

KIC 005394238

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})
005394238-01	OBS	No	571.401337	435.350518	848.5	26.386	7.6	8.1	0.82	5608	3.05	0.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005394238-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

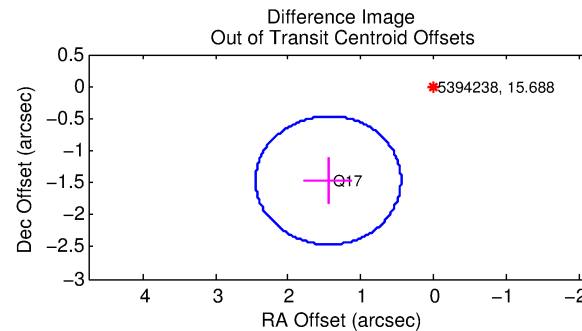
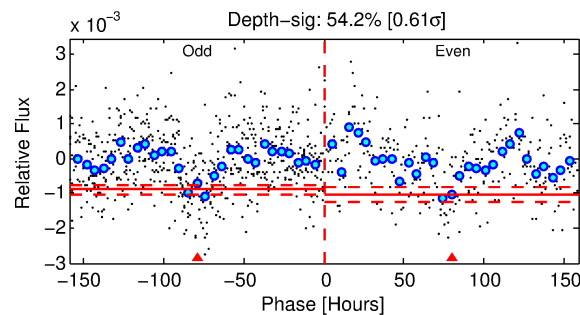
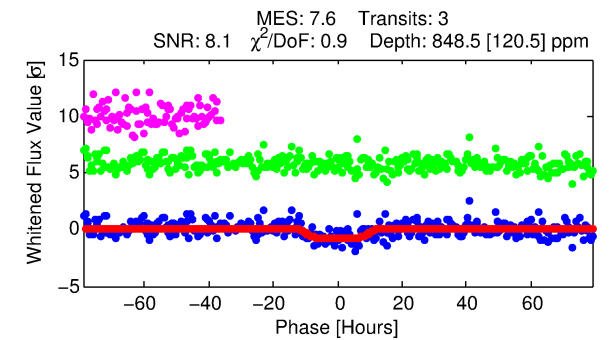
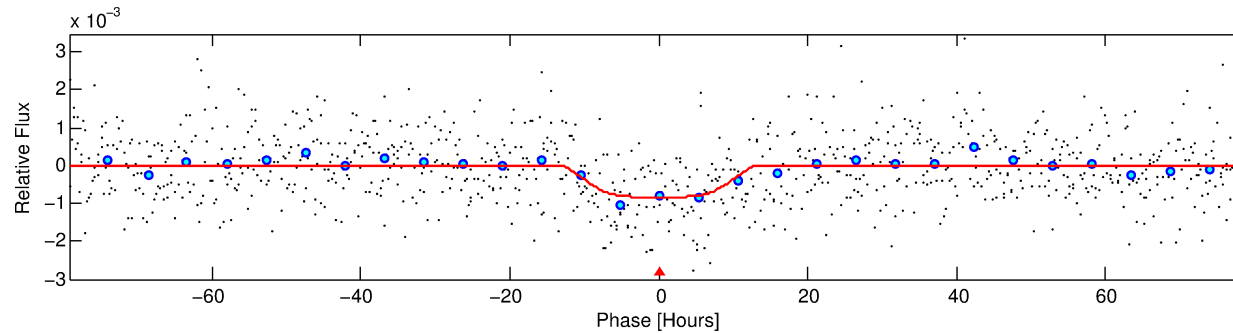
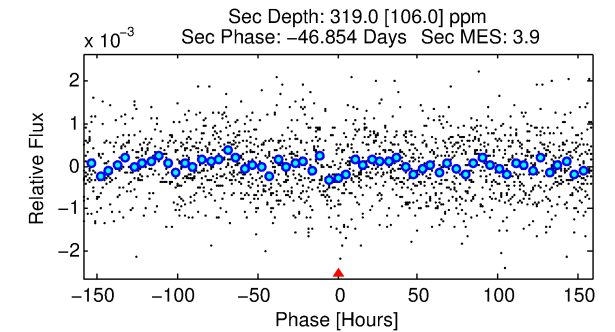
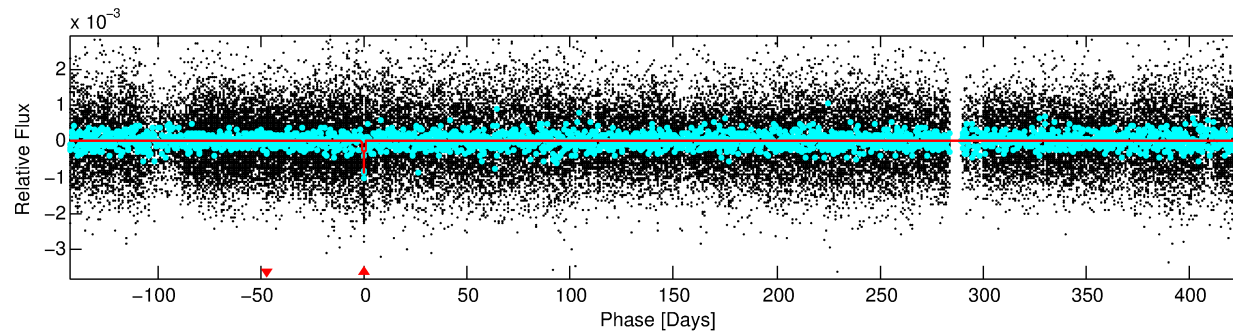
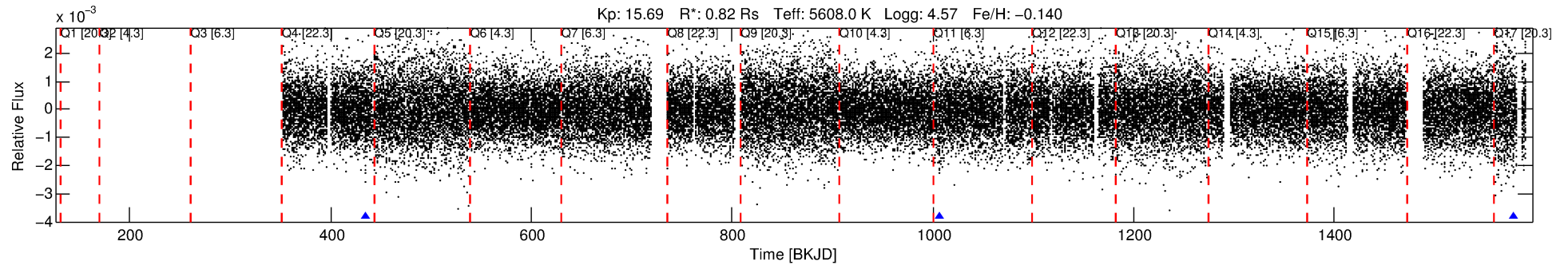
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005394238-01

