

KIC 008175236

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})
008175236-01	OBS	No	368.870801	235.331789	1672.5	28.114	10.0	10.0	0.84	5700	6.57	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008175236-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_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.

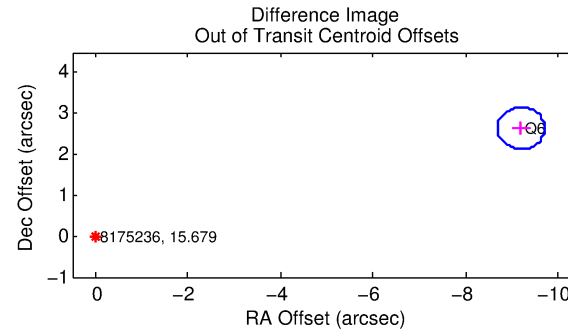
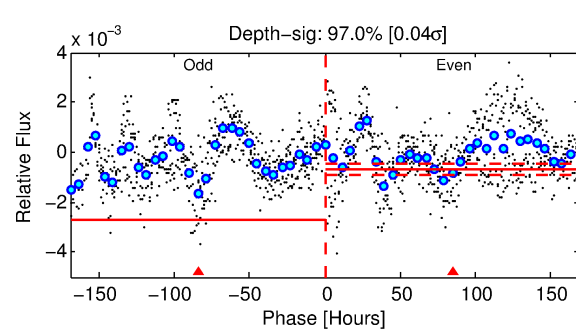
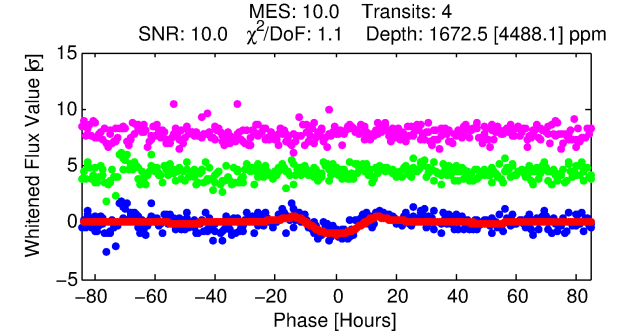
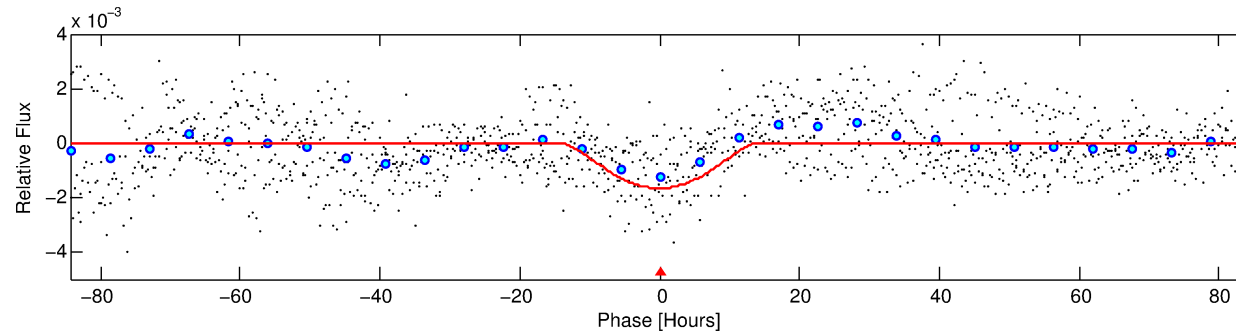
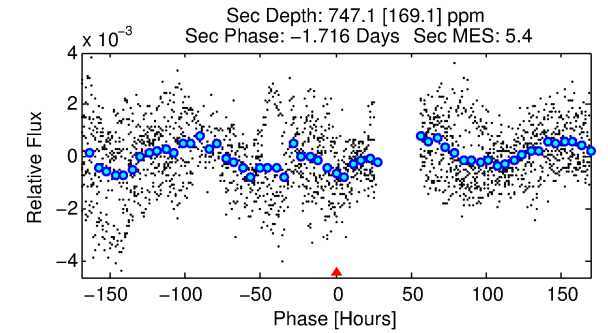
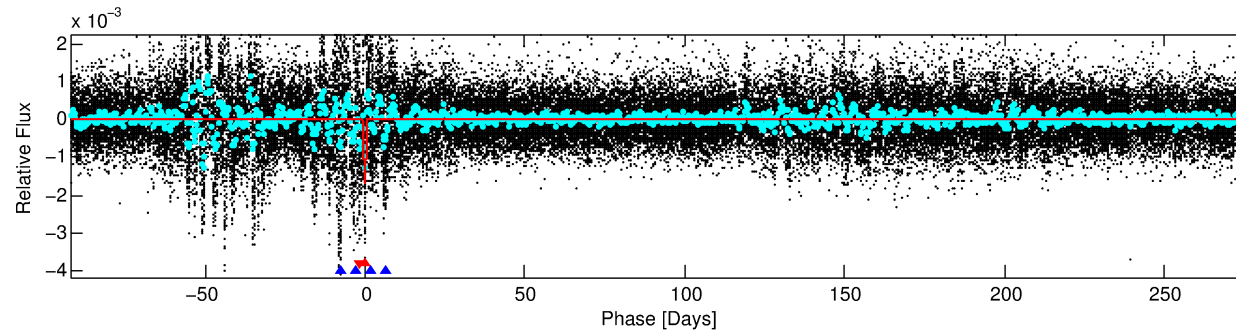
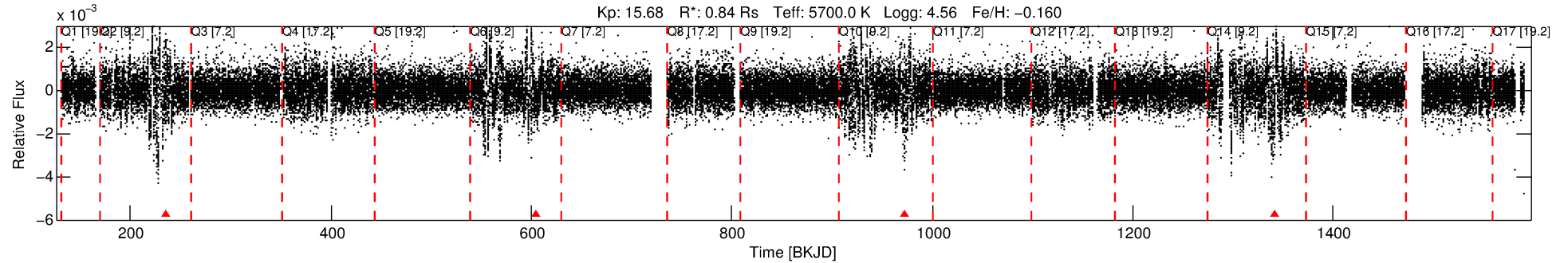
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008175236-01

No Significant Match Found

DV One-Page Summary

KIC: 8175236 Candidate: 1 of 2 Period: 368.871 d



DV Fit Results:

Period = 368.87080 [0.02437] d
Epoch = 235.3318 [0.0439] BKJD
Rp/R* = 0.0719 [0.1548]
a/R* = 38.70 [18.22]
b = 1.00 [0.09]
Seff = 0.69 [0.25]
Teq = 232 [21] K
Rp = 6.57 [14.27] Re
a = 0.9827 [0.2290] AU
Ag = 9185.46 [39727.43] [0.23σ]
Teff = 3515 [3790] K [0.87σ]

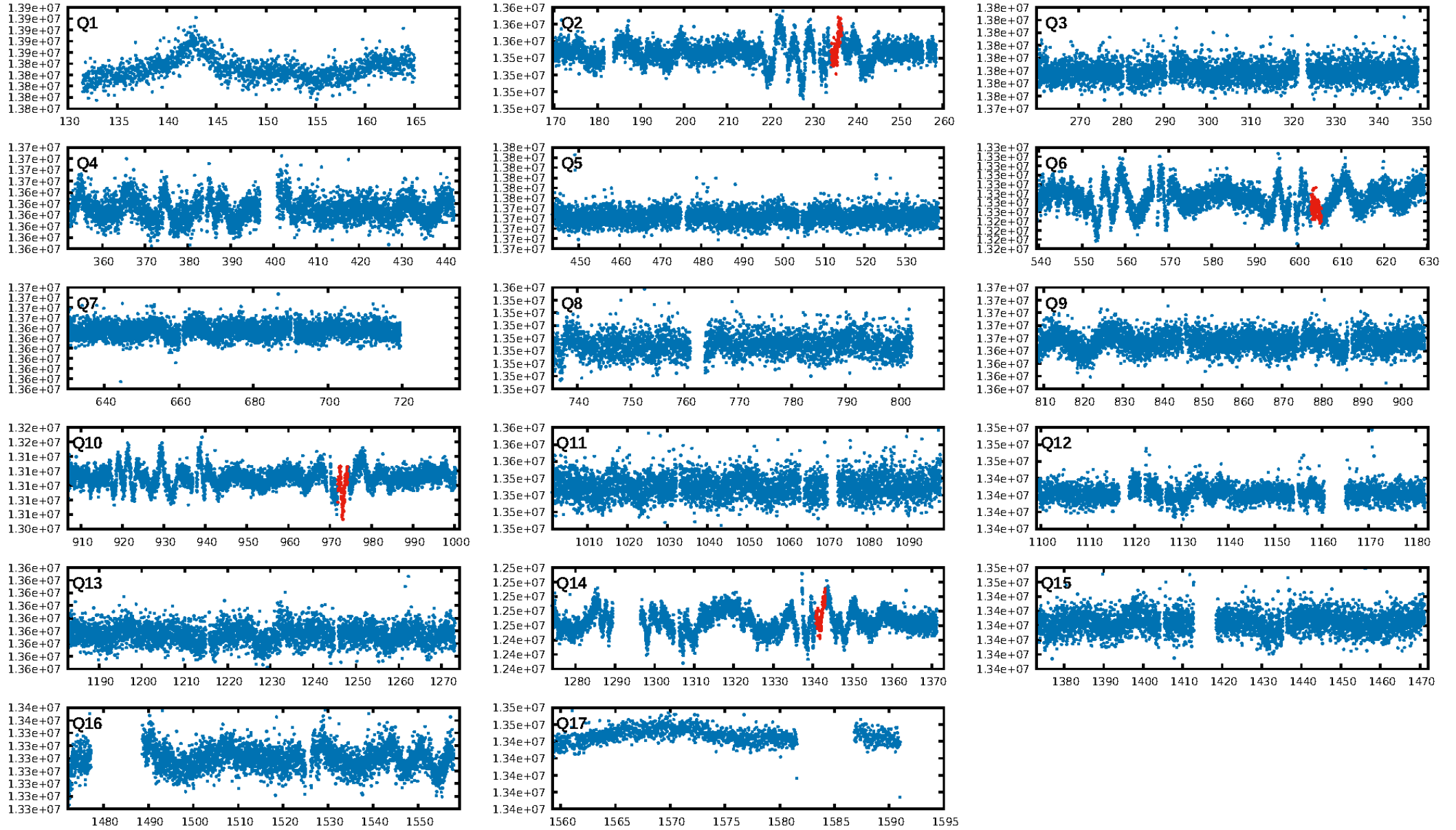
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.61σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 99.7%
Bootstrap-pfa: 9.48e-12
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.8129
Centroid-sig: 53.5%
Centroid-so: 2.066 arcsec [0.86σ]
OotOffset-rm: 9.569 arcsec [56.23σ]
KicOffset-rm: 9.712 arcsec [56.96σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.75 [3/4]

