

KIC 008172376

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})
008172376-01	OBS	No	364.951104	186.214519	1989.6	21.753	7.9	8.4	0.89	5889	4.86	0.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008172376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—MOD_NONUNIQ_DV—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.

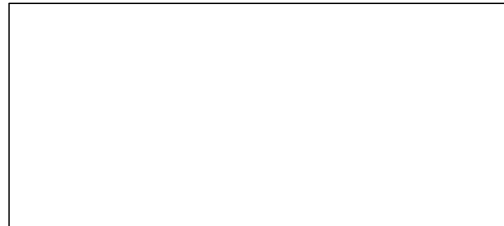
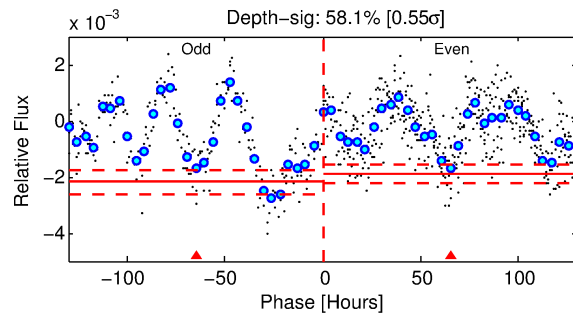
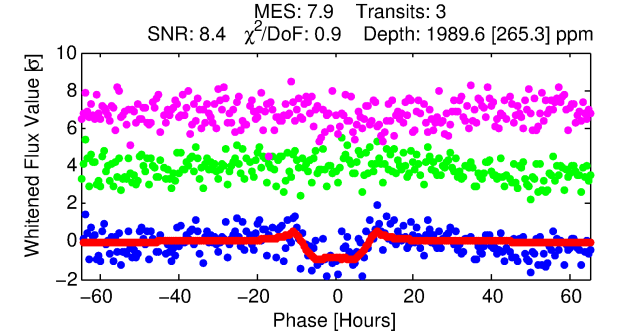
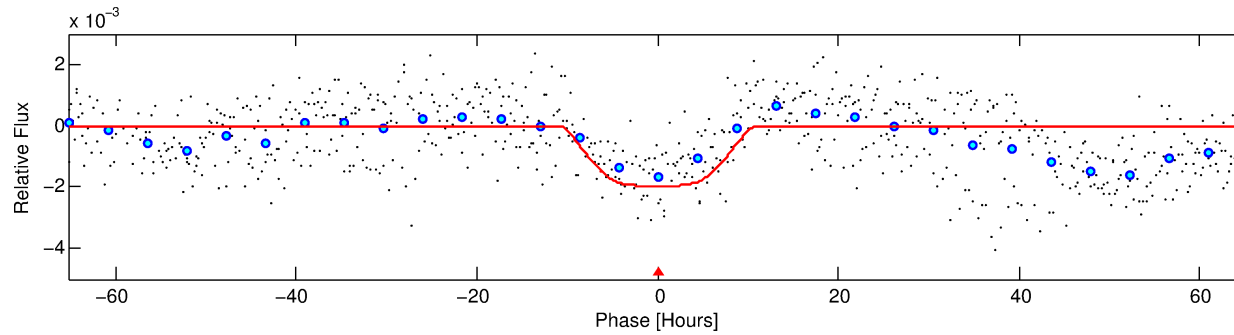
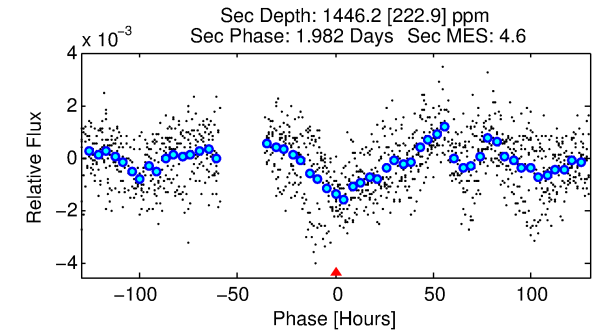
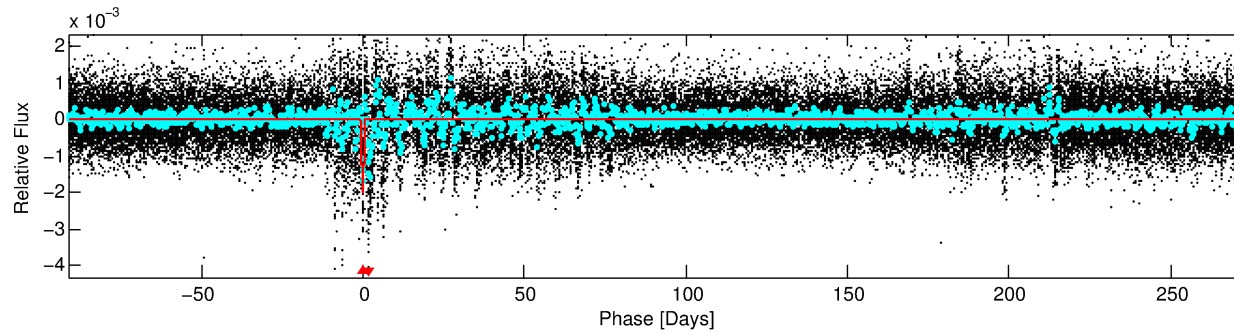
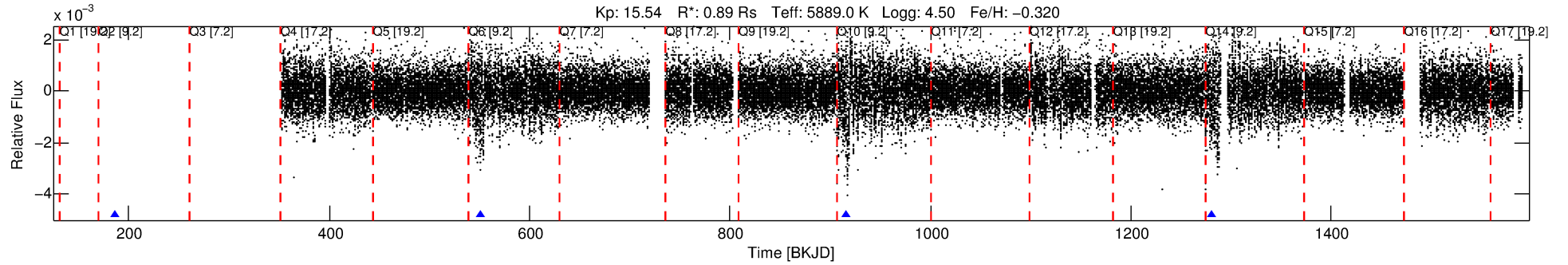
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008172376-01

No Significant Match Found

DV One-Page Summary

KIC: 8172376 Candidate: 1 of 1 Period: 364.951 d



DV Fit Results:

Period = 364.95110 [0.02470] d
Epoch = 186.2145 [0.0485] BKJD
Rp/R* = 0.0500 [0.0040]
a/R* = 62.45 [7.99]
b = 0.93 [0.02]
Seff = 0.91 [0.33]
Teq = 249 [22] K
Rp = 4.86 [1.38] Re
a = 0.9685 [0.2221] AU
Ag = 31540.08 [12613.01] [2.50σ]
Teffp = 5134 [330] K [14.78σ]

