

KIC 007418766

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})
007418766-01	OBS	No	373.718124	333.099812	823.8	9.115	42.4	52.1	1.59	5996	5.06	2.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007418766-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

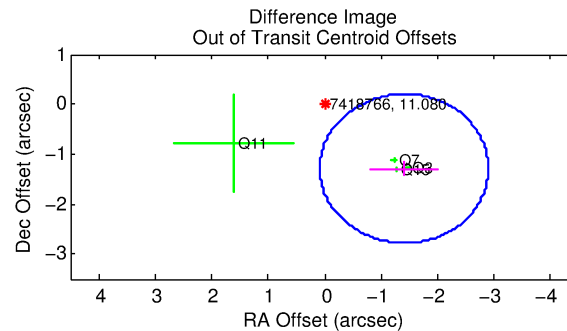
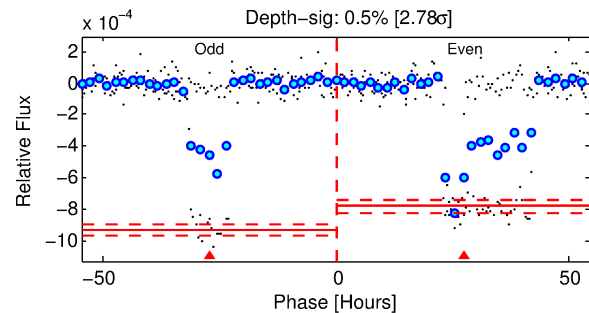
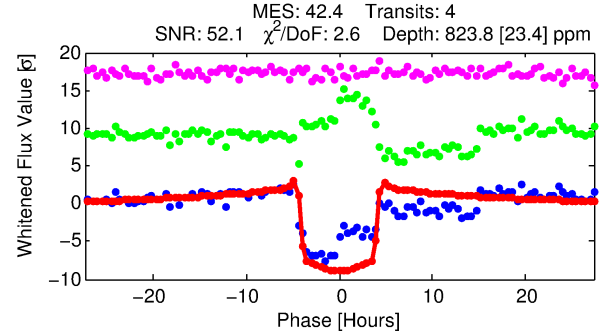
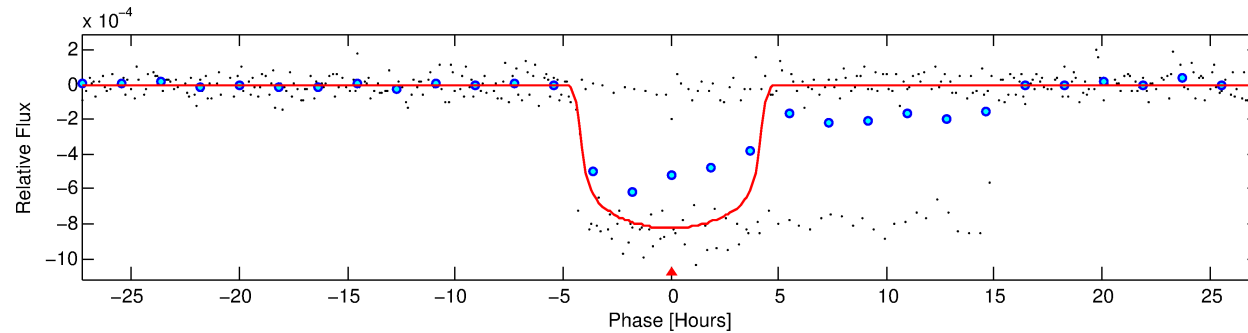
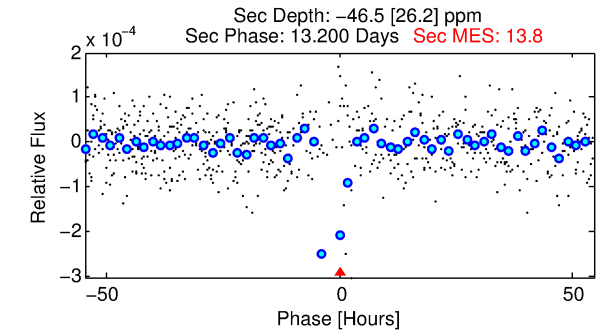
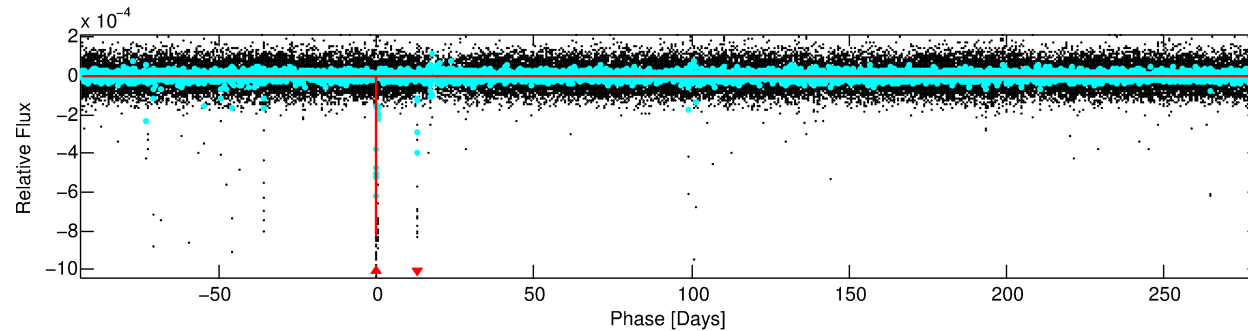
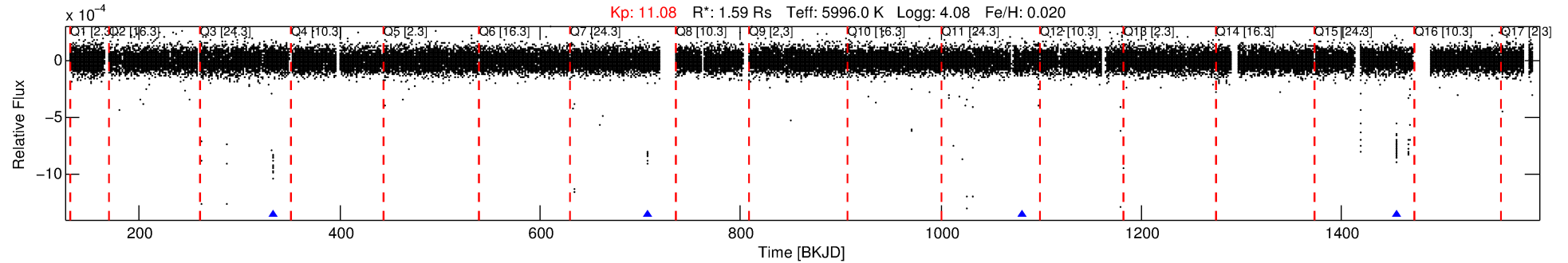
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007418766-01

No Significant Match Found

DV One-Page Summary

KIC: 7418766 Candidate: 1 of 1 Period: 373.718 d



DV Fit Results:

Period = 373.71812 [0.00151] d
Epoch = 333.0998 [0.0029] BKJD
Rp/R* = 0.0292 [0.0012]
a/R* = 202.08 [37.09]
b = 0.80 [0.08]
Seff = 2.65 [1.50]
Teq = 325 [46] K
Rp = 5.06 [1.72] Re
a = 1.0516 [0.3509] AU
Ag = N/A
Teffp = N/A

