

KIC 010601014

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})
010601014-01	OBS	No	431.867318	458.150457	791.2	11.008	8.5	7.9	1.07	6194	3.37	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010601014-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

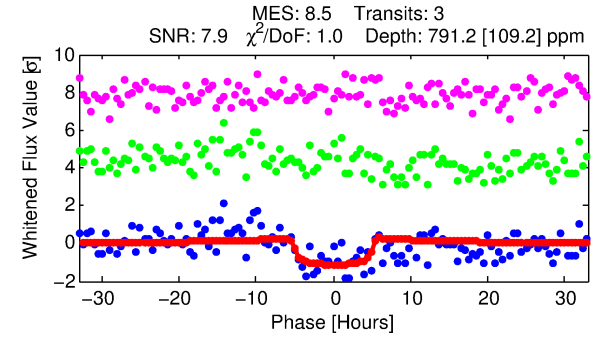
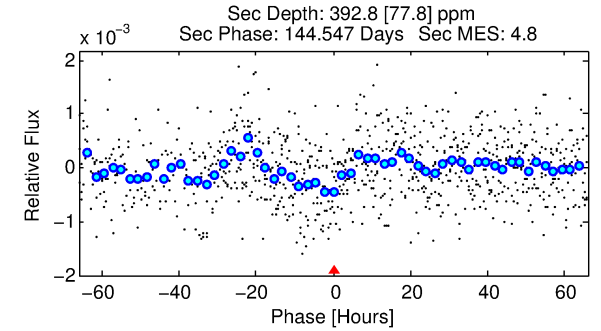
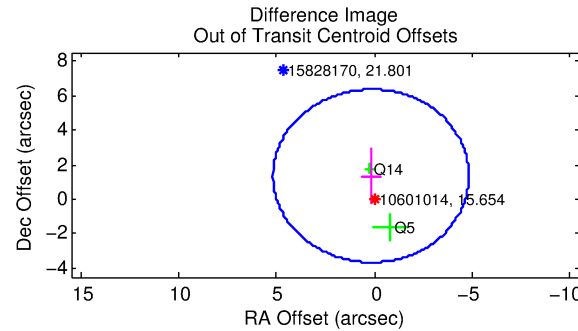
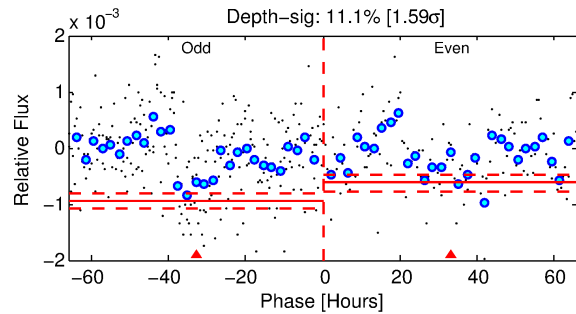
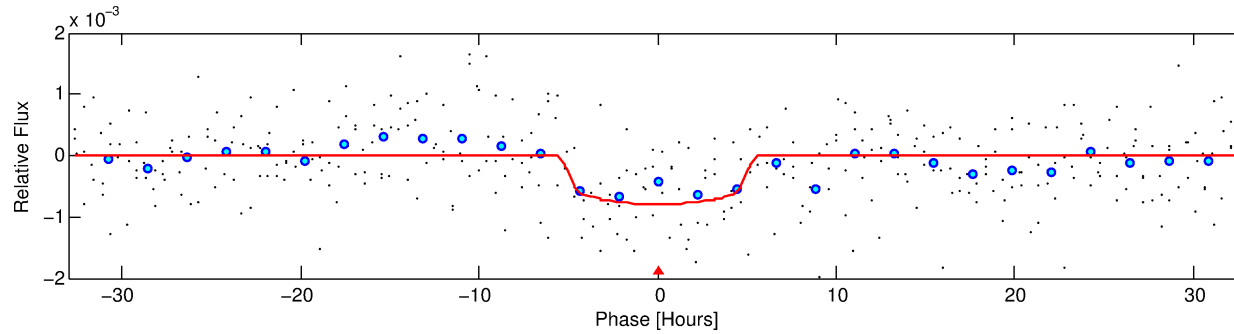
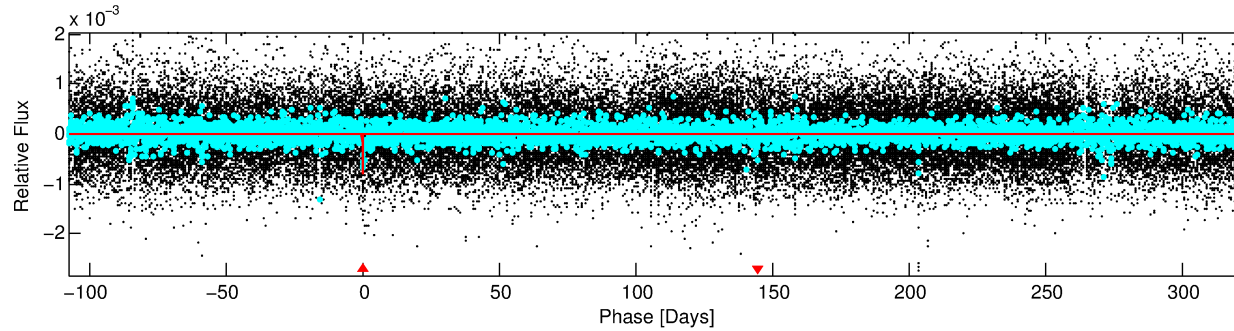
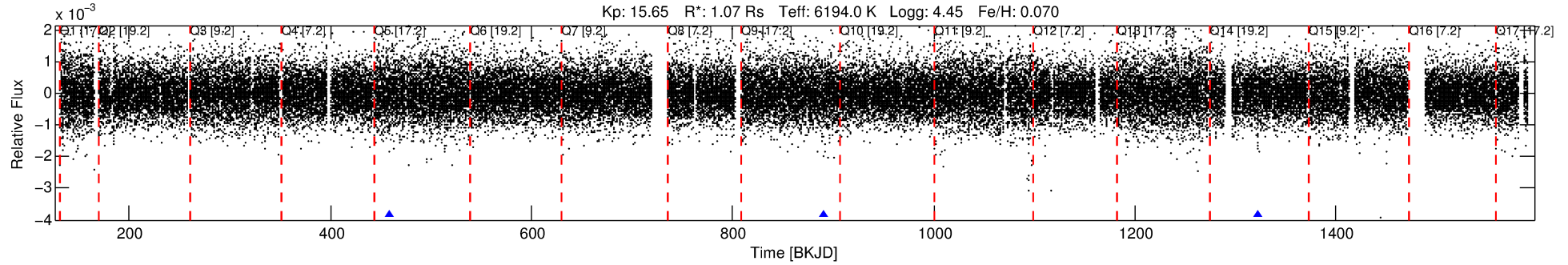
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010601014-01

No Significant Match Found

DV One-Page Summary

KIC: 10601014 Candidate: 1 of 1 Period: 431.867 d



DV Fit Results:

Period = 431.86732 [0.01523] d
Epoch = 458.1505 [0.0214] BKJD
Rp/R* = 0.0289 [0.0060]
a/R* = 183.39 [172.13]
b = 0.83 [0.36]
Seff = 1.09 [0.47]
Teq = 261 [28] K
Rp = 3.37 [1.28] Re
a = 1.1756 [0.3203] AU
Ag = 26265.33 [16074.92] [1.63 σ]
Teffp = 5129 [622] K [7.82 σ]

