

KIC 008733616

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})
008733616-01	OBS	No	348.292620	465.606190	585.5	5.193	7.9	8.2	0.79	5301	2.12	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008733616-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

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

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

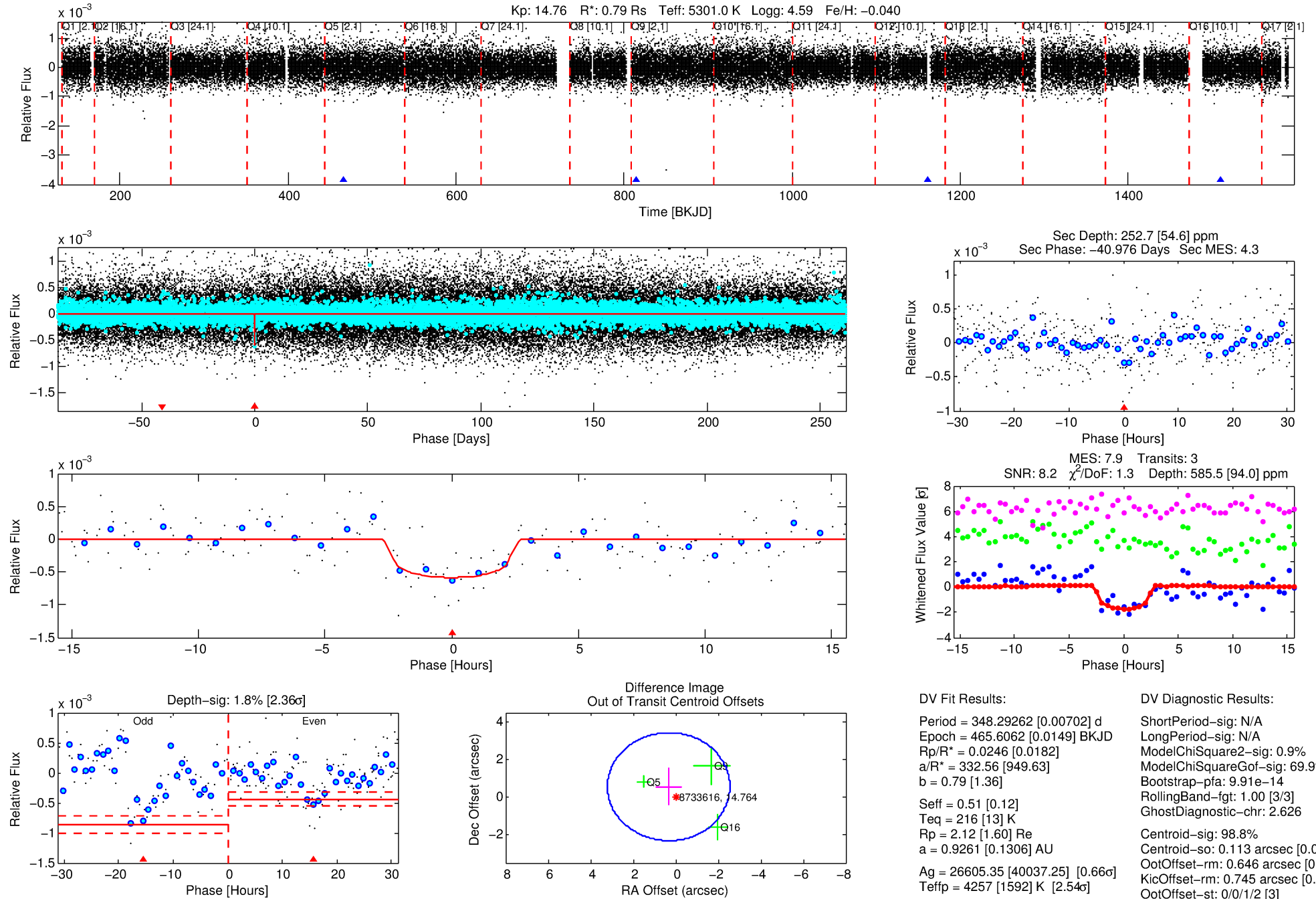
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008733616-01

No Significant Match Found

DV One-Page Summary

KIC: 8733616 Candidate: 1 of 1 Period: 348.293 d



DV Fit Results:

Period = 348.29262 [0.00702] d
Epoch = 465.6062 [0.0149] BKJD
Rp/R* = 0.0246 [0.0182]
a/R* = 332.56 [949.63]
b = 0.79 [1.36]
Seff = 0.51 [0.12]
Teq = 216 [13] K
Rp = 2.12 [1.60] Re
a = 0.9261 [0.1306] AU
Ag = 26605.35 [40037.25] [0.66 σ]
Teff = 4257 [1592] K [2.54 σ]

