

KIC 008037316

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})
008037316-01	OBS	No	369.944773	232.515784	1251.9	12.828	8.9	9.0	0.69	5030	2.61	0.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008037316-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

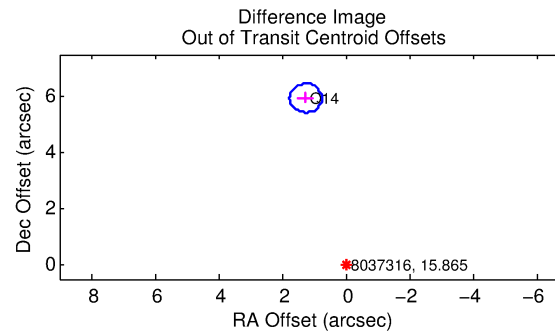
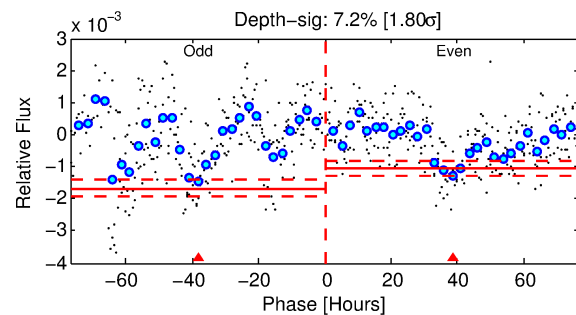
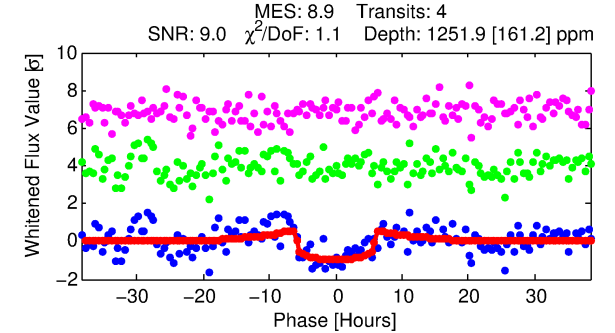
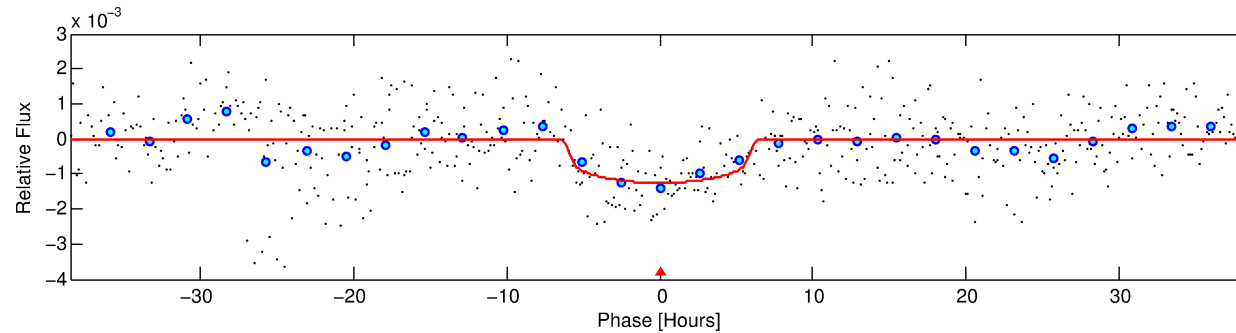
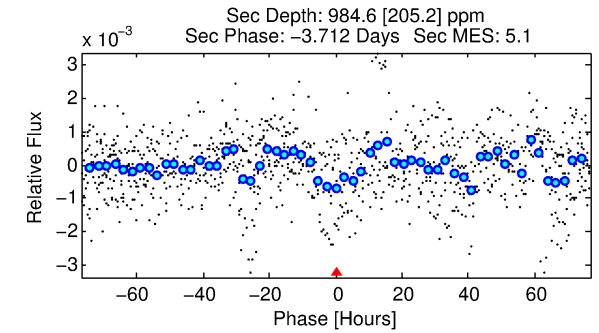
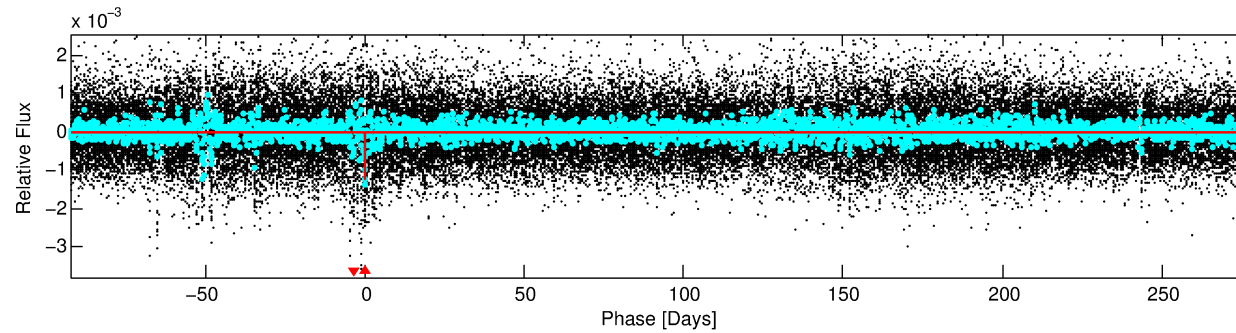
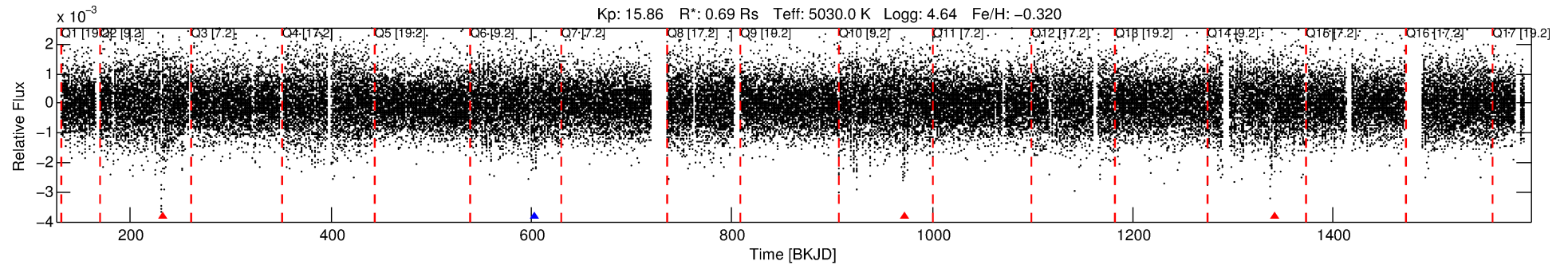
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008037316-01

No Significant Match Found

DV One-Page Summary

KIC: 8037316 Candidate: 1 of 1 Period: 369.945 d



DV Fit Results:

Period = 369.94477 [0.00955] d
Epoch = 232.5158 [0.0184] BKJD
Rp/R* = 0.0350 [0.0089]
a/R* = 161.81 [142.07]
b = 0.73 [0.57]
Seff = 0.32 [0.06]
Teq = 192 [9] K
Rp = 2.61 [0.74] Re
a = 0.9139 [0.0909] AU
Ag = 66206.48 [37386.70] [1.77σ]
Teff = 4765 [668] K [6.84σ]

