

KIC 009003326

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})
009003326-01	OBS	No	678.741899	151.060829	194.1	13.069	7.7	7.6	1.21	6586	1.83	0.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009003326-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

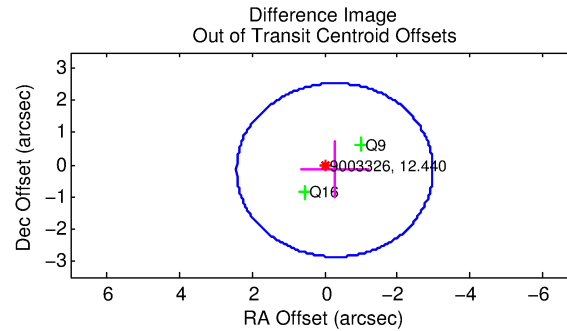
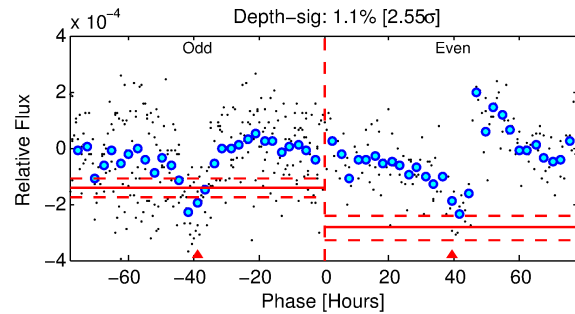
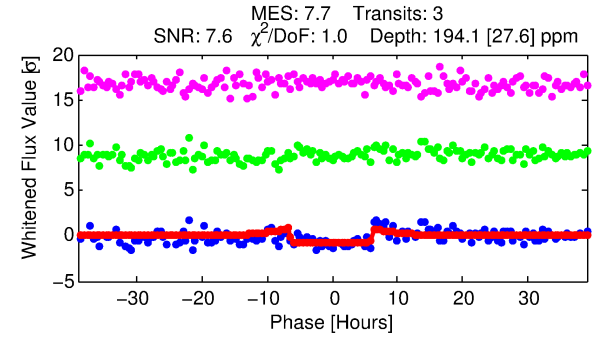
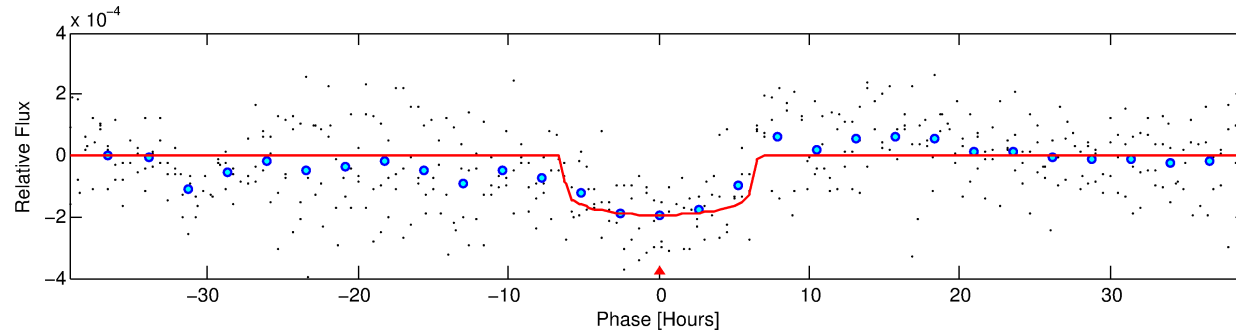
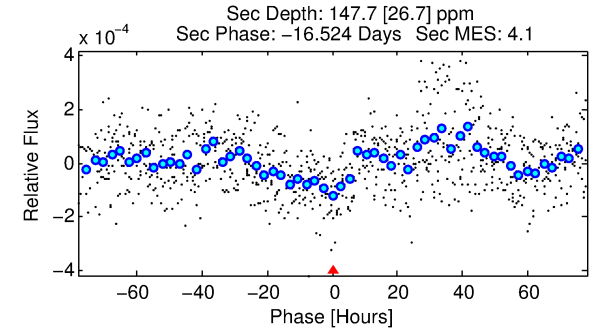
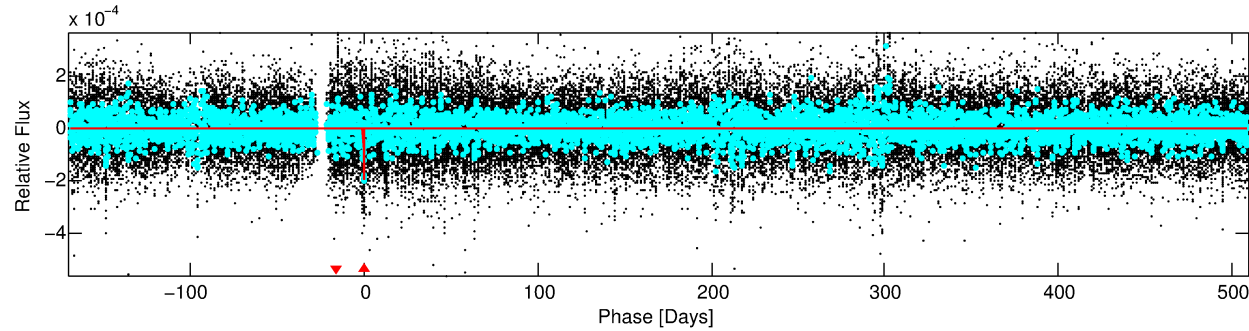
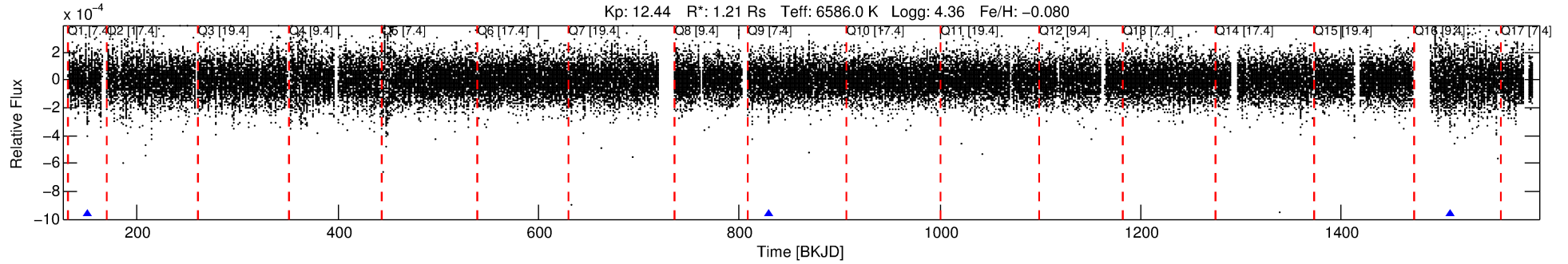
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009003326-01

No Significant Match Found

DV One-Page Summary

KIC: 9003326 Candidate: 1 of 1 Period: 678.742 d



DV Fit Results:

Period = 678.74190 [0.00950] d
Epoch = 151.0608 [0.0117] BKJD
Rp/R* = 0.0139 [0.0034]
a/R* = 265.77 [329.35]
b = 0.76 [0.69]
Seff = 0.94 [0.41]
Teq = 251 [27] K
Rp = 1.83 [0.78] Re
a = 1.6155 [0.4693] AU
Ag = 63249.78 [42026.33] [1.50σ]
Teffp = 6158 [819] K [7.21σ]

