

KIC 011506859

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})
011506859-01	OBS	No	354.203385	280.795659	179.2	10.667	32.8	8.9	0.58	4841	0.85	0.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011506859-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

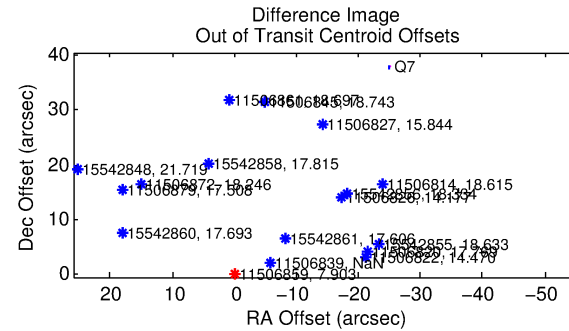
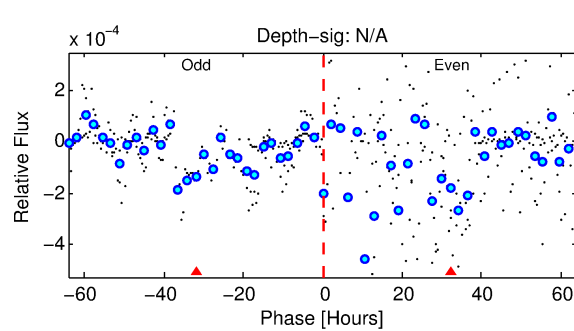
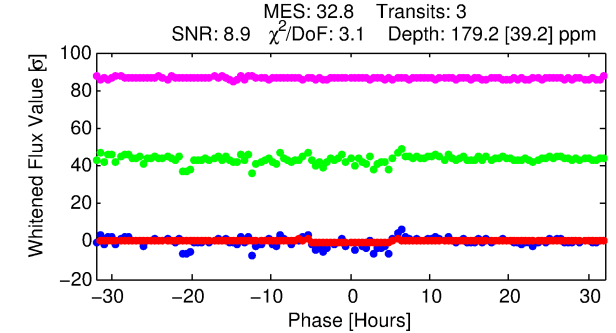
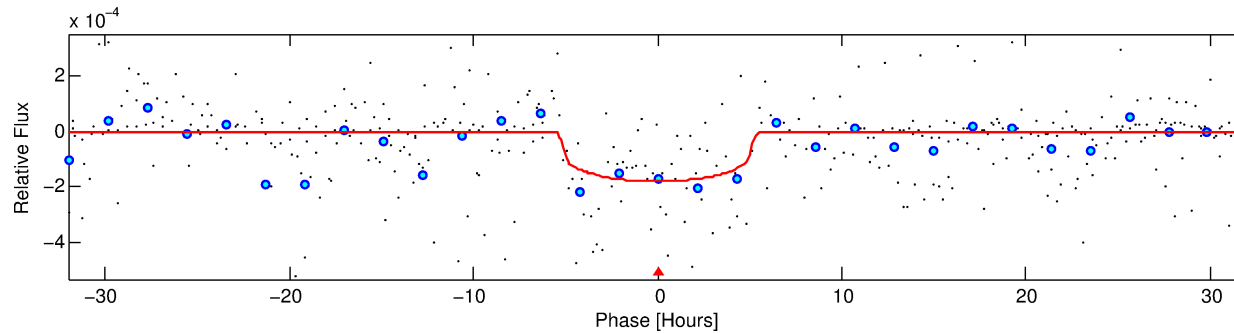
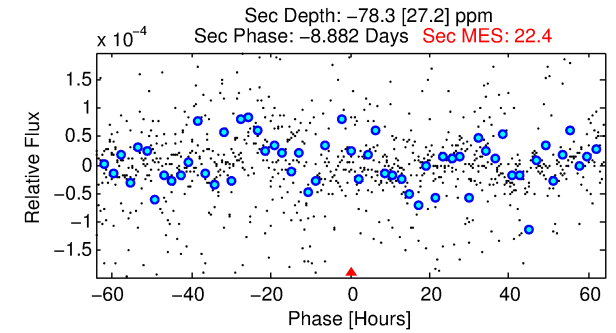
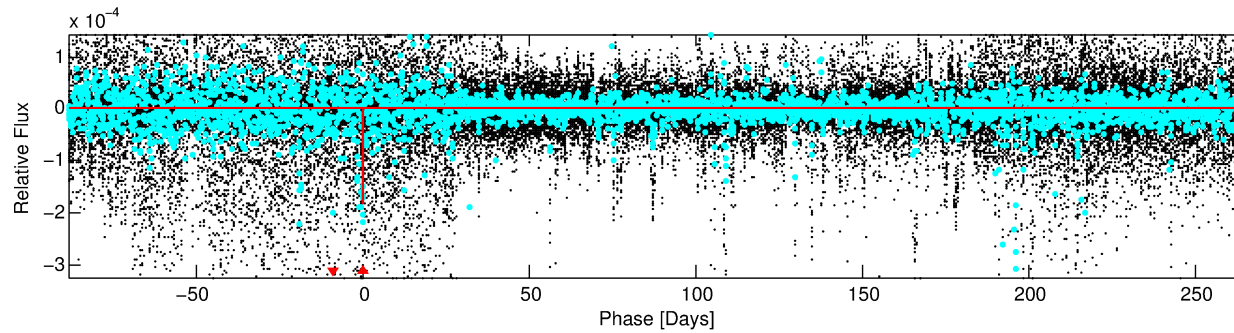
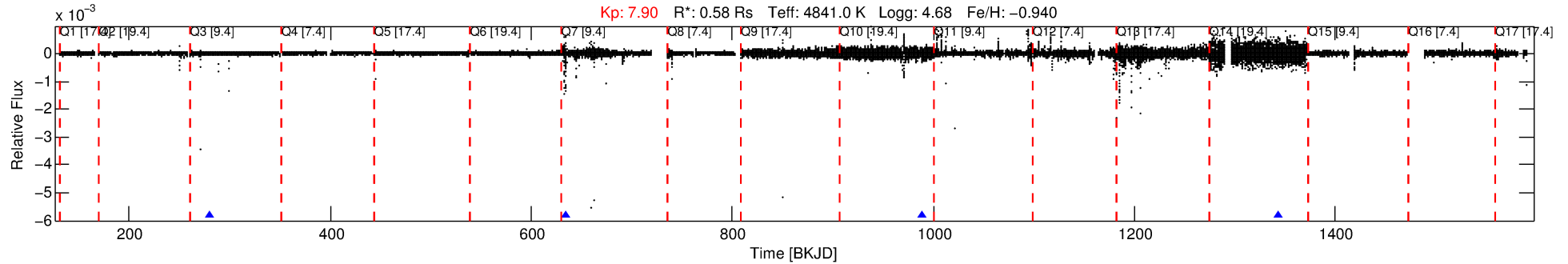
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011506859-01

No Significant Match Found

DV One-Page Summary

KIC: 11506859 Candidate: 1 of 1 Period: 354.203 d



DV Fit Results:

Period = 354.20338 [0.01324] d
Epoch = 280.7957 [0.0277] BKJD
Rp/R* = 0.0134 [0.0100]
a/R* = 170.68 [491.59]
b = 0.76 [1.63]
Seff = 0.25 [0.04]
Teq = 180 [8] K
Rp = 0.85 [0.64] Re
a = 0.8200 [0.0536] AU
Ag = N/A
Teffp = N/A

