

KIC 008879868

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})
008879868-01	OBS	No	377.255894	169.348701	1825.6	42.714	9.8	13.3	0.84	5700	6.85	0.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008879868-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

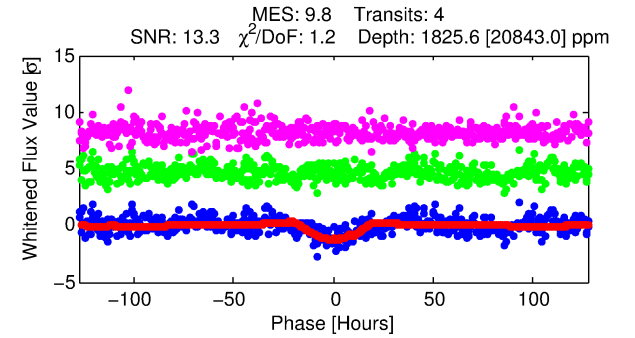
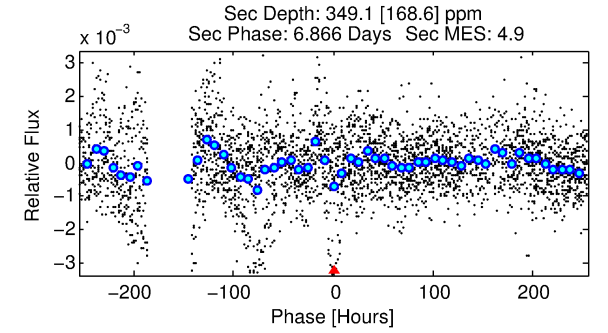
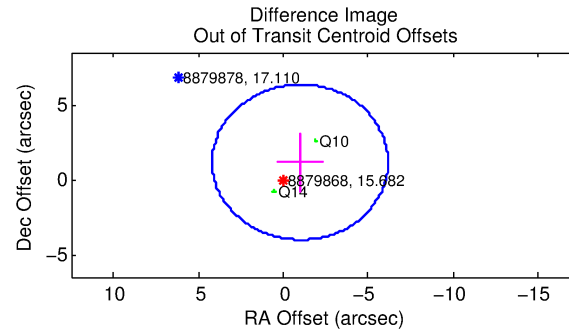
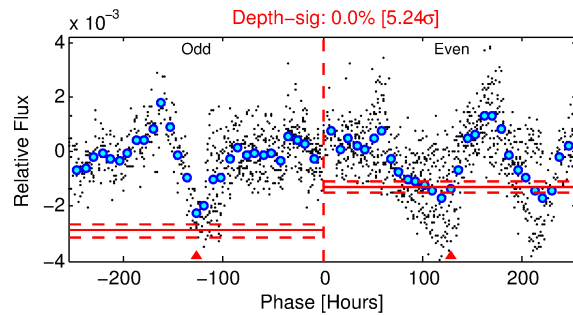
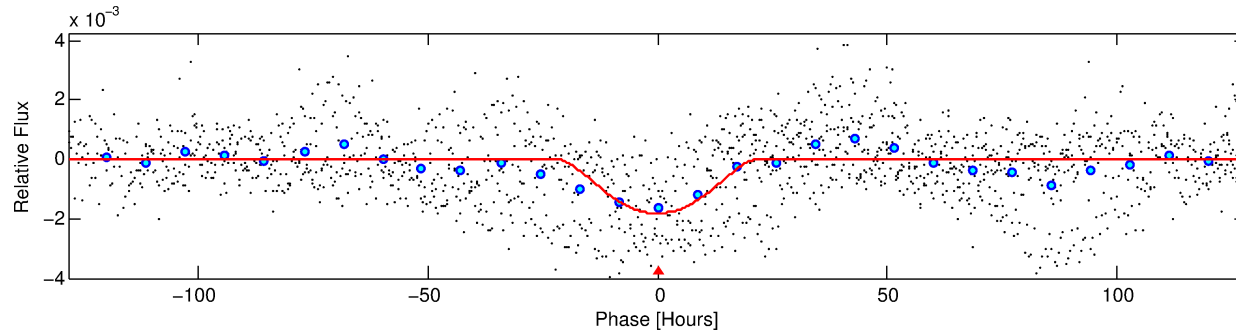
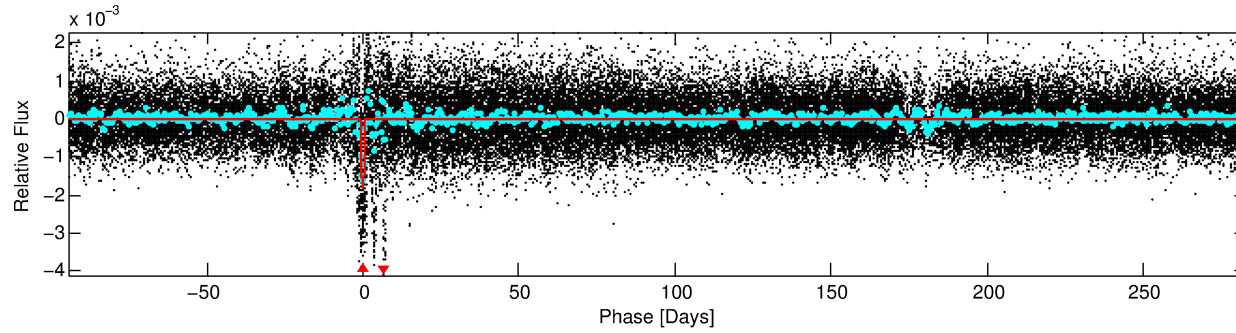
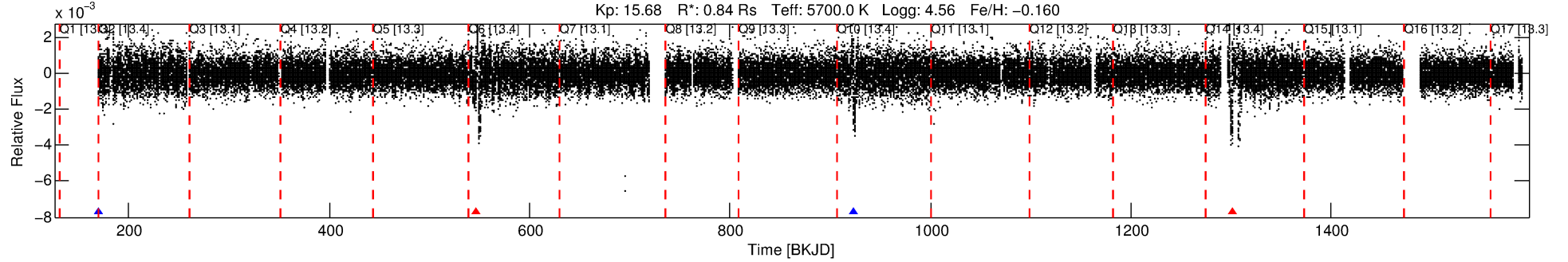
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008879868-01

No Significant Match Found

DV One-Page Summary

KIC: 8879868 Candidate: 1 of 1 Period: 377.256 d



DV Fit Results:

Period = 377.25589 [0.03461] d
Epoch = 169.3487 [0.0716] BKJD
Rp/R* = 0.0749 [0.1705]
a/R* = 26.62 [13.01]
b = 1.00 [0.33]
Seff = 0.67 [0.24]
Teq = 230 [21] K
Rp = 6.85 [15.71] Re
a = 0.9976 [0.2314] AU
Ag = 4076.63 [18722.02] [0.22 σ]
Teffp = 2847 [3261] K [0.80 σ]

