

KIC 006875959

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})
006875959-01	OBS	No	317.323016	416.002068	745.0	23.259	7.5	8.4	1.00	5917	5.29	1.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006875959-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

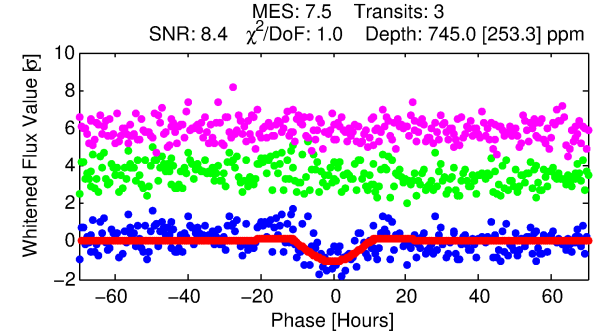
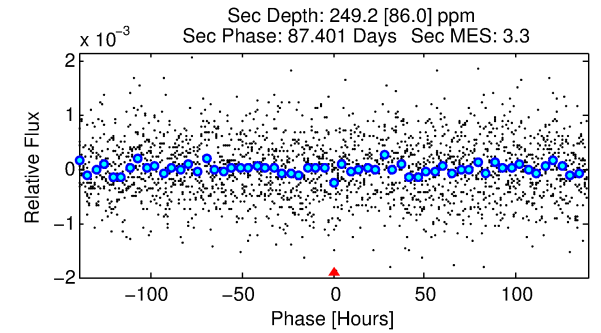
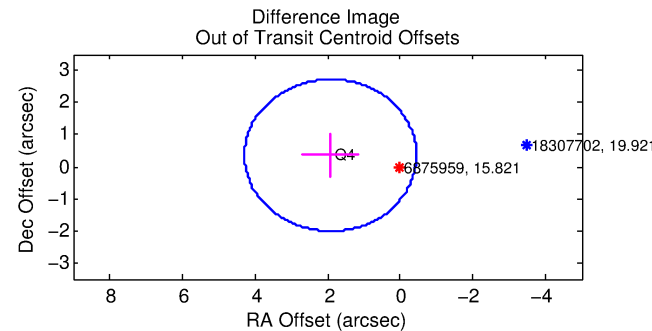
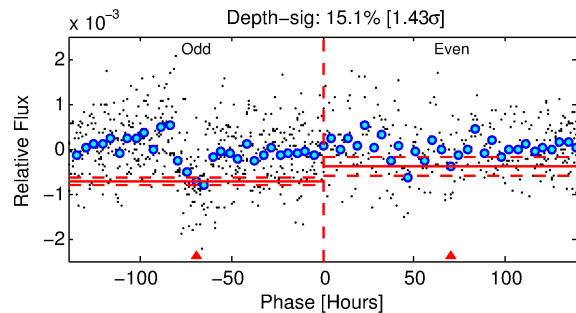
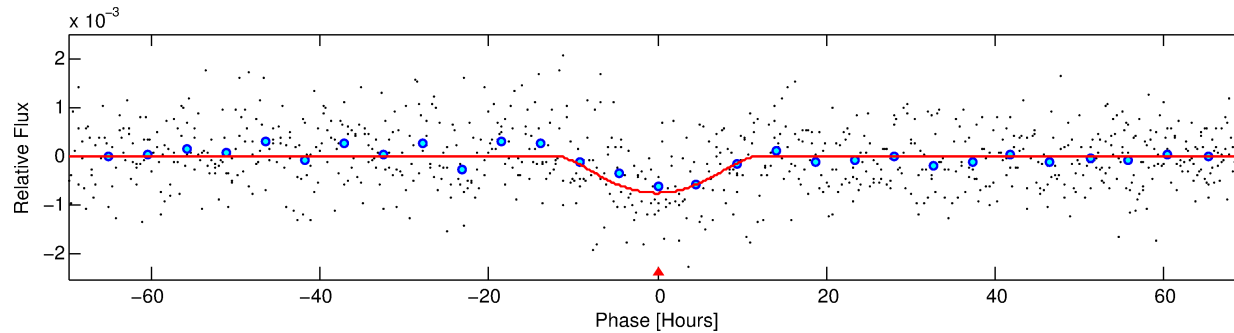
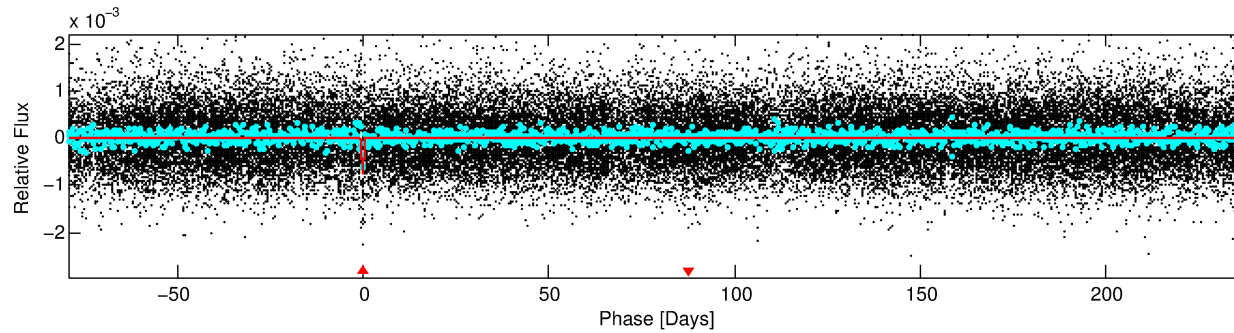
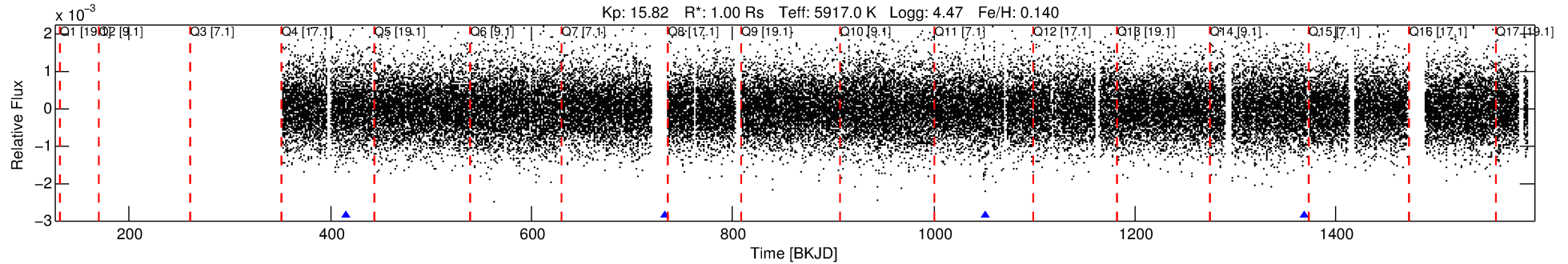
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006875959-01

No Significant Match Found

DV One-Page Summary

KIC: 6875959 Candidate: 1 of 1 Period: 317.323 d



DV Fit Results:

Period = 317.32302 [0.02754] d
Epoch = 416.0021 [0.0541] BKJD
Rp/R* = 0.0485 [0.2299]
a/R* = 33.18 [38.70]
b = 1.00 [0.34]
Seff = 1.25 [0.49]
Teq = 270 [26] K
Rp = 5.29 [25.13] Re
a = 0.9369 [0.2289] AU
Ag = 4303.32 [40880.11] [0.11 σ]
Teffp = 3377 [8016] K [0.39 σ]

