

KIC 011868854

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})
011868854-01	OBS	No	556.686855	354.609816	1175.0	14.298	10.5	9.6	0.91	5941	3.23	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011868854-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—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.

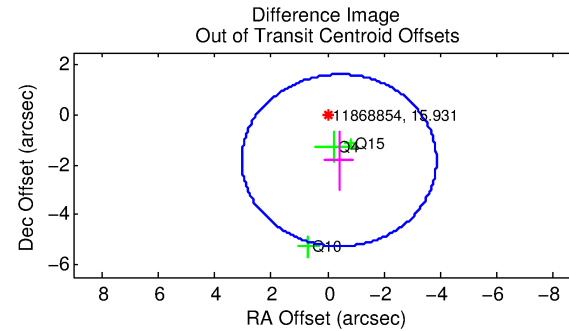
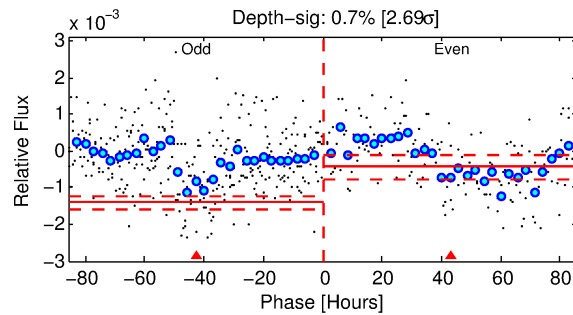
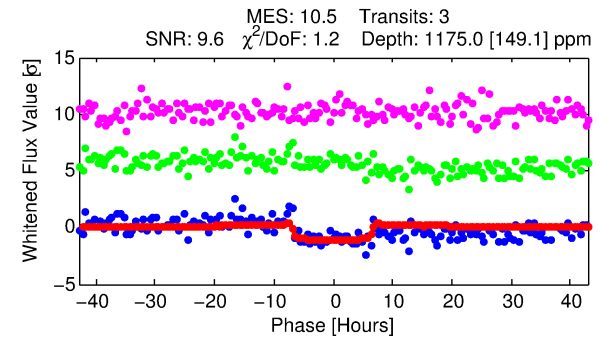
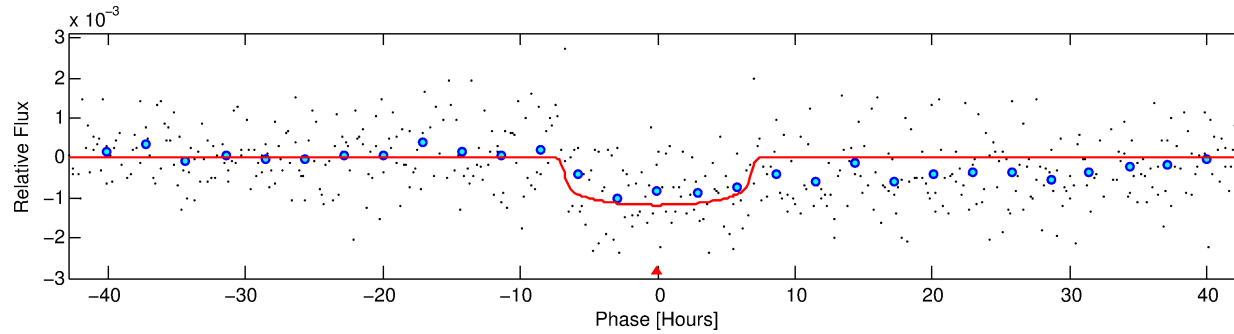
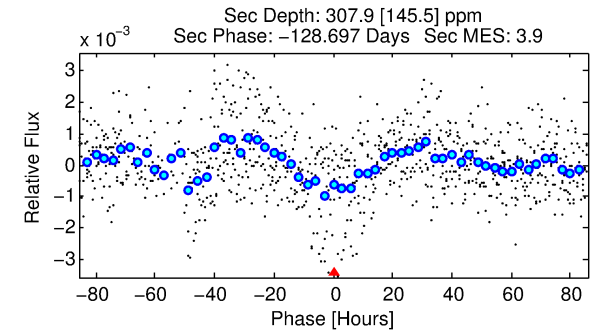
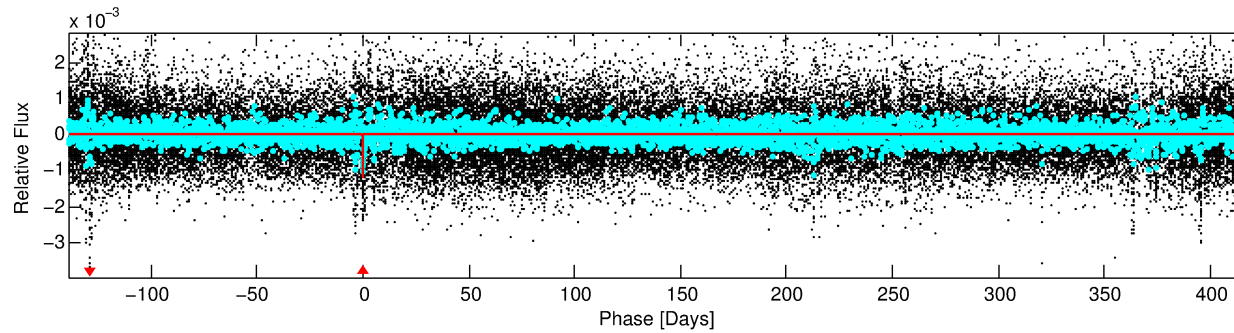
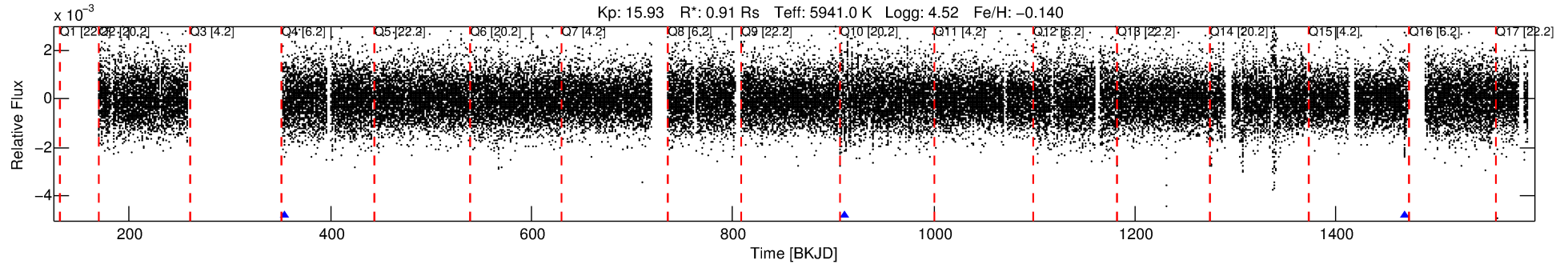
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011868854-01

No Significant Match Found

DV One-Page Summary

KIC: 11868854 Candidate: 1 of 1 Period: 556.687 d



DV Fit Results:

Period = 556.68686 [0.01529] d
Epoch = 354.6098 [0.0202] BKJD
Rp/R* = 0.0325 [0.0127]
a/R* = 258.42 [462.50]
b = 0.56 [2.22]
Seff = 0.53 [0.20]
Teq = 217 [21] K
Rp = 3.23 [1.58] Re
a = 1.3247 [0.3234] AU
Ag = 28471.61 [27871.39] [1.02σ]
Teffp = 4365 [1008] K [4.11σ]