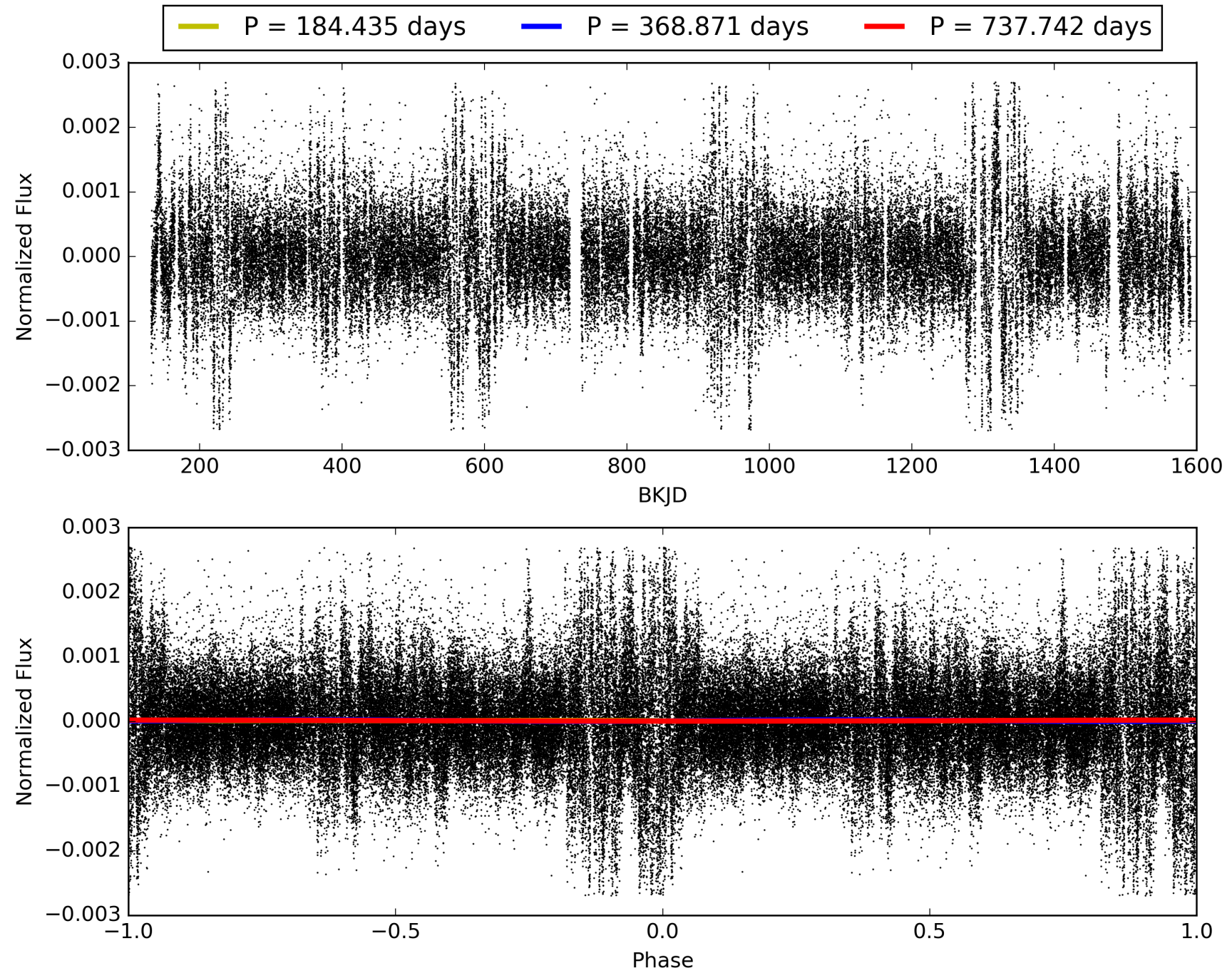
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:49:54 Z

