

KIC 007902182

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})
007902182-01	OBS	No	353.450497	247.844322	1658.2	22.735	13.4	13.0	0.60	4331	4.92	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007902182-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—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.

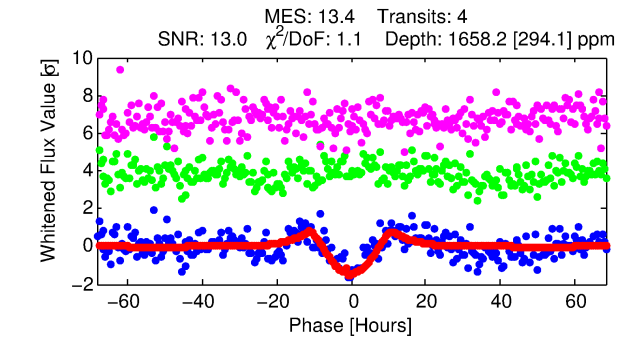
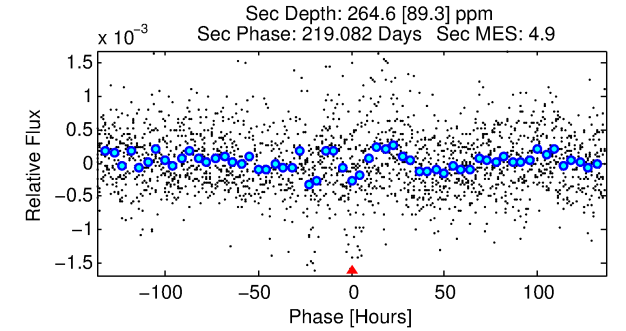
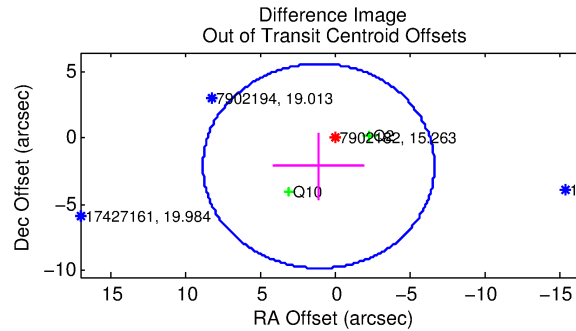
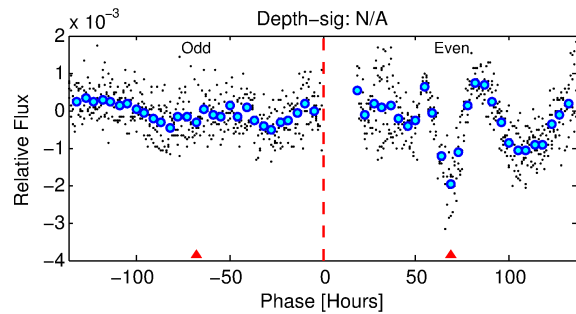
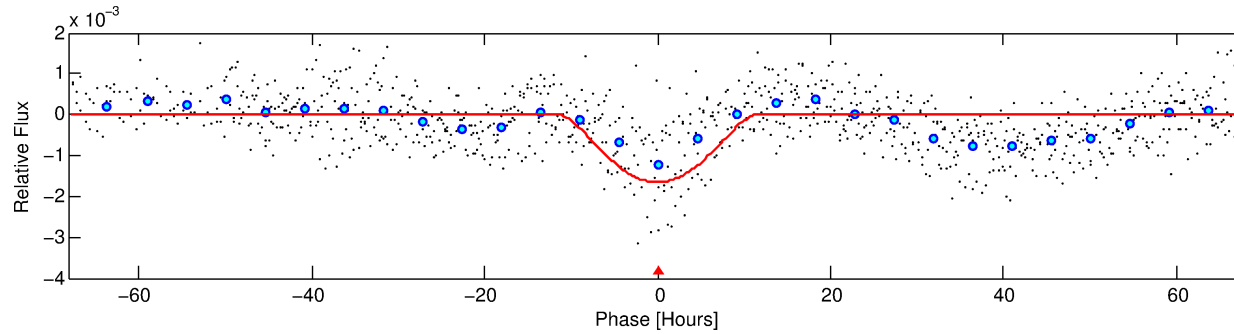
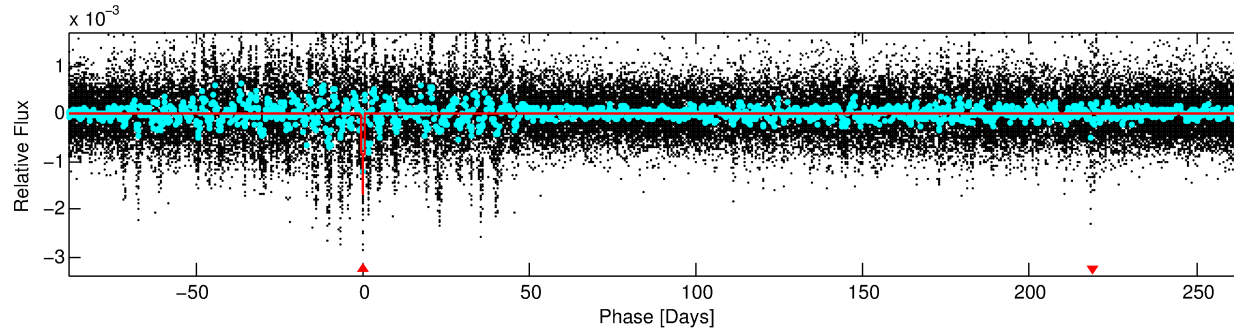
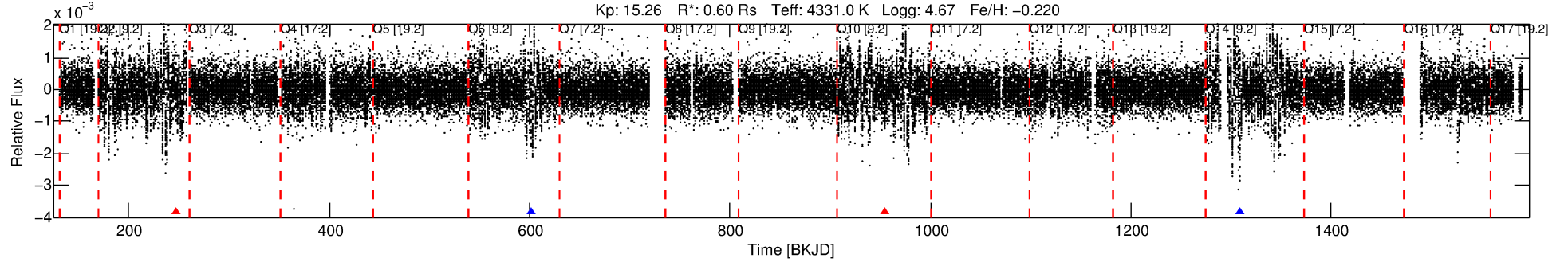
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007902182-01

No Significant Match Found

DV One-Page Summary

KIC: 7902182 Candidate: 1 of 1 Period: 353.450 d



DV Fit Results:

Period = 353.45050 [0.01582] d
Epoch = 247.8443 [0.0273] BKJD
Rp/R* = 0.0746 [0.1330]
a/R* = 46.75 [17.69]
b = 1.00 [0.18]
Seff = 0.16 [0.02]
Teq = 162 [6] K
Rp = 4.92 [8.80] Re
a = 0.8396 [0.0585] AU
Ag = 4235.81 [15190.28] [0.28σ]
Teffp = 2023 [1814] K [1.03σ]

