

KIC 010091703

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})
010091703-01	OBS	No	355.248441	437.932682	264297.9	12.250	949.1	1198.1	0.58	4654	35.06	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010091703-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_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.

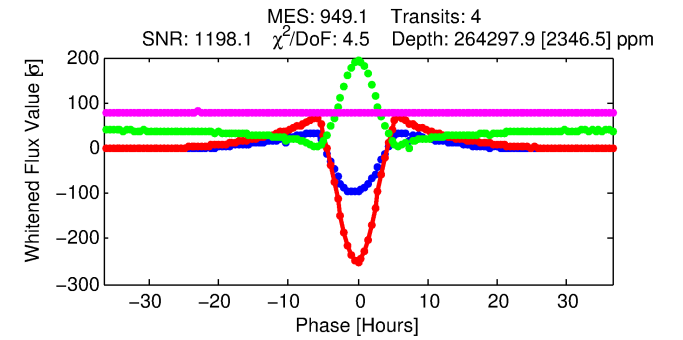
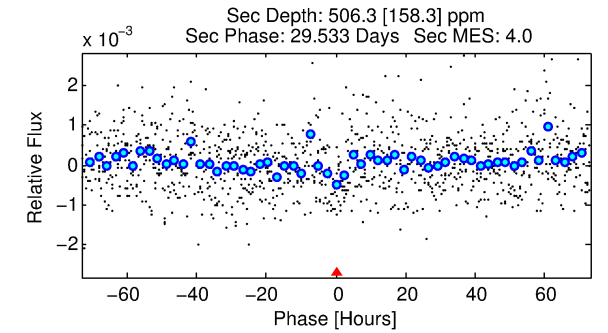
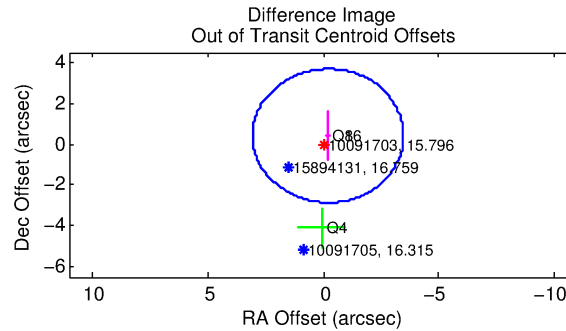
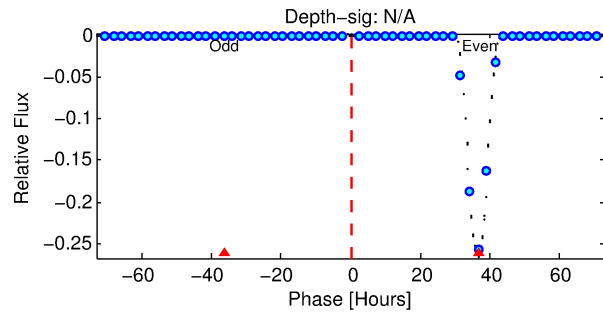
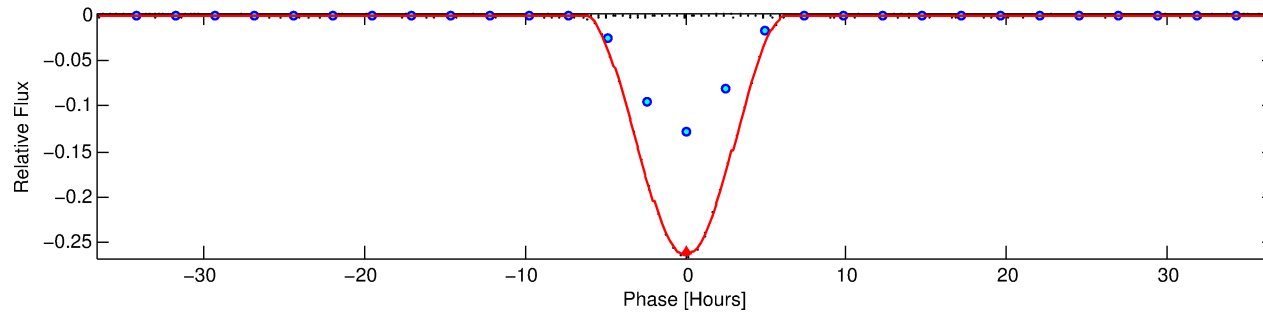
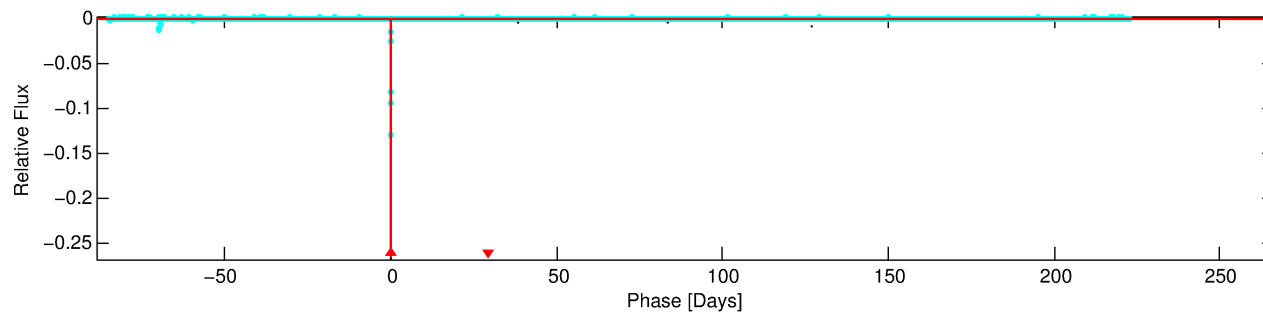
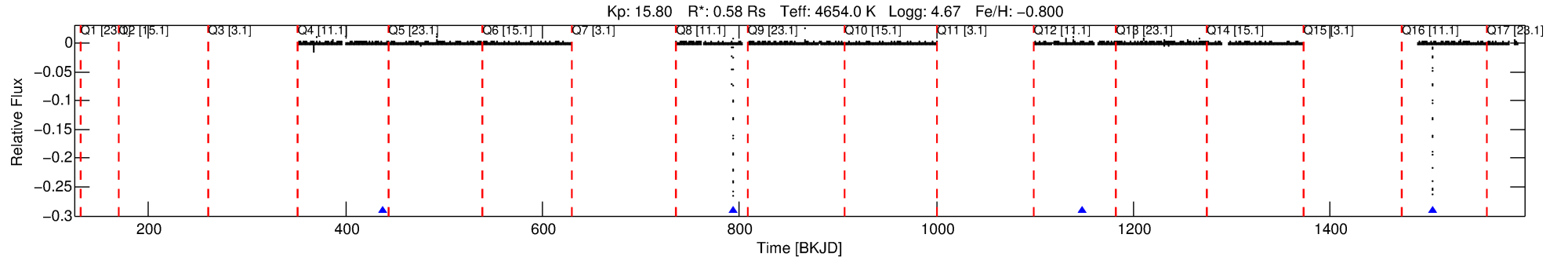
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010091703-01

