

KIC 005183039

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})
005183039-01	OBS	No	433.134915	365.530560	595.1	5.622	7.7	7.7	0.84	5767	2.57	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005183039-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—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.

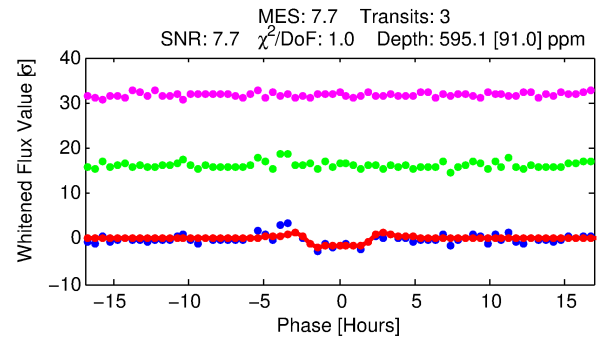
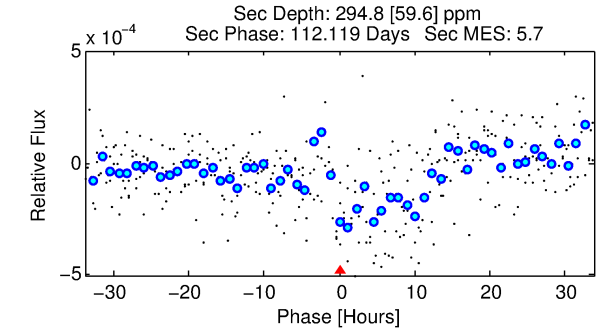
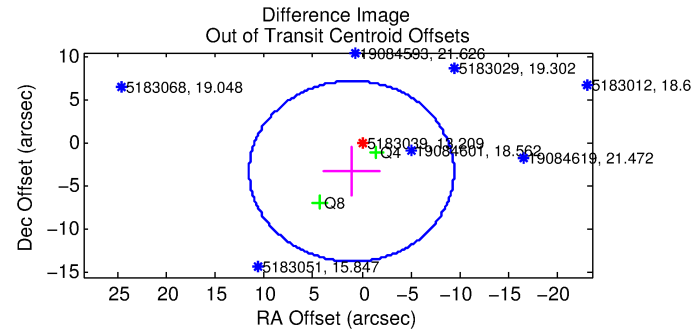
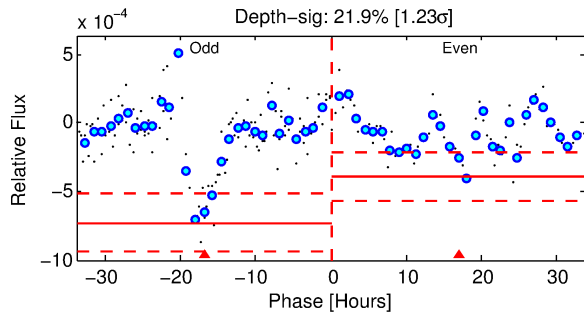
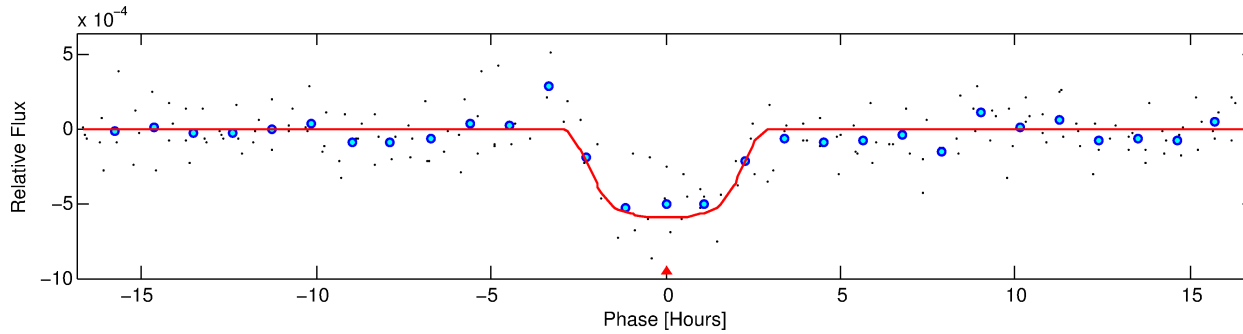
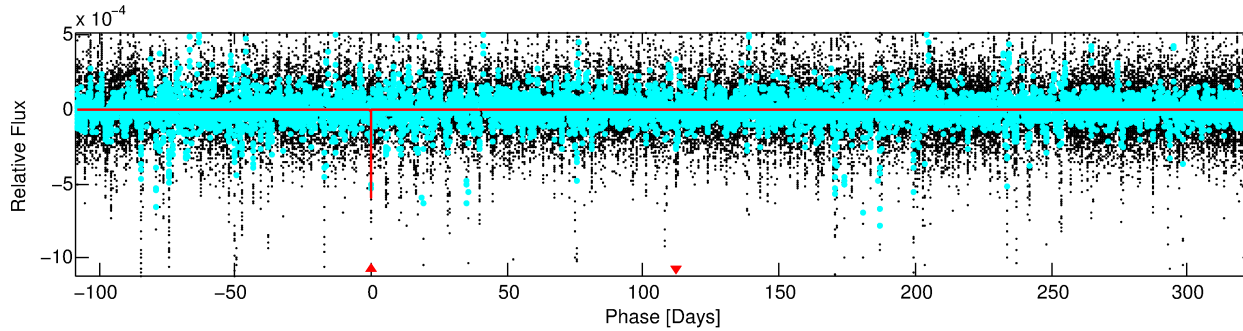
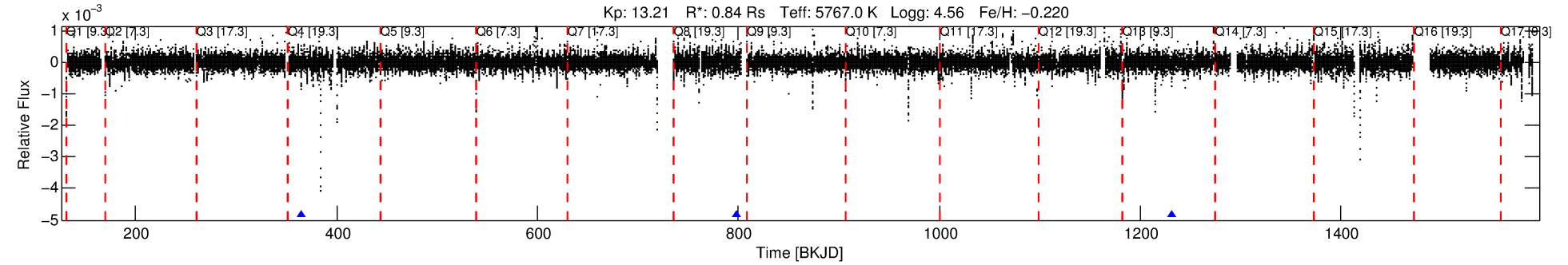
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005183039-01

No Significant Match Found

DV One-Page Summary

KIC: 5183039 Candidate: 1 of 1 Period: 433.135 d



DV Fit Results:

Period = 433.13492 [0.00766] d

Epoch = 365.5306 [0.0078] BKJD

Rp/R* = 0.0281 [0.0025]

a/R* = 236.66 [43.40]

b = 0.95 [0.02]

Seff = 0.58 [0.18]

Teq = 223 [17] K

Rp = 2.57 [0.65] Re

a = 1.0921 [0.2190] AU

Ag = 29287.35 [11685.83] [2.51 σ]

Teffp = 4505 [330] K [12.96 σ]

DV Diagnostic Results:

ShortPeriod-sig: N/A

LongPeriod-sig: N/A

ModelChiSquare2-sig: 29.5%

ModelChiSquareGof-sig: 99.3%

Bootstrap-pfa: 3.68e-07

RollingBand-fgt: 1.00 [3/3]

GhostDiagnostic-chr: -5.093

Centroid-sig: 46.6%

Centroid-so: 0.456 arcsec [0.69 σ]

