

KIC 009651155

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})
009651155-01	OBS	7955.01	1.073839	132.027952	7990.7	1.894	72.2	67.3	2.86	8059	30.32	48930.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009651155-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—CENT_FEW_DIFFS

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

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

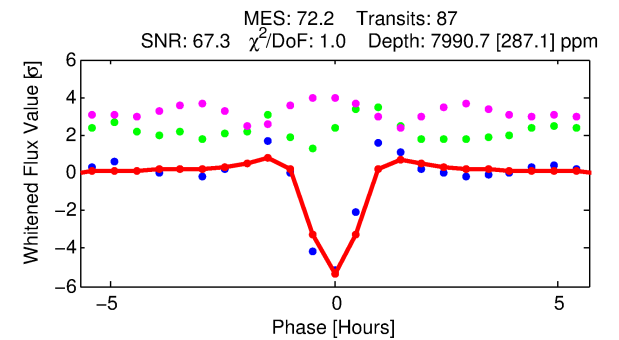
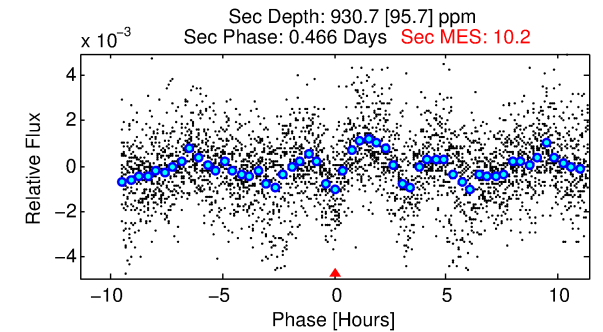
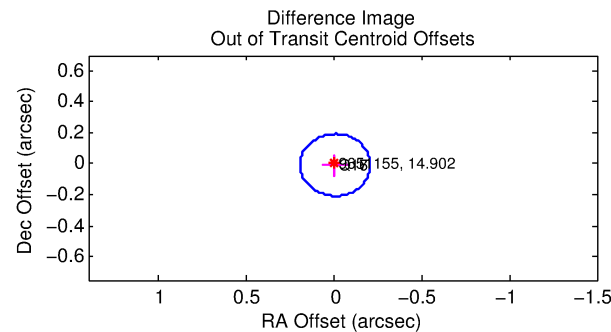
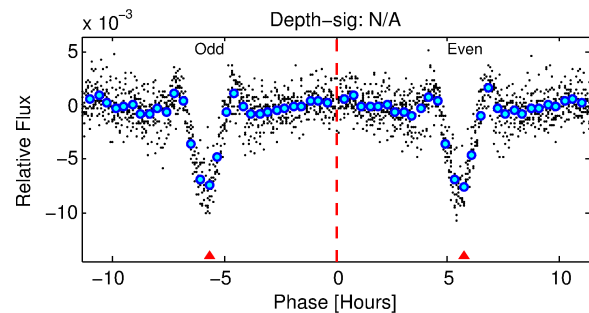
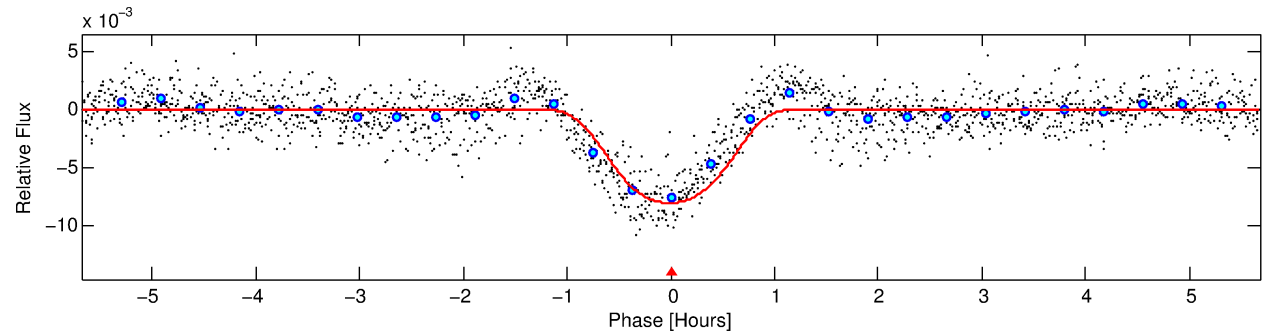
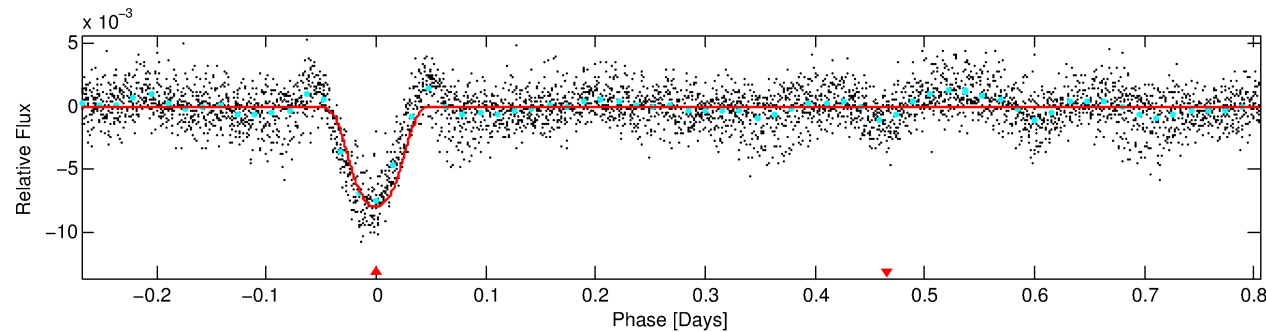
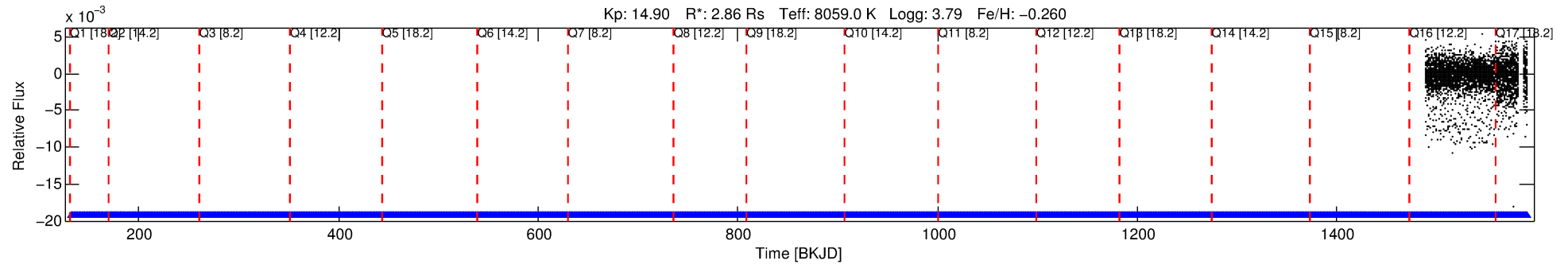
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009651155-01

No Significant Match Found

DV One-Page Summary

KIC: 9651155 Candidate: 1 of 1 Period: 1.074 d



DV Fit Results:

Period = 1.07384 [0.00000] d
Epoch = 132.0280 [0.0004] BKJD
Rp/R* = 0.0972 [0.0037]
a/R* = 2.89 [0.15]
b = 0.90 [0.02]
Seff = 48930.13 [34149.54]
Teff = 3792 [662] K
Rp = 30.32 [13.24] Re
a = 0.0251 [0.0106] AU
Ag = 0.35 [0.24] [-2.67σ]
Teffp = 4515 [237] K [1.03σ]