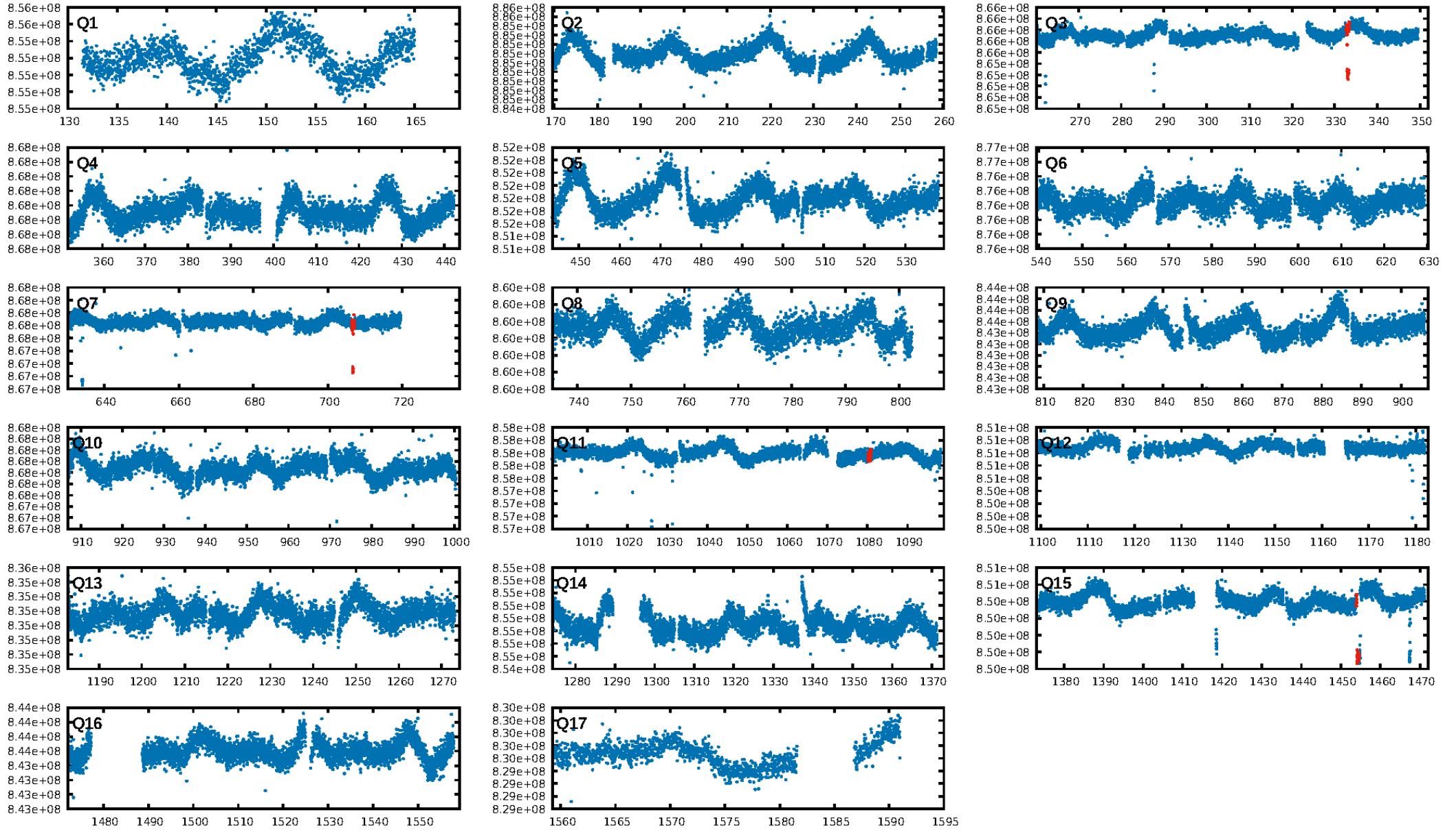
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 9.03e-72
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -51.89
Centroid-sig: 0.0%
Centroid-so: 1.122 arcsec [7.69σ]
OotOffset-rm: 1.907 arcsec [3.83σ]
KicOffset-rm: 1.972 arcsec [3.64σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

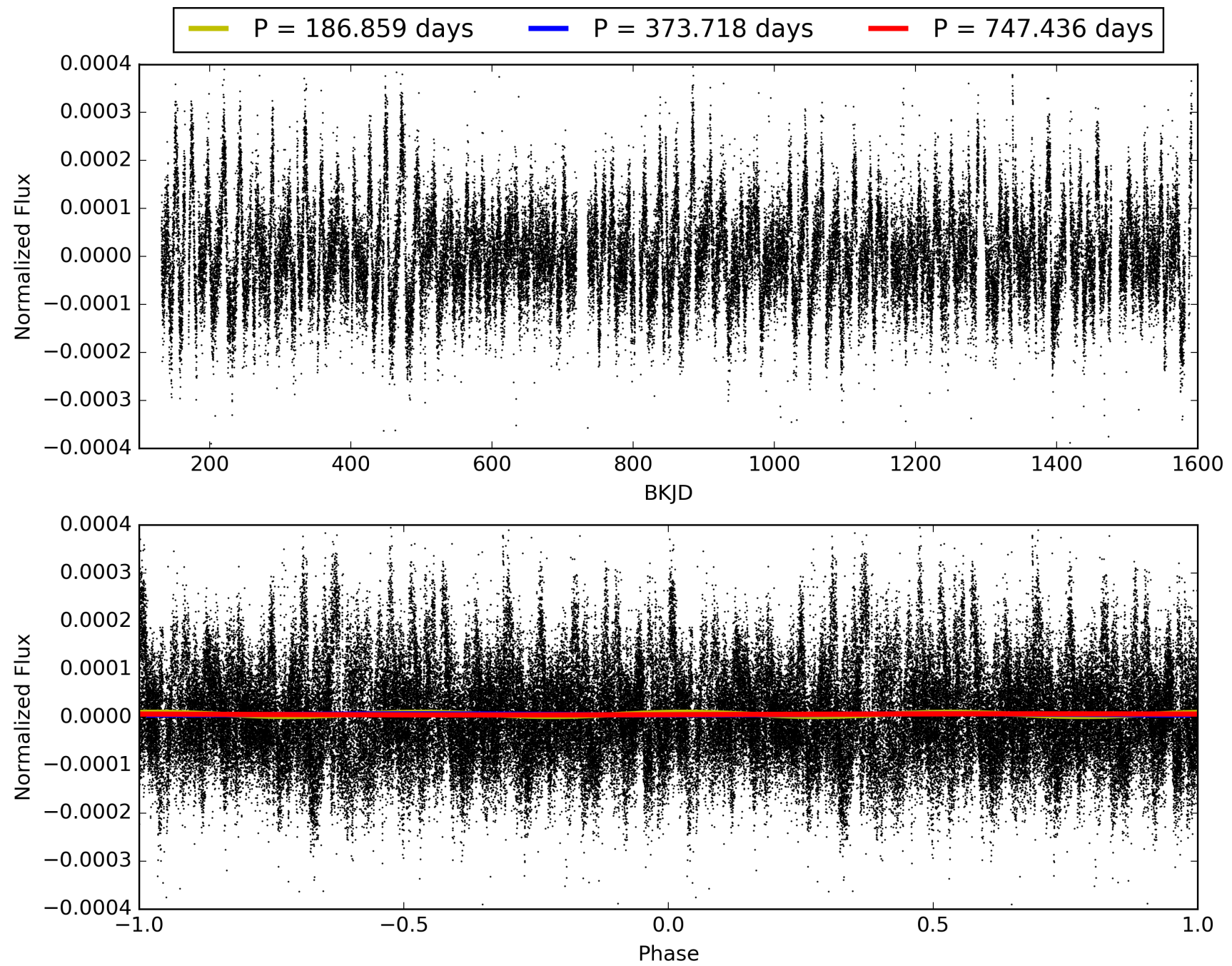
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:39:31 Z

