

KIC 008681636

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})
008681636-01	OBS	No	427.530854	330.271989	981.1	5.043	7.9	8.1	0.60	4252	2.05	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008681636-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_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.

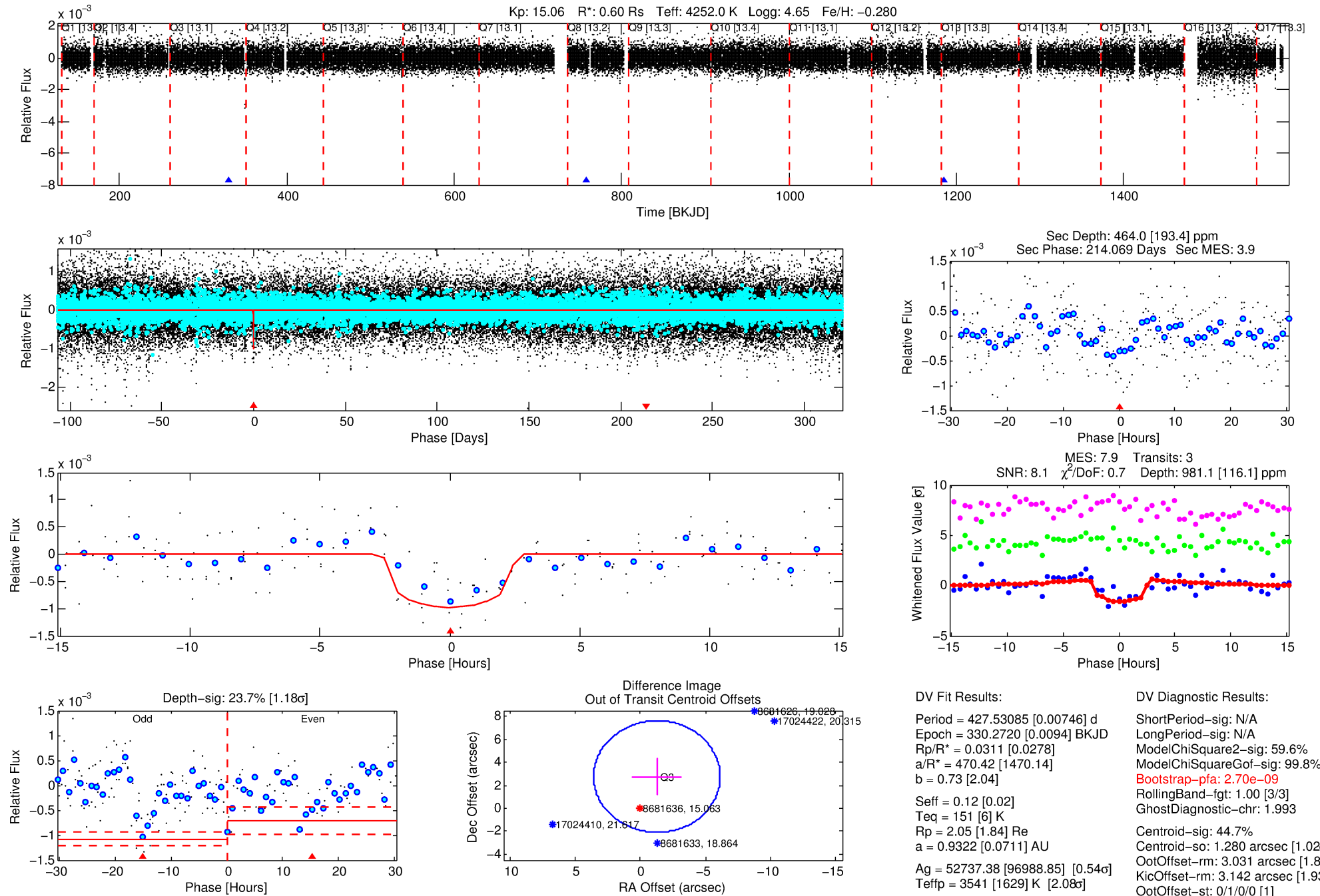
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008681636-01

No Significant Match Found

DV One-Page Summary

KIC: 8681636 Candidate: 1 of 1 Period: 427.531 d



DV Fit Results:

Period = 427.53085 [0.00746] d
Epoch = 330.2720 [0.0094] BKJD
Rp/R* = 0.0311 [0.0278]
a/R* = 470.42 [1470.14]
b = 0.73 [2.04]
Seff = 0.12 [0.02]
Teq = 151 [6] K
Rp = 2.05 [1.84] Re
a = 0.9322 [0.0711] AU
Ag = 52737.38 [96988.85] [0.54 σ]
Teff = 3541 [1629] K [2.08 σ]

