

KIC 008687080

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})
008687080-01	OBS	No	375.480113	140.187930	1142.7	46.648	10.5	15.5	0.92	5907	3.15	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008687080-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

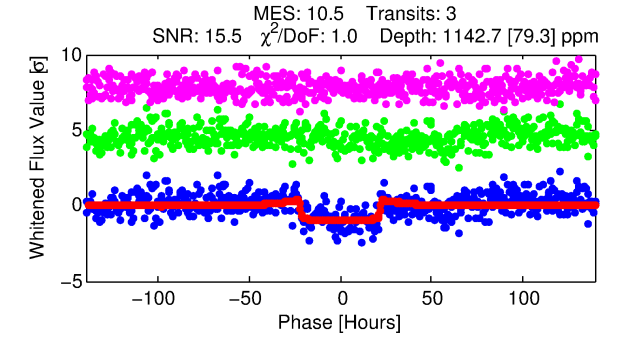
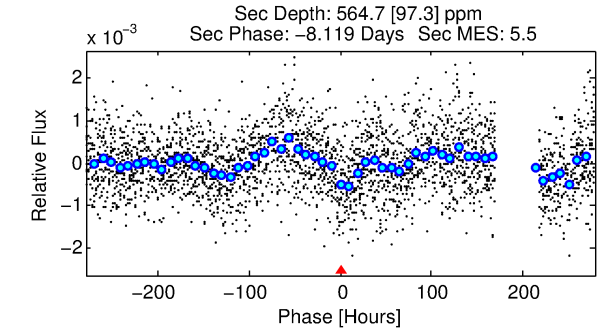
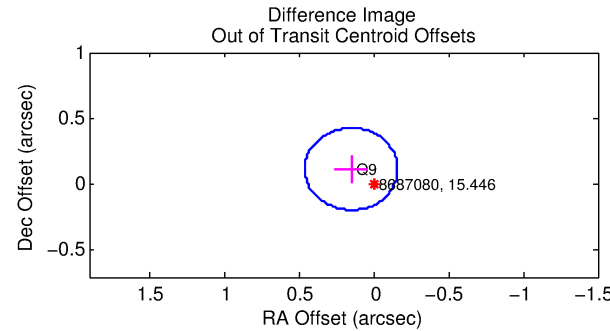
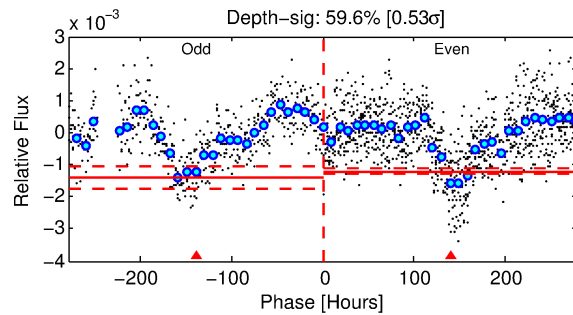
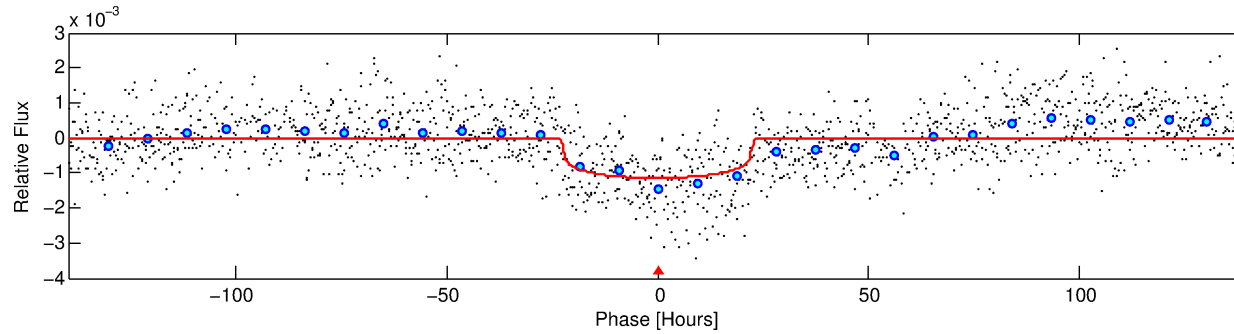
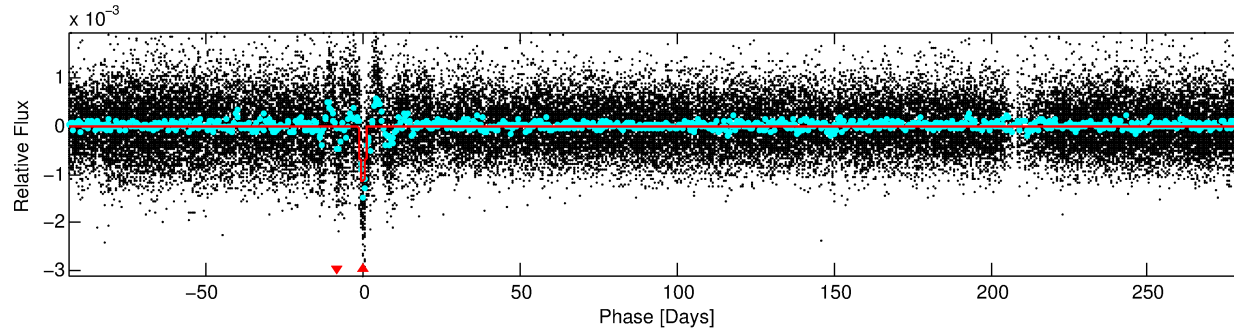
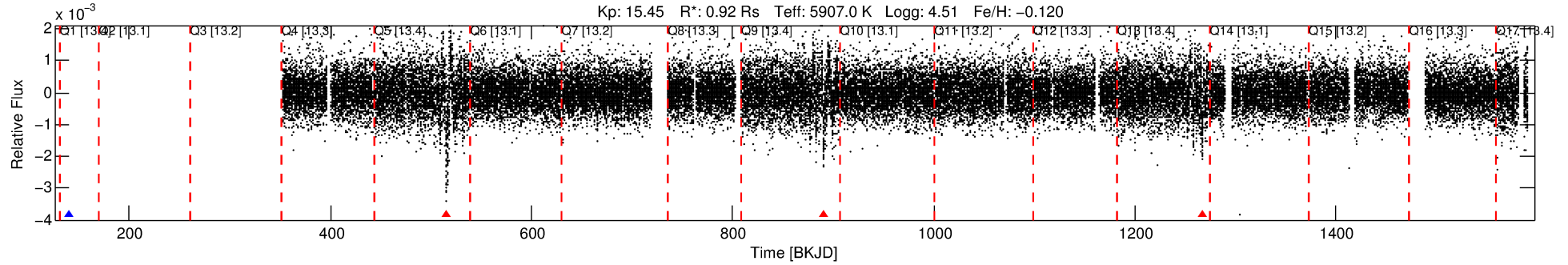
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008687080-01

No Significant Match Found

DV One-Page Summary

KIC: 8687080 Candidate: 1 of 1 Period: 375.480 d



DV Fit Results:

Period = 375.48011 [0.01958] d
Epoch = 140.1879 [0.0428] BKJD
Rp/R* = 0.0316 [0.0038]
a/R* = 56.70 [29.93]
b = 0.46 [0.90]
Seff = 0.88 [0.35]
Teq = 247 [25] K
Rp = 3.15 [1.02] Re
a = 1.0171 [0.2600] AU
Ag = 32317.25 [15500.57] [2.08 σ]
Teffp = 5124 [420] K [11.58 σ]

