

KIC 009771266

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})
009771266-02	OBS	No	365.086898	494.945116	829.7	17.088	7.5	8.8	1.05	5922	3.26	1.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009771266-02	OBS	FP	0.00	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.

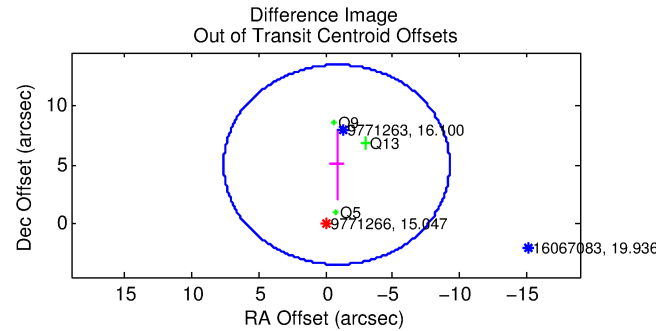
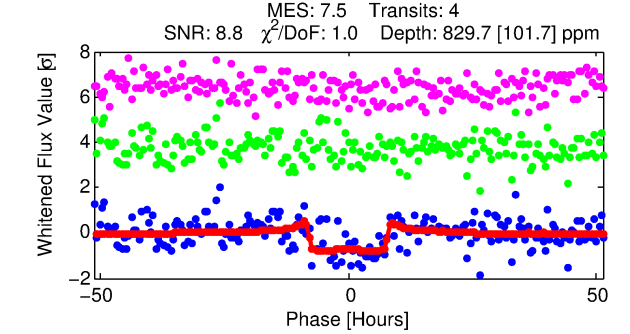
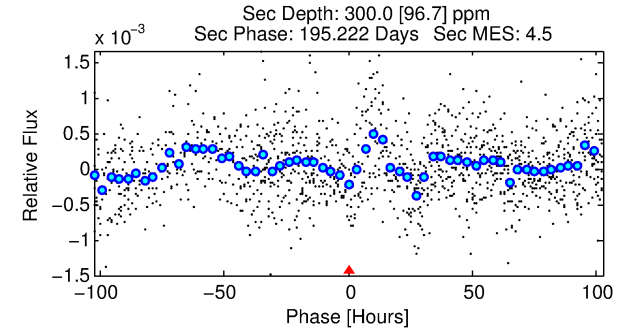
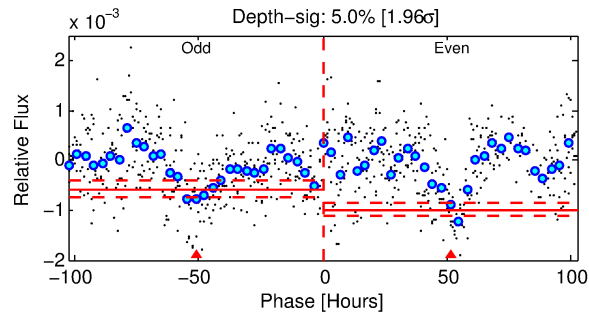
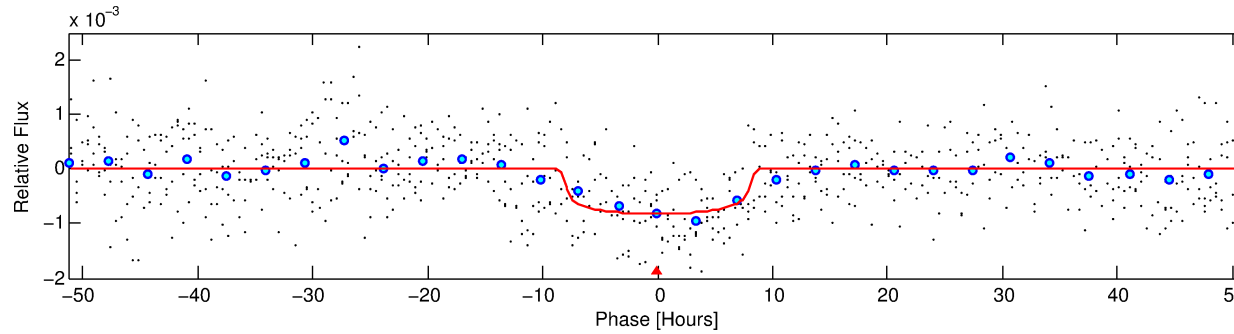
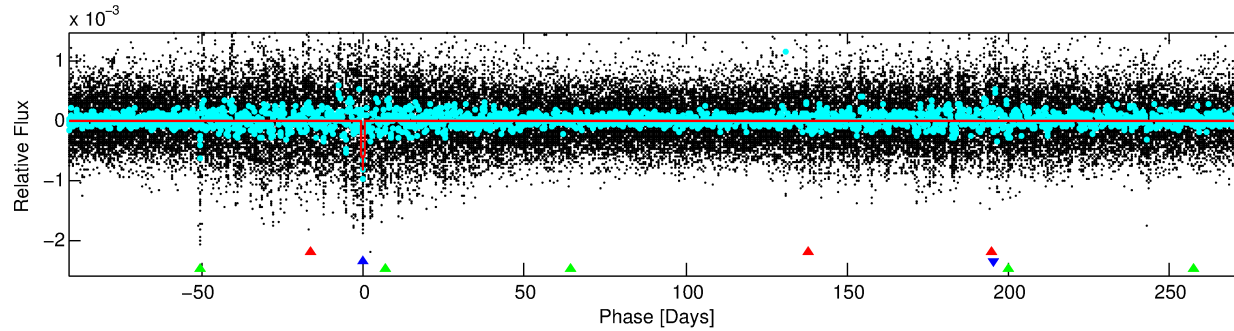
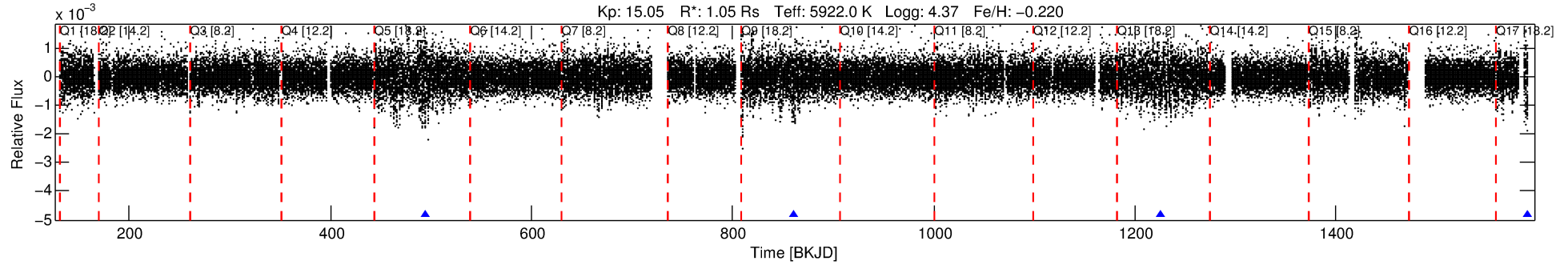
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009771266-02

