

KIC 010815879

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})
010815879-01	OBS	No	398.143792	469.983072	1030.9	22.443	7.9	8.2	0.94	5803	4.18	0.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010815879-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—CENT_FEW_DIFFS—HALO_GHOST

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

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

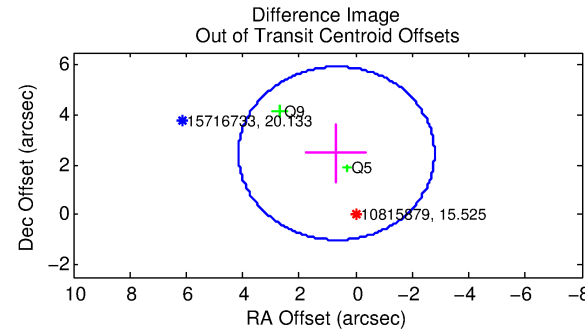
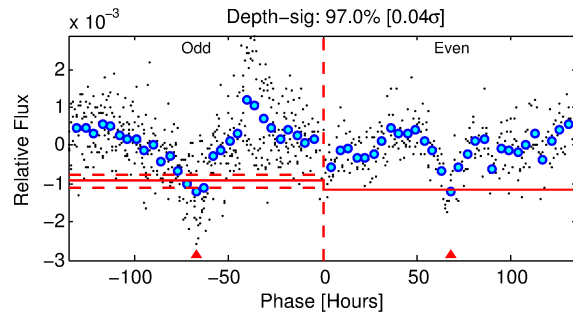
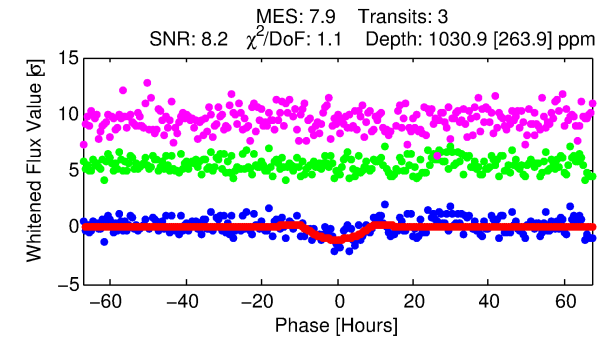
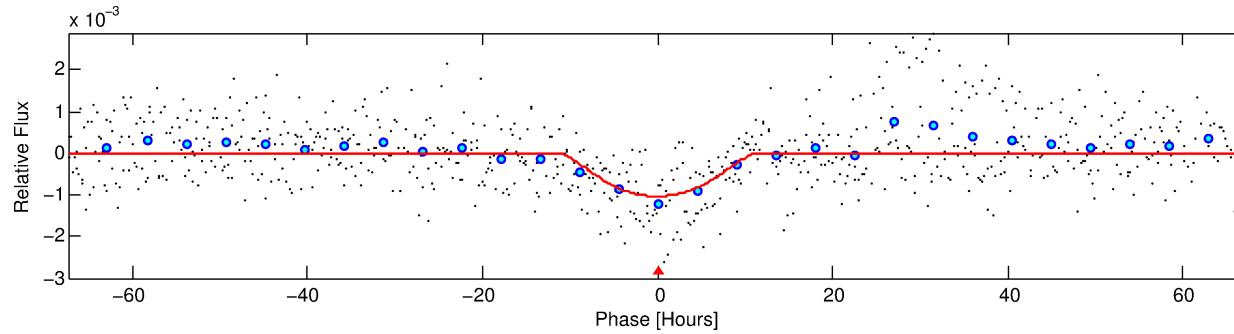
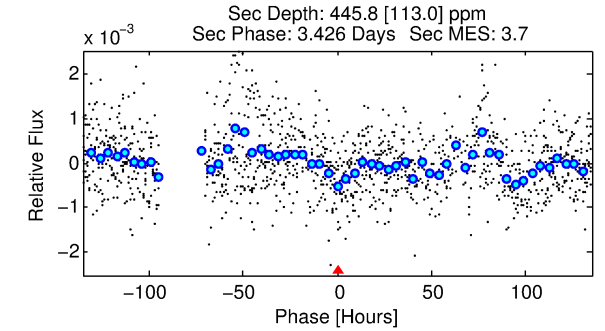
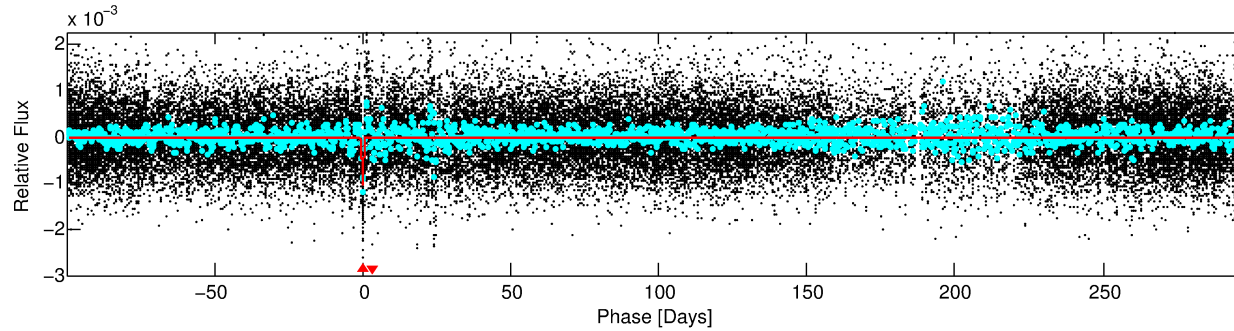
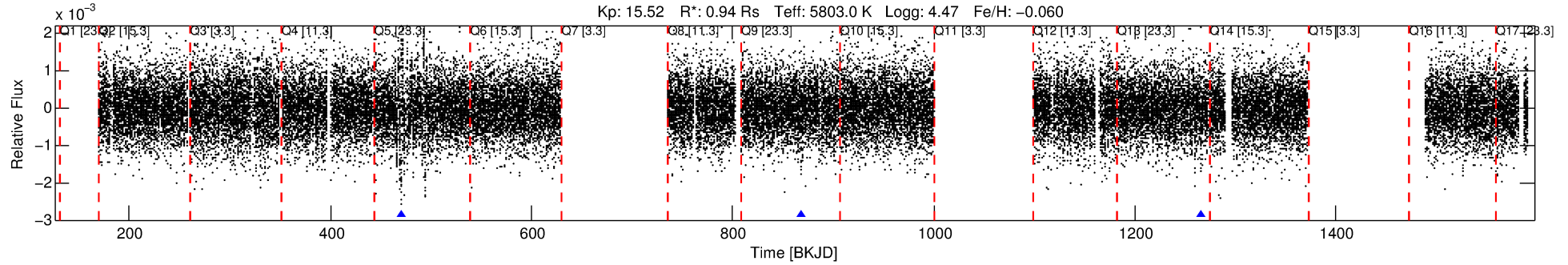
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010815879-01