No Significant Match Found

DV One-Page Summary

KIC: 5394238 Candidate: 1 of 1 Period: 571.401 d



DV Fit Results:

Period = 571.40134 [0.04806] d
Epoch = 435.3505 [0.0518] BKJD
Rp/R* = 0.0339 [0.0038]
a/R* = 69.13 [21.29]
b = 0.95 [0.04]
Seff = 0.35 [0.12]
Teq = 197 [16] K
Rp = 3.05 [0.83] Re
a = 1.3071 [0.2744] AU
Ag = 32253.98 [16283.58] [1.98σ]
Teff = 4073 [430] K [9.00σ]

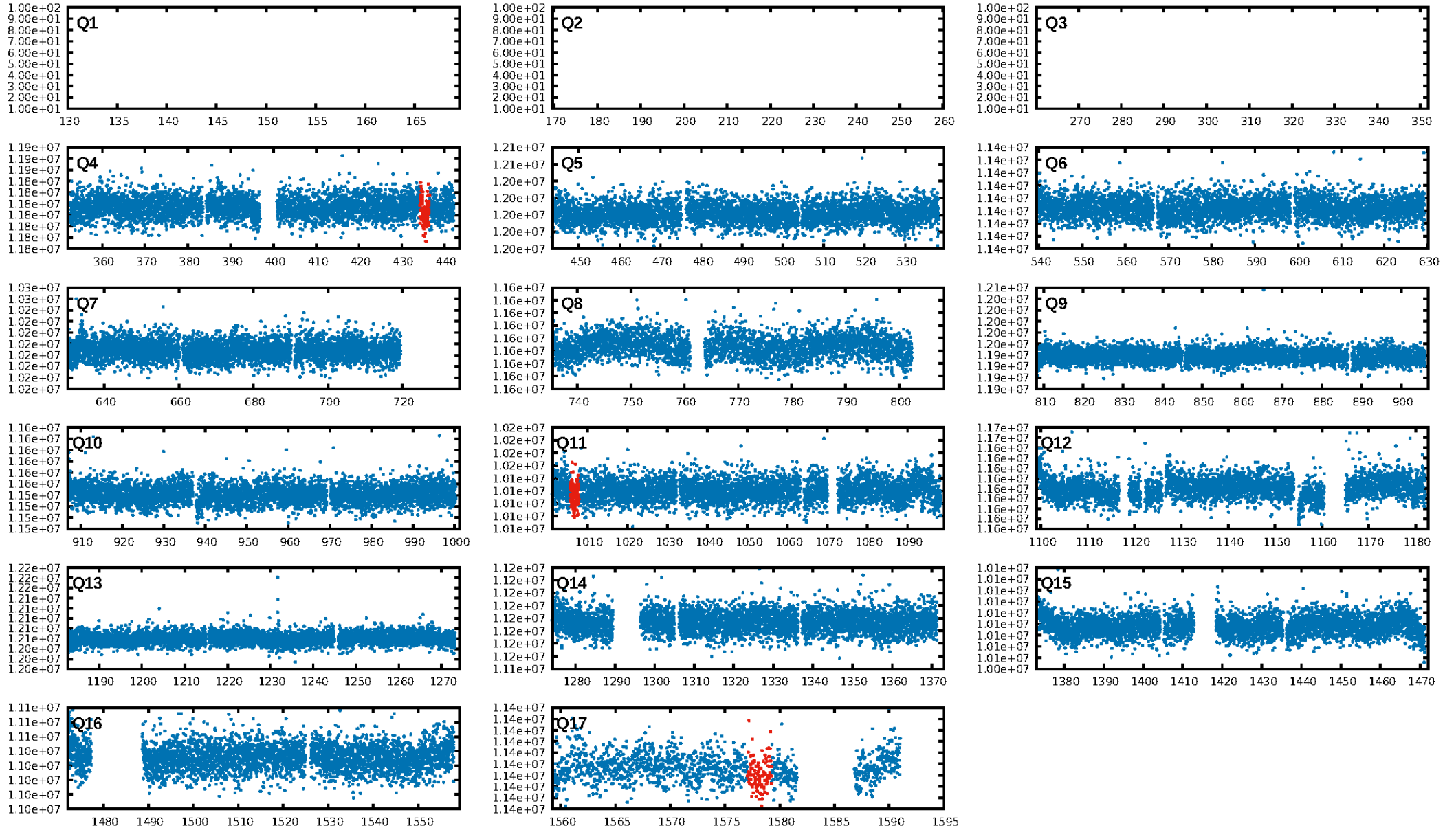
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.08e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 3.561
Centroid-sig: 6.6%
Centroid-so: 4.968 arcsec [8.05σ]
OotOffset-rm: 2.060 arcsec [6.18σ]
KicOffset-rm: 8.920 arcsec [25.92σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