No Significant Match Found

DV One-Page Summary

KIC: 10091703 Candidate: 1 of 1 Period: 355.248 d



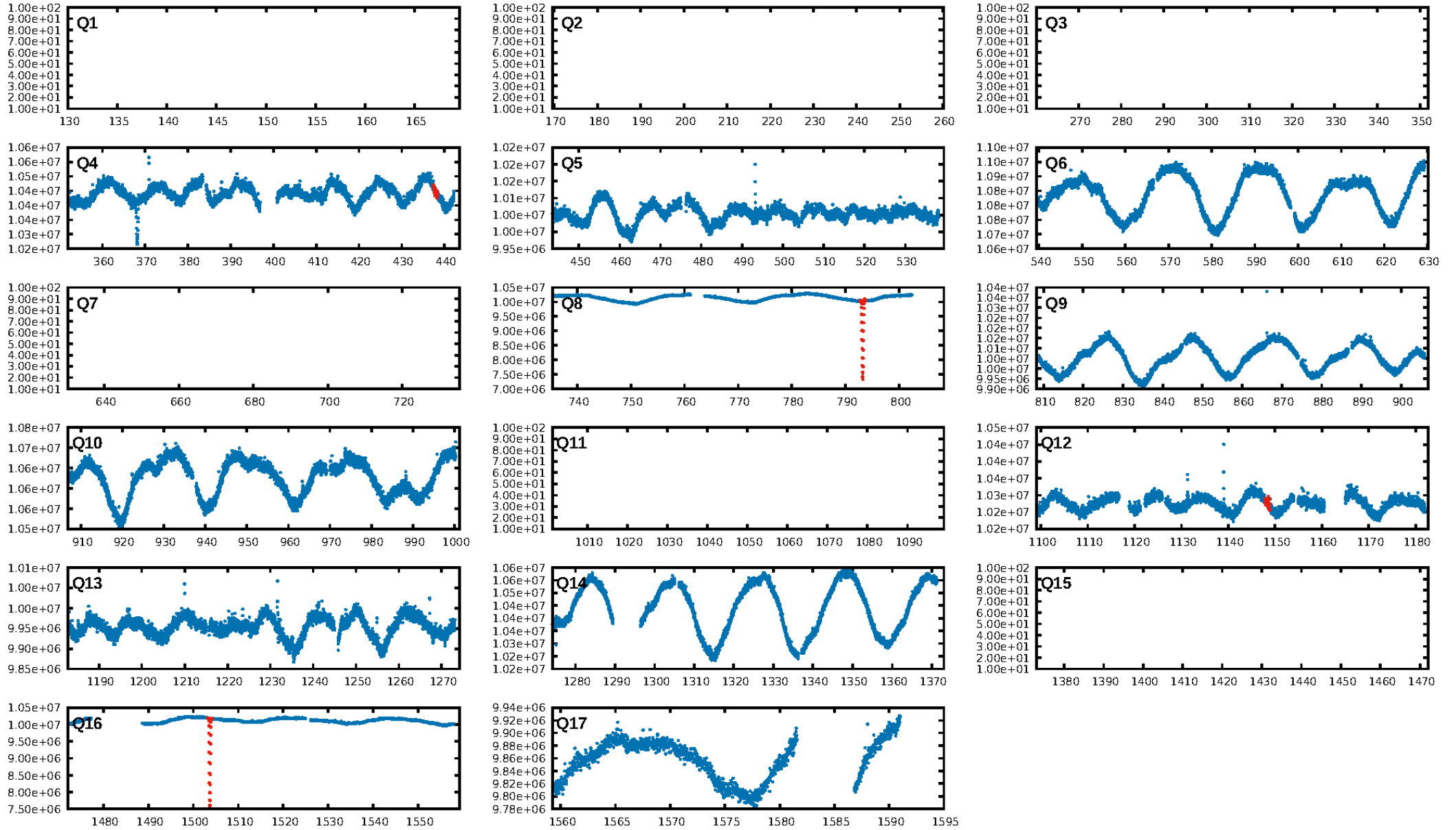
DV Fit Results:

Period = 355.24844 [0.00074] d
Epoch = 437.9327 [0.0015] BKJD
Rp/R* = 0.5540 [0.2080]
a/R* = 312.70 [13.61]
b = 0.65 [0.37]
Seff = 0.21 [0.04]
Teq = 173 [8] K
Rp = 35.06 [13.45] Re
a = 0.8153 [0.0548] AU
Ag = 150.62 [123.41] [1.21σ]
Teffp = 938 [194] K [3.93σ]

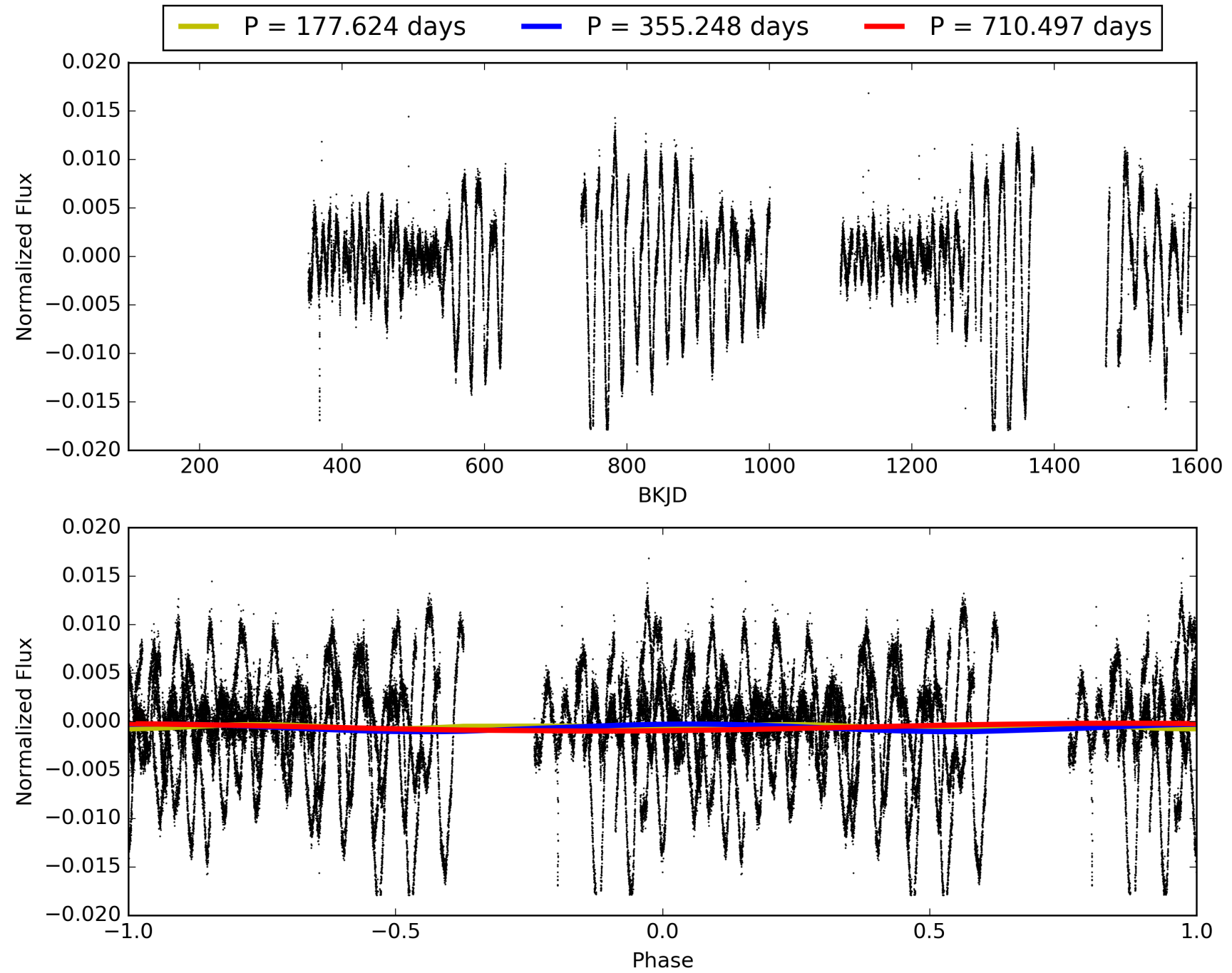
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 9.278
Centroid-sig: 0.0%
Centroid-so: 1.162 arcsec [175.54σ]
OotOffset-rm: 0.459 arcsec [0.42σ]
KicOffset-rm: 0.271 arcsec [0.38σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 010091703-01, PDC Light Curves

