

KIC 003761010

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})
003761010-01	OBS	No	578.797738	298.437655	100.6	19.065	7.2	8.0	1.86	6611	2.09	2.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003761010-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

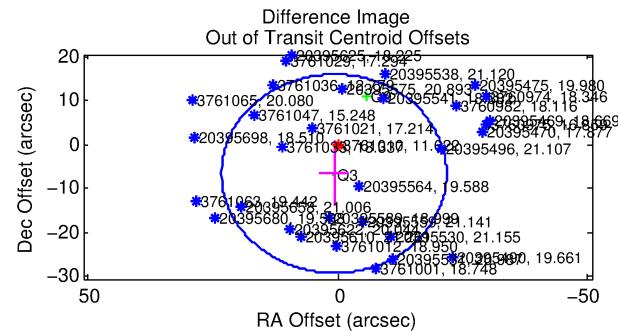
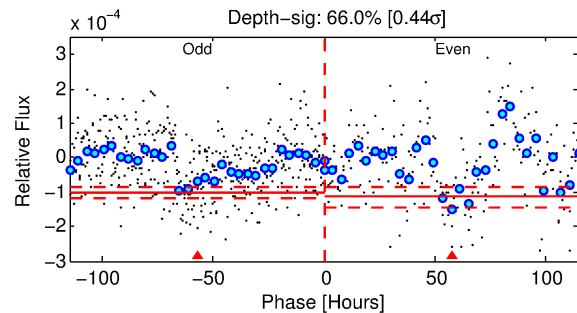
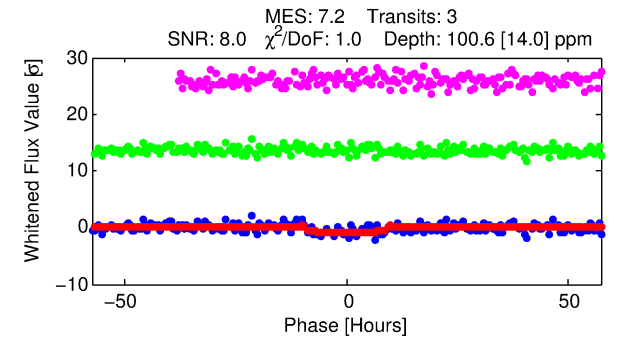
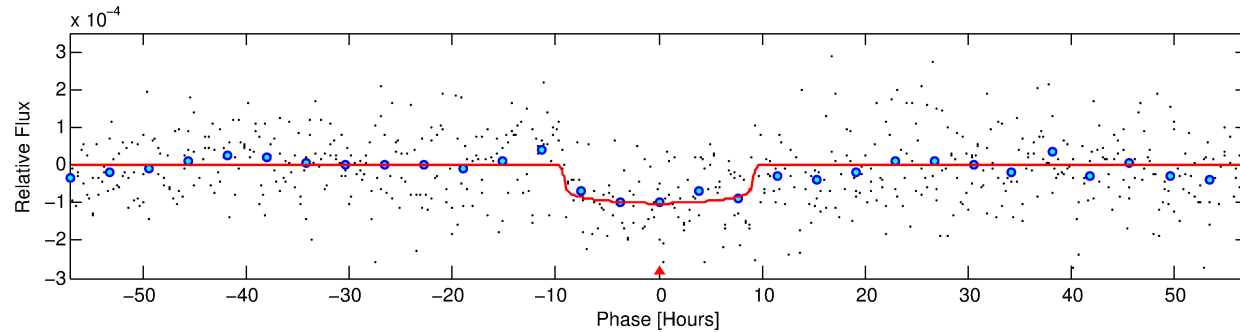
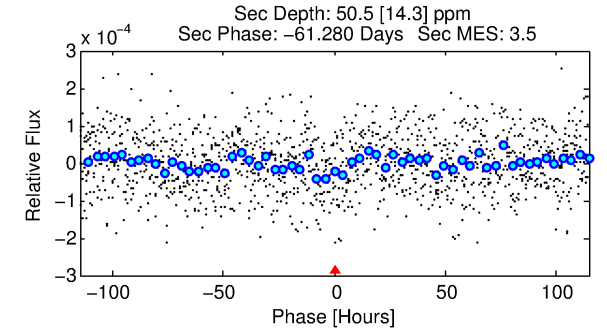
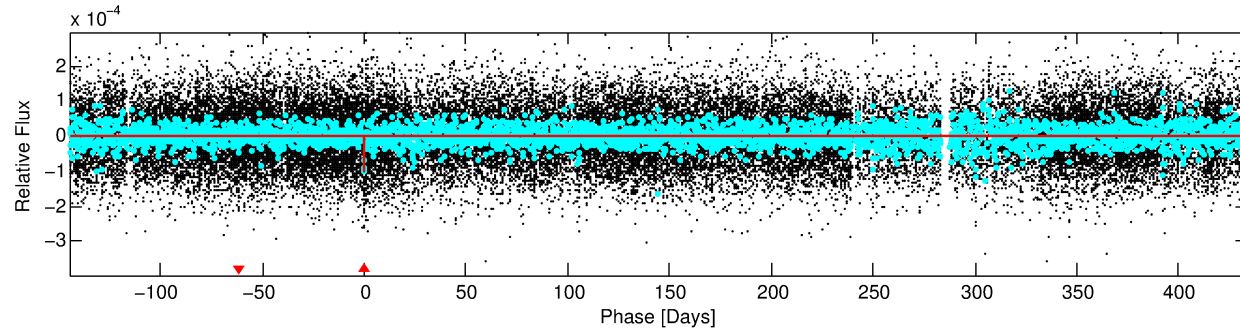
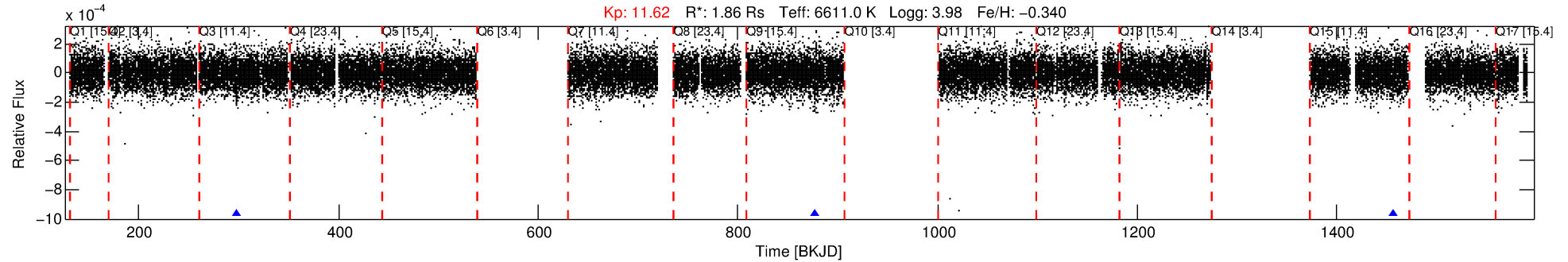
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003761010-01

