

KIC 008743239

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})
008743239-01	OBS	No	651.605717	234.699290	646.6	7.905	7.2	7.3	1.08	5915	3.01	0.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008743239-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

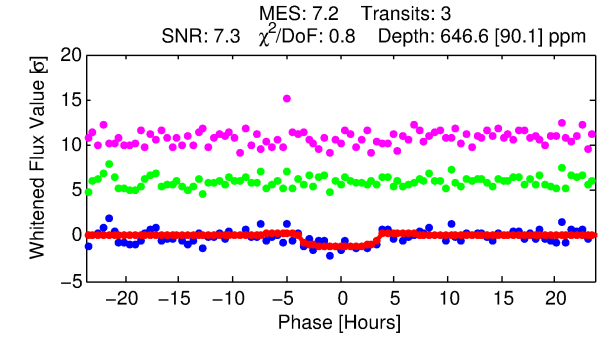
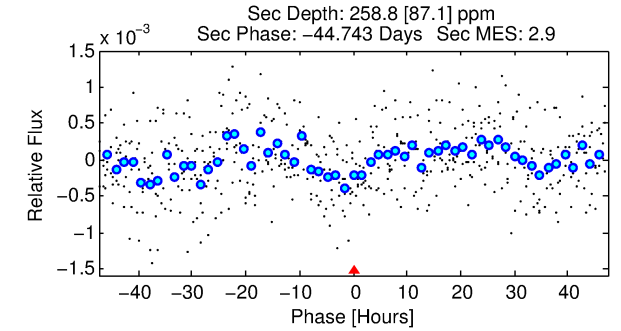
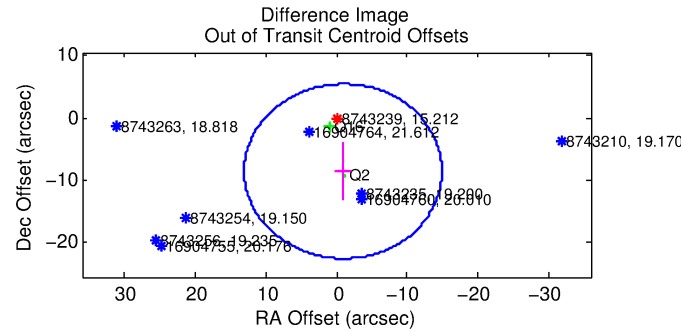
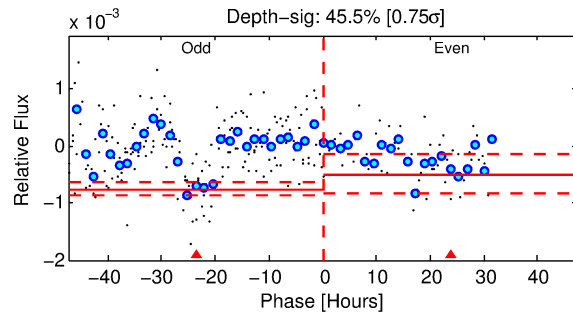
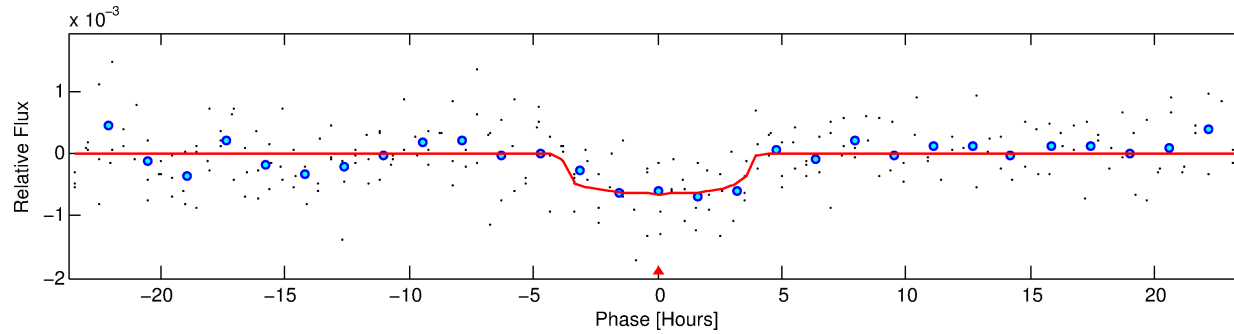
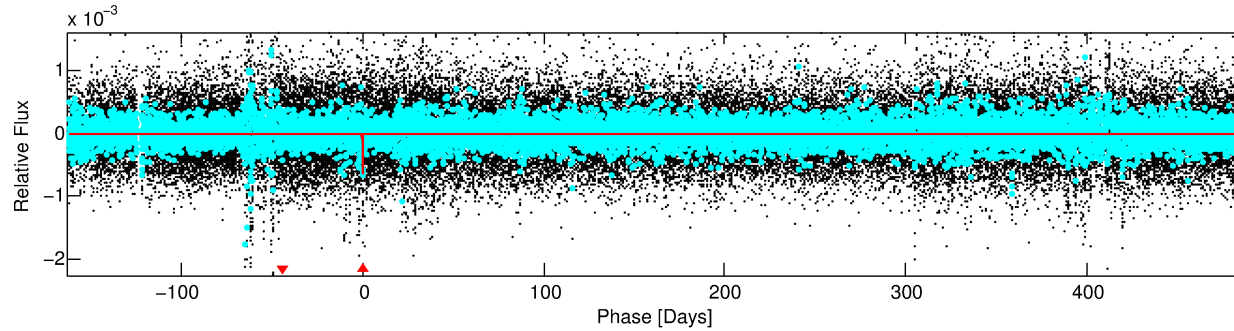
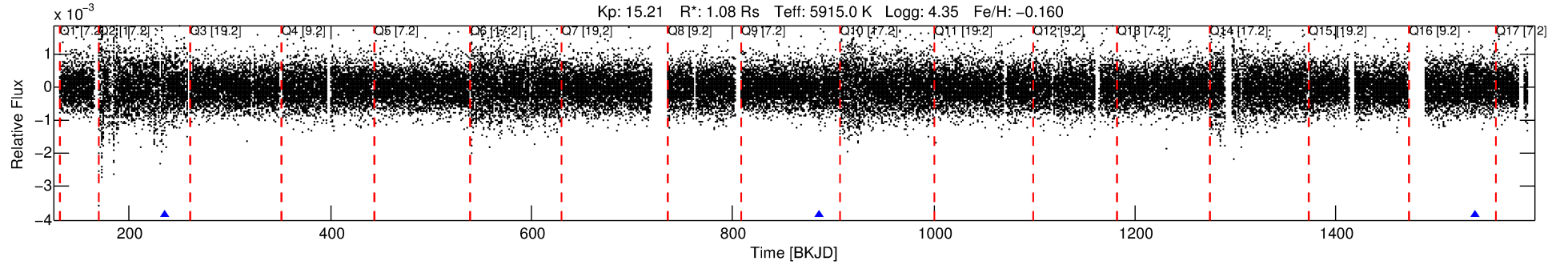
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008743239-01

No Significant Match Found

DV One-Page Summary

KIC: 8743239 Candidate: 1 of 1 Period: 651.606 d



DV Fit Results:

Period = 651.60572 [0.01234] d
Epoch = 234.6993 [0.0175] BKJD
Rp/R* = 0.0255 [0.0102]
a/R* = 428.40 [786.80]
b = 0.77 [0.99]
Seff = 0.61 [0.22]
Teq = 226 [20] K
Rp = 3.01 [1.49] Re
a = 1.4480 [0.3468] AU
Ag = 32971.24 [30737.29] [1.07 σ]
Teff = 4702 [1030] K [4.35 σ]

