

KIC 003539231

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})
003539231-01	OBS	4626.01	91.959681	183.065105	311.9	17.947	10.9	11.1	1.53	5854	5.07	14.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003539231-01	OBS	PC	0.98	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.

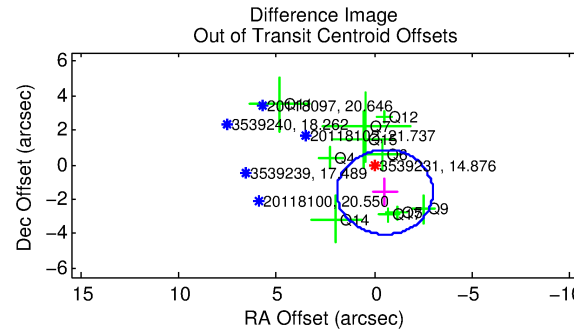
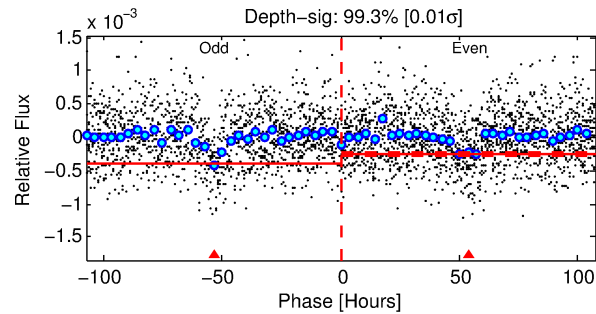
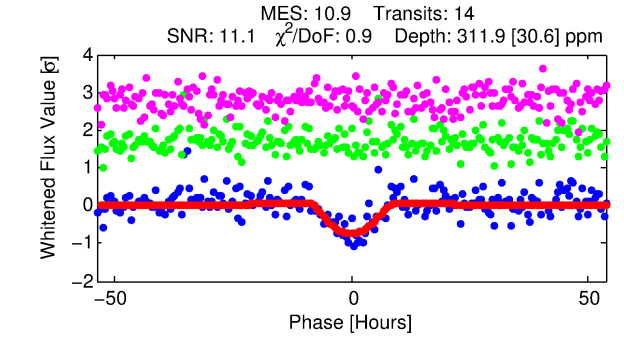
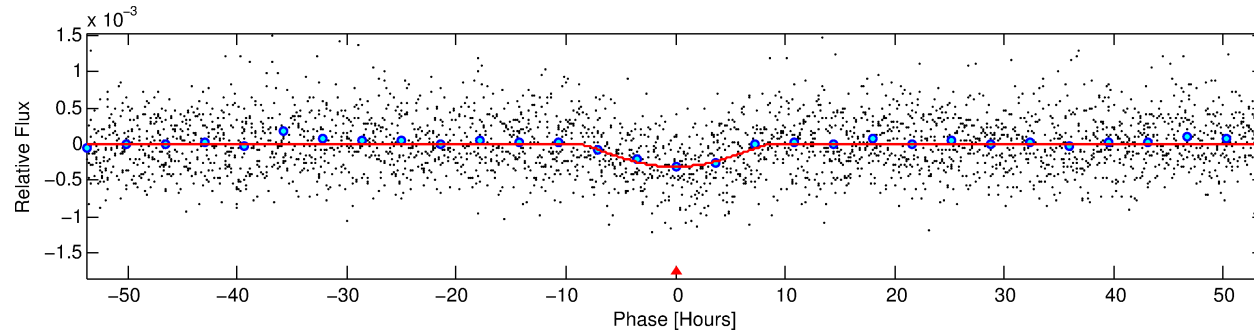
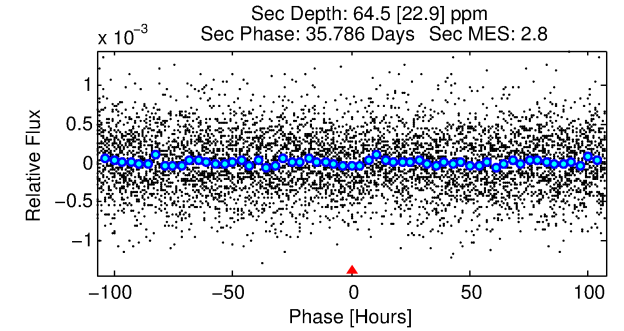
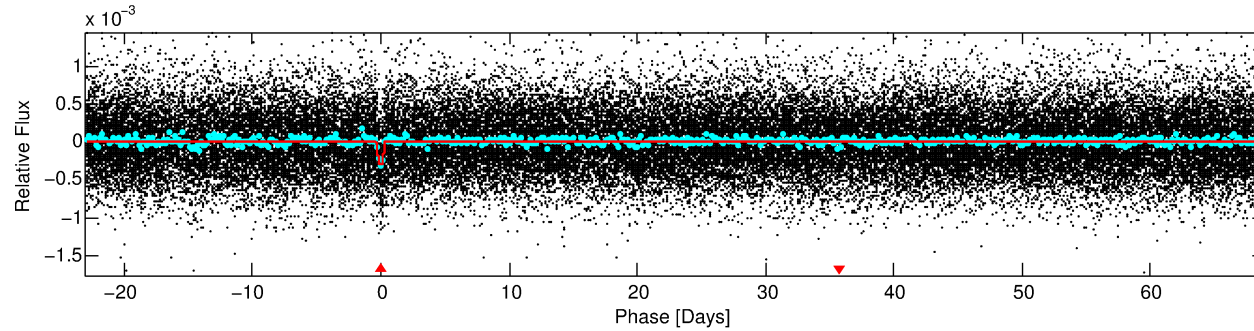
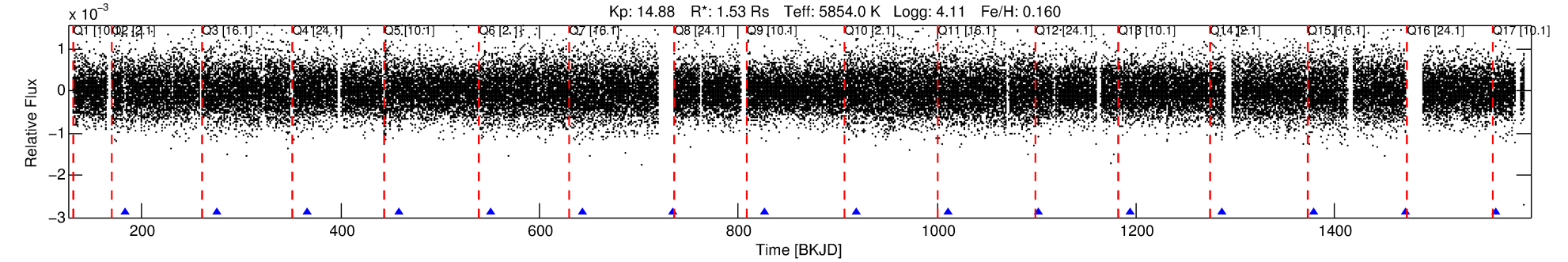
Ephemeris Match Information For 003539231-01

No Significant Match Found

DV One-Page Summary

KIC: 3539231 Candidate: 1 of 1 Period: 91.960 d

KOI: K04626.01 Corr: 0.857



DV Fit Results:

Period = 91.95968 [0.00434] d
Epoch = 183.0651 [0.0397] BKJD
Rp/R* = 0.0304 [0.0740]
a/R* = 10.33 [7.12]
b = 1.00 [0.12]
Seff = 14.43 [4.59]
Teff = 497 [40] K
Rp = 5.07 [12.38] Re
a = 0.4126 [0.0824] AU
Ag = 234.96 [1147.92] [0.20 σ]
Teffp = 3008 [3667] K [0.68 σ]

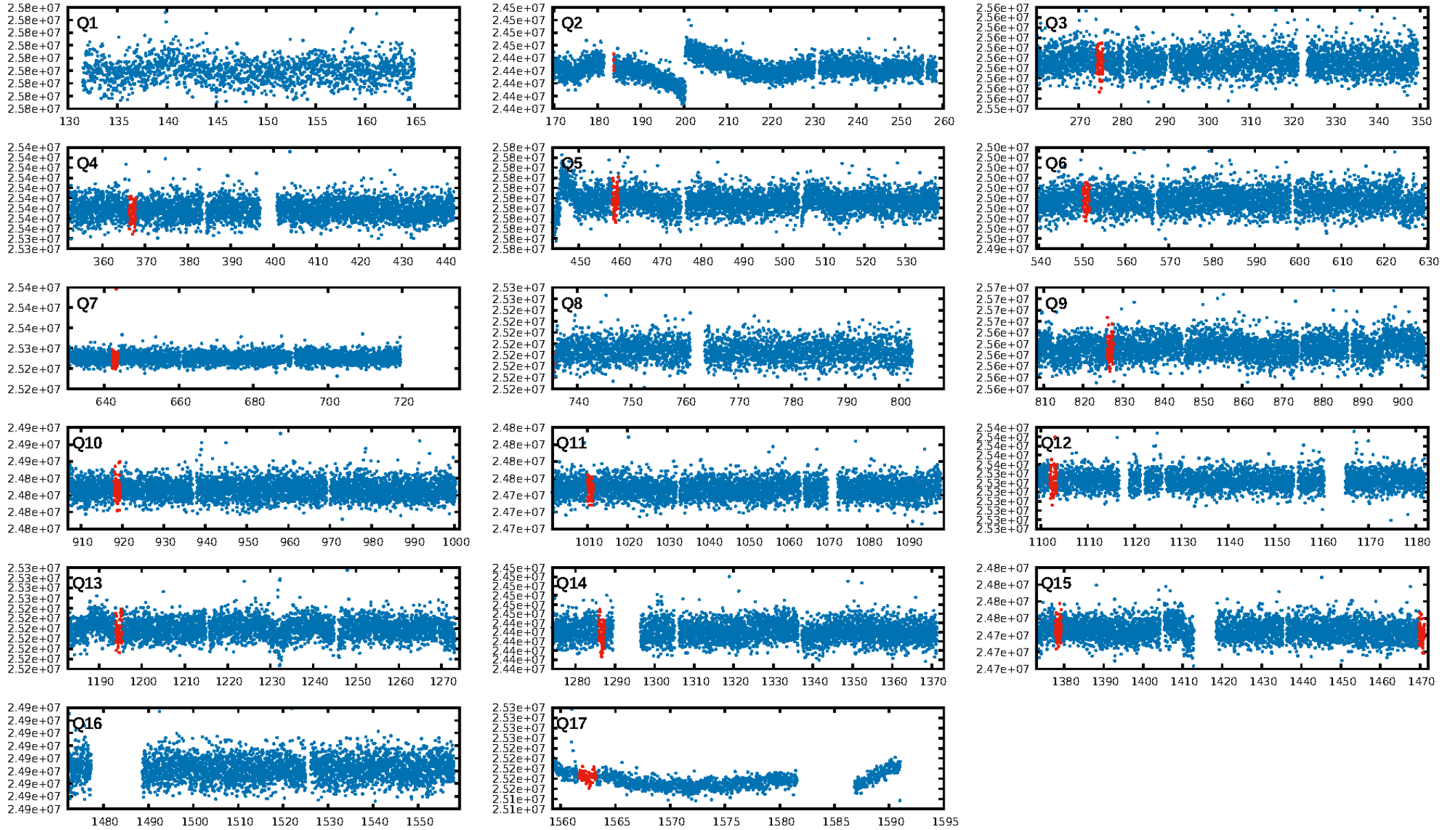
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 77.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.37e-22
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.297
Centroid-sig: 20.7%
Centroid-so: 1.302 arcsec [1.19 σ]
OotOffset-rm: 1.674 arcsec [2.05 σ]
KicOffset-rm: 1.643 arcsec [2.06 σ]
OotOffset-st: 2/3/2/3 [10]
KicOffset-st: 2/3/2/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [12/12]

