

KIC 008814635

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})
008814635-01	OBS	No	0.551120	131.529447	134.4	3.495	14.6	2.7	1.37	6685	1.69	15610.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008814635-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

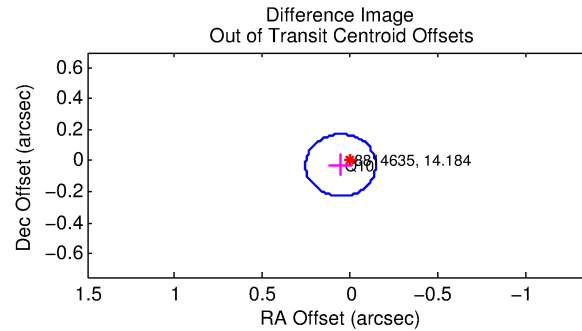
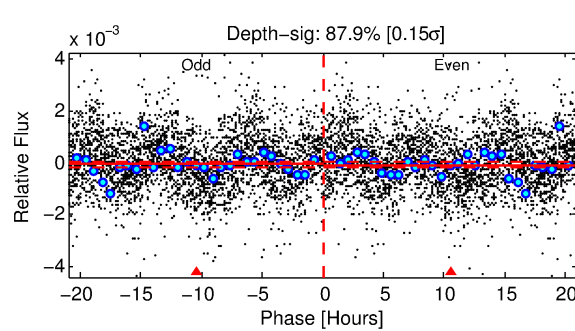
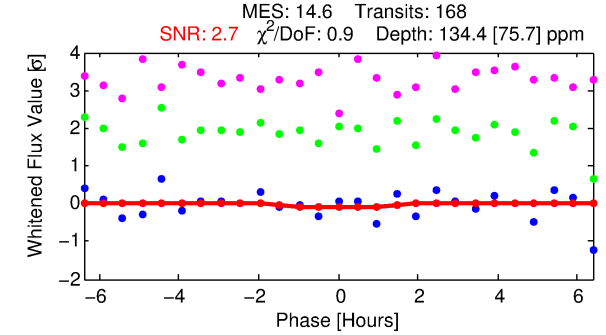
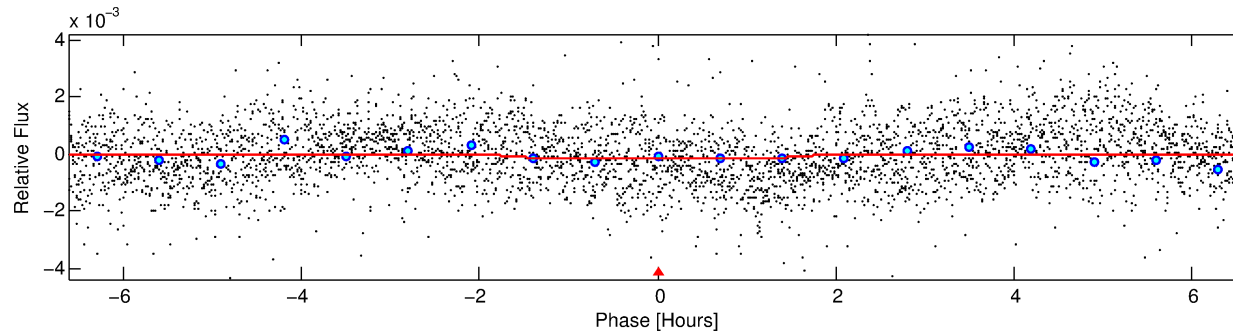
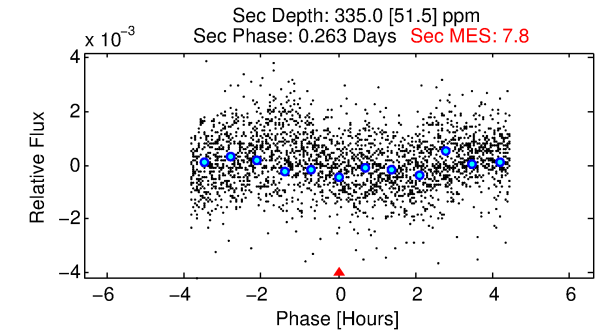
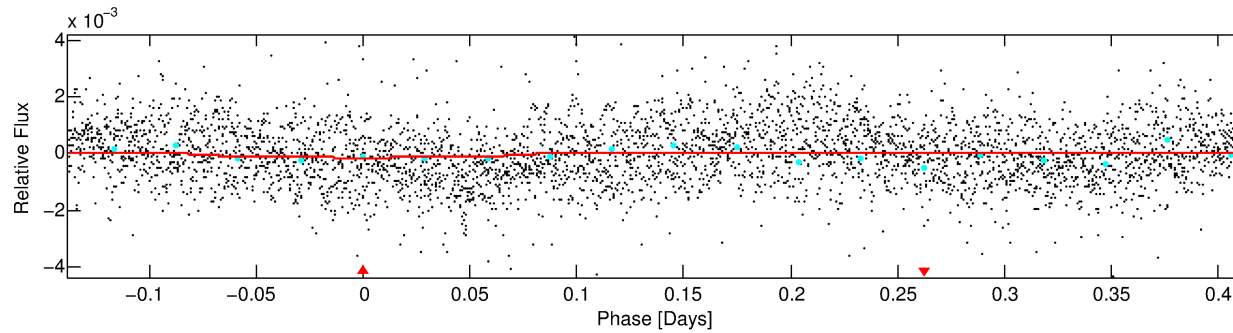
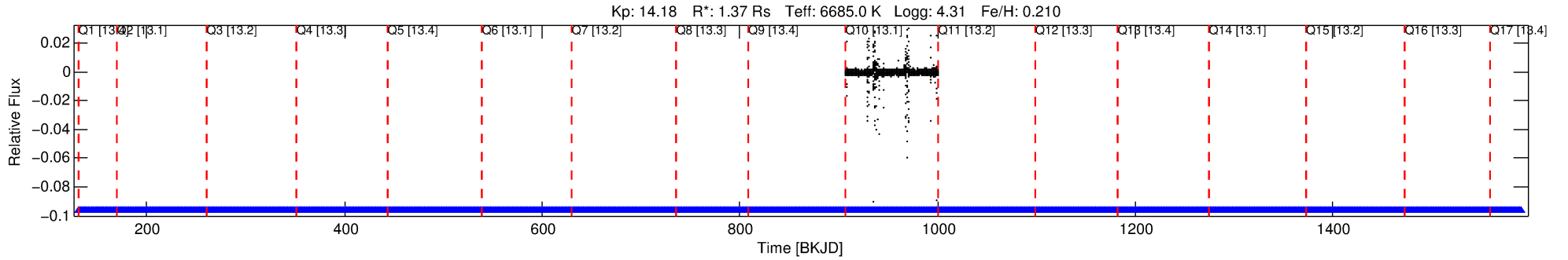
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814635-01