No Significant Match Found

DV One-Page Summary

KIC: 10815879 Candidate: 1 of 1 Period: 398.144 d



DV Fit Results:

Period = 398.14379 [0.03605] d
Epoch = 469.9831 [0.0480] BKJD
Rp/R* = 0.0406 [0.0204]
a/R* = 51.26 [15.66]
b = 0.97 [0.05]
Seff = 0.83 [0.32]
Teq = 243 [24] K
Rp = 4.19 [2.43] Re
a = 1.0480 [0.2603] AU
Ag = 15379.92 [16876.60] [0.91σ]
Teff = 4186 [1091] K [3.61σ]

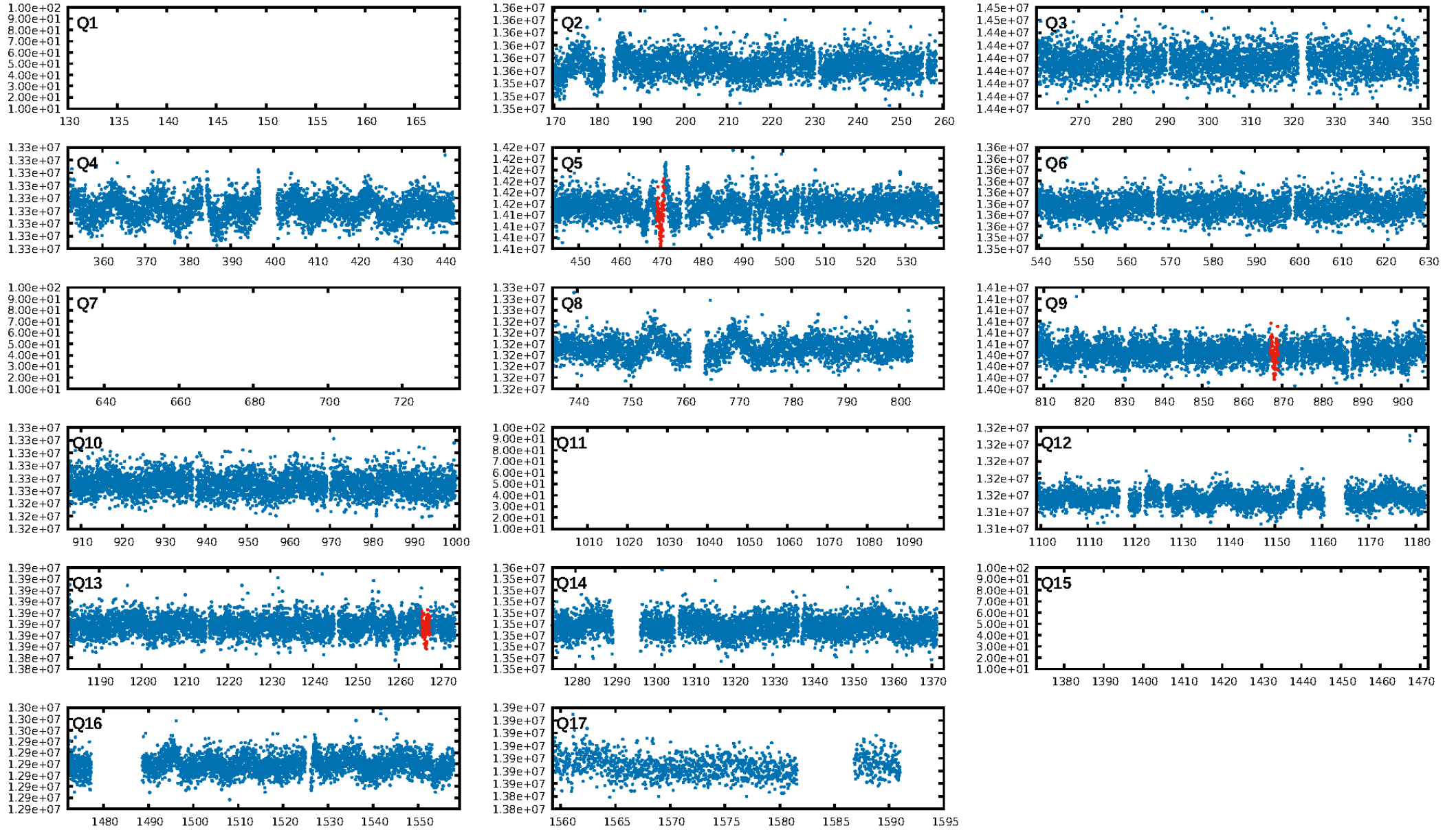
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.6%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 1.58e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.123
Centroid-sig: 43.1%
Centroid-so: 1.425 arcsec [0.75σ]
OotOffset-rm: 2.545 arcsec [2.20σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 2.270 arcsec [1.98σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