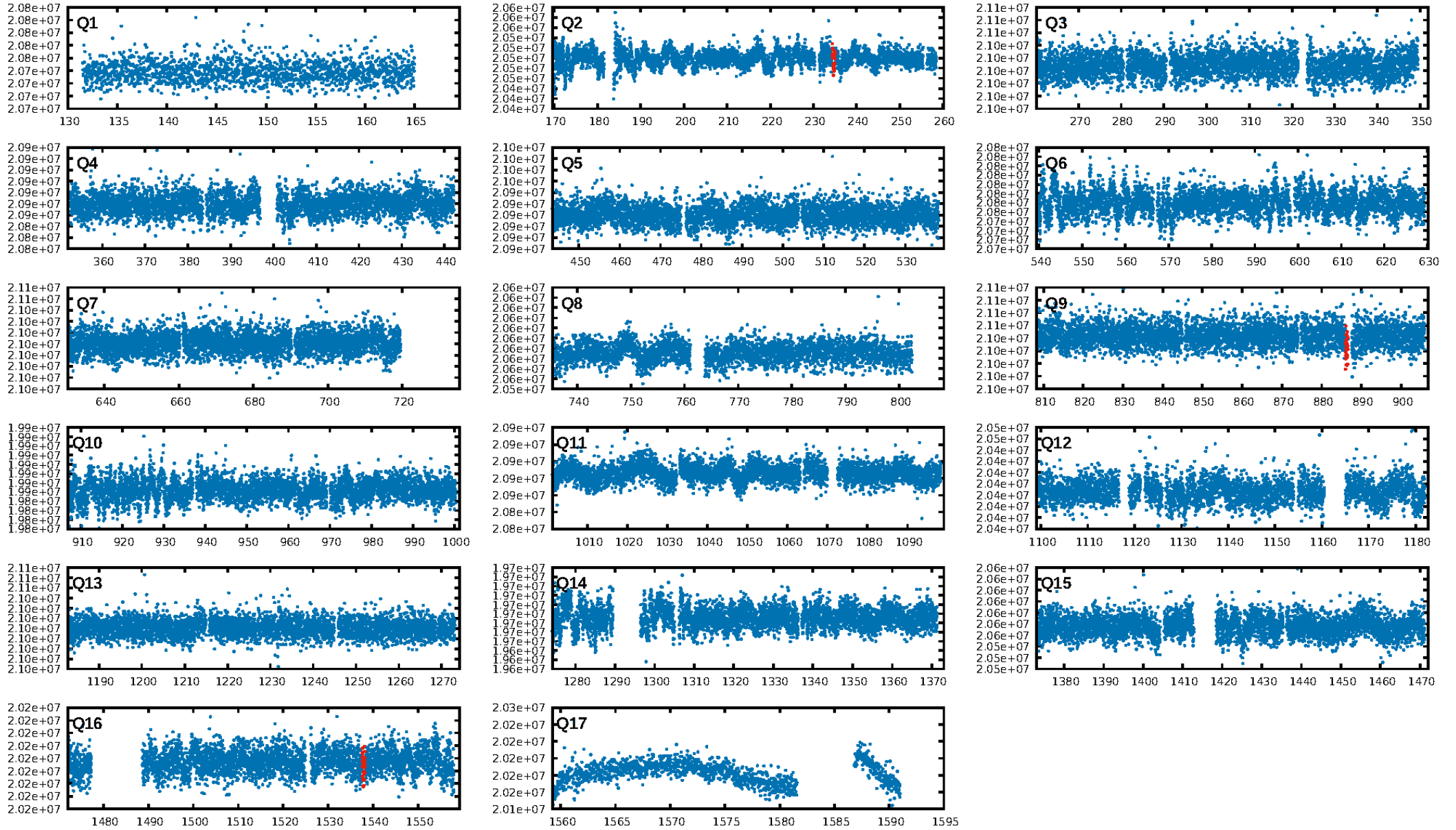
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.19e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.603
Centroid-sig: 8.0%
Centroid-so: 2.813 arcsec [1.58 σ]
OotOffset-rm: 8.614 arcsec [1.85 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 8.340 arcsec [3.28 σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

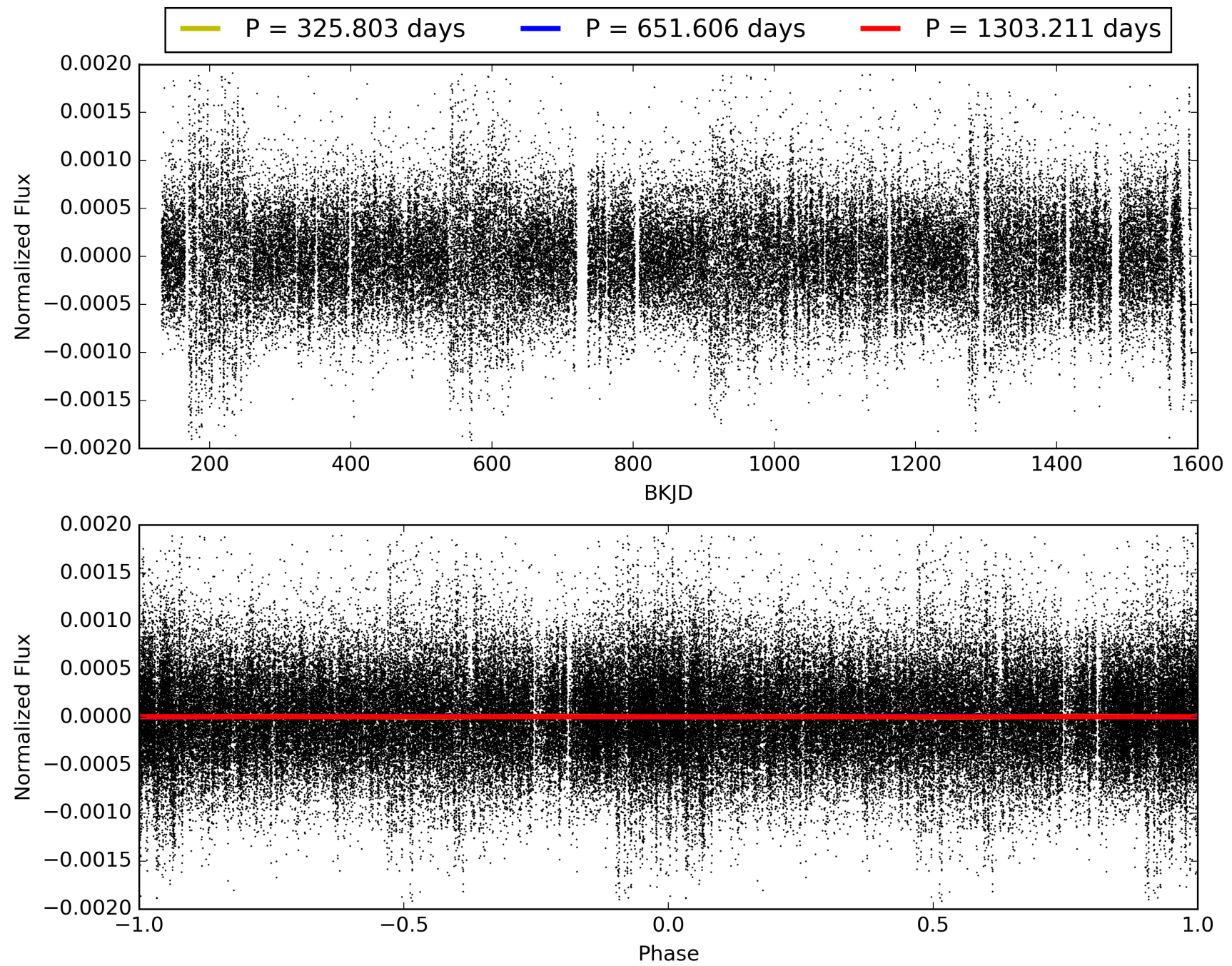
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:54:52 Z

