

KIC 006117602

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})
006117602-01	OBS	No	415.733817	425.020754	1786.4	16.373	9.7	7.4	0.12	2661	0.48	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006117602-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—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.

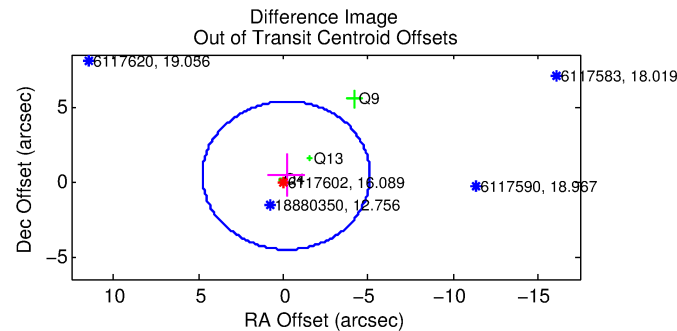
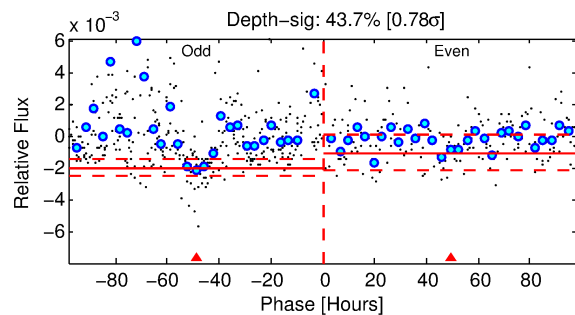
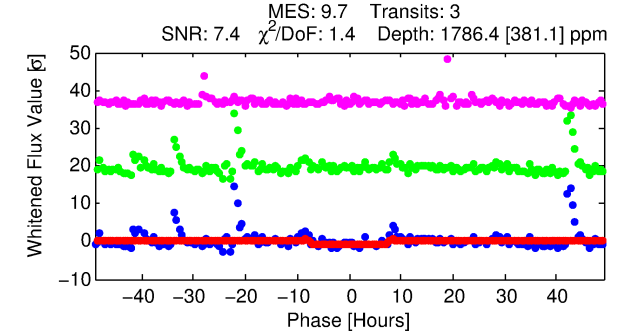
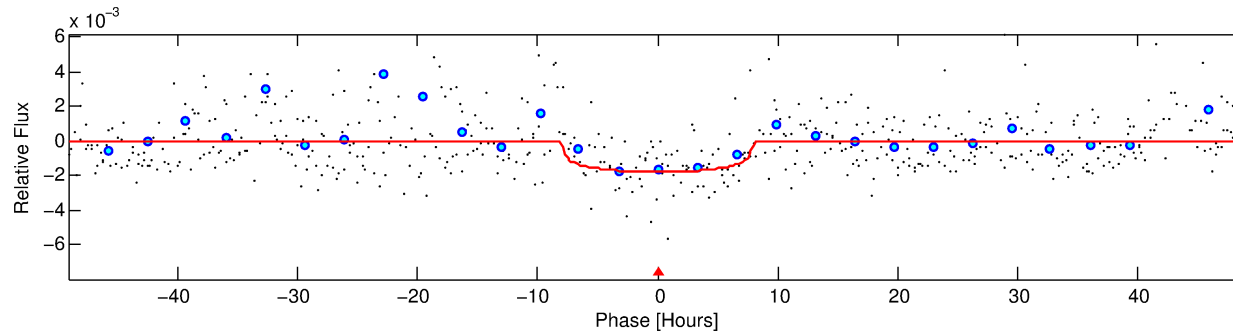
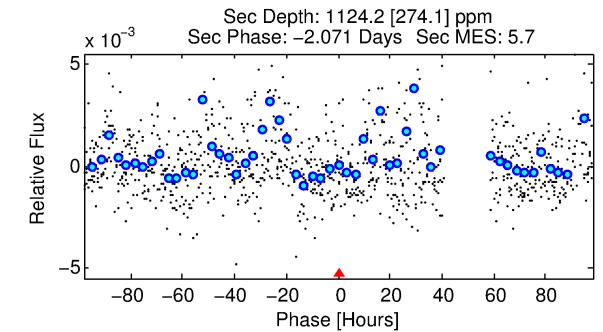
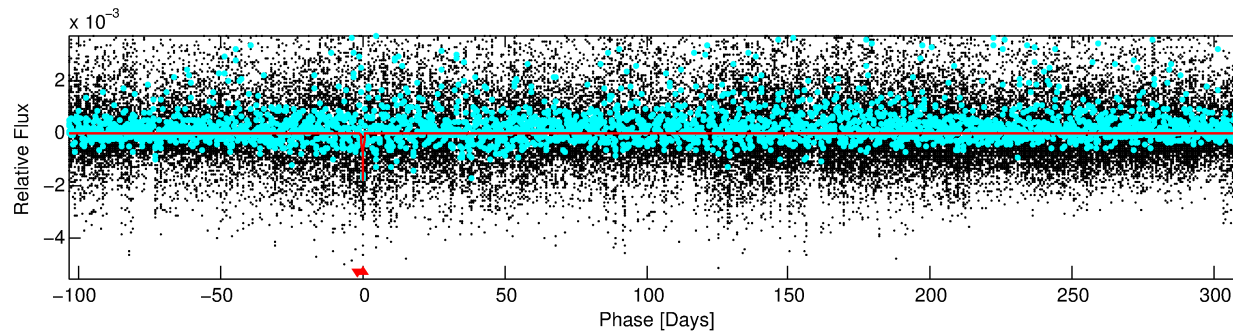
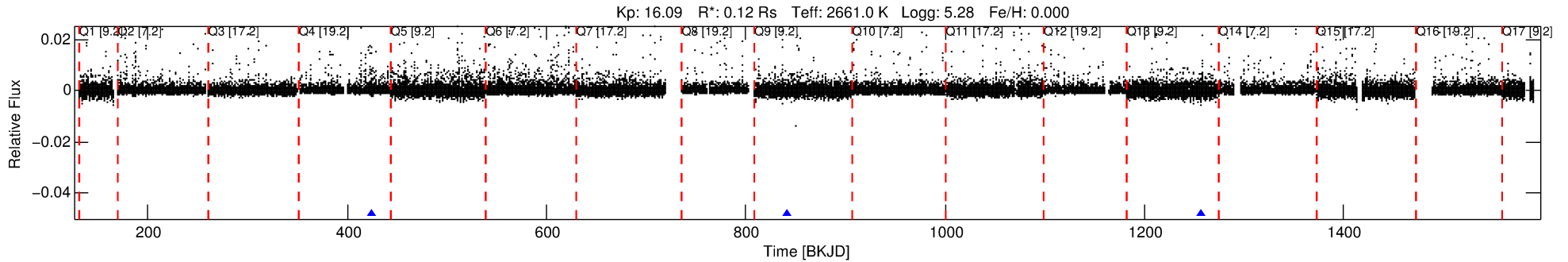
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006117602-01

