

KIC 007690521

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})
007690521-01	OBS	8142.01	380.304288	355.642464	775.4	12.511	7.3	9.1	0.82	5518	2.32	0.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007690521-01	OBS	FP	0.25	1	0	0	0	INDIV_TRANS_MARSHALL—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.

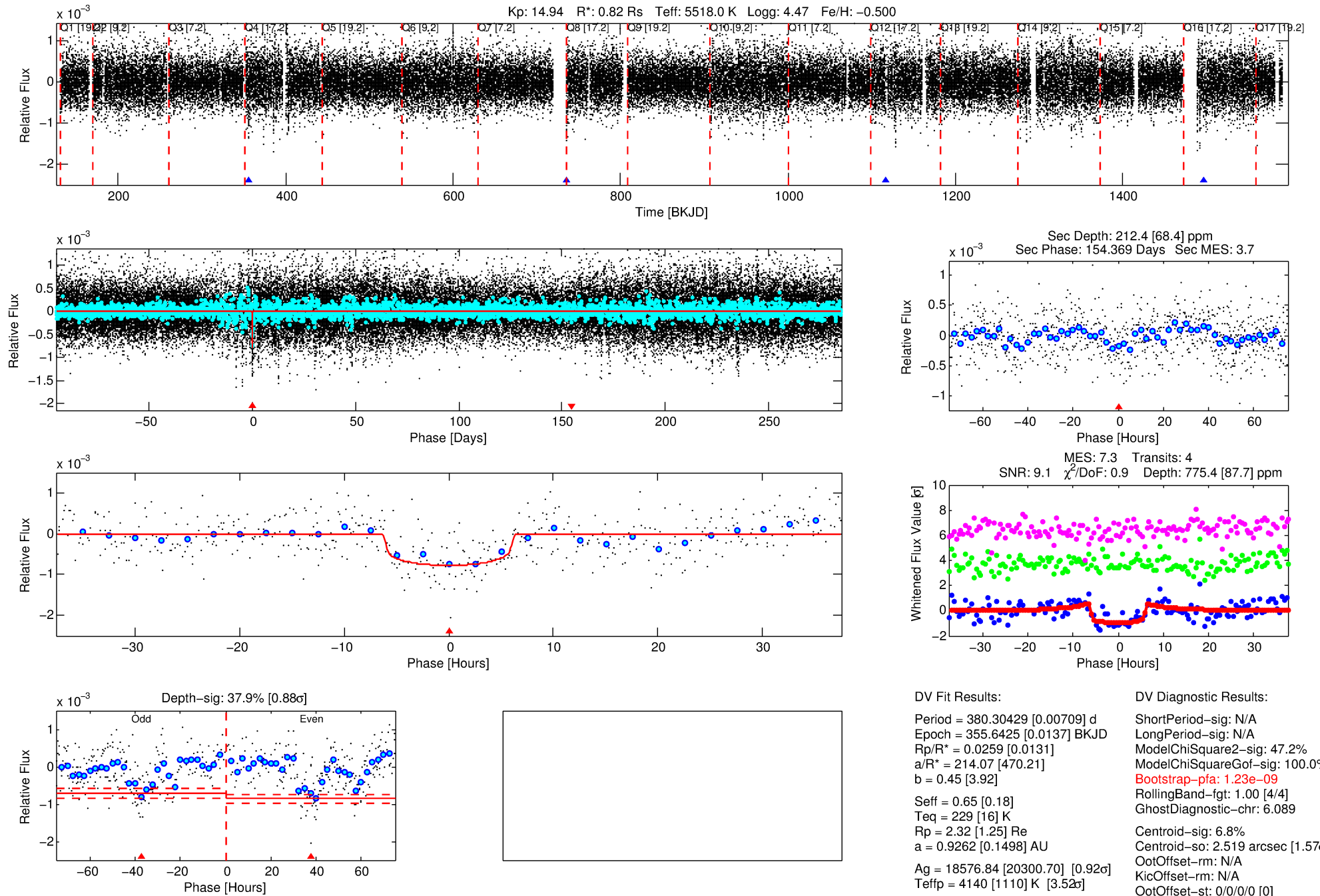
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007690521-01

No Significant Match Found

DV One-Page Summary

KIC: 7690521 Candidate: 1 of 1 Period: 380.304 d



DV Fit Results:

Period = 380.30429 [0.00709] d
Epoch = 355.6425 [0.0137] BKJD
Rp/R* = 0.0259 [0.0131]
a/R* = 214.07 [470.21]
b = 0.45 [3.92]
Seff = 0.65 [0.18]
Teq = 229 [16] K
Rp = 2.32 [1.25] Re
a = 0.9262 [0.1498] AU
Ag = 18576.84 [20300.70] [0.92σ]
Teffp = 4140 [1110] K [3.52σ]

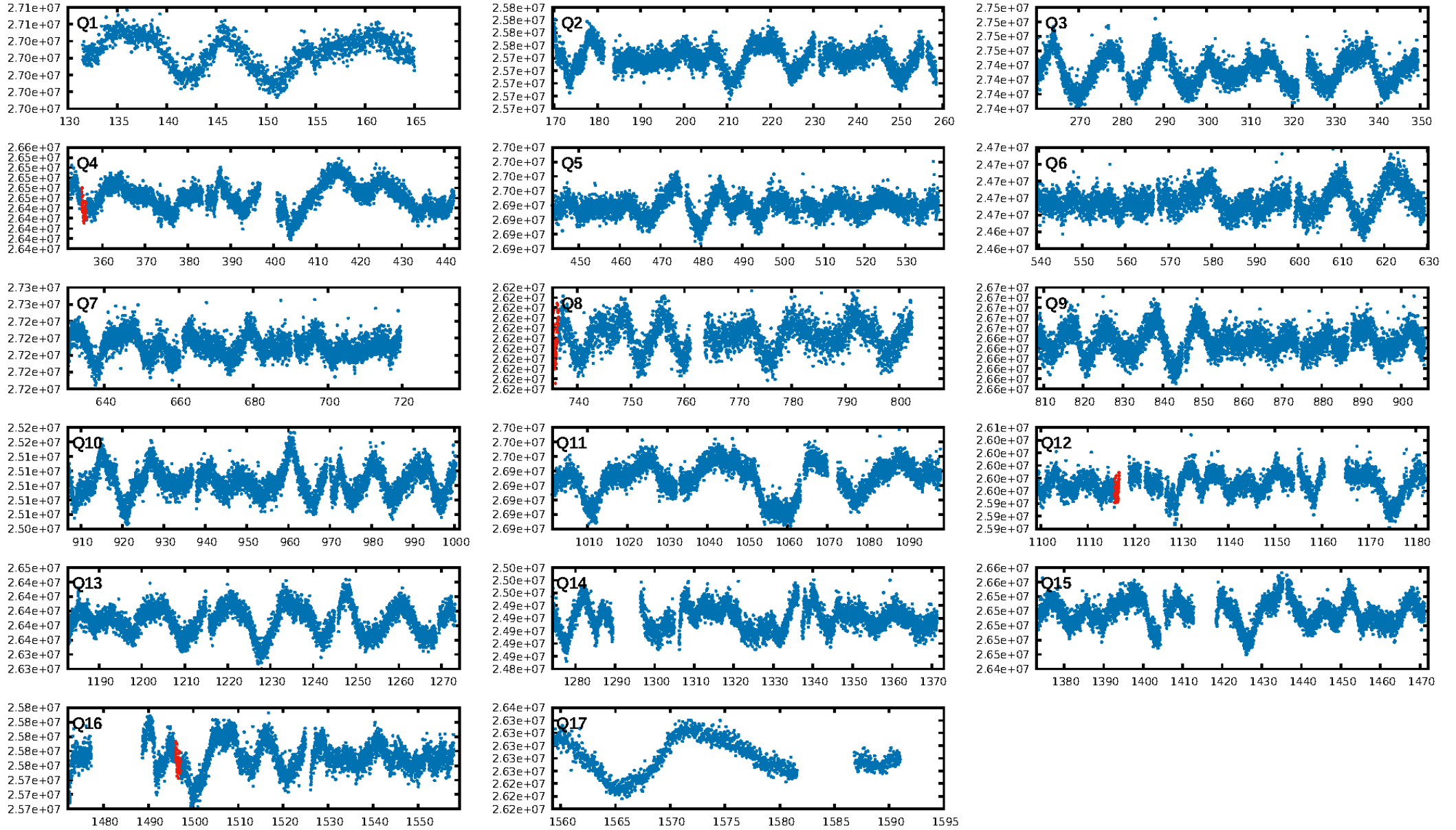
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 47.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.23e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 6.089
Centroid-sig: 6.8%
Centroid-so: 2.519 arcsec [1.57σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

