

KIC 002718321

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})
002718321-01	OBS	No	358.406143	207.929257	73.7	21.777	9.6	10.5	2.00	9417	1.95	17.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002718321-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

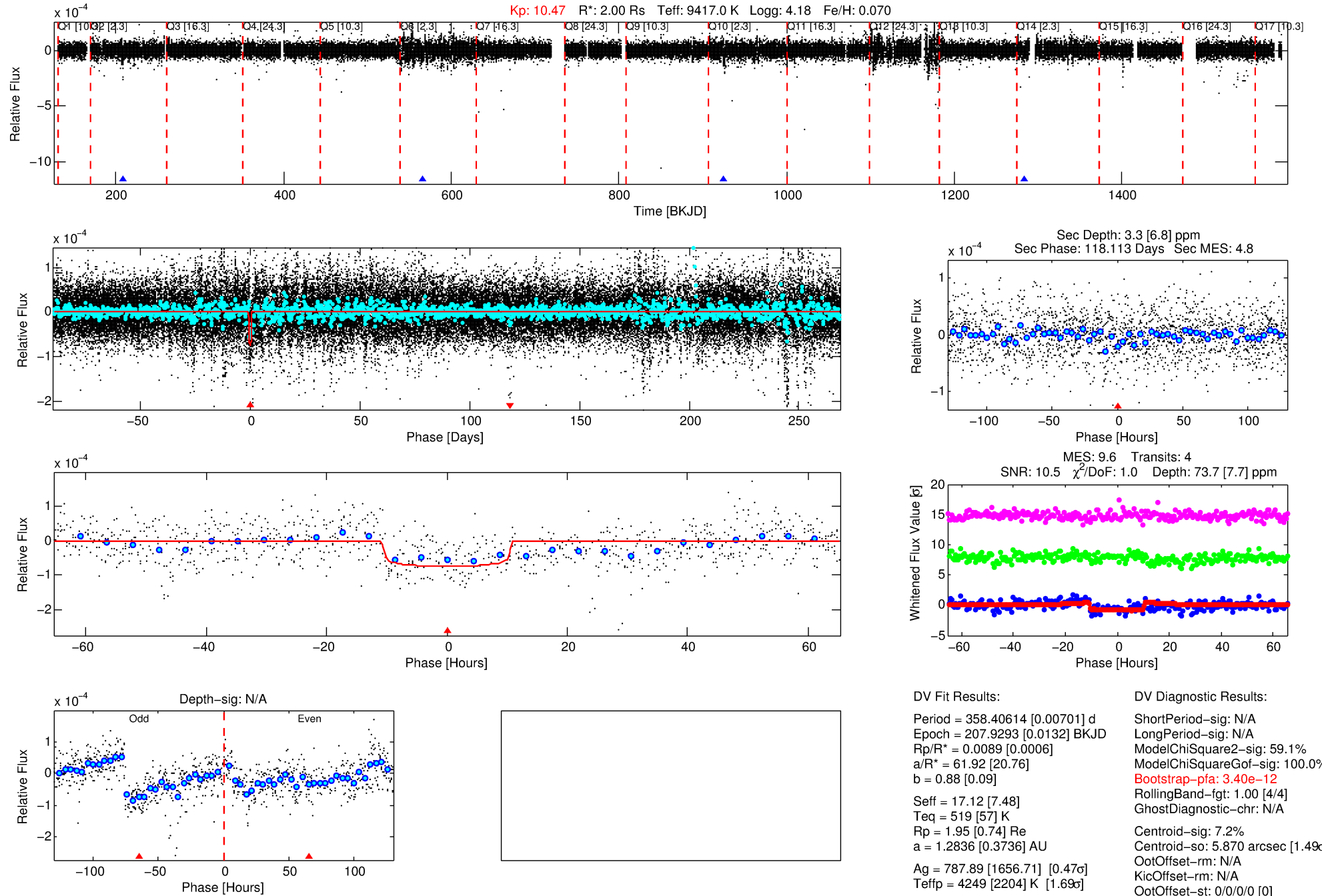
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002718321-01

No Significant Match Found

DV One-Page Summary

KIC: 2718321 Candidate: 1 of 1 Period: 358.406 d



DV Fit Results:

Period = 358.40614 [0.00701] d
Epoch = 207.9293 [0.0132] BKJD
Rp/R* = 0.0089 [0.0006]
a/R* = 61.92 [20.76]
b = 0.88 [0.09]
Seff = 17.12 [7.48]
Teq = 519 [57] K
Rp = 1.95 [0.74] Re
a = 1.2836 [0.3736] AU
Ag = 787.89 [1656.71] [0.47σ]
Teffp = 4249 [2204] K [1.69σ]

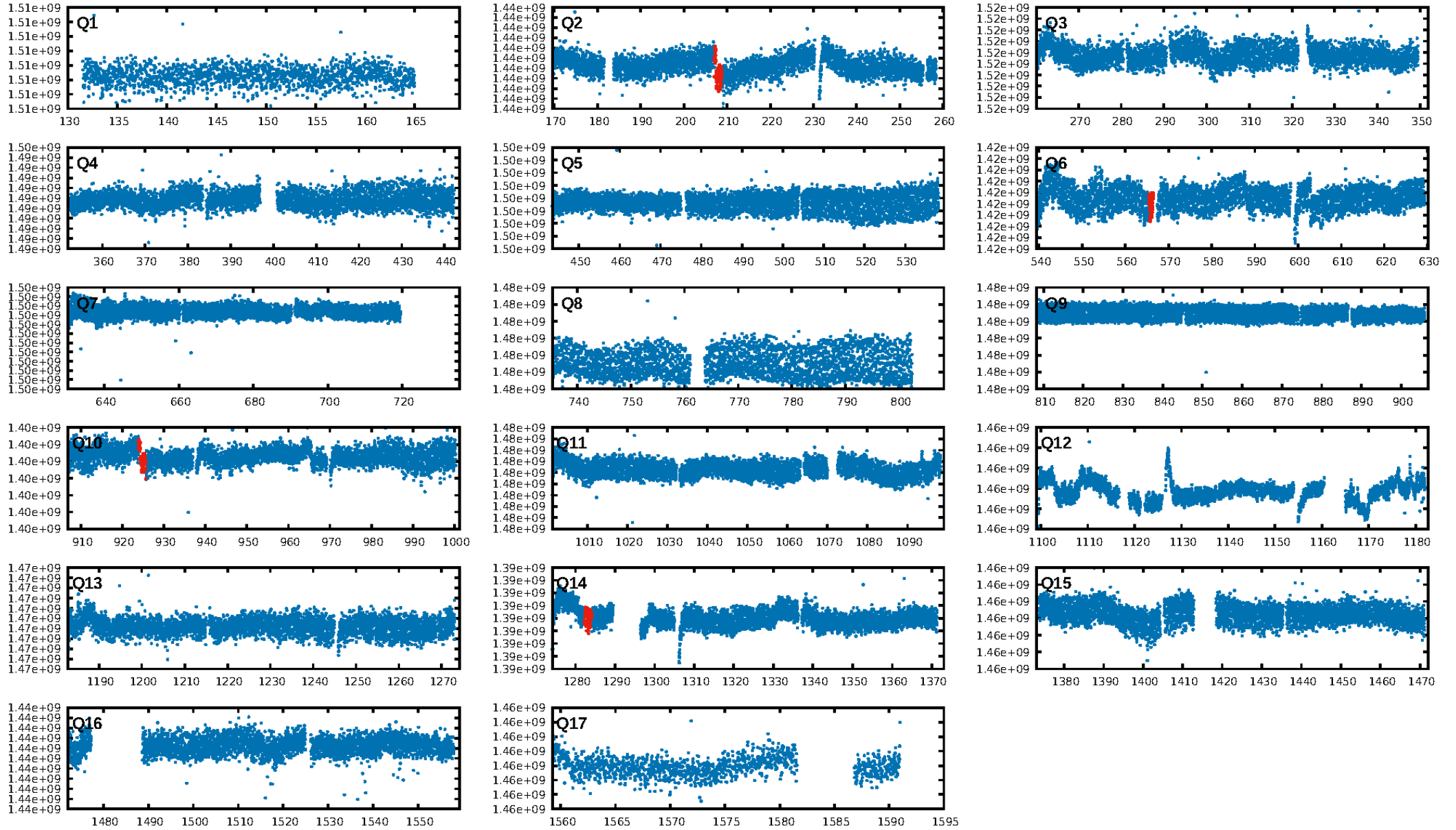
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.40e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 7.2%
Centroid-so: 5.870 arcsec [1.49σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