No Significant Match Found

DV One-Page Summary

KIC: 6117602 Candidate: 1 of 1 Period: 415.734 d



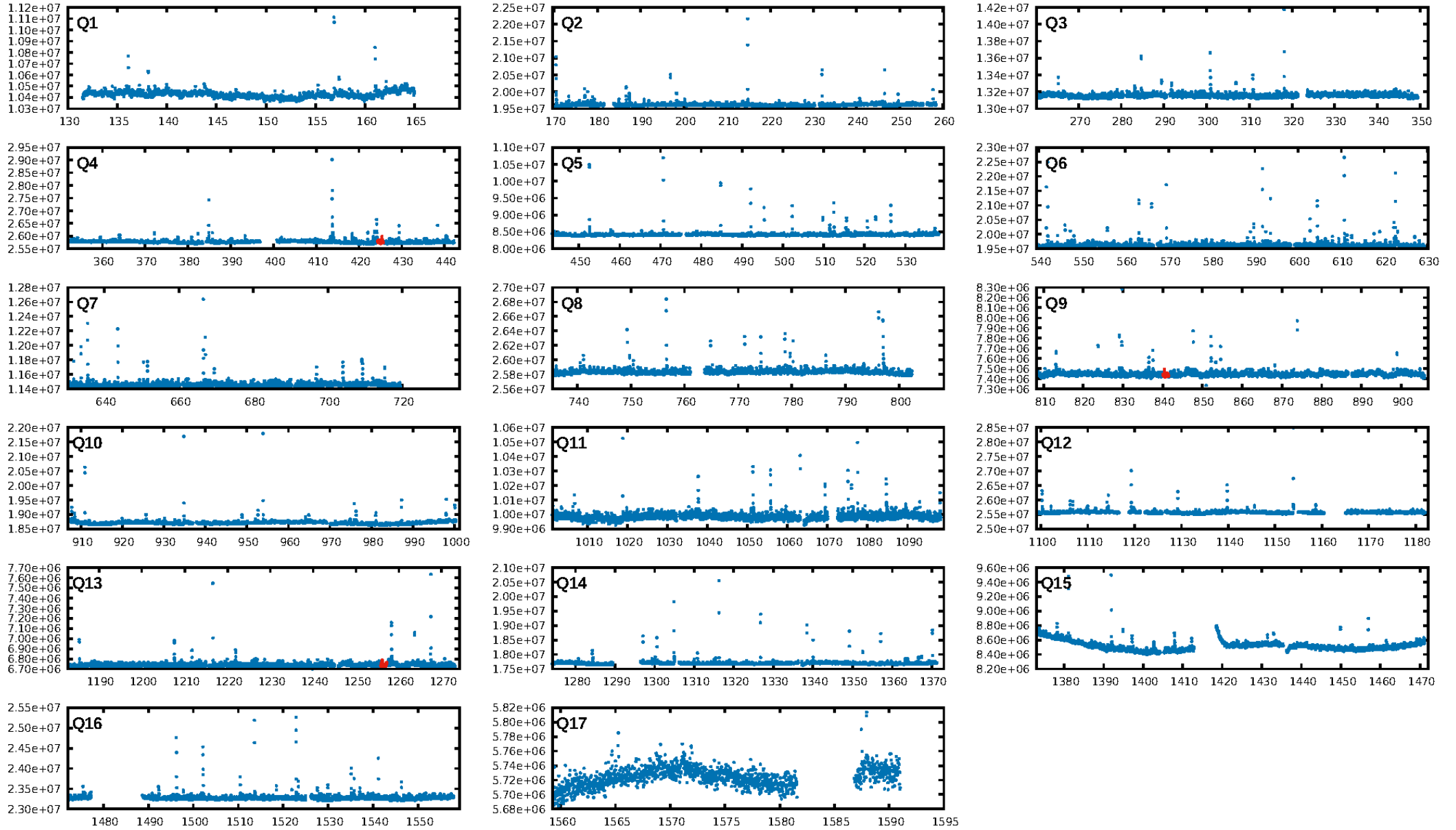
DV Fit Results:

Period = 415.73382 [0.01987] d
Epoch = 425.0208 [0.0196] BKJD
Rp/R* = 0.0383 [0.0219]
a/R* = 199.91 [480.22]
b = 0.13 [18.80]
Seff = 0.00 [0.00]
Teff = 57 [0] K
Rp = 0.48 [0.28] Re
a = 0.4961 [0.0000] AU
Ag = 648841.65 [760470.03] [0.85σ]
Teffp = 2491 [730] K [3.34σ]

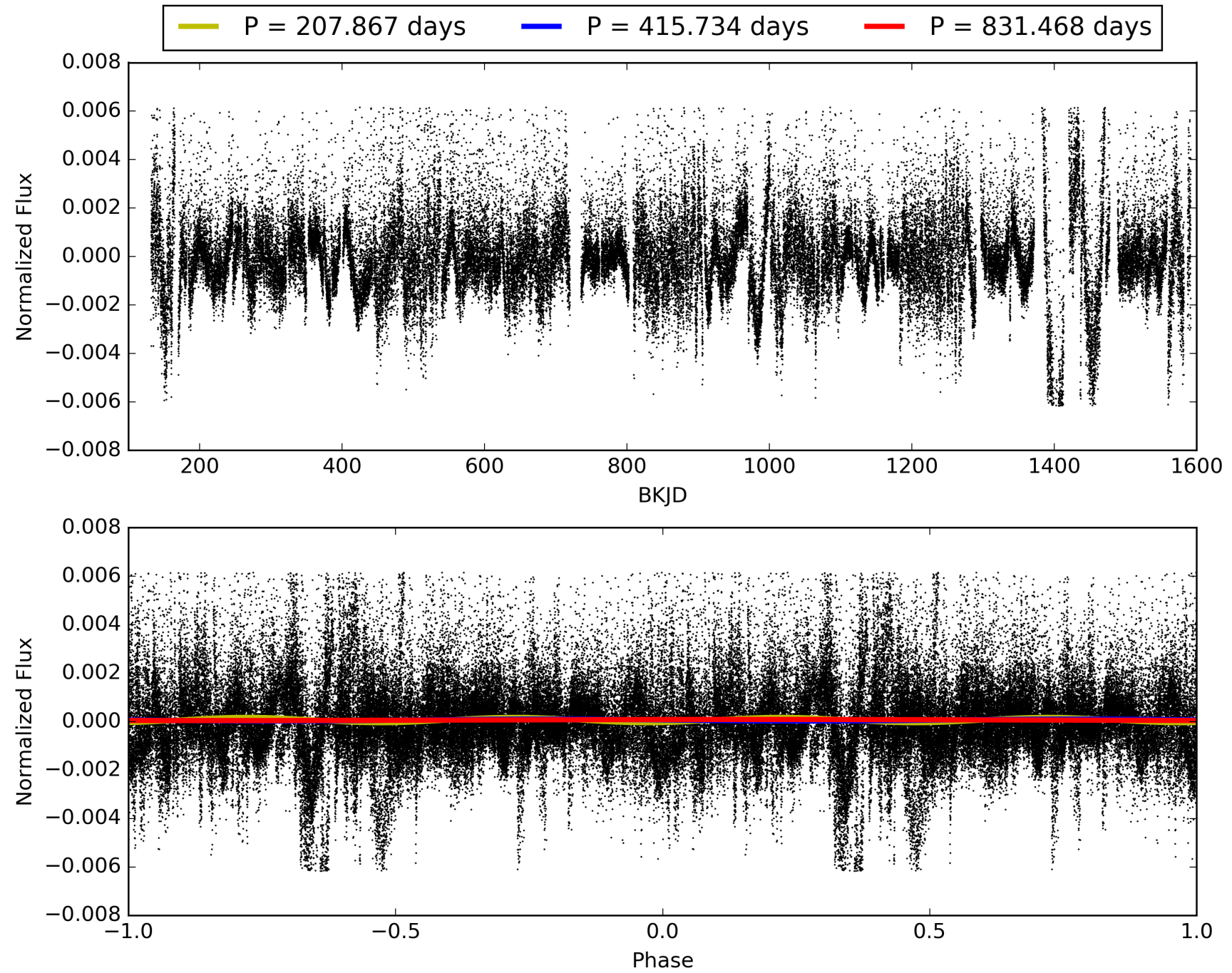
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.29e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.294
Centroid-sig: 26.2%
Centroid-so: 1.720 arcsec [3.92σ]
OotOffset-rm: 0.453 arcsec [0.27σ]
KicOffset-rm: 1.762 arcsec [0.88σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 006117602-01, PDC Light Curves