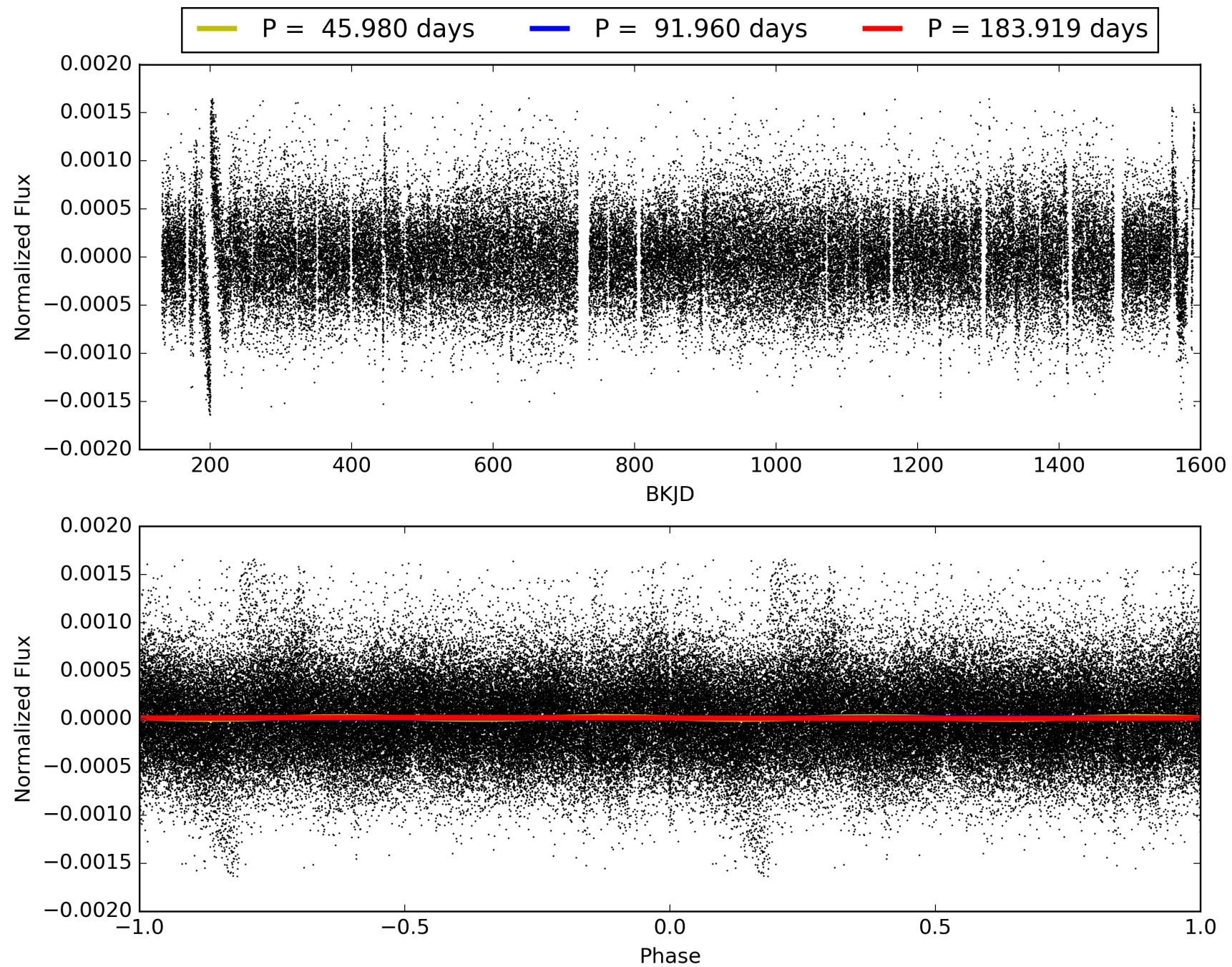
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:45:08 Z

