

KIC 007025851

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})
007025851-01	OBS	6803.01	2.340594	132.715853	233857.5	4.461	7542.9	4223.4	1.14	6300	67.82	1479.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007025851-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—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.

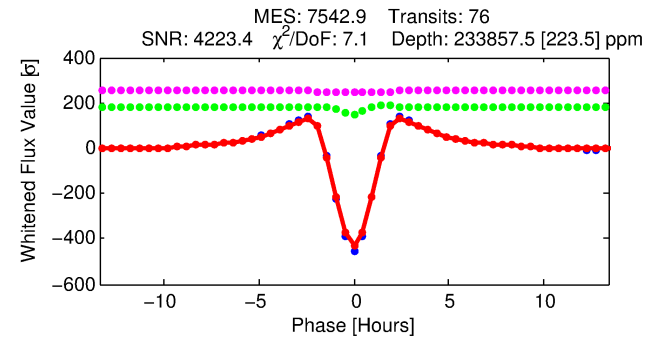
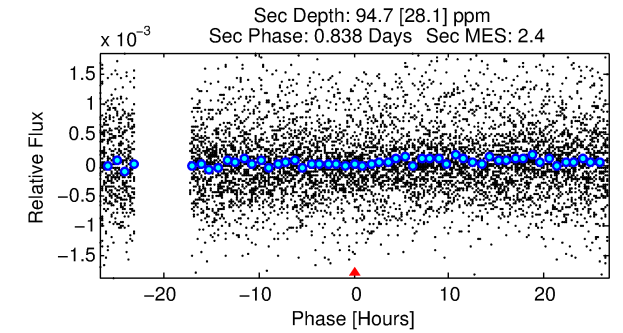
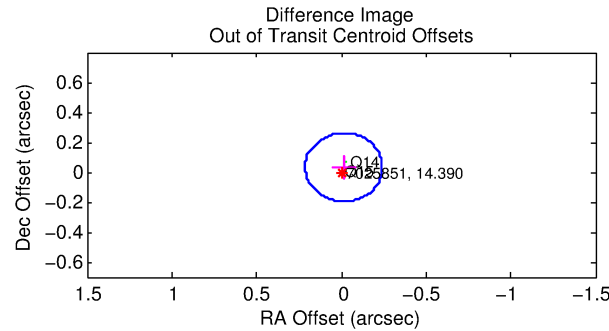
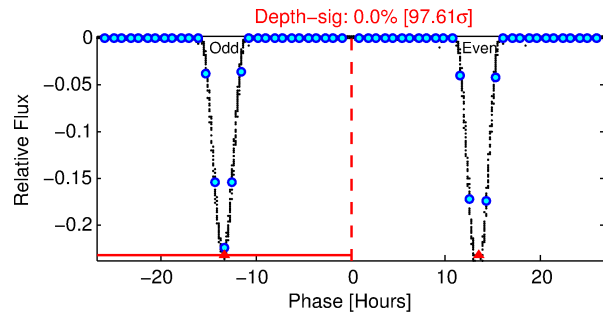
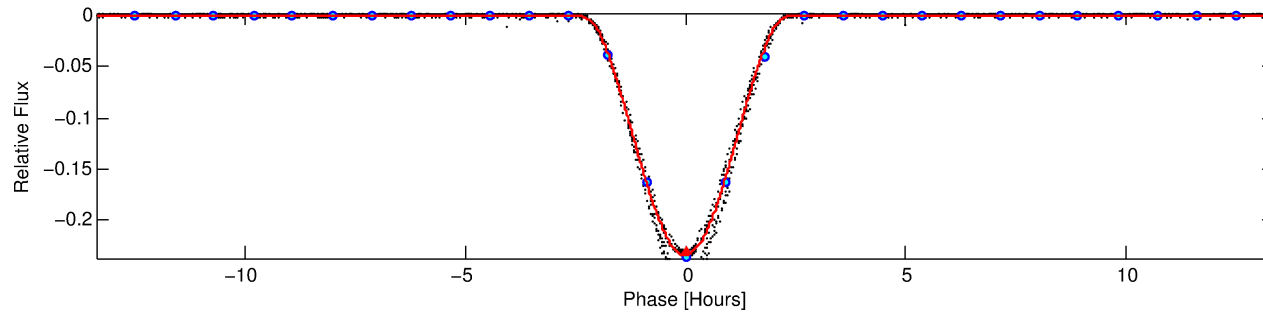
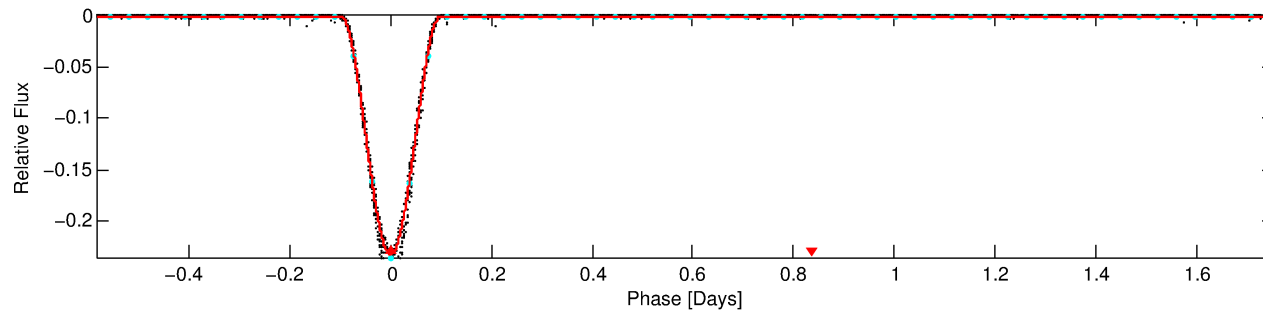
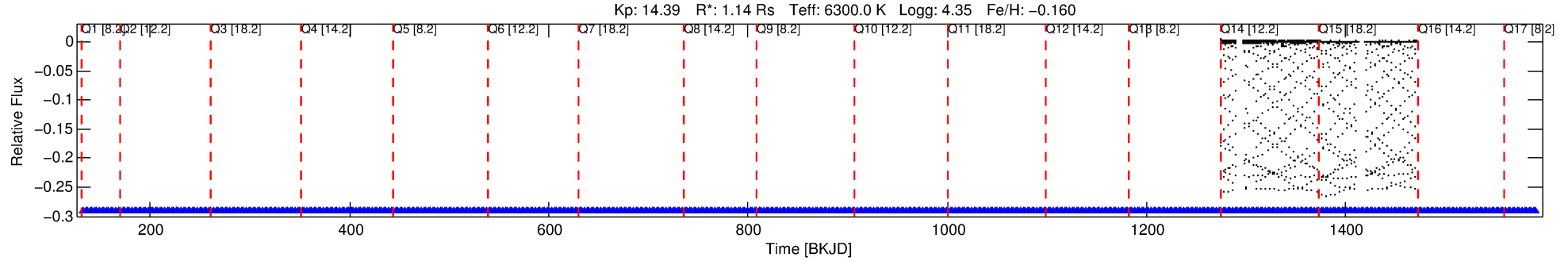
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007025851-01

