

KIC 009340291

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})
009340291-01	OBS	No	466.694236	419.448058	3574.6	8.784	13.8	9.7	0.54	4785	4.03	0.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009340291-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—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.

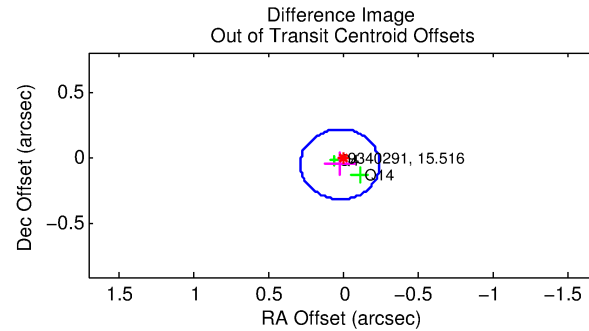
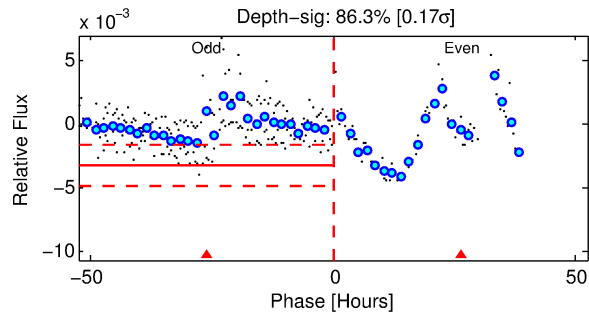
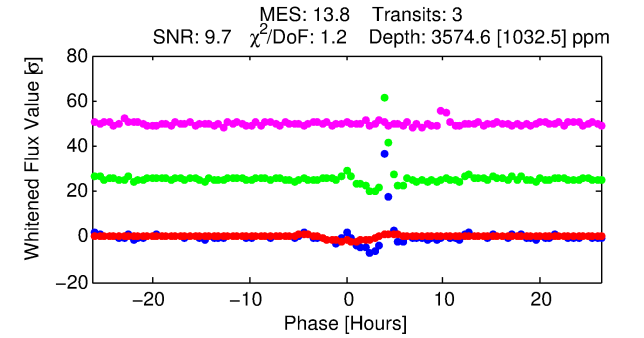
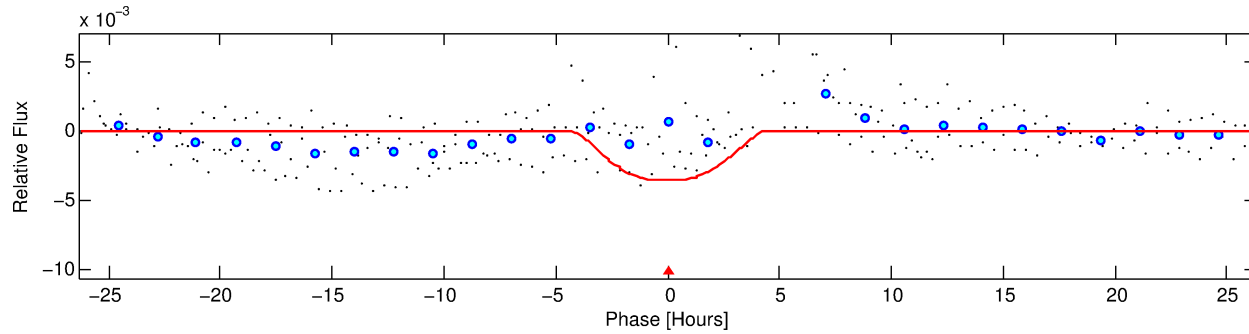
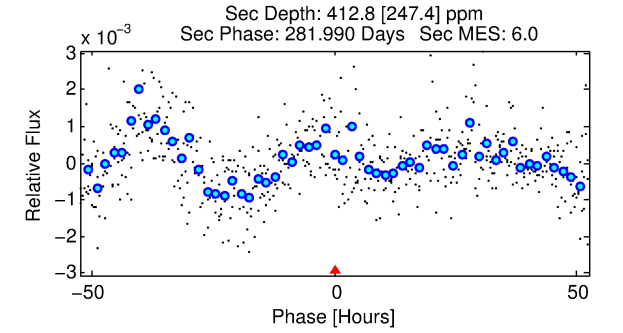
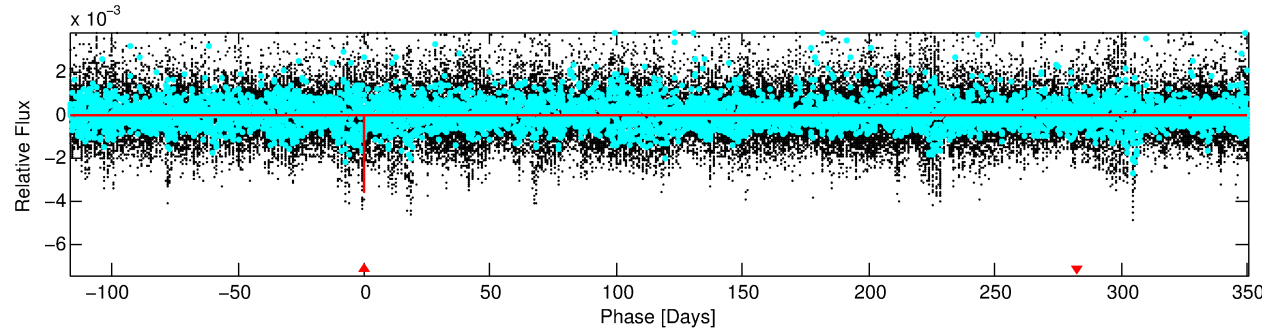
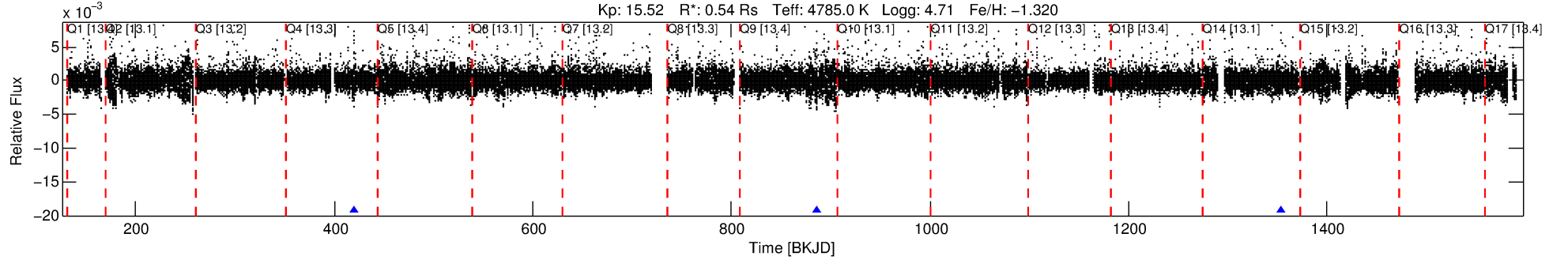
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009340291-01

No Significant Match Found

DV One-Page Summary

KIC: 9340291 Candidate: 1 of 1 Period: 466.694 d



DV Fit Results:

Period = 466.69424 [0.01888] d
Epoch = 419.4481 [0.0200] BKJD
Rp/R* = 0.0684 [0.0129]
a/R* = 215.82 [48.68]
b = 0.93 [0.04]
Seff = 0.15 [0.02]
Teq = 158 [6] K
Rp = 4.03 [0.80] Re
a = 0.9630 [0.0547] AU
Ag = 12960.74 [9246.34] [1.40 σ]
Teffp = 2608 [471] K [5.20 σ]

