

KIC 007734207

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})
007734207-01	OBS	No	347.368264	399.029367	1460.6	4.156	8.8	8.6	0.61	4344	2.71	0.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007734207-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—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.

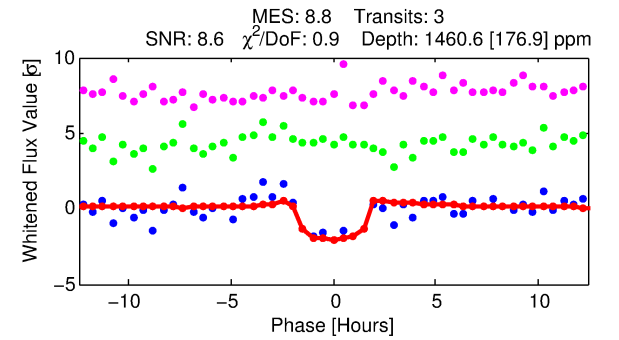
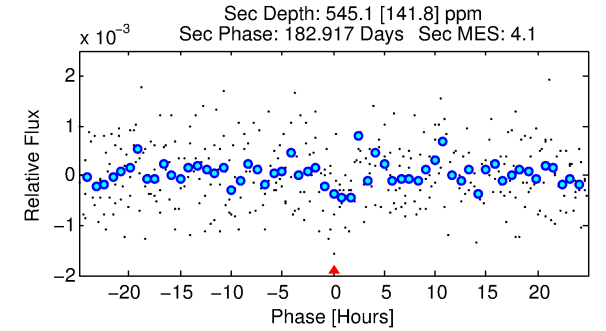
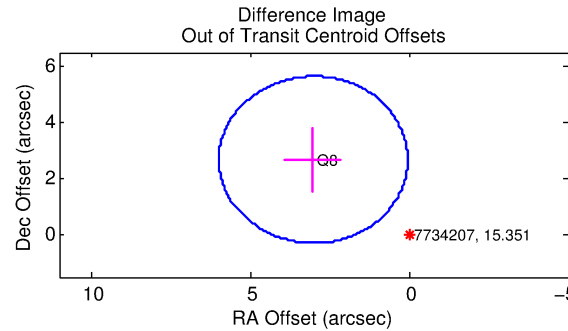
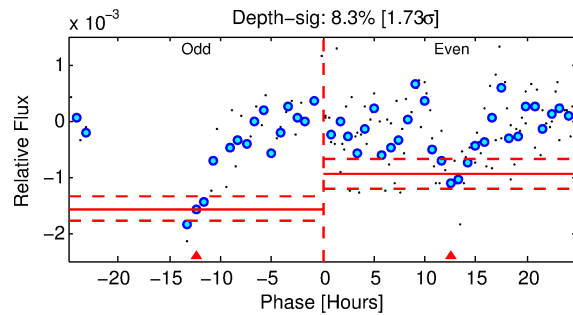
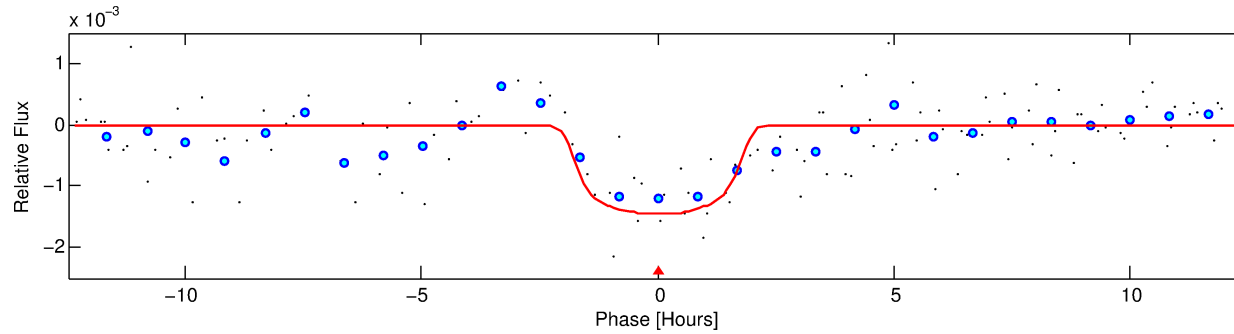
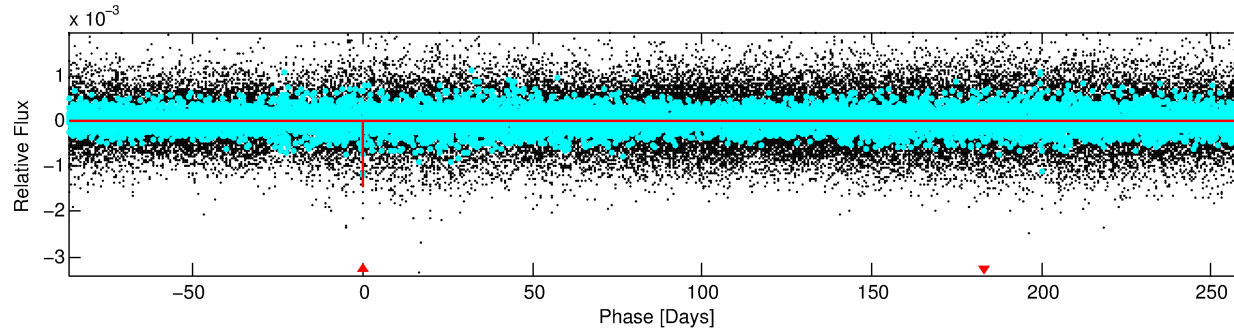
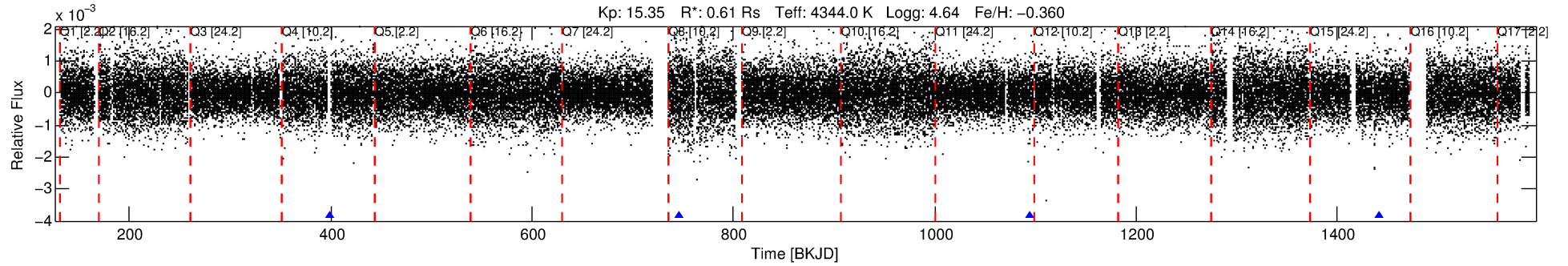
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007734207-01

No Significant Match Found

DV One-Page Summary

KIC: 7734207 Candidate: 1 of 1 Period: 347.368 d



DV Fit Results:

Period = 347.36826 [0.00630] d
Epoch = 399.0294 [0.0154] BKJD
Rp/R* = 0.0408 [0.0091]
a/R* = 378.58 [295.19]
b = 0.86 [0.25]
Seff = 0.18 [0.03]
Teq = 166 [7] K
Rp = 2.71 [0.65] Re
a = 0.8122 [0.0609] AU
Ag = 27022.99 [14258.66] [1.90 σ]
Teffp = 3284 [438] K [7.12 σ]