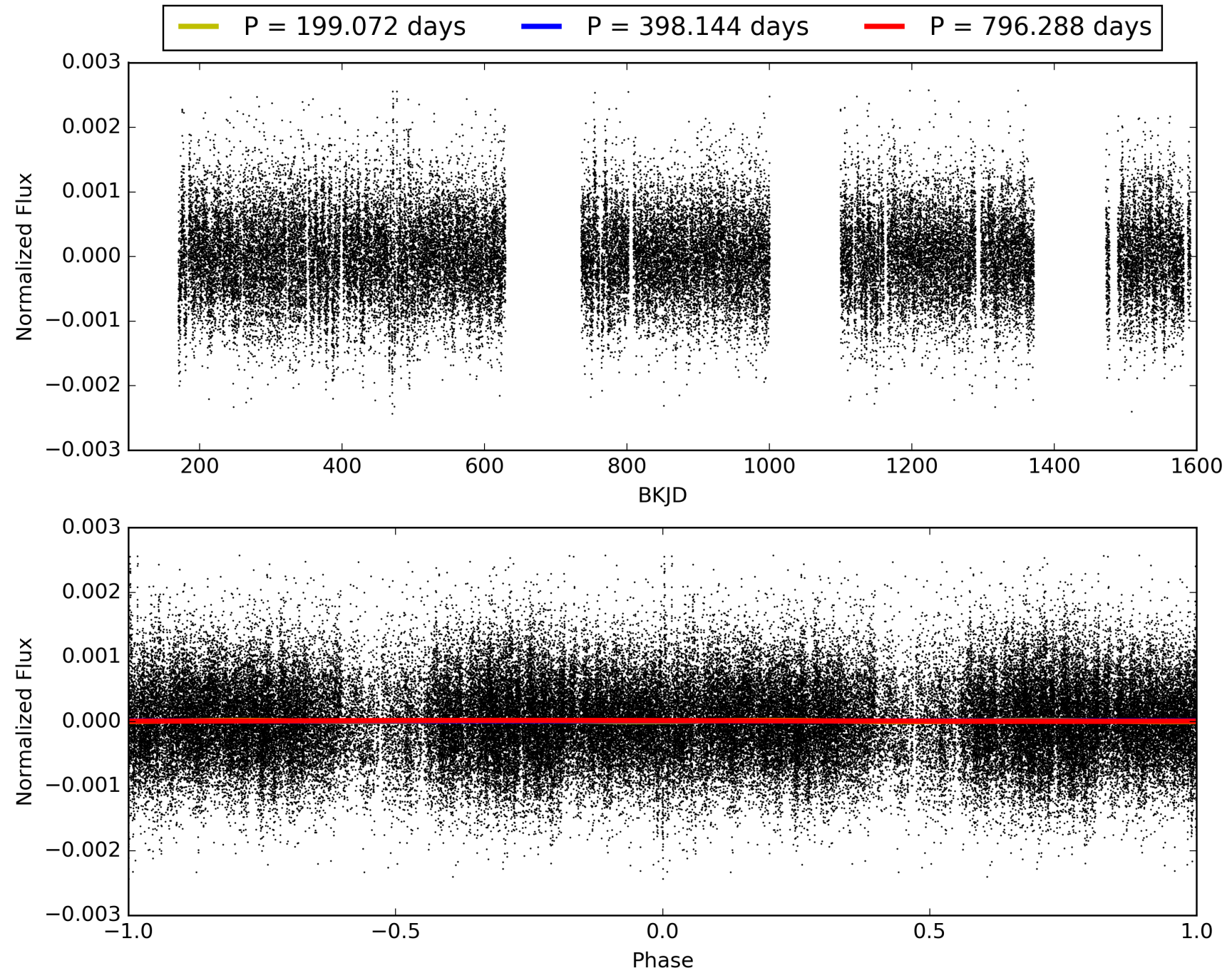
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:09:38 Z