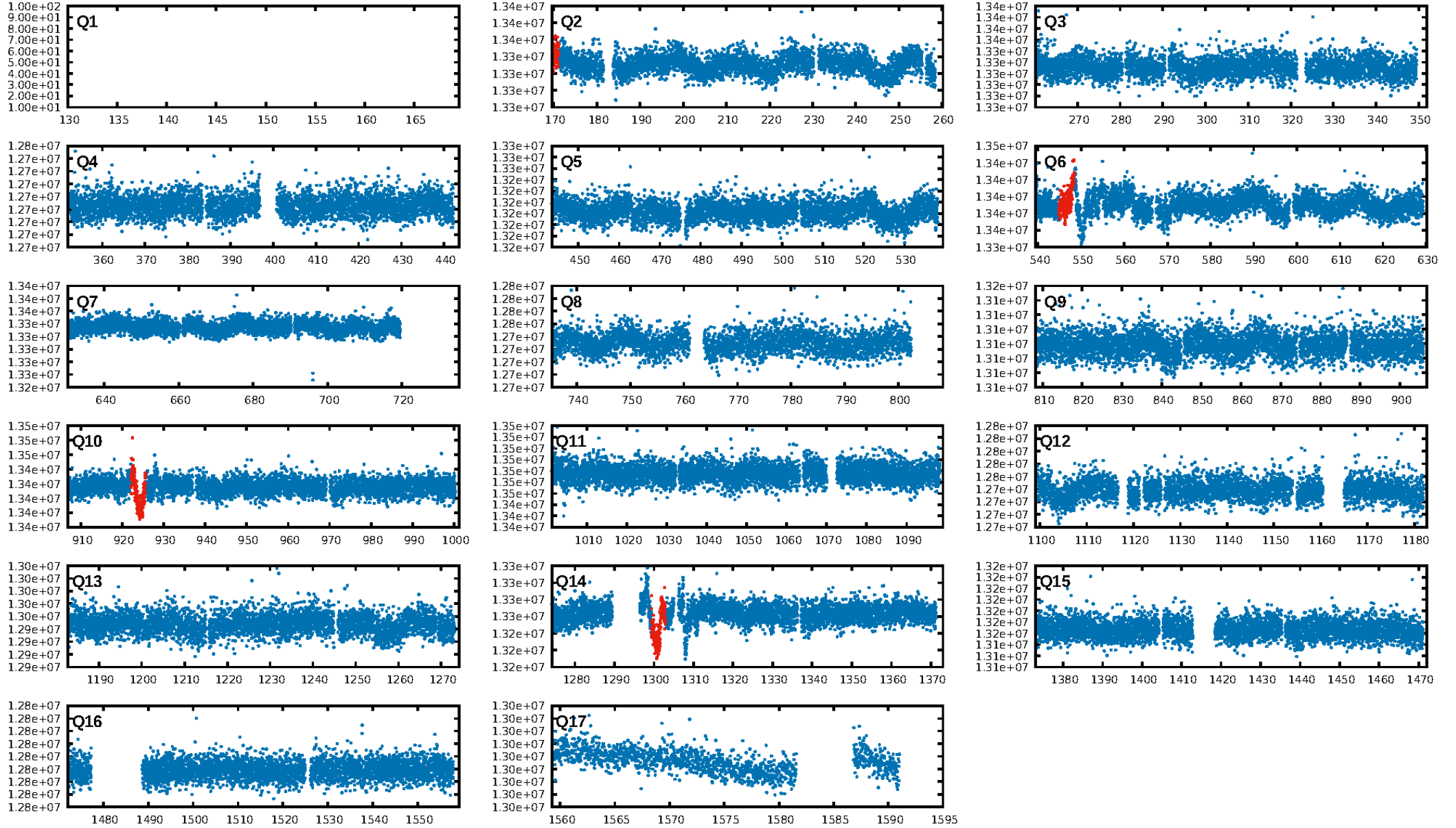
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 3.06e-13
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: -0.2044
Centroid-sig: 15.3%
Centroid-so: 1.126 arcsec [1.26 σ]
OotOffset-rm: 1.533 arcsec [0.89 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 1.534 arcsec [0.91 σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

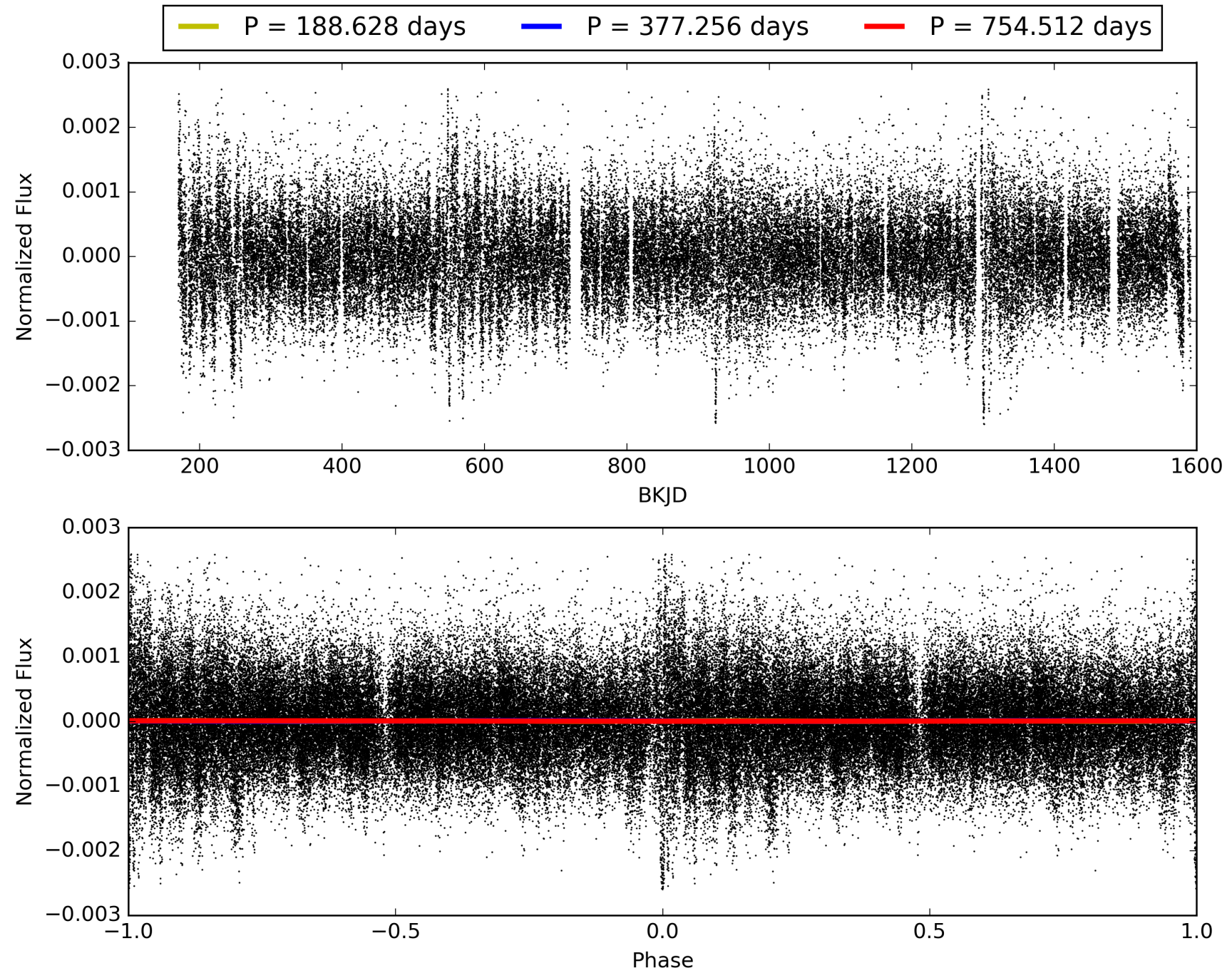
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:47:38 Z

