

KIC 009710626

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})
009710626-01	OBS	7959.01	371.174992	497.609197	1553.0	18.996	7.8	7.8	0.85	5189	5.65	0.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009710626-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

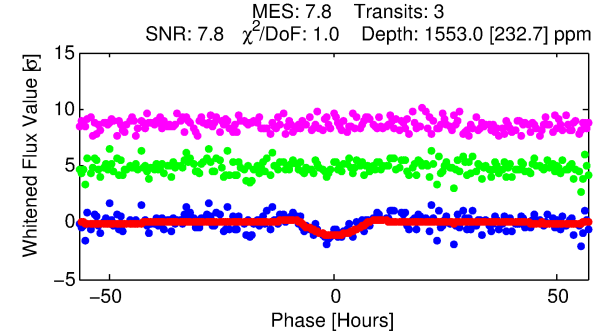
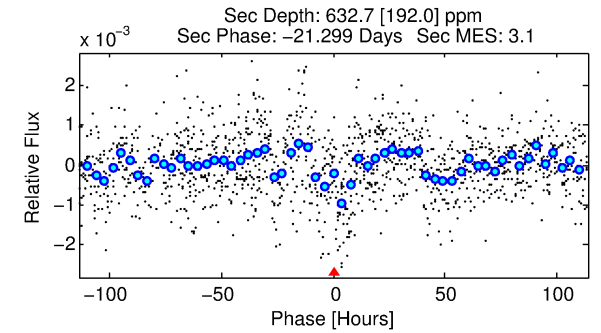
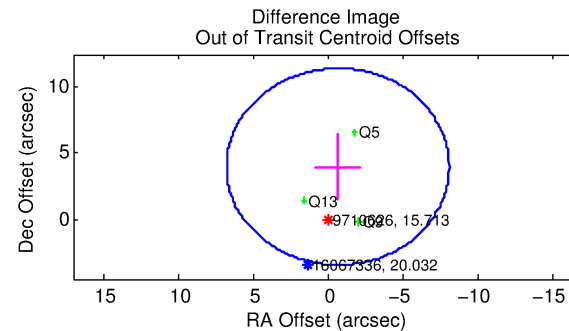
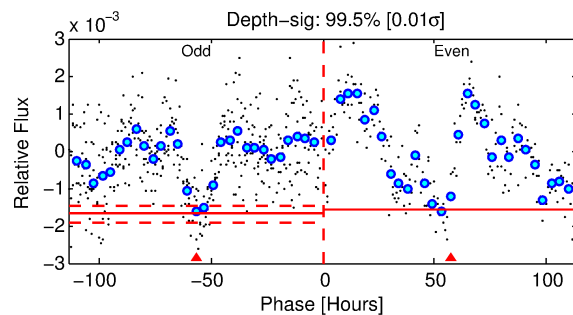
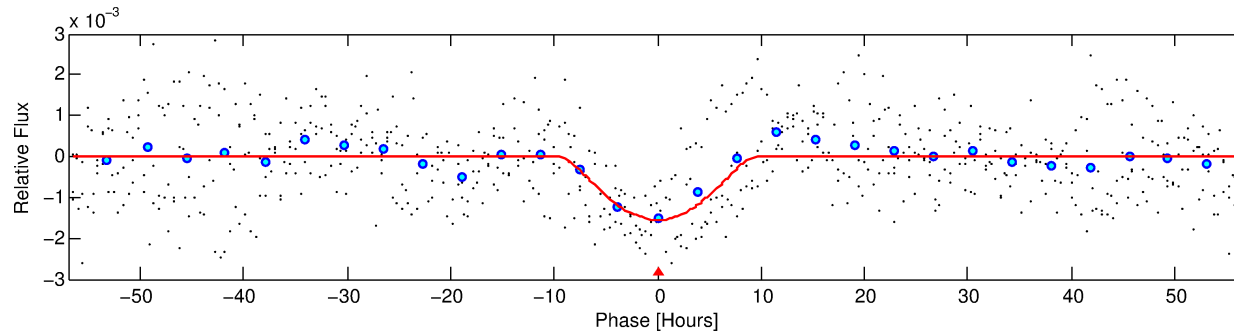
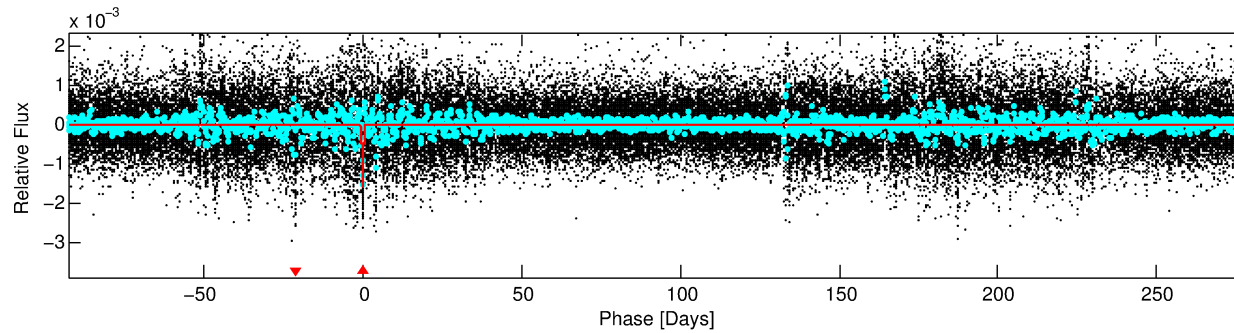
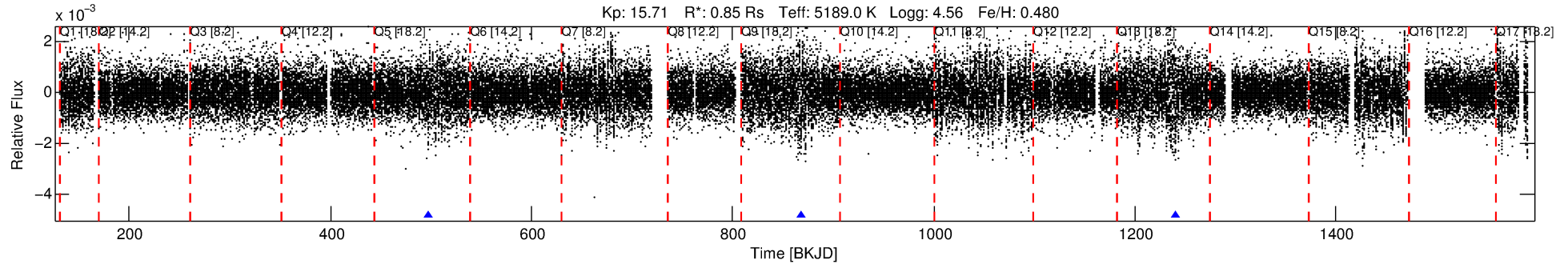
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009710626-01

No Significant Match Found

DV One-Page Summary

KIC: 9710626 Candidate: 1 of 1 Period: 371.175 d



DV Fit Results:

Period = 371.17499 [0.02937] d
Epoch = 497.6092 [0.0368] BKJD
Rp/R* = 0.0609 [0.1042]
a/R* = 59.83 [29.90]
b = 0.98 [0.18]
Seff = 0.48 [0.12]
Teq = 212 [13] K
Rp = 5.65 [9.71] Re
a = 0.9939 [0.1349] AU
Ag = 10778.69 [37109.72] [0.29 σ]
Teffp = 3335 [2867] K [1.09 σ]

