

KIC 008012732

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})
008012732-01	OBS	8151.01	431.468056	391.806604	5359.8	16.537	121.4	148.9	1.31	6221	10.40	1.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008012732-01	OBS	FP	0.10	1	0	0	0	INCONSISTENT_TRANS—CENT_KIC_POS

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

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

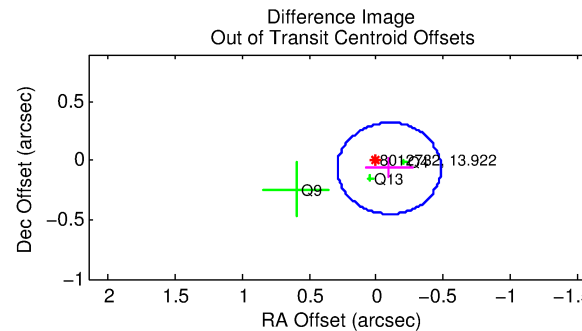
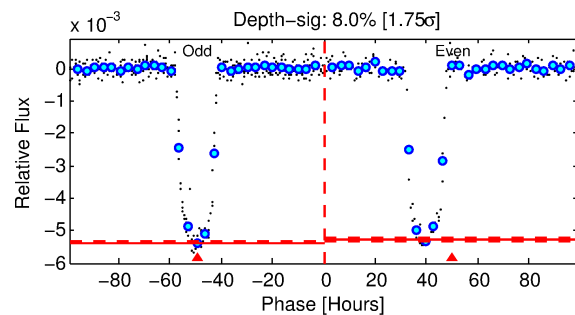
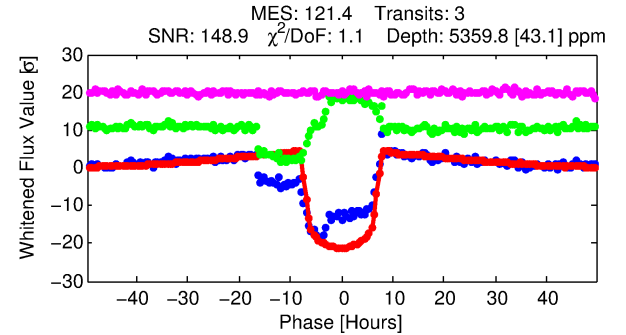
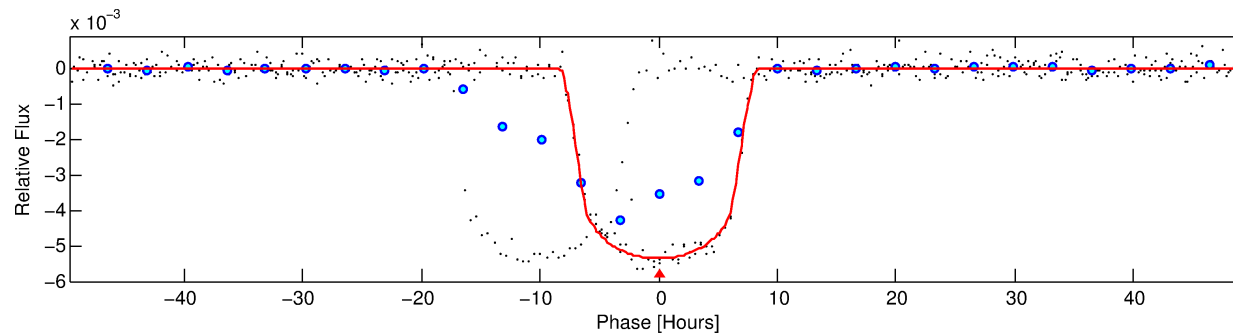
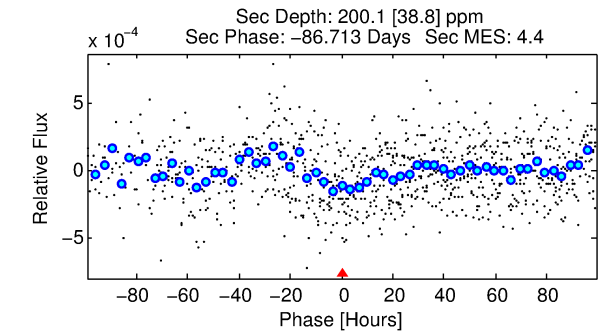
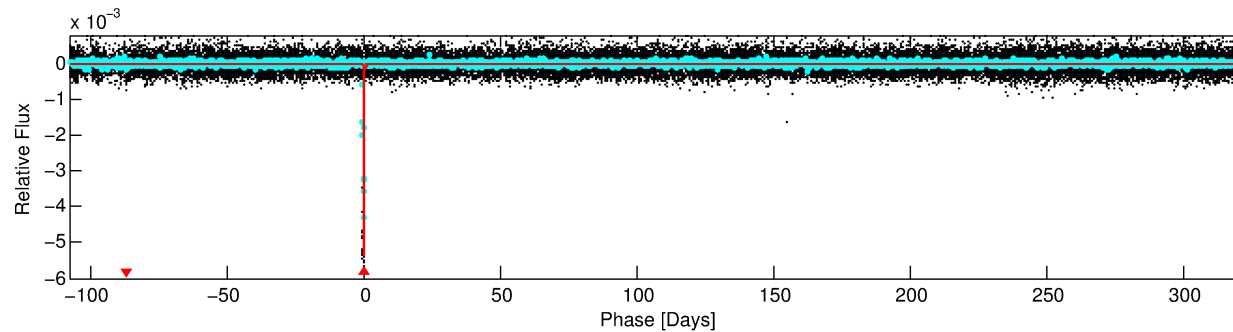
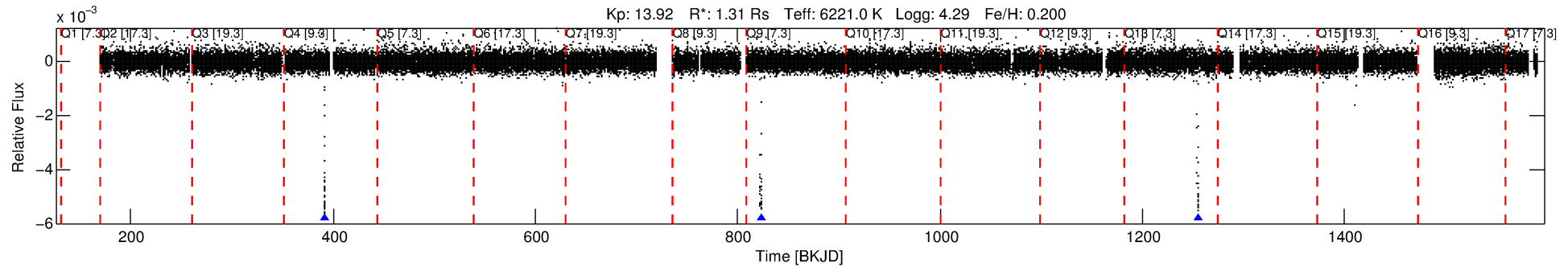
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008012732-01

No Significant Match Found

DV One-Page Summary

KIC: 8012732 Candidate: 1 of 1 Period: 431.468 d



DV Fit Results:

Period = 431.46806 [0.00144] d
Epoch = 391.8066 [0.0019] BKJD
Rp/R* = 0.0726 [0.0006]
a/R* = 154.95 [4.76]
b = 0.74 [0.02]
Seff = 1.61 [0.67]
Teq = 287 [30] K
Rp = 10.40 [3.39] Re
a = 1.1994 [0.3236] AU
Ag = 1464.92 [633.73] [2.31σ]
Teff = 2746 [171] K [14.13σ]

