

KIC 008309108

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})
008309108-01	OBS	No	369.201690	232.776327	2685.7	29.755	9.7	11.2	0.85	5428	8.34	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008309108-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

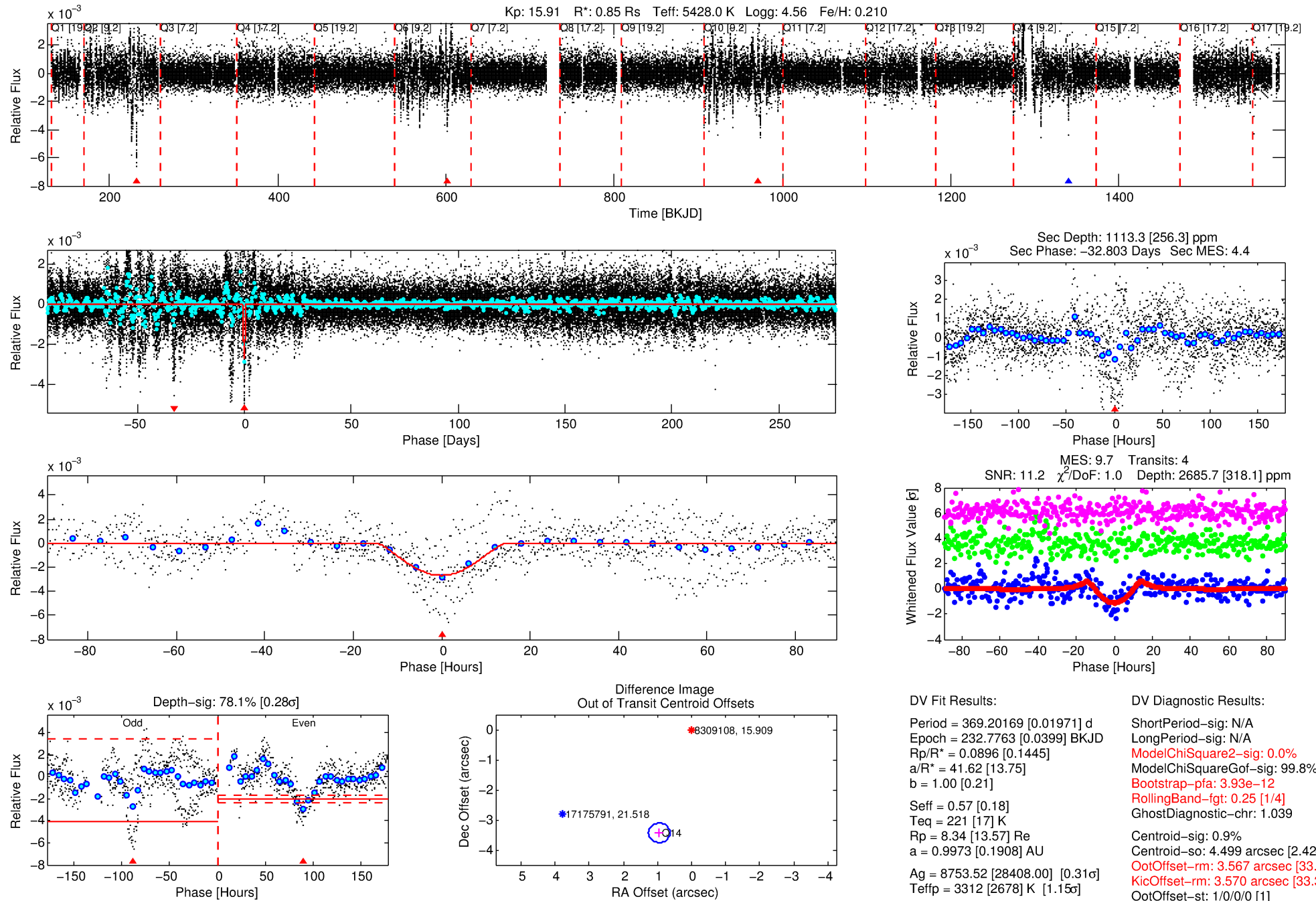
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008309108-01

No Significant Match Found

DV One-Page Summary

KIC: 8309108 Candidate: 1 of 1 Period: 369.202 d



DV Fit Results:

Period = 369.20169 [0.01971] d
Epoch = 232.7763 [0.0399] BKJD
Rp/R* = 0.0896 [0.1445]
a/R* = 41.62 [13.75]
b = 1.00 [0.21]
Seff = 0.57 [0.18]
Teq = 221 [17] K
Rp = 8.34 [13.57] Re
a = 0.9973 [0.1908] AU
Ag = 8753.52 [28408.00] [0.31 σ]
Teff = 3312 [2678] K [1.15 σ]

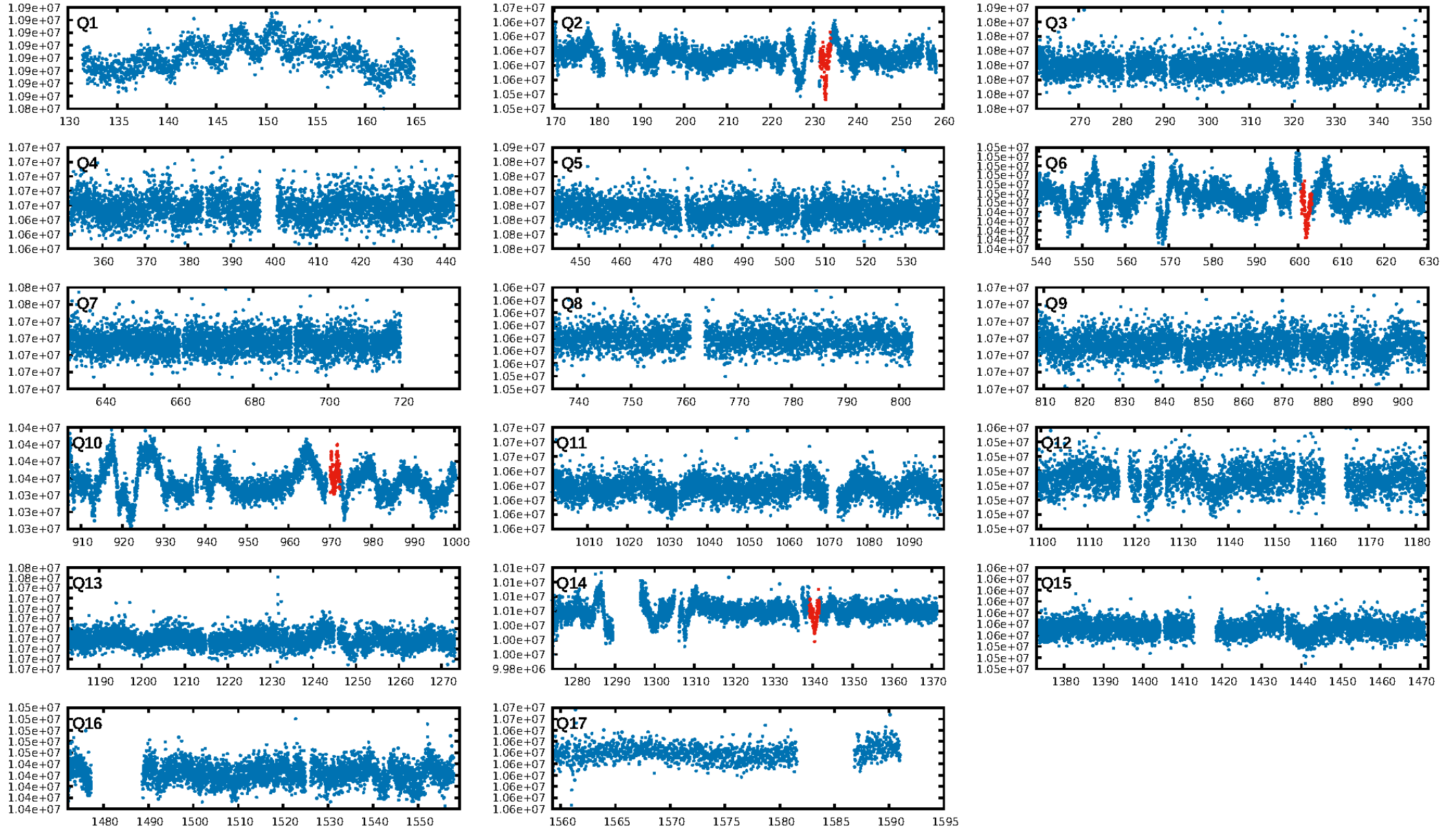
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 99.8%
Bootstrap-pfa: 3.93e-12
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 1.039
Centroid-sig: 0.9%
Centroid-so: 4.499 arcsec [2.42 σ]
OotOffset-rm: 3.567 arcsec [33.21 σ]
KicOffset-rm: 3.570 arcsec [33.30 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