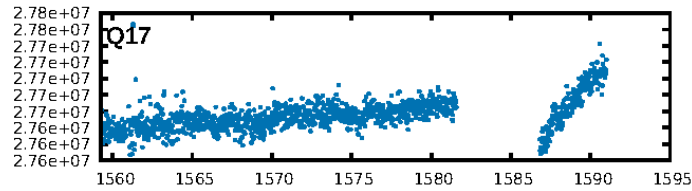
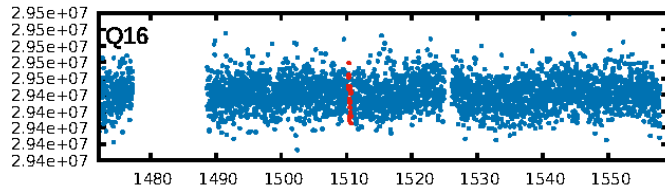
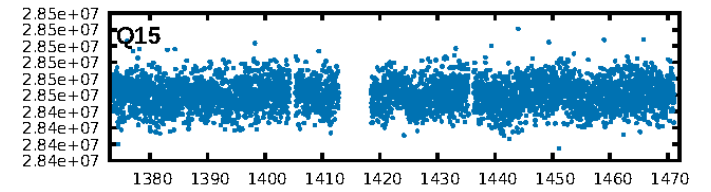
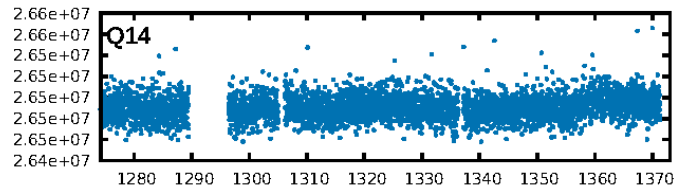
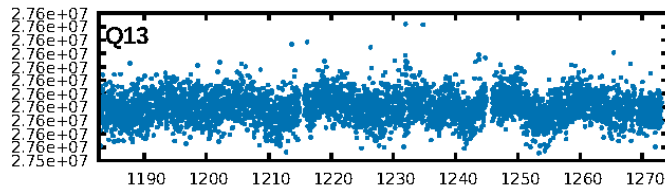
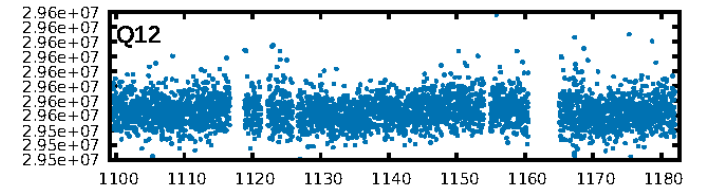
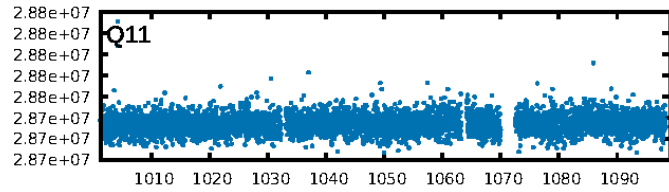
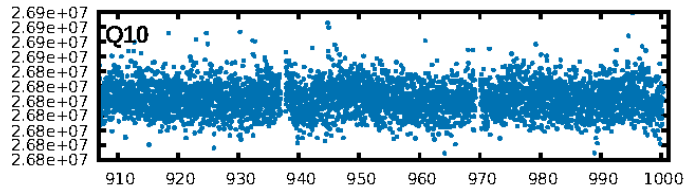
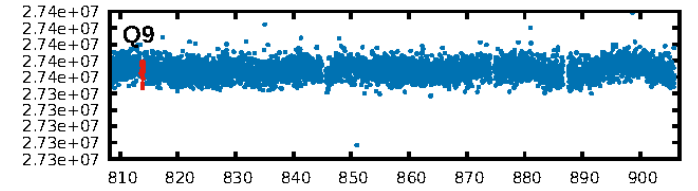
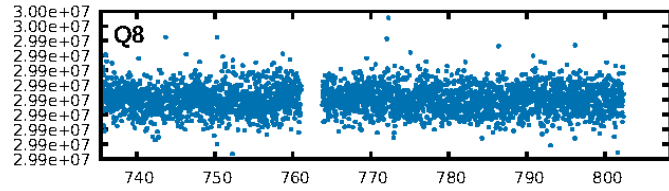
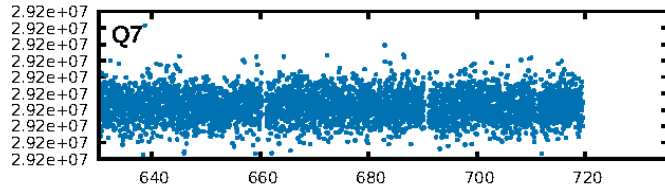
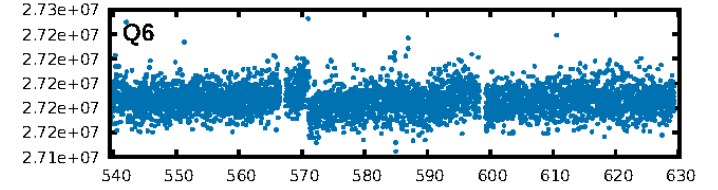
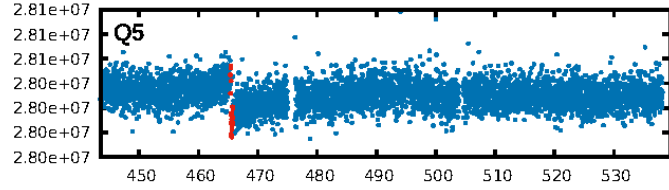
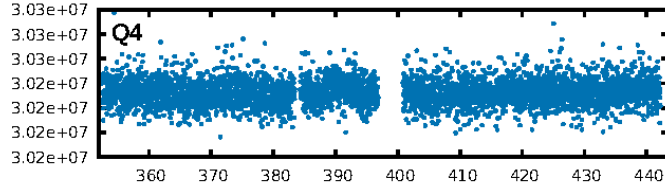
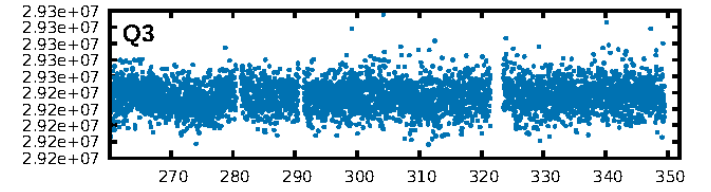
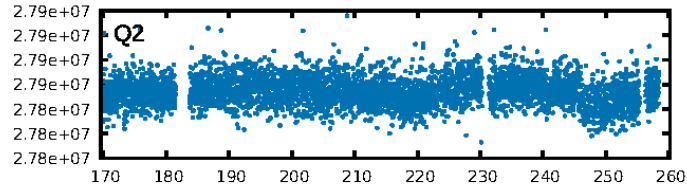
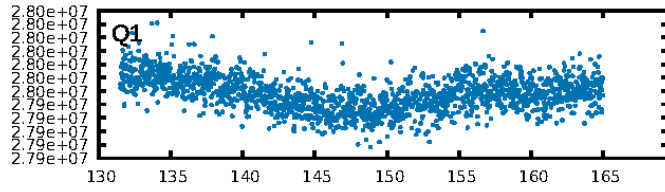
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 69.9%
Bootstrap-pfa: 9.91e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.626
Centroid-sig: 98.8%
Centroid-so: 0.113 arcsec [0.06 σ]
OotOffset-rm: 0.646 arcsec [0.67 σ]
KicOffset-rm: 0.745 arcsec [0.95 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

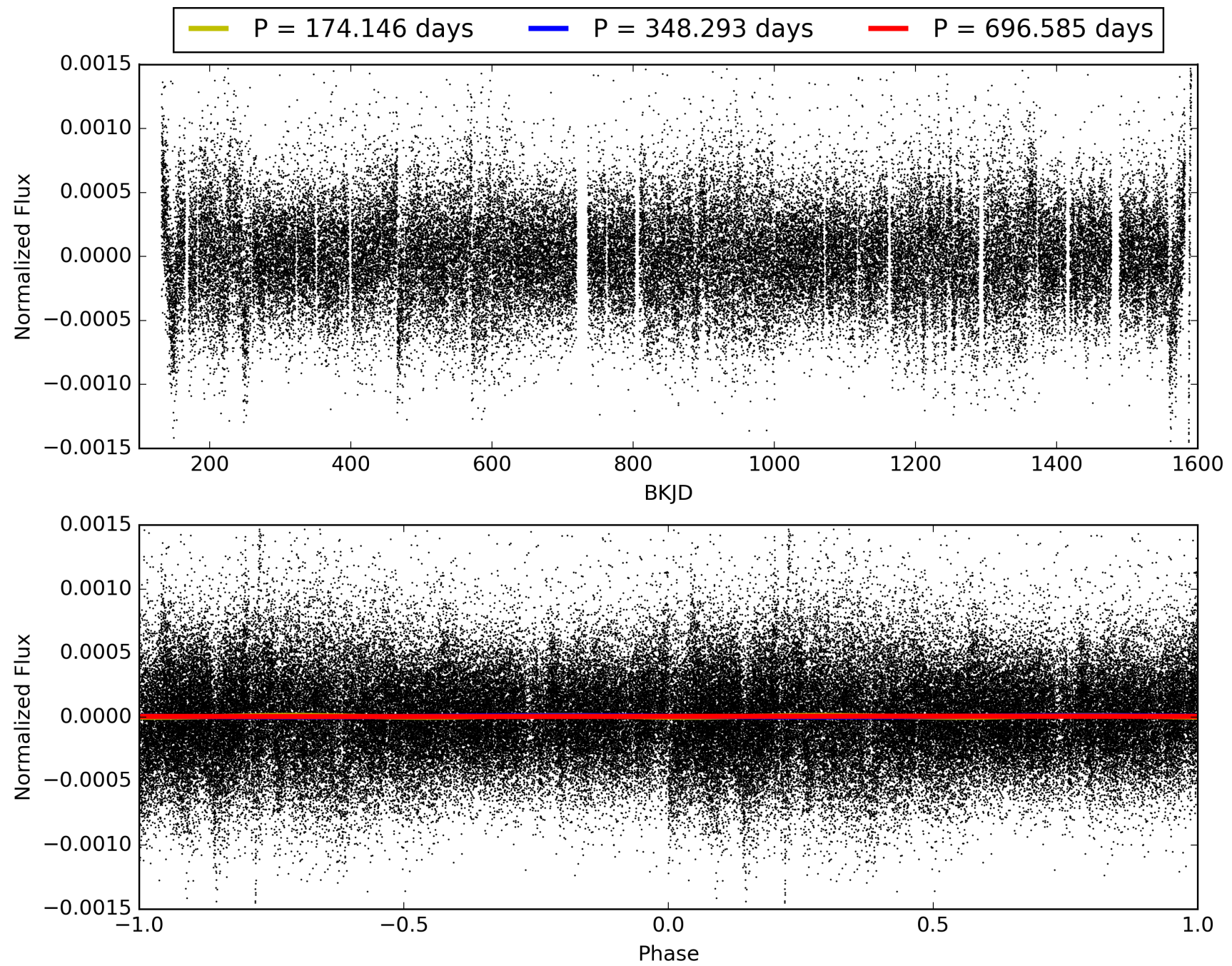
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:13:27 Z

