

KIC 008108014

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})
008108014-01	OBS	No	369.251635	232.943441	734.3	19.004	10.7	9.8	1.01	5889	3.41	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008108014-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—EPHEM_MATCH

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.

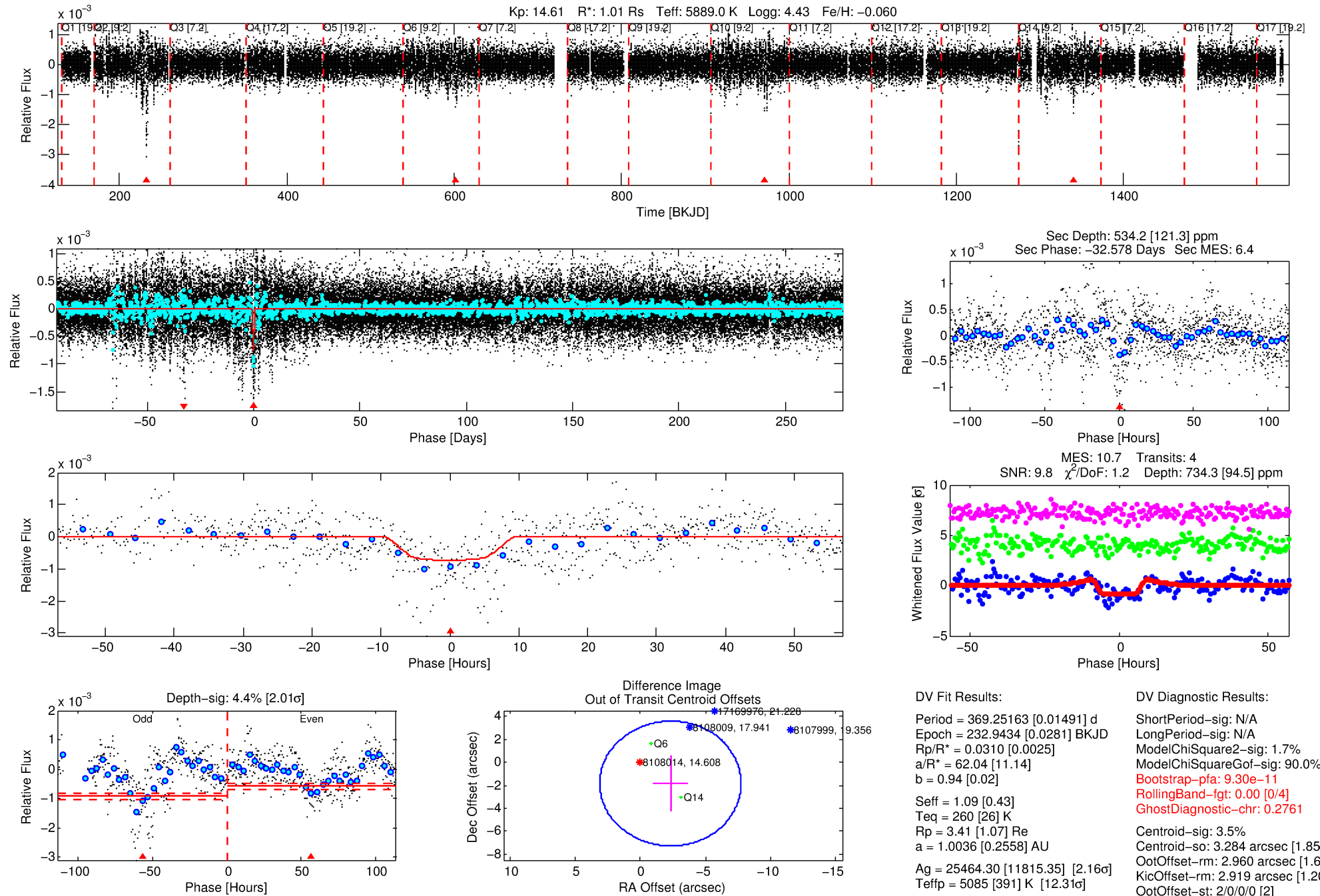
Ephemeris Match Information For 008108014-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008108014-01	8108014	008038392-01	8038392	1:1	928.8	233	4	15.35	14.61	1.31	Col-Anomaly	1	4.98	3.06

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8108014 Candidate: 1 of 1 Period: 369.252 d



DV Fit Results:

Period = 369.25163 [0.01491] d
Epoch = 232.9434 [0.0281] BKJD
Rp/R* = 0.0310 [0.0025]
a/R* = 62.04 [11.14]
b = 0.94 [0.02]
Seff = 1.09 [0.43]
Teq = 260 [26] K
Rp = 3.41 [1.07] Re
a = 1.0036 [0.2558] AU
Ag = 25464.30 [11815.35] [2.16 σ]
Teff = 5085 [391] K [12.31 σ]

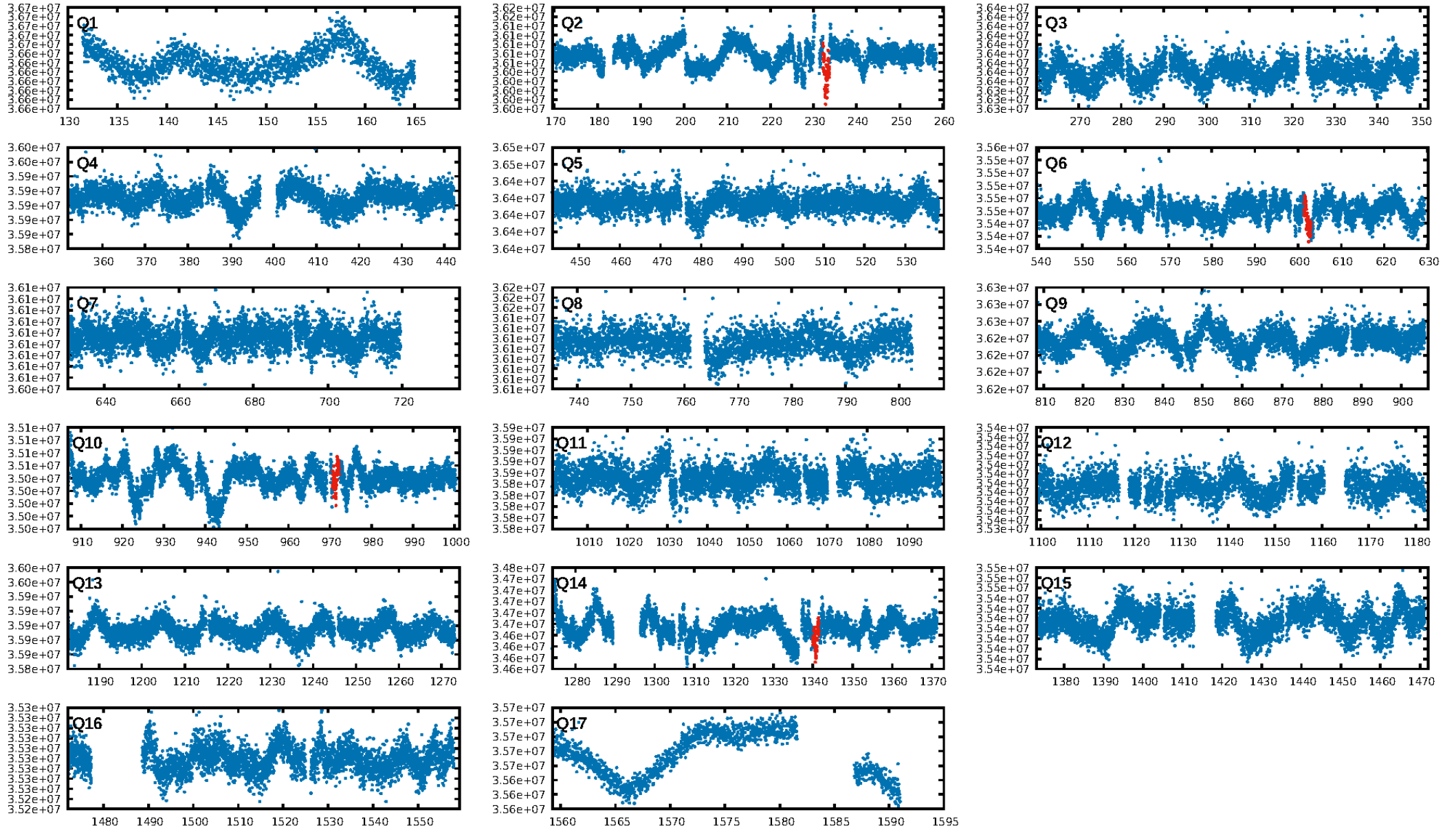
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.7%
ModelChiSquareGof-sig: 90.0%
Bootstrap-pfa: 9.30e-11
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.2761
Centroid-sig: 3.5%
Centroid-so: 3.284 arcsec [1.85 σ]
OotOffset-rm: 2.960 arcsec [1.64 σ]
KicOffset-rm: 2.919 arcsec [1.20 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

