

KIC 008686013

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})
008686013-01	OBS	No	375.552167	143.851126	663.3	40.718	10.6	10.8	0.80	5503	4.14	0.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008686013-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

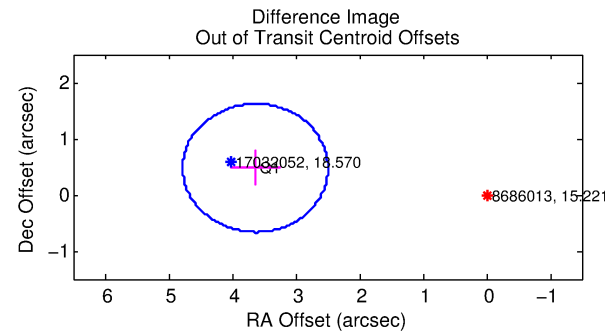
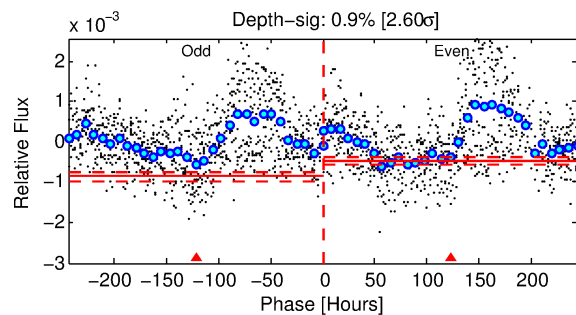
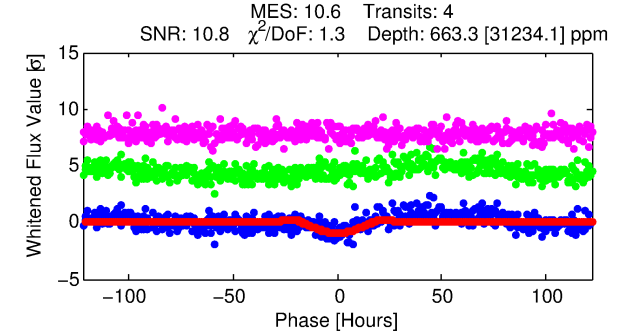
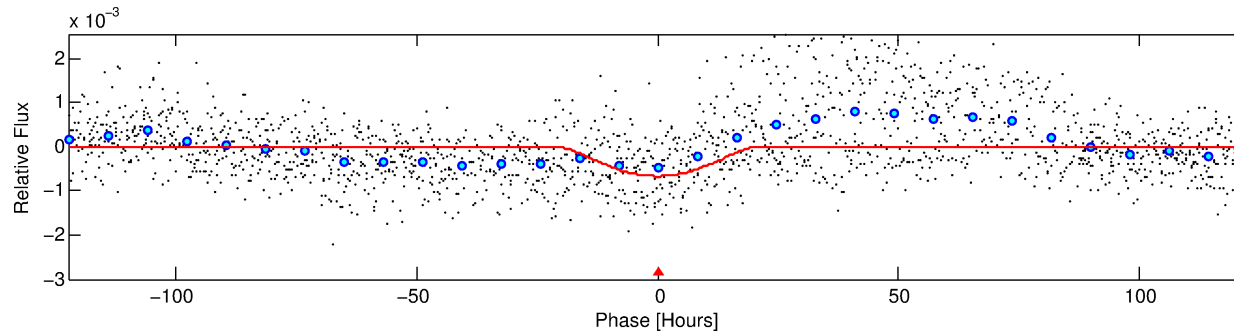
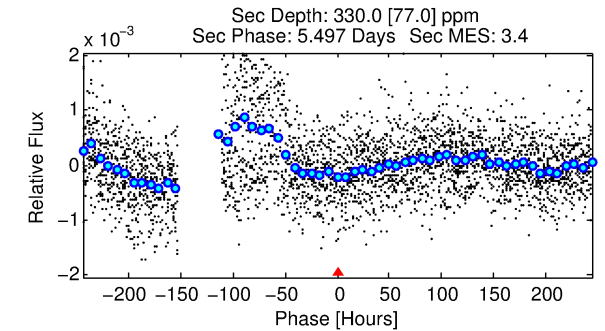
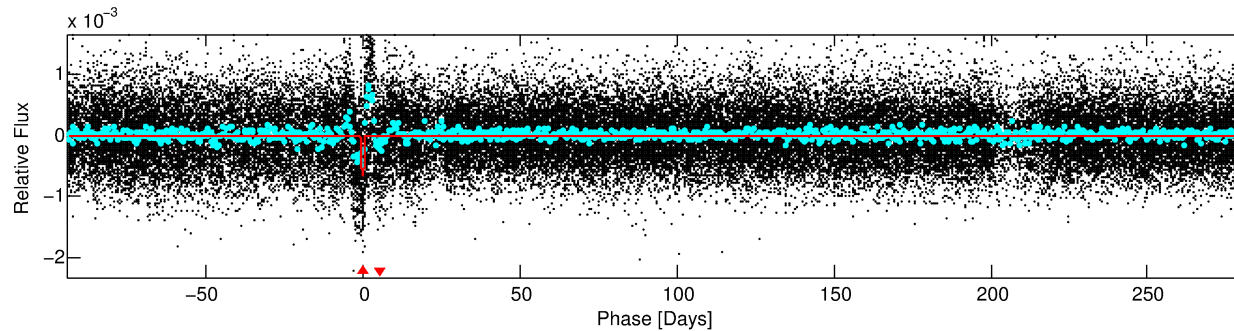
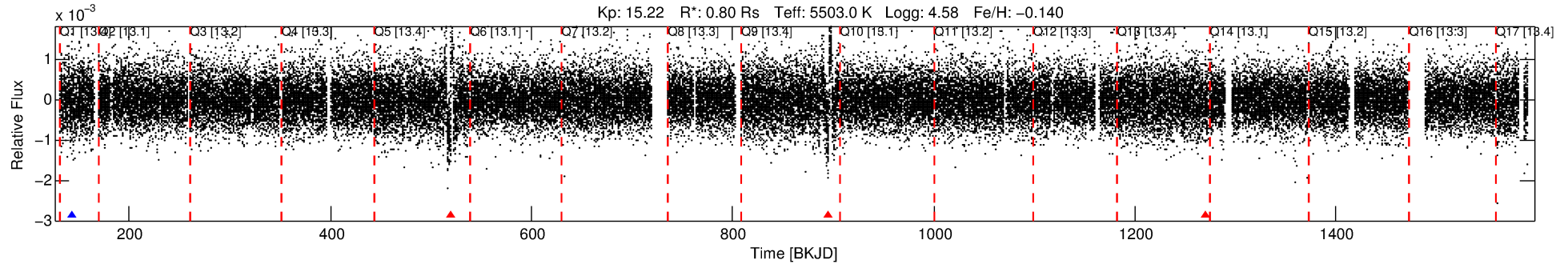
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008686013-01

No Significant Match Found

DV One-Page Summary

KIC: 8686013 Candidate: 1 of 1 Period: 375.552 d



DV Fit Results:

Period = 375.55217 [0.04555] d
Epoch = 143.8511 [0.0931] BKJD
Rp/R* = 0.0472 [0.1698]
a/R* = 21.93 [19.02]
b = 1.00 [1.25]
Seff = 0.55 [0.16]
Teq = 220 [16] K
Rp = 4.14 [14.91] Re
a = 0.9794 [0.1794] AU
Ag = 10172.09 [73253.10] [0.14σ]
Teffp = 3413 [6142] K [0.52σ]