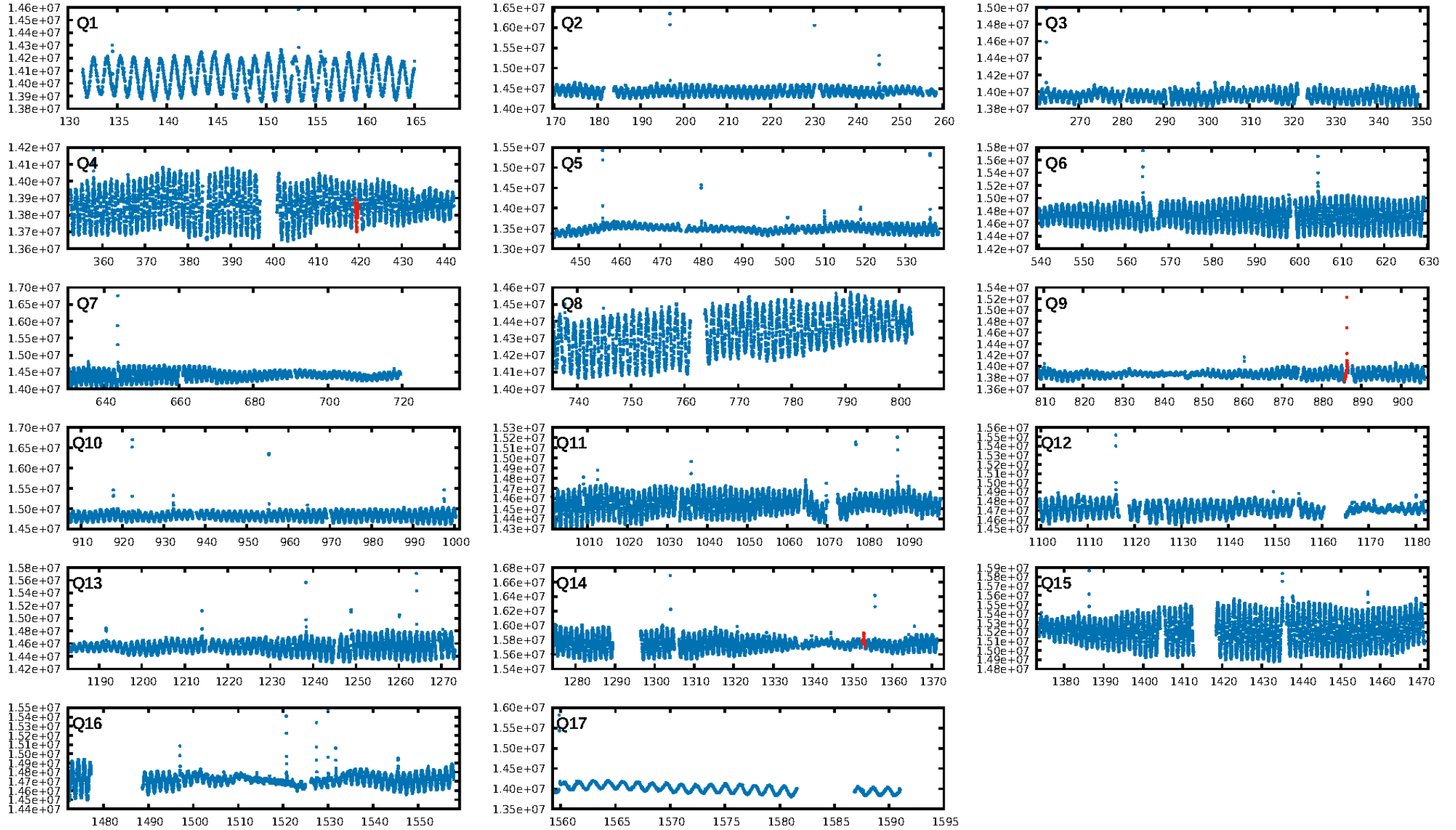
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.6%
ModelChiSquareGof-sig: 95.6%
Bootstrap-pfa: 2.28e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.991
Centroid-sig: 79.5%
Centroid-so: 0.173 arcsec [0.36 σ]
OotOffset-rm: 0.050 arcsec [0.57 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 0.176 arcsec [2.36 σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

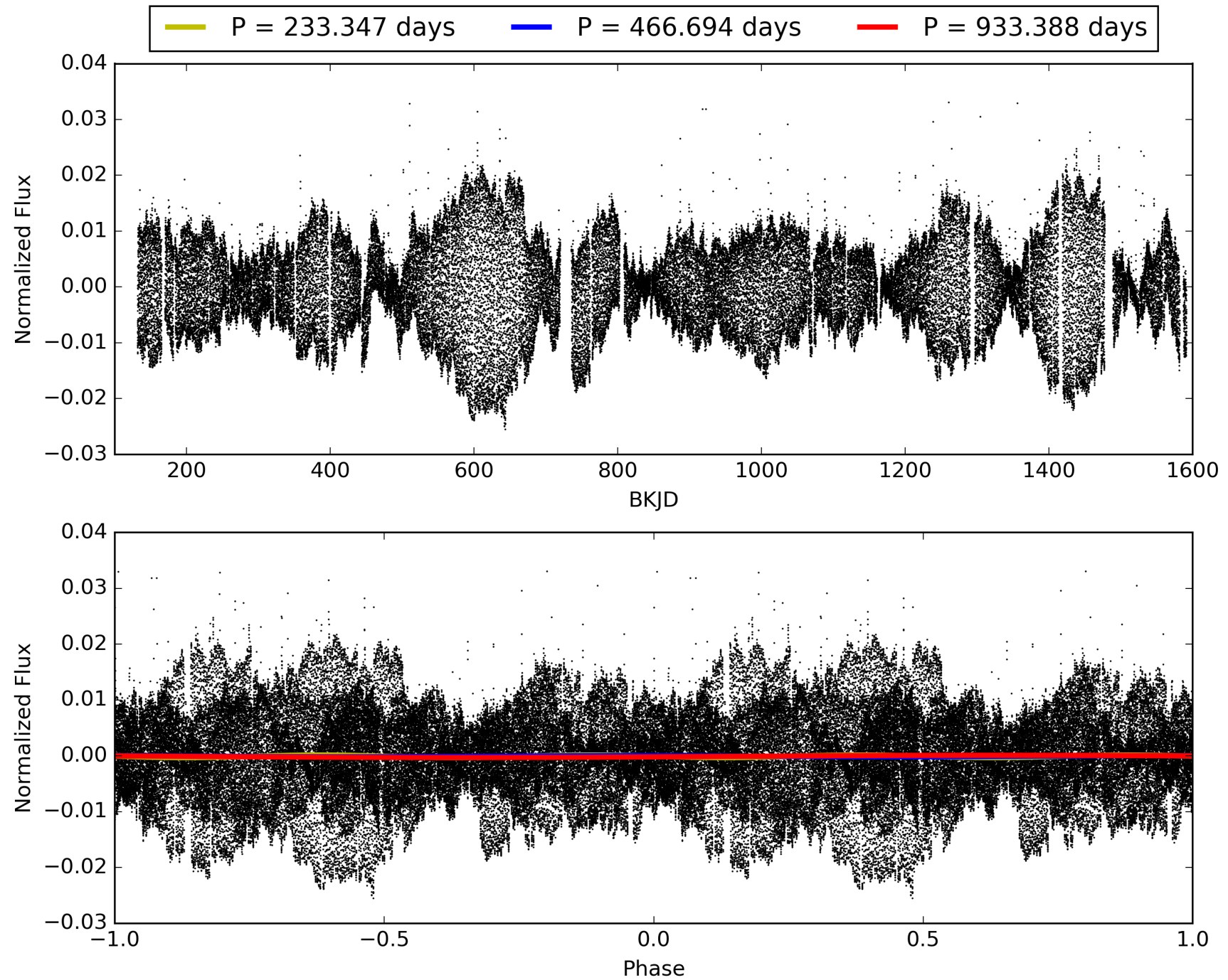
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:47:47 Z