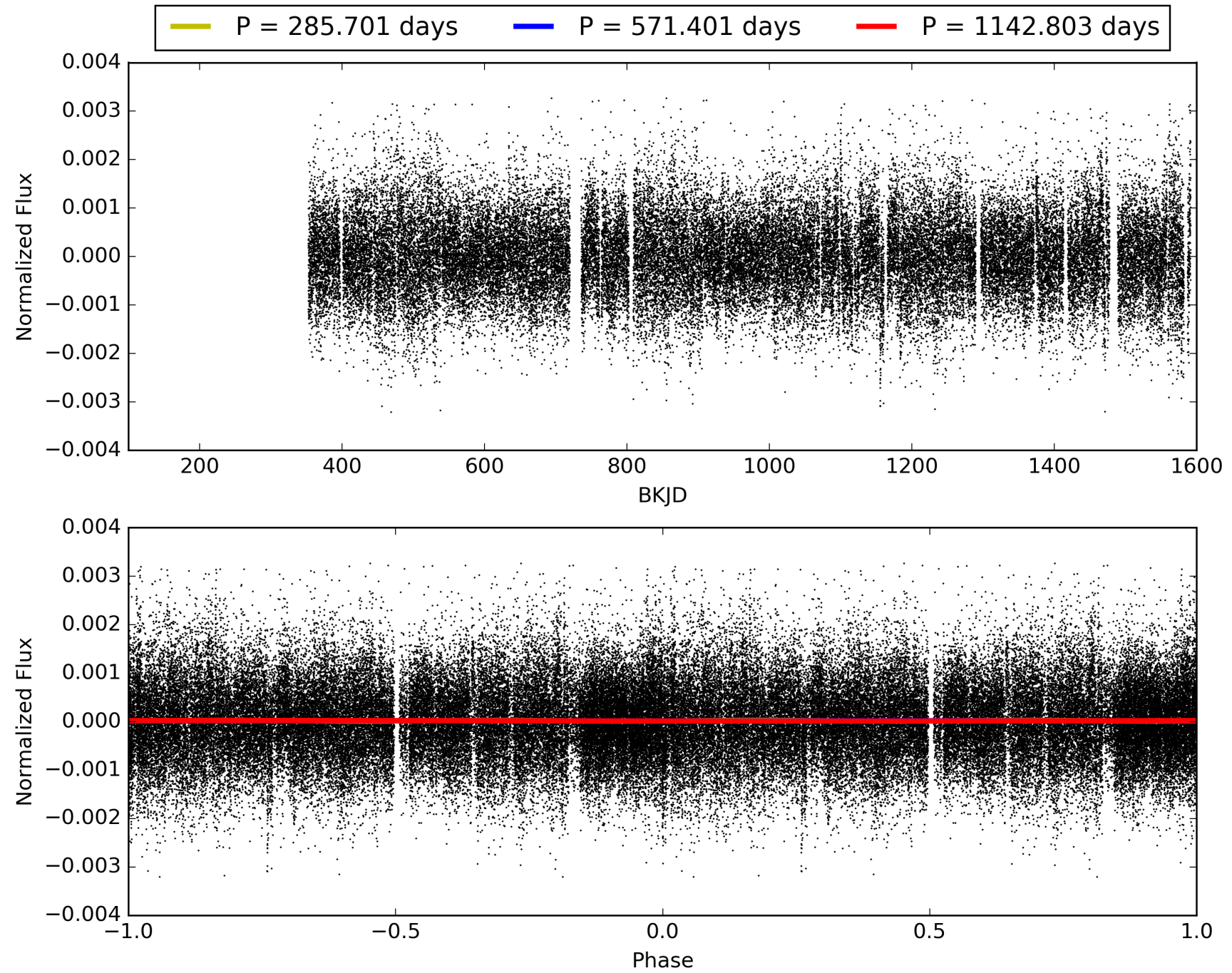
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:46:47 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005394238-01, PDC Light Curves

