

KIC 008619862

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})
008619862-01	OBS	No	382.354441	161.281159	519.0	13.550	11.9	9.5	0.98	5991	2.31	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008619862-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

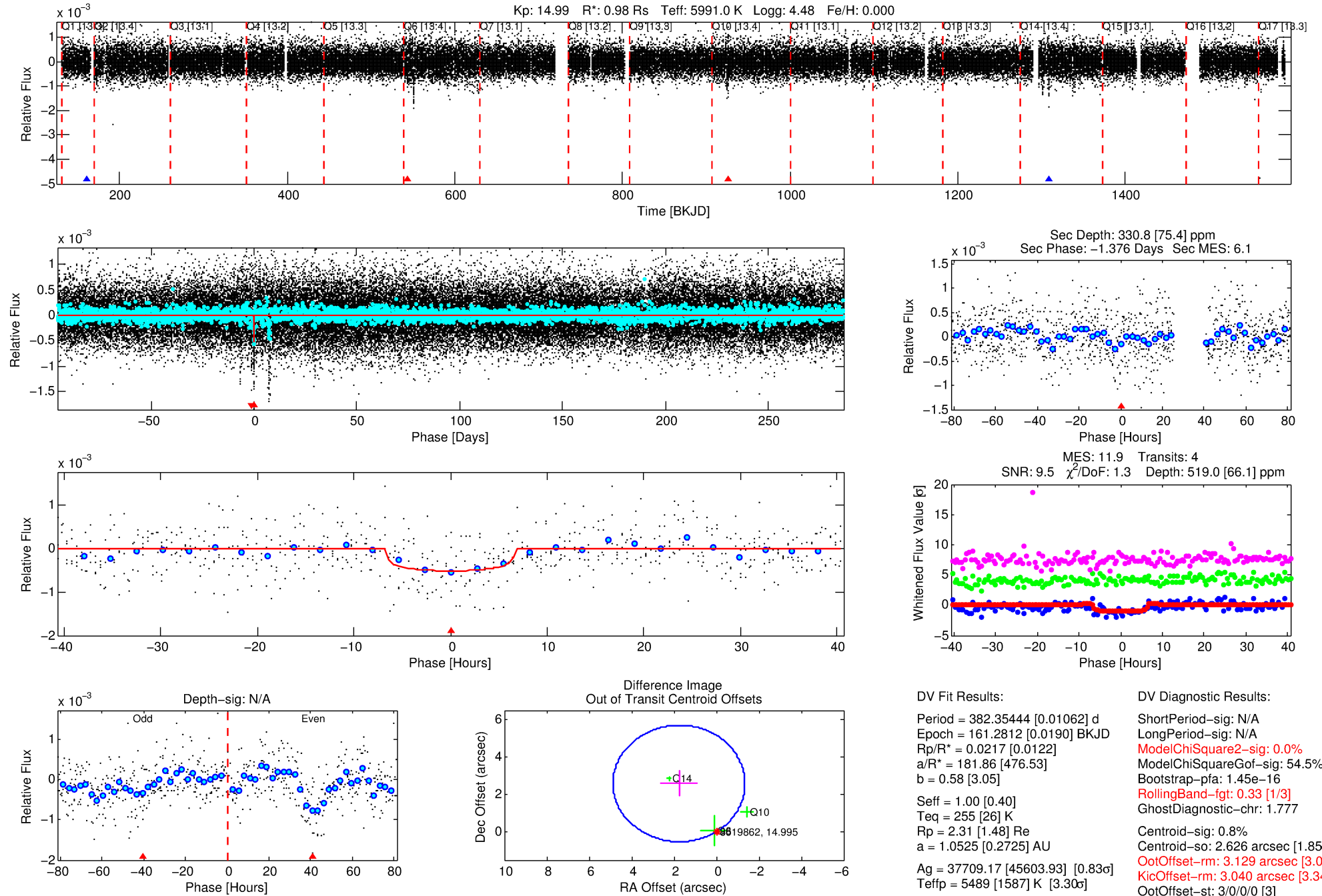
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008619862-01

No Significant Match Found

DV One-Page Summary

KIC: 8619862 Candidate: 1 of 1 Period: 382.354 d



DV Fit Results:

Period = 382.35444 [0.01062] d
Epoch = 161.2812 [0.0190] BKJD
Rp/R* = 0.0217 [0.0122]
a/R* = 181.86 [476.53]
b = 0.58 [3.05]
Seff = 1.00 [0.40]
Teff = 255 [26] K
Rp = 2.31 [1.48] Re
a = 1.0525 [0.2725] AU
Ag = 37709.17 [45603.93] [0.83 σ]
Teffp = 5489 [1587] K [3.30 σ]

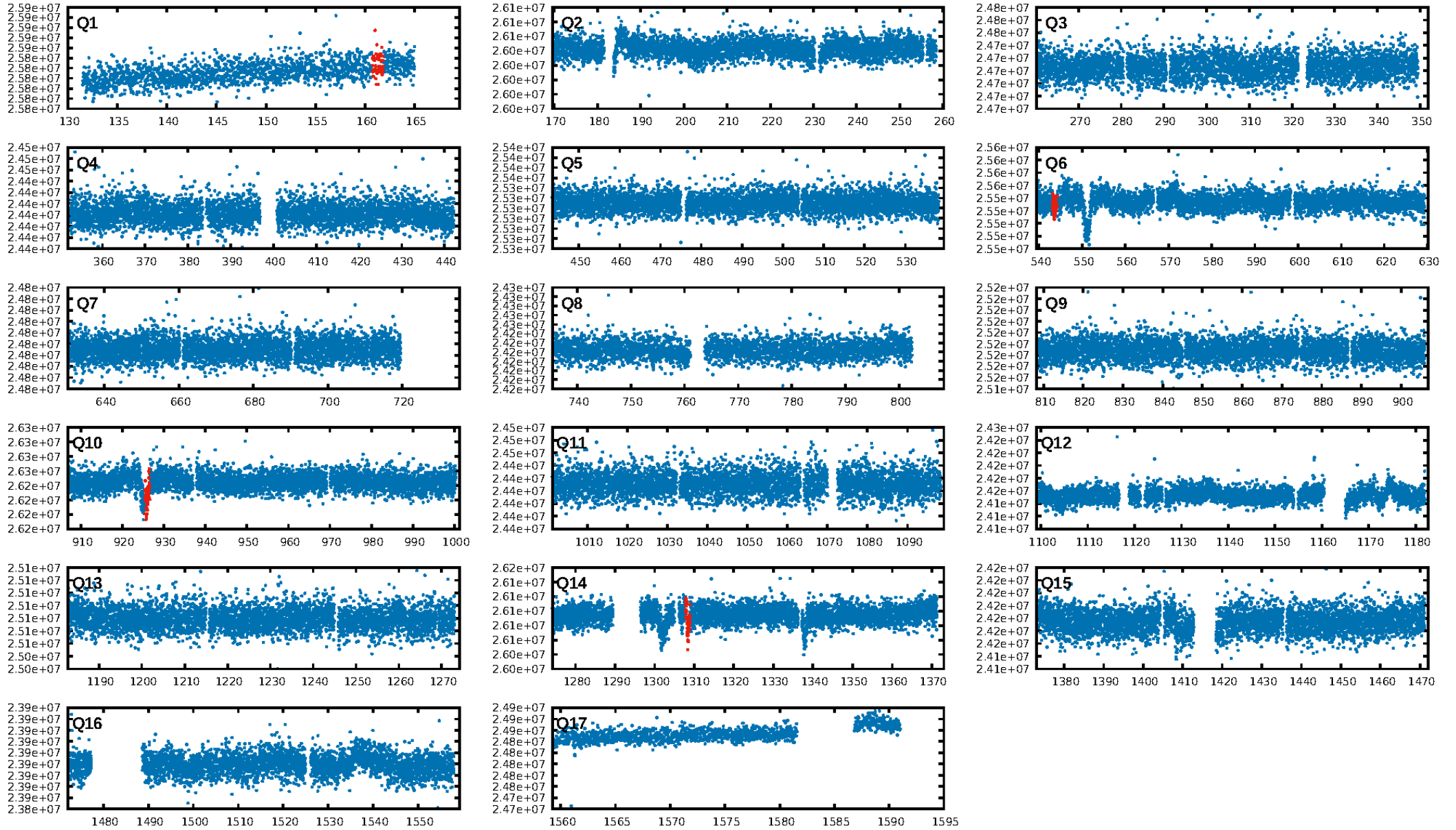
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 54.5%
Bootstrap-pfa: 1.45e-16
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 1.777
Centroid-sig: 0.8%
Centroid-so: 2.626 arcsec [1.85 σ]
OotOffset-rm: 3.129 arcsec [3.02 σ]
KicOffset-rm: 3.040 arcsec [3.34 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