No Significant Match Found

DV One-Page Summary

KIC: 3761010 Candidate: 1 of 1 Period: 578.798 d



DV Fit Results:

Period = 578.79774 [0.01555] d
Epoch = 298.4377 [0.0201] BKJD
Rp/R* = 0.0103 [0.0020]
a/R* = 134.26 [133.55]
b = 0.83 [0.38]
Seff = 2.82 [1.34]
Teq = 330 [39] K
Rp = 2.09 [0.77] Re
a = 1.4522 [0.4245] AU
Ag = 13438.20 [8898.09] [1.51 σ]
Teffp = 5501 [677] K [7.62 σ]

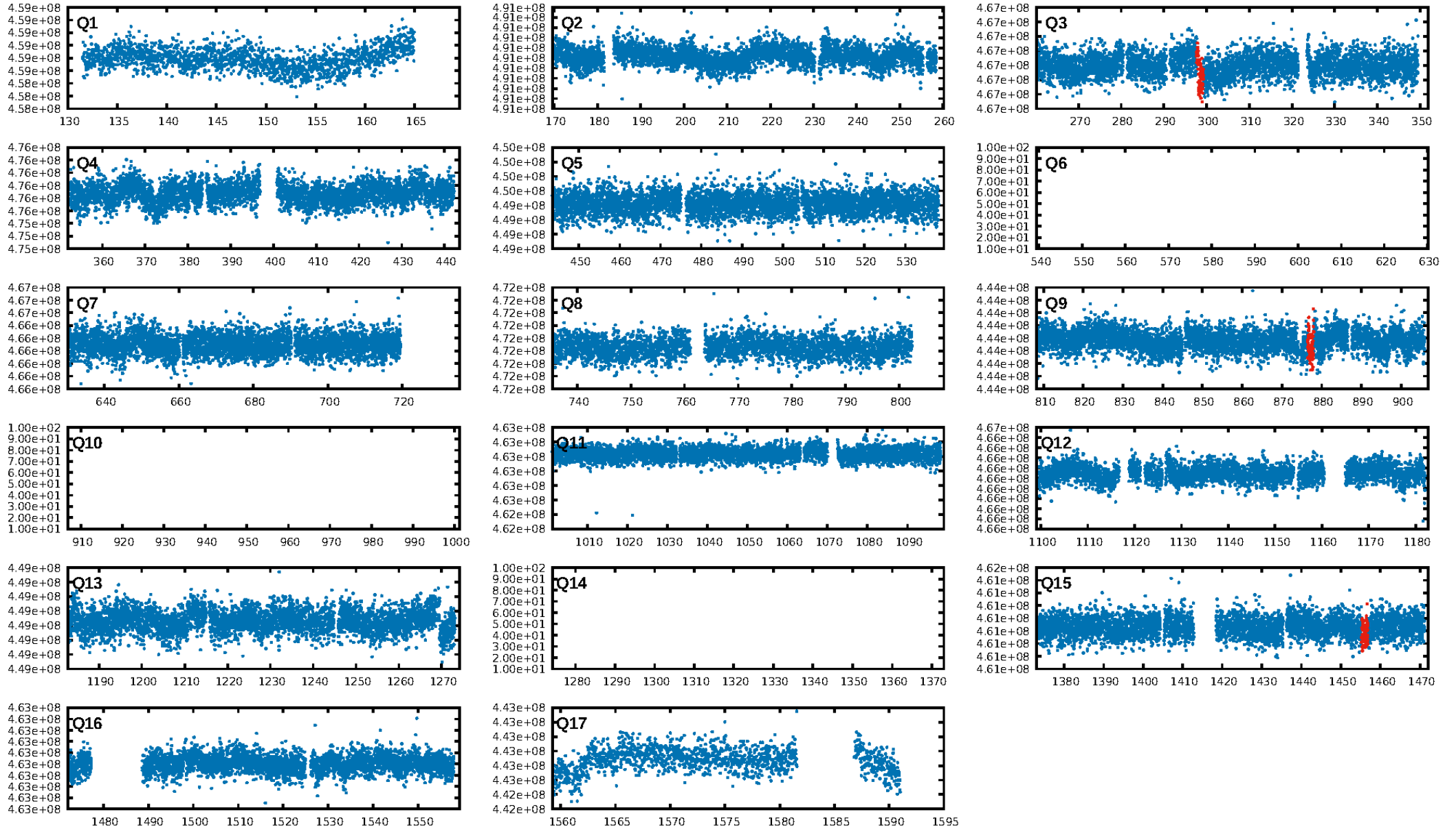
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.1%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 5.37e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3558
Centroid-sig: 58.9%
Centroid-so: 1.007 arcsec [0.59 σ]
OotOffset-rm: 6.644 arcsec [0.88 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 6.495 arcsec [1.40 σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

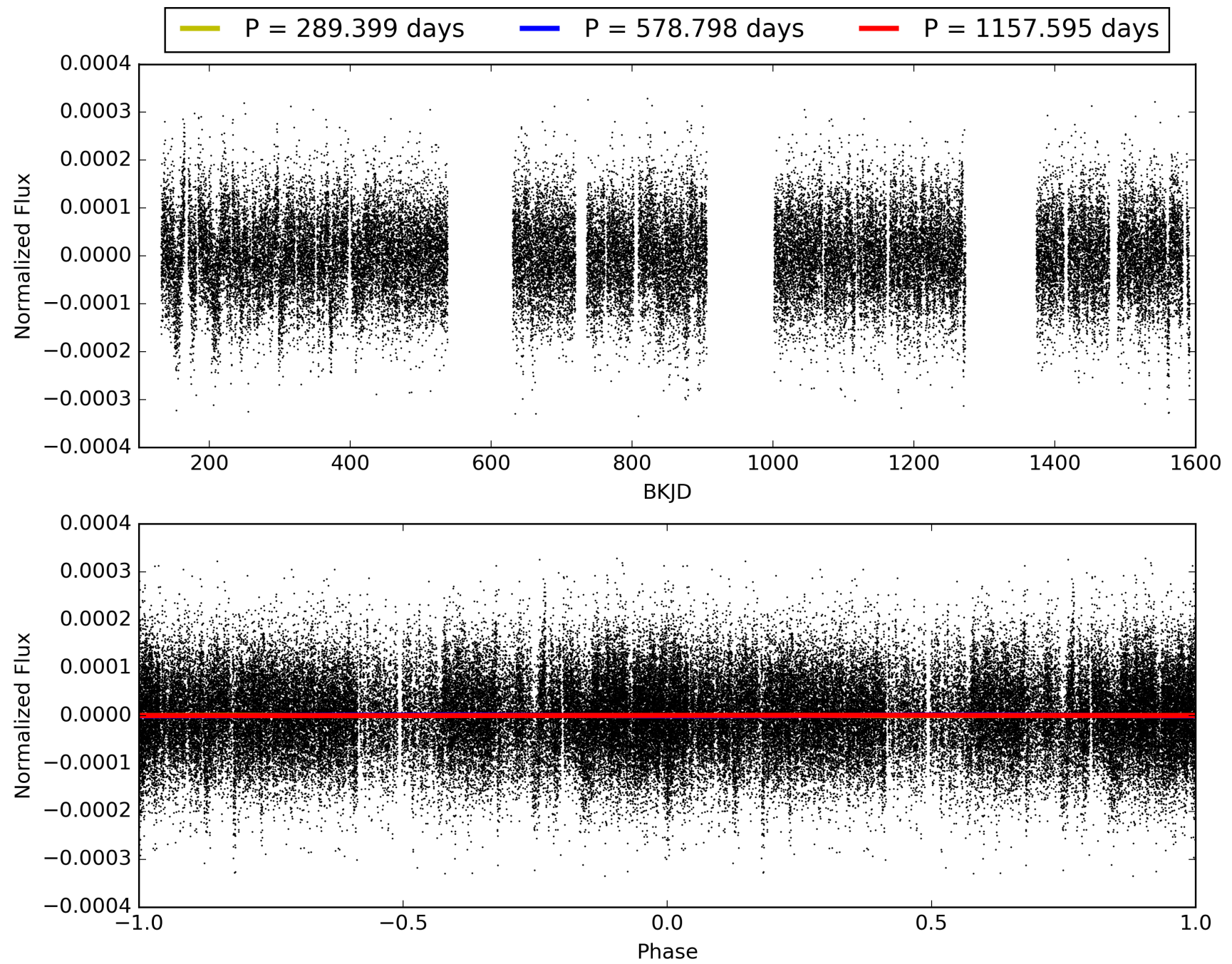
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:35:42 Z

