

KIC 008039046

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})
008039046-01	OBS	No	370.449422	231.257700	642.0	13.731	7.6	8.1	0.91	6047	2.64	1.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008039046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—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.

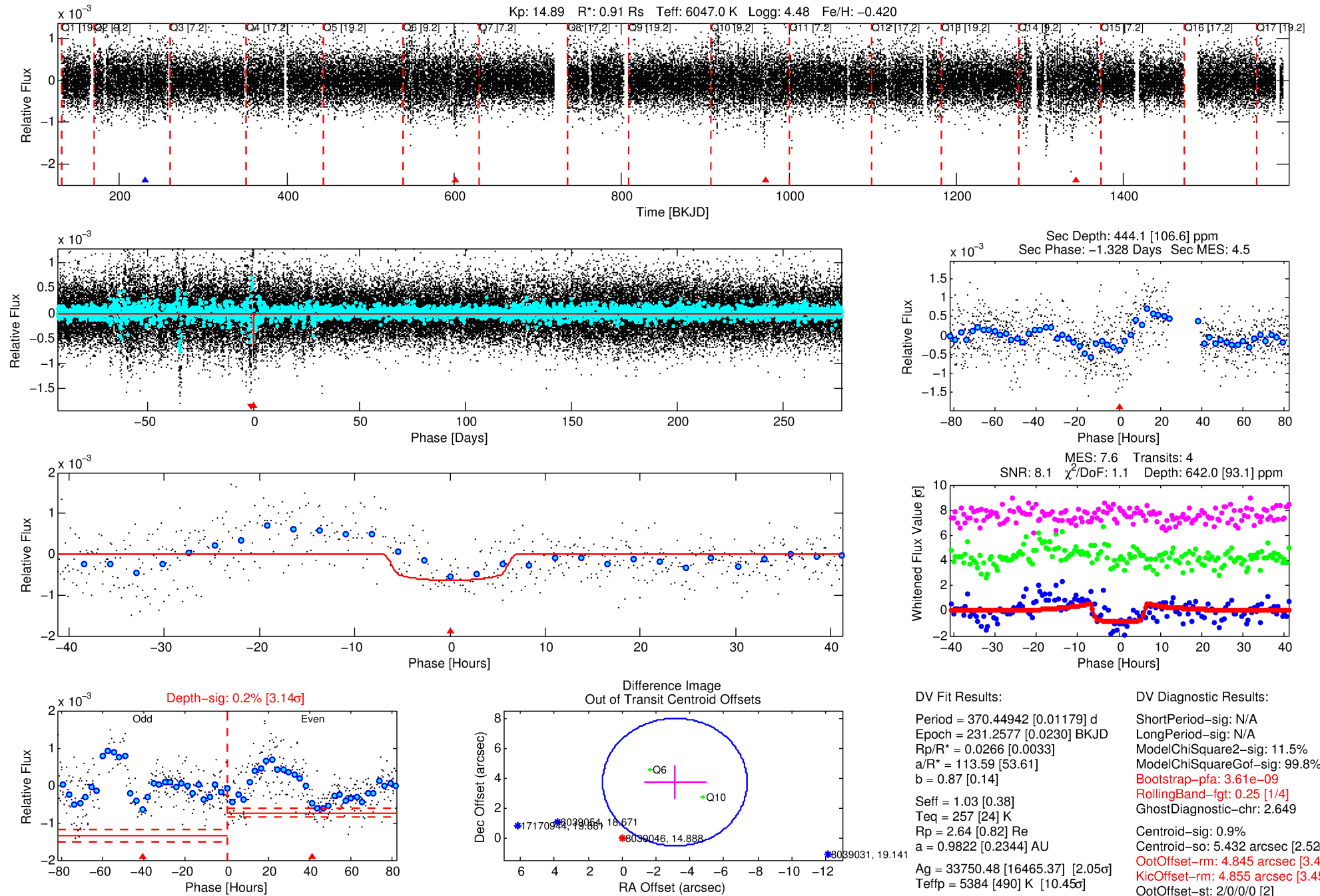
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008039046-01

No Significant Match Found

DV One-Page Summary

KIC: 8039046 Candidate: 1 of 1 Period: 370.449 d



DV Fit Results:

Period = 370.44942 [0.01179] d
Epoch = 231.2577 [0.0230] BKJD
Rp/R* = 0.0266 [0.0033]
a/R* = 113.59 [53.61]
b = 0.87 [0.14]
Seff = 1.03 [0.38]
Teq = 257 [24] K
Rp = 2.64 [0.82] Re
a = 0.9822 [0.2344] AU
Ag = 33750.48 [16465.37] [2.05 σ]
Teffp = 5384 [490] K [10.45 σ]

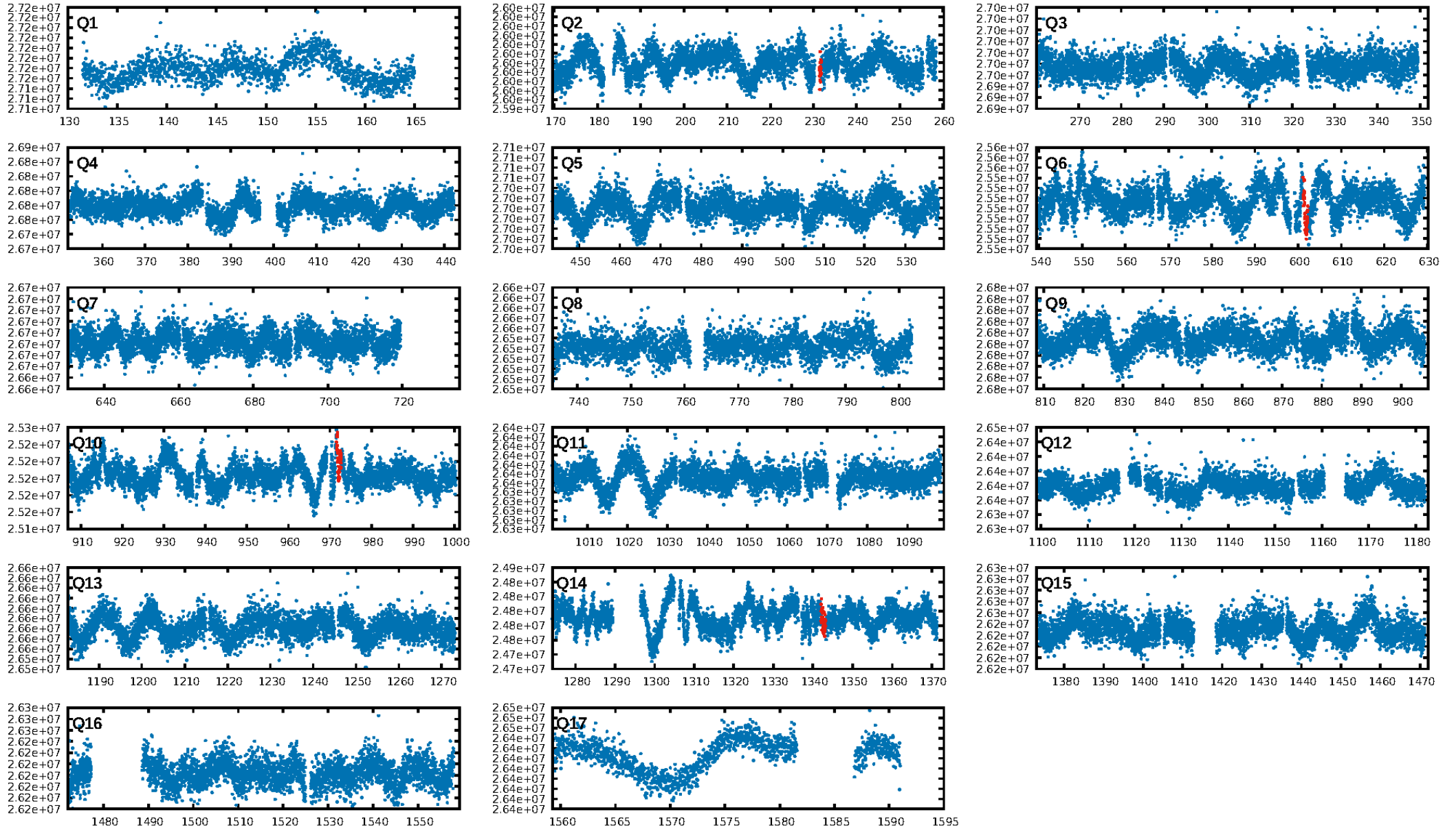
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.5%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 3.61e-09
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 2.649
Centroid-sig: 0.9%
Centroid-so: 5.432 arcsec [2.52 σ]
OotOffset-rm: 4.845 arcsec [3.41 σ]
KicOffset-rm: 4.855 arcsec [3.45 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

