

KIC 010215103

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})
010215103-01	OBS	No	348.329361	446.089472	312.2	4.324	7.6	7.1	0.82	5774	1.70	0.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010215103-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_ALT—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.

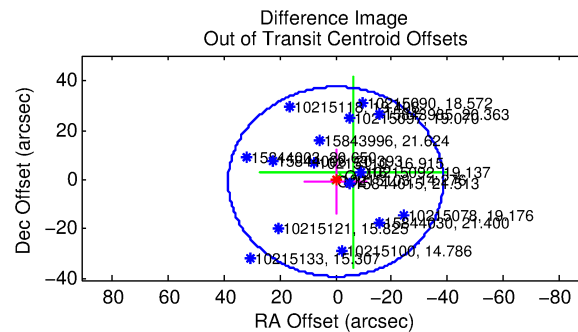
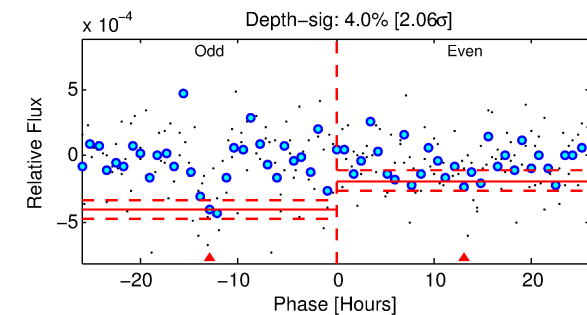
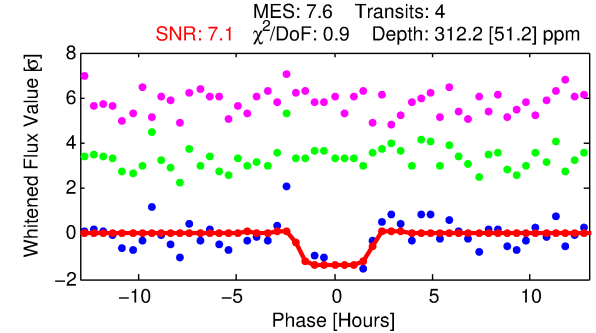
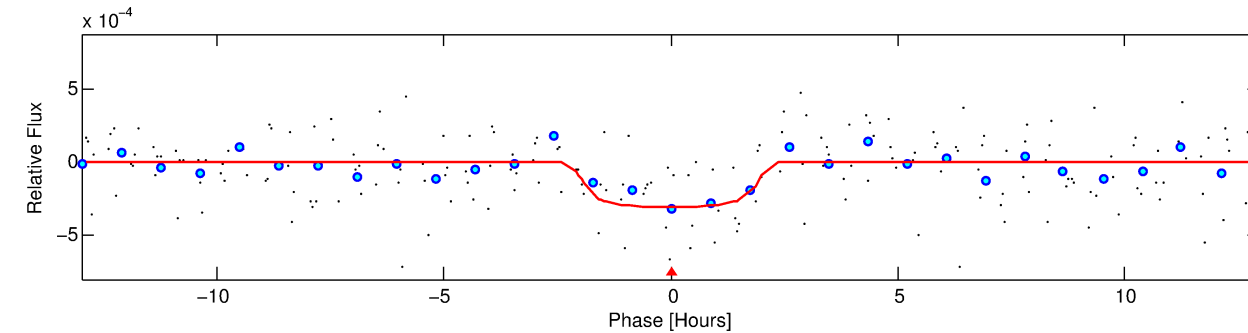
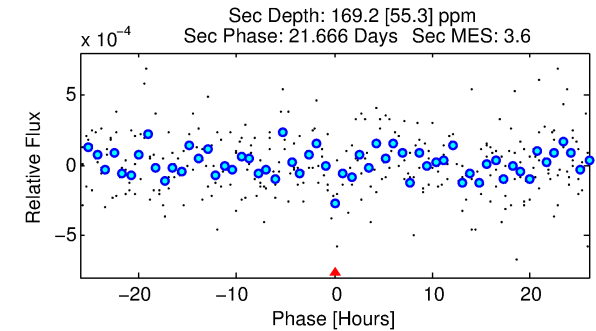
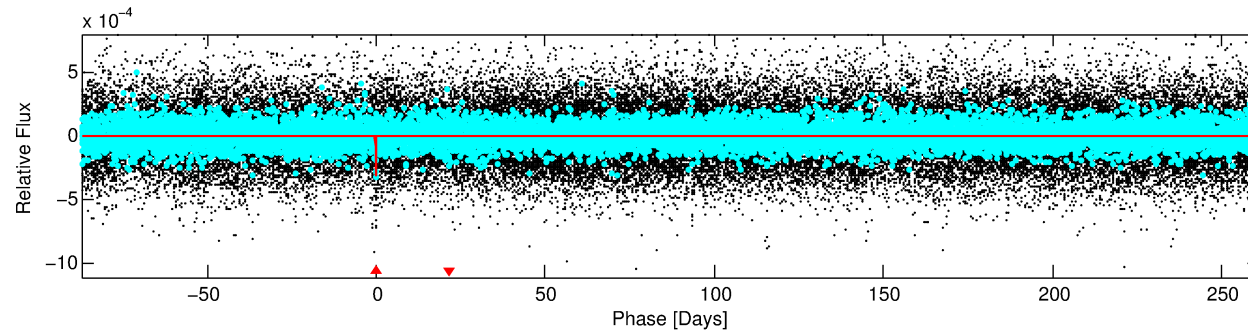
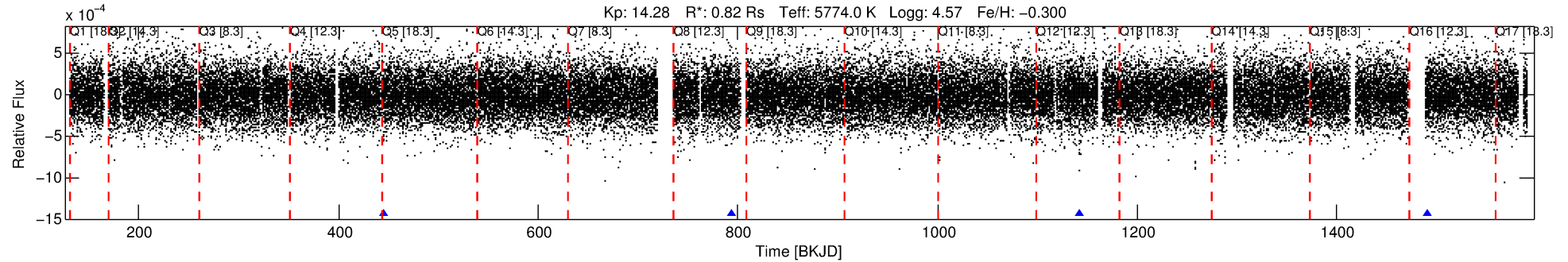
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010215103-01

No Significant Match Found

DV One-Page Summary

KIC: 10215103 Candidate: 1 of 1 Period: 348.329 d



DV Fit Results:

Period = 348.32936 [0.00633] d
Epoch = 446.0895 [0.0114] BKJD
Rp/R* = 0.0191 [0.0330]
a/R* = 301.22 [2573.79]
b = 0.89 [1.96]
Seff = 0.76 [0.25]
Teq = 238 [20] K
Rp = 1.70 [2.98] Re
a = 0.9358 [0.2018] AU
Ag = 28154.71 [98308.83] [0.29σ]
Teff = 4770 [4149] K [1.09σ]