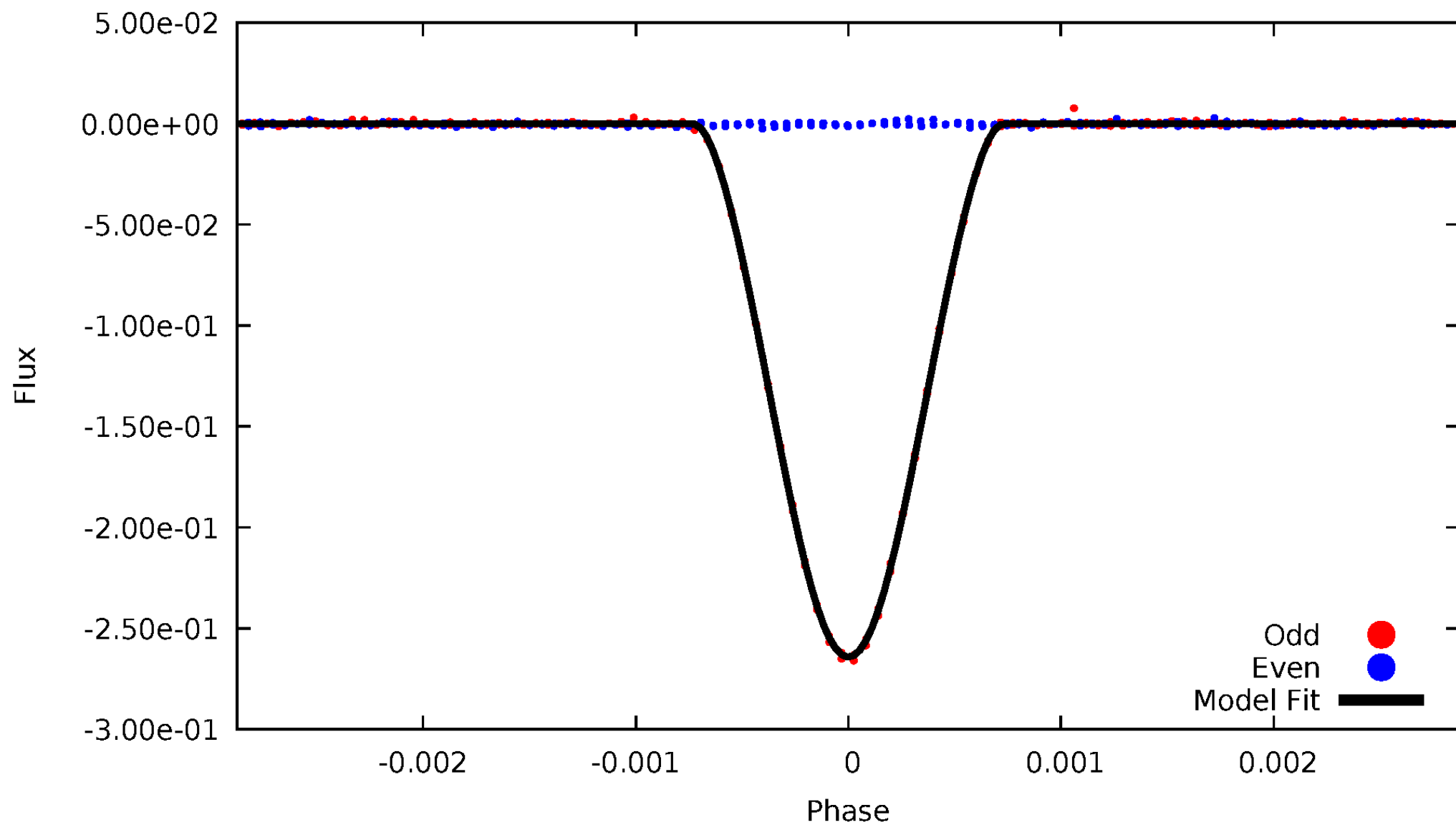


TCE 010091703-01



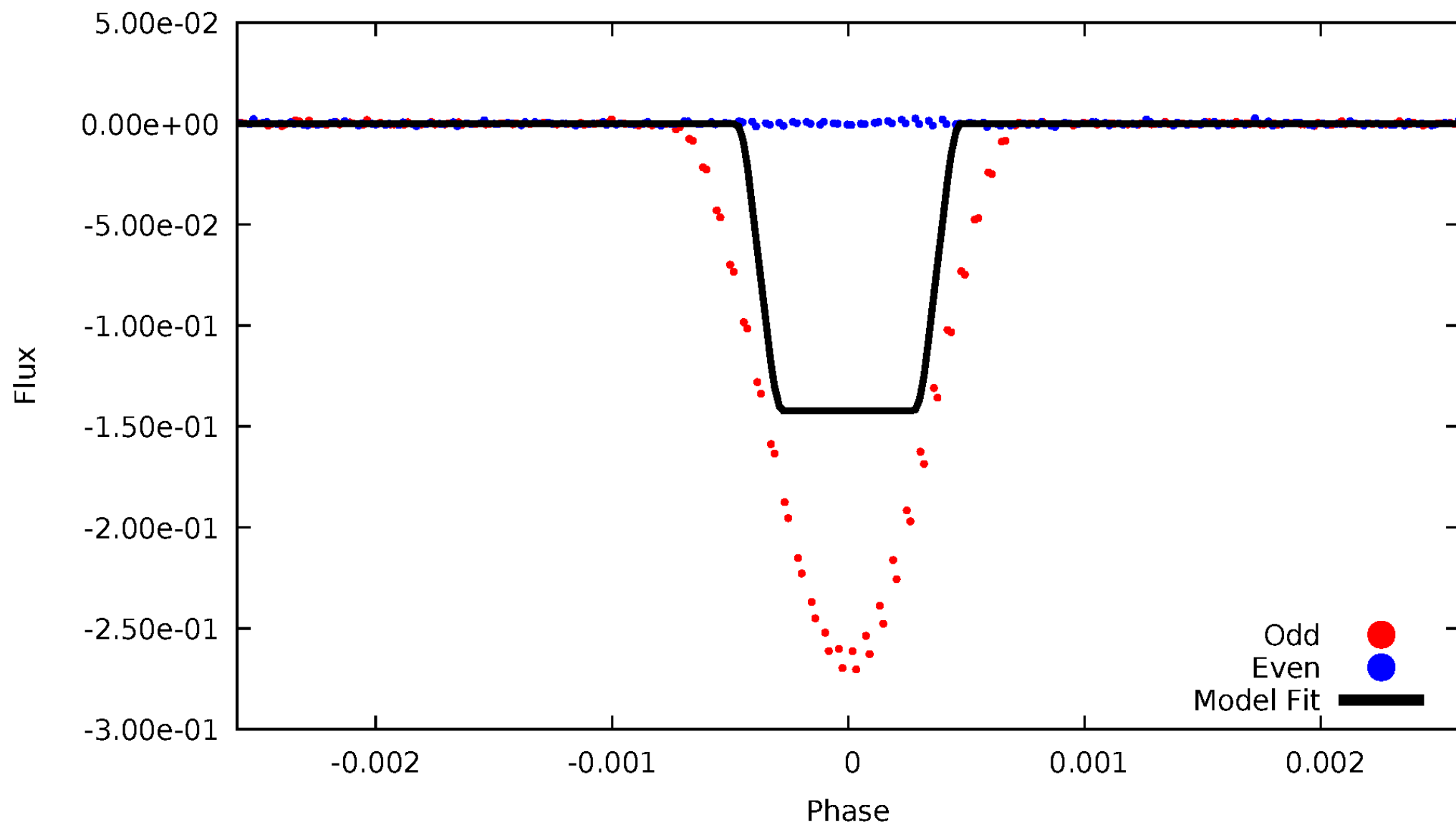
DV Odd/Even

TCE 010091703-01



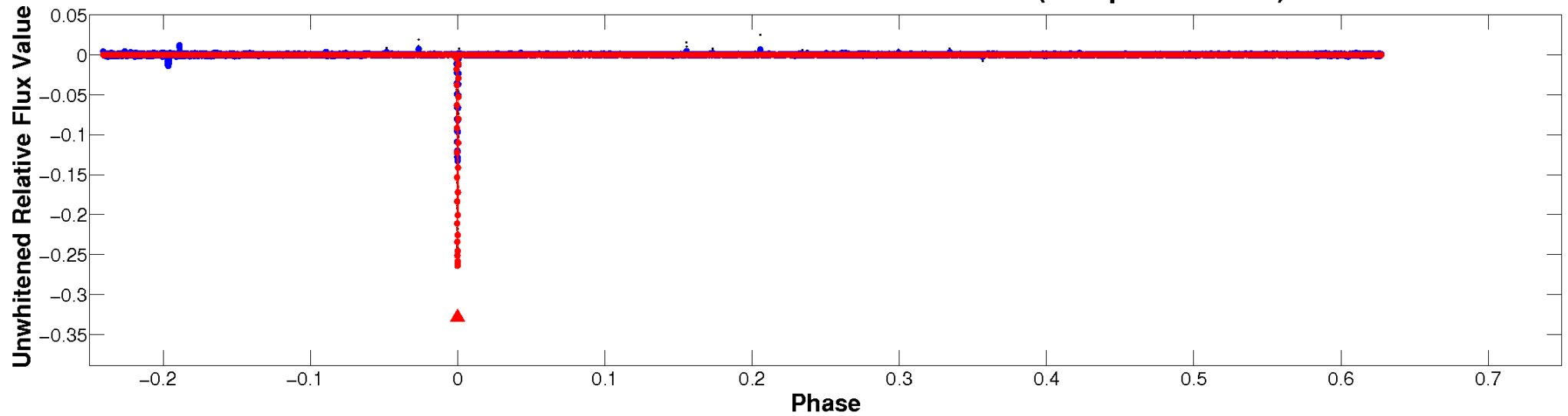
ALT Odd/Even

TCE 010091703-01

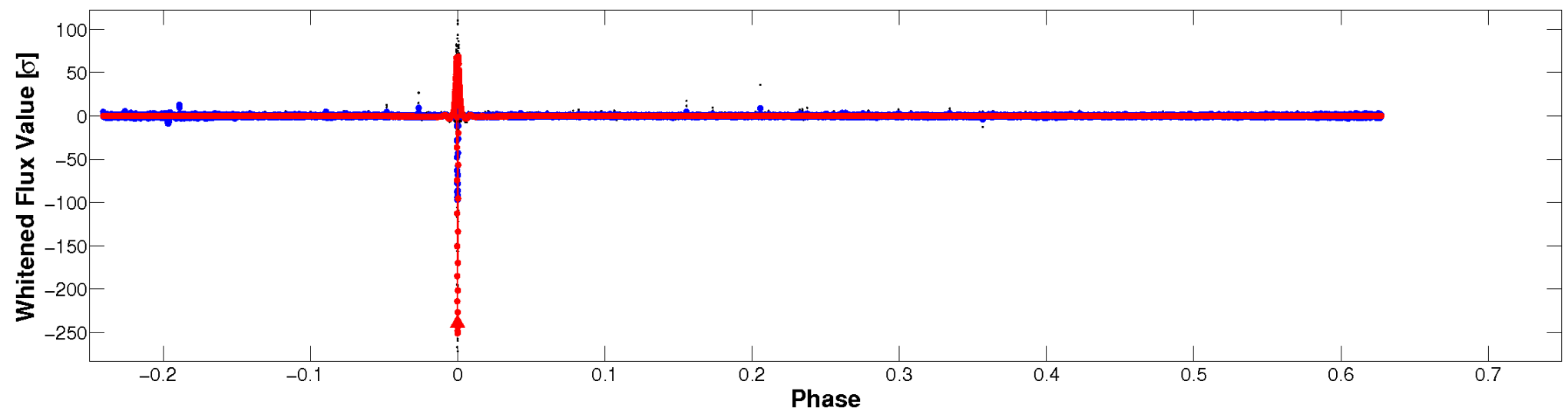


Non-Whitened Vs. Whitened Light Curve