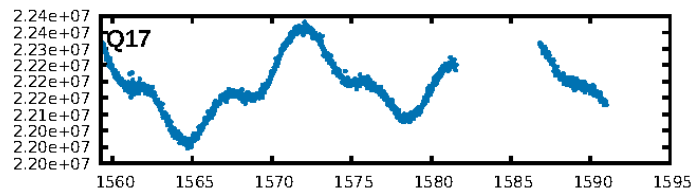
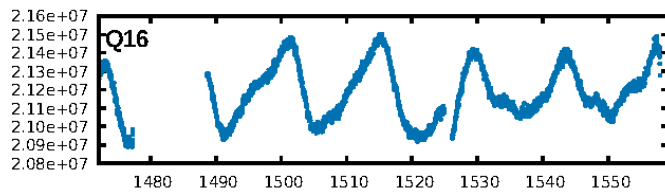
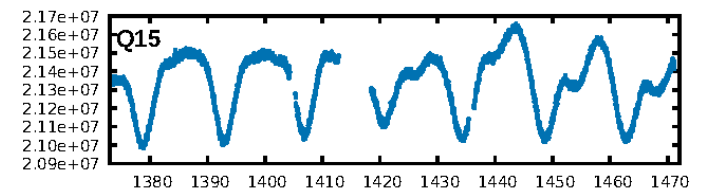
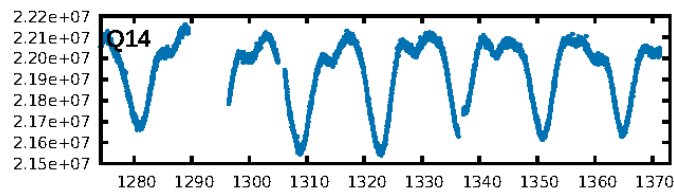
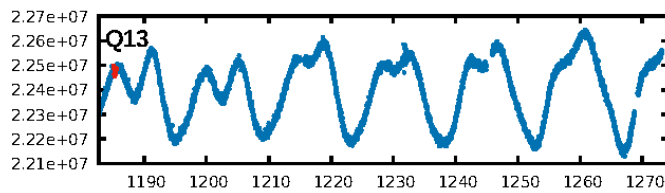
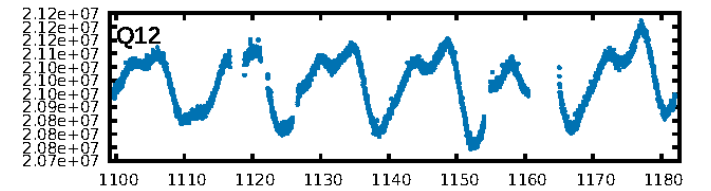
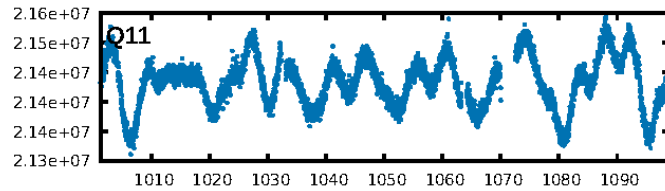
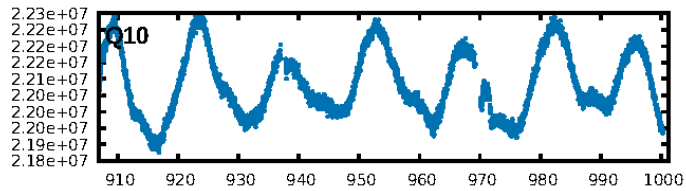
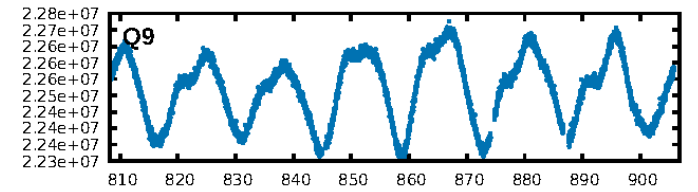
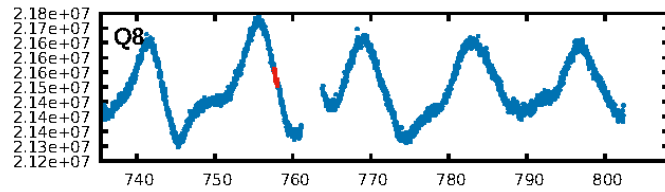
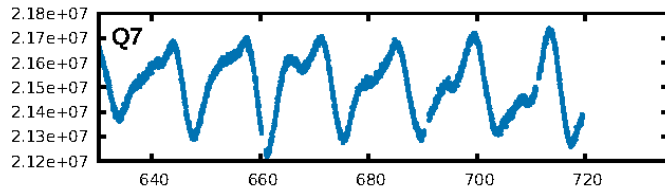
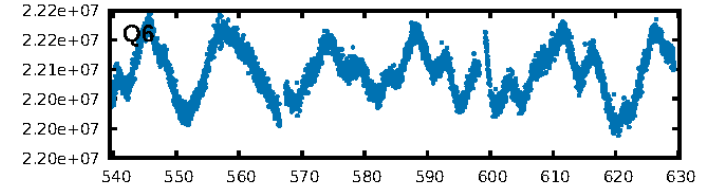
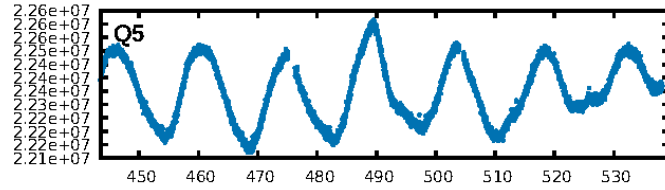
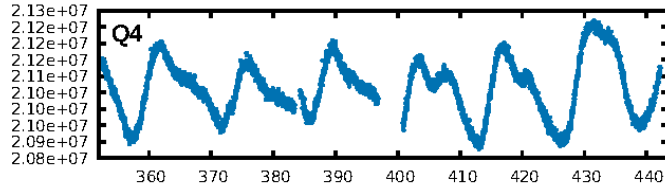
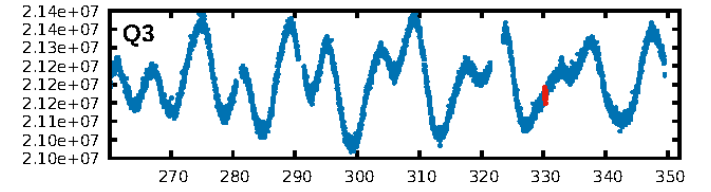