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

TCE 003539231-01, PDC Light Curves

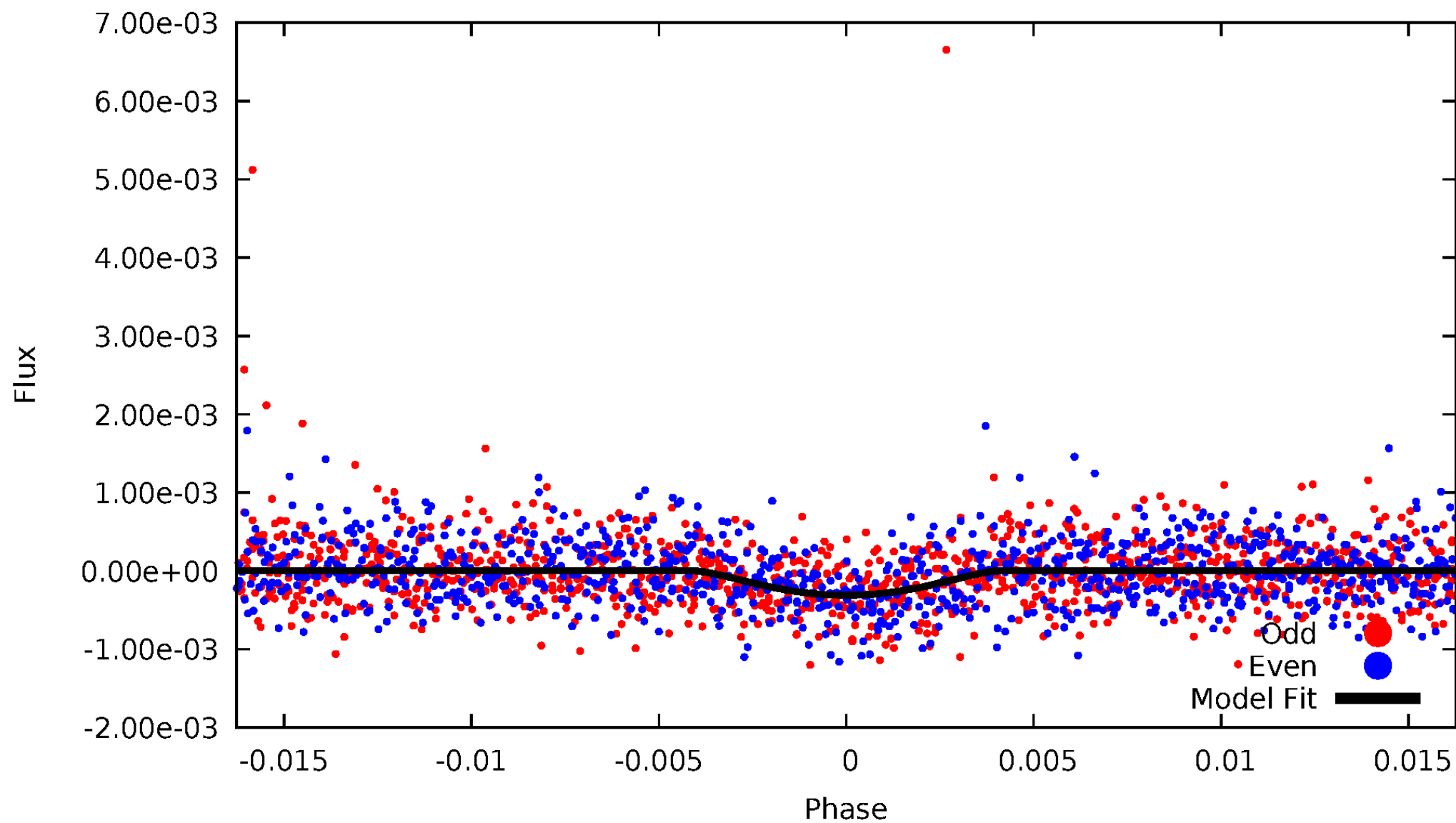


TCE 003539231-01



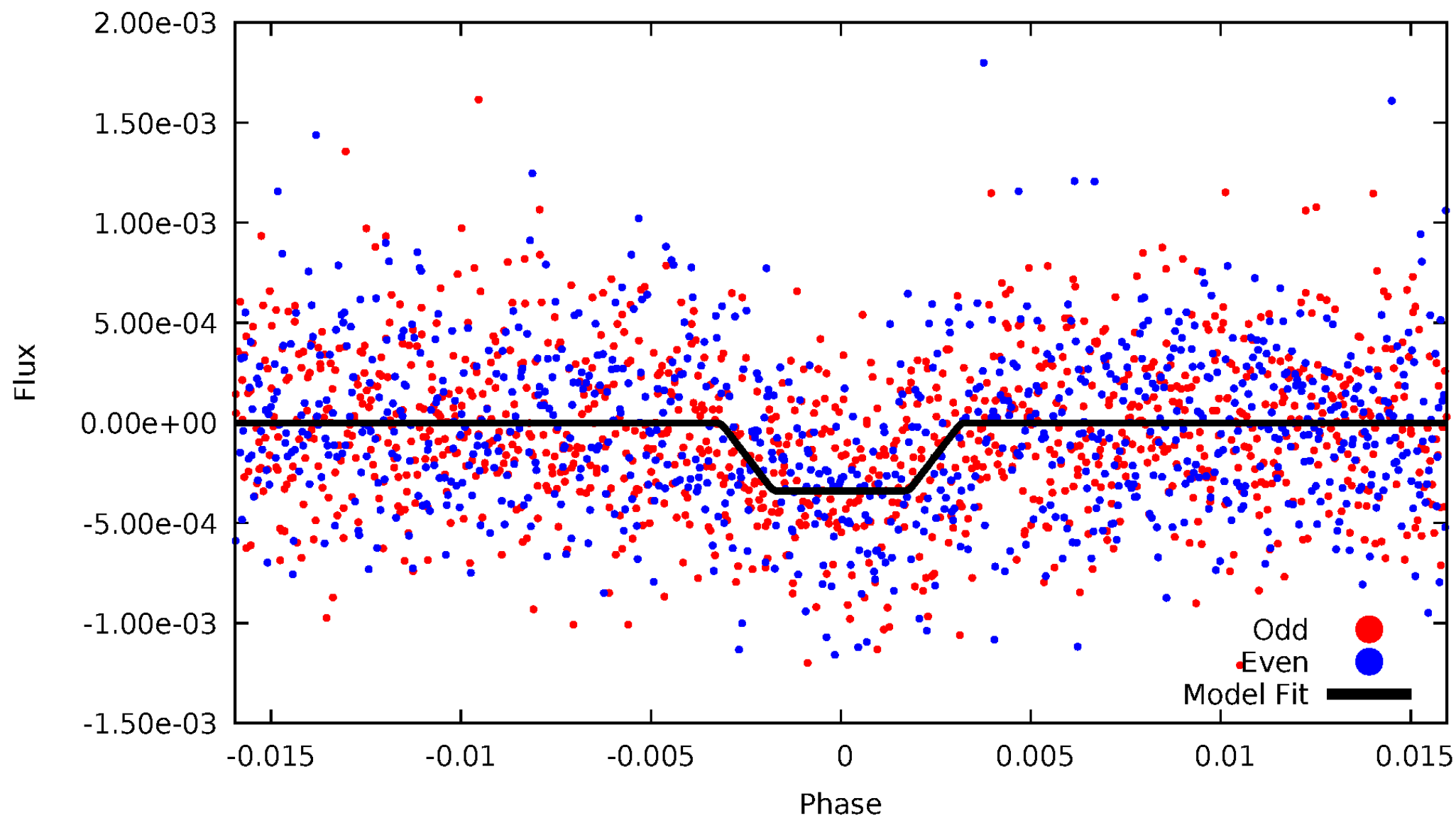
DV Odd/Even

TCE 003539231-01



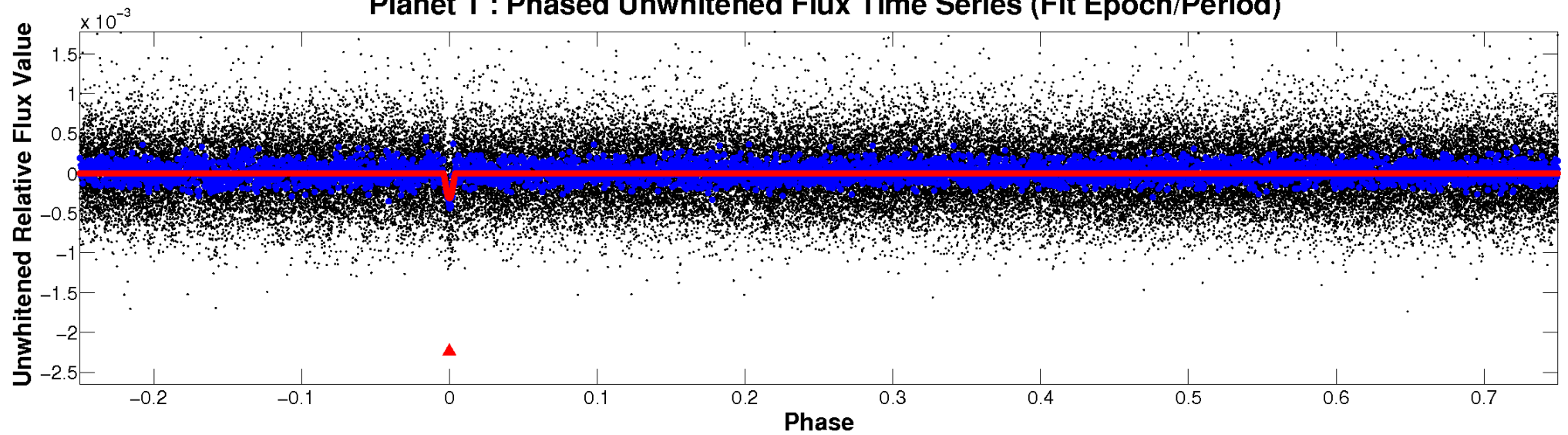
ALT Odd/Even

TCE 003539231-01

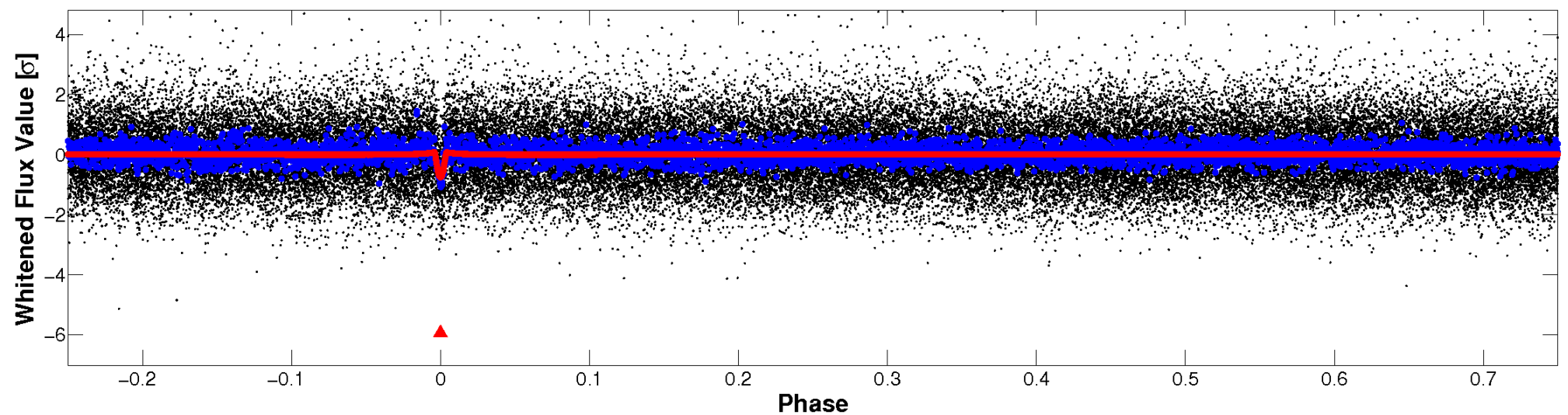


Non-Whitened Vs. Whitened Light Curve

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

