

KIC 008741367

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})
008741367-01	OBS	5566.01	0.988790	131.993942	102.9	1.903	9.4	11.0	2.77	6456	3.29	24316.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008741367-01	OBS	PC	1.00	0	0	0	0	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.

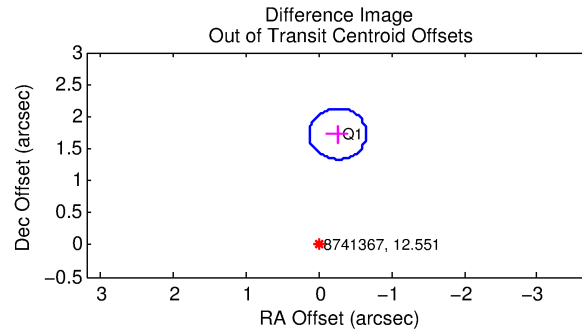
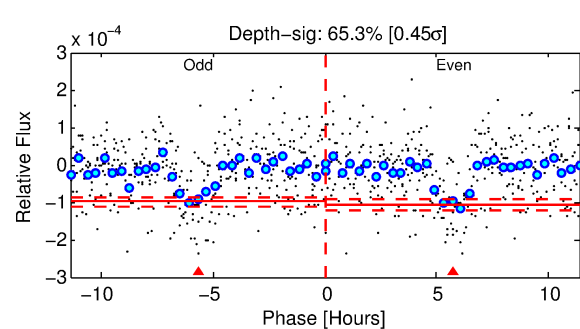
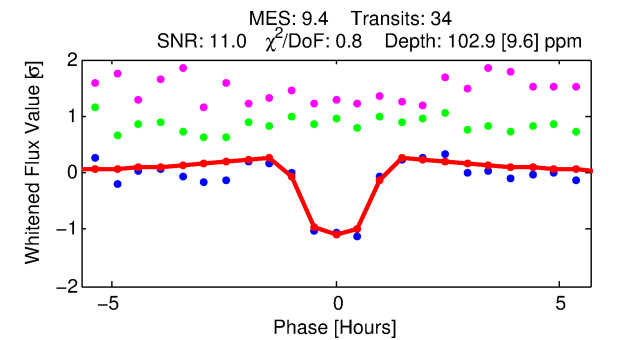
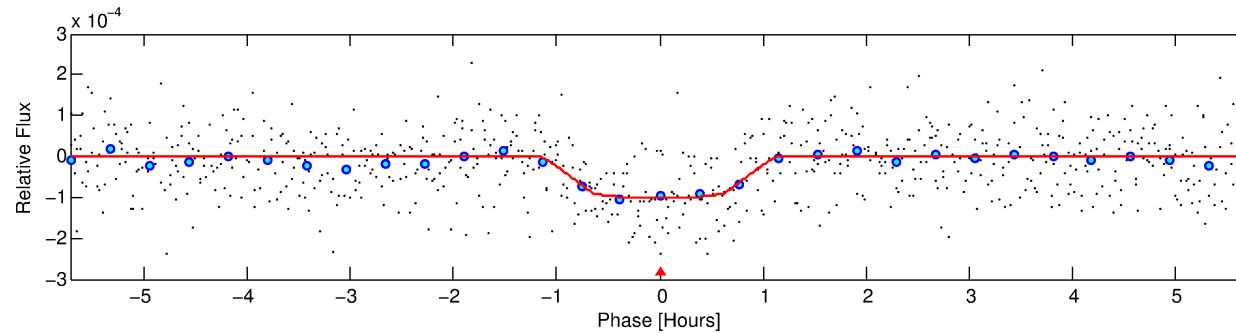
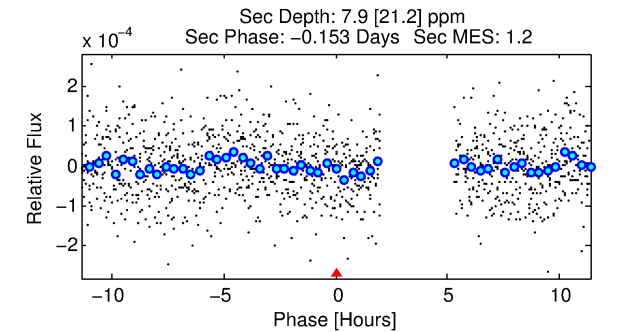
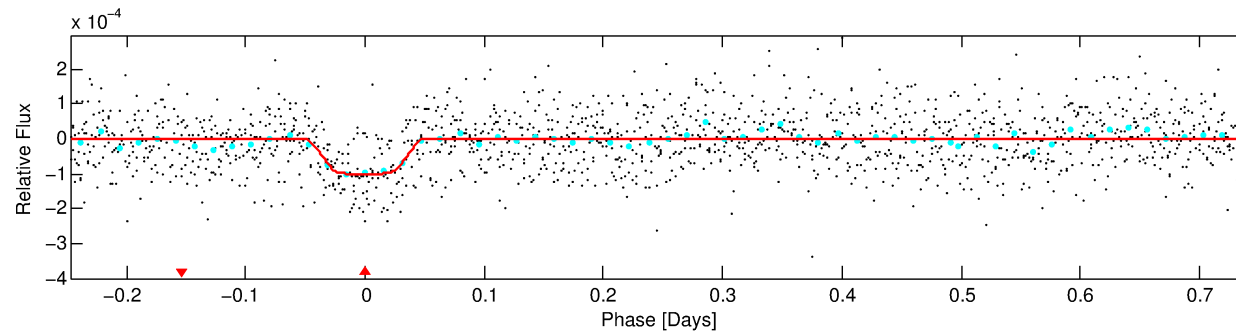
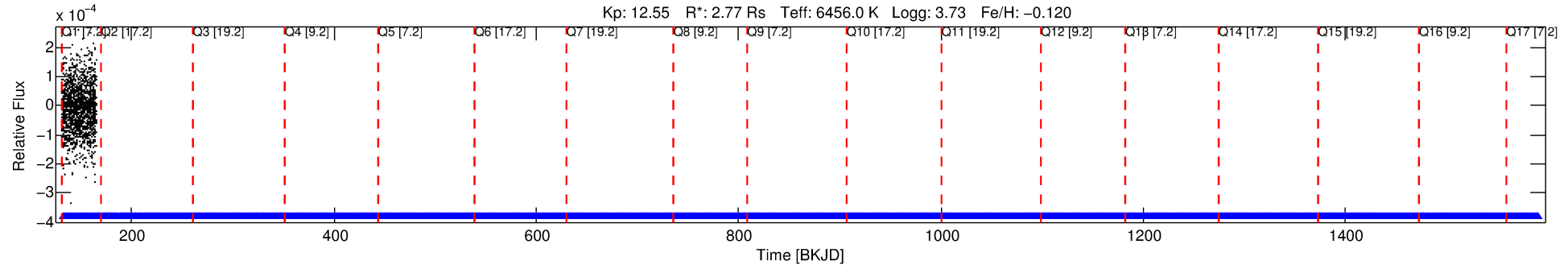
Ephemeris Match Information For 008741367-01

No Significant Match Found

DV One-Page Summary

KIC: 8741367 Candidate: 1 of 1 Period: 0.989 d
KOI: K05566 Corr: No Ephemeris Match

Kp: 12.55 R*: 2.77 Rs Teff: 6456.0 K Logg: 3.73 Fe/H: -0.120



DV Fit Results:

Period = 0.98879 [0.00020] d
Epoch = 131.9939 [0.0039] BKJD
Rp/R* = 0.0109 [0.0053]
a/R* = 2.06 [4.35]
b = 0.90 [0.60]
Seff = 24316.99 [21662.36]
Teq = 3184 [709] K
Rp = 3.29 [2.33] Re
a = 0.0222 [0.0118] AU
Ag = 0.20 [0.59] [-1.36σ]
Teff = 3284 [2341] K [0.04σ]