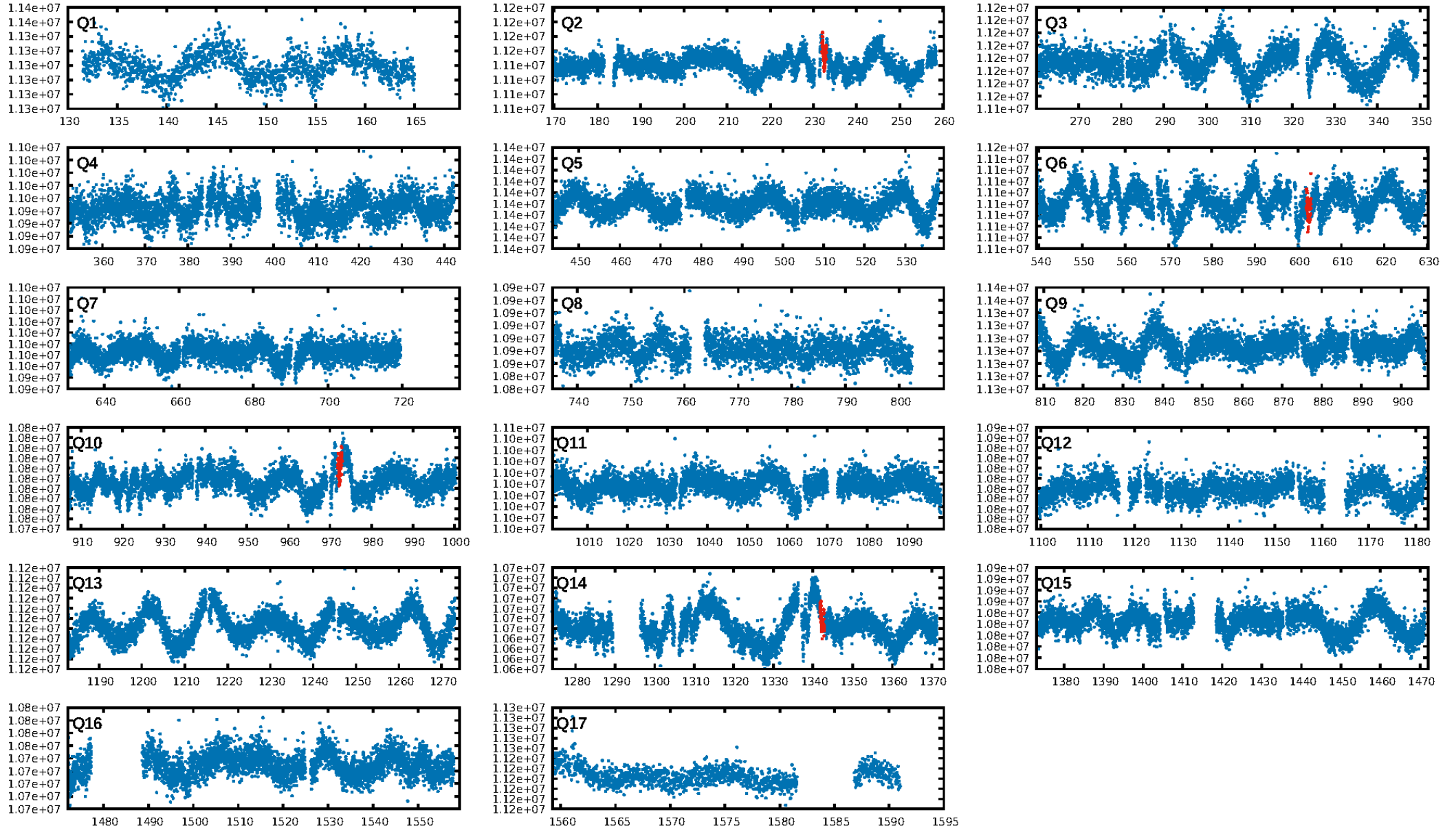
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.7%
ModelChiSquareGoF-sig: 99.9%
Bootstrap-pfa: 8.08e-11
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 1.594
Centroid-sig: 0.0%
Centroid-so: 9.263 arcsec [3.70σ]
OotOffset-rm: 6.072 arcsec [35.47σ]
KicOffset-rm: 6.002 arcsec [35.10σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

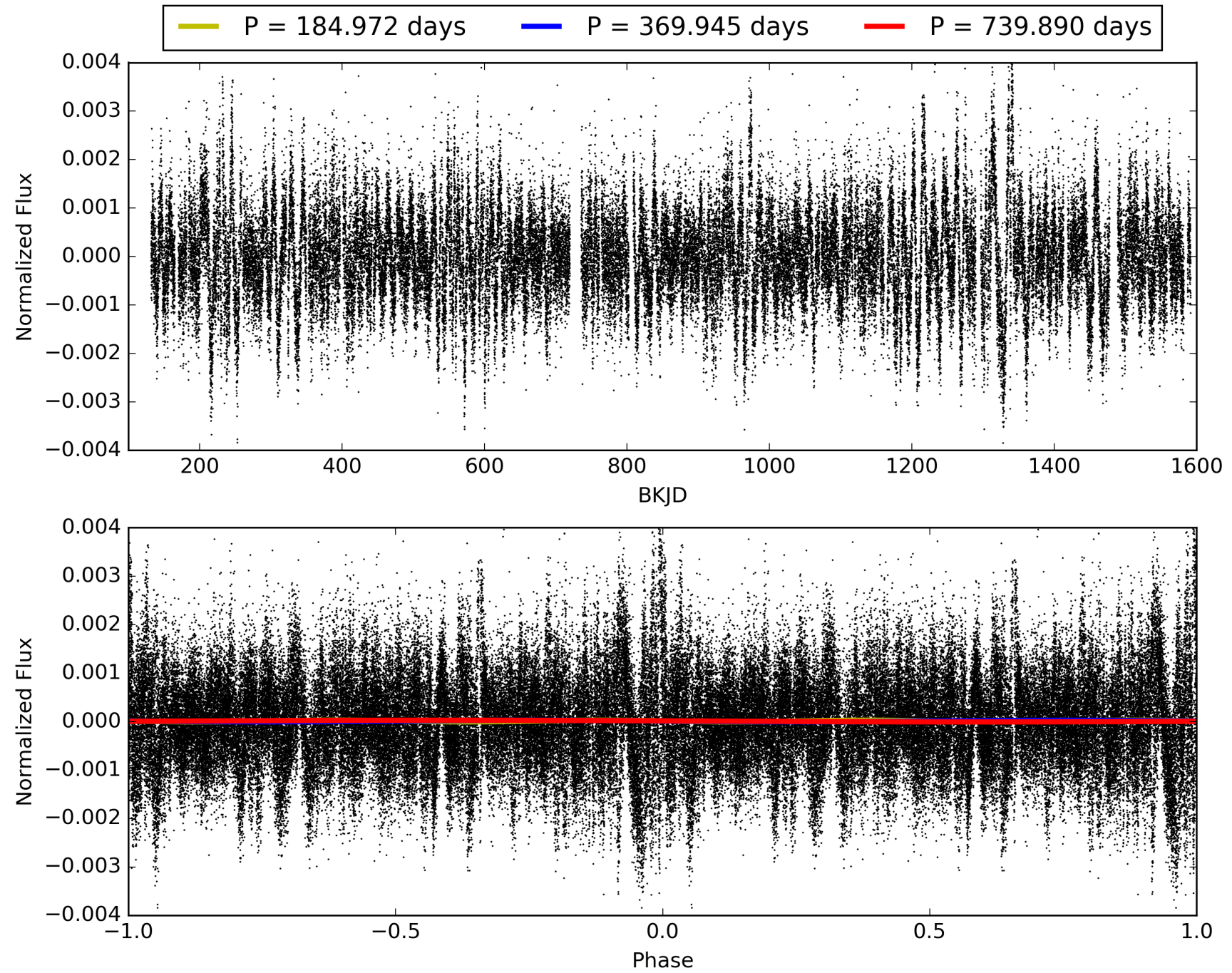
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:40:01 Z