No Significant Match Found

DV One-Page Summary

KIC: 9771266 Candidate: 2 of 3 Period: 365.087 d



DV Fit Results:

Period = 365.08690 [0.00856] d
Epoch = 494.9451 [0.0154] BKJD
Rp/R* = 0.0285 [0.0036]
a/R* = 116.90 [59.24]
b = 0.74 [0.31]
Seff = 1.27 [0.46]
Teq = 271 [24] K
Rp = 3.26 [1.04] Re
a = 0.9769 [0.2346] AU
Ag = 14791.21 [7884.88] [1.88 σ]
Teffp = 4614 [493] K [8.80 σ]

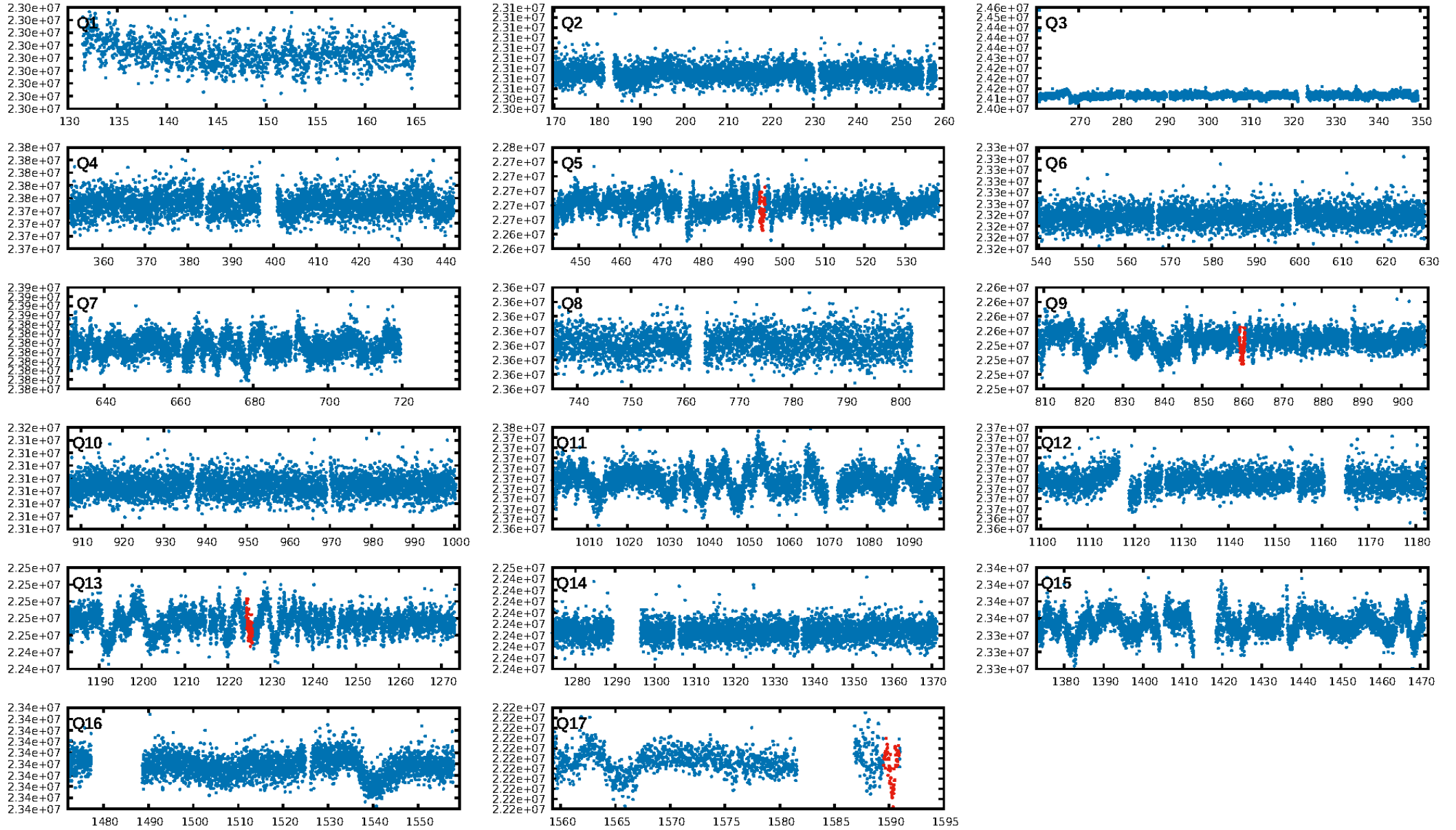
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [63.44 σ]
LongPeriod-sig: 100.0% [288.24 σ]
ModelChiSquare2-sig: 29.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.68e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.832
Centroid-sig: 2.4%
Centroid-so: 1.389 arcsec [1.05 σ]
OotOffset-rm: 5.070 arcsec [1.80 σ]
KicOffset-rm: 5.064 arcsec [1.83 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

