

KIC 003430893

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})
003430893-01	OBS	No	432.556578	367.479996	133.9	10.243	9.5	7.8	1.50	6161	2.00	2.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003430893-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

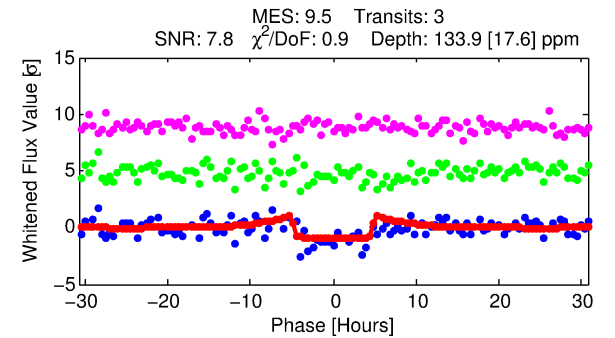
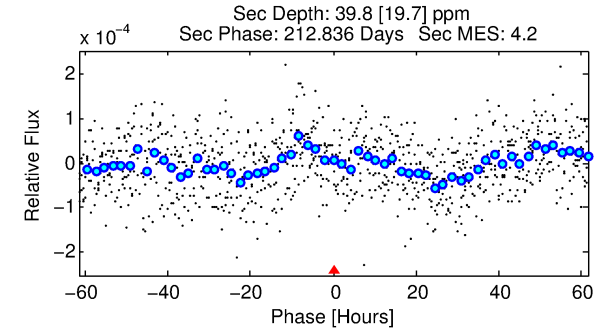
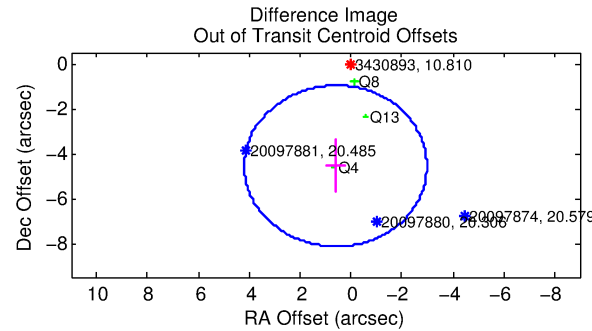
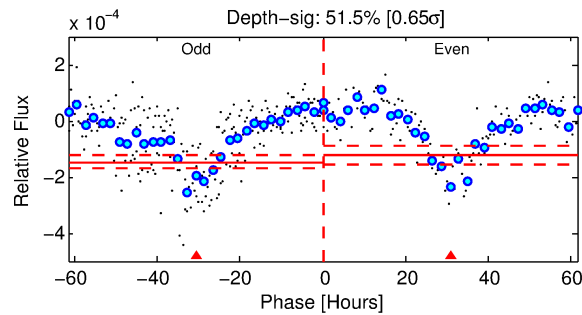
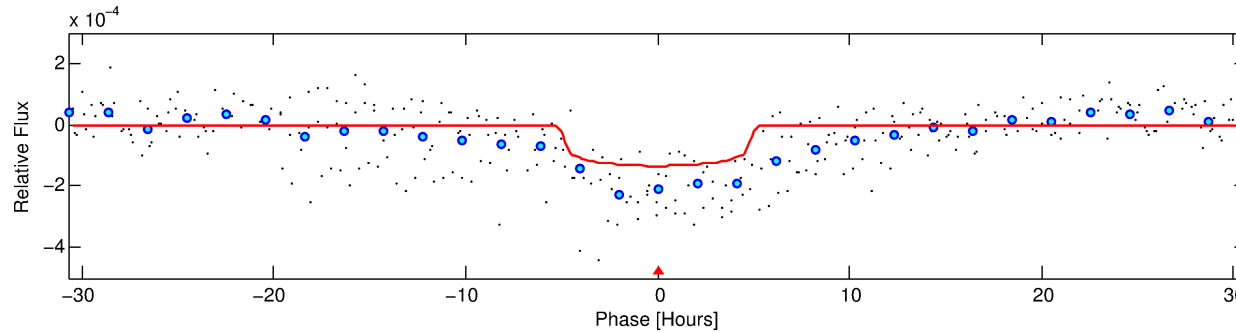
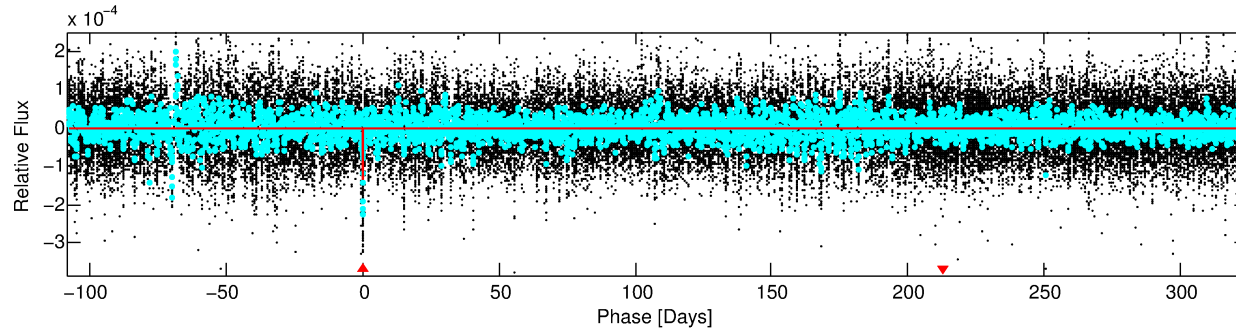
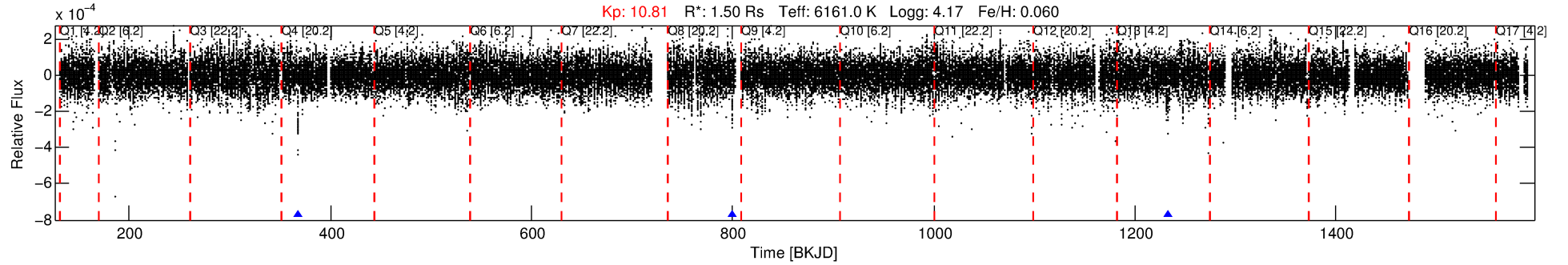
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003430893-01

No Significant Match Found

DV One-Page Summary

KIC: 3430893 Candidate: 1 of 1 Period: 432.557 d



DV Fit Results:

Period = 432.55658 [0.00759] d
Epoch = 367.4800 [0.0097] BKJD
Rp/R* = 0.0122 [0.0029]
a/R* = 166.75 [188.15]
b = 0.87 [0.32]
Seff = 2.04 [0.13]
Teq = 305 [5] K
Rp = 2.00 [0.48] Re
a = 1.1925 [0.0388] AU
Ag = 7820.23 [5349.94] [1.46 σ]
Teff = 4432 [759] K [5.44 σ]

