

KIC 007299905

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})
007299905-01	OBS	No	675.508495	223.529147	870.3	7.993	10.7	12.9	0.54	4218	1.63	0.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007299905-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

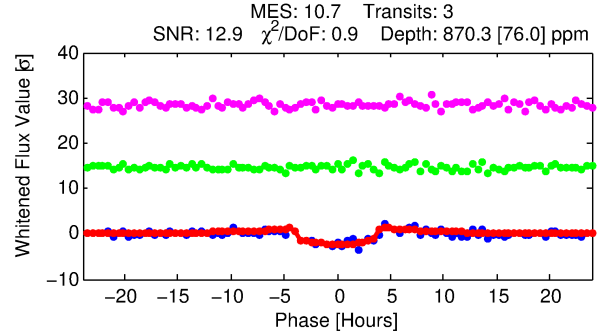
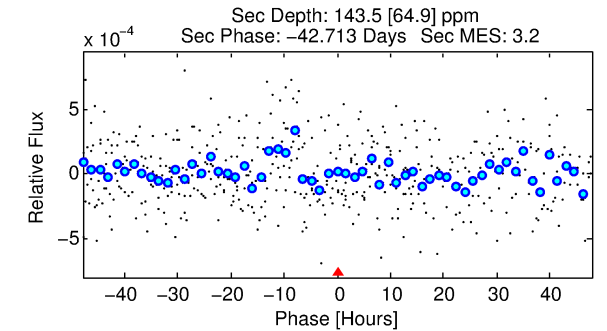
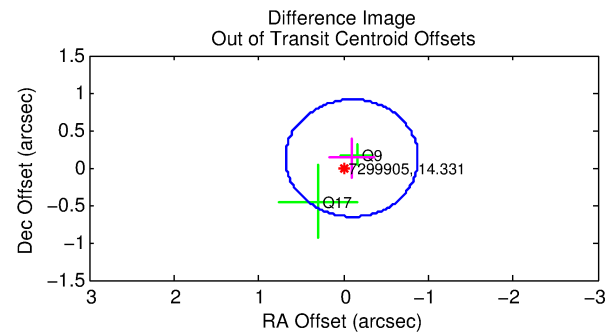
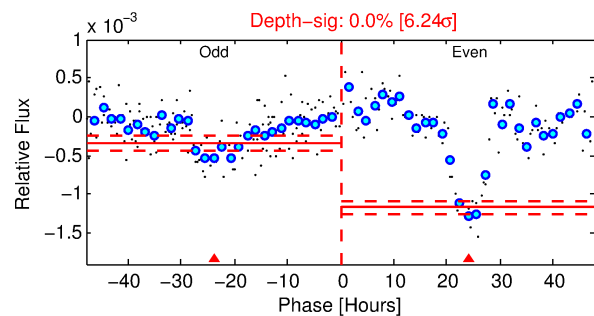
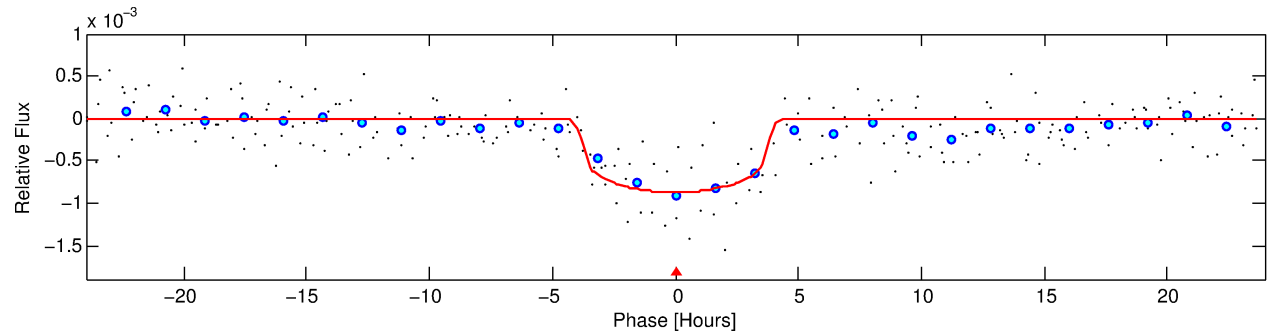
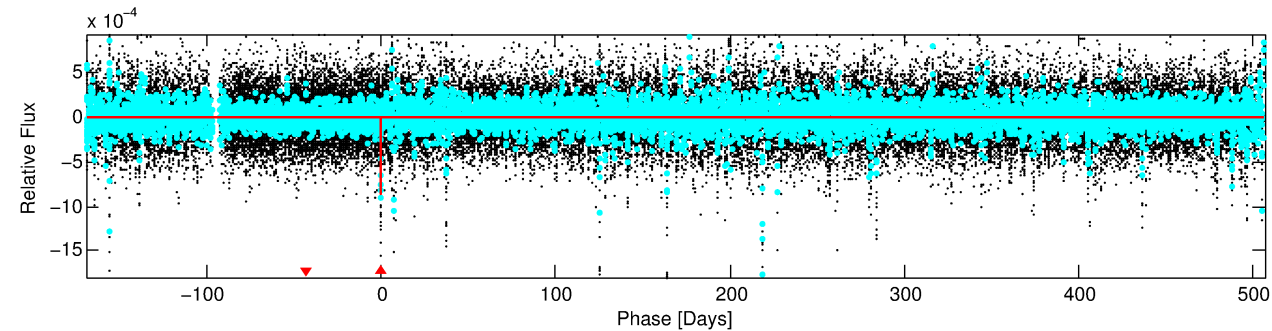
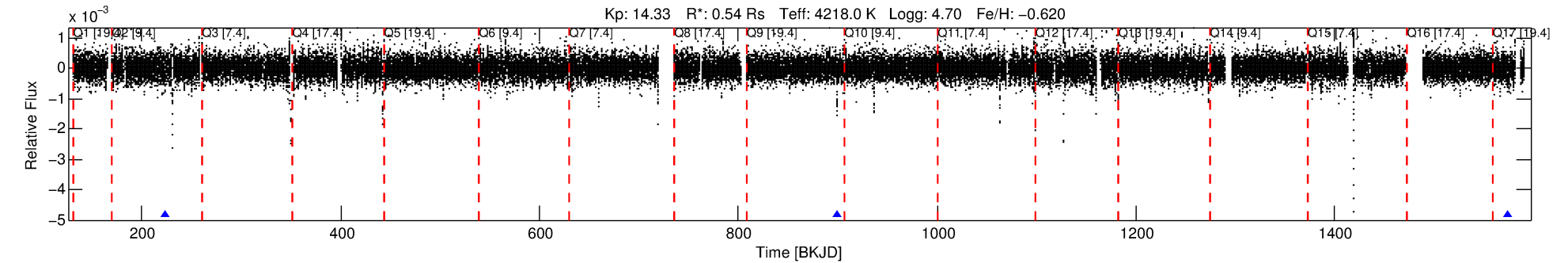
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007299905-01