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

TCE 003761010-01, PDC Light Curves

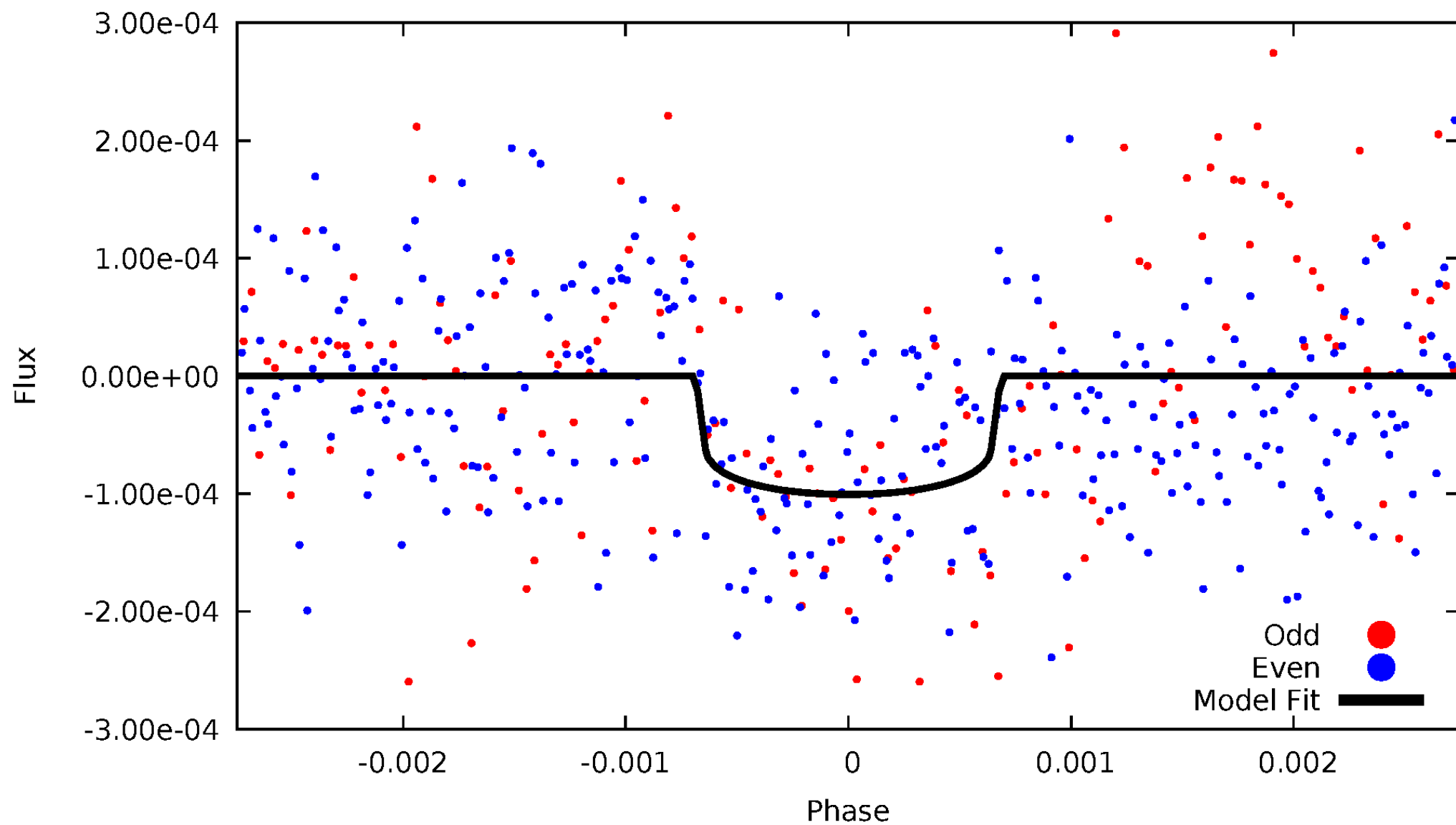


TCE 003761010-01



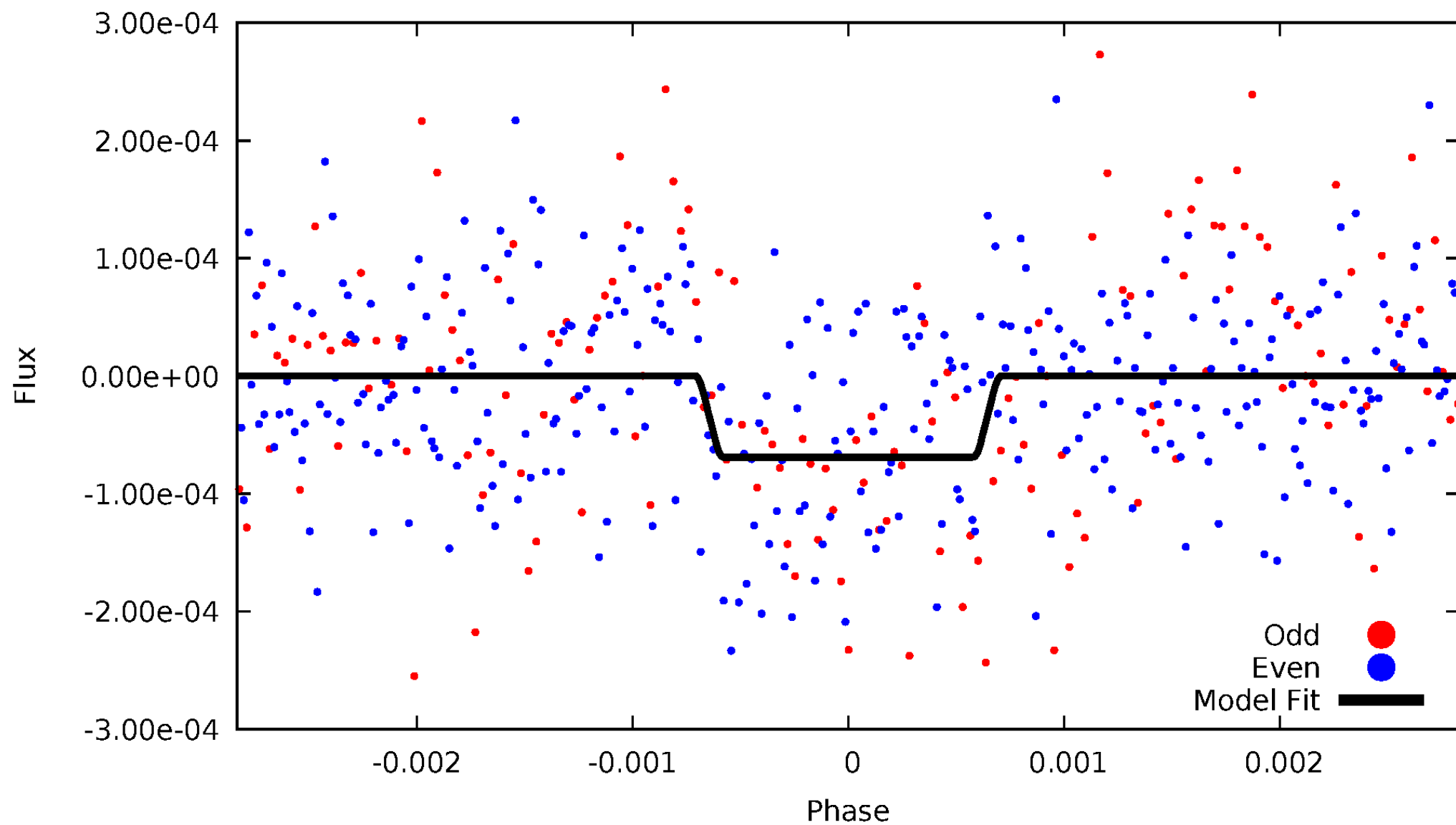
DV Odd/Even

TCE 003761010-01



