

KIC 005900212

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})
005900212-01	OBS	No	378.170762	484.738123	590.4	19.048	9.7	9.5	0.82	4898	2.46	0.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005900212-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

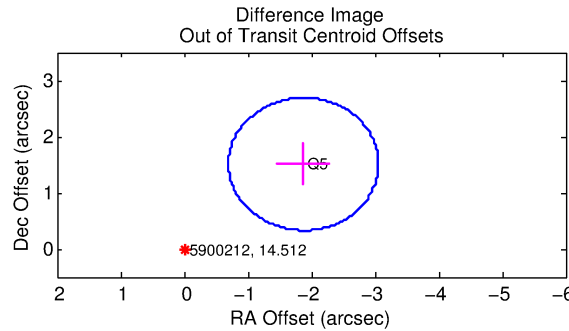
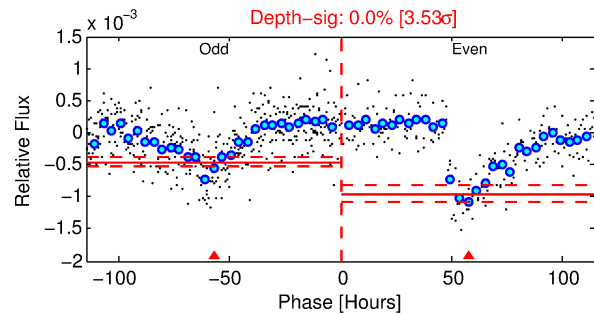
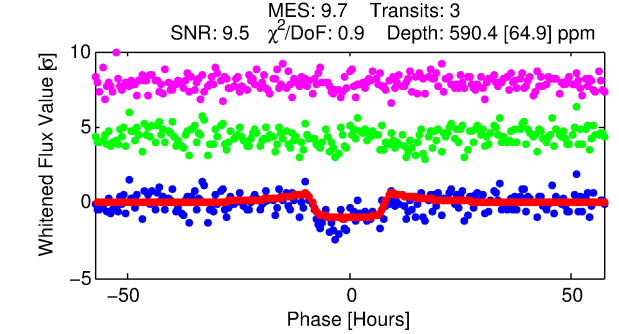
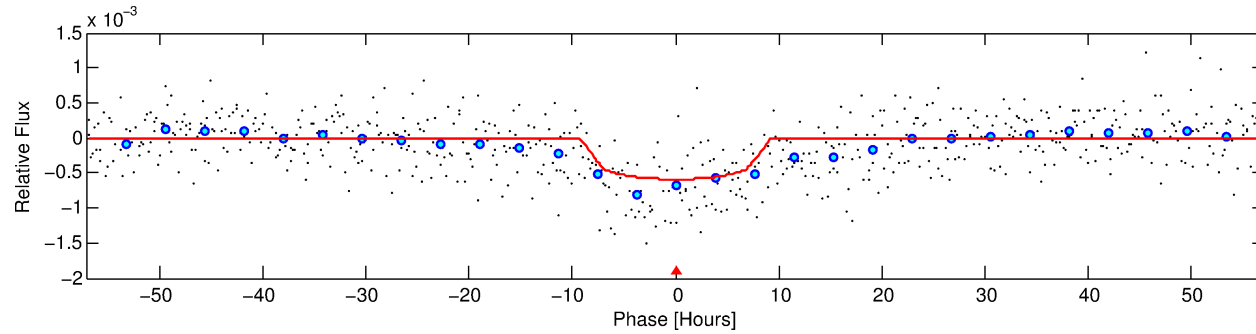
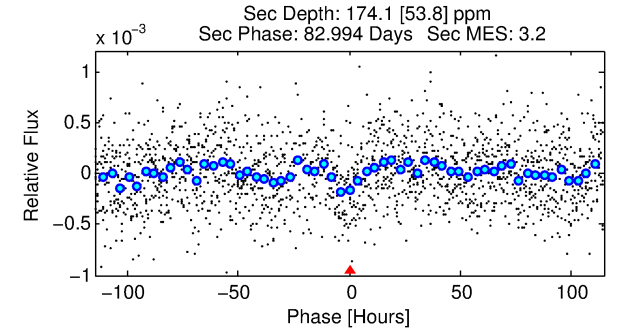
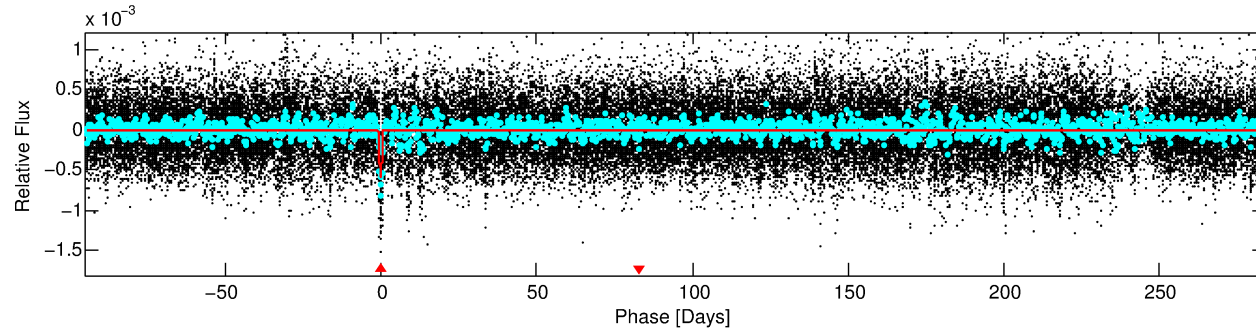
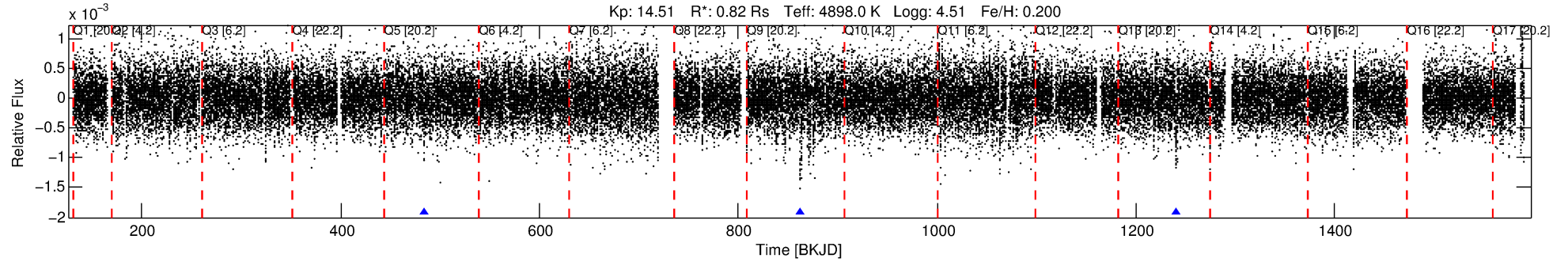
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005900212-01