No Significant Match Found

DV One-Page Summary

KIC: 7299905 Candidate: 1 of 1 Period: 675.508 d



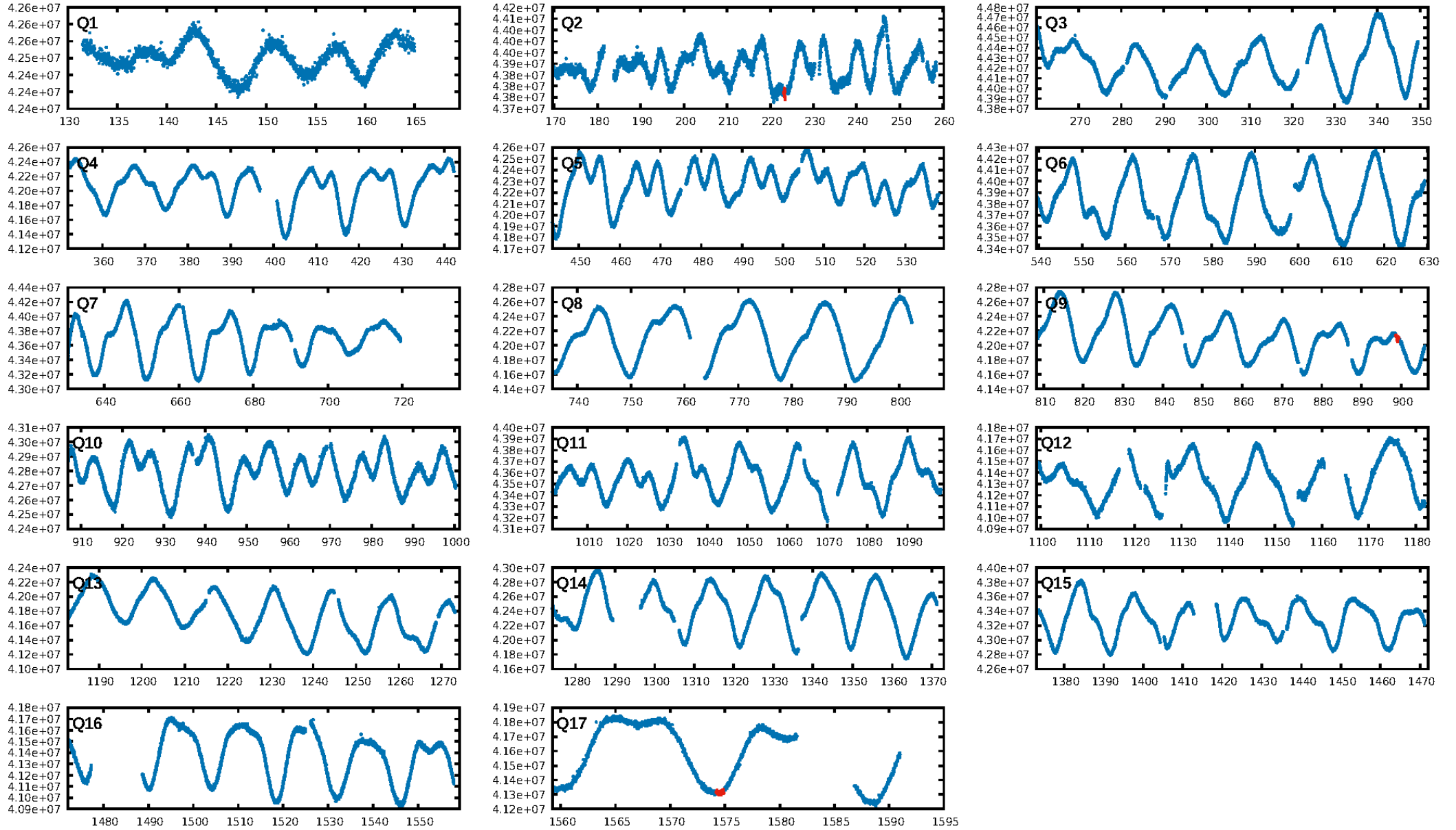
DV Fit Results:

Period = 675.50849 [0.00633] d
Epoch = 223.5291 [0.0093] BKJD
Rp/R* = 0.0275 [0.0158]
a/R* = 580.78 [1303.89]
b = 0.50 [3.46]
Seff = 0.06 [0.01]
Teq = 124 [6] K
Rp = 1.63 [0.95] Re
a = 1.2218 [0.1077] AU
Ag = 44418.96 [55063.11] [0.81σ]
Teffp = 2784 [864] K [3.08σ]

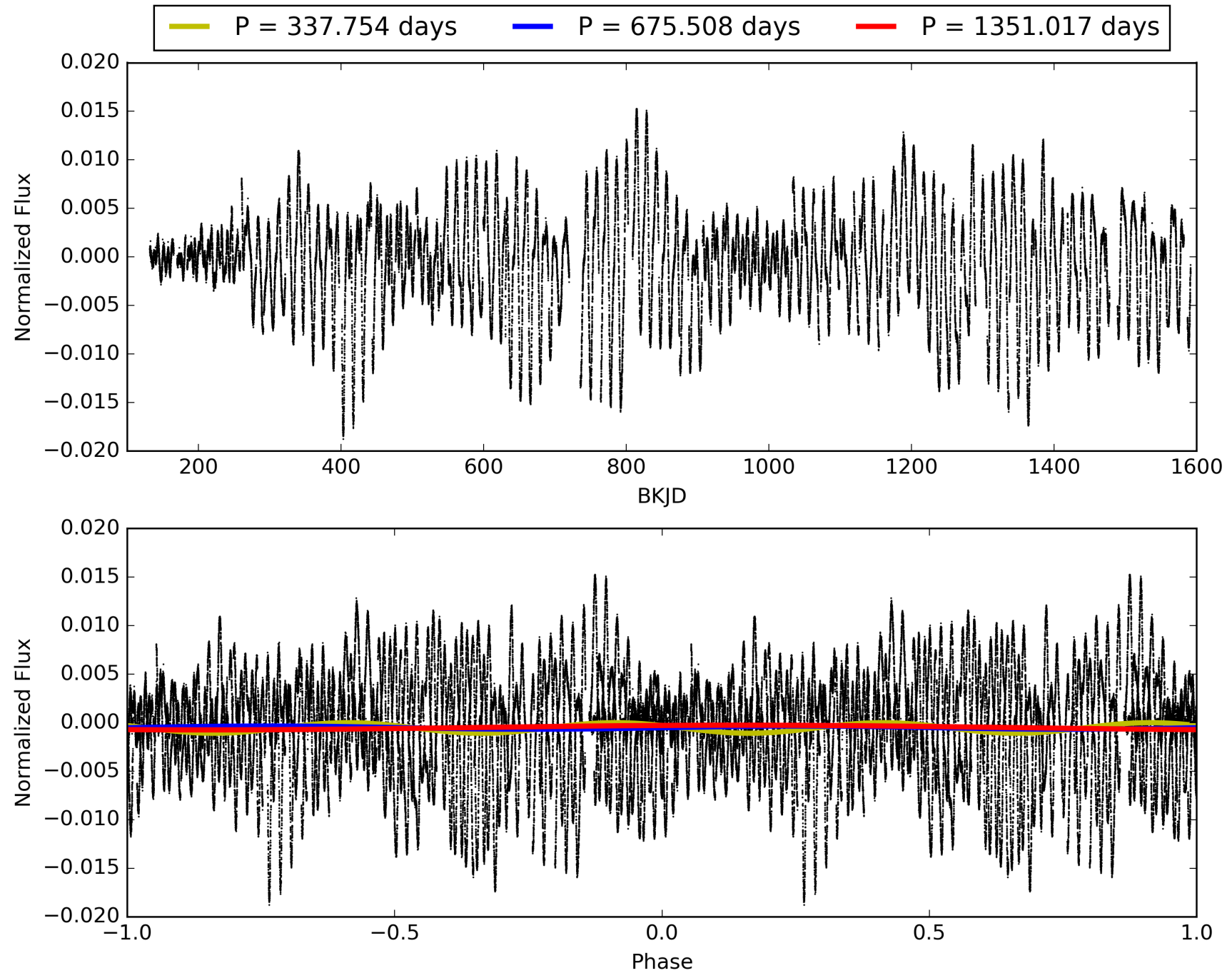
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.02e-09
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.215
Centroid-sig: 40.8%
Centroid-so: 0.268 arcsec [0.39σ]
OotOffset-rm: 0.161 arcsec [0.62σ]
KicOffset-rm: 0.178 arcsec [0.49σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007299905-01, PDC Light Curves