OotOffset-rm: 3.439 arcsec [0.99 σ]

OotOffset-st: 0/0/2/0 [2]

KicOffset-rm: 3.400 arcsec [1.05 σ]

KicOffset-st: 0/0/2/0 [2]

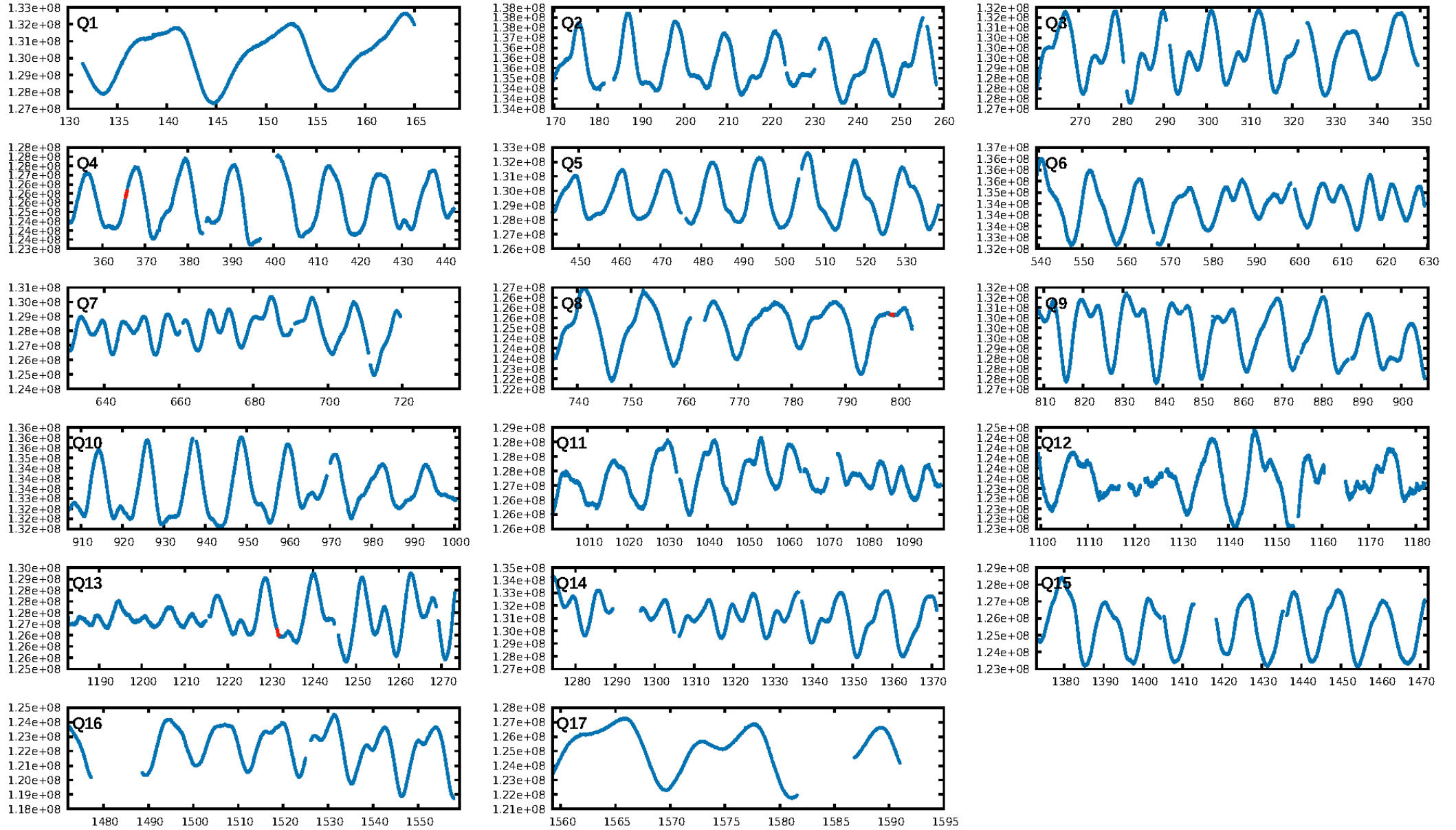
DiffImageQuality-fgm: 0.50 [1/2]

DiffImageOverlap-fno: 1.00 [2/2]

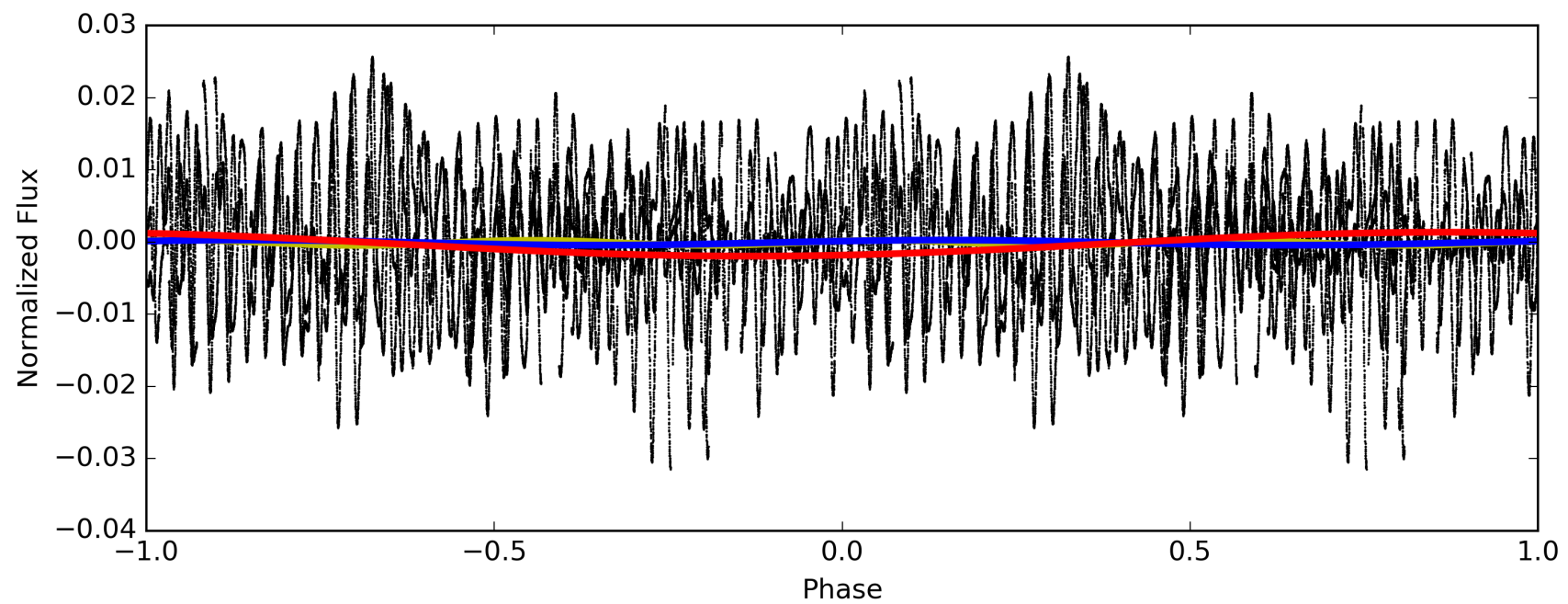
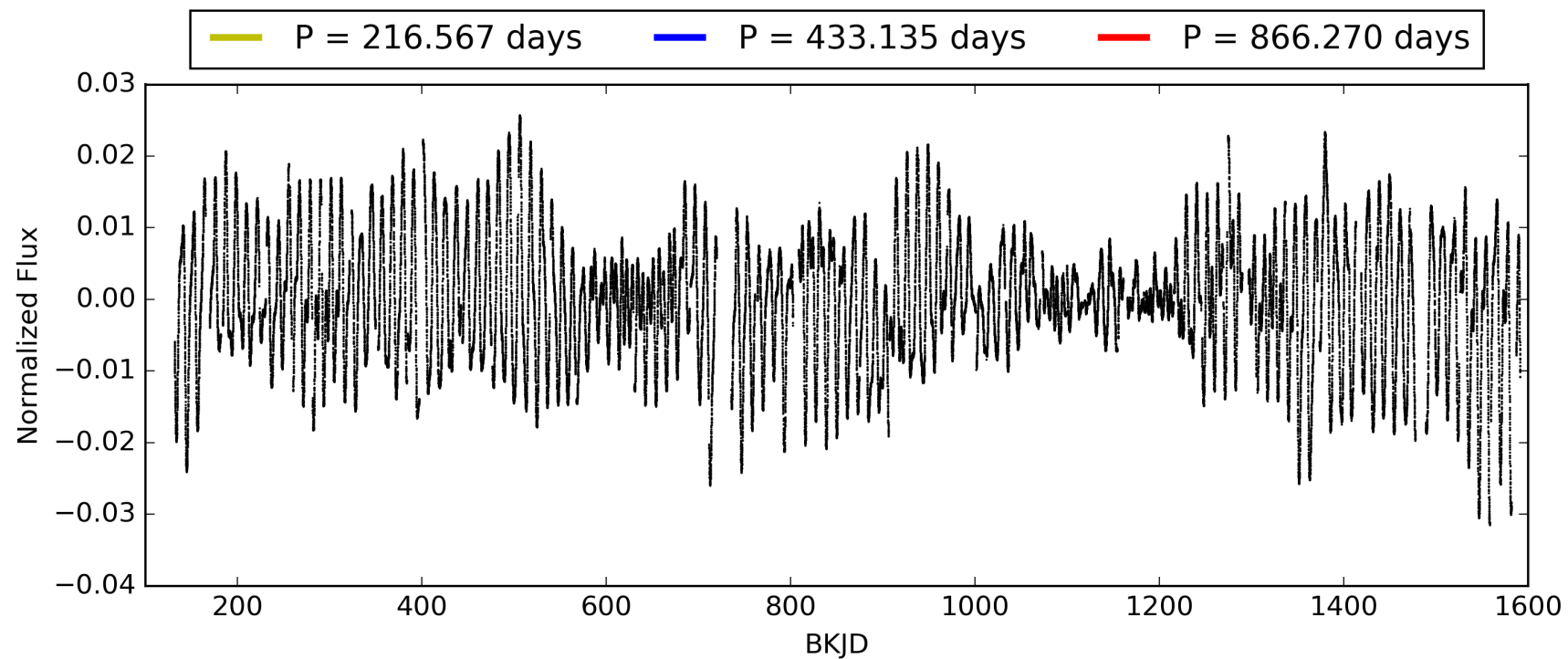
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:05:03 Z