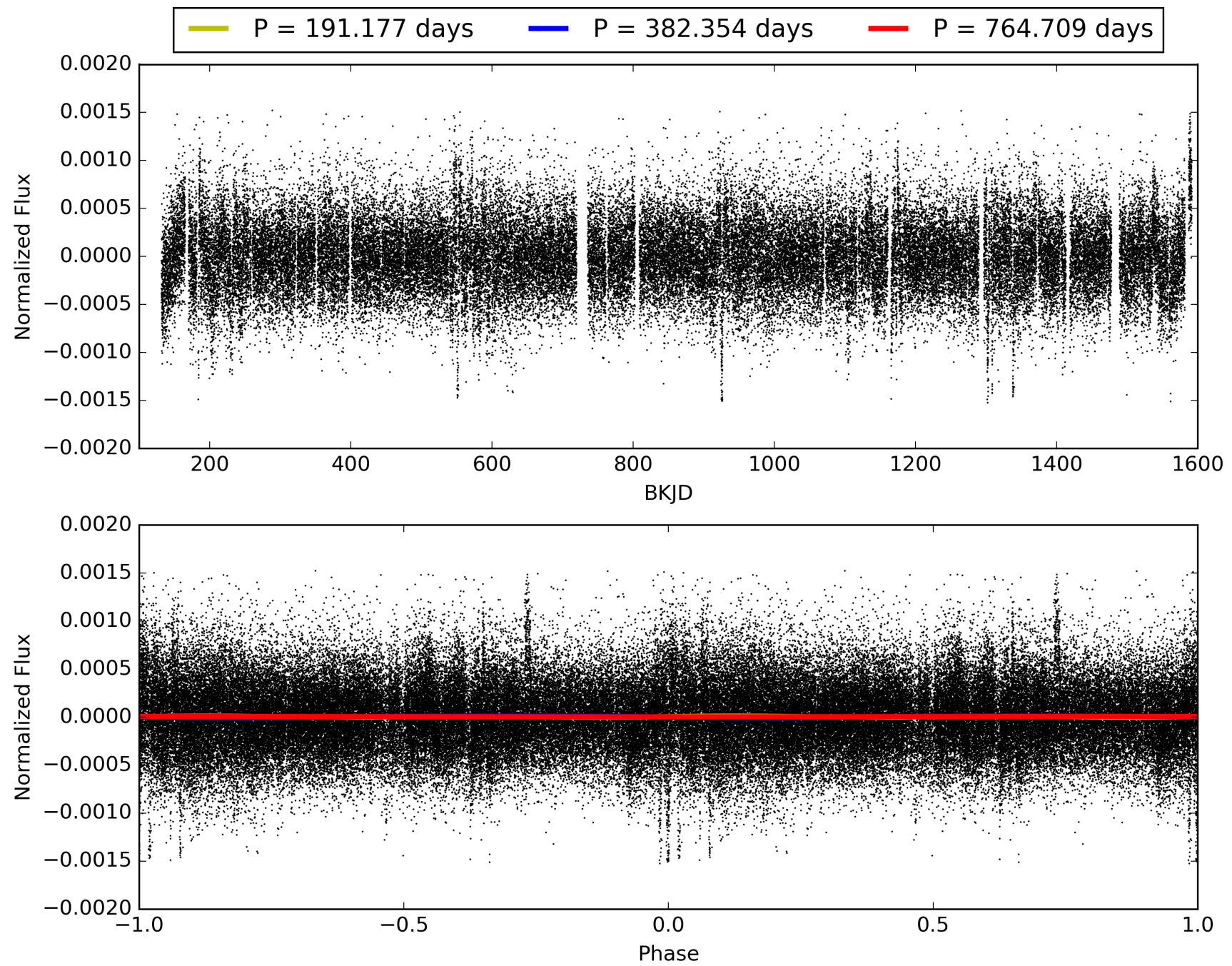
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:46 Z

