

KIC 006775985

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})
006775985-01	OBS	3780.01	27.960825	133.183382	6332.7	3.883	111.6	111.2	1.36	6770	16.41	95.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006775985-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—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.

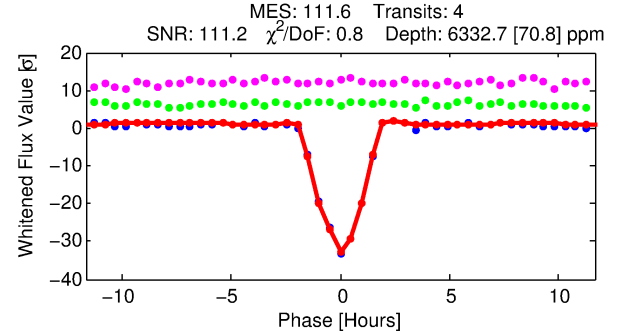
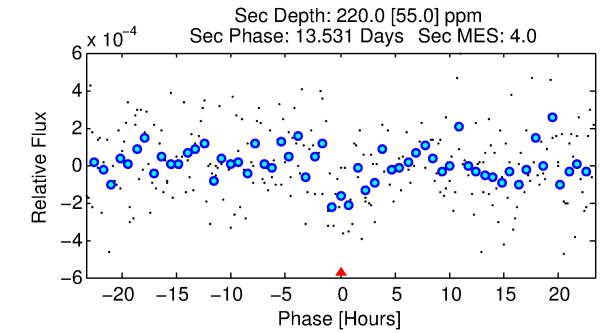
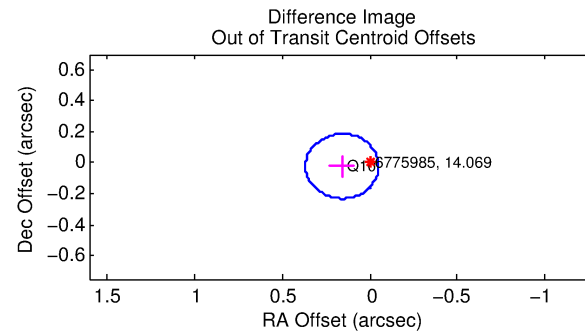
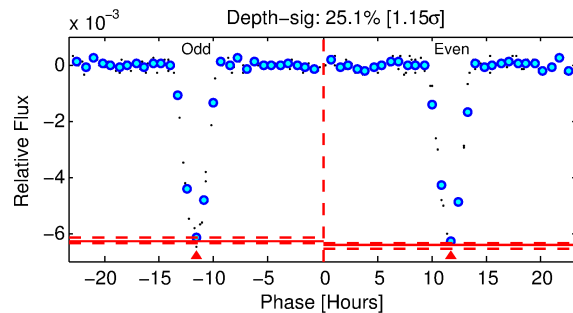
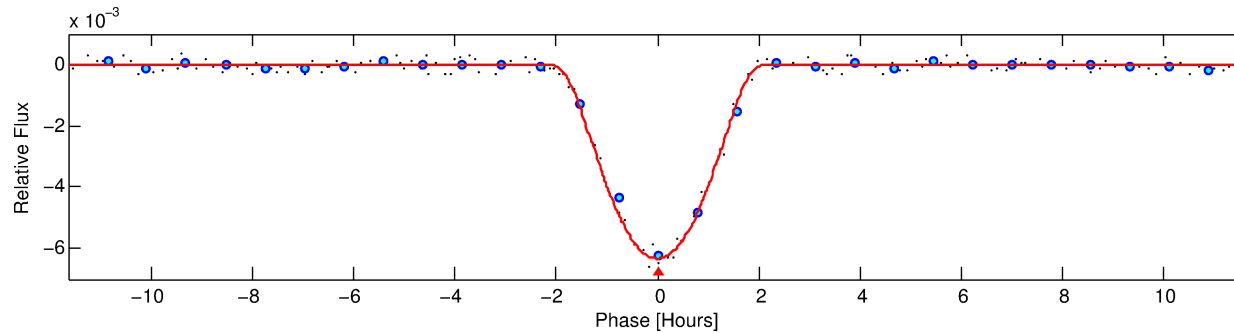
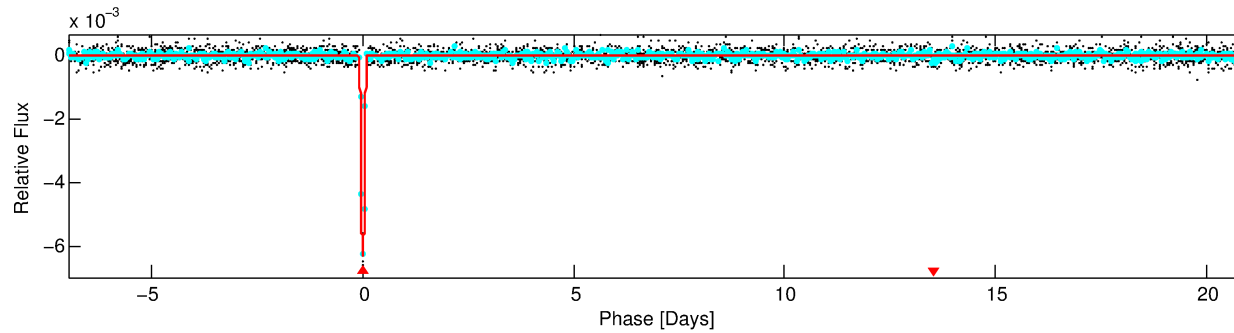
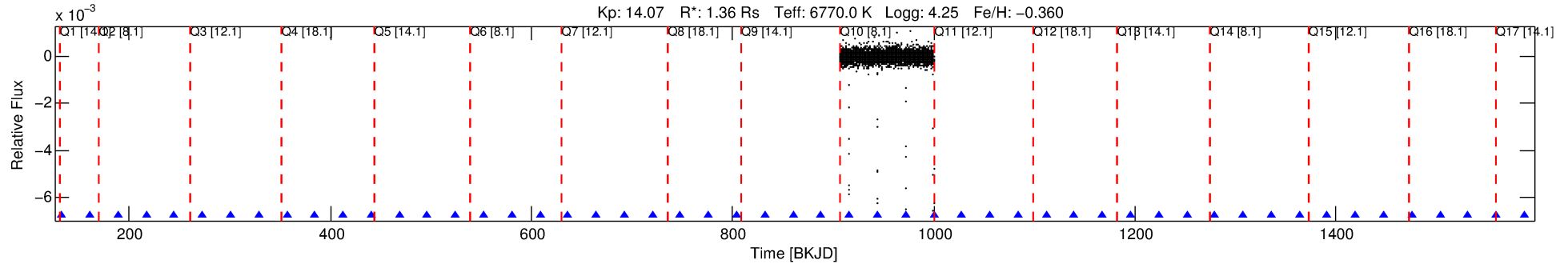
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006775985-01