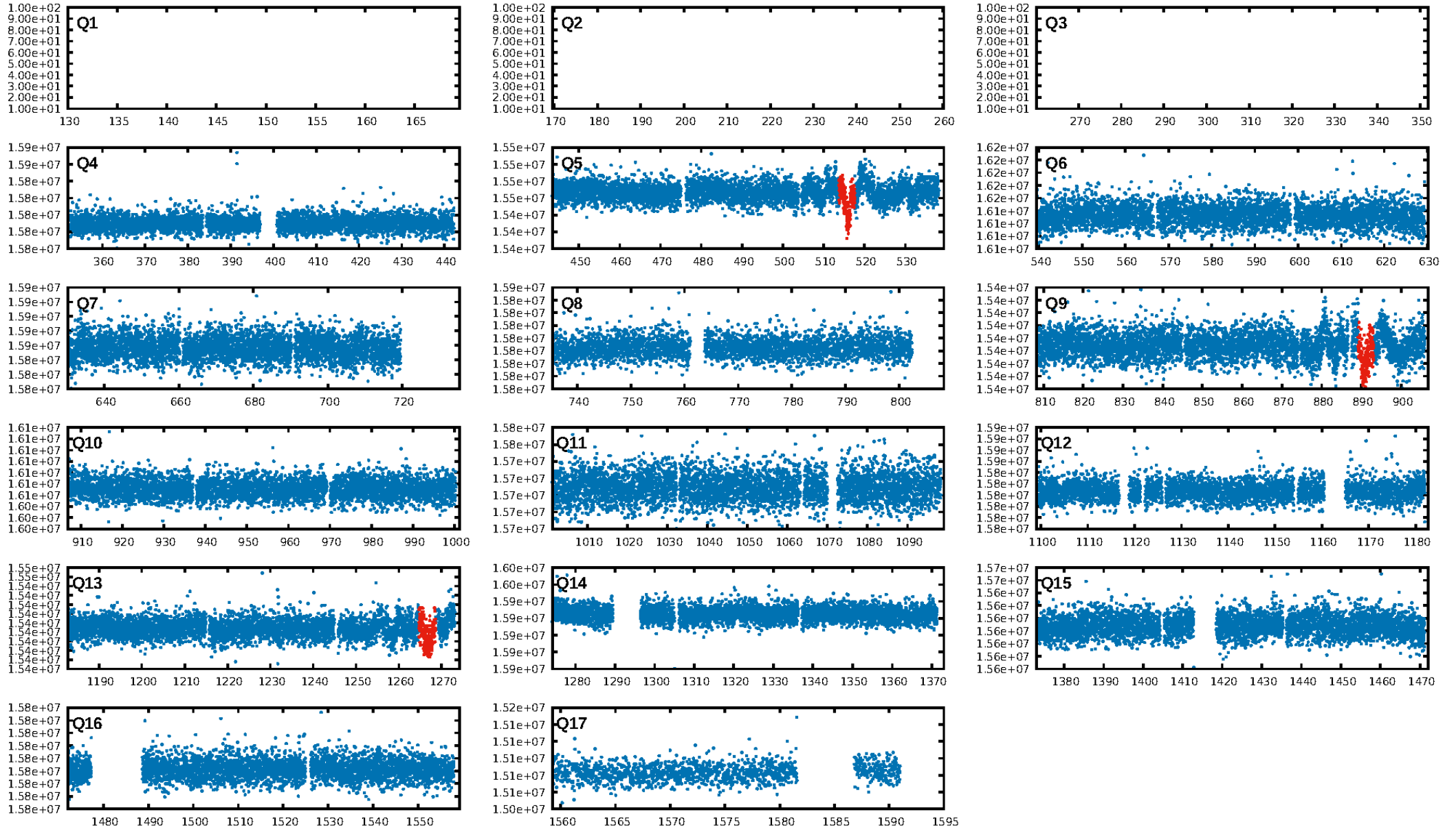
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.2%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 2.29e-21
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 2.182
Centroid-sig: 0.0%
Centroid-so: 11.190 arcsec [6.55 σ]
OotOffset-rm: 0.190 arcsec [1.83 σ]
KicOffset-rm: 0.317 arcsec [3.05 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

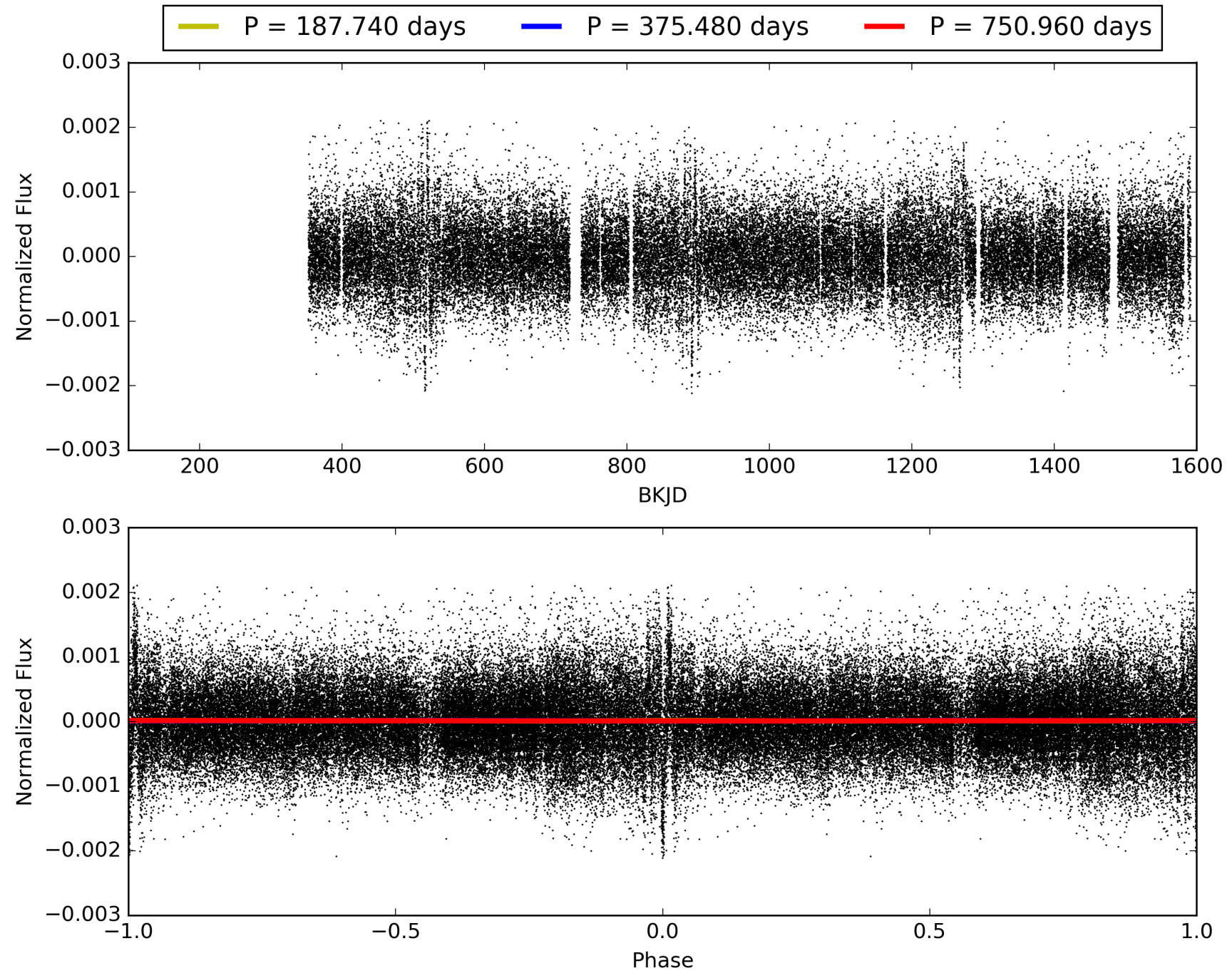
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:39:55 Z

