

KIC 007430713

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})
007430713-01	OBS	No	298.976285	288.263111	134.2	7.632	11.9	8.4	1.35	6774	1.71	3.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007430713-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—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.

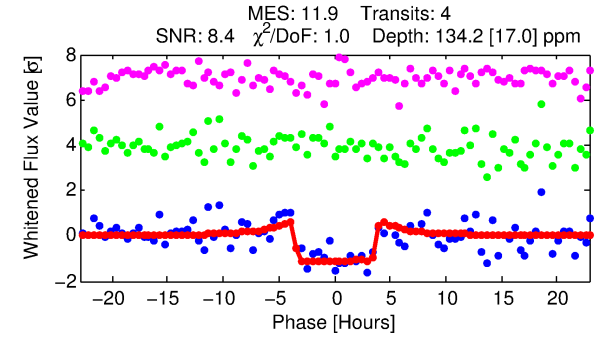
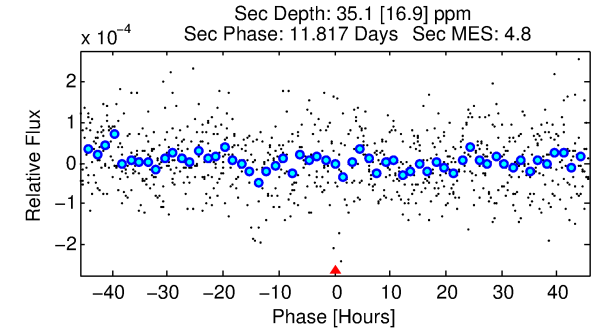
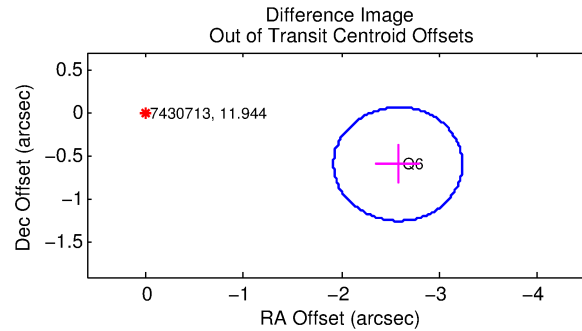
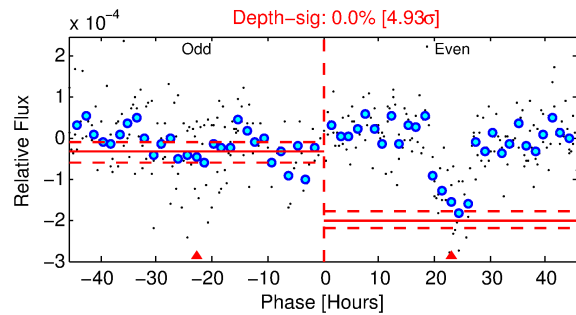
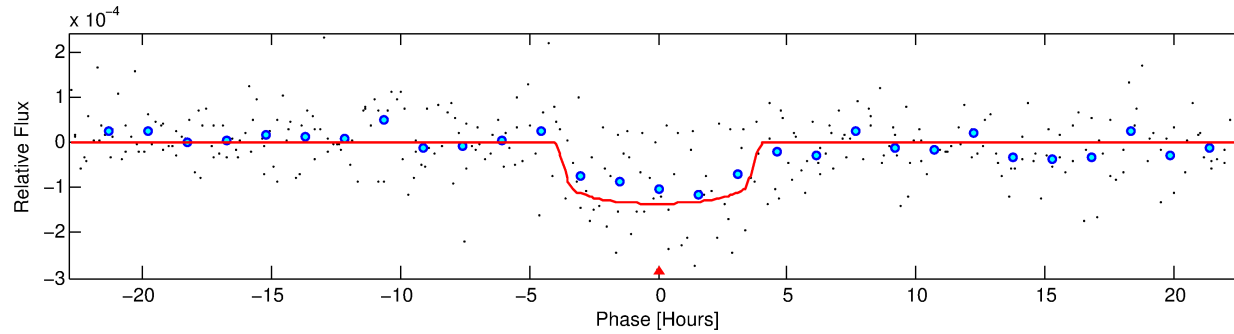
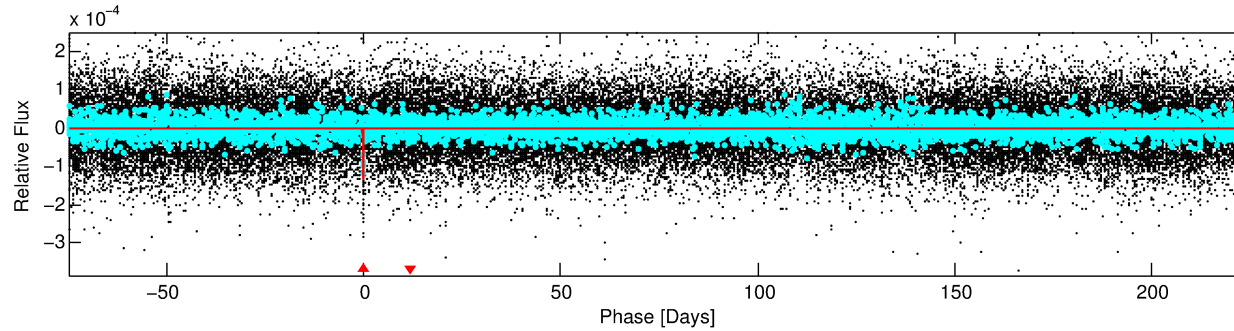
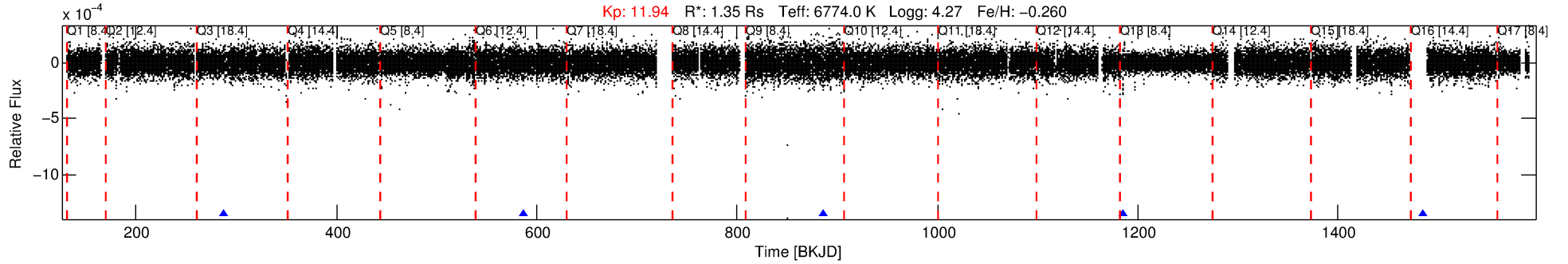
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007430713-01