No Significant Match Found

DV One-Page Summary

KIC: 8814635 Candidate: 1 of 1 Period: 0.551 d



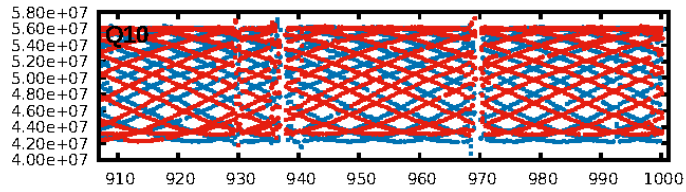
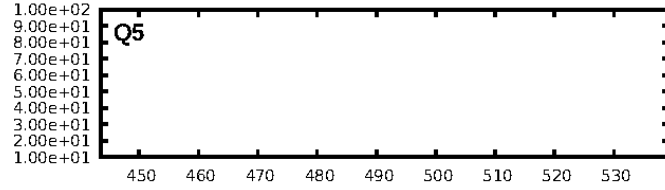
DV Fit Results:

Period = 0.55112 [0.00004] d
Epoch = 131.5294 [0.0107] BKJD
Rp/R* = 0.0113 [0.0306]
a/R* = 1.23 [6.12]
b = 0.66 [12.64]
Seff = 15610.58 [7276.51]
Teff = 2850 [332] K
Rp = 1.69 [4.63] Re
a = 0.0147 [0.0045] AU
Ag = 13.94 [75.91] [0.17σ]
Teffp = 8516 [11558] K [0.49σ]

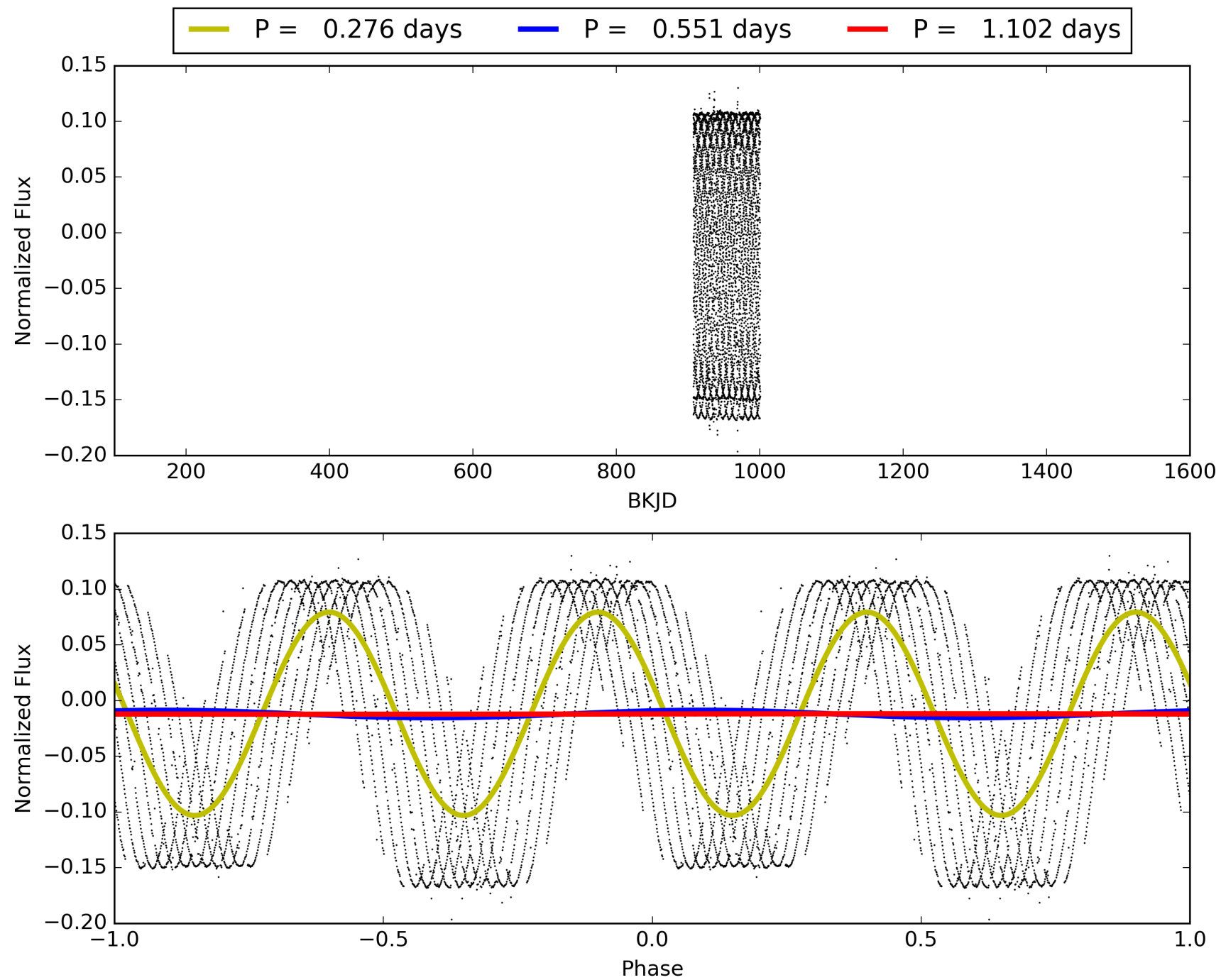
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.01e-41
RollingBand-fgt: 1.00 [168/168]
GhostDiagnostic-chr: 0.1004
Centroid-sig: 3.3%
Centroid-so: 1.675 arcsec [1.63σ]
OotOffset-rm: 0.062 arcsec [0.94σ]
KicOffset-rm: 0.173 arcsec [2.60σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 008814635-01, PDC Light Curves