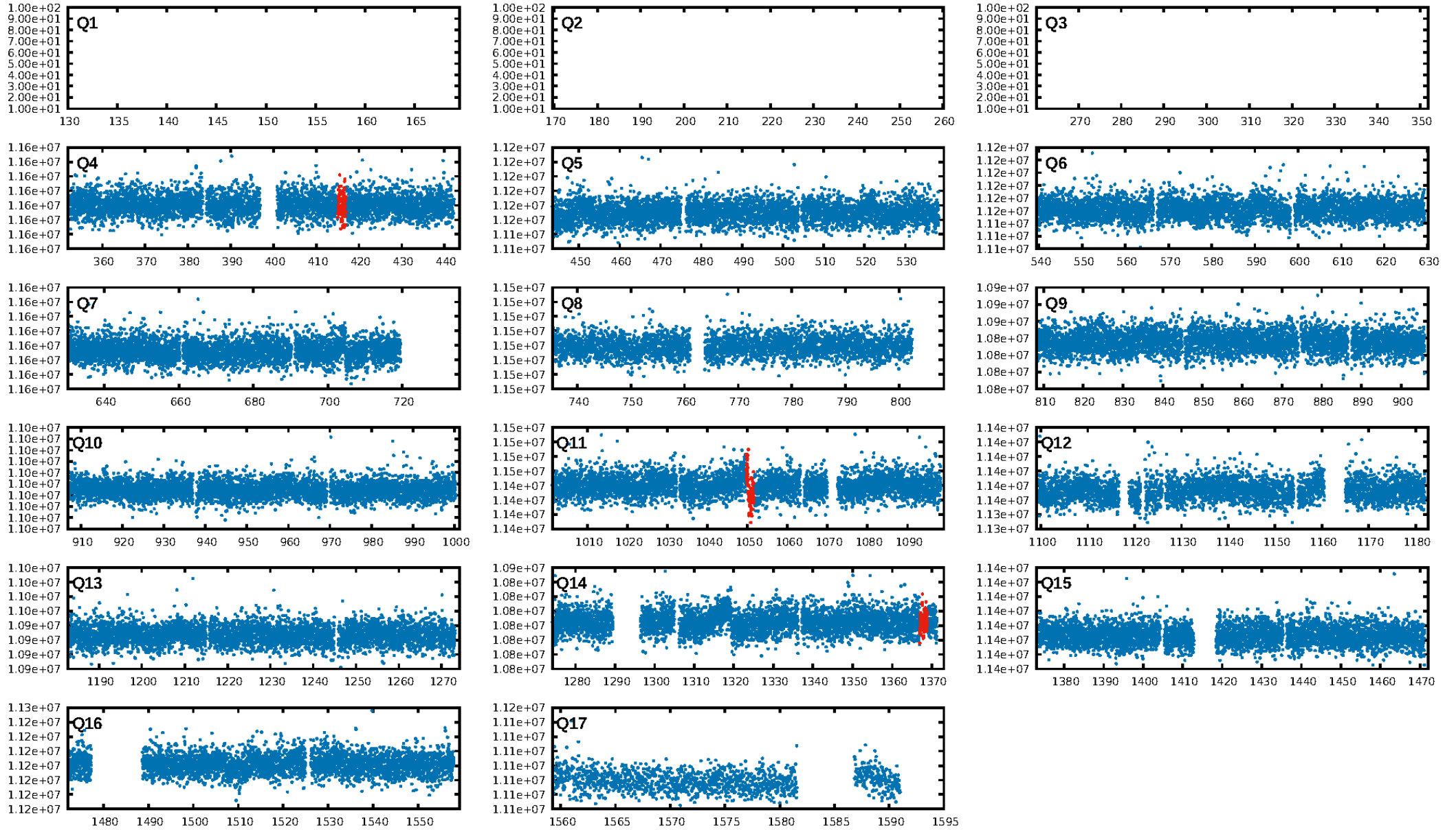
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.57e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.315
Centroid-sig: 0.2%
Centroid-so: 3.476 arcsec [3.05 σ]
OotOffset-rm: 1.951 arcsec [2.48 σ]
KicOffset-rm: 0.369 arcsec [0.47 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

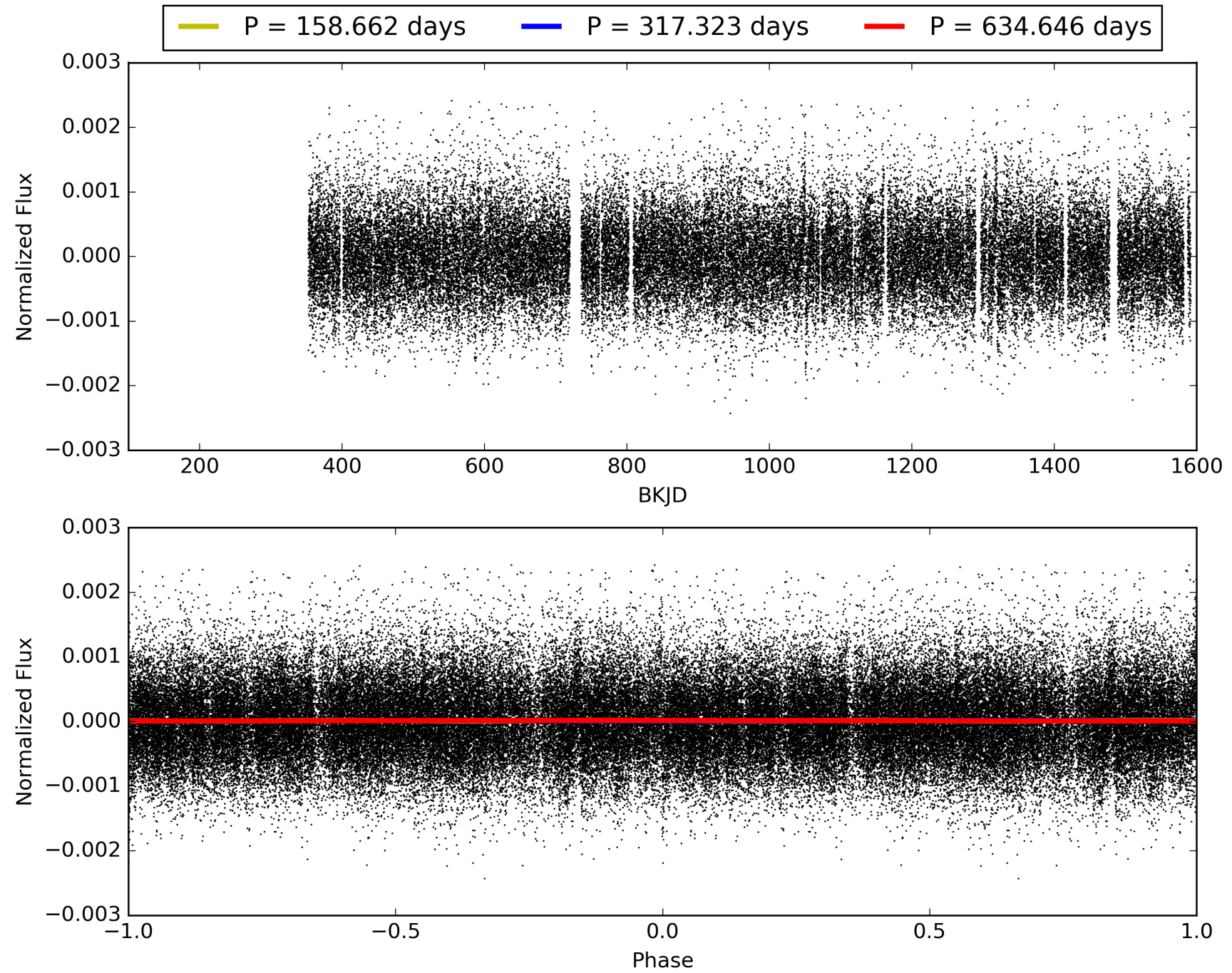
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:38:22 Z

