

KIC 008023034

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})
008023034-01	OBS	No	374.476778	263.616336	411.1	40.424	9.9	12.0	1.11	6112	2.31	1.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008023034-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

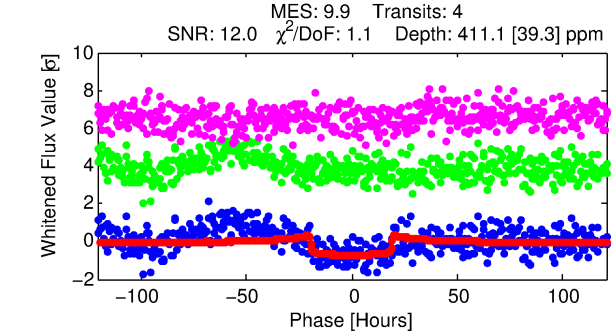
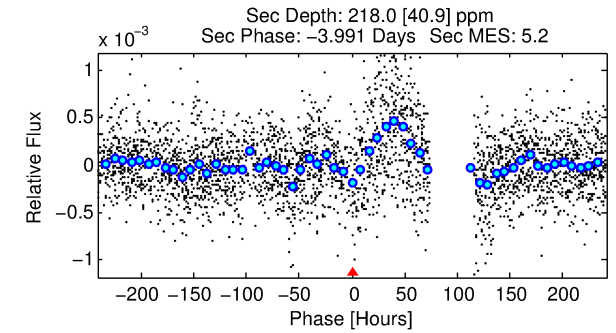
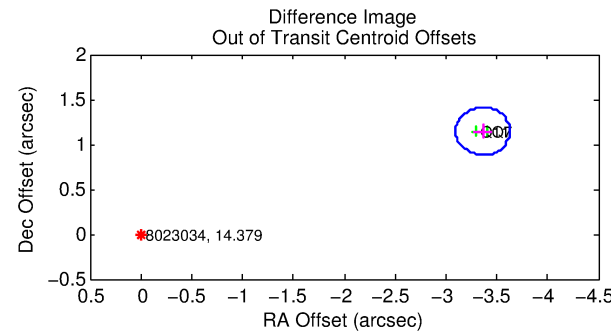
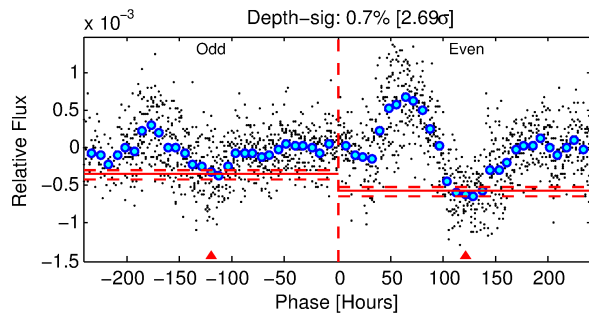
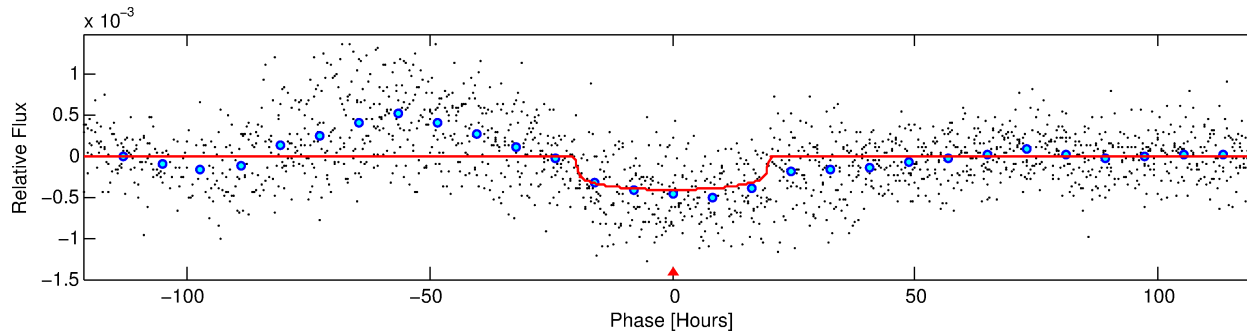
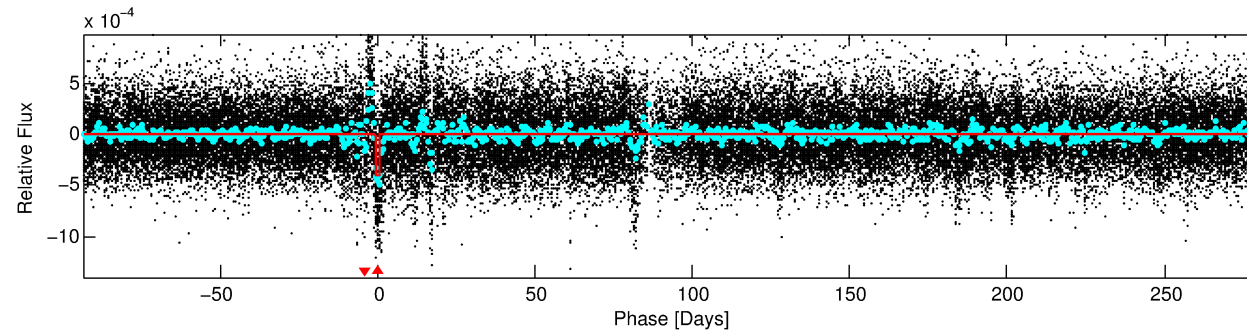
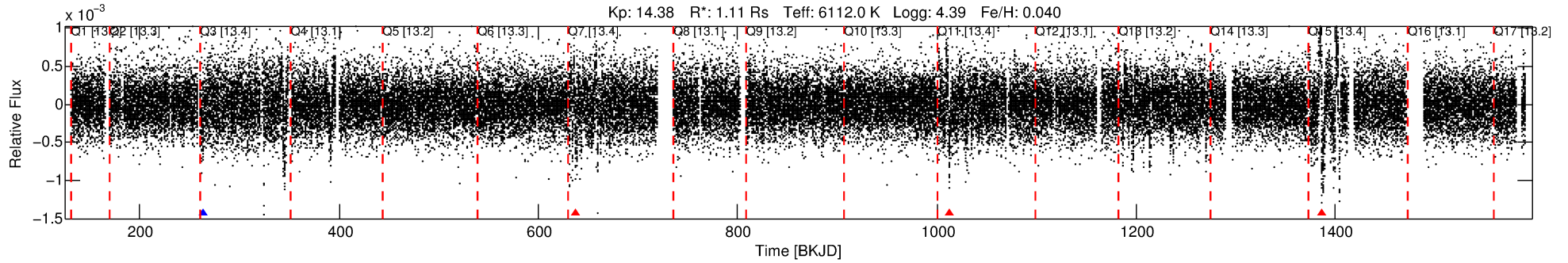
Ephemeris Match Information For 008023034-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (μ)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008023034-01	8023034	007953935-02	7953935	1:1	517.5	130	0	15.40	14.38	2.28	Col-Anomaly	1	0.30	0.46

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: 8023034 Candidate: 1 of 1 Period: 374.477 d



DV Fit Results:

Period = 374.47678 [0.01351] d
Epoch = 263.6163 [0.0266] BKJD
Rp/R* = 0.0190 [0.0036]
a/R* = 63.31 [55.07]
b = 0.49 [1.36]
Seff = 1.40 [0.57]
Teq = 277 [28] K
Rp = 2.31 [0.88] Re
a = 1.0484 [0.2825] AU
Ag = 24781.29 [14079.38] [1.76σ]
Teffp = 5382 [599] K [8.51σ]