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

TCE 010815879-01, PDC Light Curves

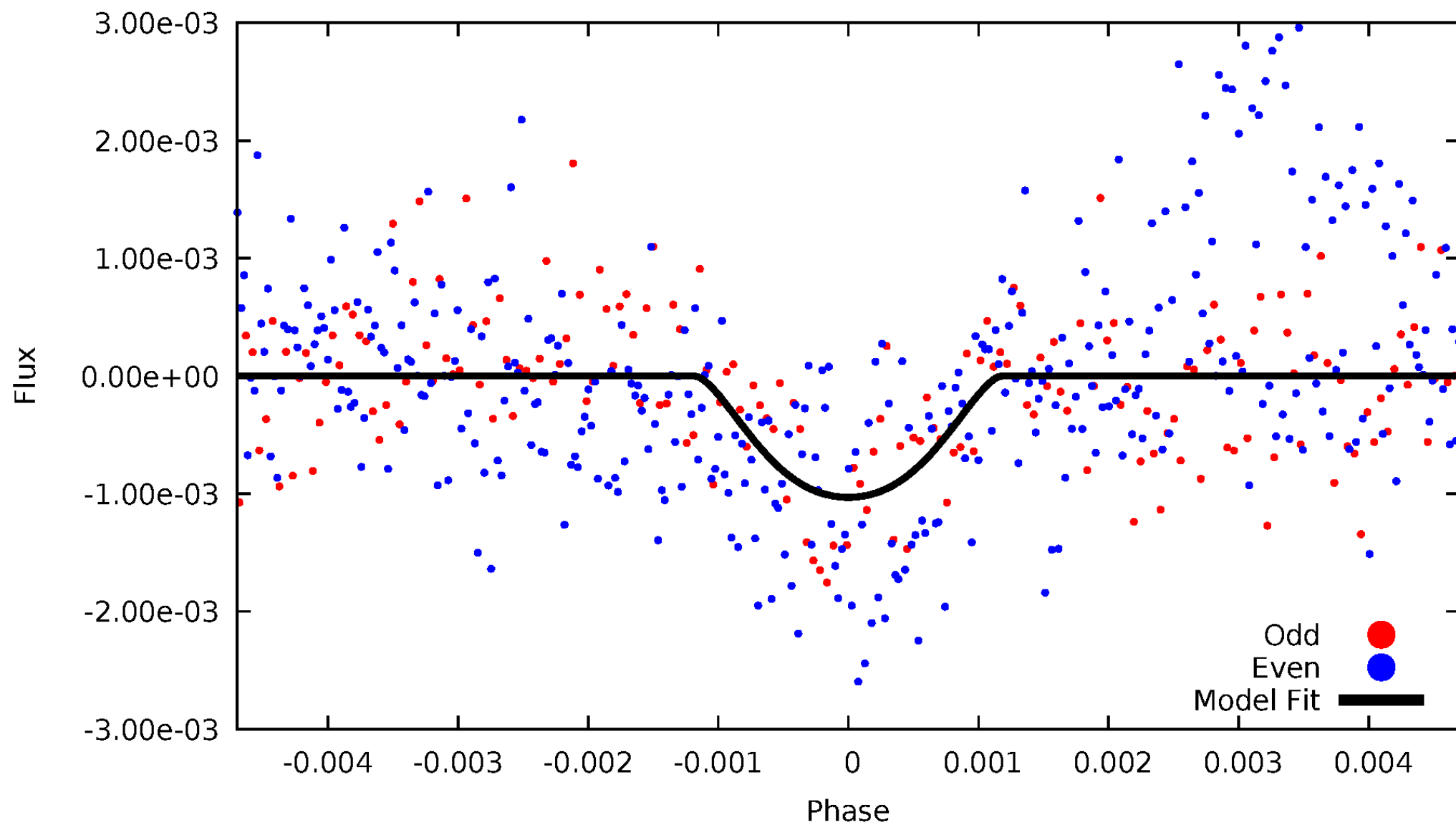


TCE 010815879-01



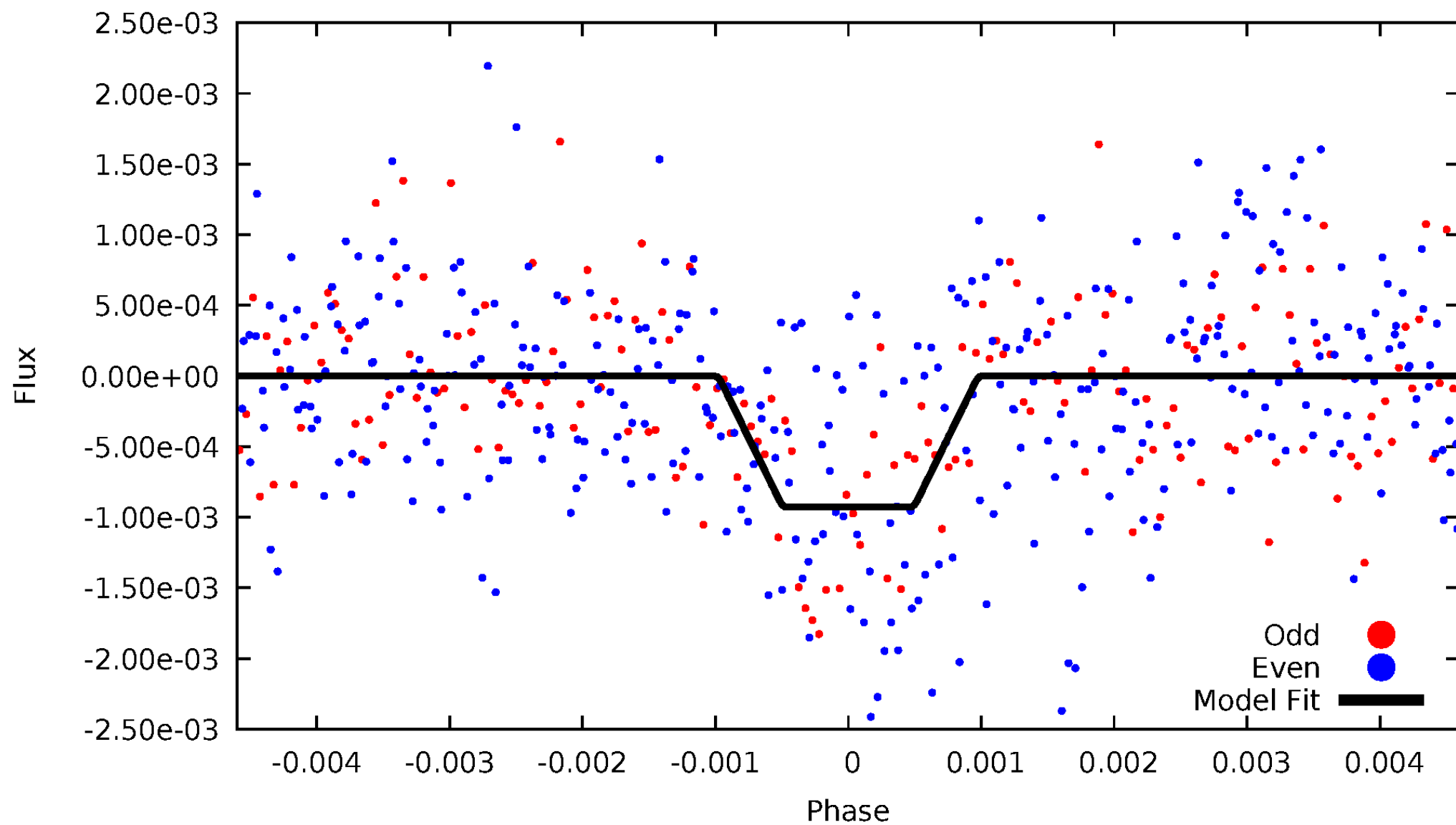
DV Odd/Even

TCE 010815879-01

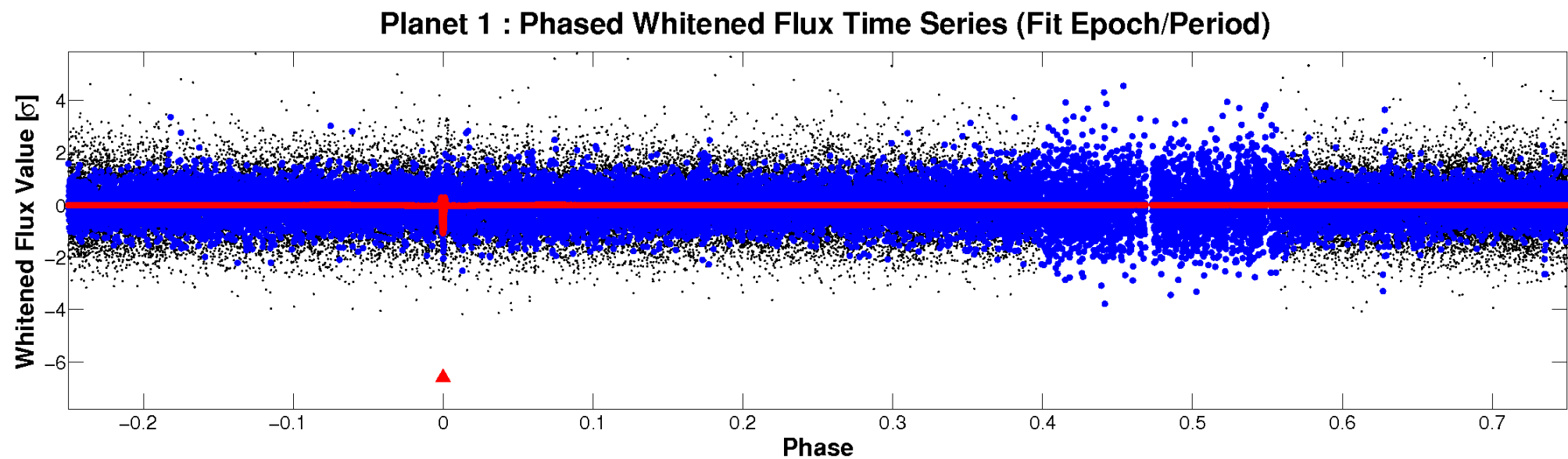
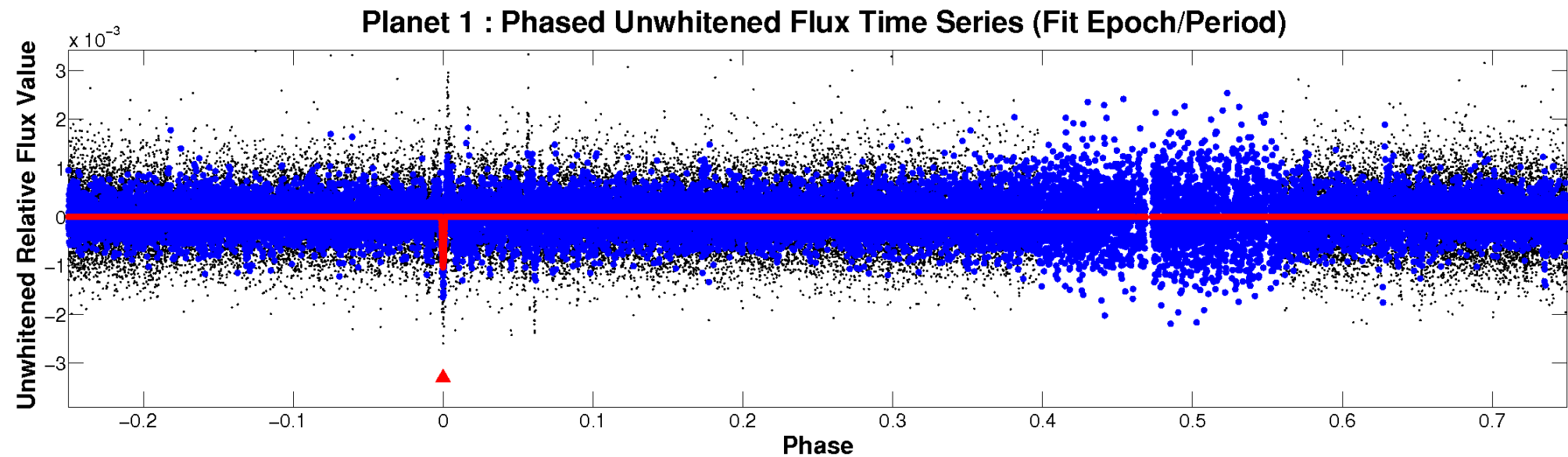


ALT Odd/Even