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

TCE 008733616-01, PDC Light Curves

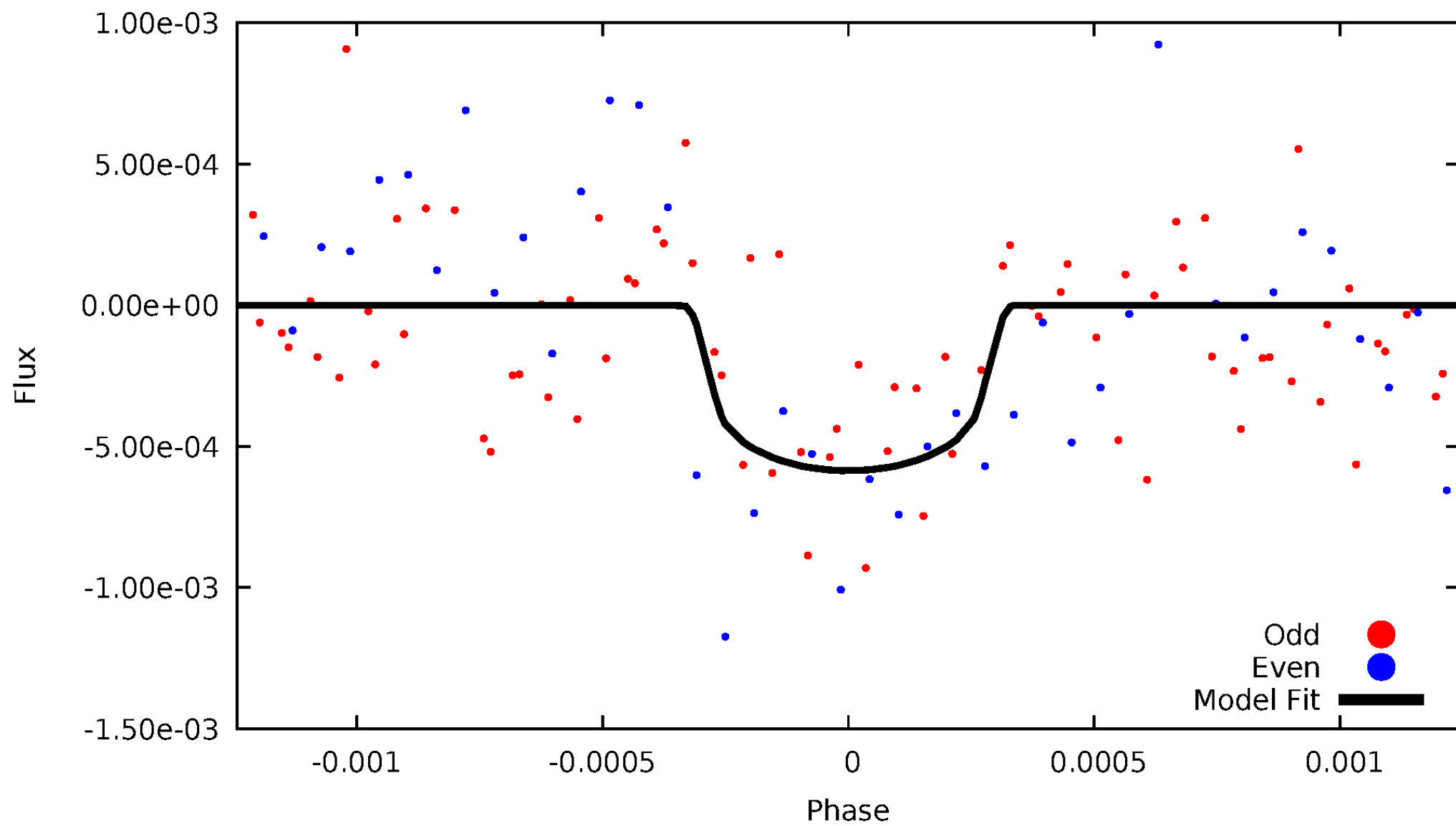


TCE 008733616-01



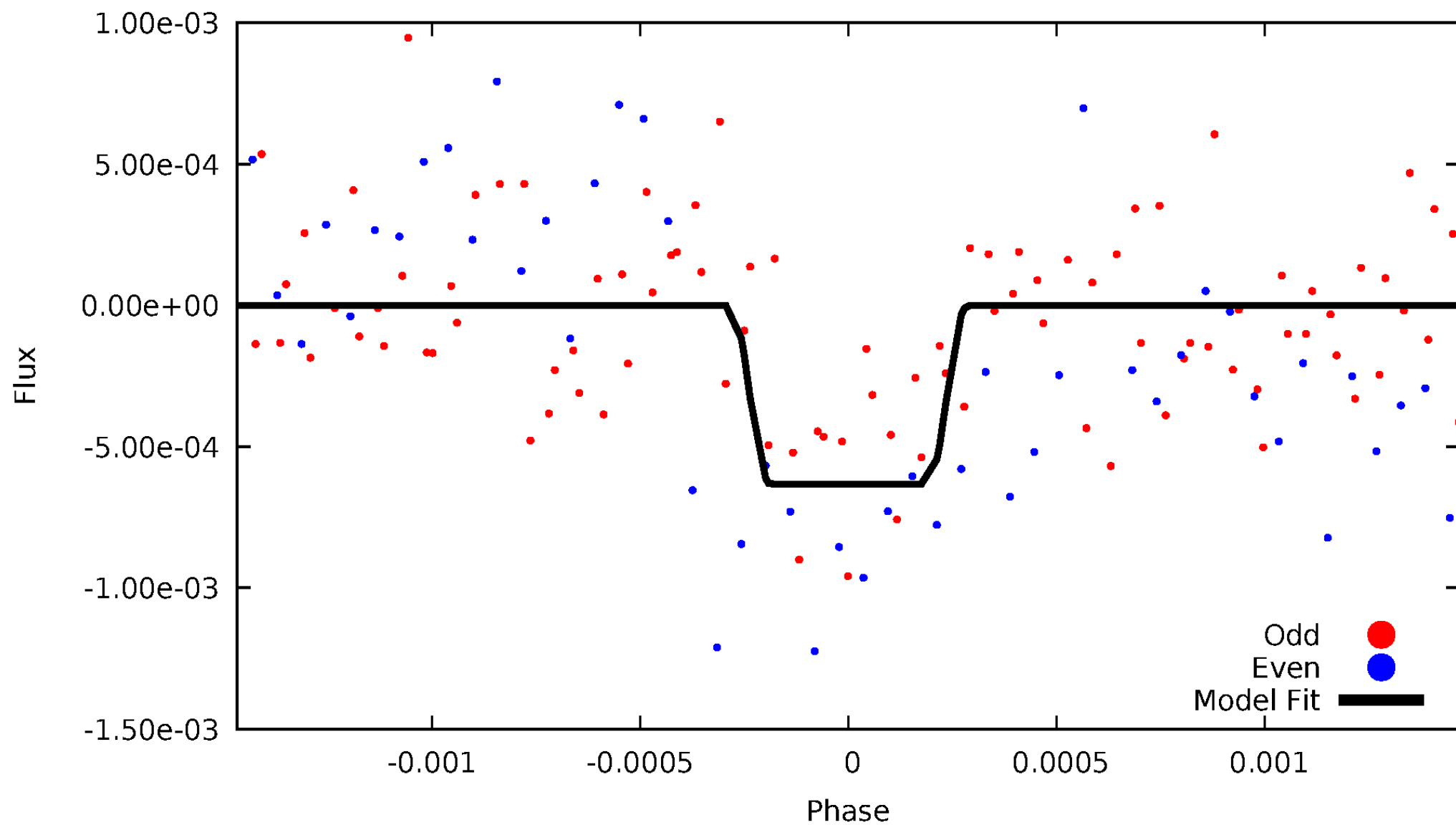
DV Odd/Even

TCE 008733616-01



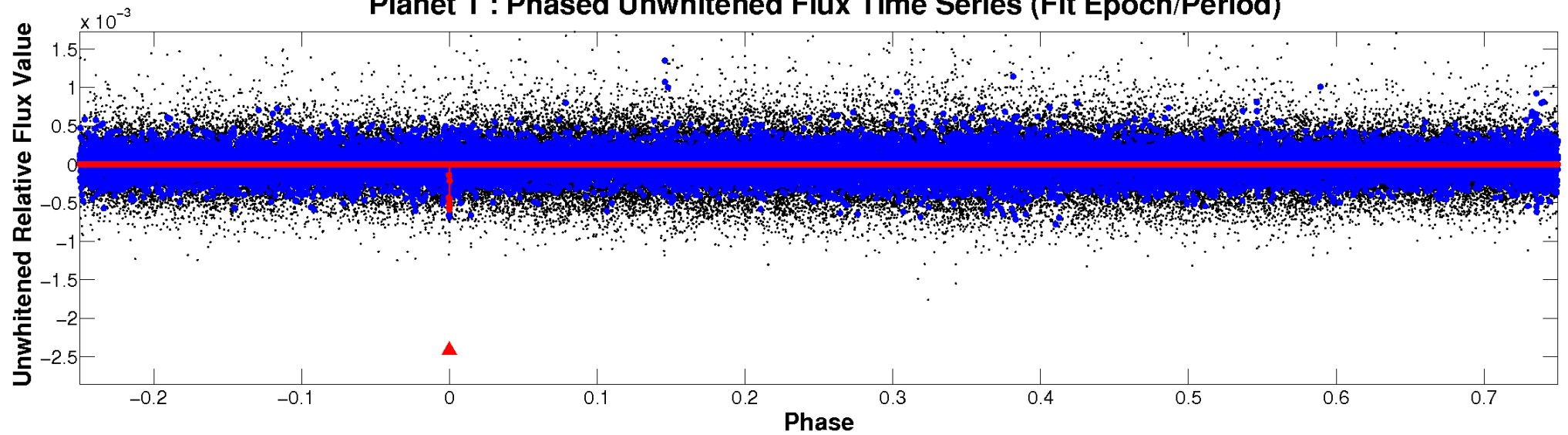
ALT Odd/Even