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

TCE 007418766-01, PDC Light Curves

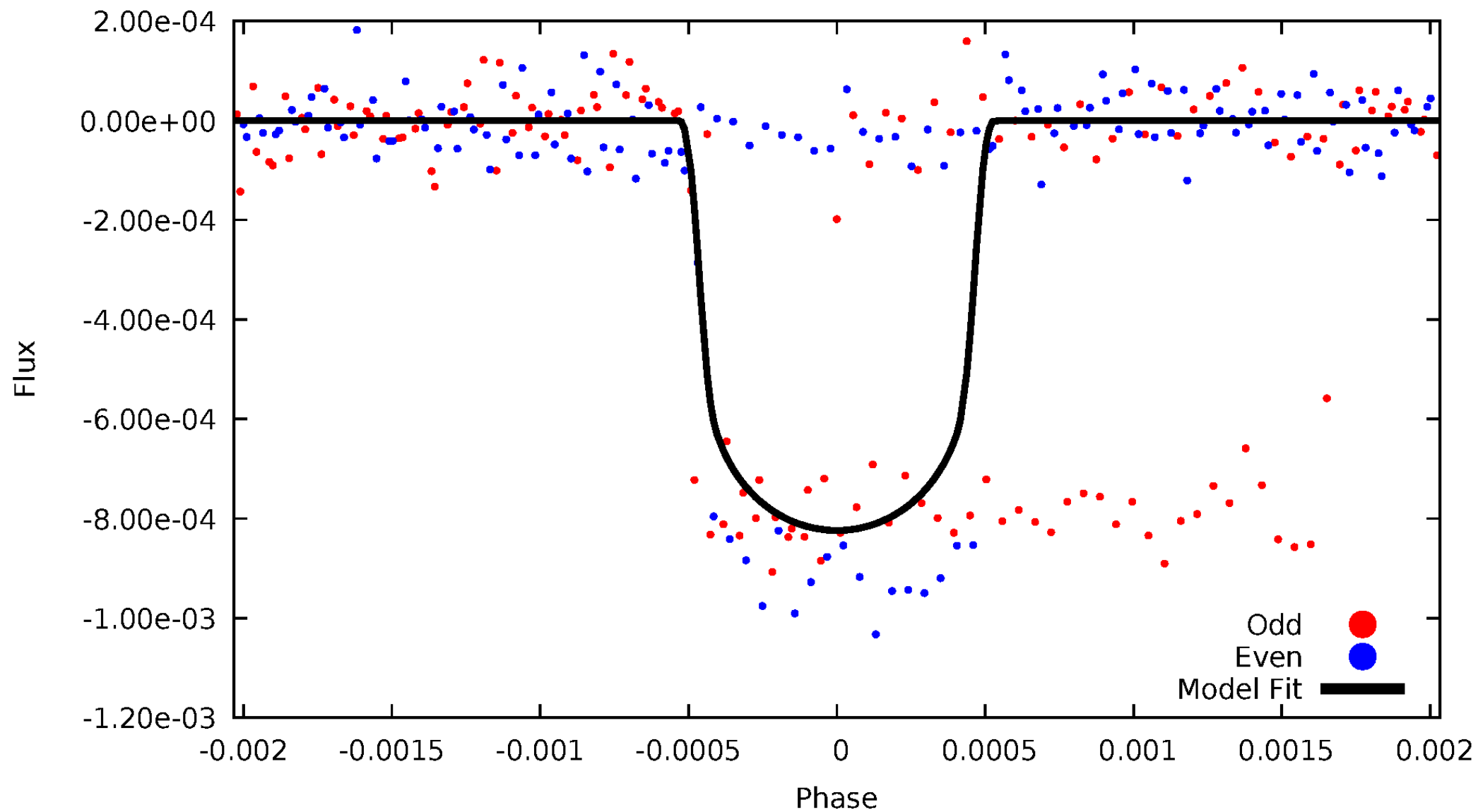


TCE 007418766-01



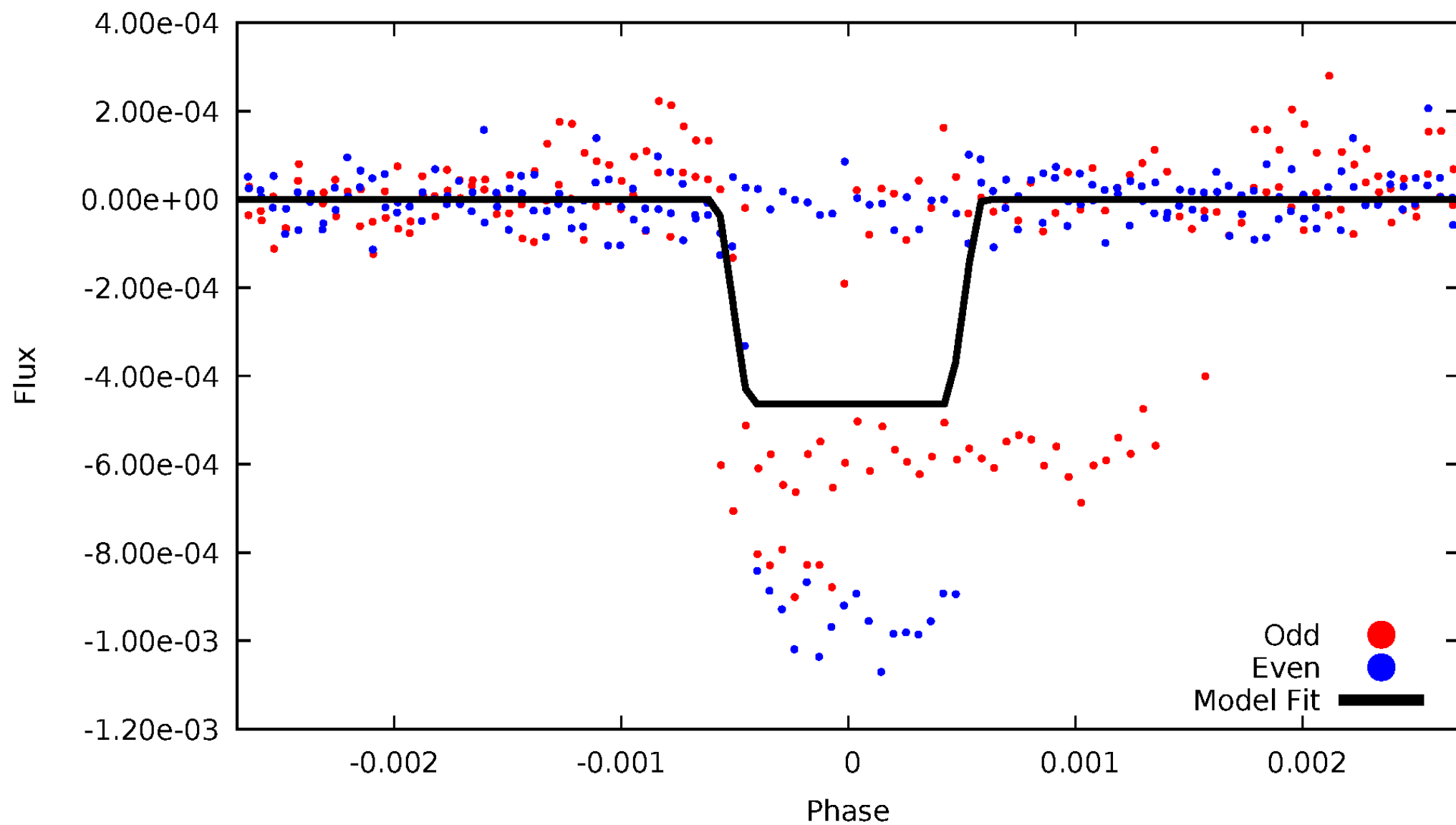
DV Odd/Even

TCE 007418766-01



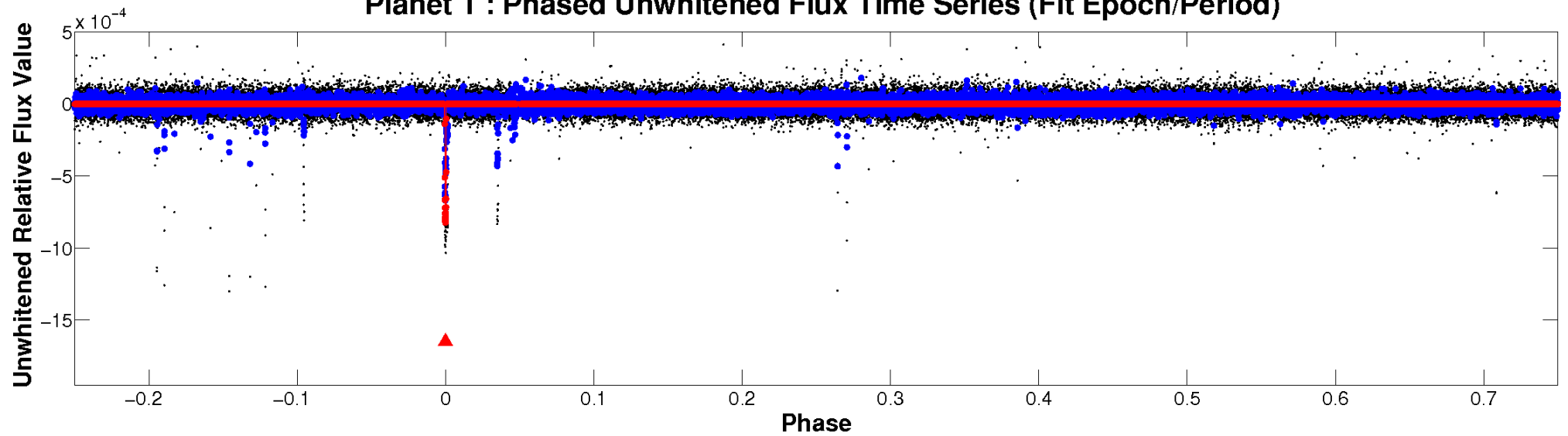
ALT Odd/Even

TCE 007418766-01

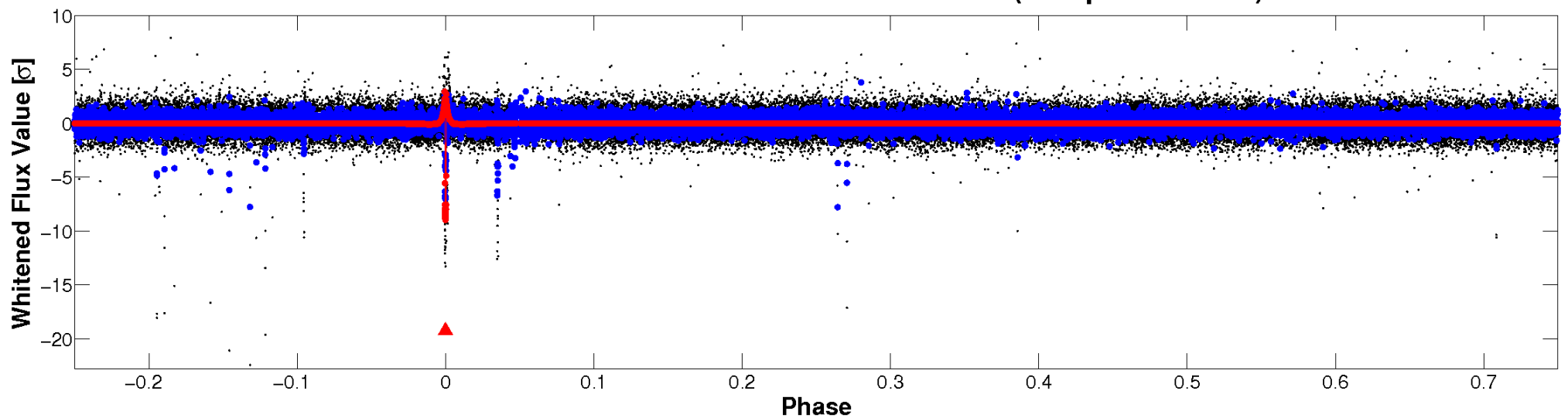


