

KIC 008818311

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})
008818311-01	OBS	No	374.783717	136.561616	1473.4	68.273	9.9	17.1	1.17	6481	5.91	1.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008818311-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

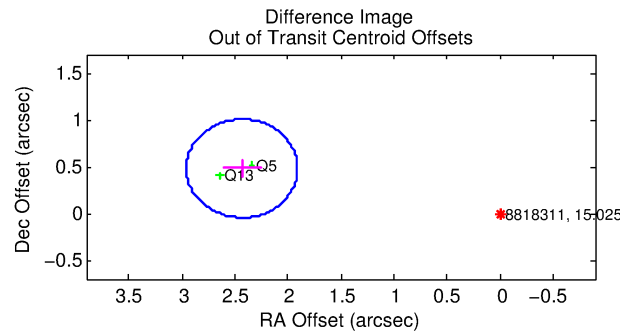
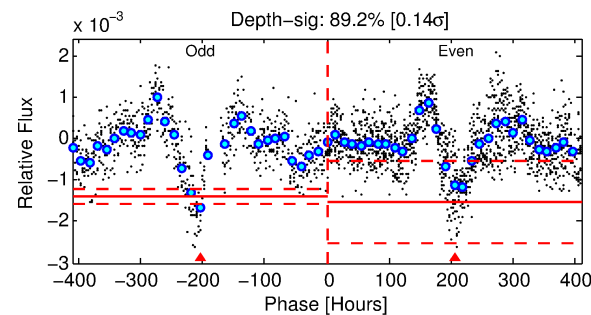
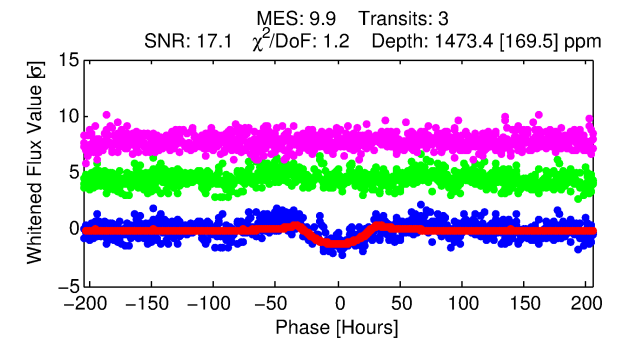
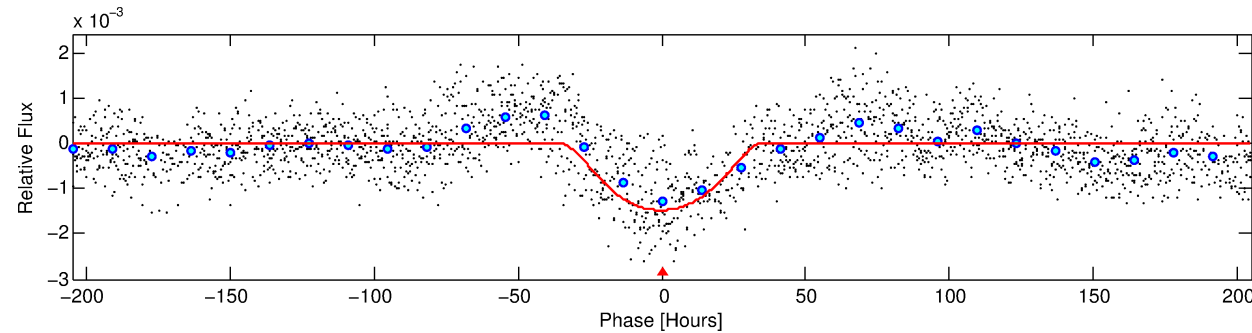
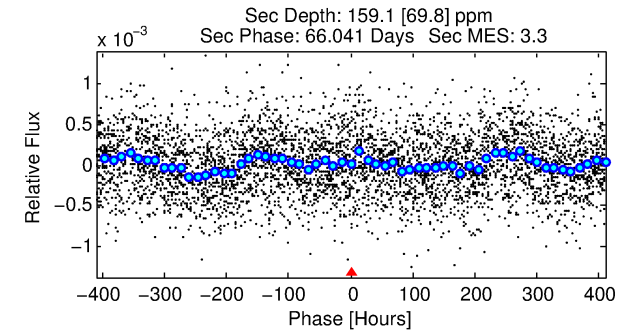
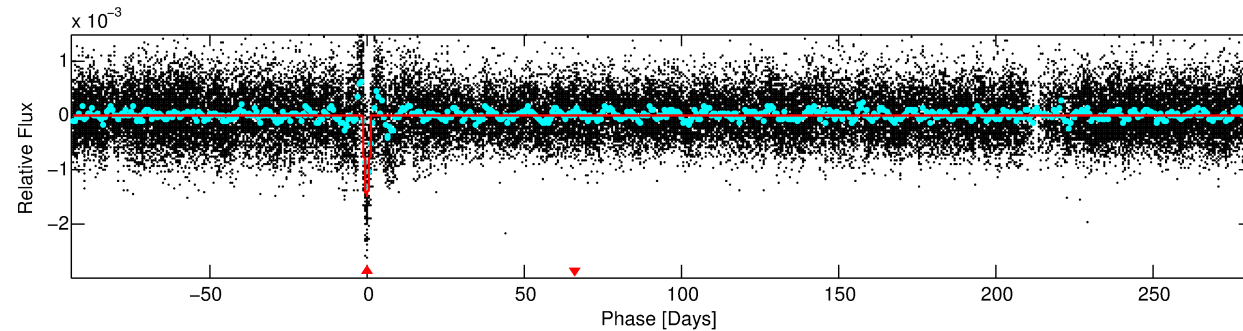
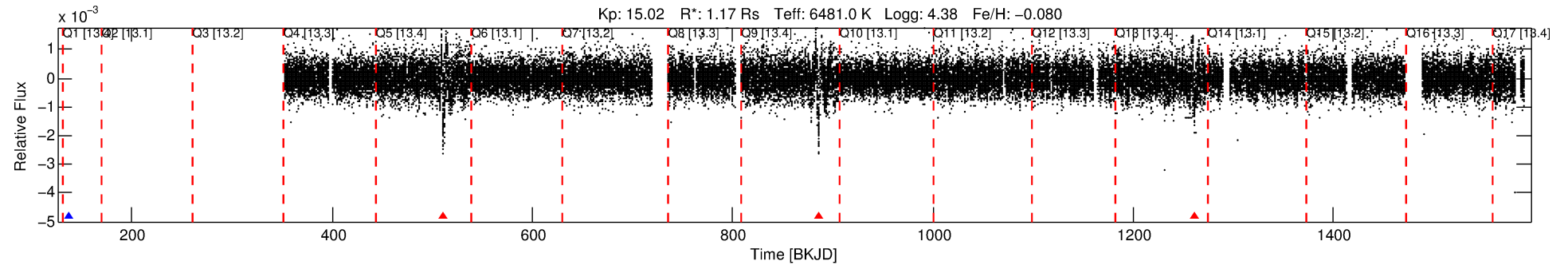
Ephemeris Match Information For 008818311-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008818311-01	8818311	008752295-01	8752295	1:1	761.7	-191	-2	15.61	15.03	1.36	Col-Anomaly	1	4.23	0.64

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8818311 Candidate: 1 of 1 Period: 374.784 d



DV Fit Results:

Period = 374.78372 [0.05376] d
Epoch = 136.5616 [0.1039] BKJD
Rp/R* = 0.0463 [0.0092]
a/R* = 17.13 [2.21]
b = 0.96 [0.02]
Seff = 1.86 [0.73]
Teq = 298 [29] K
Rp = 5.91 [2.18] Re
a = 1.0796 [0.2755] AU
Ag = 2917.95 [2028.97] [1.44σ]
Teff = 3384 [518] K [5.95σ]