TCE 008733616-01

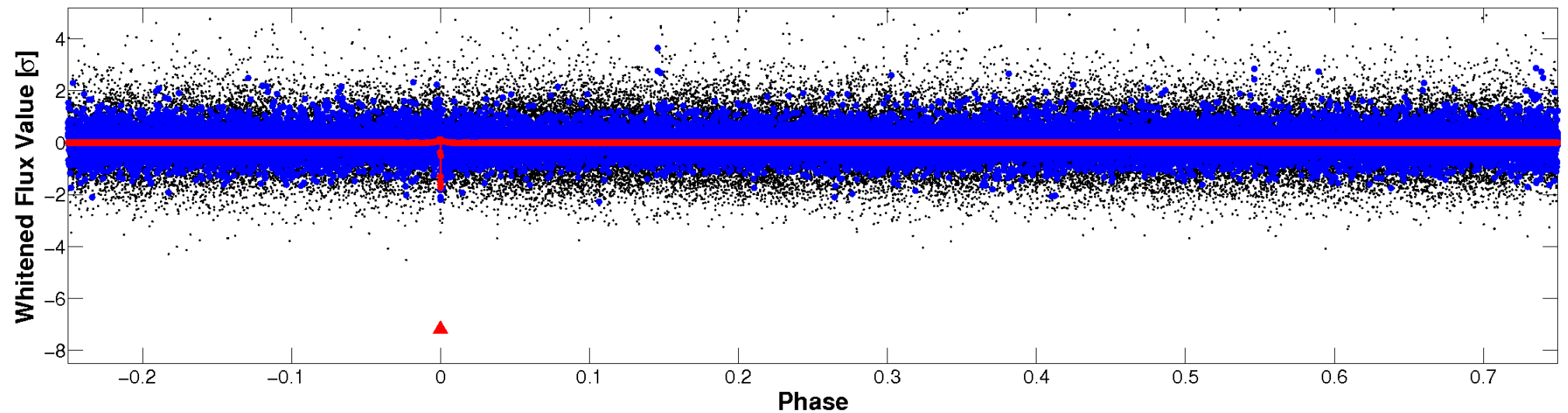


Non-Whitened Vs. Whitened Light Curve

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

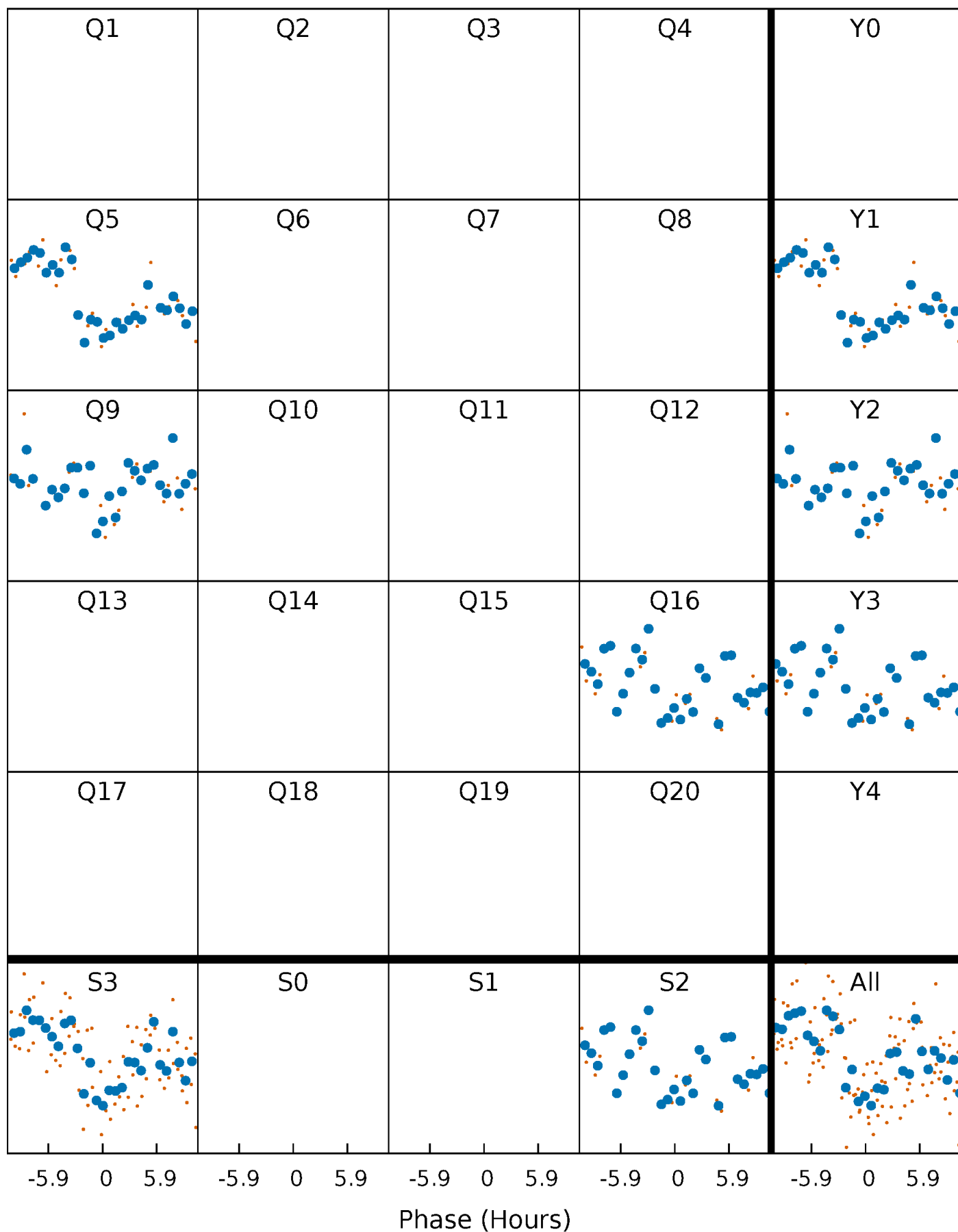


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



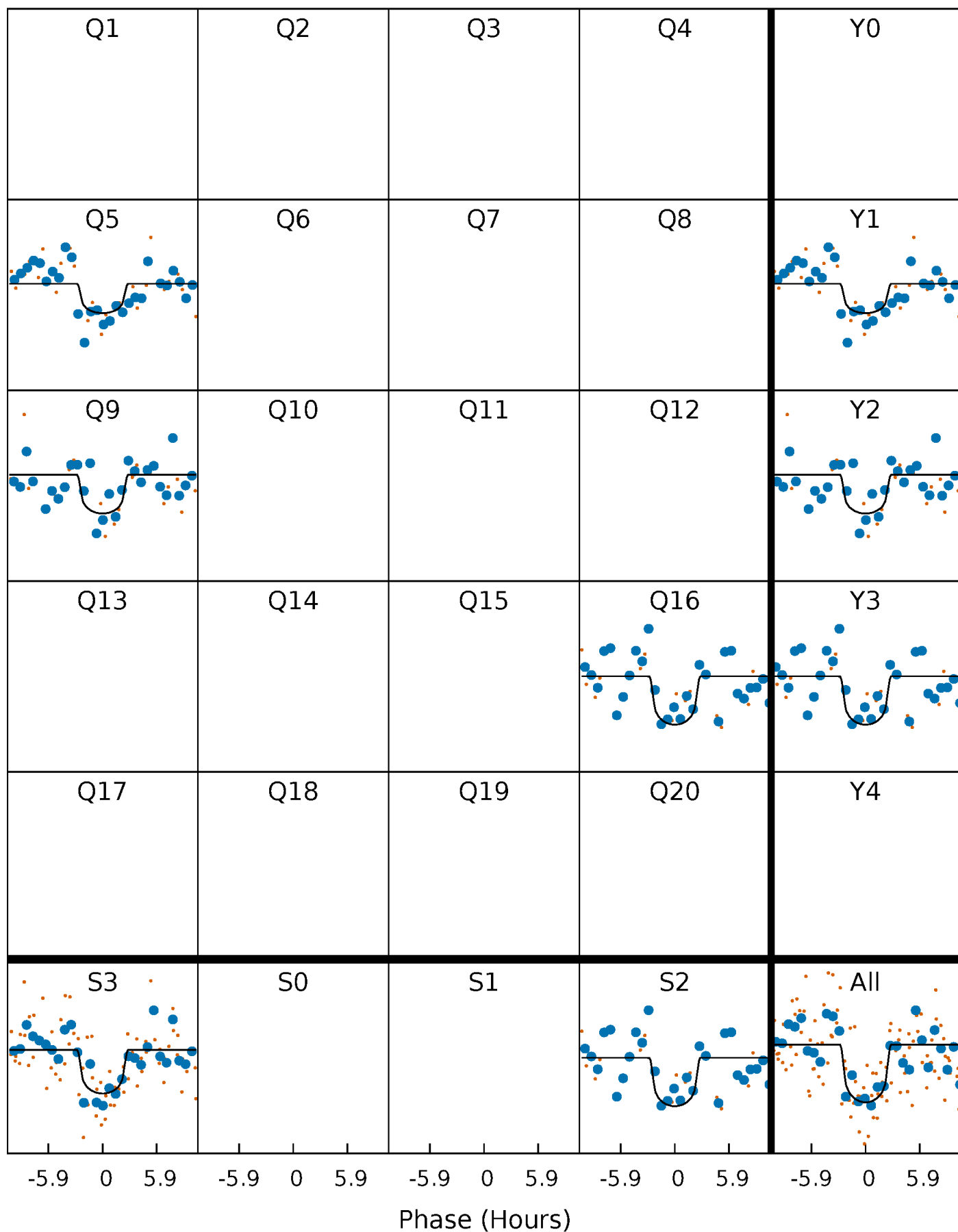