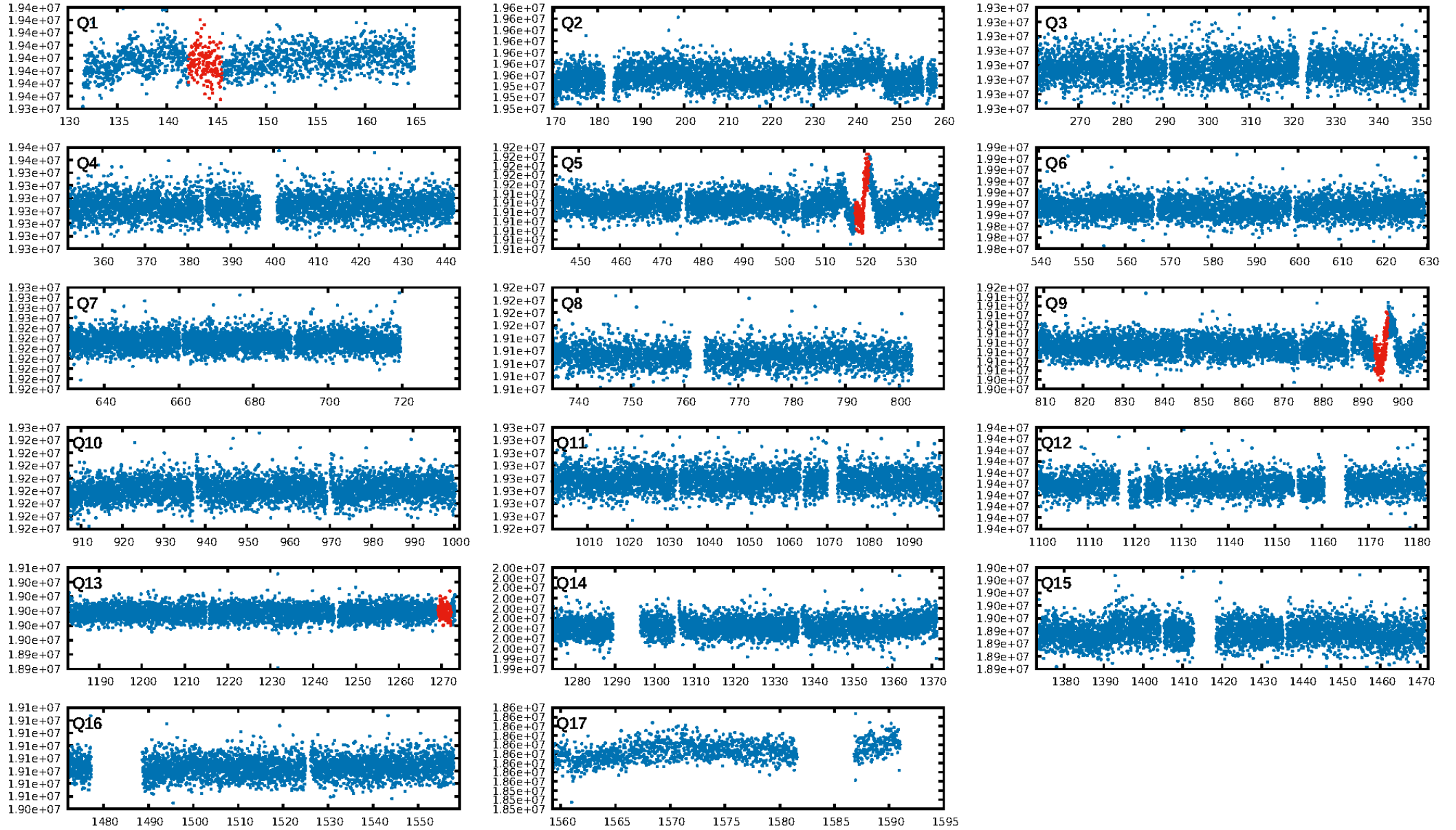
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 3.57e-26
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 0.07647
Centroid-sig: 19.8%
Centroid-so: 1.312 arcsec [1.01σ]
OotOffset-rm: 3.666 arcsec [9.63σ]
KicOffset-rm: 3.710 arcsec [9.74σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

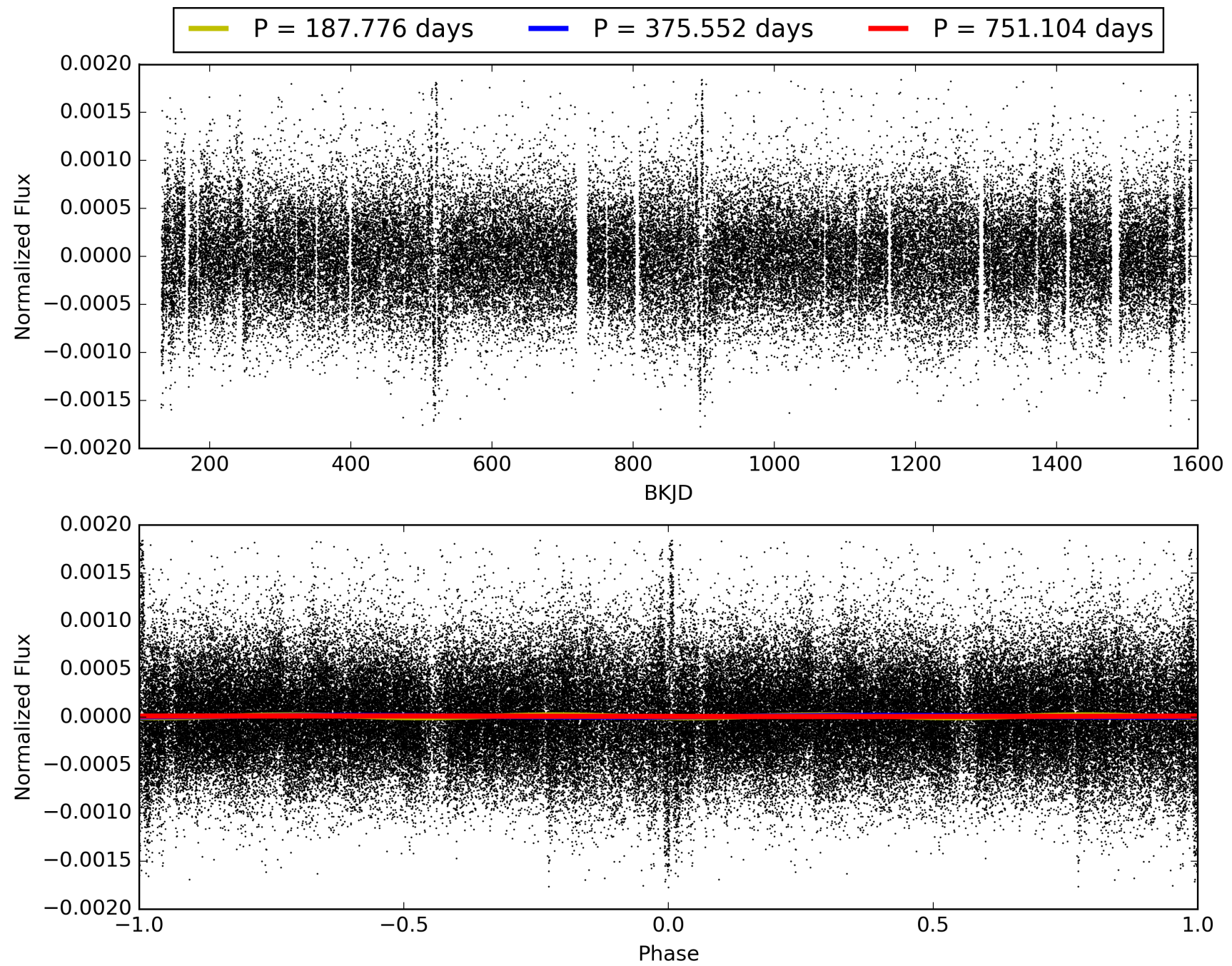
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:04:26 Z