Non-Whitened Vs. Whitened Light Curve

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

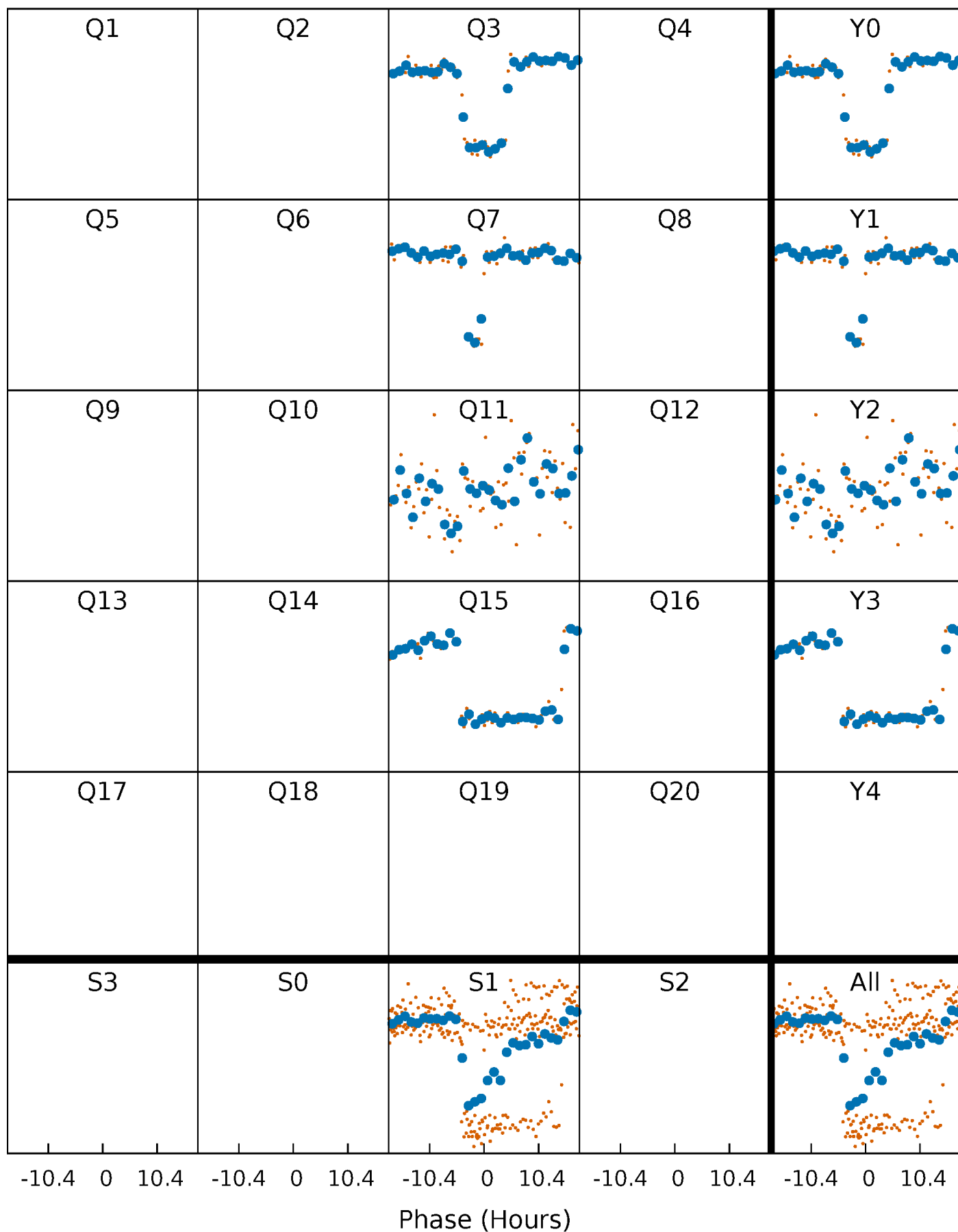


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



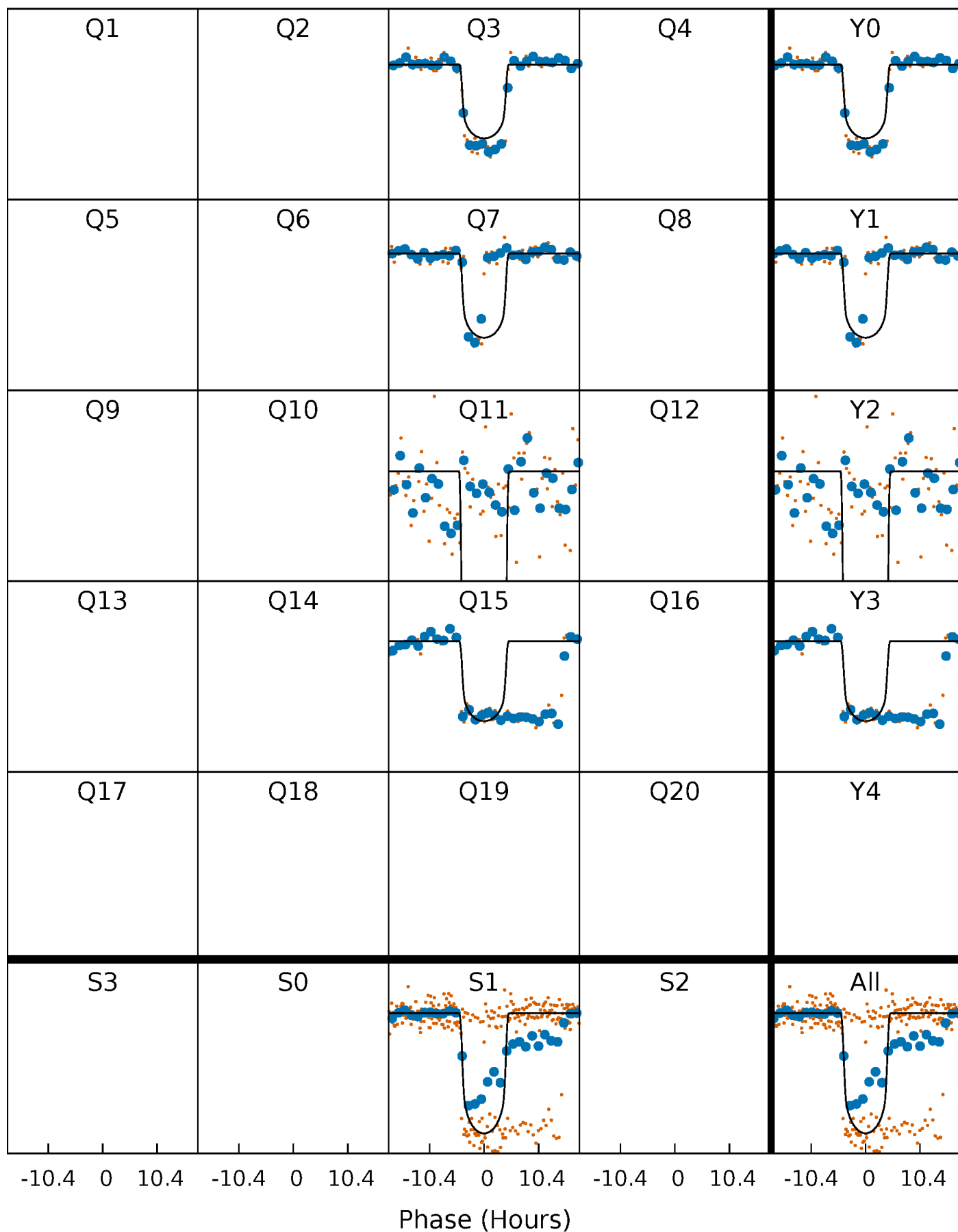
PDC Quarter-Phased Transit Curves

TCE 007418766-01 P=373.718124 Days $T_0=333.099812$ (BKJD)