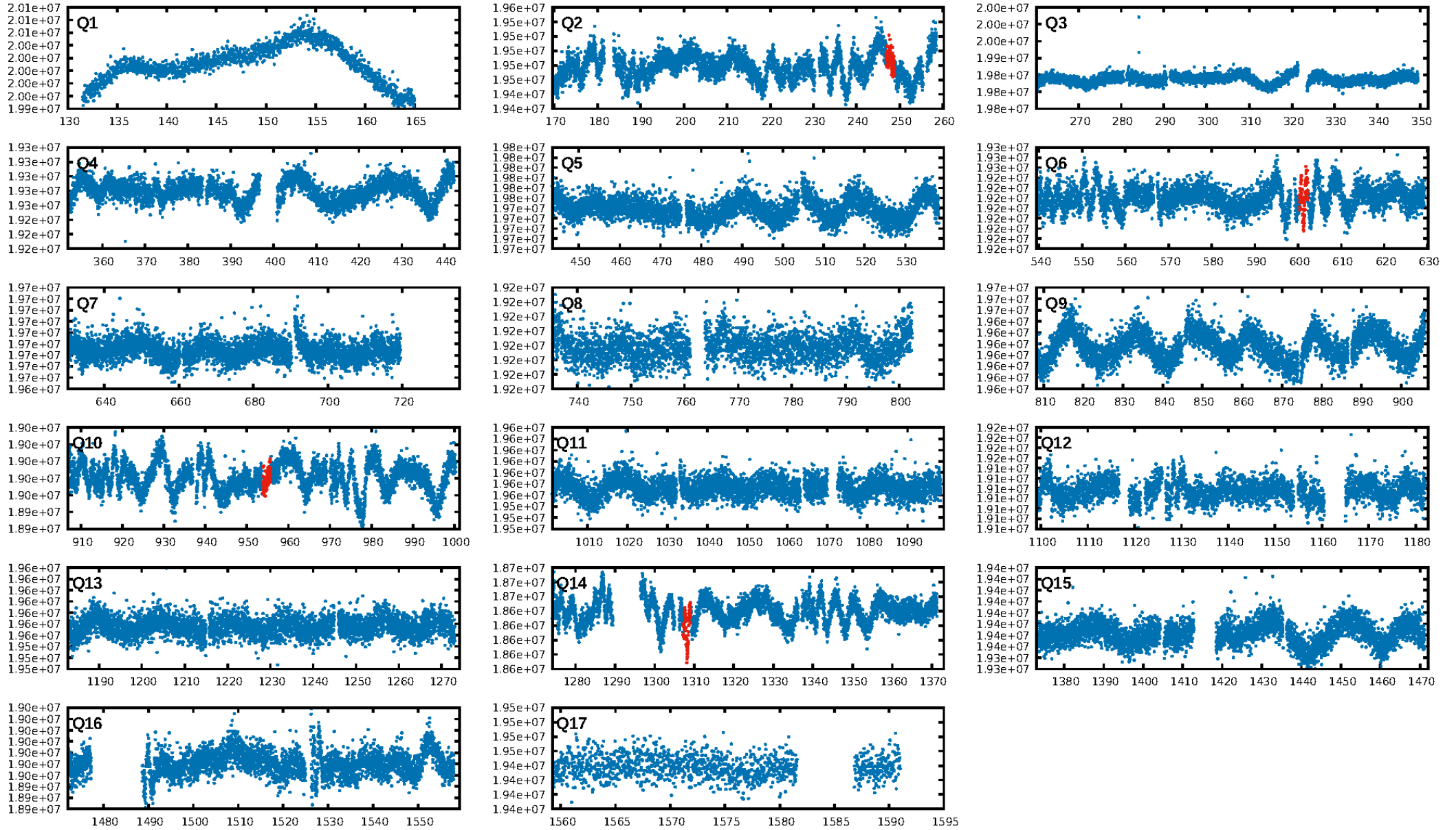
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 1.38e-14
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 5.79
Centroid-sig: 21.7%
Centroid-so: 1.777 arcsec [1.26σ]
OotOffset-rm: 2.359 arcsec [0.91σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 2.164 arcsec [0.74σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

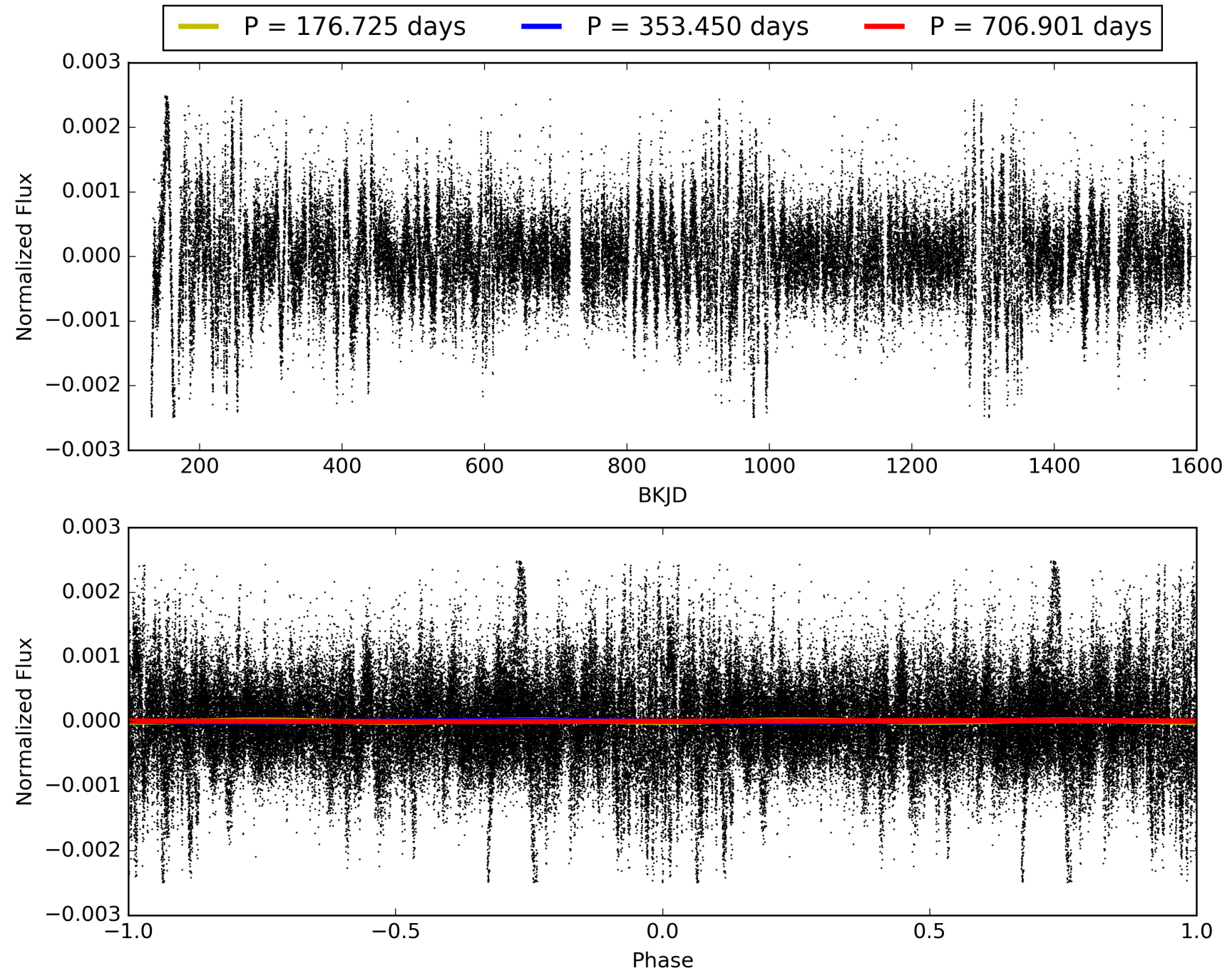
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:27:39 Z