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

TCE 005183039-01, PDC Light Curves

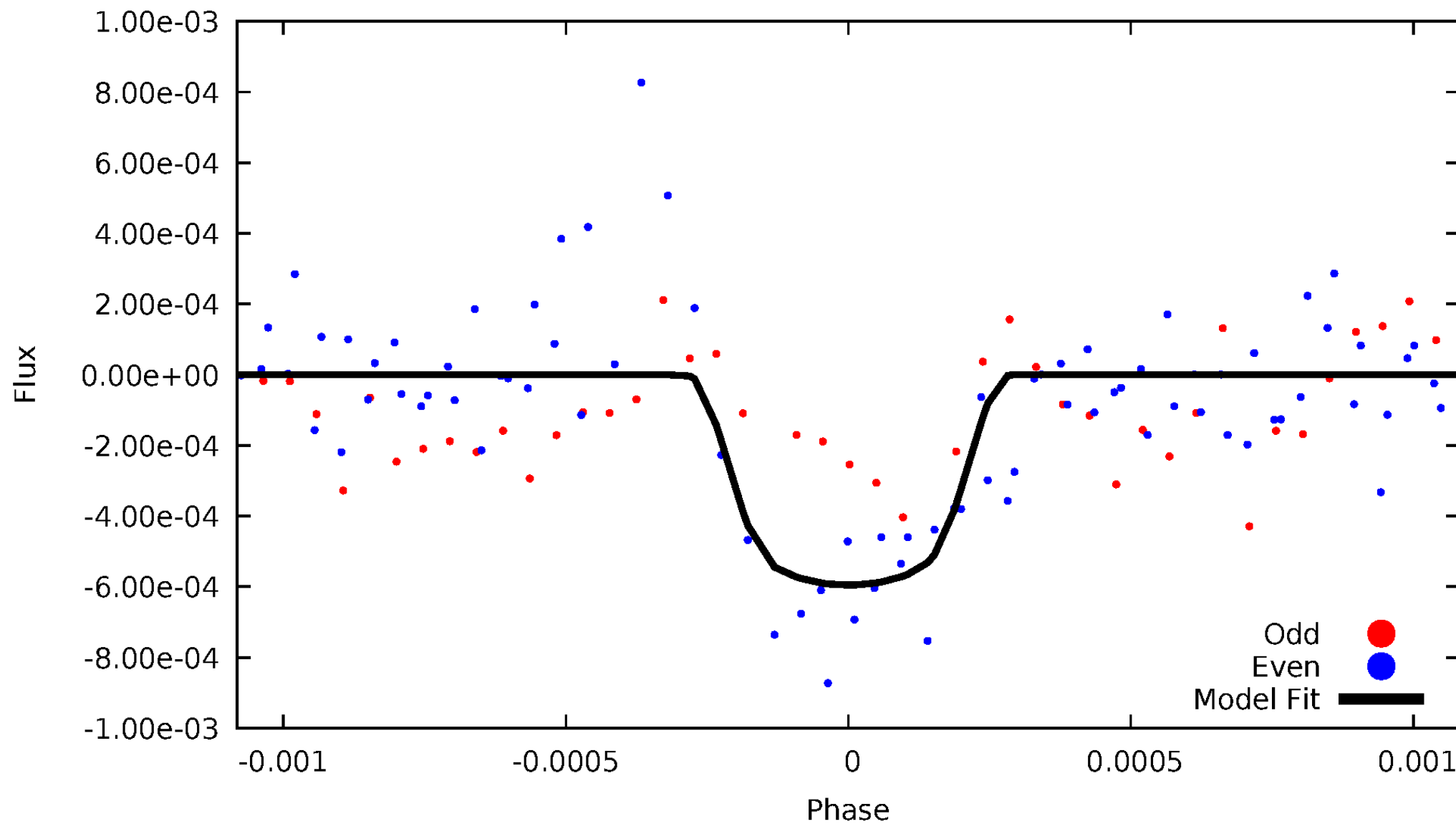


TCE 005183039-01



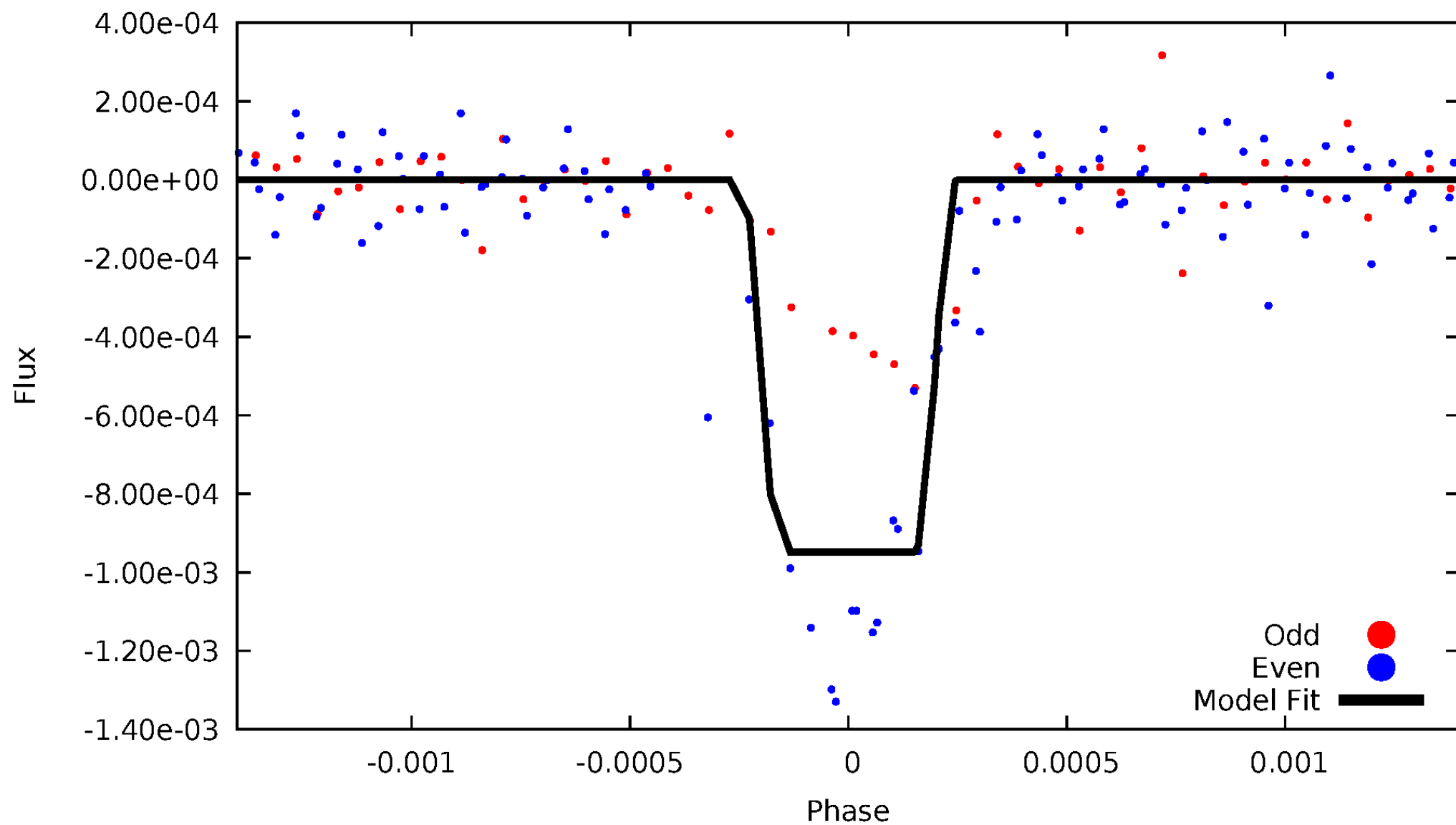
DV Odd/Even

TCE 005183039-01