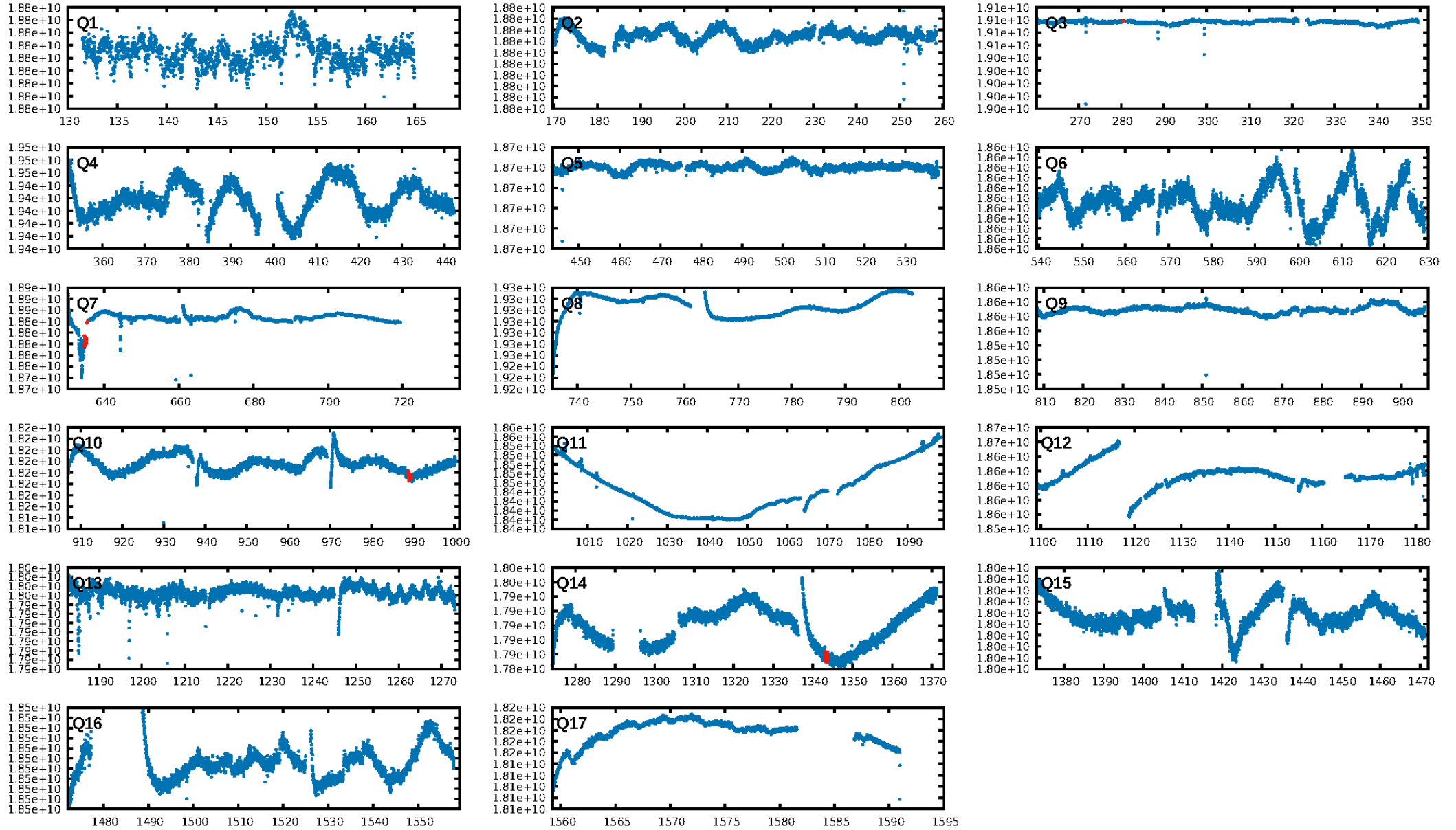
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 3.24e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.9%
Centroid-so: 11.212 arcsec [4.15σ]
OotOffset-rm: 45.402 arcsec [679.48σ]
KicOffset-rm: 49.349 arcsec [738.60σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

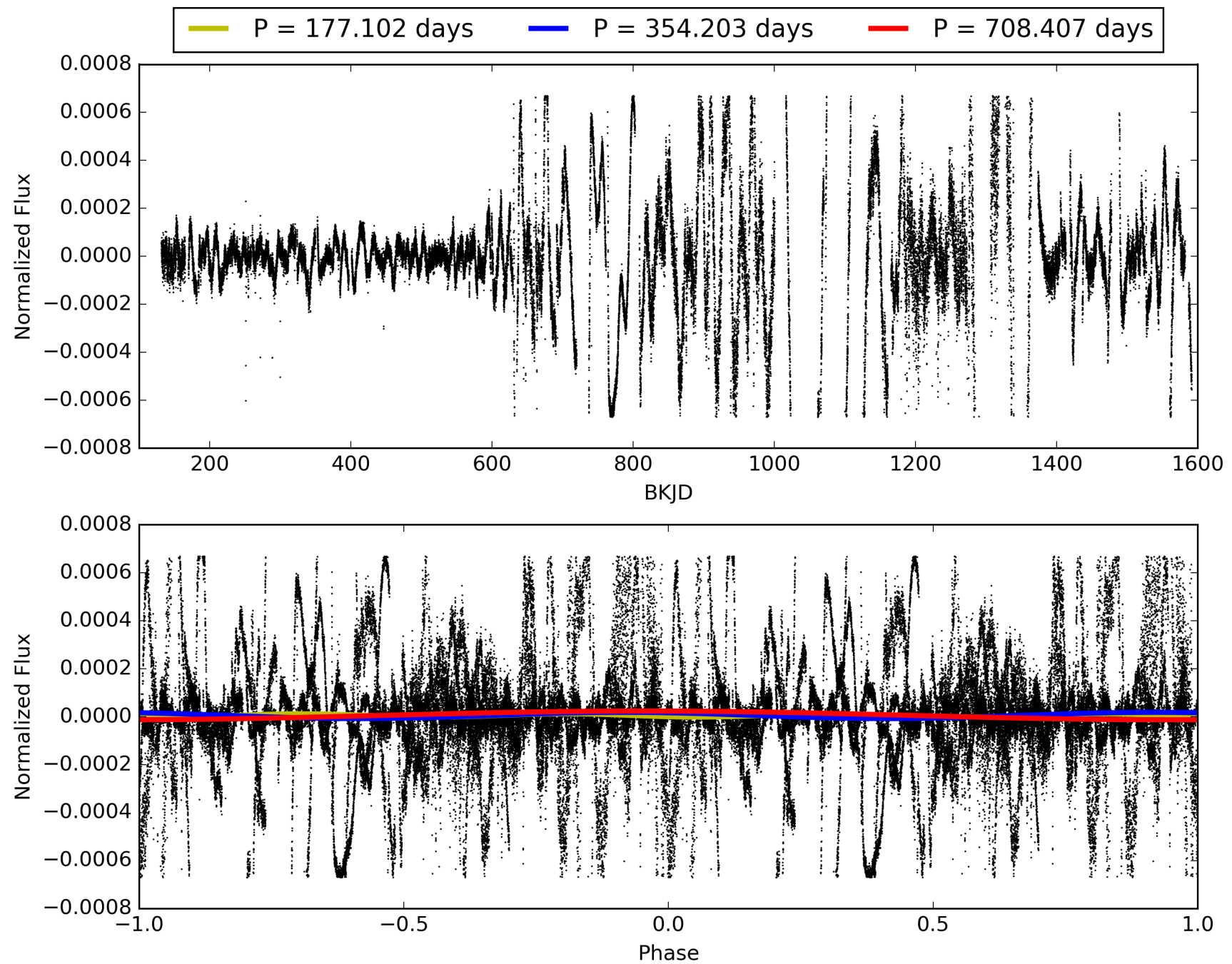
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:04:49 Z