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

TCE 008687080-01, PDC Light Curves

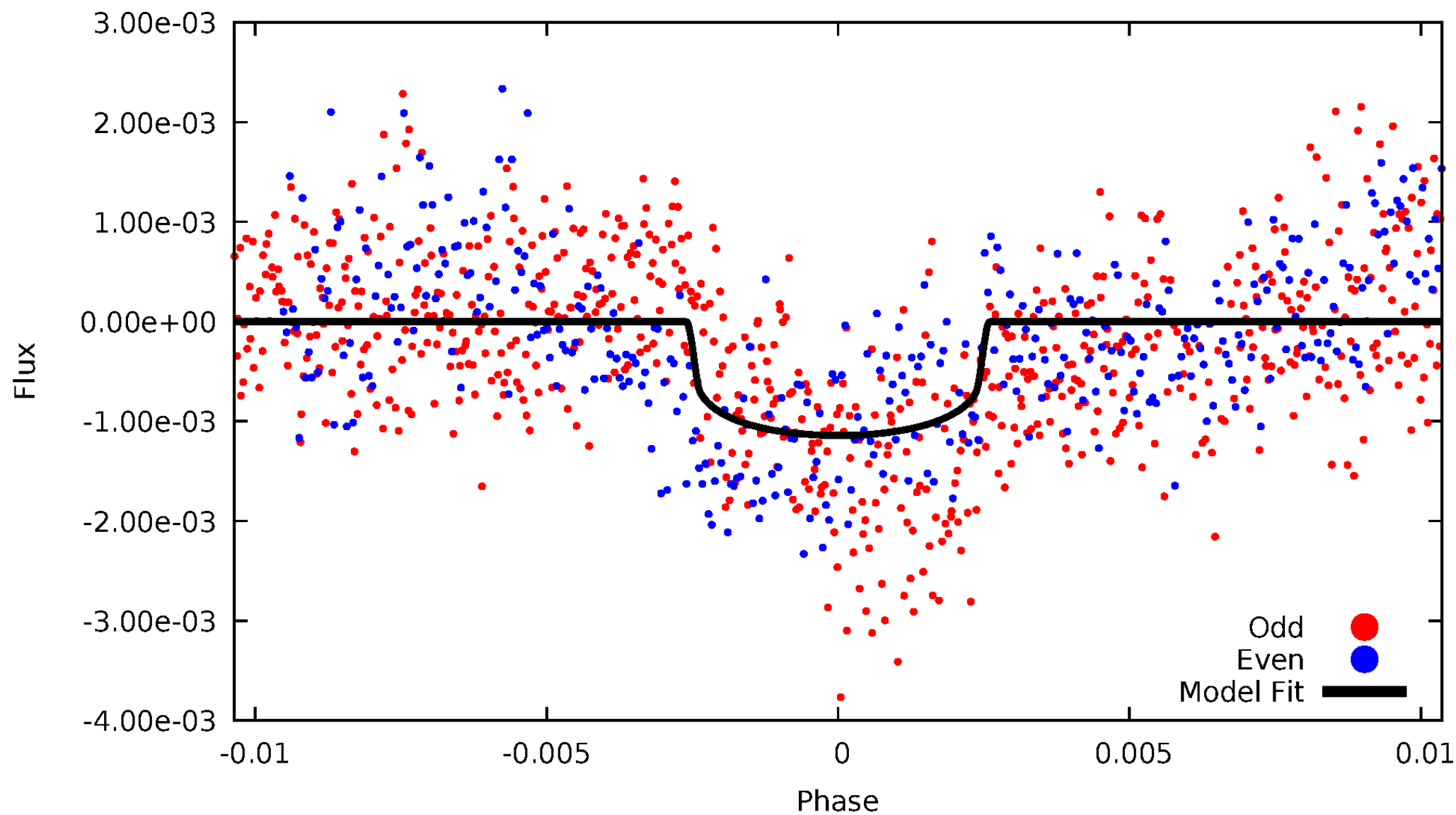


TCE 008687080-01



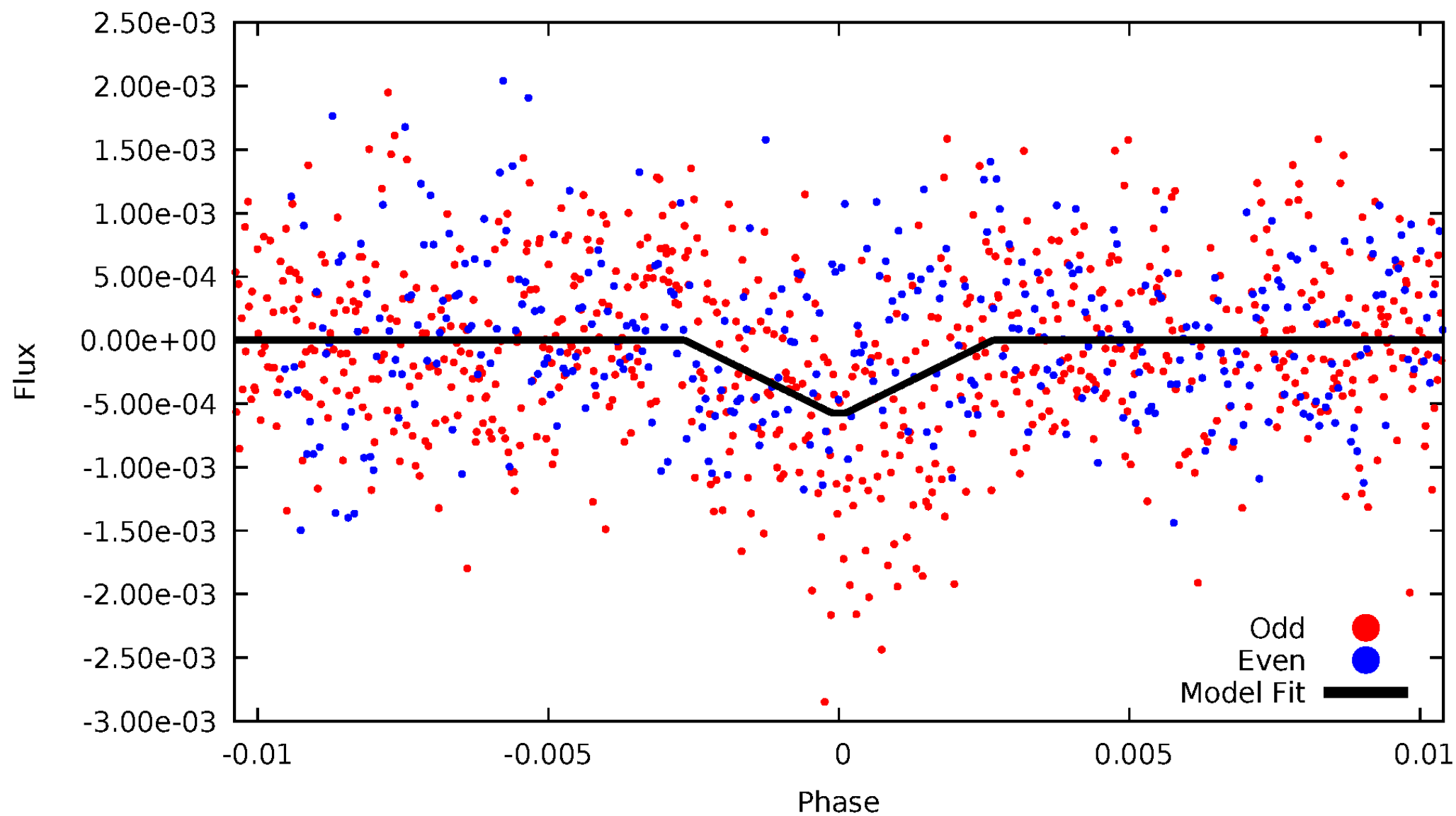
DV Odd/Even

TCE 008687080-01