PDC Quarter-Phased Transit Curves

TCE 008733616-01 P=348.292620 Days $T_0=465.606190$ (BKJD)



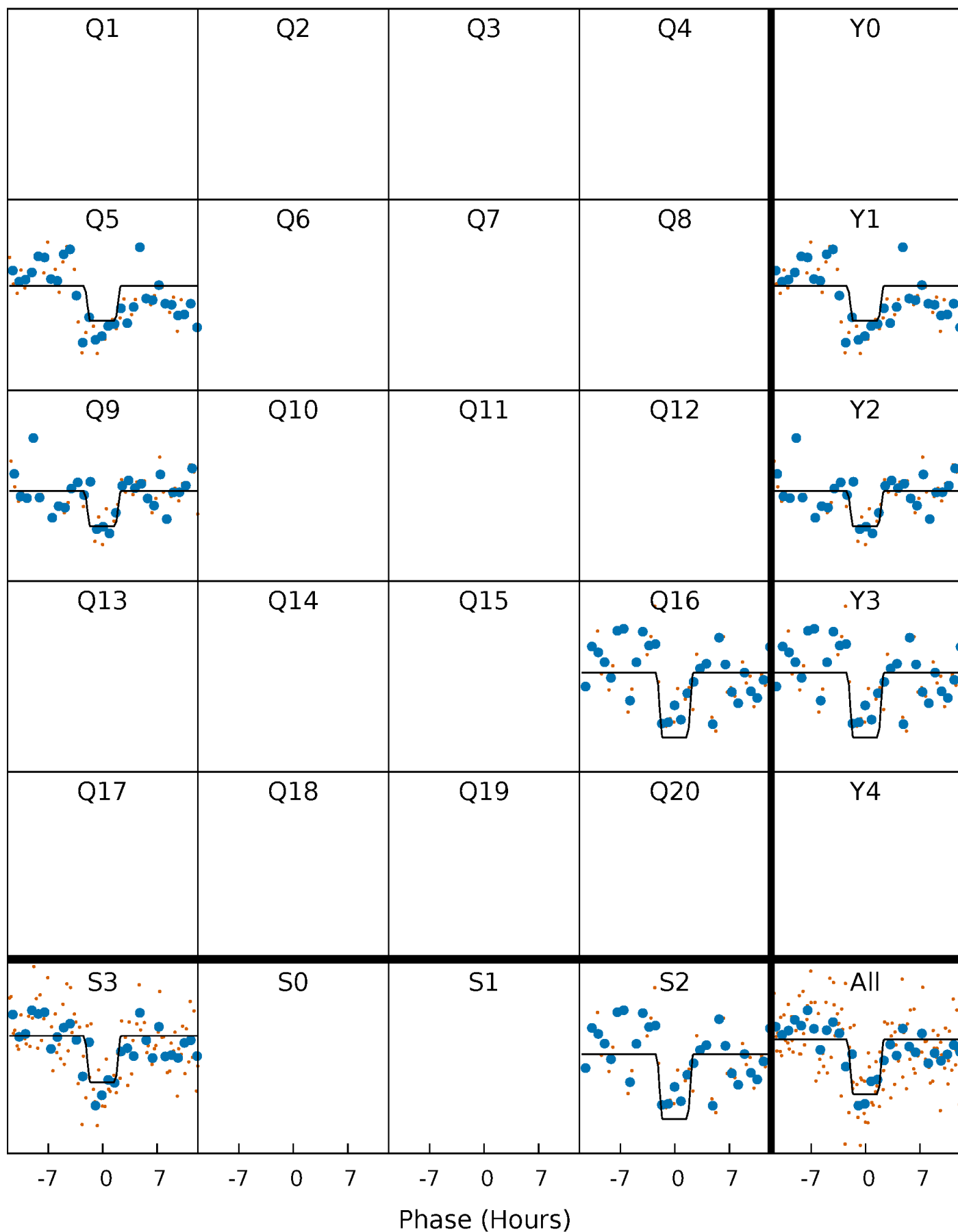
DV Quarter-Phased Transit Curves

TCE 008733616-01 P=348.292620 Days $T_0=465.606190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