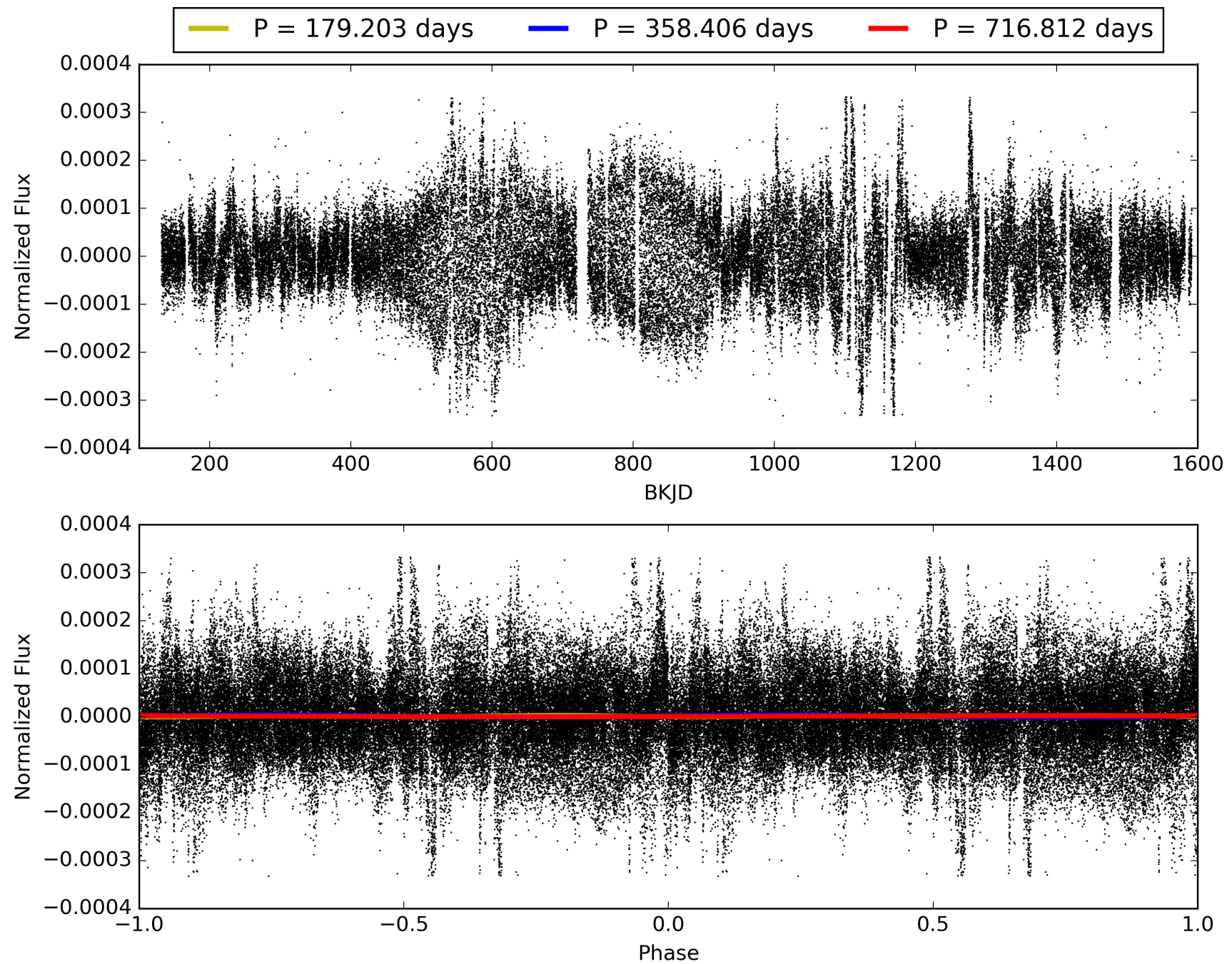
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:09:14 Z