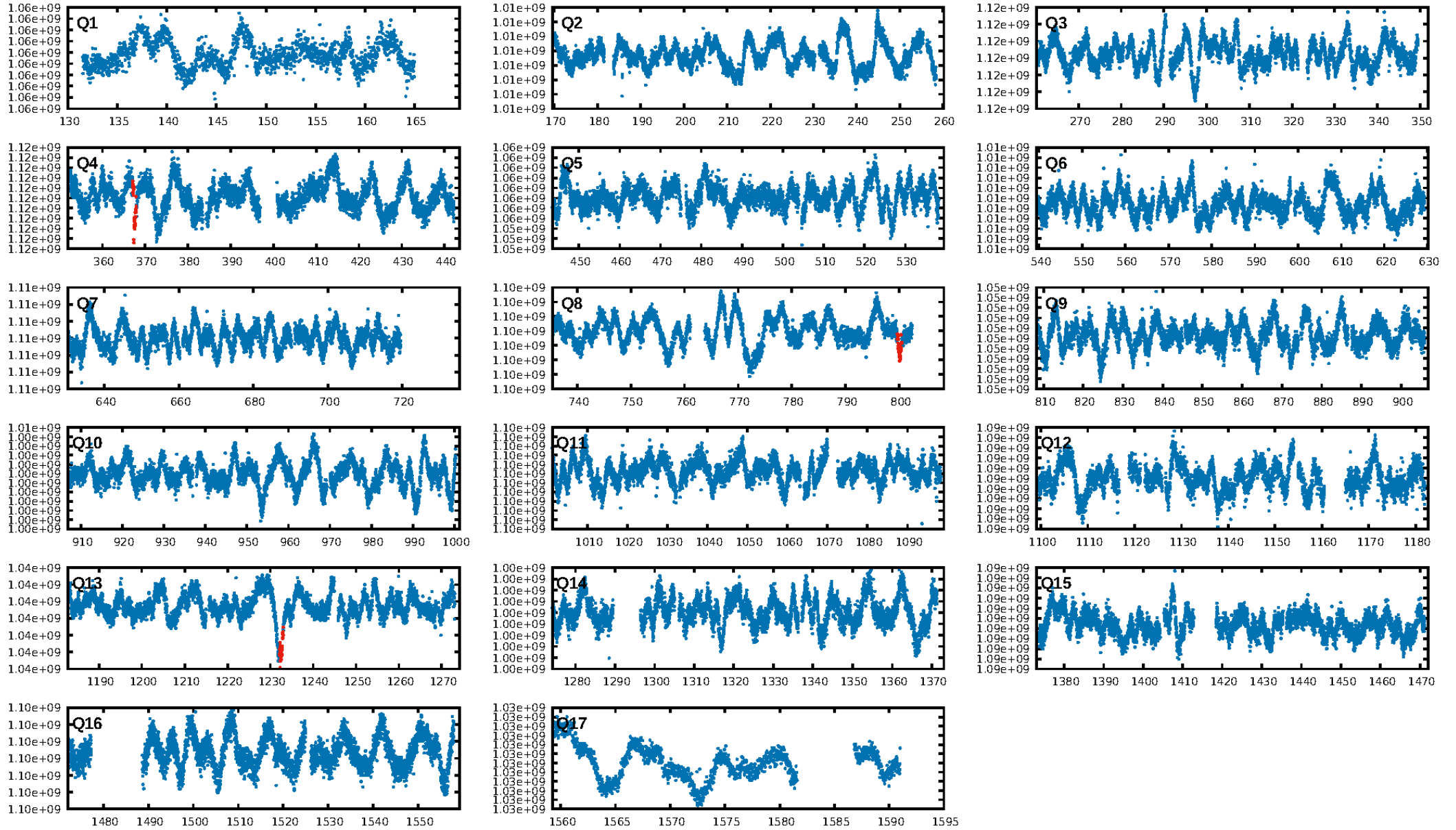
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.0%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 2.43e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19
Centroid-sig: 42.2%
Centroid-so: 1.586 arcsec [0.64 σ]
OotOffset-rm: 4.600 arcsec [3.84 σ]
KicOffset-rm: 4.245 arcsec [5.45 σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

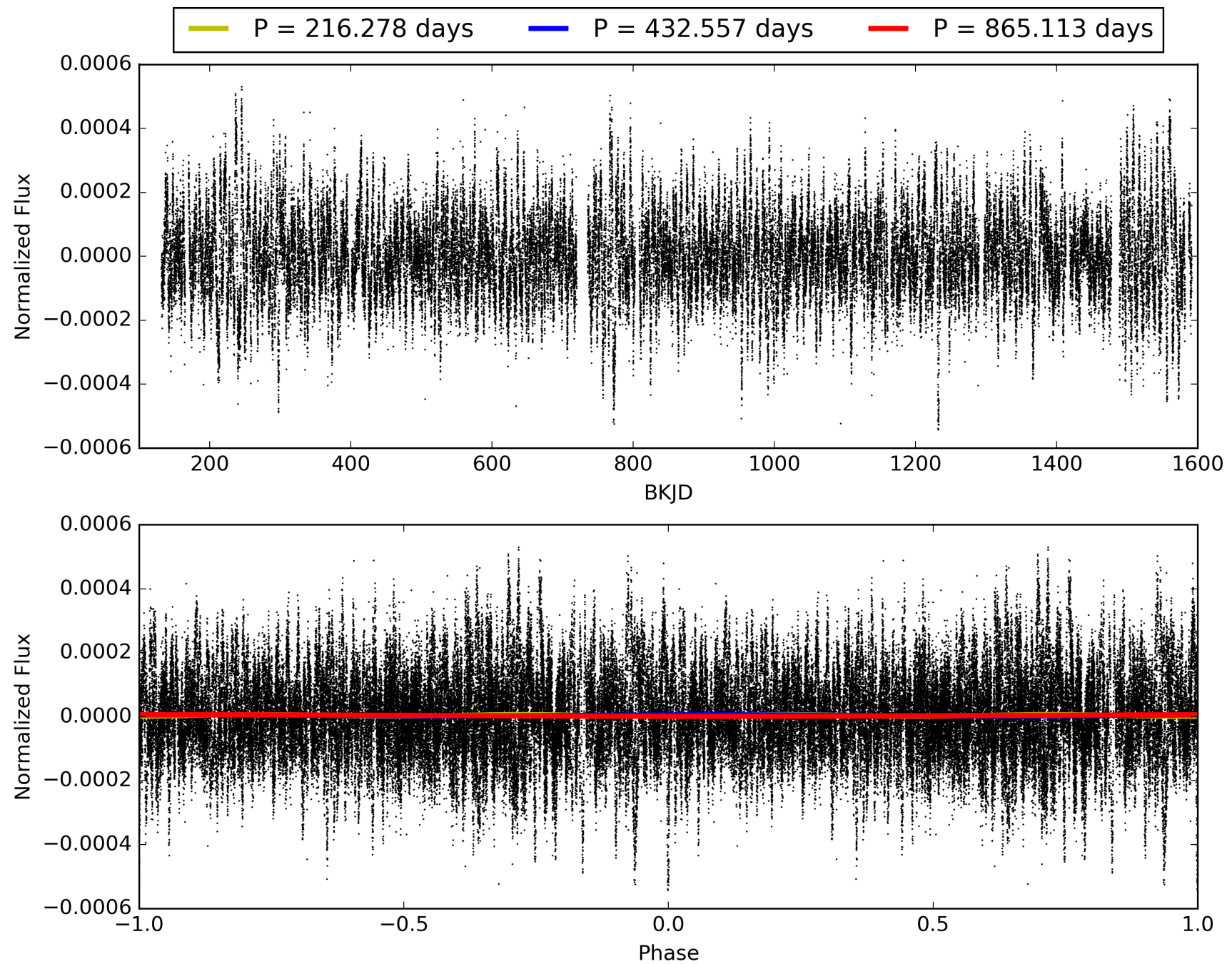
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:10:12 Z