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

TCE 008879868-01, PDC Light Curves

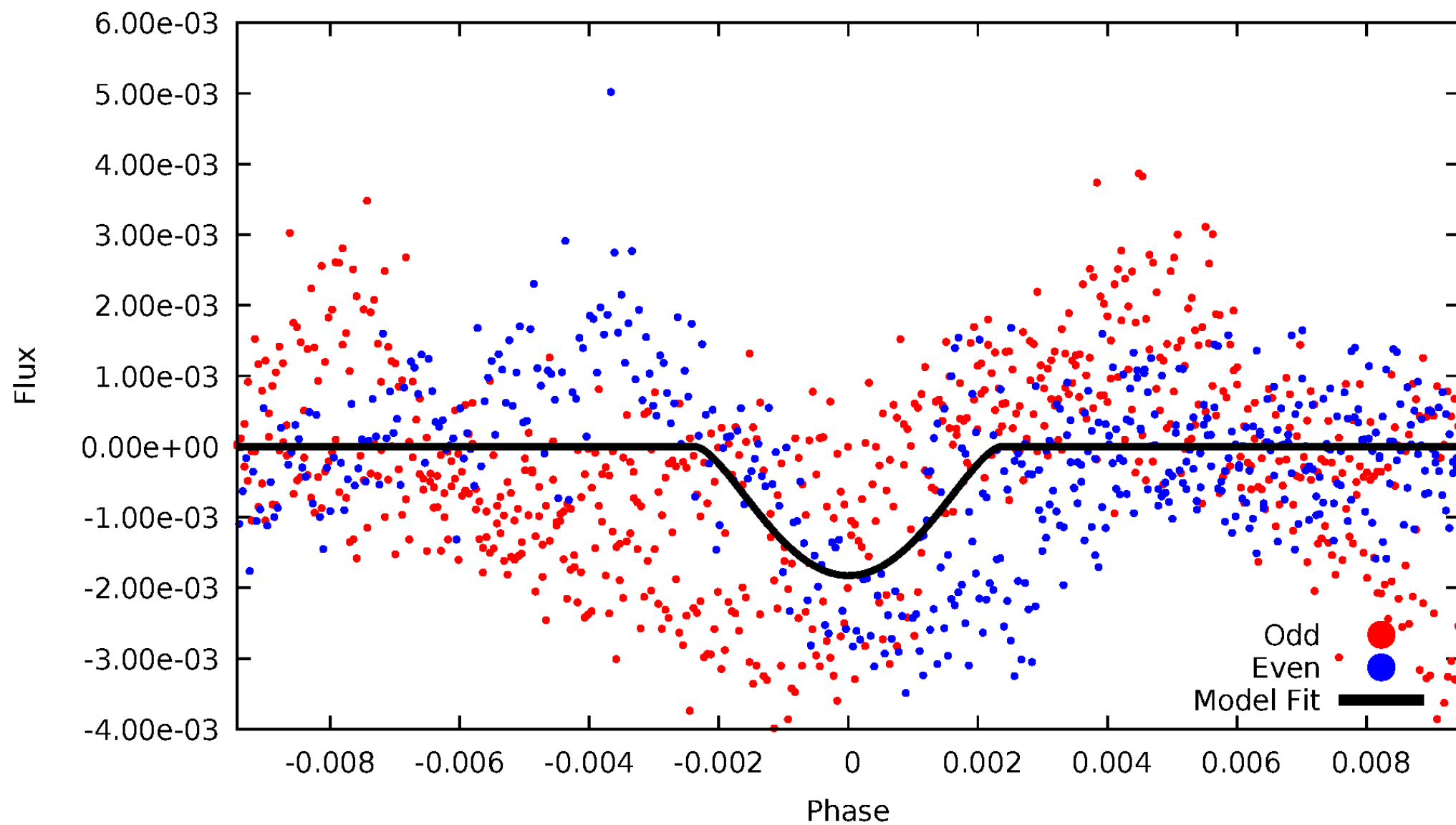


TCE 008879868-01



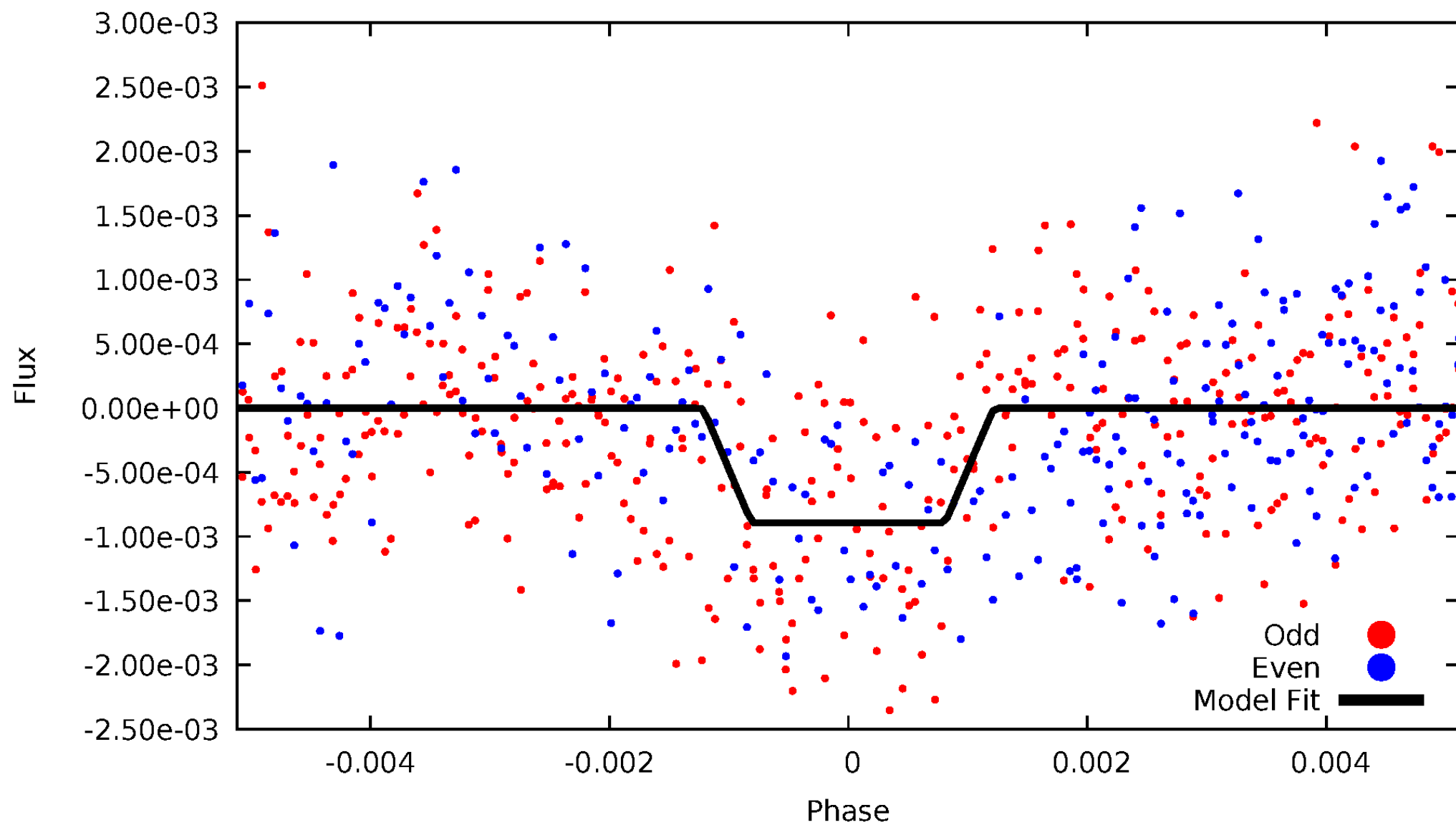
DV Odd/Even

TCE 008879868-01



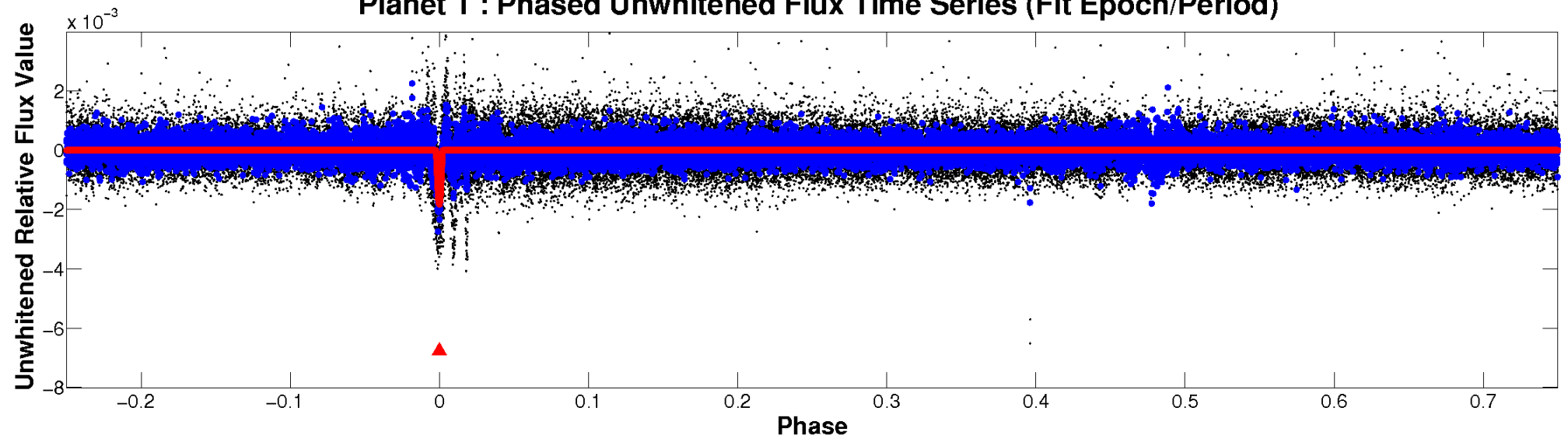
ALT Odd/Even

TCE 008879868-01

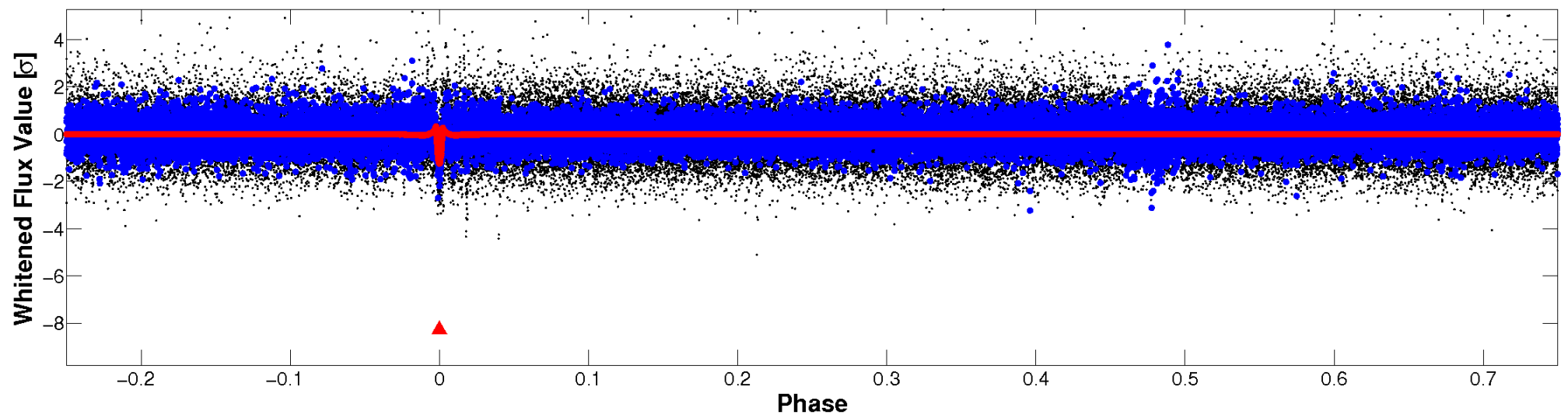