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

TCE 002718321-01, PDC Light Curves

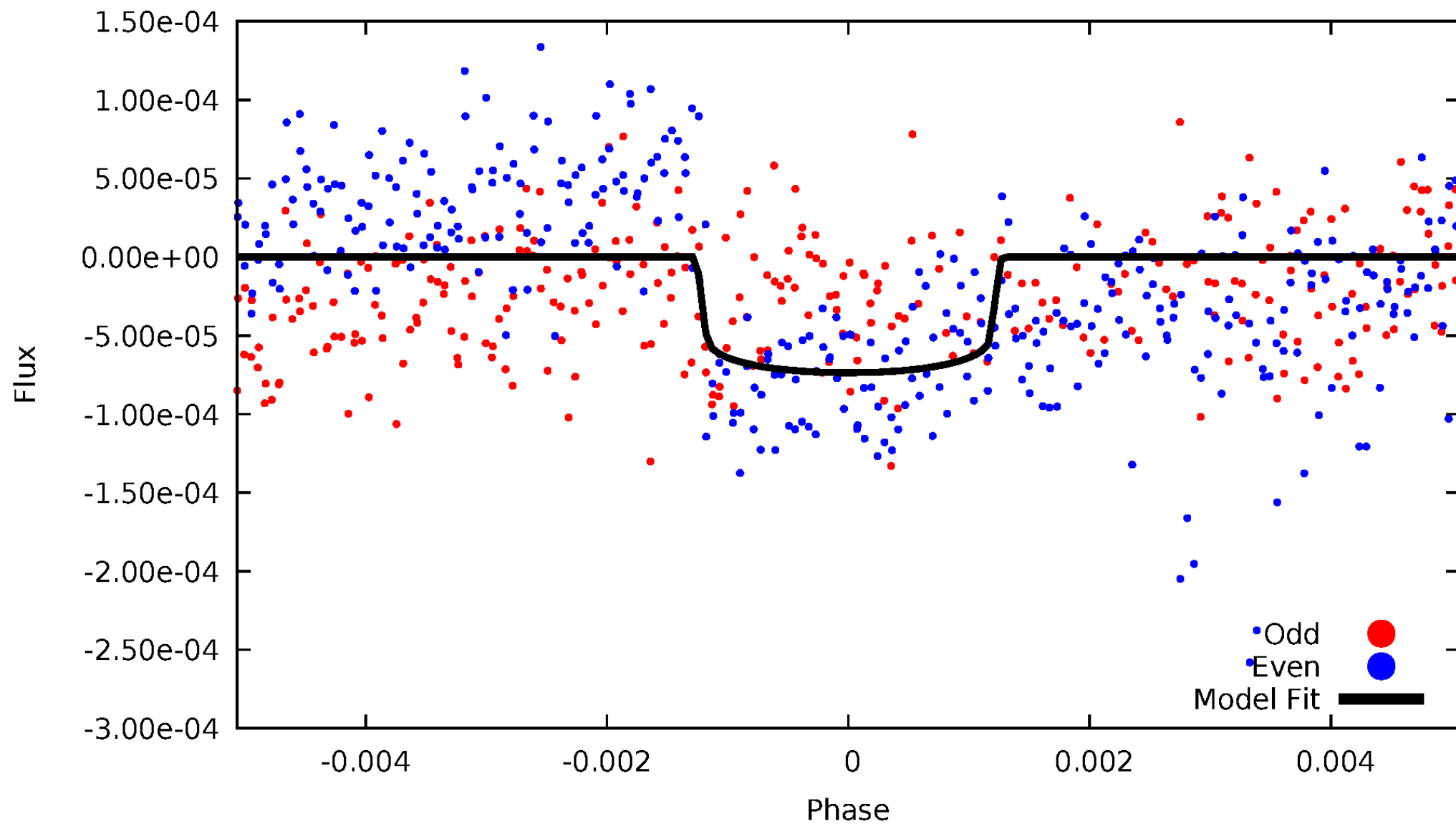


TCE 002718321-01



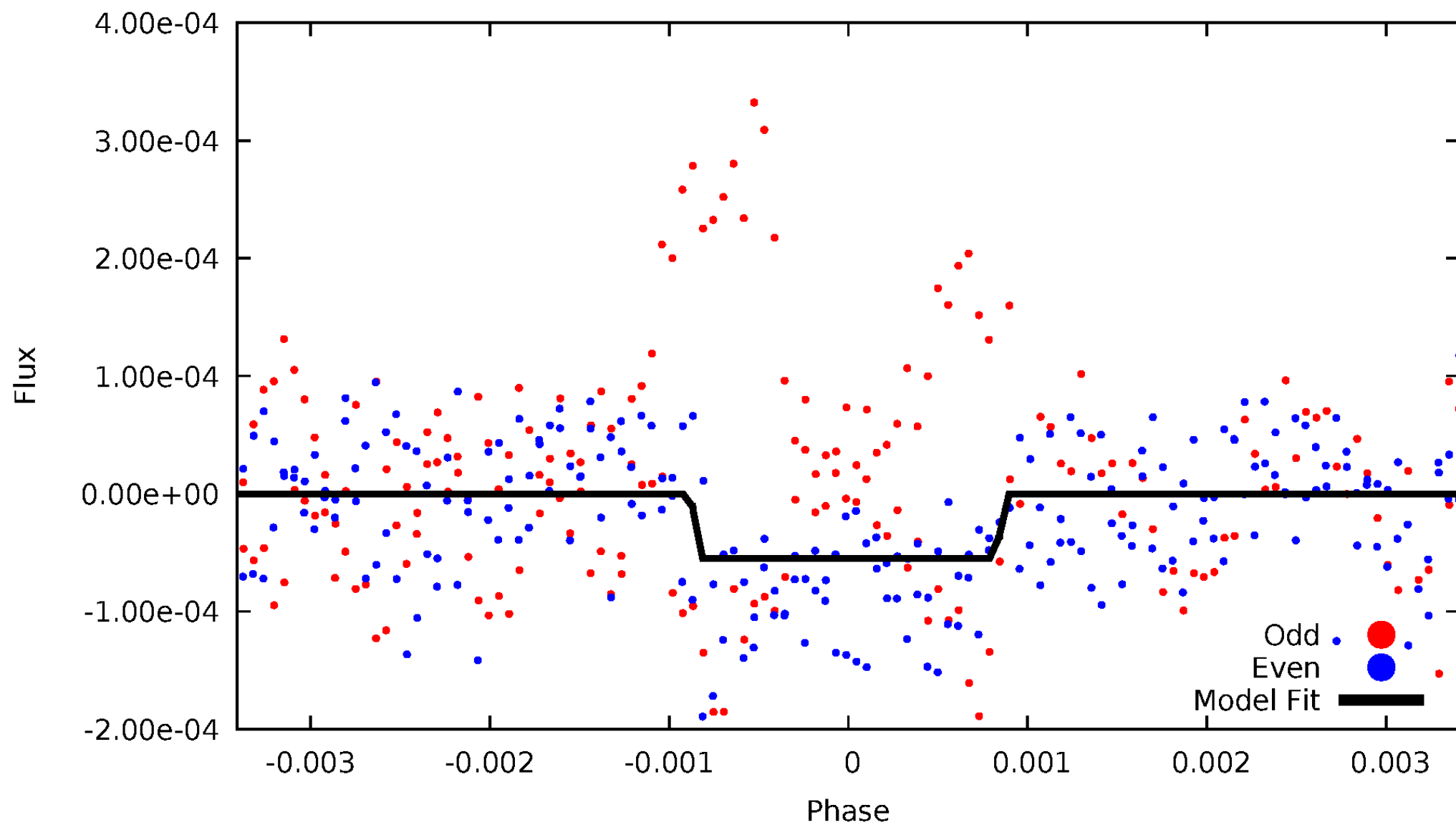
DV Odd/Even

TCE 002718321-01



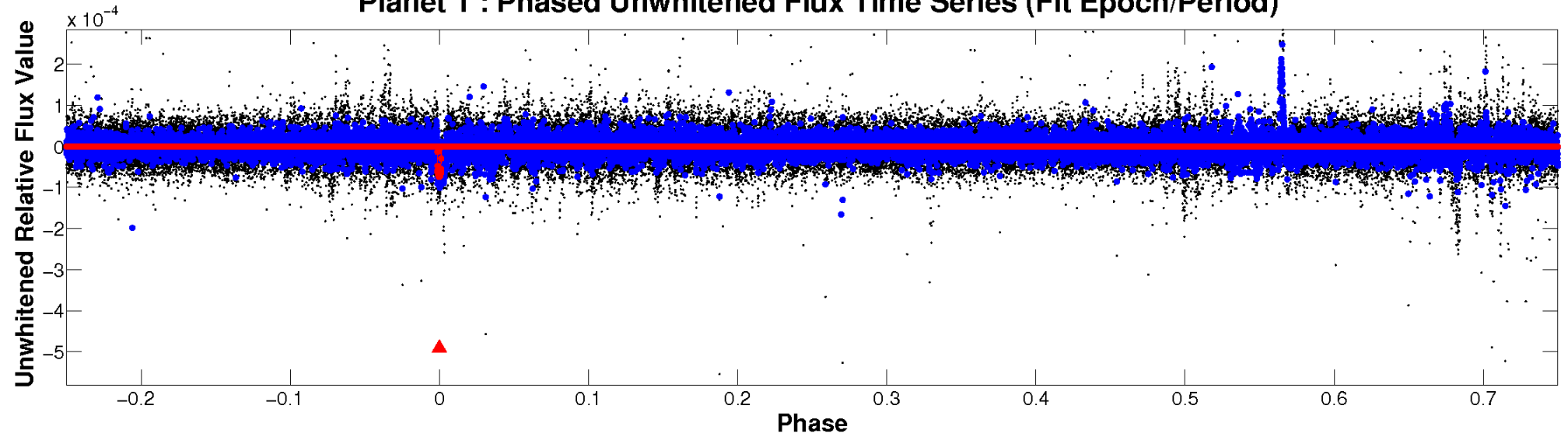
ALT Odd/Even

TCE 002718321-01

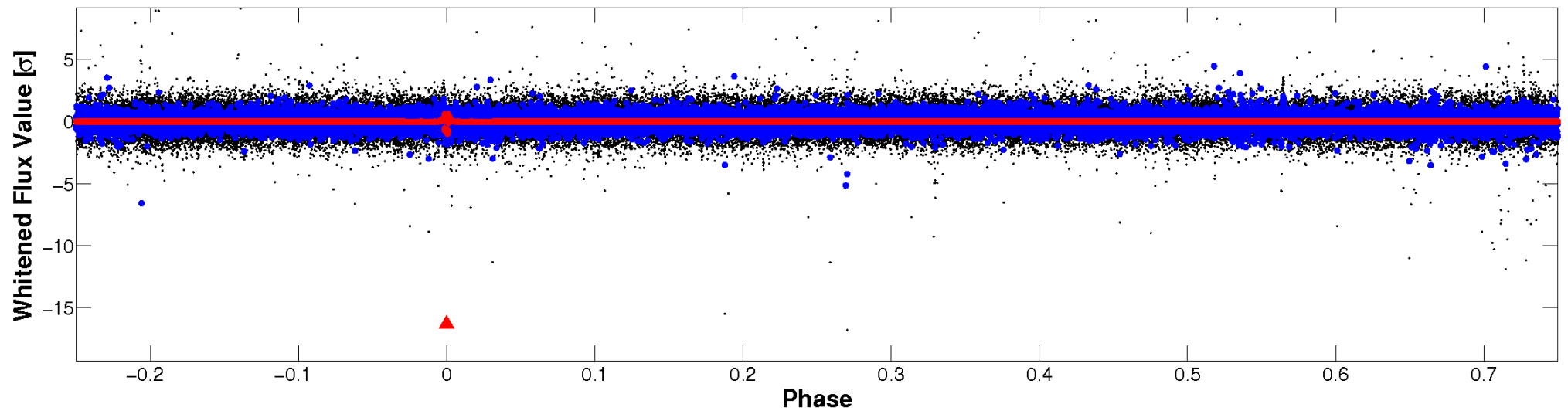