No Significant Match Found

DV One-Page Summary

KIC: 7430713 Candidate: 1 of 1 Period: 298.976 d



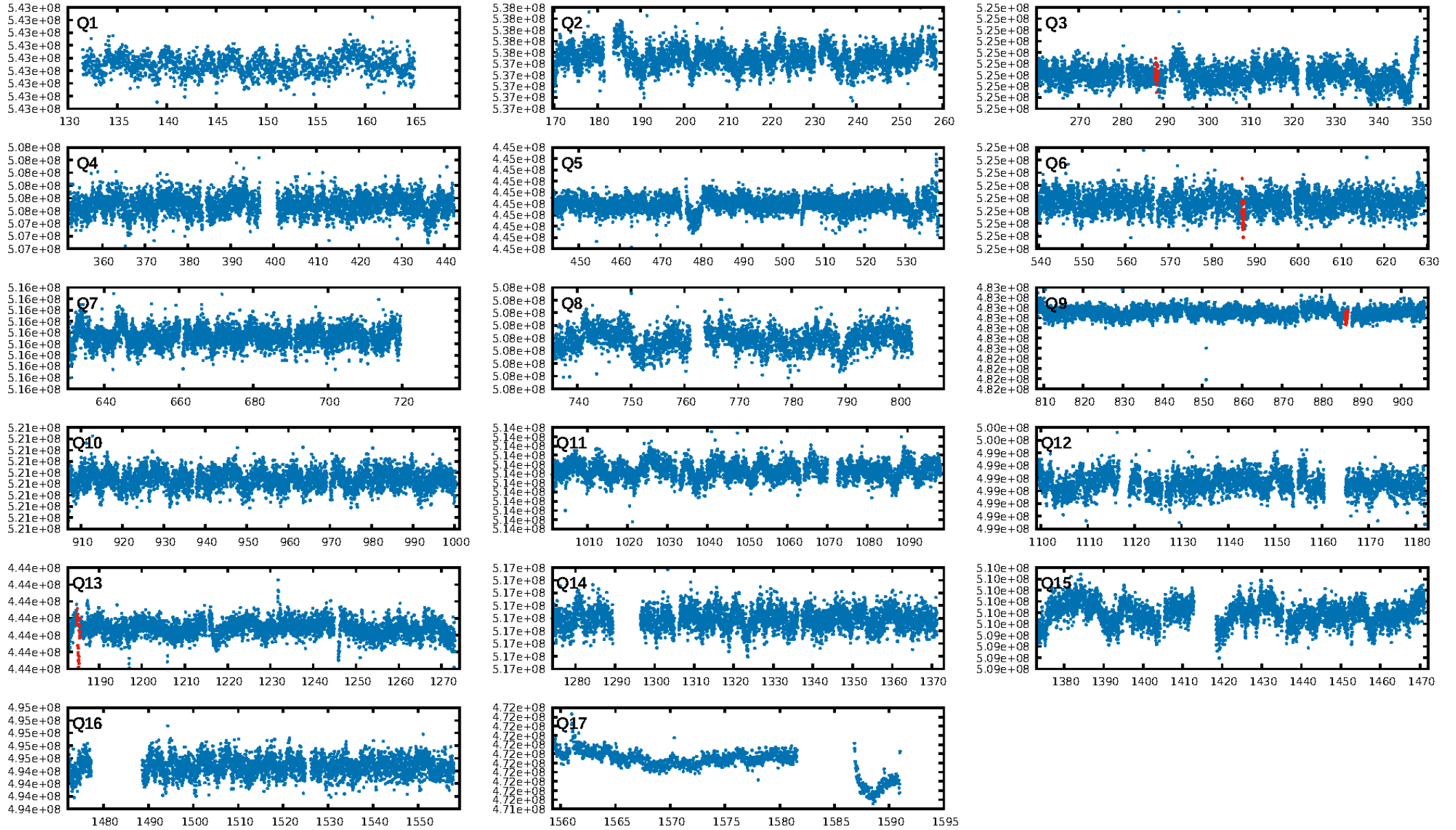
DV Fit Results:

Period = 298.97629 [0.00489] d
Epoch = 288.2631 [0.0086] BKJD
 $R_p/R^* = 0.0116$ [0.0033]
 $a/R^* = 192.42$ [297.56]
 $b = 0.78$ [0.78]
 $\text{Seff} = 3.87$ [1.54]
 $T_{\text{eq}} = 358$ [36] K
 $R_p = 1.71$ [0.71] R_e
 $a = 0.9401$ [0.2379] AU
 $A_g = 5839.65$ [4803.36] [1.22 σ]
 $T_{\text{eff}} = 4833$ [915] K [4.89 σ]

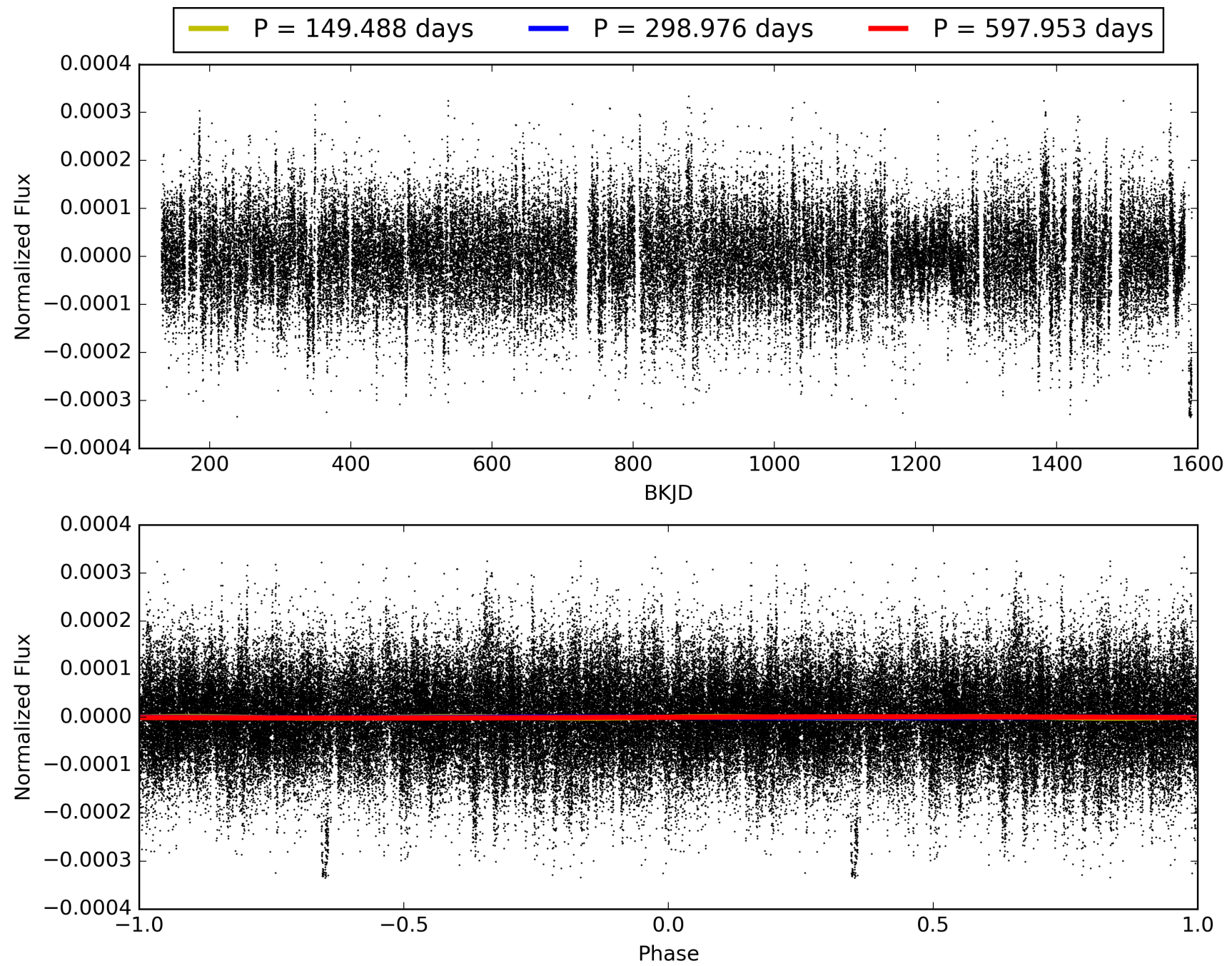
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 93.8%
Bootstrap-pfa: 3.55e-20
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.592
Centroid-sig: 46.7%
Centroid-so: 0.814 arcsec [0.89 σ]
OotOffset-rm: 2.646 arcsec [12.06 σ]
KicOffset-rm: 2.572 arcsec [11.73 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007430713-01, PDC Light Curves