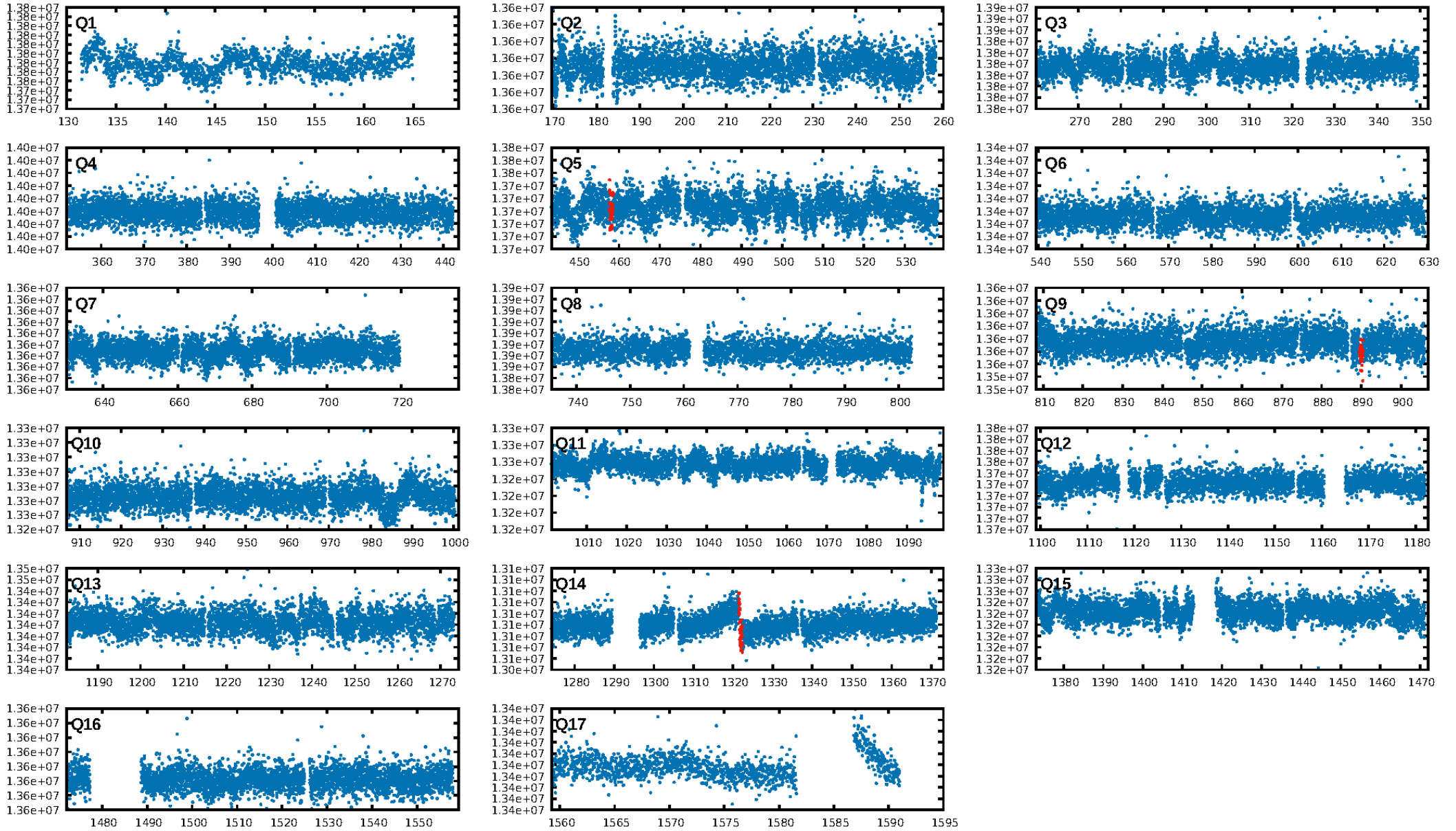
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 1.02e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.045
Centroid-sig: 64.4%
Centroid-so: 1.168 arcsec [0.69 σ]
OotOffset-rm: 1.360 arcsec [0.81 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 1.317 arcsec [0.81 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

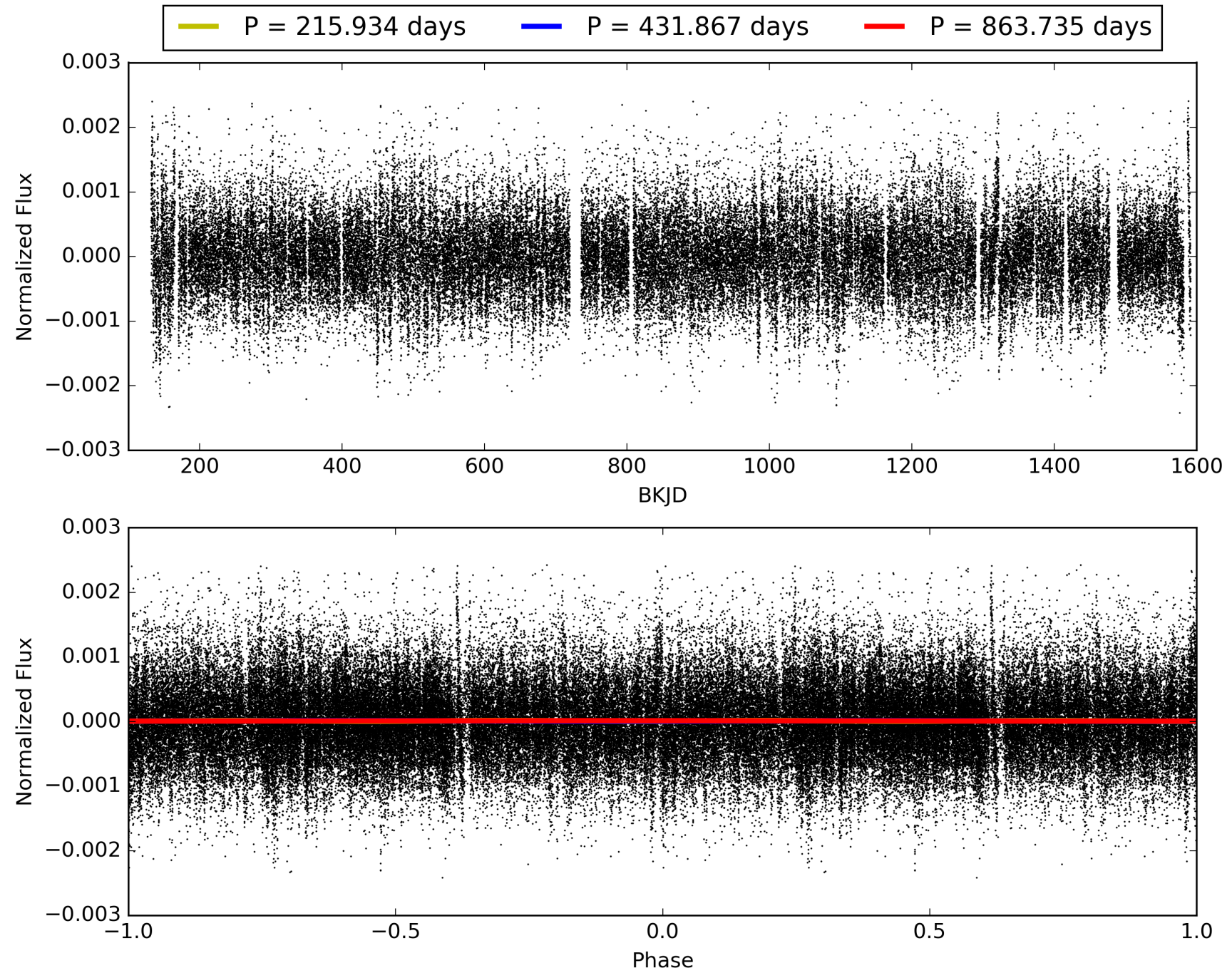
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:19:30 Z

