

KIC 006948815

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})
006948815-01	OBS	5339.01	1.541570	131.954102	196935.6	4.548	4765.2	3190.4	1.94	7631	105.35	12379.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006948815-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—SEASONAL_DEPTH_DV—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.

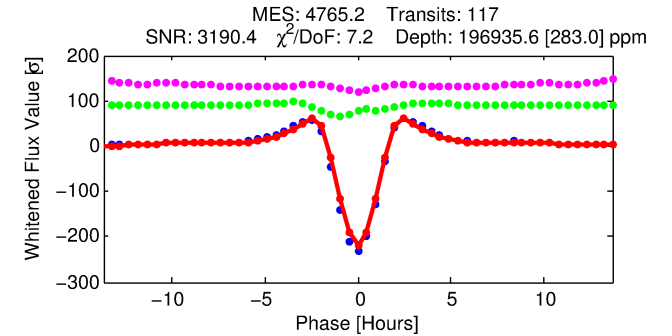
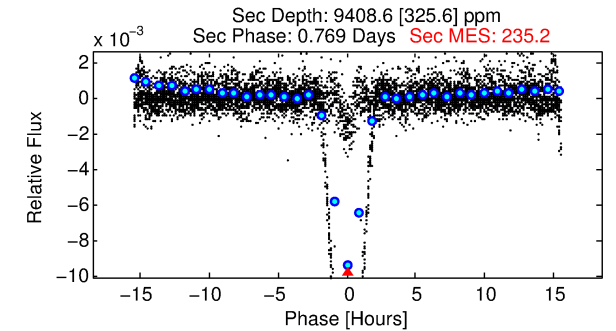
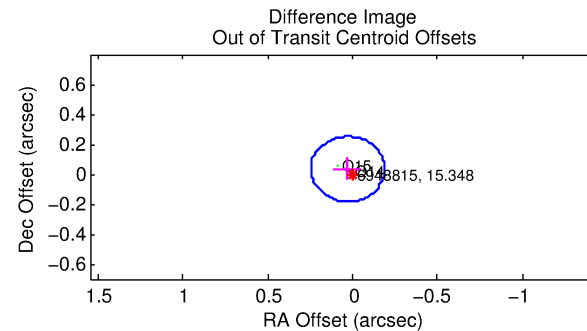
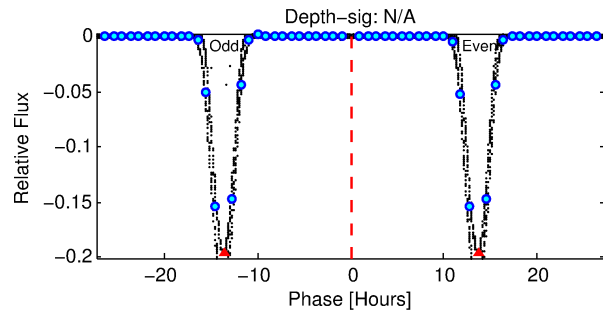
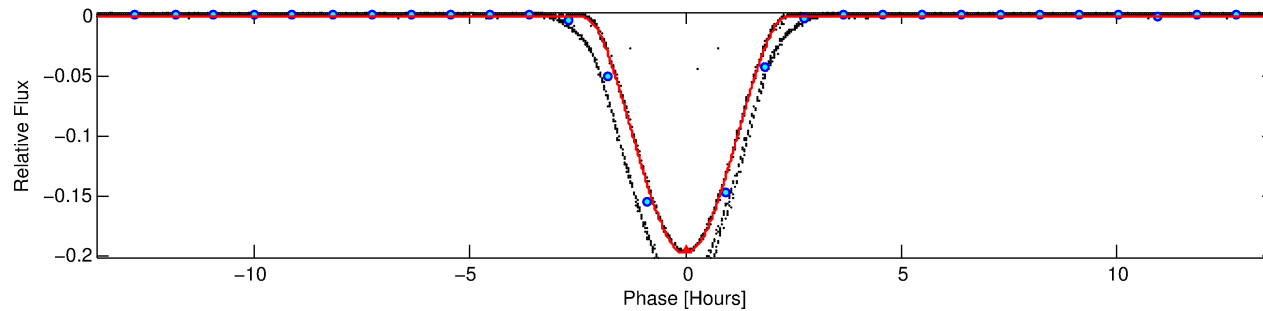
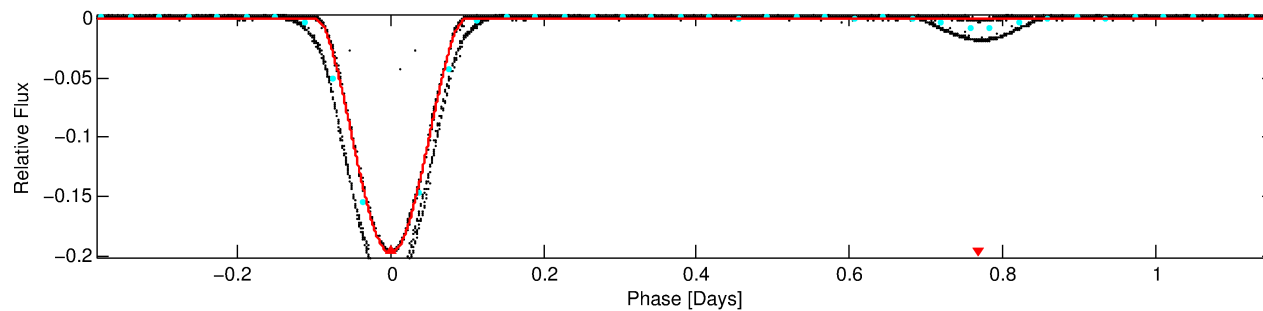
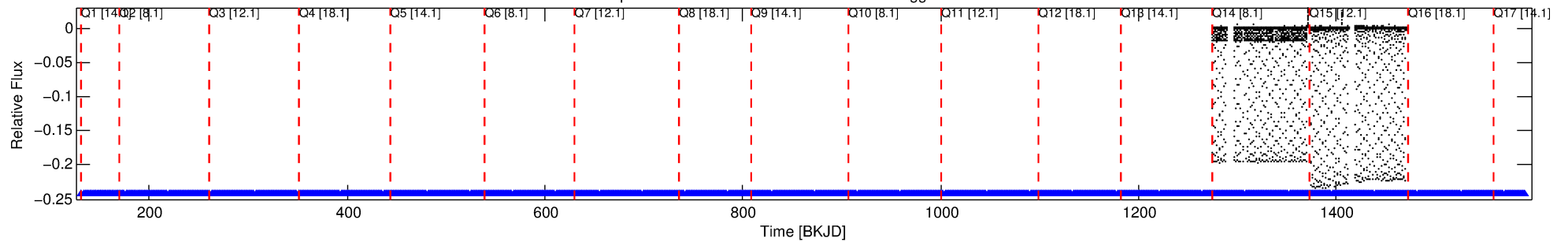
Ephemeris Match Information For 006948815-01

