

KIC 003839930

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})
003839930-01	OBS	No	479.213664	133.859926	110.5	2.204	17.1	1.3	4.50	11502	5.45	96.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003839930-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

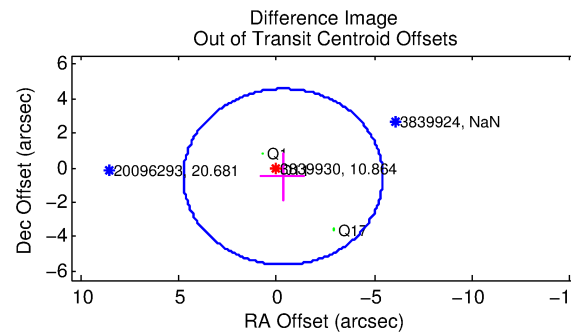
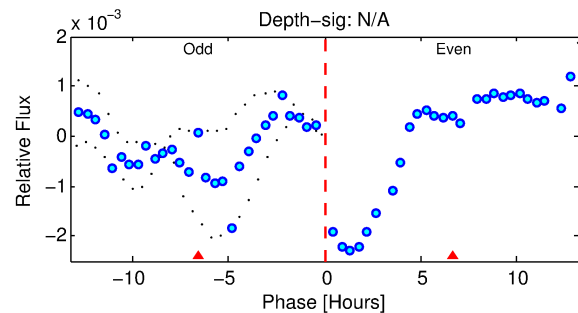
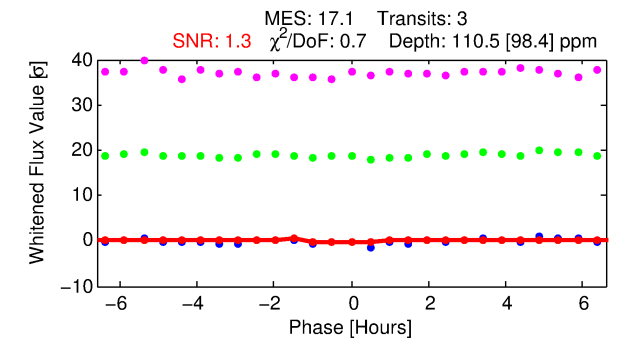
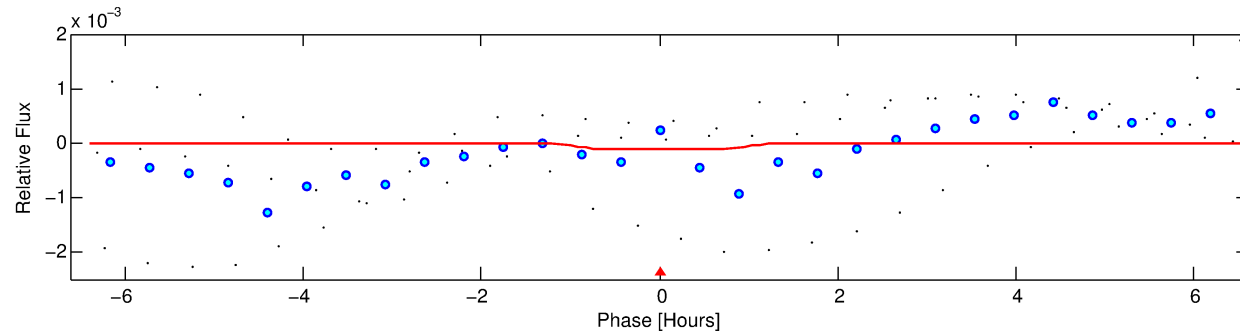
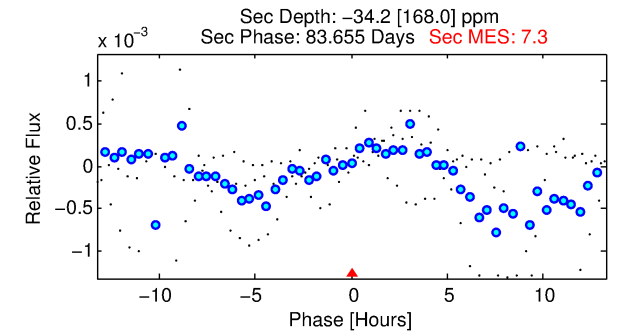
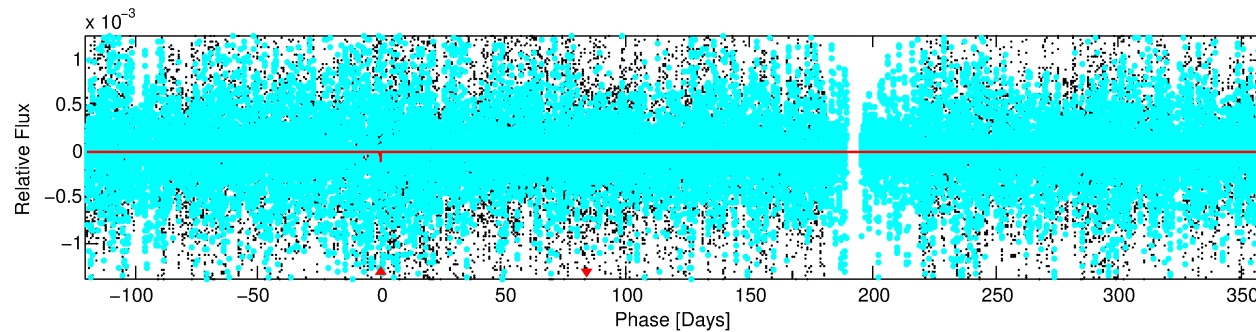
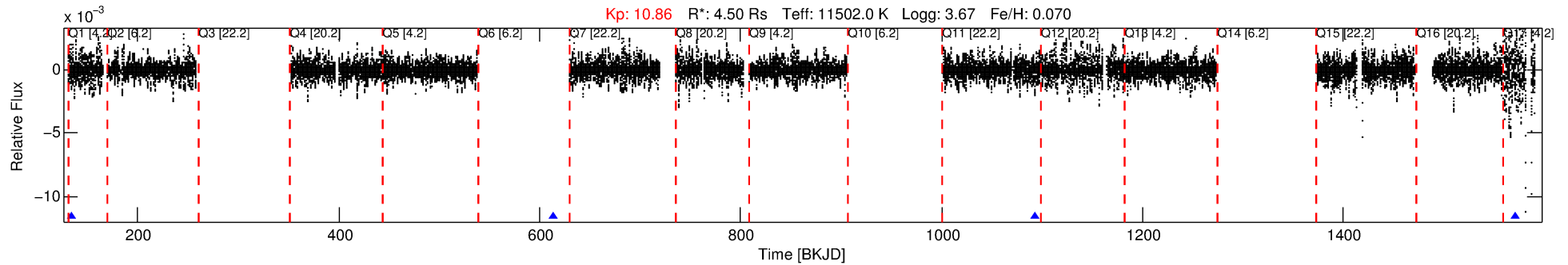
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003839930-01

No Significant Match Found

DV One-Page Summary

KIC: 3839930 Candidate: 1 of 1 Period: 479.214 d



DV Fit Results:

Period = 479.21366 [0.00586] d
Epoch = 133.8599 [0.0097] BKJD
Rp/R* = 0.0111 [0.0108]
a/R* = 711.37 [4349.38]
b = 0.92 [1.09]
Seff = 96.21 [93.36]
Teq = 799 [194] K
Rp = 5.44 [5.95] Re
a = 1.8155 [0.8591] AU
Ag = N/A
Teffp = N/A