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

TCE 010601014-01, PDC Light Curves

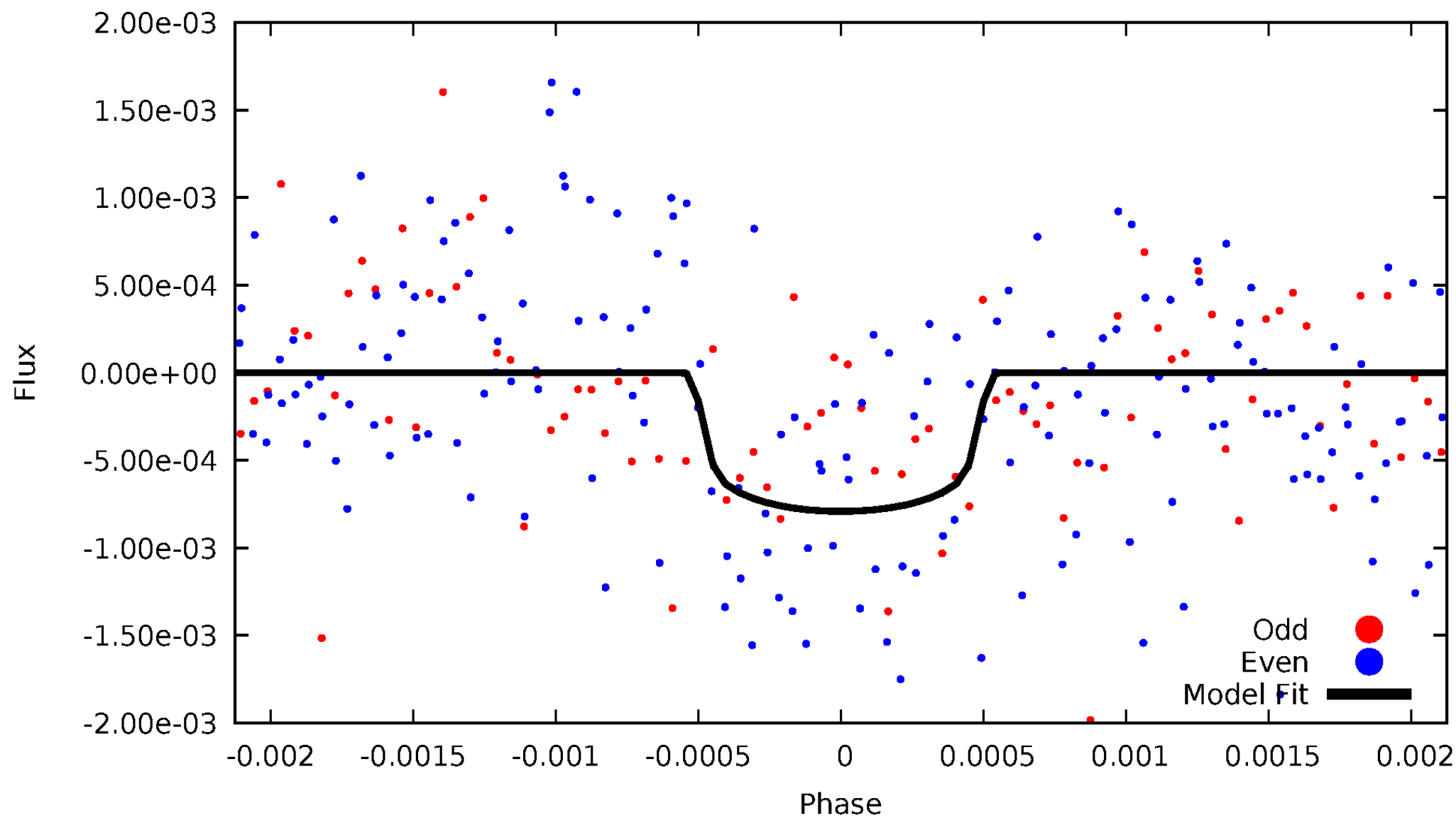


TCE 010601014-01



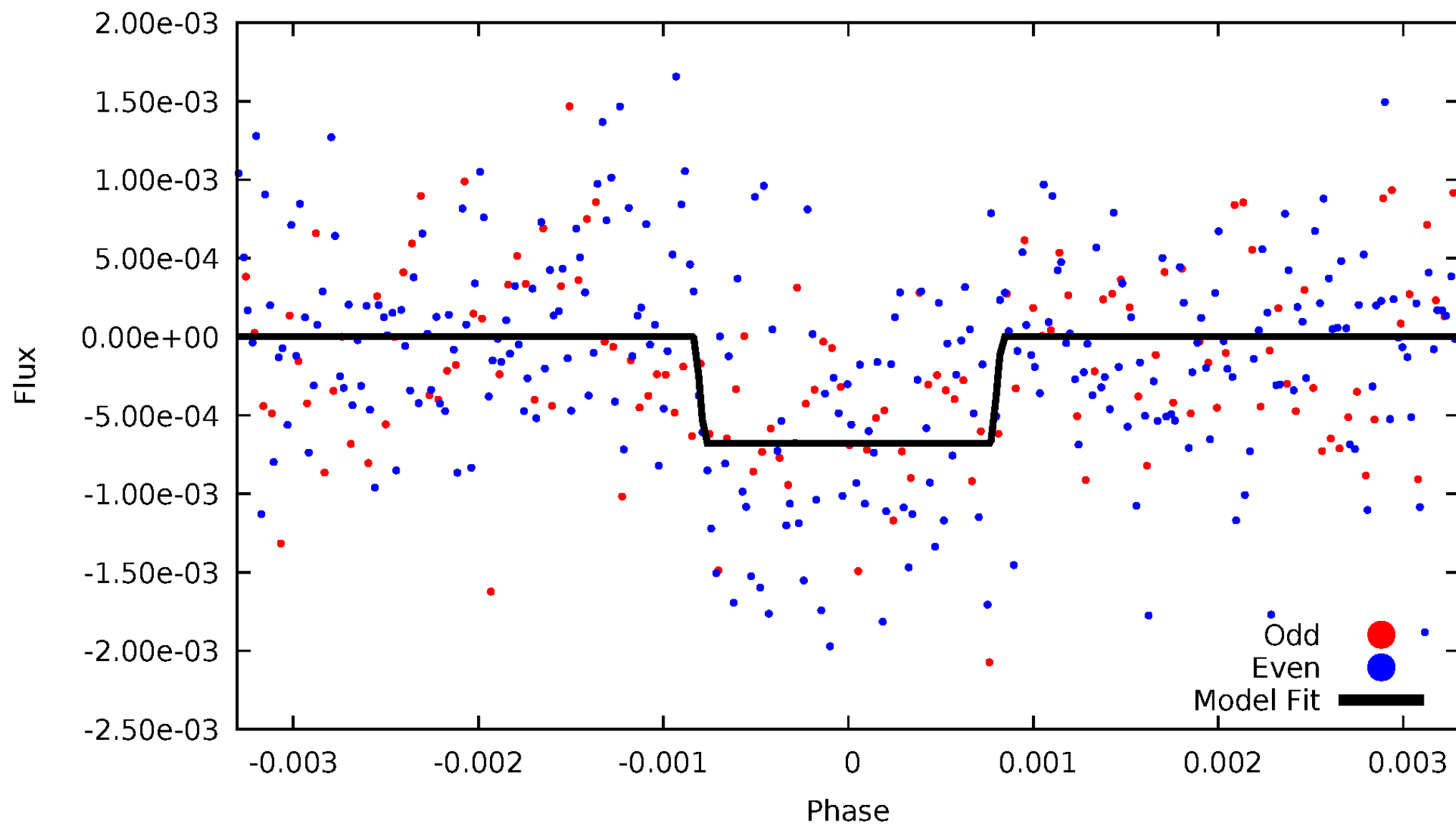
DV Odd/Even

TCE 010601014-01



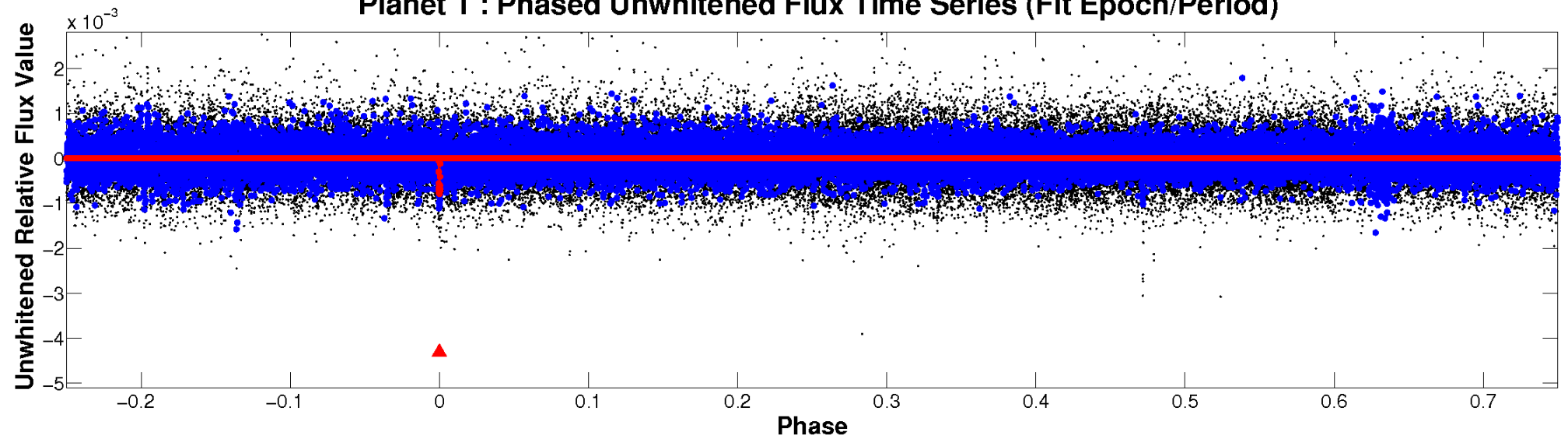
ALT Odd/Even

TCE 010601014-01