TCE 010815879-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010815879-01 P=398.143793 Days $T_0=469.983072$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010815879-01 P=398.143793 Days $T_0=469.983072$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

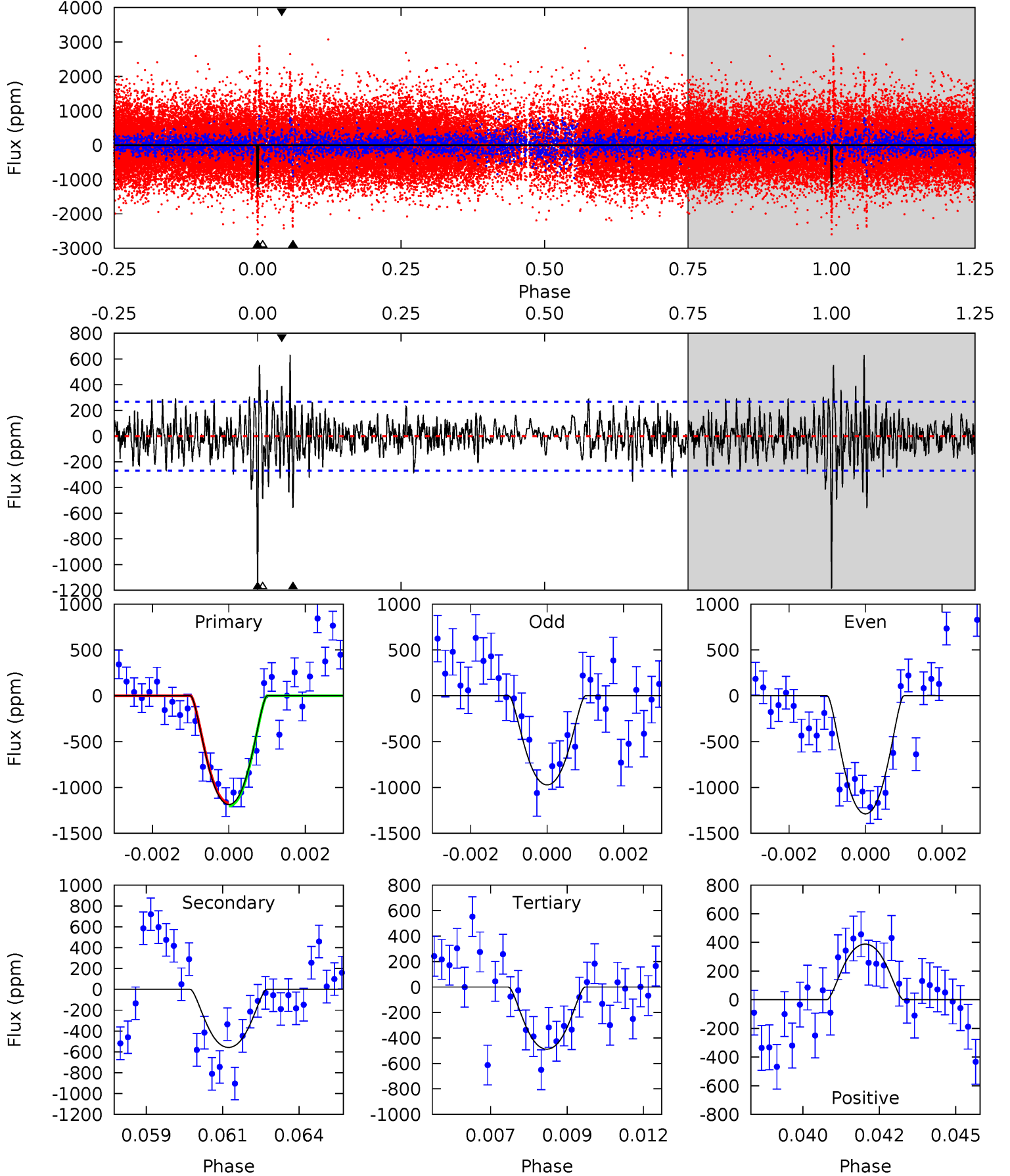
TCE 010815879-01 P=398.202406 Days $T_0=469.946081$ (BKJD)