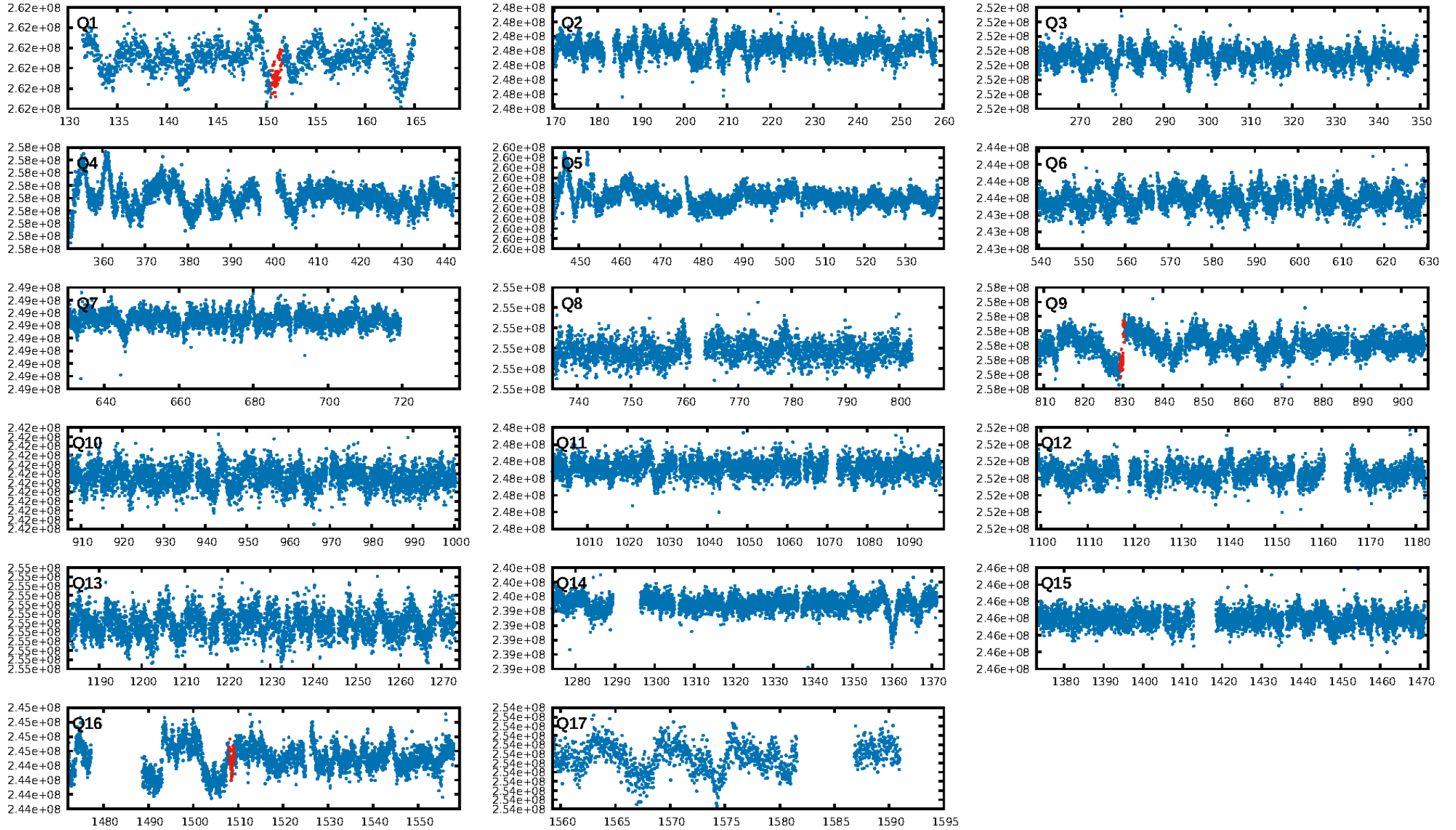
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 24.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.81e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.279
Centroid-sig: 59.4%
Centroid-so: 0.534 arcsec [0.73σ]
OotOffset-rm: 0.327 arcsec [0.36σ]
KicOffset-rm: 0.223 arcsec [0.24σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

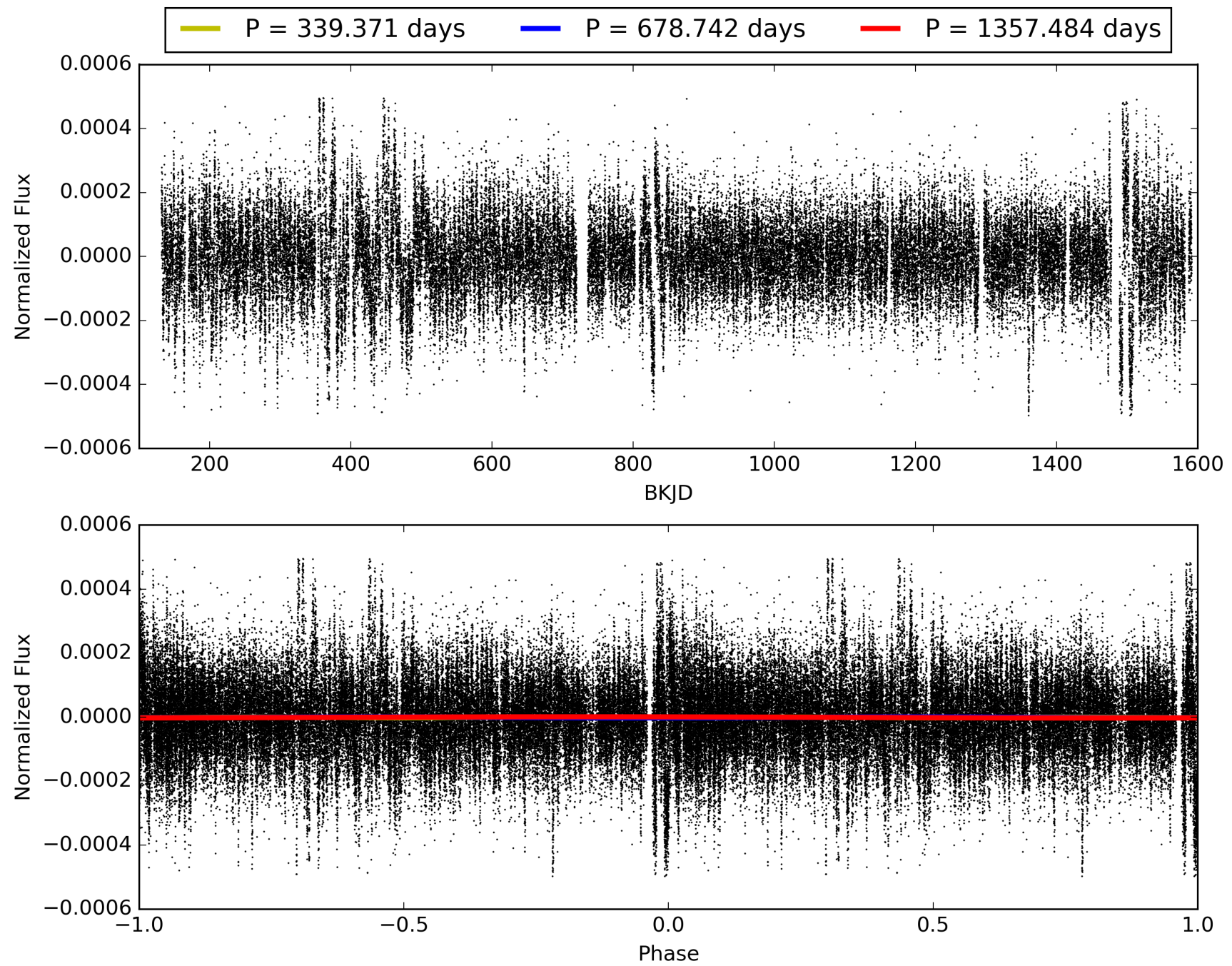
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:49:13 Z