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

TCE 008175236-01, PDC Light Curves

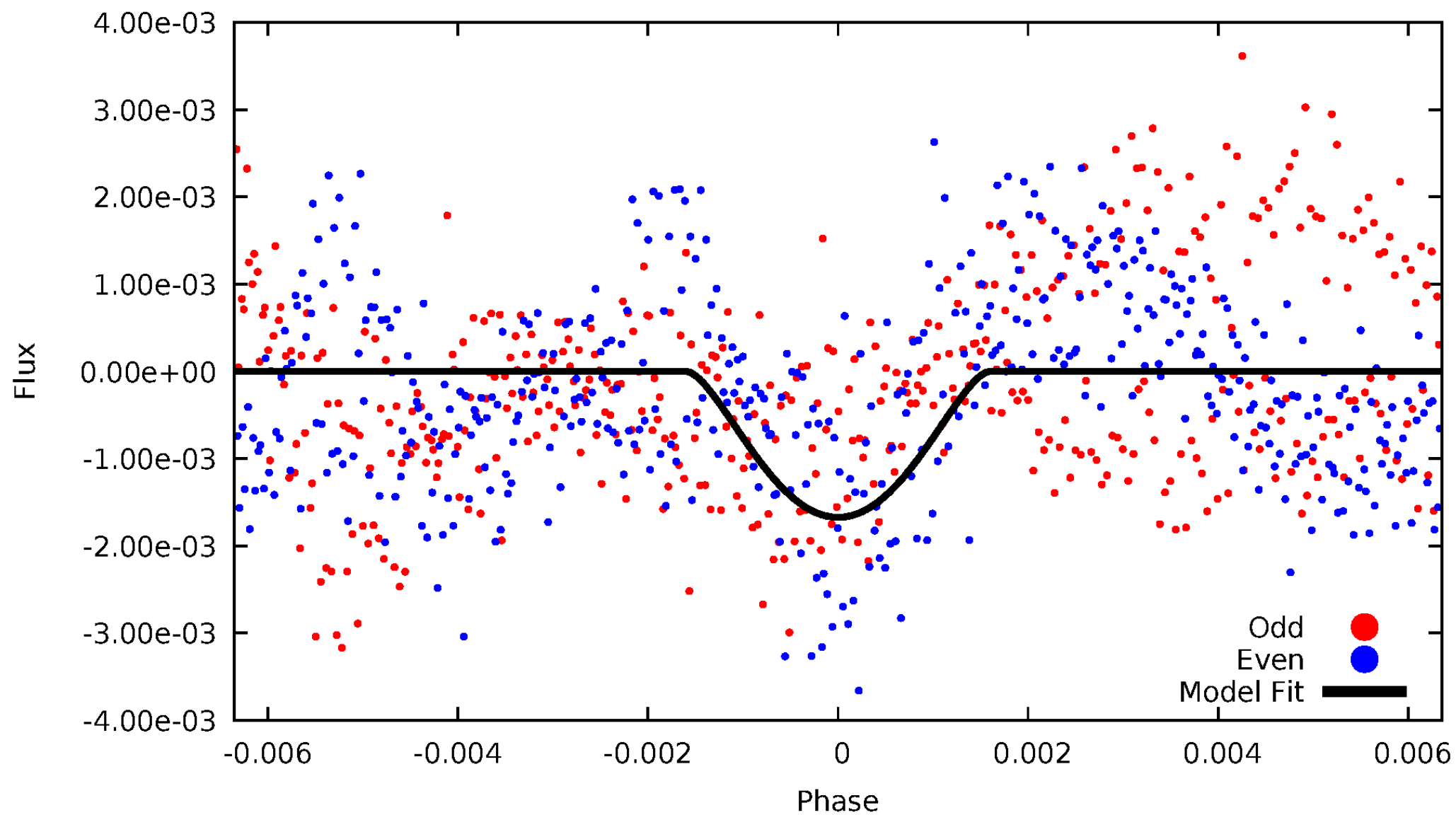


TCE 008175236-01



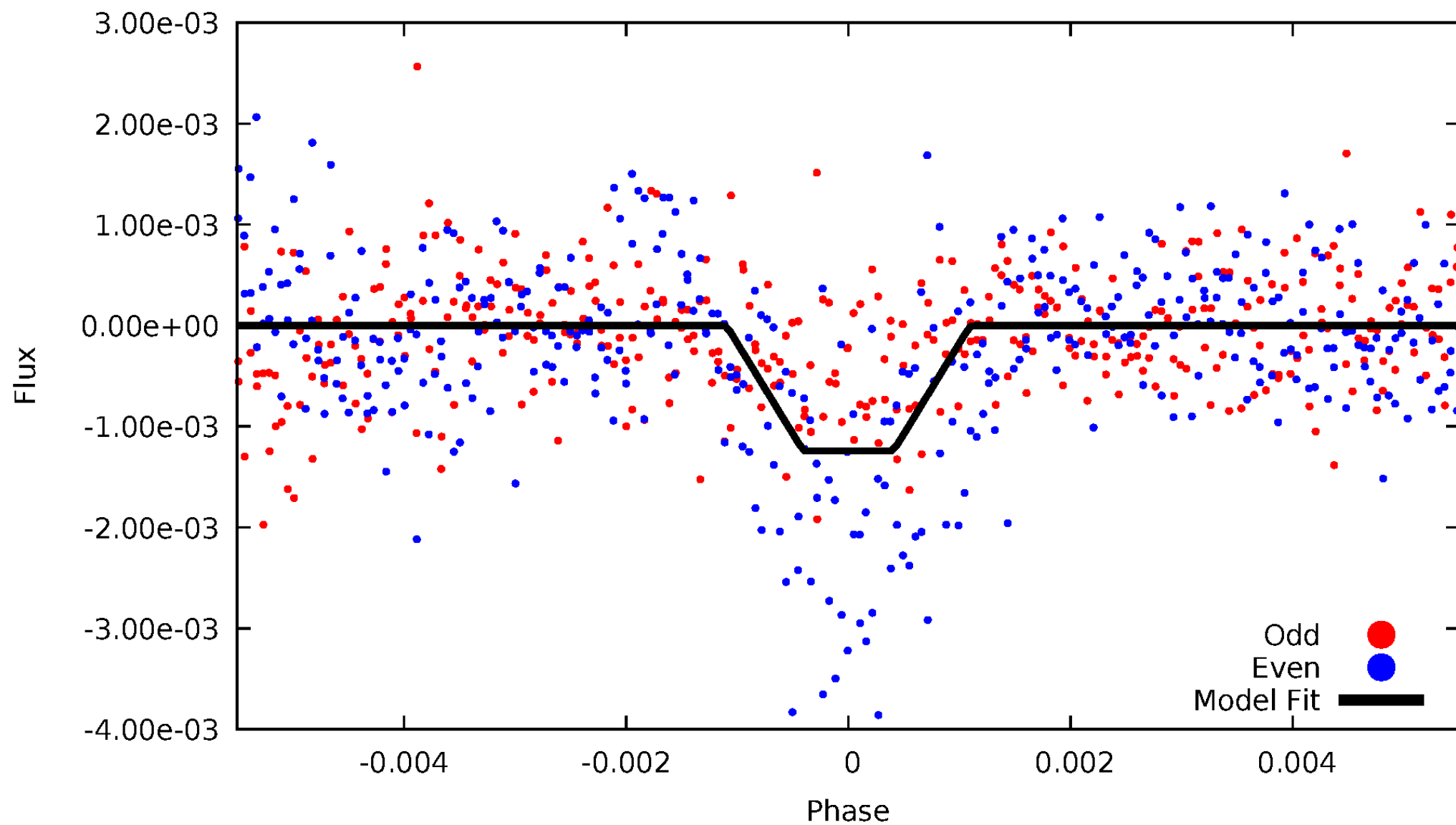
DV Odd/Even

TCE 008175236-01



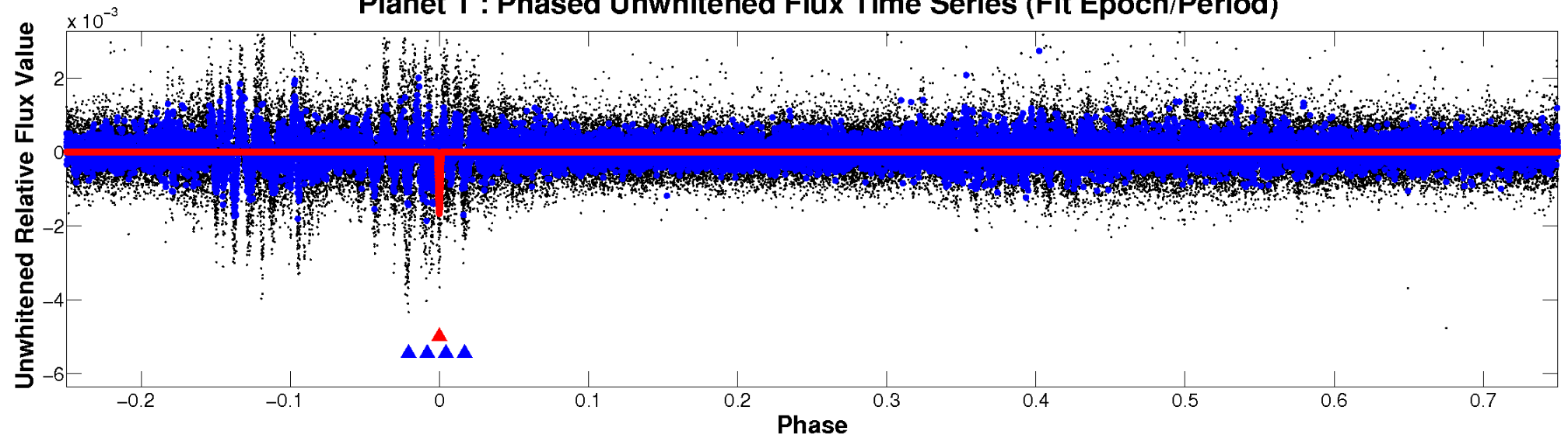
ALT Odd/Even

TCE 008175236-01

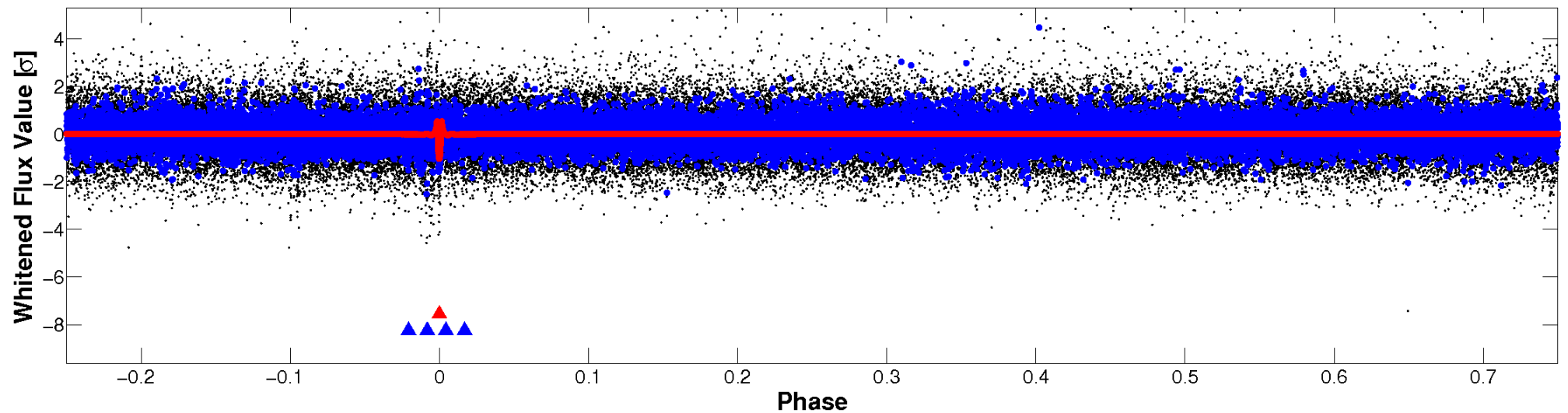


Non-Whitened Vs. Whitened Light Curve

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

