

KIC 010489389

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})
010489389-01	OBS	No	369.392815	493.293846	1058.6	10.312	8.6	7.9	0.85	5985	2.86	0.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010489389-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

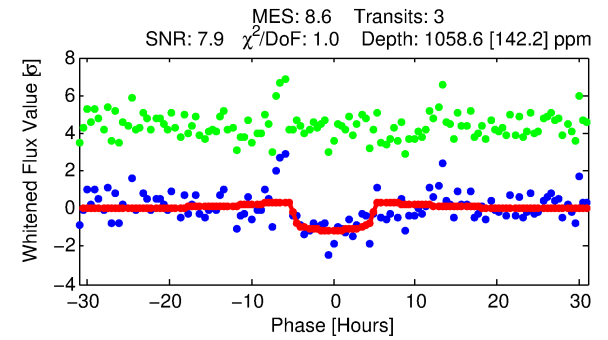
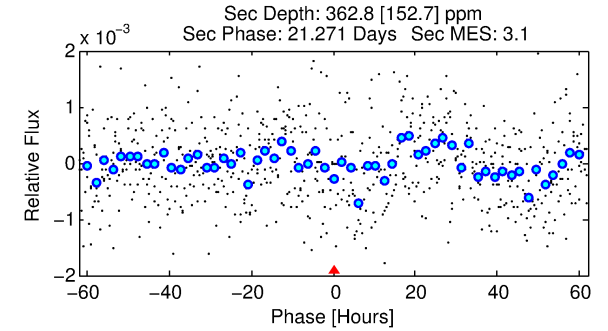
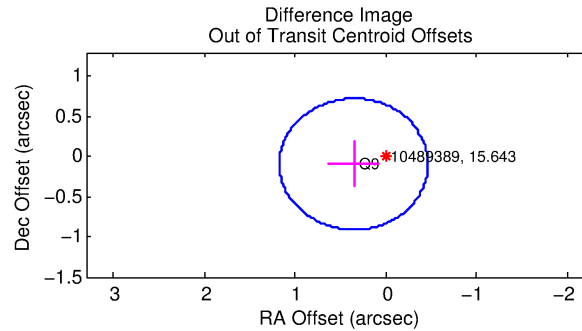
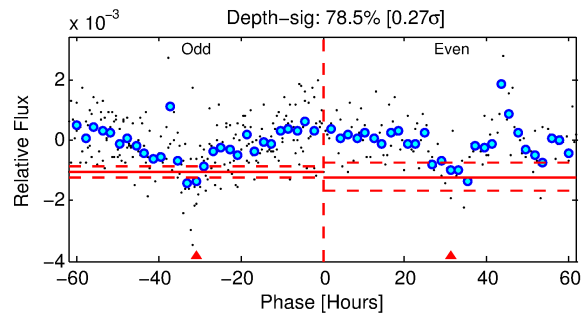
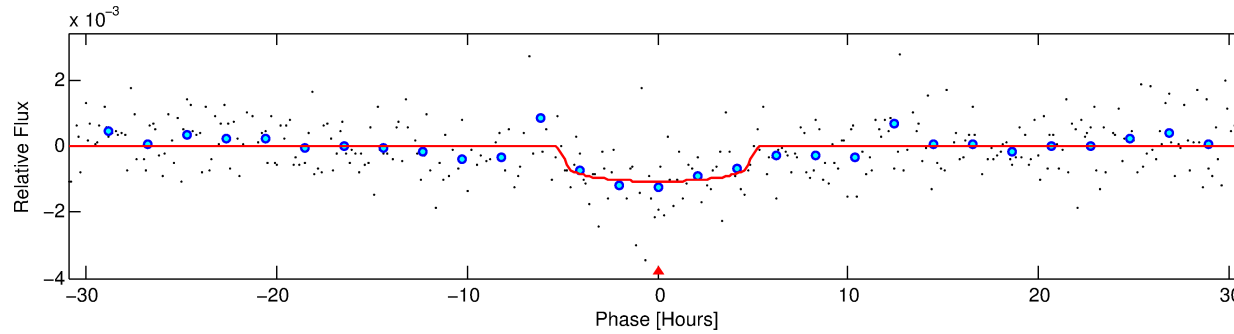
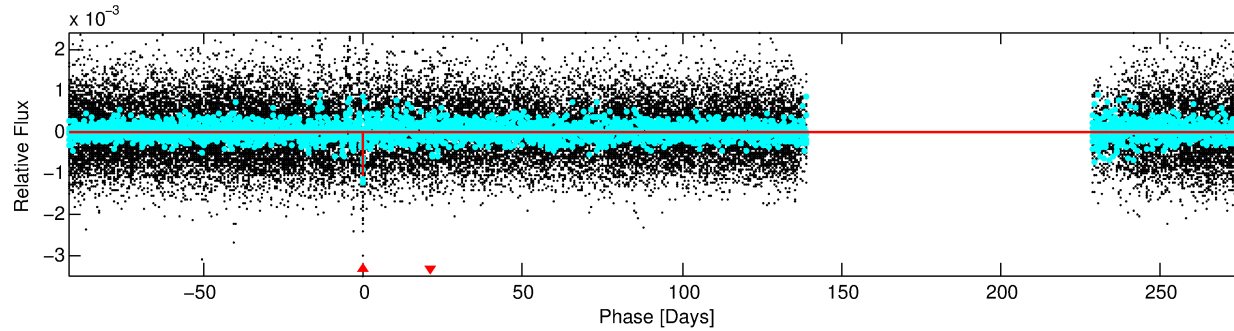
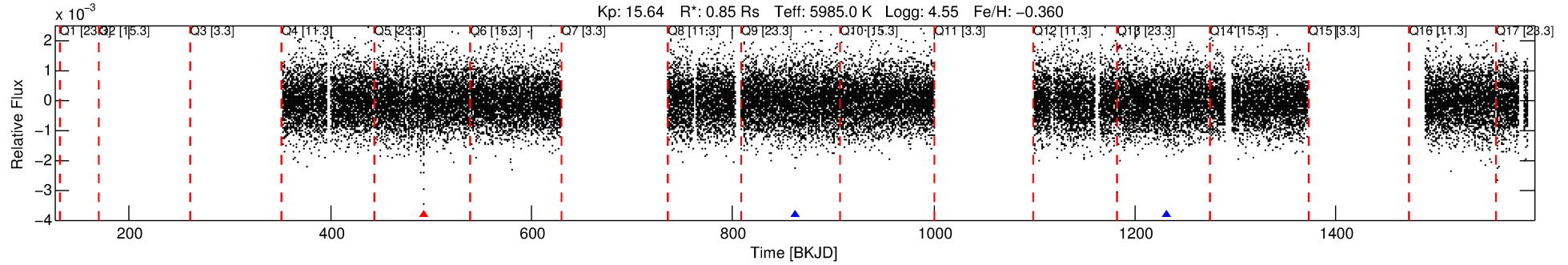
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010489389-01