No Significant Match Found

DV One-Page Summary

KIC: 5900212 Candidate: 1 of 1 Period: 378.171 d



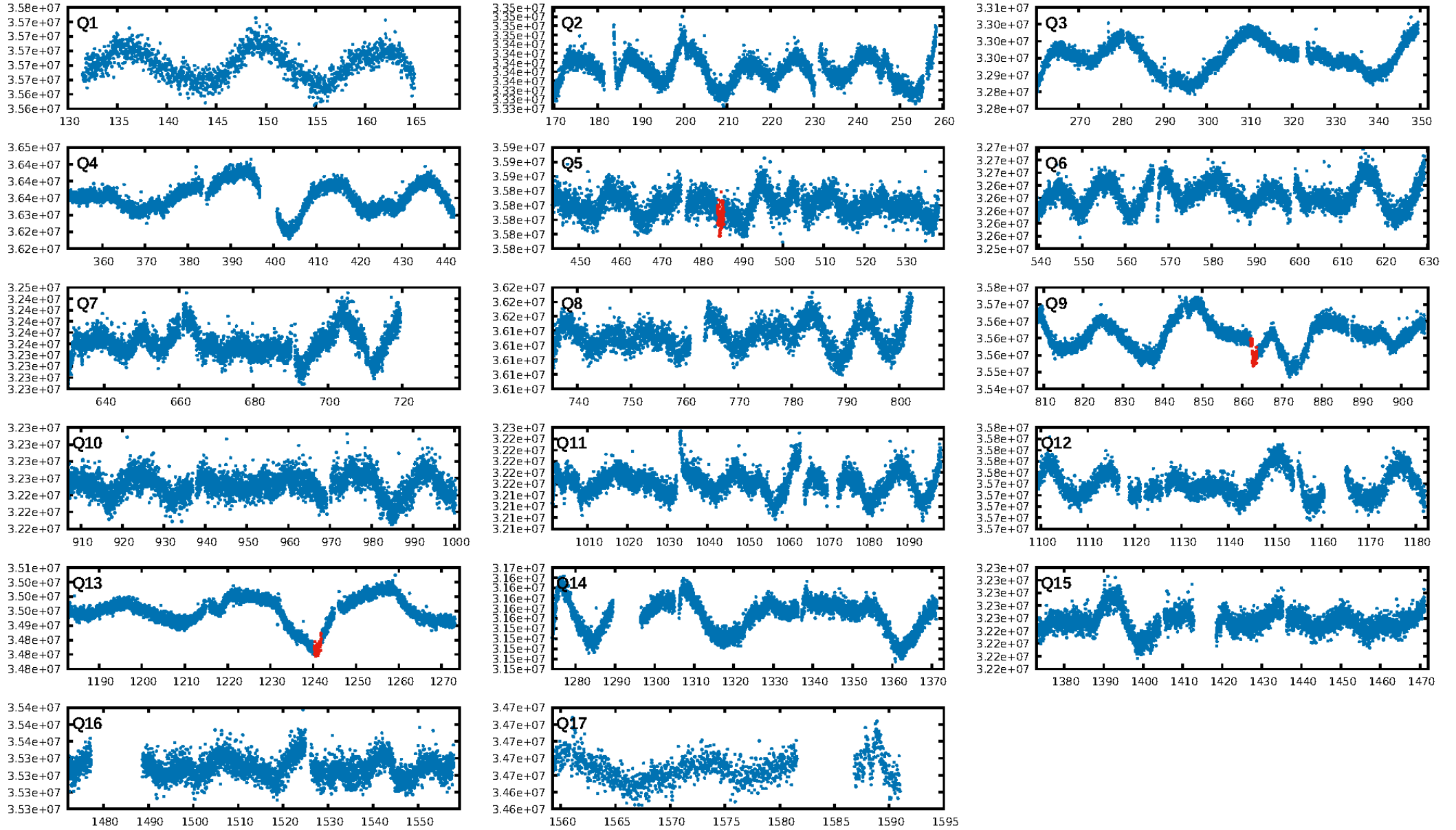
DV Fit Results:

Period = 378.17076 [0.01900] d
Epoch = 484.7381 [0.0229] BKJD
Rp/R* = 0.0276 [0.0028]
a/R* = 72.48 [22.27]
b = 0.91 [0.06]
Seff = 0.38 [0.10]
Teff = 201 [13] K
Rp = 2.46 [0.35] Re
a = 0.9447 [0.1205] AU
Ag = 14160.64 [6153.88] [2.30 σ]
Teffp = 3387 [329] K [9.67 σ]

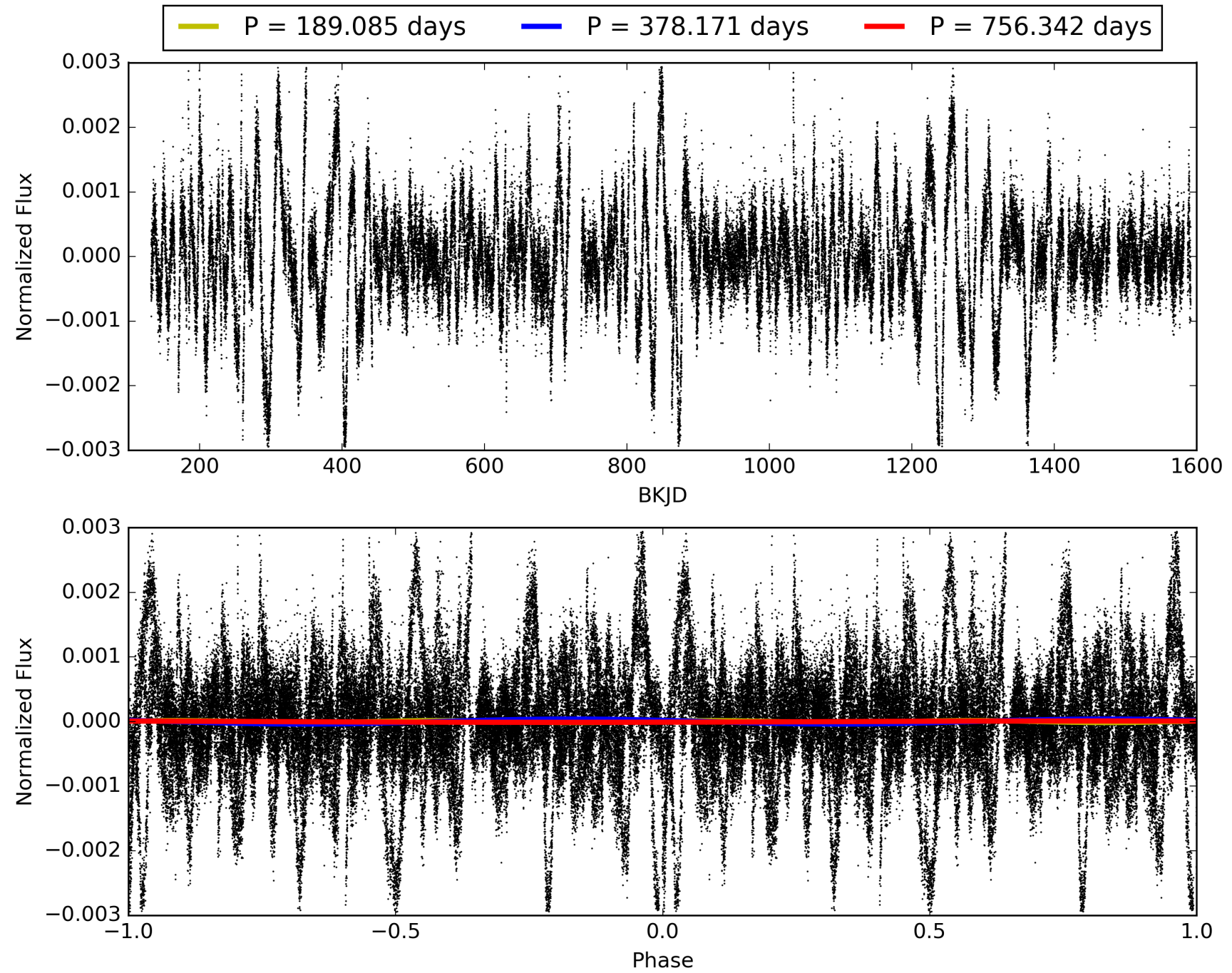
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.66e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19.42
Centroid-sig: 13.3%
Centroid-so: 1.832 arcsec [1.17 σ]
OotOffset-rm: 2.406 arcsec [6.12 σ]
KicOffset-rm: 2.586 arcsec [6.61 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 005900212-01, PDC Light Curves