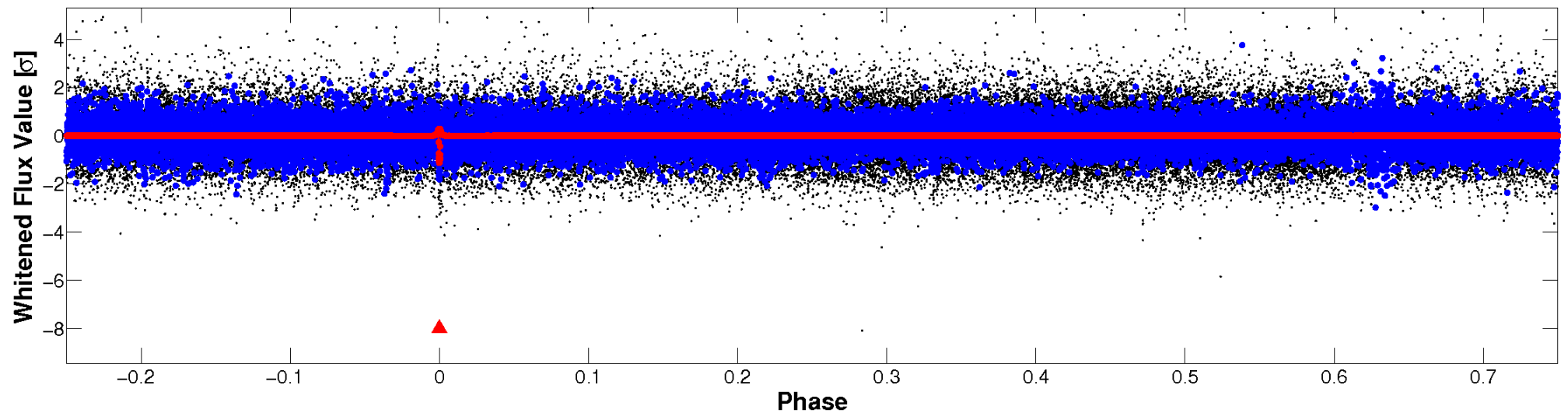


Non-Whitened Vs. Whitened Light Curve

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



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



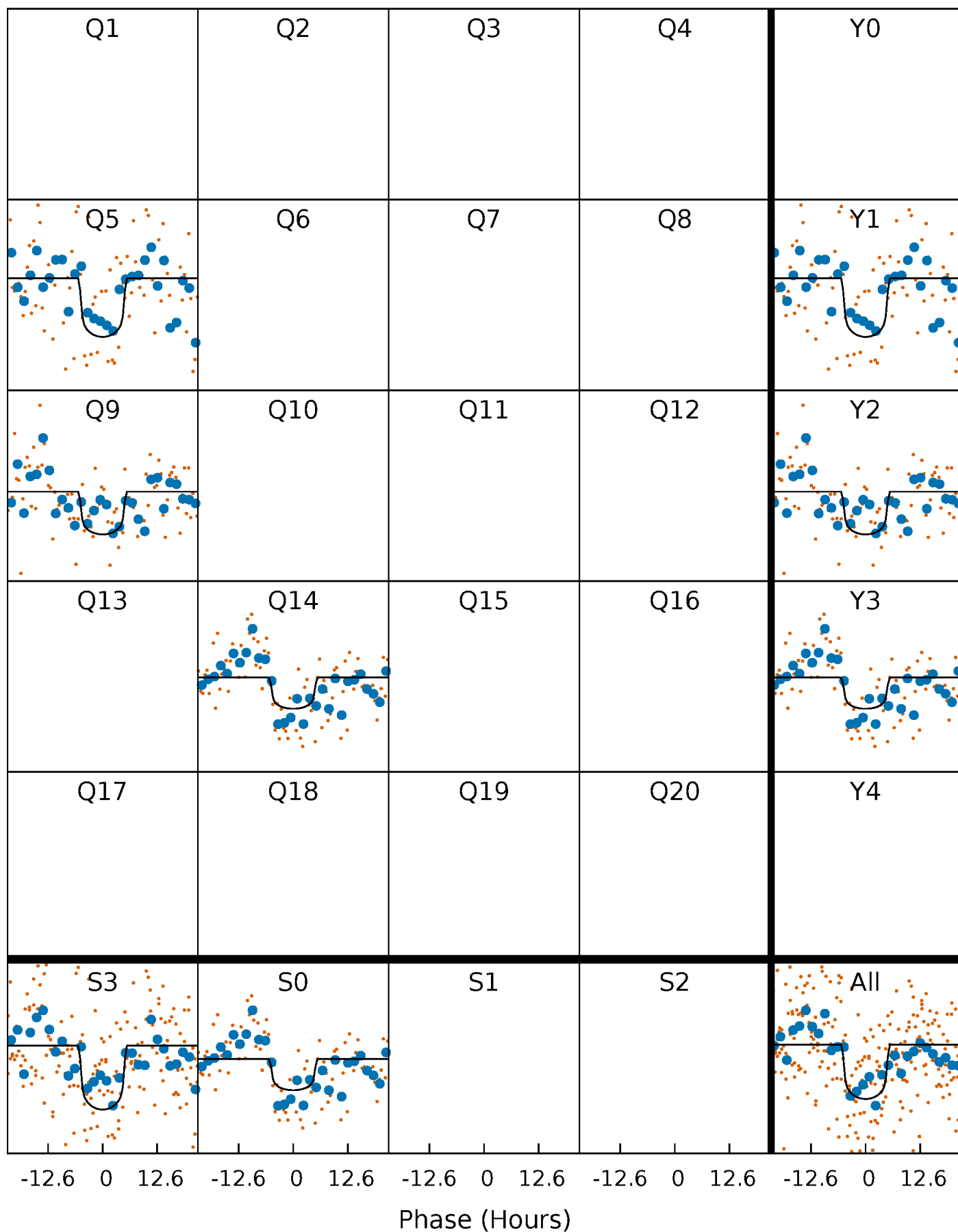
PDC Quarter-Phased Transit Curves

TCE 010601014-01 P=431.867318 Days $T_0=458.150457$ (BKJD)