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

TCE 008743239-01, PDC Light Curves

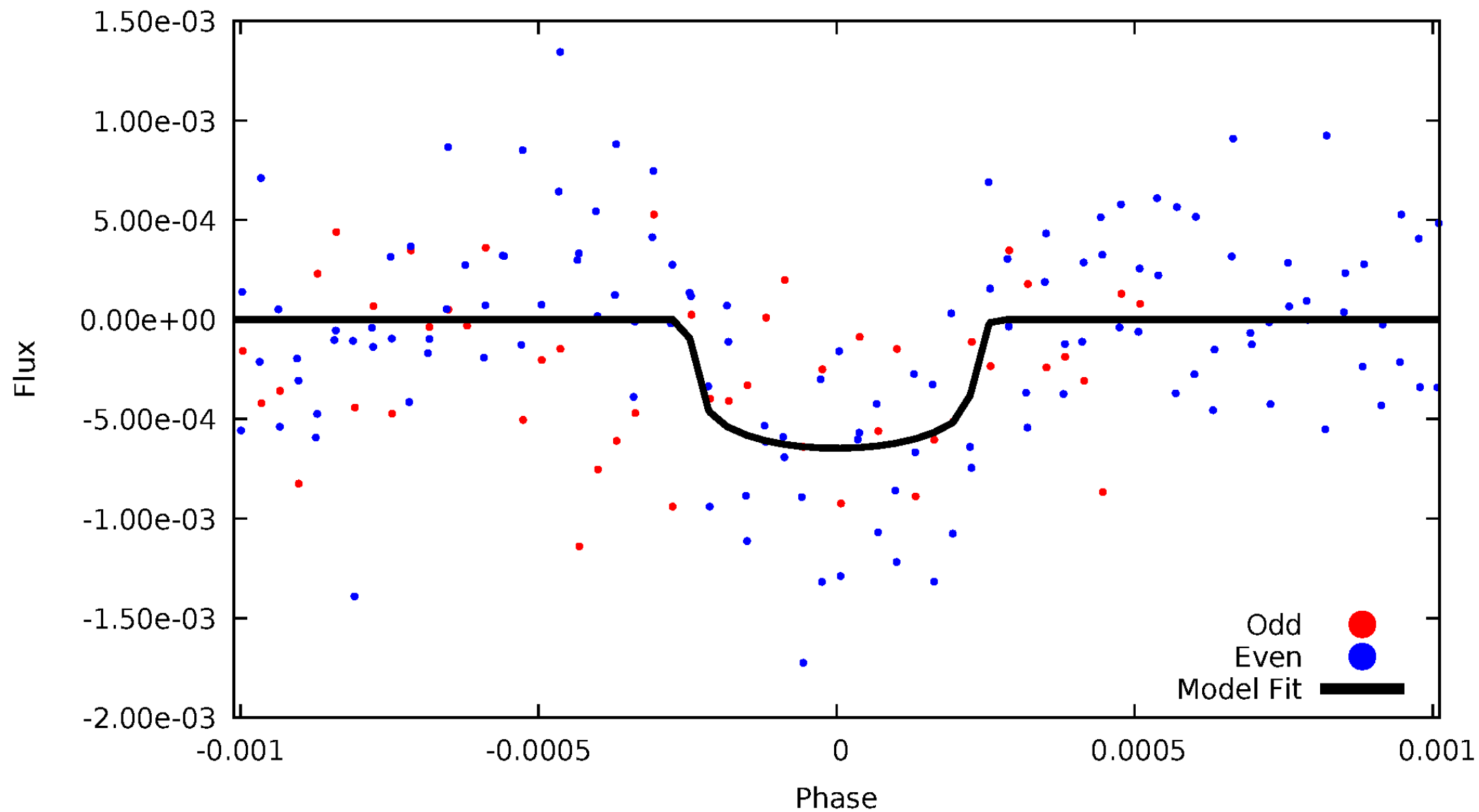


TCE 008743239-01



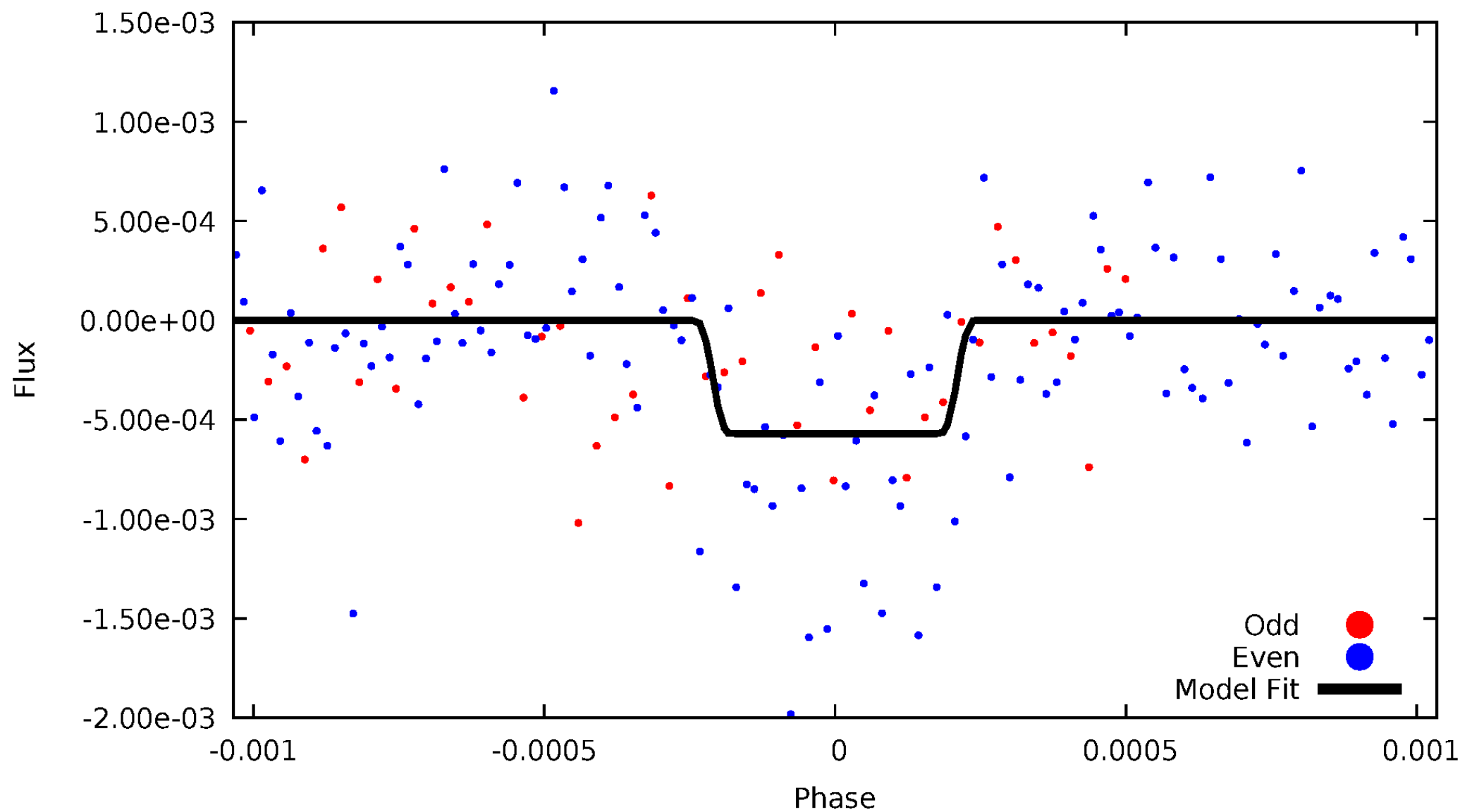
DV Odd/Even

TCE 008743239-01



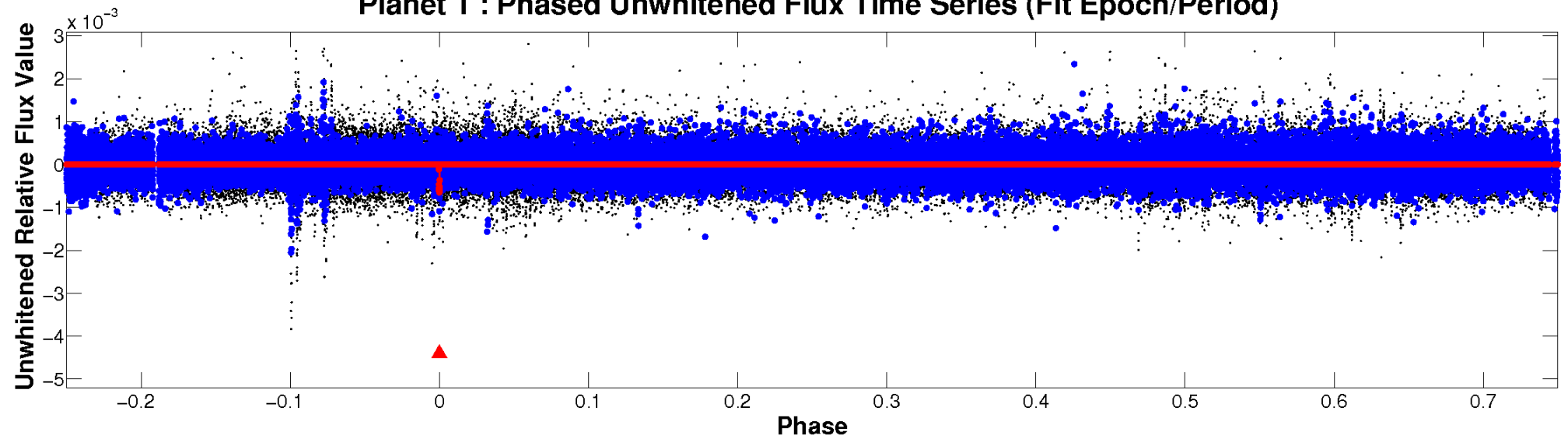
ALT Odd/Even