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

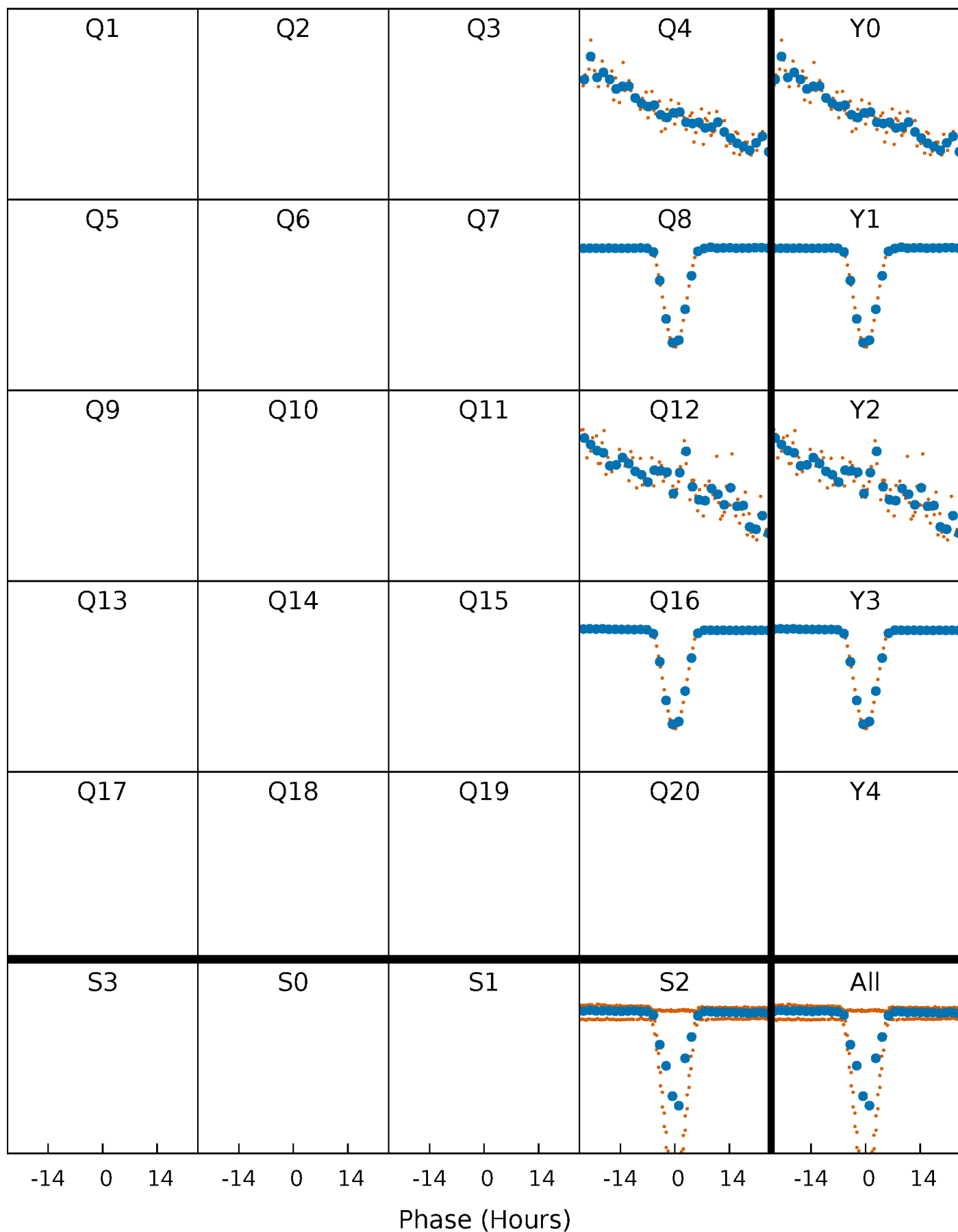


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



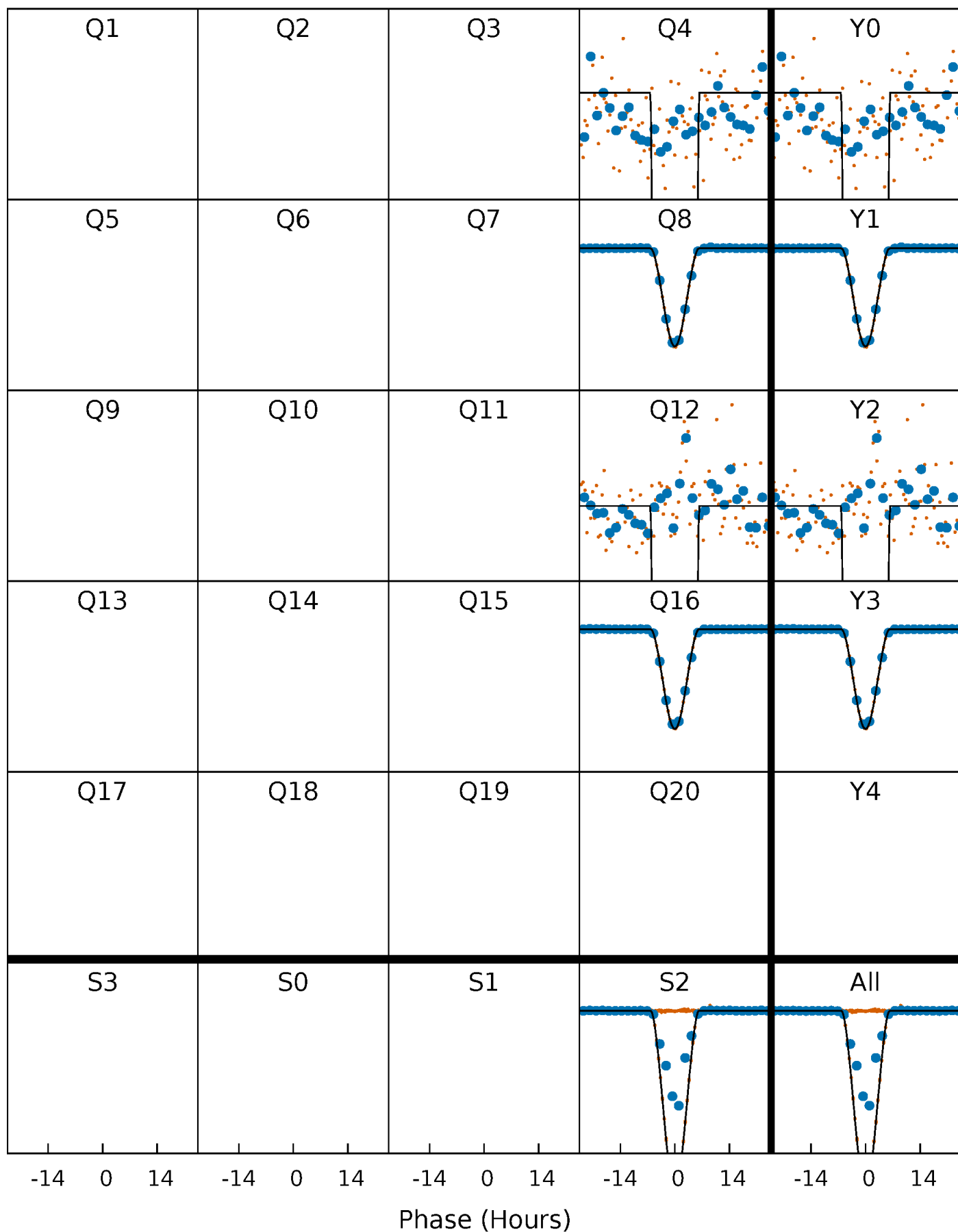
PDC Quarter-Phased Transit Curves

TCE 010091703-01 P=355.248441 Days $T_0=437.932682$ (BKJD)