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

TCE 009003326-01, PDC Light Curves

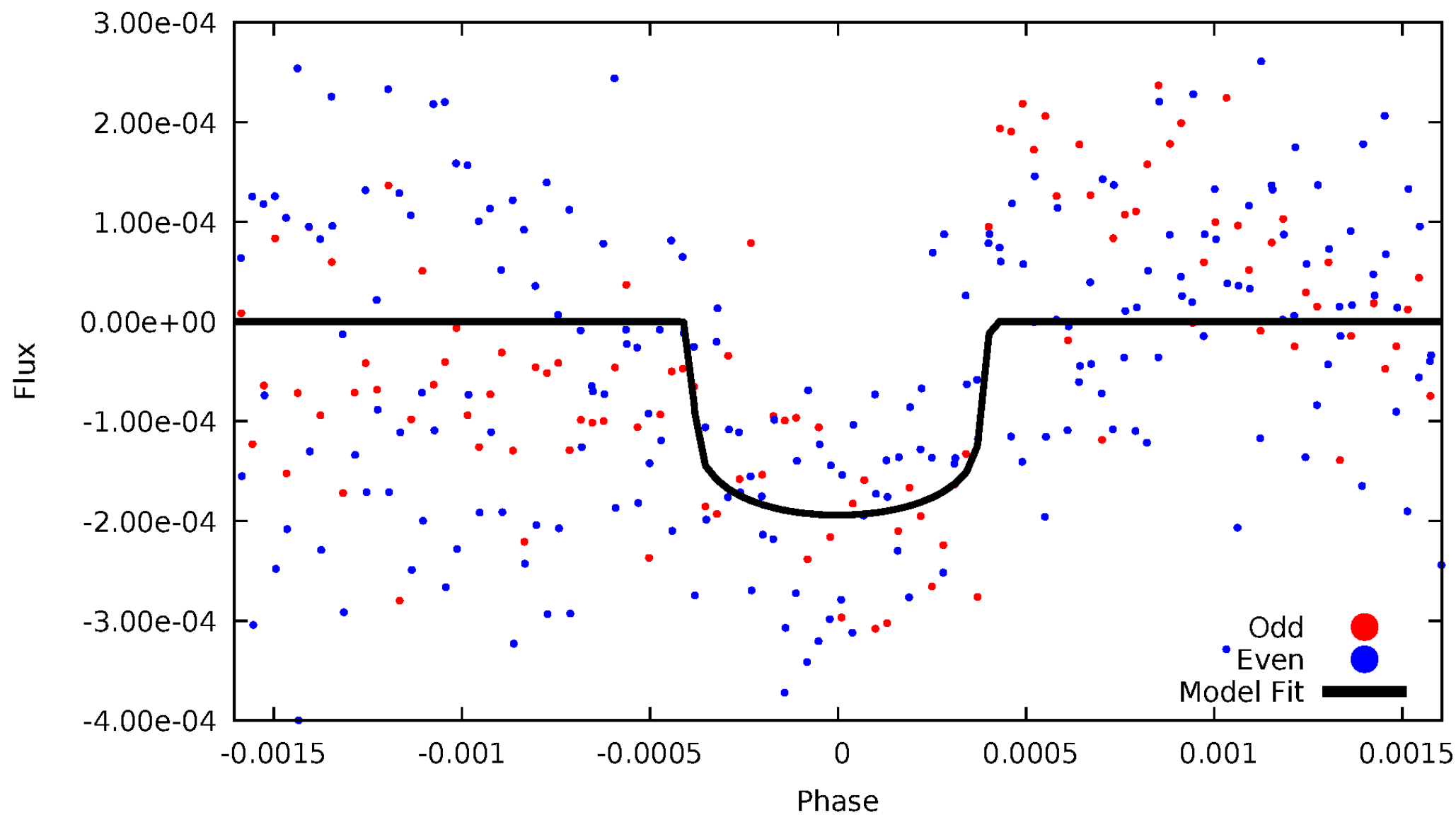


TCE 009003326-01



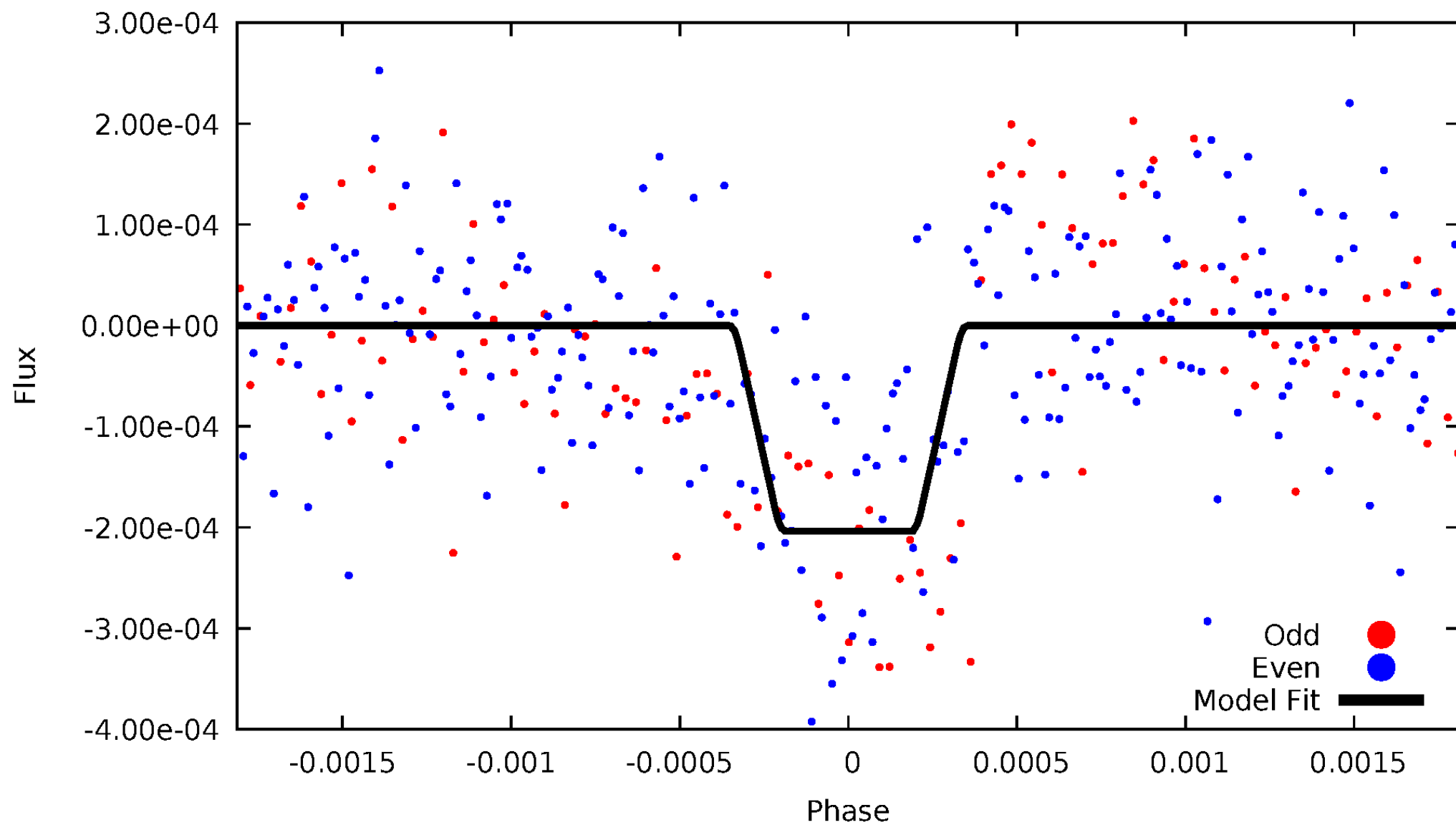
DV Odd/Even

TCE 009003326-01



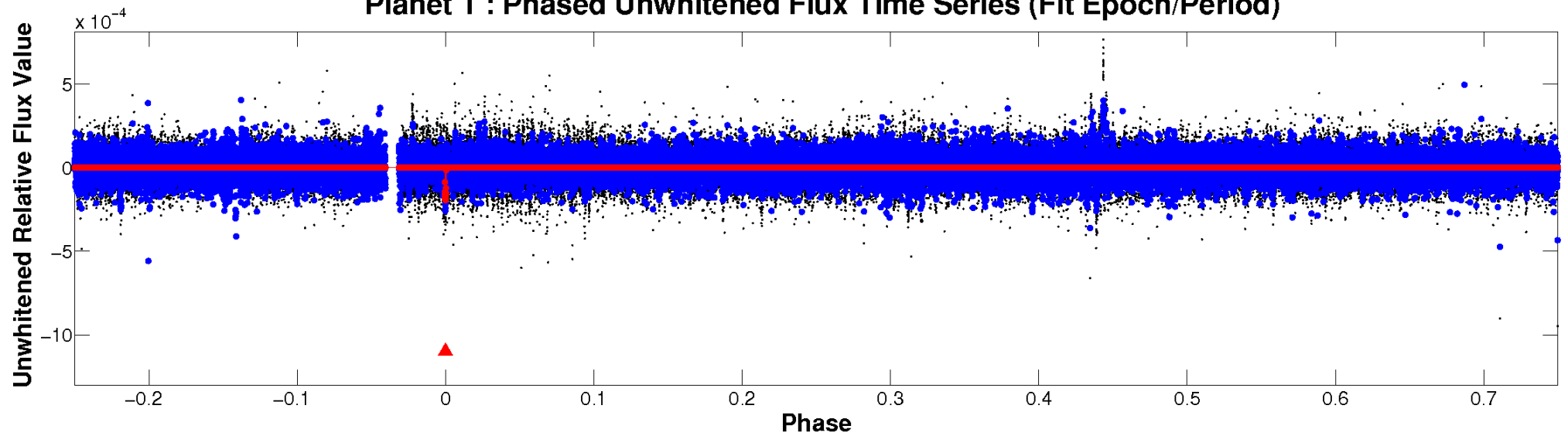
ALT Odd/Even