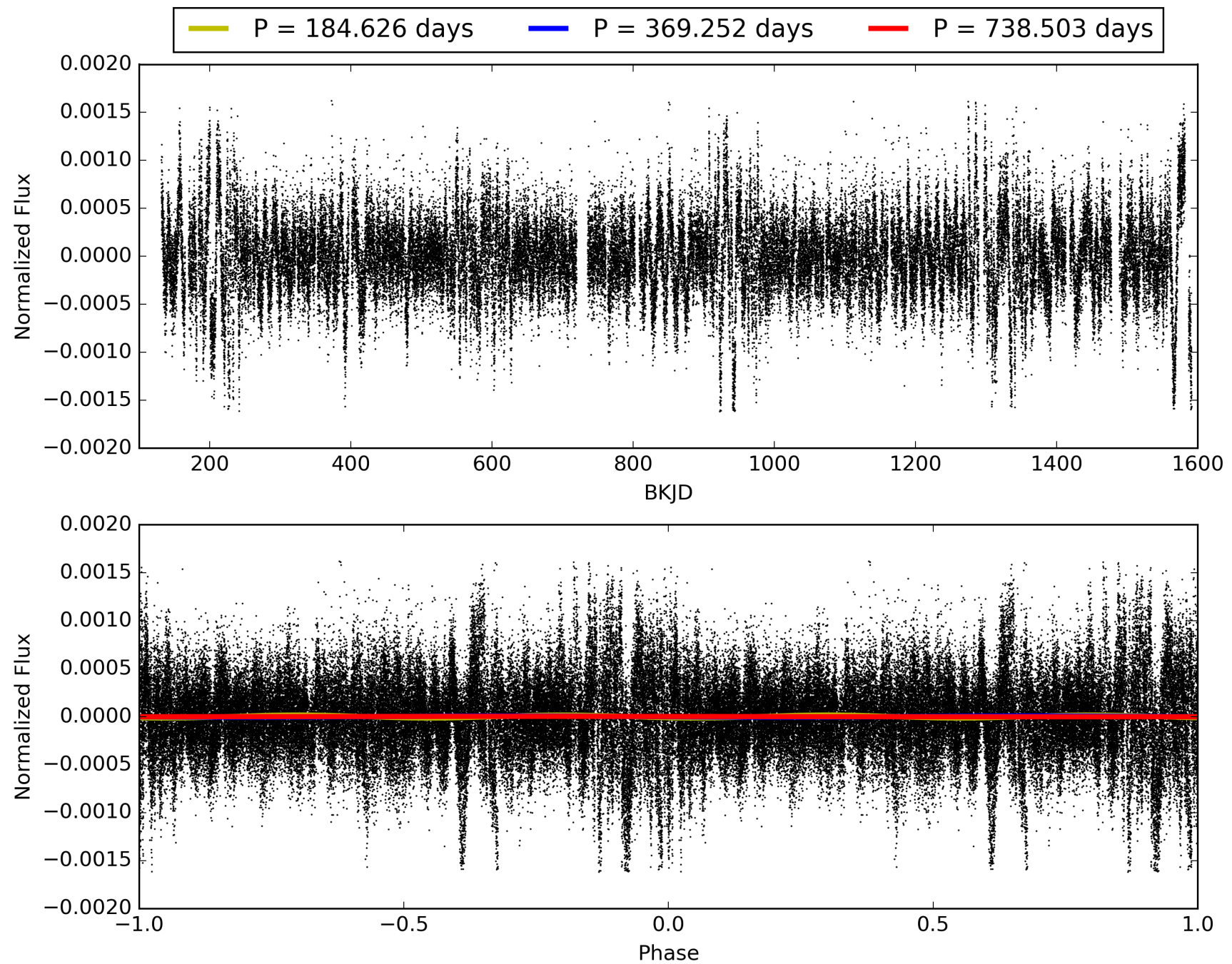
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:39:09 Z