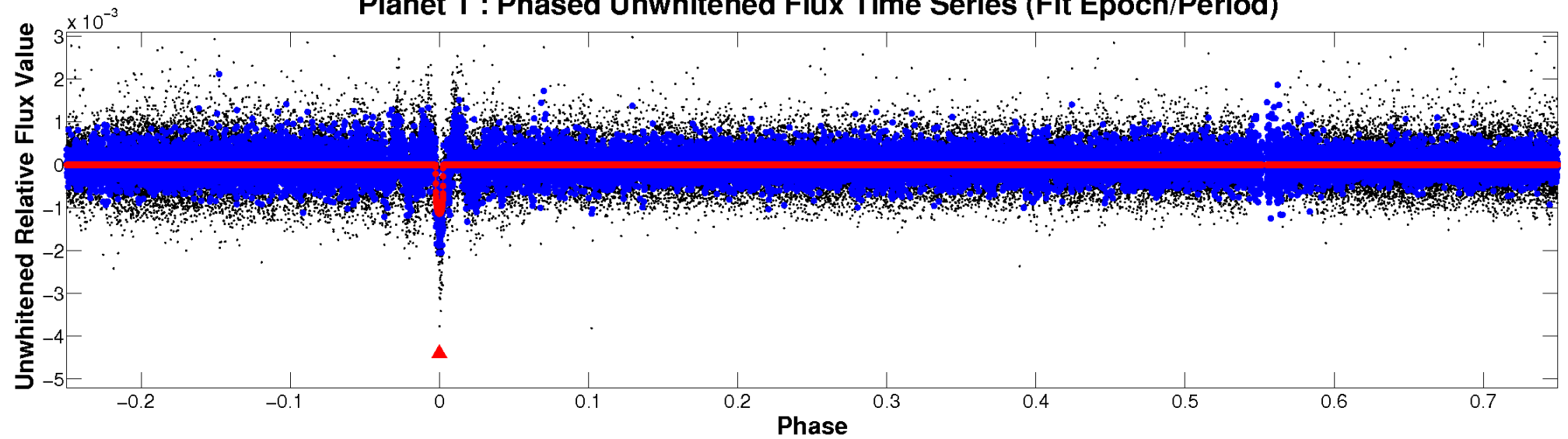
ALT Odd/Even

TCE 008687080-01

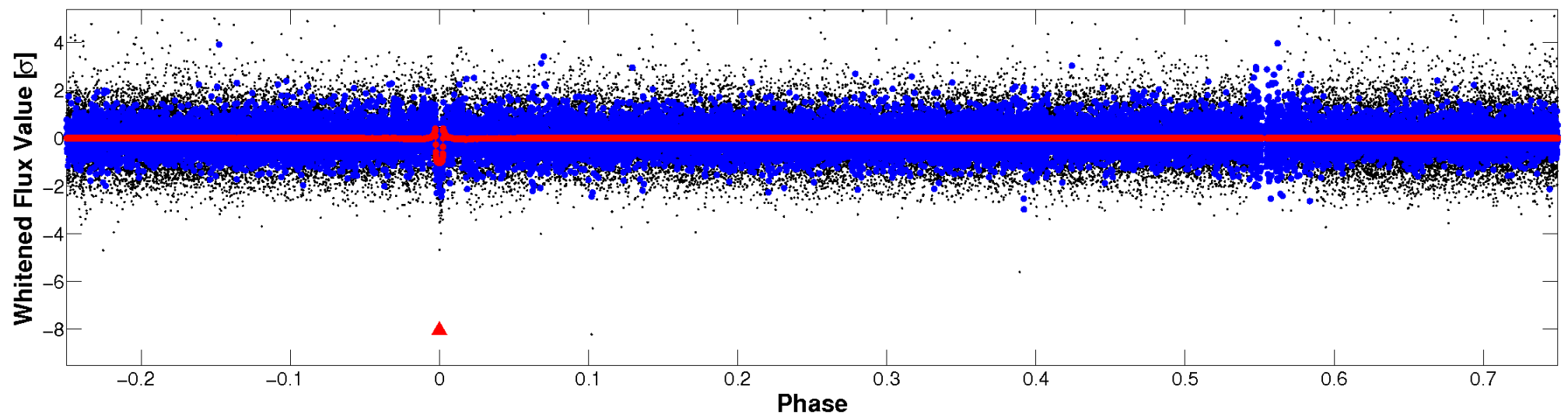


Non-Whitened Vs. Whitened Light Curve

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

