

KIC 008229044

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})
008229044-01	OBS	No	374.472143	259.743133	4741.5	70.348	10.2	15.1	0.12	2661	1.50	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008229044-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

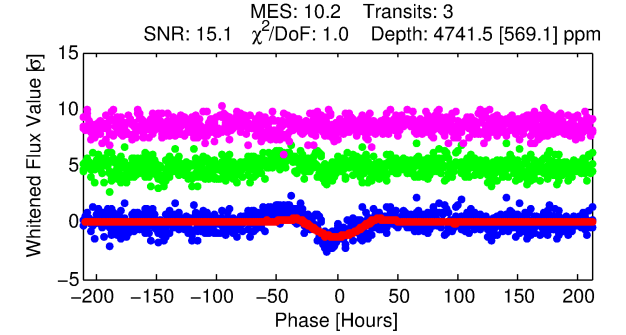
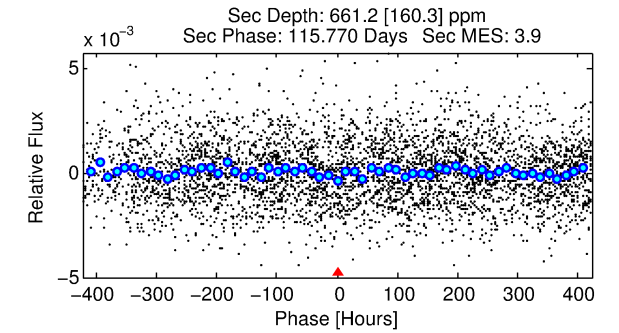
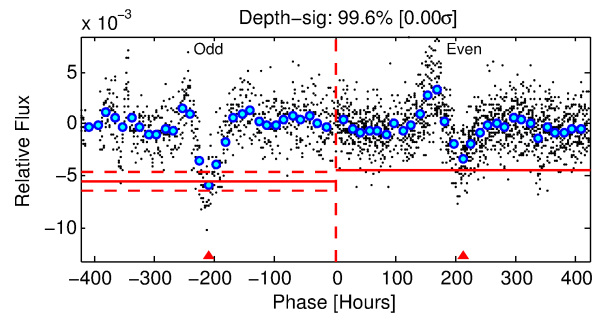
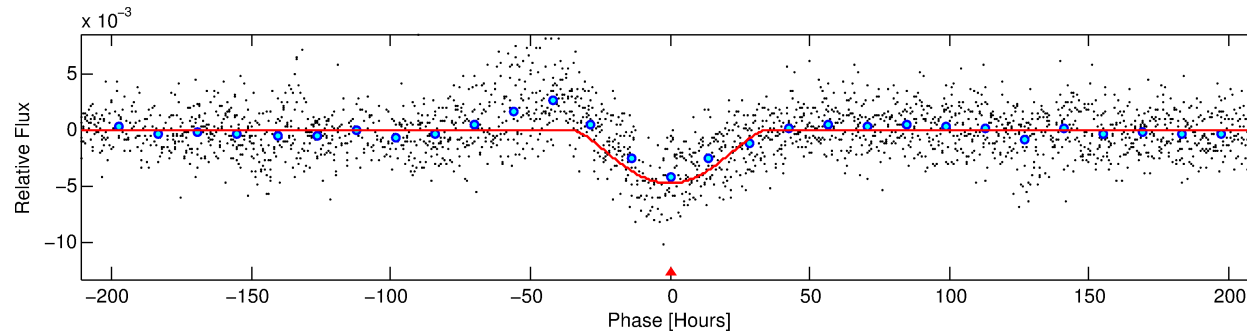
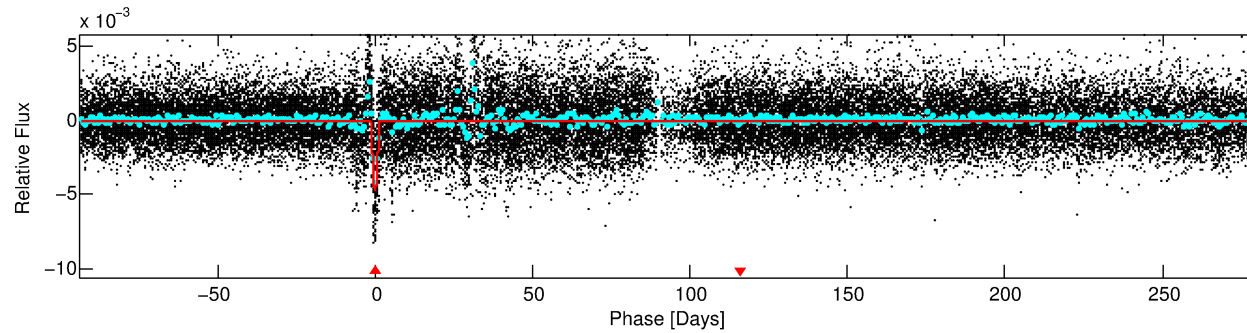
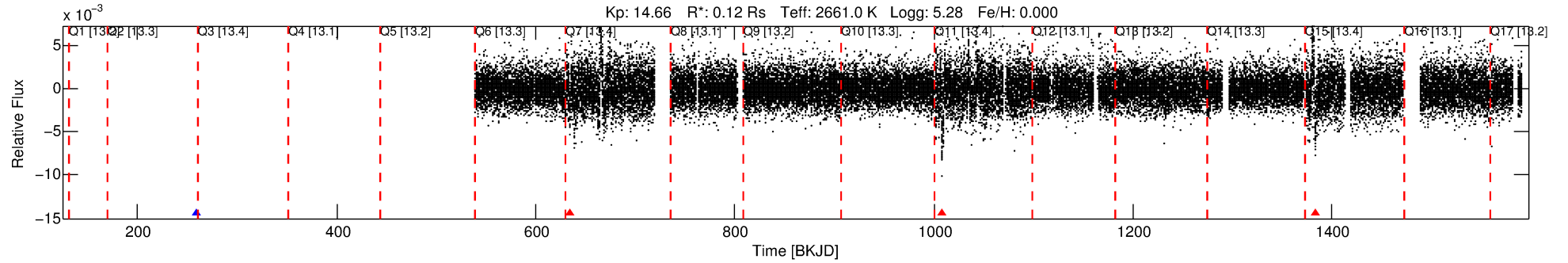
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008229044-01