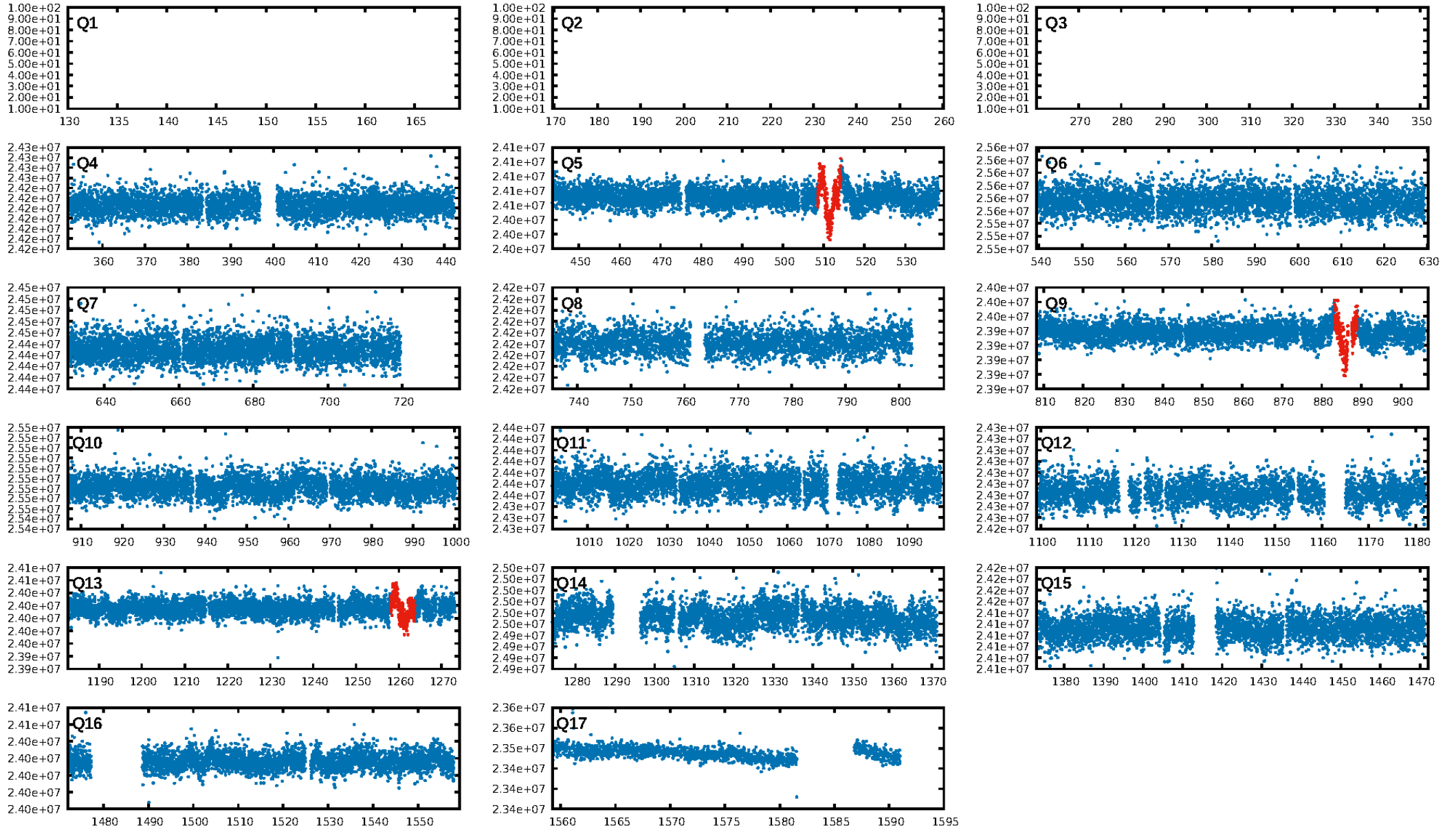
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.87e-23
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -0.2017
Centroid-sig: 86.4%
Centroid-so: 1.345 arcsec [1.92σ]
OotOffset-rm: 2.481 arcsec [14.17σ]
KicOffset-rm: 2.345 arcsec [10.58σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

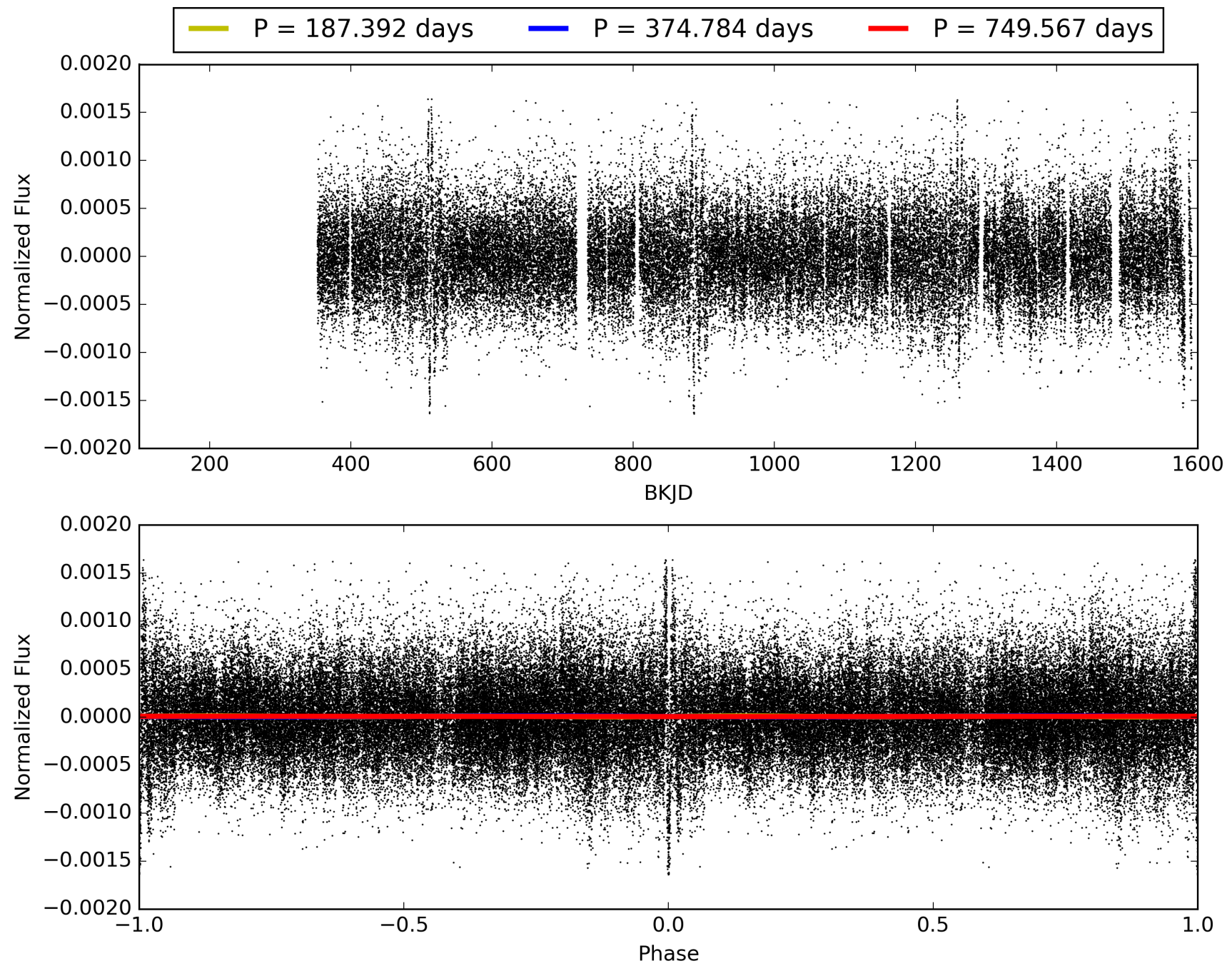
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:13:47 Z