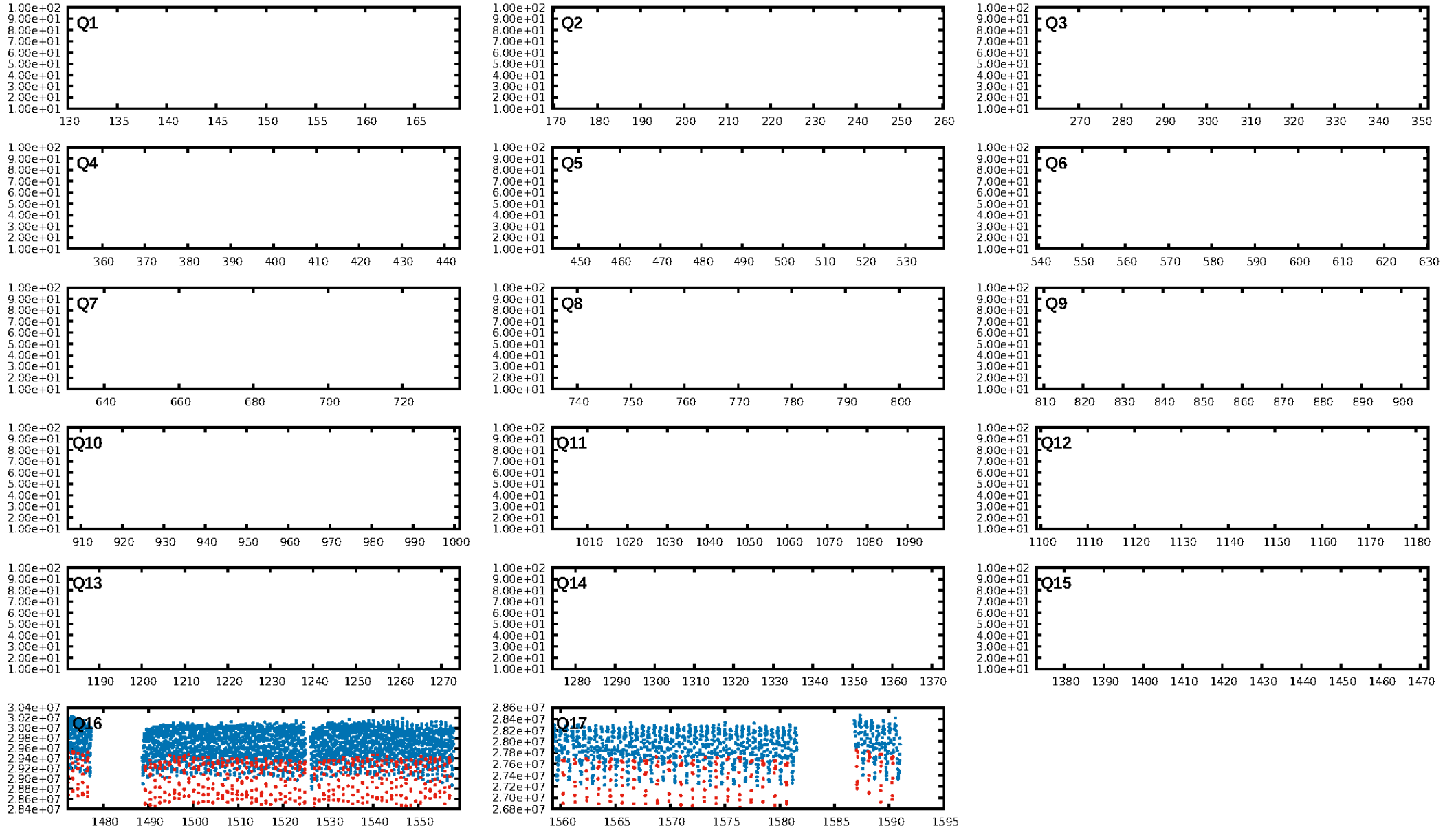
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.8%
ModelChiSquareGof-sig: 78.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [63/63]
GhostDiagnostic-chr: 14.6
Centroid-sig: 0.0%
Centroid-so: 0.133 arcsec [1.88σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 0.046 arcsec [0.66σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

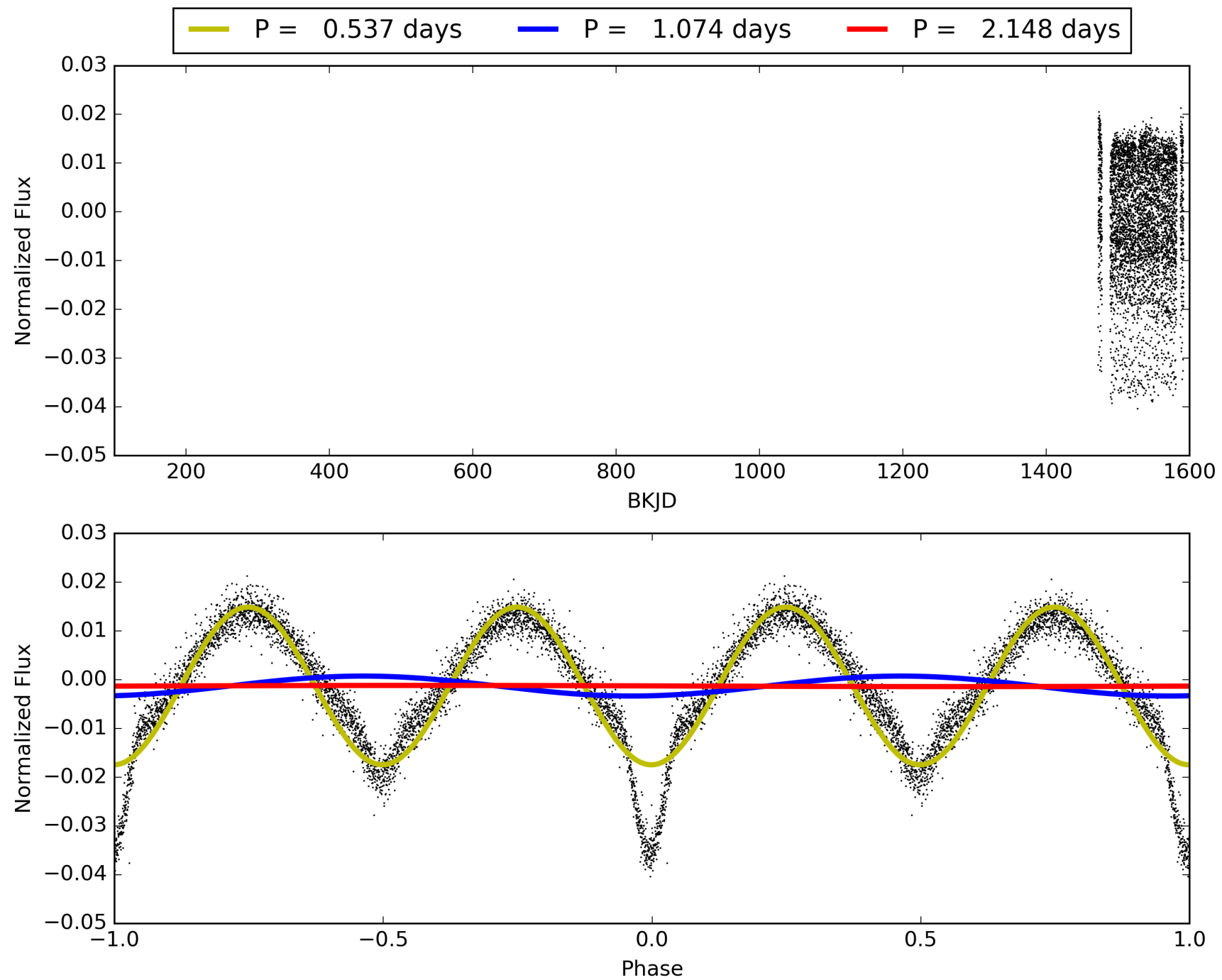
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:11:59 Z