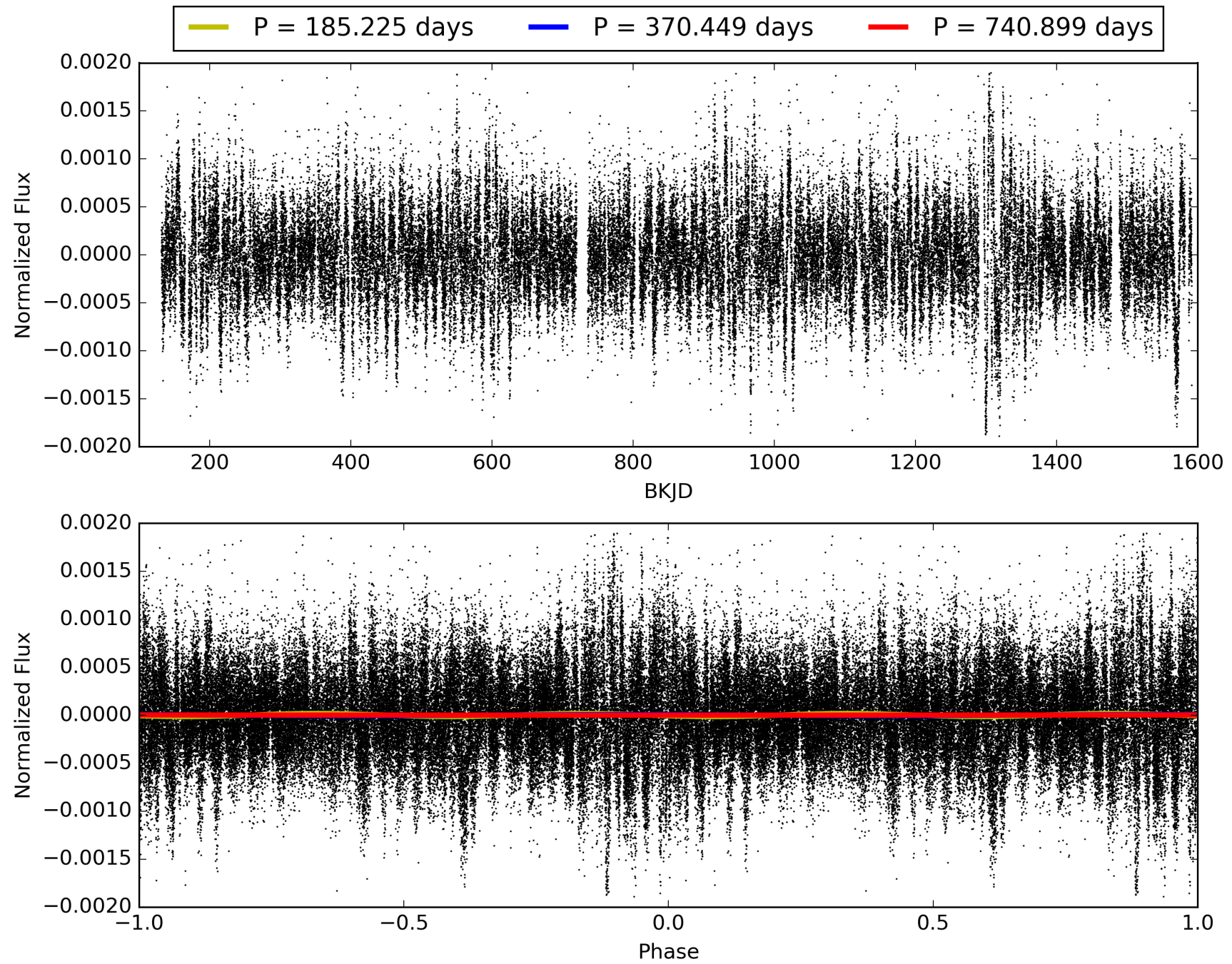
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:16:21 Z