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

TCE 011506859-01, PDC Light Curves

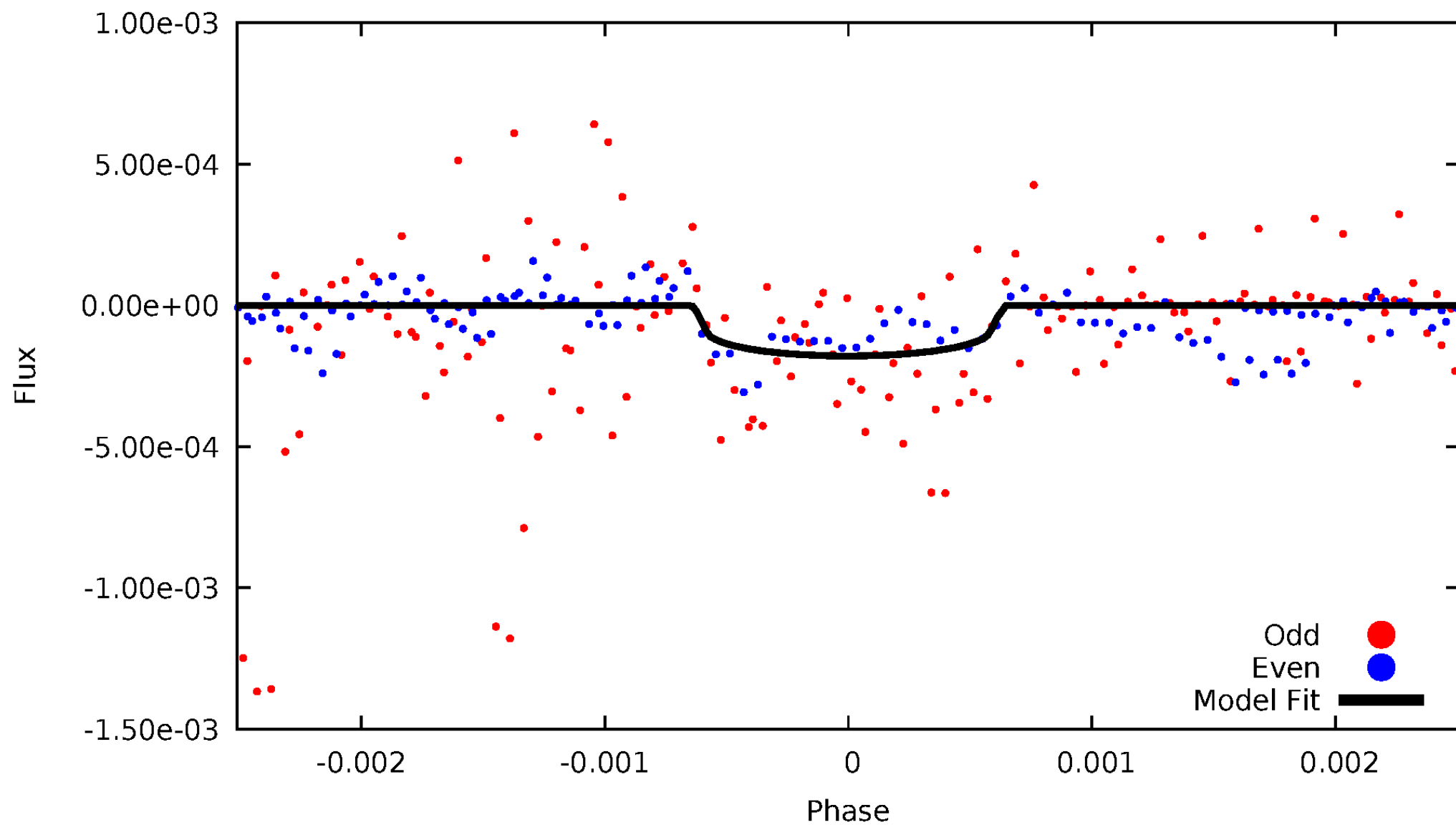


TCE 011506859-01



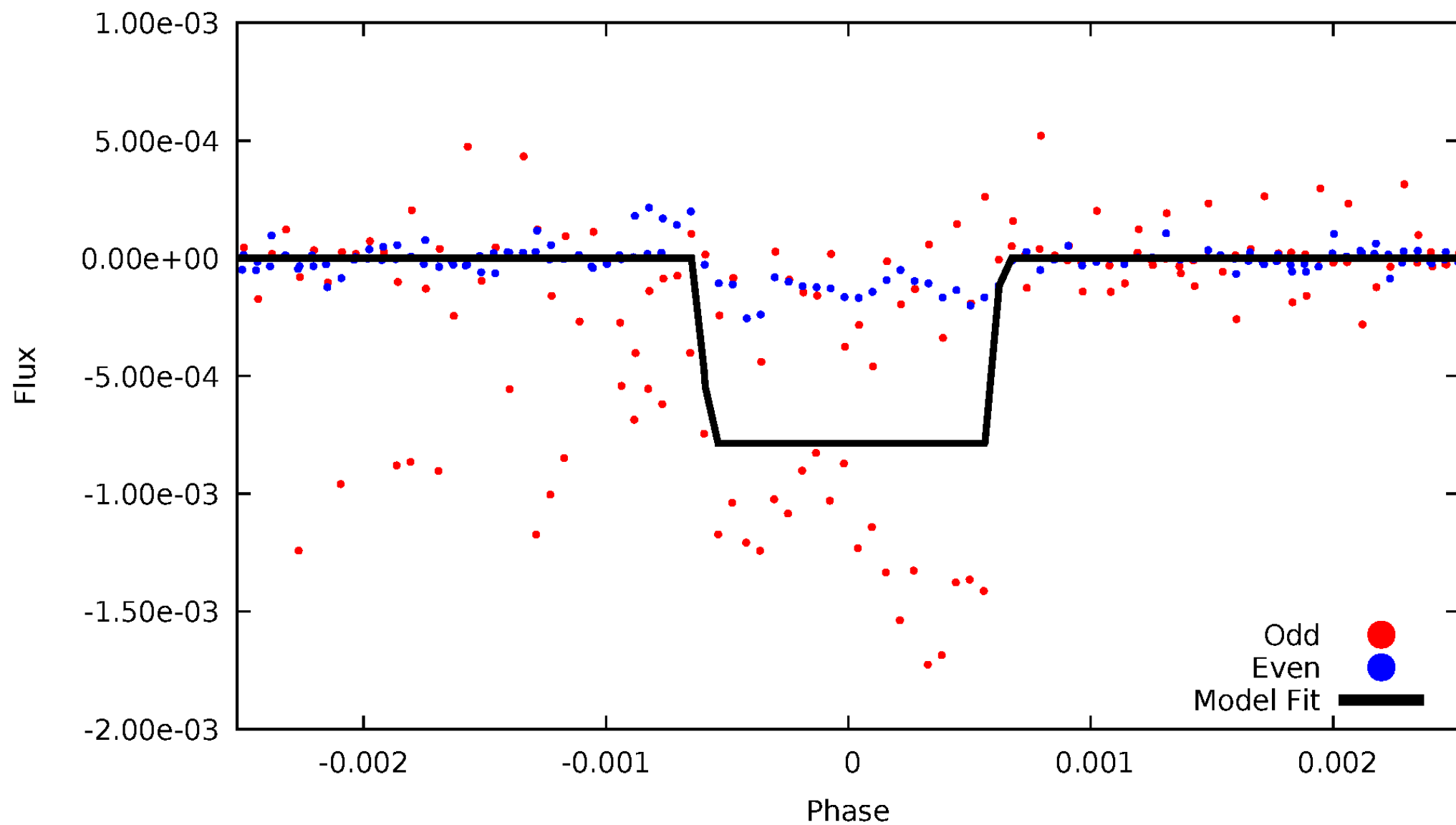
DV Odd/Even

TCE 011506859-01



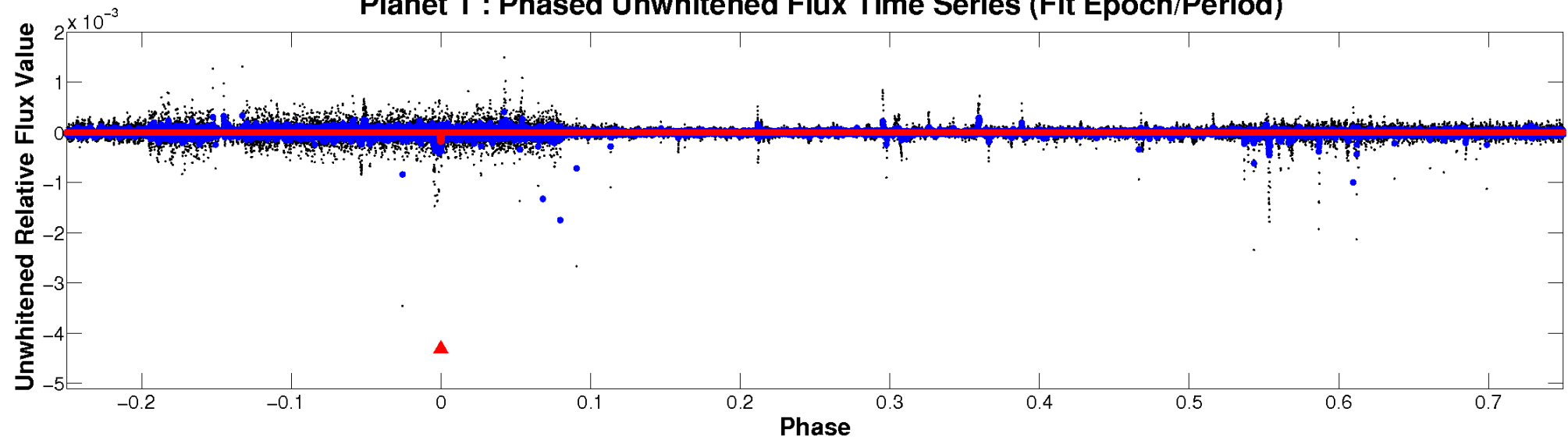
ALT Odd/Even

TCE 011506859-01