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

TCE 008619862-01, PDC Light Curves

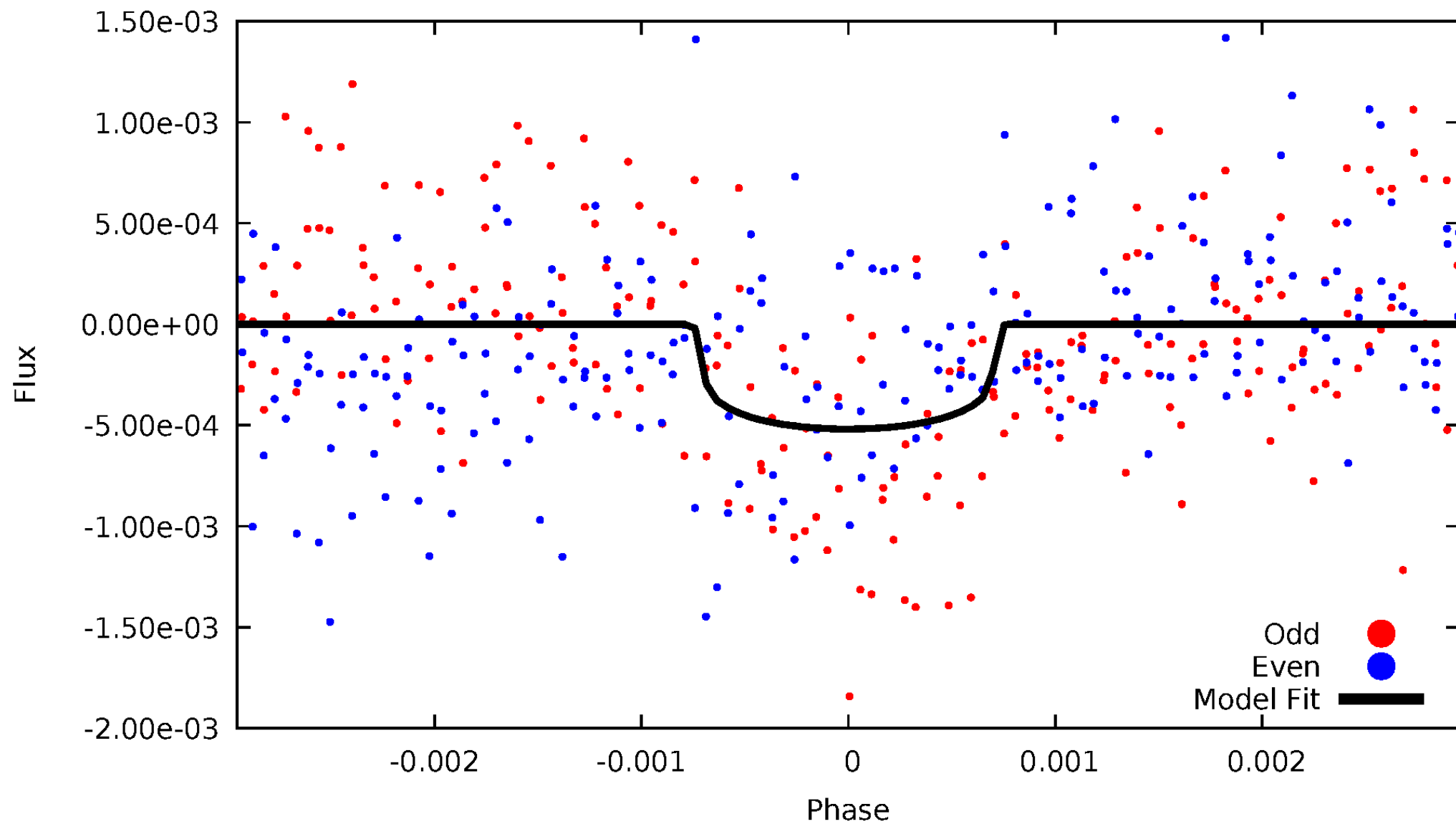


TCE 008619862-01



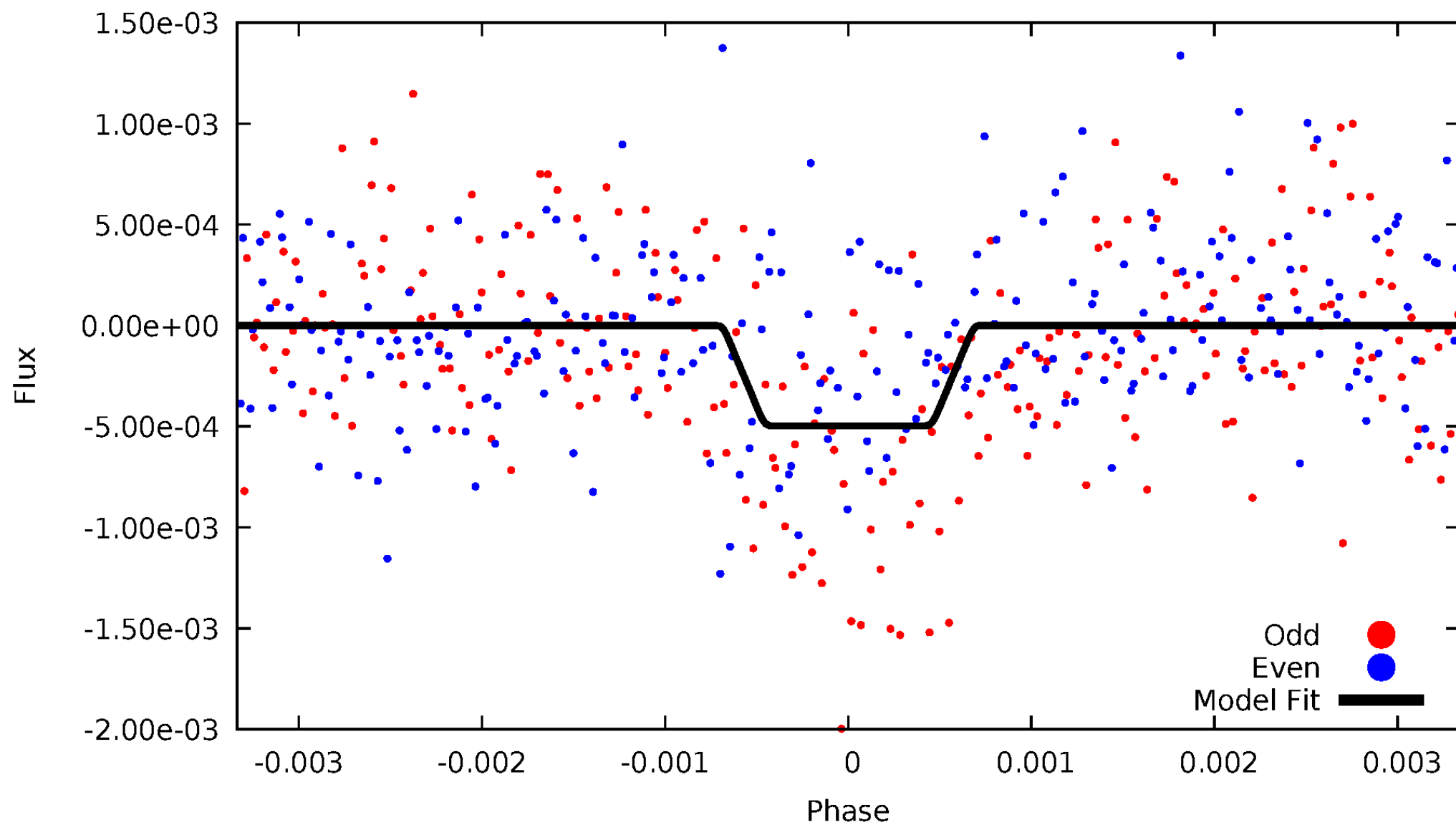
DV Odd/Even

TCE 008619862-01



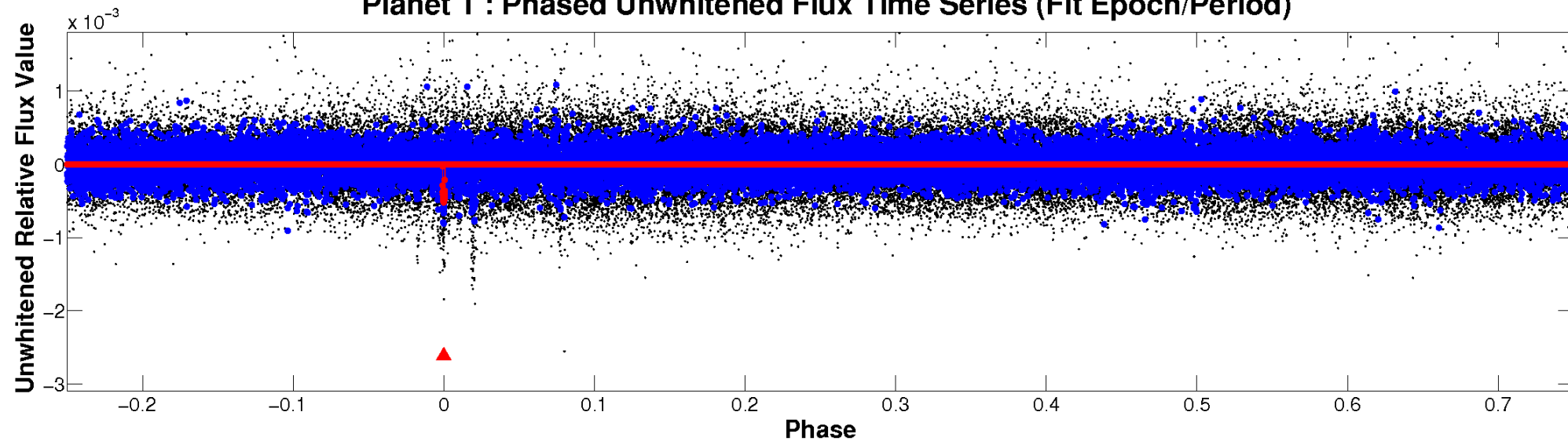
ALT Odd/Even

TCE 008619862-01

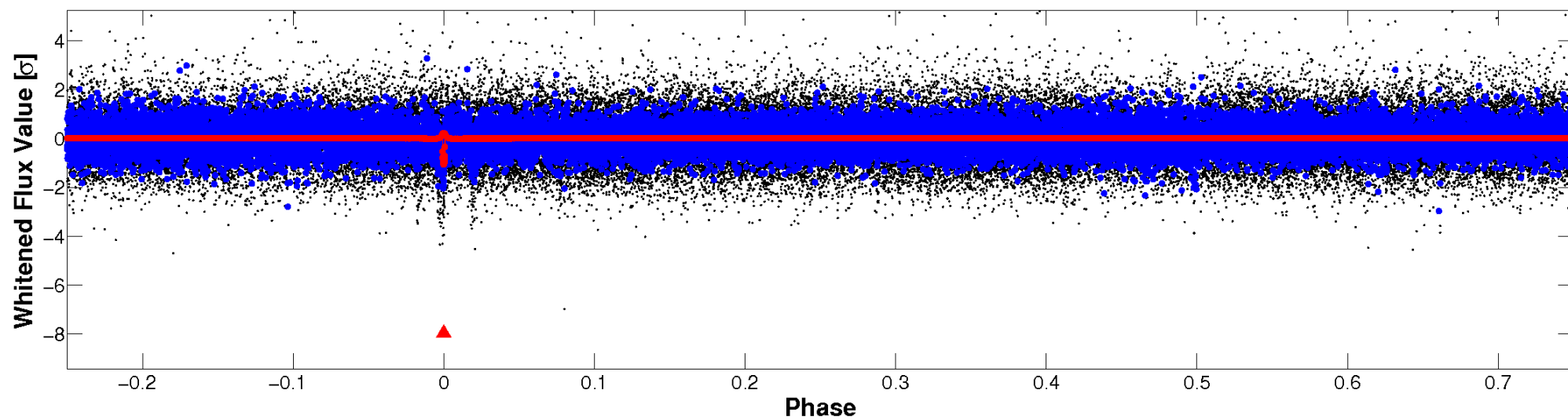


Non-Whitened Vs. Whitened Light Curve

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