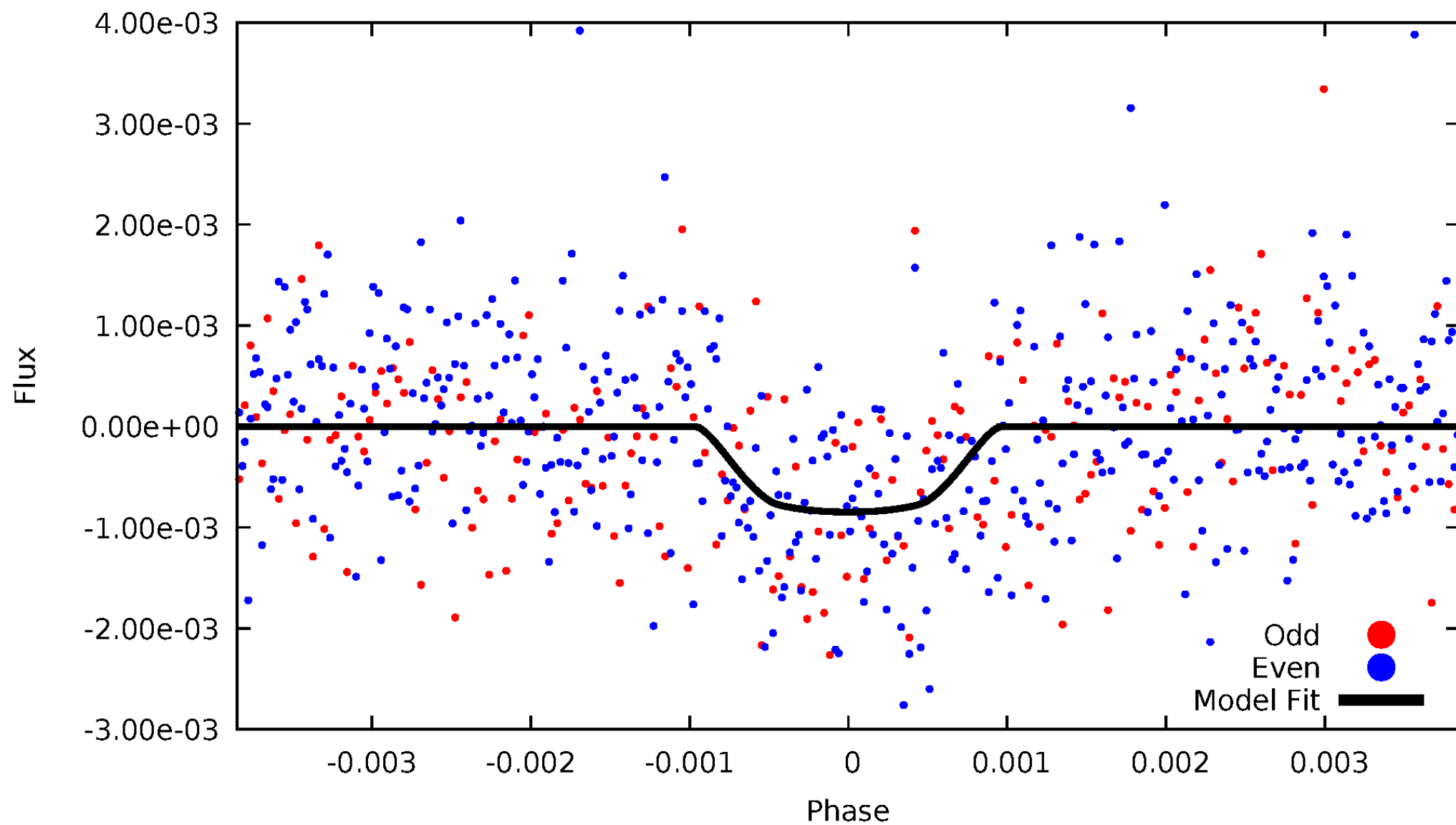


TCE 005394238-01