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

TCE 008686013-01, PDC Light Curves

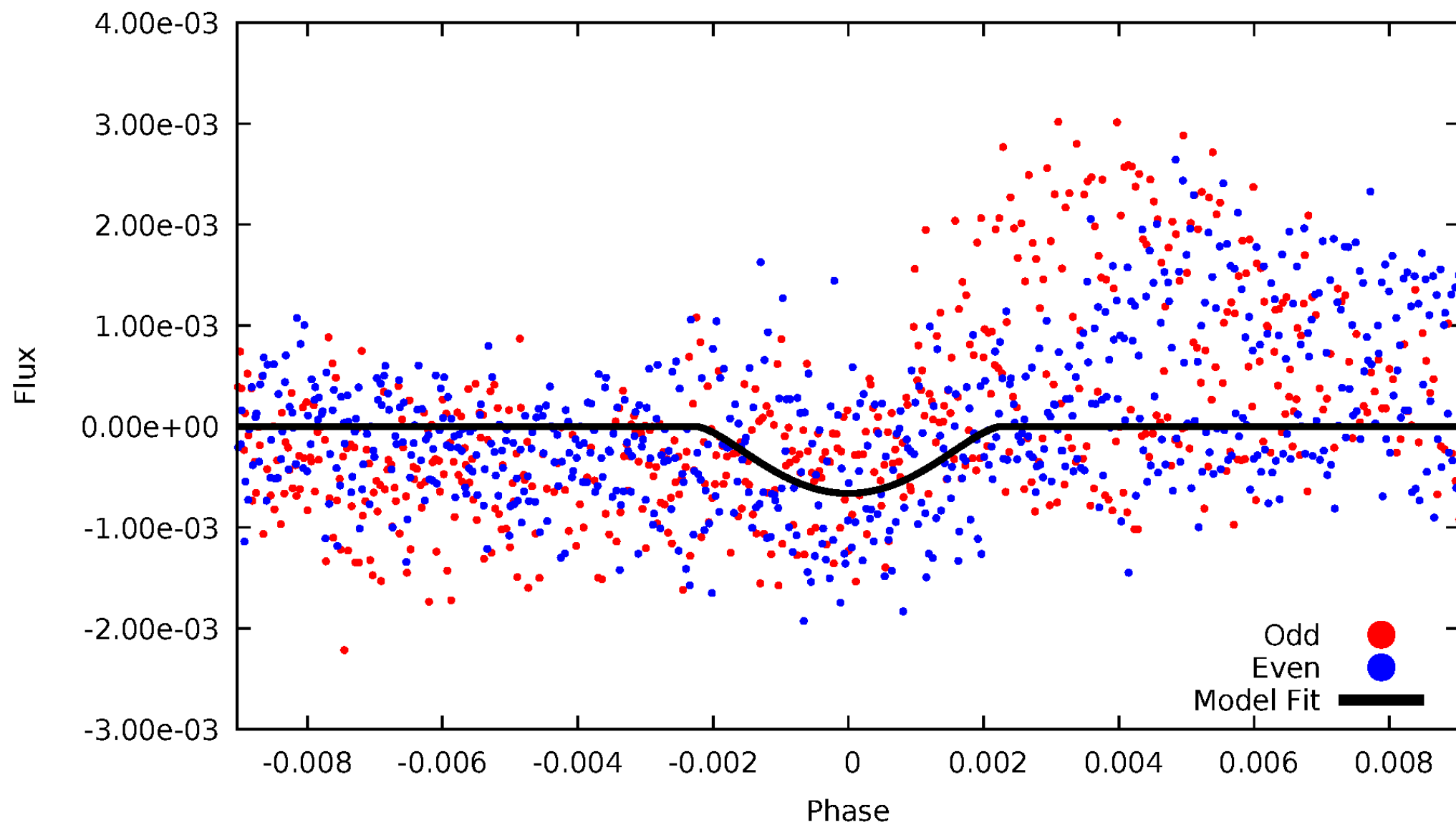


TCE 008686013-01



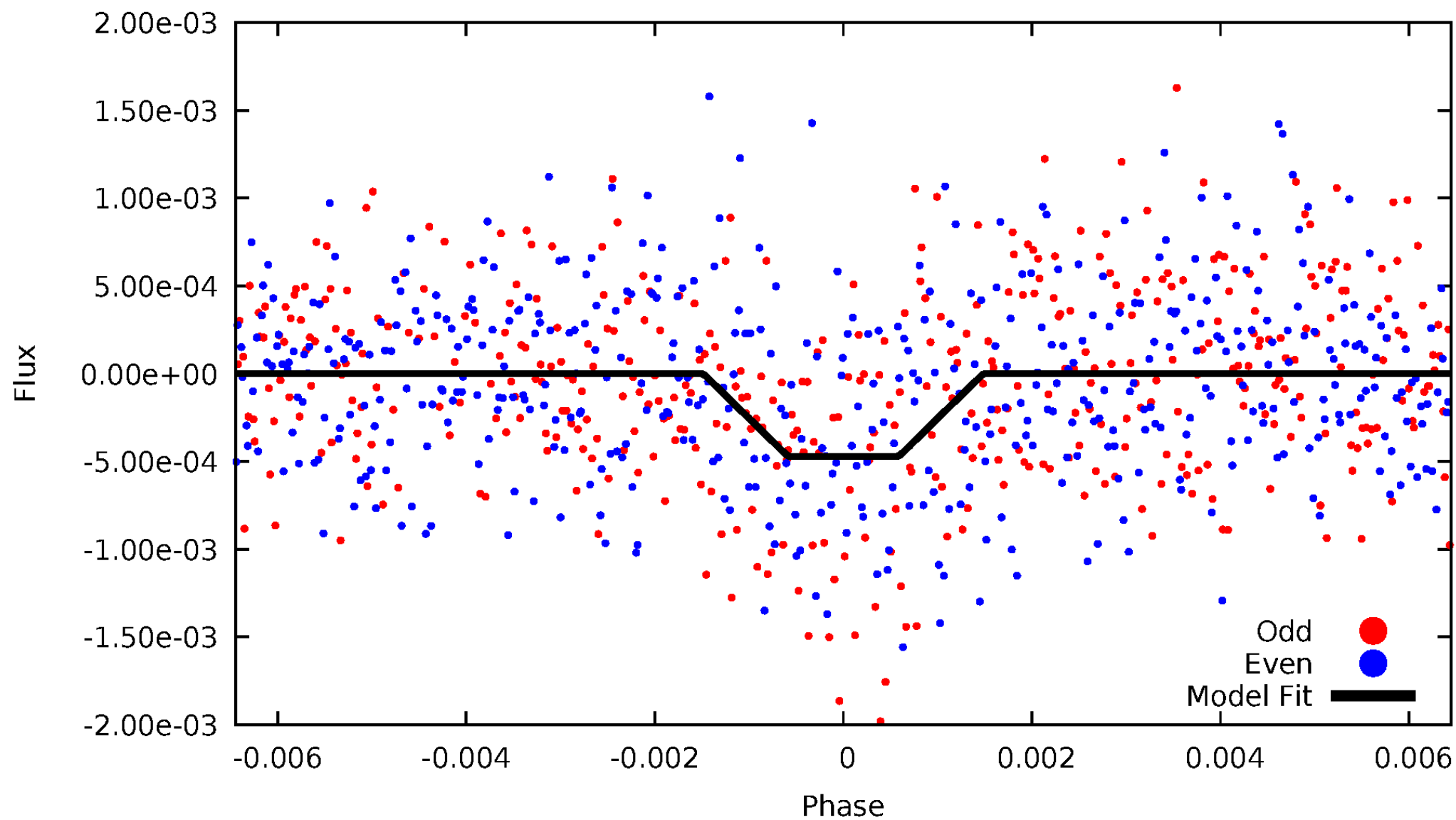
DV Odd/Even

TCE 008686013-01



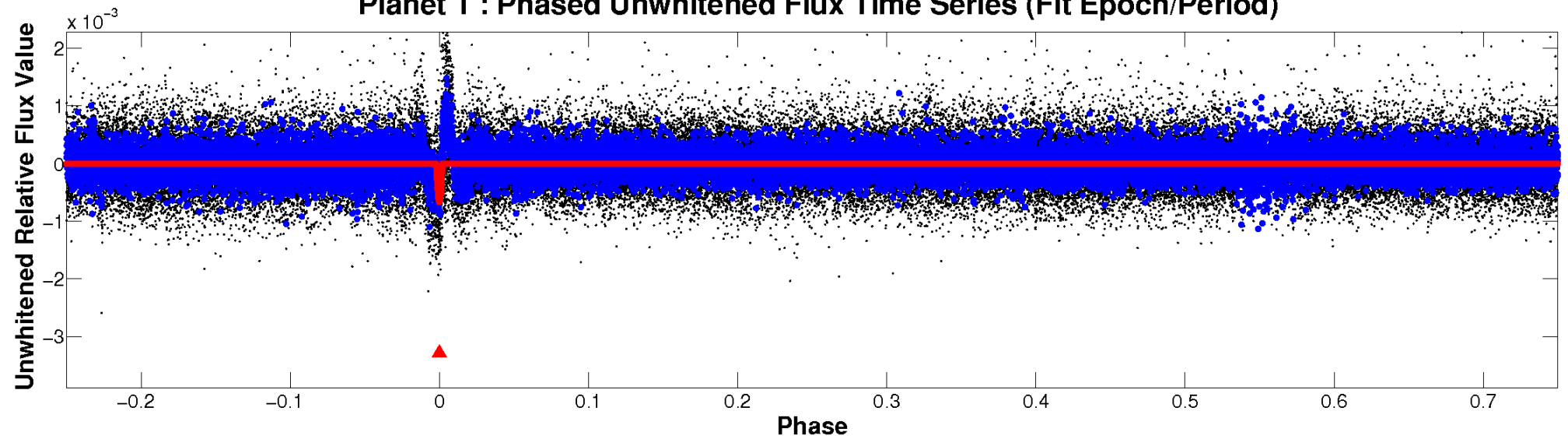
ALT Odd/Even