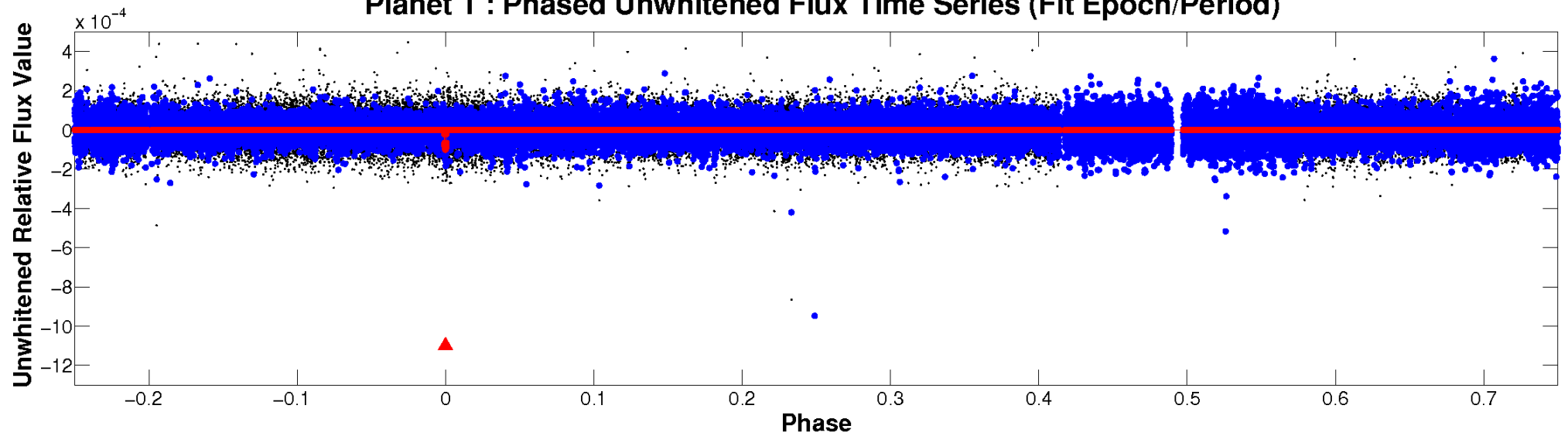
ALT Odd/Even

TCE 003761010-01

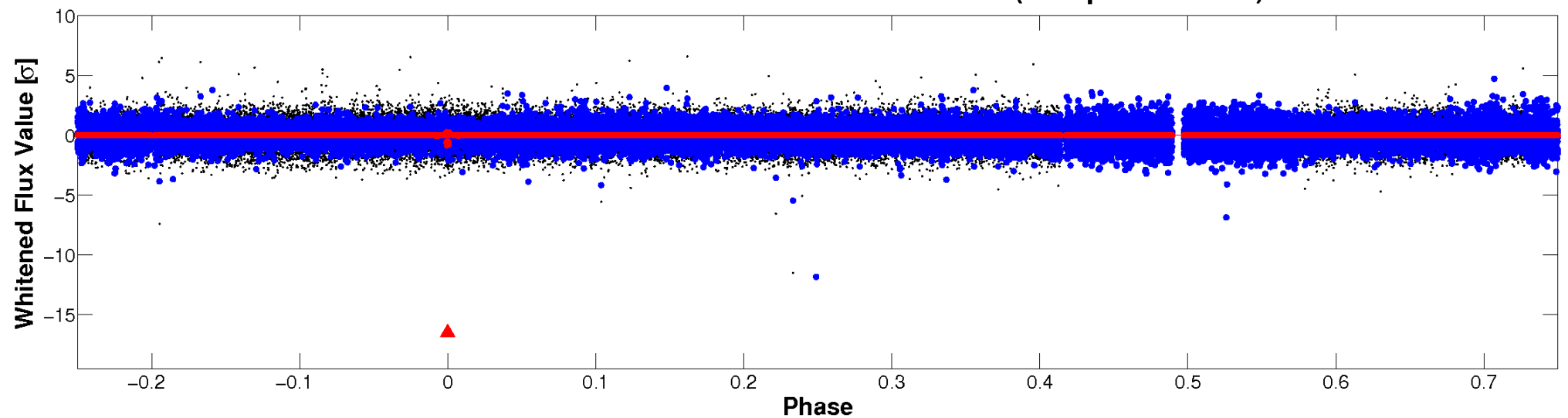


Non-Whitened Vs. Whitened Light Curve

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 003761010-01 P=578.797738 Days $T_0=298.437655$ (BKJD)