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

TCE 008039046-01, PDC Light Curves

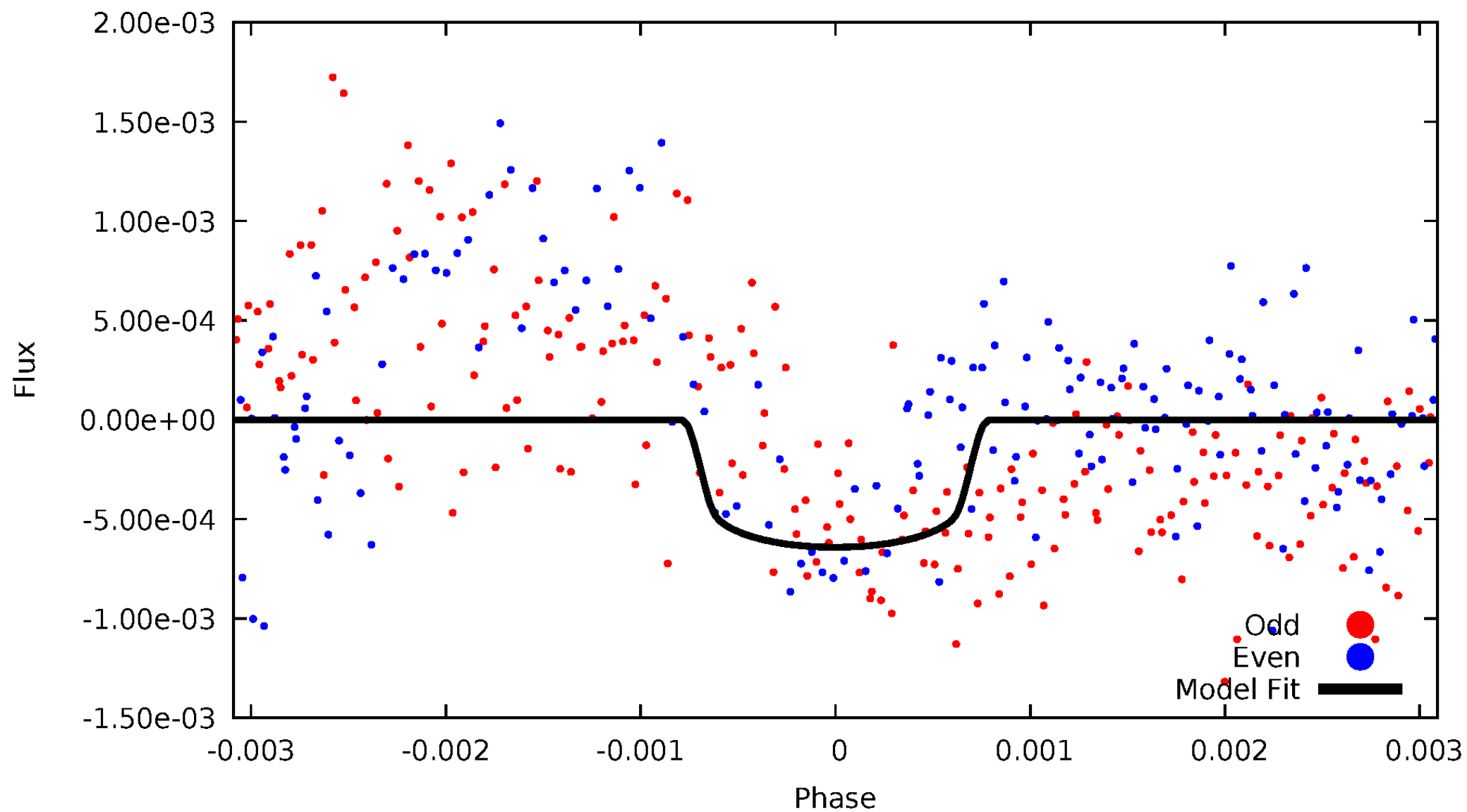


TCE 008039046-01



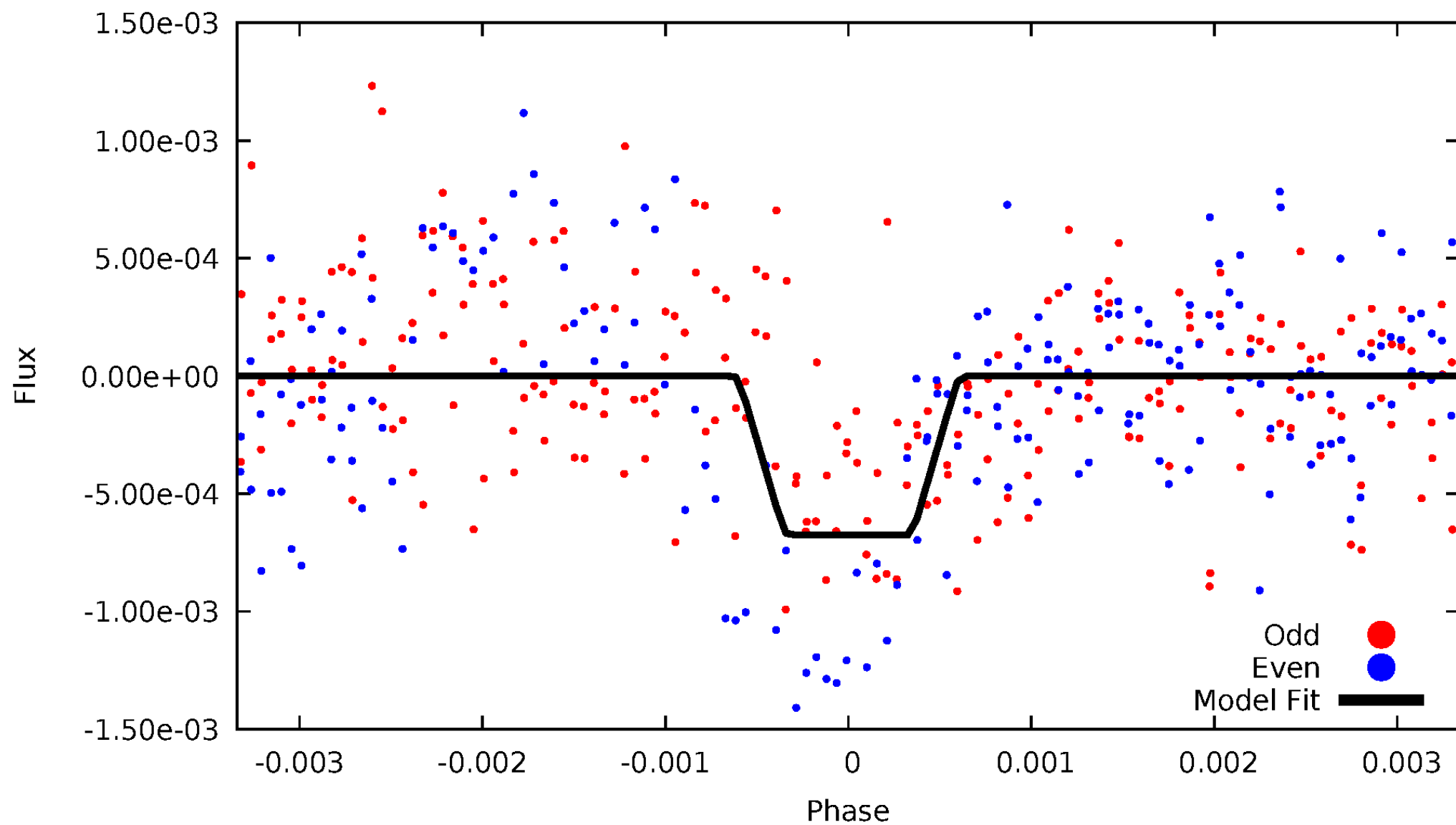
DV Odd/Even

TCE 008039046-01

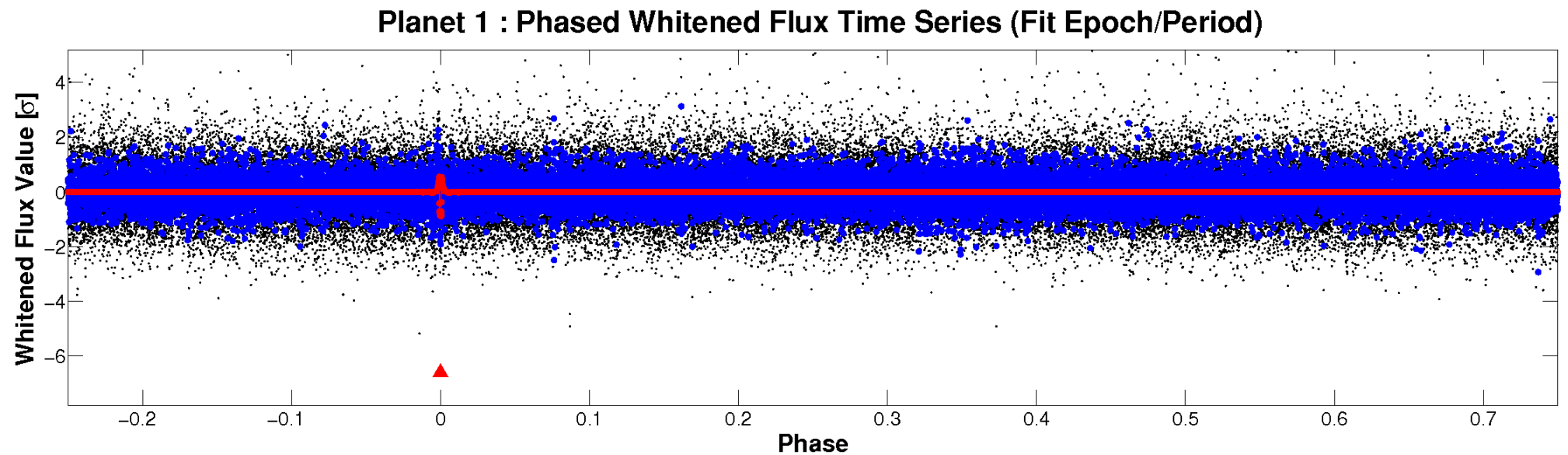
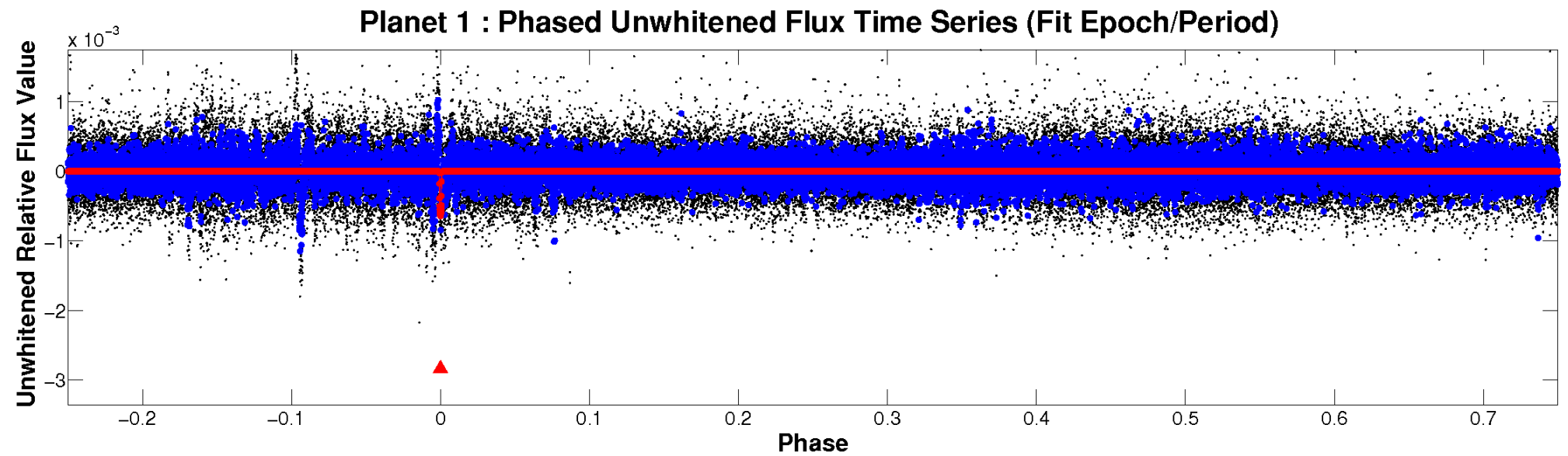