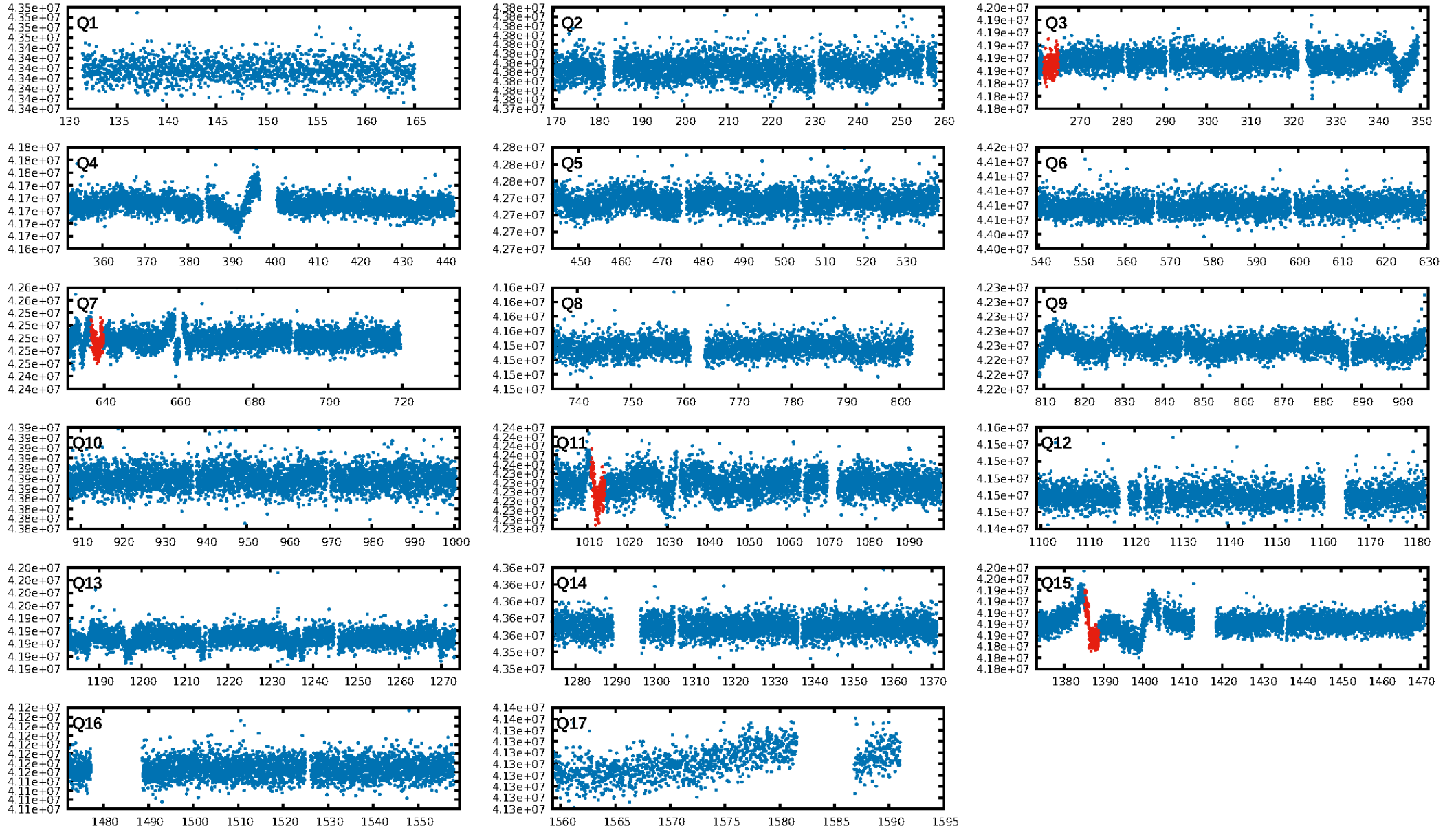
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.41e-12
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 6.453
Centroid-sig: 0.0%
Centroid-so: 4.274 arcsec [2.56σ]
OotOffset-rm: 3.551 arcsec [40.14σ]
KicOffset-rm: 3.604 arcsec [40.80σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

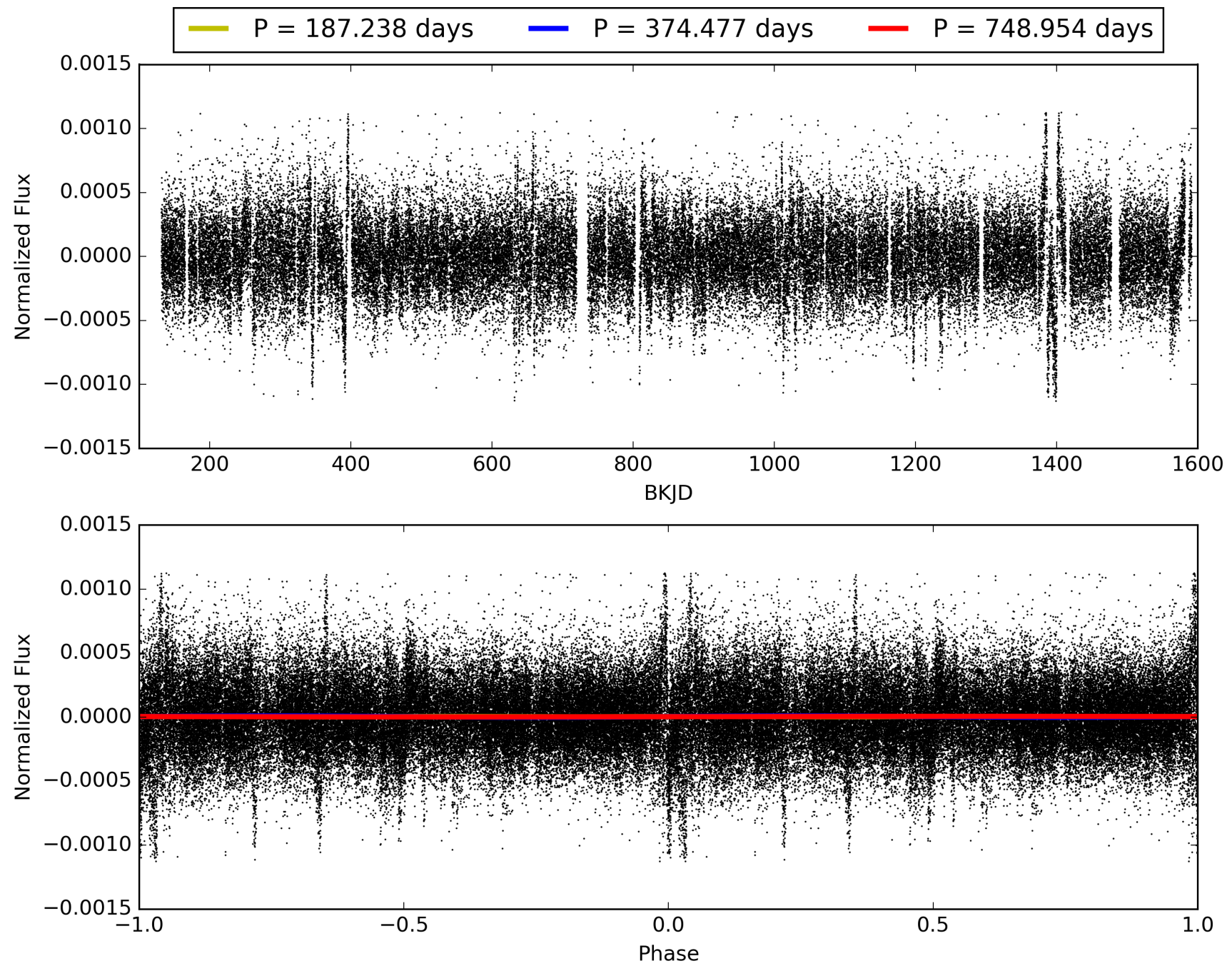
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:45:52 Z

