

KIC 006867765

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})
006867765-01	OBS	No	367.508908	172.929838	222.2	26.887	7.1	7.1	0.91	5754	1.40	0.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006867765-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

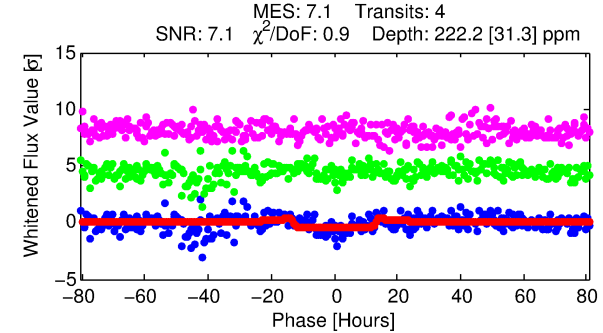
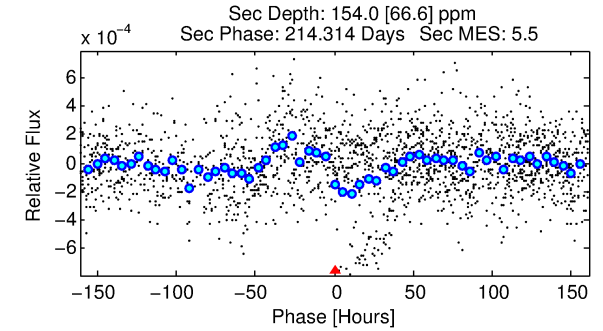
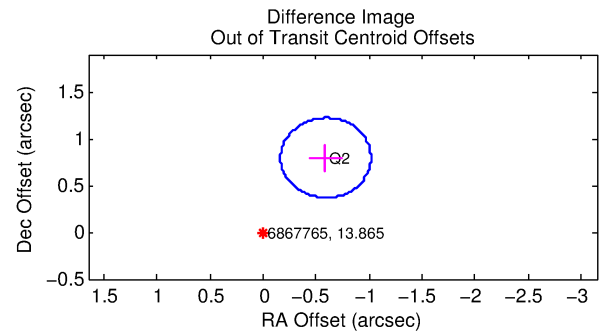
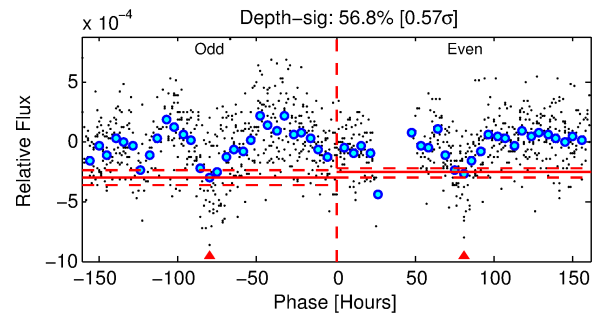
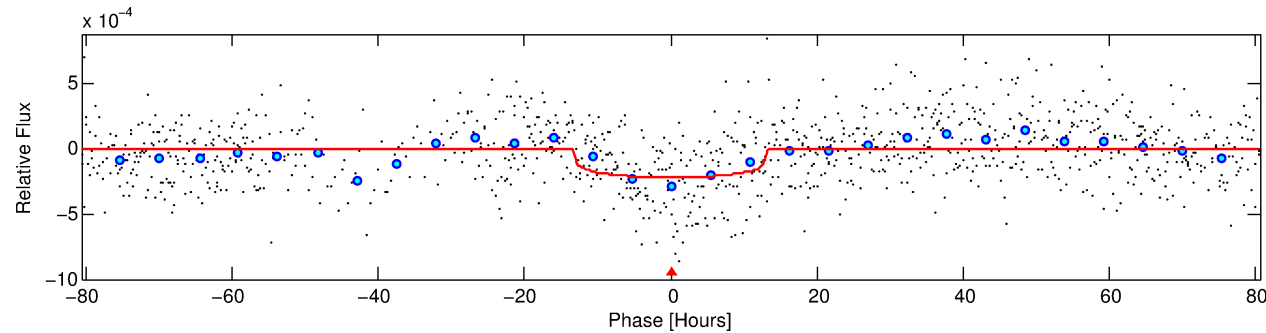
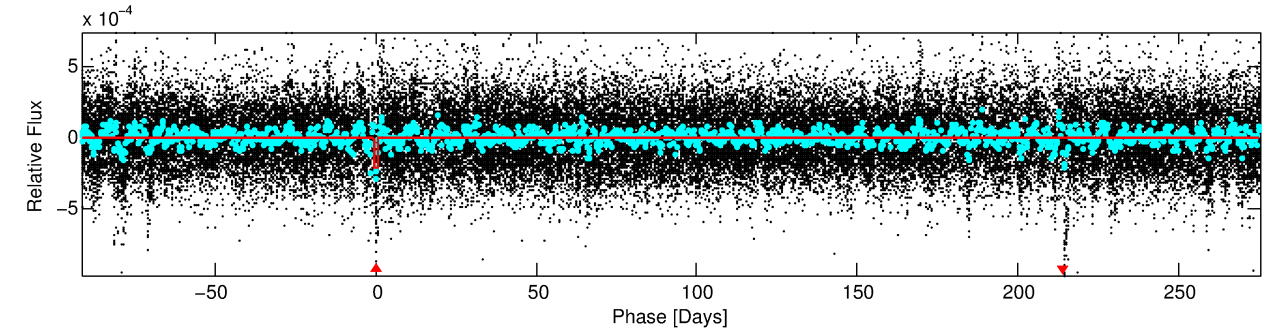
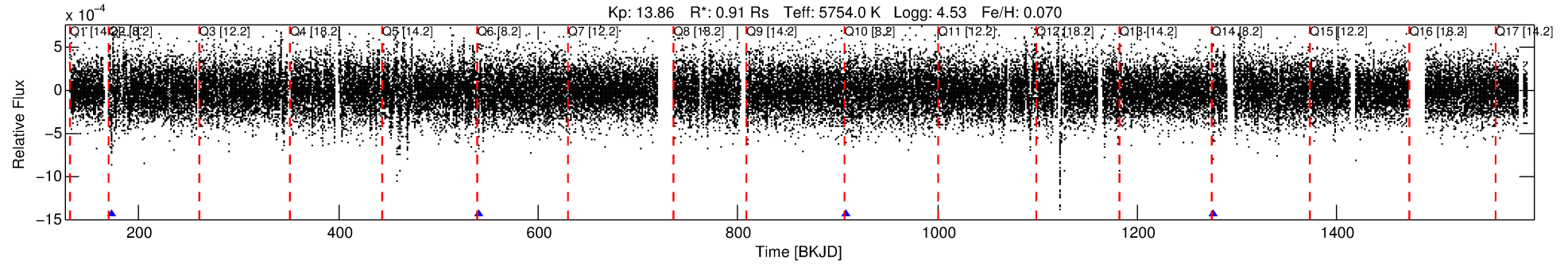
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006867765-01

No Significant Match Found

DV One-Page Summary

KIC: 6867765 Candidate: 1 of 1 Period: 367.509 d



DV Fit Results:

Period = 367.50891 [0.01294] d
Epoch = 172.9298 [0.0239] BKJD
Rp/R* = 0.0142 [0.0050]
a/R* = 85.92 [128.89]
b = 0.59 [1.65]
Seff = 0.79 [0.28]
Teq = 240 [22] K
Rp = 1.40 [0.63] Re
a = 1.0115 [0.2350] AU
Ag = 44230.88 [39765.47] [1.11 σ]
Teffp = 5384 [1131] K [4.55 σ]