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

TCE 009340291-01, PDC Light Curves

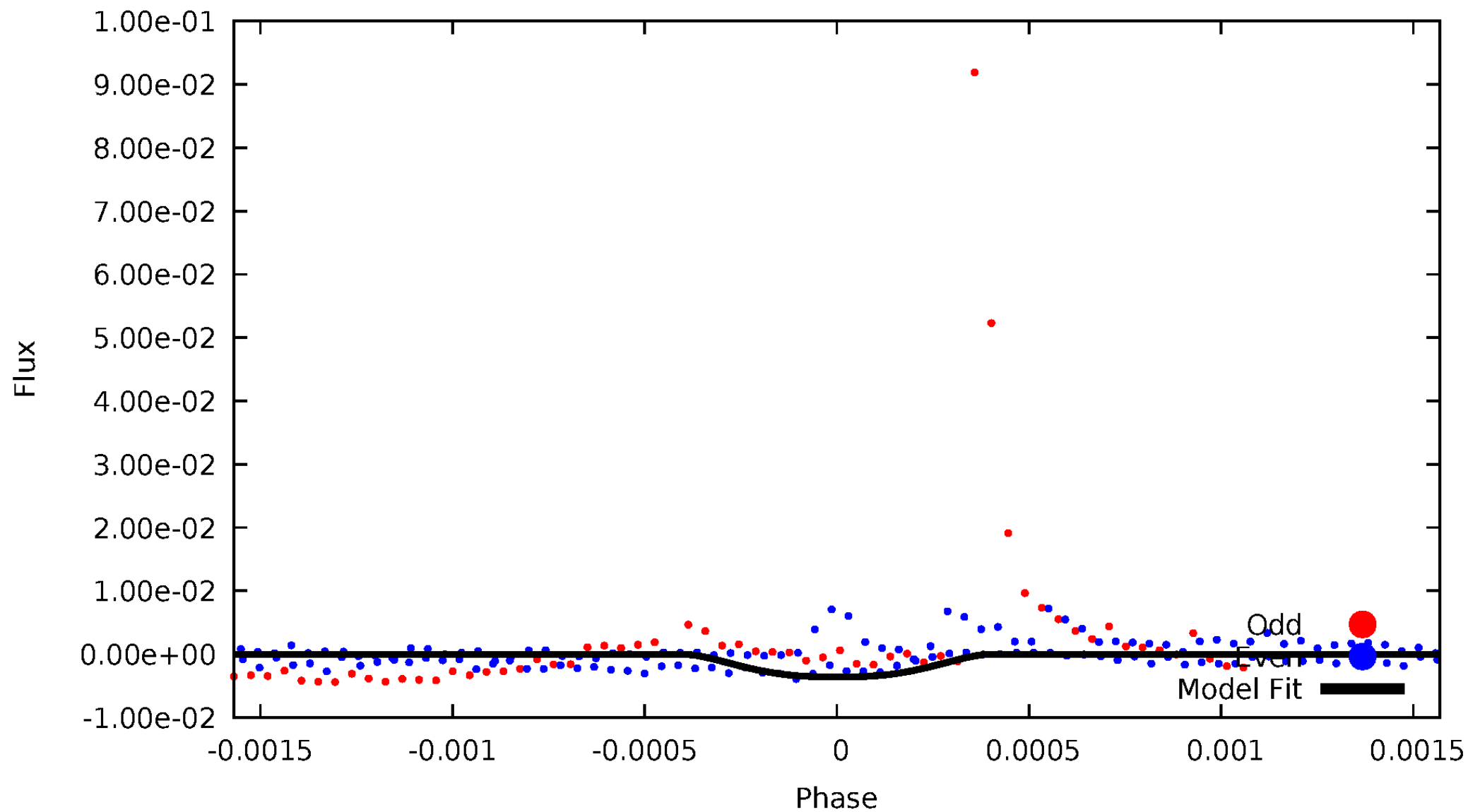


TCE 009340291-01