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

TCE 009651155-01, PDC Light Curves

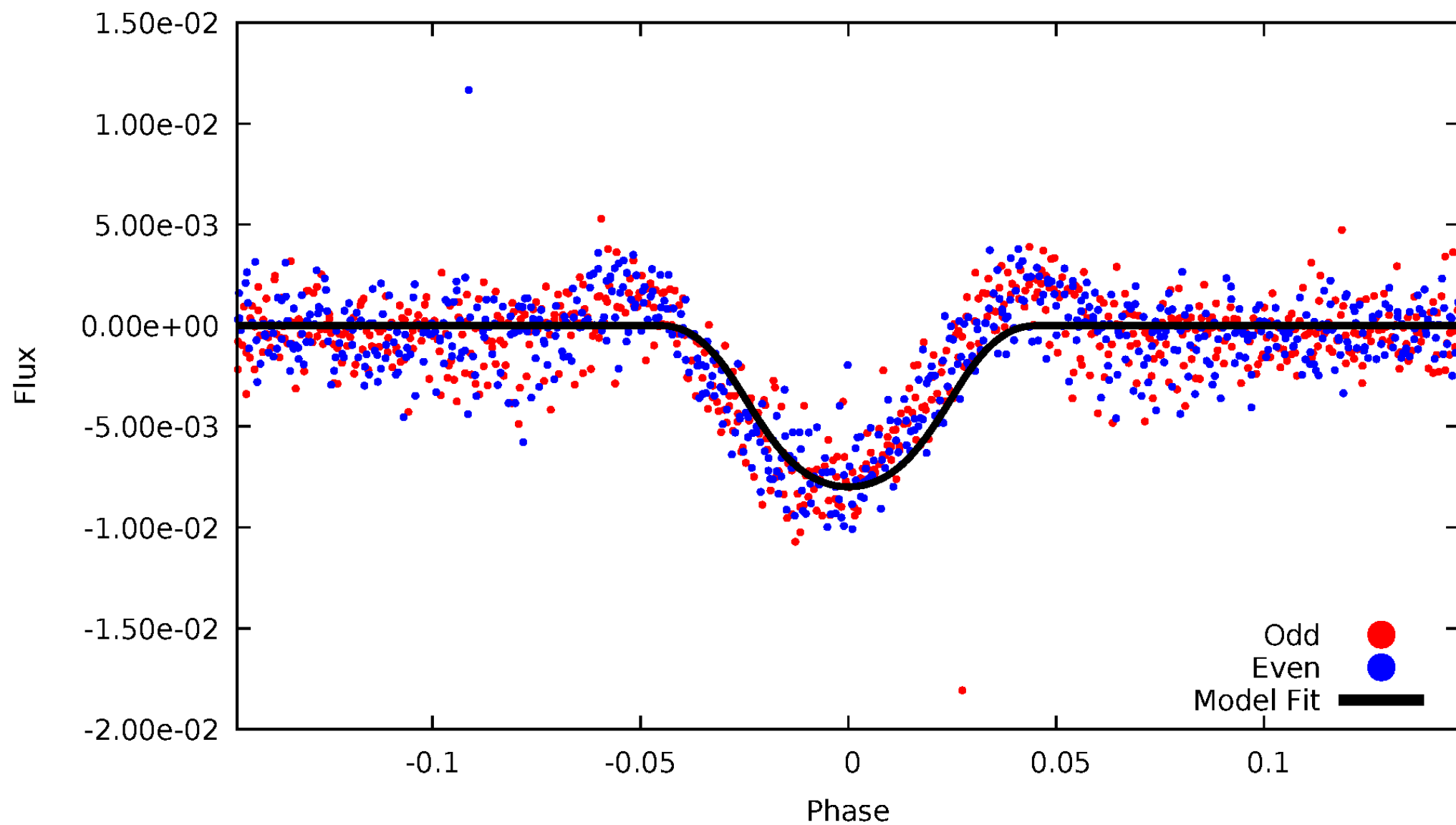


TCE 009651155-01



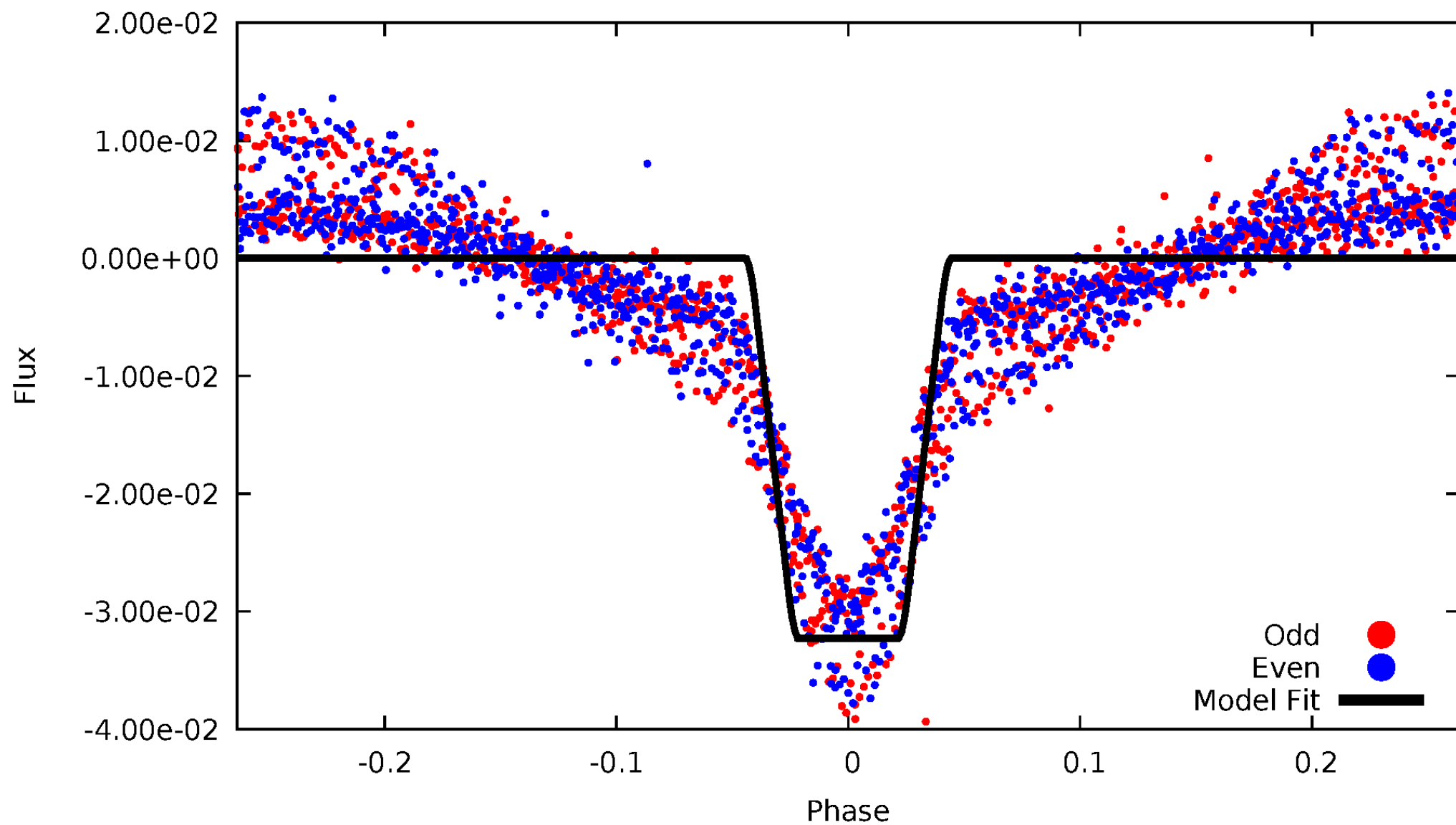
DV Odd/Even

TCE 009651155-01



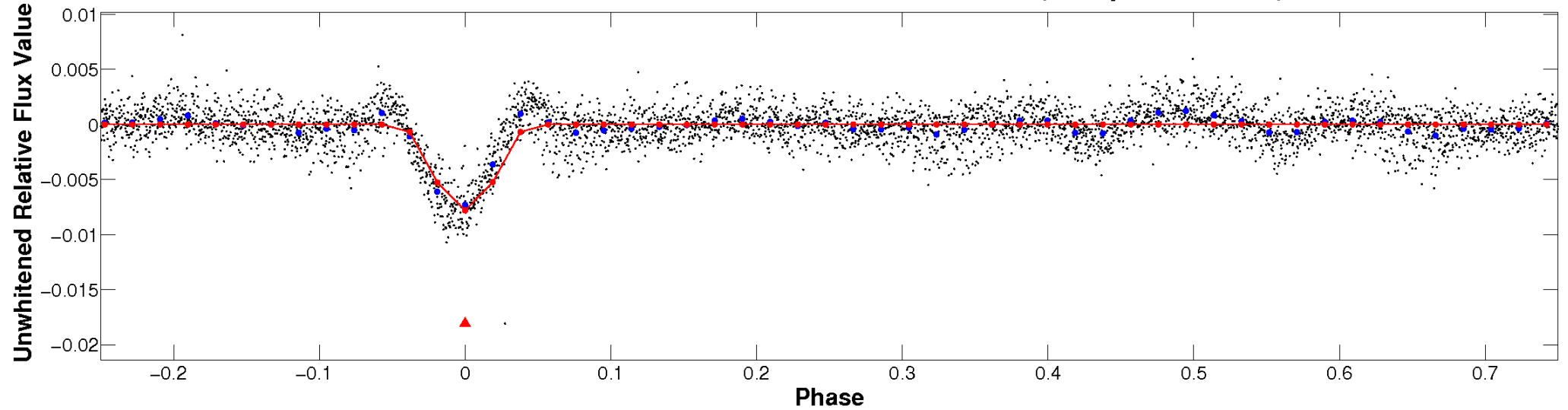
ALT Odd/Even

TCE 009651155-01

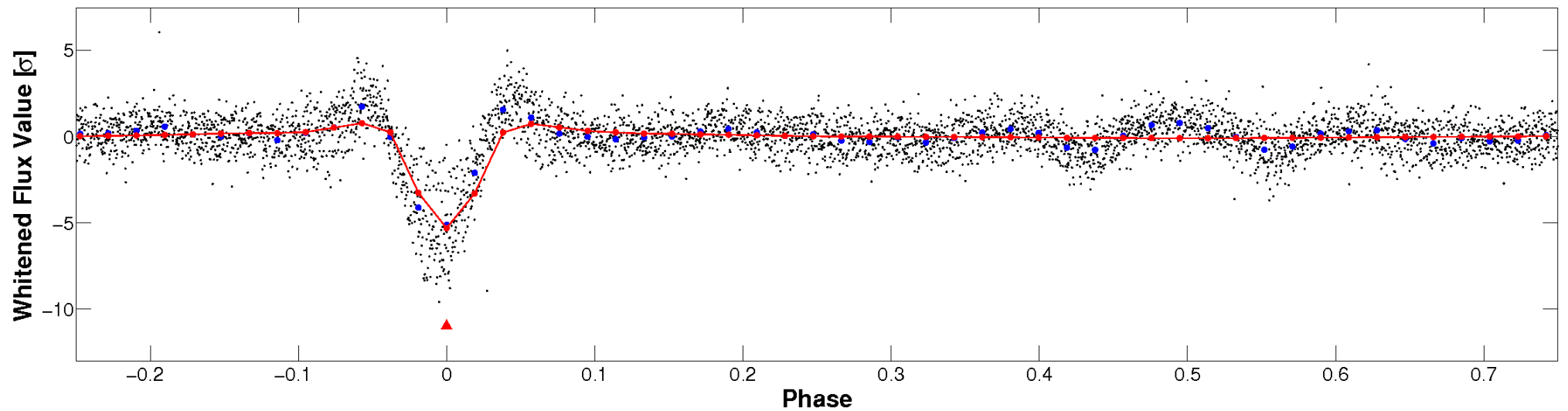