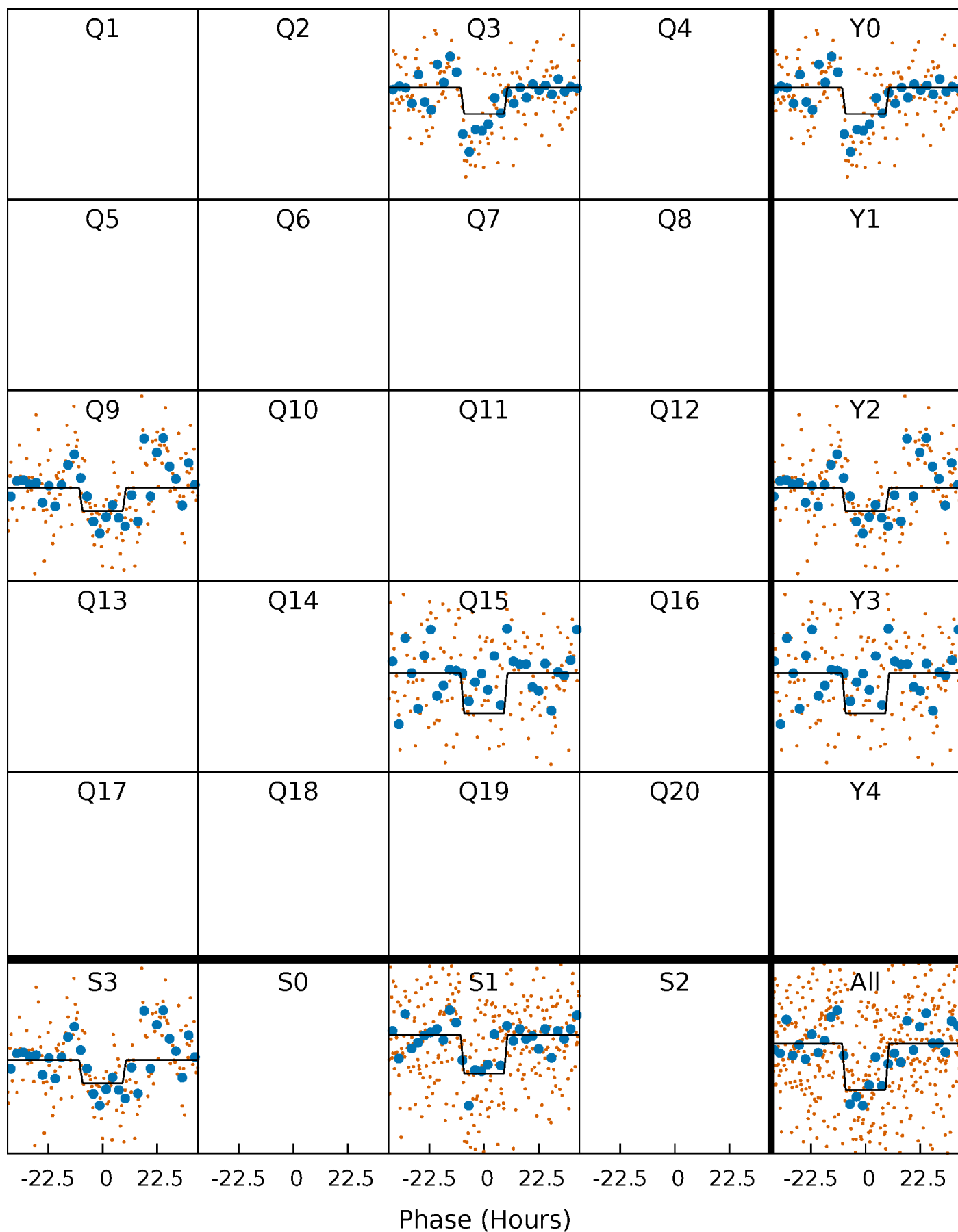
DV Quarter-Phased Transit Curves

TCE 003761010-01 P=578.797738 Days $T_0=298.437655$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

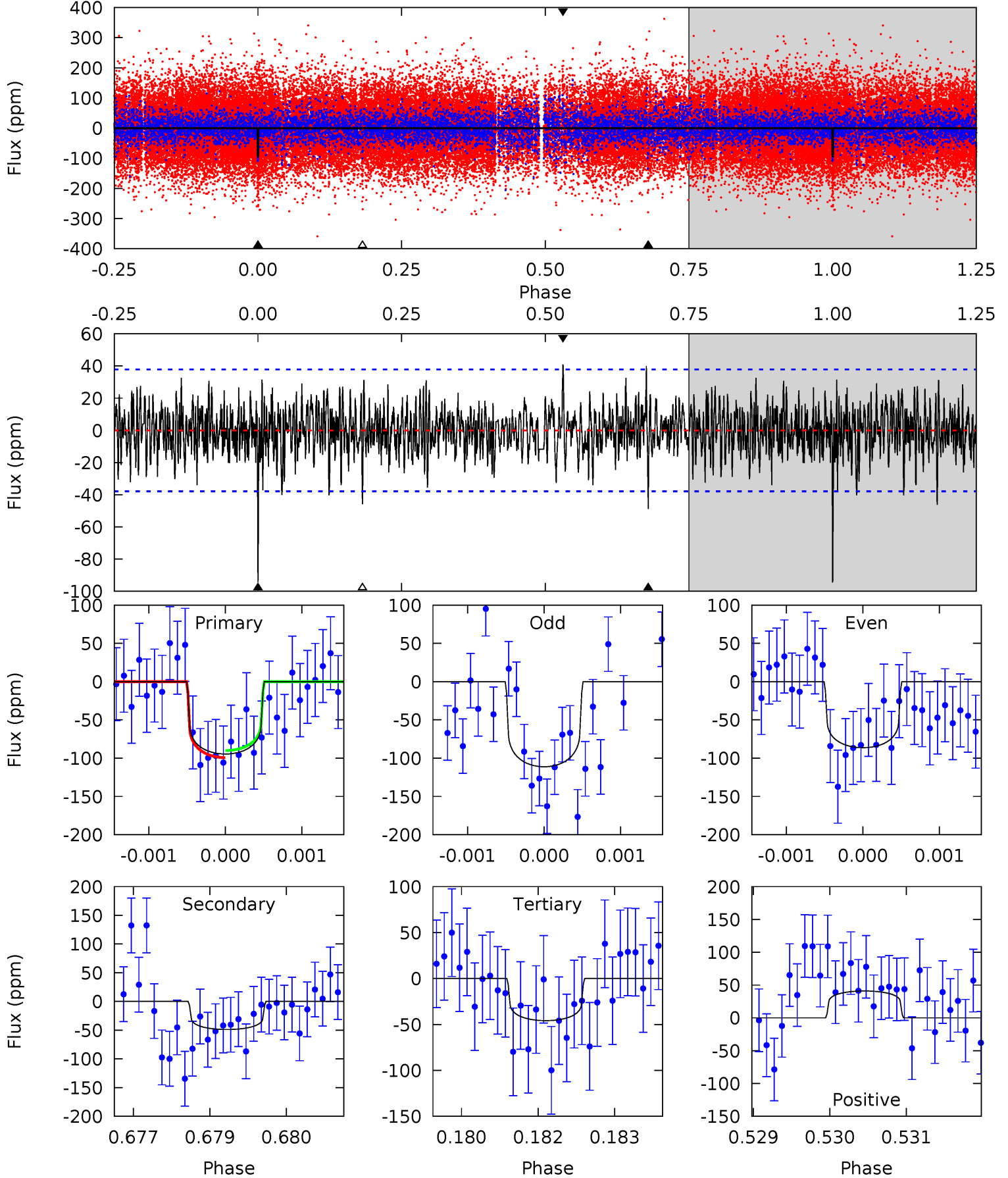
TCE 003761010-01 P=578.794209 Days $T_0=298.462458$ (BKJD)