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

TCE 006875959-01, PDC Light Curves

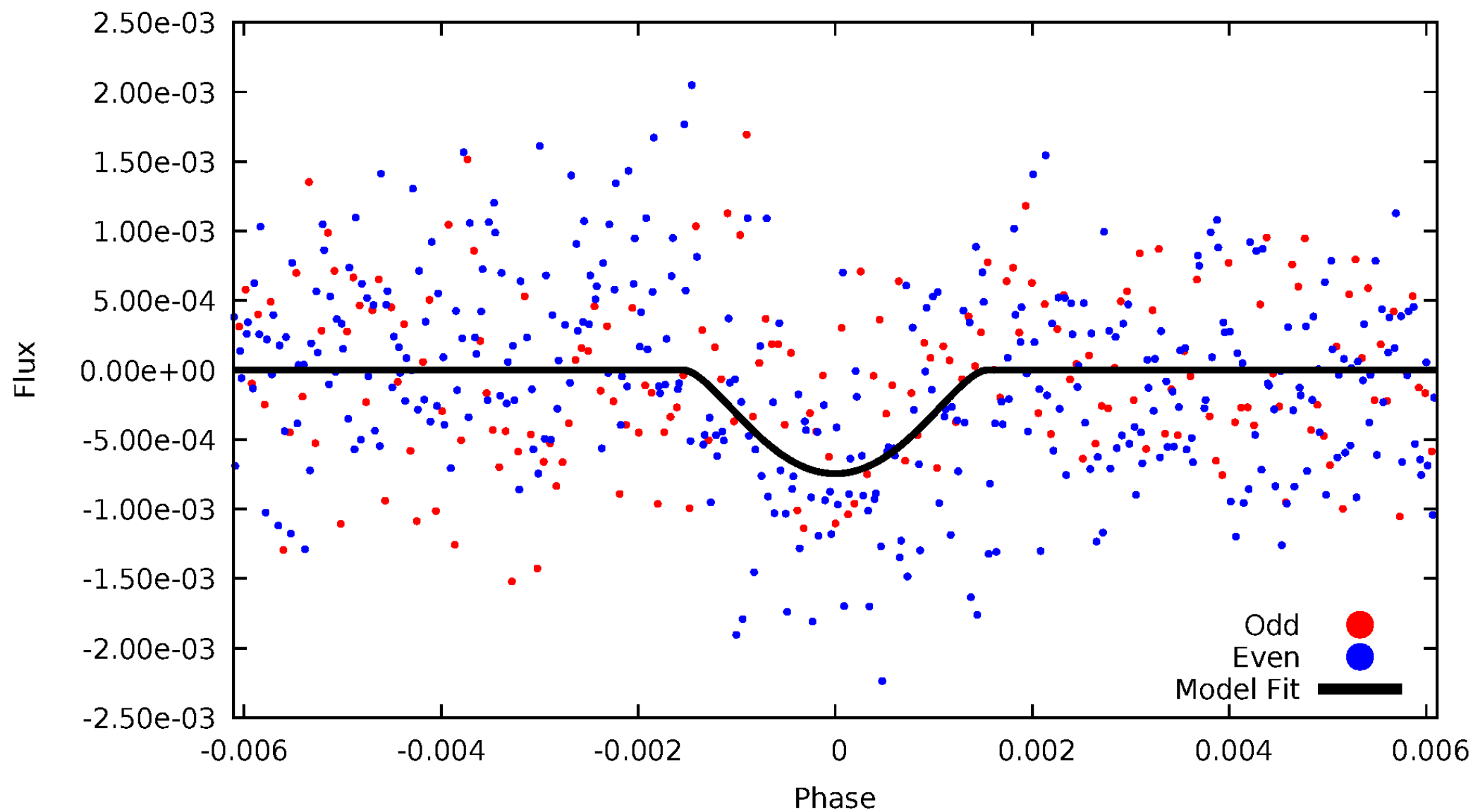


TCE 006875959-01



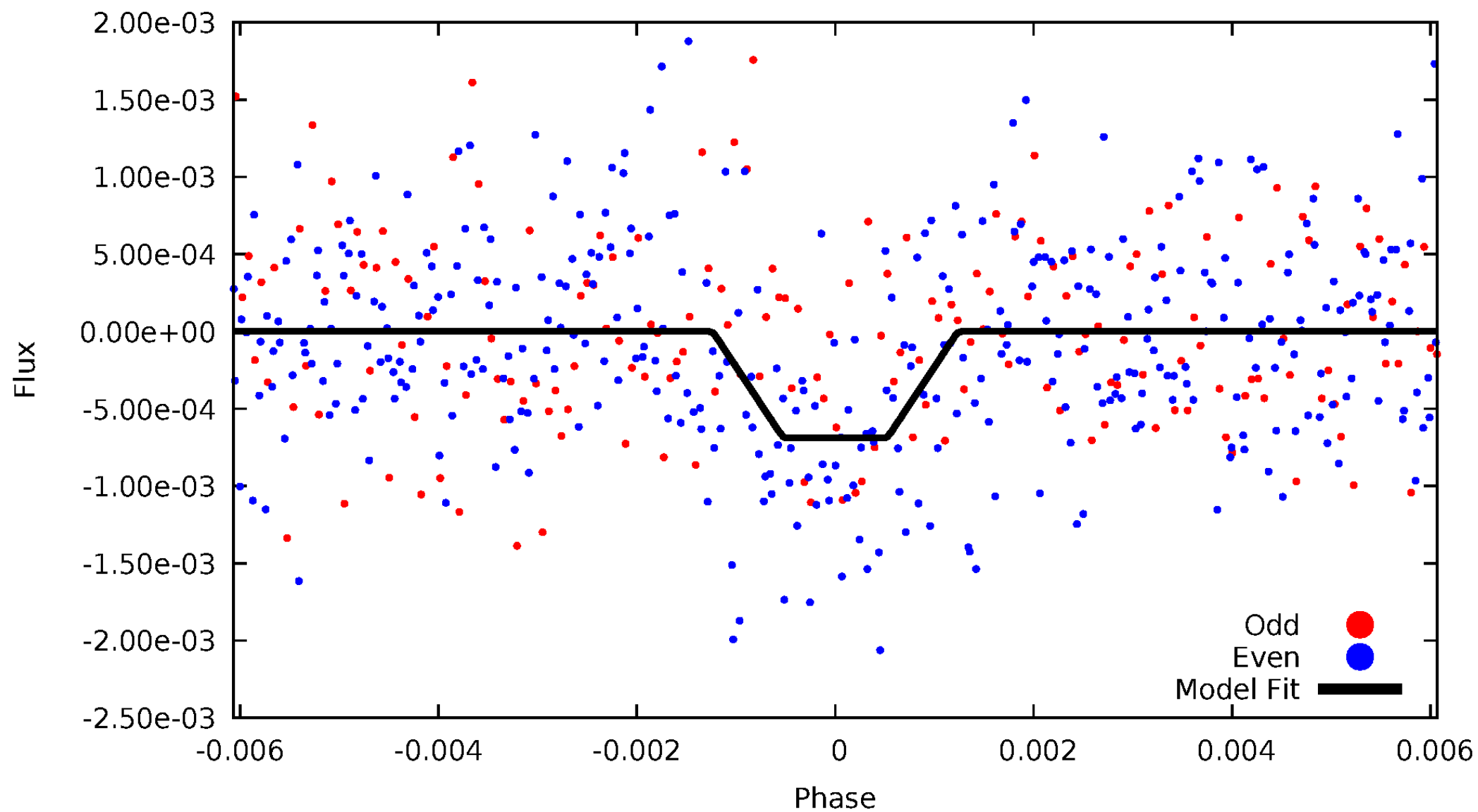
DV Odd/Even

TCE 006875959-01



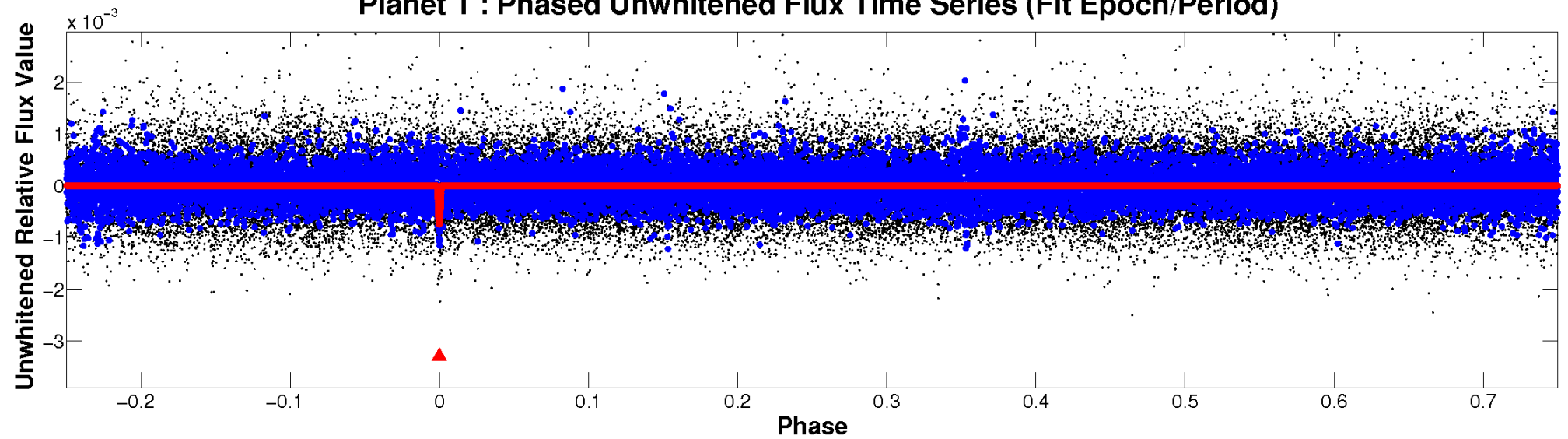
ALT Odd/Even

TCE 006875959-01

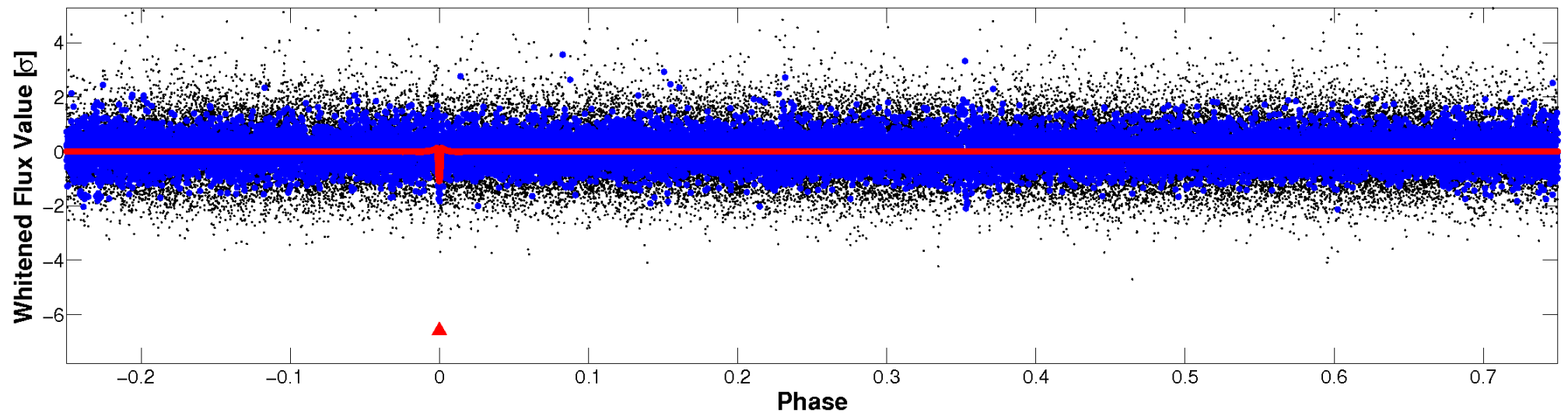