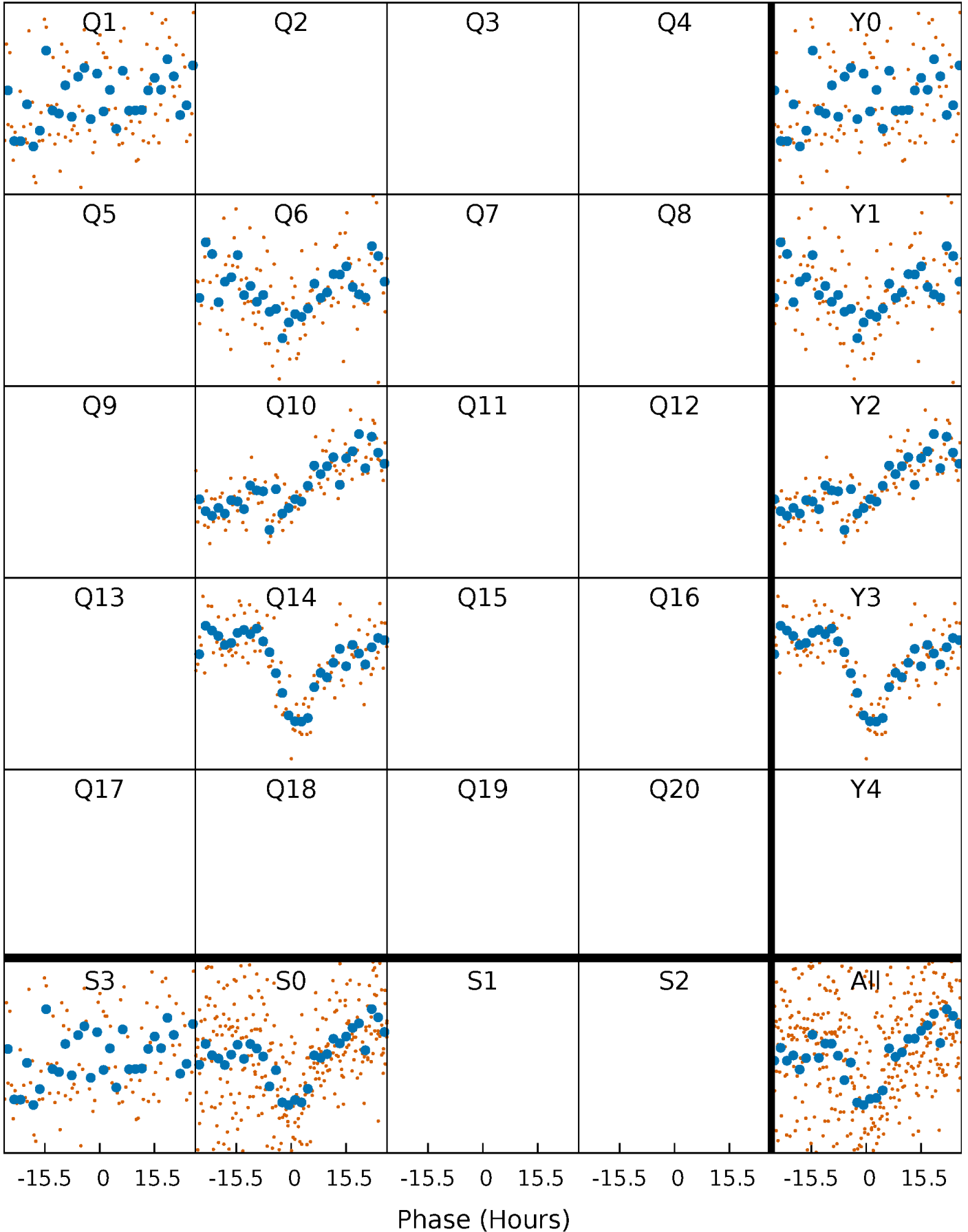


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



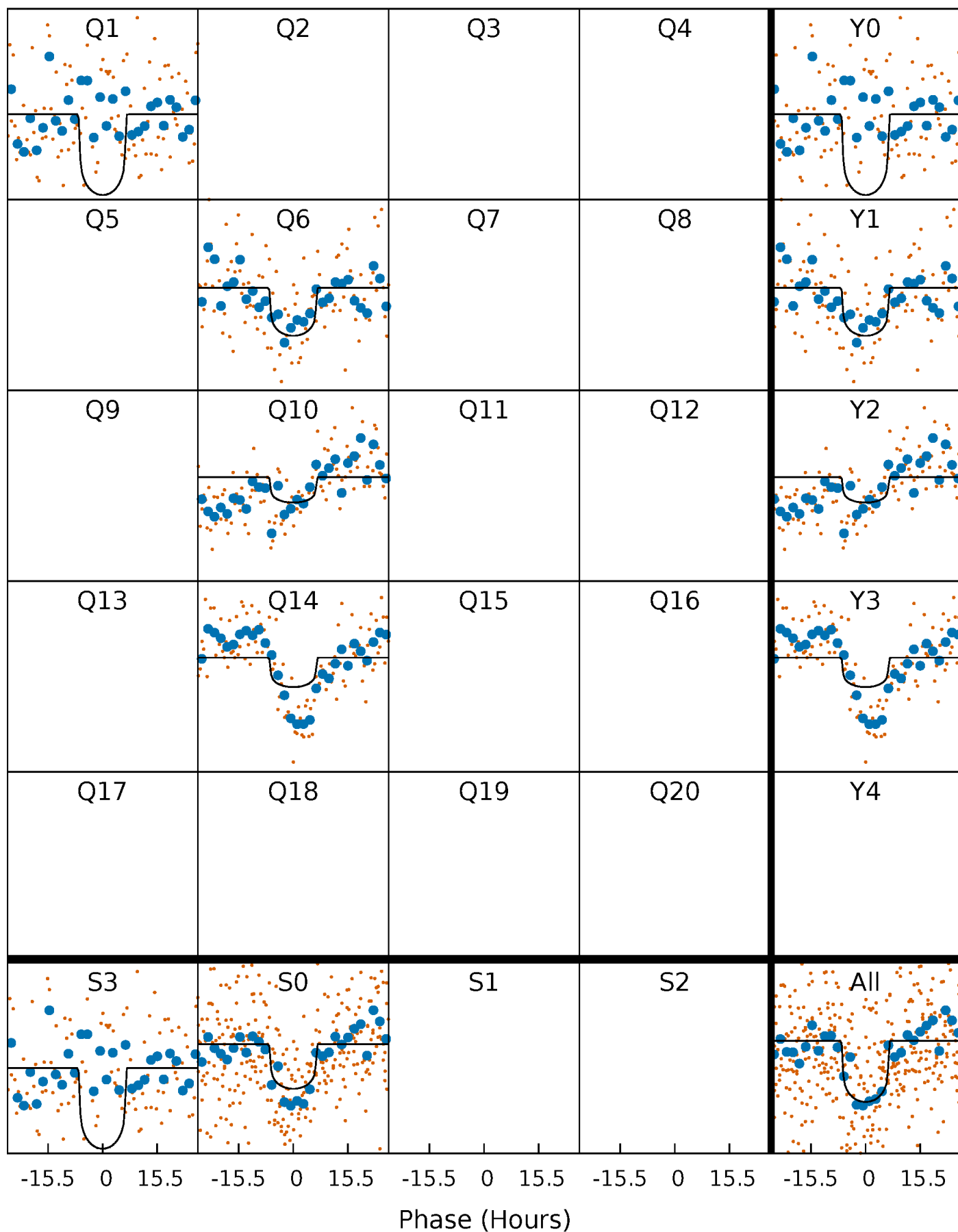
PDC Quarter-Phased Transit Curves

TCE 008619862-01 $P=382.354441$ Days $T_0=161.281159$ (BKJD)



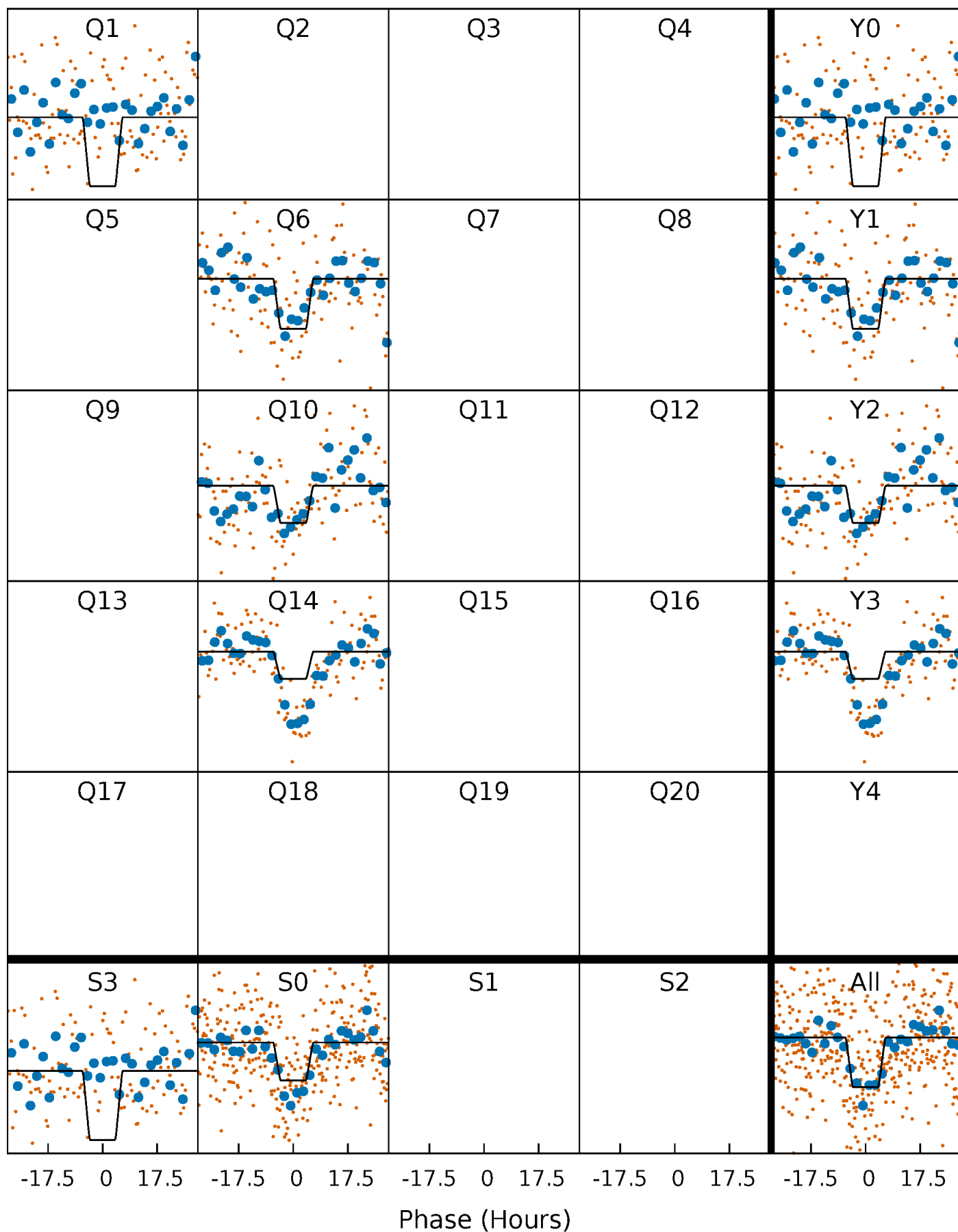
DV Quarter-Phased Transit Curves

TCE 008619862-01 P=382.354441 Days $T_0=161.281159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