DV Model-Shift Uniqueness Test

010815879-01, $P = 398.143793$ Days, $E = 71.839279$ Days

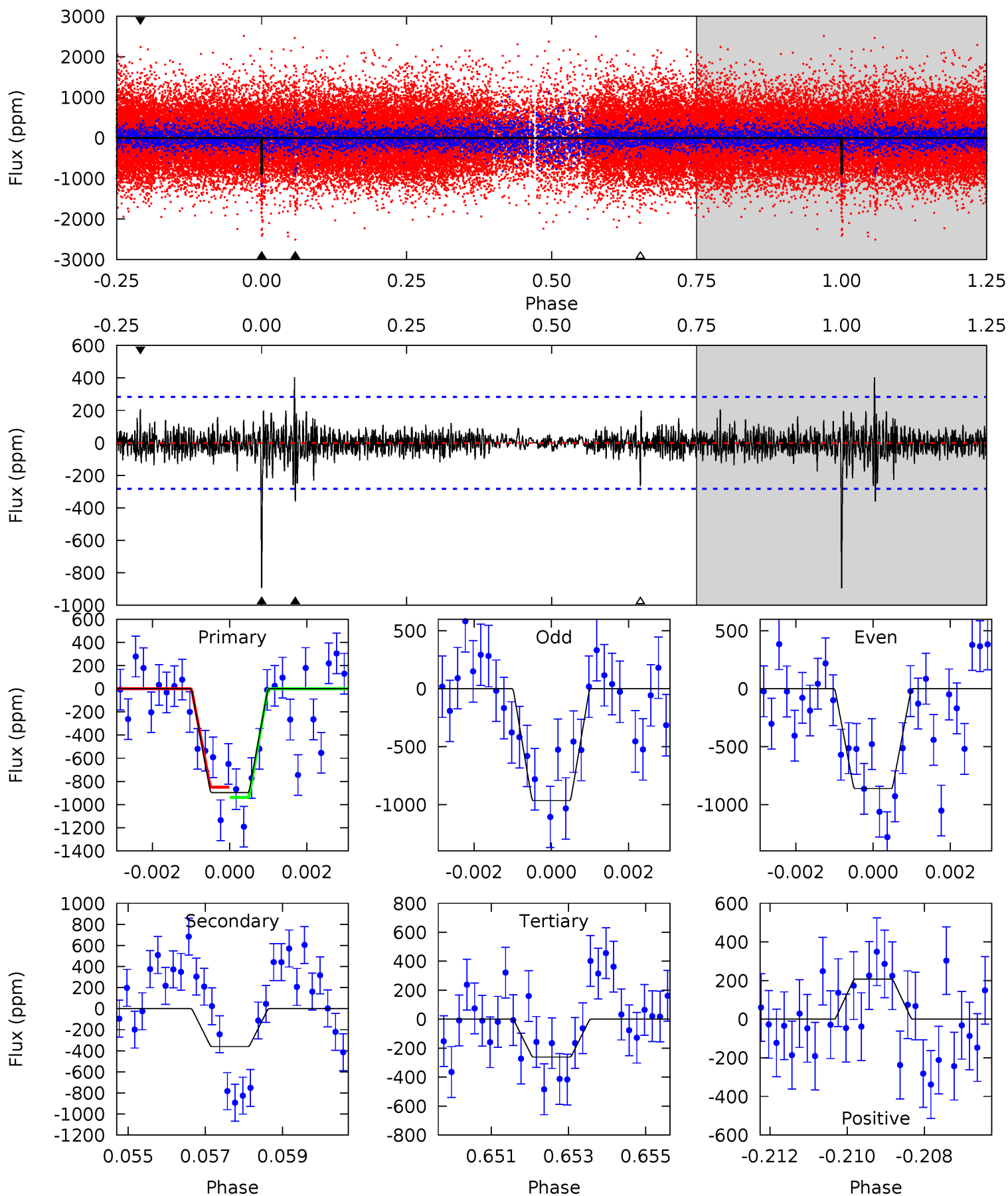
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	11.0	9.63	7.67	5.30	3.04	2.21	13.8	15.7	1.37	3.34	2.97	1.22	0.35	0.33



Alt Model-Shift Uniqueness Test

010815879-01, P = 398.202406 Days, E = 71.743675 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	6.77	4.93	3.91	5.33	3.09	1.00	11.9	13.0	1.85	2.86	0.93	0.93	0.31	0.83