No Significant Match Found

DV One-Page Summary

KIC: 8229044 Candidate: 1 of 1 Period: 374.472 d



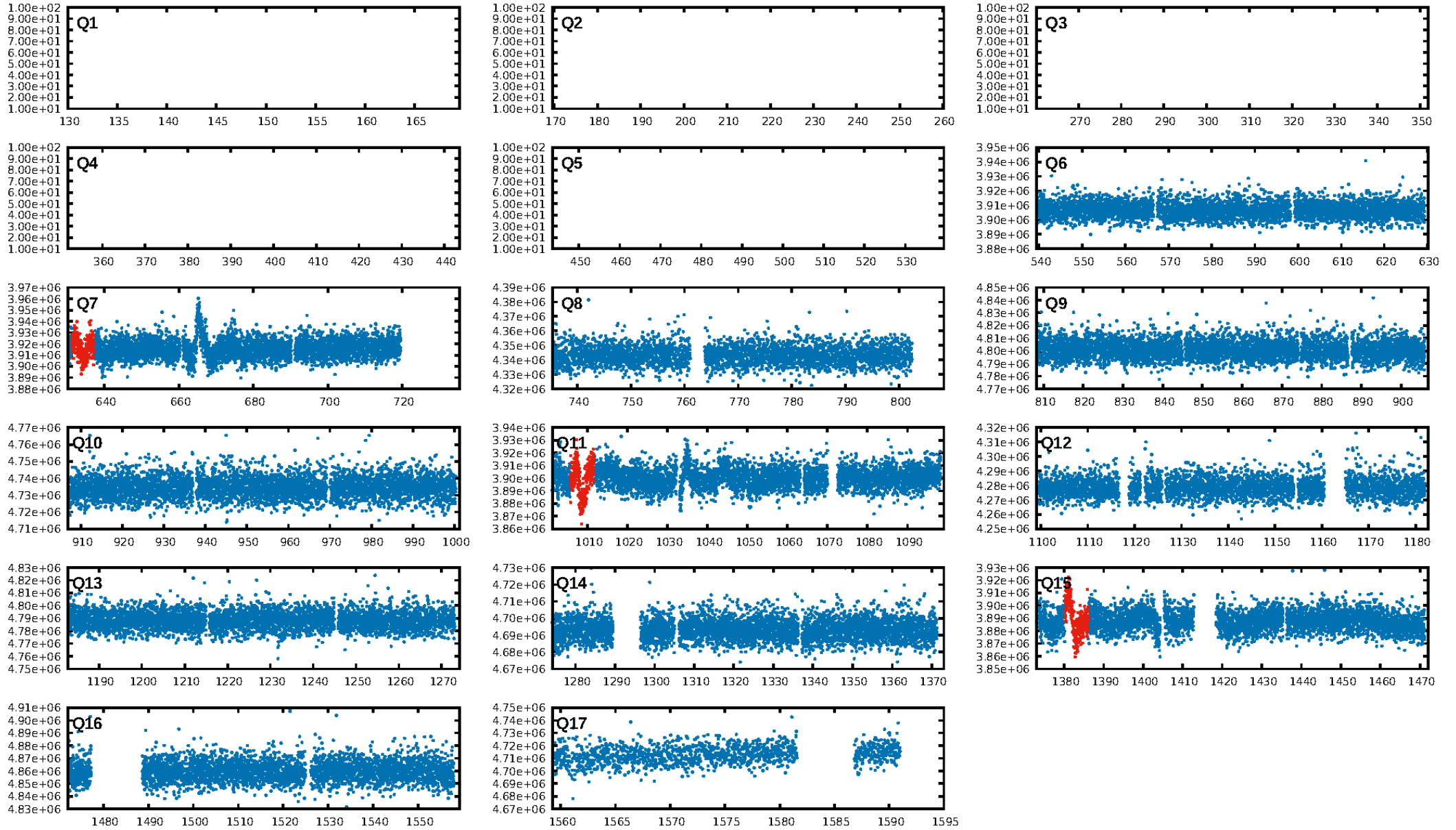
DV Fit Results:

Period = 374.47214 [0.05293] d
Epoch = 259.7431 [0.1218] BKJD
Rp/R* = 0.1182 [0.2294]
a/R* = 20.40 [6.88]
b = 1.00 [0.31]
Seff = 0.00 [0.00]
Teq = 59 [0] K
Rp = 1.50 [2.90] Re
a = 0.4627 [0.0000] AU
Ag = 34778.90 [135240.59] [0.26σ]
Teffp = 1241 [1207] K [0.98σ]

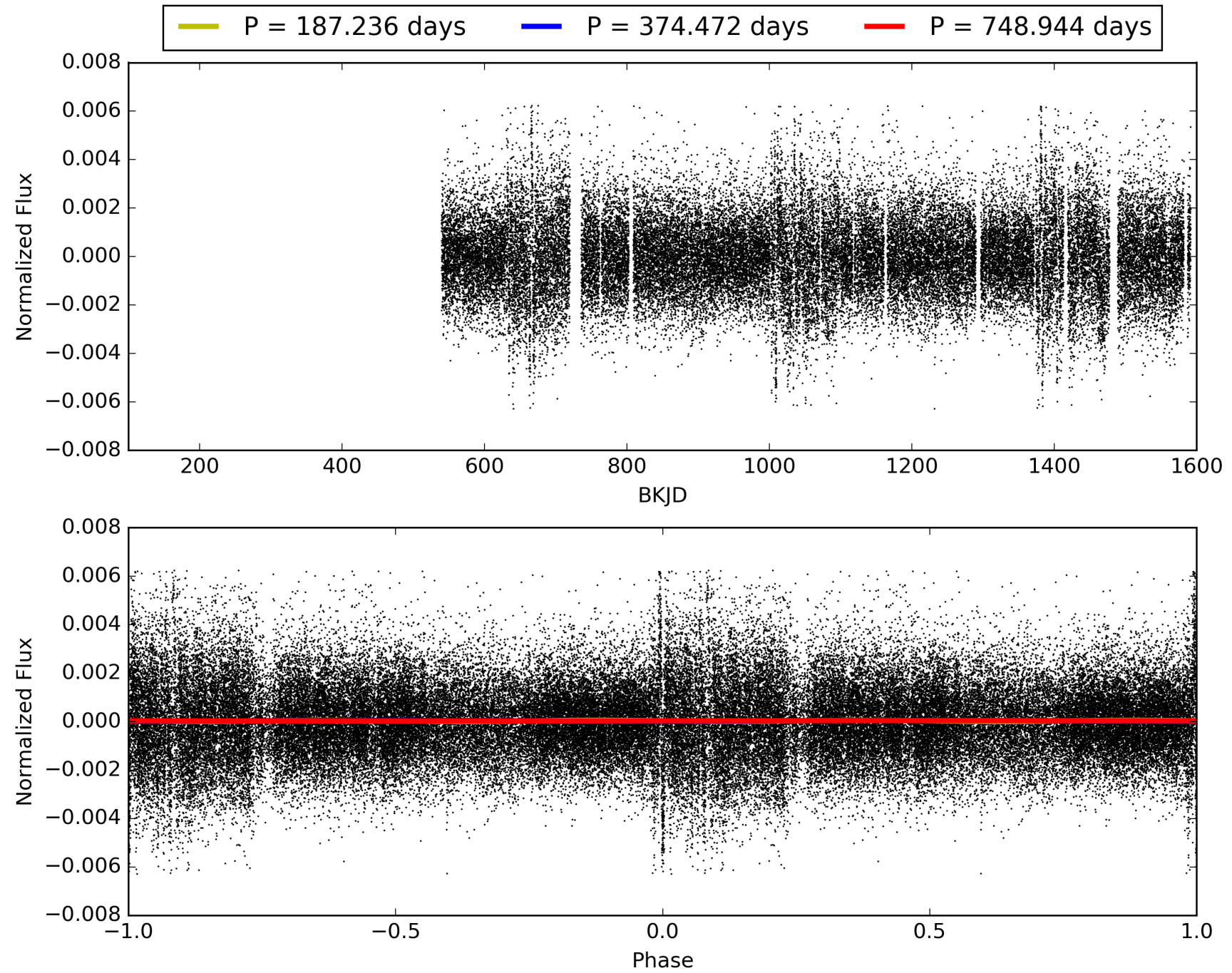
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.96e-12
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 0.1382
Centroid-sig: 0.0%
Centroid-so: 3.764 arcsec [4.39σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