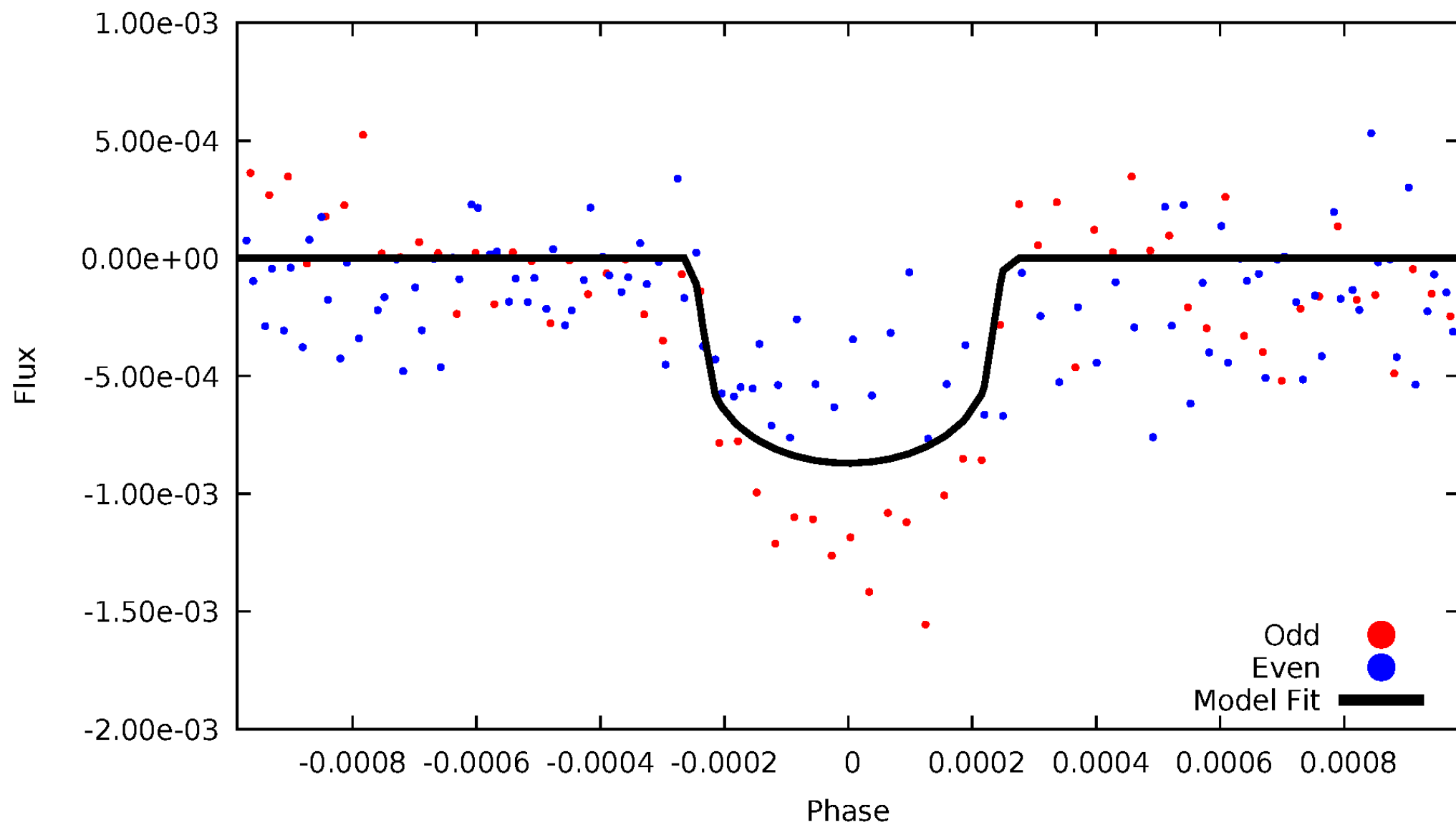


TCE 007299905-01



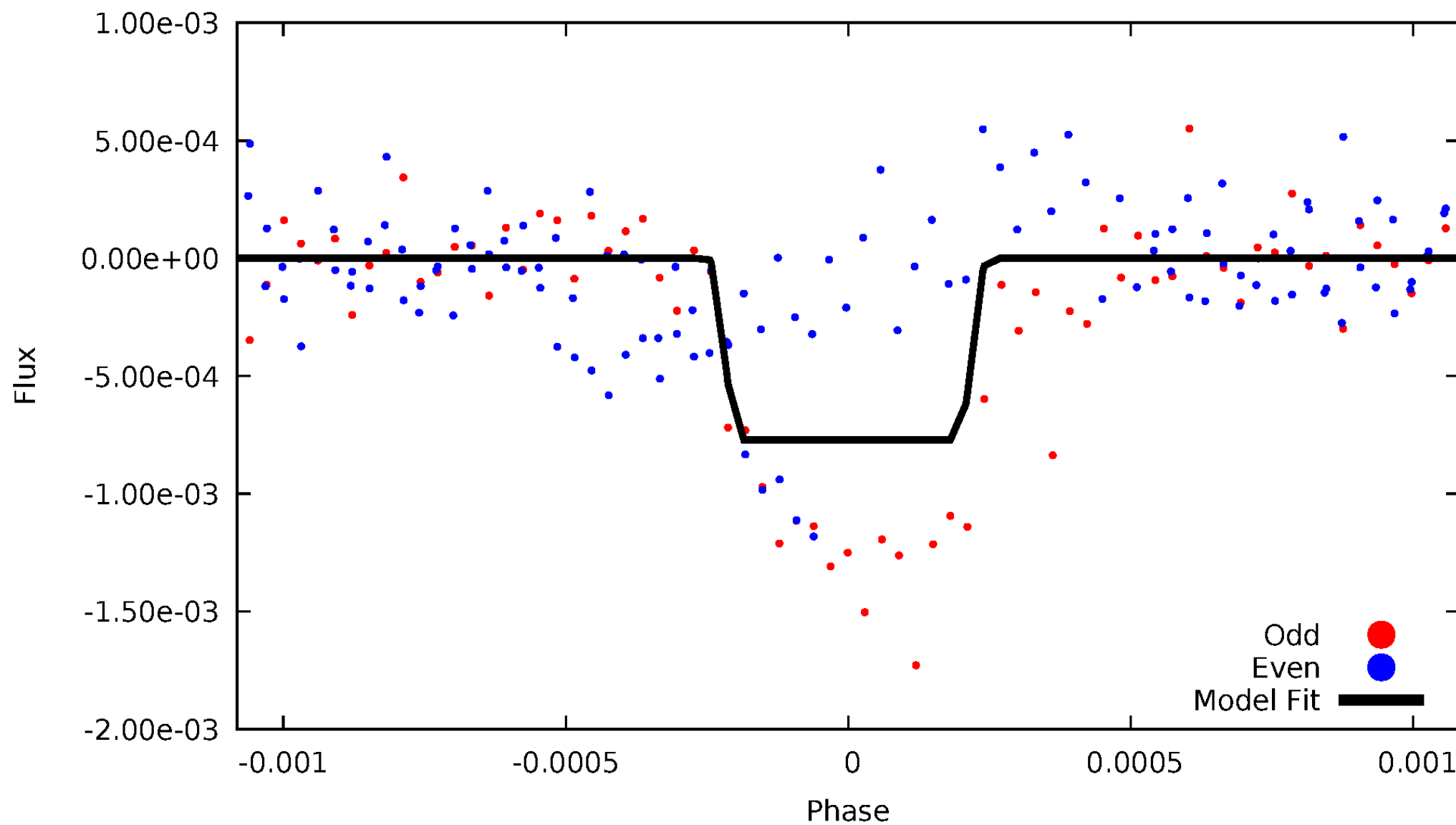
DV Odd/Even

TCE 007299905-01



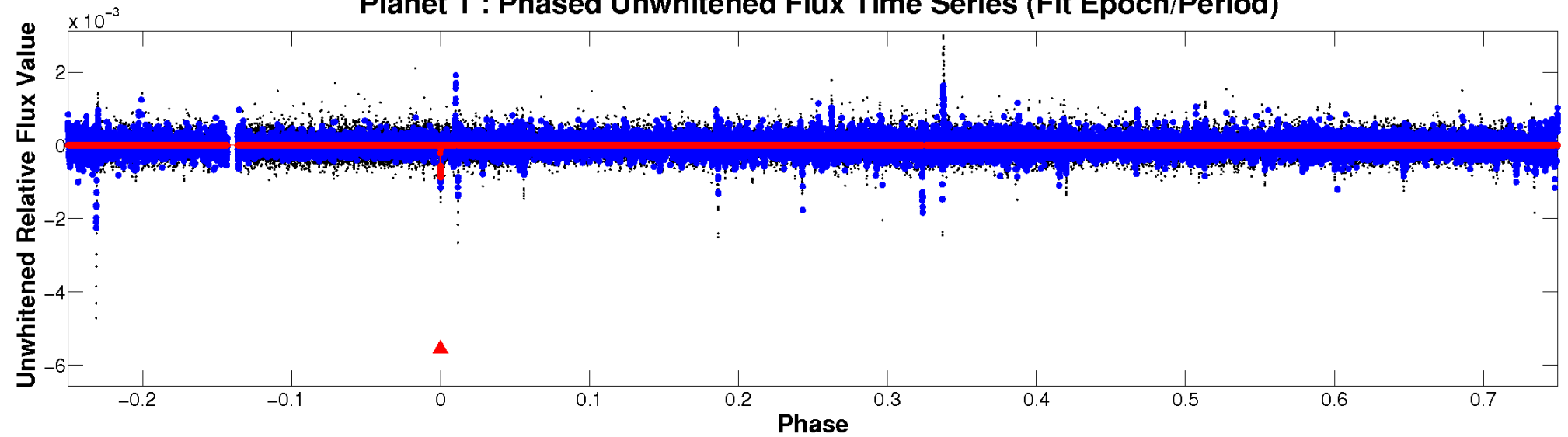
ALT Odd/Even