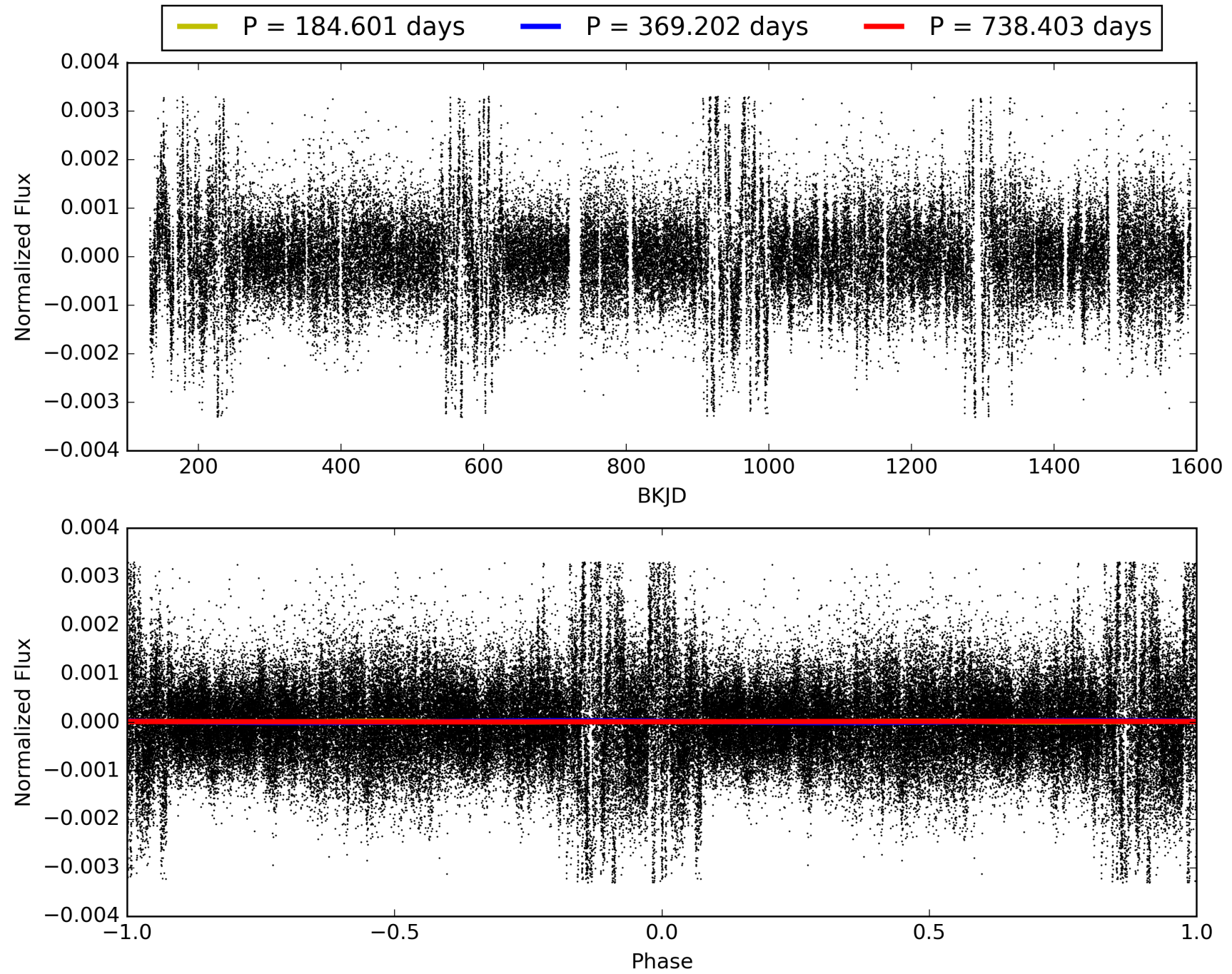
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:08:57 Z