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

TCE 003430893-01, PDC Light Curves

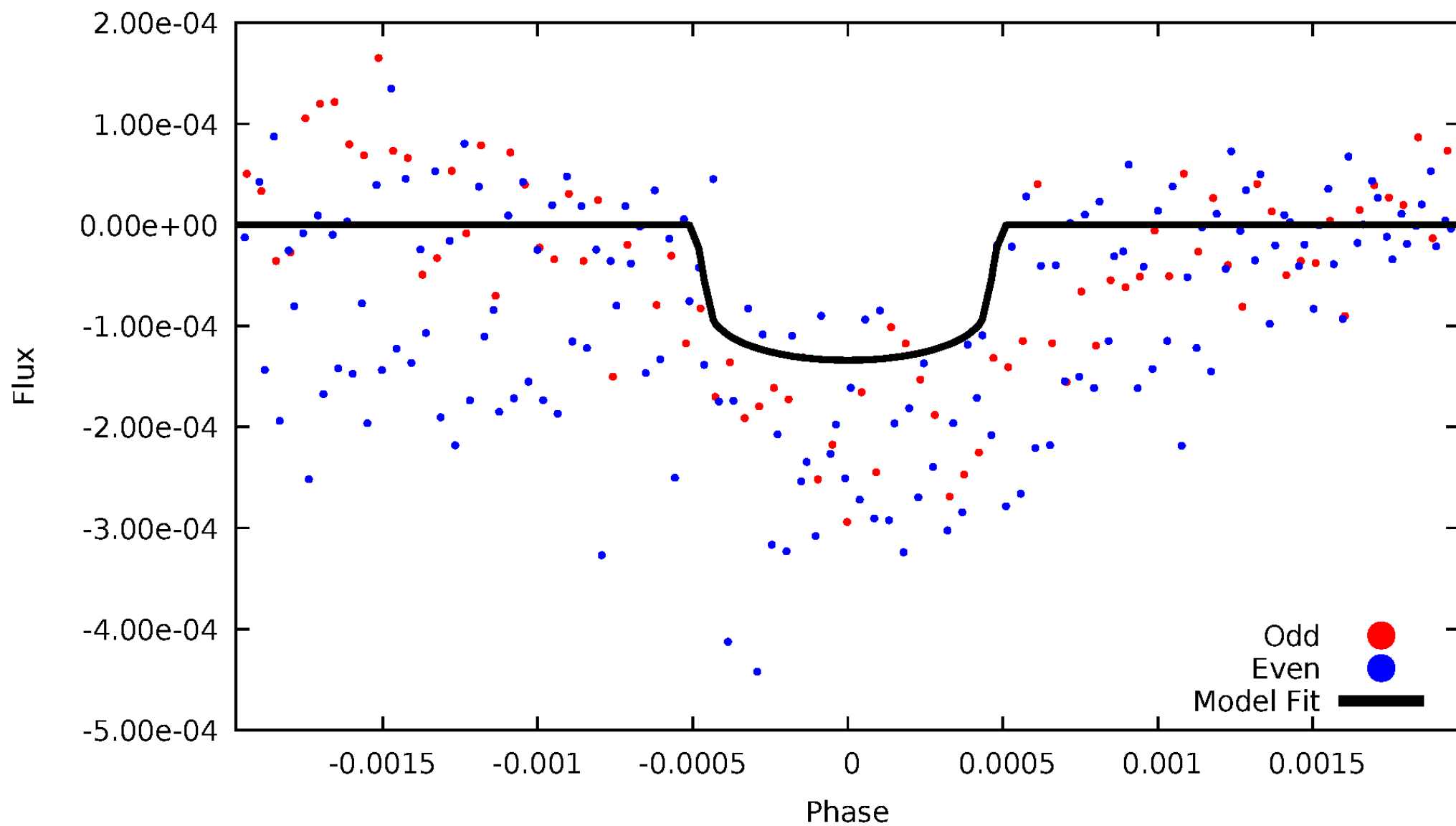


TCE 003430893-01



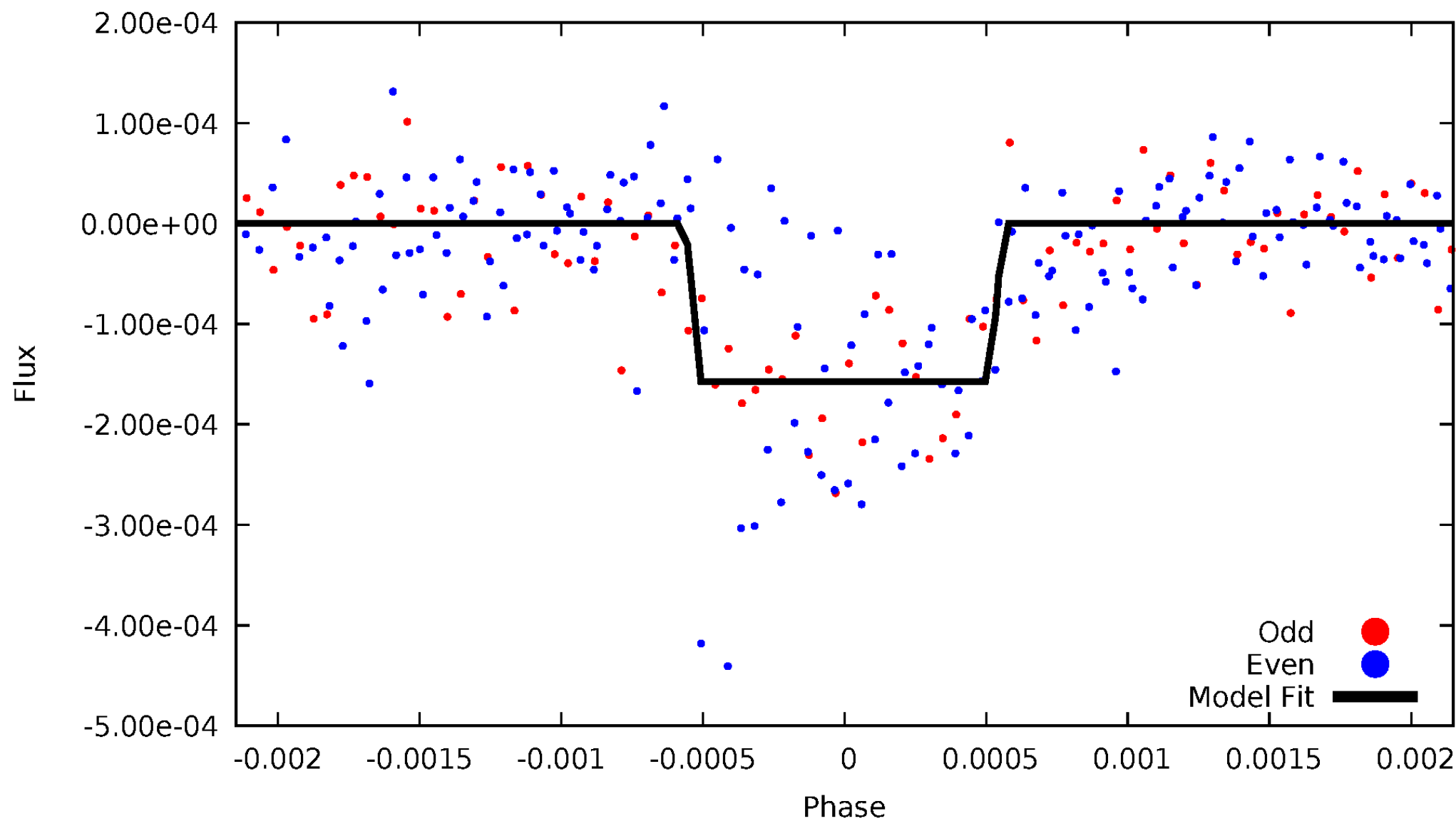
DV Odd/Even

TCE 003430893-01



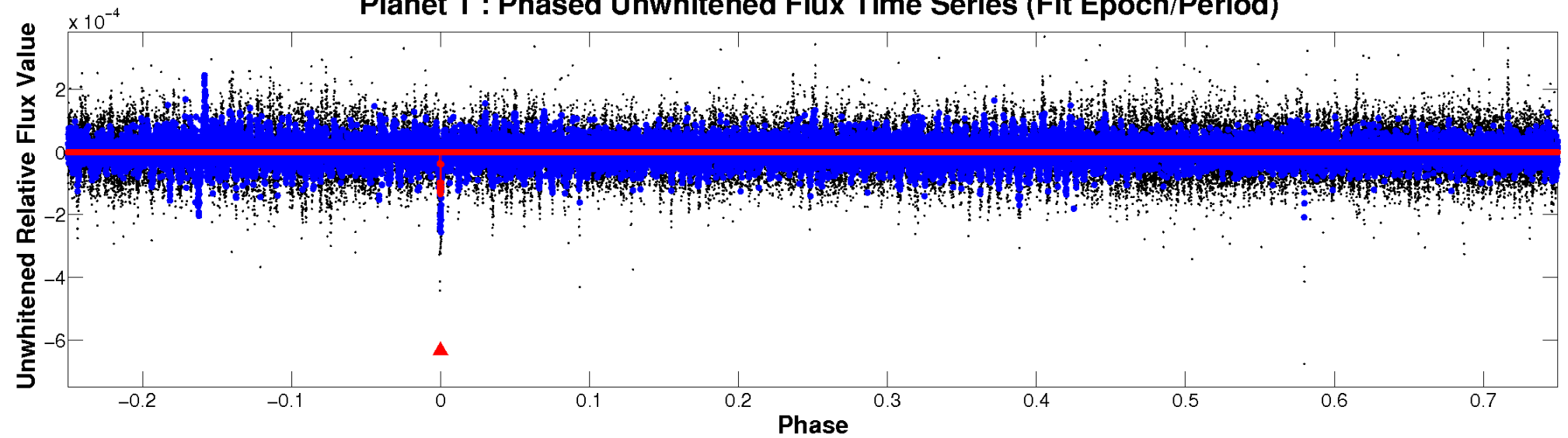
ALT Odd/Even

TCE 003430893-01

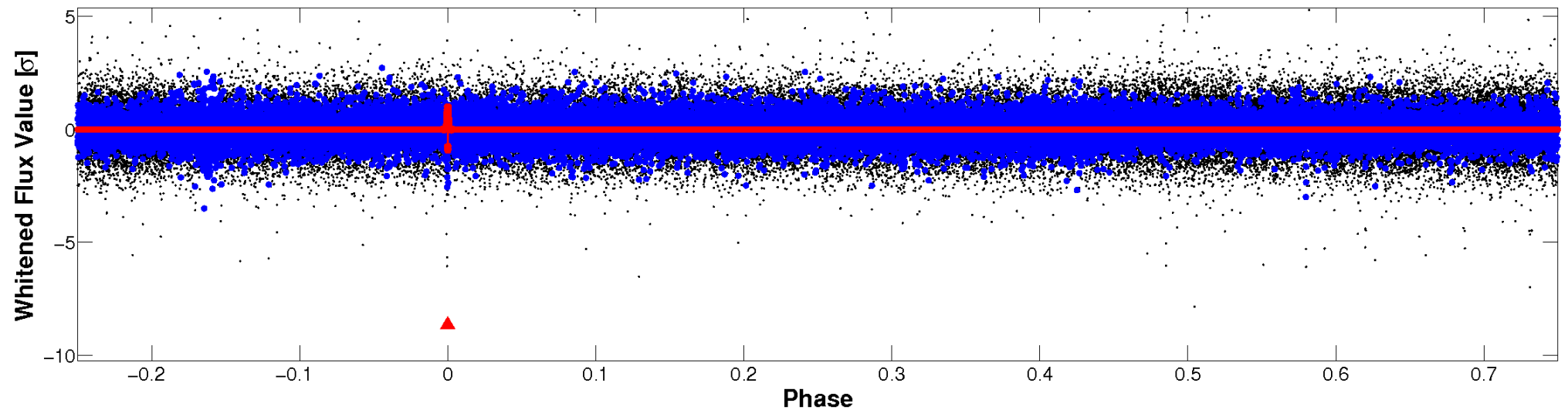