No Significant Match Found

DV One-Page Summary

KIC: 7025851 Candidate: 1 of 1 Period: 2.341 d
KOI: K06803.01 Corr: 0.928



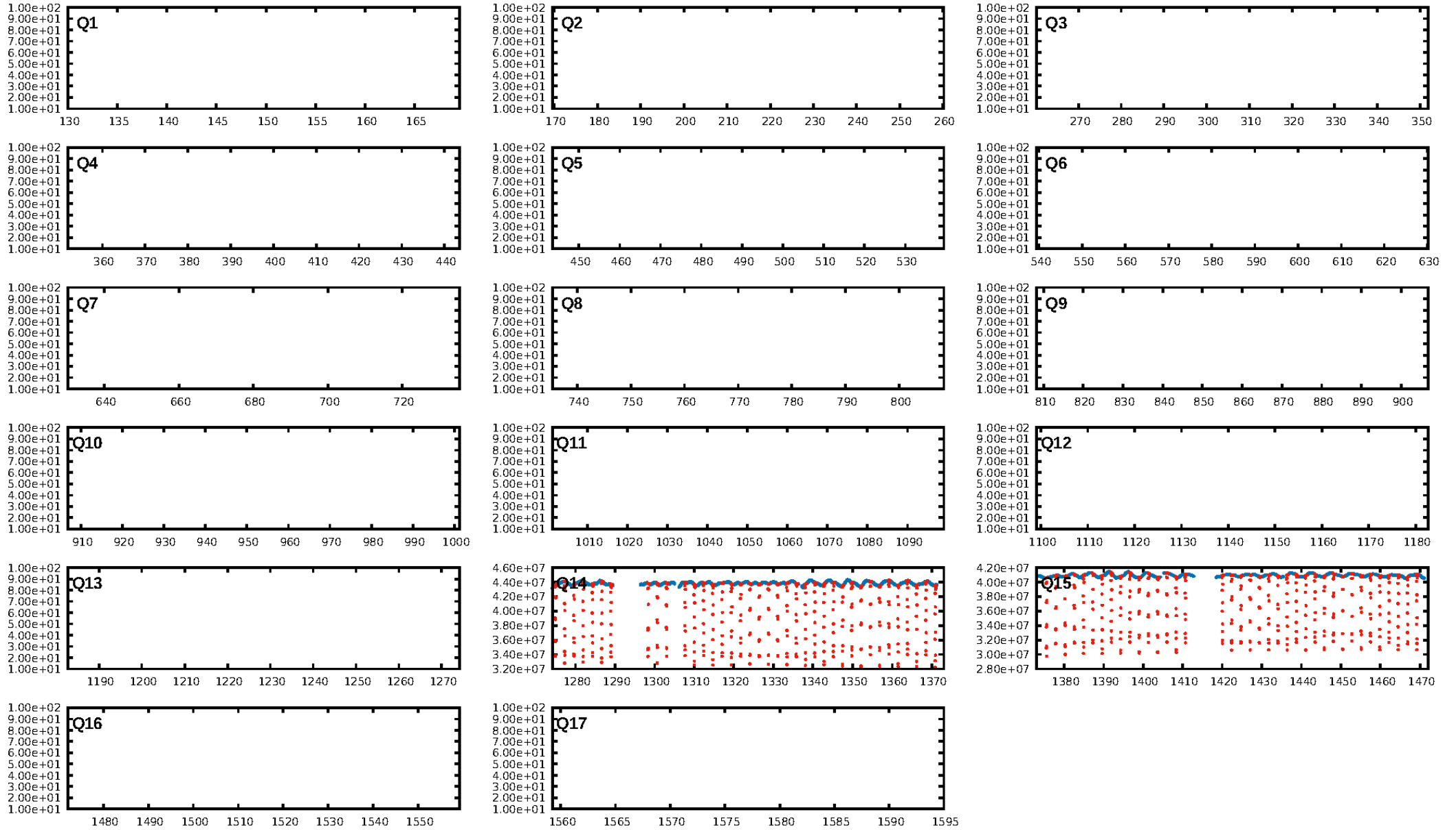
DV Fit Results:

Period = 2.34059 [0.00000] d
Epoch = 132.7159 [0.0000] BKJD
Rp/R* = 0.5471 [0.0229]
a/R* = 5.62 [0.03]
b = 0.71 [0.04]
Seff = 1479.36 [616.59]
Teq = 1581 [165] K
Rp = 67.82 [22.09] Re
a = 0.0351 [0.0094] AU
Ag = 0.01 [0.01] [-142.67 σ]
Teffp = 840 [72] K [-4.12 σ]

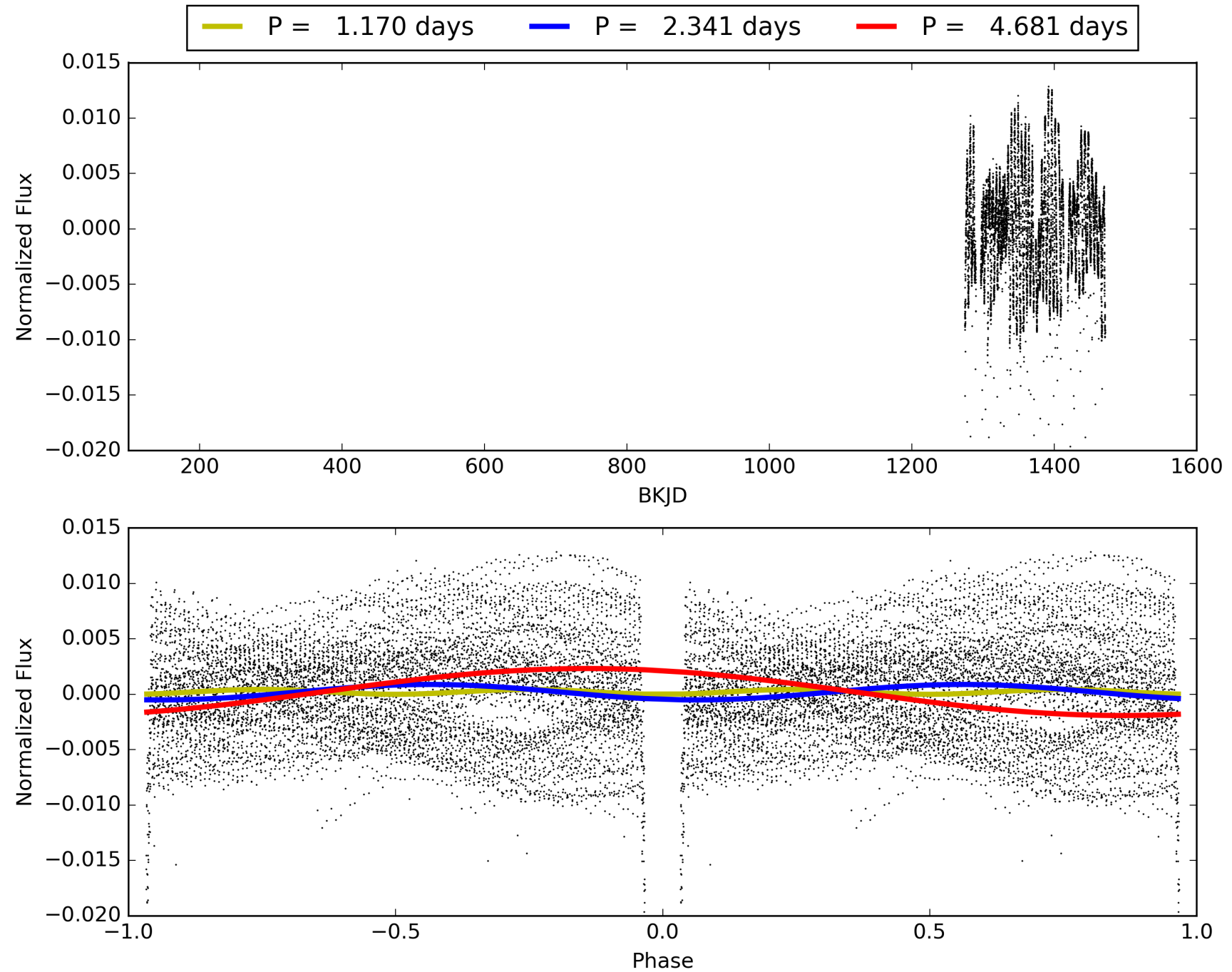
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [76/76]
GhostDiagnostic-chr: 2.276
Centroid-sig: 0.0%
Centroid-so: 0.327 arcsec [210.88 σ]
OotOffset-rm: 0.036 arcsec [0.47 σ]
KicOffset-rm: 0.230 arcsec [1.92 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007025851-01, PDC Light Curves