TCE 008686013-01

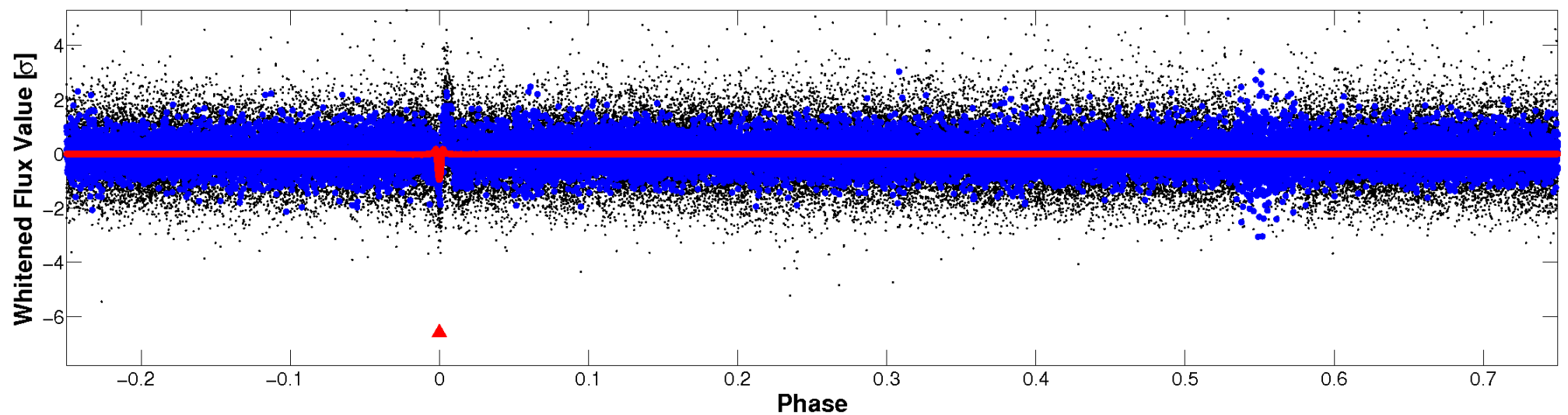


Non-Whitened Vs. Whitened Light Curve

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

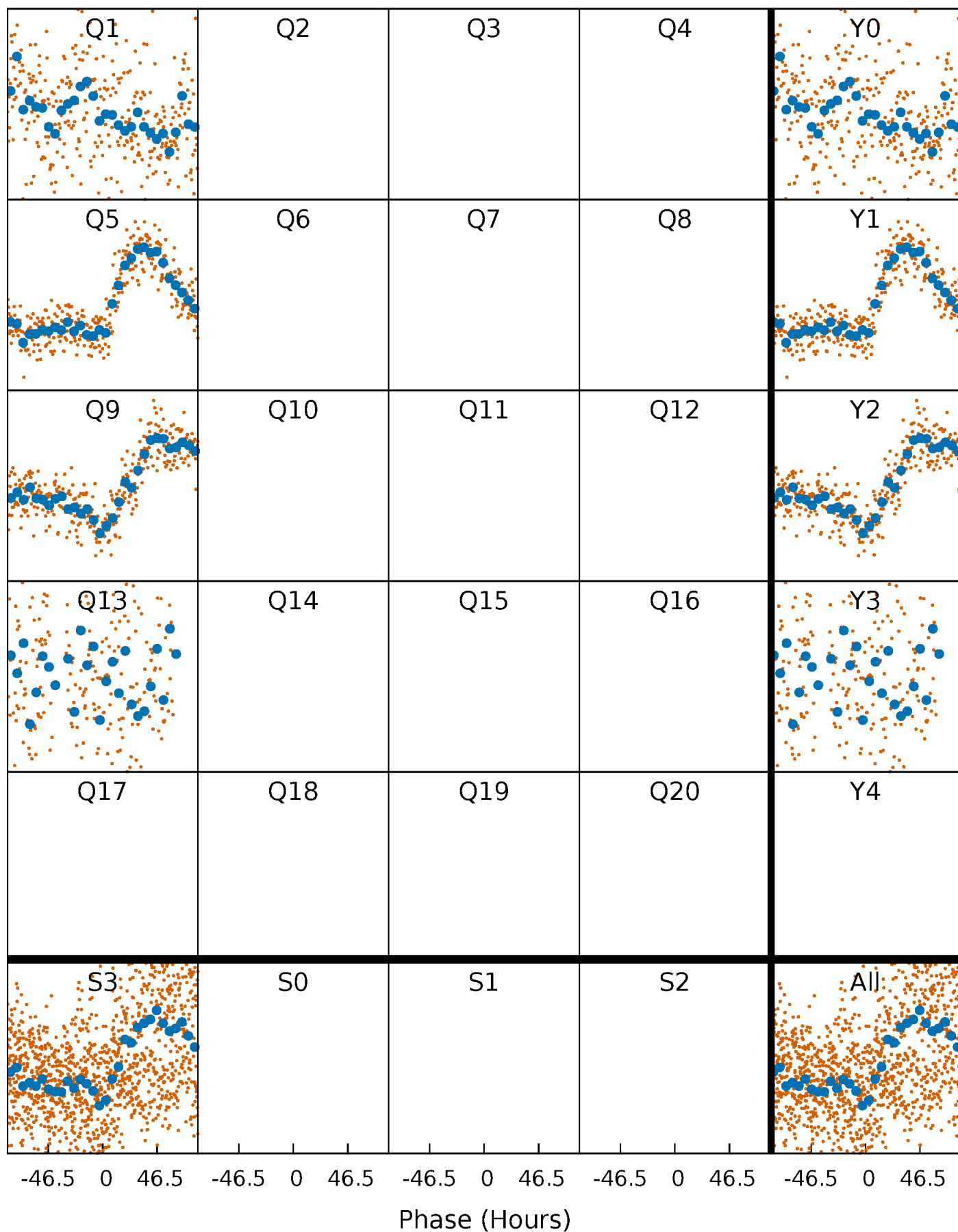


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



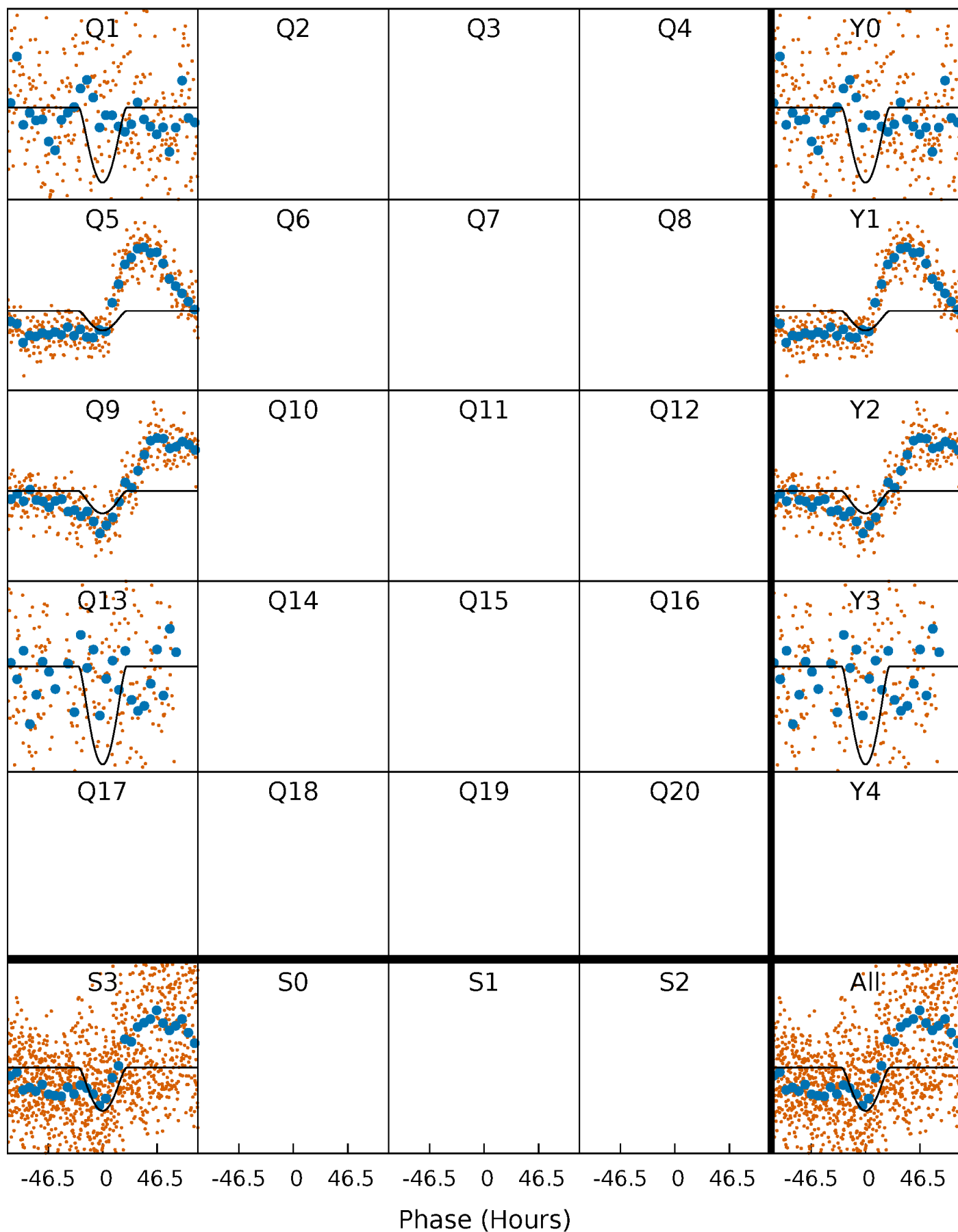