TCE 008229044-01, PDC Light Curves

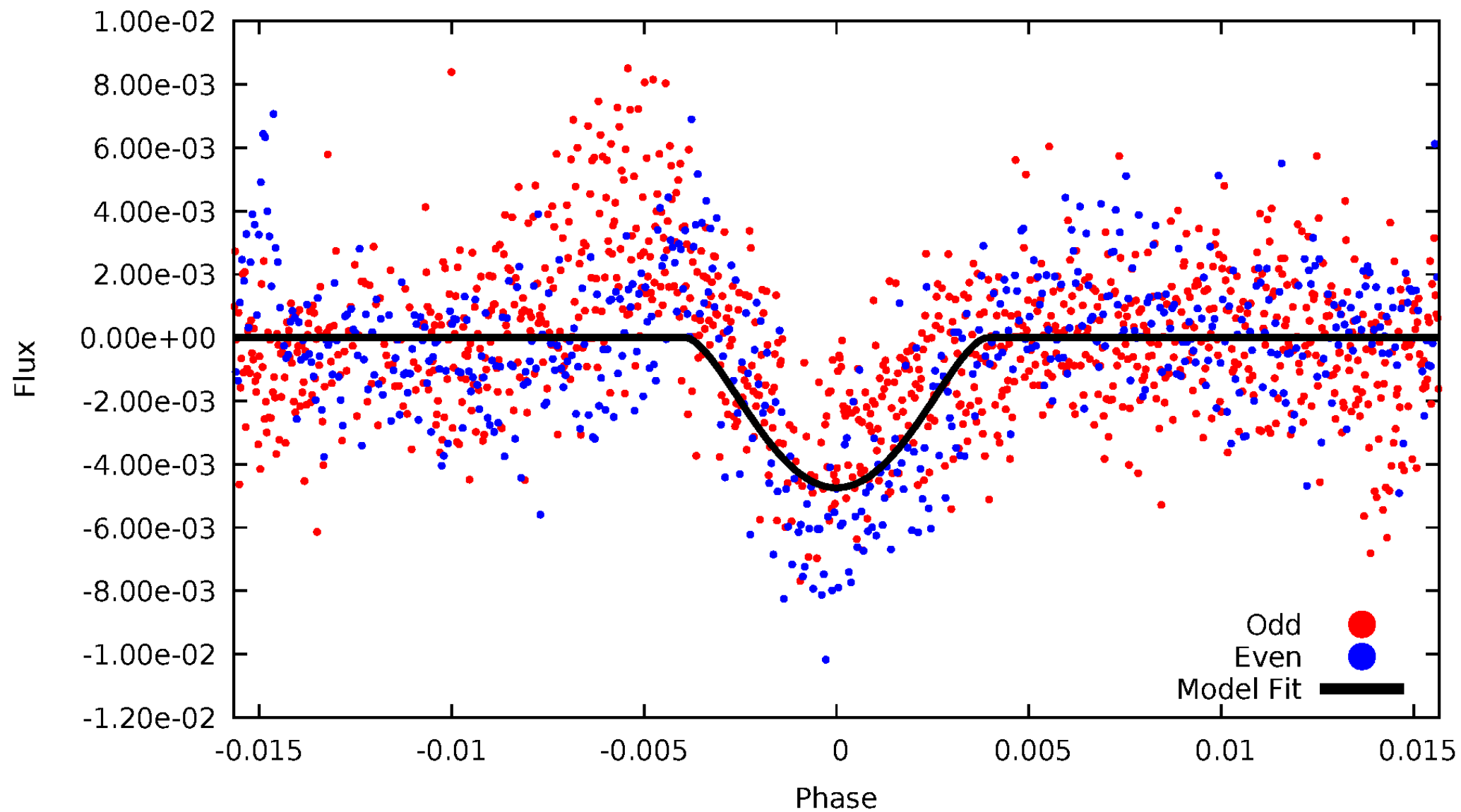


TCE 008229044-01



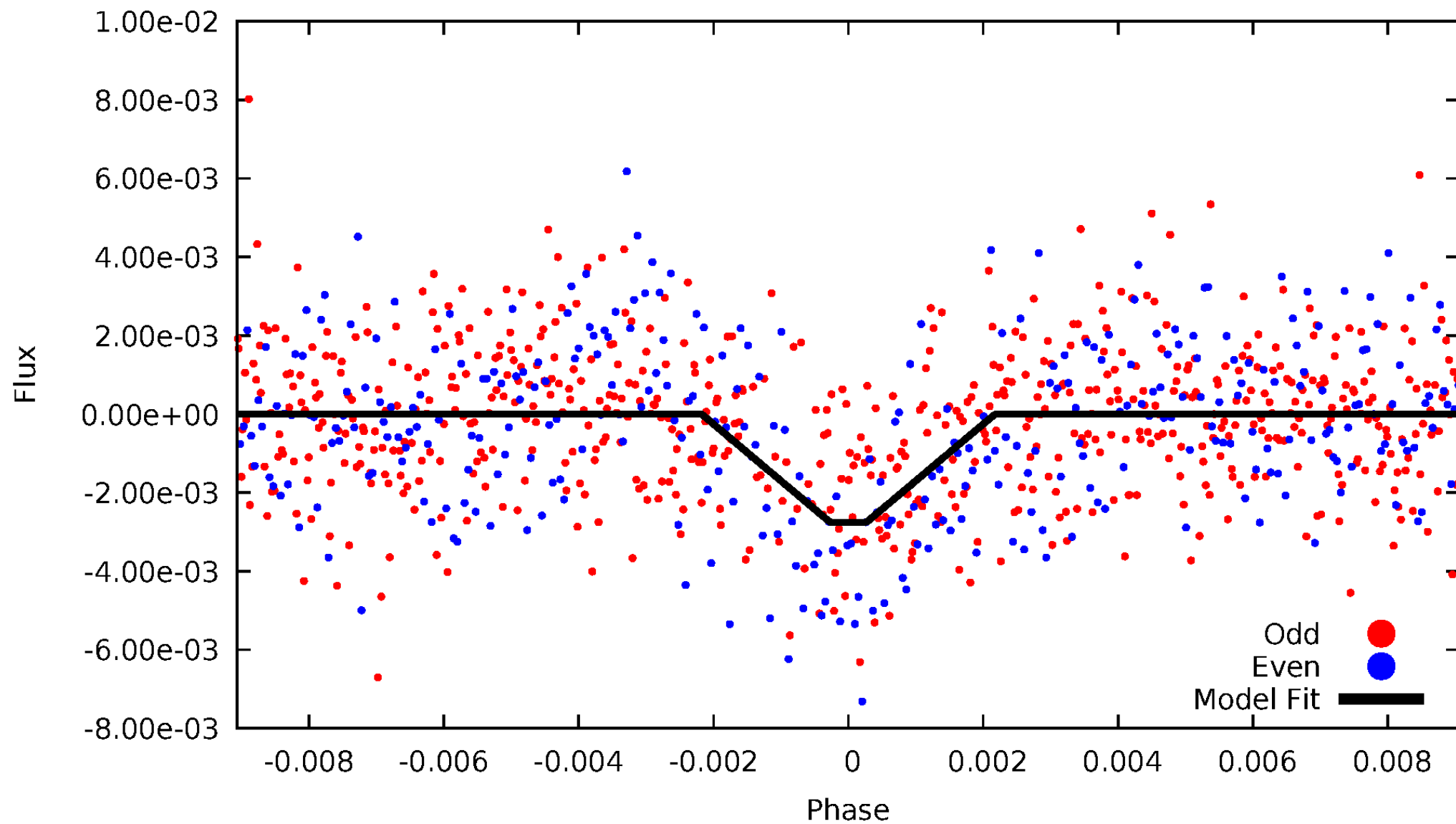
DV Odd/Even

TCE 008229044-01



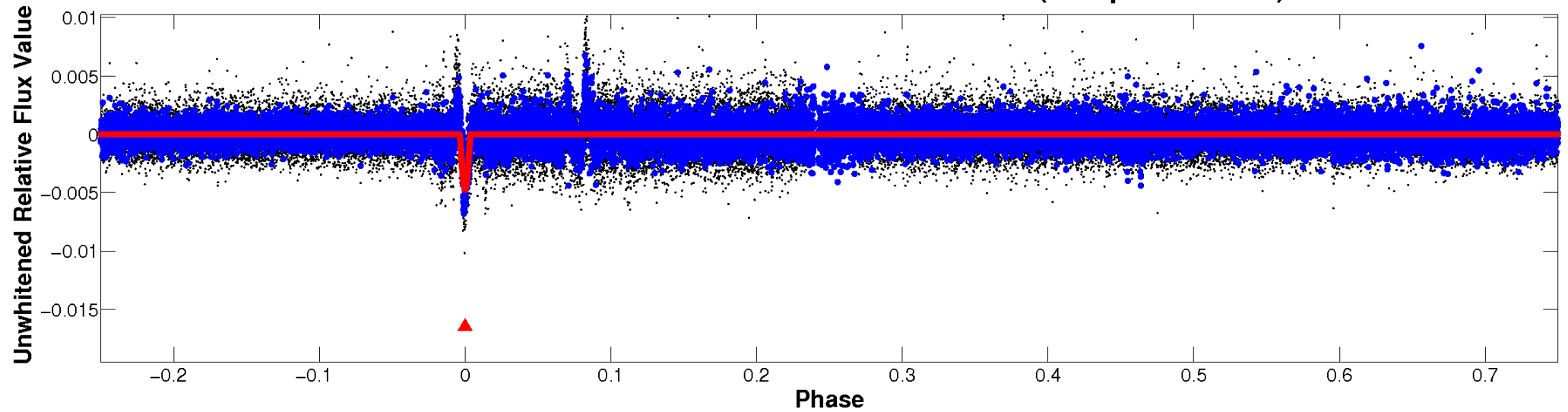
ALT Odd/Even

TCE 008229044-01