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

TCE 008818311-01, PDC Light Curves

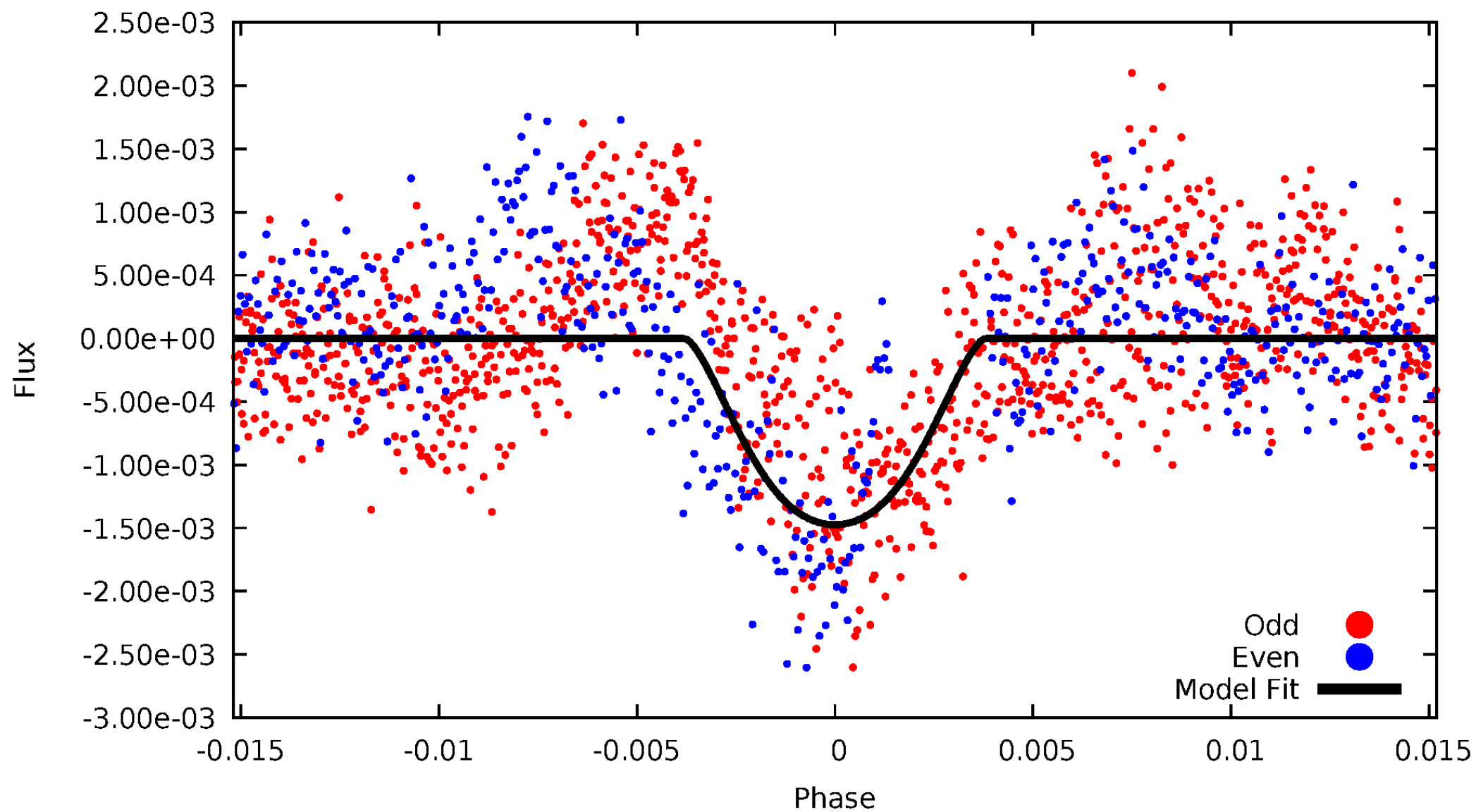


TCE 008818311-01



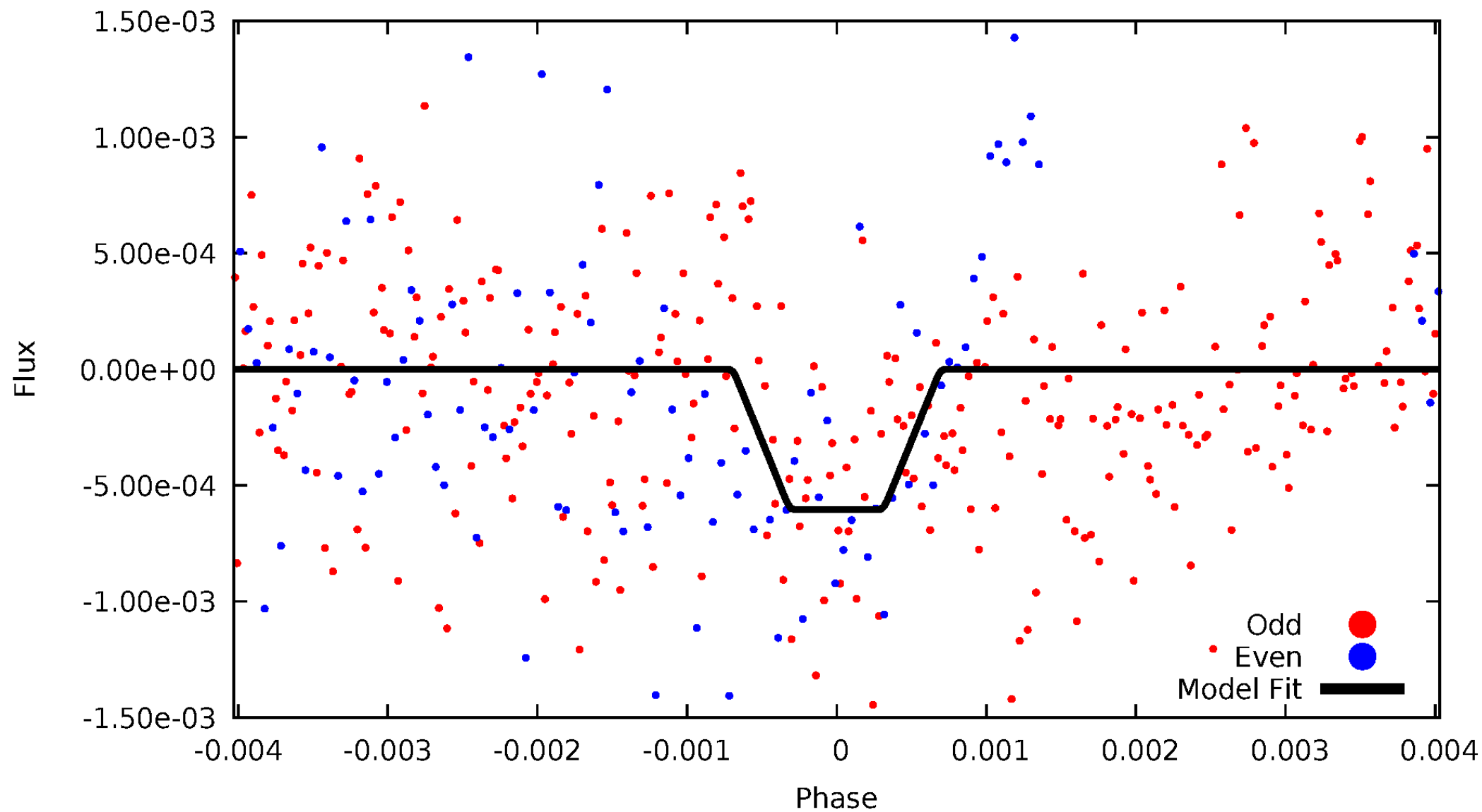
DV Odd/Even

TCE 008818311-01



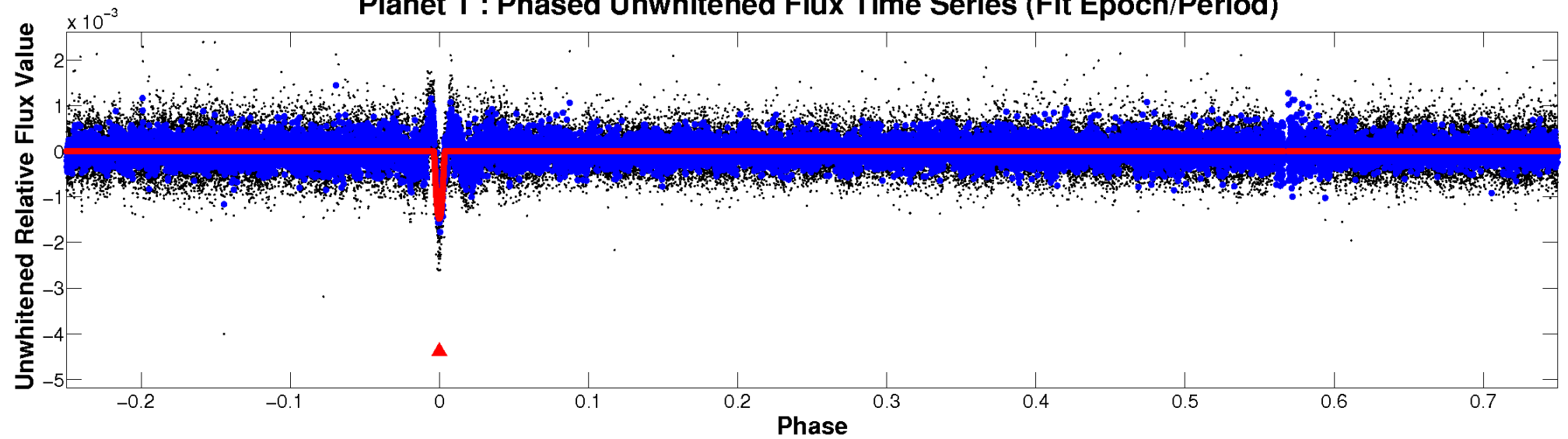
ALT Odd/Even