PDC Quarter-Phased Transit Curves

TCE 008686013-01 P=375.552167 Days $T_0=143.851126$ (BKJD)



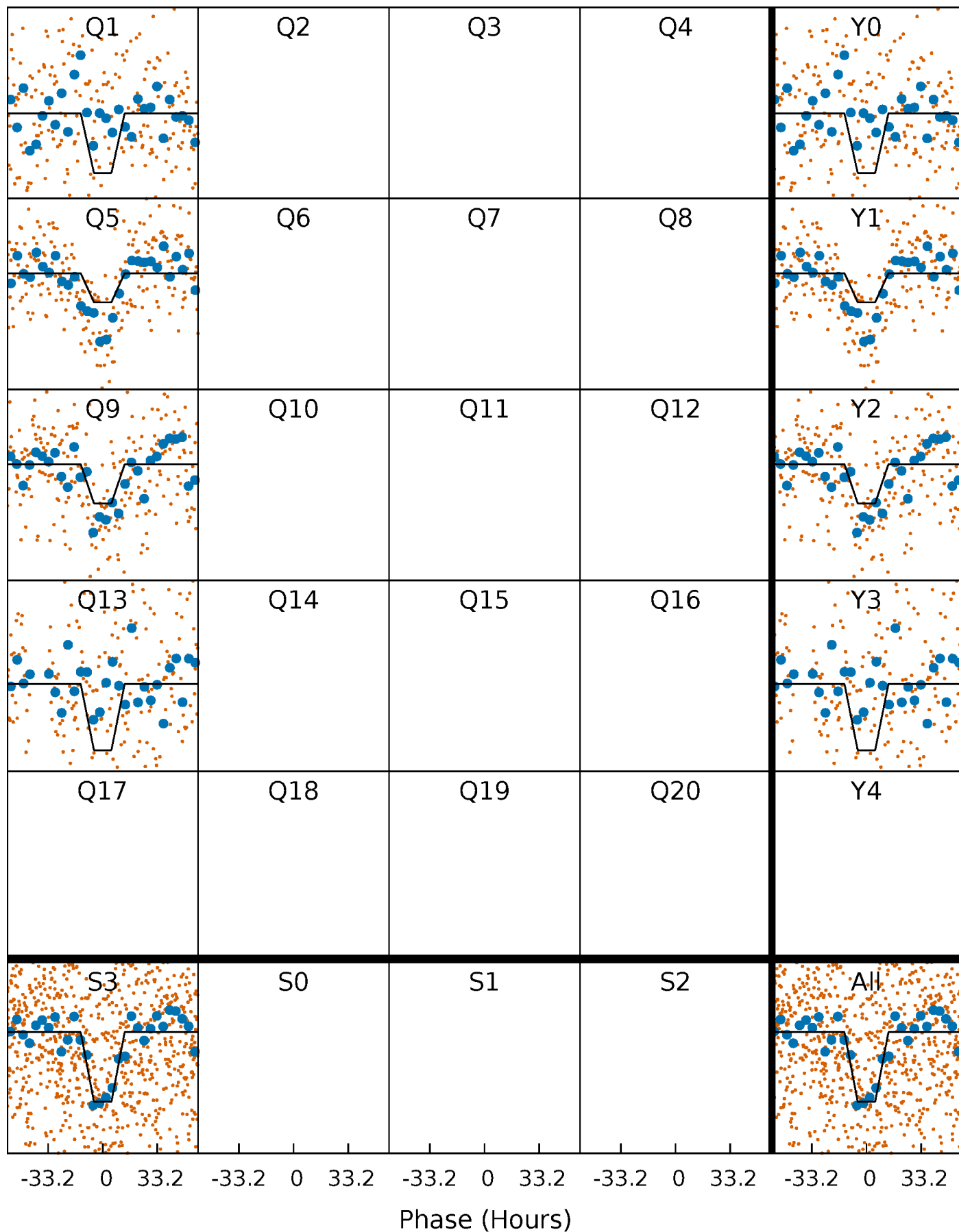
DV Quarter-Phased Transit Curves

TCE 008686013-01 P=375.552167 Days $T_0=143.851126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