TCE 007299905-01

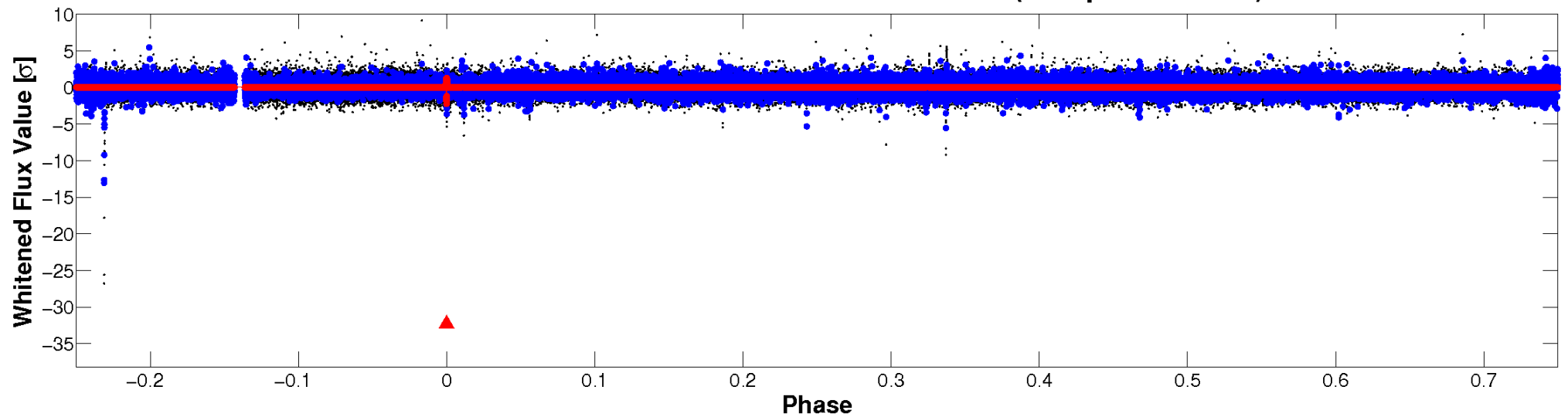


Non-Whitened Vs. Whitened Light Curve

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

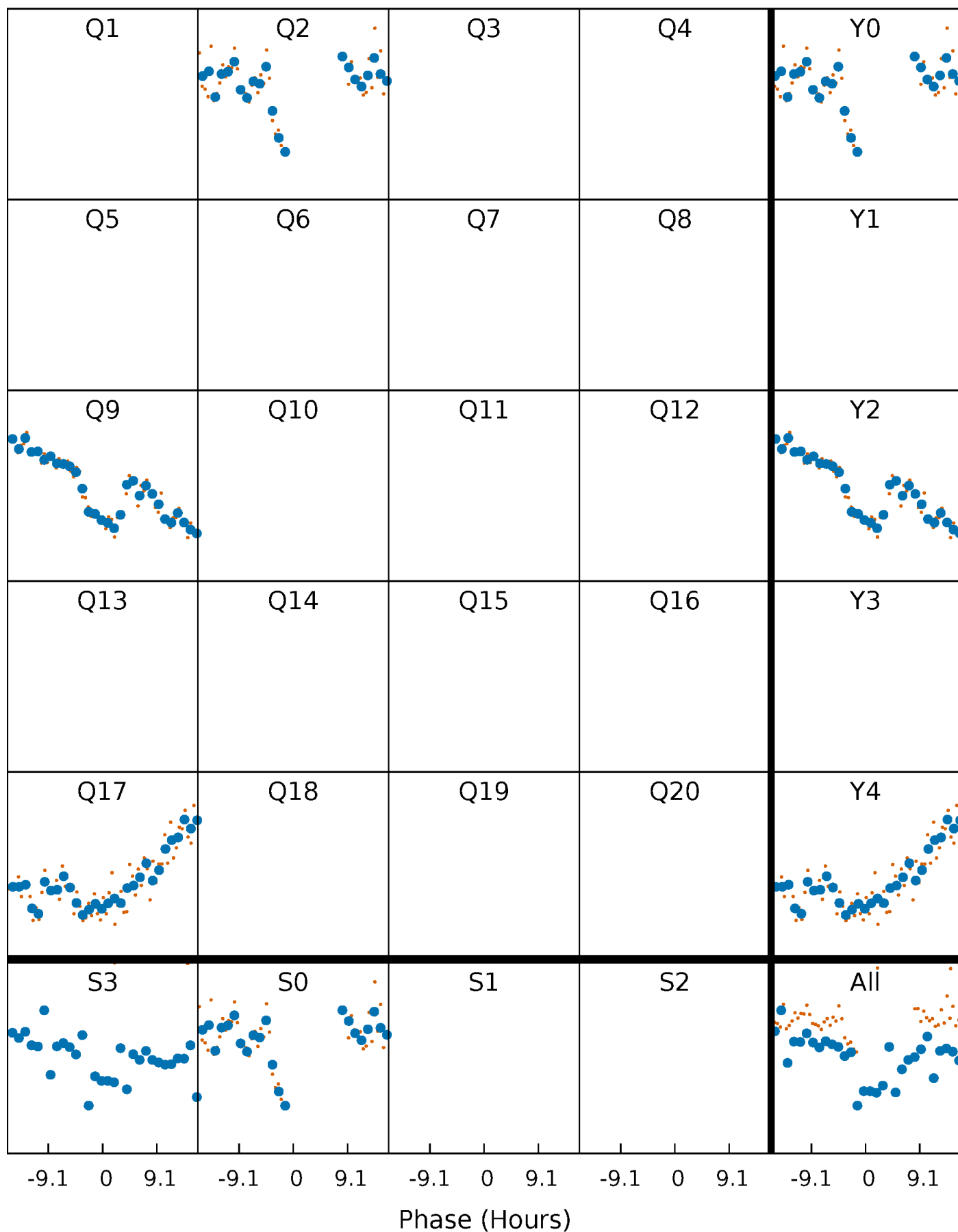