No Significant Match Found

DV One-Page Summary

KIC: 6775985 Candidate: 1 of 1 Period: 27.961 d
KOI: K03780.01 Corr: 0.948



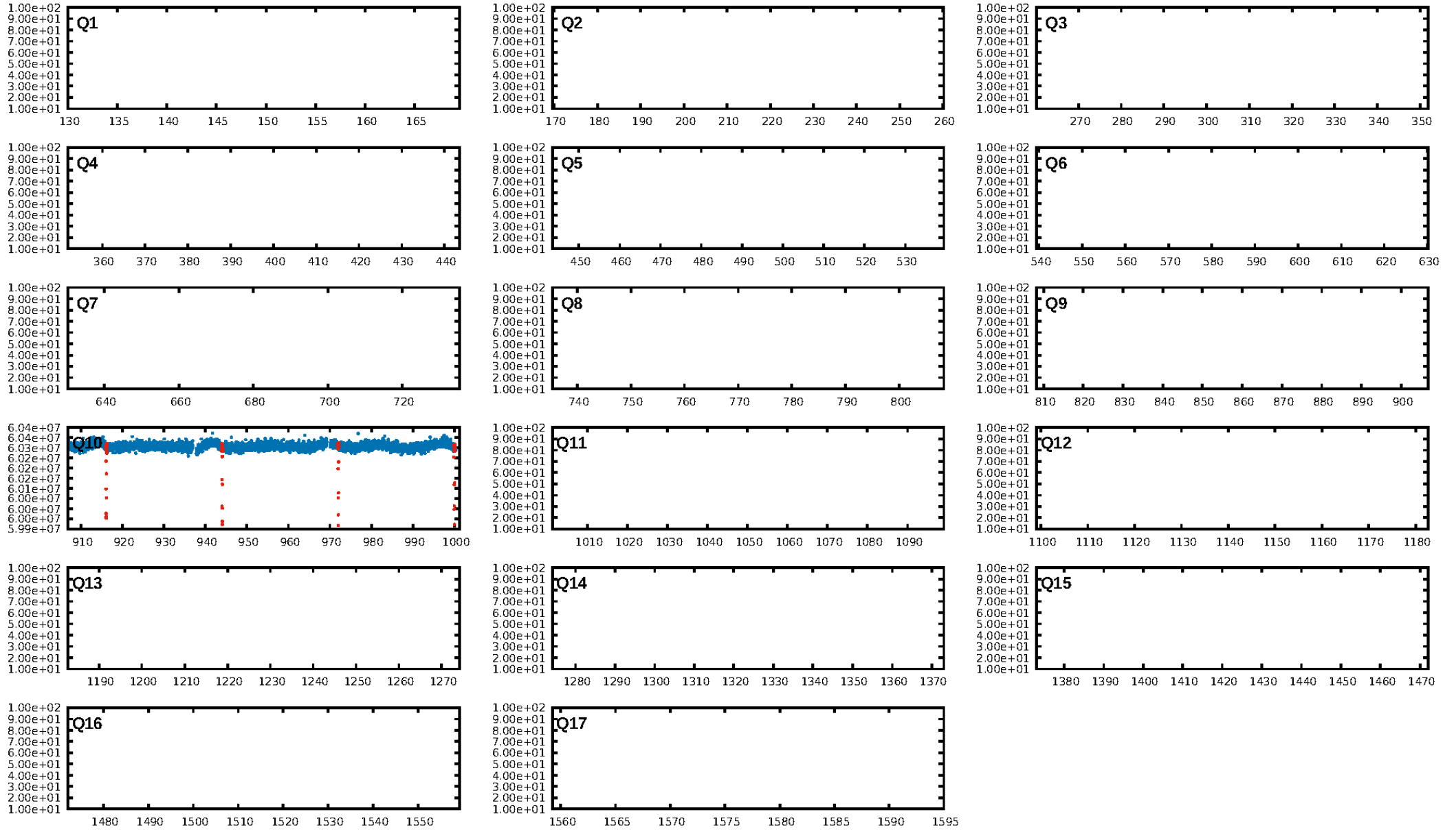
DV Fit Results:

Period = 27.96083 [0.00037] d
Epoch = 133.1834 [0.0108] BKJD
Rp/R* = 0.1105 [0.0250]
a/R* = 29.80 [1.82]
b = 0.97 [0.04]
Seff = 95.01 [37.28]
Teq = 796 [78] K
Rp = 16.41 [6.11] Re
a = 0.1916 [0.0472] AU
Ag = 16.50 [10.34] [1.50 σ]
Teffp = 2481 [337] K [4.87 σ]

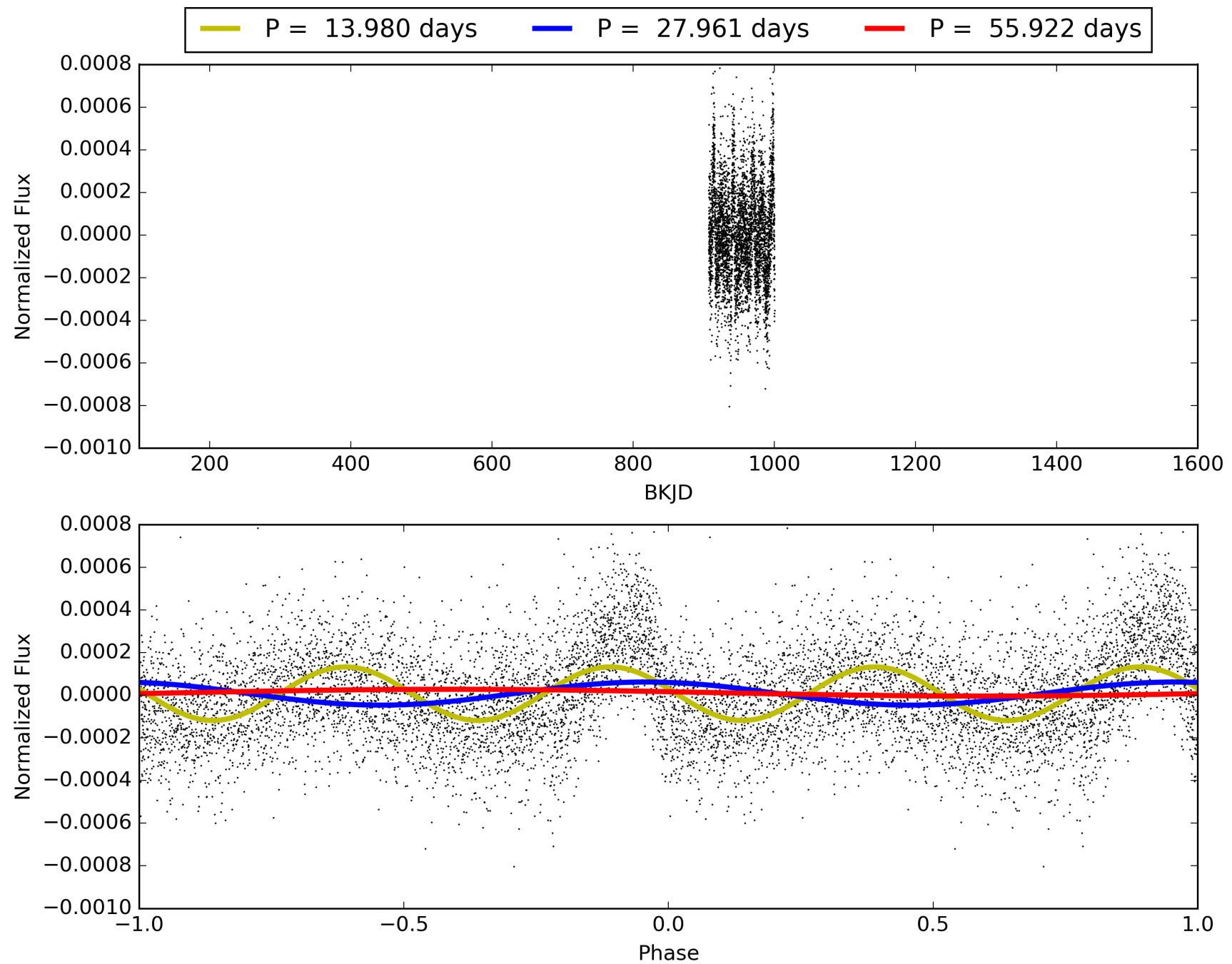
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.1%
ModelChiSquareGof-sig: 92.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.114
Centroid-sig: 0.0%
Centroid-so: 0.274 arcsec [2.38 σ]
OotOffset-rm: 0.160 arcsec [2.31 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 0.275 arcsec [3.95 σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 006775985-01, PDC Light Curves