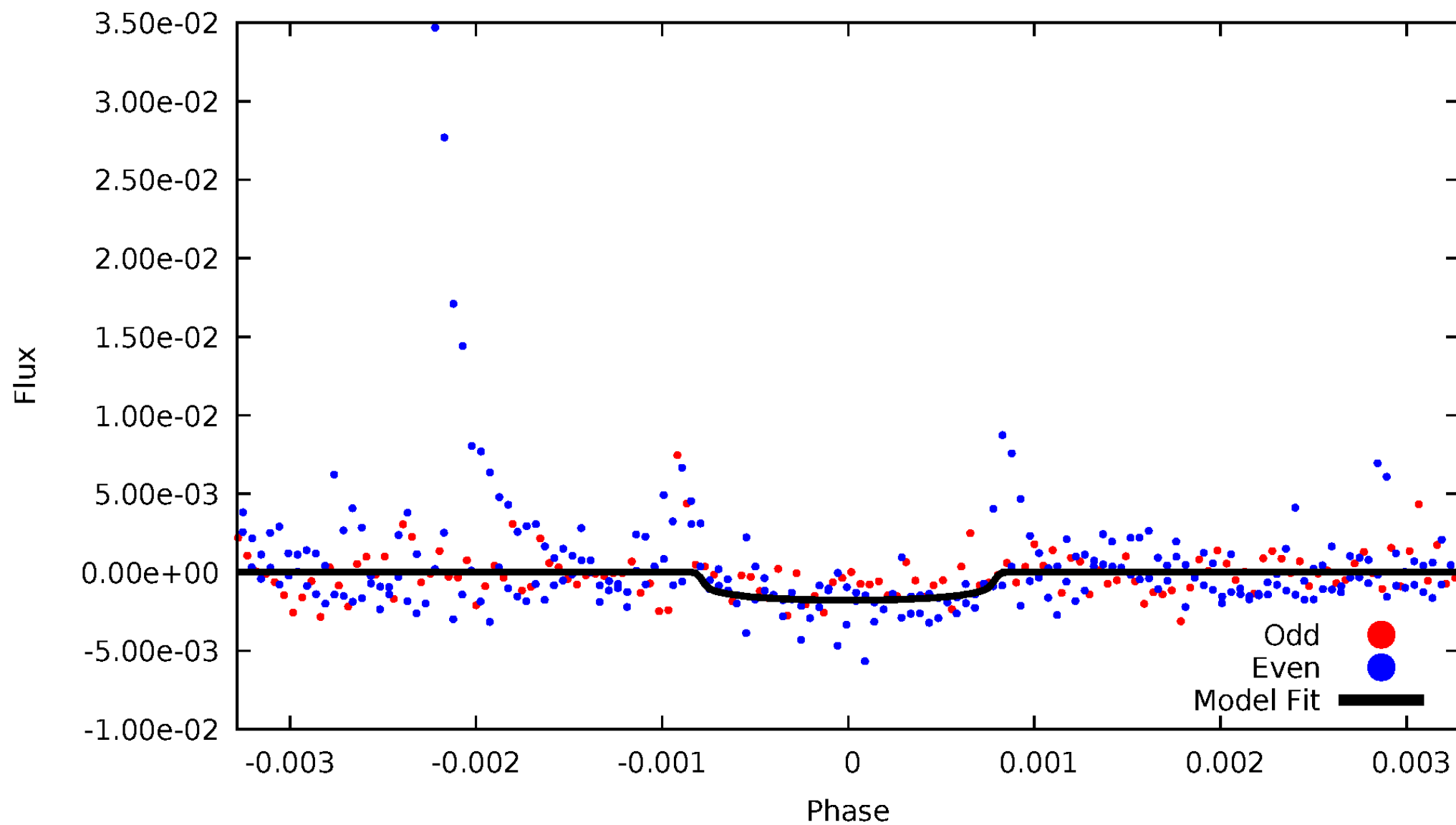


TCE 006117602-01



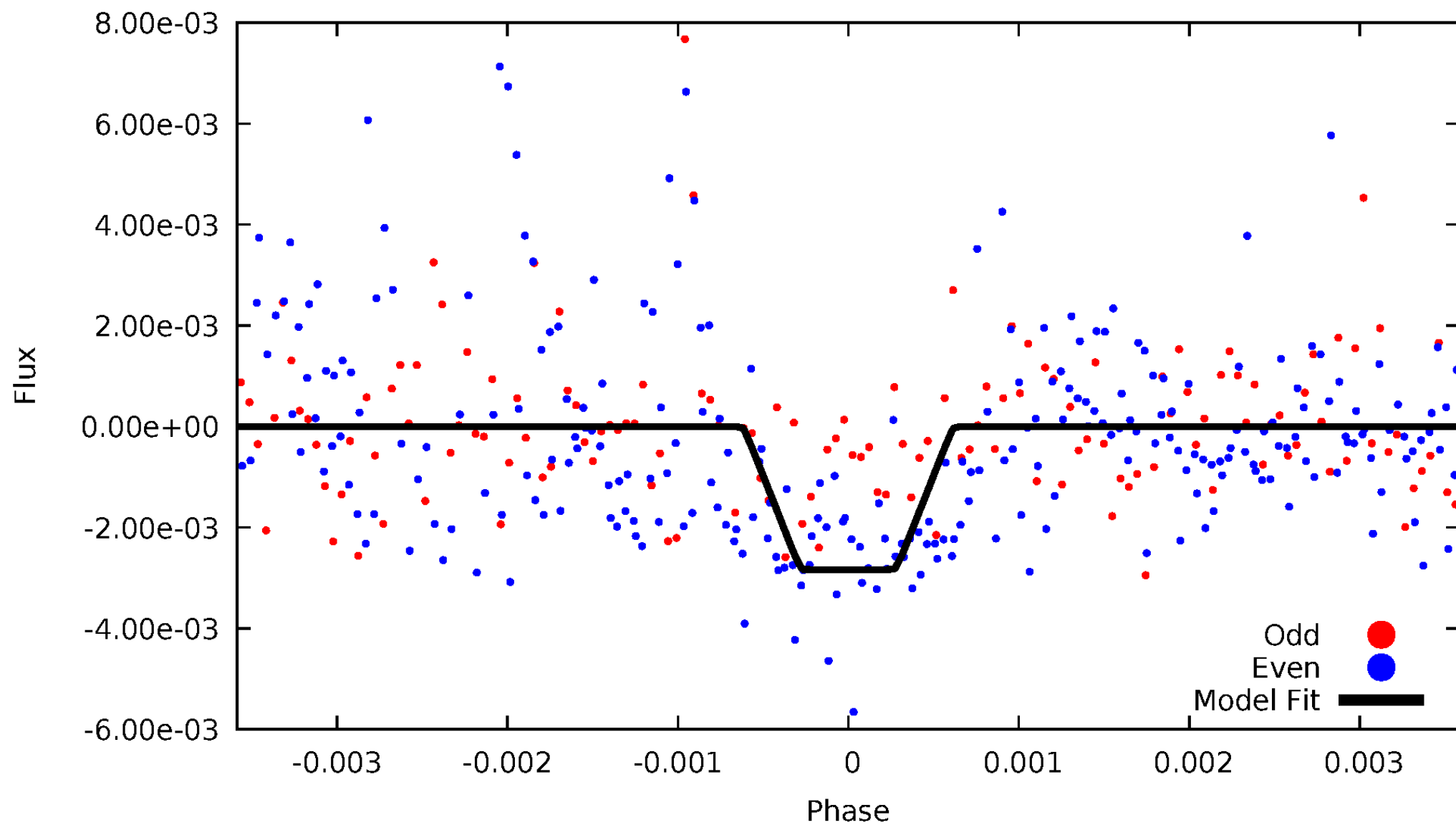
DV Odd/Even

TCE 006117602-01



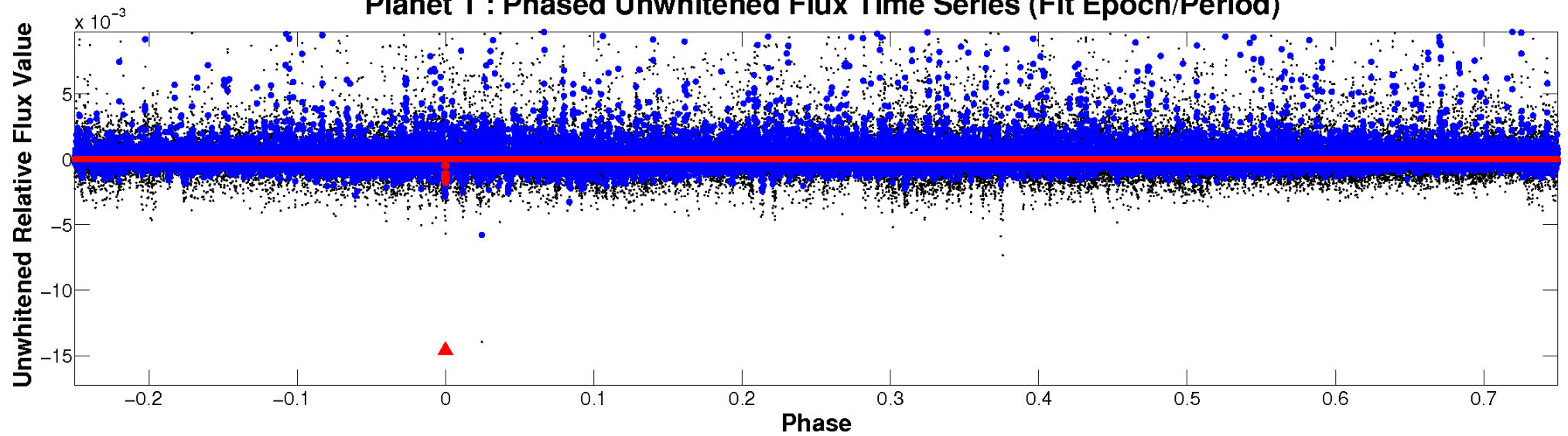
ALT Odd/Even

TCE 006117602-01

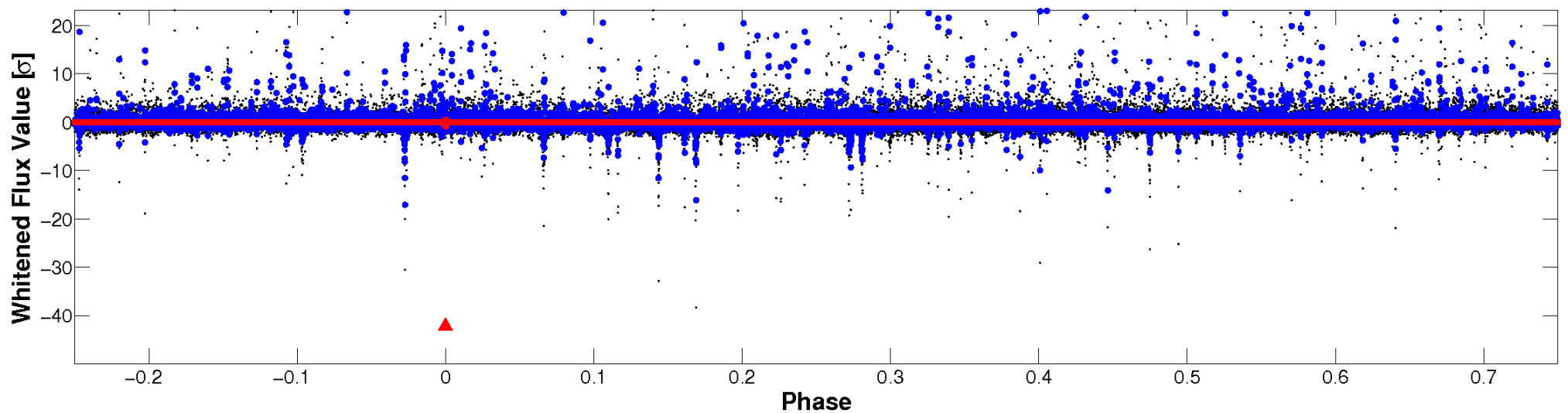