No Significant Match Found

DV One-Page Summary

KIC: 6948815 Candidate: 1 of 1 Period: 1.542 d
KOI: K05339.01 Corr: 0.920

Kp: 15.35 R*: 1.94 Rs Teff: 7631.0 K Logg: 4.06 Fe/H: -0.260



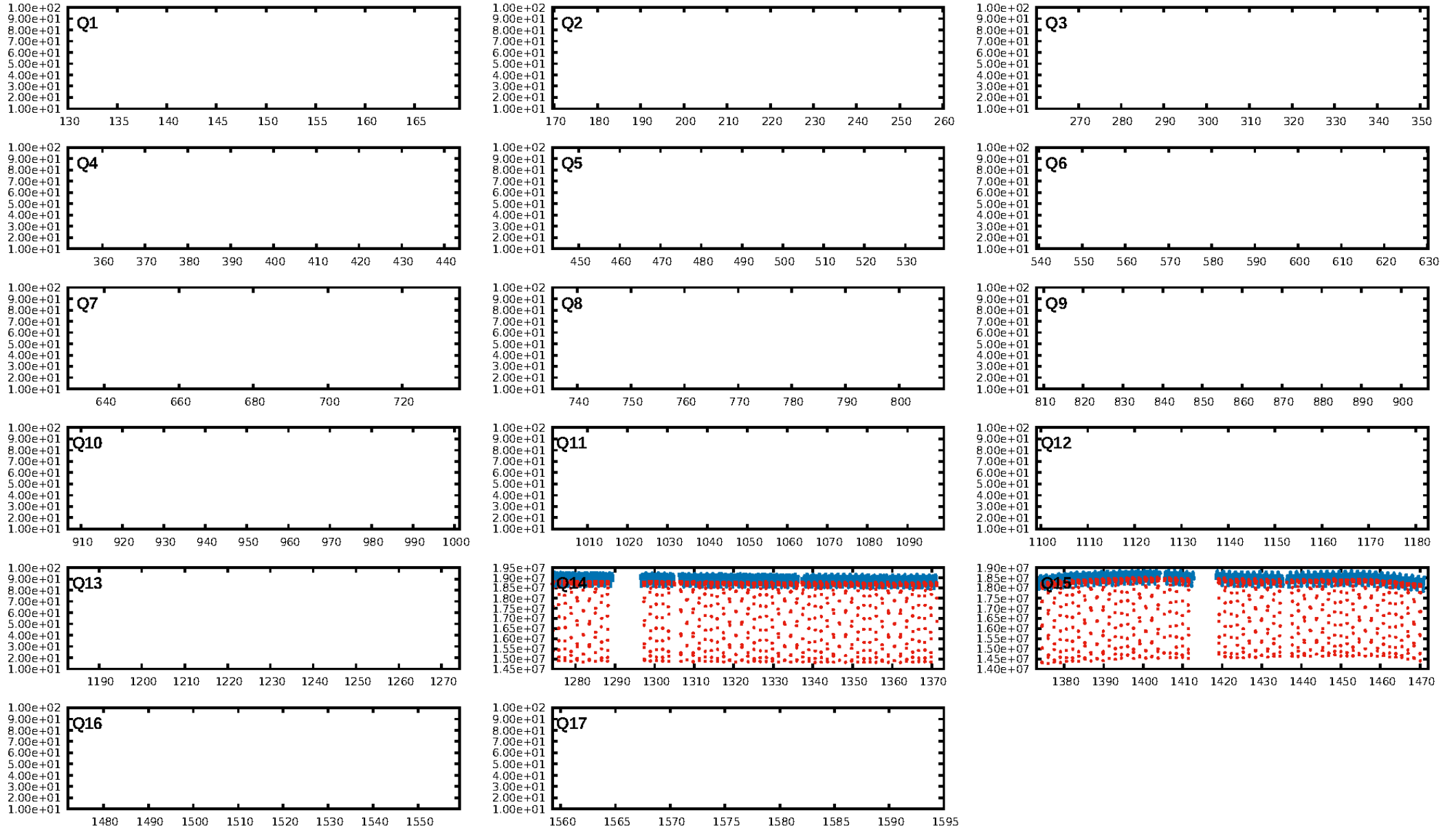
DV Fit Results:

Period = 1.54157 [0.00000] d
Epoch = 131.9541 [0.0000] BKJD
Rp/R* = 0.4984 [0.0115]
a/R* = 3.56 [0.01]
b = 0.72 [0.02]
Seff = 12379.09 [4713.70]
Teq = 2690 [256] K
Rp = 105.35 [27.79] Re
a = 0.0303 [0.0069] AU
Ag = 0.43 [0.15] [-3.82σ]
Teffp = 3366 [148] K [2.29σ]

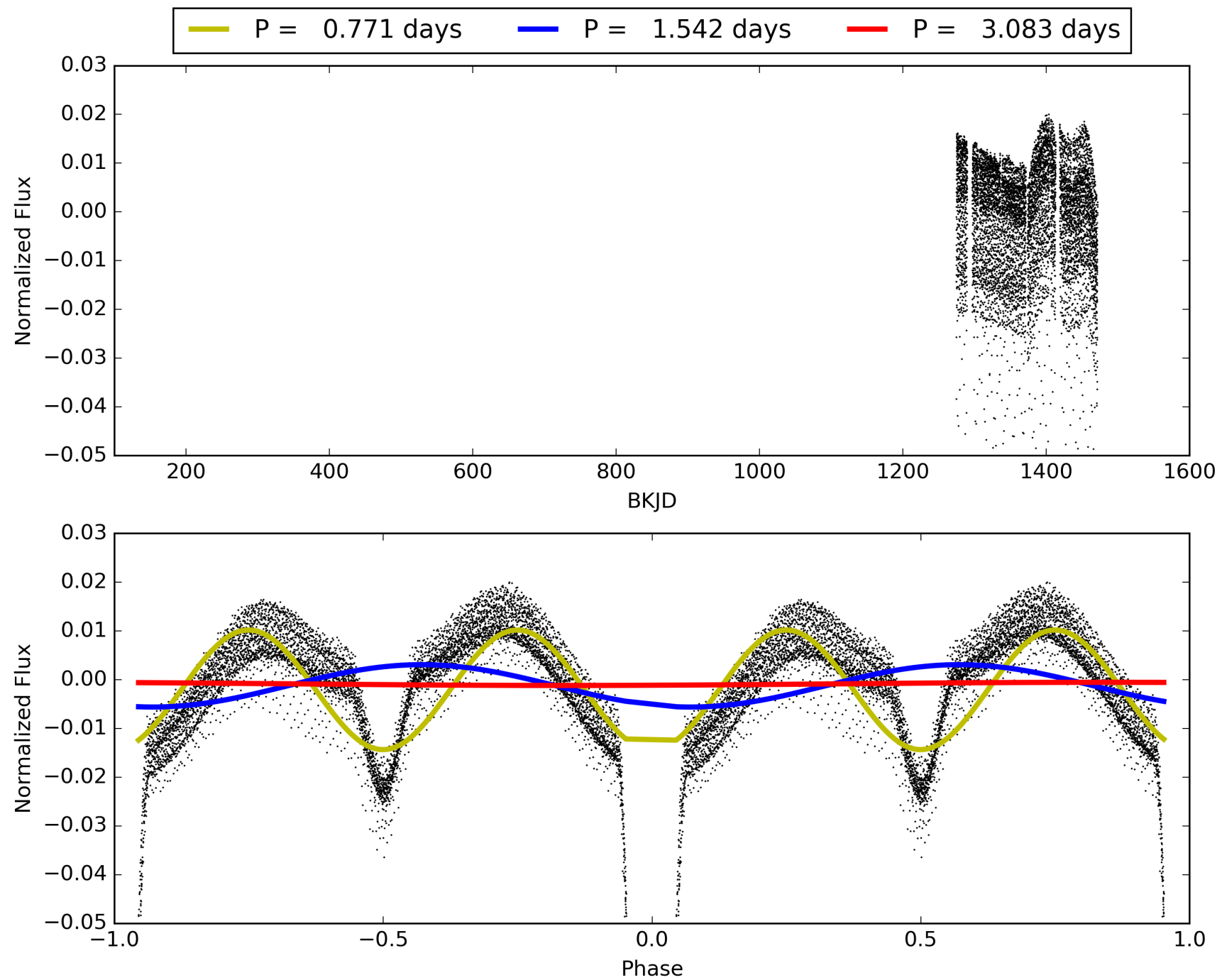
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [117/117]
GhostDiagnostic-chr: 1.852
Centroid-sig: N/A
Centroid-so: 0.235 arcsec [110.34σ]
OotOffset-rm: 0.045 arcsec [0.62σ]
KicOffset-rm: 0.032 arcsec [0.41σ]
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 006948815-01, PDC Light Curves