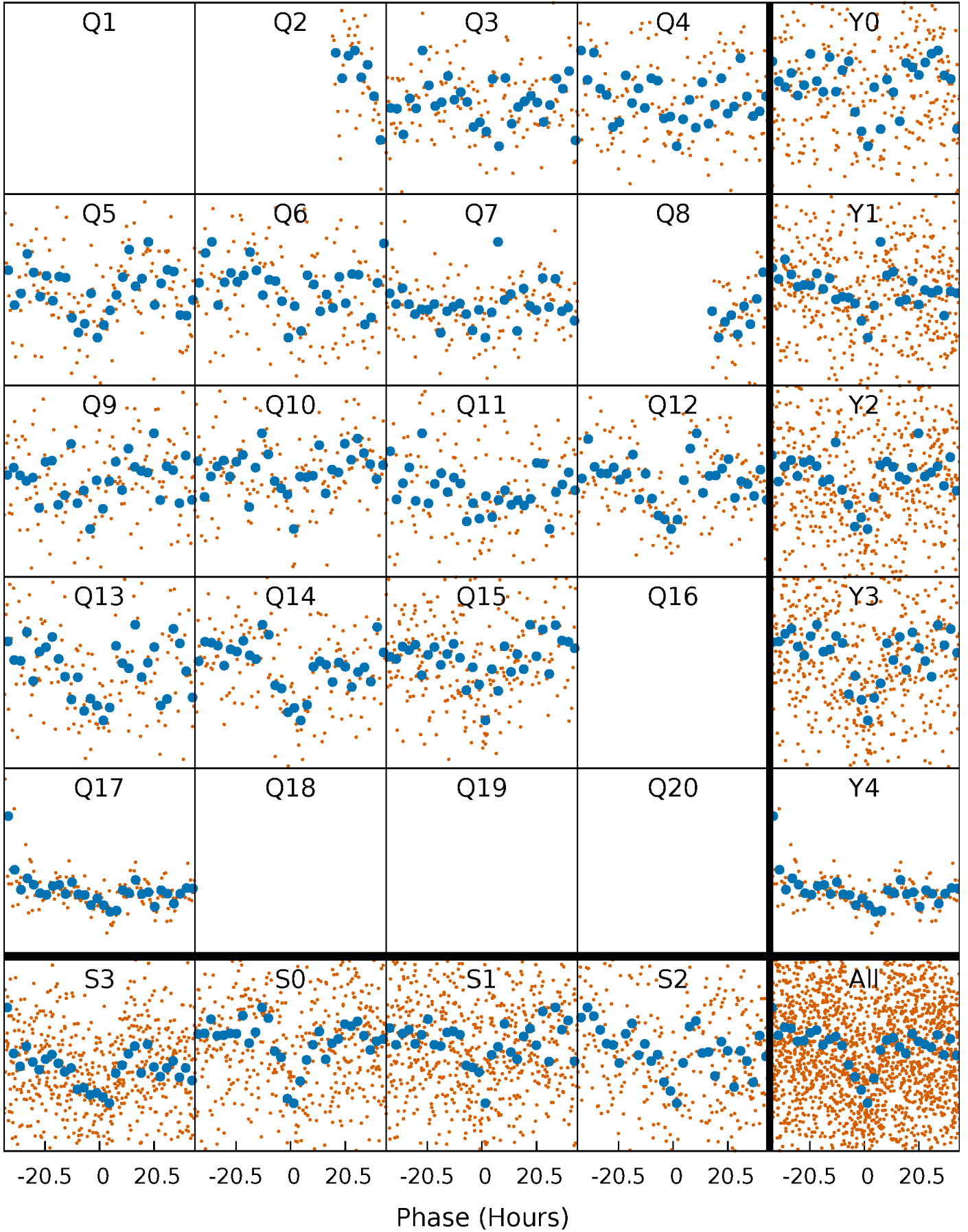


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



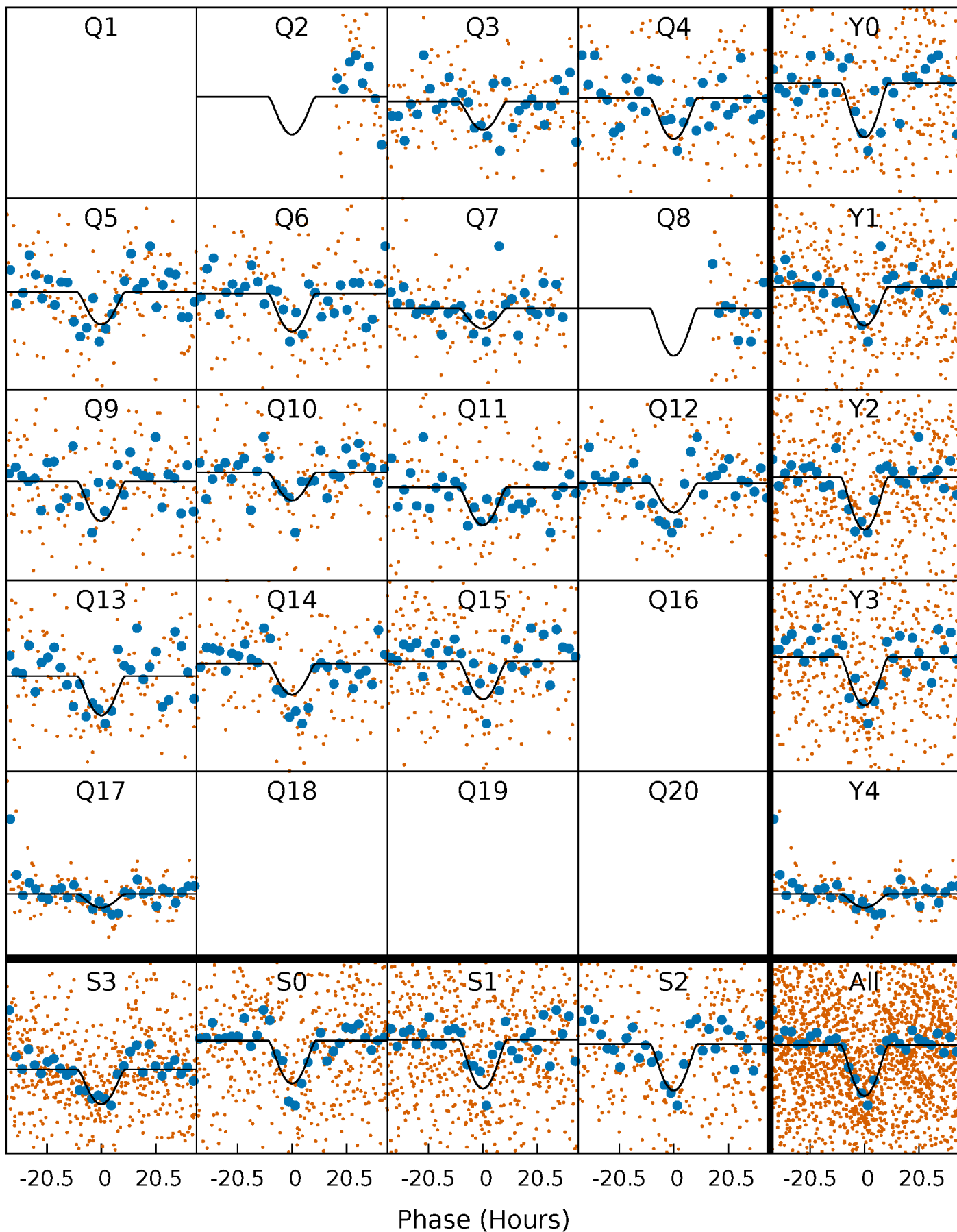
PDC Quarter-Phased Transit Curves

TCE 003539231-01 P= 91.959681 Days $T_0=183.065105$ (BKJD)



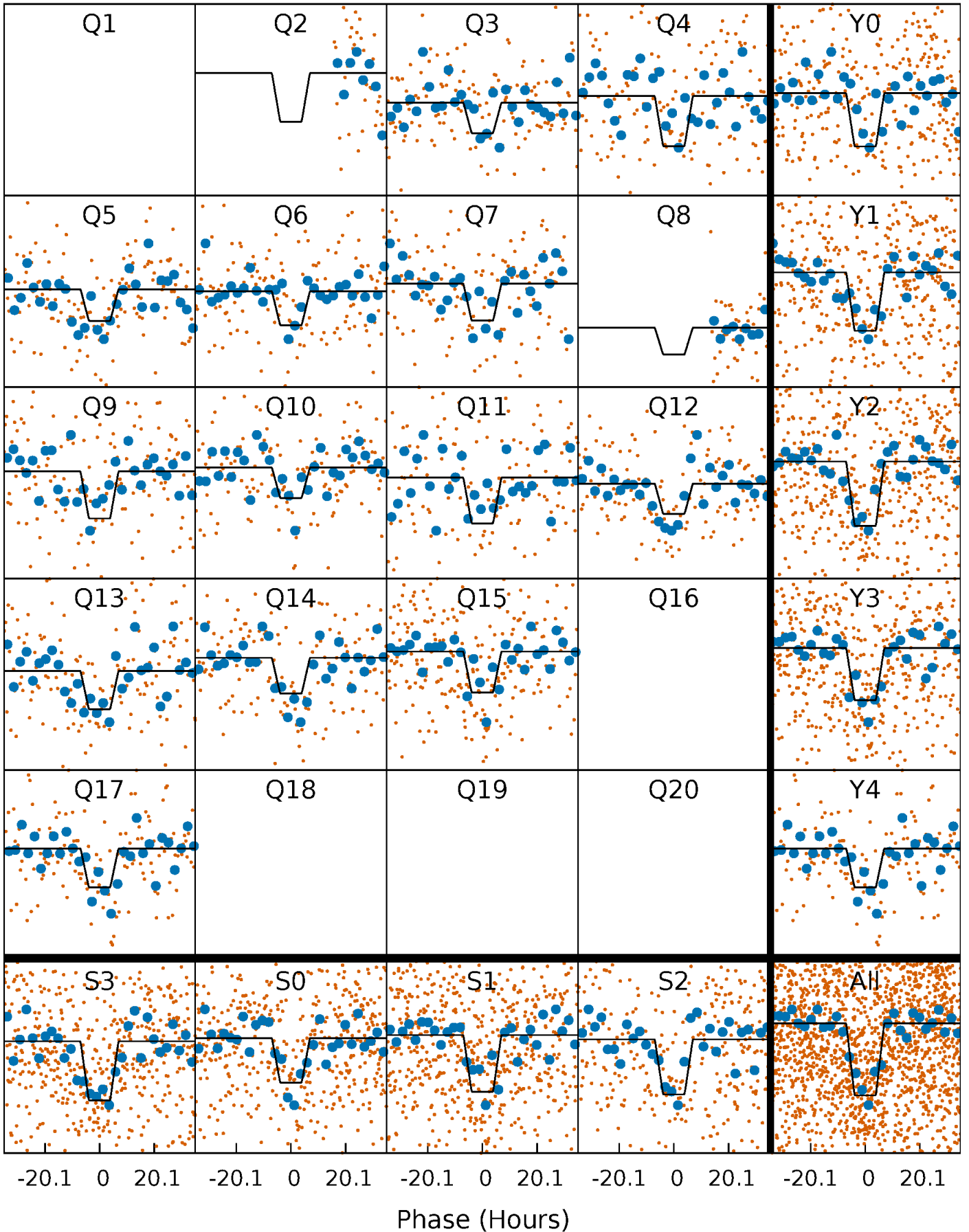
DV Quarter-Phased Transit Curves

TCE 003539231-01 P= 91.959681 Days $T_0=183.065105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

