

KIC 006677003

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})
006677003-01	OBS	No	432.927186	309.366522	1338.2	3.428	13.4	4.2	0.68	5246	2.90	0.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006677003-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

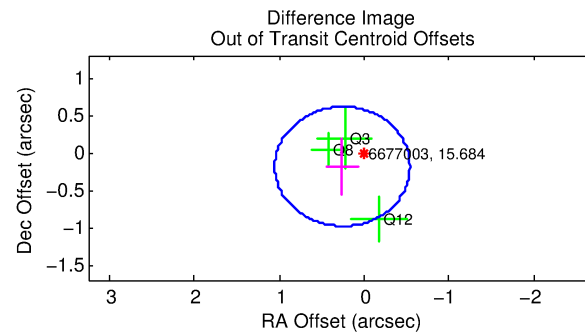
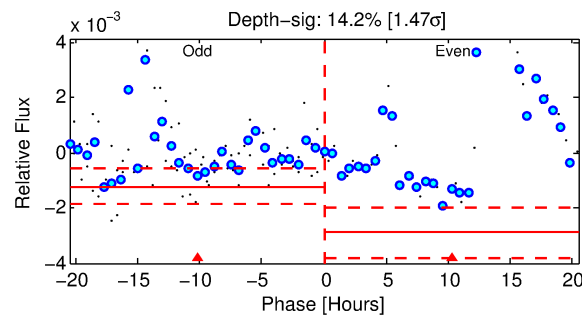
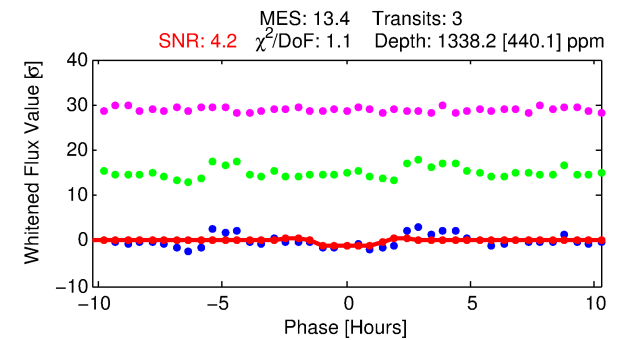
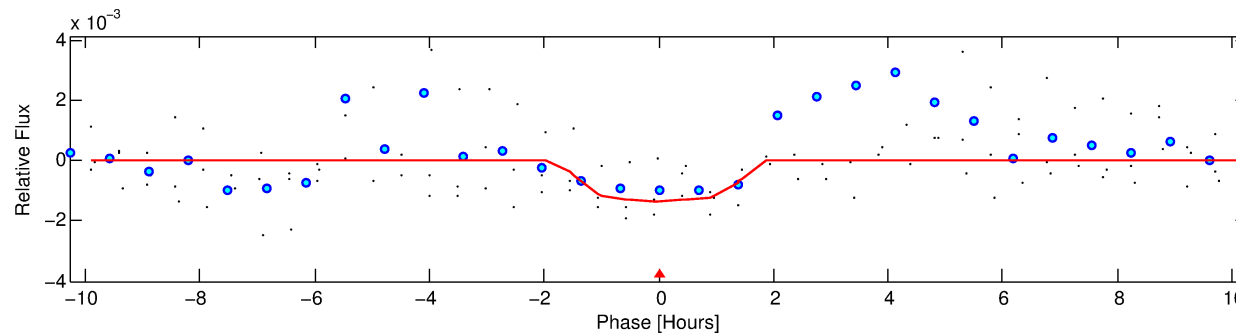
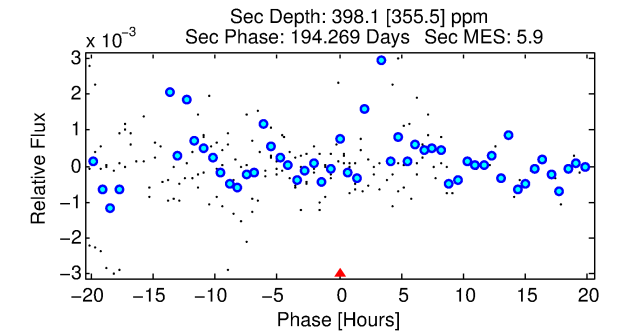
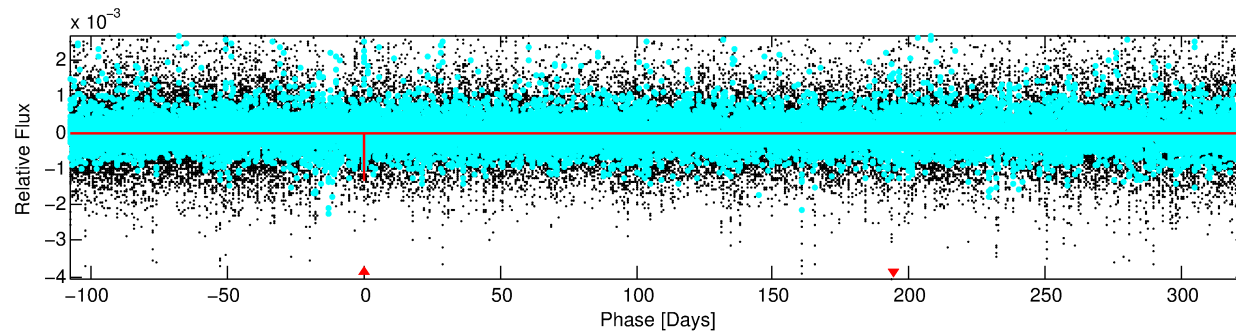
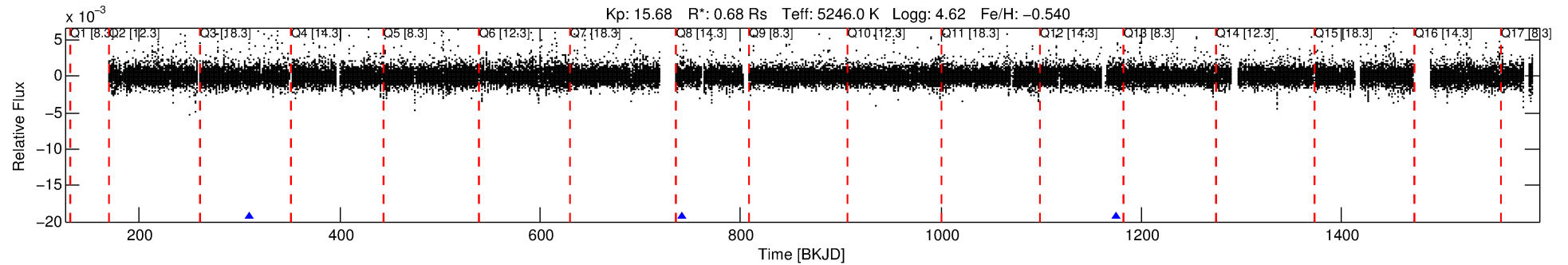
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006677003-01

No Significant Match Found

DV One-Page Summary

KIC: 6677003 Candidate: 1 of 1 Period: 432.927 d



DV Fit Results:

Period = 432.92719 [0.00947] d
Epoch = 309.3665 [0.0115] BKJD
Rp/R* = 0.0389 [0.0453]
a/R* = 558.38 [2573.69]
b = 0.86 [1.40]
Seff = 0.32 [0.06]
Teq = 191 [9] K
Rp = 2.90 [3.40] Re
a = 1.0021 [0.0991] AU
Ag = 26173.00 [65365.03] [0.40 σ]
Teffp = 3757 [2345] K [1.52 σ]