TCE 009003326-01

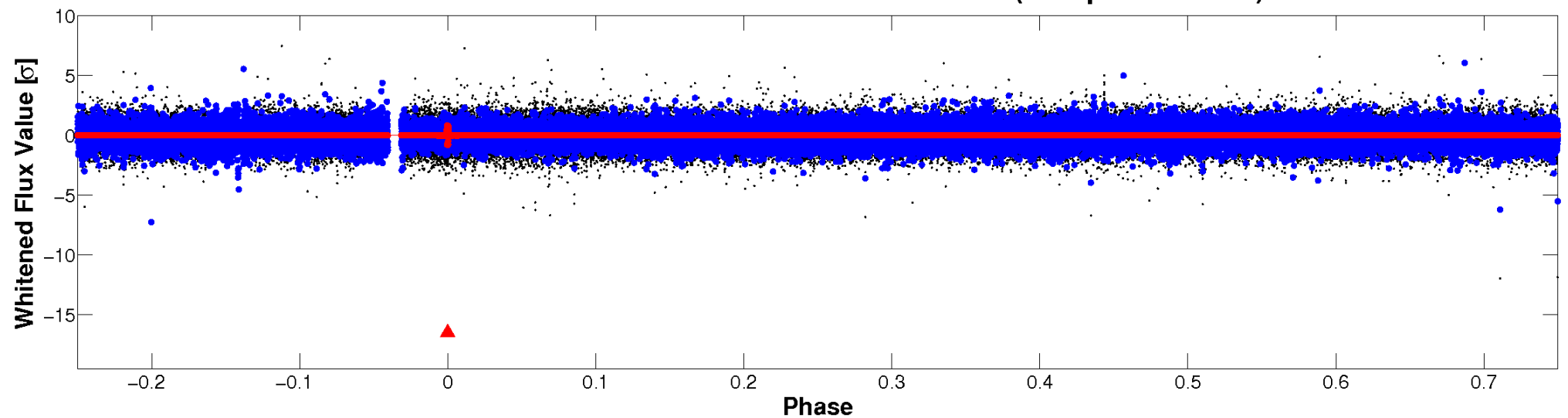


Non-Whitened Vs. Whitened Light Curve

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

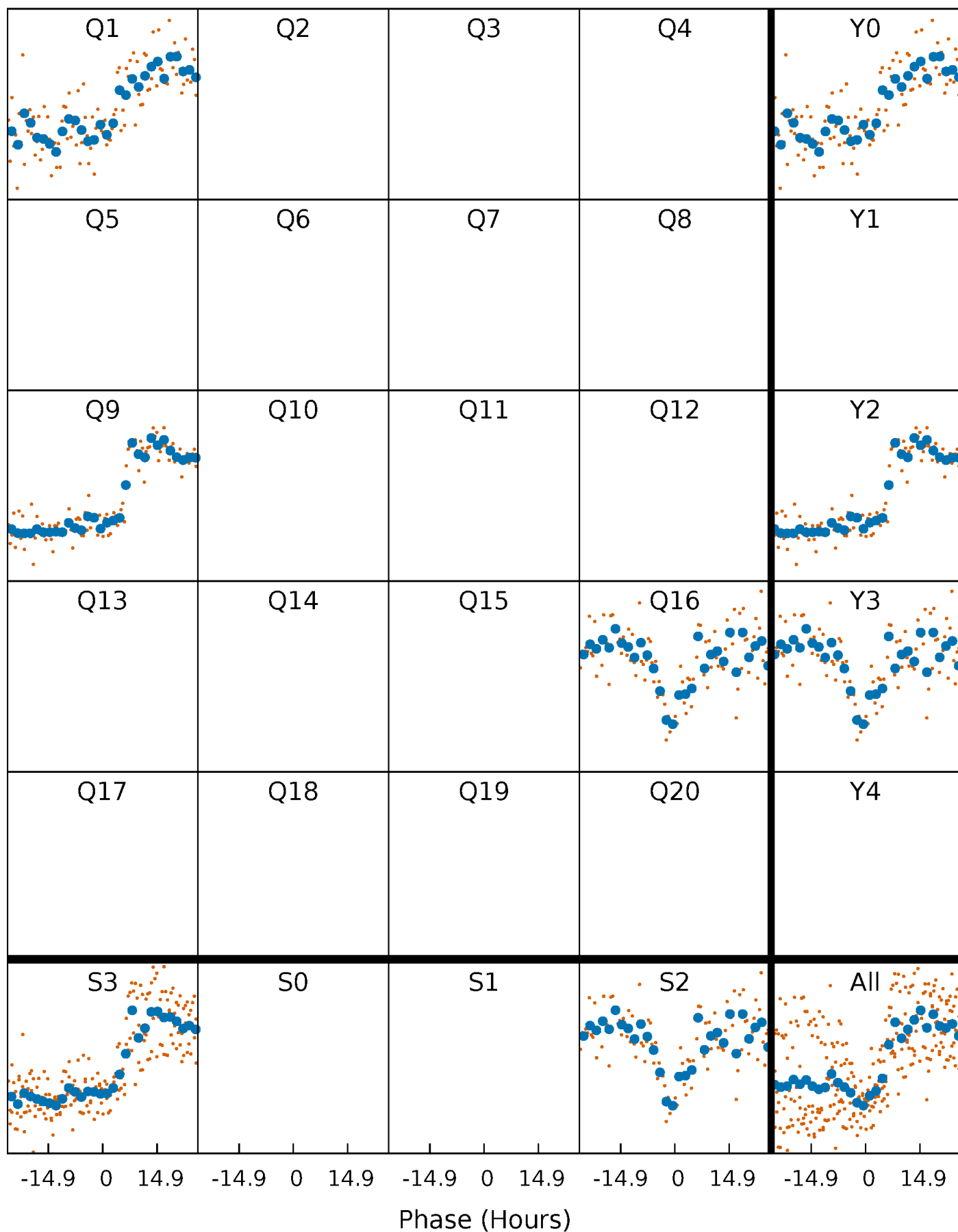


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



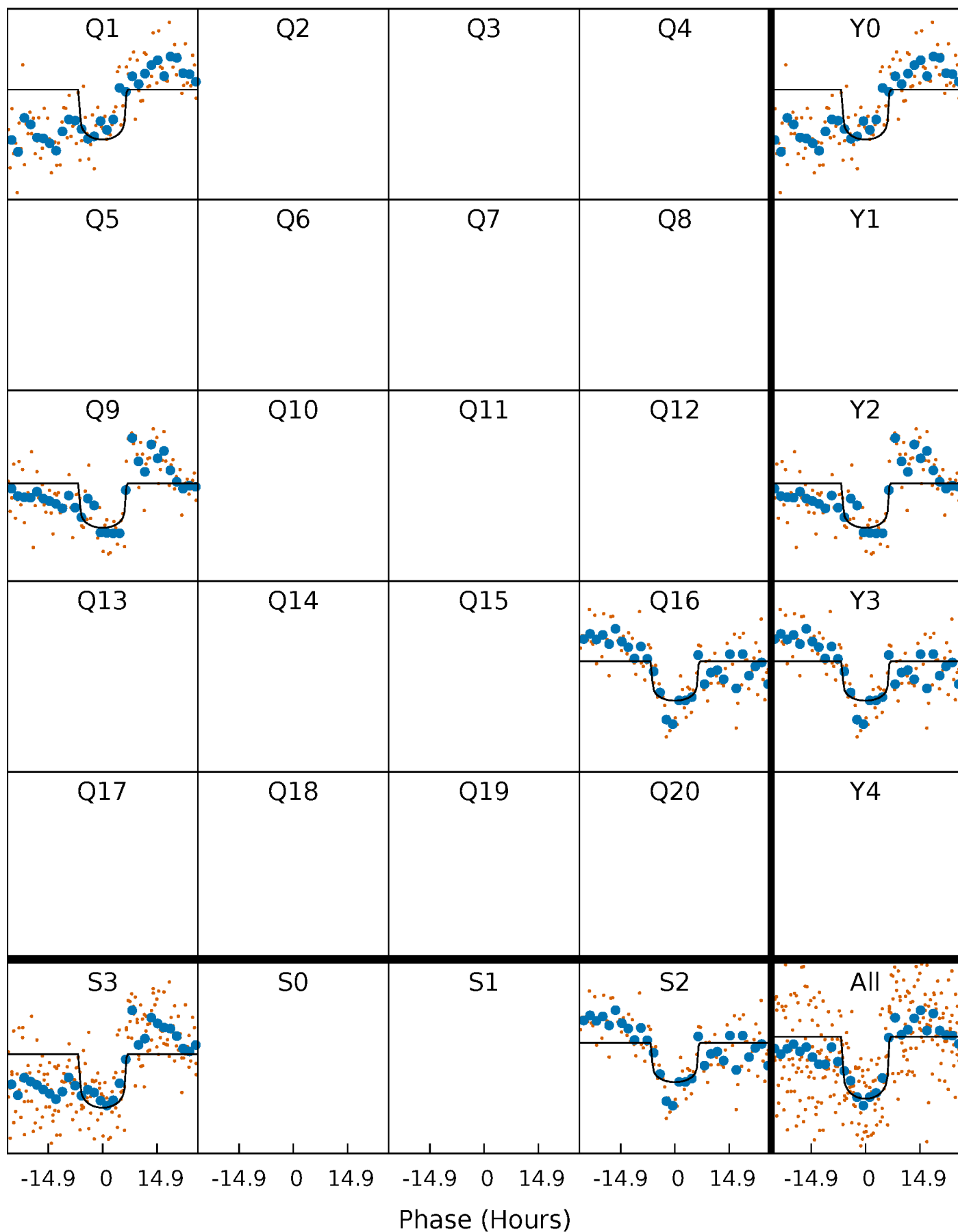