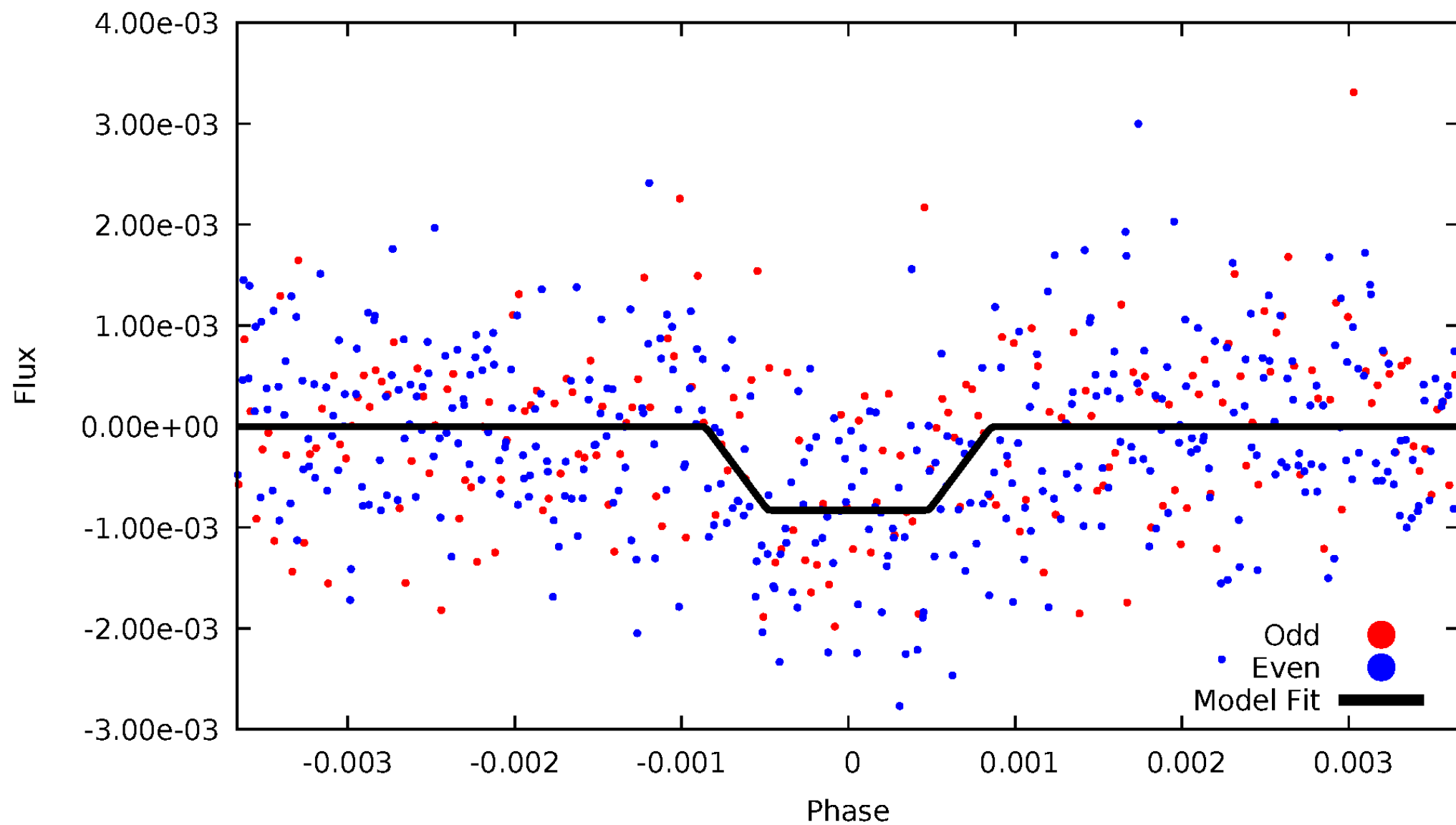
DV Odd/Even

TCE 005394238-01