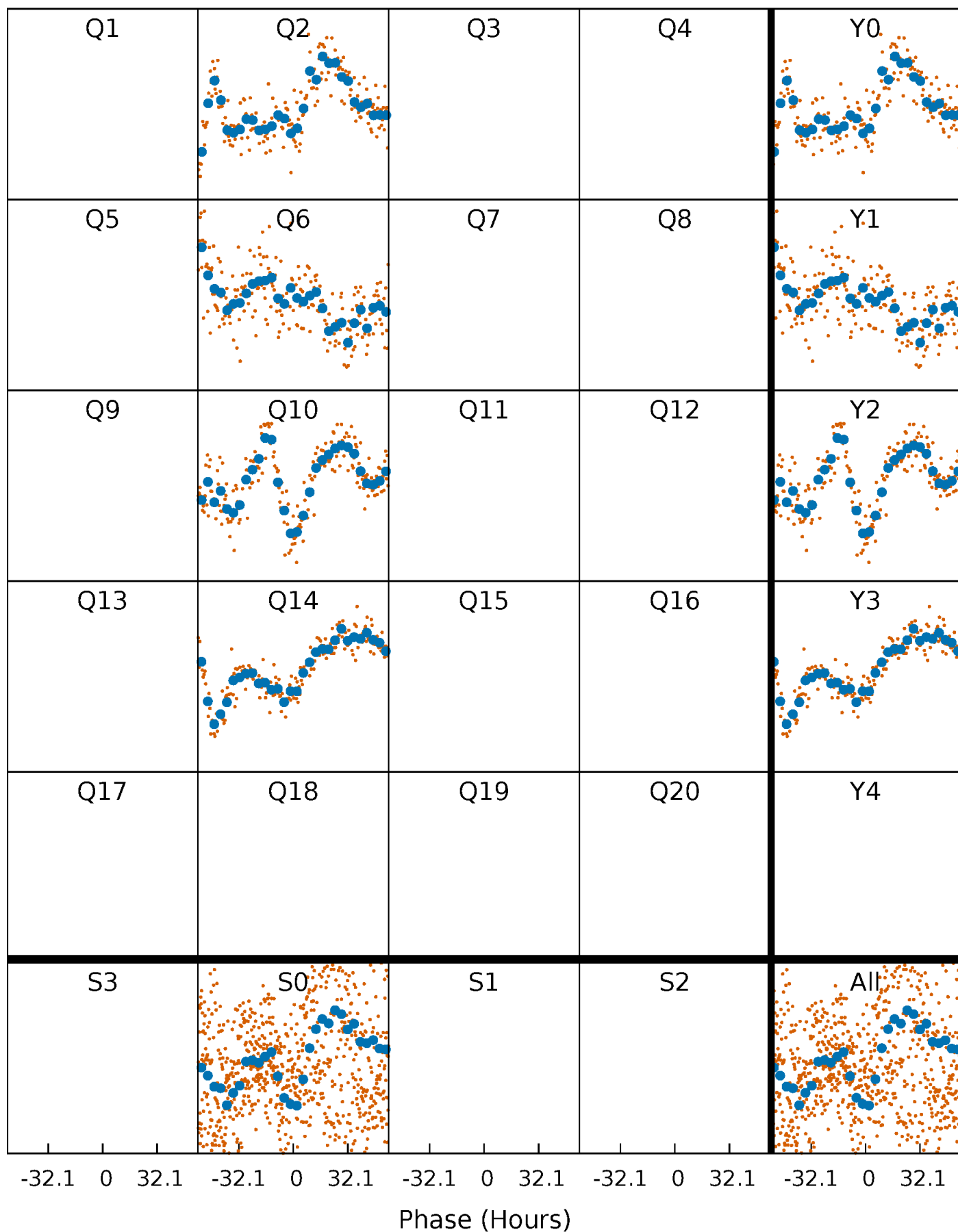


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



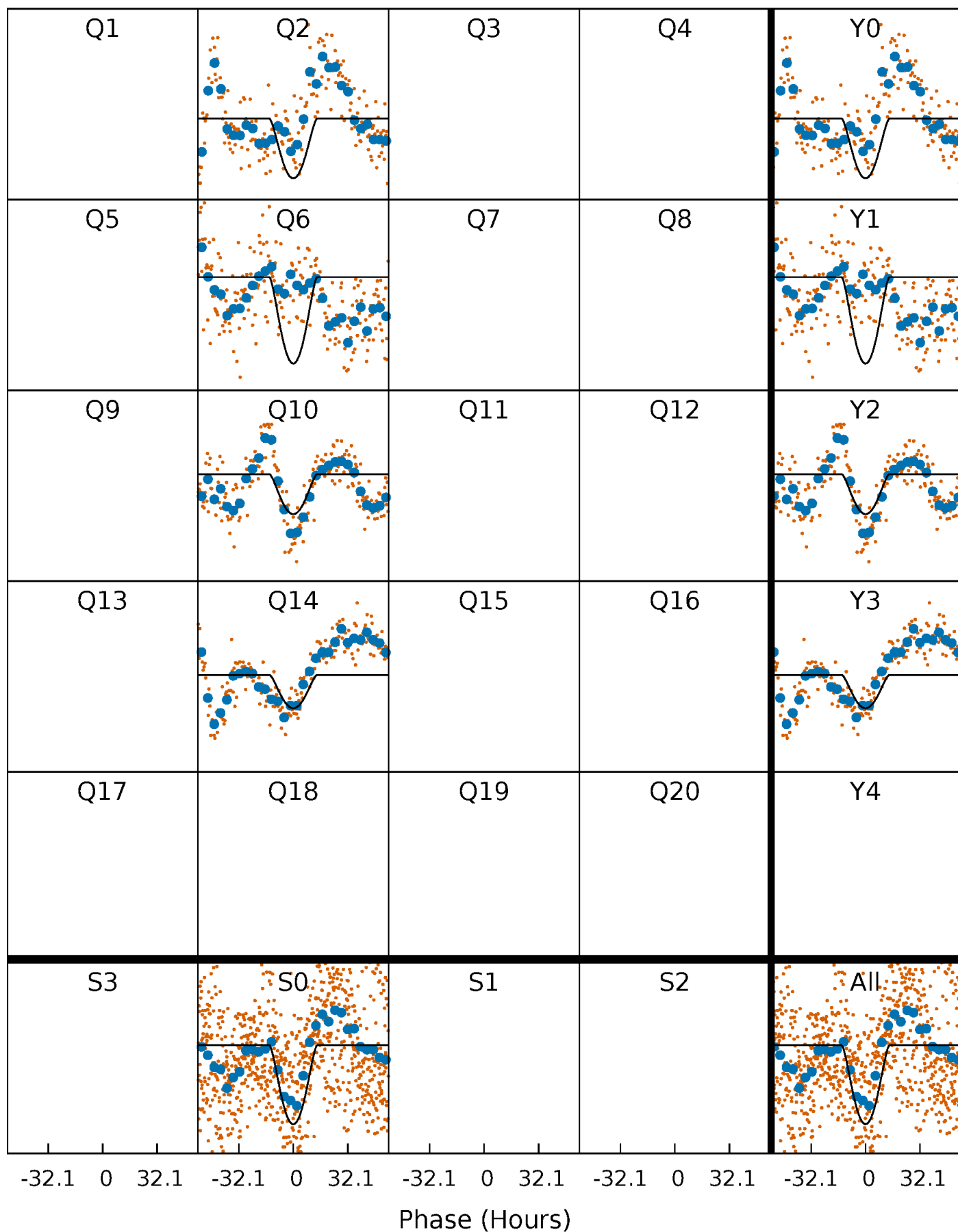
PDC Quarter-Phased Transit Curves

TCE 008175236-01 P=368.870801 Days $T_0=235.331789$ (BKJD)



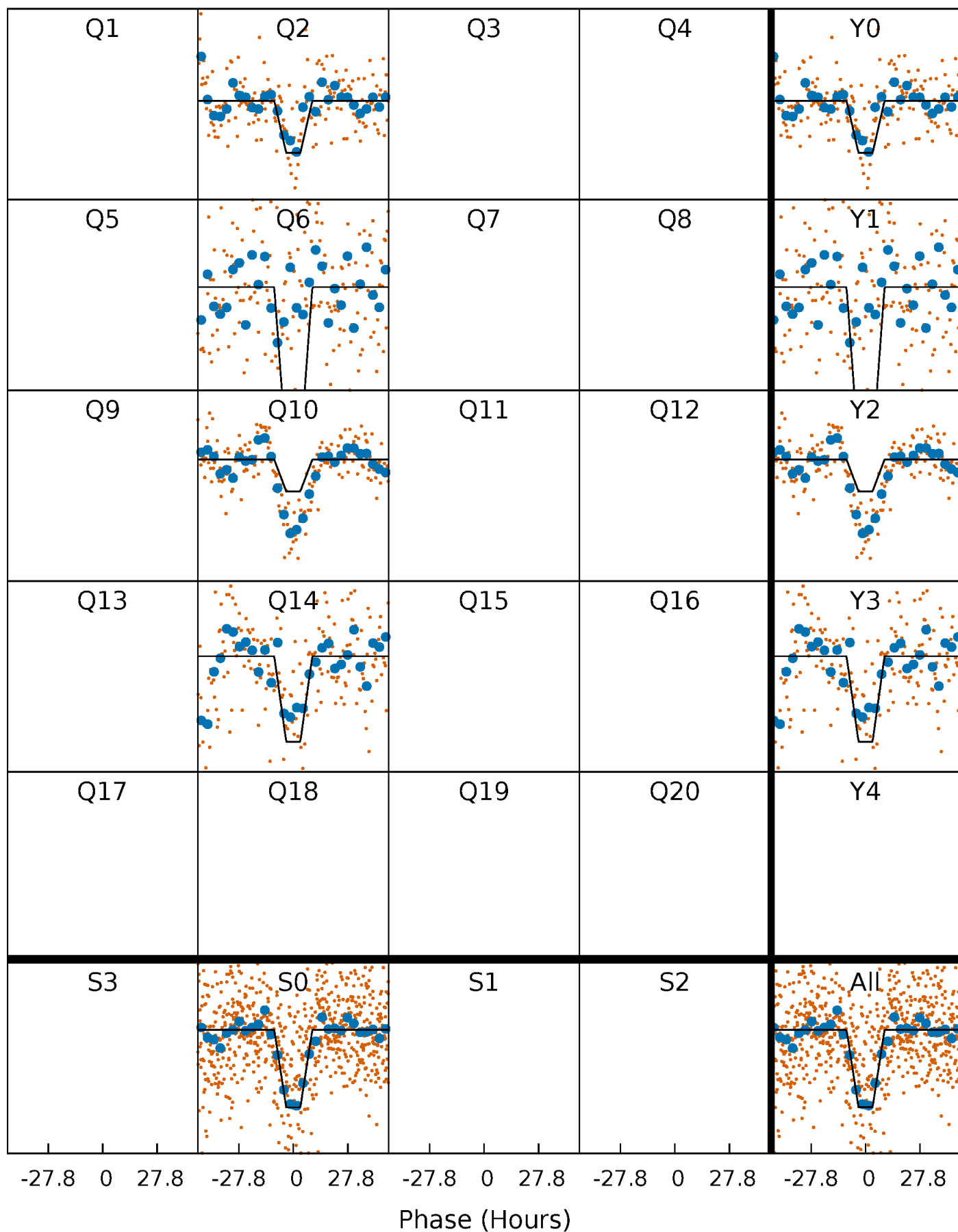
DV Quarter-Phased Transit Curves

TCE 008175236-01 P=368.870801 Days $T_0=235.331789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