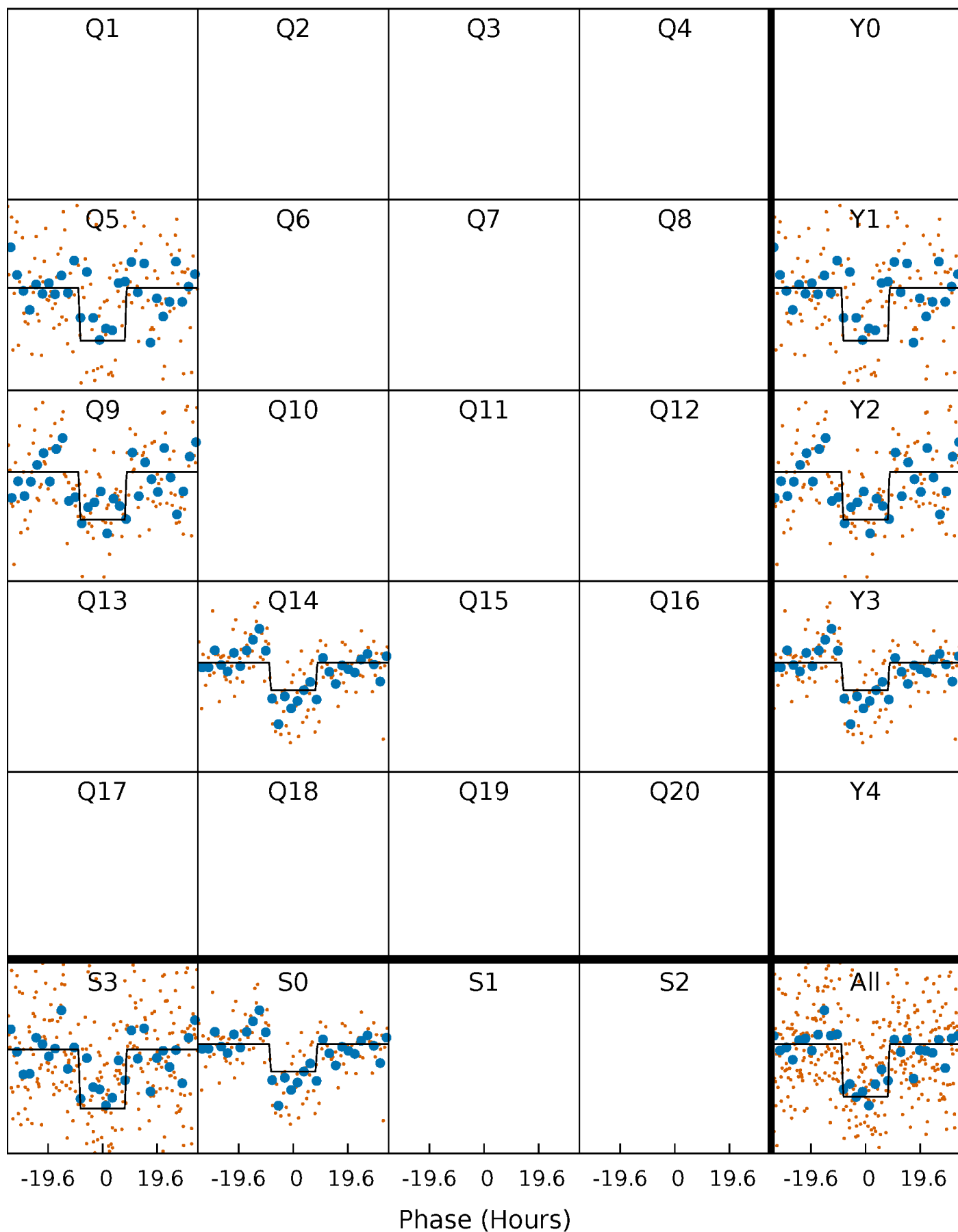
DV Quarter-Phased Transit Curves

TCE 010601014-01 P=431.867318 Days $T_0=458.150457$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

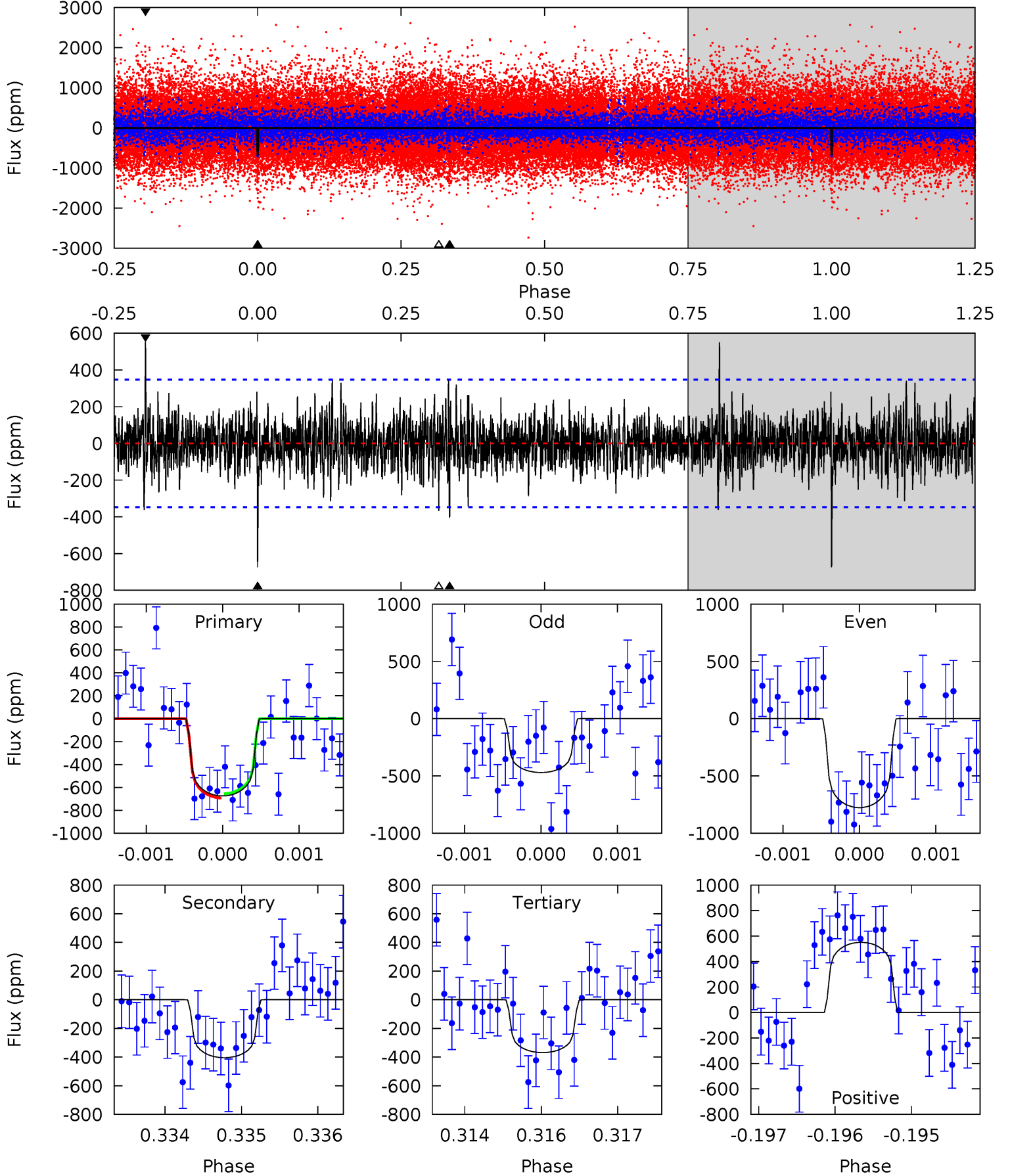
TCE 010601014-01 P=431.951836 Days $T_0=458.114482$ (BKJD)