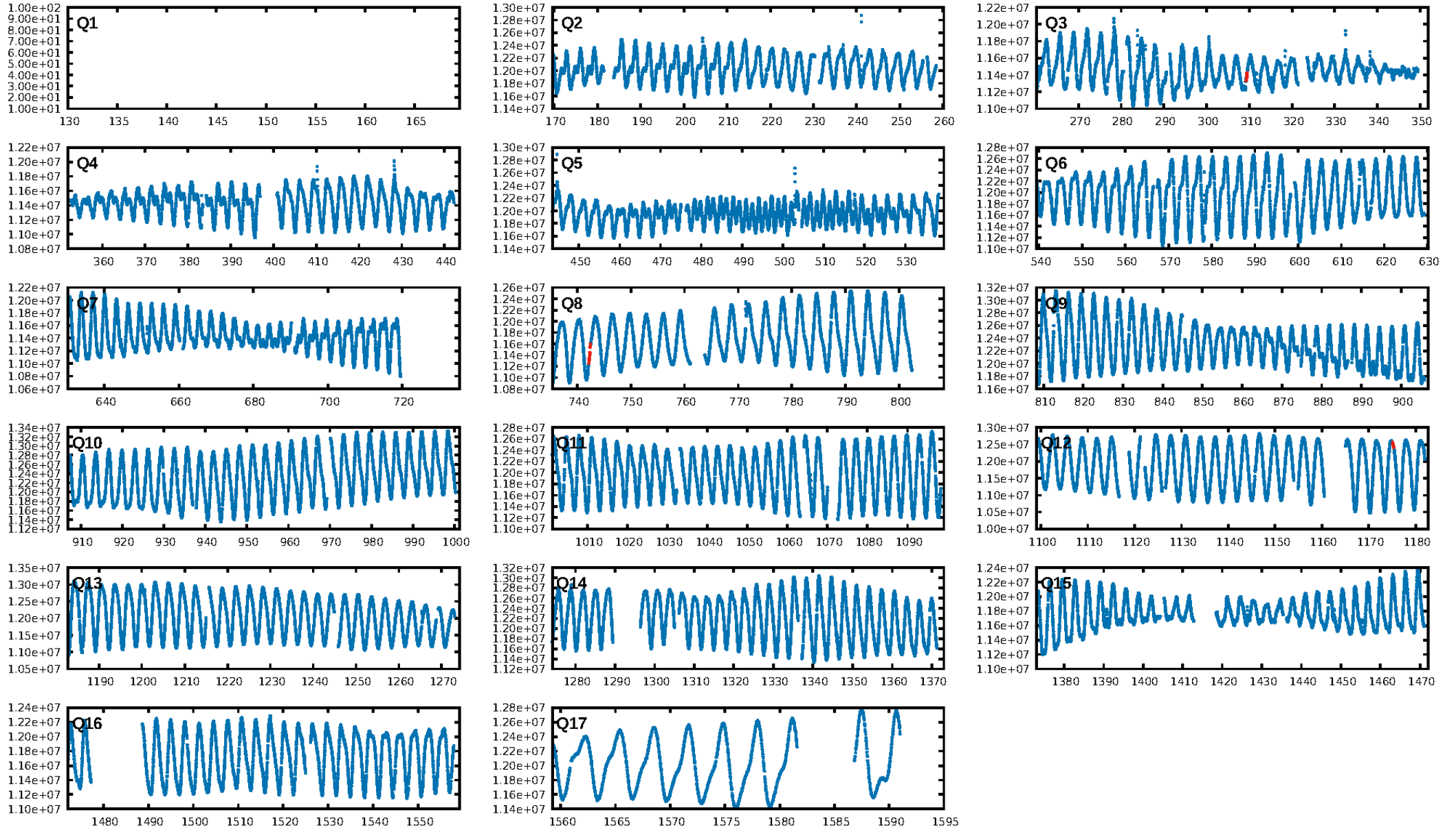
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.4%
ModelChiSquareGof-sig: 98.4%
Bootstrap-pfa: 3.39e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3168
Centroid-sig: 53.5%
Centroid-so: 1.177 arcsec [0.61 σ]
OotOffset-rm: 0.312 arcsec [1.18 σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-rm: 0.251 arcsec [0.71 σ]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

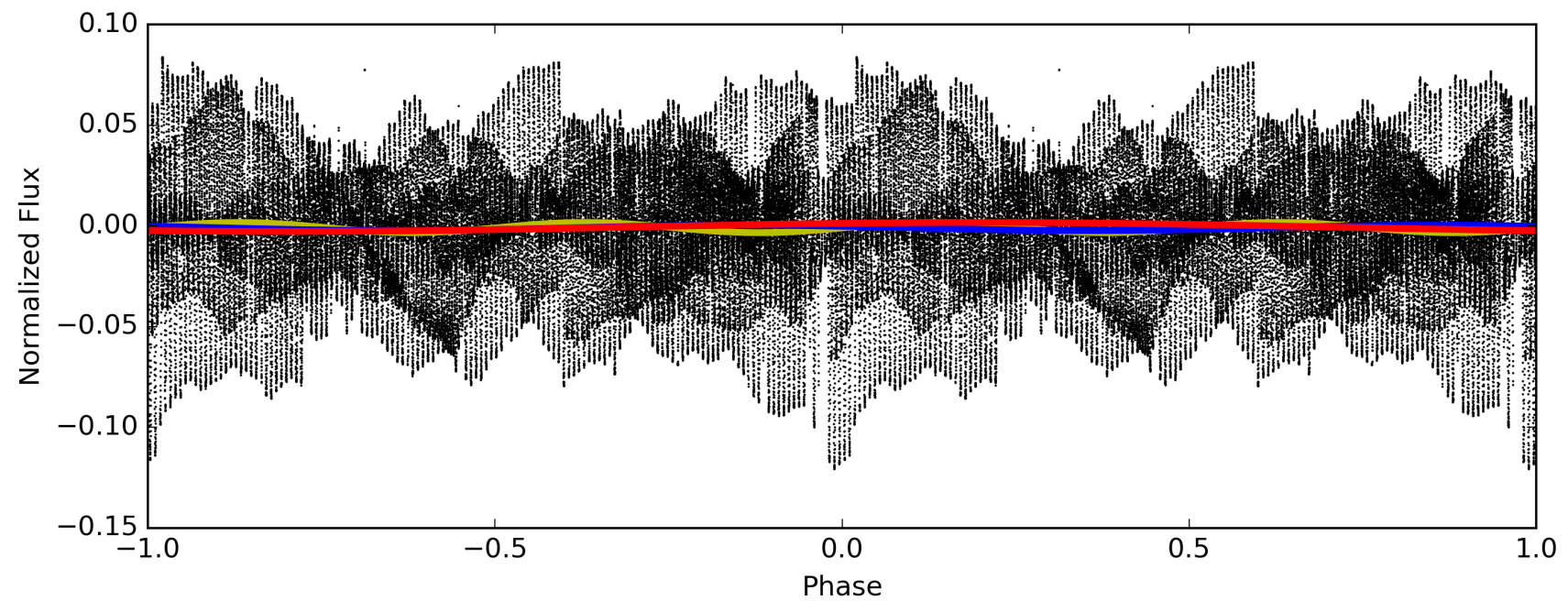
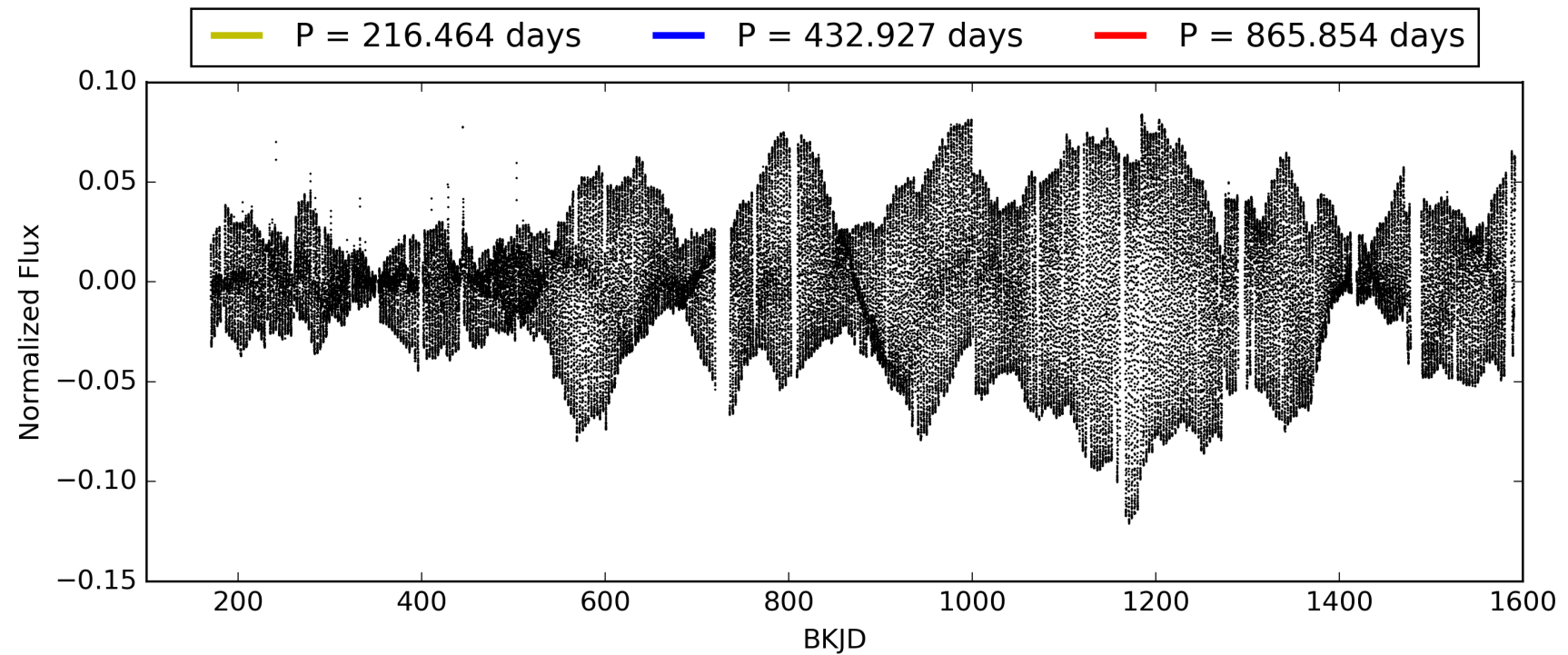
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:16:24 Z