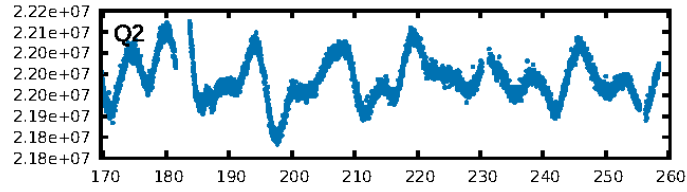
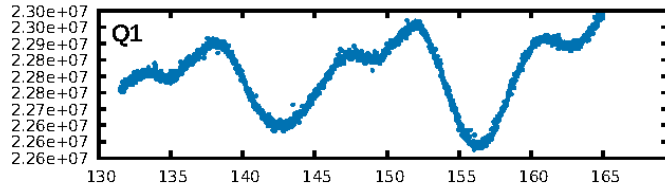
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.6%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.70e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.993
Centroid-sig: 44.7%
Centroid-so: 1.280 arcsec [1.02 σ]
OotOffset-rm: 3.031 arcsec [1.87 σ]
KicOffset-rm: 3.142 arcsec [1.93 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

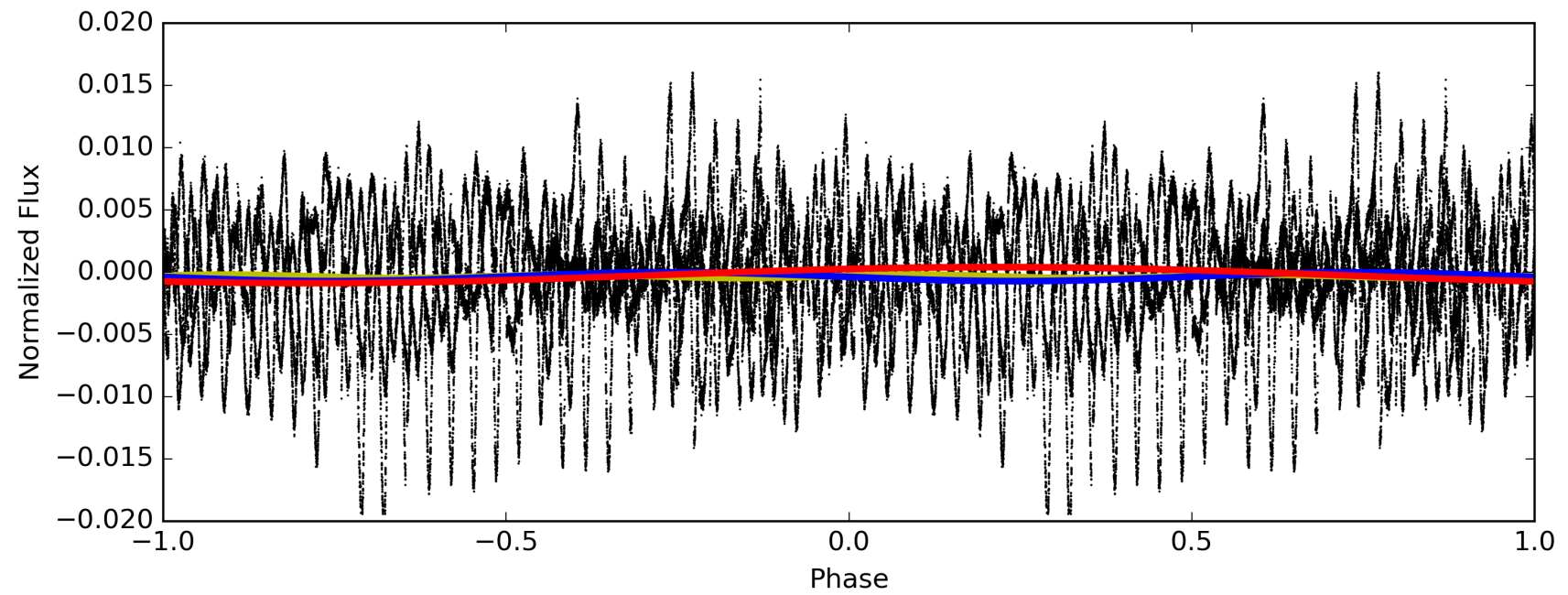
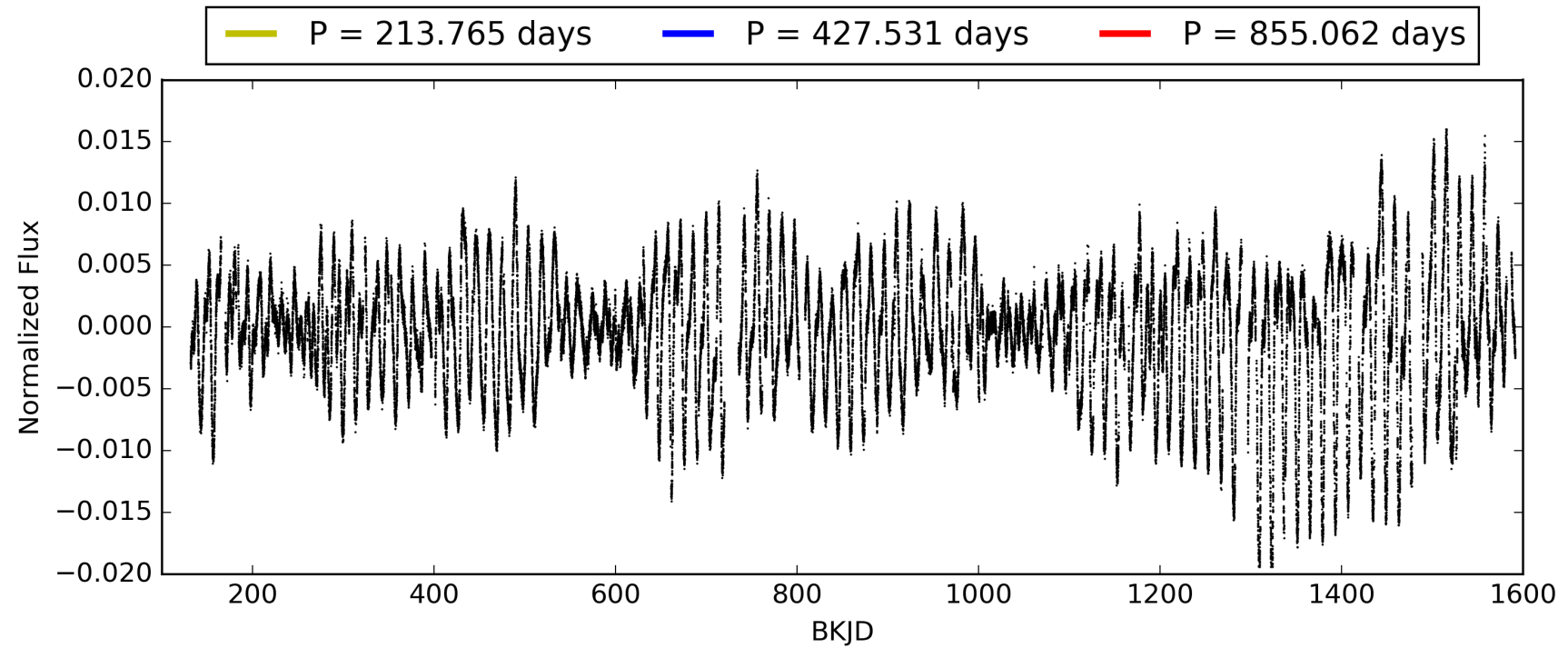
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:27:46 Z

