

KIC 008176341

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})
008176341-01	OBS	No	369.981654	232.783935	2023.8	21.523	12.1	12.5	0.96	6014	8.06	1.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008176341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

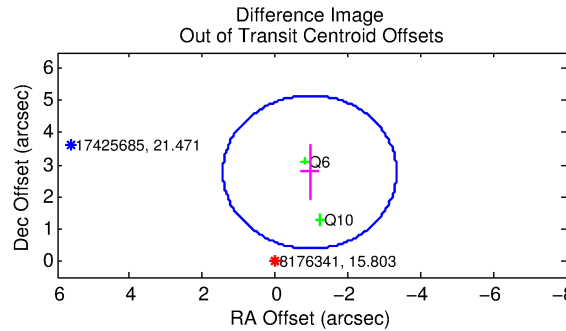
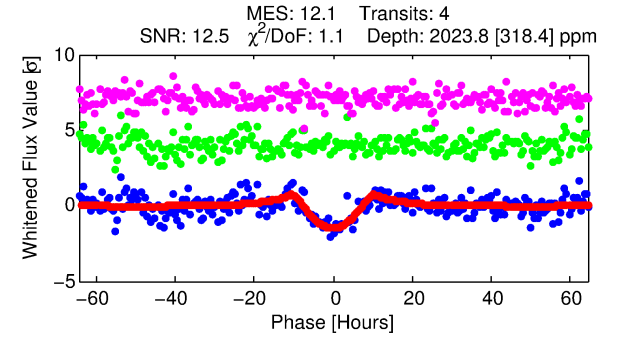
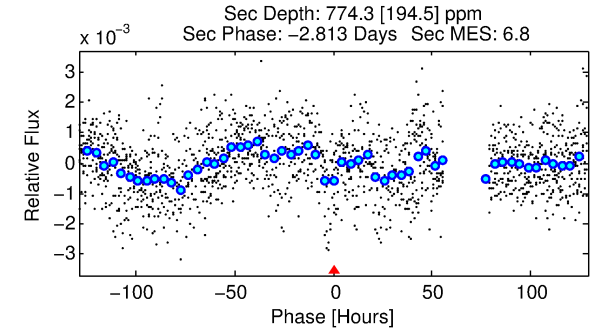
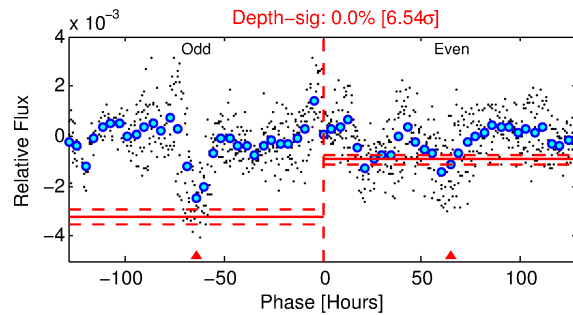
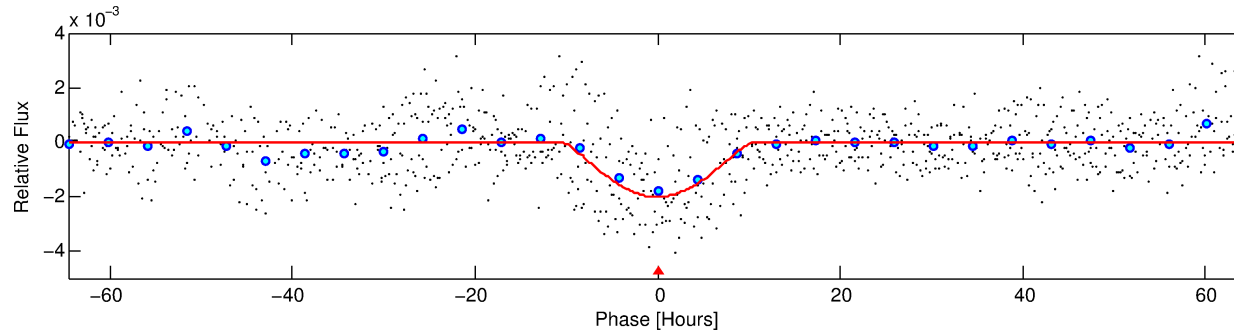
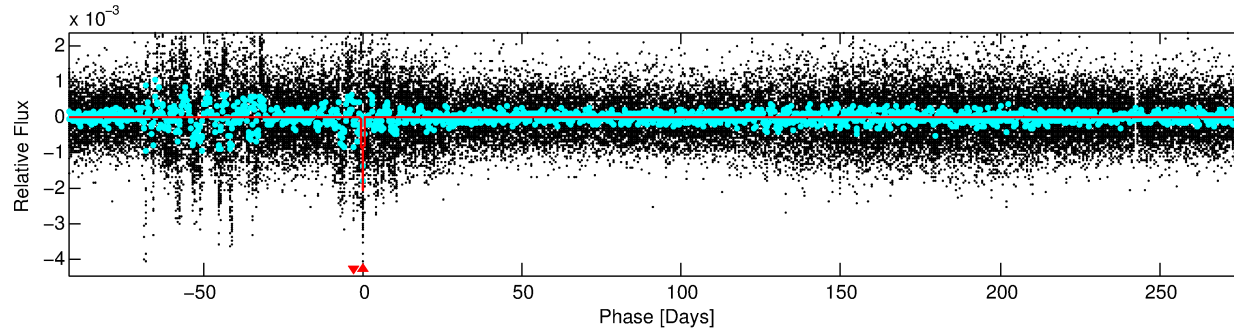
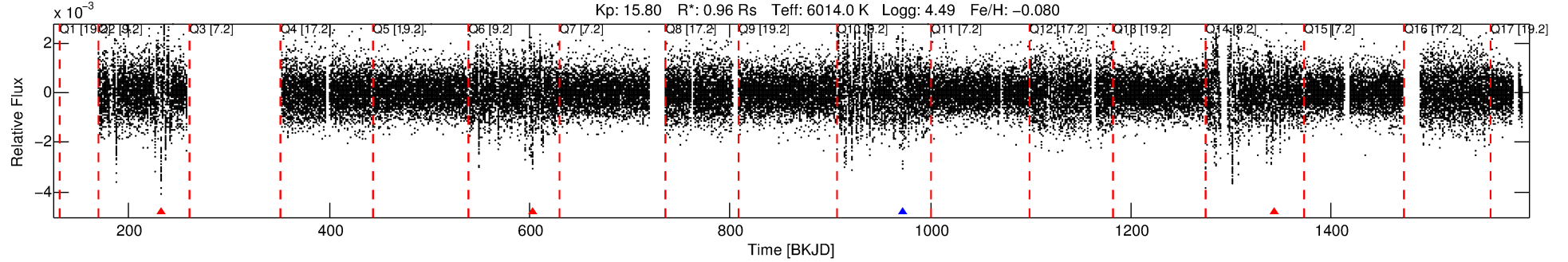
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008176341-01

No Significant Match Found

DV One-Page Summary

KIC: 8176341 Candidate: 1 of 1 Period: 369.982 d



DV Fit Results:

Period = 369.98165 [0.01422] d
Epoch = 232.7839 [0.0272] BKJD
Rp/R* = 0.0771 [0.1512]
a/R* = 52.79 [22.70]
b = 1.00 [0.22]
Seff = 1.03 [0.42]
Teq = 257 [26] K
Rp = 8.06 [16.01] Re
a = 1.0234 [0.2690] AU
Ag = 6861.24 [27086.61] [0.25σ]
Teffp = 3612 [3550] K [0.95σ]