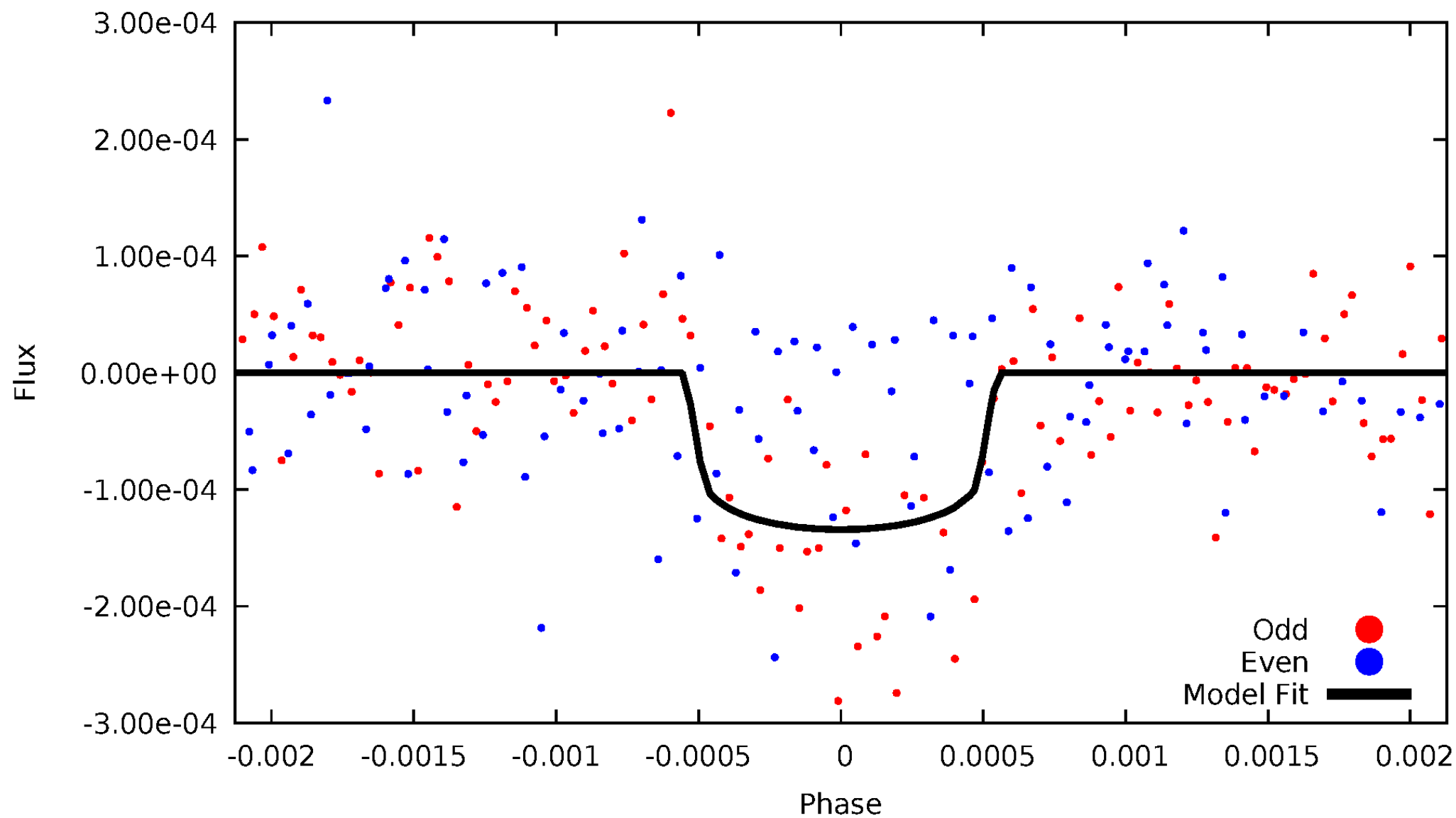


TCE 007430713-01



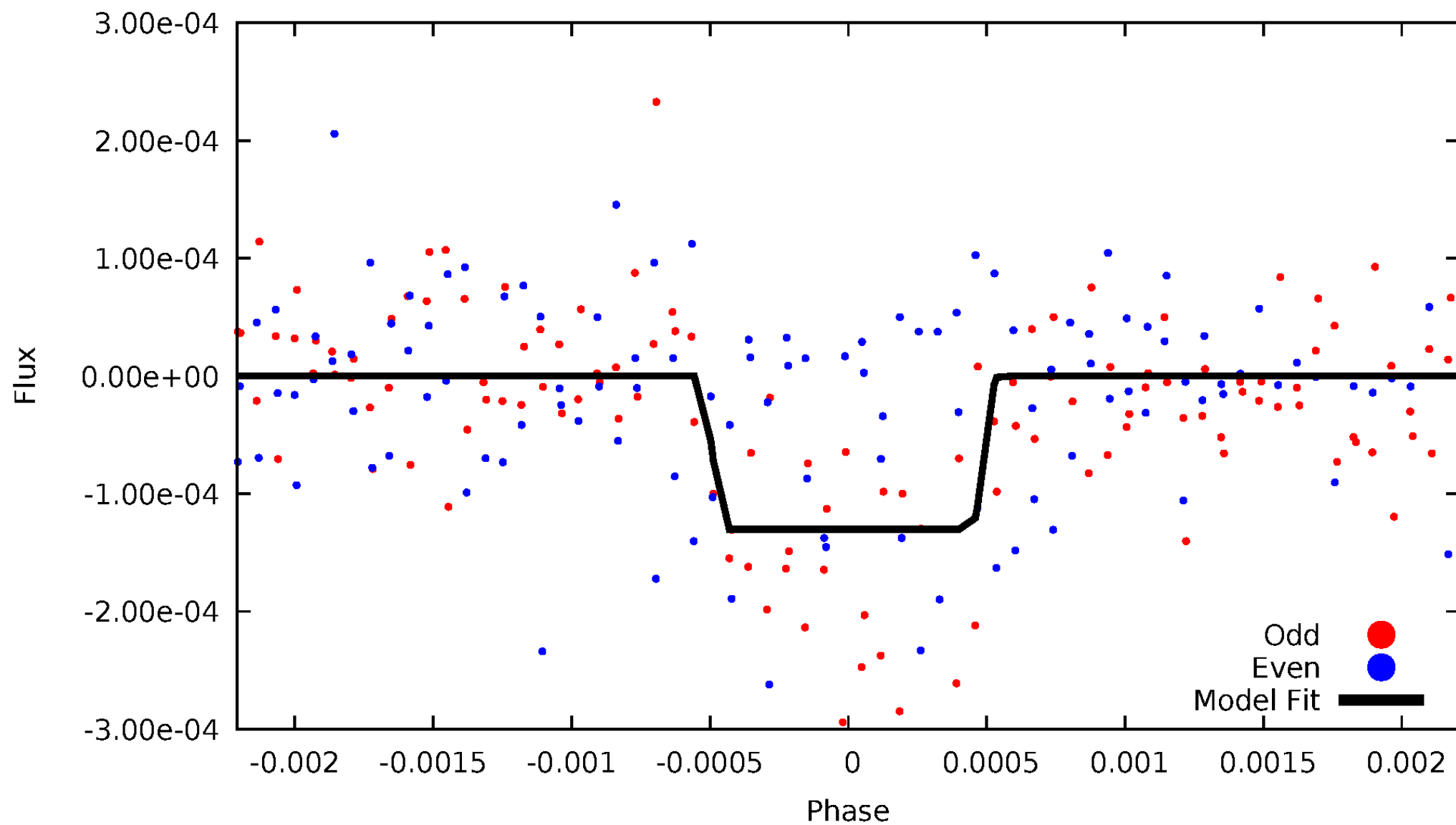
DV Odd/Even

TCE 007430713-01



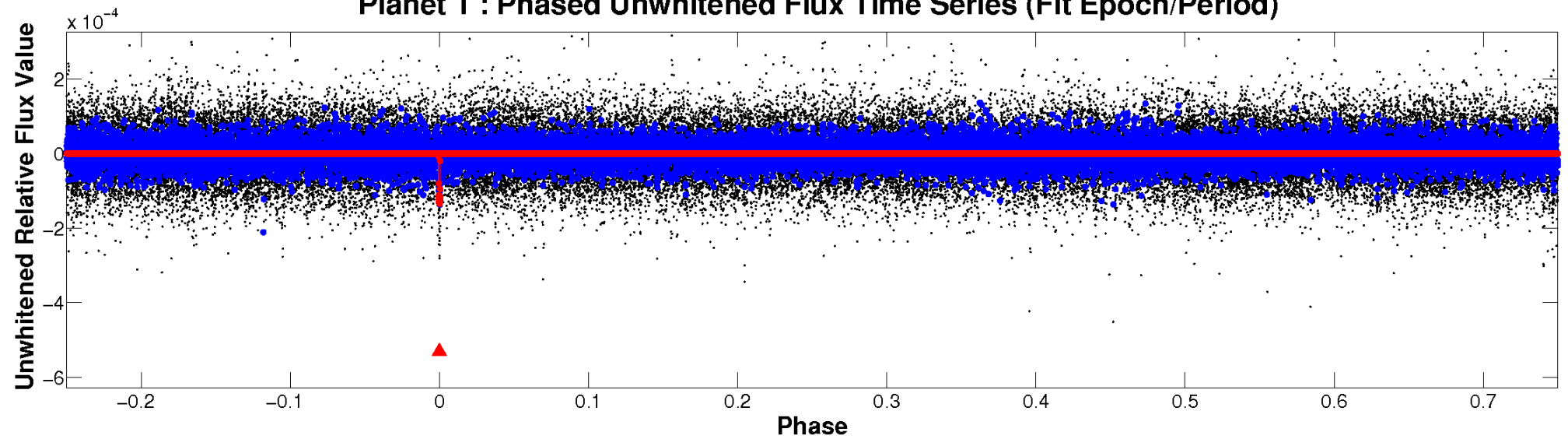
ALT Odd/Even

TCE 007430713-01

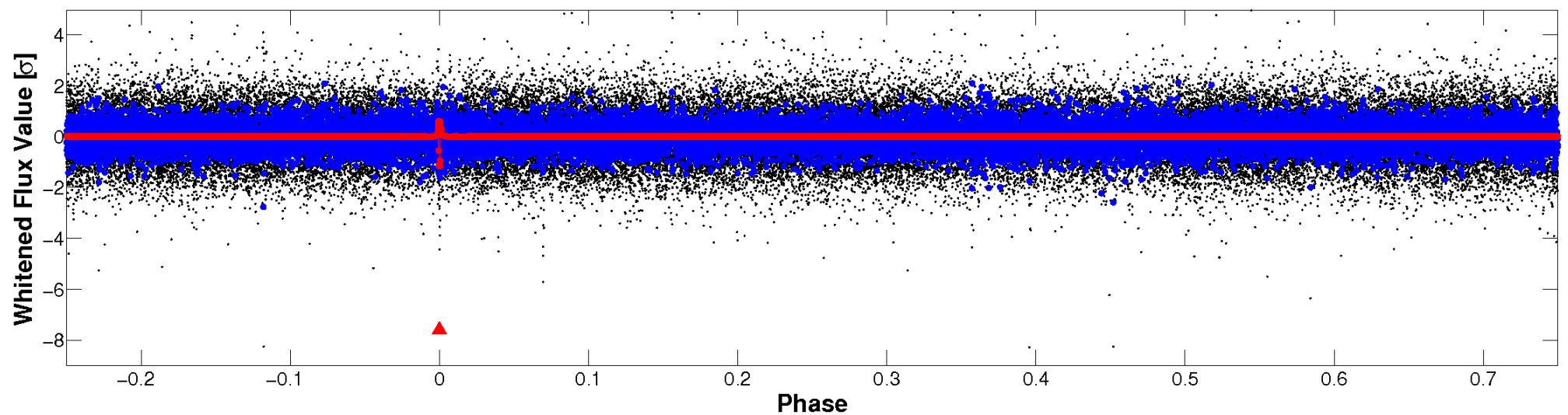