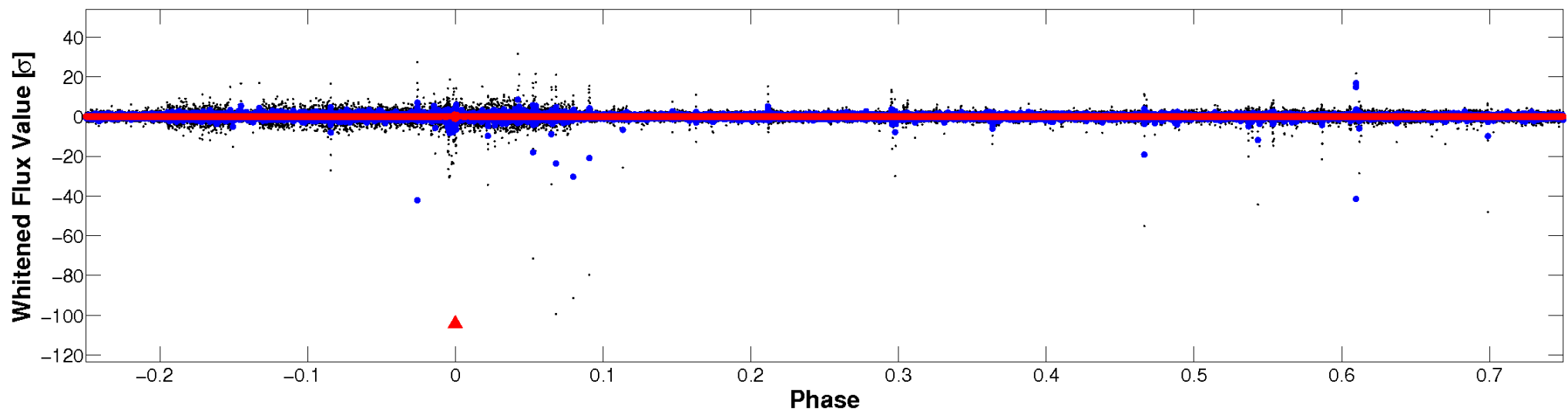


Non-Whitened Vs. Whitened Light Curve

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

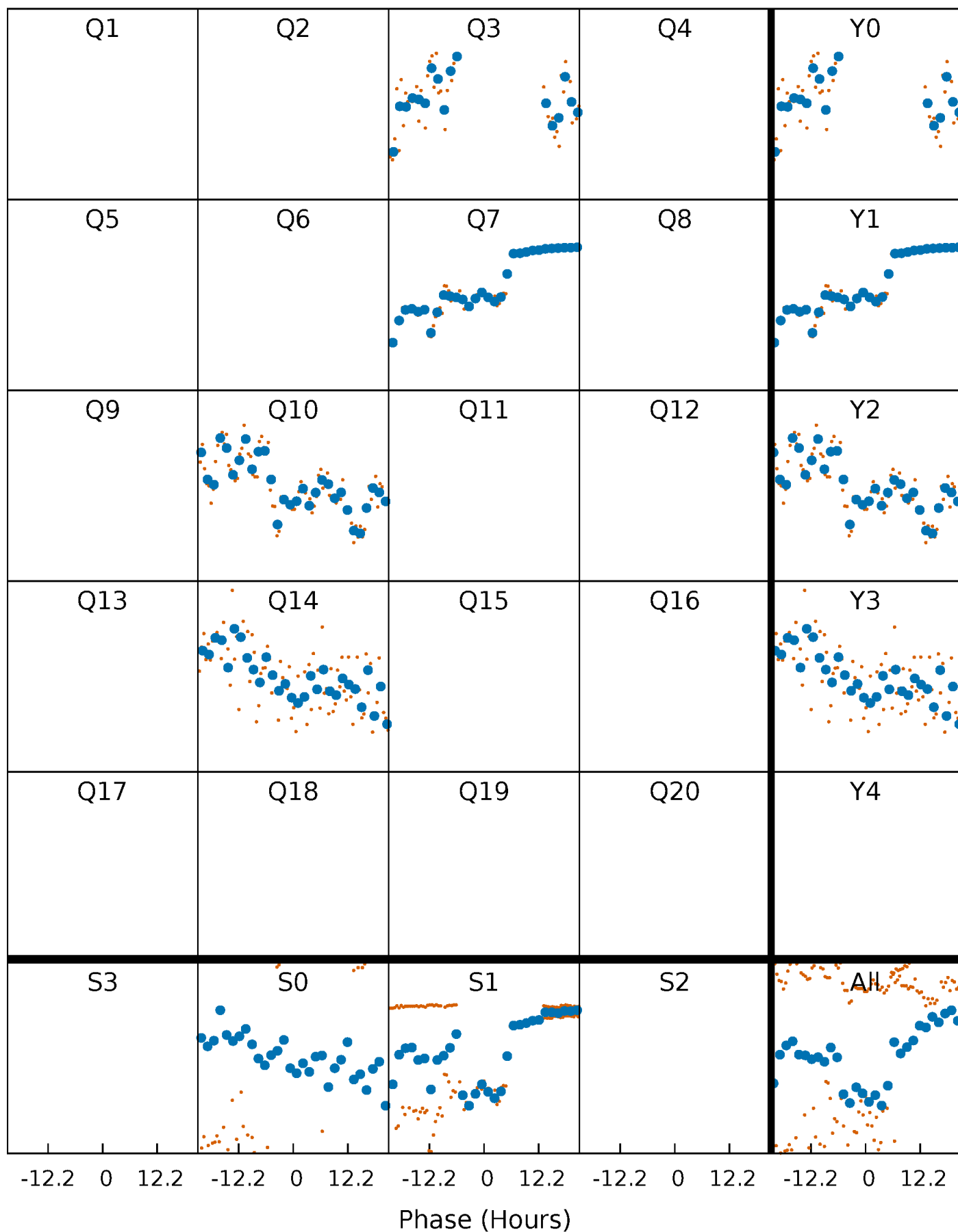


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



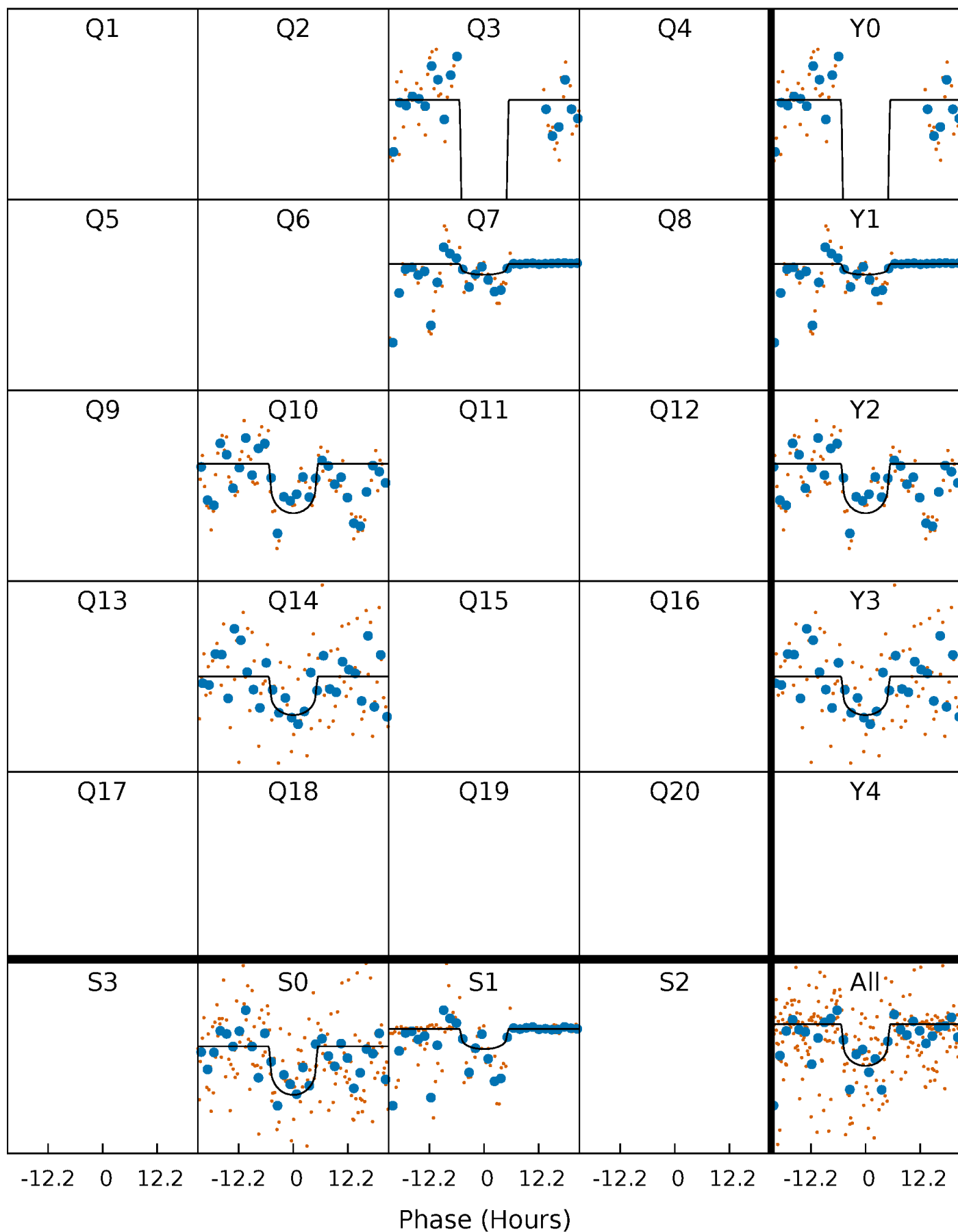
PDC Quarter-Phased Transit Curves