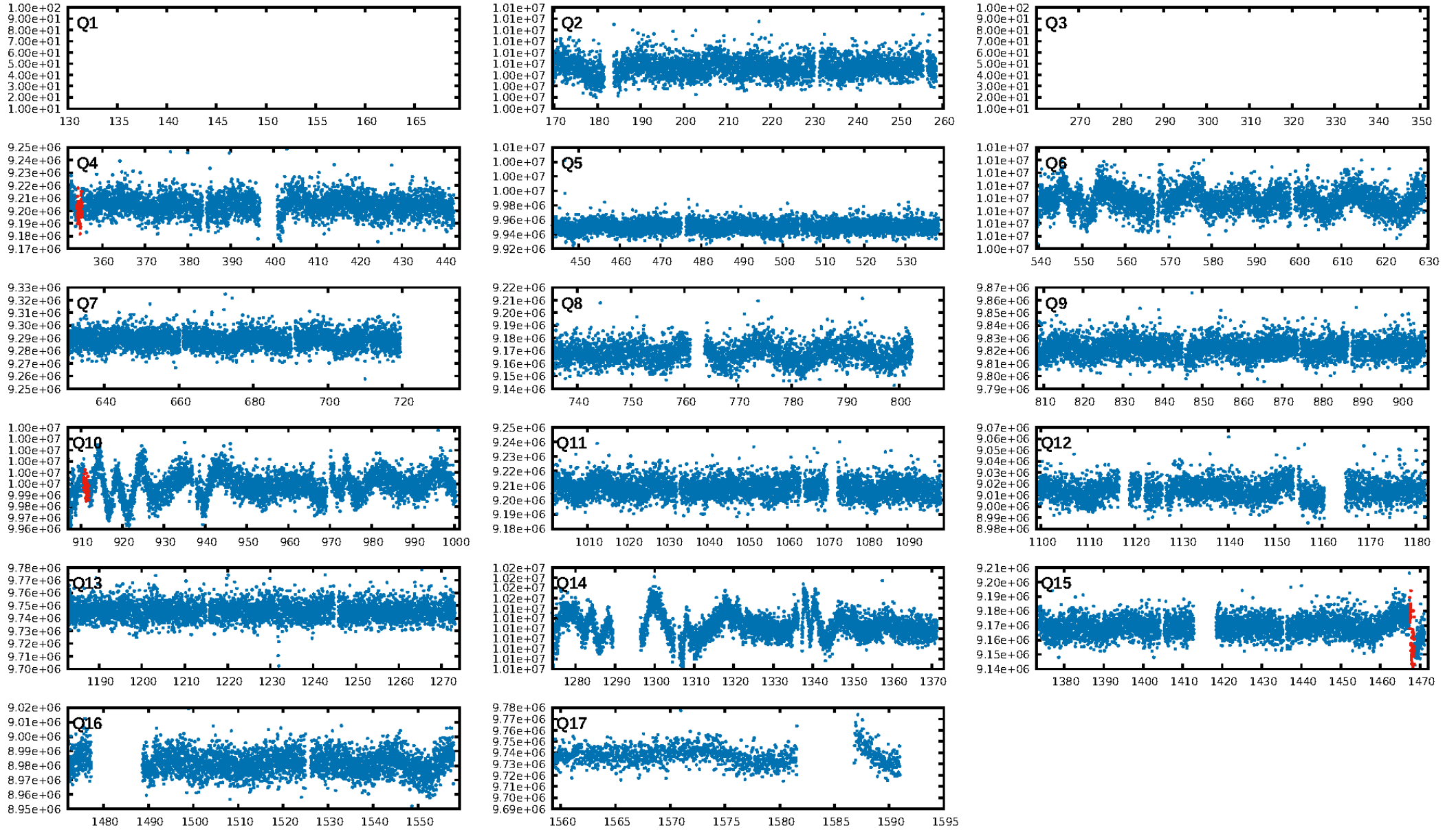
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 92.8%
Bootstrap-pfa: 1.72e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.946
Centroid-sig: 20.8%
Centroid-so: 1.970 arcsec [1.24σ]
OotOffset-rm: 1.871 arcsec [1.63σ]
KicOffset-rm: 1.886 arcsec [1.61σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

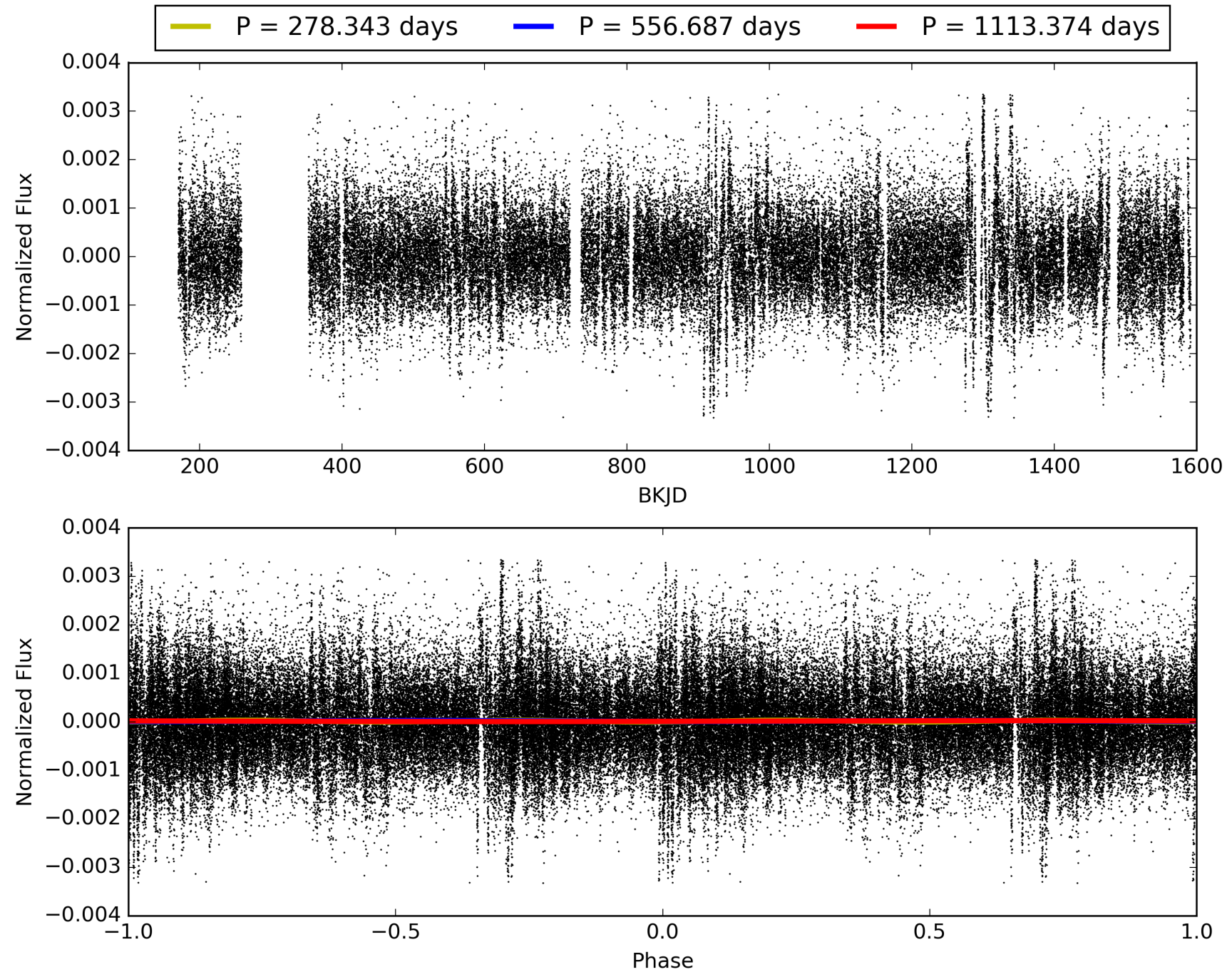
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:21:45 Z