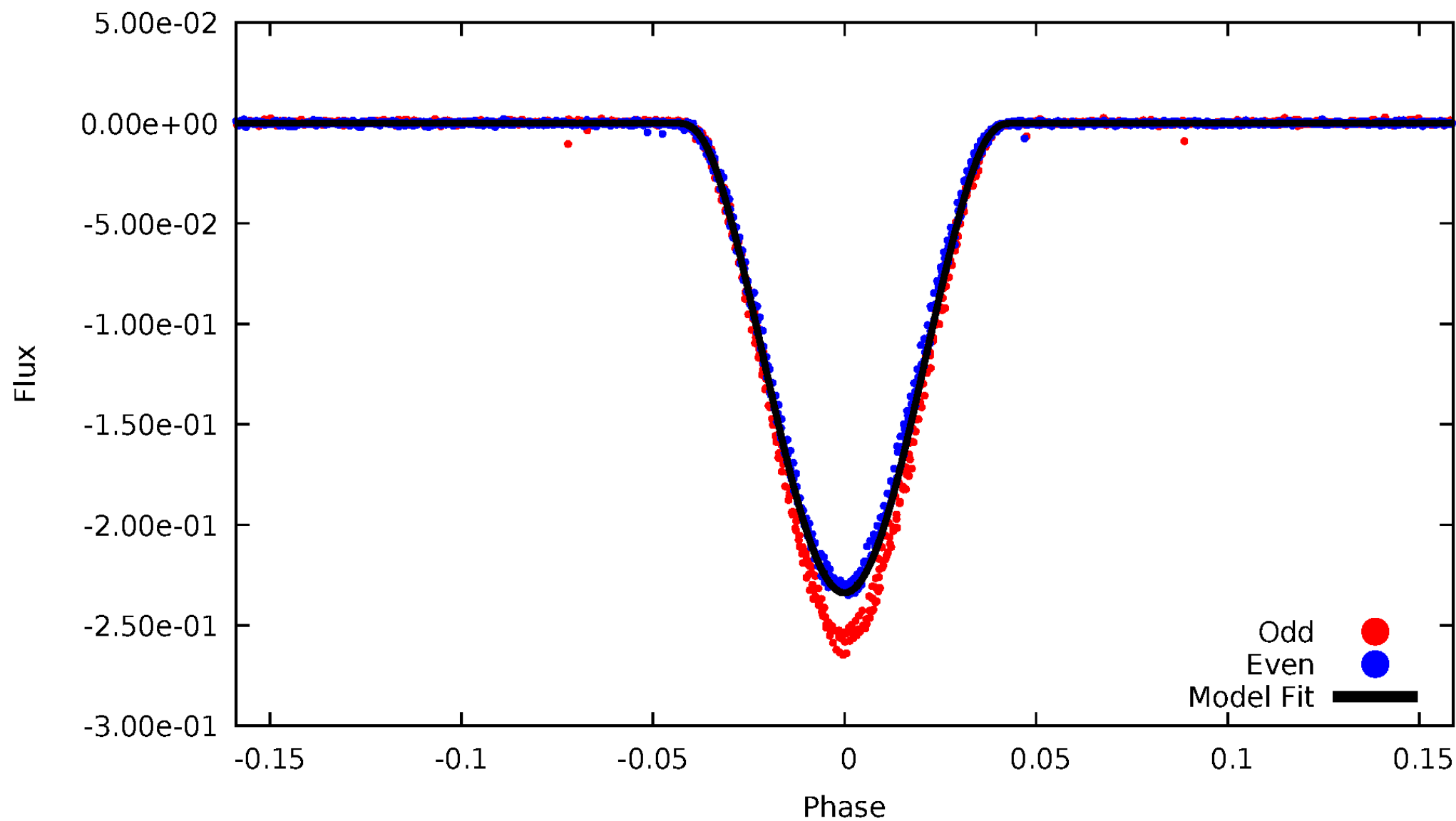


TCE 007025851-01



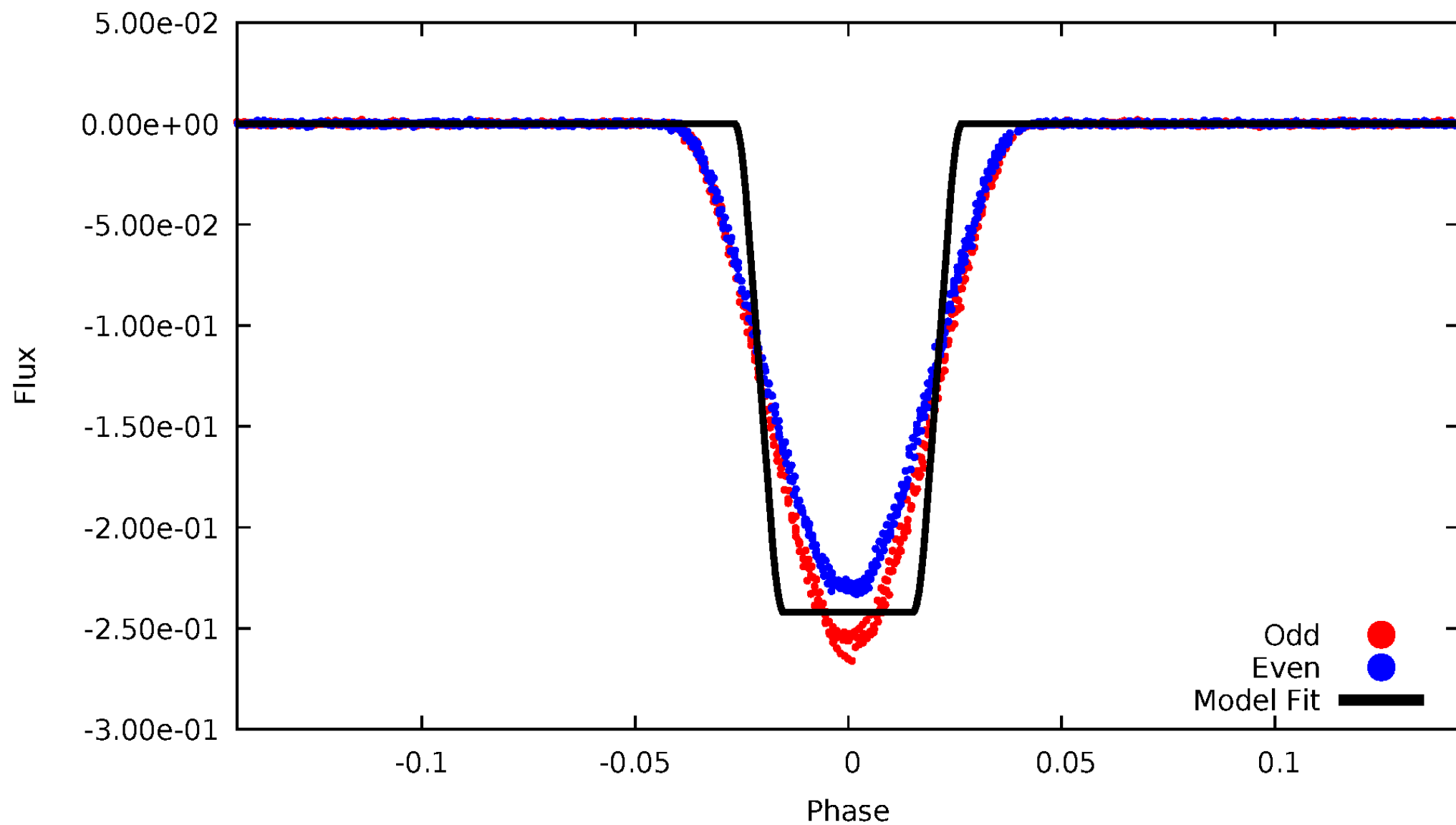
DV Odd/Even

TCE 007025851-01



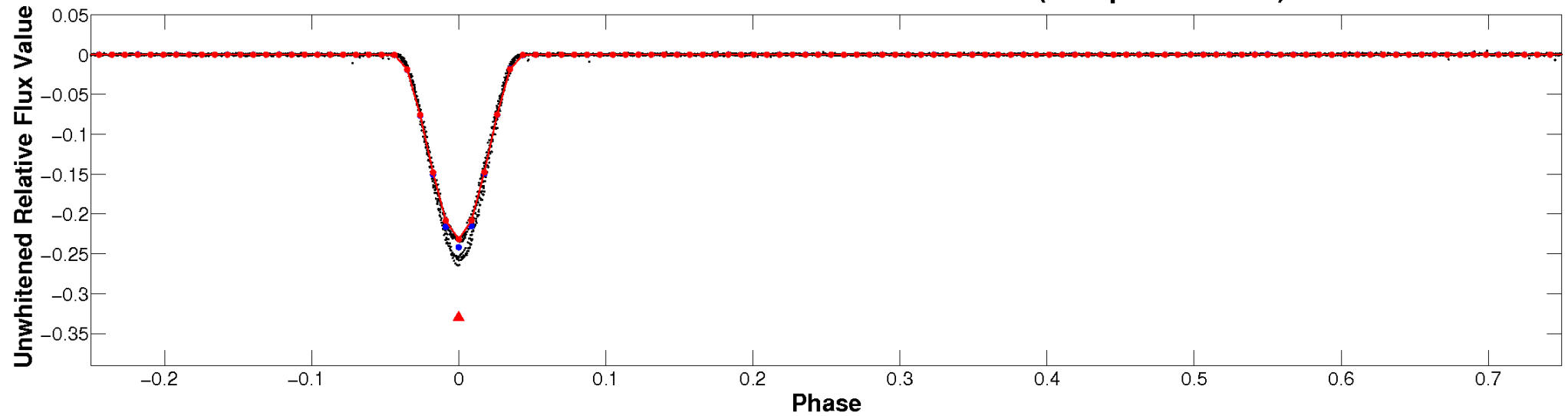
ALT Odd/Even