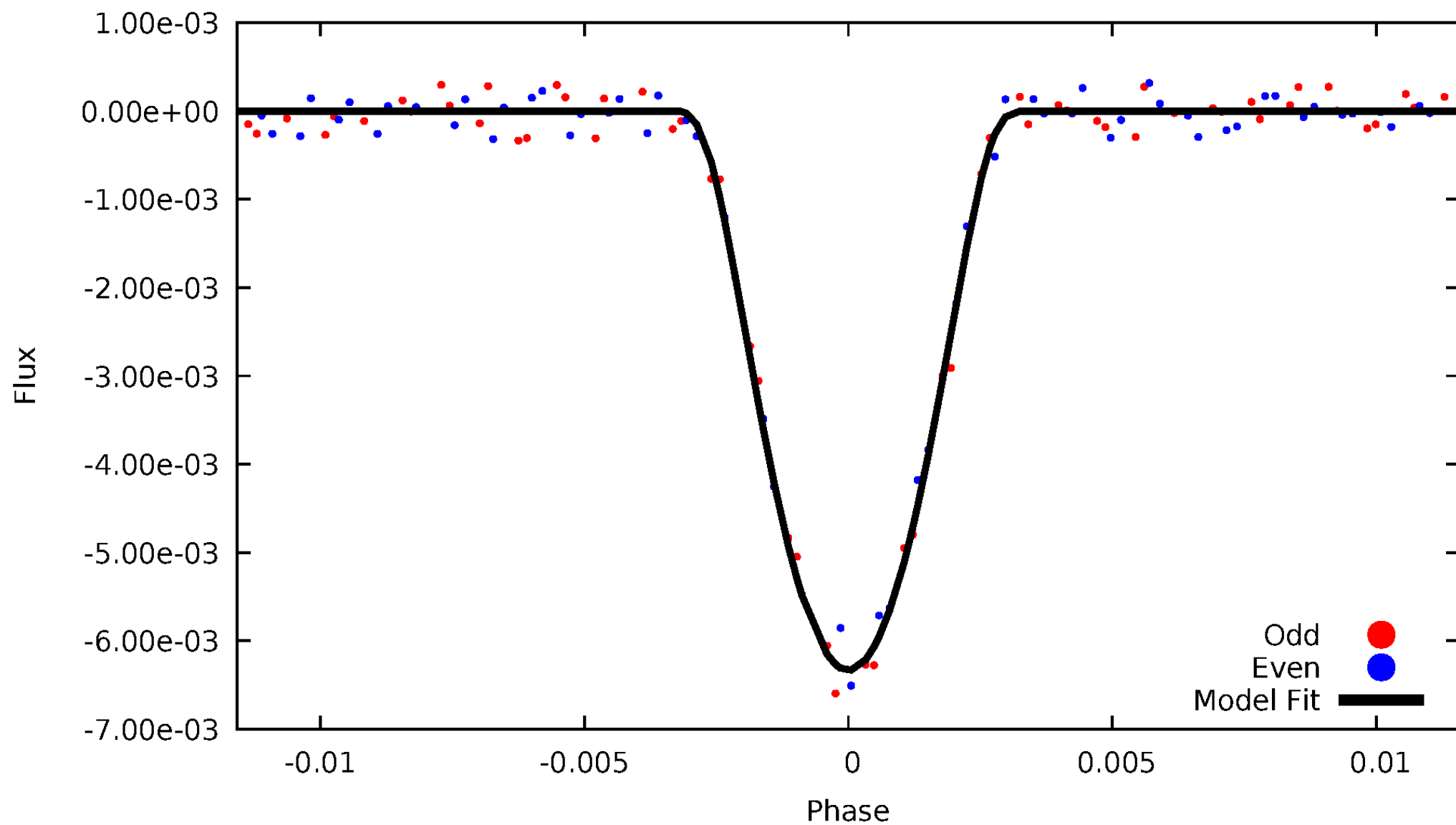


TCE 006775985-01



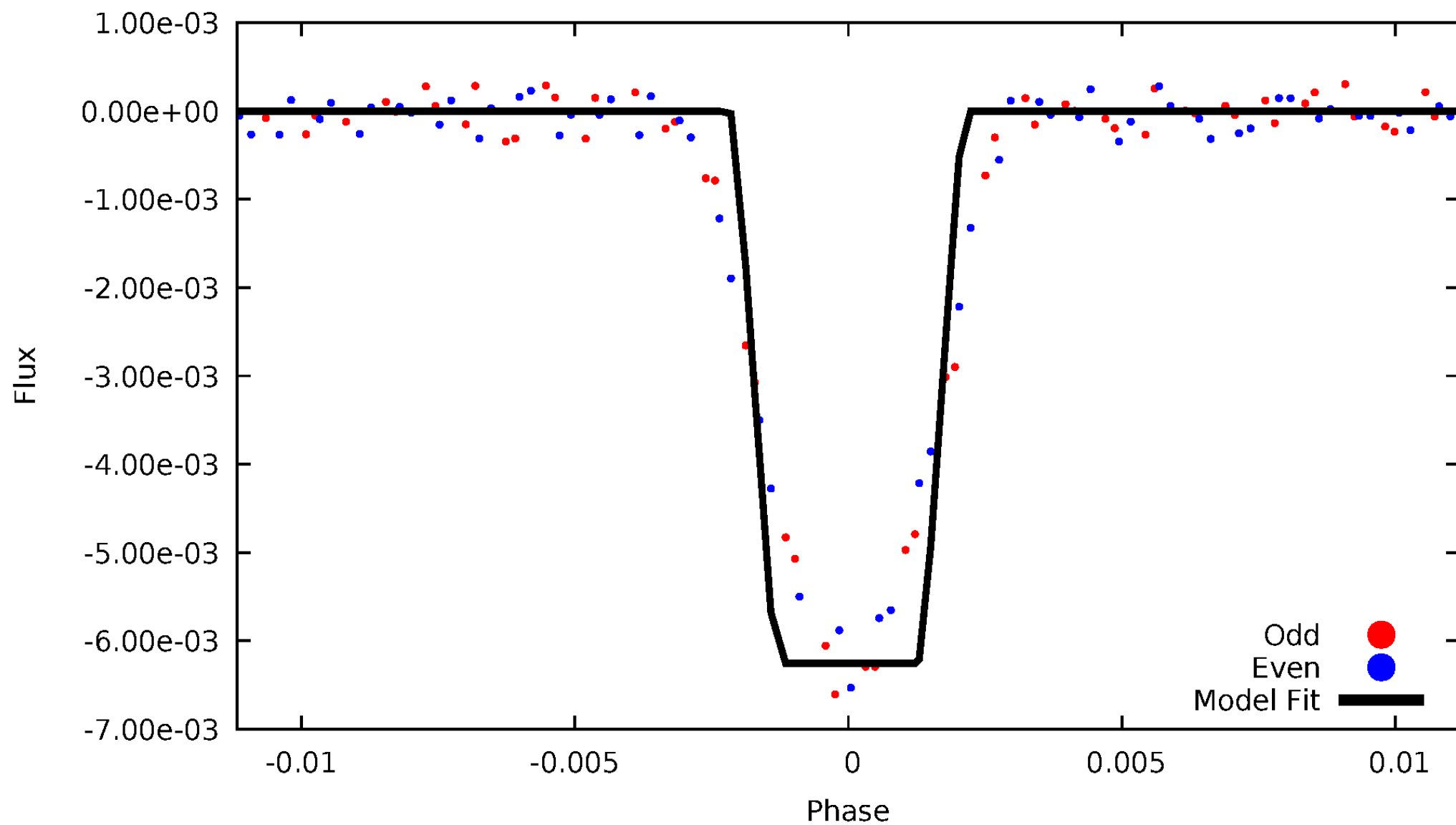