Non-Whitened Vs. Whitened Light Curve

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

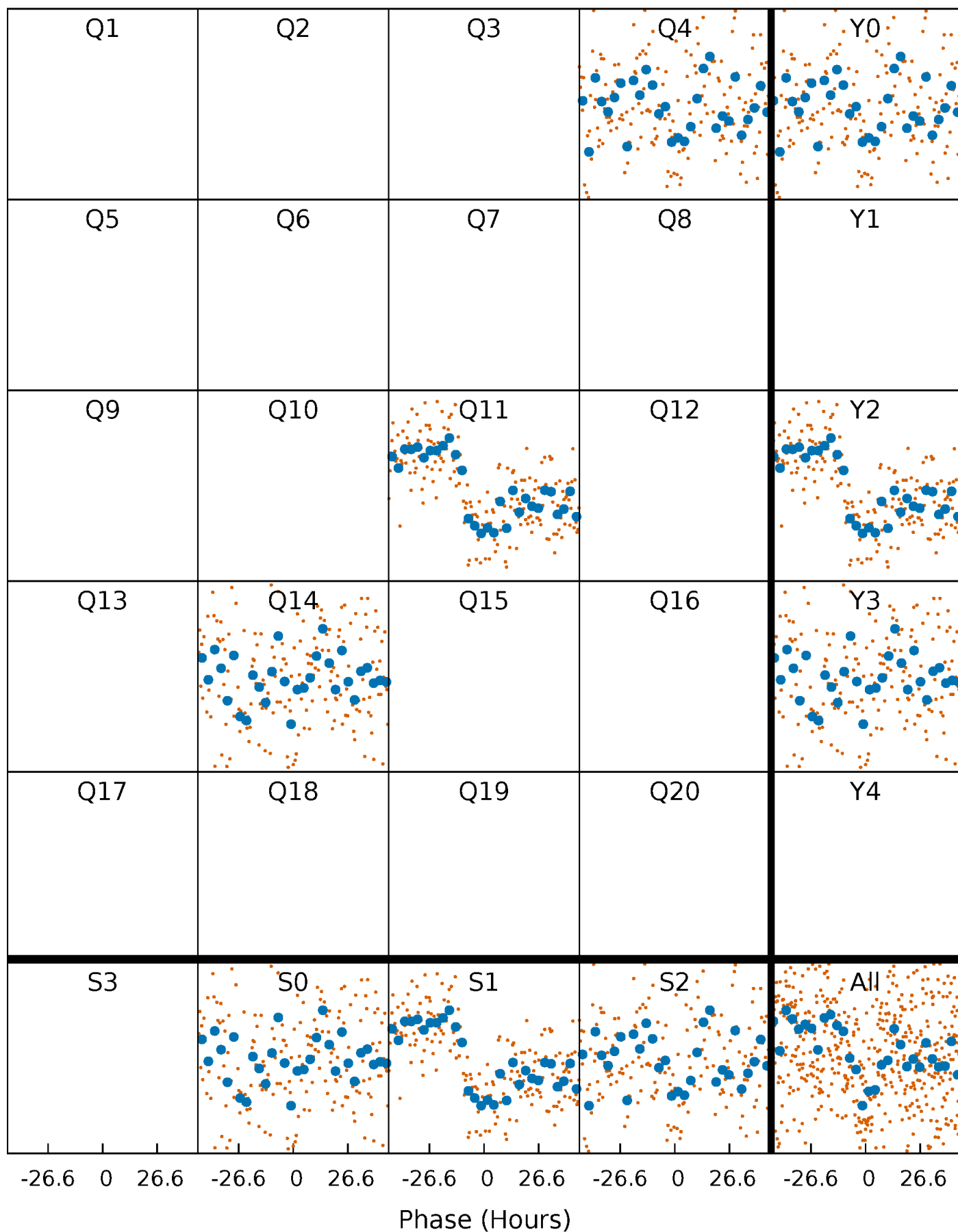


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



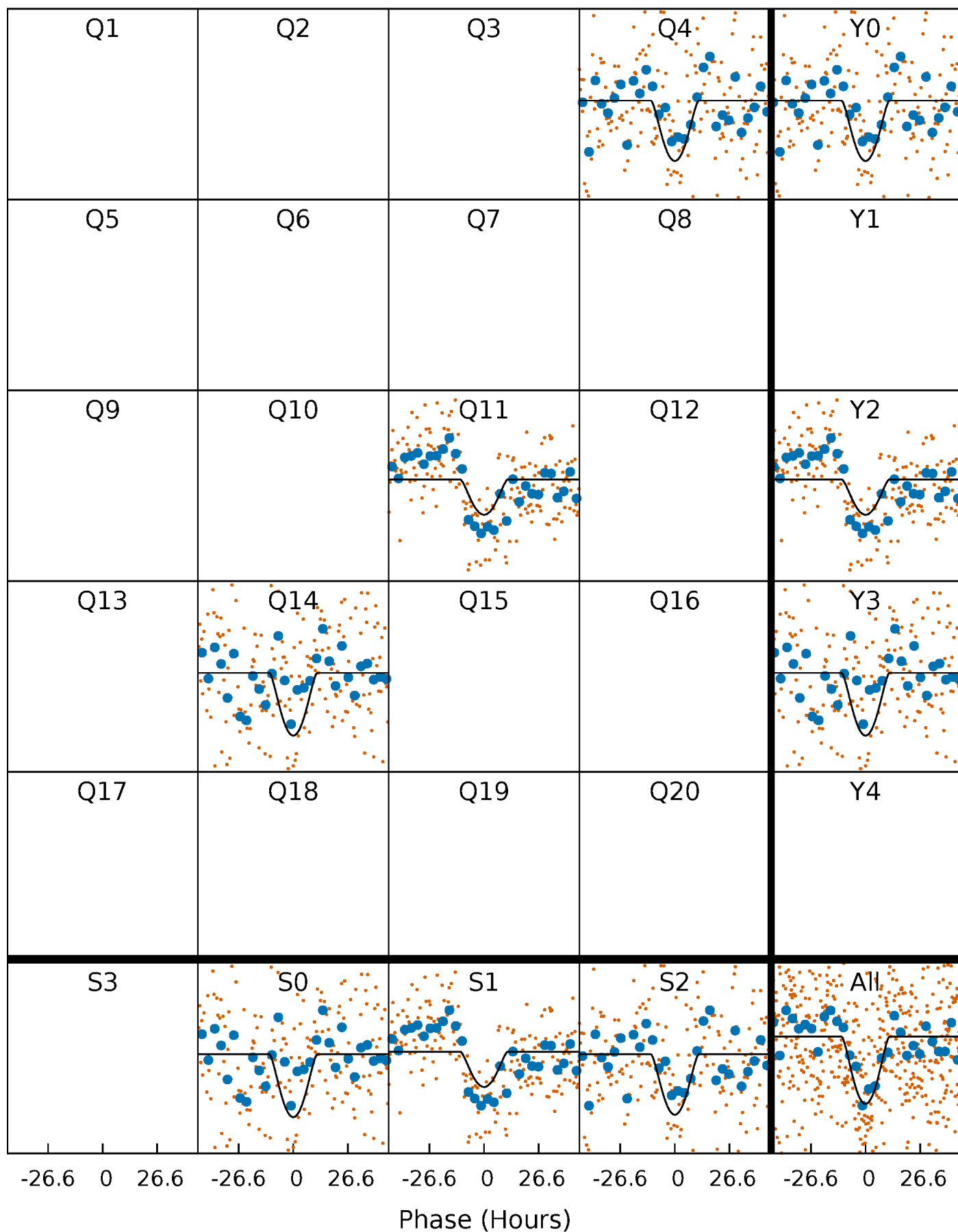
PDC Quarter-Phased Transit Curves

TCE 006875959-01 P=317.323016 Days $T_0=416.002068$ (BKJD)