Non-Whitened Vs. Whitened Light Curve

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

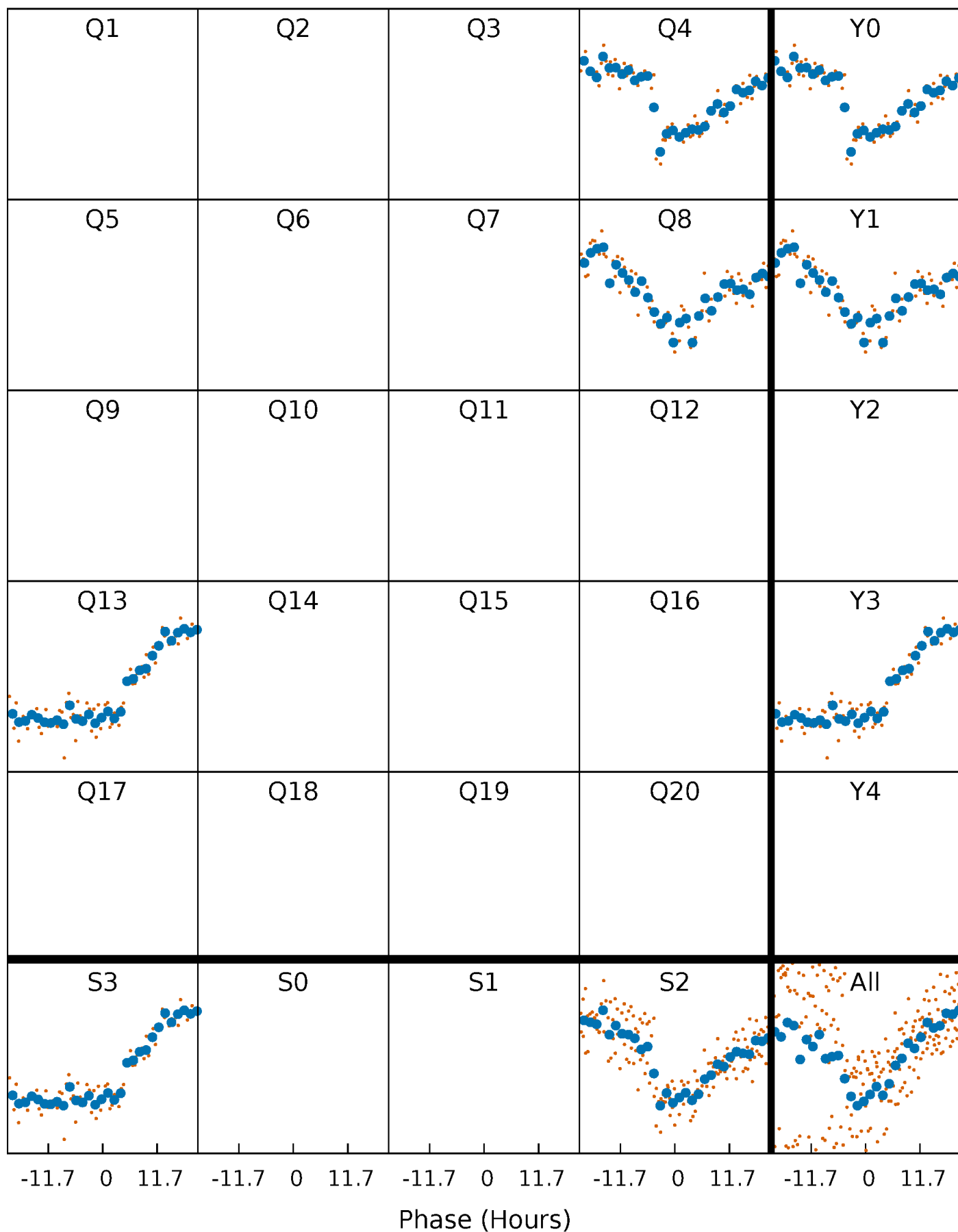


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



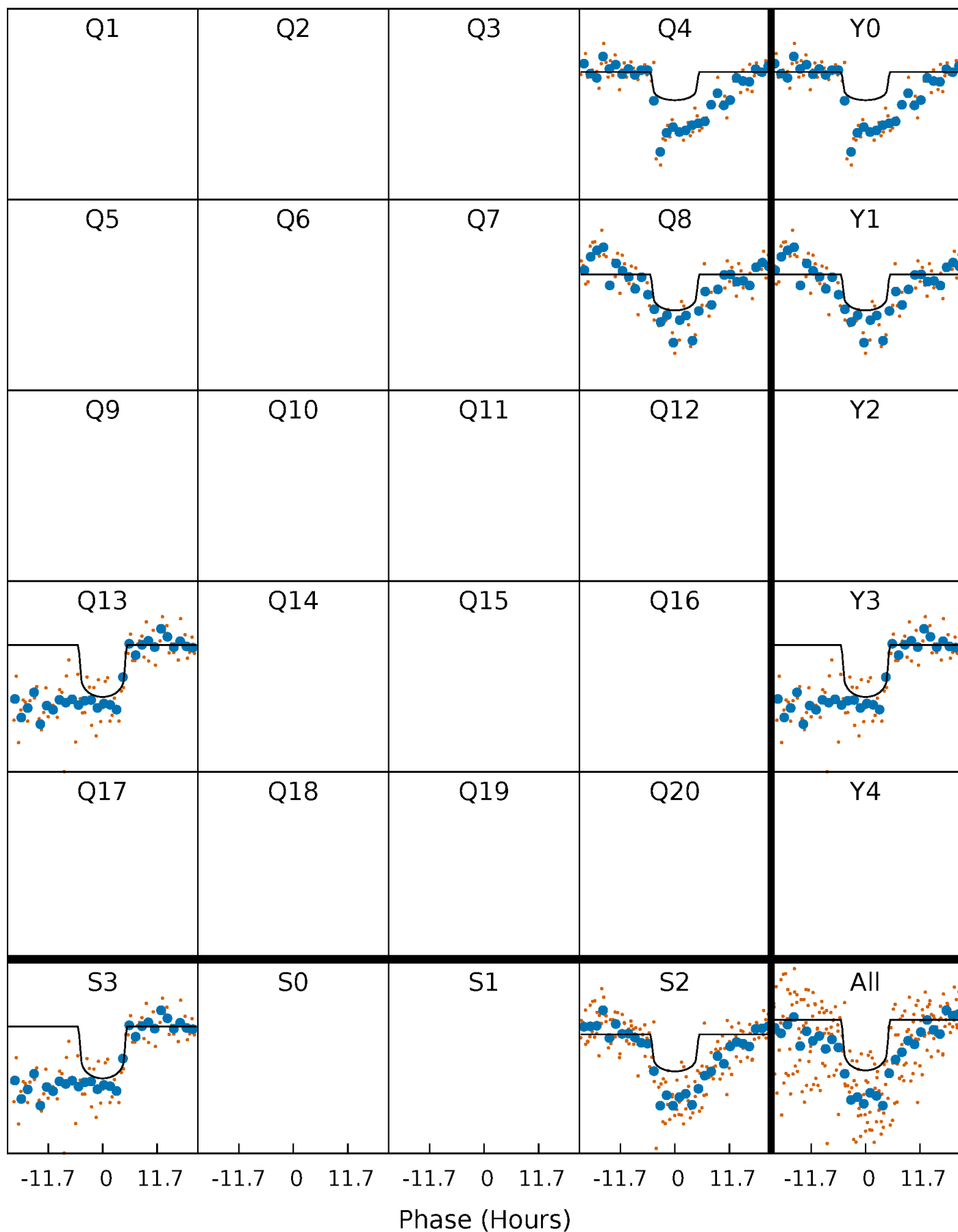
PDC Quarter-Phased Transit Curves

TCE 003430893-01 P=432.556578 Days $T_0=367.479996$ (BKJD)