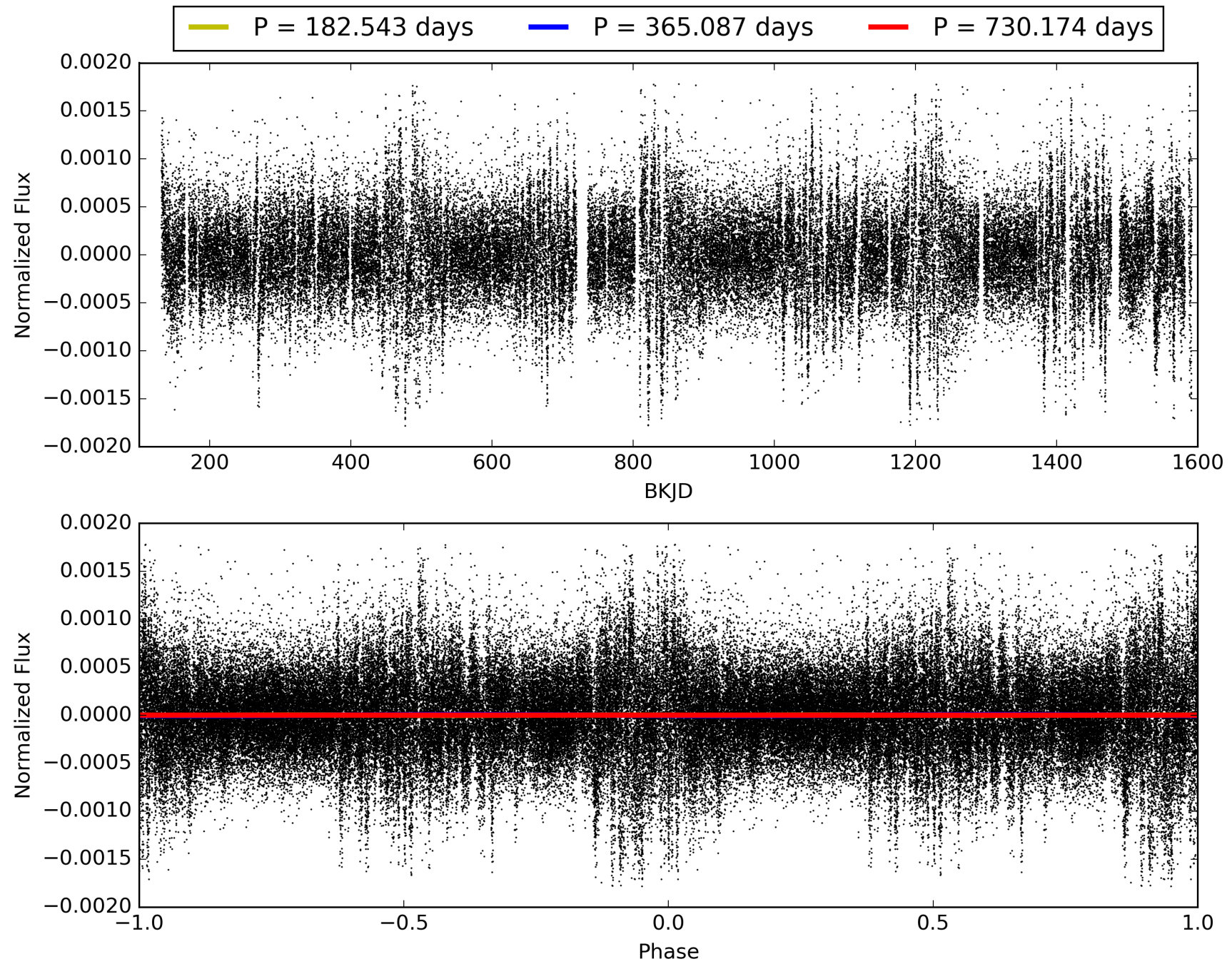
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:23:30 Z