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

TCE 008023034-01, PDC Light Curves

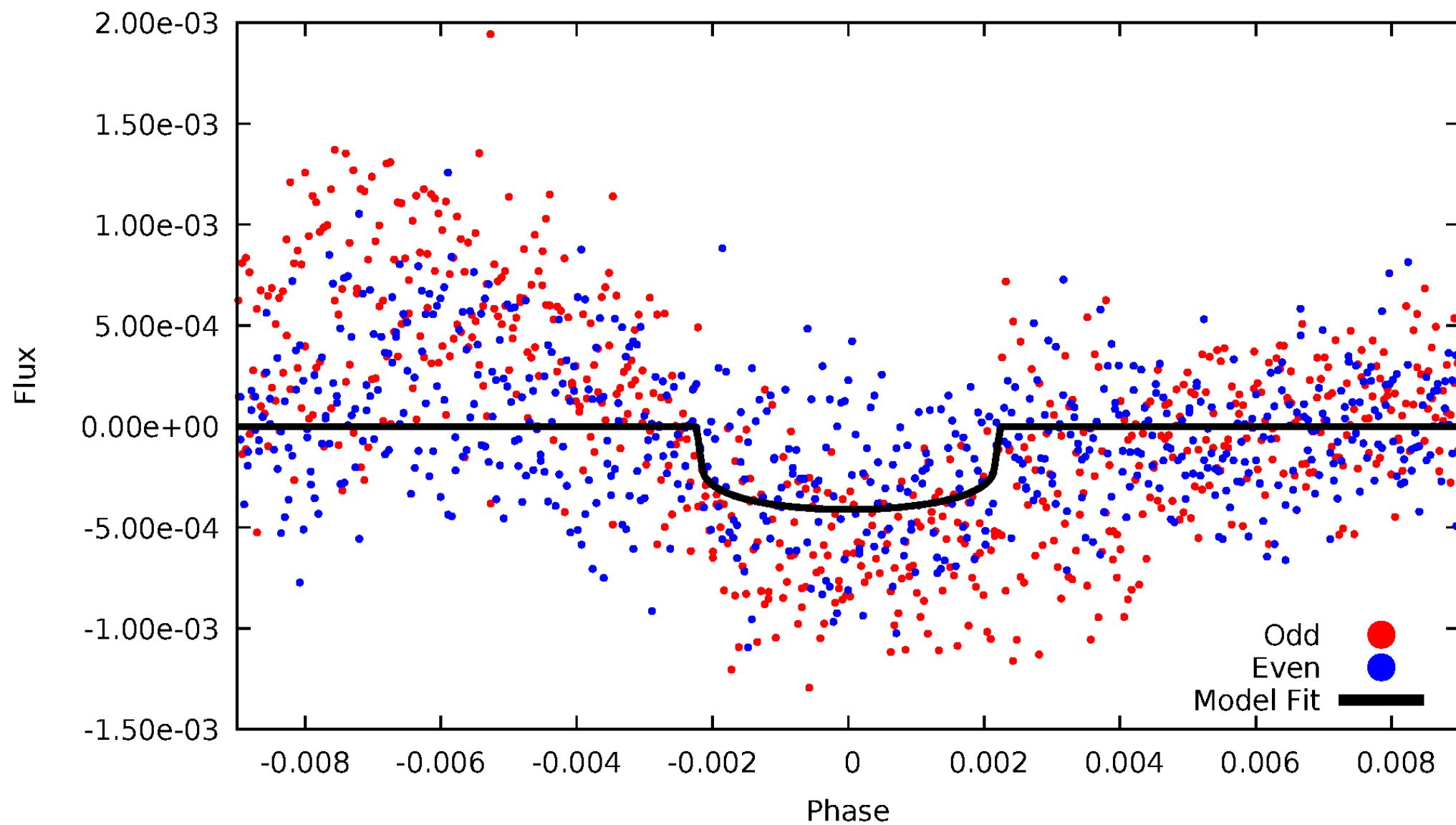


TCE 008023034-01



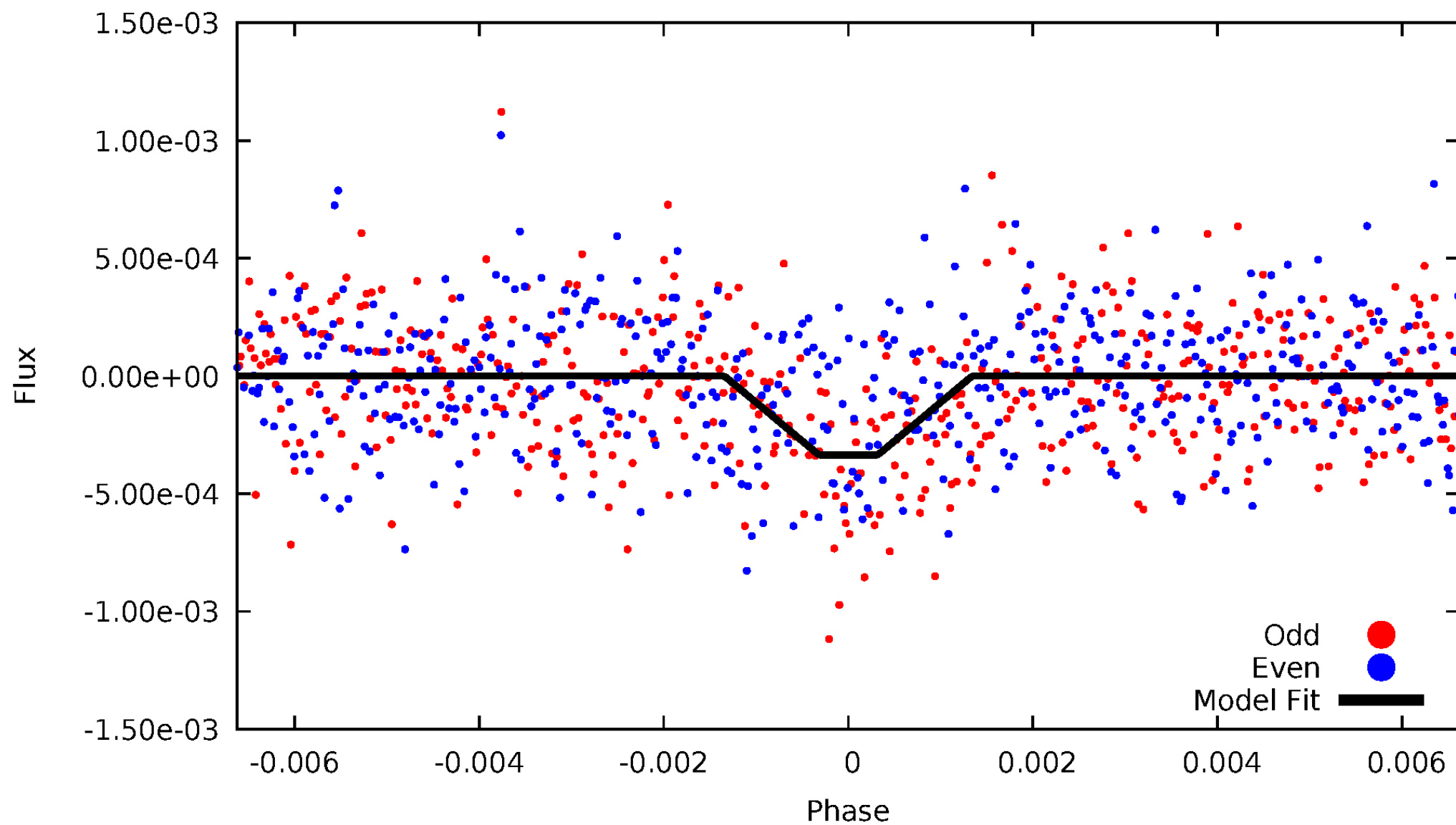
DV Odd/Even

TCE 008023034-01



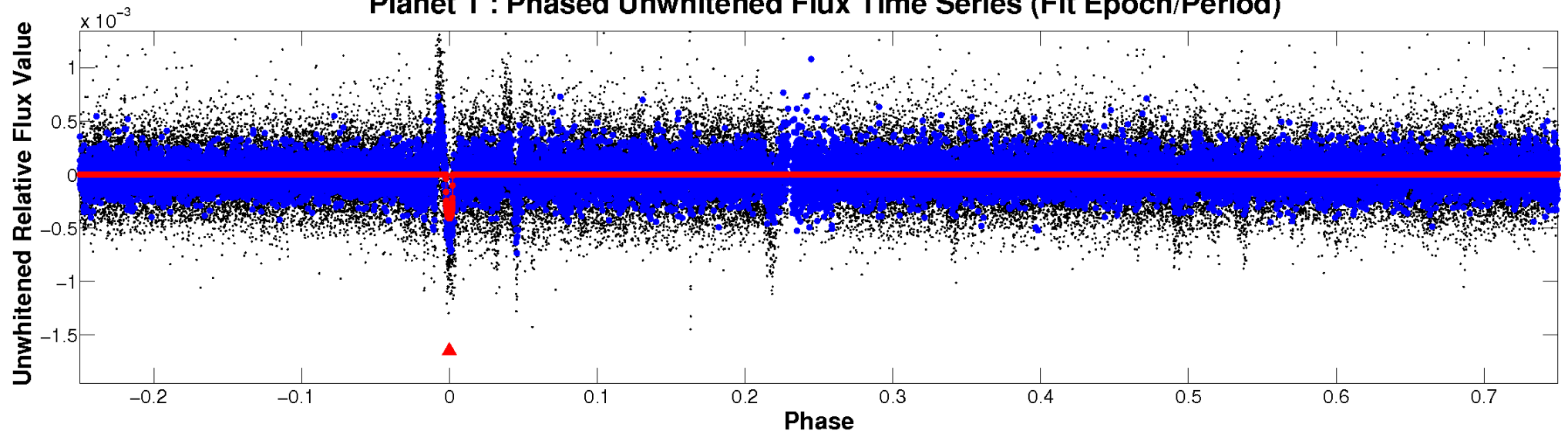
ALT Odd/Even

TCE 008023034-01

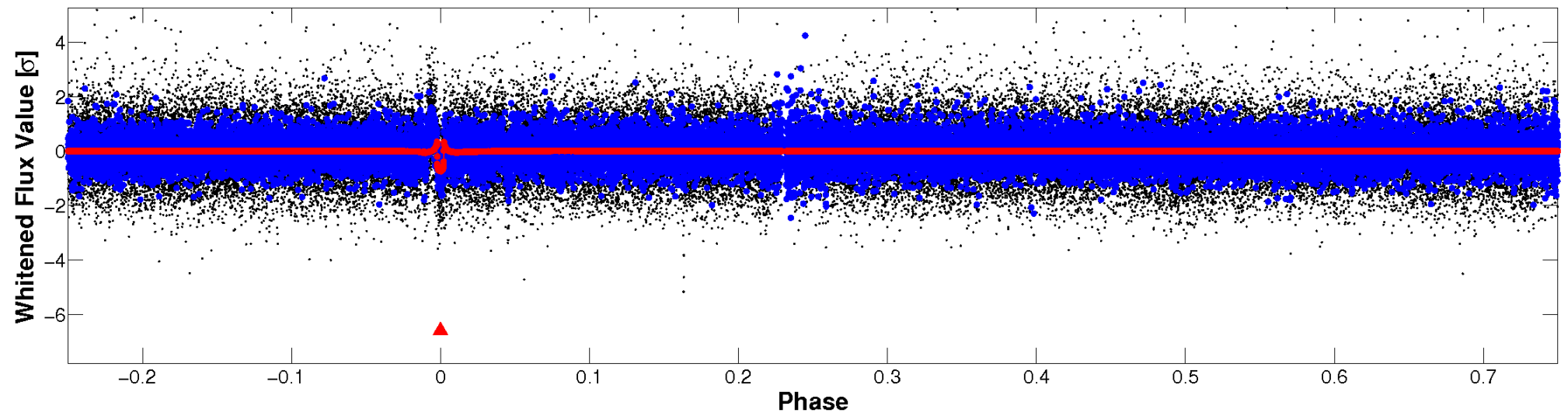