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

TCE 008681636-01, PDC Light Curves

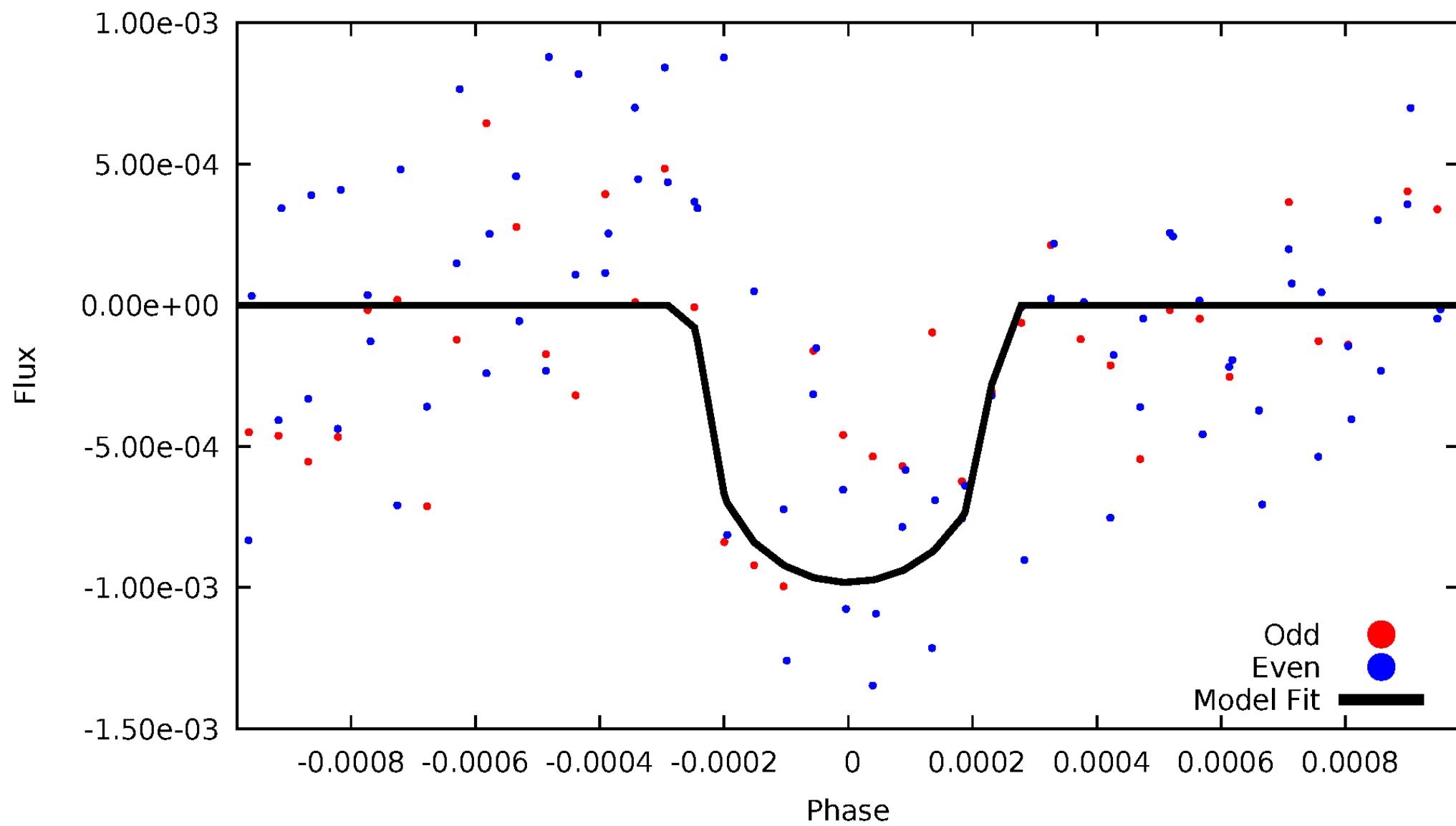


TCE 008681636-01



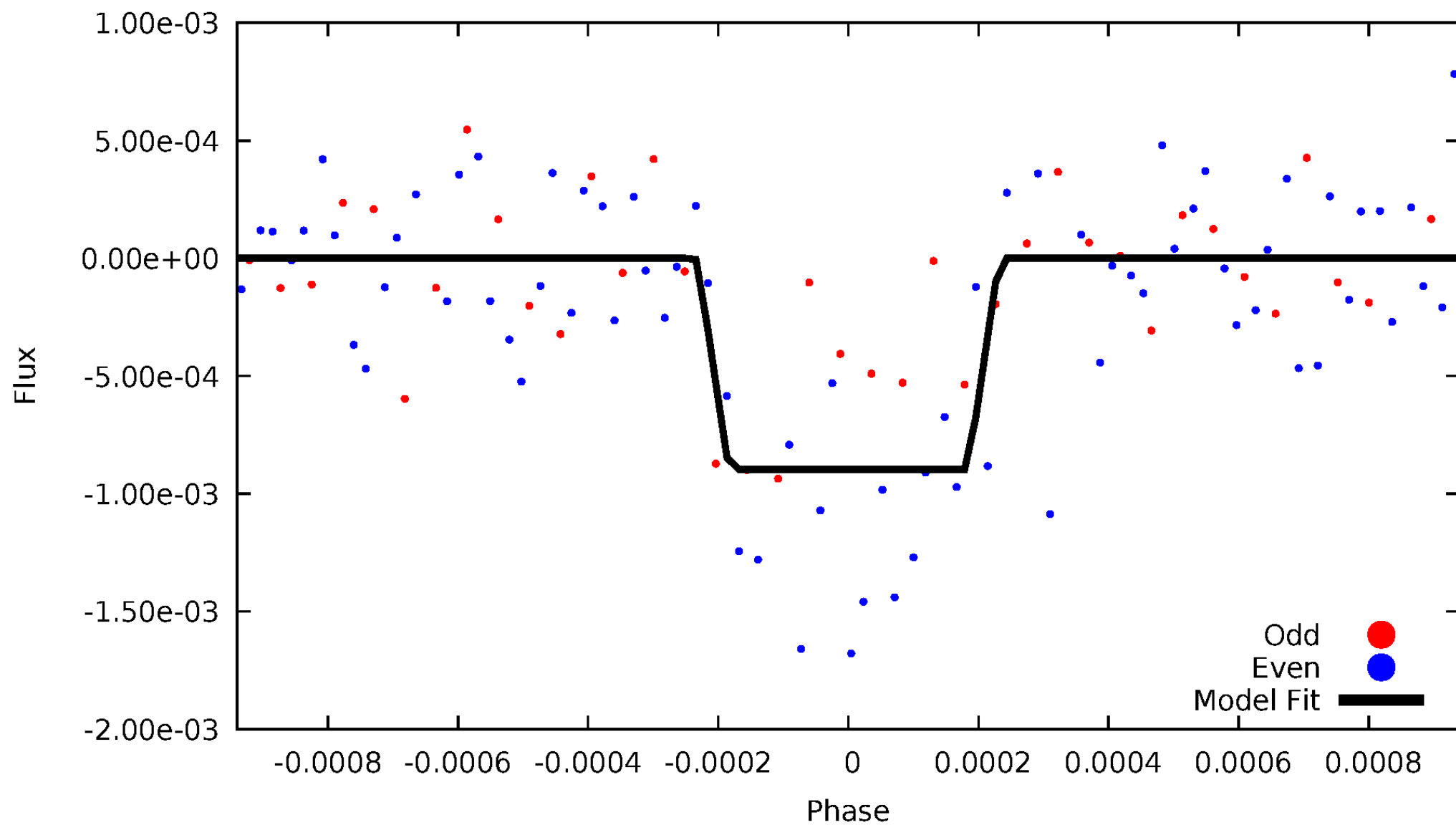
DV Odd/Even

TCE 008681636-01



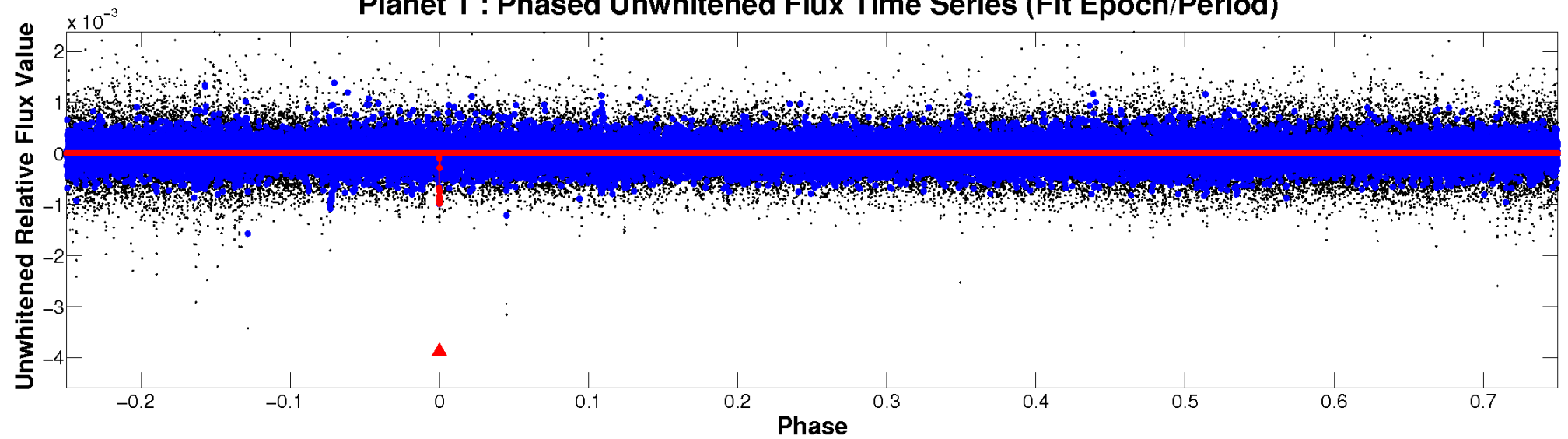
ALT Odd/Even

TCE 008681636-01

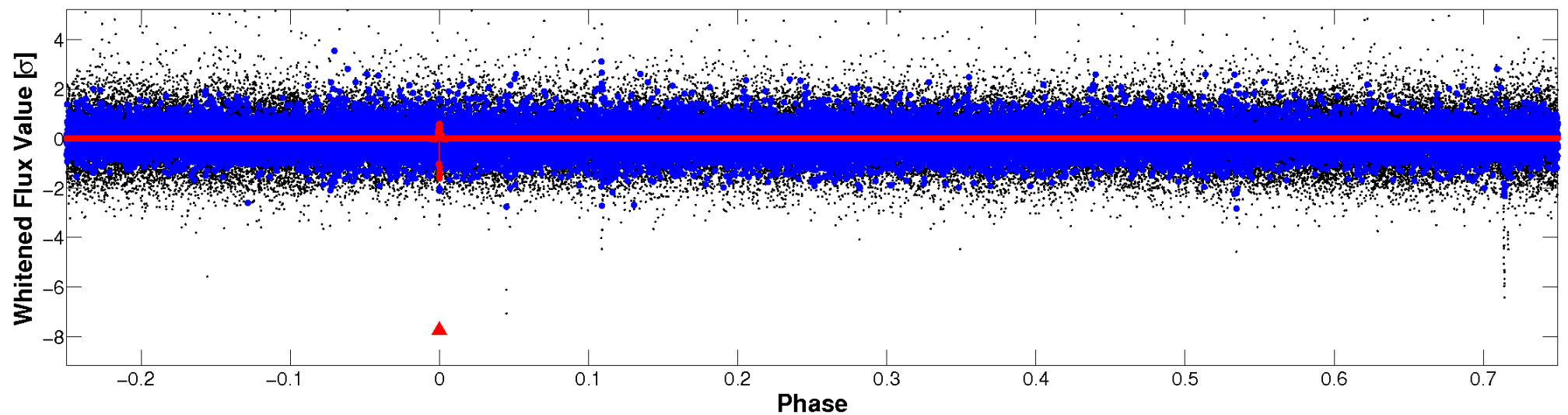