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

TCE 008037316-01, PDC Light Curves

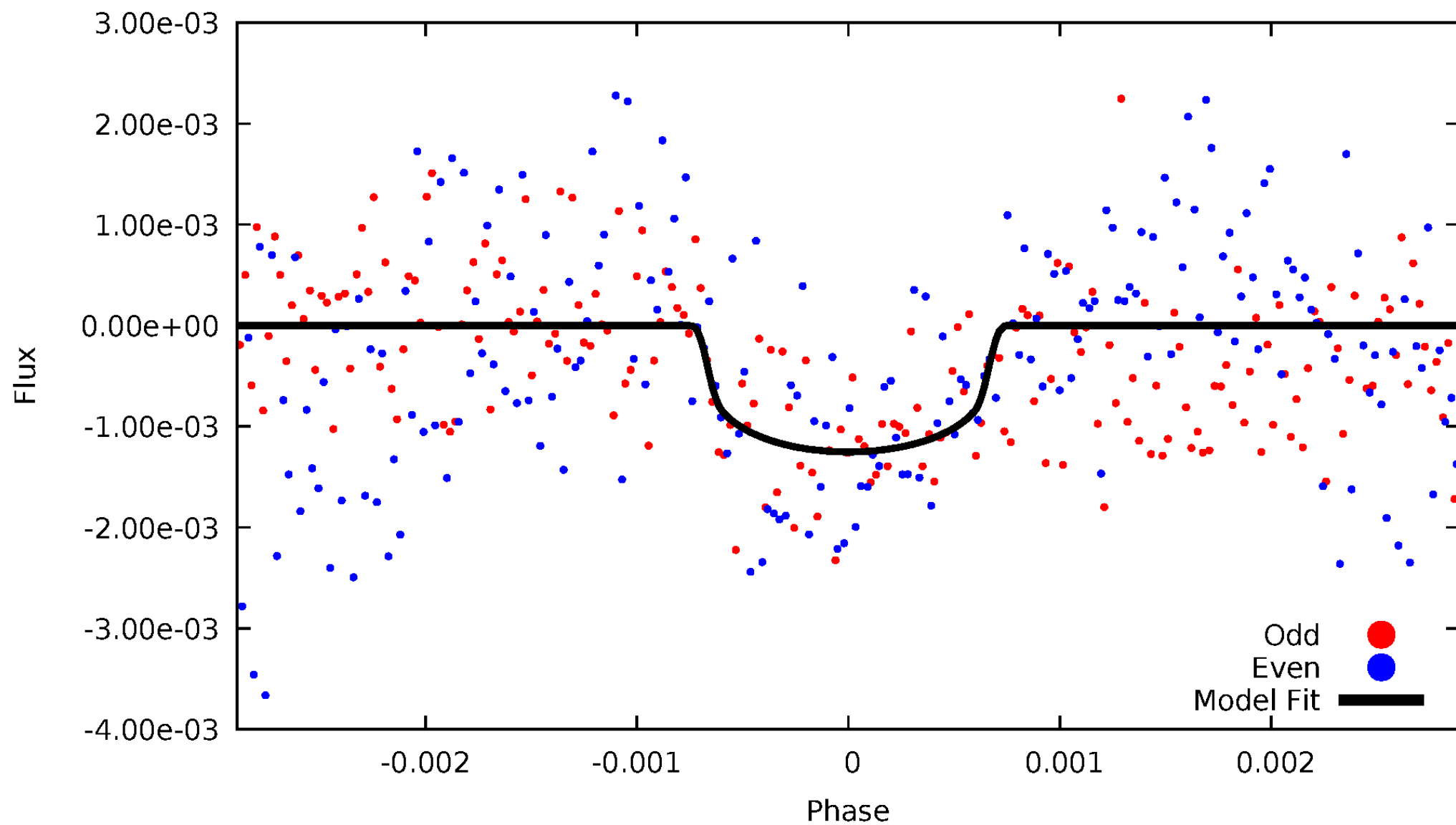


TCE 008037316-01



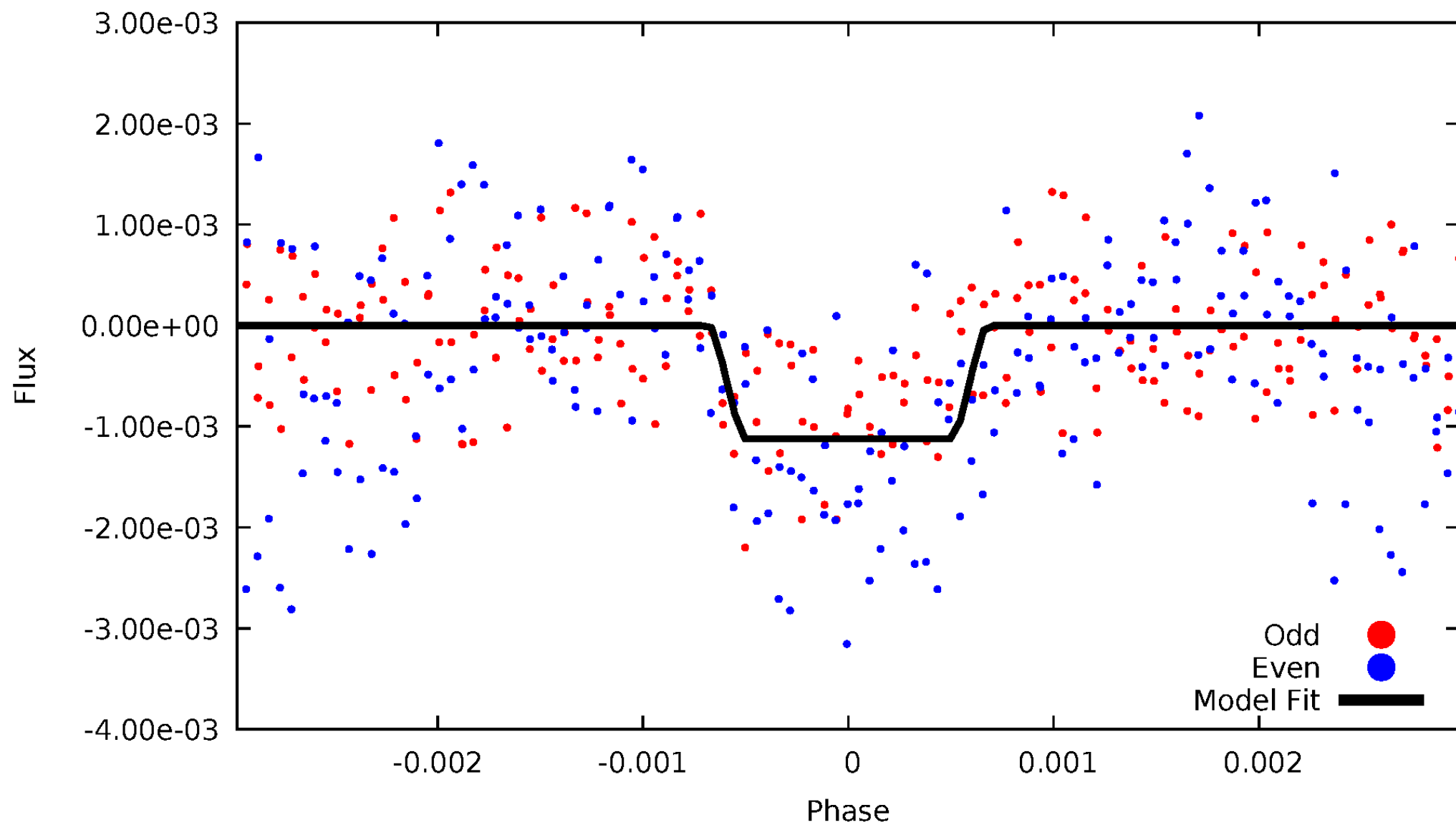
DV Odd/Even

TCE 008037316-01



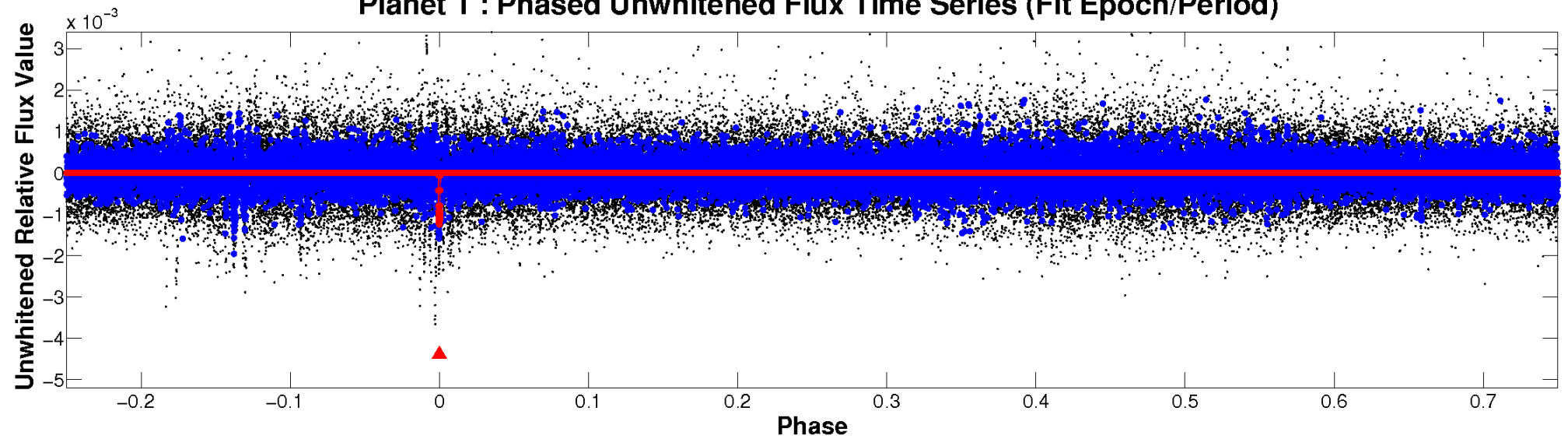
ALT Odd/Even

TCE 008037316-01

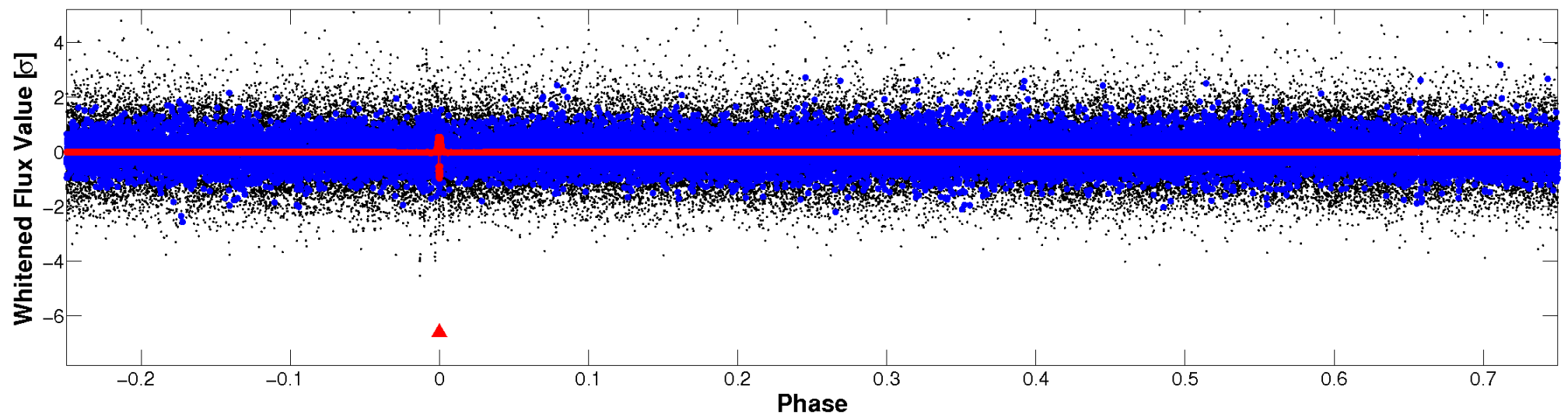