PDC Quarter-Phased Transit Curves

TCE 009003326-01 P=678.741899 Days $T_0=151.060829$ (BKJD)



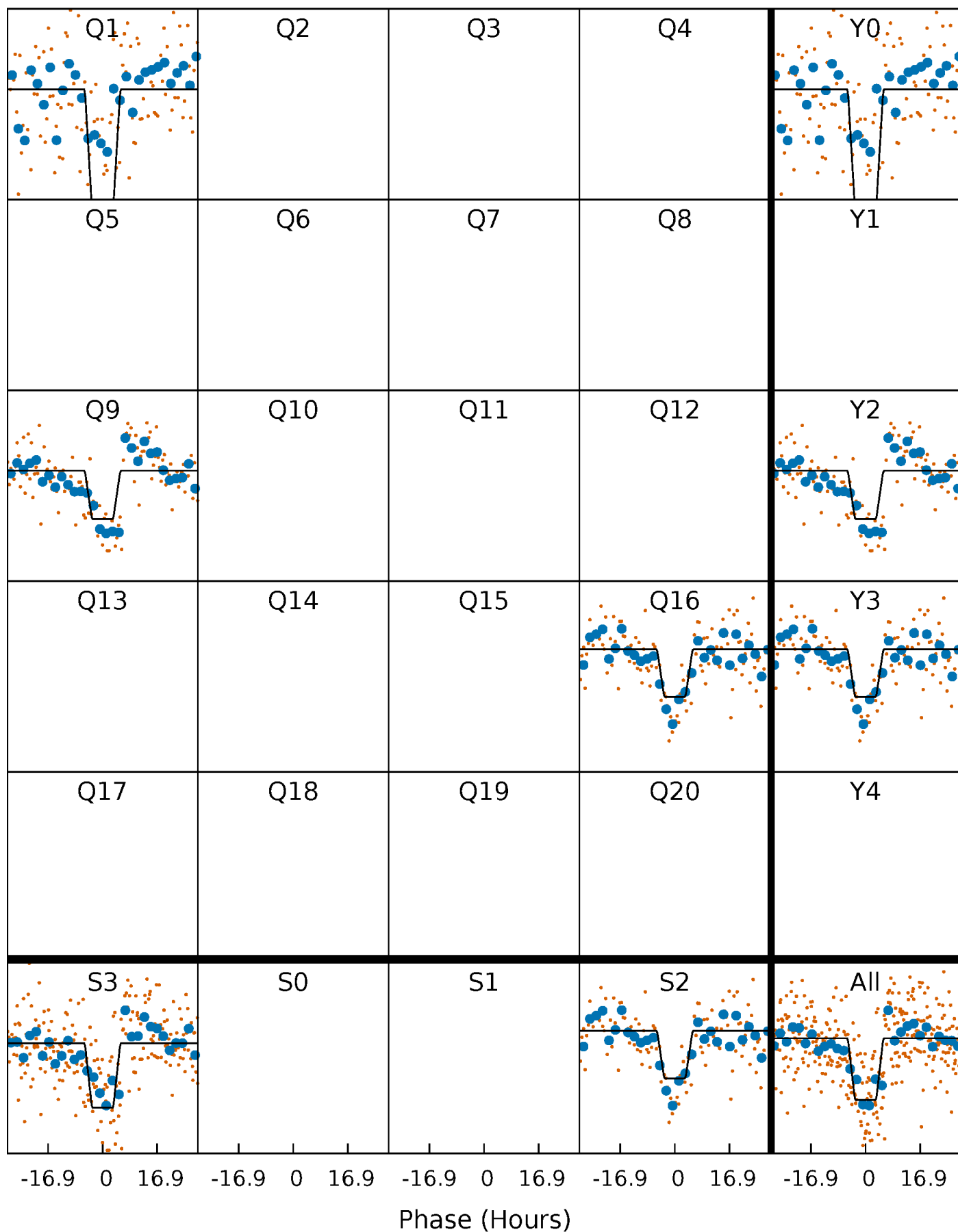
DV Quarter-Phased Transit Curves

TCE 009003326-01 P=678.741899 Days $T_0=151.060829$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

