

KIC 006038860

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})
006038860-01	OBS	No	363.649160	167.678471	2194.6	40.147	8.6	8.7	0.55	4237	3.63	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006038860-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

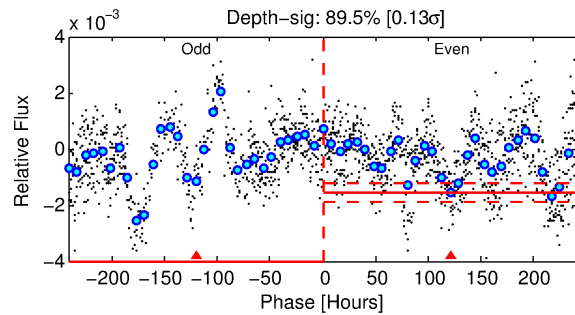
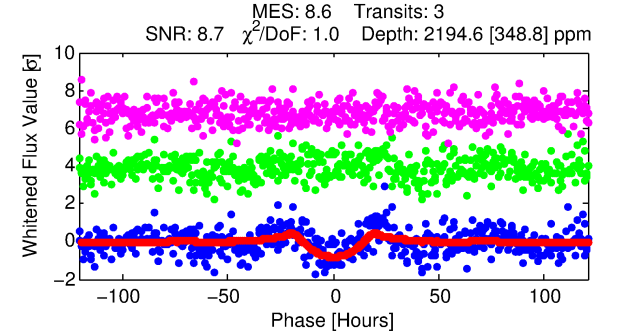
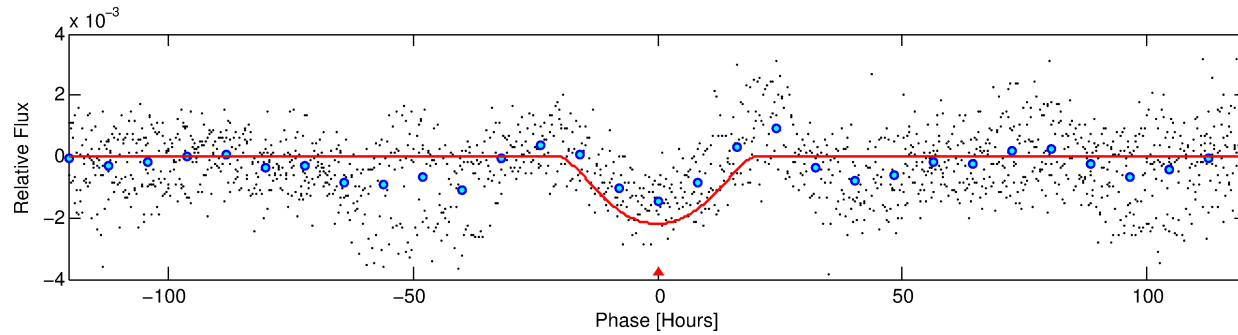
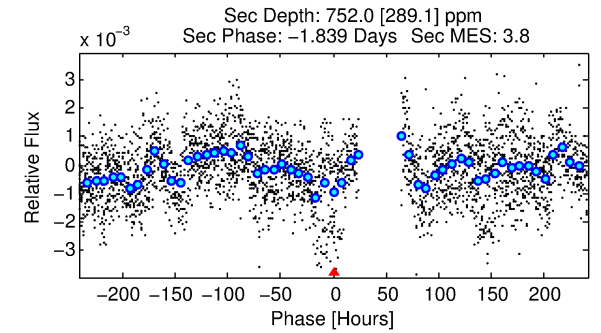
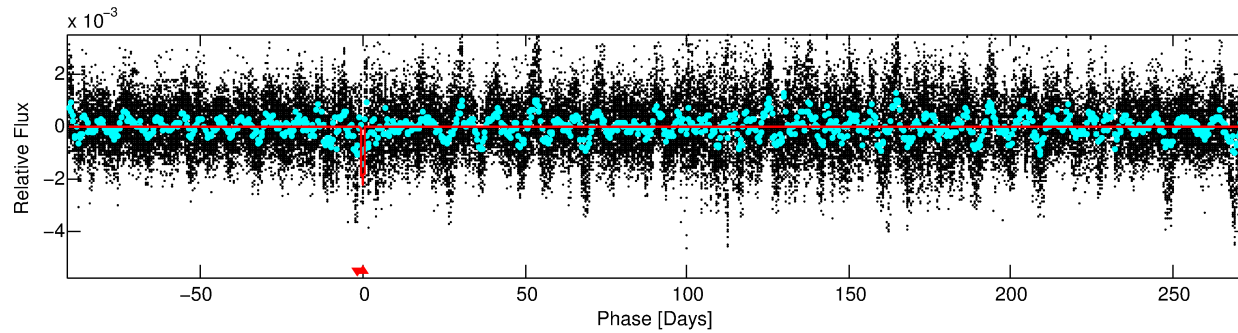
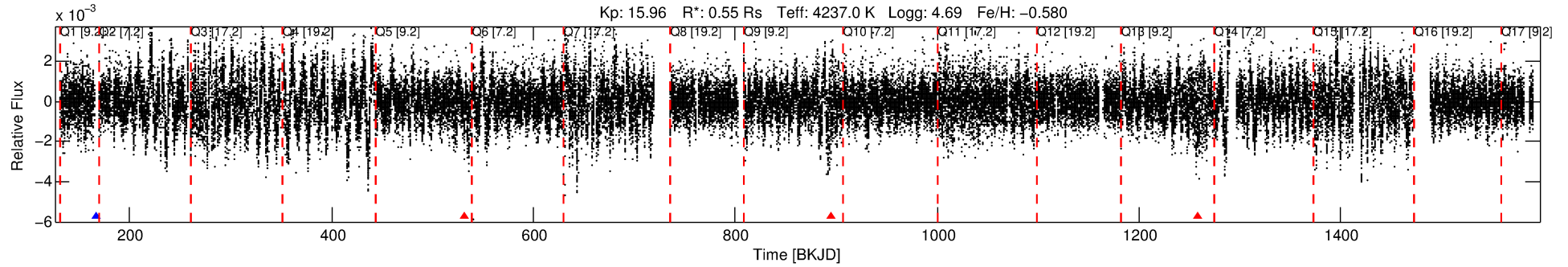
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006038860-01

No Significant Match Found

DV One-Page Summary

KIC: 6038860 Candidate: 1 of 1 Period: 363.649 d



DV Fit Results:

Period = 363.64916 [0.05001] d
Epoch = 167.6785 [0.1049] BKJD
Rp/R* = 0.0602 [0.0274]
a/R* = 31.12 [6.50]
b = 0.96 [0.06]
Seff = 0.13 [0.02]
Teq = 154 [7] K
Rp = 3.63 [1.70] Re
a = 0.8128 [0.0714] AU
Ag = 20736.40 [20636.85] [1.00σ]
Teffp = 2861 [713] K [3.80σ]