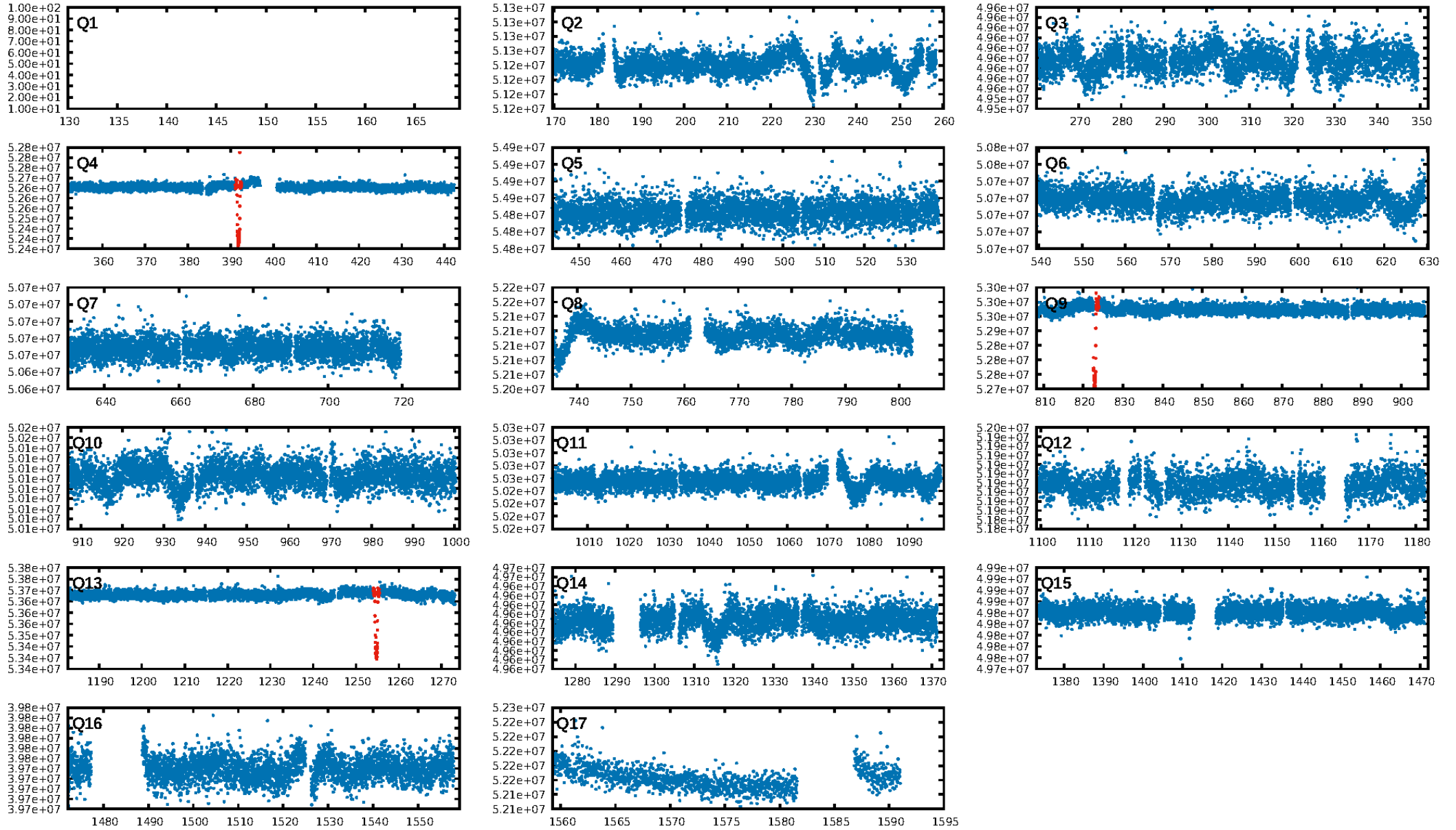
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.317
Centroid-sig: 0.5%
Centroid-so: 1.244 arcsec [16.72σ]
OotOffset-rm: 0.116 arcsec [0.90σ]
KicOffset-rm: 1.284 arcsec [12.39σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

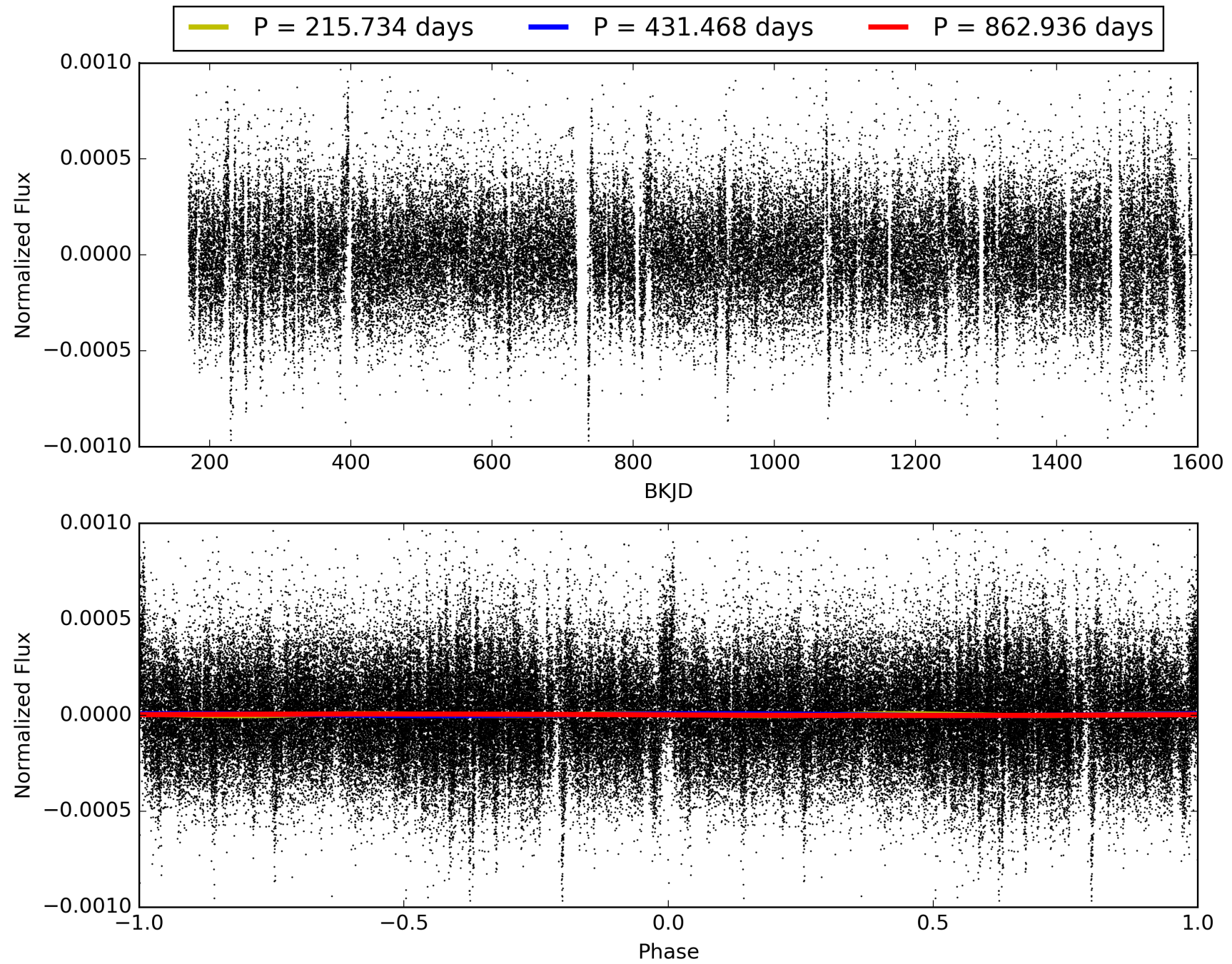
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:12:40 Z