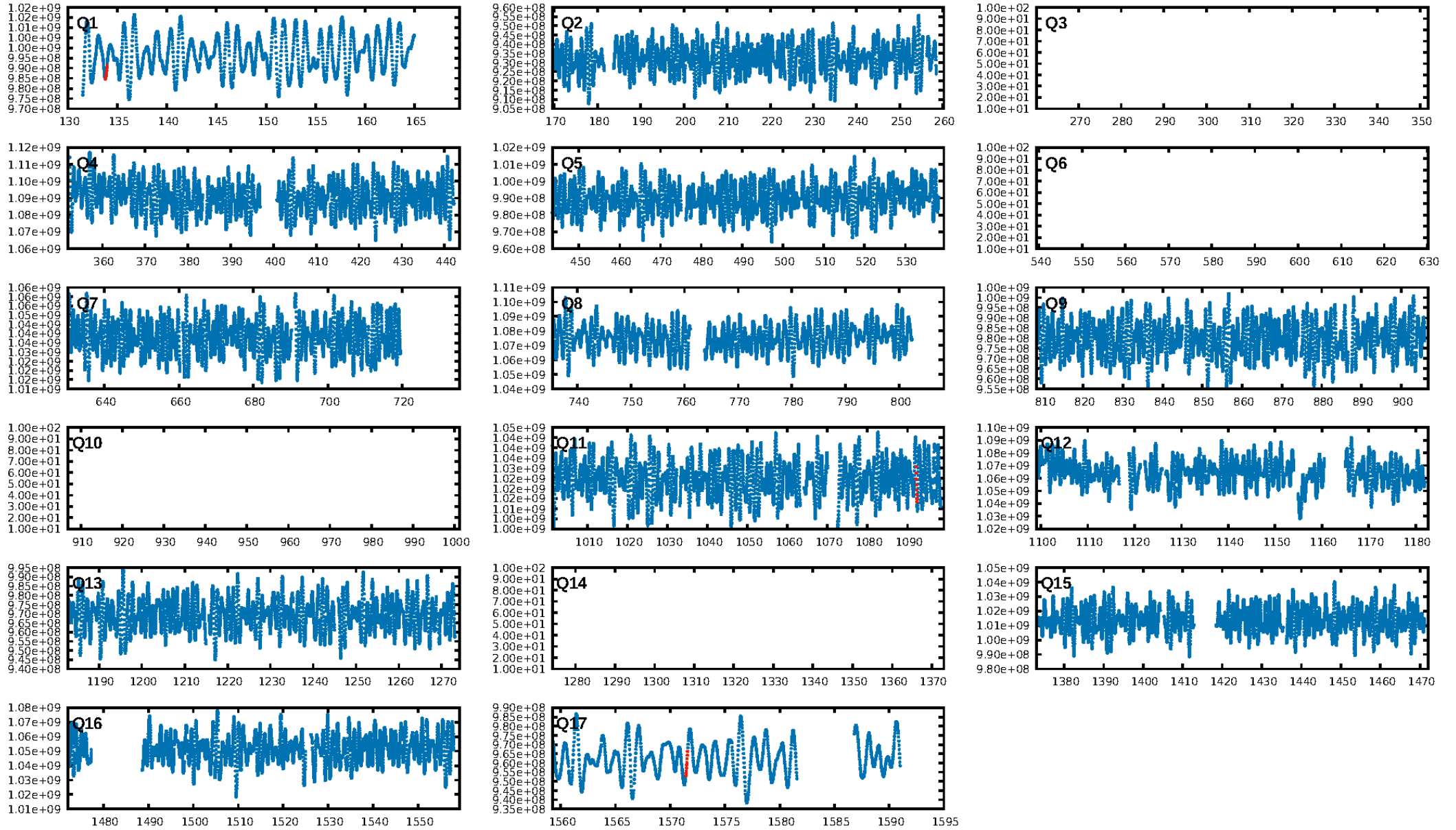
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.7%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 1.16e-11
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: 1.787
Centroid-sig: 52.1%
Centroid-so: 3.276 arcsec [0.76σ]
OotOffset-rm: 0.630 arcsec [0.37σ]
KicOffset-rm: 0.532 arcsec [0.31σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

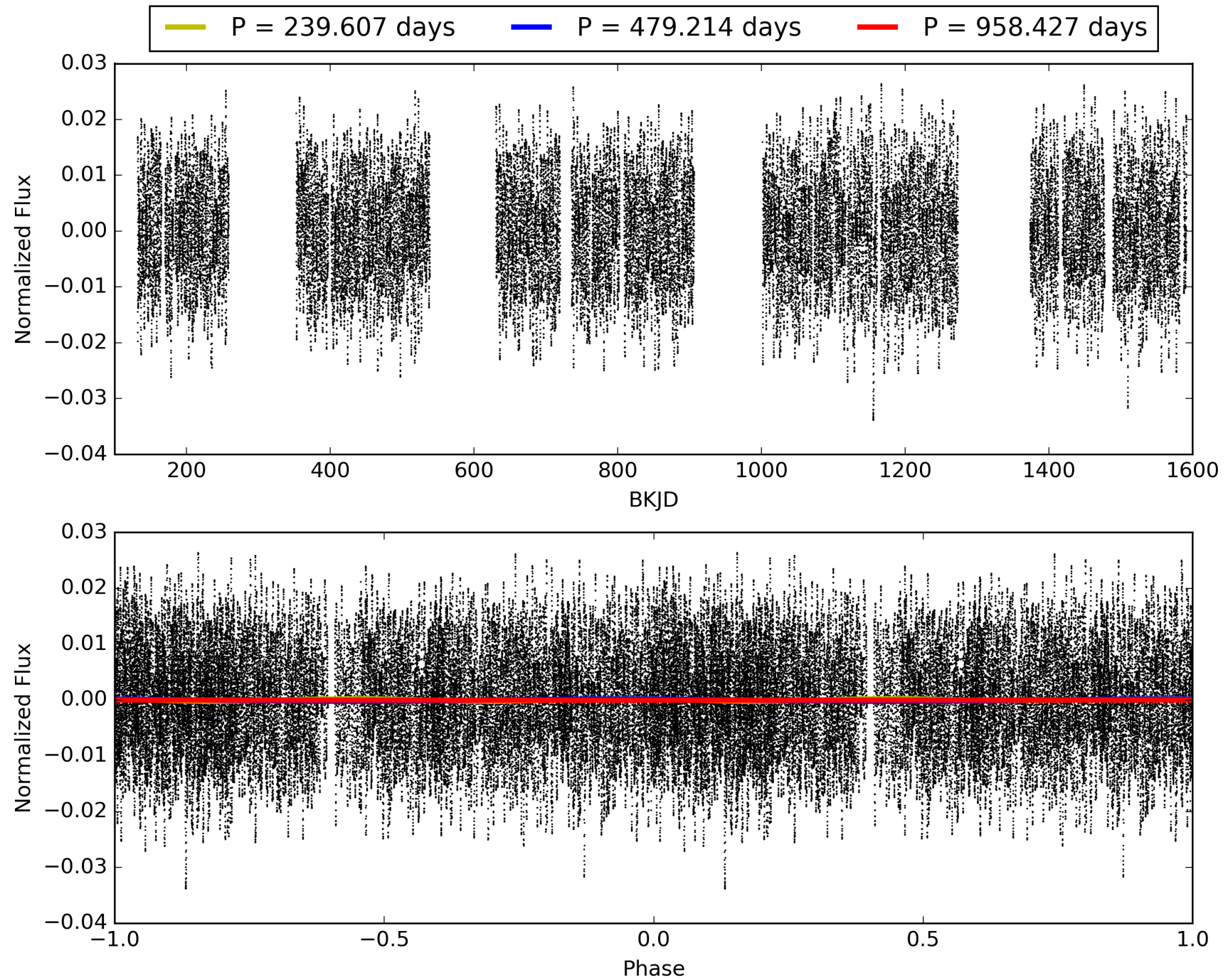
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:49:19 Z