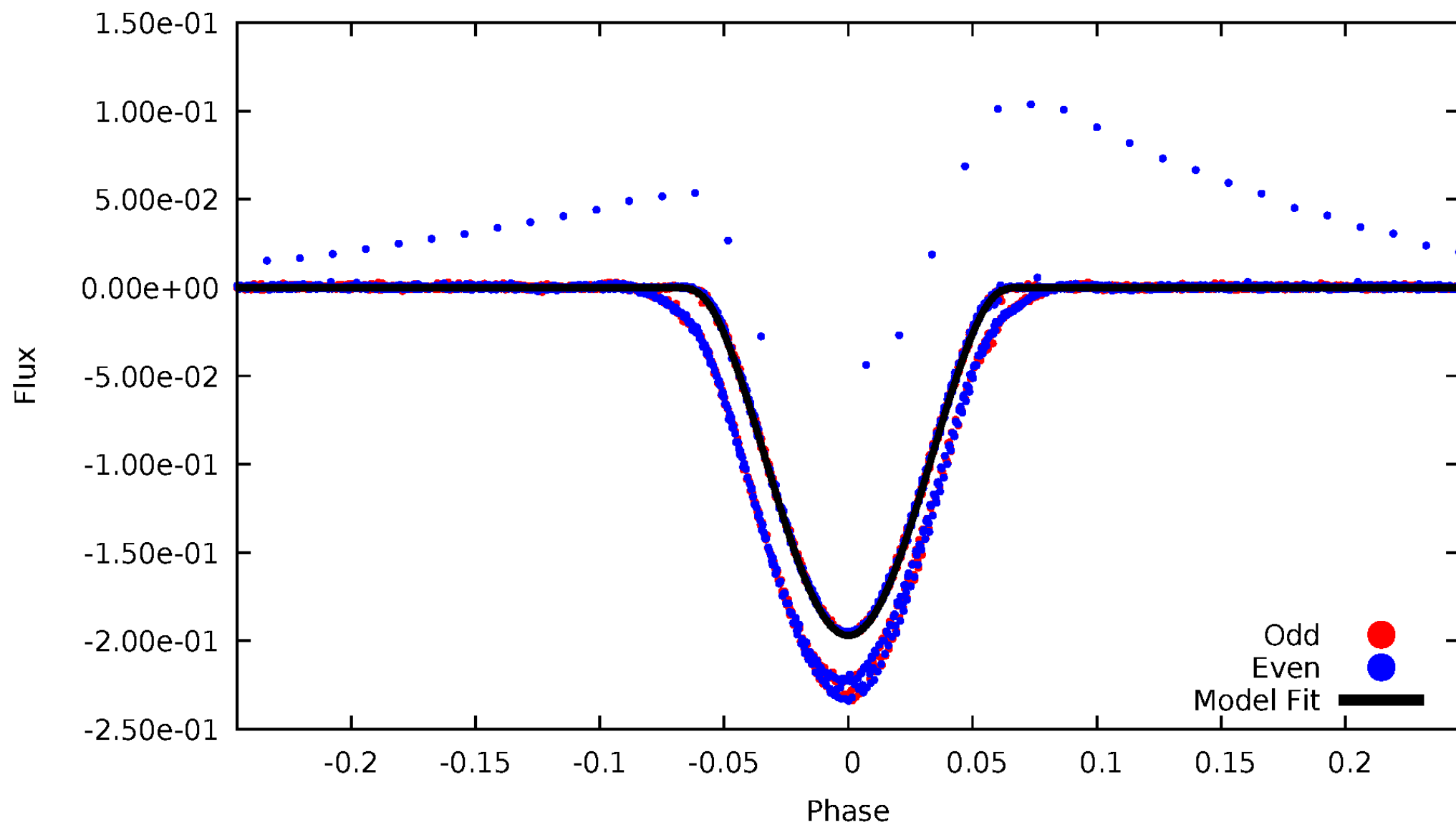


TCE 006948815-01



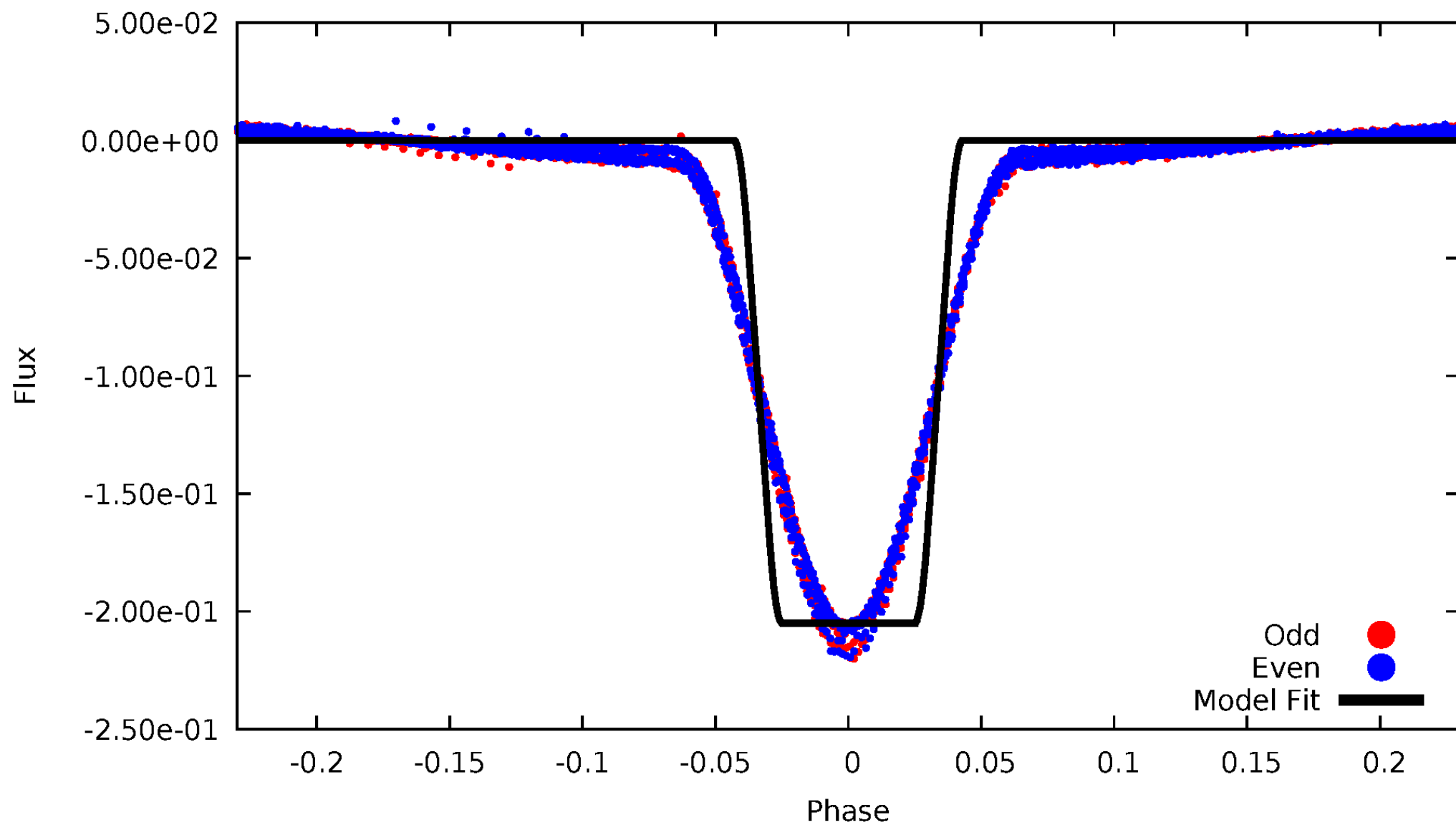
DV Odd/Even

TCE 006948815-01



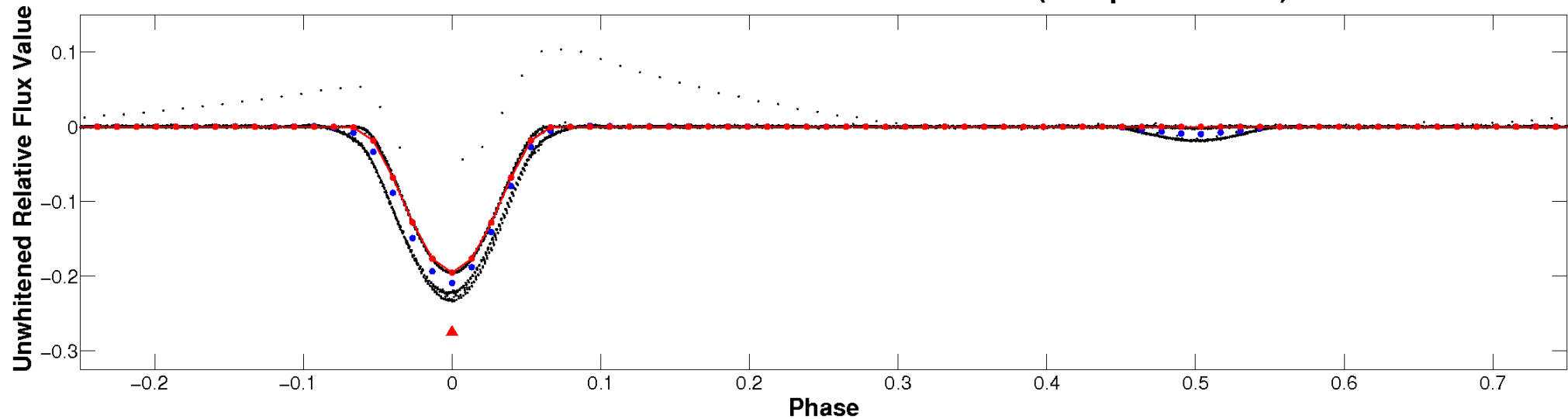
ALT Odd/Even