Non-Whitened Vs. Whitened Light Curve

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

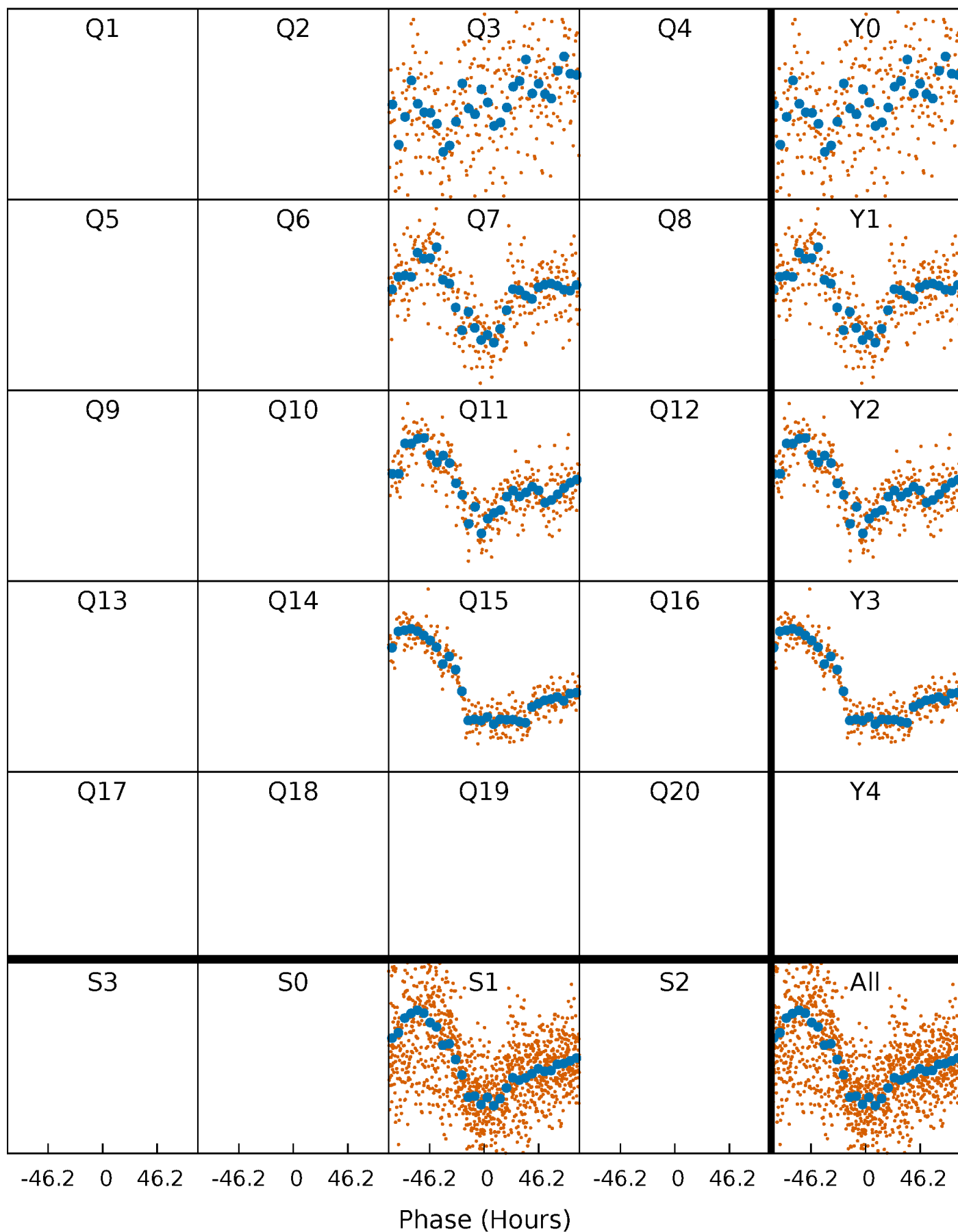


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



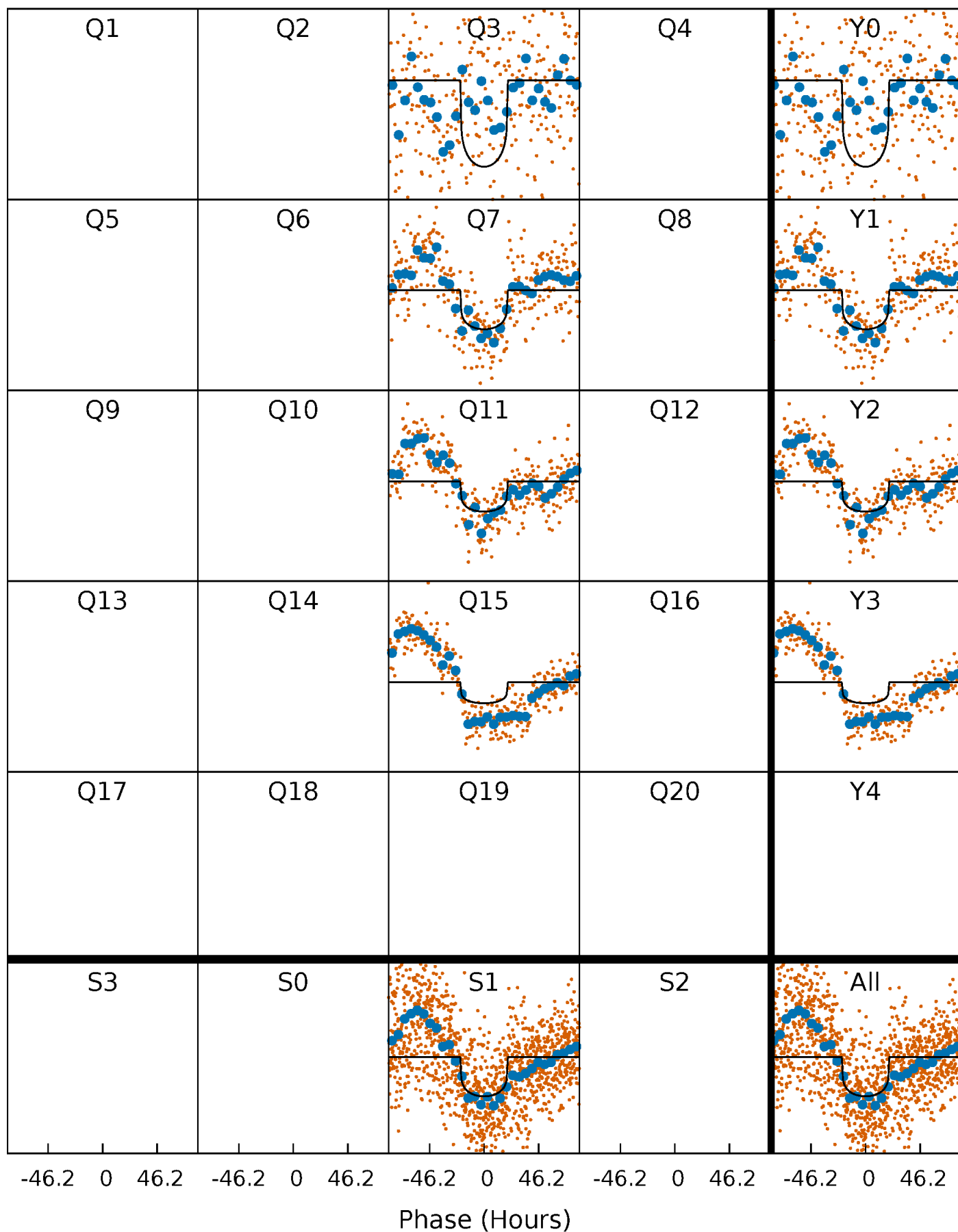
PDC Quarter-Phased Transit Curves

TCE 008023034-01 P=374.476778 Days $T_0=263.616336$ (BKJD)