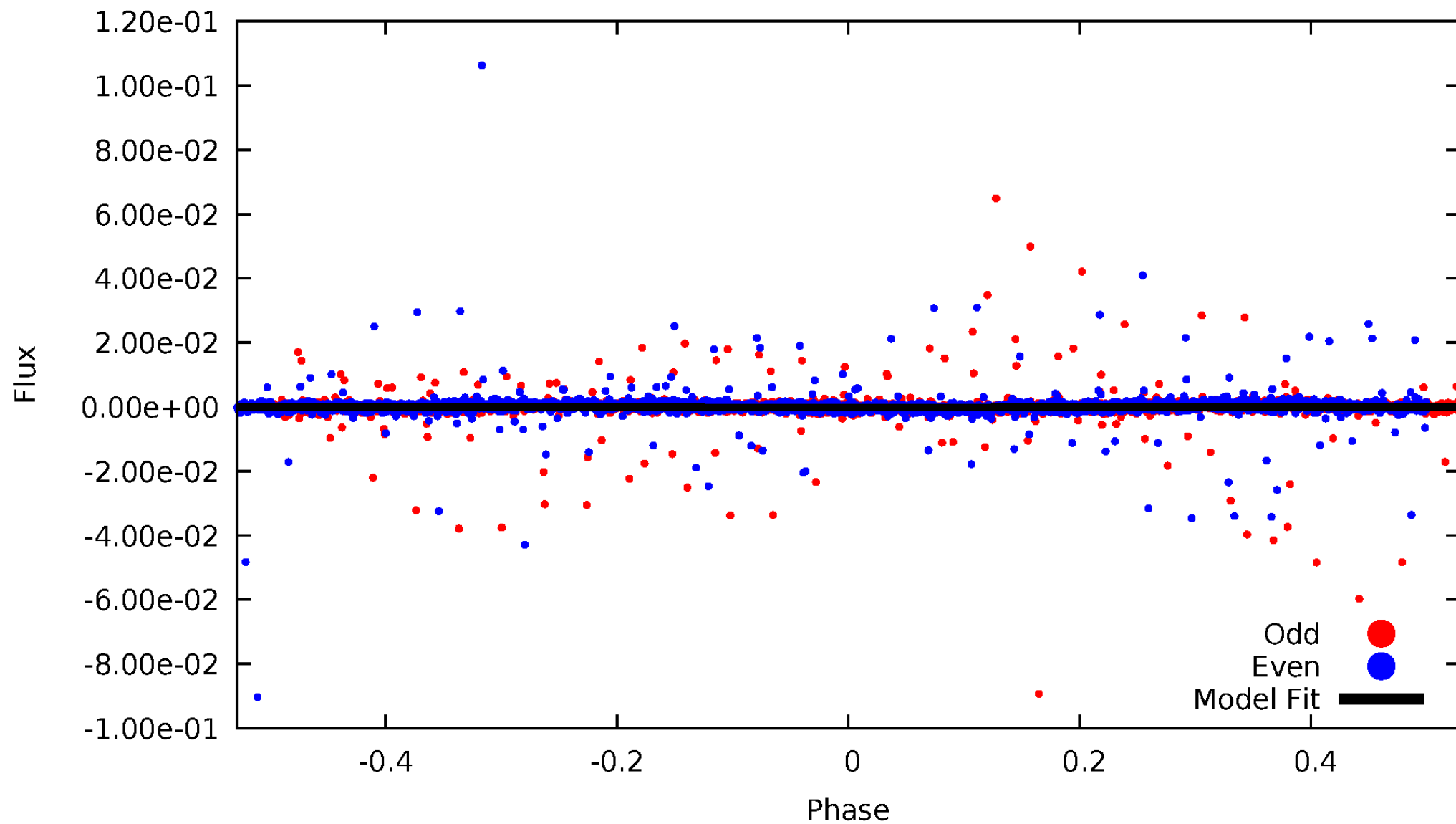


TCE 008814635-01



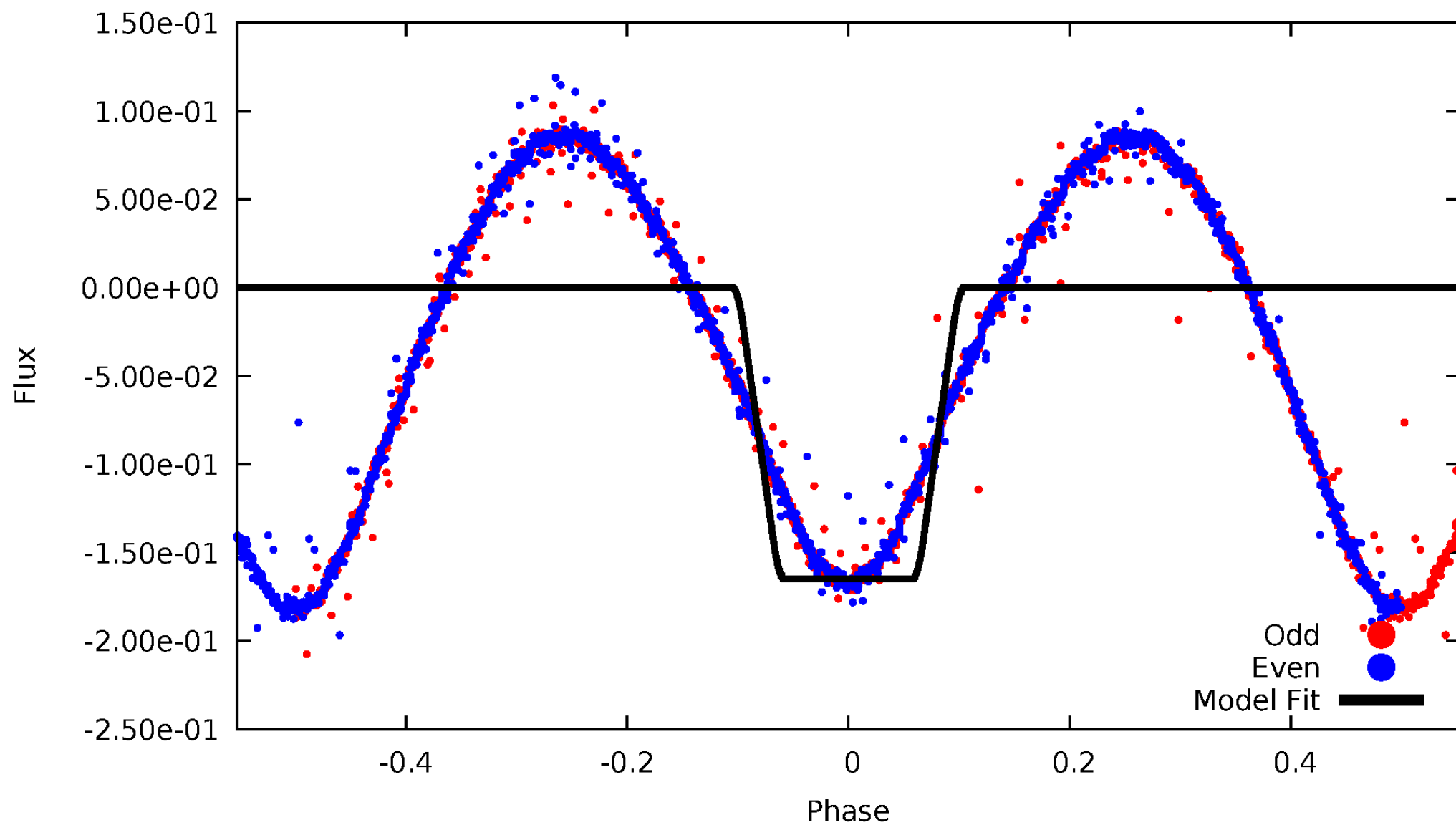
DV Odd/Even

TCE 008814635-01



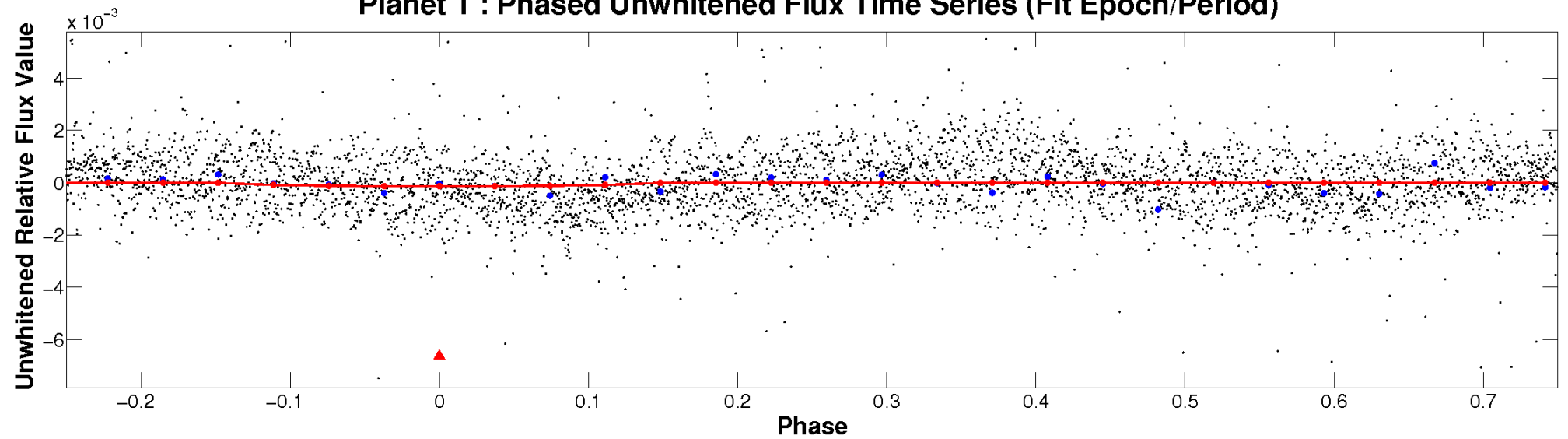
ALT Odd/Even

TCE 008814635-01

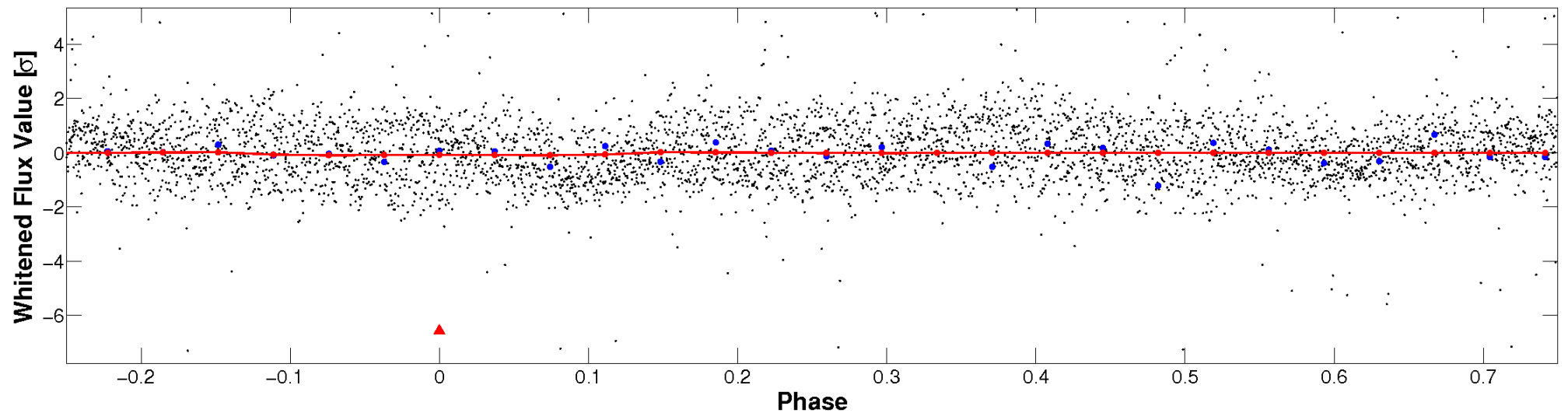