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

TCE 011868854-01, PDC Light Curves

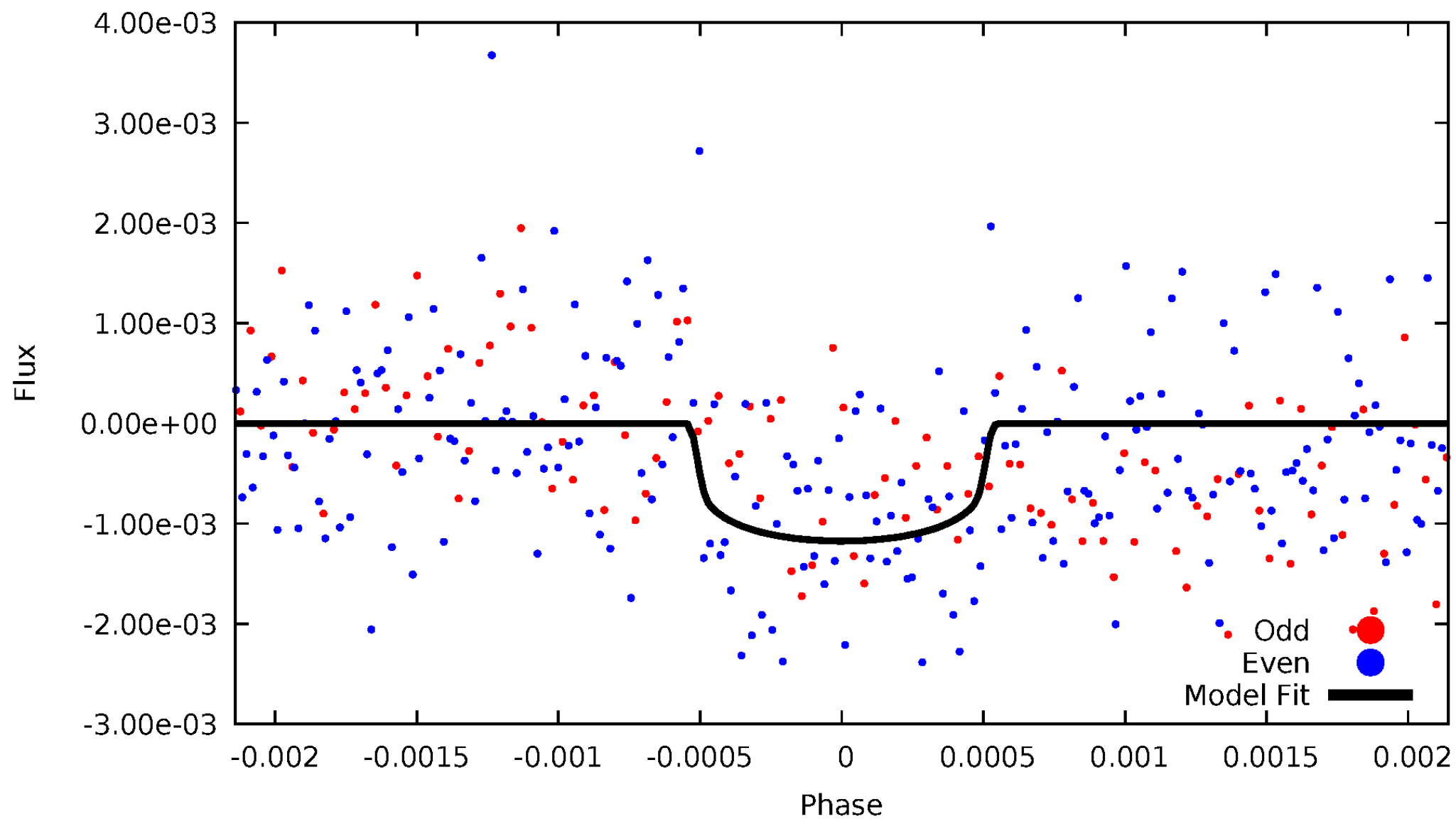


TCE 011868854-01



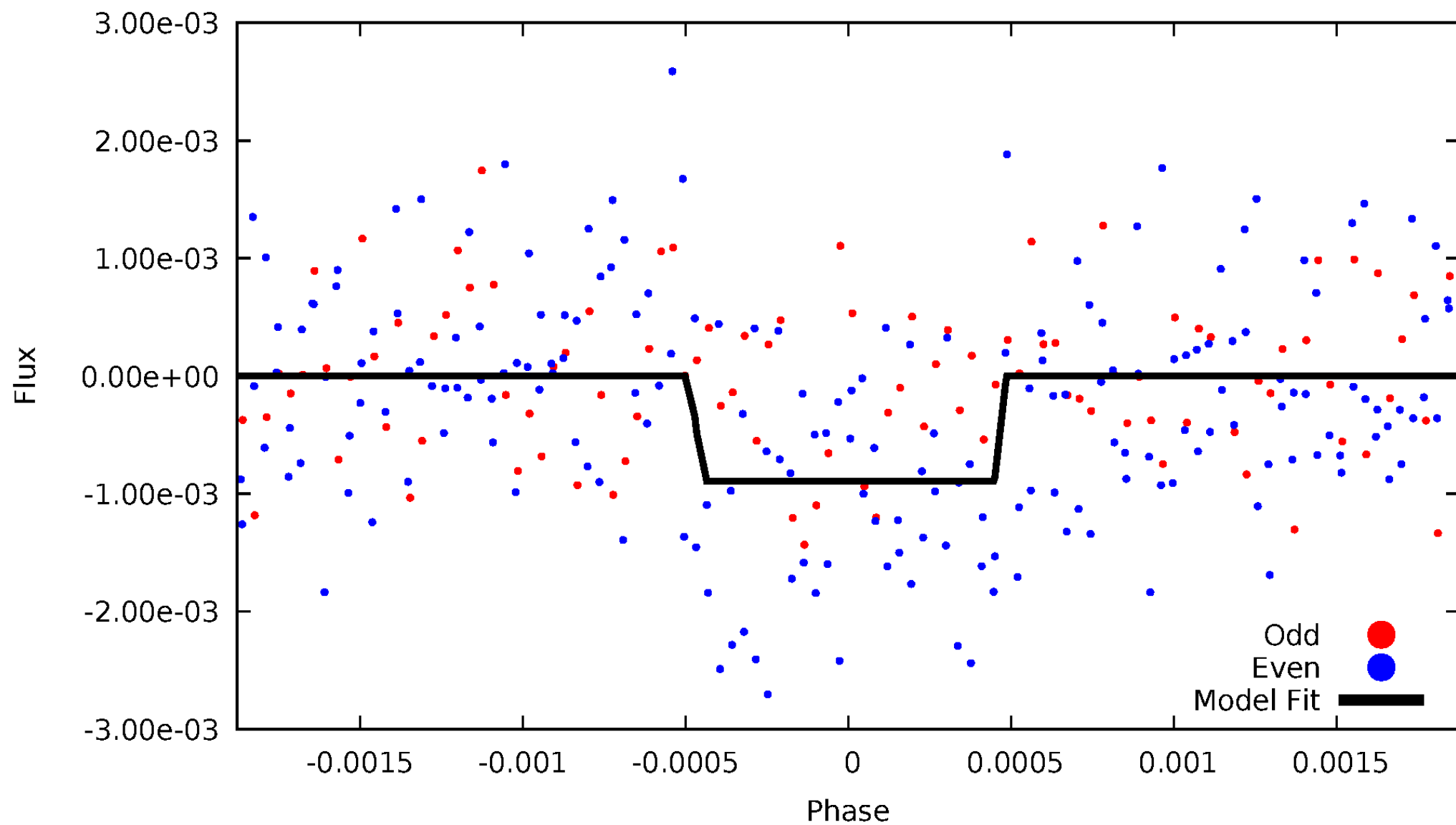
DV Odd/Even

TCE 011868854-01



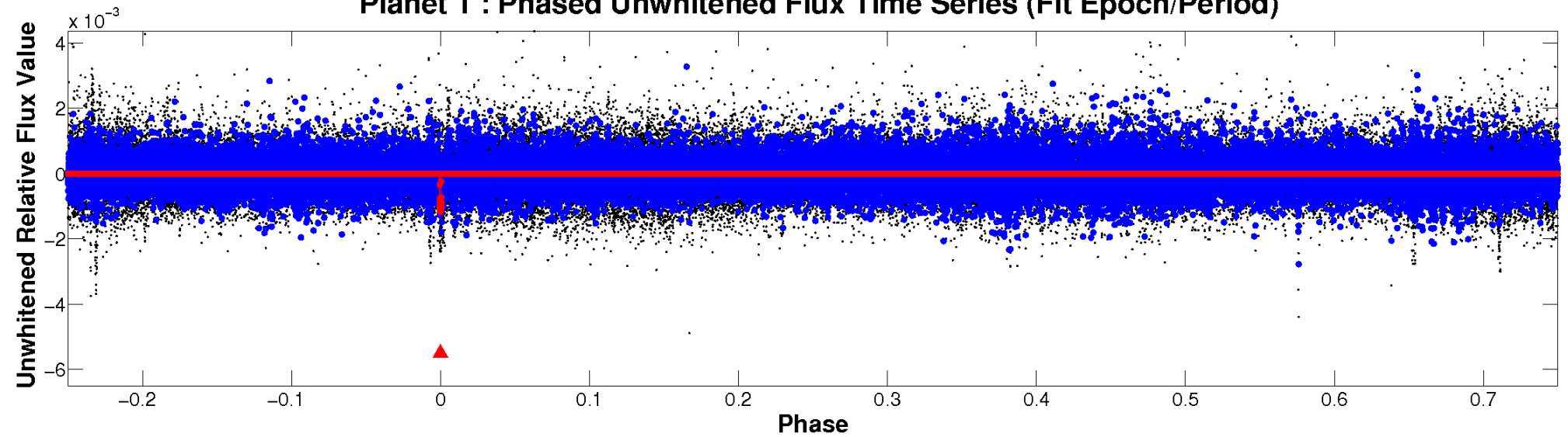
ALT Odd/Even

TCE 011868854-01

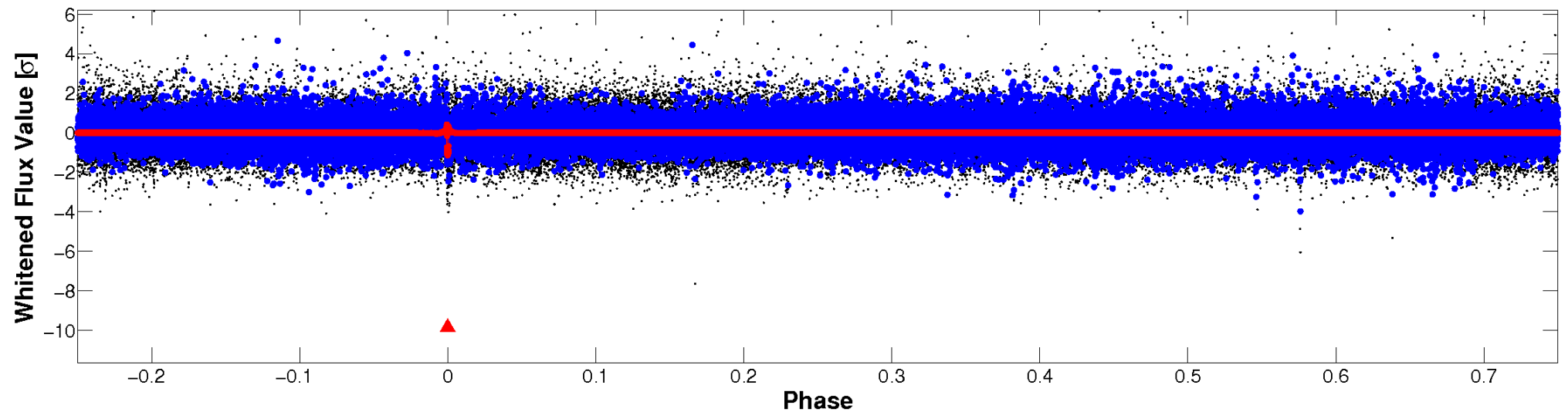