Non-Whitened Vs. Whitened Light Curve

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

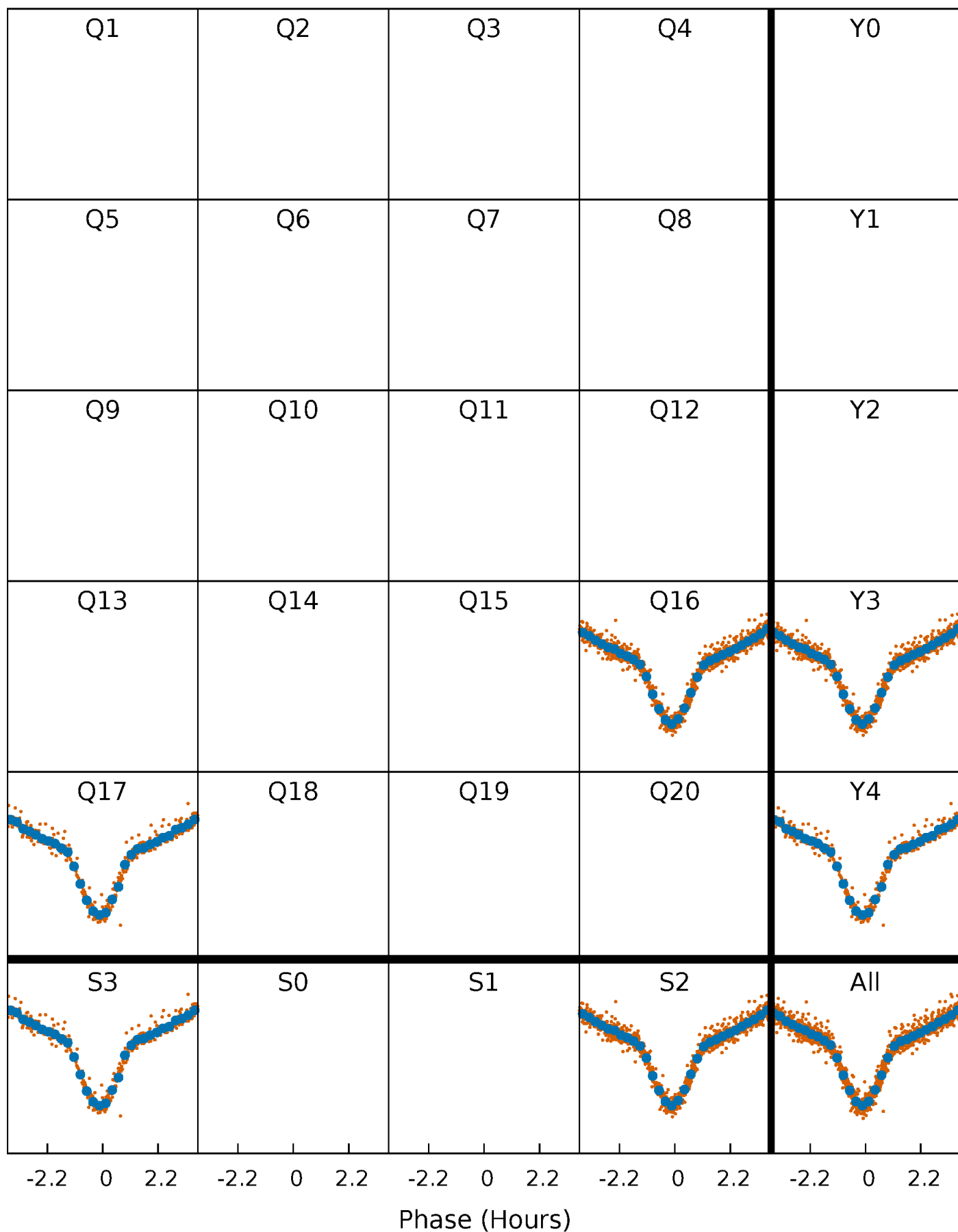


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



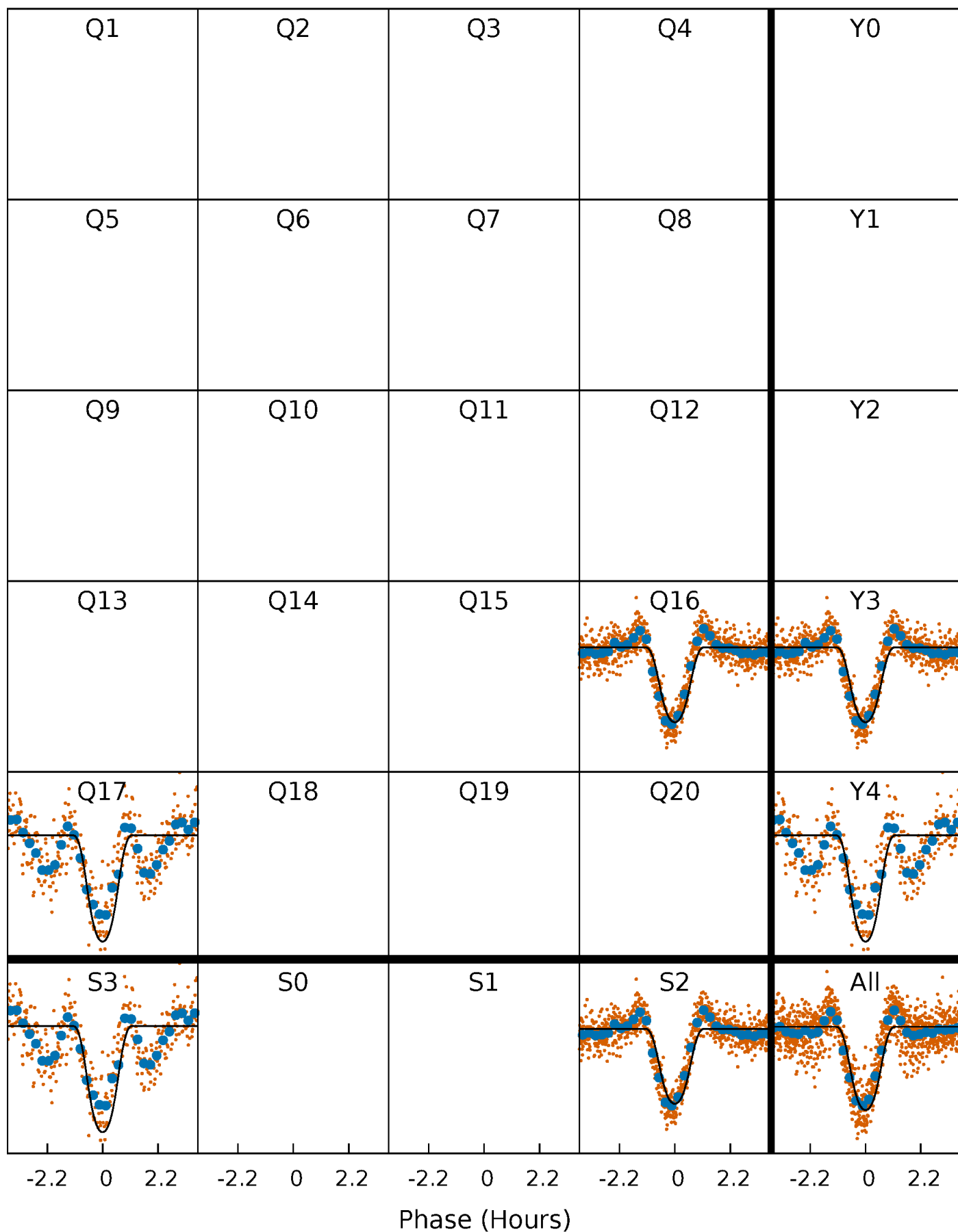
PDC Quarter-Phased Transit Curves

TCE 009651155-01 P= 1.073839 Days $T_0=132.027952$ (BKJD)