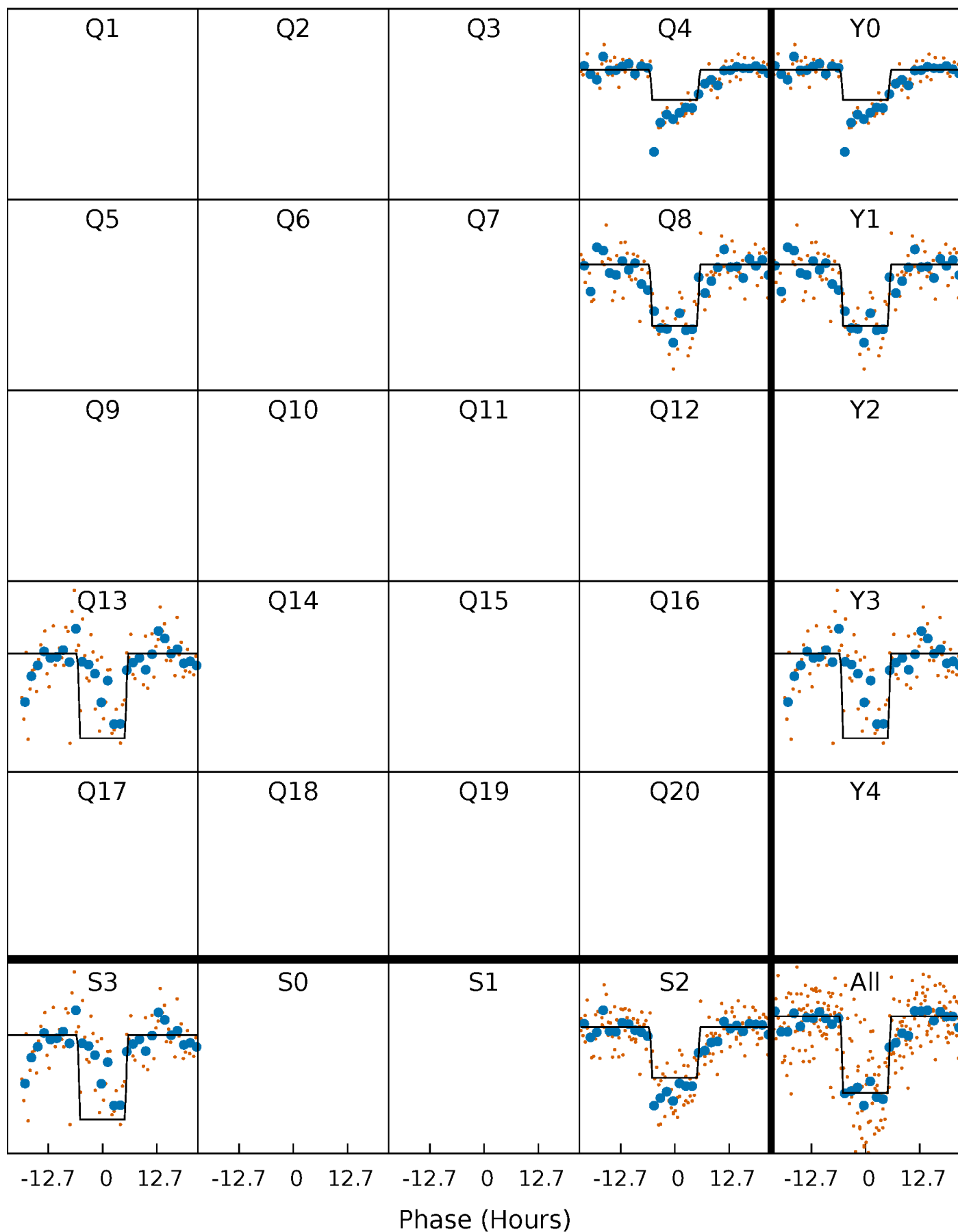
DV Quarter-Phased Transit Curves

TCE 003430893-01 $P=432.556578$ Days $T_0=367.479996$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

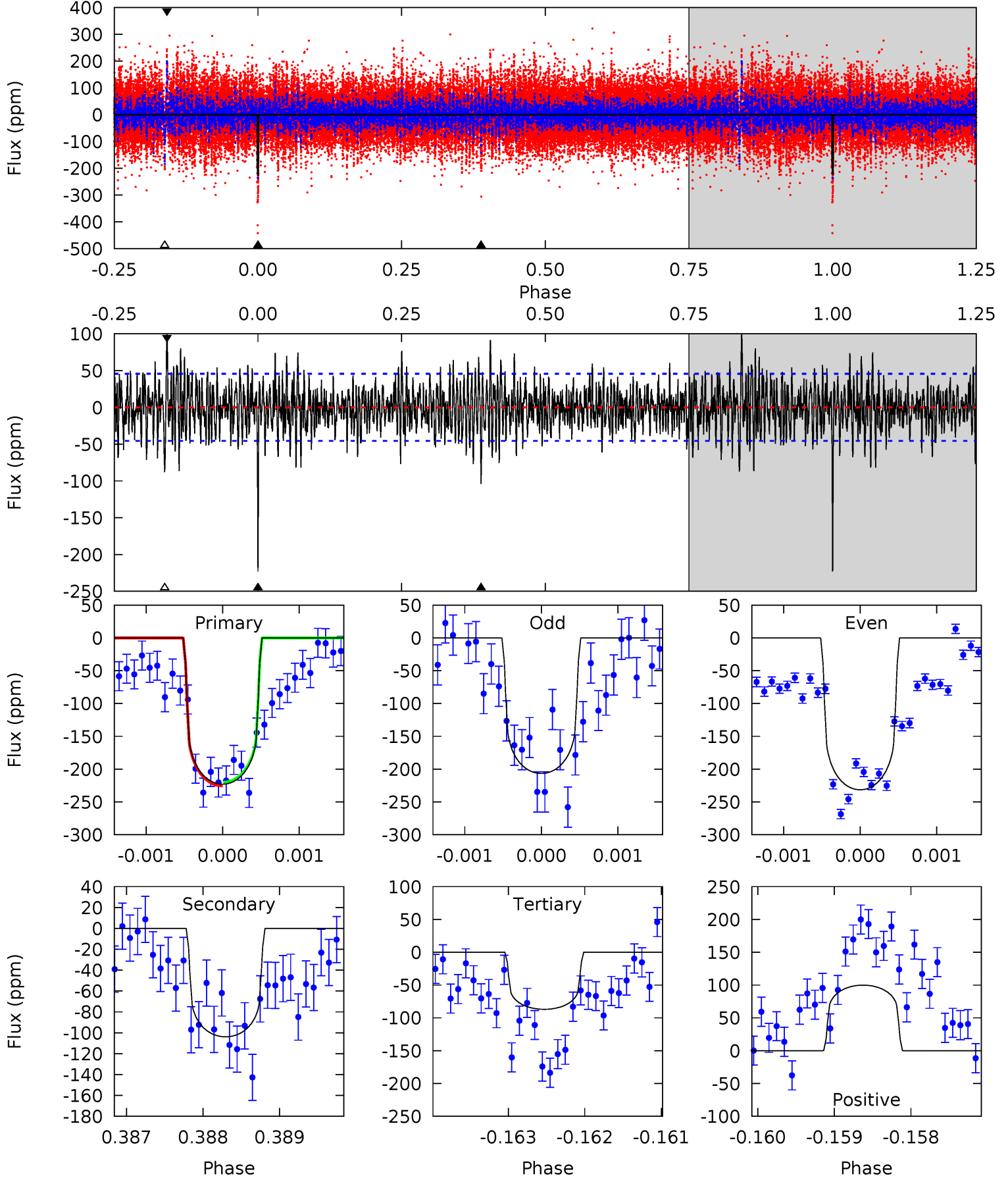
TCE 003430893-01 P=432.517164 Days $T_0=367.532088$ (BKJD)