DV Odd/Even

TCE 006775985-01

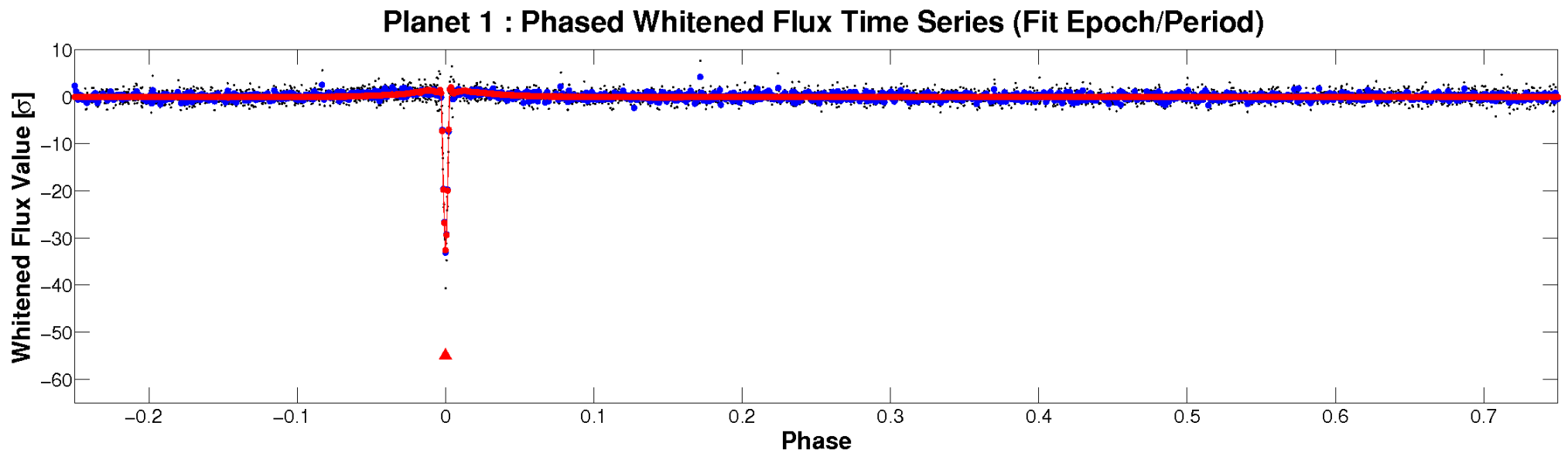
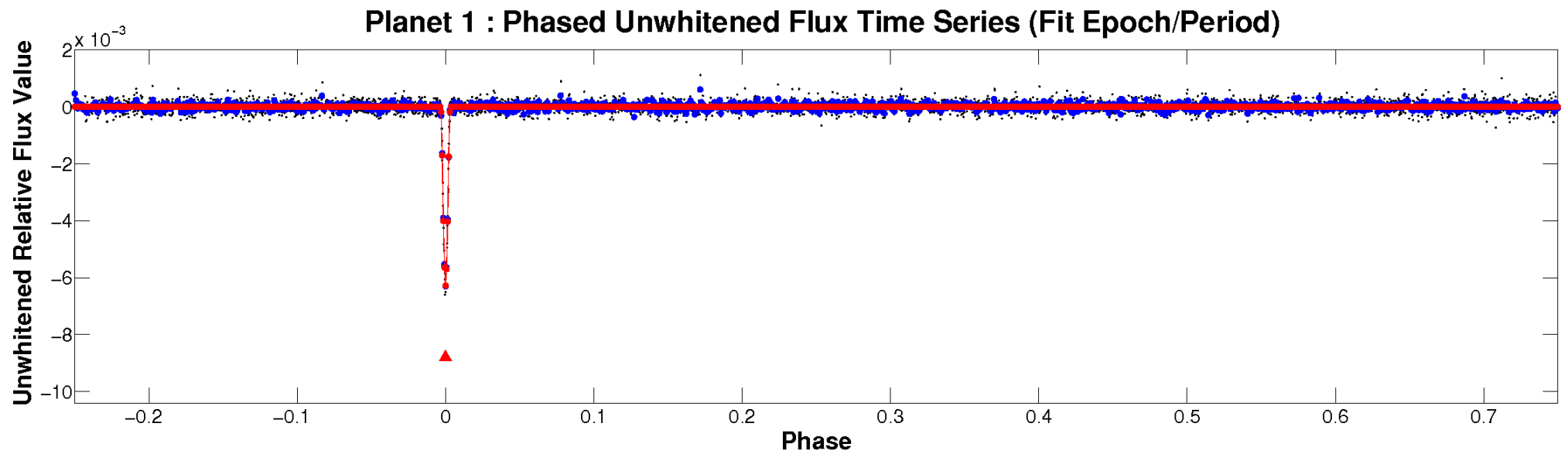