Stellar Parameters For KIC 010815879

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5803^{+157}_{-192}	$4.473^{+0.067}_{-0.202}$	$-0.060^{+0.300}_{-0.300}$	$0.945^{+0.275}_{-0.110}$	$0.969^{+0.116}_{-0.104}$	$1.619^{+0.553}_{-0.799}$
	+3%/-3%	+1%/-5%	+500%/-500%	+29%/-12%	+12%/-11%	+34%/-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 010815879-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-557 ± 51	$4.53^{+2.12}_{-2.29}$	347^{+24}_{-17}	4536^{+1637}_{-619}	16153^{+50422}_{-8639}
Alt.	-360 ± 53	$3.55^{+2.08}_{-1.93}$	346^{+24}_{-17}	4572^{+1995}_{-717}	17405^{+63565}_{-10733}

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

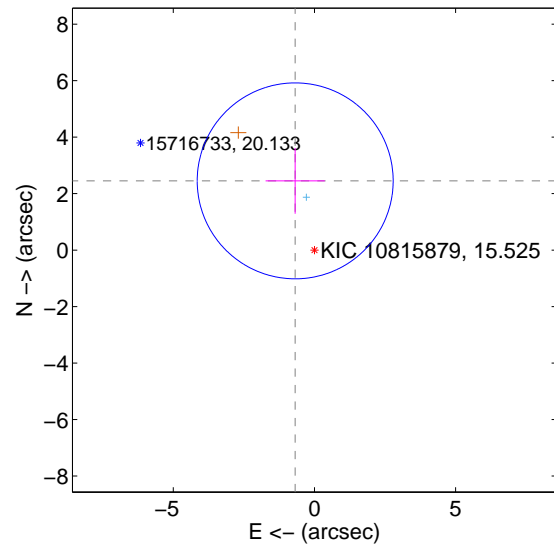
Supplemental centroid analysis for 010815879-01. Kepler magnitude: 15.53. Transit SNR 8.15

There are 1 quarters with good PRF difference image offsets

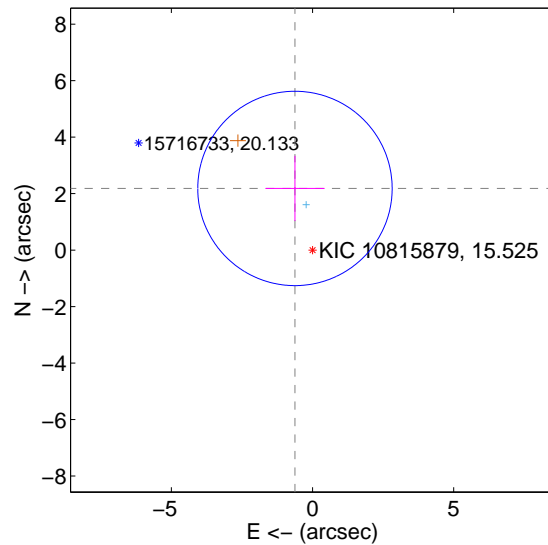
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.545 ± 1.156	2.20	0.682 ± 1.047	2.452 ± 1.164
PRF-fit source offset from KIC position	2.270 ± 1.147	1.98	0.622 ± 1.049	2.183 ± 1.155
photometric centroid source offset	1.42 ± 1.91	0.75	-0.54 ± 1.98	-1.32 ± 1.89

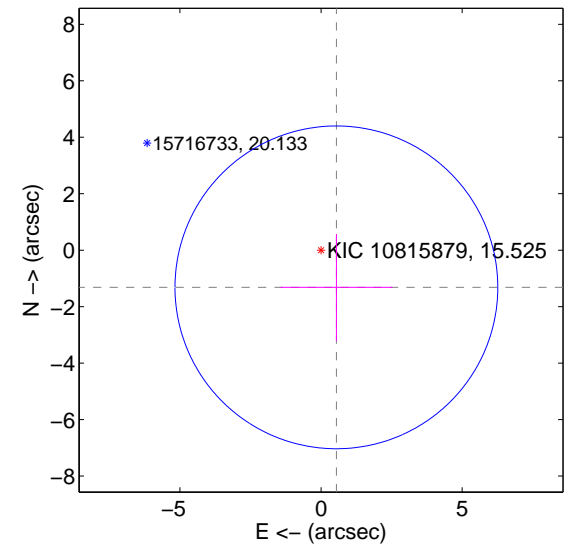
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