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



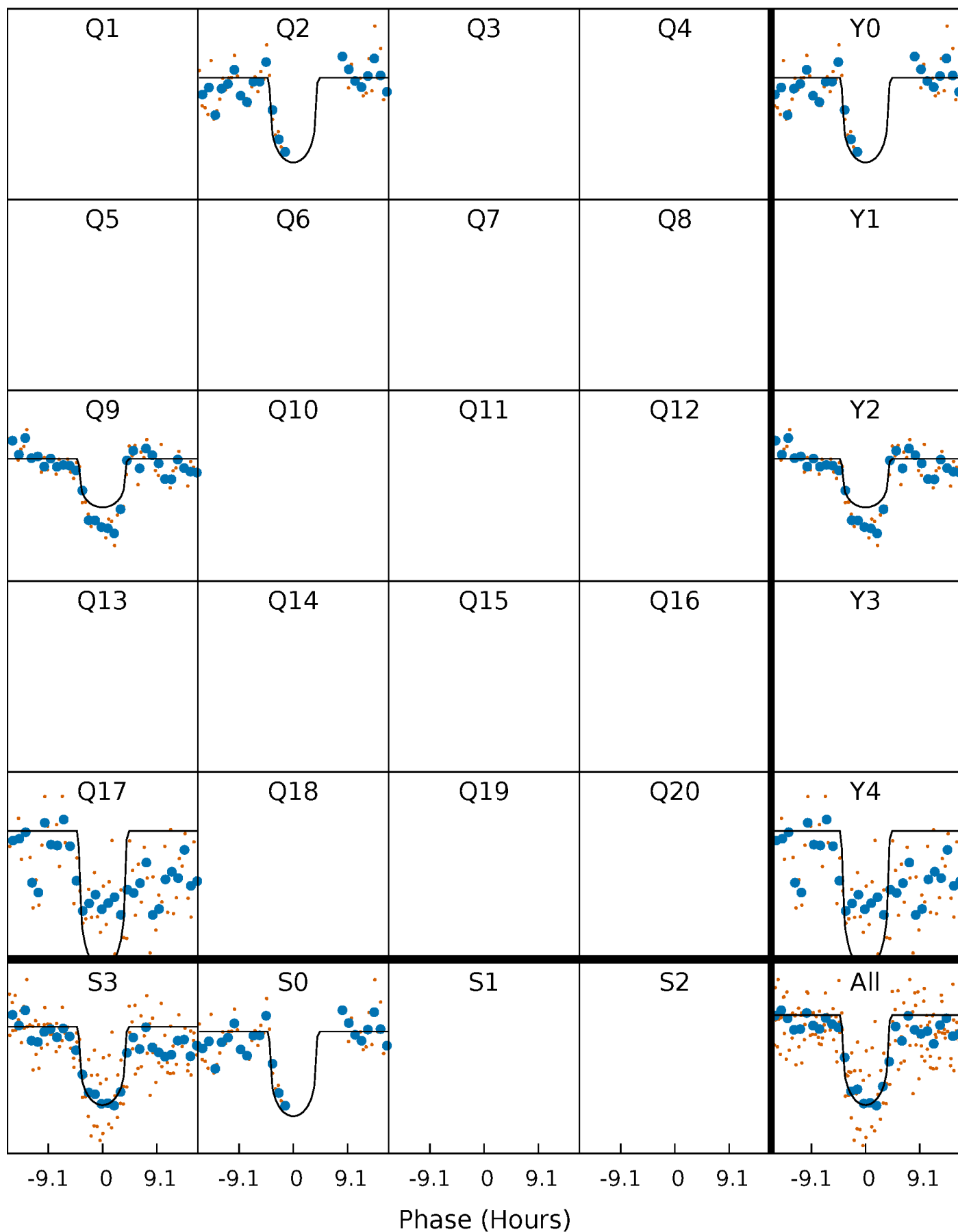
PDC Quarter-Phased Transit Curves

TCE 007299905-01 P=675.508495 Days $T_0=223.529147$ (BKJD)