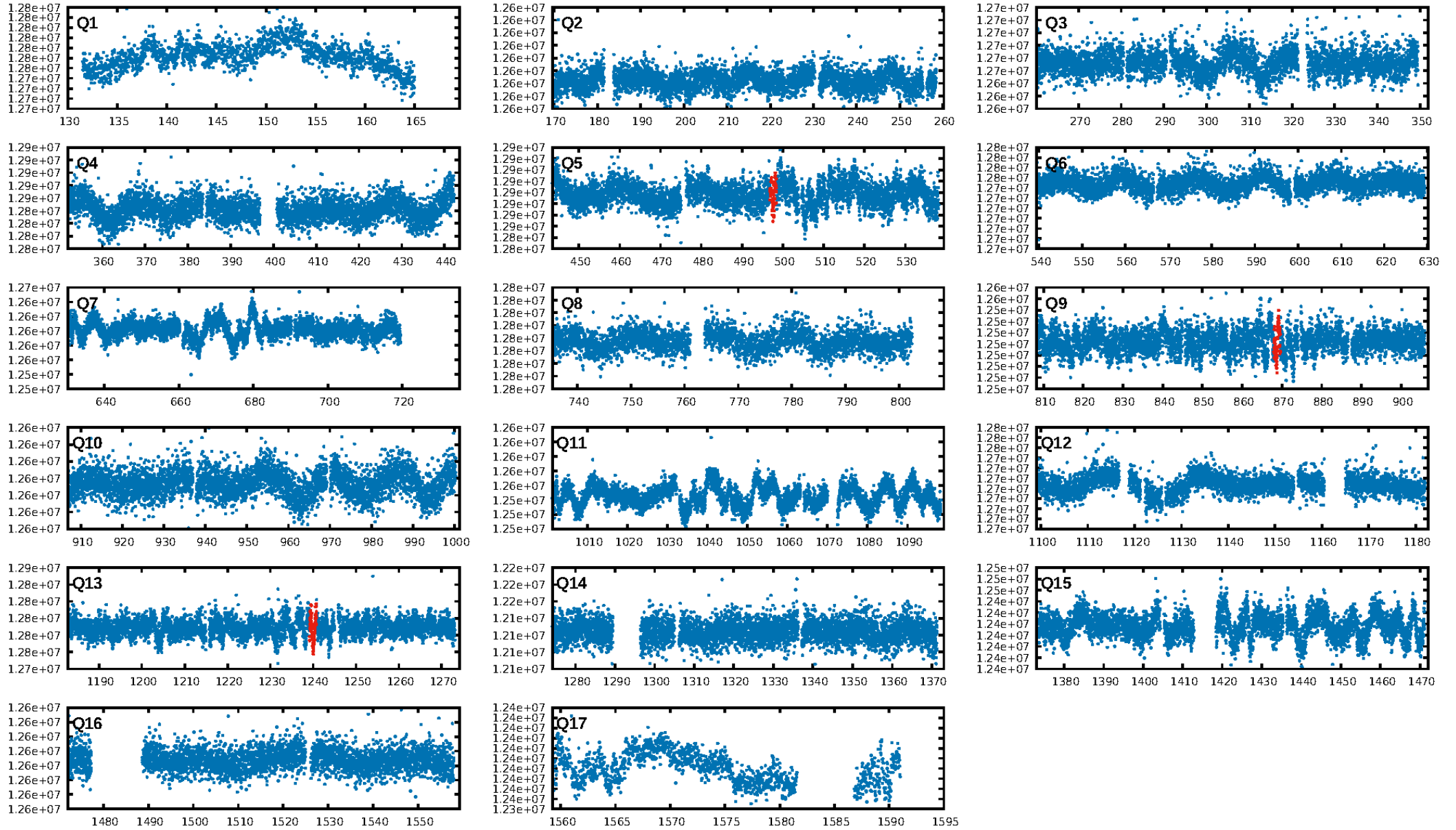
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.00e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.874
Centroid-sig: 13.6%
Centroid-so: 2.054 arcsec [1.03 σ]
OotOffset-rm: 4.058 arcsec [1.64 σ]
KicOffset-rm: 3.752 arcsec [1.50 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

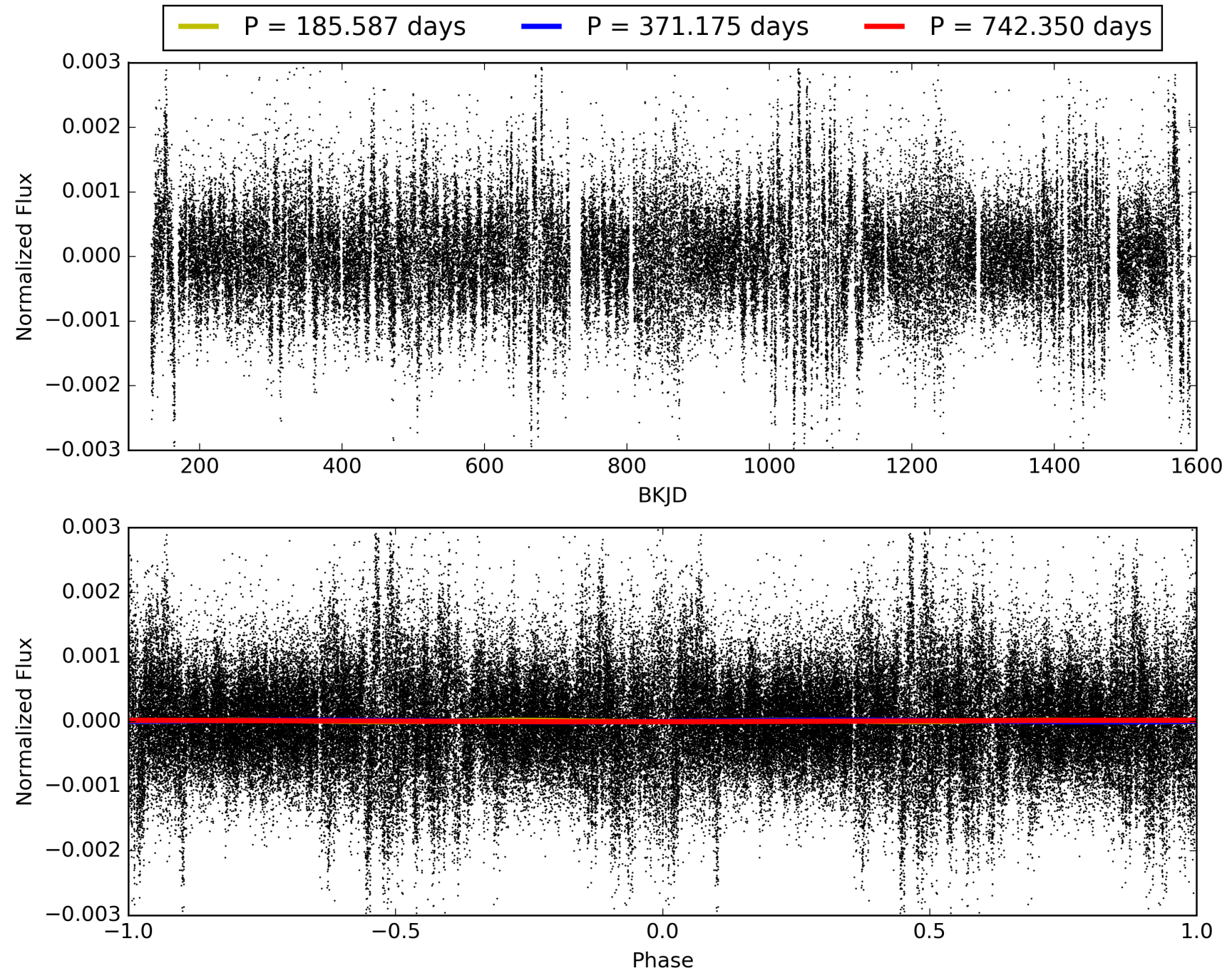
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:23:43 Z