Non-Whitened Vs. Whitened Light Curve

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

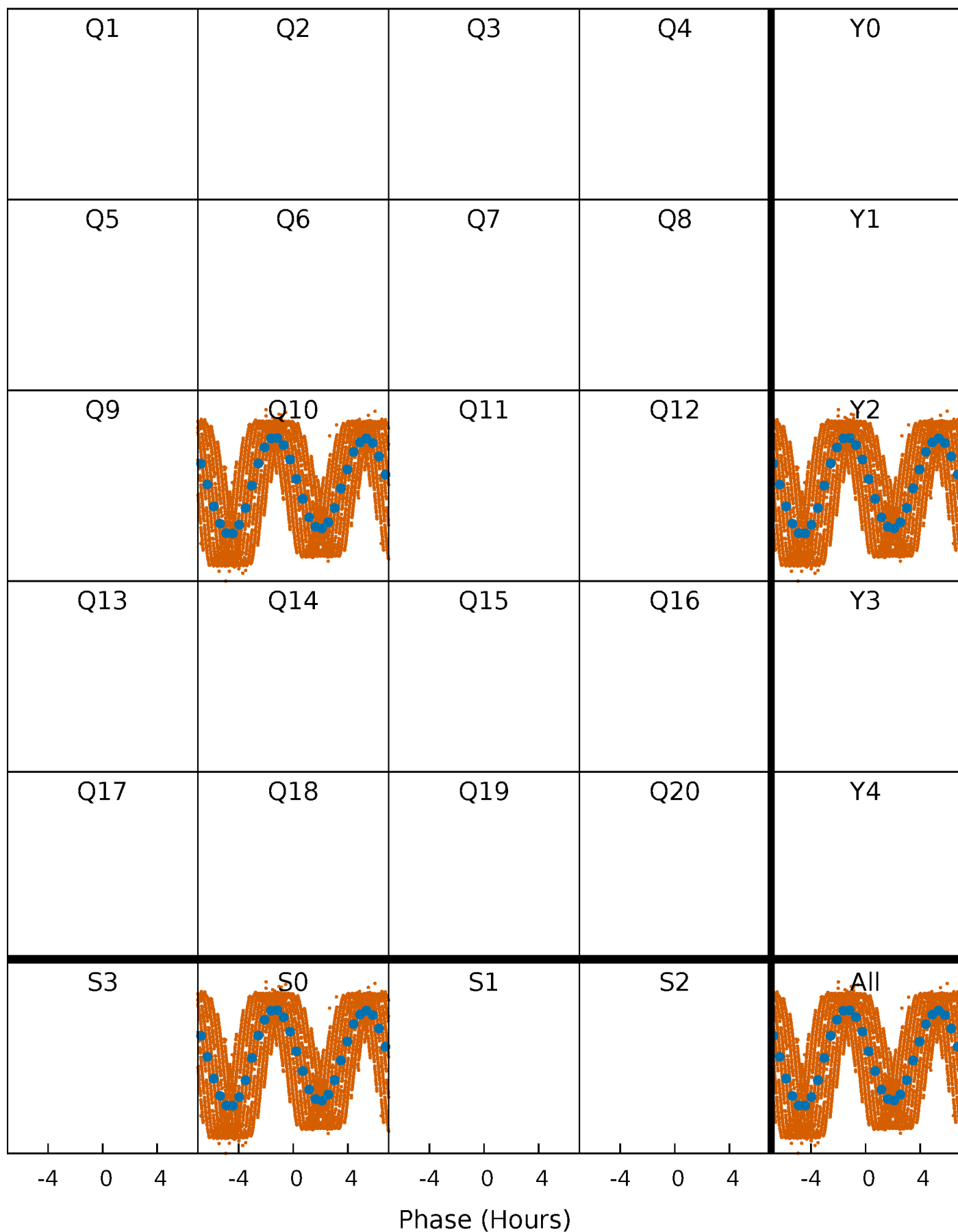


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008814635-01 P= 0.551120 Days $T_0=131.529448$ (BKJD)