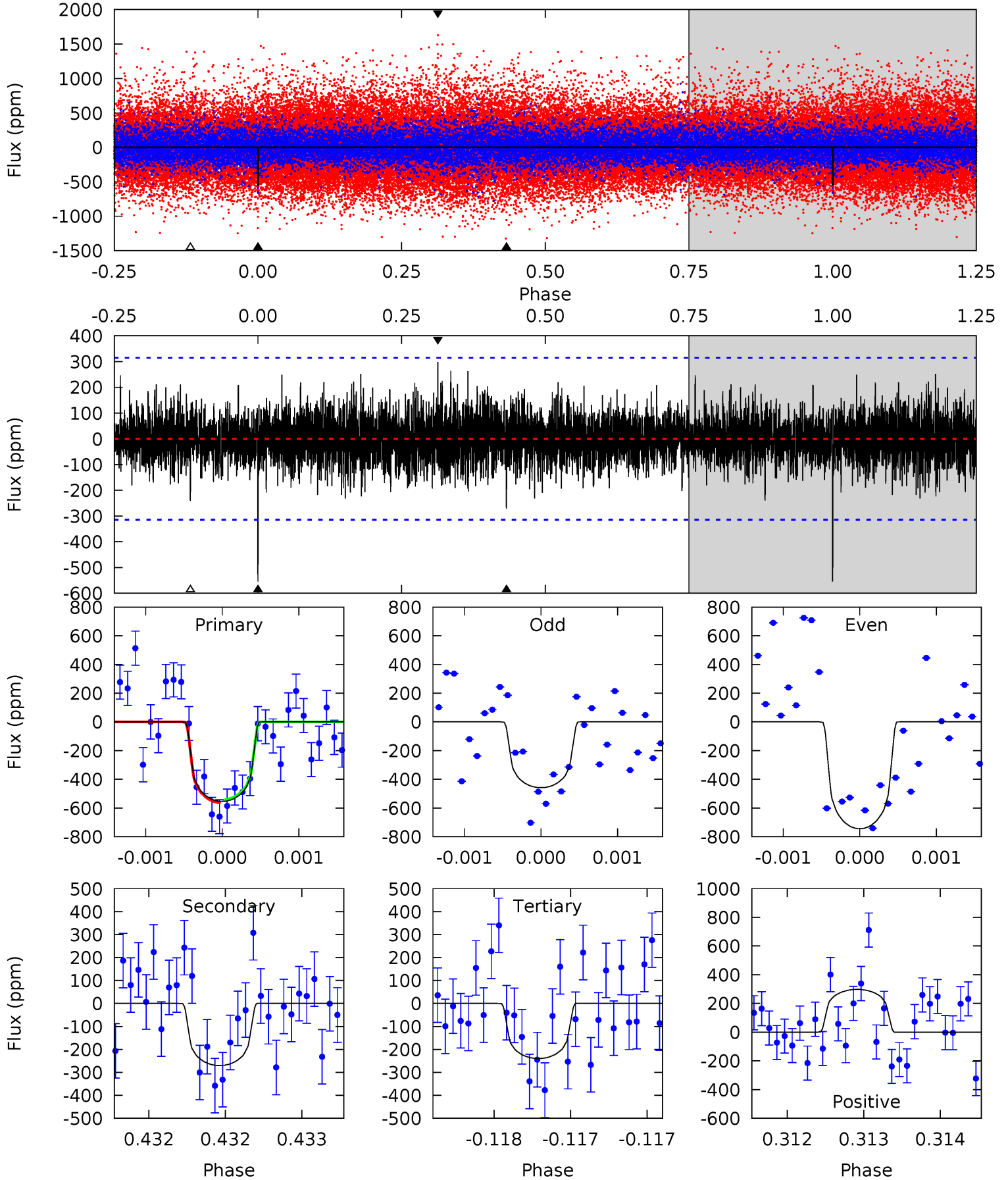
TCE 008733616-01 P=348.282410 Days $T_0=465.629037$ (BKJD)



DV Model-Shift Uniqueness Test

008733616-01, P = 348.292620 Days, E = 117.313570 Days

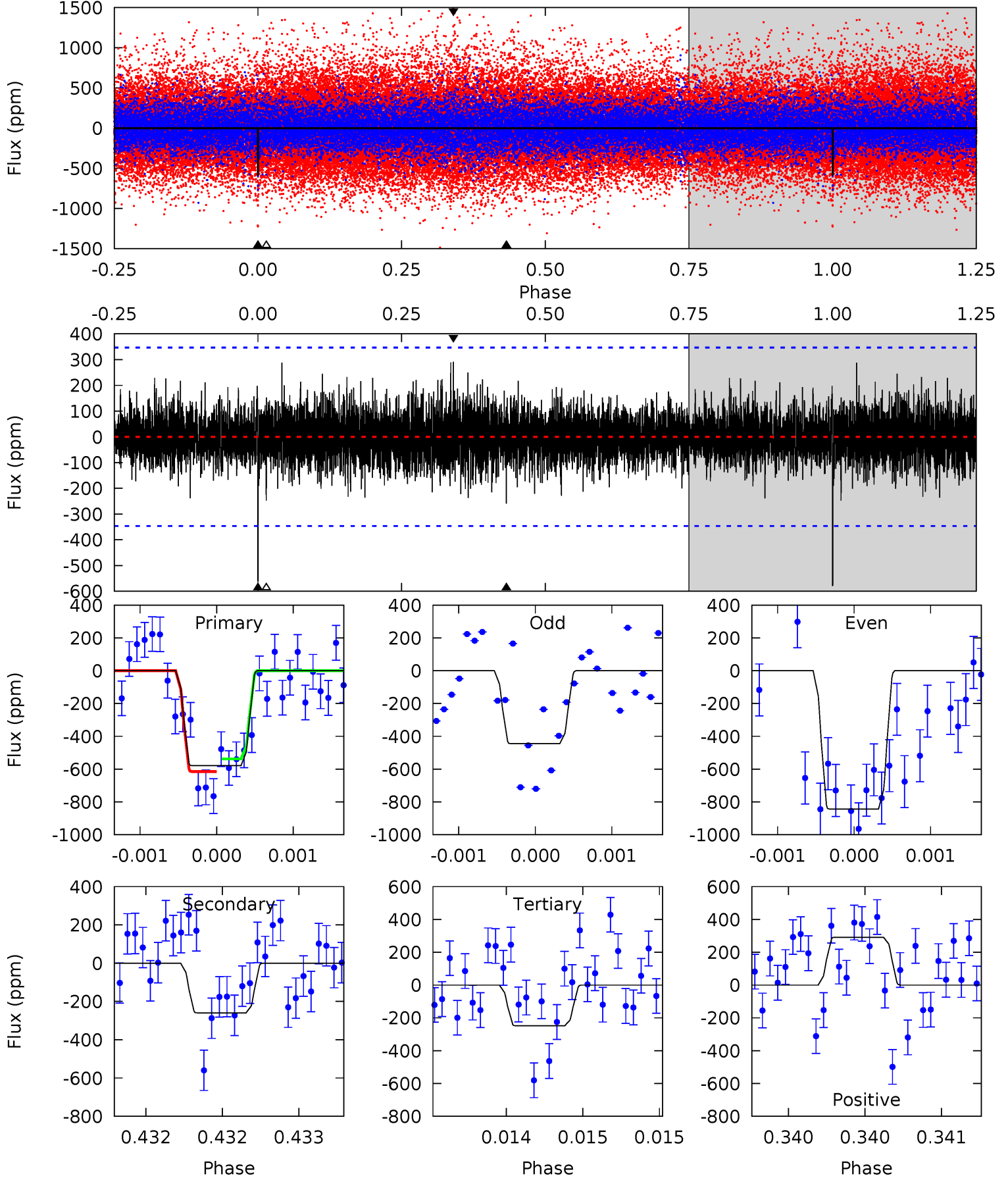
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	4.74	4.21	5.23	5.52	3.39	1.19	5.51	4.49	0.53	-0.48	2.40	1.20	0.35	0.19