TCE 008818311-01

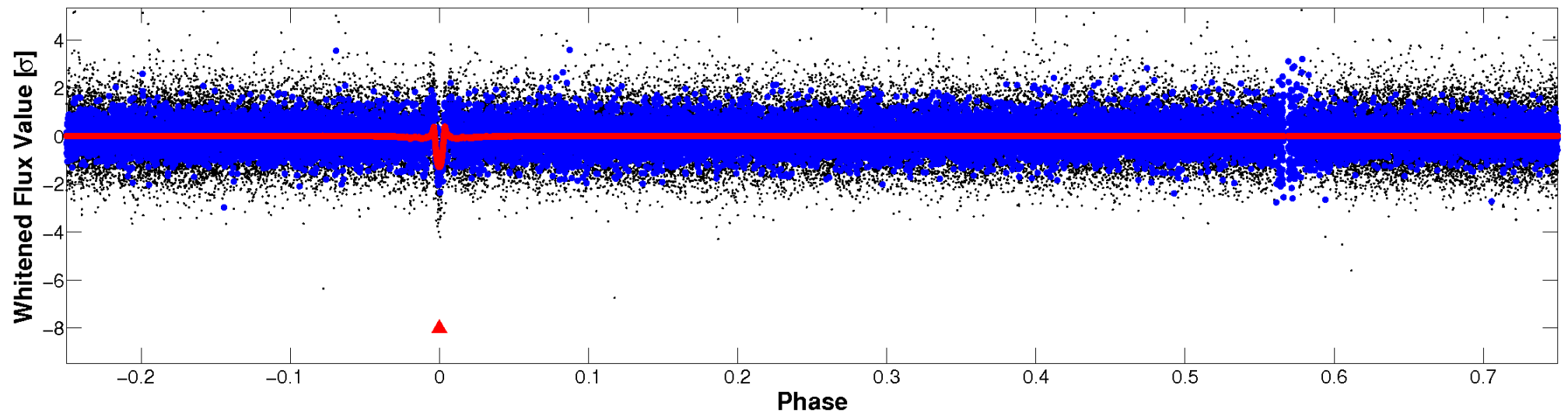


Non-Whitened Vs. Whitened Light Curve

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

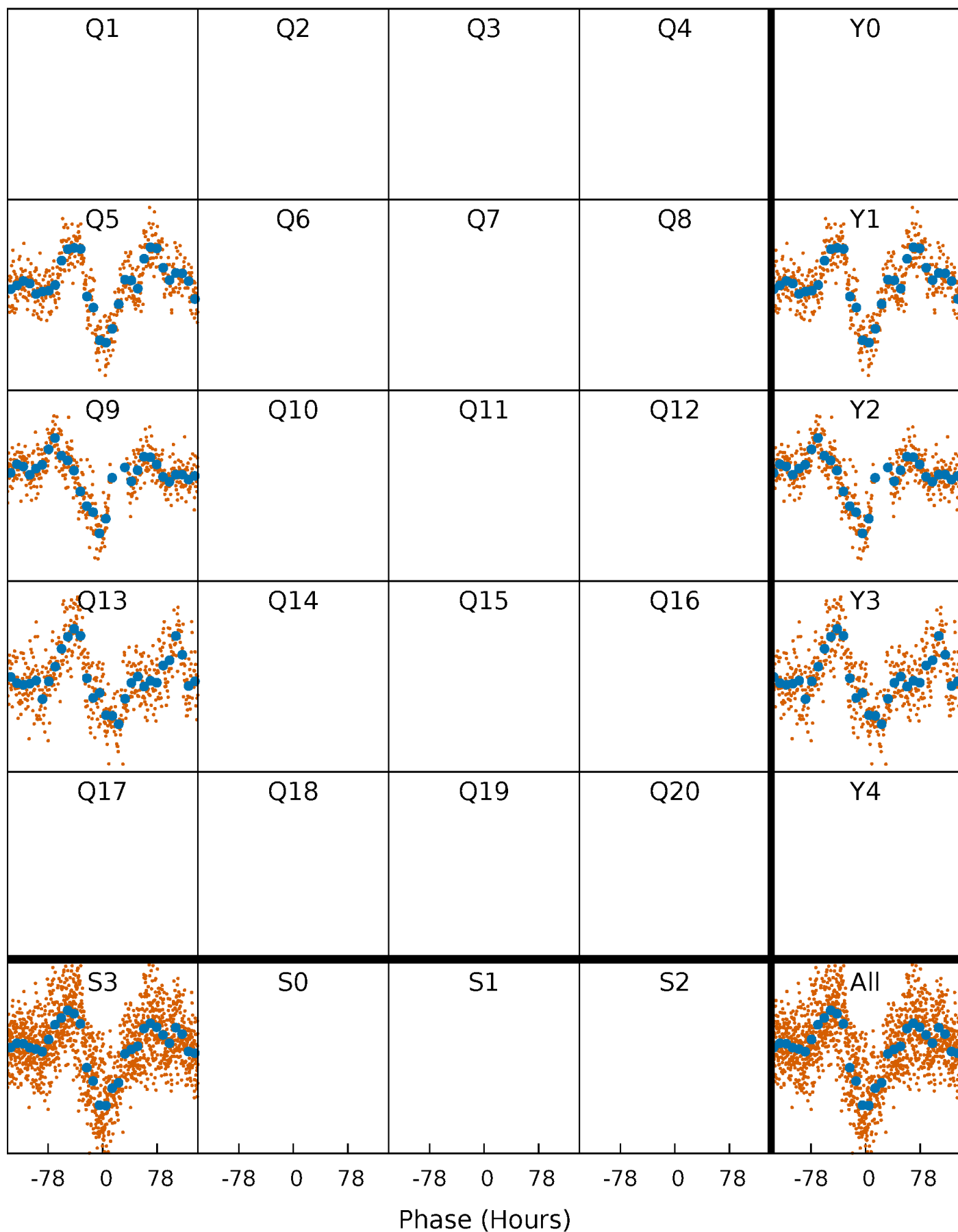


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



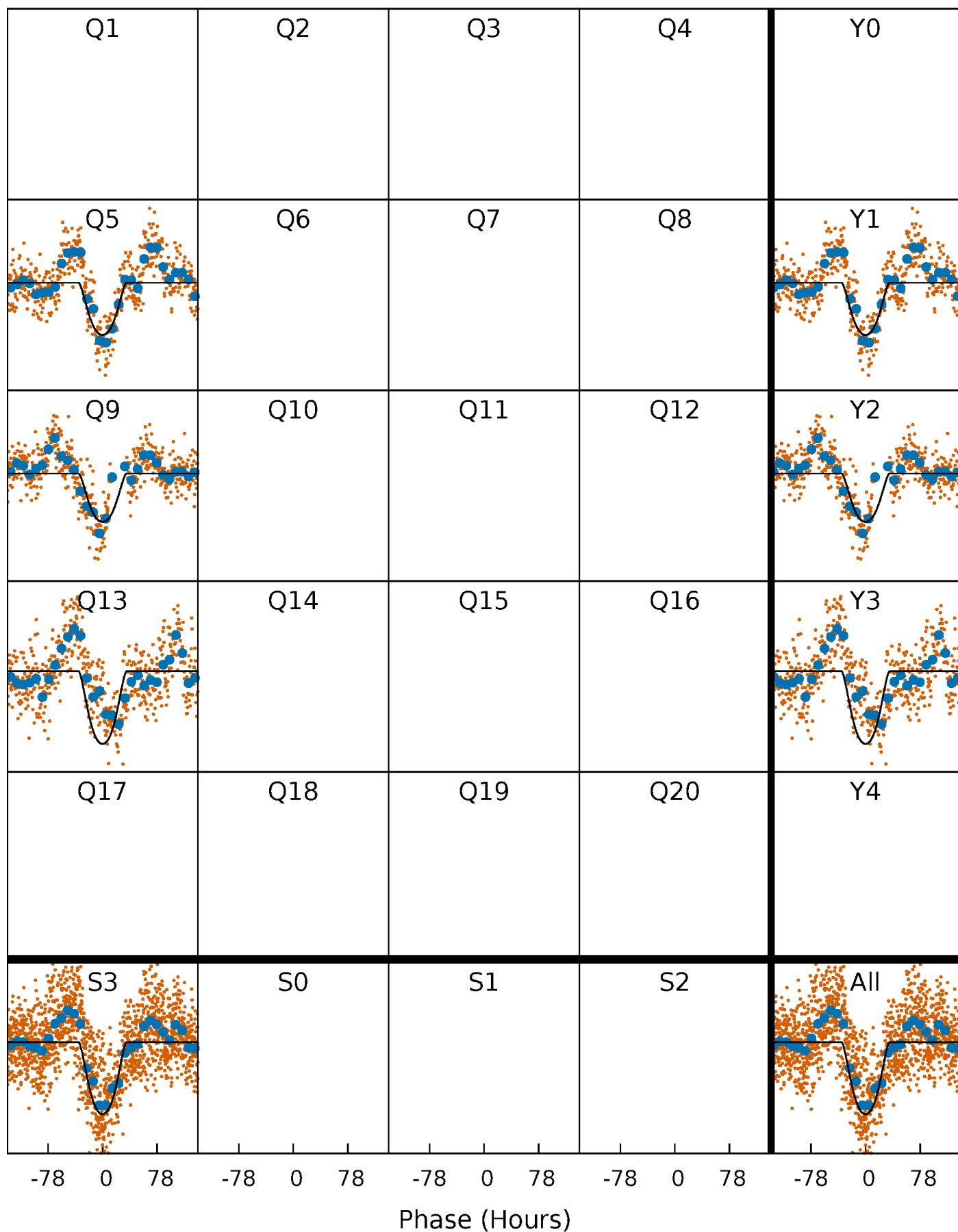