Non-Whitened Vs. Whitened Light Curve

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

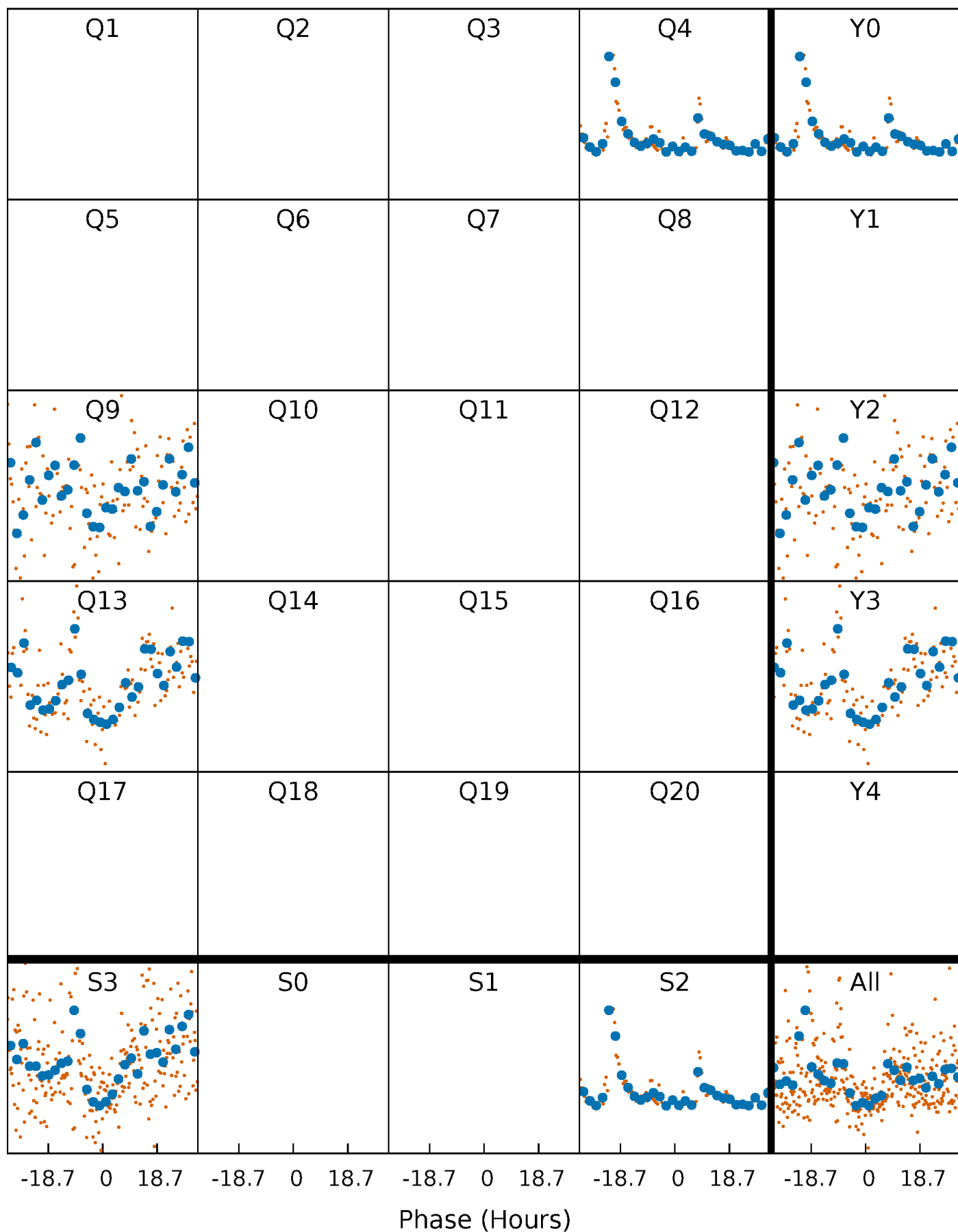


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



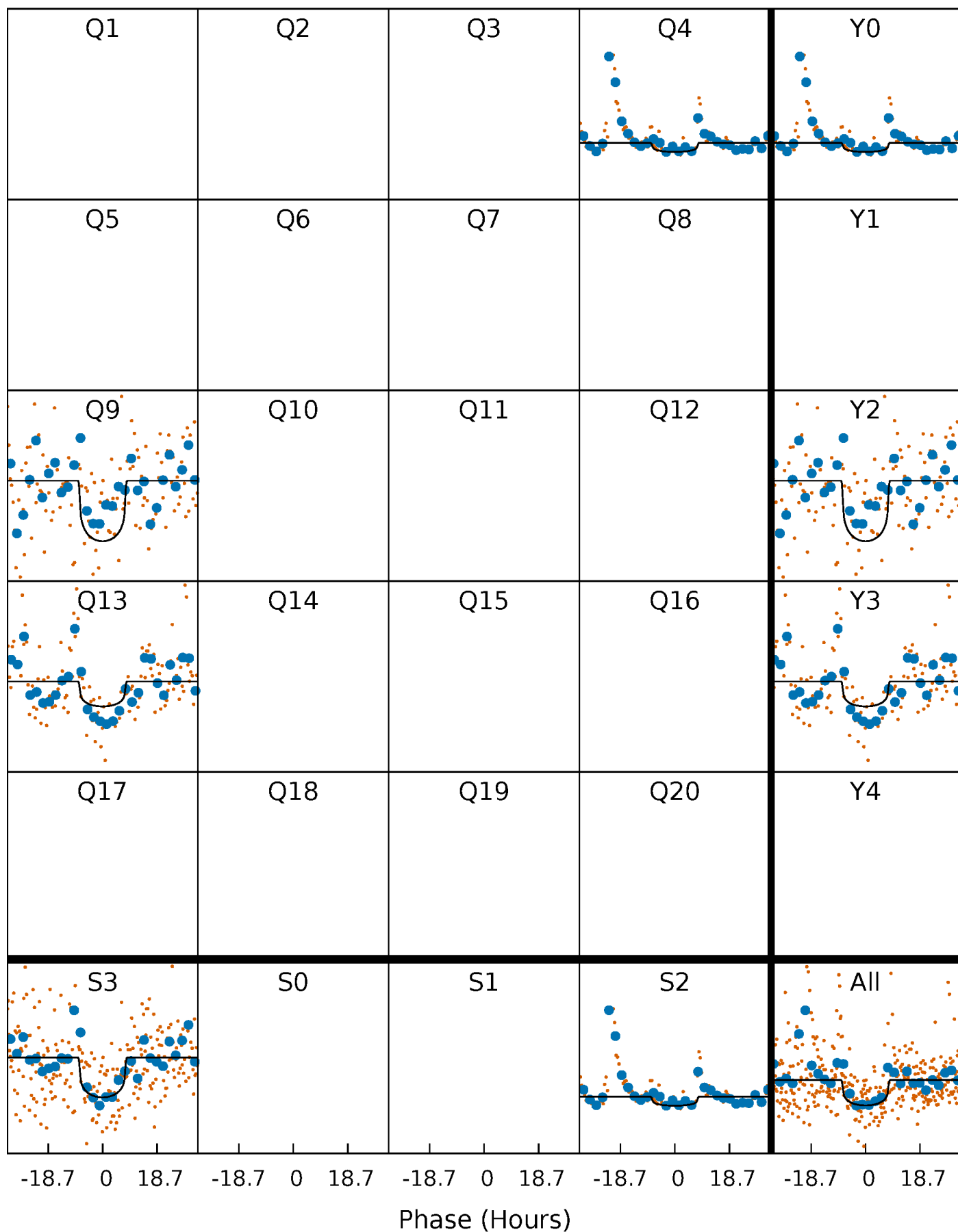
PDC Quarter-Phased Transit Curves