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

TCE 009771266-02, PDC Light Curves

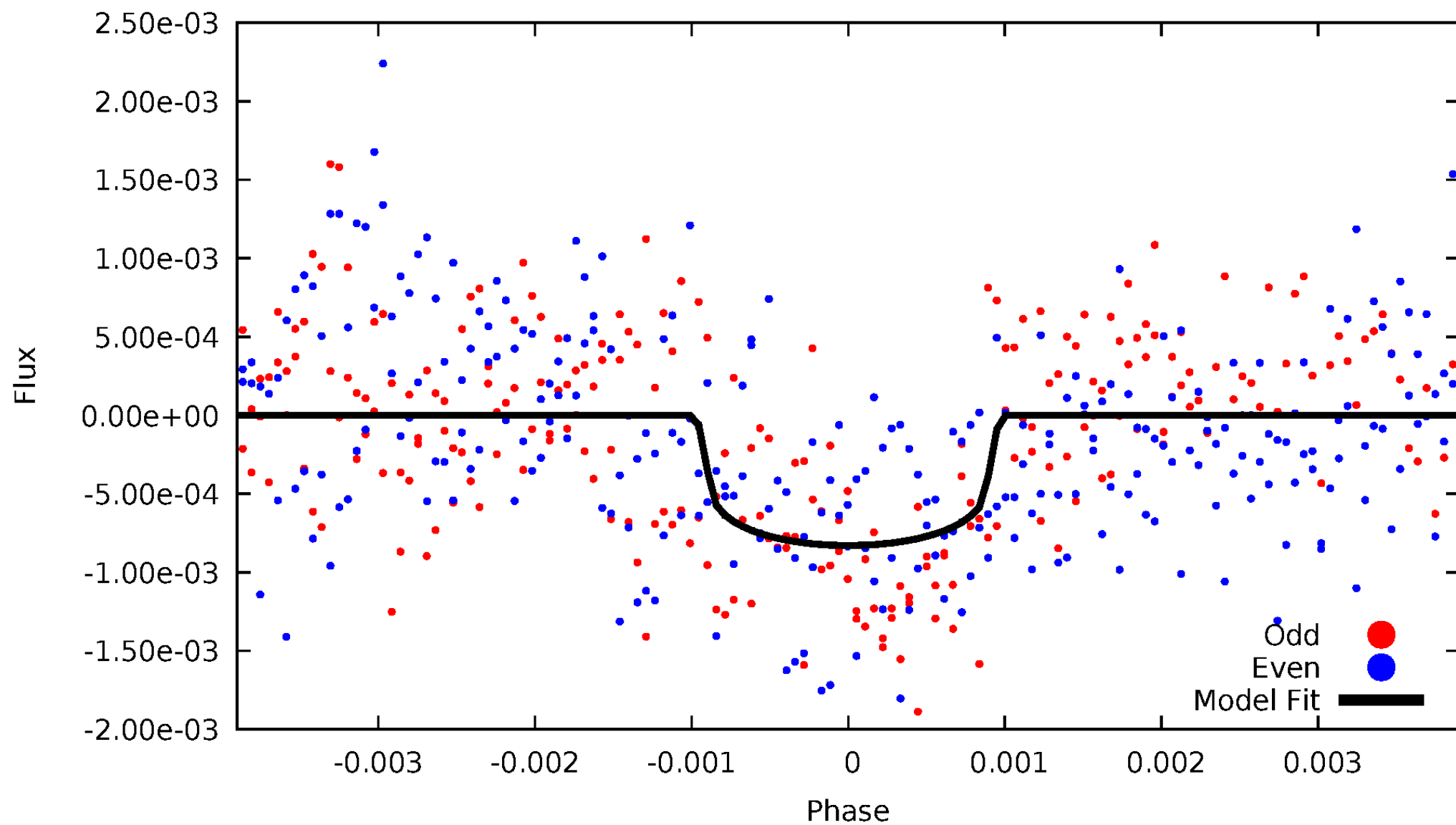


TCE 009771266-02



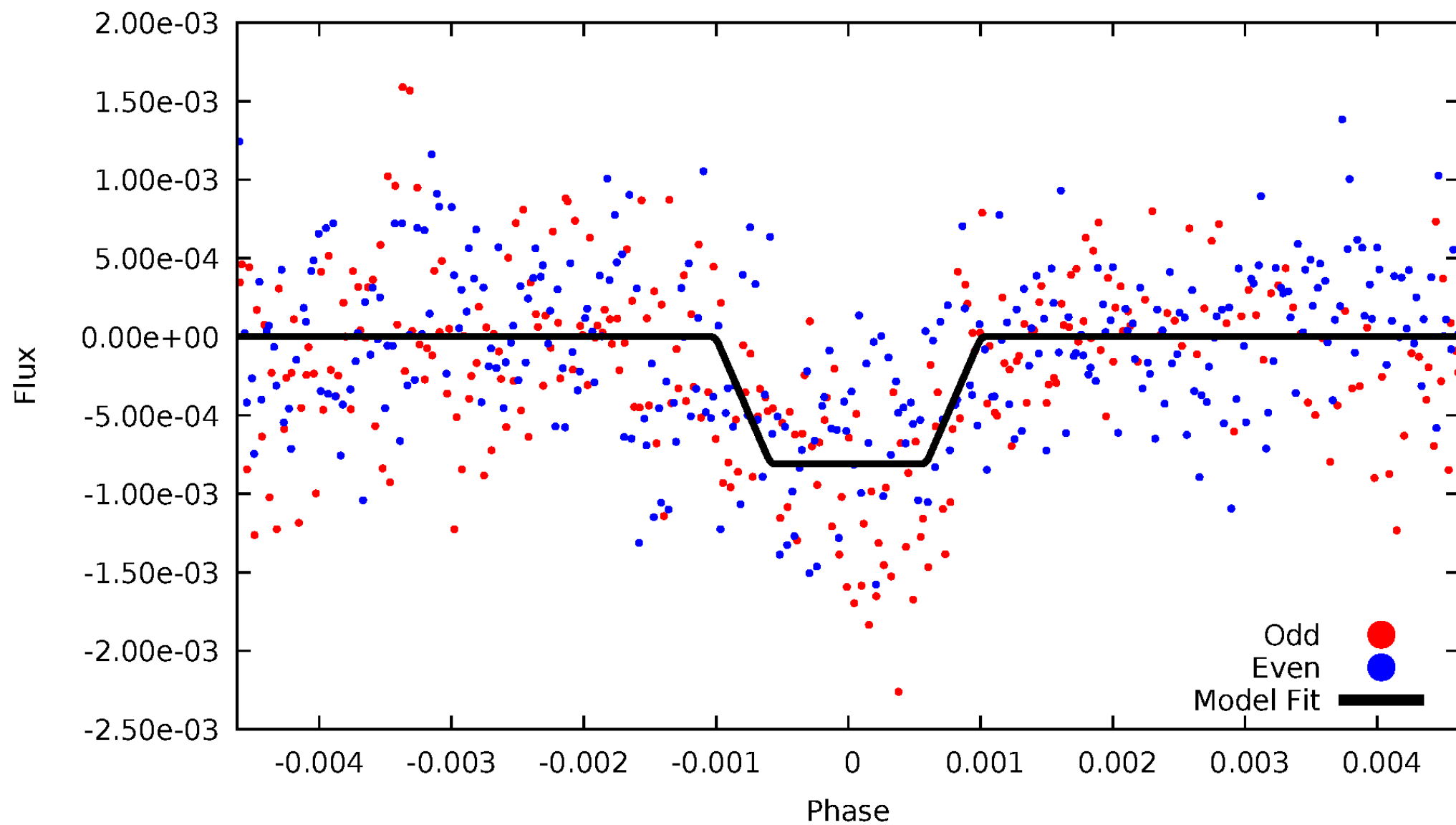
DV Odd/Even

TCE 009771266-02



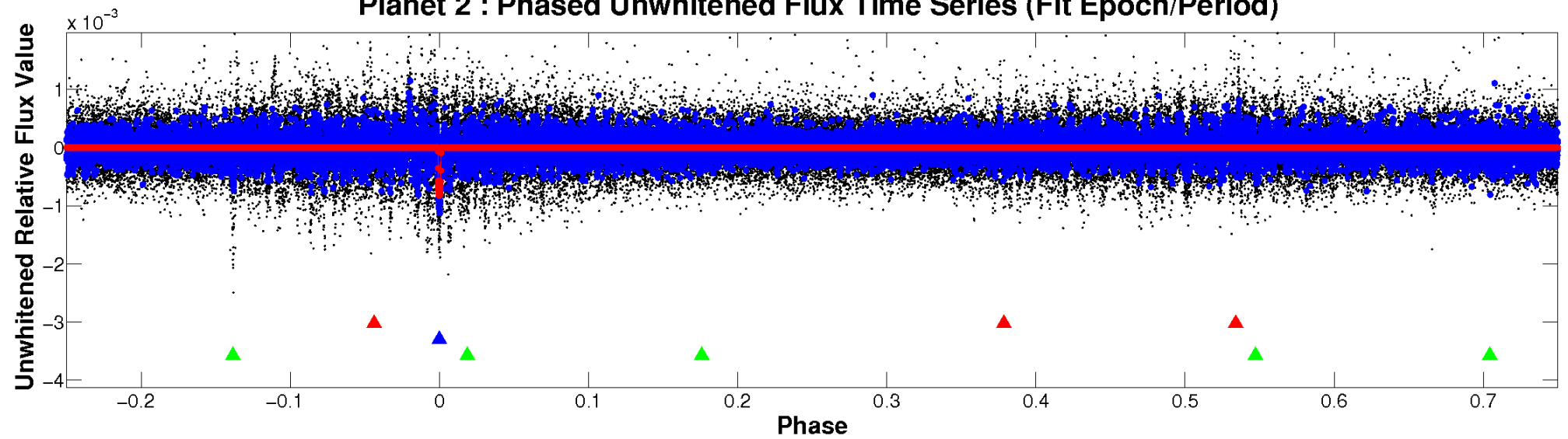
ALT Odd/Even

TCE 009771266-02

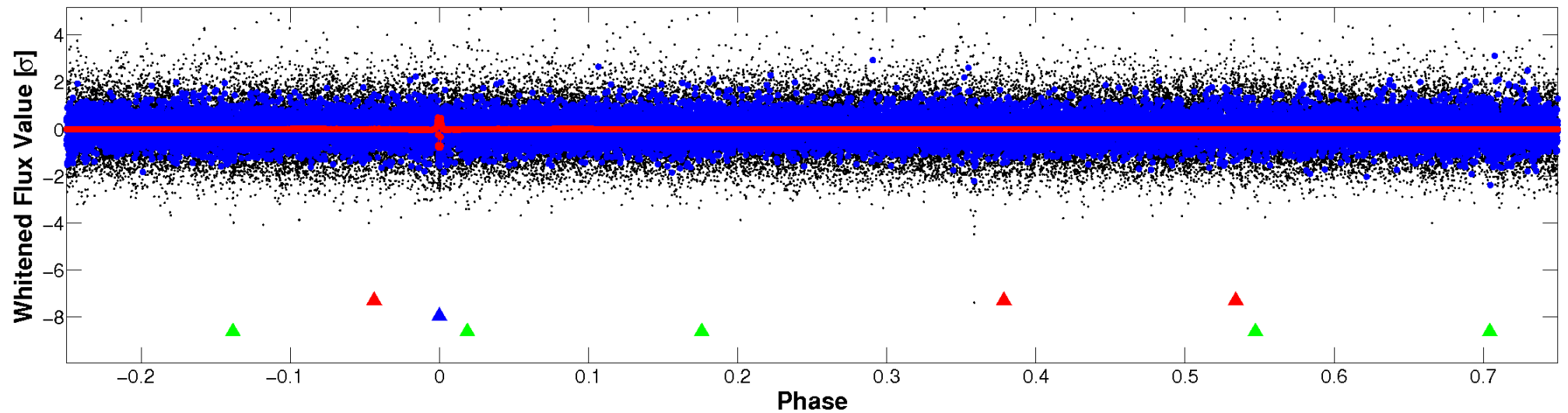