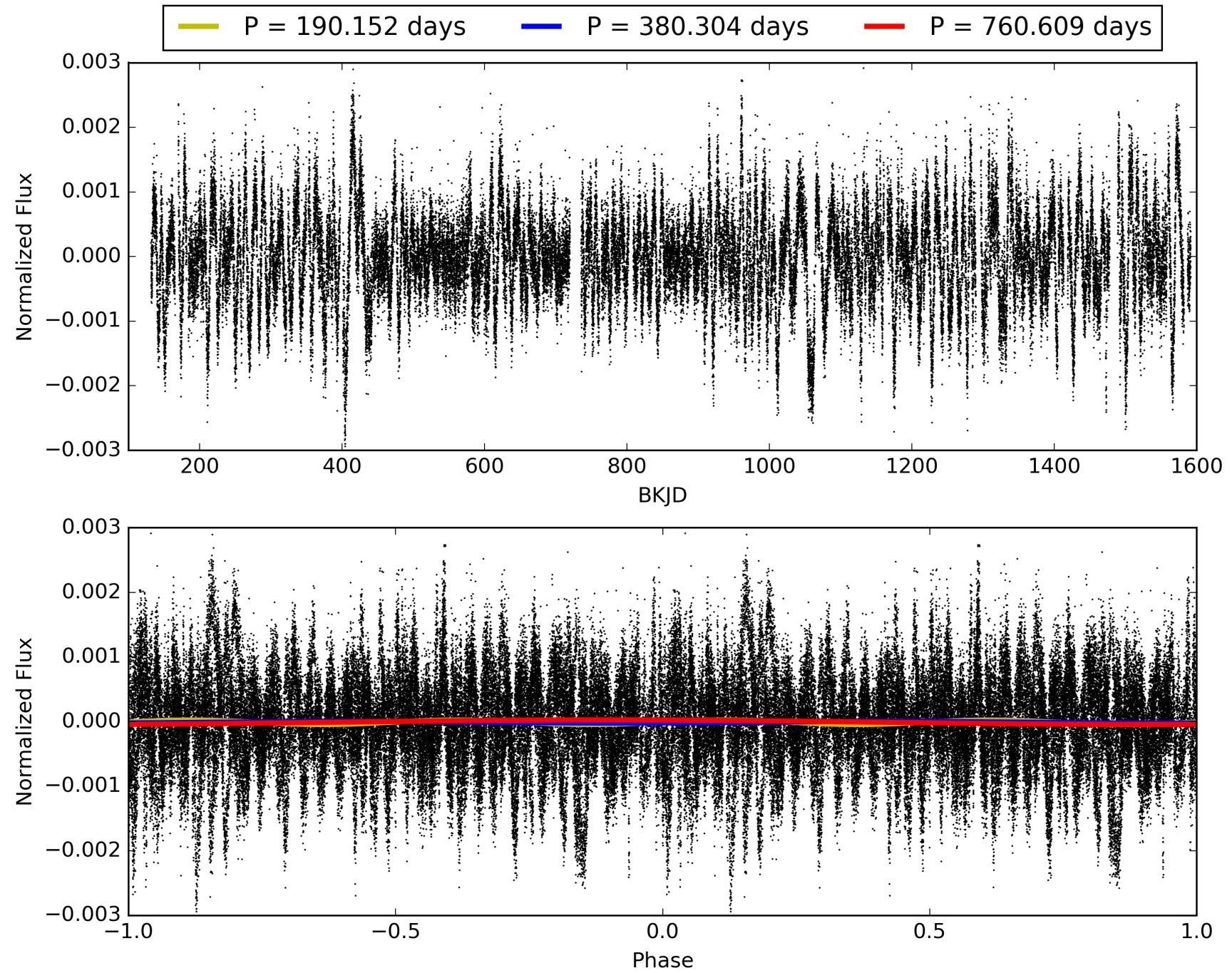
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:07:55 Z