TCE 006117602-01 P=415.733817 Days $T_0=425.020754$ (BKJD)



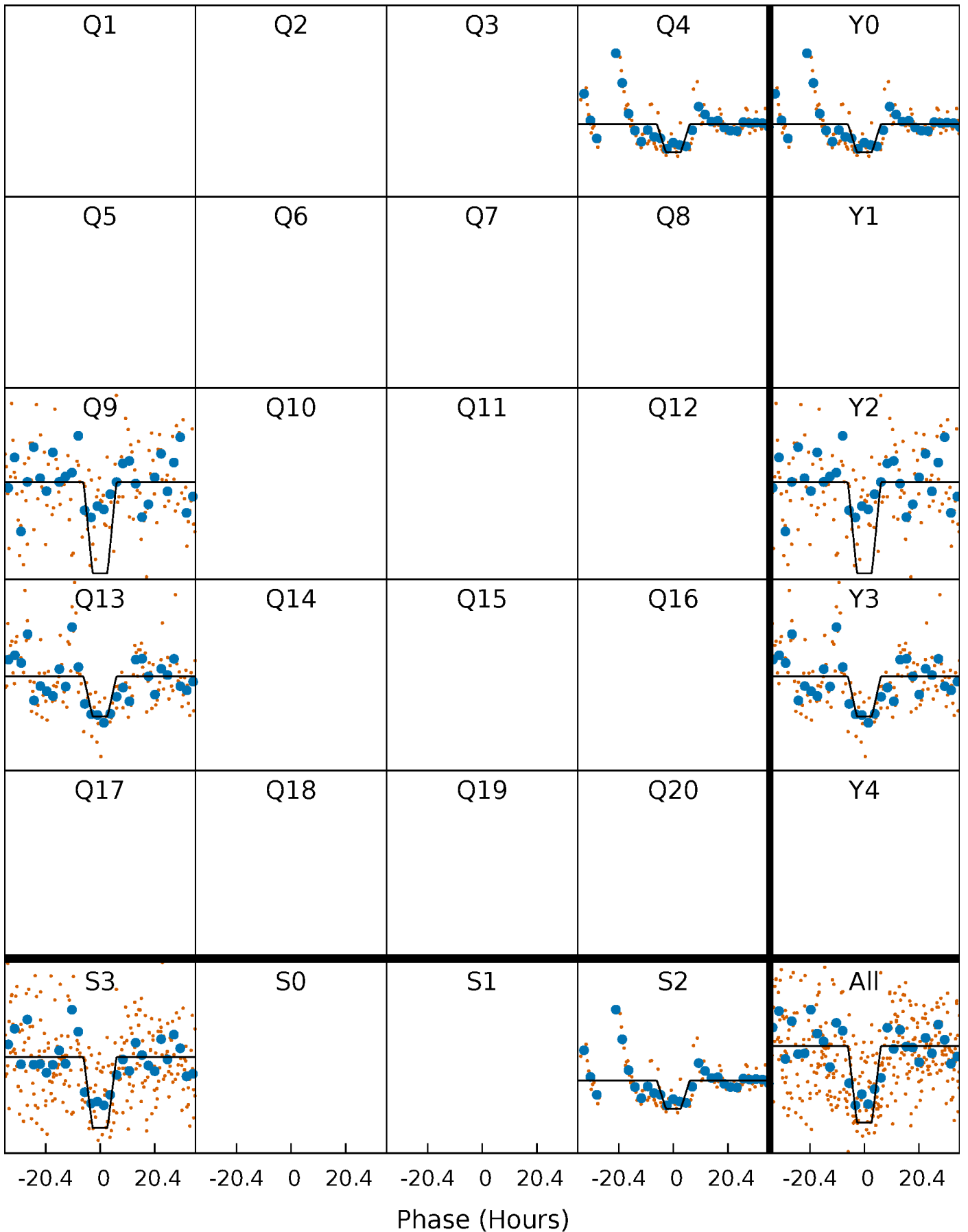
DV Quarter-Phased Transit Curves

TCE 006117602-01 P=415.733817 Days $T_0=425.020754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