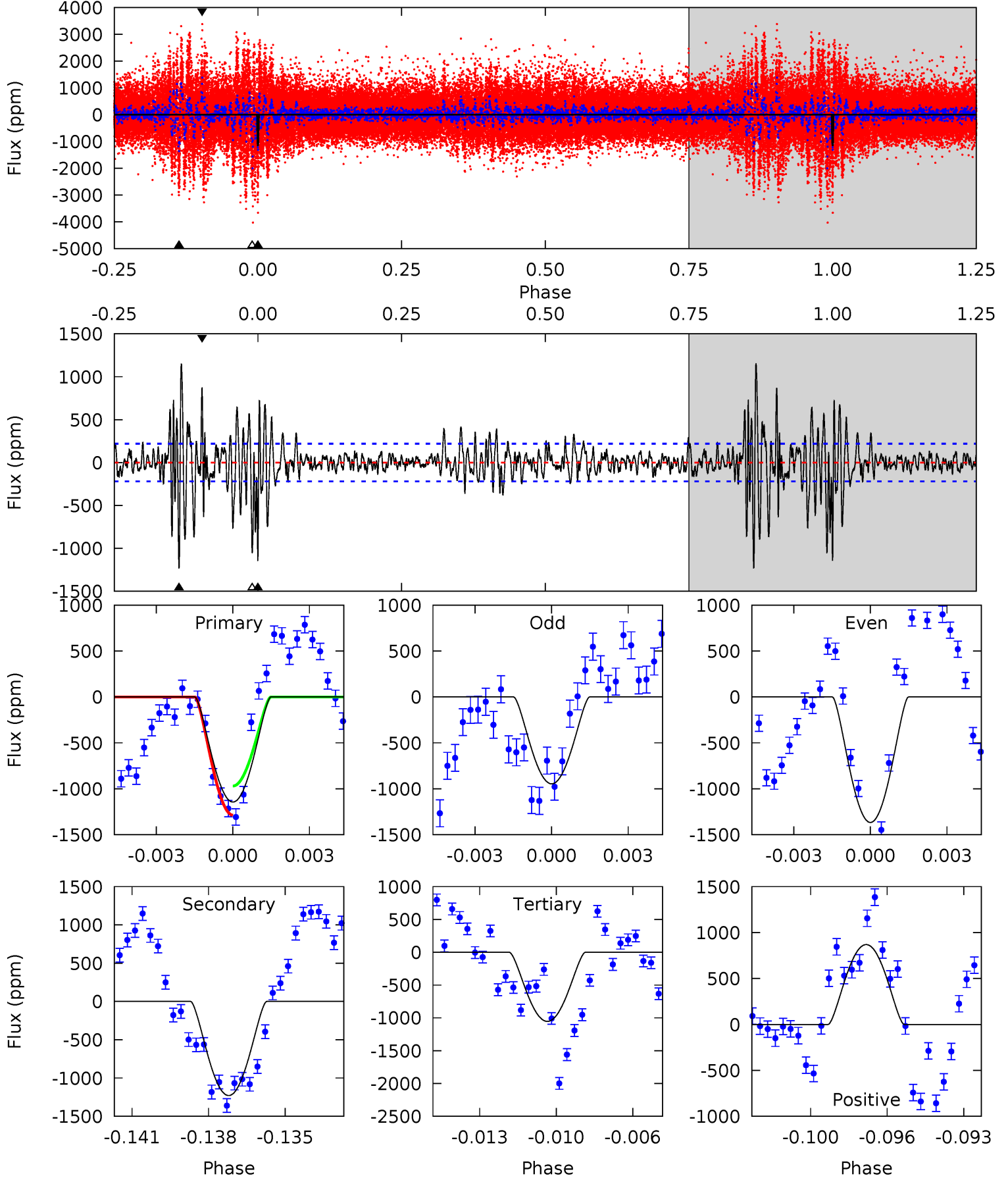
TCE 008175236-01 P=368.805324 Days $T_0=235.443087$ (BKJD)



DV Model-Shift Uniqueness Test

008175236-01, P = 368.870801 Days, E = 235.331789 Days

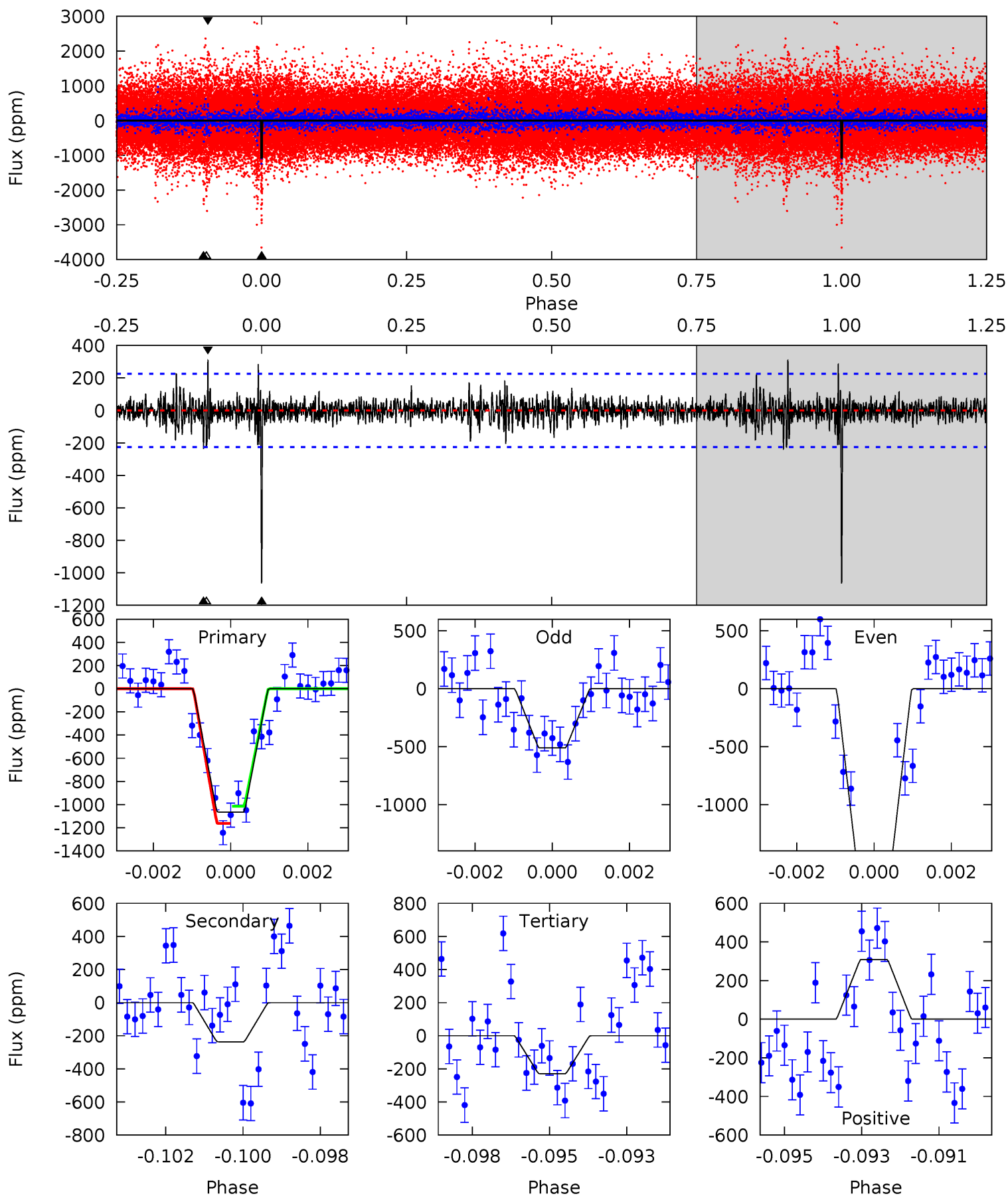
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	29.4	25.2	20.8	5.24	2.95	4.64	2.17	6.59	4.20	8.62	4.97	1.09	0.48	3.80



Alt Model-Shift Uniqueness Test

008175236-01, P = 368.805324 Days, E = 235.443087 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	5.56	5.39	7.26	5.30	3.05	1.17	19.6	17.8	0.18	-1.69	15.1	1.36	0.22	1.76



Stellar Parameters For KIC 008175236

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5700^{+152}_{-169}	$4.560^{+0.034}_{-0.184}$	$-0.160^{+0.300}_{-0.300}$	$0.838^{+0.233}_{-0.078}$	$0.934^{+0.094}_{-0.115}$	$2.236^{+0.421}_{-1.121}$
	+3%/-3%	+1%/-4%	+188%/-188%	+28%/-9%	+10%/-12%	+19%/-50%
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 008175236-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1229 ± 42	$14.08^{+12.31}_{-9.76}$	332^{+21}_{-15}	3348^{+1792}_{-543}	3195^{+32815}_{-2273}
Alt.	-237 ± 43	$11.59^{+11.70}_{-8.22}$	332^{+22}_{-15}	2777^{+1327}_{-432}	932^{+10013}_{-701}