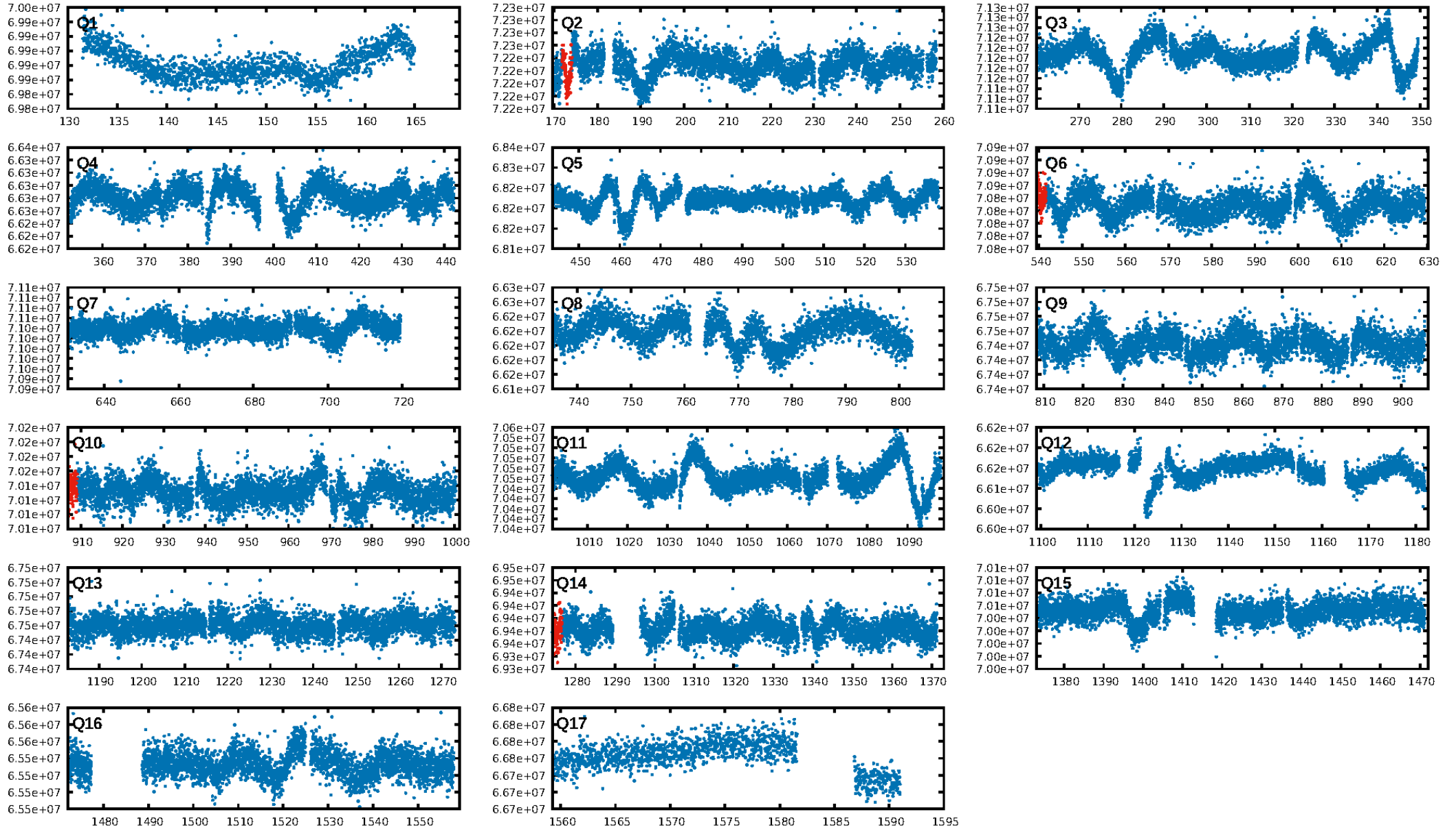
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.34e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -3.05
Centroid-sig: 0.3%
Centroid-so: 2.418 arcsec [2.17 σ]
OotOffset-rm: 0.990 arcsec [6.96 σ]
KicOffset-rm: 1.067 arcsec [7.52 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

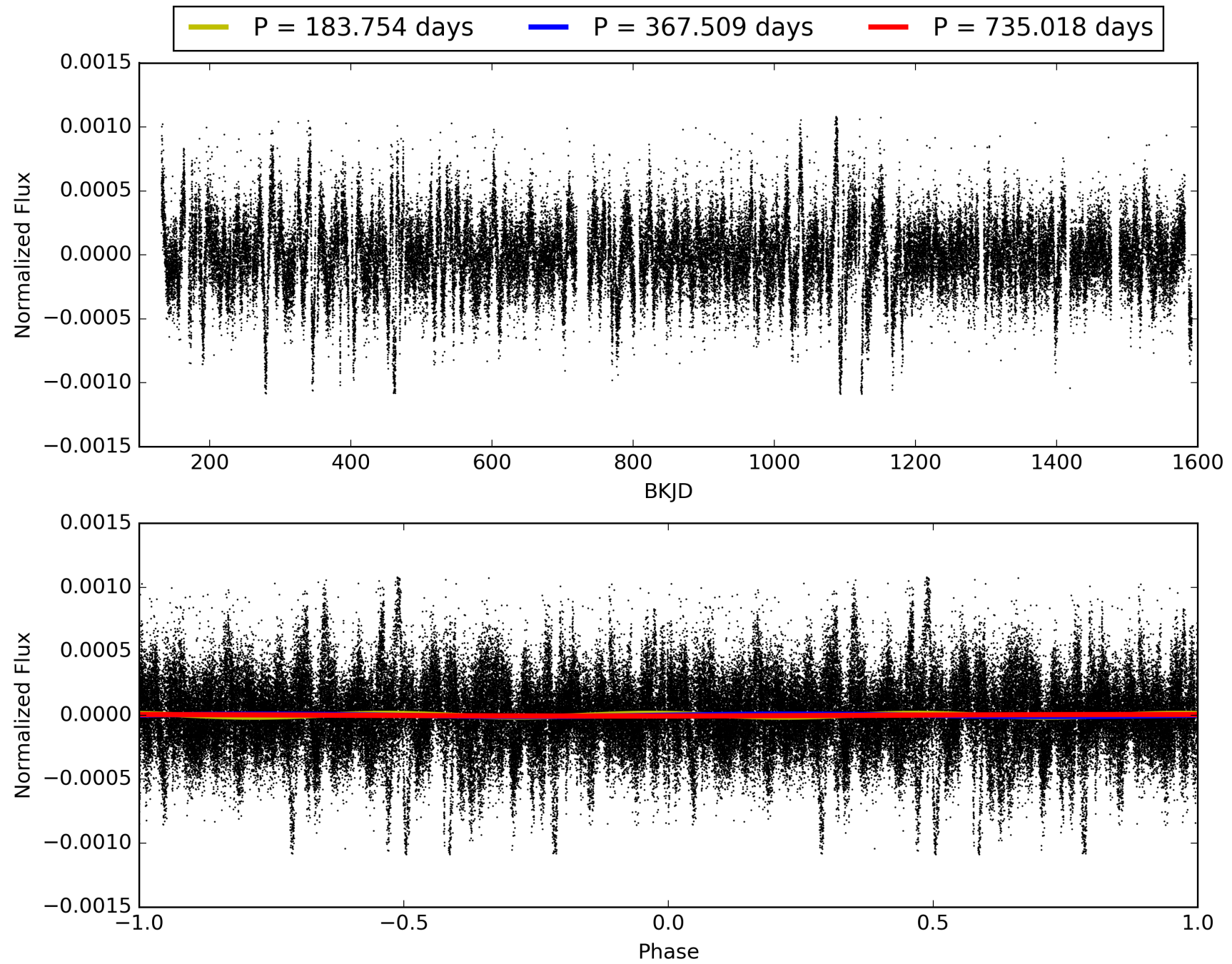
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:19:22 Z