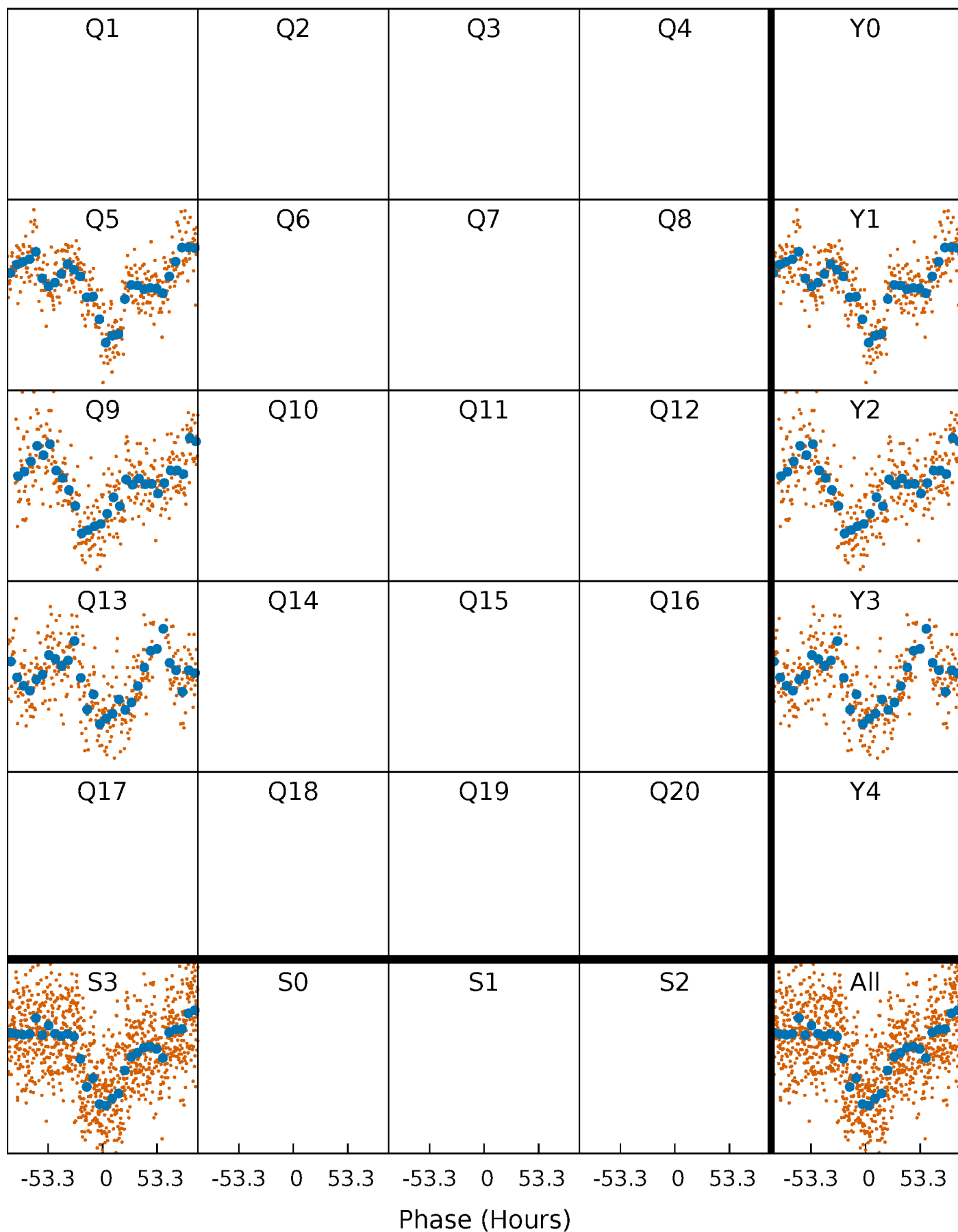


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



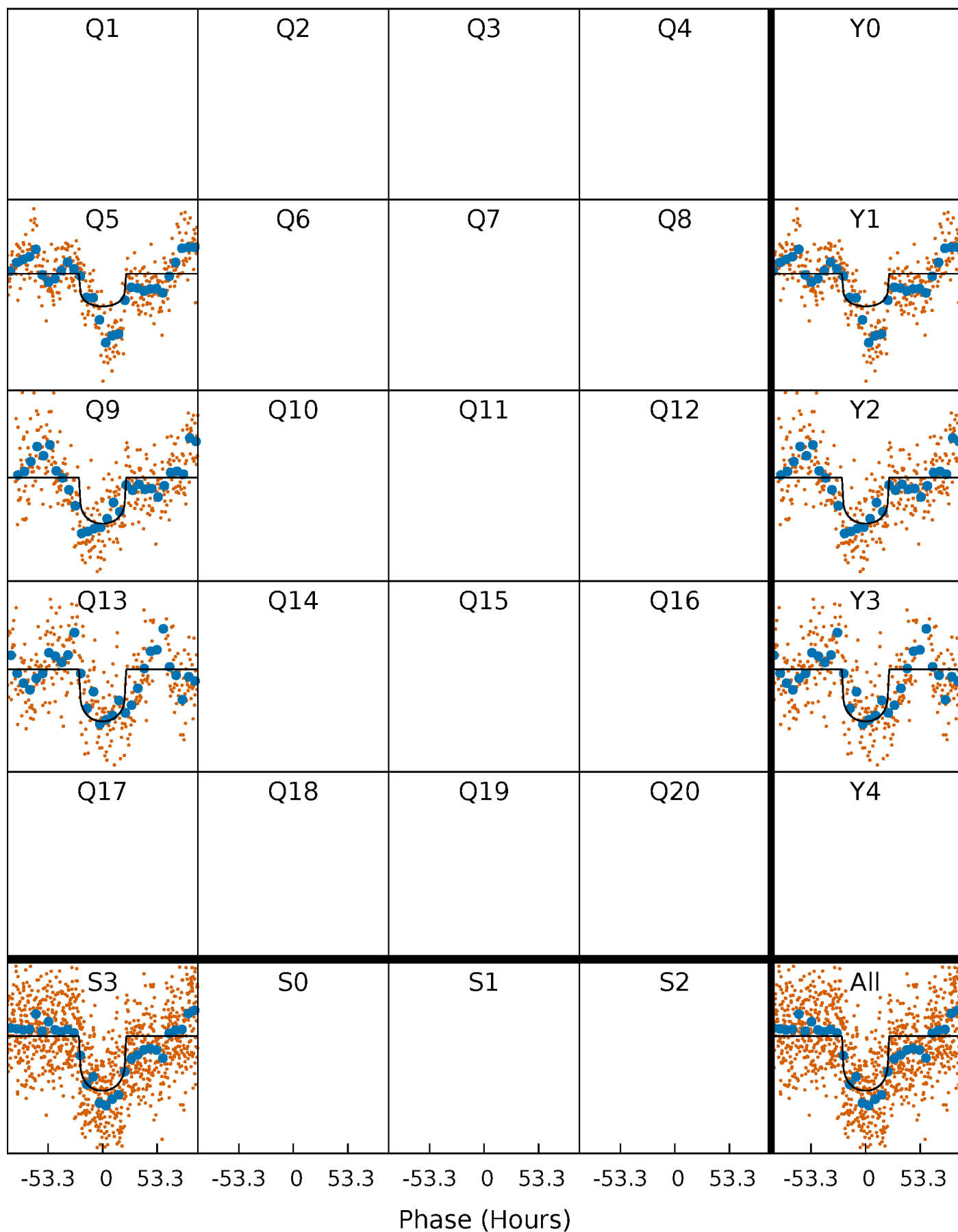
PDC Quarter-Phased Transit Curves

TCE 008687080-01 P=375.480113 Days $T_0=140.187930$ (BKJD)