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

TCE 009710626-01, PDC Light Curves

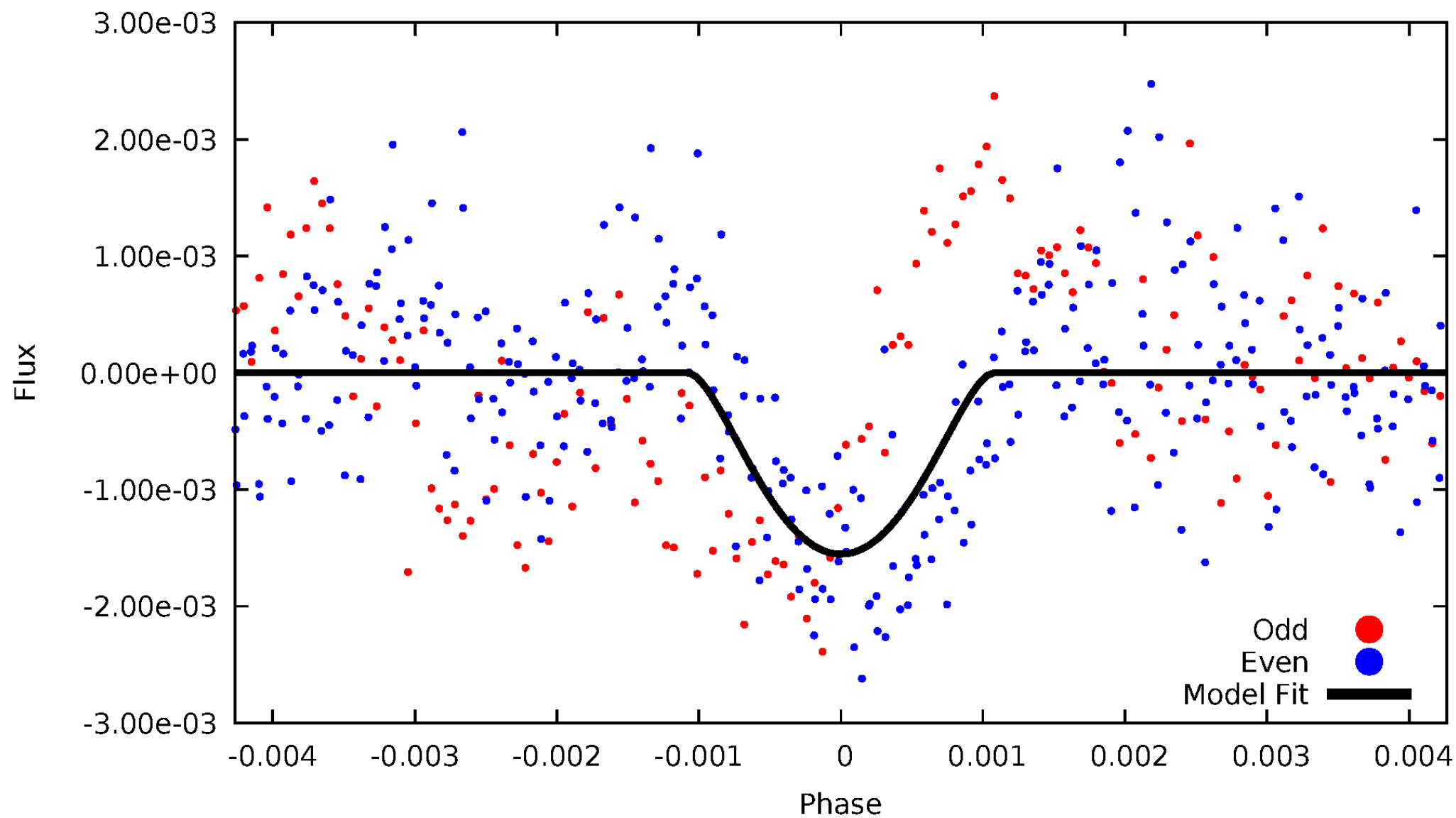


TCE 009710626-01



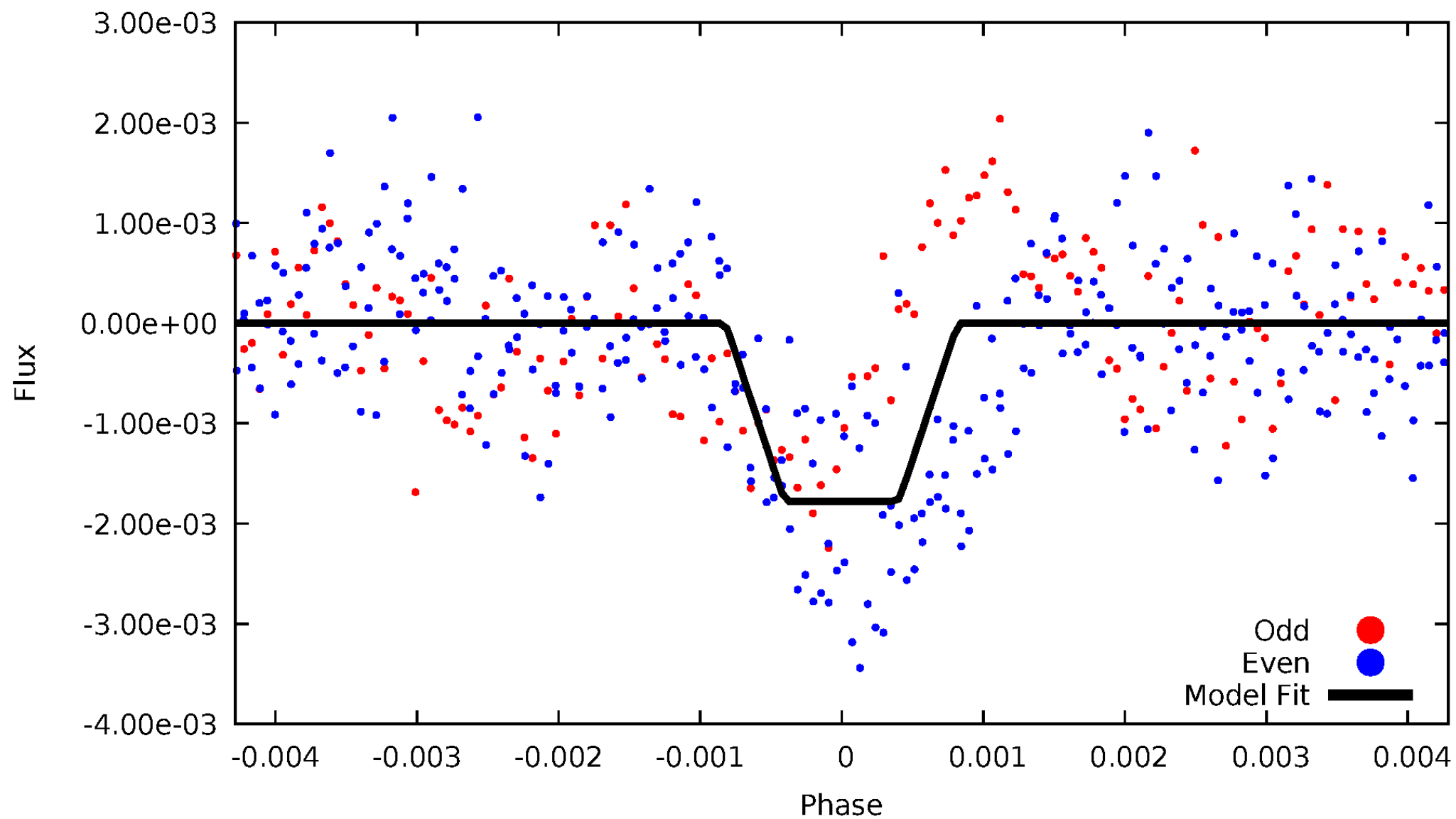
DV Odd/Even

TCE 009710626-01



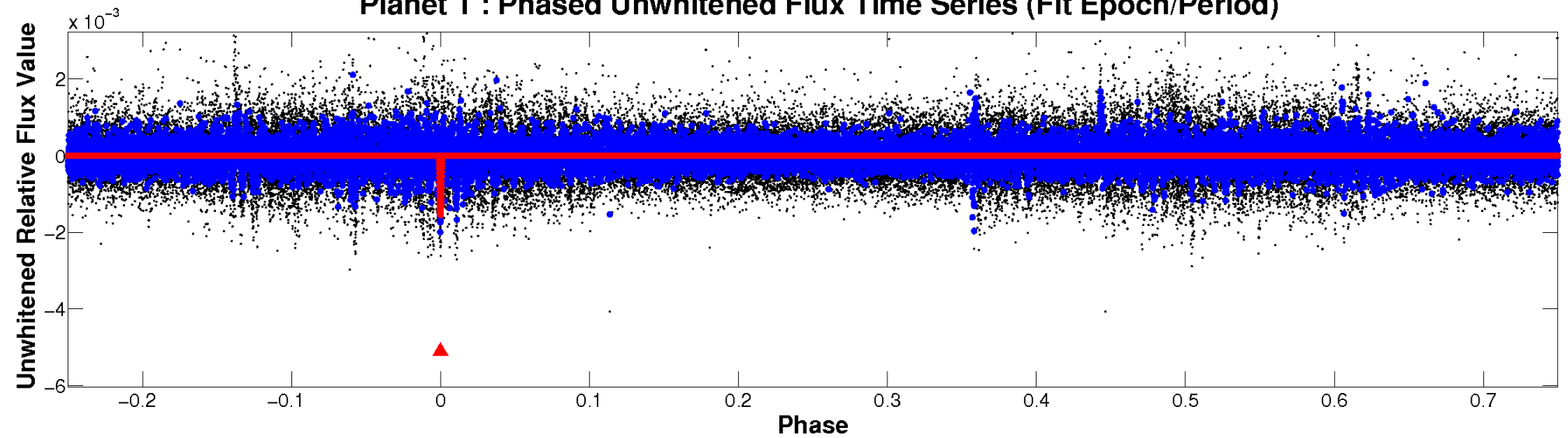
ALT Odd/Even

TCE 009710626-01