TCE 006948815-01

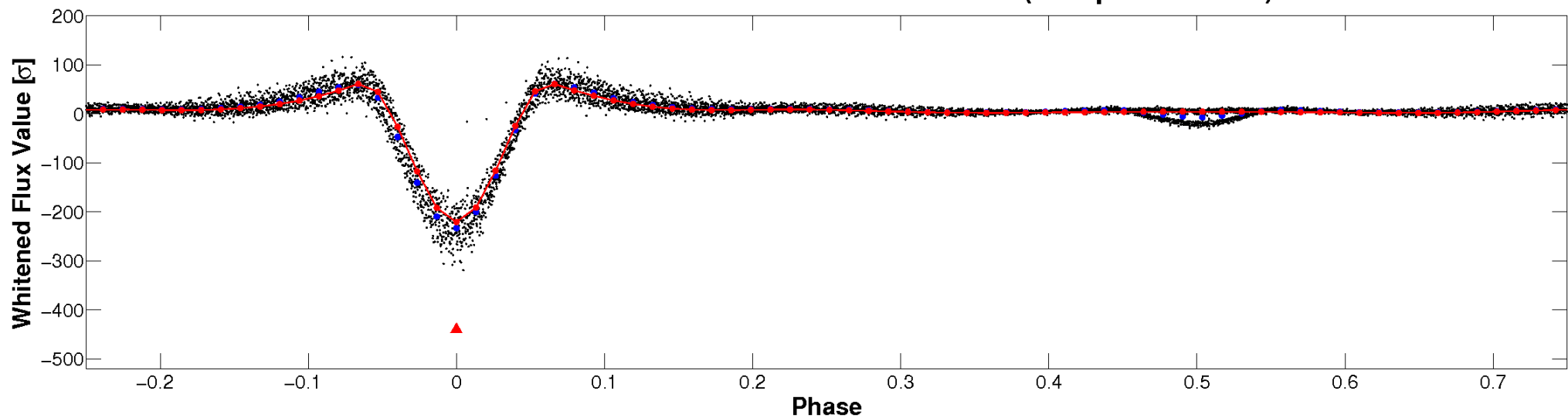


Non-Whitened Vs. Whitened Light Curve

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

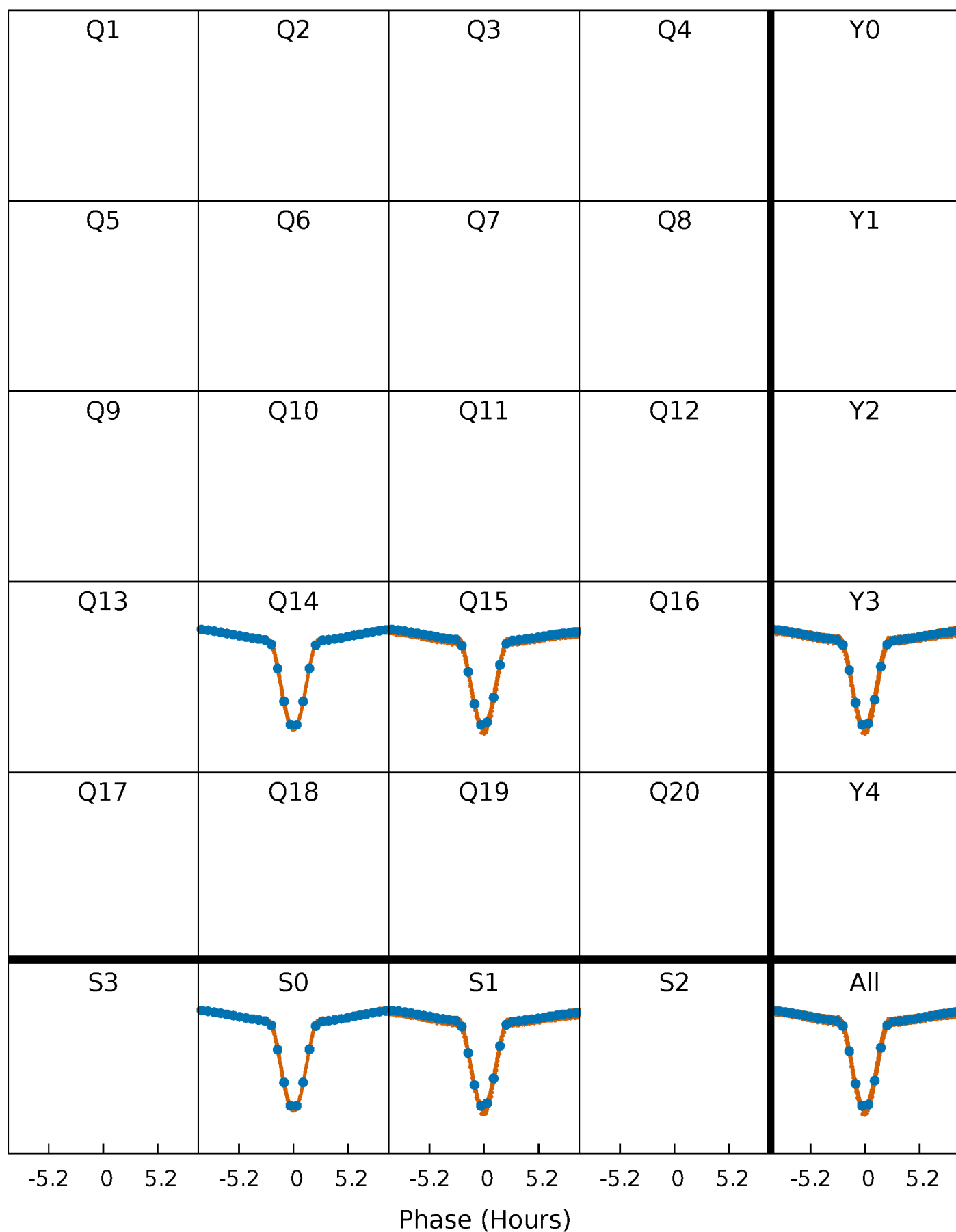