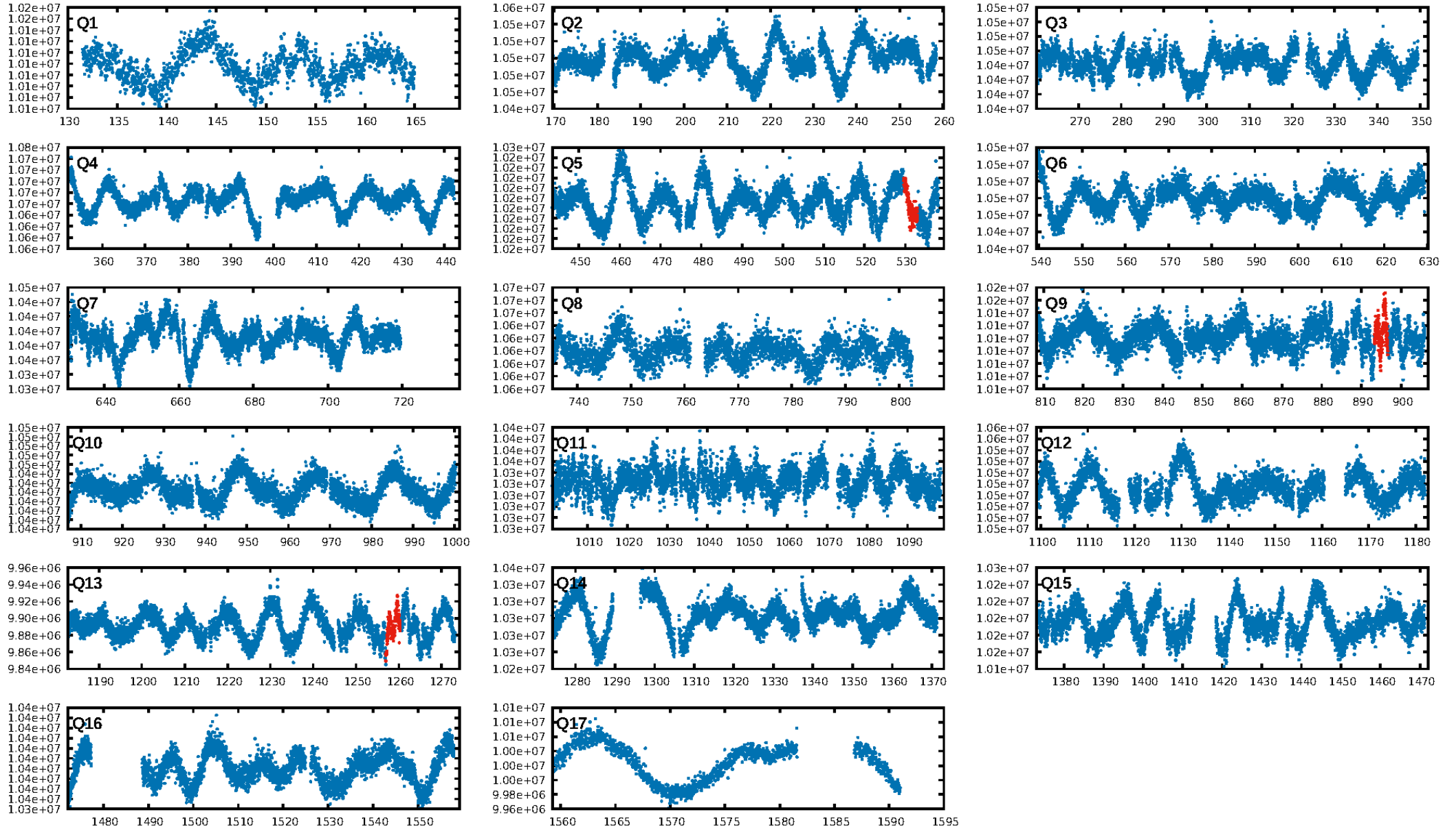
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.93e-10
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 0.6241
Centroid-sig: 0.0%
Centroid-so: 3.018 arcsec [2.42σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

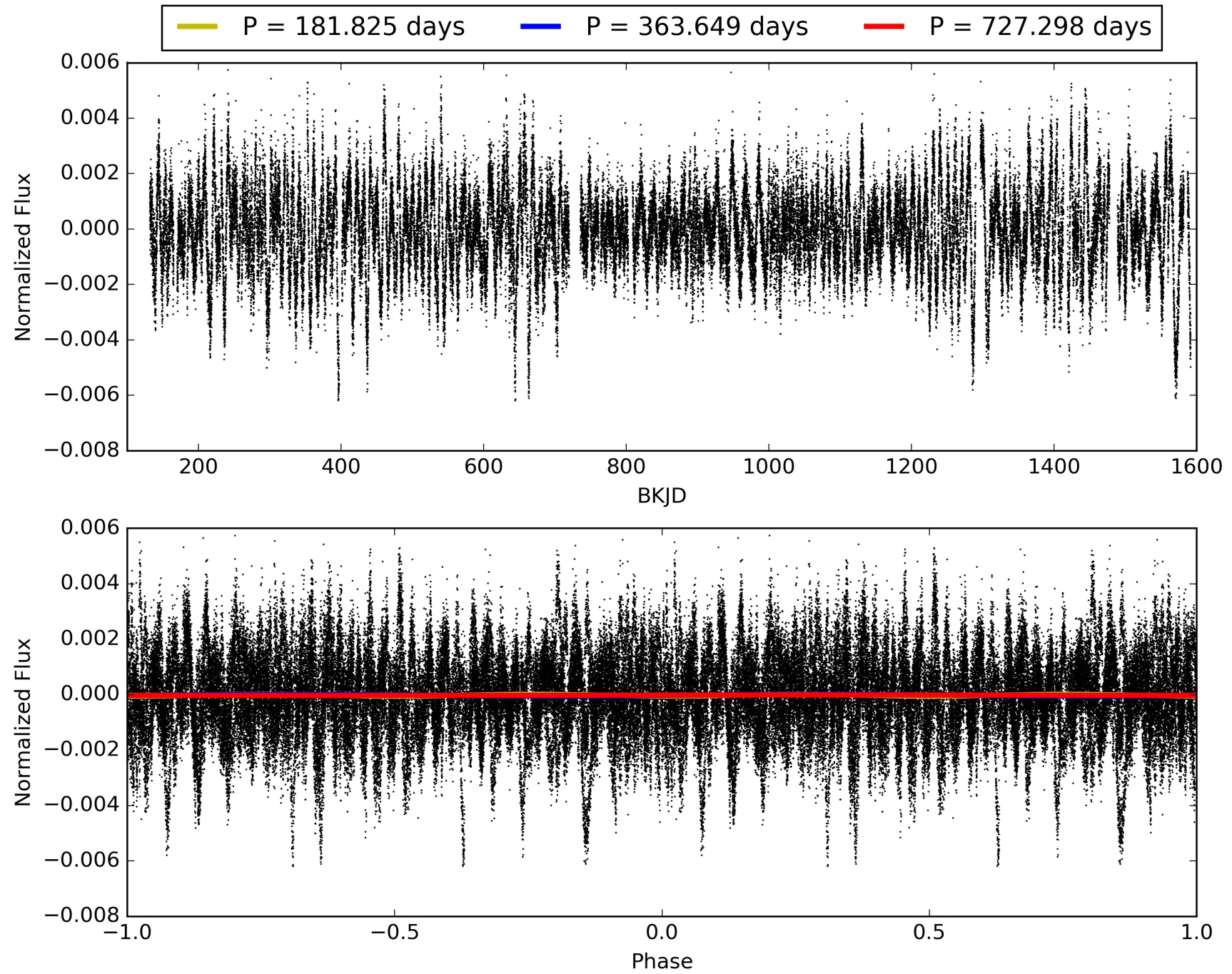
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:10:31 Z