No Significant Match Found

DV One-Page Summary

KIC: 10489389 Candidate: 1 of 1 Period: 369.393 d



DV Fit Results:

Period = 369.39282 [0.01366] d
Epoch = 493.2938 [0.0173] BKJD
Rp/R* = 0.0306 [0.0246]
a/R* = 247.76 [971.61]
b = 0.49 [6.06]
Seff = 0.86 [0.34]
Teq = 246 [24] K
Rp = 2.86 [2.44] Re
a = 0.9878 [0.2458] AU
Ag = 23861.17 [40660.28] [0.59 σ]
Teff = 4720 [1970] K [2.27 σ]

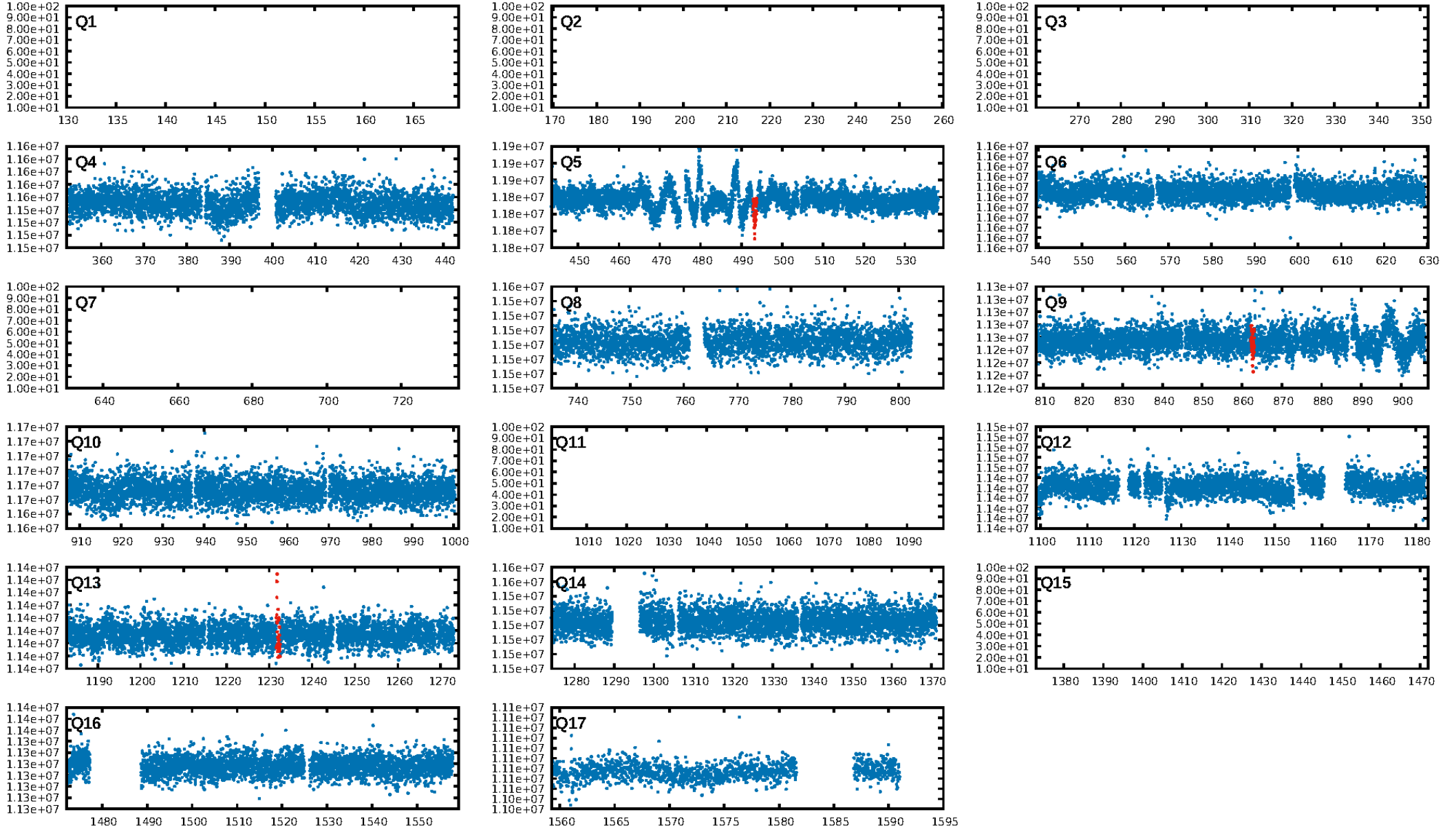
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 3.87e-11
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 7.042
Centroid-sig: 14.1%
Centroid-so: 2.161 arcsec [1.19 σ]
OotOffset-rm: 0.368 arcsec [1.35 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-rm: 0.324 arcsec [1.17 σ]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