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

TCE 008309108-01, PDC Light Curves

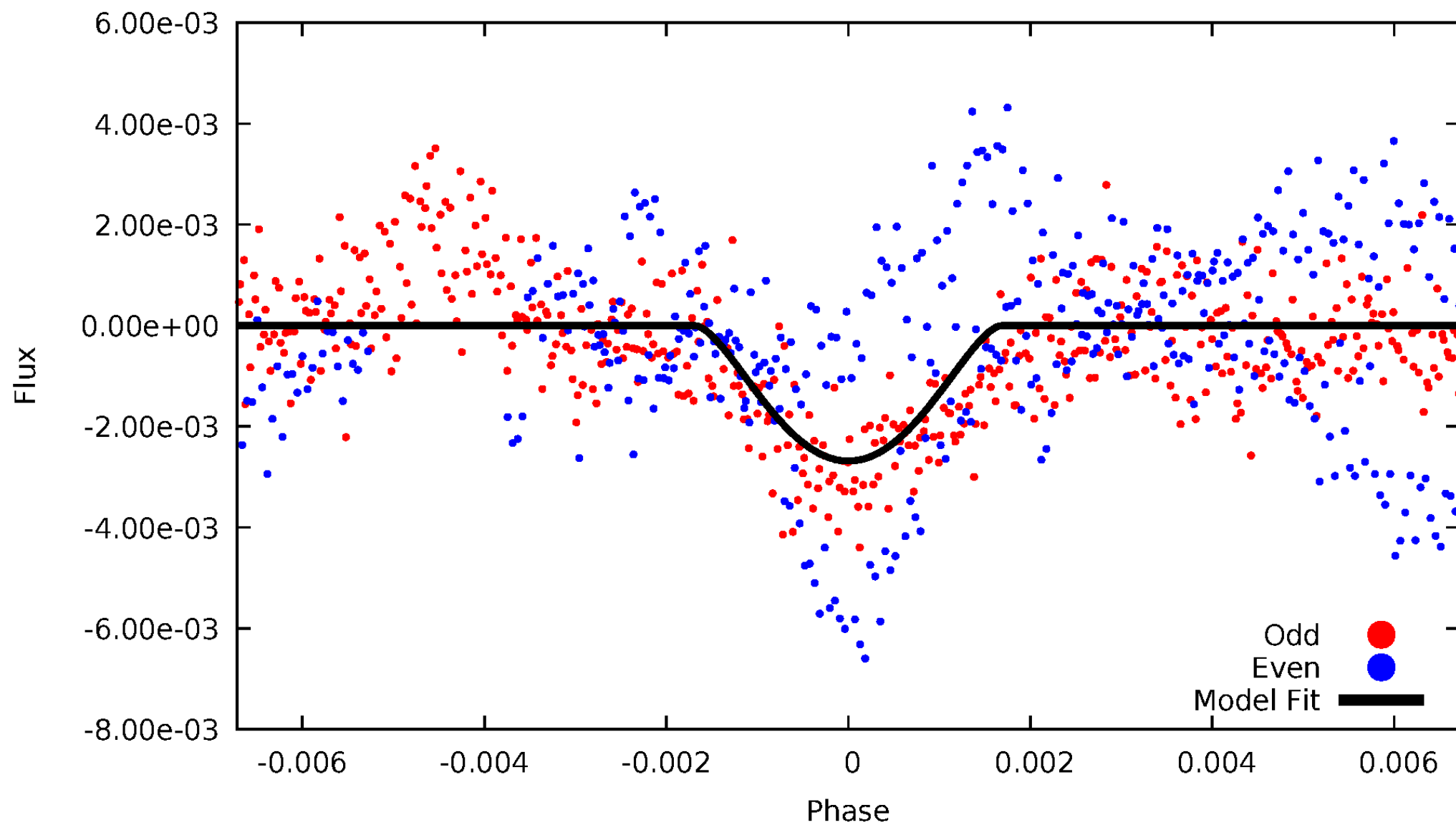


TCE 008309108-01



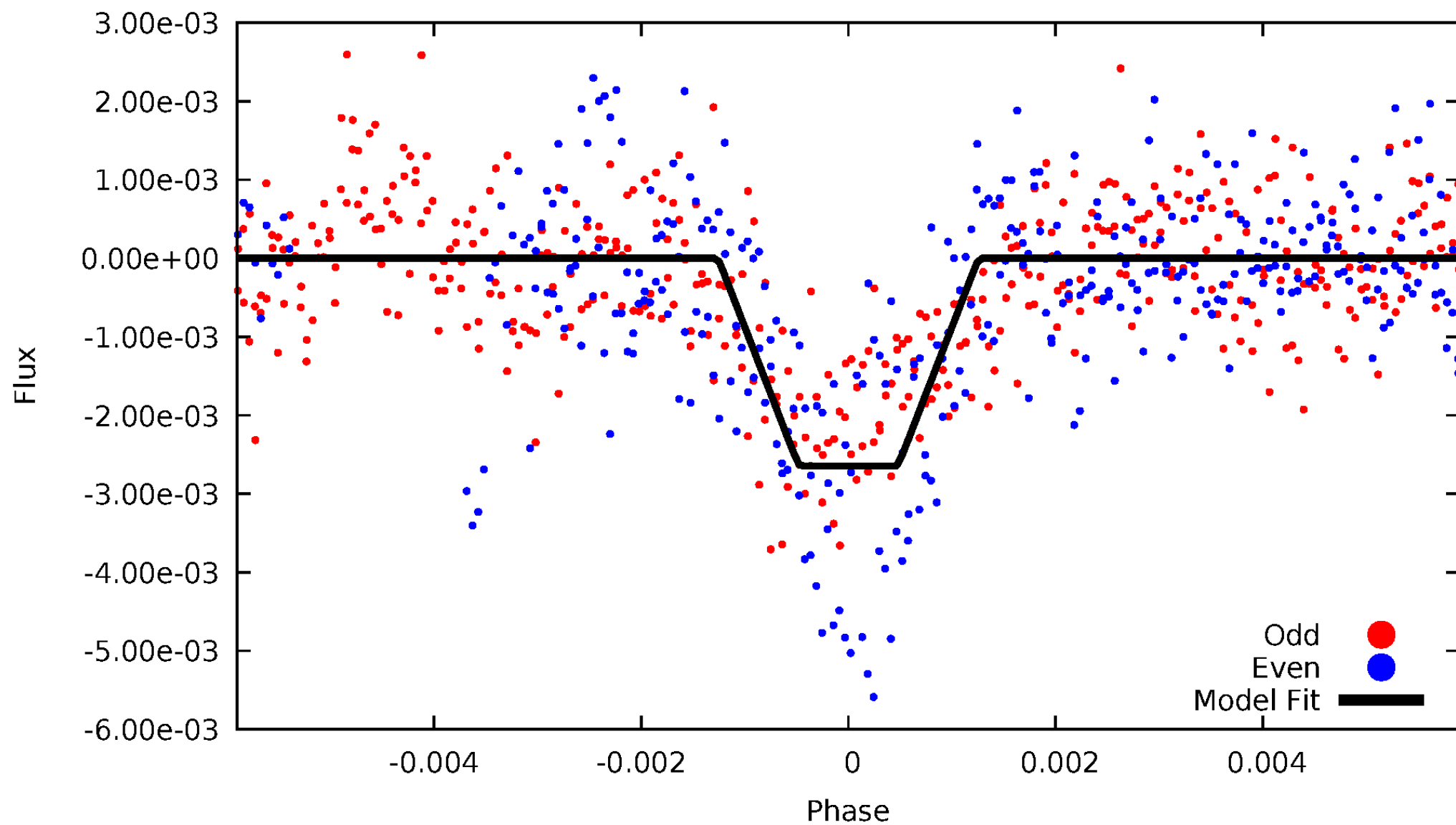
DV Odd/Even

TCE 008309108-01



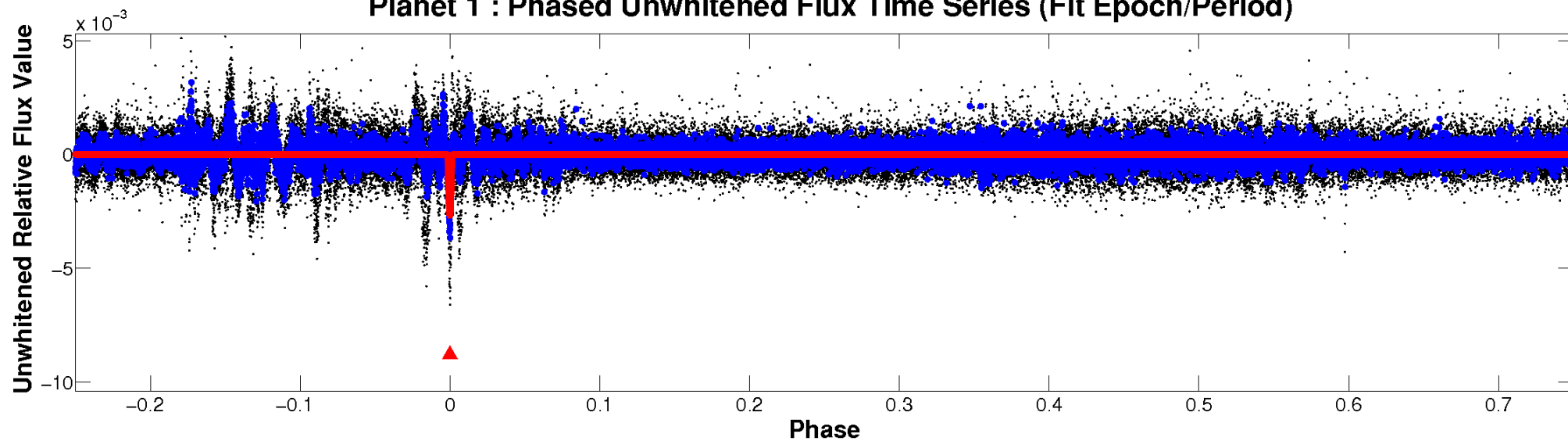
ALT Odd/Even

TCE 008309108-01