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

TCE 007690521-01, PDC Light Curves

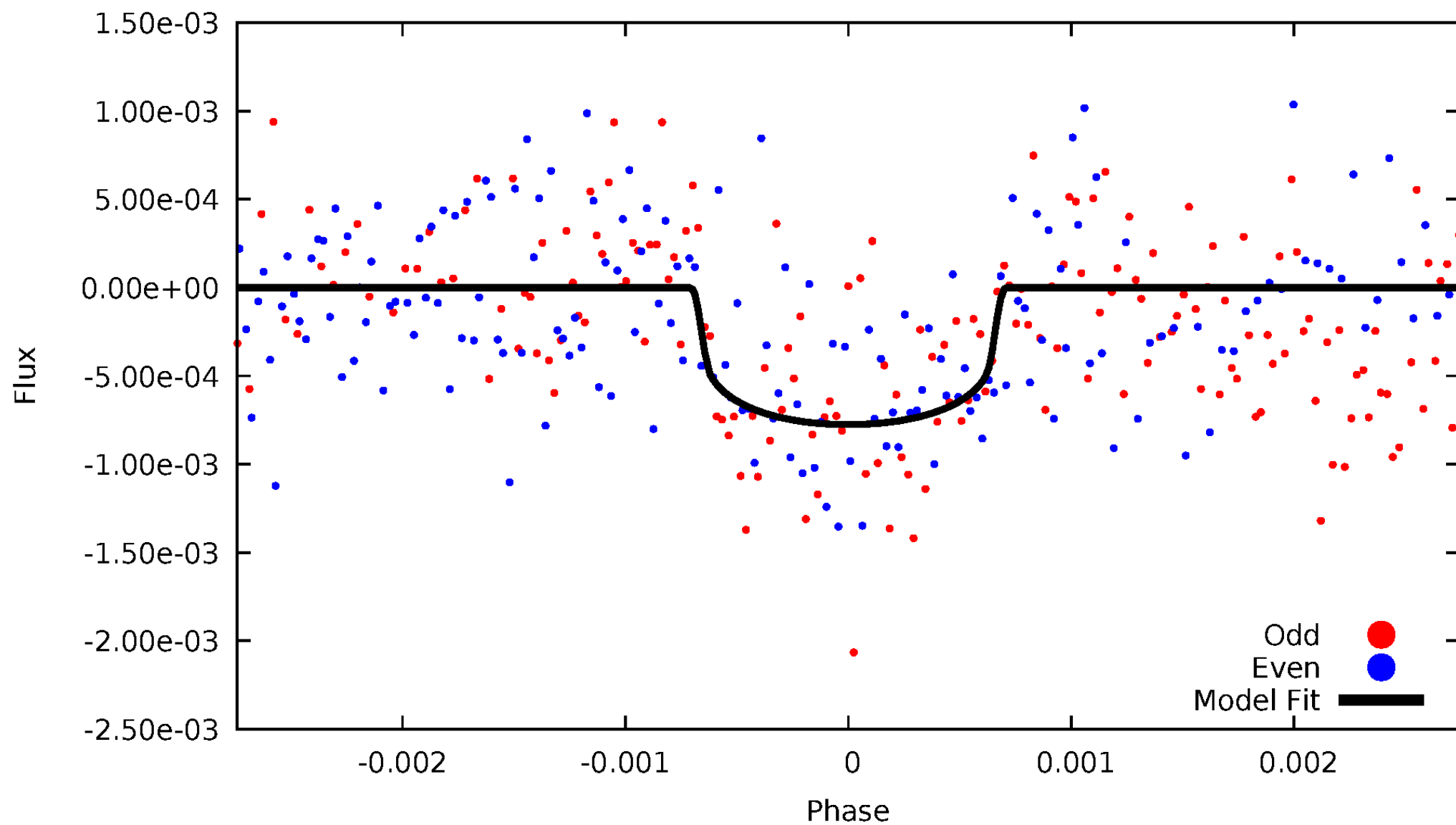


TCE 007690521-01



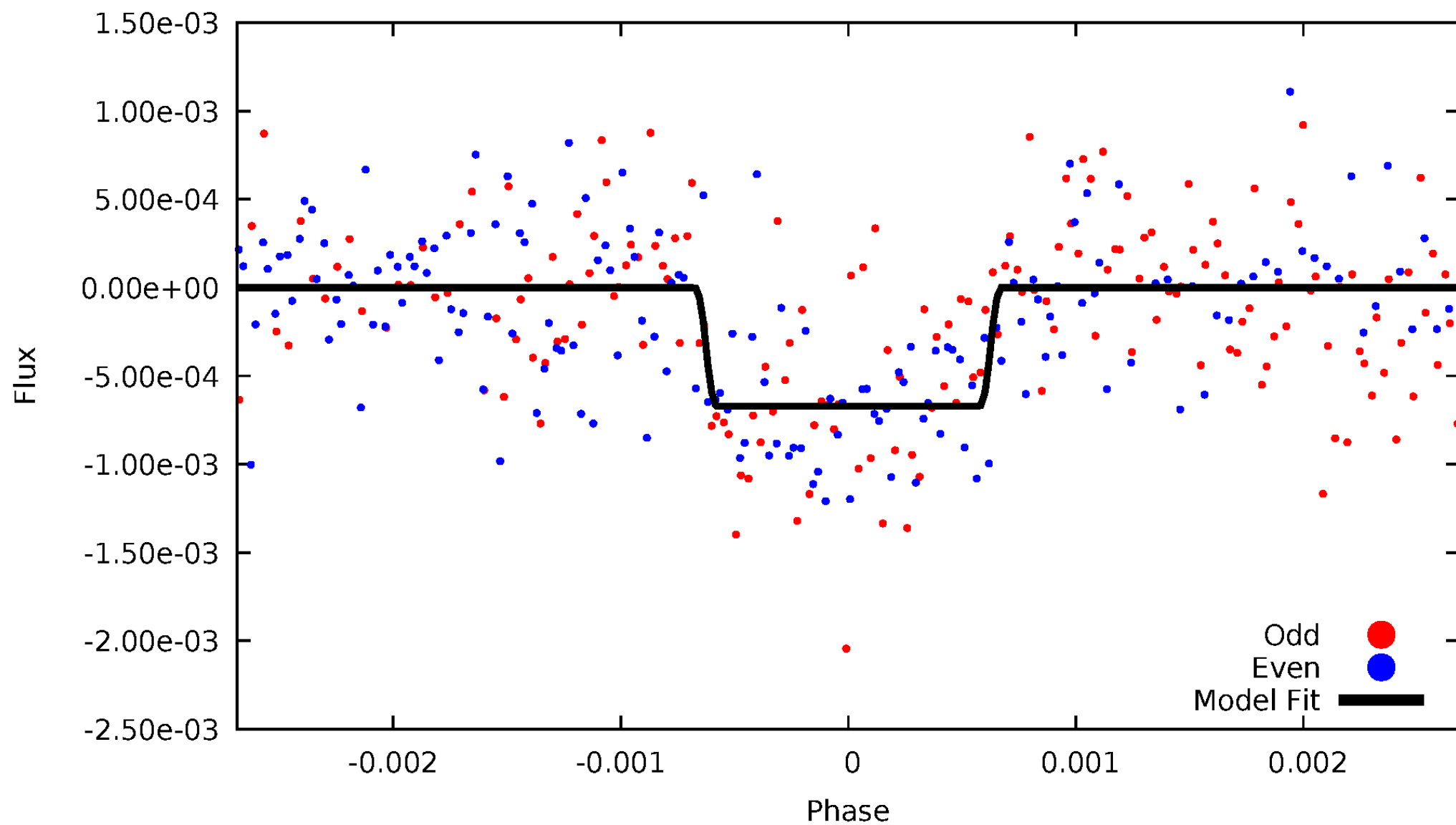
DV Odd/Even

TCE 007690521-01



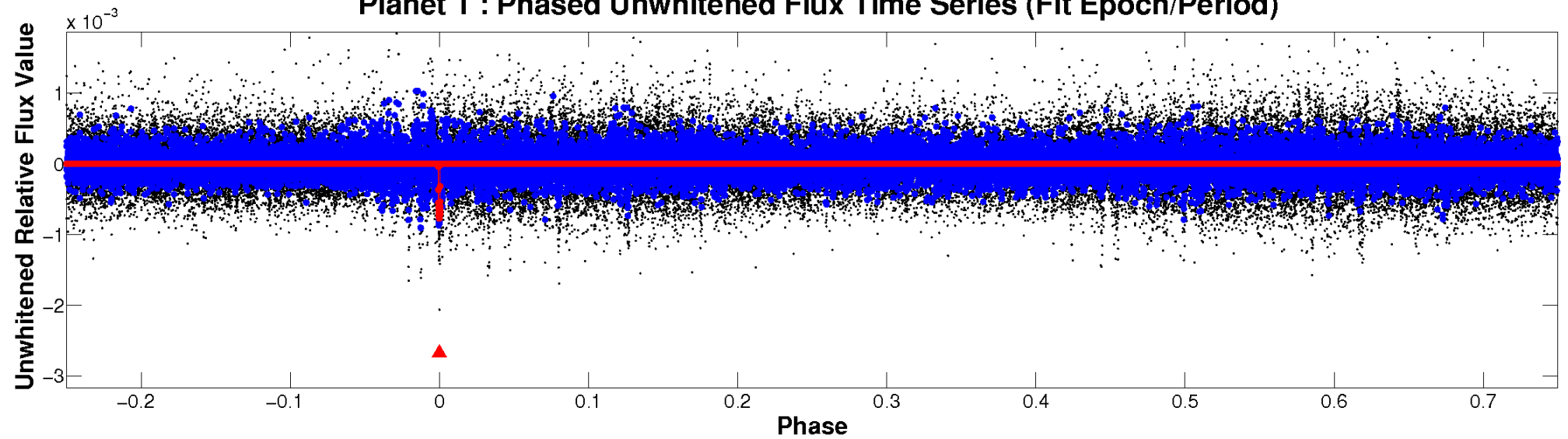
ALT Odd/Even