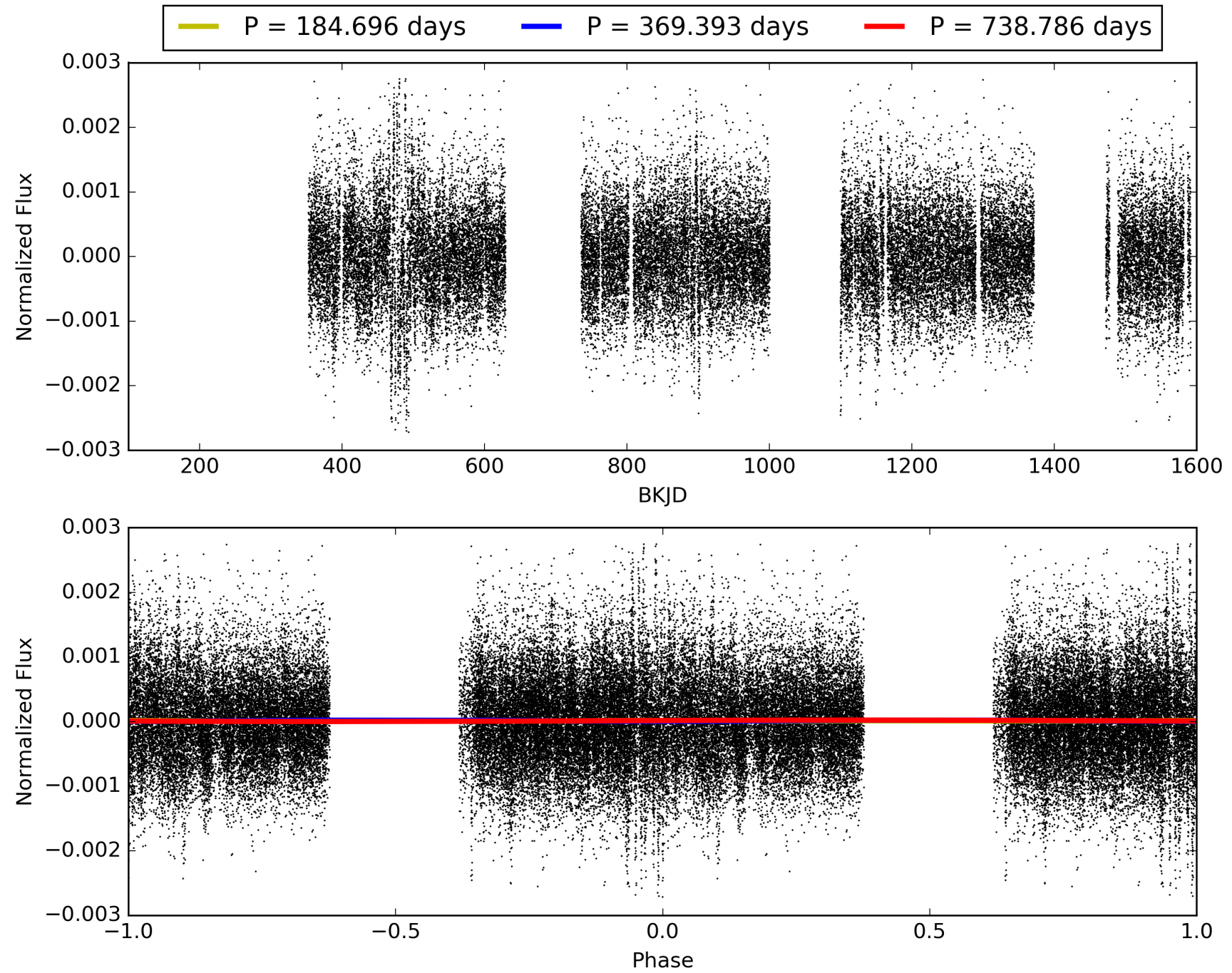
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:35:12 Z