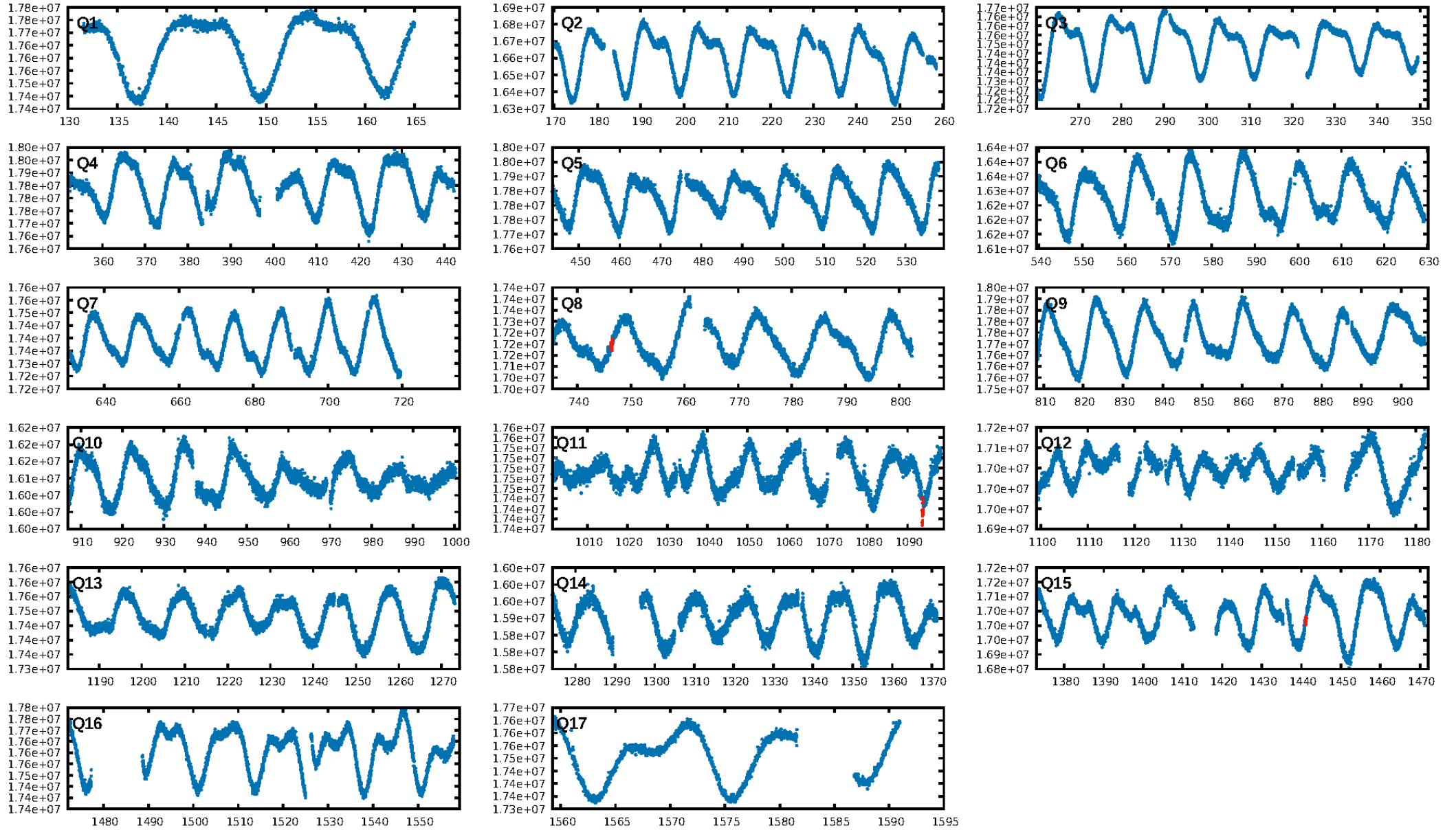
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.6%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.50e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 19.57
Centroid-sig: 95.7%
Centroid-so: 0.066 arcsec [0.06 σ]
OotOffset-rm: 4.025 arcsec [4.06 σ]
KicOffset-rm: 4.136 arcsec [4.21 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

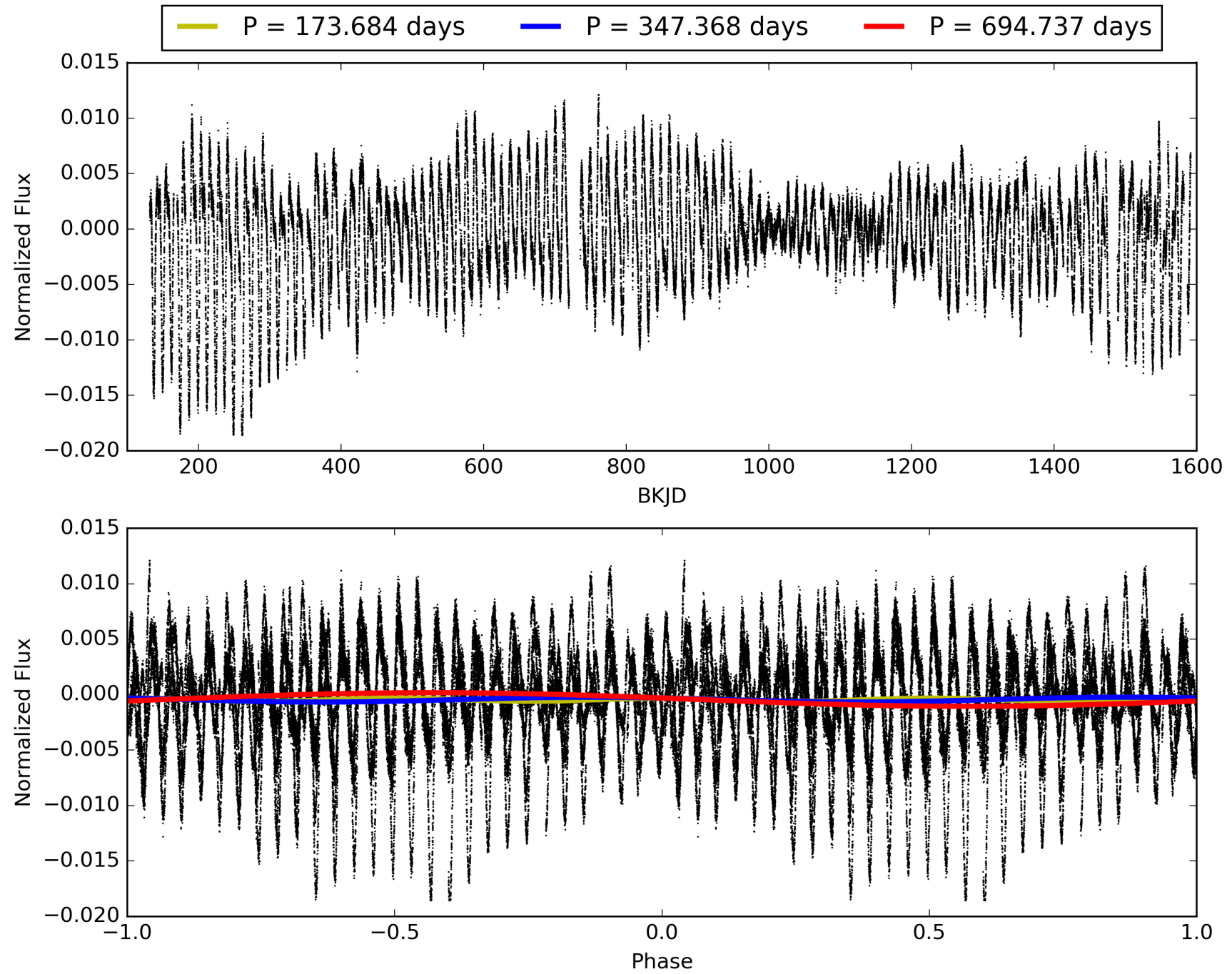
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:53:08 Z