TCE 007690521-01

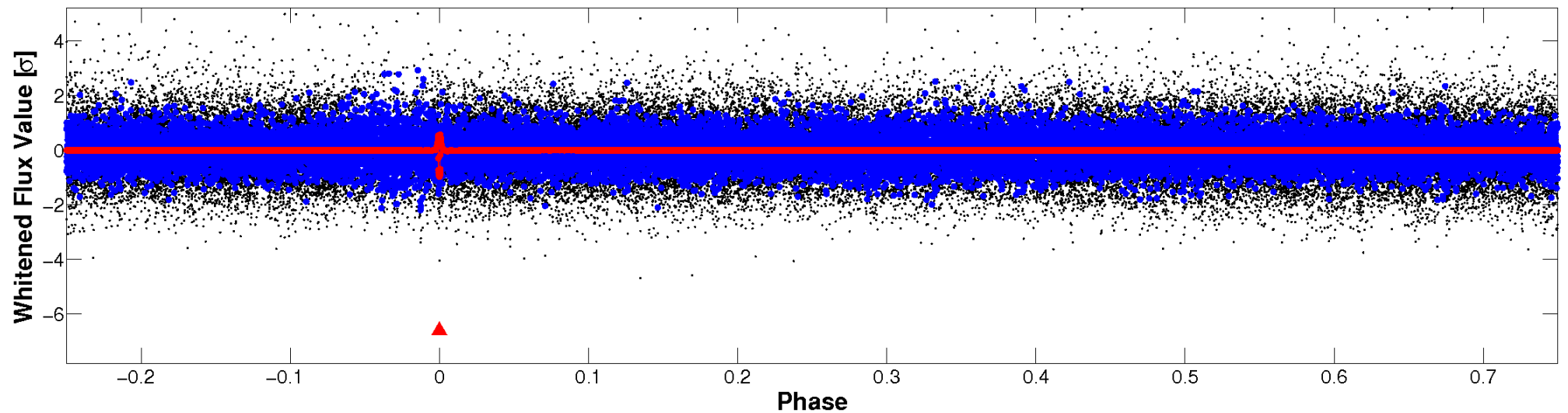


Non-Whitened Vs. Whitened Light Curve

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

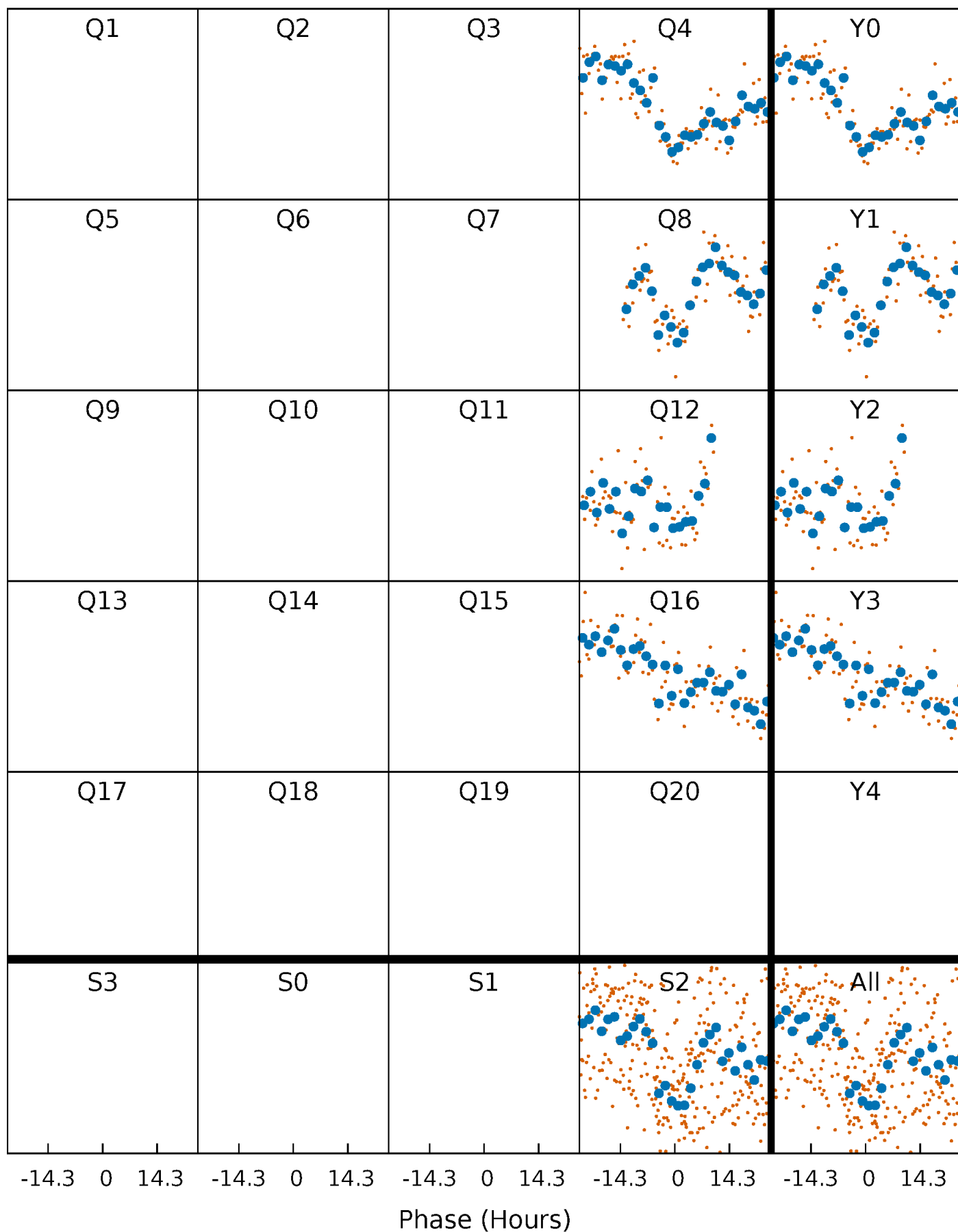


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



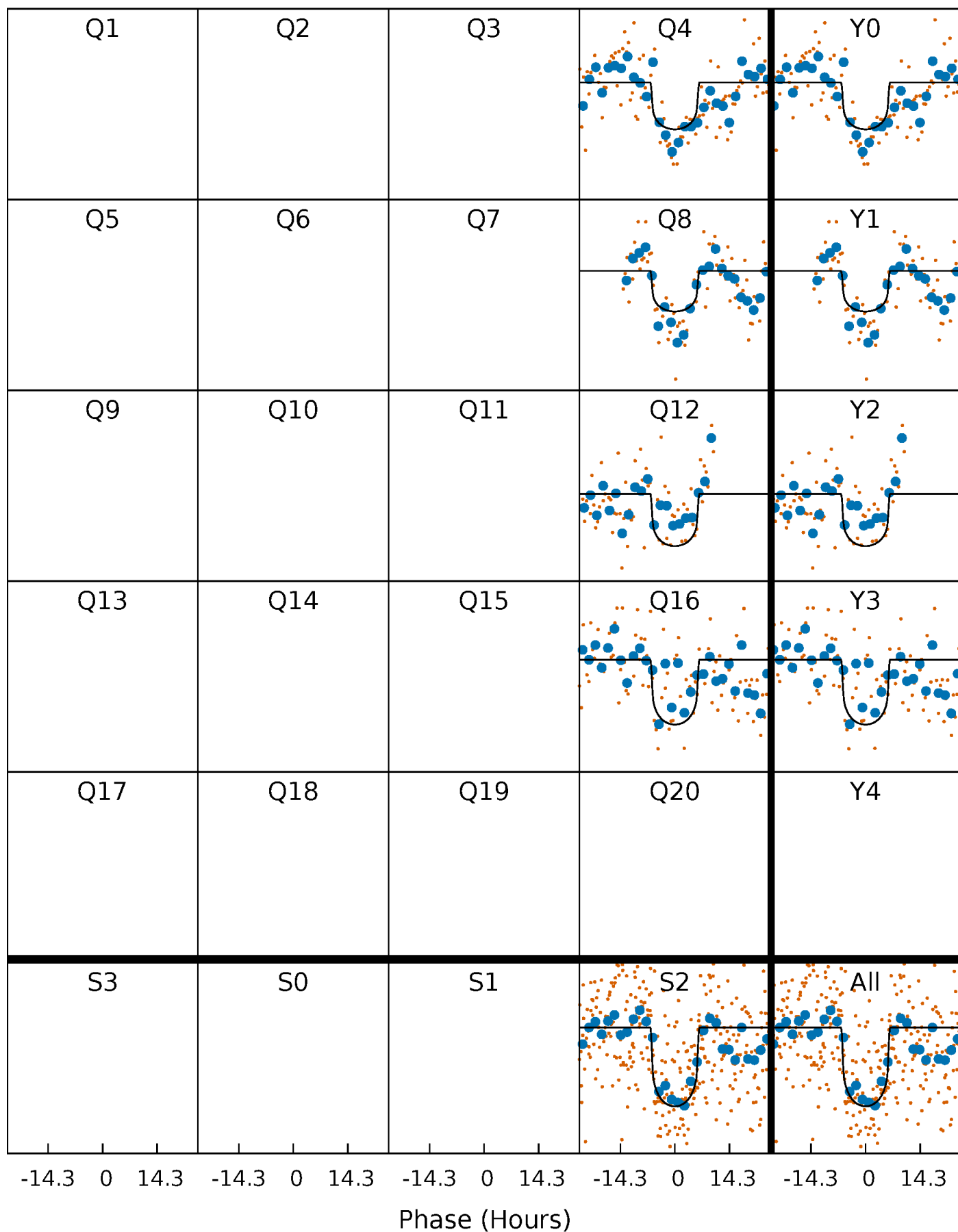
