

KIC 006039270

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})
006039270-02	OBS	No	358.635614	165.500389	1454.5	16.661	8.4	8.3	1.09	6310	4.45	1.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006039270-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE — ALL_TRANS_CHASES — 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.

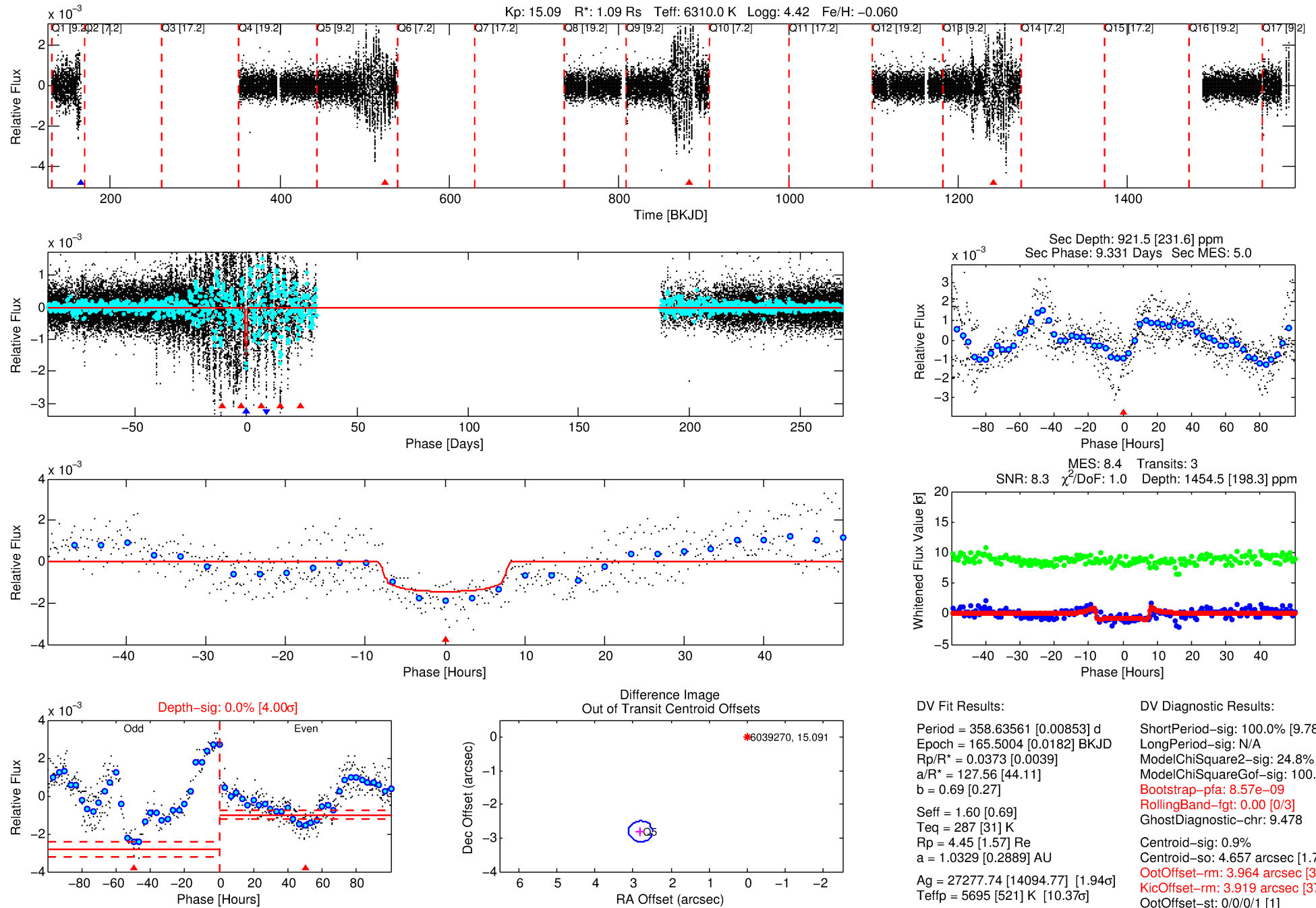
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006039270-02

No Significant Match Found

DV One-Page Summary

KIC: 6039270 Candidate: 2 of 2 Period: 358.636 d



DV Fit Results:

Period = 358.63561 [0.00853] d
Epoch = 165.5004 [0.0182] BKJD
Rp/R* = 0.0373 [0.0039]
a/R* = 127.56 [44.11]
b = 0.69 [0.27]
Seff = 1.60 [0.69]
Teq = 287 [31] K
Rp = 4.45 [1.57] Re
a = 1.0329 [0.2889] AU
Ag = 27277.74 [14094.77] [1.94σ]
Teff = 5695 [521] K [10.37σ]

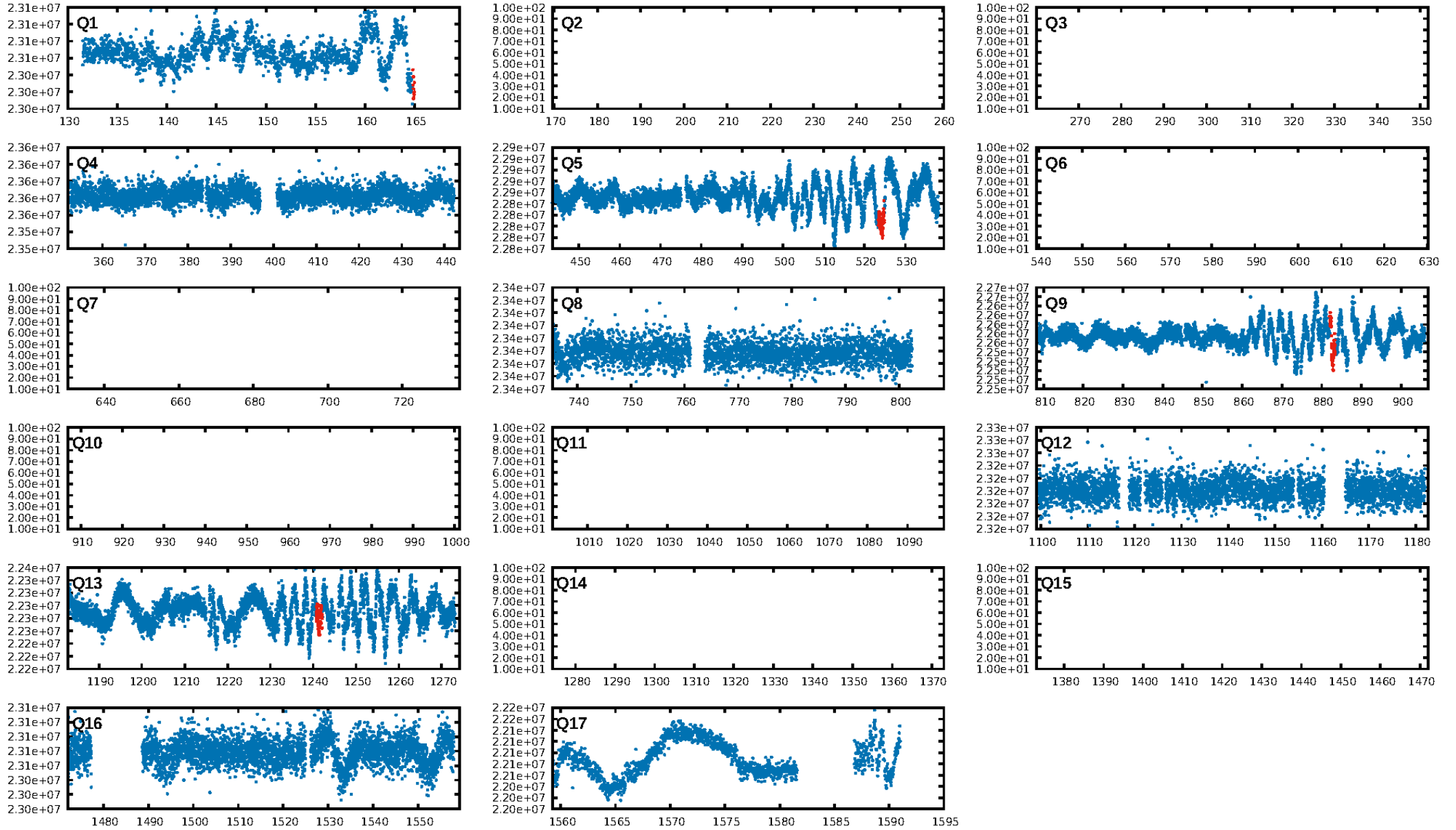
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.78σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 24.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.57e-09
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 9.478
Centroid-sig: 0.9%
Centroid-so: 4.657 arcsec [1.74σ]
OotOffset-rm: 3.964 arcsec [38.48σ]
KicOffset-rm: 3.919 arcsec [37.98σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