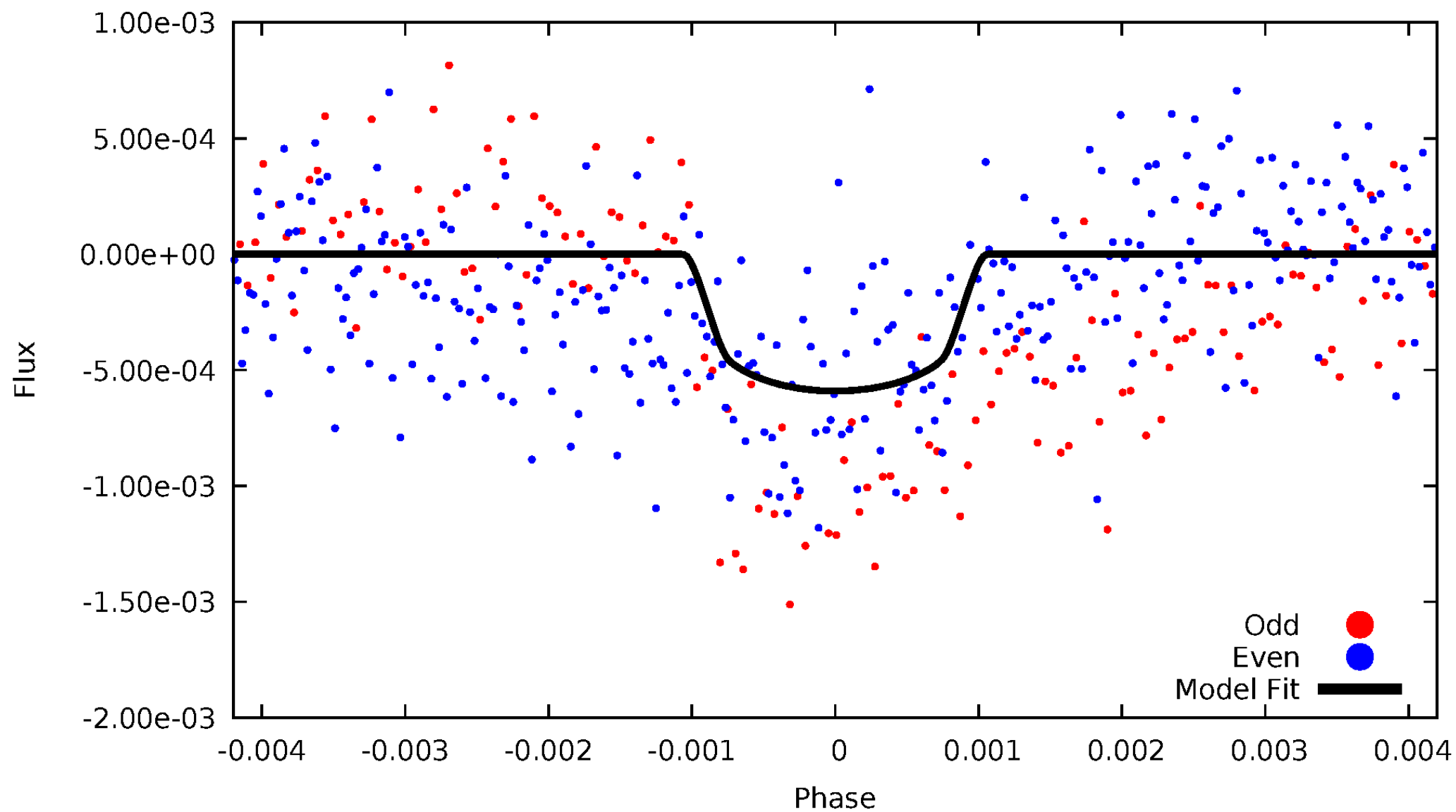


TCE 005900212-01



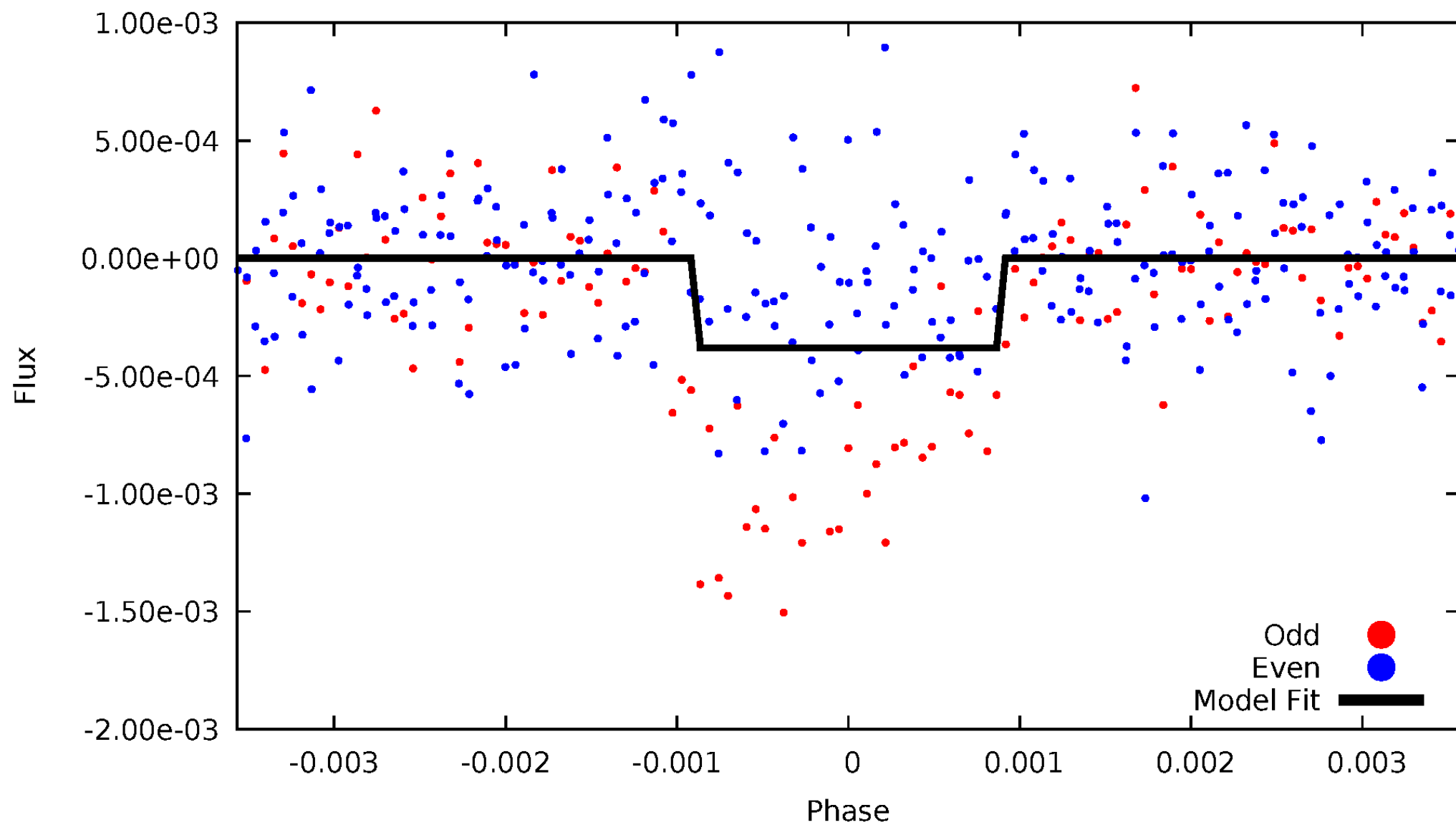
DV Odd/Even

TCE 005900212-01



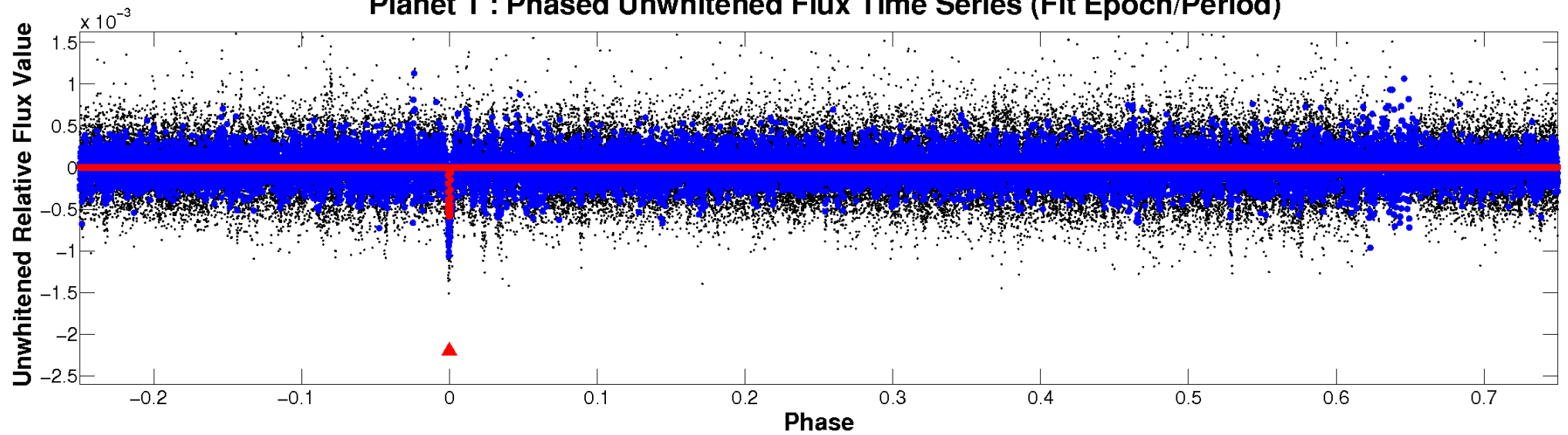
ALT Odd/Even

TCE 005900212-01

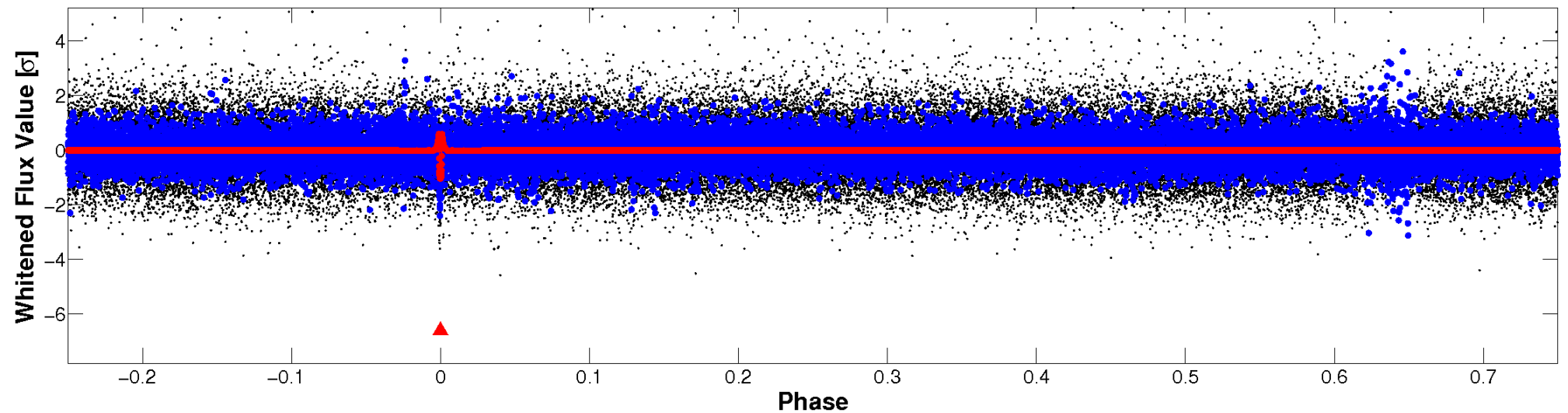