Non-Whitened Vs. Whitened Light Curve

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

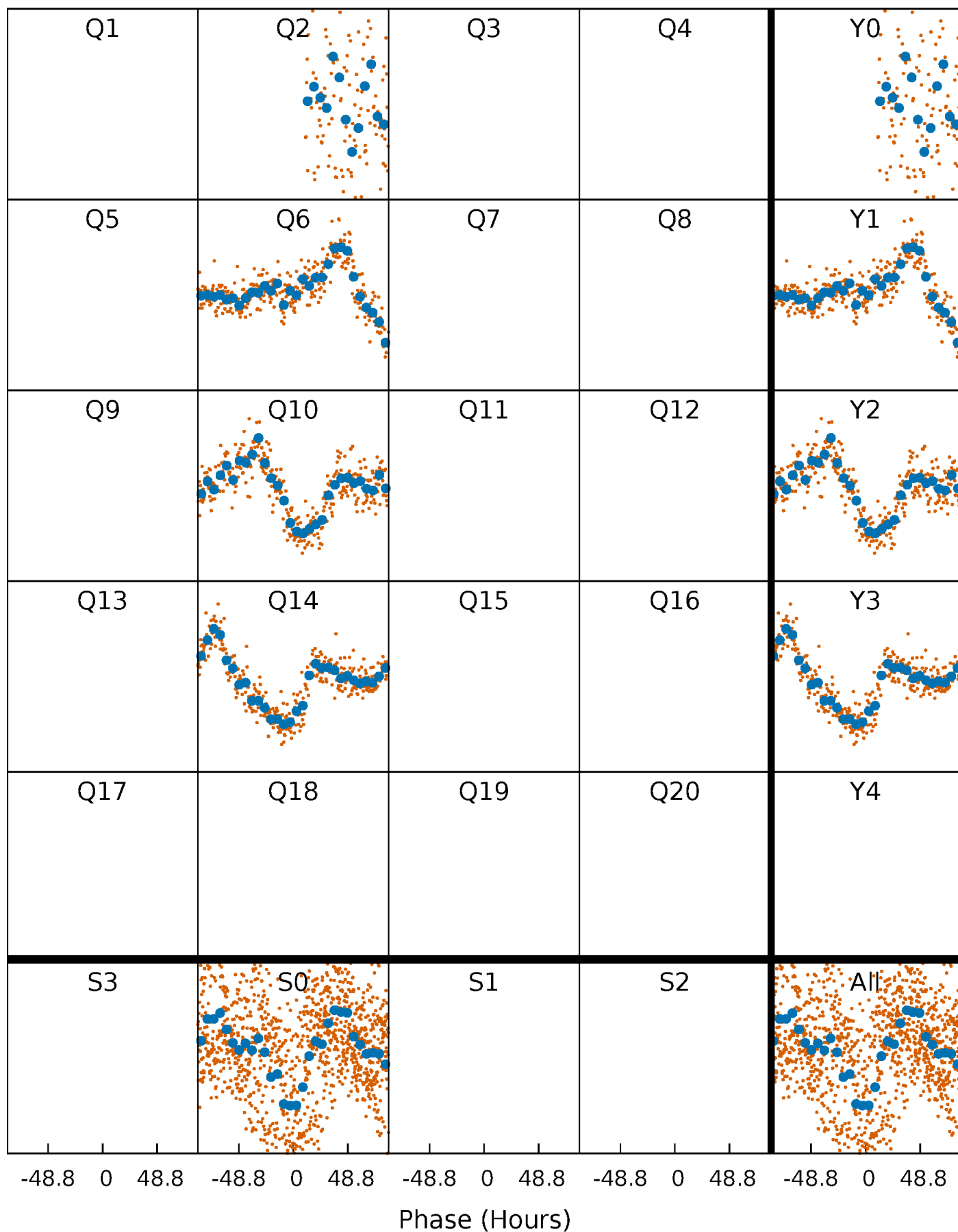


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



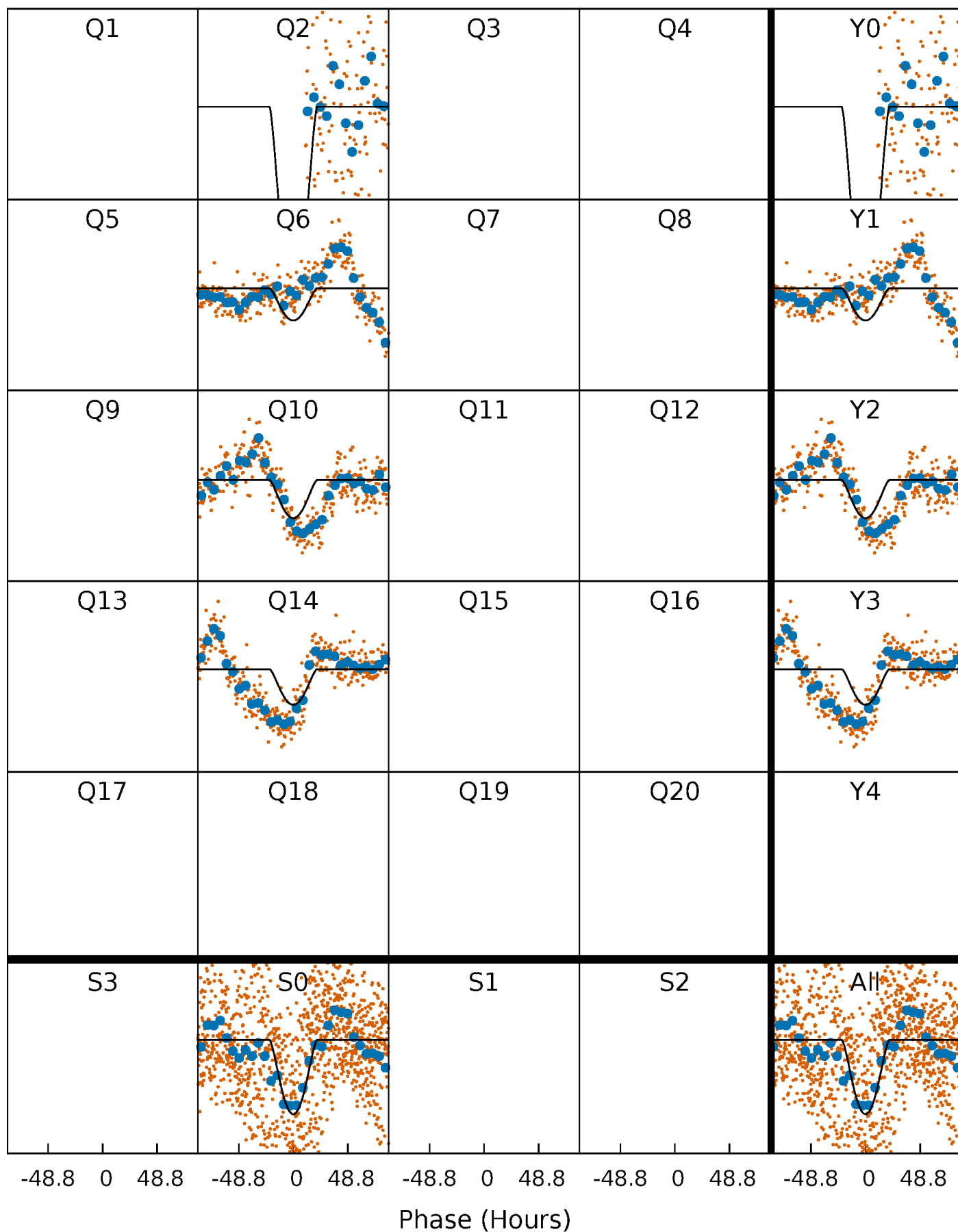
PDC Quarter-Phased Transit Curves

TCE 008879868-01 $P=377.255894$ Days $T_0=169.348701$ (BKJD)