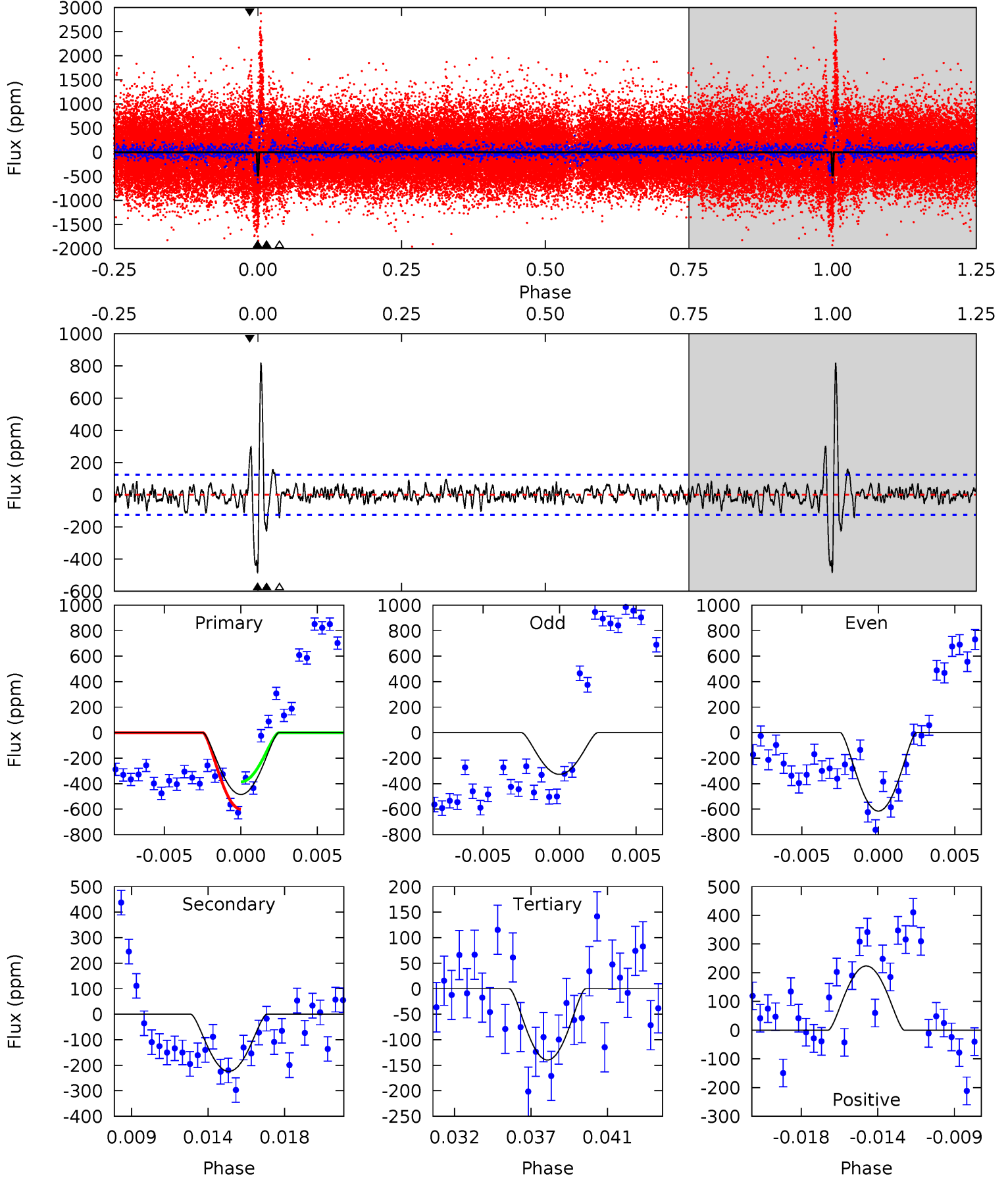
TCE 008686013-01 P=375.562022 Days $T_0=143.898244$ (BKJD)



DV Model-Shift Uniqueness Test

008686013-01, P = 375.552167 Days, E = 143.851126 Days

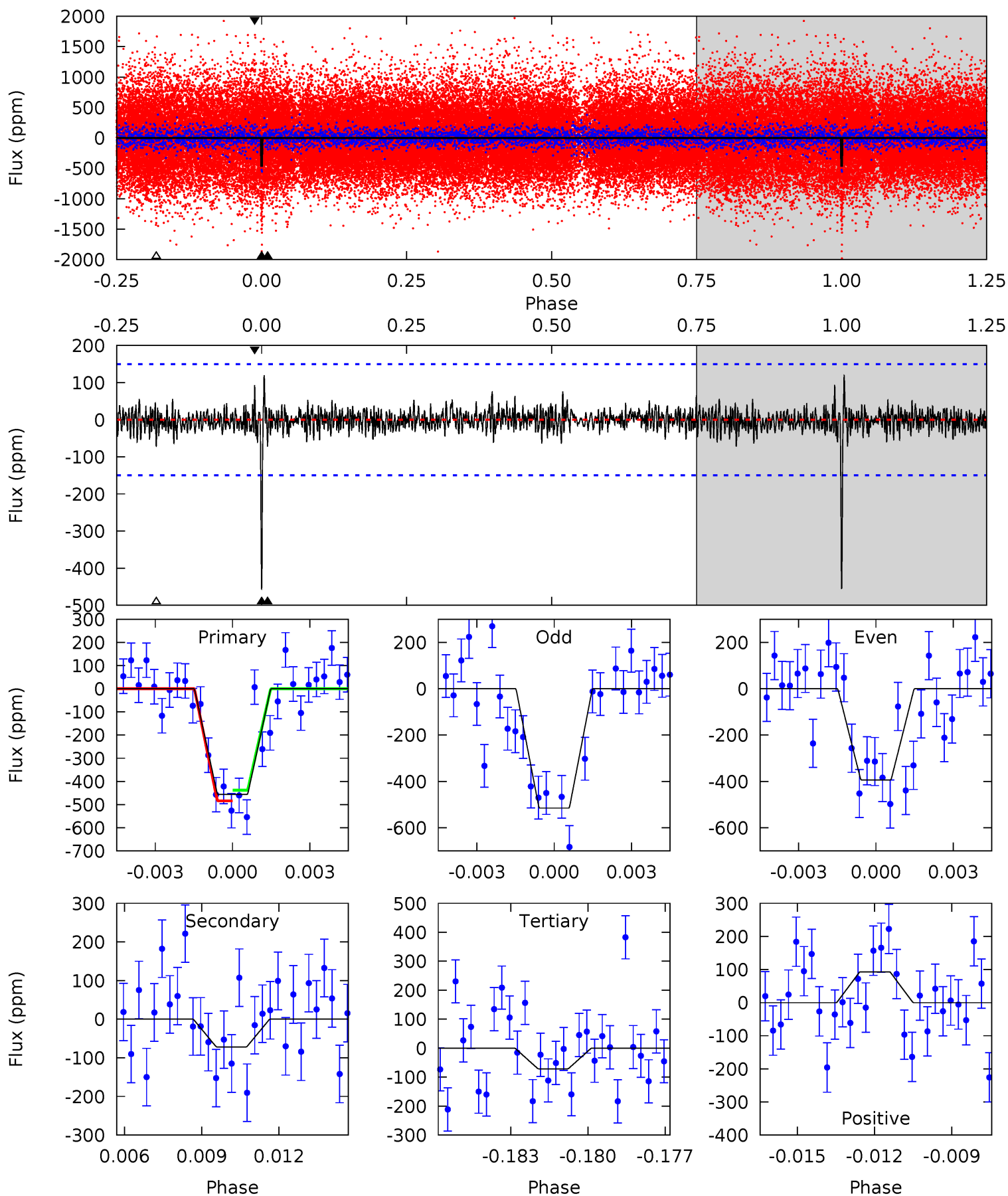
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	9.30	5.80	9.28	5.17	2.84	2.81	14.3	10.8	3.50	0.02	5.98	1.45	0.63	4.44