DV Model-Shift Uniqueness Test

003761010-01, $P = 578.797738$ Days, $E = 298.437655$ Days

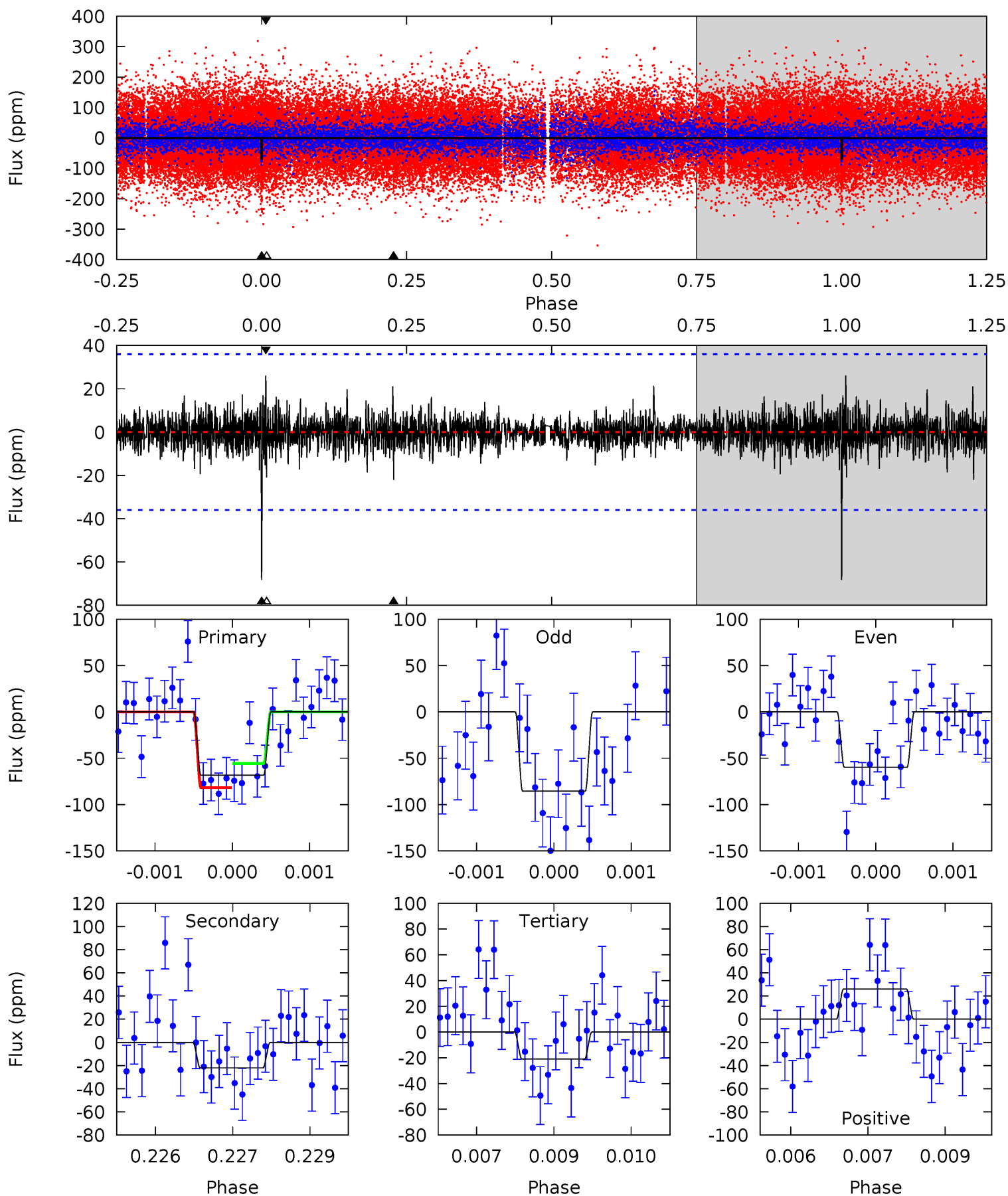
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	6.96	6.54	5.83	5.39	3.20	1.67	6.94	7.64	0.42	1.13	1.65	0.85	0.30	0.66



Alt Model-Shift Uniqueness Test

003761010-01, P = 578.794209 Days, E = 298.462458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.30	3.13	3.91	5.39	3.19	0.79	7.09	6.32	0.17	-0.61	1.80	0.79	0.28	1.95



Stellar Parameters For KIC 003761010

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6611^{+167}_{-200}	$3.983^{+0.266}_{-0.114}$	$-0.340^{+0.300}_{-0.250}$	$1.864^{+0.390}_{-0.585}$	$1.217^{+0.194}_{-0.194}$	$0.265^{+0.413}_{-0.106}$
	+3%/-3%	+7%/-3%	+88%/-74%	+21%/-31%	+16%/-16%	+156%/-40%
Source	PHO1	FLK73	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 003761010-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49 ± 7	$2.04^{+0.52}_{-0.48}$	455^{+29}_{-37}	5421^{+670}_{-445}	13973^{+10457}_{-5286}
Alt.	-22 ± 7	$1.64^{+0.49}_{-0.46}$	453^{+30}_{-36}	5000^{+725}_{-549}	9806^{+8482}_{-4734}