ALT Odd/Even

TCE 006775985-01

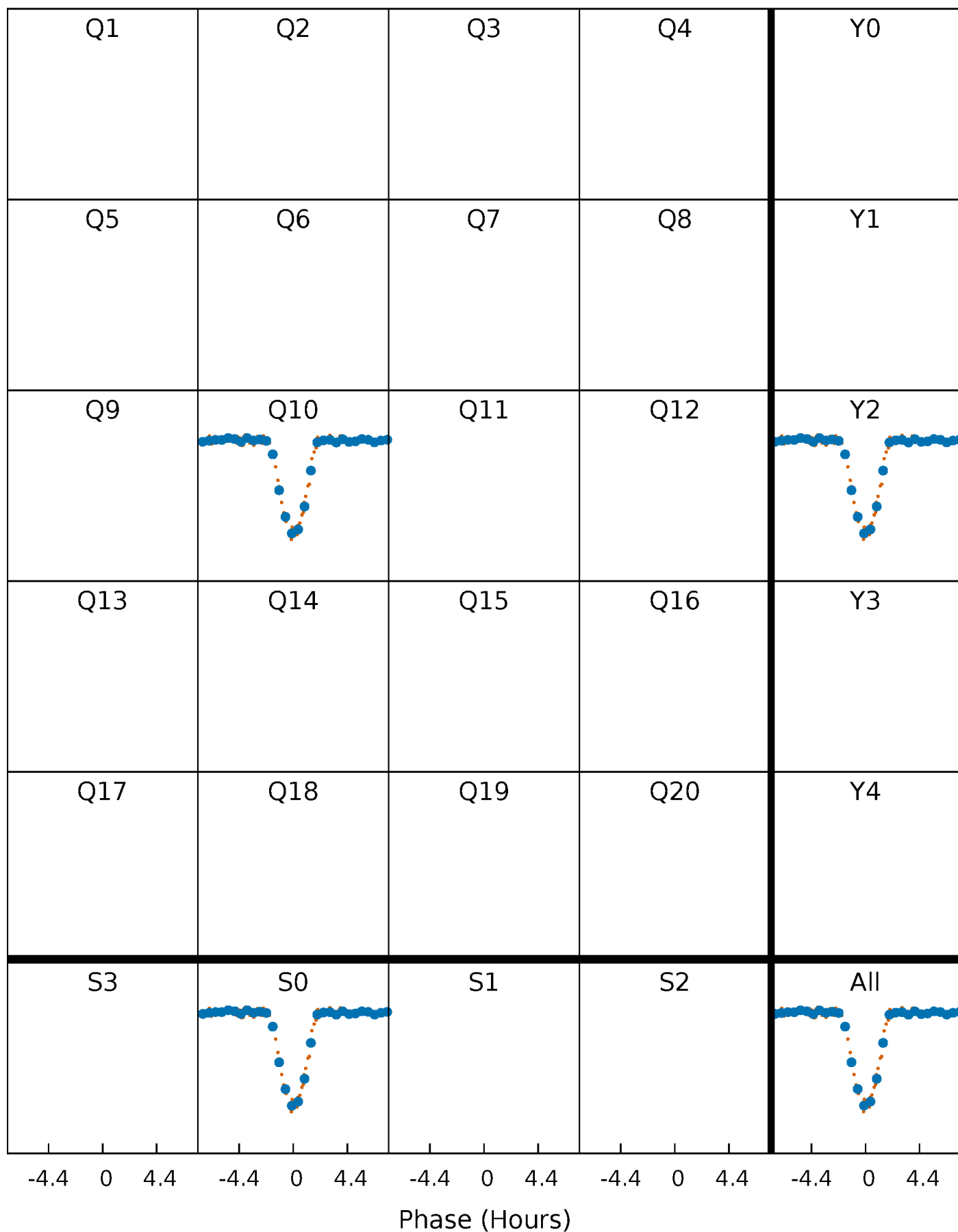


Non-Whitened Vs. Whitened Light Curve



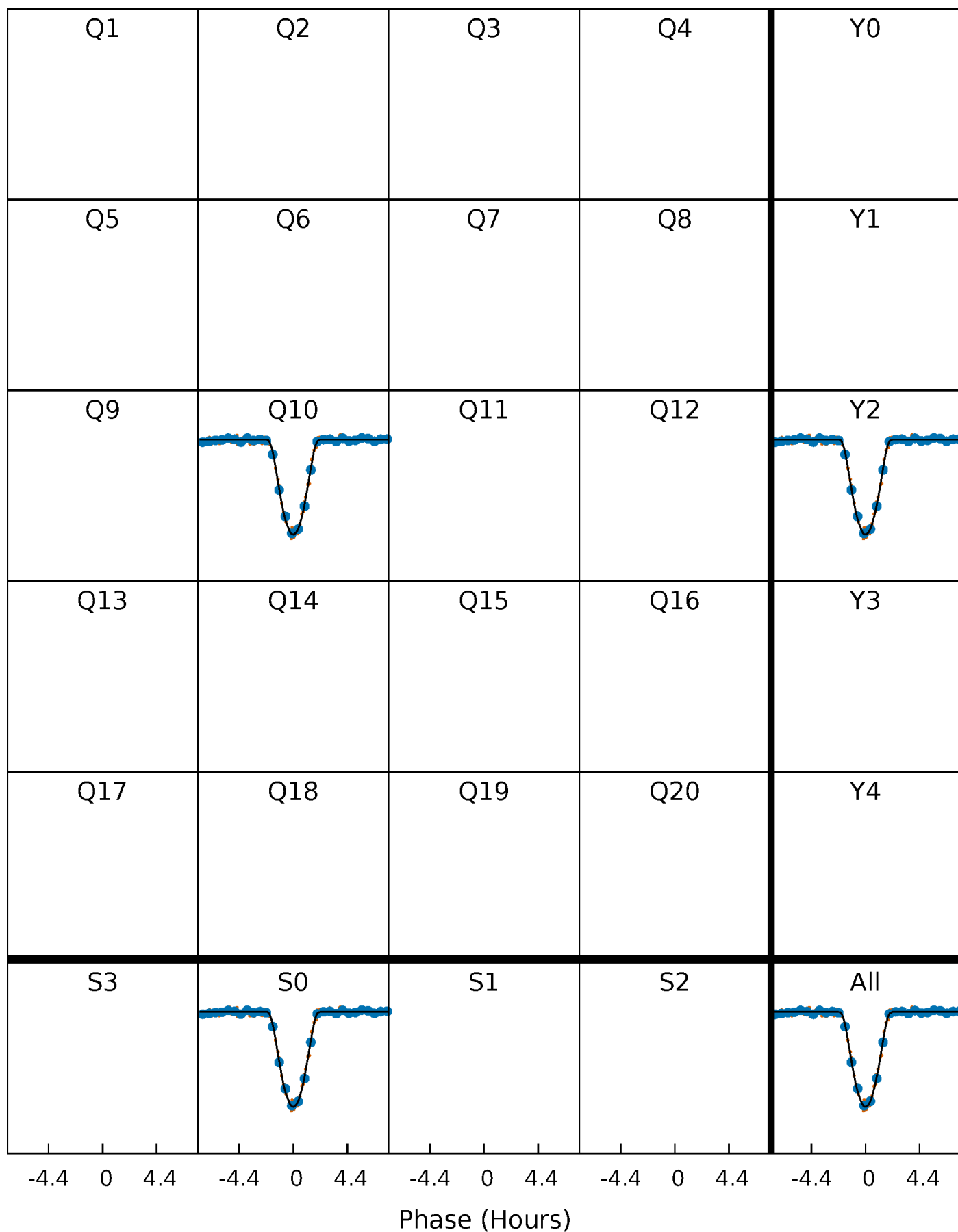
PDC Quarter-Phased Transit Curves

TCE 006775985-01 P= 27.960825 Days $T_0=133.183382$ (BKJD)