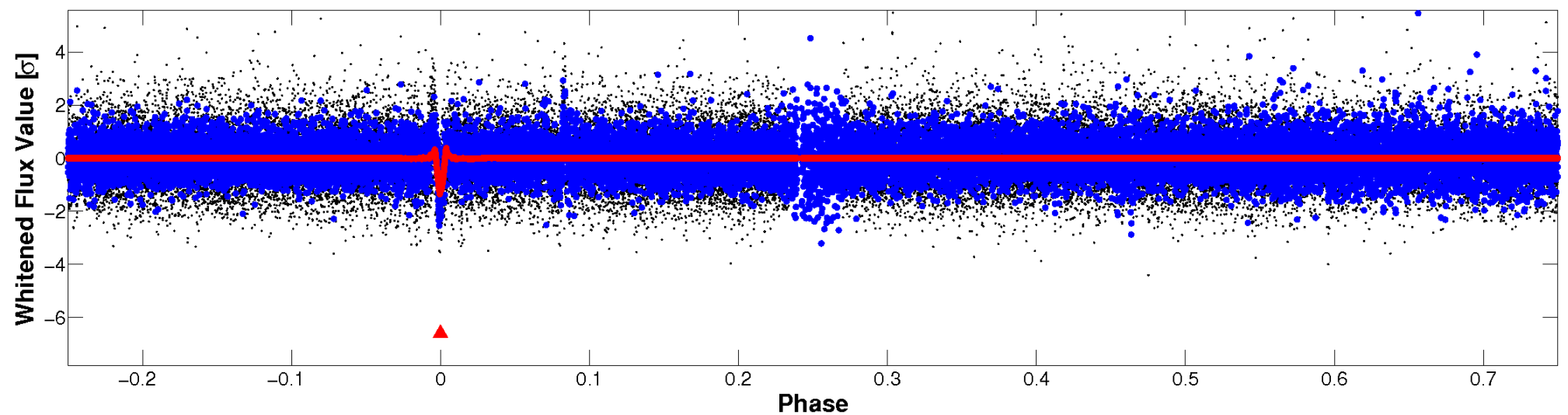


Non-Whitened Vs. Whitened Light Curve

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

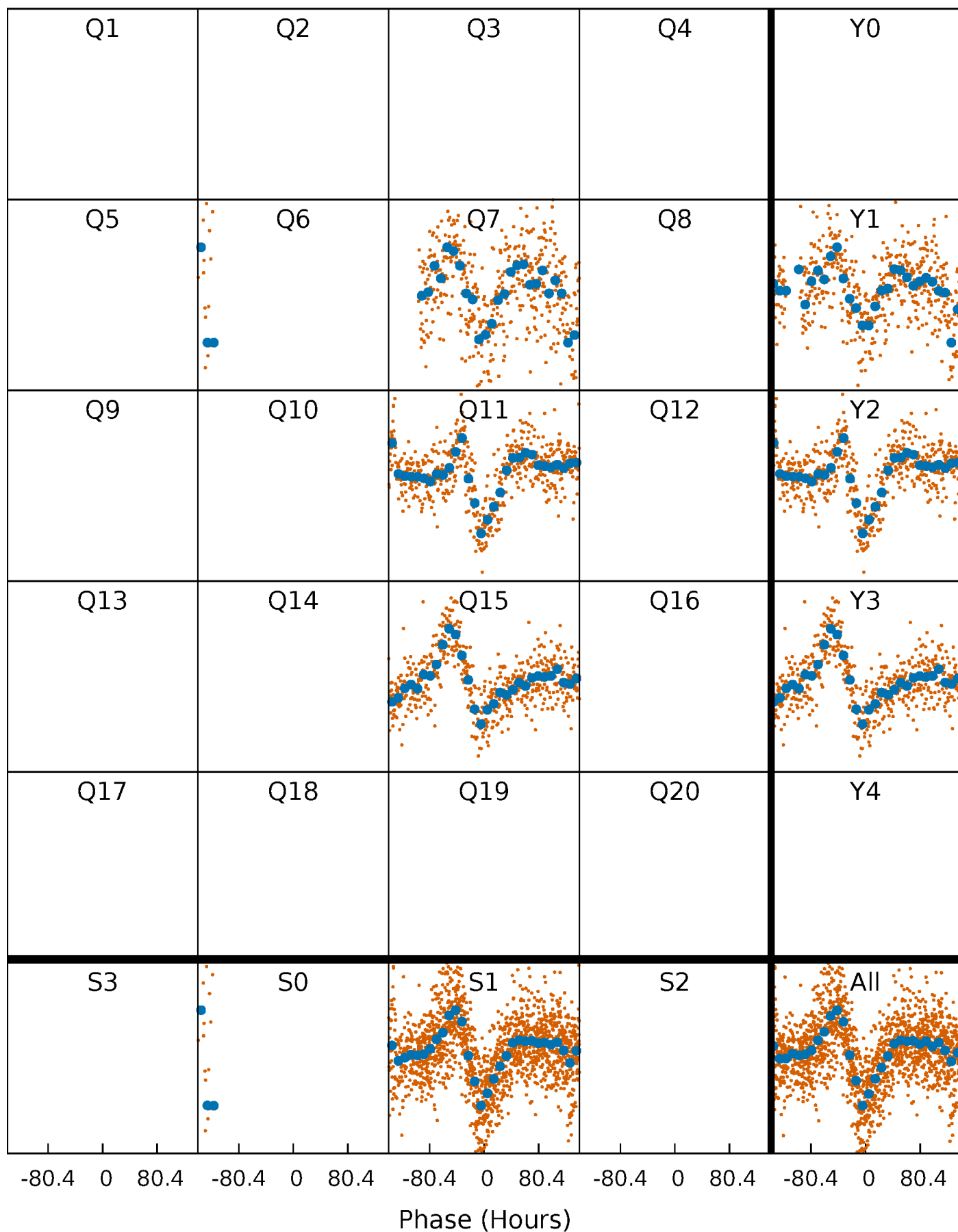


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



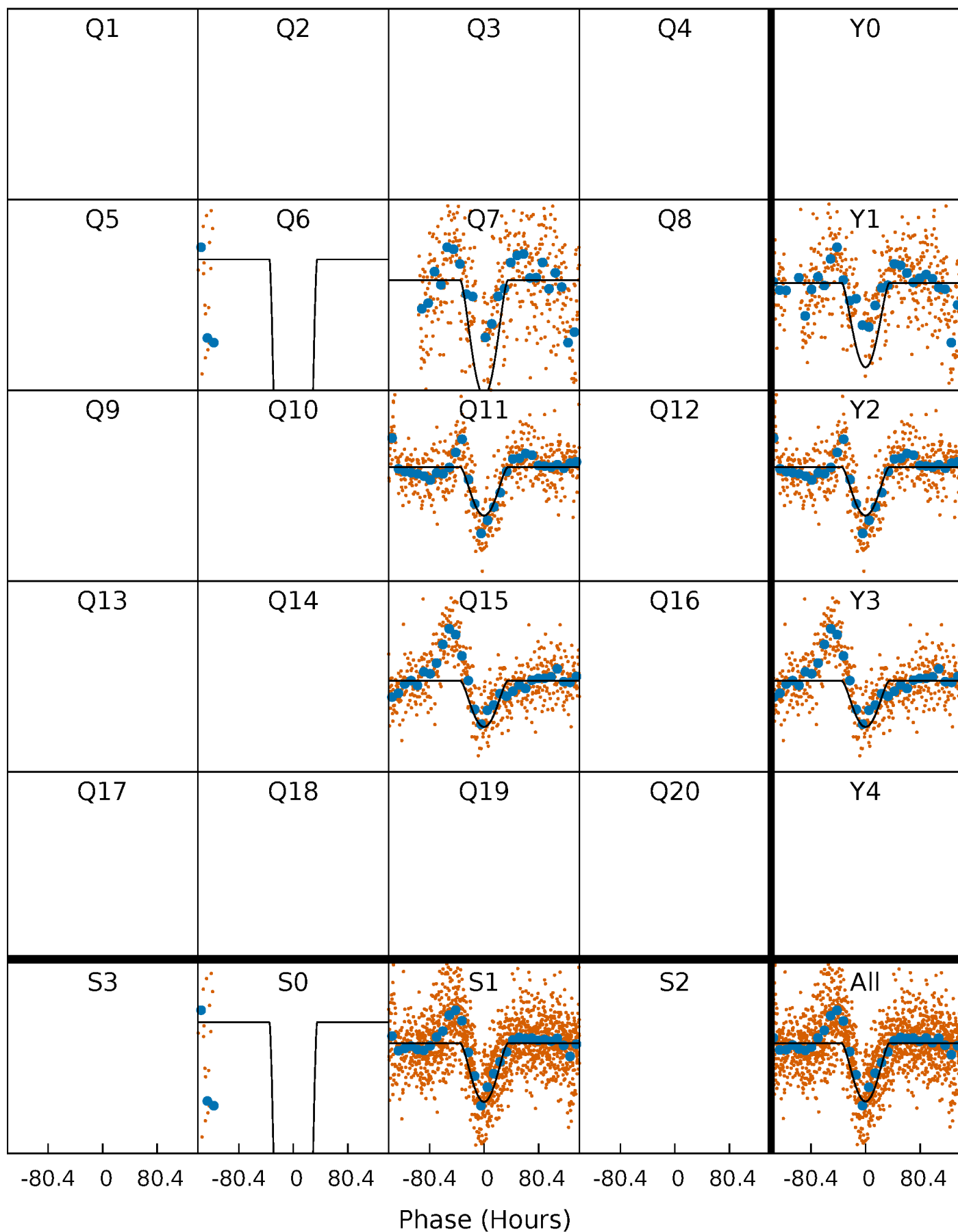