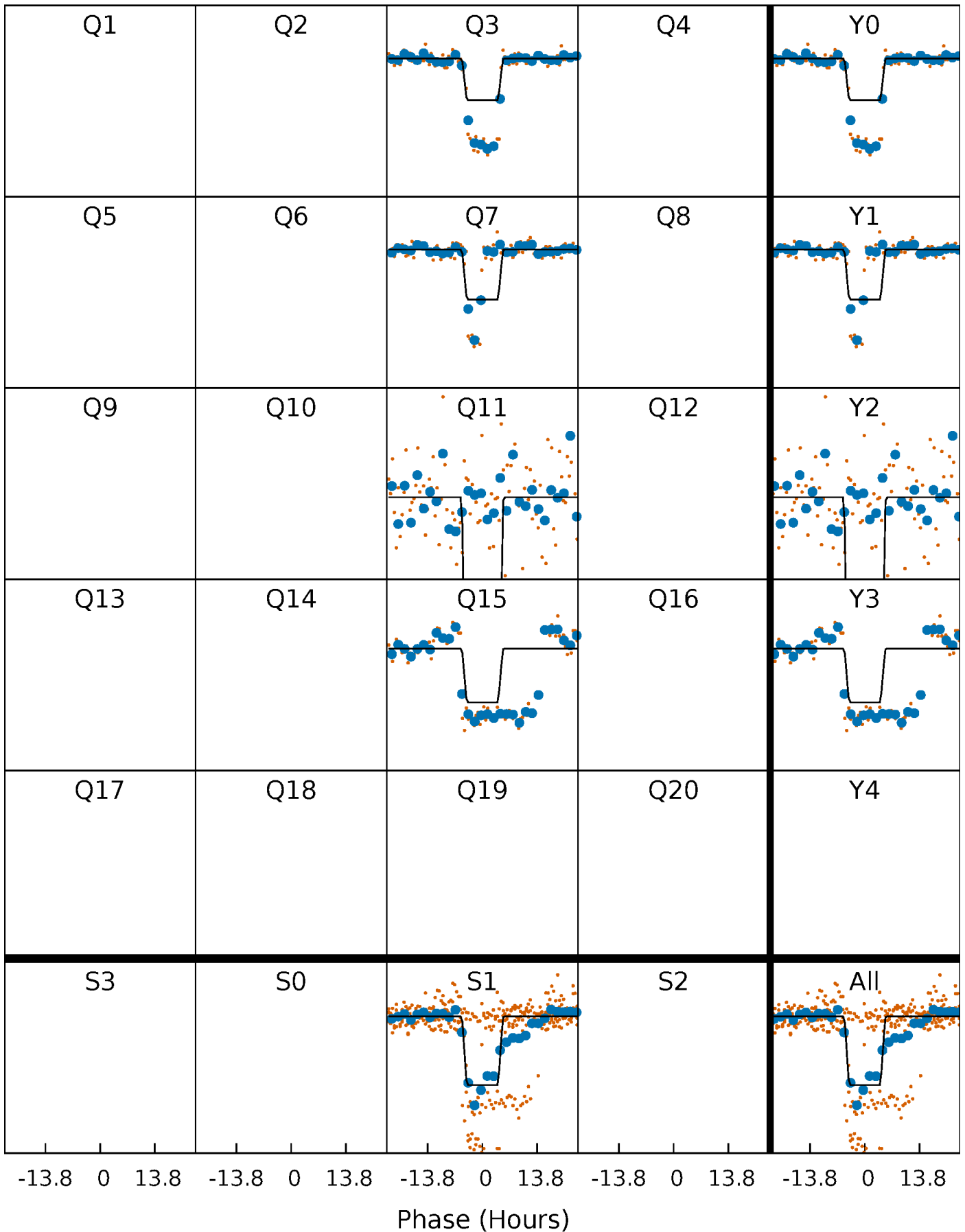
DV Quarter-Phased Transit Curves

TCE 007418766-01 P=373.718124 Days $T_0=333.099812$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

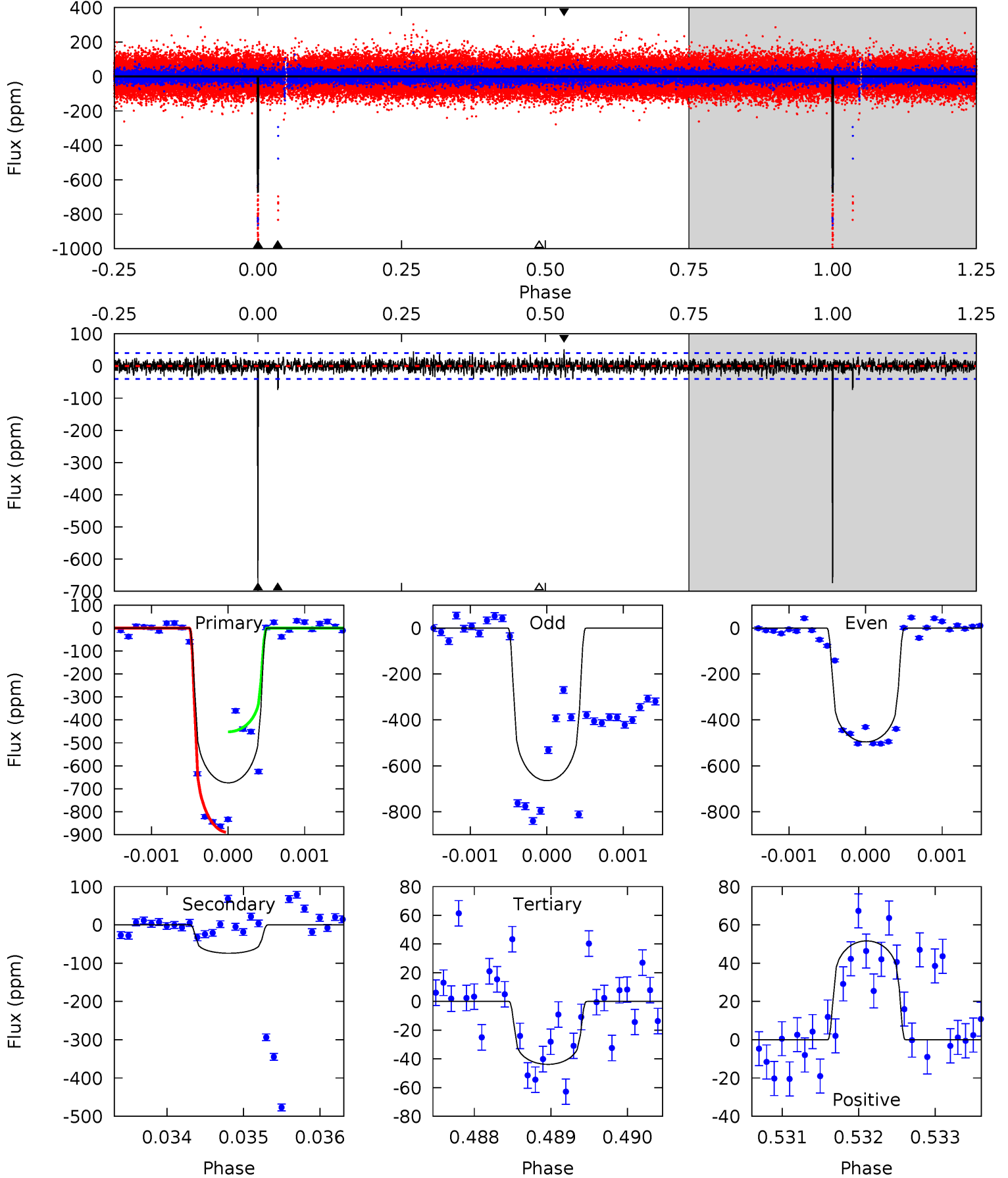
TCE 007418766-01 P=373.729812 Days $T_0=333.094796$ (BKJD)