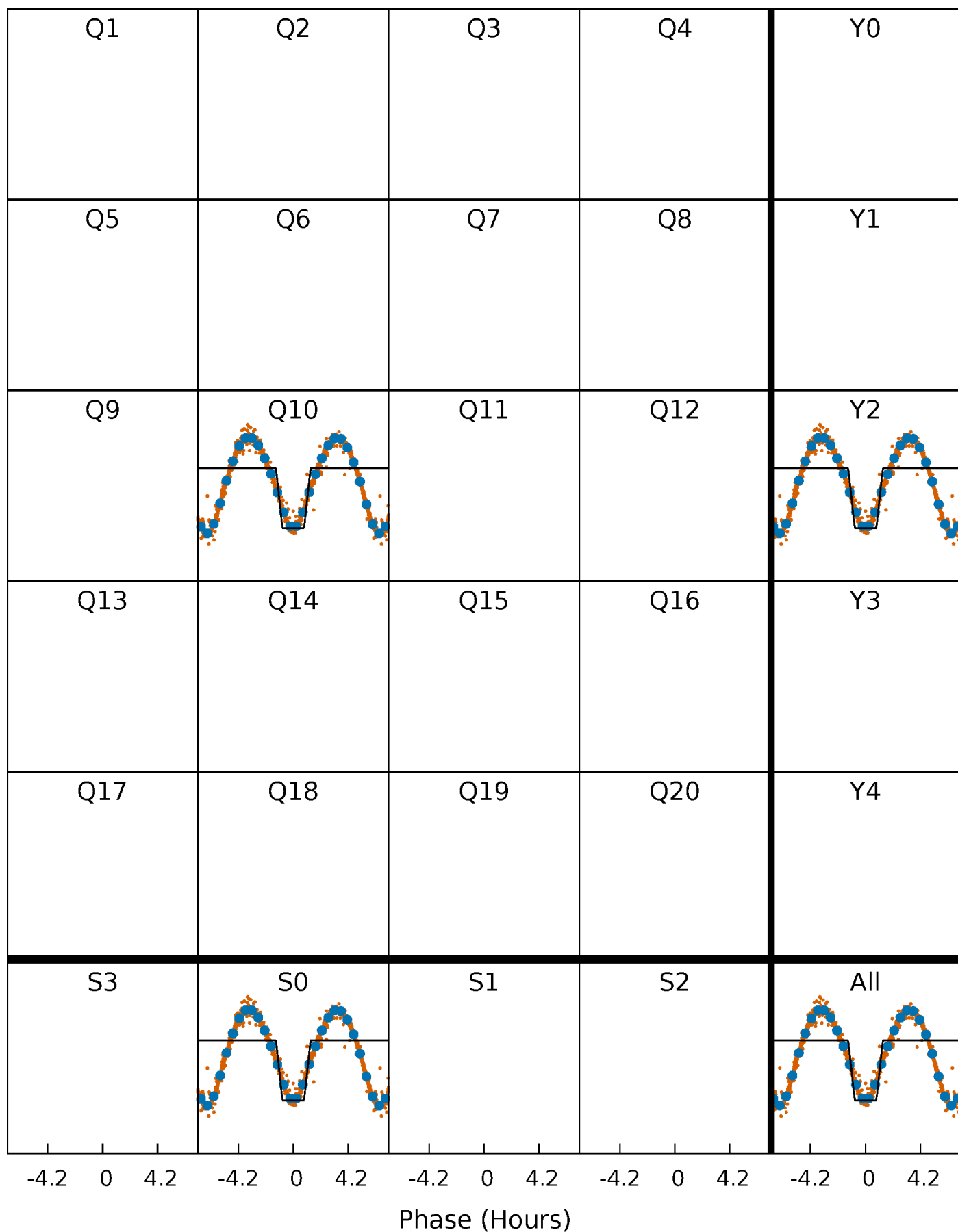
DV Quarter-Phased Transit Curves

TCE 008814635-01 P= 0.551120 Days $T_0=131.529448$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

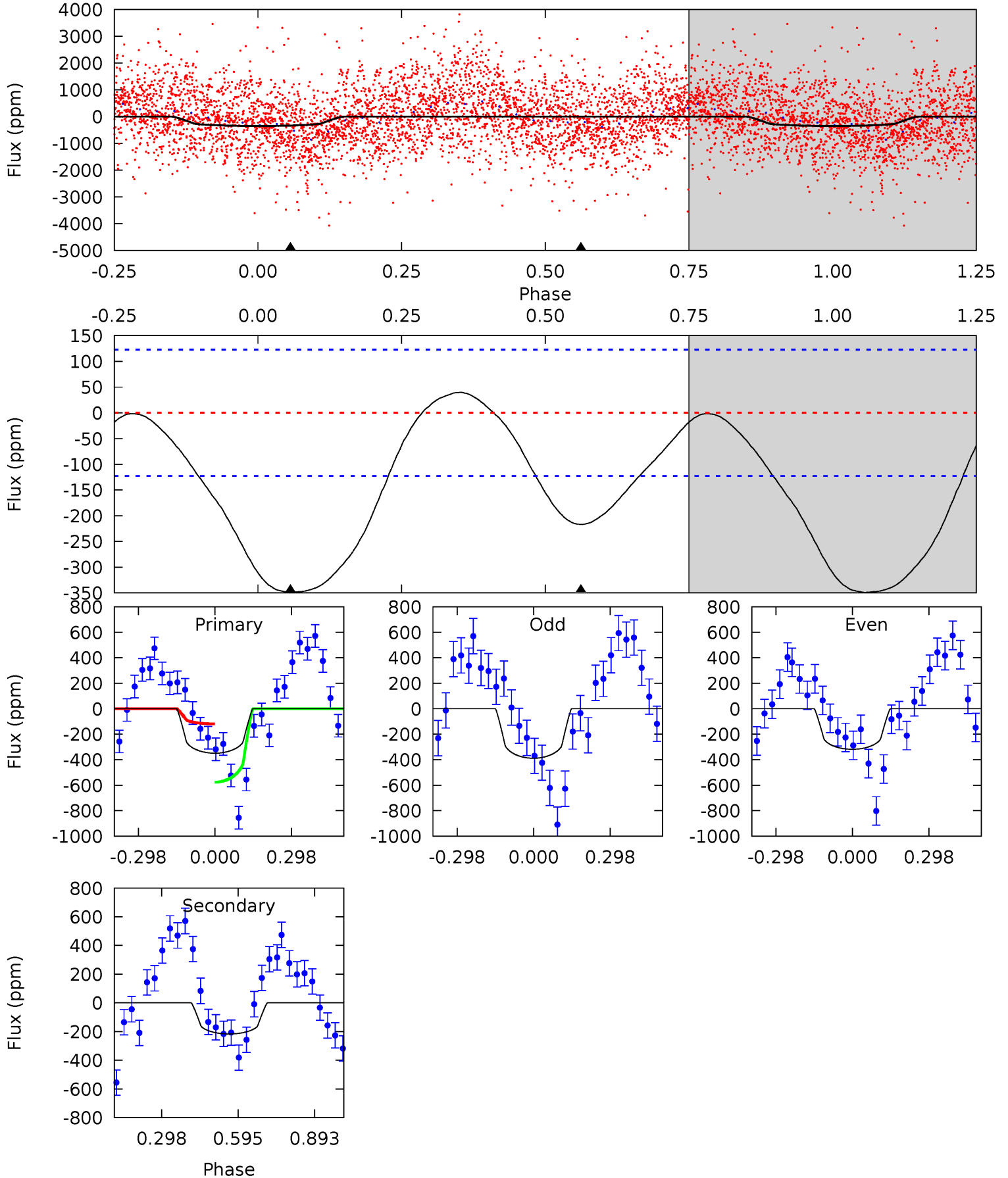
TCE 008814635-01 P= 0.550426 Days $T_0=131.545508$ (BKJD)