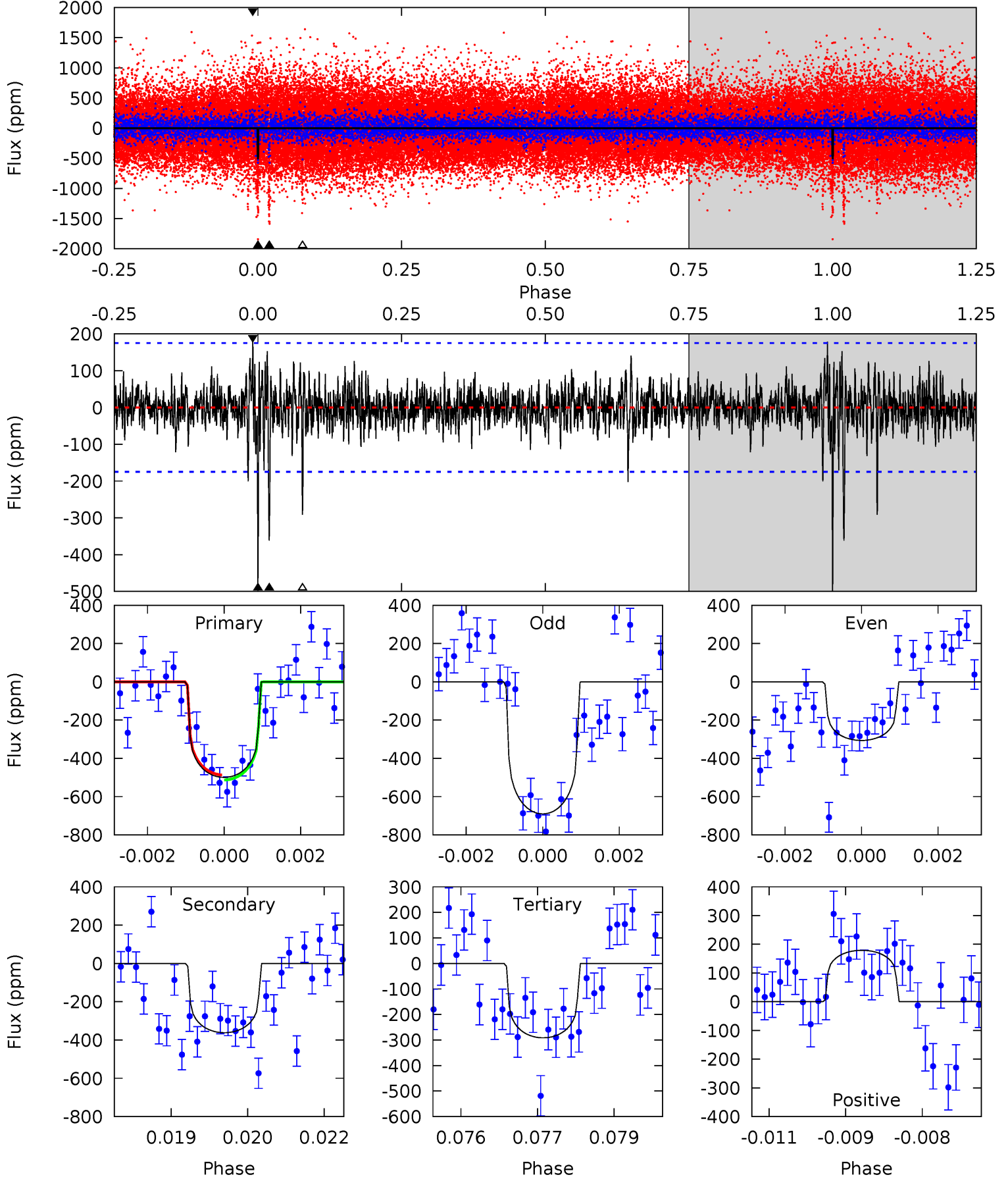
TCE 008619862-01 P=382.366397 Days $T_0=161.261591$ (BKJD)



DV Model-Shift Uniqueness Test

008619862-01, P = 382.354441 Days, E = 161.281159 Days

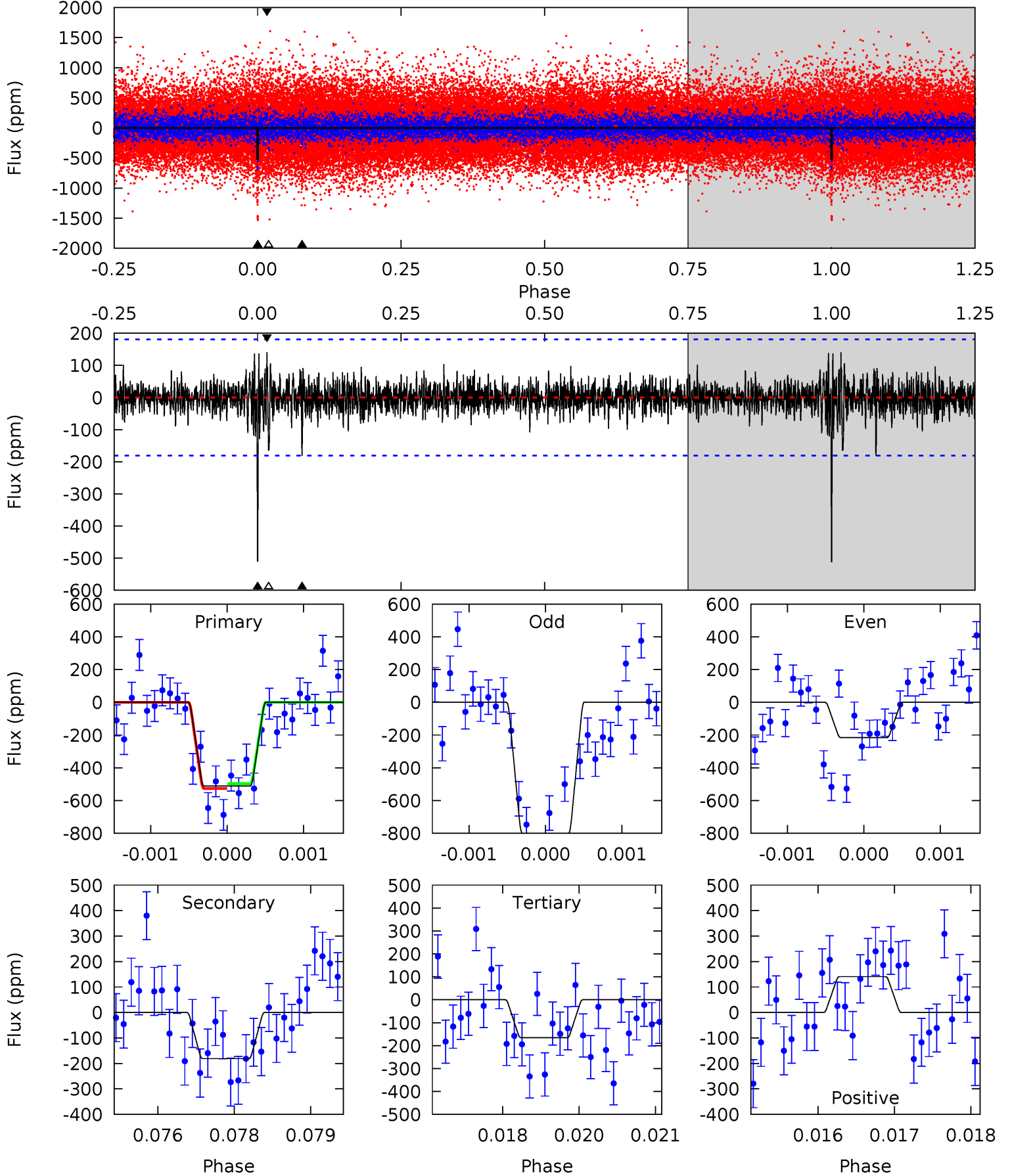
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	11.1	8.94	5.49	5.37	3.17	1.29	6.39	9.84	2.16	5.61	5.87	0.96	0.26	0.39