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



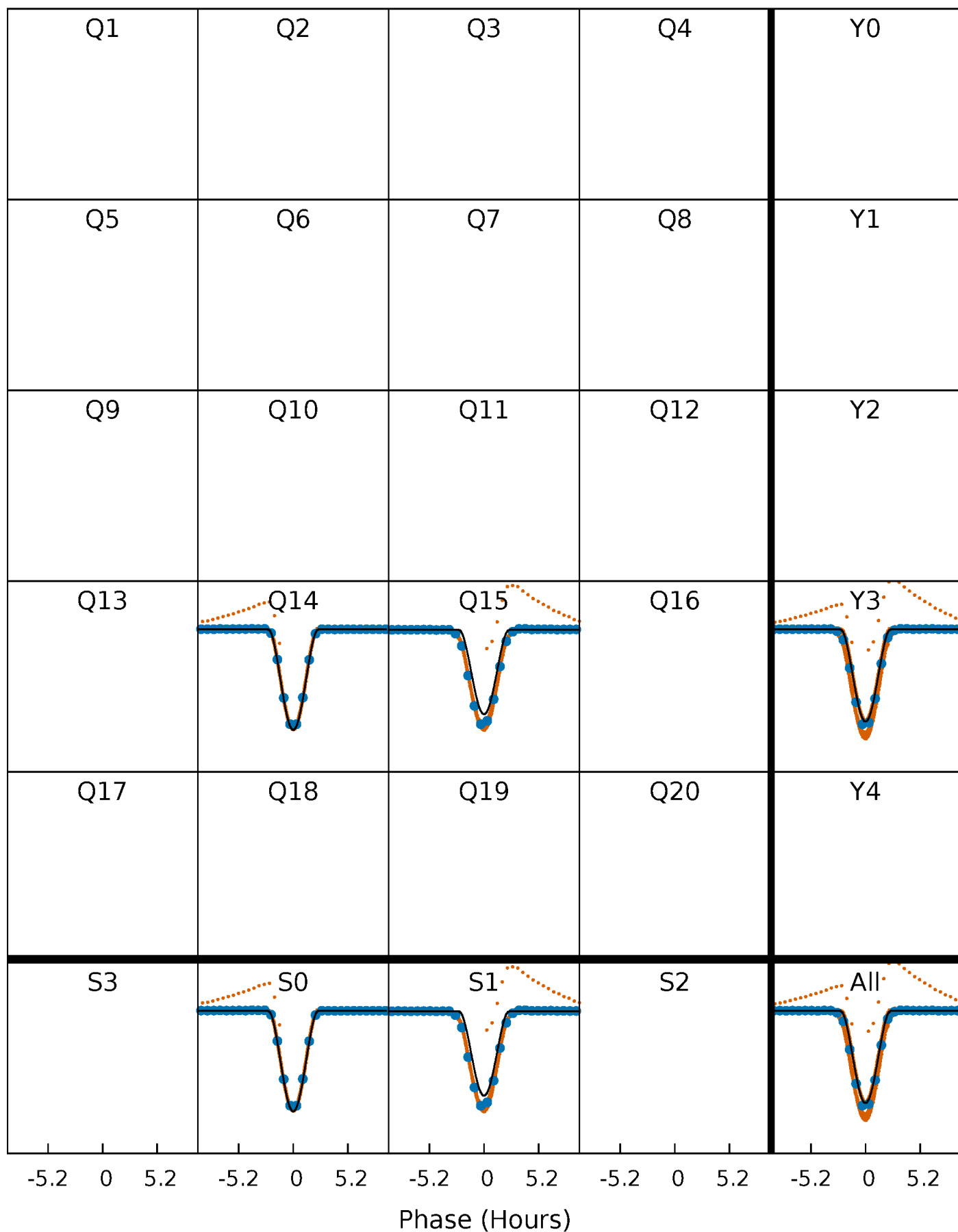
PDC Quarter-Phased Transit Curves

TCE 006948815-01 P= 1.541570 Days $T_0=131.954102$ (BKJD)