DV Model-Shift Uniqueness Test

008814635-01, P = 0.551120 Days, E = 131.529448 Days

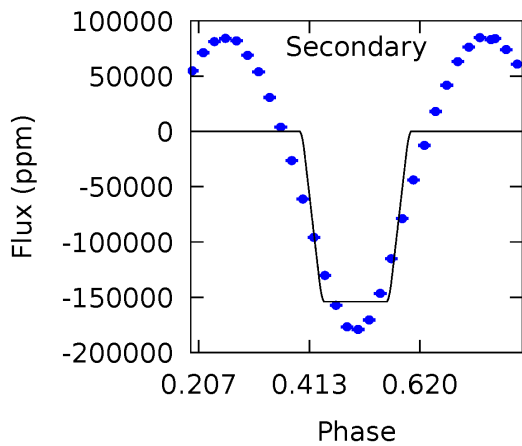
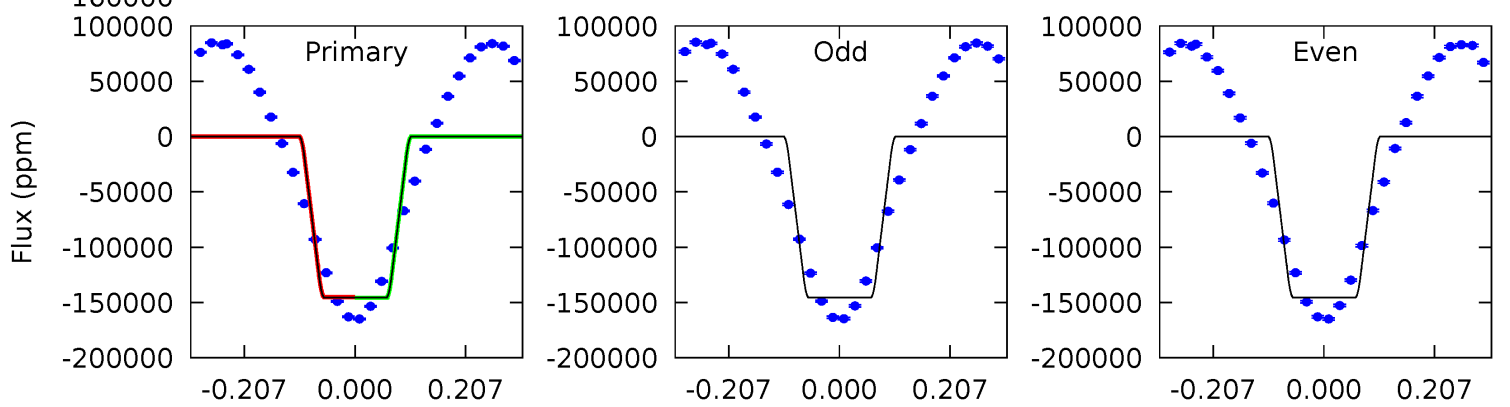
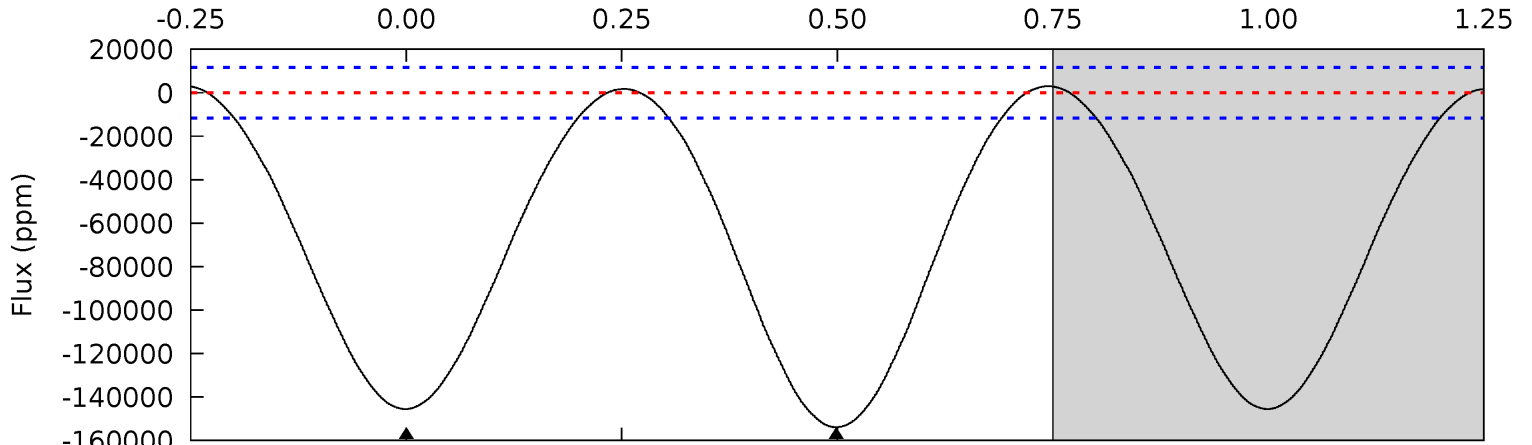
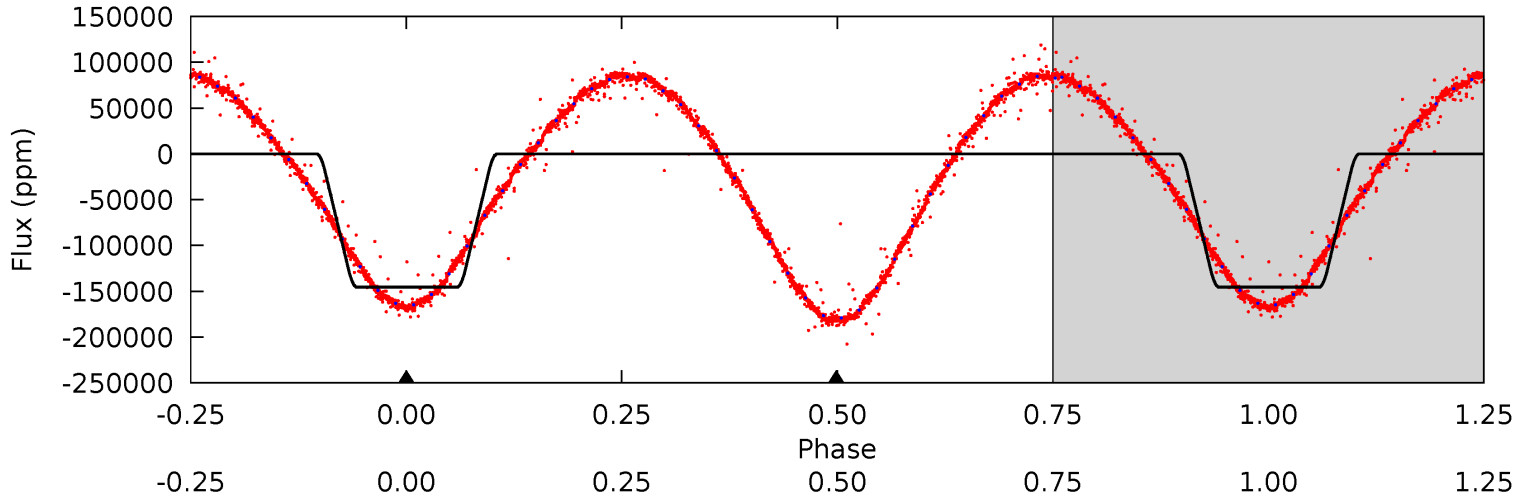
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	7.65	0	0	4.33	1.04	0.70	12.3	12.3	7.65	7.65	1.22	0.53	0.10	7.90