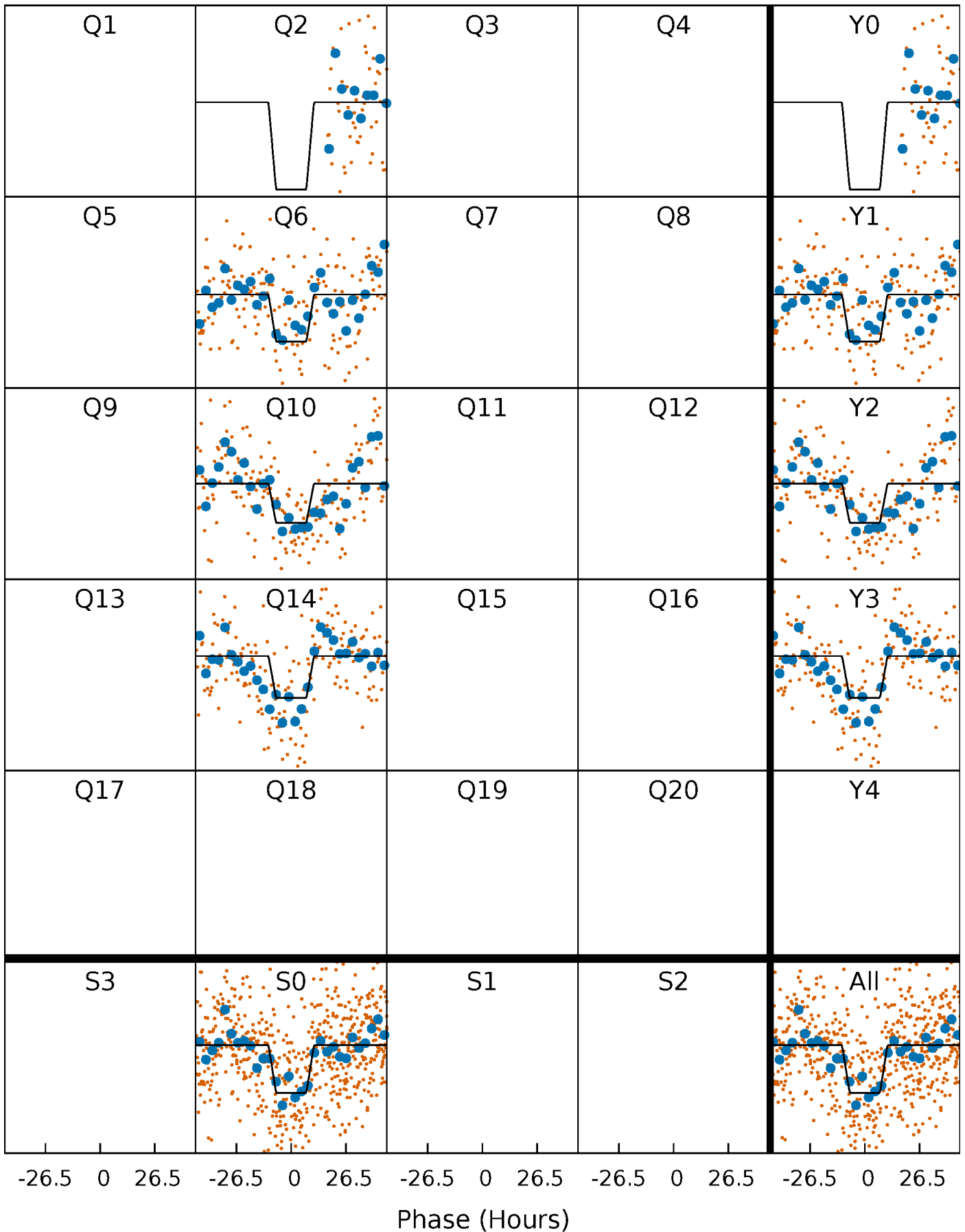
DV Quarter-Phased Transit Curves

TCE 008879868-01 P=377.255894 Days $T_0=169.348701$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

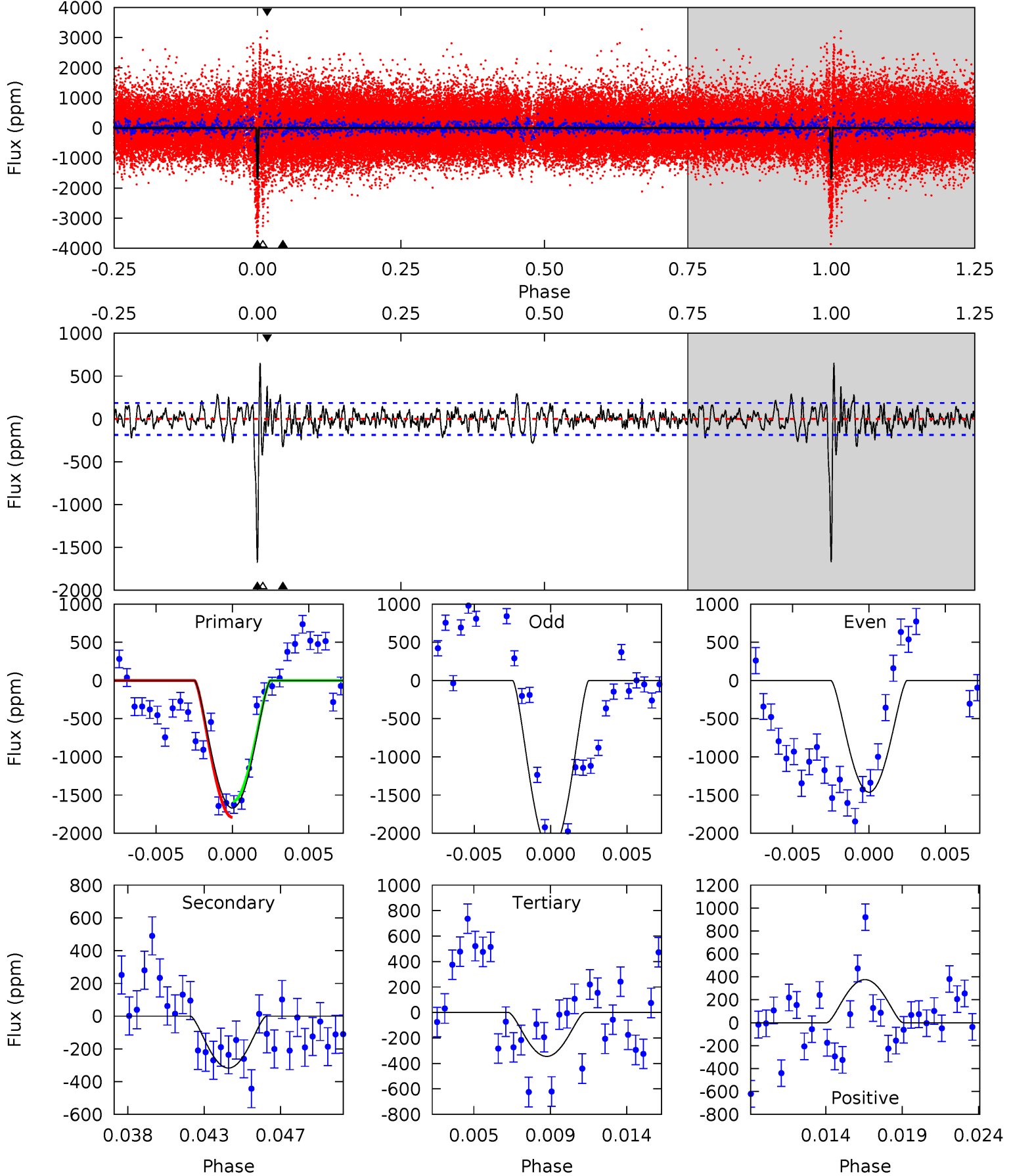
TCE 008879868-01 P=377.387420 Days $T_0=169.065134$ (BKJD)