DV Model-Shift Uniqueness Test

010601014-01, $P = 431.867318$ Days, $E = 26.283139$ Days

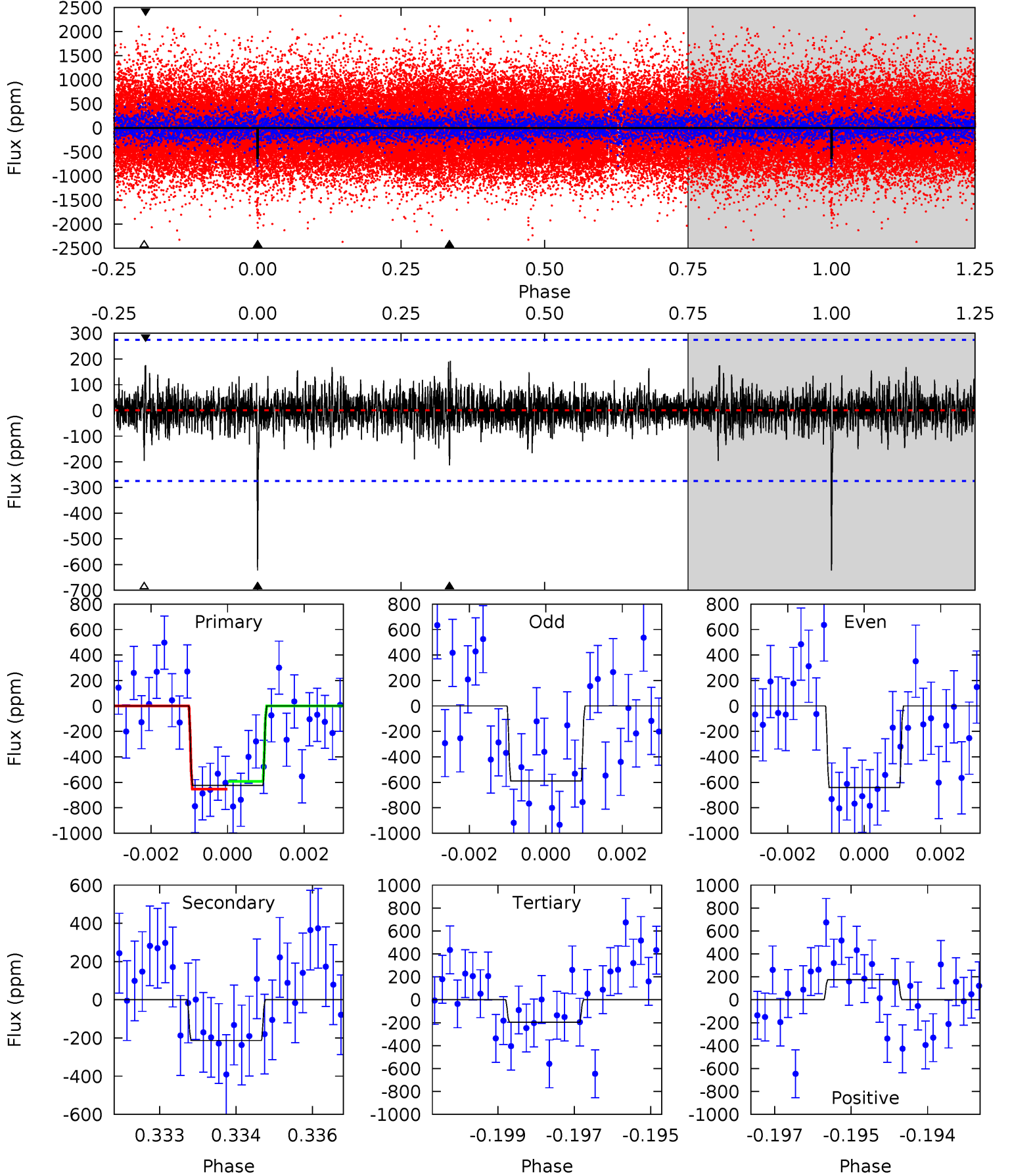
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.33	5.77	8.62	5.43	3.26	1.45	4.78	1.93	0.56	-2.29	2.25	1.24	0.45	0.29



Alt Model-Shift Uniqueness Test

010601014-01, P = 431.951836 Days, E = 26.162646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	4.17	3.83	3.42	5.36	3.15	0.88	8.35	8.76	0.34	0.75	0.47	1.06	0.24	0.59



Stellar Parameters For KIC 010601014

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6194^{+173}_{-238}	$4.445^{+0.056}_{-0.224}$	$0.070^{+0.200}_{-0.350}$	$1.069^{+0.339}_{-0.113}$	$1.161^{+0.140}_{-0.171}$	$1.340^{+0.391}_{-0.714}$
	+3%/-4%	+1%/-5%	+286%/-500%	+32%/-11%	+12%/-15%	+29%/-53%
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 010601014-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-404 ± 64	$3.53^{+0.92}_{-0.76}$	372^{+29}_{-20}	5208^{+538}_{-461}	23721^{+14809}_{-8832}
Alt.	-213 ± 51	$3.18^{+0.89}_{-0.75}$	371^{+29}_{-20}	4748^{+575}_{-480}	15859^{+11619}_{-7253}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

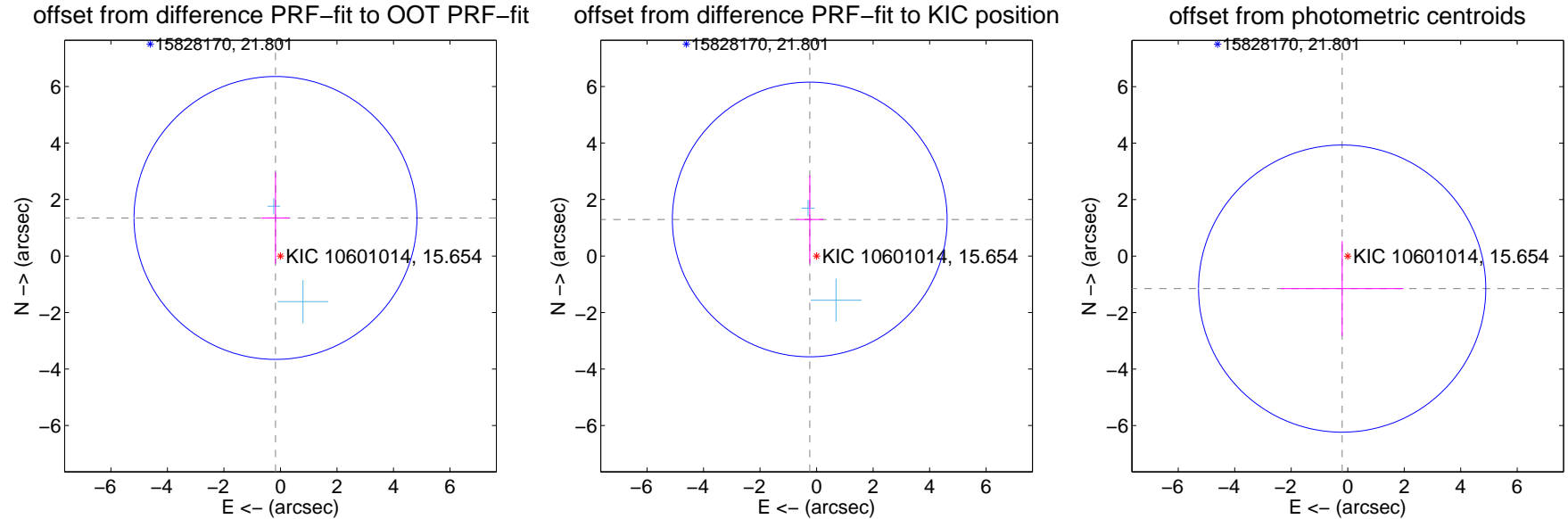
DV Centroid Data

Supplemental centroid analysis for 010601014-01. Kepler magnitude: 15.65. Transit SNR 7.91

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.360 ± 1.669	0.81	0.176 ± 0.500	1.348 ± 1.619
PRF-fit source offset from KIC position	1.317 ± 1.621	0.81	0.242 ± 0.478	1.294 ± 1.560
photometric centroid source offset	1.17 ± 1.70	0.69	0.20 ± 2.17	-1.15 ± 1.68