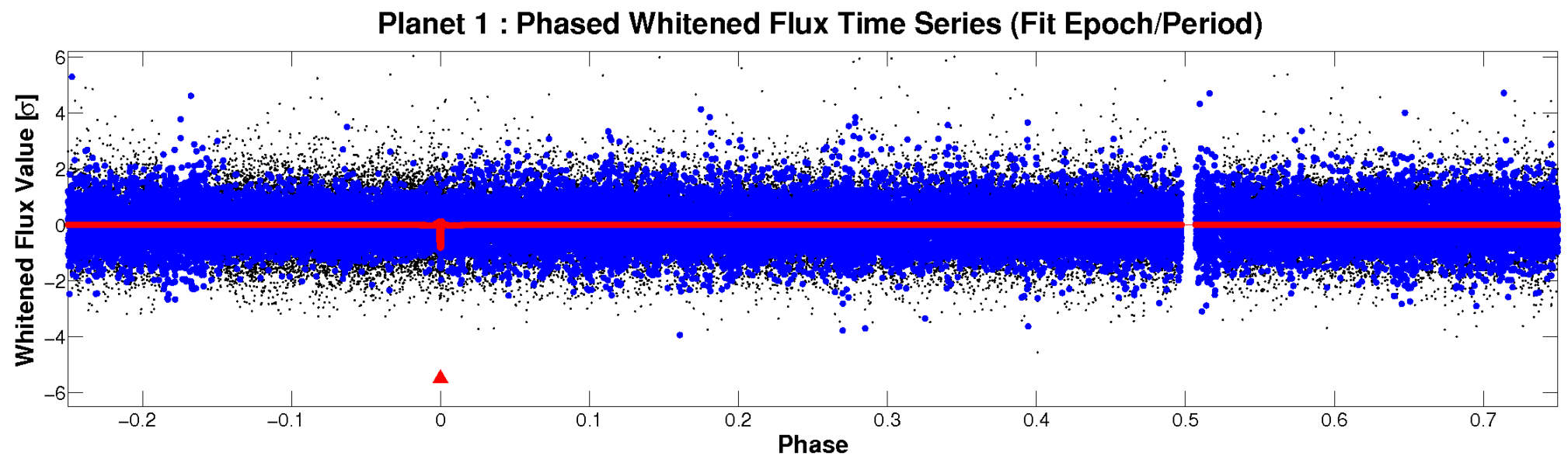
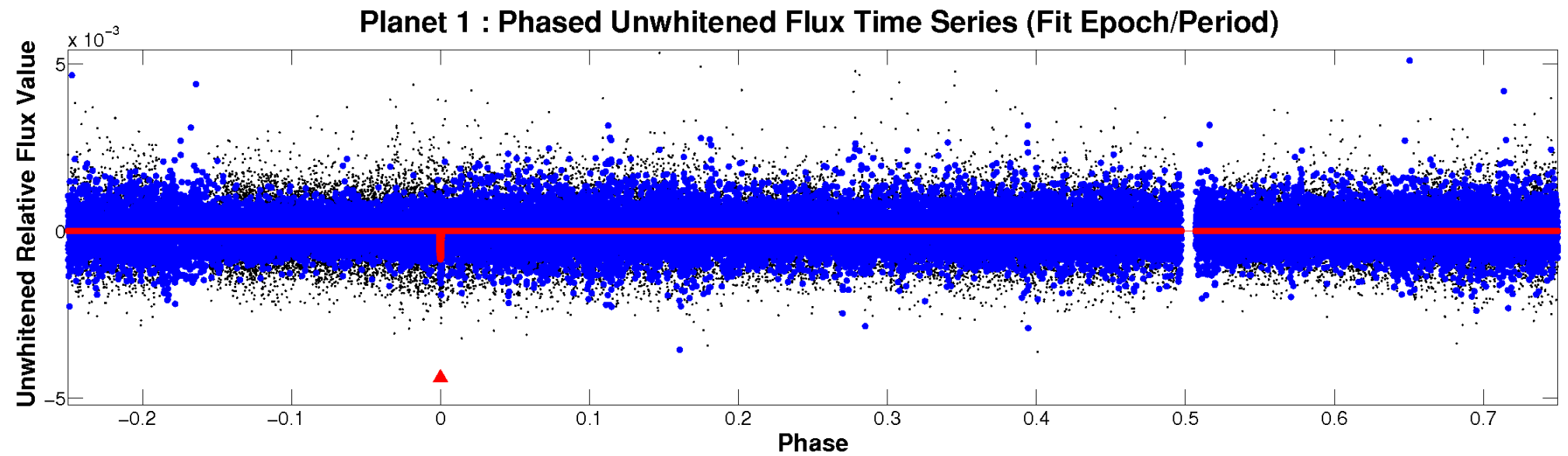