PDC Quarter-Phased Transit Curves

TCE 007690521-01 P=380.304288 Days $T_0=355.642464$ (BKJD)



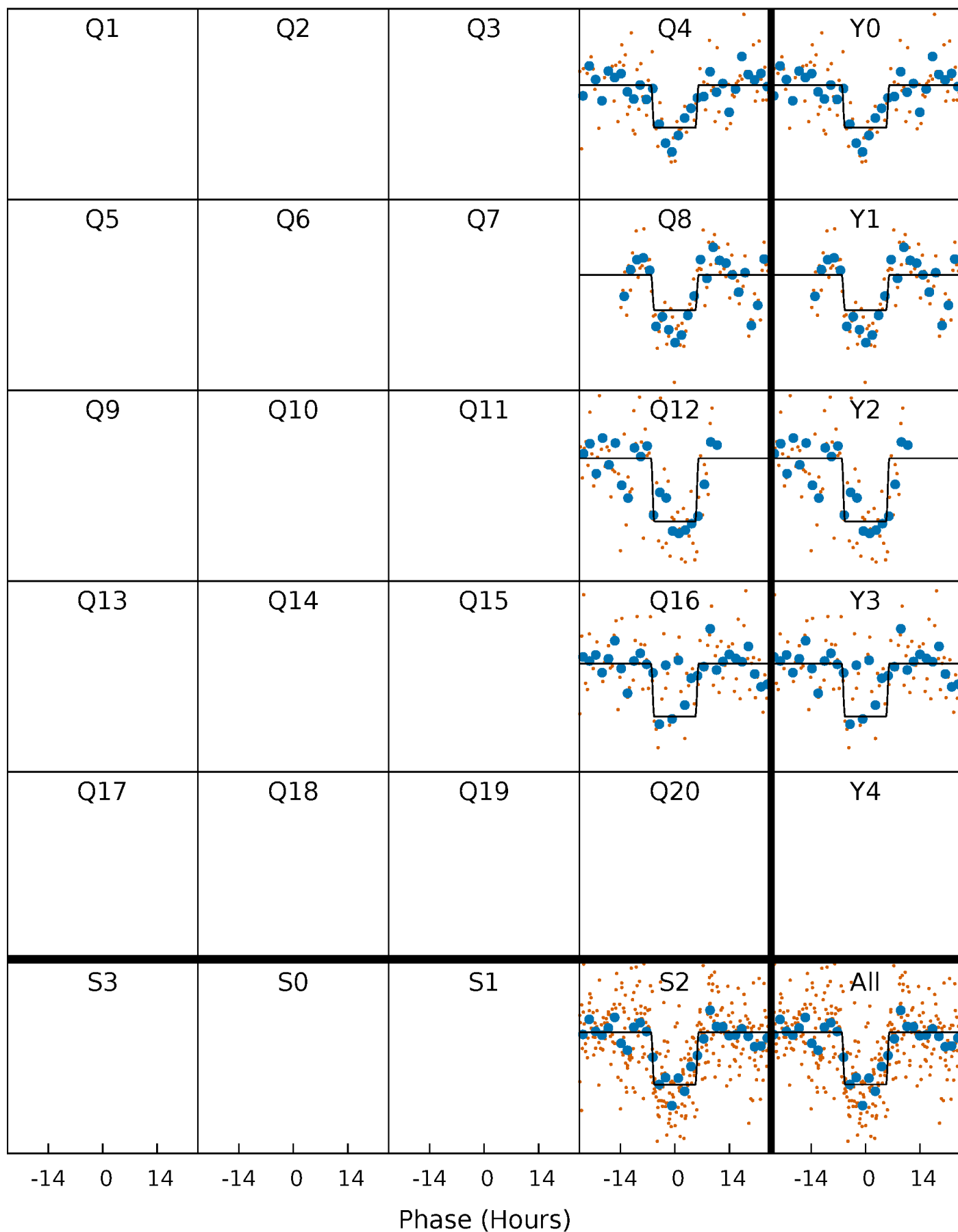
DV Quarter-Phased Transit Curves

TCE 007690521-01 P=380.304288 Days $T_0=355.642464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