Non-Whitened Vs. Whitened Light Curve

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

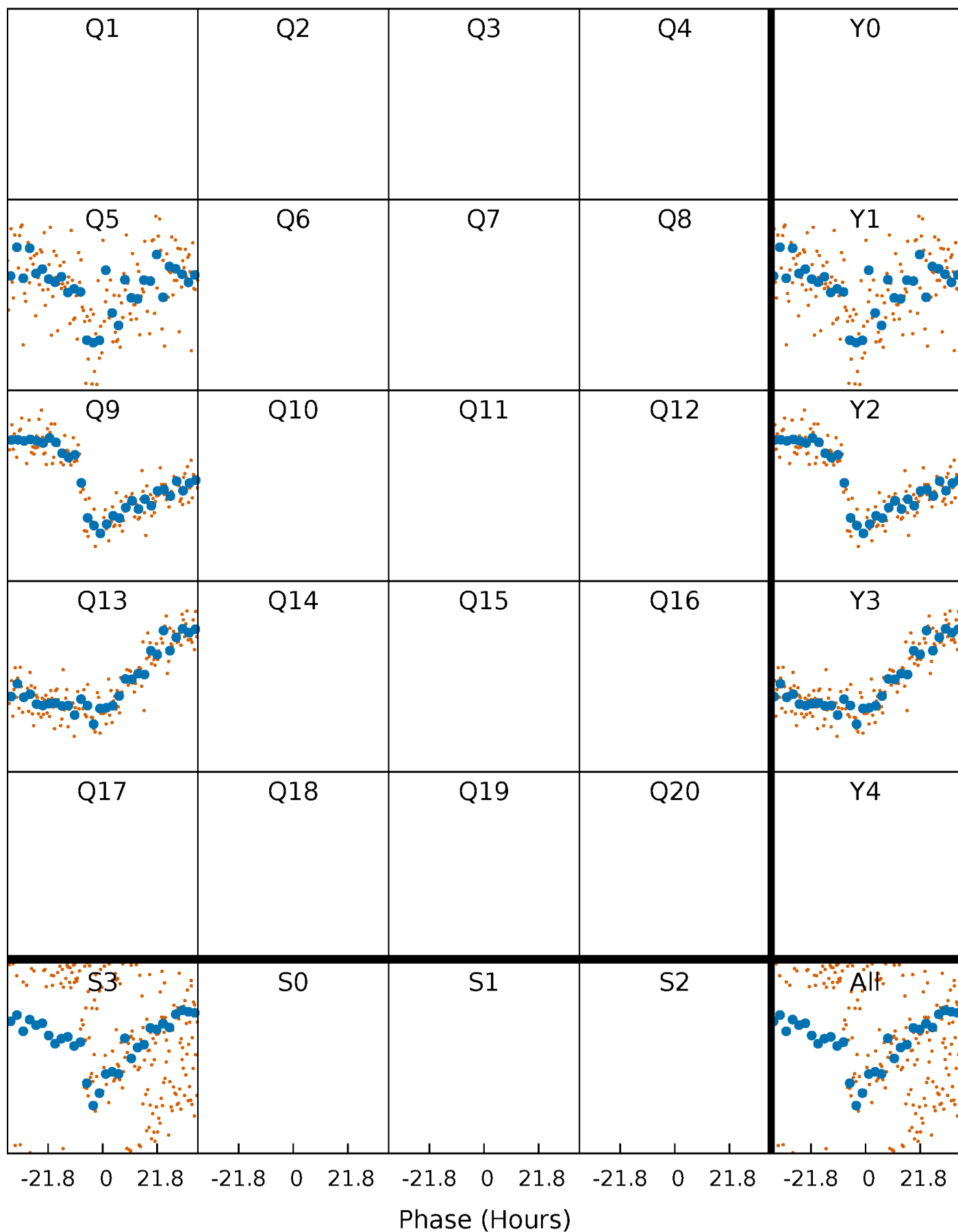


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



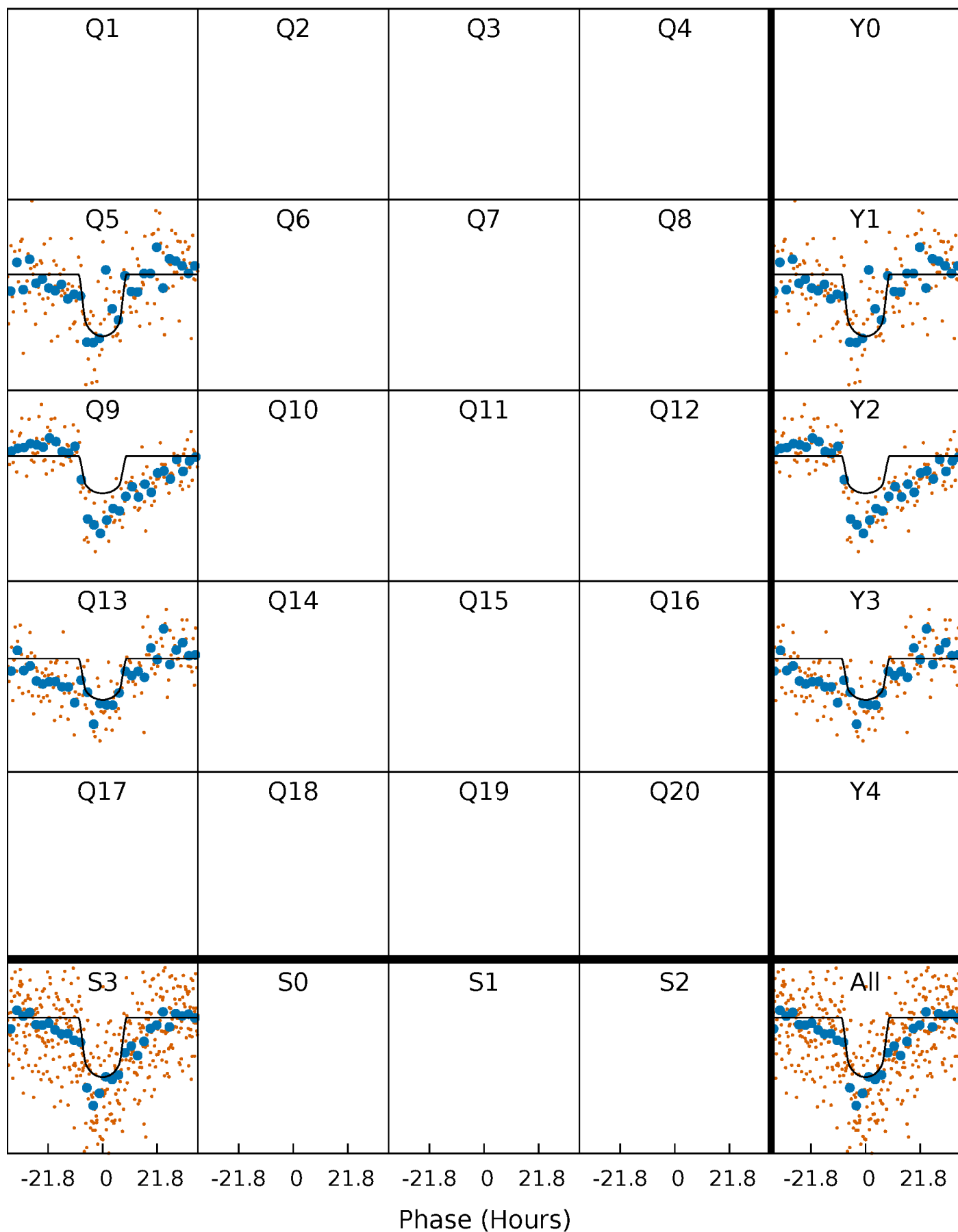
PDC Quarter-Phased Transit Curves