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

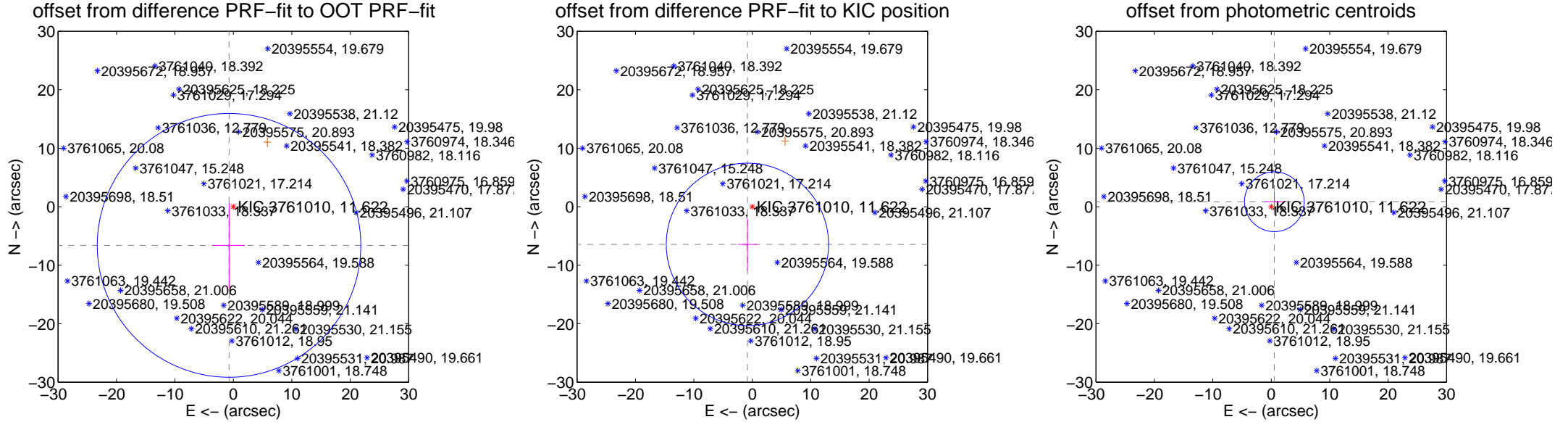
DV Centroid Data

Supplemental centroid analysis for 003761010-01. **Kepler magnitude: 11.62.** Transit SNR 7.99

There are 0 quarters with good PRF difference image offsets

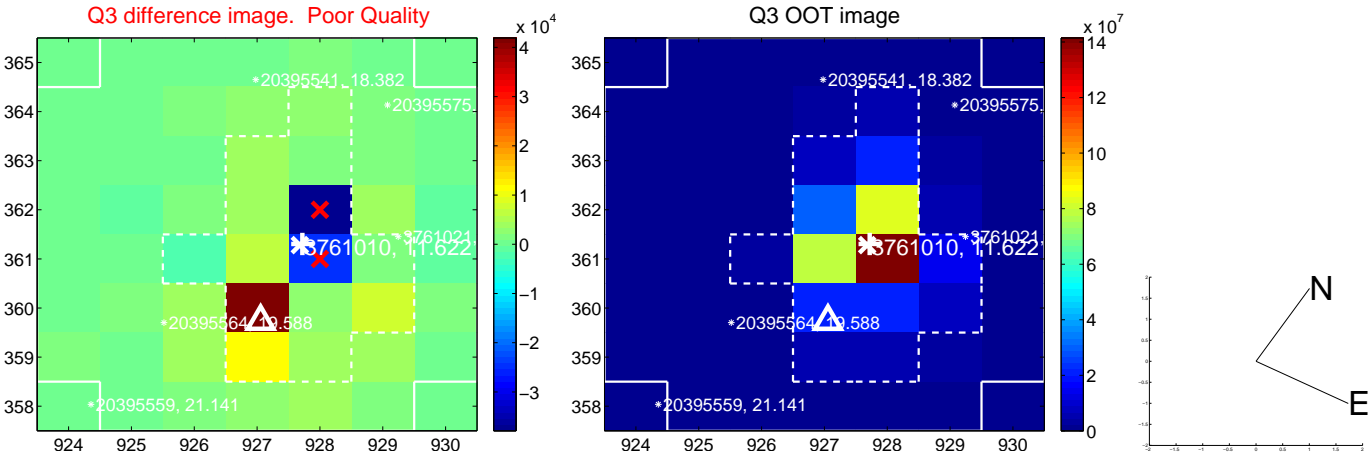
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.644 ± 7.517	0.88	0.738 ± 2.730	-6.603 ± 7.259
PRF-fit source offset from KIC position	6.495 ± 4.630	1.40	0.836 ± 1.643	-6.441 ± 4.455
photometric centroid source offset	1.01 ± 1.70	0.59	-0.53 ± 1.53	0.85 ± 1.77



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.

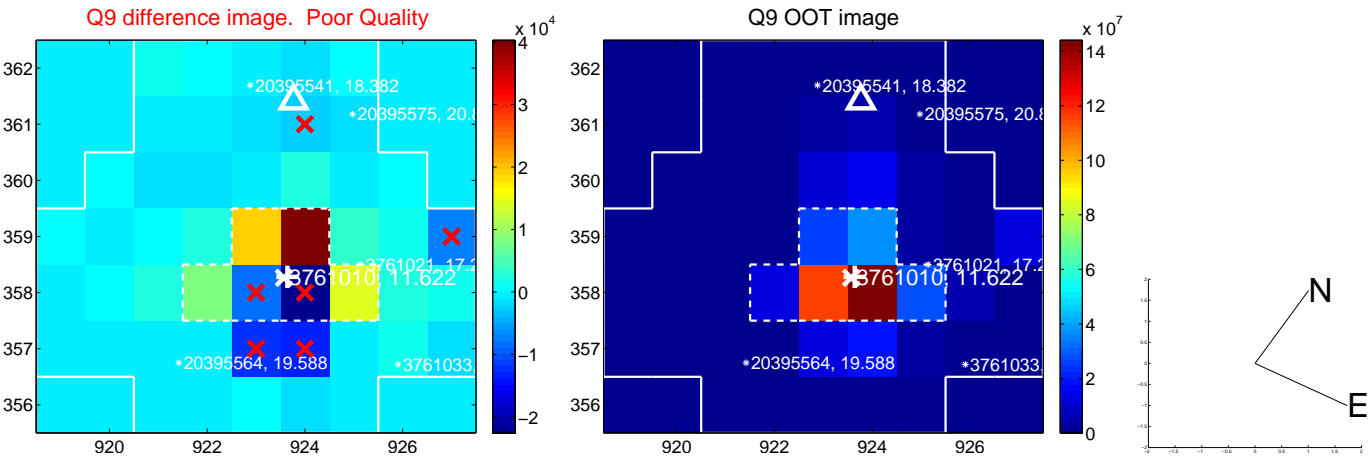
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