Alt Model-Shift Uniqueness Test

008686013-01, P = 375.562022 Days, E = 143.898244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	2.53	2.50	3.26	5.25	2.97	0.76	13.5	12.7	0.03	-0.74	2.14	1.16	0.21	0.80



Stellar Parameters For KIC 008686013

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5503^{+149}_{-166}	$4.577^{+0.036}_{-0.144}$	$-0.140^{+0.300}_{-0.300}$	$0.803^{+0.176}_{-0.063}$	$0.896^{+0.083}_{-0.108}$	$2.435^{+0.454}_{-0.973}$
	+3%/-3%	+1%/-3%	+214%/-214%	+22%/-8%	+9%/-12%	+19%/-40%
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 008686013-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-224 ± 24	$11.97^{+12.45}_{-8.28}$	312^{+17}_{-12}	2648^{+1045}_{-416}	802^{+7528}_{-610}
Alt.	-72 ± 28	$11.46^{+12.56}_{-8.14}$	312^{+18}_{-13}	2310^{+936}_{-363}	264^{+3257}_{-211}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

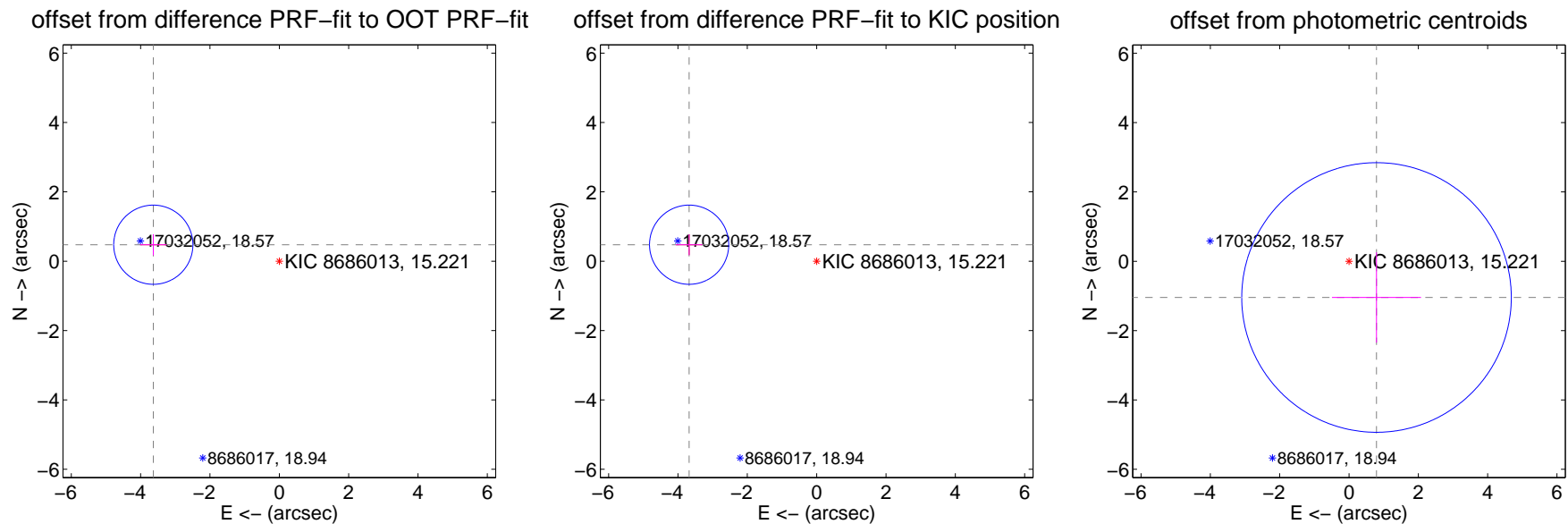
DV Centroid Data

Supplemental centroid analysis for 008686013-01. Kepler magnitude: 15.22. Transit SNR 10.85

There are 0 quarters with good PRF difference image offsets

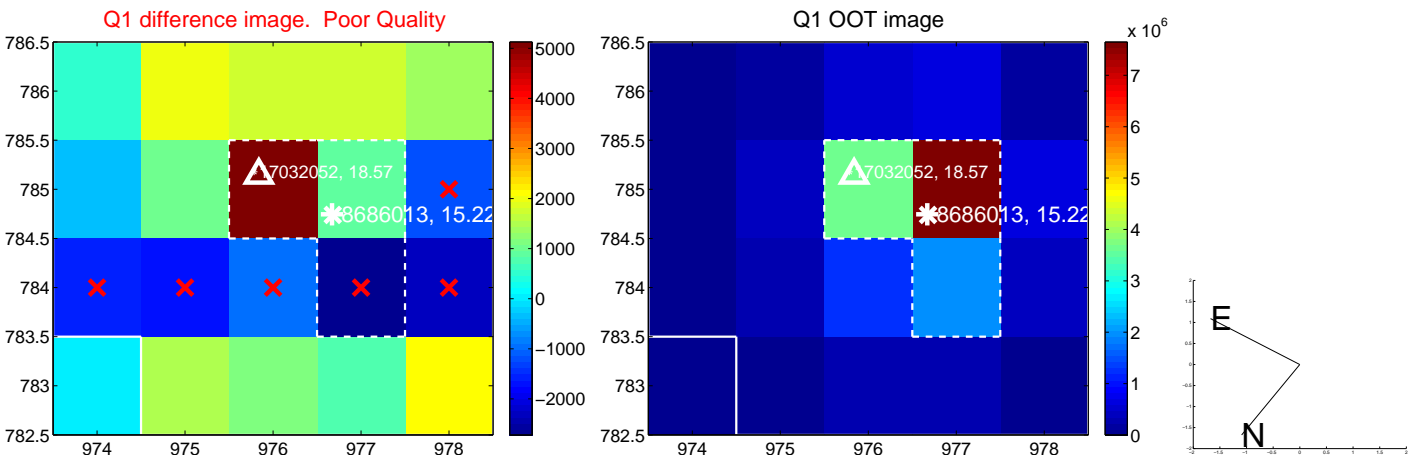
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.666 ± 0.381	9.63	3.635 ± 0.382	0.475 ± 0.304
PRF-fit source offset from KIC position	3.710 ± 0.381	9.74	3.679 ± 0.382	0.476 ± 0.304
photometric centroid source offset	1.31 ± 1.30	1.01	-0.79 ± 1.29	-1.04 ± 1.30