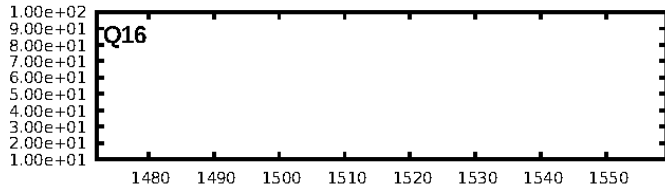
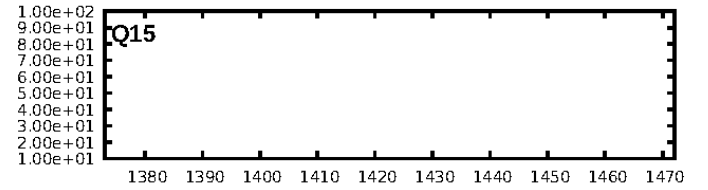
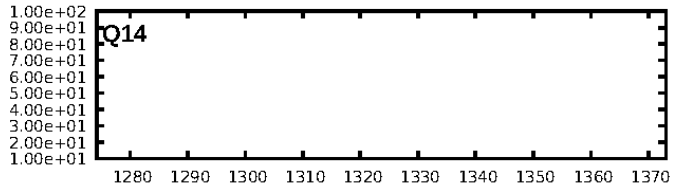
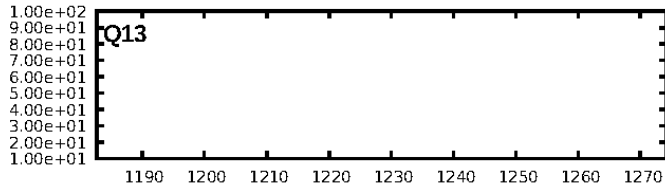
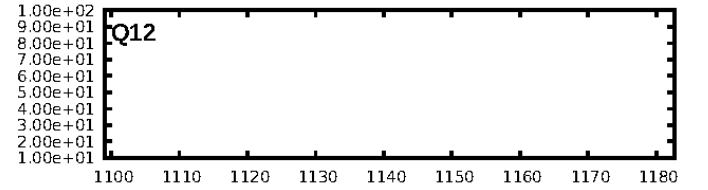
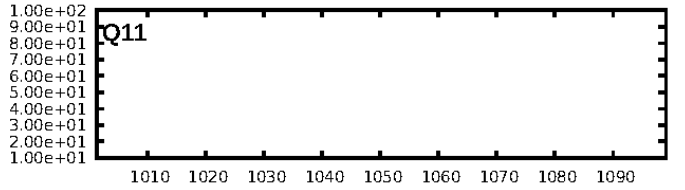
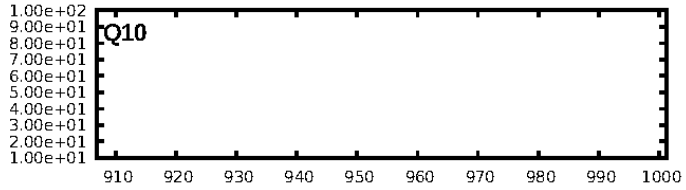
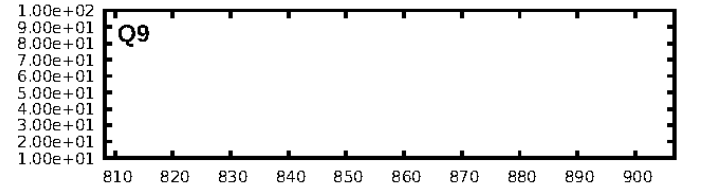
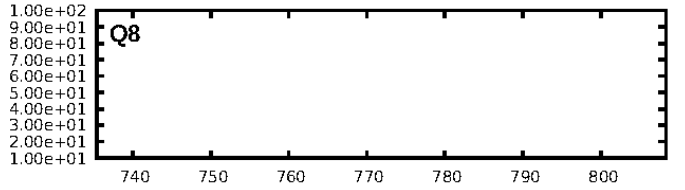
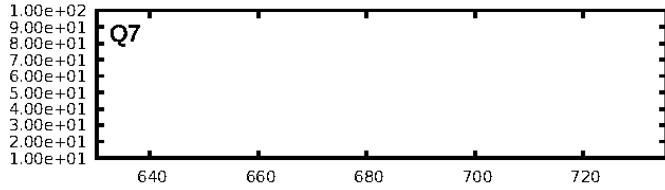
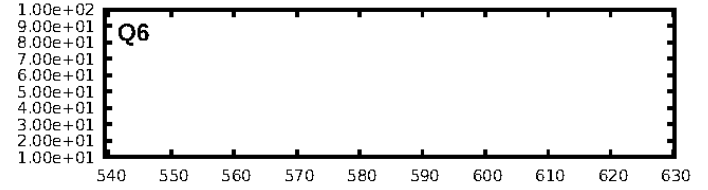
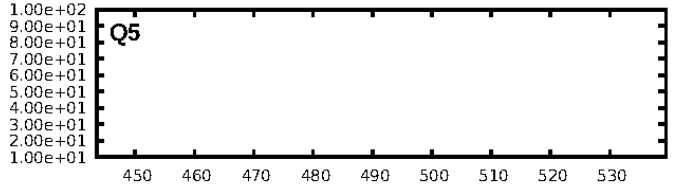
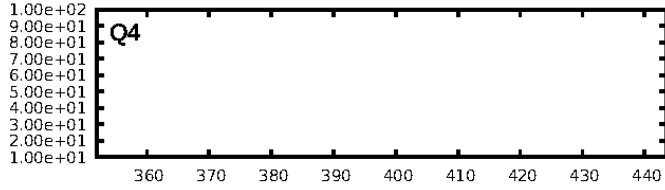
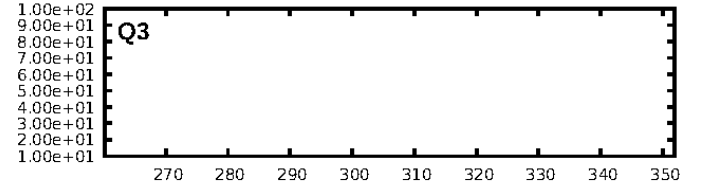
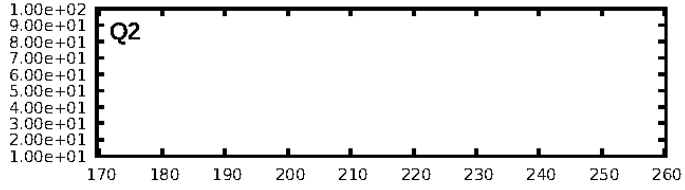
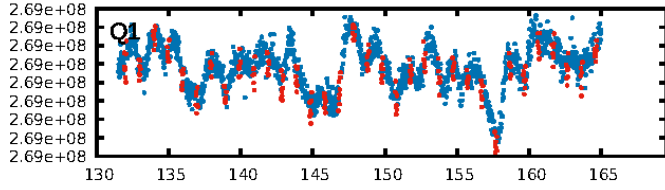
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 4.93e-19
RollingBand-fgt: N/A
GhostDiagnostic-chr: 3.065
Centroid-sig: 4.3%
Centroid-so: 1.301 arcsec [1.12σ]
OotOffset-rm: 1.748 arcsec [13.29σ]
KicOffset-rm: 1.808 arcsec [13.76σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