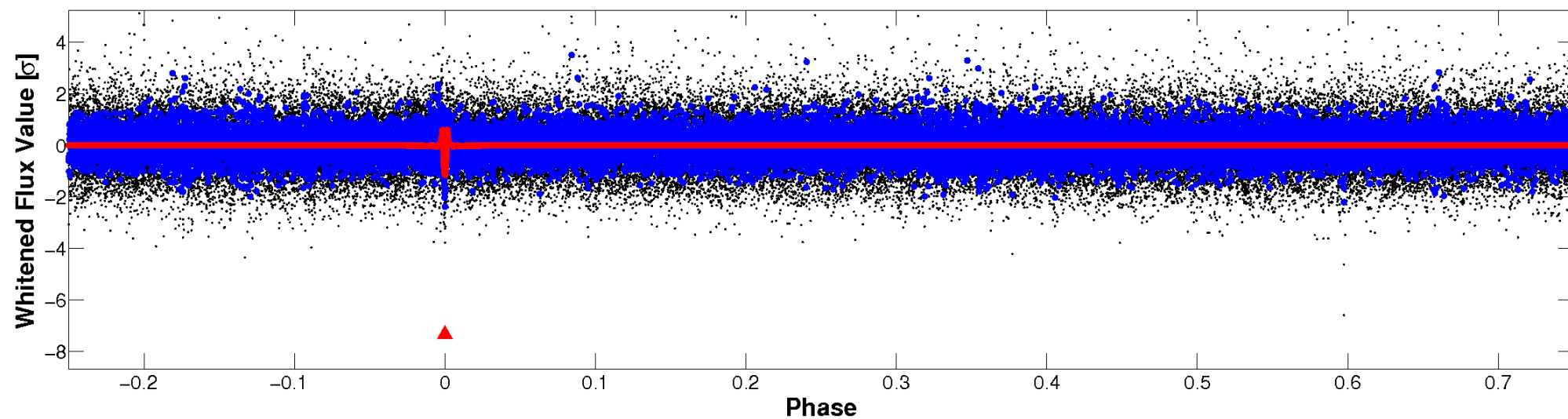


Non-Whitened Vs. Whitened Light Curve

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

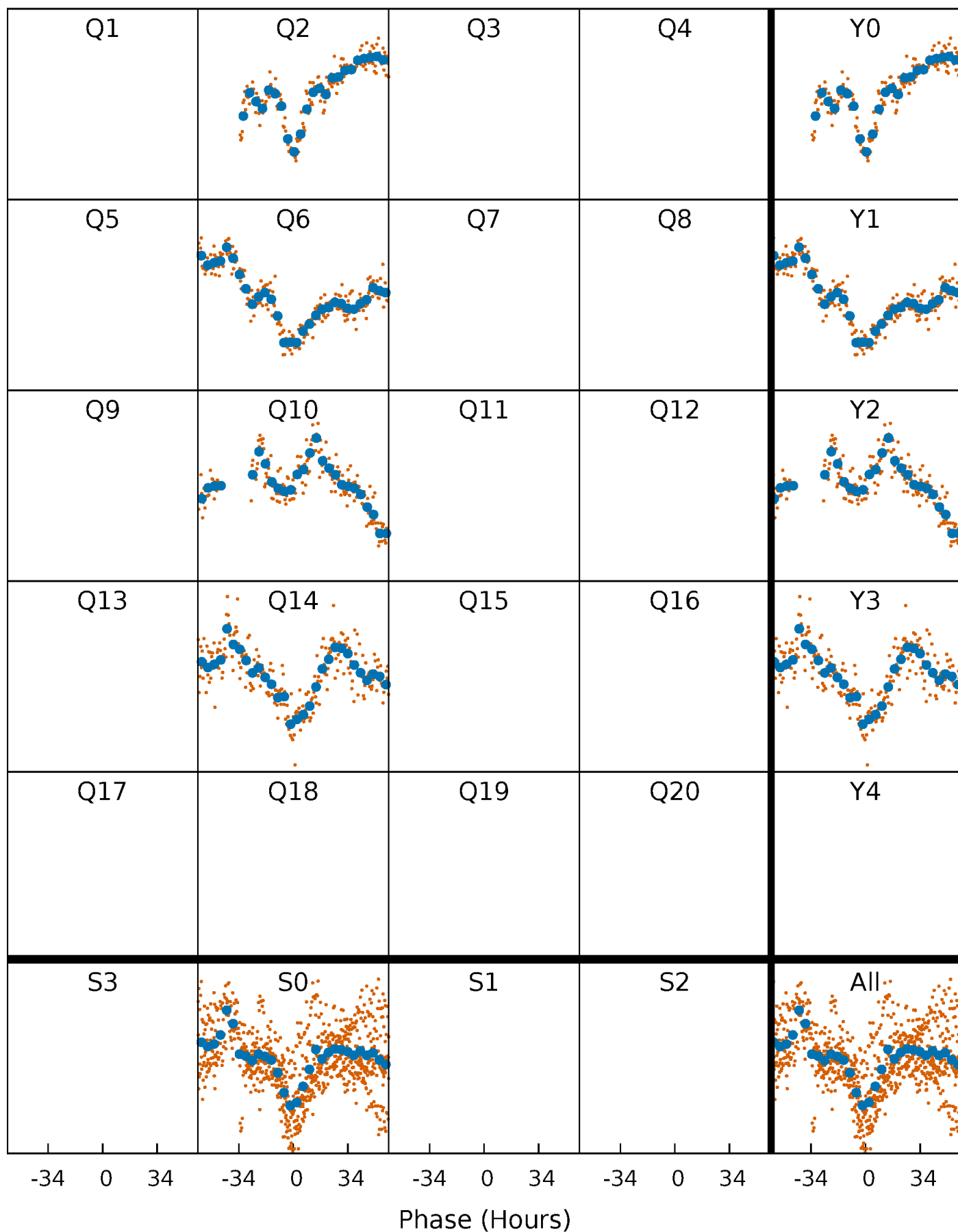


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008309108-01 P=369.201690 Days $T_0=232.776327$ (BKJD)