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

TCE 008108014-01, PDC Light Curves

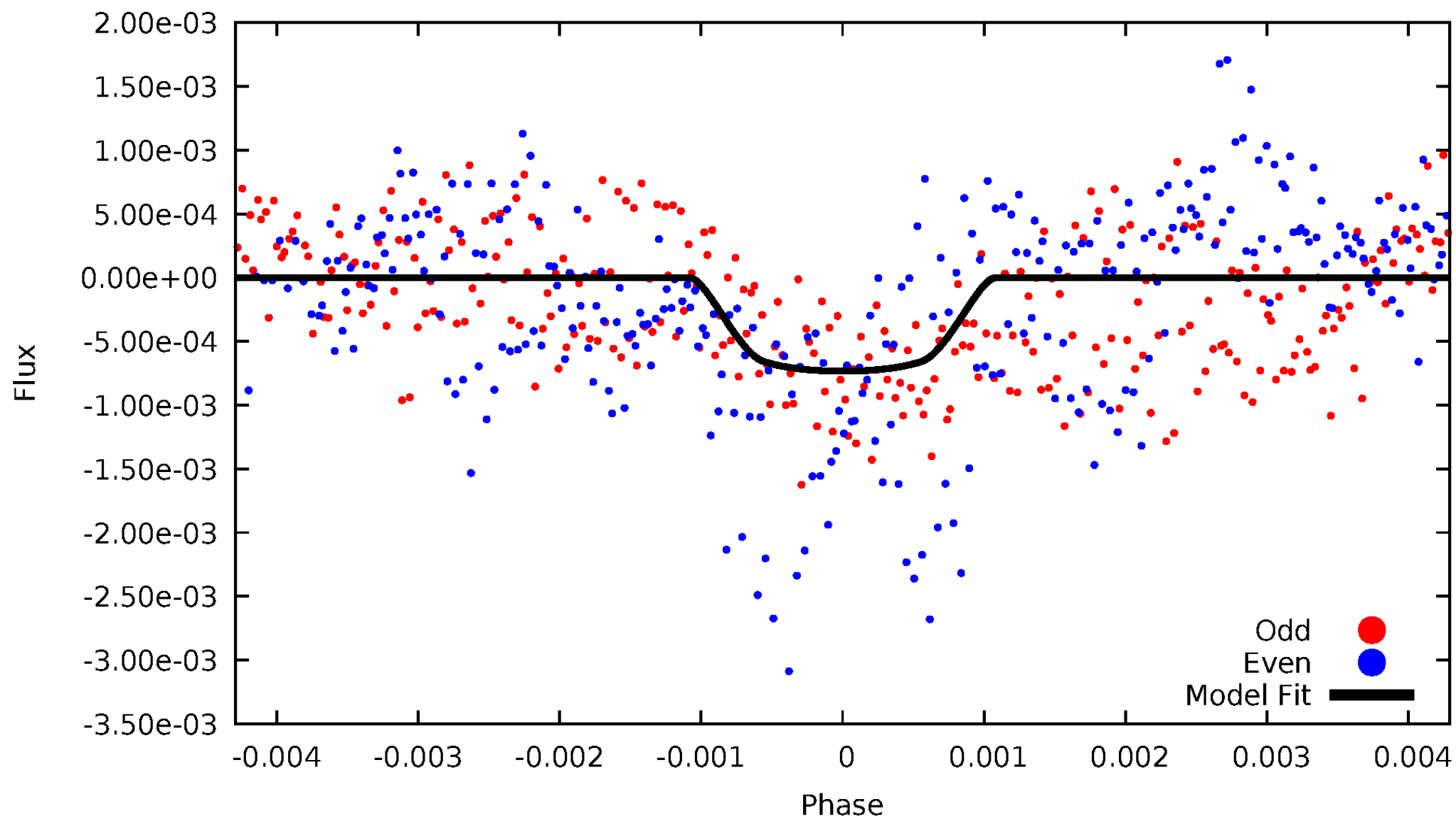


TCE 008108014-01



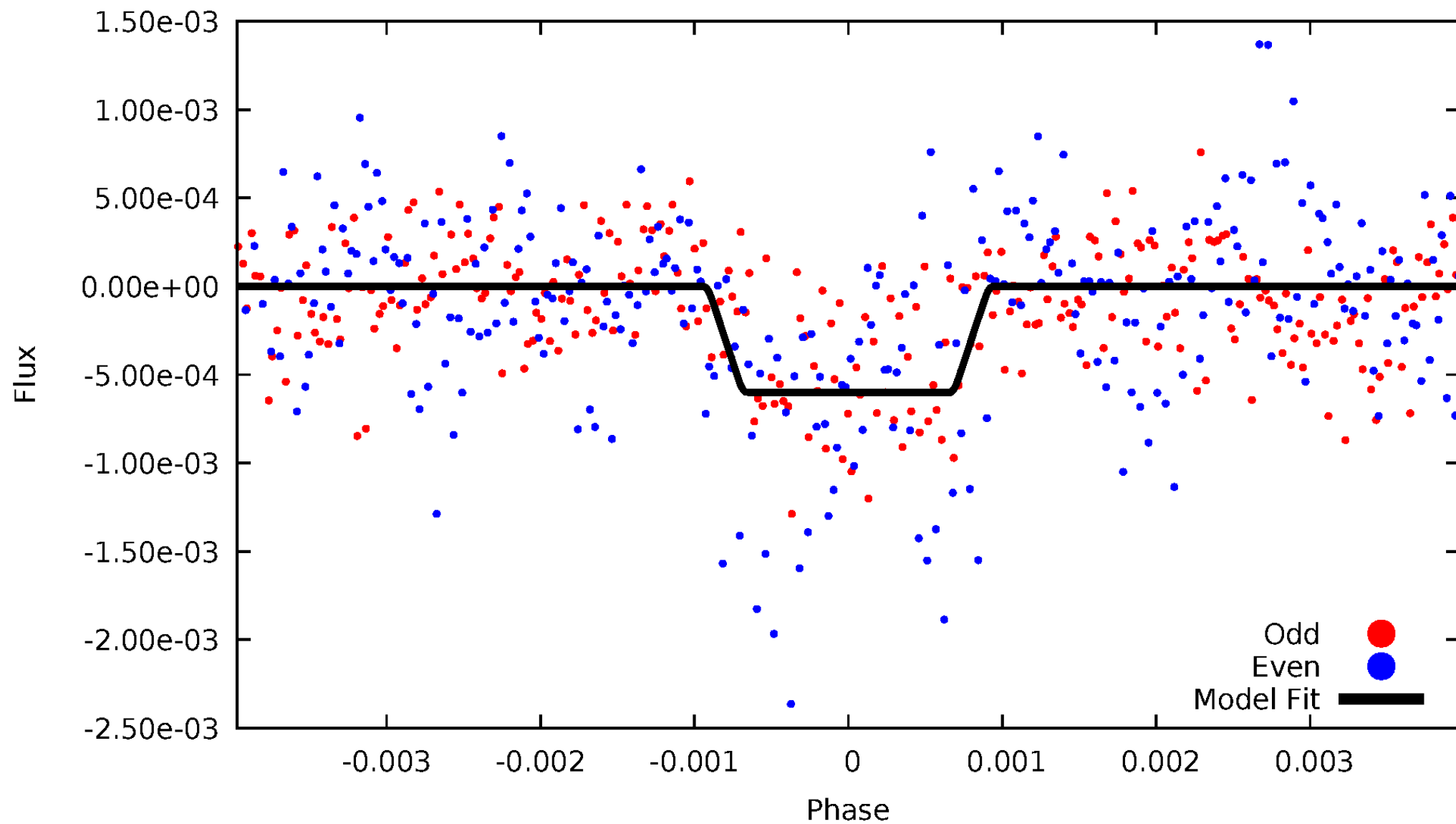
DV Odd/Even

TCE 008108014-01



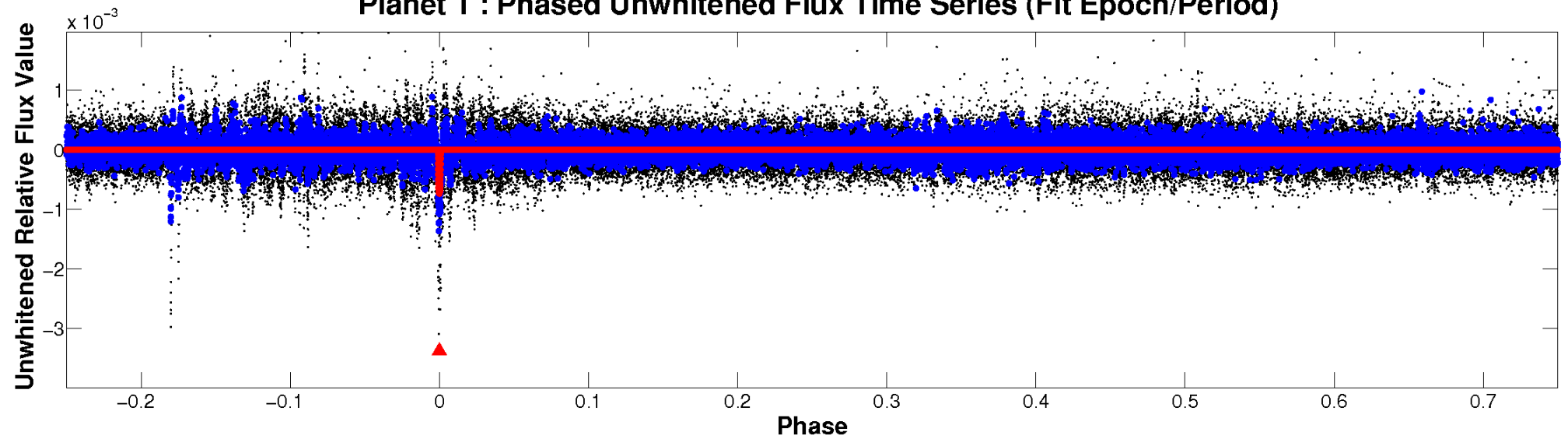
ALT Odd/Even

TCE 008108014-01