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

TCE 006677003-01, PDC Light Curves

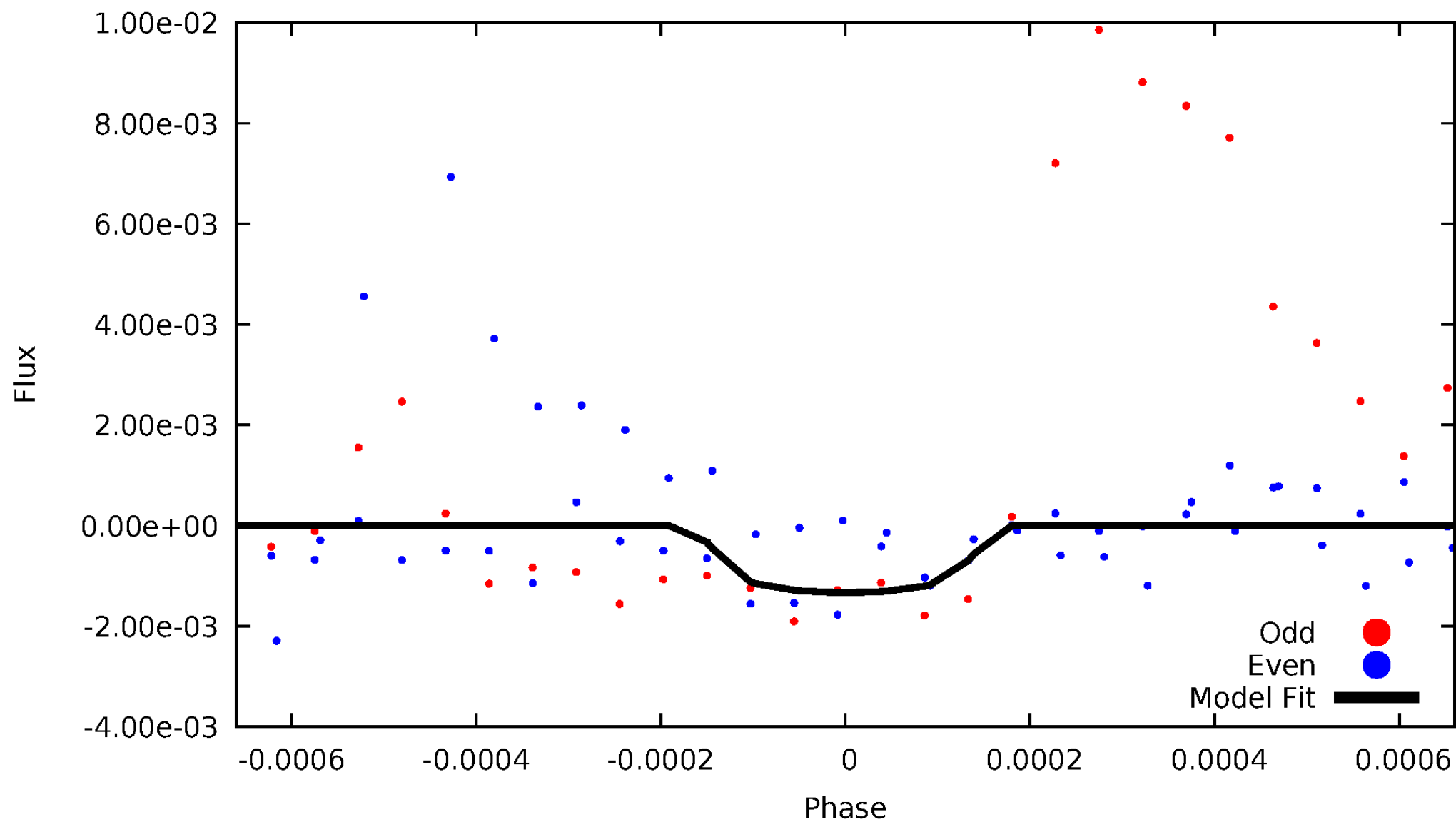


TCE 006677003-01



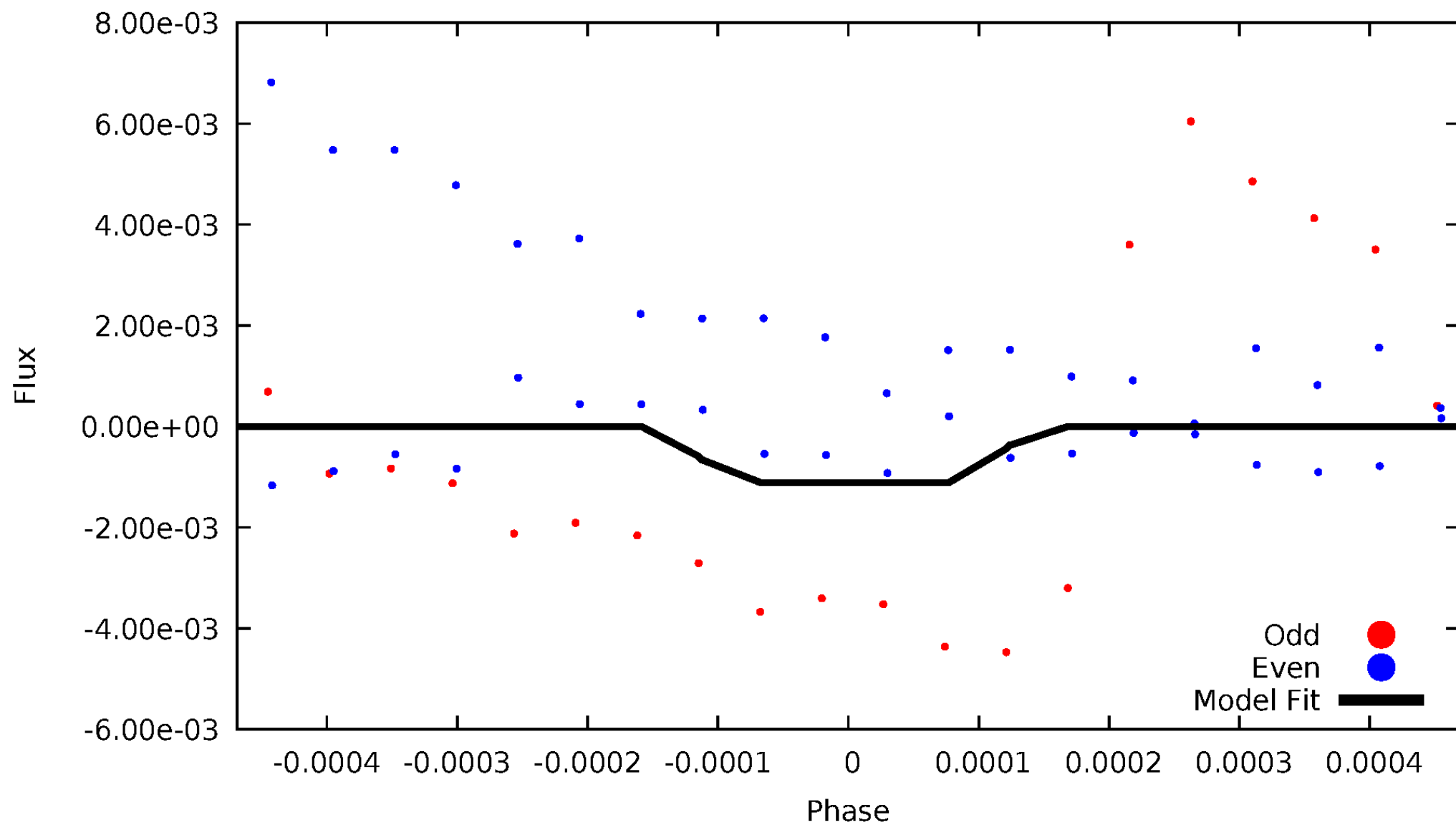
DV Odd/Even

TCE 006677003-01



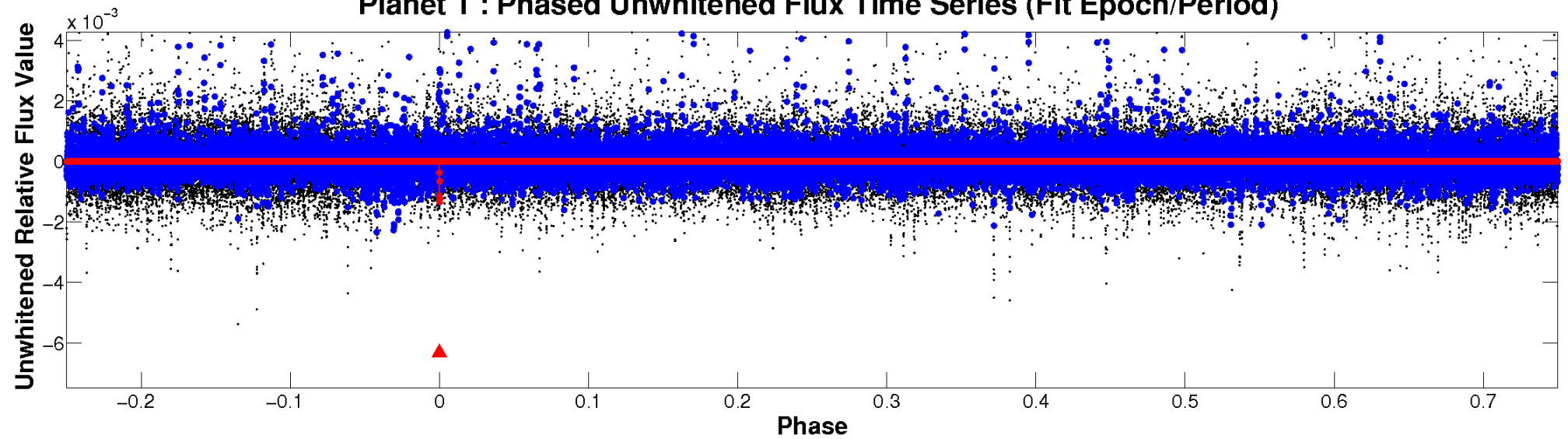
ALT Odd/Even