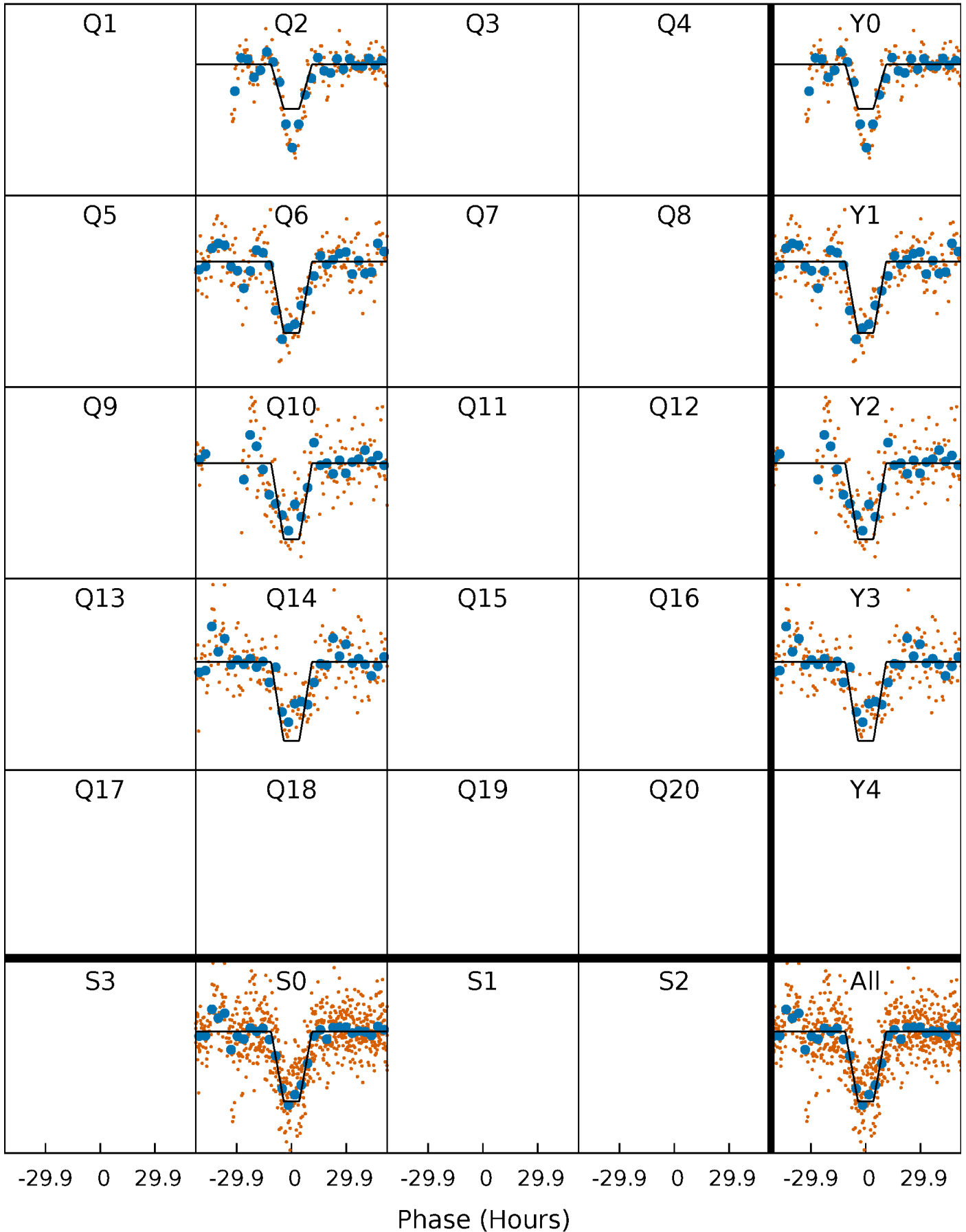
DV Quarter-Phased Transit Curves

TCE 008309108-01 P=369.201690 Days $T_0=232.776327$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

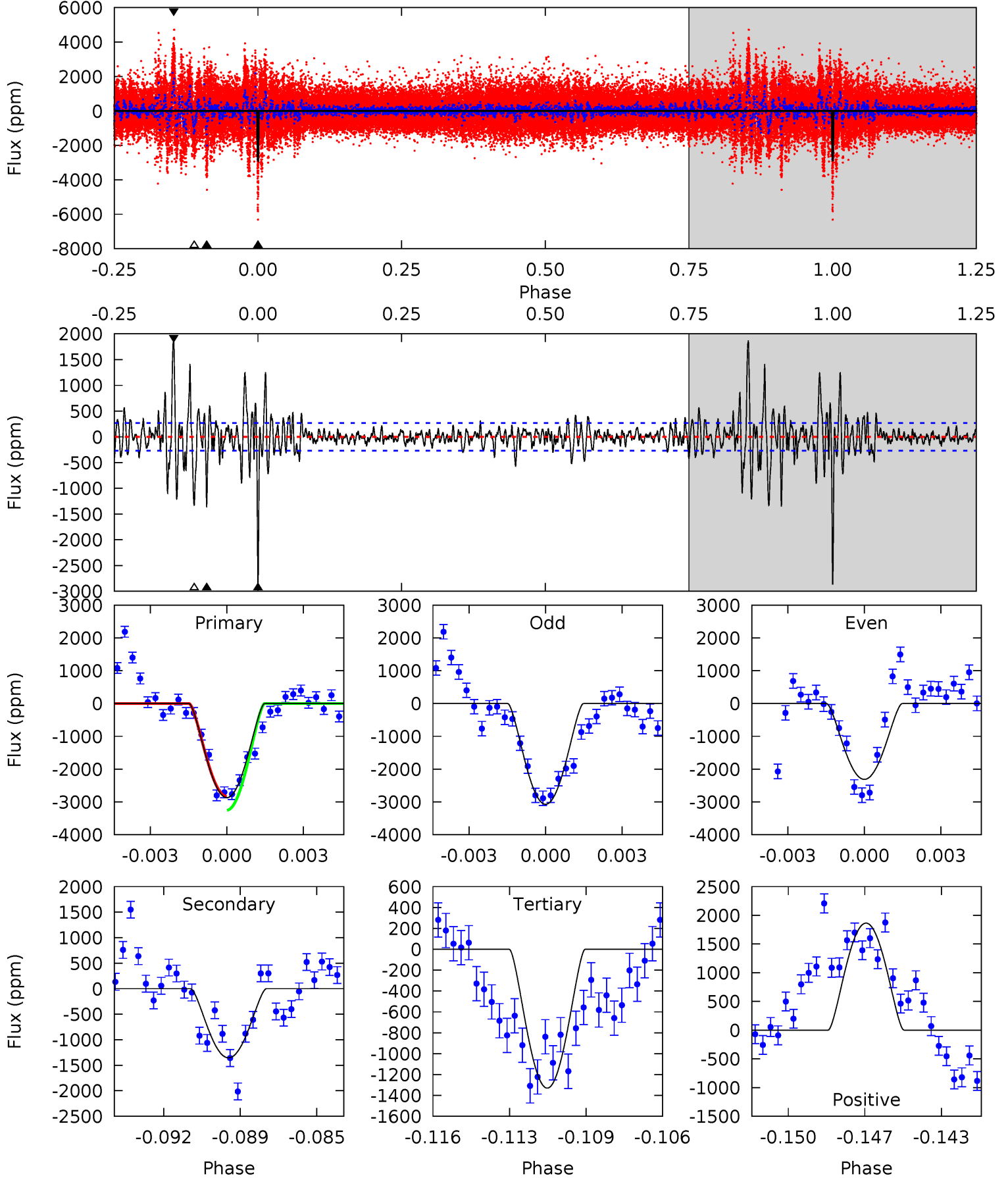
TCE 008309108-01 P=369.234429 Days $T_0=232.754412$ (BKJD)