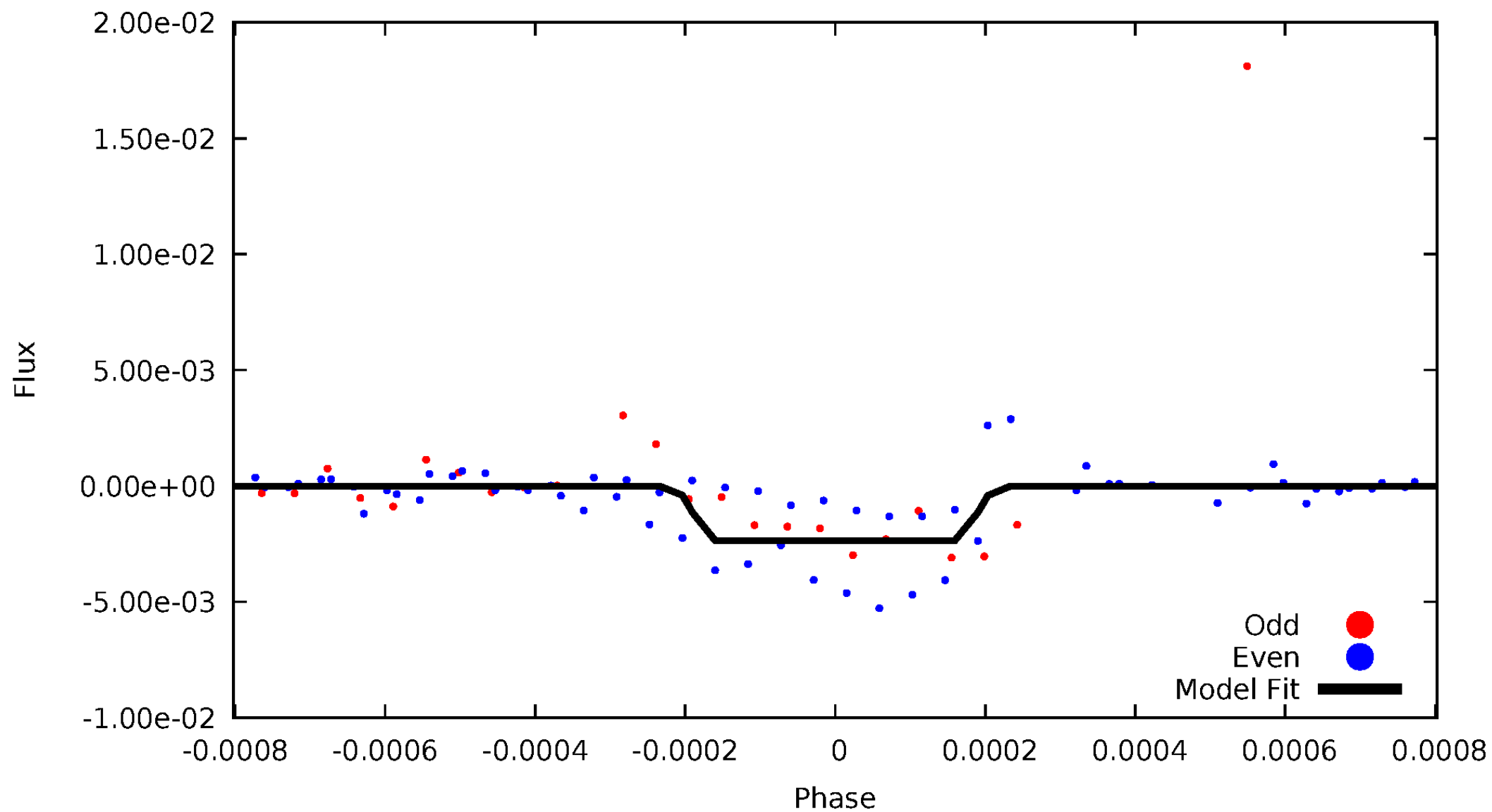
DV Odd/Even

TCE 009340291-01

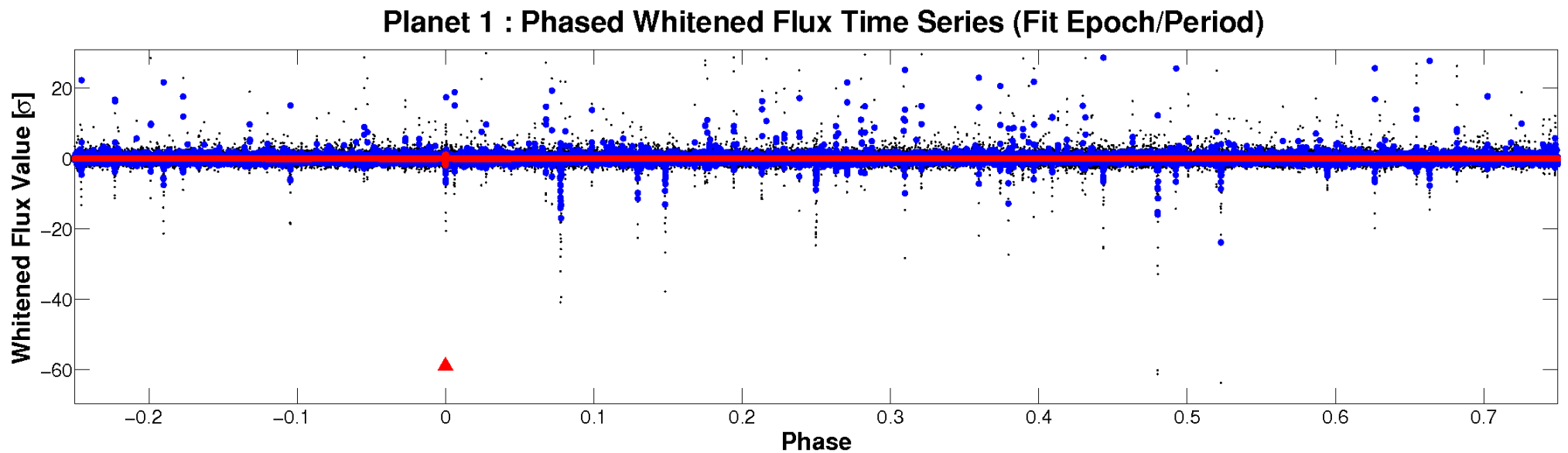
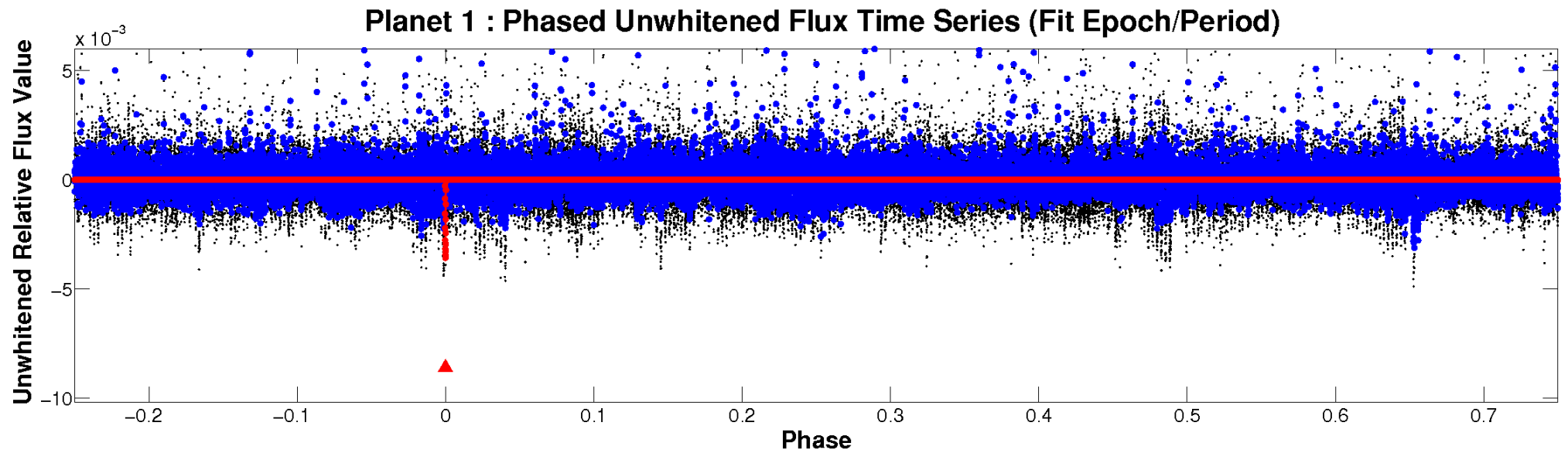