TCE 006677003-01

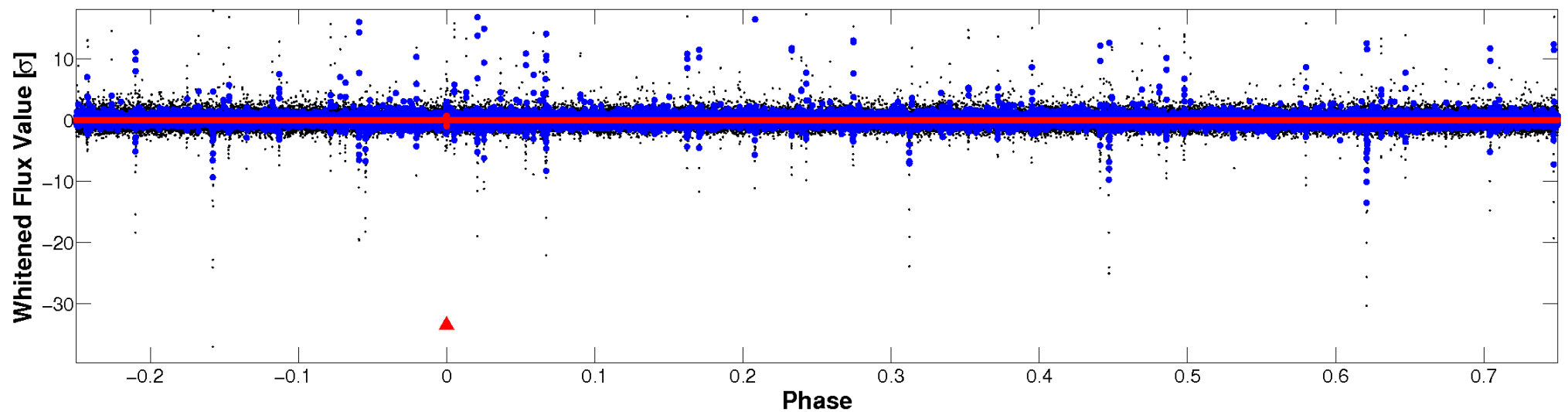


Non-Whitened Vs. Whitened Light Curve

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

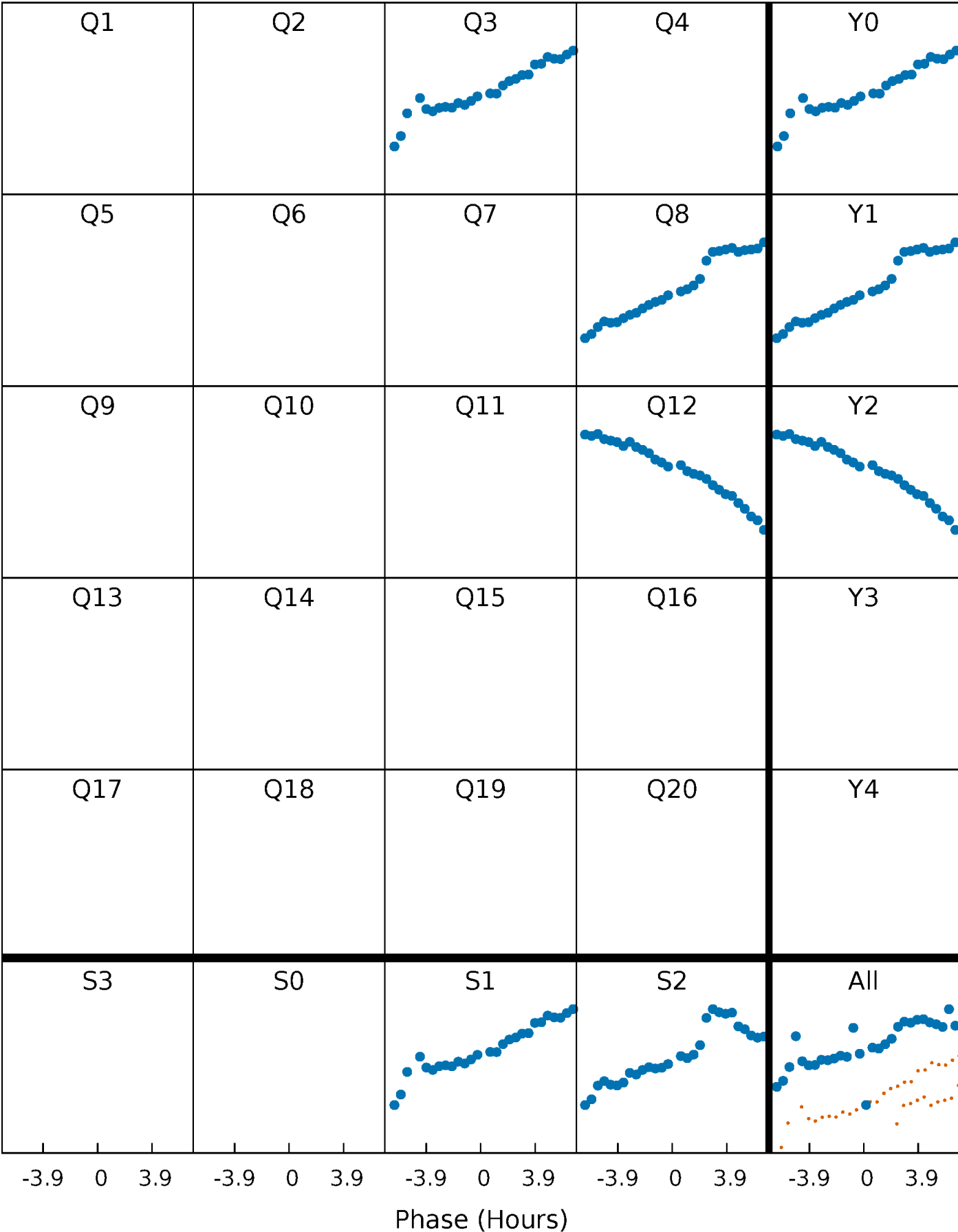


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



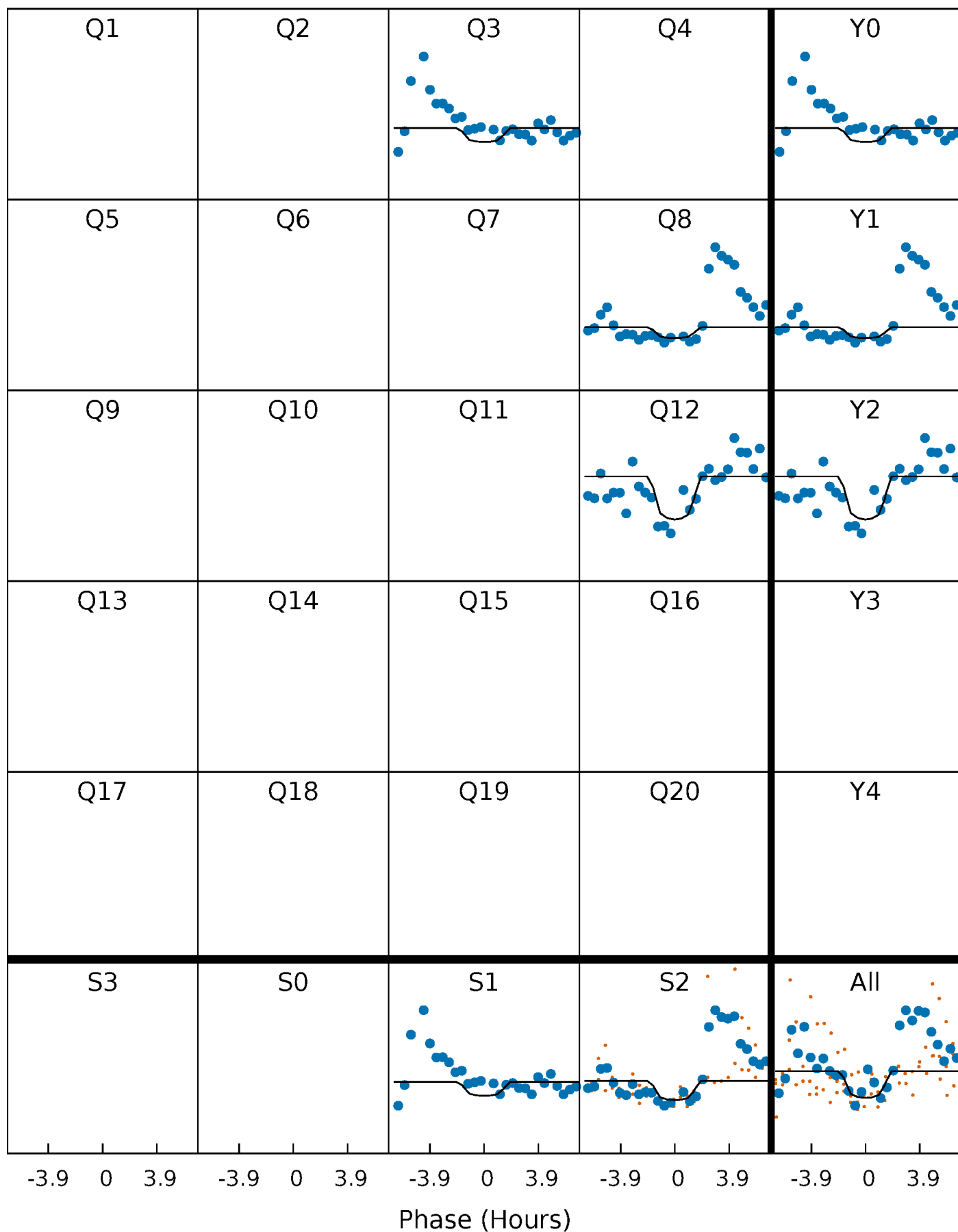