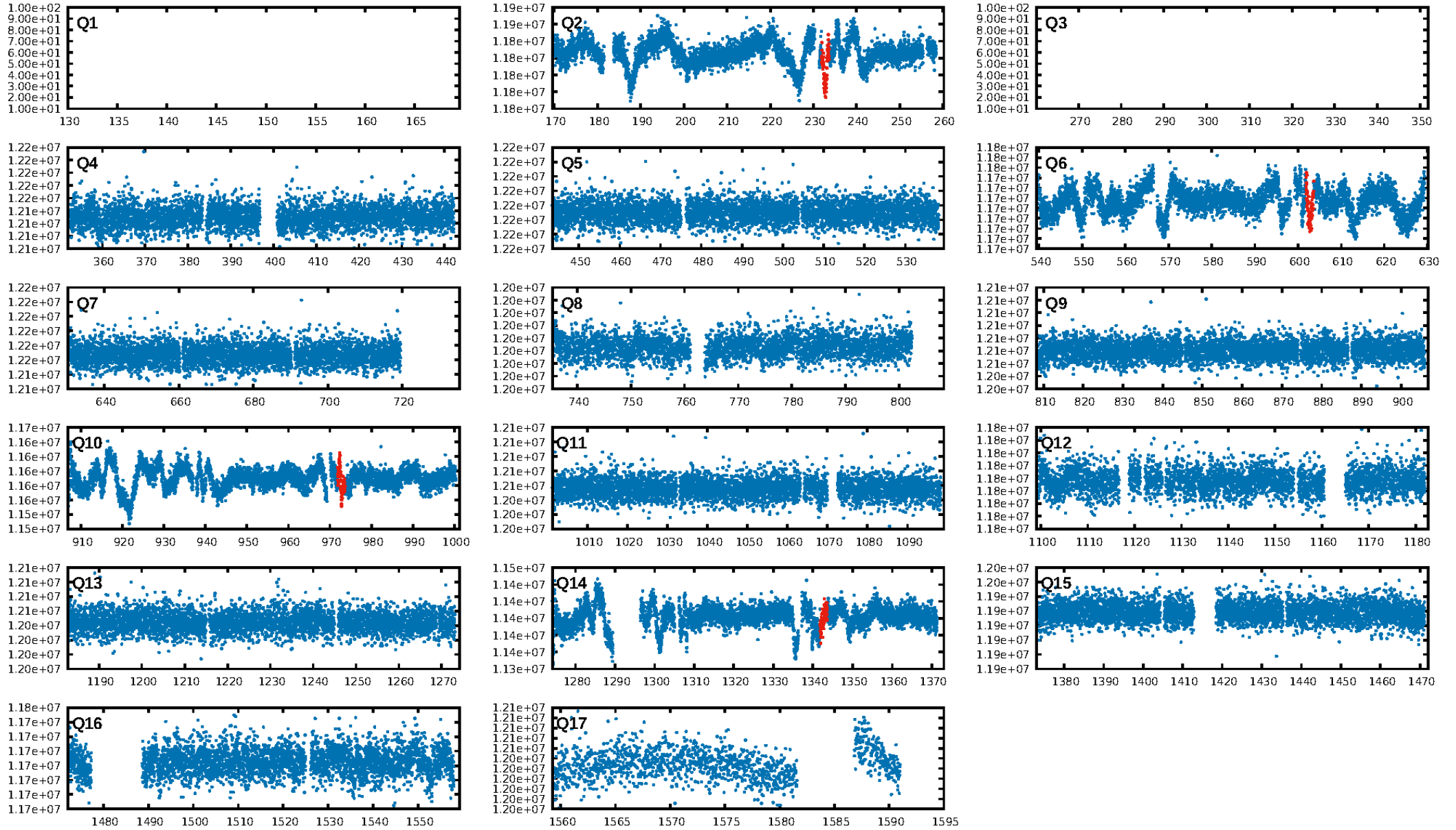
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 77.7%
Bootstrap-pfa: 2.14e-13
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 5.563
Centroid-sig: 1.6%
Centroid-so: 4.087 arcsec [2.22σ]
OotOffset-rm: 2.926 arcsec [3.68σ]
KicOffset-rm: 2.875 arcsec [3.58σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

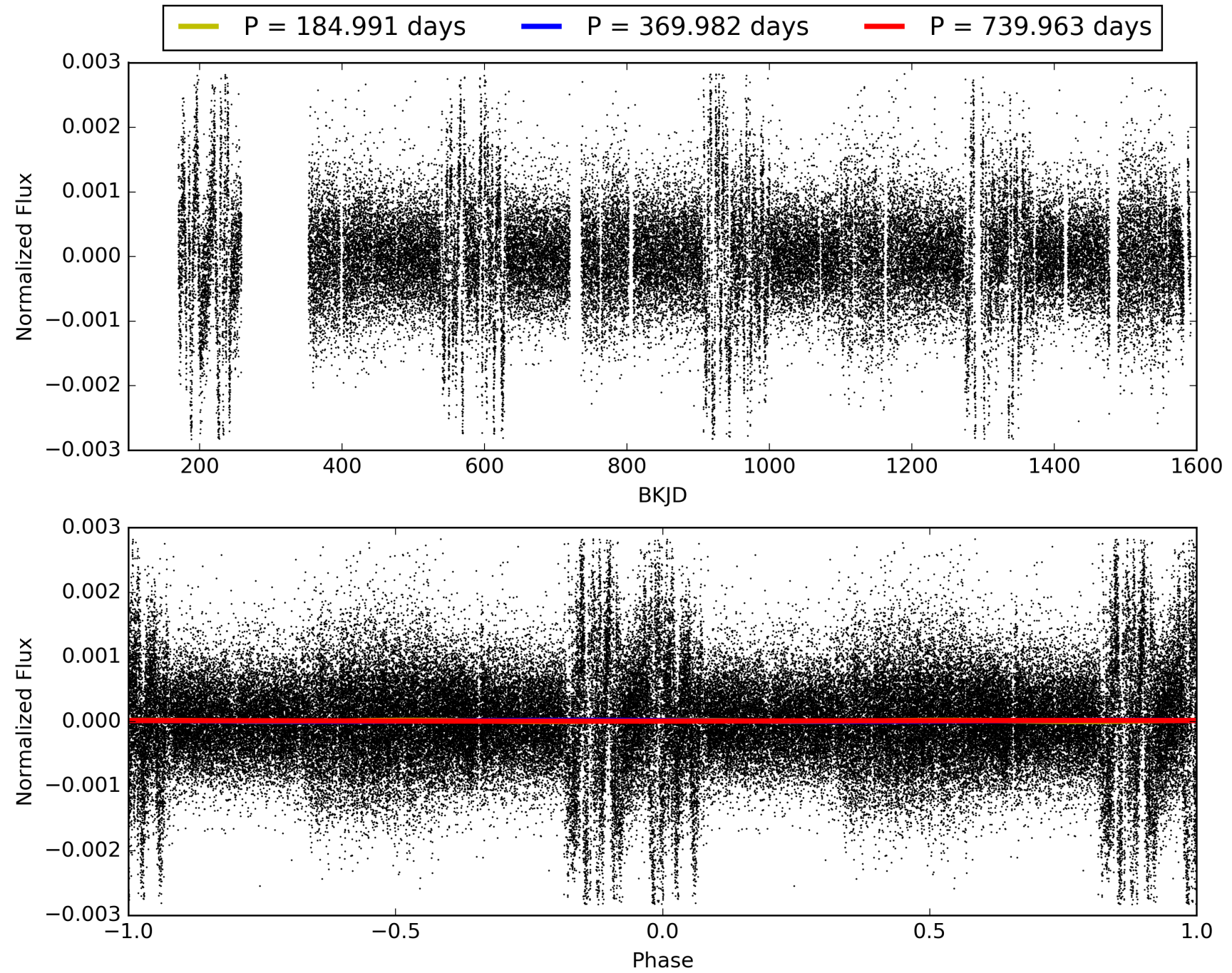
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:04:14 Z