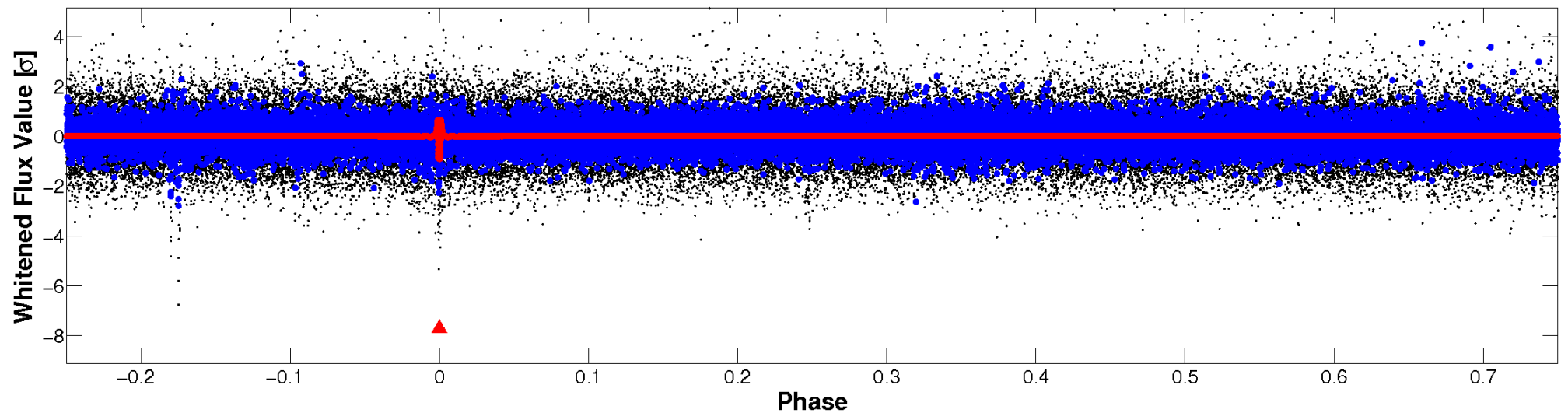


Non-Whitened Vs. Whitened Light Curve

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

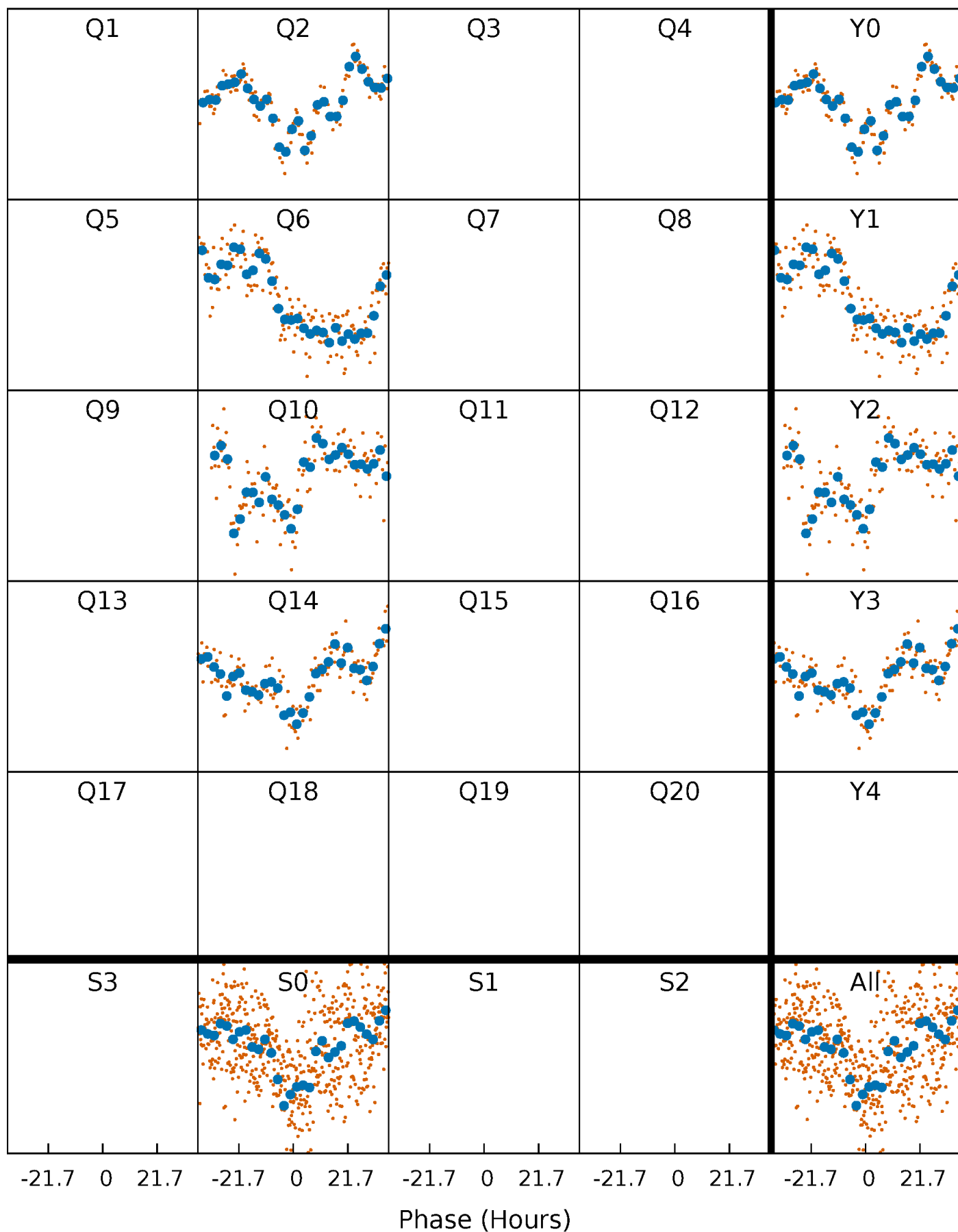


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



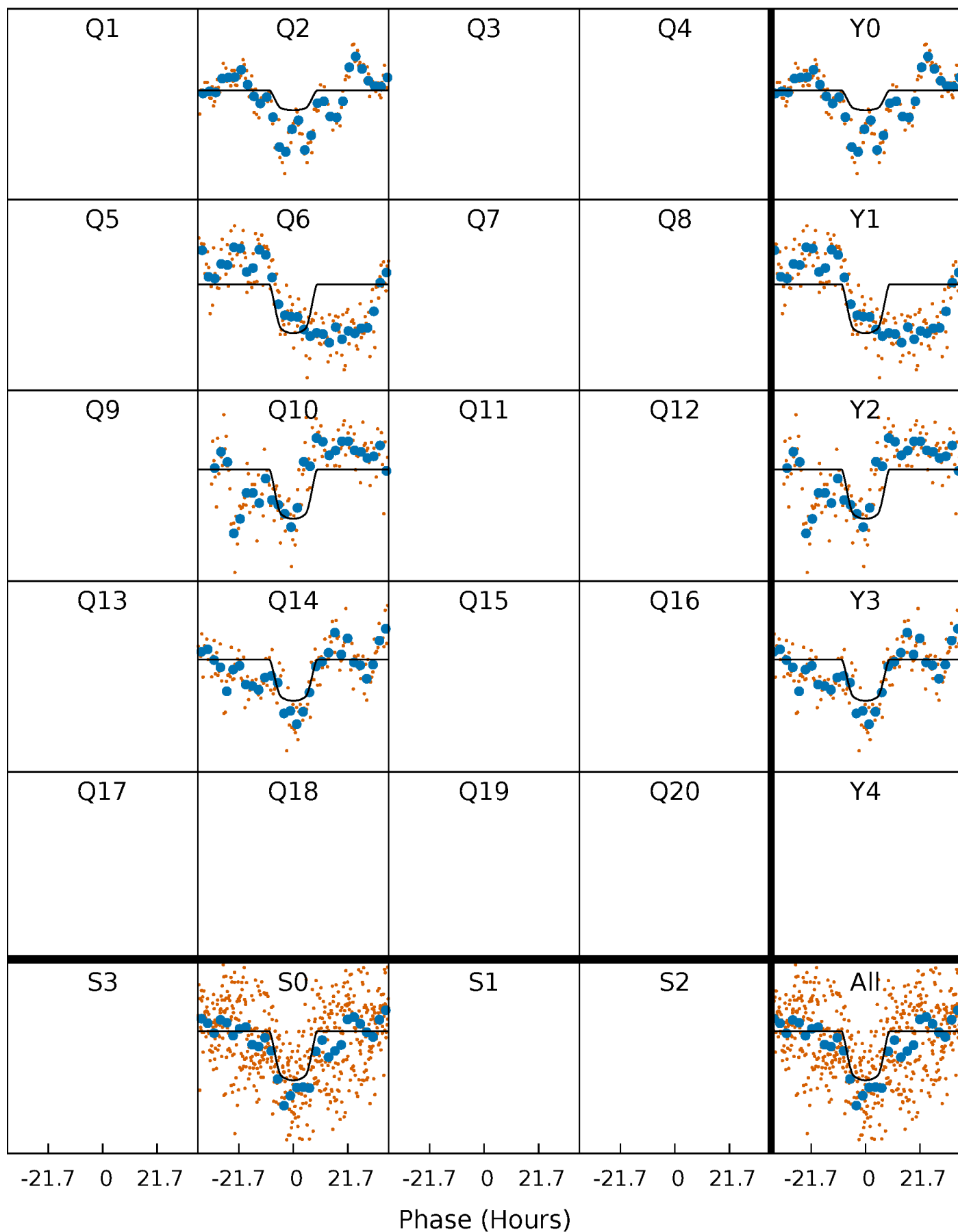
PDC Quarter-Phased Transit Curves