PDC Quarter-Phased Transit Curves

TCE 006677003-01 P=432.927186 Days T₀=309.366522 (BKJD)



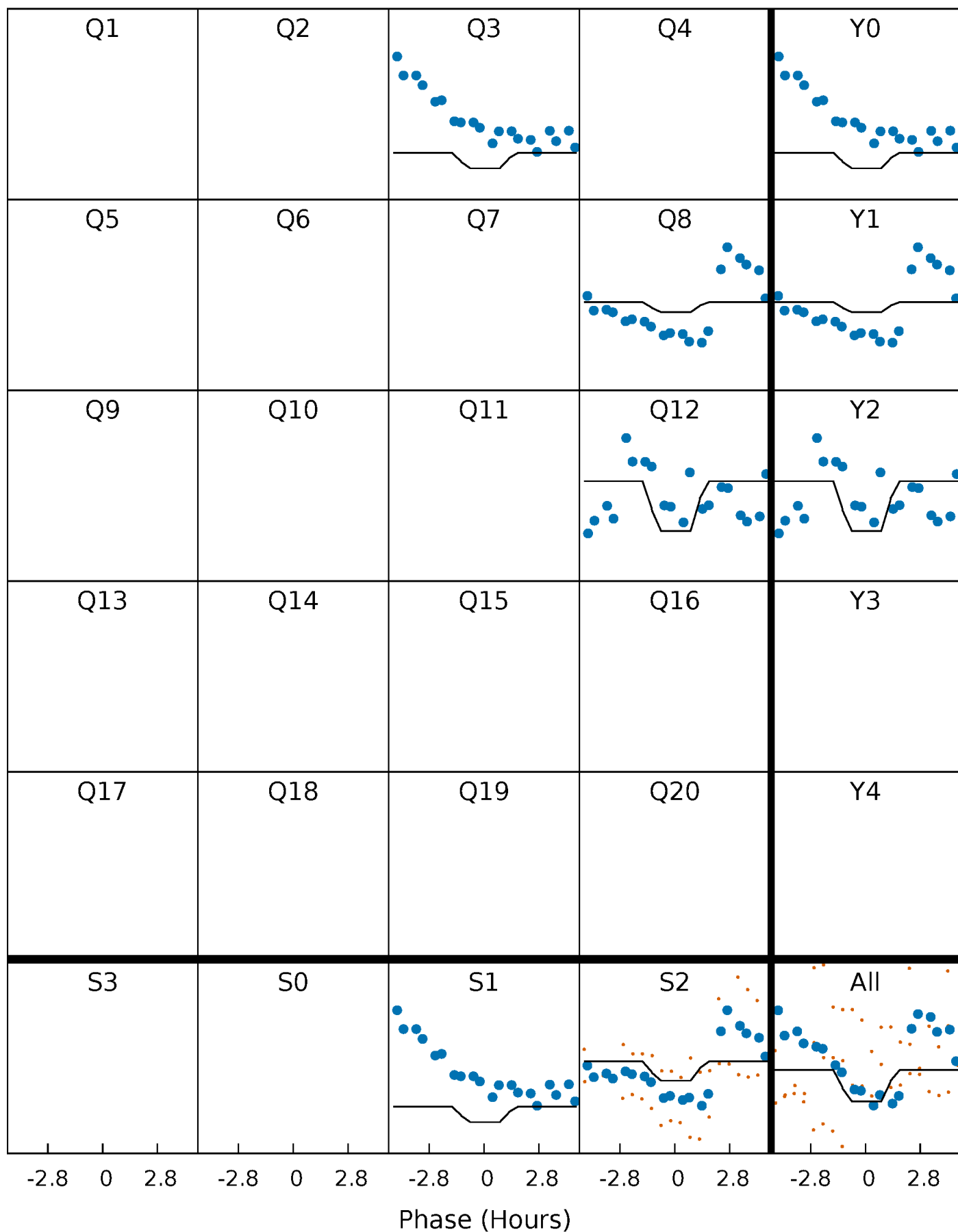
DV Quarter-Phased Transit Curves

TCE 006677003-01 P=432.927186 Days $T_0=309.366522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