ALT Odd/Even

TCE 008039046-01

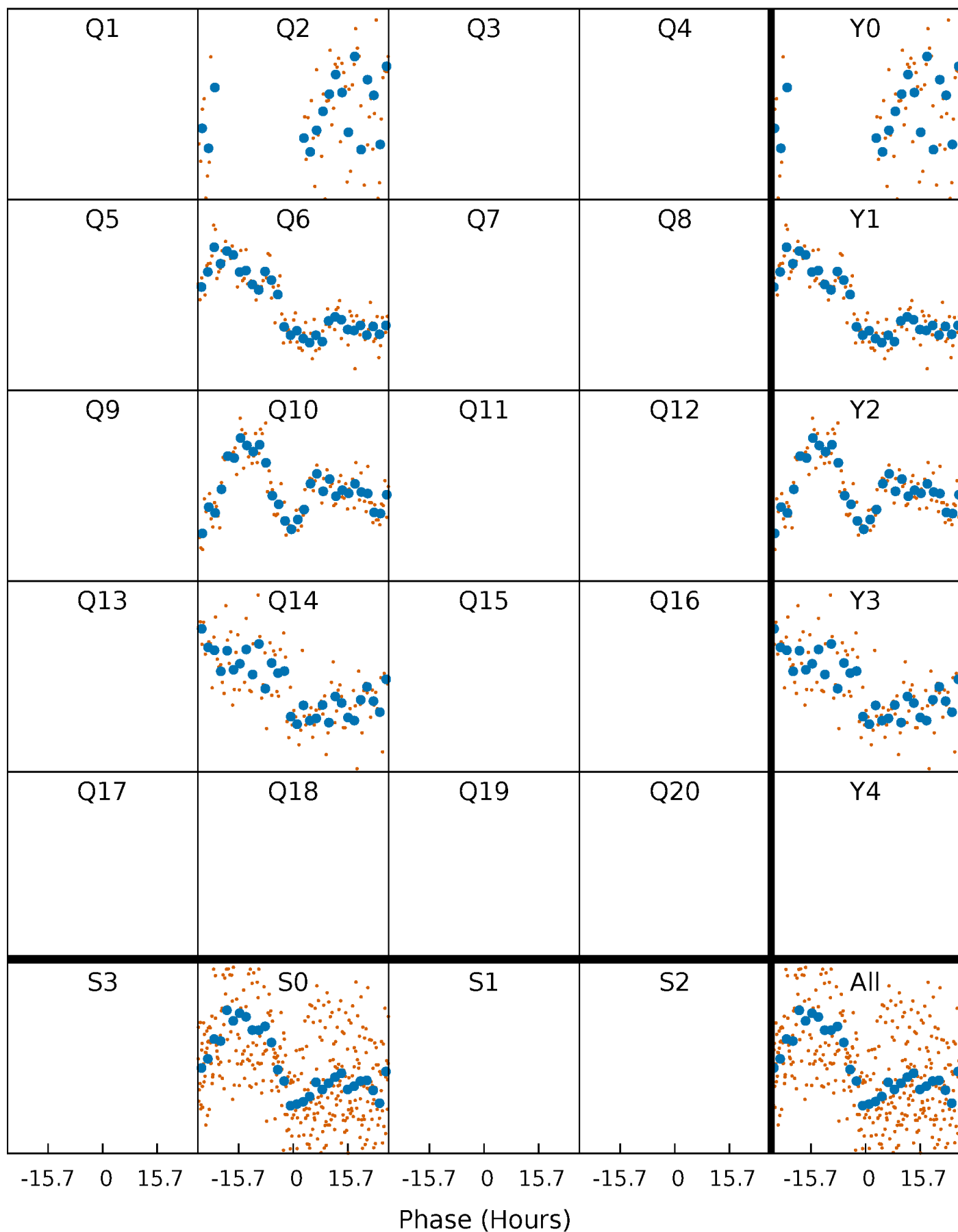


Non-Whitened Vs. Whitened Light Curve



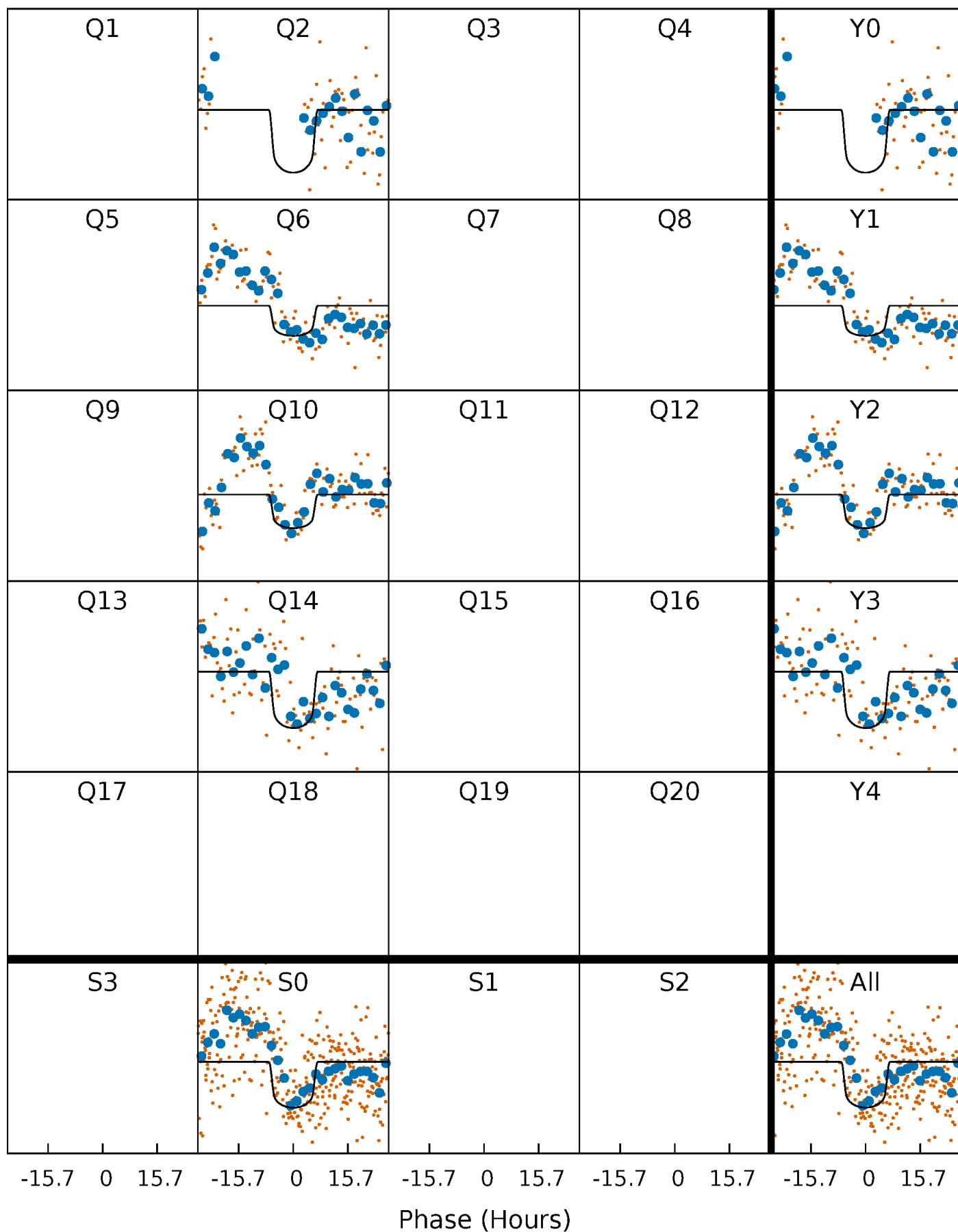
PDC Quarter-Phased Transit Curves

TCE 008039046-01 P=370.449422 Days $T_0=231.257700$ (BKJD)



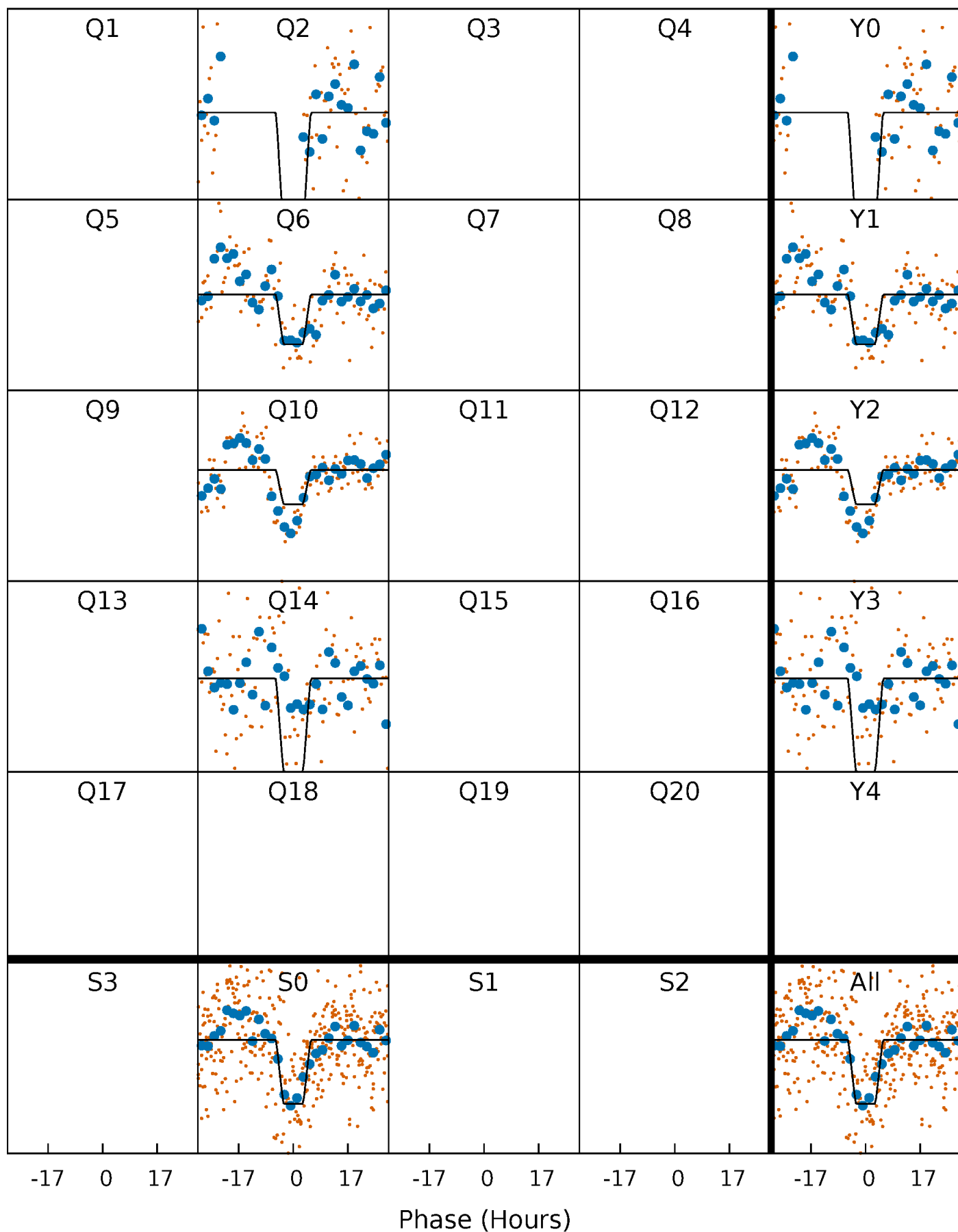
DV Quarter-Phased Transit Curves

TCE 008039046-01 P=370.449422 Days $T_0=231.257700$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