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

TCE 007734207-01, PDC Light Curves

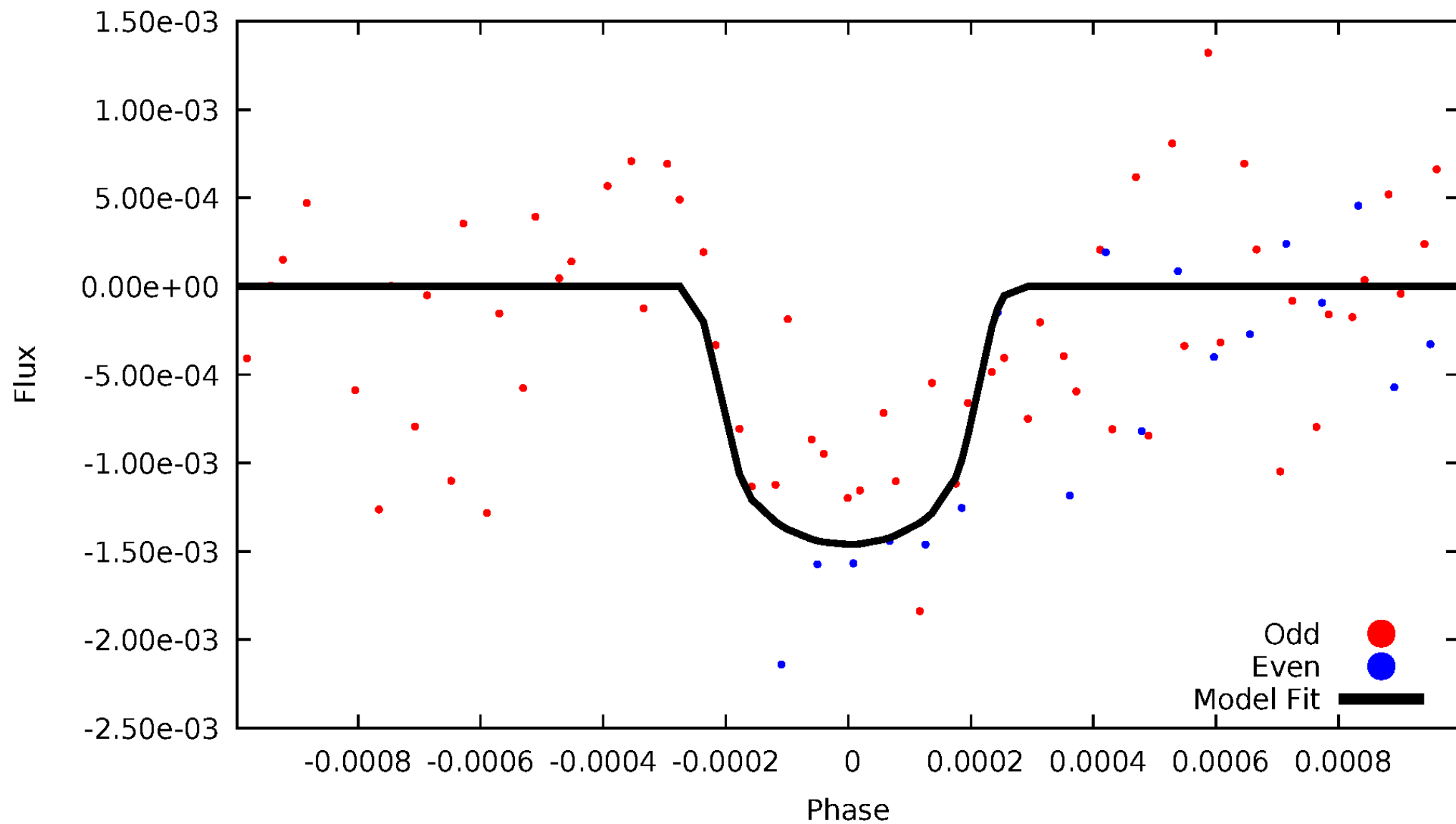


TCE 007734207-01



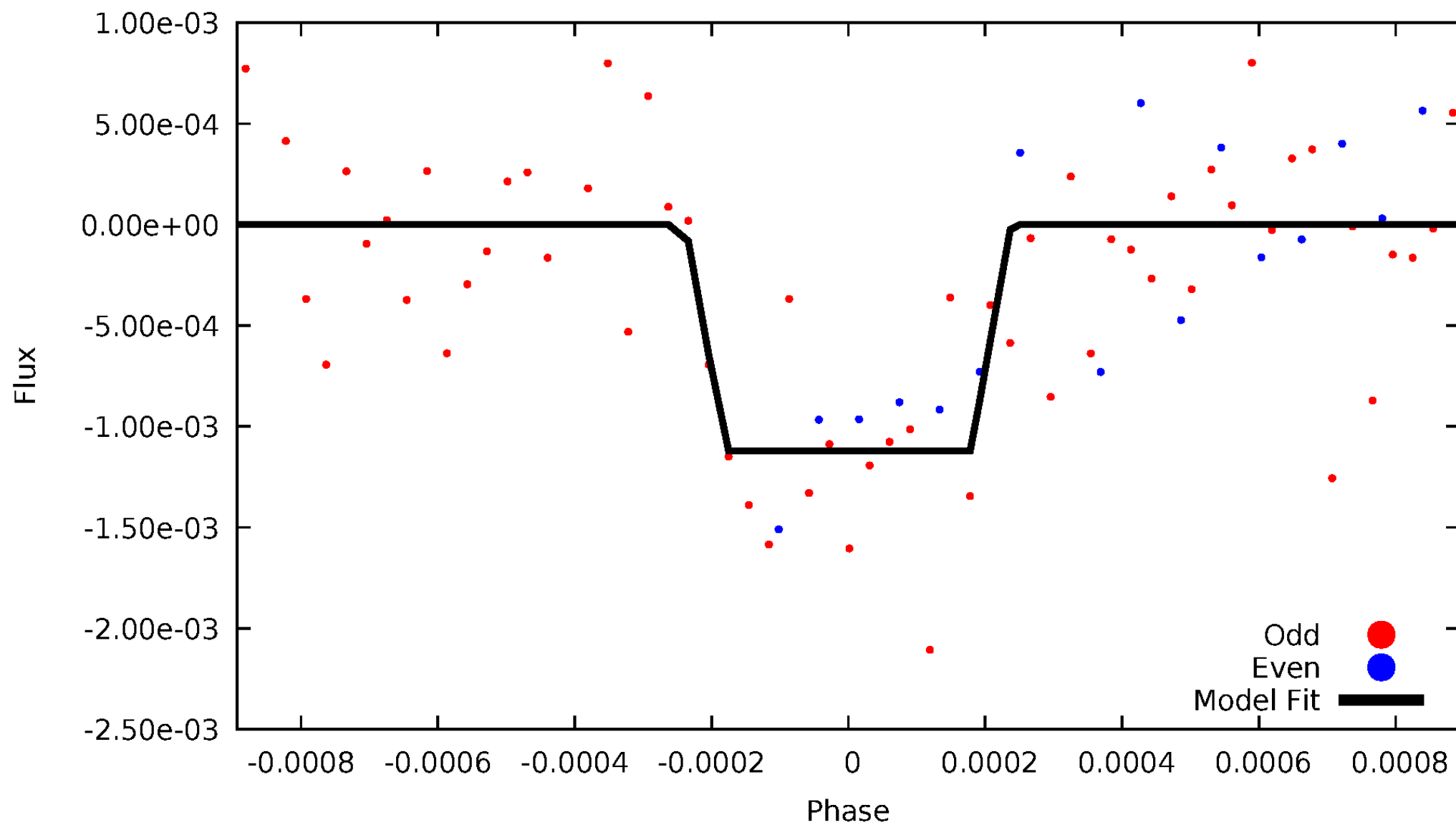
DV Odd/Even

TCE 007734207-01



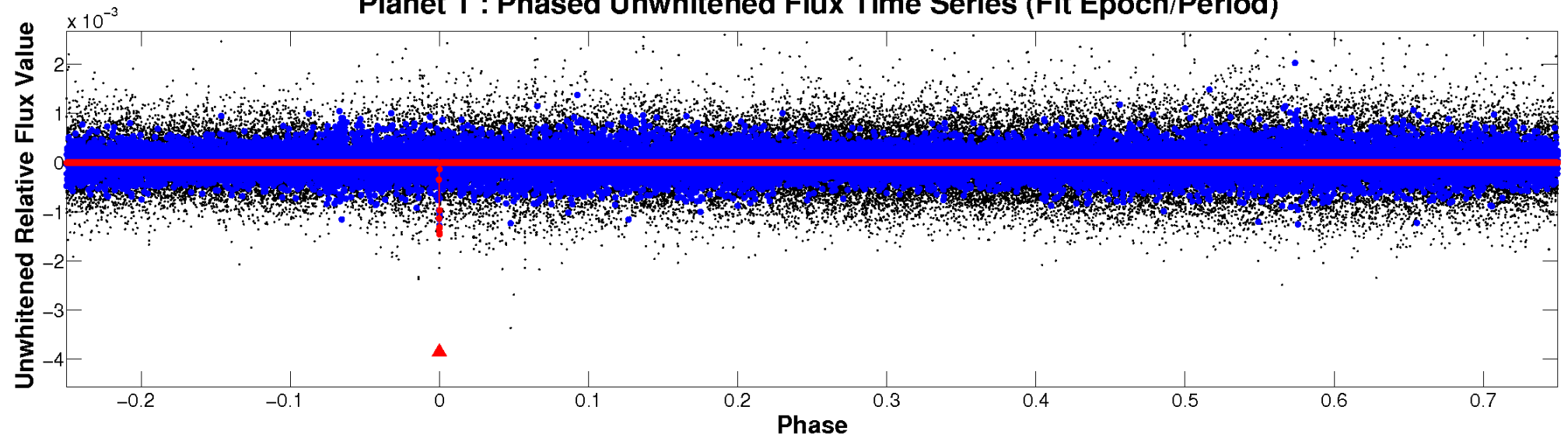
ALT Odd/Even