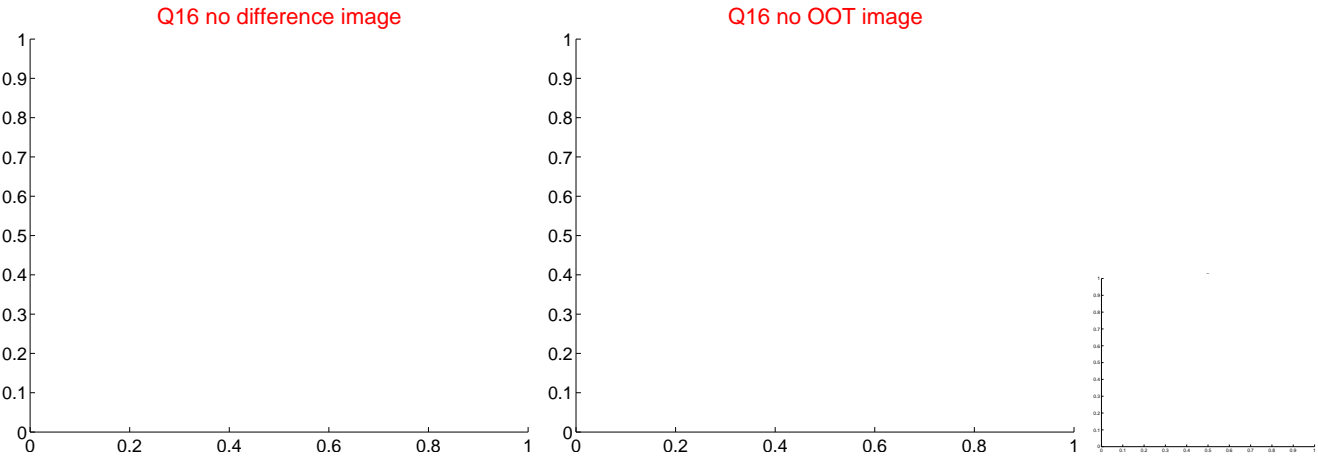
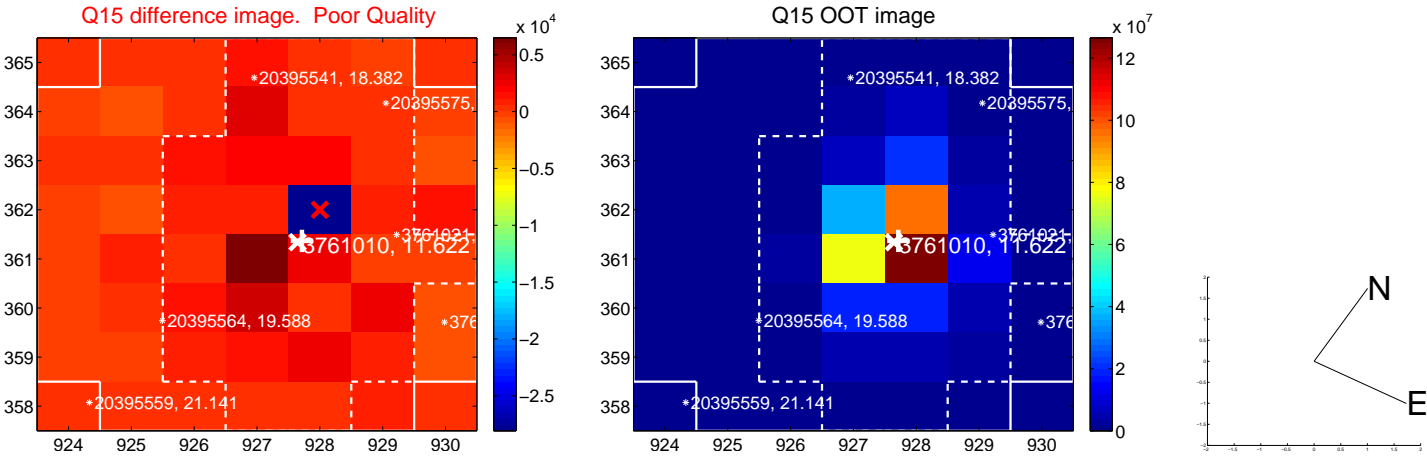
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



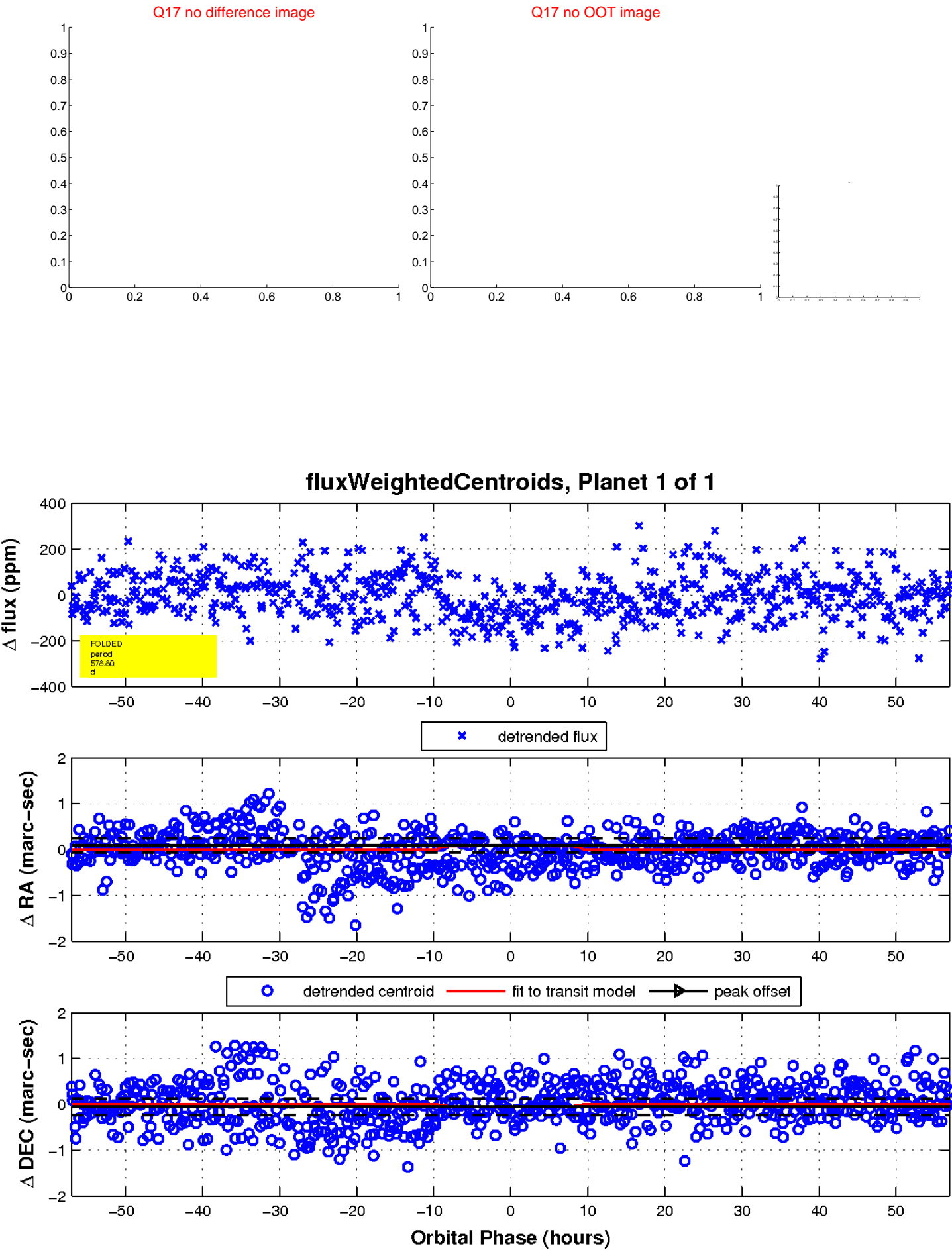
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