TCE 008743239-01

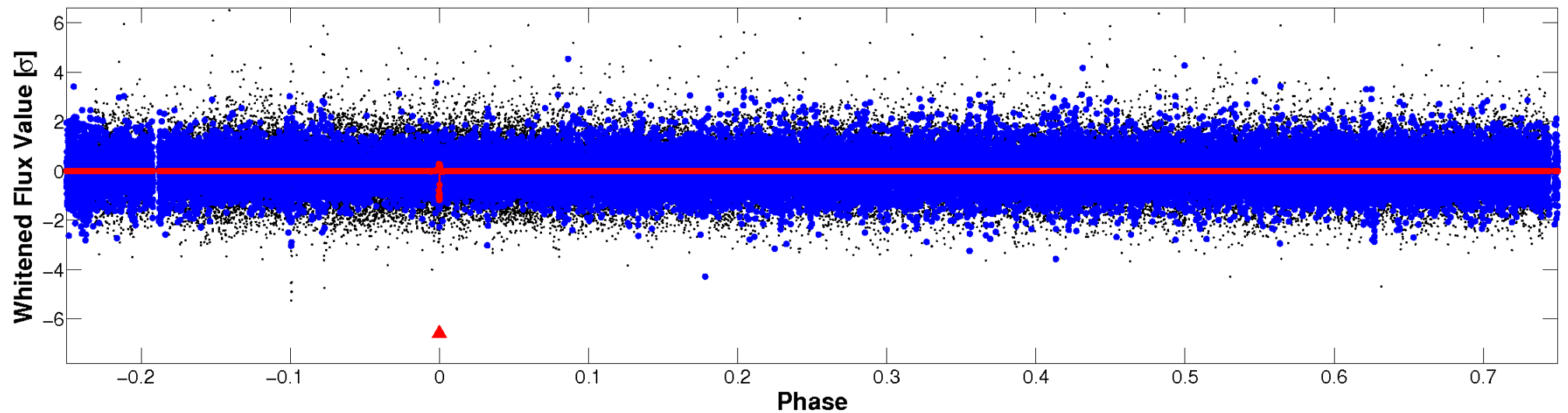


Non-Whitened Vs. Whitened Light Curve

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

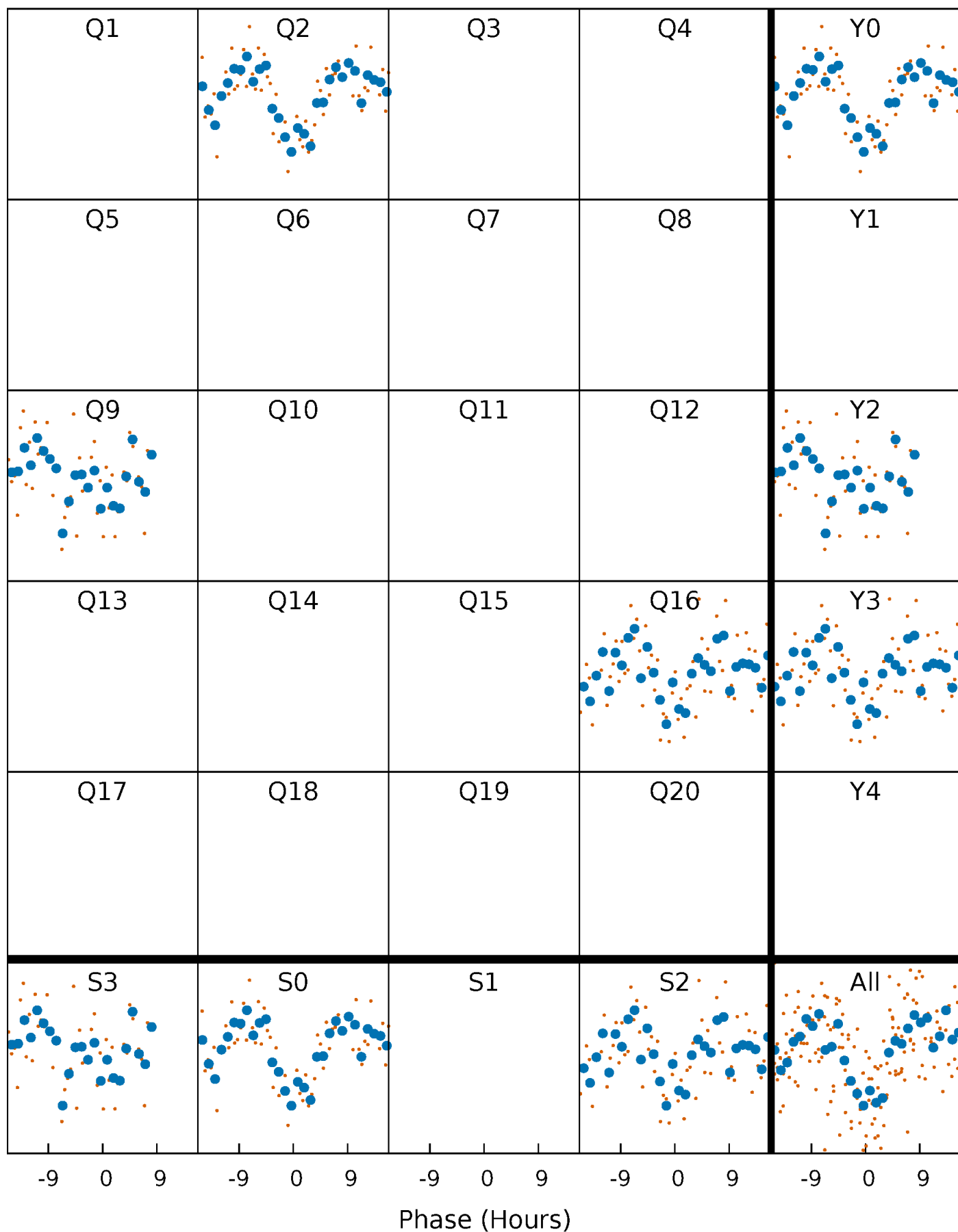


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



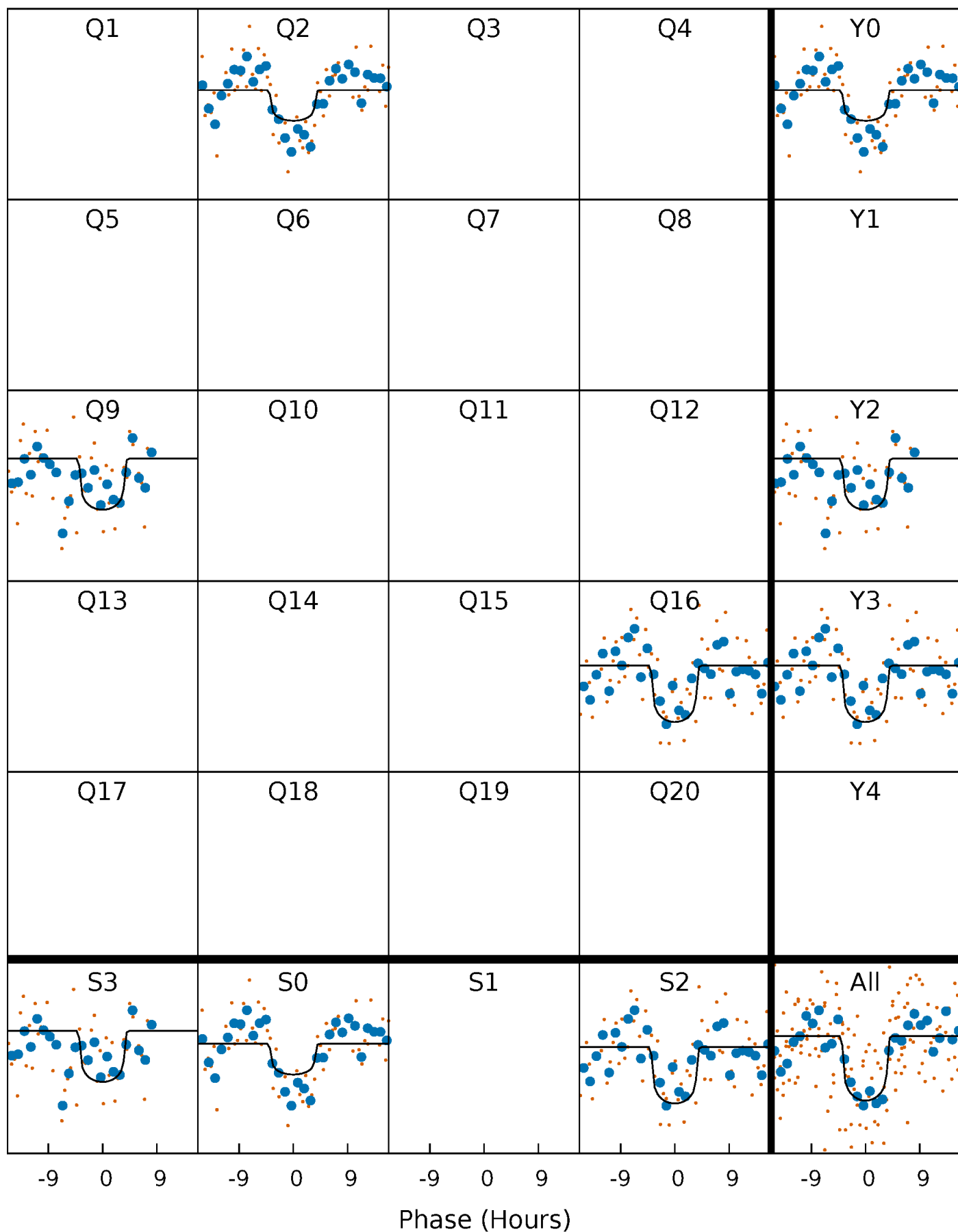