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

TCE 003839930-01, PDC Light Curves

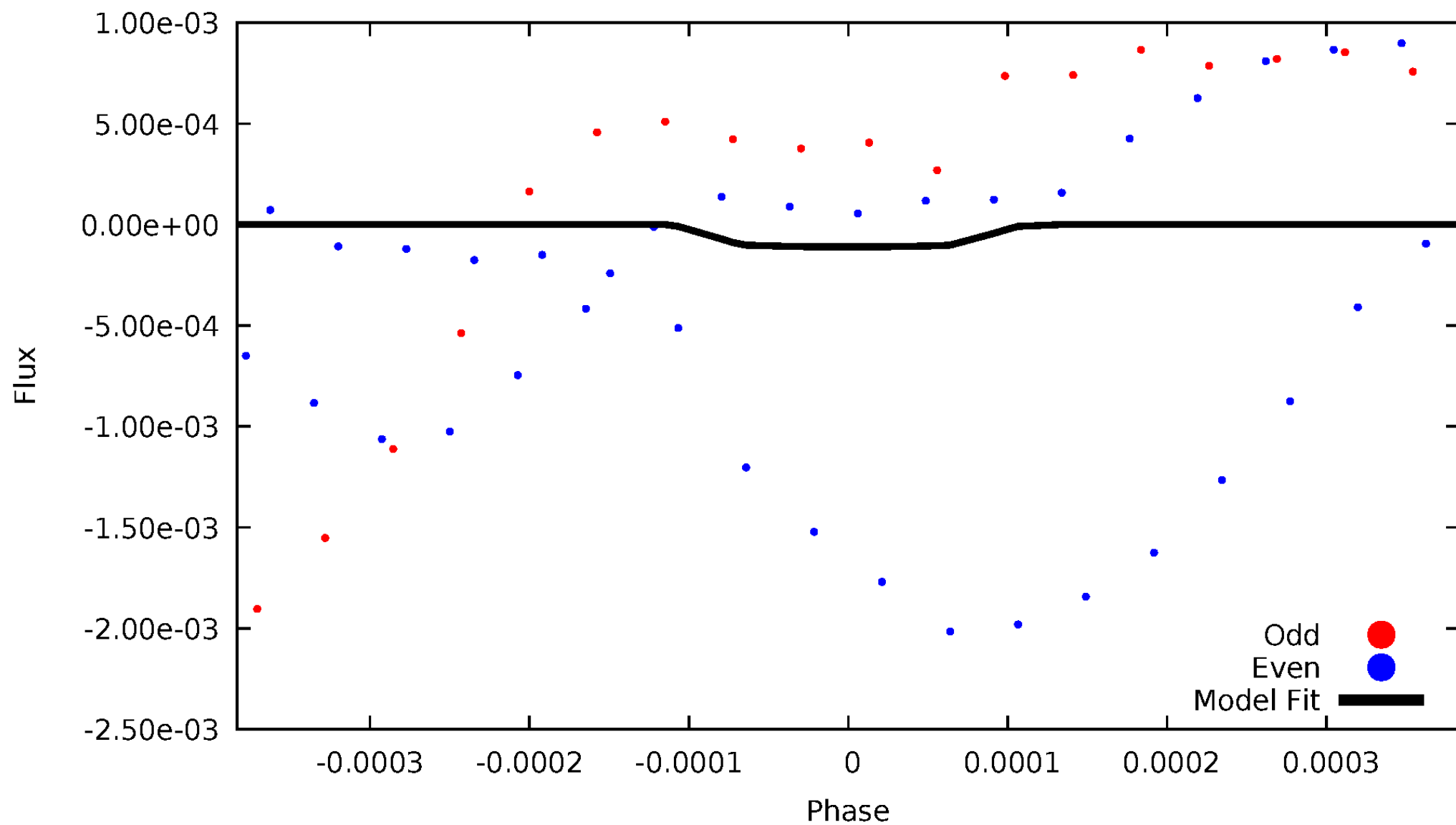


TCE 003839930-01



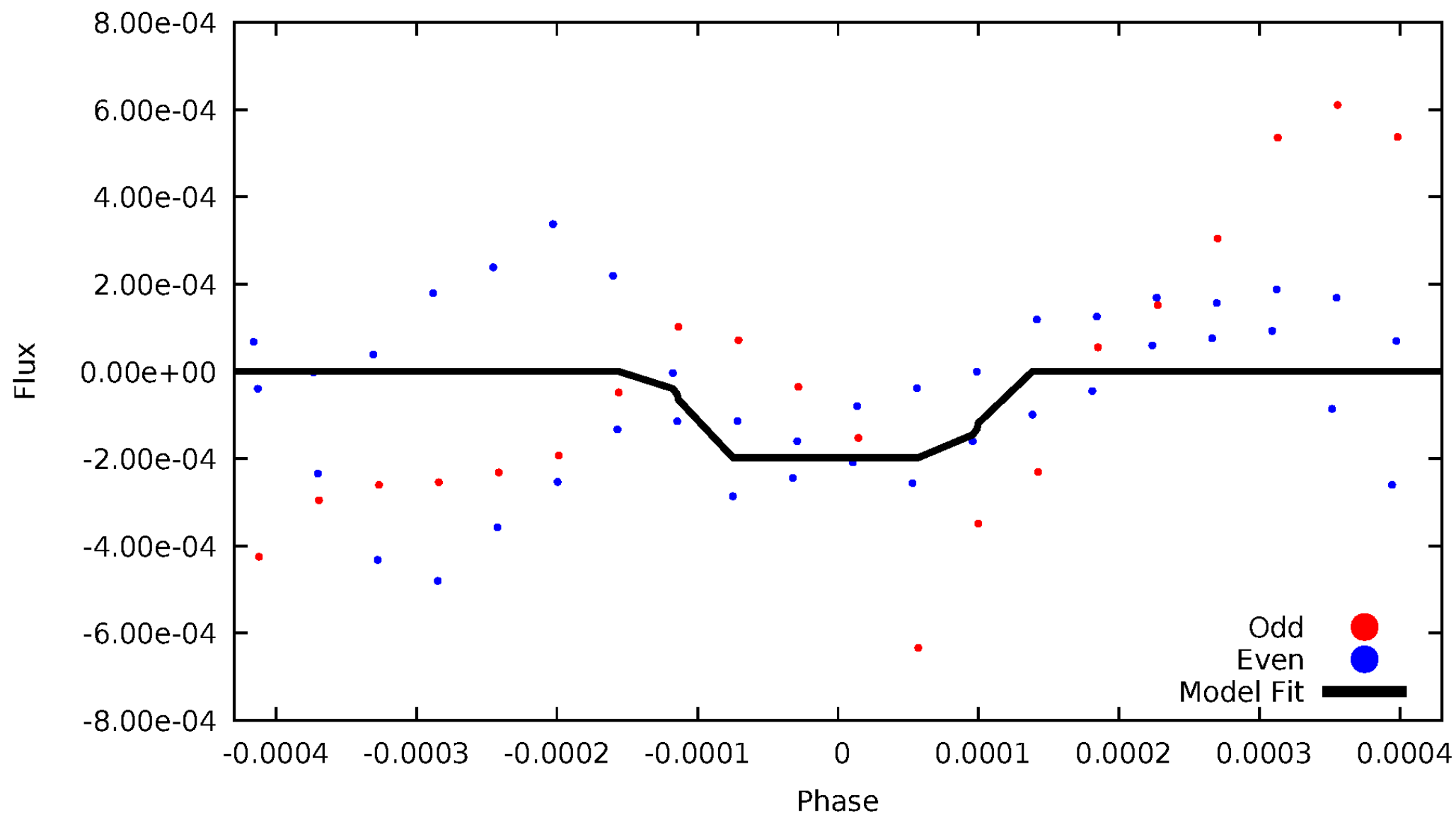
DV Odd/Even

TCE 003839930-01



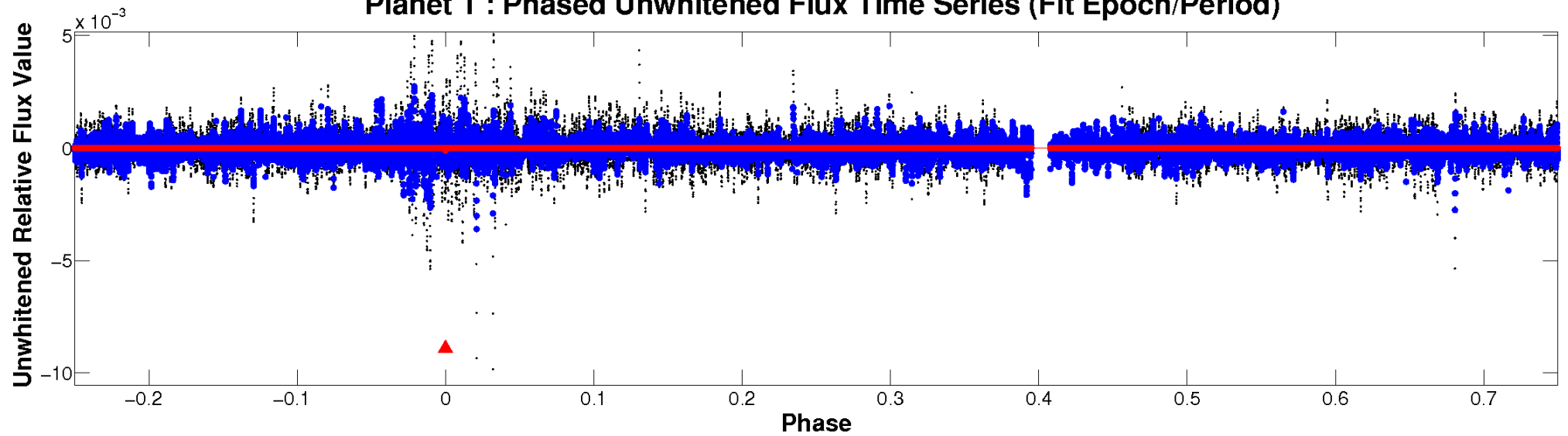
ALT Odd/Even

TCE 003839930-01