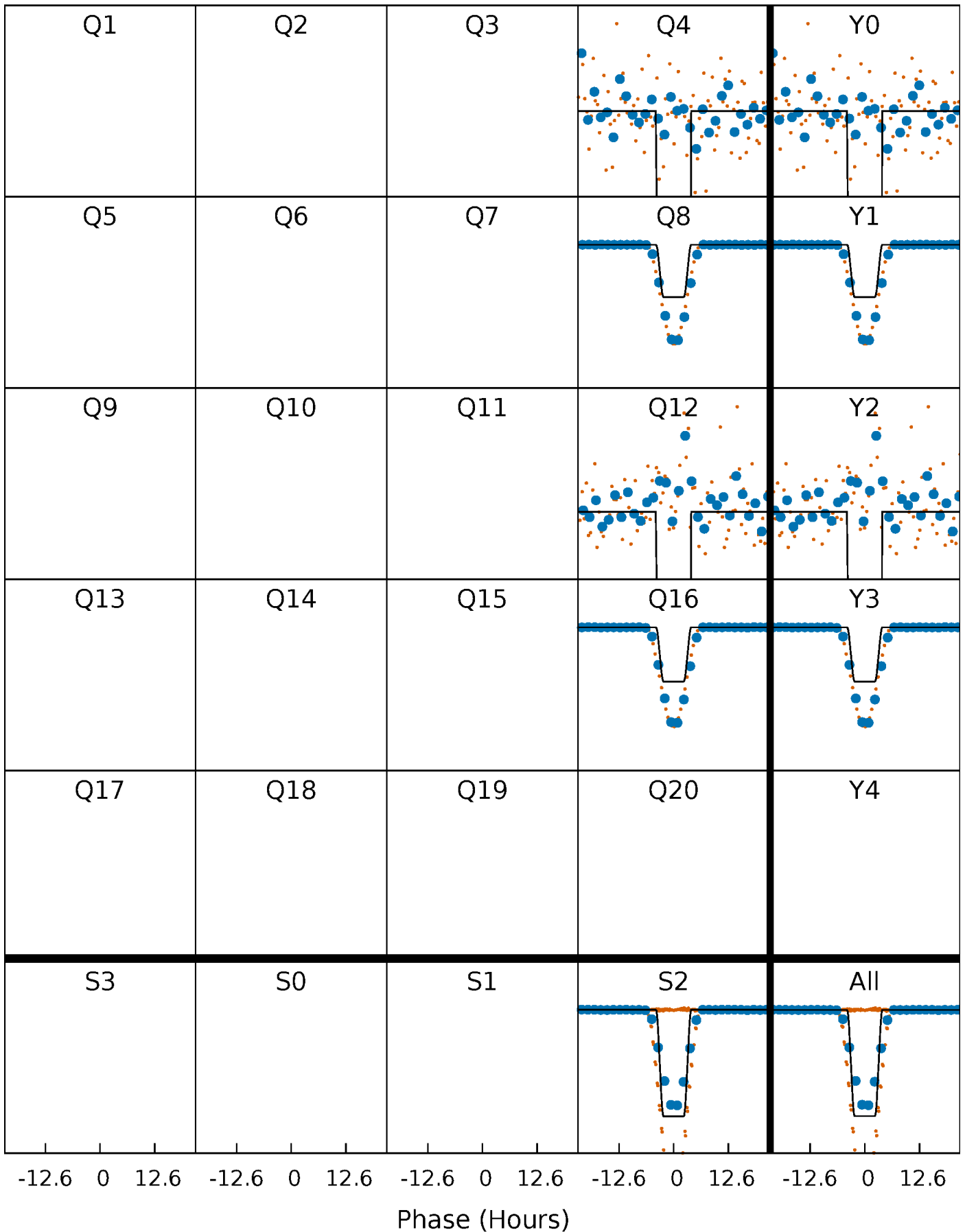
DV Quarter-Phased Transit Curves

TCE 010091703-01 P=355.248441 Days $T_0=437.932682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

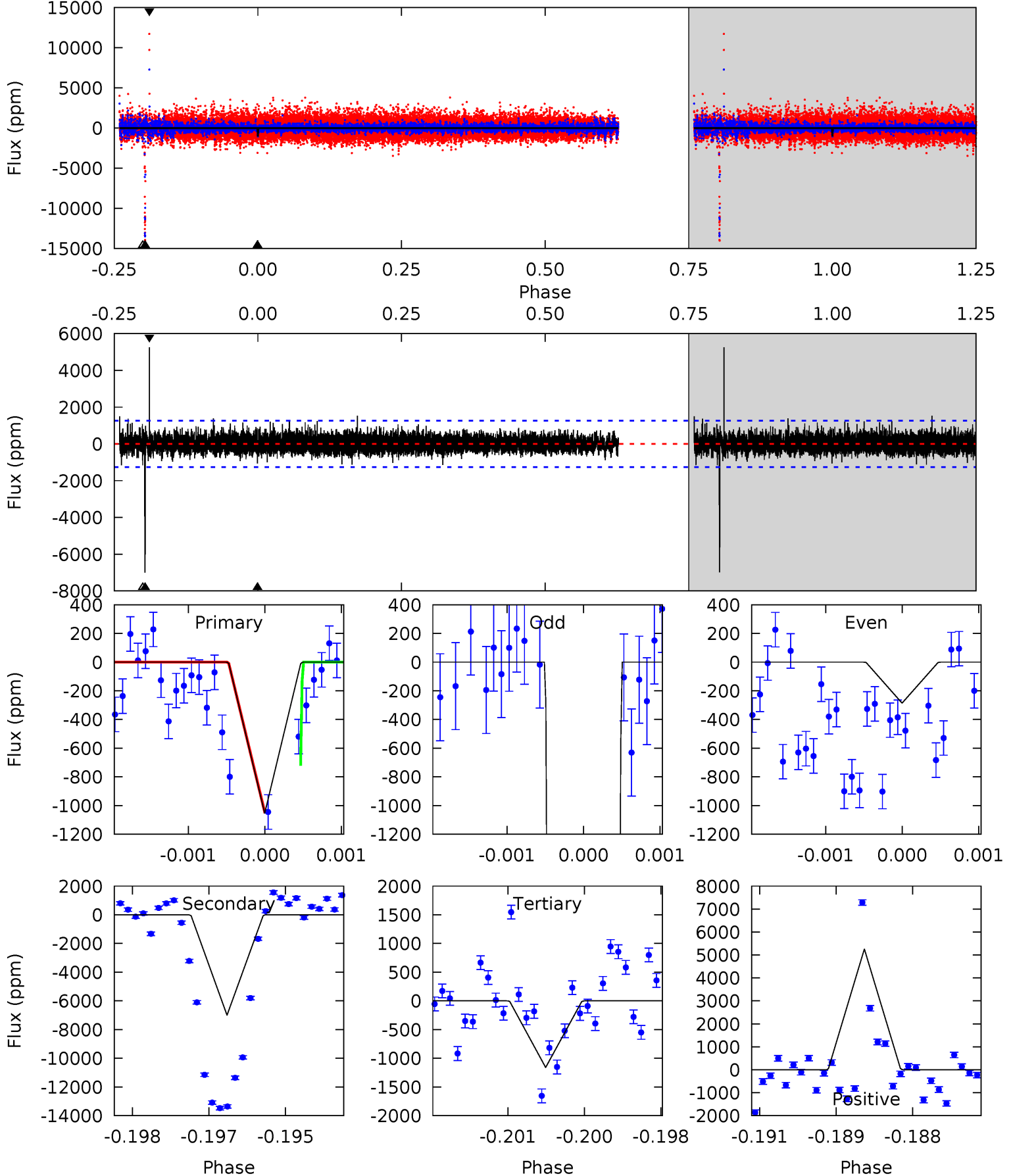
TCE 010091703-01 P=355.251063 Days $T_0=437.927567$ (BKJD)