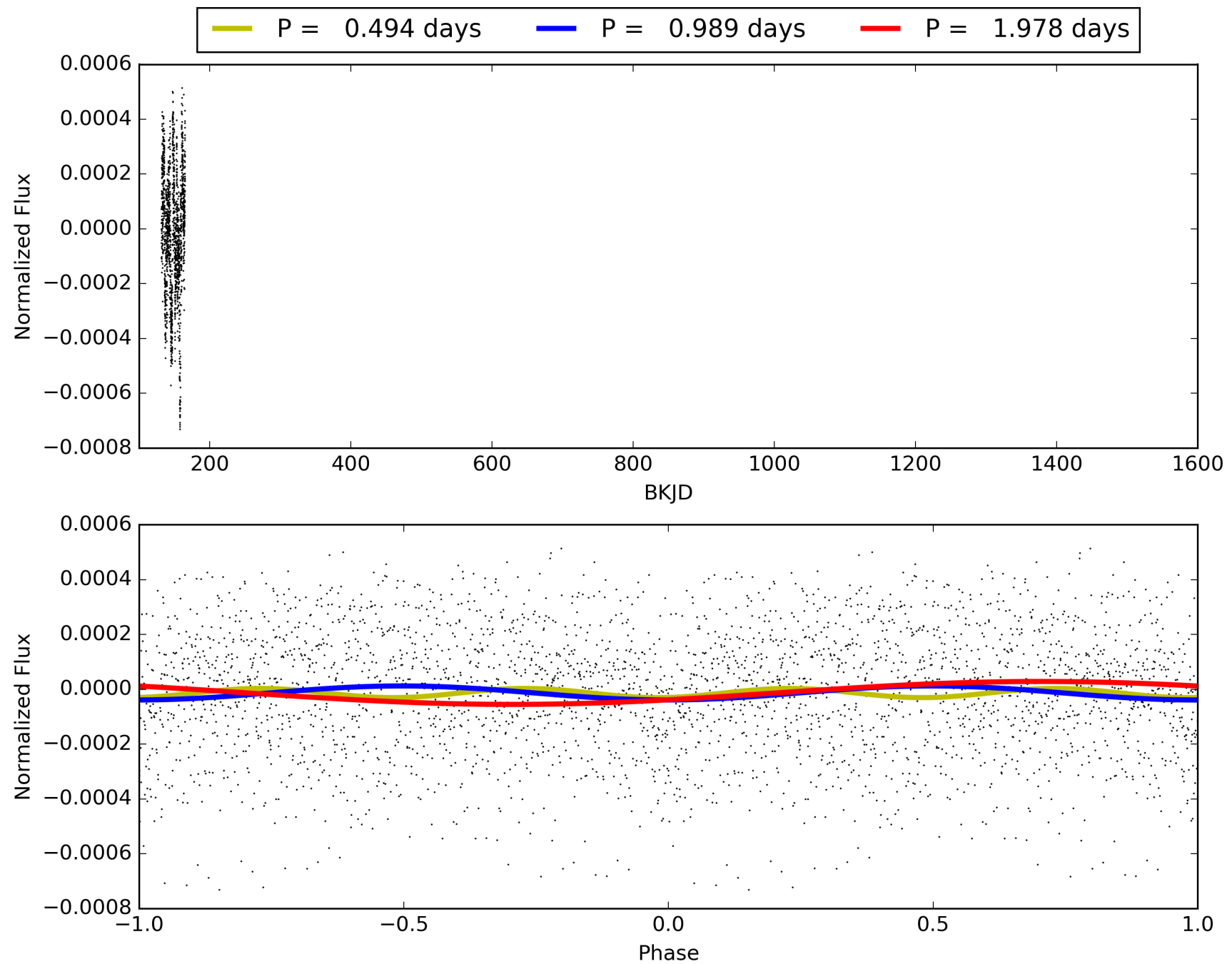
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:35:18 Z