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

TCE 006038860-01, PDC Light Curves

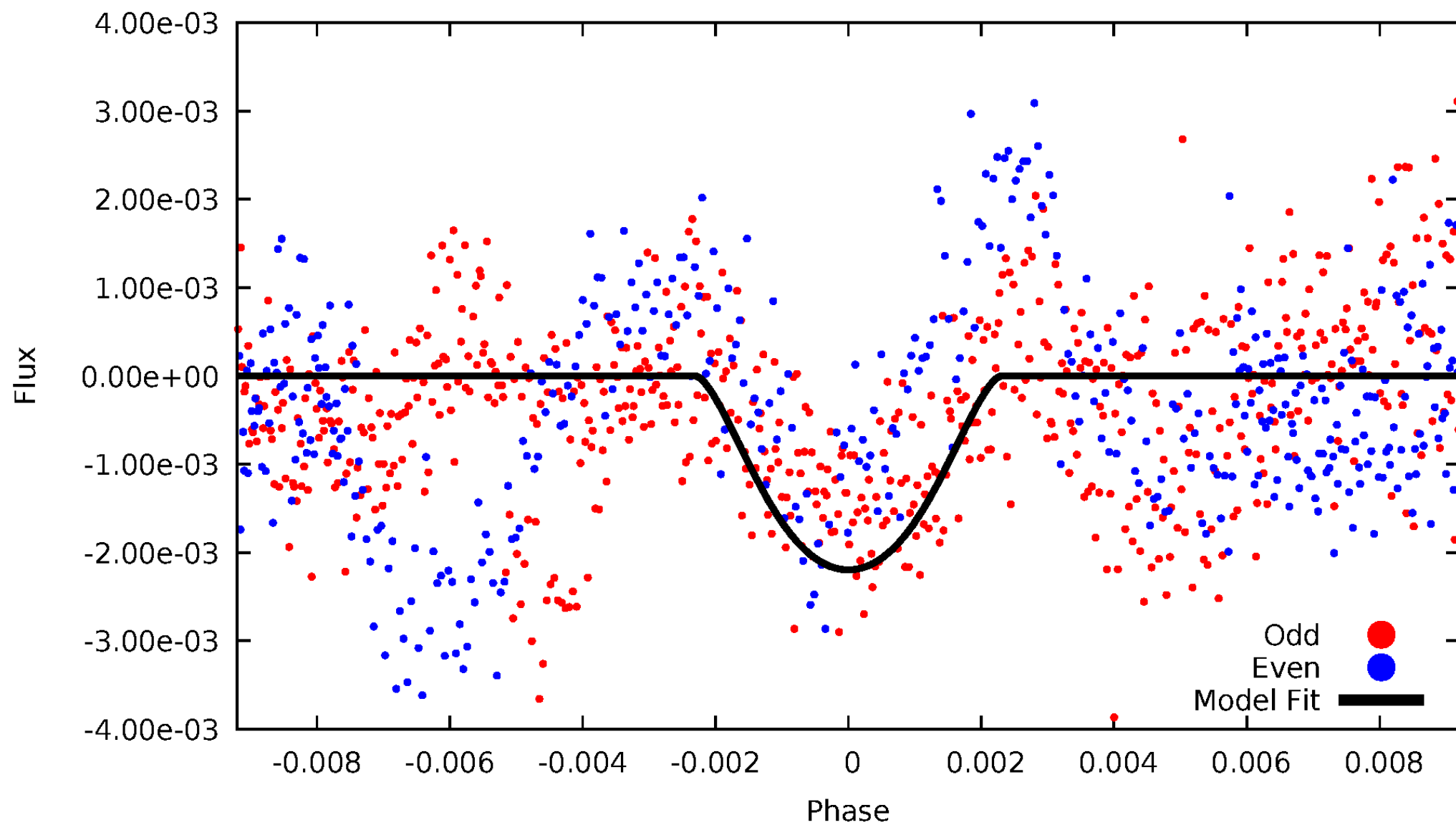


TCE 006038860-01



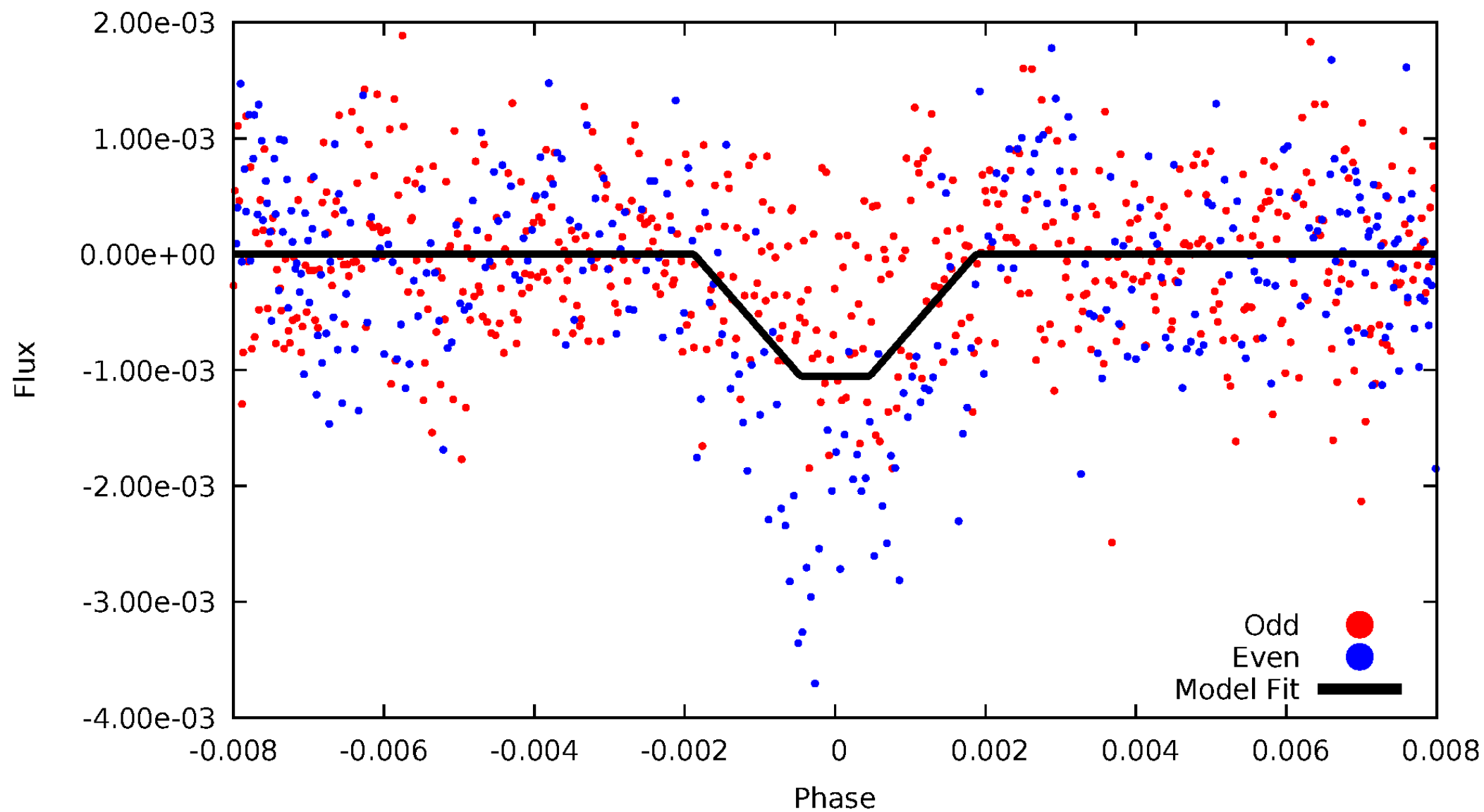
DV Odd/Even

TCE 006038860-01



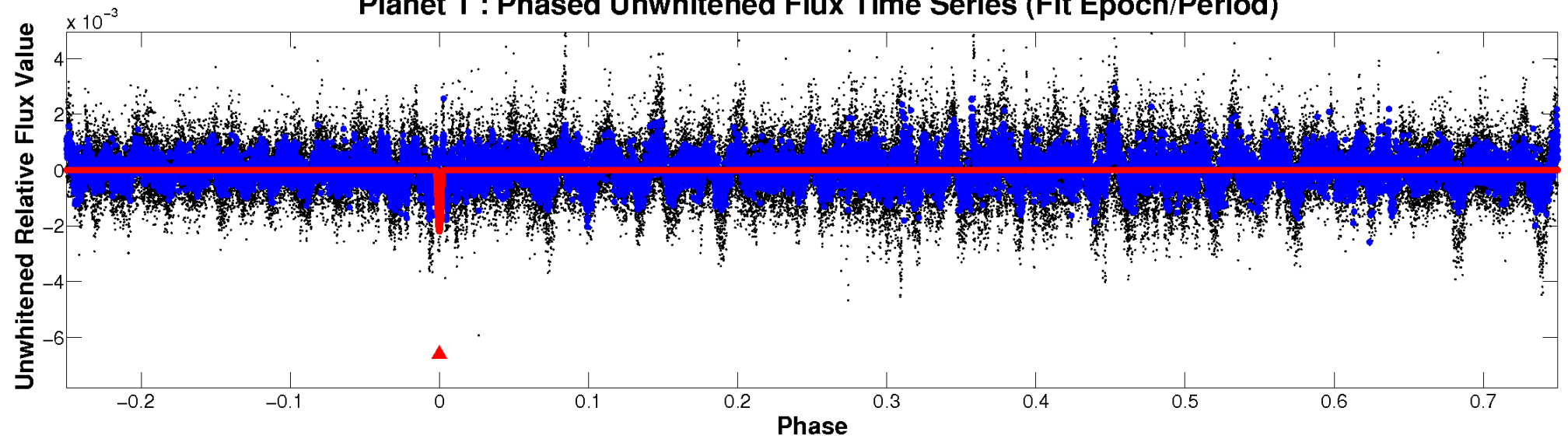