TCE 007025851-01

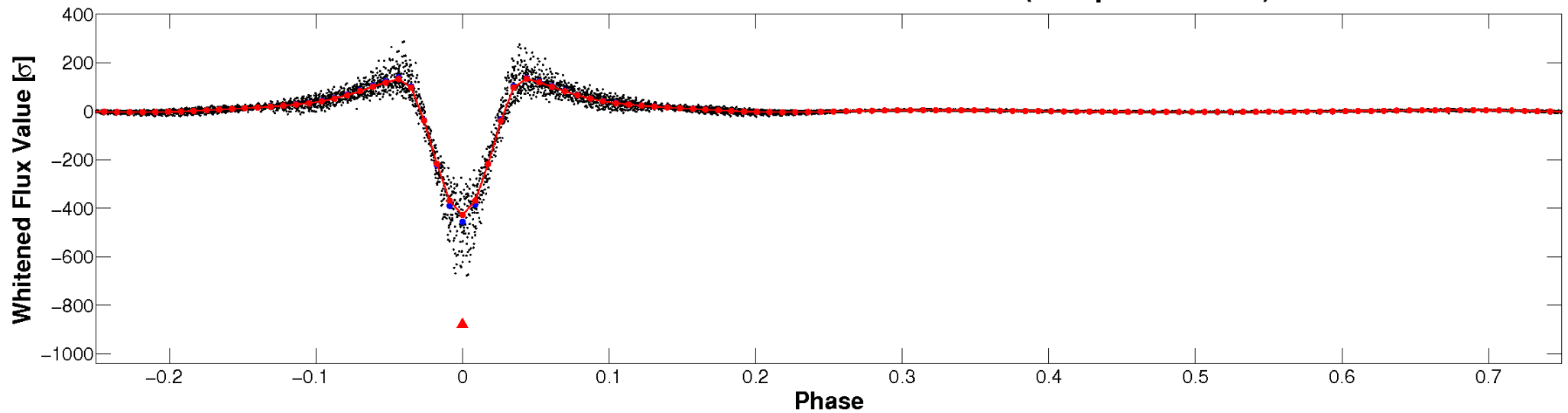


Non-Whitened Vs. Whitened Light Curve

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

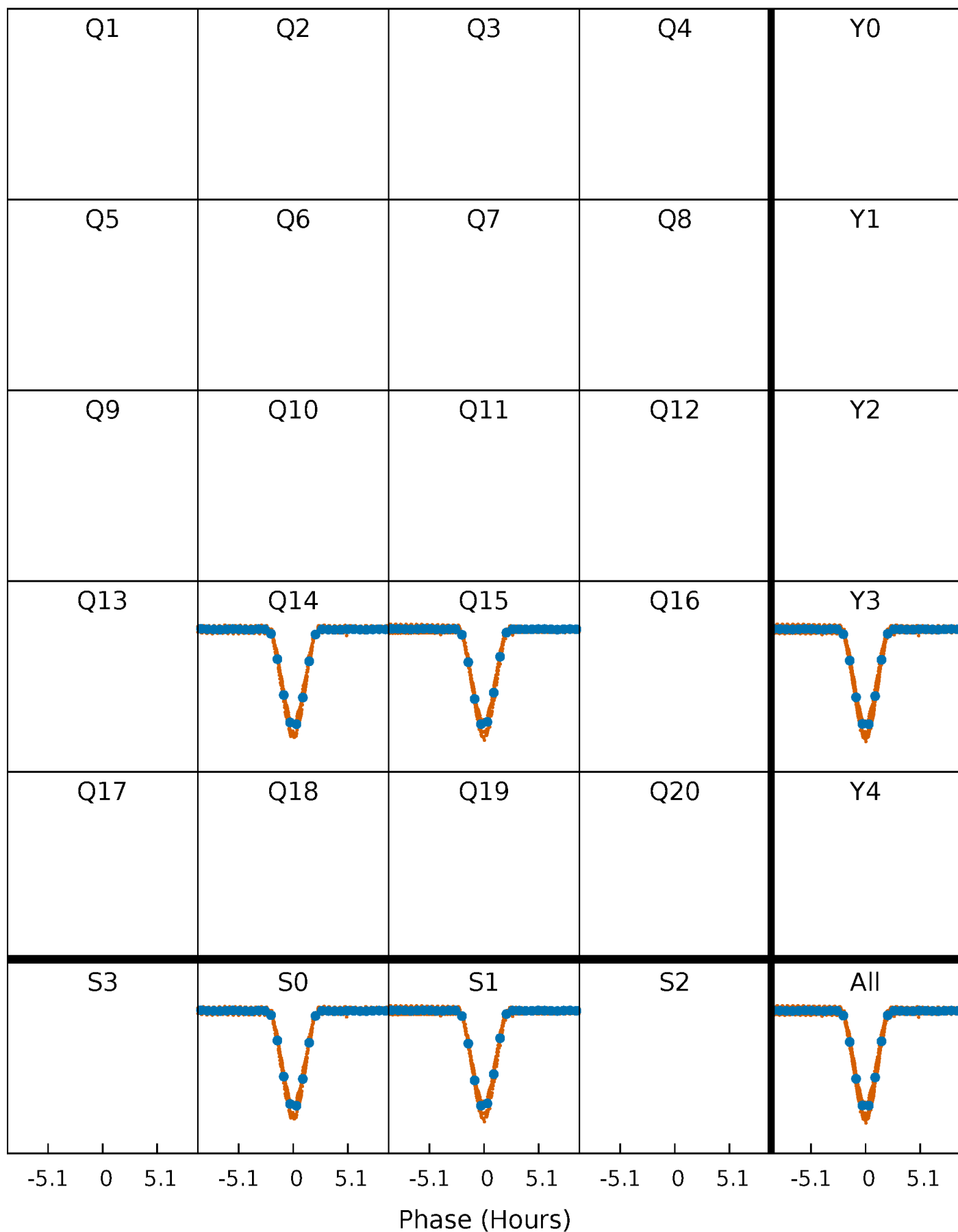