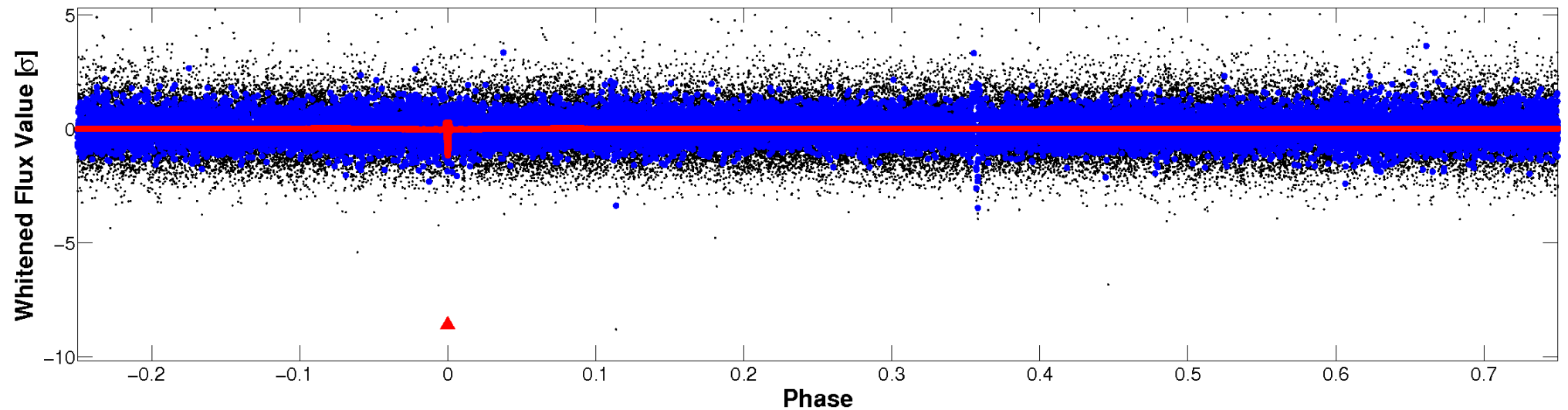


Non-Whitened Vs. Whitened Light Curve

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

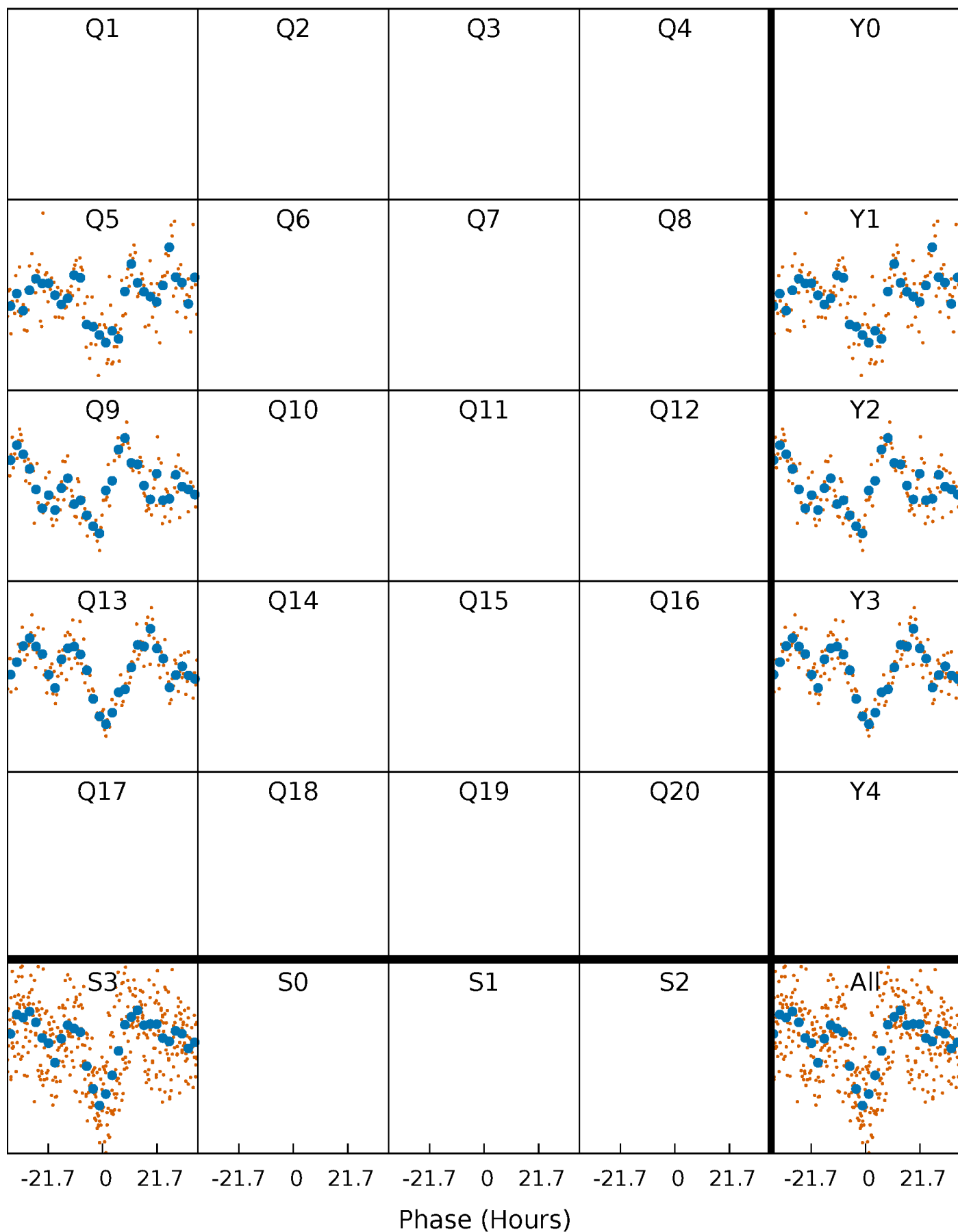


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 009710626-01 P=371.174992 Days $T_0=497.609197$ (BKJD)