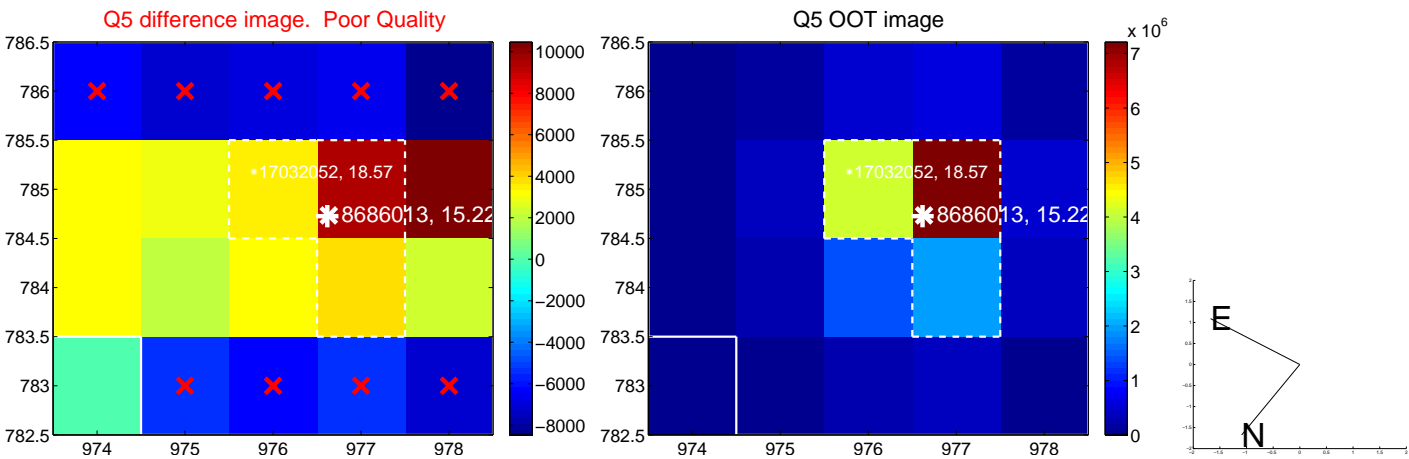


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

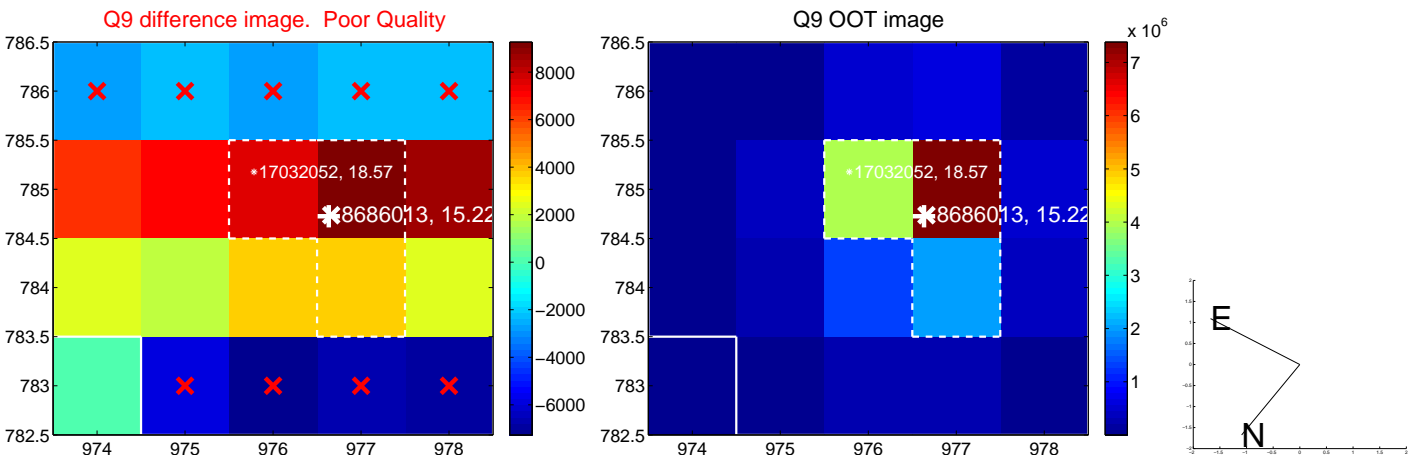
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



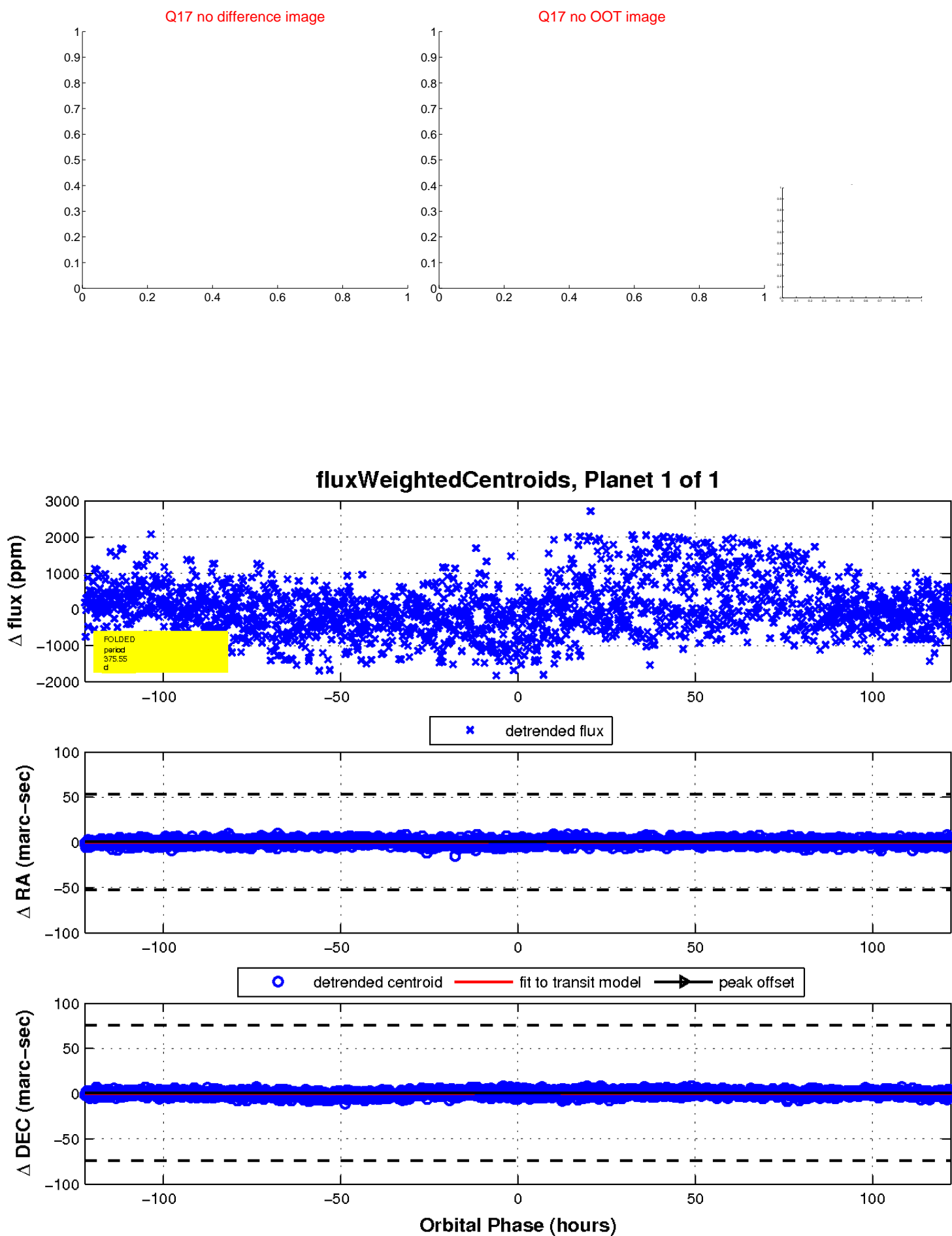
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