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

TCE 008176341-01, PDC Light Curves

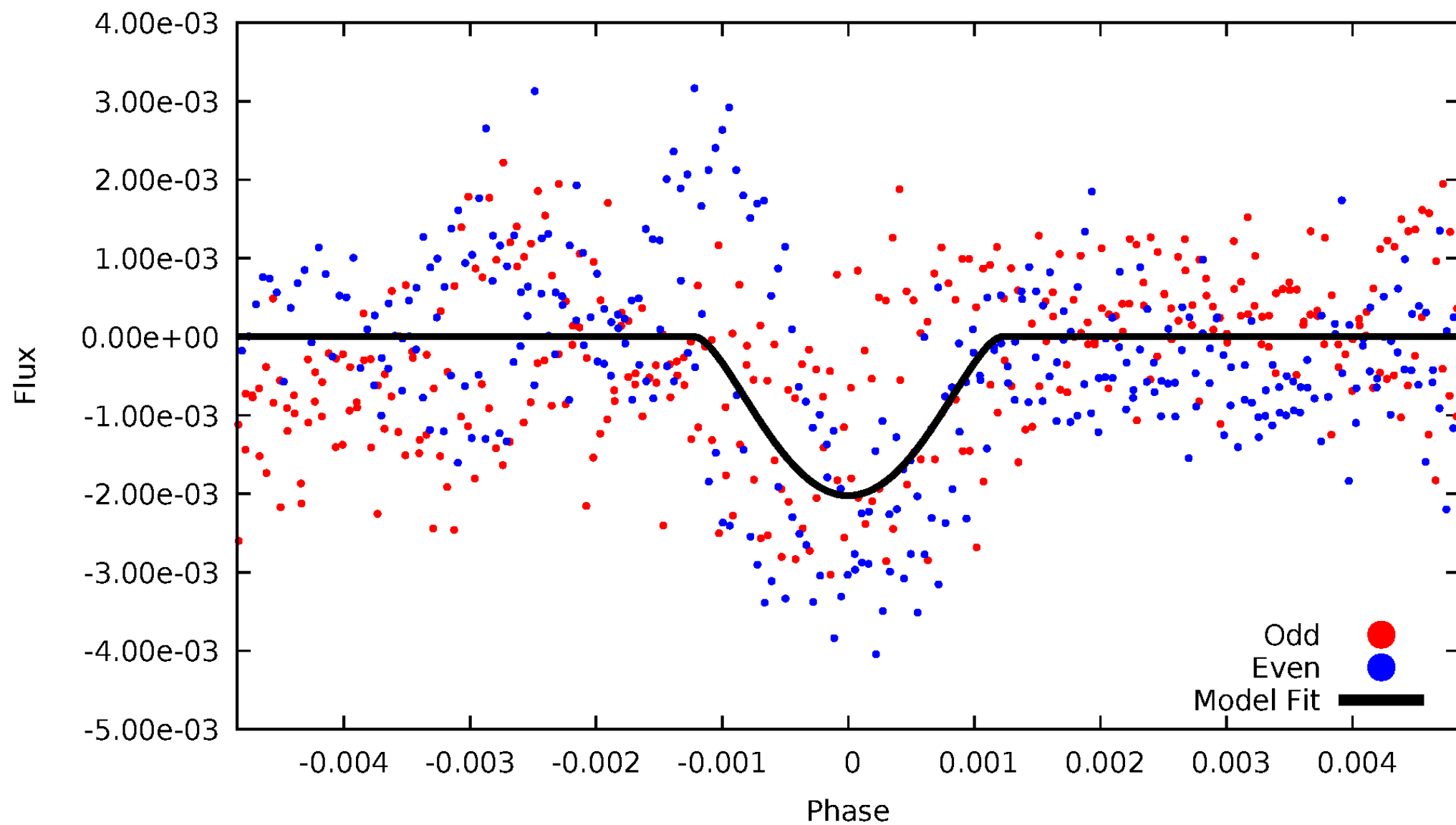


TCE 008176341-01



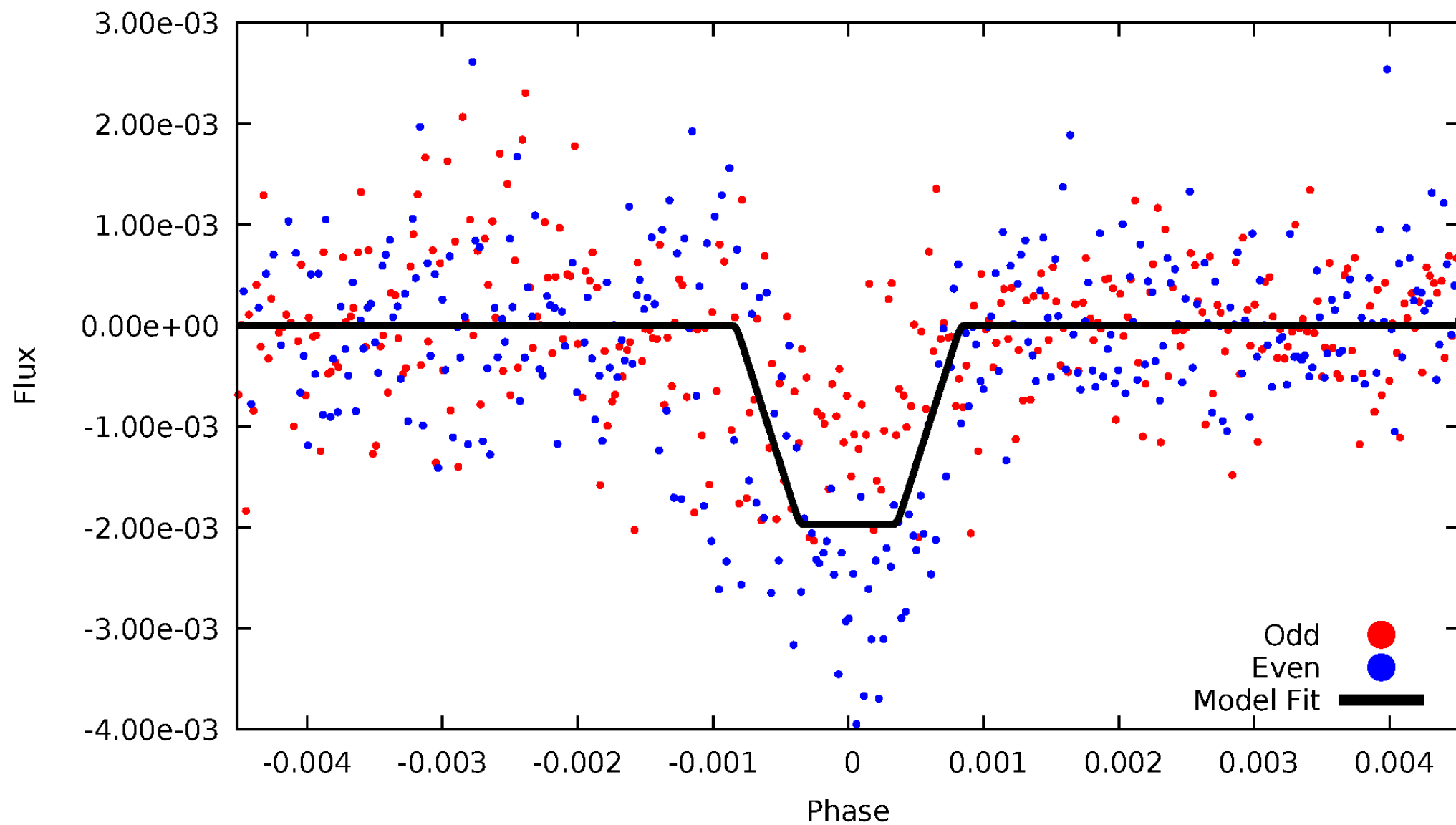
DV Odd/Even

TCE 008176341-01

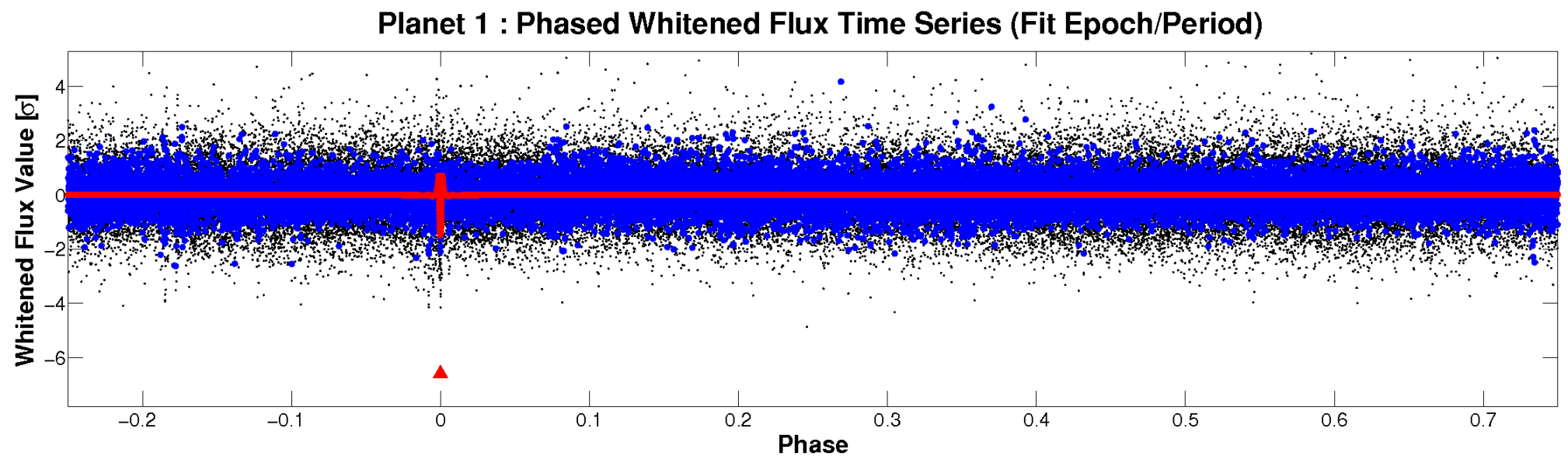
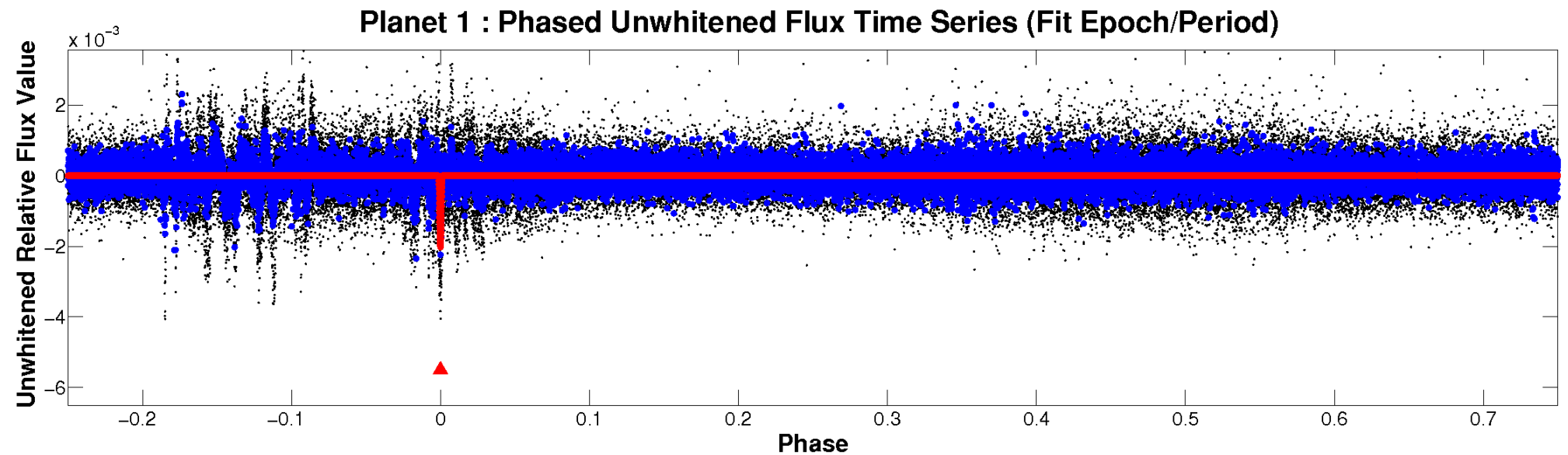