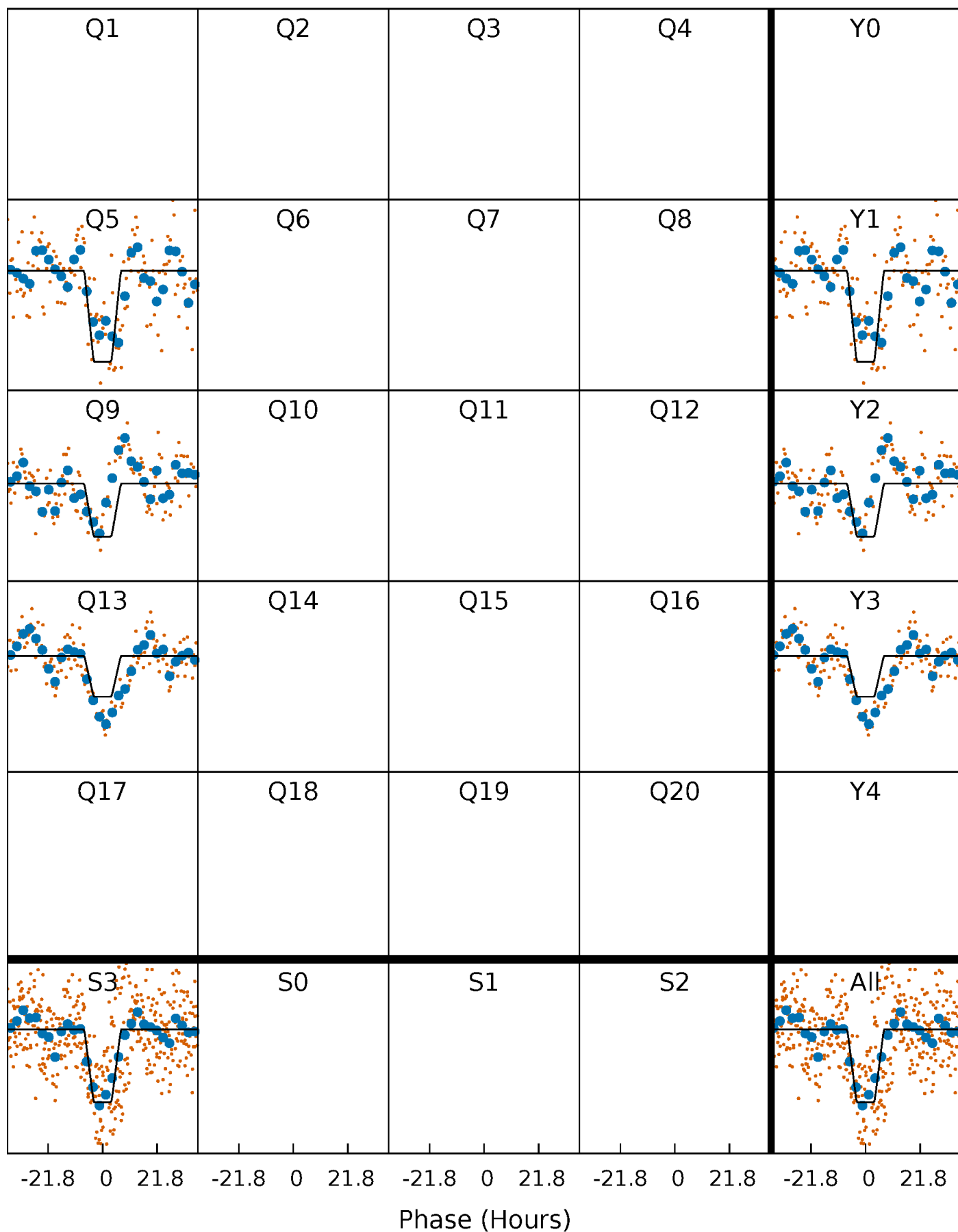
DV Quarter-Phased Transit Curves

TCE 009710626-01 P=371.174992 Days $T_0=497.609197$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

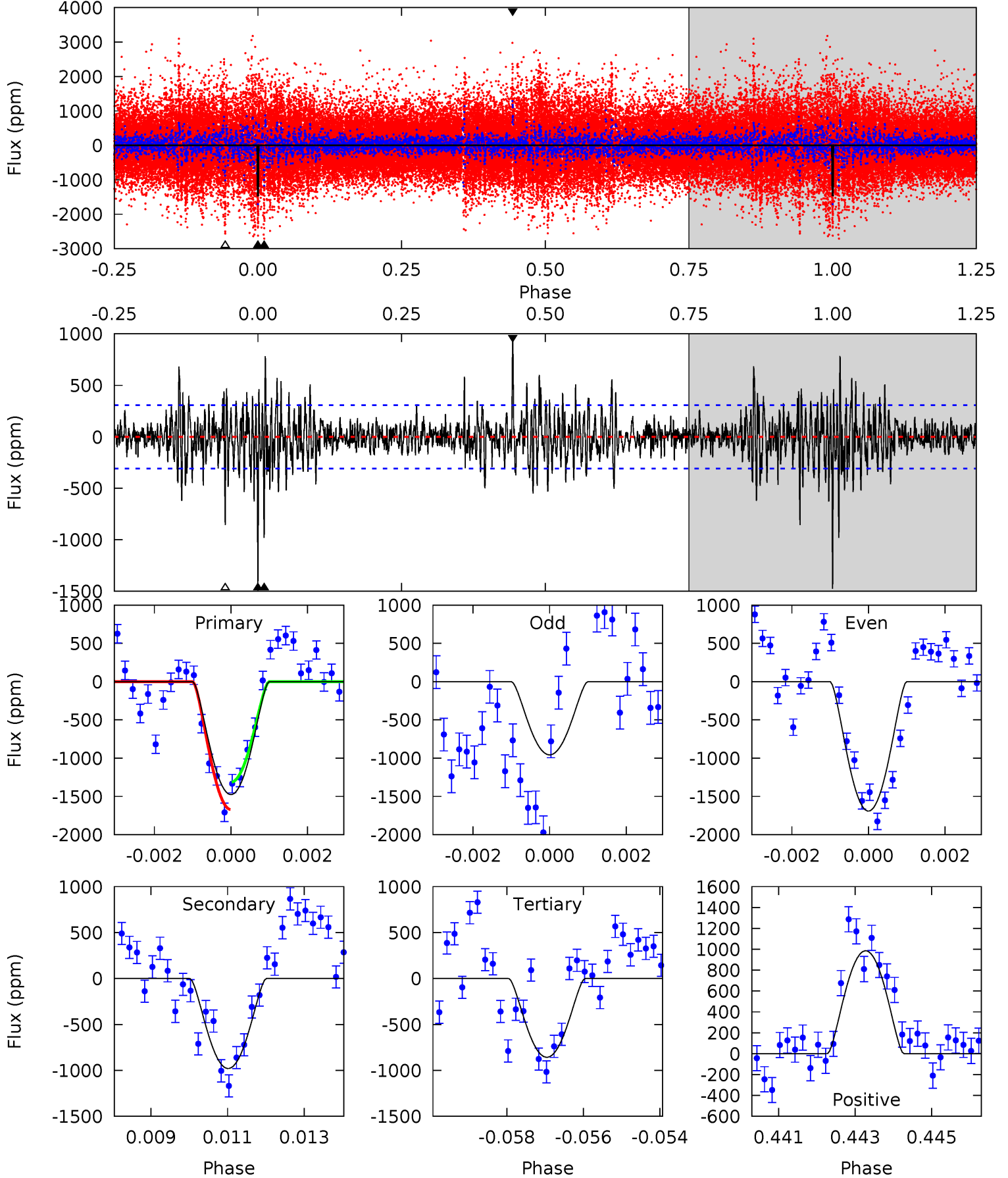
TCE 009710626-01 P=371.196051 Days $T_0=497.574109$ (BKJD)