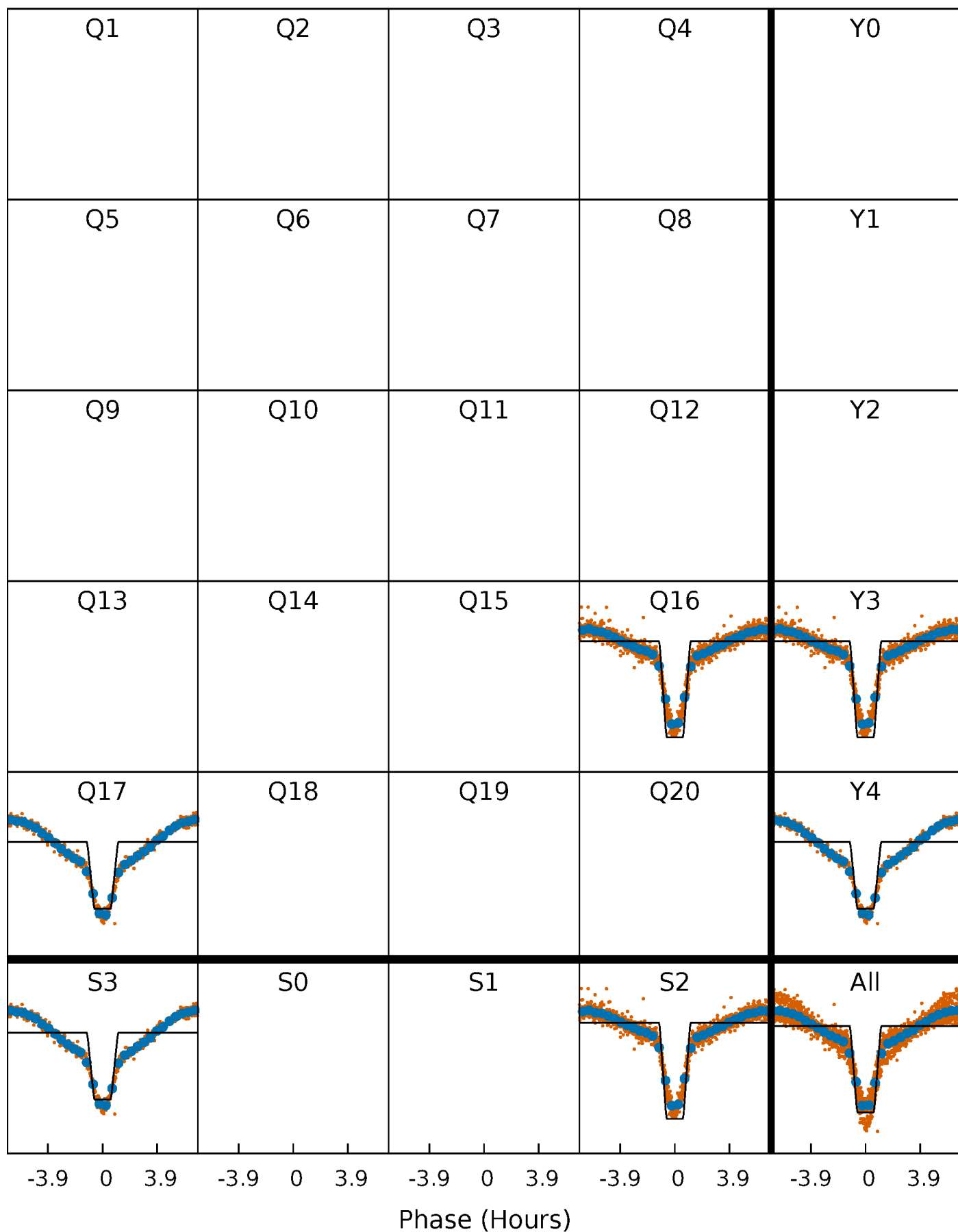
DV Quarter-Phased Transit Curves

TCE 009651155-01 P= 1.073839 Days $T_0=132.027952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

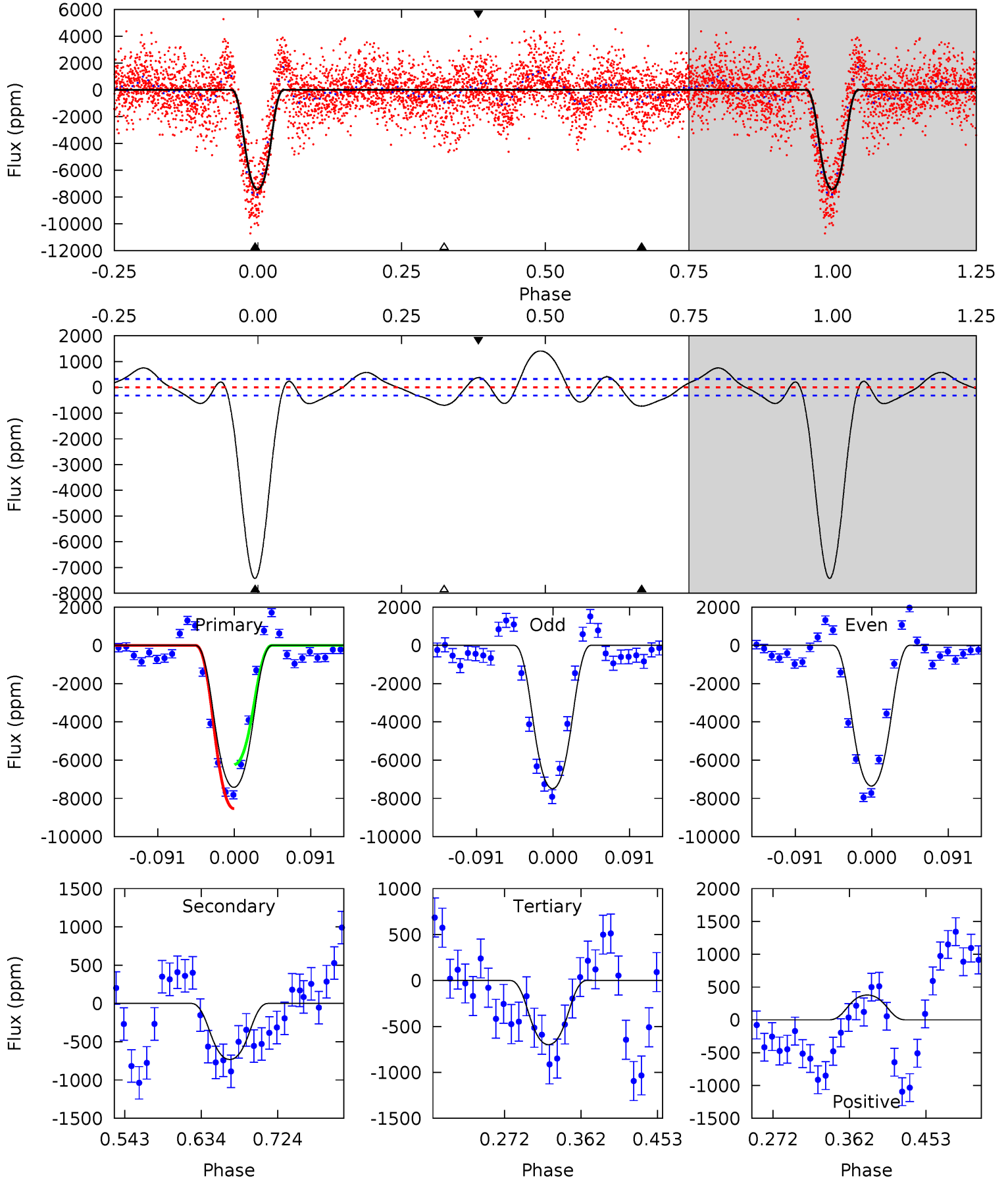
TCE 009651155-01 P= 1.073815 Days $T_0=132.053856$ (BKJD)