Alt Model-Shift Uniqueness Test

008619862-01, P = 382.366397 Days, E = 161.261591 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	5.39	4.93	4.19	5.39	3.19	0.97	10.3	11.0	0.46	1.20	8.71	1.17	0.22	0.45



Stellar Parameters For KIC 008619862

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5991^{+165}_{-207}	$4.484^{+0.052}_{-0.208}$	$0.000^{+0.250}_{-0.300}$	$0.978^{+0.299}_{-0.100}$	$1.063^{+0.126}_{-0.154}$	$1.598^{+0.355}_{-0.850}$
	+3%/-3%	+1%/-5%	+inf%/-inf%	+31%/-10%	+12%/-14%	+22%/-53%
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 008619862-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-362 ± 33	$2.49^{+1.30}_{-1.30}$	363^{+25}_{-17}	5597^{+2416}_{-968}	$35727^{+111268}_{-20989}$
Alt.	-181 ± 34	$2.54^{+1.44}_{-1.40}$	363^{+26}_{-17}	4700^{+2179}_{-693}	16787^{+67355}_{-10253}

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

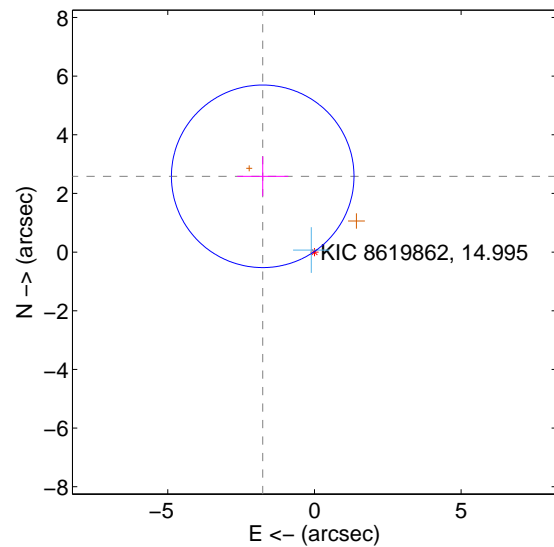
Supplemental centroid analysis for 008619862-01. Kepler magnitude: 14.99. Transit SNR 9.48

There are 1 quarters with good PRF difference image offsets

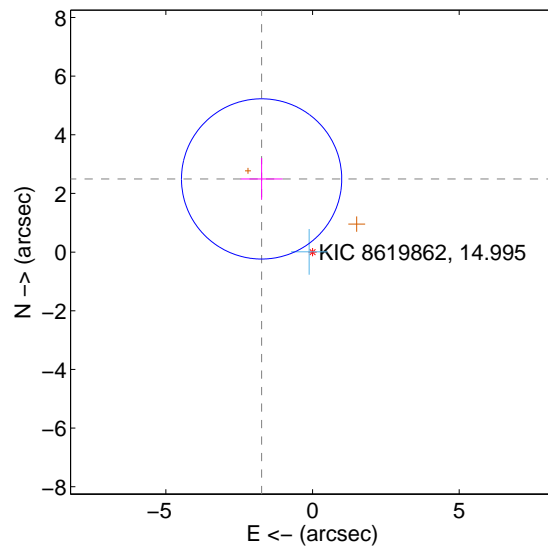
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.129 ± 1.037	3.02	1.764 ± 0.870	2.584 ± 0.678
PRF-fit source offset from KIC position	3.040 ± 0.911	3.34	1.736 ± 0.709	2.495 ± 0.714
photometric centroid source offset	2.63 ± 1.42	1.85	0.17 ± 1.41	2.62 ± 1.42

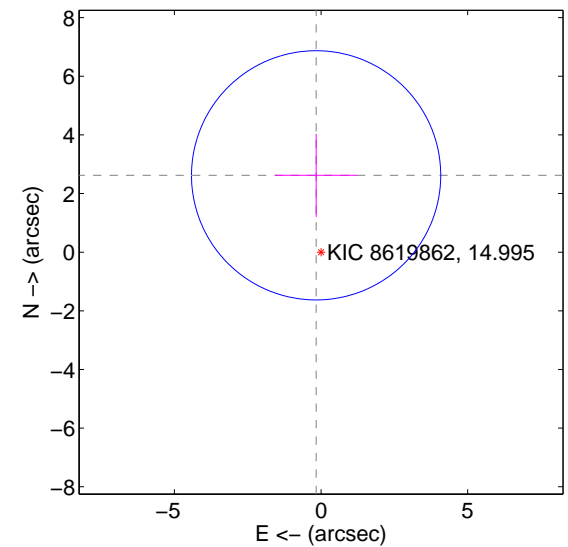
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