DV Model-Shift Uniqueness Test

003430893-01, P = 432.556578 Days, E = 367.479996 Days

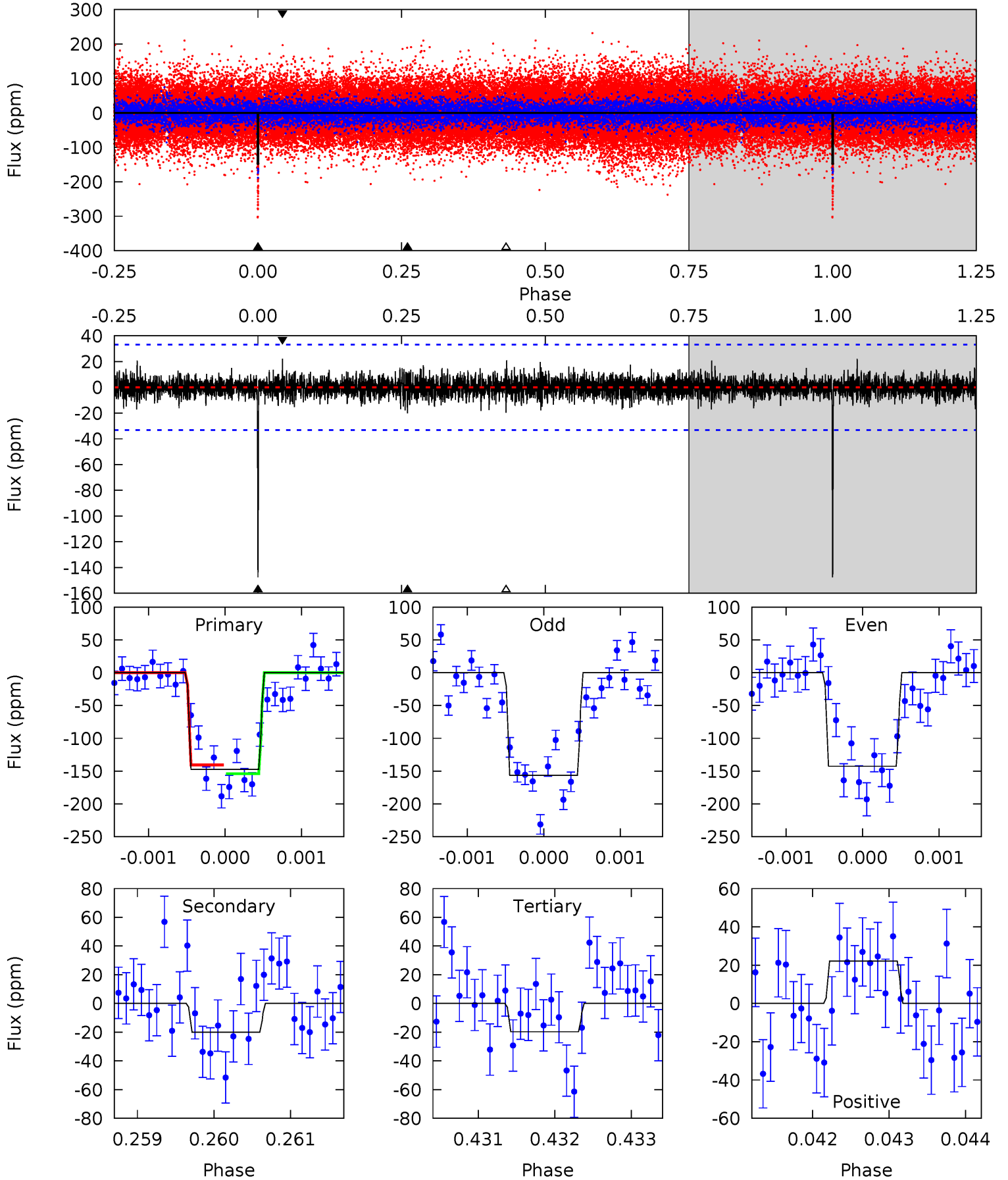
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	12.4	10.4	11.9	5.45	3.29	2.97	16.3	14.7	2.02	0.48	1.43	1.08	0.31	0.32



Alt Model-Shift Uniqueness Test

003430893-01, P = 432.517164 Days, E = 367.532088 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	3.28	3.23	3.62	5.43	3.26	0.83	20.9	20.5	0.06	-0.34	1.06	1.00	0.13	1.10



Stellar Parameters For KIC 003430893

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6161^{+80}_{-80}	$4.168^{+0.017}_{-0.015}$	$0.060^{+0.150}_{-0.100}$	$1.500^{+0.055}_{-0.067}$	$1.209^{+0.079}_{-0.096}$	$0.505^{+0.036}_{-0.031}$
	+1%/-1%	+0%/-0%	+250%/-167%	+4%/-4%	+7%/-8%	+7%/-6%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003430893-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-104 ± 8	$2.01^{+0.47}_{-0.50}$	426^{+6}_{-6}	5605^{+929}_{-490}	19809^{+16807}_{-6816}
Alt.	-20 ± 6	$2.04^{+0.48}_{-0.43}$	426^{+6}_{-6}	3981^{+455}_{-342}	3643^{+2789}_{-1487}

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 $A_{obs} \gg 1.0$

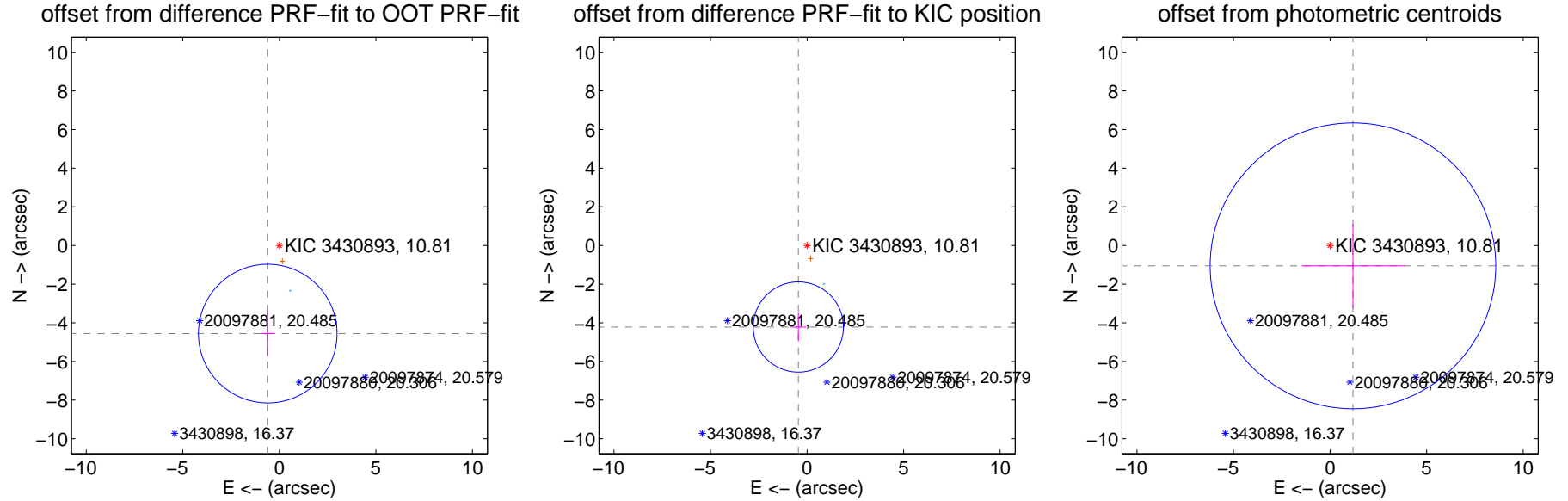
DV Centroid Data

Supplemental centroid analysis for 003430893-01. **Kepler magnitude: 10.81.** Transit SNR 7.82