Non-Whitened Vs. Whitened Light Curve

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

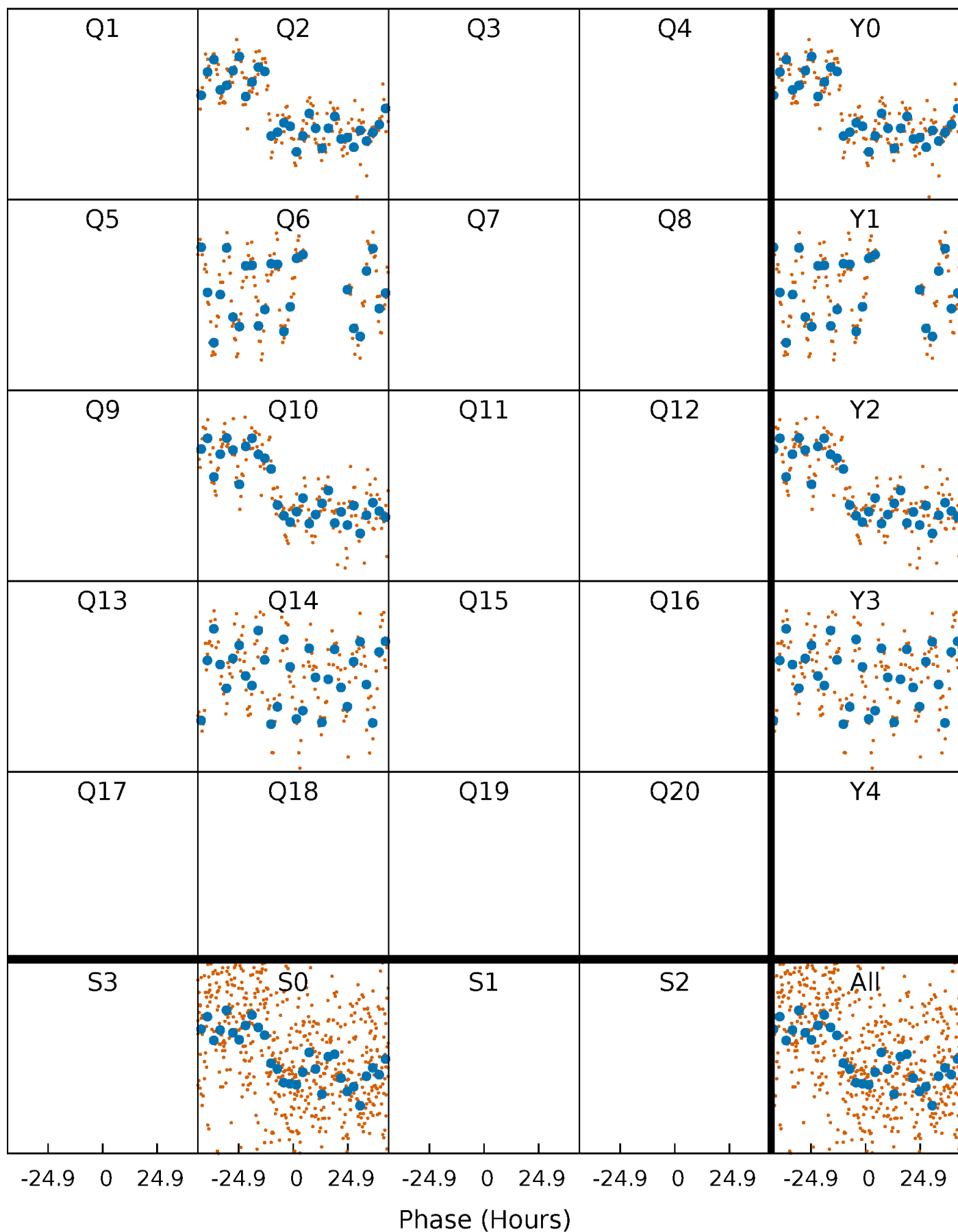


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



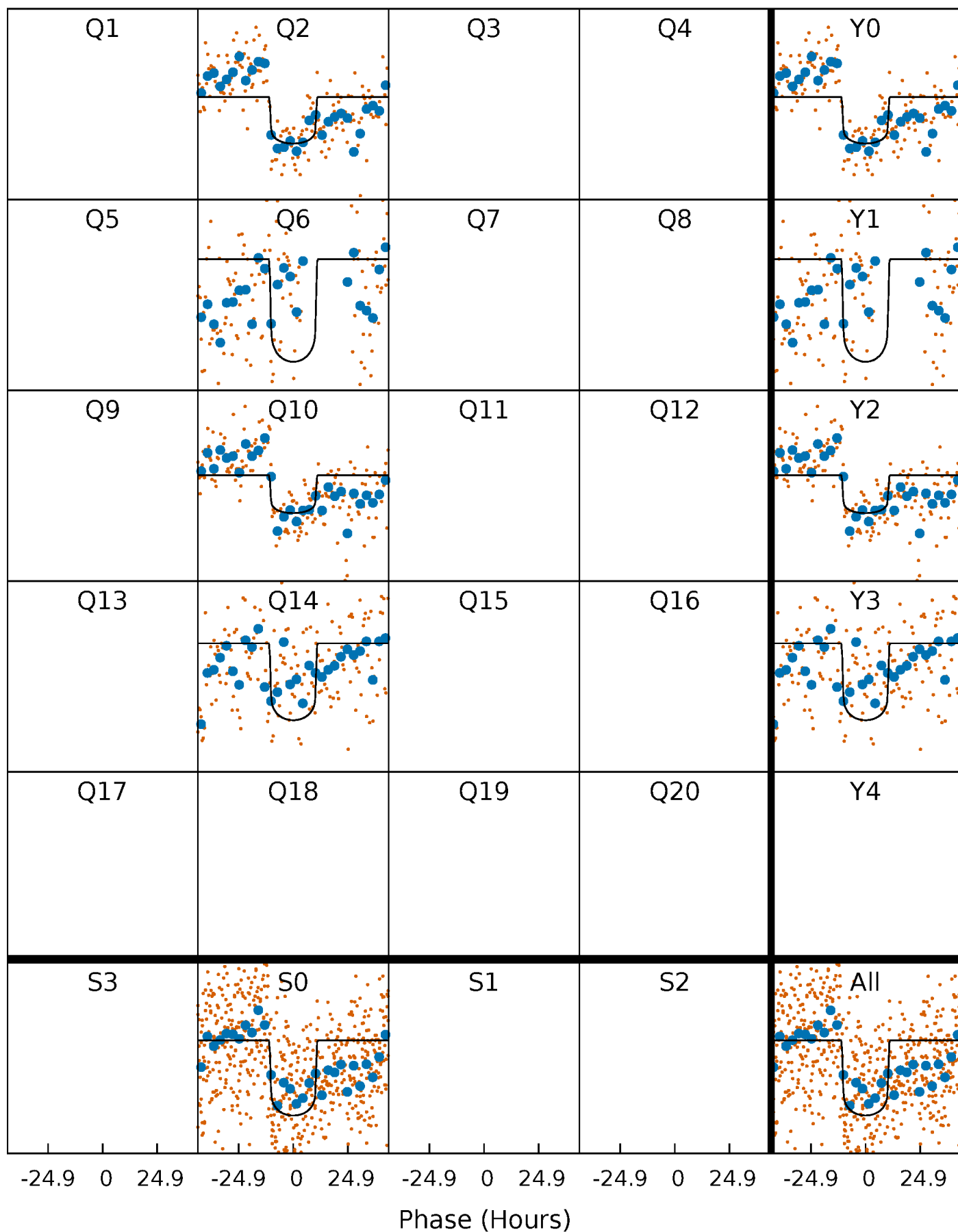
PDC Quarter-Phased Transit Curves

TCE 002718321-01 P=358.406143 Days $T_0=207.929257$ (BKJD)