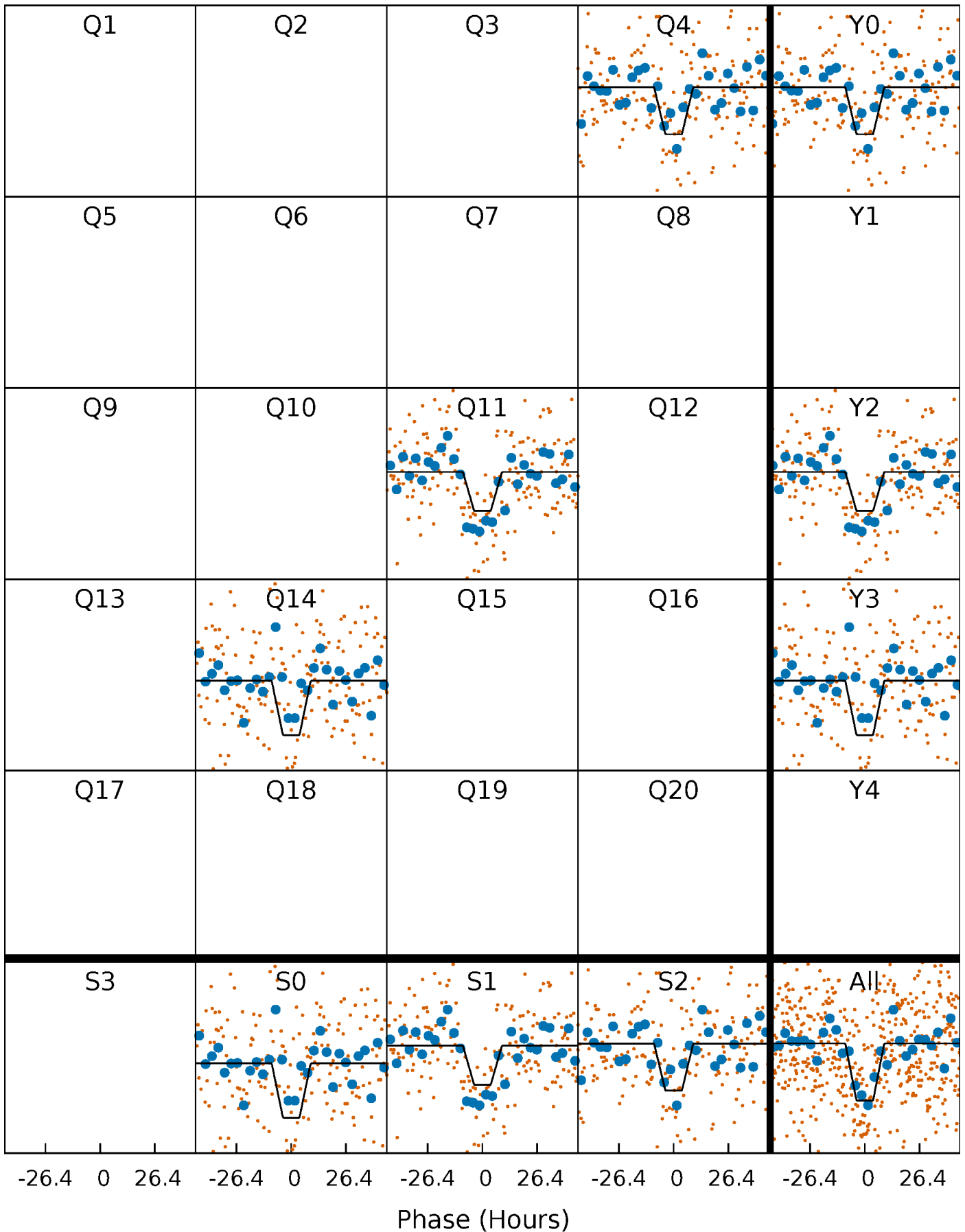
DV Quarter-Phased Transit Curves

TCE 006875959-01 P=317.323016 Days $T_0=416.002068$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

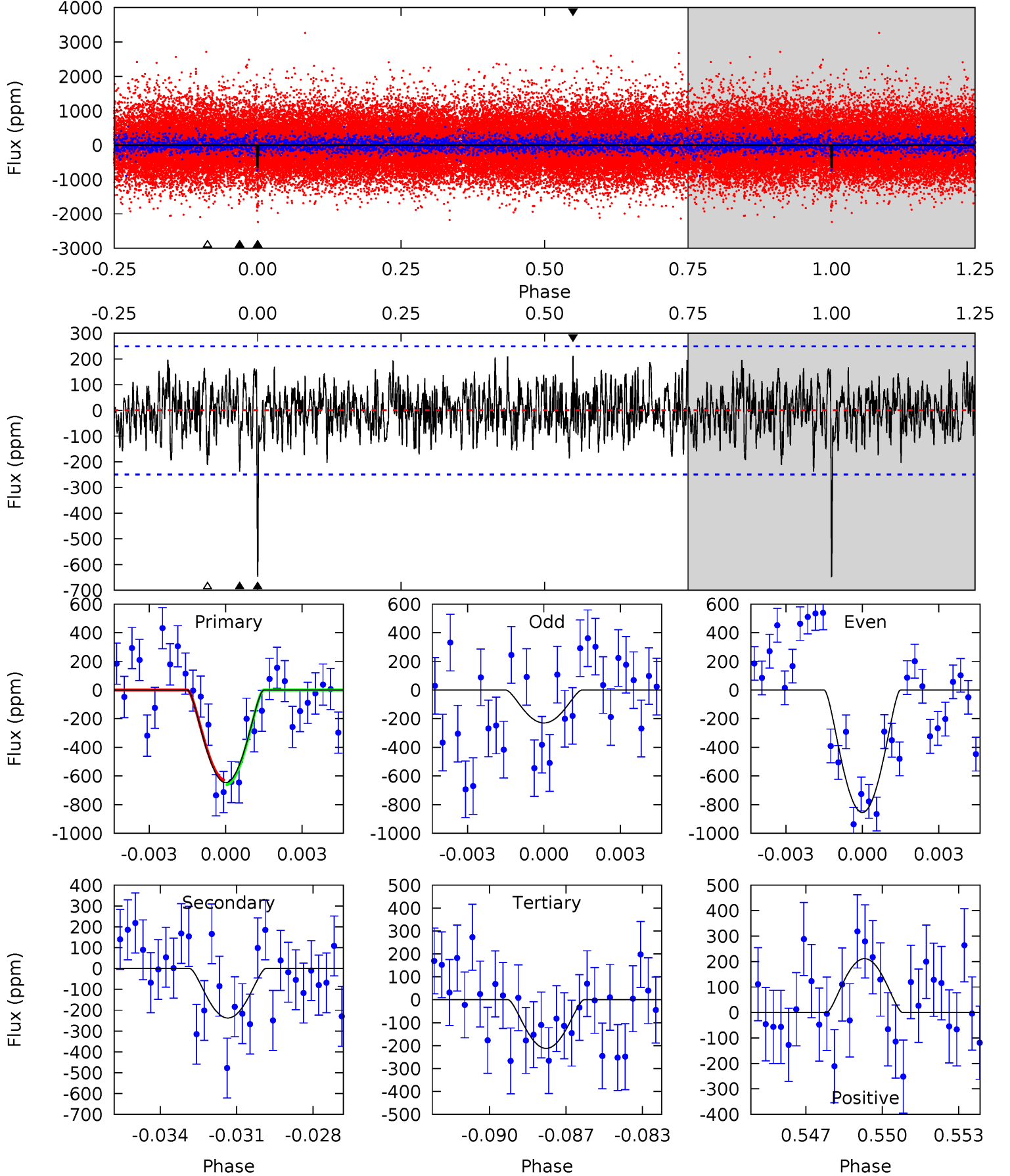
TCE 006875959-01 P=317.292320 Days $T_0=416.070781$ (BKJD)