TCE 005900212-01 P=378.170763 Days $T_0=484.738123$ (BKJD)



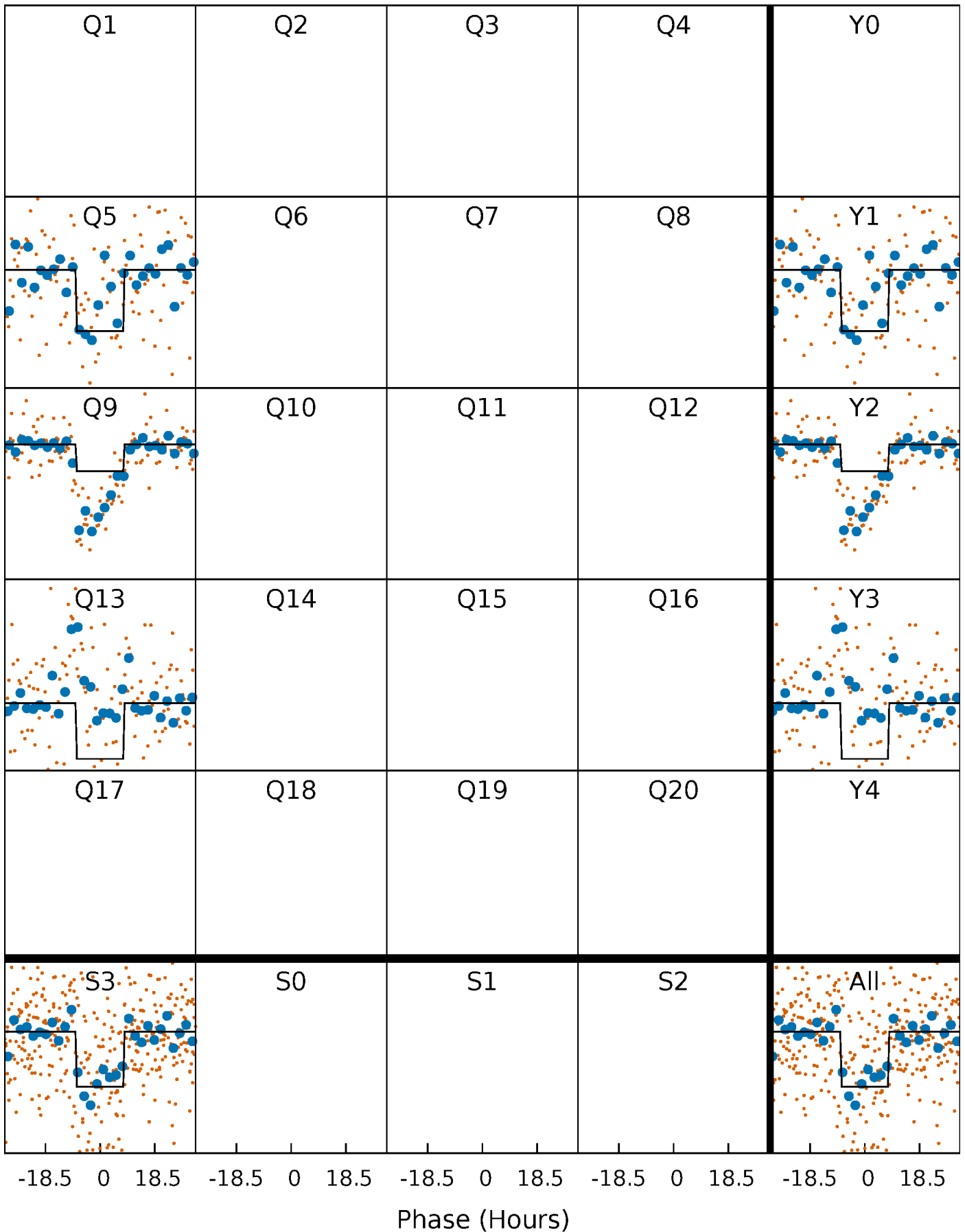
DV Quarter-Phased Transit Curves

TCE 005900212-01 $P=378.170763$ Days $T_0=484.738123$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