DV Model-Shift Uniqueness Test

008309108-01, P = 369.201690 Days, E = 232.776327 Days

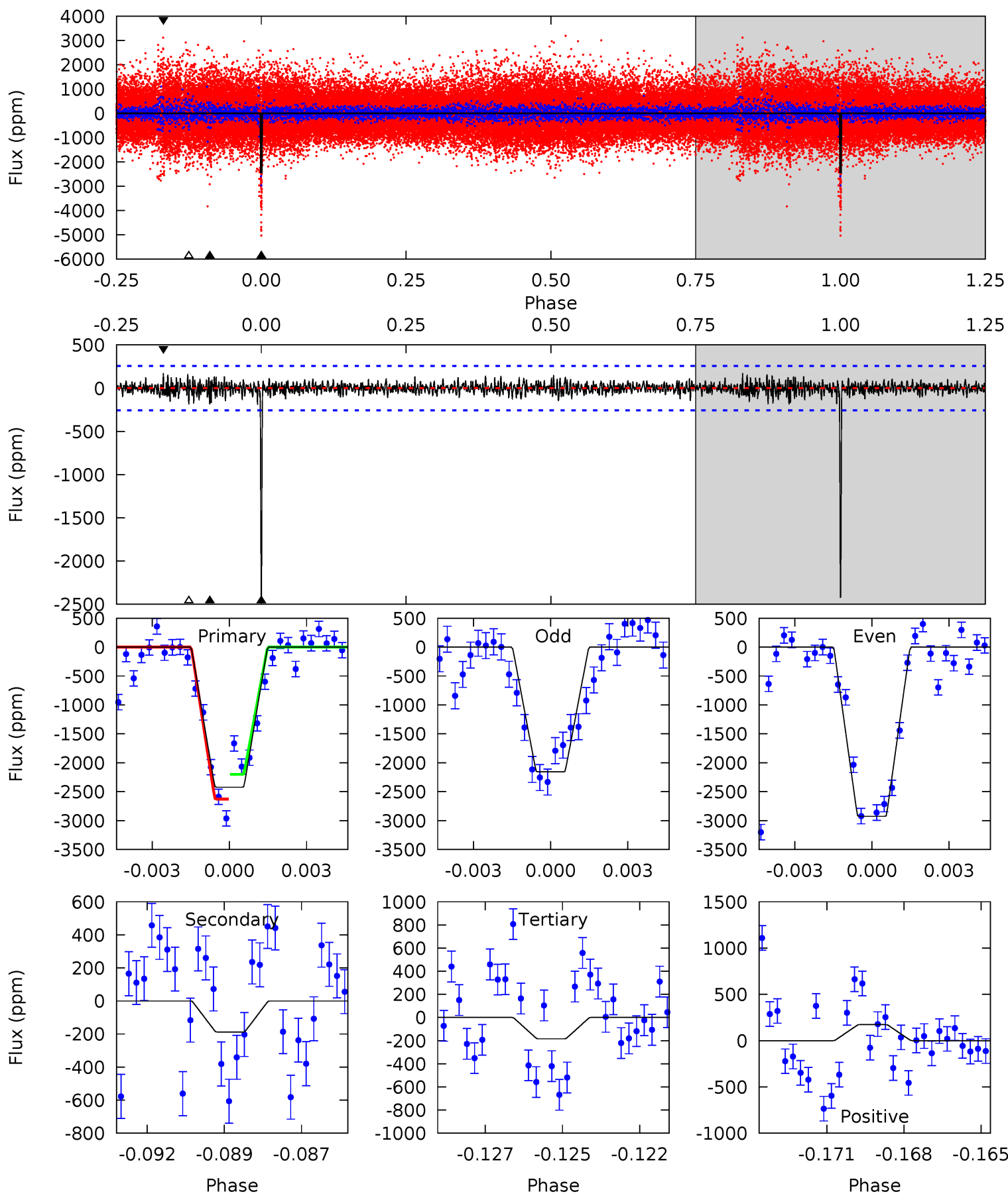
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.7	26.3	25.8	36.2	5.23	2.93	5.37	29.9	19.5	0.46	-9.91	7.63	0.88	0.39	3.97



Alt Model-Shift Uniqueness Test

008309108-01, P = 369.234429 Days, E = 232.754412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.7	3.85	3.78	3.54	5.28	3.02	0.96	45.9	46.2	0.07	0.31	7.97	1.11	0.07	4.39



Stellar Parameters For KIC 008309108

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5428^{+164}_{-164}	$4.563^{+0.029}_{-0.162}$	$0.210^{+0.200}_{-0.300}$	$0.853^{+0.186}_{-0.062}$	$0.971^{+0.065}_{-0.106}$	$2.202^{+0.331}_{-0.948}$
	+3%/-3%	+1%/-4%	+95%/-143%	+22%/-7%	+7%/-11%	+15%/-43%
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 008309108-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1354 ± 51	$13.82^{+12.32}_{-9.16}$	316^{+17}_{-13}	3319^{+1472}_{-546}	3878^{+28936}_{-2801}
Alt.	-188 ± 49	$12.29^{+11.34}_{-8.48}$	316^{+18}_{-13}	2582^{+1114}_{-373}	622^{+6635}_{-456}

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 $A_{obs} \gg 1.0$

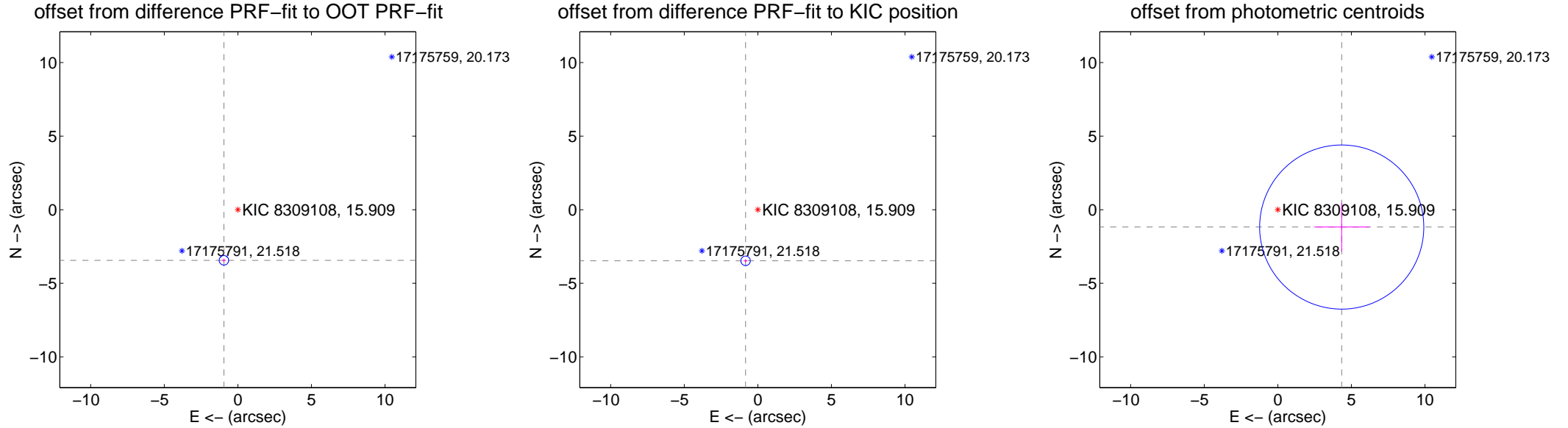
DV Centroid Data

Supplemental centroid analysis for 008309108-01. Kepler magnitude: 15.91. Transit SNR 11.21

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.567 ± 0.107	33.21	0.948 ± 0.117	-3.439 ± 0.107
PRF-fit source offset from KIC position	3.570 ± 0.107	33.30	0.831 ± 0.117	-3.472 ± 0.107
photometric centroid source offset	4.50 ± 1.86	2.42	-4.34 ± 1.87	-1.18 ± 1.66



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.