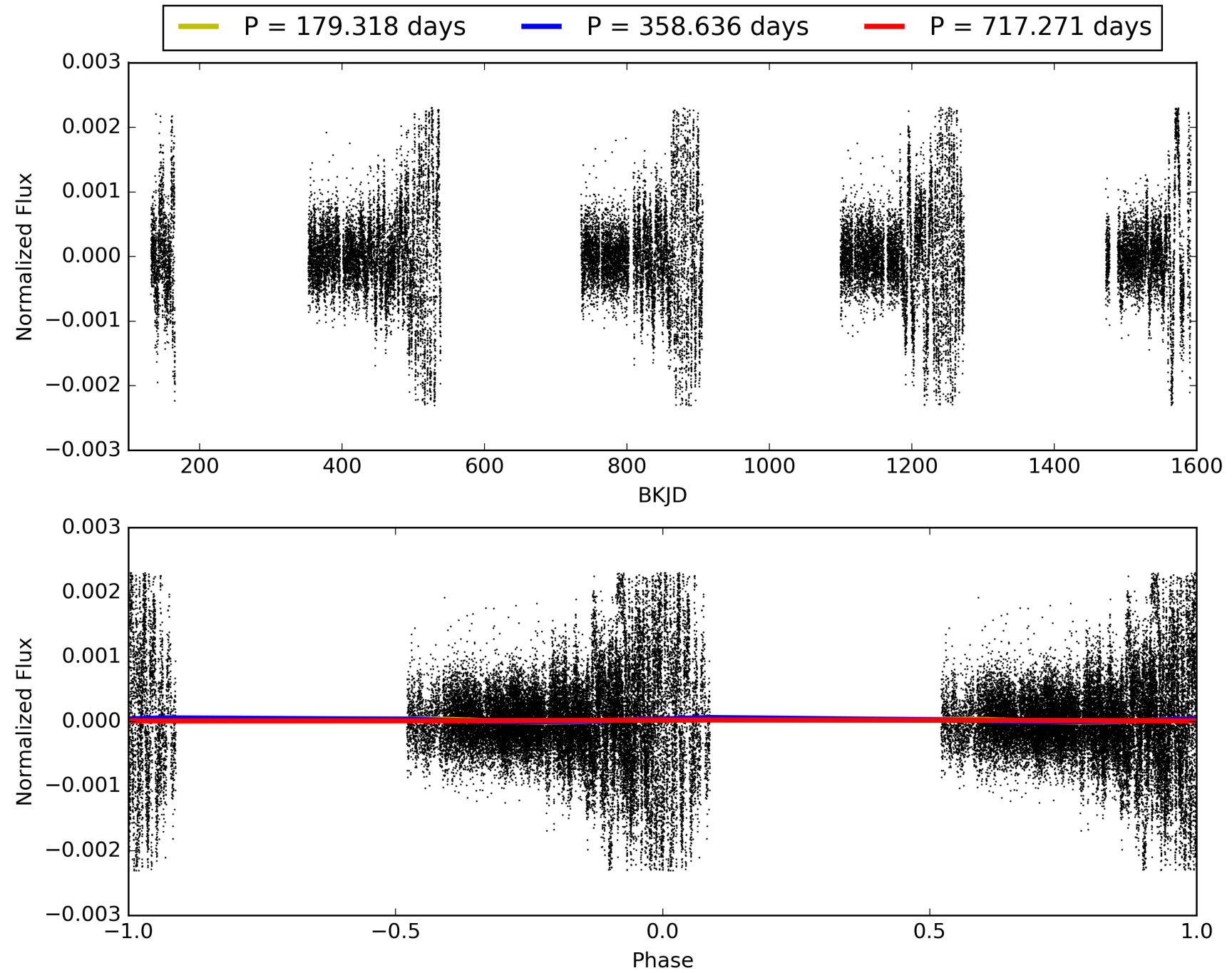
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:26:21 Z