ALT Odd/Even

TCE 009340291-01

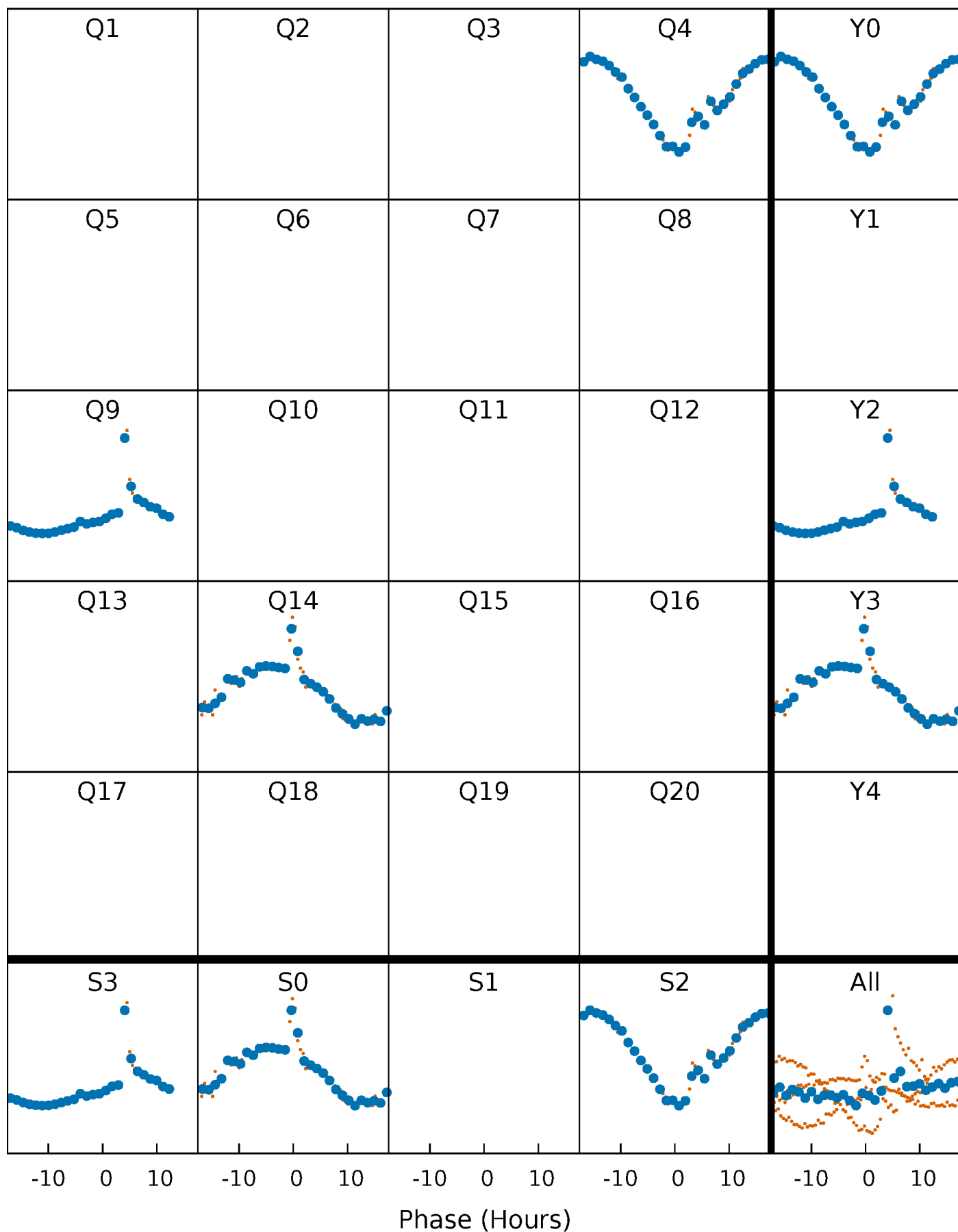


Non-Whitened Vs. Whitened Light Curve



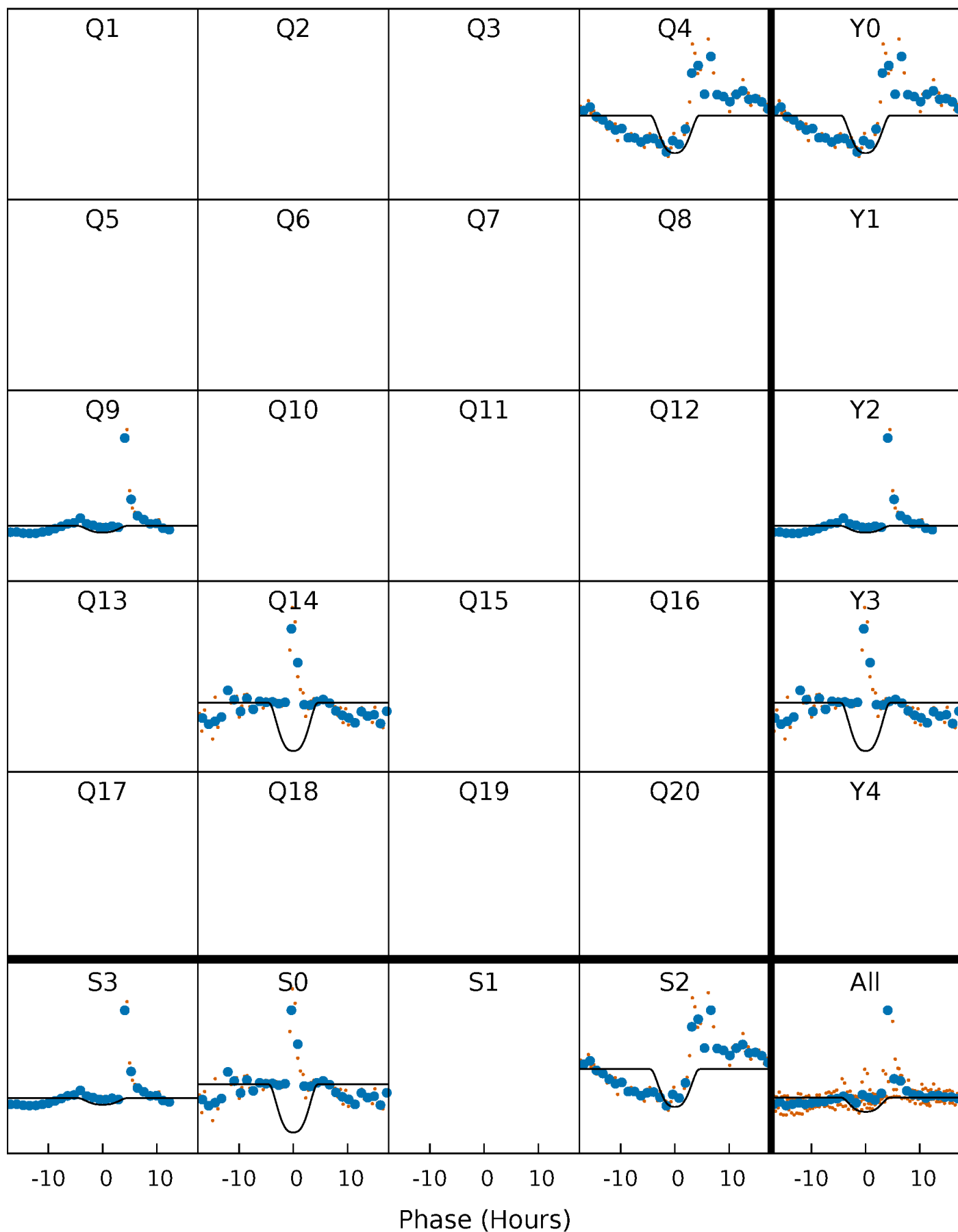
PDC Quarter-Phased Transit Curves

TCE 009340291-01 P=466.694236 Days $T_0=419.448058$ (BKJD)



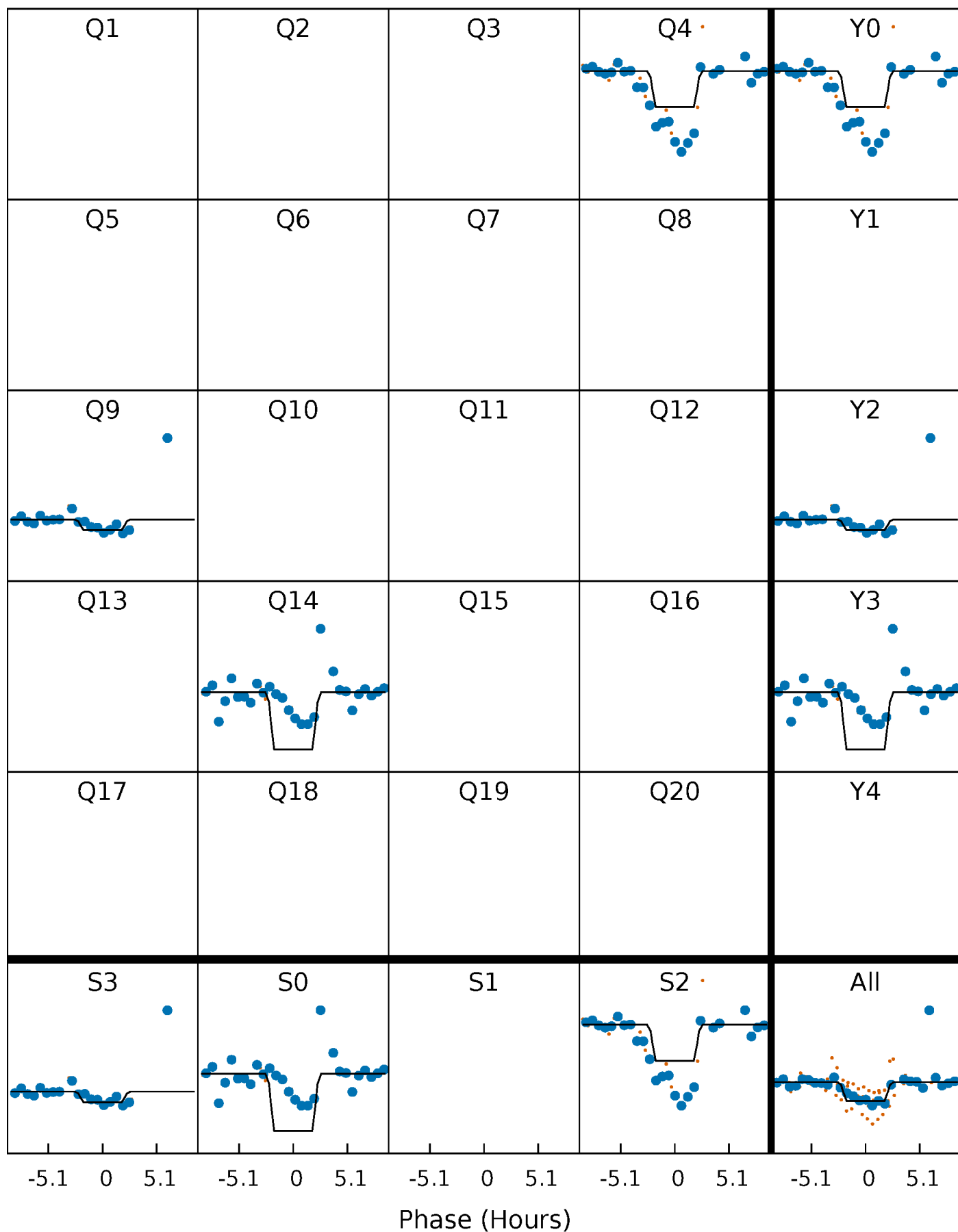
DV Quarter-Phased Transit Curves

TCE 009340291-01 P=466.694236 Days $T_0=419.448058$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