Non-Whitened Vs. Whitened Light Curve

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

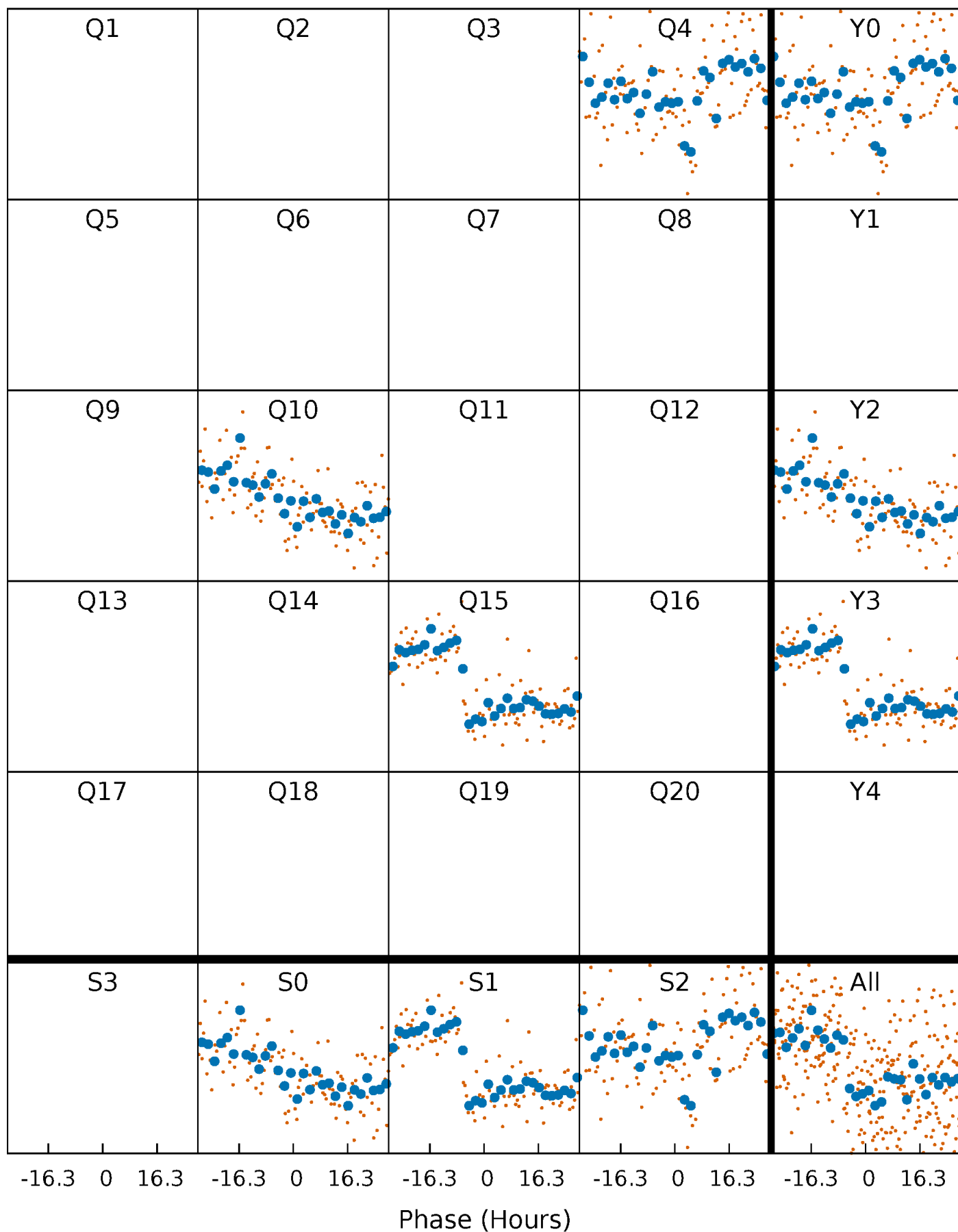


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



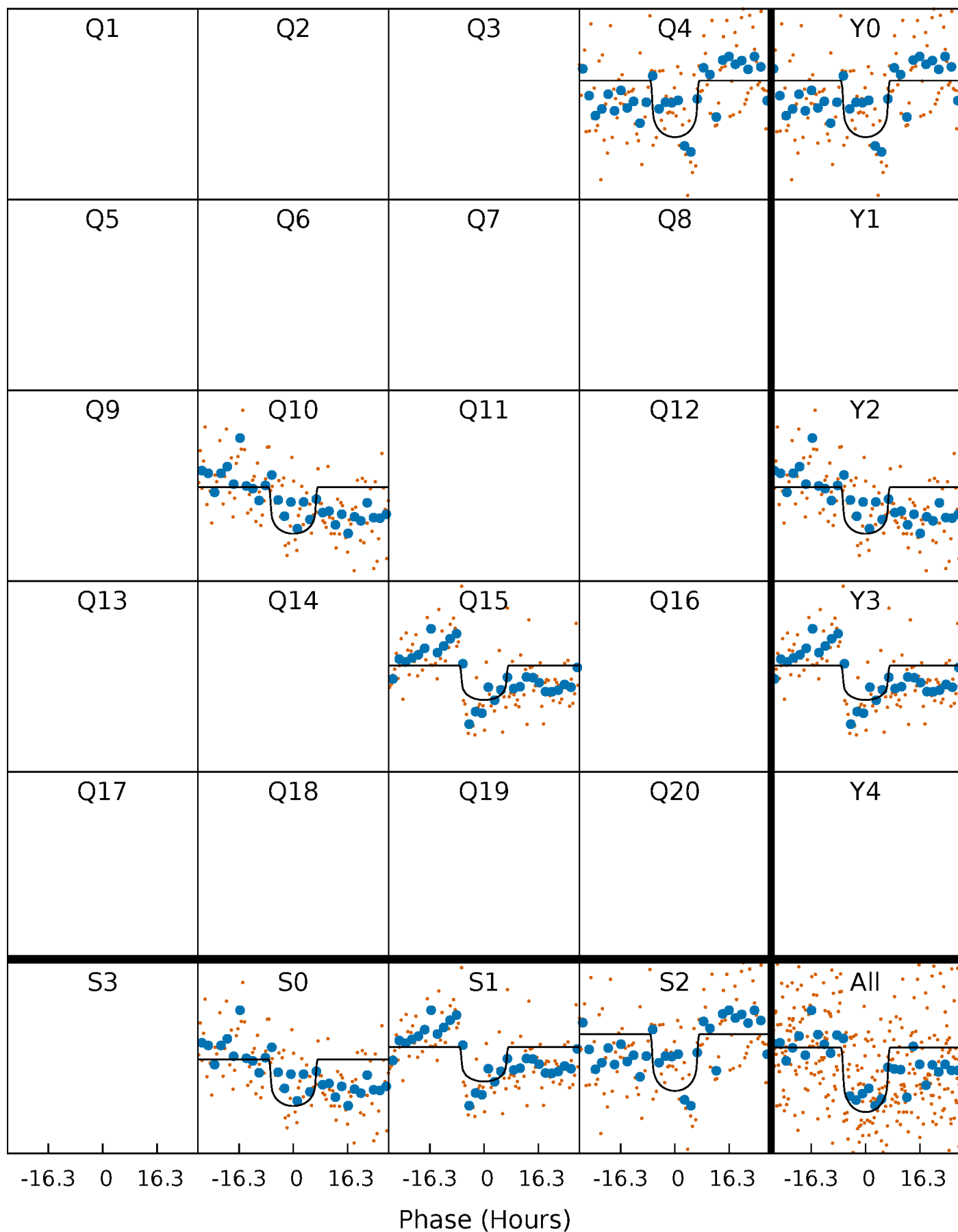
PDC Quarter-Phased Transit Curves

TCE 011868854-01 P=556.686855 Days $T_0=354.609816$ (BKJD)