TCE 007734207-01

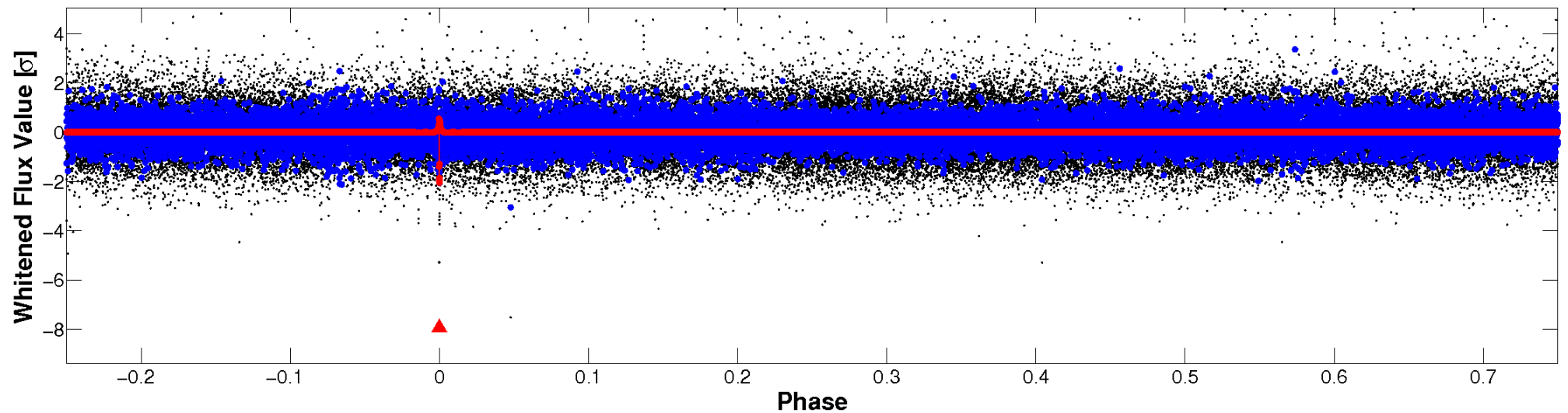


Non-Whitened Vs. Whitened Light Curve

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

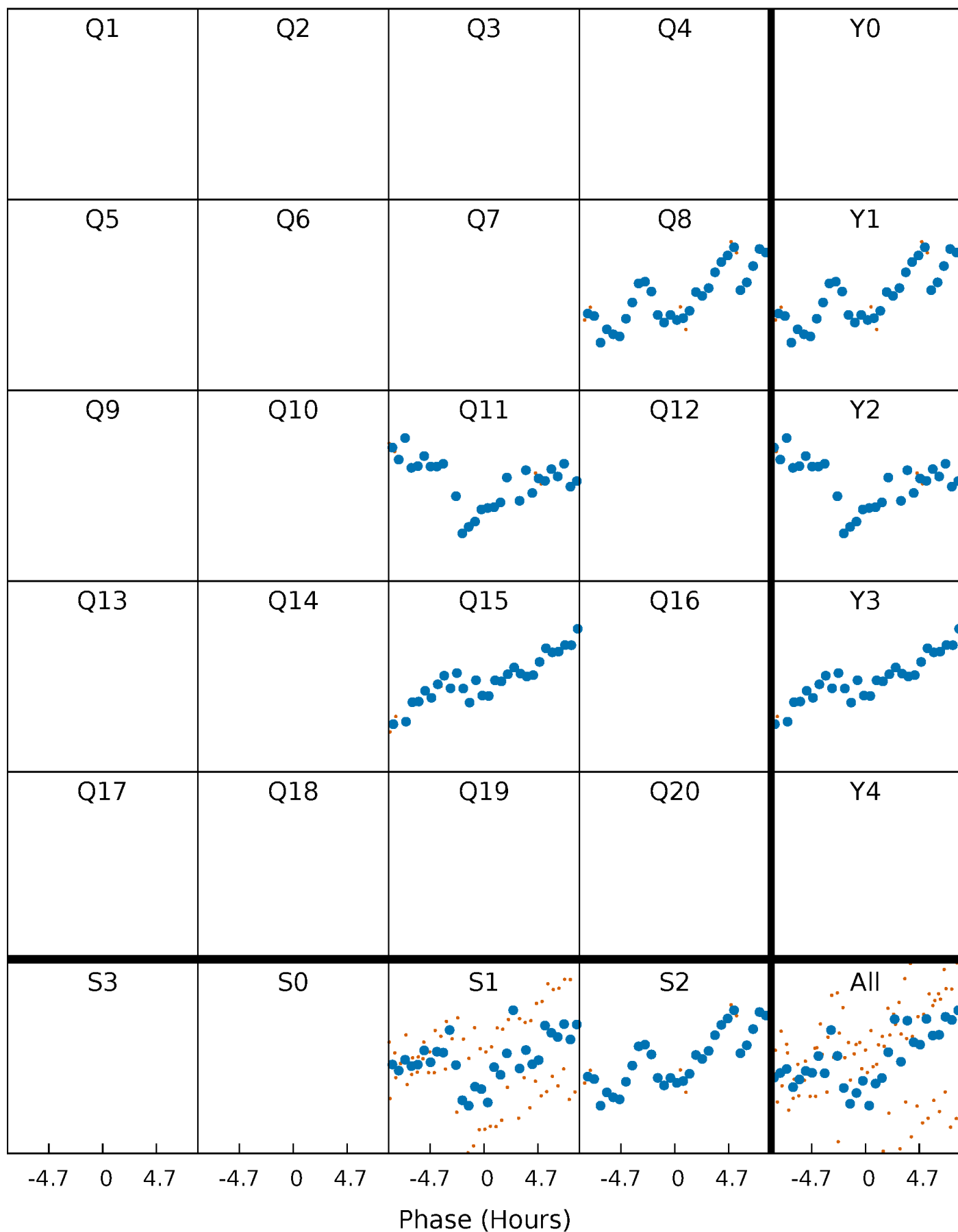


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



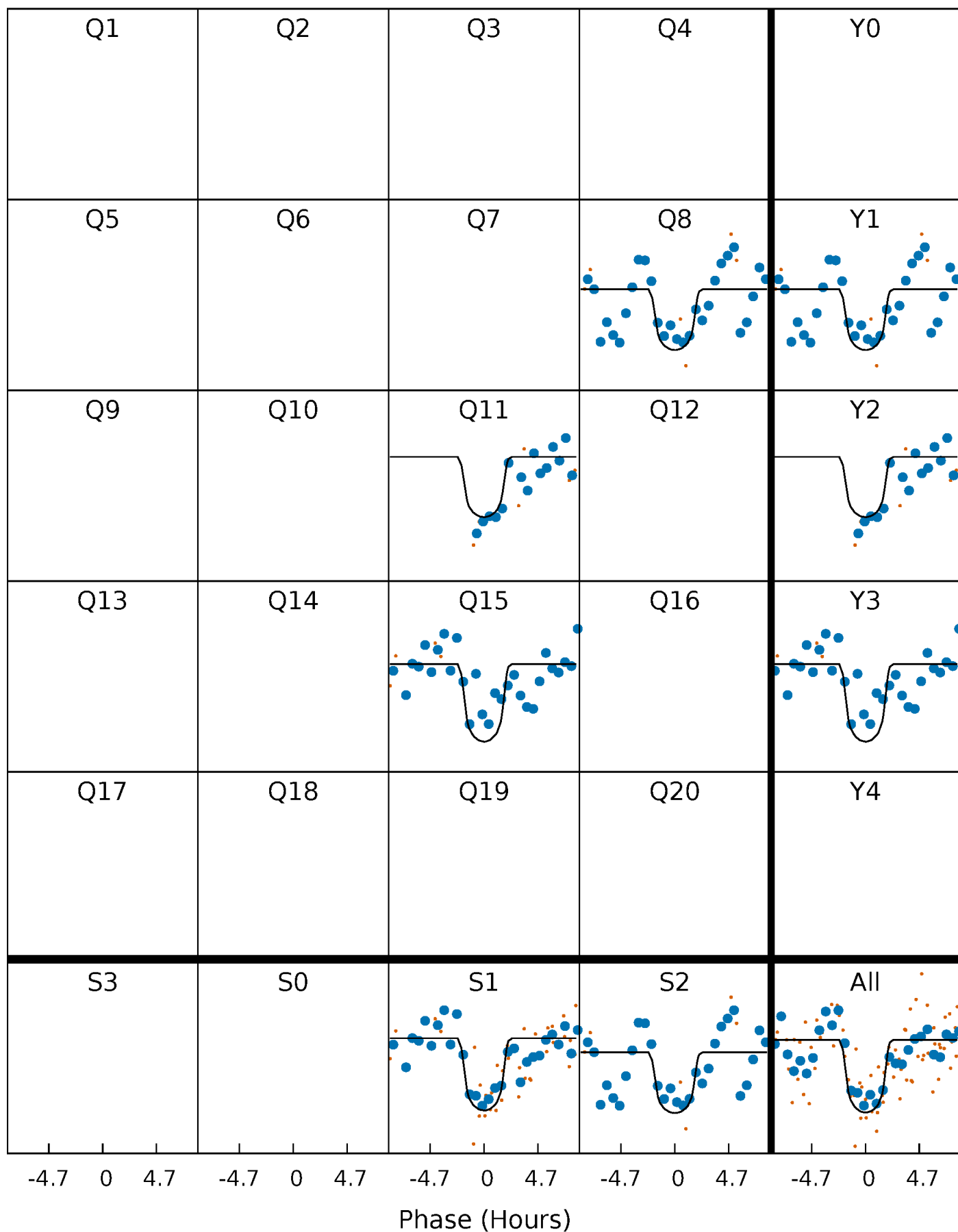