TCE 008108014-01 P=369.251635 Days $T_0=232.943441$ (BKJD)



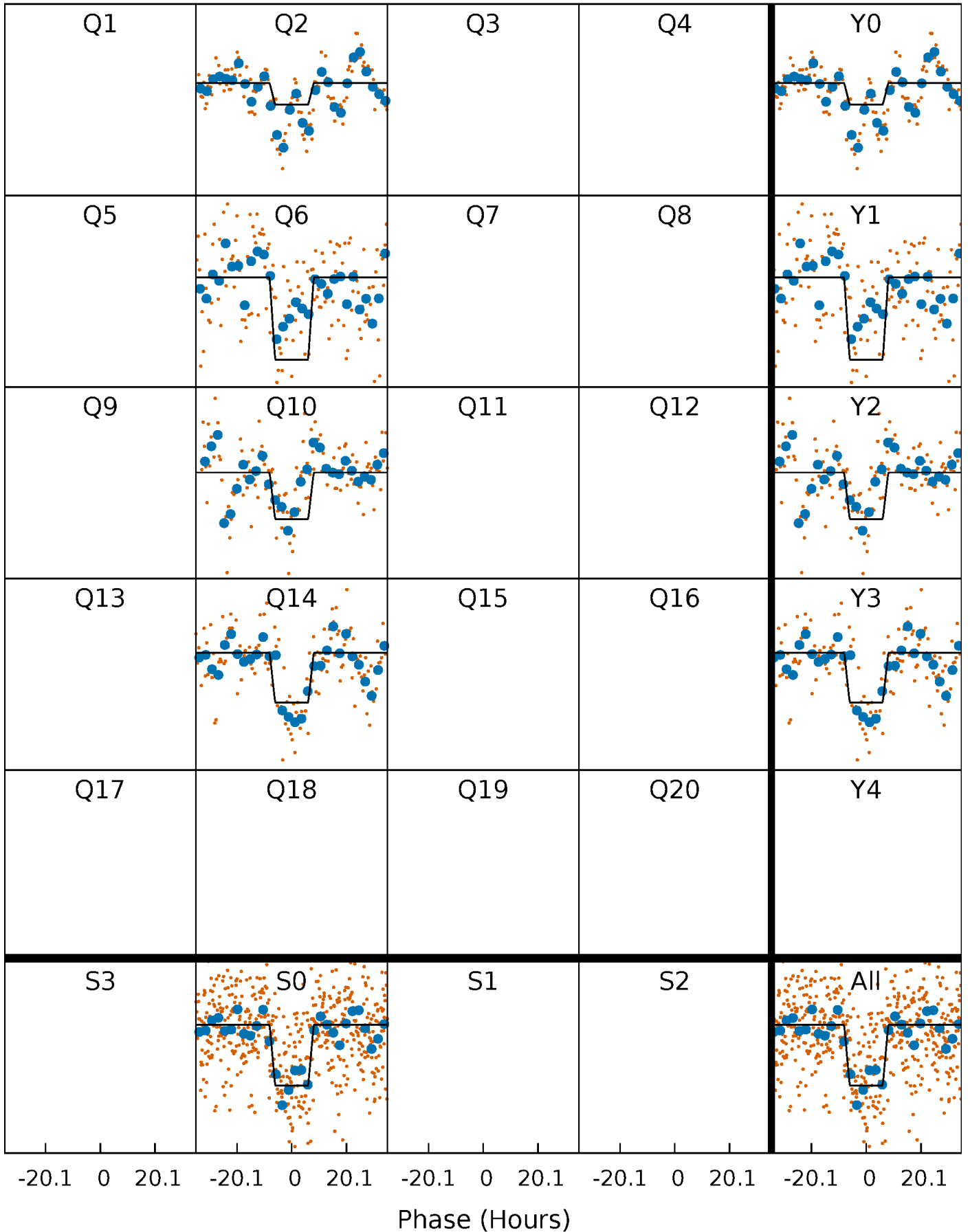
DV Quarter-Phased Transit Curves

TCE 008108014-01 P=369.251635 Days $T_0=232.943441$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

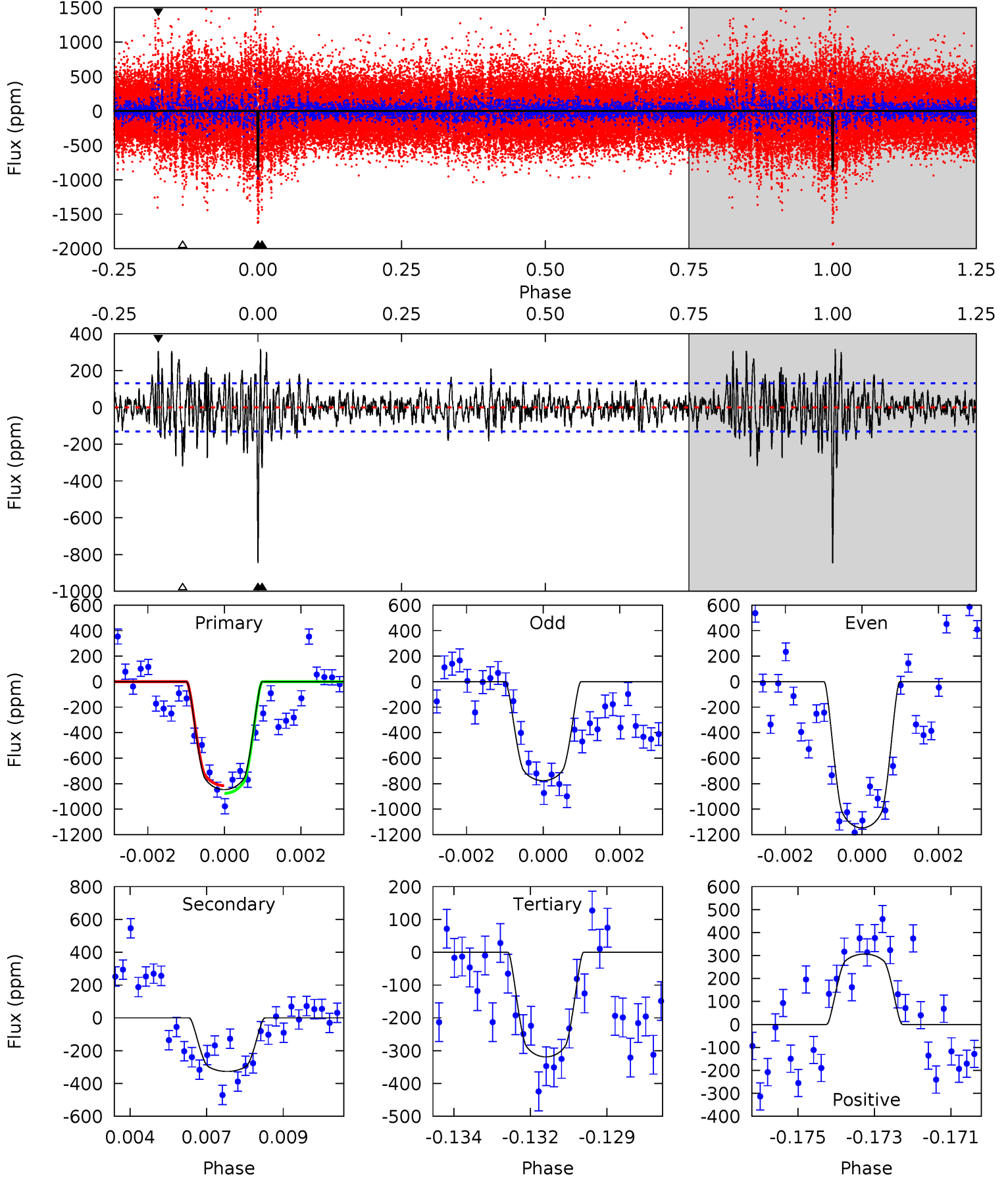
TCE 008108014-01 P=369.261674 Days $T_0=232.941348$ (BKJD)