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

TCE 008012732-01, PDC Light Curves

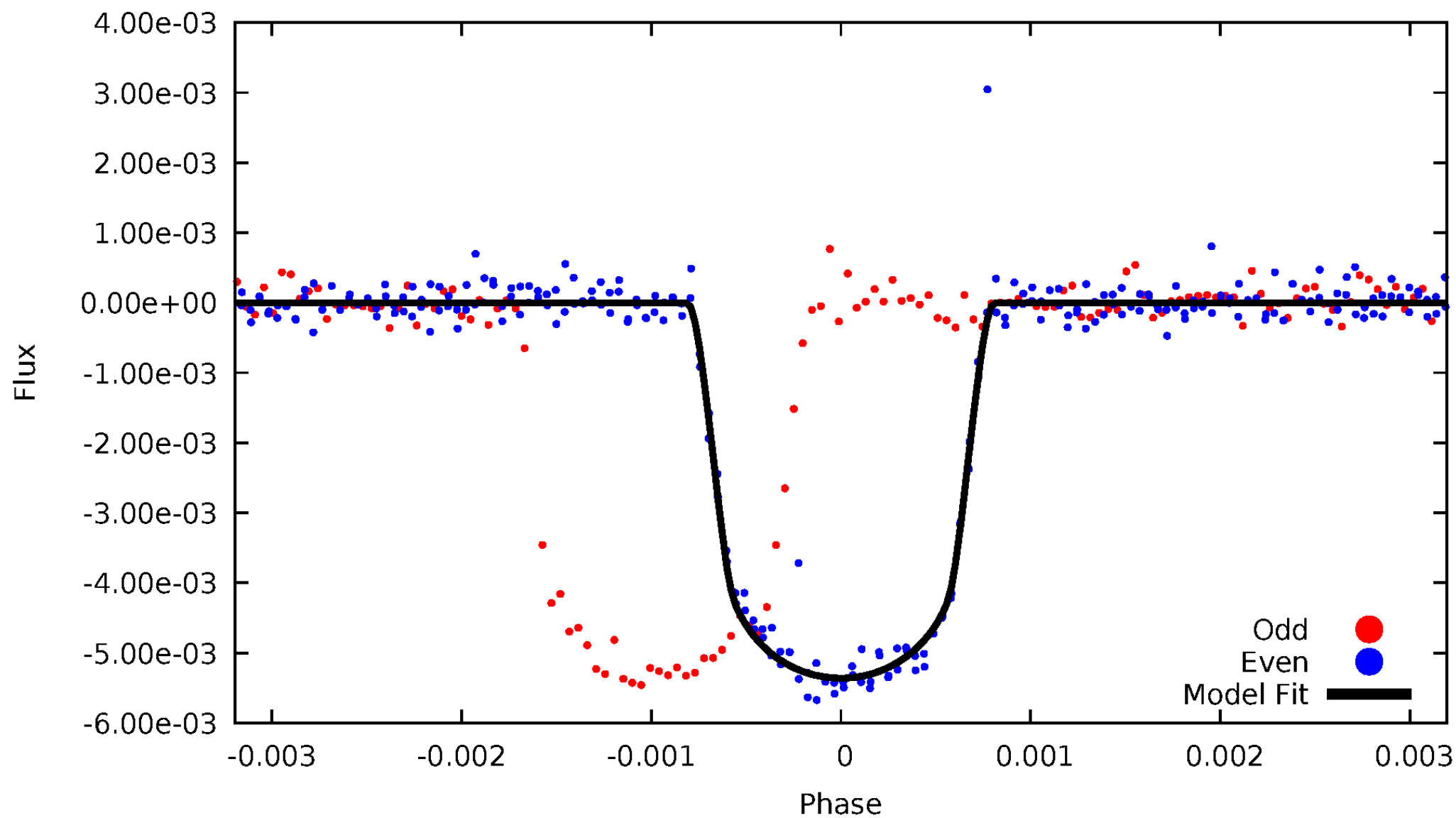


TCE 008012732-01



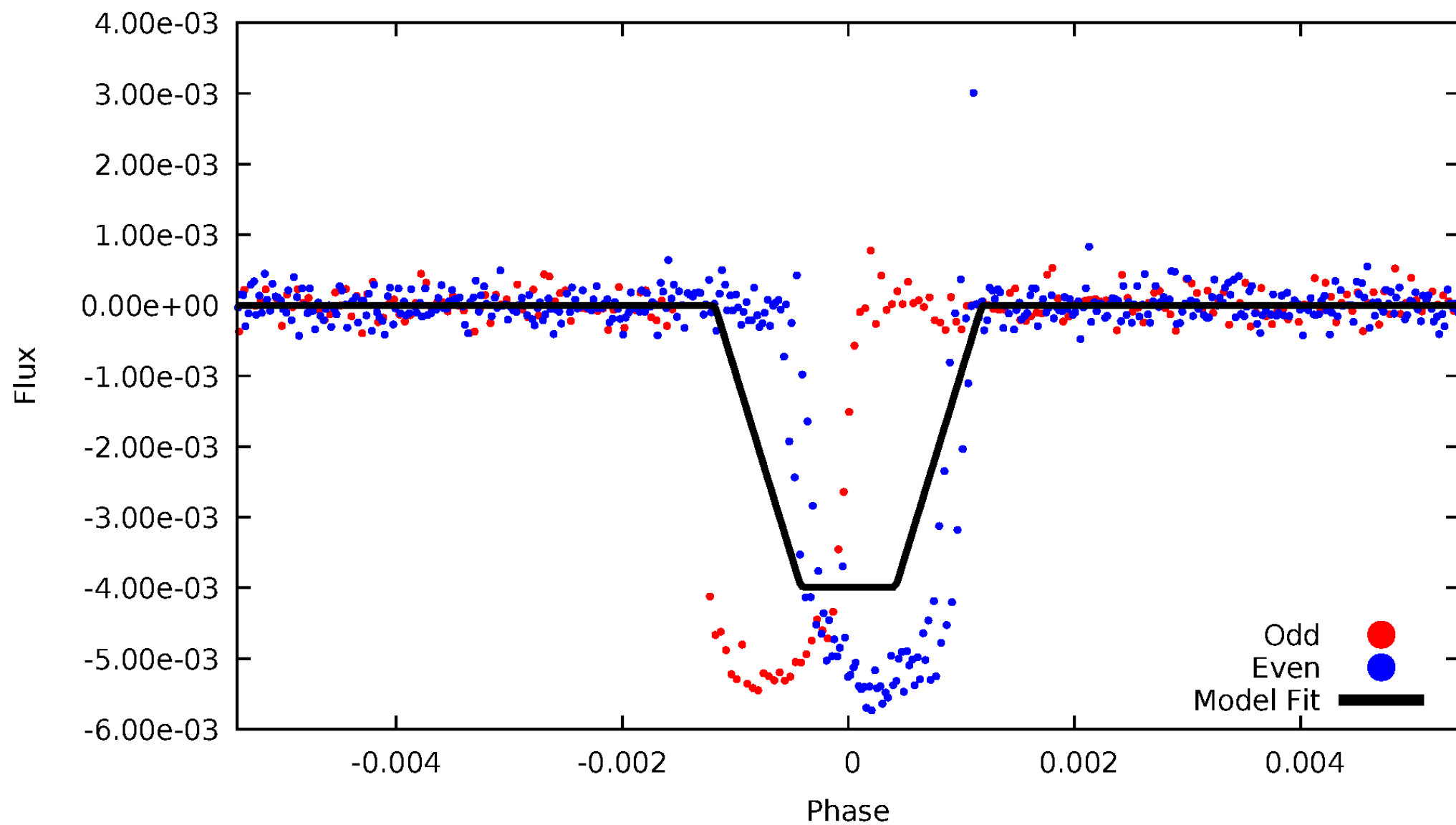
DV Odd/Even

TCE 008012732-01



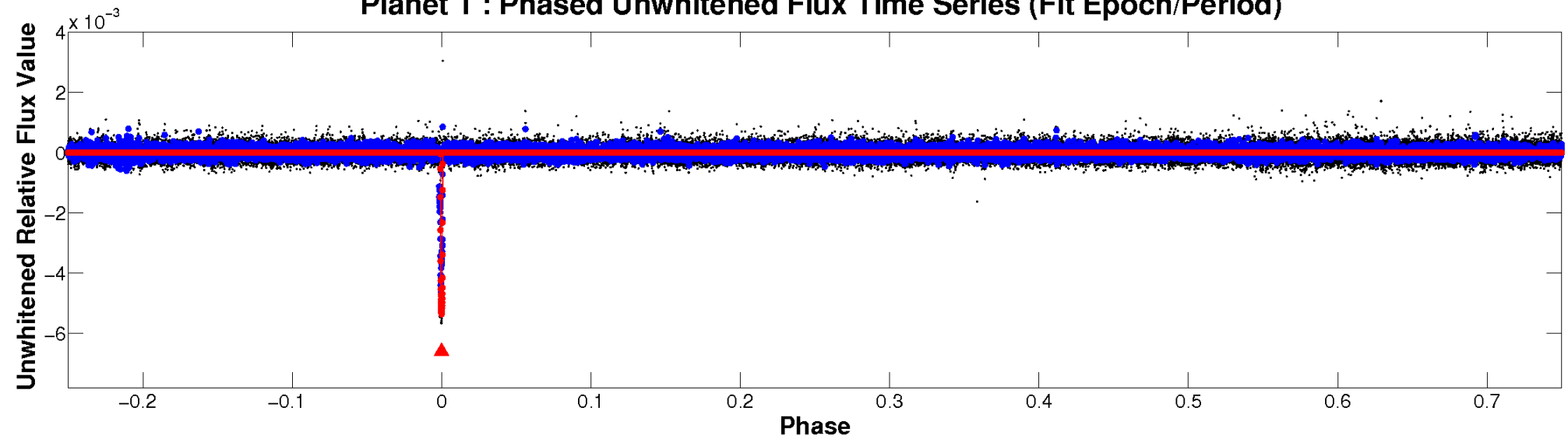
ALT Odd/Even

TCE 008012732-01