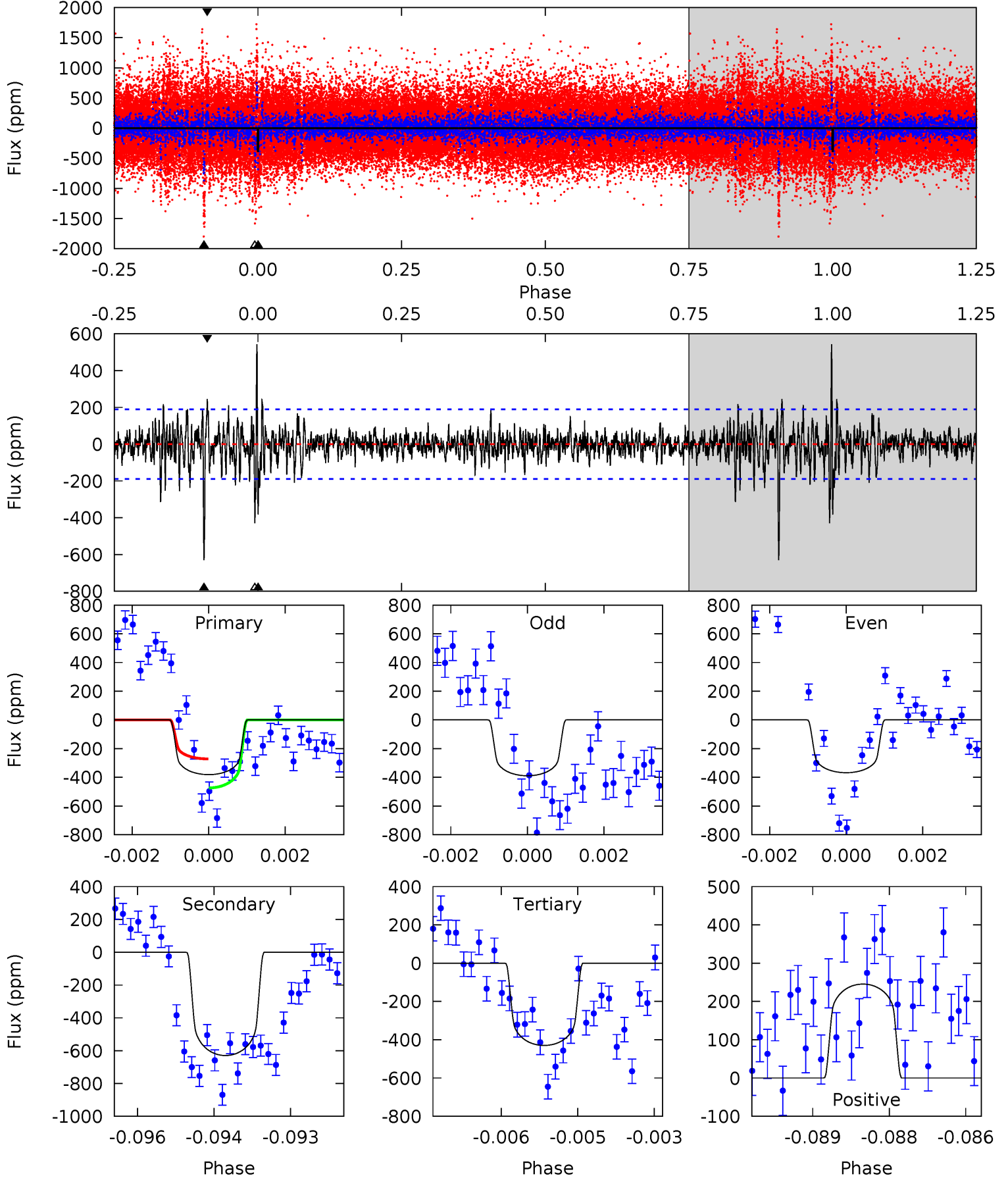
TCE 008039046-01 P=370.460443 Days $T_0=231.255627$ (BKJD)



DV Model-Shift Uniqueness Test

008039046-01, P = 370.449422 Days, E = 231.257700 Days

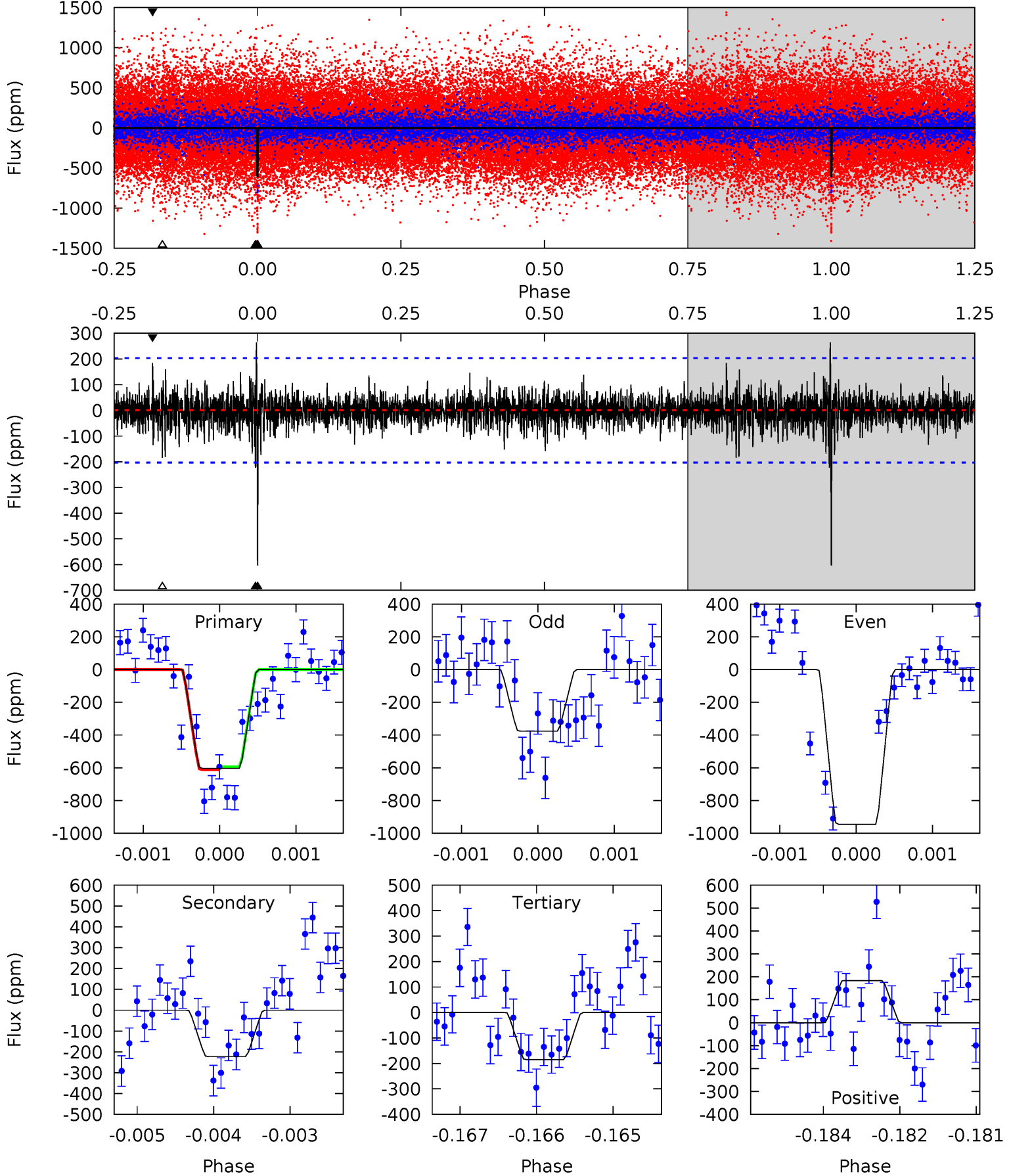
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	17.8	12.2	6.96	5.37	3.16	1.80	-1.37	3.85	5.66	10.9	0.29	0.97	0.46	2.83



Alt Model-Shift Uniqueness Test

008039046-01, P = 370.460443 Days, E = 231.255627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	5.92	4.91	4.90	5.41	3.22	1.10	11.1	11.1	1.01	1.02	7.38	1.17	0.30	0.24



Stellar Parameters For KIC 008039046

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6047^{+183}_{-183}	$4.483^{+0.067}_{-0.189}$	$-0.420^{+0.300}_{-0.300}$	$0.911^{+0.259}_{-0.104}$	$0.922^{+0.106}_{-0.106}$	$1.717^{+0.581}_{-0.848}$
	+3%/-3%	+1%/-4%	+71%/-71%	+28%/-11%	+11%/-11%	+34%/-49%
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 008039046-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-630 ± 35	$2.72^{+0.52}_{-0.42}$	364^{+24}_{-19}	5849^{+459}_{-369}	44400^{+16243}_{-12247}
Alt.	-223 ± 38	$2.68^{+0.52}_{-0.43}$	366^{+27}_{-18}	4719^{+354}_{-301}	16115^{+6688}_{-5293}

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

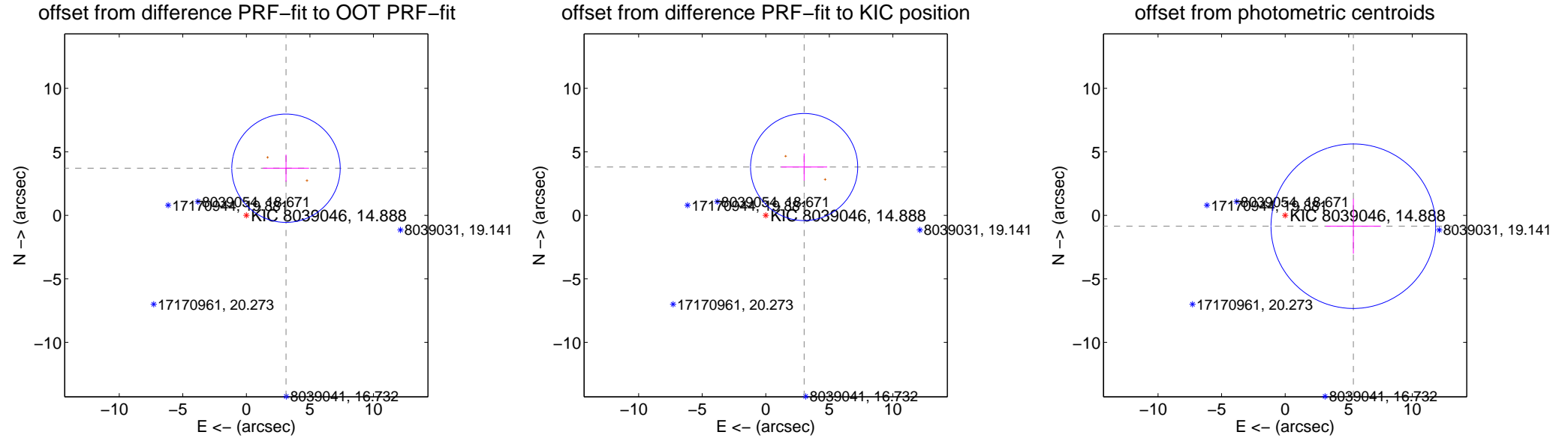
DV Centroid Data

Supplemental centroid analysis for 008039046-01. Kepler magnitude: 14.89. Transit SNR 8.07