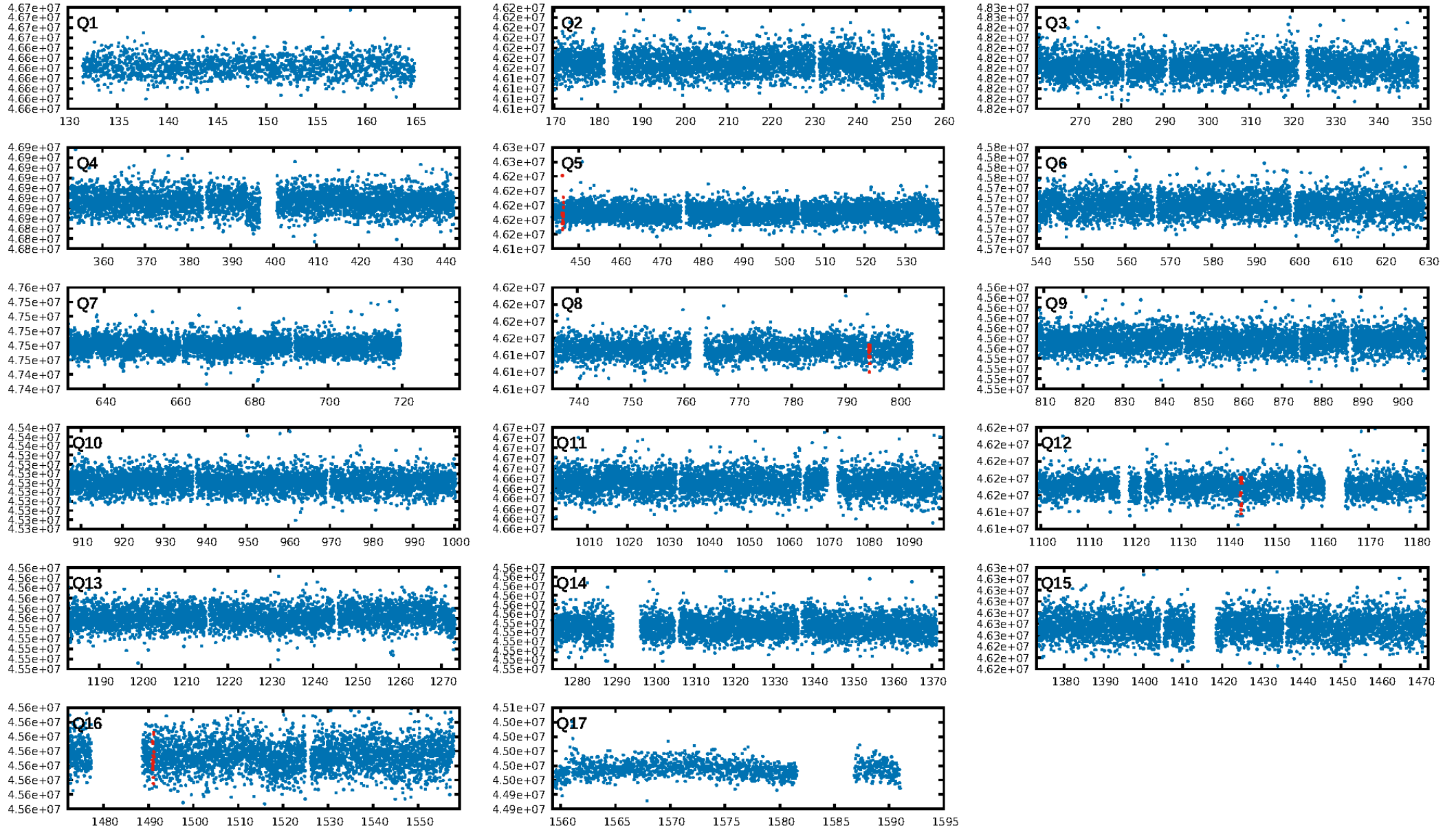
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.8%
ModelChiSquareGof-sig: 93.6%
Bootstrap-pfa: 1.19e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 32.9
Centroid-sig: 2.7%
Centroid-so: 3.443 arcsec [2.04σ]
OotOffset-rm: 0.667 arcsec [0.05σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-rm: 0.920 arcsec [0.07σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

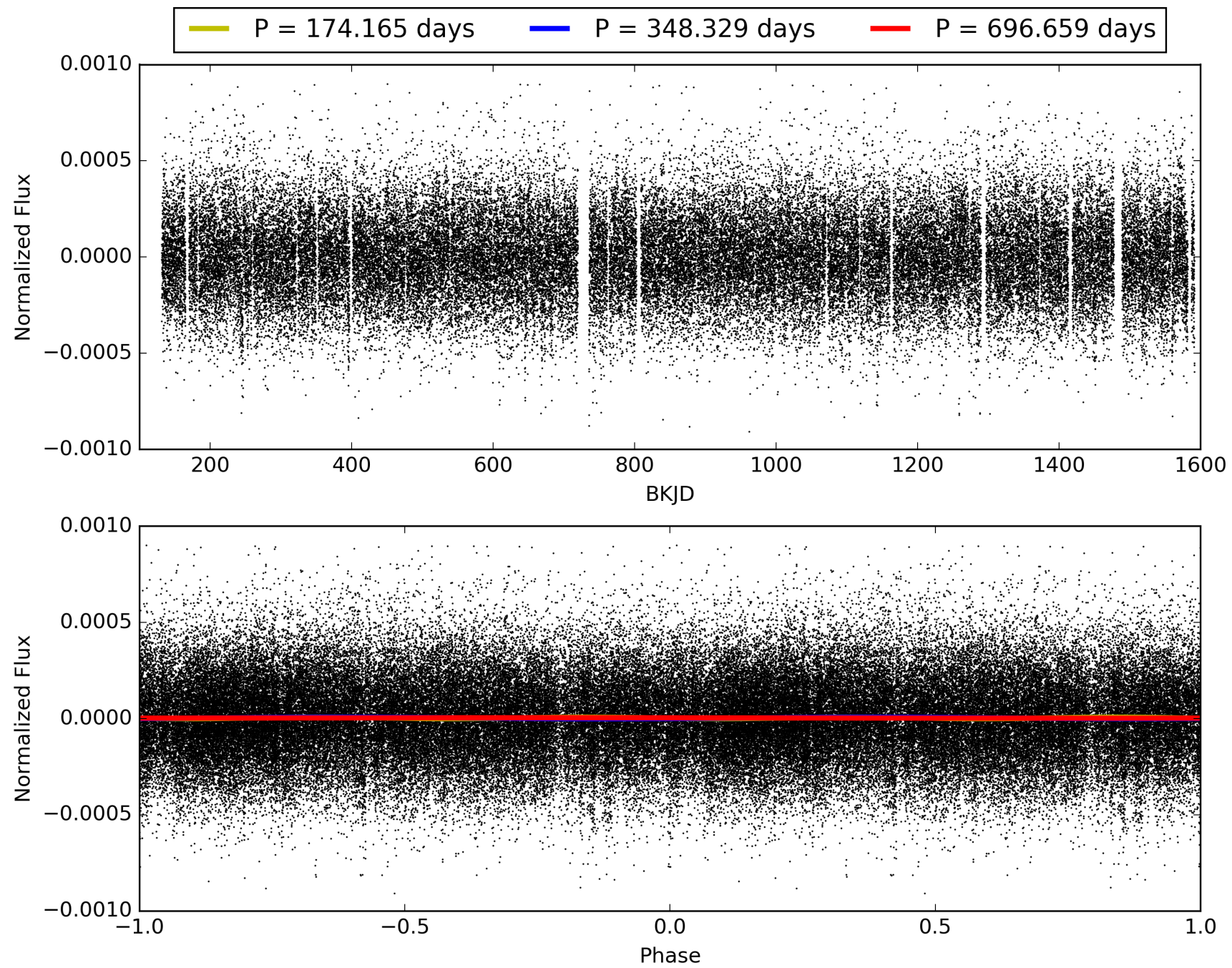
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:33:14 Z