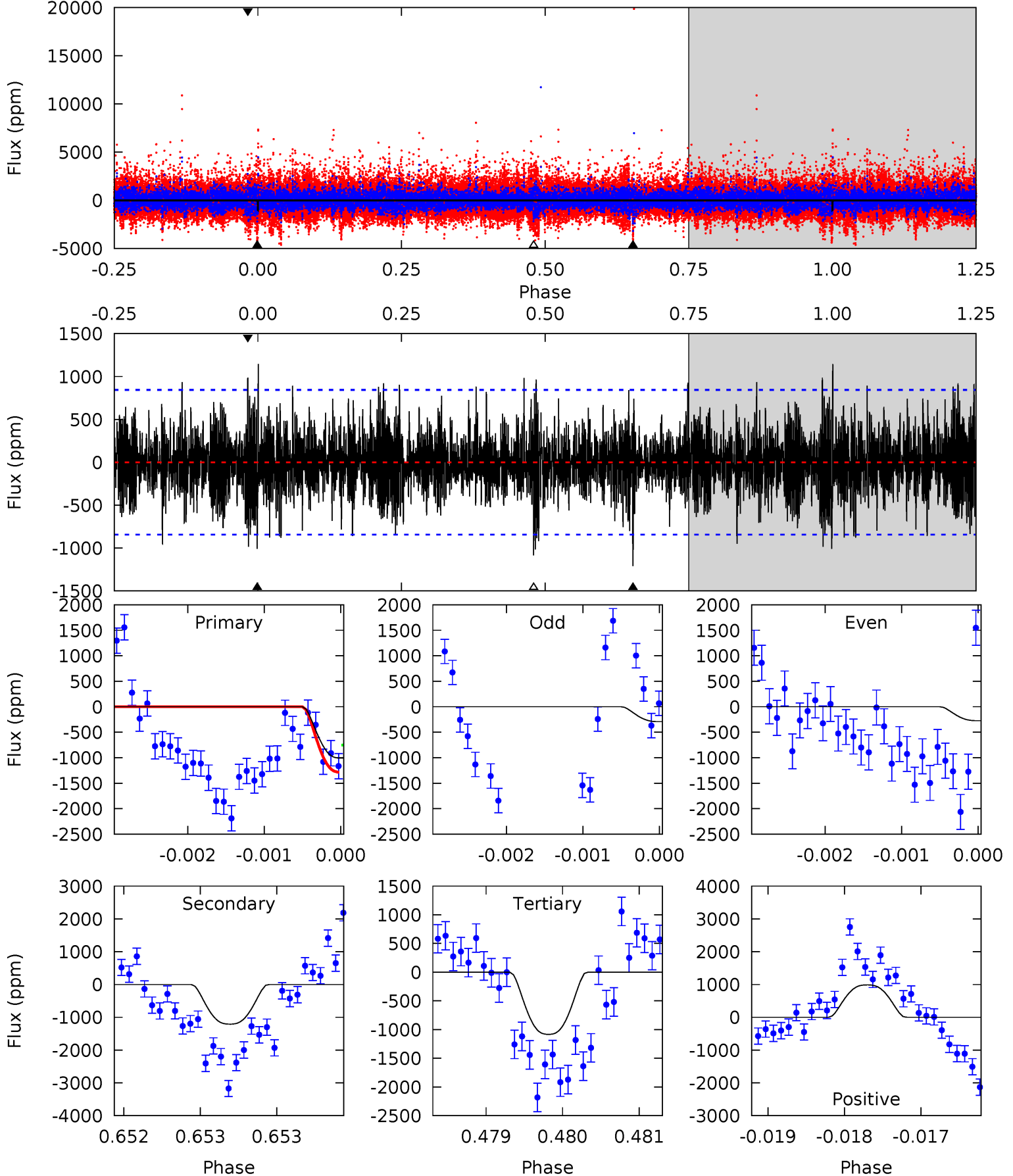
TCE 009340291-01 P=466.620776 Days $T_0=419.473244$ (BKJD)



DV Model-Shift Uniqueness Test

009340291-01, P = 466.694236 Days, E = 419.448058 Days

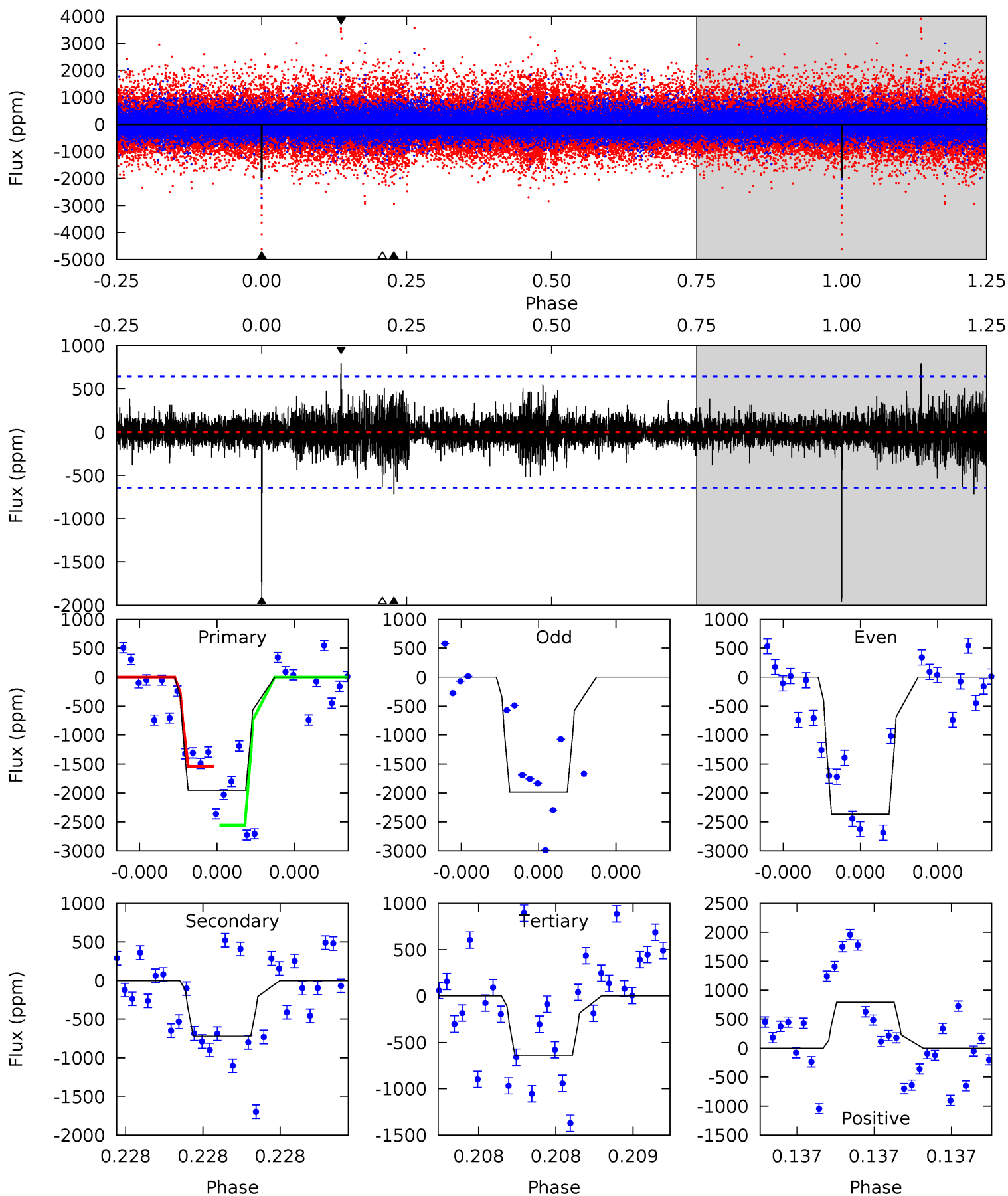
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.56	7.87	7.05	6.42	5.49	3.35	1.91	-0.49	0.13	0.82	1.45	0.04	0.12	0.49	0