There are 2 quarters with good PRF difference image offsets

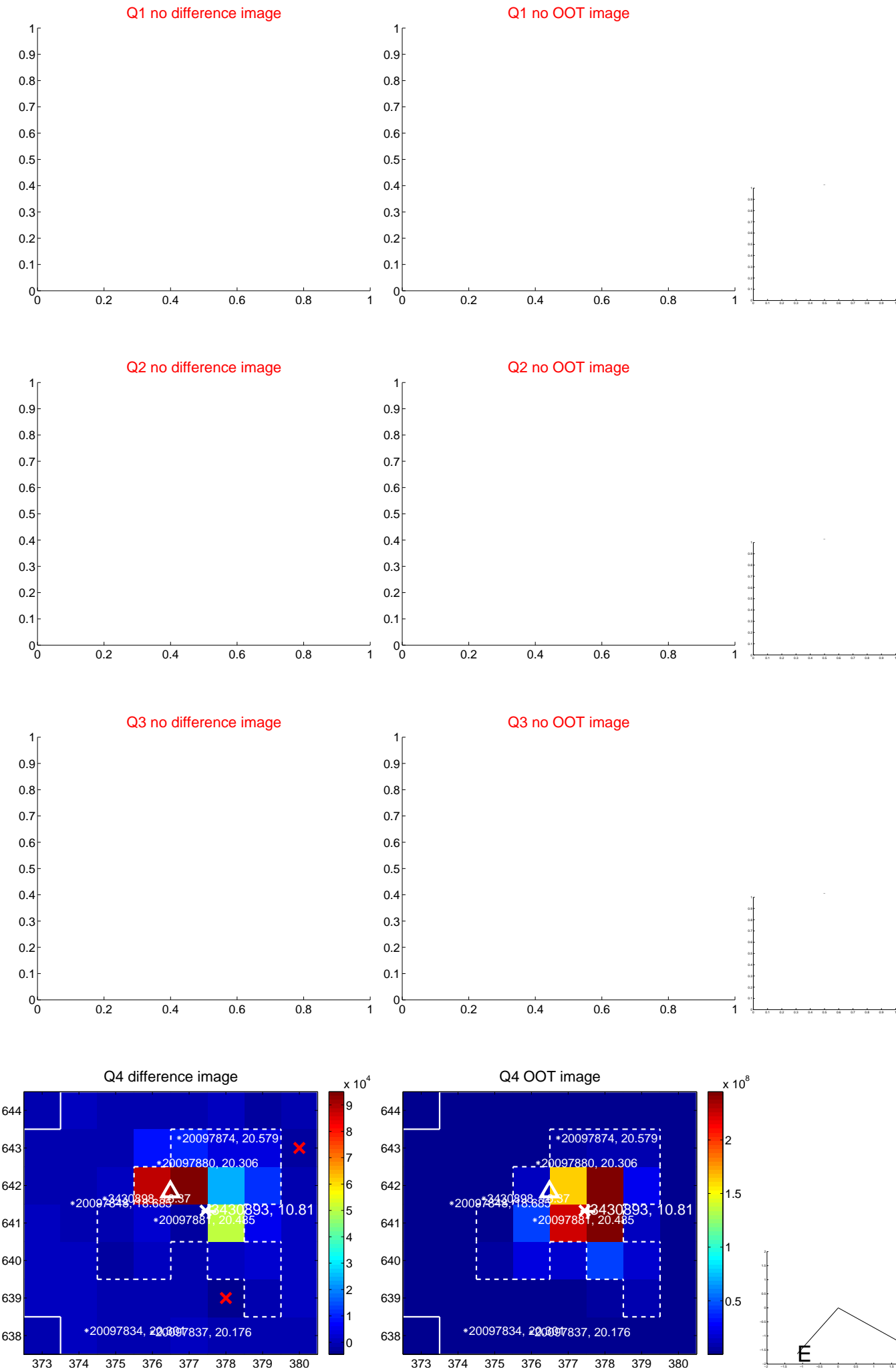
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.600 ± 1.196	3.84	0.601 ± 0.364	-4.560 ± 1.173
PRF-fit source offset from KIC position	4.245 ± 0.778	5.45	0.453 ± 0.399	-4.221 ± 0.745
photometric centroid source offset	1.59 ± 2.47	0.64	-1.19 ± 2.67	-1.05 ± 2.18

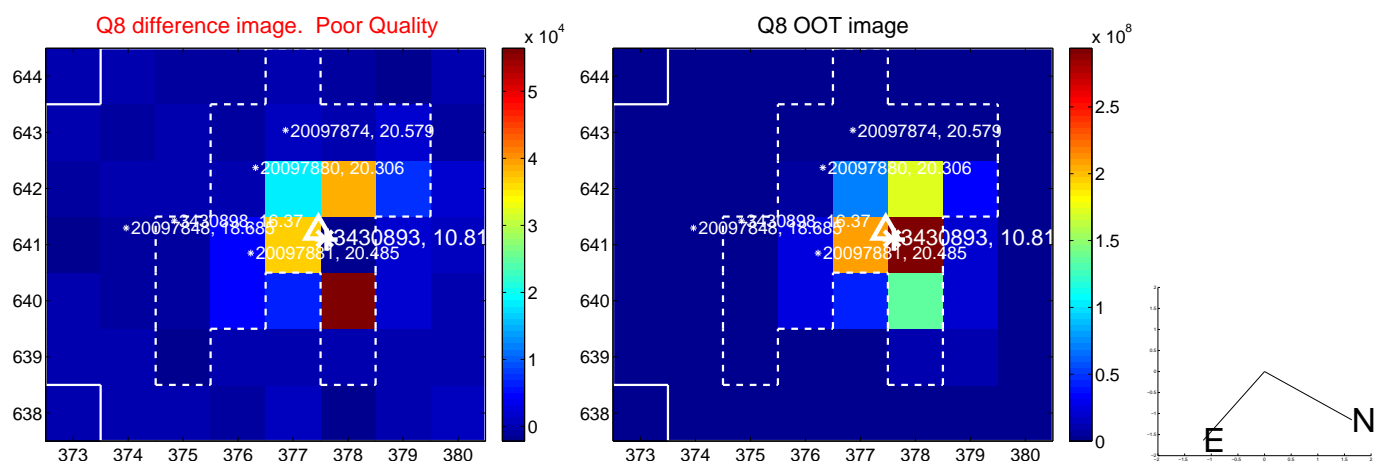
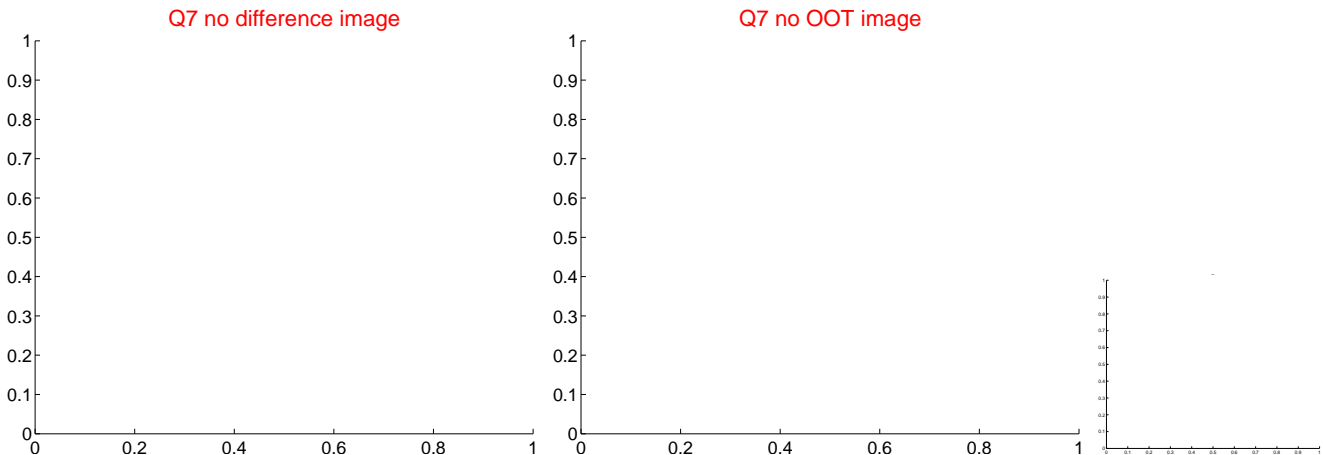
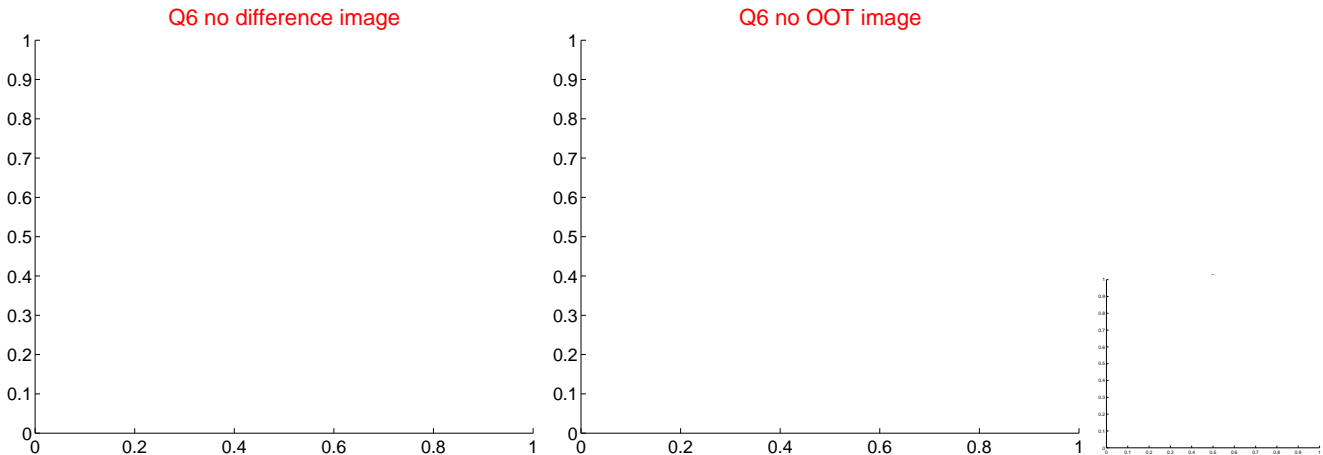
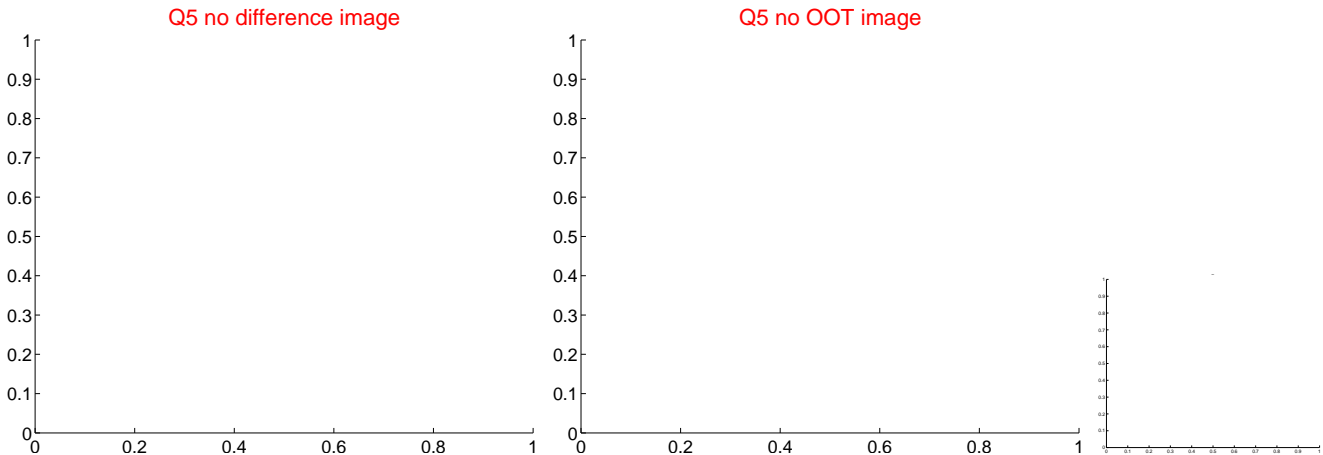


