

KIC 006680743

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})
006680743-01	OBS	No	614.742743	195.908043	113.6	23.481	7.4	7.7	0.79	5570	0.89	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006680743-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

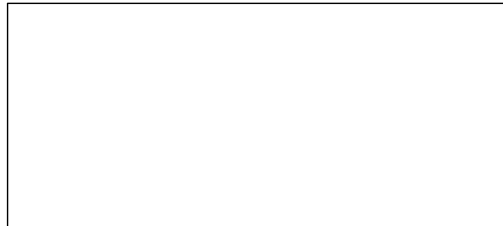
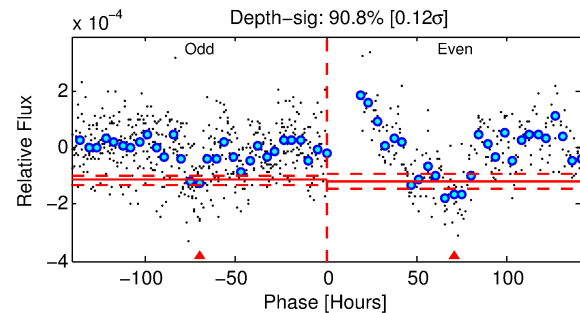
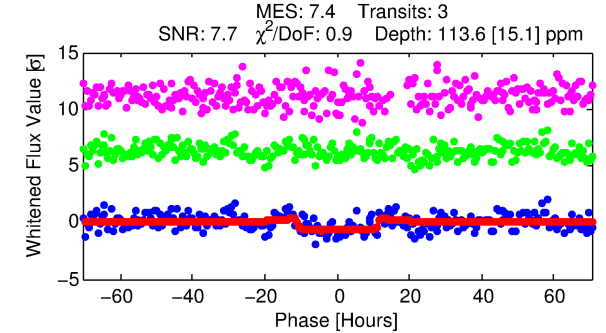
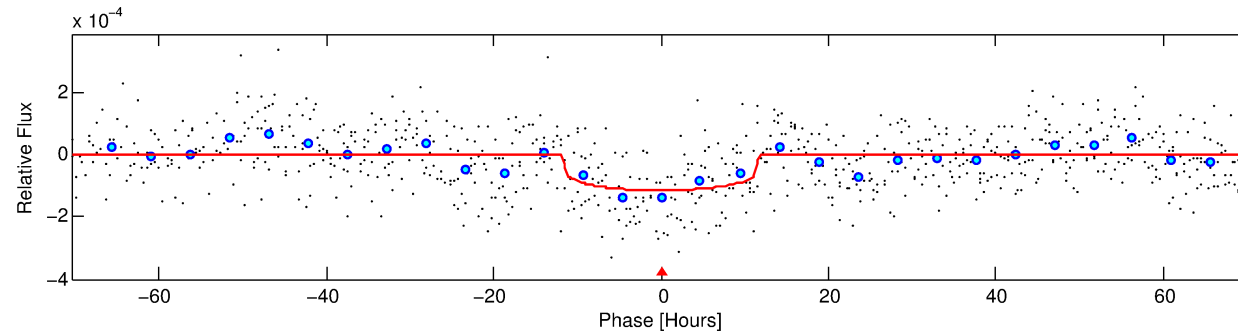
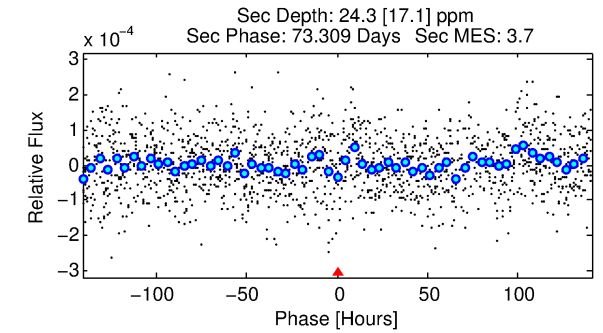
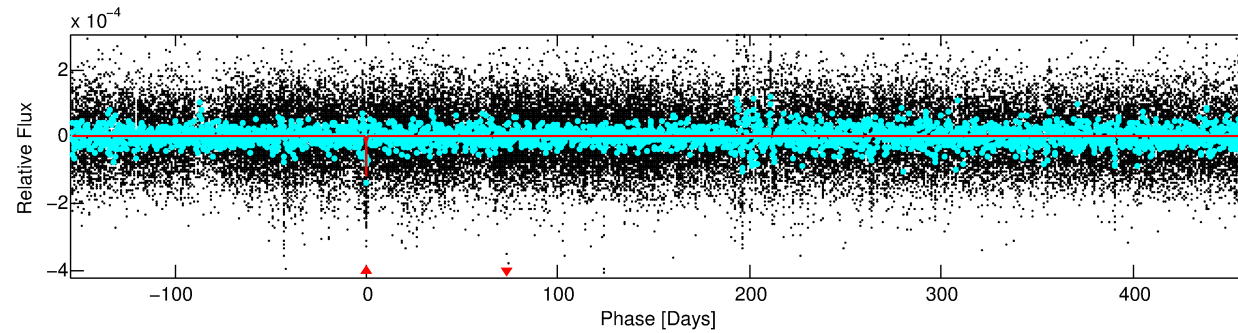
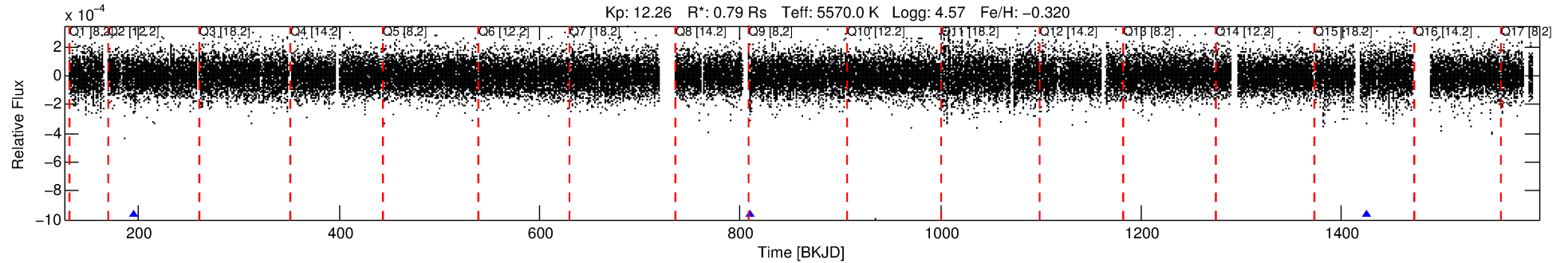
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006680743-01