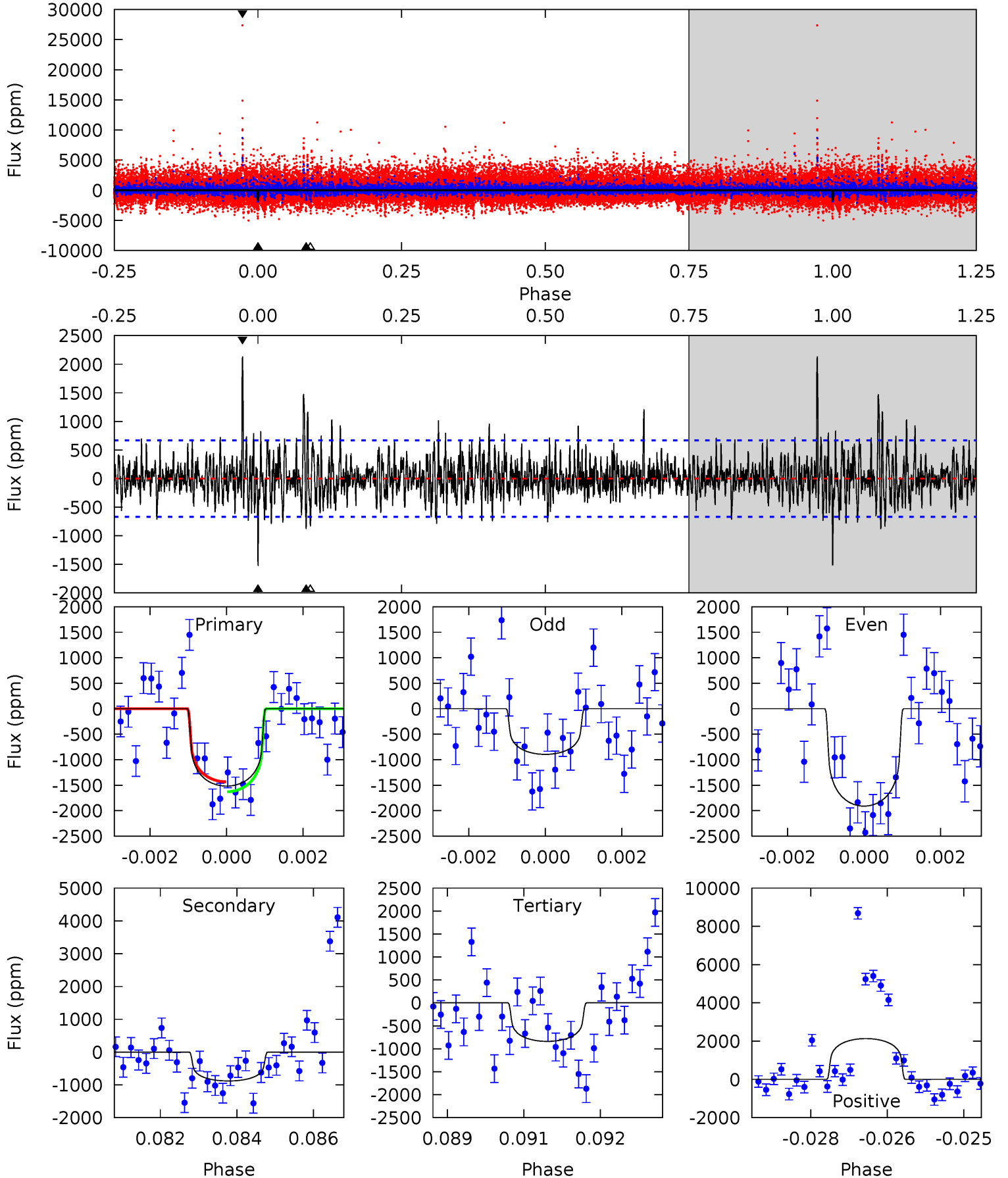
TCE 006117602-01 P=415.741212 Days $T_0=425.030384$ (BKJD)



DV Model-Shift Uniqueness Test

006117602-01, P = 415.733817 Days, E = 9.286937 Days

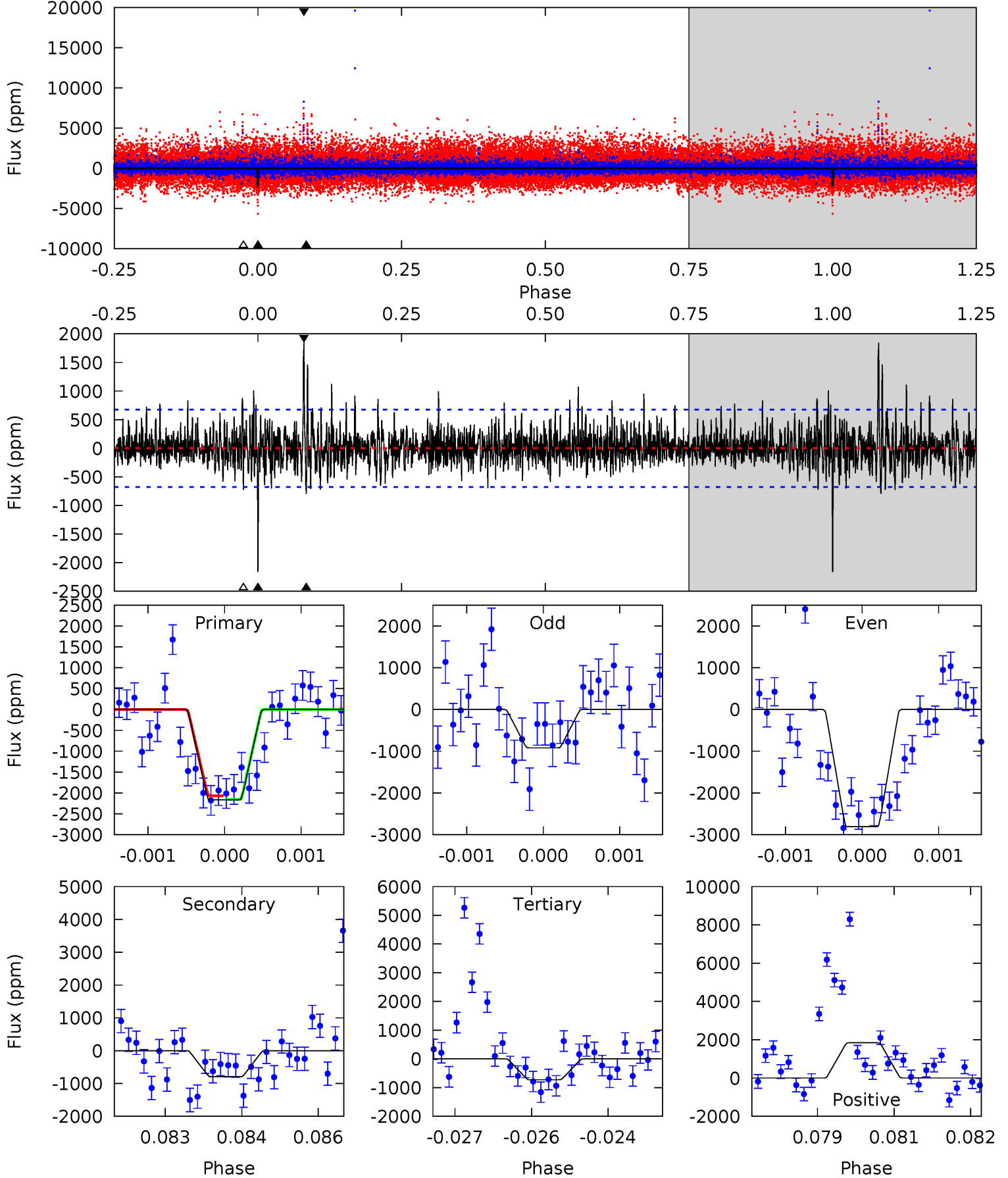
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.07	6.73	17.1	5.36	3.15	2.20	5.44	-4.94	0.35	-10.0	2.53	1.32	0.58	0.79



Alt Model-Shift Uniqueness Test

006117602-01, P = 415.741212 Days, E = 9.289172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	6.35	5.82	14.7	5.41	3.22	1.88	11.5	2.61	0.54	-8.36	6.71	0.88	0.46	0.35



Stellar Parameters For KIC 006117602

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	2661^{+1}_{-1}	$5.283^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$0.116^{+1.000}_{-1.000}$	$0.094^{+1.000}_{-1.000}$	$85.200^{+1.000}_{-1.000}$
	+0%/-0%	+19%/-19%	+inf%/-inf%	+862%/-862%	+1064%/-1064%	+1%/-1%
Source	PHO54	PHO54	PHO54	BTSL		