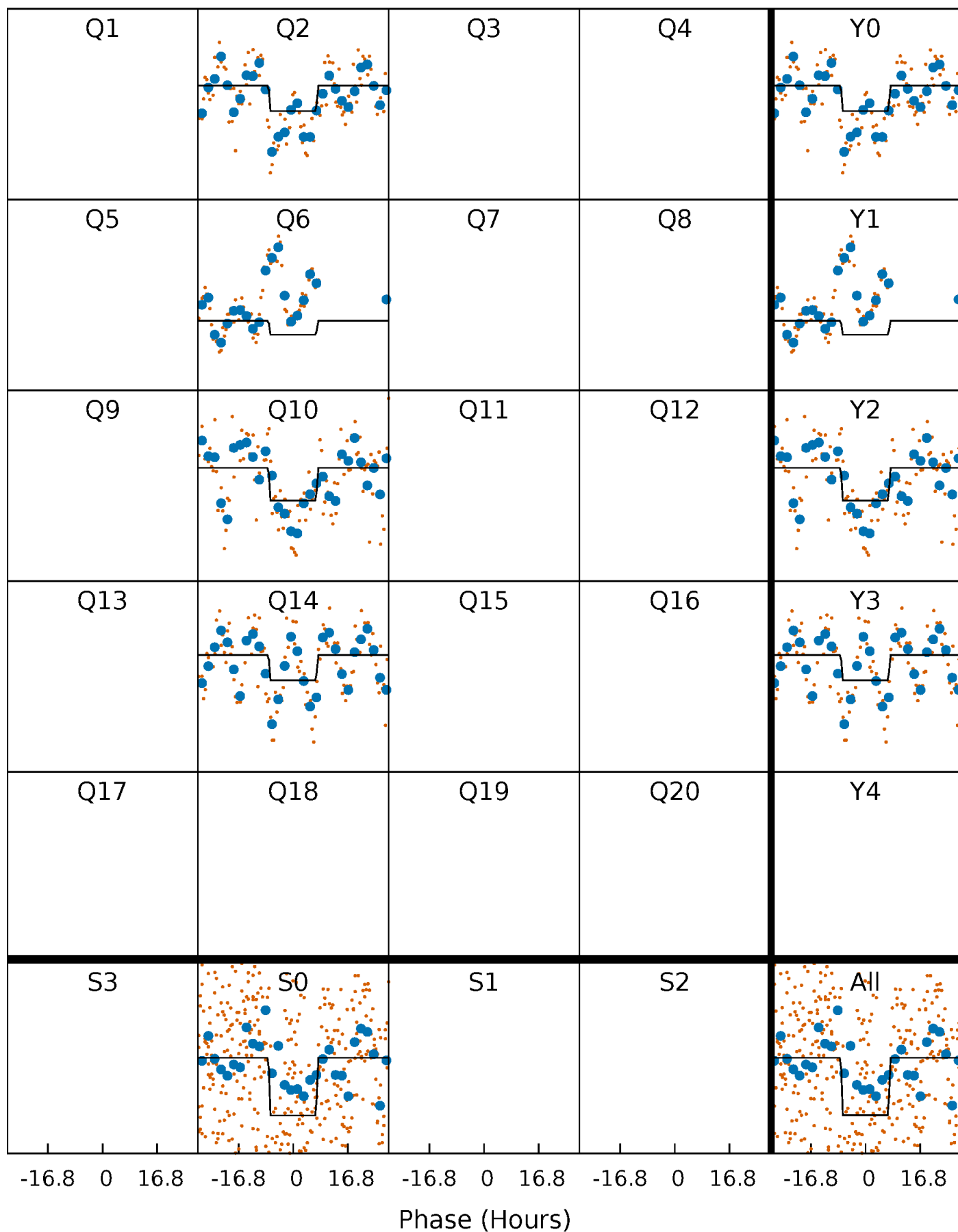
DV Quarter-Phased Transit Curves

TCE 002718321-01 P=358.406143 Days $T_0=207.929257$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

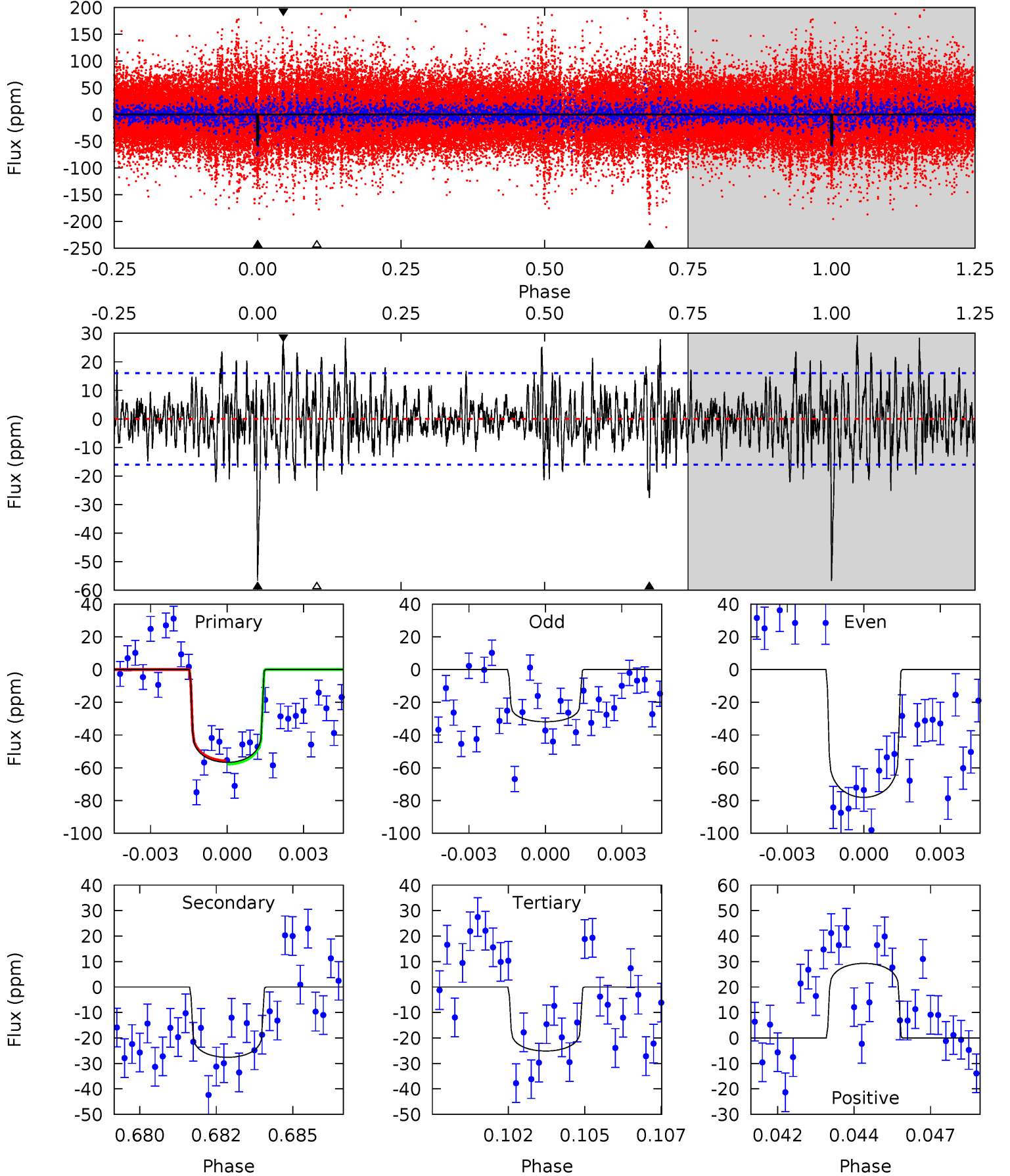
TCE 002718321-01 P=358.404642 Days $T_0=207.798700$ (BKJD)