No Significant Match Found

DV One-Page Summary

KIC: 6680743 Candidate: 1 of 1 Period: 614.743 d



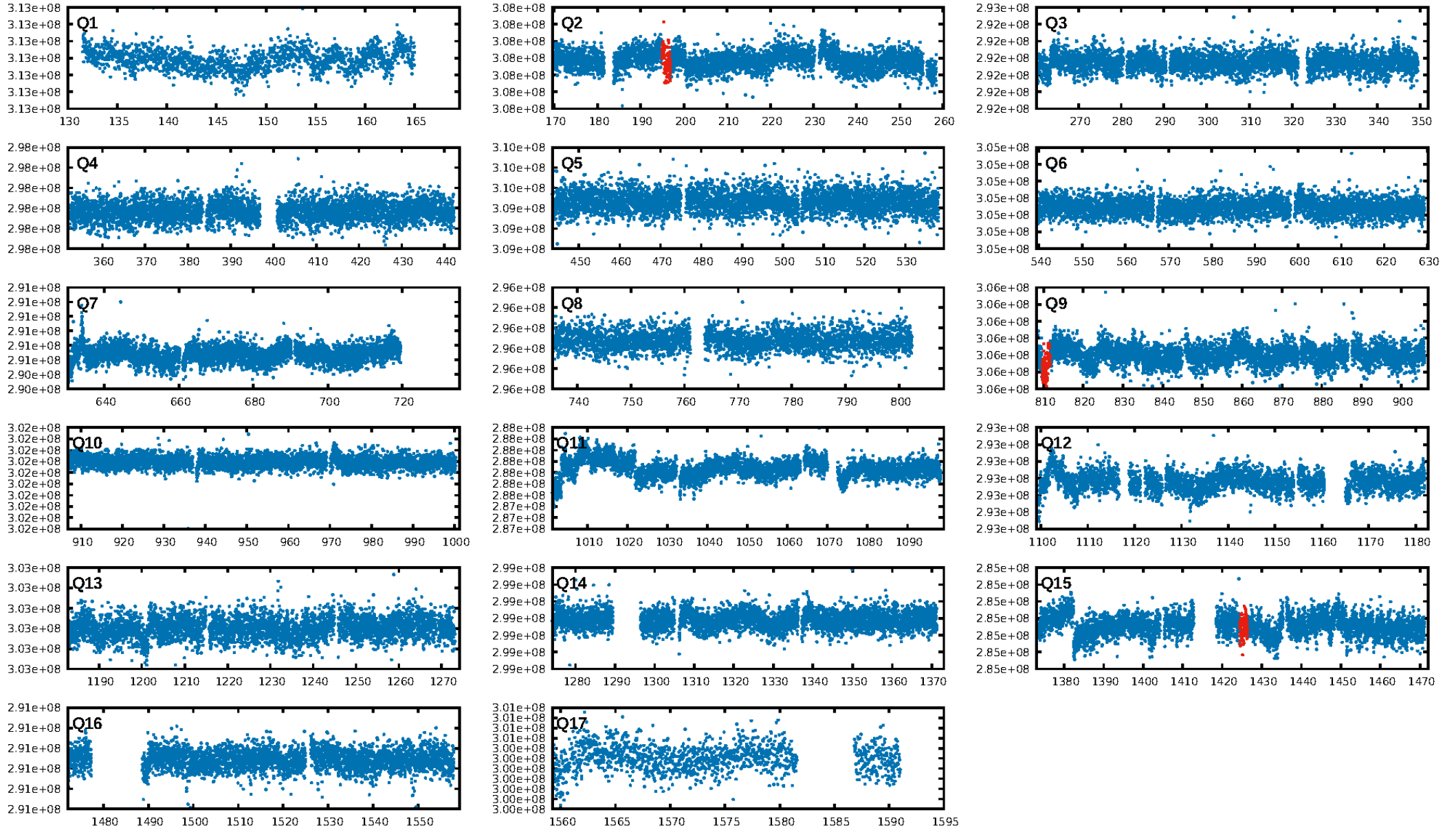
DV Fit Results:

Period = 614.74274 [0.01558] d
Epoch = 195.9080 [0.0186] BKJD
Rp/R* = 0.0104 [0.0067]
a/R* = 148.31 [419.65]
b = 0.69 [2.20]
Seff = 0.30 [0.09]
Teq = 189 [13] K
Rp = 0.89 [0.61] Re
a = 1.3331 [0.2437] AU
Ag = 29794.65 [44430.23] [0.67σ]
Teffp = 3840 [1413] K [2.58σ]

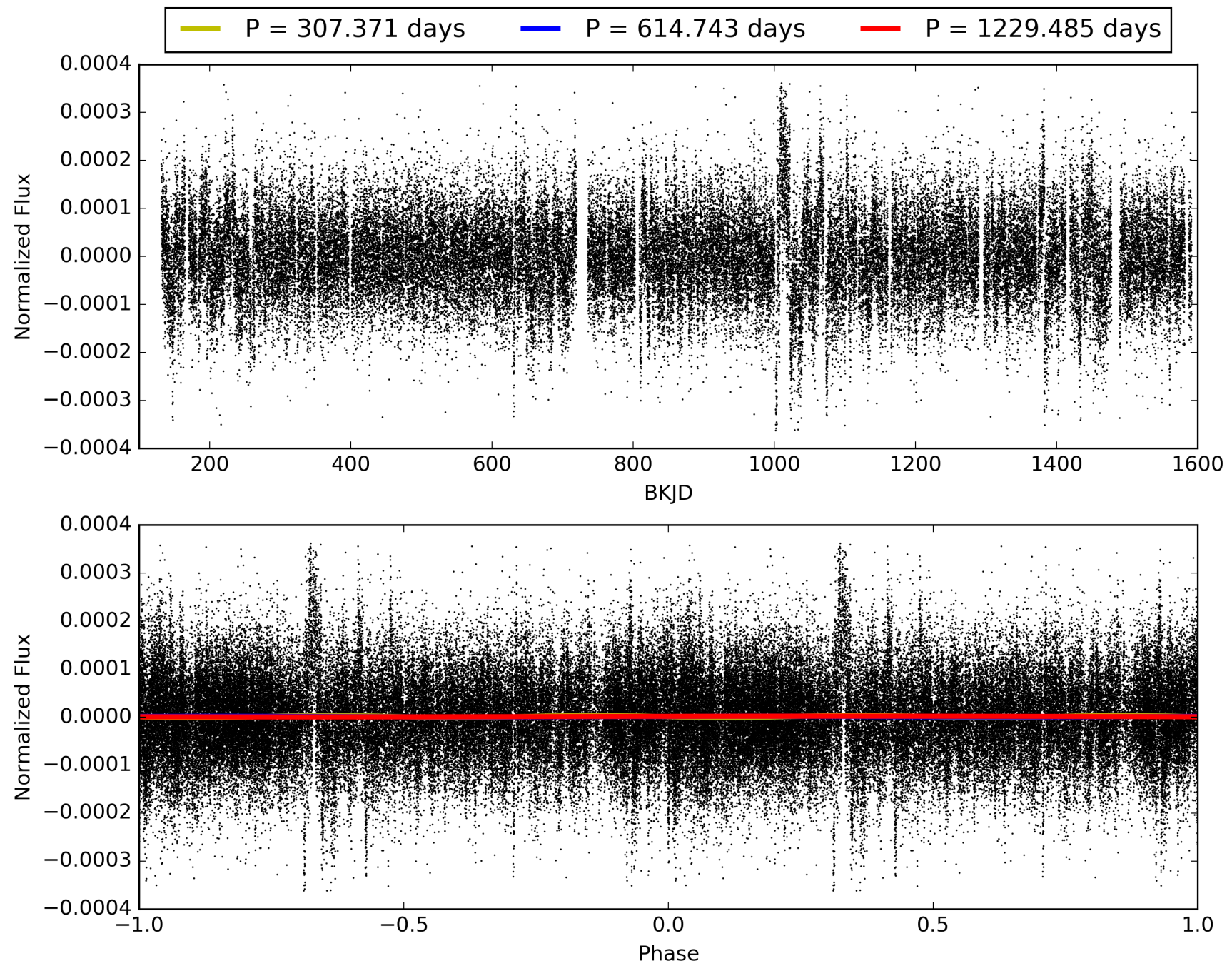
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 24.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.47e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.064
Centroid-sig: 50.4%
Centroid-so: 1.471 arcsec [0.86σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