ALT Odd/Even

TCE 008176341-01

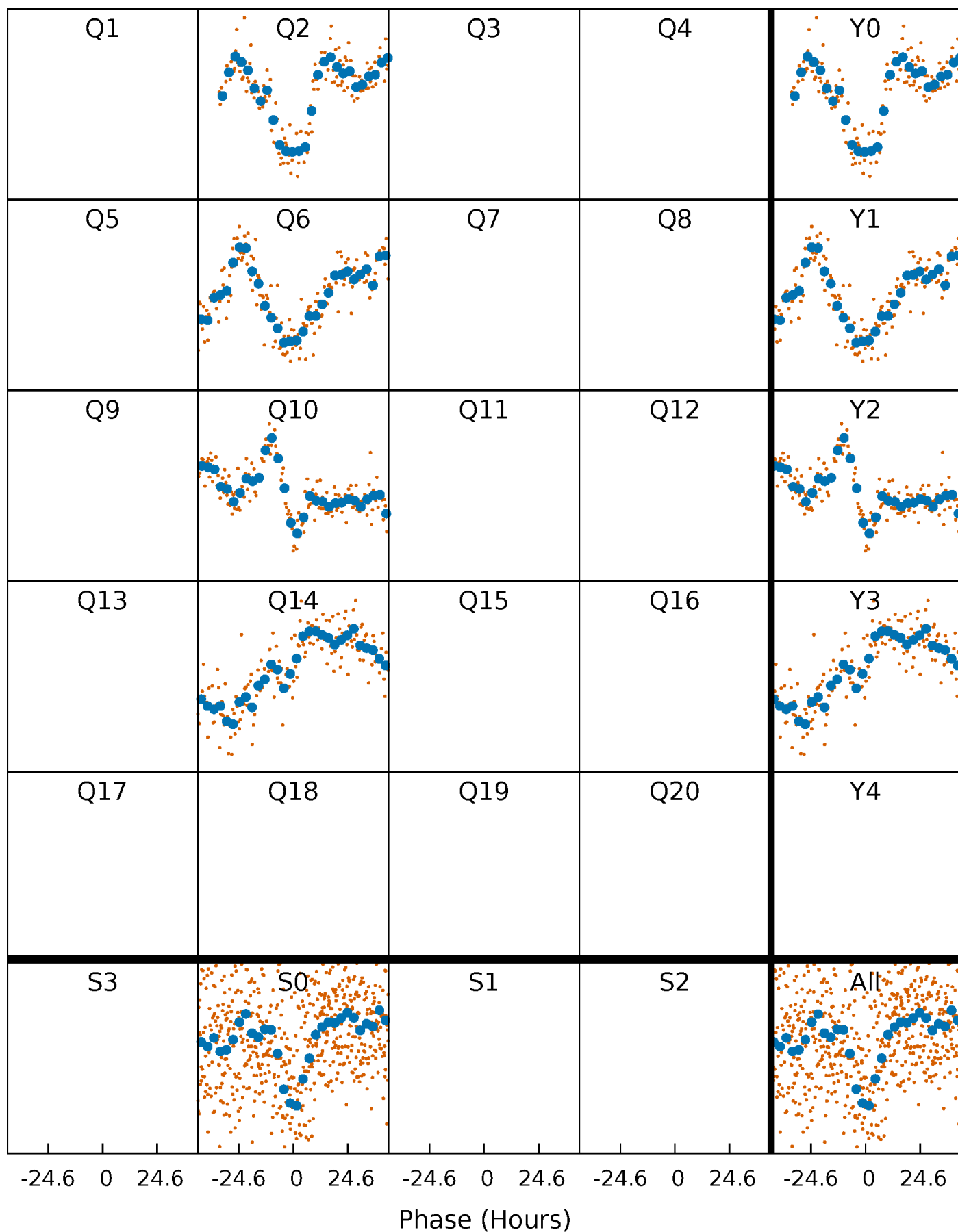


Non-Whitened Vs. Whitened Light Curve



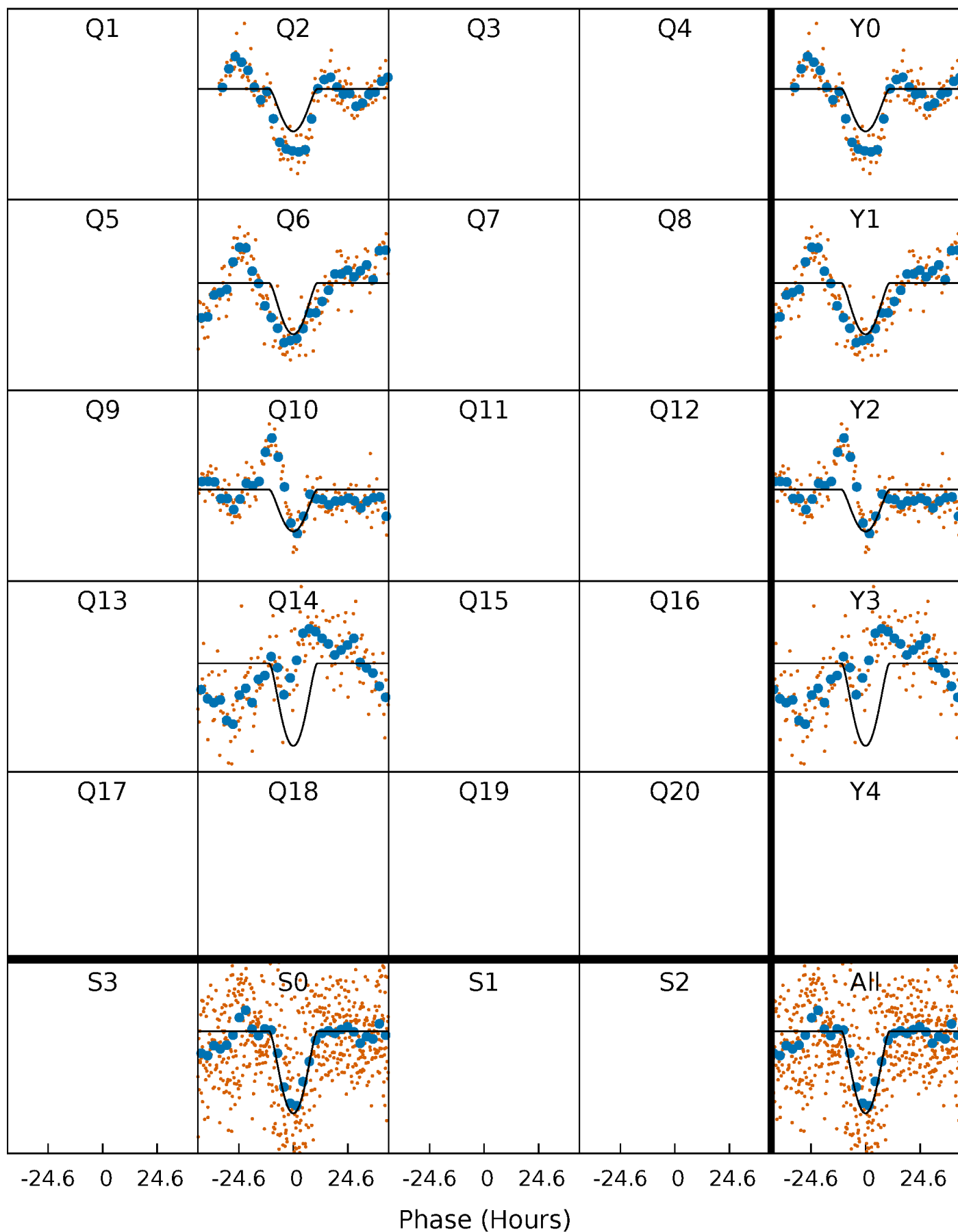
PDC Quarter-Phased Transit Curves

TCE 008176341-01 P=369.981654 Days $T_0=232.783935$ (BKJD)