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 $A_{obs} \gg 1.0$

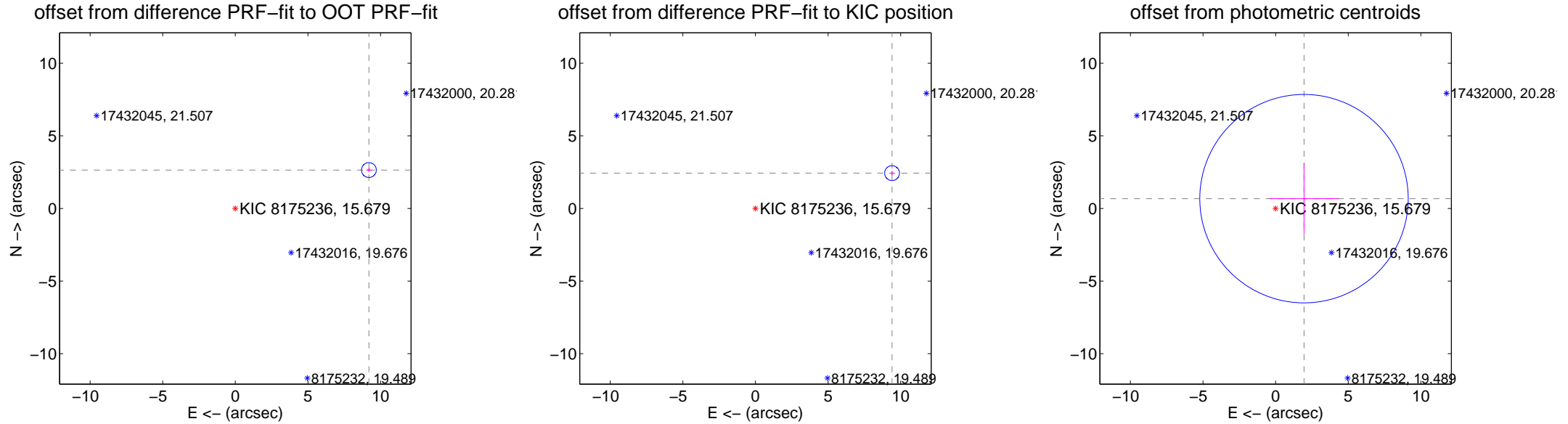
DV Centroid Data

Supplemental centroid analysis for 008175236-01. Kepler magnitude: 15.68. Transit SNR 9.96

There are 0 quarters with good PRF difference image offsets

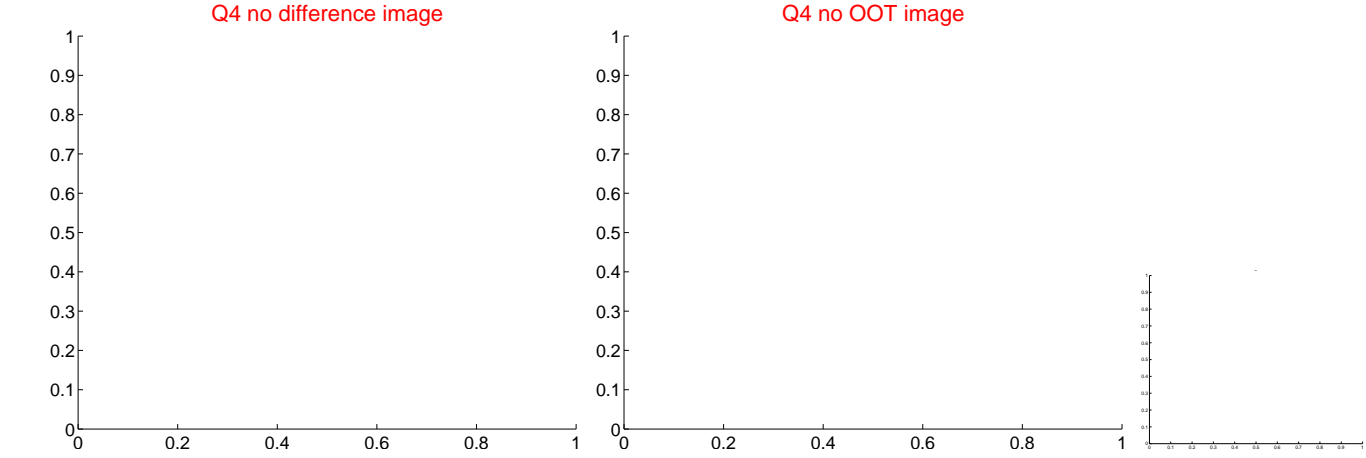
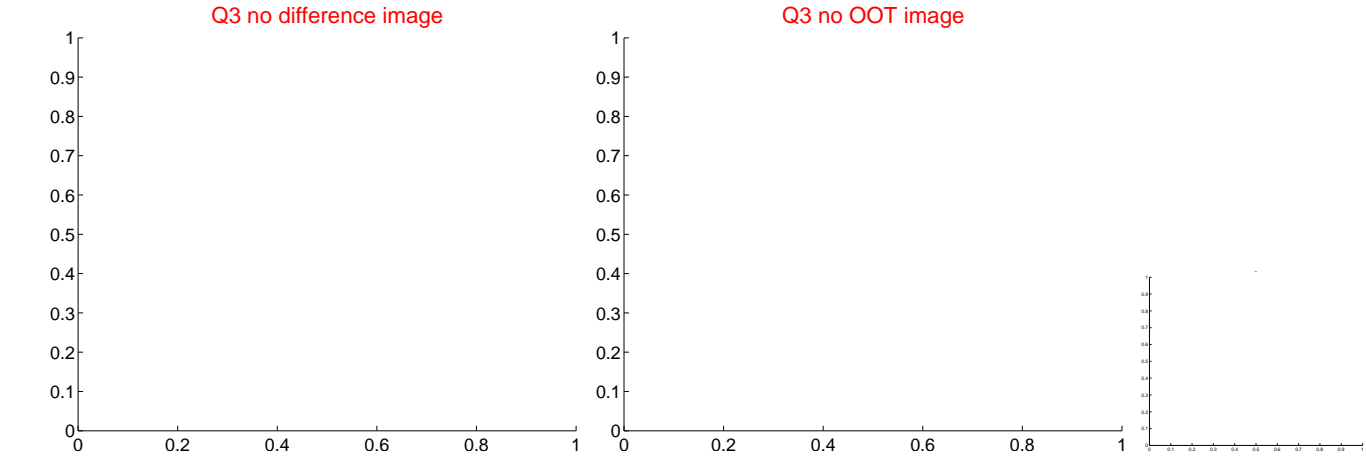
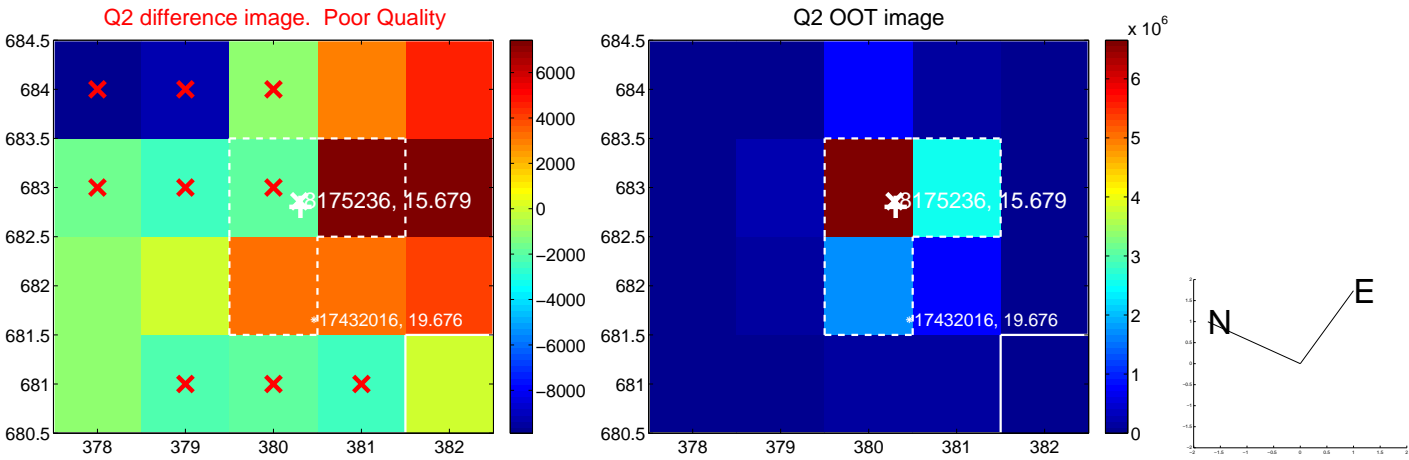
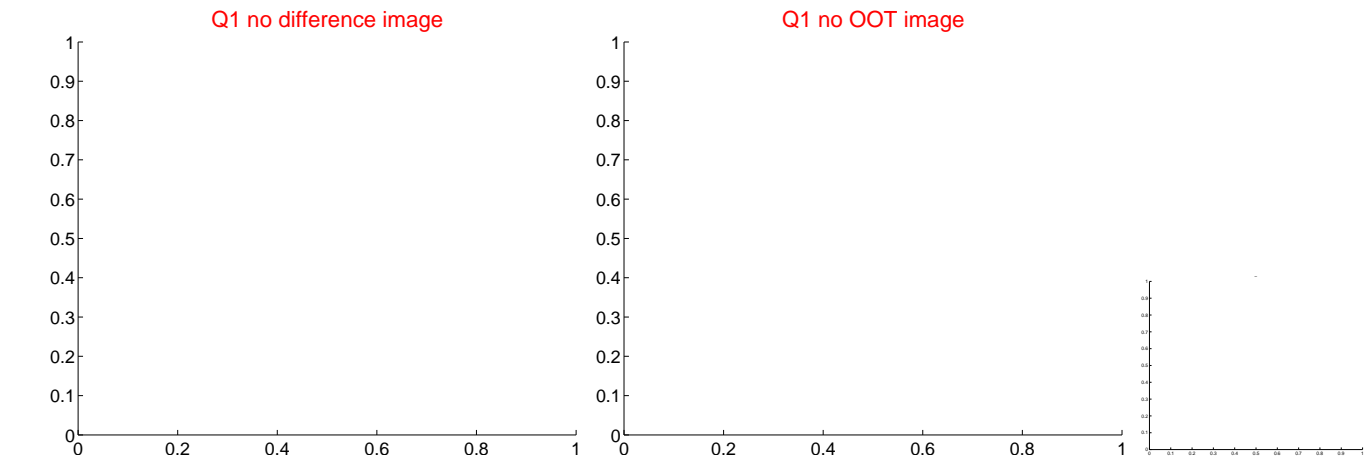
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.569 \pm 0.170	56.23	-9.196 \pm 0.172	2.643 \pm 0.145
PRF-fit source offset from KIC position	9.712 \pm 0.170	56.96	-9.402 \pm 0.172	2.432 \pm 0.145
photometric centroid source offset	2.07 \pm 2.39	0.86	-1.95 \pm 2.38	0.67 \pm 2.45