Alt Model-Shift Uniqueness Test

009340291-01, P = 466.620776 Days, E = 419.473244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	6.25	5.56	6.90	5.60	3.52	1.00	11.5	10.1	0.69	-0.65	1.59	1.14	0.29	4.35



Stellar Parameters For KIC 009340291

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4785^{+168}_{-168}	$4.711^{+0.048}_{-0.024}$	$-1.320^{+0.300}_{-0.300}$	$0.540^{+0.029}_{-0.035}$	$0.547^{+0.040}_{-0.023}$	$4.889^{+0.887}_{-0.515}$
	+4%/-4%	+1%/-1%	+23%/-23%	+5%/-6%	+7%/-4%	+18%/-11%
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 009340291-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1210 ± 154	$4.04^{+0.76}_{-0.80}$	220^{+9}_{-9}	3714^{+308}_{-235}	37978^{+21339}_{-11868}
Alt.	-718 ± 115	$2.90^{+0.77}_{-0.86}$	220^{+8}_{-8}	3816^{+526}_{-321}	44501^{+42451}_{-18088}

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

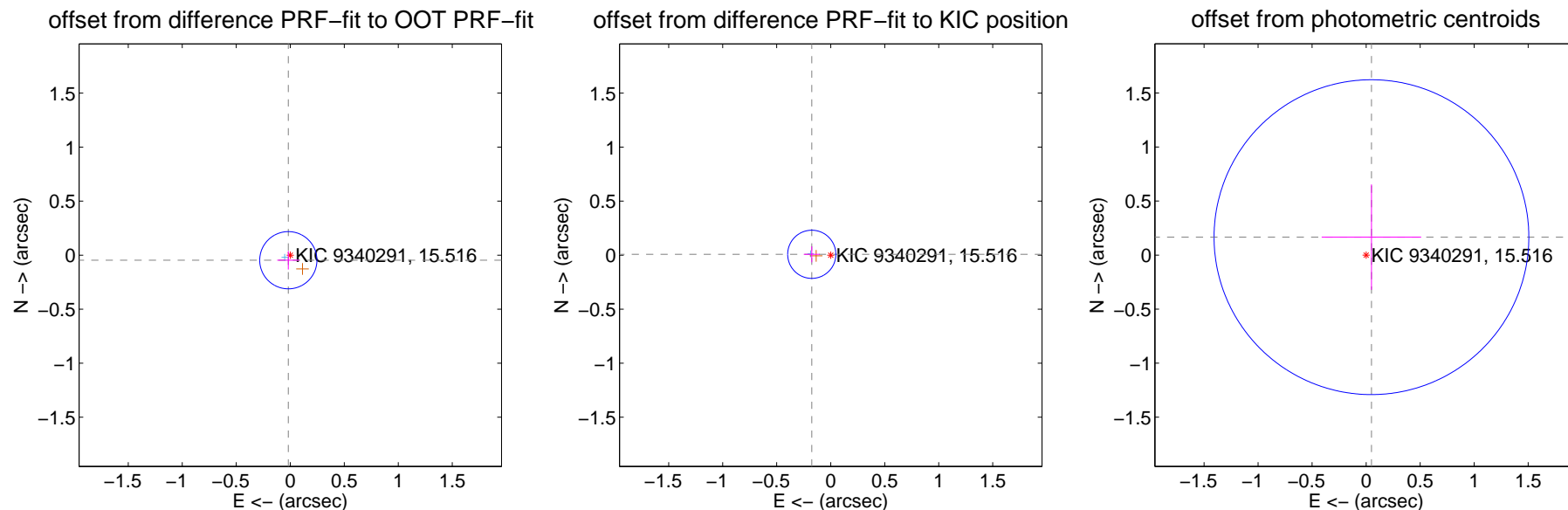
DV Centroid Data

Supplemental centroid analysis for 009340291-01. Kepler magnitude: 15.52. Transit SNR 9.73

There are 1 quarters with good PRF difference image offsets

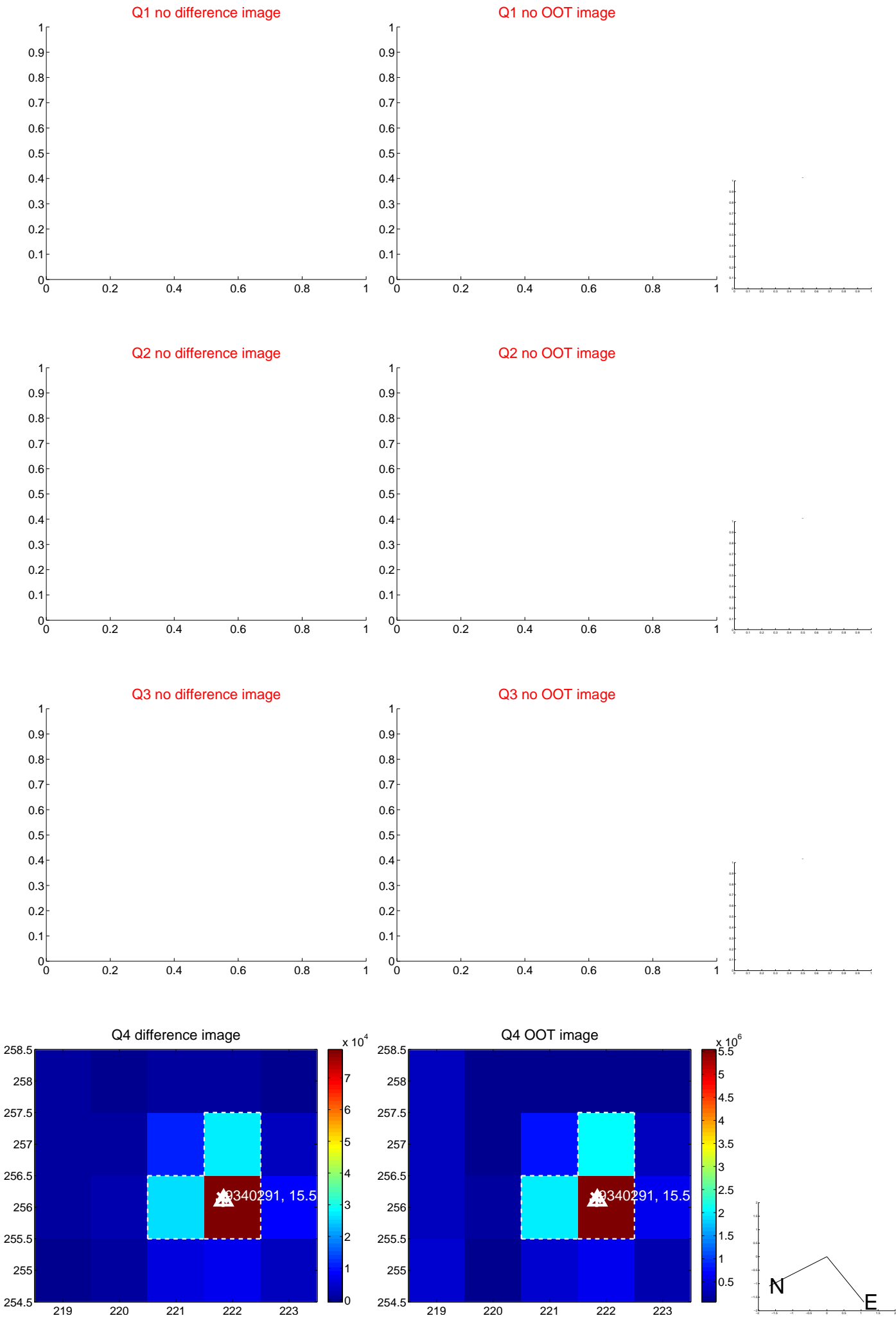
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.088	0.57	0.018 ± 0.102	-0.047 ± 0.086
PRF-fit source offset from KIC position	0.176 ± 0.074	2.36	0.176 ± 0.074	0.008 ± 0.074
photometric centroid source offset	0.17 ± 0.49	0.36	-0.05 ± 0.46	0.17 ± 0.49



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.