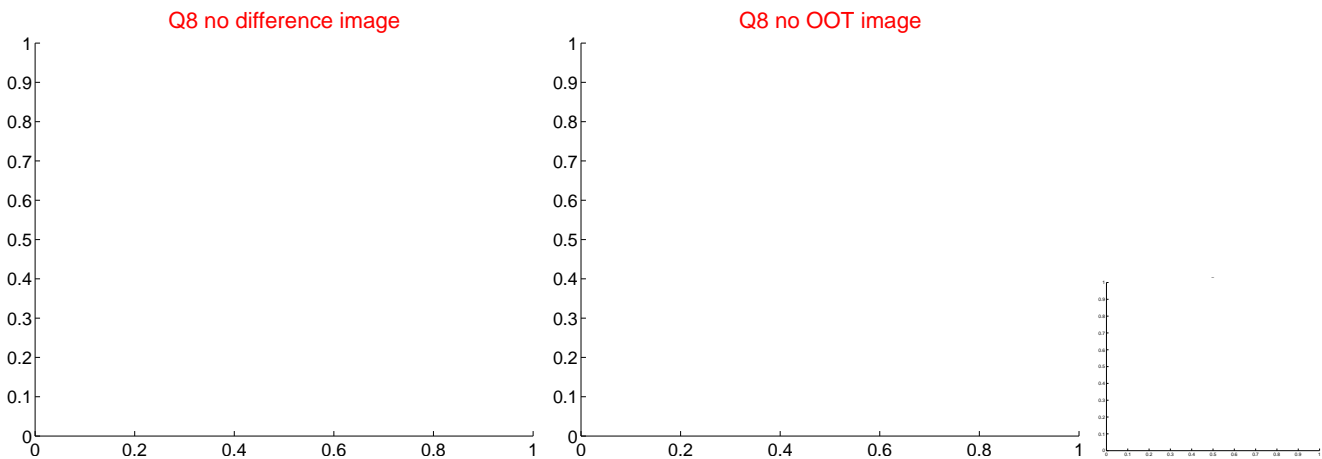
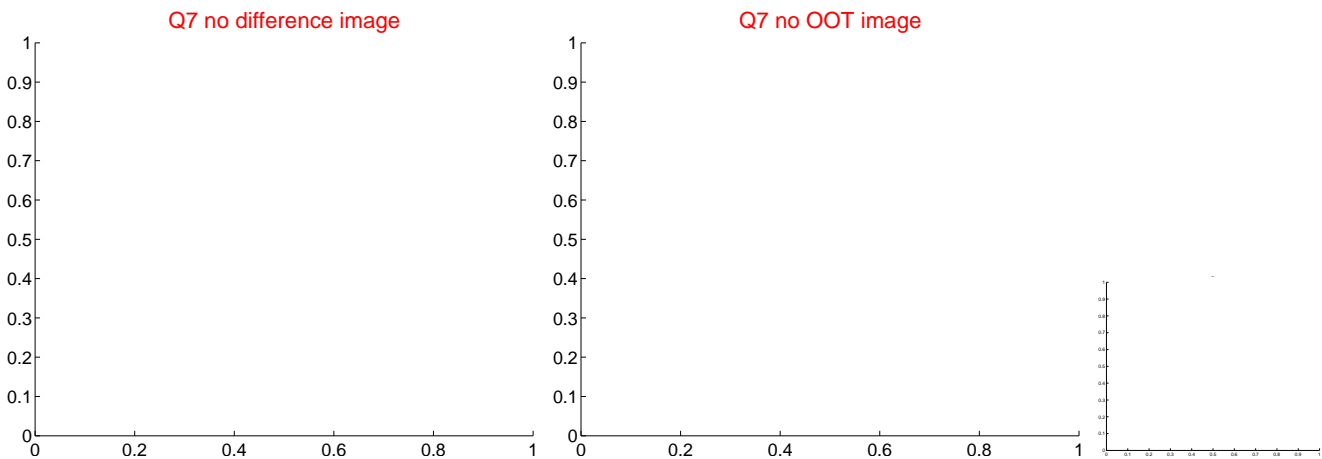
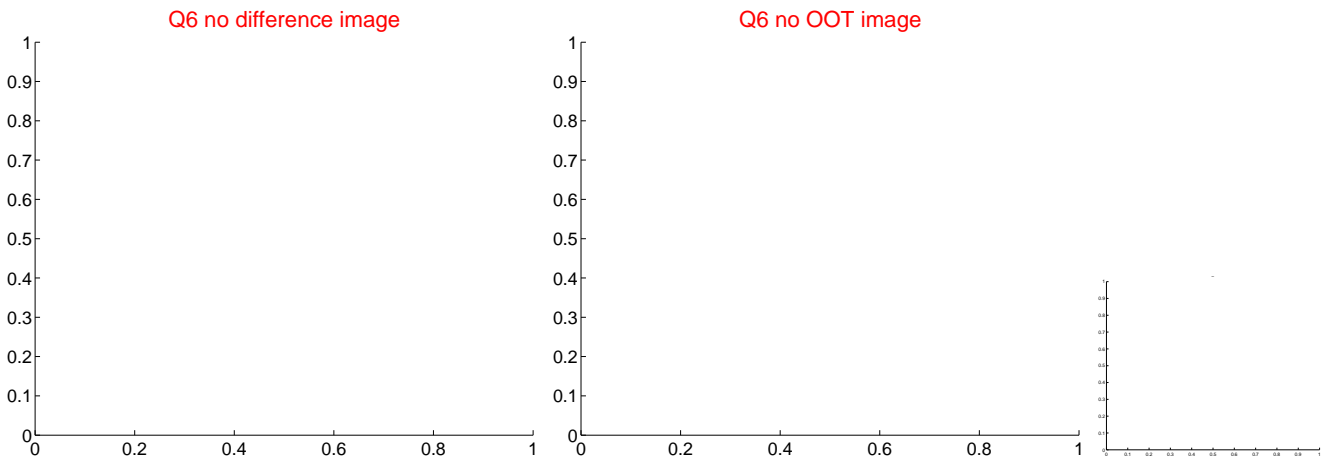
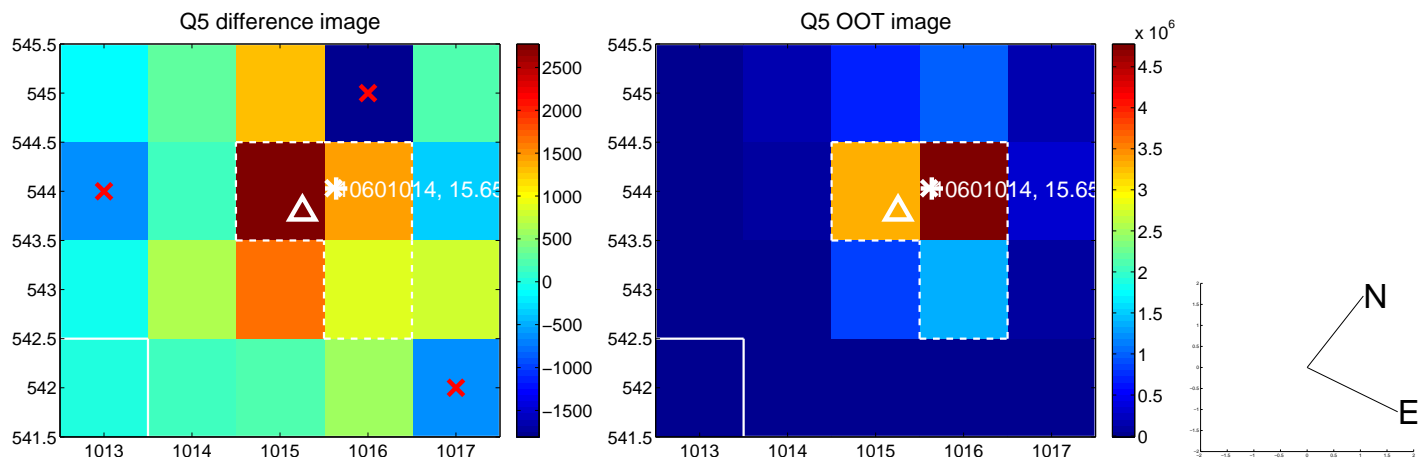


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

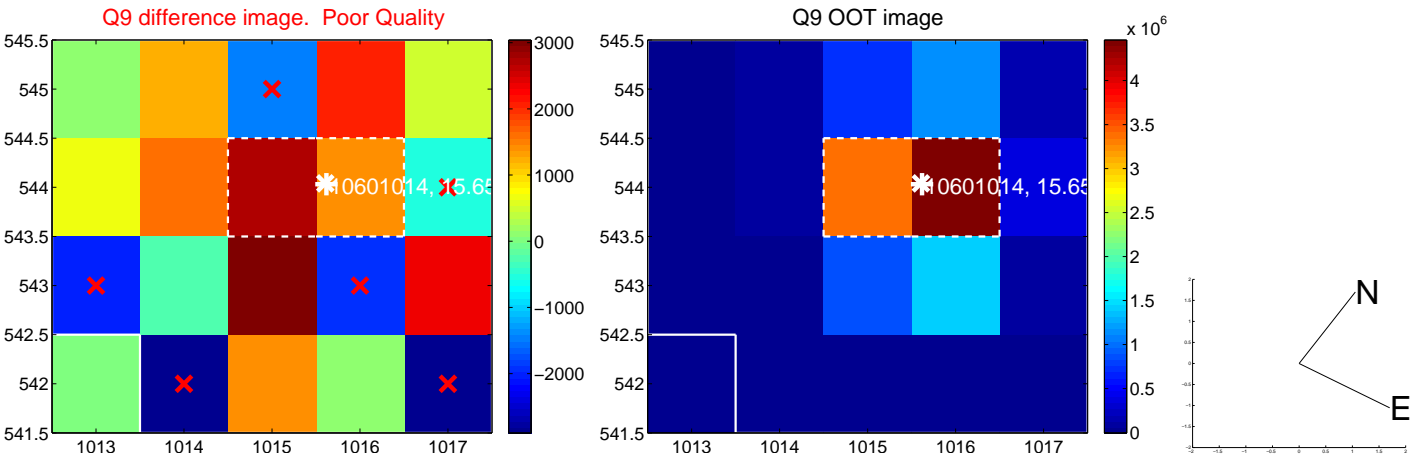
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