ALT Odd/Even

TCE 006038860-01

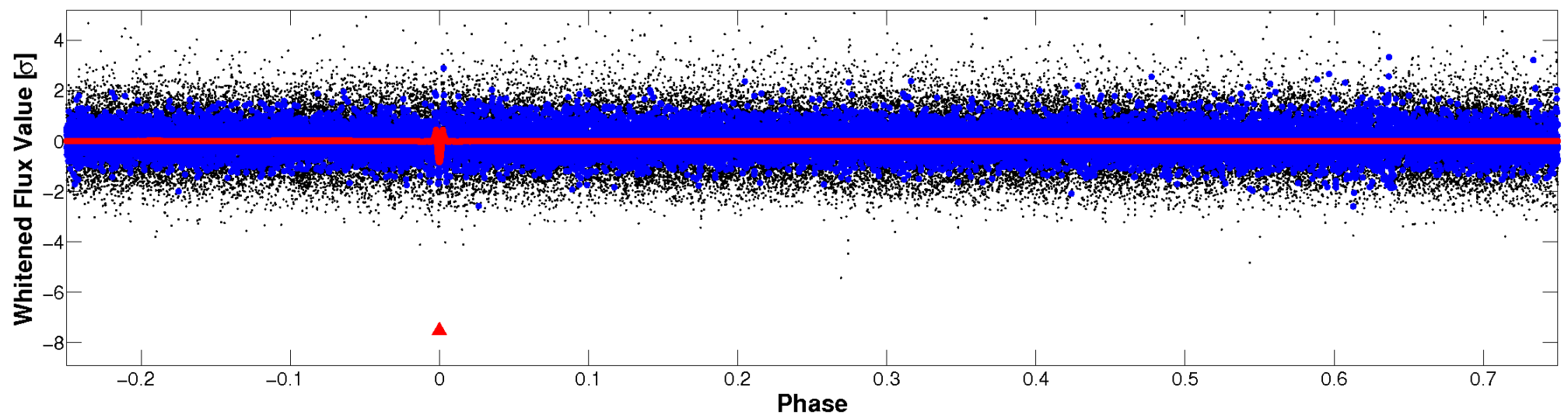


Non-Whitened Vs. Whitened Light Curve

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



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



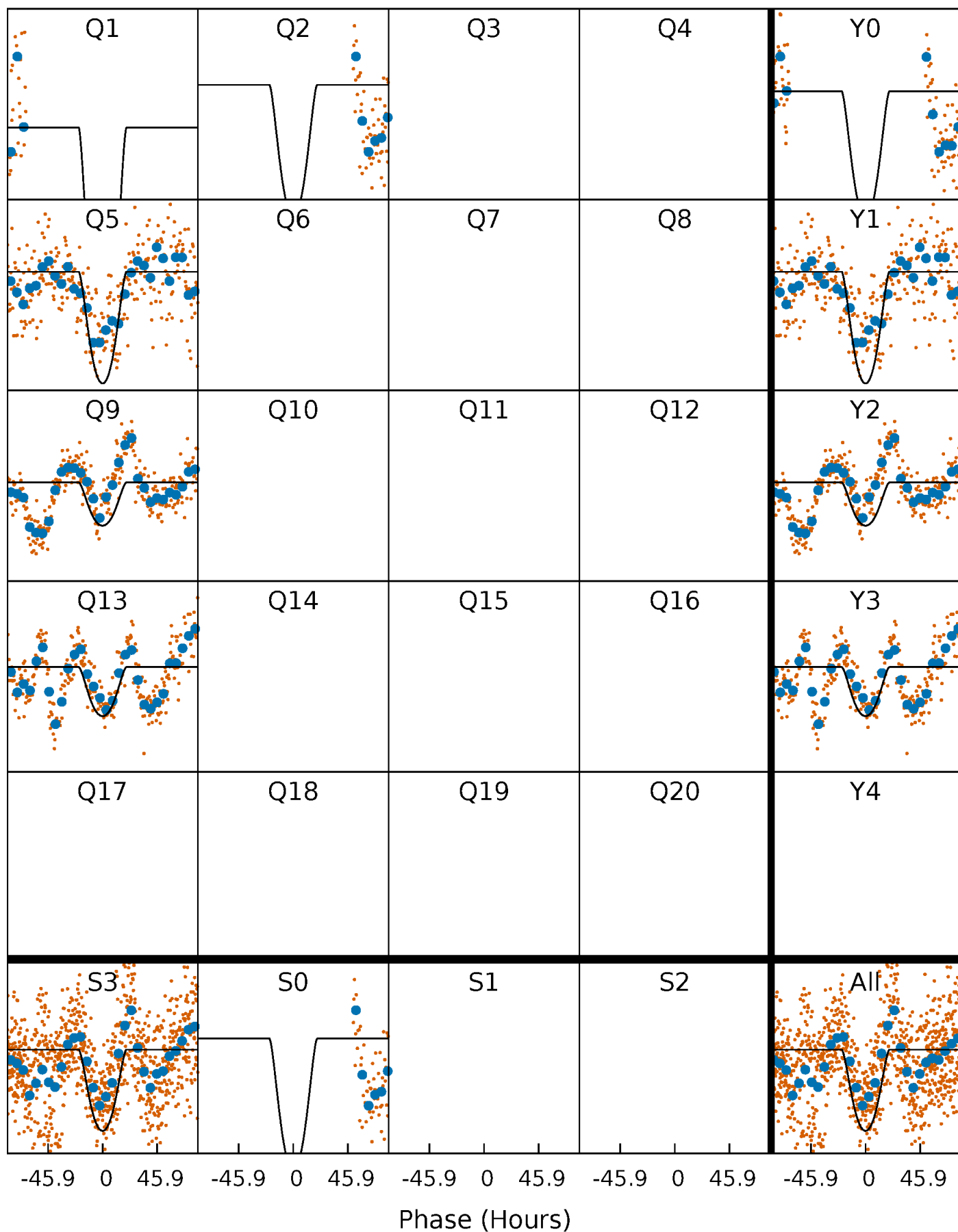