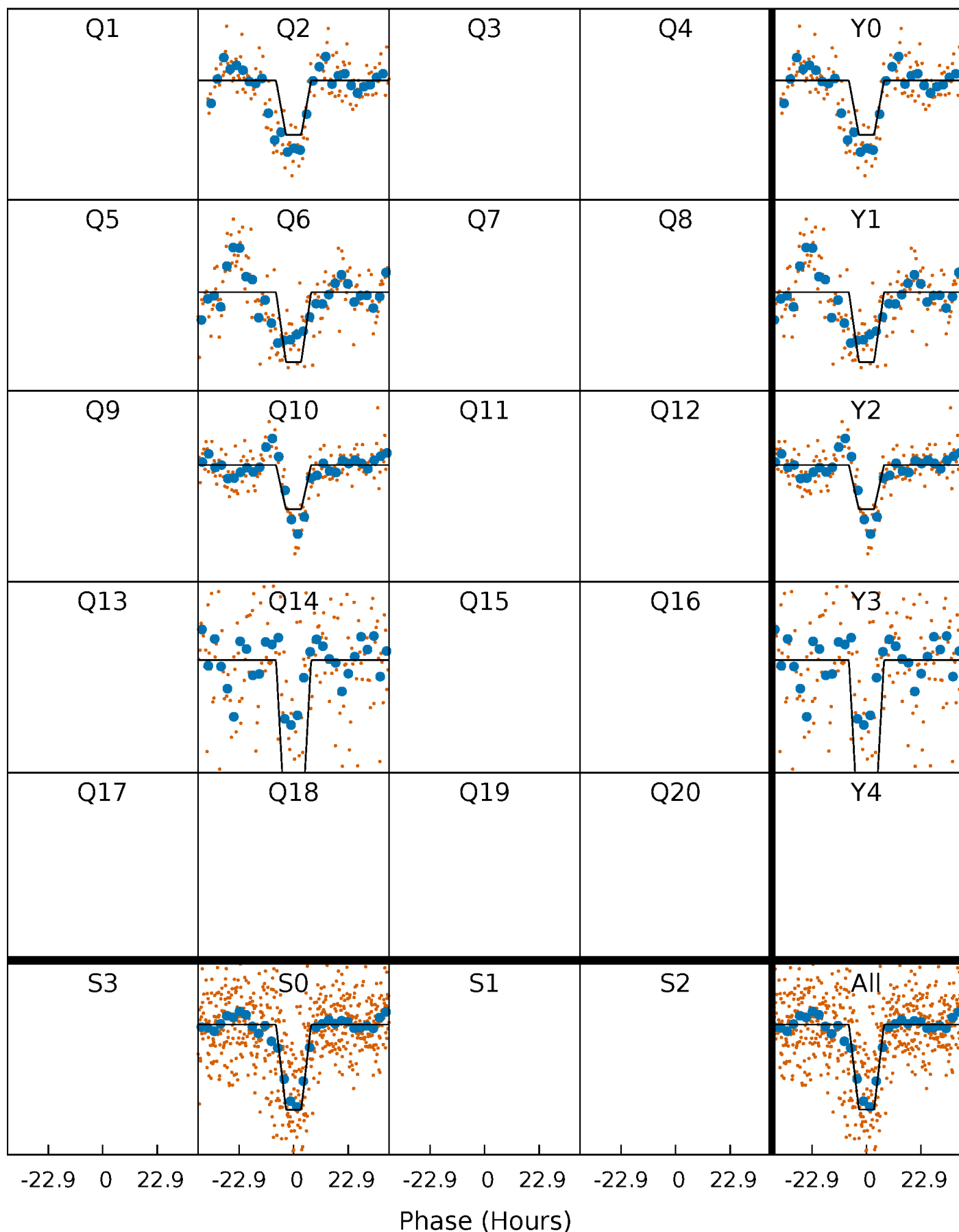
DV Quarter-Phased Transit Curves

TCE 008176341-01 P=369.981654 Days $T_0=232.783935$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

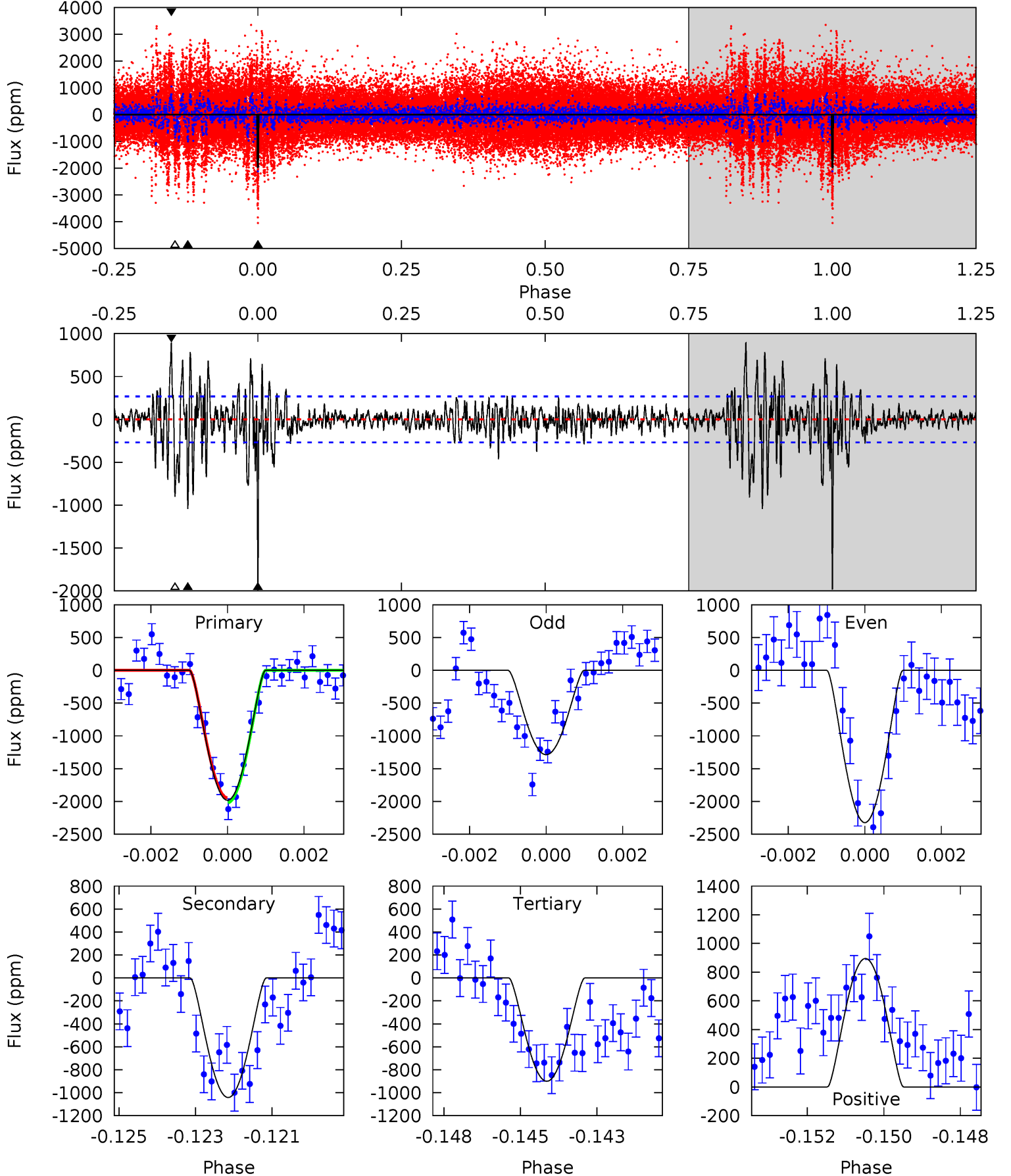
TCE 008176341-01 P=369.915548 Days $T_0=232.891790$ (BKJD)