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

TCE 006867765-01, PDC Light Curves

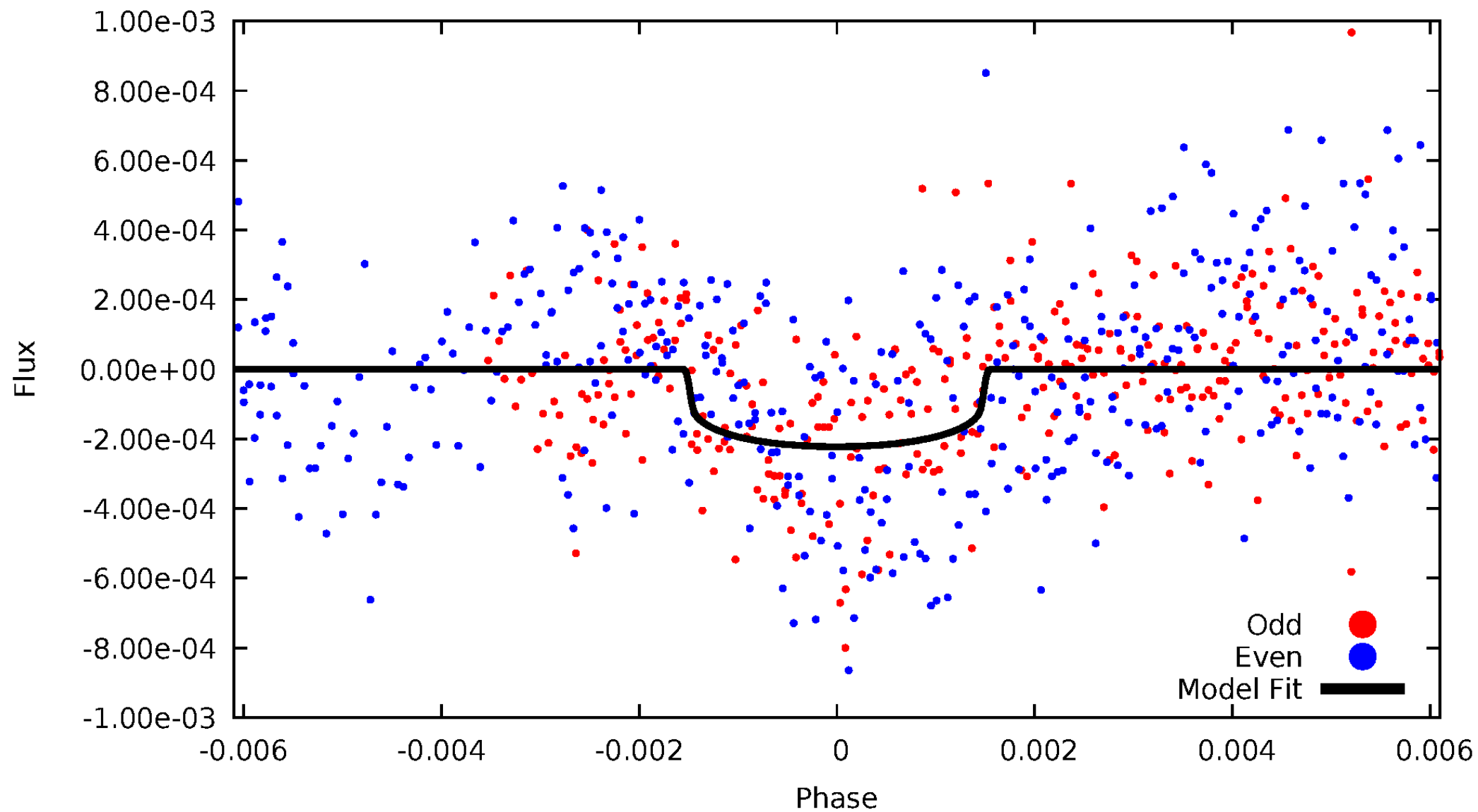


TCE 006867765-01



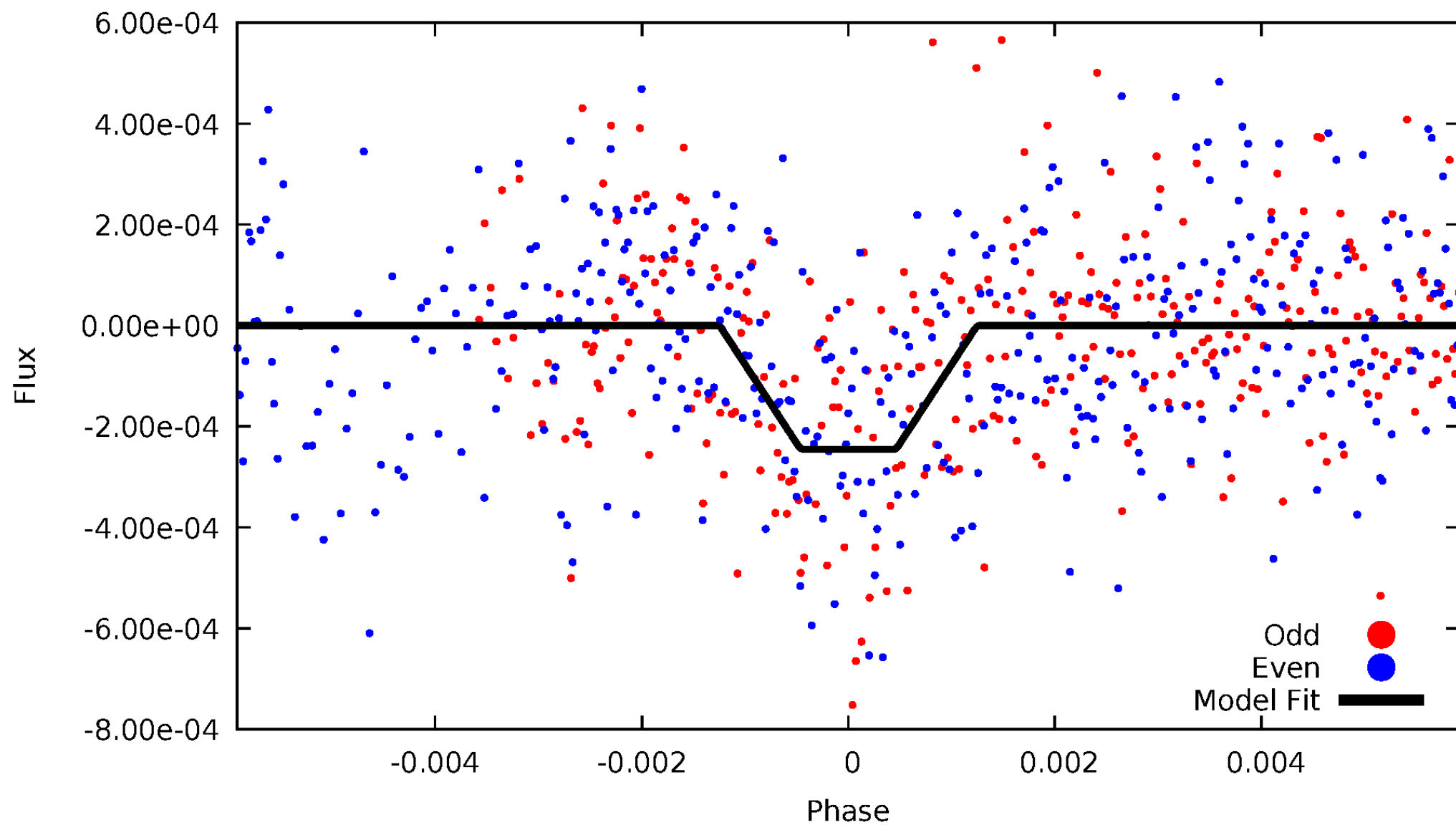
DV Odd/Even

TCE 006867765-01



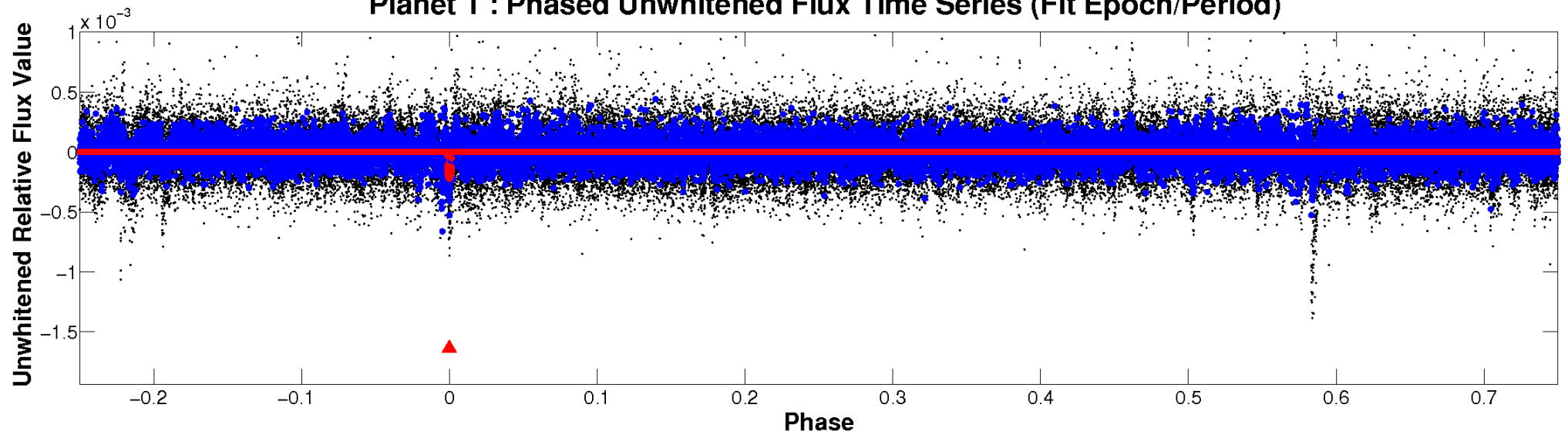
ALT Odd/Even