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

TCE 010489389-01, PDC Light Curves

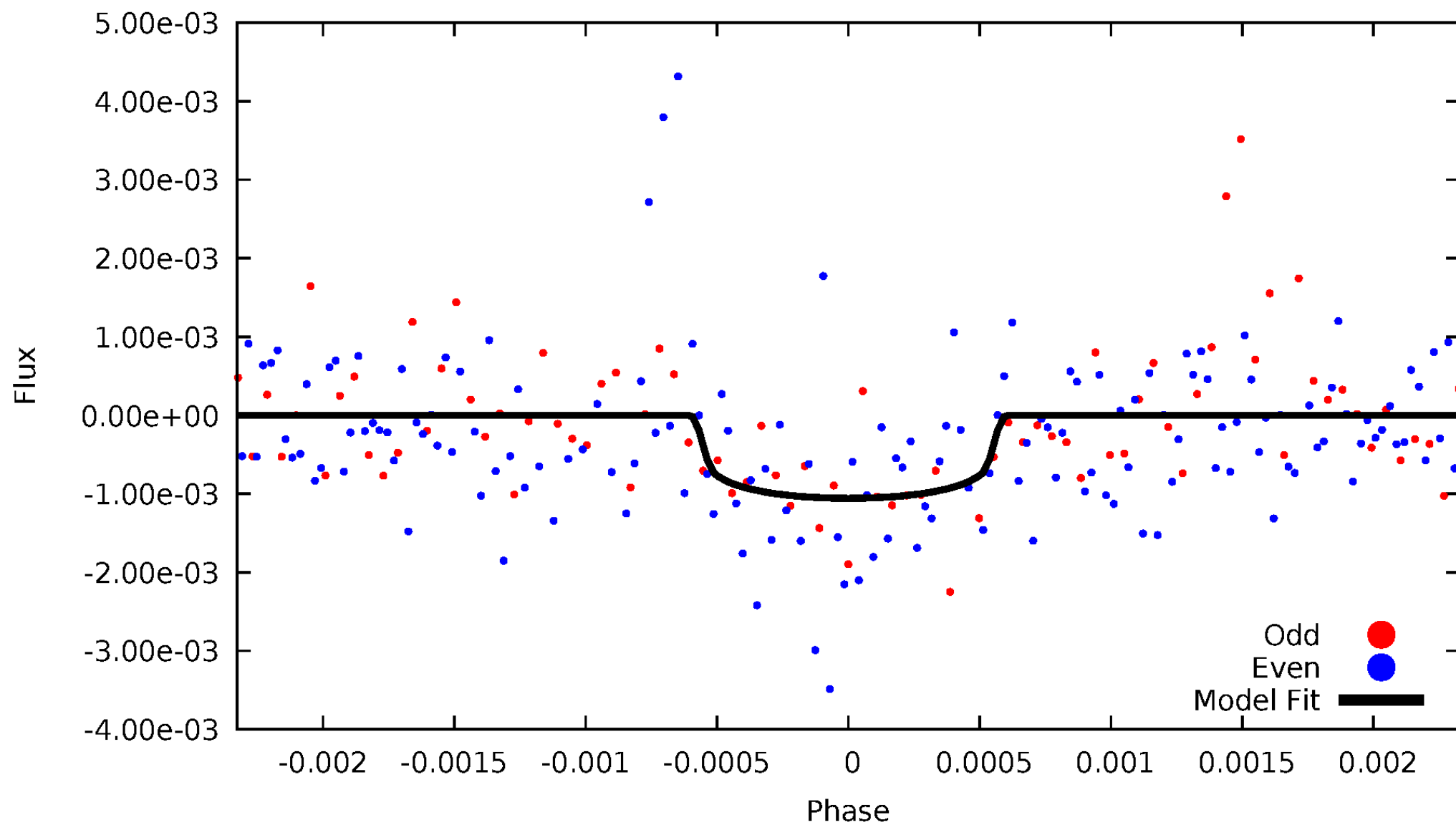


TCE 010489389-01



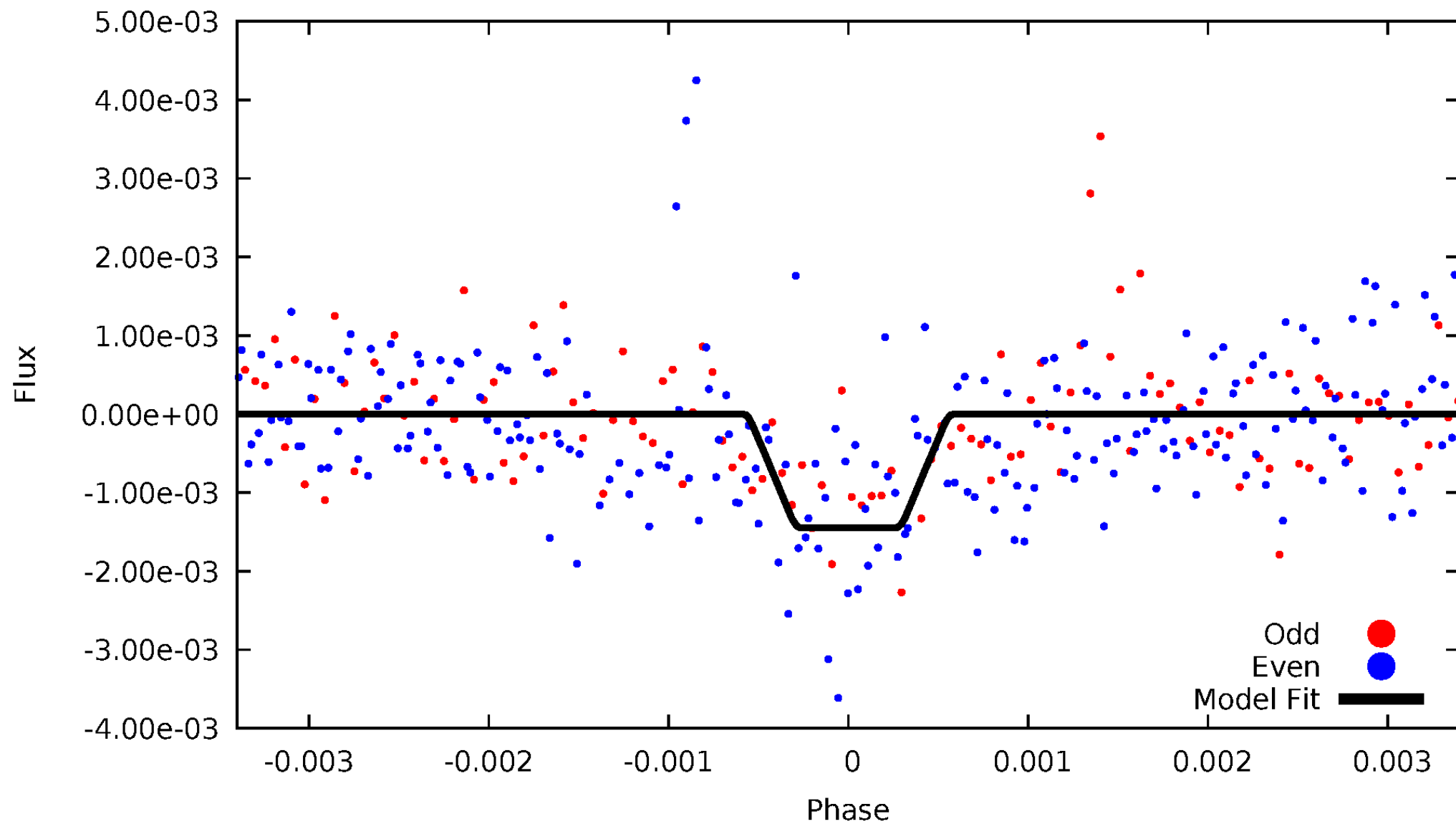
DV Odd/Even

TCE 010489389-01



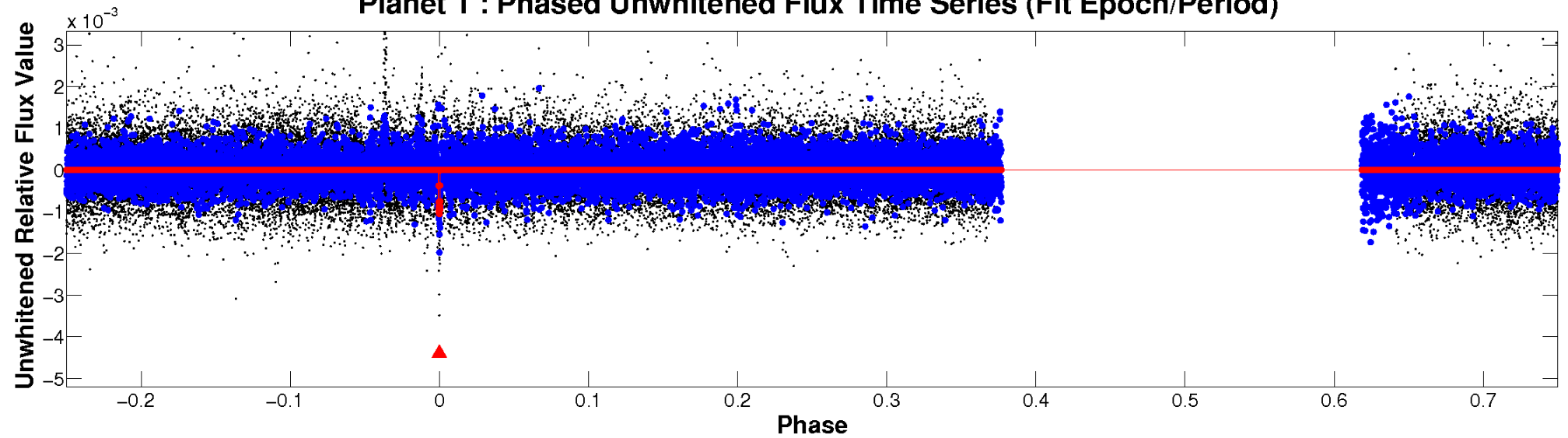
ALT Odd/Even

TCE 010489389-01

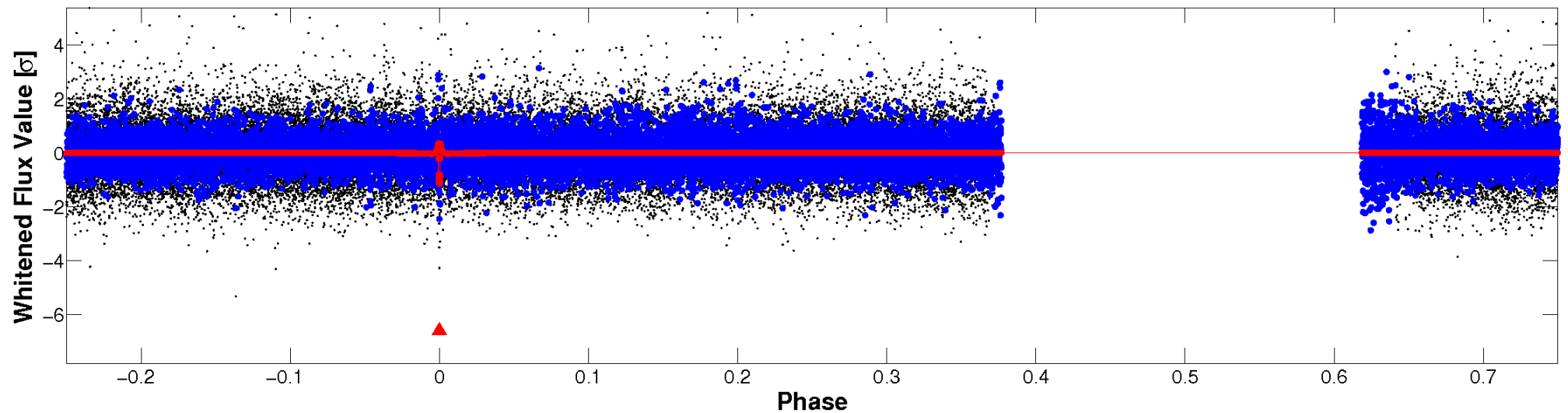


Non-Whitened Vs. Whitened Light Curve