TCE 011506859-01 P=354.203385 Days $T_0=280.795659$ (BKJD)



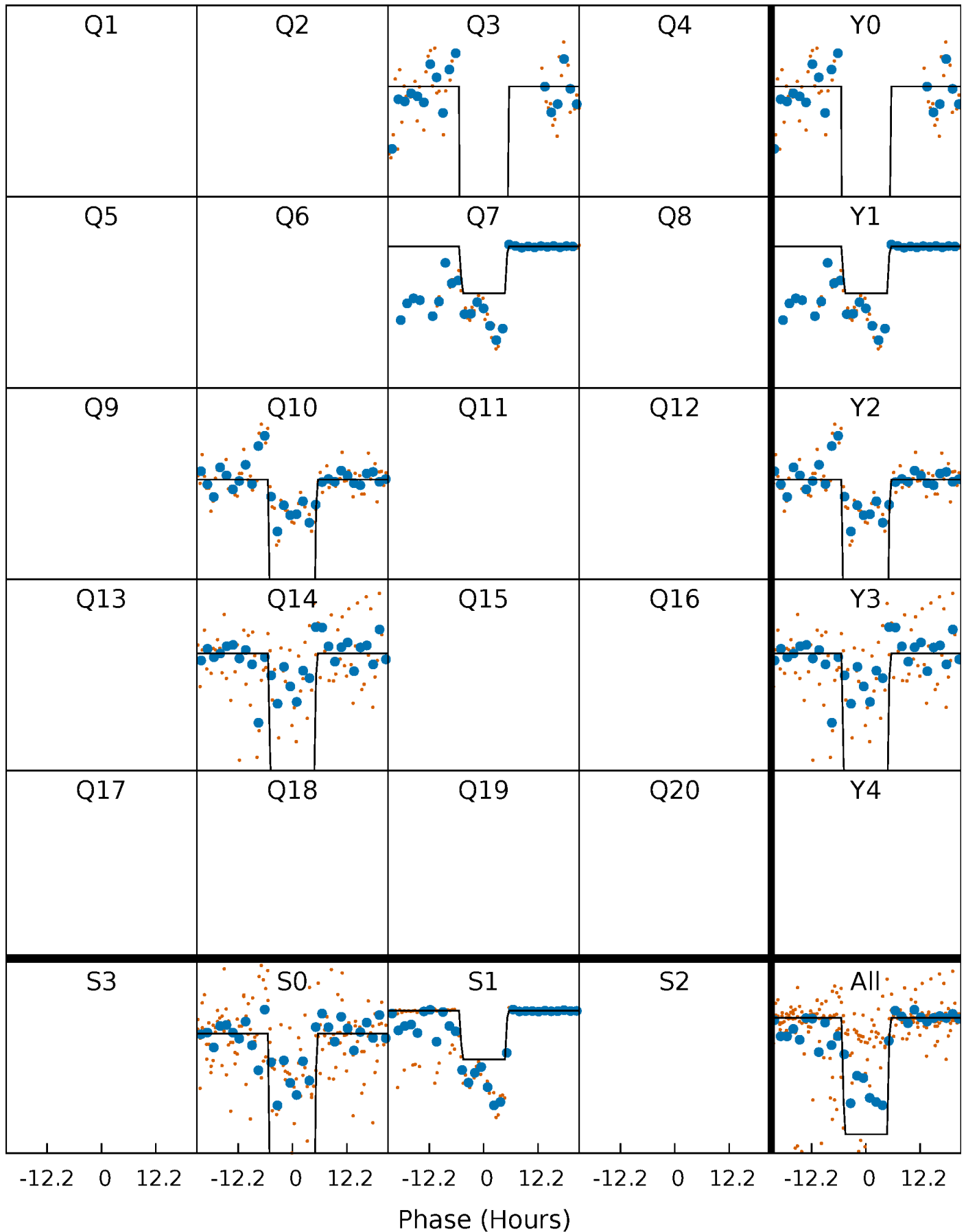
DV Quarter-Phased Transit Curves

TCE 011506859-01 P=354.203385 Days $T_0=280.795659$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

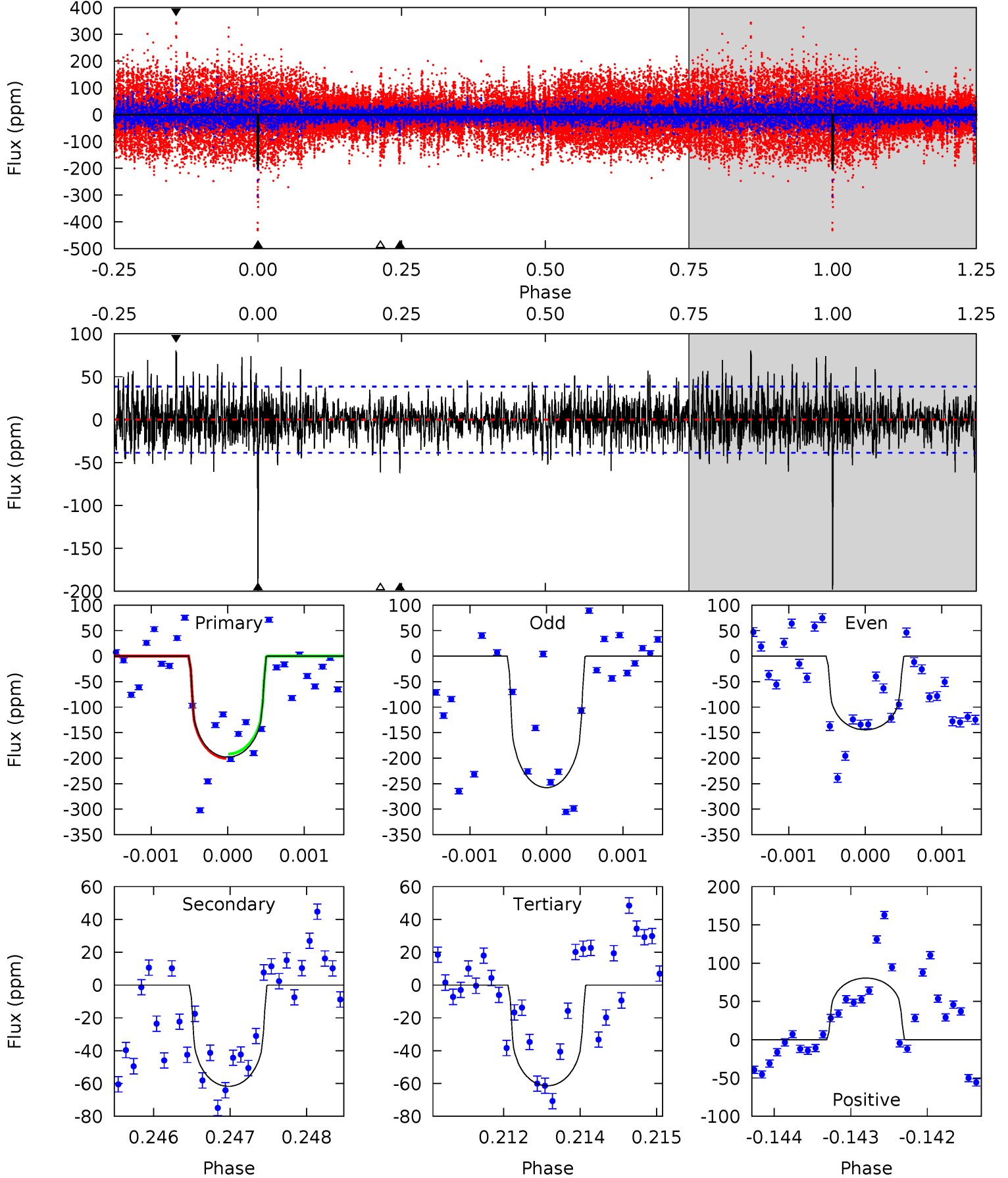
TCE 011506859-01 P=354.195329 Days $T_0=280.808289$ (BKJD)