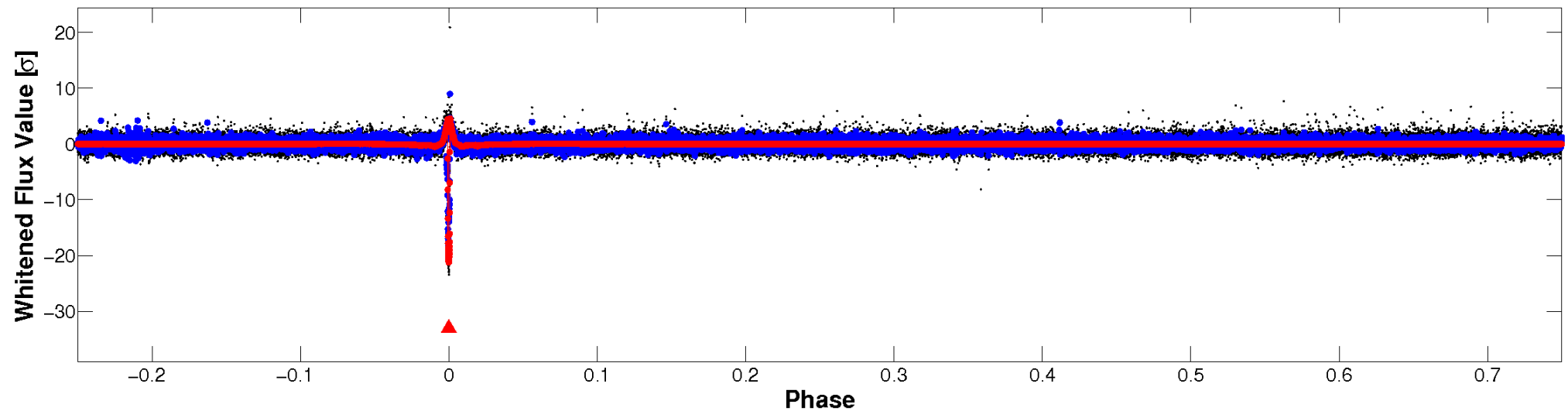


Non-Whitened Vs. Whitened Light Curve

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

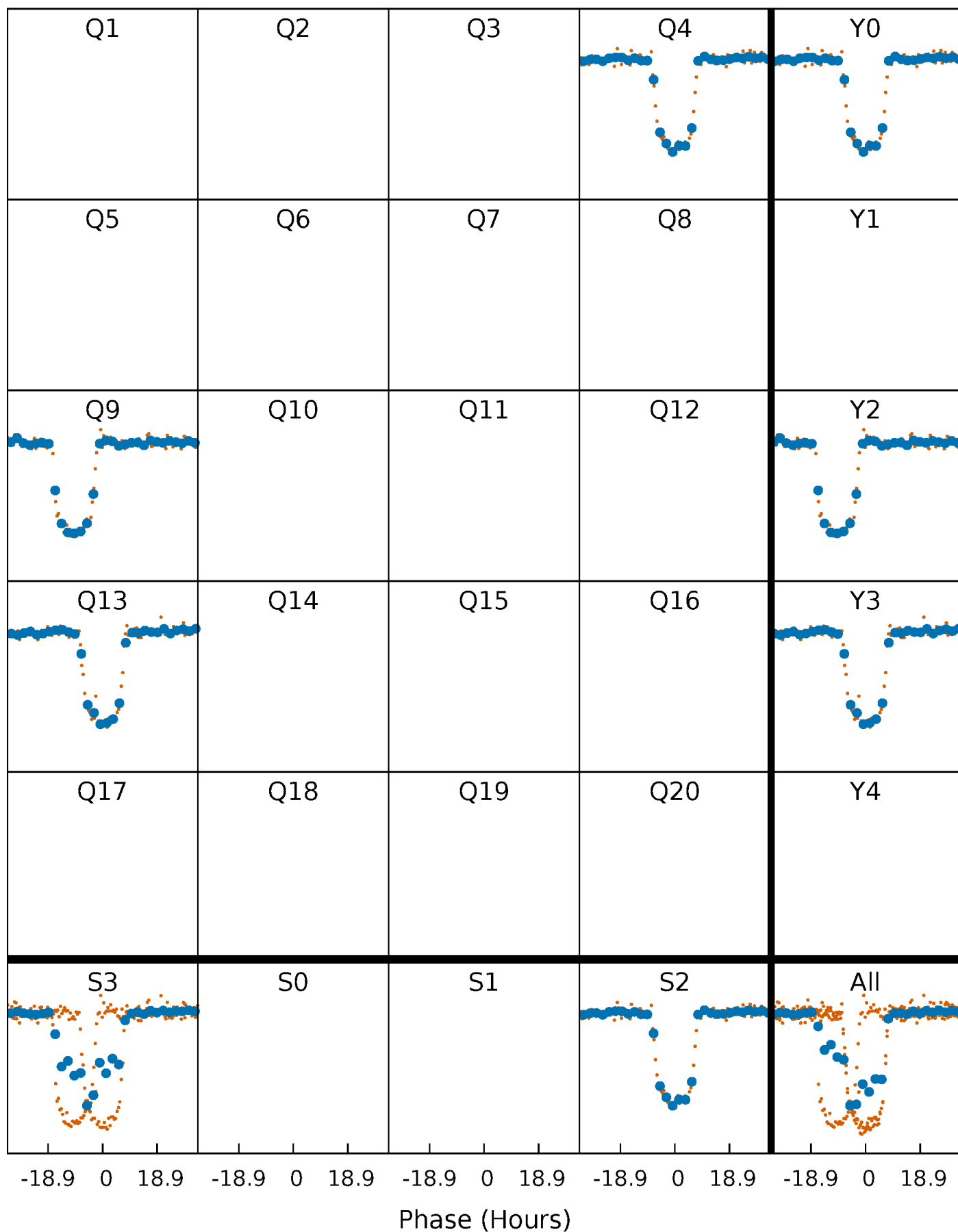


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



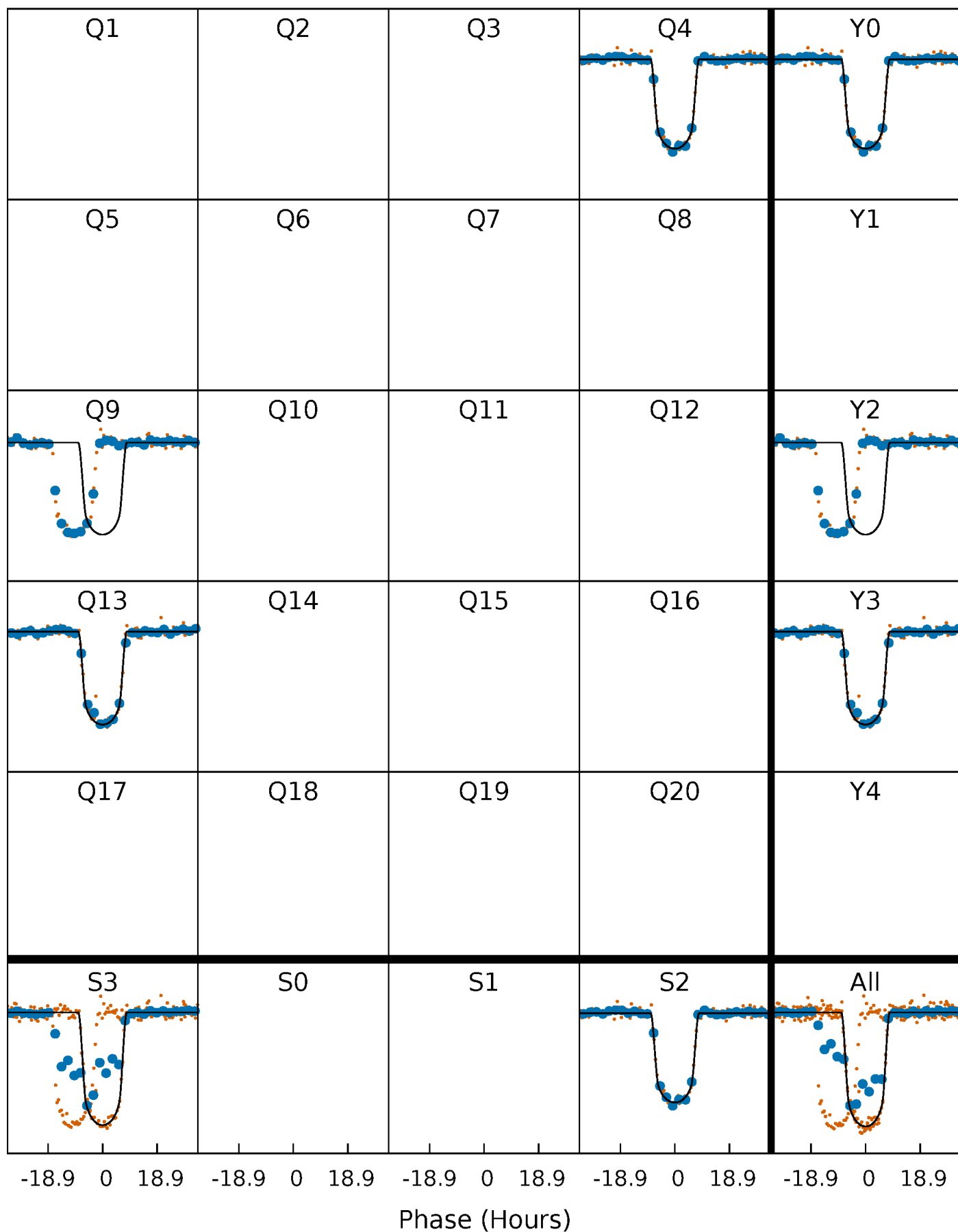
PDC Quarter-Phased Transit Curves