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

TCE 006039270-02, PDC Light Curves

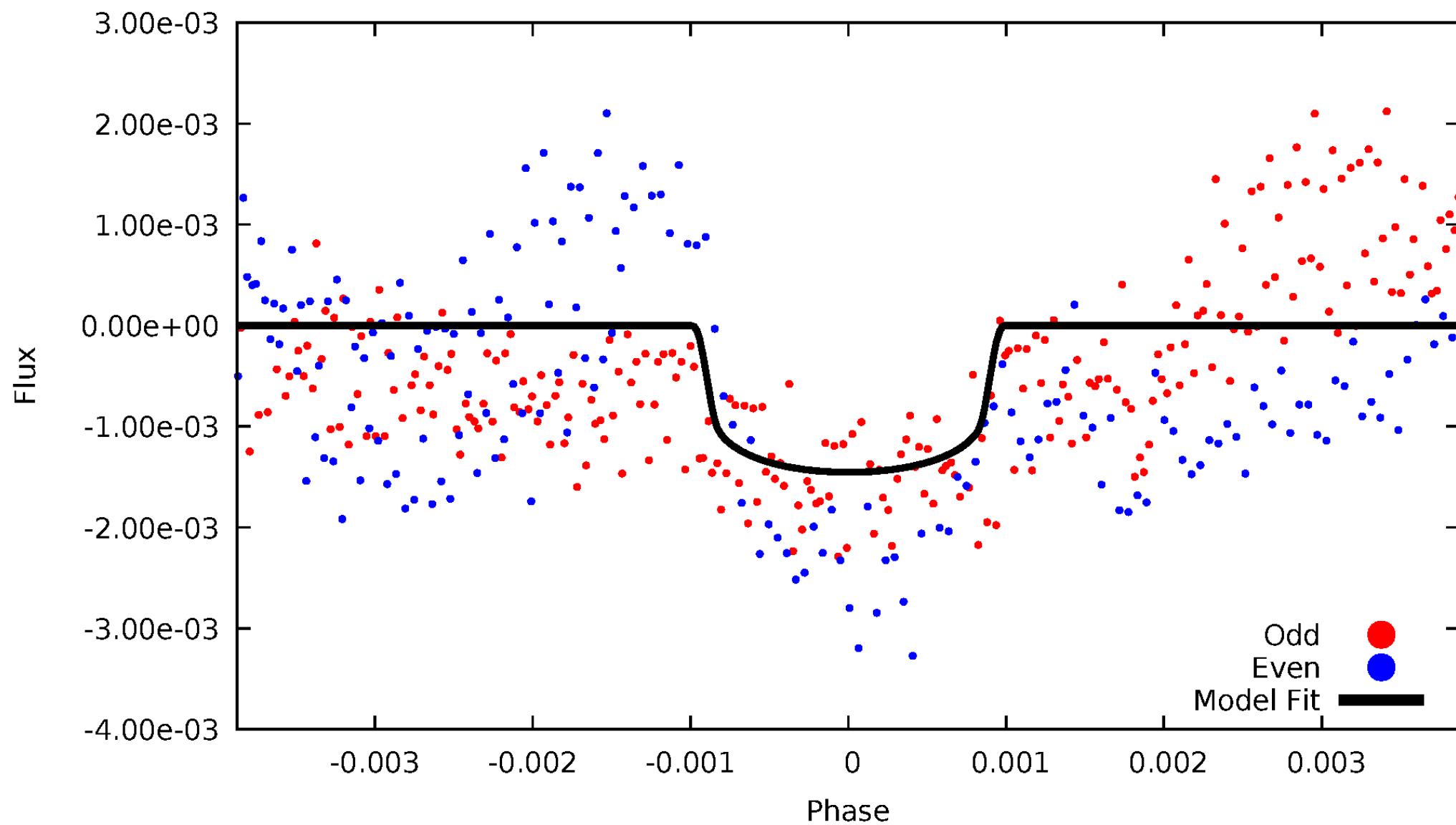


TCE 006039270-02



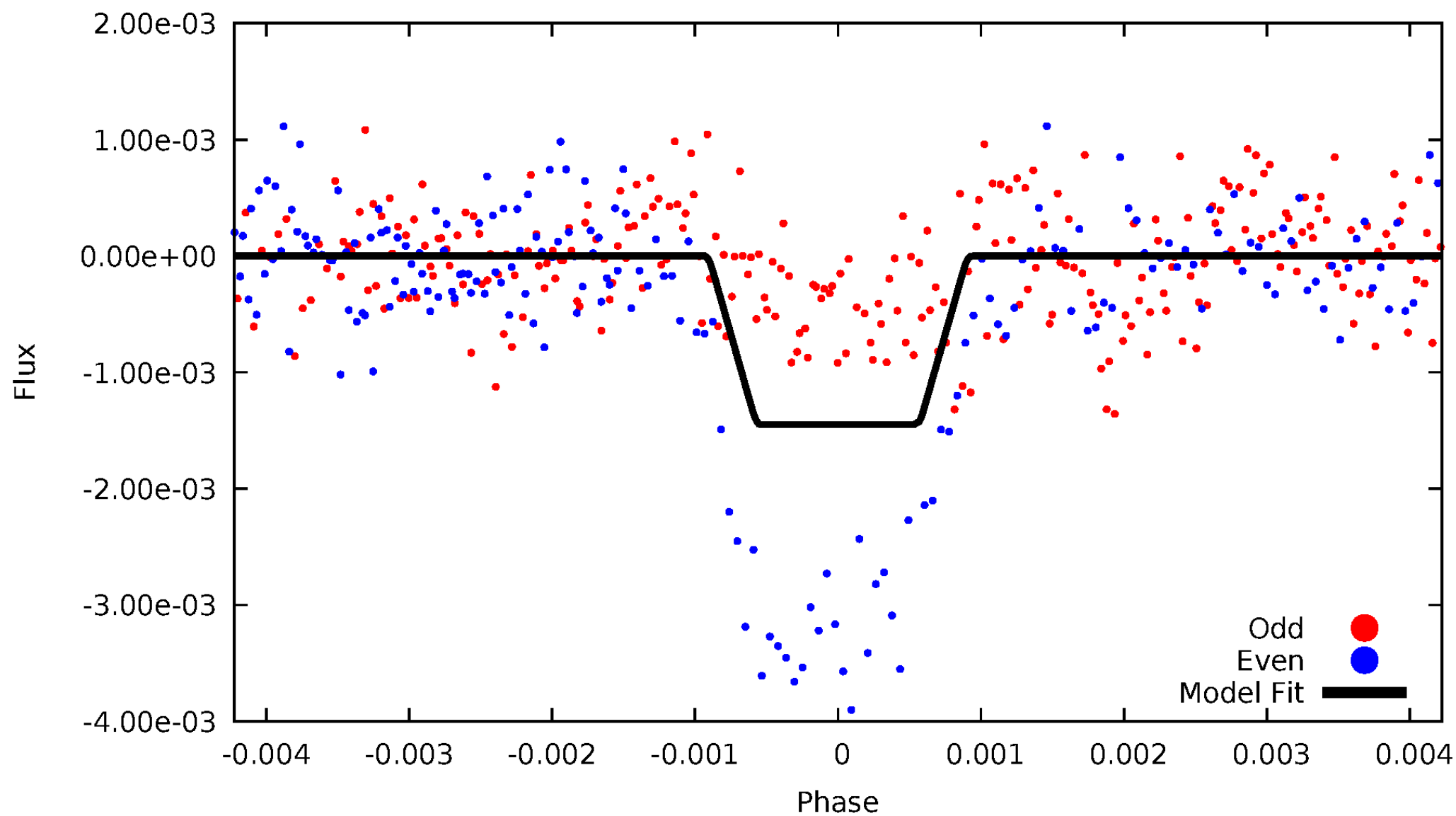
DV Odd/Even

TCE 006039270-02



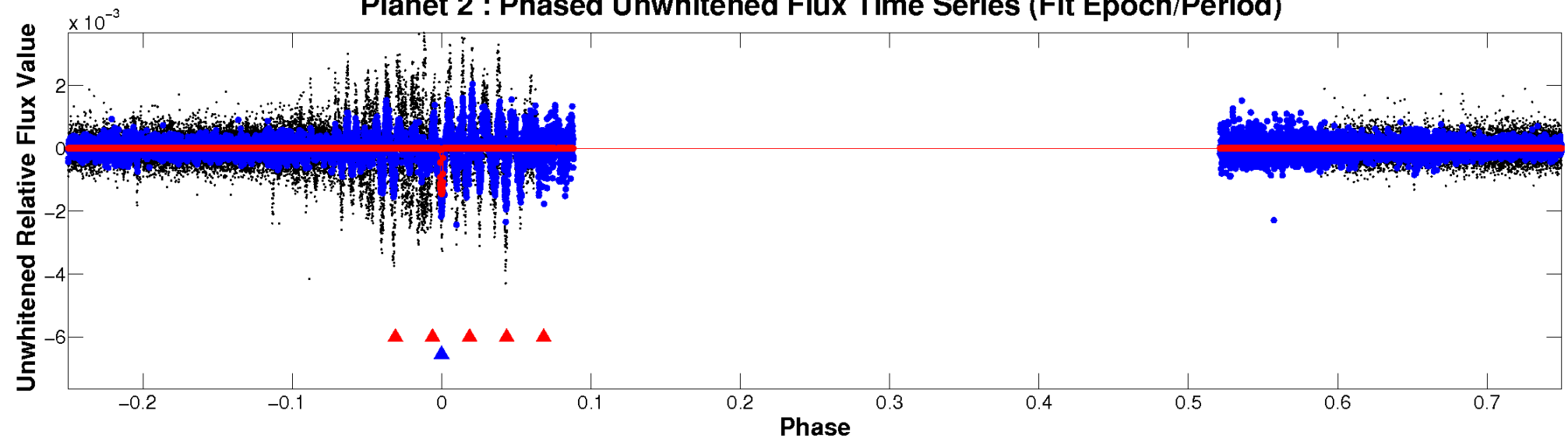
ALT Odd/Even

TCE 006039270-02