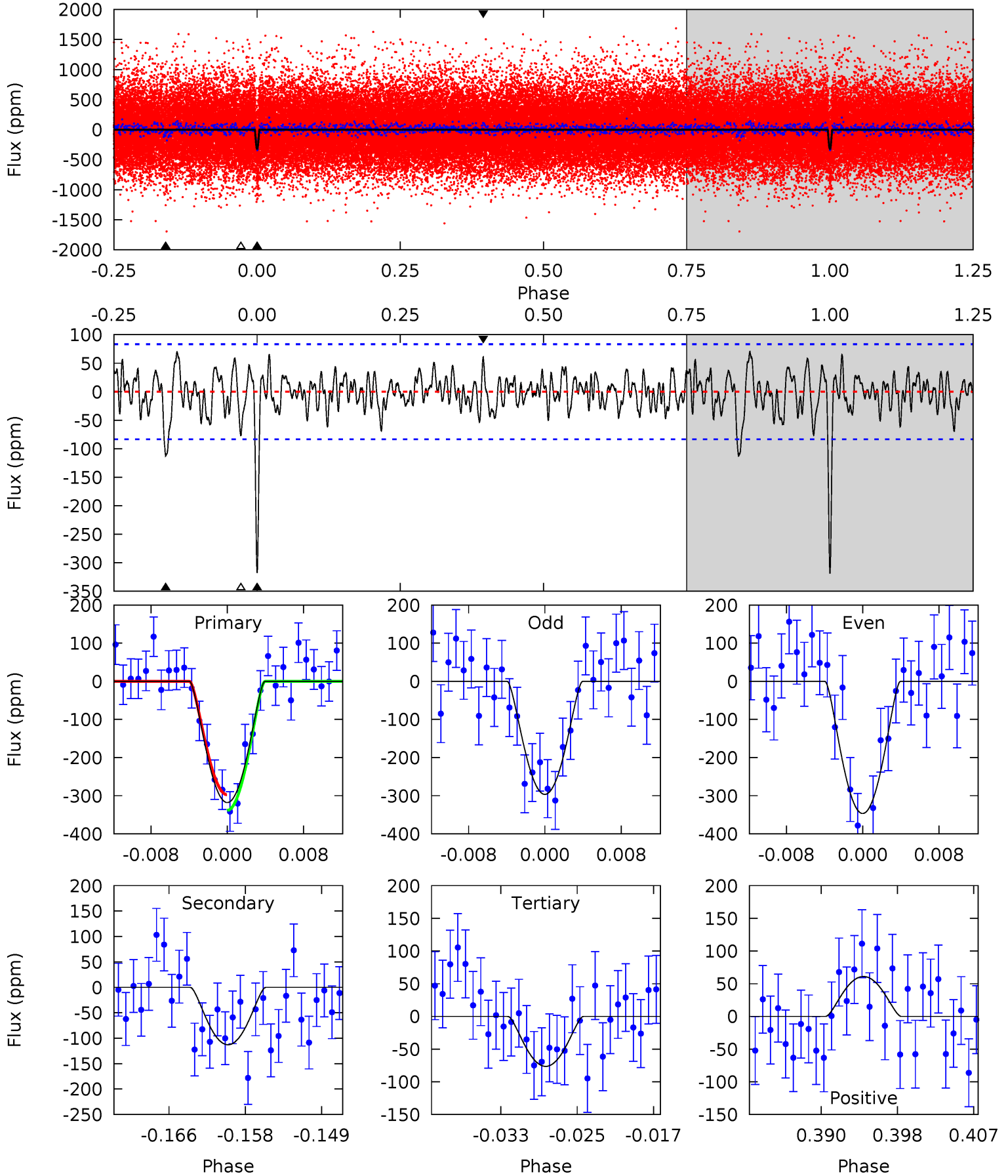
TCE 003539231-01 P= 91.960199 Days $T_0=183.056463$ (BKJD)



DV Model-Shift Uniqueness Test

003539231-01, P = 91.959681 Days, E = 91.105424 Days

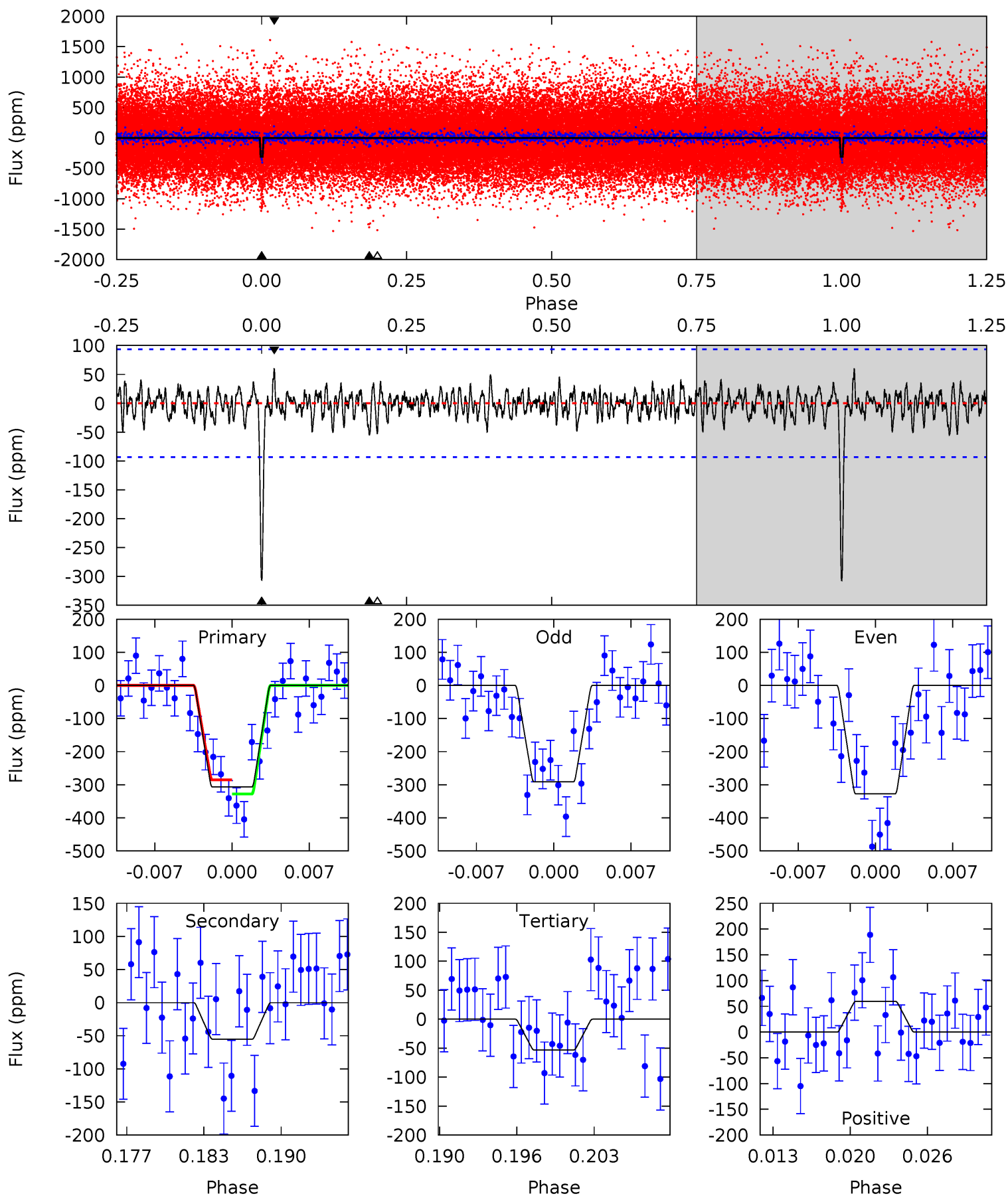
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	6.85	4.64	3.70	5.06	2.64	1.50	14.7	15.6	2.21	3.15	1.51	1.06	0.18	1.24



Alt Model-Shift Uniqueness Test

003539231-01, P = 91.960199 Days, E = 91.096264 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	3.02	2.91	3.26	5.11	2.72	0.95	13.9	13.5	0.12	-0.24	0.98	0.93	0.16	1.15



Stellar Parameters For KIC 003539231

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5854^{+79}_{-79}	$4.114^{+0.182}_{-0.098}$	$0.160^{+0.150}_{-0.150}$	$1.528^{+0.238}_{-0.327}$	$1.107^{+0.110}_{-0.090}$	$0.437^{+0.398}_{-0.127}$
	+1%/-1%	+4%/-2%	+94%/-94%	+16%/-21%	+10%/-8%	+91%/-29%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003539231-01 / KOI 4626.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-113 ± 16	$10.36^{+9.45}_{-7.03}$	689^{+31}_{-38}	3037^{+1347}_{-491}	98^{+835}_{-71}
Alt.	-55 ± 18	$9.39^{+9.85}_{-6.42}$	690^{+31}_{-39}	2830^{+1217}_{-497}	58^{+525}_{-45}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

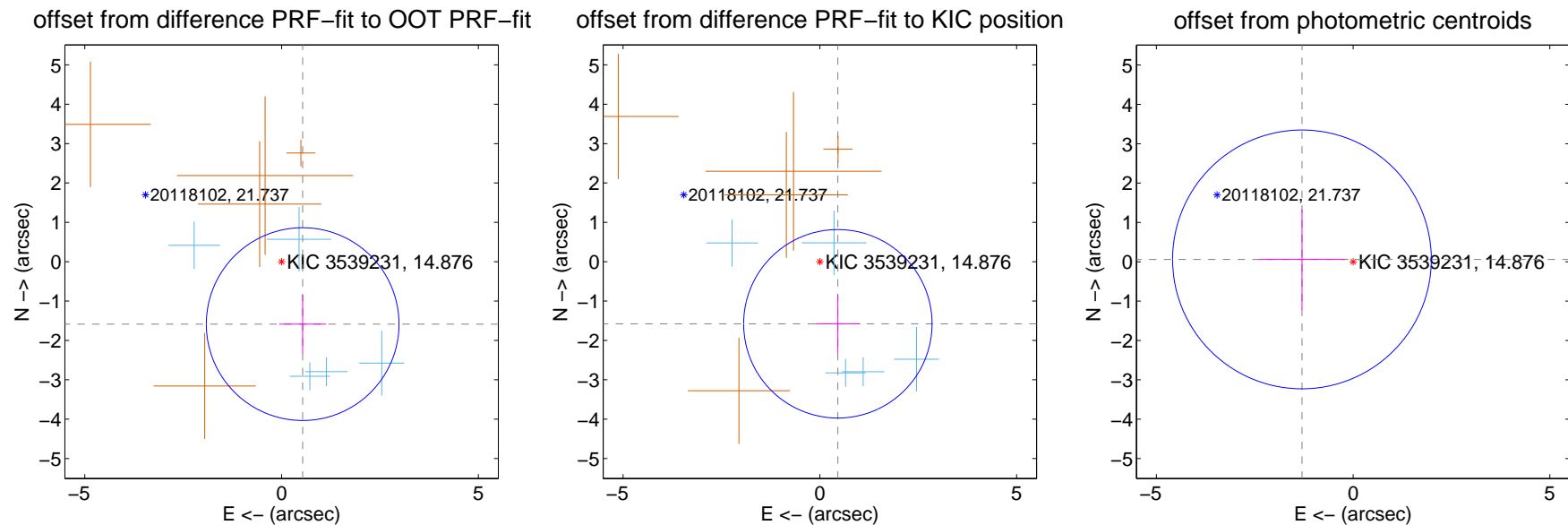
DV Centroid Data

Supplemental centroid analysis for 003539231-01. Kepler magnitude: 14.88. Transit SNR 11.12