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

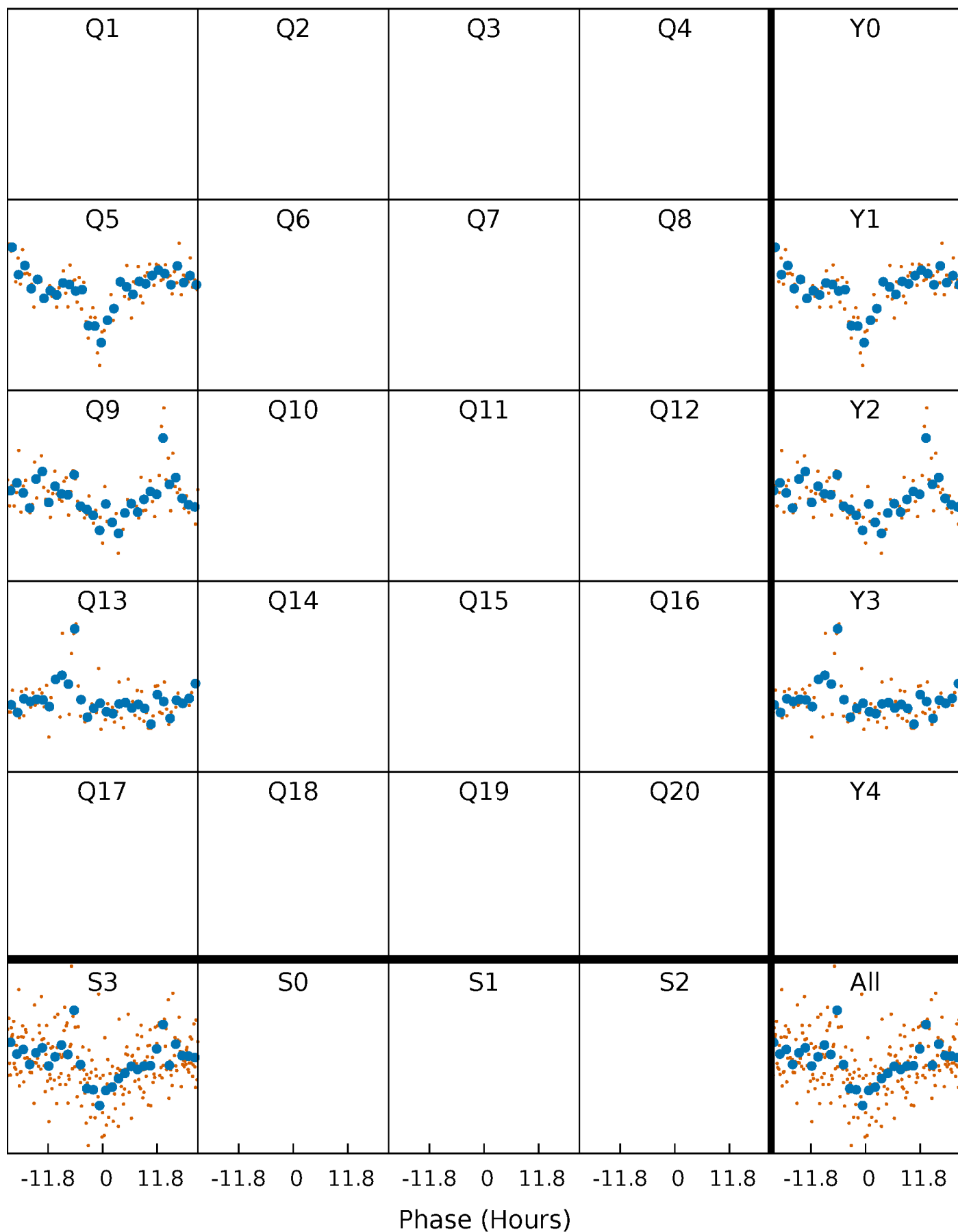


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010489389-01 P=369.392815 Days $T_0=493.293846$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010489389-01 $P=369.392815$ Days $T_0=493.293846$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