Non-Whitened Vs. Whitened Light Curve

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 009771266-02 $P=365.086898$ Days $T_0=494.945116$ (BKJD)



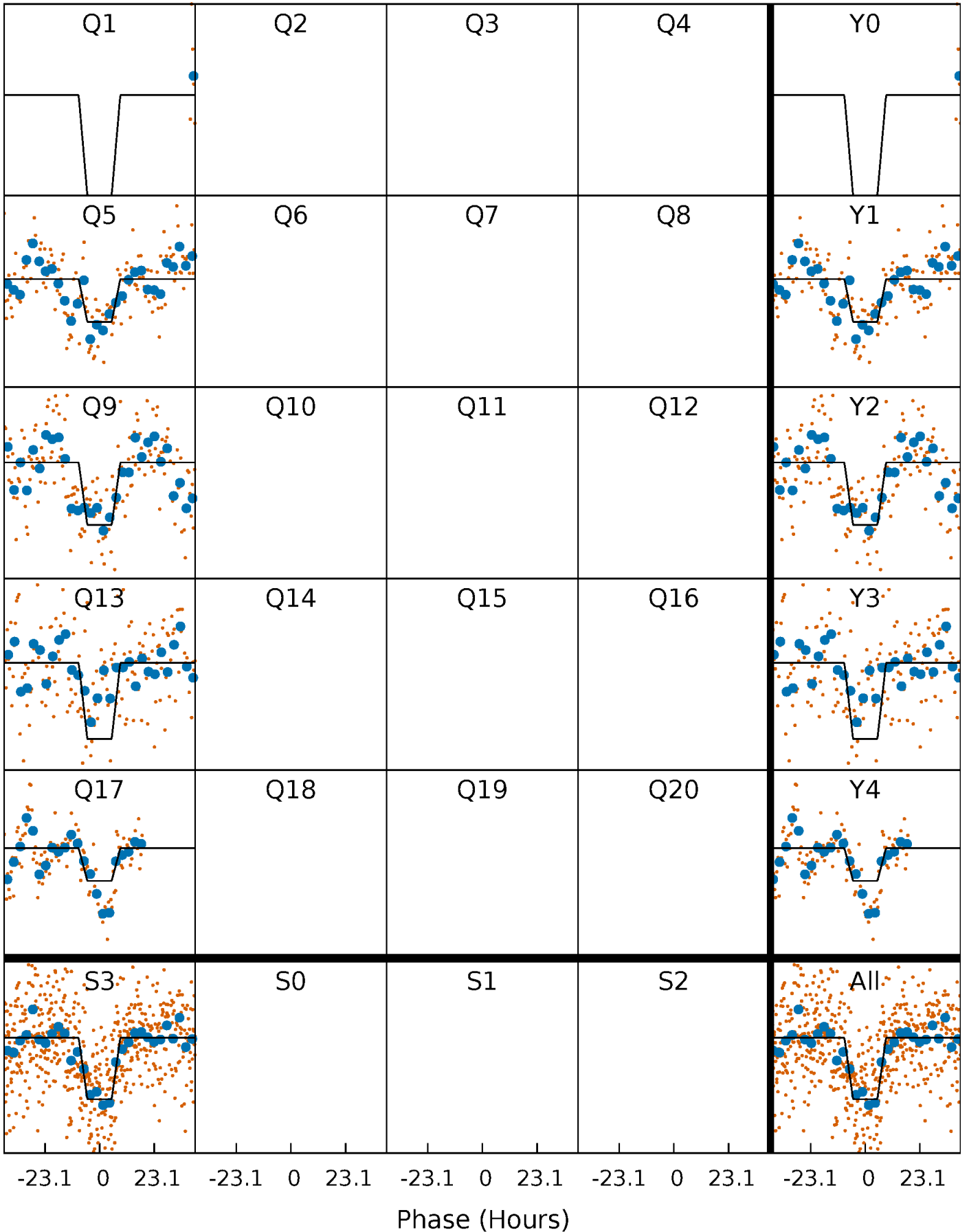
DV Quarter-Phased Transit Curves

TCE 009771266-02 $P=365.086898$ Days $T_0=494.945116$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