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

TCE 008741367-01, PDC Light Curves

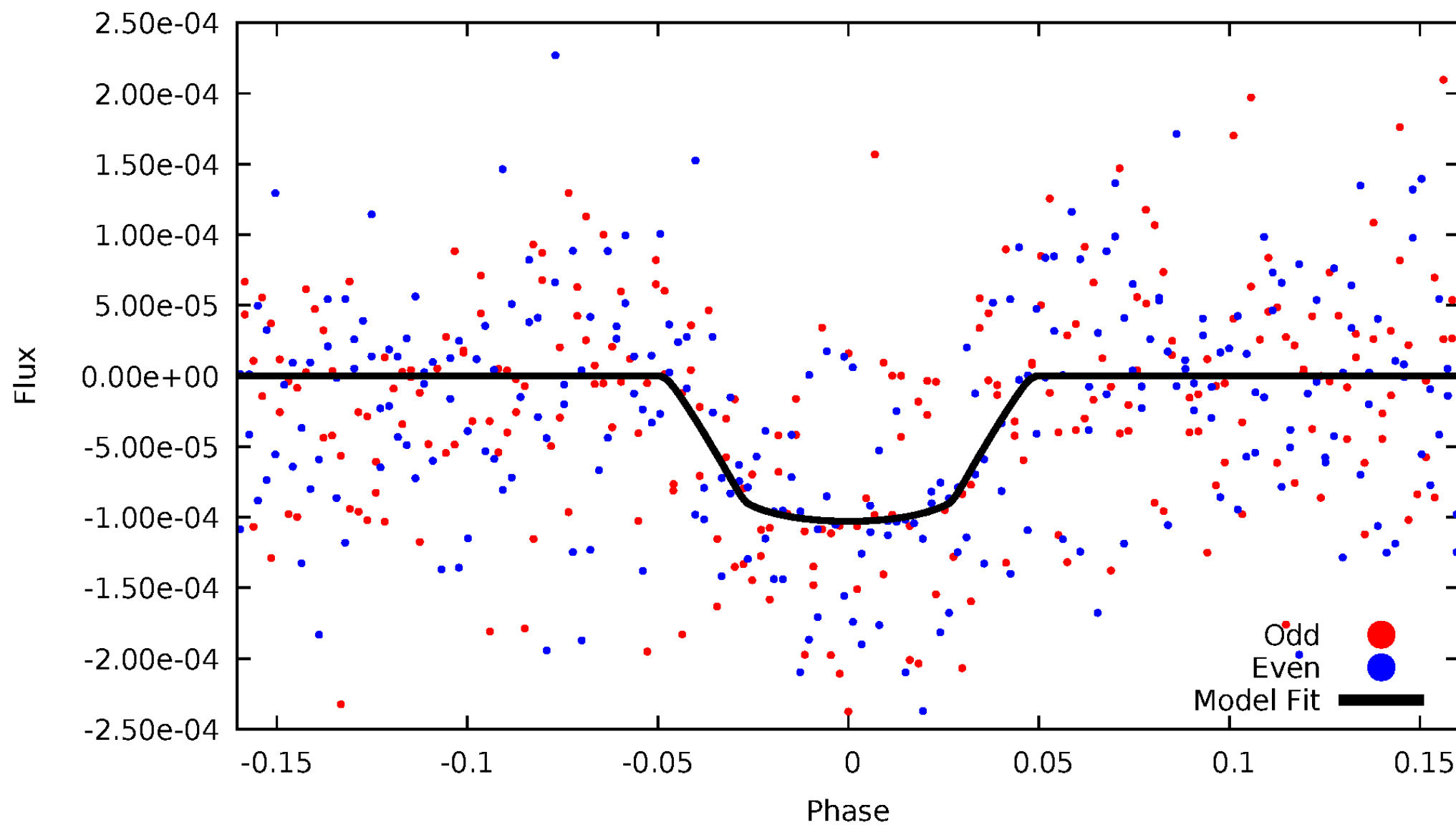


TCE 008741367-01



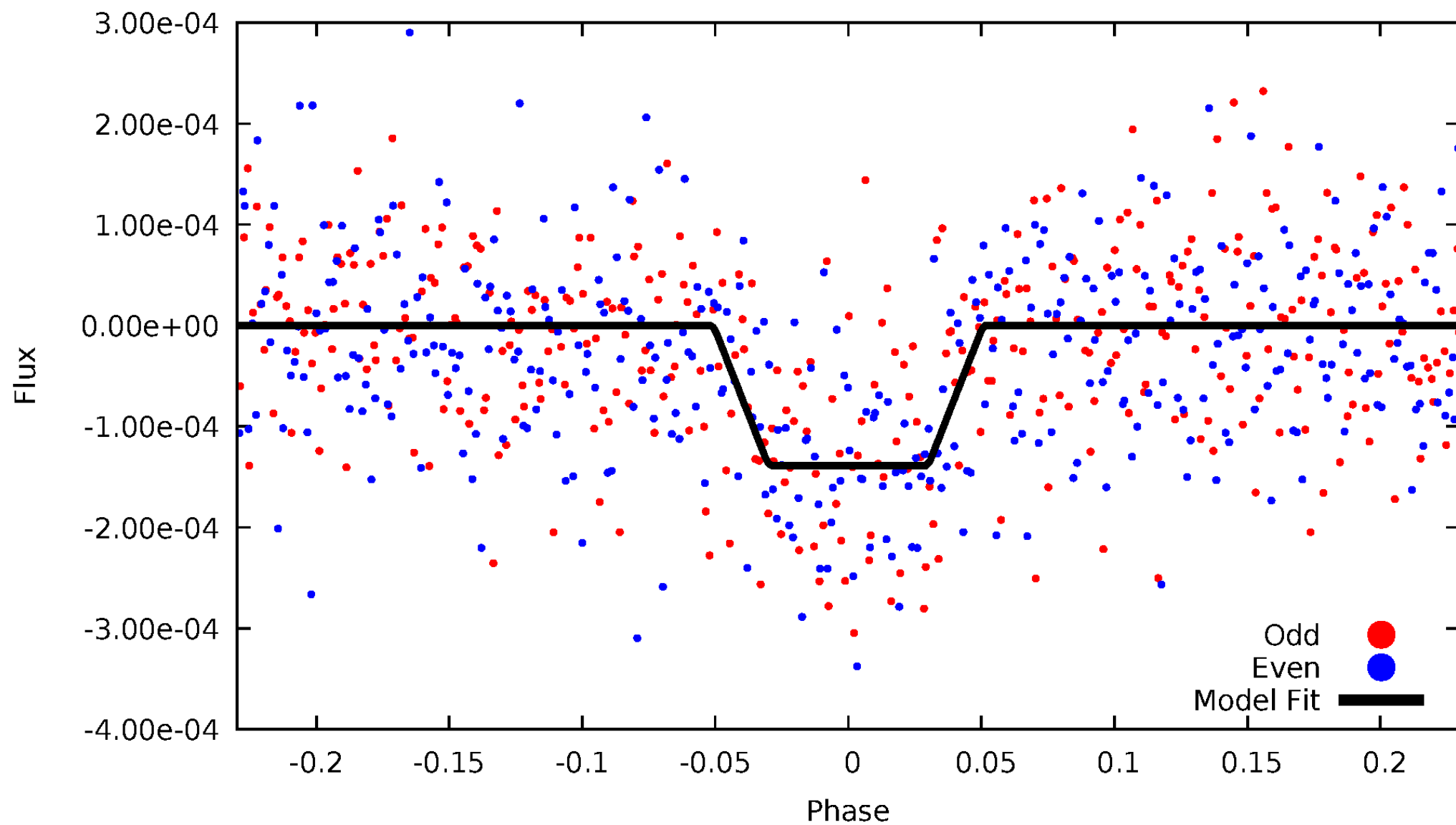
DV Odd/Even

TCE 008741367-01



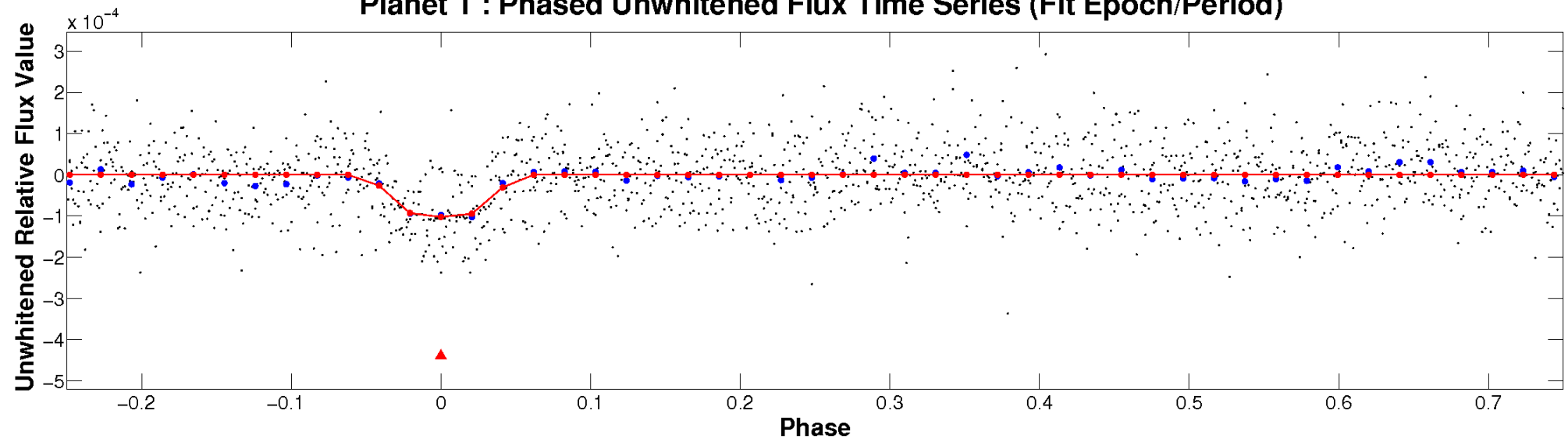
ALT Odd/Even

TCE 008741367-01

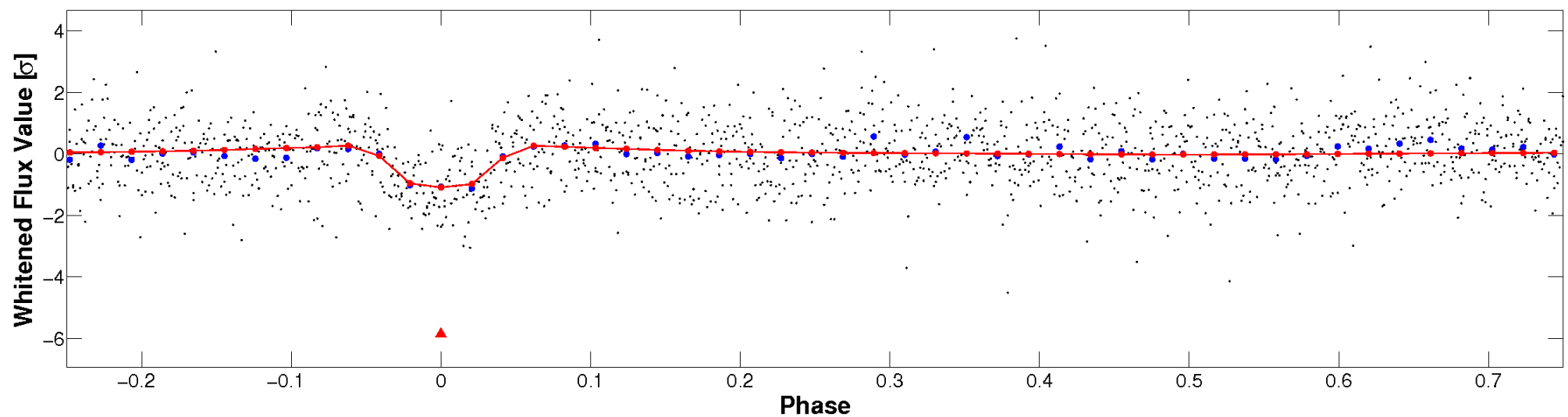