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.674 ± 0.816	2.05	-0.536 ± 0.598	-1.586 ± 0.742
PRF-fit source offset from KIC position	1.643 ± 0.798	2.06	-0.457 ± 0.574	-1.578 ± 0.738
photometric centroid source offset	1.30 ± 1.10	1.19	1.30 ± 1.10	0.06 ± 1.27



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



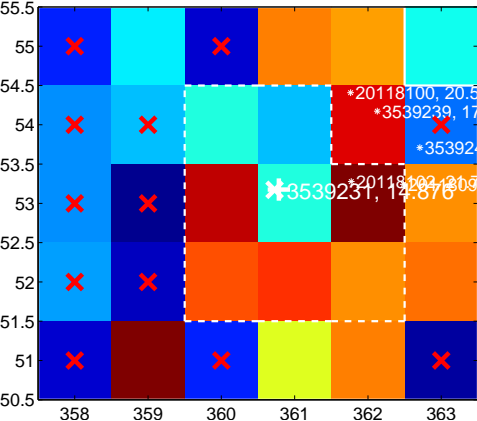
Q2 no difference image



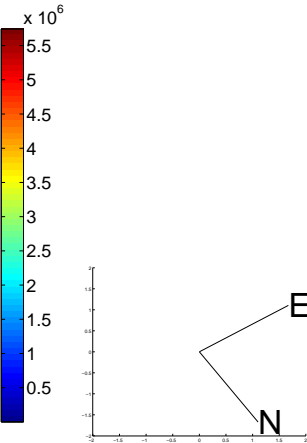
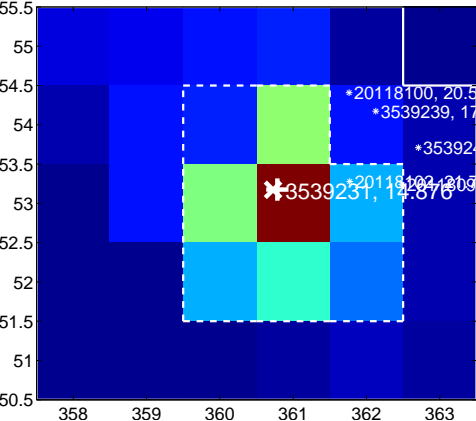
Q2 no OOT image



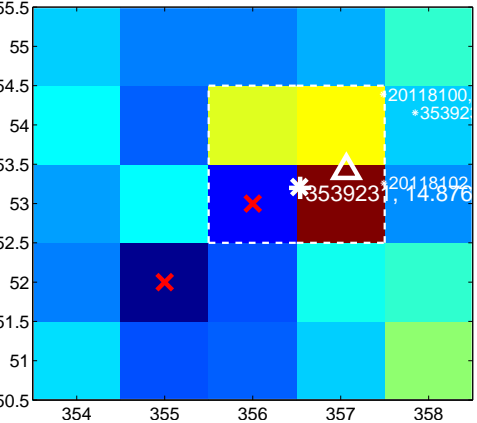
Q3 difference image. Poor Quality



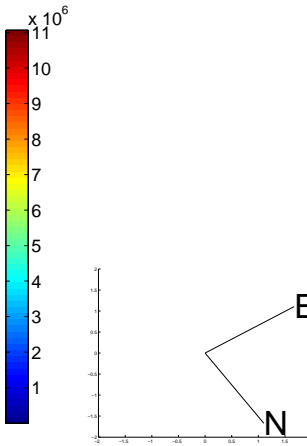
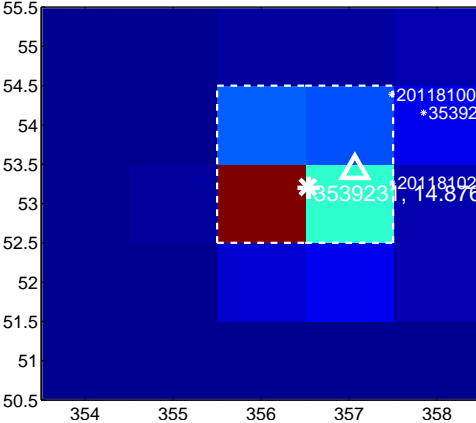
Q3 OOT image



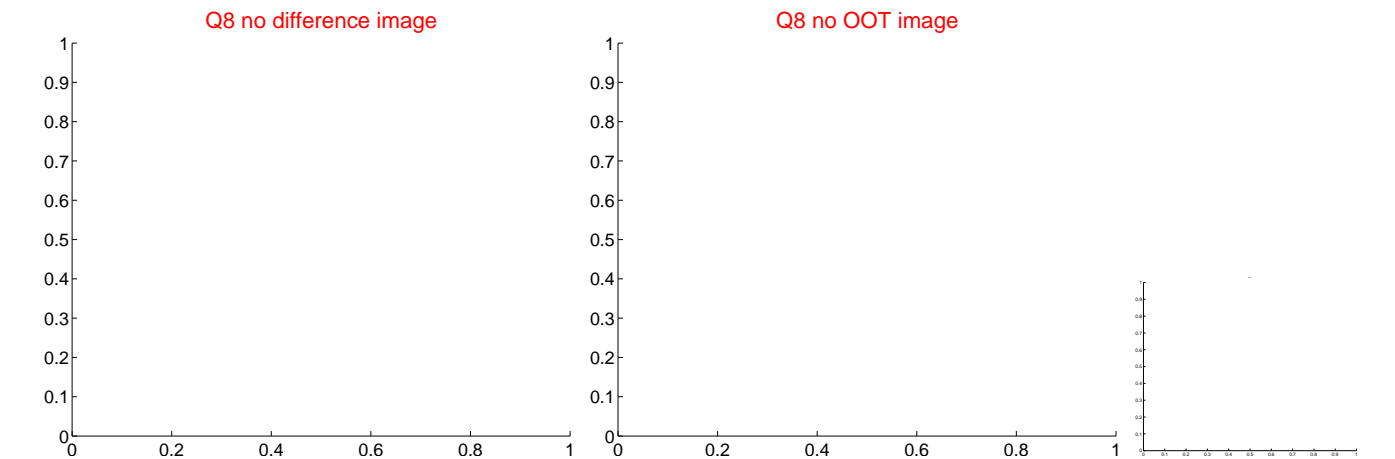
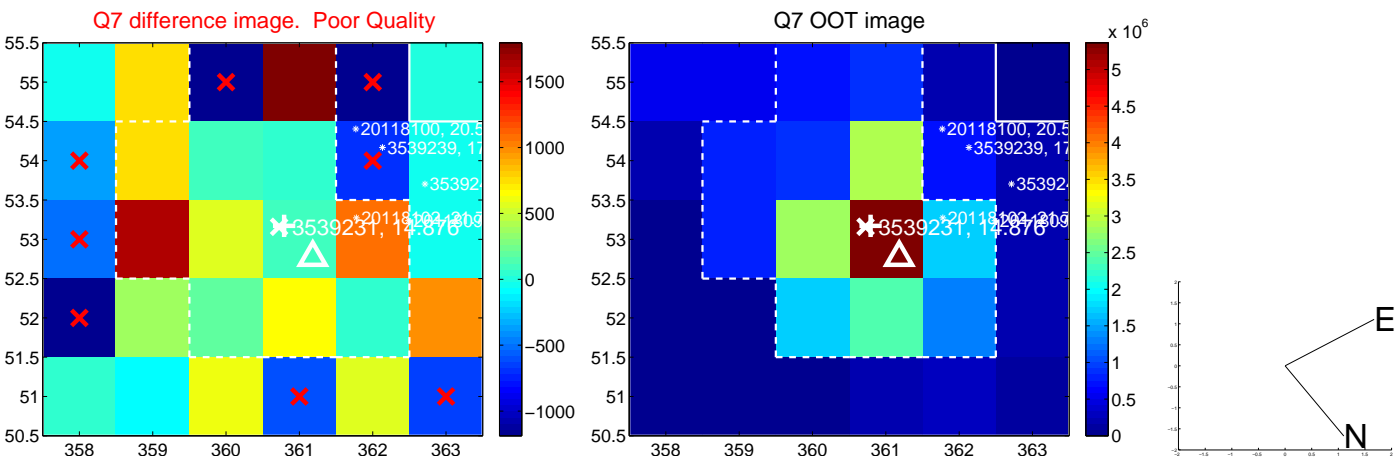
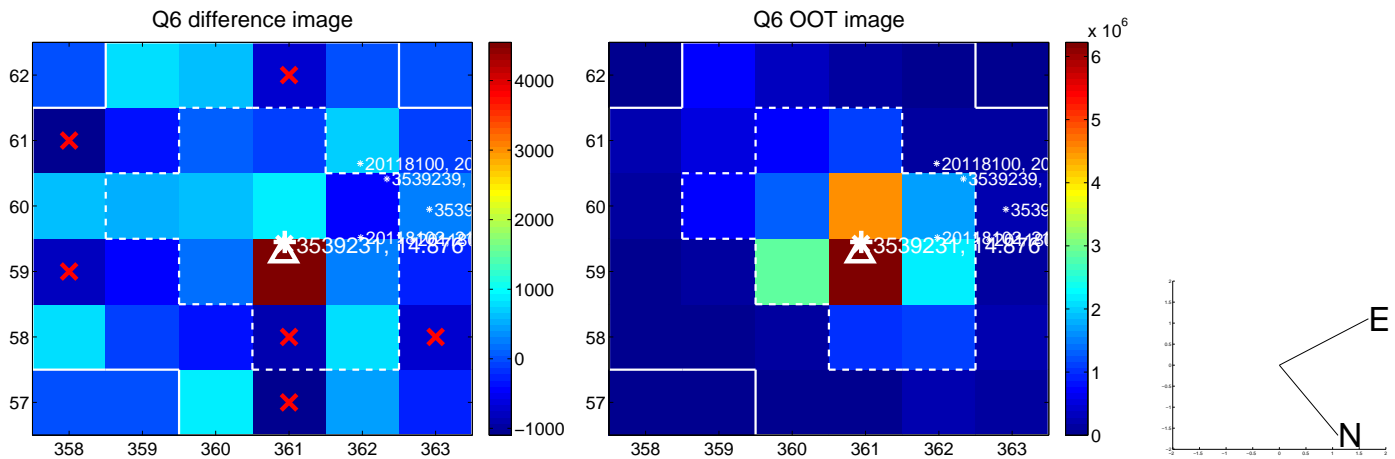
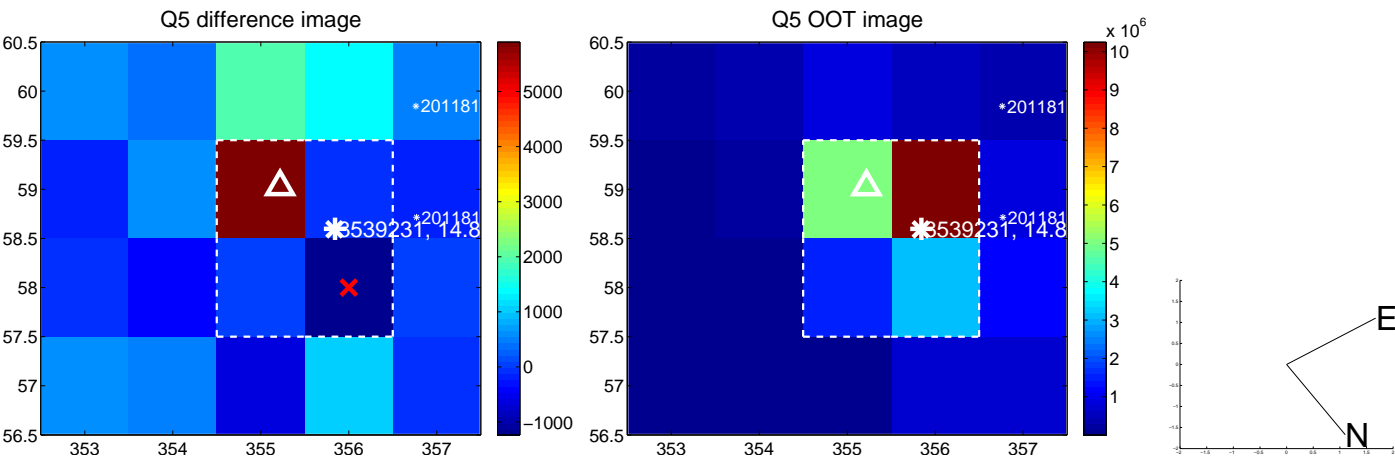
Q4 difference image