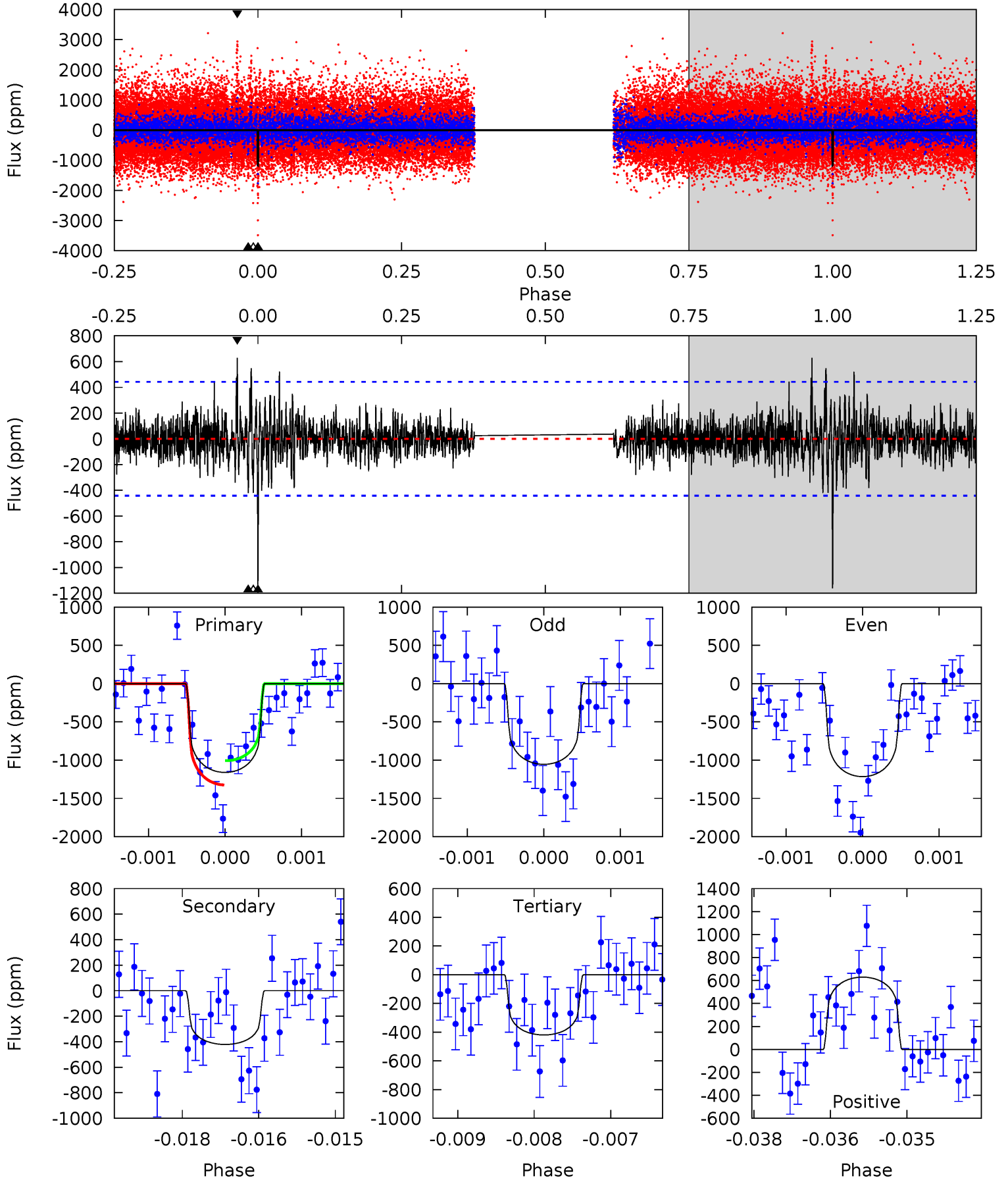
TCE 010489389-01 P=369.431954 Days $T_0=493.288649$ (BKJD)



DV Model-Shift Uniqueness Test

010489389-01, P = 369.392815 Days, E = 123.901031 Days

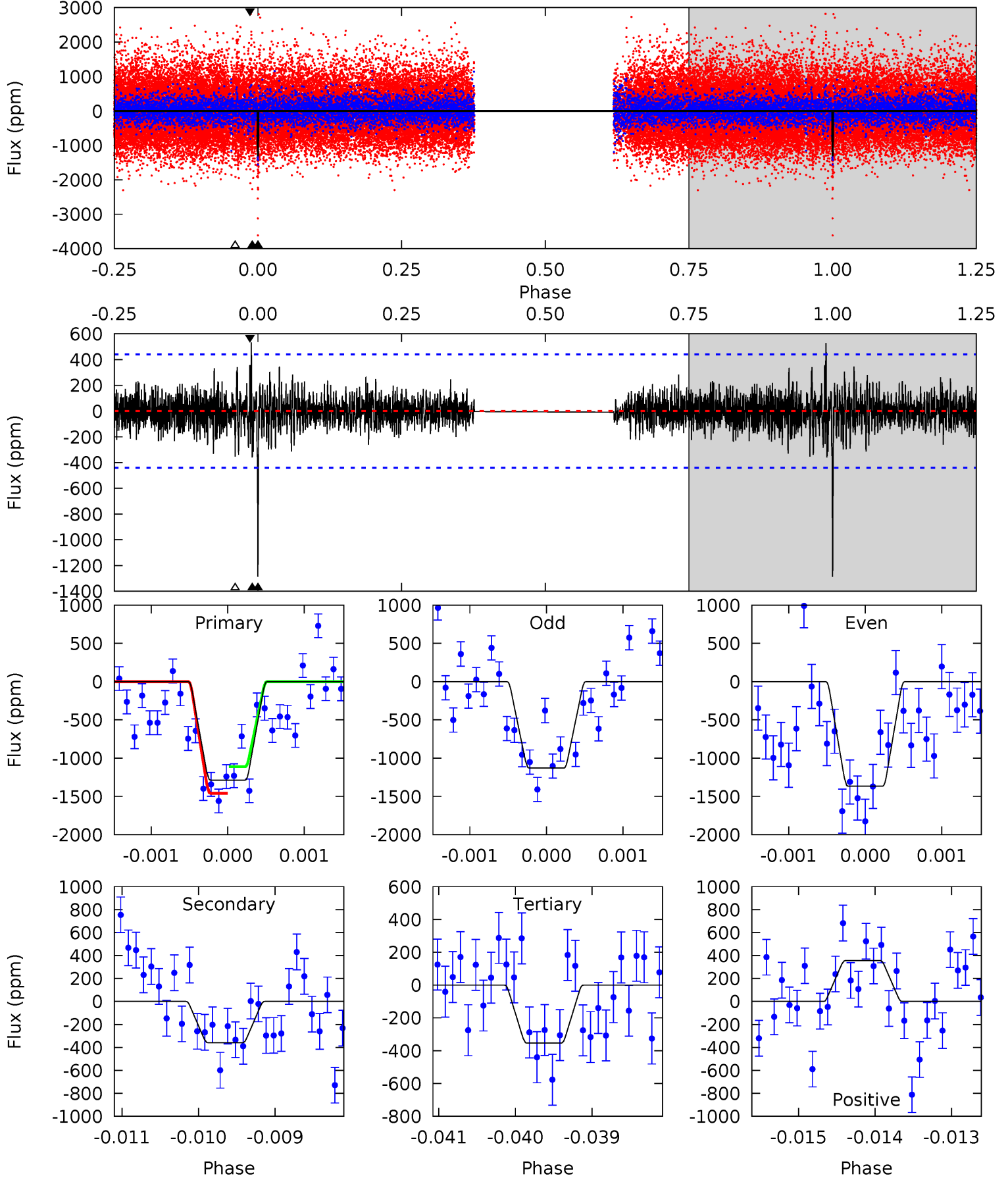
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	5.17	5.15	7.72	5.42	3.24	1.32	9.09	6.52	0.02	-2.55	0.93	1.04	0.35	1.94