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

TCE 010215103-01, PDC Light Curves

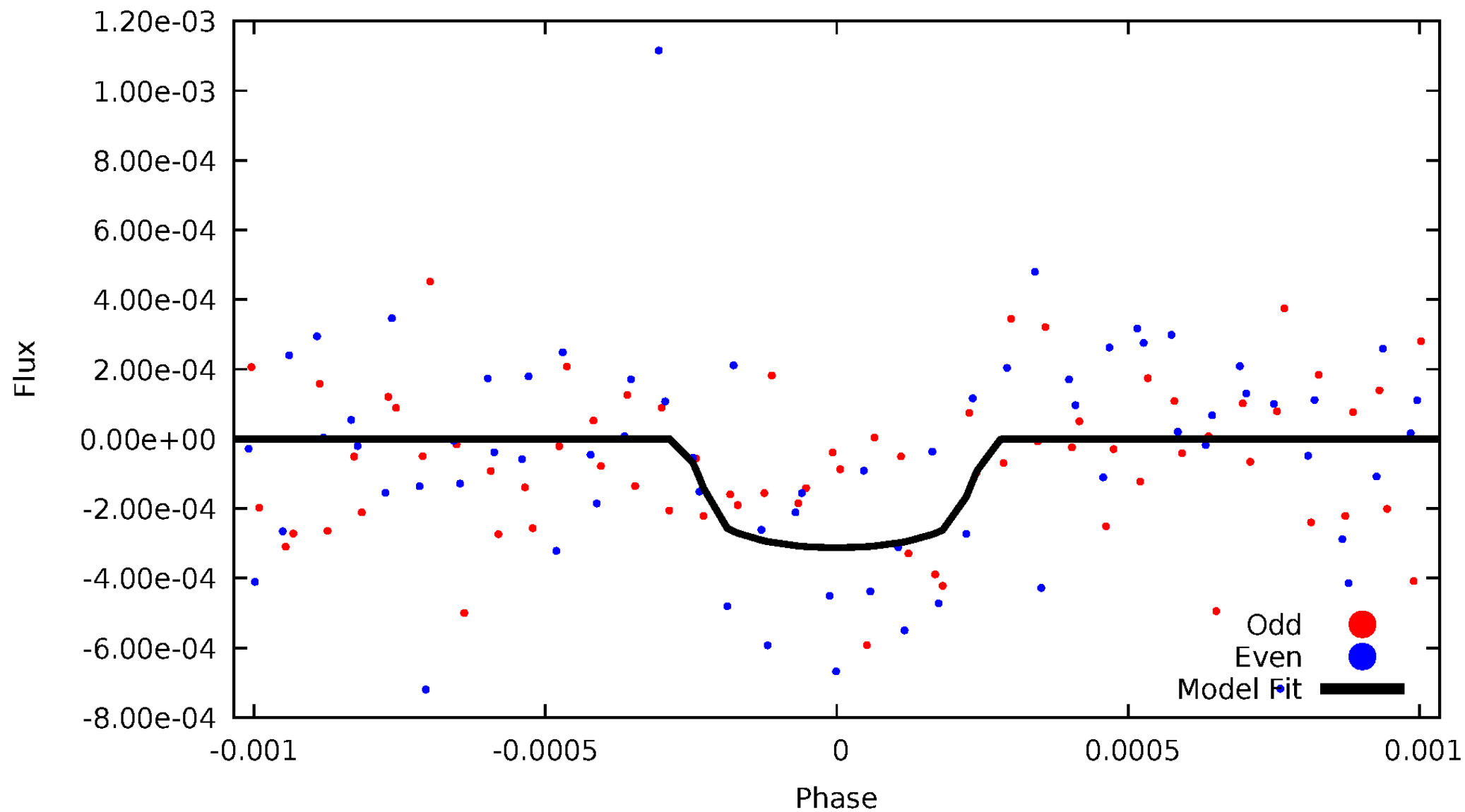


TCE 010215103-01



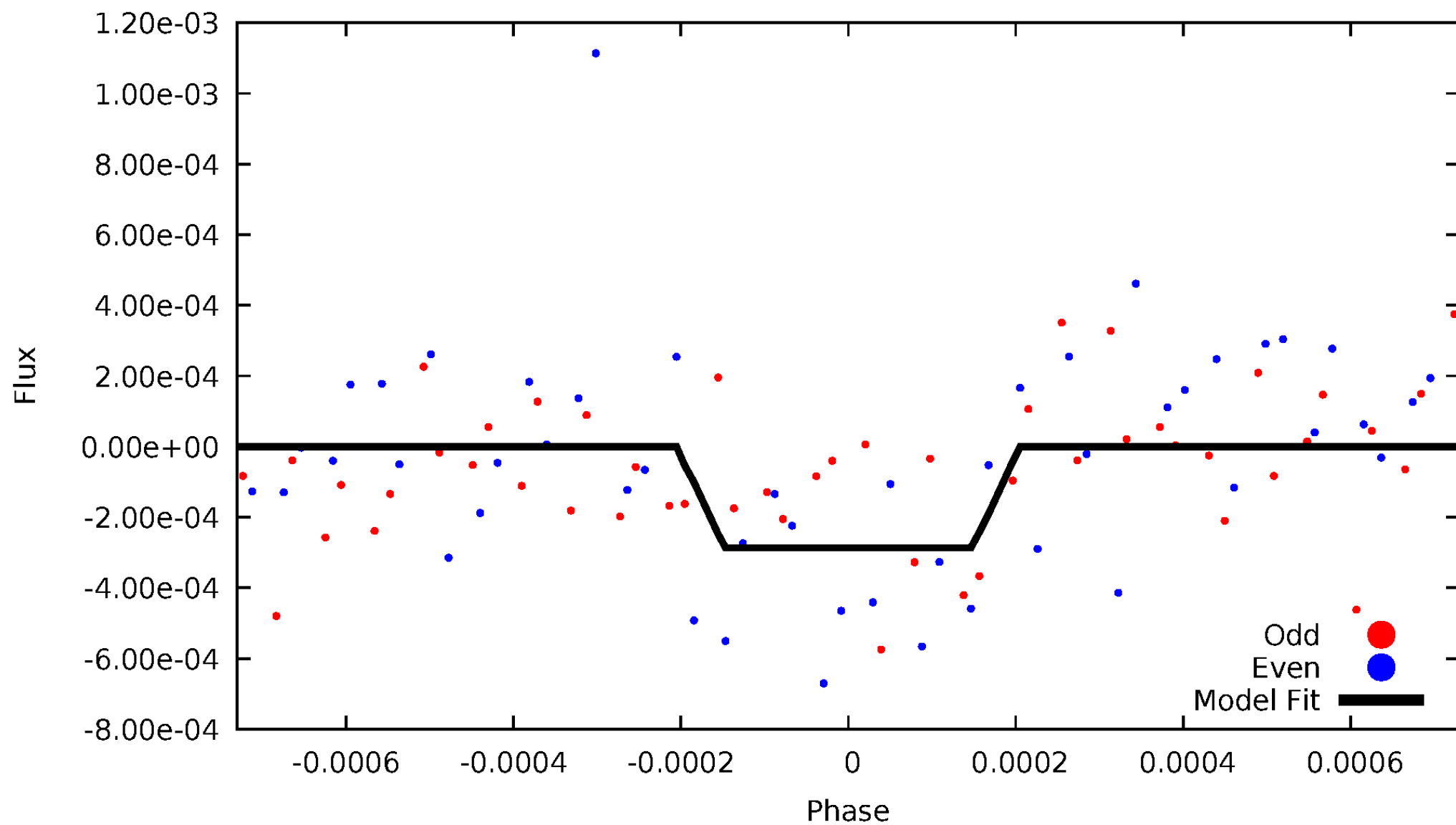
DV Odd/Even

TCE 010215103-01



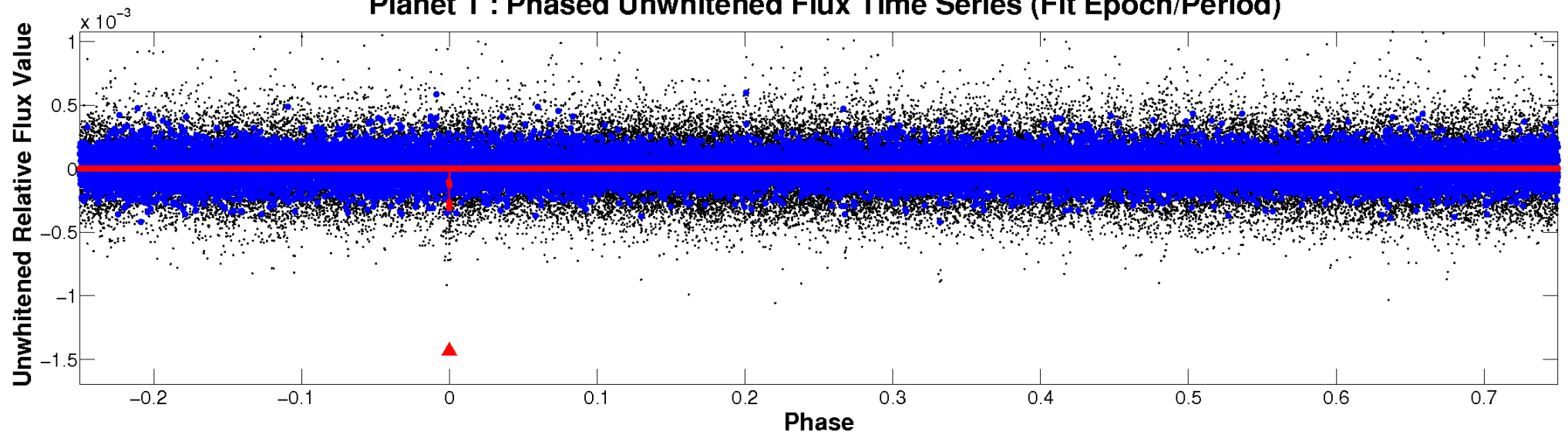
ALT Odd/Even

TCE 010215103-01

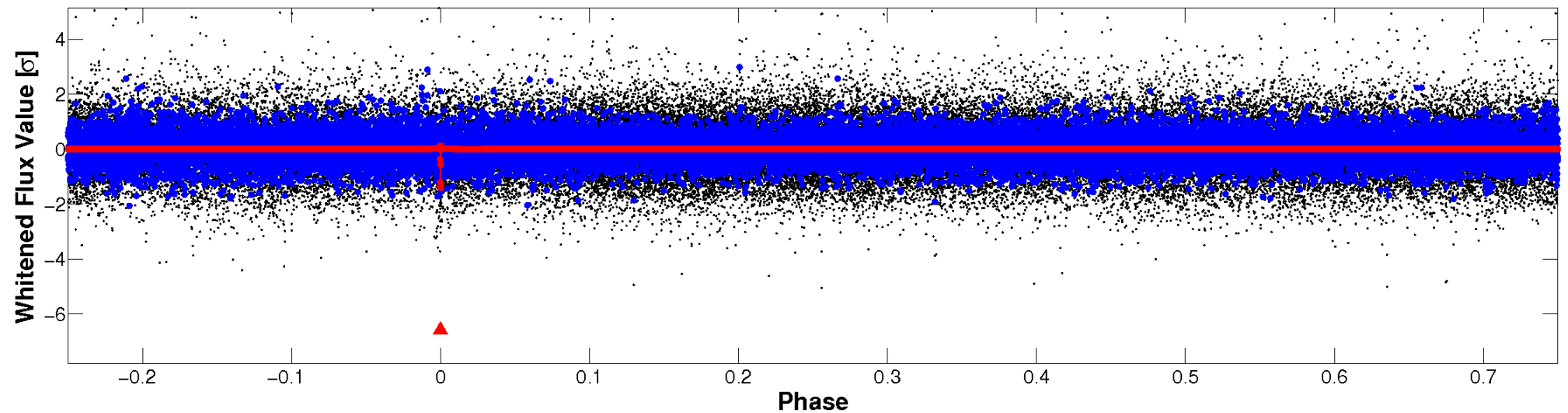