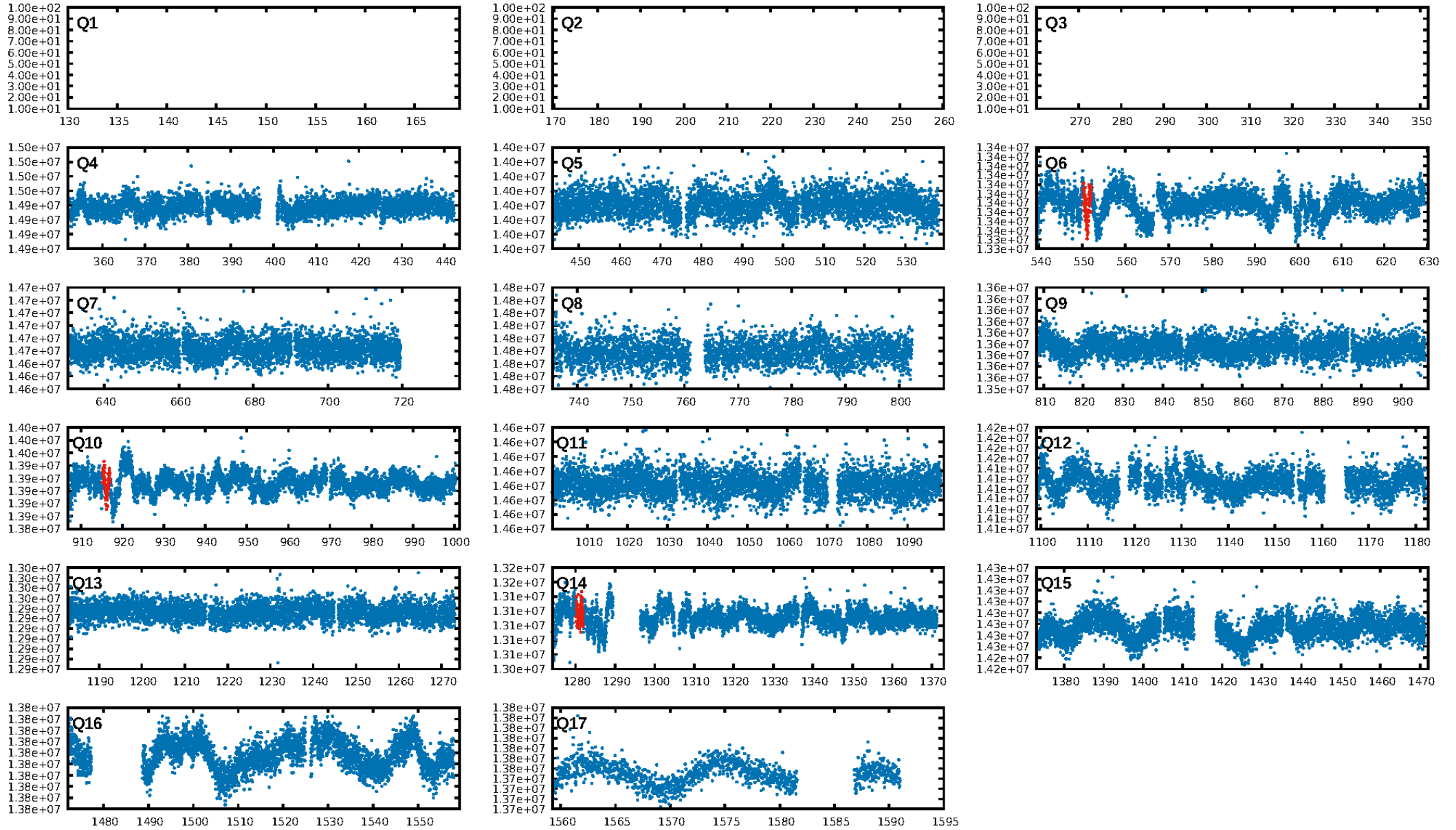
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.46e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 44.16
Centroid-sig: 33.6%
Centroid-so: 2.679 arcsec [2.22σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

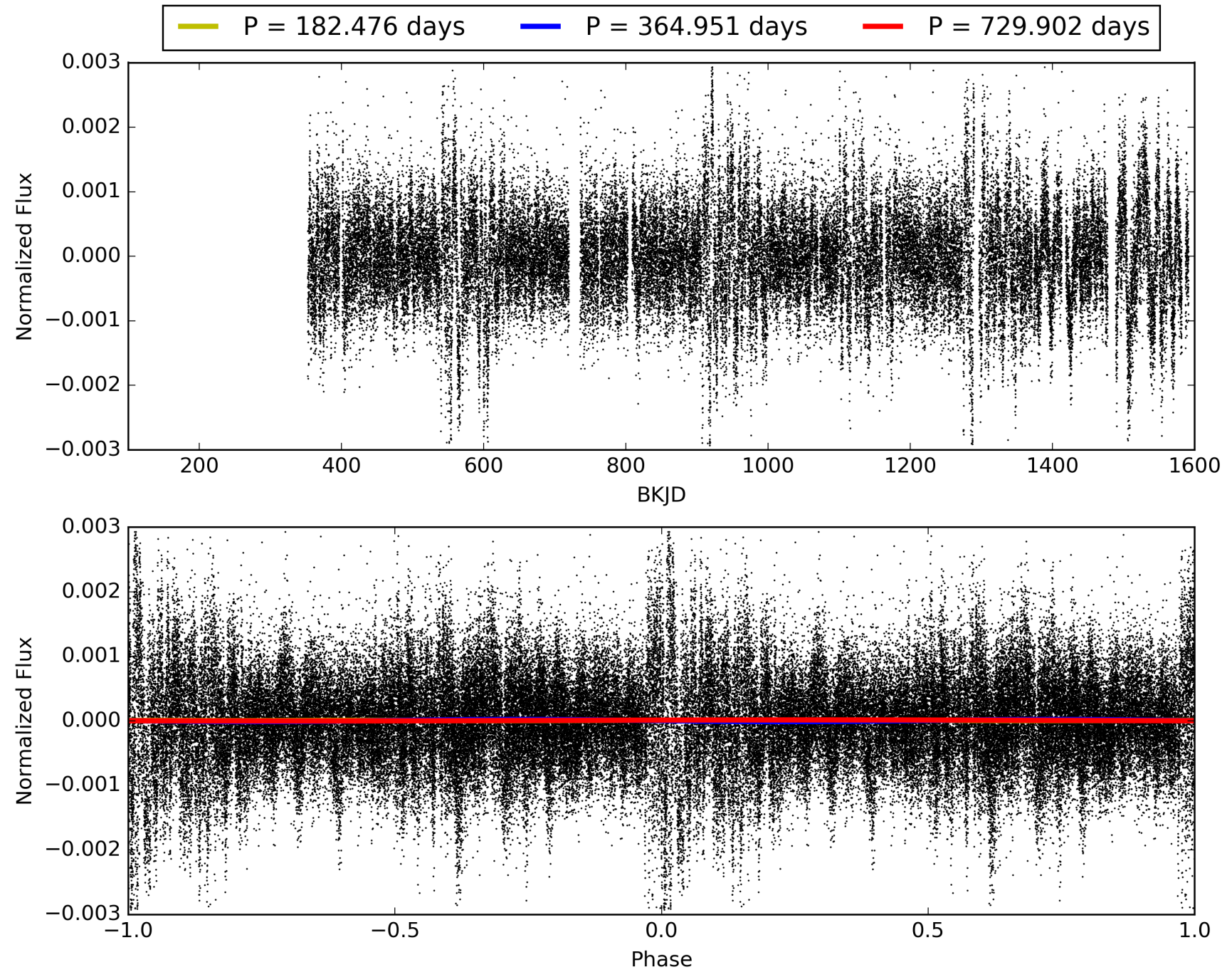
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:54:30 Z