DV Model-Shift Uniqueness Test

007418766-01, P = 373.718124 Days, E = 333.099812 Days

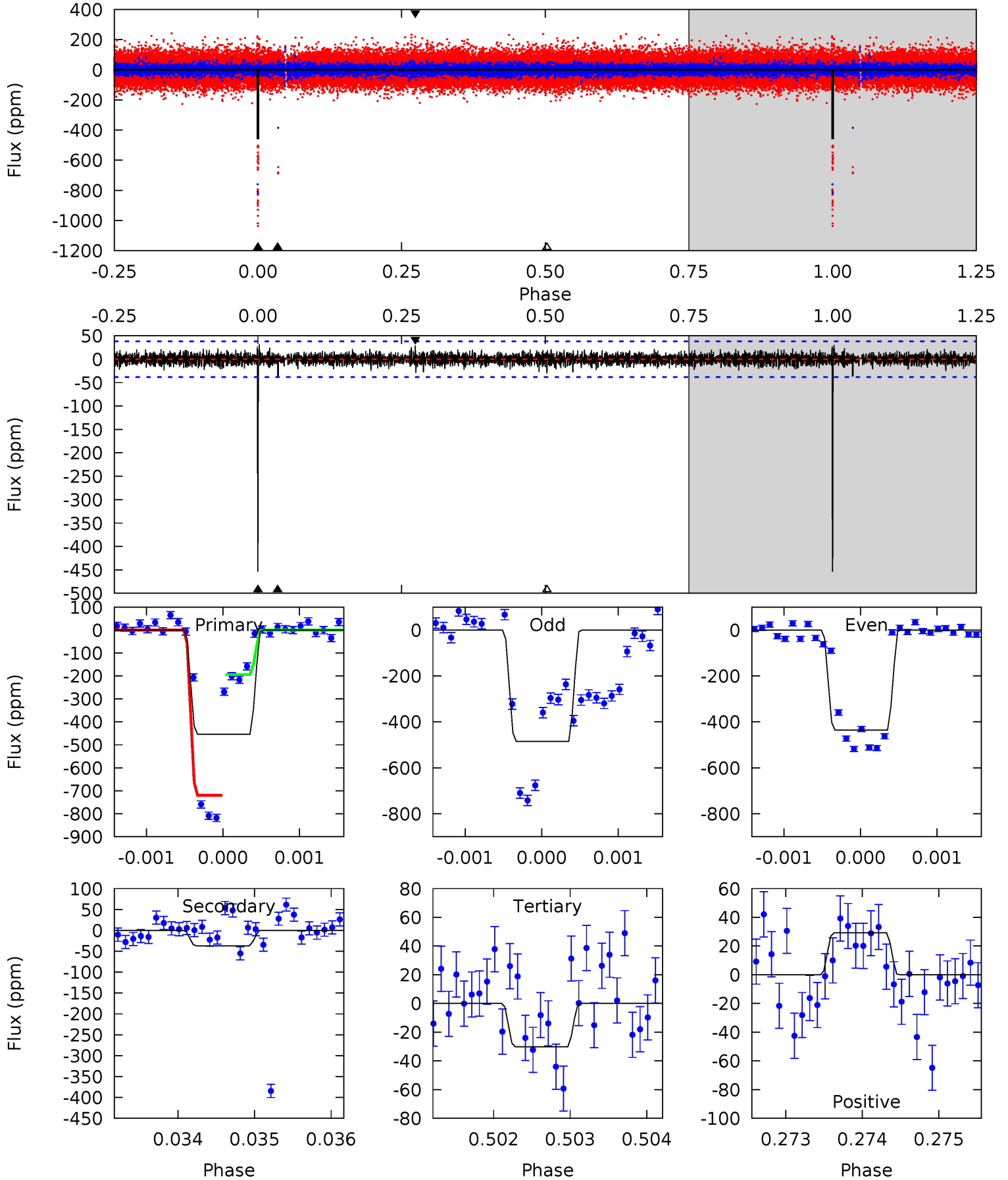
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
91.4	10.0	5.94	7.00	5.44	3.28	1.51	85.5	84.4	4.11	3.05	12.5	0.91	0.07	0



Alt Model-Shift Uniqueness Test

007418766-01, P = 373.729812 Days, E = 333.094796 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.5	5.26	4.30	4.15	5.42	3.24	1.05	60.2	60.3	0.96	1.12	4.01	0.98	0.06	36.1



Stellar Parameters For KIC 007418766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5996^{+190}_{-232}	$4.080^{+0.322}_{-0.138}$	$0.020^{+0.250}_{-0.300}$	$1.591^{+0.438}_{-0.535}$	$1.110^{+0.164}_{-0.164}$	$0.388^{+0.817}_{-0.181}$
	+3%/-4%	+8%/-3%	+1250%/-1500%	+28%/-34%	+15%/-15%	+211%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007418766-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-74 ± 7	$4.88^{+0.74}_{-0.83}$	445^{+36}_{-39}	3675^{+128}_{-118}	1902^{+836}_{-485}
Alt.	-37 ± 7	$3.58^{+0.62}_{-0.66}$	444^{+34}_{-43}	3612^{+155}_{-157}	1736^{+882}_{-513}

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 $A_{obs} \gg 1.0$

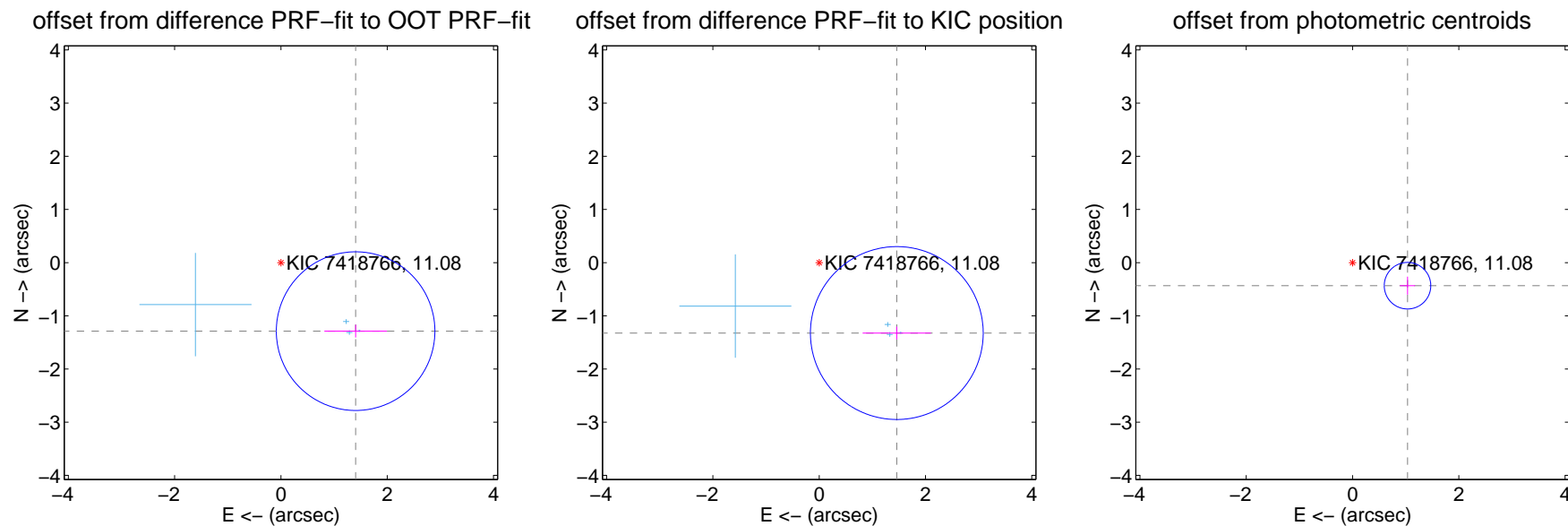
DV Centroid Data

Supplemental centroid analysis for 007418766-01. **Kepler magnitude: 11.08.** Transit SNR 52.10

There are 4 quarters with good PRF difference image offsets

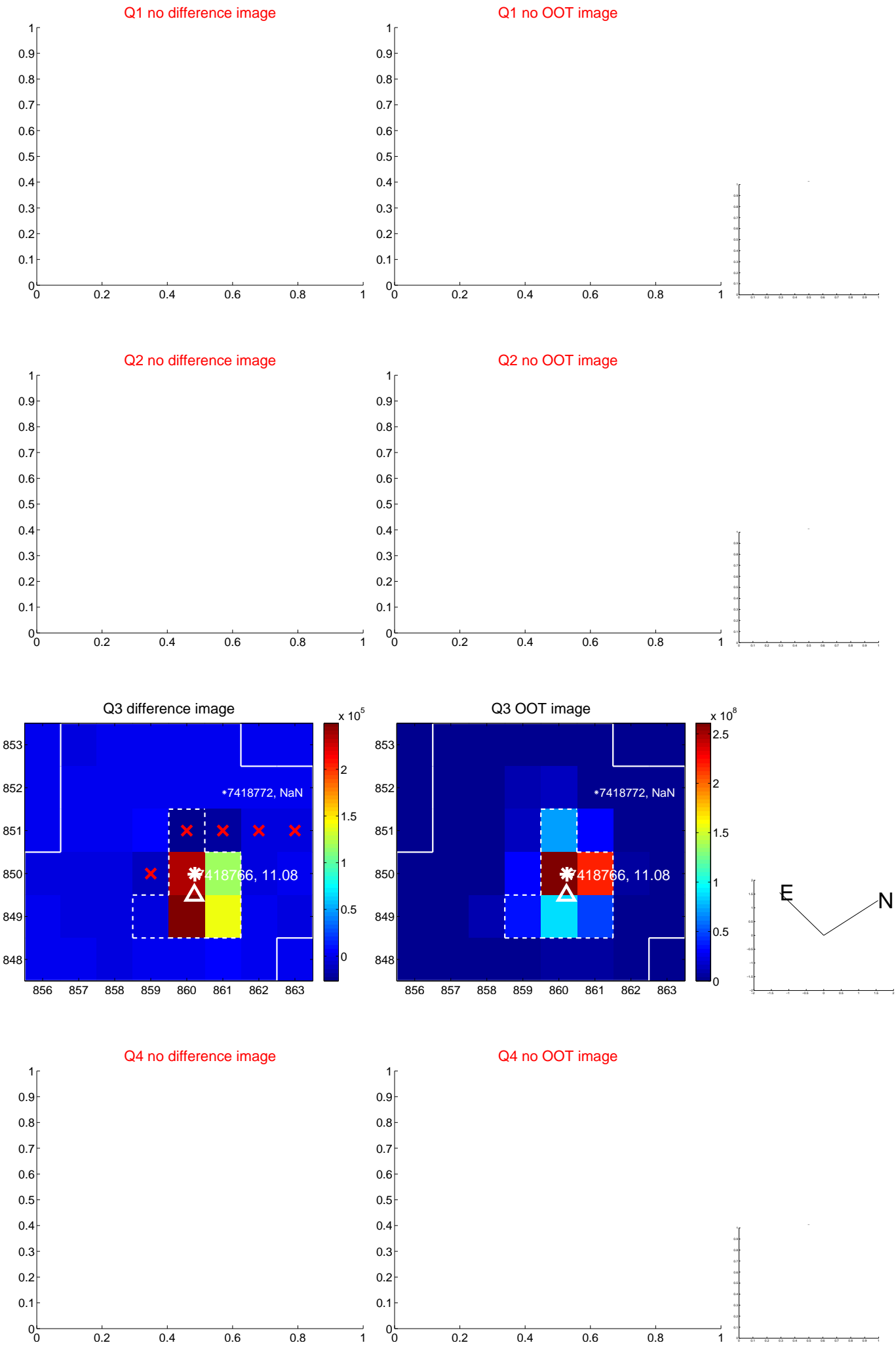
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.907 ± 0.497	3.83	-1.406 ± 0.589	-1.288 ± 0.120
PRF-fit source offset from KIC position	1.972 ± 0.542	3.64	-1.461 ± 0.643	-1.324 ± 0.120
photometric centroid source offset	1.12 ± 0.15	7.69	-1.03 ± 0.14	-0.43 ± 0.17