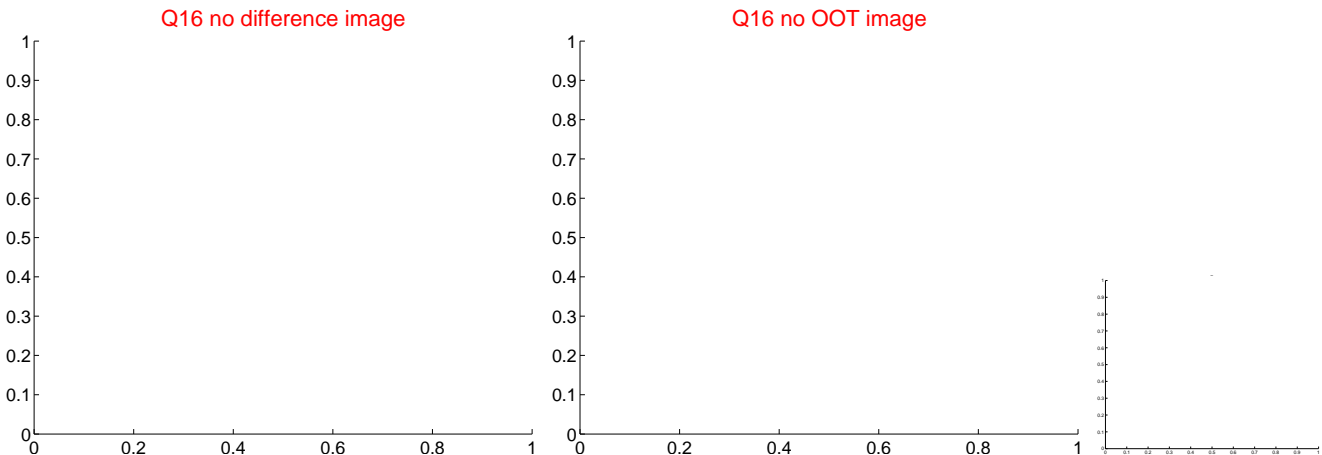
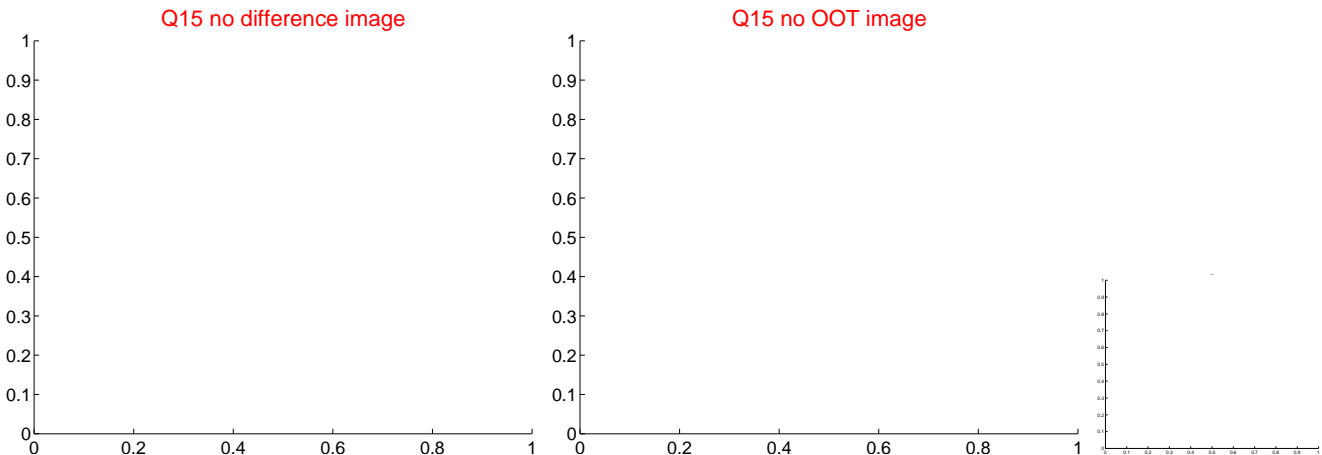
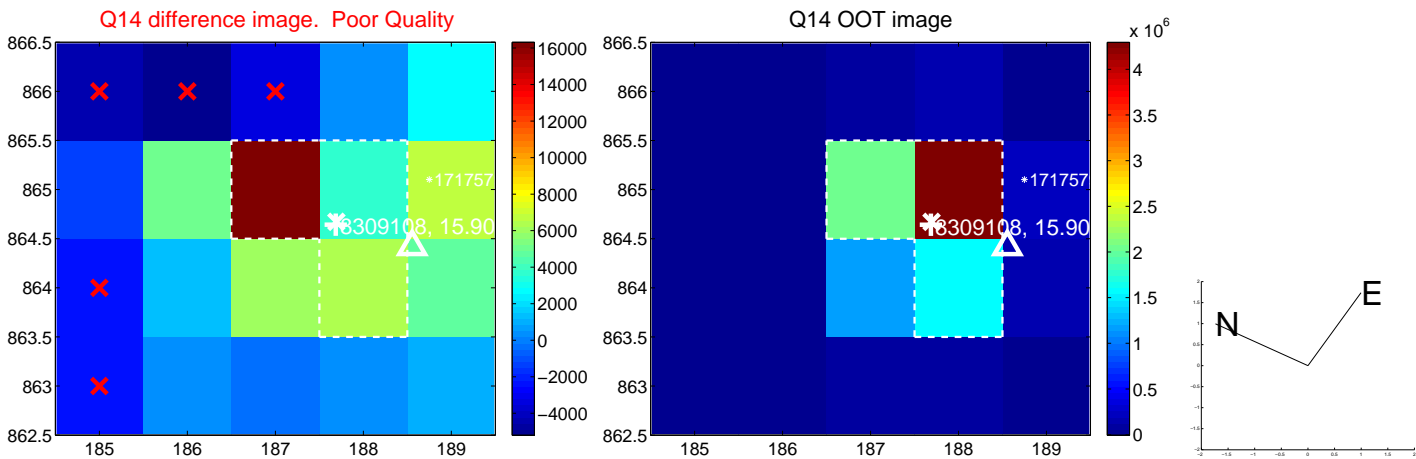
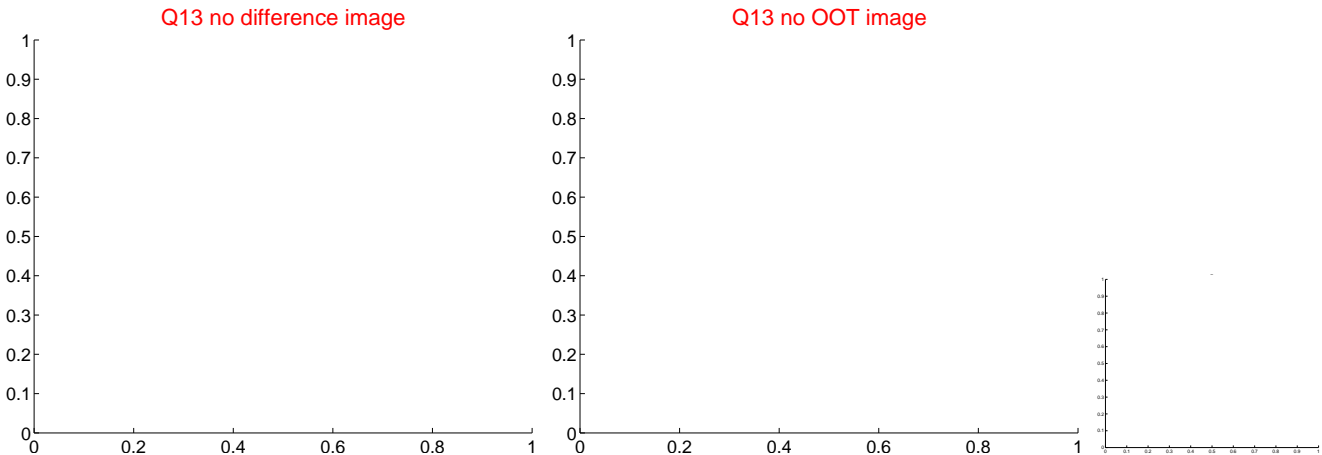
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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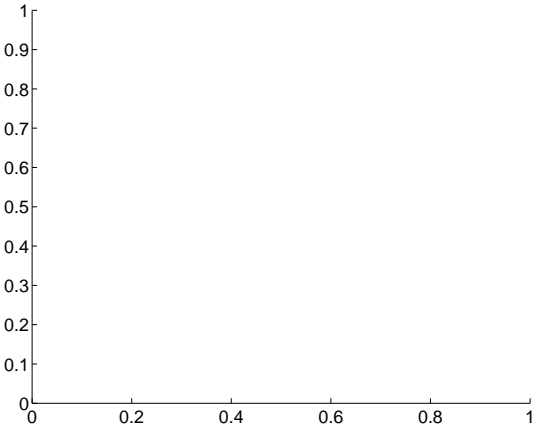