PDC Quarter-Phased Transit Curves

TCE 007734207-01 P=347.368264 Days $T_0=399.029367$ (BKJD)



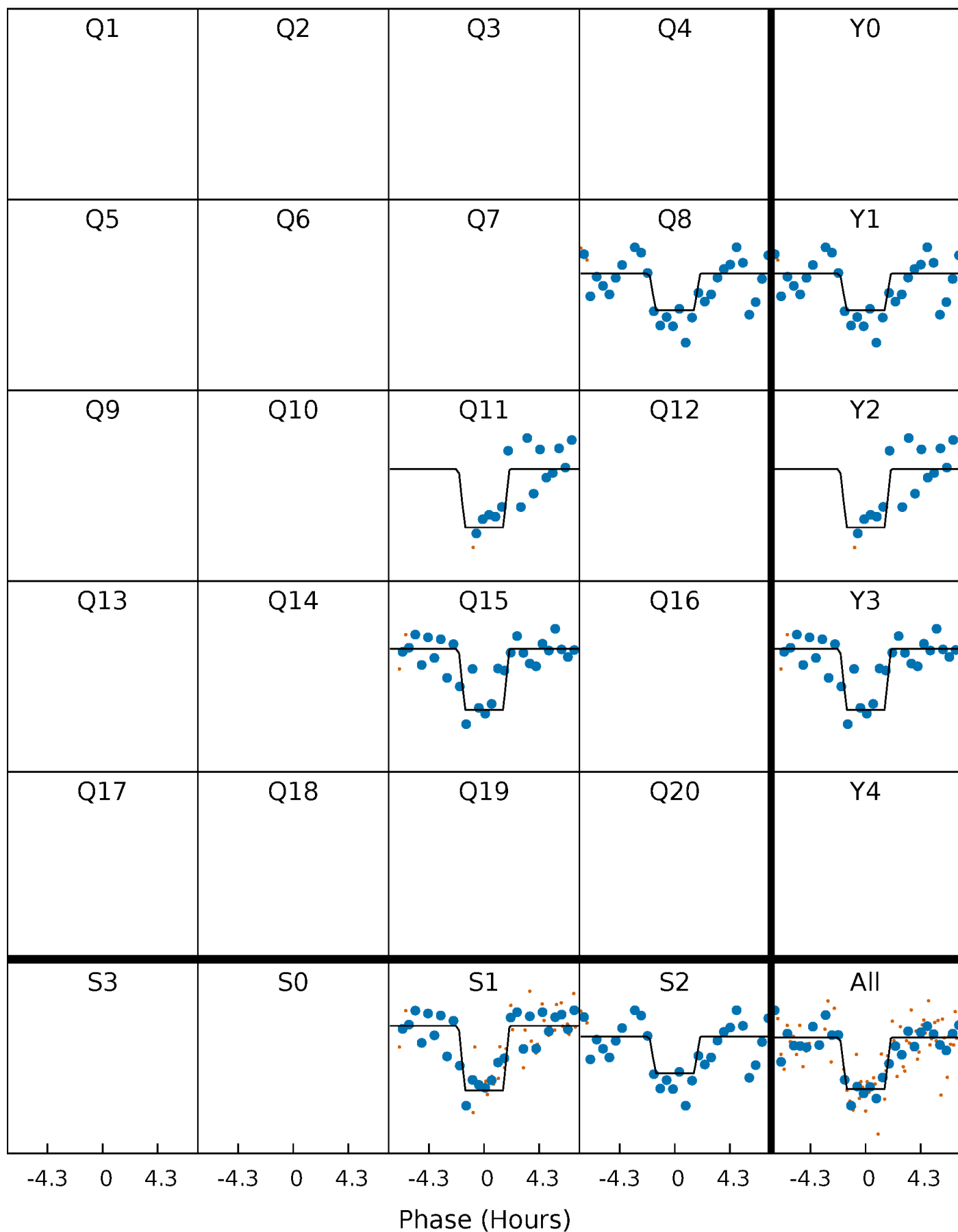
DV Quarter-Phased Transit Curves

TCE 007734207-01 P=347.368264 Days $T_0=399.029367$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