DV Model-Shift Uniqueness Test

010091703-01, P = 355.248441 Days, E = 82.684241 Days

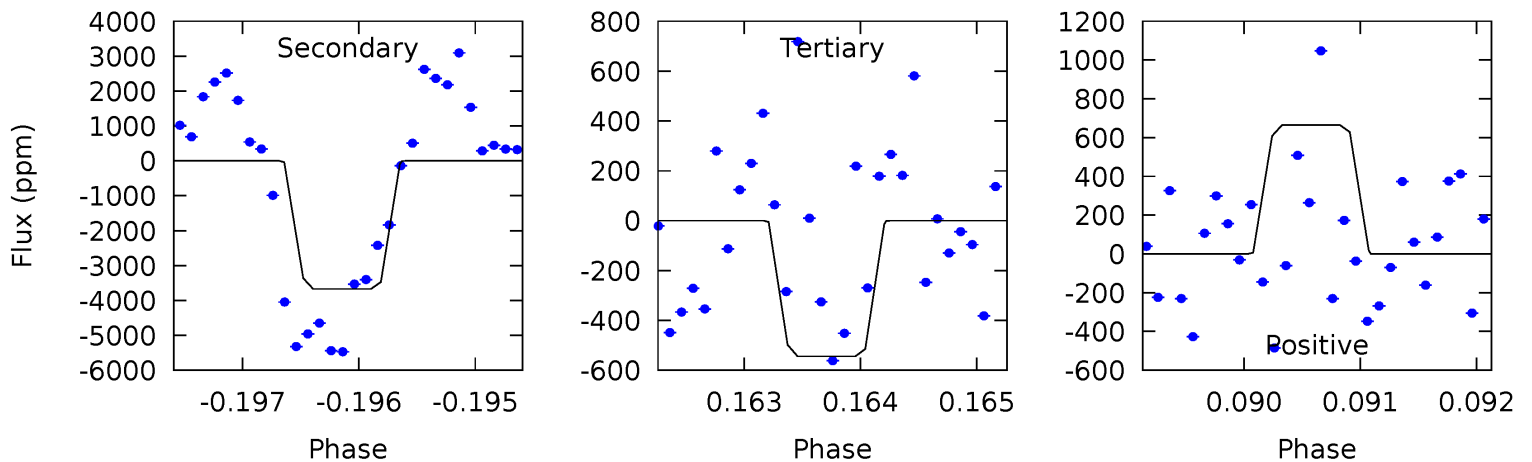
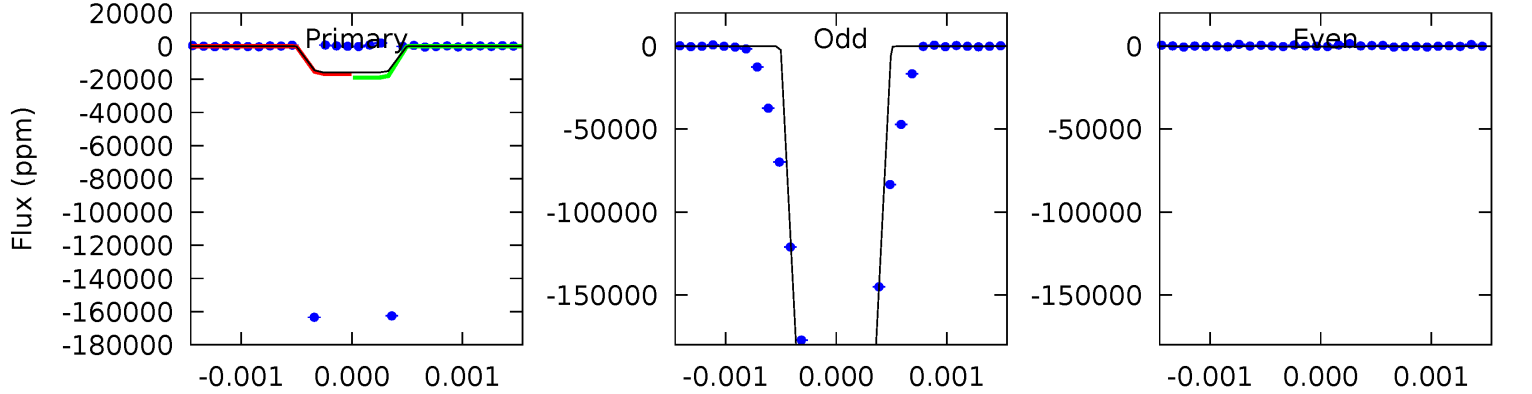
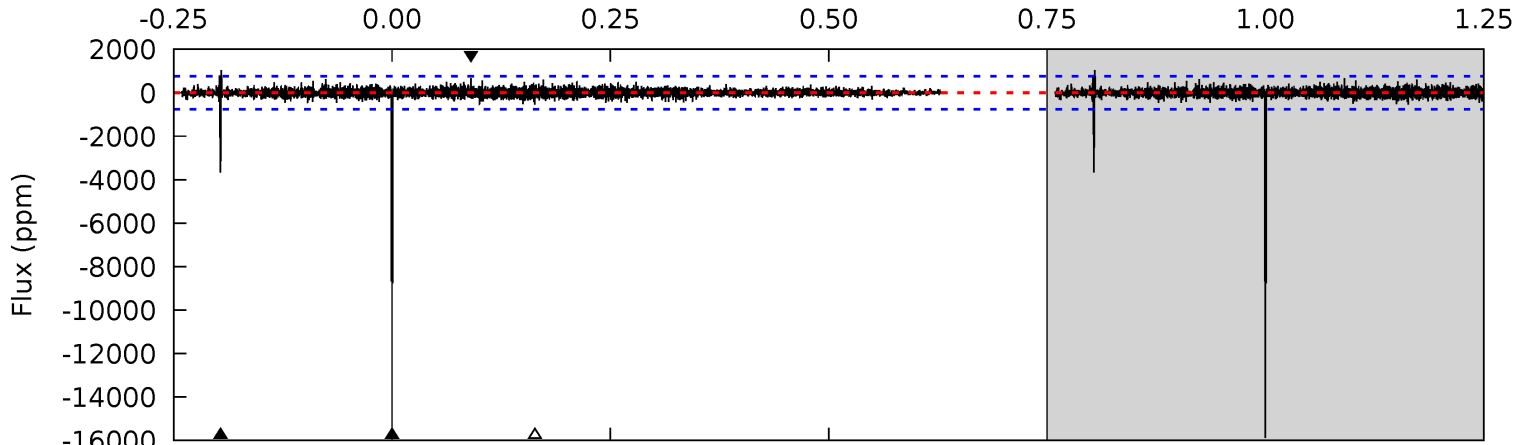
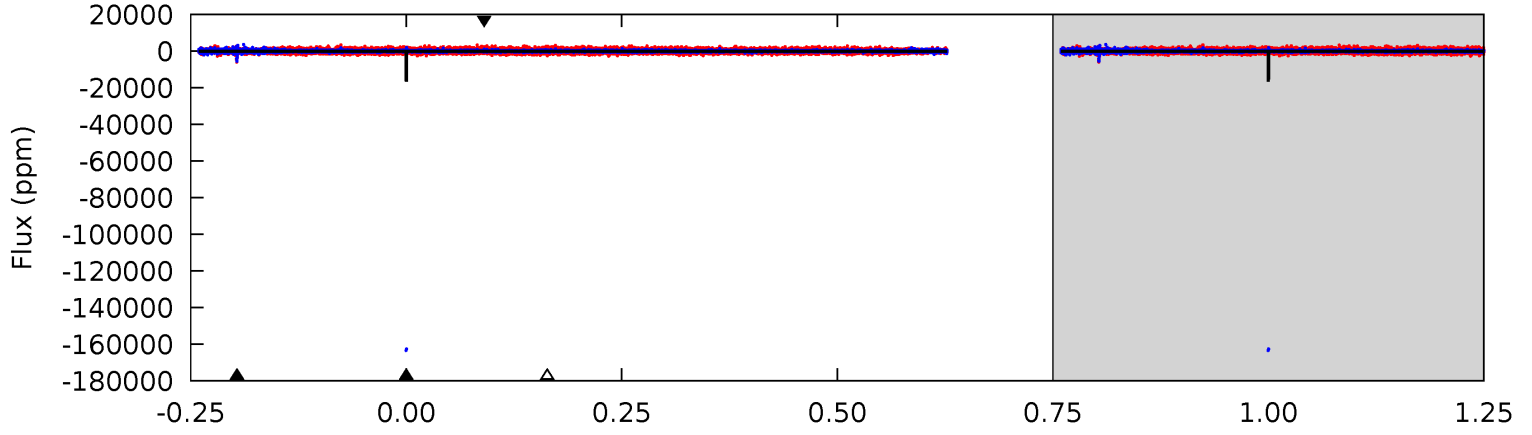
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.49	29.8	4.94	22.4	5.38	3.18	1.11	-0.45	-17.9	24.9	7.40	1801	1.00	0.43	0.69



Alt Model-Shift Uniqueness Test

010091703-01, P = 355.251063 Days, E = 82.676504 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.0	26.6	3.94	4.81	5.47	3.31	0.90	111.0	110.2	22.6	21.8	1262	1.02	0.06	7.99



Stellar Parameters For KIC 010091703

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4654^{+147}_{-184}	$4.669^{+0.054}_{-0.032}$	$-0.800^{+0.300}_{-0.300}$	$0.580^{+0.046}_{-0.046}$	$0.572^{+0.055}_{-0.032}$	$4.134^{+0.951}_{-0.533}$
	+3%/-4%	+1%/-1%	+37%/-37%	+8%/-8%	+10%/-6%	+23%/-13%
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 010091703-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6989 ± 235	$33.44^{+14.12}_{-12.72}$	241^{+9}_{-10}	2611^{+353}_{-217}	2316^{+3831}_{-1183}
Alt.	-3671 ± 138	$23.97^{+13.15}_{-12.22}$	241^{+9}_{-9}	2620^{+549}_{-271}	2358^{+7625}_{-1350}