TCE 006867765-01

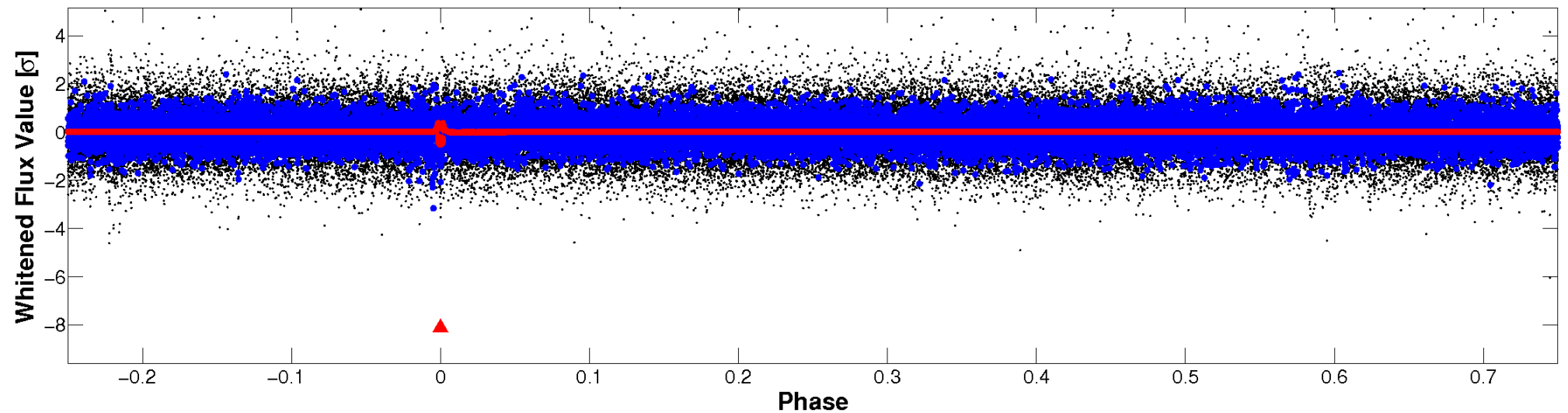


Non-Whitened Vs. Whitened Light Curve

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

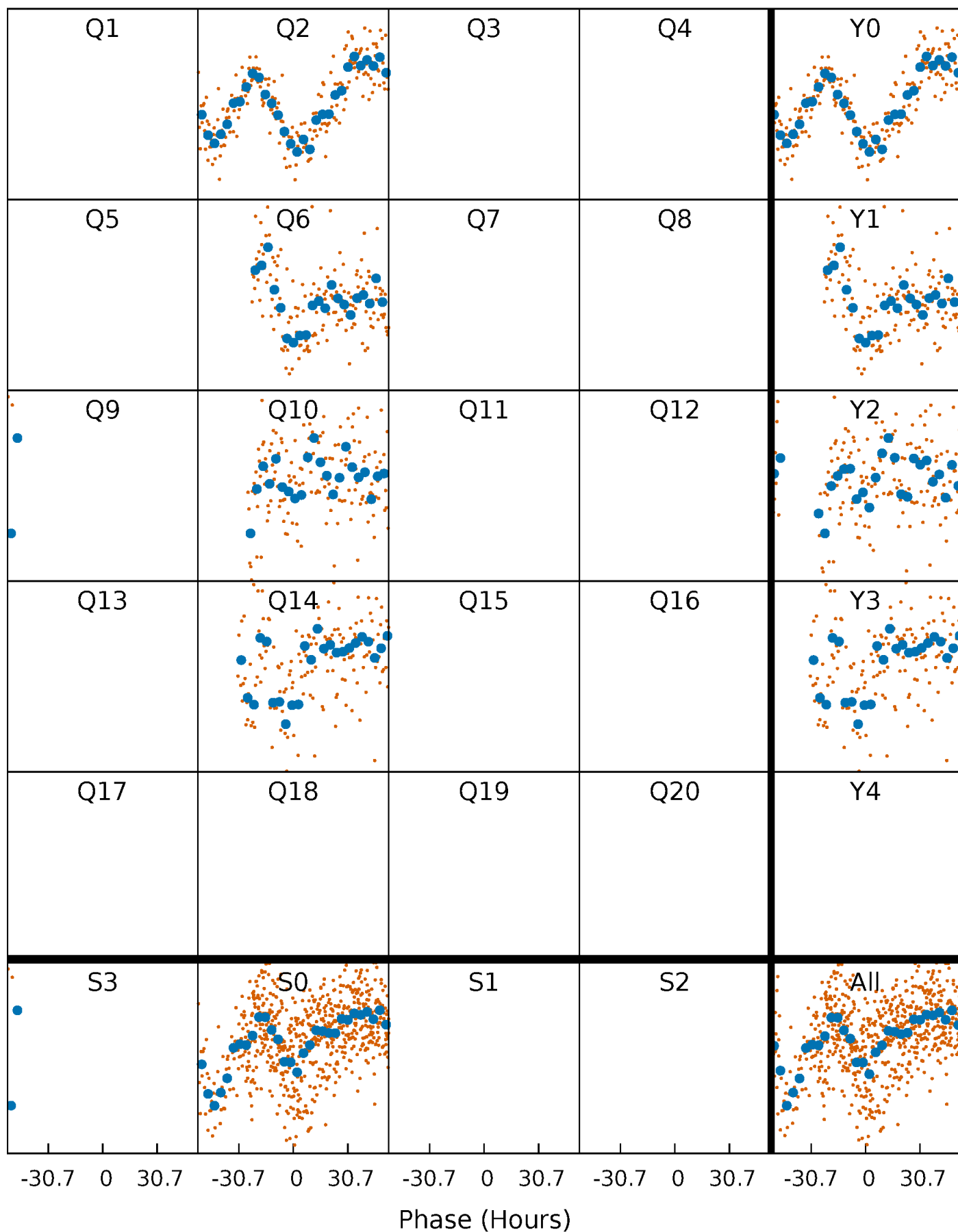


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



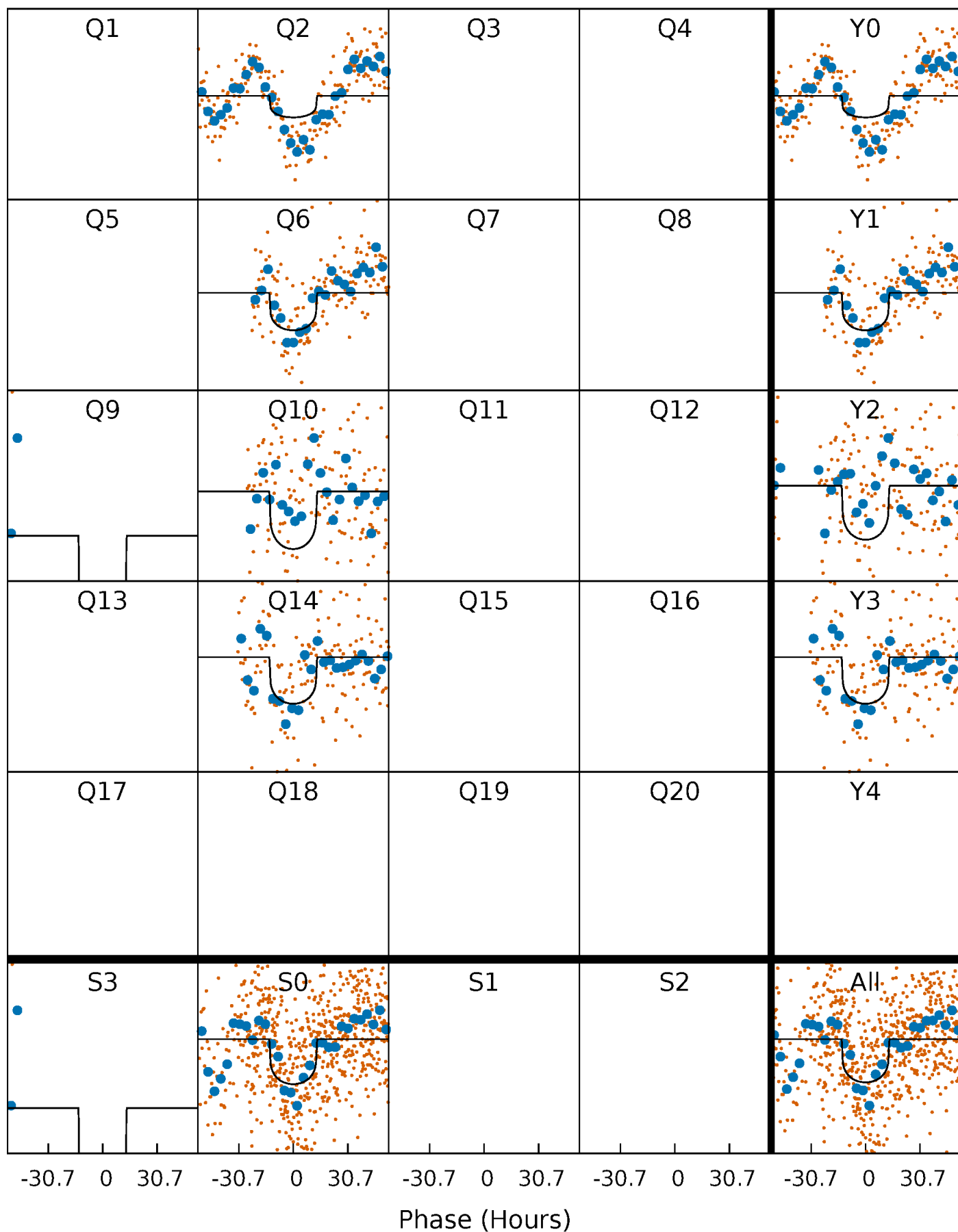