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



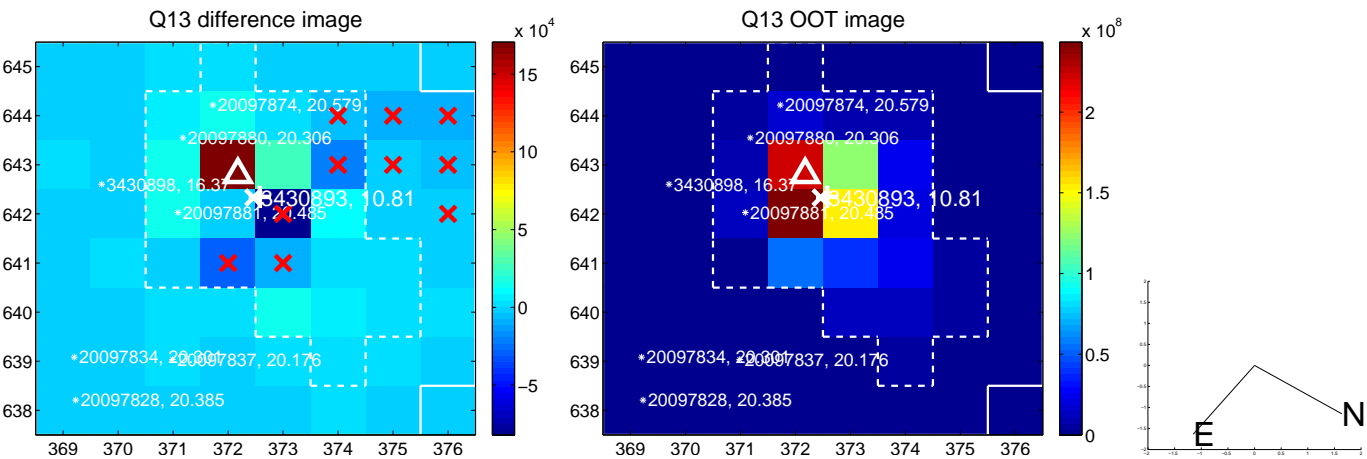
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



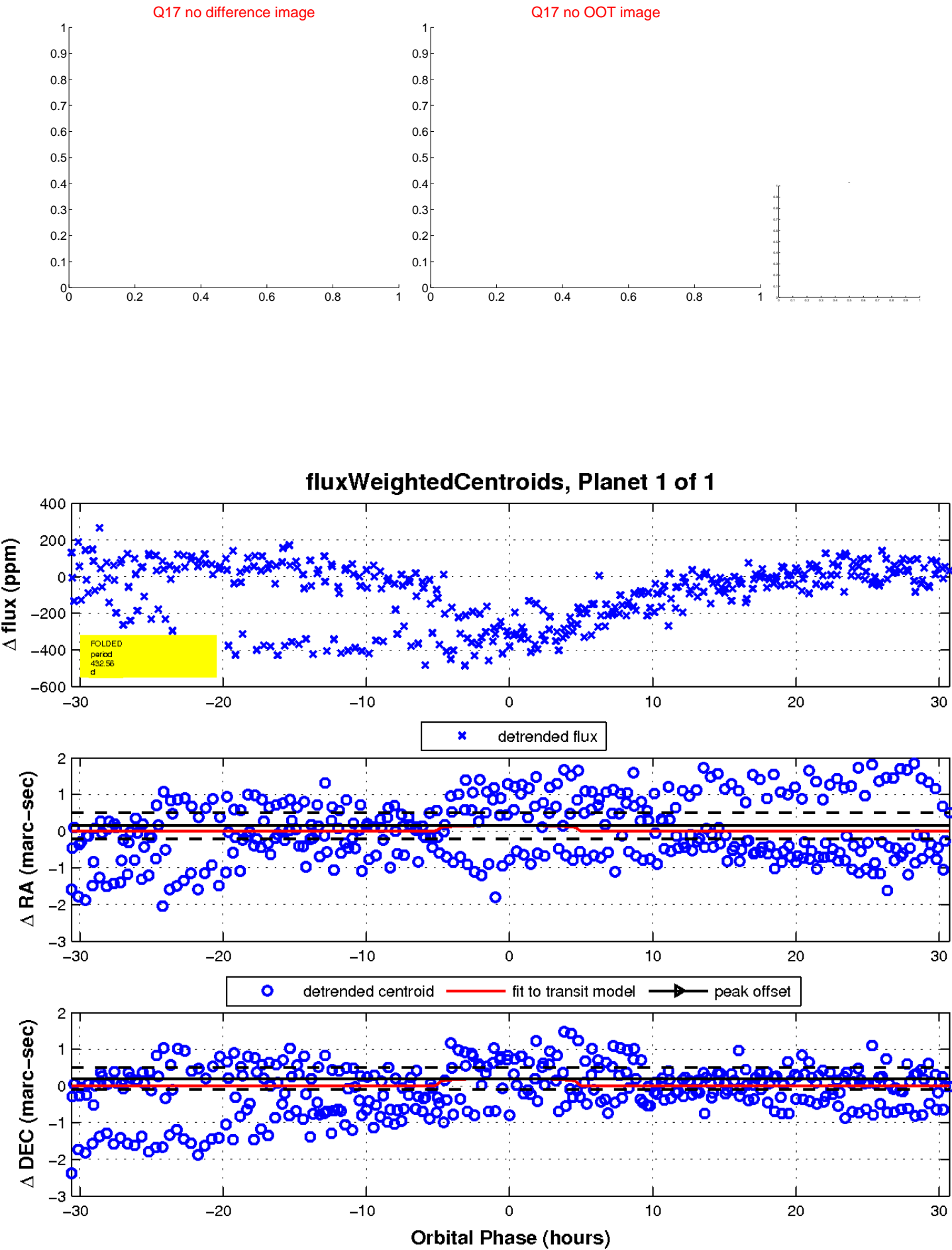
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