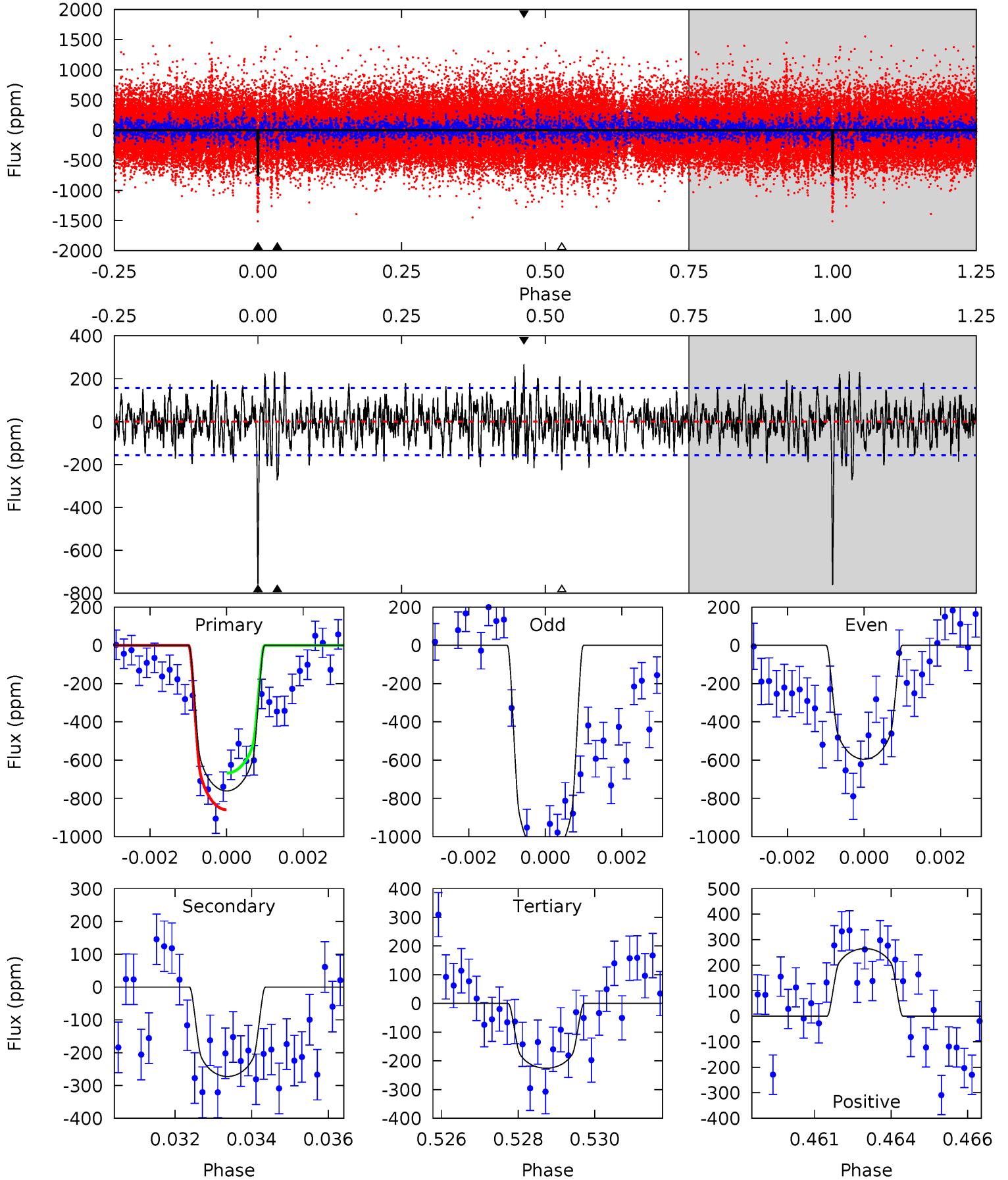
TCE 005900212-01 $P=378.184328$ Days $T_0=484.747624$ (BKJD)



DV Model-Shift Uniqueness Test

005900212-01, P = 378.170763 Days, E = 106.567360 Days

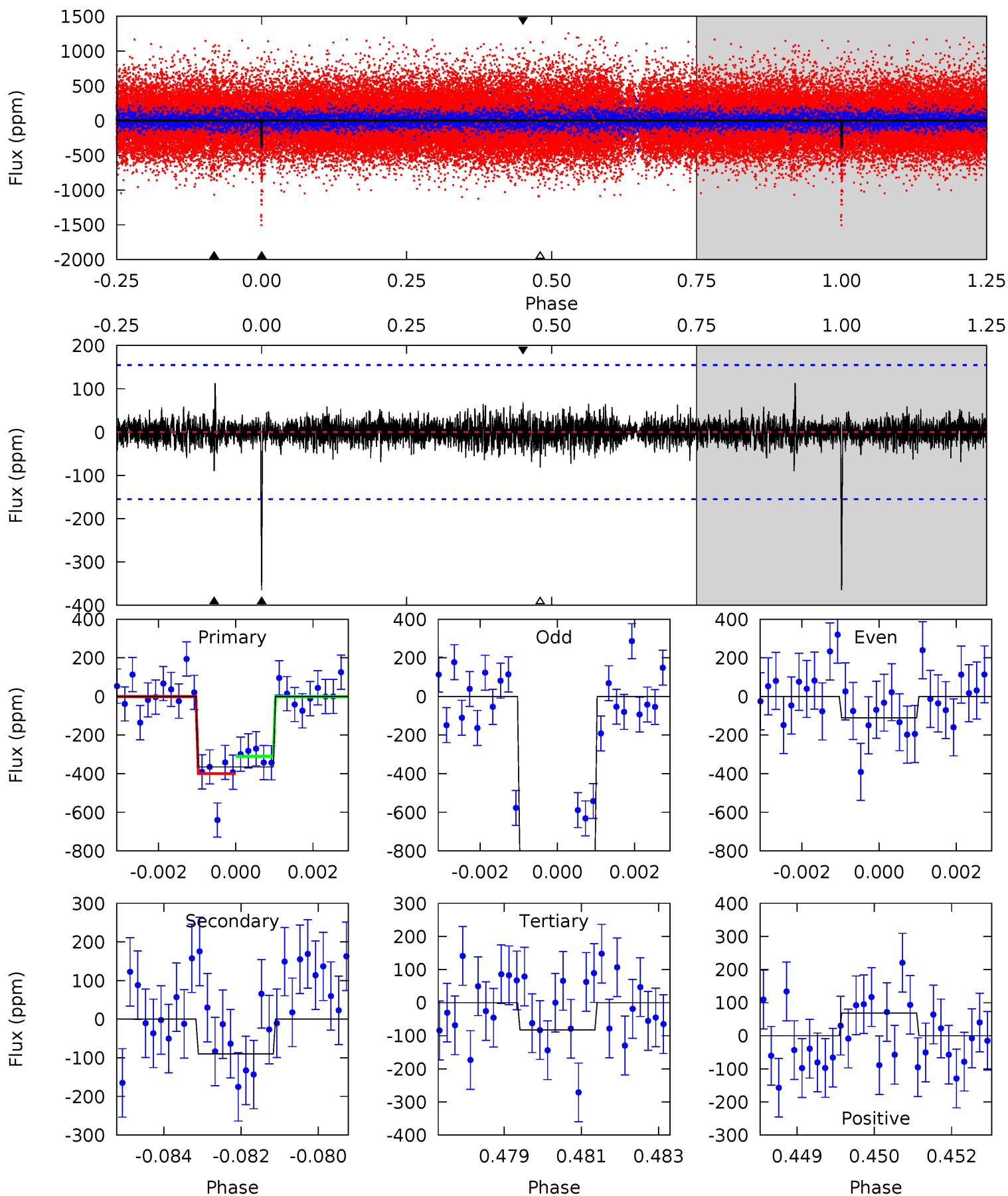
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	9.25	7.66	8.99	5.31	3.07	2.41	18.2	16.8	1.59	0.26	8.30	1.07	0.26	3.25



Alt Model-Shift Uniqueness Test

005900212-01, P = 378.184328 Days, E = 106.563296 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.10	2.83	2.36	5.35	3.12	0.63	9.75	10.2	0.27	0.73	12.5	1.51	0.24	1.53



Stellar Parameters For KIC 005900212

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4898^{+146}_{-146}	$4.510^{+0.071}_{-0.142}$	$0.200^{+0.200}_{-0.300}$	$0.816^{+0.081}_{-0.081}$	$0.786^{+0.072}_{-0.054}$	$2.035^{+0.694}_{-0.616}$
	+3%/-3%	+2%/-3%	+100%/-150%	+10%/-10%	+9%/-7%	+34%/-30%
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 005900212-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-273 ± 29	$2.52^{+0.33}_{-0.27}$	283^{+13}_{-11}	4007^{+198}_{-190}	20903^{+6022}_{-4984}
Alt.	-90 ± 29	$1.77^{+0.30}_{-0.29}$	284^{+13}_{-12}	3757^{+284}_{-310}	14241^{+7605}_{-5775}