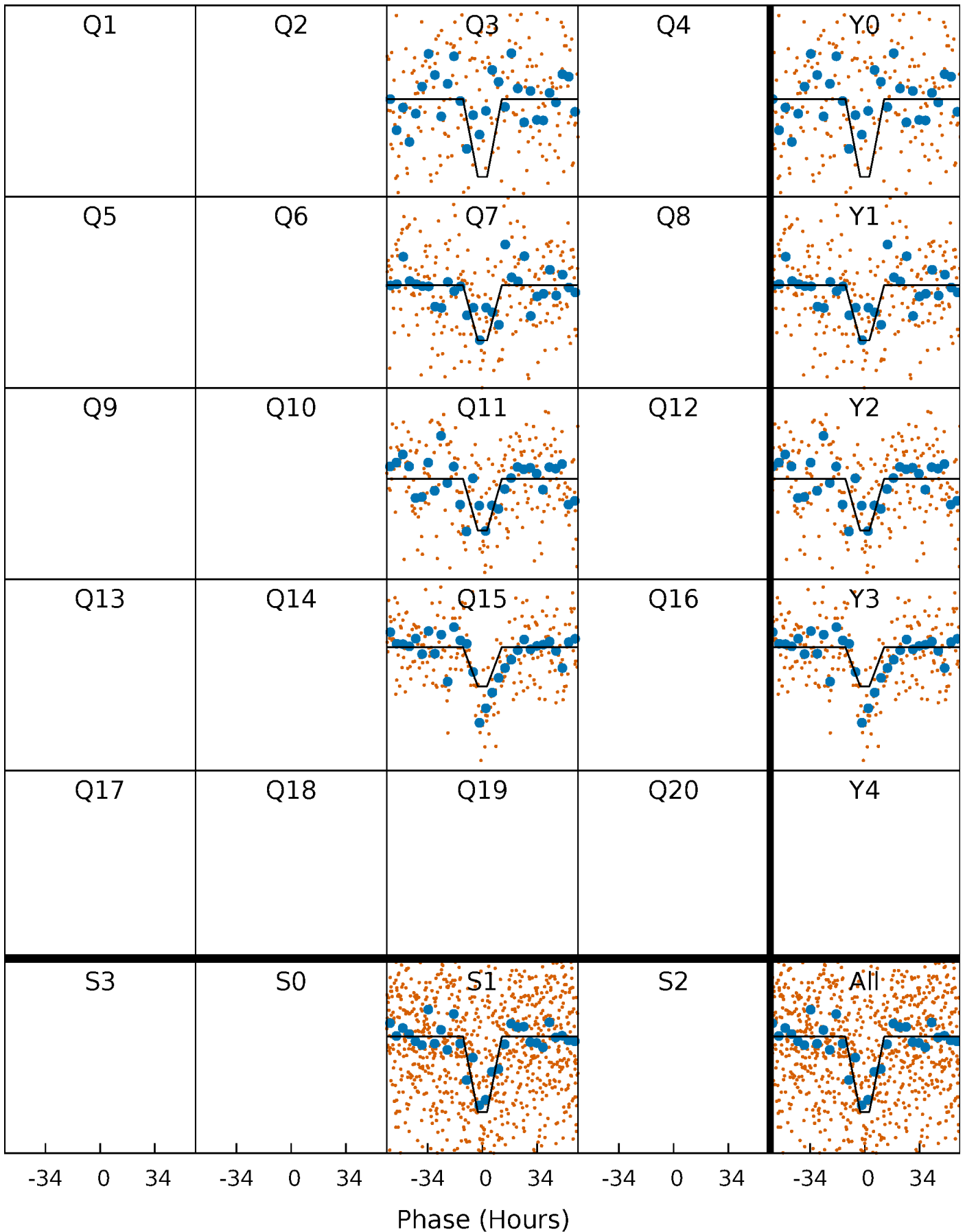
DV Quarter-Phased Transit Curves

TCE 008023034-01 P=374.476778 Days $T_0=263.616336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

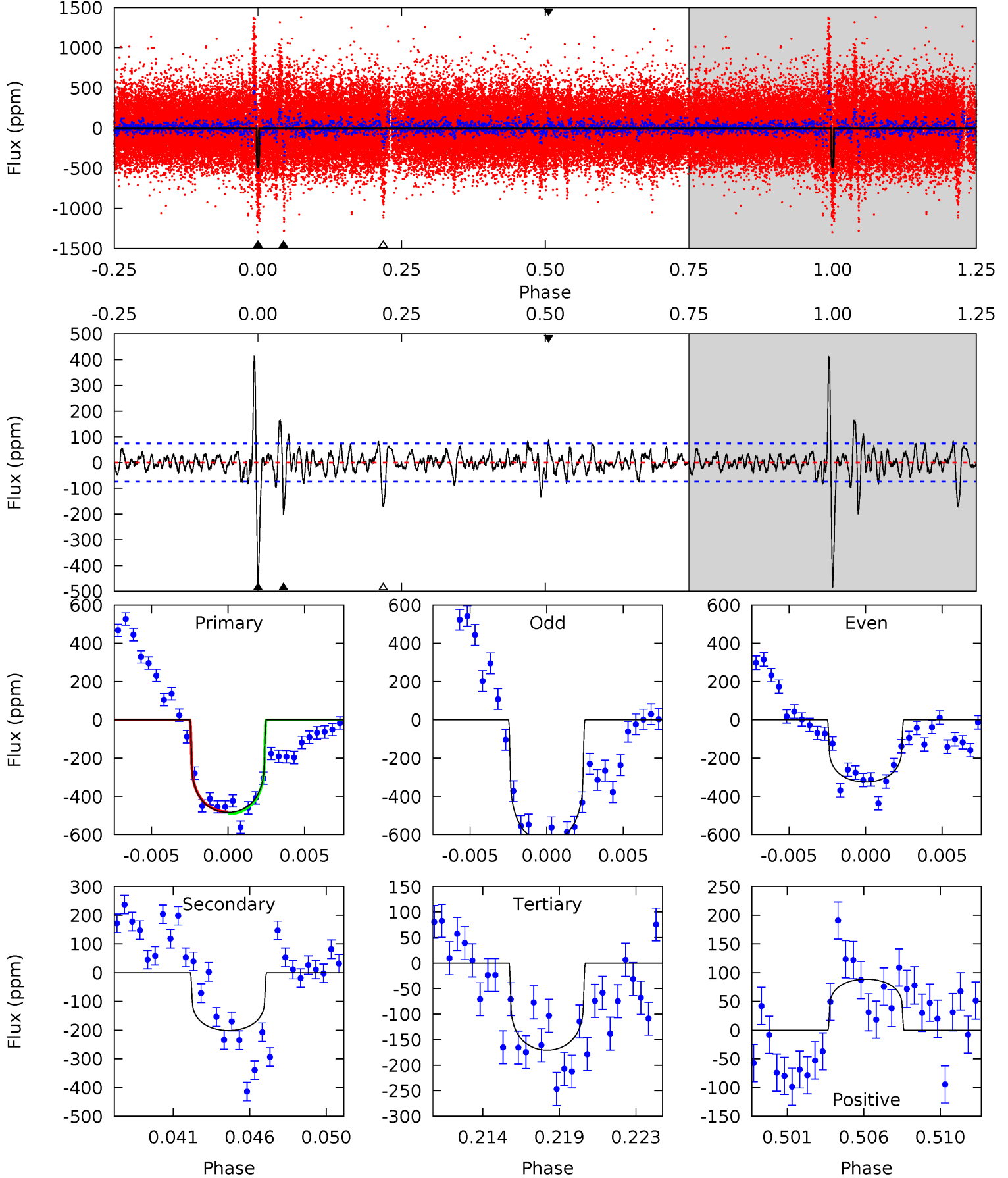
TCE 008023034-01 P=374.049938 Days $T_0=264.329161$ (BKJD)