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

TCE 008172376-01, PDC Light Curves

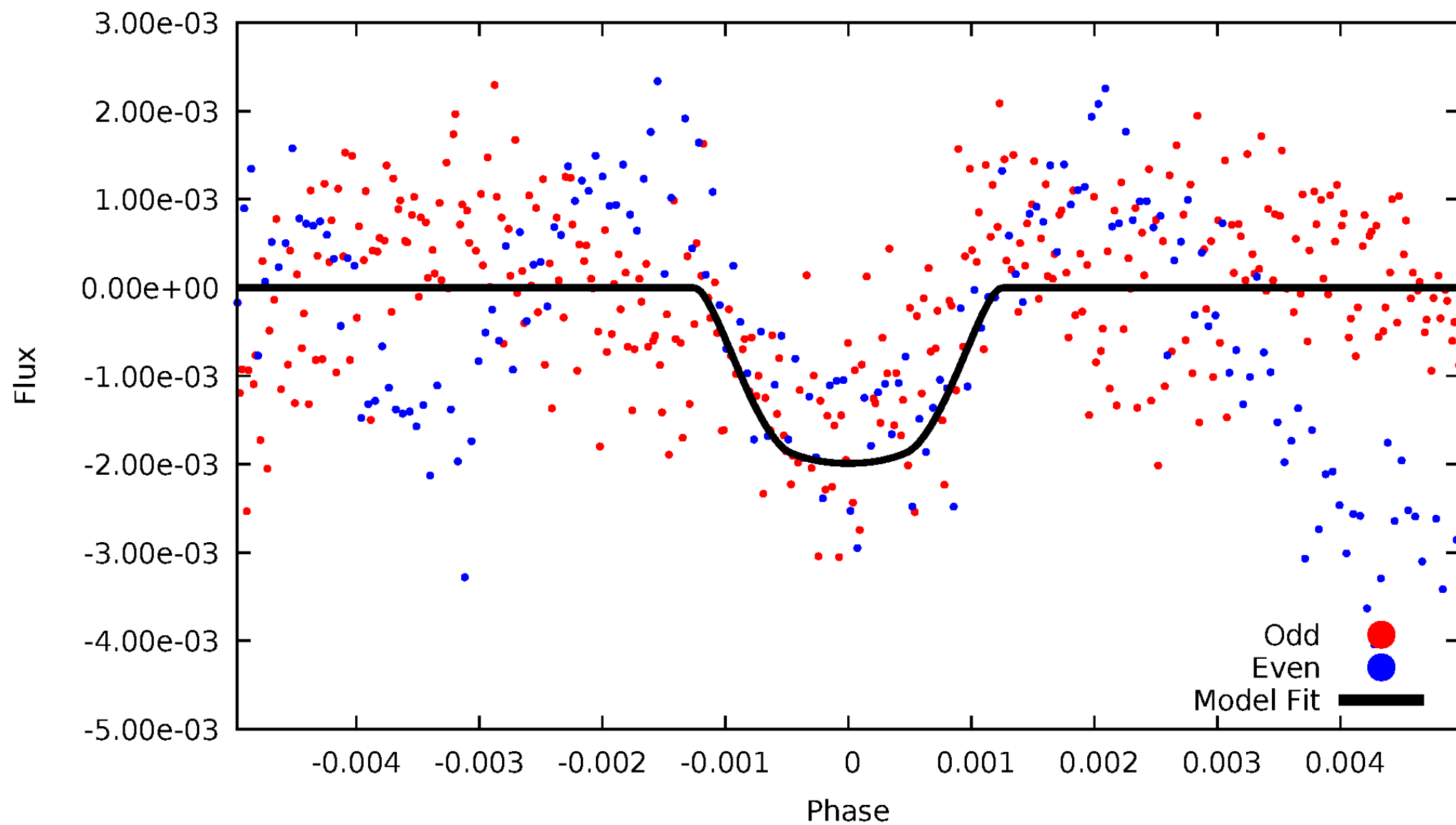


TCE 008172376-01



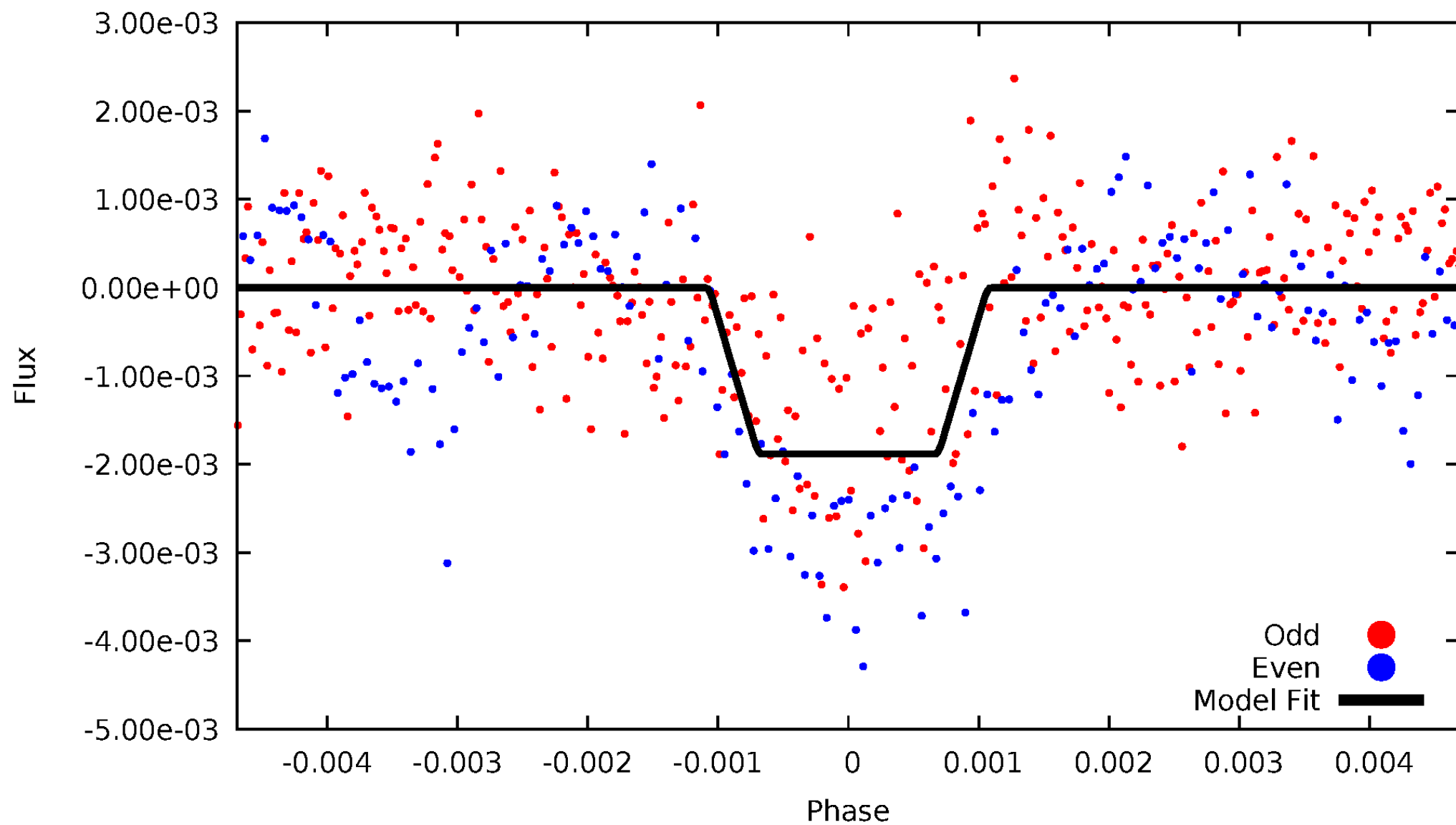
DV Odd/Even

TCE 008172376-01



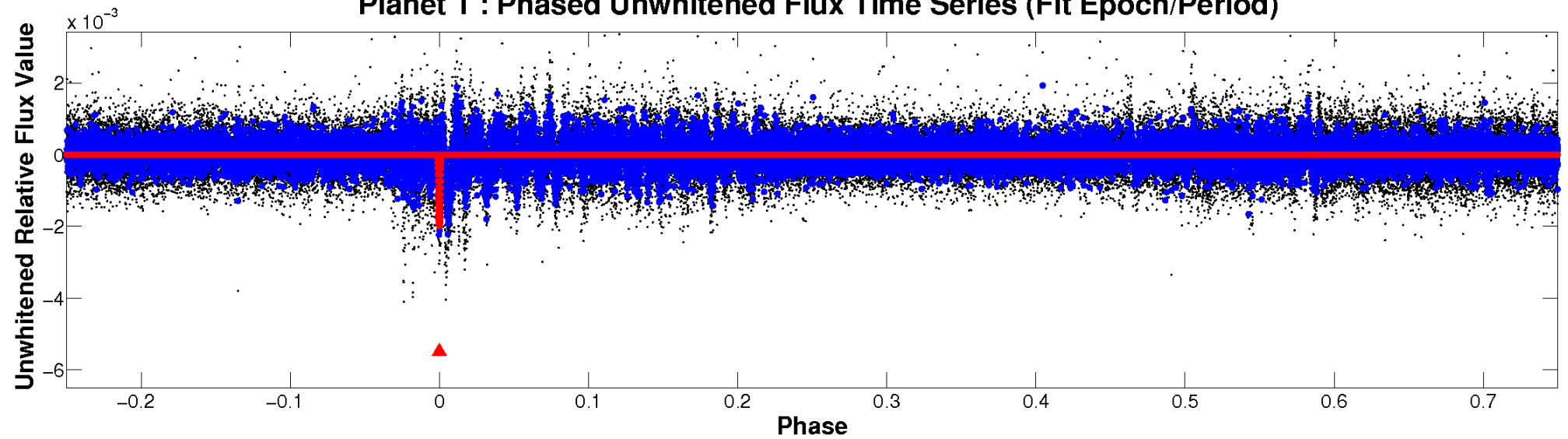
ALT Odd/Even