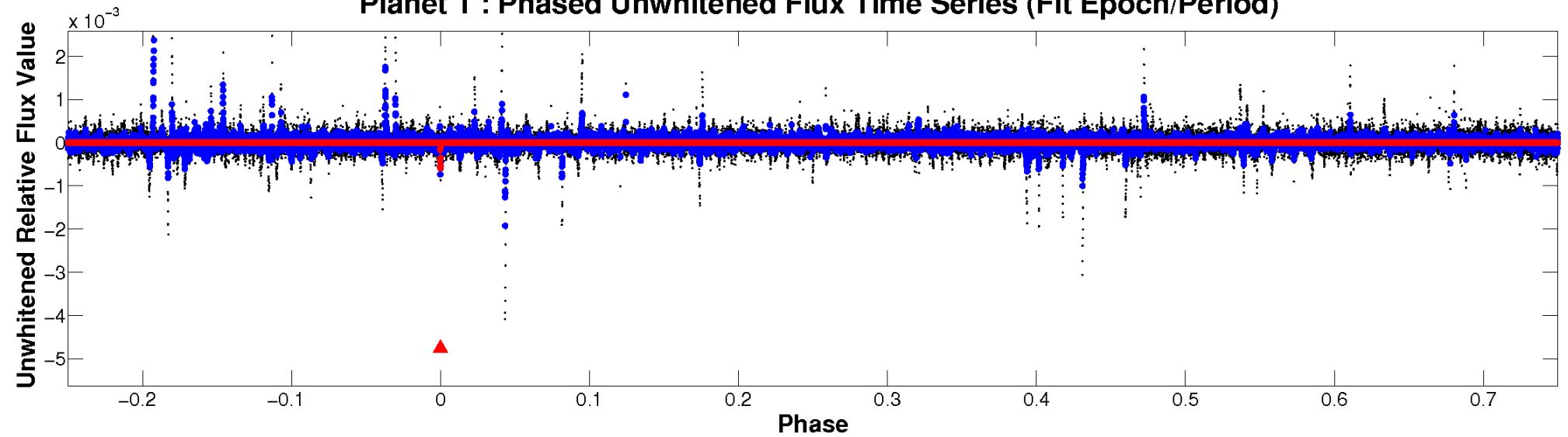
ALT Odd/Even

TCE 005183039-01

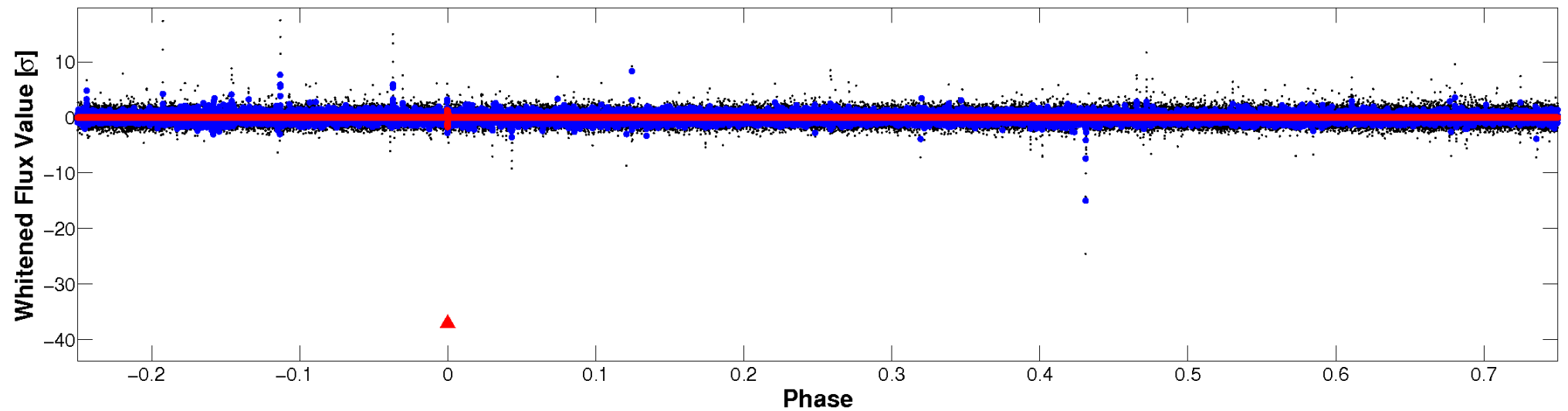


Non-Whitened Vs. Whitened Light Curve

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