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

TCE 007902182-01, PDC Light Curves

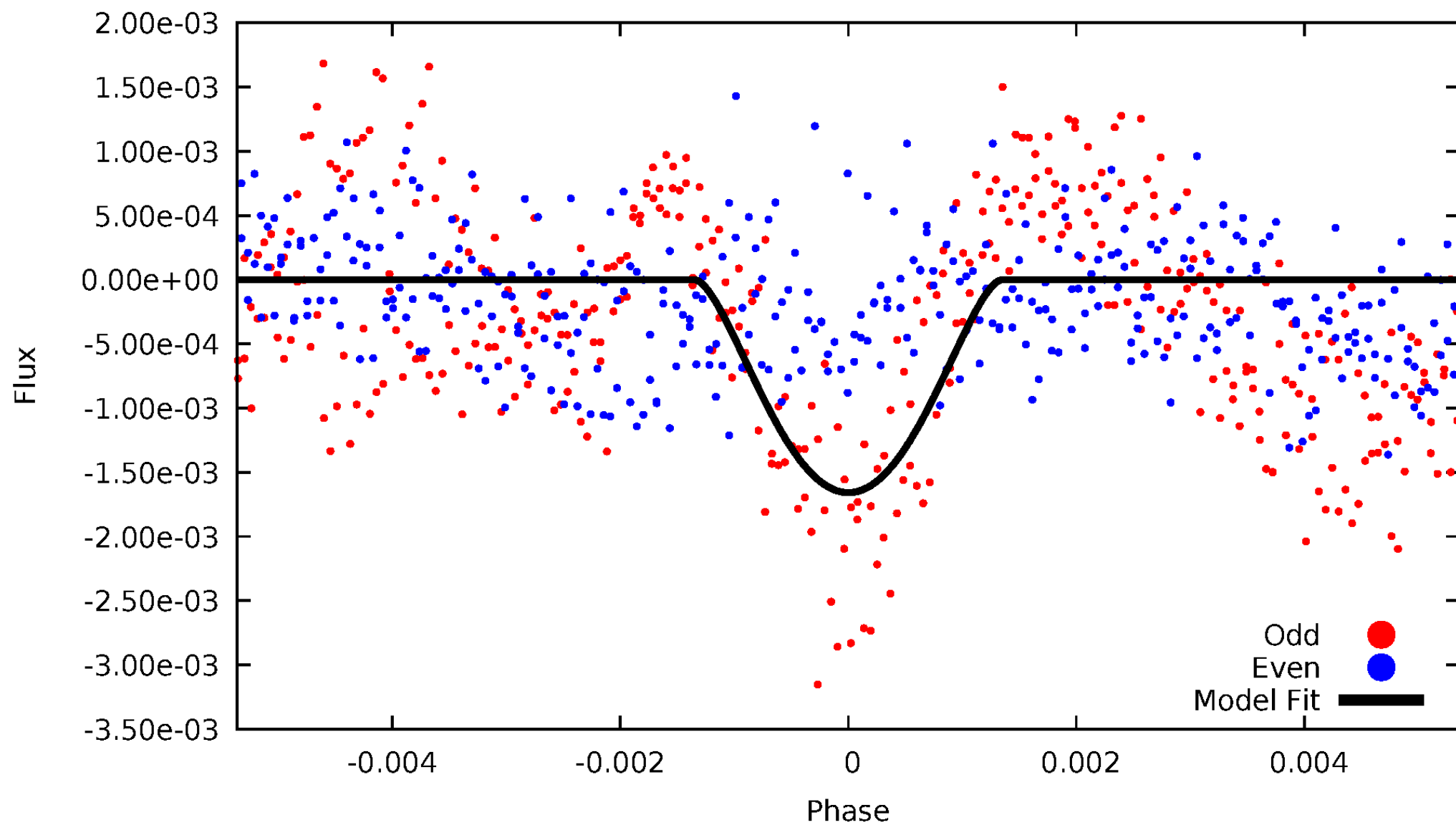


TCE 007902182-01



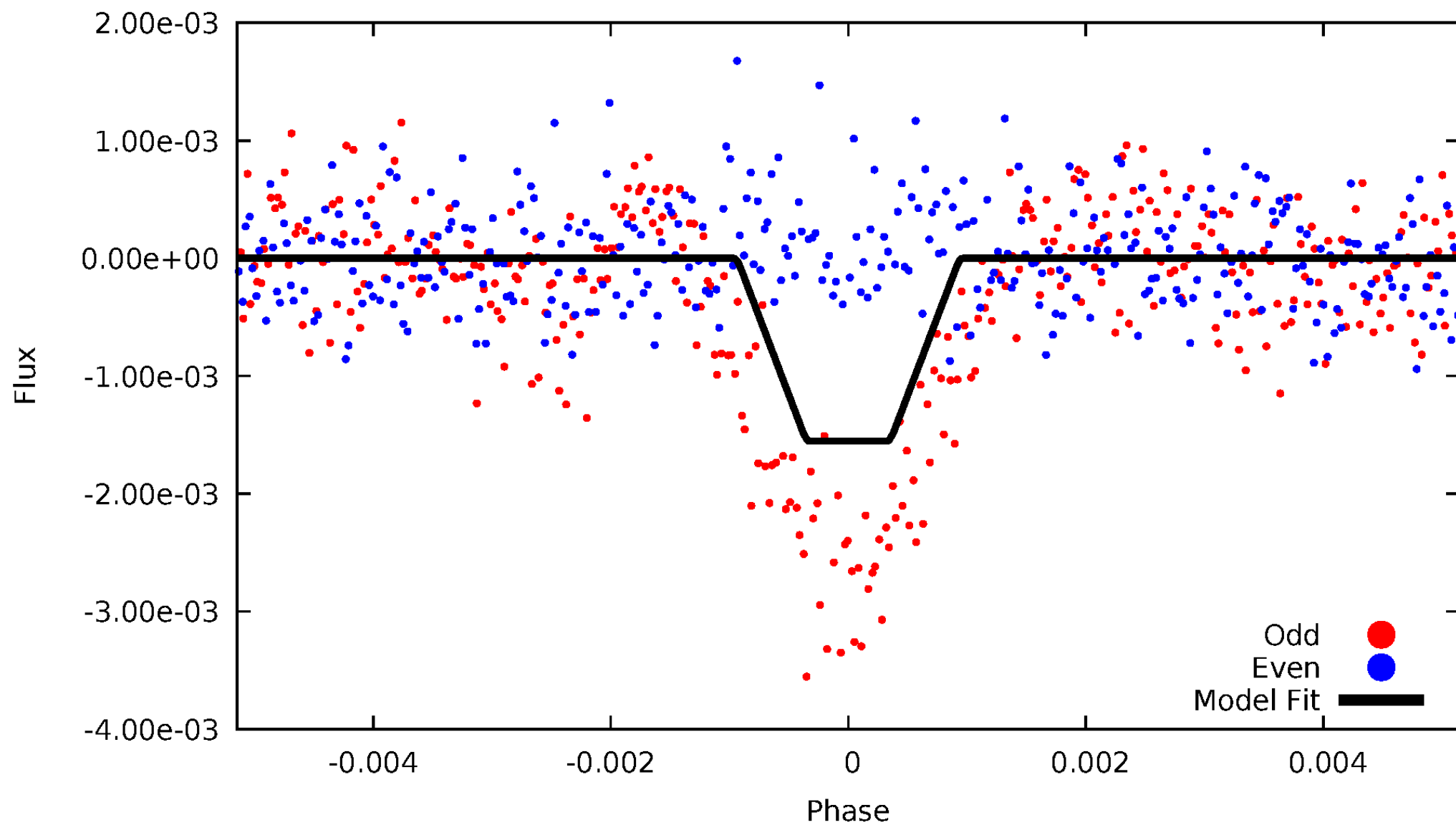
DV Odd/Even

TCE 007902182-01



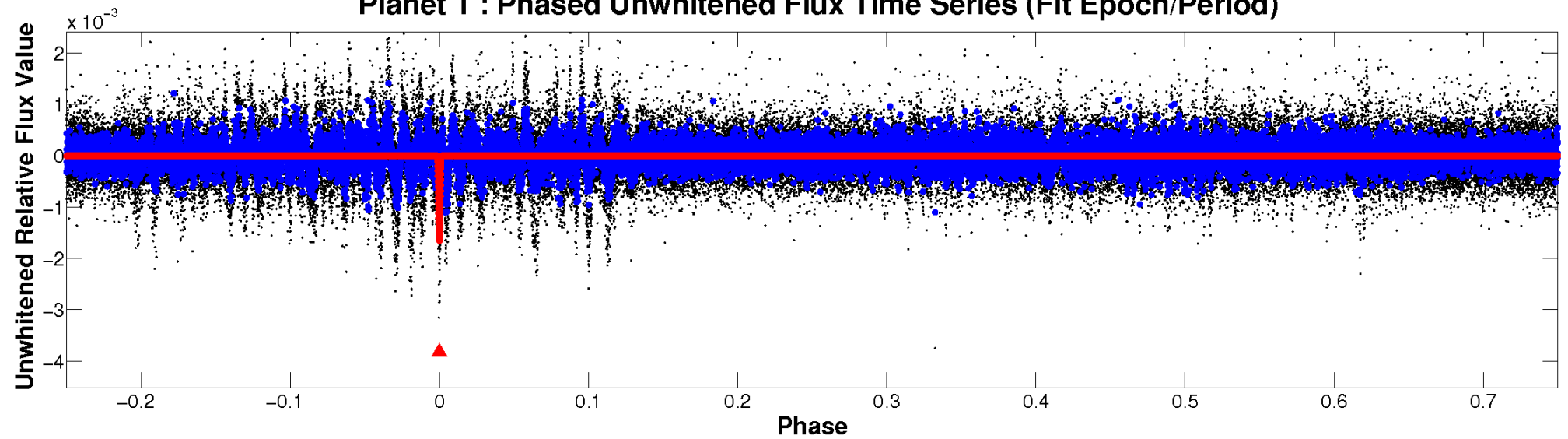
ALT Odd/Even