TCE 008172376-01

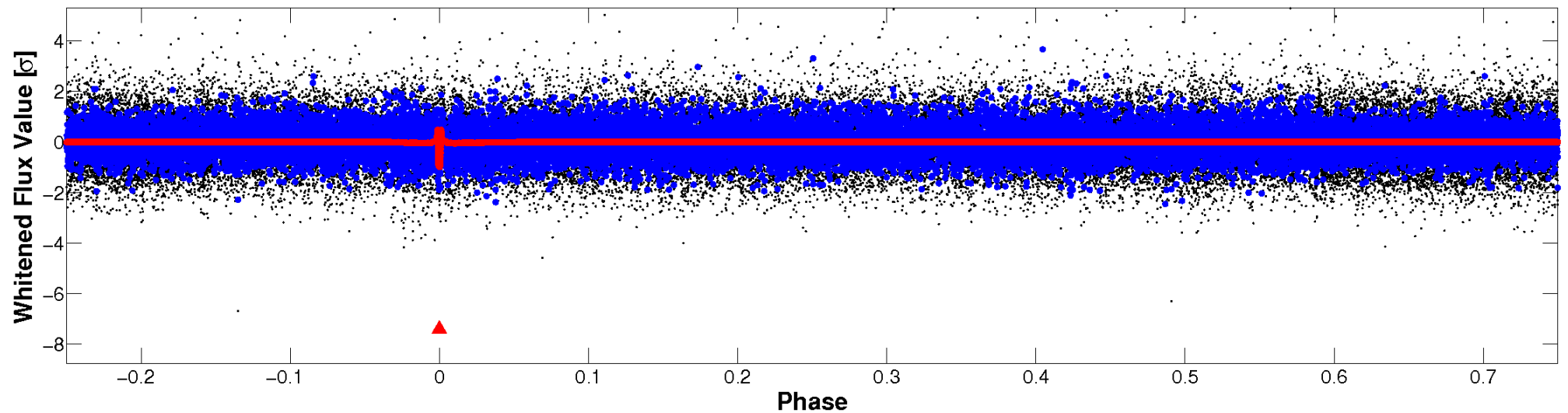


Non-Whitened Vs. Whitened Light Curve

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

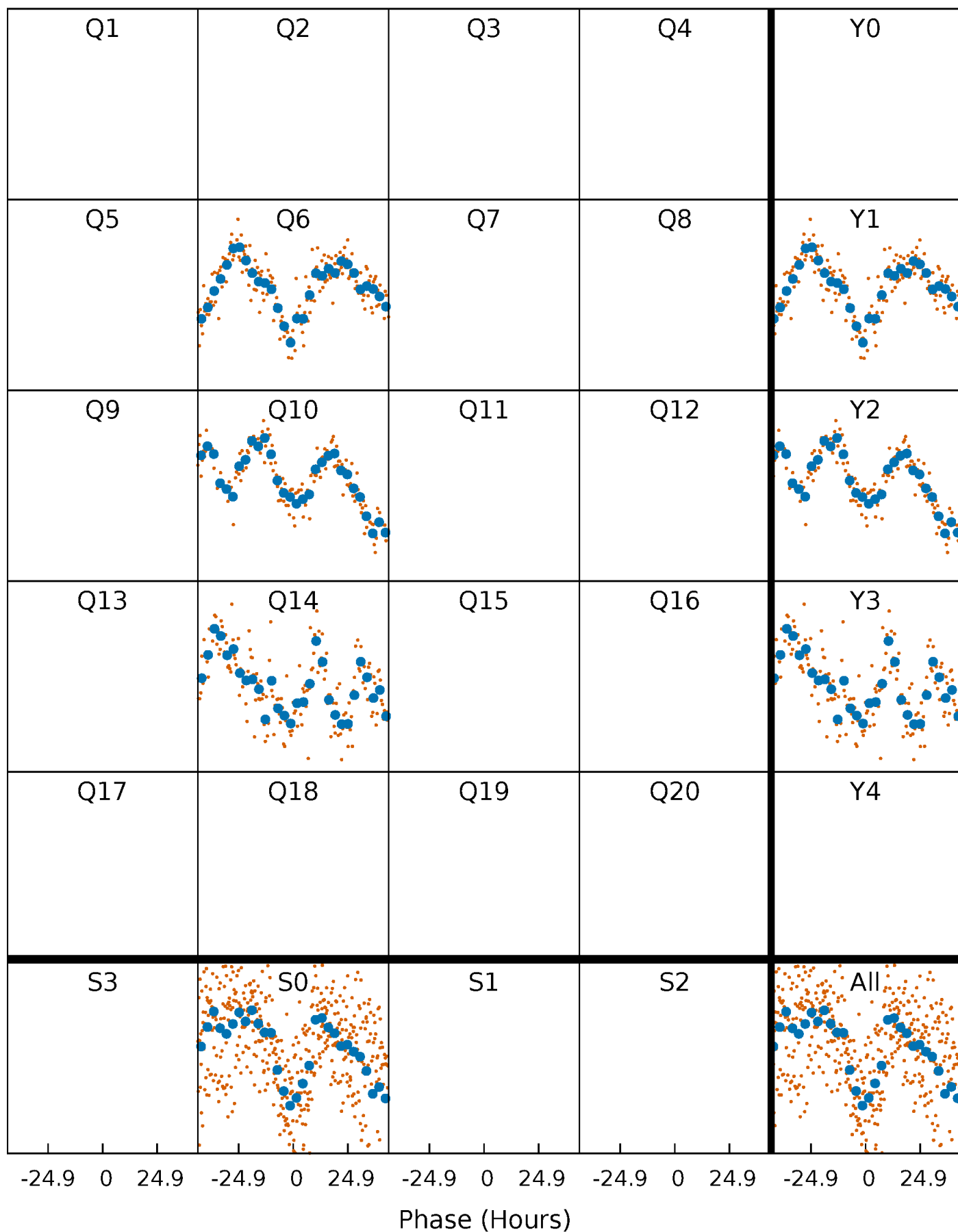


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



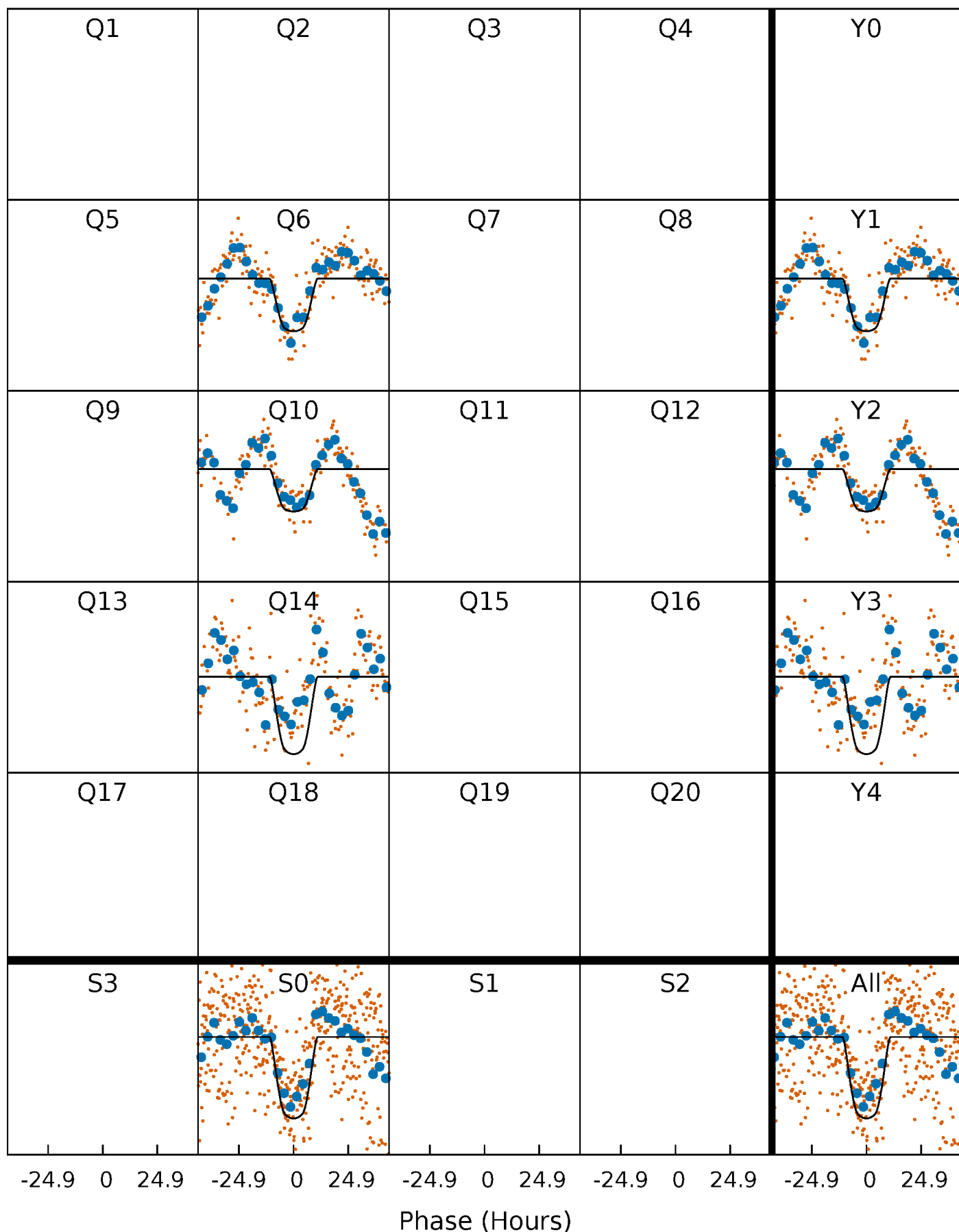