DV Model-Shift Uniqueness Test

008108014-01, P = 369.251635 Days, E = 232.943441 Days

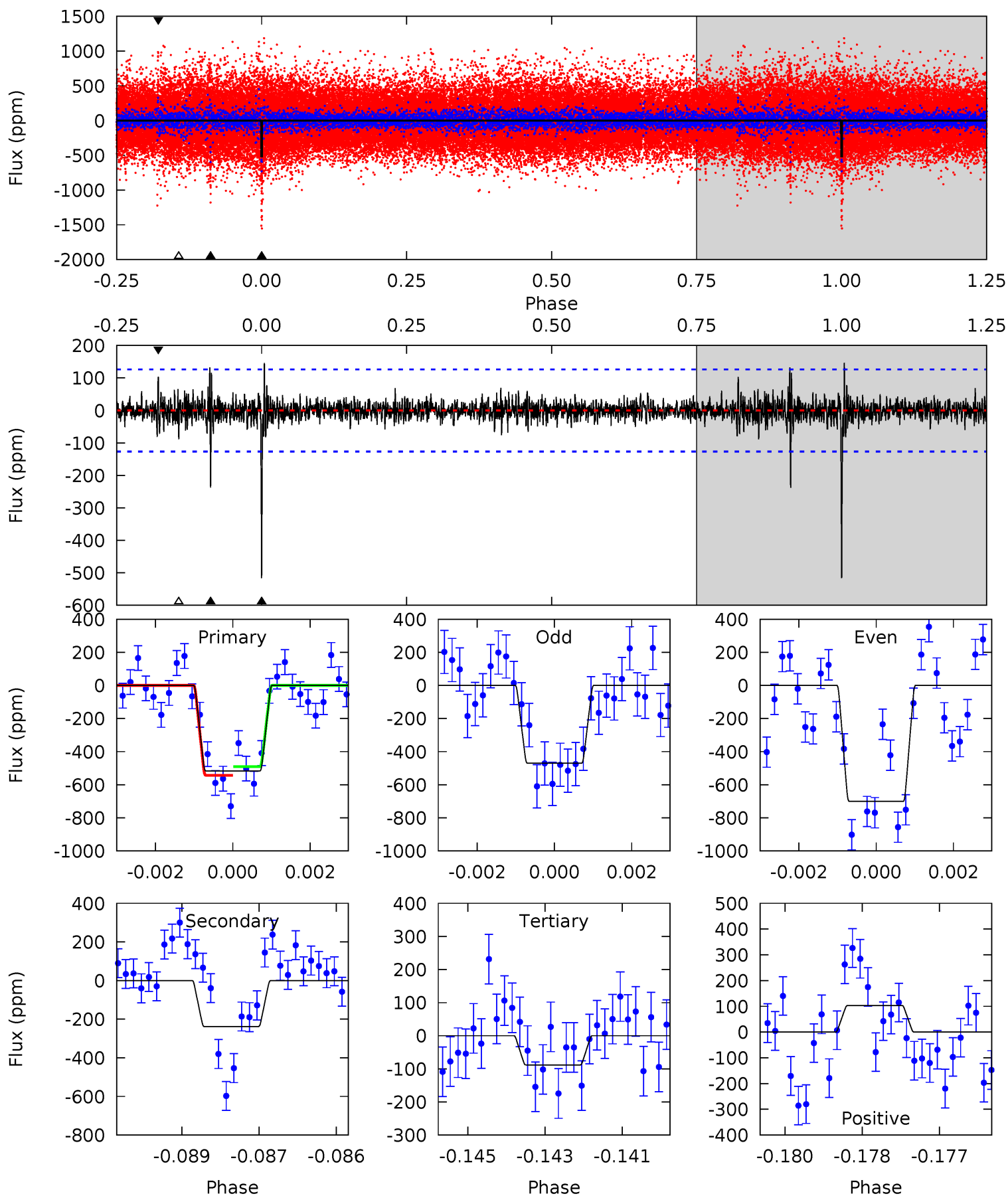
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	13.2	12.9	12.4	5.31	3.06	2.87	21.3	21.9	0.31	0.82	7.74	1.32	0.27	1.22



Alt Model-Shift Uniqueness Test

008108014-01, P = 369.261674 Days, E = 232.941348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	10.0	3.72	4.36	5.34	3.11	0.88	18.1	17.4	6.32	5.69	4.98	1.22	0.22	1.08



Stellar Parameters For KIC 008108014

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5889^{+158}_{-193}	$4.426^{+0.087}_{-0.203}$	$-0.060^{+0.300}_{-0.300}$	$1.008^{+0.305}_{-0.131}$	$0.989^{+0.127}_{-0.115}$	$1.362^{+0.523}_{-0.732}$
	+3%/-3%	+2%/-5%	+500%/-500%	+30%/-13%	+13%/-12%	+38%/-54%
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 008108014-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-327 ± 25	$3.54^{+0.59}_{-0.46}$	368^{+25}_{-21}	4620^{+224}_{-184}	14485^{+4407}_{-3912}
Alt.	-238 ± 24	$2.78^{+0.51}_{-0.40}$	370^{+26}_{-19}	4801^{+271}_{-245}	16859^{+6036}_{-4893}