TCE 007902182-01

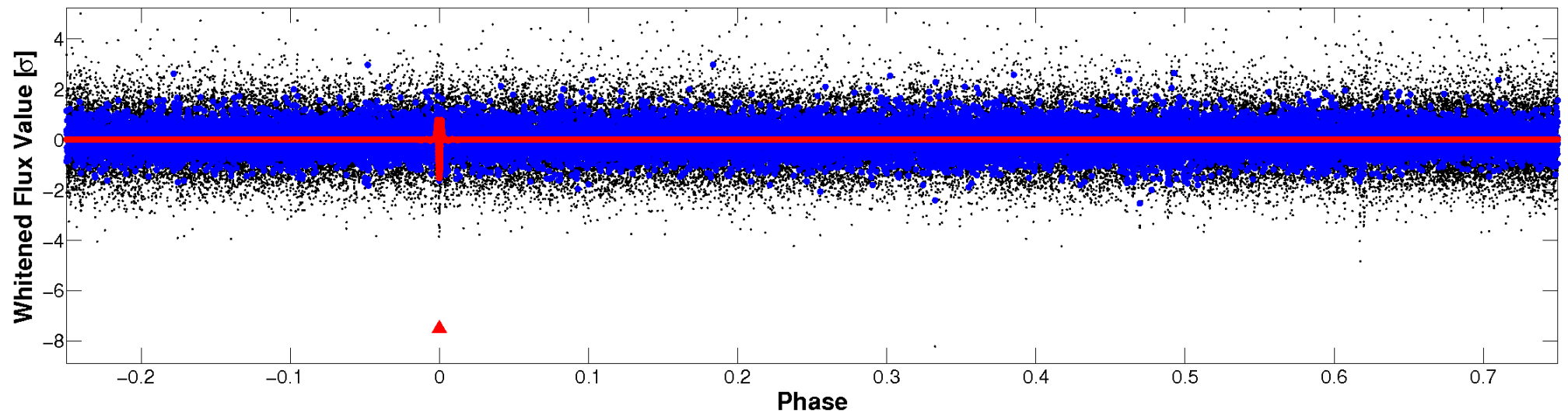


Non-Whitened Vs. Whitened Light Curve

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

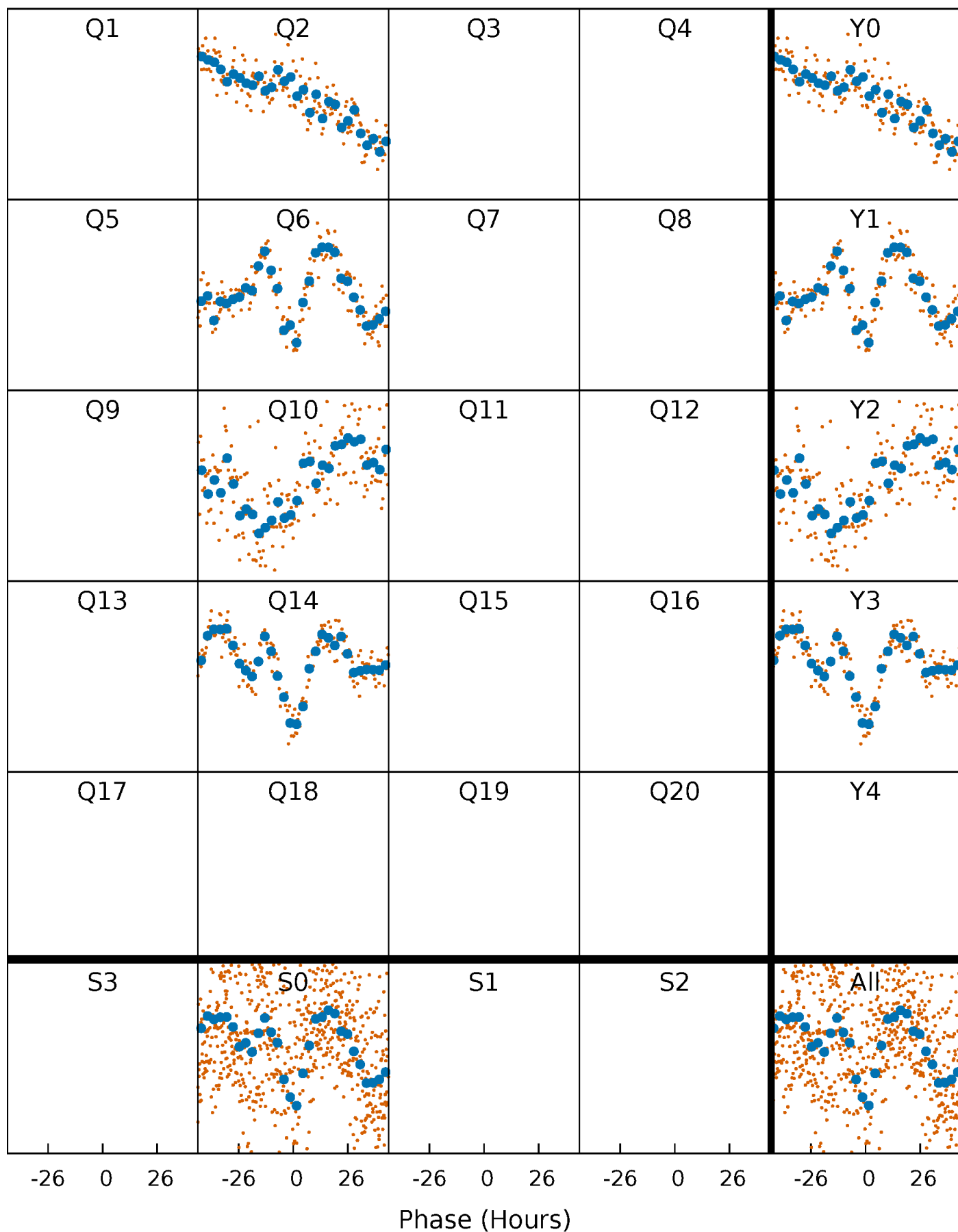


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



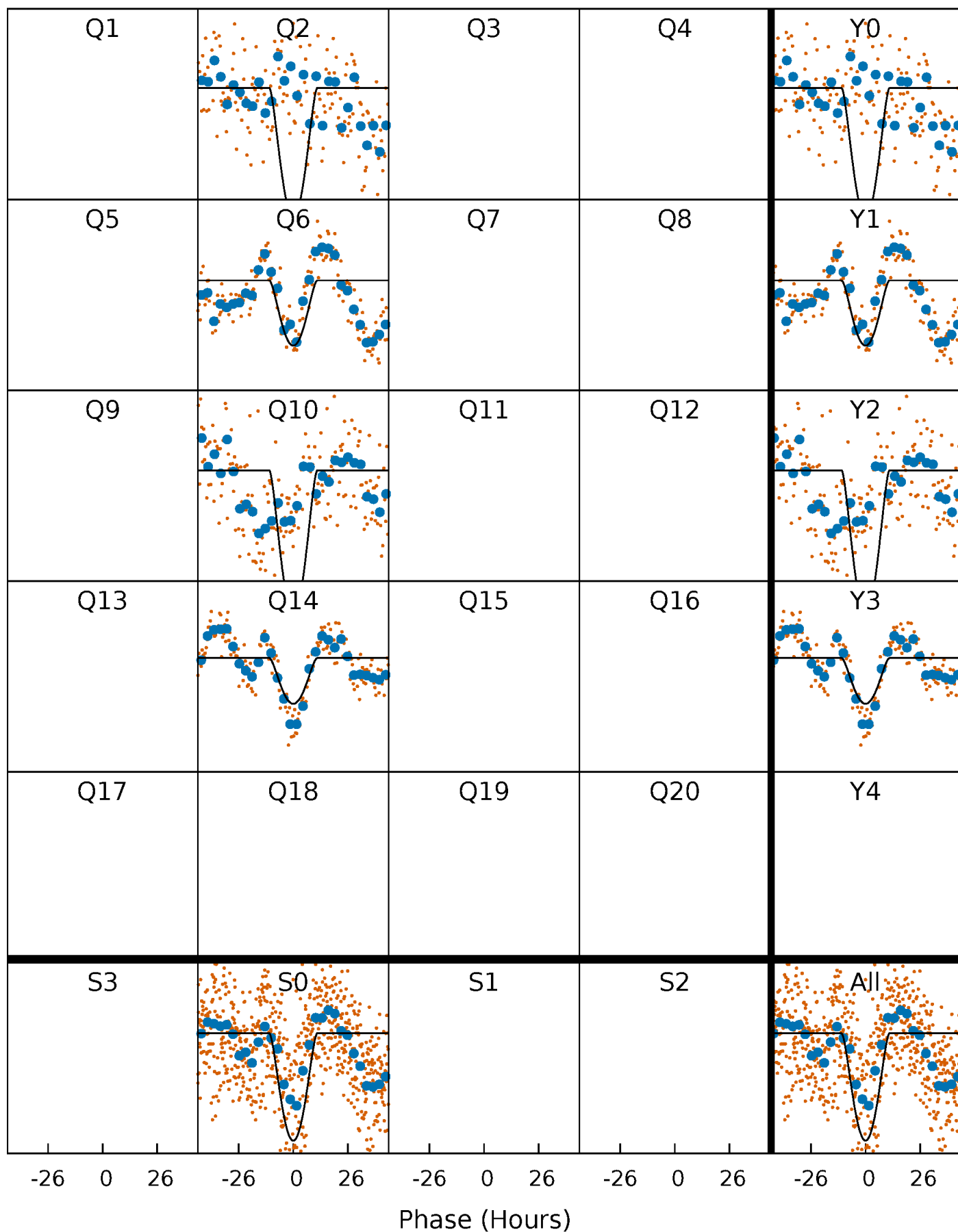