DV Model-Shift Uniqueness Test

002718321-01, P = 358.406143 Days, E = 207.929257 Days

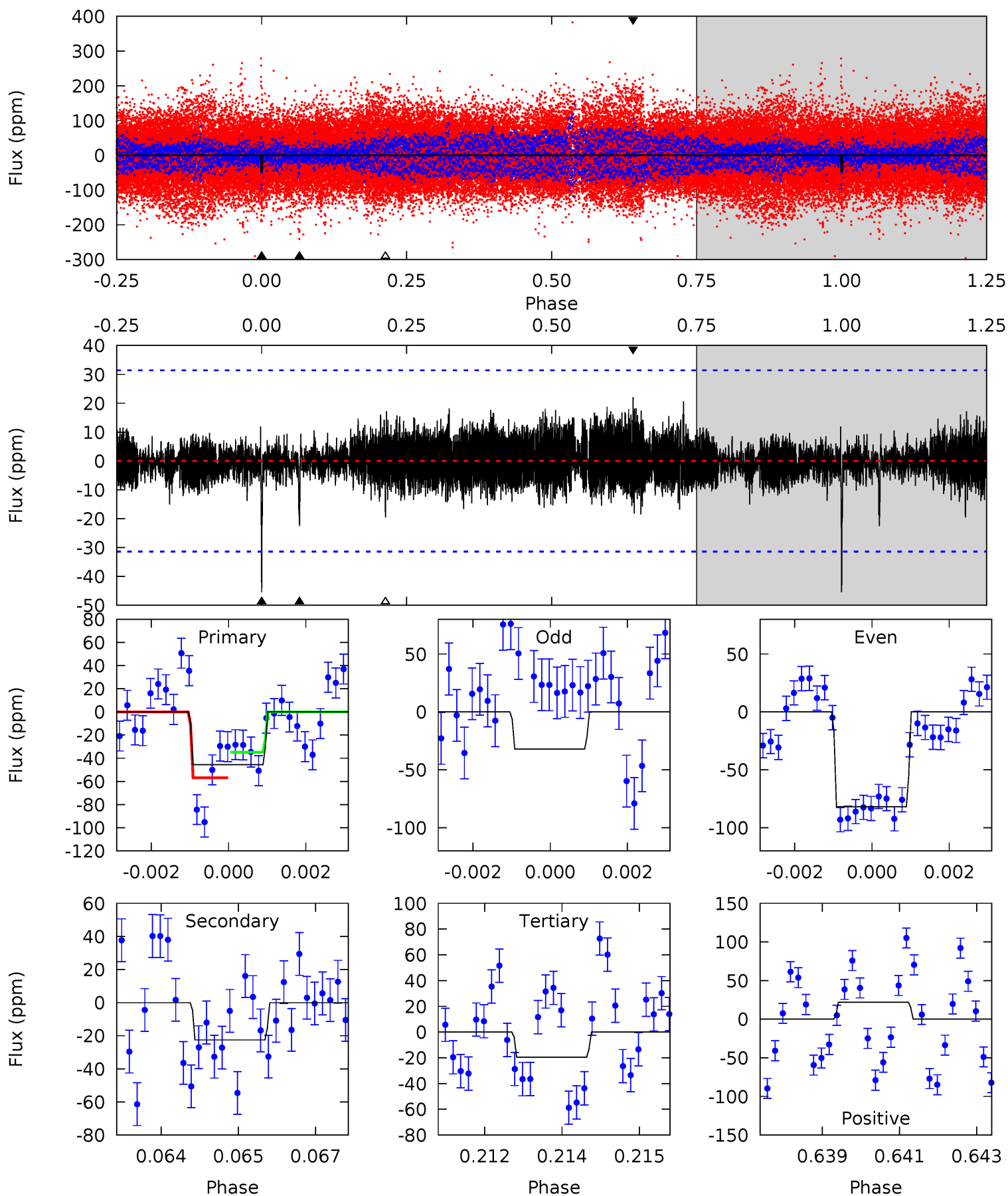
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	9.10	8.28	9.65	5.28	3.01	2.48	10.4	9.04	0.82	-0.55	7.18	0.97	0.34	0.33



Alt Model-Shift Uniqueness Test

002718321-01, $P = 358.404642$ Days, $E = 207.798700$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.73	3.84	3.32	3.76	5.35	3.13	1.01	4.41	3.98	0.51	0.08	4.39	0.37	0.33	1.87



Stellar Parameters For KIC 002718321

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9417^{+301}_{-451}	$4.177^{+0.132}_{-0.198}$	$0.070^{+0.150}_{-0.650}$	$2.001^{+0.745}_{-0.497}$	$2.195^{+0.377}_{-0.565}$	$0.386^{+0.307}_{-0.208}$
	+3%/-5%	+3%/-5%	+214%/-929%	+37%/-25%	+17%/-26%	+80%/-54%
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 002718321-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 3	$1.97^{+0.39}_{-0.32}$	729^{+58}_{-56}	6736^{+378}_{-383}	6248^{+2303}_{-1803}
Alt.	-23 ± 6	$1.62^{+0.34}_{-0.26}$	728^{+62}_{-56}	7067^{+643}_{-642}	7215^{+3484}_{-2560}

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 002718321-01. **Kepler magnitude: 10.47.** Transit SNR 10.50

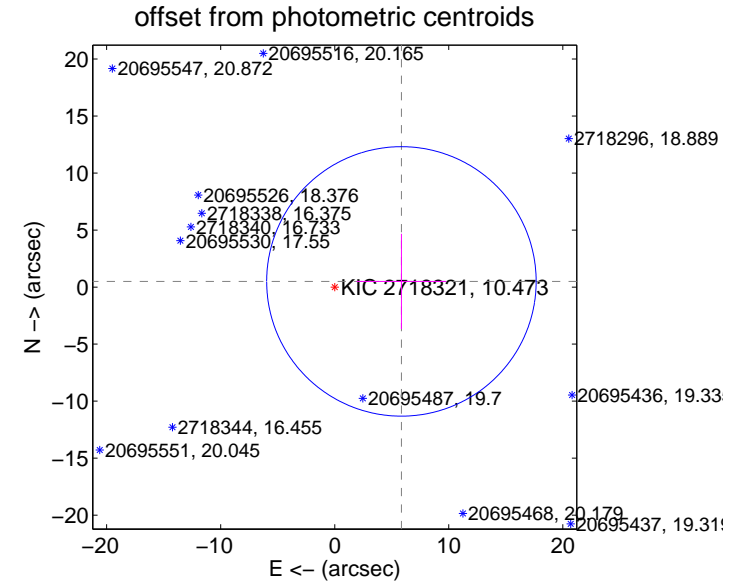
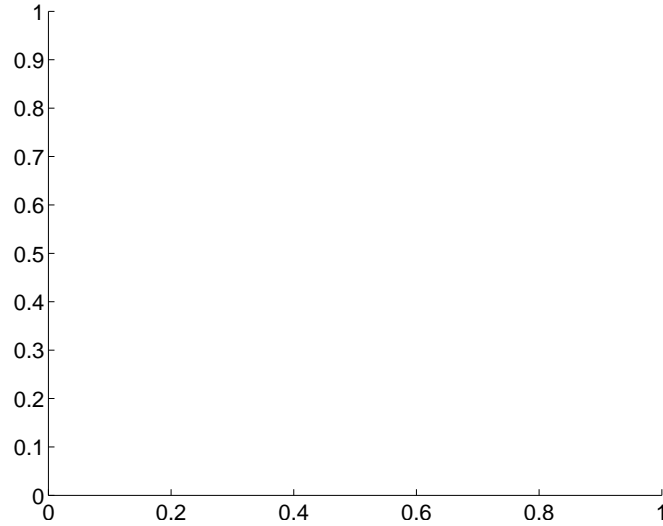
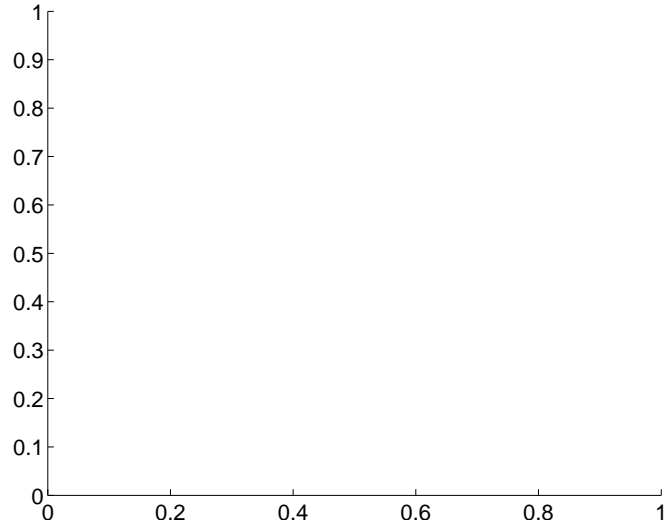
There are 0 quarters with good PRF difference image offsets