Non-Whitened Vs. Whitened Light Curve

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

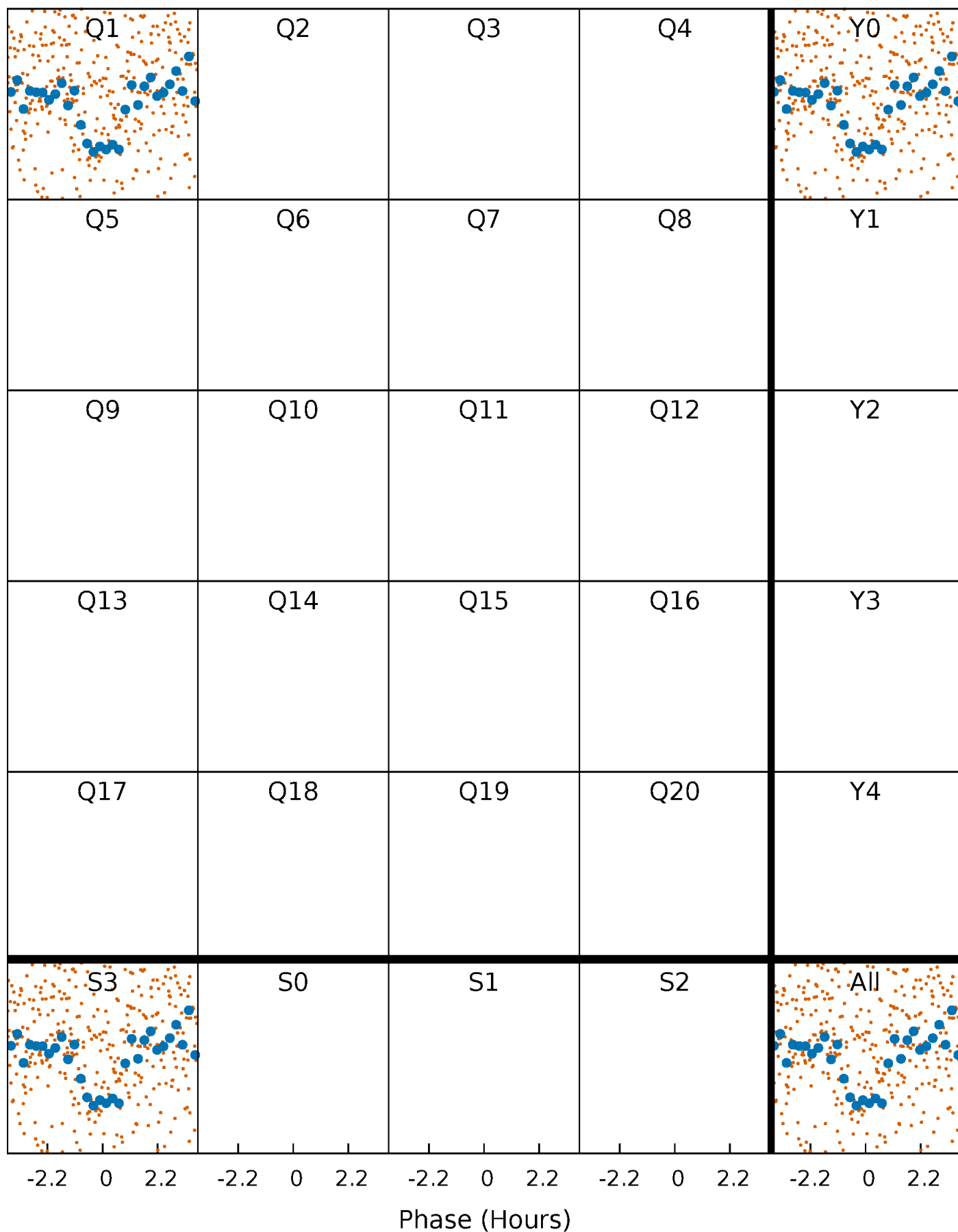


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



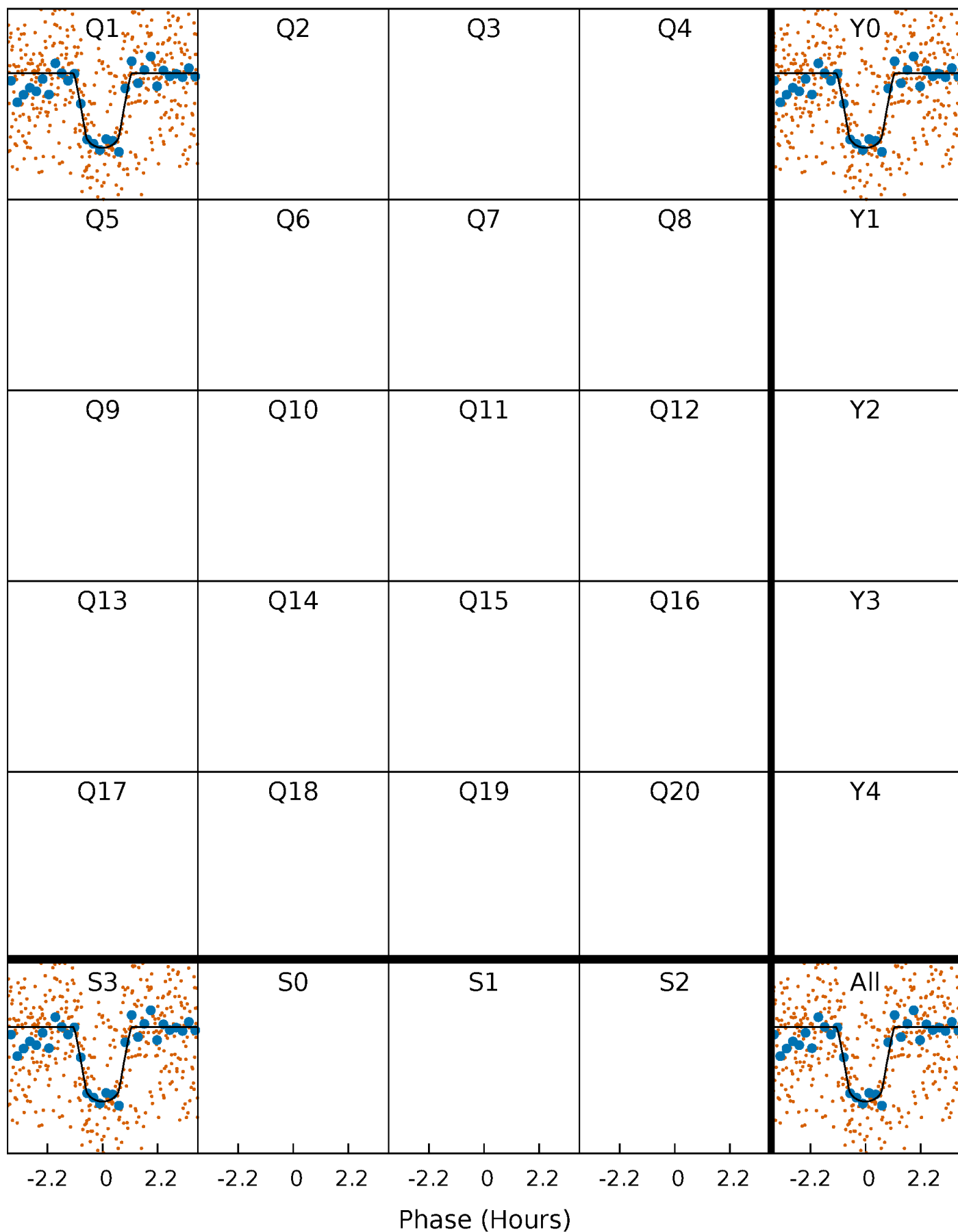
PDC Quarter-Phased Transit Curves

TCE 008741367-01 P= 0.988790 Days $T_0=131.993942$ (BKJD)