TCE 006680743-01, PDC Light Curves

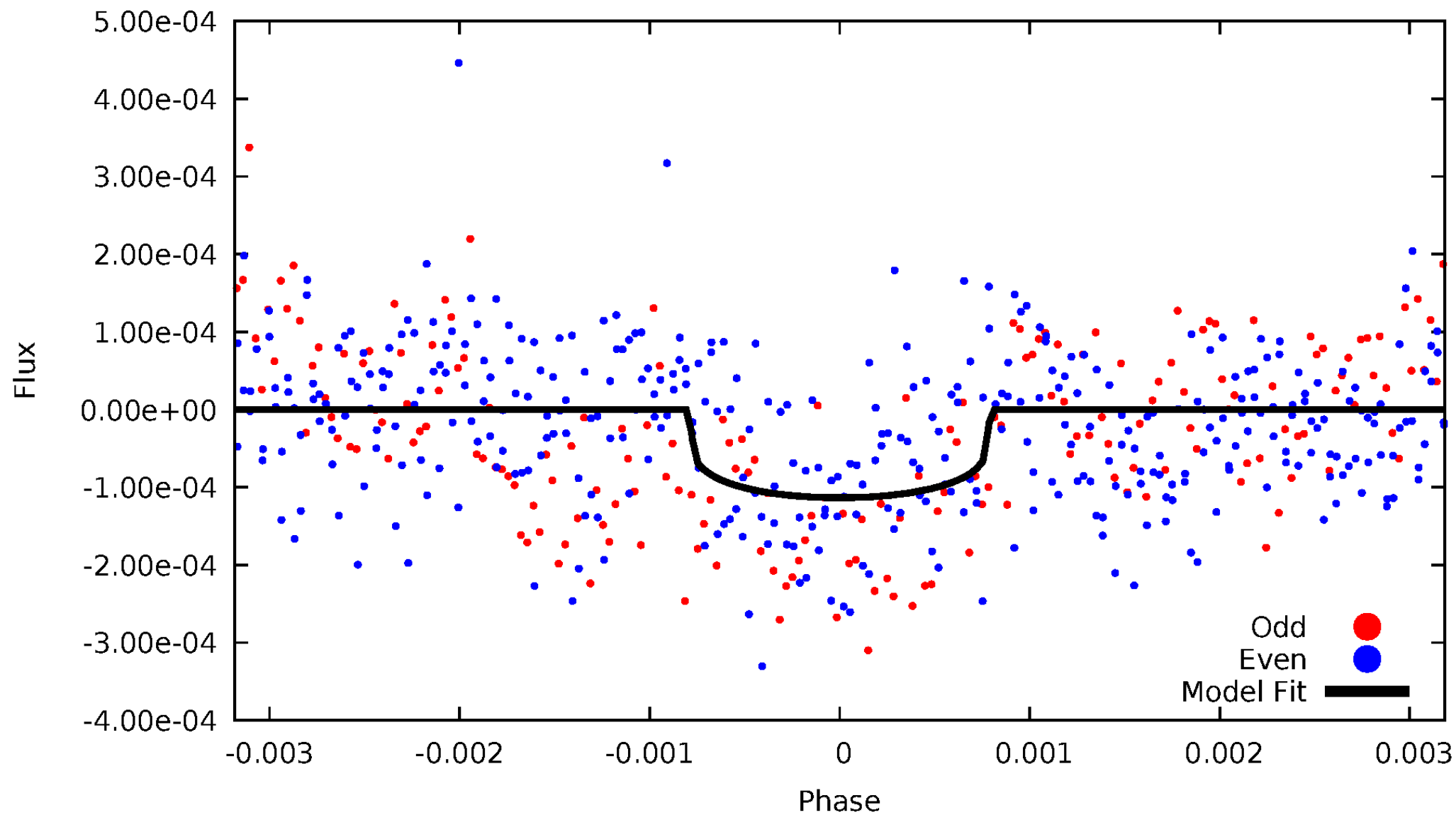


TCE 006680743-01



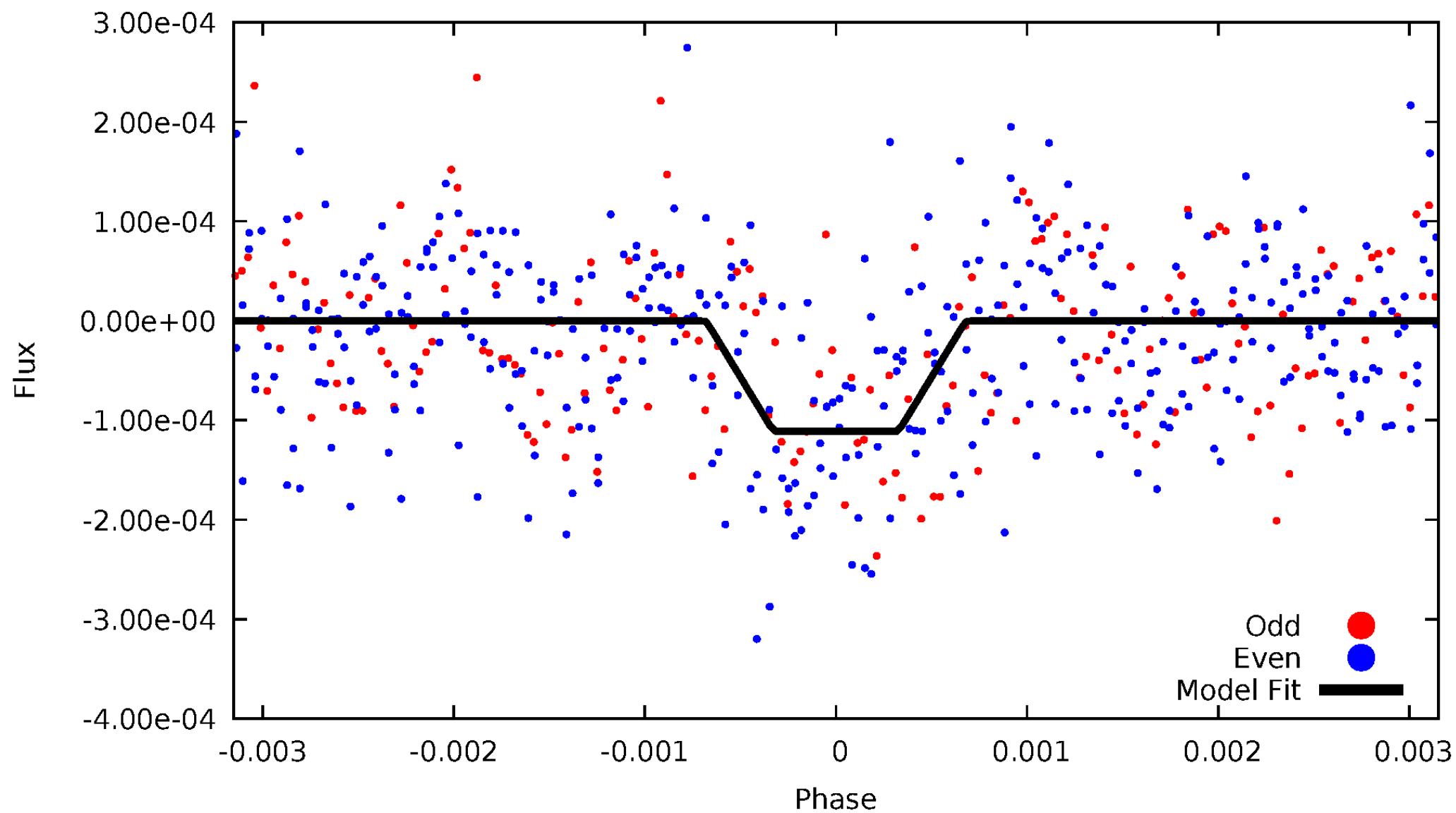
DV Odd/Even

TCE 006680743-01



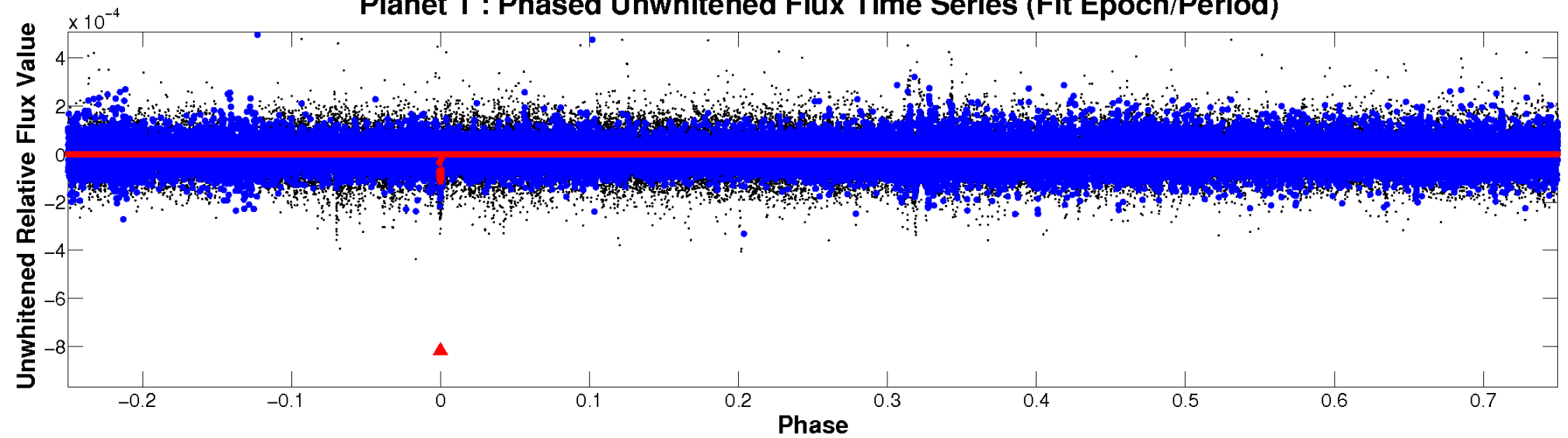
ALT Odd/Even

TCE 006680743-01

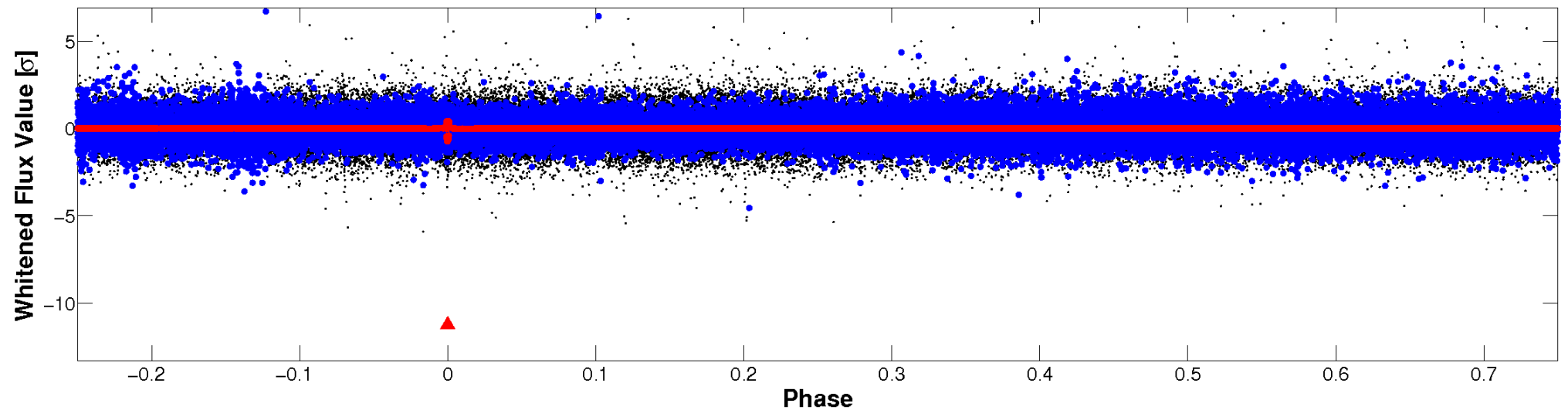