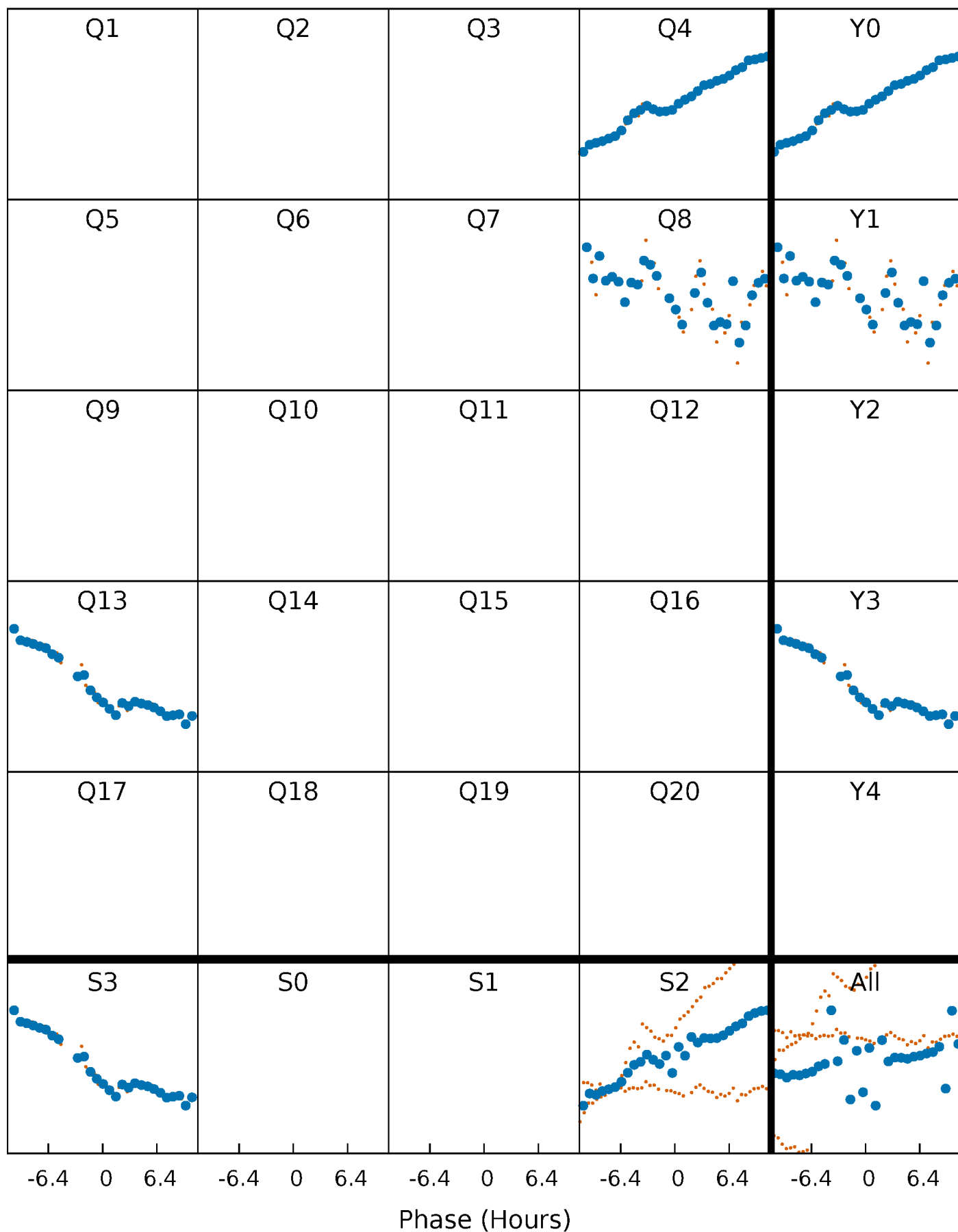


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



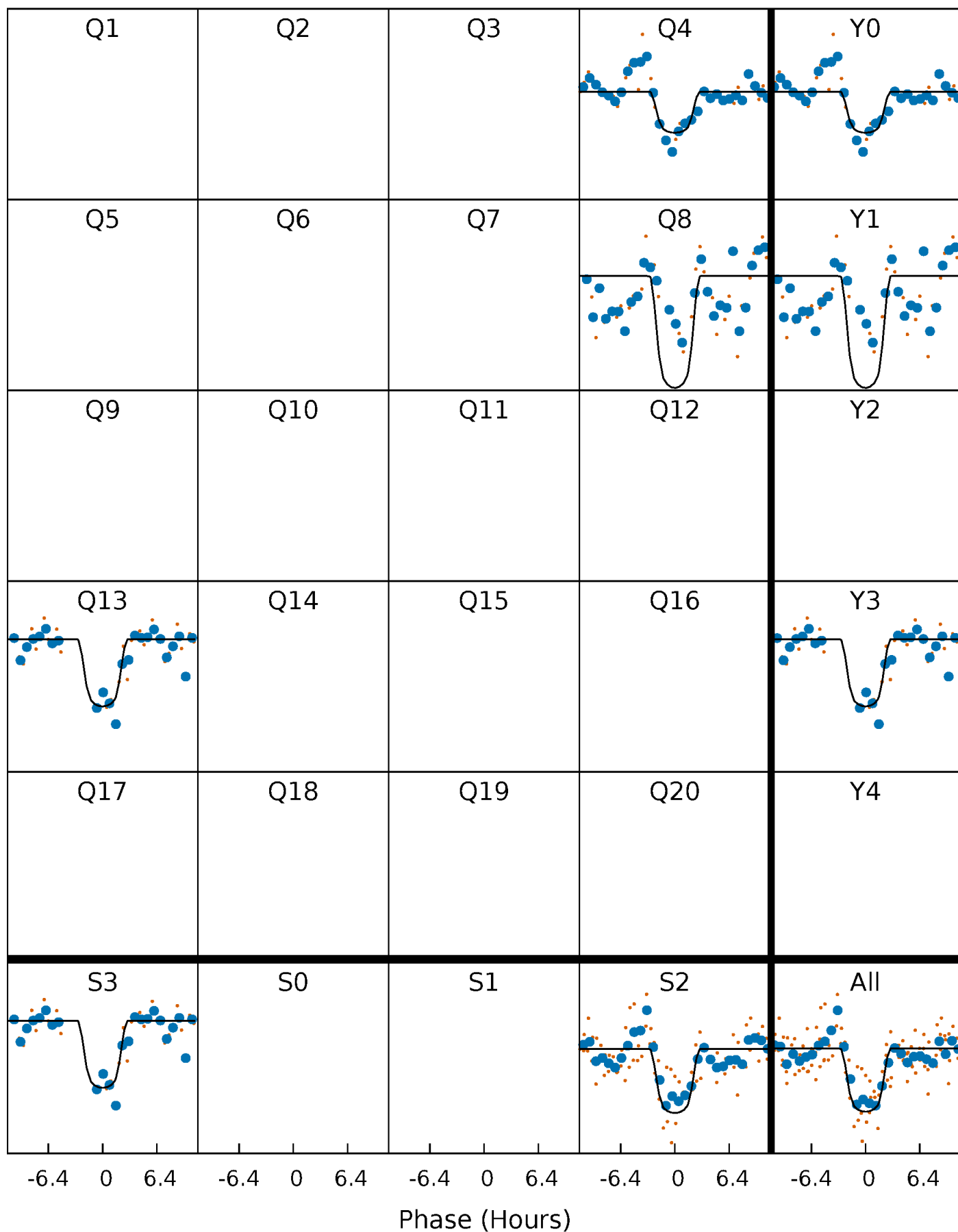
PDC Quarter-Phased Transit Curves

TCE 005183039-01 $P=433.134915$ Days $T_0=365.530560$ (BKJD)