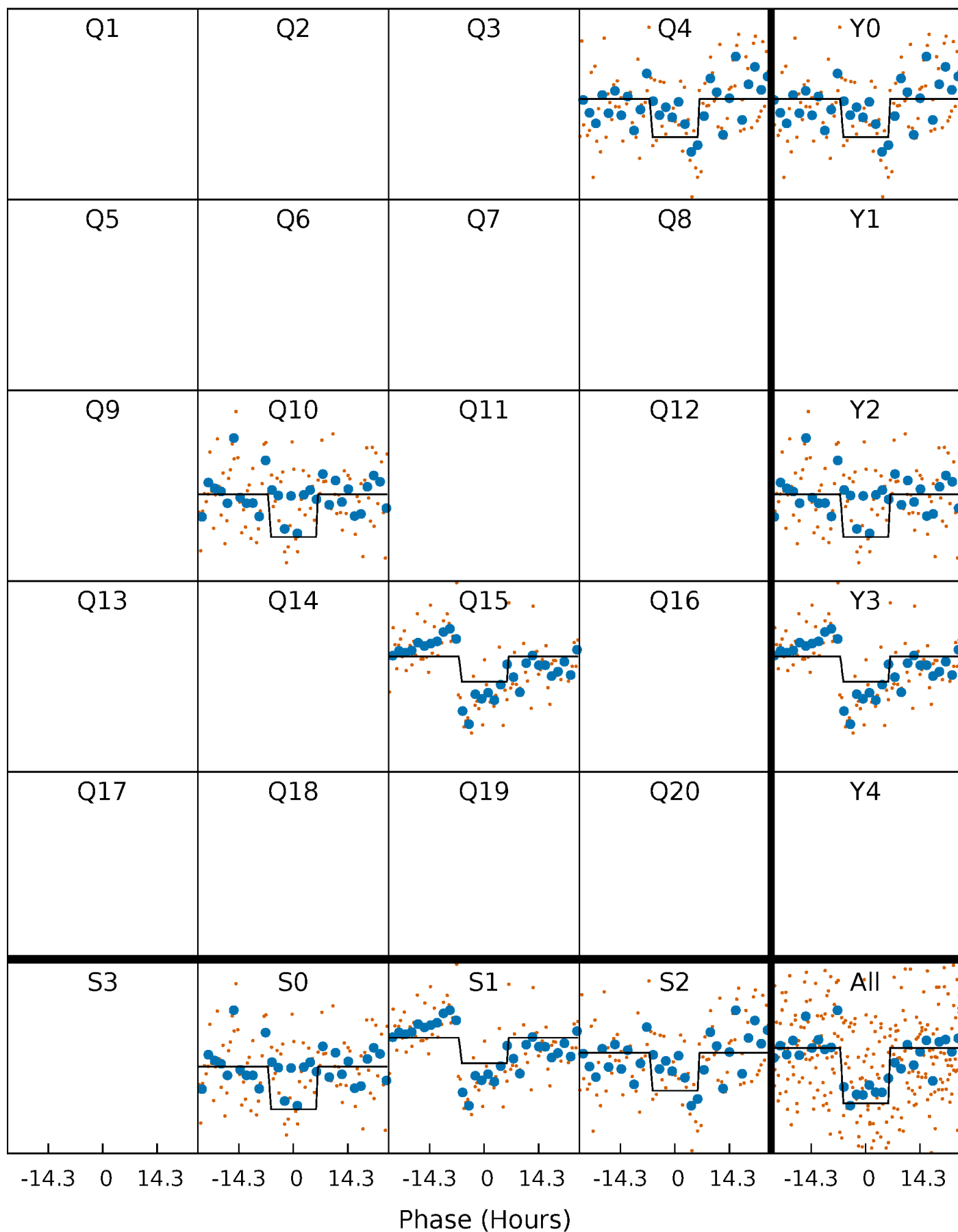
DV Quarter-Phased Transit Curves

TCE 011868854-01 P=556.686855 Days $T_0=354.609816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

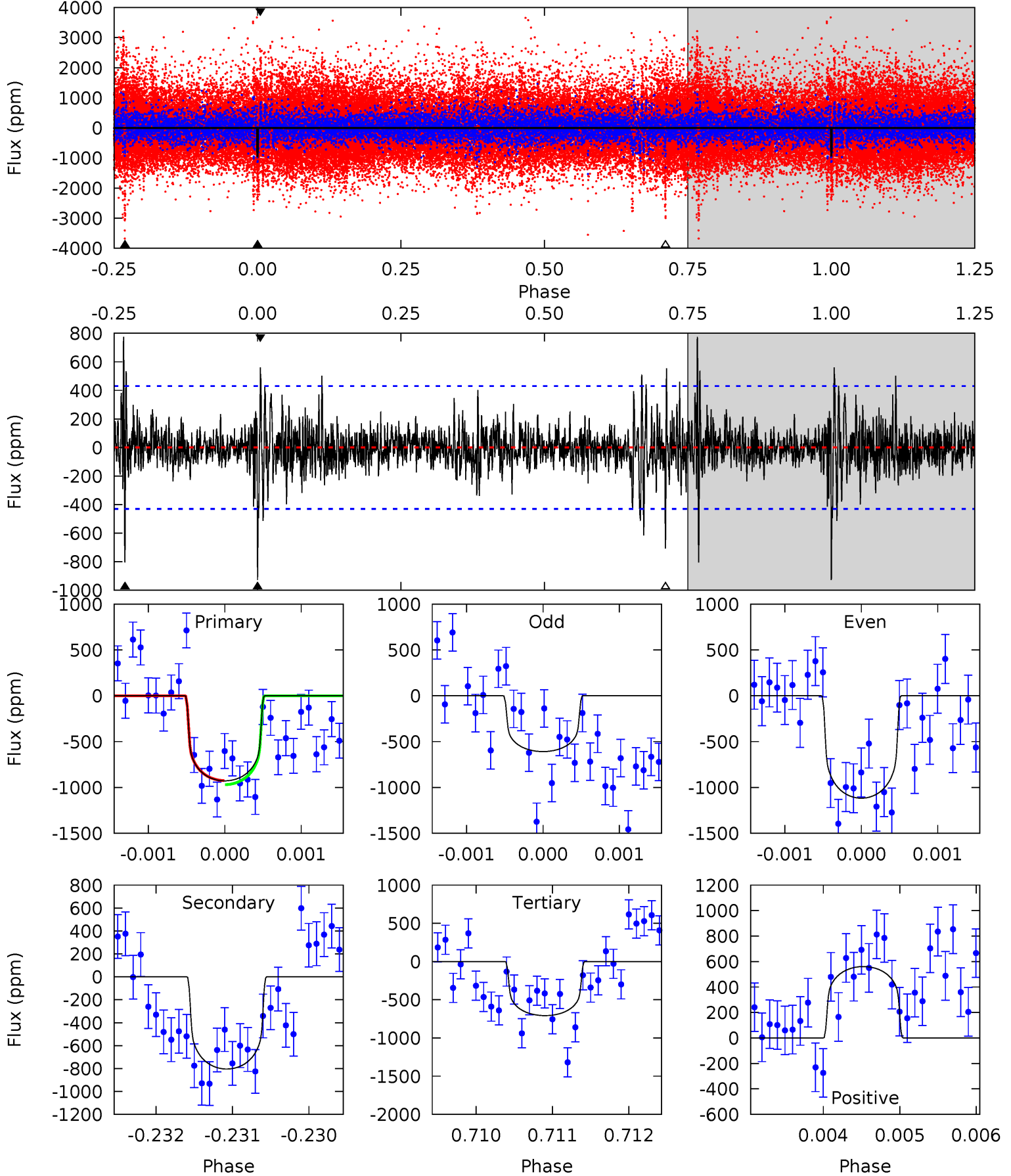
TCE 011868854-01 P=556.712342 Days $T_0=354.580875$ (BKJD)