PDC Quarter-Phased Transit Curves

TCE 007902182-01 P=353.450497 Days $T_0=247.844322$ (BKJD)



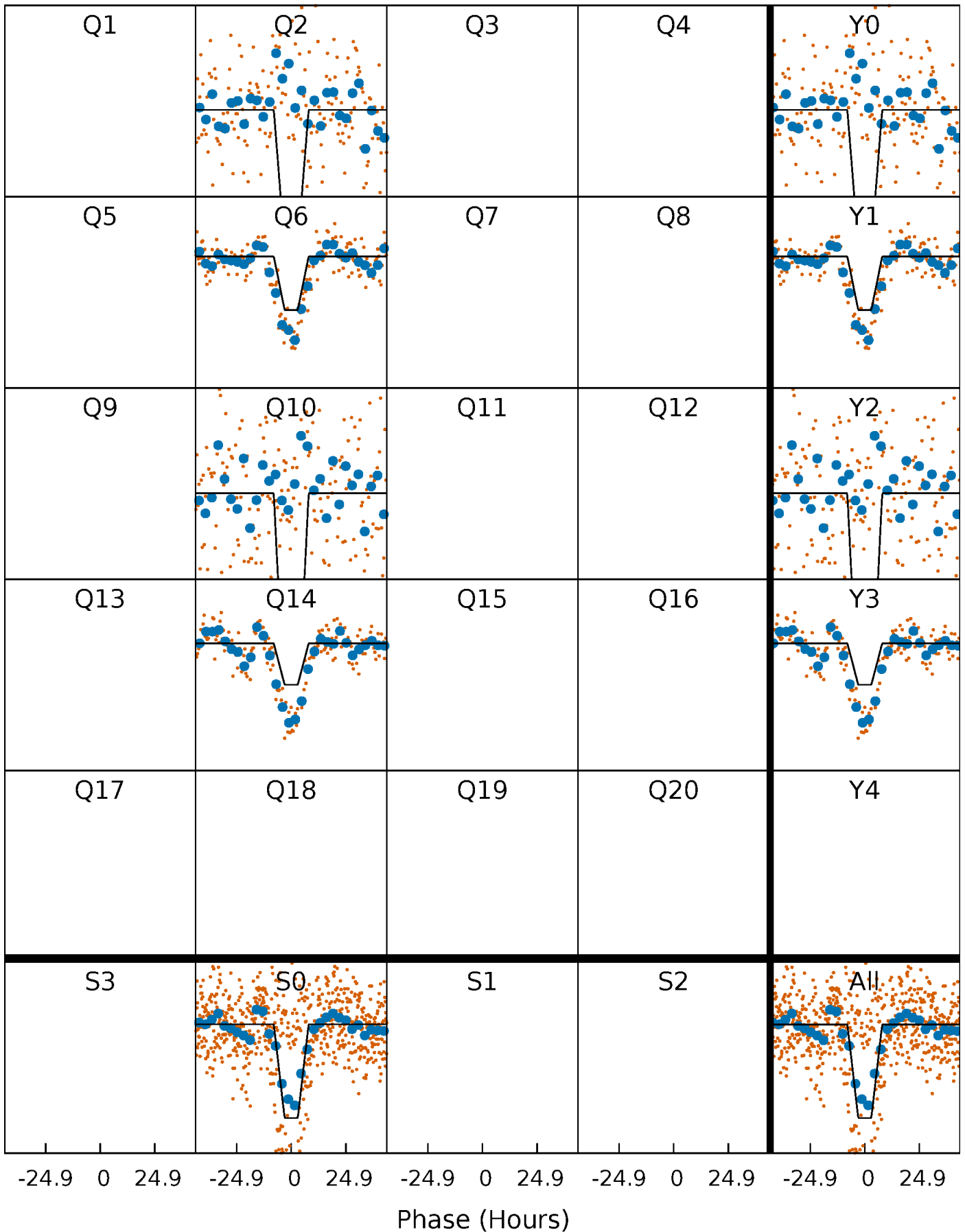
DV Quarter-Phased Transit Curves

TCE 007902182-01 P=353.450497 Days $T_0=247.844322$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