Non-Whitened Vs. Whitened Light Curve

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

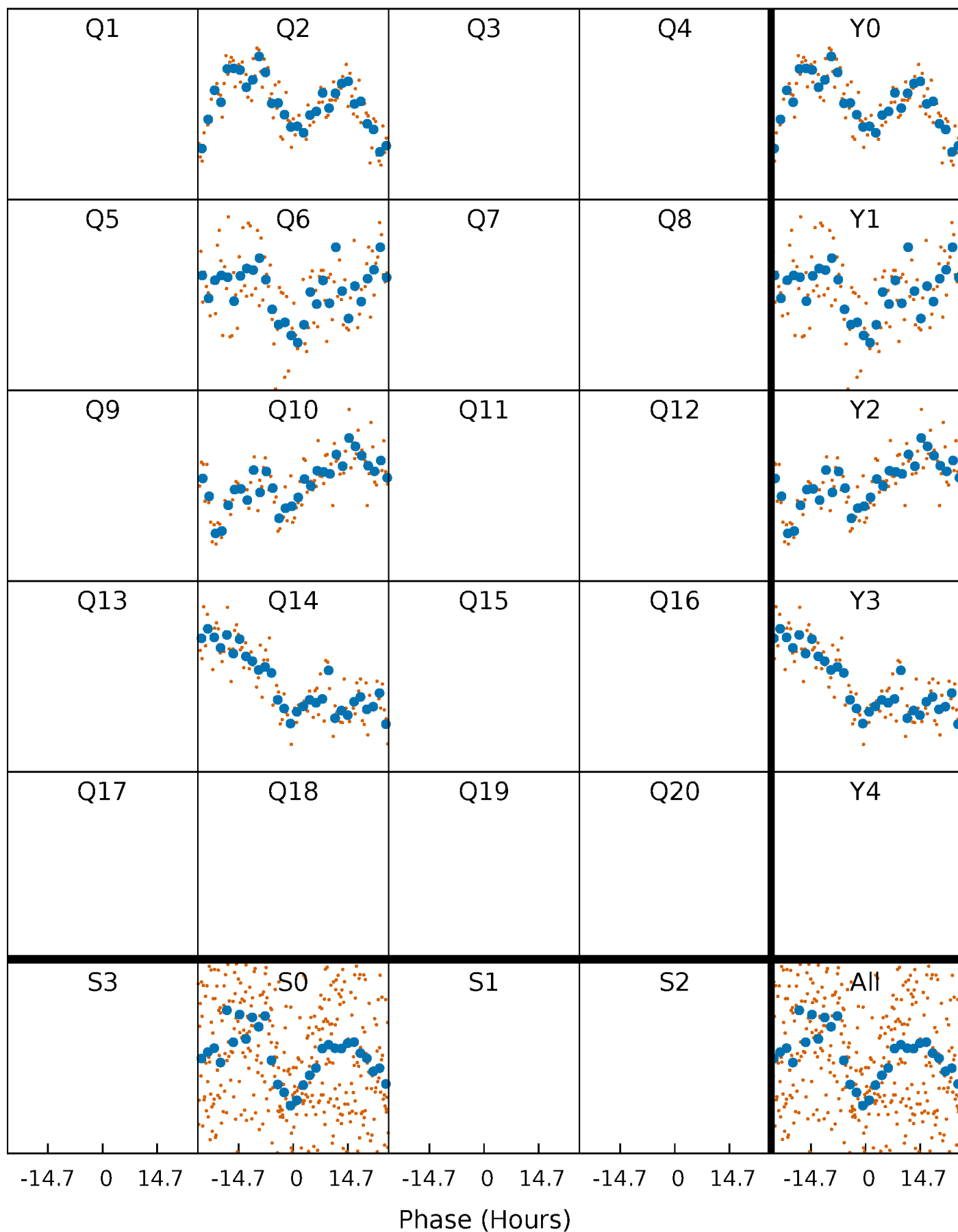


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



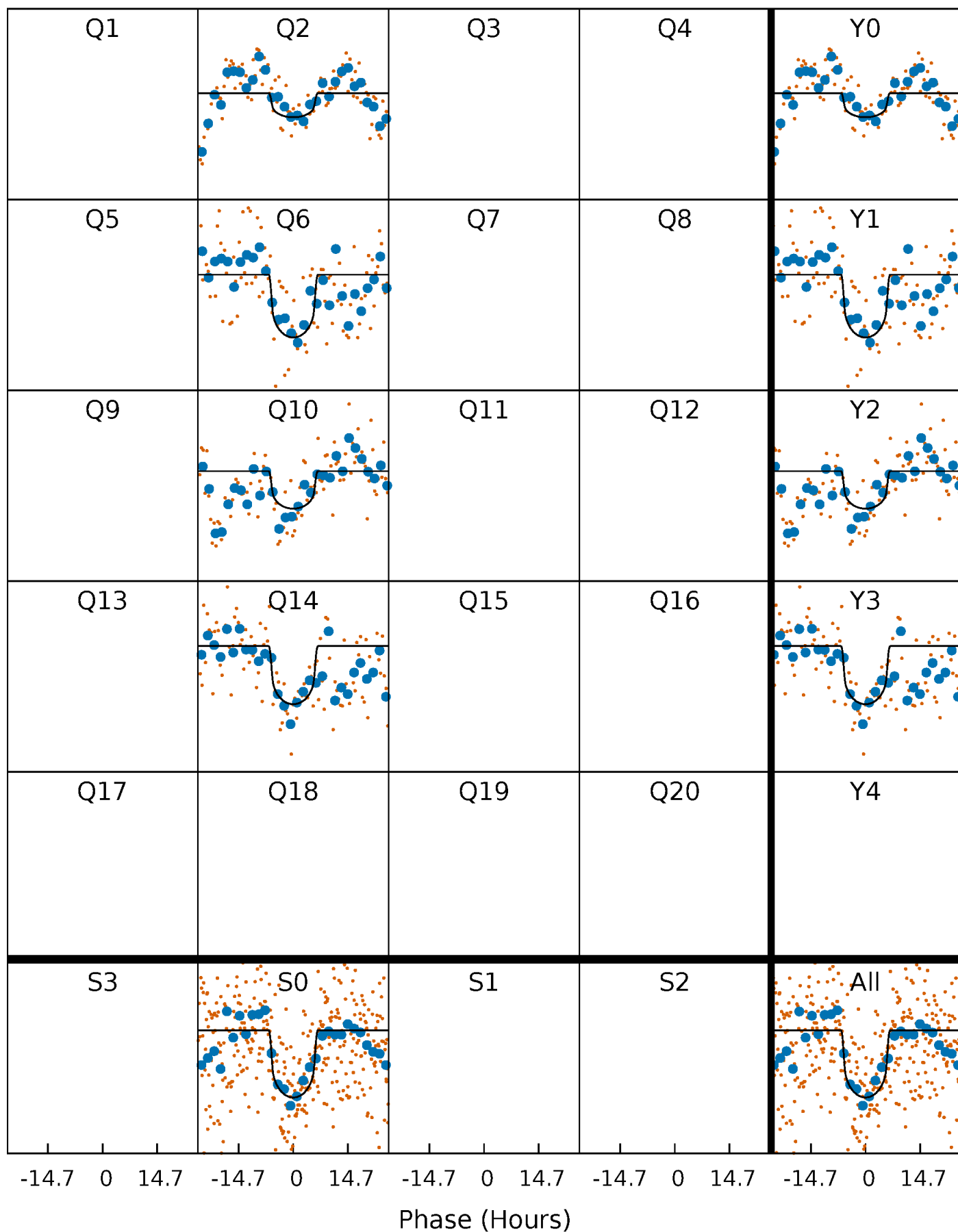
PDC Quarter-Phased Transit Curves

TCE 008037316-01 P=369.944773 Days $T_0=232.515784$ (BKJD)