Non-Whitened Vs. Whitened Light Curve

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



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



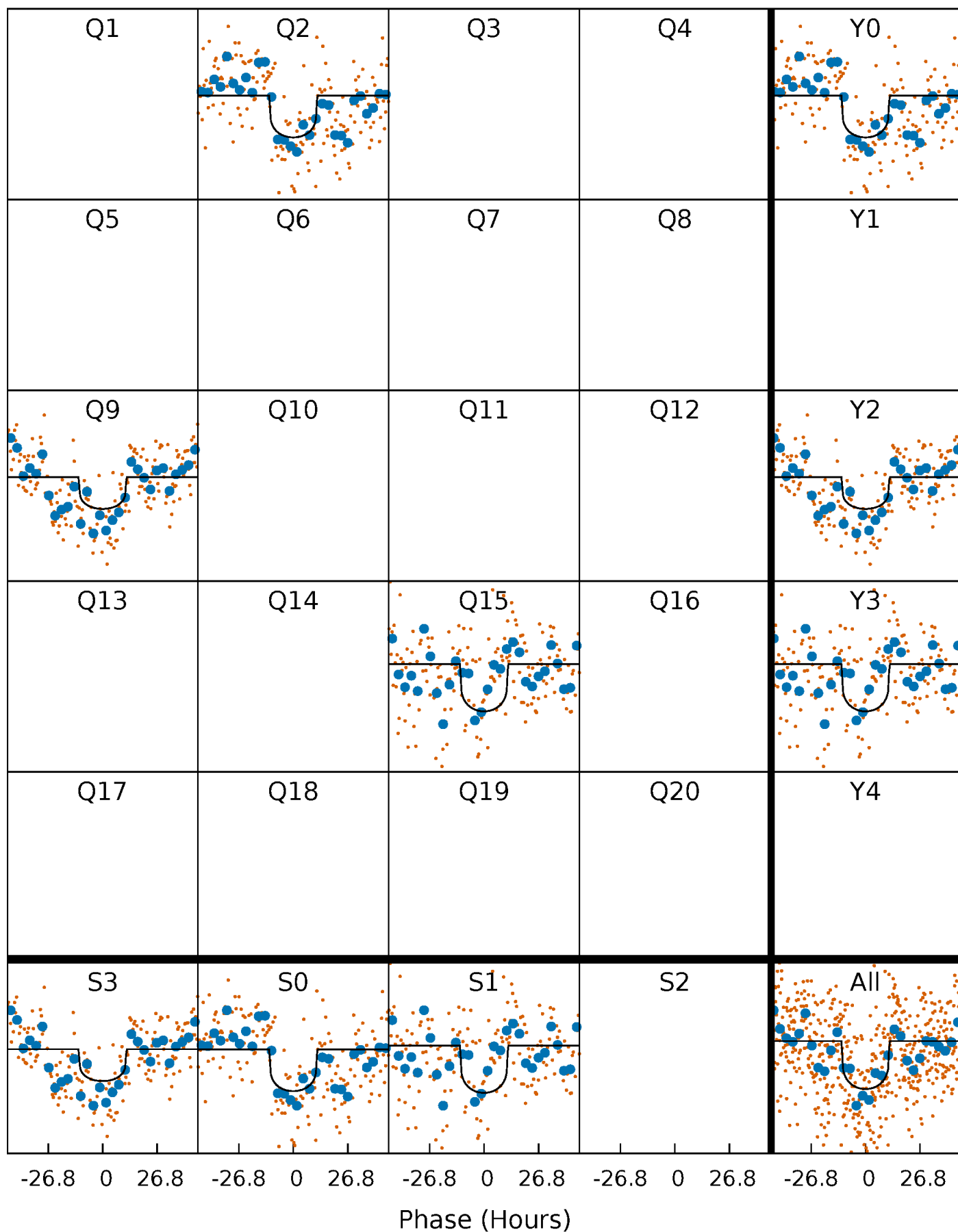
PDC Quarter-Phased Transit Curves

TCE 006680743-01 P=614.742743 Days $T_0=195.908042$ (BKJD)