Non-Whitened Vs. Whitened Light Curve

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

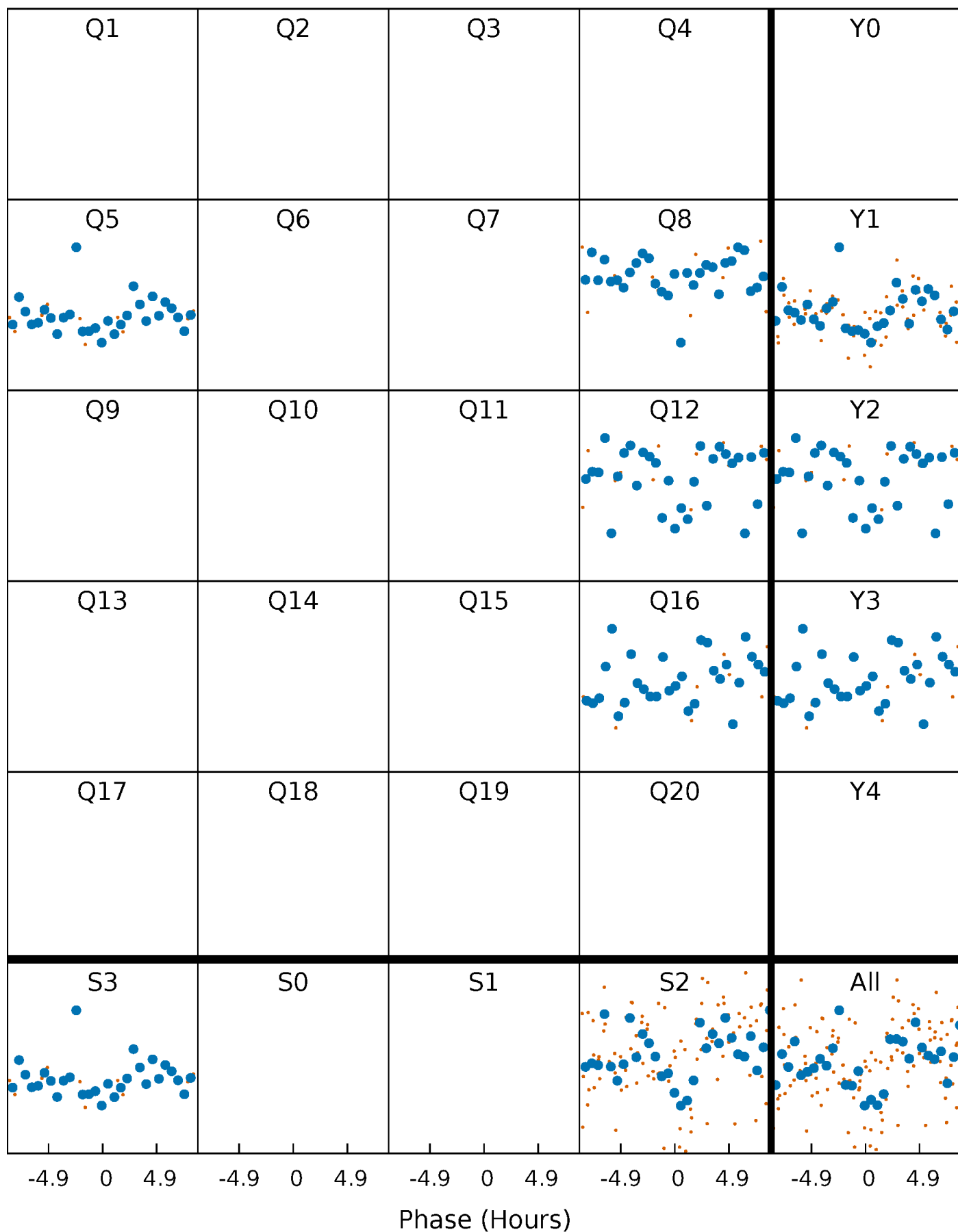


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



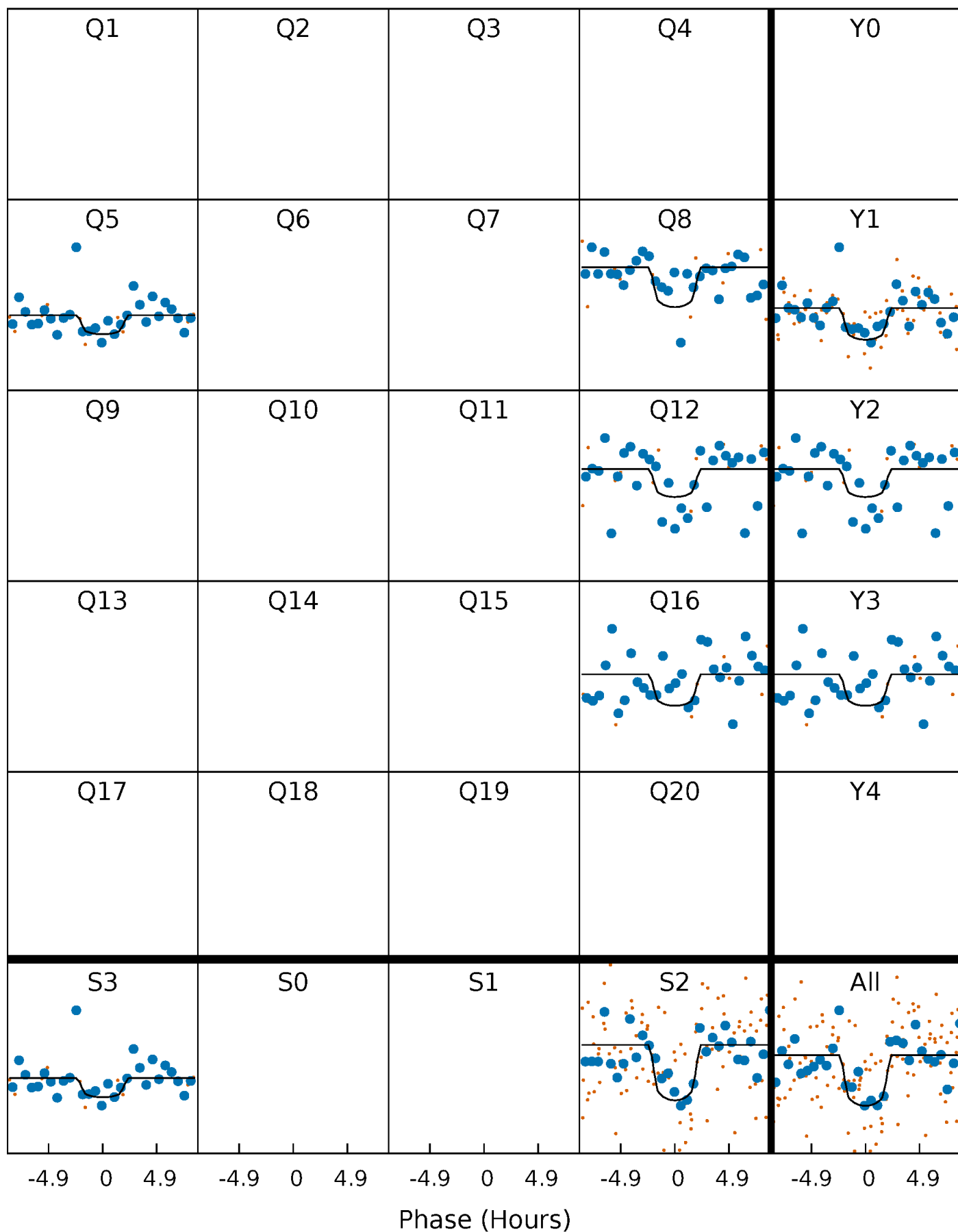
PDC Quarter-Phased Transit Curves

TCE 010215103-01 P=348.329361 Days $T_0=446.089472$ (BKJD)