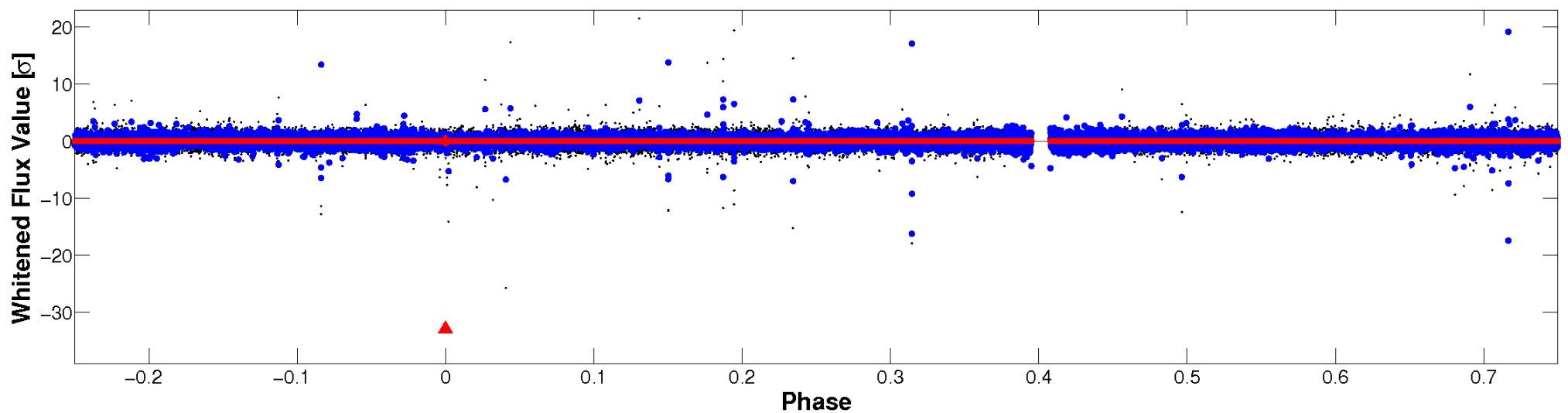


Non-Whitened Vs. Whitened Light Curve

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

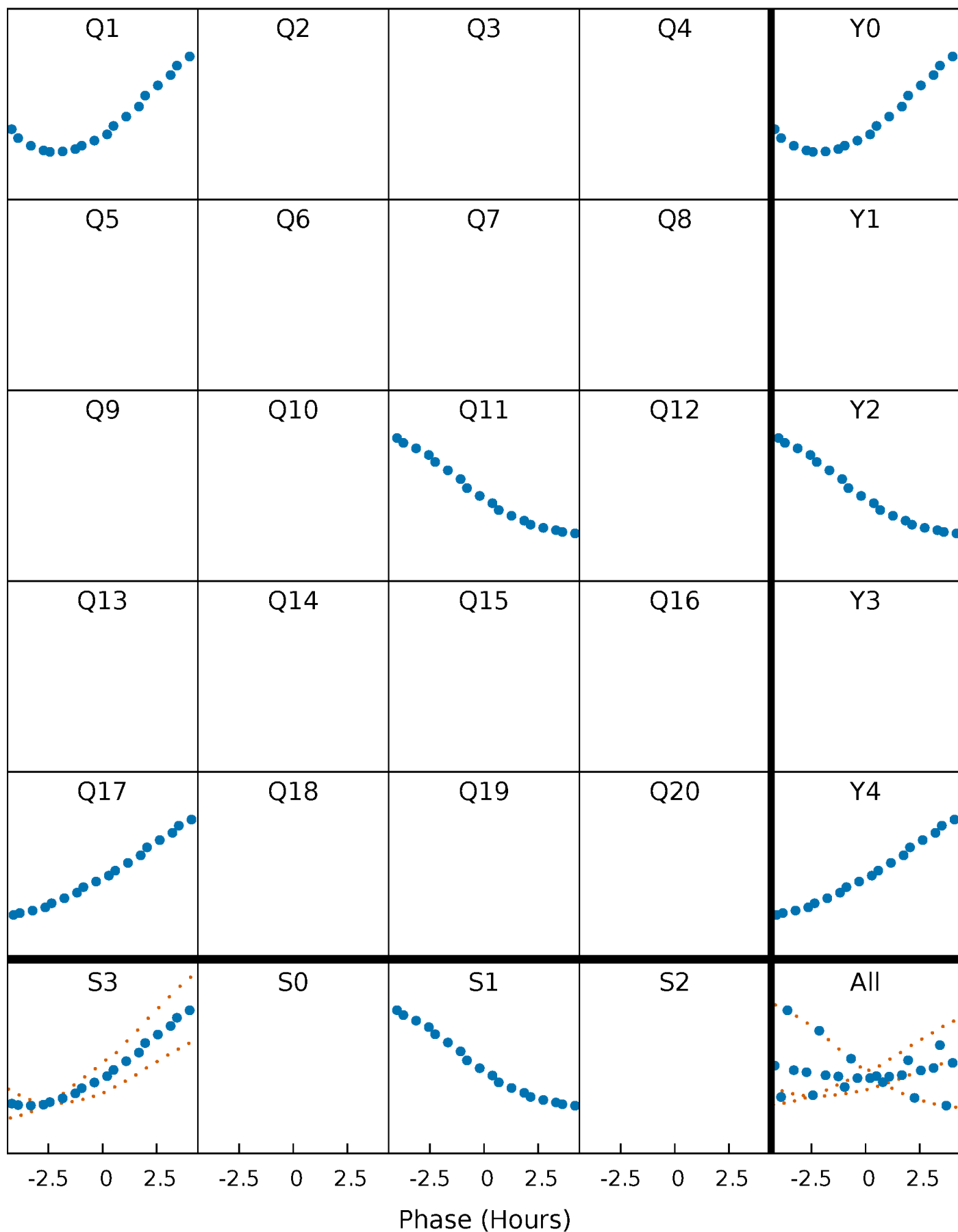


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



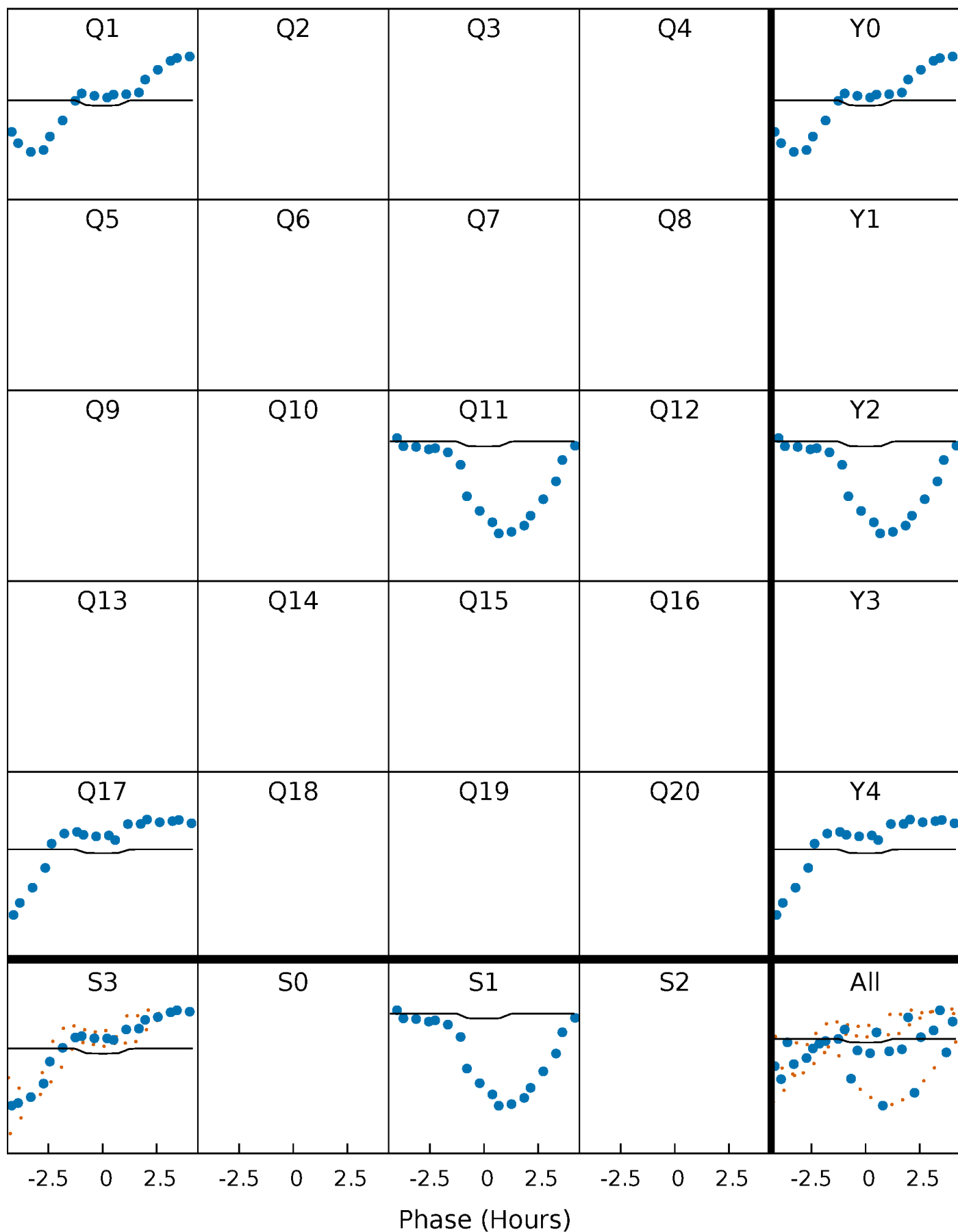
PDC Quarter-Phased Transit Curves