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



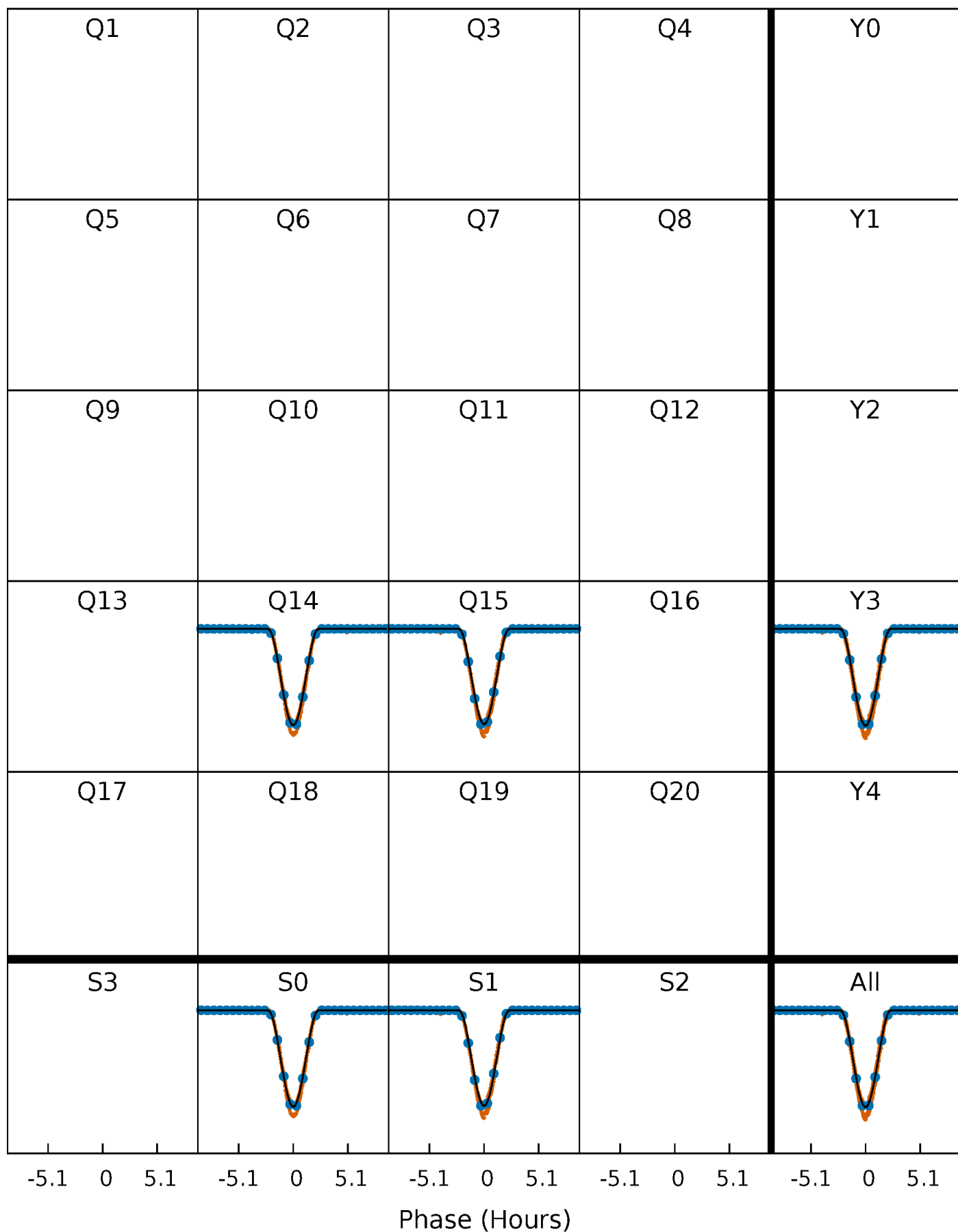
PDC Quarter-Phased Transit Curves

TCE 007025851-01 P= 2.340594 Days $T_0=132.715853$ (BKJD)