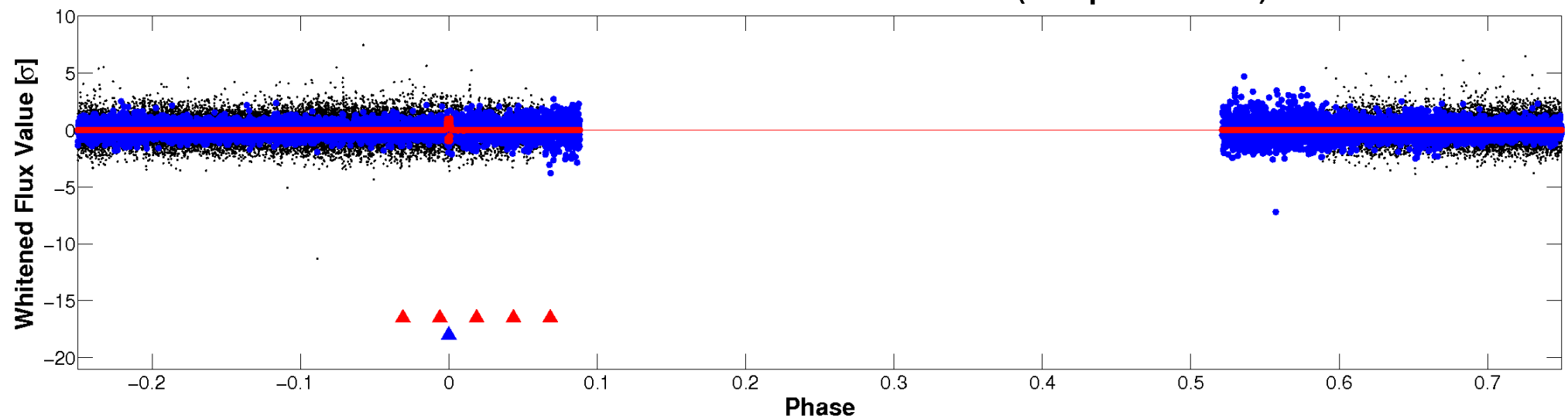


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

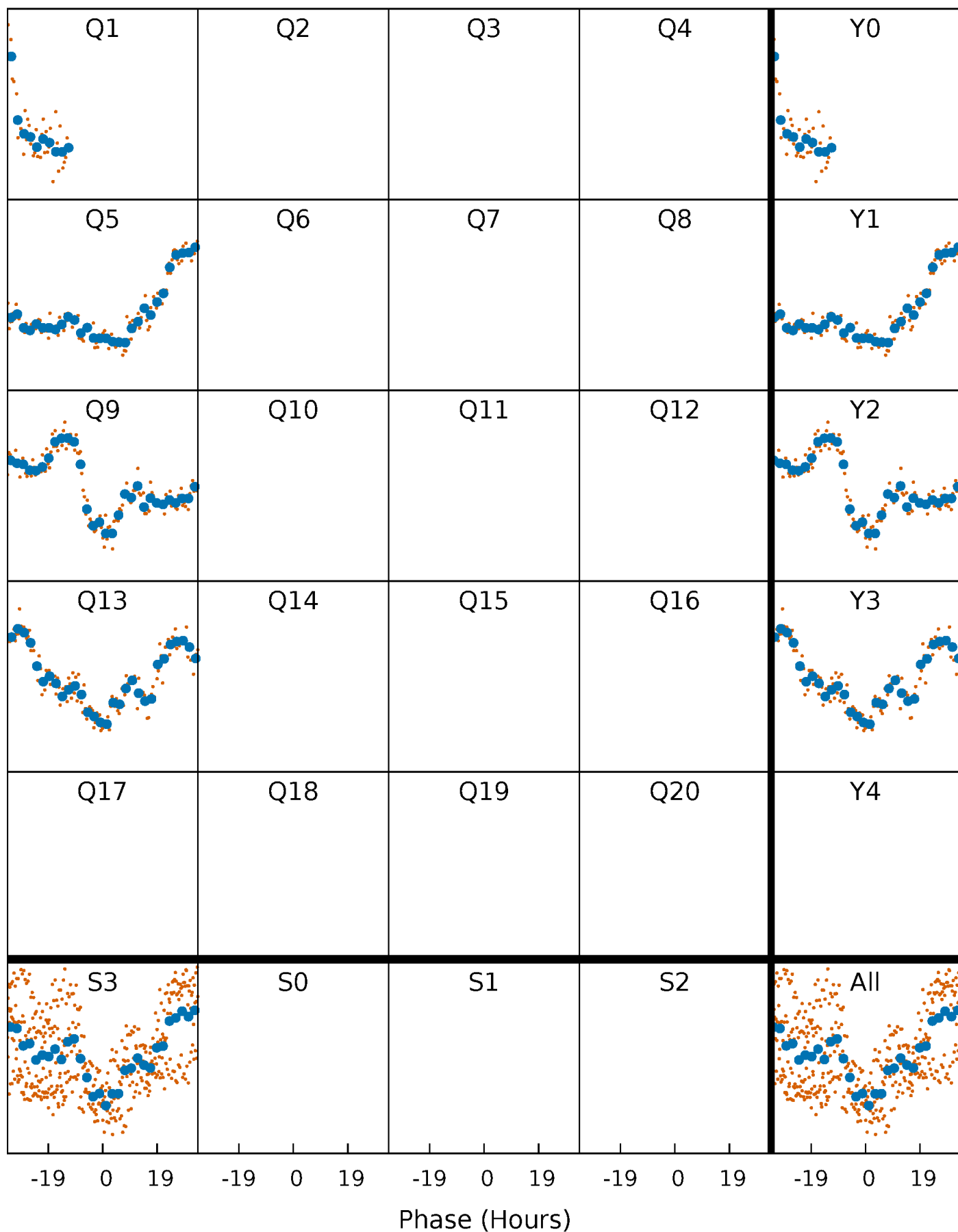


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



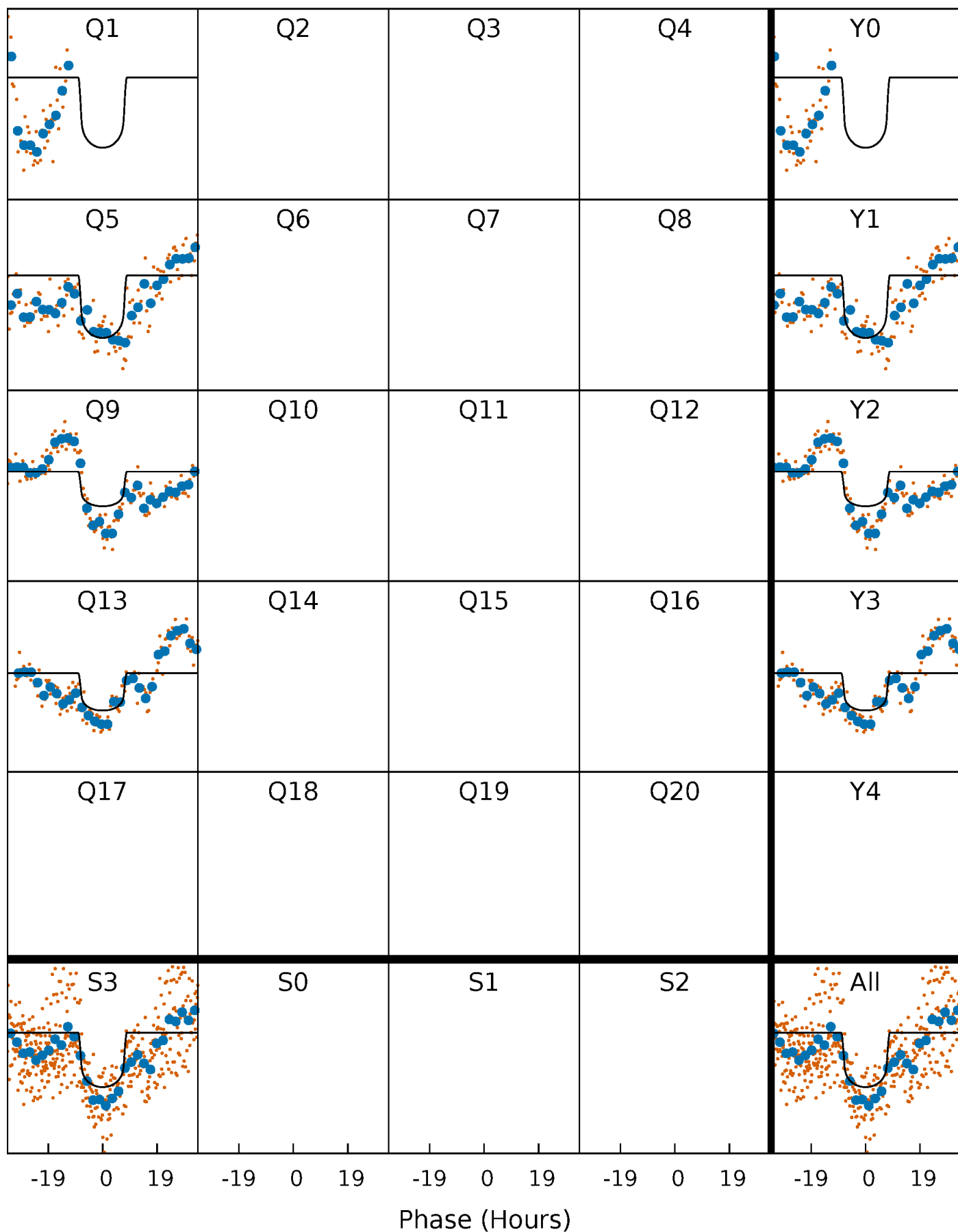
PDC Quarter-Phased Transit Curves

TCE 006039270-02 $P=358.635614$ Days $T_0=165.500389$ (BKJD)