DV Model-Shift Uniqueness Test

009710626-01, P = 371.174992 Days, E = 126.434205 Days

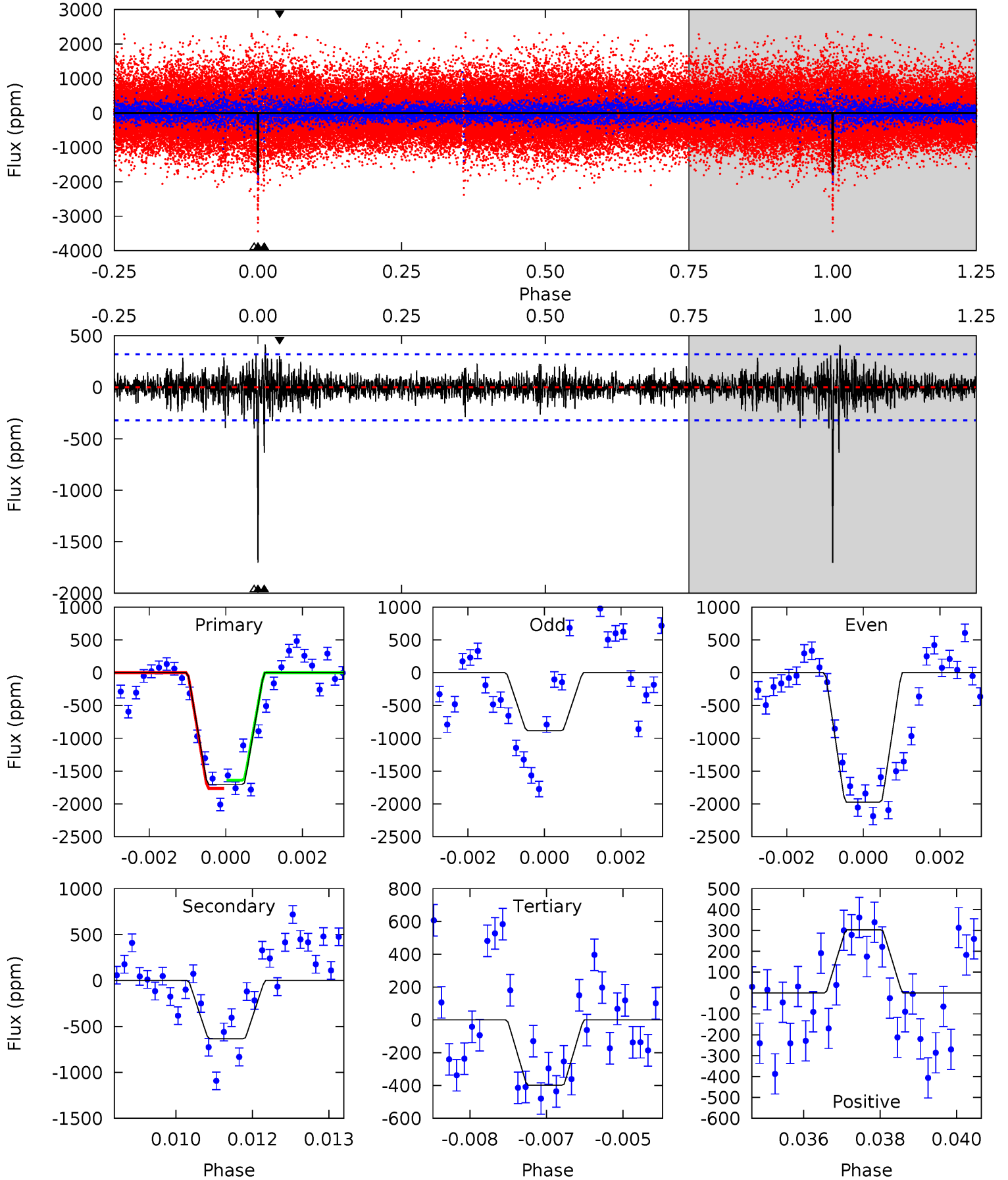
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	16.9	14.8	17.0	5.31	3.07	2.90	10.7	8.46	2.12	-0.09	5.95	0.96	0.40	3.09



Alt Model-Shift Uniqueness Test

009710626-01, P = 371.196051 Days, E = 126.378058 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	10.6	6.65	5.05	5.36	3.15	1.28	21.8	23.4	3.92	5.52	8.78	1.30	0.20	1.04



Stellar Parameters For KIC 009710626

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5189^{+171}_{-155}	$4.557^{+0.028}_{-0.119}$	$0.480^{+0.050}_{-0.250}$	$0.850^{+0.128}_{-0.051}$	$0.951^{+0.047}_{-0.087}$	$2.180^{+0.291}_{-0.719}$
	+3%/-3%	+1%/-3%	+10%/-52%	+15%/-6%	+5%/-9%	+13%/-33%
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 009710626-01 / KOI 7959.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-980 ± 58	$8.89^{+8.64}_{-6.20}$	300^{+14}_{-11}	3492^{+1879}_{-659}	6704^{+63927}_{-4999}
Alt.	-633 ± 60	$8.33^{+7.96}_{-5.75}$	301^{+14}_{-12}	3313^{+1659}_{-582}	4957^{+45658}_{-3696}

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

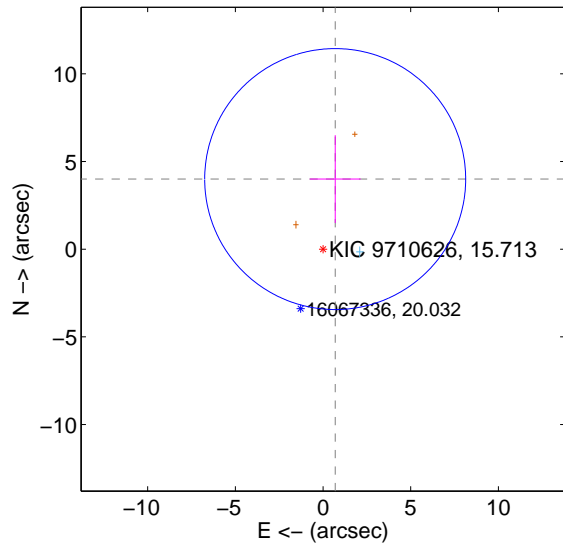
Supplemental centroid analysis for 009710626-01. Kepler magnitude: 15.71. Transit SNR 7.79