Non-Whitened Vs. Whitened Light Curve

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

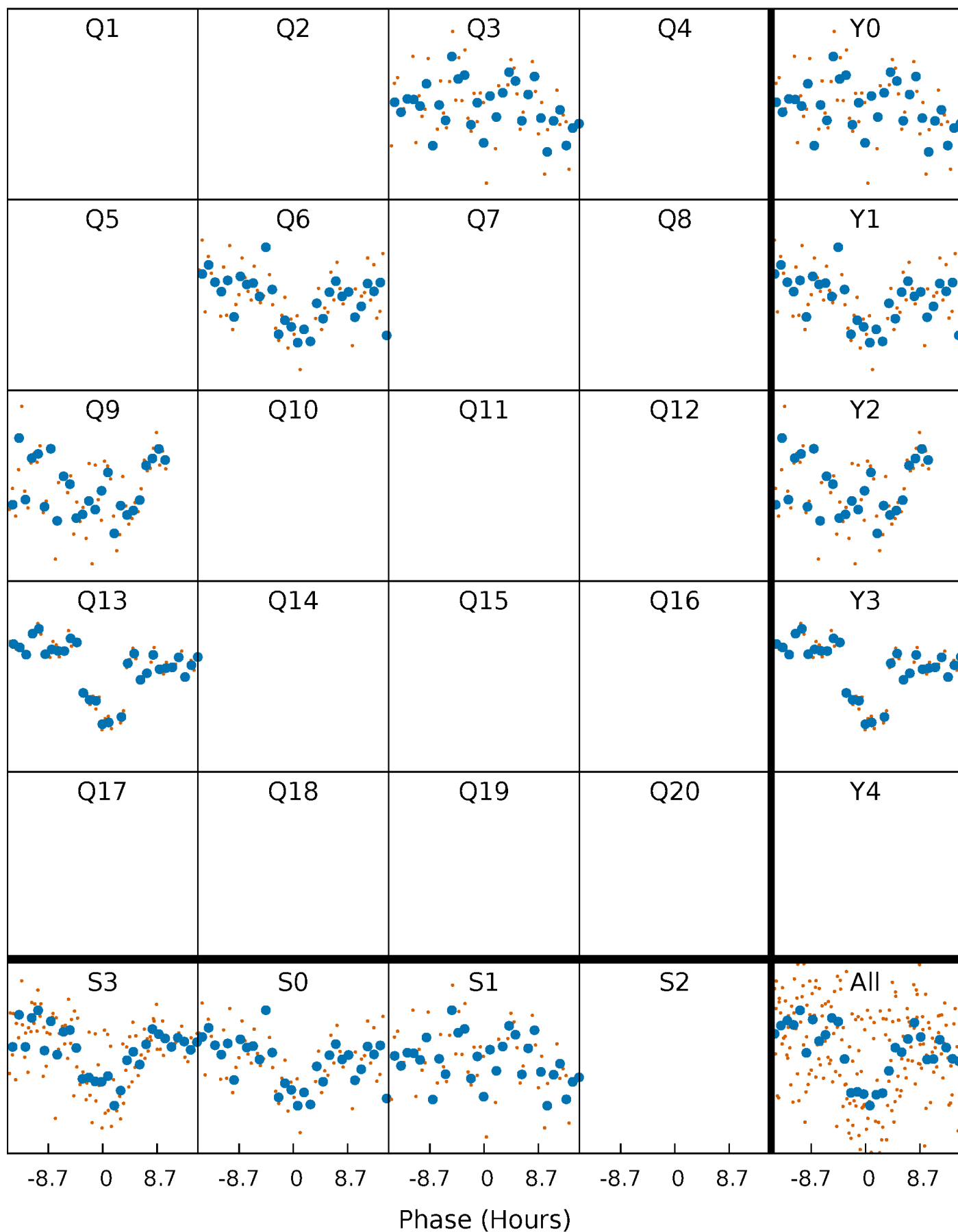


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



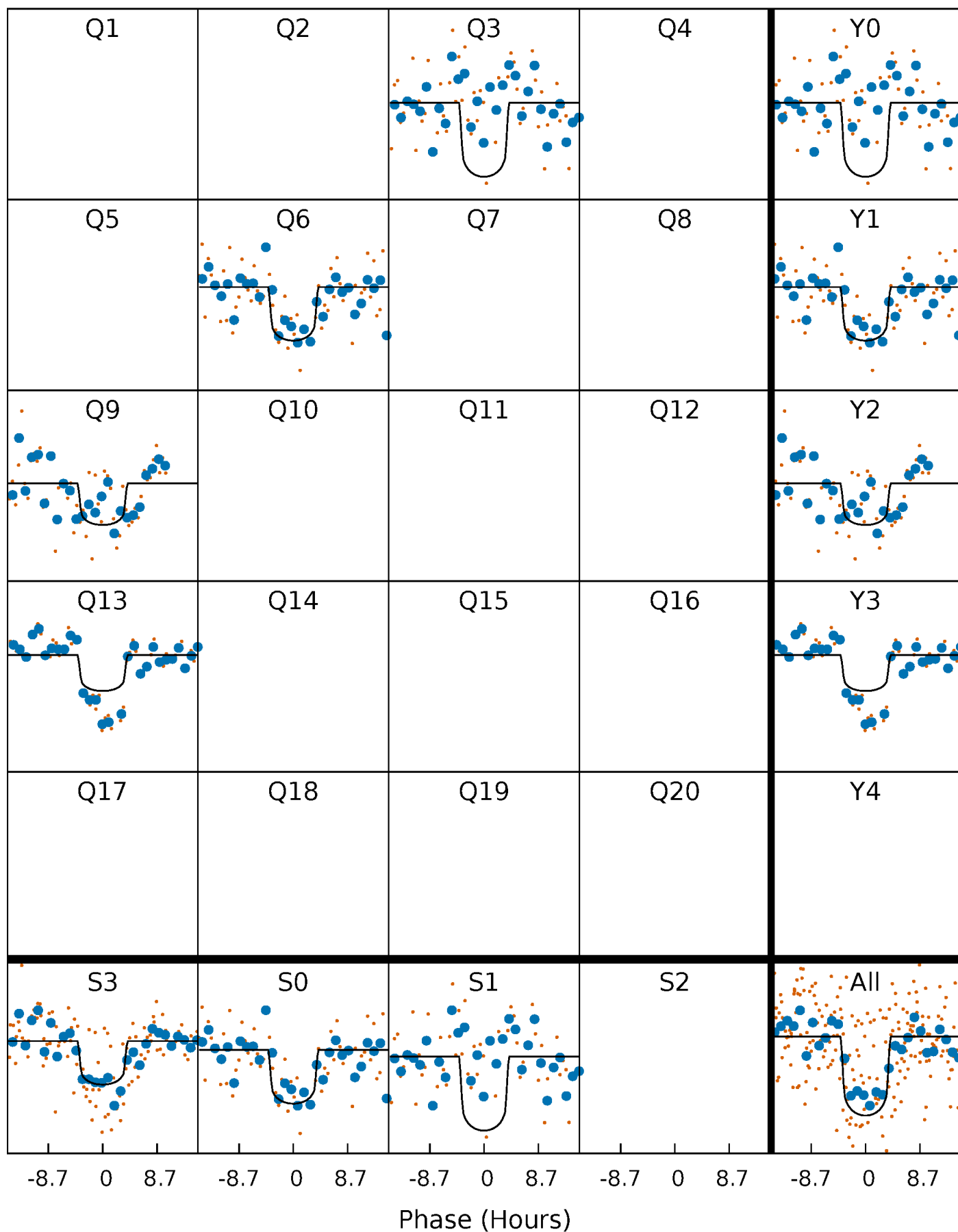
PDC Quarter-Phased Transit Curves