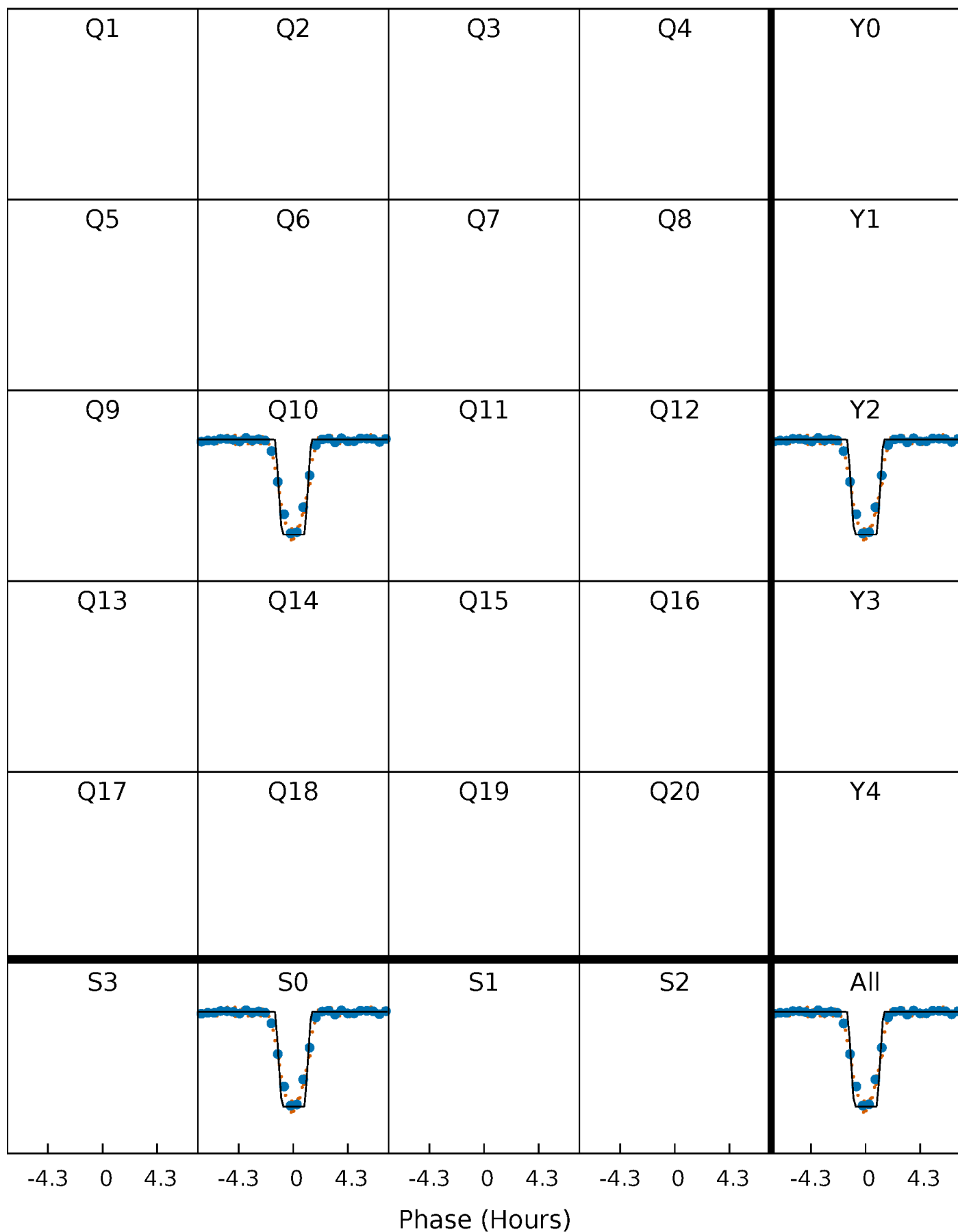
DV Quarter-Phased Transit Curves

TCE 006775985-01 P= 27.960825 Days $T_0=133.183382$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

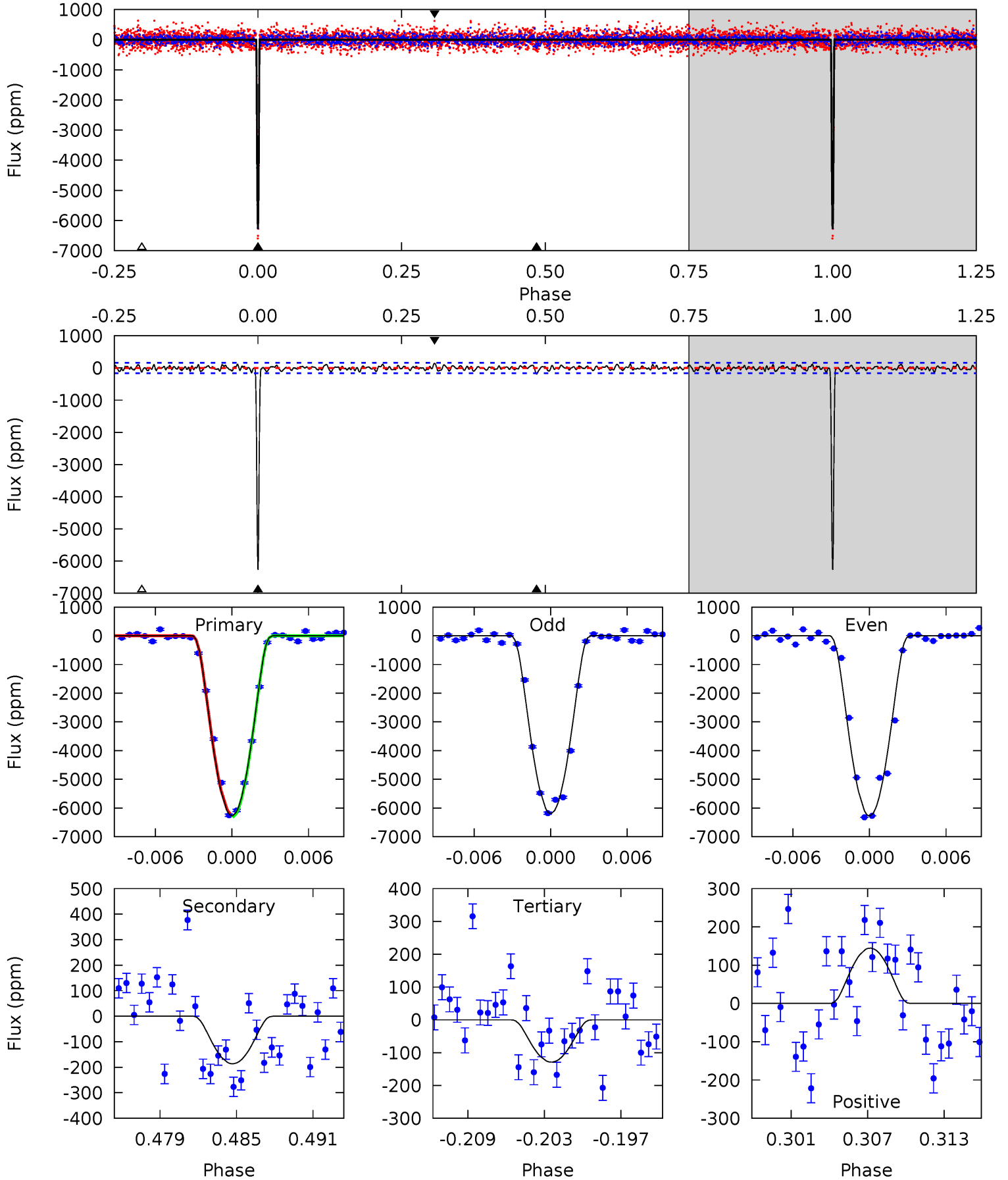
TCE 006775985-01 P= 27.960663 Days $T_0=133.188426$ (BKJD)