DV Model-Shift Uniqueness Test

009651155-01, P = 1.073839 Days, E = 132.027952 Days

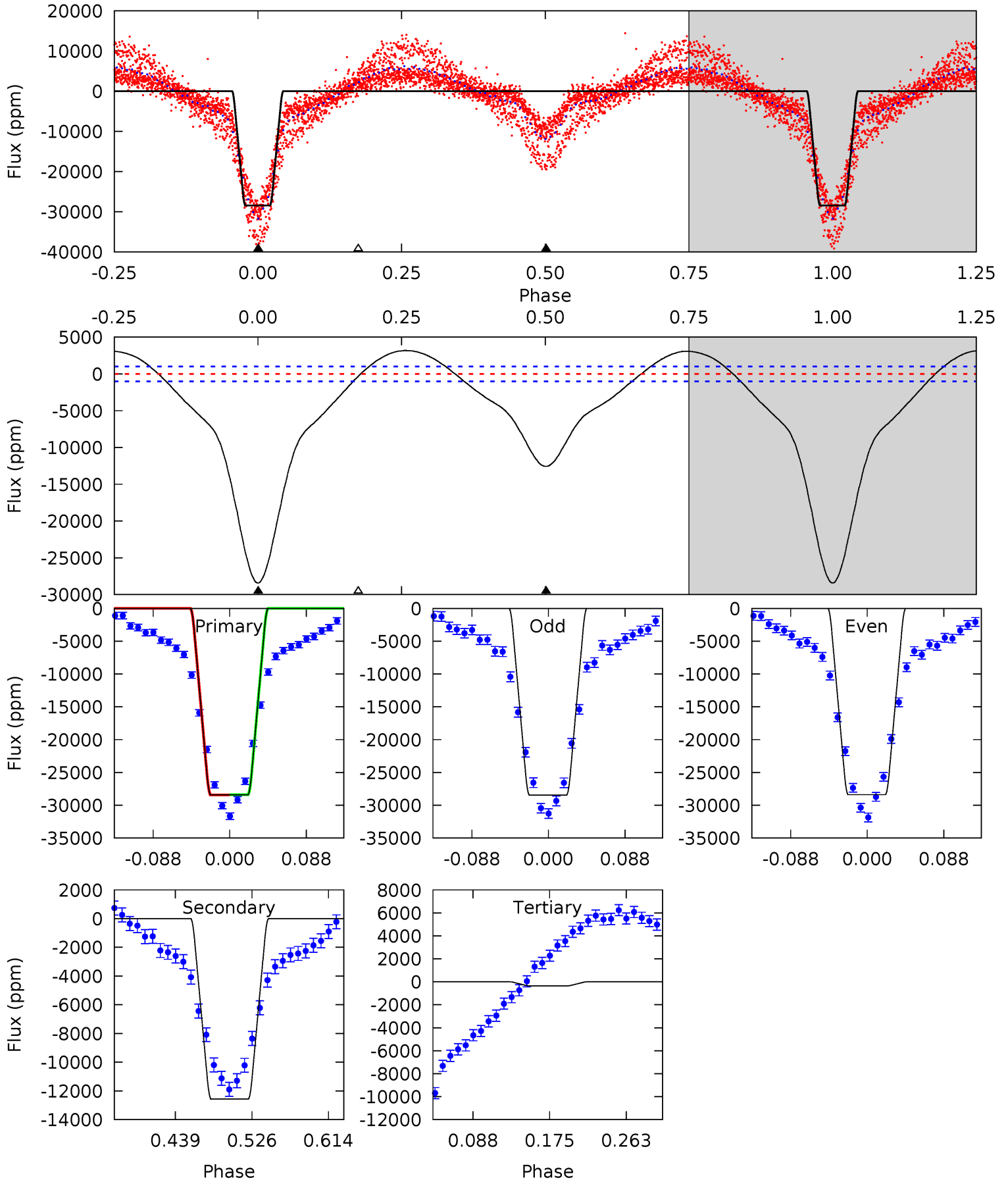
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
105.5	10.4	9.92	5.37	4.59	1.69	7.74	95.6	100.1	0.48	5.03	0.99	1.00	0.16	16.8



Alt Model-Shift Uniqueness Test

009651155-01, P = 1.073815 Days, E = 132.053856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
128.8	57.0	1.61	0	4.59	1.71	13.2	127.2	128.8	55.4	57.0	0.11	1.07	0.10	0.04



Stellar Parameters For KIC 009651155

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8059^{+224}_{-336}	$3.789^{+0.399}_{-0.070}$	$-0.260^{+0.200}_{-0.300}$	$2.859^{+0.311}_{-1.244}$	$1.834^{+0.094}_{-0.376}$	$0.111^{+0.381}_{-0.025}$
	+3%/-4%	+11%/-2%	+77%/-115%	+11%/-44%	+5%/-21%	+345%/-23%
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 009651155-01 / KOI 7955.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-732 ± 70	$29.04^{+3.23}_{-6.32}$	5163^{+332}_{-567}	2273^{+1361}_{-5665}	$0.304^{+0.173}_{-0.063}$
Alt.	-12572 ± 221	$54.69^{+4.70}_{-12.89}$	5156^{+331}_{-553}	5898^{+193}_{-226}	$1.494^{+0.886}_{-0.227}$

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

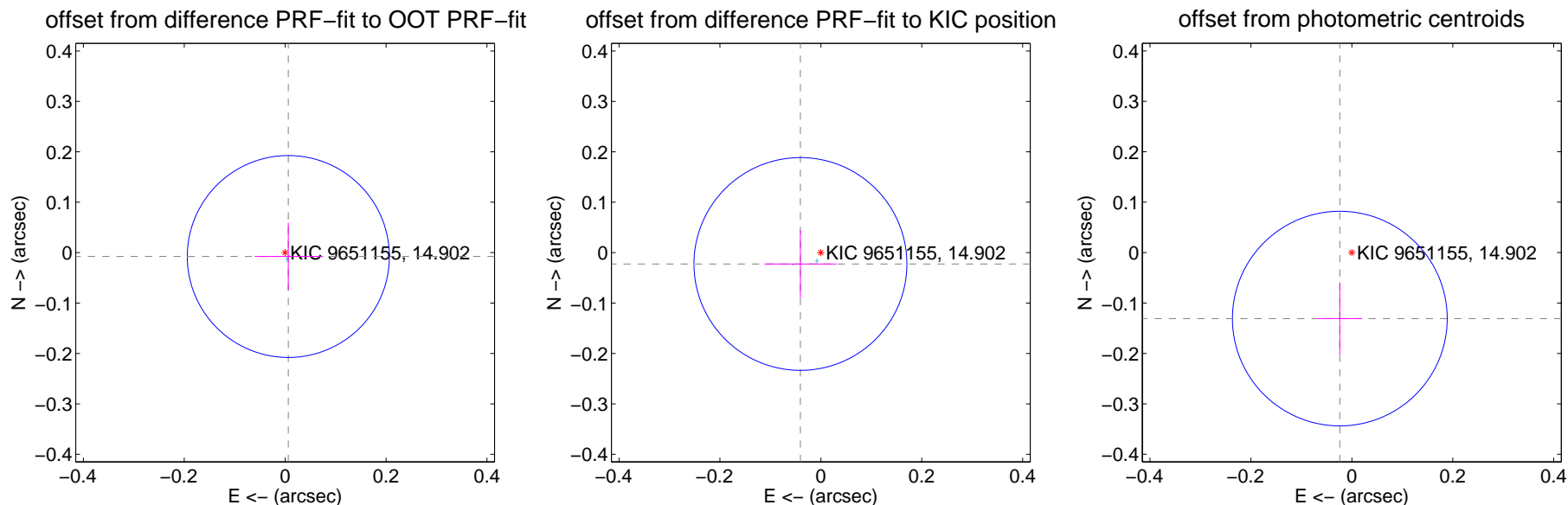
DV Centroid Data

Supplemental centroid analysis for 009651155-01. Kepler magnitude: 14.90. Transit SNR 67.26

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	-0.006 ± 0.067	-0.008 ± 0.067
PRF-fit source offset from KIC position	0.046 ± 0.070	0.66	0.040 ± 0.071	-0.022 ± 0.067
photometric centroid source offset	0.13 ± 0.07	1.88	0.02 ± 0.04	-0.13 ± 0.07