Alt Model-Shift Uniqueness Test

008814635-01, P = 0.550426 Days, E = 131.545508 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.1	58.3	0	0	4.41	1.26	1.14	55.1	55.1	58.3	58.3	0.01	1.00	0.02	0.34



Stellar Parameters For KIC 008814635

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+185}_{-278}	$4.307^{+0.072}_{-0.232}$	$0.210^{+0.200}_{-0.350}$	$1.373^{+0.516}_{-0.172}$	$1.394^{+0.188}_{-0.206}$	$0.759^{+0.251}_{-0.440}$
	+3%/-4%	+2%/-5%	+95%/-167%	+38%/-13%	+13%/-15%	+33%/-58%
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 008814635-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-217 ± 28	$3.81^{+3.93}_{-2.77}$	4050^{+322}_{-237}	4980^{+6282}_{-1855}	$1.719^{+20.419}_{-1.321}$
Alt.	-153857 ± 2641	$62.54^{+12.02}_{-7.68}$	4038^{+340}_{-233}	6726^{+409}_{-375}	$5.367^{+1.470}_{-1.456}$

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 $A_{obs} \gg 1.0$

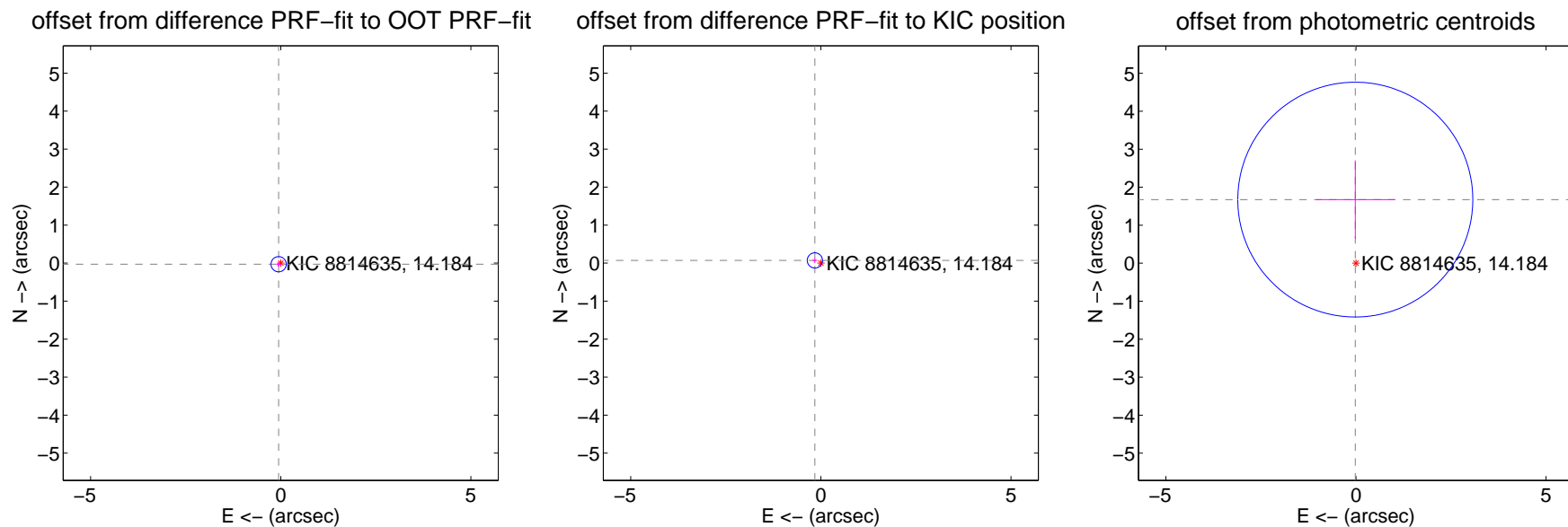
DV Centroid Data

Supplemental centroid analysis for 008814635-01. Kepler magnitude: 14.18. Transit SNR 2.69

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.062 ± 0.067	0.94	0.056 ± 0.067	-0.028 ± 0.067
PRF-fit source offset from KIC position	0.173 ± 0.067	2.60	0.158 ± 0.067	0.071 ± 0.067
photometric centroid source offset	1.67 ± 1.03	1.63	0.02 ± 1.03	1.67 ± 1.03



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.