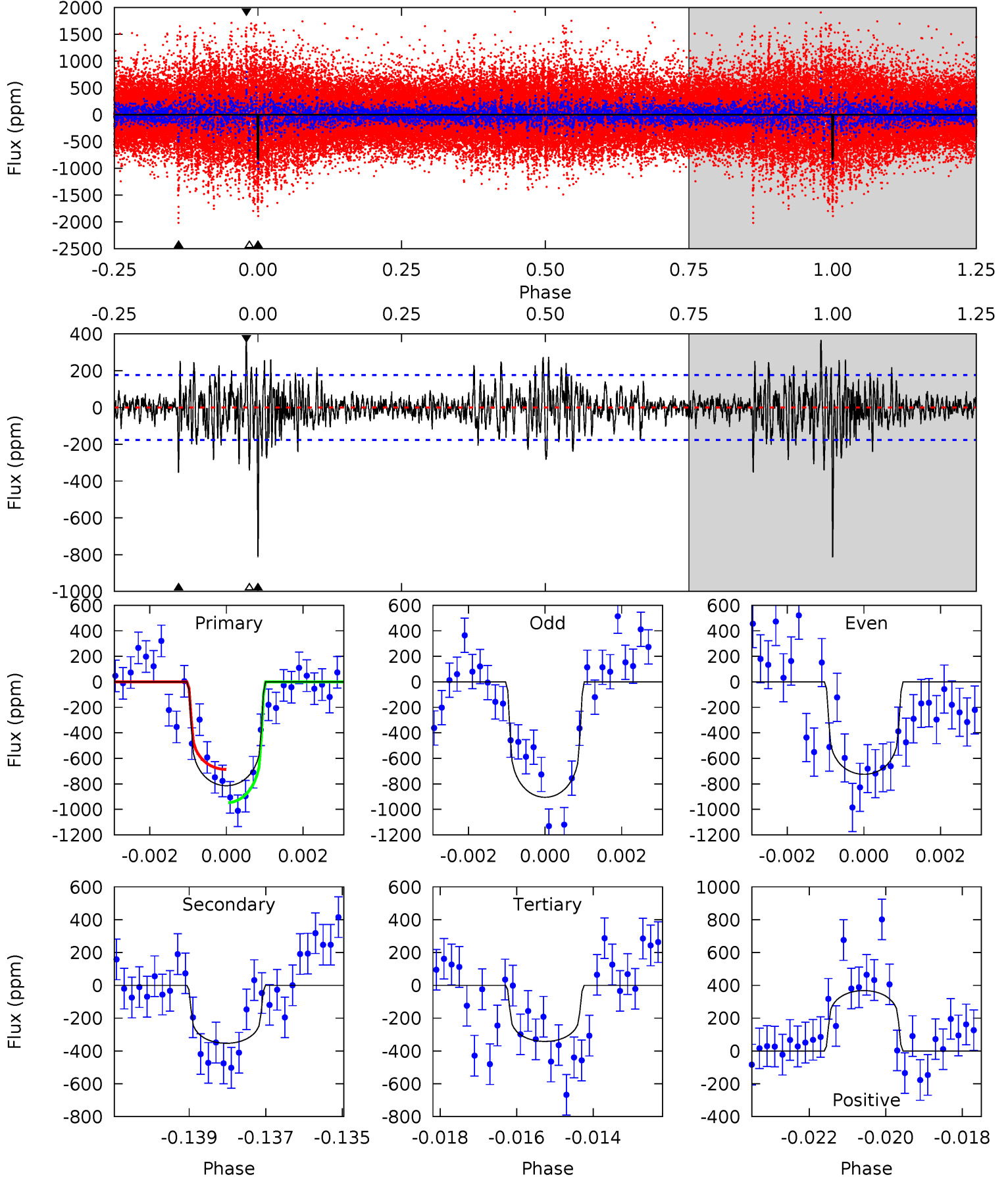
TCE 009771266-02 $P=365.079605$ Days $T_0=494.990293$ (BKJD)



DV Model-Shift Uniqueness Test

009771266-02, $P = 365.086898$ Days, $E = 129.858218$ Days

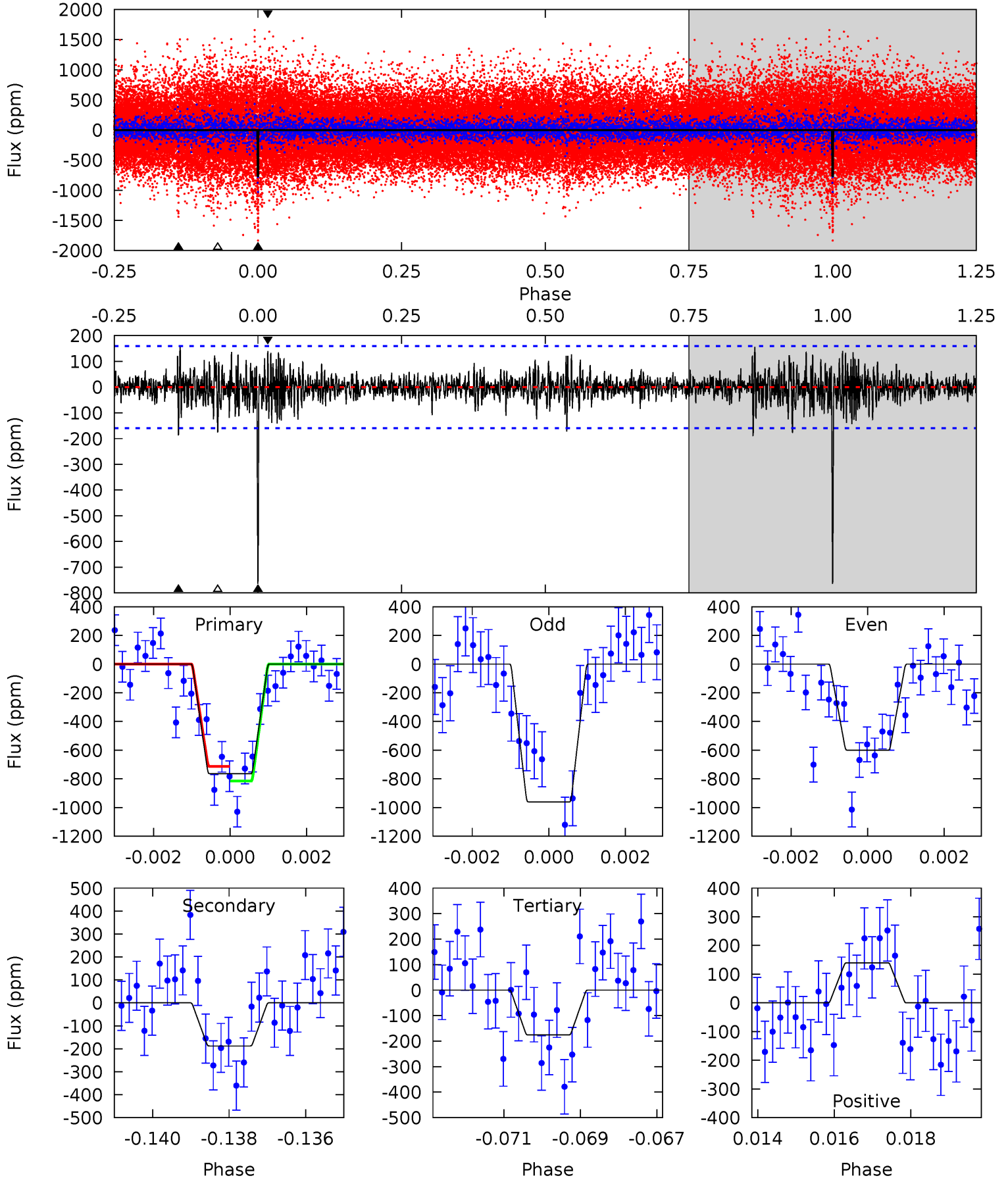
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	10.7	10.3	11.1	5.33	3.10	2.39	14.2	13.5	0.34	-0.44	2.71	0.90	0.31	3.93



Alt Model-Shift Uniqueness Test

009771266-02, P = 365.079605 Days, E = 129.910688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	6.26	5.86	4.66	5.32	3.09	1.24	19.6	20.8	0.41	1.60	6.04	0.96	0.17	1.70