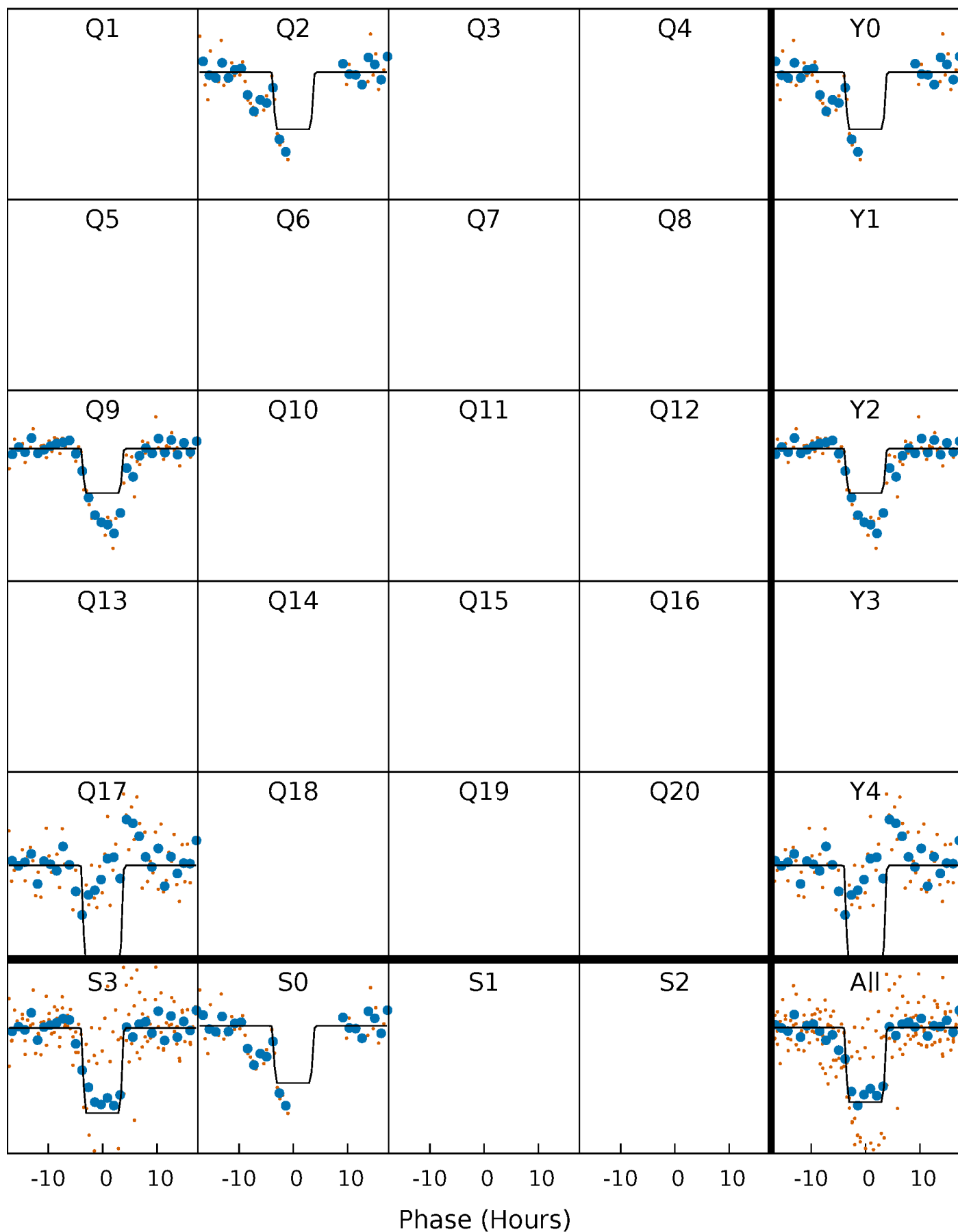
DV Quarter-Phased Transit Curves

TCE 007299905-01 P=675.508495 Days $T_0=223.529147$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

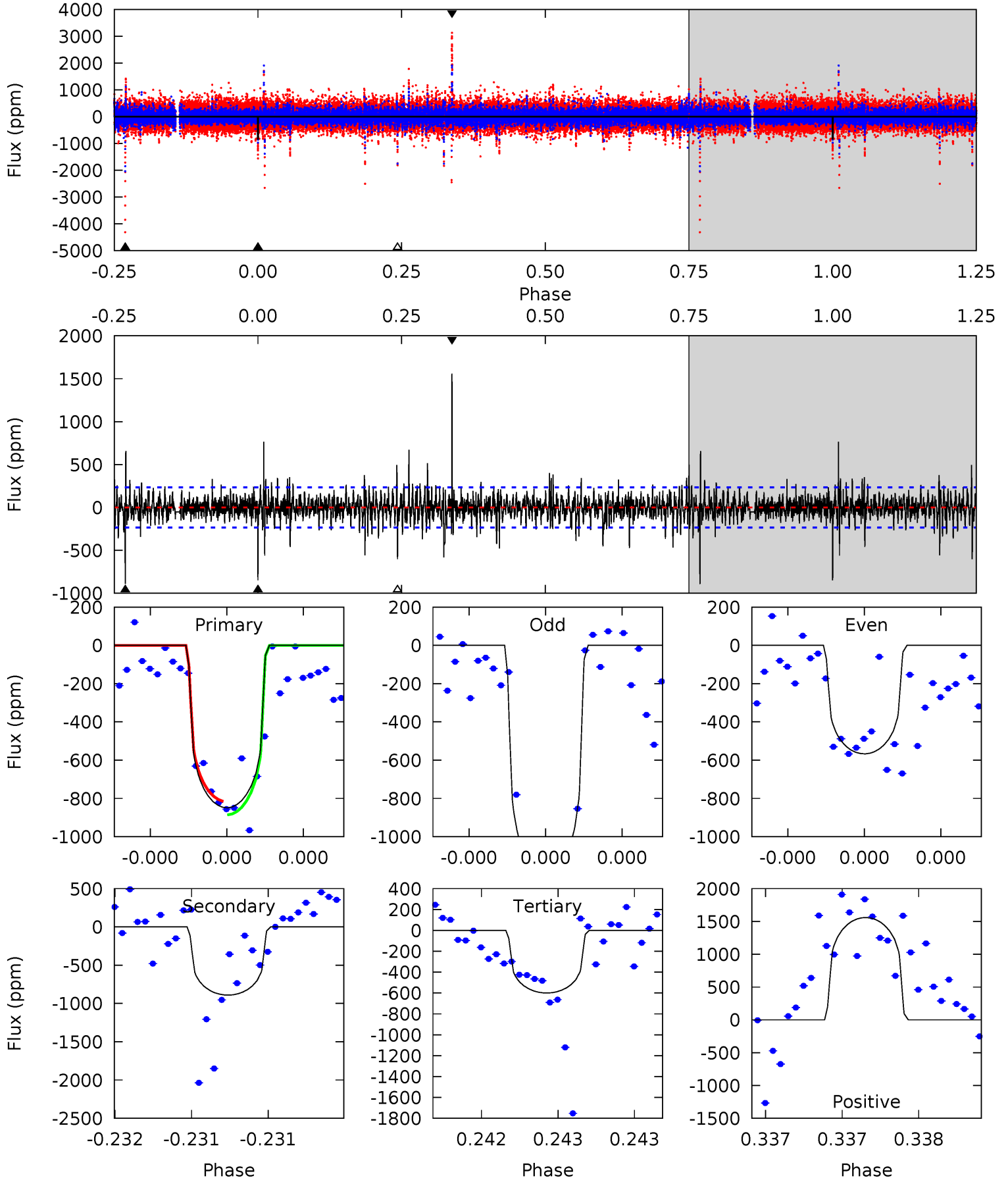
TCE 007299905-01 P=675.533494 Days $T_0=223.507189$ (BKJD)