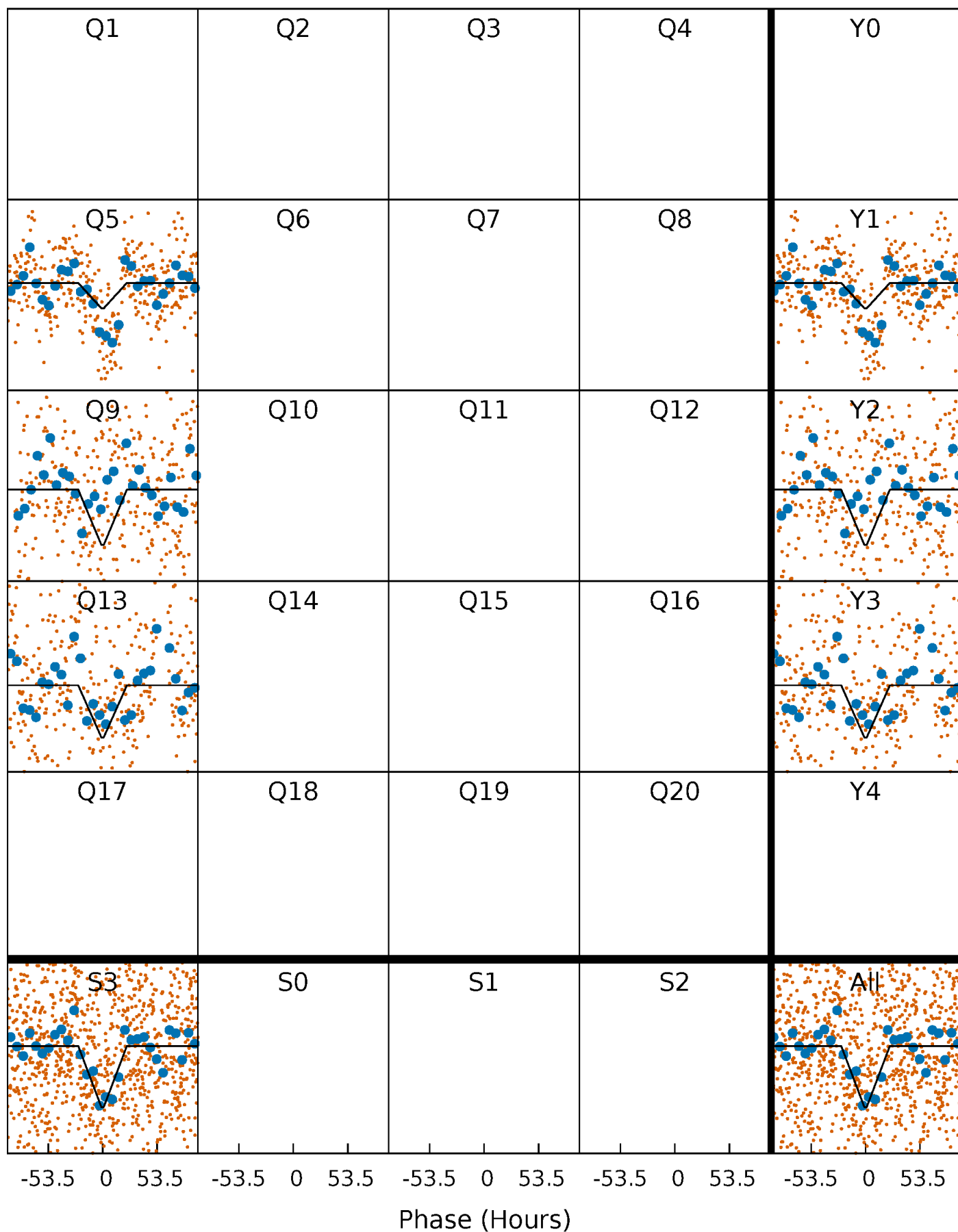
DV Quarter-Phased Transit Curves

TCE 008687080-01 $P=375.480113$ Days $T_0=140.187930$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

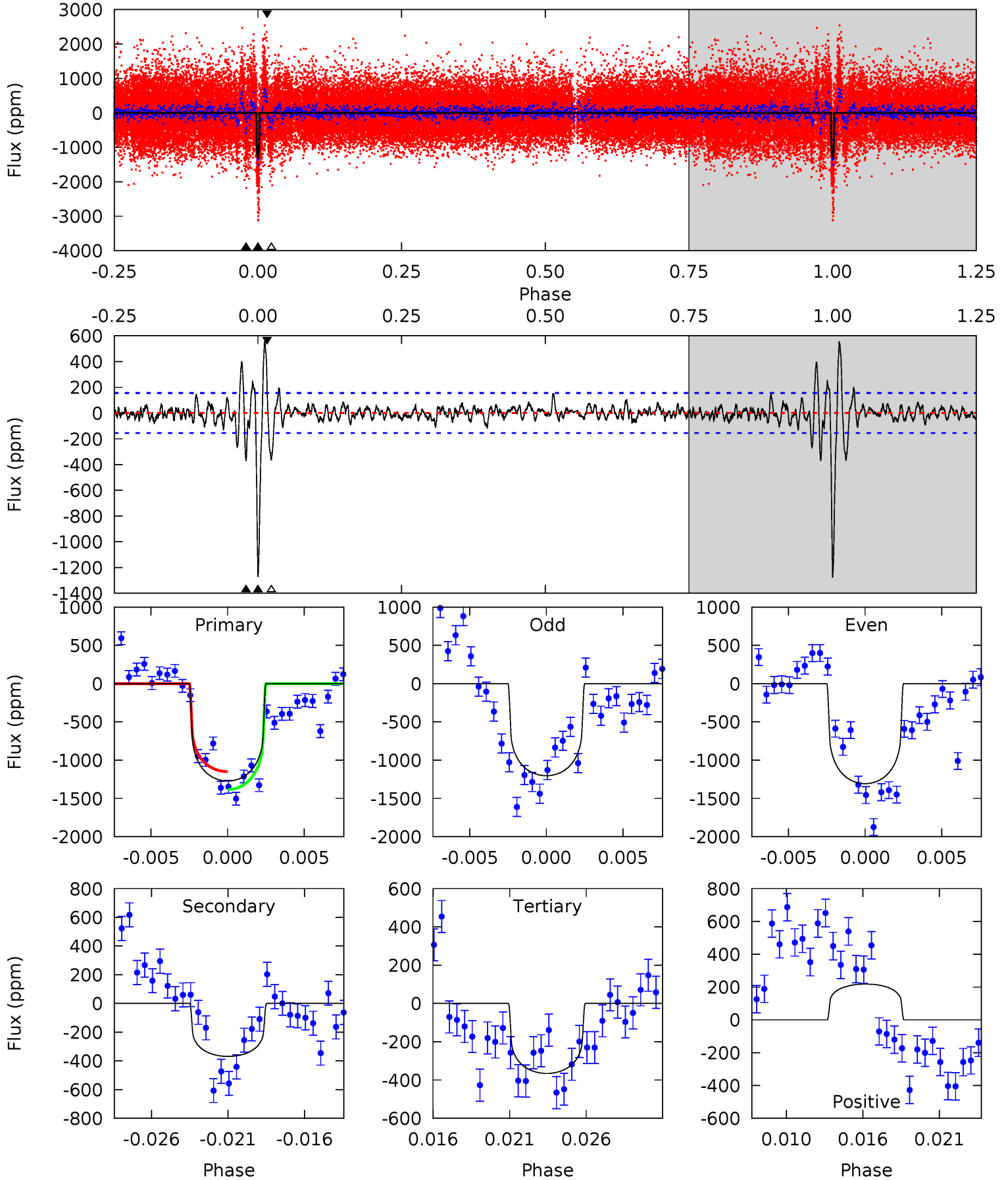
TCE 008687080-01 P=375.378120 Days $T_0=140.398549$ (BKJD)