TCE 007430713-01 P=298.976285 Days $T_0=288.263111$ (BKJD)



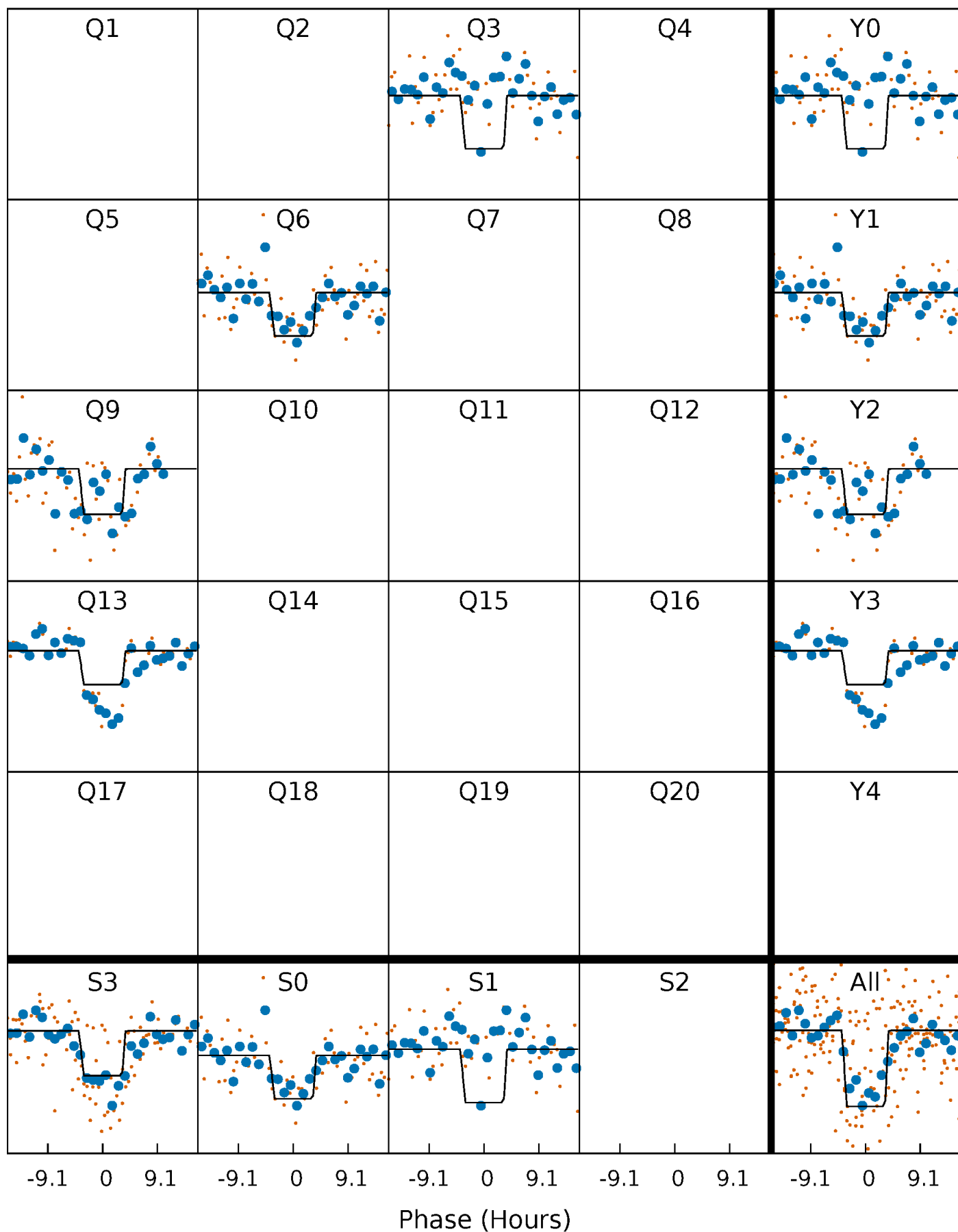
DV Quarter-Phased Transit Curves

TCE 007430713-01 P=298.976285 Days $T_0=288.263111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