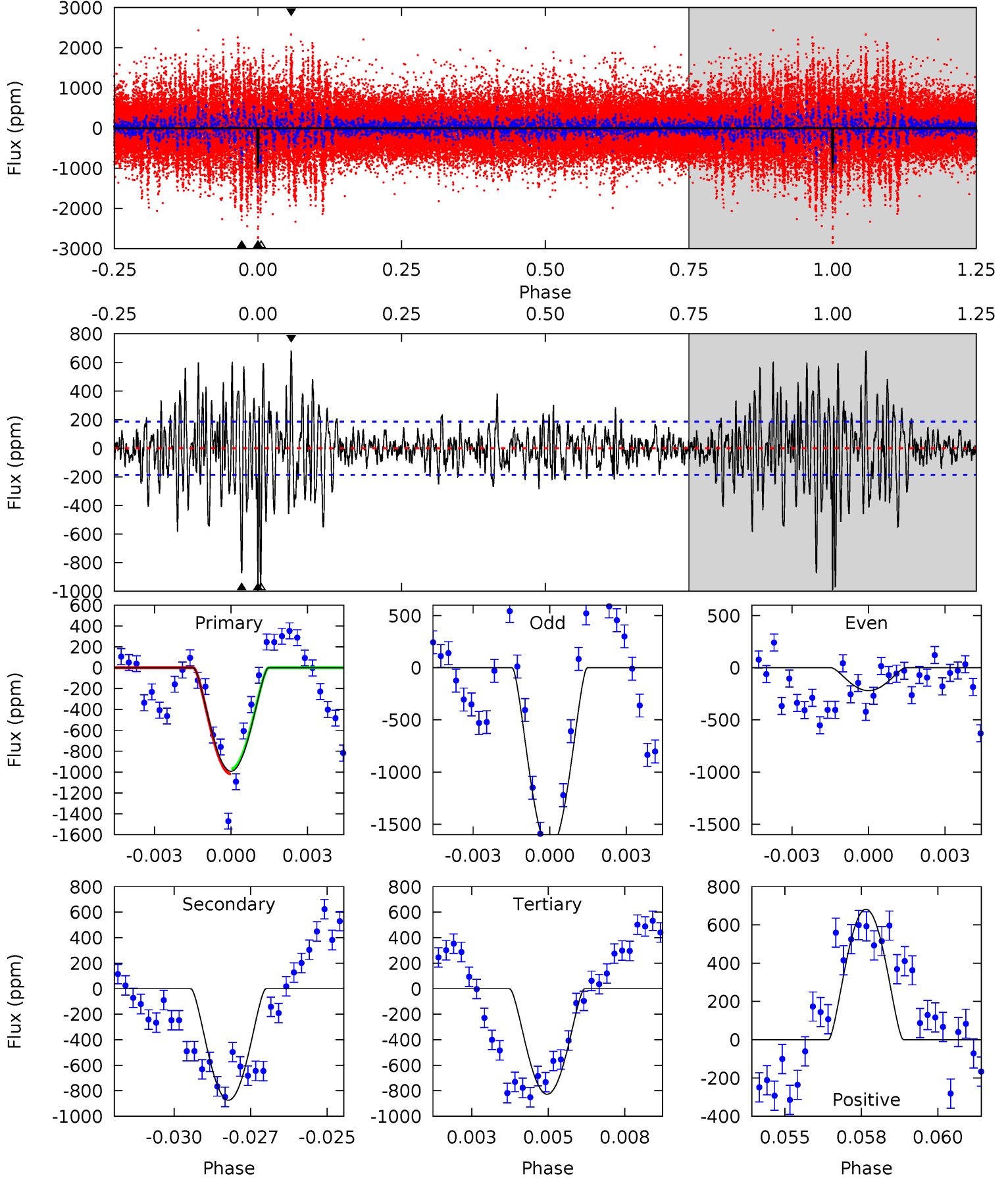
TCE 007902182-01 P=353.466532 Days $T_0=247.826348$ (BKJD)



DV Model-Shift Uniqueness Test

007902182-01, P = 353.450497 Days, E = 247.844322 Days

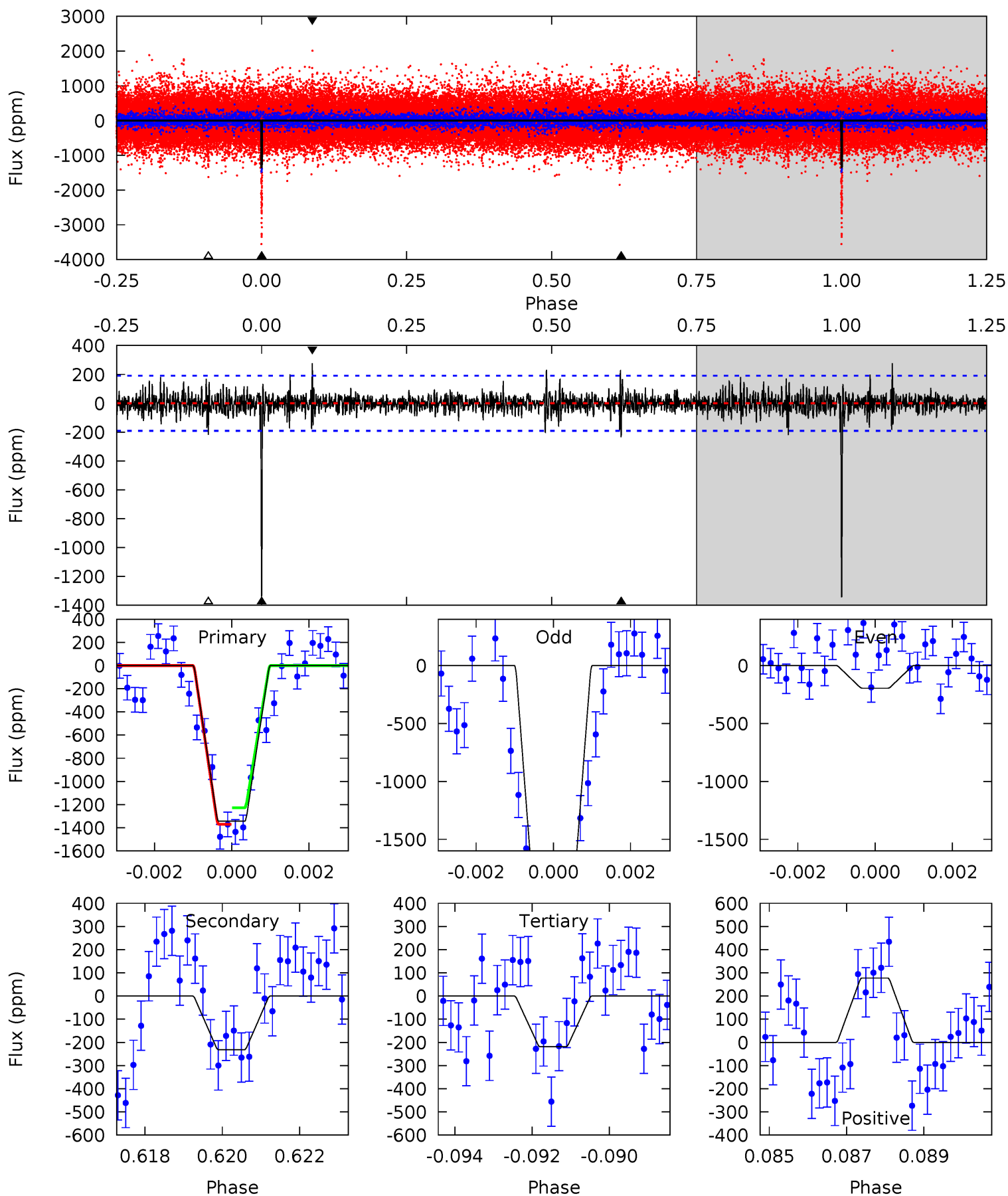
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	24.7	23.4	19.3	5.27	2.99	4.66	4.67	8.78	1.33	5.44	21.5	1.14	0.41	0



Alt Model-Shift Uniqueness Test

007902182-01, P = 353.466532 Days, E = 247.826348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.6	6.47	6.12	7.75	5.33	3.10	1.27	31.4	29.8	0.36	-1.28	35.0	1.09	0.17	1.98