DV Model-Shift Uniqueness Test

011506859-01, P = 354.203385 Days, E = 280.795659 Days

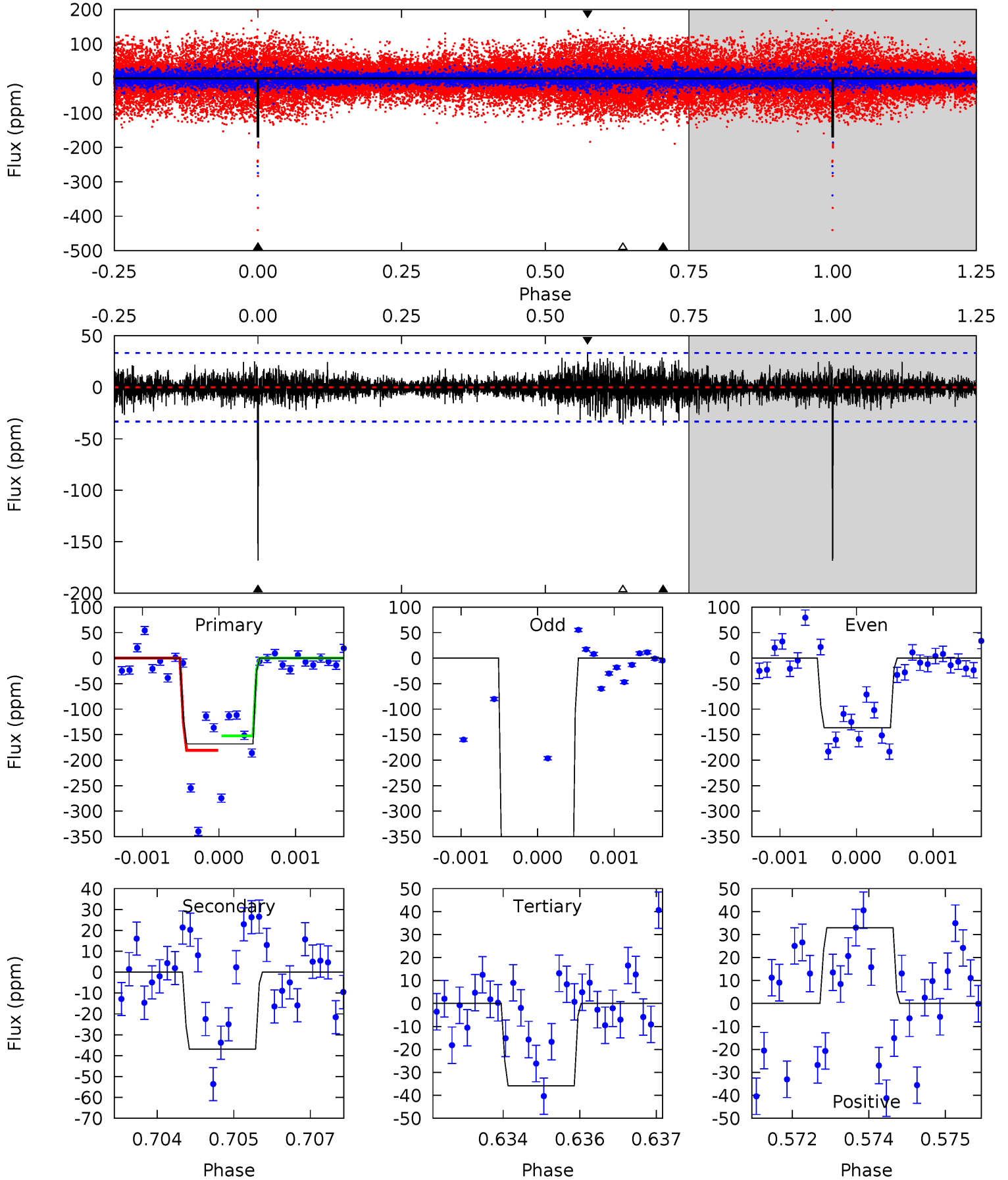
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	8.63	8.59	11.3	5.41	3.22	2.32	19.1	16.4	0.04	-2.63	6.50	1.36	0.29	0



Alt Model-Shift Uniqueness Test

011506859-01, P = 354.195329 Days, E = 280.808289 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	6.00	5.81	5.36	5.41	3.22	1.14	21.5	21.9	0.19	0.64	47.9	3.66	0.16	2.26



Stellar Parameters For KIC 011506859

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+174}_{-174}	$4.679^{+0.050}_{-0.036}$	$-0.940^{+0.300}_{-0.300}$	$0.580^{+0.046}_{-0.037}$	$0.586^{+0.049}_{-0.029}$	$4.236^{+0.827}_{-0.635}$
	+4%/-4%	+1%/-1%	+32%/-32%	+8%/-6%	+8%/-5%	+20%/-15%
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 011506859-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 7	$0.91^{+0.65}_{-0.53}$	250^{+9}_{-10}	3866^{+1619}_{-617}	$28216^{+131464}_{-18600}$
Alt.	-37 ± 6	$1.79^{+0.64}_{-0.63}$	250^{+10}_{-10}	2903^{+387}_{-238}	4372^{+5883}_{-2109}

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 $A_{obs} \gg 1.0$

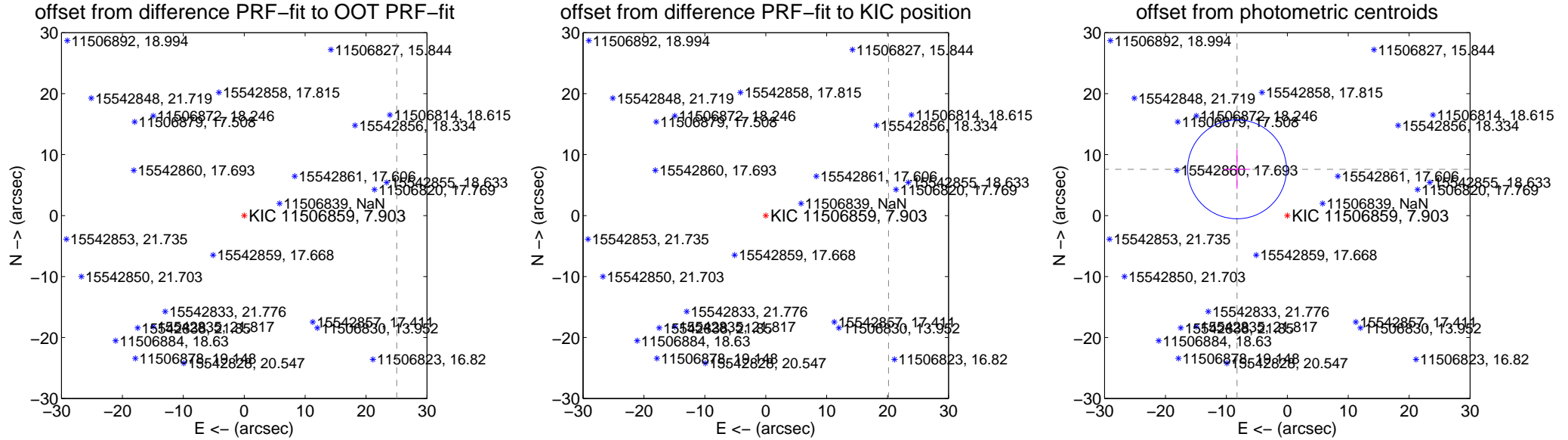
DV Centroid Data

Supplemental centroid analysis for 011506859-01. **Kepler magnitude: 7.90.** Transit SNR 8.87

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 8.68 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	45.402 \pm 0.067	679.48	-25.041 \pm 0.067	37.871 \pm 0.067
PRF-fit source offset from KIC position	49.349 \pm 0.067	738.60	-20.156 \pm 0.067	45.045 \pm 0.067
photometric centroid source offset	11.21 \pm 2.70	4.14	8.25 \pm 2.18	7.59 \pm 3.21



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.