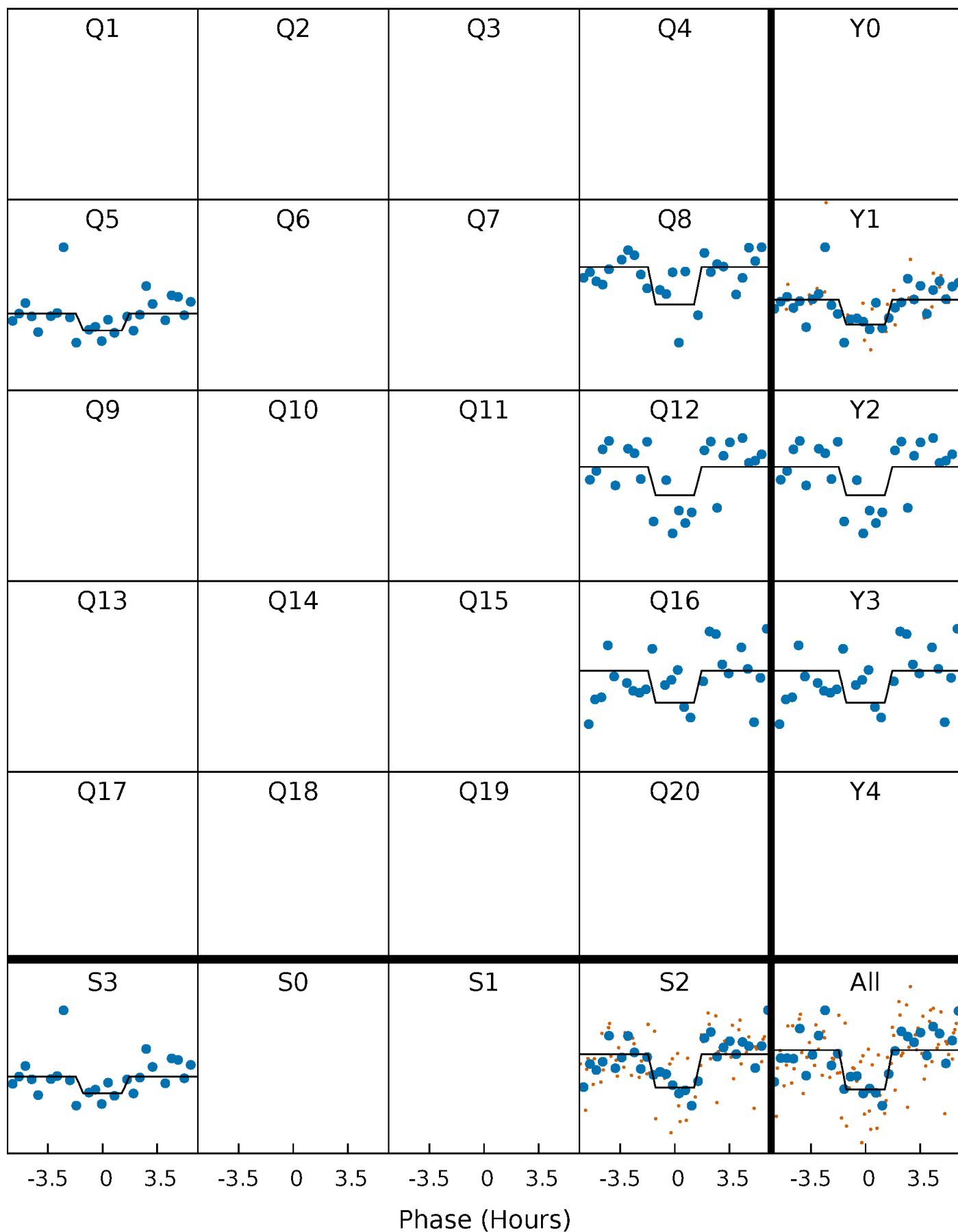
DV Quarter-Phased Transit Curves

TCE 010215103-01 P=348.329361 Days $T_0=446.089472$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

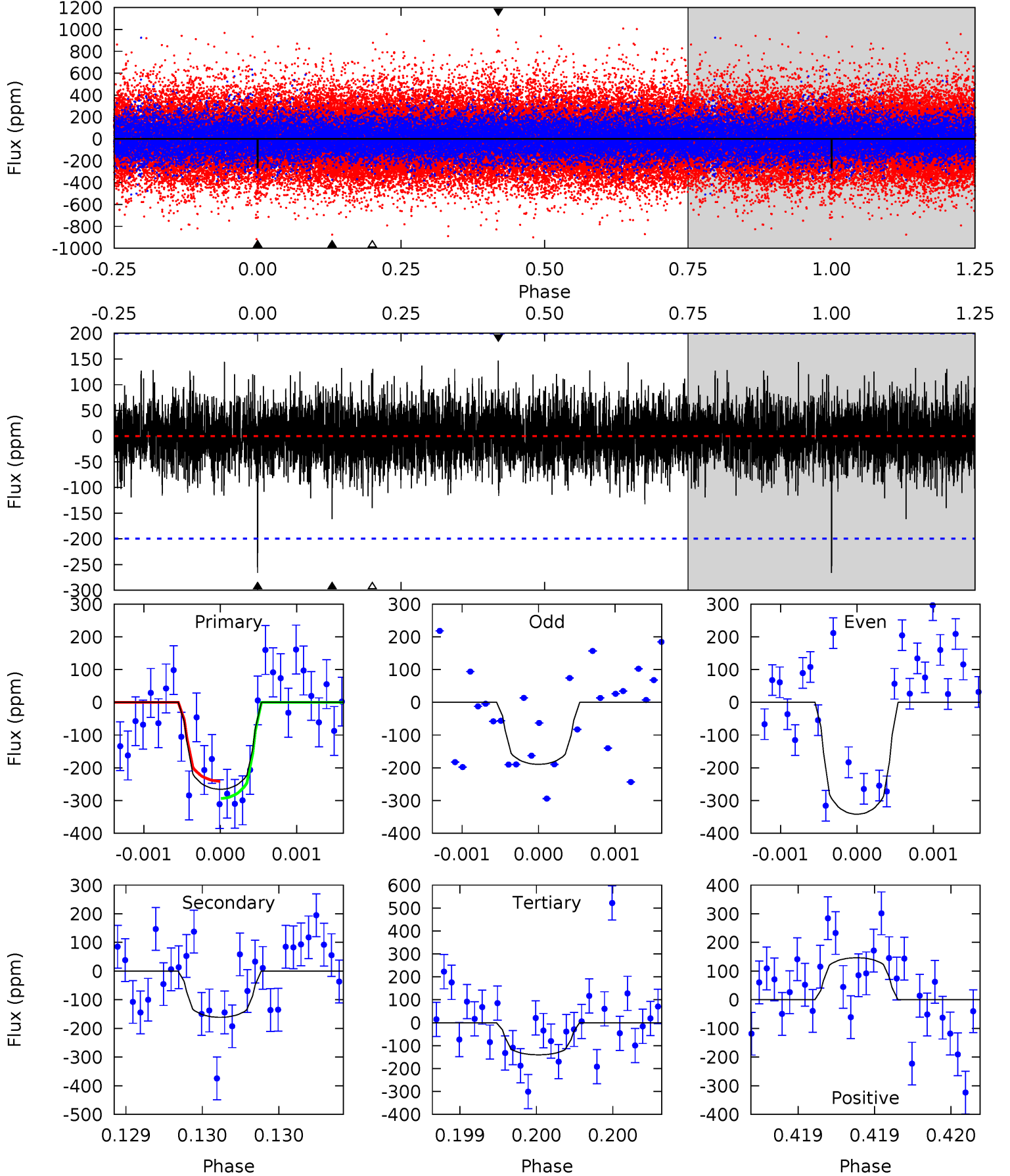
TCE 010215103-01 P=348.334909 Days $T_0=446.088239$ (BKJD)