PDC Quarter-Phased Transit Curves

TCE 006038860-01 P=363.649160 Days $T_0=167.678471$ (BKJD)



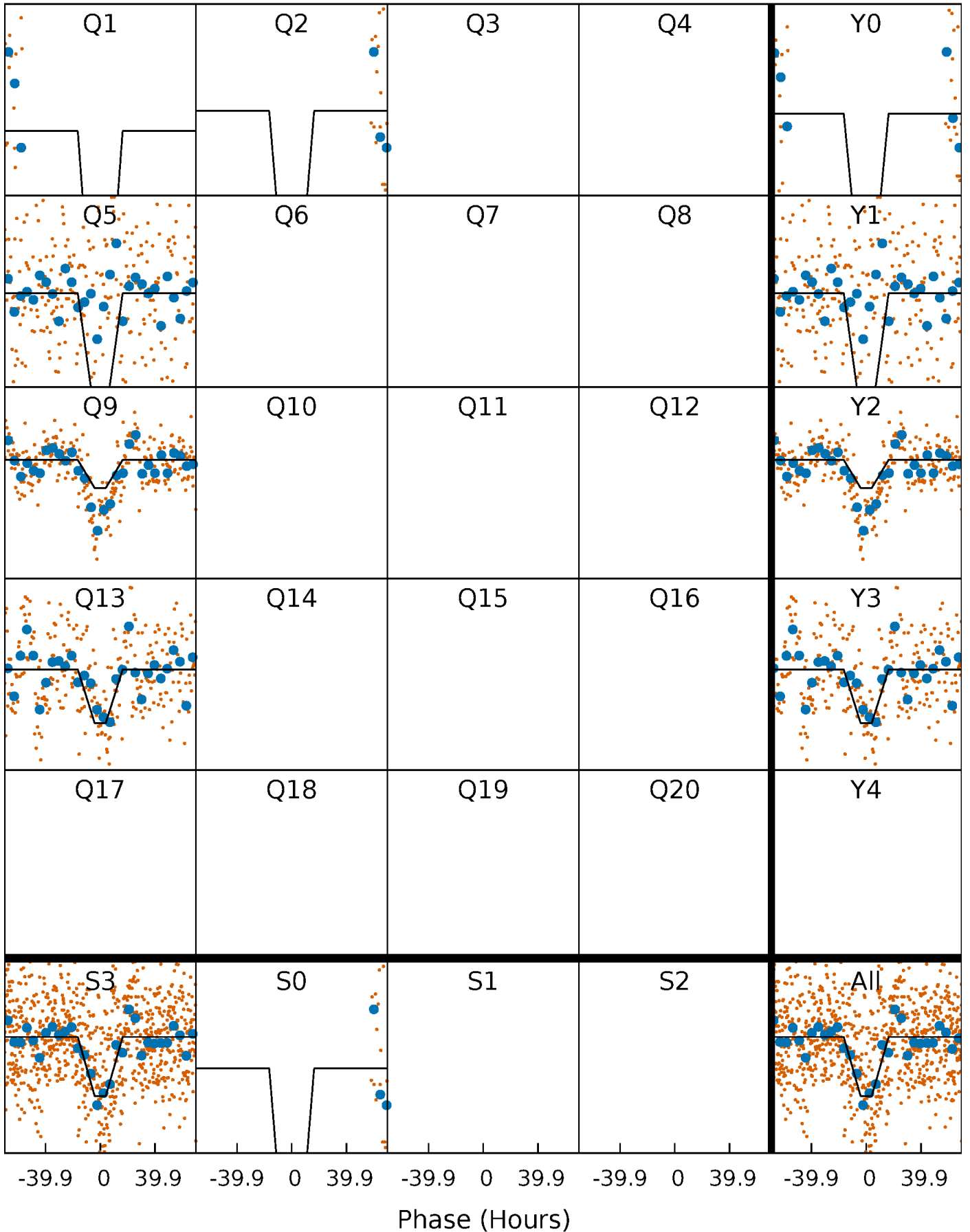
DV Quarter-Phased Transit Curves

TCE 006038860-01 P=363.649160 Days $T_0=167.678471$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