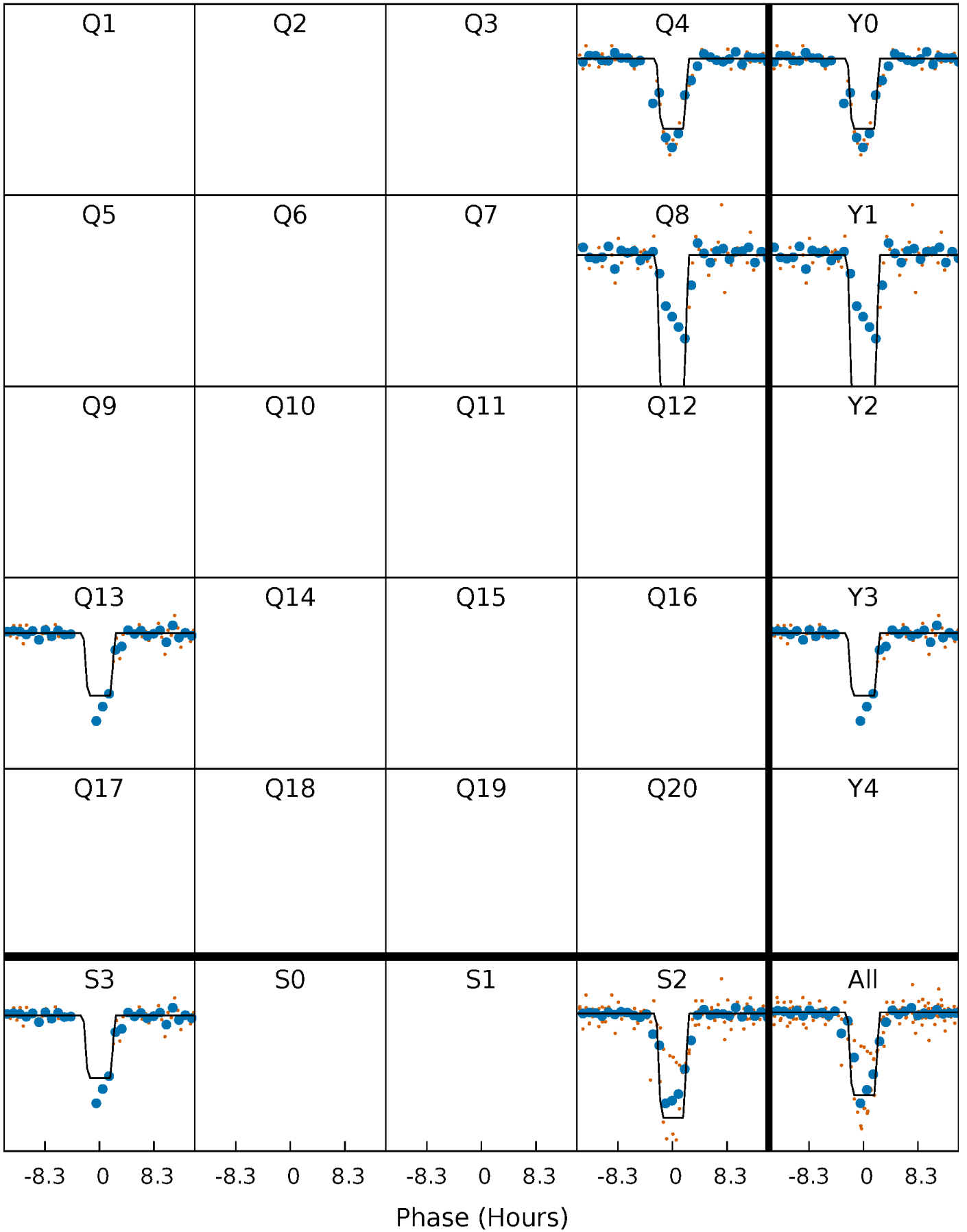
DV Quarter-Phased Transit Curves

TCE 005183039-01 P=433.134915 Days $T_0=365.530560$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

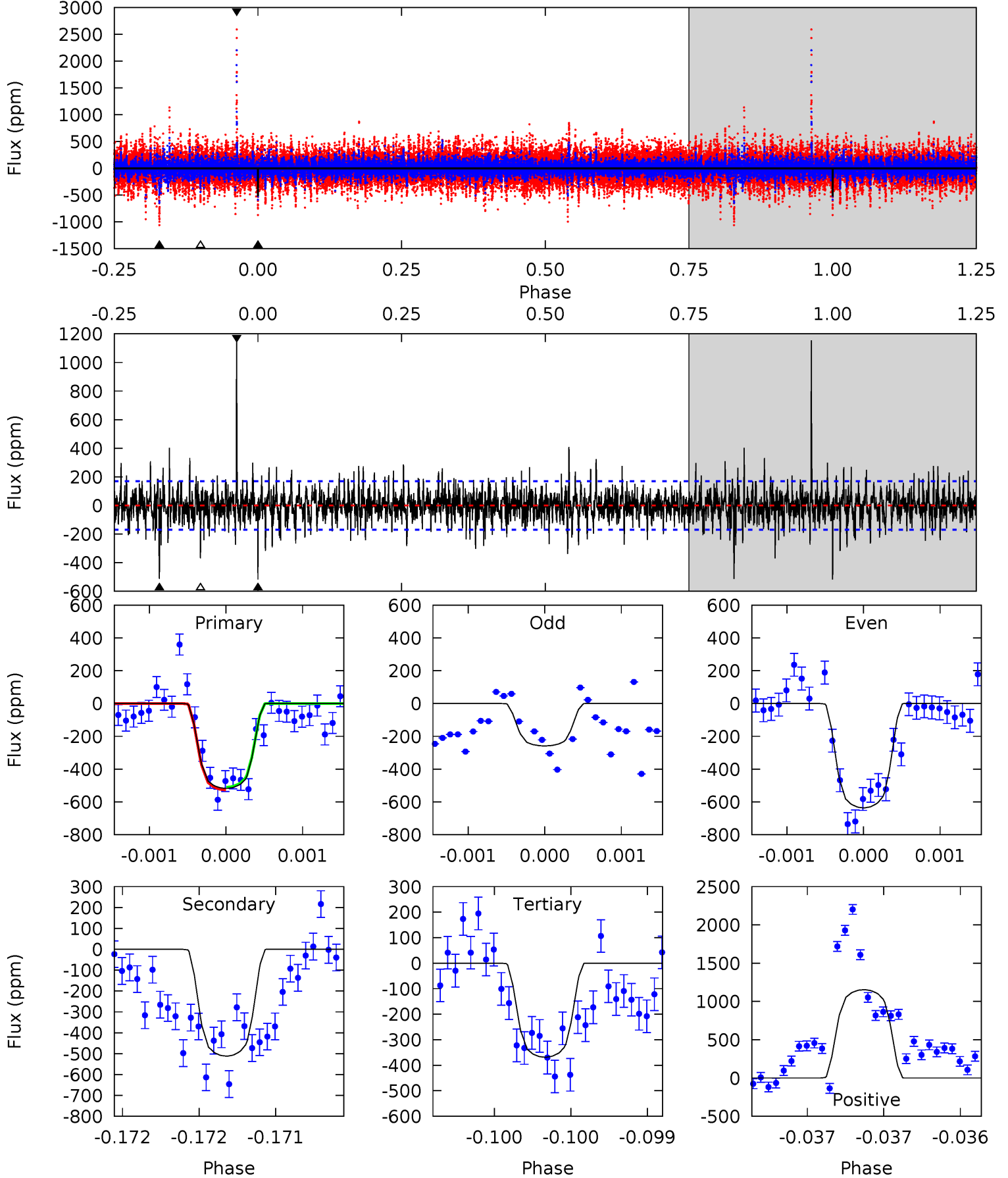
TCE 005183039-01 P=433.150605 Days $T_0=365.490644$ (BKJD)