Stellar Parameters For KIC 007902182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4331^{+129}_{-129}	$4.675^{+0.032}_{-0.042}$	$-0.220^{+0.300}_{-0.300}$	$0.605^{+0.056}_{-0.050}$	$0.632^{+0.055}_{-0.061}$	$4.016^{+0.630}_{-0.709}$
	+3%/-3%	+1%/-1%	+136%/-136%	+9%/-8%	+9%/-10%	+16%/-18%
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 007902182-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-874 ± 35	$8.18^{+7.38}_{-5.67}$	227^{+8}_{-8}	2776^{+1169}_{-405}	5136^{+48829}_{-3745}
Alt.	-232 ± 36	$6.73^{+7.34}_{-4.64}$	228^{+8}_{-8}	2463^{+928}_{-397}	1957^{+18039}_{-1537}

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

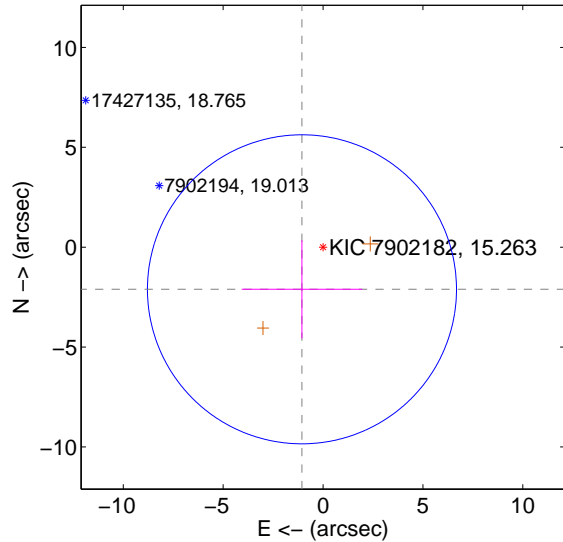
Supplemental centroid analysis for 007902182-01. Kepler magnitude: 15.26. Transit SNR 12.99

There are 0 quarters with good PRF difference image offsets

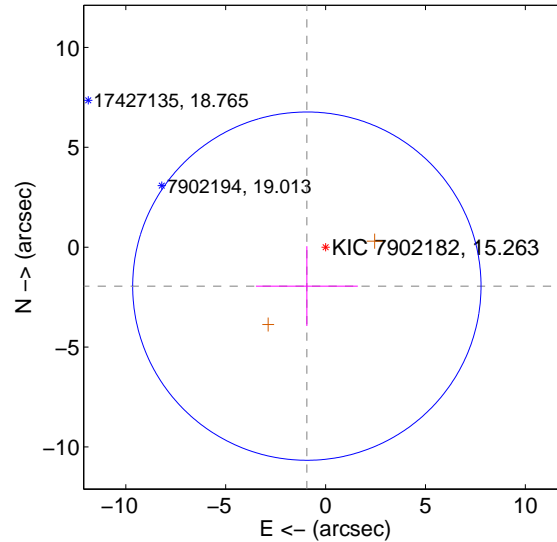
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.359 ± 2.579	0.91	1.055 ± 3.017	-2.110 ± 2.457
PRF-fit source offset from KIC position	2.164 ± 2.906	0.74	0.938 ± 2.551	-1.951 ± 1.999
photometric centroid source offset	1.78 ± 1.42	1.26	1.74 ± 1.42	0.35 ± 1.15

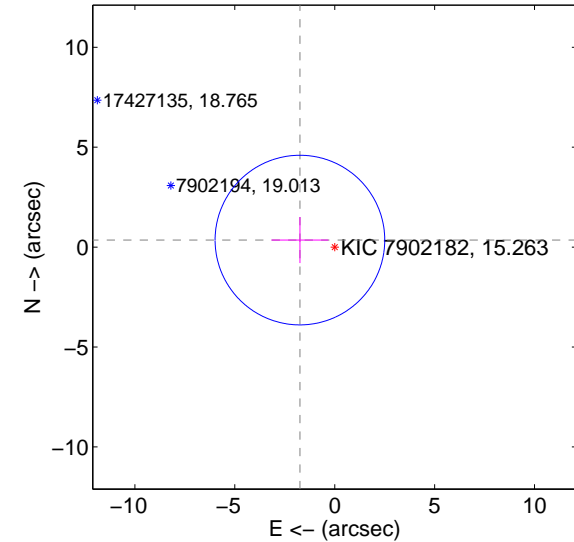
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

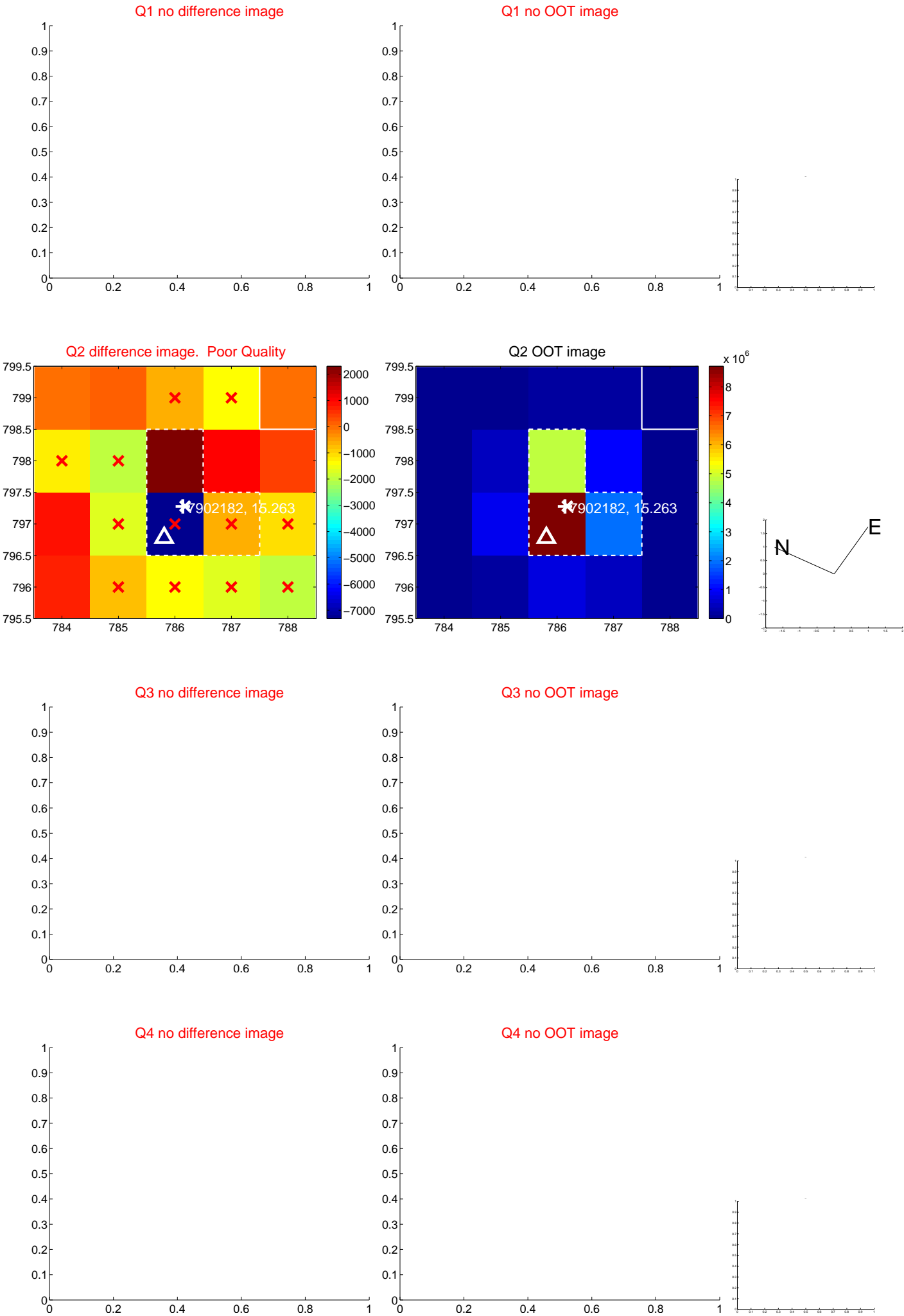


offset from photometric centroids



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.