There are 1 quarters with good PRF difference image offsets

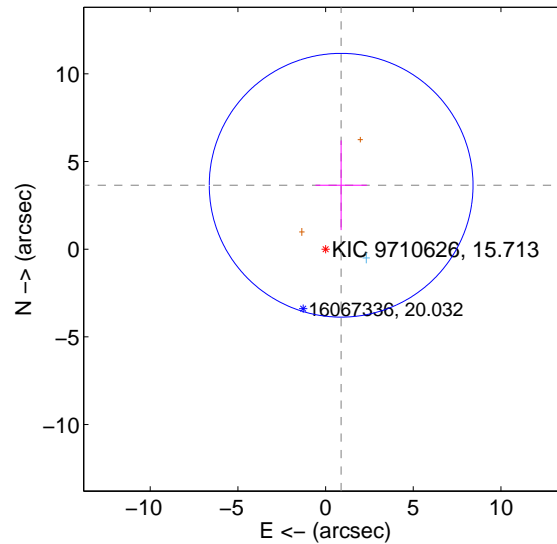
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.058 ± 2.481	1.64	-0.692 ± 1.450	3.998 ± 2.505
PRF-fit source offset from KIC position	3.752 ± 2.507	1.50	-0.888 ± 1.464	3.646 ± 2.556
photometric centroid source offset	2.05 ± 1.99	1.03	0.54 ± 1.34	1.98 ± 2.03

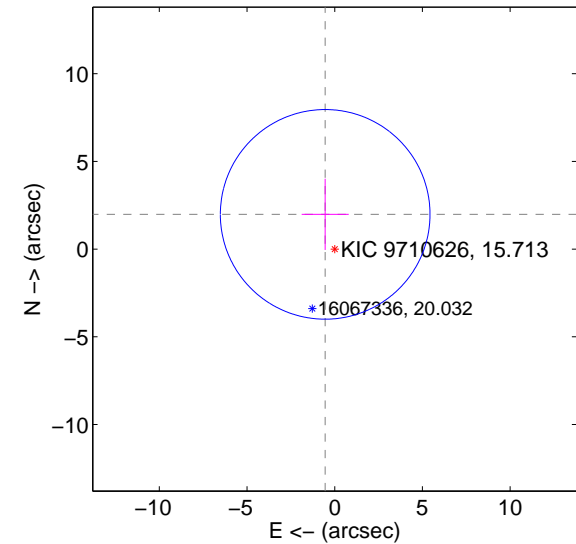
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

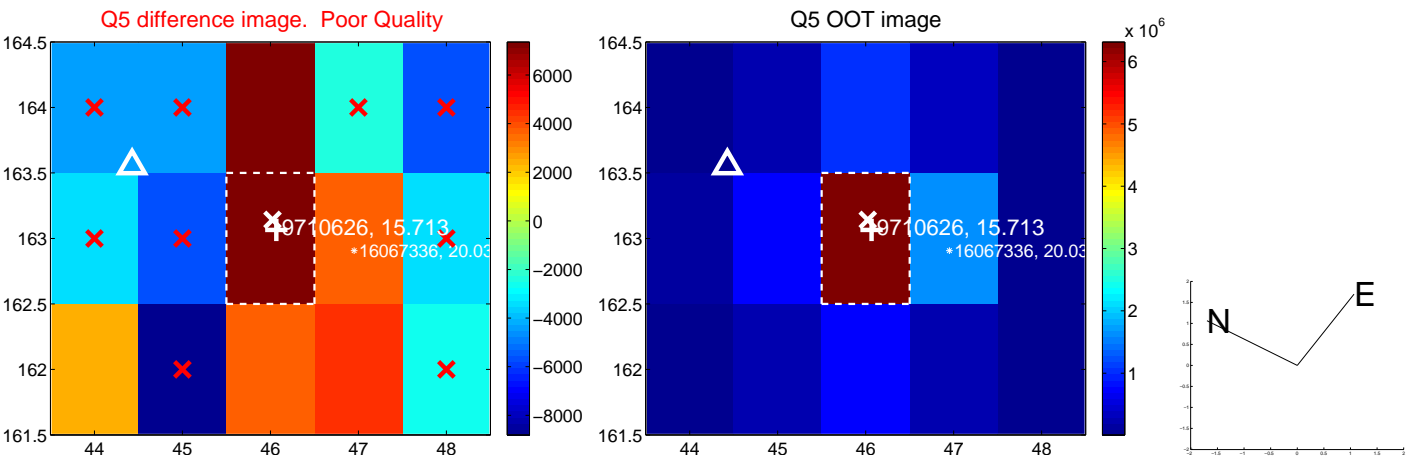


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

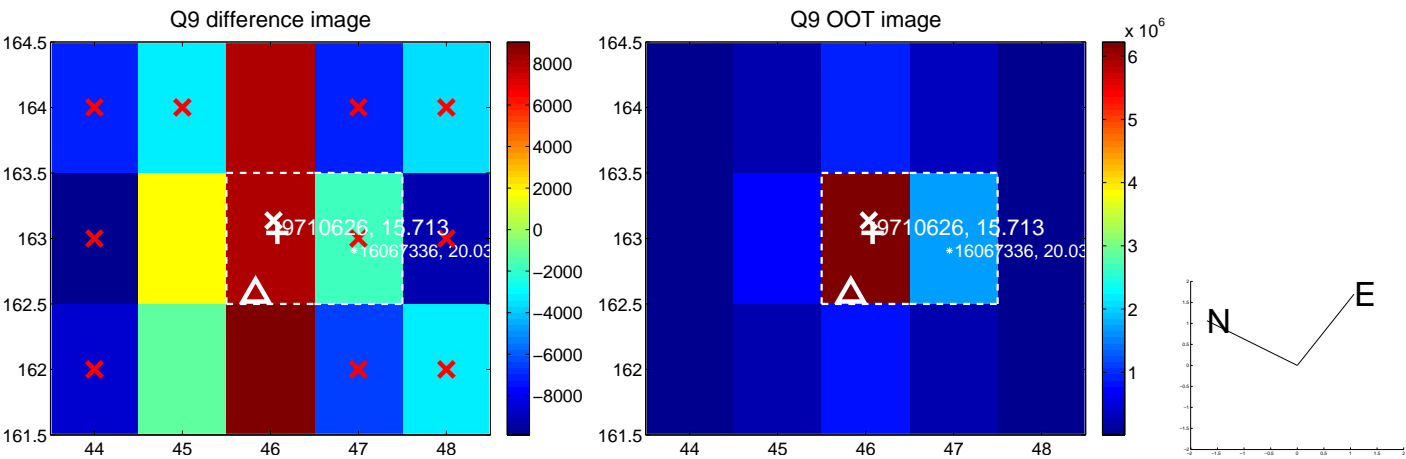
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