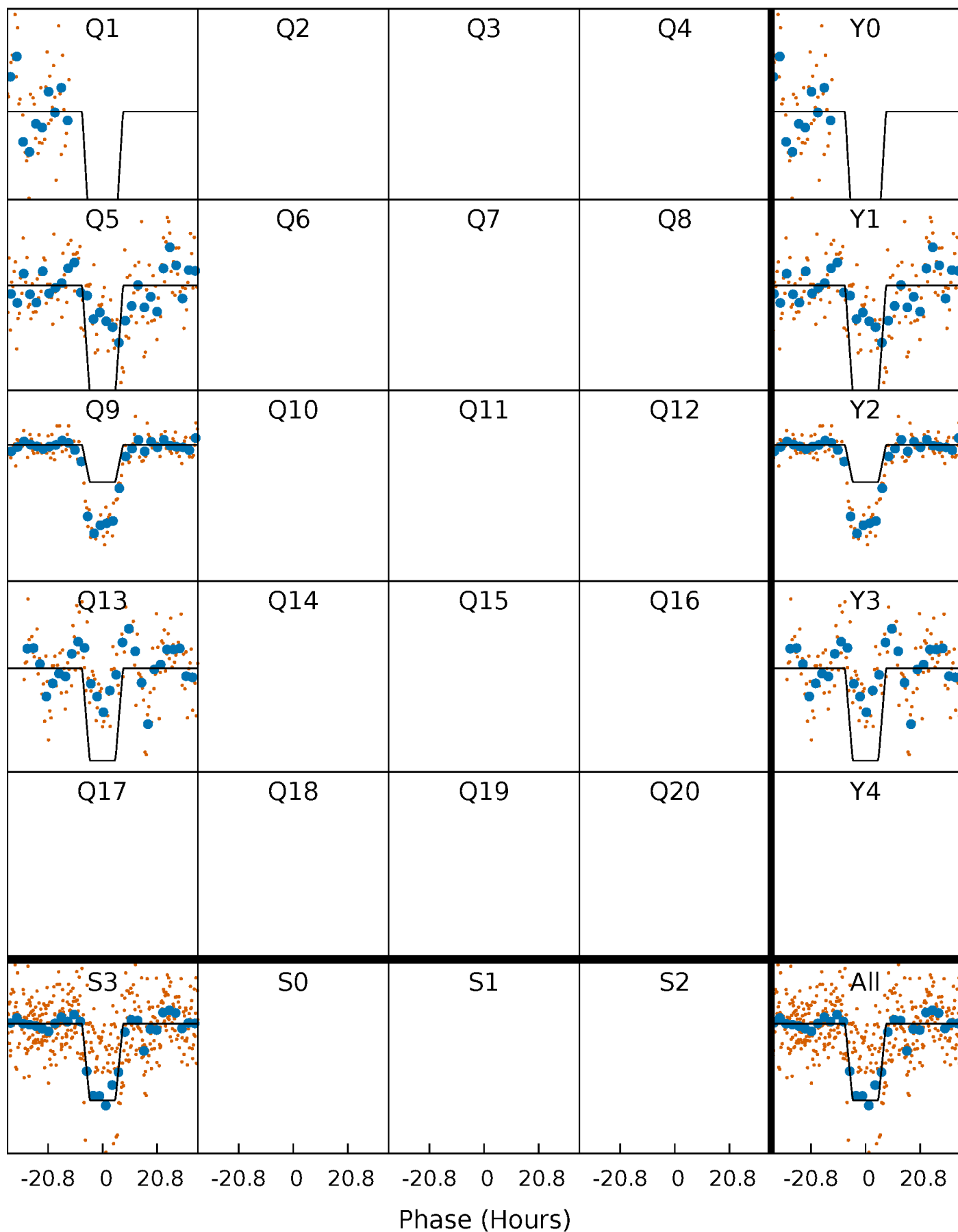
DV Quarter-Phased Transit Curves

TCE 006039270-02 $P=358.635614$ Days $T_0=165.500389$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

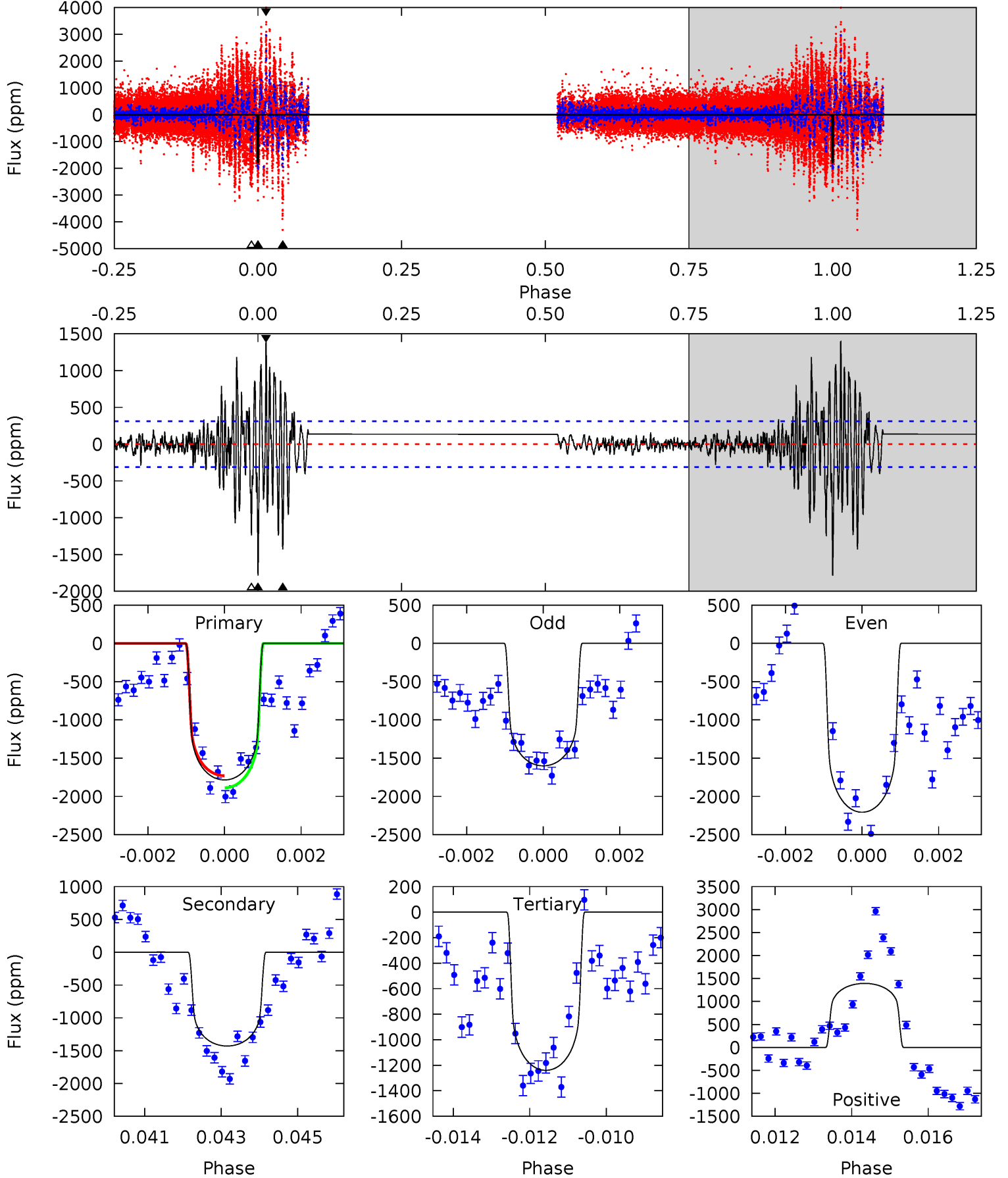
TCE 006039270-02 P=358.622600 Days $T_0=165.516446$ (BKJD)