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

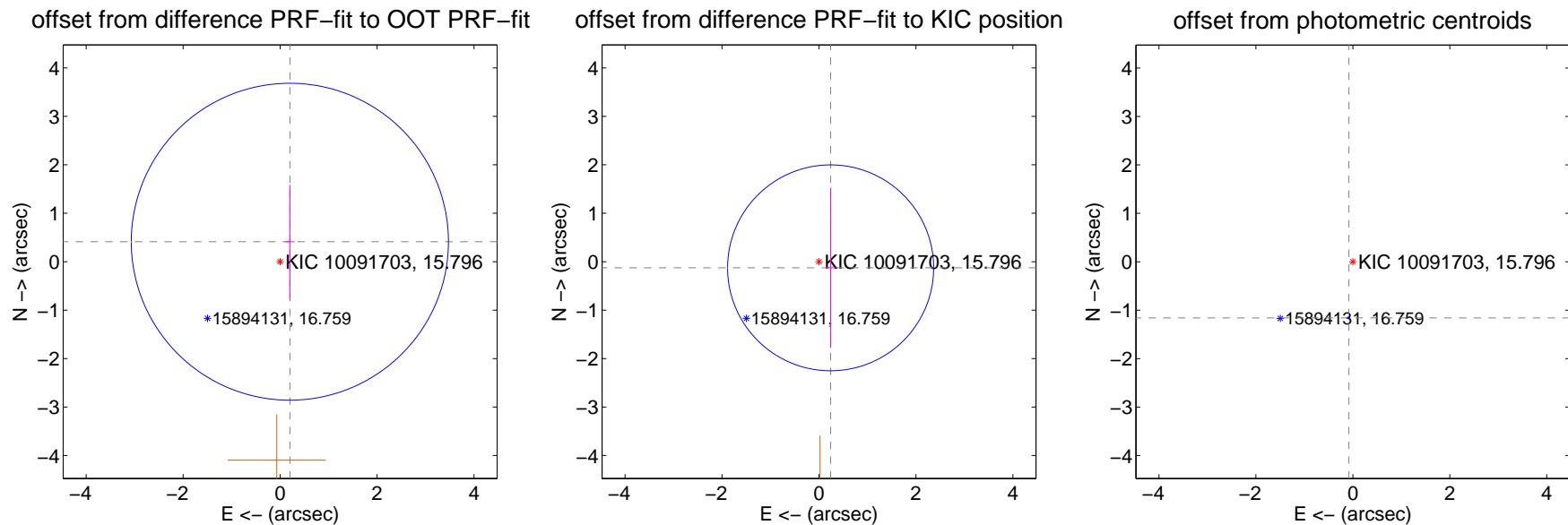
DV Centroid Data

Supplemental centroid analysis for 010091703-01. Kepler magnitude: 15.80. Transit SNR 1198.06

There are 2 quarters with good PRF difference image offsets

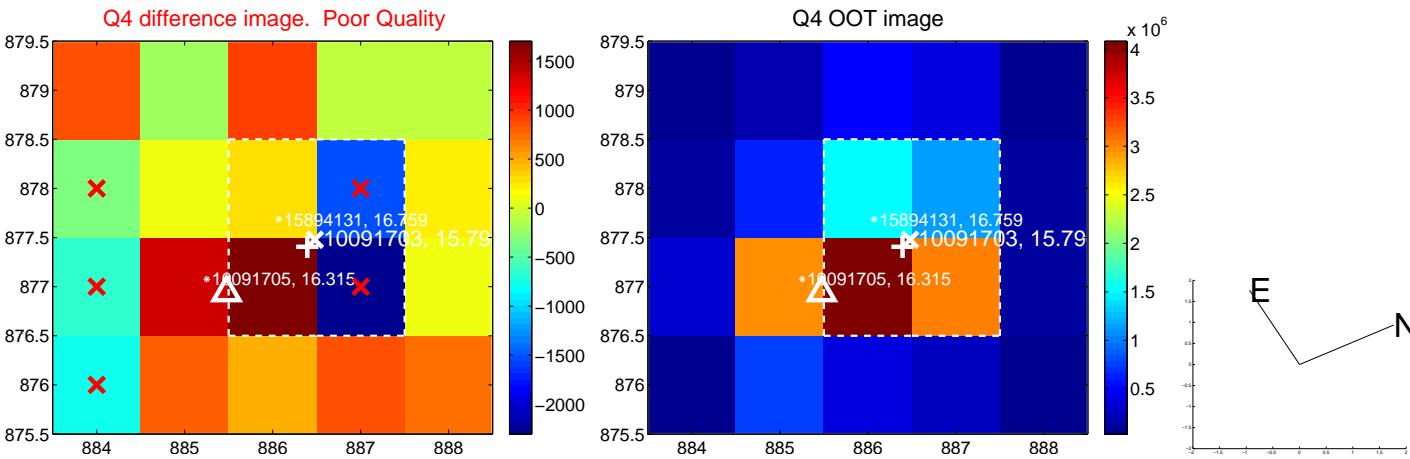
The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.459 ± 1.090	0.42	-0.201 ± 0.098	0.412 ± 1.178
PRF-fit source offset from KIC position	0.271 ± 0.708	0.38	-0.240 ± 0.101	-0.127 ± 1.652
photometric centroid source offset	1.16 ± 0.01	175.54	0.08 ± 0.00	-1.16 ± 0.01

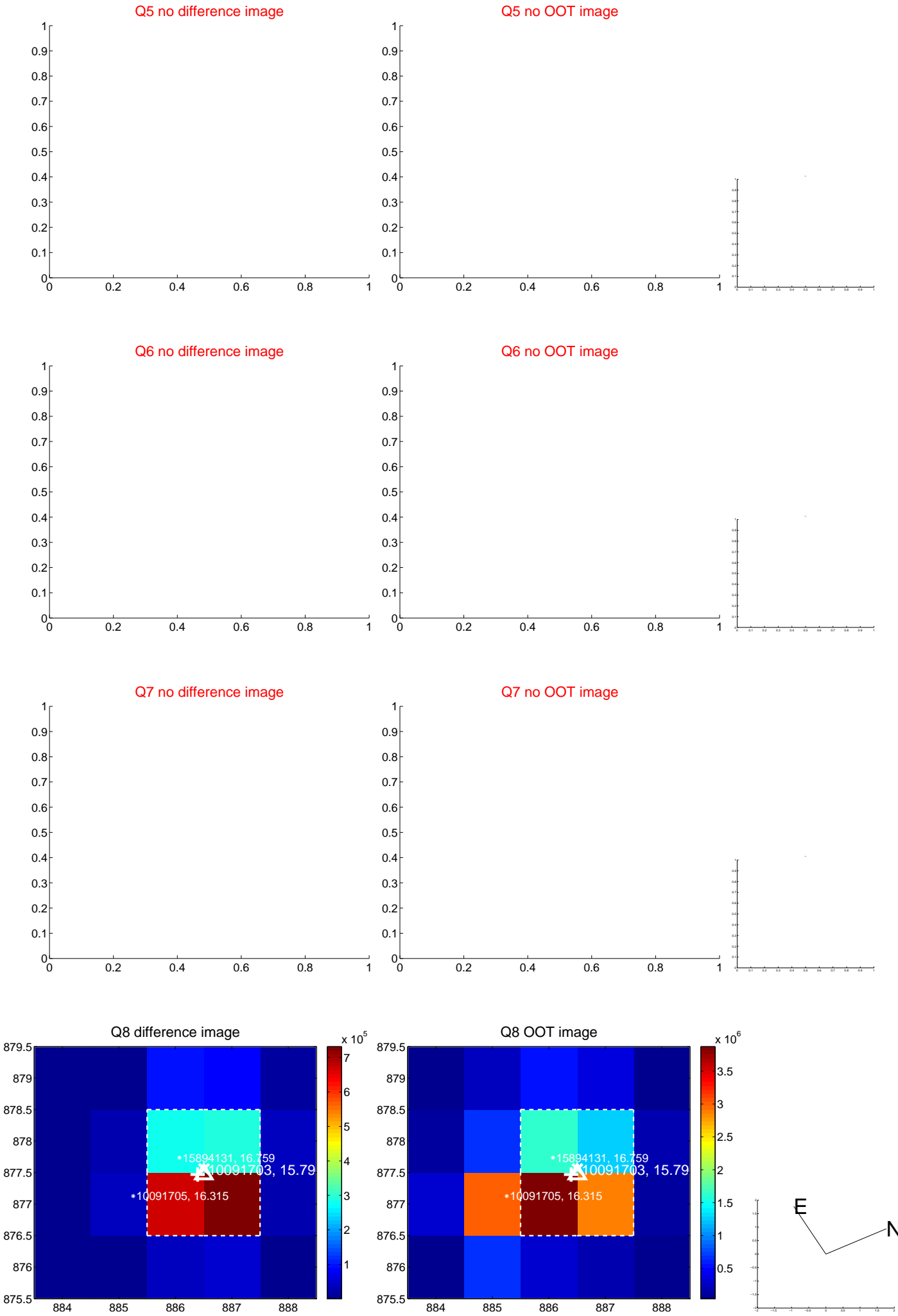


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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