There are 0 quarters with good PRF difference image offsets

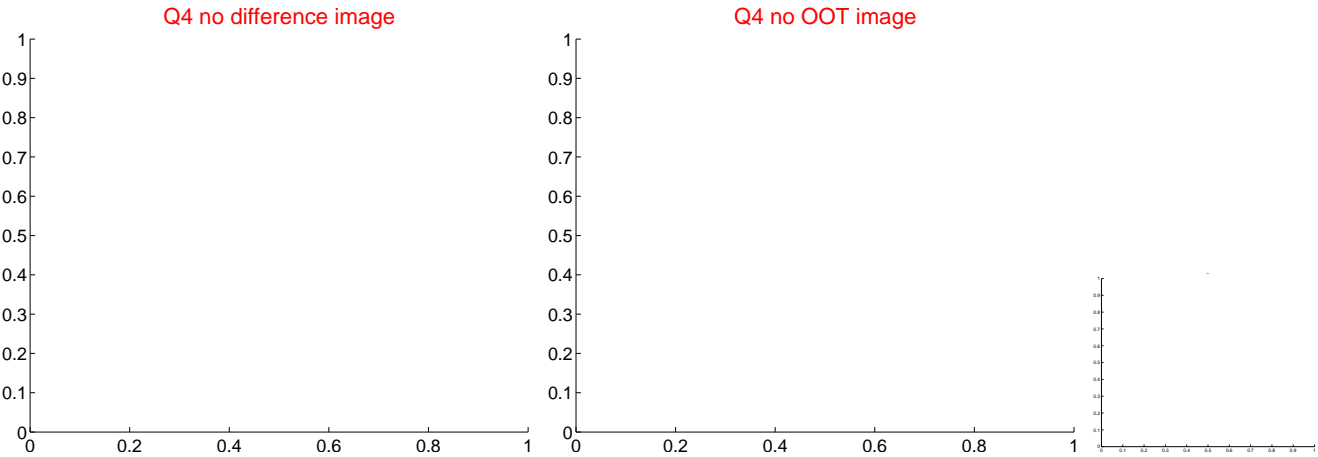
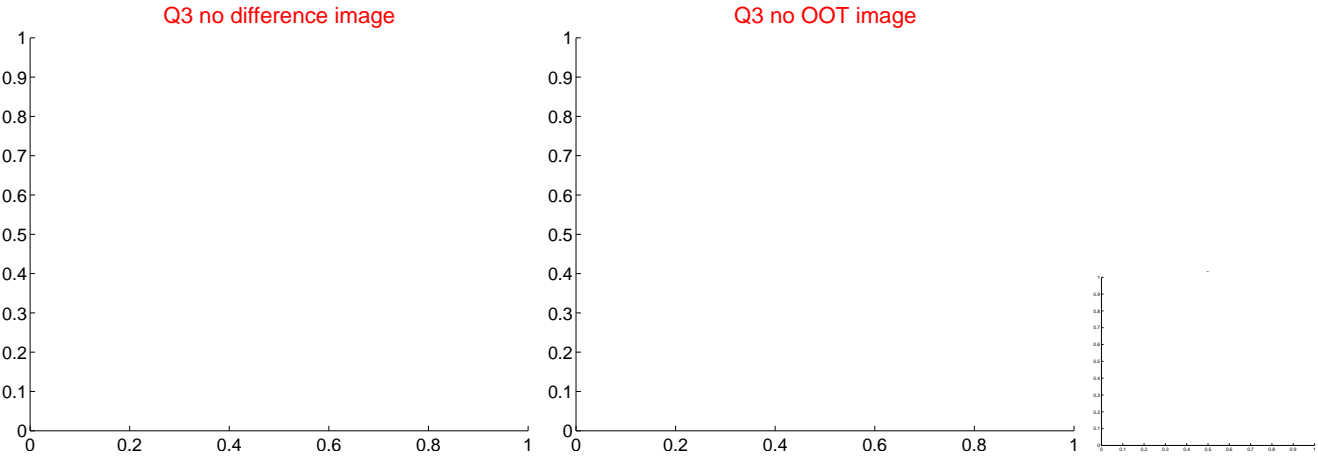
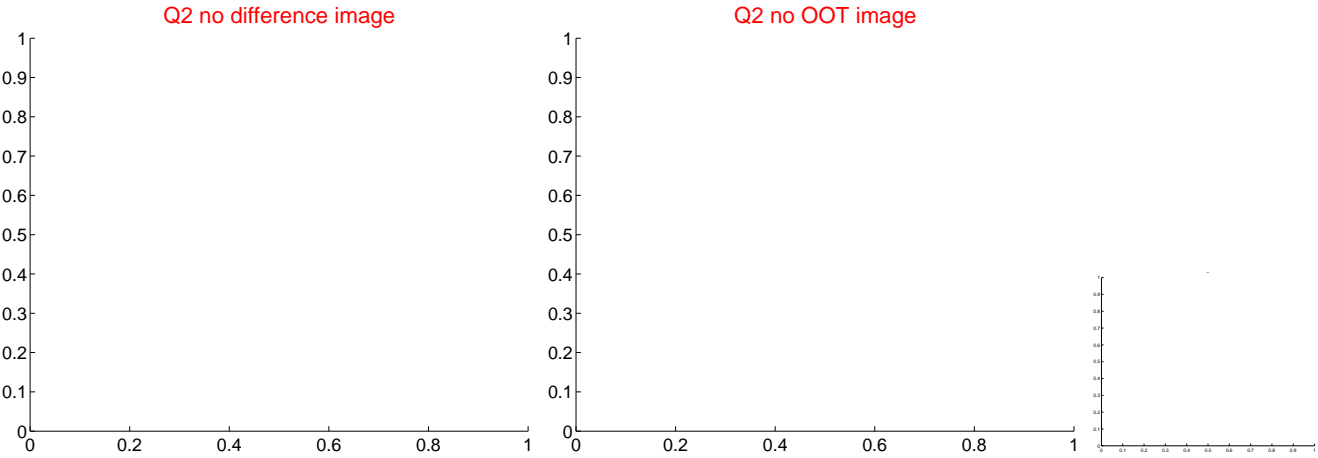
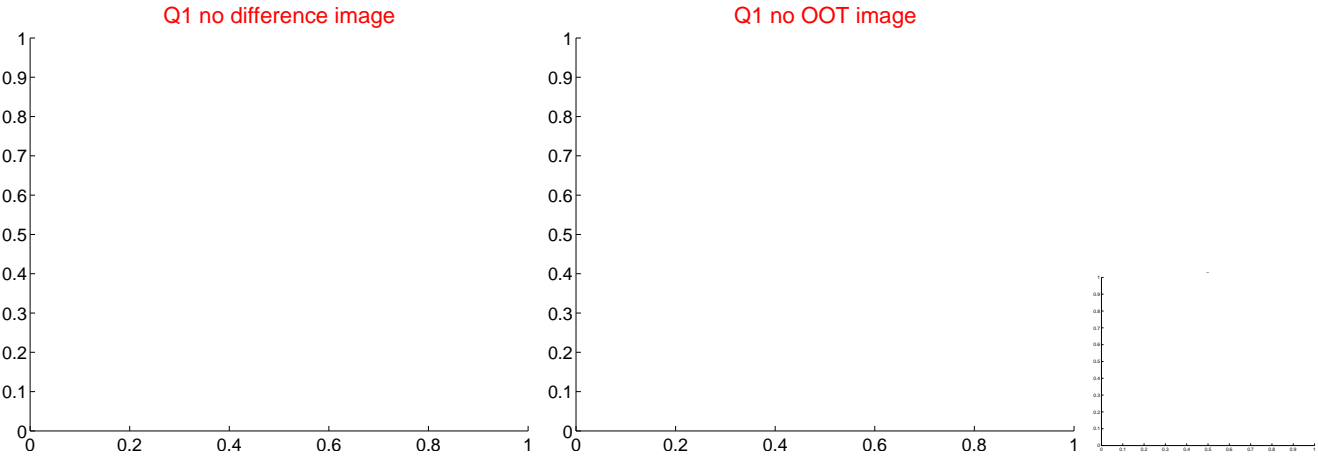
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.845 ± 1.421	3.41	-3.119 ± 1.807	3.708 ± 1.067
PRF-fit source offset from KIC position	4.855 ± 1.405	3.45	-3.019 ± 1.813	3.802 ± 1.070
photometric centroid source offset	5.43 ± 2.16	2.52	-5.36 ± 2.16	-0.86 ± 2.16