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

Secondary Eclipse Parameters for KIC 006117602-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-882±125	$0.54^{+0.42}_{-0.29}$	82^{+9}_{-8}	2520^{+570}_{-325}	$502879^{+1656340}_{-332862}$
Alt.	-794±125	$0.78^{+0.47}_{-0.37}$	81^{+8}_{-8}	2274^{+340}_{-210}	$208365^{+418322}_{-113508}$

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

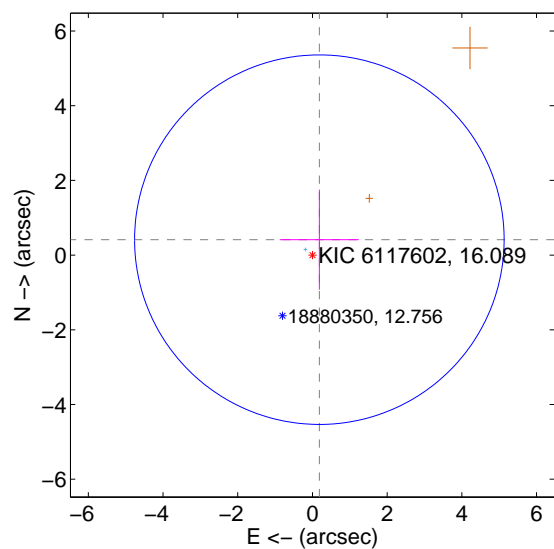
Supplemental centroid analysis for 006117602-01. Kepler magnitude: 16.09. Transit SNR 7.35

There are 1 quarters with good PRF difference image offsets

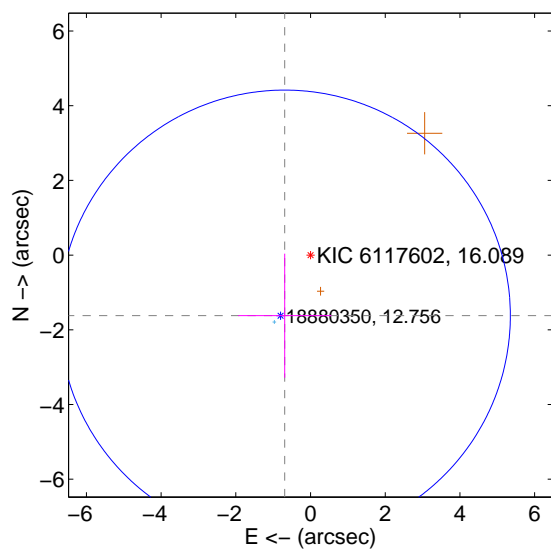
The OOT PRF centroid is offset from the target star catalog position by about 2.78 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.453 ± 1.649	0.27	-0.185 ± 1.058	0.413 ± 1.338
PRF-fit source offset from KIC position	1.762 ± 2.013	0.88	0.690 ± 1.247	-1.622 ± 1.659
photometric centroid source offset	1.72 ± 0.44	3.92	0.08 ± 0.48	-1.72 ± 0.44

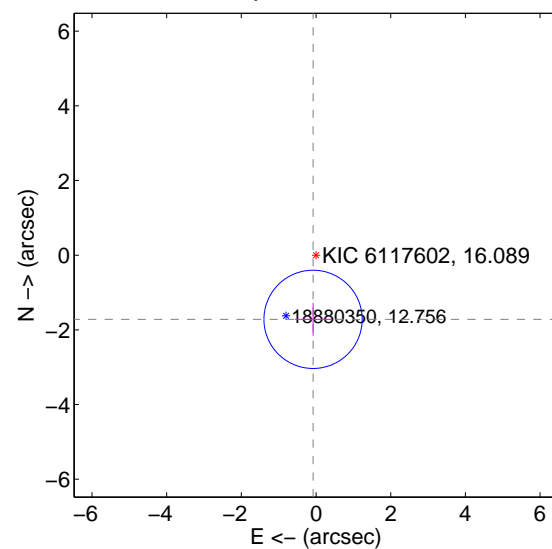
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

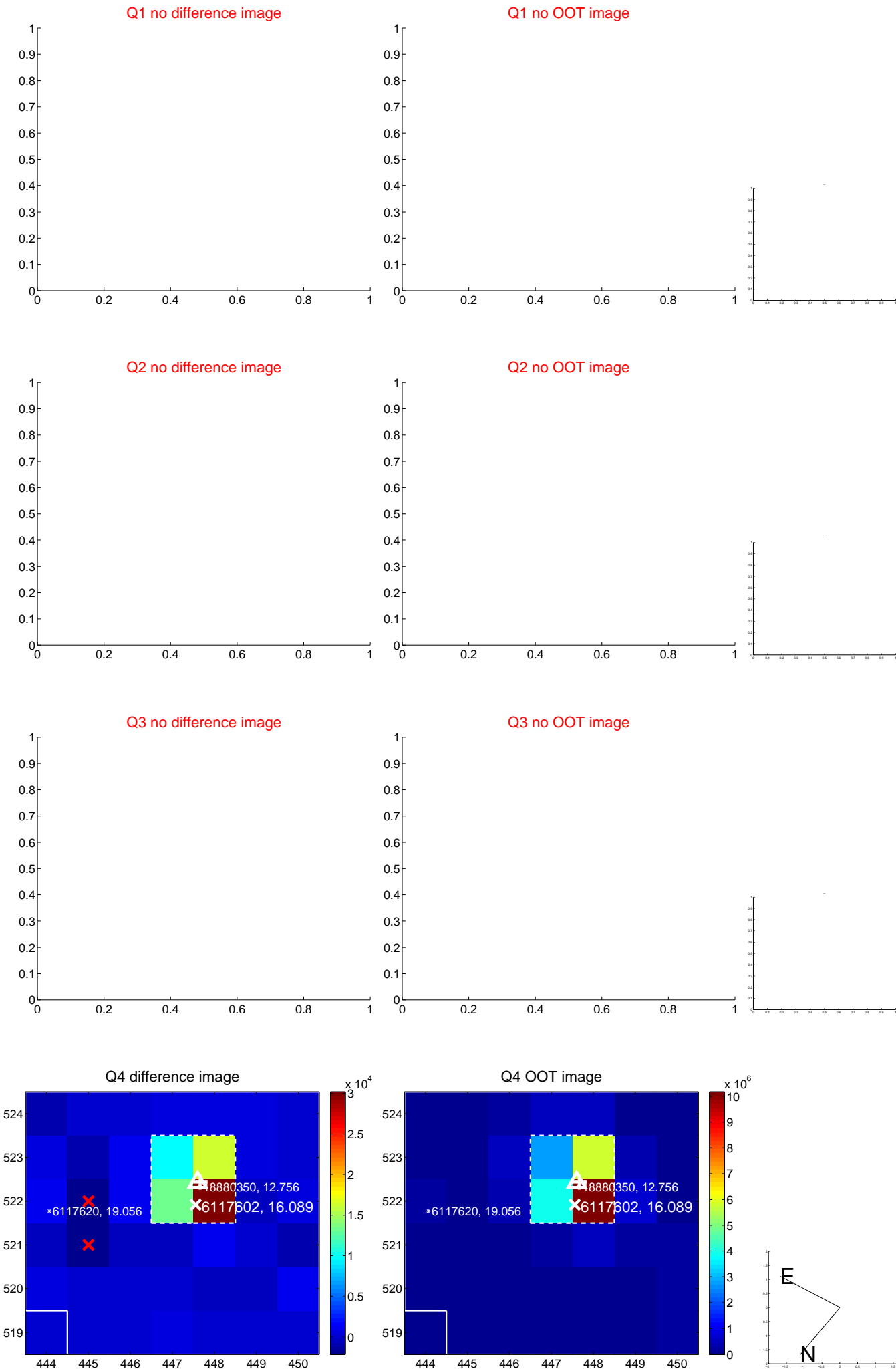


offset from photometric centroids



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.