TCE 003839930-01 P=479.213664 Days $T_0=133.859926$ (BKJD)



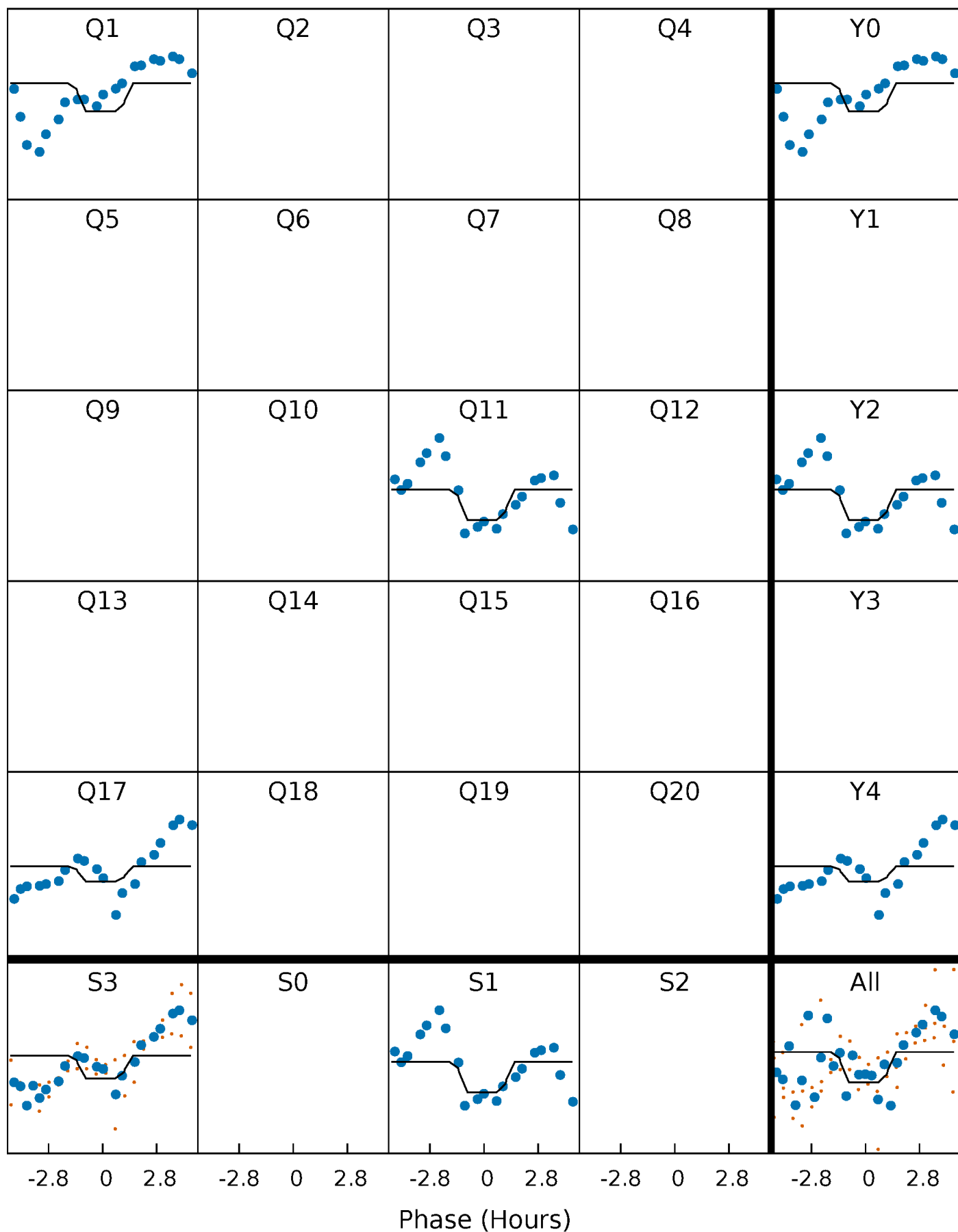
DV Quarter-Phased Transit Curves

TCE 003839930-01 $P=479.213664$ Days $T_0=133.859926$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

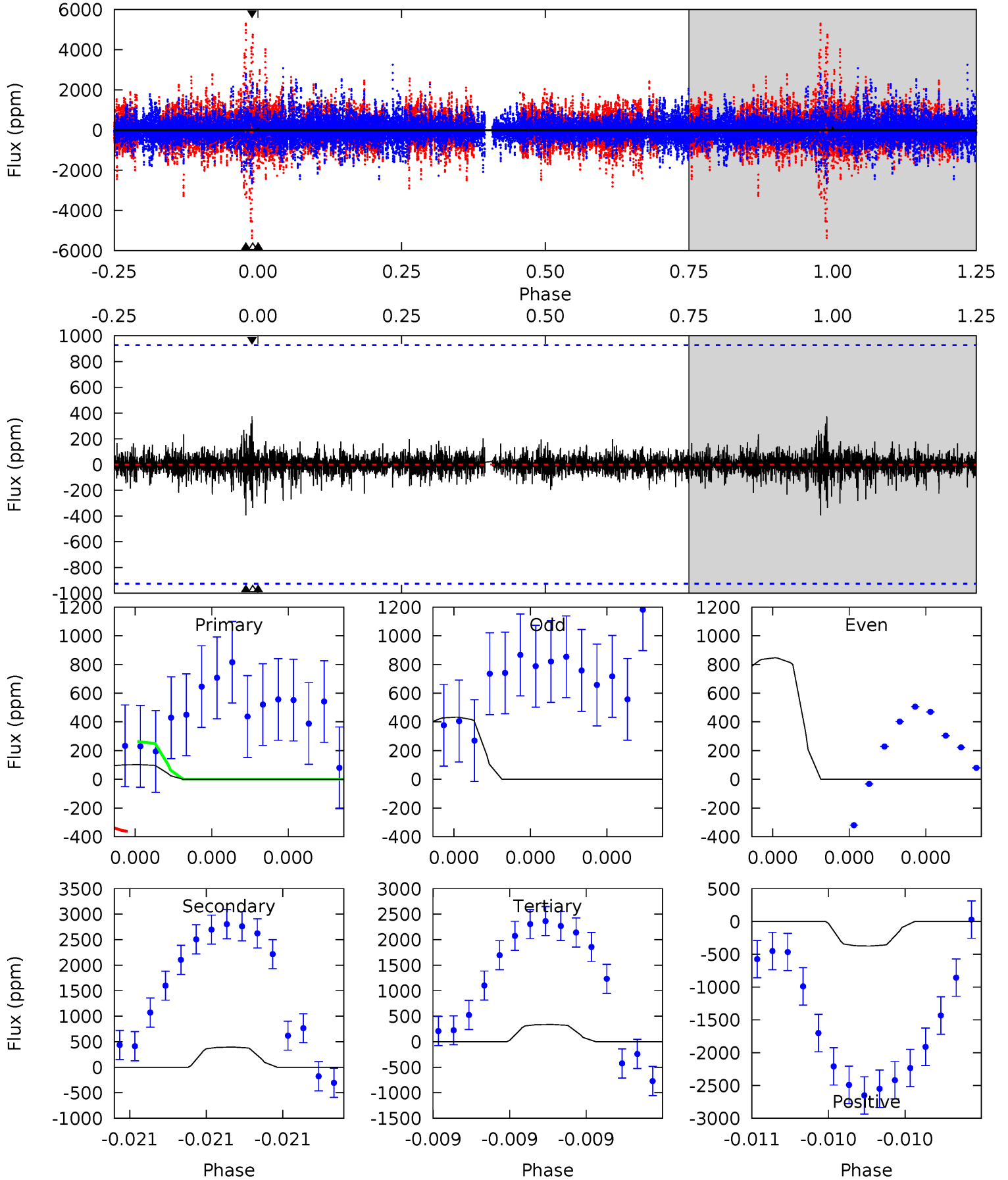
TCE 003839930-01 P=479.207849 Days $T_0=133.876695$ (BKJD)