PDC Quarter-Phased Transit Curves

TCE 006867765-01 P=367.508908 Days $T_0=172.929838$ (BKJD)



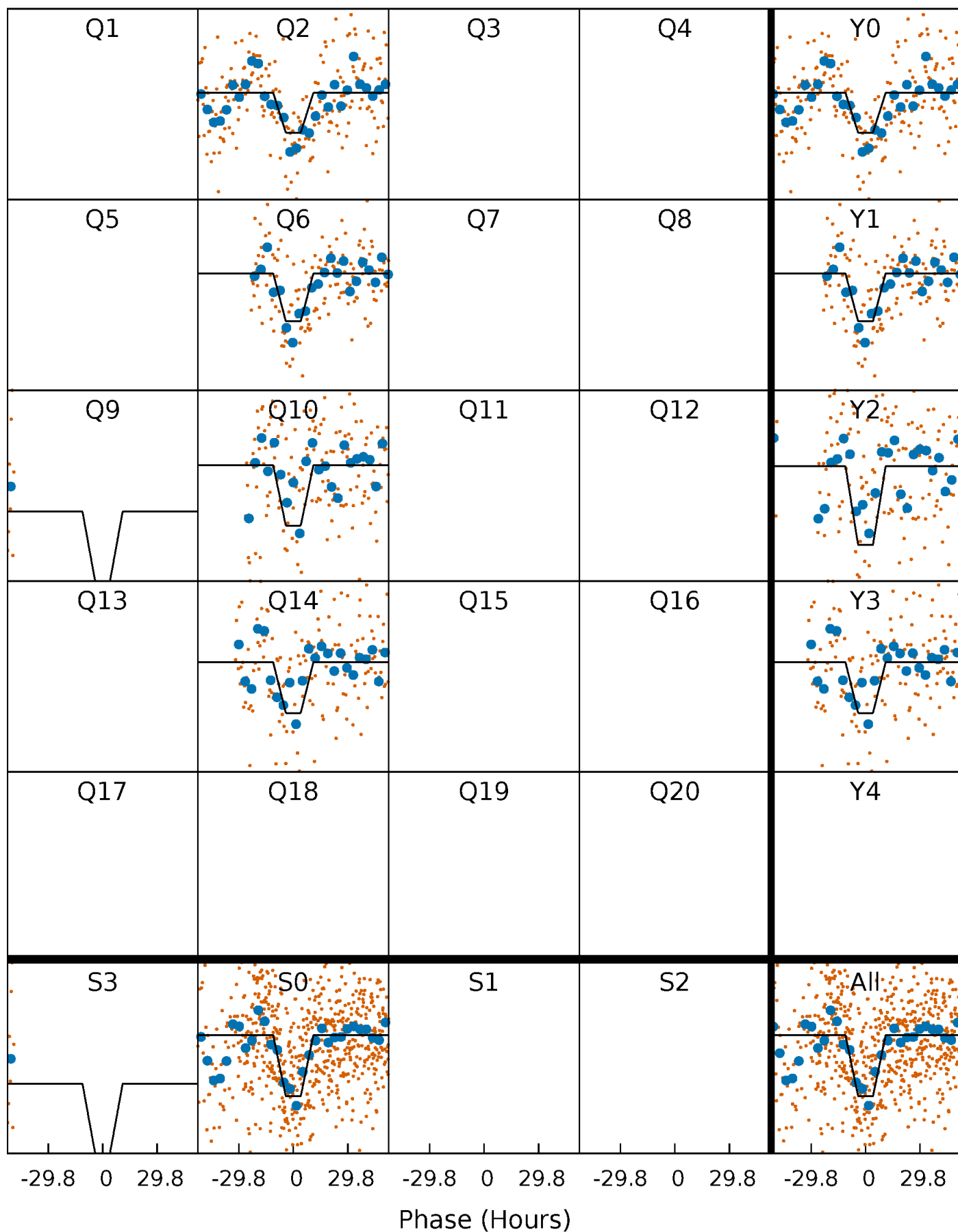
DV Quarter-Phased Transit Curves

TCE 006867765-01 P=367.508908 Days $T_0=172.929838$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