DV Model-Shift Uniqueness Test

008023034-01, P = 374.476778 Days, E = 263.616336 Days

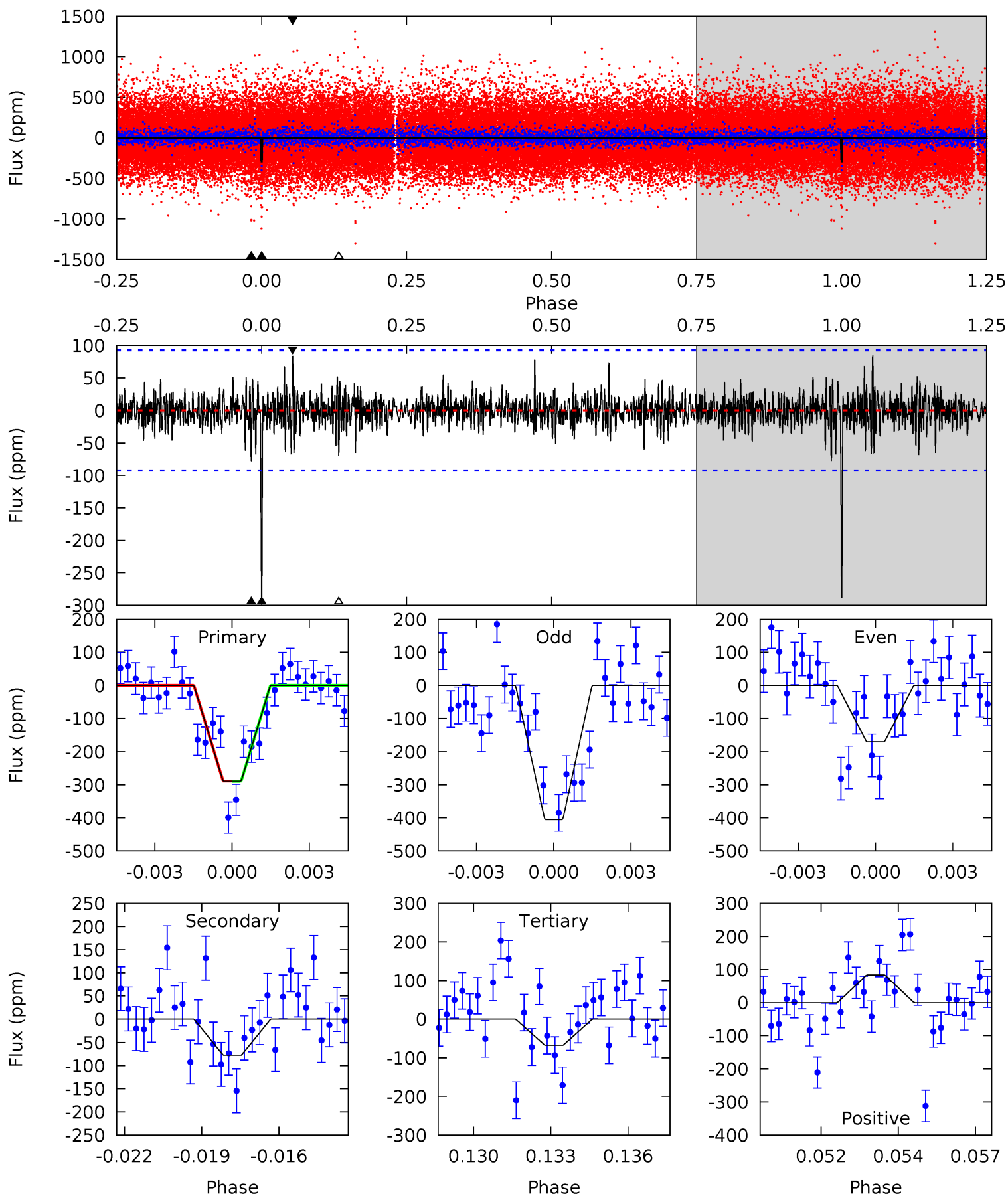
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.7	14.0	11.9	6.18	5.18	2.84	2.90	21.8	27.5	2.13	7.83	10.9	0.98	0.46	0.38



Alt Model-Shift Uniqueness Test

008023034-01, P = 374.049938 Days, E = 264.329161 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.43	3.85	4.77	5.27	3.00	1.03	12.6	11.7	0.58	-0.34	6.73	1.12	0.22	0.01



Stellar Parameters For KIC 008023034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6112^{+184}_{-220}	$4.387^{+0.087}_{-0.203}$	$0.040^{+0.250}_{-0.300}$	$1.110^{+0.366}_{-0.157}$	$1.092^{+0.166}_{-0.135}$	$1.125^{+0.439}_{-0.607}$
	+3%/-4%	+2%/-5%	+625%/-750%	+33%/-14%	+15%/-12%	+39%/-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 008023034-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-201 ± 14	$2.39^{+0.61}_{-0.51}$	392^{+29}_{-21}	5279^{+579}_{-378}	20823^{+12177}_{-7224}
Alt.	-78 ± 18	$2.28^{+0.59}_{-0.47}$	392^{+31}_{-22}	4417^{+434}_{-324}	8807^{+5923}_{-3494}

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 $A_{obs} \gg 1.0$

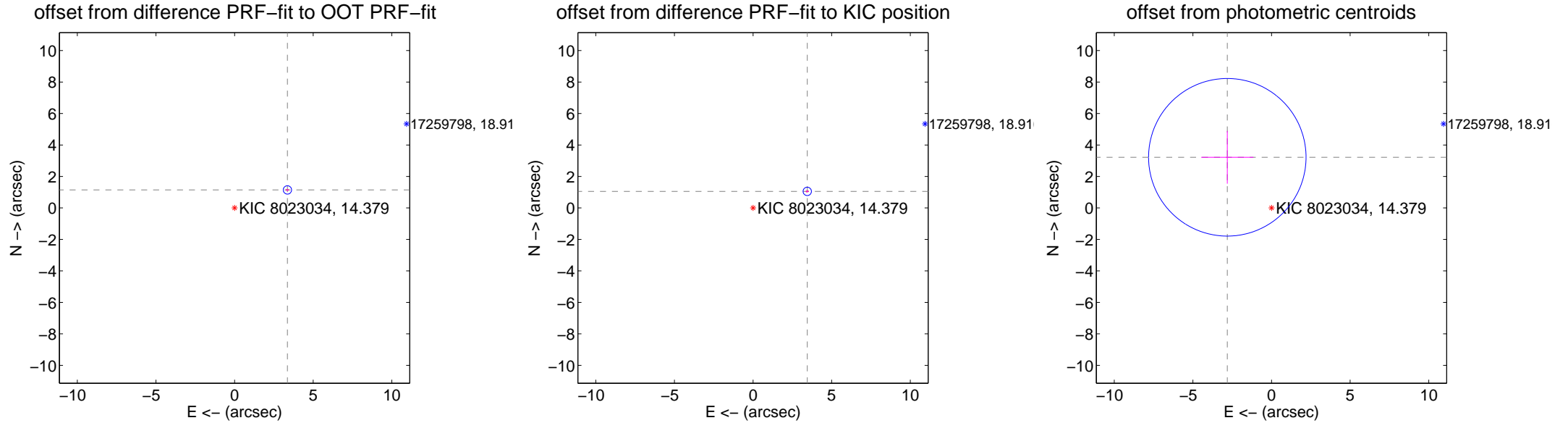
DV Centroid Data

Supplemental centroid analysis for 008023034-01. Kepler magnitude: 14.38. Transit SNR 12.02