Stellar Parameters For KIC 009771266

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5922^{+160}_{-178}	$4.367^{+0.132}_{-0.182}$	$-0.220^{+0.300}_{-0.300}$	$1.048^{+0.307}_{-0.189}$	$0.934^{+0.131}_{-0.095}$	$1.143^{+0.709}_{-0.557}$
	+3%/-3%	+3%/-4%	+136%/-136%	+29%/-18%	+14%/-10%	+62%/-49%
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 009771266-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-353 ± 33	$3.33^{+0.64}_{-0.57}$	381^{+27}_{-24}	4912^{+326}_{-284}	16750^{+7735}_{-4902}
Alt.	-188 ± 30	$3.30^{+0.68}_{-0.55}$	380^{+27}_{-21}	4332^{+285}_{-252}	8923^{+4347}_{-2760}

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

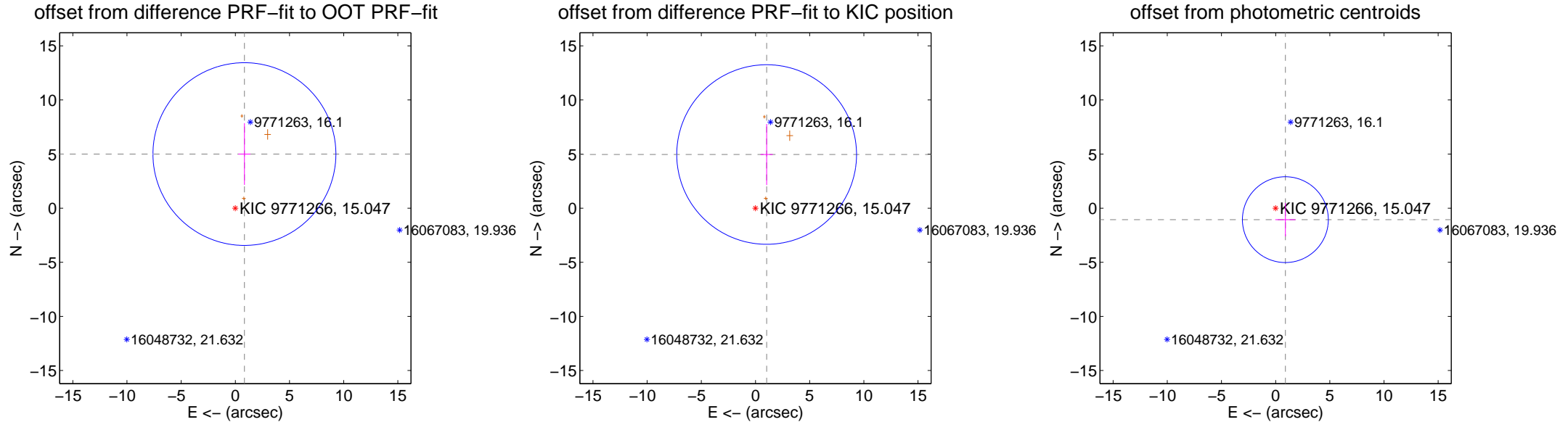
DV Centroid Data

Supplemental centroid analysis for 009771266-02. Kepler magnitude: 15.05. Transit SNR 8.76

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.070 ± 2.814	1.80	-0.838 ± 0.559	5.000 ± 2.852
PRF-fit source offset from KIC position	5.064 ± 2.765	1.83	-1.029 ± 0.564	4.959 ± 2.822
photometric centroid source offset	1.39 ± 1.32	1.05	-0.90 ± 0.93	-1.06 ± 1.54

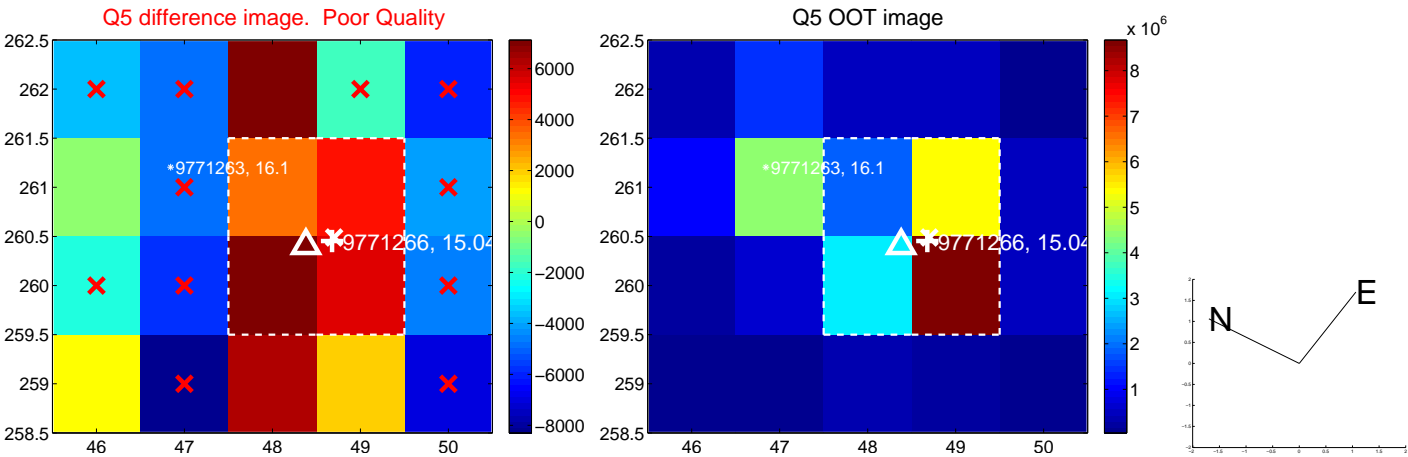


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

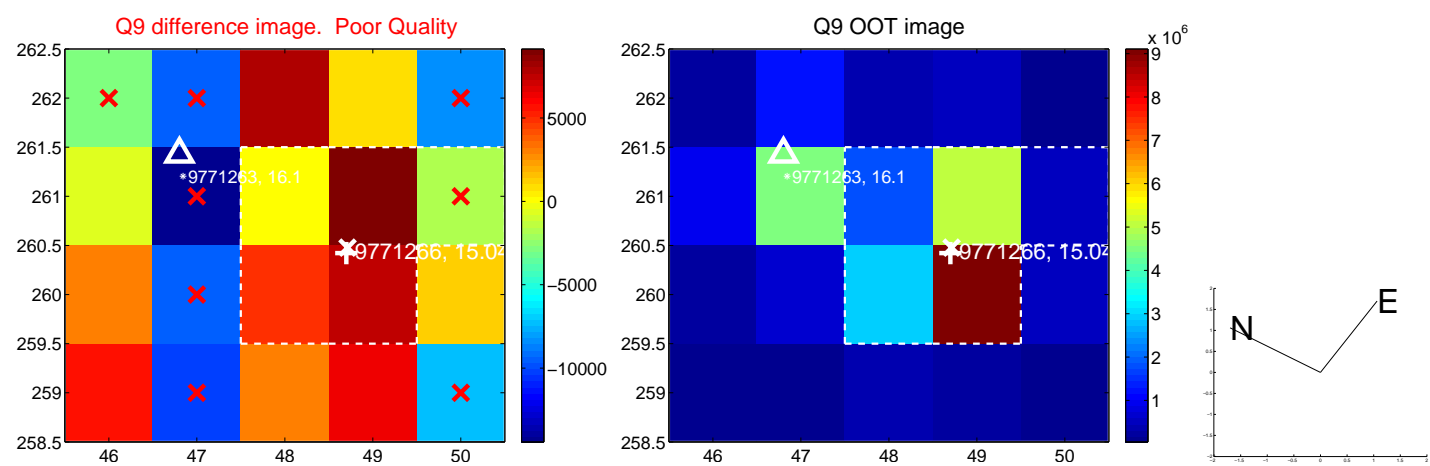
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