DV Model-Shift Uniqueness Test

008176341-01, P = 369.981654 Days, E = 232.783935 Days

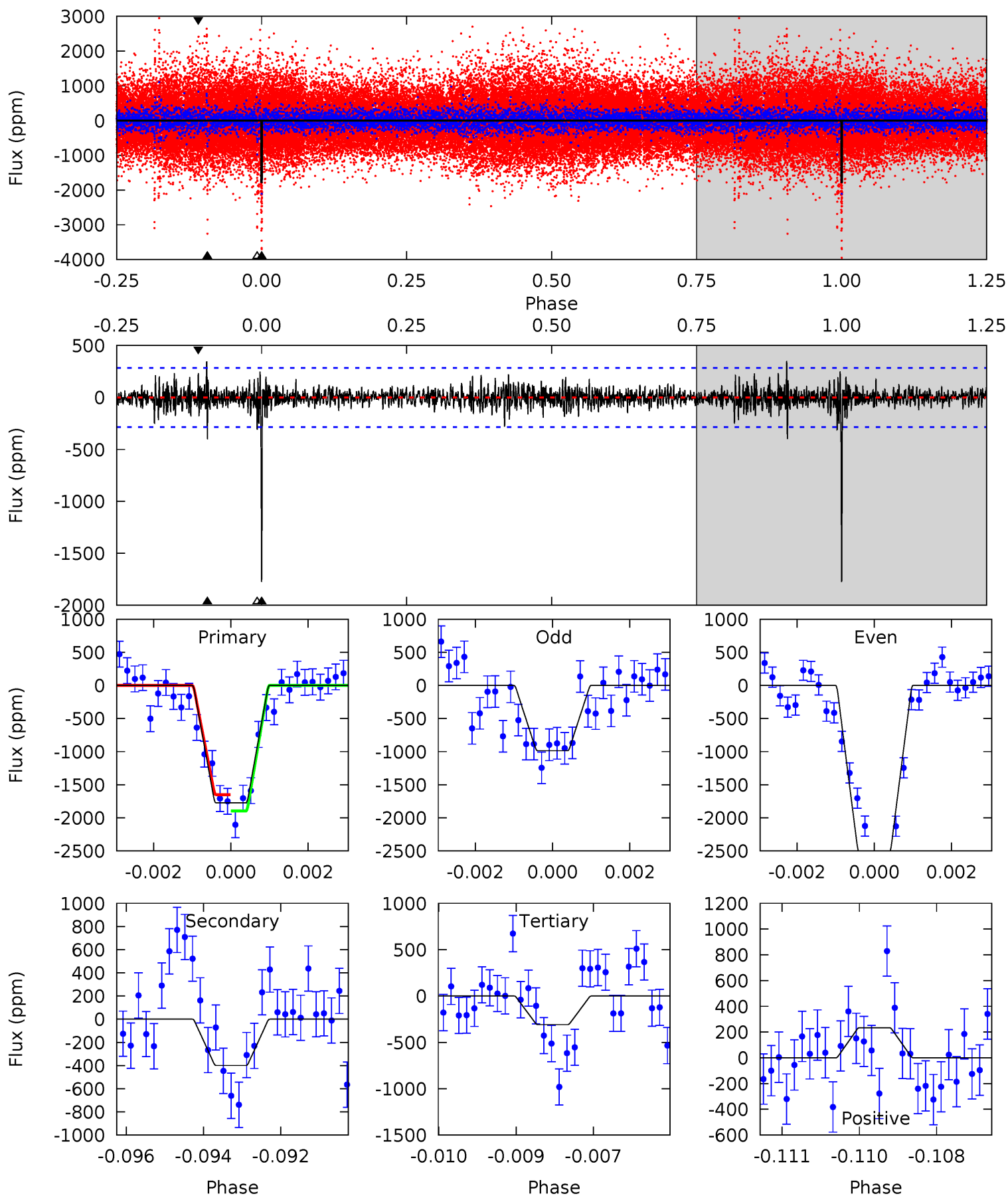
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.2	20.6	17.8	17.7	5.29	3.03	3.65	21.4	21.5	2.80	2.90	10.4	0.98	0.31	0.76



Alt Model-Shift Uniqueness Test

008176341-01, P = 369.915548 Days, E = 232.891790 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.3	7.51	5.79	4.40	5.35	3.14	1.18	27.5	28.9	1.72	3.11	14.4	0.93	0.16	2.31



Stellar Parameters For KIC 008176341

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6014^{+189}_{-210}	$4.494^{+0.052}_{-0.208}$	$-0.080^{+0.250}_{-0.300}$	$0.958^{+0.300}_{-0.100}$	$1.043^{+0.126}_{-0.153}$	$1.673^{+0.463}_{-0.863}$
	+3%/-3%	+1%/-5%	+312%/-375%	+31%/-10%	+12%/-15%	+28%/-52%
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 008176341-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1042 ± 51	$15.68^{+12.22}_{-10.83}$	366^{+28}_{-19}	3383^{+1834}_{-529}	2376^{+22173}_{-1636}
Alt.	-400 ± 53	$12.54^{+14.75}_{-8.39}$	367^{+25}_{-19}	3101^{+1437}_{-544}	1351^{+12004}_{-1049}

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

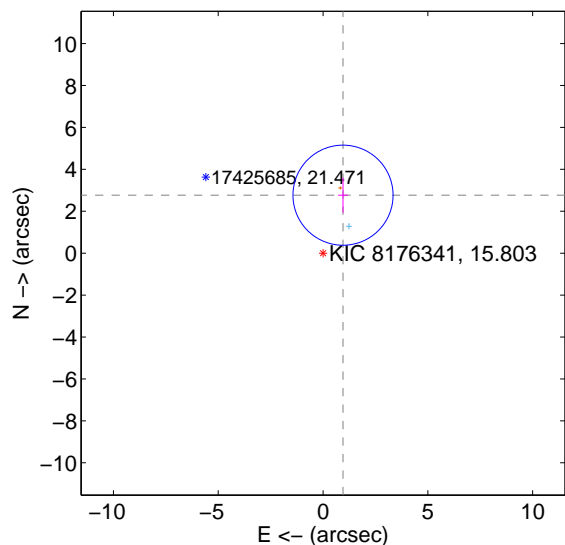
Supplemental centroid analysis for 008176341-01. Kepler magnitude: 15.80. Transit SNR 12.53

There are 1 quarters with good PRF difference image offsets

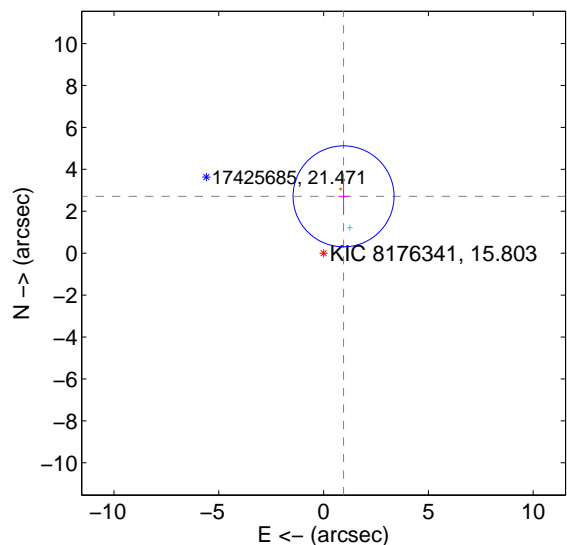
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.926 ± 0.796	3.68	-0.953 ± 0.233	2.767 ± 0.838
PRF-fit source offset from KIC position	2.875 ± 0.803	3.58	-0.953 ± 0.244	2.713 ± 0.847
photometric centroid source offset	4.09 ± 1.84	2.22	3.90 ± 1.82	-1.23 ± 2.04

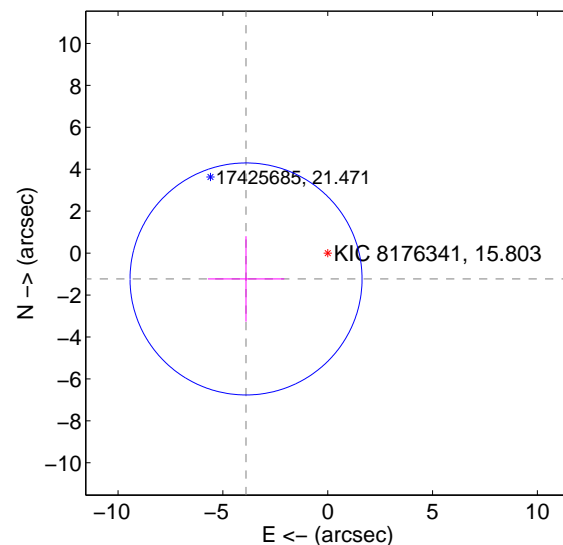
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