DV Model-Shift Uniqueness Test

003839930-01, P = 479.213664 Days, E = 133.859926 Days

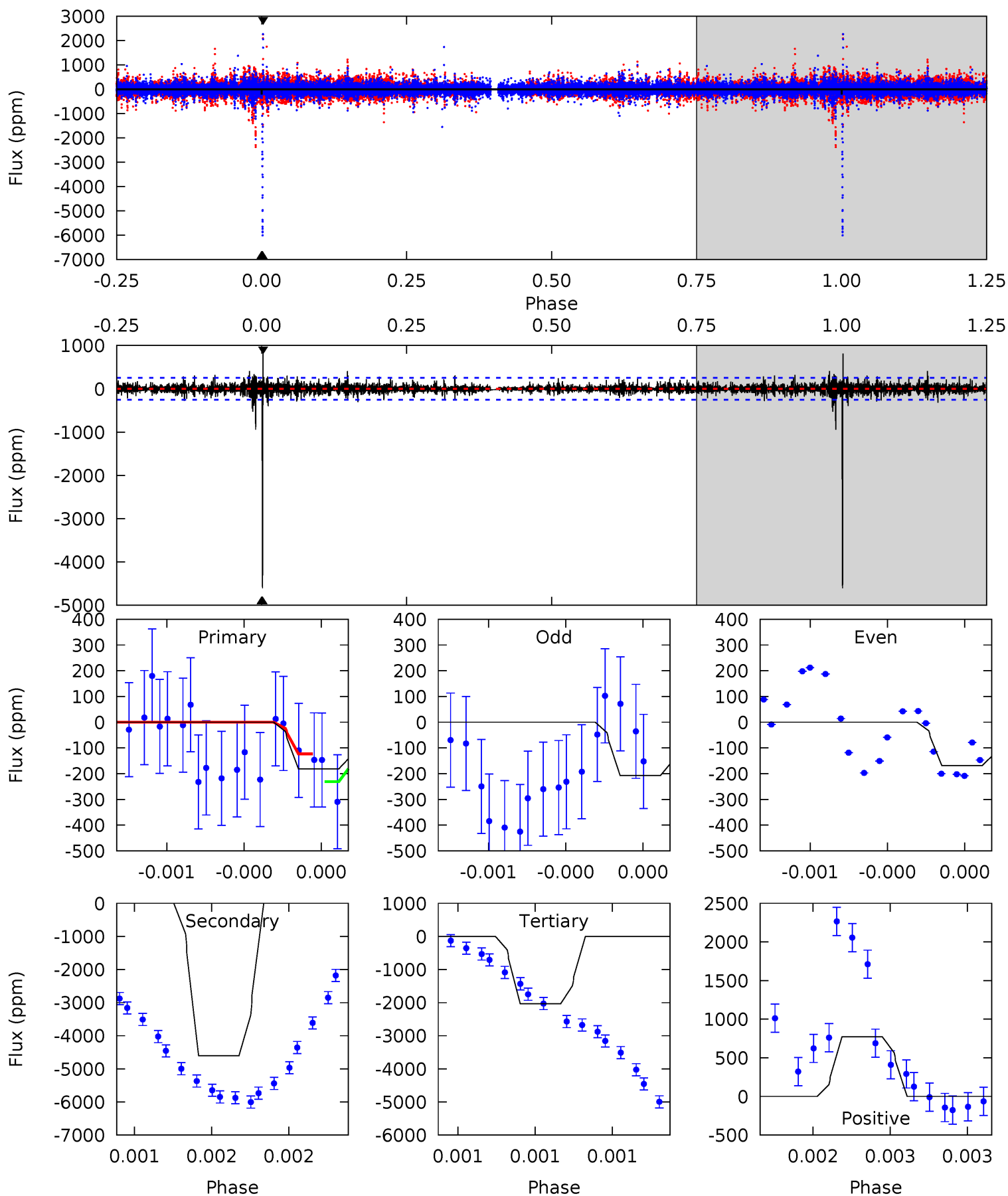
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.63	2.44	2.08	2.31	5.72	3.70	0.31	-1.45	-1.69	0.36	0.12	1.28	-3.53	0.49	0.32



Alt Model-Shift Uniqueness Test

003839930-01, P = 479.207849 Days, E = 133.876695 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.10	104.0	46.0	17.4	5.69	3.66	1.80	-41.9	-13.3	58.0	86.5	0.23	0.87	0.15	1.15



Stellar Parameters For KIC 003839930

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11502^{+469}_{-1762}	$3.673^{+0.440}_{-0.110}$	$0.070^{+0.250}_{-0.550}$	$4.497^{+0.559}_{-2.236}$	$3.472^{+0.069}_{-1.057}$	$0.054^{+0.230}_{-0.018}$
	+4%/-15%	+12%/-3%	+357%/-786%	+12%/-50%	+2%/-30%	+428%/-34%
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 003839930-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-395 ± 162	$5.97^{+4.30}_{-3.71}$	1035^{+131}_{-181}	15127^{+27312}_{-6285}	$19011^{+107313}_{-13684}$
Alt.	-4604 ± 44	$6.63^{+4.89}_{-3.75}$	1034^{+141}_{-167}	$67634^{+221602}_{-38396}$	$181465^{+774235}_{-119106}$

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 $A_{\text{obs}} \gg 1.0$

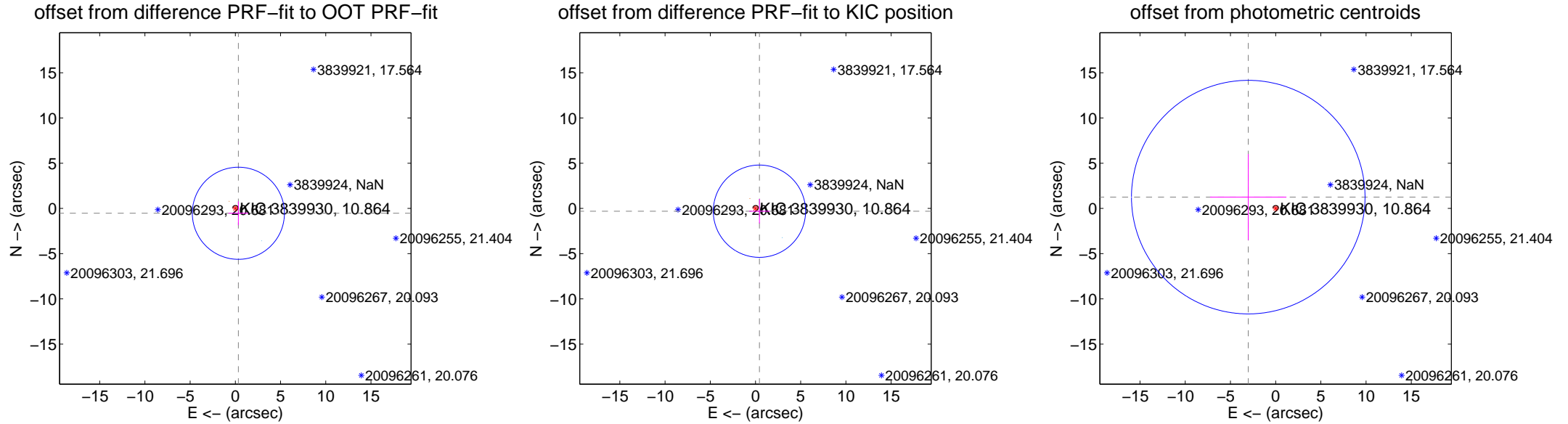
DV Centroid Data

Supplemental centroid analysis for 003839930-01. **Kepler magnitude: 10.86.** Transit SNR 1.28