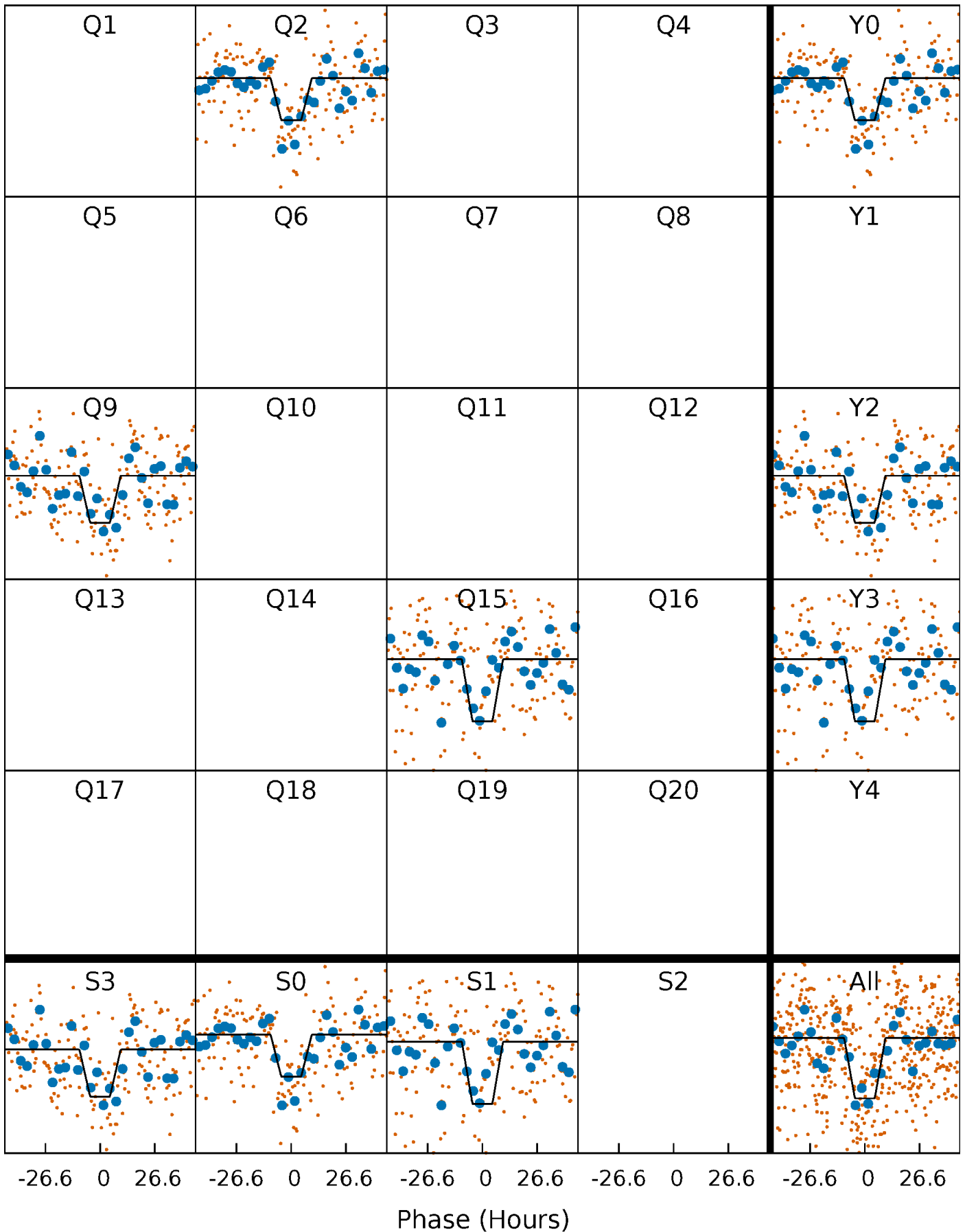
DV Quarter-Phased Transit Curves

TCE 006680743-01 P=614.742743 Days $T_0=195.908042$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

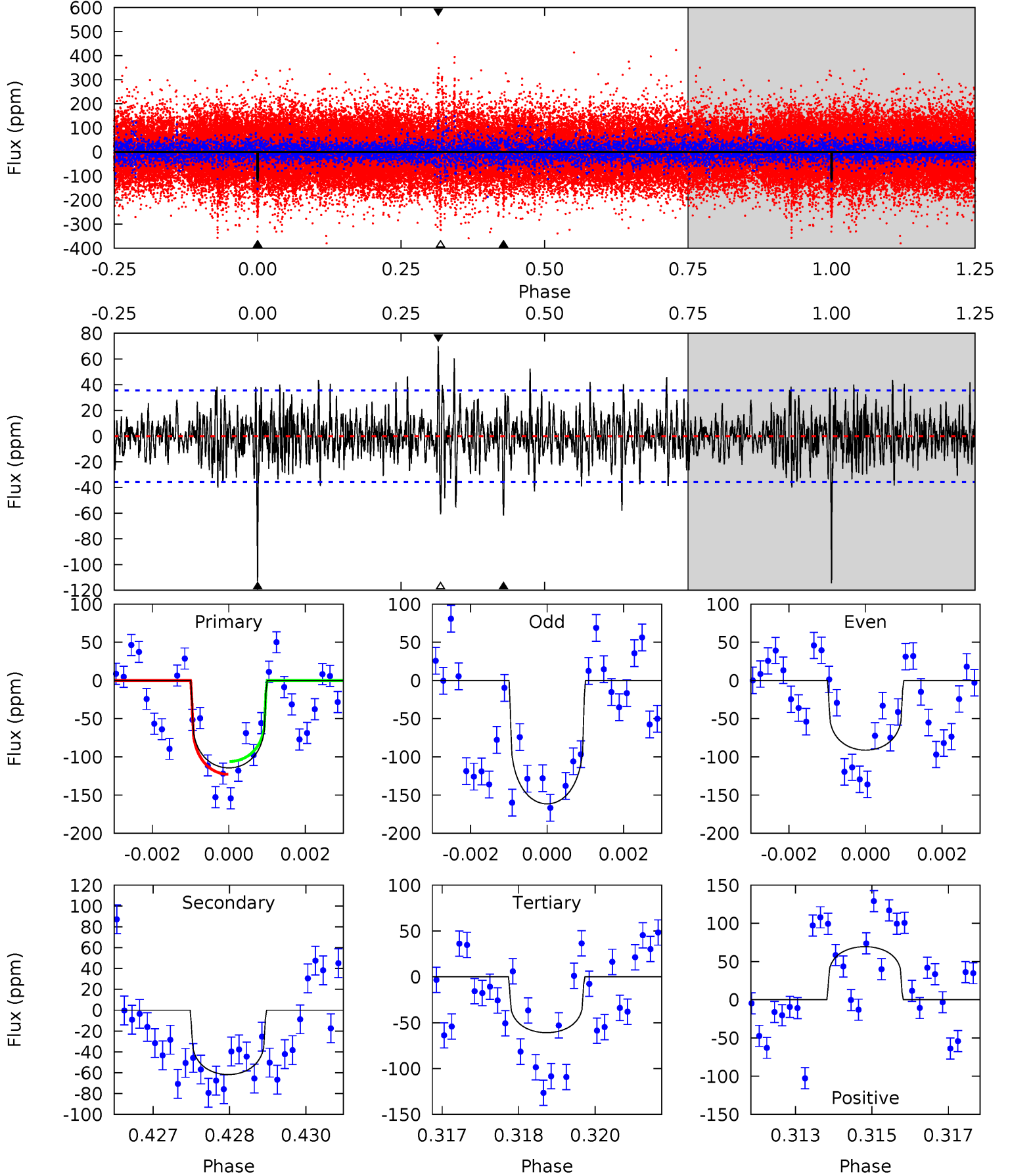
TCE 006680743-01 P=614.784520 Days $T_0=195.827967$ (BKJD)