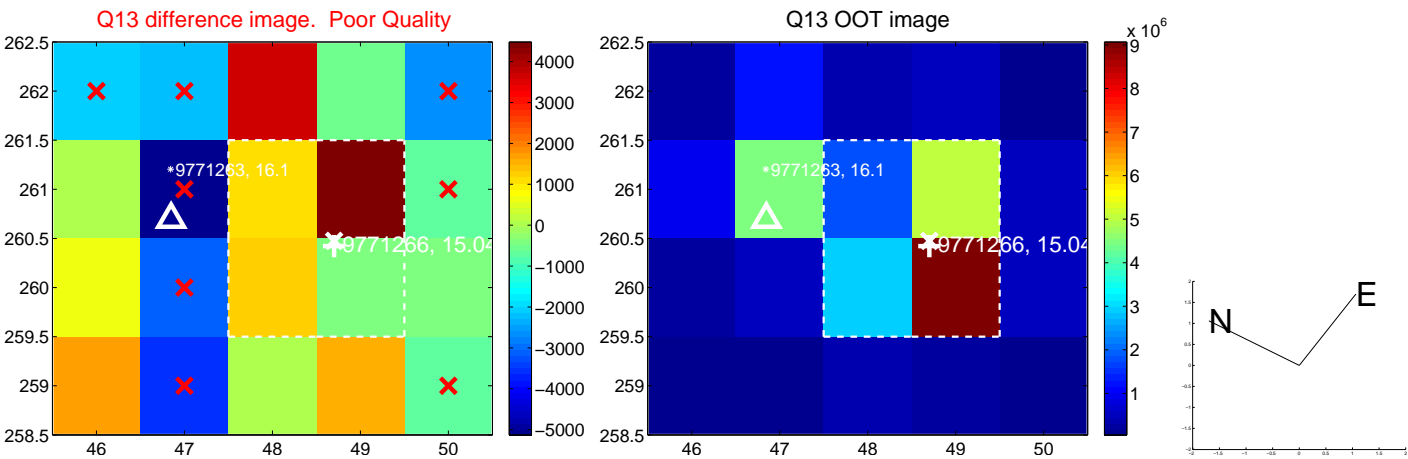
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



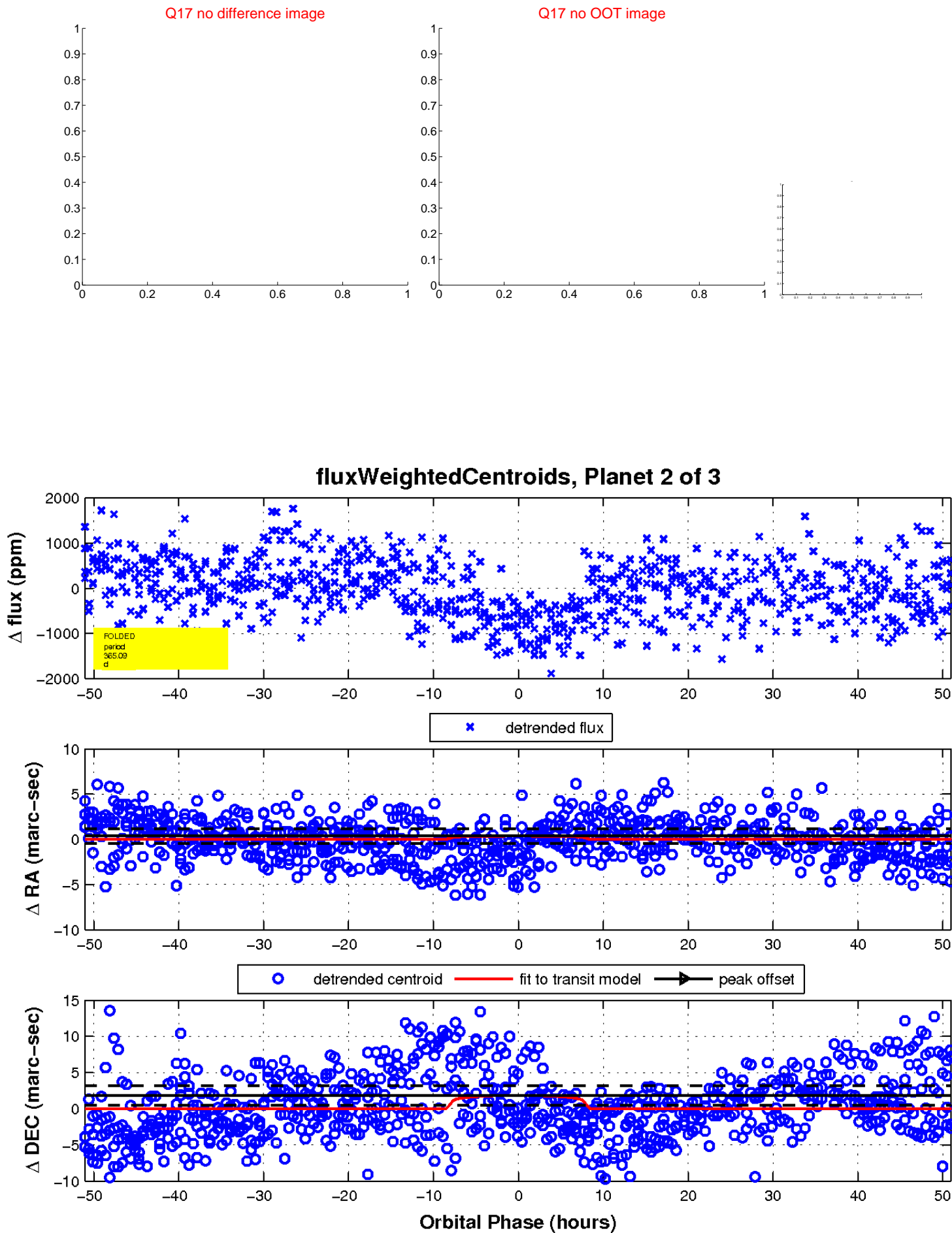
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