Alt Model-Shift Uniqueness Test

008733616-01, P = 348.282410 Days, E = 117.346627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.29	4.16	3.98	4.67	5.56	3.46	1.06	5.31	4.62	0.18	-0.50	3.10	1.14	0.33	0.62



Stellar Parameters For KIC 008733616

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5301^{+159}_{-159}	$4.587^{+0.028}_{-0.112}$	$-0.040^{+0.300}_{-0.300}$	$0.787^{+0.132}_{-0.066}$	$0.879^{+0.063}_{-0.102}$	$2.542^{+0.473}_{-0.832}$
	+3%/-3%	+1%/-2%	+750%/-750%	+17%/-8%	+7%/-12%	+19%/-33%
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 008733616-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-270 ± 57	$2.44^{+1.52}_{-1.49}$	307^{+14}_{-12}	4320^{+2326}_{-712}	$22056^{+125269}_{-14050}$
Alt.	-259 ± 62	$2.43^{+1.45}_{-1.49}$	306^{+14}_{-12}	4227^{+2221}_{-655}	$19357^{+122176}_{-11853}$

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

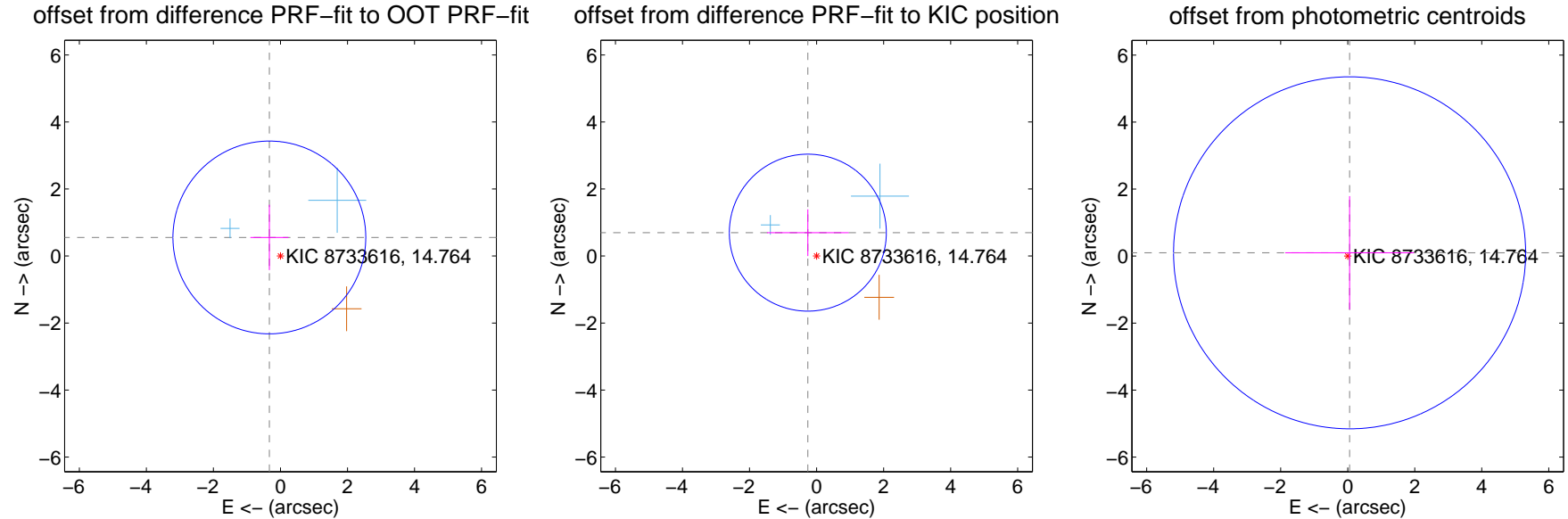
DV Centroid Data

Supplemental centroid analysis for 008733616-01. Kepler magnitude: 14.76. Transit SNR 8.18

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.646 ± 0.959	0.67	0.331 ± 0.567	0.554 ± 0.975
PRF-fit source offset from KIC position	0.745 ± 0.781	0.95	0.261 ± 1.218	0.697 ± 0.698
photometric centroid source offset	0.11 ± 1.75	0.06	-0.06 ± 1.92	0.10 ± 1.69

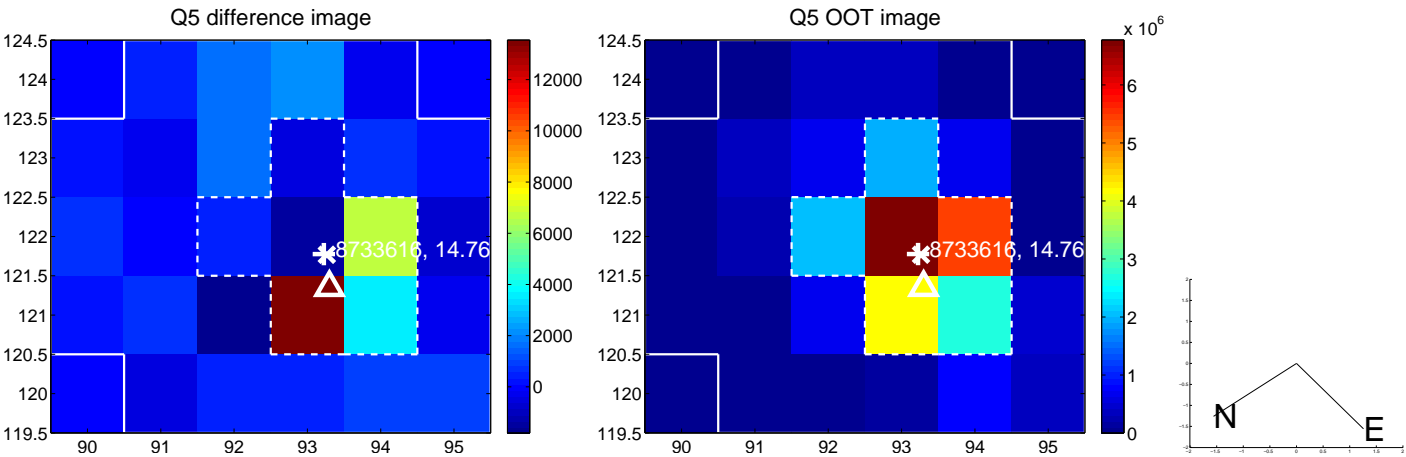


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

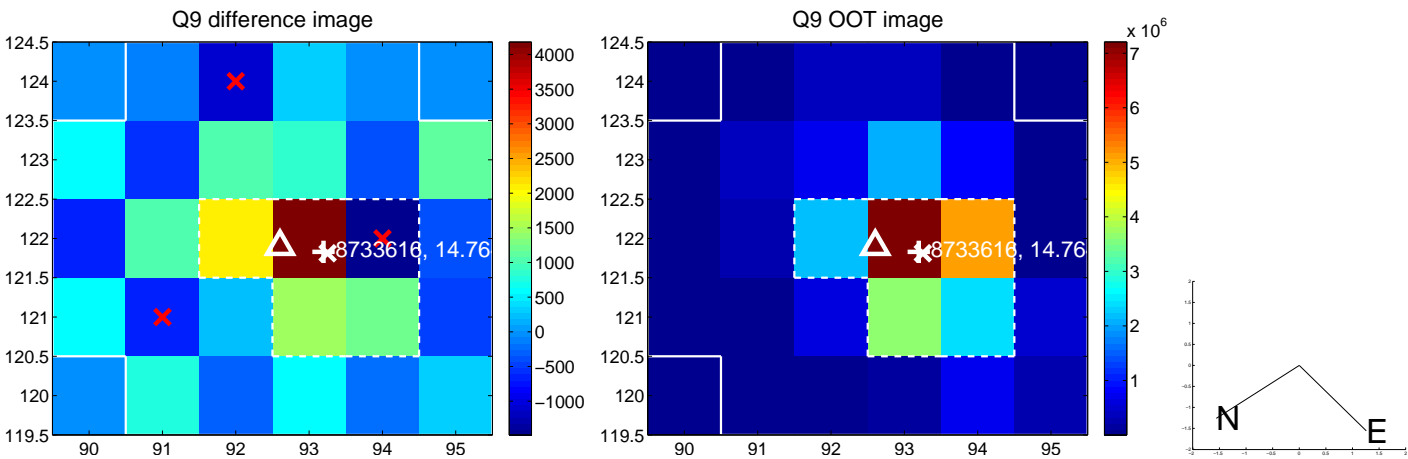
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