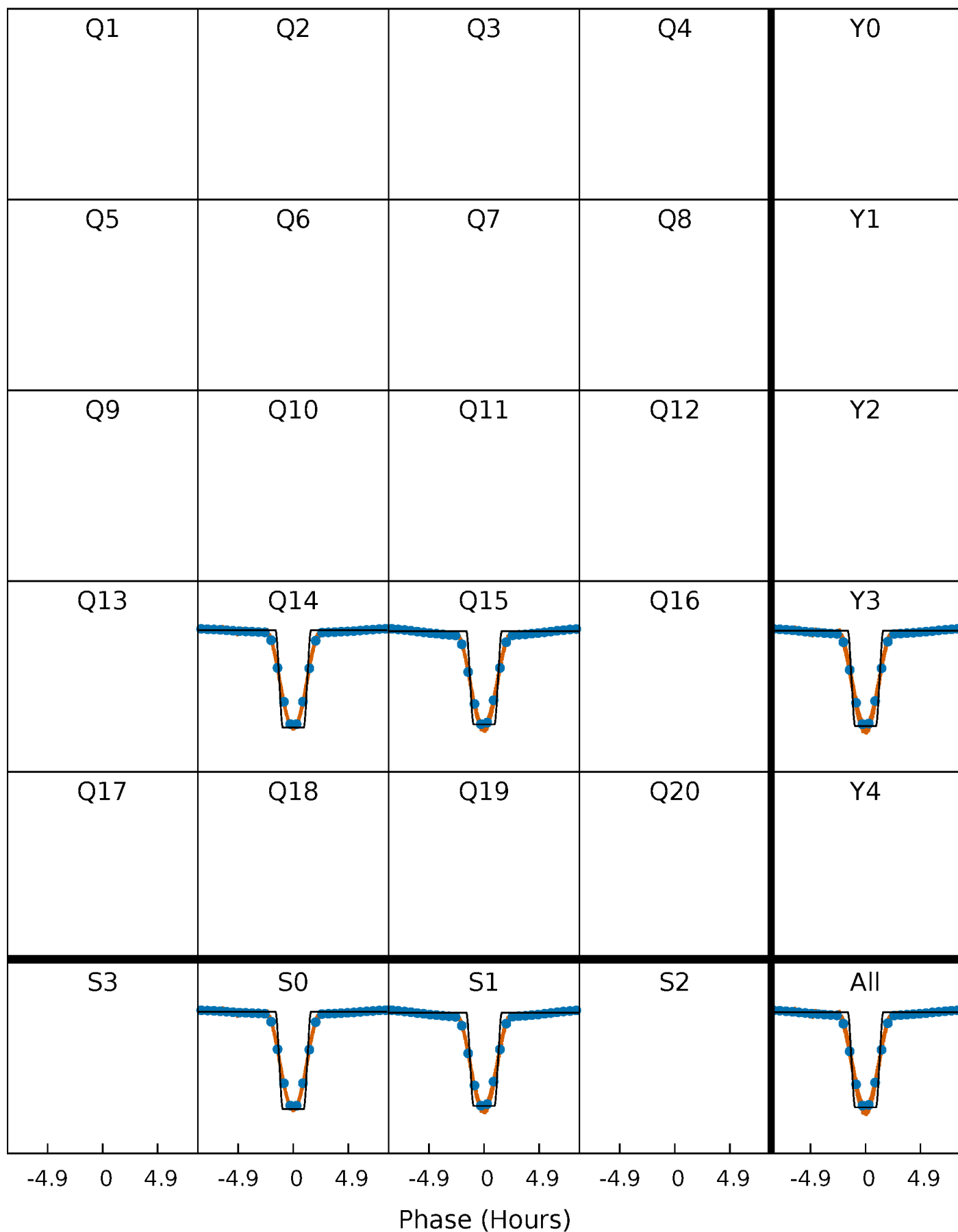
DV Quarter-Phased Transit Curves

TCE 006948815-01 P= 1.541570 Days $T_0=131.954102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

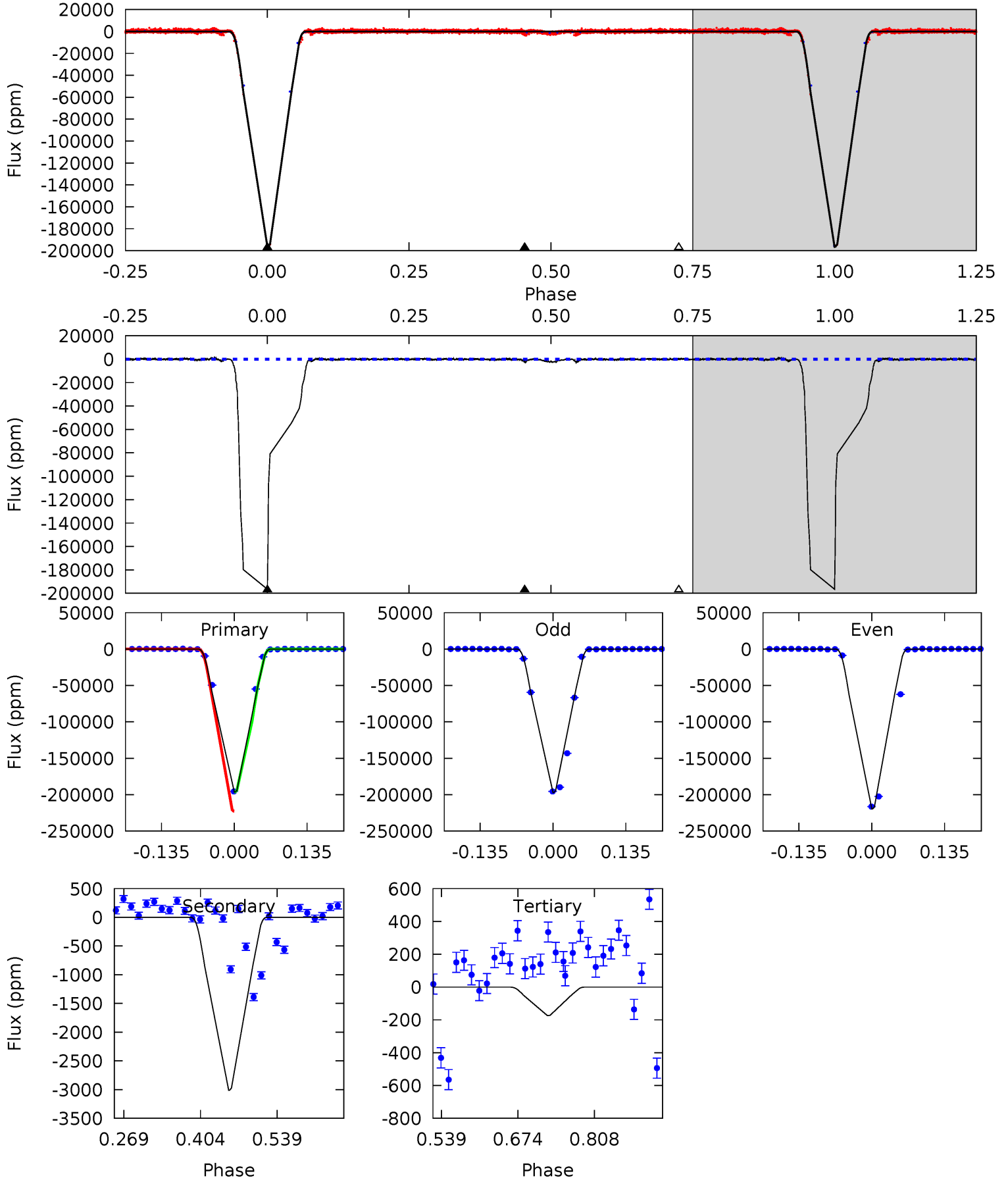
TCE 006948815-01 P= 1.541560 Days $T_0=131.961688$ (BKJD)