DV Model-Shift Uniqueness Test

005183039-01, P = 433.134915 Days, E = 365.530560 Days

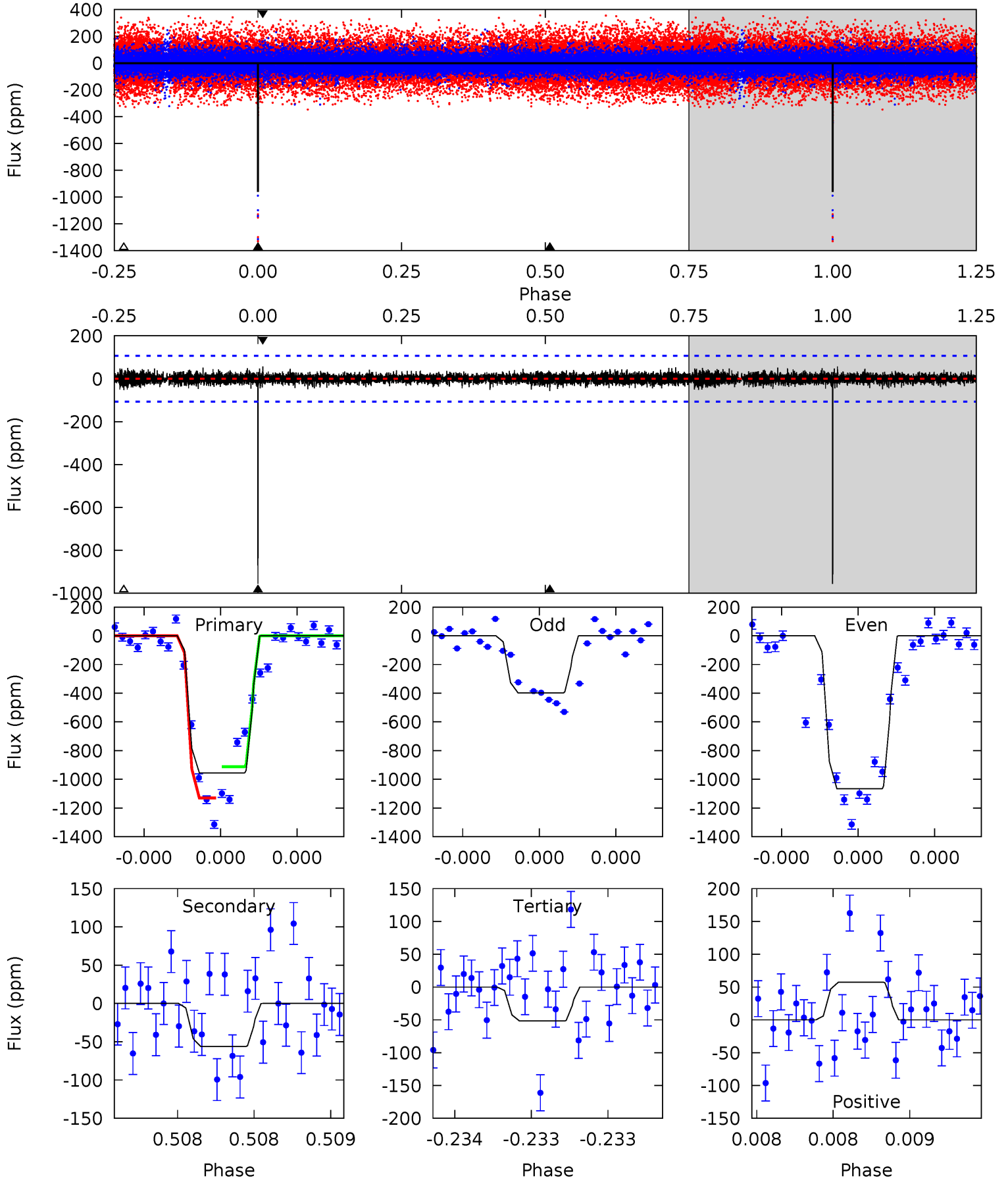
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	16.7	12.0	37.7	5.55	3.45	2.60	4.87	-20.8	4.68	-21.0	4.92	0.84	0.69	0.25



Alt Model-Shift Uniqueness Test

005183039-01, P = 433.150605 Days, E = 365.490644 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.9	2.93	2.70	2.99	5.58	3.49	0.62	47.2	46.9	0.23	-0.06	18.5	0.83	0.06	4.86



Stellar Parameters For KIC 005183039

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5767^{+143}_{-158}	$4.559^{+0.040}_{-0.160}$	$-0.220^{+0.300}_{-0.300}$	$0.837^{+0.199}_{-0.080}$	$0.927^{+0.090}_{-0.110}$	$2.227^{+0.463}_{-0.962}$
	+2%/-3%	+1%/-4%	+136%/-136%	+24%/-10%	+10%/-12%	+21%/-43%
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 005183039-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-512 ± 31	$2.69^{+0.35}_{-0.33}$	318^{+18}_{-14}	5204^{+294}_{-222}	45777^{+13005}_{-9218}
Alt.	-56 ± 19	$2.91^{+0.41}_{-0.34}$	317^{+18}_{-13}	3370^{+180}_{-218}	4214^{+1776}_{-1677}

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 $A_{obs} \gg 1.0$

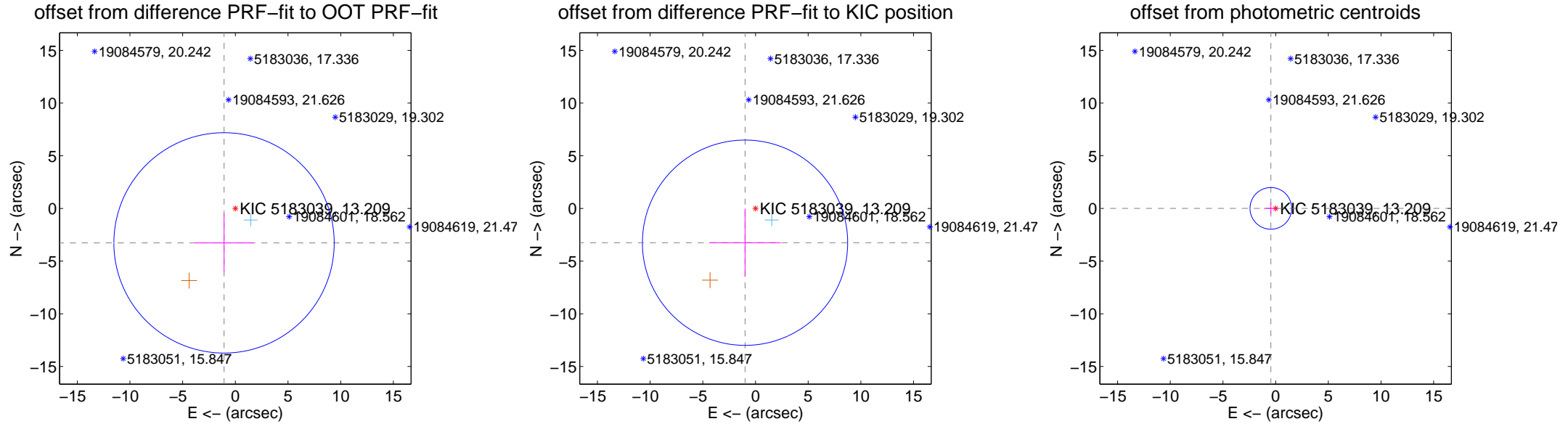
DV Centroid Data

Supplemental centroid analysis for 005183039-01. Kepler magnitude: 13.21. Transit SNR 7.69

There are 1 quarters with good PRF difference image offsets

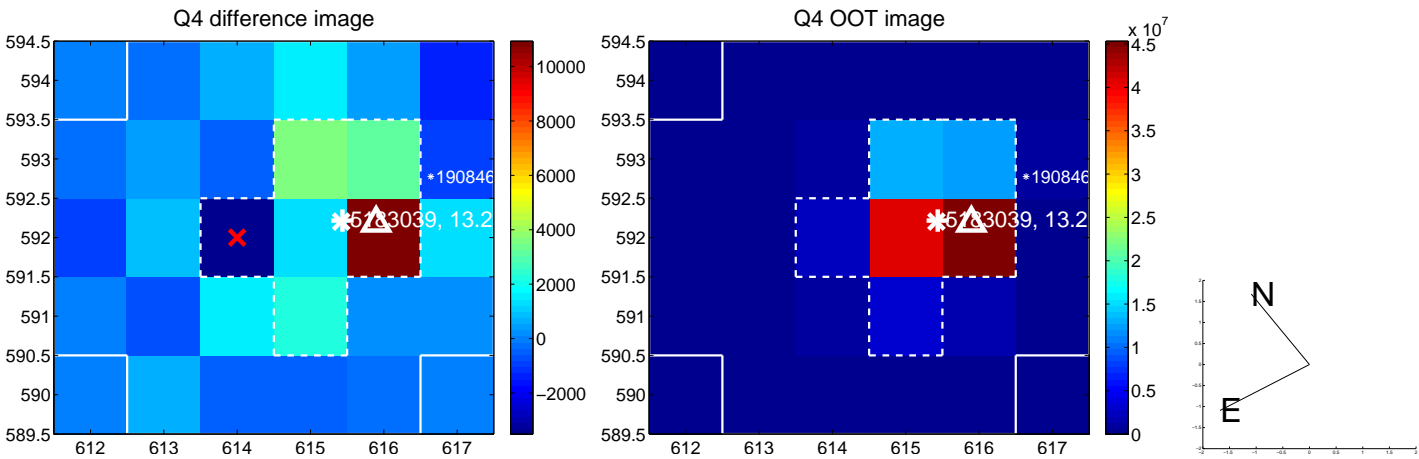
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.439 ± 3.486	0.99	1.072 ± 2.799	-3.268 ± 2.750
PRF-fit source offset from KIC position	3.400 ± 3.247	1.05	0.991 ± 3.393	-3.253 ± 3.233
photometric centroid source offset	0.46 ± 0.66	0.69	0.46 ± 0.66	0.01 ± 0.54