DV Model-Shift Uniqueness Test

010215103-01, P = 348.329361 Days, E = 97.760111 Days

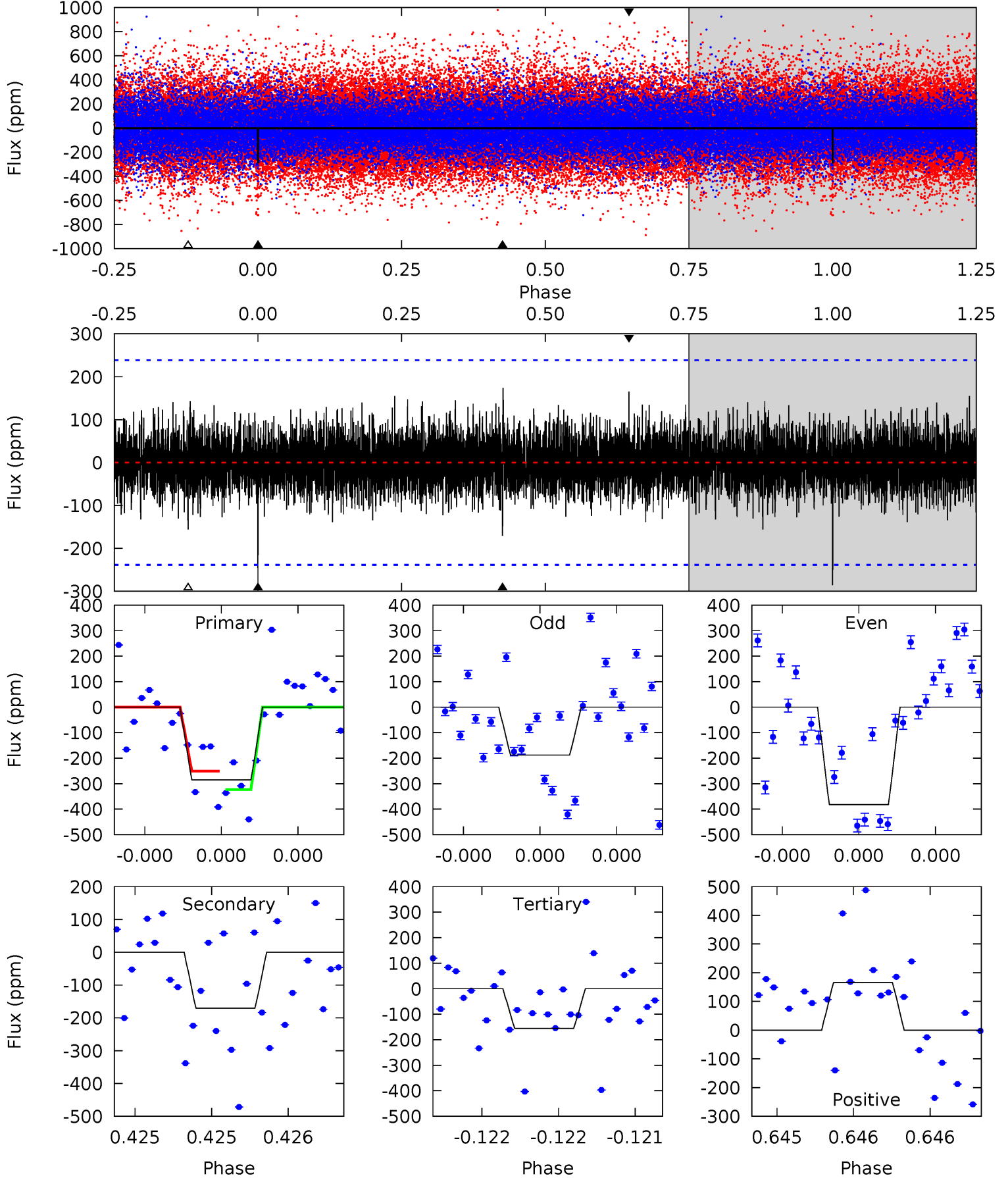
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.42	4.50	3.91	4.09	5.57	3.47	1.09	3.50	3.32	0.59	0.41	2.13	1.04	0.36	0.74



Alt Model-Shift Uniqueness Test

010215103-01, P = 348.334909 Days, E = 97.753330 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.73	4.02	3.67	3.90	5.62	3.55	0.98	3.06	2.83	0.35	0.13	2.29	1.08	0.38	0.85



Stellar Parameters For KIC 010215103

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5774^{+138}_{-155}	$4.567^{+0.042}_{-0.168}$	$-0.300^{+0.300}_{-0.300}$	$0.818^{+0.212}_{-0.071}$	$0.907^{+0.090}_{-0.110}$	$2.332^{+0.397}_{-1.090}$
	+2%/-3%	+1%/-4%	+100%/-100%	+26%/-9%	+10%/-12%	+17%/-47%
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 010215103-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-161 ± 36	$2.83^{+2.60}_{-1.92}$	339^{+20}_{-14}	4018^{+2431}_{-756}	9569^{+81891}_{-7027}
Alt.	-171 ± 42	$2.69^{+2.46}_{-1.82}$	338^{+19}_{-15}	4126^{+2659}_{-823}	10647^{+86110}_{-7698}

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

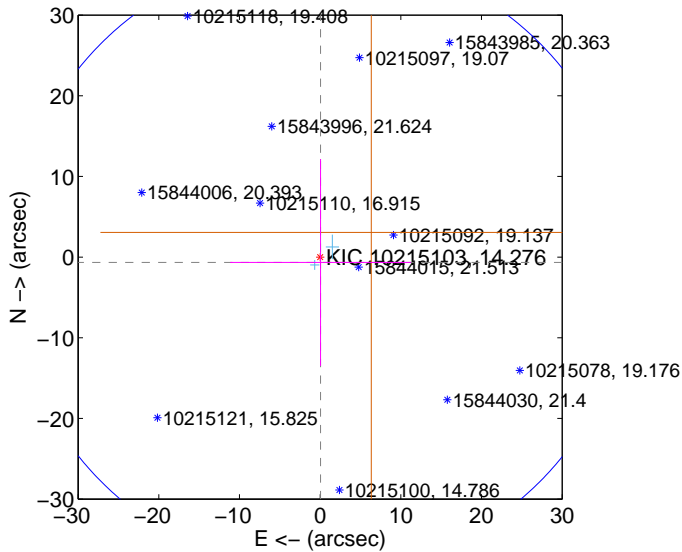
Supplemental centroid analysis for 010215103-01. Kepler magnitude: 14.28. Transit SNR 7.08

There are 2 quarters with good PRF difference image offsets

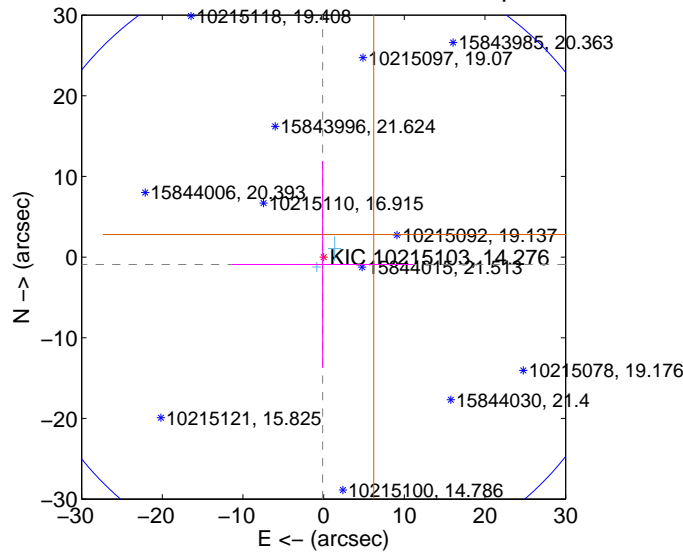
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.667 ± 12.812	0.05	-0.051 ± 11.199	-0.665 ± 12.821
PRF-fit source offset from KIC position	0.920 ± 12.796	0.07	0.118 ± 11.199	-0.913 ± 12.821
photometric centroid source offset	3.44 ± 1.69	2.04	-3.35 ± 1.67	0.80 ± 1.93

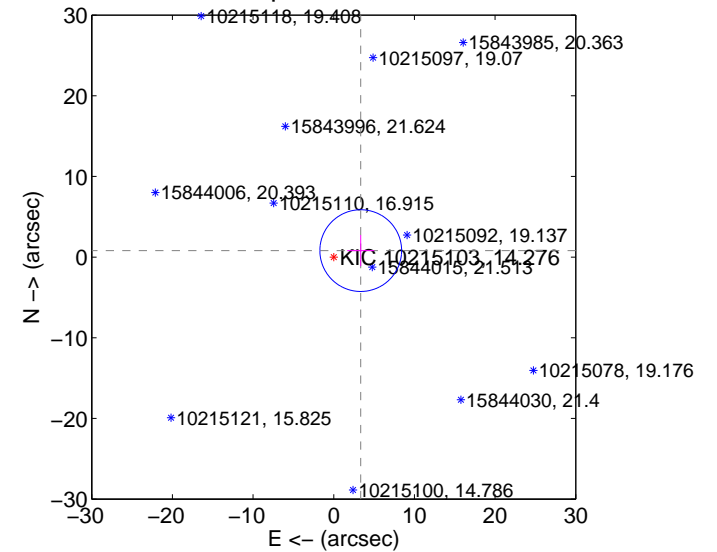
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