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 $A_{\text{obs}} \gg 1.0$

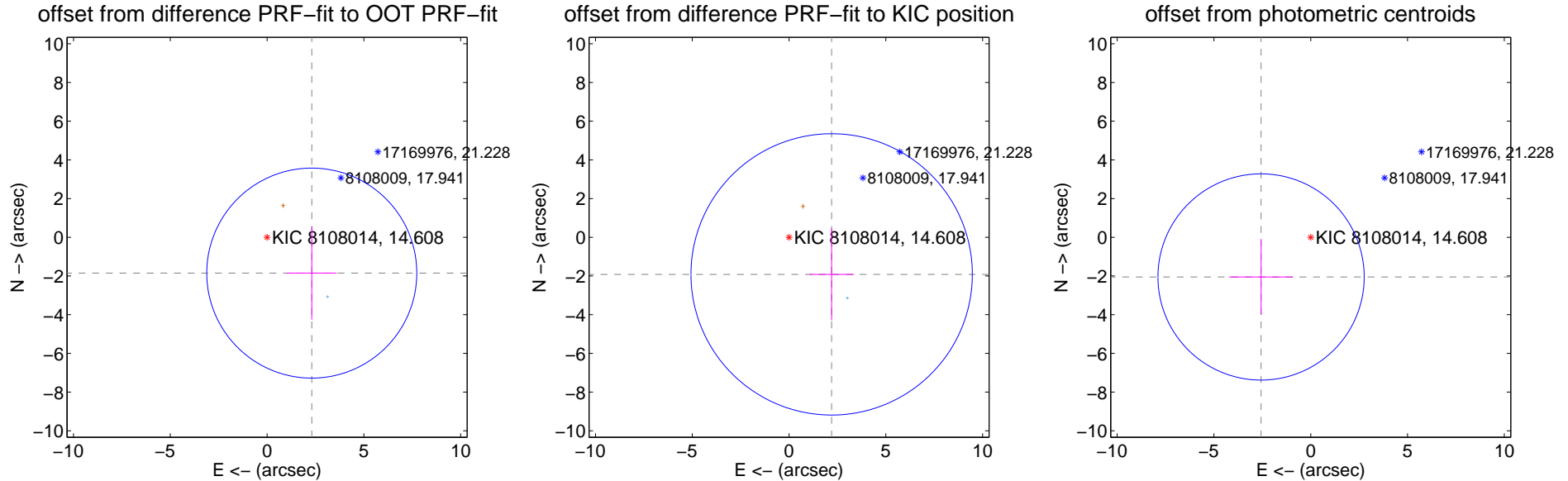
DV Centroid Data

Supplemental centroid analysis for 008108014-01. Kepler magnitude: 14.61. Transit SNR 9.76

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.960 ± 1.808	1.64	-2.310 ± 1.282	-1.852 ± 2.409
PRF-fit source offset from KIC position	2.919 ± 2.423	1.20	-2.201 ± 1.148	-1.918 ± 2.372
photometric centroid source offset	3.28 ± 1.78	1.85	2.57 ± 1.65	-2.05 ± 1.96

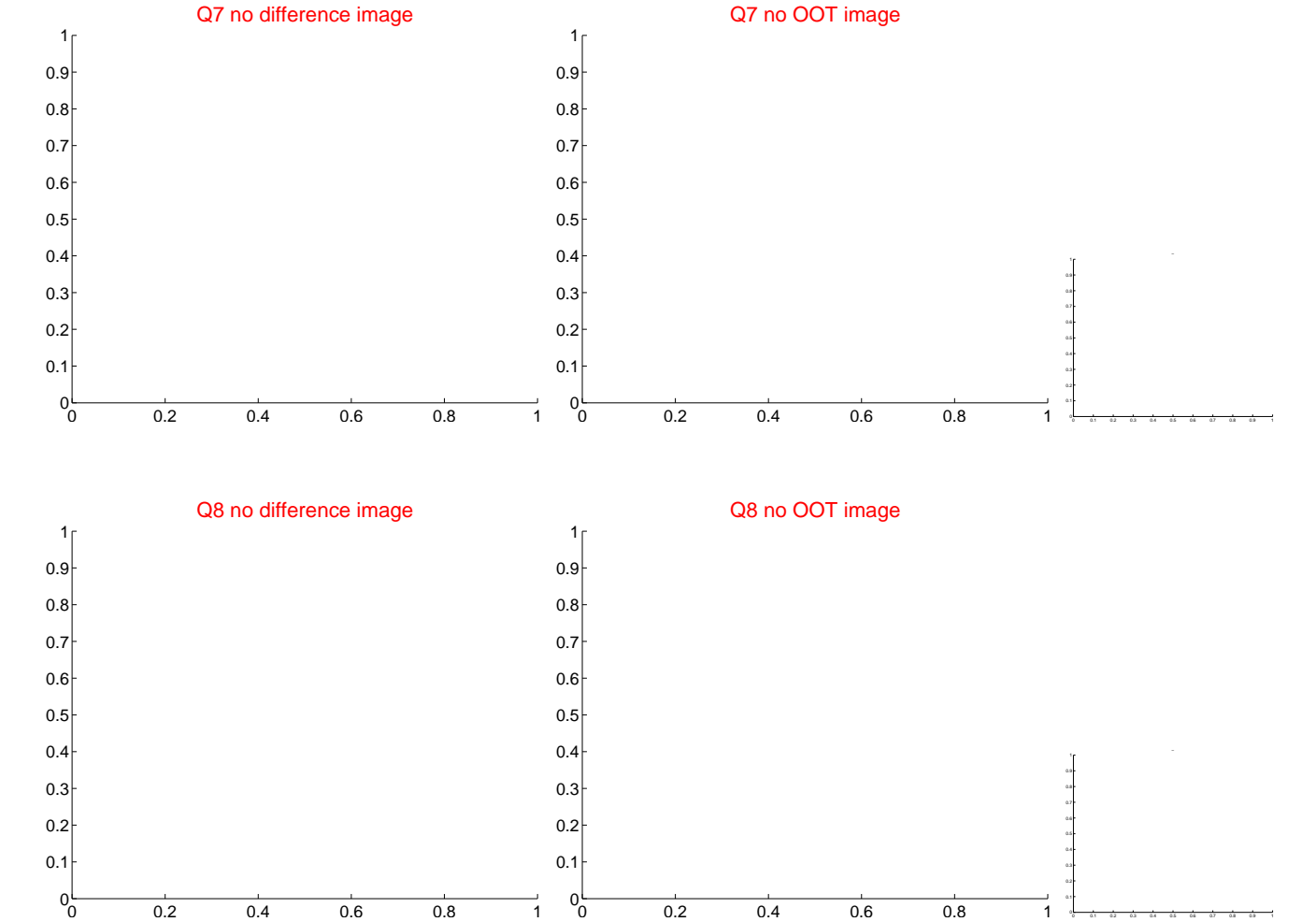
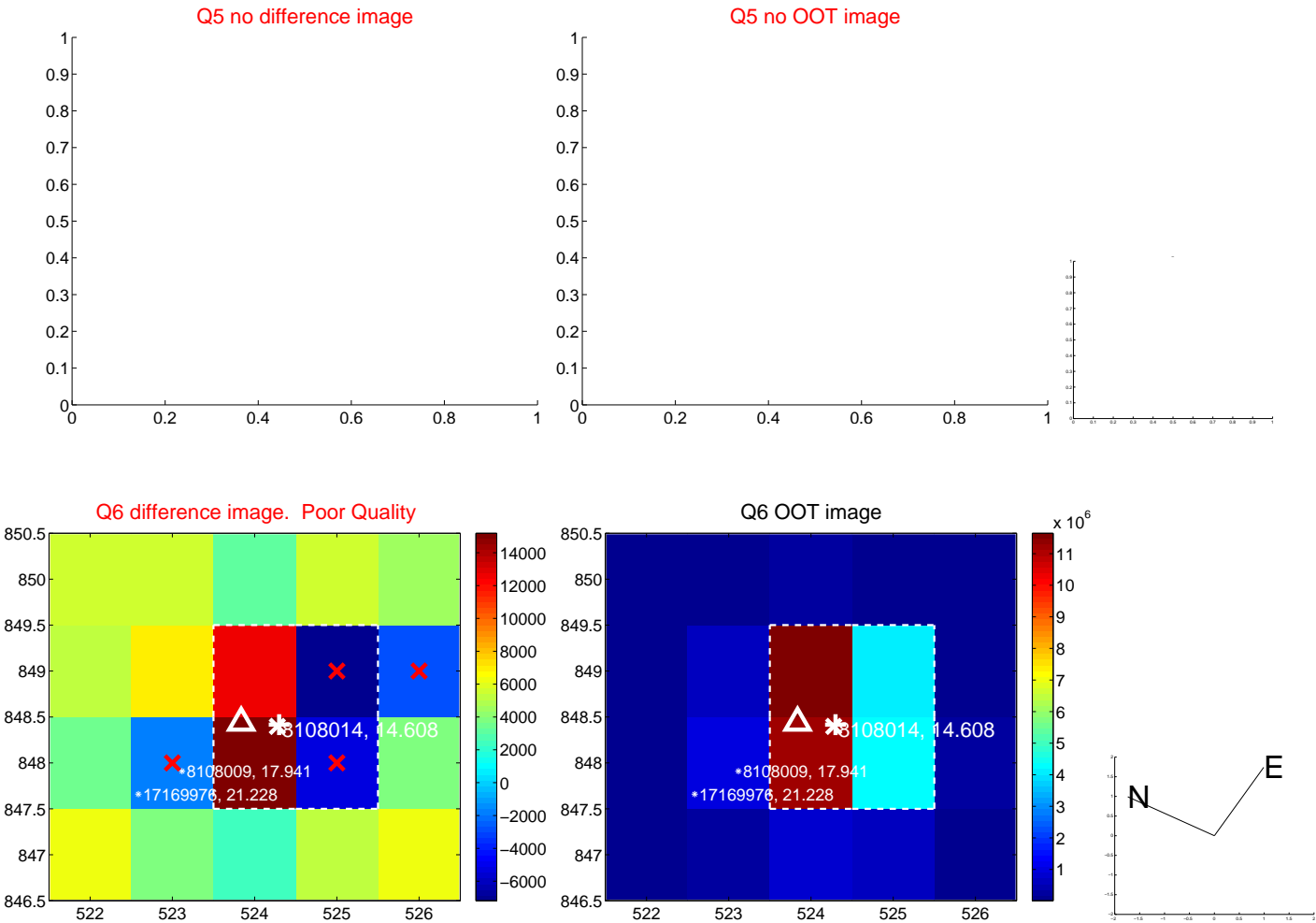