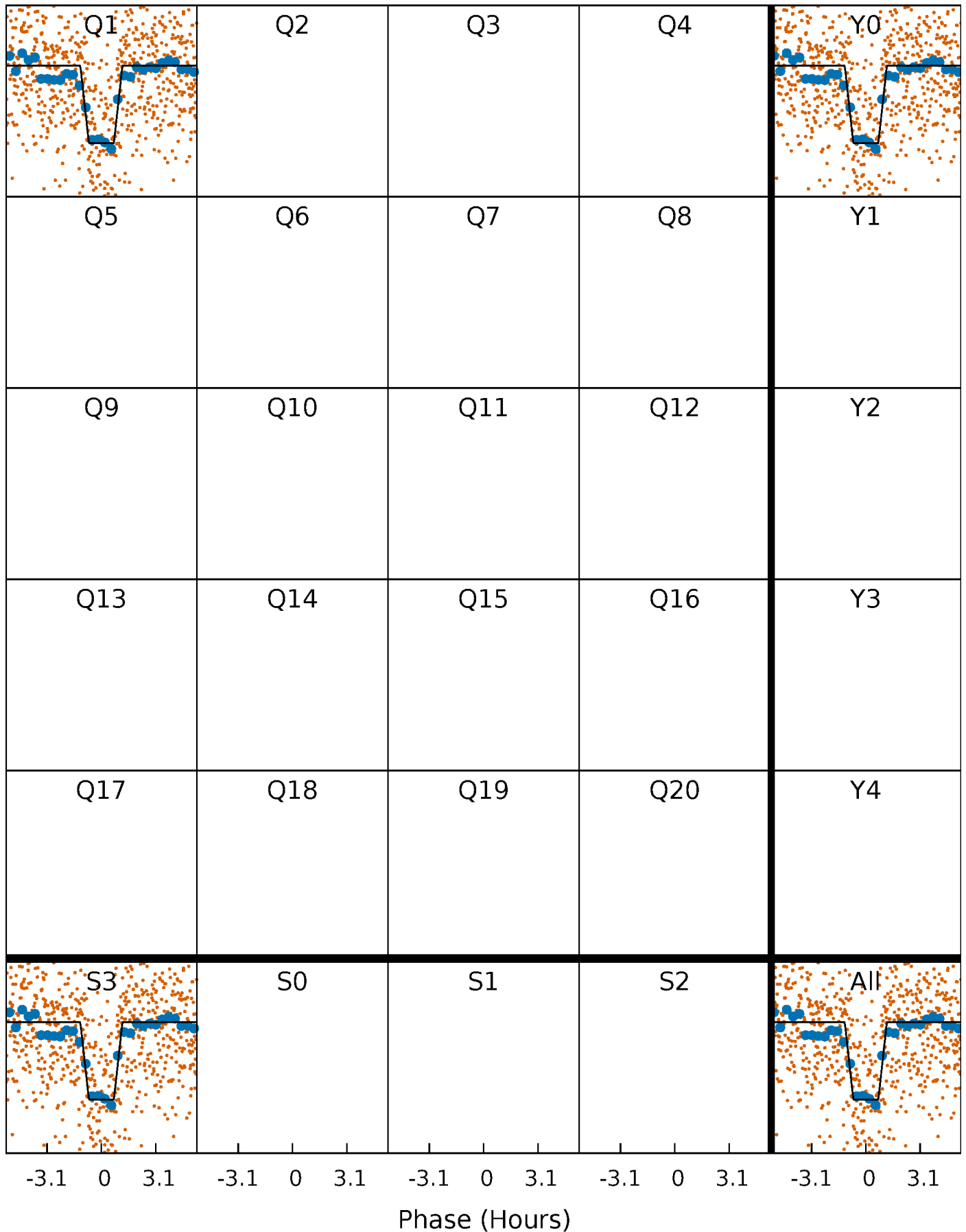
DV Quarter-Phased Transit Curves

TCE 008741367-01 P= 0.988790 Days $T_0=131.993942$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

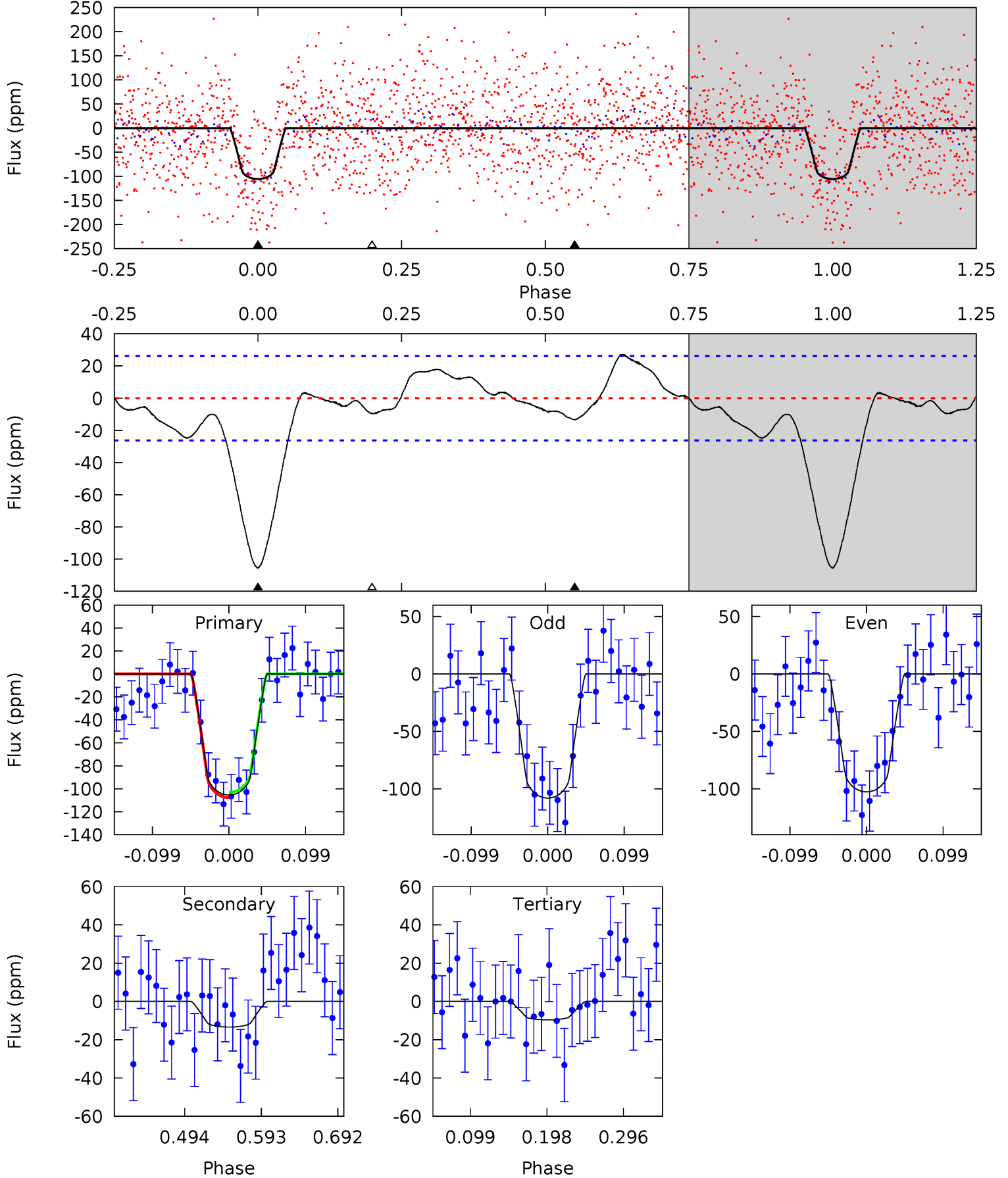
TCE 008741367-01 P= 0.988681 Days $T_0=131.995314$ (BKJD)