PDC Quarter-Phased Transit Curves

TCE 008743239-01 P=651.605717 Days $T_0=234.699290$ (BKJD)



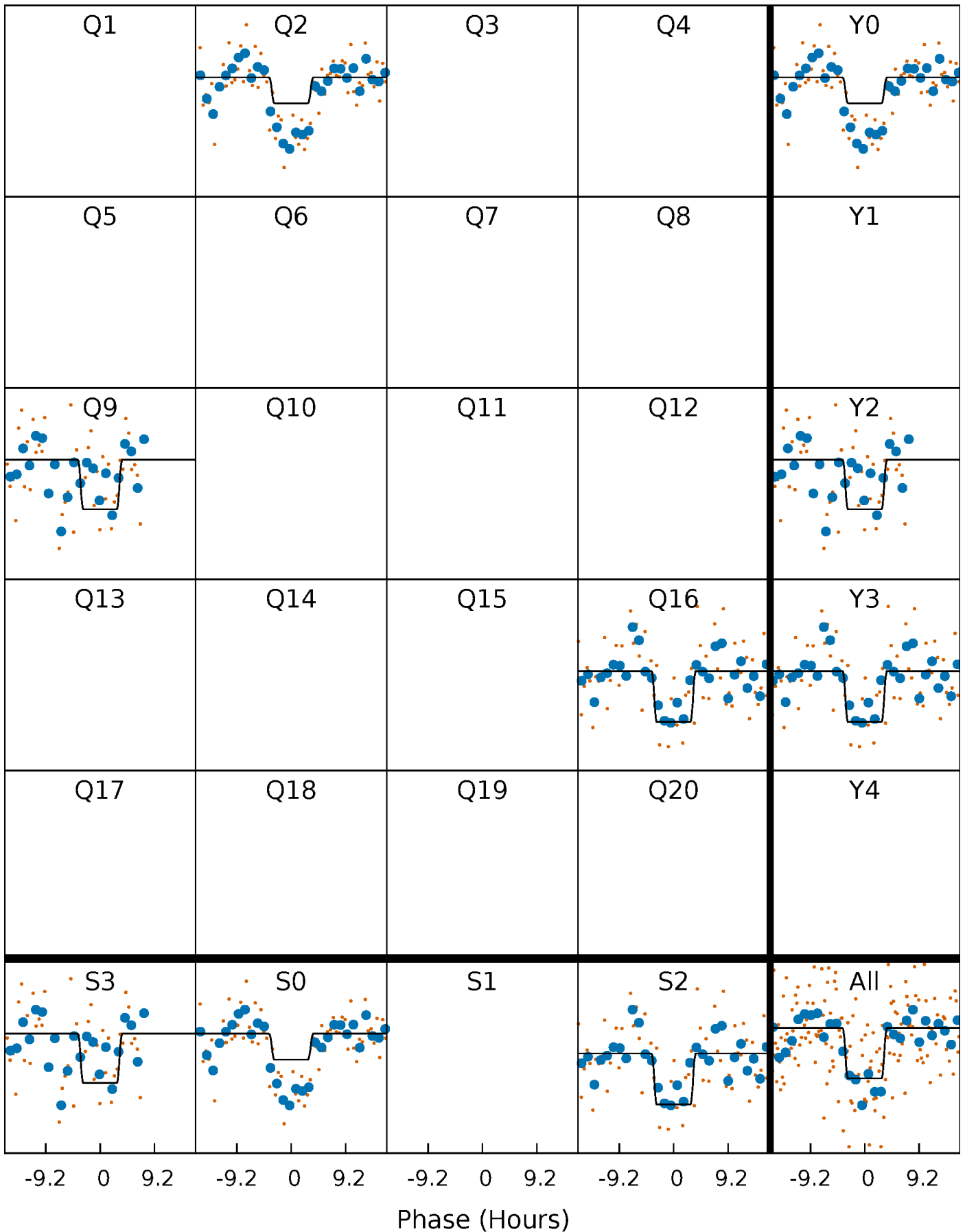
DV Quarter-Phased Transit Curves

TCE 008743239-01 P=651.605717 Days $T_0=234.699290$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