DV Model-Shift Uniqueness Test

008687080-01, P = 375.480113 Days, E = 140.187930 Days

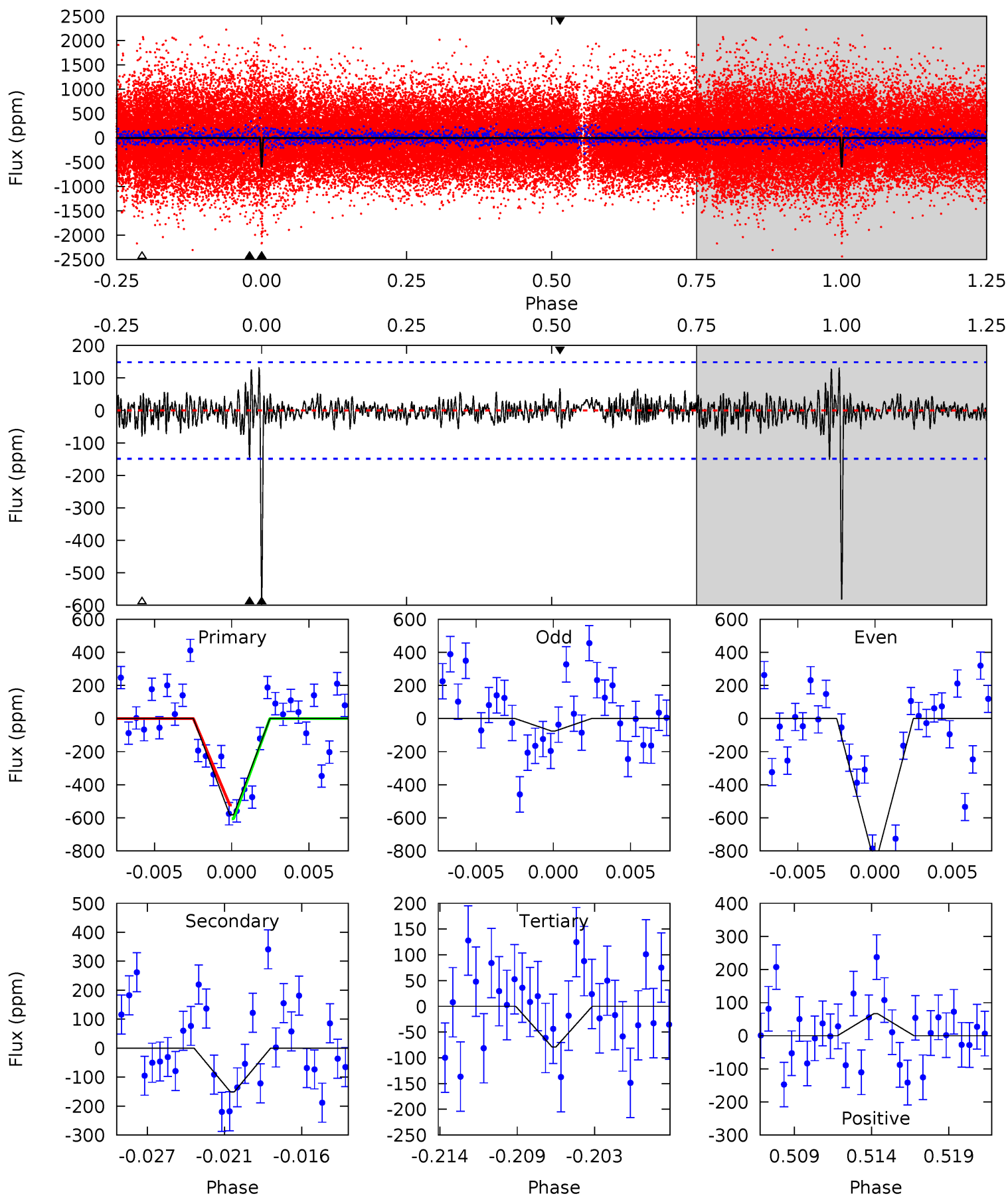
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.1	12.2	12.1	7.22	5.15	2.79	2.31	30.0	34.9	0.11	4.98	1.63	1.07	0.30	3.88



Alt Model-Shift Uniqueness Test

008687080-01, P = 375.378120 Days, E = 140.398549 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	5.23	2.74	2.31	5.14	2.78	0.80	17.4	17.8	2.50	2.92	12.5	1.44	0.18	1.43



Stellar Parameters For KIC 008687080

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5907^{+185}_{-206}	$4.513^{+0.052}_{-0.208}$	$-0.120^{+0.300}_{-0.300}$	$0.915^{+0.274}_{-0.091}$	$0.994^{+0.117}_{-0.130}$	$1.829^{+0.497}_{-0.938}$
	+3%/-3%	+1%/-5%	+250%/-250%	+30%/-10%	+12%/-13%	+27%/-51%
Source	KIC0	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 008687080-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-369 ± 30	$3.28^{+0.66}_{-0.46}$	353^{+24}_{-17}	4722^{+307}_{-261}	18929^{+6631}_{-5481}
Alt.	-151 ± 29	$2.49^{+0.56}_{-0.48}$	353^{+25}_{-18}	4443^{+379}_{-322}	13812^{+7250}_{-5069}

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 $A_{obs} \gg 1.0$

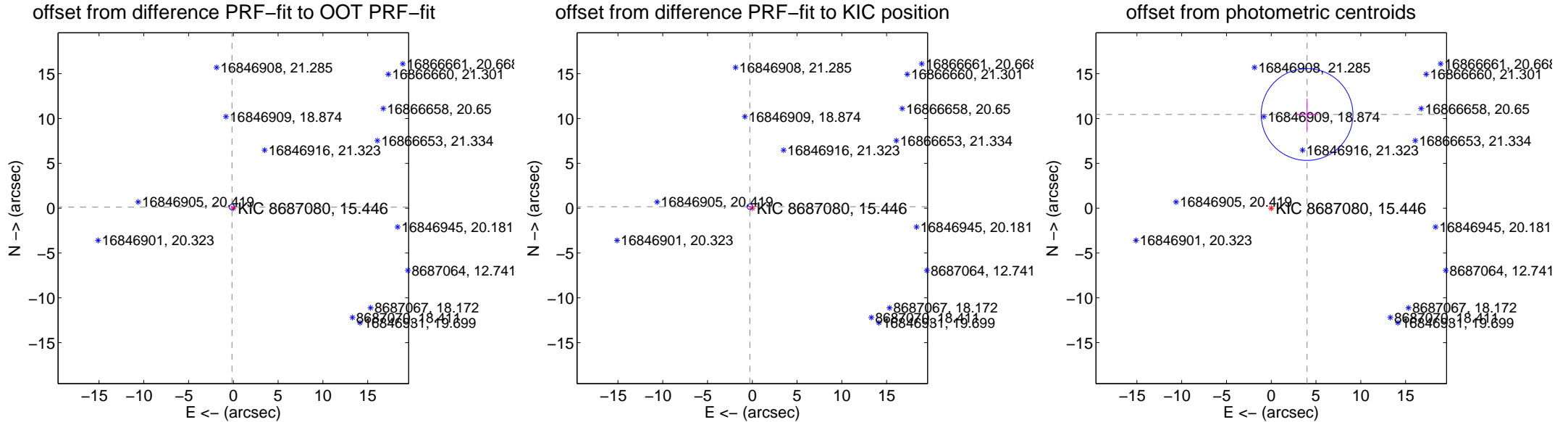
DV Centroid Data

Supplemental centroid analysis for 008687080-01. Kepler magnitude: 15.45. Transit SNR 15.50

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.190 ± 0.104	1.83	0.149 ± 0.104	0.117 ± 0.102
PRF-fit source offset from KIC position	0.317 ± 0.104	3.05	0.271 ± 0.104	0.164 ± 0.102
photometric centroid source offset	11.19 ± 1.71	6.55	-4.00 ± 1.23	10.45 ± 1.77