DV Model-Shift Uniqueness Test

008741367-01, P = 0.988790 Days, E = 131.005152 Days

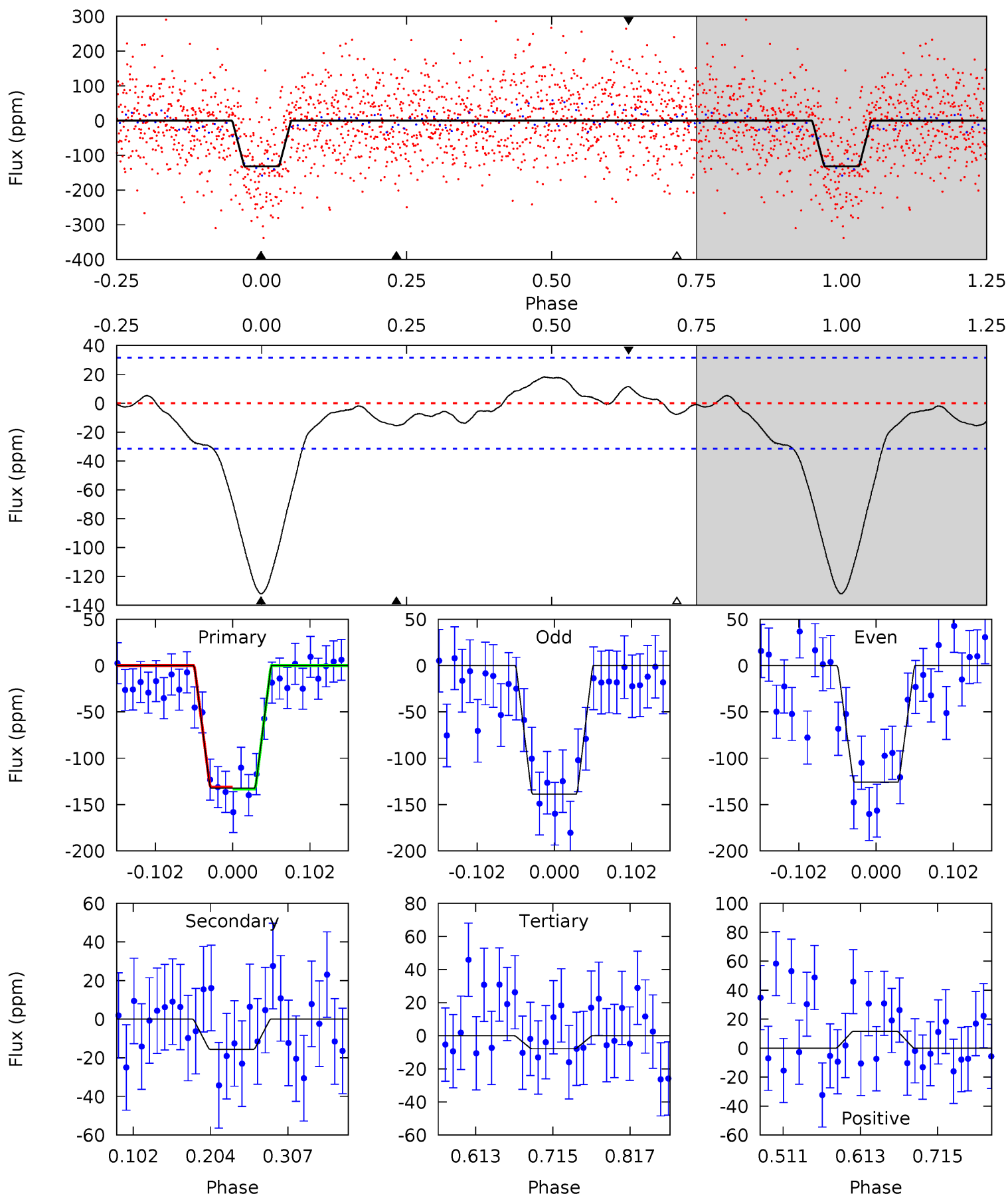
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	2.33	1.67	0	4.57	1.65	2.07	16.7	18.3	0.66	2.33	0.48	0.90	0.20	0.41



Alt Model-Shift Uniqueness Test

008741367-01, P = 0.988681 Days, E = 131.006633 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	2.26	1.12	1.68	4.56	1.63	1.51	18.0	17.4	1.13	0.57	0.98	0.97	0.12	0.15



Stellar Parameters For KIC 008741367

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6456^{+182}_{-228}	$3.725^{+0.527}_{-0.093}$	$-0.120^{+0.300}_{-0.250}$	$2.773^{+0.479}_{-1.436}$	$1.490^{+0.211}_{-0.393}$	$0.098^{+0.547}_{-0.030}$
	+3%/-4%	+14%/-2%	+250%/-208%	+17%/-52%	+14%/-26%	+556%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008741367-01 / KOI 5566.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 6	$2.85^{+1.79}_{-1.48}$	4282^{+330}_{-584}	3311^{+1697}_{-6874}	$0.428^{+1.443}_{-0.301}$
Alt.	-16 ± 7	$3.11^{+1.83}_{-1.50}$	4307^{+302}_{-603}	3208^{+1574}_{-6757}	$0.406^{+1.168}_{-0.265}$