DV Model-Shift Uniqueness Test

006775985-01, P = 27.960825 Days, E = 133.183382 Days

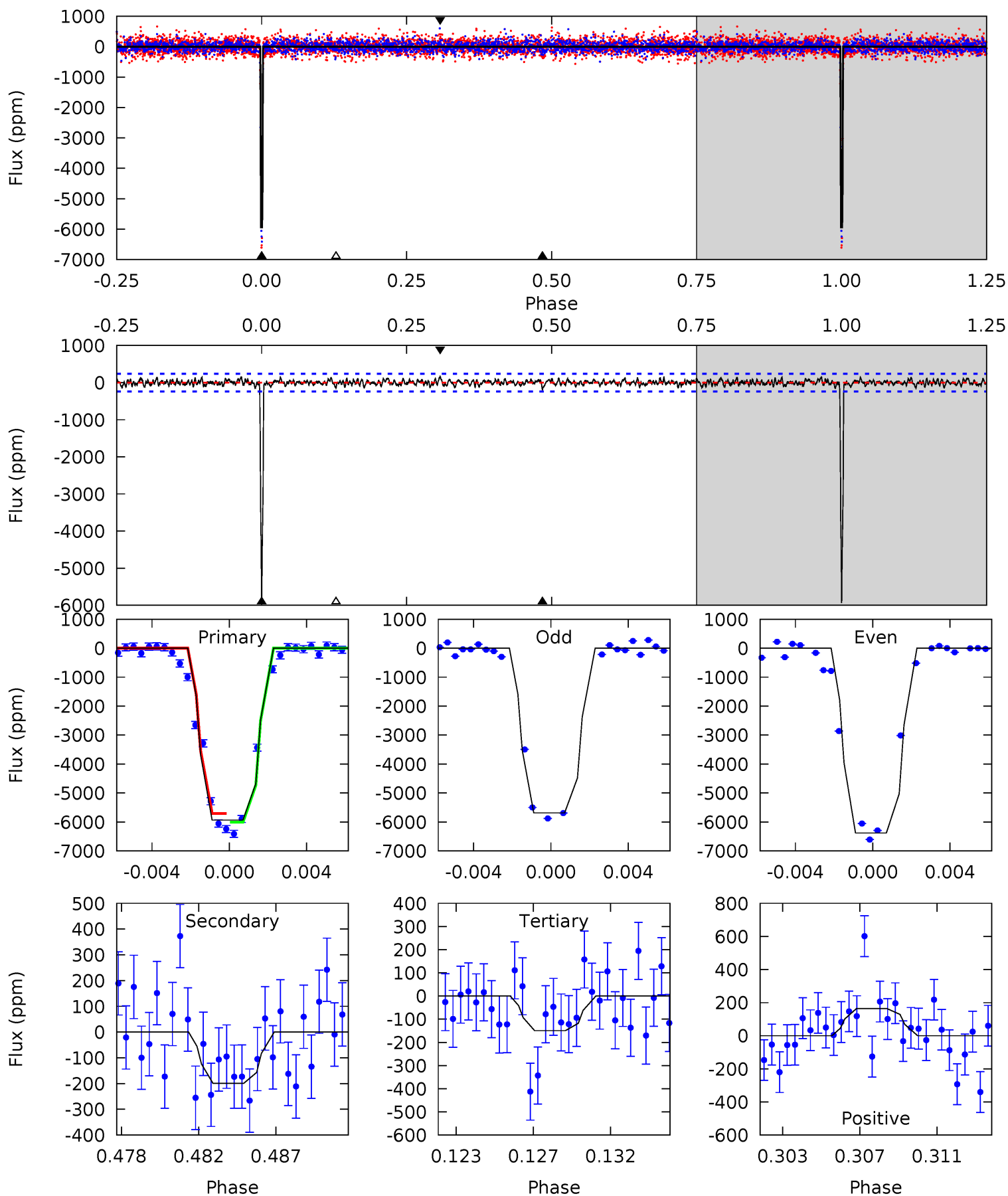
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
199.4	5.93	4.10	4.60	5.12	2.74	1.51	195.3	194.8	1.83	1.33	1.34	1.00	0.02	2.05



Alt Model-Shift Uniqueness Test

006775985-01, P = 27.960663 Days, E = 133.188426 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
129.0	4.32	3.25	3.55	5.18	2.85	1.14	125.7	125.4	1.08	0.77	6.66	1.00	0.03	3.15



Stellar Parameters For KIC 006775985

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6770^{+189}_{-284}	$4.249^{+0.128}_{-0.192}$	$-0.360^{+0.250}_{-0.300}$	$1.361^{+0.403}_{-0.268}$	$1.204^{+0.170}_{-0.189}$	$0.674^{+0.482}_{-0.326}$
	+3%/-4%	+3%/-5%	+69%/-83%	+30%/-20%	+14%/-16%	+72%/-48%
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 006775985-01 / KOI 3780.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-186 ± 31	$16.35^{+4.89}_{-4.08}$	1110^{+87}_{-76}	3019^{+267}_{-211}	14^{+11}_{-6}
Alt.	-199 ± 46	$11.95^{+4.21}_{-4.06}$	1117^{+87}_{-78}	3365^{+468}_{-313}	28^{+37}_{-13}

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

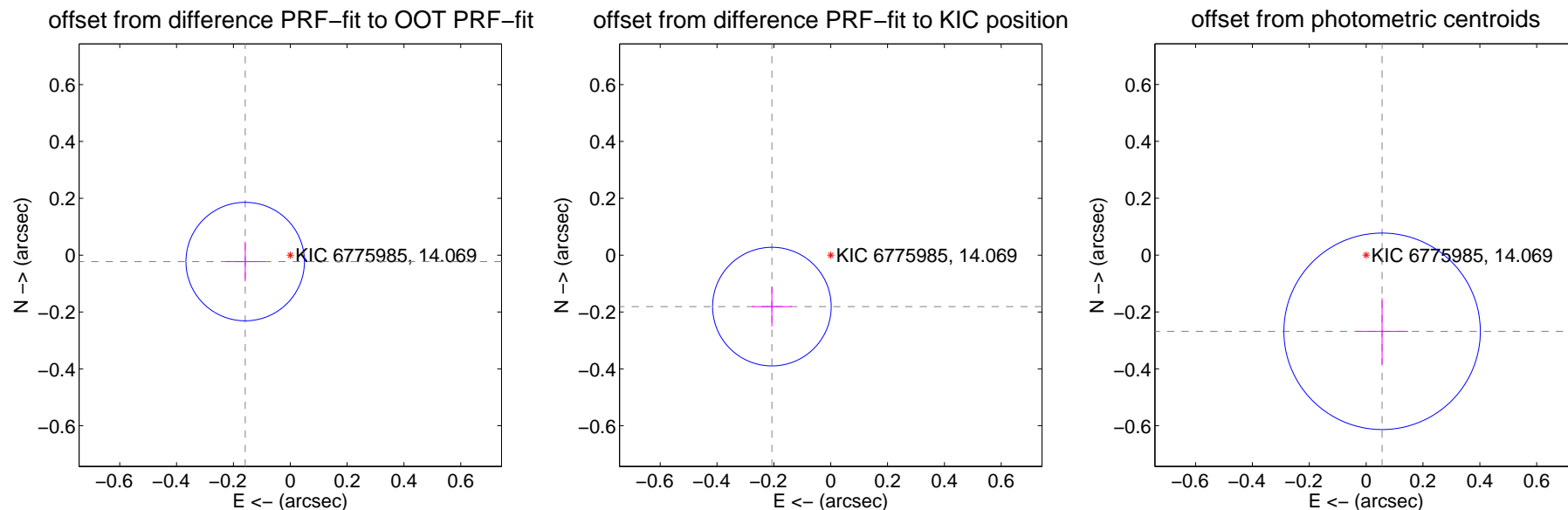
DV Centroid Data

Supplemental centroid analysis for 006775985-01. Kepler magnitude: 14.07. Transit SNR 111.19

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.160 ± 0.069	2.31	0.159 ± 0.069	-0.023 ± 0.070
PRF-fit source offset from KIC position	0.275 ± 0.070	3.95	0.207 ± 0.069	-0.181 ± 0.070
photometric centroid source offset	0.27 ± 0.12	2.38	-0.06 ± 0.09	-0.27 ± 0.12



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.