DV Model-Shift Uniqueness Test

008879868-01, P = 377.255894 Days, E = 169.348701 Days

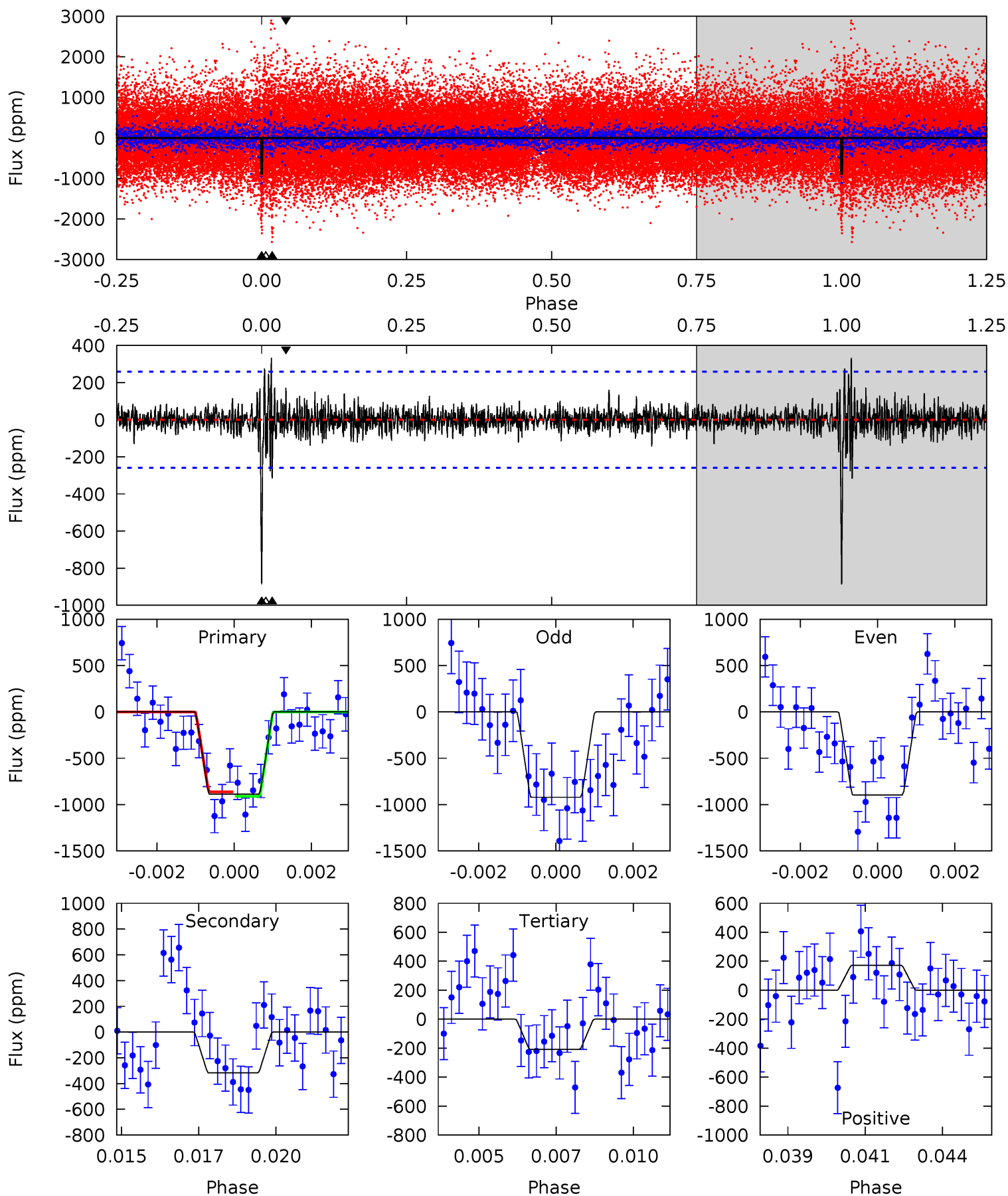
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.5	8.82	9.59	10.5	5.17	2.82	2.54	36.9	36.0	-0.77	-1.63	10.7	1.04	0.28	2.88



Alt Model-Shift Uniqueness Test

008879868-01, P = 377.387420 Days, E = 169.065134 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	6.46	4.24	3.50	5.29	3.03	0.92	13.9	14.6	2.22	2.96	0.24	0.97	0.27	0.48



Stellar Parameters For KIC 008879868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5700^{+152}_{-169}	$4.560^{+0.033}_{-0.187}$	$-0.160^{+0.300}_{-0.300}$	$0.838^{+0.229}_{-0.076}$	$0.934^{+0.102}_{-0.112}$	$2.236^{+0.398}_{-1.070}$
	+3%/-3%	+1%/-4%	+188%/-188%	+27%/-9%	+11%/-12%	+18%/-48%
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 008879868-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-317 ± 36	$13.91^{+14.07}_{-9.38}$	330^{+20}_{-14}	2756^{+1136}_{-446}	875^{+7471}_{-658}
Alt.	-317 ± 49	$11.70^{+12.69}_{-7.93}$	330^{+21}_{-14}	2868^{+1244}_{-460}	1204^{+11145}_{-916}

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 $A_{obs} \gg 1.0$

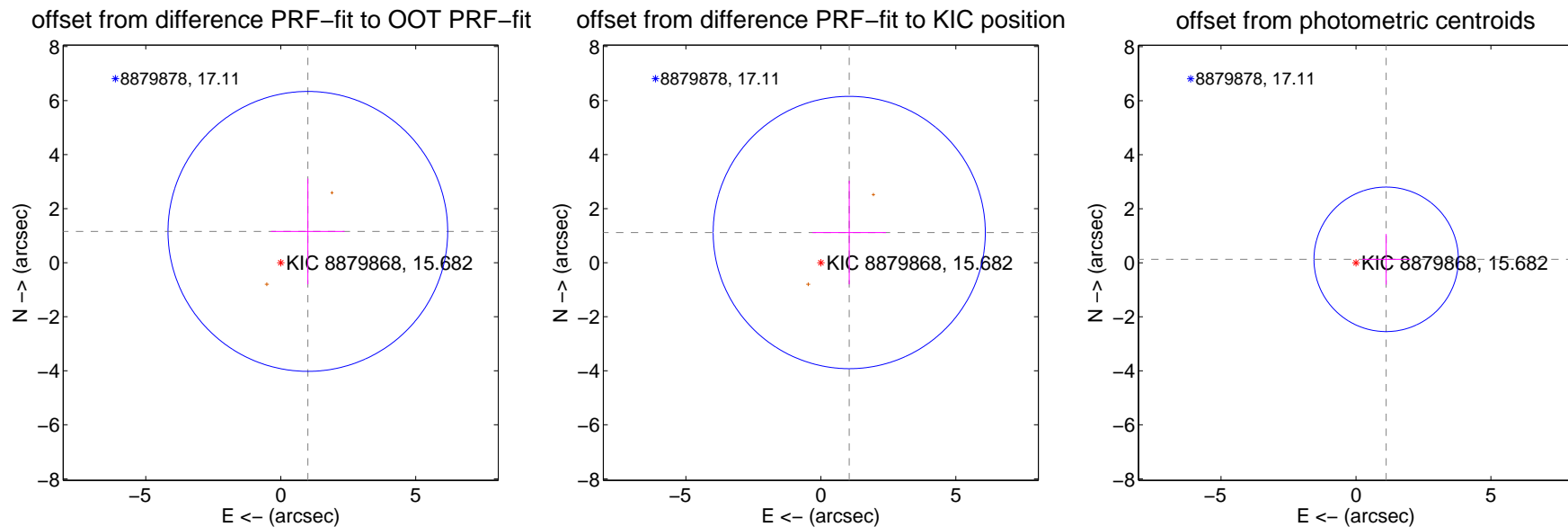
DV Centroid Data

Supplemental centroid analysis for 008879868-01. Kepler magnitude: 15.68. Transit SNR 13.27

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.533 ± 1.727	0.89	-1.004 ± 1.363	1.158 ± 1.956
PRF-fit source offset from KIC position	1.534 ± 1.680	0.91	-1.051 ± 1.363	1.117 ± 1.917
photometric centroid source offset	1.13 ± 0.89	1.26	-1.12 ± 0.89	0.13 ± 0.94