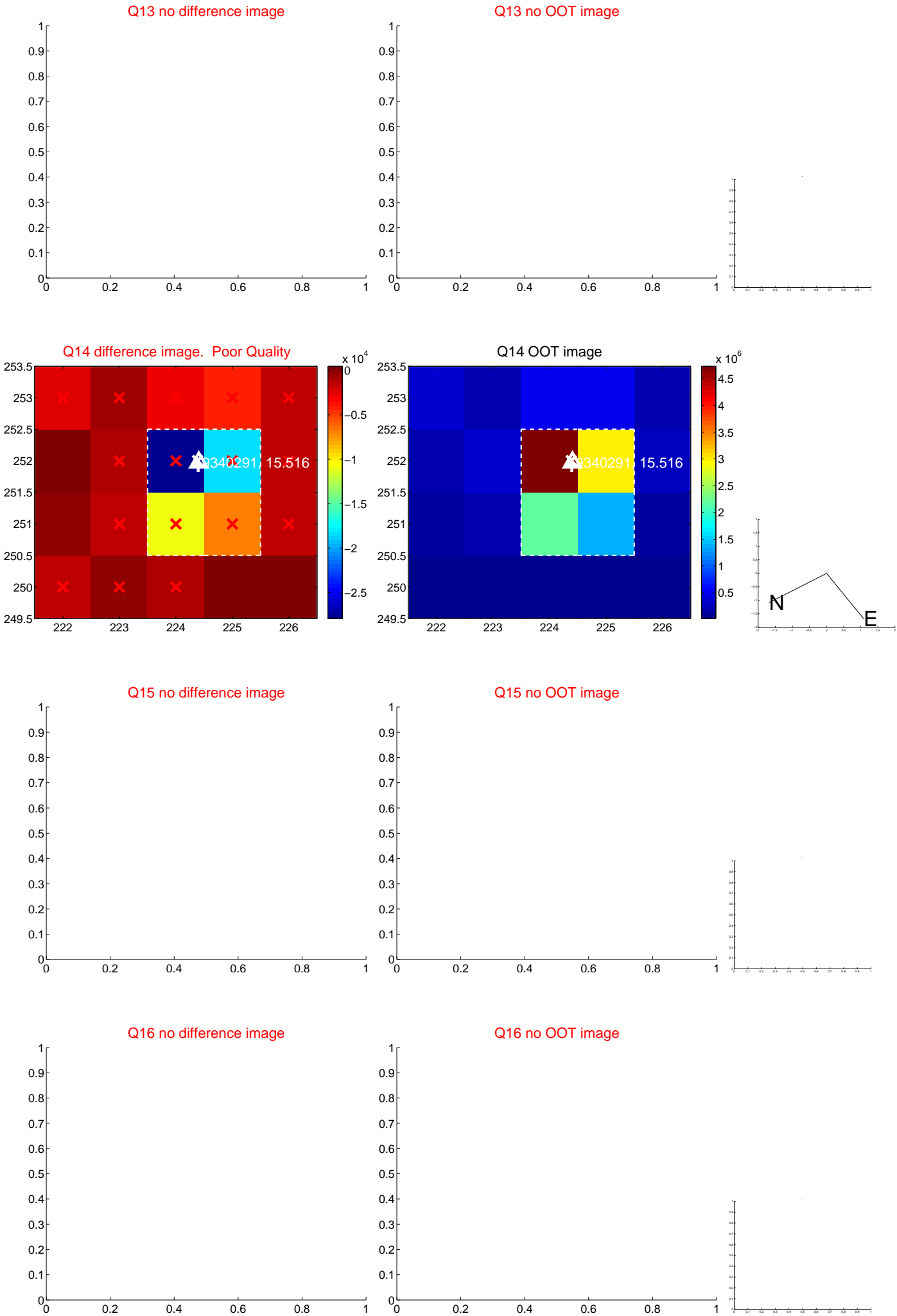
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



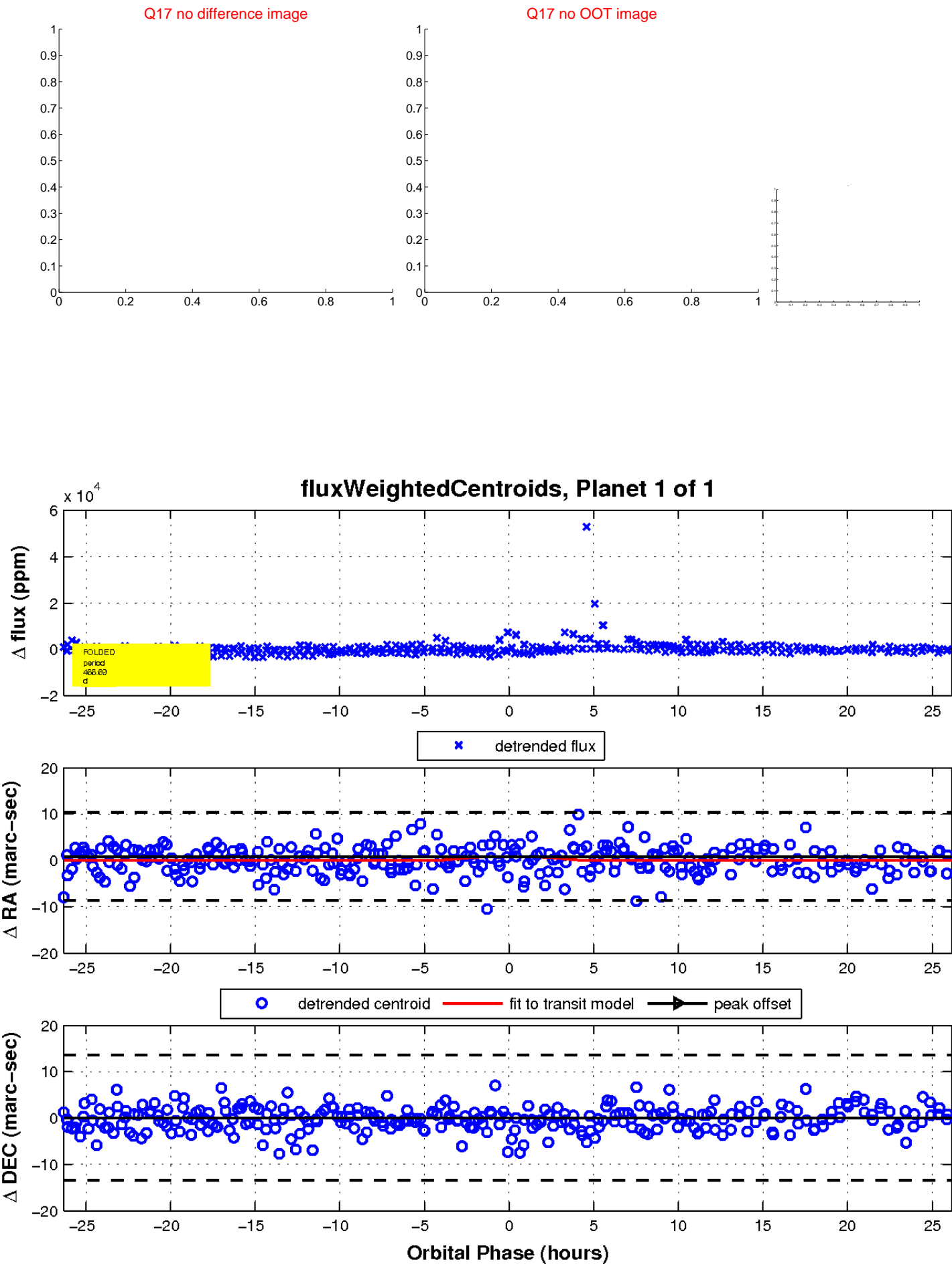
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