PDC Quarter-Phased Transit Curves

TCE 008172376-01 P=364.951104 Days $T_0=186.214519$ (BKJD)



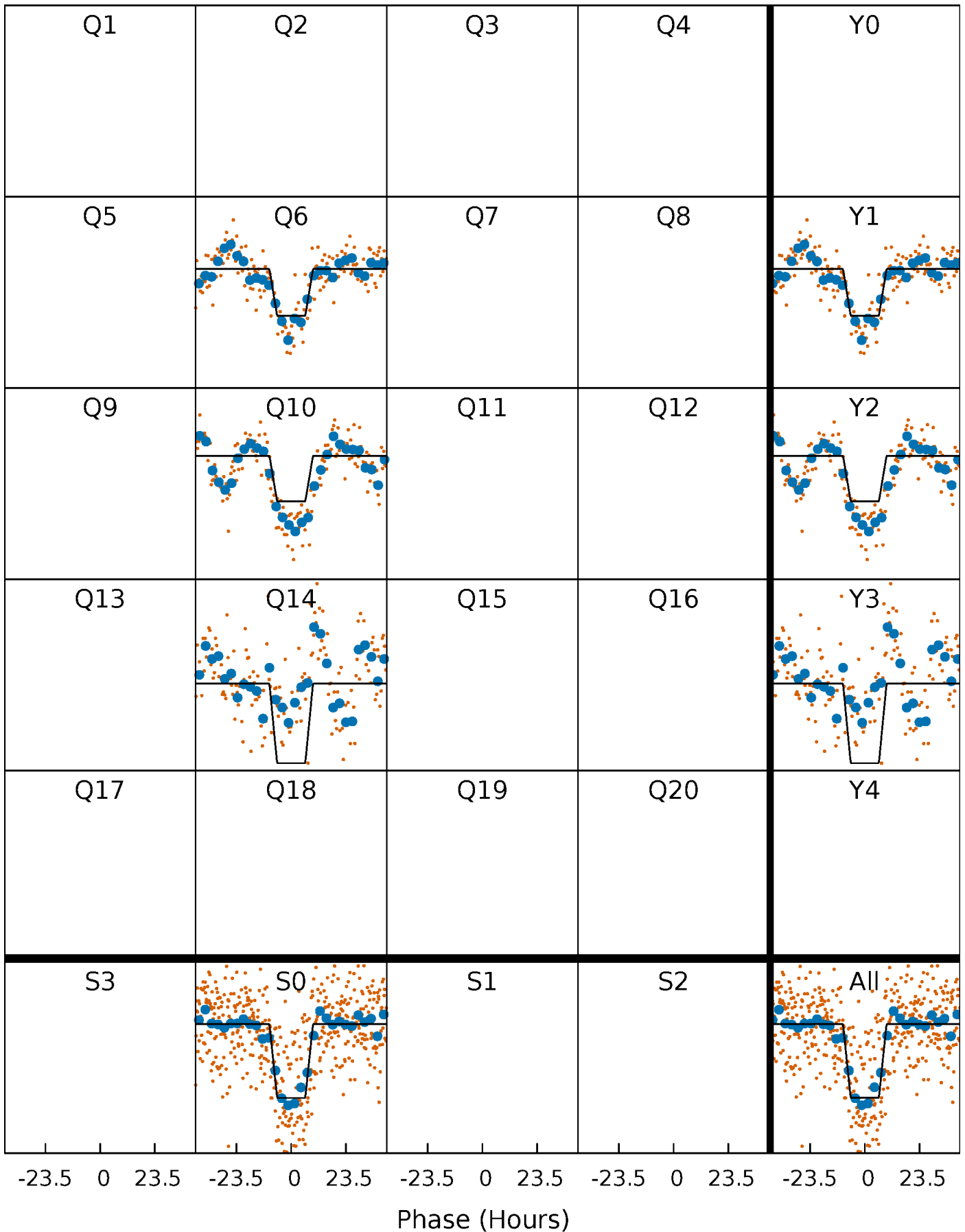
DV Quarter-Phased Transit Curves

TCE 008172376-01 P=364.951104 Days $T_0=186.214519$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