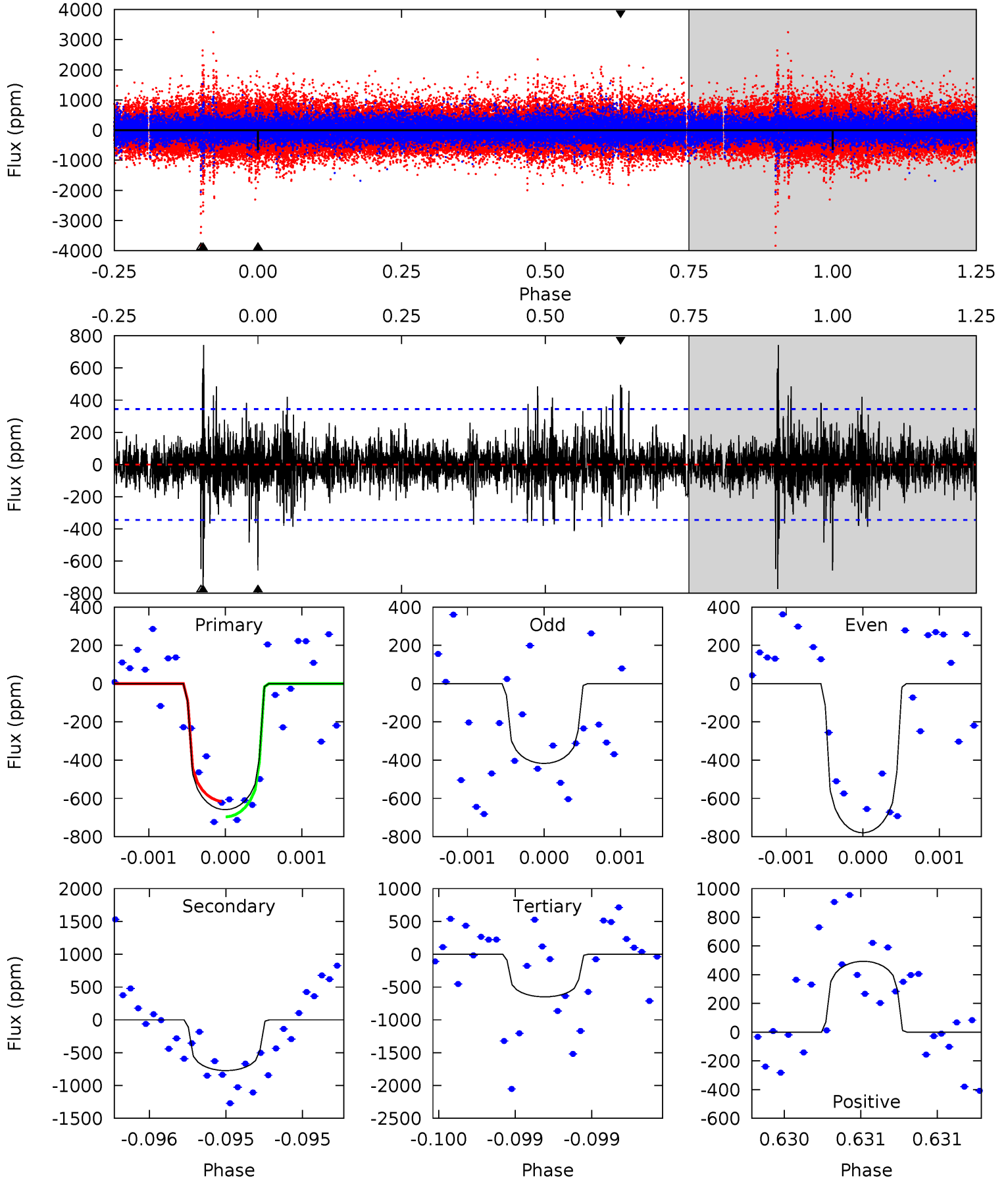
TCE 008743239-01 P=651.598984 Days $T_0=234.712276$ (BKJD)



DV Model-Shift Uniqueness Test

008743239-01, P = 651.605717 Days, E = 234.699290 Days

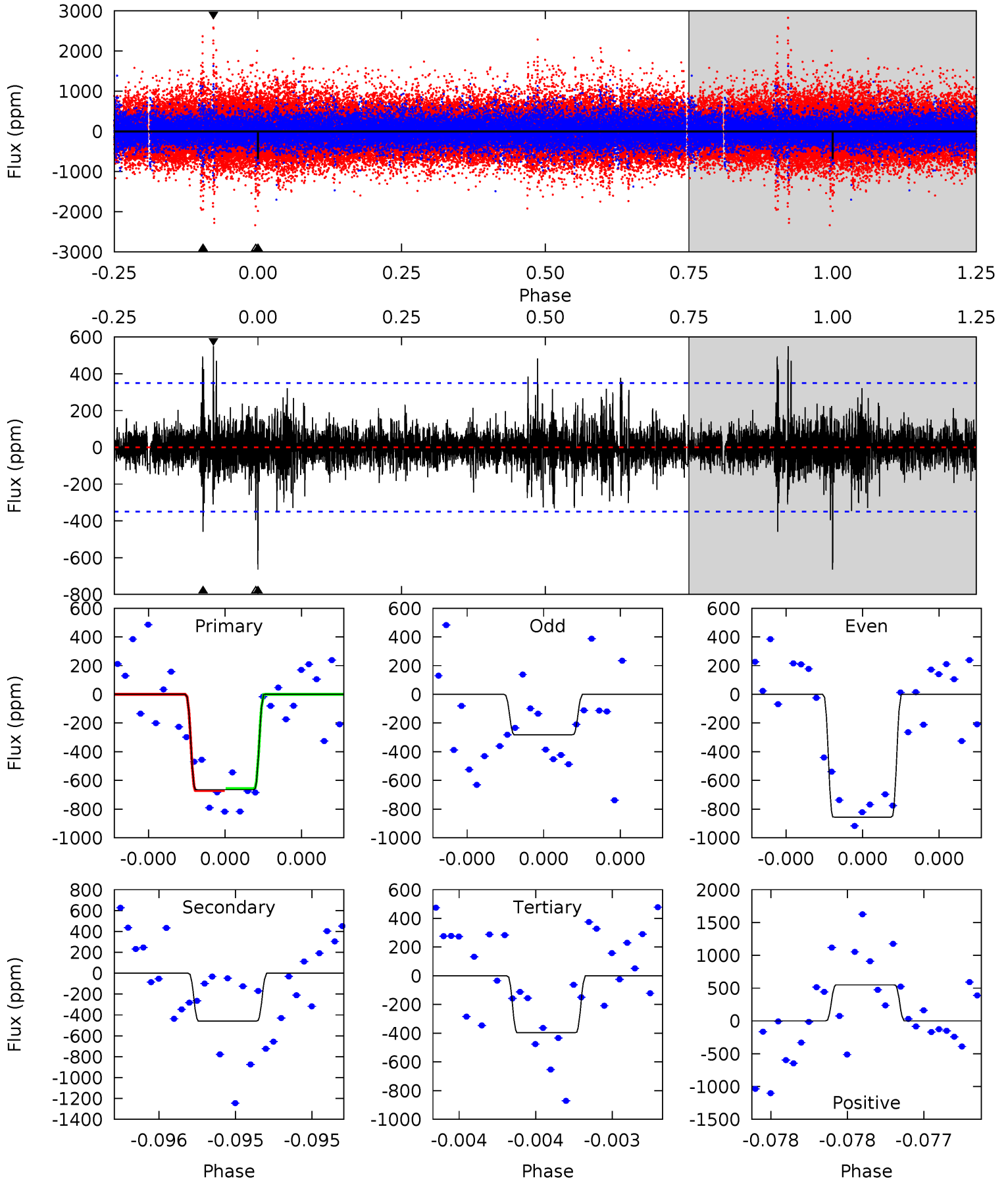
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	12.5	10.5	7.99	5.57	3.48	1.62	0.15	2.67	2.01	4.52	2.78	1.34	0.49	0.65