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



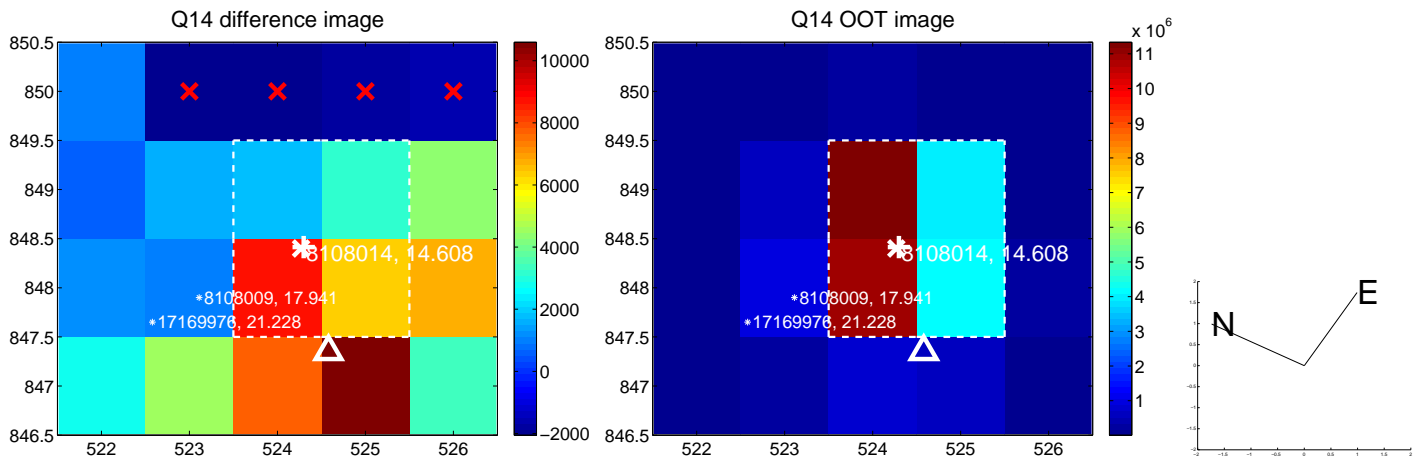
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



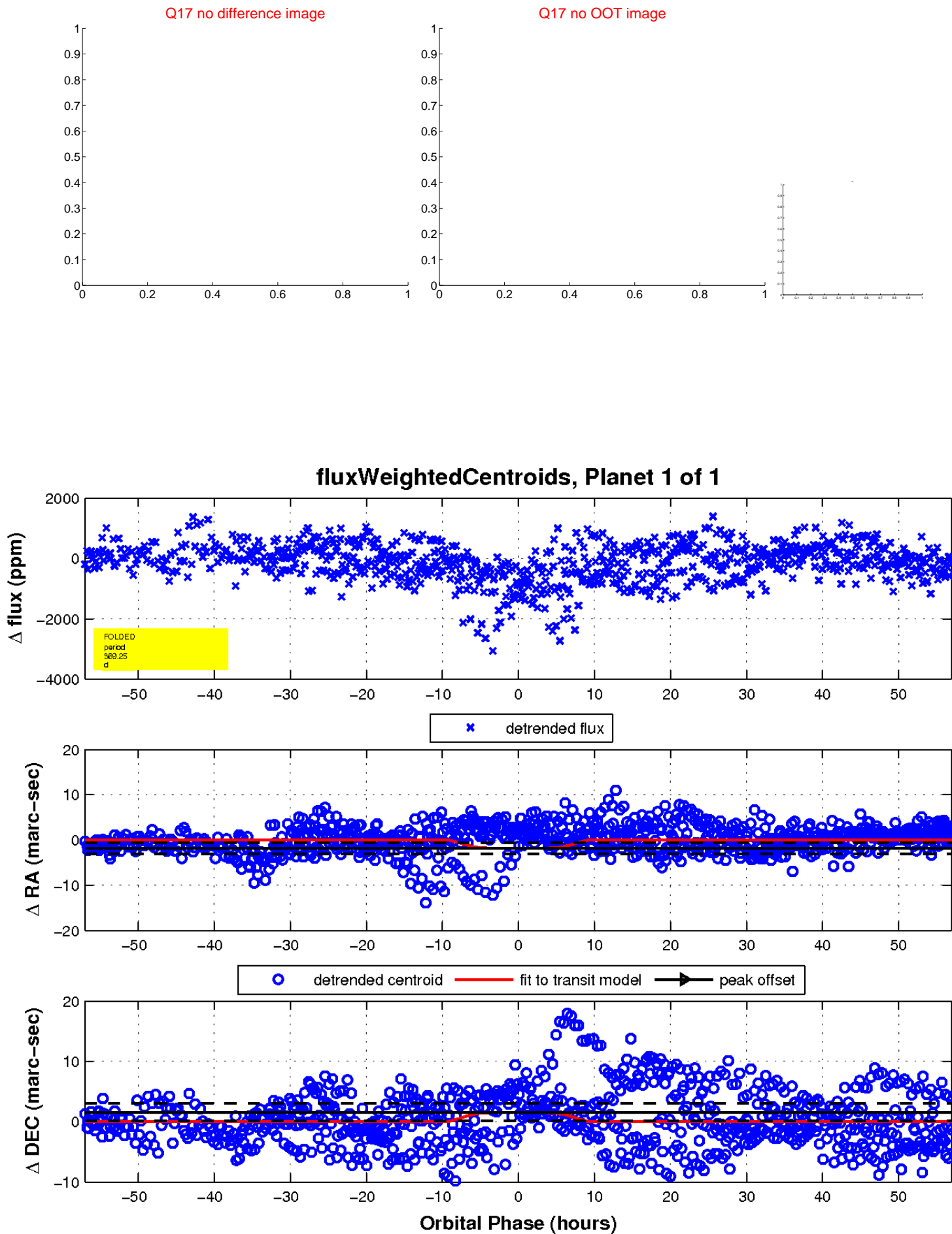
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