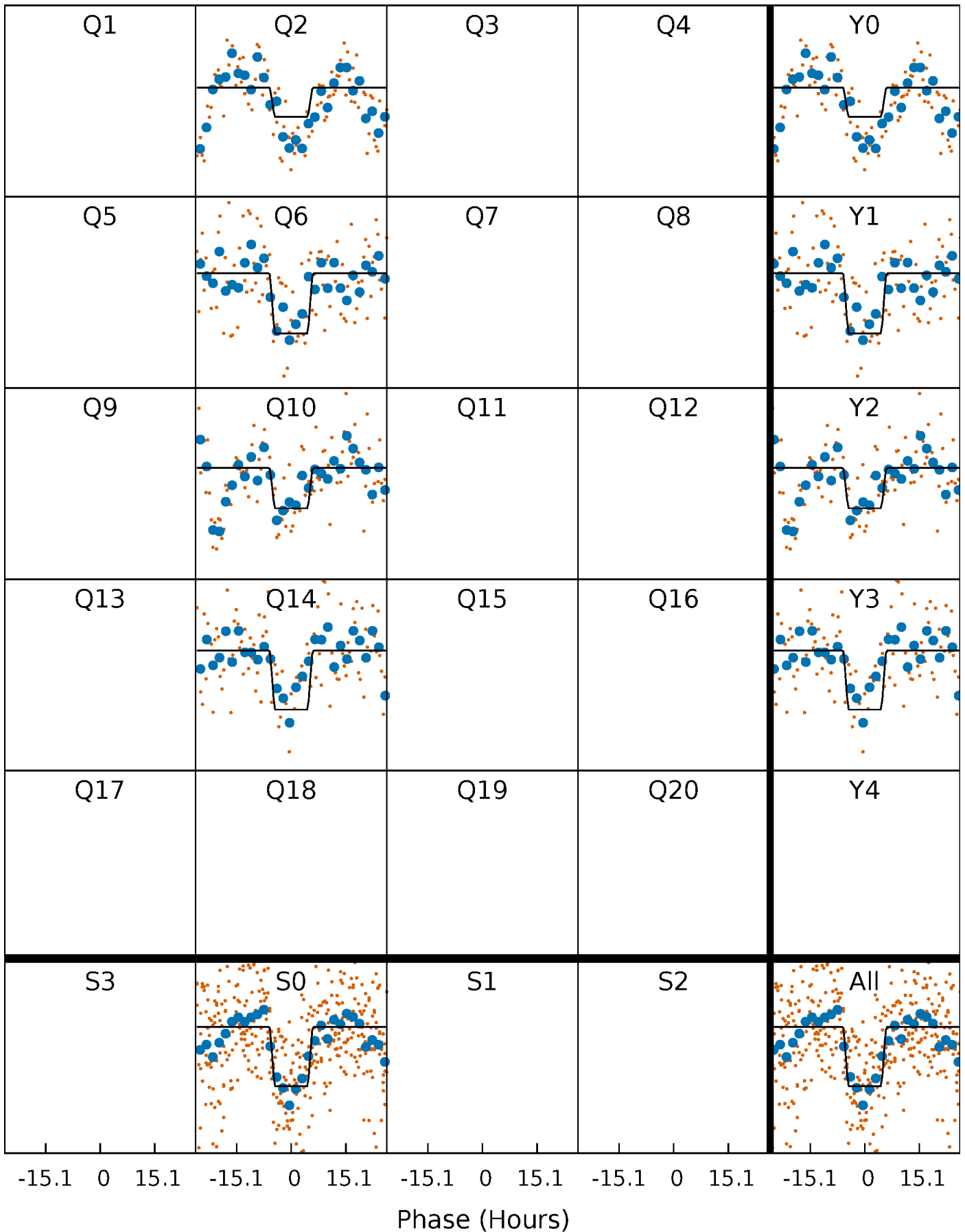
DV Quarter-Phased Transit Curves

TCE 008037316-01 P=369.944773 Days $T_0=232.515784$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

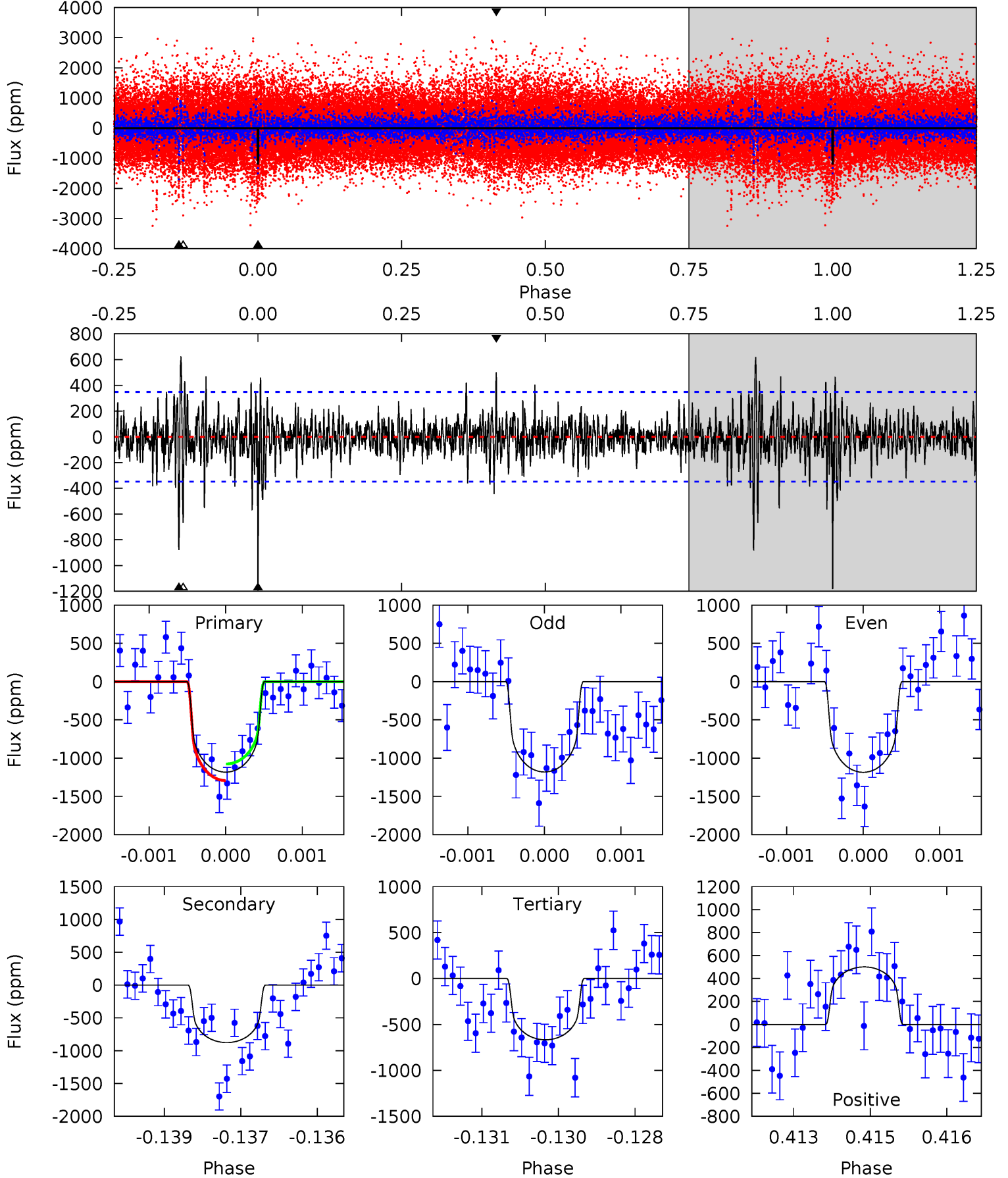
TCE 008037316-01 P=369.949604 Days $T_0=232.499939$ (BKJD)



DV Model-Shift Uniqueness Test

008037316-01, P = 369.944773 Days, E = 232.515784 Days

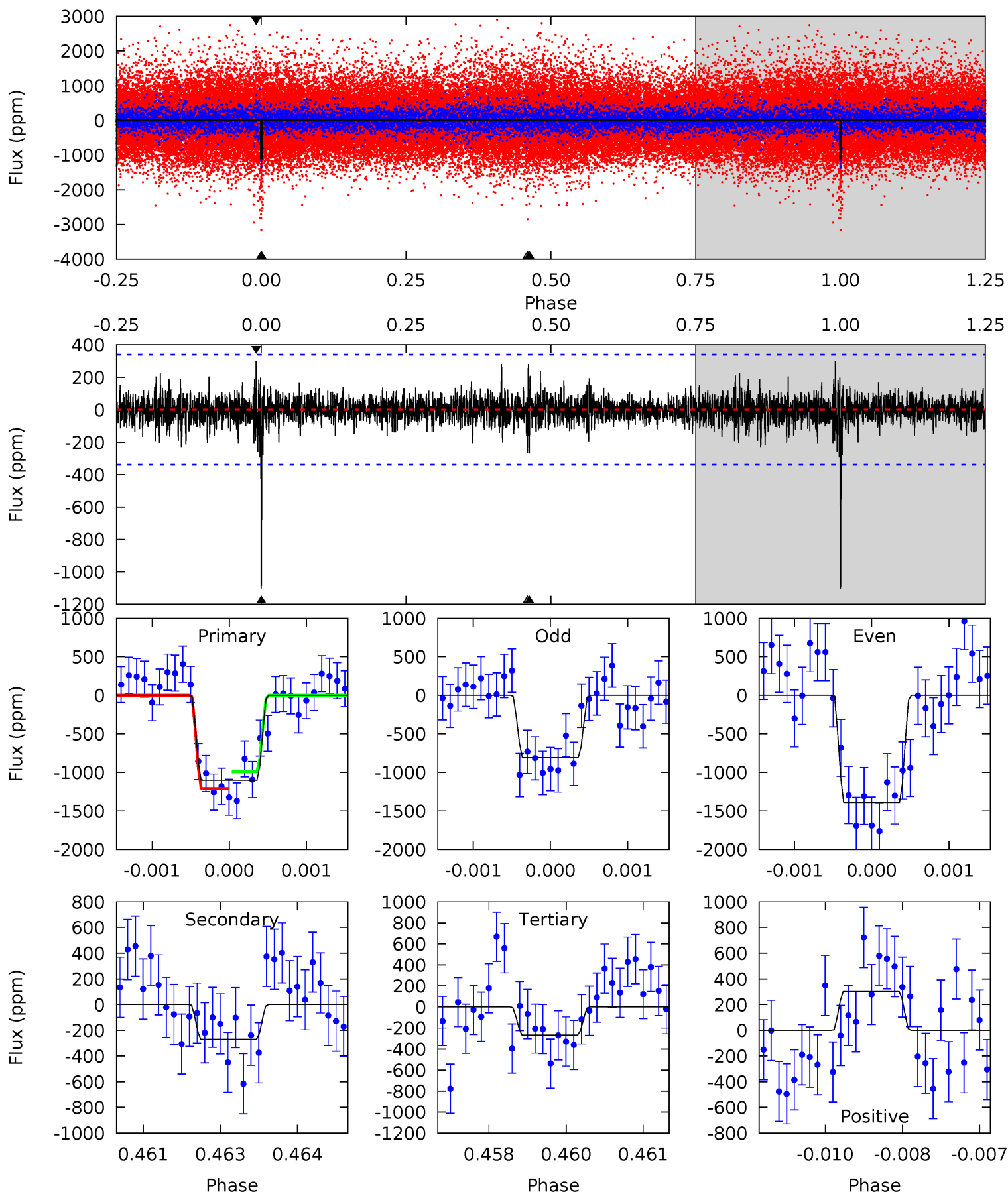
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	13.5	10.3	7.73	5.38	3.18	1.85	7.96	10.5	3.23	5.80	0.03	1.00	0.34	1.67