Alt Model-Shift Uniqueness Test

008743239-01, P = 651.598984 Days, E = 234.712276 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	7.32	6.33	8.77	5.58	3.50	1.26	4.28	1.84	0.99	-1.45	4.37	1.55	0.45	0.11



Stellar Parameters For KIC 008743239

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5915^{+160}_{-178}	$4.348^{+0.149}_{-0.182}$	$-0.160^{+0.300}_{-0.300}$	$1.083^{+0.316}_{-0.195}$	$0.953^{+0.135}_{-0.098}$	$1.058^{+0.676}_{-0.525}$
	+3%/-3%	+3%/-4%	+188%/-188%	+29%/-18%	+14%/-10%	+64%/-50%
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 008743239-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-773 ± 62	$3.05^{+1.45}_{-1.21}$	317^{+25}_{-18}	6143^{+1906}_{-915}	$95438^{+169717}_{-50329}$
Alt.	-458 ± 63	$2.92^{+1.21}_{-1.18}$	315^{+24}_{-17}	5537^{+1659}_{-790}	$62038^{+116331}_{-31566}$

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 $A_{obs} \gg 1.0$

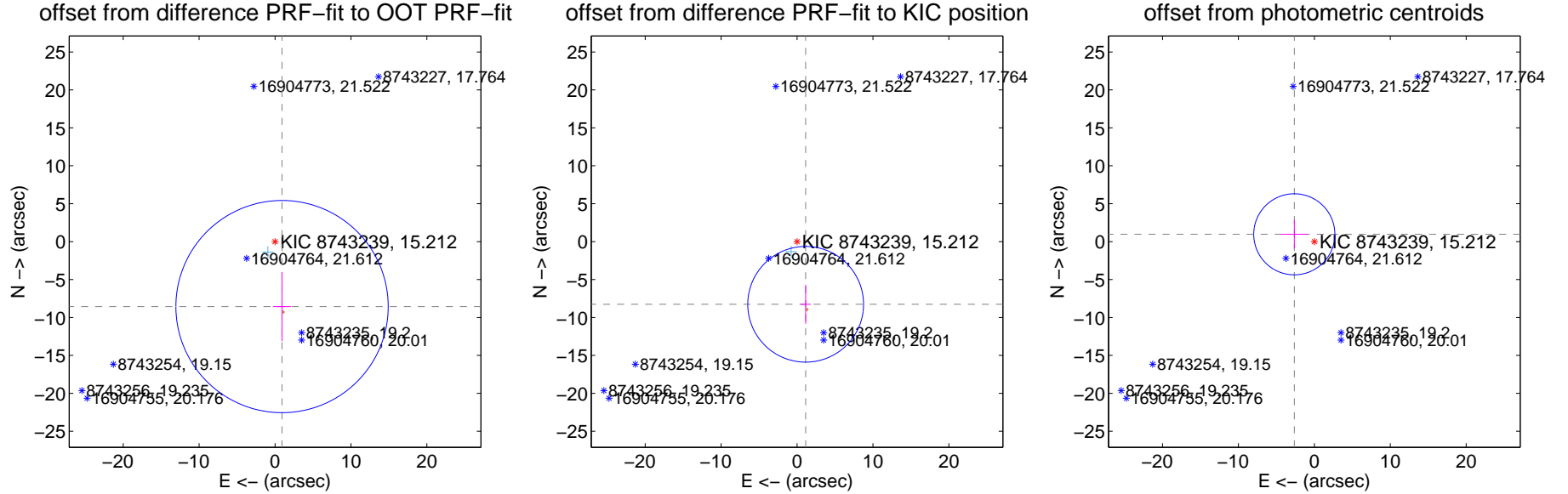
DV Centroid Data

Supplemental centroid analysis for 008743239-01. Kepler magnitude: 15.21. Transit SNR 7.28

There are 1 quarters with good PRF difference image offsets

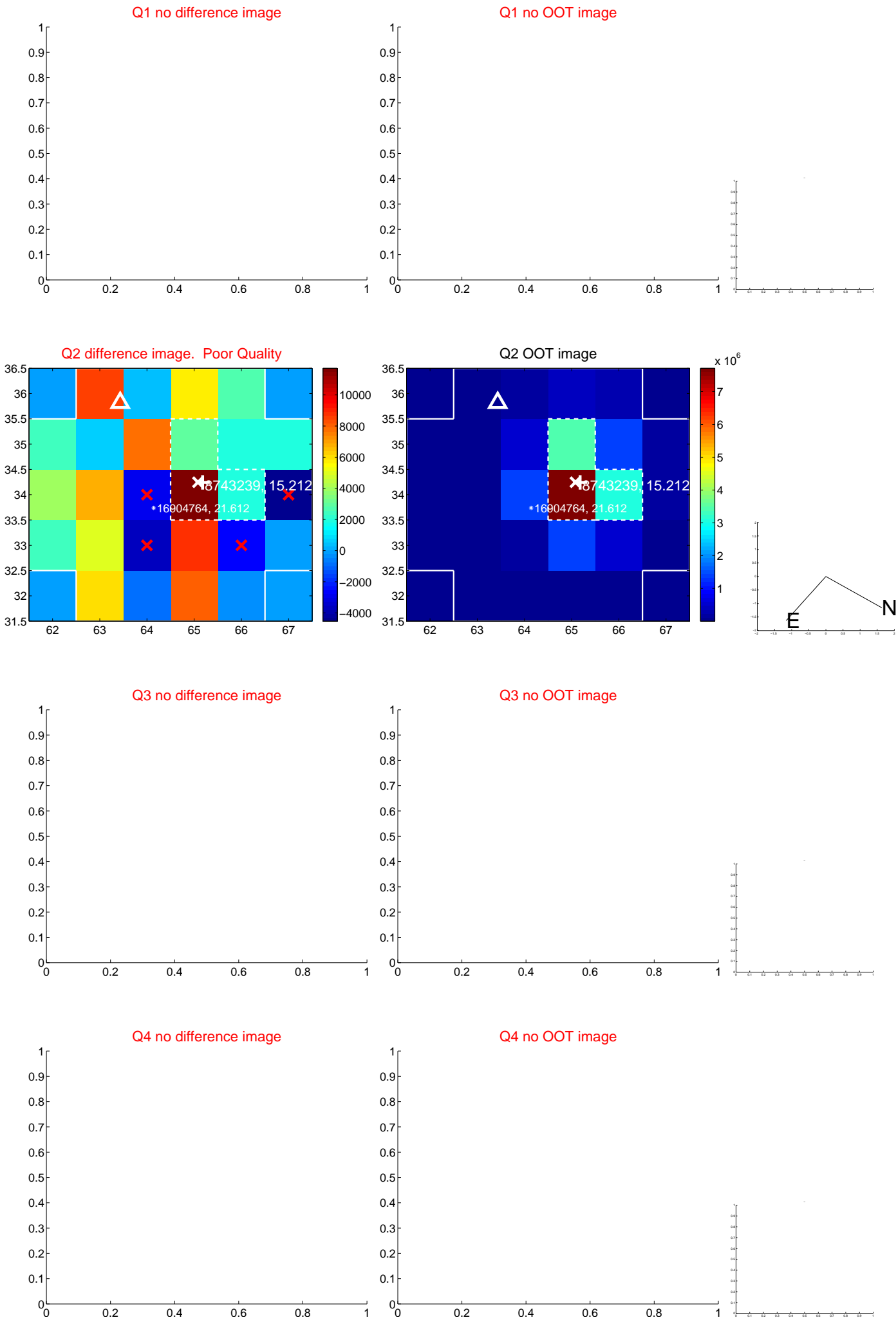
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.614 ± 4.662	1.85	-0.924 ± 1.174	-8.564 ± 4.563
PRF-fit source offset from KIC position	8.340 ± 2.542	3.28	-1.137 ± 0.675	-8.262 ± 2.564
photometric centroid source offset	2.81 ± 1.78	1.58	2.64 ± 1.77	0.97 ± 1.87



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.