TCE 008012732-01 P=431.468056 Days $T_0=391.806604$ (BKJD)



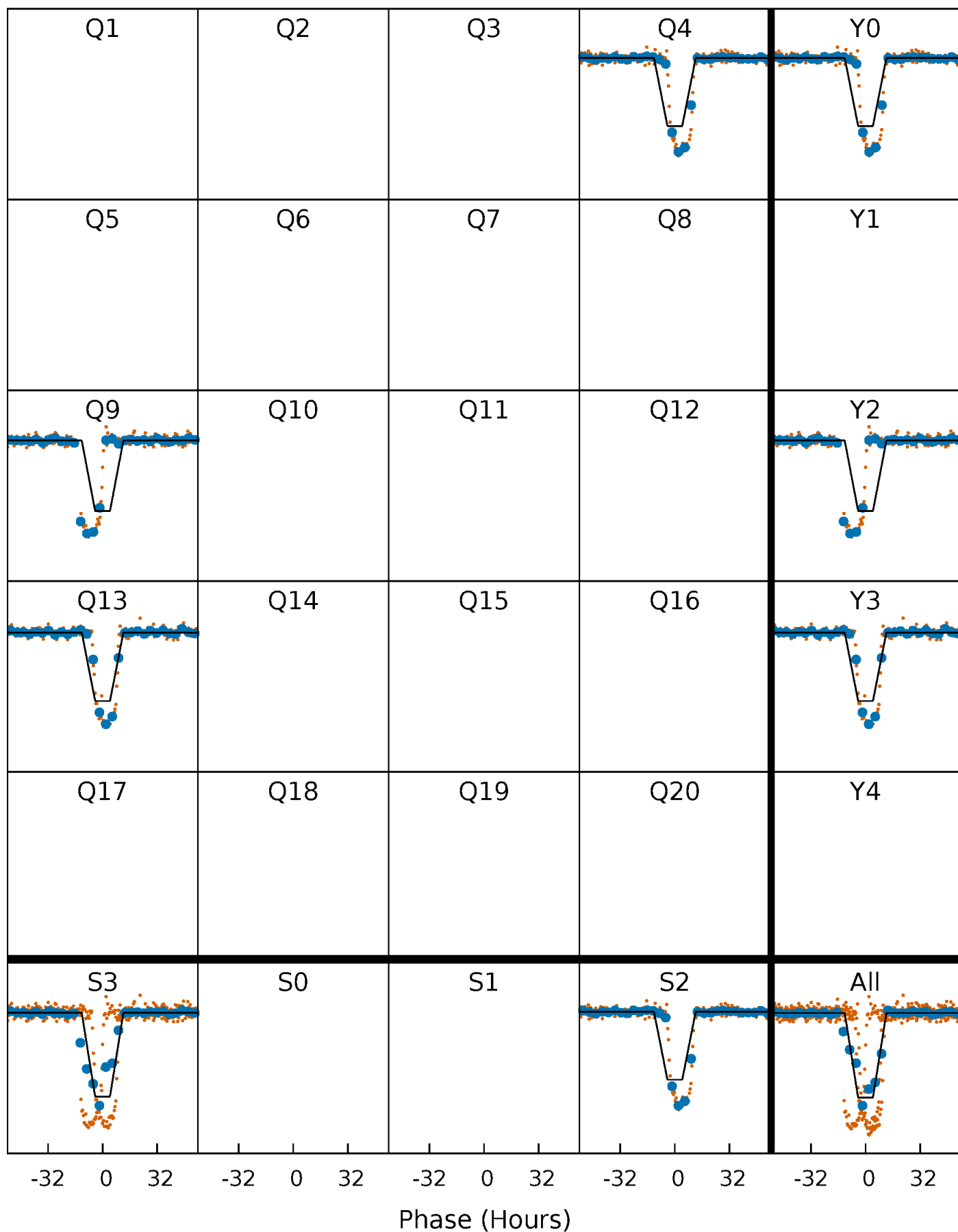
DV Quarter-Phased Transit Curves

TCE 008012732-01 P=431.468056 Days $T_0=391.806604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

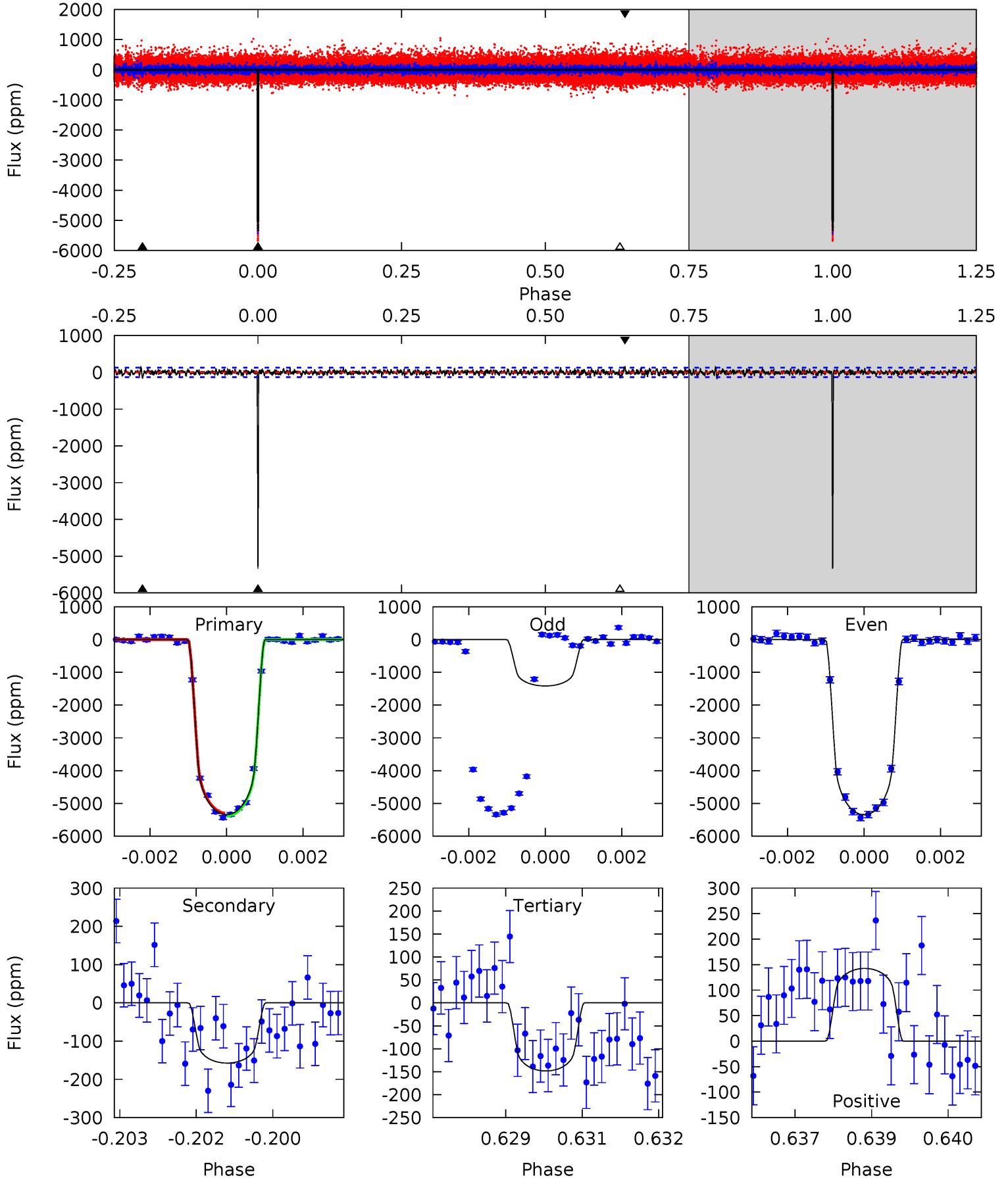
TCE 008012732-01 P=431.502298 Days $T_0=391.662214$ (BKJD)