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	5.87 ± 3.94	1.49	-5.85 ± 3.94	0.50 ± 4.18

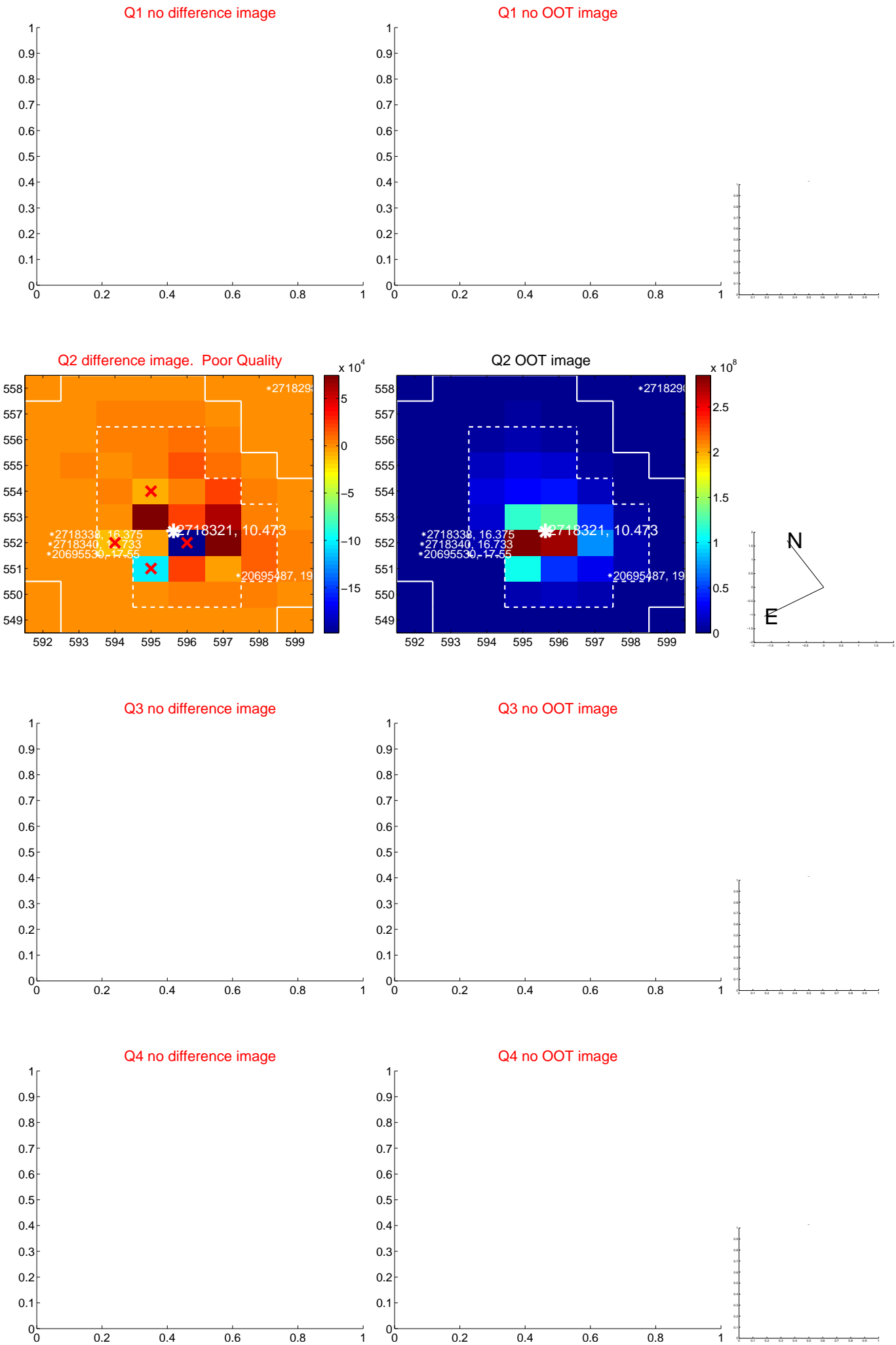
There is no PRF-fit offset from OOT-fit

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.