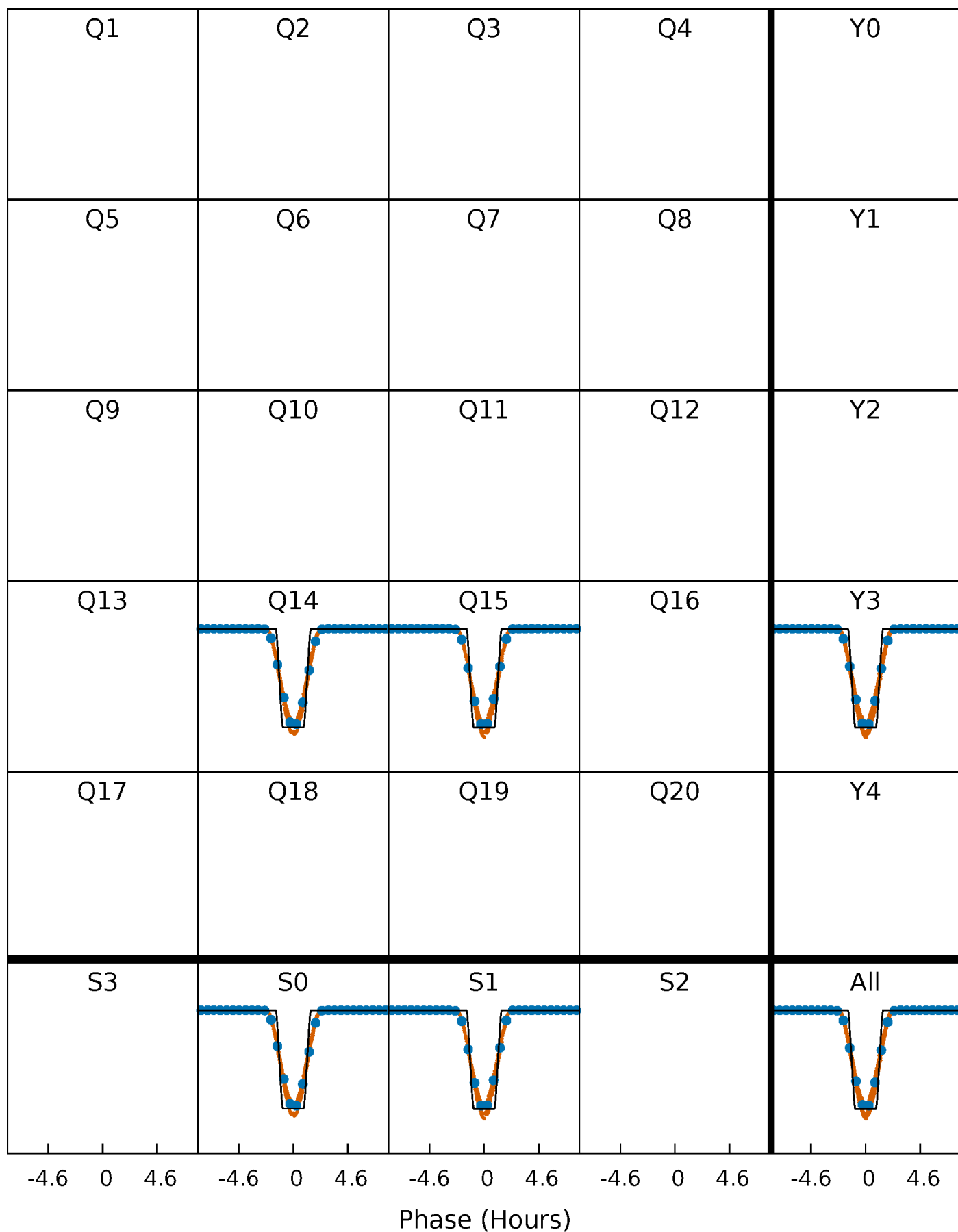
DV Quarter-Phased Transit Curves

TCE 007025851-01 P= 2.340594 Days $T_0=132.715853$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

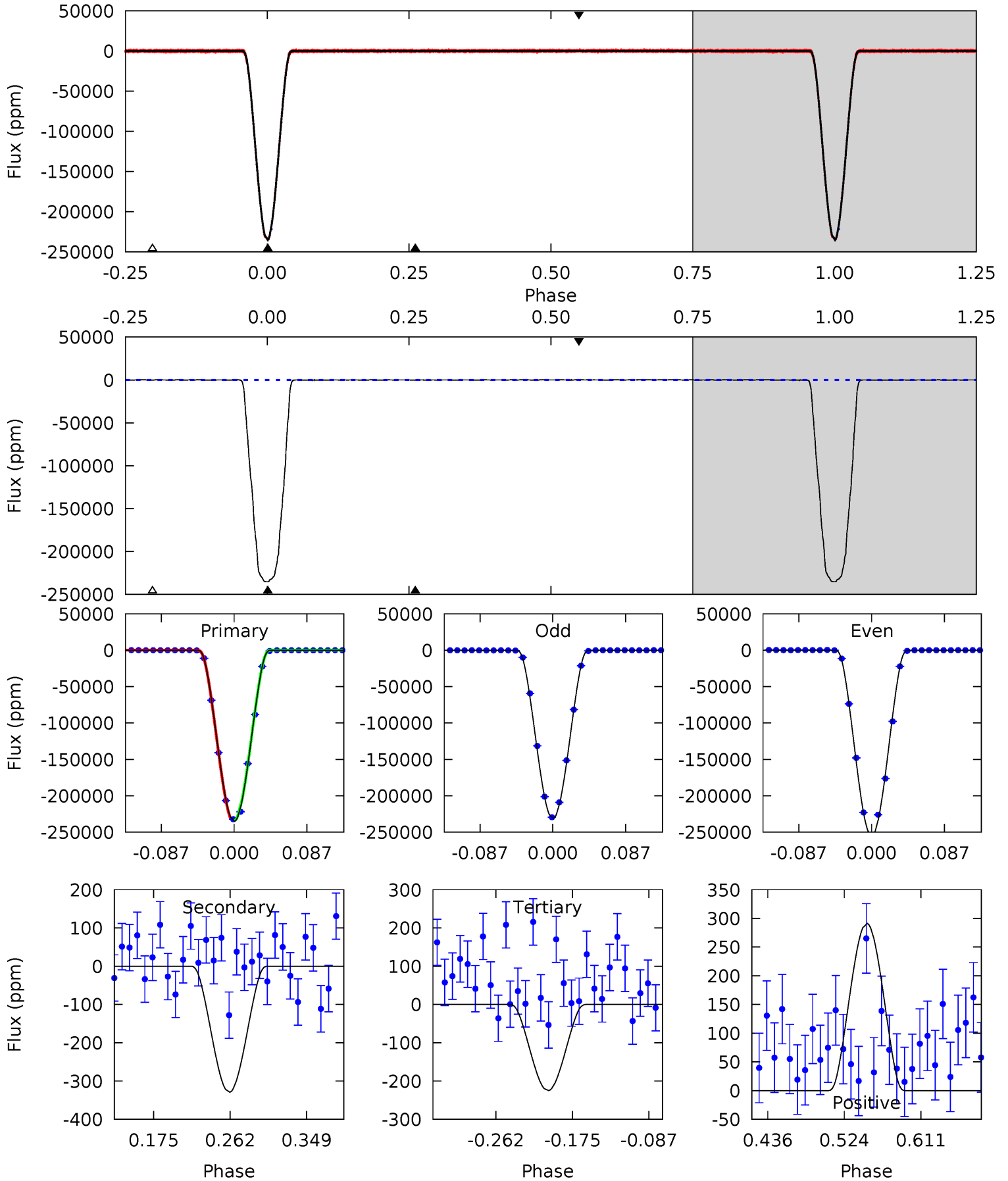
TCE 007025851-01 P= 2.340579 Days $T_0=132.723136$ (BKJD)



DV Model-Shift Uniqueness Test

007025851-01, P = 2.340594 Days, E = 132.715853 Days

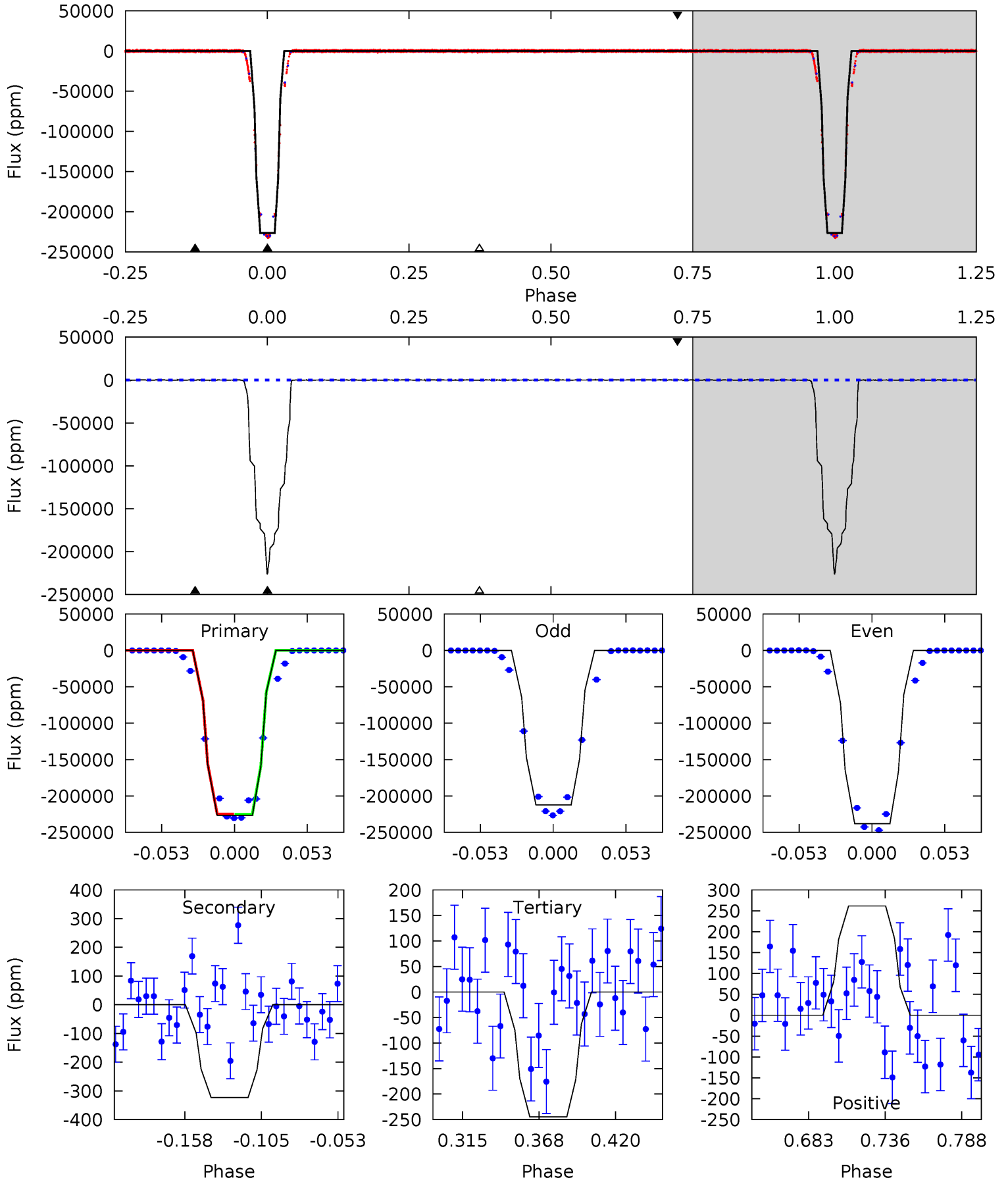
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6318	8.85	6.05	7.83	4.59	1.71	2.82	6312	6310	2.80	1.02	372.9	1.03	0.00	0