PDC Quarter-Phased Transit Curves

TCE 008229044-01 P=374.472143 Days $T_0=259.743133$ (BKJD)



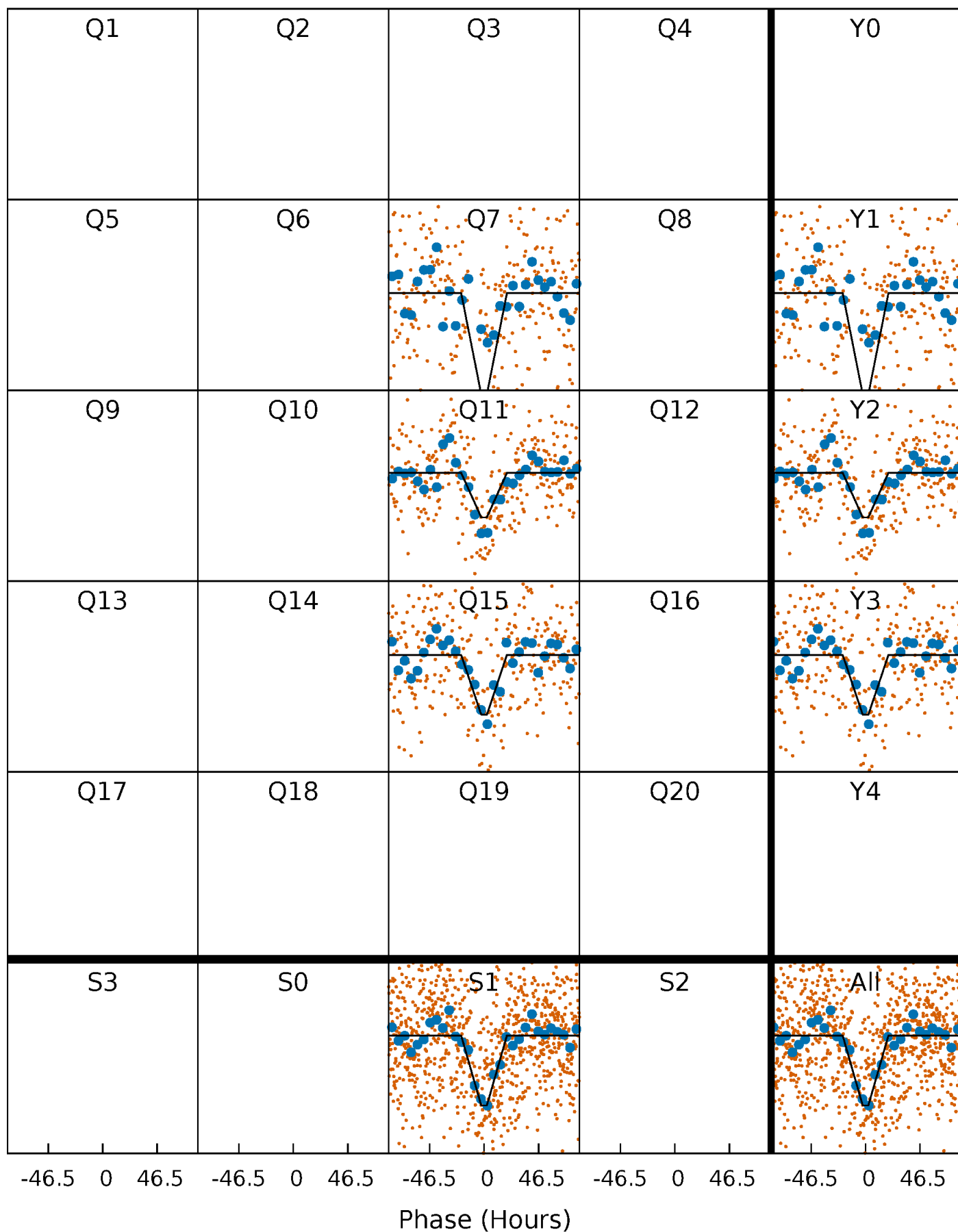
DV Quarter-Phased Transit Curves

TCE 008229044-01 P=374.472143 Days $T_0=259.743133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