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 $A_{obs} \gg 1.0$

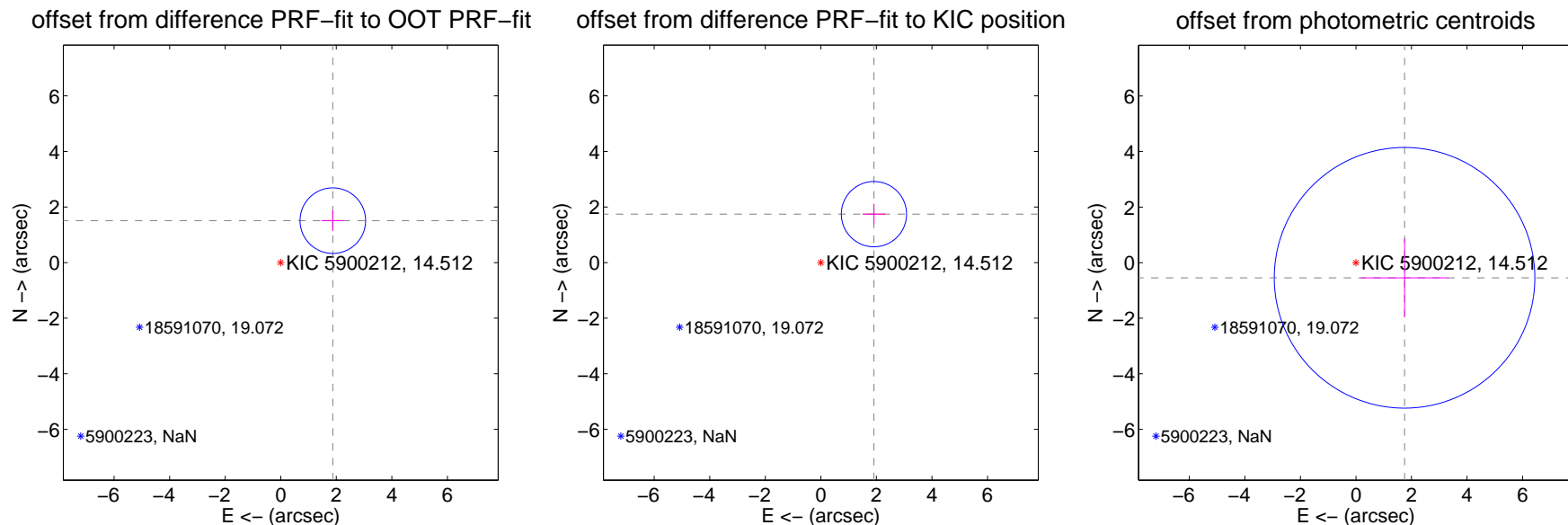
DV Centroid Data

Supplemental centroid analysis for 005900212-01. Kepler magnitude: 14.51. Transit SNR 9.48

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.406 ± 0.393	6.12	-1.874 ± 0.405	1.509 ± 0.374
PRF-fit source offset from KIC position	2.586 ± 0.391	6.61	-1.911 ± 0.405	1.743 ± 0.374
photometric centroid source offset	1.83 ± 1.56	1.17	-1.75 ± 1.58	-0.54 ± 1.41

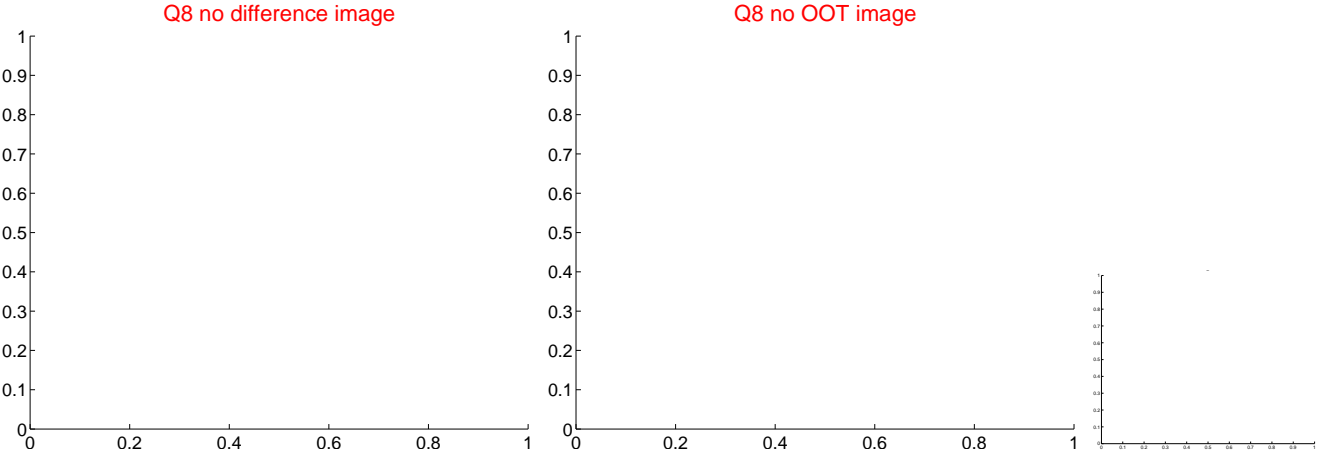
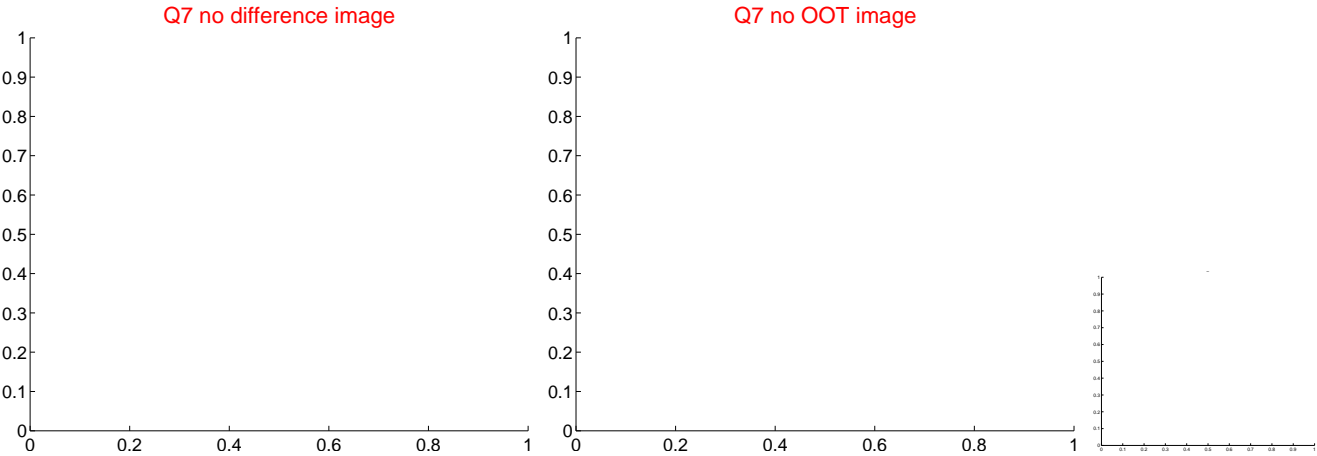
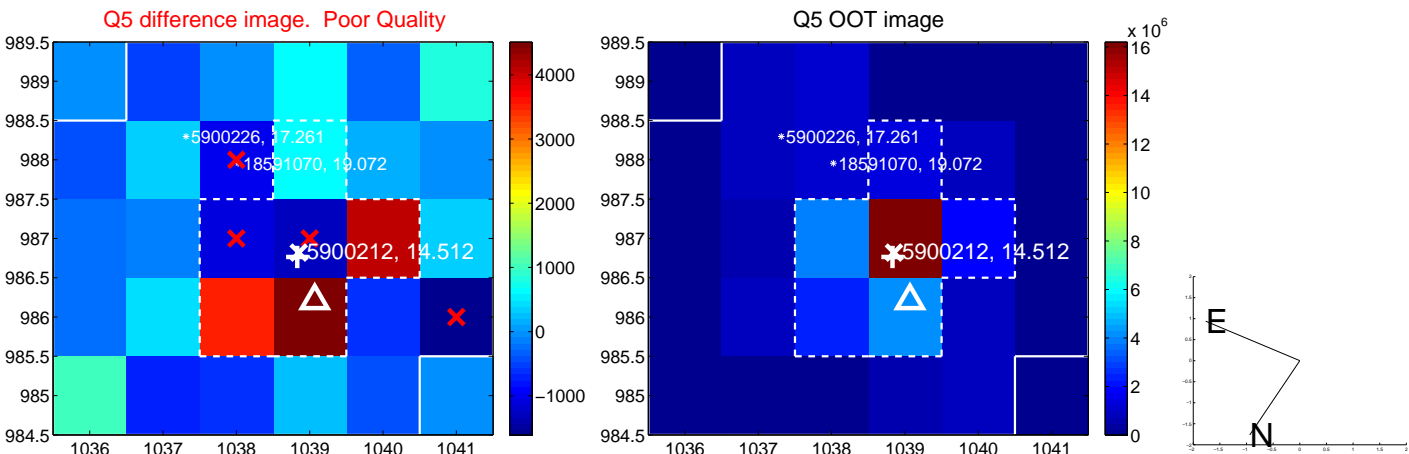