DV Model-Shift Uniqueness Test

011868854-01, P = 556.686855 Days, E = 354.609816 Days

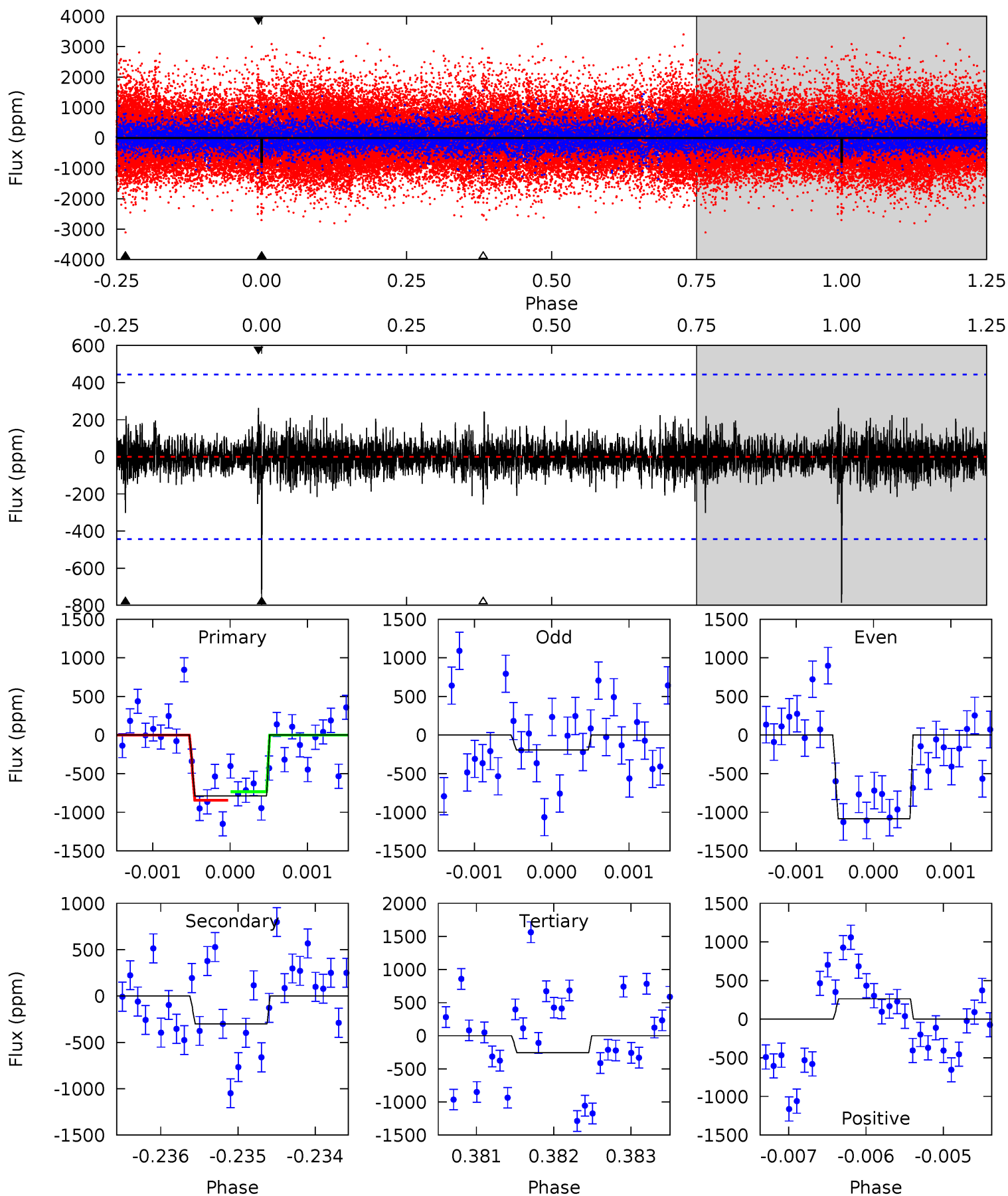
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	10.2	8.93	7.08	5.44	3.27	1.60	2.79	4.64	1.22	3.08	3.05	1.17	0.46	0.27



Alt Model-Shift Uniqueness Test

011868854-01, P = 556.712342 Days, E = 354.580875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.68	3.71	3.16	3.25	5.46	3.30	0.73	6.53	6.44	0.56	0.47	5.23	1.34	0.25	0.68



Stellar Parameters For KIC 011868854

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+166}_{-208}	$4.519^{+0.048}_{-0.192}$	$-0.140^{+0.300}_{-0.300}$	$0.911^{+0.266}_{-0.089}$	$1.001^{+0.122}_{-0.122}$	$1.865^{+0.371}_{-0.967}$
	+3%/-4%	+1%/-4%	+214%/-214%	+29%/-10%	+12%/-12%	+20%/-52%
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 011868854-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-804 ± 79	$3.35^{+1.36}_{-1.27}$	310^{+19}_{-15}	5570^{+1523}_{-704}	$67789^{+109271}_{-32627}$
Alt.	-302 ± 81	$3.08^{+1.42}_{-1.30}$	309^{+21}_{-15}	4688^{+1327}_{-700}	29817^{+64280}_{-16872}

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 $A_{obs} \gg 1.0$

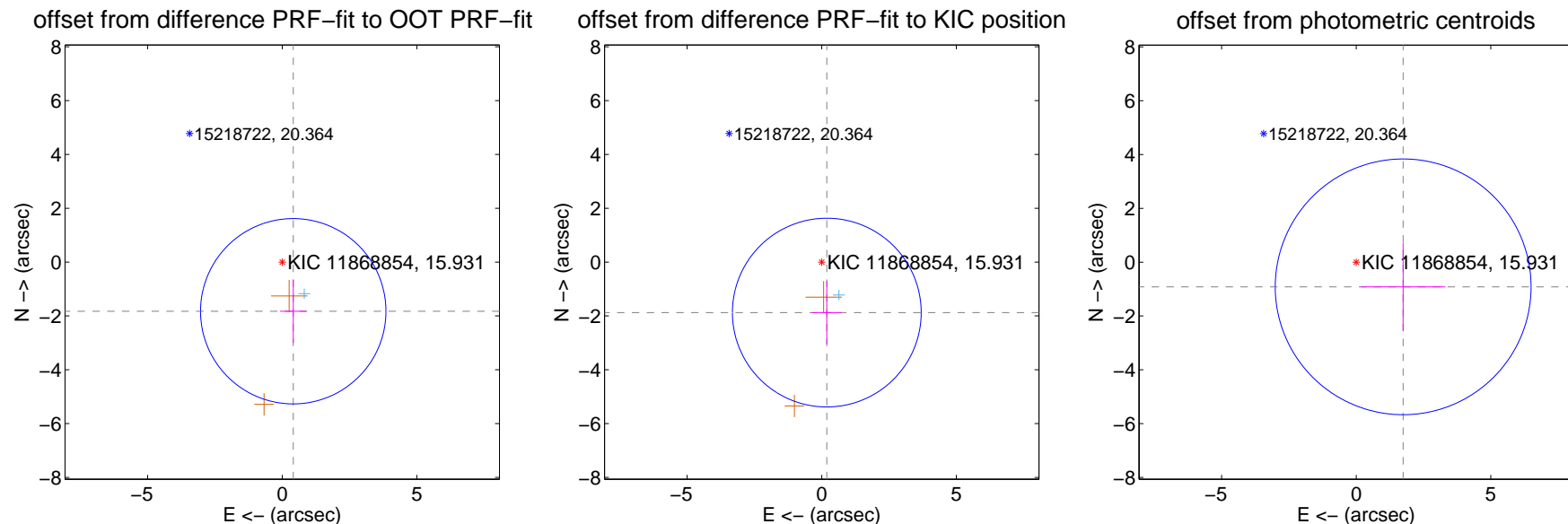
DV Centroid Data

Supplemental centroid analysis for 011868854-01. Kepler magnitude: 15.93. Transit SNR 9.58

There are 1 quarters with good PRF difference image offsets

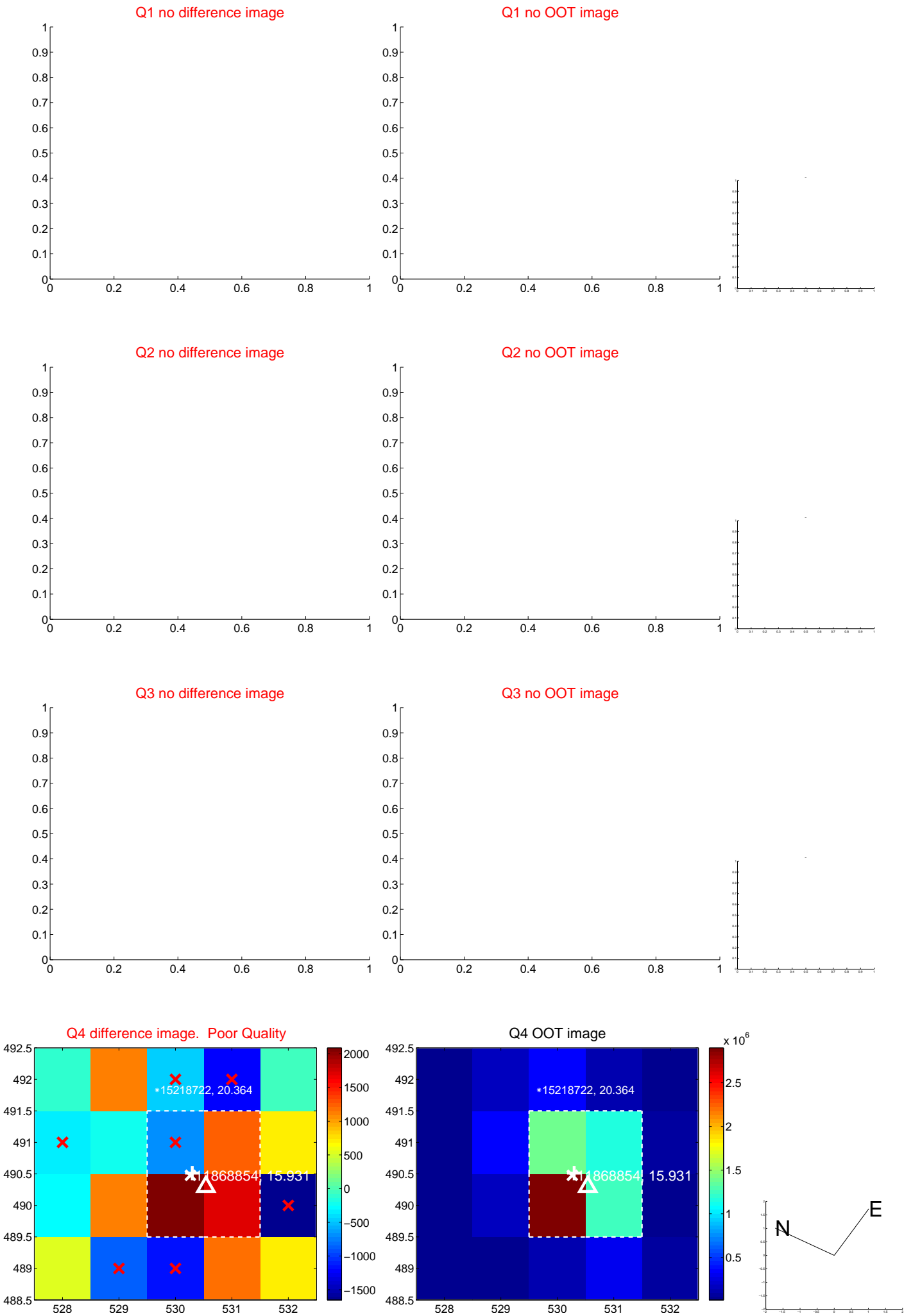
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.871 ± 1.147	1.63	-0.409 ± 0.491	-1.826 ± 1.171
PRF-fit source offset from KIC position	1.886 ± 1.168	1.61	-0.189 ± 0.541	-1.876 ± 1.173
photometric centroid source offset	1.97 ± 1.58	1.24	-1.74 ± 1.57	-0.92 ± 1.64