DV Model-Shift Uniqueness Test

006875959-01, P = 317.323016 Days, E = 98.679052 Days

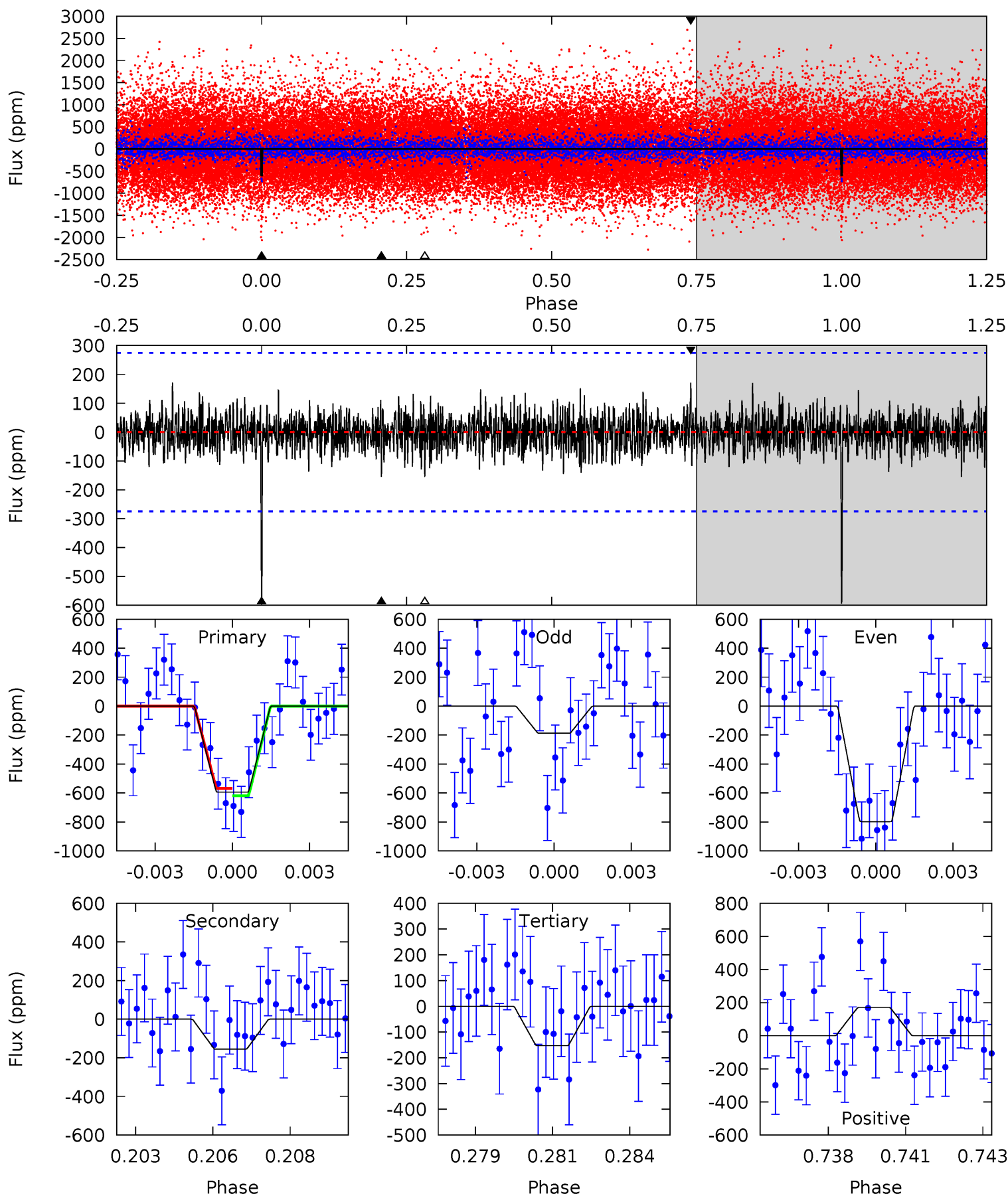
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	5.00	4.46	4.45	5.25	2.96	1.51	9.14	9.15	0.54	0.55	6.25	1.38	0.25	0.33



Alt Model-Shift Uniqueness Test

006875959-01, $P = 317.292320$ Days, $E = 98.778461$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	2.99	2.95	3.29	5.29	3.02	0.93	8.51	8.17	0.05	-0.30	5.59	1.09	0.22	0.49



Stellar Parameters For KIC 006875959

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5917^{+182}_{-223}	$4.475^{+0.050}_{-0.200}$	$0.140^{+0.200}_{-0.300}$	$1.000^{+0.285}_{-0.102}$	$1.088^{+0.125}_{-0.150}$	$1.531^{+0.402}_{-0.766}$
	+3%/-4%	+1%/-4%	+143%/-214%	+28%/-10%	+11%/-14%	+26%/-50%
Source	KIC0	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 006875959-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-238 ± 48	$20.64^{+19.03}_{-14.04}$	384^{+29}_{-19}	2577^{+999}_{-400}	268^{+2528}_{-200}
Alt.	-155 ± 52	$18.30^{+21.14}_{-12.97}$	383^{+27}_{-18}	2483^{+1056}_{-405}	207^{+2256}_{-164}

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

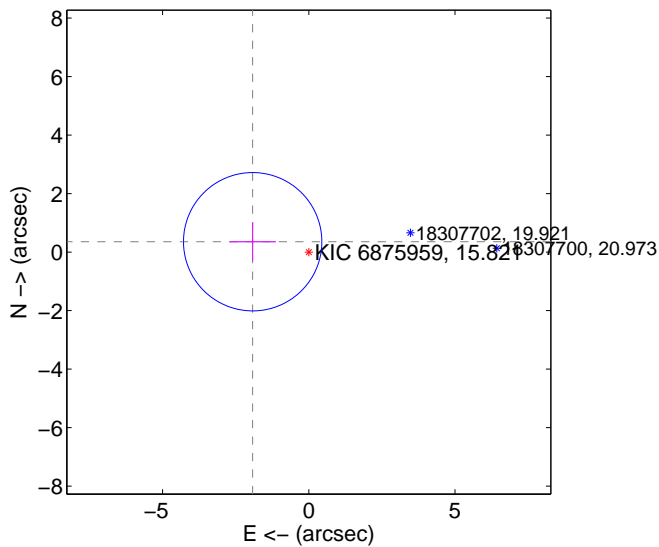
Supplemental centroid analysis for 006875959-01. Kepler magnitude: 15.82. Transit SNR 8.36

There are 1 quarters with good PRF difference image offsets

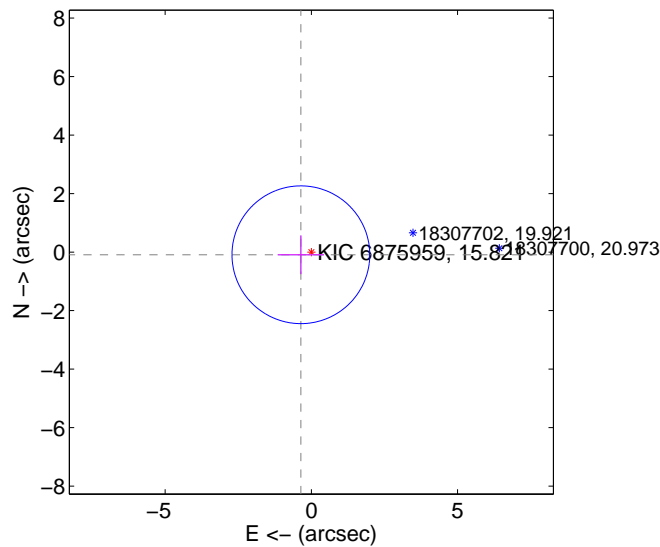
The direct PRF centroid is offset from the target star catalog position by about 1.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.951 ± 0.788	2.48	1.919 ± 0.792	0.355 ± 0.661
PRF-fit source offset from KIC position	0.369 ± 0.785	0.47	0.358 ± 0.792	-0.091 ± 0.661
photometric centroid source offset	3.48 ± 1.14	3.05	-3.22 ± 1.16	1.32 ± 1.02

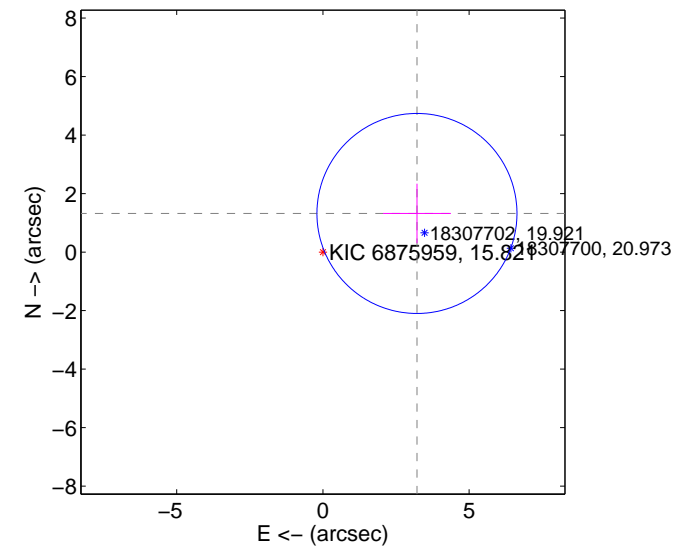
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