Alt Model-Shift Uniqueness Test

008037316-01, P = 369.949604 Days, E = 232.499939 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	4.29	4.24	4.81	5.39	3.20	0.93	13.3	12.7	0.05	-0.52	4.62	1.22	0.22	1.71



Stellar Parameters For KIC 008037316

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5030^{+136}_{-151}	$4.638^{+0.030}_{-0.070}$	$-0.320^{+0.300}_{-0.300}$	$0.685^{+0.086}_{-0.050}$	$0.753^{+0.071}_{-0.078}$	$3.292^{+0.514}_{-0.778}$
	+3%/-3%	+1%/-2%	+94%/-94%	+13%/-7%	+9%/-10%	+16%/-24%
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 008037316-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-877 ± 65	$2.61^{+0.73}_{-0.63}$	270^{+10}_{-9}	4722^{+612}_{-424}	59376^{+45115}_{-23502}
Alt.	-270 ± 63	$2.54^{+0.72}_{-0.73}$	270^{+10}_{-9}	3843^{+464}_{-375}	18836^{+17401}_{-8105}

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 $A_{obs} \gg 1.0$

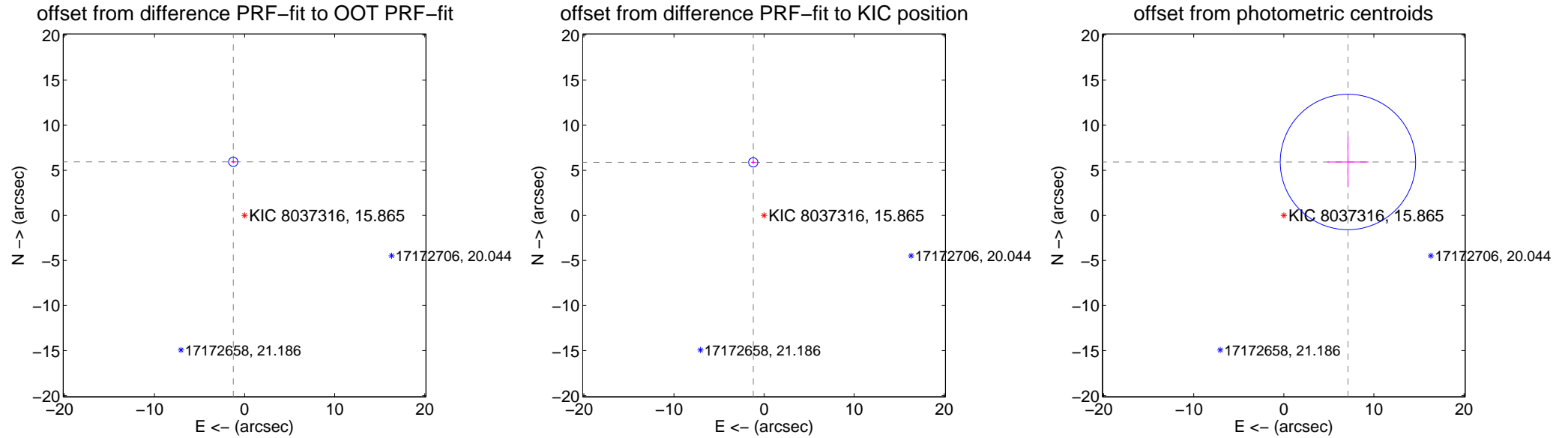
DV Centroid Data

Supplemental centroid analysis for 008037316-01. Kepler magnitude: 15.87. Transit SNR 8.98

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.072 \pm 0.171	35.47	1.256 \pm 0.227	5.941 \pm 0.168
PRF-fit source offset from KIC position	6.002 \pm 0.171	35.10	1.200 \pm 0.227	5.881 \pm 0.168
photometric centroid source offset	9.26 \pm 2.50	3.70	-7.12 \pm 2.28	5.92 \pm 2.79