DV Model-Shift Uniqueness Test

006039270-02, P = 358.635614 Days, E = 165.500389 Days

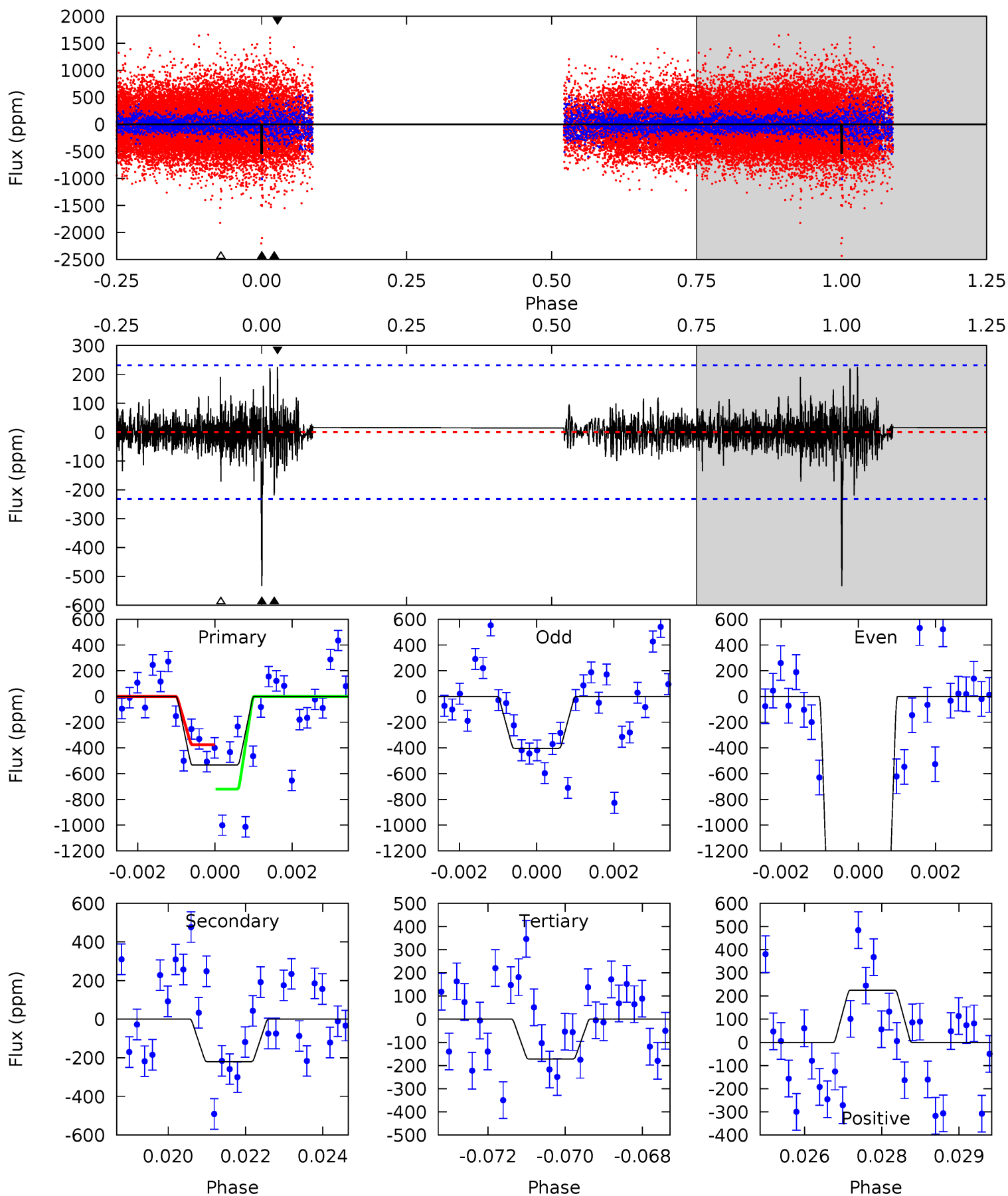
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	24.4	21.2	23.8	5.33	3.10	4.75	9.30	6.69	3.23	0.61	4.67	1.04	0.44	0.96



Alt Model-Shift Uniqueness Test

006039270-02, P = 358.622600 Days, E = 165.516446 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	5.06	3.95	5.18	5.34	3.11	0.97	8.32	7.09	1.11	-0.12	36.1	2.81	0.30	3.67



Stellar Parameters For KIC 006039270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6310^{+196}_{-261}	$4.417^{+0.067}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$1.095^{+0.370}_{-0.123}$	$1.143^{+0.157}_{-0.157}$	$1.225^{+0.358}_{-0.655}$
	+3%/-4%	+2%/-5%	+417%/-500%	+34%/-11%	+14%/-14%	+29%/-53%
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 006039270-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1429 ± 59	$4.62^{+0.94}_{-0.65}$	407^{+35}_{-23}	6309^{+459}_{-348}	38693^{+12375}_{-10879}
Alt.	-220 ± 43	$4.73^{+0.88}_{-0.68}$	408^{+33}_{-23}	4185^{+247}_{-225}	5585^{+2154}_{-1818}