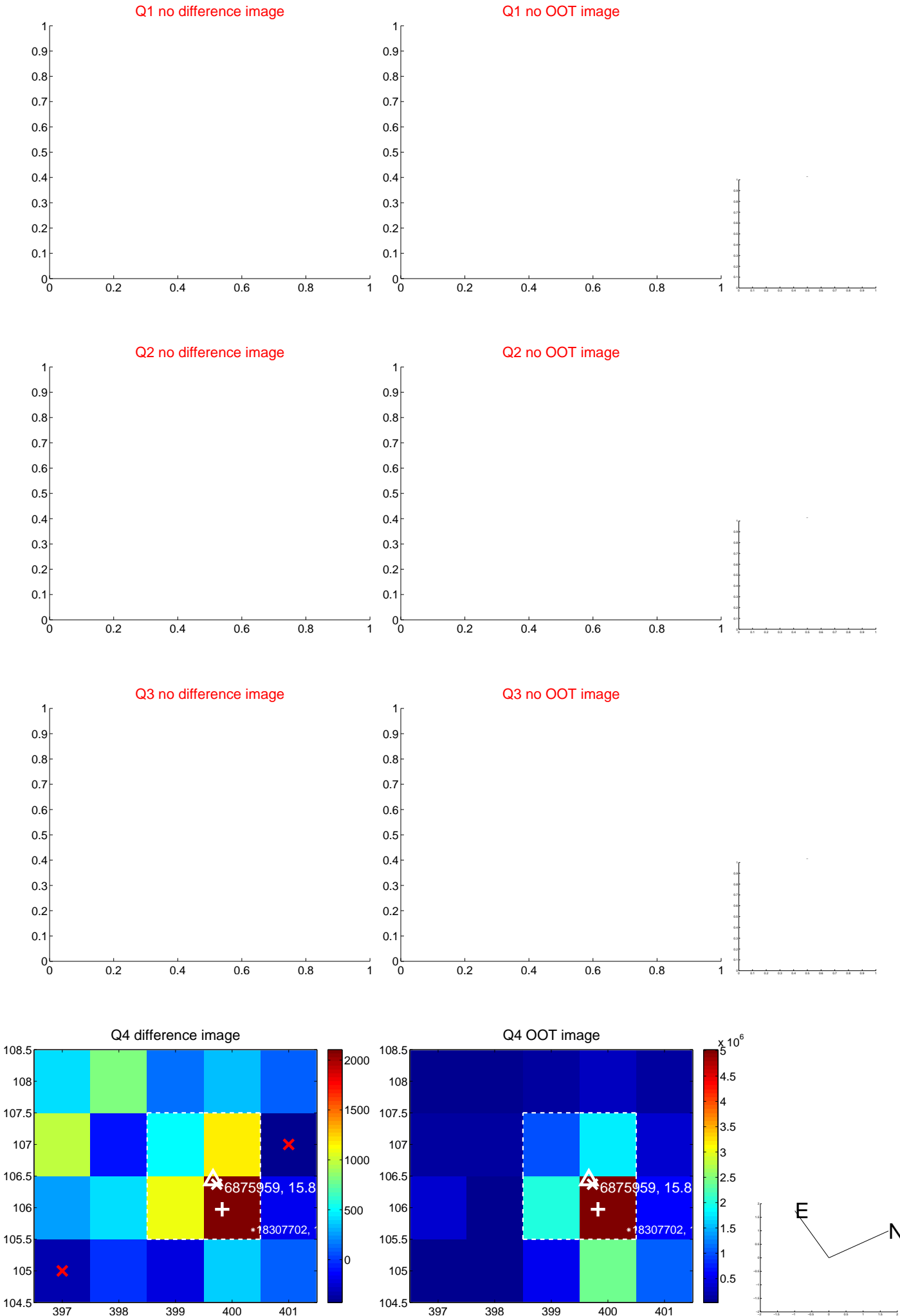


offset from photometric centroids



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.

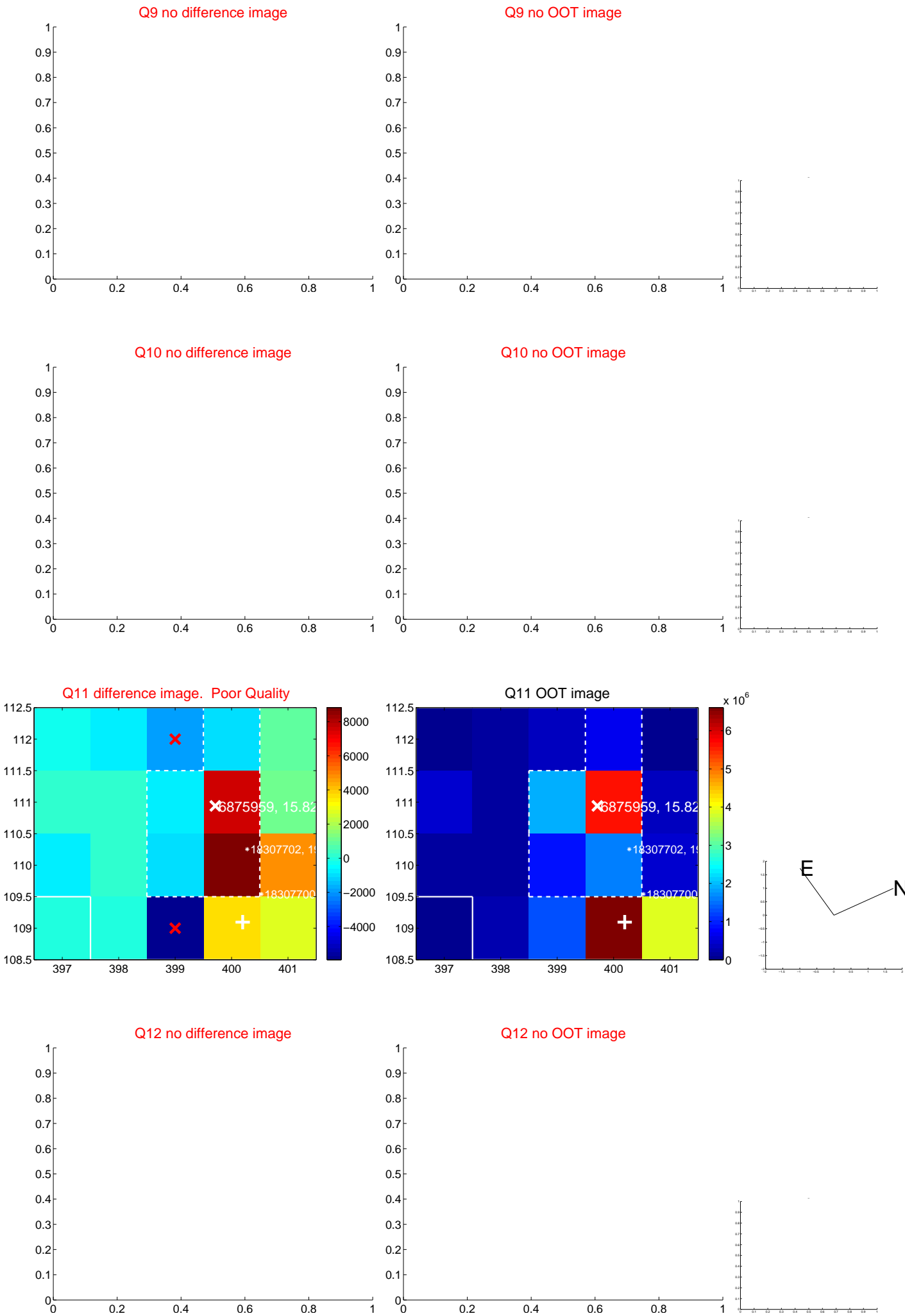
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