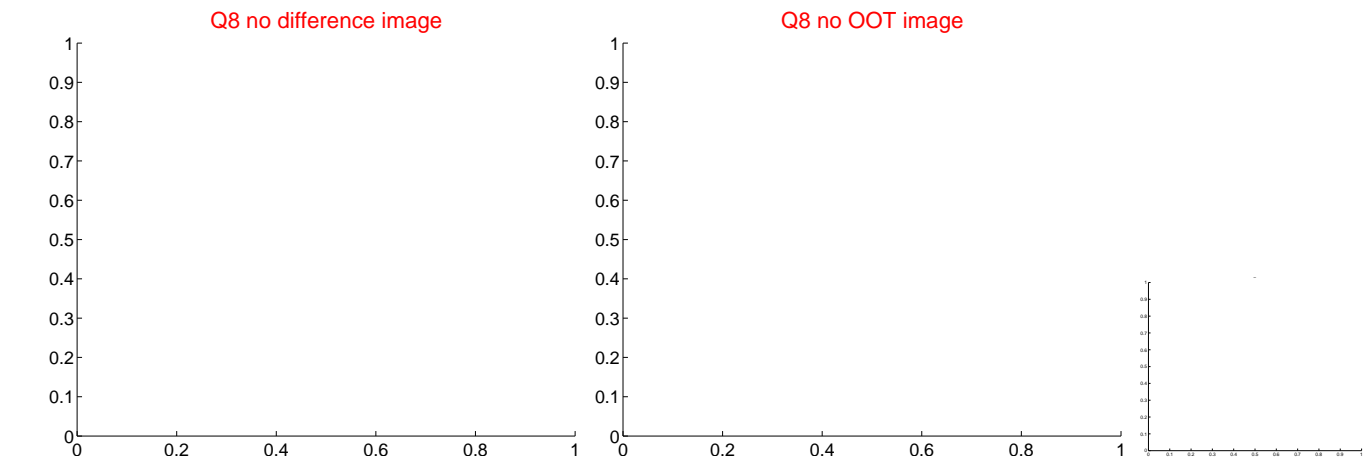
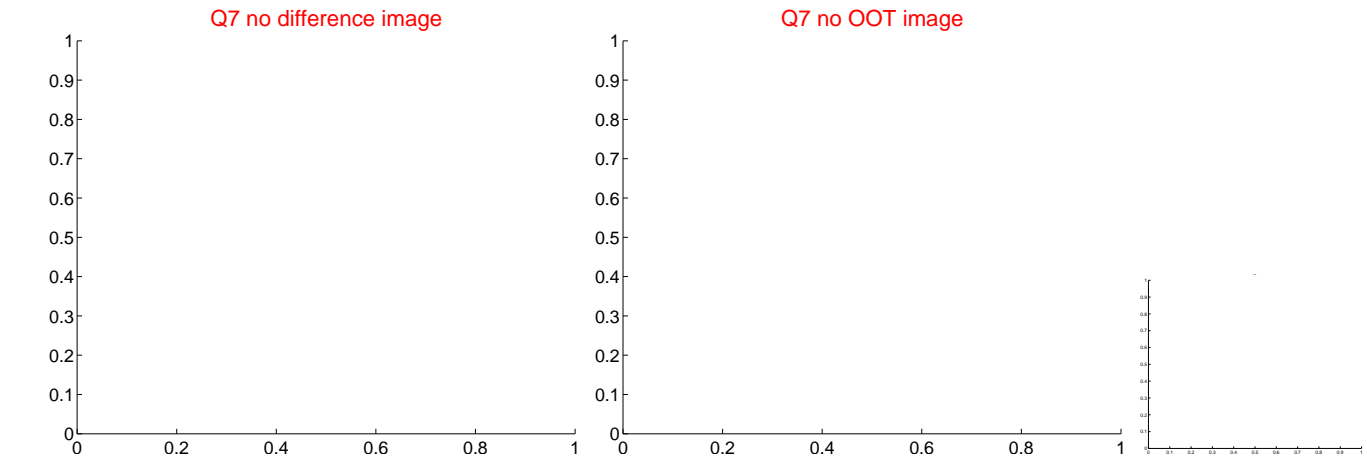
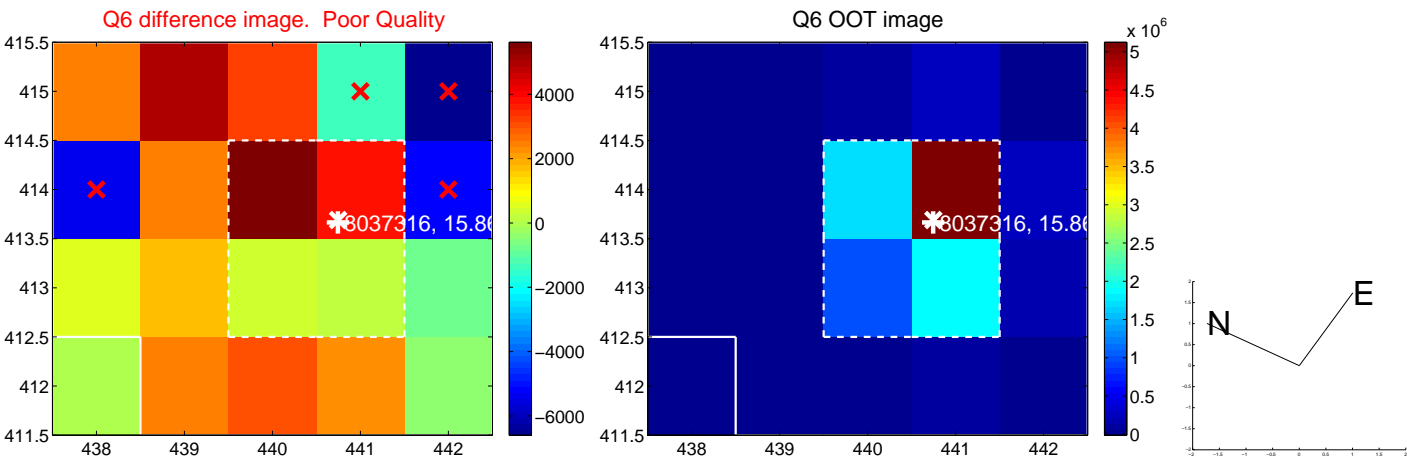
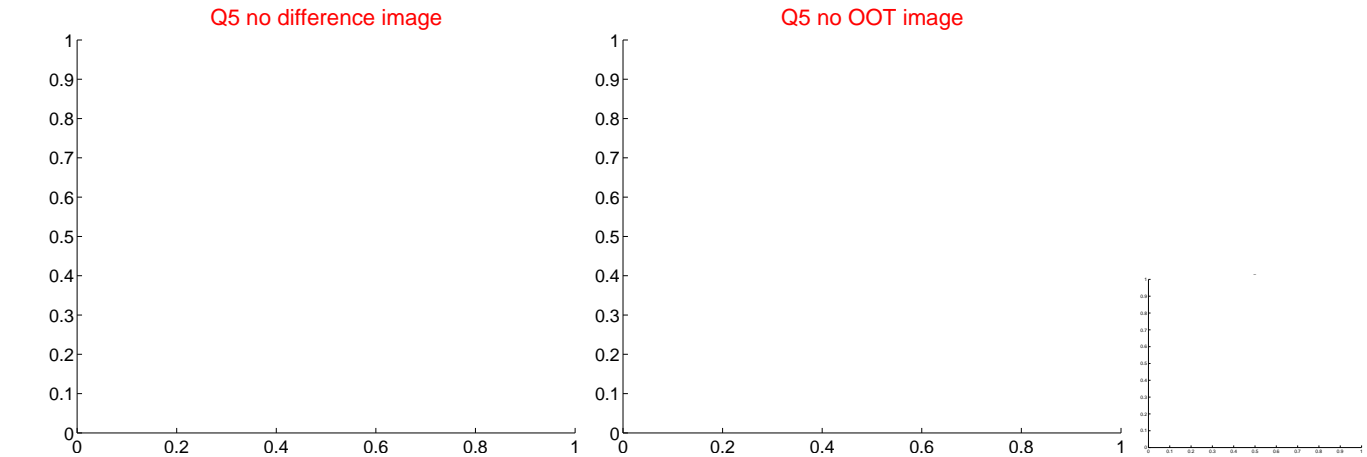


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

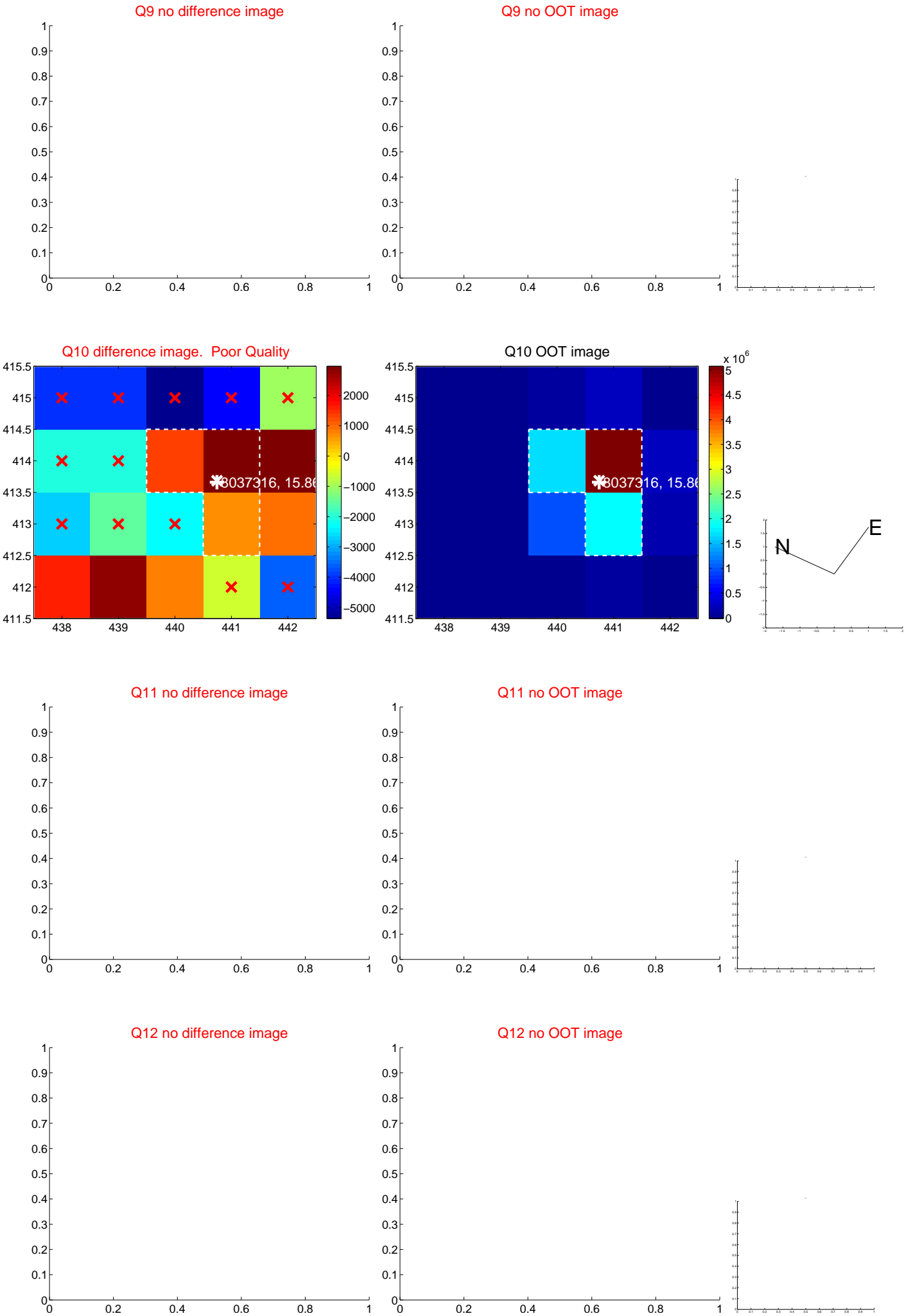
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