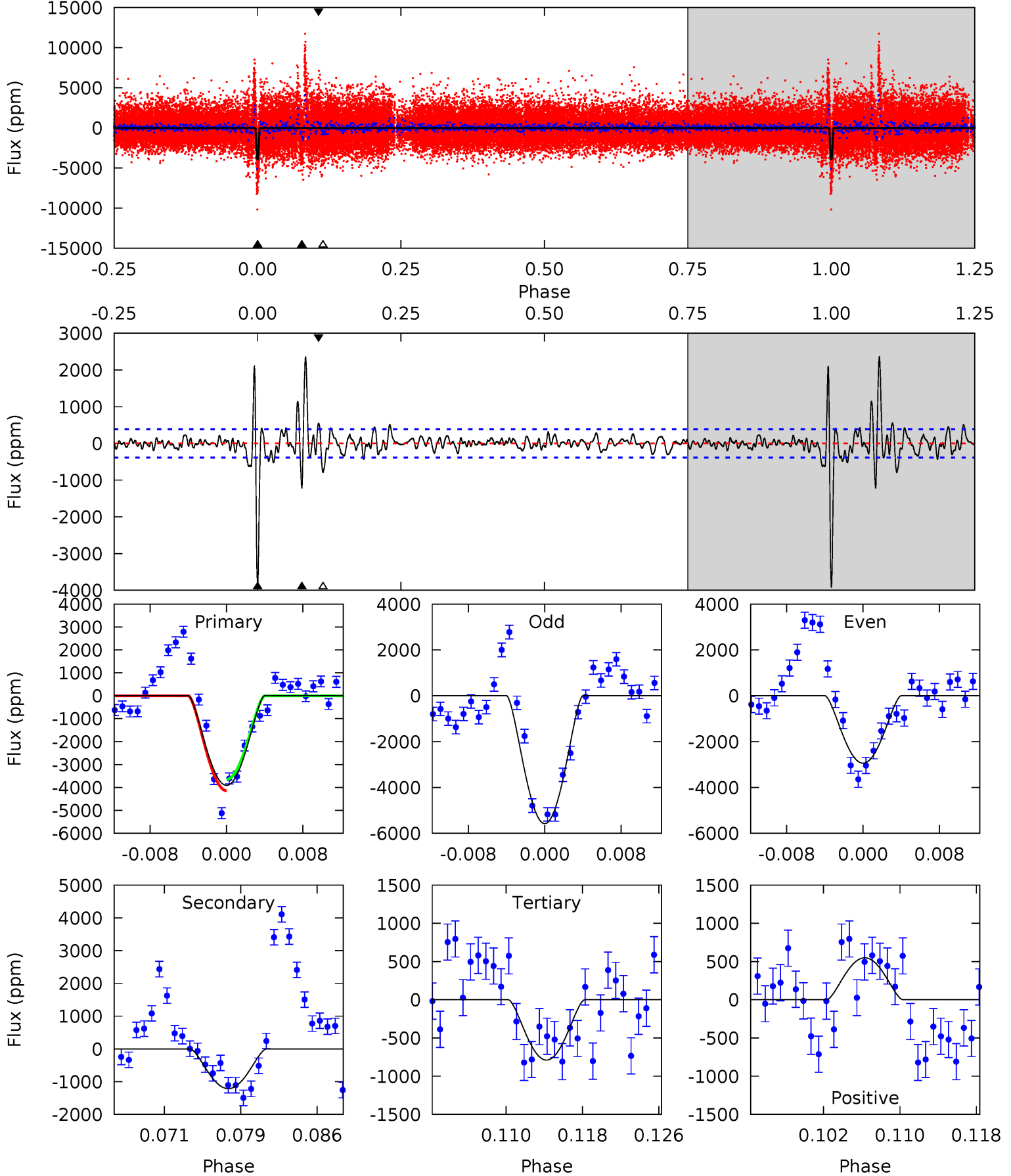
TCE 008229044-01 P=374.233840 Days $T_0=260.040060$ (BKJD)



DV Model-Shift Uniqueness Test

008229044-01, P = 374.472143 Days, E = 259.743133 Days

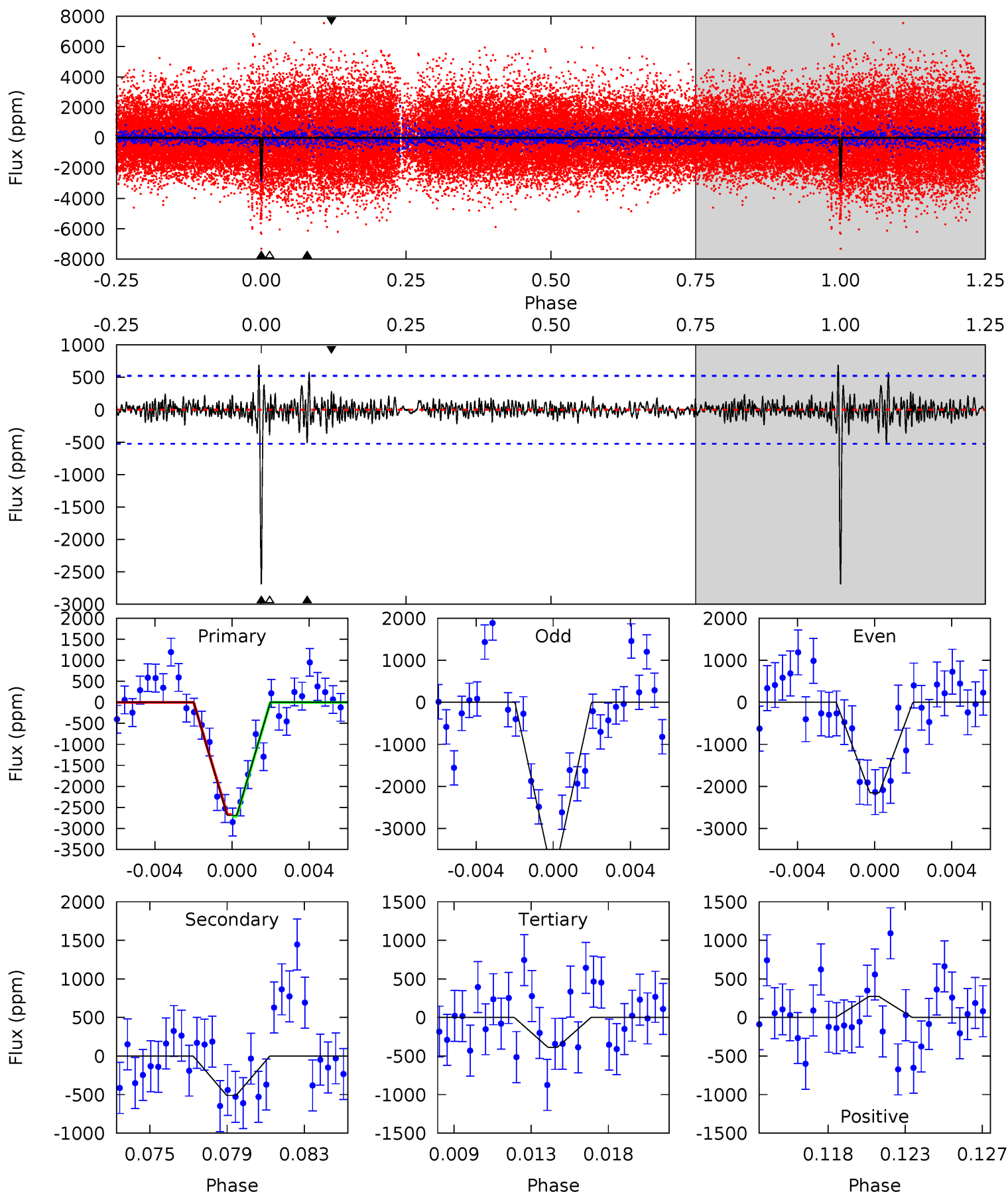
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.3	15.9	10.4	7.20	5.07	2.66	2.45	41.0	44.1	5.57	8.73	16.4	1.04	0.38	3.18



Alt Model-Shift Uniqueness Test

008229044-01, P = 374.233840 Days, E = 260.040060 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	5.05	3.83	2.71	5.18	2.85	0.90	22.8	23.9	1.23	2.34	7.38	0.94	0.20	0.20



Stellar Parameters For KIC 008229044

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	2661^{+1}_{-1}	$5.283^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$0.116^{+1.000}_{-1.000}$	$0.094^{+1.000}_{-1.000}$	$85.200^{+1.000}_{-1.000}$
	+0%/-0%	+19%/-19%	+inf%/-inf%	+862%/-862%	+1064%/-1064%	+1%/-1%
Source	PHO54	PHO54	PHO54	BTSL		

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

Secondary Eclipse Parameters for KIC 008229044-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1214 ± 76	$3.10^{+3.16}_{-2.12}$	84^{+8}_{-8}	1792^{+453}_{-223}	$17941^{+136547}_{-13019}$
Alt.	-510 ± 101	$2.42^{+3.00}_{-1.70}$	84^{+9}_{-8}	1720^{+449}_{-213}	$11797^{+116505}_{-9173}$