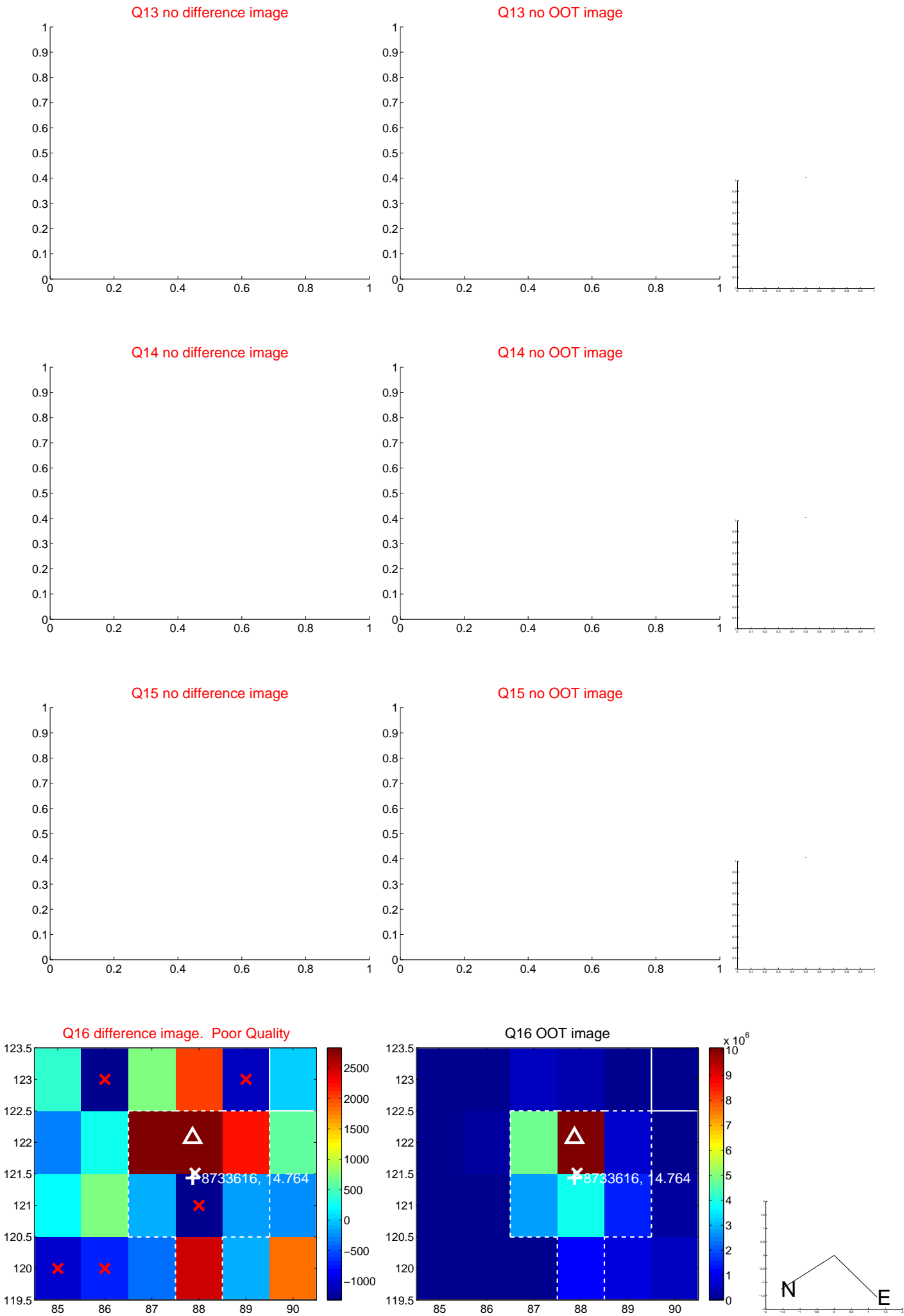
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



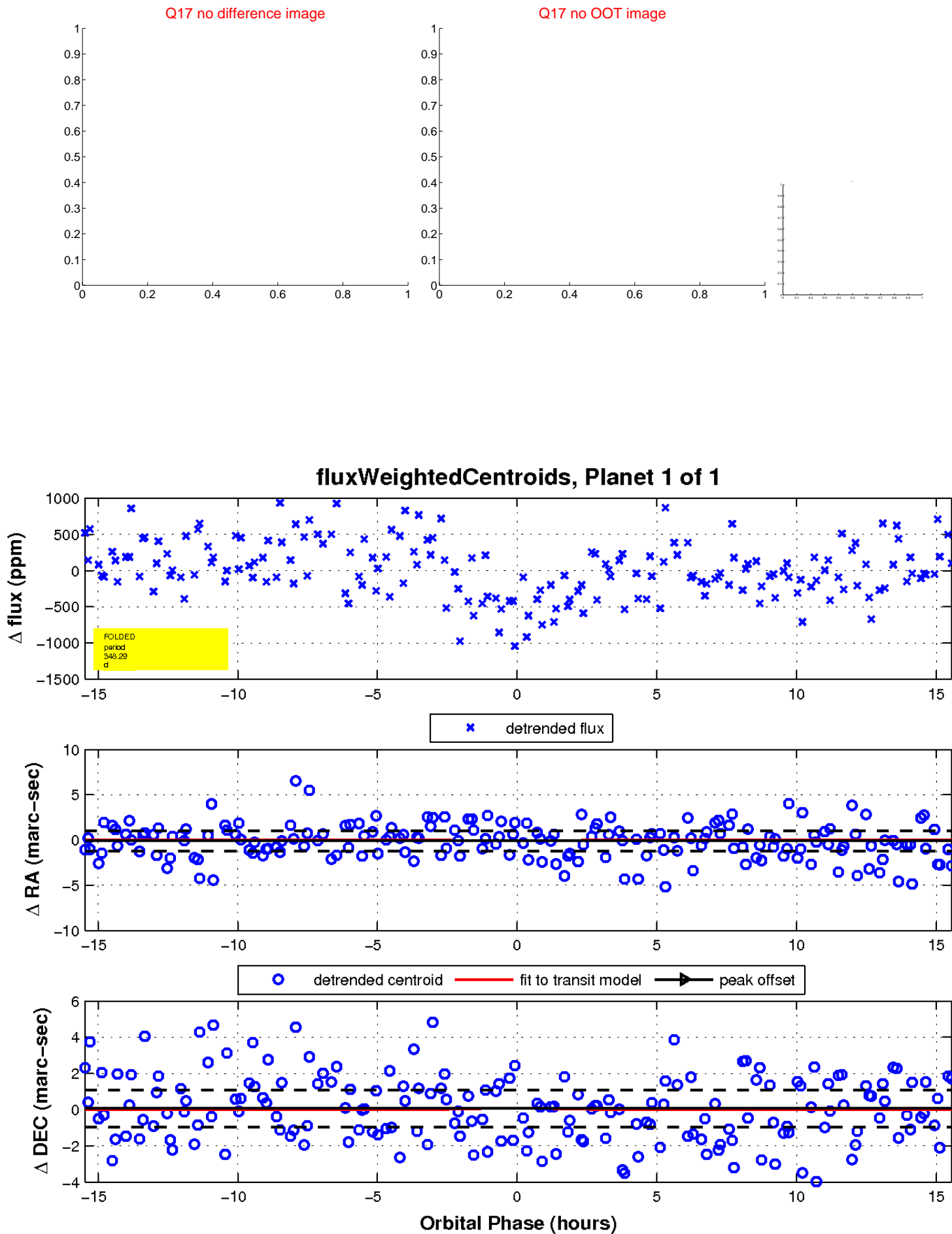
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