Q5 no difference image



Q5 no OOT image



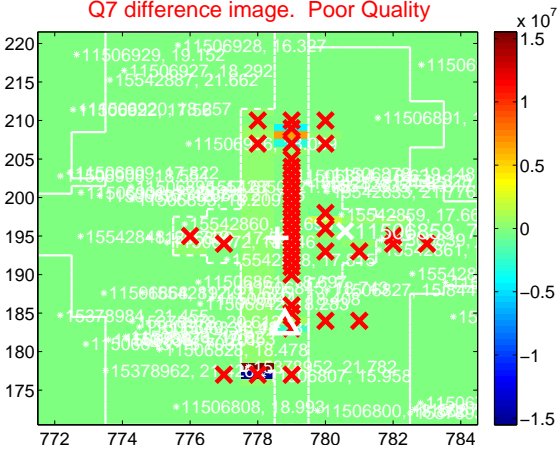
Q6 no difference image



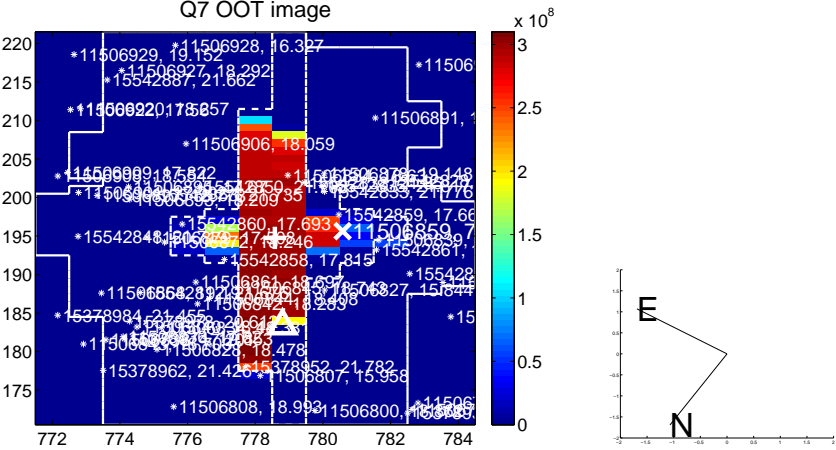
Q6 no OOT image



Q7 difference image. Poor Quality



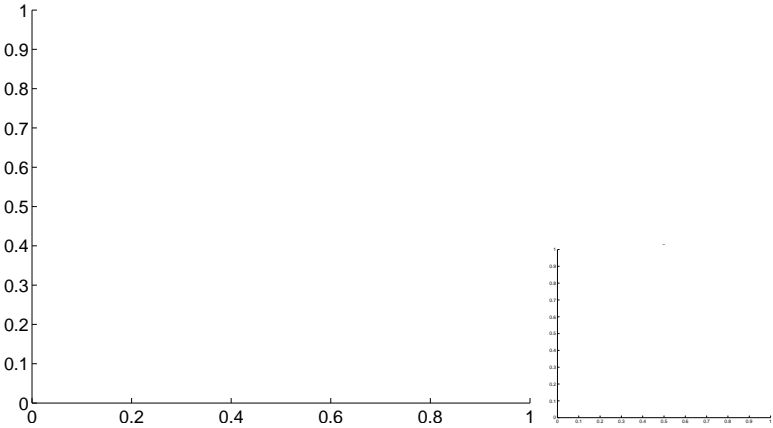
Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

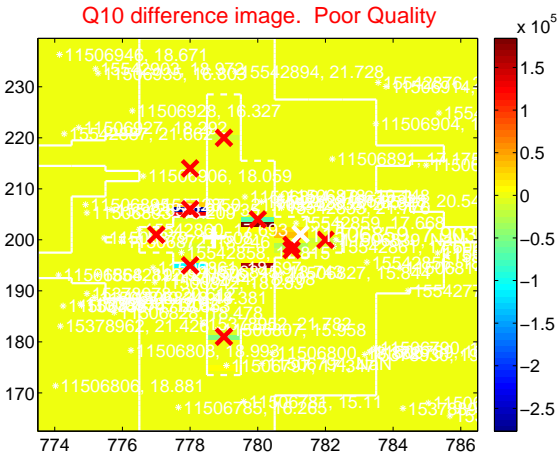
Q9 no difference image



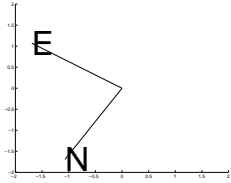
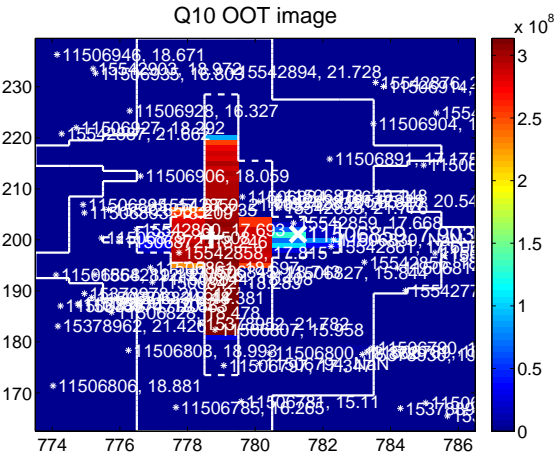
Q9 no OOT image