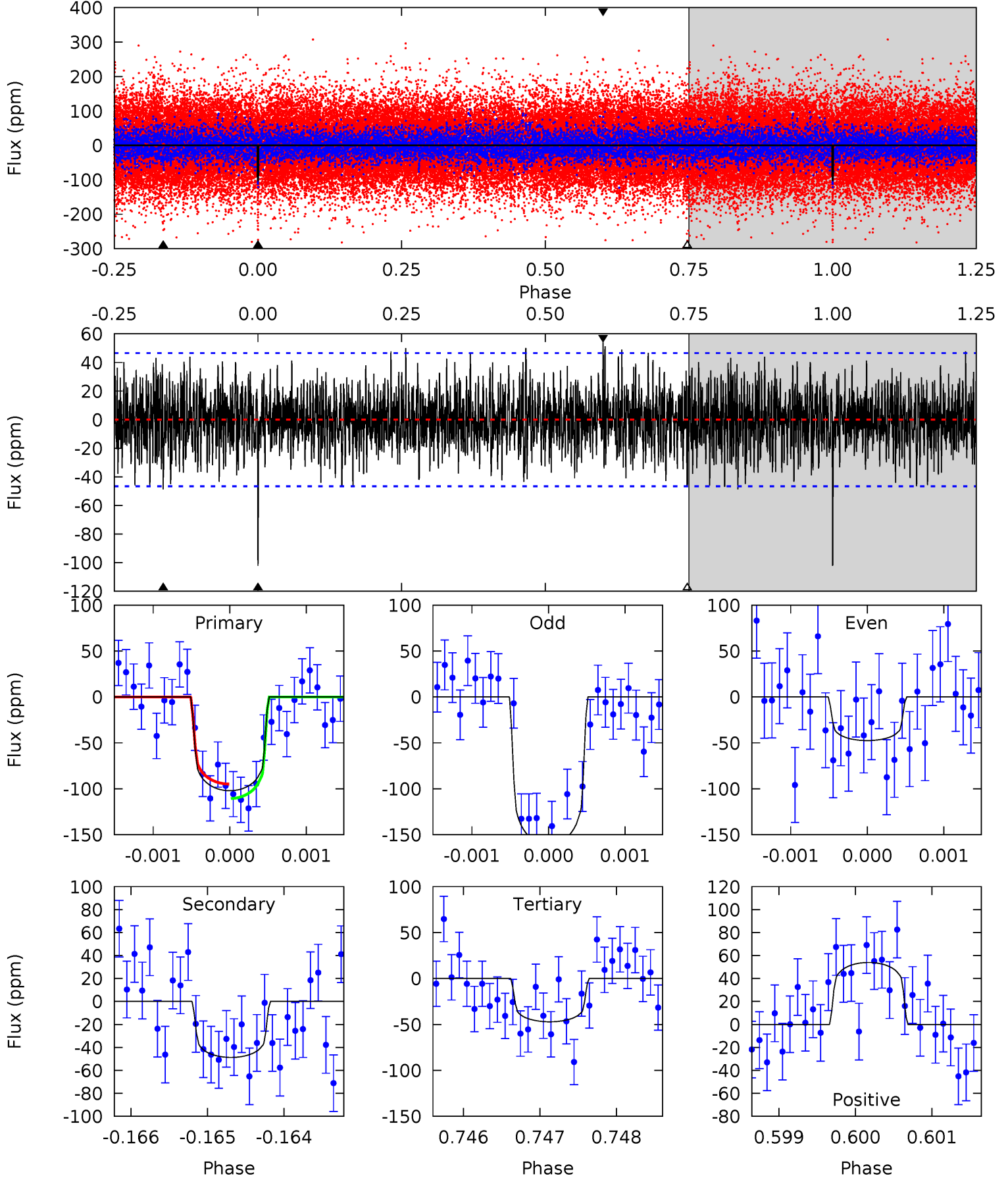
TCE 007430713-01 P=298.963416 Days $T_0=288.304846$ (BKJD)



DV Model-Shift Uniqueness Test

007430713-01, P = 298.976285 Days, E = 288.263111 Days

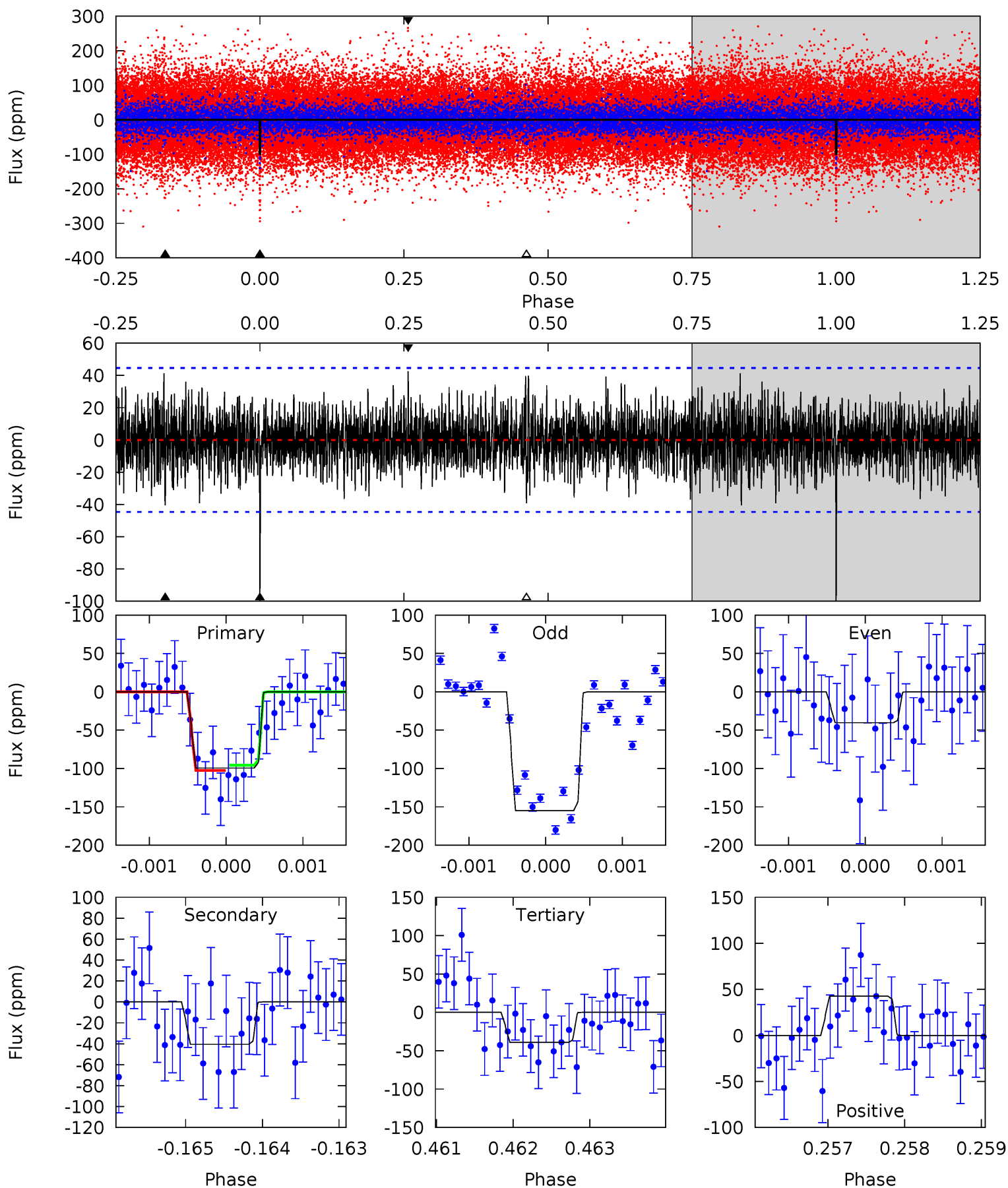
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	5.68	5.49	6.29	5.44	3.27	1.86	6.41	5.61	0.19	-0.61	6.65	1.07	0.35	0.92



Alt Model-Shift Uniqueness Test

007430713-01, P = 298.963416 Days, E = 288.304846 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.93	4.77	5.18	5.44	3.27	1.45	7.33	6.92	0.16	-0.25	7.01	1.03	0.30	0.42



Stellar Parameters For KIC 007430713

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6774^{+189}_{-284}	$4.273^{+0.105}_{-0.195}$	$-0.260^{+0.250}_{-0.300}$	$1.346^{+0.412}_{-0.222}$	$1.246^{+0.189}_{-0.189}$	$0.720^{+0.357}_{-0.383}$
	+3%/-4%	+2%/-5%	+96%/-115%	+31%/-16%	+15%/-15%	+50%/-53%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007430713-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49 ± 9	$1.74^{+0.56}_{-0.50}$	504^{+35}_{-31}	5255^{+882}_{-573}	7642^{+7797}_{-3493}
Alt.	-41 ± 8	$1.72^{+0.57}_{-0.54}$	502^{+39}_{-32}	5085^{+952}_{-562}	6627^{+8125}_{-3253}