ALT Odd/Even

TCE 005394238-01

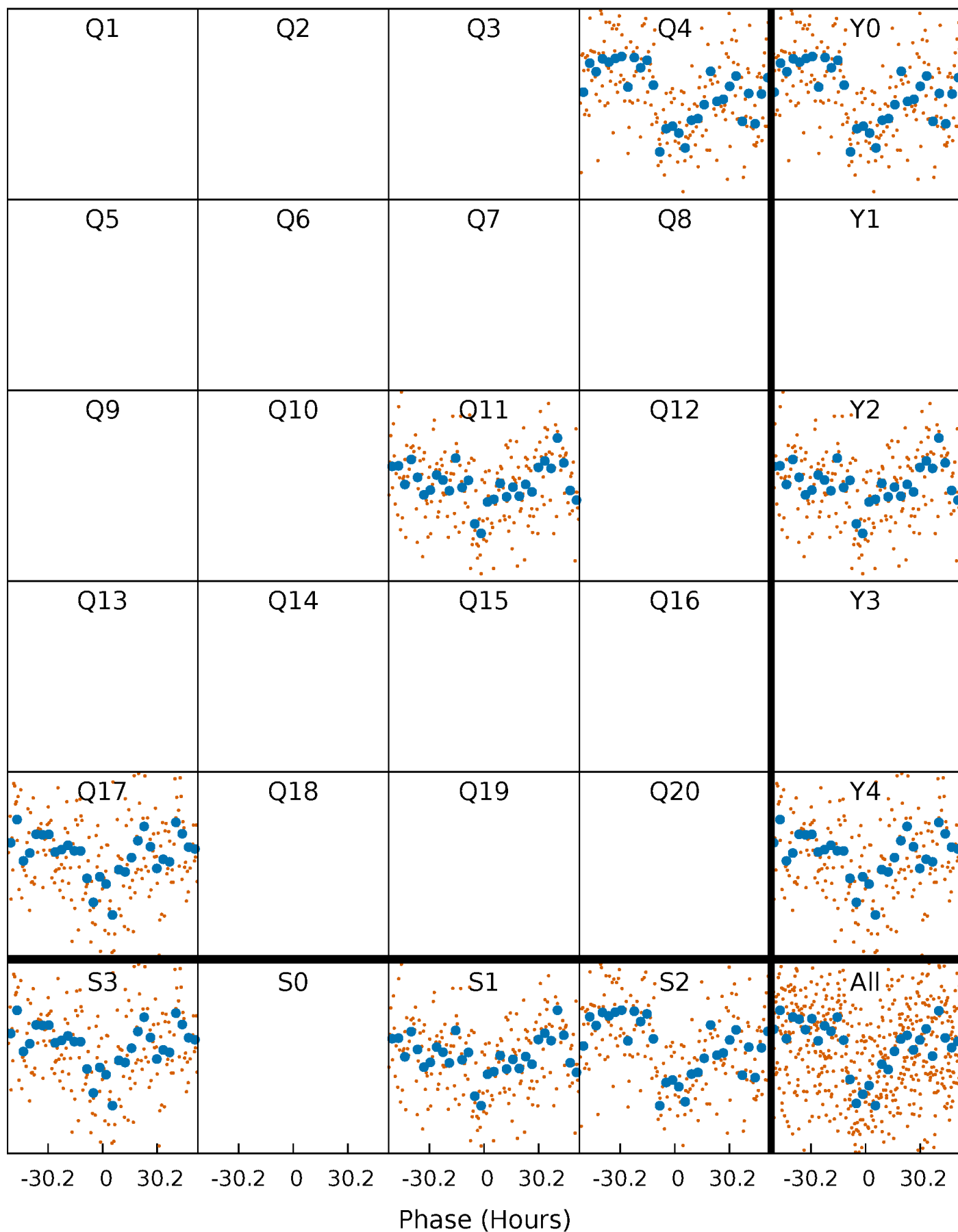


Non-Whitened Vs. Whitened Light Curve