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

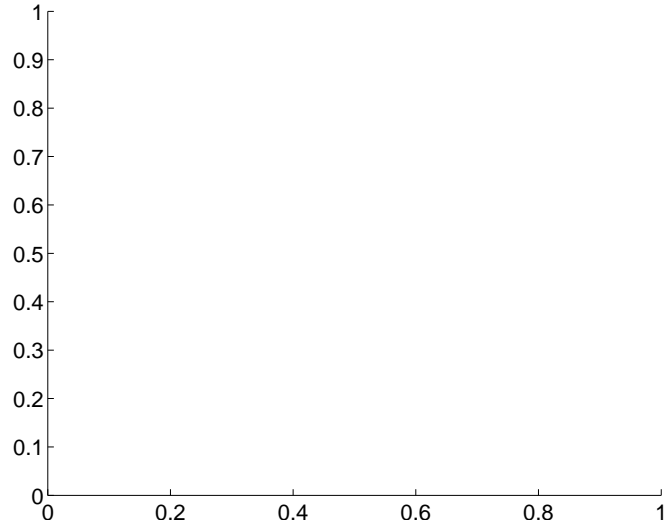
Supplemental centroid analysis for 008229044-01. Kepler magnitude: 14.66. Transit SNR 15.12

There are 0 quarters with good PRF difference image offsets

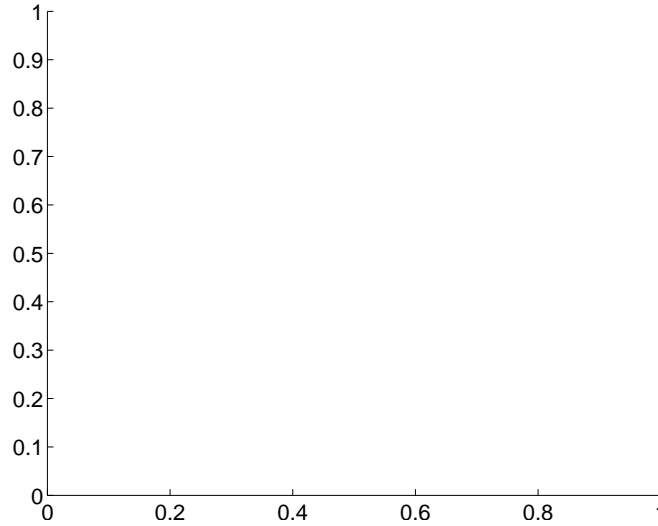
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.76 ± 0.86	4.39	2.60 ± 0.85	-2.72 ± 0.86

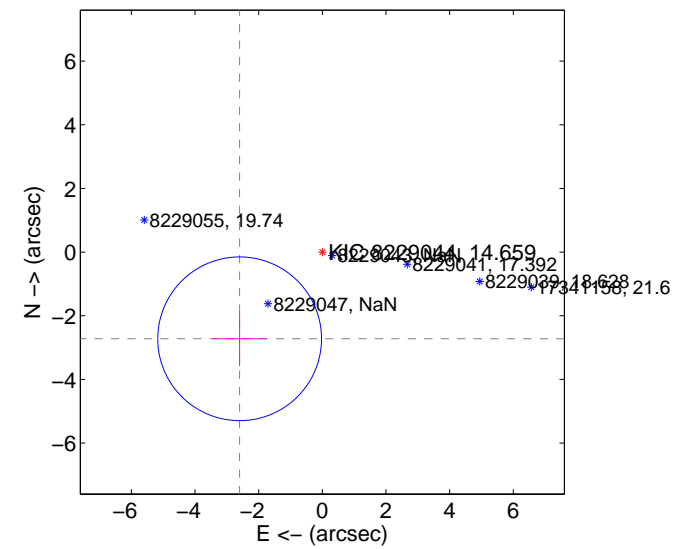
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



offset from photometric centroids



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.