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 $A_{obs} \gg 1.0$

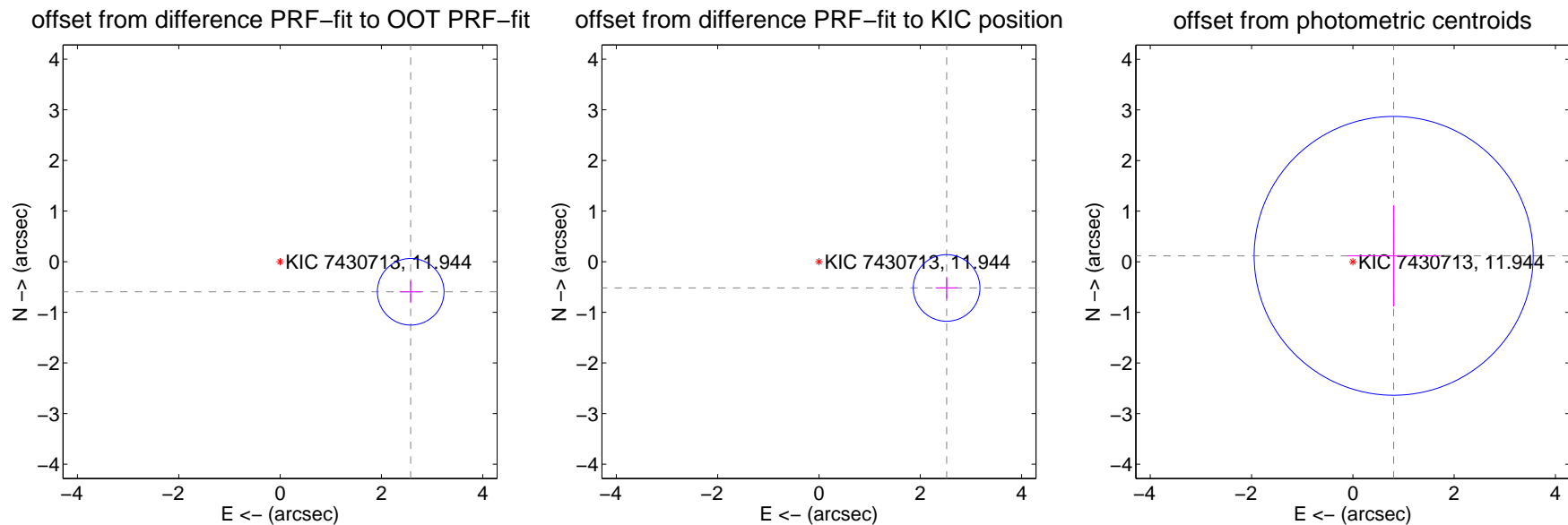
DV Centroid Data

Supplemental centroid analysis for 007430713-01. **Kepler magnitude: 11.94.** Transit SNR 8.42

There are 1 quarters with good PRF difference image offsets

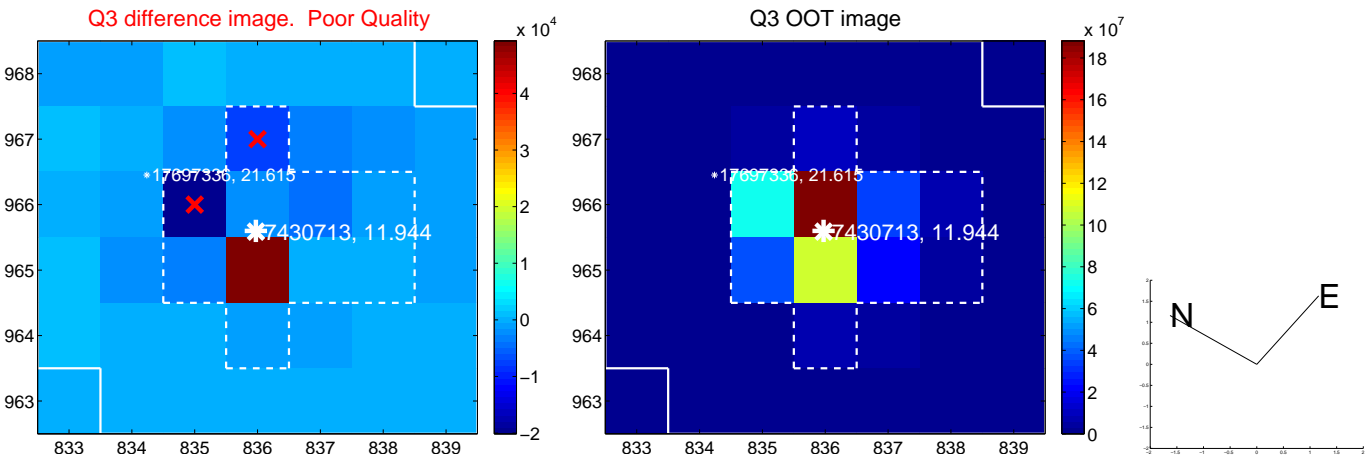
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.646 ± 0.219	12.06	-2.578 ± 0.219	-0.594 ± 0.218
PRF-fit source offset from KIC position	2.572 ± 0.219	11.73	-2.520 ± 0.219	-0.519 ± 0.218
photometric centroid source offset	0.81 ± 0.92	0.89	-0.81 ± 0.92	0.12 ± 1.00