DV Model-Shift Uniqueness Test

007299905-01, P = 675.508495 Days, E = 223.529147 Days

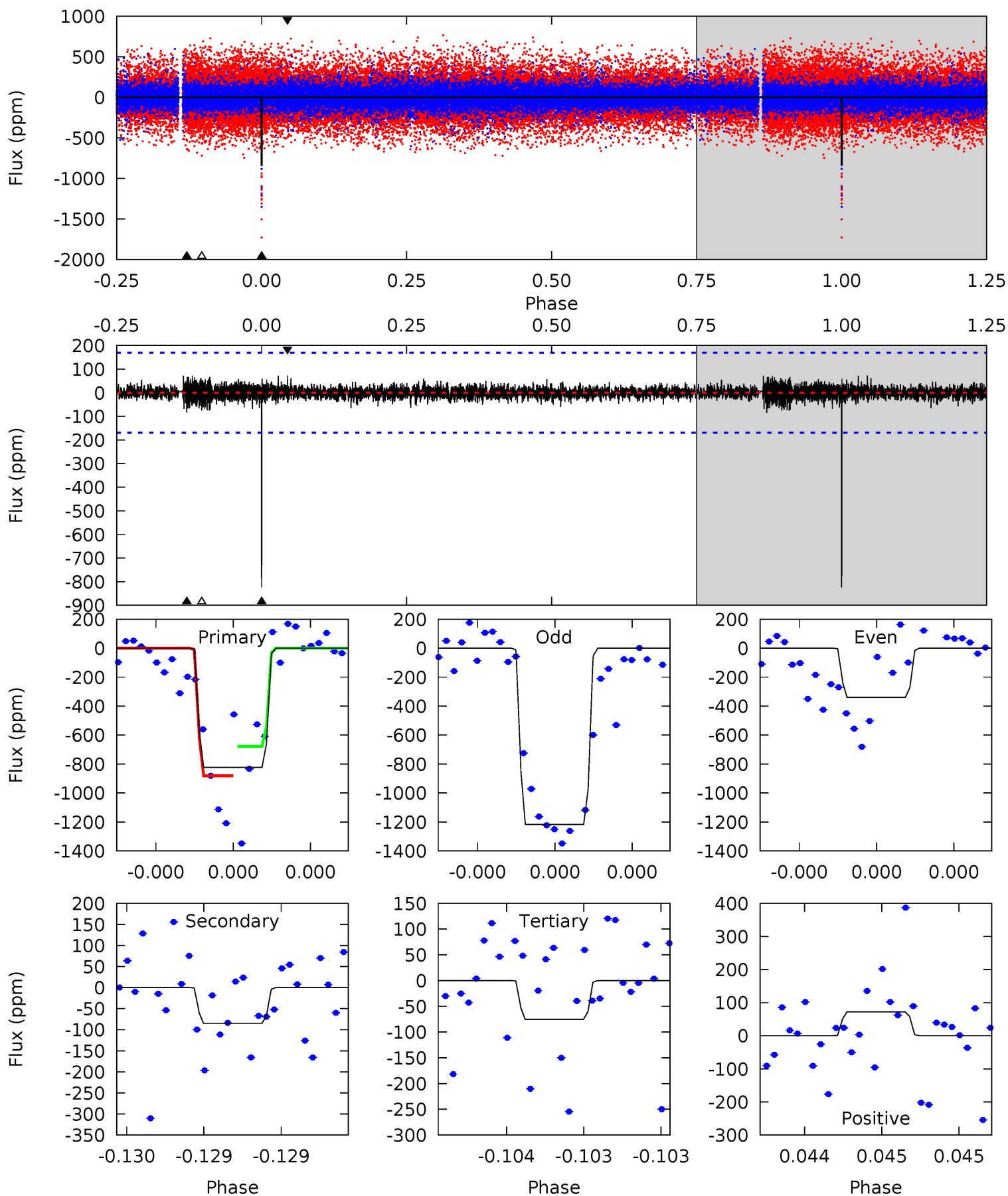
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	21.1	14.2	37.0	5.58	3.48	2.64	5.90	-16.8	6.90	-15.8	7.62	1.13	0.64	0.83



Alt Model-Shift Uniqueness Test

007299905-01, P = 675.533494 Days, E = 223.507189 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	2.80	2.48	2.37	5.58	3.49	0.50	24.7	24.8	0.32	0.43	15.3	0.79	0.08	3.22



Stellar Parameters For KIC 007299905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4218^{+115}_{-140}	$4.695^{+0.063}_{-0.032}$	$-0.620^{+0.300}_{-0.300}$	$0.543^{+0.049}_{-0.060}$	$0.533^{+0.056}_{-0.046}$	$4.682^{+1.420}_{-0.671}$
	+3%/-3%	+1%/-1%	+48%/-48%	+9%/-11%	+11%/-9%	+30%/-14%
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 007299905-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-891 ± 42	$1.70^{+0.87}_{-0.90}$	173^{+6}_{-7}	4279^{+1660}_{-583}	$257497^{+948956}_{-144732}$
Alt.	-85 ± 30	$1.66^{+0.88}_{-0.87}$	172^{+6}_{-7}	2942^{+762}_{-373}	25368^{+90039}_{-16337}

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

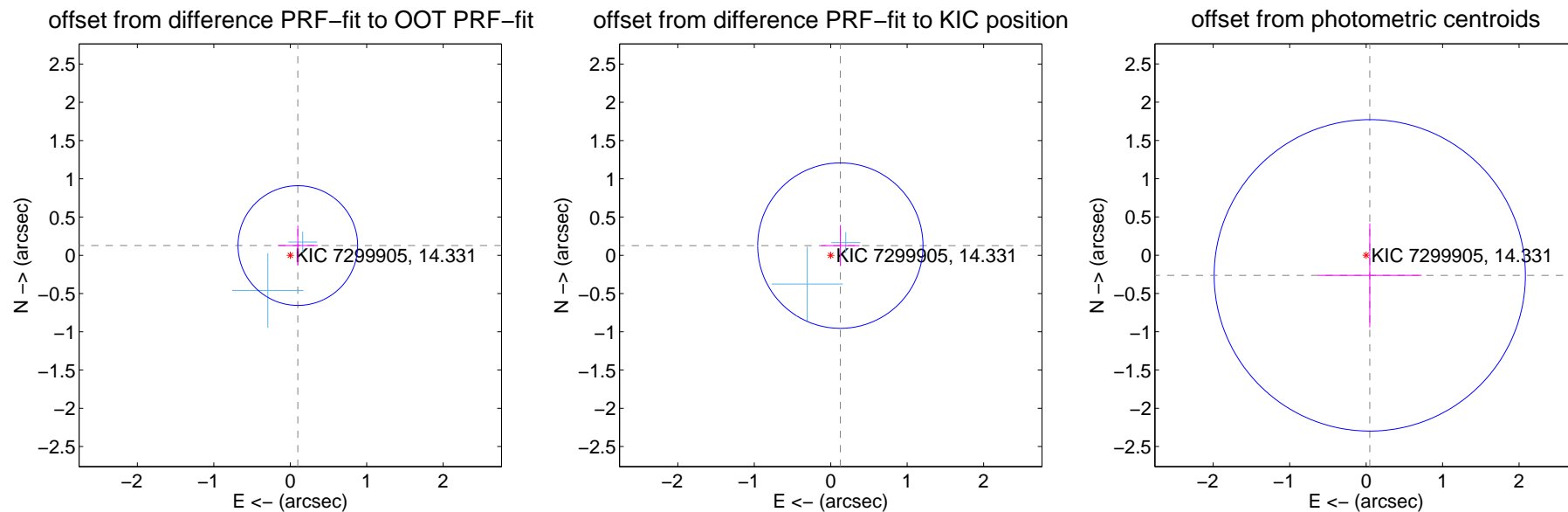
DV Centroid Data

Supplemental centroid analysis for 007299905-01. Kepler magnitude: 14.33. Transit SNR 12.86

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.161 ± 0.261	0.62	-0.099 ± 0.260	0.127 ± 0.261
PRF-fit source offset from KIC position	0.178 ± 0.360	0.49	-0.126 ± 0.250	0.126 ± 0.268
photometric centroid source offset	0.27 ± 0.68	0.39	-0.05 ± 0.68	-0.26 ± 0.68



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.