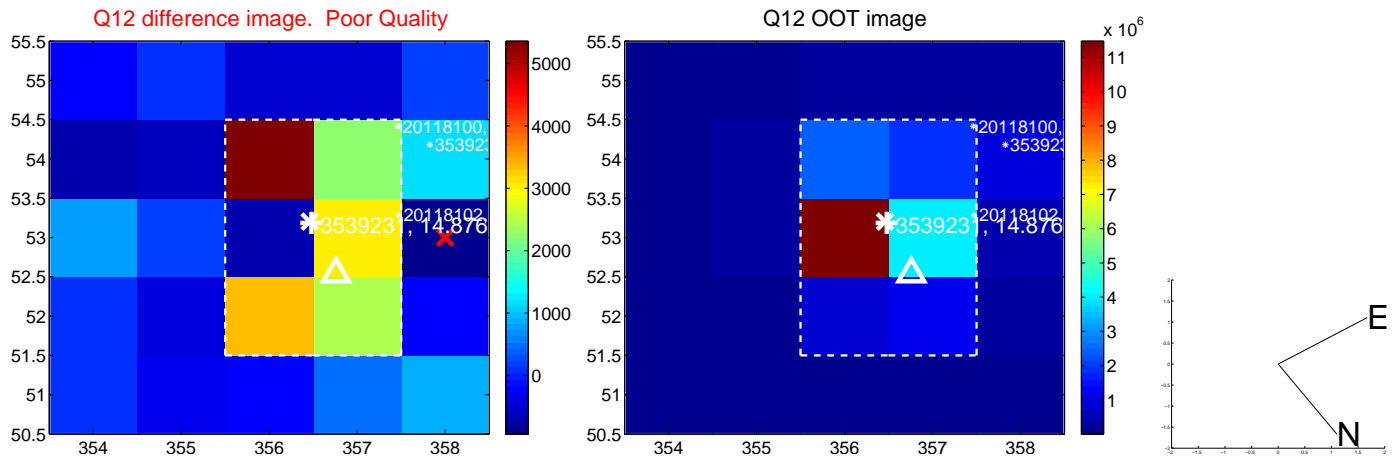
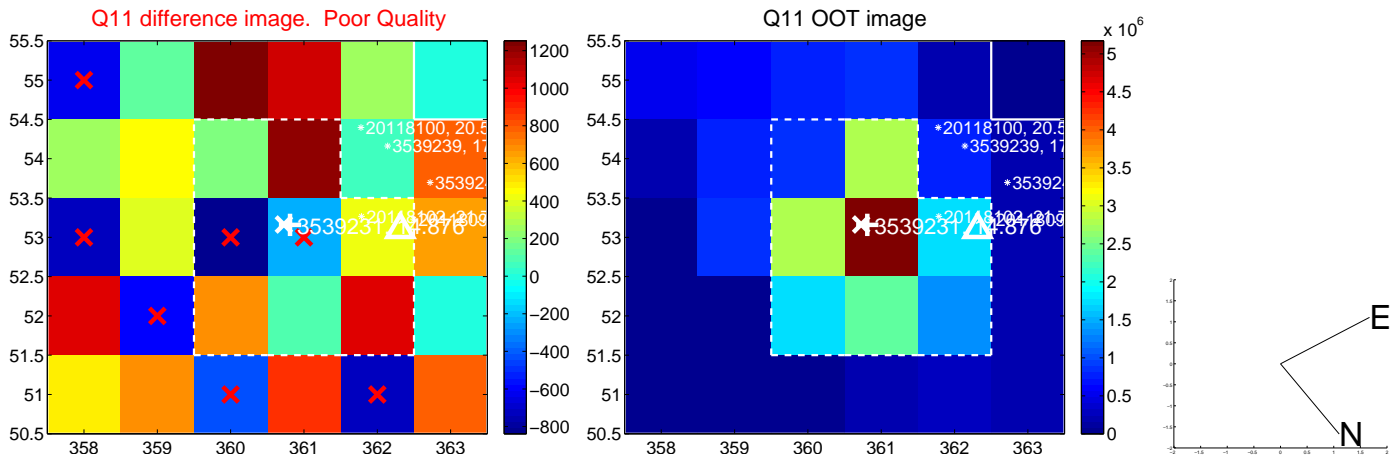
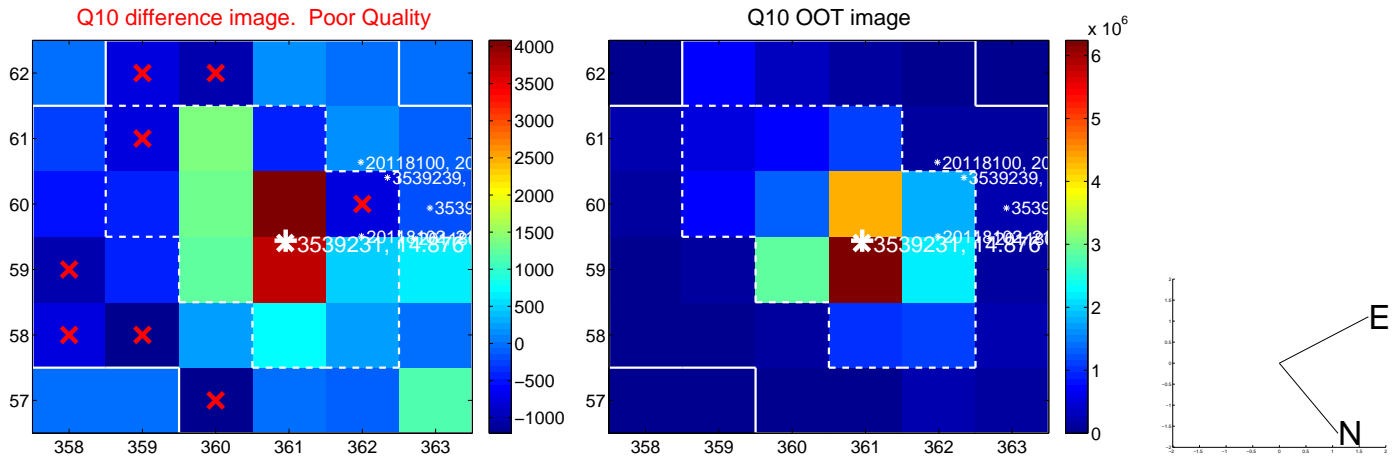
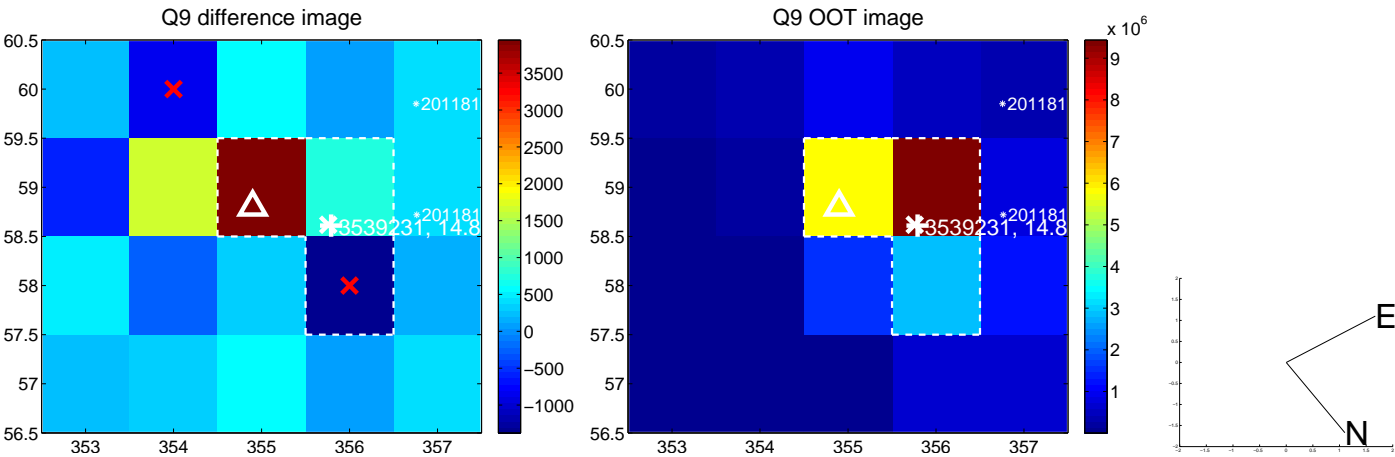
Q4 OOT image