Alt Model-Shift Uniqueness Test

007025851-01, P = 2.340579 Days, E = 132.723136 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3147	4.49	3.40	3.64	4.70	1.94	1.26	3144	3143	1.09	0.85	245.9	1.00	0.00	0



Stellar Parameters For KIC 007025851

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6300^{+197}_{-241}	$4.349^{+0.105}_{-0.210}$	$-0.160^{+0.250}_{-0.300}$	$1.136^{+0.367}_{-0.157}$	$1.047^{+0.185}_{-0.123}$	$1.006^{+0.498}_{-0.535}$
	+3%/-4%	+2%/-5%	+156%/-188%	+32%/-14%	+18%/-12%	+50%/-53%
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 007025851-01 / KOI 6803.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-329 ± 37	$69.47^{+12.05}_{-7.27}$	2235^{+171}_{-130}	-2583^{+86}_{-113}	$0.045^{+0.013}_{-0.012}$
Alt.	-323 ± 72	$62.01^{+11.39}_{-6.93}$	2233^{+175}_{-130}	-2565^{+91}_{-123}	$0.056^{+0.020}_{-0.018}$

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

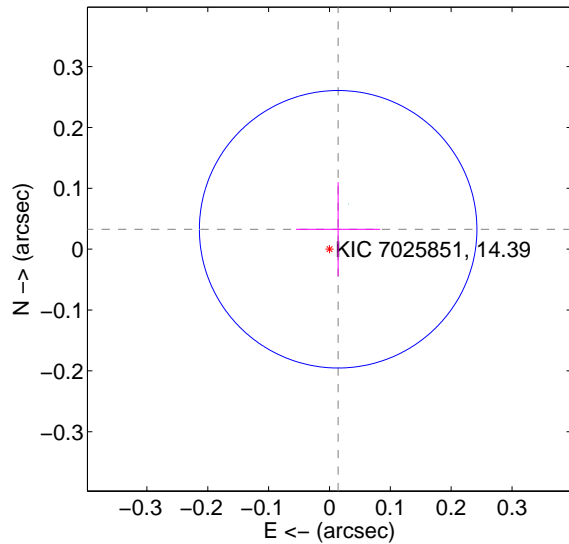
Supplemental centroid analysis for 007025851-01. Kepler magnitude: 14.39. Transit SNR 4223.42

There are 2 quarters with good PRF difference image offsets

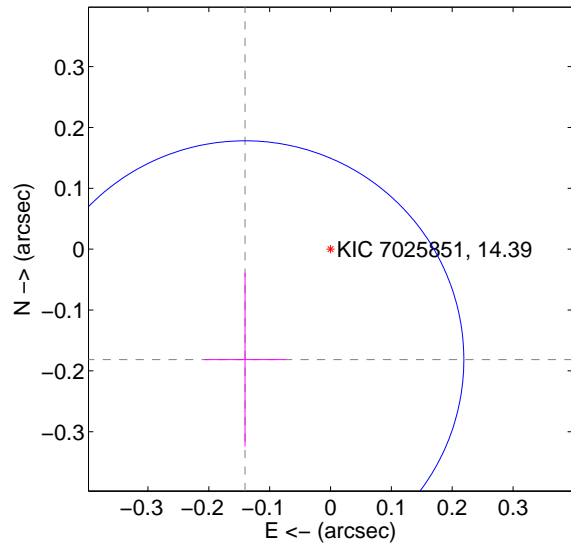
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.036 ± 0.076	0.47	-0.014 ± 0.069	0.033 ± 0.077
PRF-fit source offset from KIC position	0.230 ± 0.120	1.92	0.141 ± 0.067	-0.182 ± 0.143
photometric centroid source offset	0.33 ± 0.00	210.88	0.24 ± 0.00	-0.22 ± 0.00

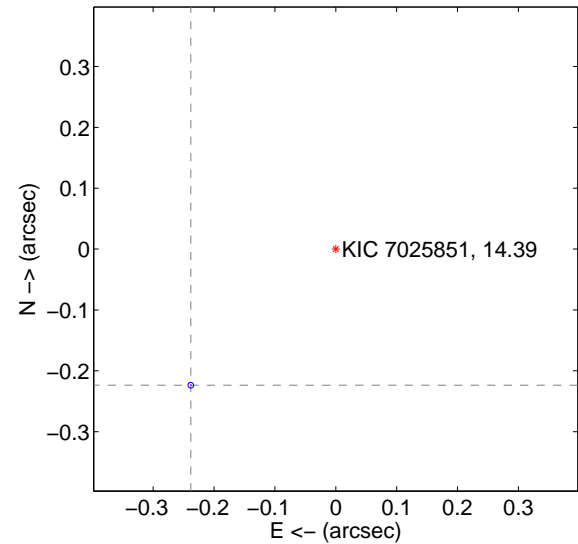
offset from difference PRF-fit to OOT PRF-fit



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.



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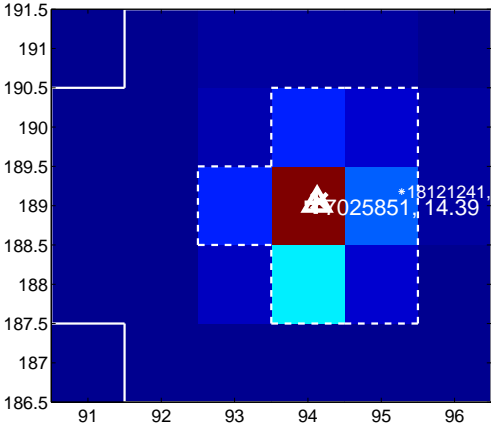
Q13 no difference image



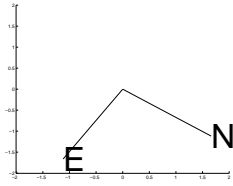
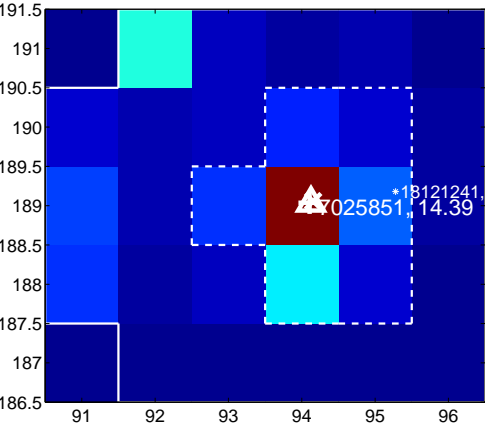
Q13 no OOT image