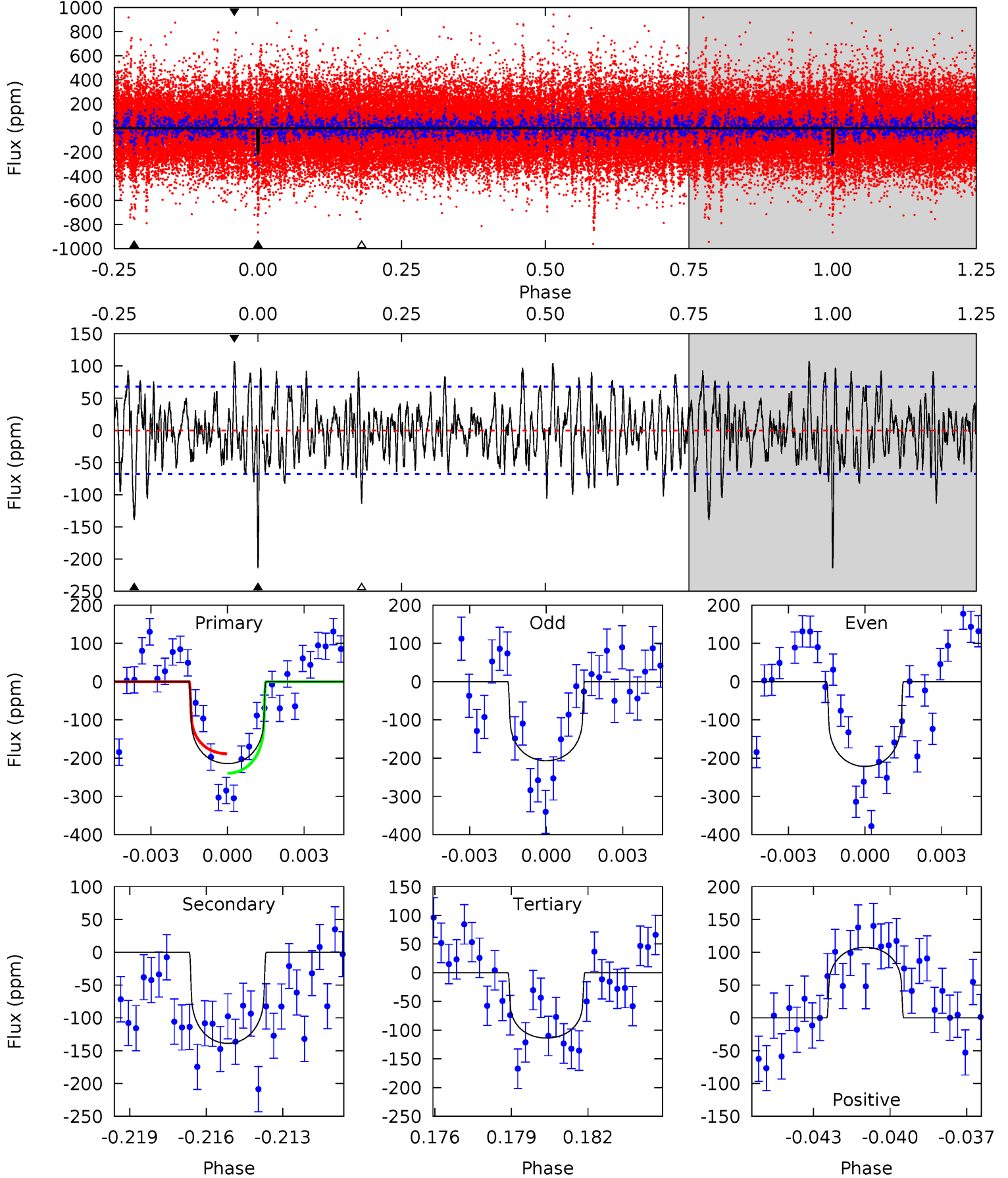
TCE 006867765-01 P=367.524821 Days $T_0=172.899788$ (BKJD)



DV Model-Shift Uniqueness Test

006867765-01, P = 367.508908 Days, E = 172.929838 Days

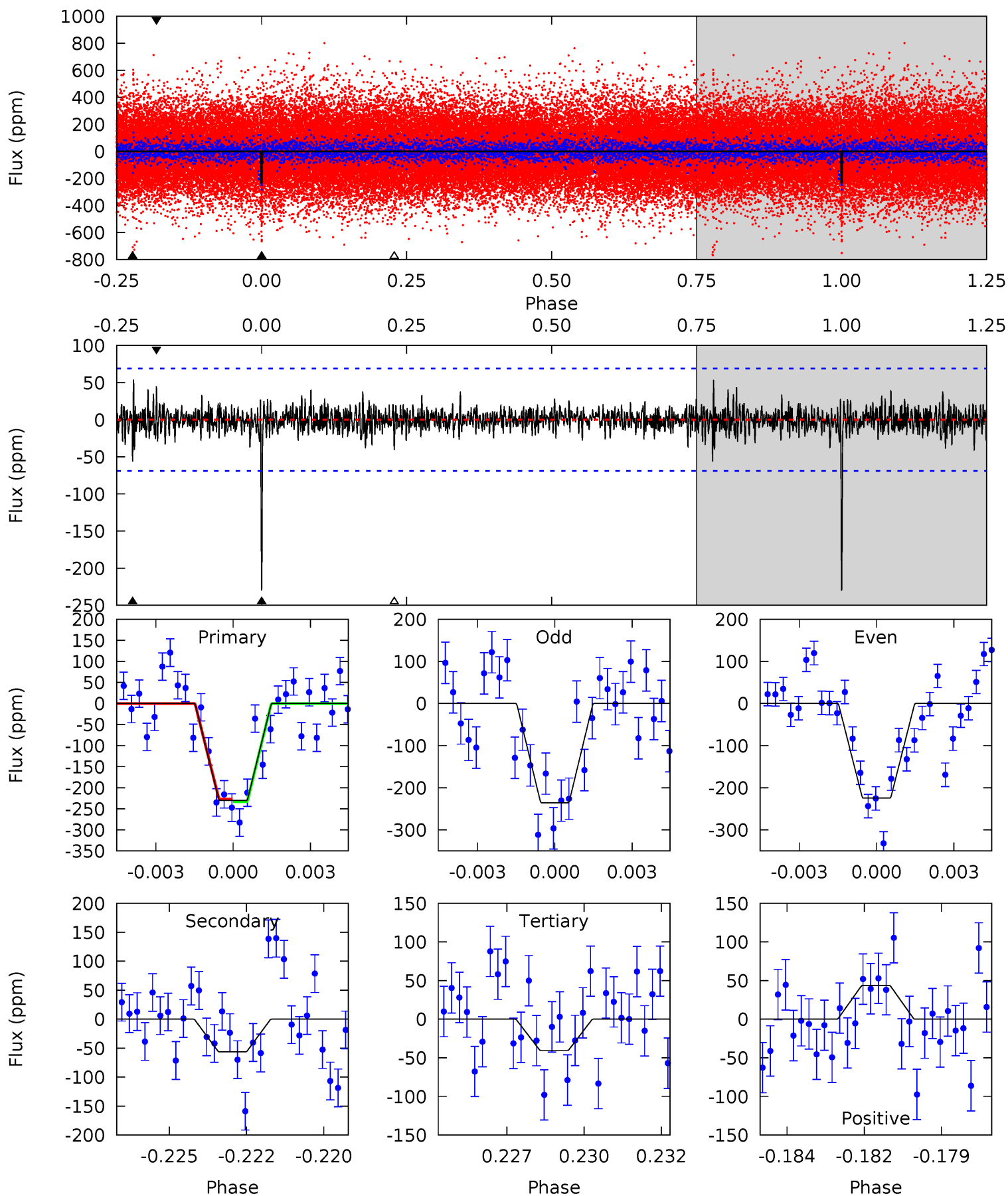
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	10.7	8.78	8.29	5.25	2.96	2.87	7.75	8.23	1.94	2.42	0.58	1.03	0.33	1.97