DV Model-Shift Uniqueness Test

008012732-01, P = 431.468056 Days, E = 391.806604 Days

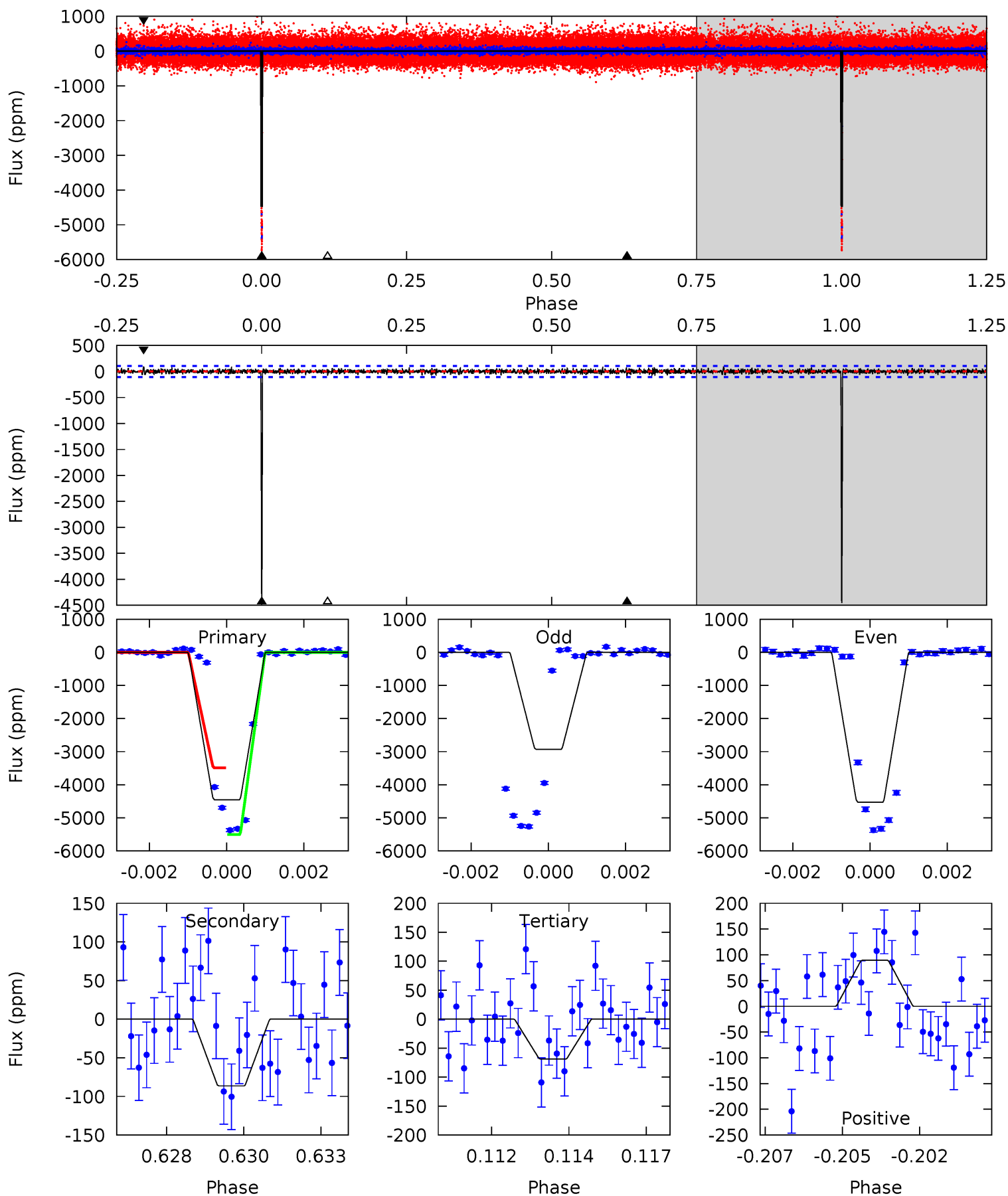
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
222.1	6.54	6.17	5.93	5.37	3.15	1.49	215.9	216.1	0.38	0.62	89.9	0.77	0.03	0



Alt Model-Shift Uniqueness Test

008012732-01, P = 431.502298 Days, E = 391.662214 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
220.9	4.29	3.41	4.43	5.30	3.04	1.02	217.5	216.5	0.87	-0.15	44.6	0.90	0.02	0



Stellar Parameters For KIC 008012732

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6221^{+177}_{-243}	$4.294^{+0.112}_{-0.208}$	$0.200^{+0.200}_{-0.300}$	$1.312^{+0.428}_{-0.230}$	$1.240^{+0.168}_{-0.184}$	$0.773^{+0.464}_{-0.408}$
	+3%/-4%	+3%/-5%	+100%/-150%	+33%/-18%	+14%/-15%	+60%/-53%
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 008012732-01 / KOI 8151.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-157 ± 24	$10.67^{+1.88}_{-1.16}$	407^{+33}_{-27}	3177^{+92}_{-106}	1055^{+328}_{-279}
Alt.	-86 ± 20	$9.22^{+1.61}_{-1.01}$	405^{+33}_{-27}	3032^{+110}_{-125}	767^{+305}_{-241}

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 $A_{obs} \gg 1.0$

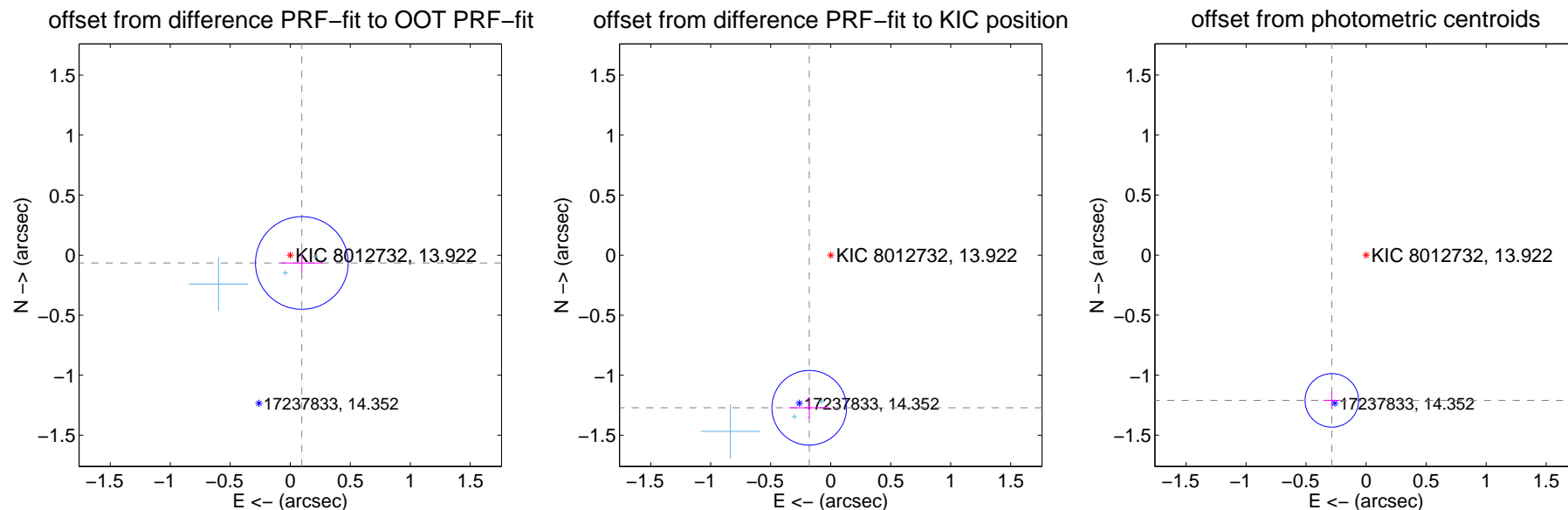
DV Centroid Data

Supplemental centroid analysis for 008012732-01. Kepler magnitude: 13.92. Transit SNR 148.91