DV Model-Shift Uniqueness Test

006948815-01, P = 1.541570 Days, E = 131.954102 Days

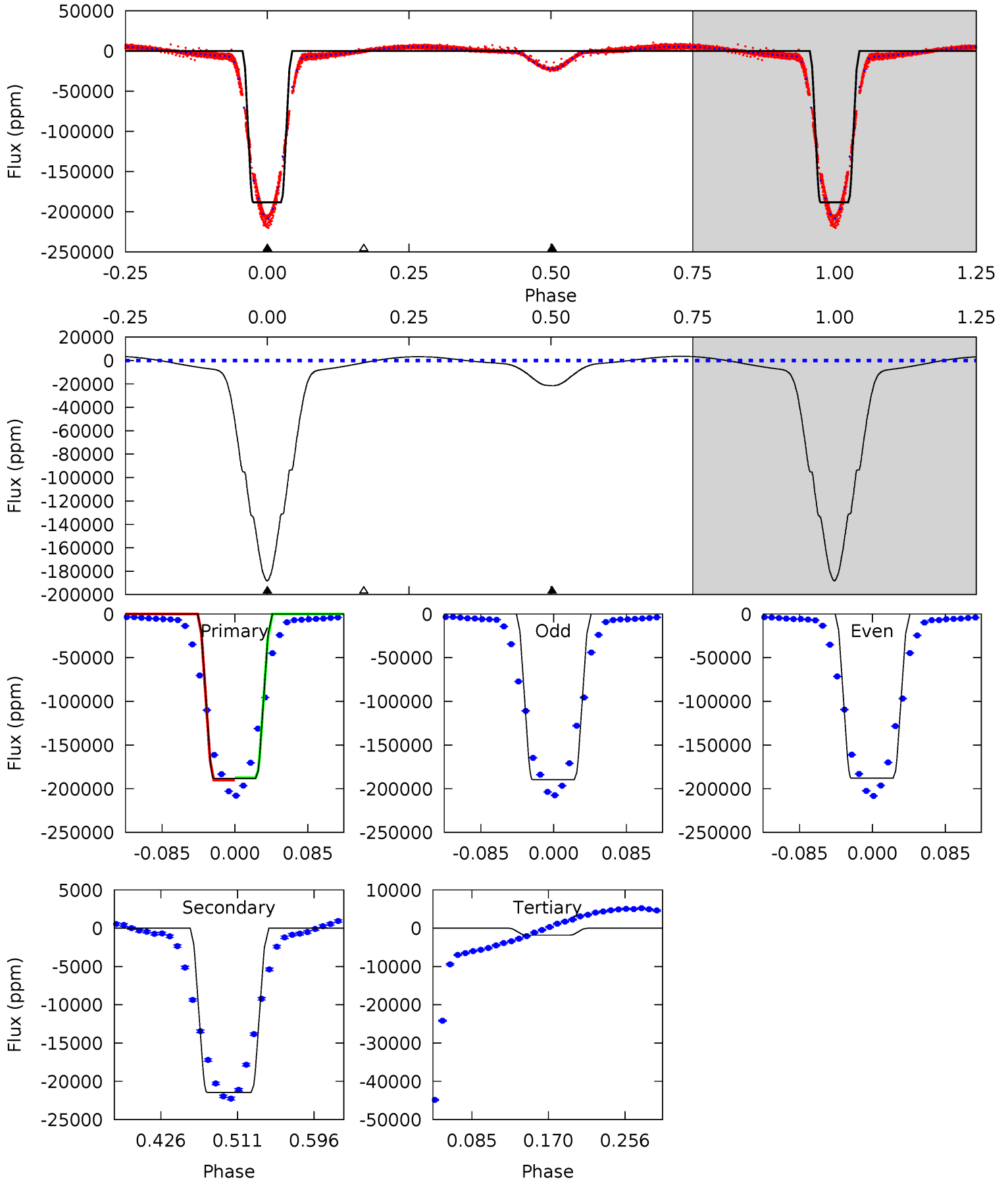
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2597	39.8	2.30	0	4.50	1.50	3.44	2595	2597	37.5	39.8	162.1	1.09	0.01	0



Alt Model-Shift Uniqueness Test

006948815-01, P = 1.541560 Days, E = 131.961688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1189	135.5	11.4	0	4.60	1.72	21.4	1178	1189	124.1	135.5	4.99	1.00	0.02	8.18



Stellar Parameters For KIC 006948815

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7631^{+237}_{-316}	$4.059^{+0.192}_{-0.157}$	$-0.260^{+0.200}_{-0.350}$	$1.937^{+0.509}_{-0.458}$	$1.564^{+0.210}_{-0.233}$	$0.303^{+0.317}_{-0.134}$
	+3%/-4%	+5%/-4%	+77%/-135%	+26%/-24%	+13%/-15%	+105%/-44%
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 006948815-01 / KOI 5339.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3013 ± 76	$104.26^{+15.51}_{-13.56}$	3730^{+278}_{-267}	-3169^{+251}_{-216}	$0.141^{+0.043}_{-0.031}$
Alt.	-21447 ± 158	$94.97^{+14.15}_{-13.62}$	3738^{+268}_{-310}	4233^{+124}_{-136}	$1.228^{+0.405}_{-0.278}$

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

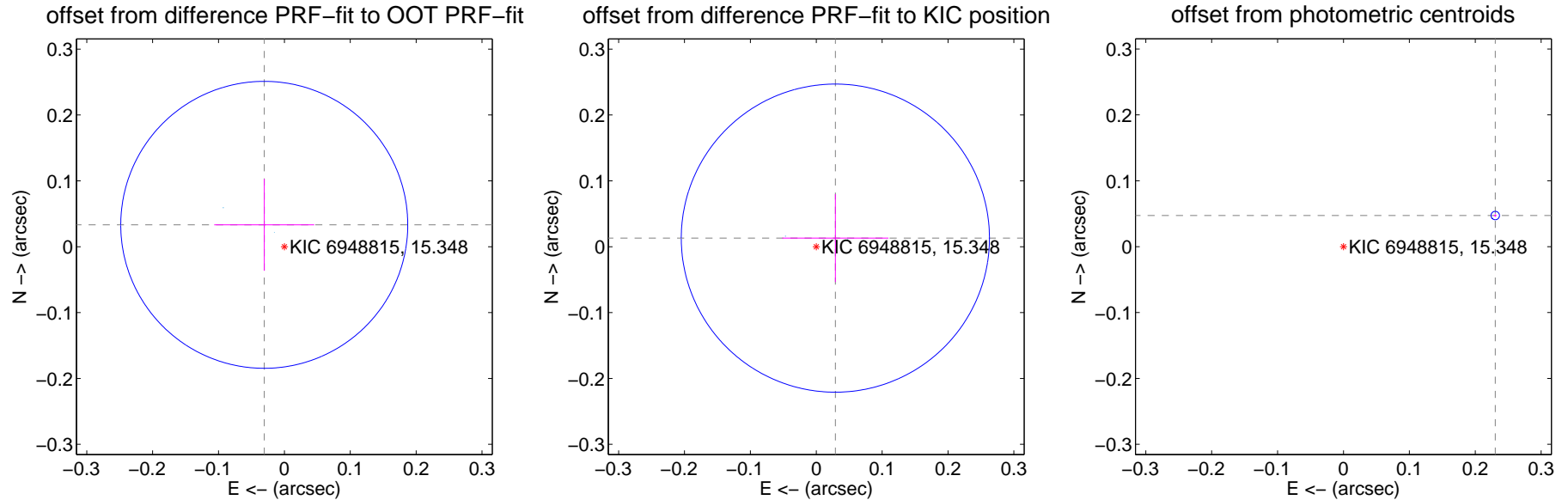
DV Centroid Data

Supplemental centroid analysis for 006948815-01. Kepler magnitude: 15.35. Transit SNR 3190.39

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.073	0.62	0.031 ± 0.076	0.033 ± 0.070
PRF-fit source offset from KIC position	0.032 ± 0.078	0.41	-0.029 ± 0.081	0.013 ± 0.067
photometric centroid source offset	0.24 ± 0.00	110.34	-0.23 ± 0.00	0.05 ± 0.00



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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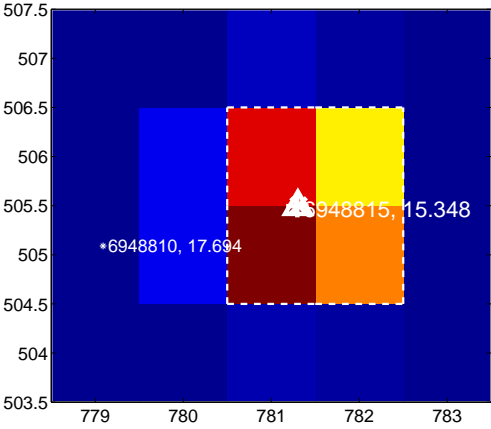
Q13 no difference image



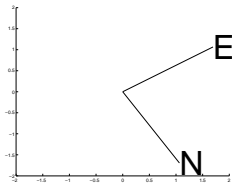
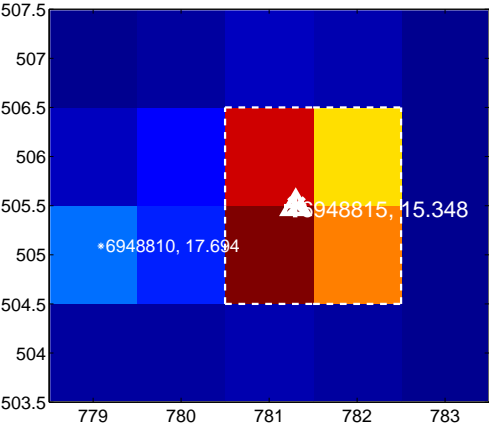
Q13 no OOT image