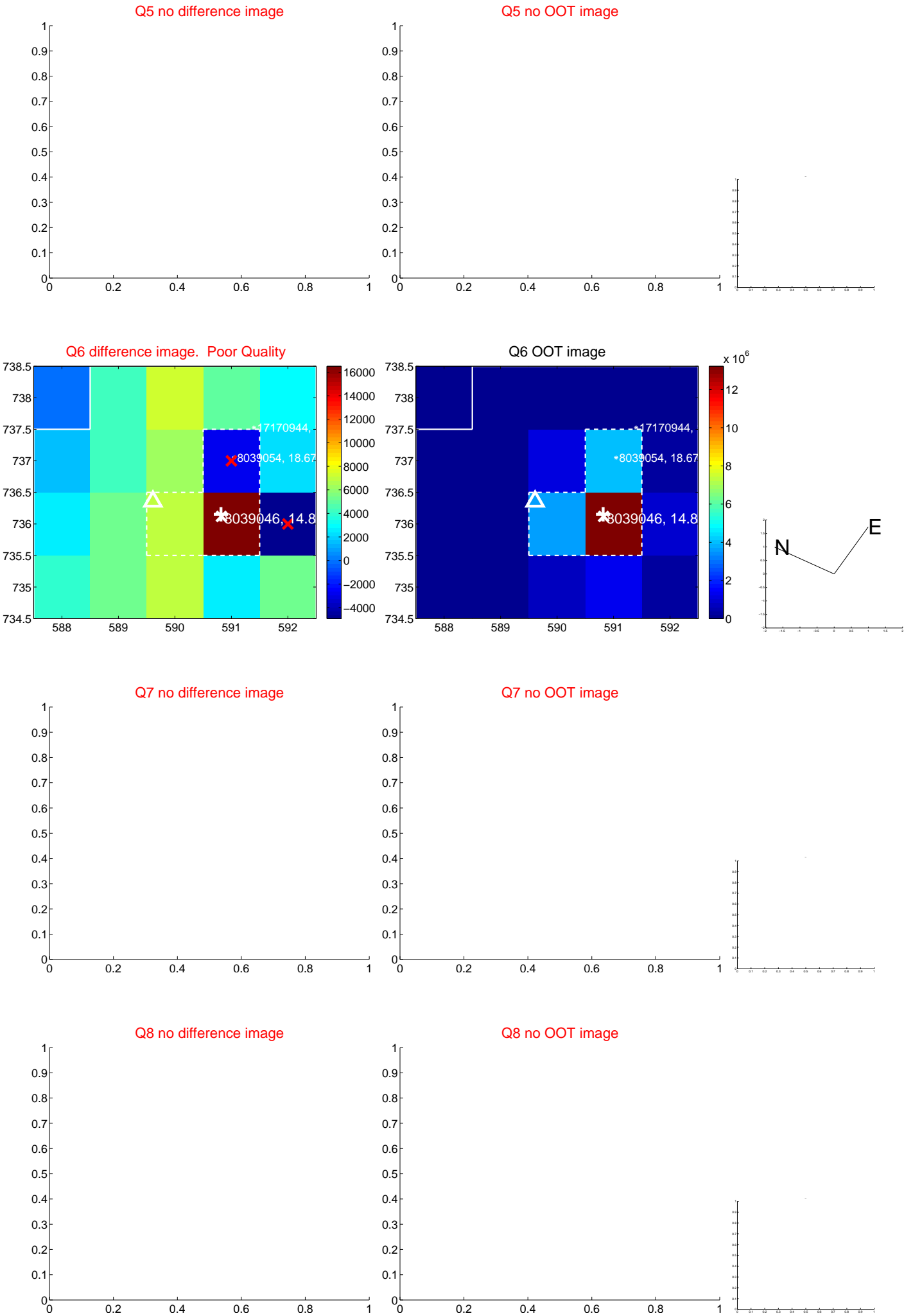


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

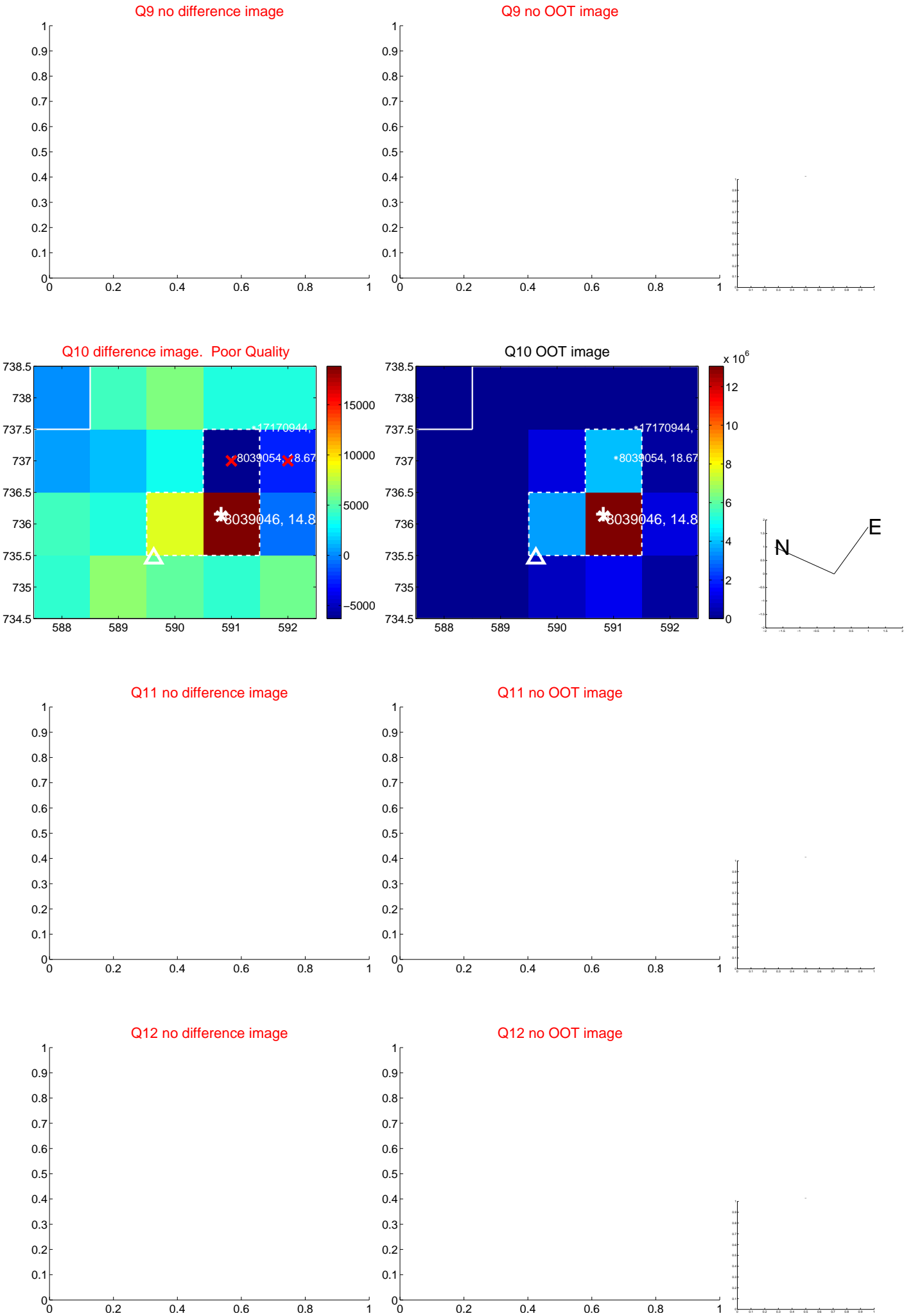
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