There are 3 quarters with good PRF difference image offsets

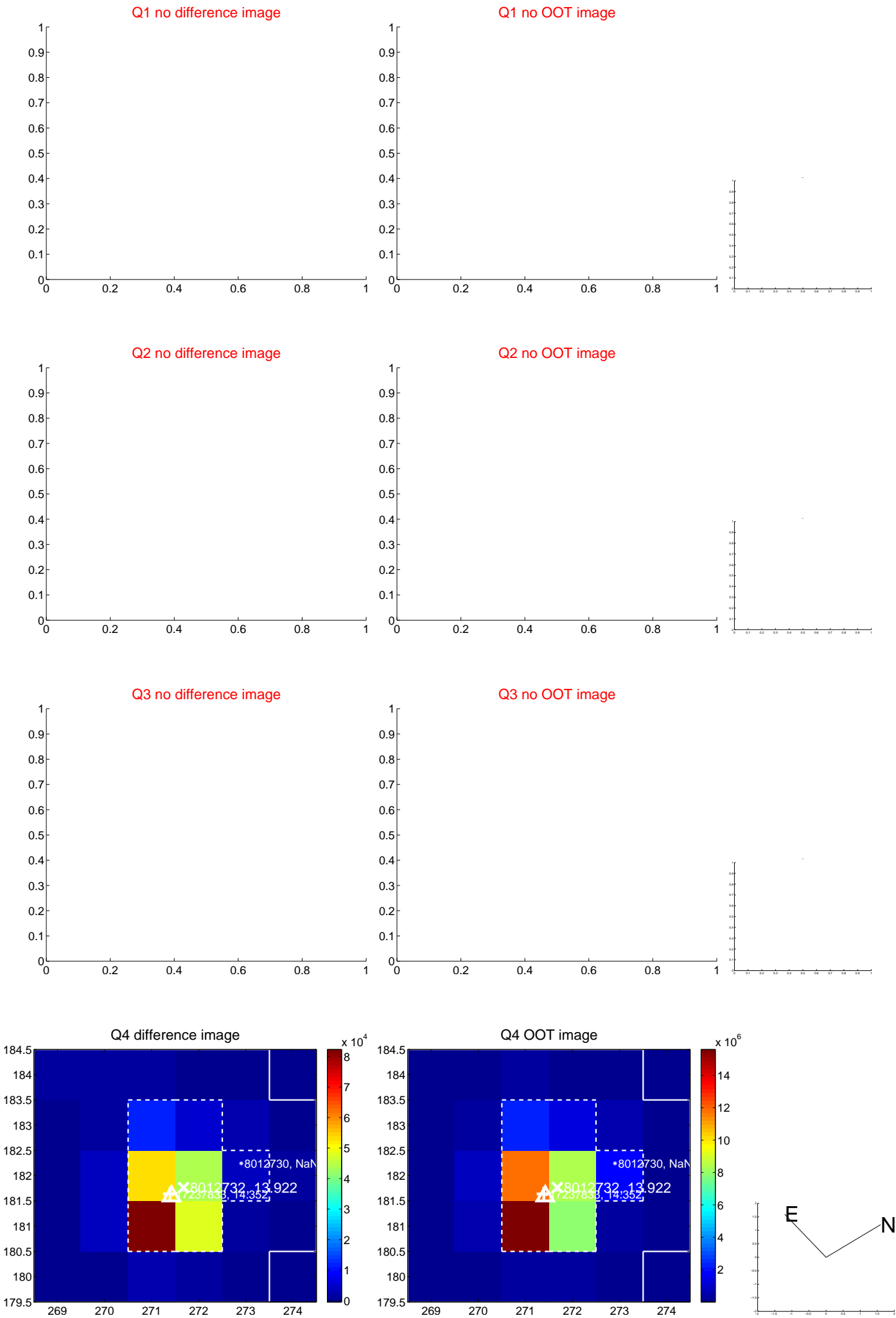
The direct PRF centroid is offset from the target star catalog position by about 1.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.116 ± 0.129	0.90	-0.096 ± 0.173	-0.065 ± 0.080
PRF-fit source offset from KIC position	1.284 ± 0.104	12.39	0.179 ± 0.168	-1.272 ± 0.089
photometric centroid source offset	1.24 ± 0.07	16.72	0.29 ± 0.07	-1.21 ± 0.07



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.

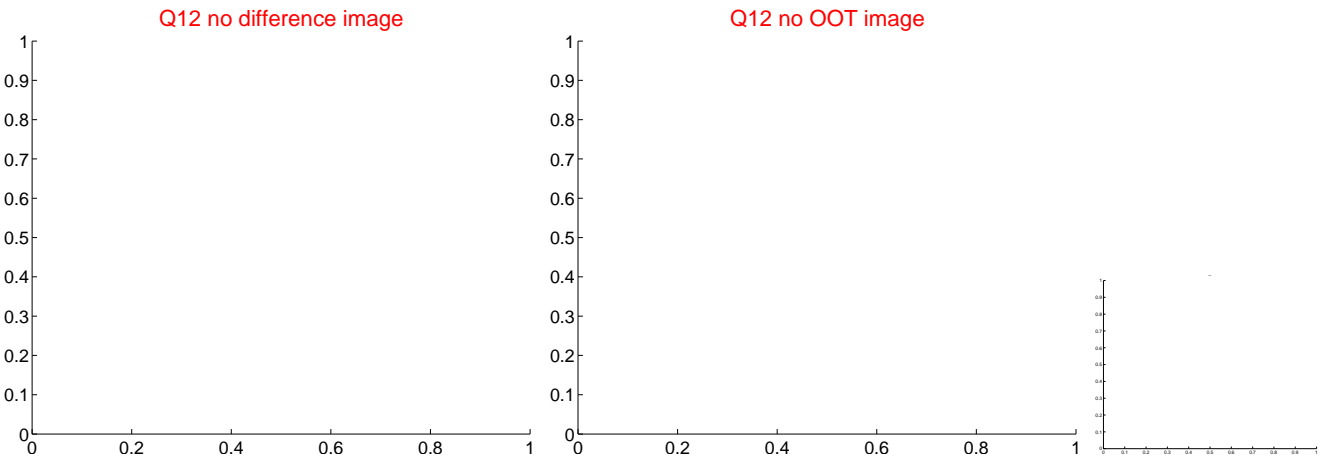
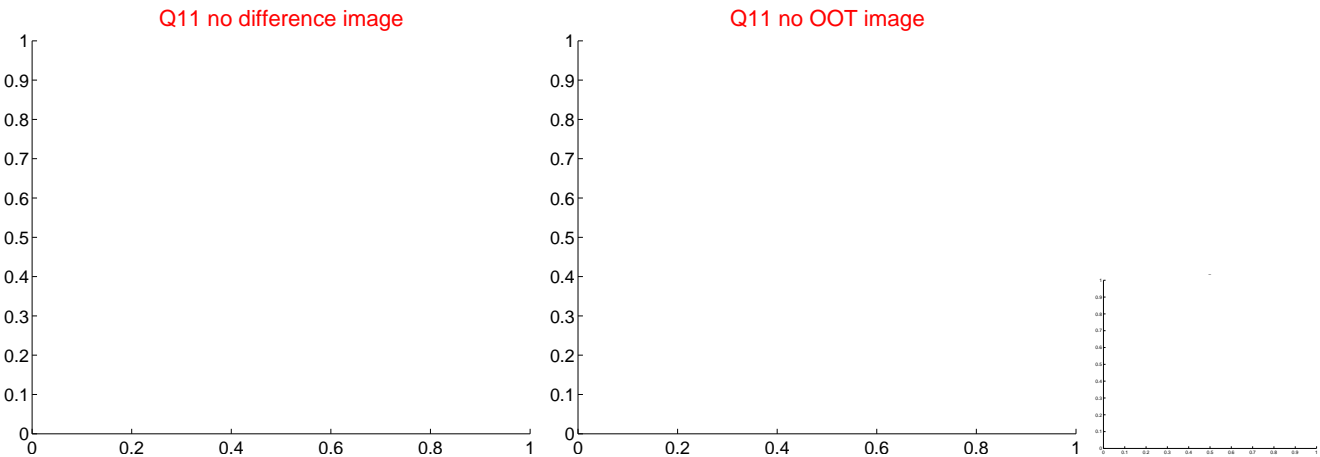
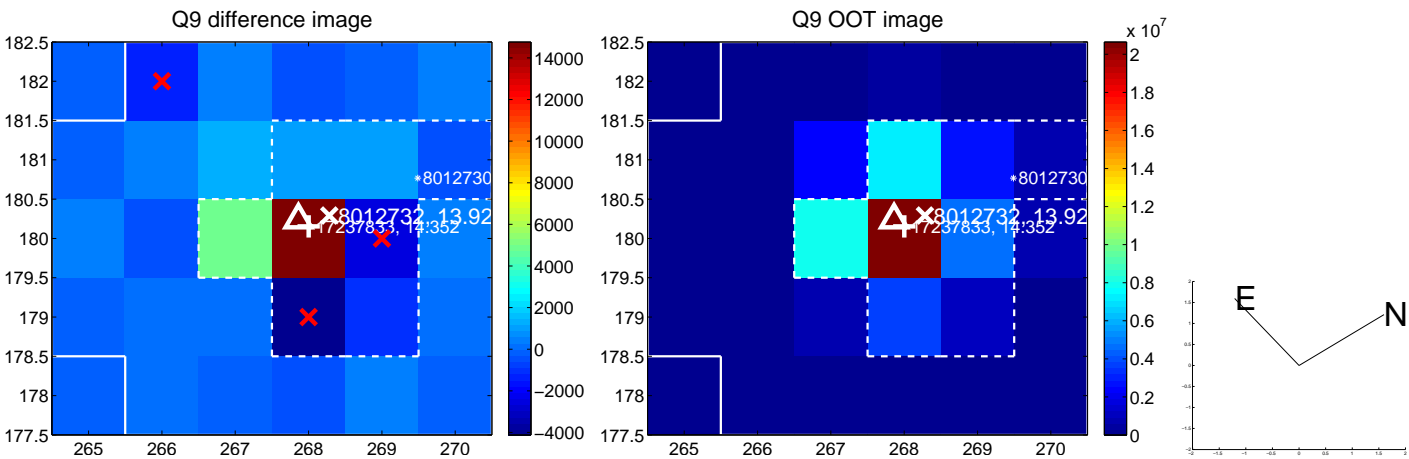
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