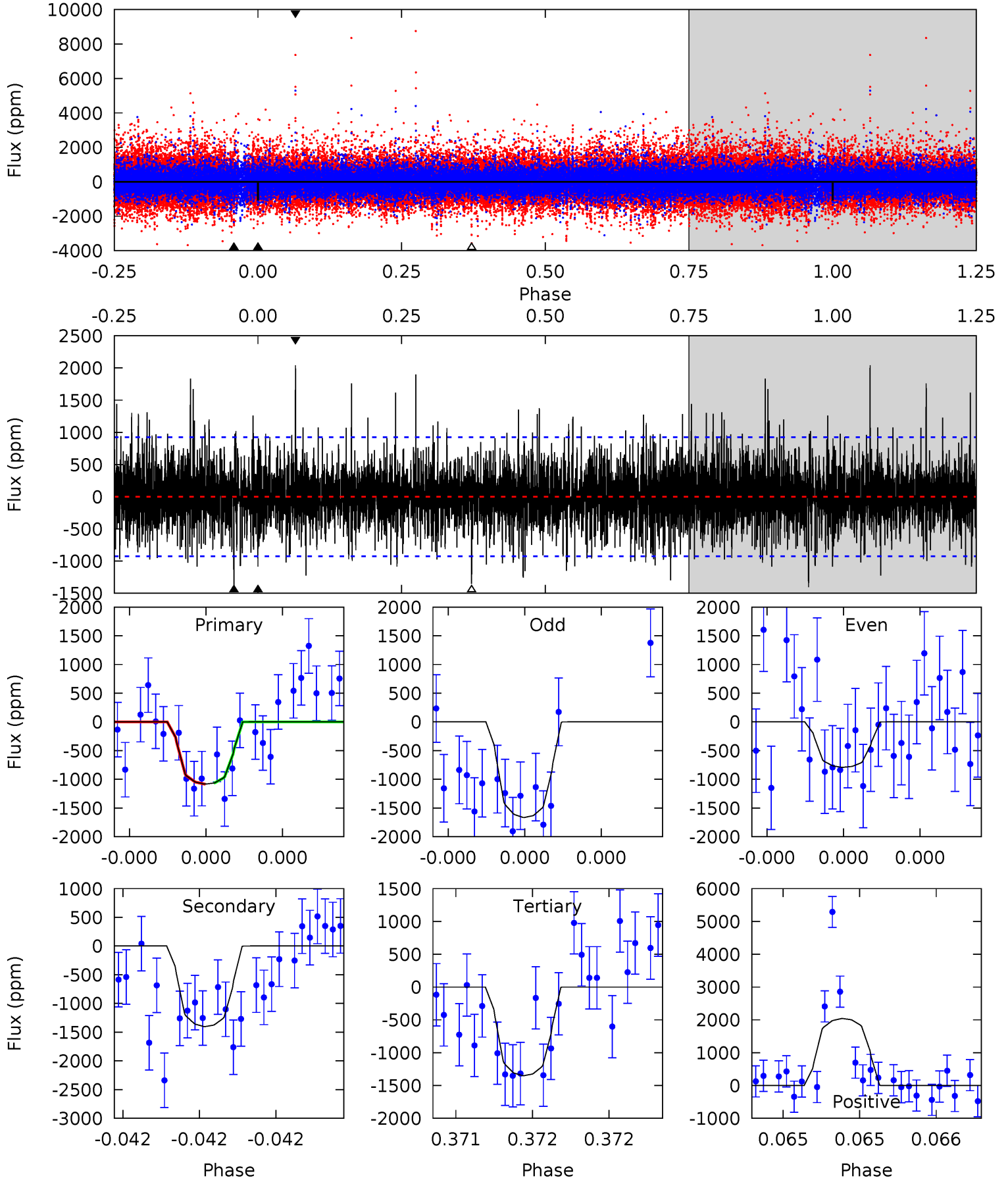
TCE 006677003-01 P=432.905402 Days $T_0=309.393461$ (BKJD)



DV Model-Shift Uniqueness Test

006677003-01, P = 432.927186 Days, E = 309.366522 Days

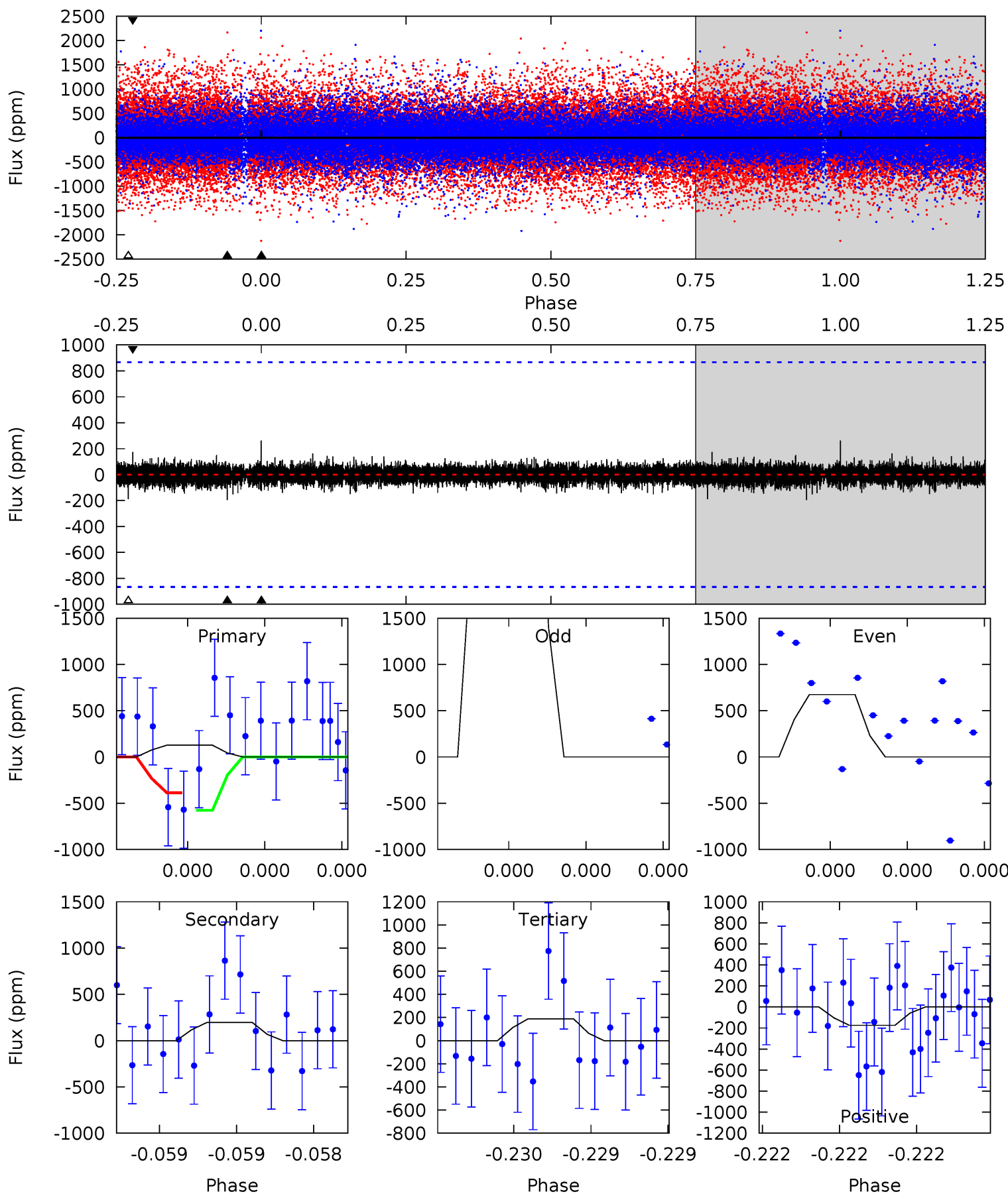
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.59	8.54	8.22	12.4	5.62	3.56	2.12	-1.63	-5.83	0.32	-3.88	2.09	0.80	0.59	0.05



Alt Model-Shift Uniqueness Test

006677003-01, P = 432.905402 Days, E = 309.393461 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.84	1.28	1.24	1.15	5.70	3.67	0.23	-0.40	-0.31	0.05	0.14	14.7	2.22	0.57	0.60