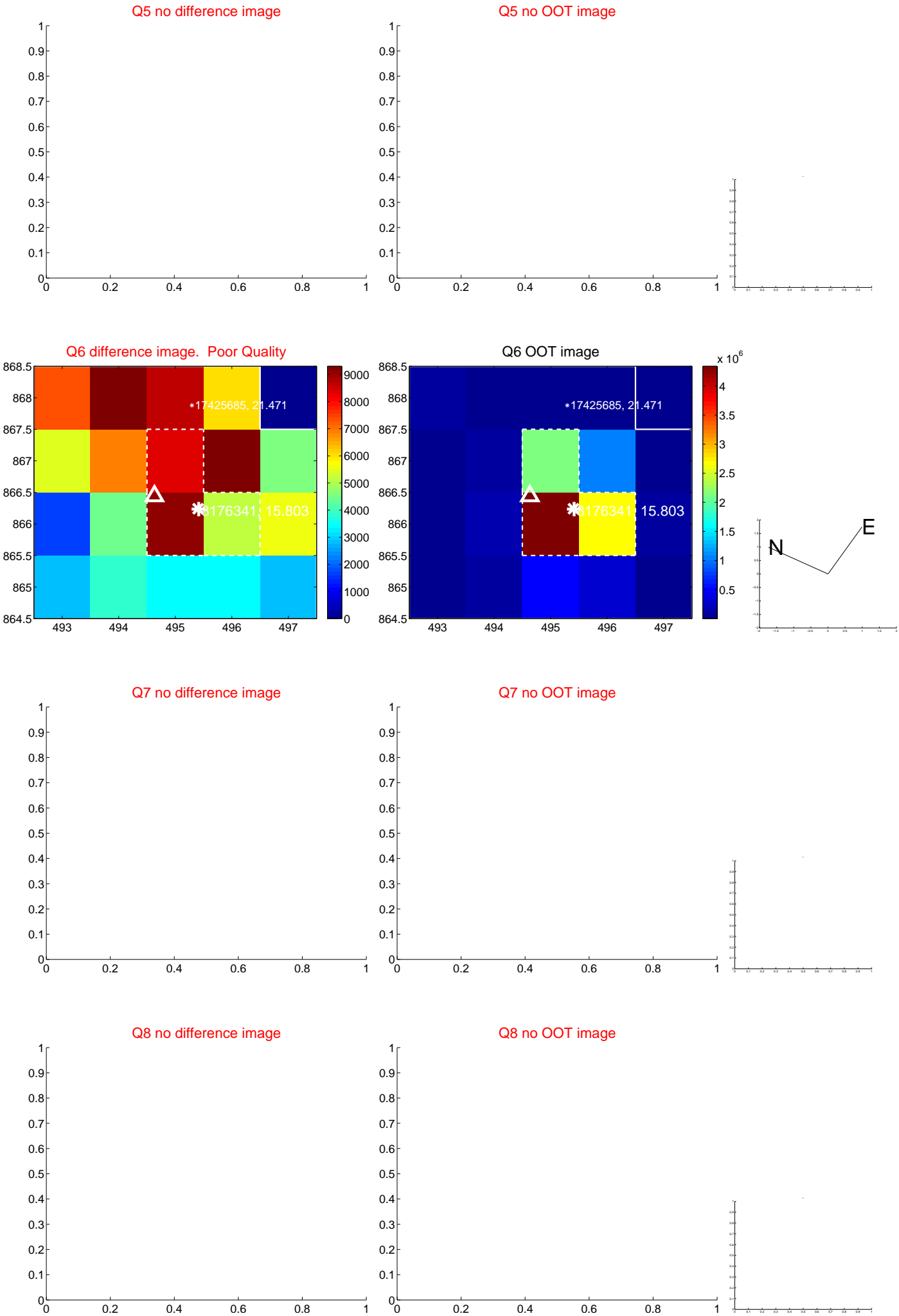


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

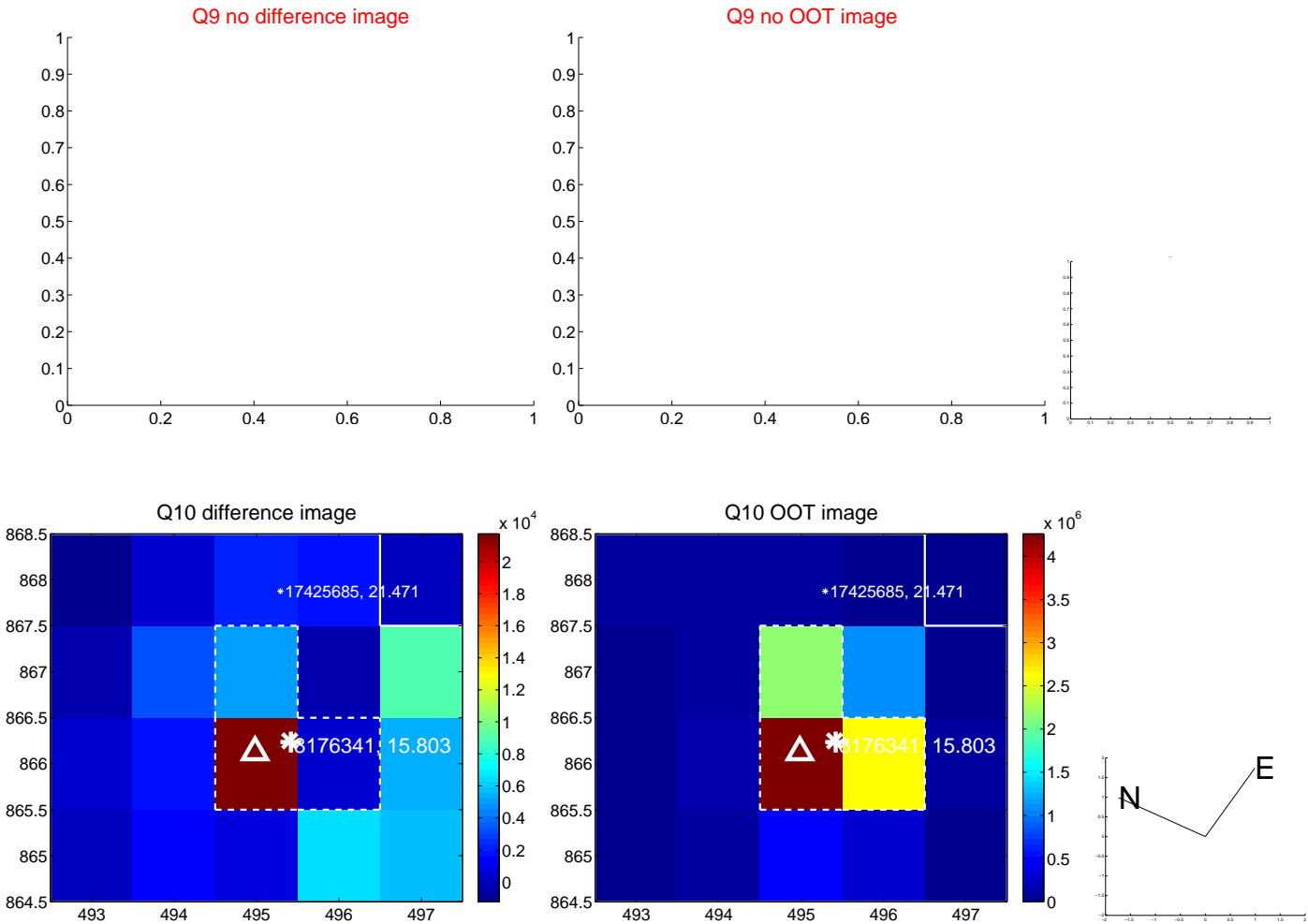
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