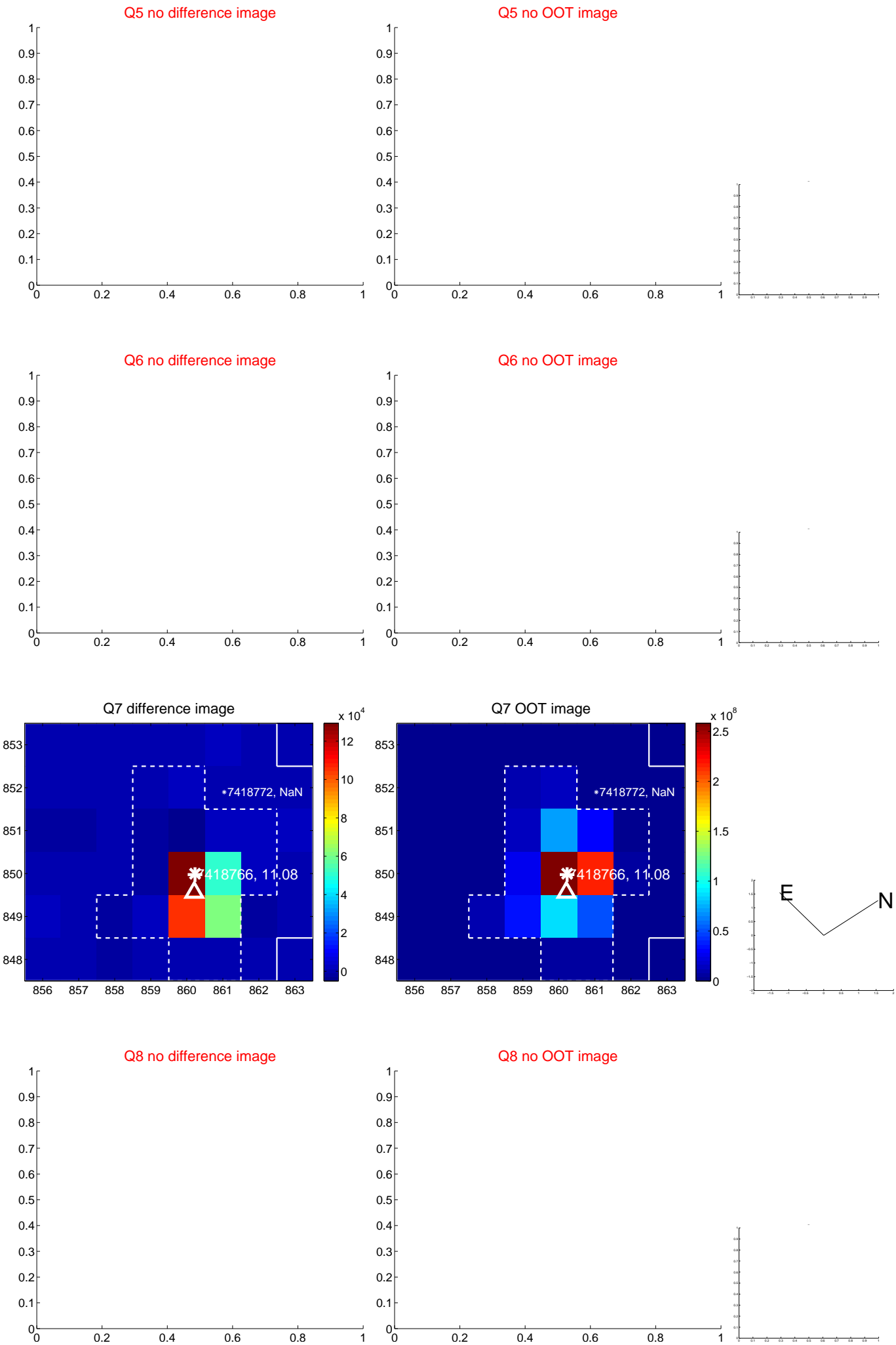


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

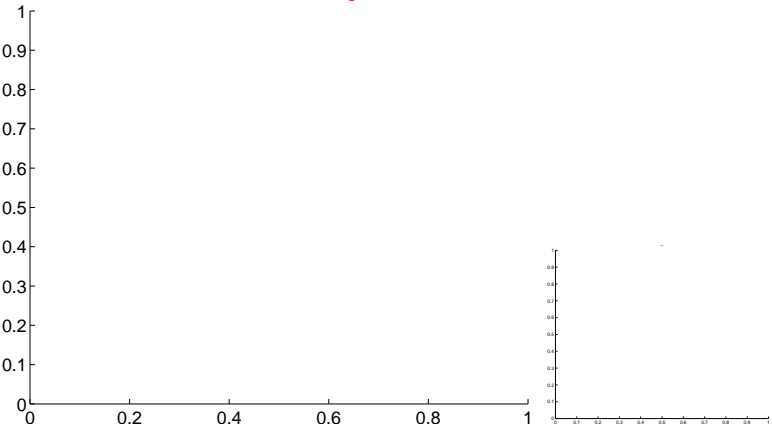


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q9 no difference image



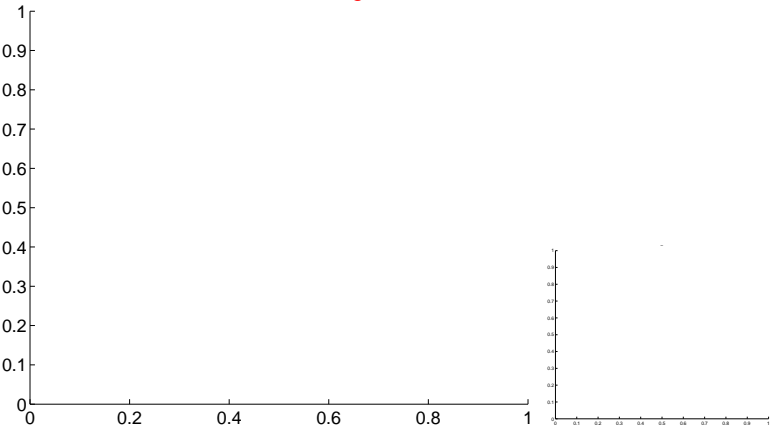
Q9 no OOT image



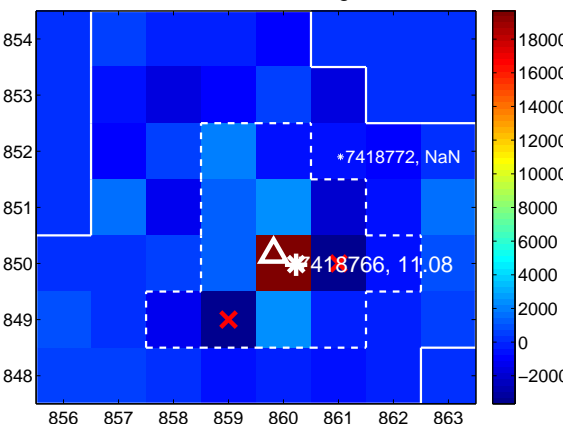
Q10 no difference image