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.

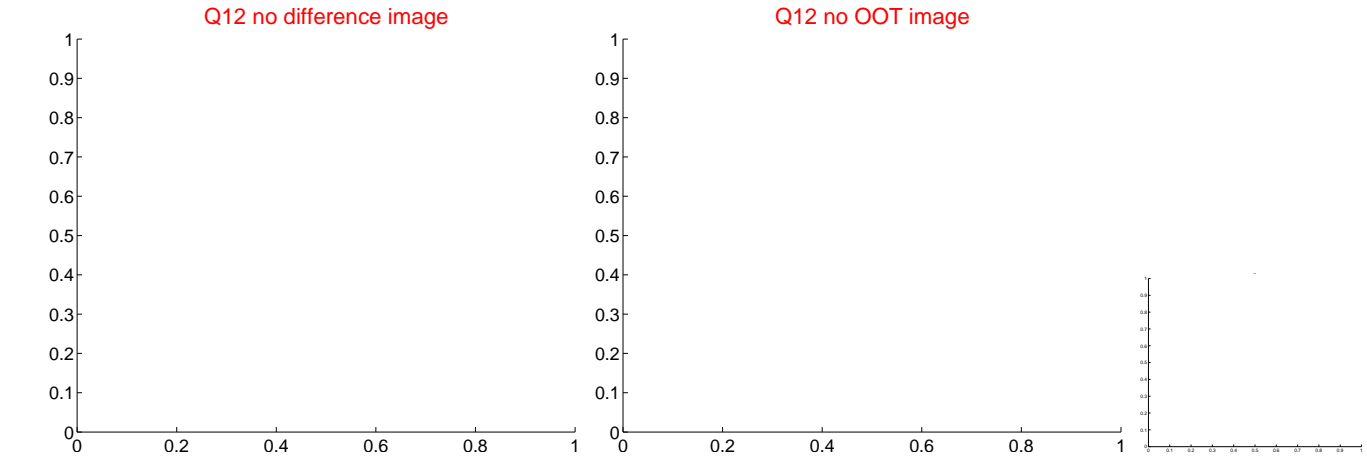
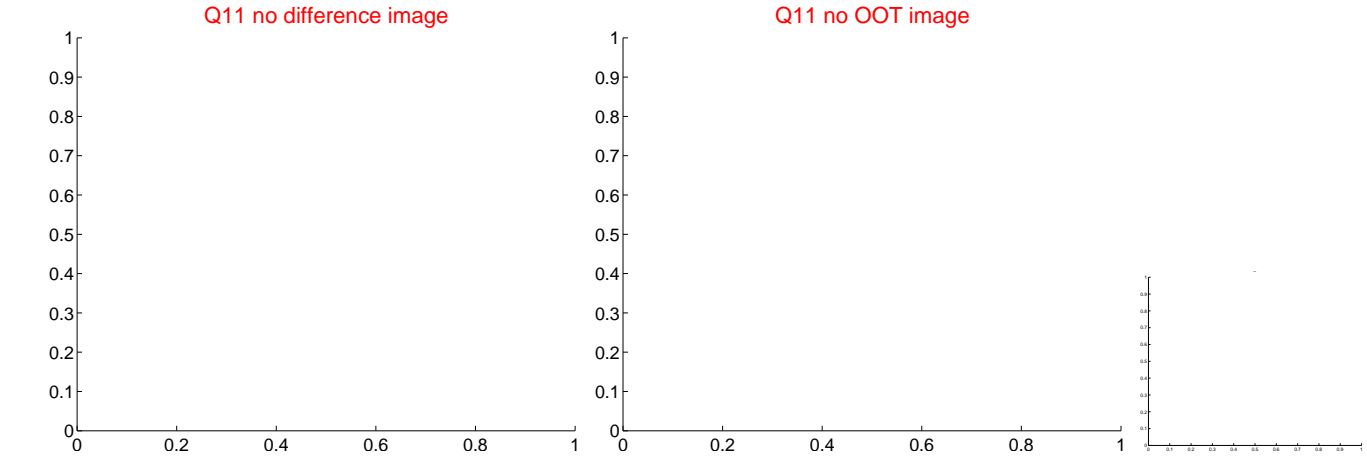
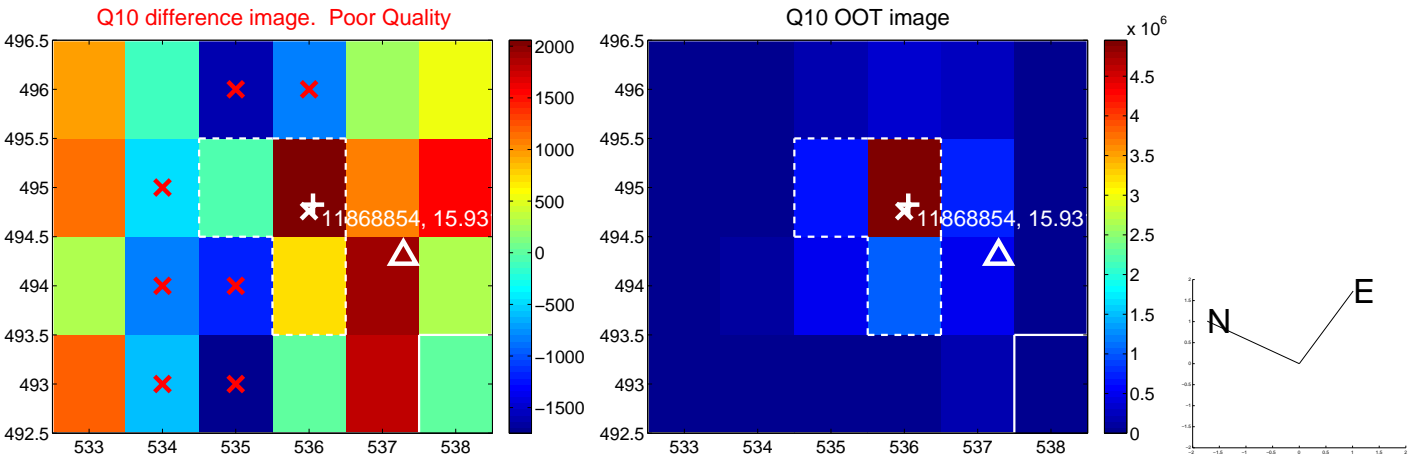
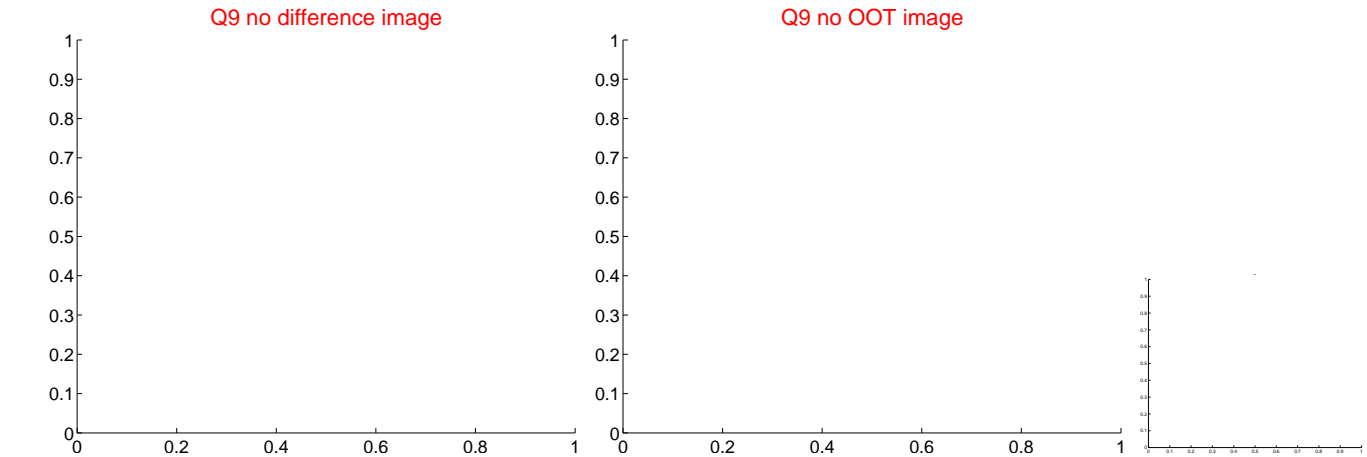
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