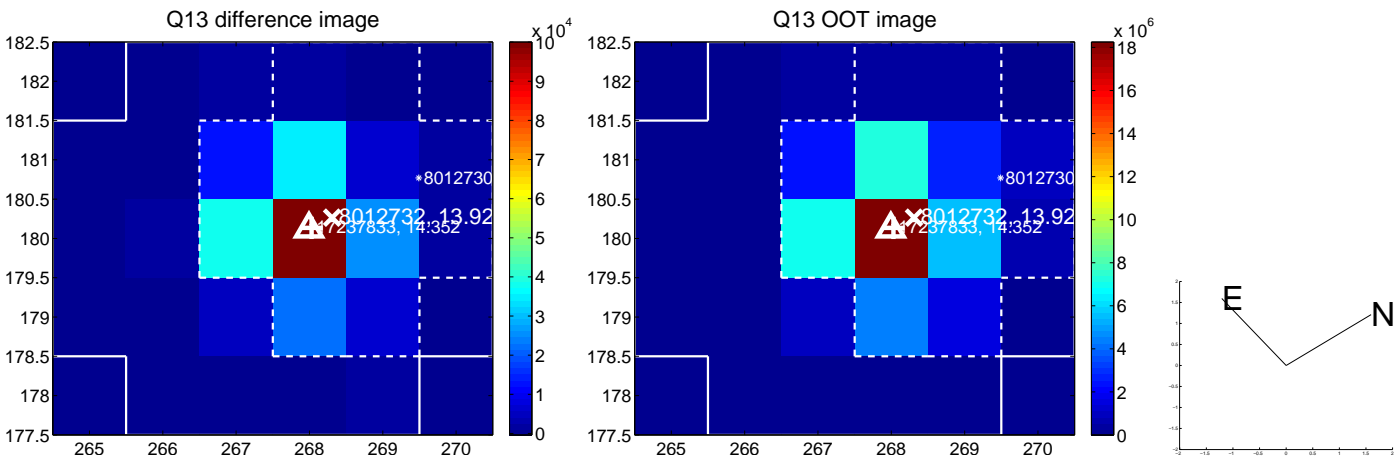
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



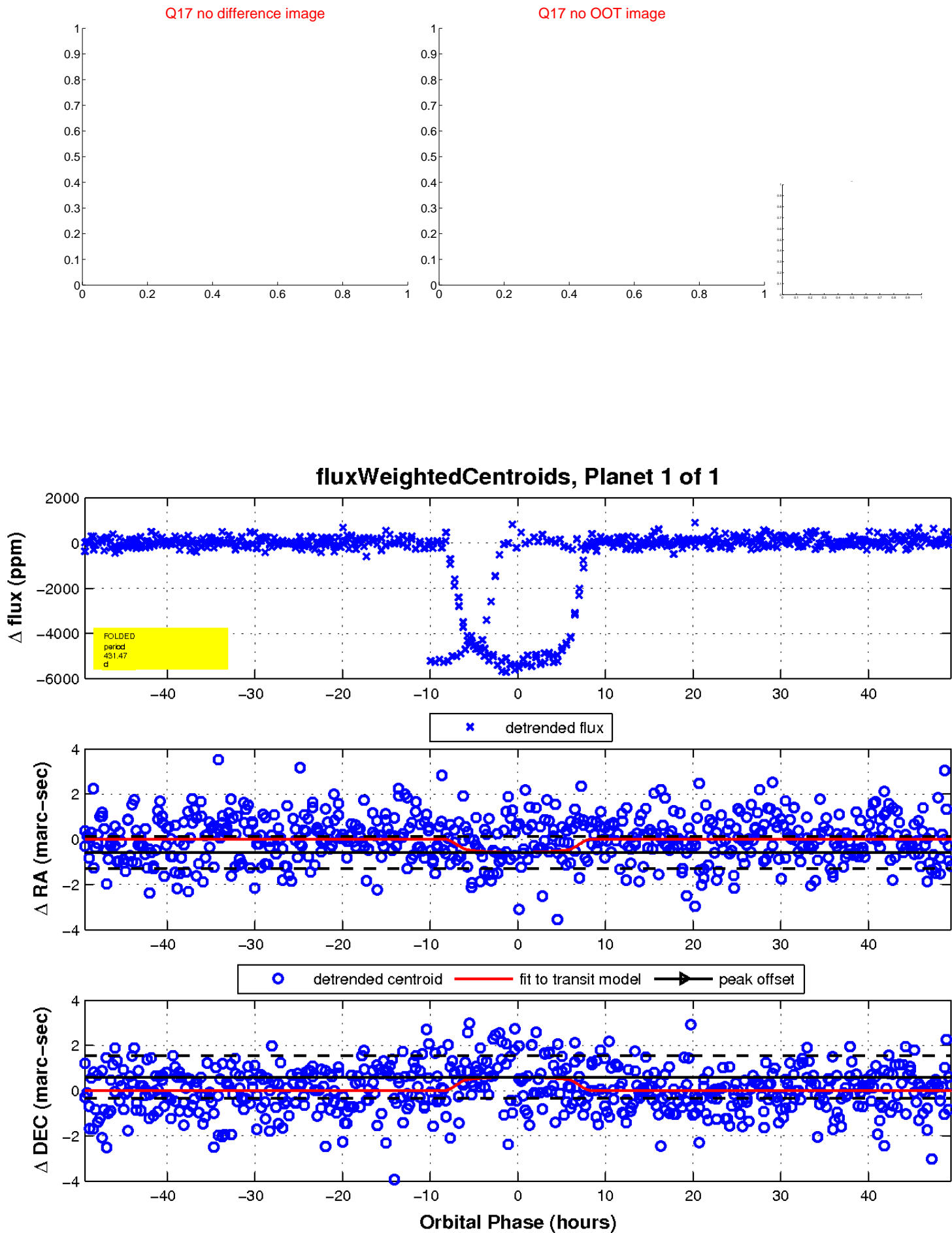
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