Non-Whitened Vs. Whitened Light Curve

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

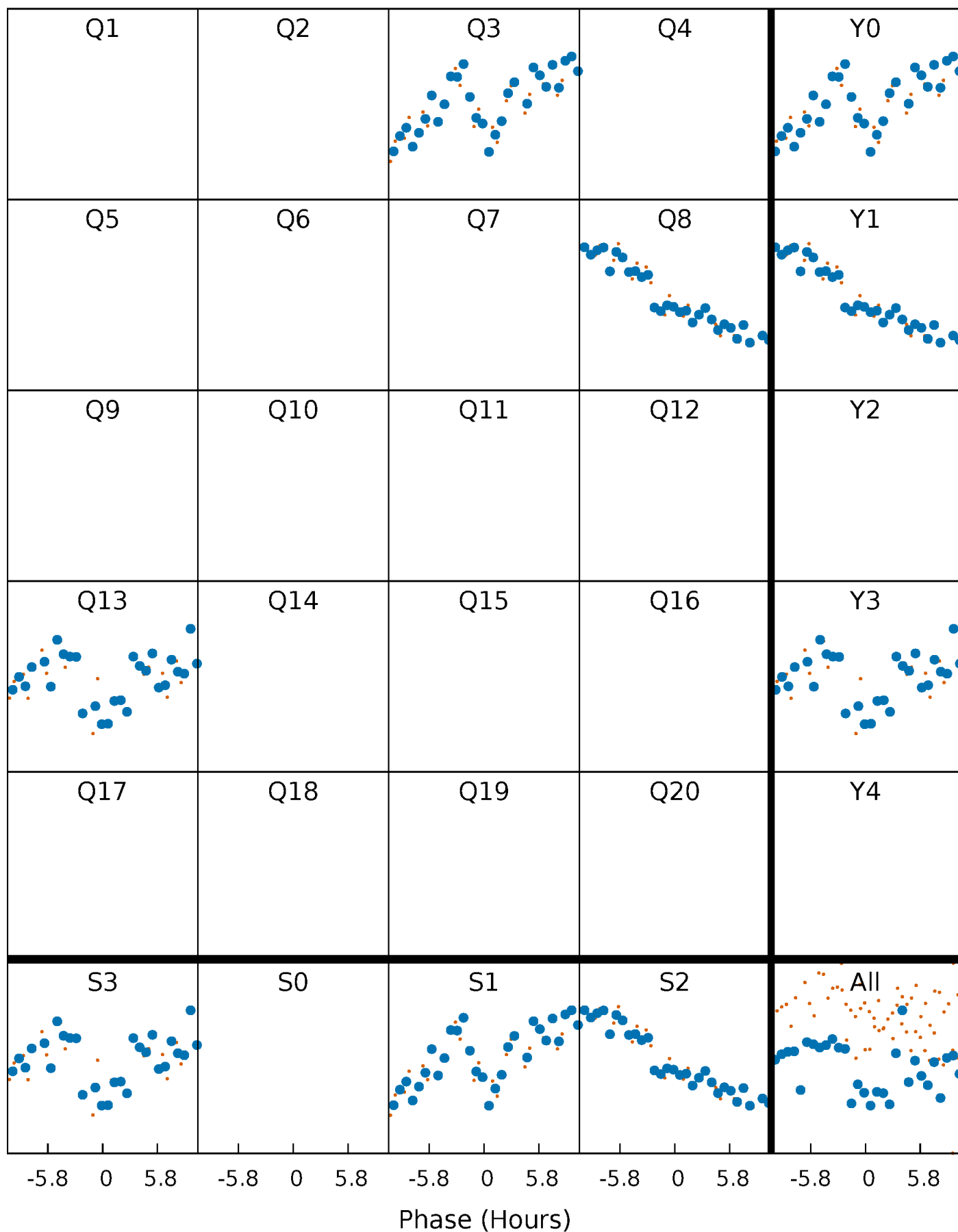


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



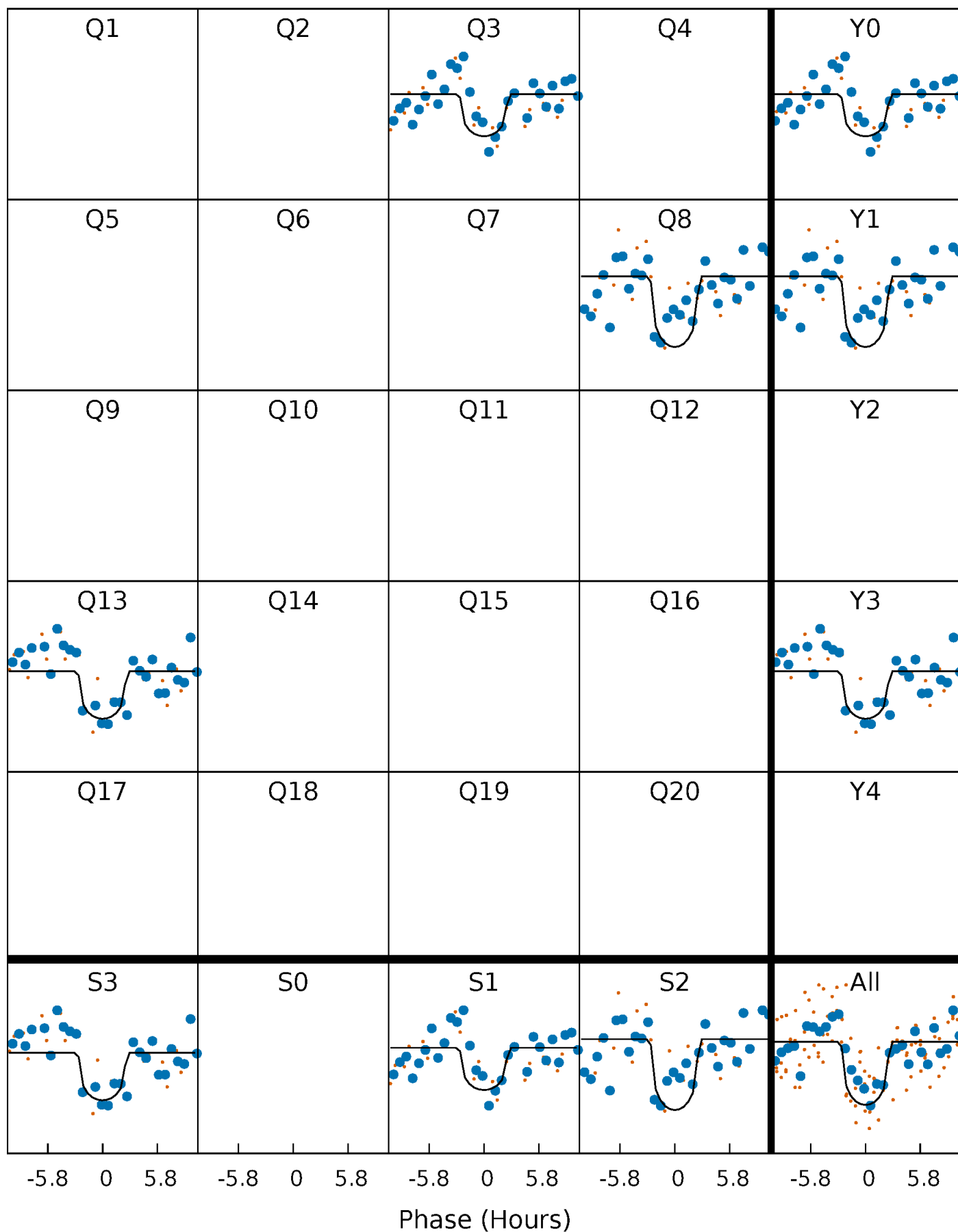
PDC Quarter-Phased Transit Curves

TCE 008681636-01 P=427.530854 Days $T_0=330.271989$ (BKJD)