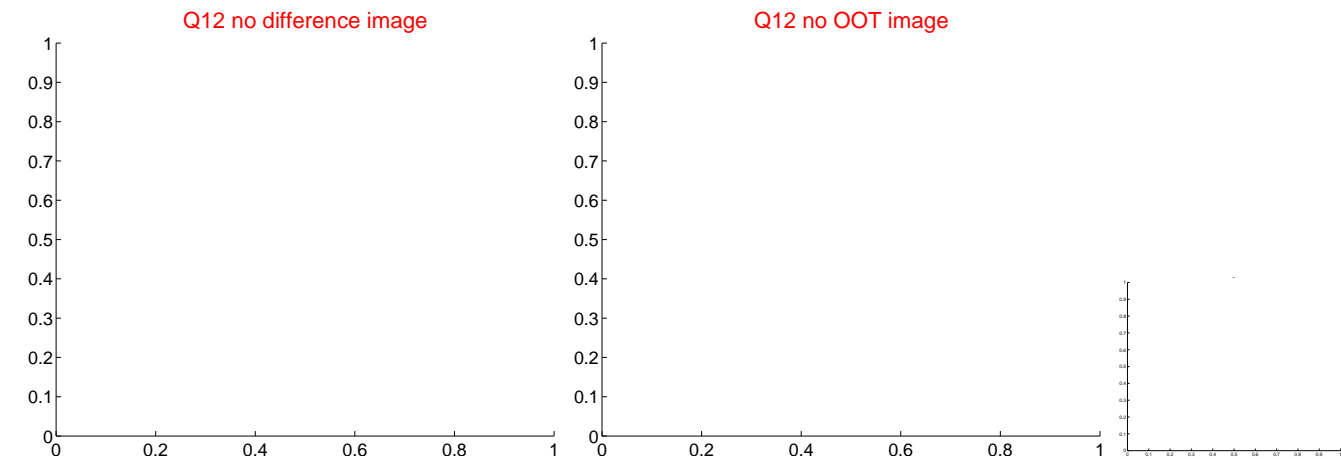
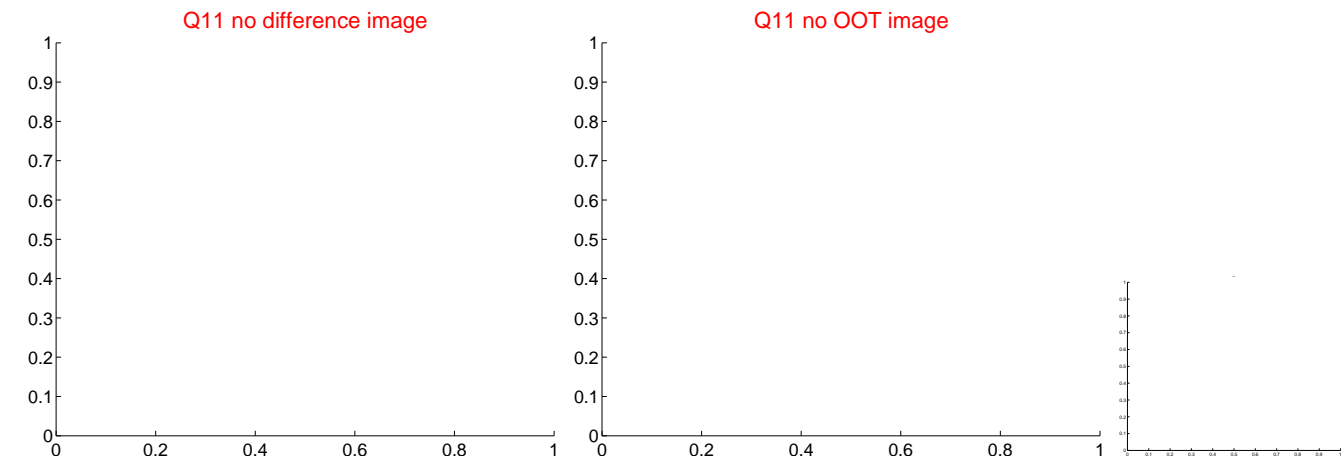
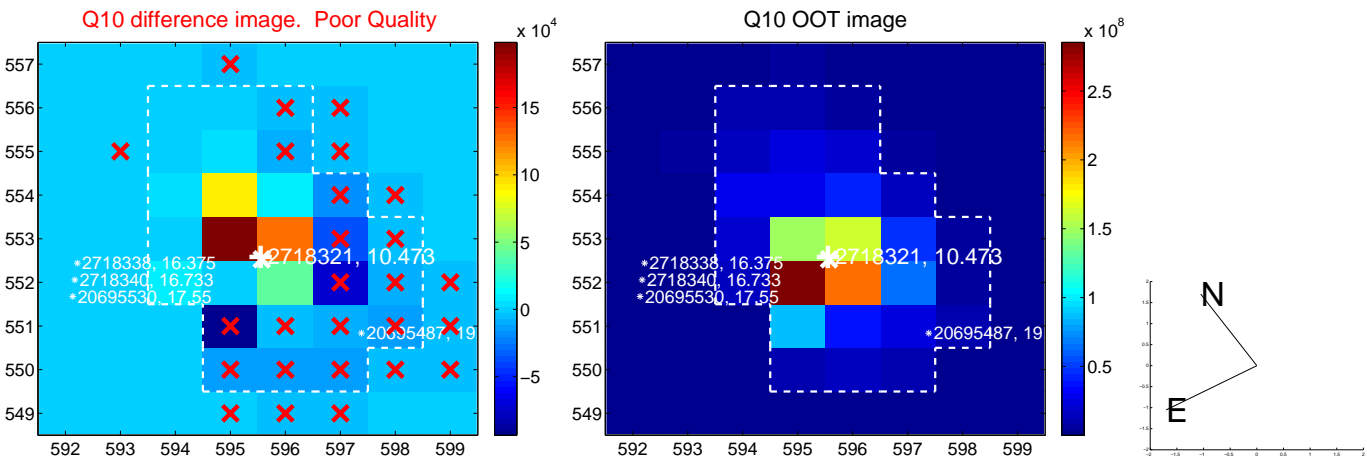
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



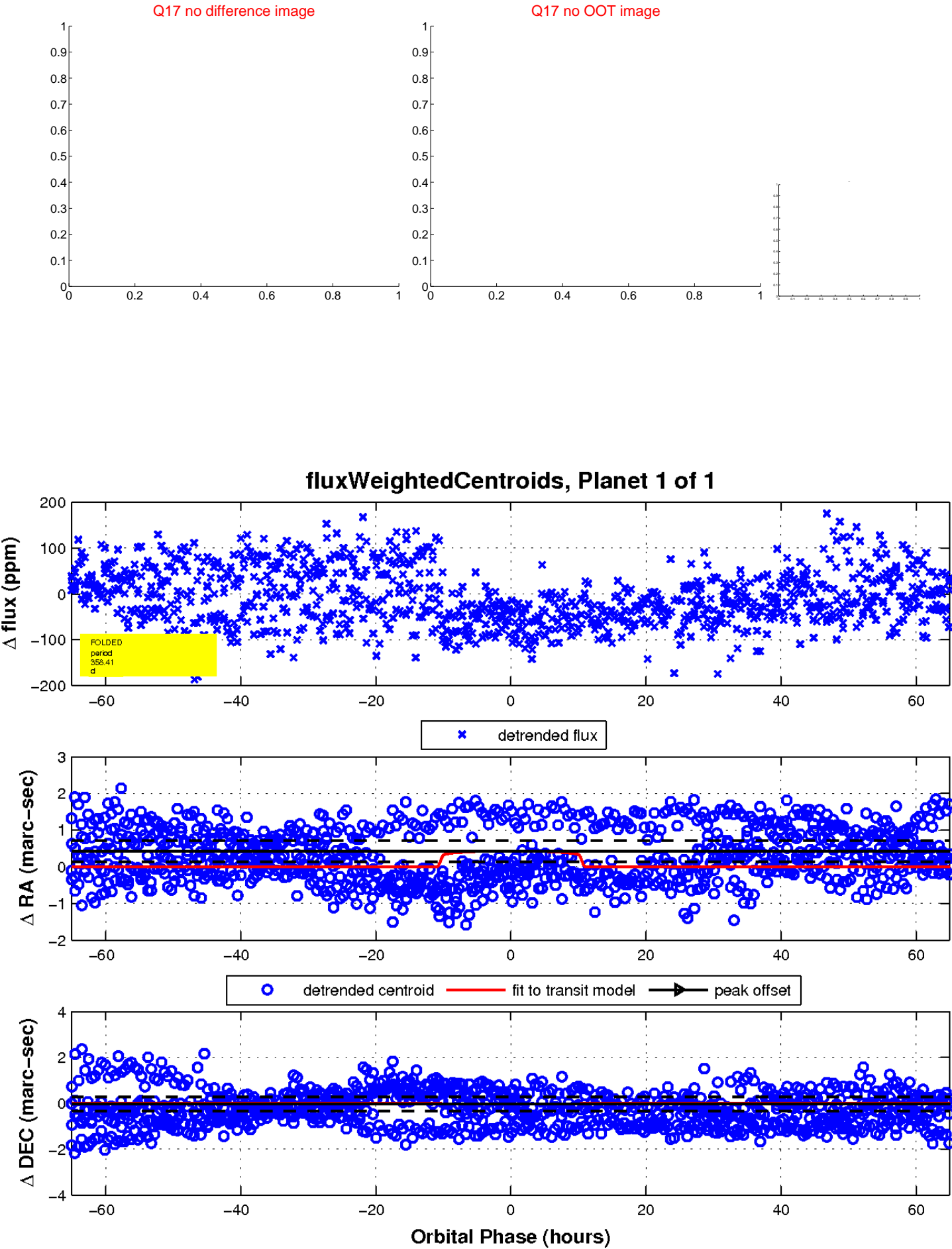
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