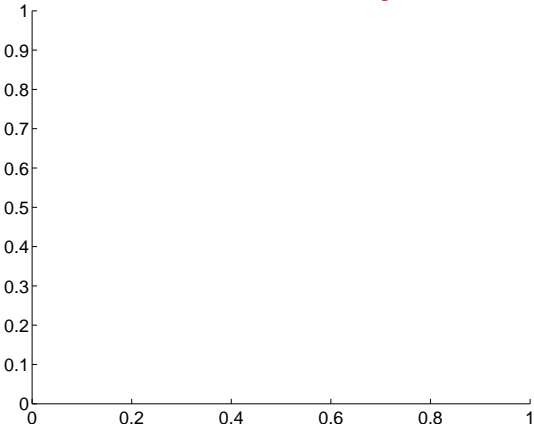
Q10 difference image. Poor Quality



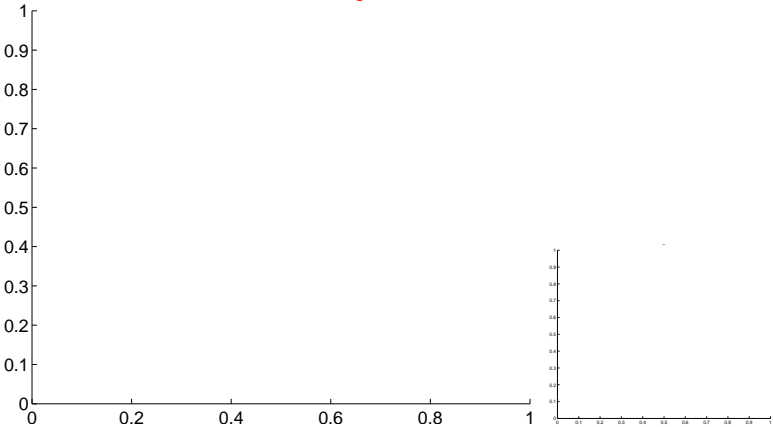
Q10 OOT image



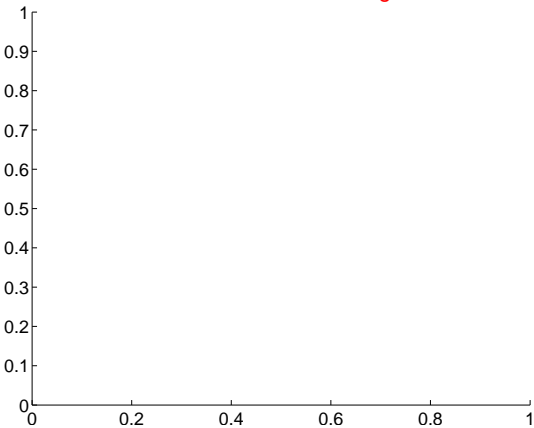
Q11 no difference image



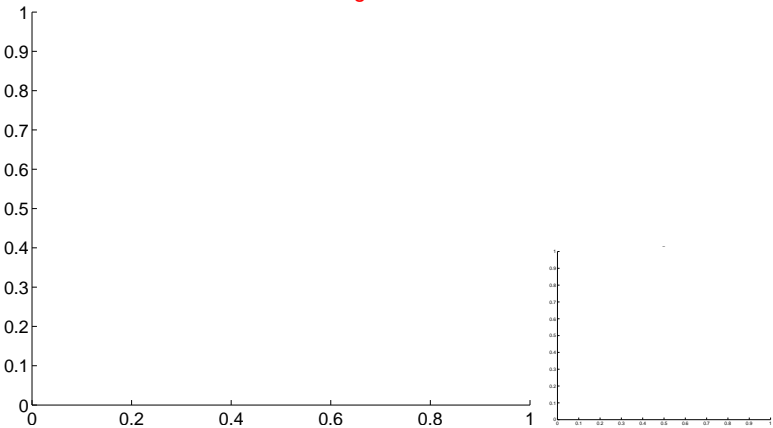
Q11 no OOT image



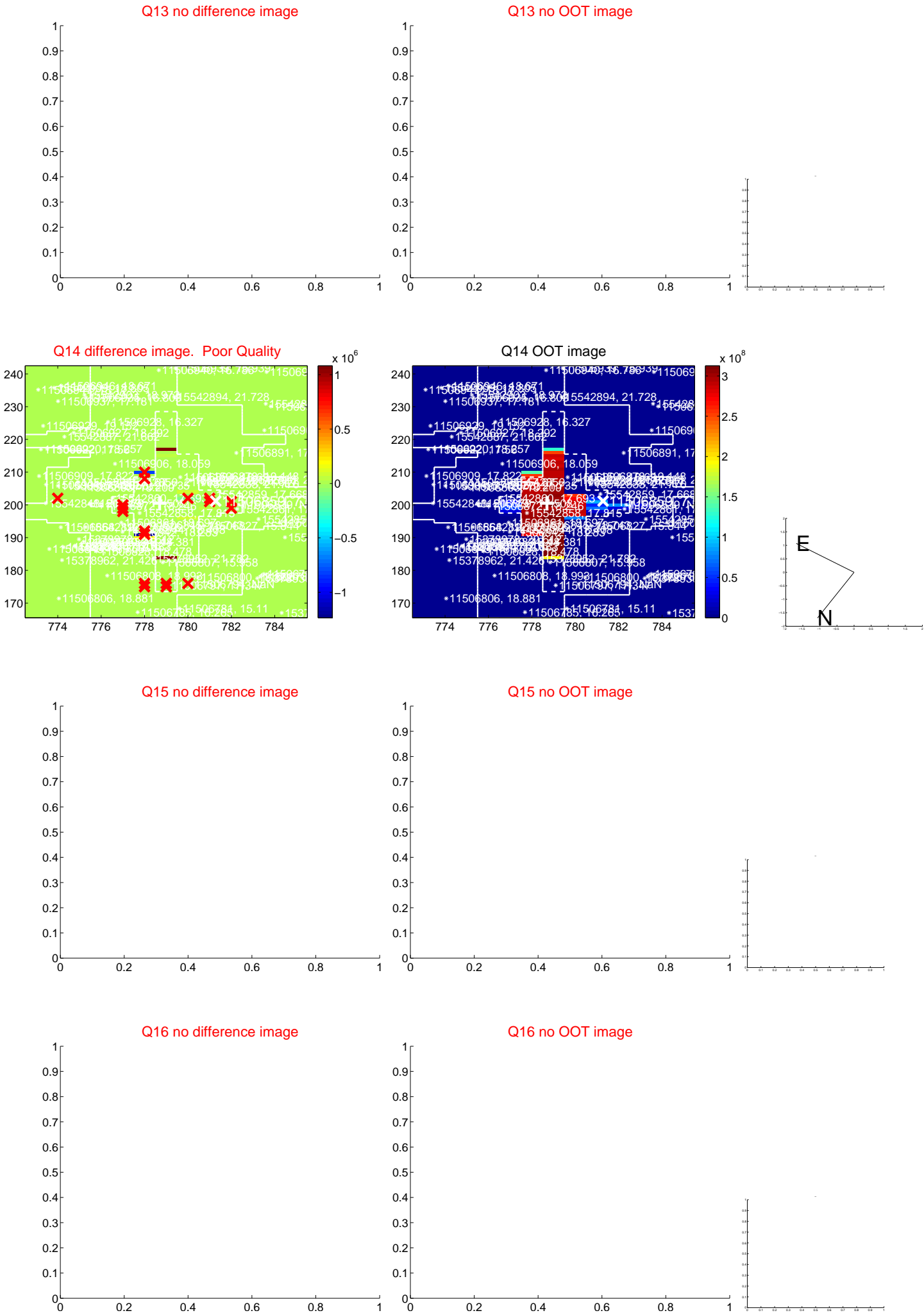
Q12 no difference image



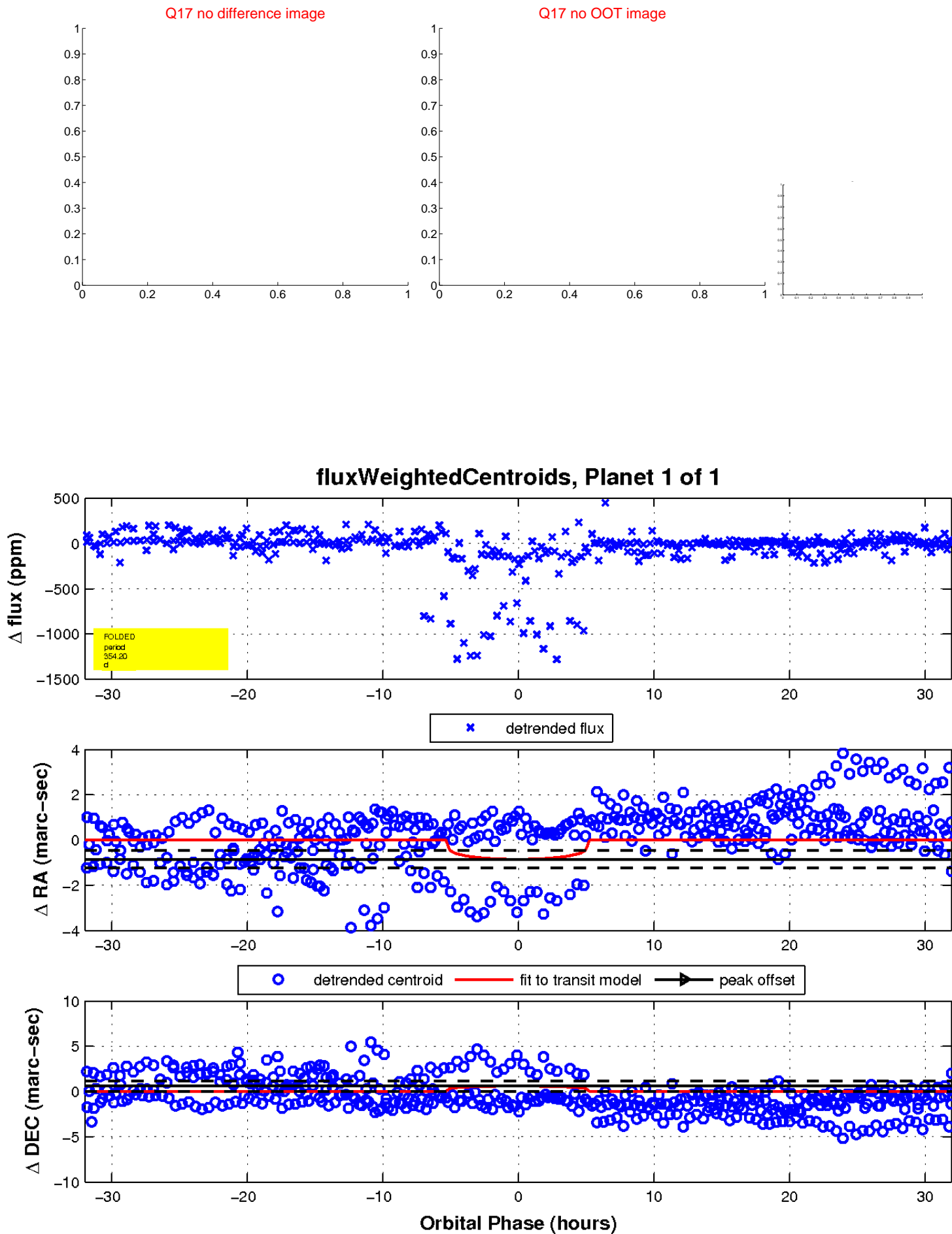
Q12 no OOT image



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.



UKIRT Image

Declination