Q9 no difference image



Q9 no OOT image



Q10 no difference image



Q10 no OOT image



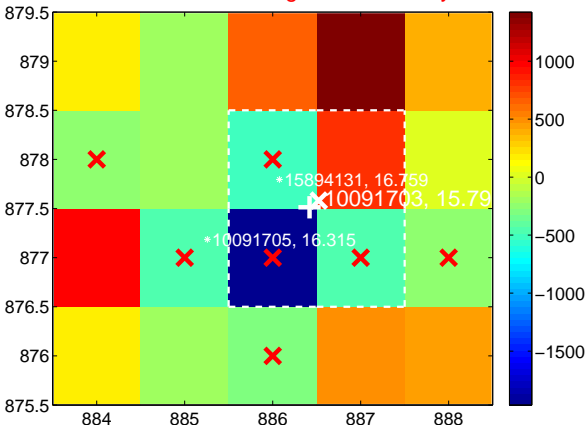
Q11 no difference image



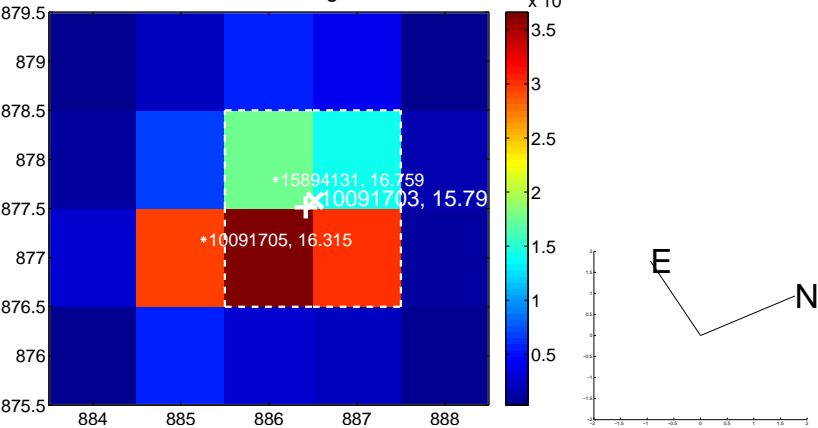
Q11 no OOT image



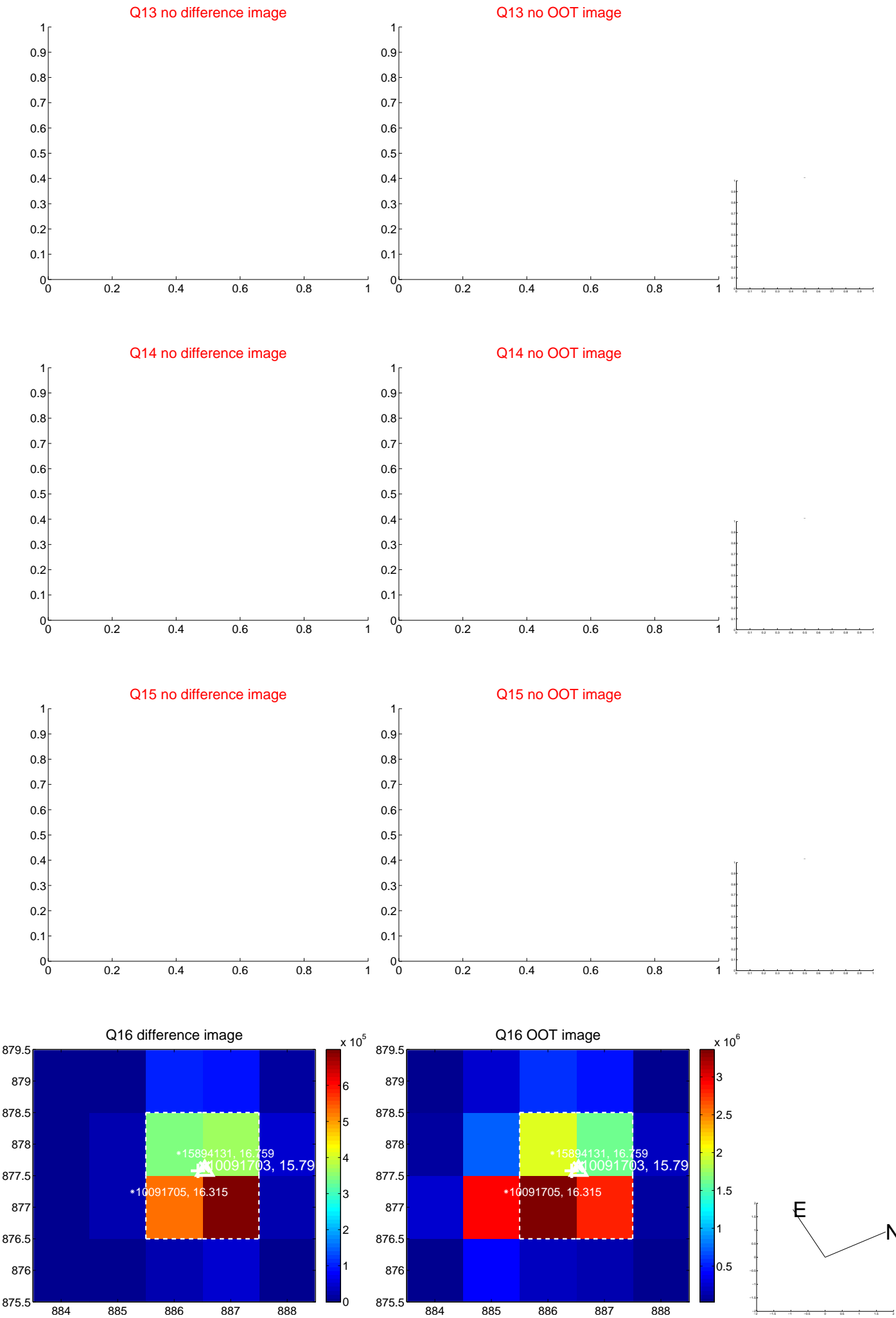
Q12 difference image. Poor Quality

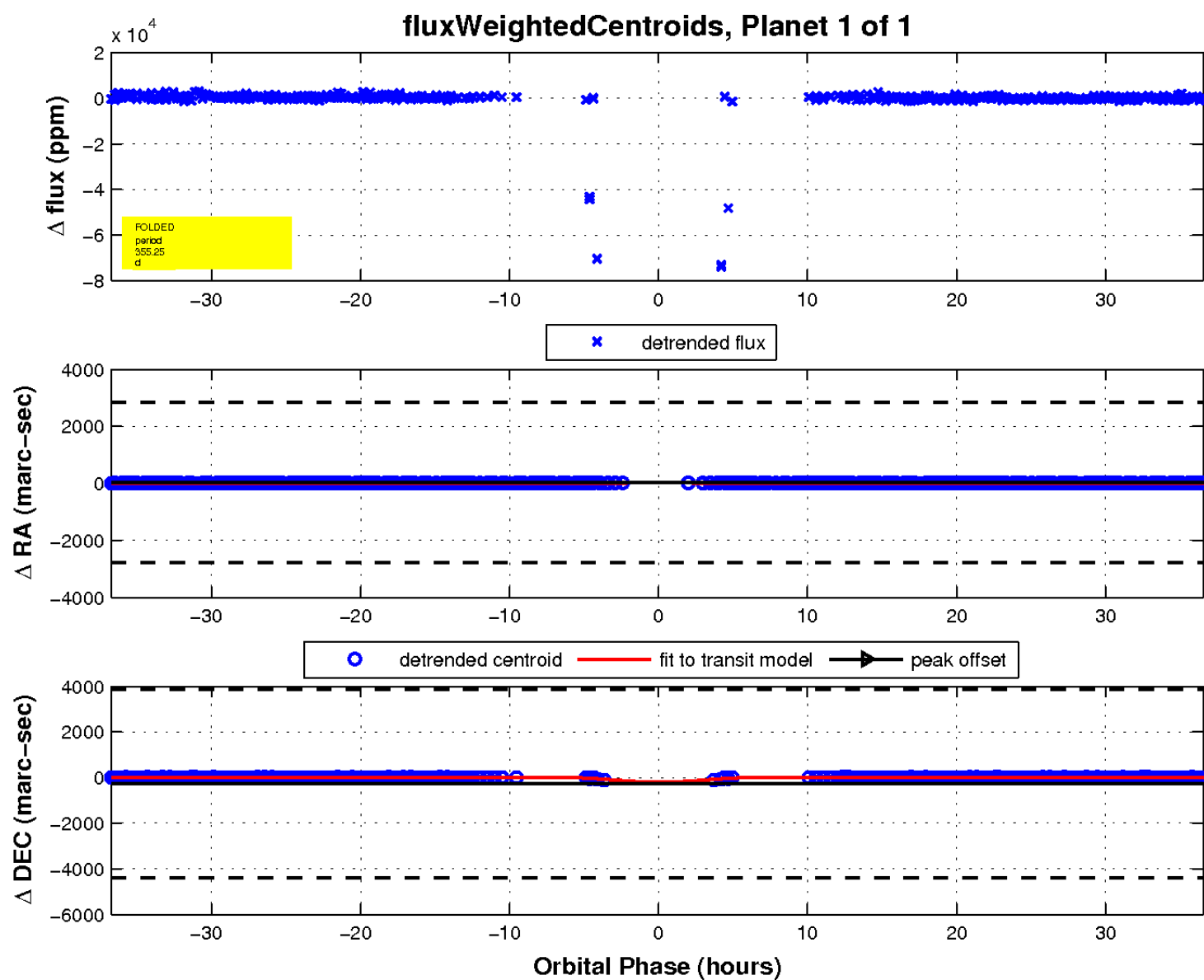


Q12 OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.





UKIRT Image

Declination