PDC Quarter-Phased Transit Curves

TCE 008818311-01 P=374.783717 Days $T_0=136.561616$ (BKJD)



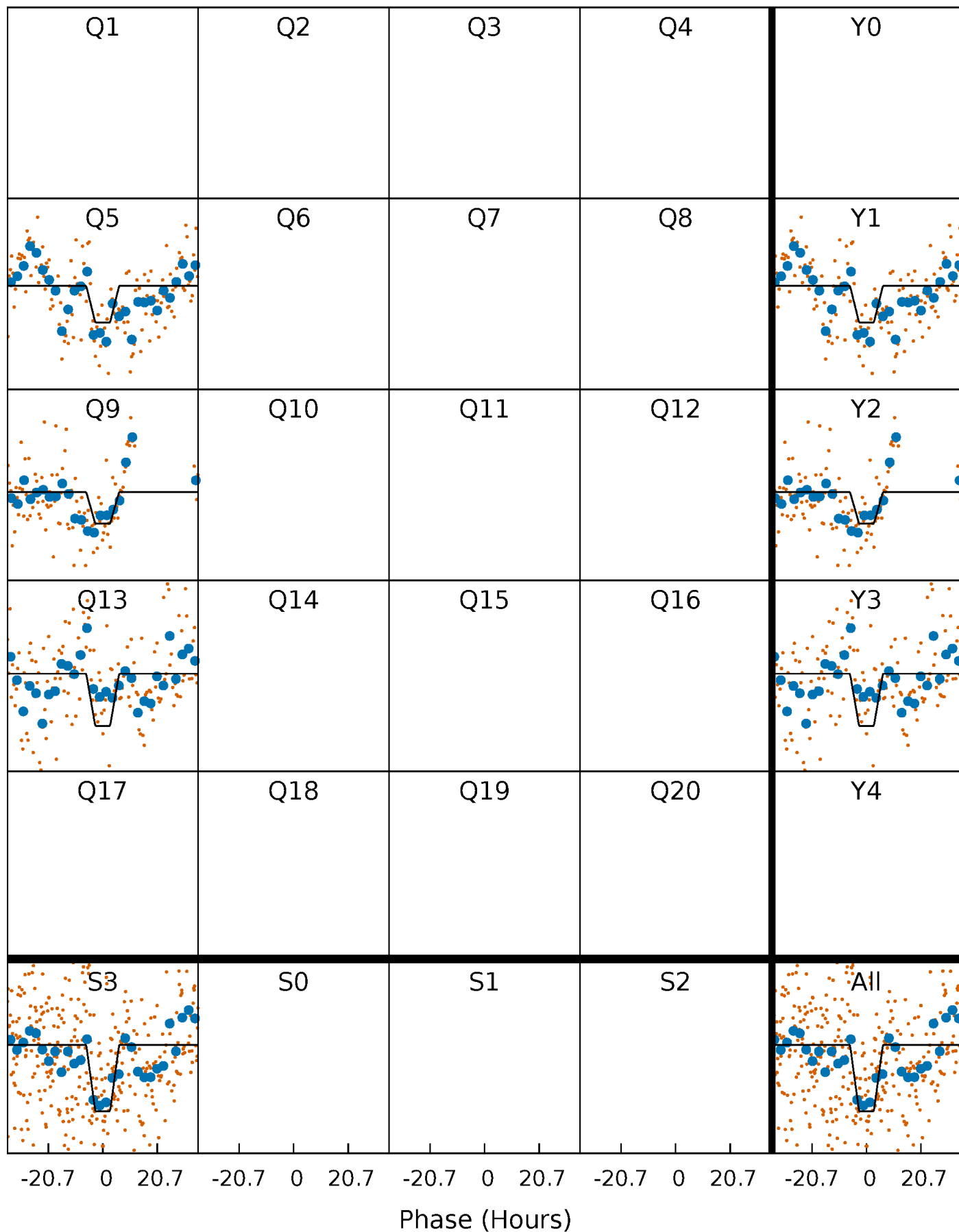
DV Quarter-Phased Transit Curves

TCE 008818311-01 P=374.783717 Days $T_0=136.561616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