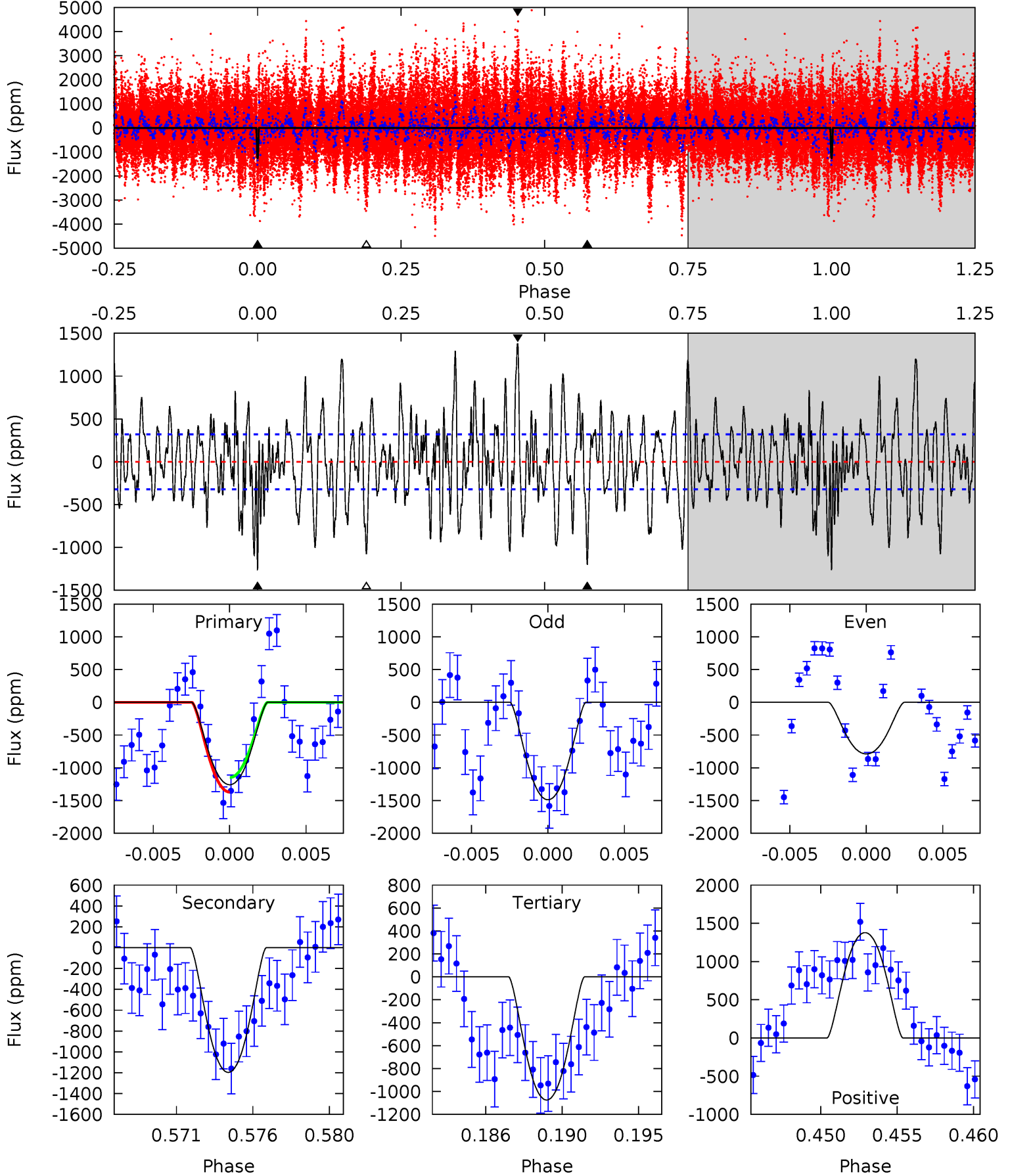
TCE 006038860-01 P=363.792291 Days $T_0=167.363921$ (BKJD)



DV Model-Shift Uniqueness Test

006038860-01, P = 363.649160 Days, E = 167.678471 Days

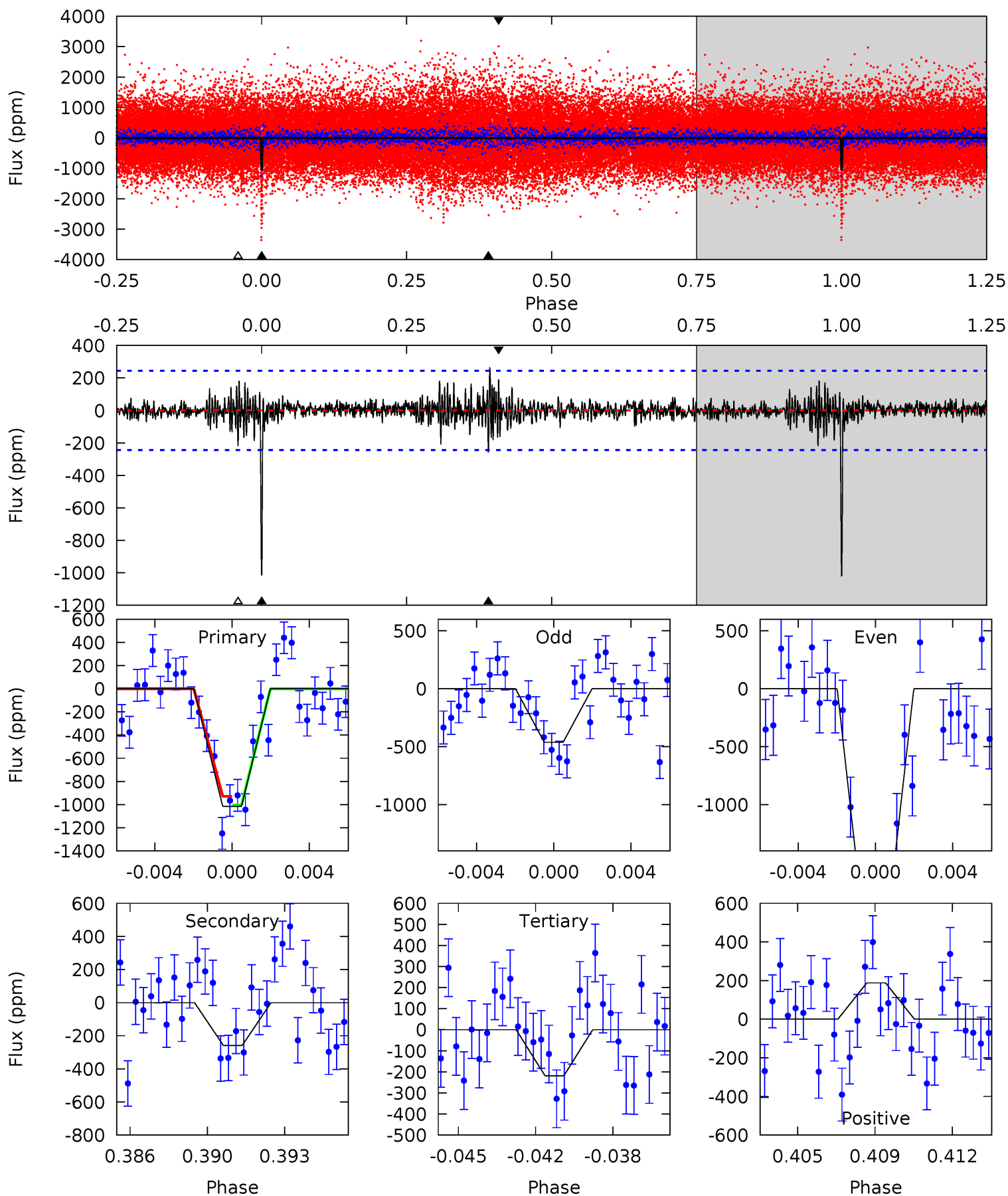
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	19.3	17.3	22.2	5.17	2.83	6.92	2.97	-1.93	1.97	-2.92	5.37	0.87	0.52	1.79



Alt Model-Shift Uniqueness Test

006038860-01, P = 363.792291 Days, E = 167.363921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	5.53	4.68	4.02	5.21	2.90	0.94	17.0	17.7	0.86	1.51	18.0	1.27	0.20	0.81