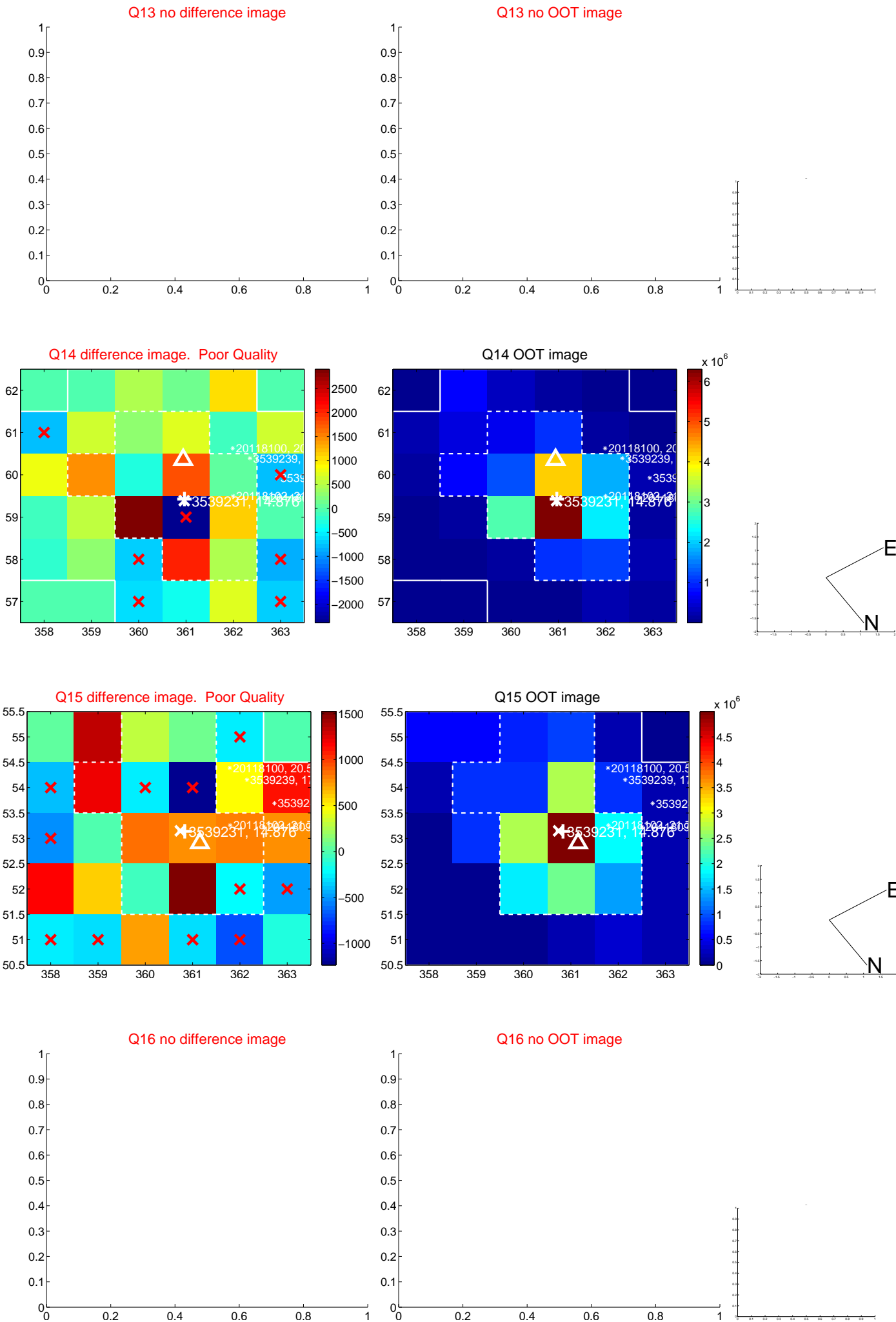
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



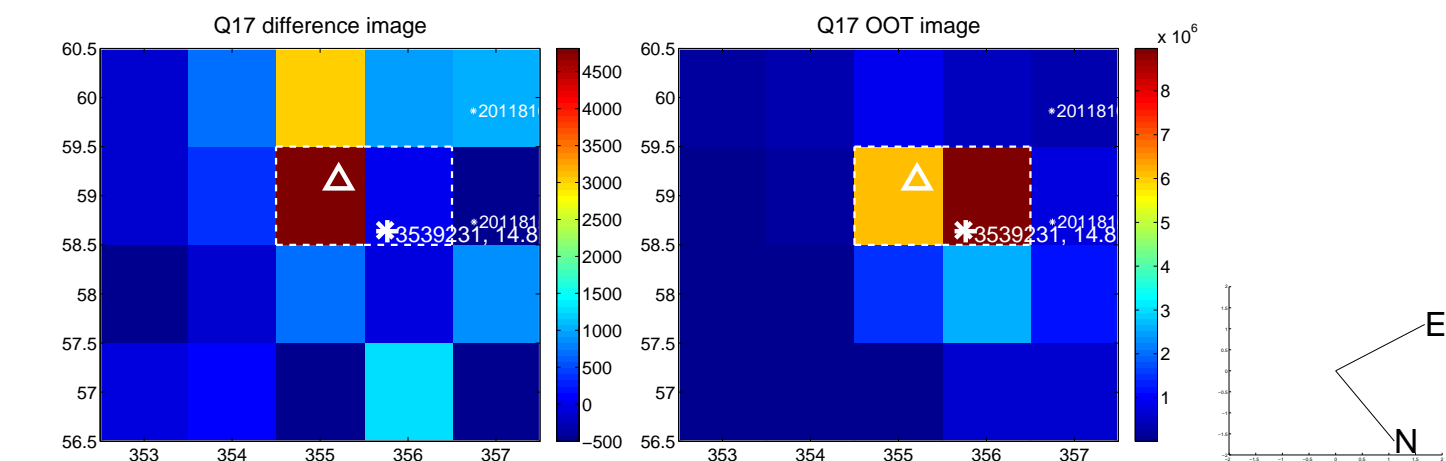
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



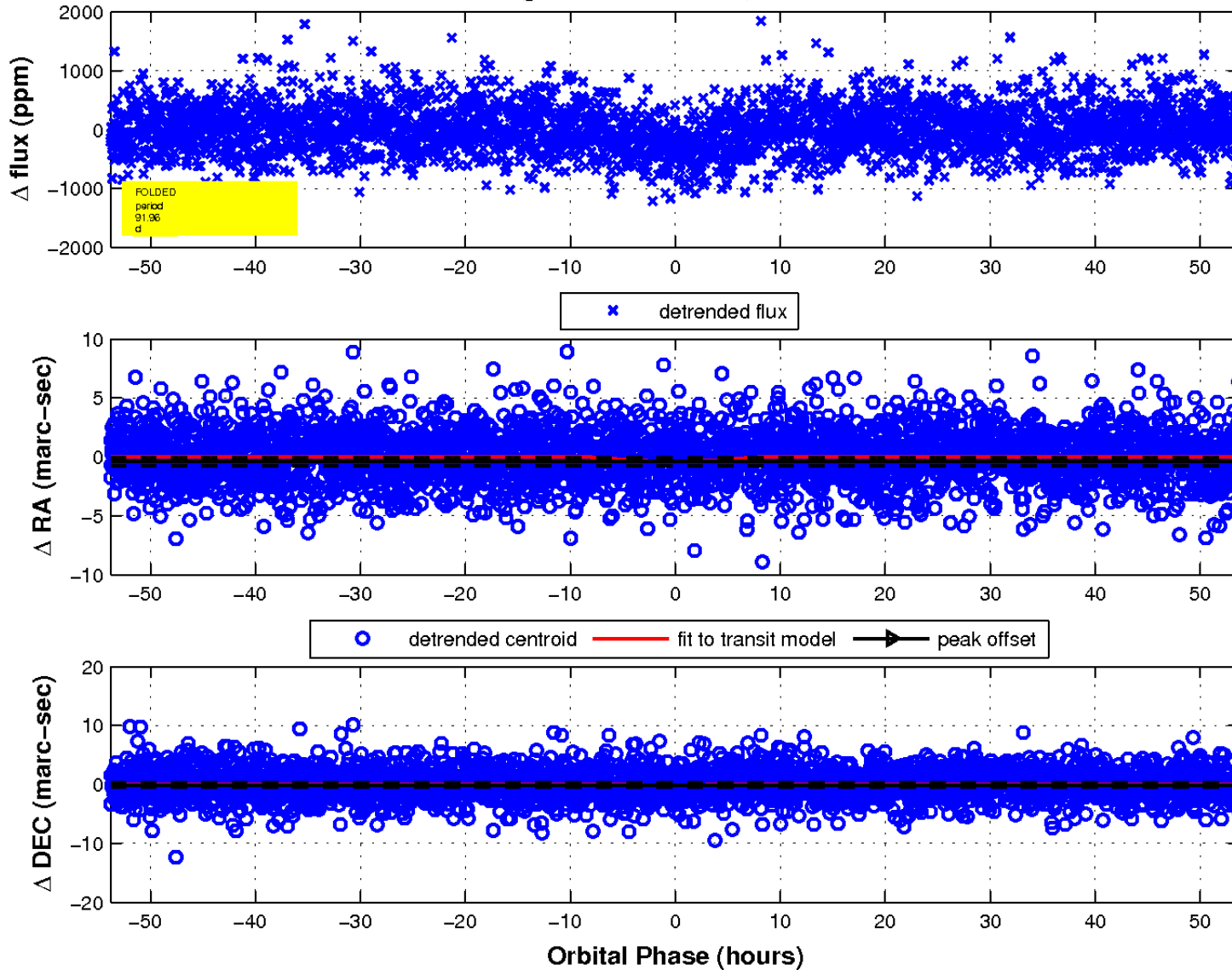
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