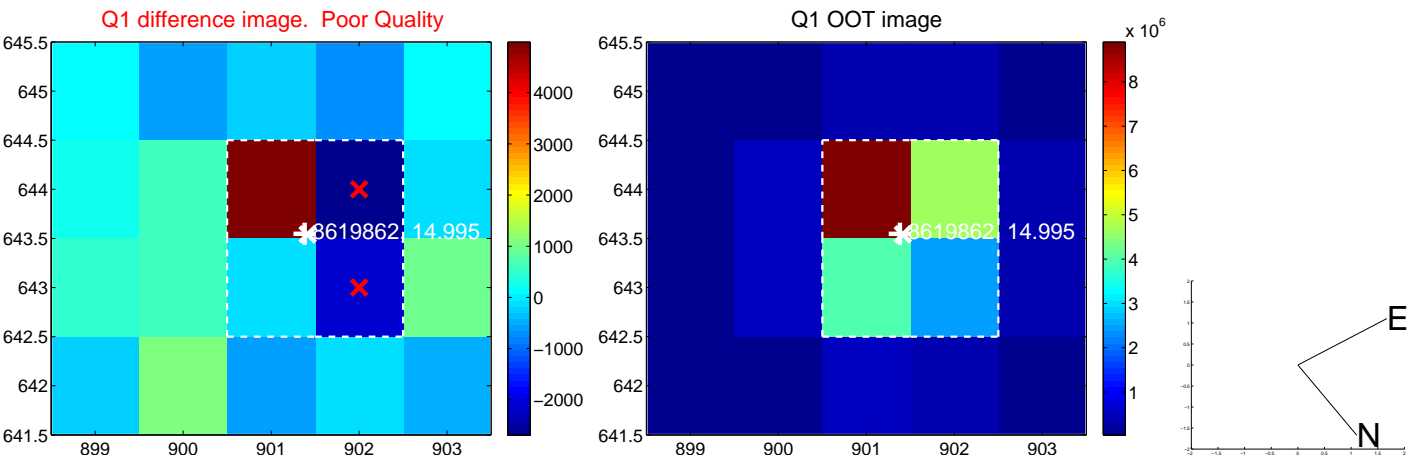


offset from photometric centroids

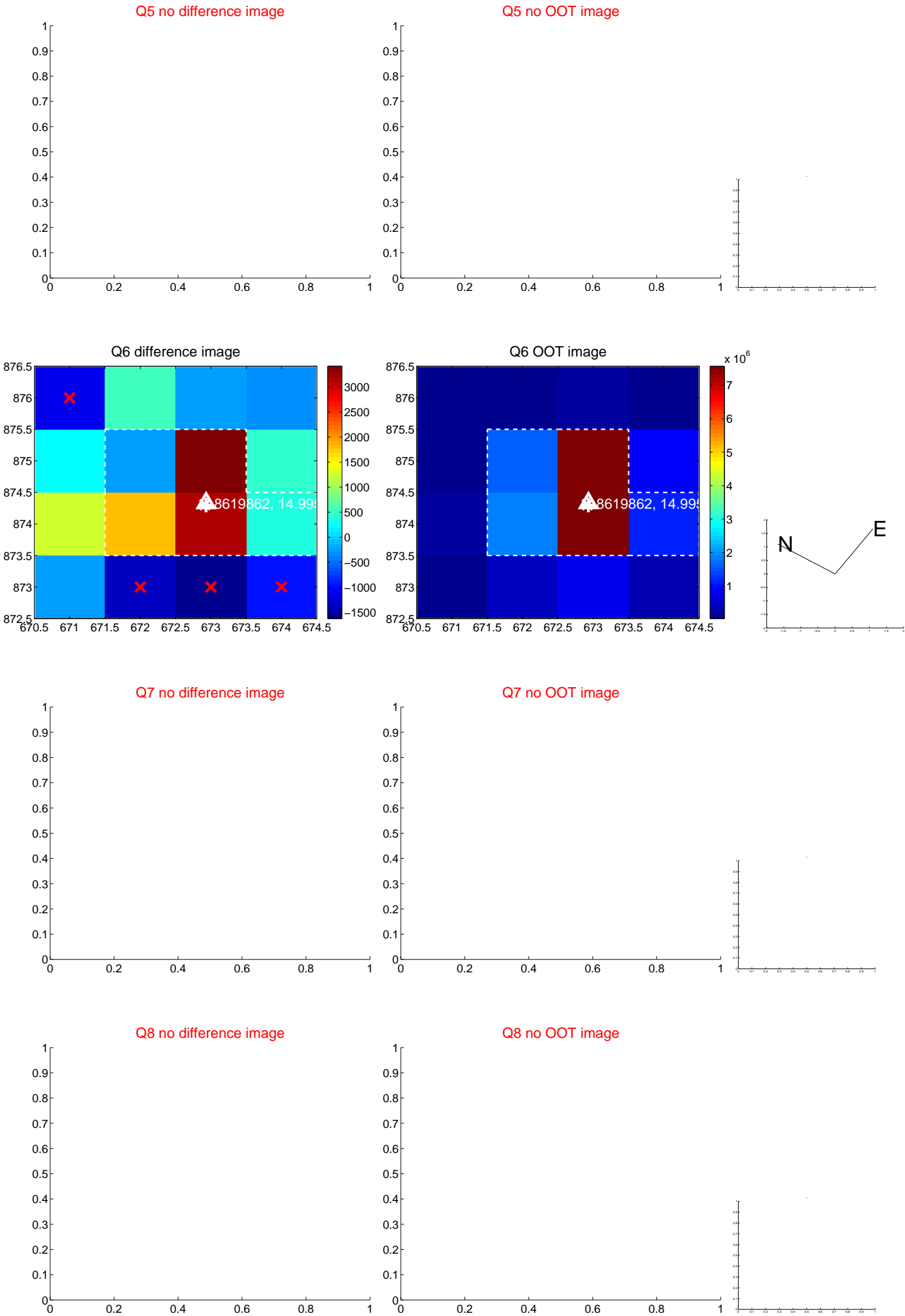


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

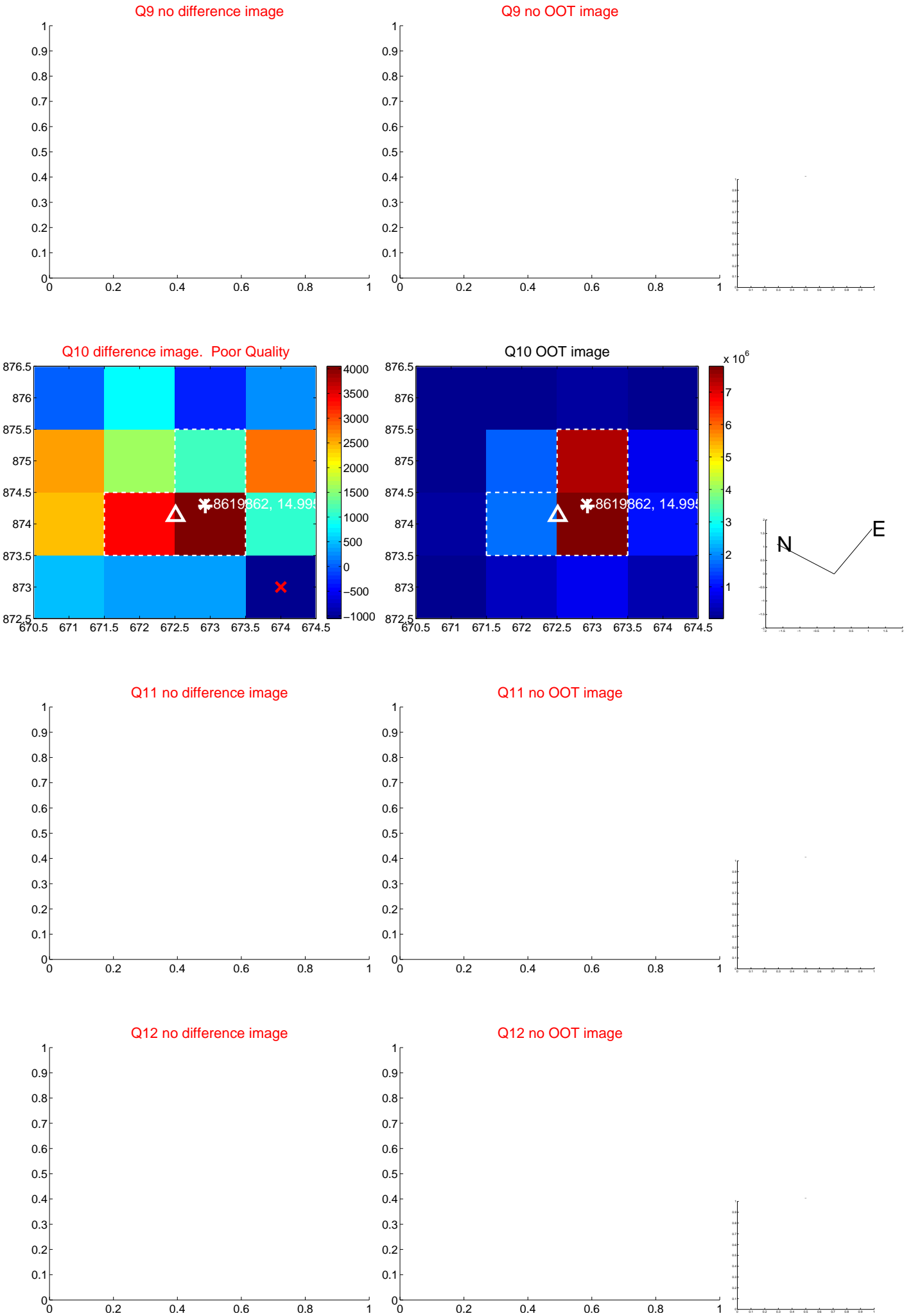
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