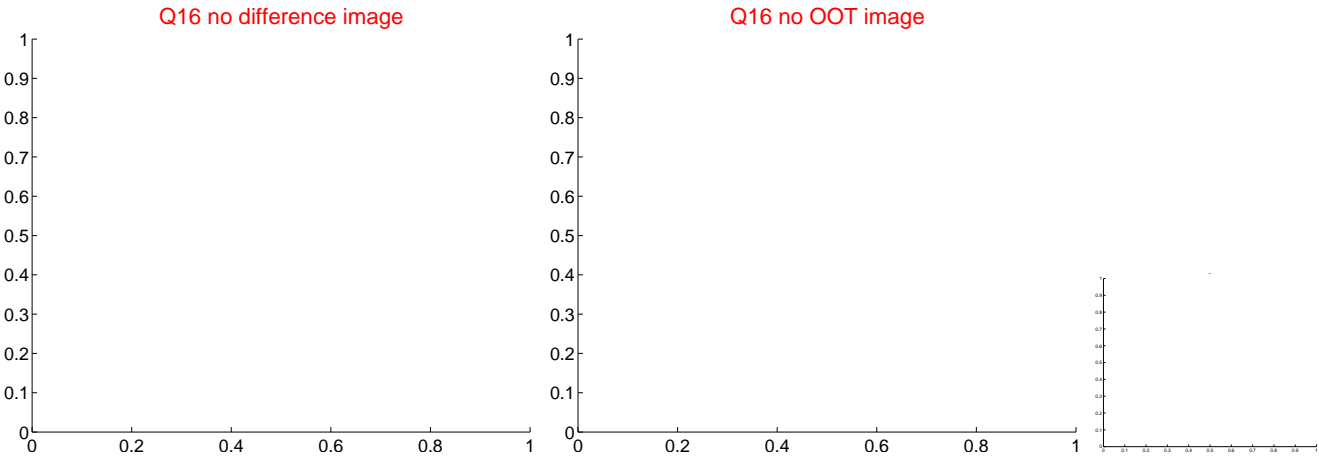
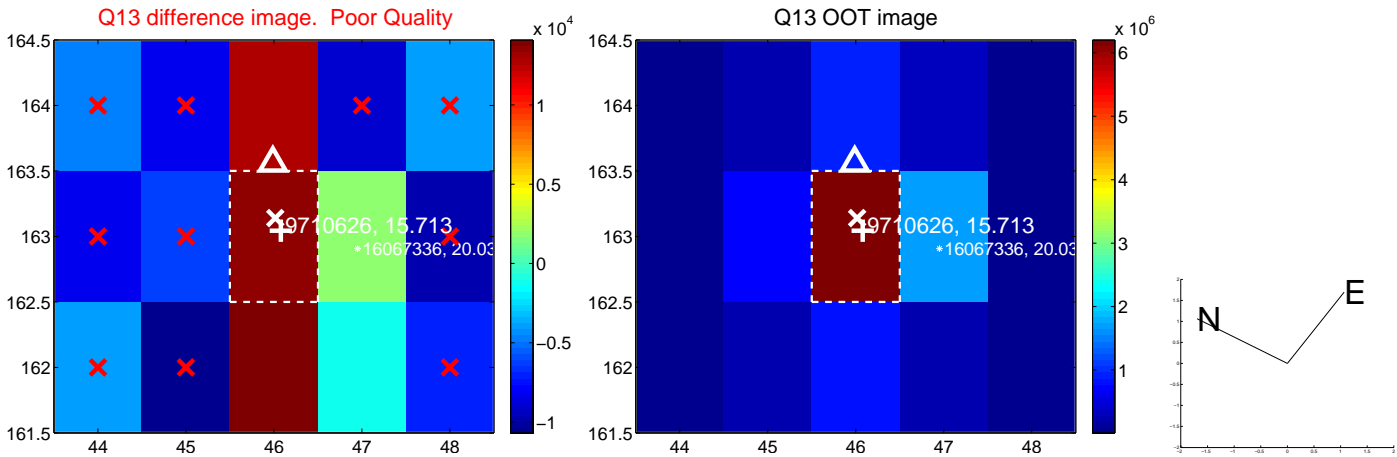
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



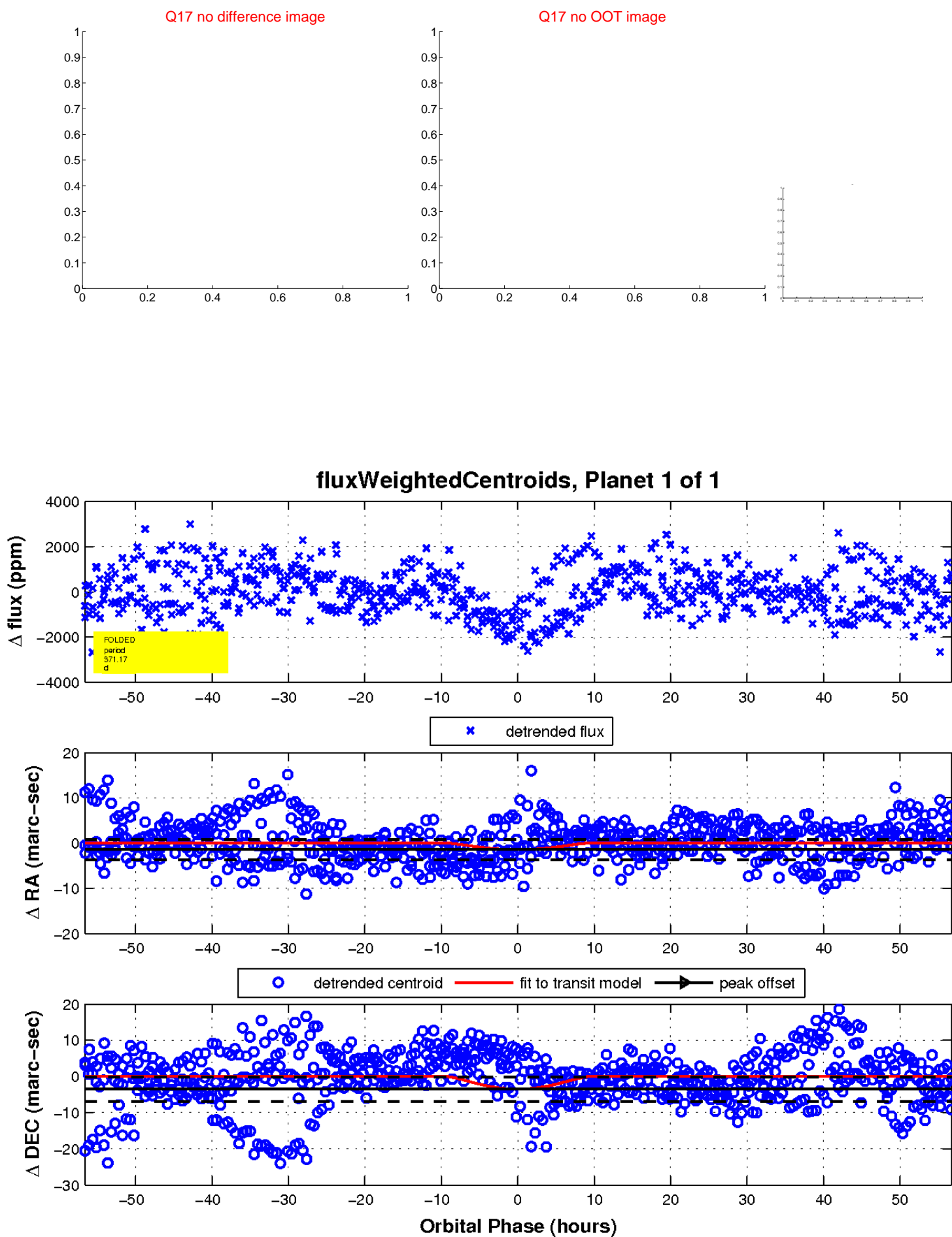
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