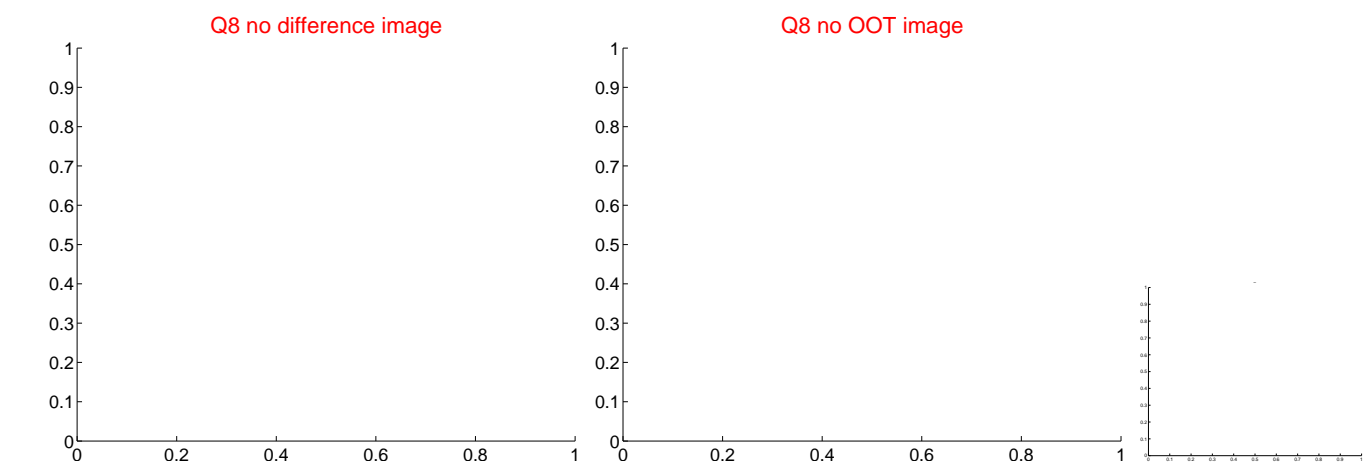
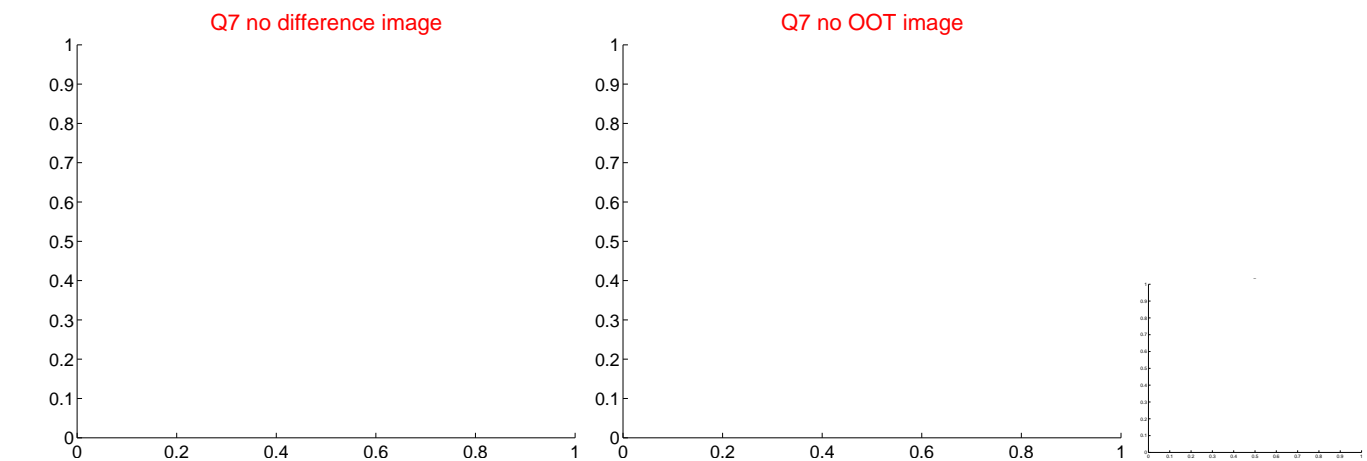
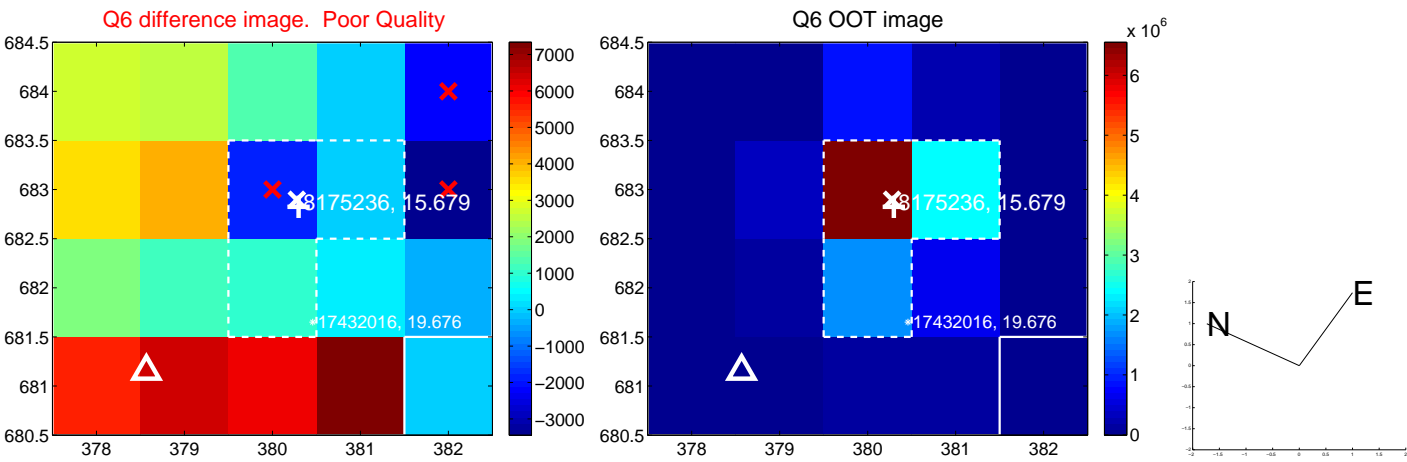
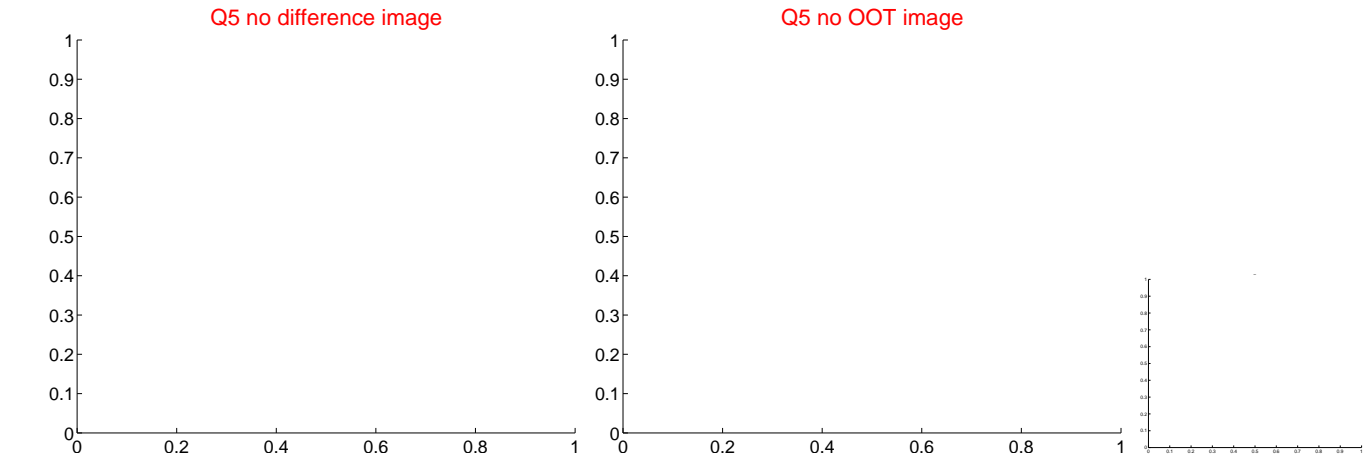