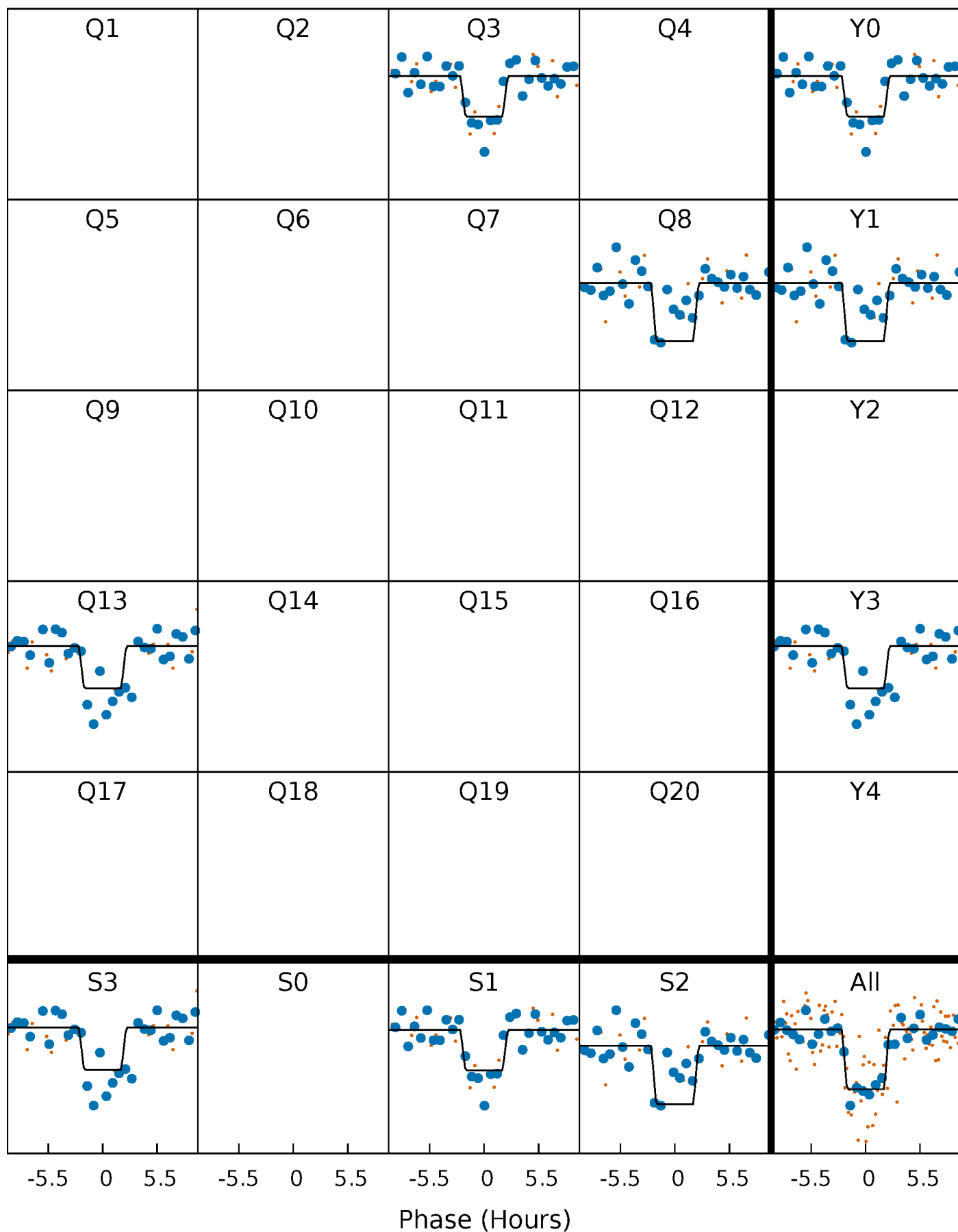
DV Quarter-Phased Transit Curves

TCE 008681636-01 P=427.530854 Days $T_0=330.271989$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

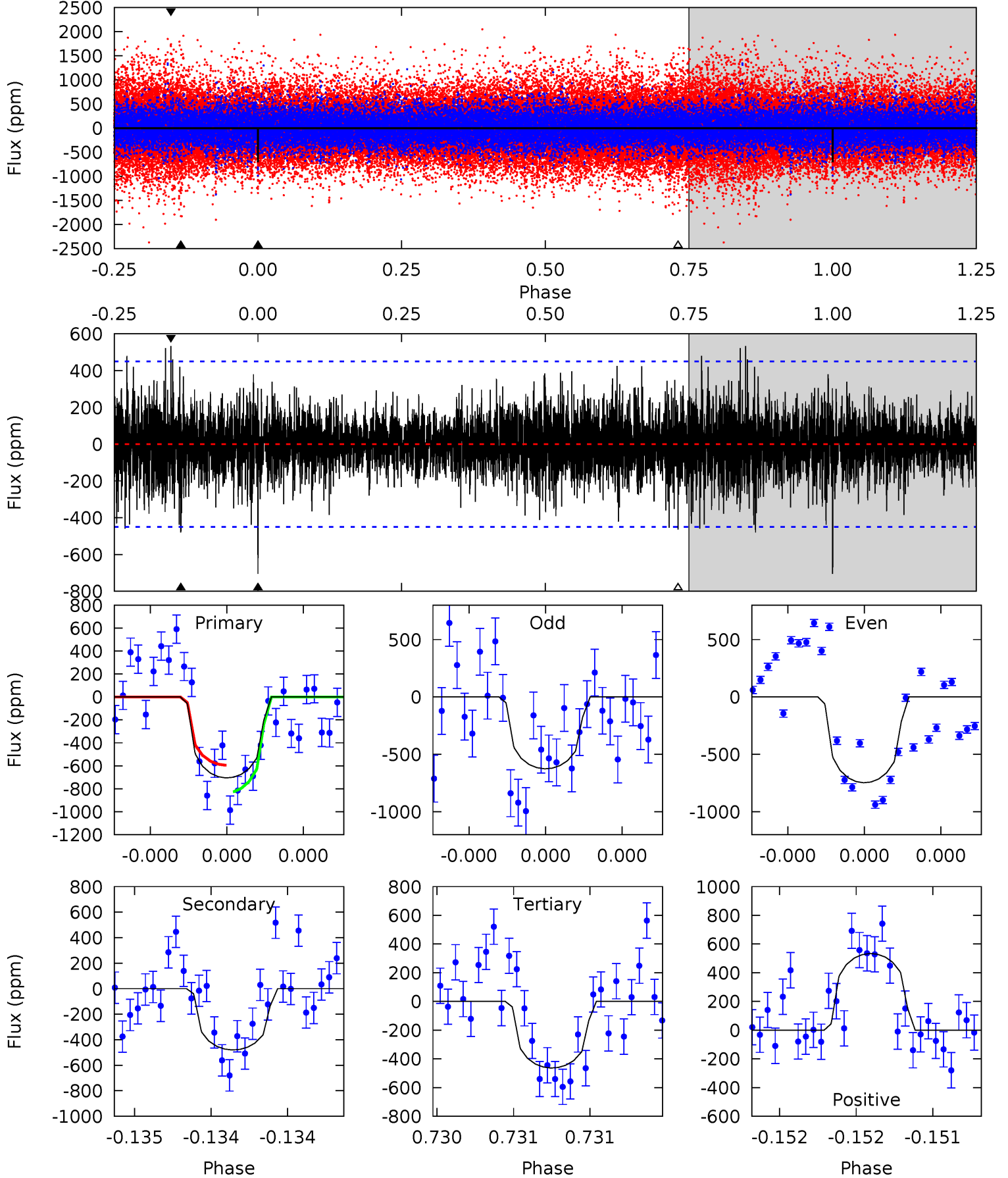
TCE 008681636-01 P=427.517754 Days $T_0=330.286746$ (BKJD)



DV Model-Shift Uniqueness Test

008681636-01, P = 427.530854 Days, E = 330.271989 Days

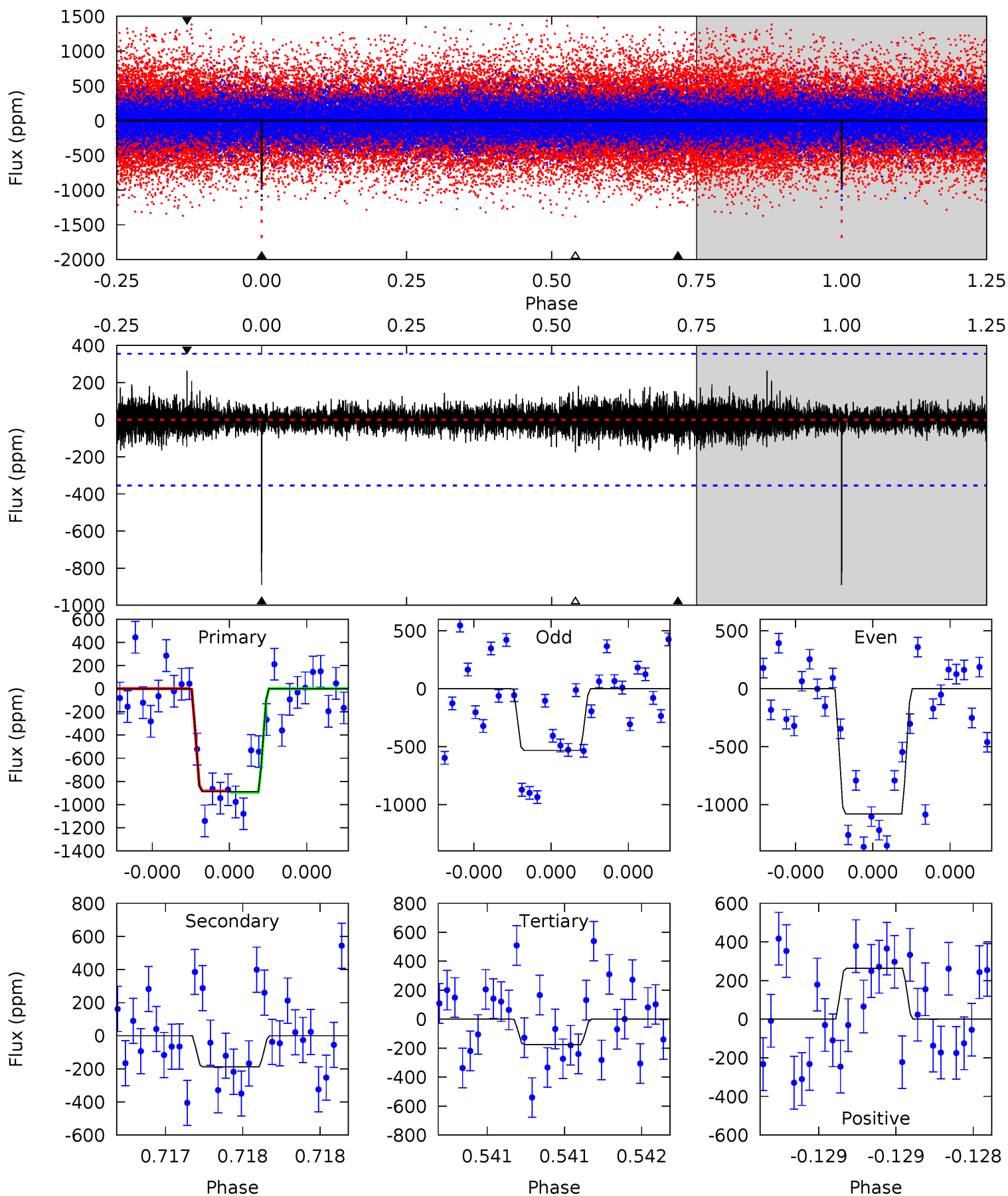
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.74	5.95	5.75	6.62	5.58	3.49	1.42	3.00	2.13	0.20	-0.67	0.68	1.09	0.43	1.44