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

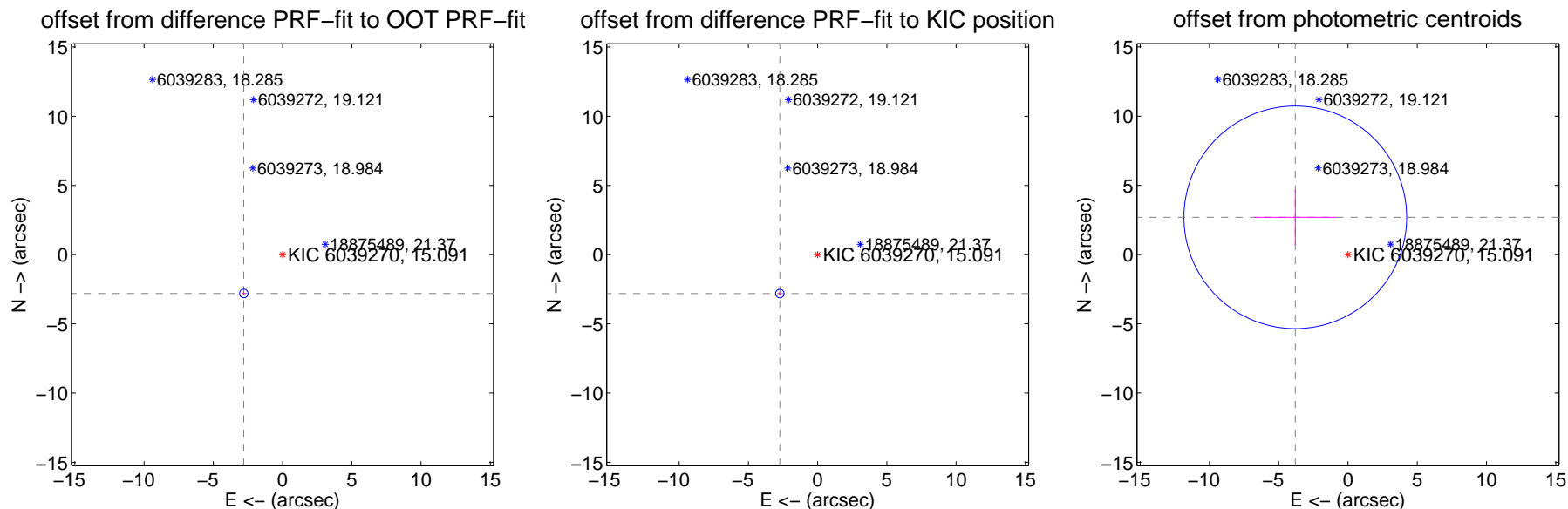
DV Centroid Data

Supplemental centroid analysis for 006039270-02. Kepler magnitude: 15.09. Transit SNR 8.33

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.964 ± 0.103	38.48	2.799 ± 0.096	-2.807 ± 0.110
PRF-fit source offset from KIC position	3.919 ± 0.103	37.98	2.728 ± 0.096	-2.814 ± 0.110
photometric centroid source offset	4.66 ± 2.68	1.74	3.80 ± 2.97	2.69 ± 1.99

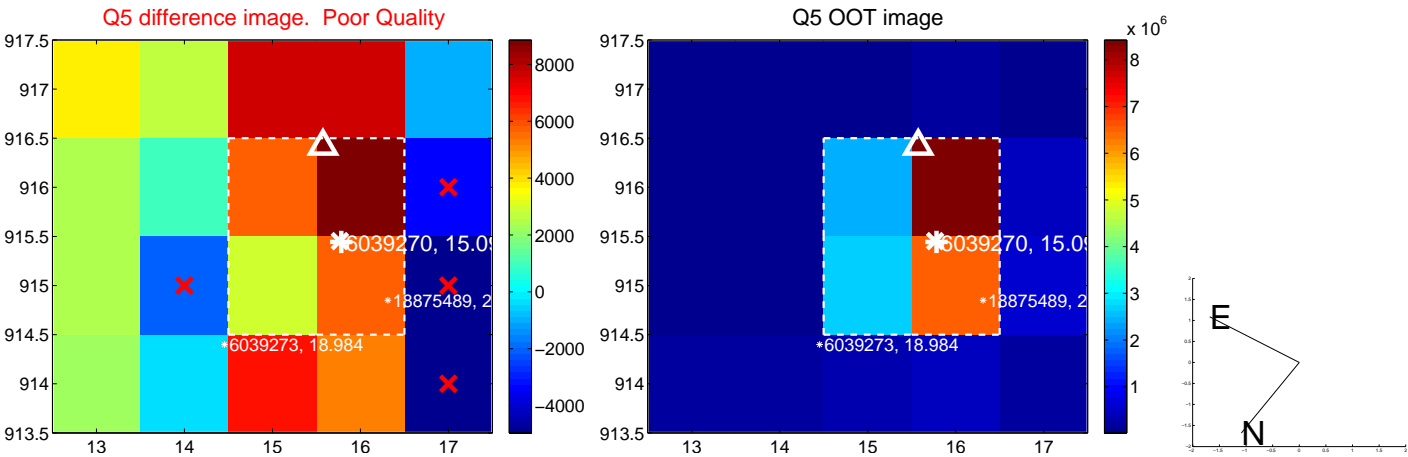


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

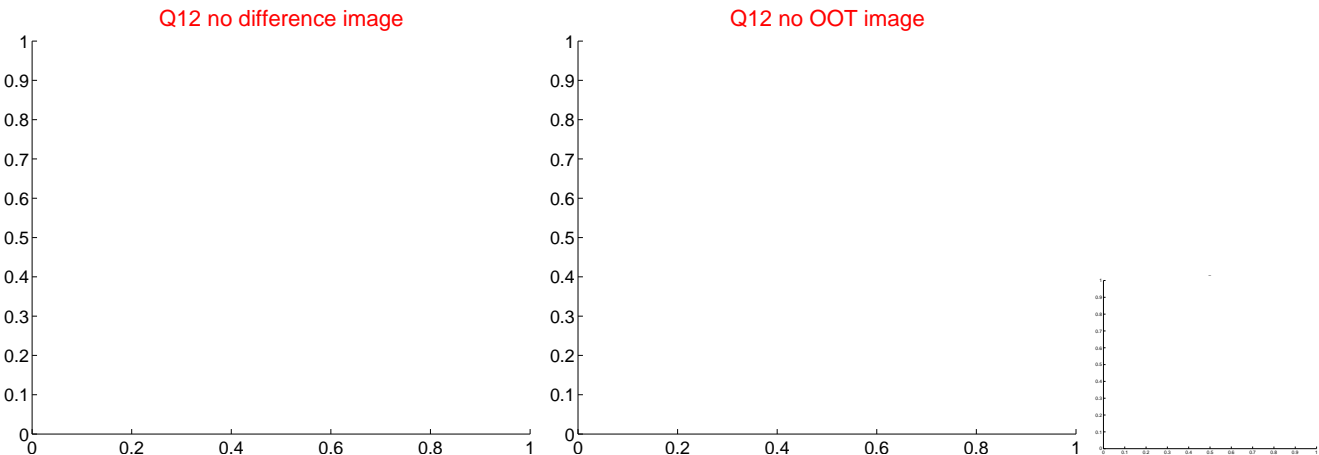
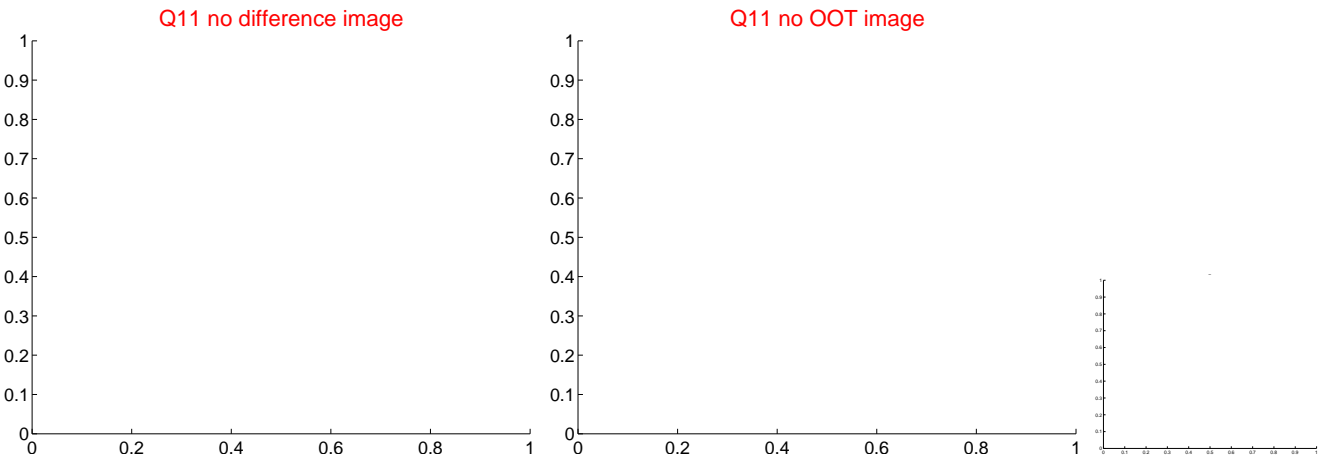
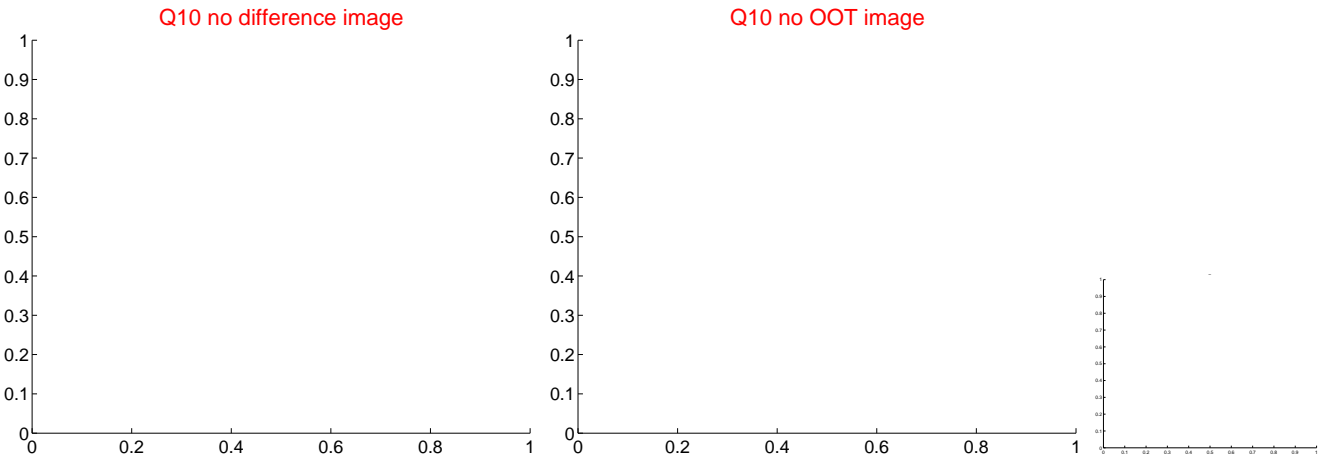
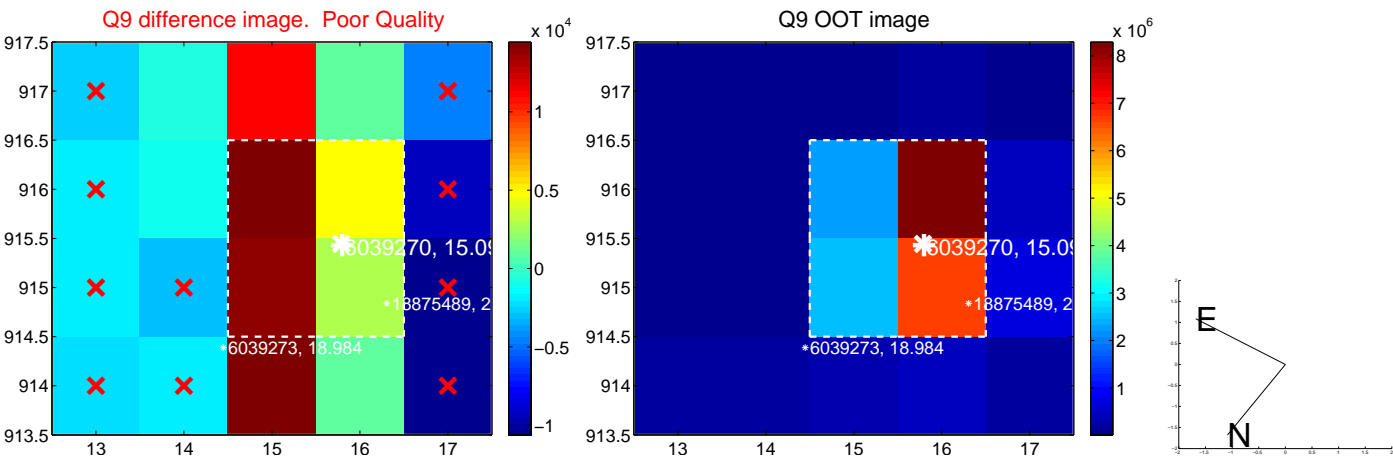
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