DV Model-Shift Uniqueness Test

006680743-01, P = 614.742743 Days, E = 195.908042 Days

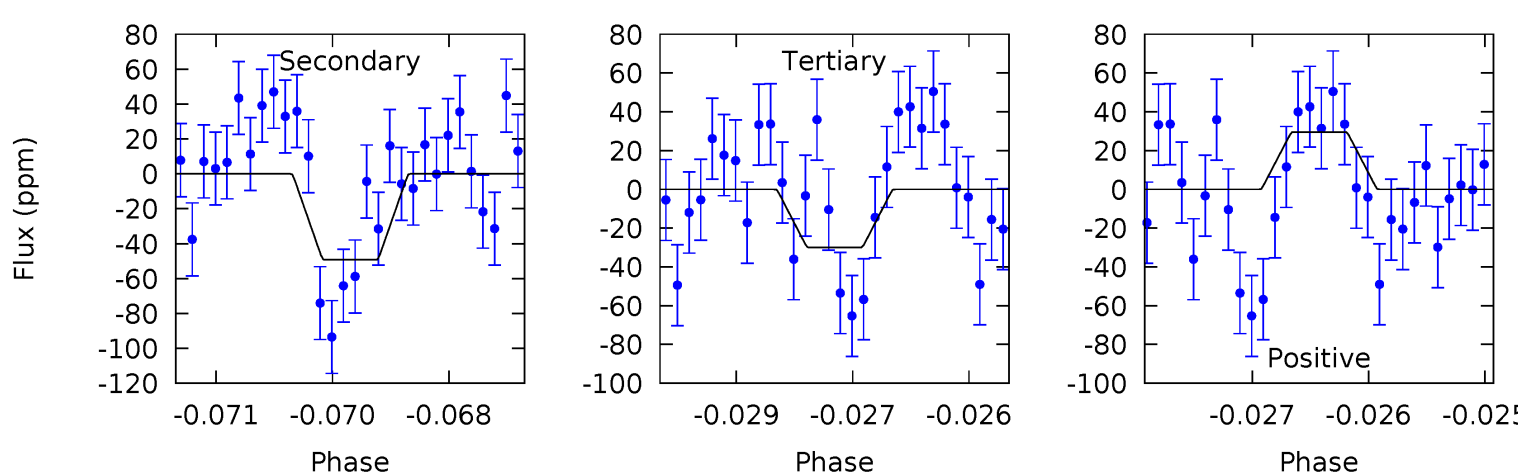
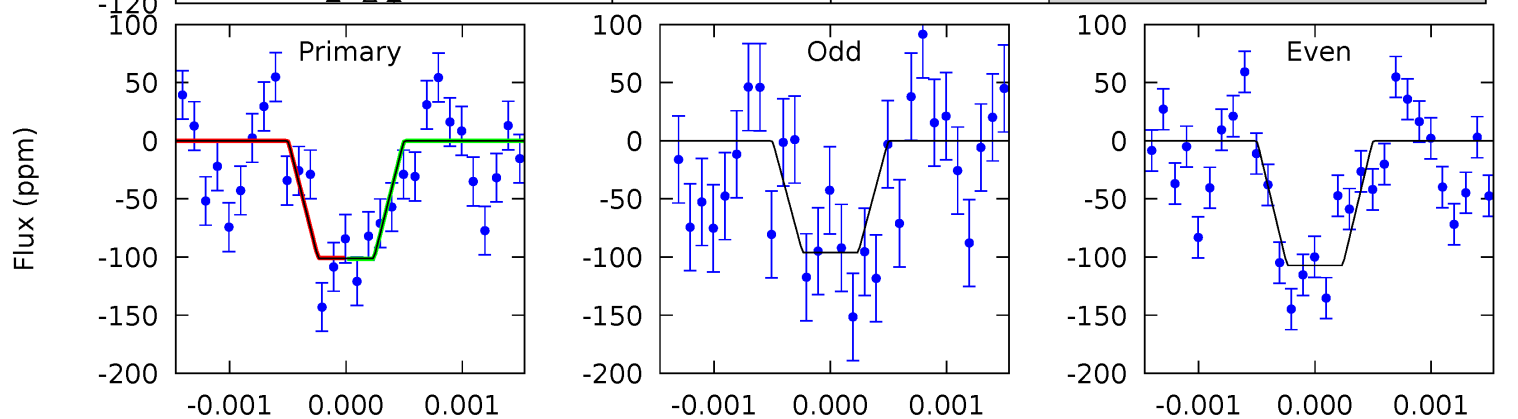
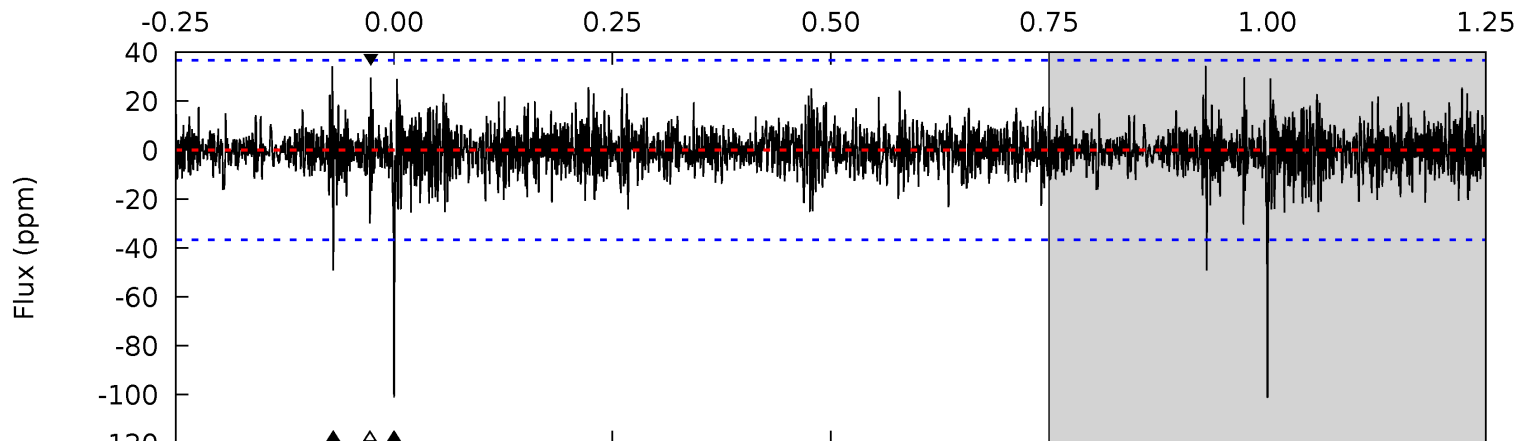
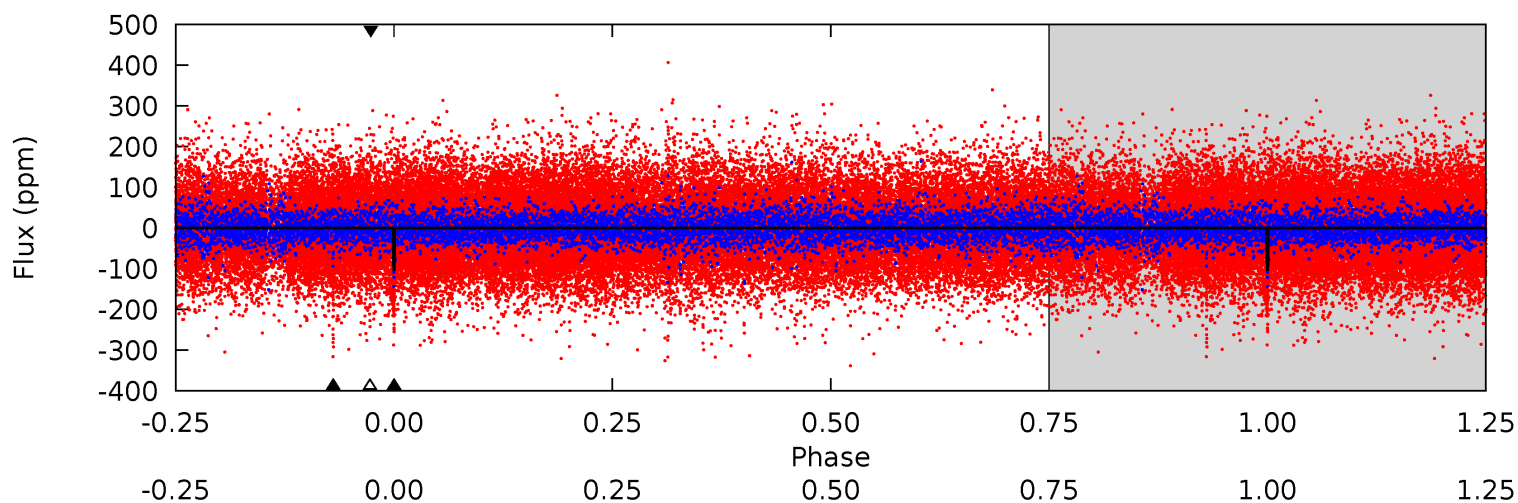
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	9.30	9.16	10.5	5.36	3.15	2.16	8.06	6.77	0.13	-1.16	4.95	0.91	0.38	1.27