Stellar Parameters For KIC 006677003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5246^{+157}_{-157}	$4.624^{+0.044}_{-0.066}$	$-0.540^{+0.350}_{-0.300}$	$0.683^{+0.087}_{-0.054}$	$0.717^{+0.076}_{-0.057}$	$3.164^{+0.647}_{-0.772}$
	+3%/-3%	+1%/-1%	+65%/-56%	+13%/-8%	+11%/-8%	+20%/-24%
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 006677003-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1403 ± 164	$3.94^{+2.98}_{-2.41}$	268^{+11}_{-9}	4583^{+2509}_{-886}	$49847^{+275442}_{-33871}$
Alt.	-195 ± 152	$3.62^{+2.94}_{-2.17}$	267^{+11}_{-9}	3225^{+1322}_{-818}	6641^{+40850}_{-5945}

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 $A_{obs} \gg 1.0$

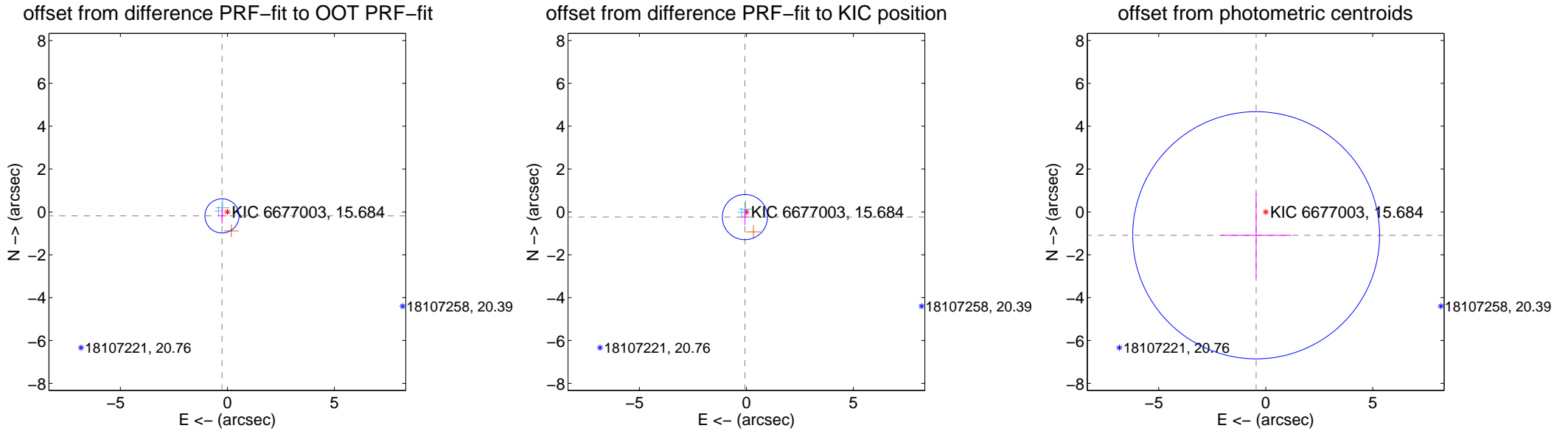
DV Centroid Data

Supplemental centroid analysis for 006677003-01. Kepler magnitude: 15.68. Transit SNR 4.21

There are 2 quarters with good PRF difference image offsets

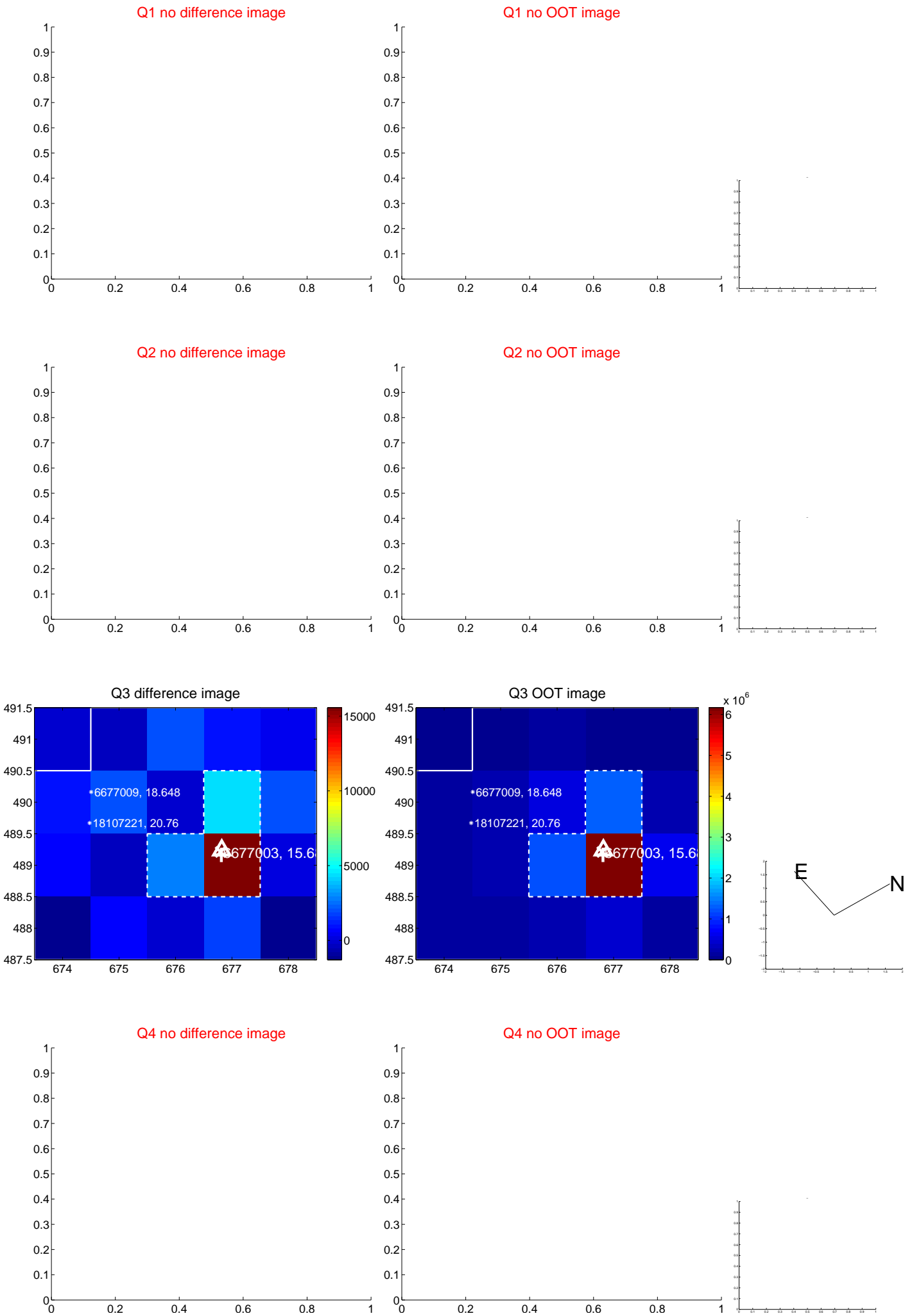
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.312 ± 0.266	1.18	0.252 ± 0.189	-0.185 ± 0.368
PRF-fit source offset from KIC position	0.251 ± 0.352	0.71	0.071 ± 0.176	-0.240 ± 0.363
photometric centroid source offset	1.18 ± 1.92	0.61	0.45 ± 1.64	-1.09 ± 1.96