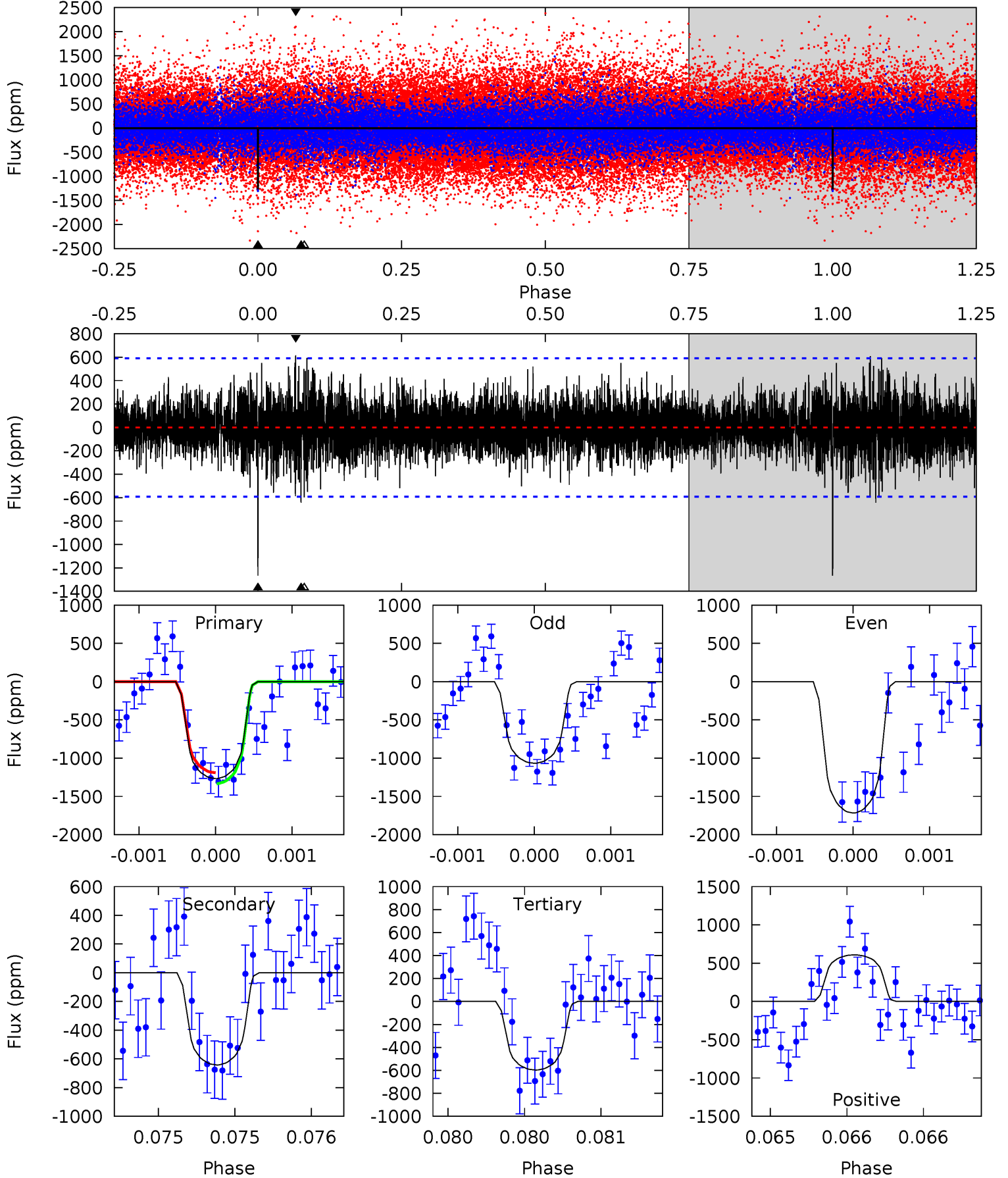
TCE 007734207-01 P=347.366576 Days $T_0=399.030151$ (BKJD)



DV Model-Shift Uniqueness Test

007734207-01, $P = 347.368264$ Days, $E = 51.661103$ Days

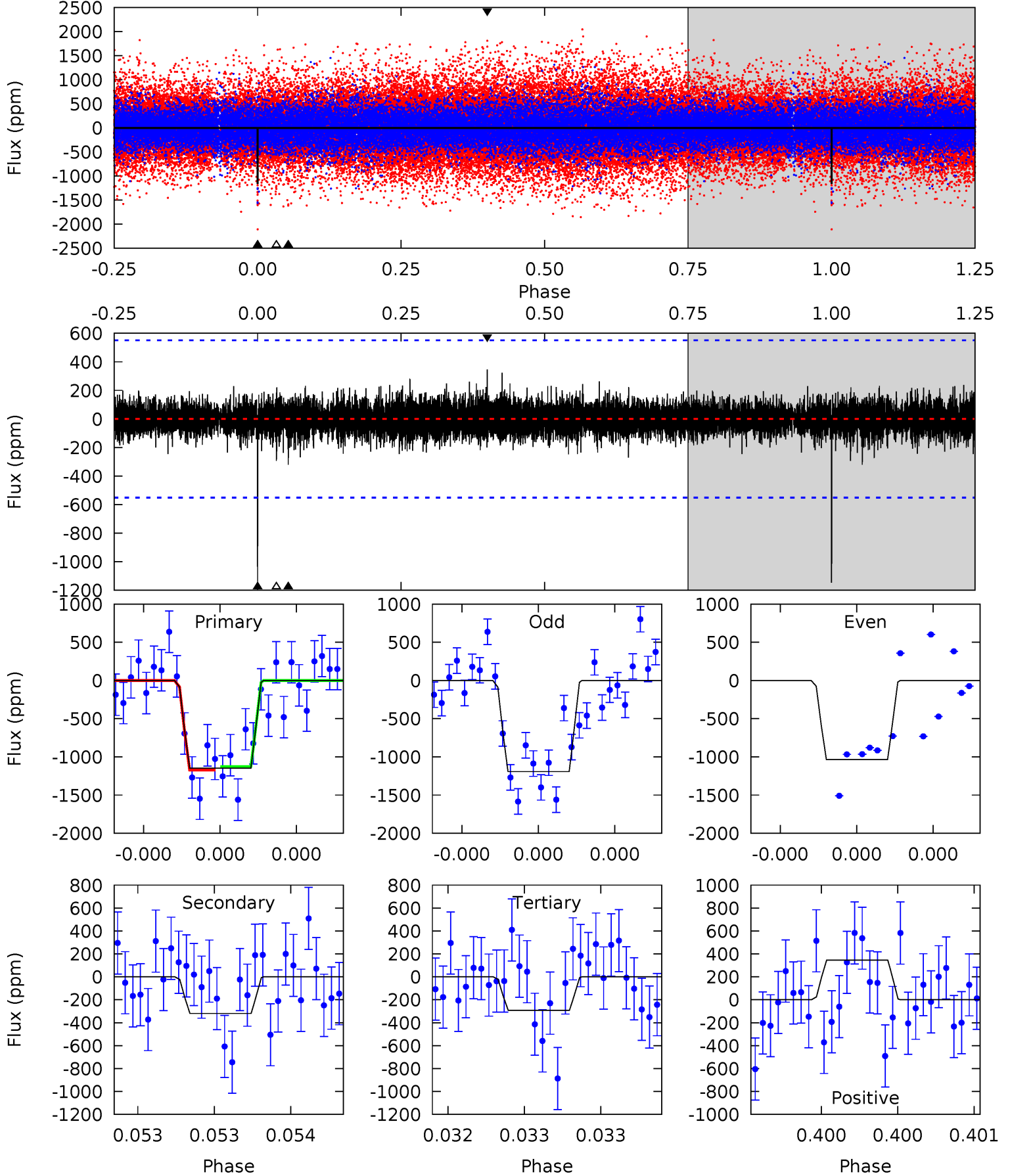
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	6.05	5.62	5.74	5.56	3.47	1.38	6.30	6.19	0.43	0.32	2.83	1.06	0.32	0.67



Alt Model-Shift Uniqueness Test

007734207-01, $P = 347.366576$ Days, $E = 51.663575$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.24	2.98	3.50	5.60	3.51	0.68	8.68	8.15	0.27	-0.26	0.74	1.10	0.23	0.24