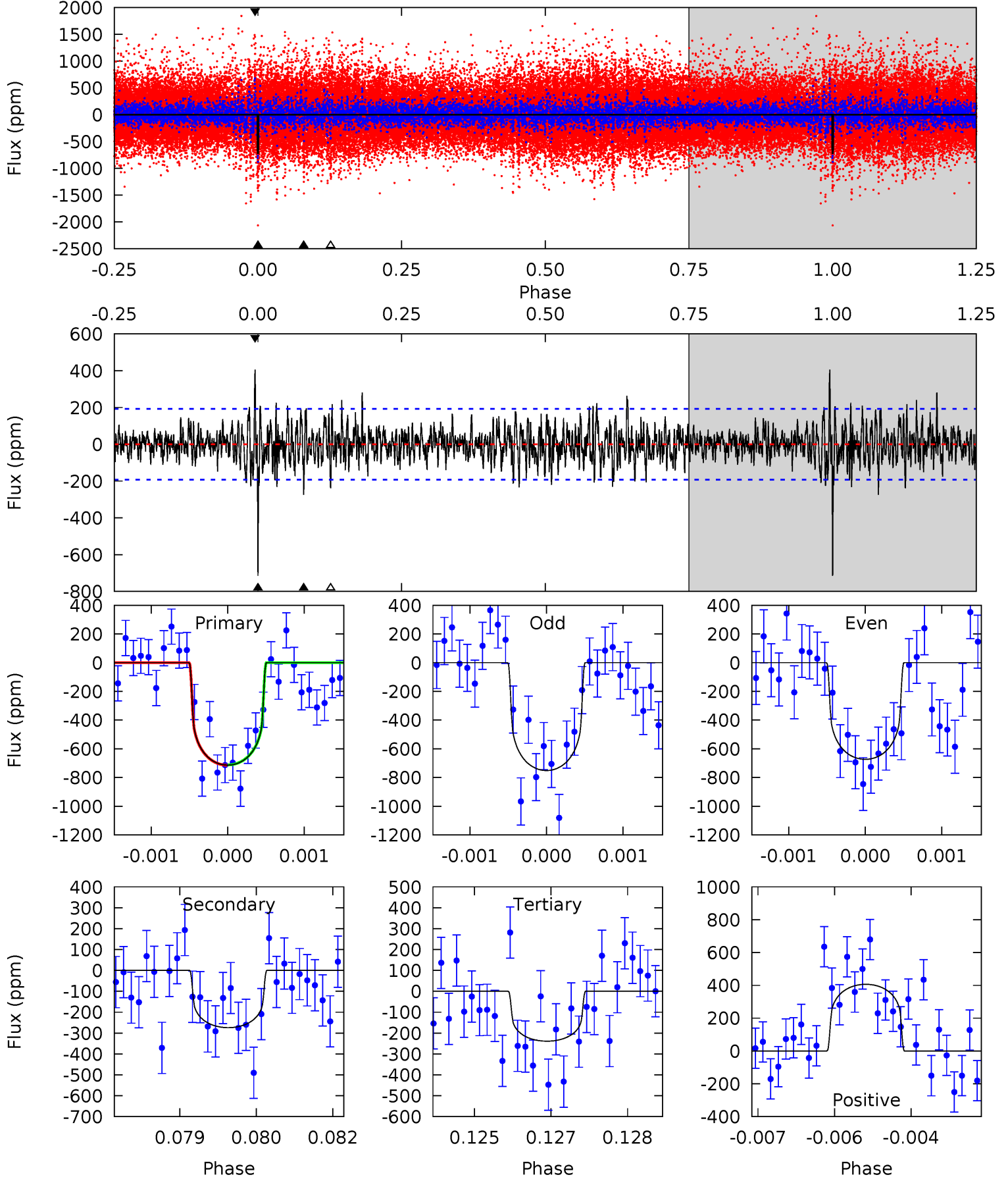
TCE 007690521-01 P=380.295796 Days $T_0=355.663747$ (BKJD)



DV Model-Shift Uniqueness Test

007690521-01, P = 380.304288 Days, E = 355.642464 Days

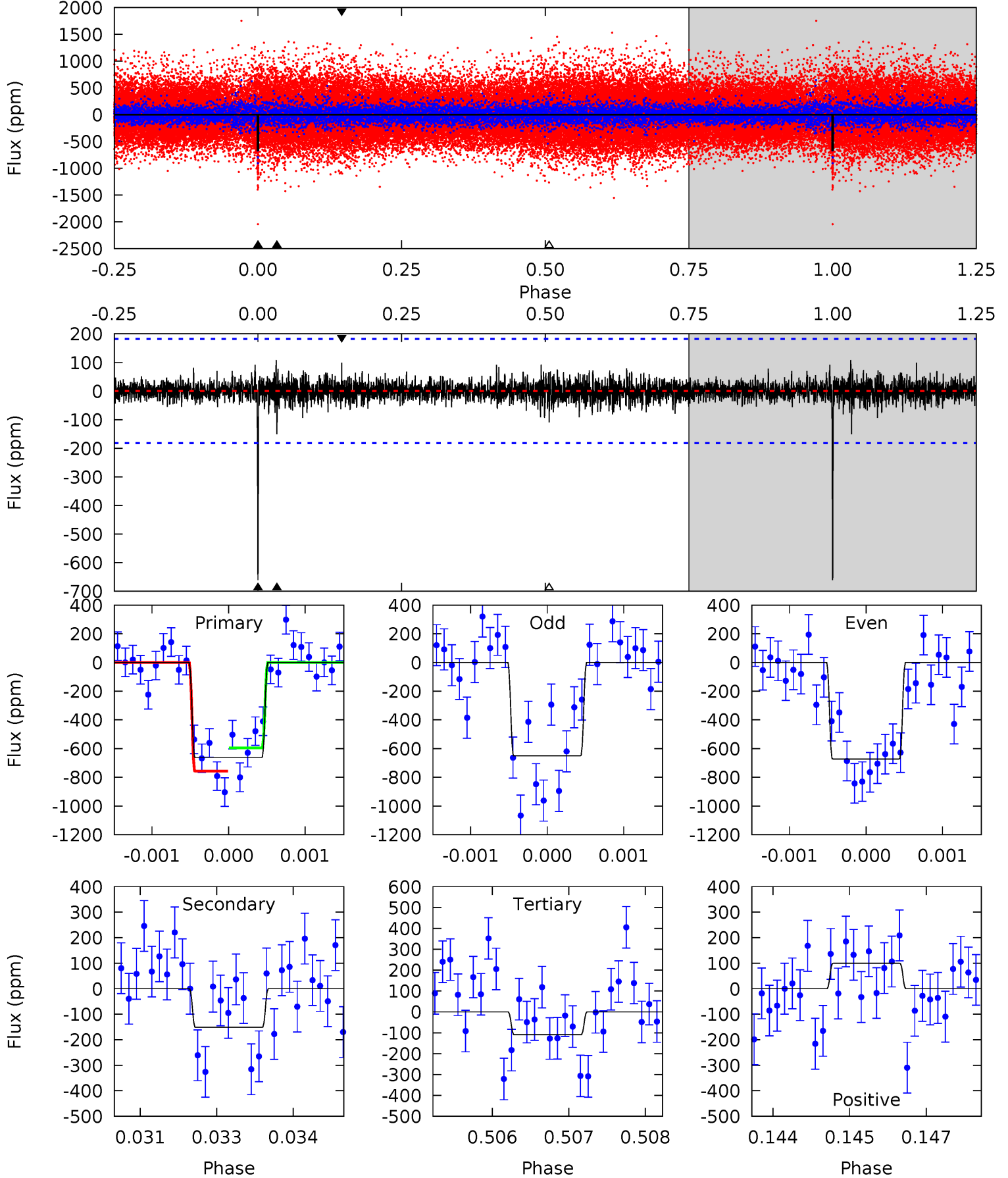
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	7.66	6.68	11.4	5.39	3.19	2.07	13.3	8.59	0.99	-3.69	1.09	1.02	0.36	0.03



Alt Model-Shift Uniqueness Test

007690521-01, P = 380.295796 Days, E = 355.663747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	4.48	3.24	2.94	5.40	3.21	0.69	16.4	16.7	1.25	1.54	0.32	0.98	0.14	2.38



Stellar Parameters For KIC 007690521

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5518^{+180}_{-163}	$4.473^{+0.126}_{-0.140}$	$-0.500^{+0.300}_{-0.300}$	$0.822^{+0.149}_{-0.109}$	$0.733^{+0.113}_{-0.038}$	$1.856^{+0.975}_{-0.746}$
	+3%/-3%	+3%/-3%	+60%/-60%	+18%/-13%	+15%/-5%	+53%/-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 007690521-01 / KOI 8142.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-274 ± 36	$2.42^{+1.19}_{-1.13}$	322^{+18}_{-16}	4576^{+1450}_{-676}	22613^{+61758}_{-12549}
Alt.	-151 ± 34	$2.48^{+1.24}_{-1.17}$	321^{+19}_{-17}	4011^{+1143}_{-504}	11851^{+31327}_{-6763}