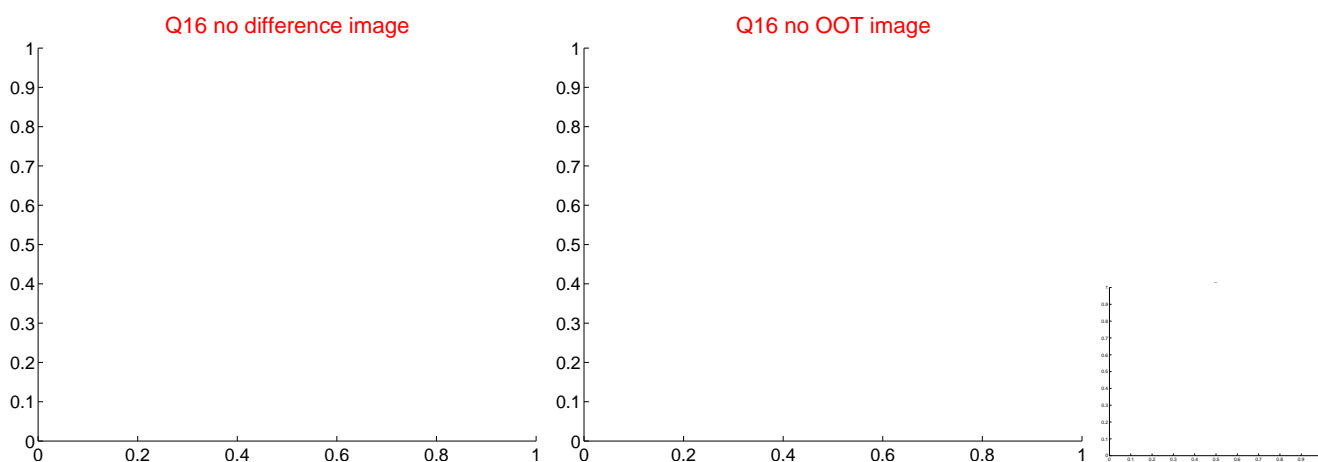
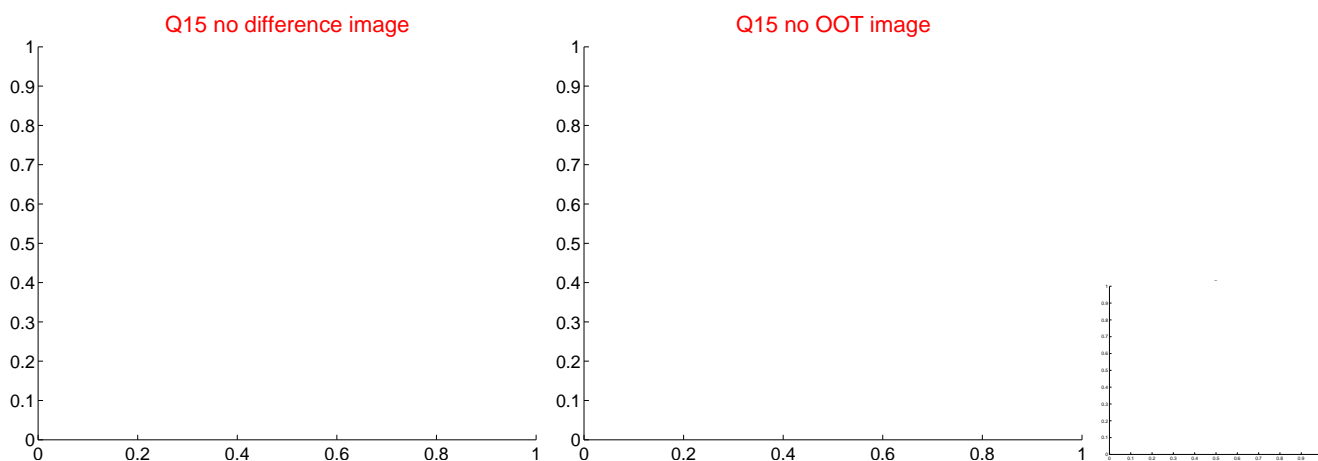
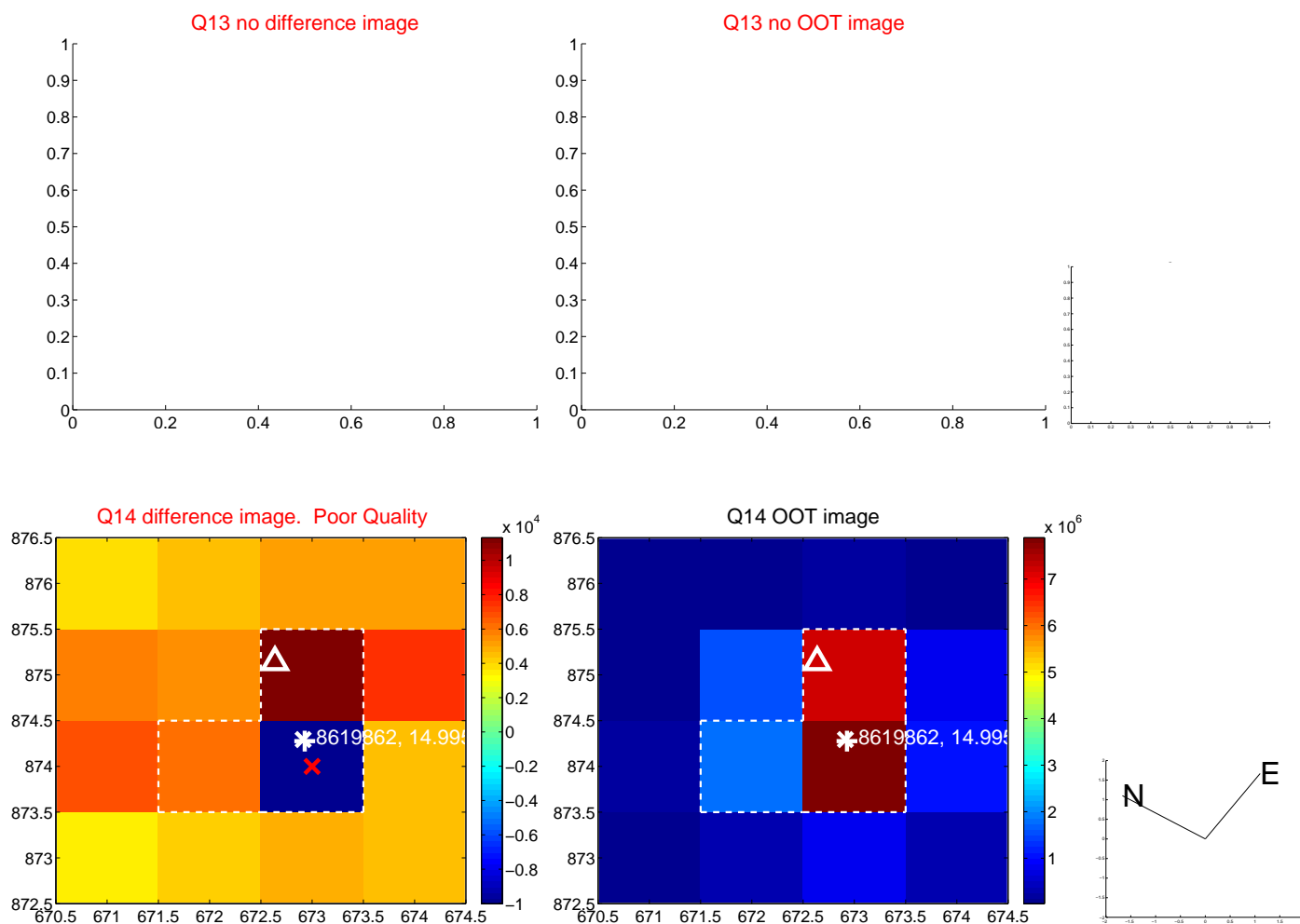
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



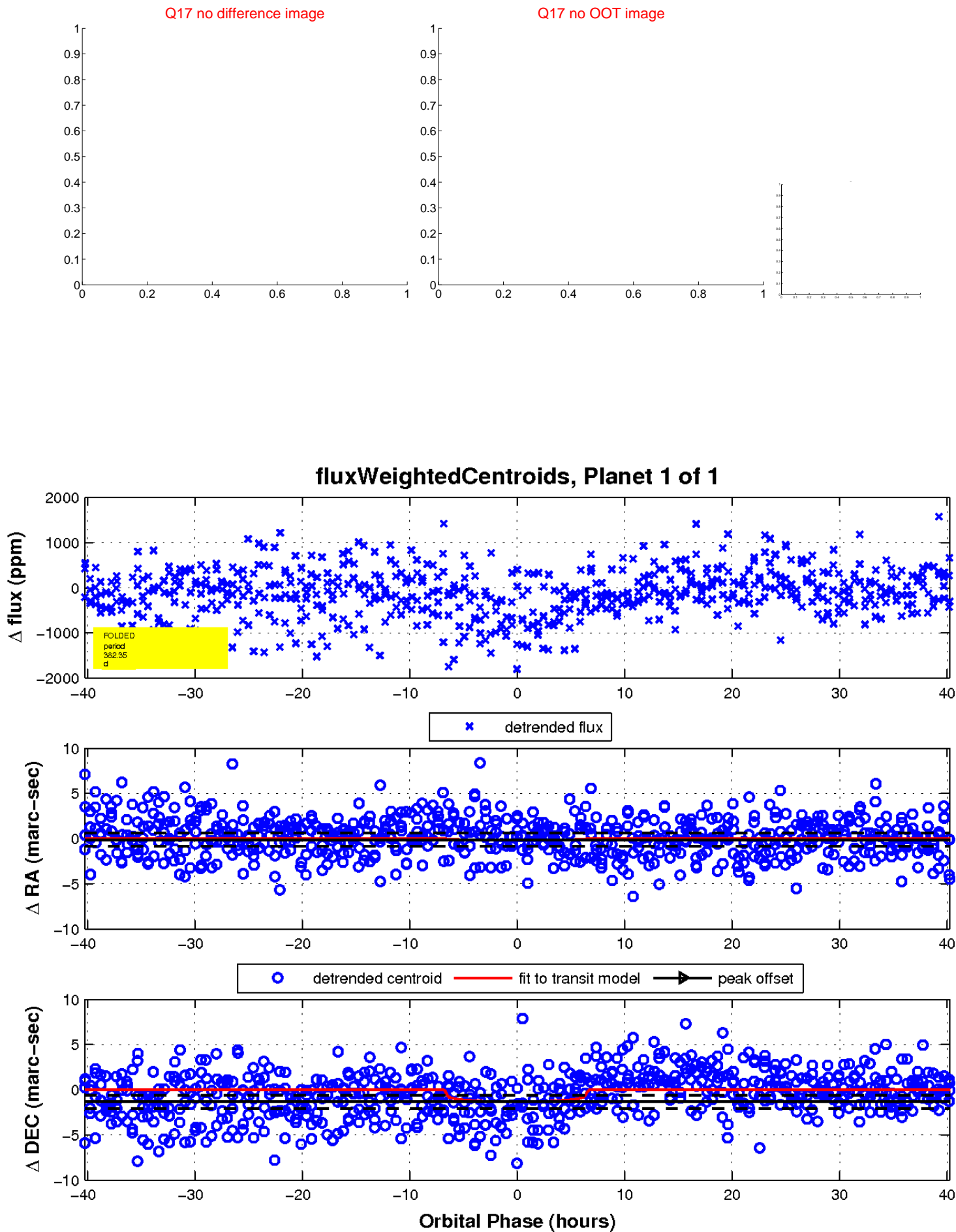
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