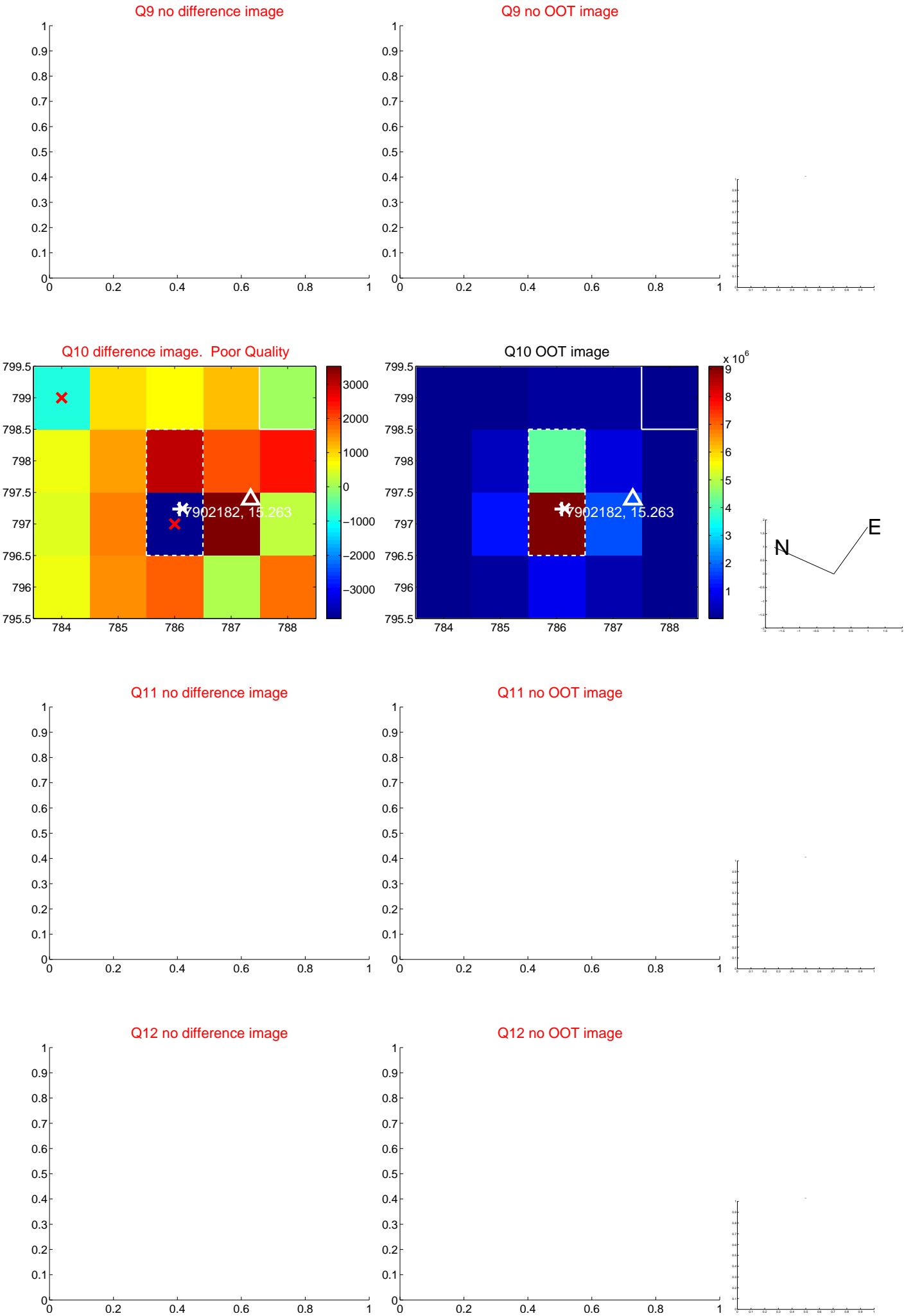
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



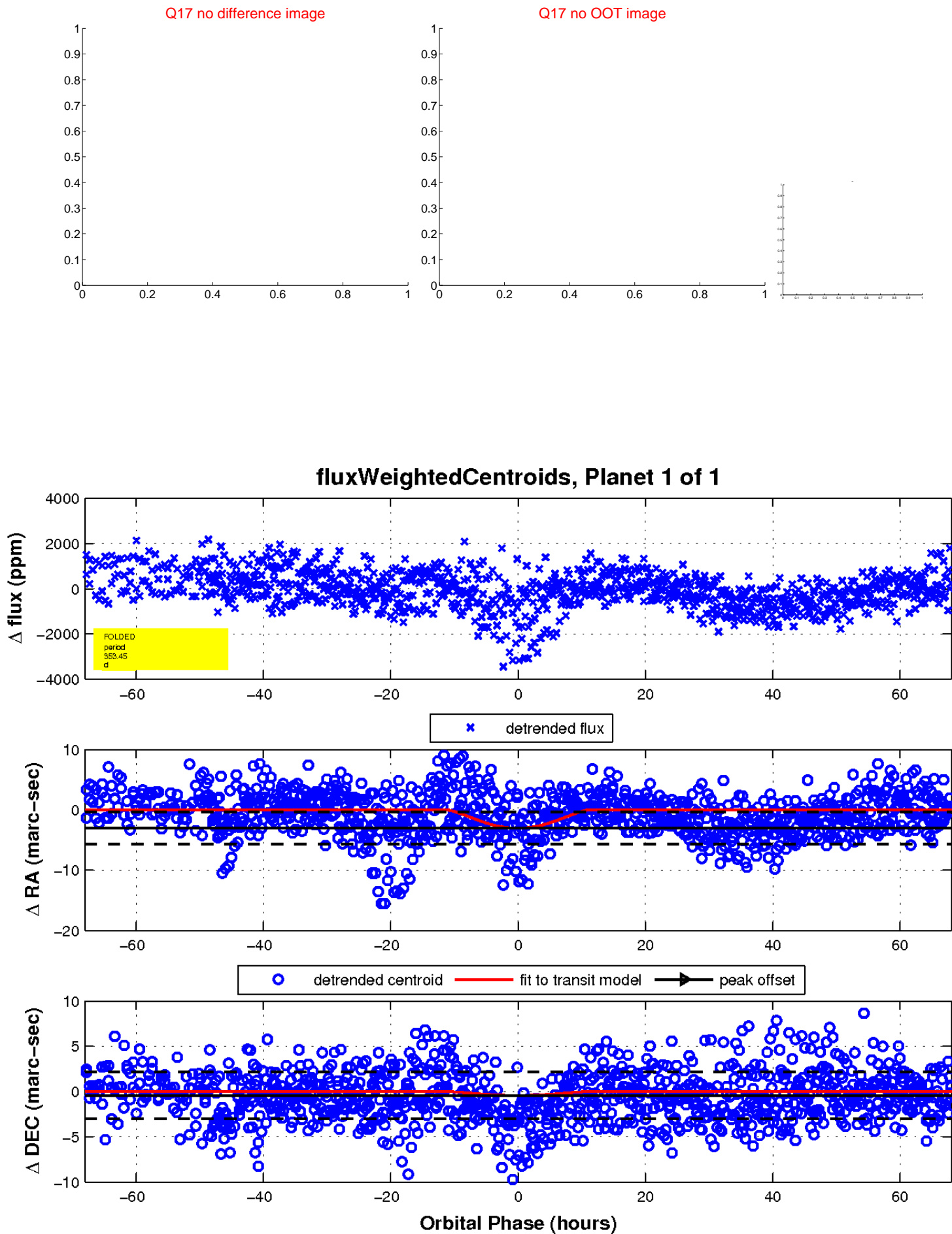
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