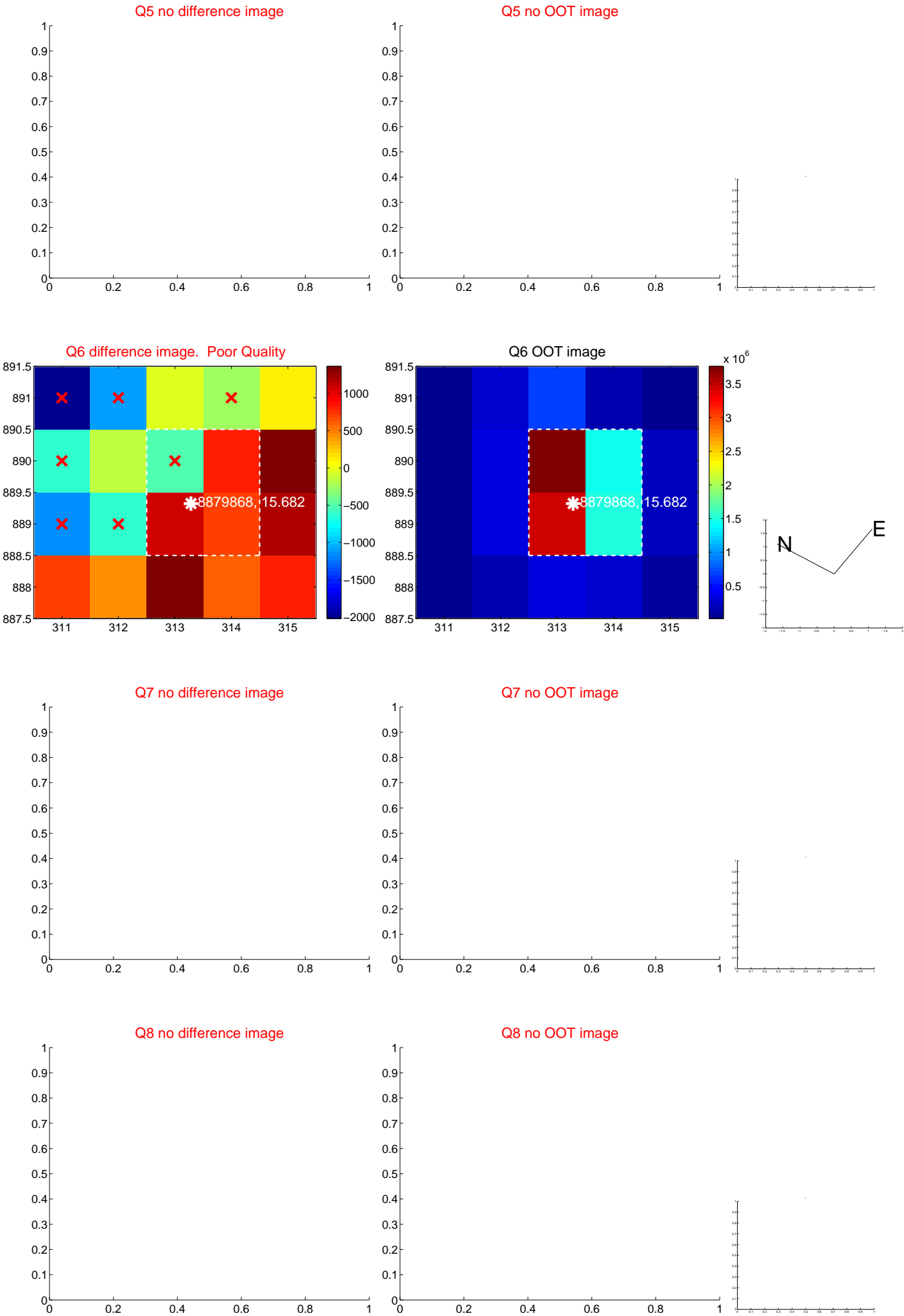


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

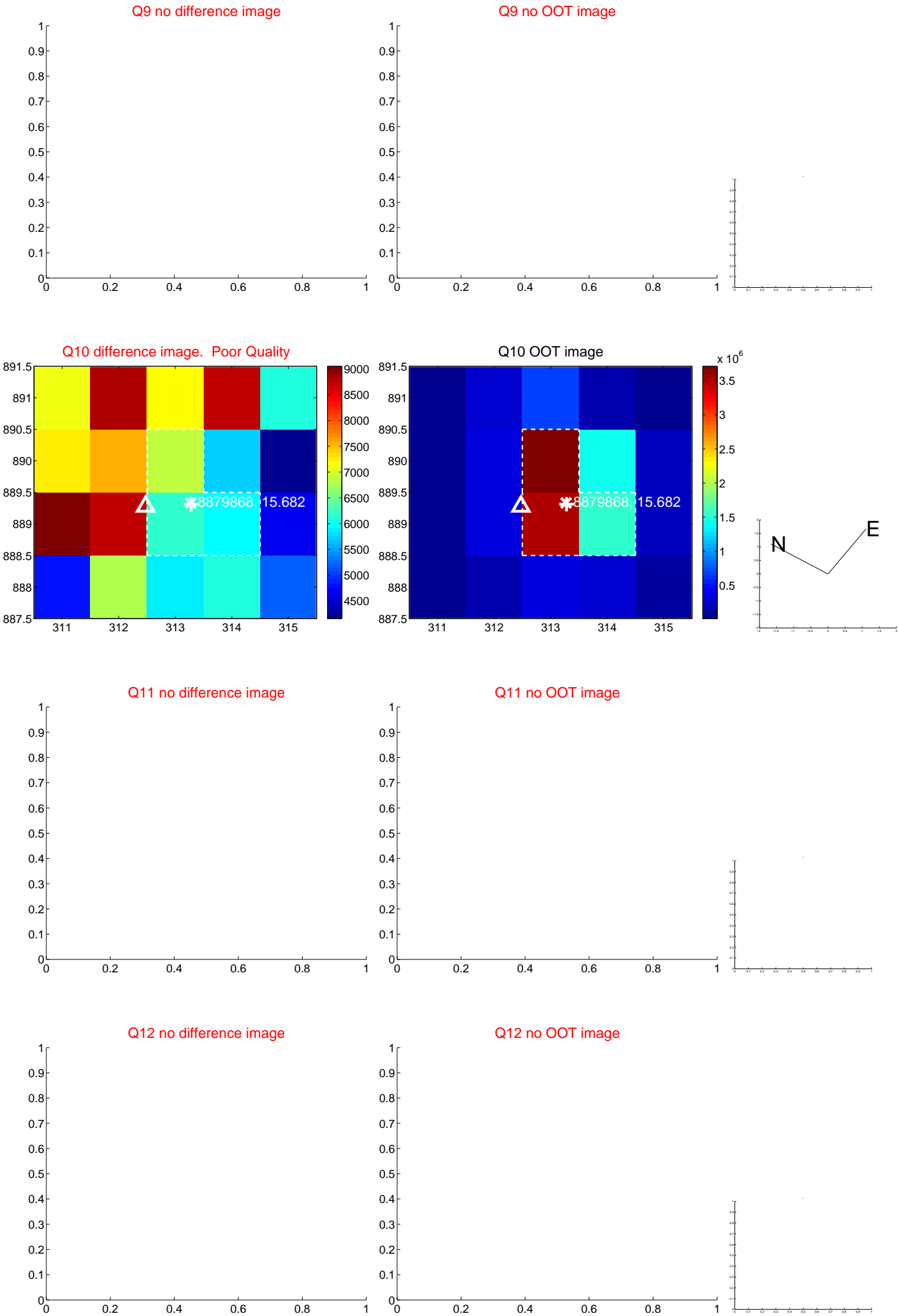
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