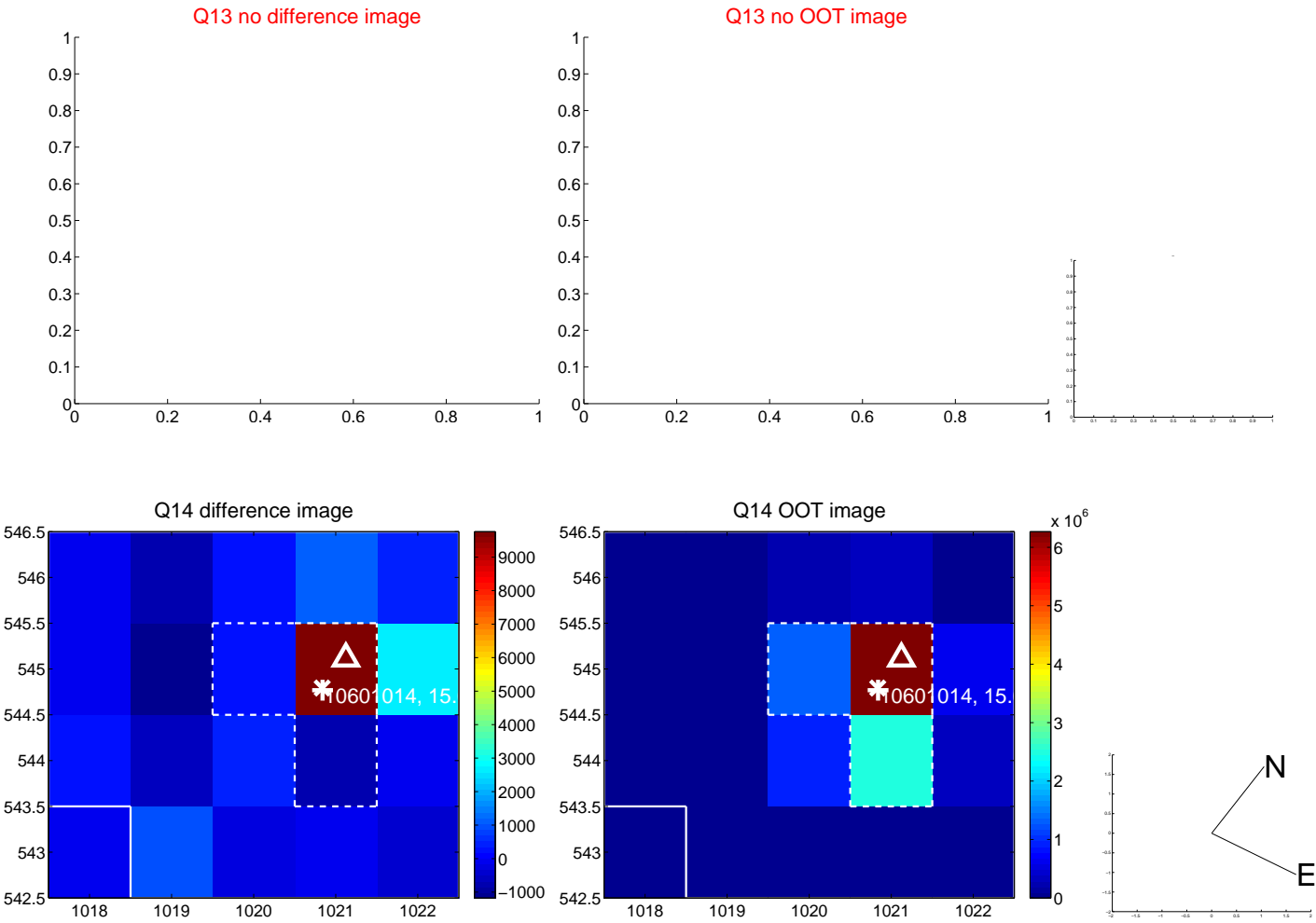
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



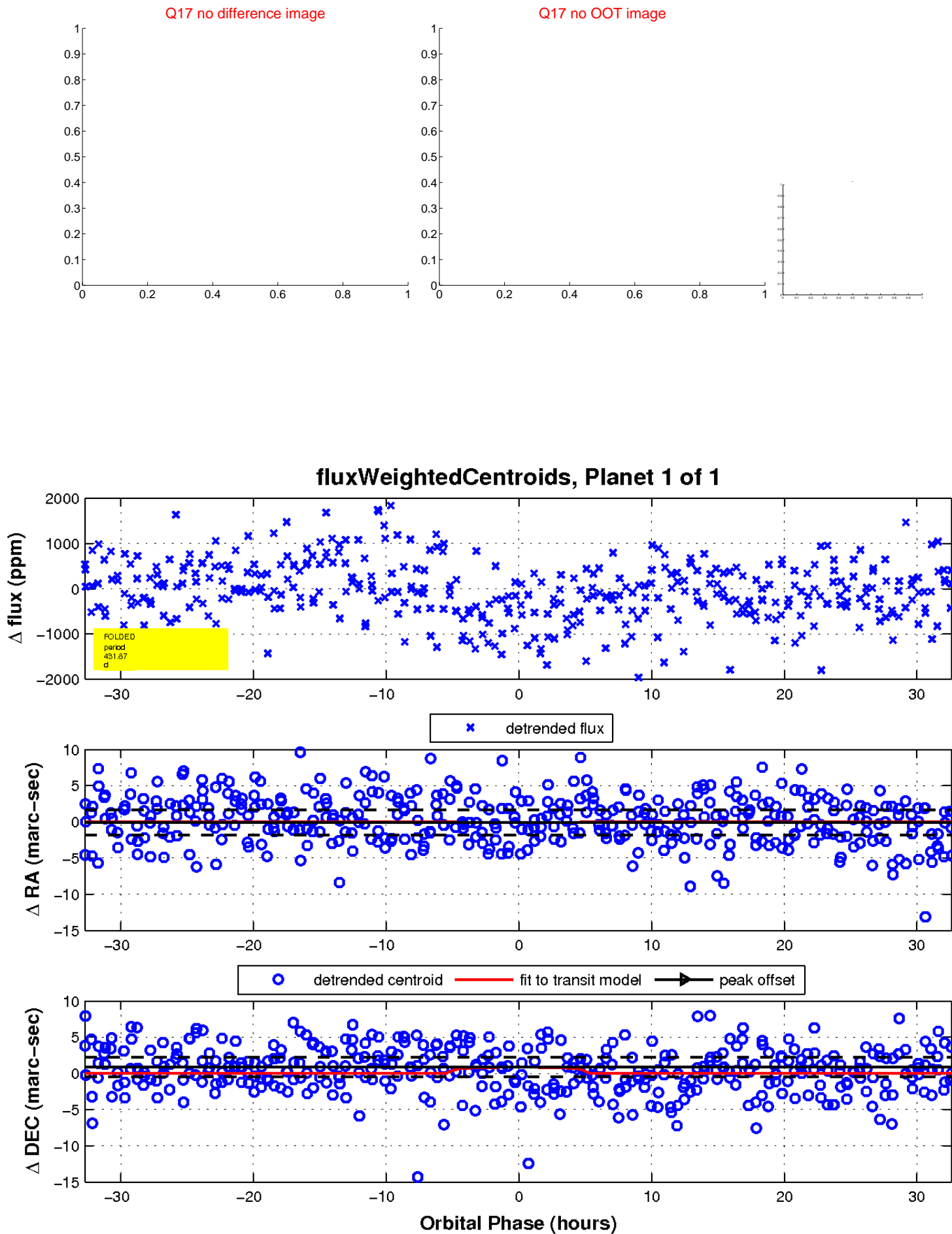
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