Alt Model-Shift Uniqueness Test

006680743-01, P = 614.784520 Days, E = 195.827967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	7.22	4.39	4.35	5.40	3.20	1.06	10.5	10.5	2.83	2.87	0.76	1.07	0.25	0.06



Stellar Parameters For KIC 006680743

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5570^{+150}_{-150}	$4.566^{+0.048}_{-0.143}$	$-0.320^{+0.300}_{-0.300}$	$0.789^{+0.173}_{-0.074}$	$0.835^{+0.090}_{-0.082}$	$2.399^{+0.579}_{-0.954}$
	+3%/-3%	+1%/-3%	+94%/-94%	+22%/-9%	+11%/-10%	+24%/-40%
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 006680743-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-62 ± 7	$0.95^{+0.59}_{-0.52}$	268^{+15}_{-10}	4857^{+2180}_{-789}	$66286^{+259029}_{-40782}$
Alt.	-49 ± 7	$0.99^{+0.52}_{-0.54}$	267^{+13}_{-10}	4575^{+1938}_{-704}	$48159^{+188273}_{-28194}$

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 006680743-01. Kepler magnitude: 12.26. Transit SNR 7.71

There are 0 quarters with good PRF difference image offsets

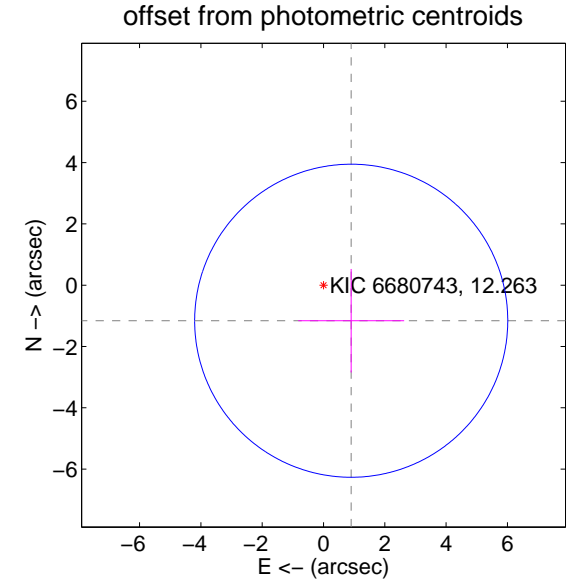
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.47 ± 1.70	0.86	-0.90 ± 1.73	-1.16 ± 1.69

There is no PRF-fit offset from OOT-fit

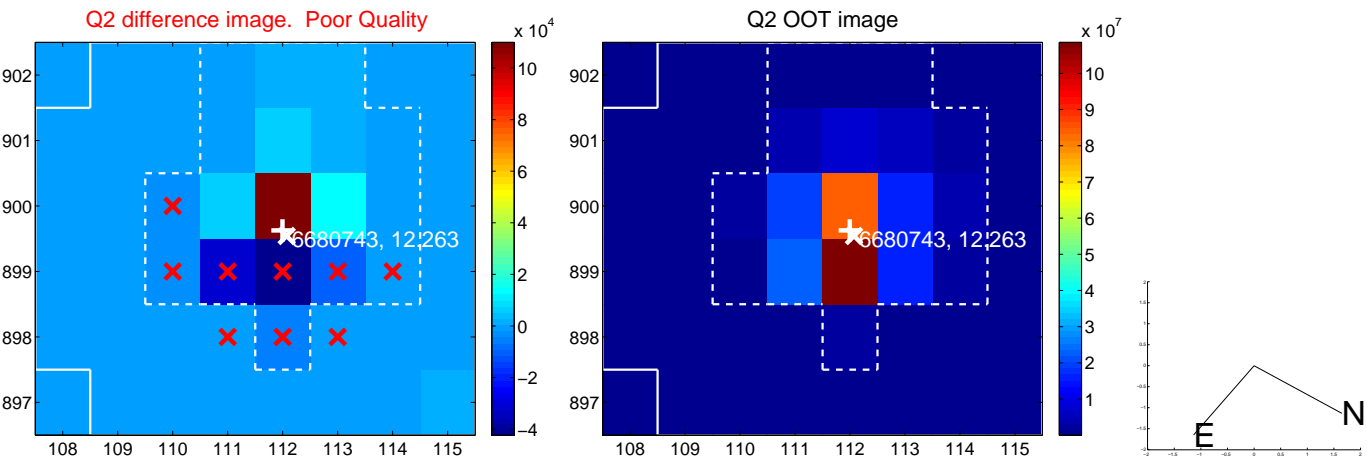


There is no PRF-fit offset from KIC



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.