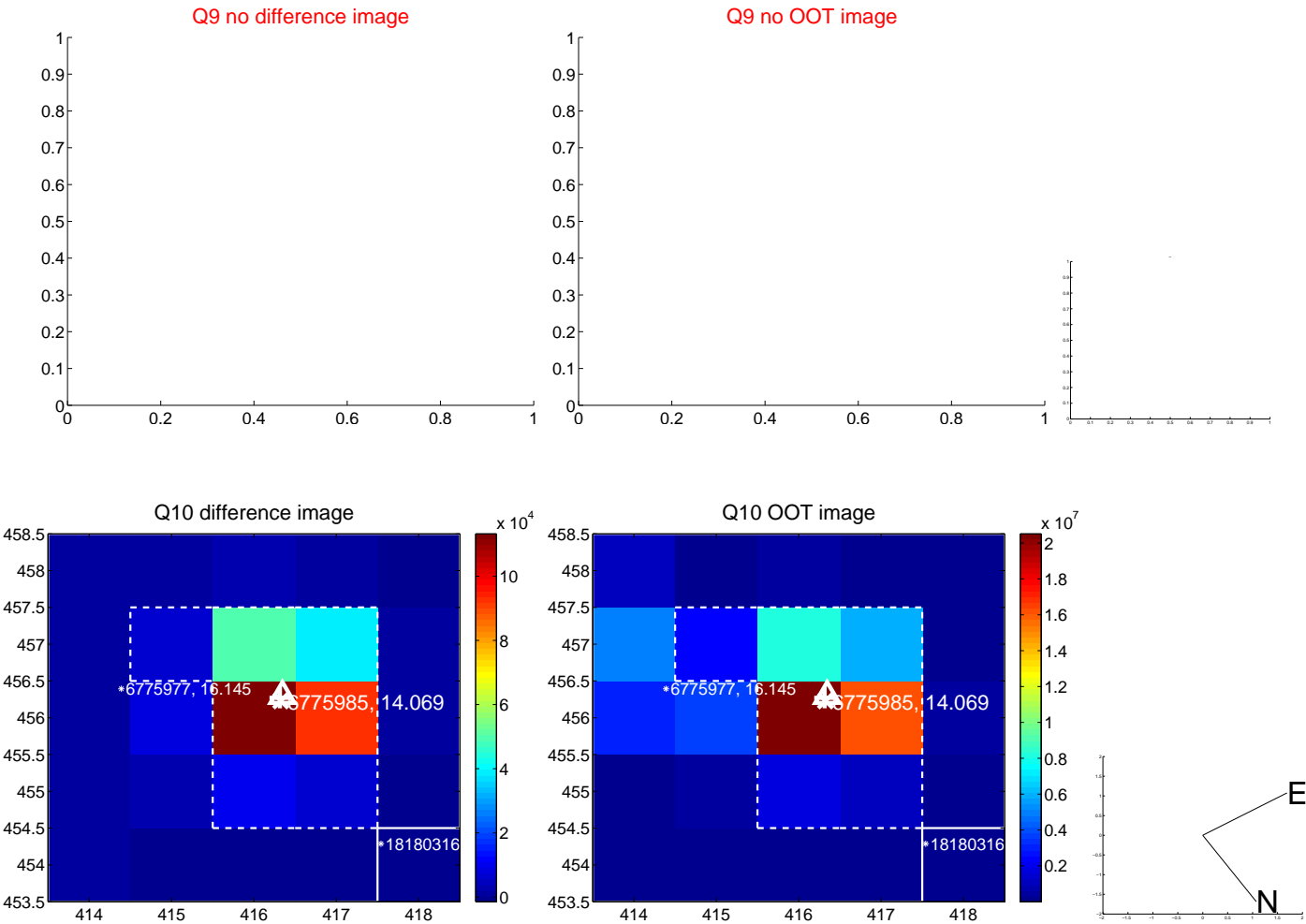
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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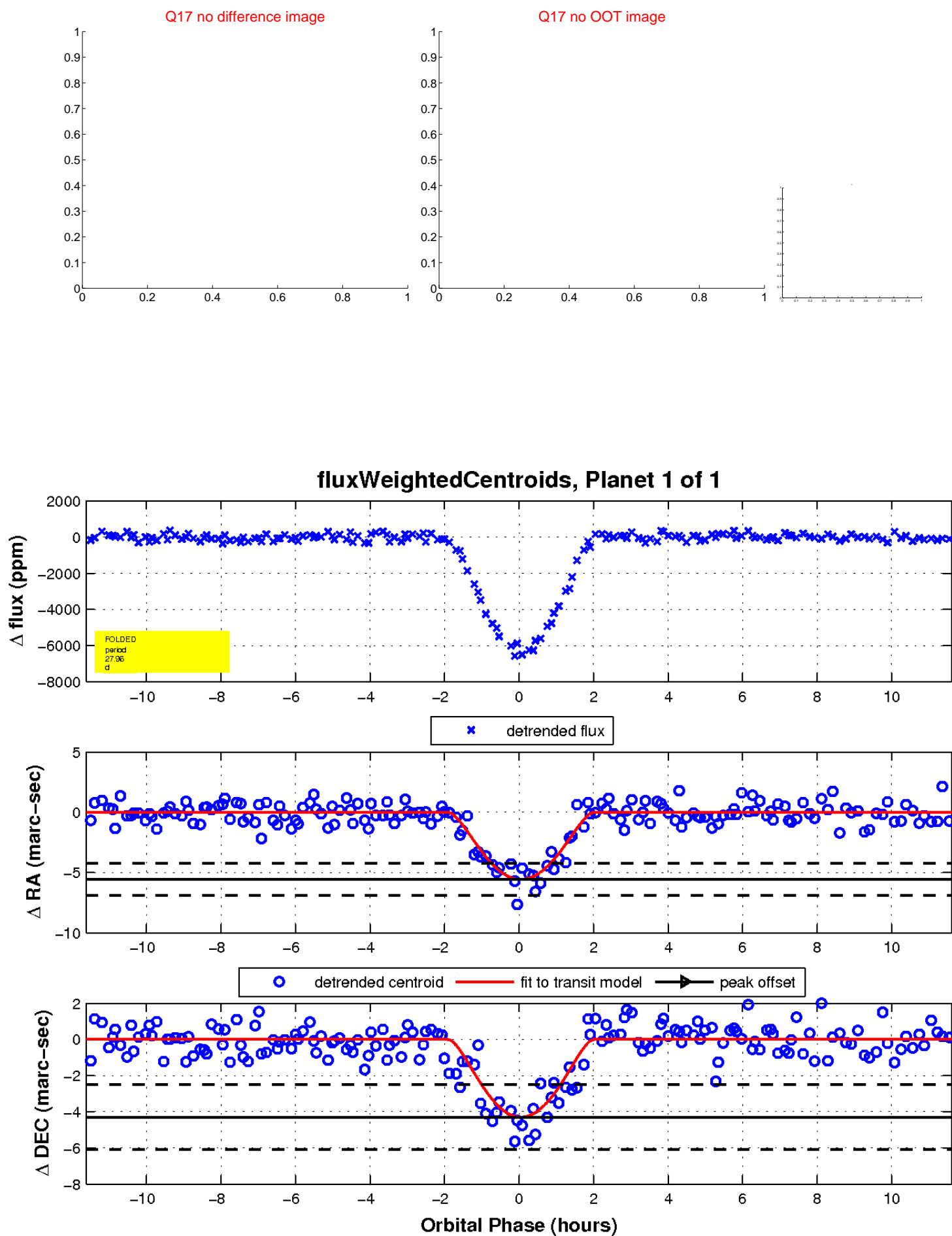
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UKIRT Image

Declination