Stellar Parameters For KIC 006038860

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4237^{+115}_{-140}	$4.686^{+0.065}_{-0.030}$	$-0.580^{+0.300}_{-0.300}$	$0.553^{+0.049}_{-0.060}$	$0.541^{+0.056}_{-0.046}$	$4.508^{+1.306}_{-0.577}$
	+3%/-3%	+1%/-1%	+52%/-52%	+9%/-11%	+10%/-9%	+29%/-13%
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 006038860-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1197 ± 62	$3.54^{+1.77}_{-1.58}$	214^{+7}_{-8}	3511^{+792}_{-401}	35369^{+79279}_{-19825}
Alt.	-259 ± 47	$2.20^{+1.57}_{-1.38}$	213^{+8}_{-8}	3217^{+1239}_{-468}	$19637^{+116363}_{-13262}$

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

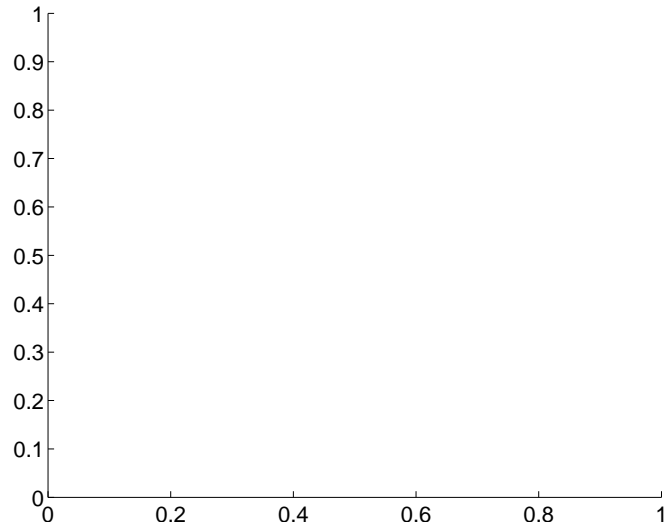
Supplemental centroid analysis for 006038860-01. Kepler magnitude: 15.96. Transit SNR 8.75

There are 0 quarters with good PRF difference image offsets

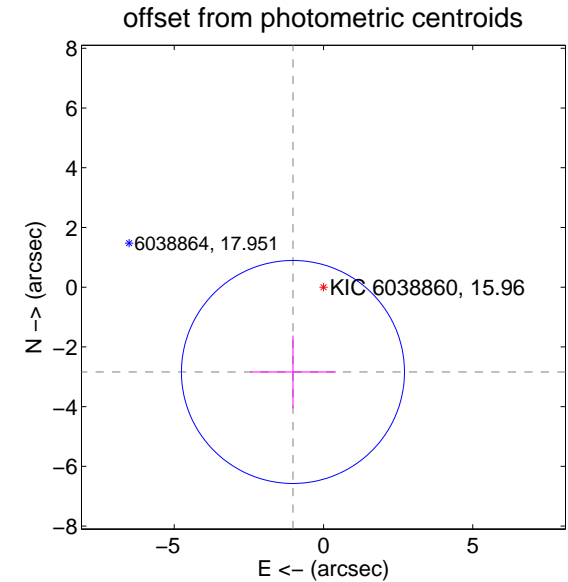
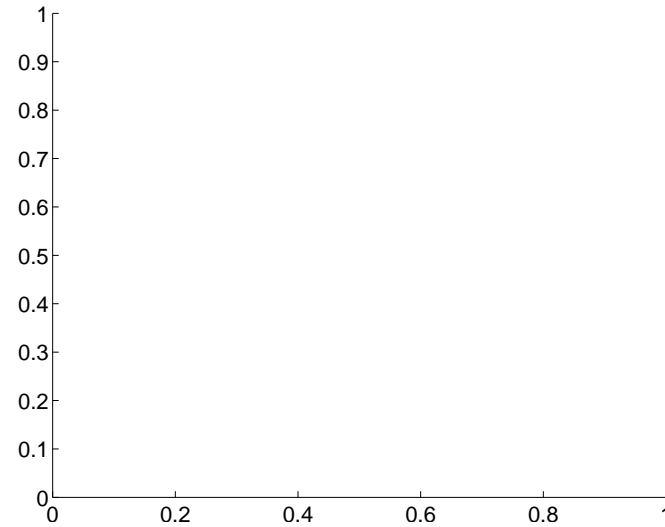
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.02 ± 1.24	2.42	1.02 ± 1.43	-2.84 ± 1.22