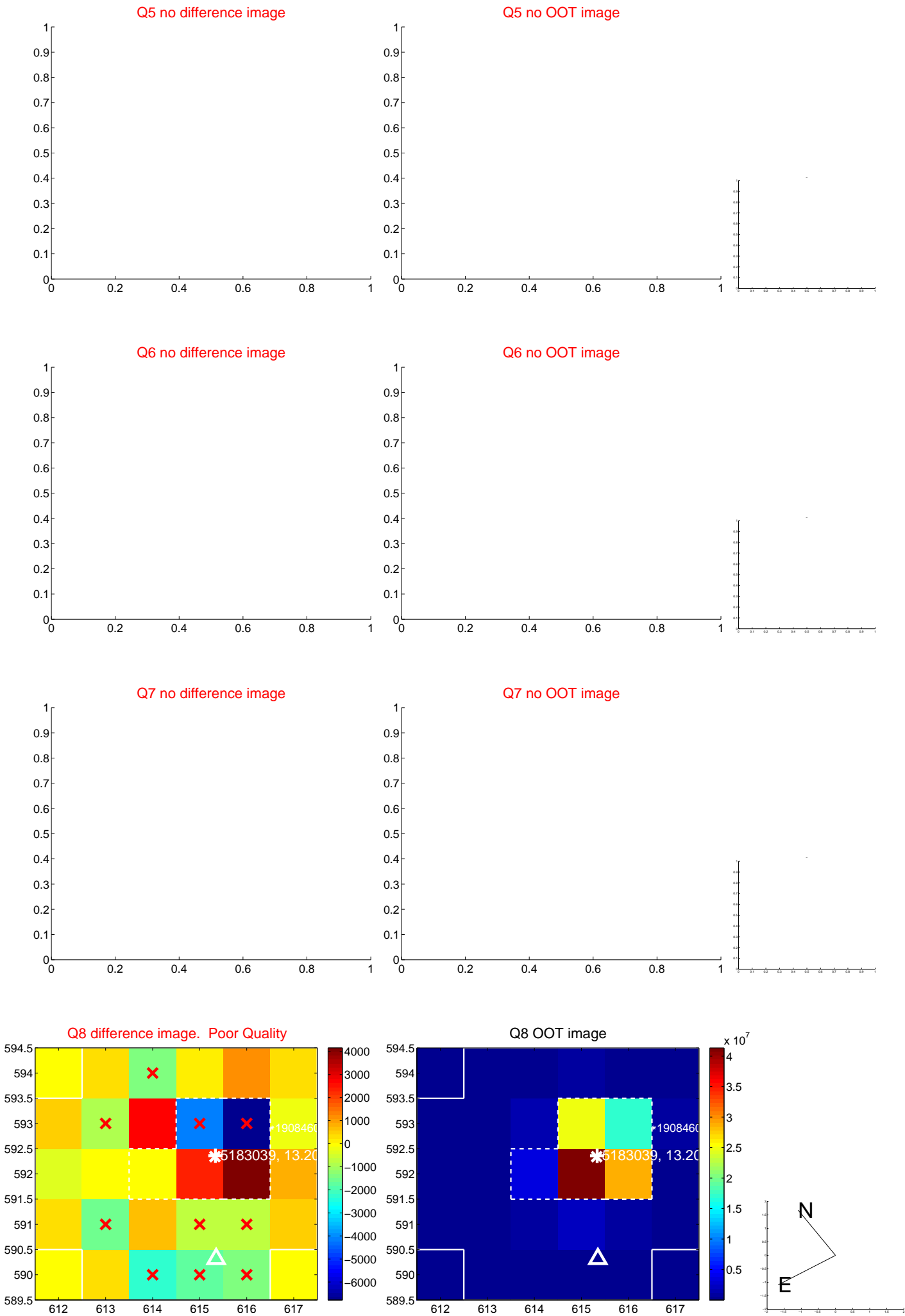


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



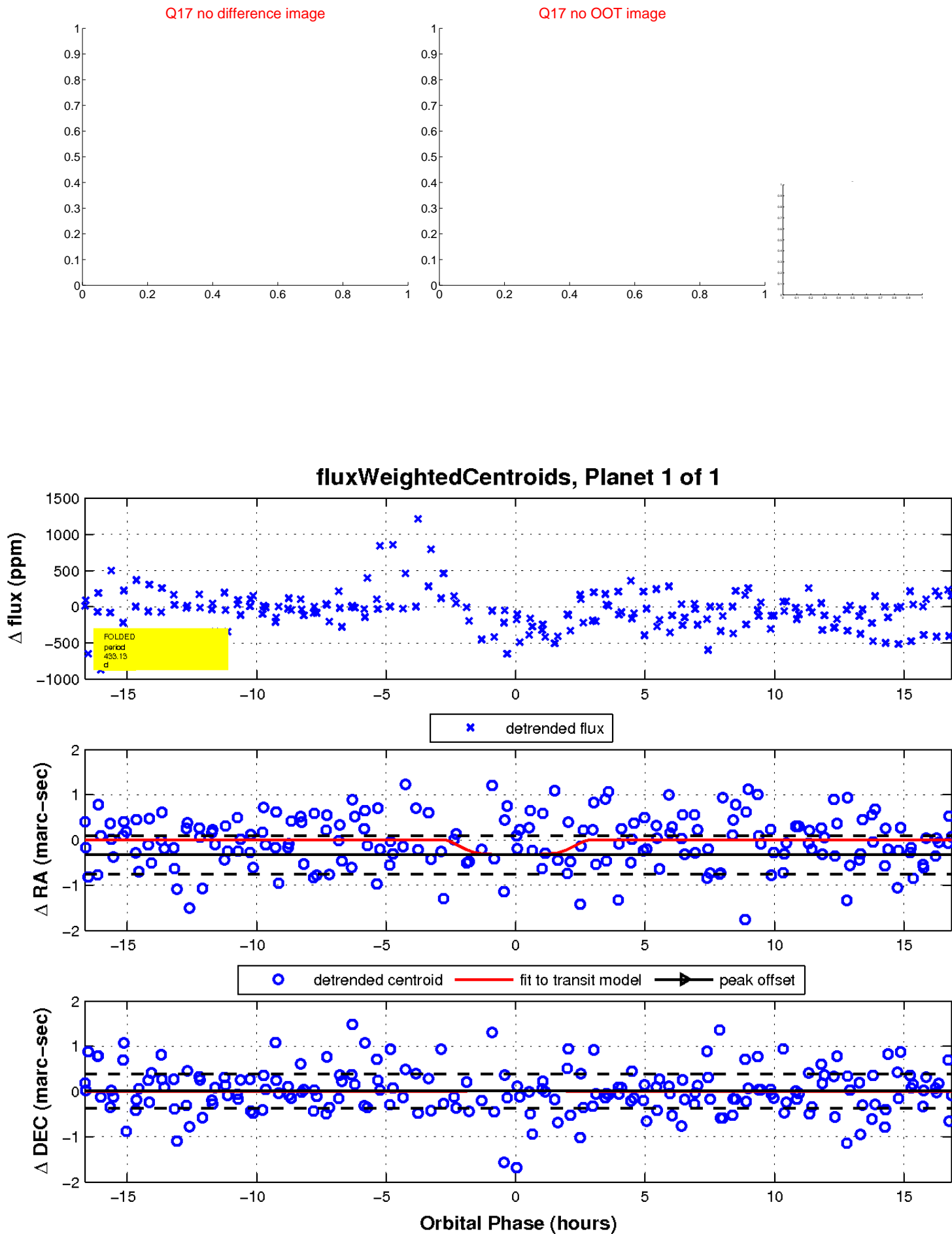
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