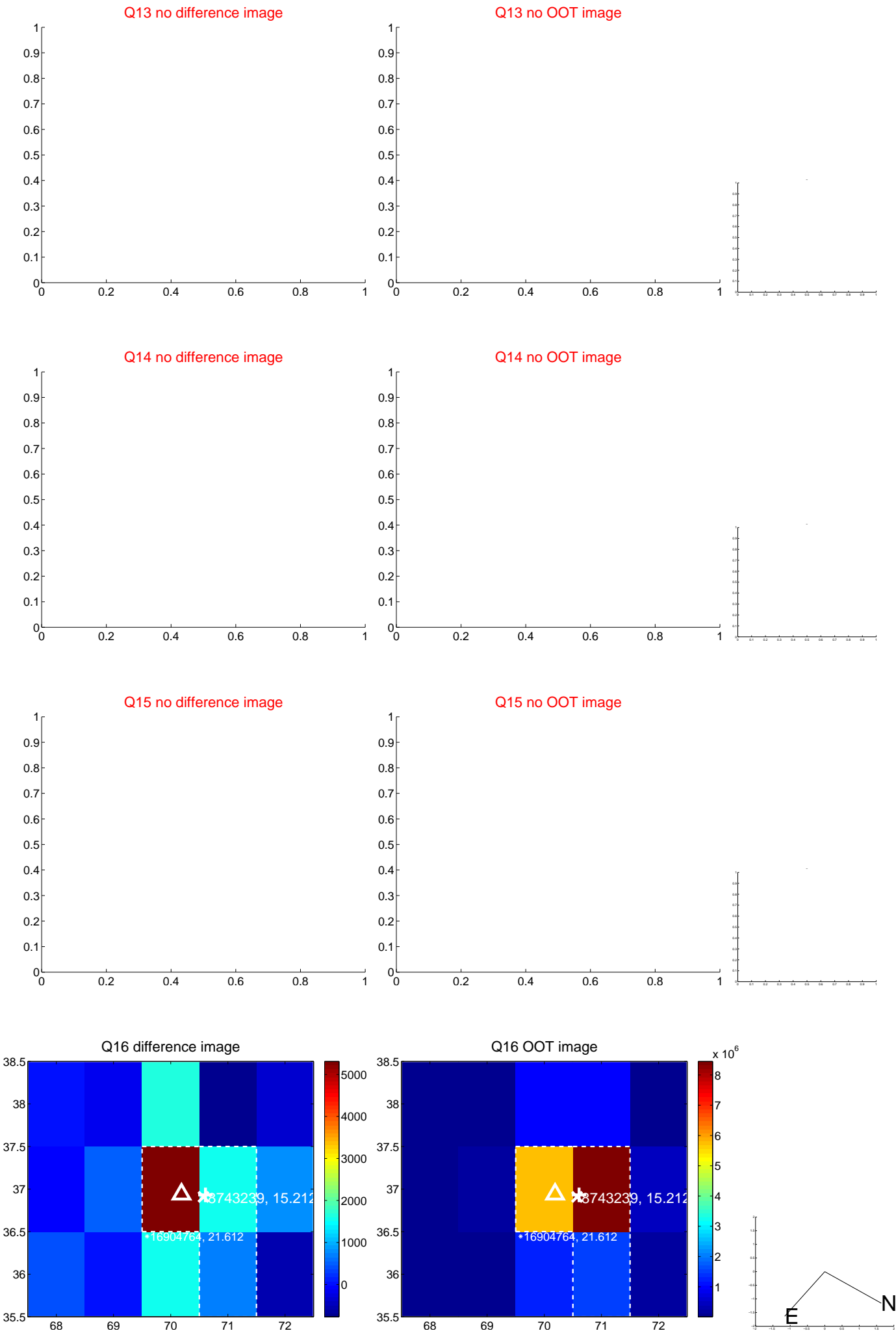
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



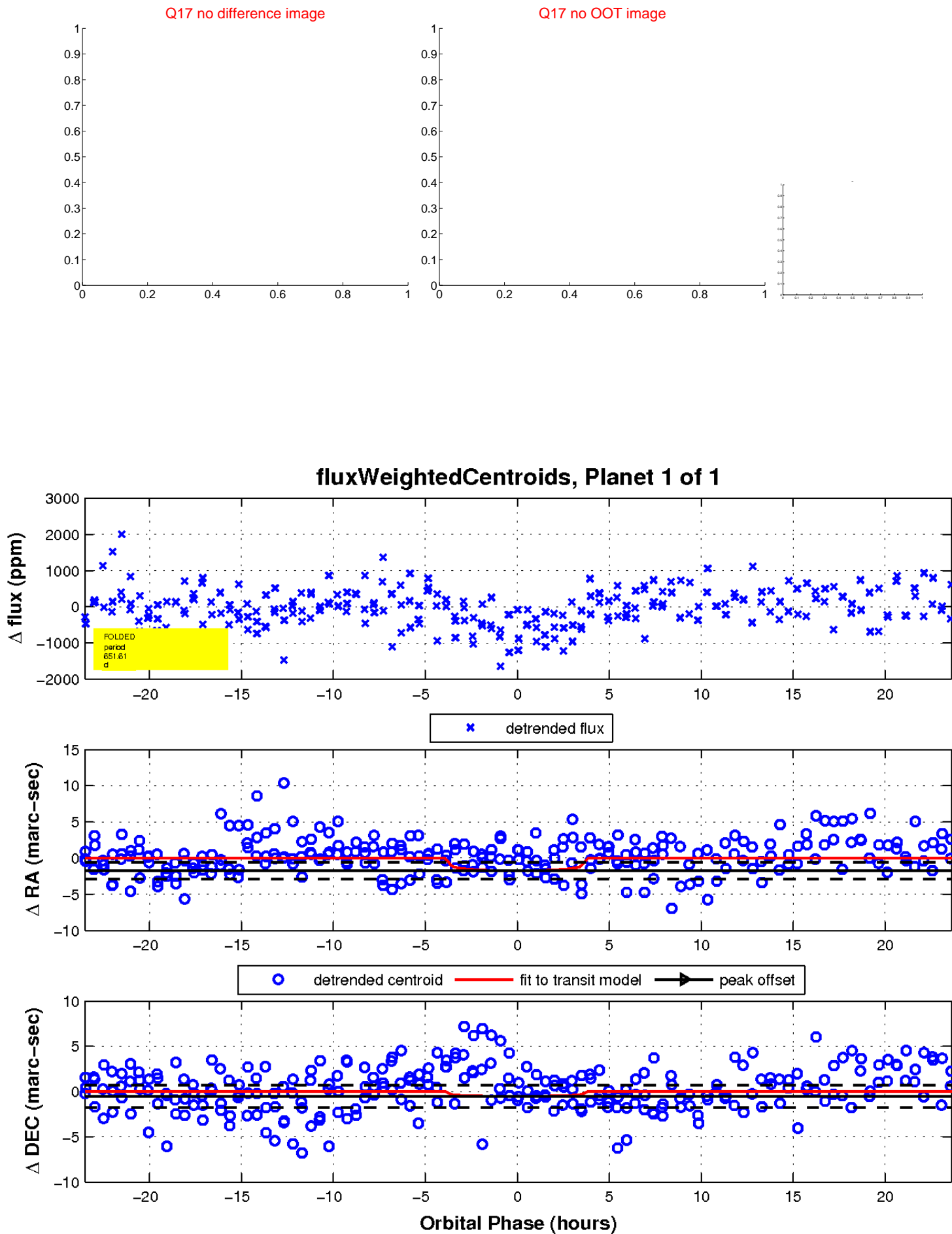
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UKIRT Image

Declination