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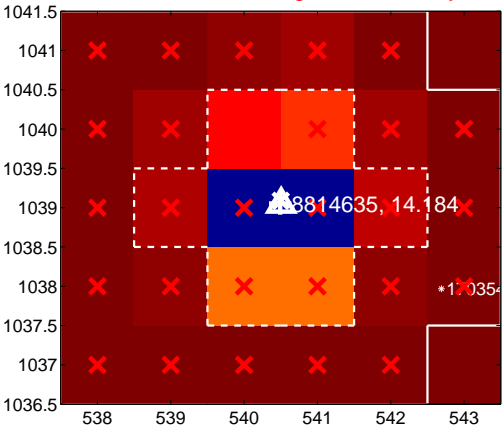
Q9 no difference image



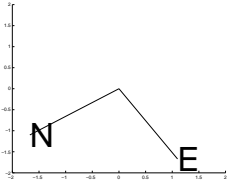
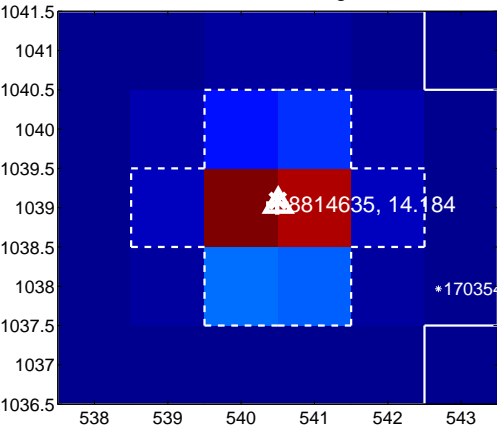
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



Q12 no OOT image



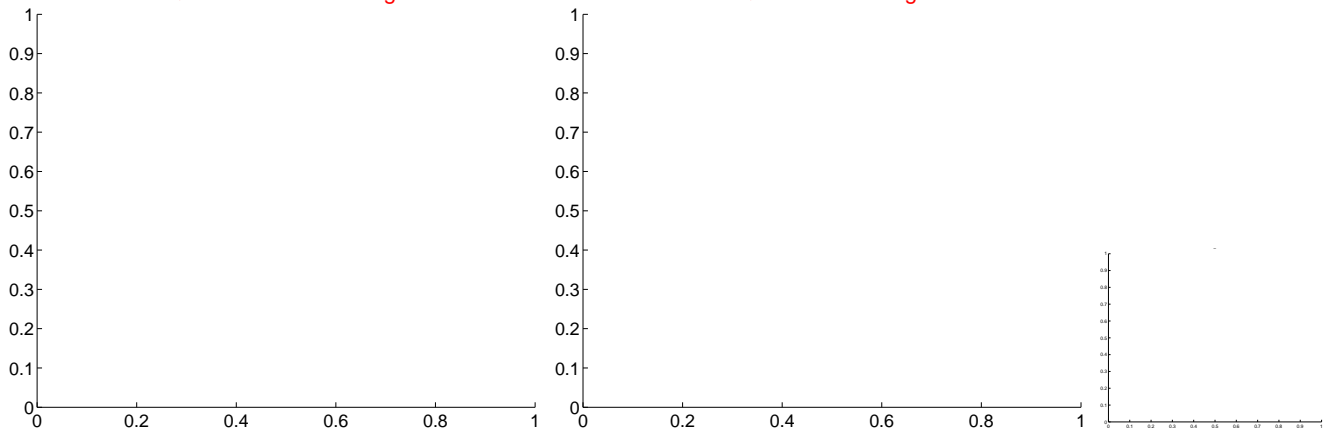
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



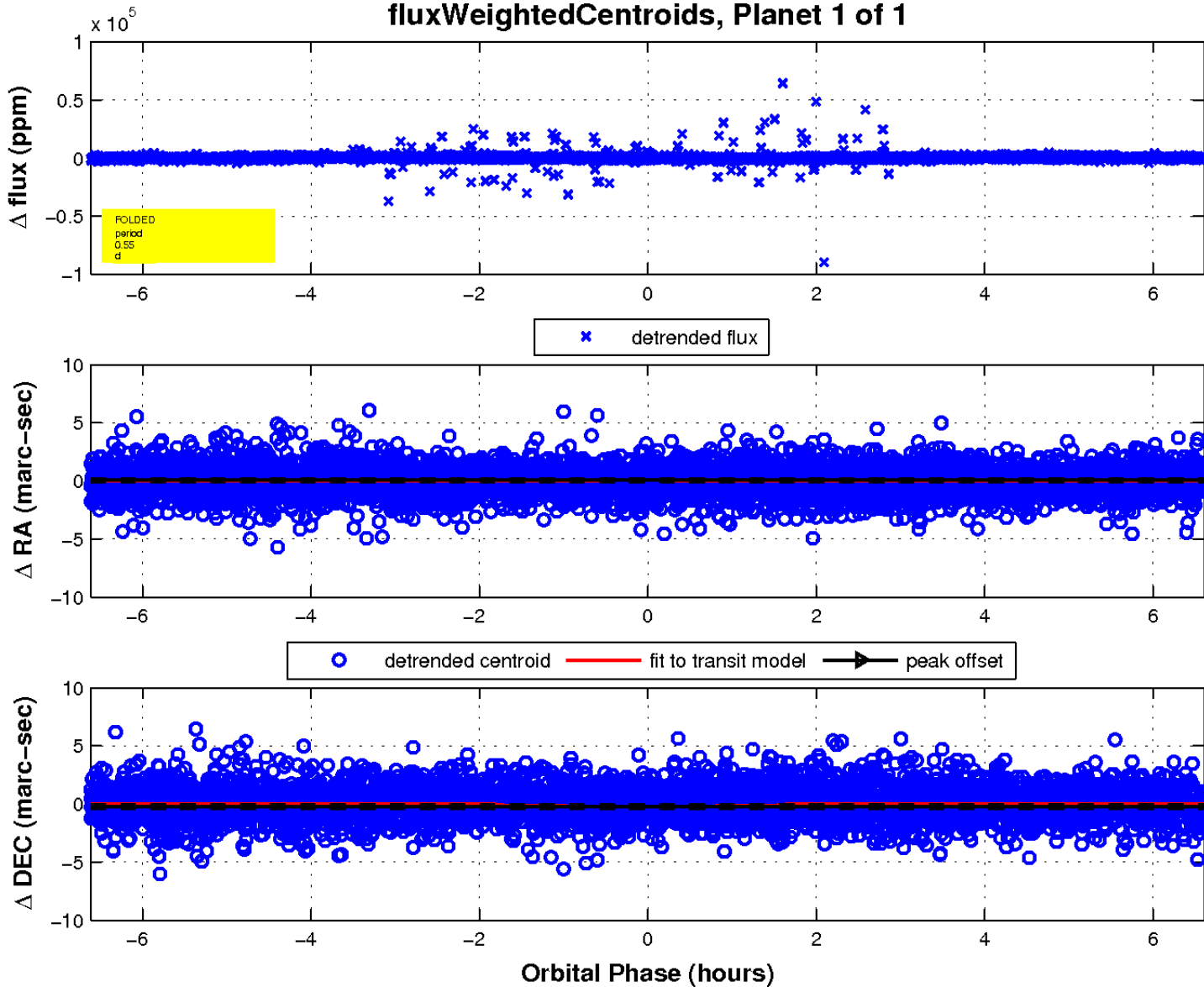
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