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

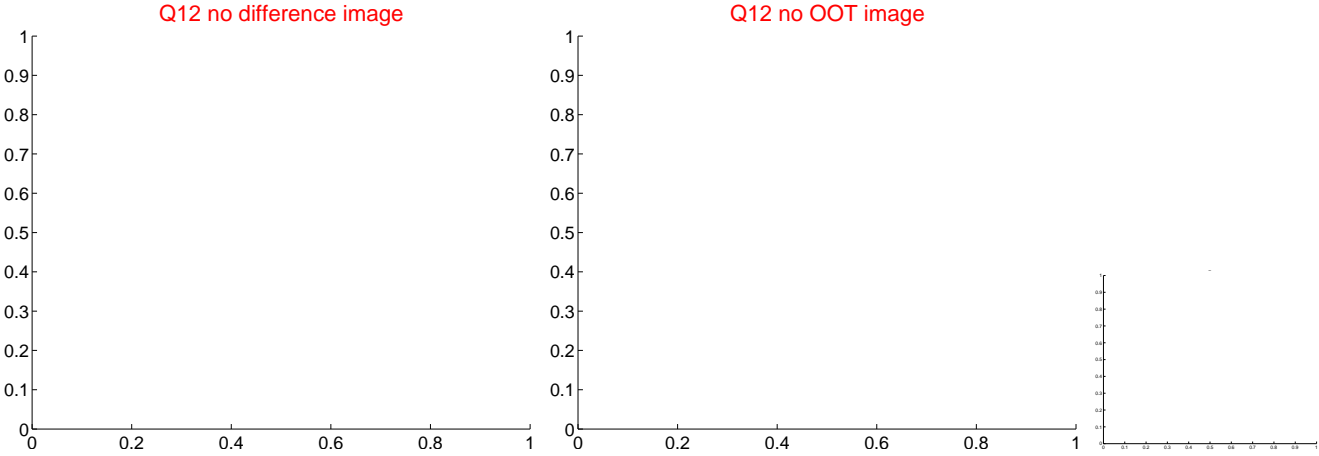
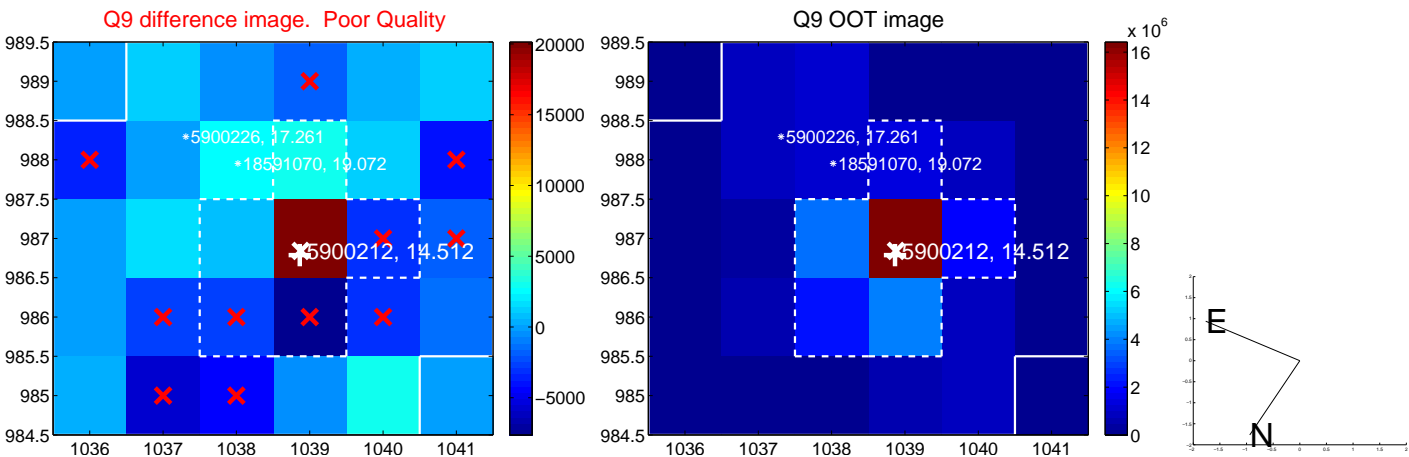
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



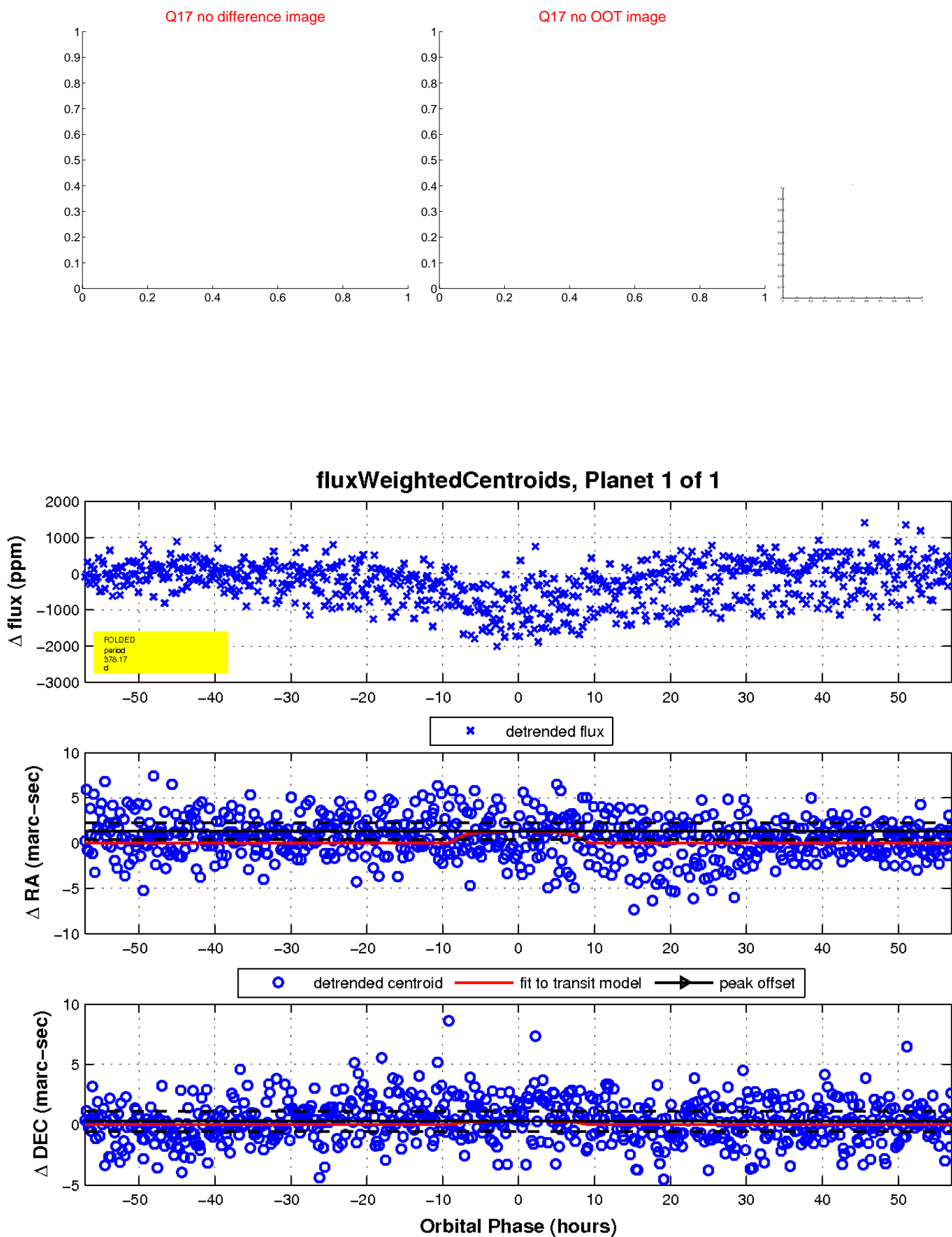
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