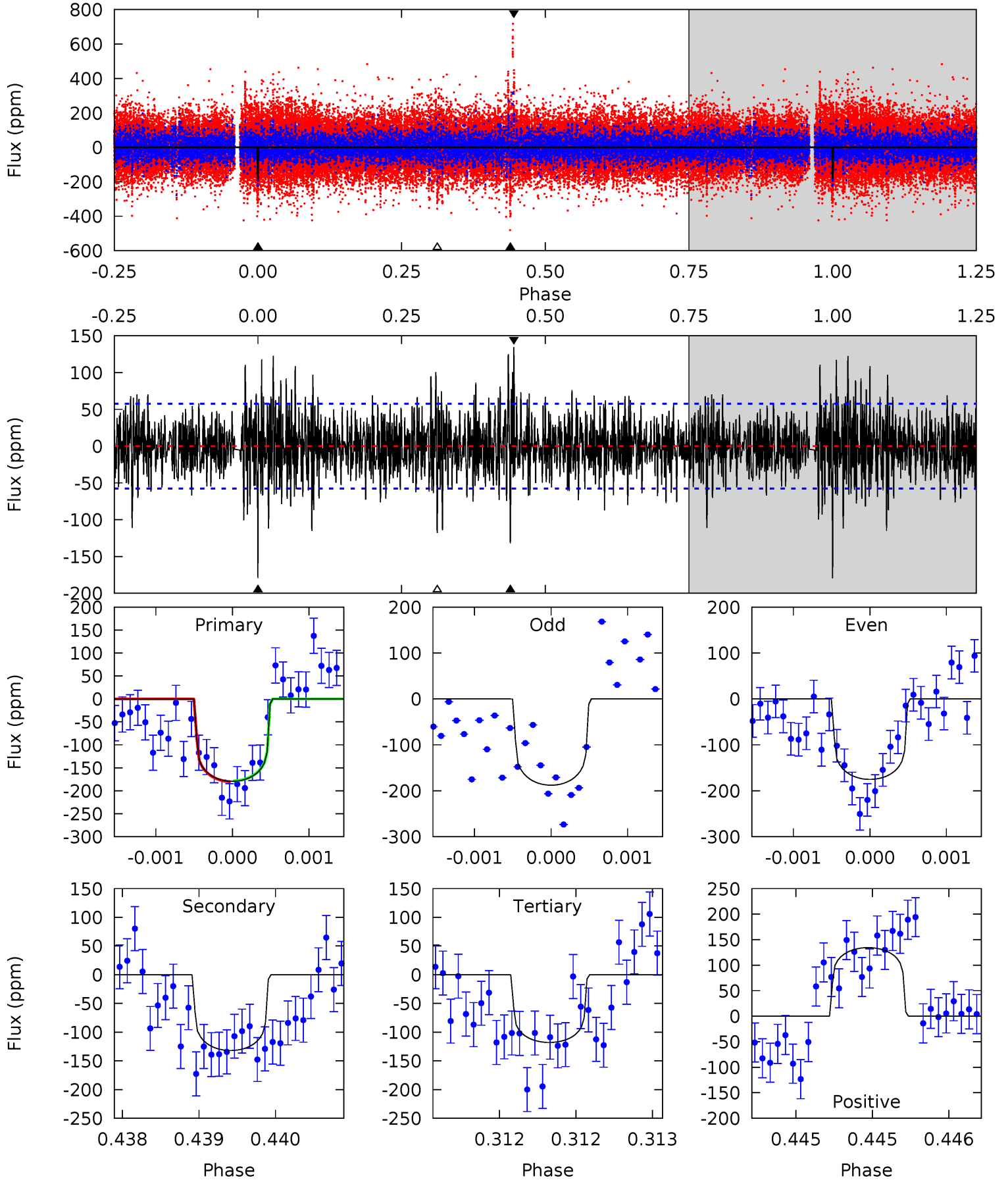
TCE 009003326-01 P=678.714318 Days $T_0=151.093236$ (BKJD)



DV Model-Shift Uniqueness Test

009003326-01, P = 678.741899 Days, E = 151.060829 Days

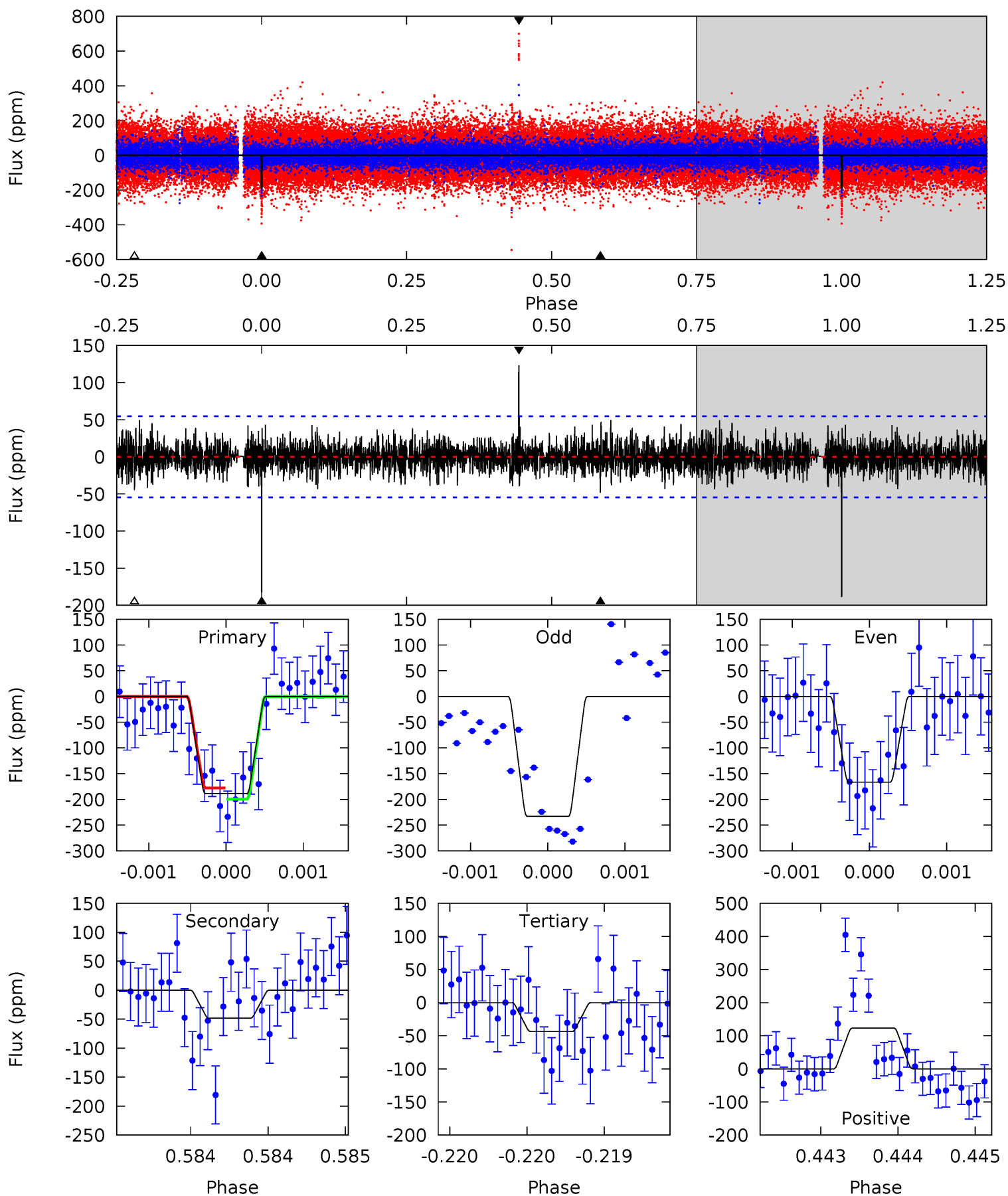
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	12.5	11.2	12.8	5.49	3.35	3.07	5.85	4.28	1.33	-0.23	0.58	0.96	0.43	0.09



Alt Model-Shift Uniqueness Test

009003326-01, P = 678.714318 Days, E = 151.093236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	4.86	4.40	12.4	5.52	3.39	1.44	14.6	6.61	0.46	-7.57	3.21	0.81	0.40	1.10