Alt Model-Shift Uniqueness Test

008681636-01, P = 427.517754 Days, E = 330.286746 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	2.96	2.76	4.14	5.58	3.49	0.64	11.2	9.84	0.20	-1.19	4.18	0.91	0.23	0.10



Stellar Parameters For KIC 008681636

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4252^{+126}_{-126}	$4.646^{+0.052}_{-0.024}$	$-0.280^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.059}$	$0.591^{+0.064}_{-0.053}$	$3.765^{+0.945}_{-0.427}$
	+3%/-3%	+1%/-1%	+107%/-107%	+7%/-10%	+11%/-9%	+25%/-11%
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 008681636-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-480 ± 81	$2.38^{+1.78}_{-1.43}$	210^{+7}_{-7}	3570^{+1420}_{-565}	$40775^{+214570}_{-27533}$
Alt.	-188 ± 64	$2.20^{+1.73}_{-1.31}$	210^{+7}_{-7}	3159^{+1130}_{-481}	$17969^{+104608}_{-12607}$

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

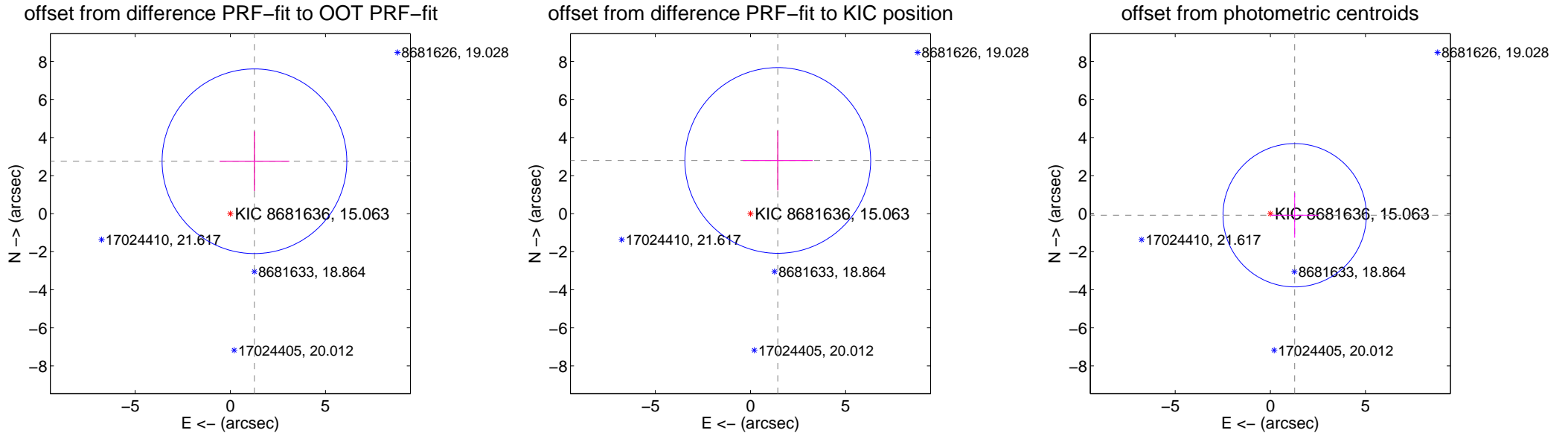
DV Centroid Data

Supplemental centroid analysis for 008681636-01. Kepler magnitude: 15.06. Transit SNR 8.07

There are 0 quarters with good PRF difference image offsets

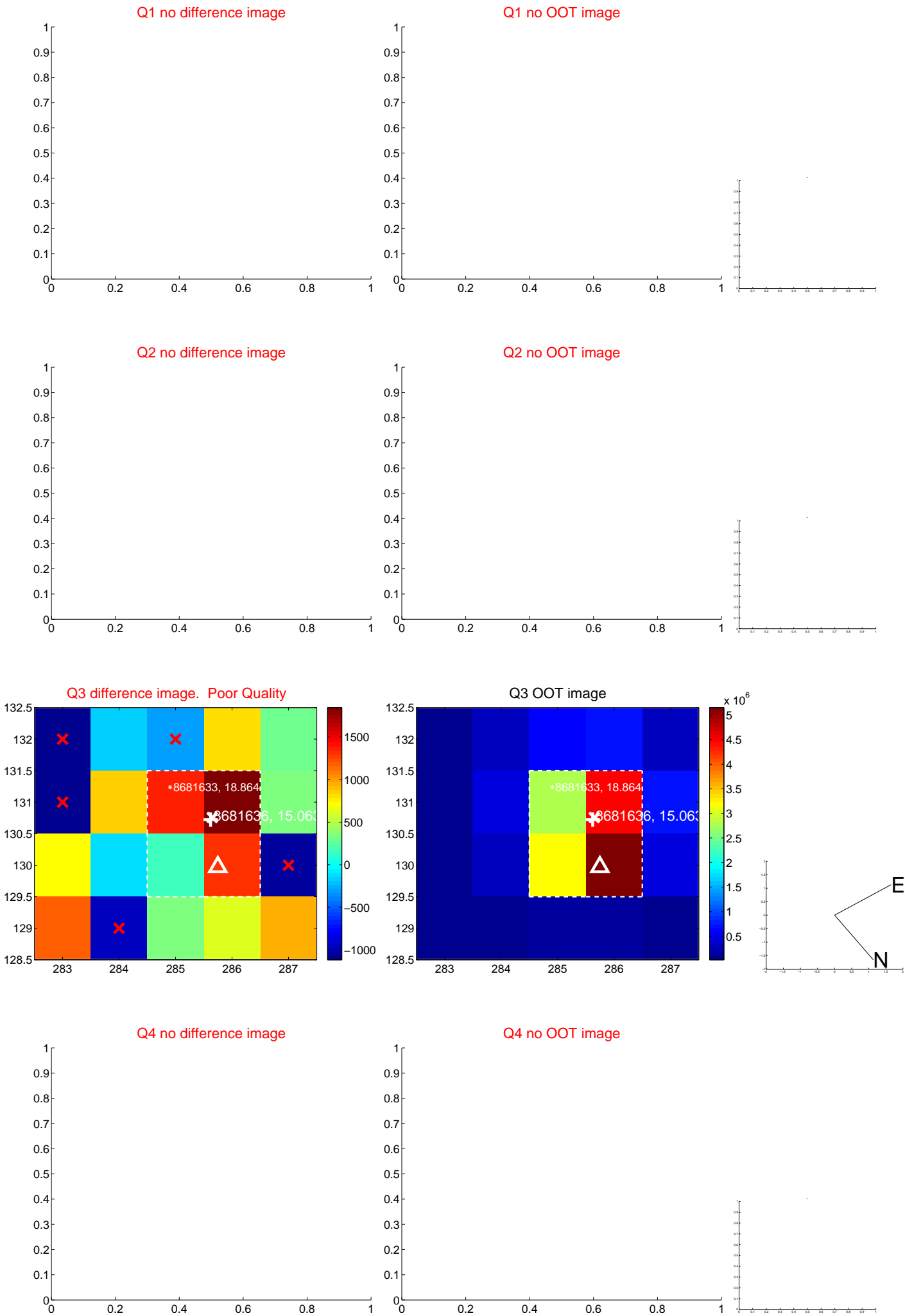
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.031 ± 1.617	1.87	-1.267 ± 1.831	2.754 ± 1.568
PRF-fit source offset from KIC position	3.142 ± 1.626	1.93	-1.434 ± 1.831	2.796 ± 1.568
photometric centroid source offset	1.28 ± 1.26	1.02	-1.28 ± 1.26	-0.08 ± 1.18