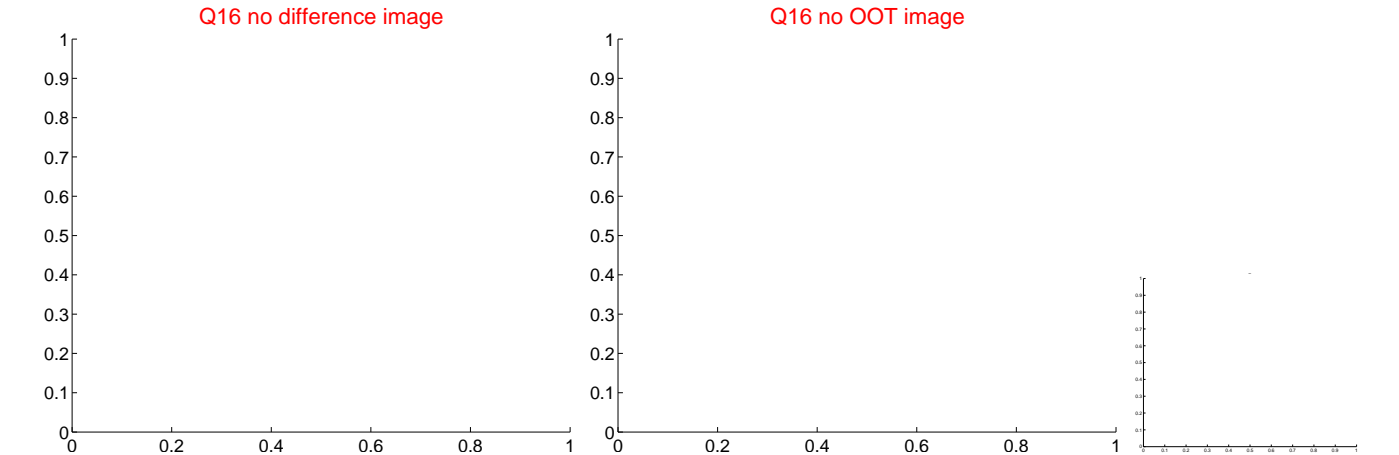
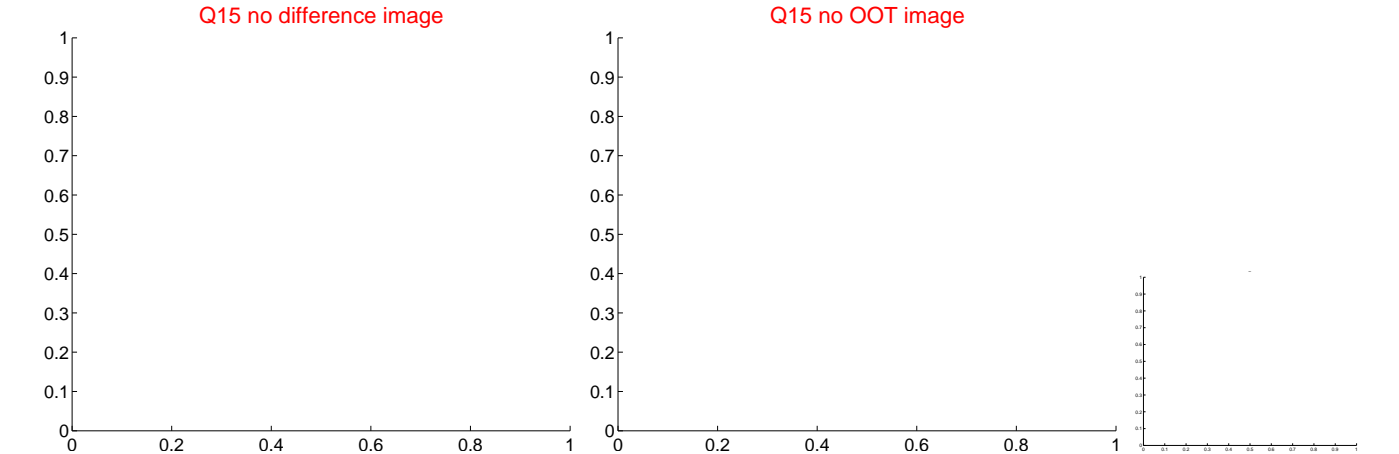
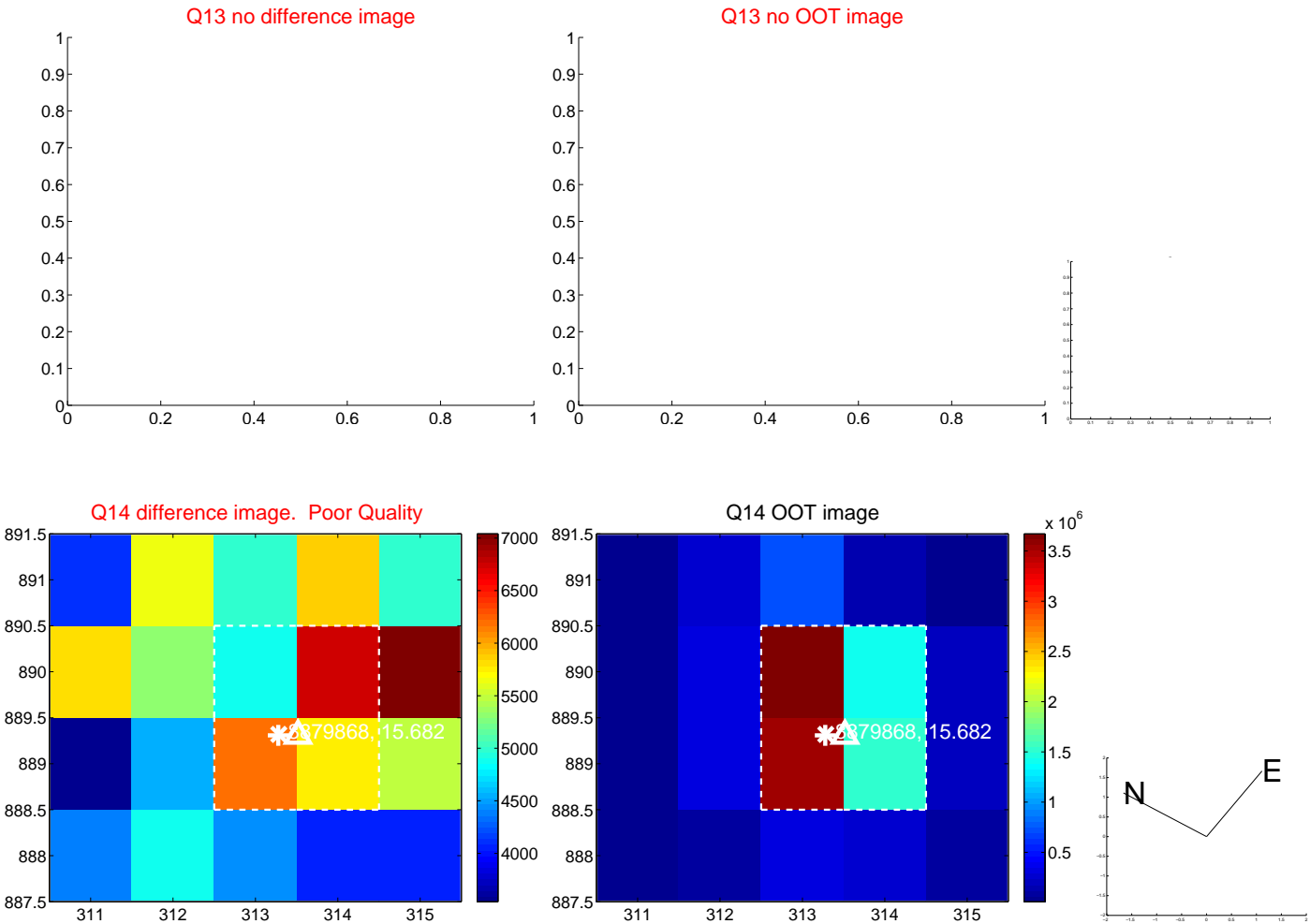
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



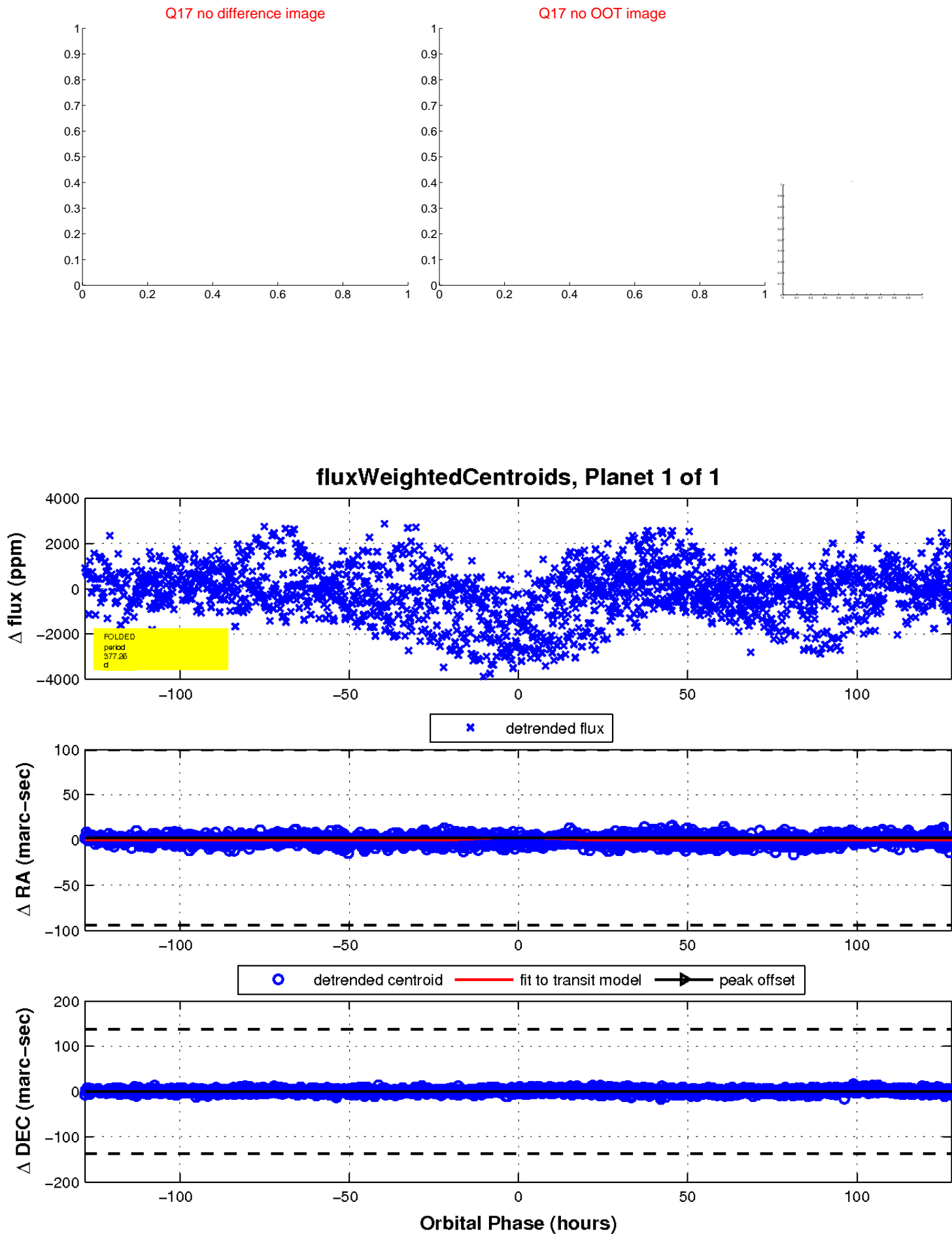
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: 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