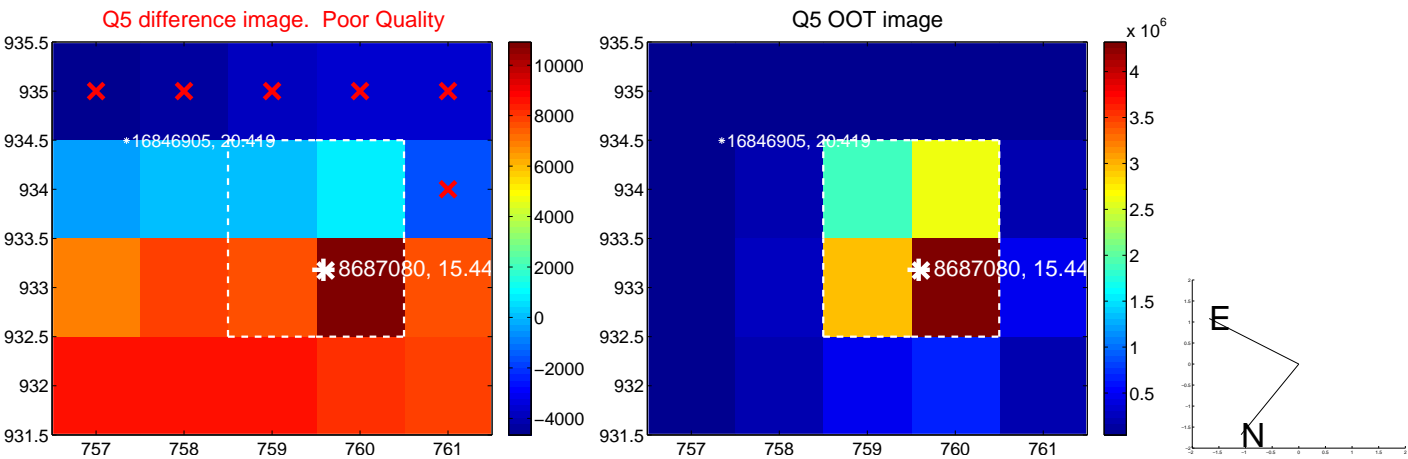


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

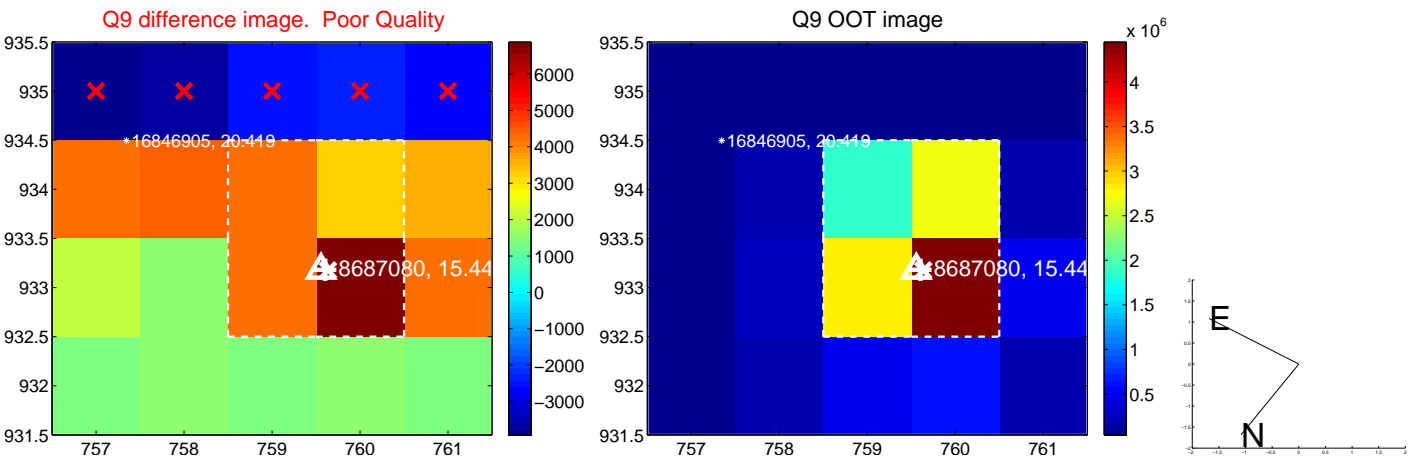
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



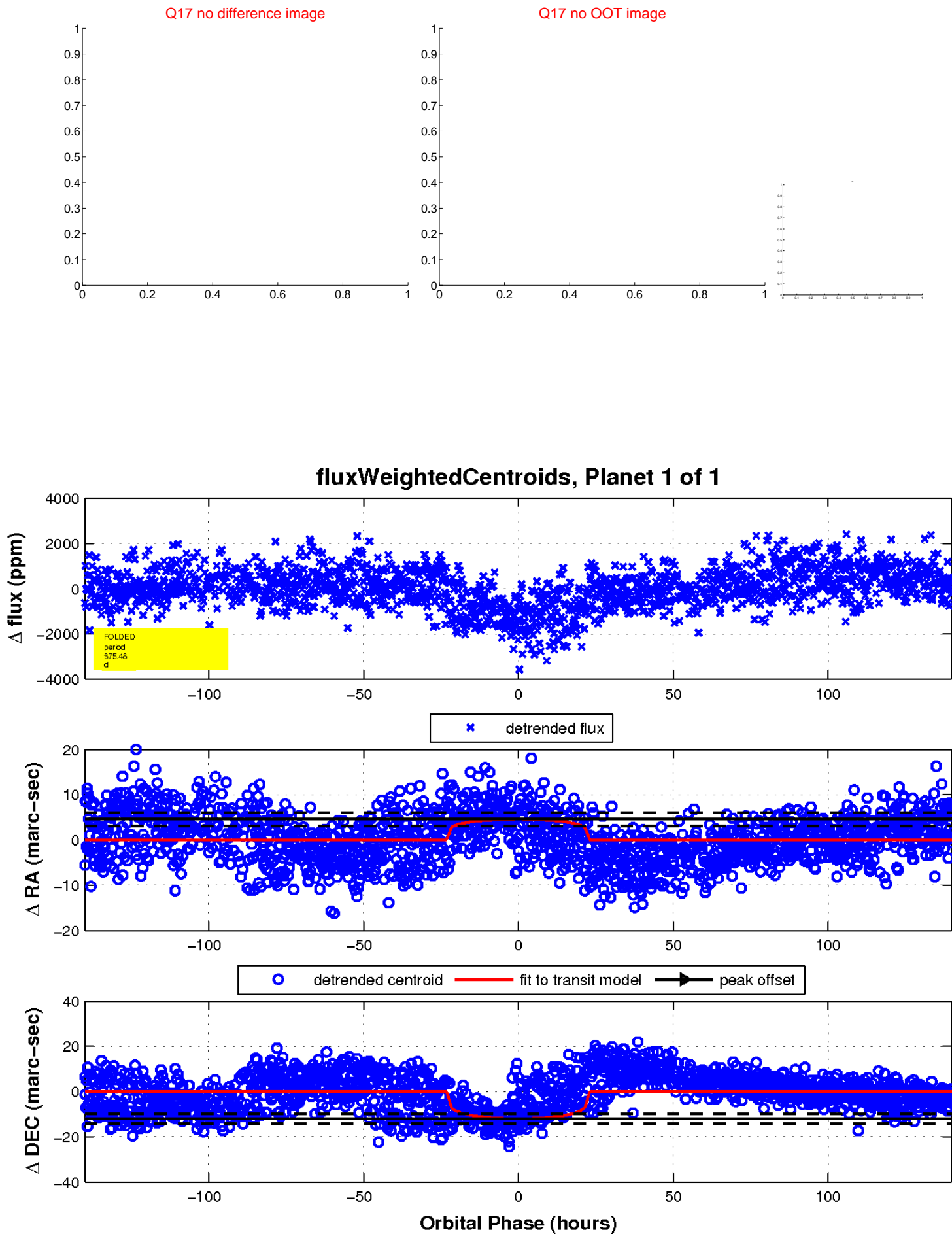
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