Alt Model-Shift Uniqueness Test

010489389-01, P = 369.431954 Days, E = 123.856695 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	4.42	4.35	4.38	5.43	3.25	1.14	11.5	11.5	0.07	0.04	1.40	1.07	0.29	2.14



Stellar Parameters For KIC 010489389

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+209}_{-209}	$4.548^{+0.036}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.106}_{-0.118}$	$2.122^{+0.418}_{-1.089}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+11%/-13%	+20%/-51%
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 010489389-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-421 ± 82	$3.32^{+2.44}_{-1.84}$	353^{+26}_{-18}	4806^{+2174}_{-920}	20160^{+73221}_{-13531}
Alt.	-359 ± 81	$3.87^{+2.55}_{-2.11}$	353^{+24}_{-18}	4387^{+1778}_{-712}	12848^{+47514}_{-8322}

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

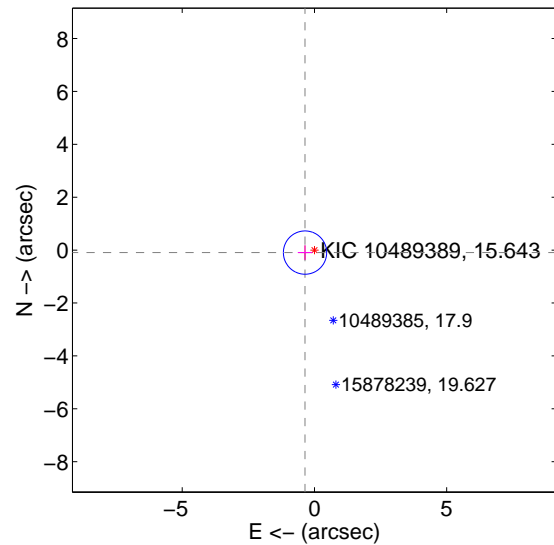
Supplemental centroid analysis for 010489389-01. Kepler magnitude: 15.64. Transit SNR 7.90

There are 0 quarters with good PRF difference image offsets

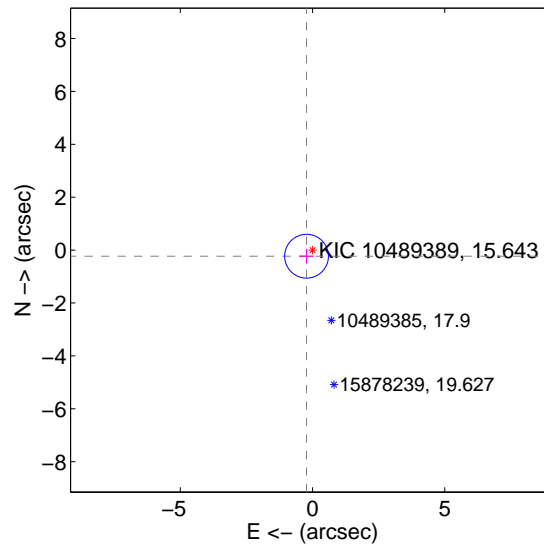
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.368 ± 0.273	1.35	0.356 ± 0.272	-0.094 ± 0.279
PRF-fit source offset from KIC position	0.324 ± 0.276	1.17	0.226 ± 0.272	-0.232 ± 0.279
photometric centroid source offset	2.16 ± 1.82	1.19	0.67 ± 1.92	-2.05 ± 1.81

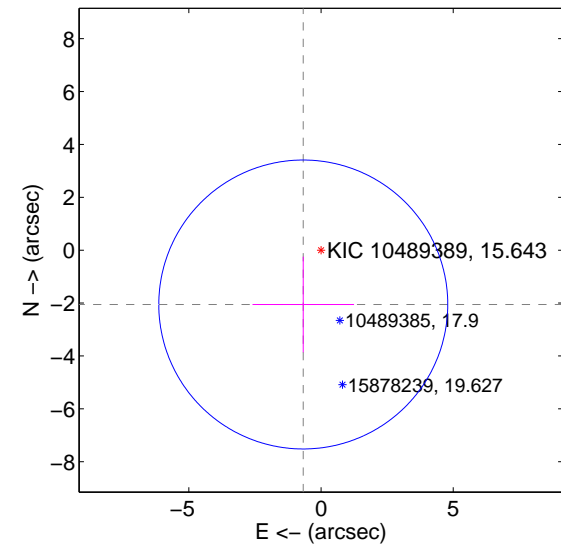
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