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

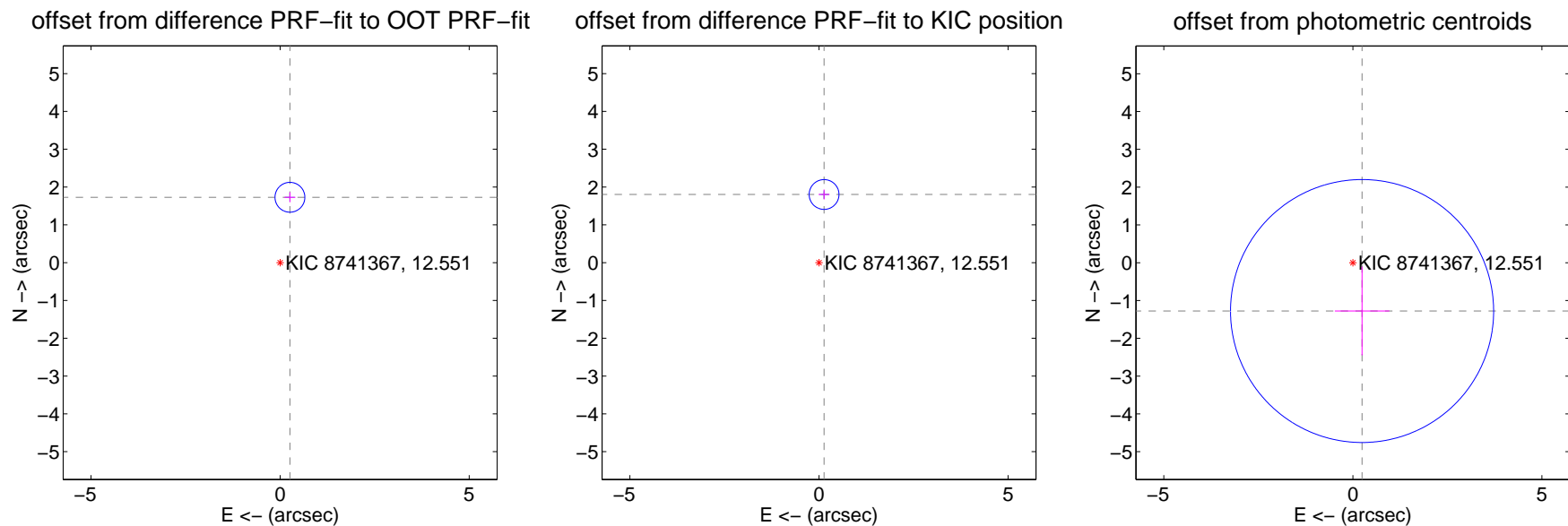
DV Centroid Data

Supplemental centroid analysis for 008741367-01. Kepler magnitude: 12.55. Transit SNR 10.97

There are 1 quarters with good PRF difference image offsets

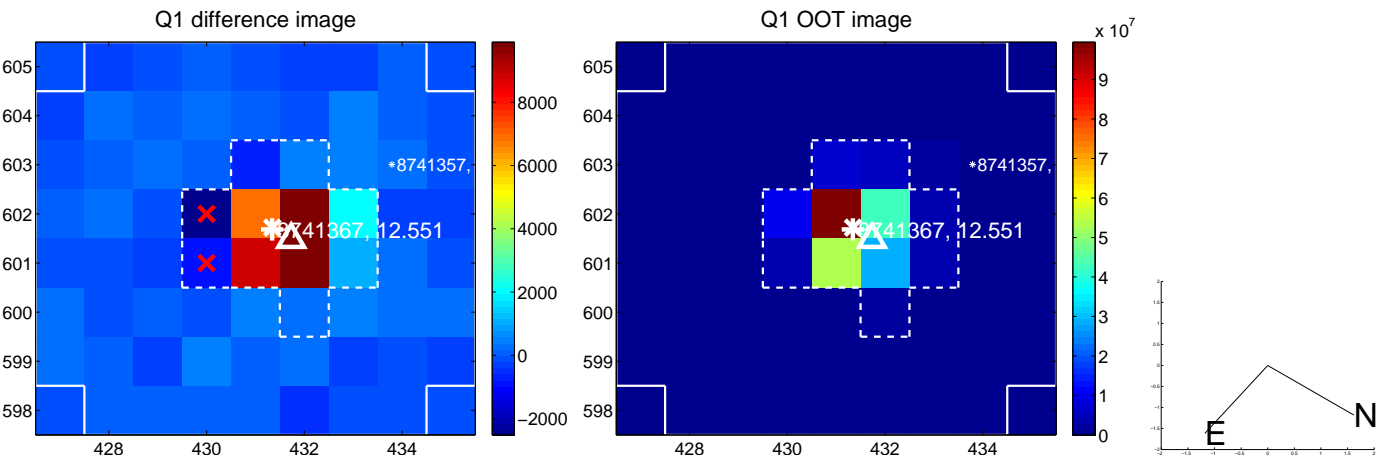
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.748 ± 0.132	13.29	-0.259 ± 0.143	1.729 ± 0.131
PRF-fit source offset from KIC position	1.808 ± 0.131	13.76	-0.135 ± 0.143	1.803 ± 0.131
photometric centroid source offset	1.30 ± 1.16	1.12	-0.24 ± 0.72	-1.28 ± 1.17



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.



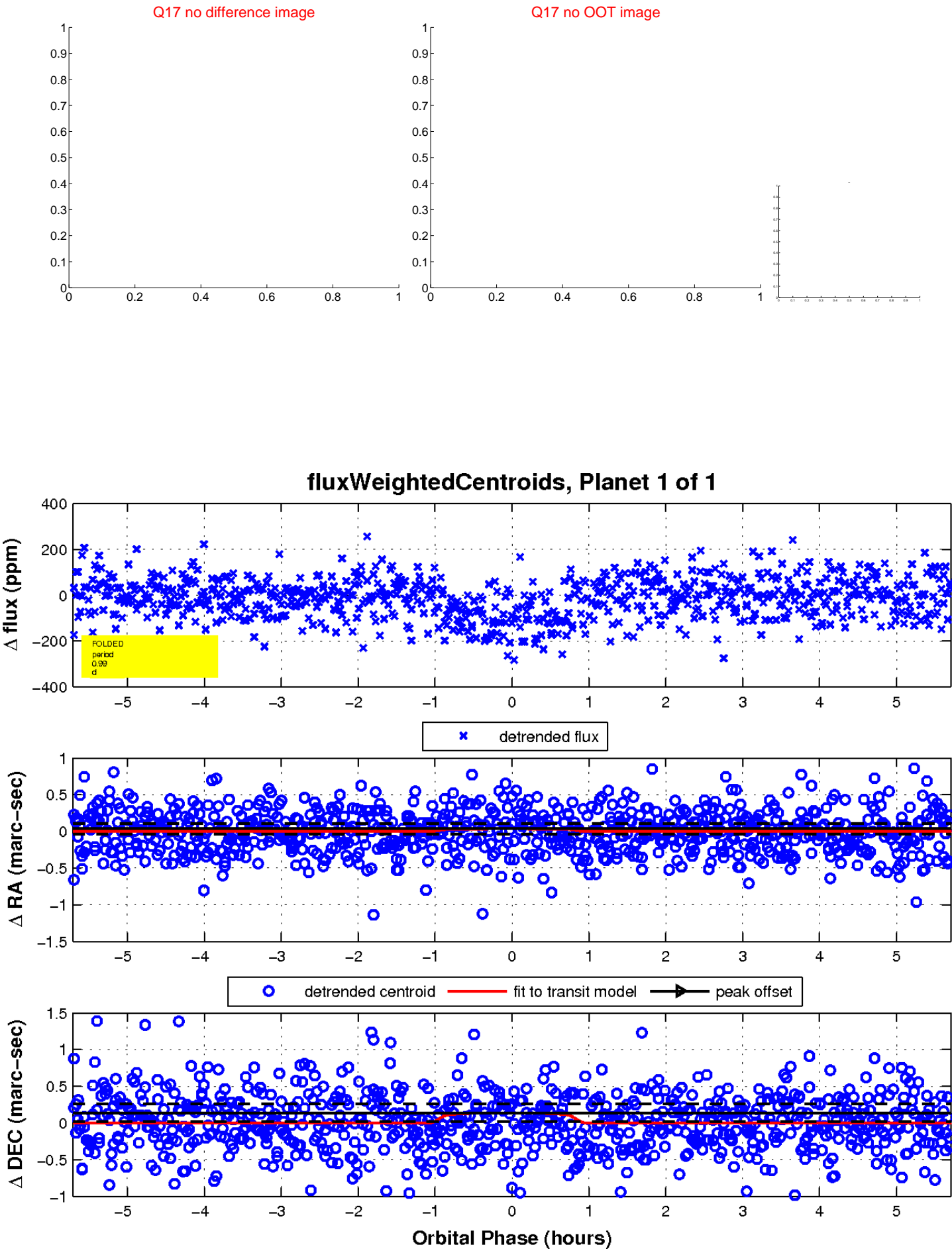
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