Stellar Parameters For KIC 007734207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4344^{+118}_{-144}	$4.644^{+0.056}_{-0.024}$	$-0.360^{+0.300}_{-0.300}$	$0.607^{+0.045}_{-0.056}$	$0.592^{+0.063}_{-0.048}$	$3.735^{+0.942}_{-0.426}$
	+3%/-3%	+1%/-1%	+83%/-83%	+7%/-9%	+11%/-8%	+25%/-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 007734207-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-643 ± 106	$2.69^{+0.62}_{-0.58}$	230^{+7}_{-8}	3677^{+324}_{-272}	33163^{+20573}_{-12513}
Alt.	-319 ± 98	$2.19^{+0.62}_{-0.60}$	230^{+7}_{-8}	3502^{+397}_{-314}	24425^{+23568}_{-11122}

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

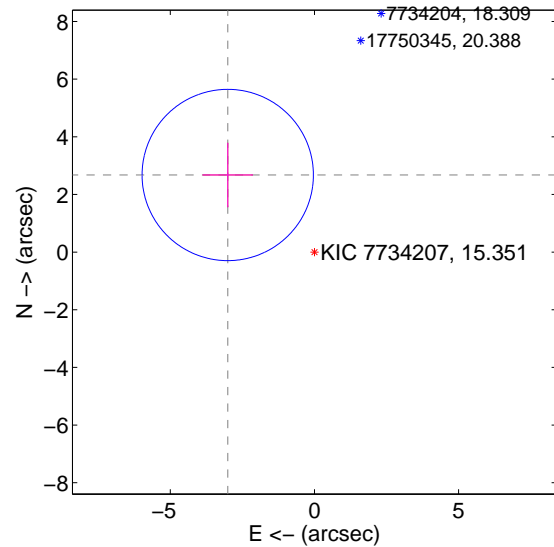
Supplemental centroid analysis for 007734207-01. Kepler magnitude: 15.35. Transit SNR 8.55

There are 0 quarters with good PRF difference image offsets

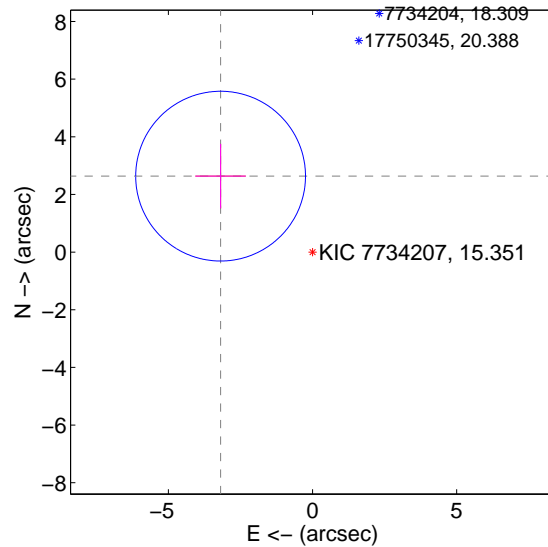
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.025 ± 0.990	4.06	3.007 ± 0.876	2.675 ± 1.118
PRF-fit source offset from KIC position	4.136 ± 0.981	4.21	3.189 ± 0.876	2.635 ± 1.118
photometric centroid source offset	0.07 ± 1.17	0.06	-0.07 ± 1.17	0.01 ± 1.18

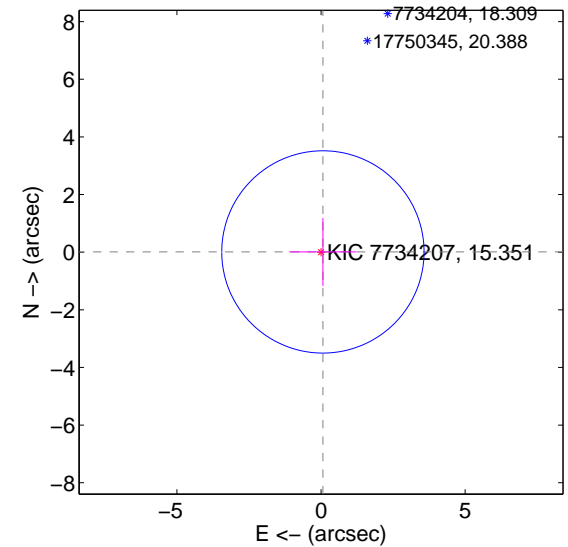
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

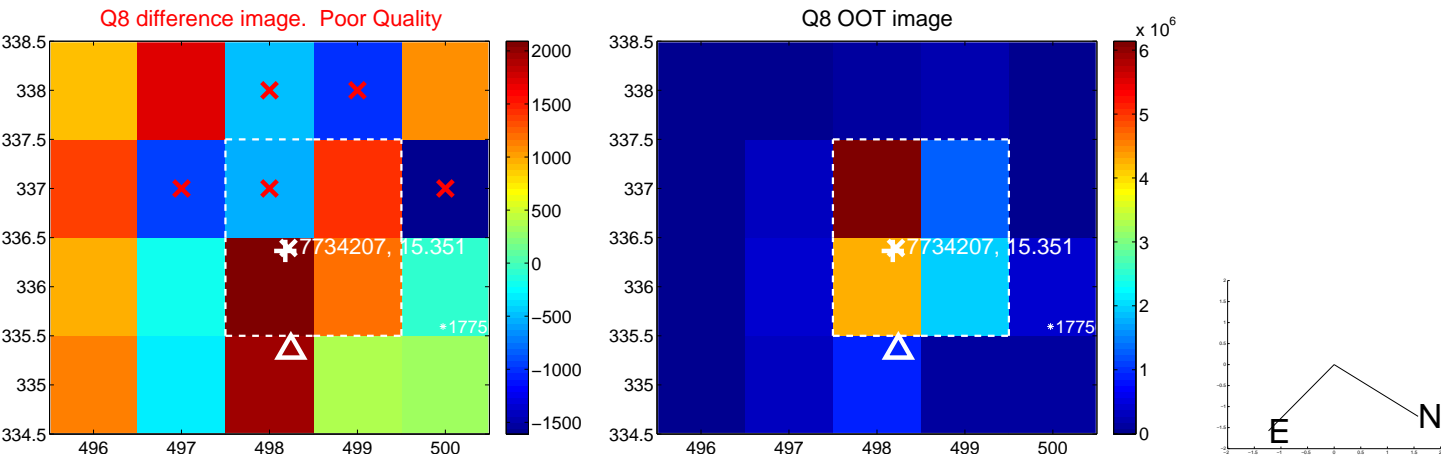
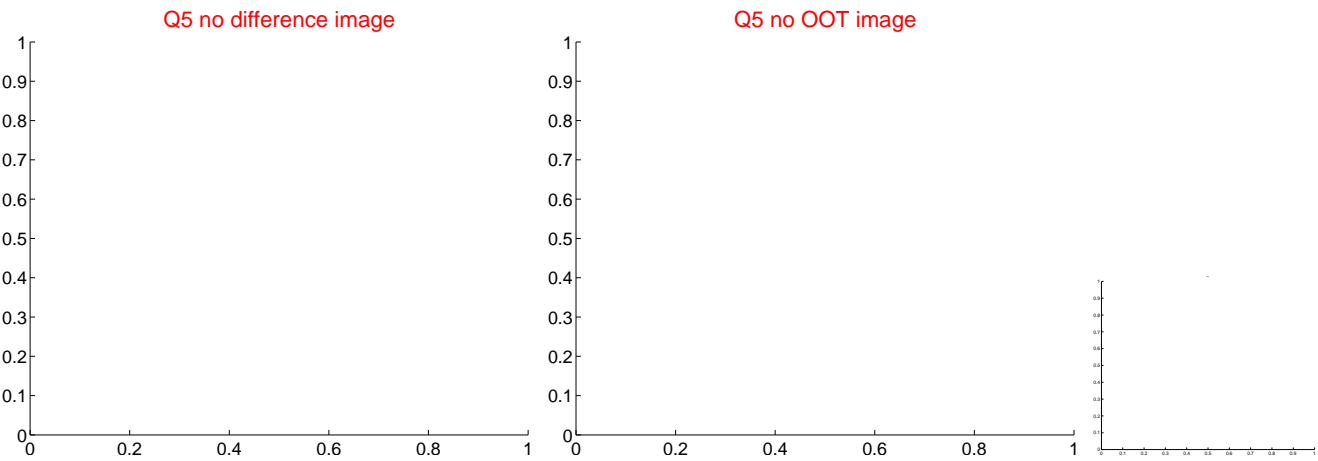