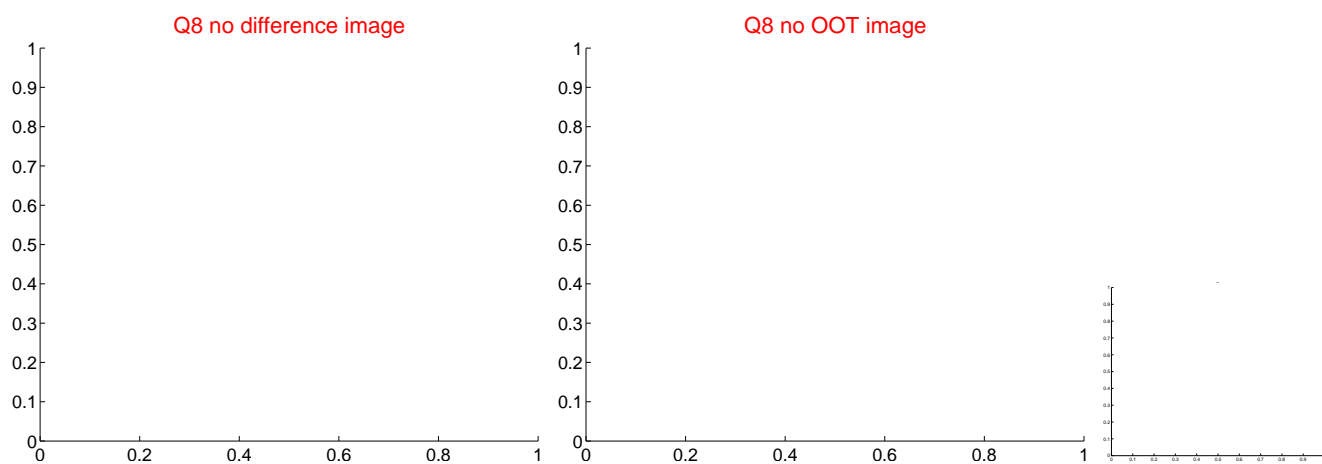
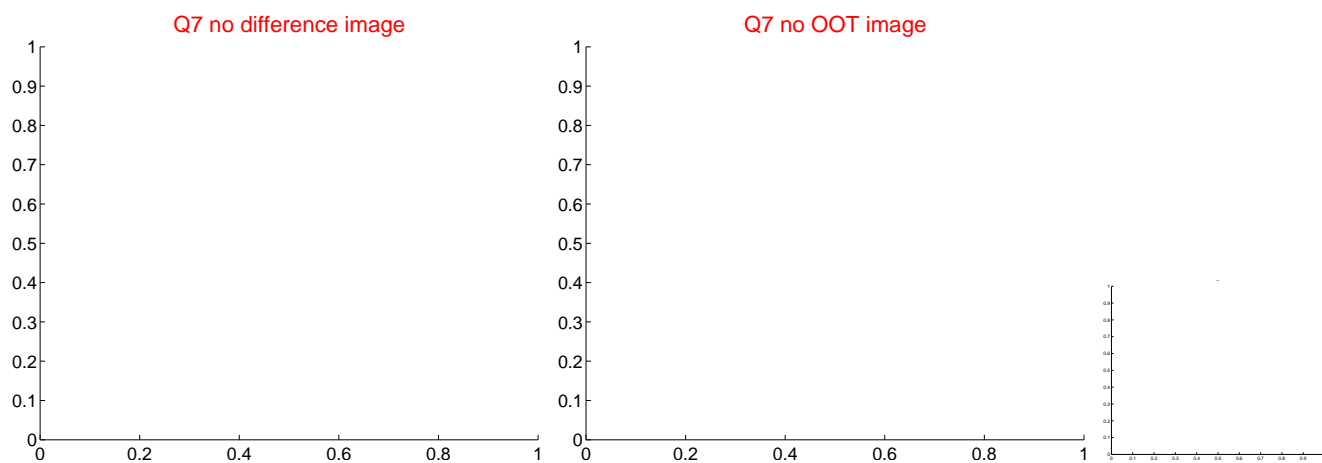
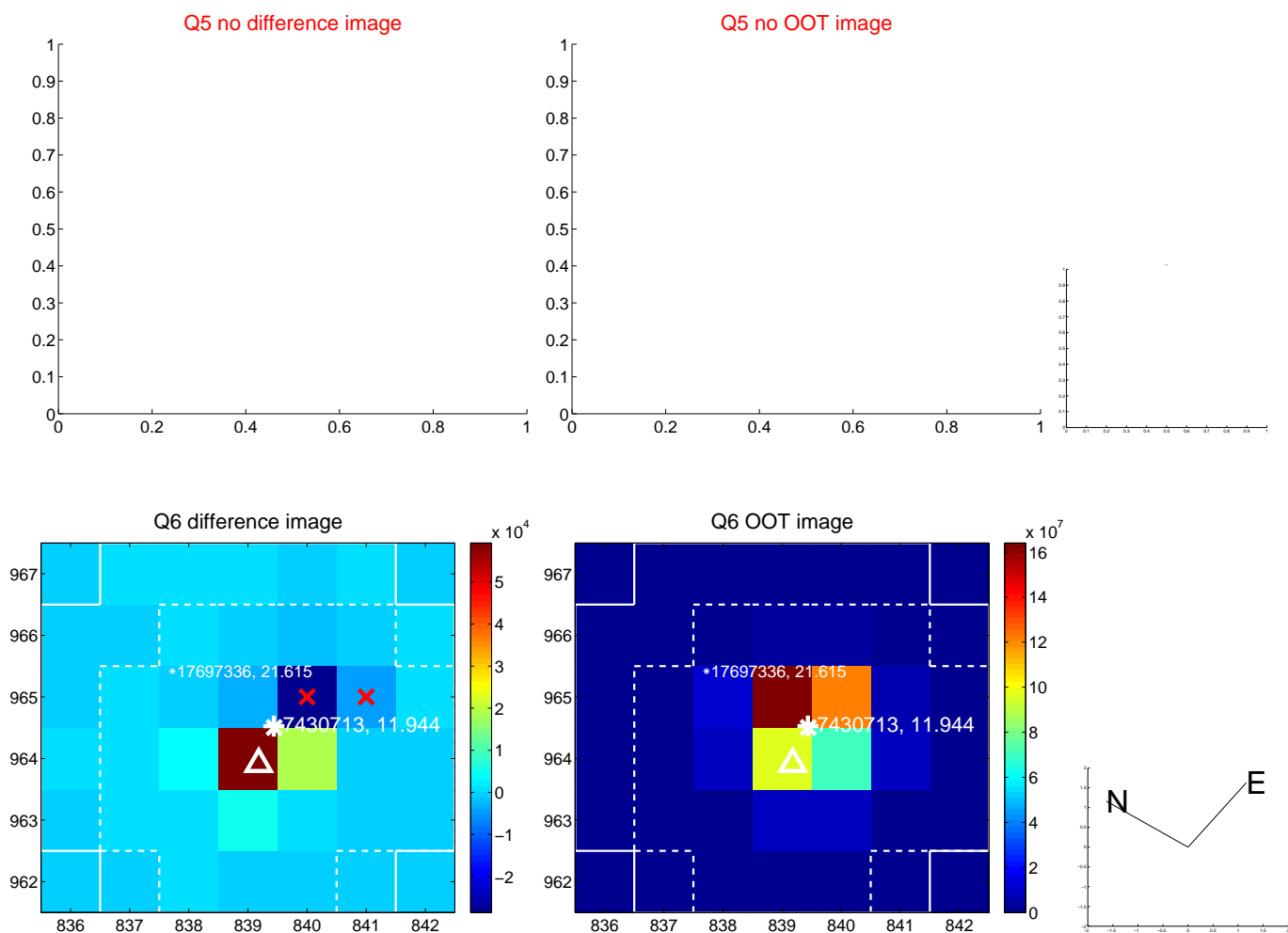


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



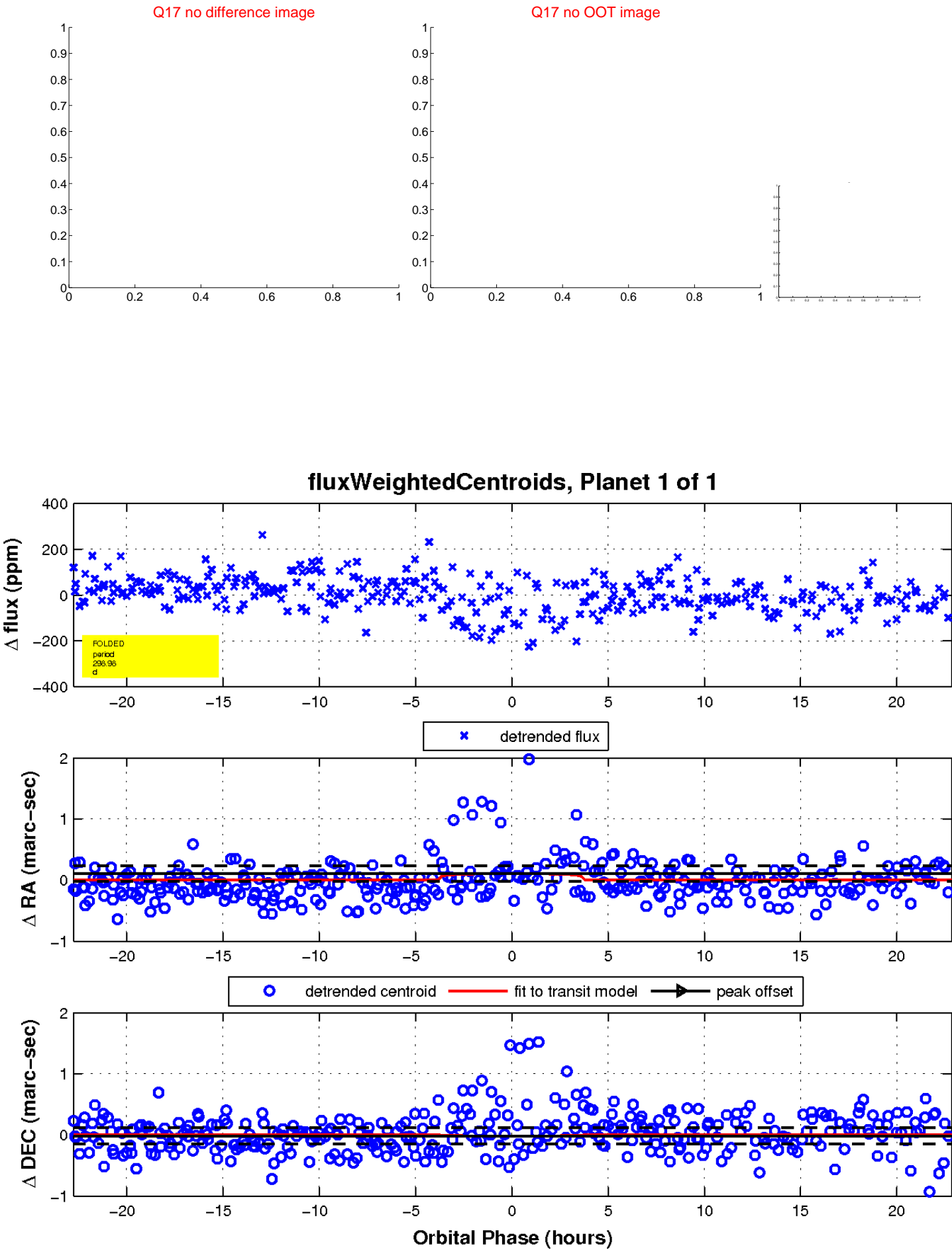
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

