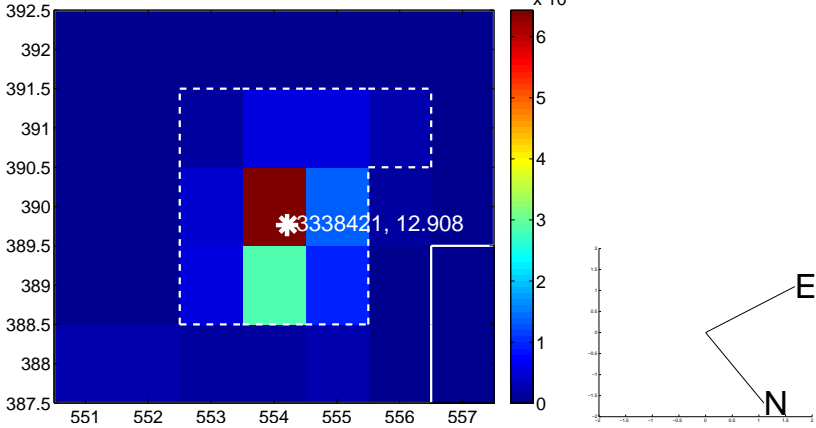
Q15 no OOT image



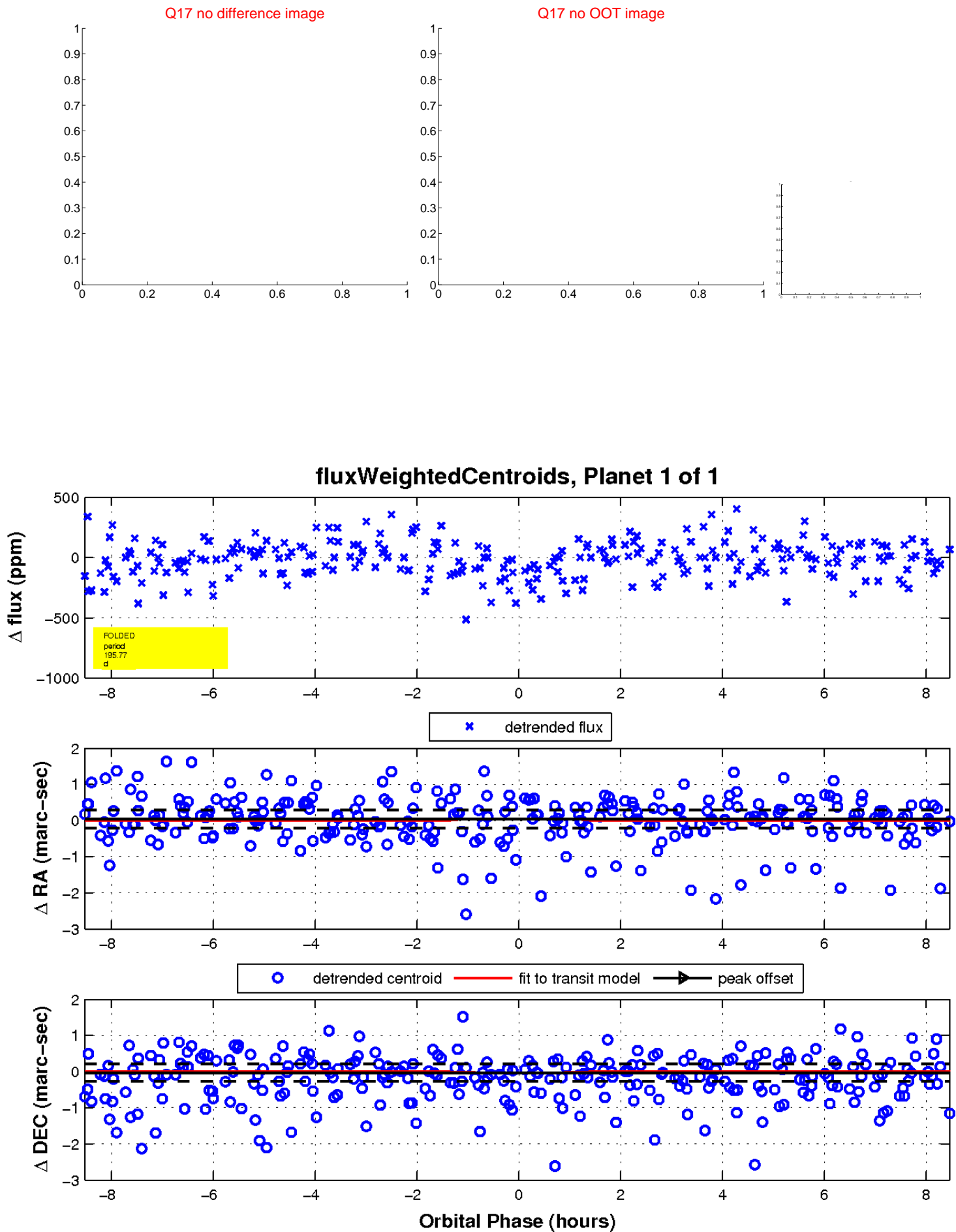
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