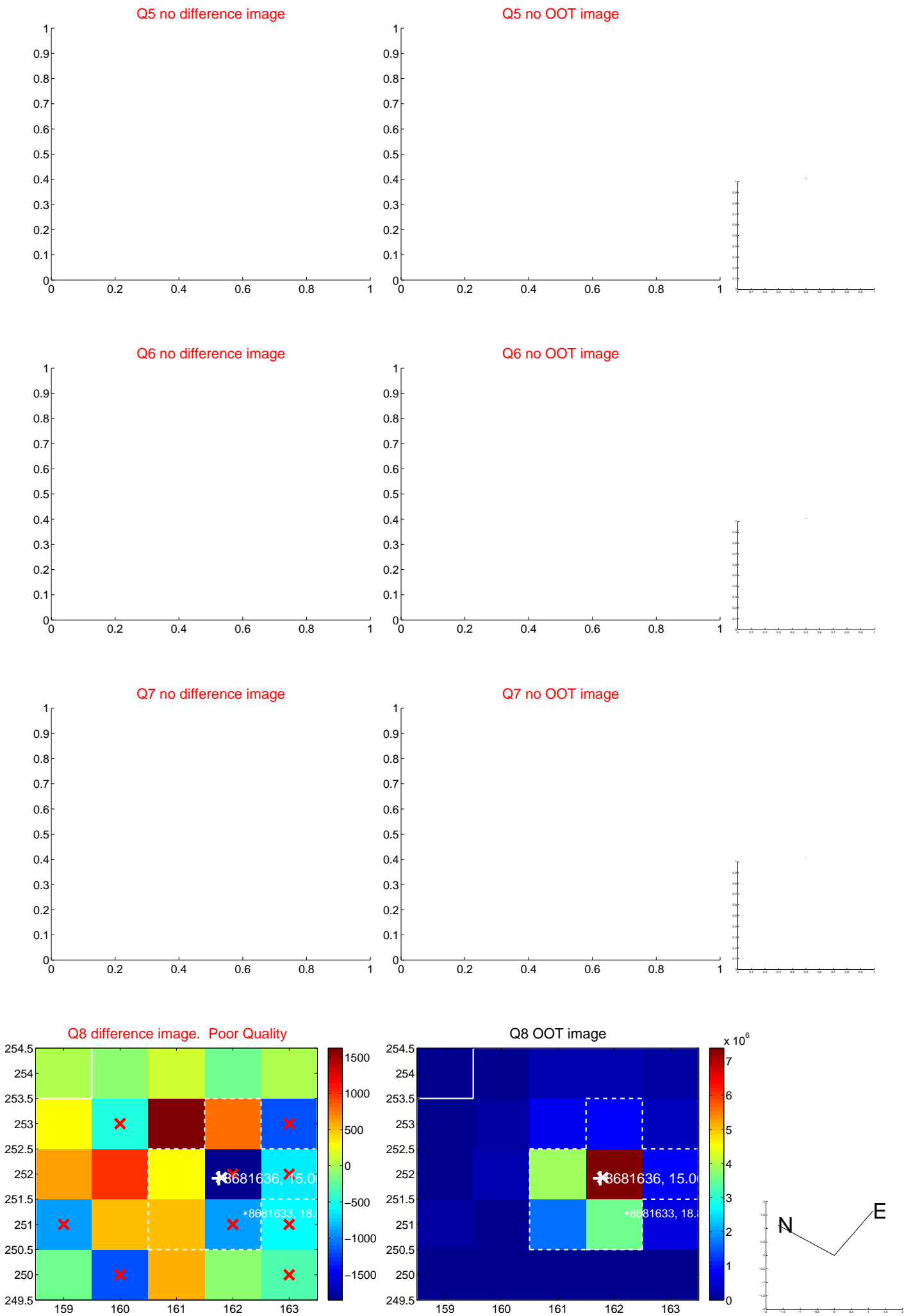


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



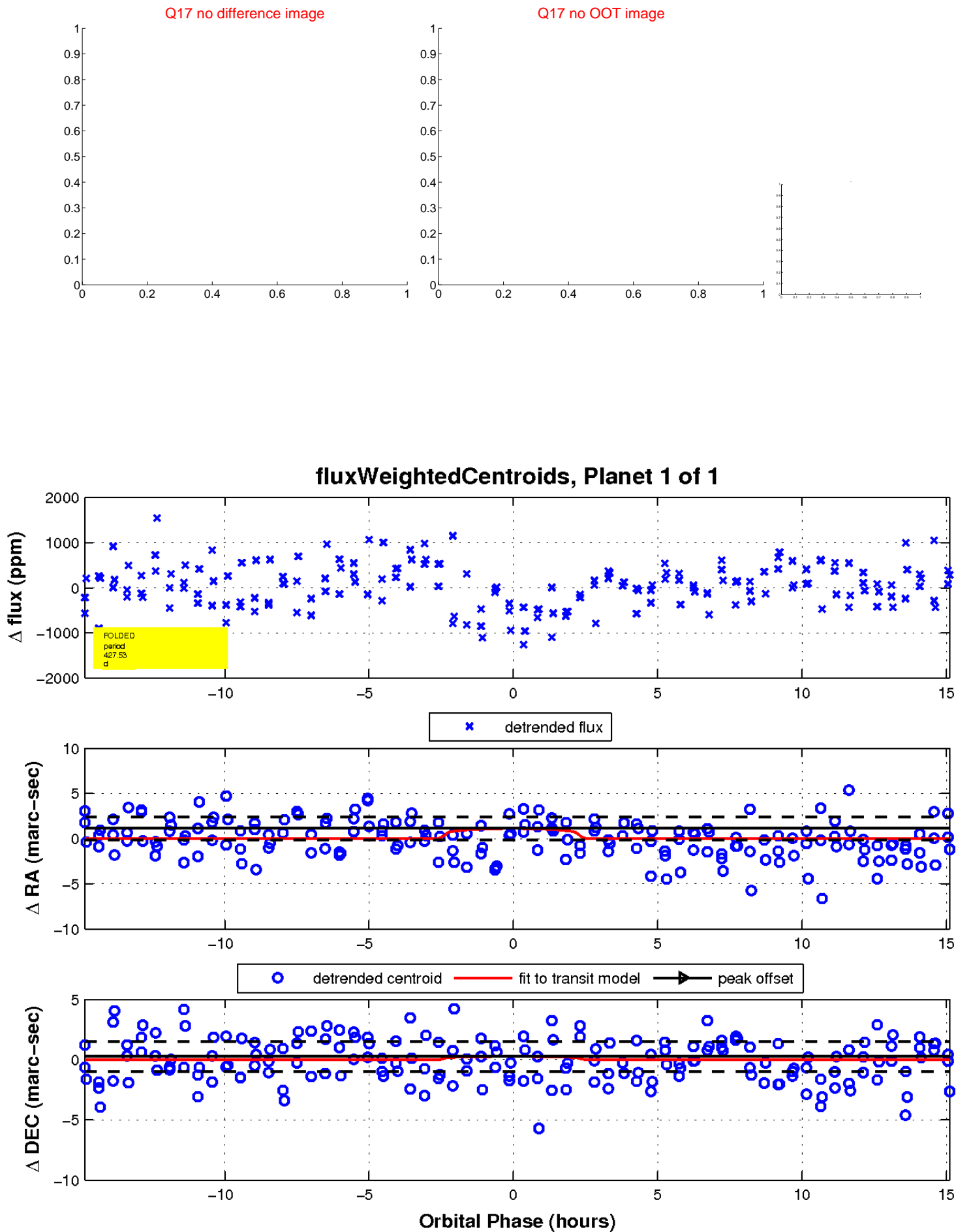
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