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

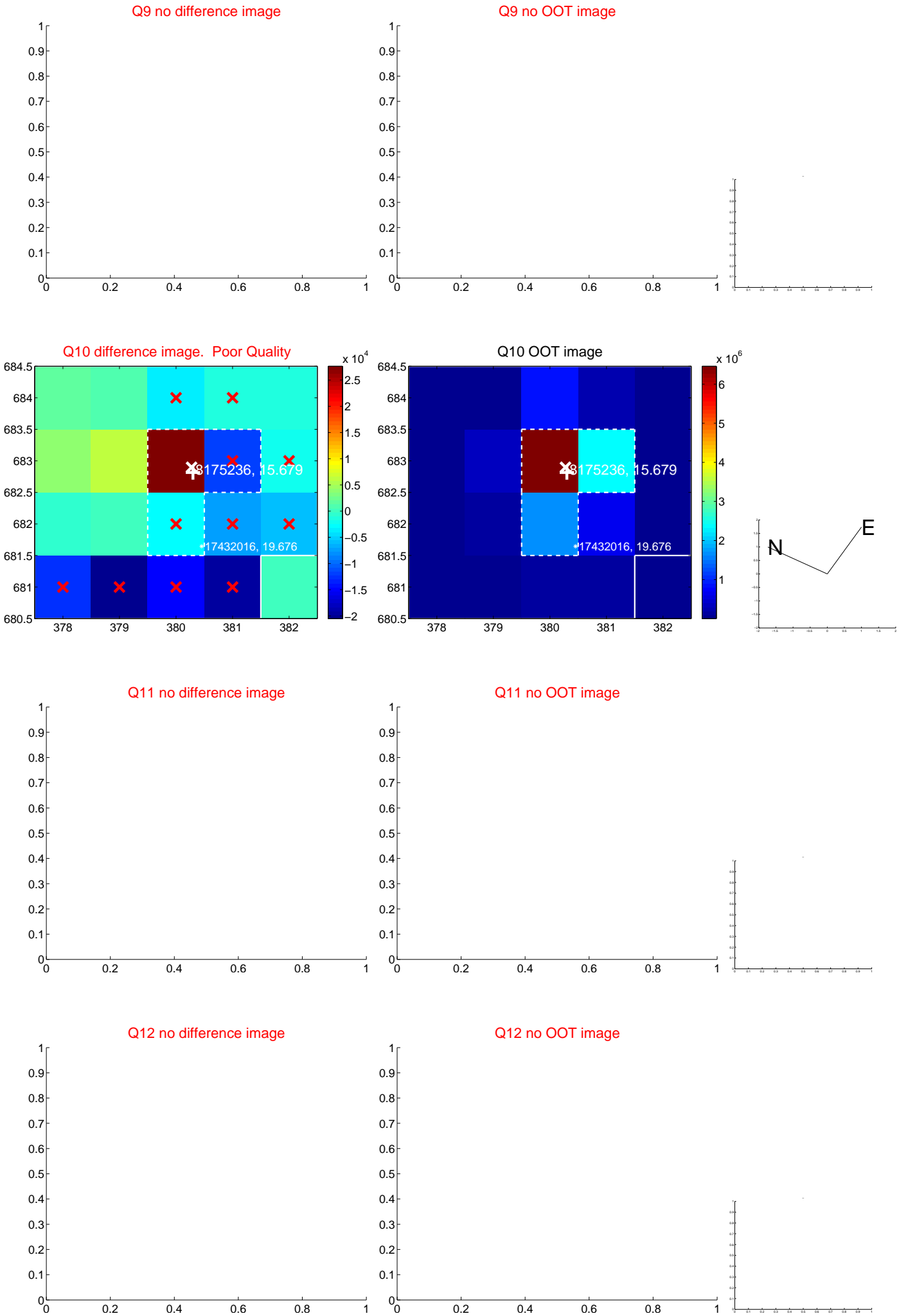
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



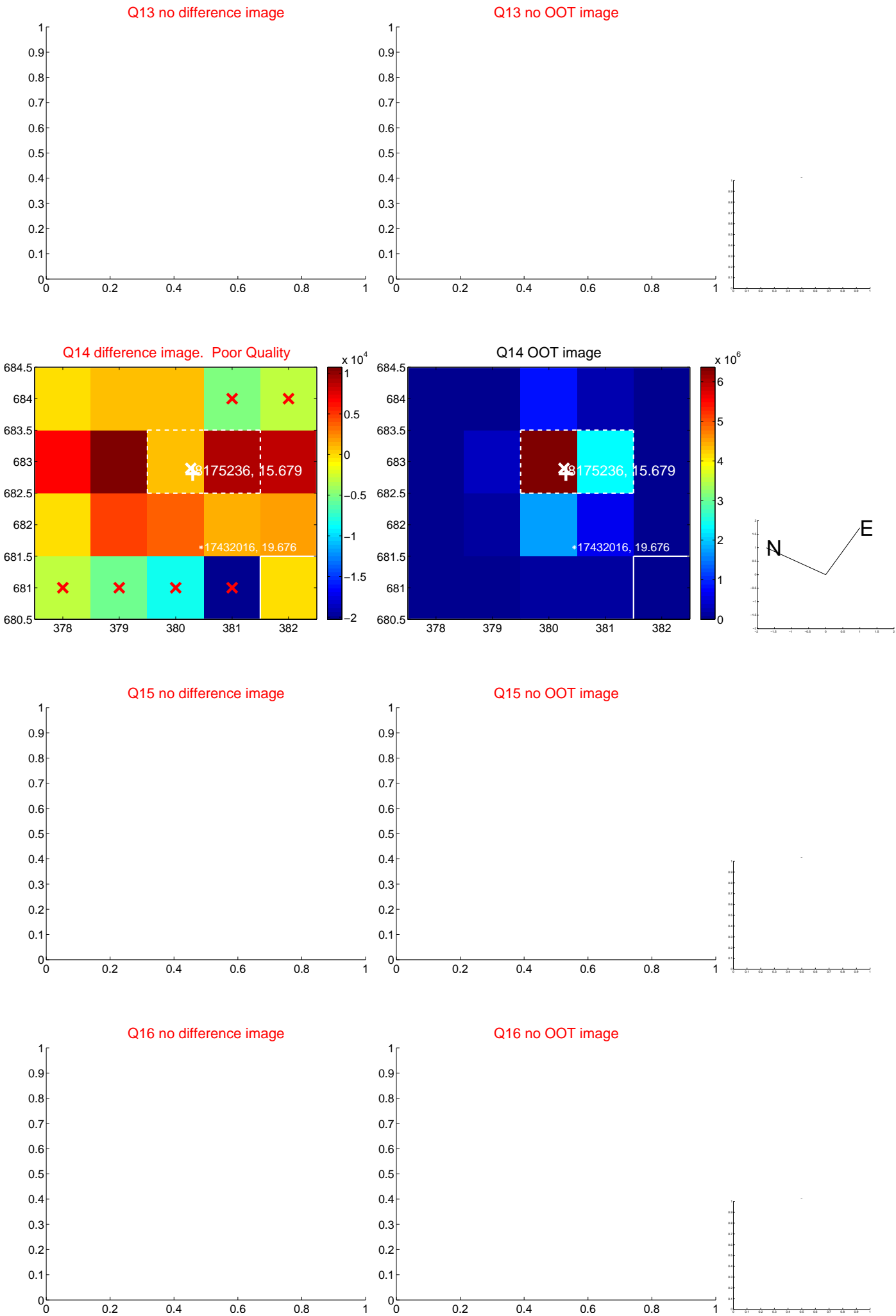
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



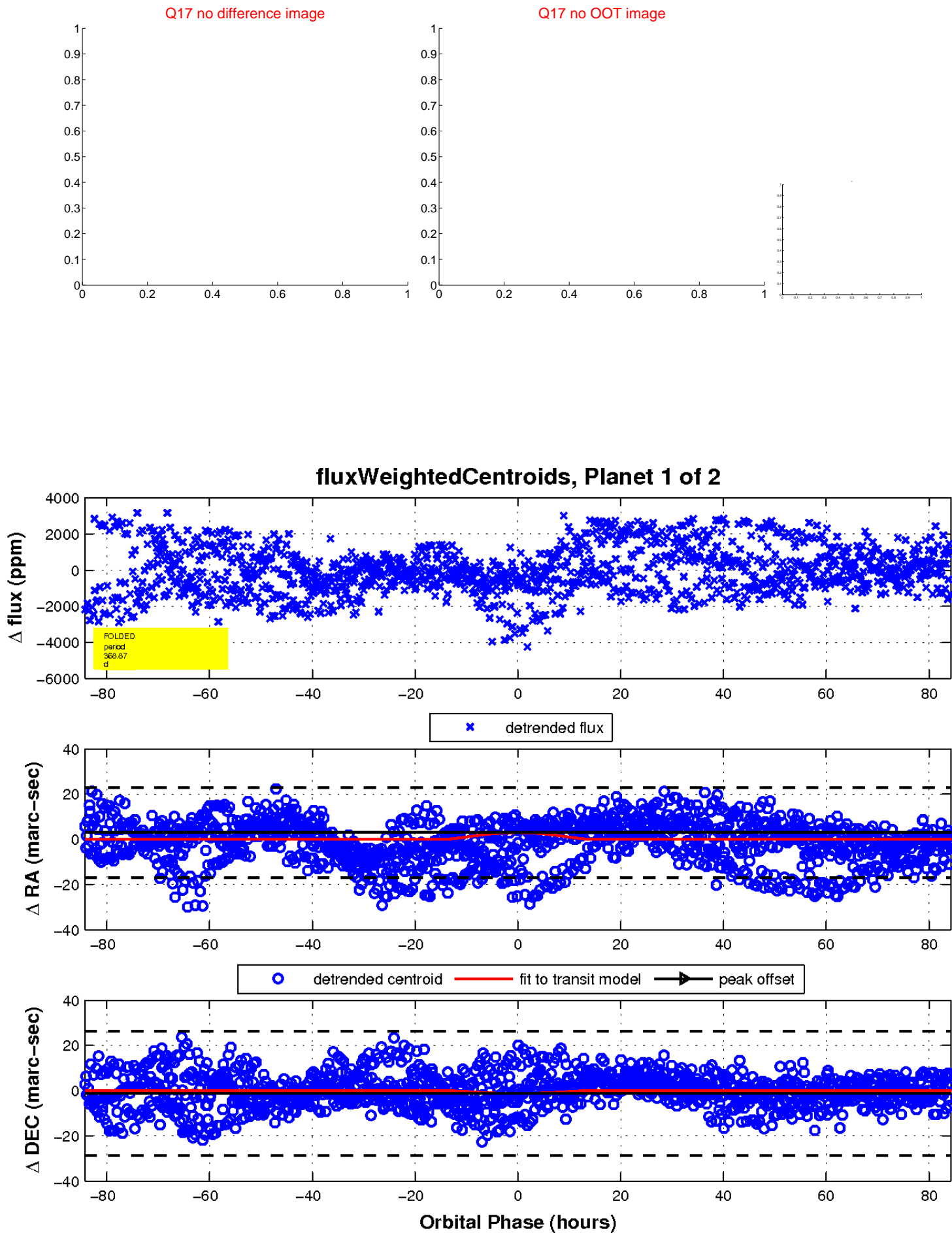
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