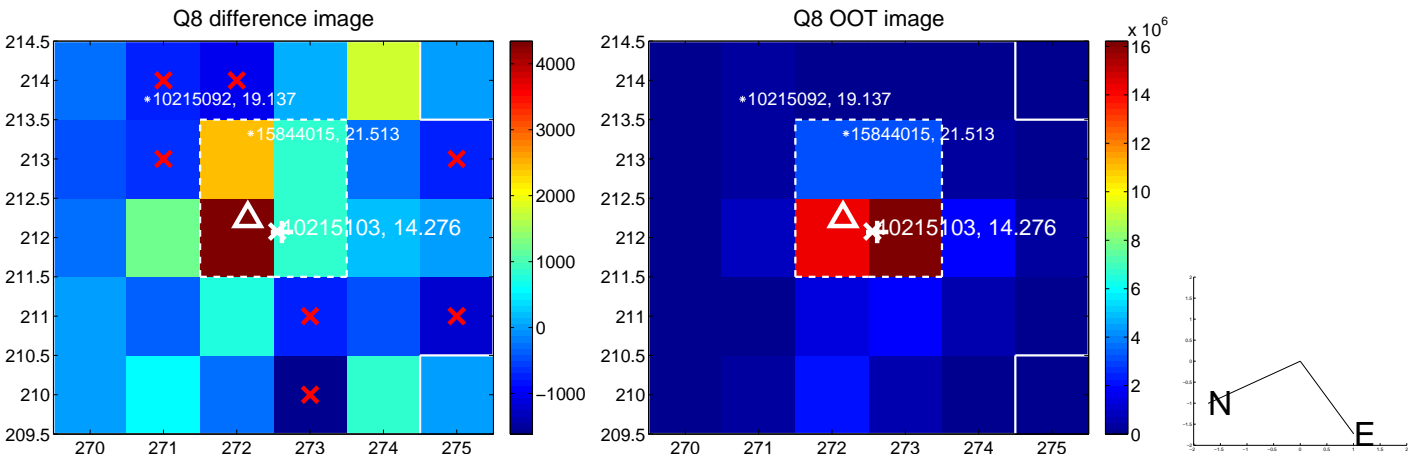
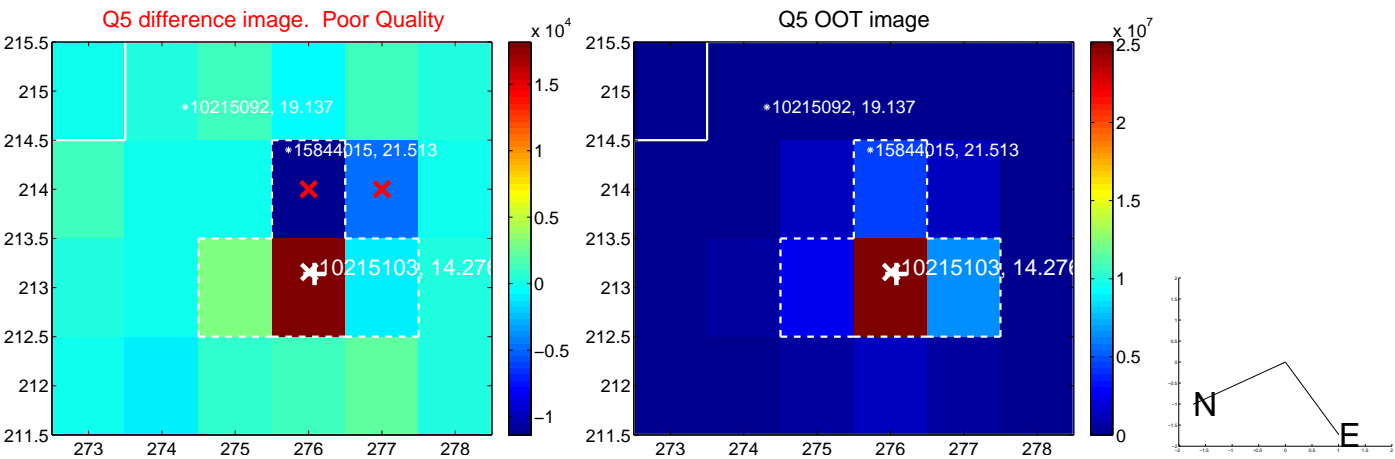


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

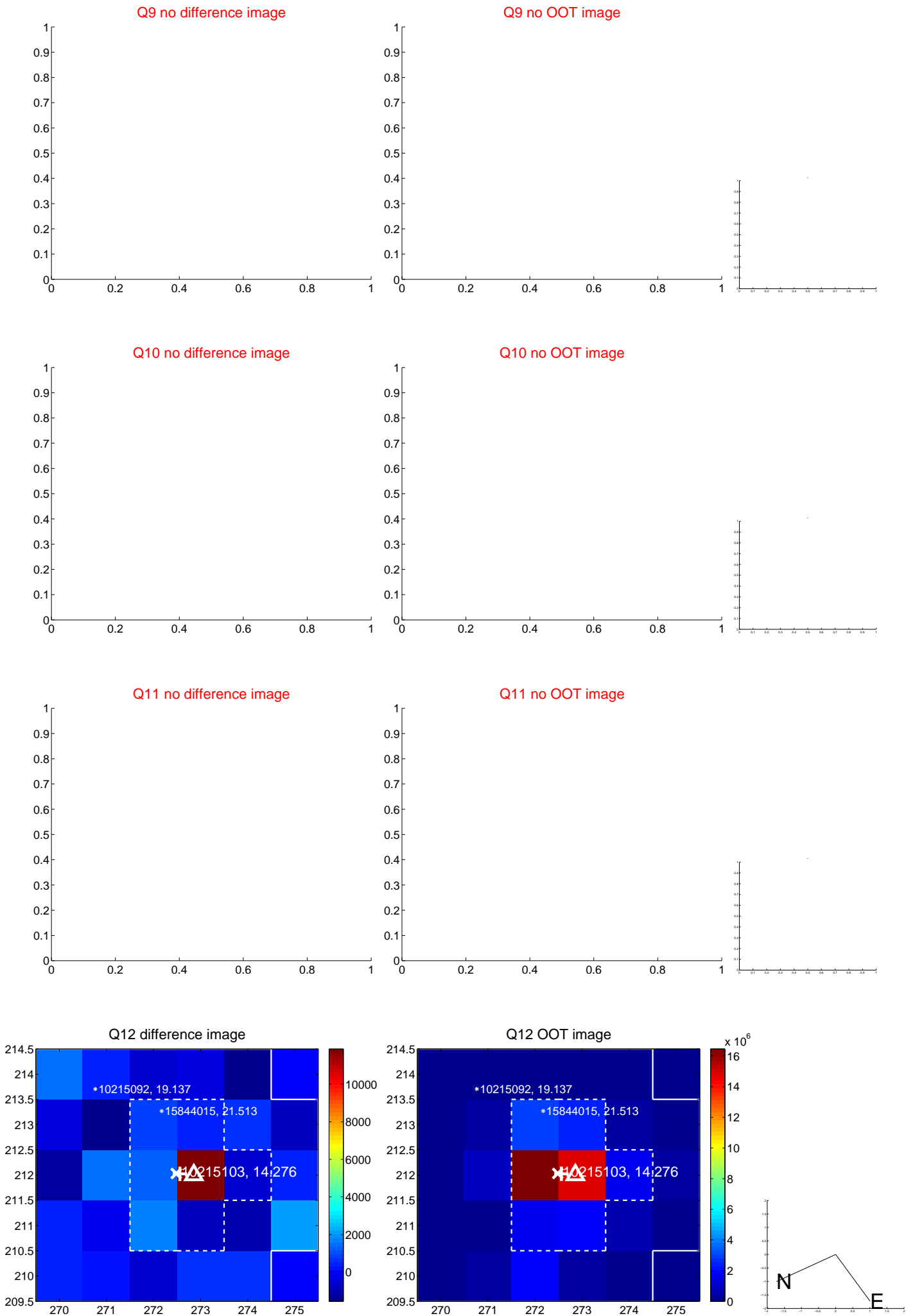
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