There are 2 quarters with good PRF difference image offsets

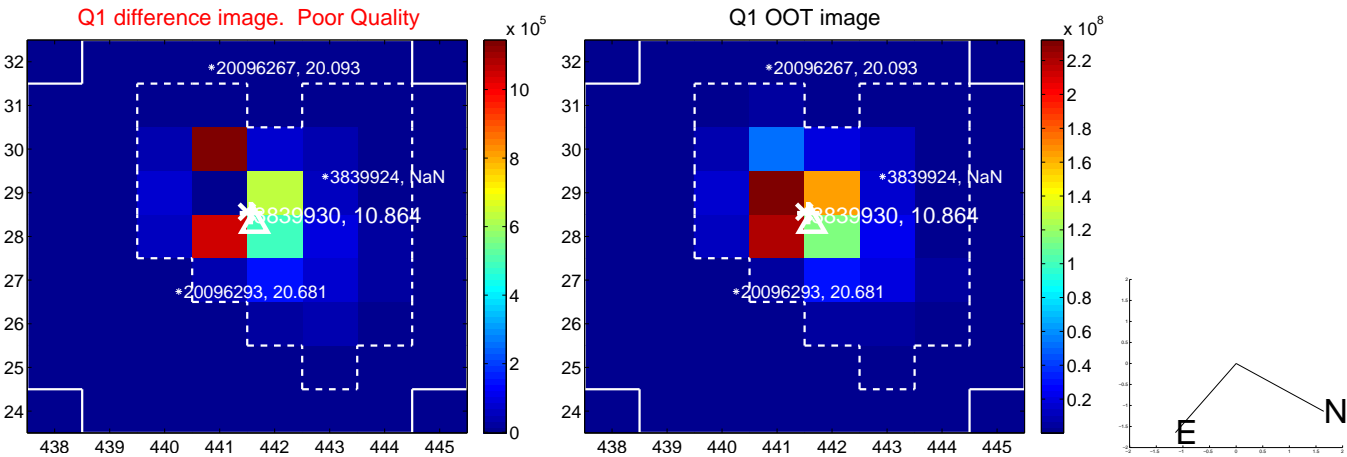
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.630 ± 1.698	0.37	-0.337 ± 1.095	-0.533 ± 1.317
PRF-fit source offset from KIC position	0.532 ± 1.701	0.31	-0.436 ± 1.134	-0.305 ± 1.349
photometric centroid source offset	3.28 ± 4.30	0.76	3.03 ± 4.22	1.25 ± 4.75



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.

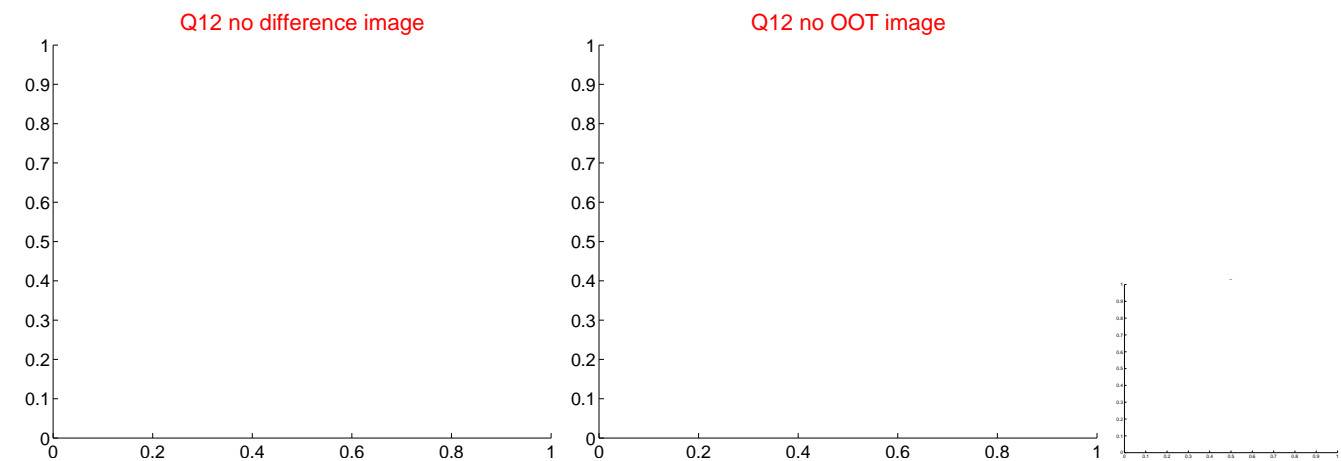
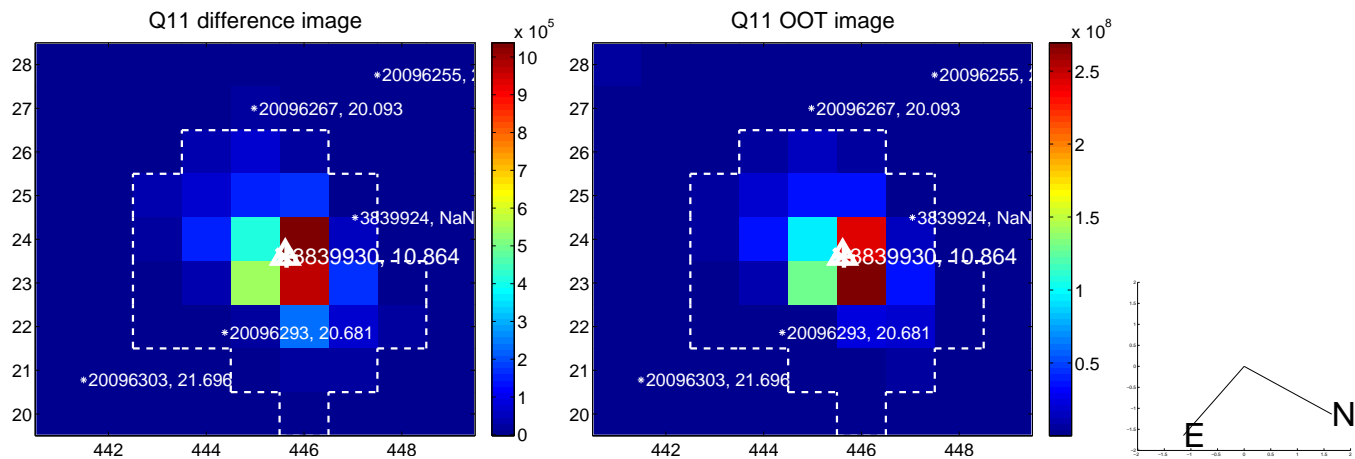
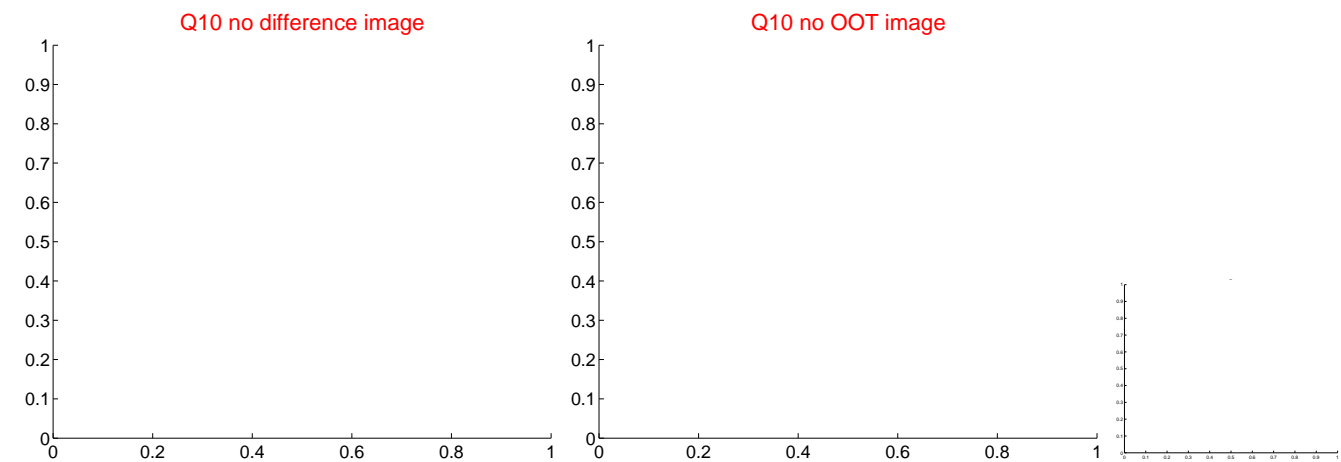
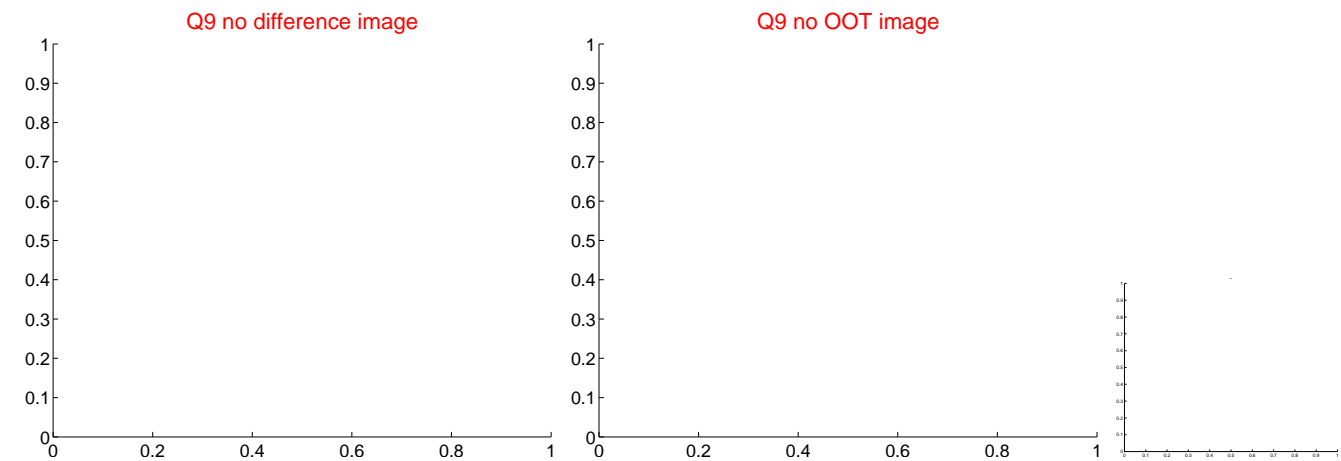
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