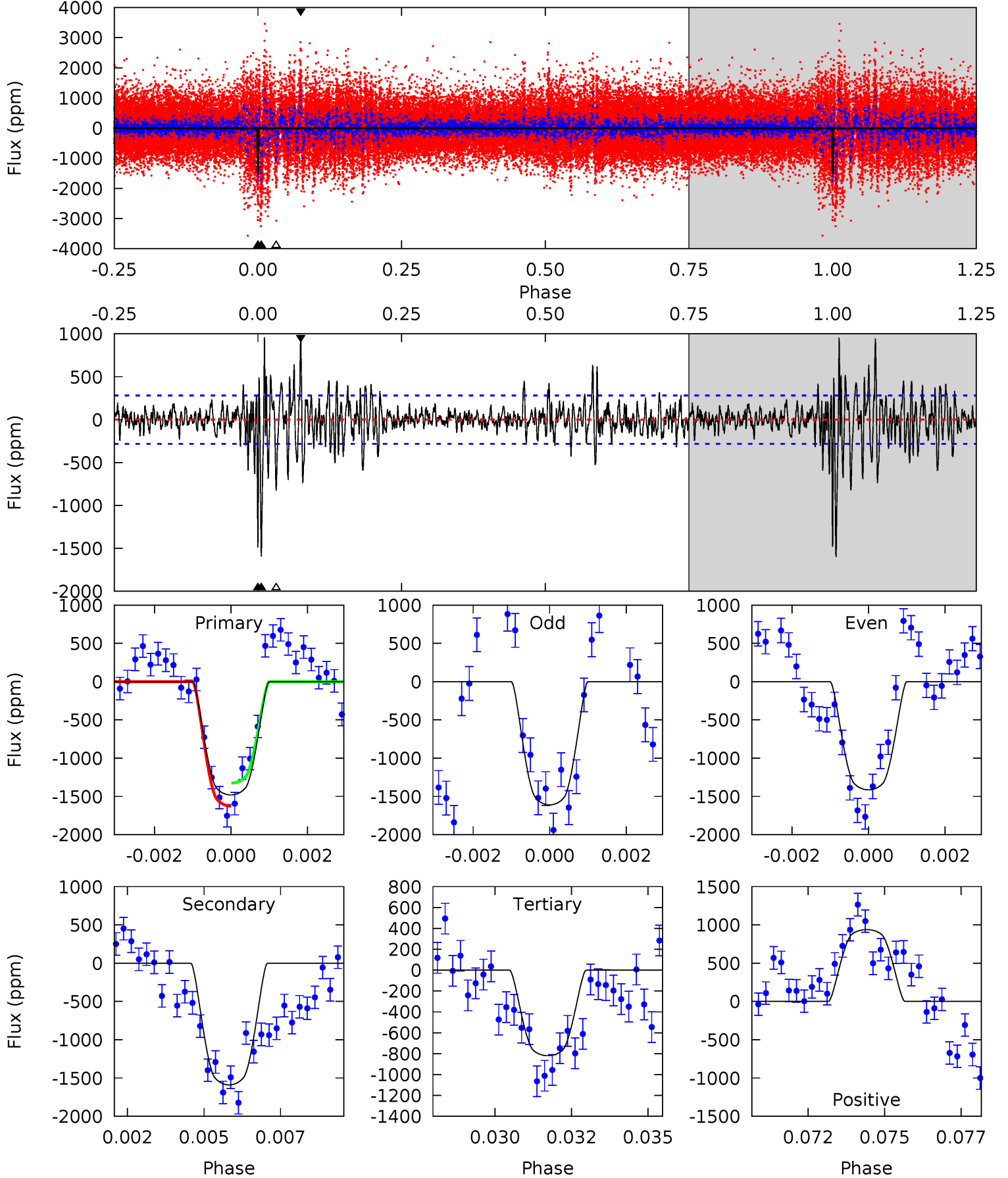
TCE 008172376-01 P=364.950193 Days $T_0=186.201291$ (BKJD)



DV Model-Shift Uniqueness Test

008172376-01, P = 364.951104 Days, E = 186.214519 Days

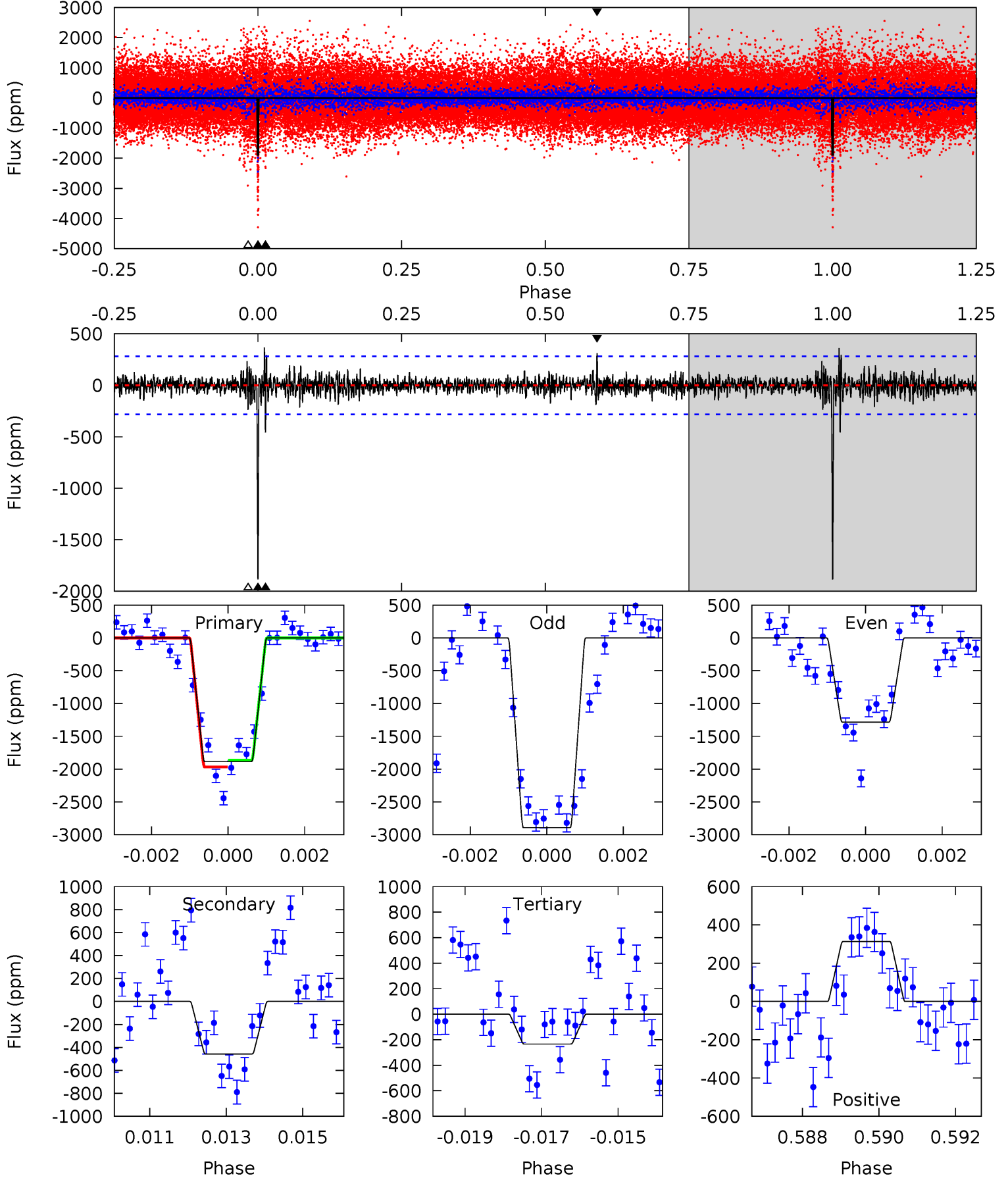
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	29.8	15.3	17.6	5.29	3.02	3.14	12.4	10.1	14.4	12.2	1.72	0.91	0.37	2.82



Alt Model-Shift Uniqueness Test

008172376-01, P = 364.950193 Days, E = 186.201291 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.5	8.61	4.41	5.90	5.31	3.07	1.00	31.1	29.6	4.21	2.71	14.5	0.86	0.16	0.93