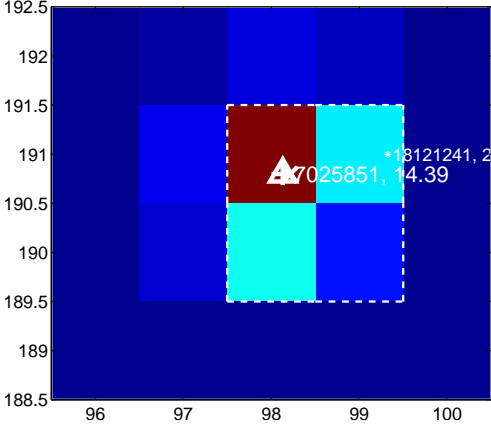
Q14 difference image



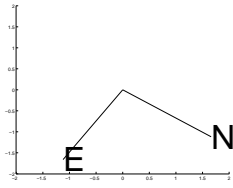
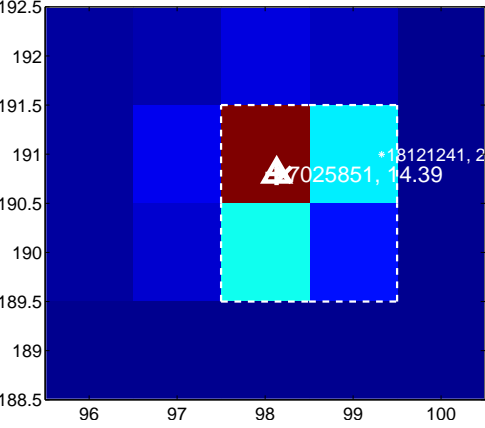
Q14 OOT image



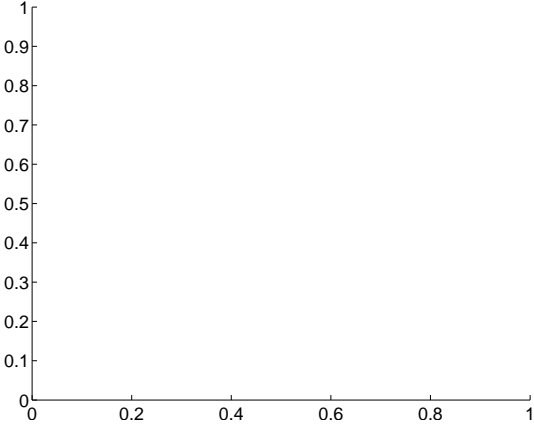
Q15 difference image



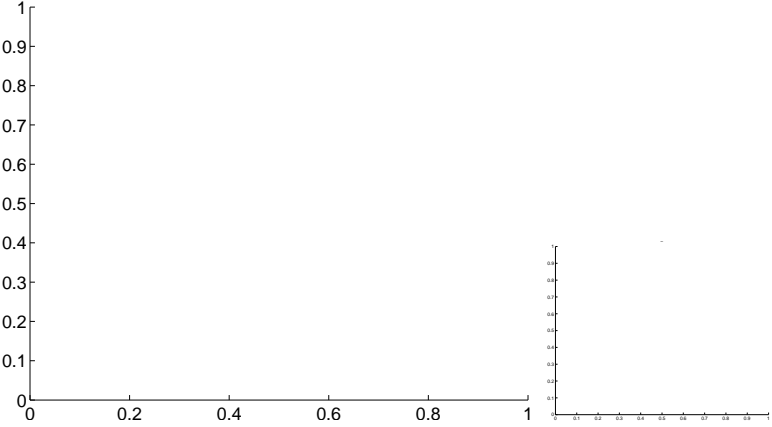
Q15 OOT image



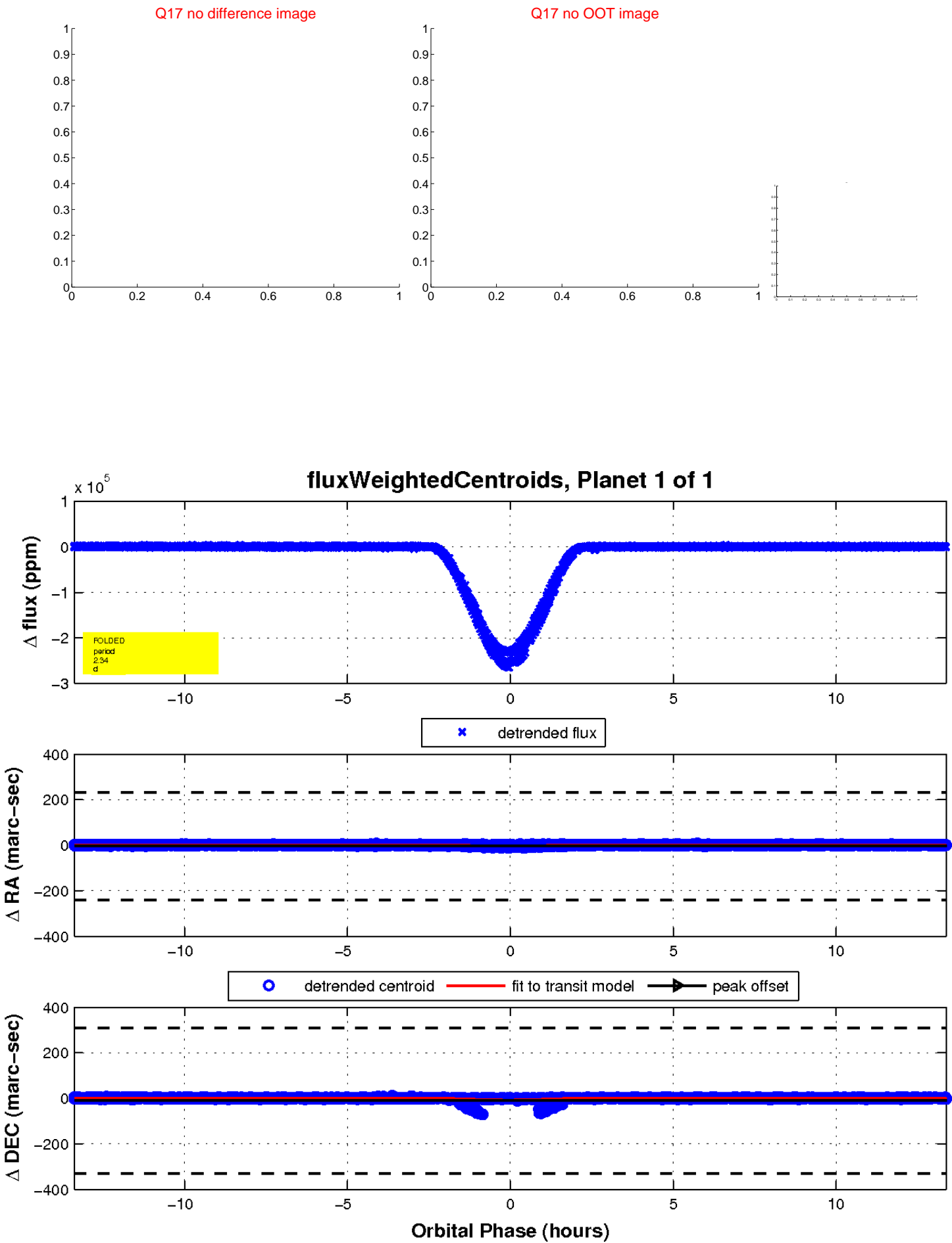
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