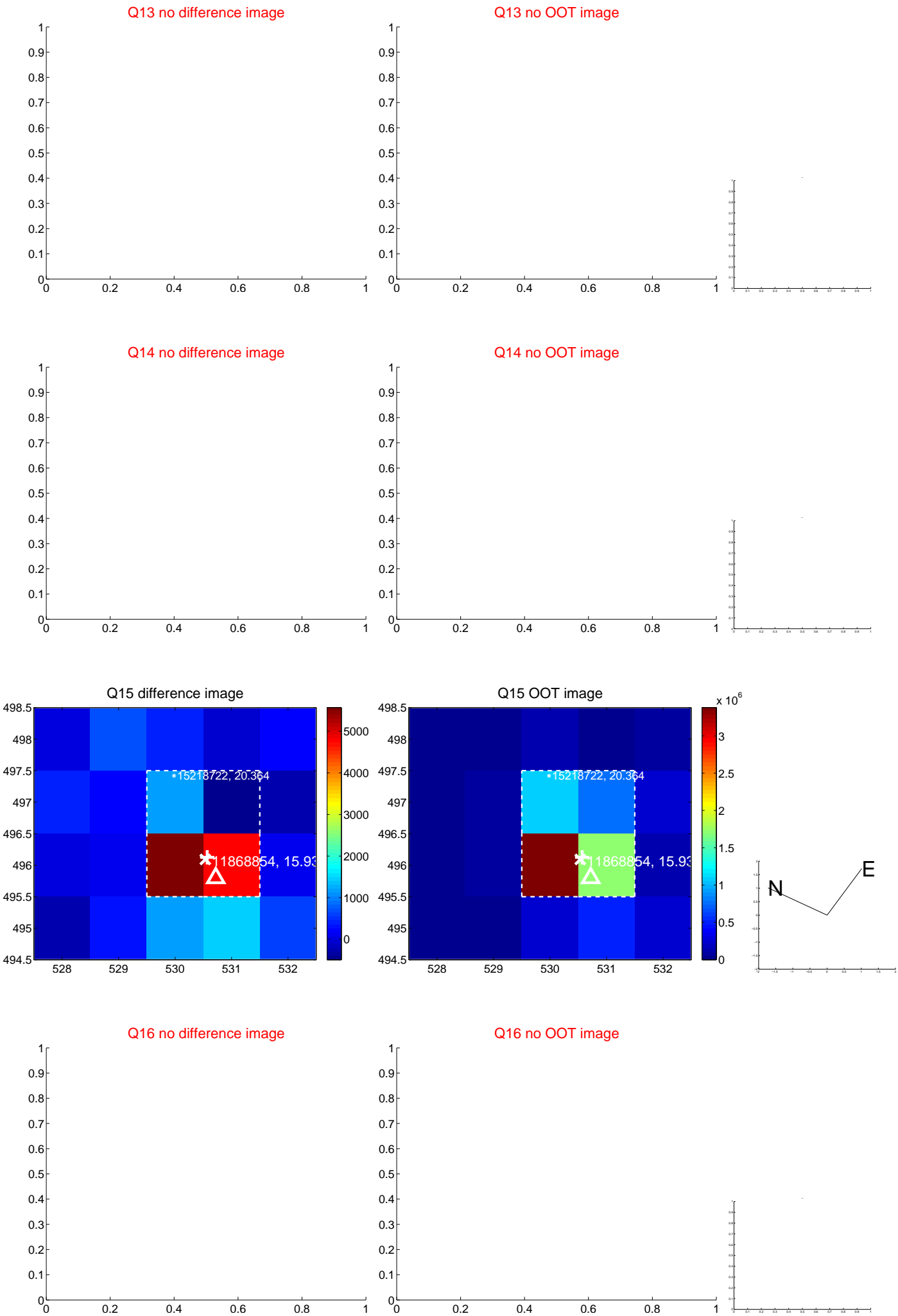
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



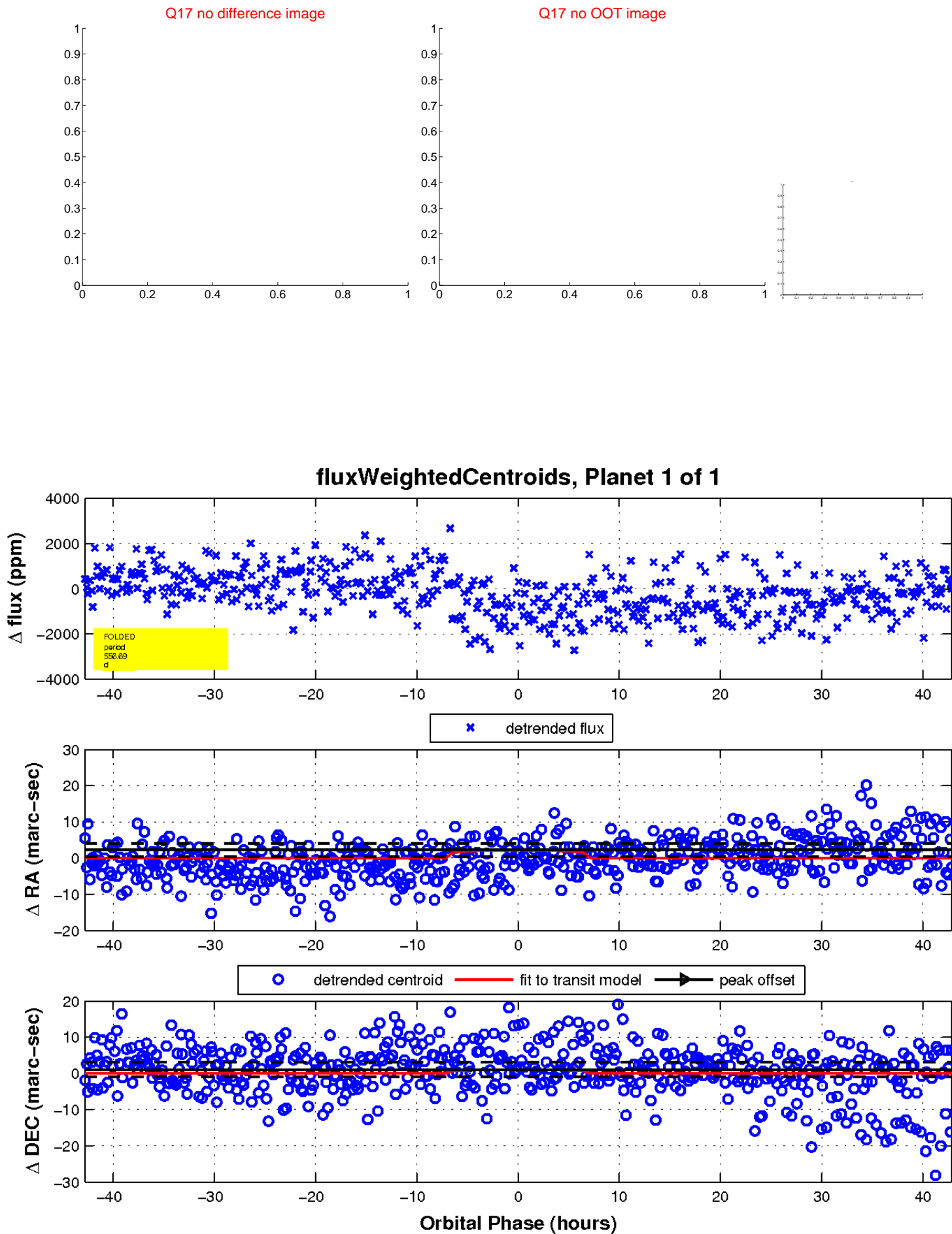
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white \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