There are 0 quarters with good PRF difference image offsets

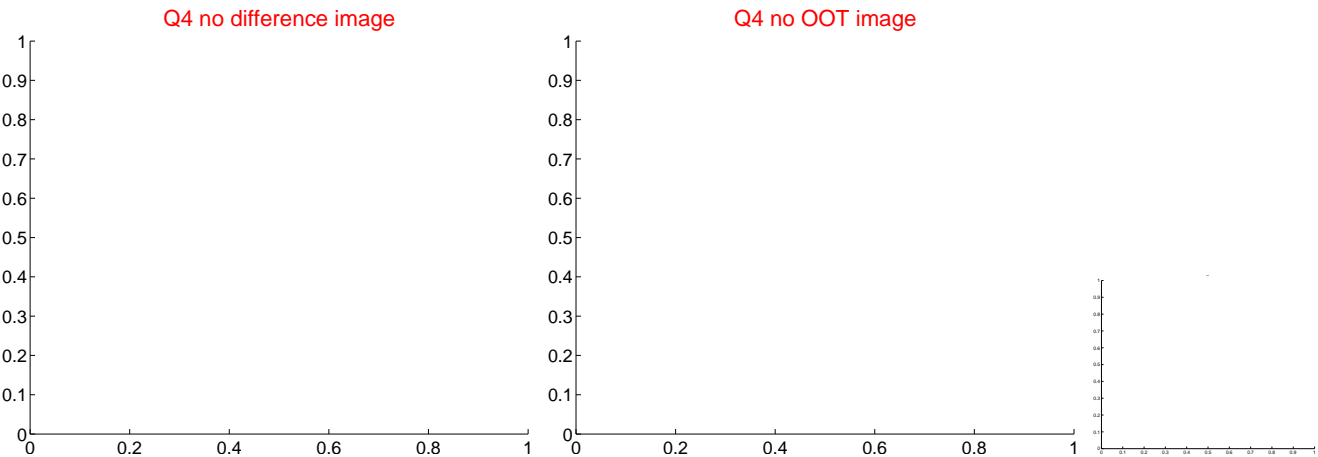
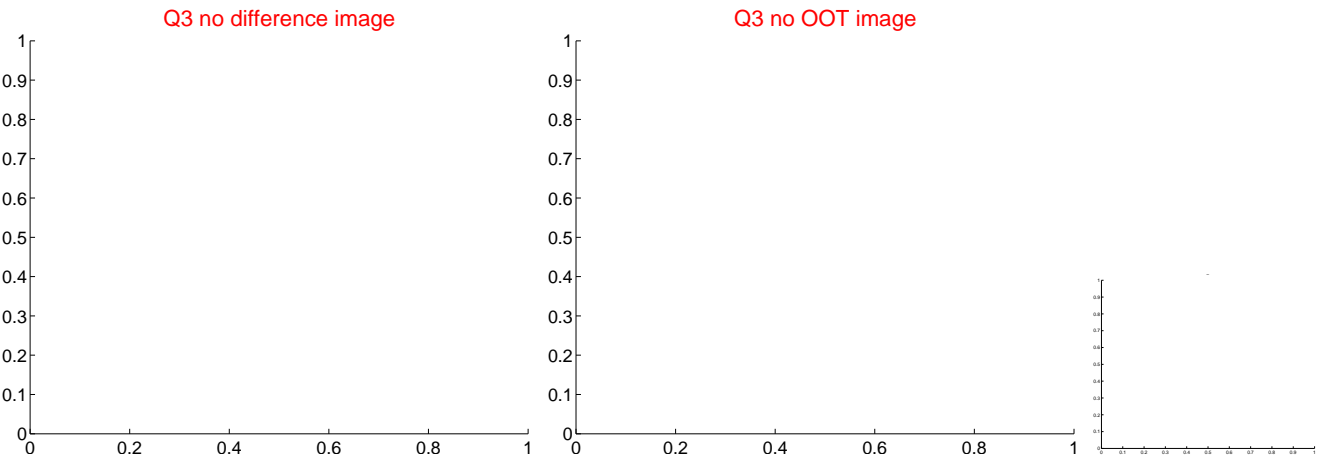
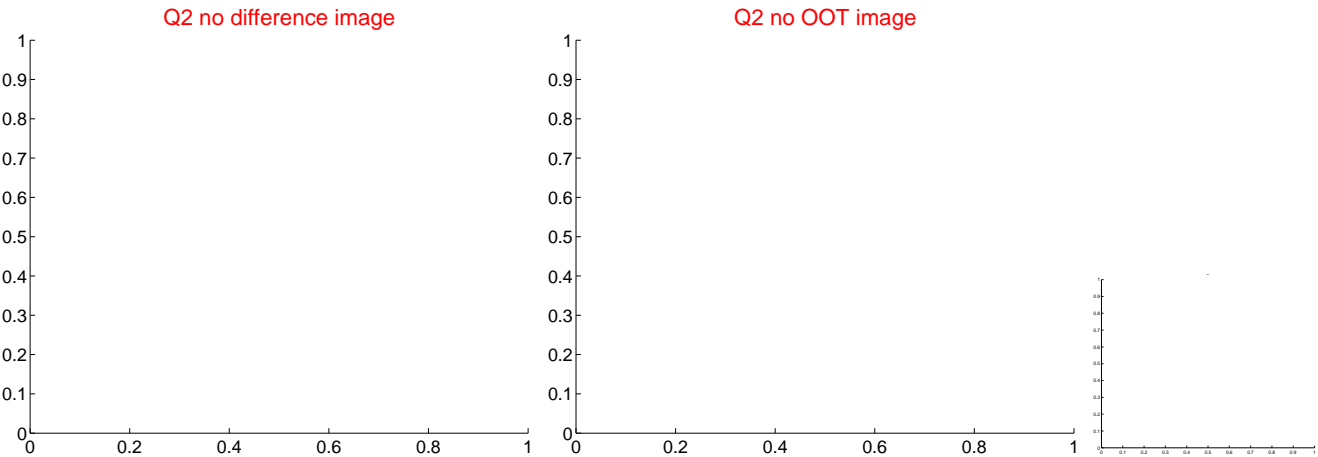
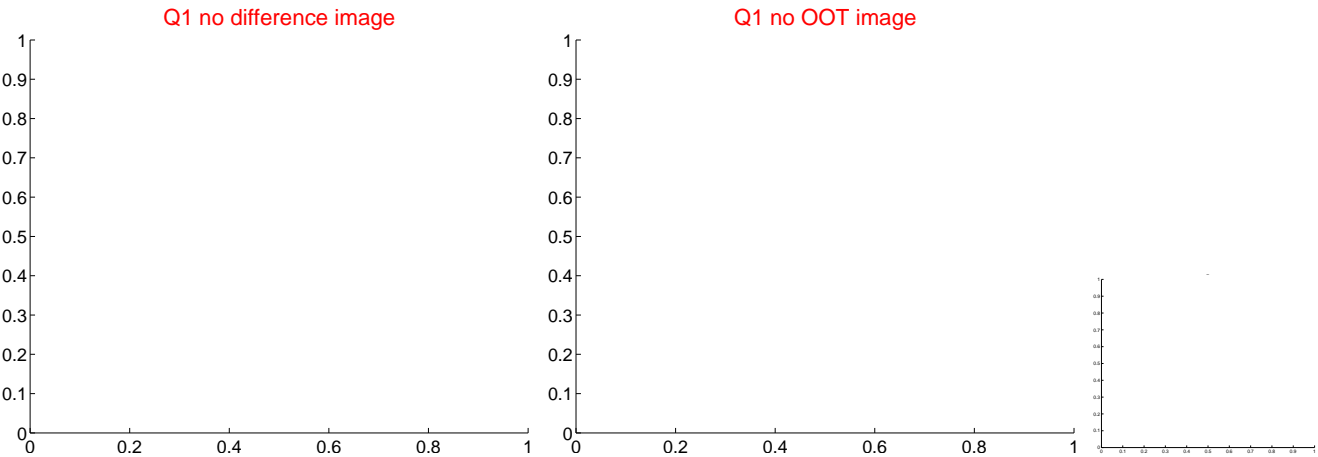
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.551 ± 0.088	40.14	-3.361 ± 0.091	1.145 ± 0.067
PRF-fit source offset from KIC position	3.604 ± 0.088	40.80	-3.447 ± 0.090	1.053 ± 0.067
photometric centroid source offset	4.27 ± 1.67	2.56	2.81 ± 1.66	3.22 ± 1.68