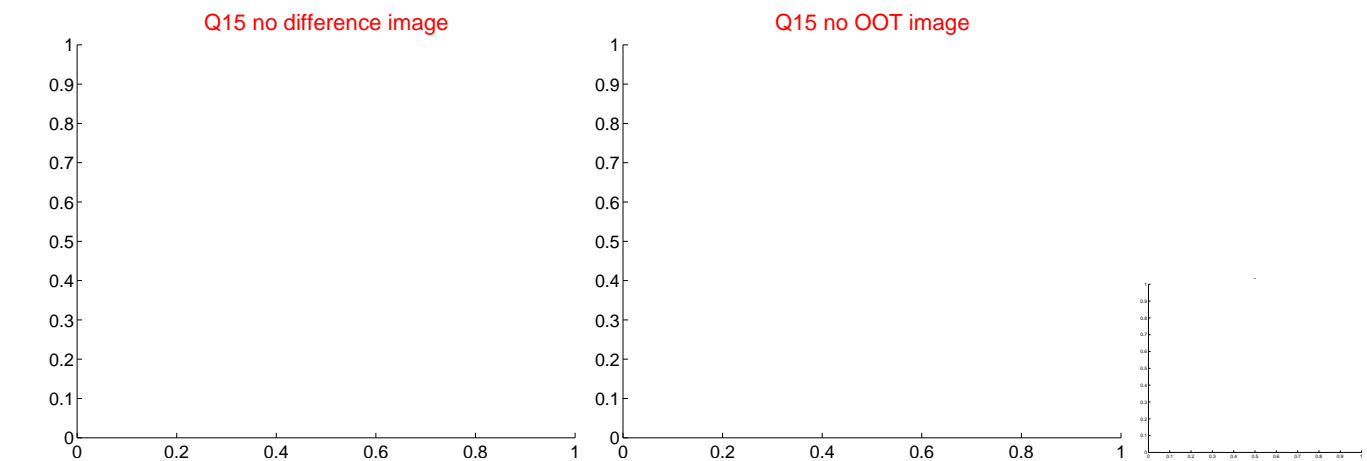
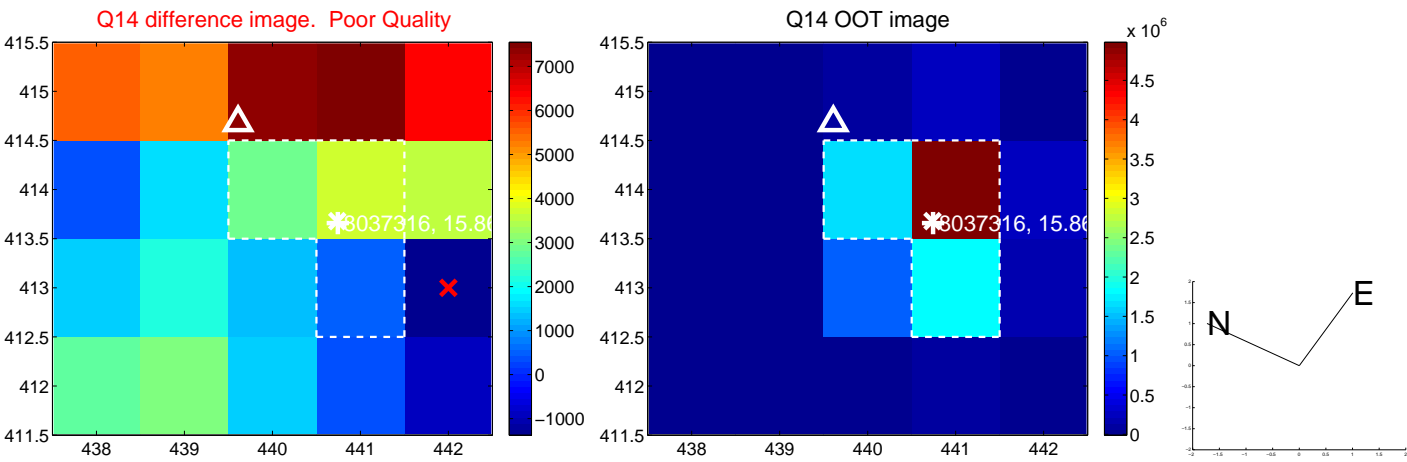
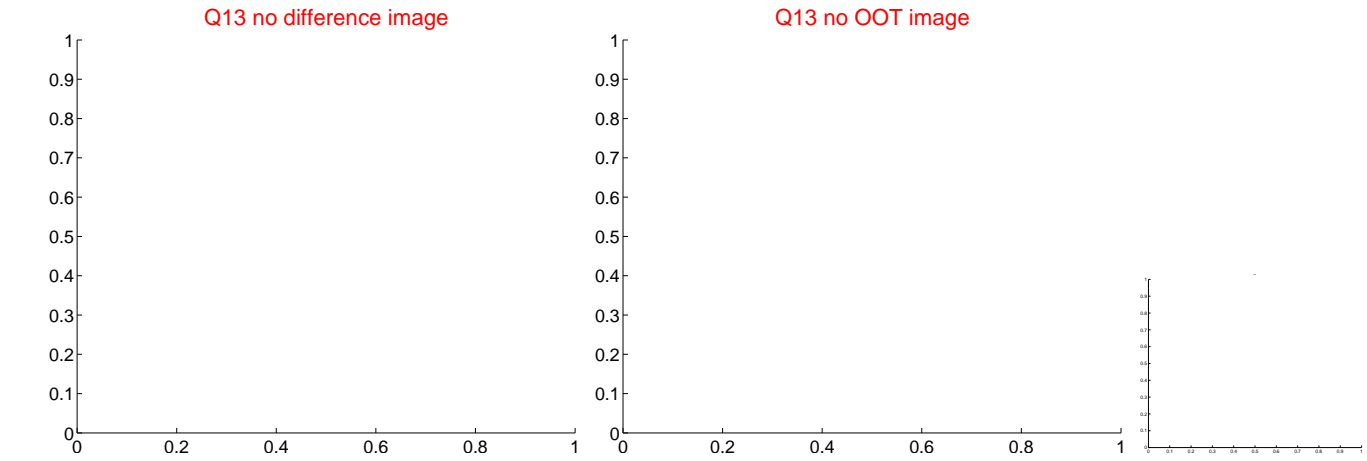
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



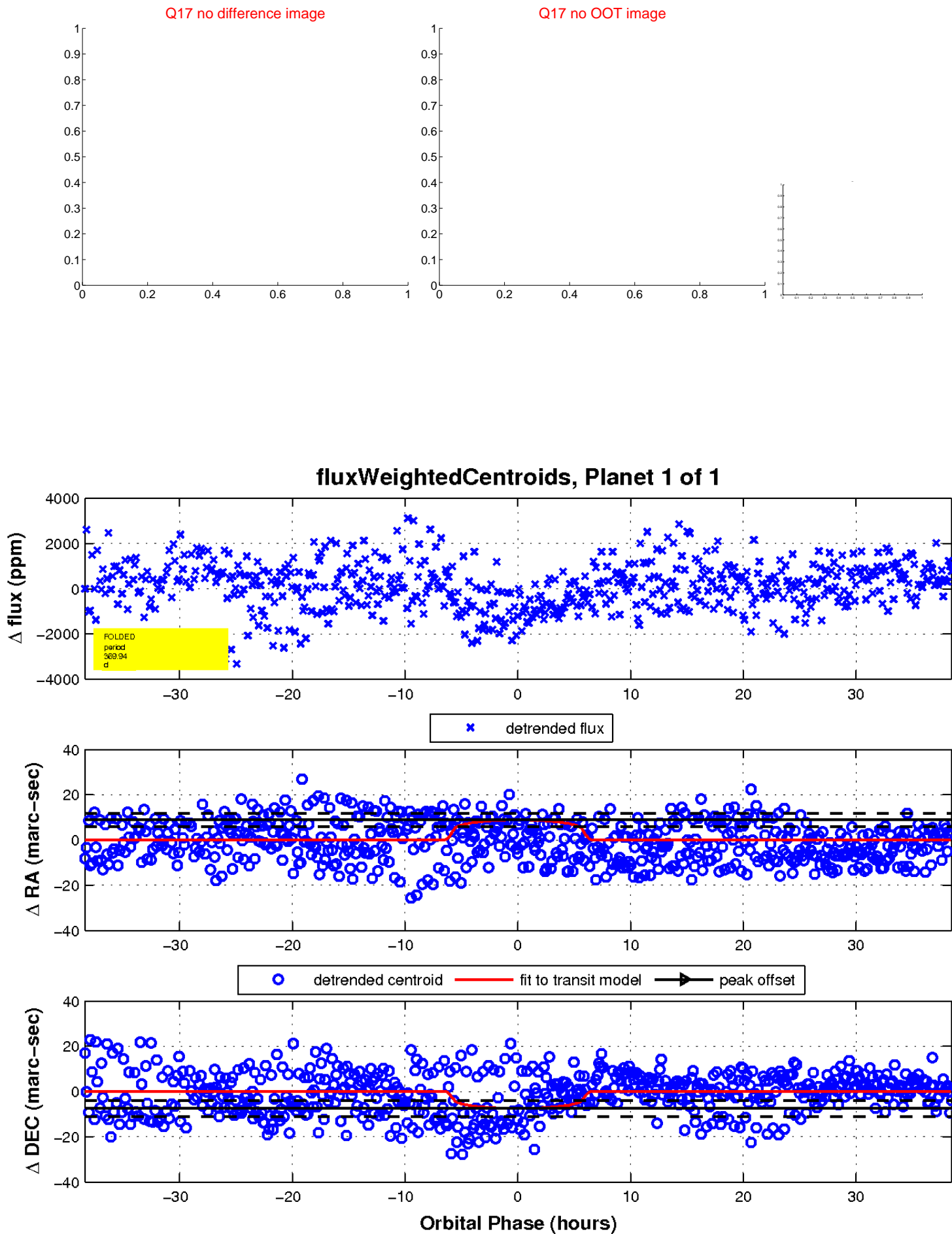
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