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



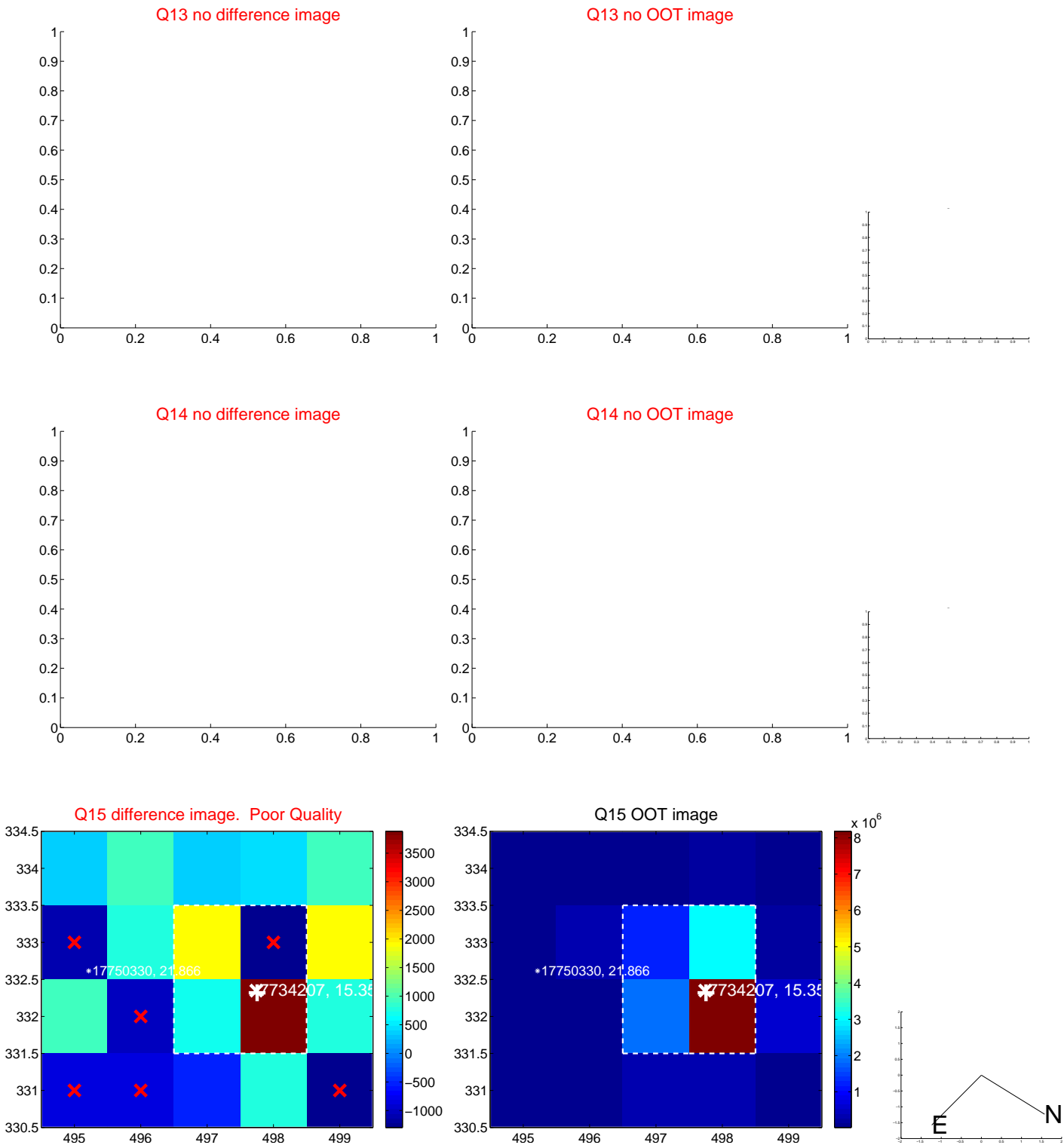
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



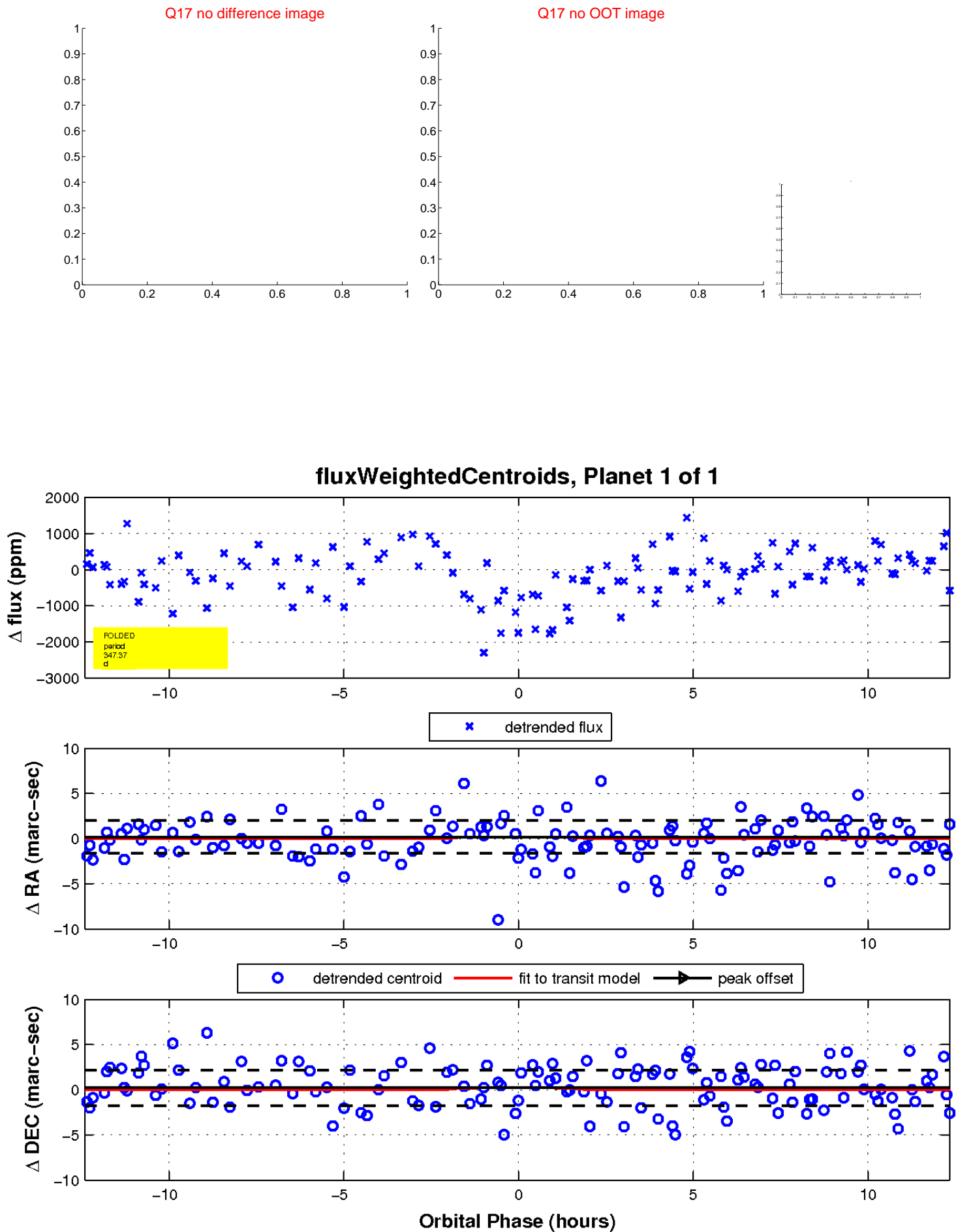
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