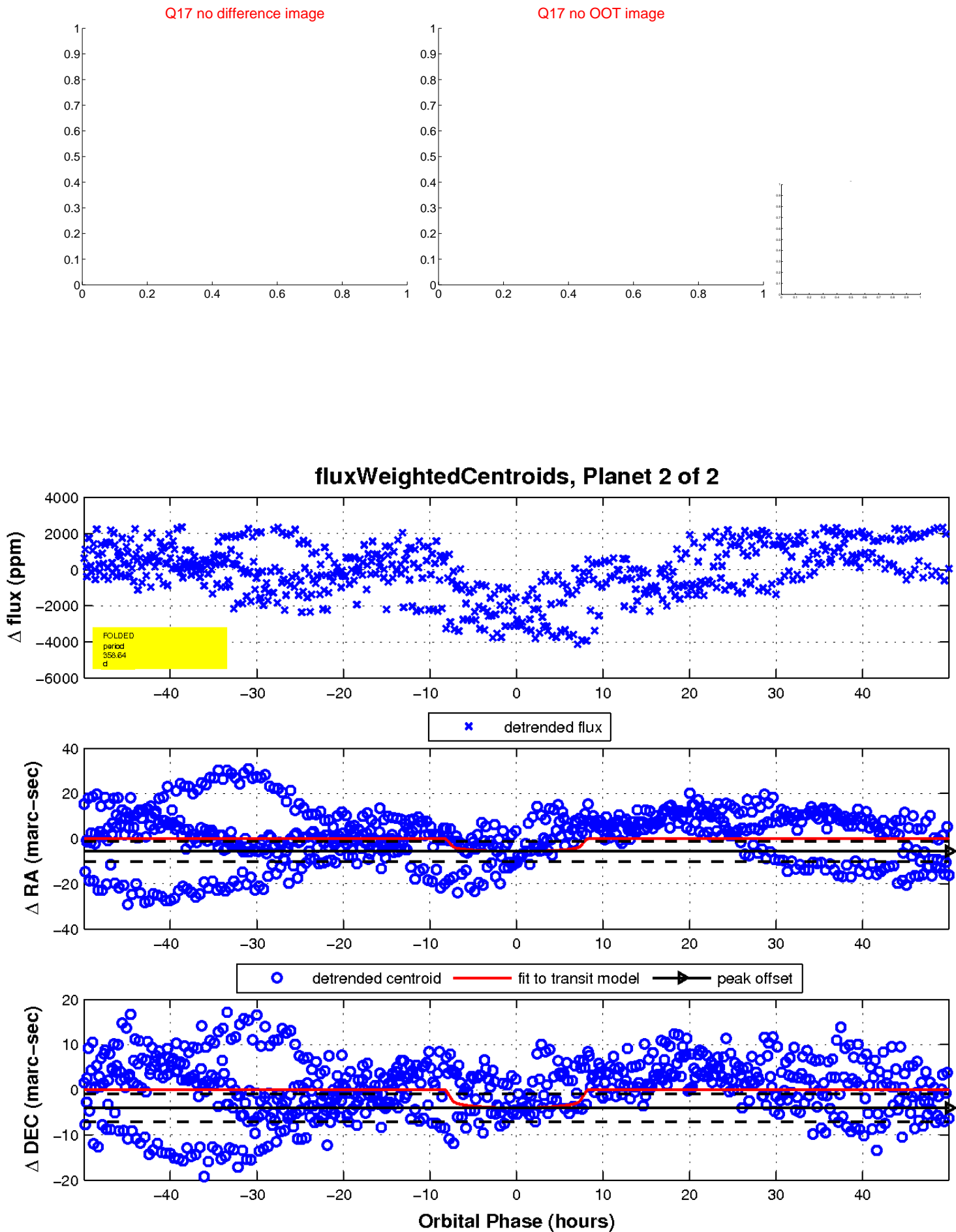
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