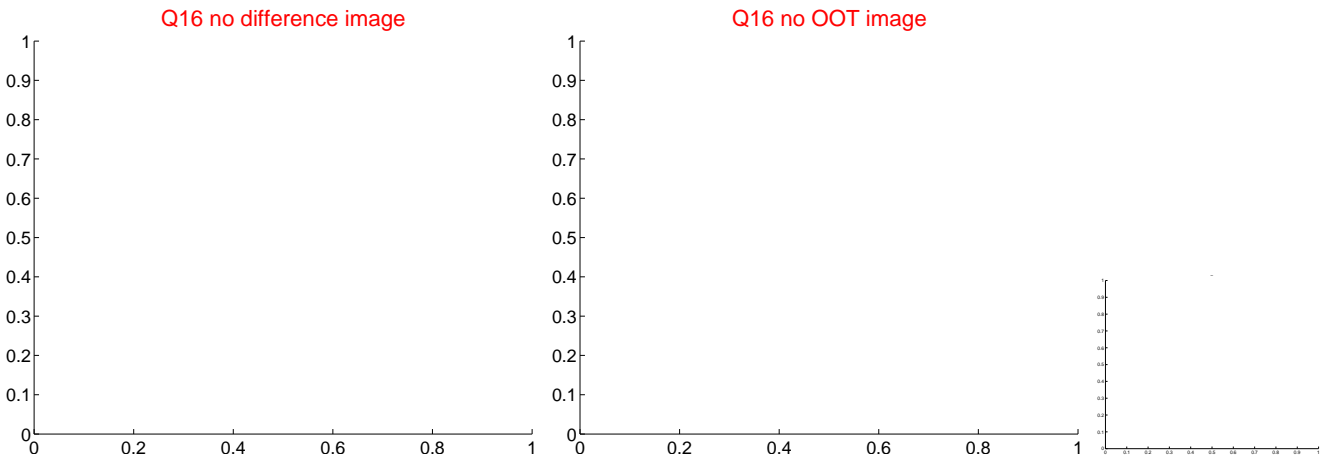
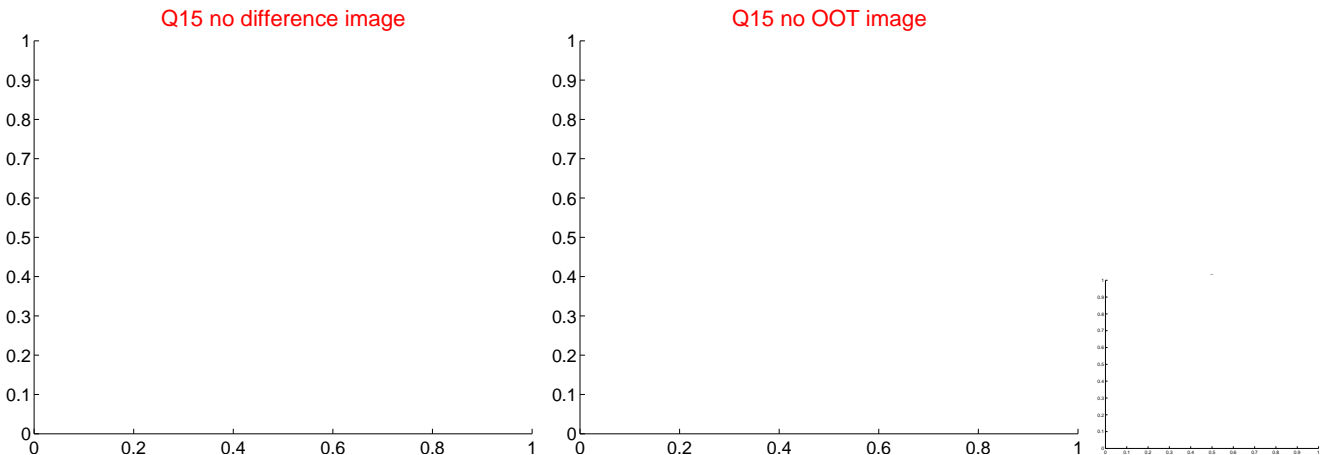
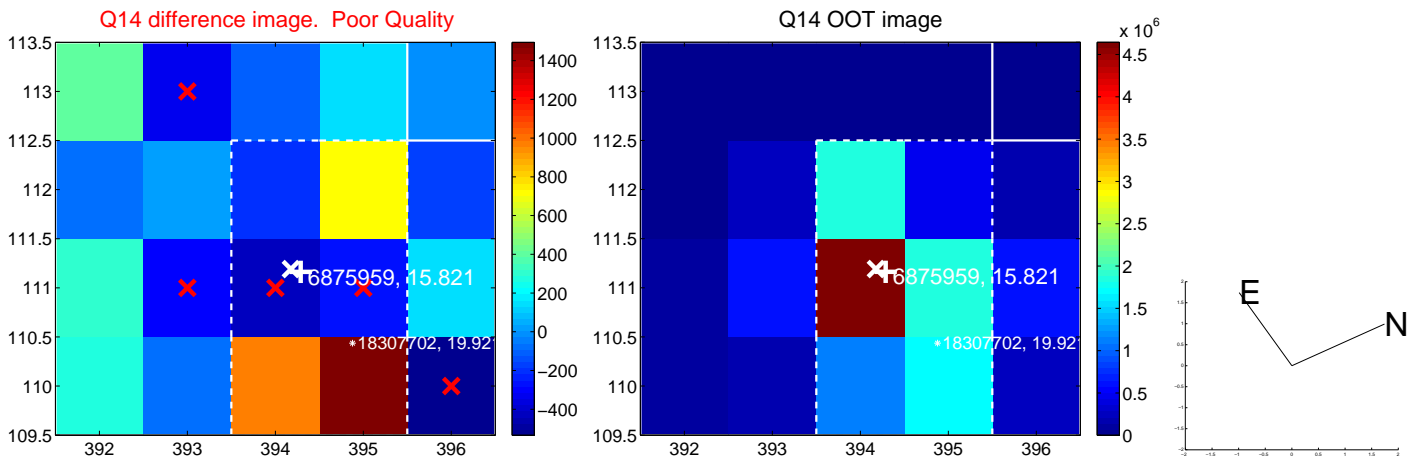
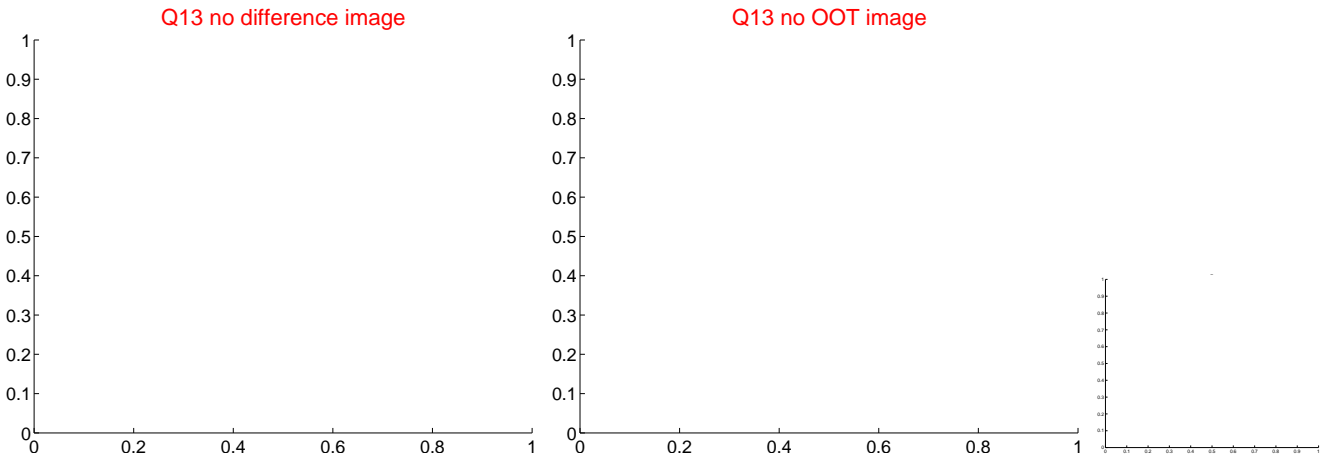
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



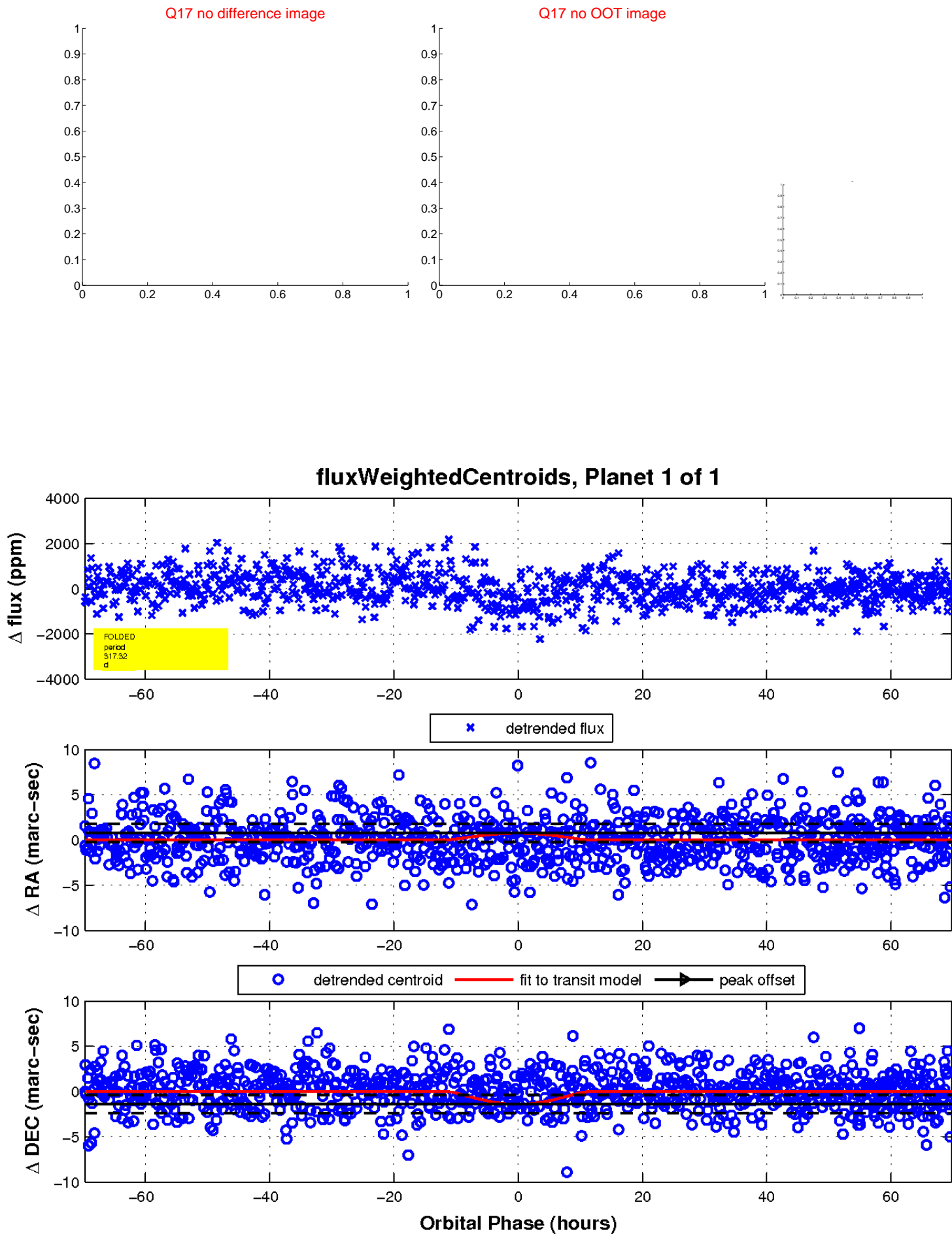
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