Stellar Parameters For KIC 009003326

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6586^{+149}_{-199}	$4.361^{+0.056}_{-0.224}$	$-0.080^{+0.250}_{-0.300}$	$1.207^{+0.424}_{-0.141}$	$1.226^{+0.191}_{-0.156}$	$0.982^{+0.303}_{-0.547}$
	+2%/-3%	+1%/-5%	+312%/-375%	+35%/-12%	+16%/-13%	+31%/-56%
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 009003326-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-132 ± 11	$1.93^{+0.54}_{-0.51}$	358^{+30}_{-16}	5992^{+932}_{-618}	49614^{+41852}_{-19165}
Alt.	-48 ± 10	$2.01^{+0.56}_{-0.52}$	359^{+29}_{-16}	4709^{+558}_{-443}	16859^{+13799}_{-6829}

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 $A_{obs} \gg 1.0$

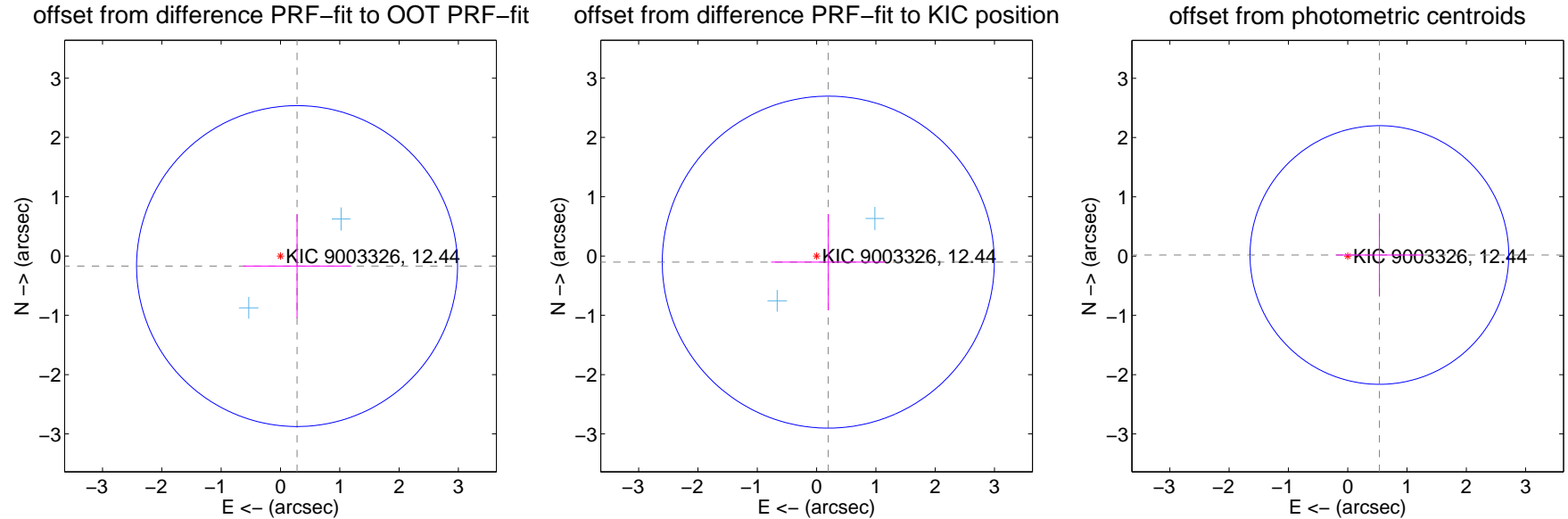
DV Centroid Data

Supplemental centroid analysis for 009003326-01. Kepler magnitude: 12.44. Transit SNR 7.56

There are 2 quarters with good PRF difference image offsets

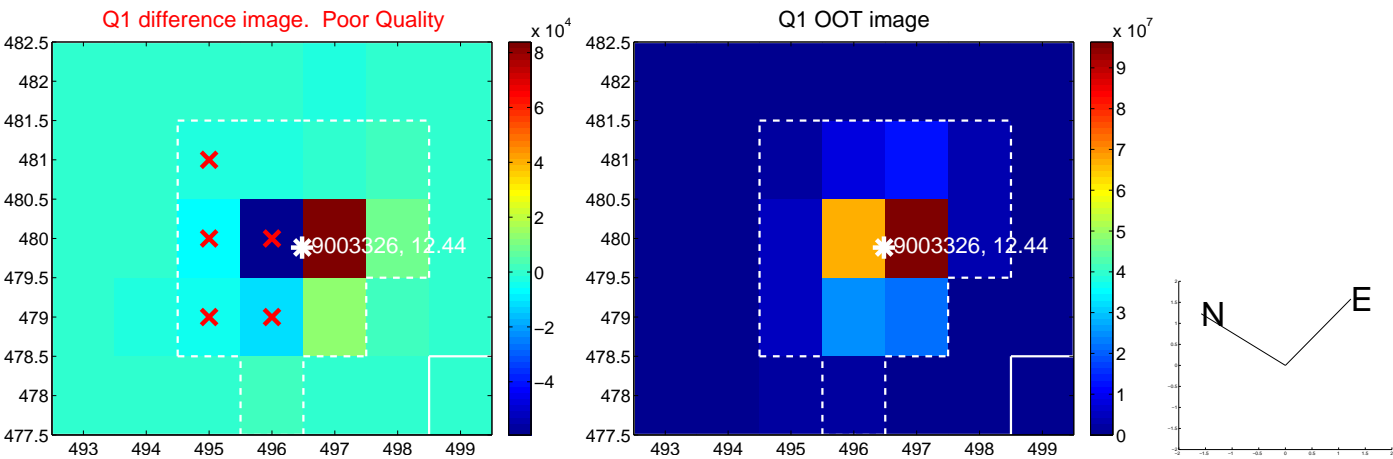
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.327 ± 0.902	0.36	-0.280 ± 0.911	-0.170 ± 0.876
PRF-fit source offset from KIC position	0.223 ± 0.933	0.24	-0.198 ± 0.963	-0.103 ± 0.812
photometric centroid source offset	0.53 ± 0.73	0.73	-0.53 ± 0.73	0.02 ± 0.70



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.

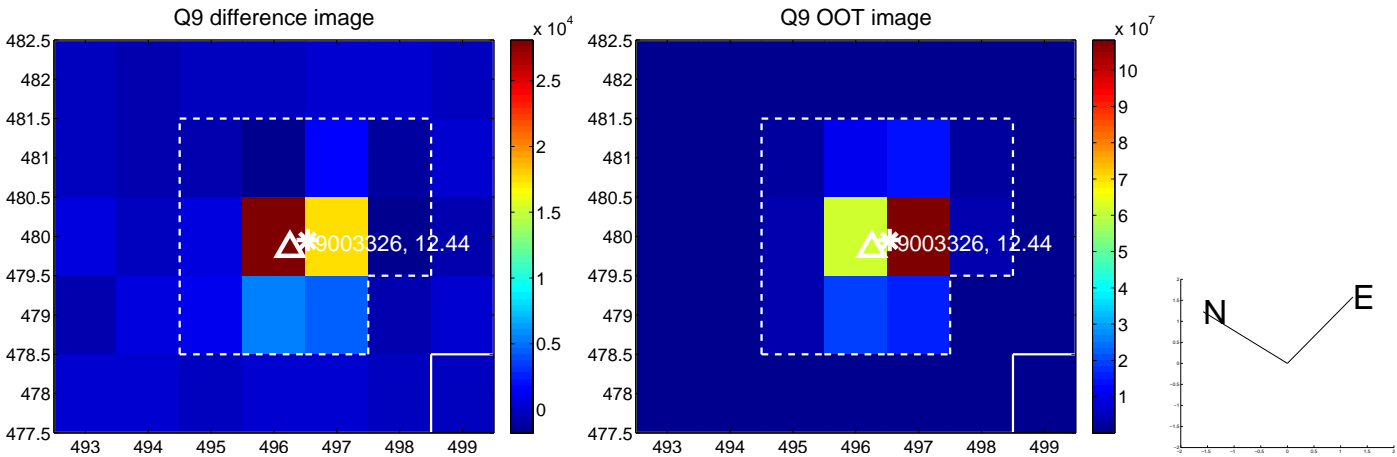
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