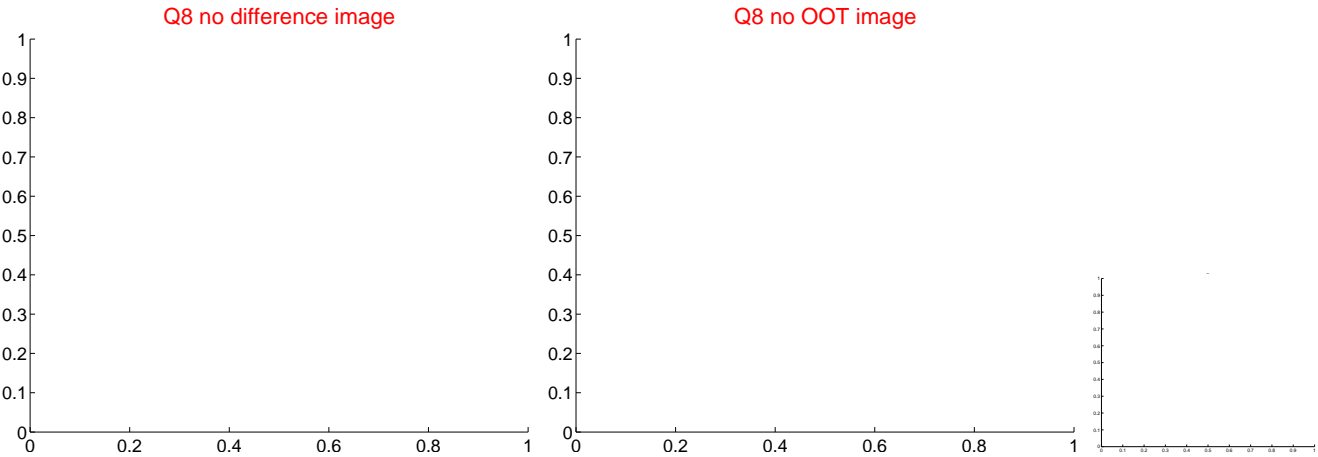
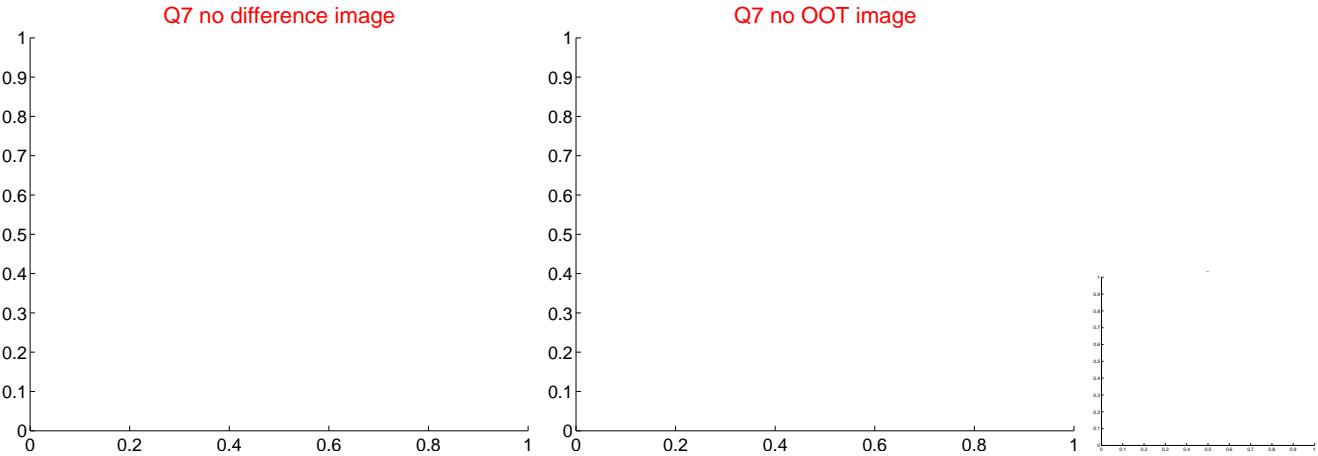
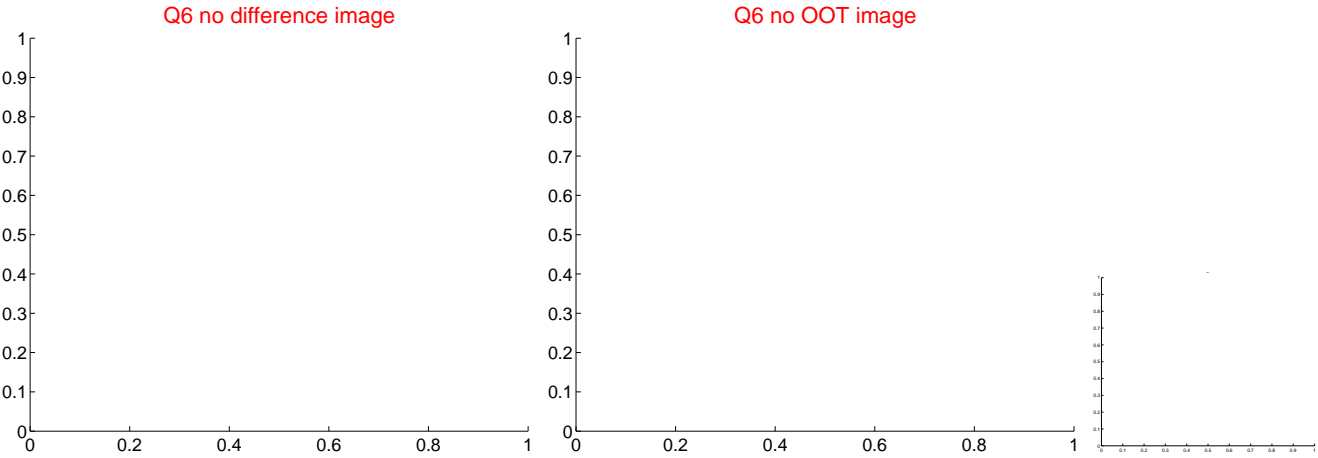
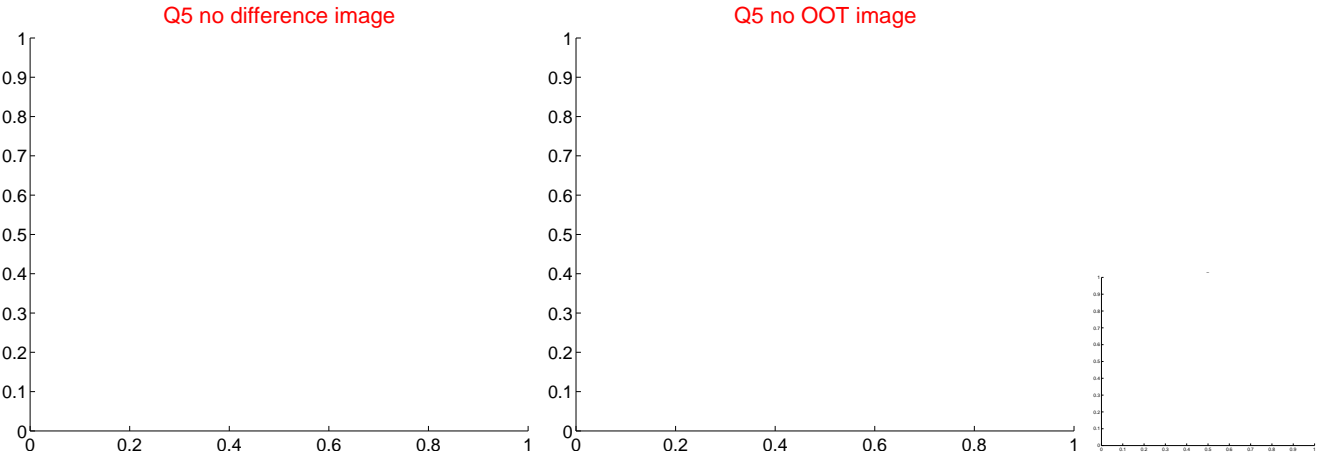