Alt Model-Shift Uniqueness Test

006867765-01, P = 367.524821 Days, E = 172.899788 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	4.30	3.10	3.35	5.28	3.02	0.83	14.5	14.3	1.20	0.95	0.43	0.98	0.19	0.23



Stellar Parameters For KIC 006867765

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5754^{+143}_{-171}	$4.534^{+0.033}_{-0.187}$	$0.070^{+0.250}_{-0.300}$	$0.905^{+0.248}_{-0.083}$	$1.021^{+0.100}_{-0.122}$	$1.938^{+0.345}_{-0.926}$
	+2%/-3%	+1%/-4%	+357%/-429%	+27%/-9%	+10%/-12%	+18%/-48%
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 006867765-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-139 ± 13	$1.48^{+0.57}_{-0.53}$	344^{+22}_{-14}	5259^{+1208}_{-614}	34641^{+50114}_{-16314}
Alt.	-56 ± 13	$1.63^{+0.59}_{-0.52}$	343^{+23}_{-14}	4213^{+748}_{-452}	11381^{+14821}_{-5439}

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

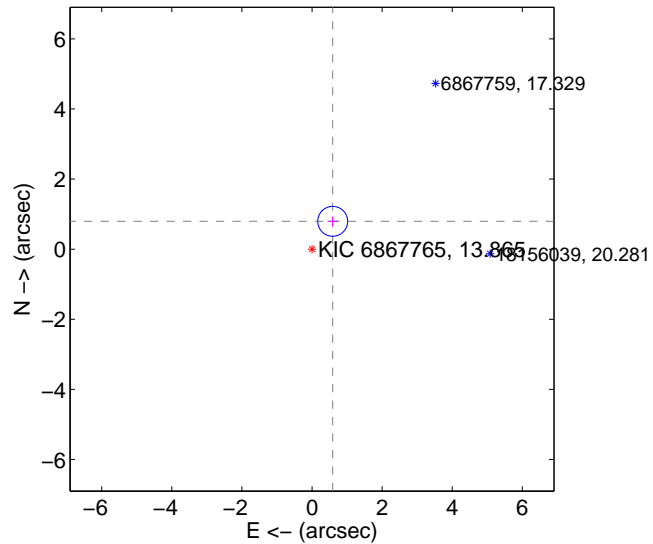
Supplemental centroid analysis for 006867765-01. Kepler magnitude: 13.87. Transit SNR 7.11

There are 1 quarters with good PRF difference image offsets

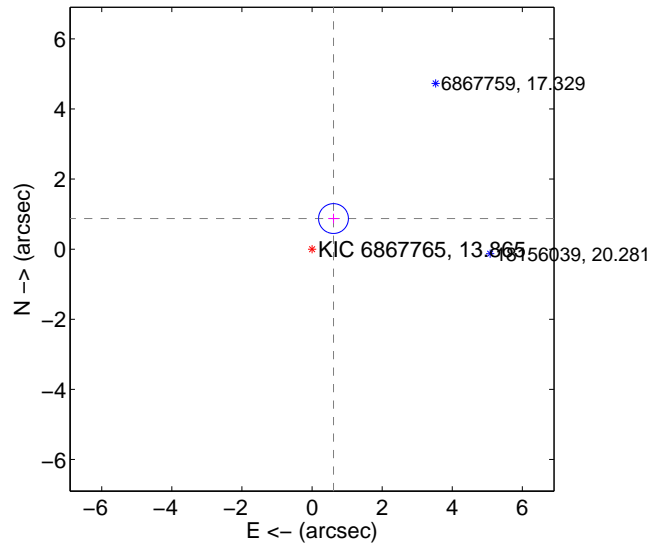
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.990 ± 0.142	6.96	-0.591 ± 0.149	0.795 ± 0.138
PRF-fit source offset from KIC position	1.067 ± 0.142	7.52	-0.612 ± 0.149	0.874 ± 0.138
photometric centroid source offset	2.42 ± 1.11	2.17	-1.45 ± 1.12	1.94 ± 1.11

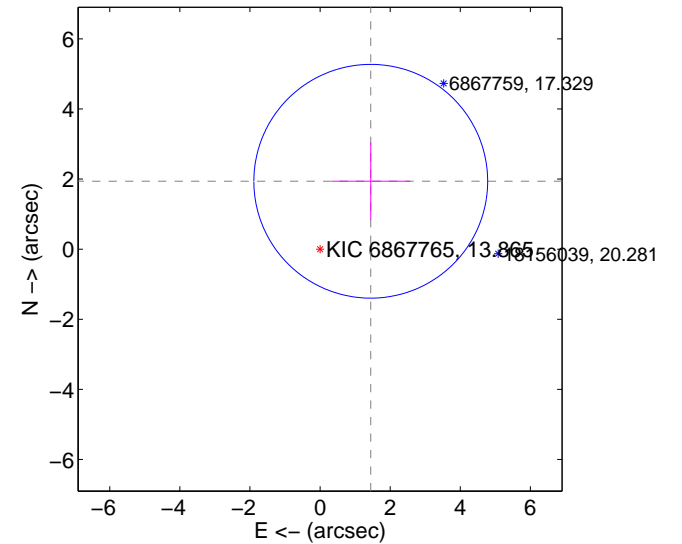
offset from difference PRF-fit to OOT PRF-fit



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.

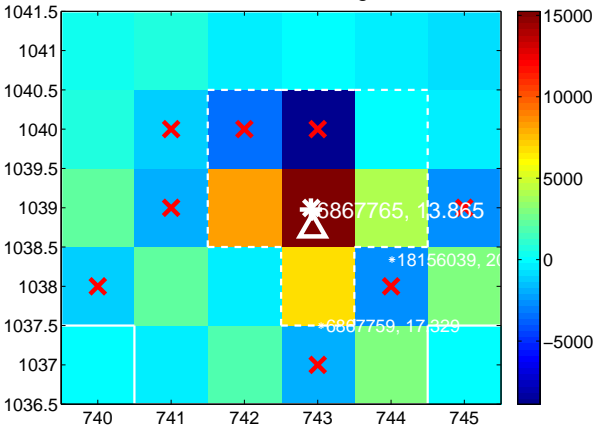
Q1 no difference image



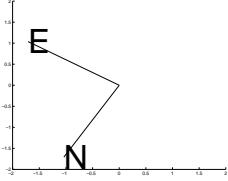
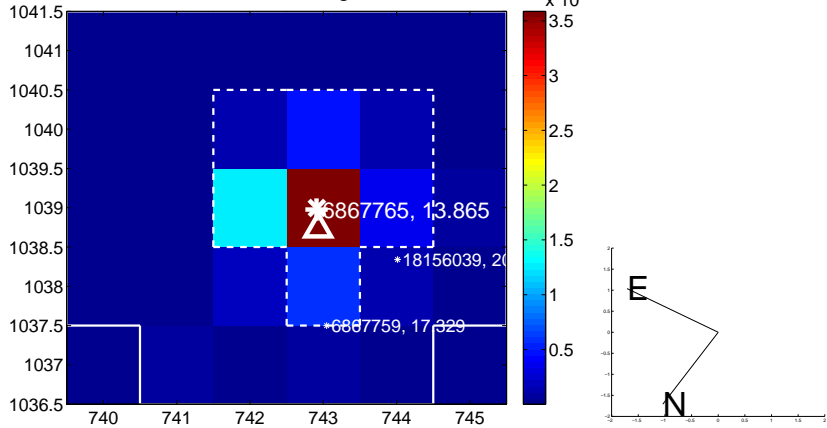
Q1 no OOT image