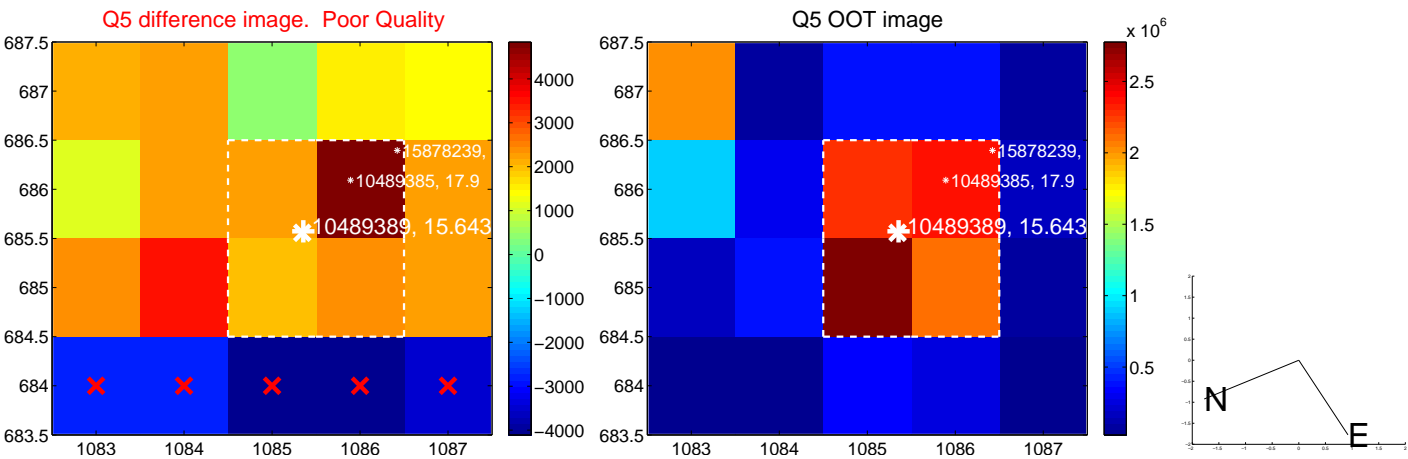


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

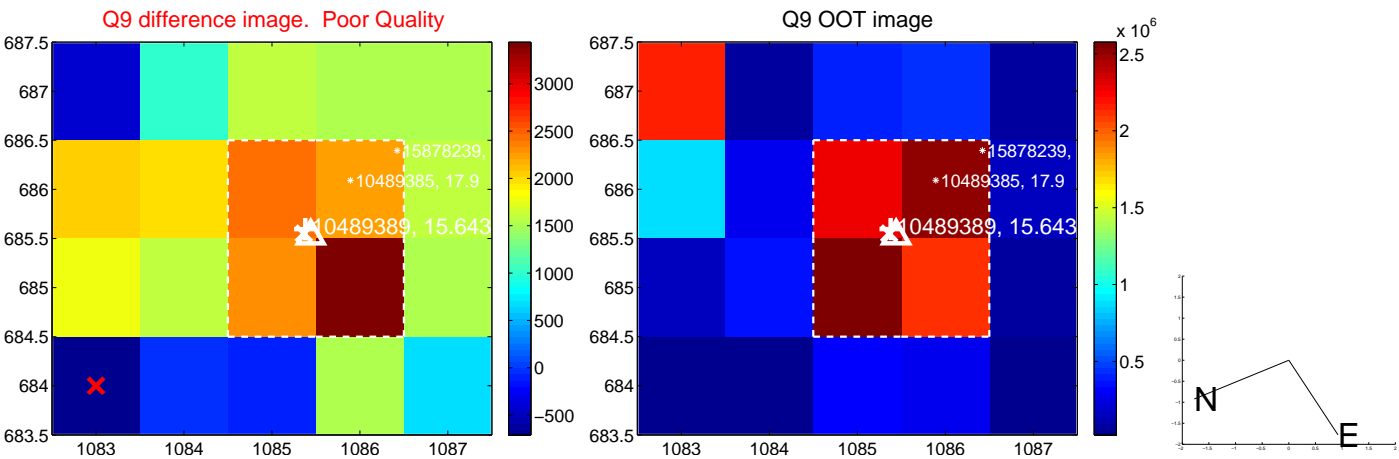
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



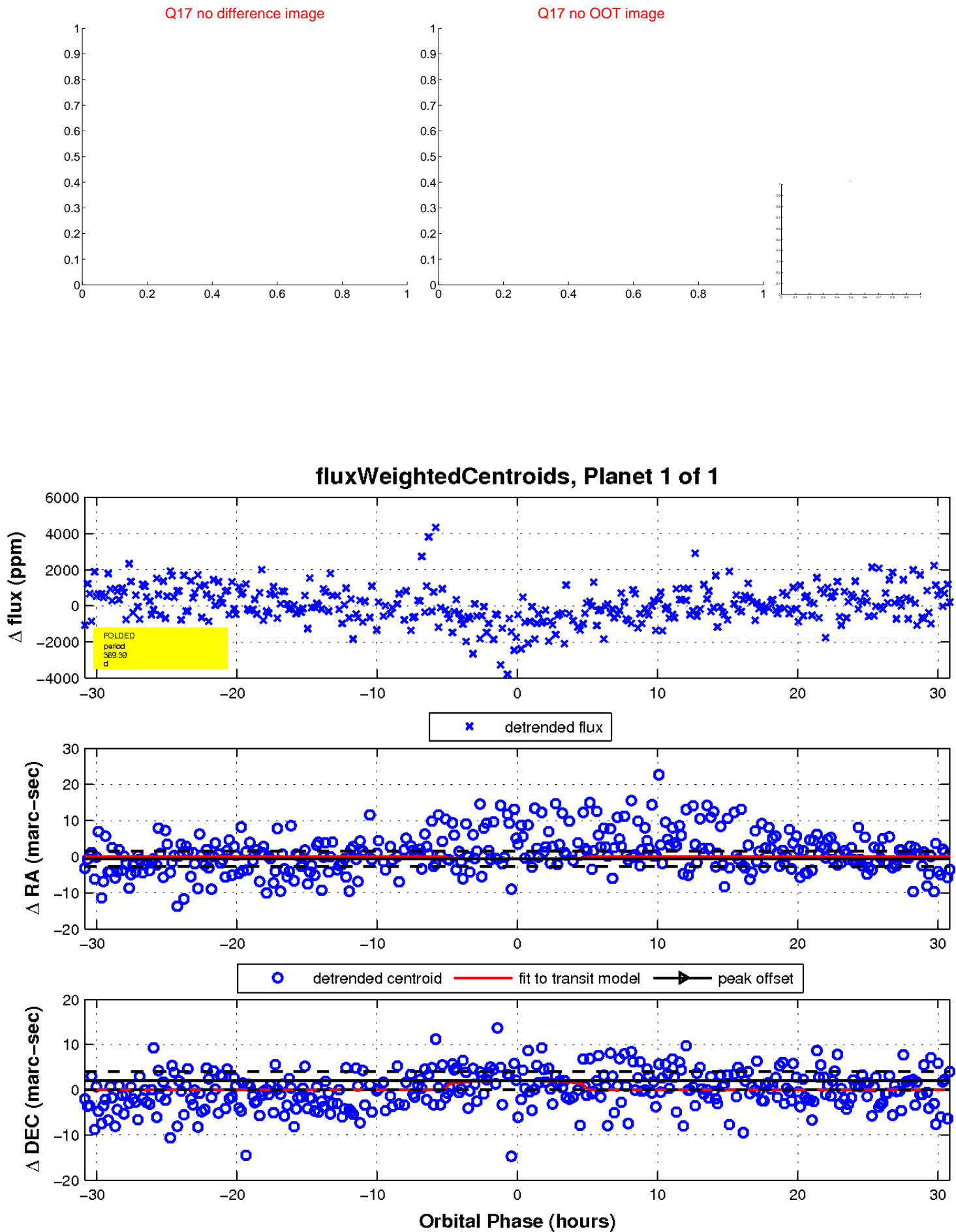
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