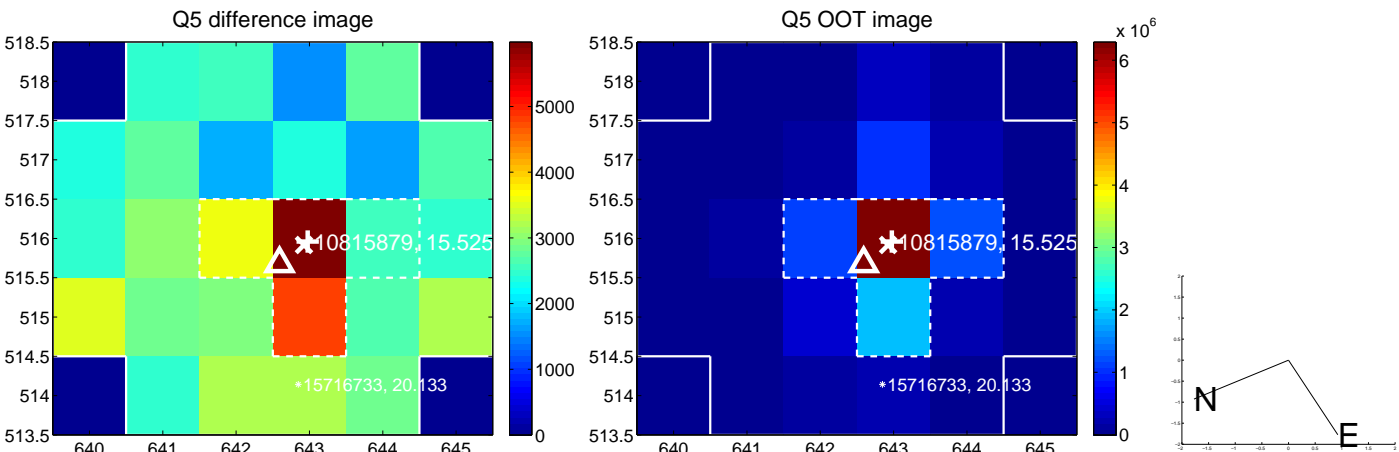


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

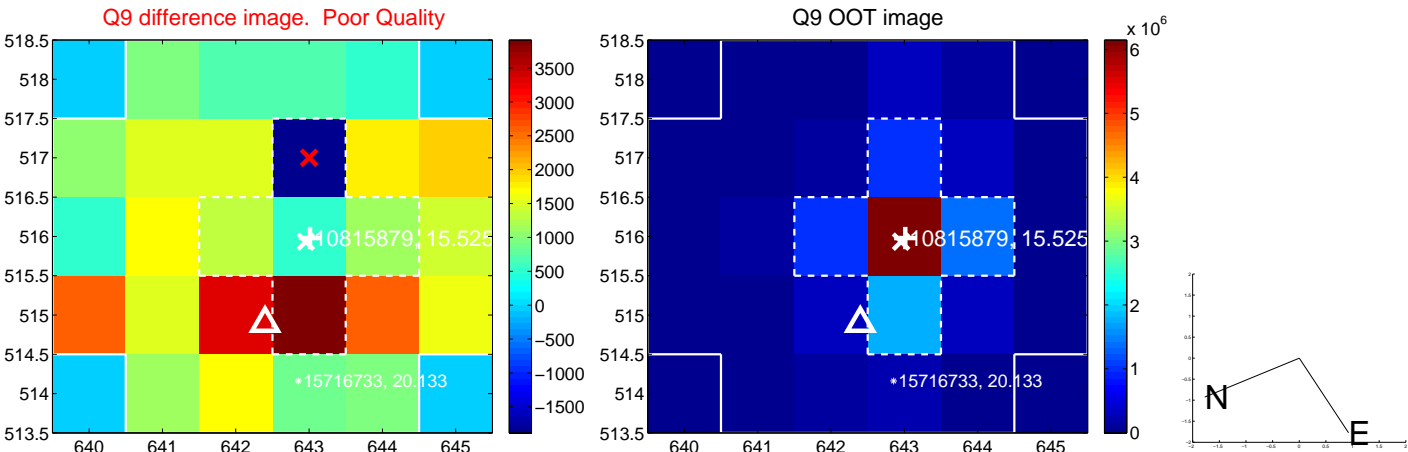
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



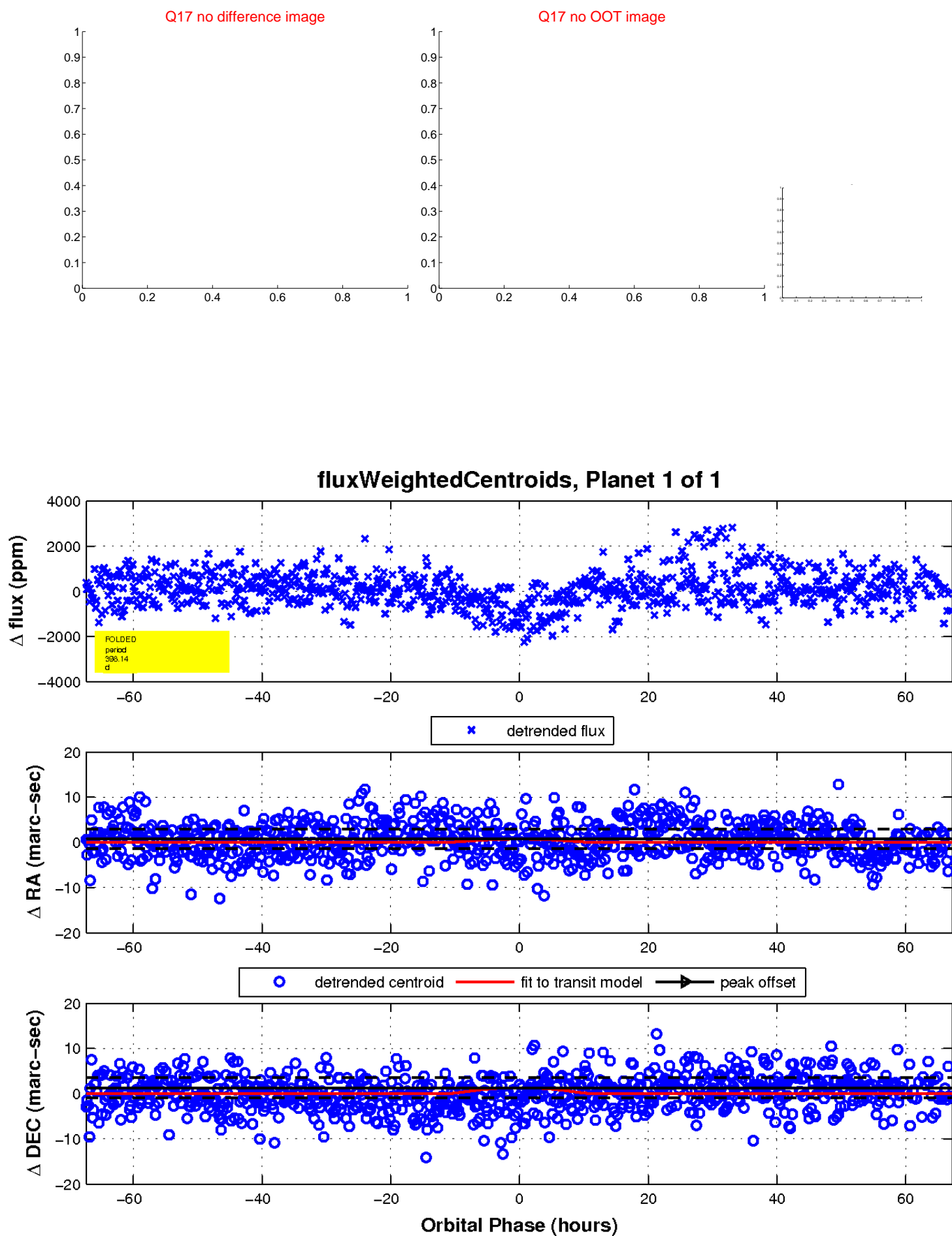
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