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

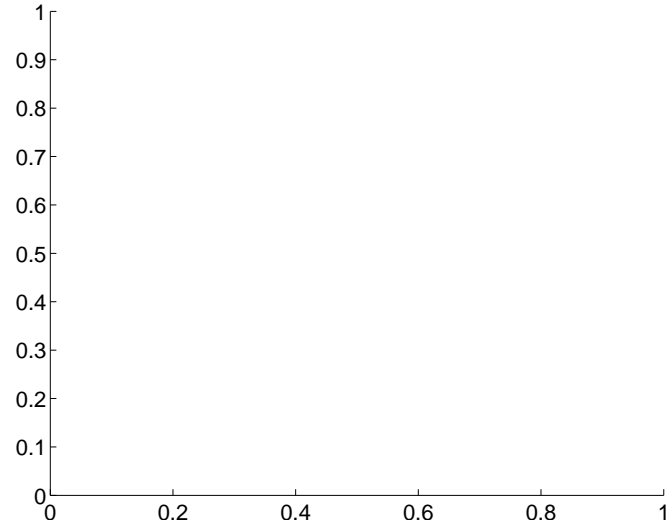
Supplemental centroid analysis for 007690521-01. Kepler magnitude: 14.95. Transit SNR 9.10

There are 0 quarters with good PRF difference image offsets

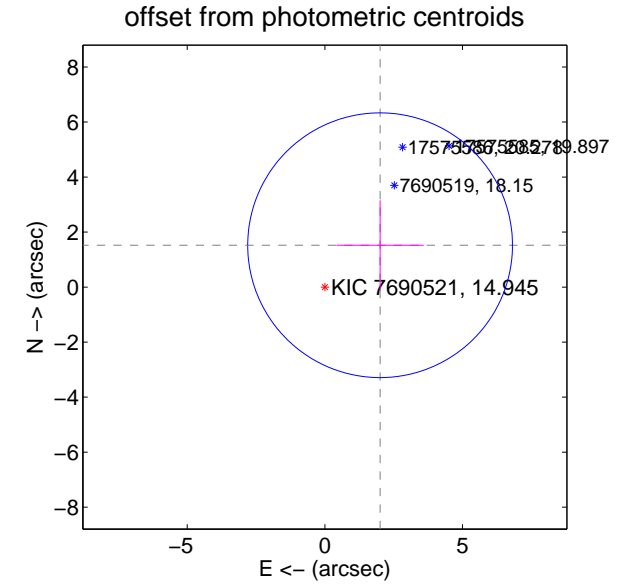
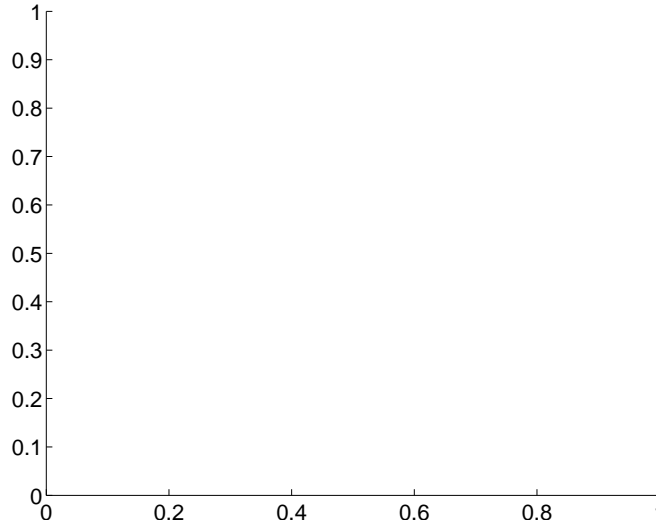
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.52 ± 1.60	1.57	-2.01 ± 1.59	1.52 ± 1.63

There is no PRF-fit offset from OOT-fit

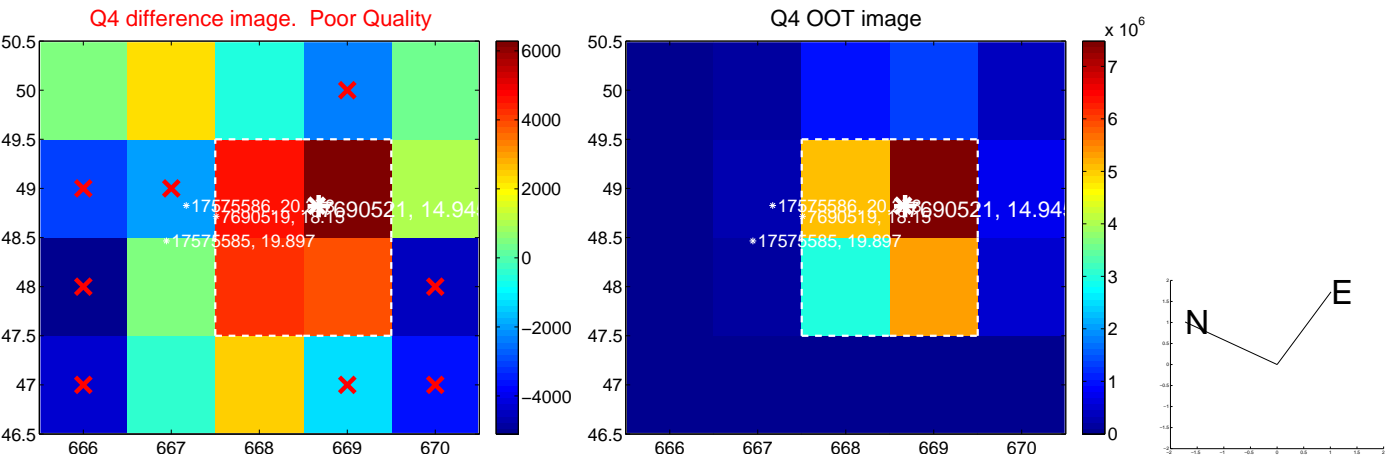
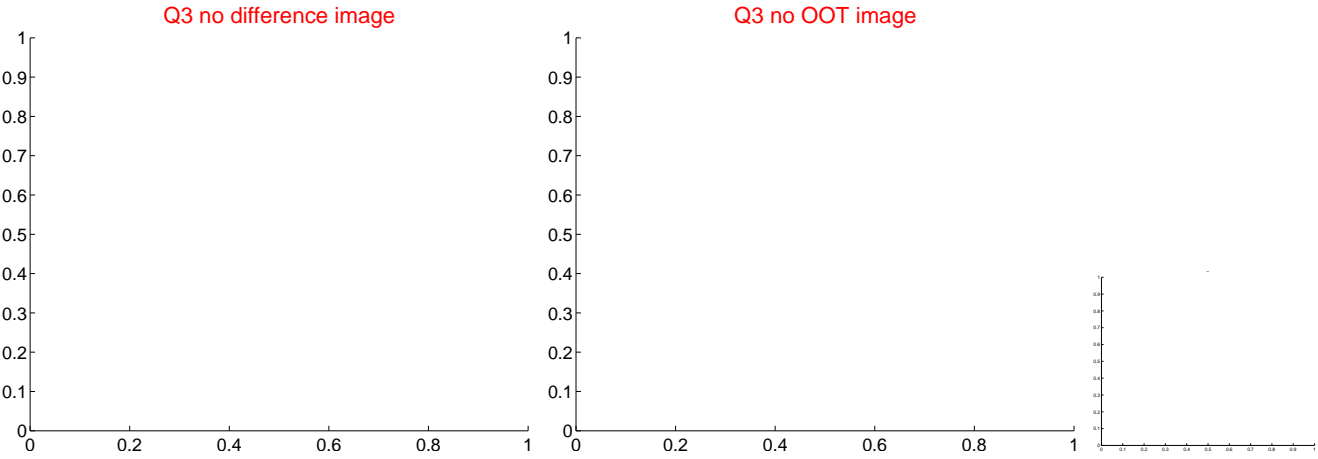
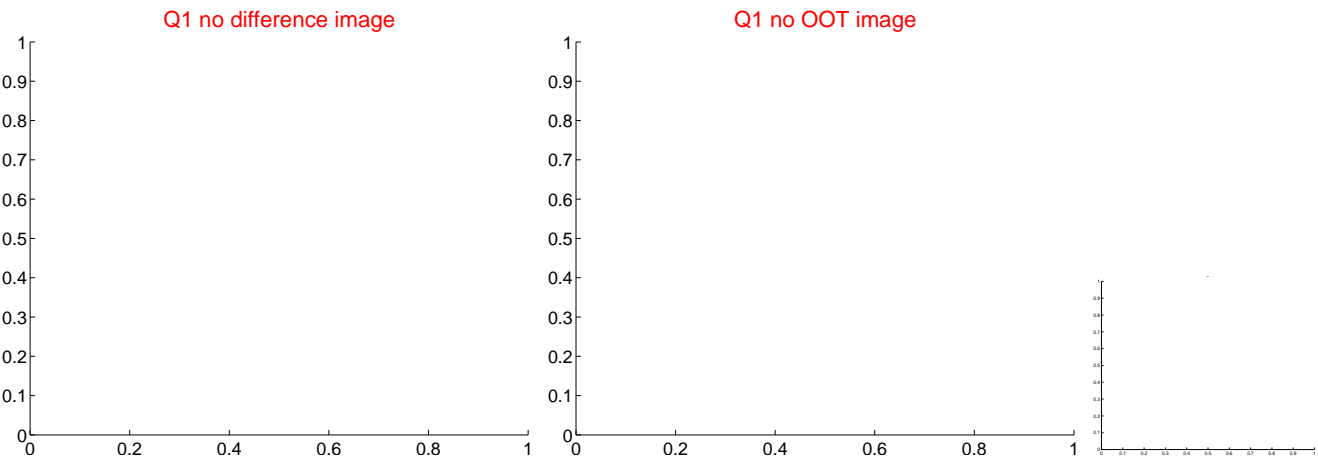