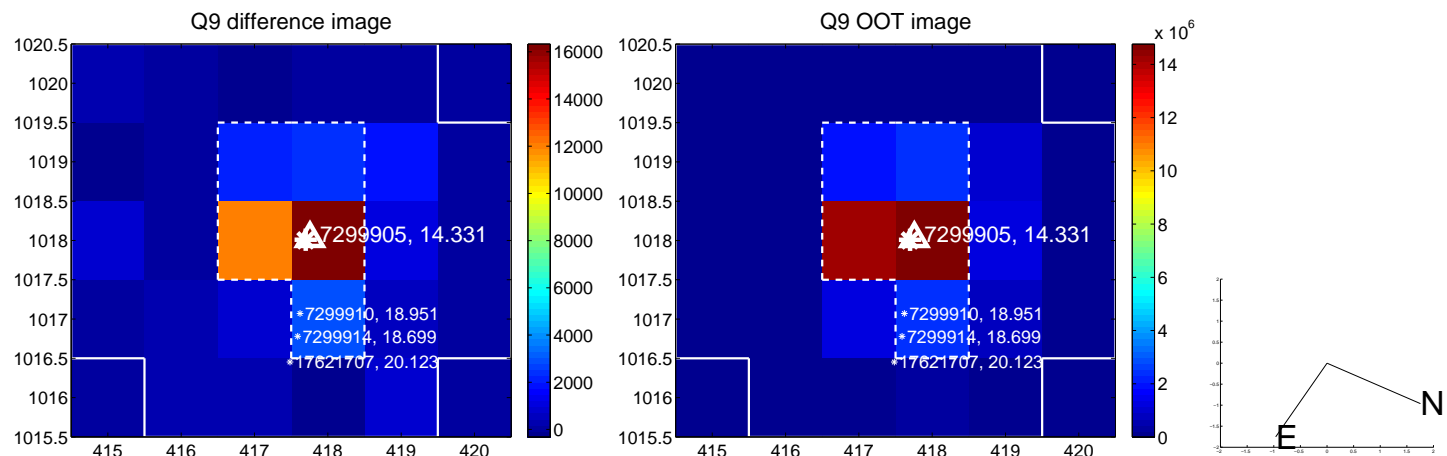
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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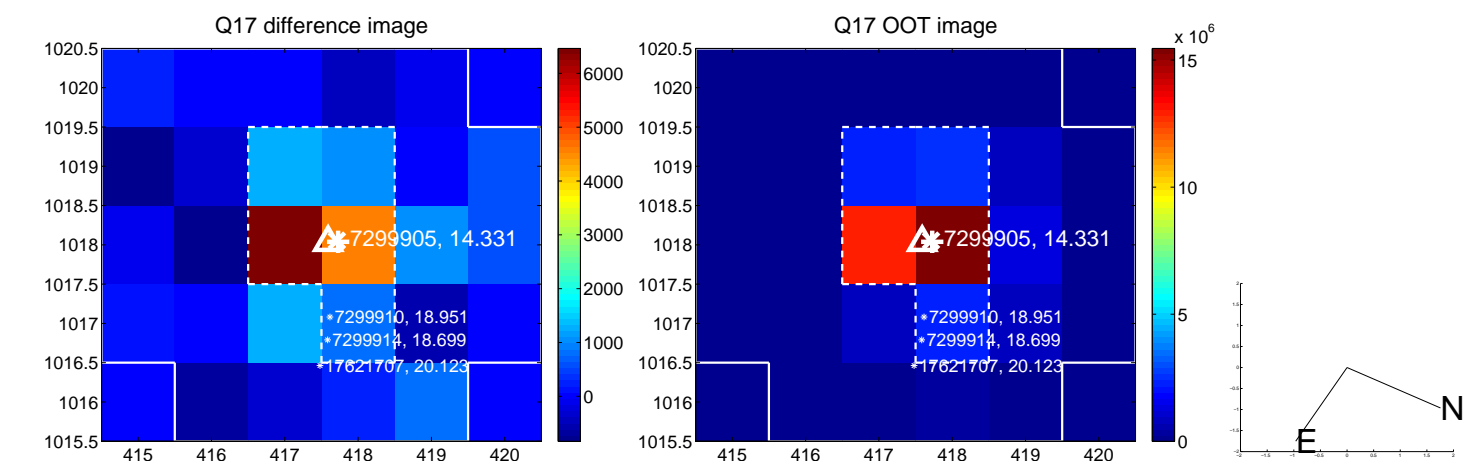
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



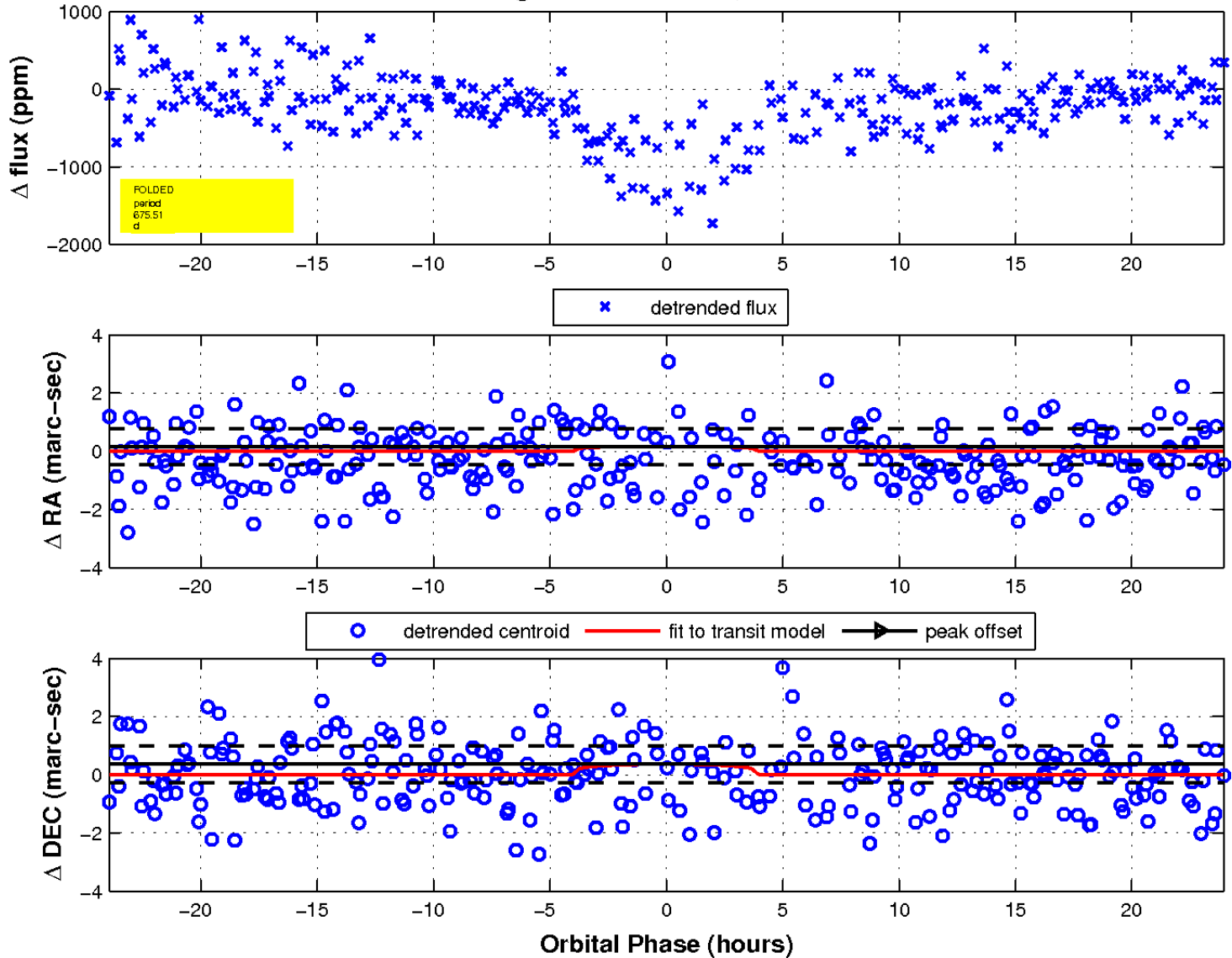
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