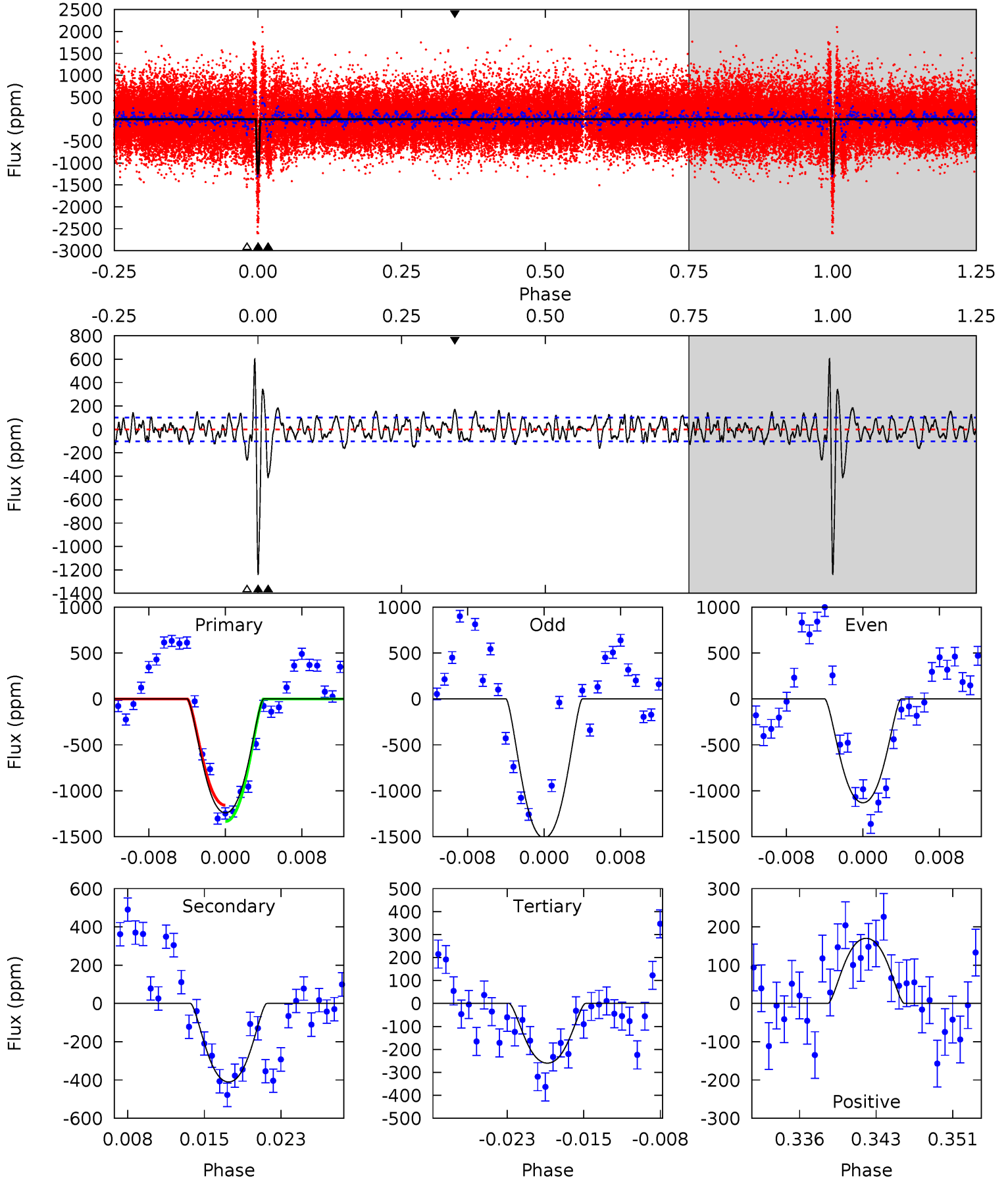
TCE 008818311-01 P=375.051183 Days $T_0=136.026850$ (BKJD)



DV Model-Shift Uniqueness Test

008818311-01, P = 374.783717 Days, E = 136.561616 Days

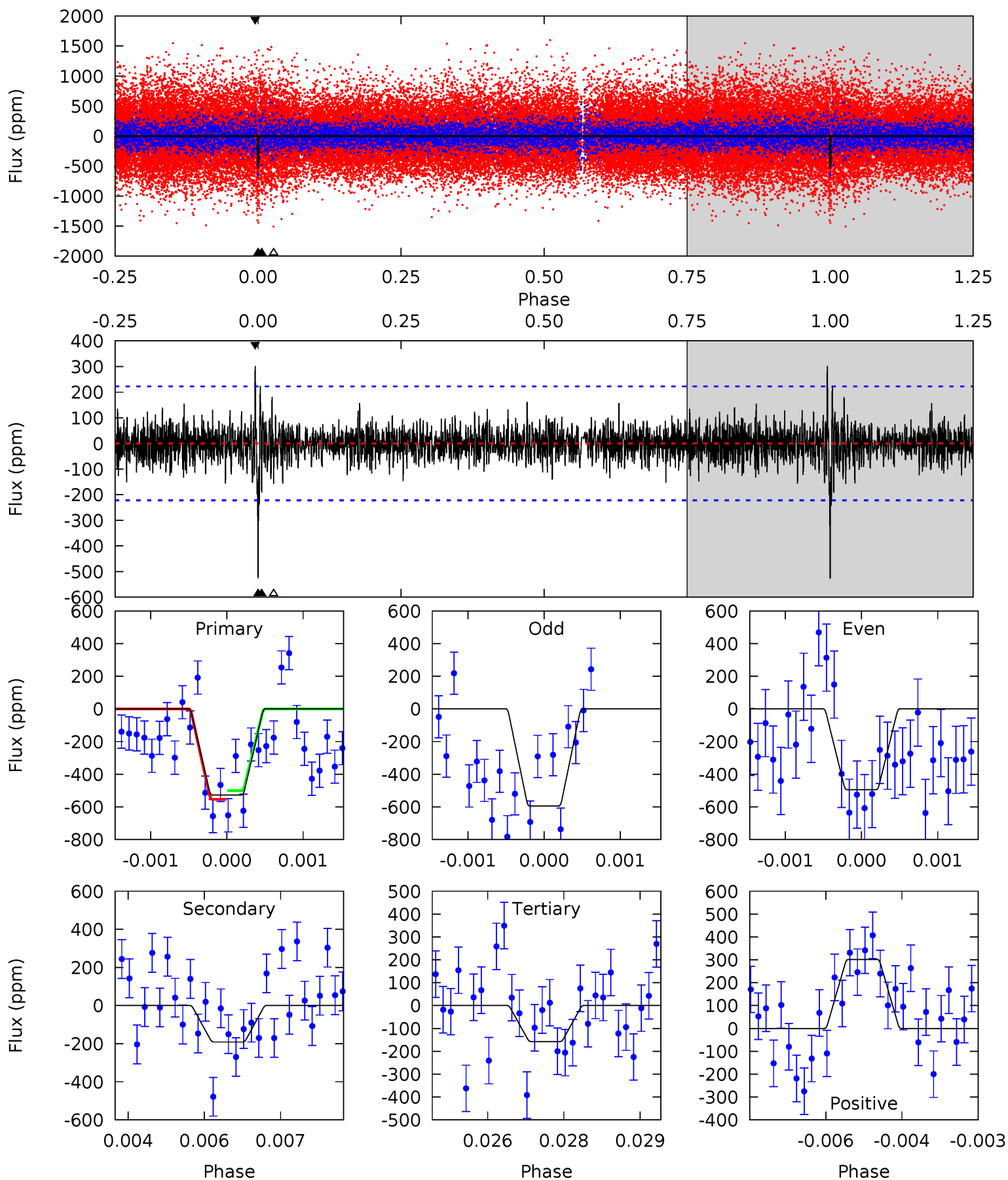
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.1	20.5	13.0	8.51	5.08	2.67	3.53	49.1	53.6	7.52	12.0	8.35	0.86	0.33	4.38