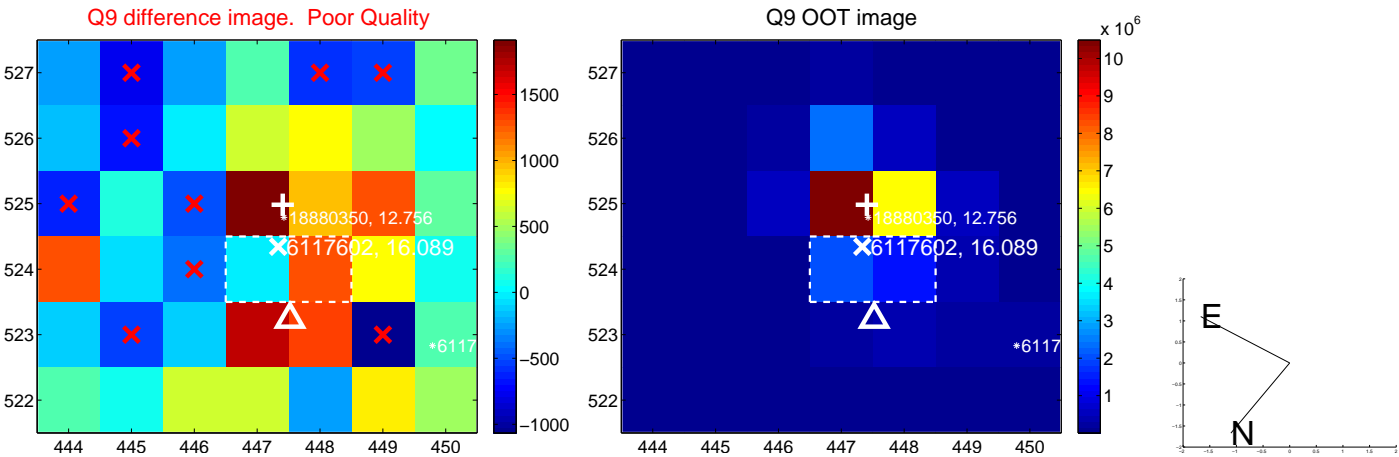
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



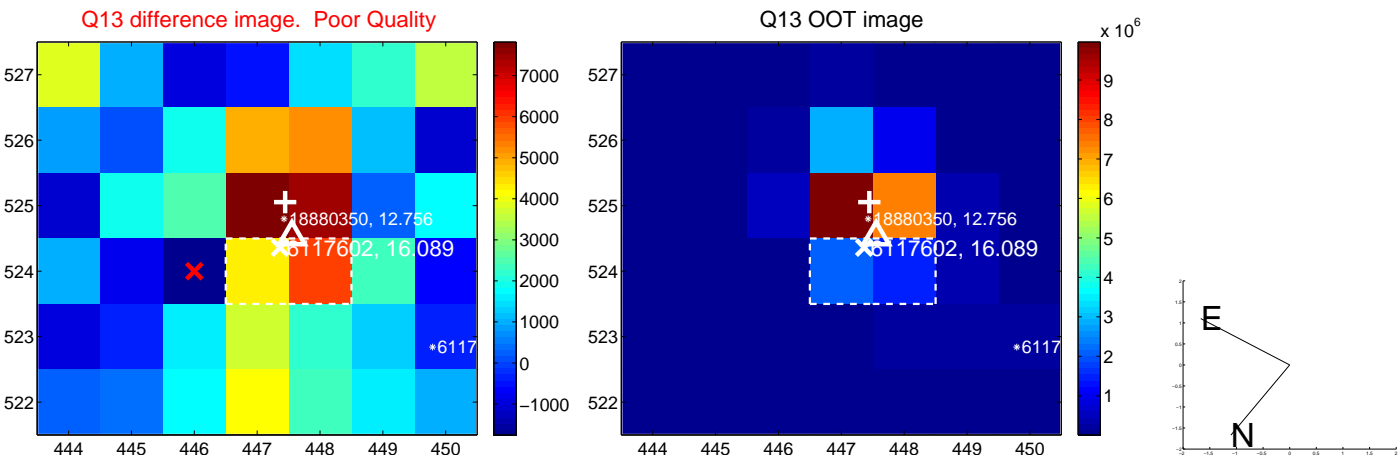
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



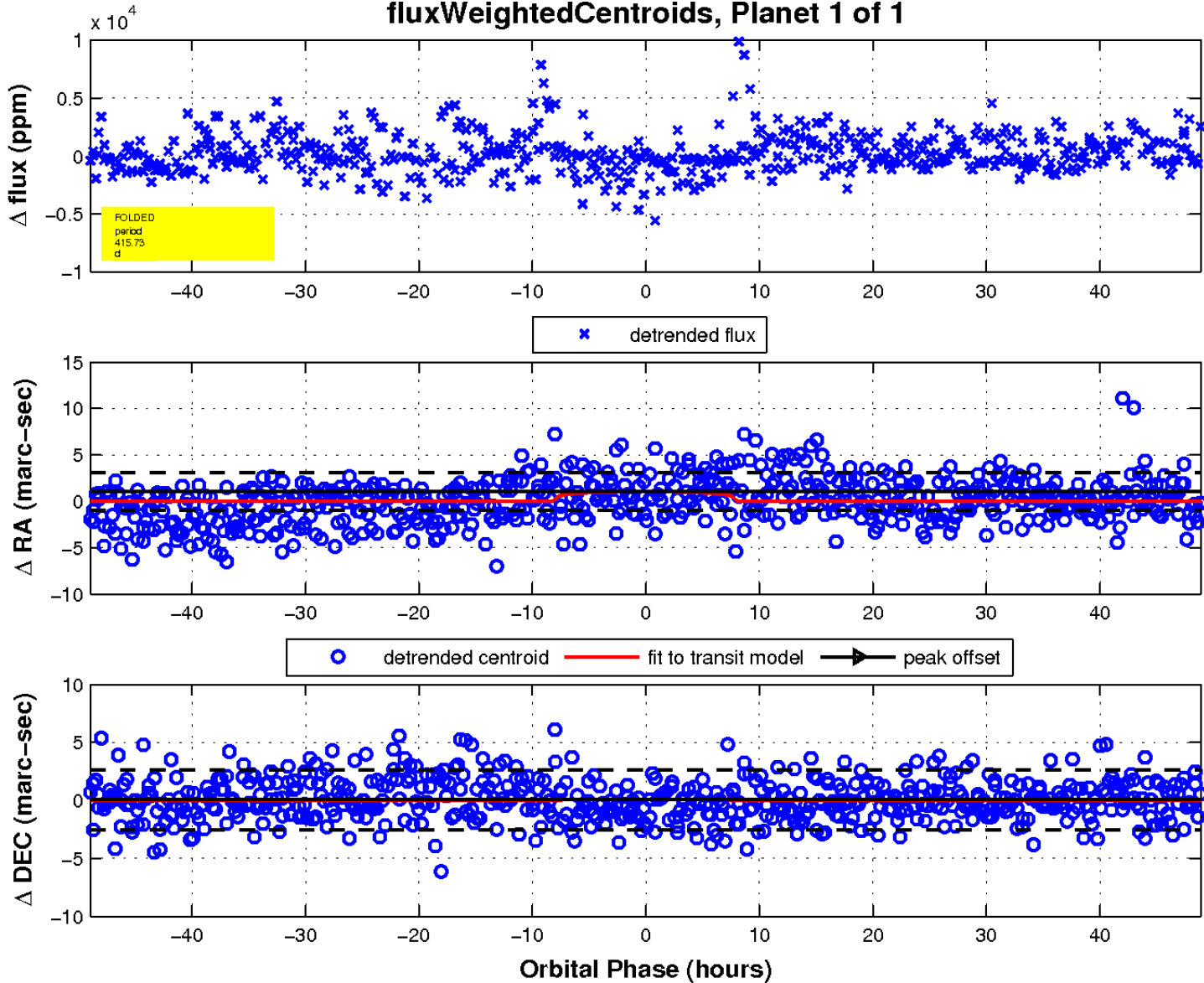
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