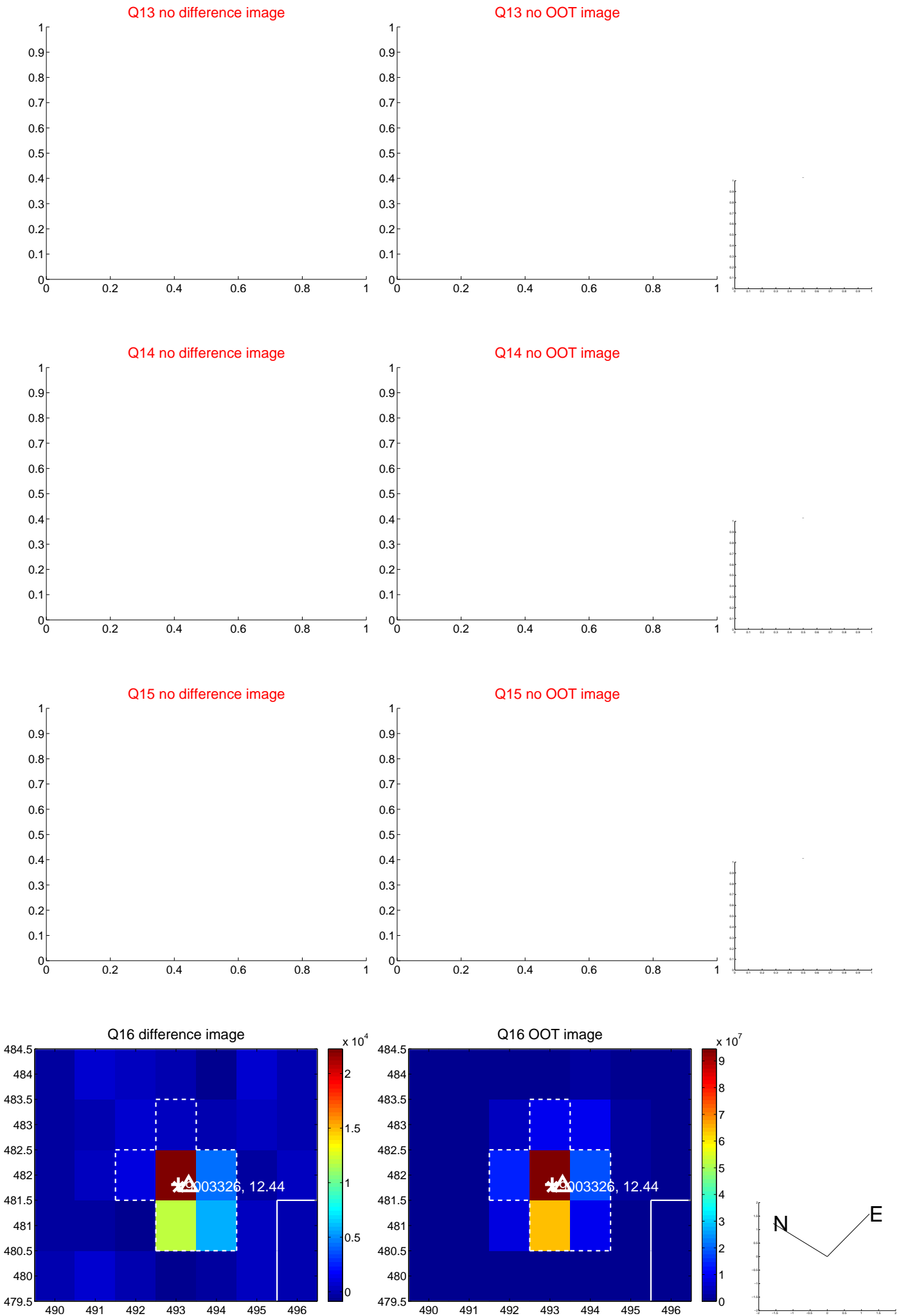
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



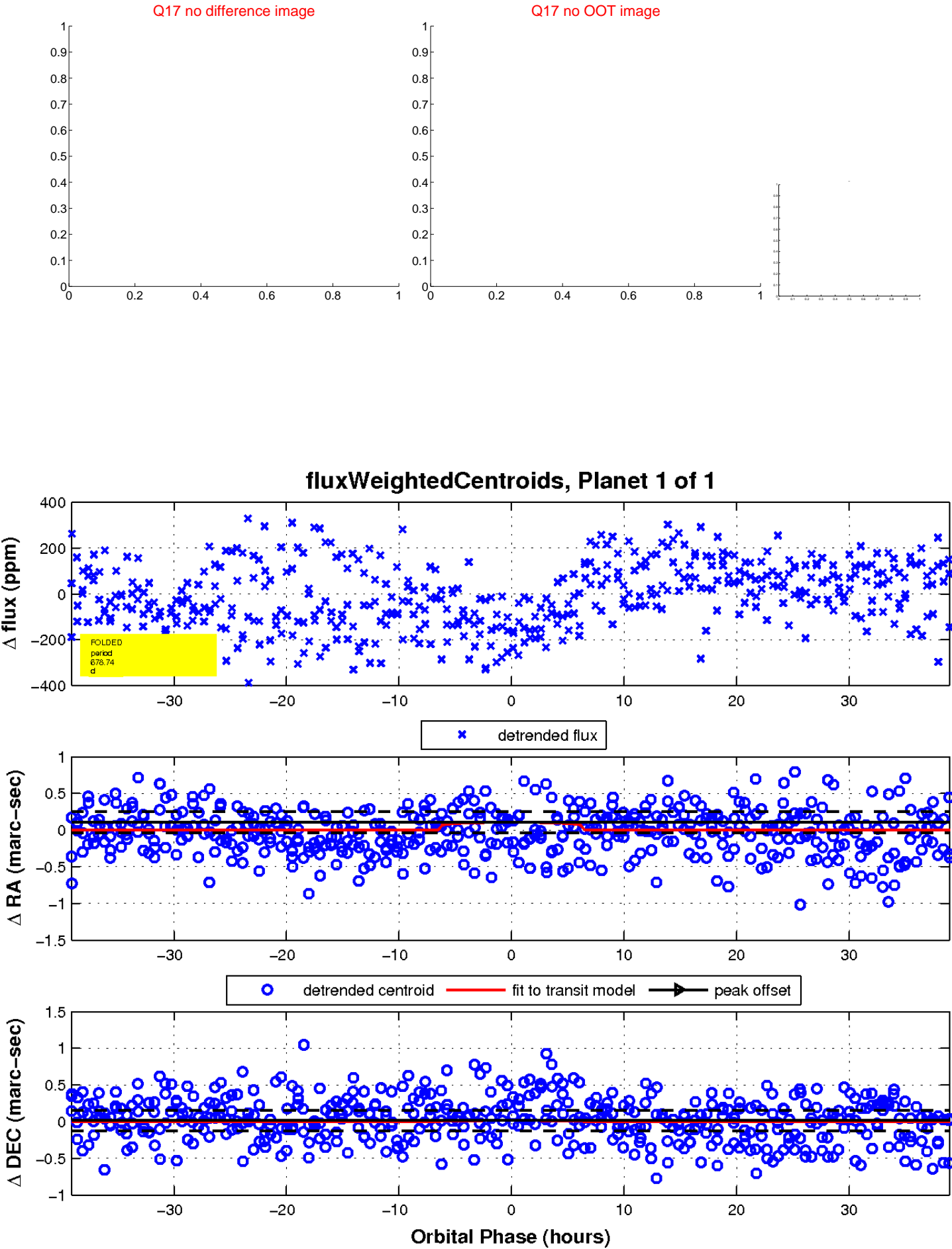
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