Alt Model-Shift Uniqueness Test

008818311-01, P = 375.051183 Days, E = 136.026850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	4.63	3.81	7.30	5.38	3.18	1.17	8.96	5.47	0.83	-2.67	1.13	0.89	0.36	0.66



Stellar Parameters For KIC 008818311

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6481^{+179}_{-246}	$4.378^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.171^{+0.363}_{-0.156}$	$1.194^{+0.169}_{-0.169}$	$1.046^{+0.374}_{-0.535}$
	+3%/-4%	+1%/-4%	+312%/-375%	+31%/-13%	+14%/-14%	+36%/-51%
Source	KIC0	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 008818311-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-410 ± 20	$6.12^{+1.64}_{-1.29}$	423^{+30}_{-23}	4457^{+413}_{-317}	6905^{+3796}_{-2534}
Alt.	-191 ± 41	$3.30^{+1.37}_{-1.25}$	423^{+33}_{-23}	4907^{+1179}_{-615}	10912^{+18085}_{-5592}

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

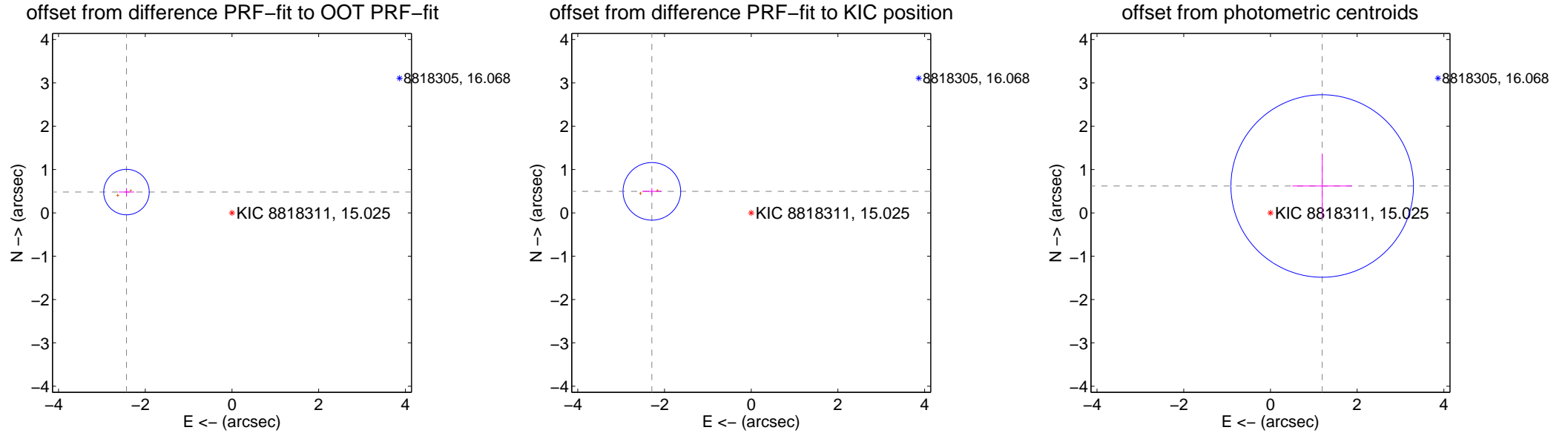
DV Centroid Data

Supplemental centroid analysis for 008818311-01. Kepler magnitude: 15.03. Transit SNR 17.14

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.481 ± 0.175	14.17	2.434 ± 0.177	0.480 ± 0.091
PRF-fit source offset from KIC position	2.345 ± 0.222	10.58	2.292 ± 0.226	0.497 ± 0.077
photometric centroid source offset	1.35 ± 0.70	1.92	-1.19 ± 0.69	0.62 ± 0.74

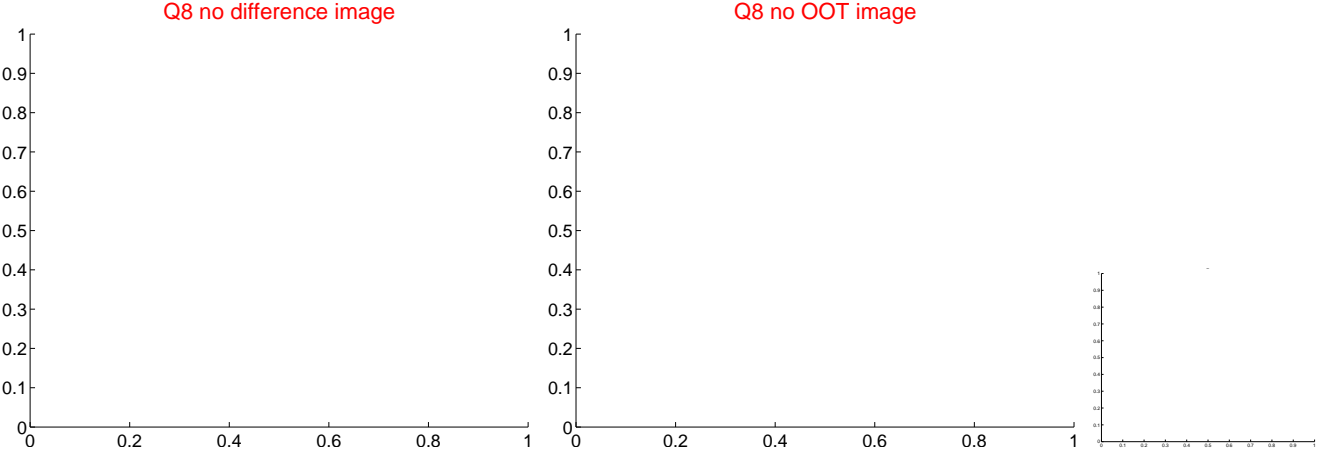
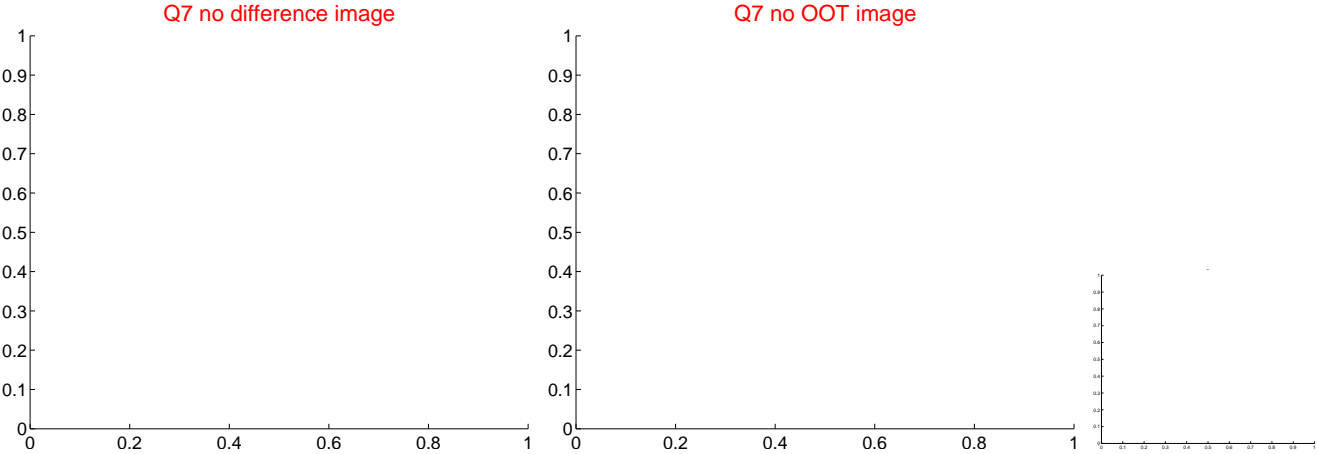
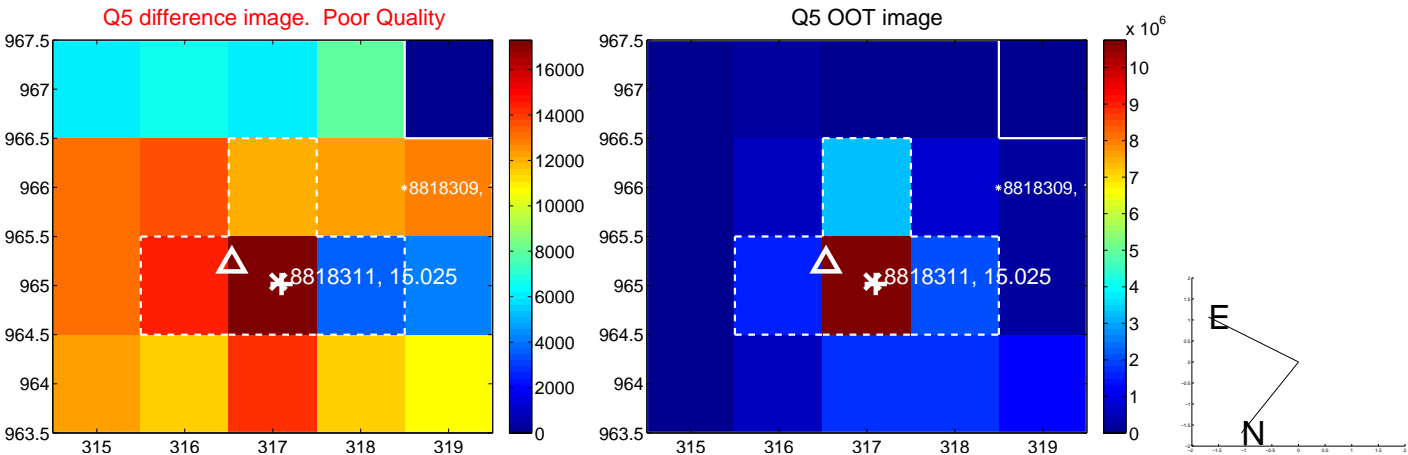