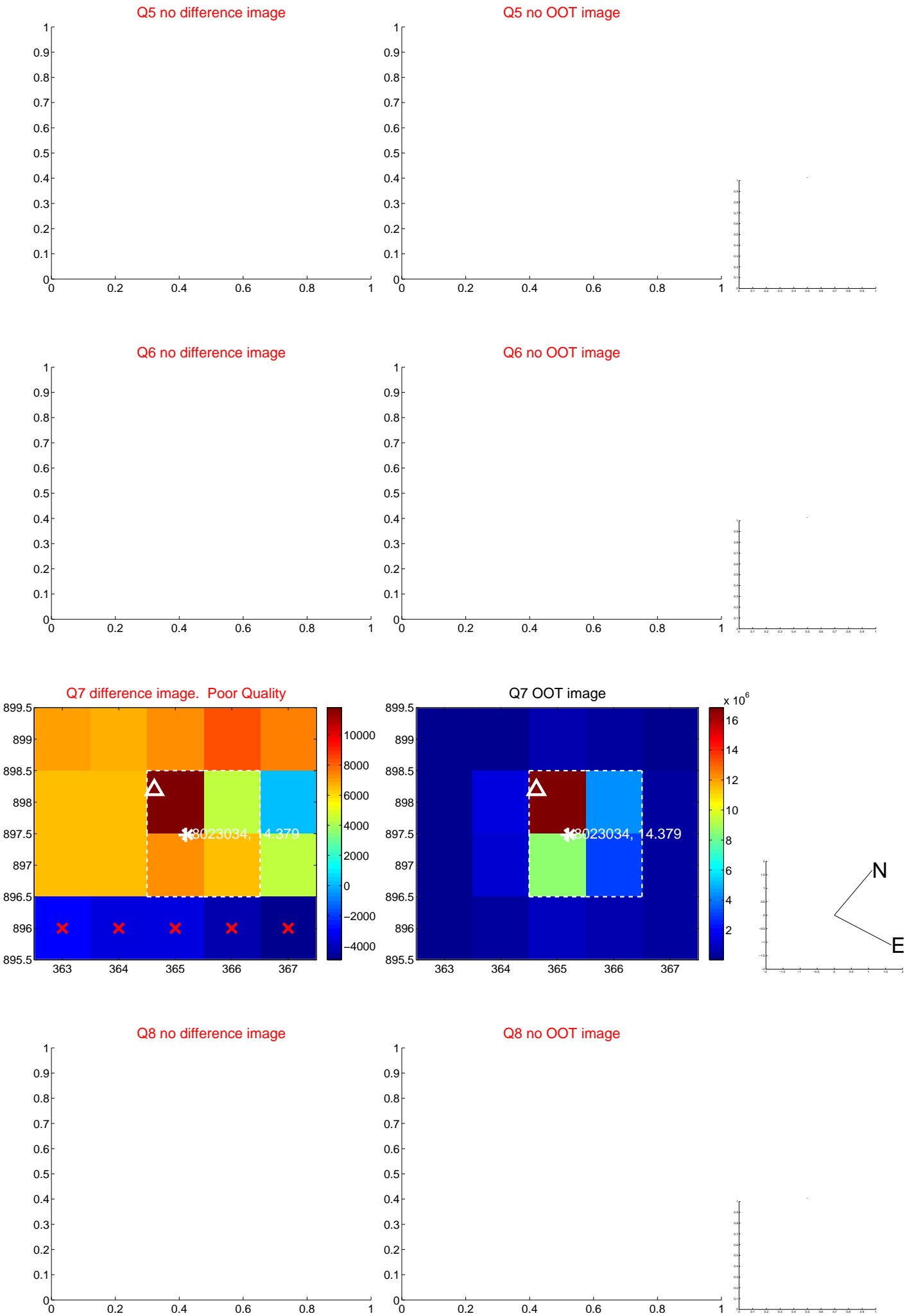


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

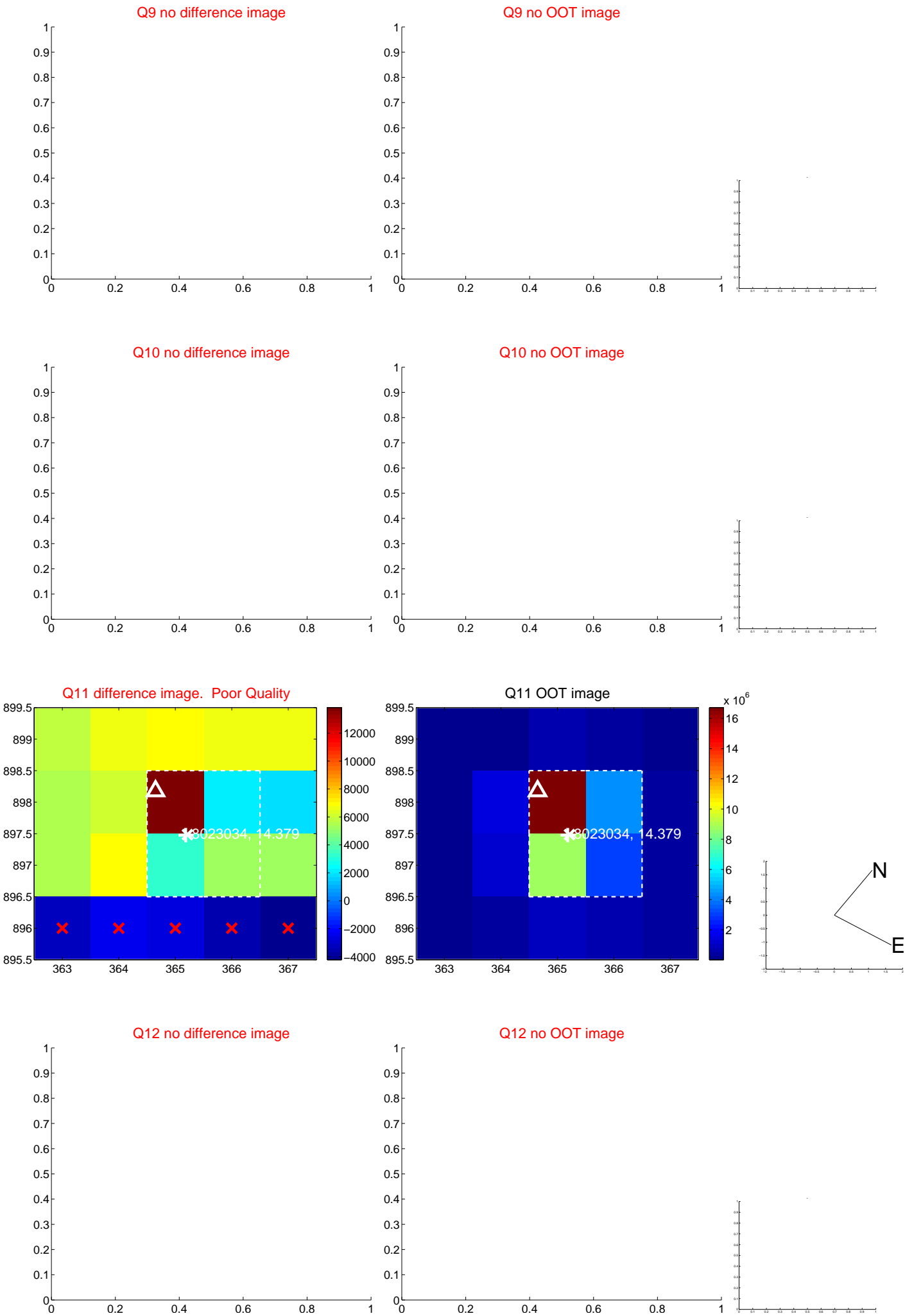
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



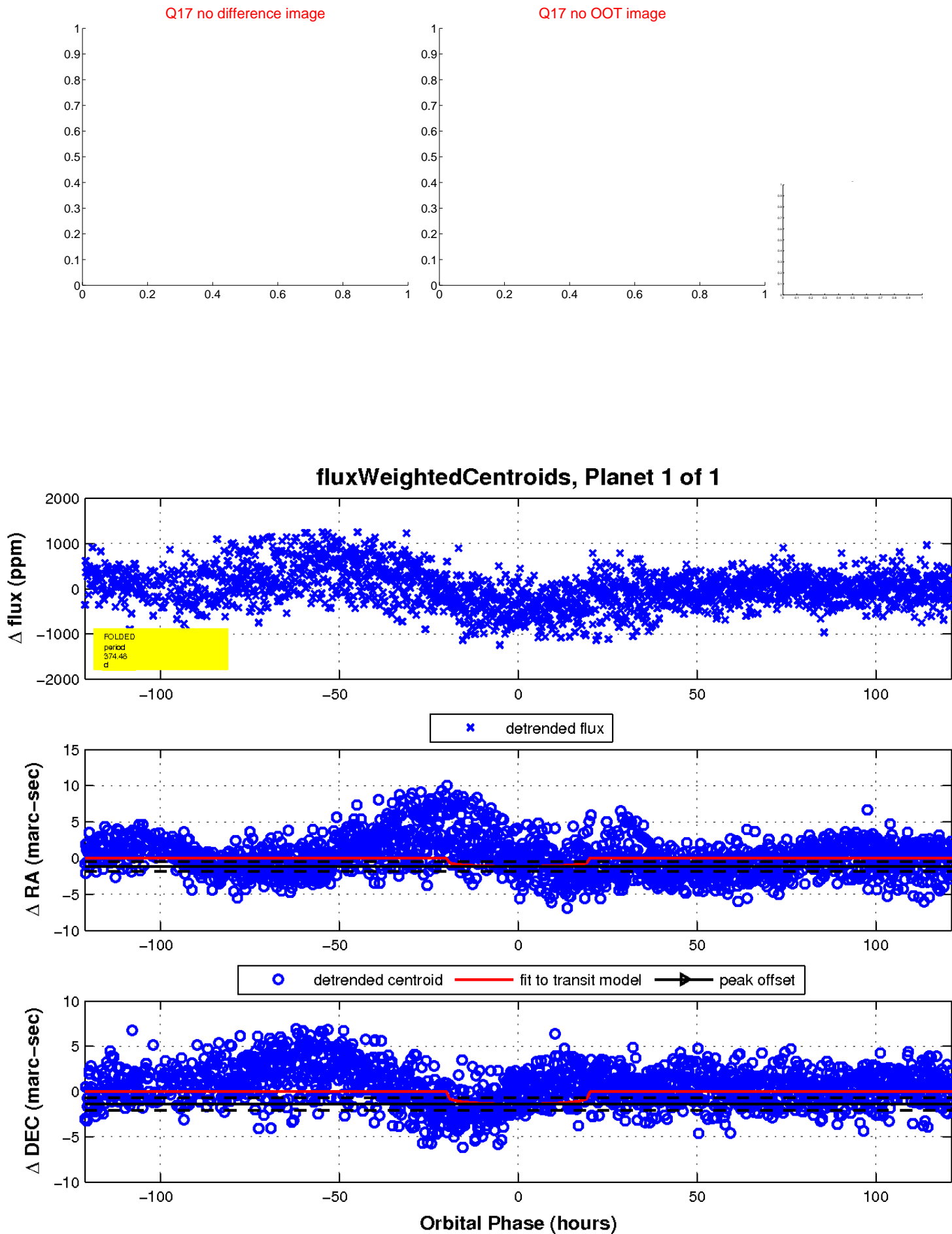
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white \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