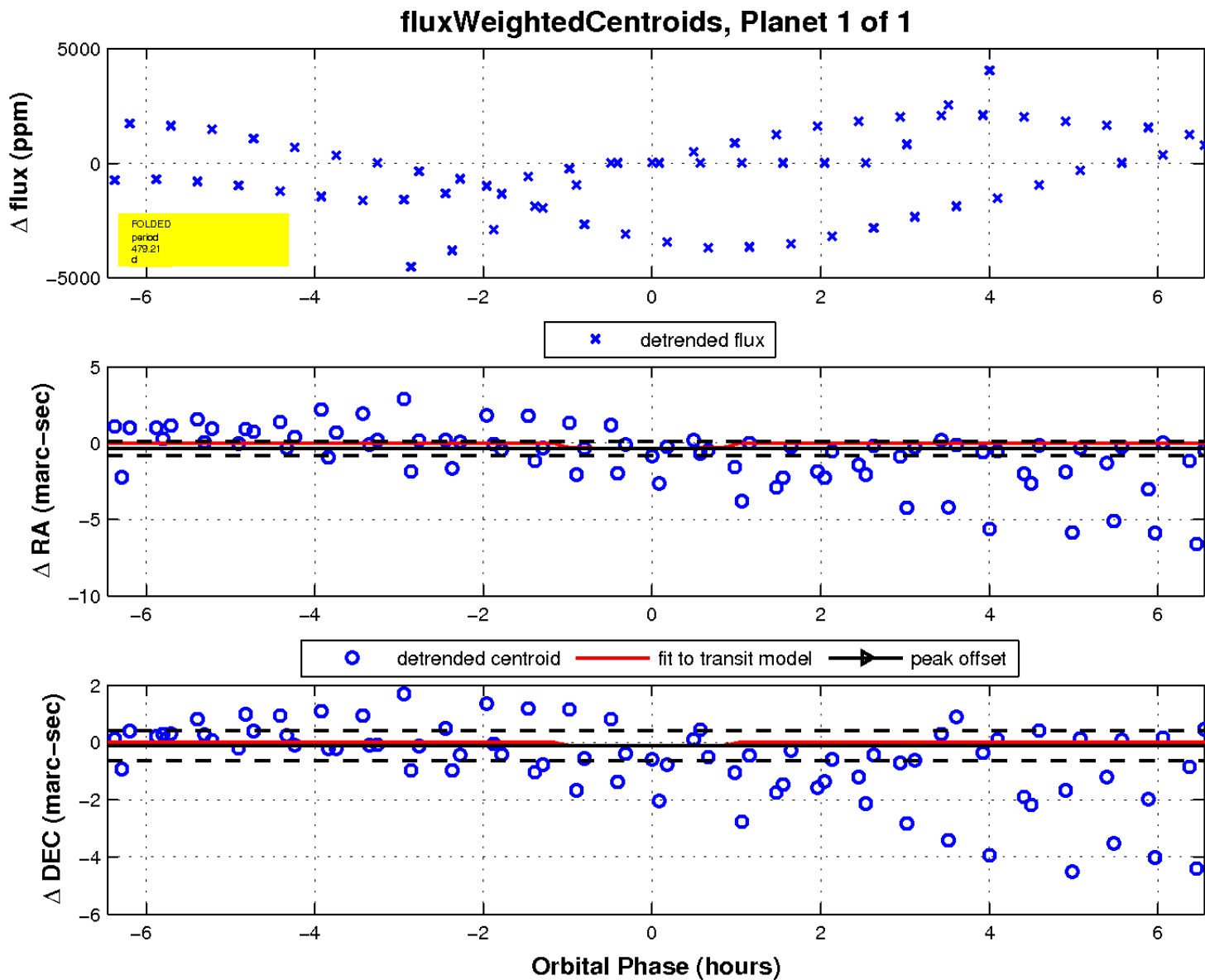
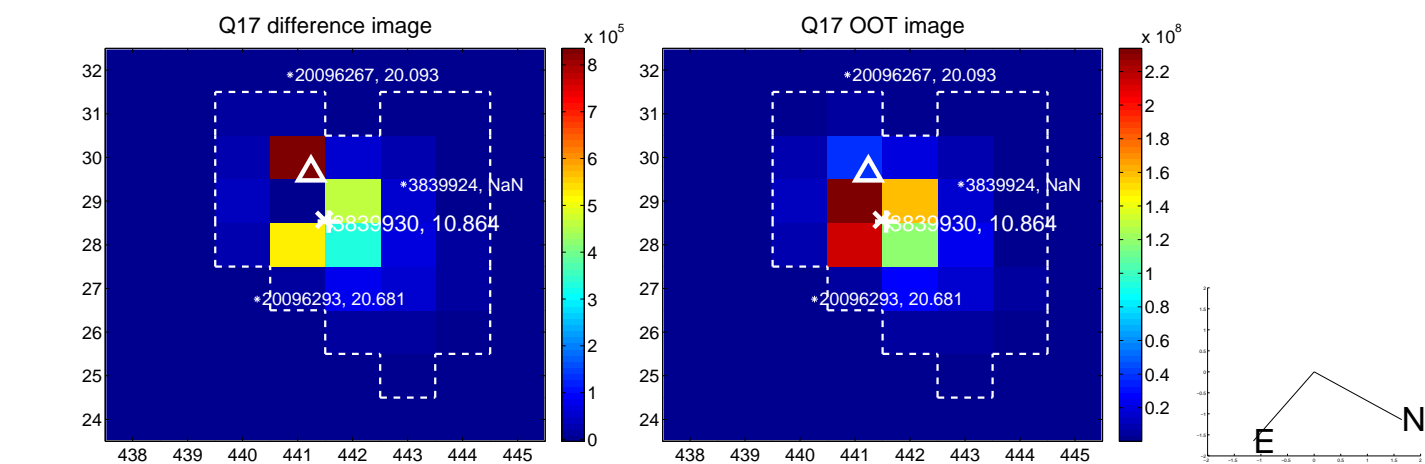
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