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

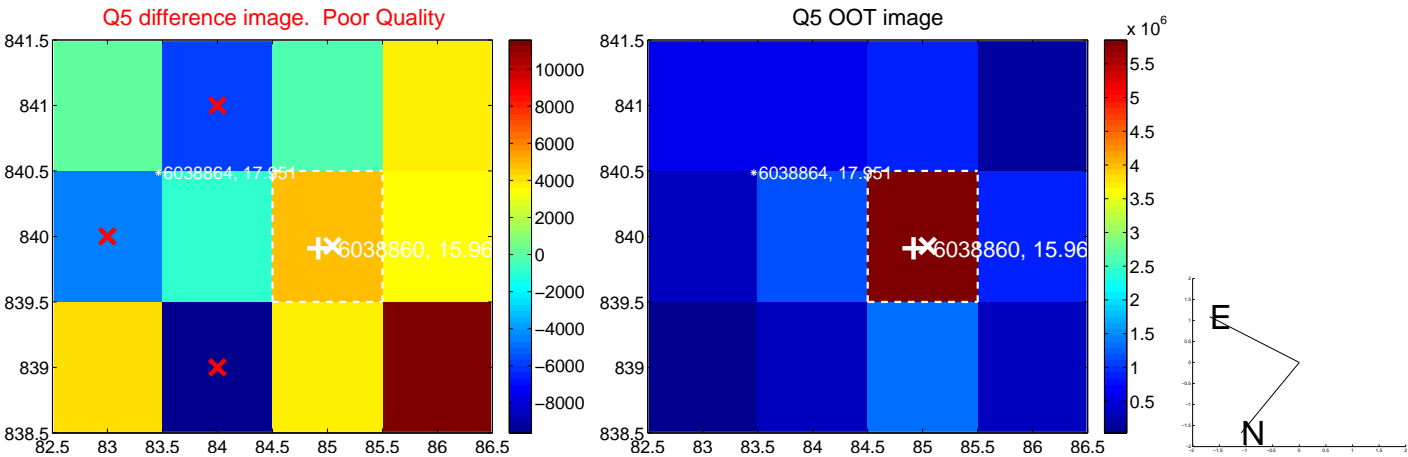


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

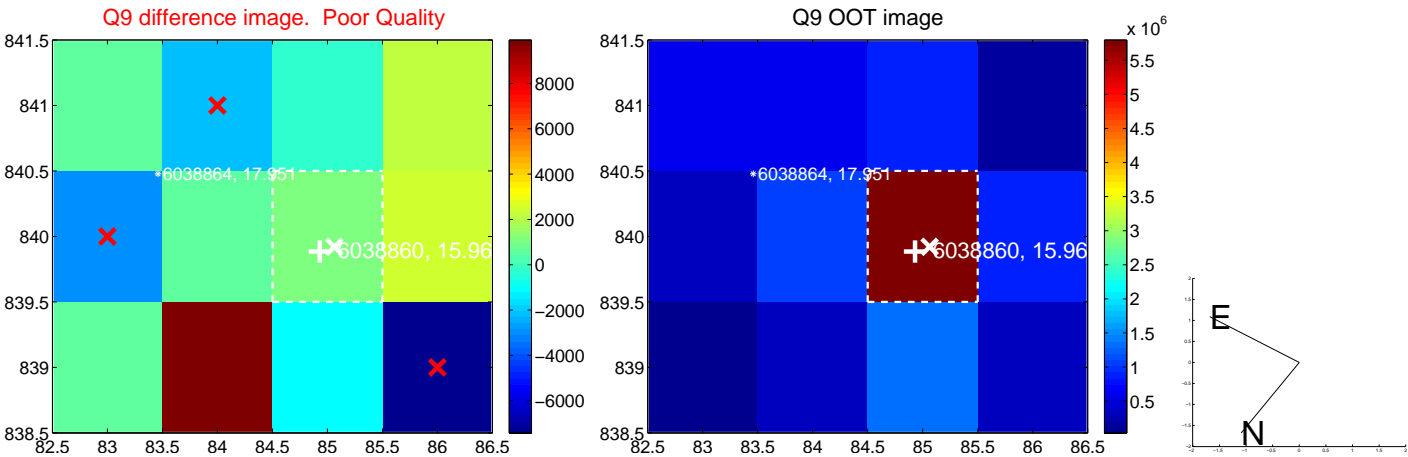
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



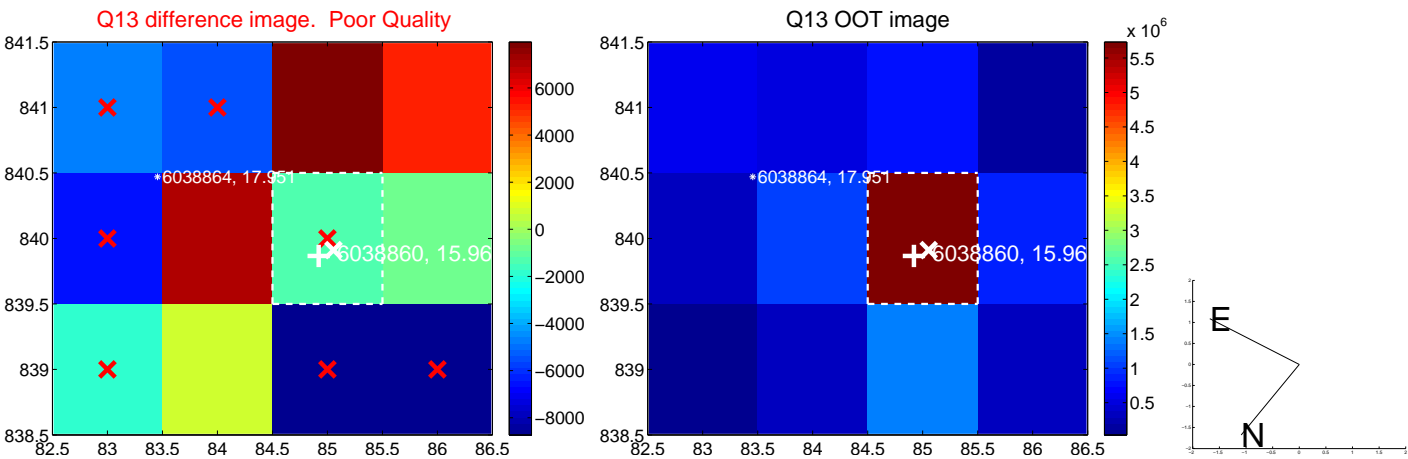
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



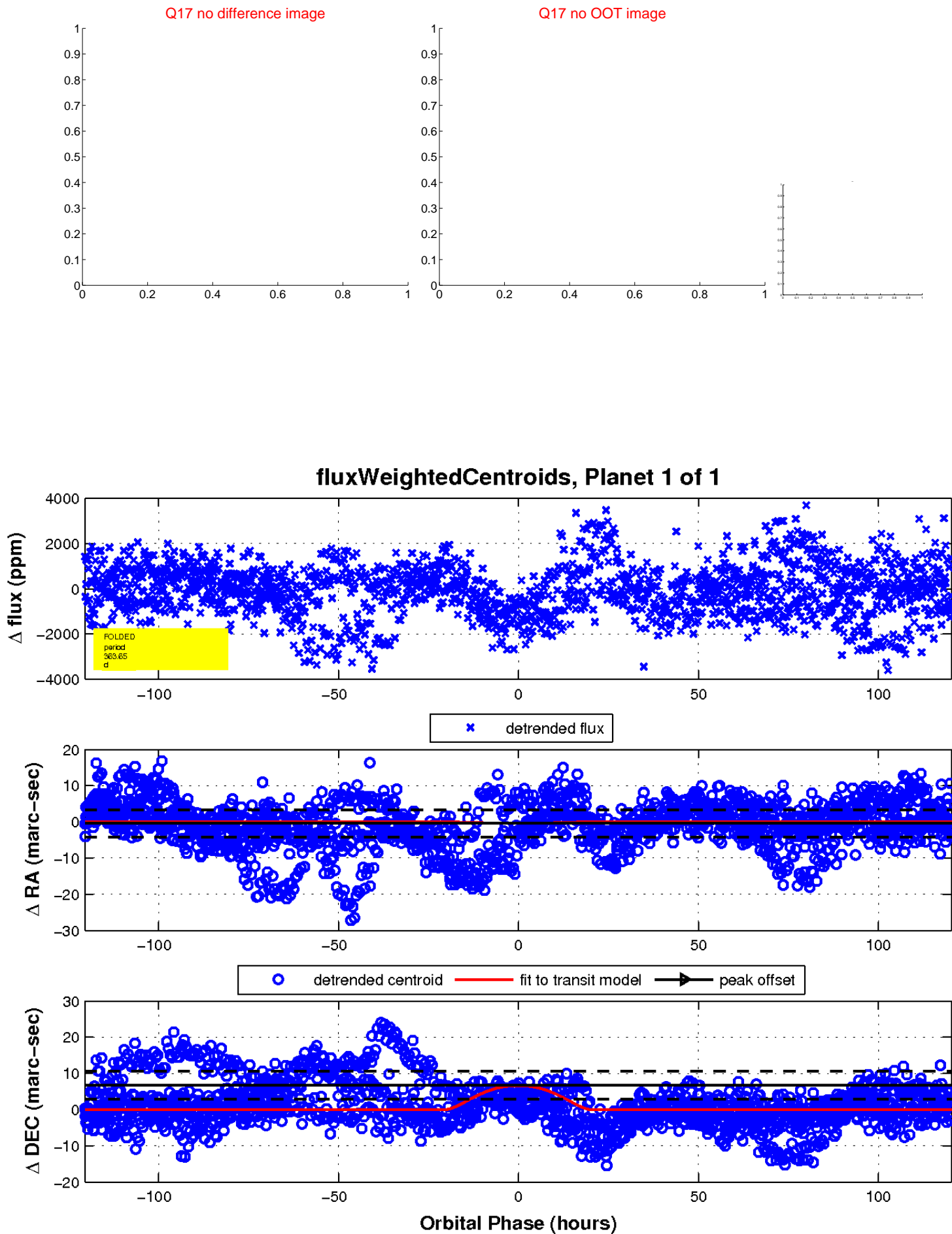
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