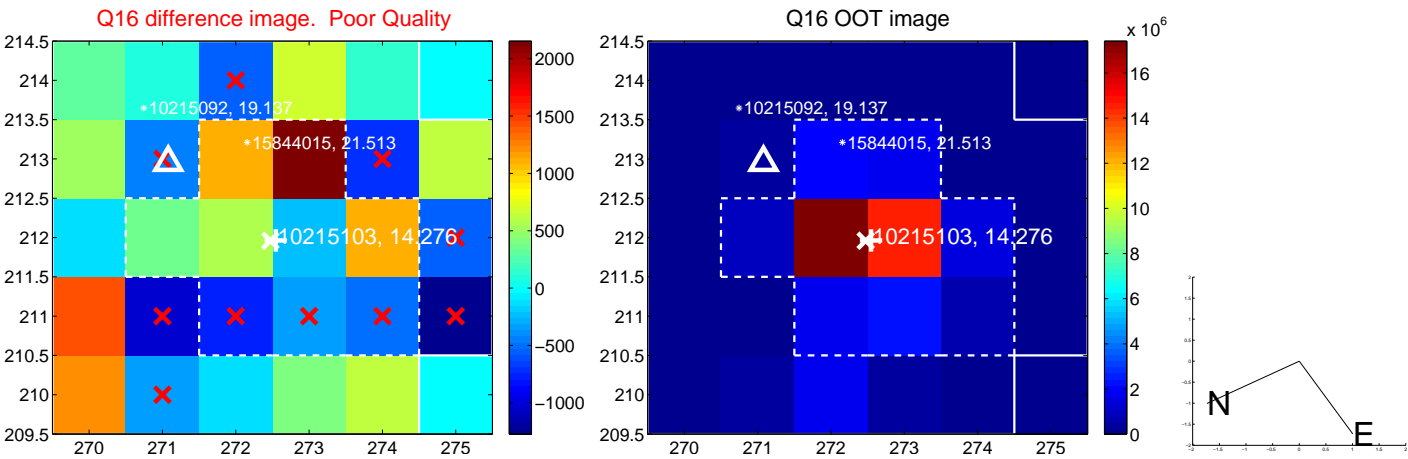
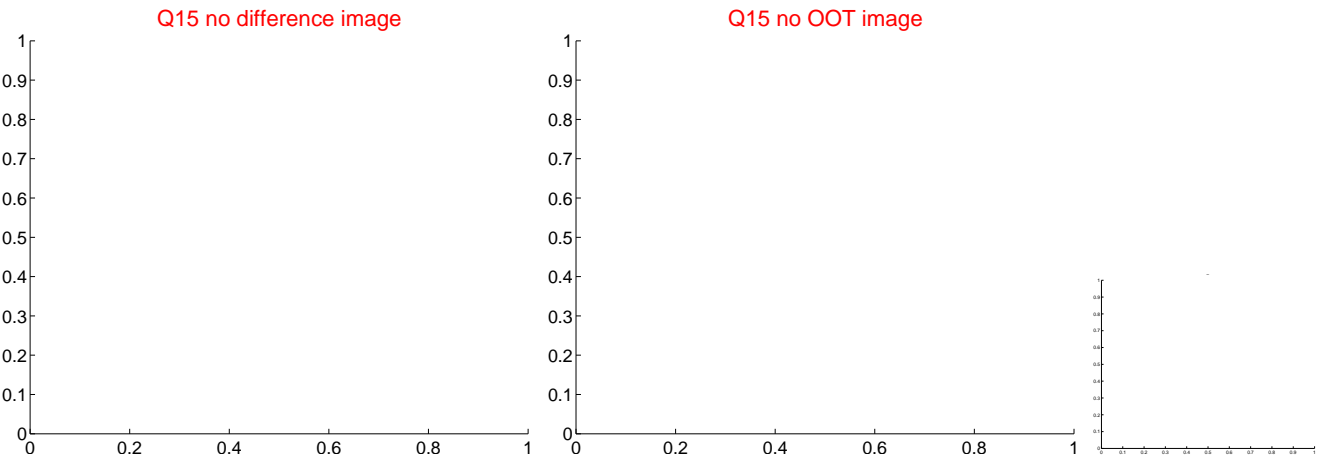
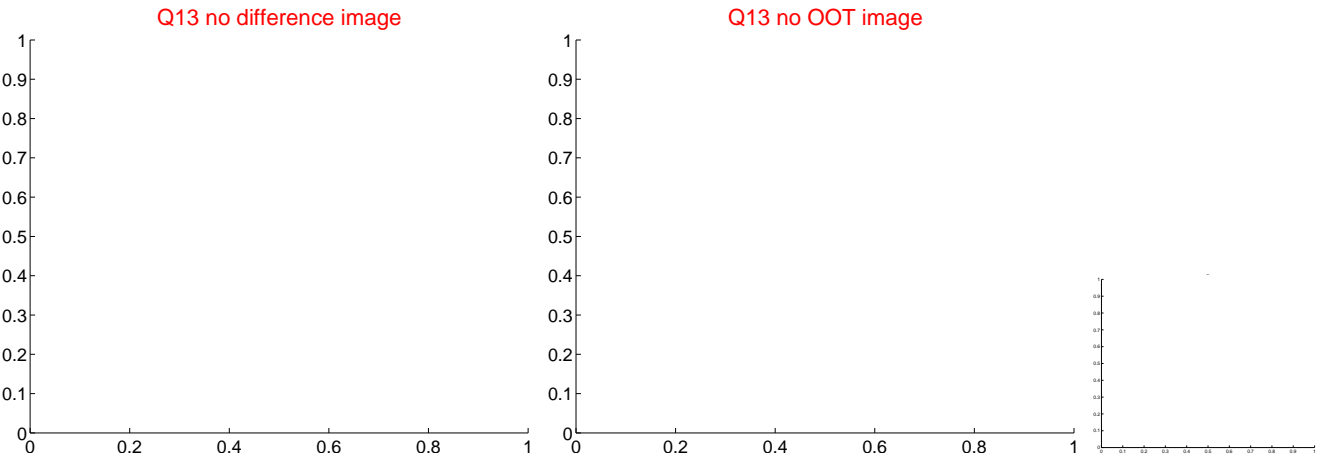
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



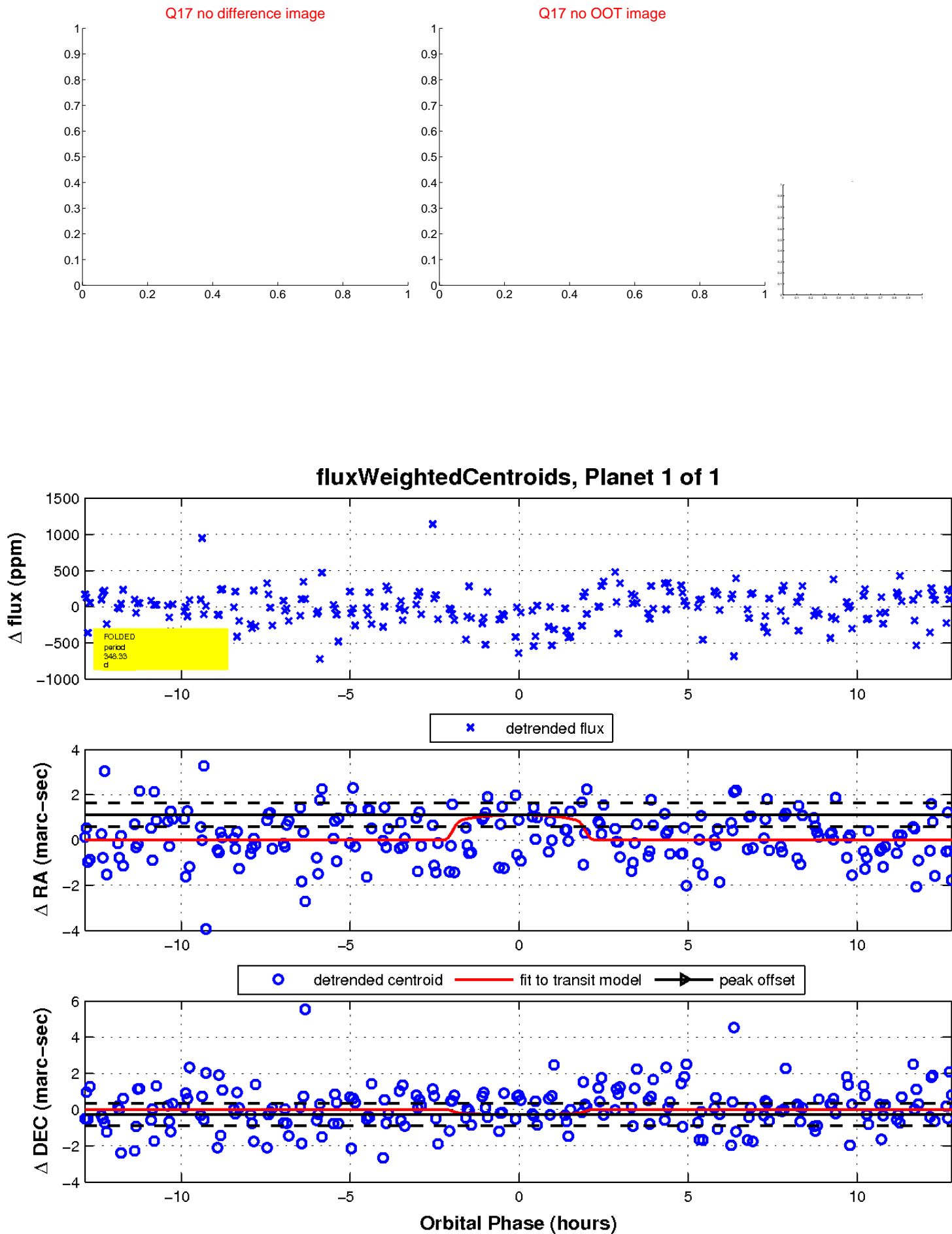
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