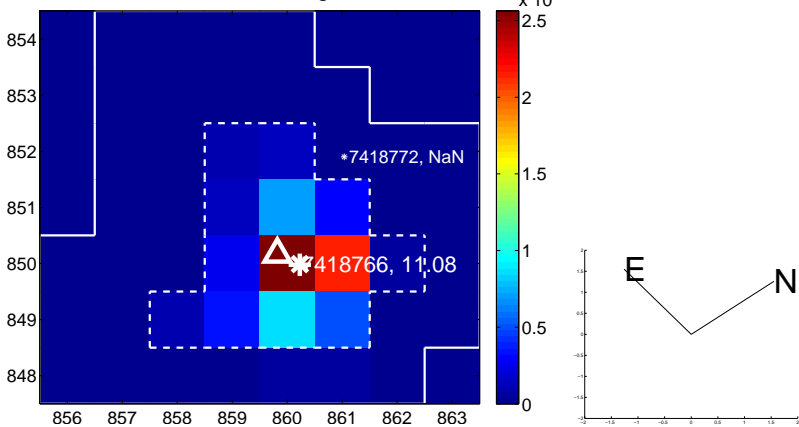
Q10 no OOT image



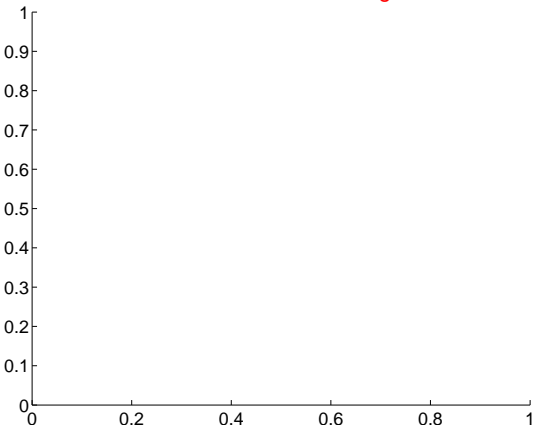
Q11 difference image



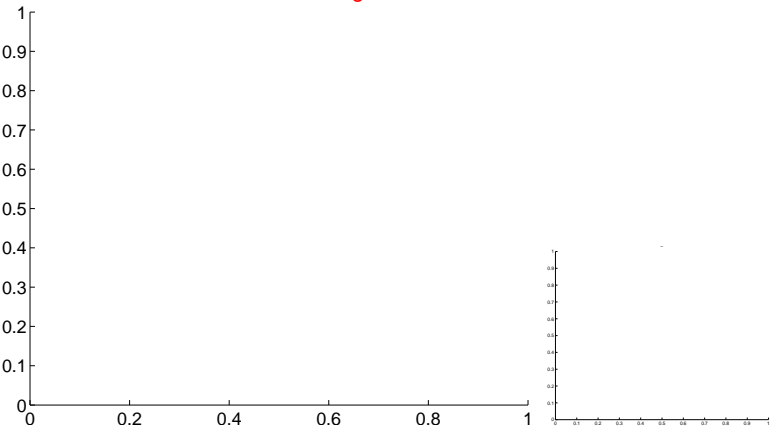
Q11 OOT image



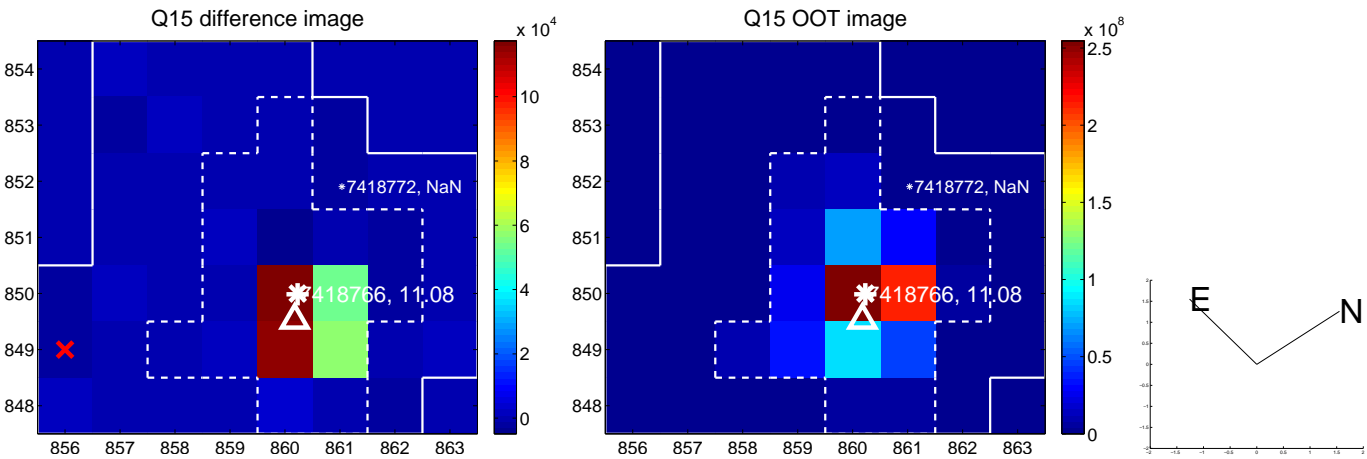
Q12 no difference image



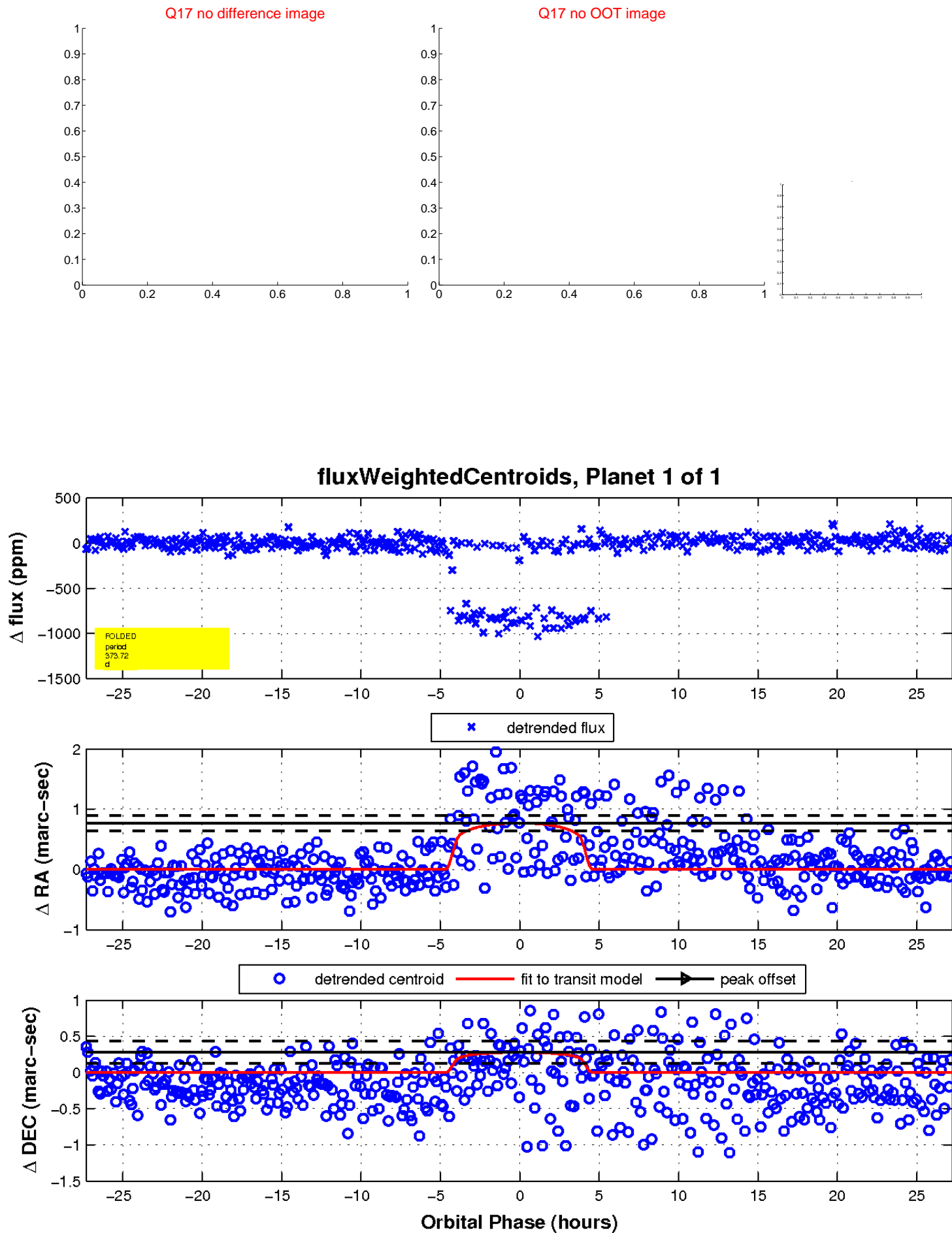
Q12 no OOT image



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