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



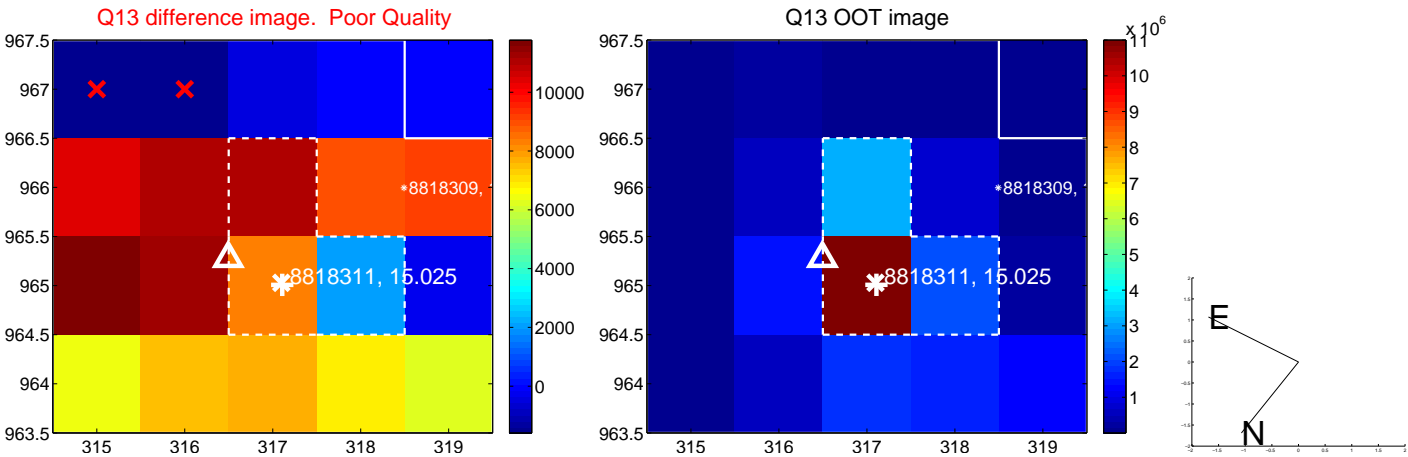
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



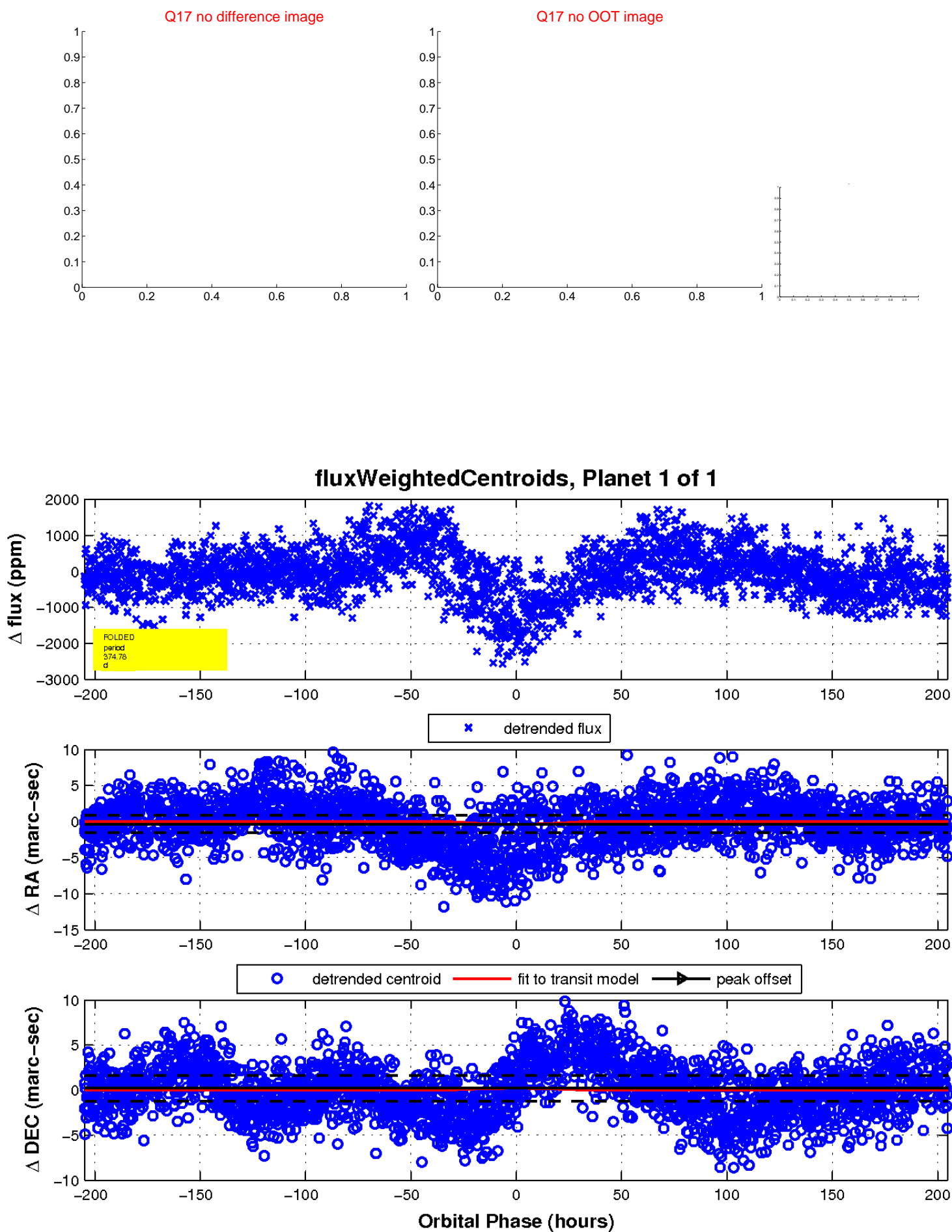
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