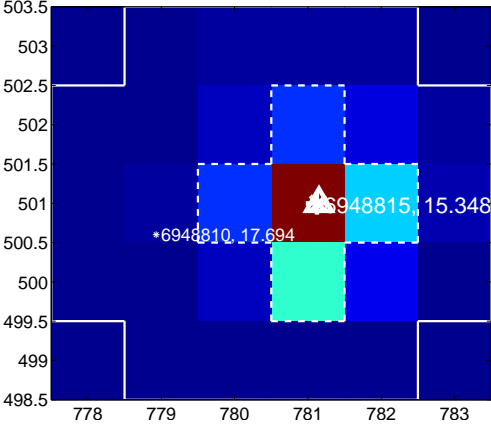
Q14 difference image



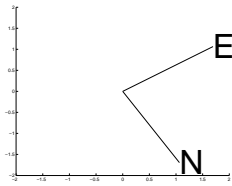
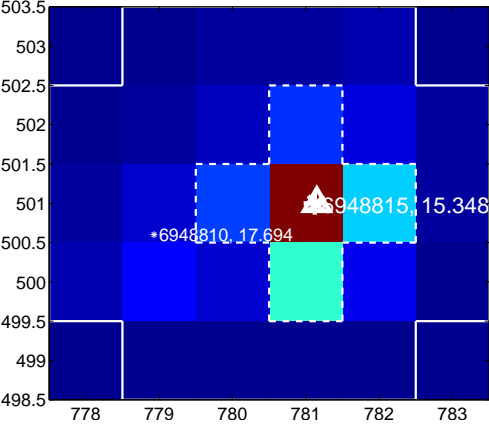
Q14 OOT image



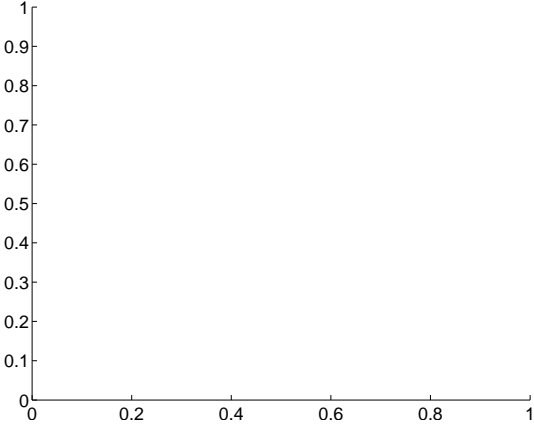
Q15 difference image



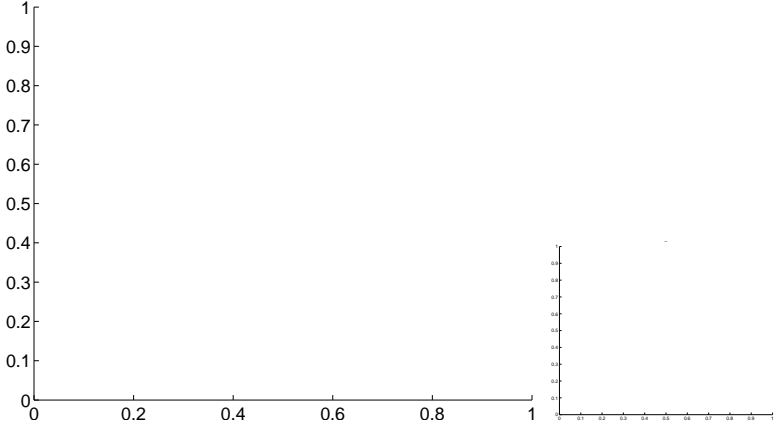
Q15 OOT image



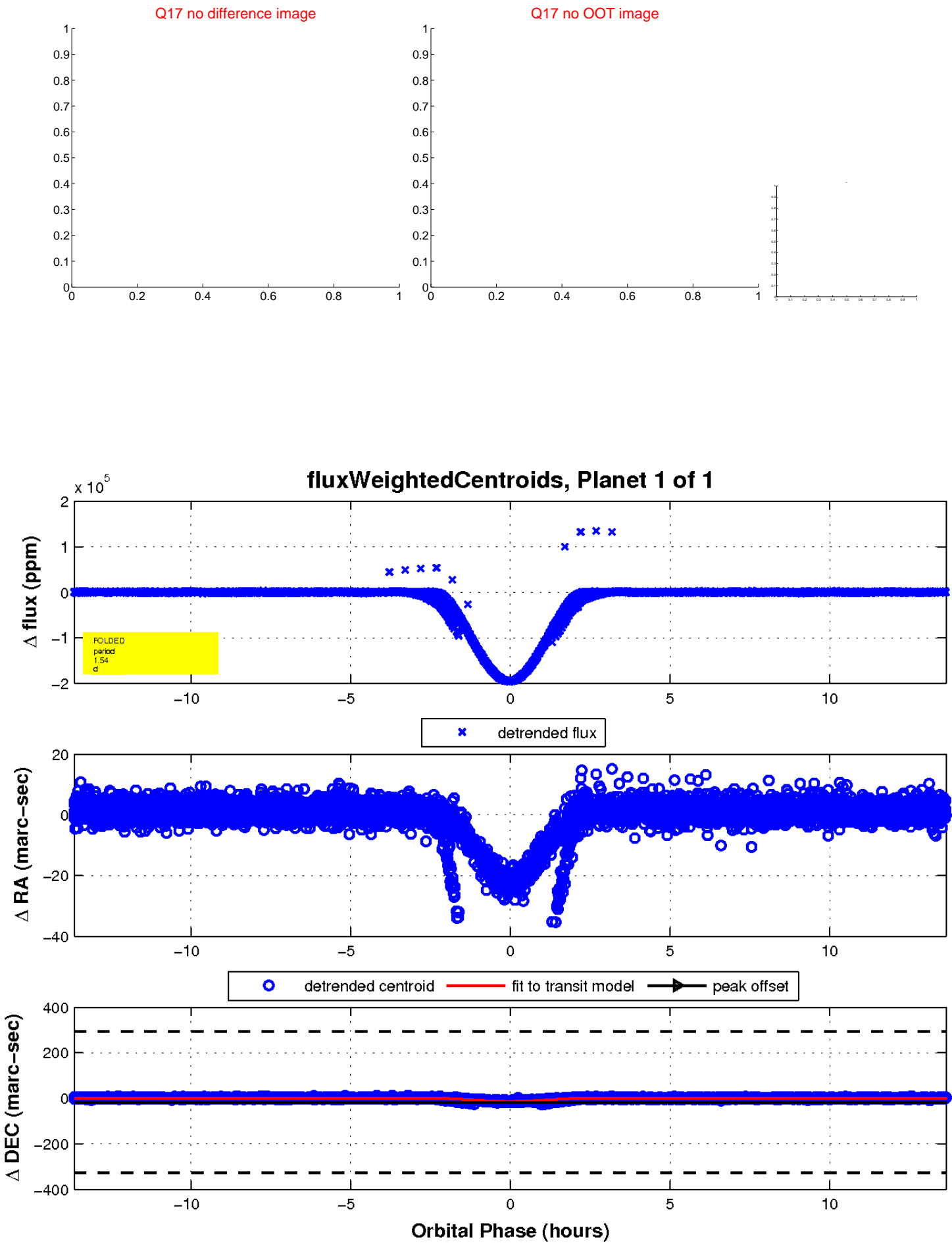
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