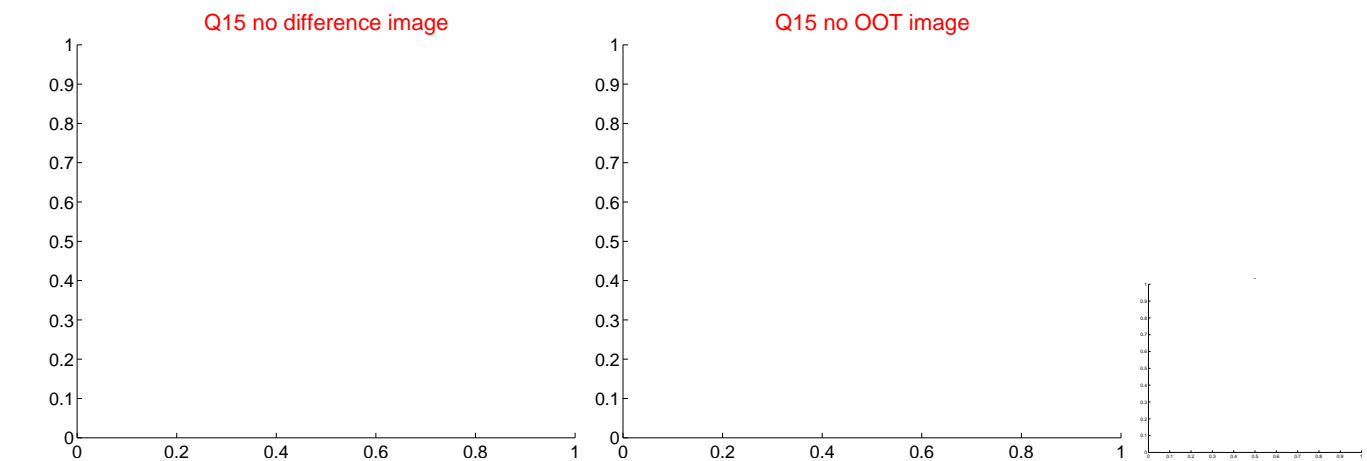
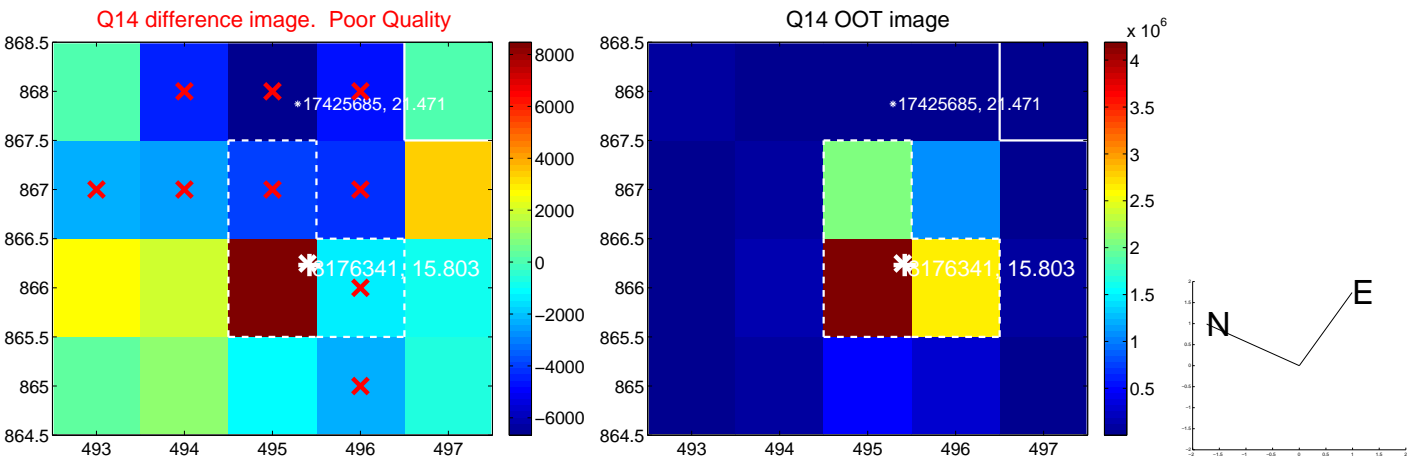
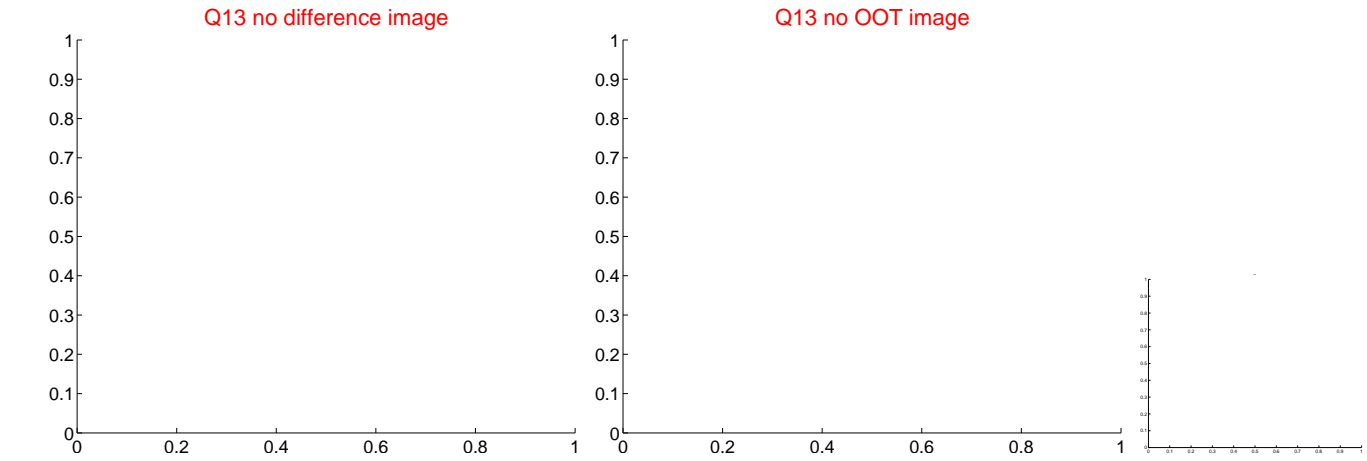
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



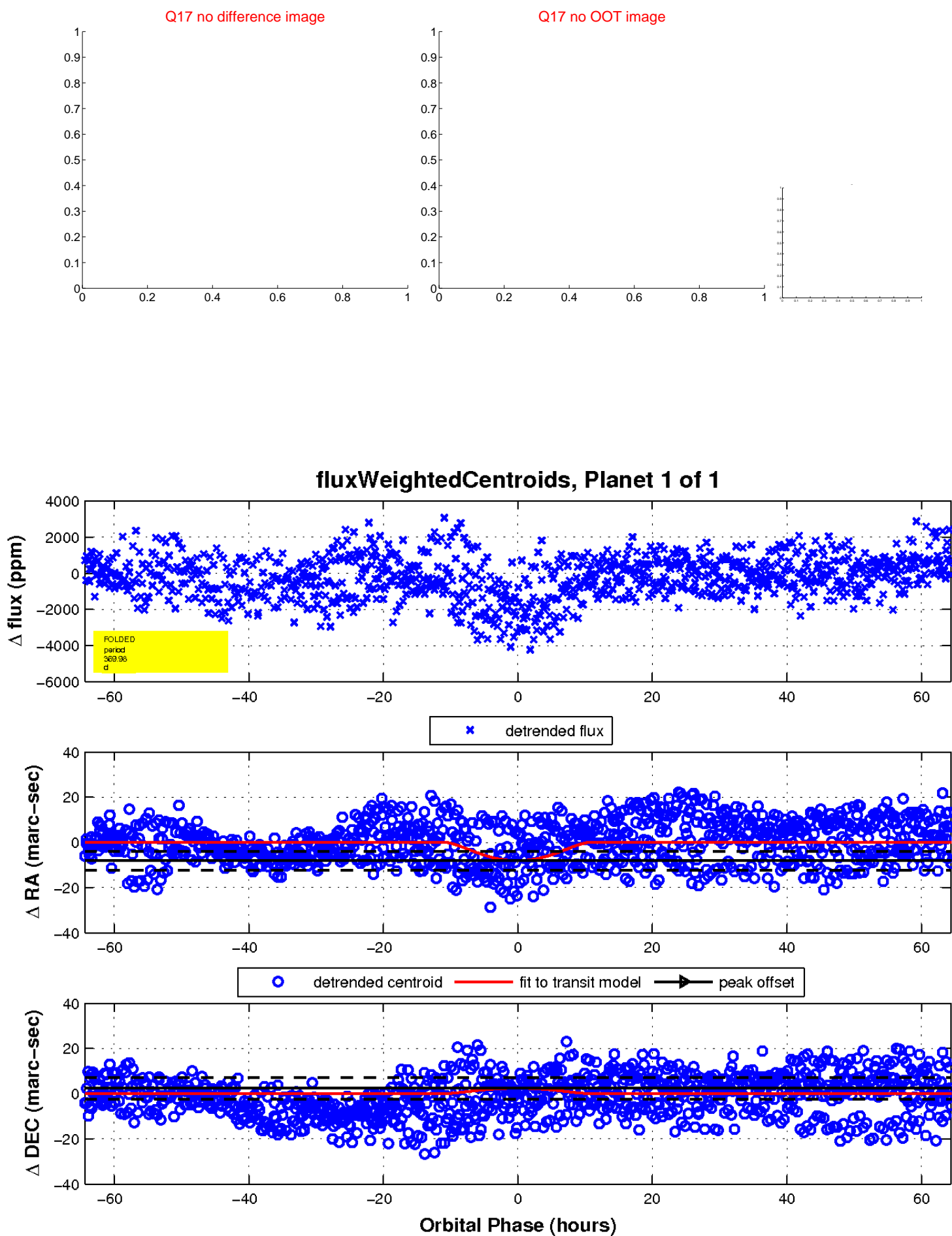
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