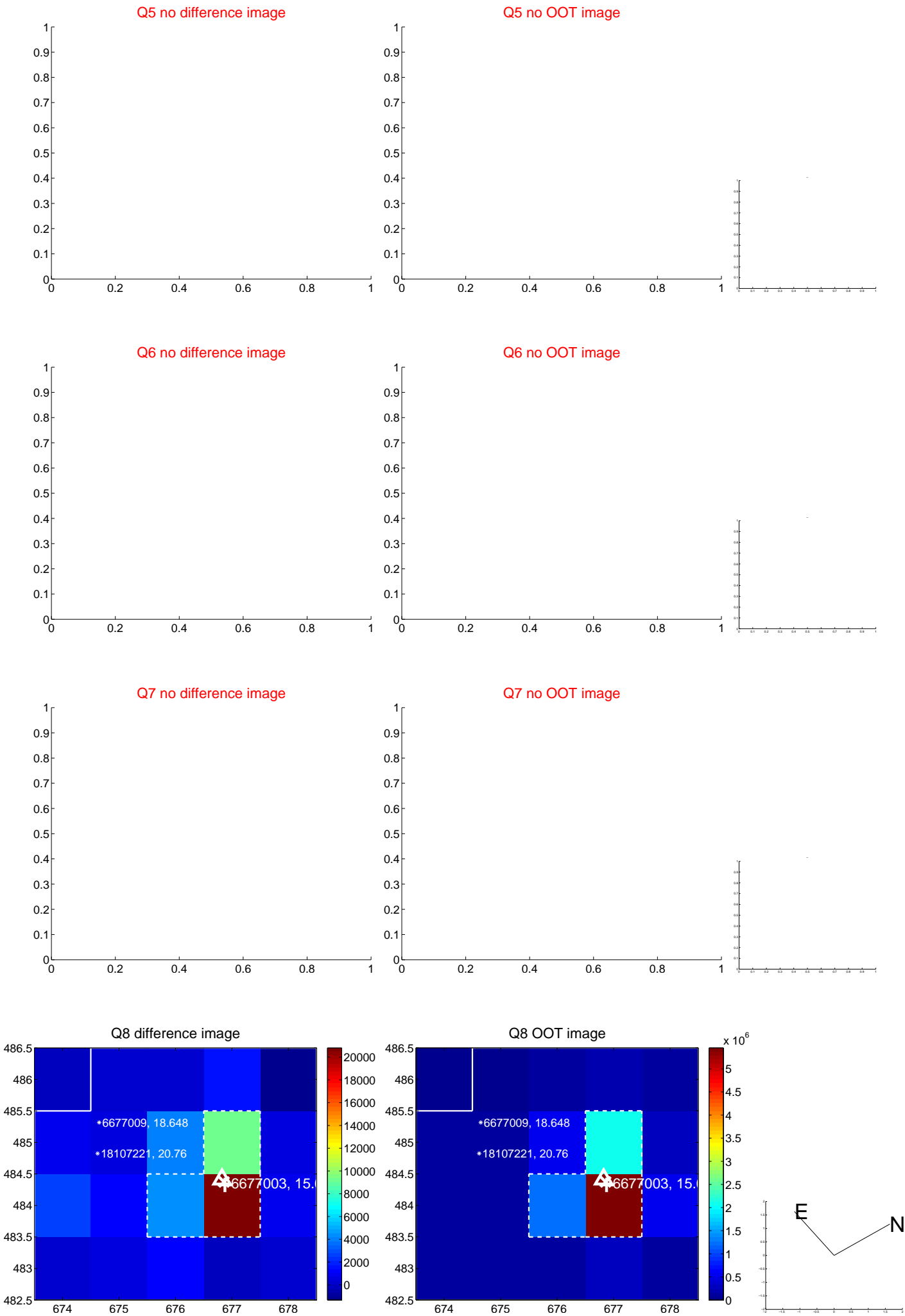


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

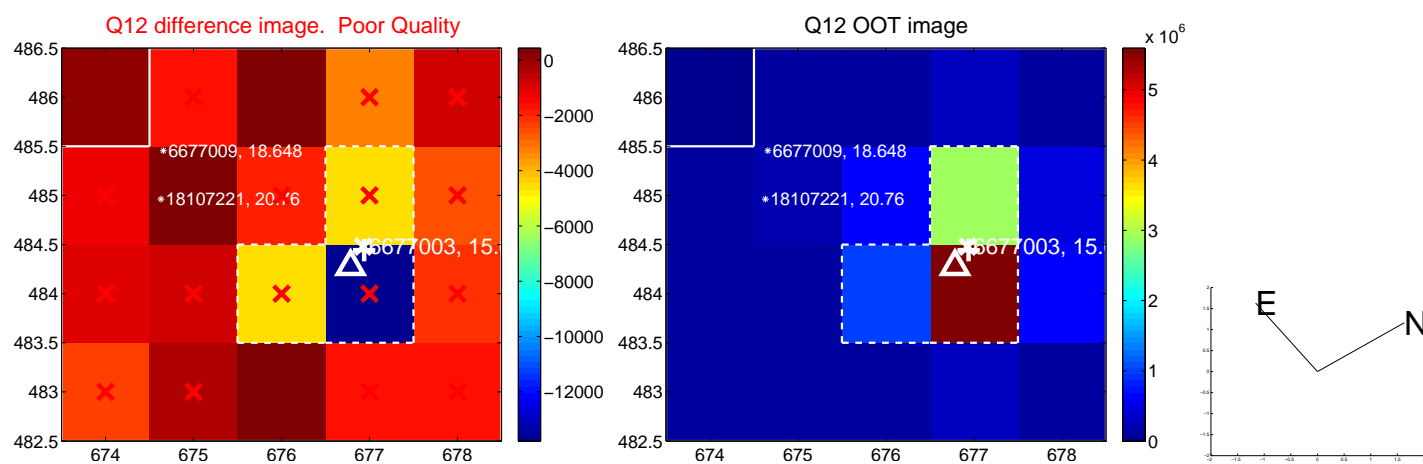
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



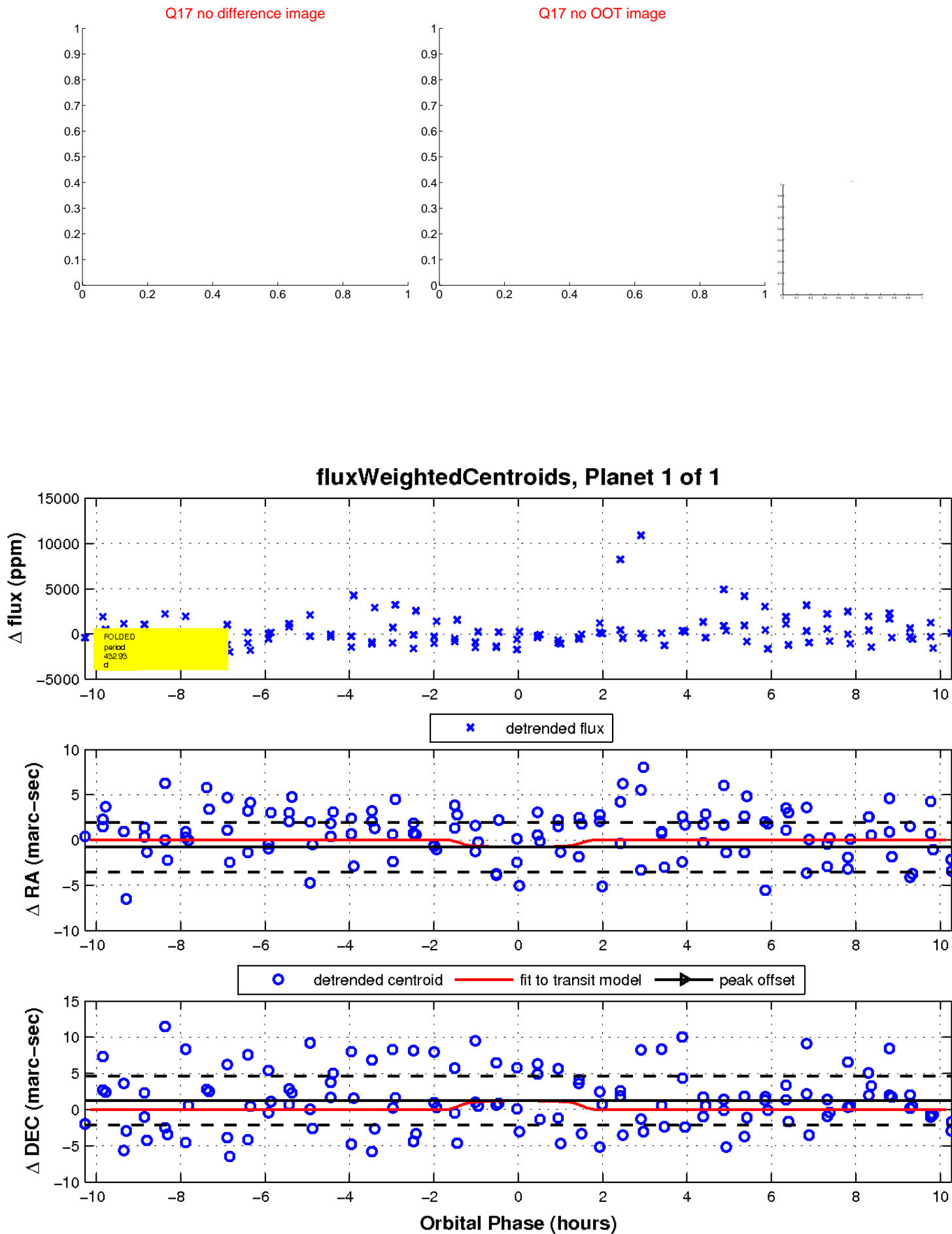
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