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value

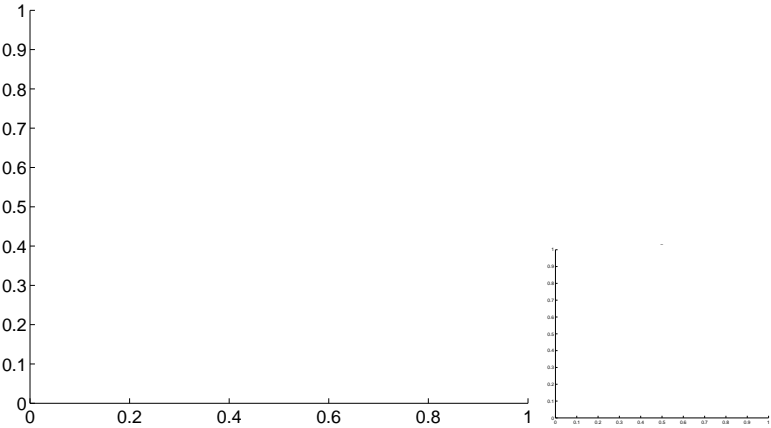


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

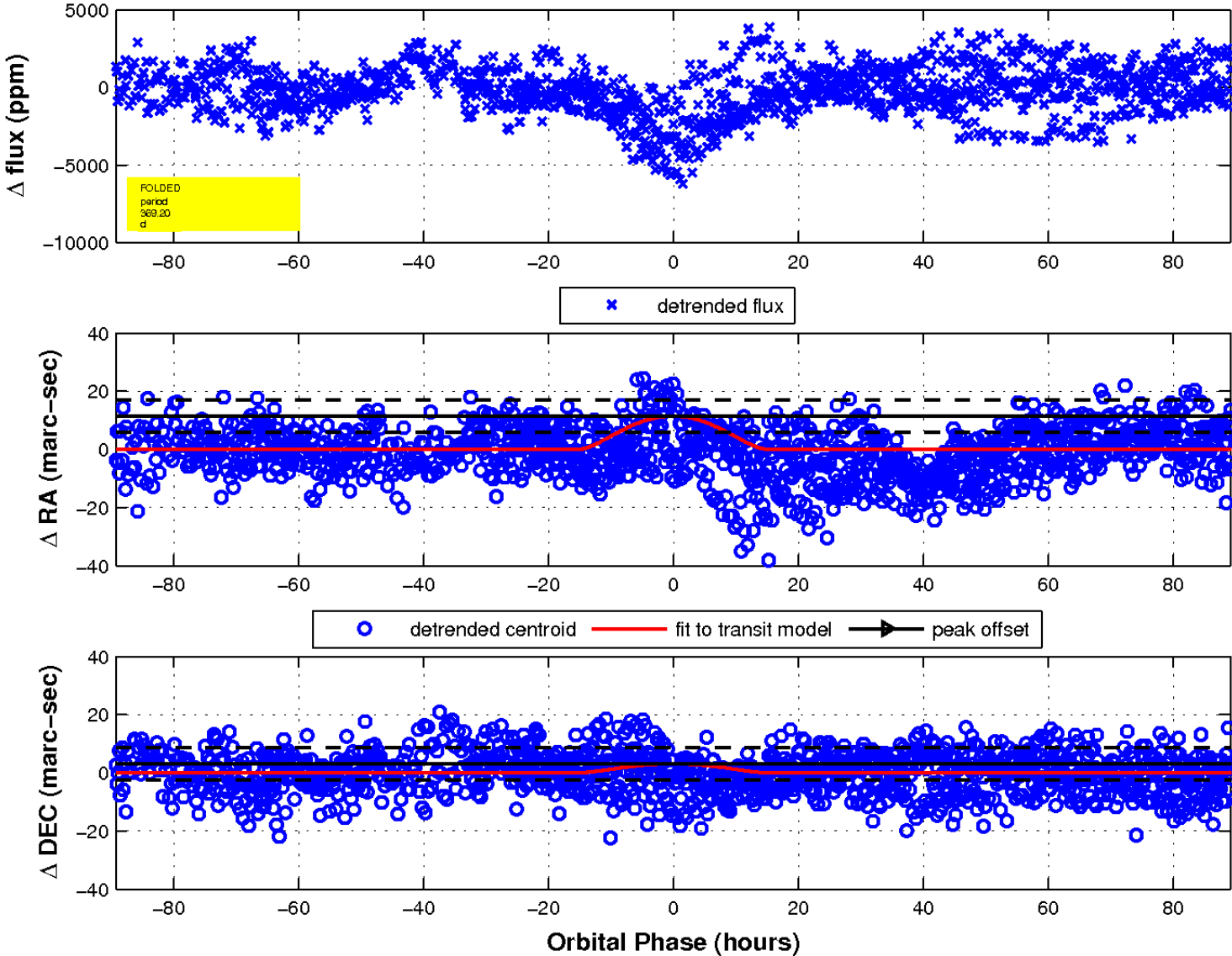
Q17 no difference image



Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