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



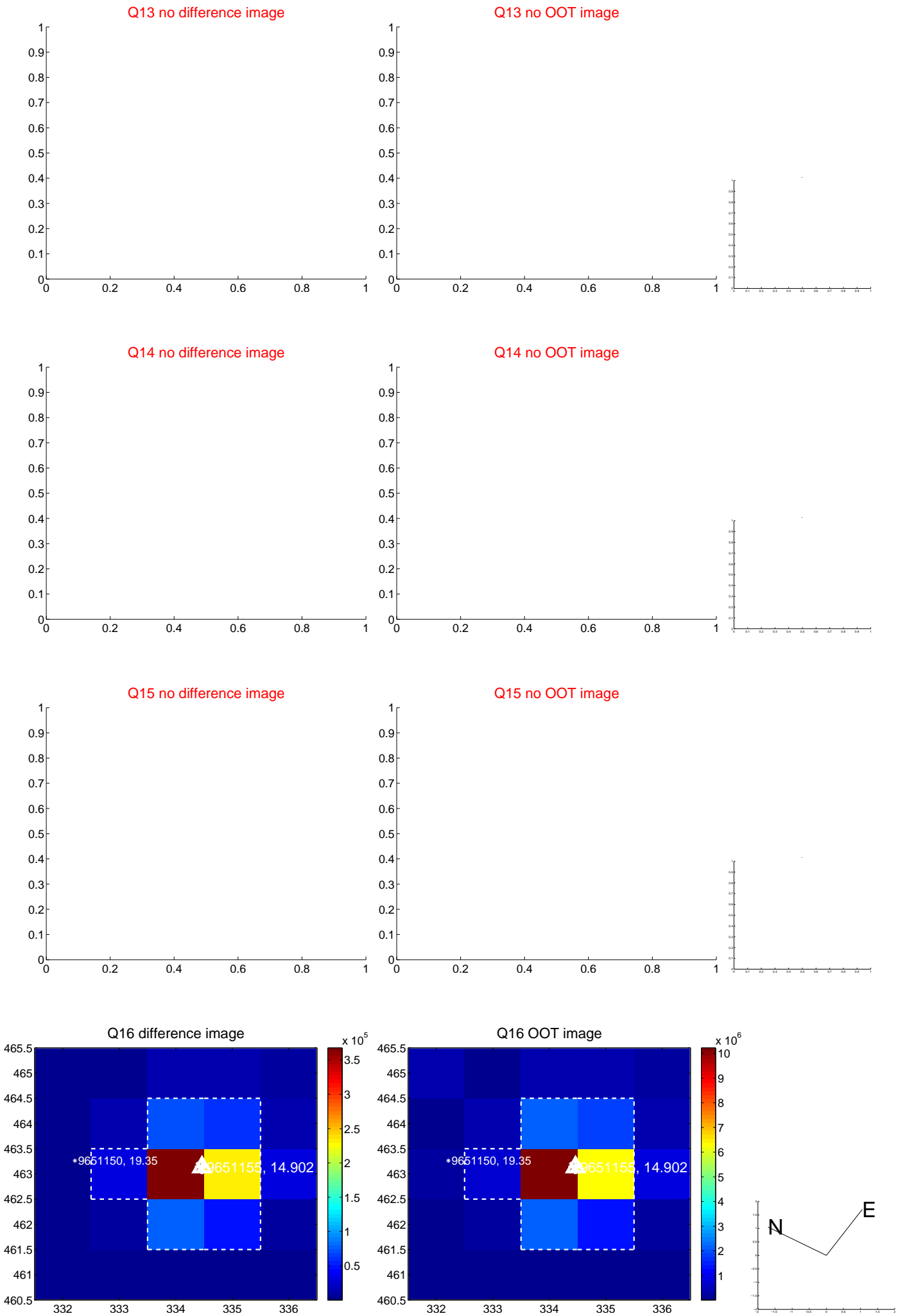
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



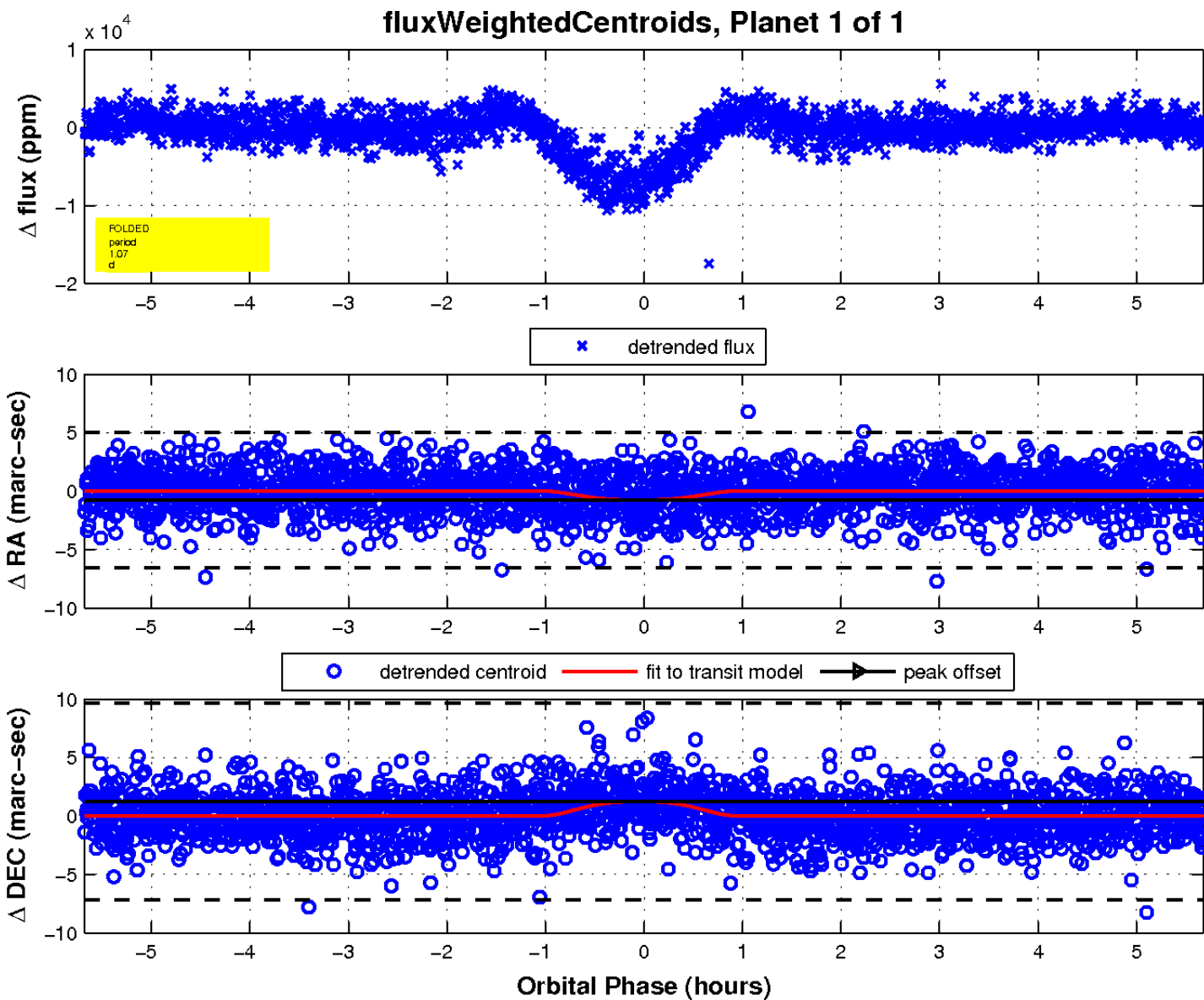
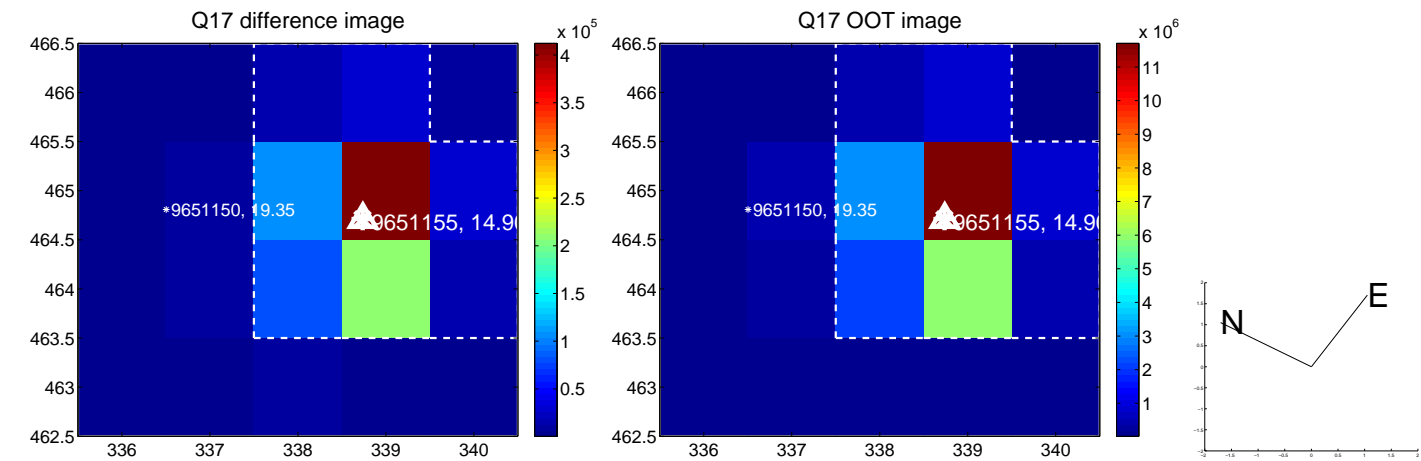
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