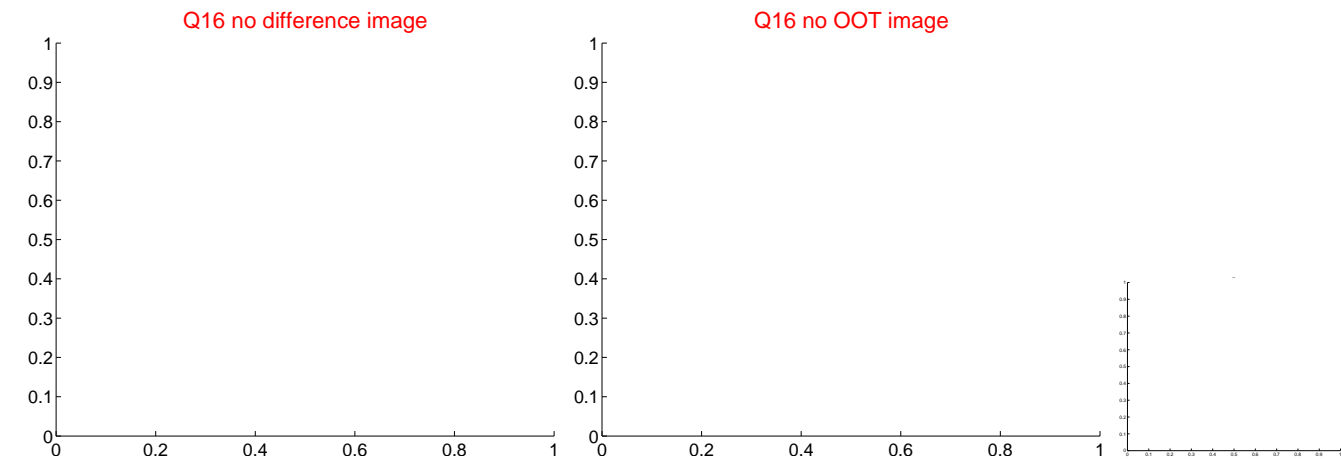
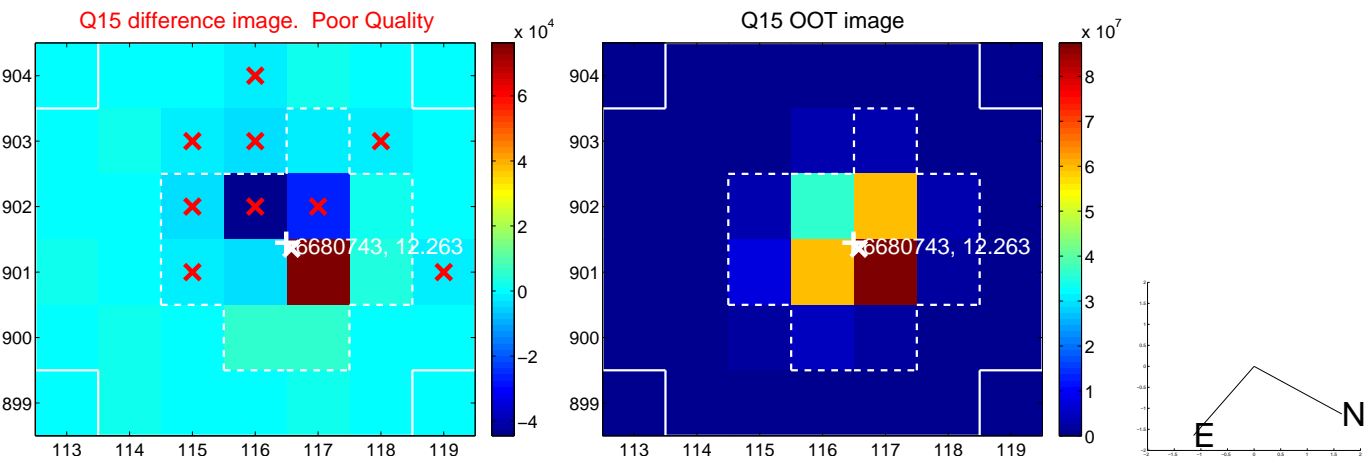
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



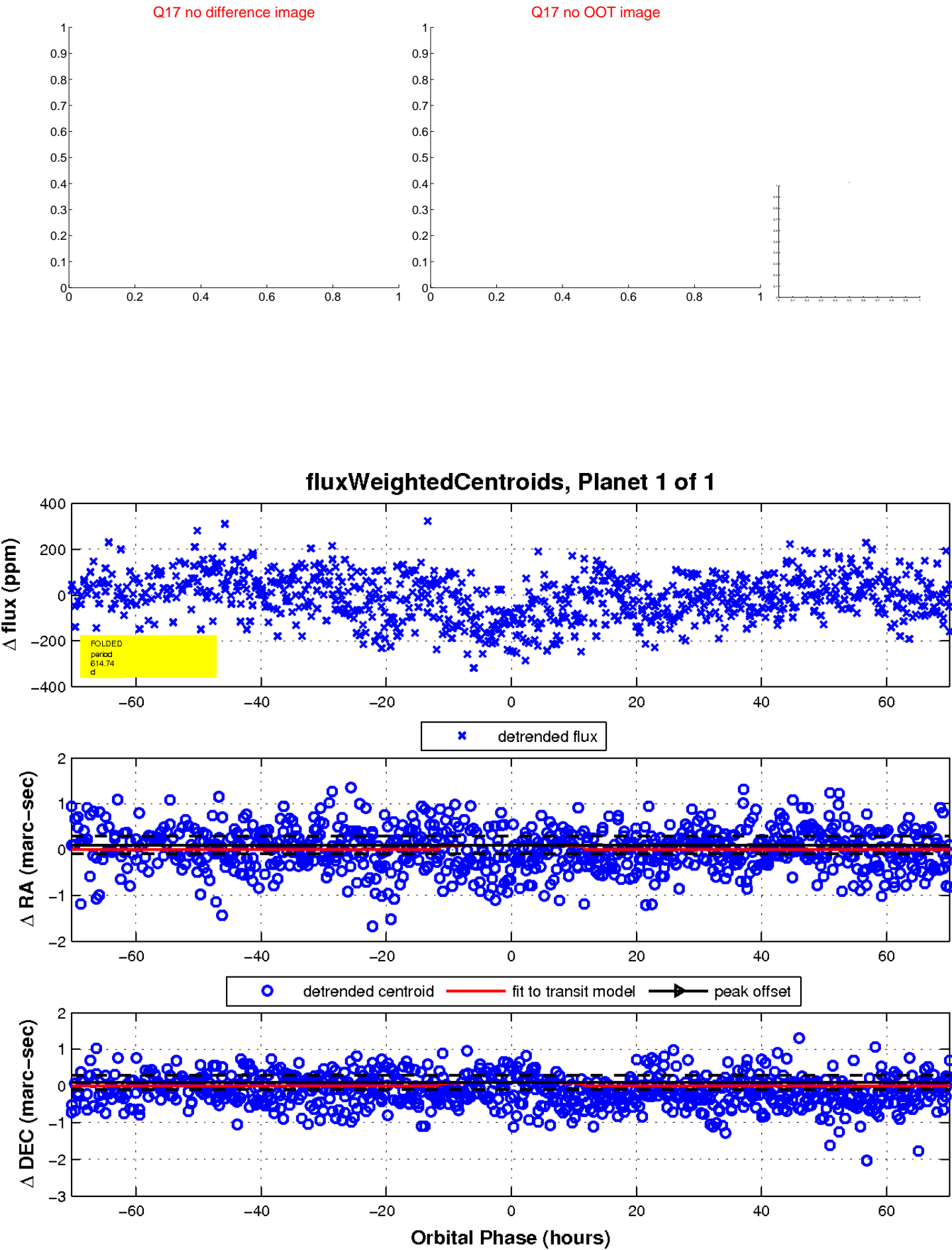
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