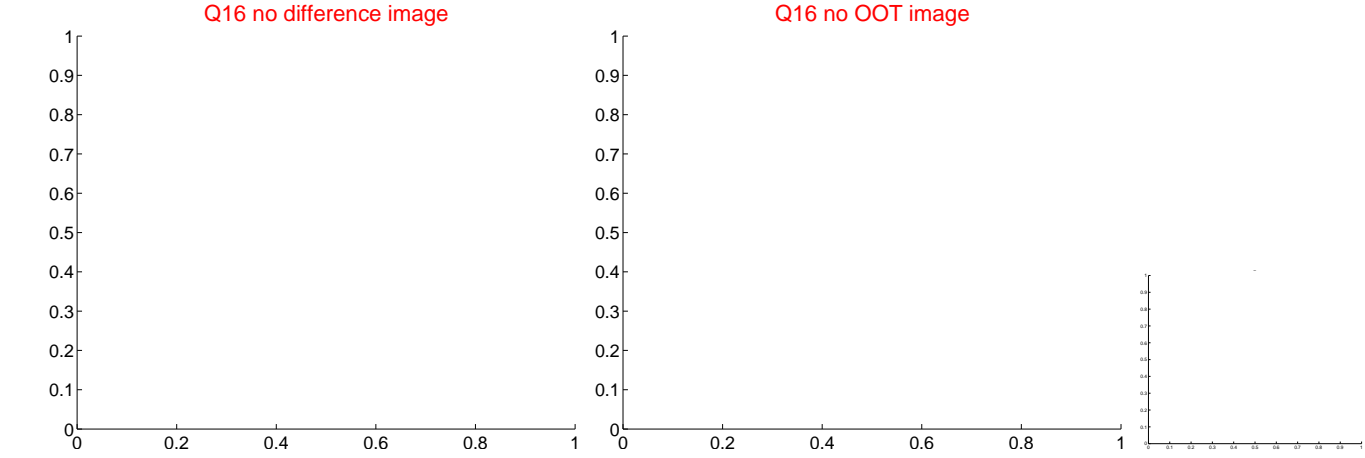
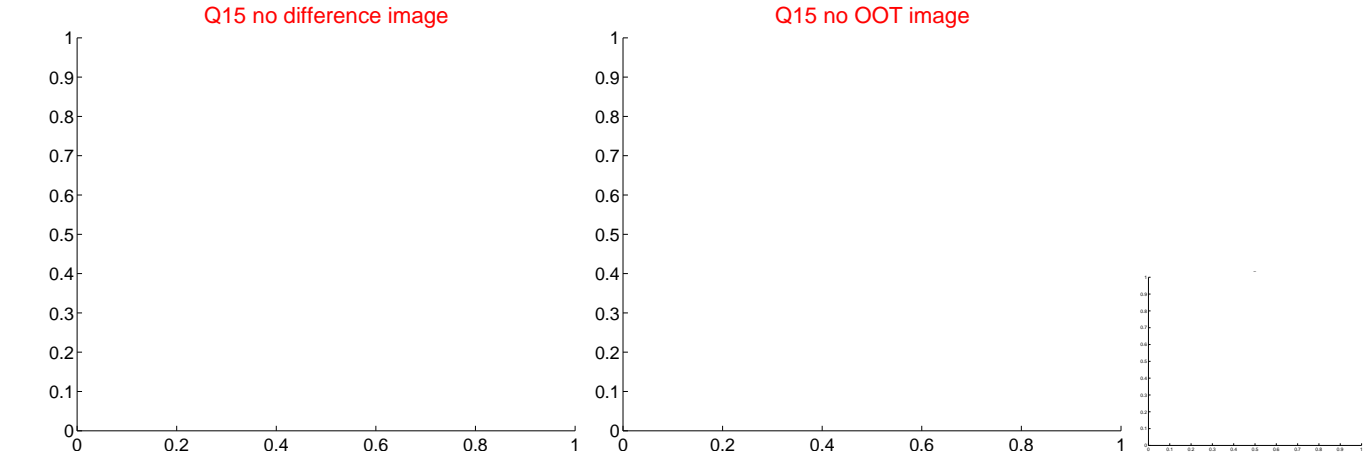
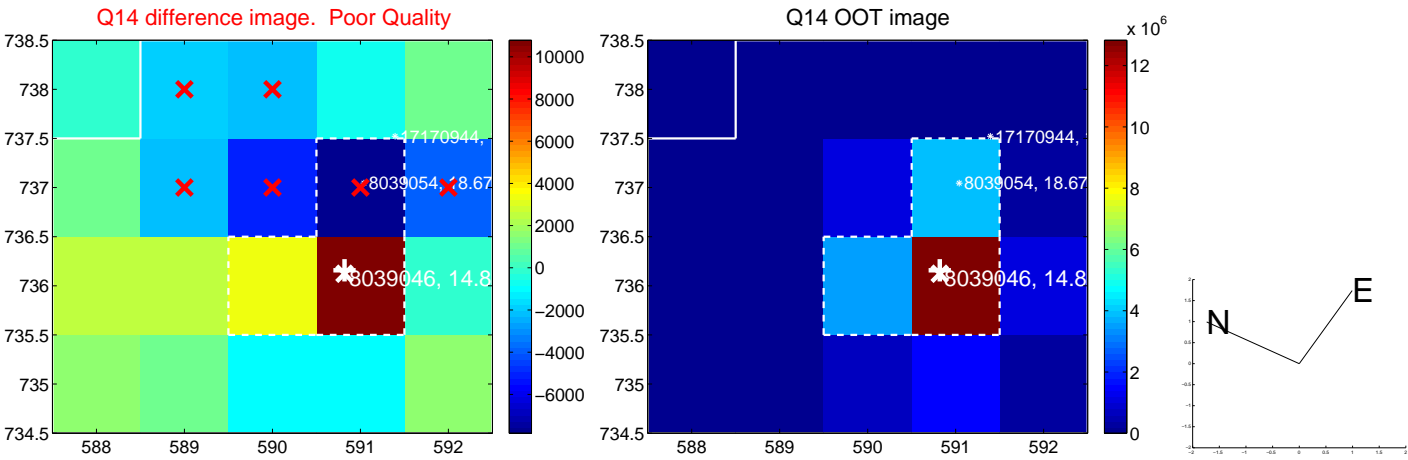
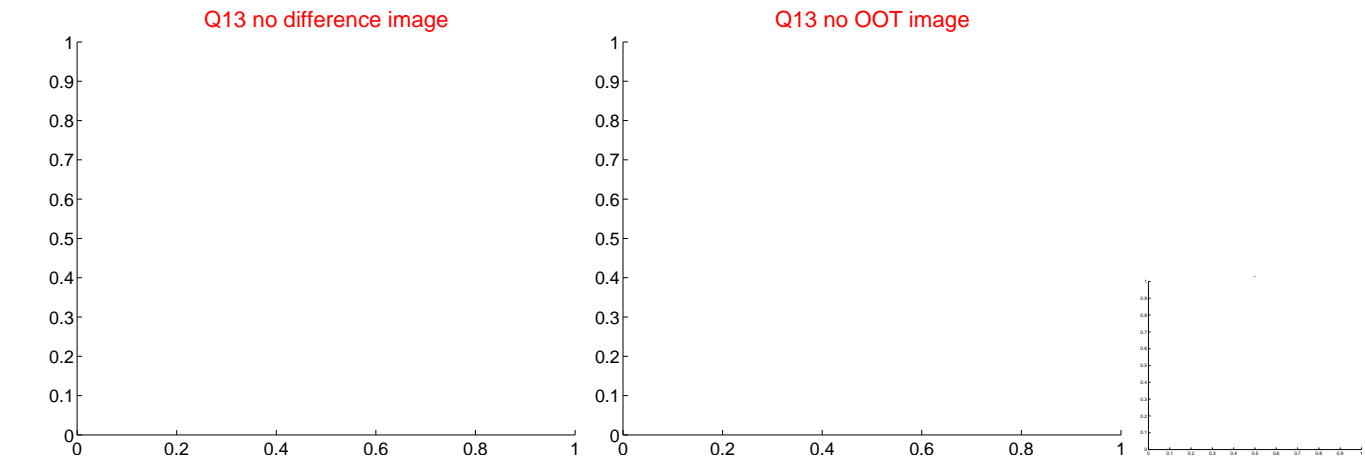
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



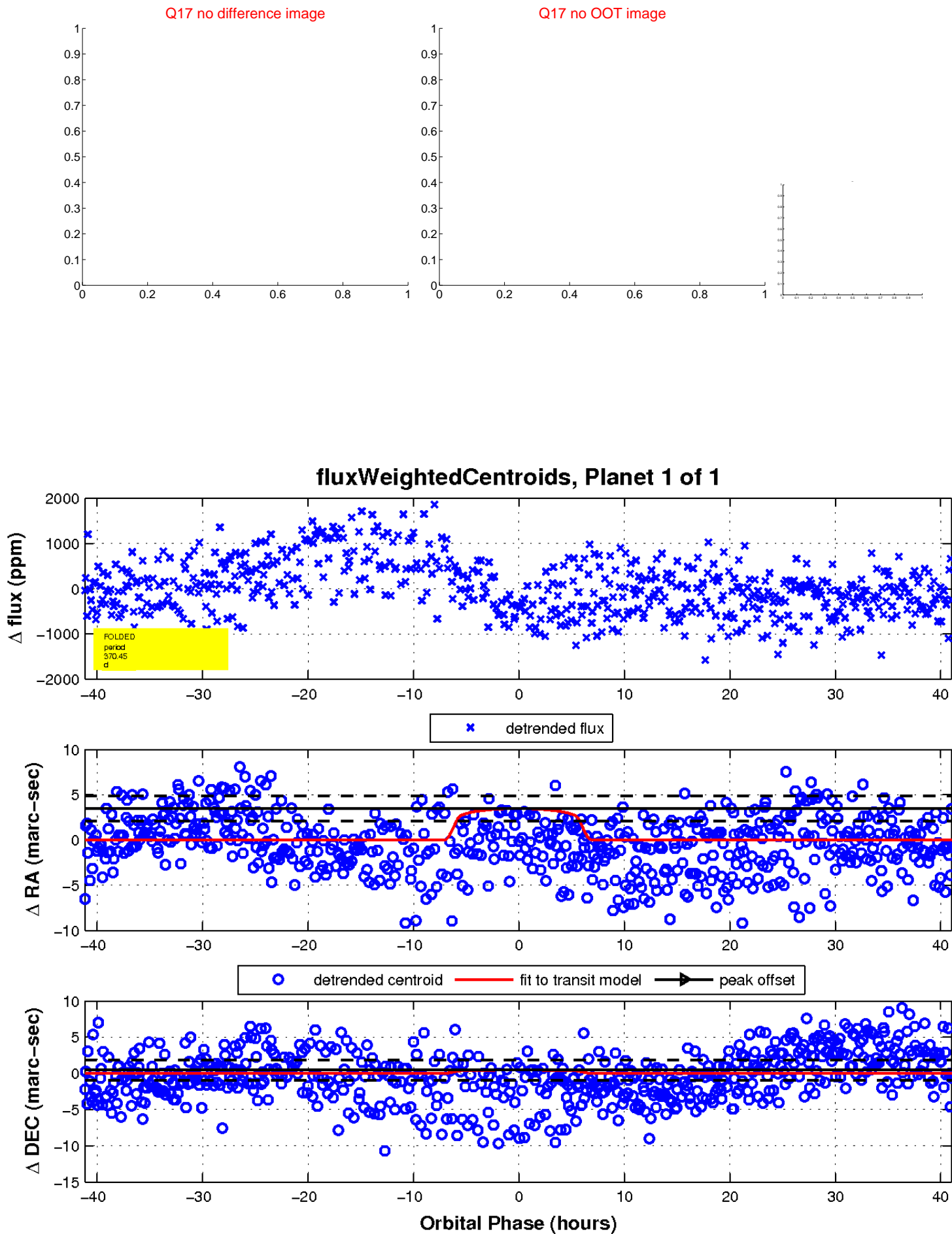
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