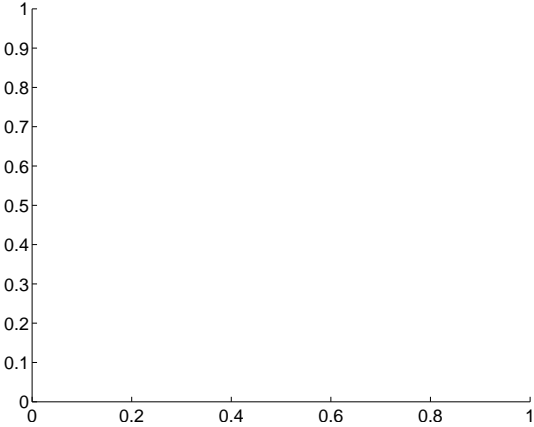
Q2 difference image



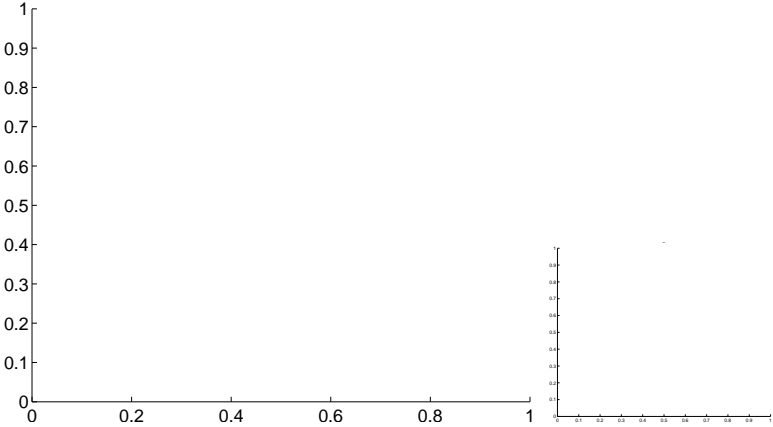
Q2 OOT image



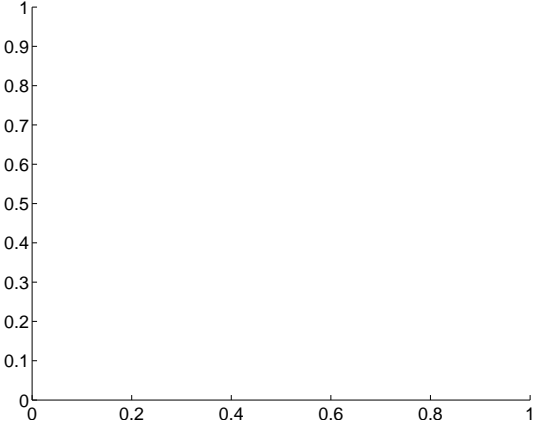
Q3 no difference image



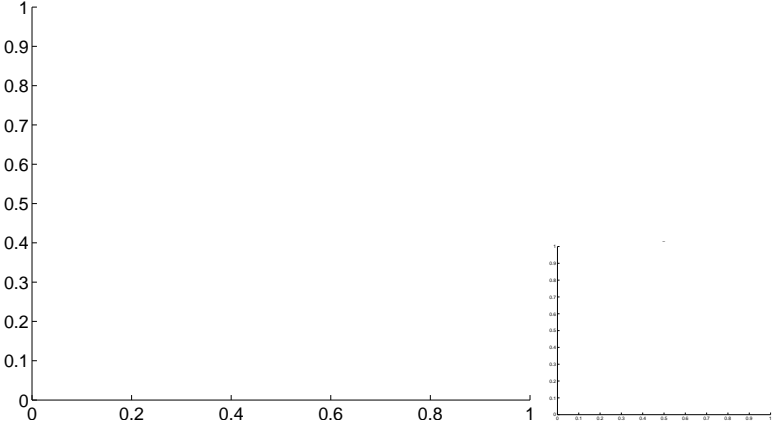
Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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



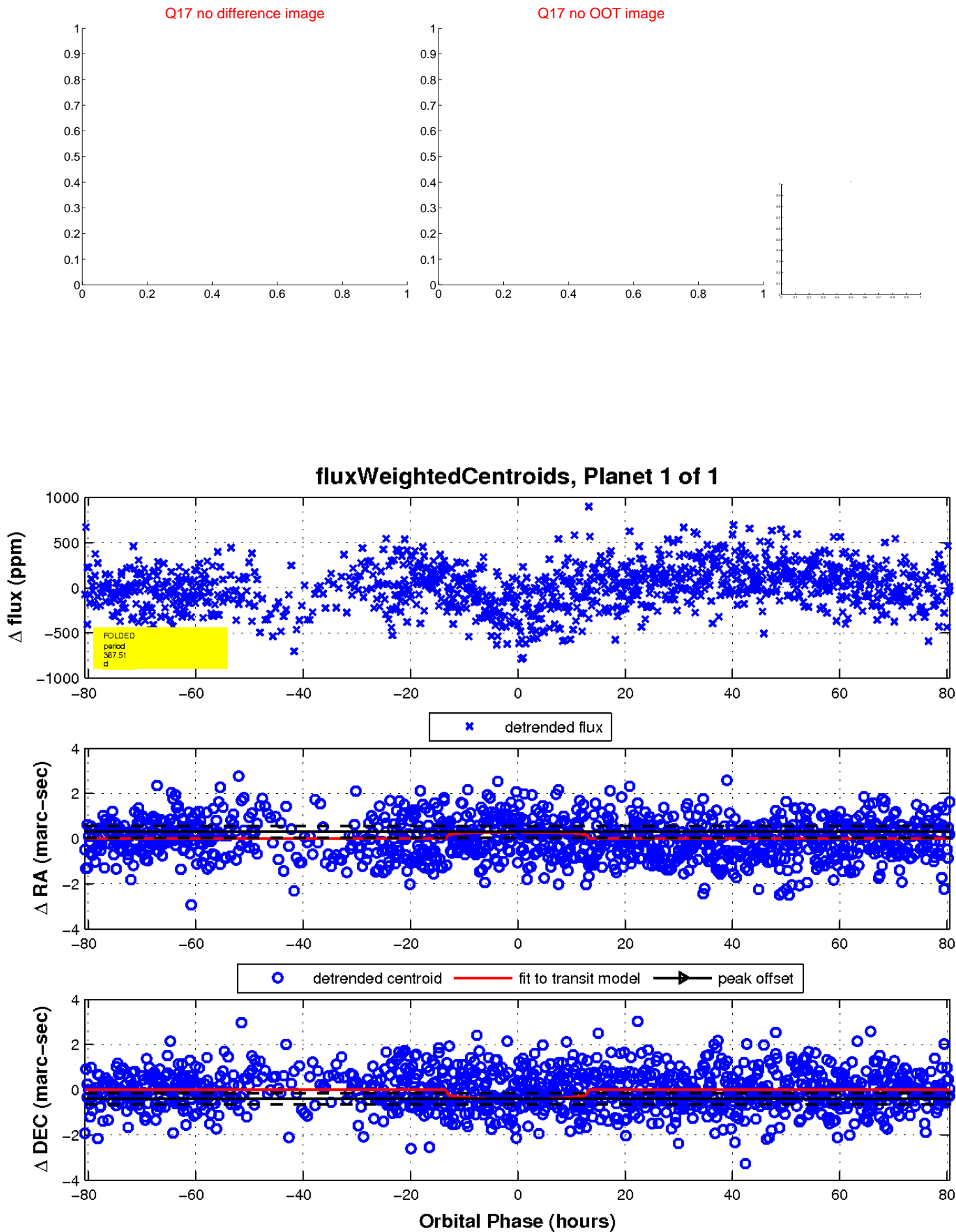
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