There is no PRF-fit offset from KIC



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



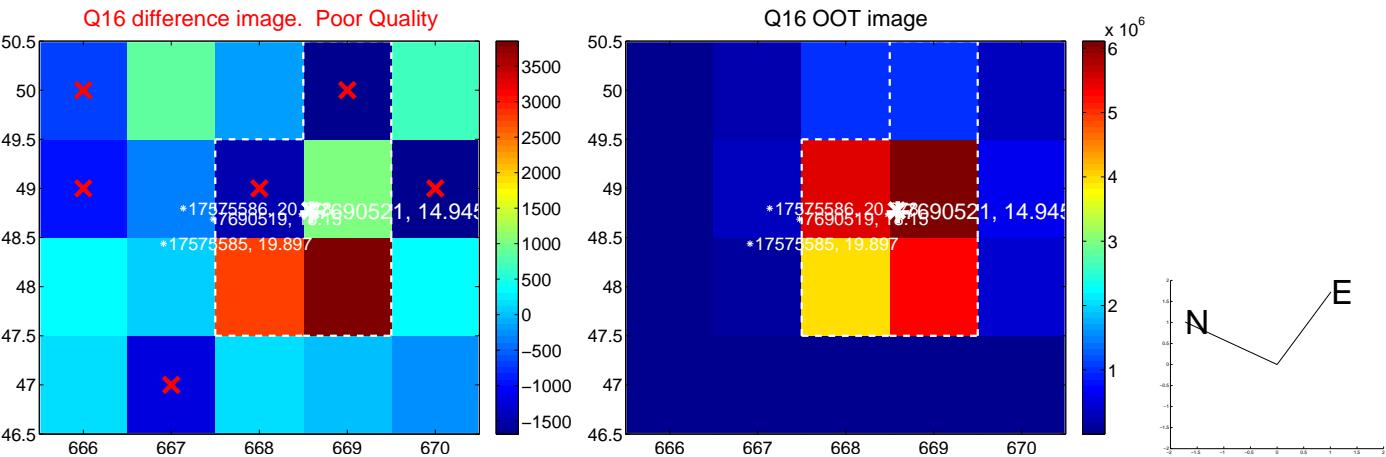
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



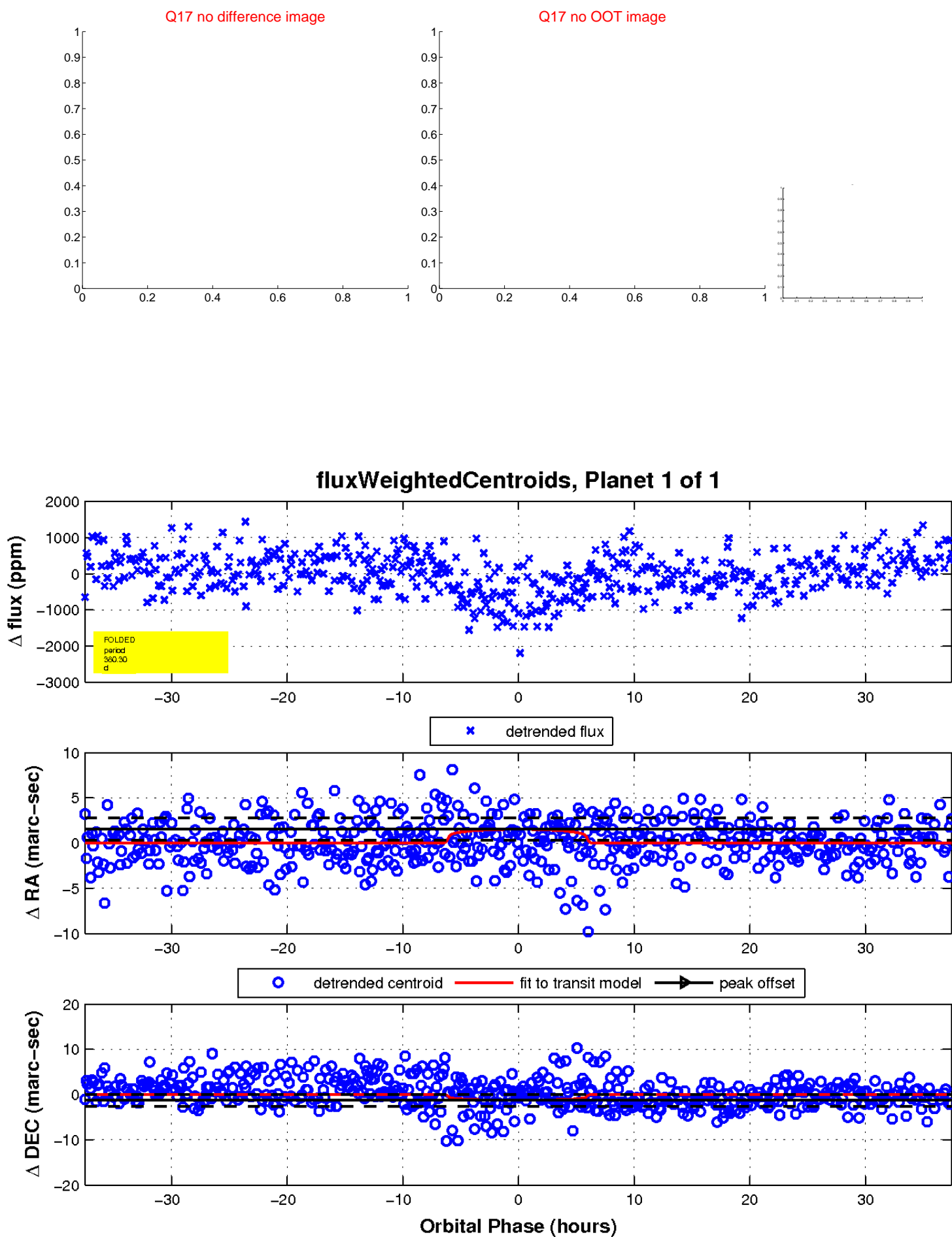
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