Stellar Parameters For KIC 008172376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5889^{+175}_{-193}	$4.497^{+0.078}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.891^{+0.243}_{-0.104}$	$0.909^{+0.108}_{-0.097}$	$1.812^{+0.585}_{-0.864}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-12%	+12%/-11%	+32%/-48%
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 008172376-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1590 ± 53	$4.99^{+0.80}_{-0.59}$	352^{+23}_{-17}	5282^{+243}_{-228}	32787^{+8479}_{-8227}
Alt.	-457 ± 53	$4.35^{+0.66}_{-0.57}$	353^{+24}_{-17}	4360^{+211}_{-225}	12385^{+4096}_{-3271}

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

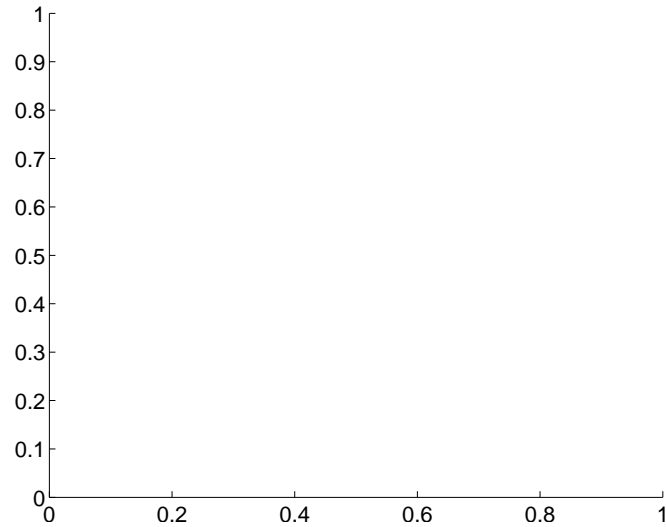
Supplemental centroid analysis for 008172376-01. Kepler magnitude: 15.54. Transit SNR 8.39

There are 0 quarters with good PRF difference image offsets

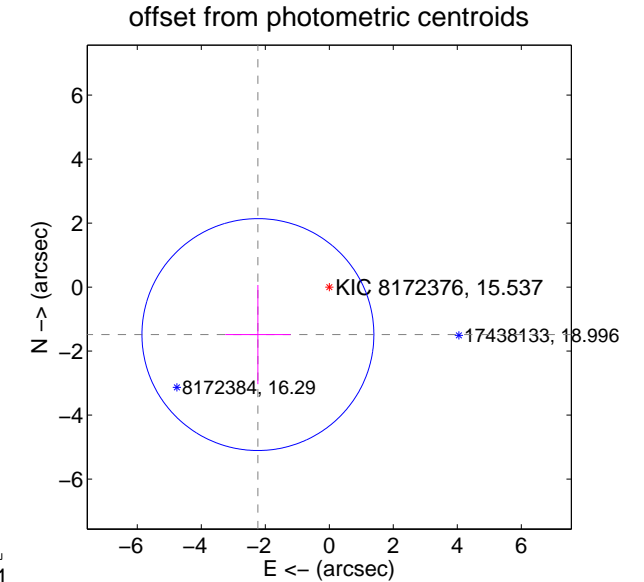
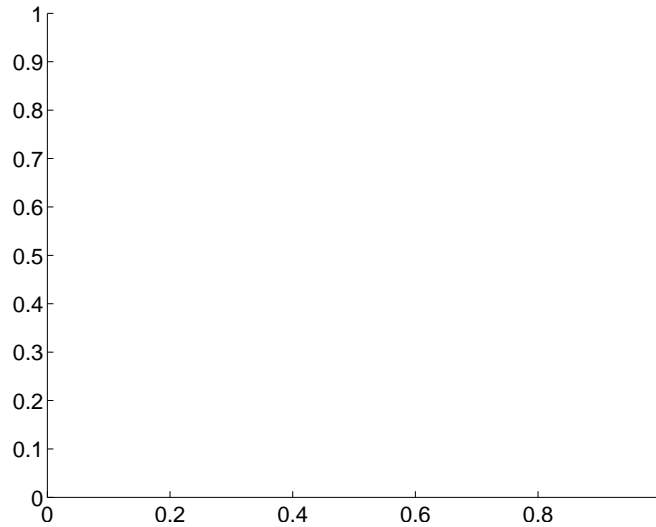
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.68 ± 1.21	2.22	2.23 ± 1.02	-1.48 ± 1.55