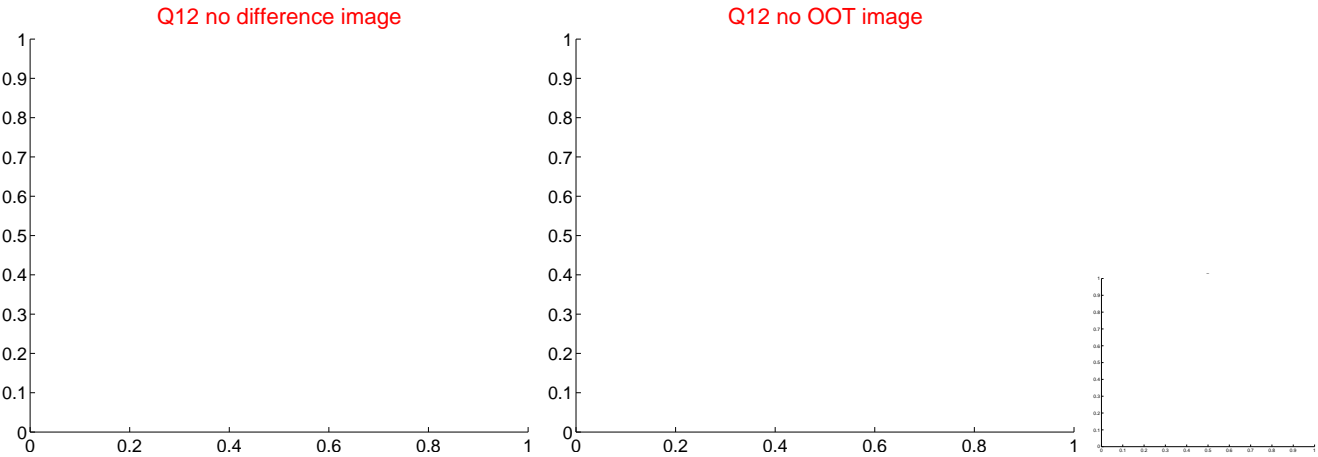
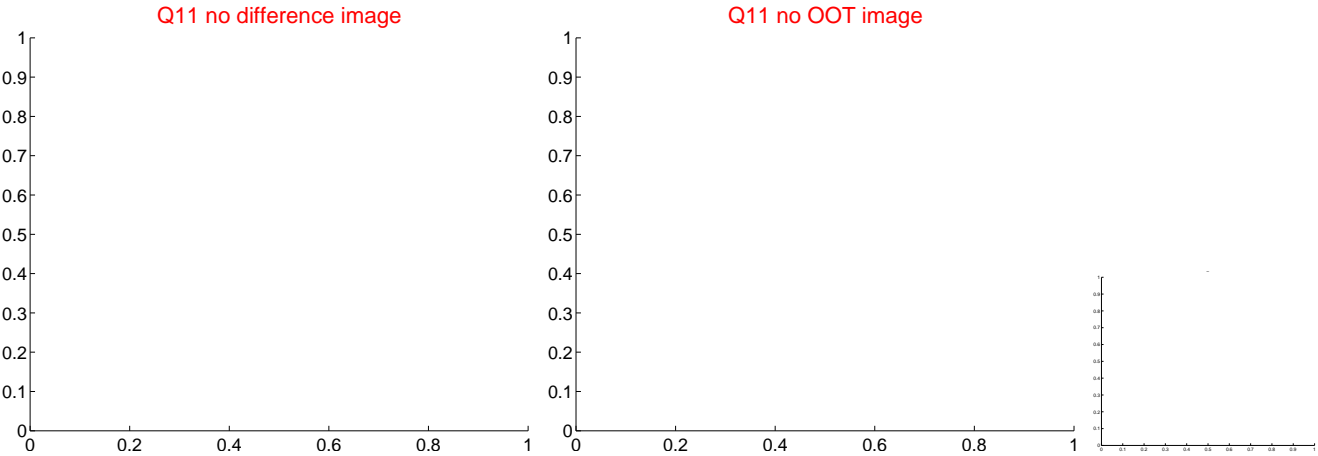
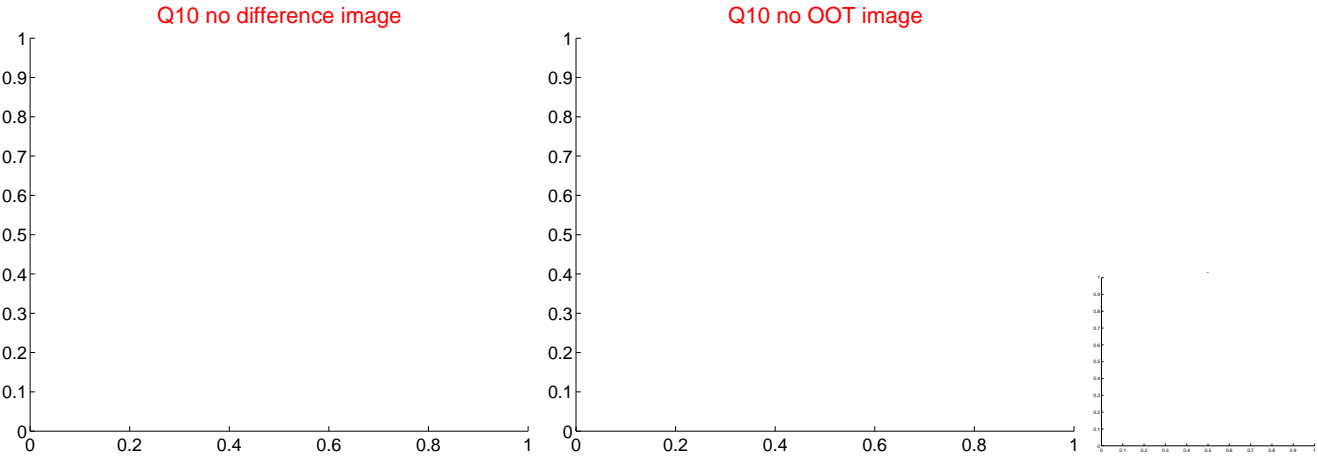
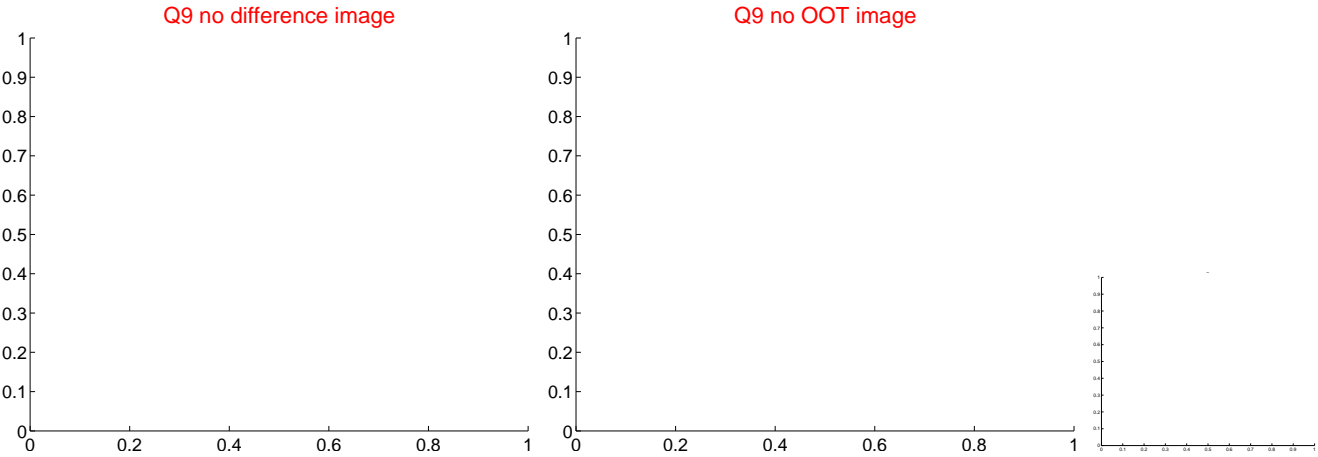
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



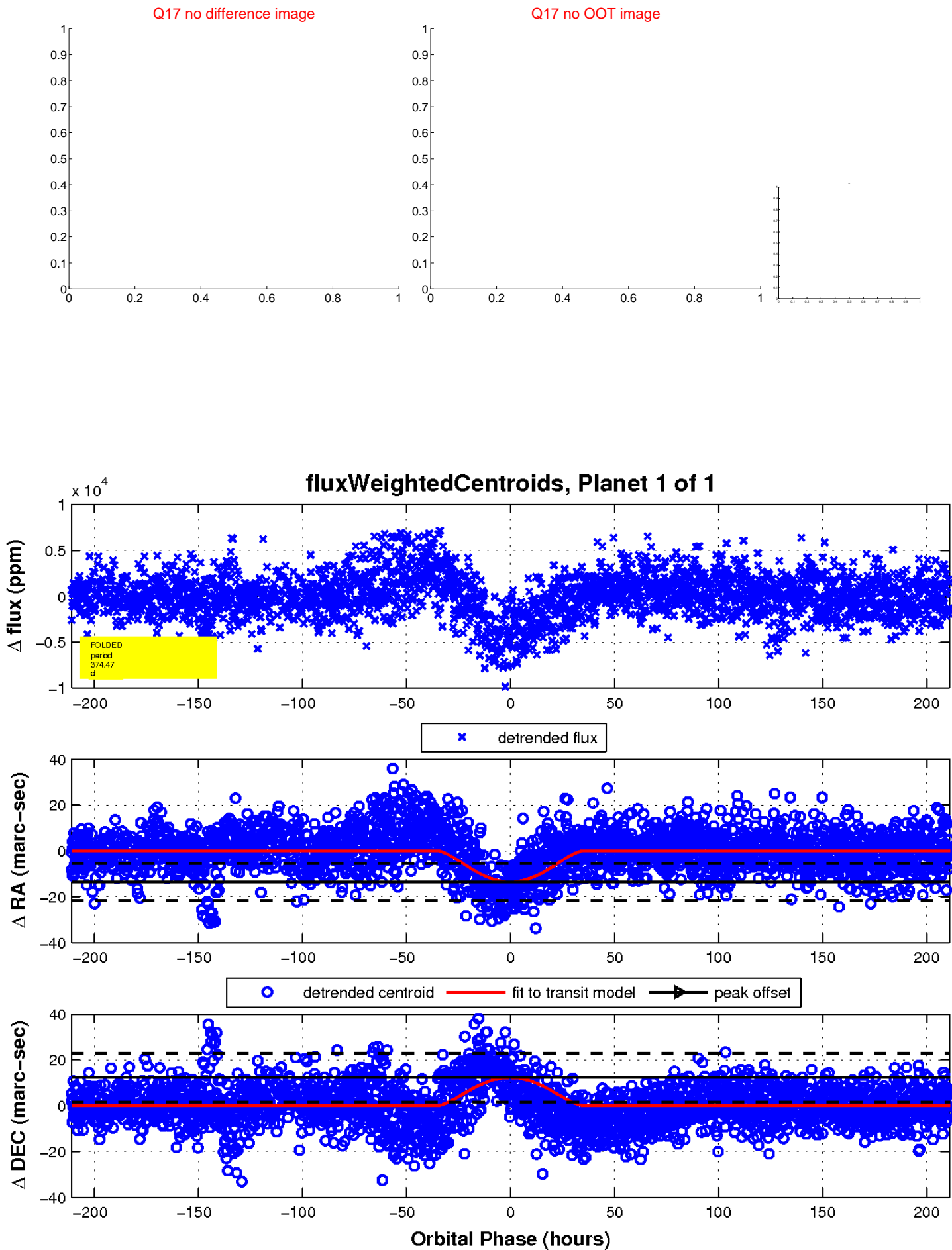
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