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

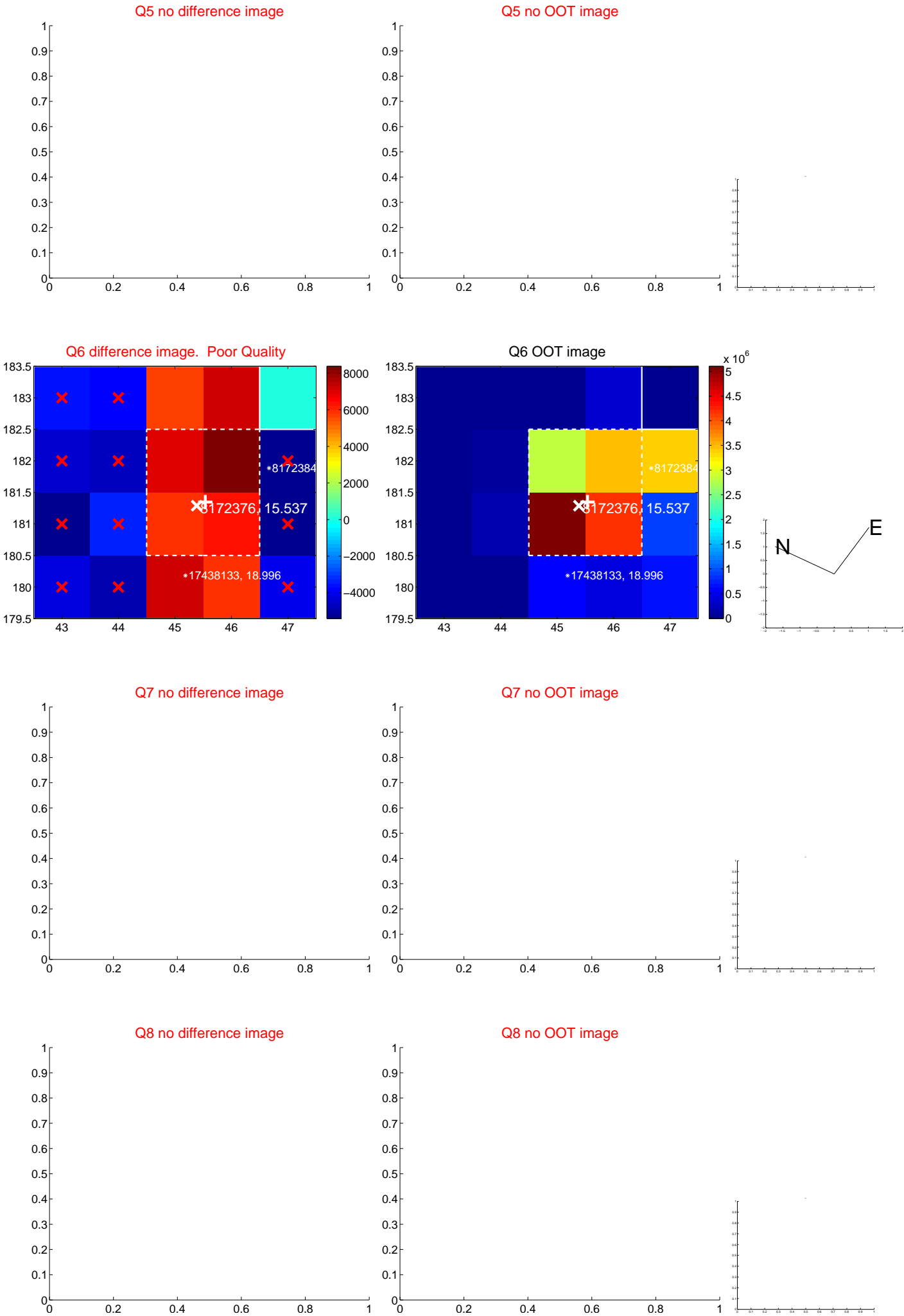


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

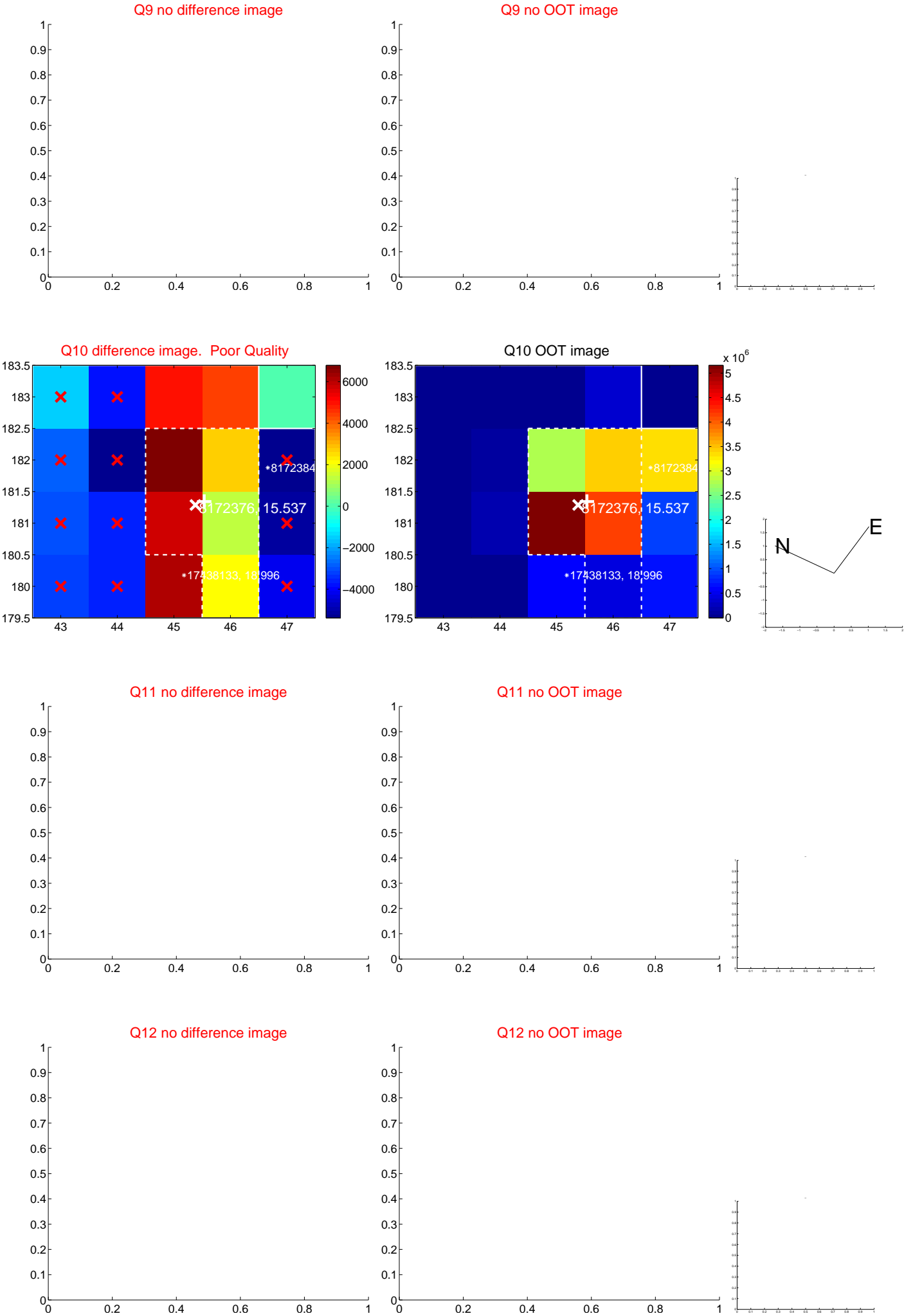
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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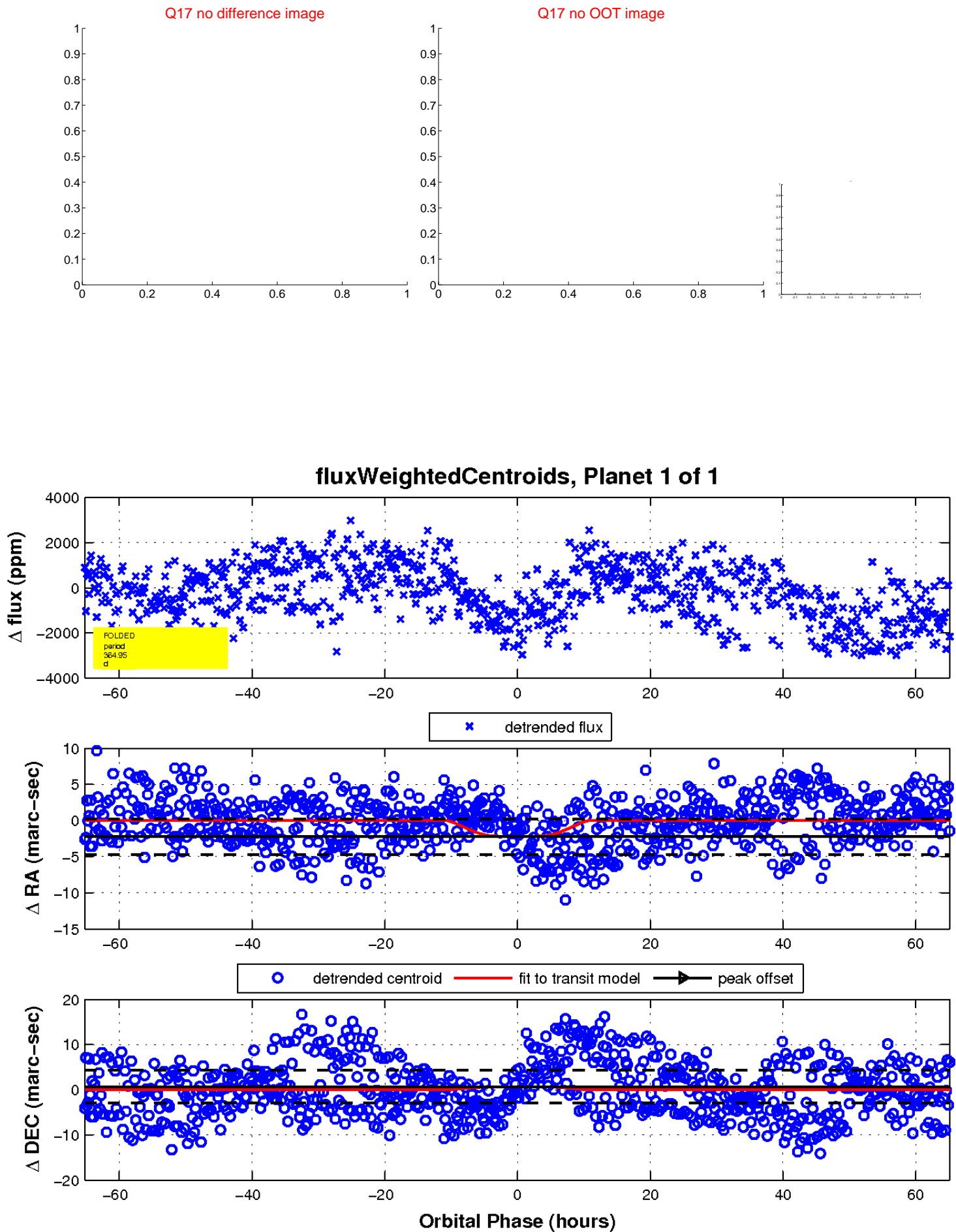
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