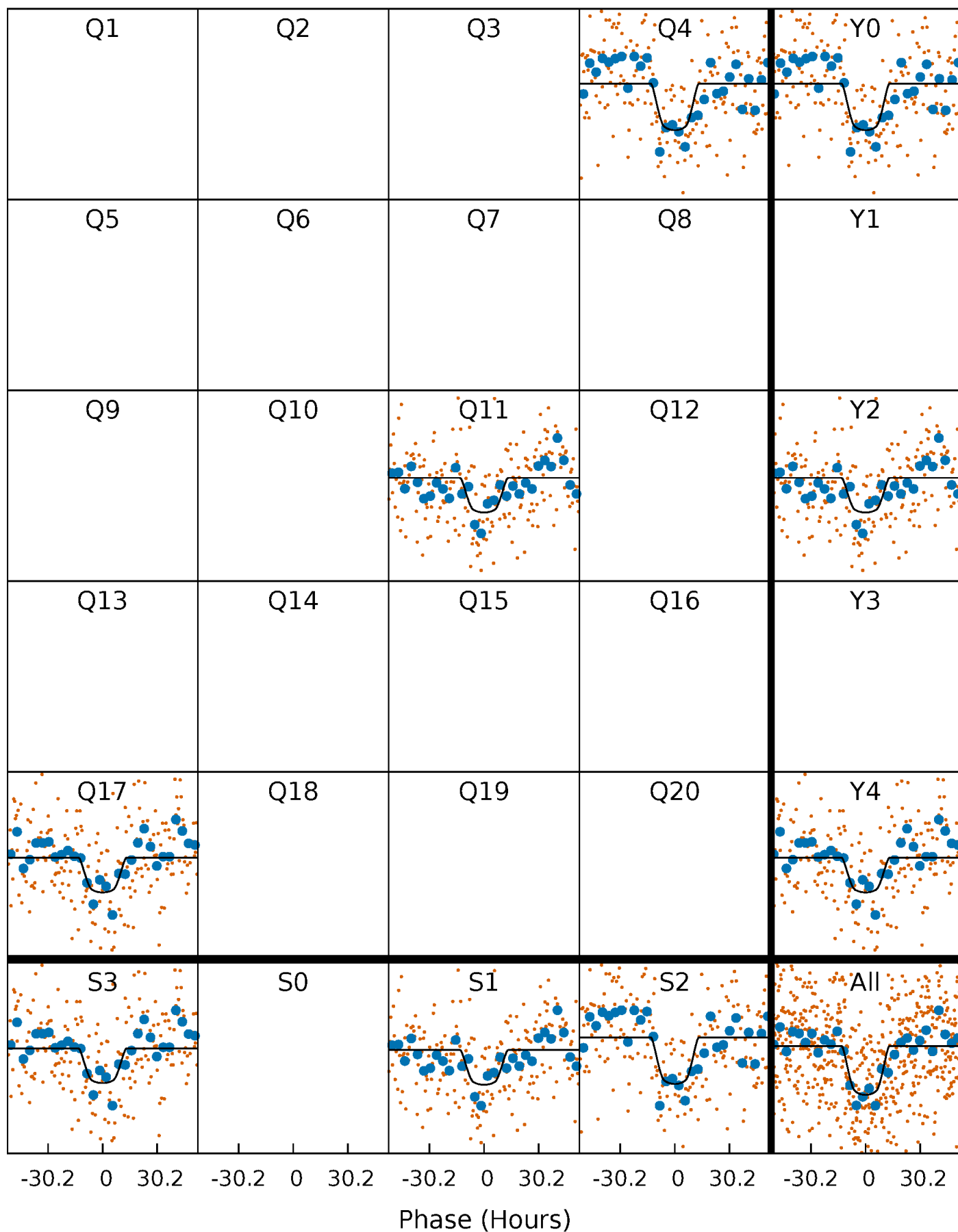
PDC Quarter-Phased Transit Curves

TCE 005394238-01 P=571.401337 Days $T_0=435.350518$ (BKJD)



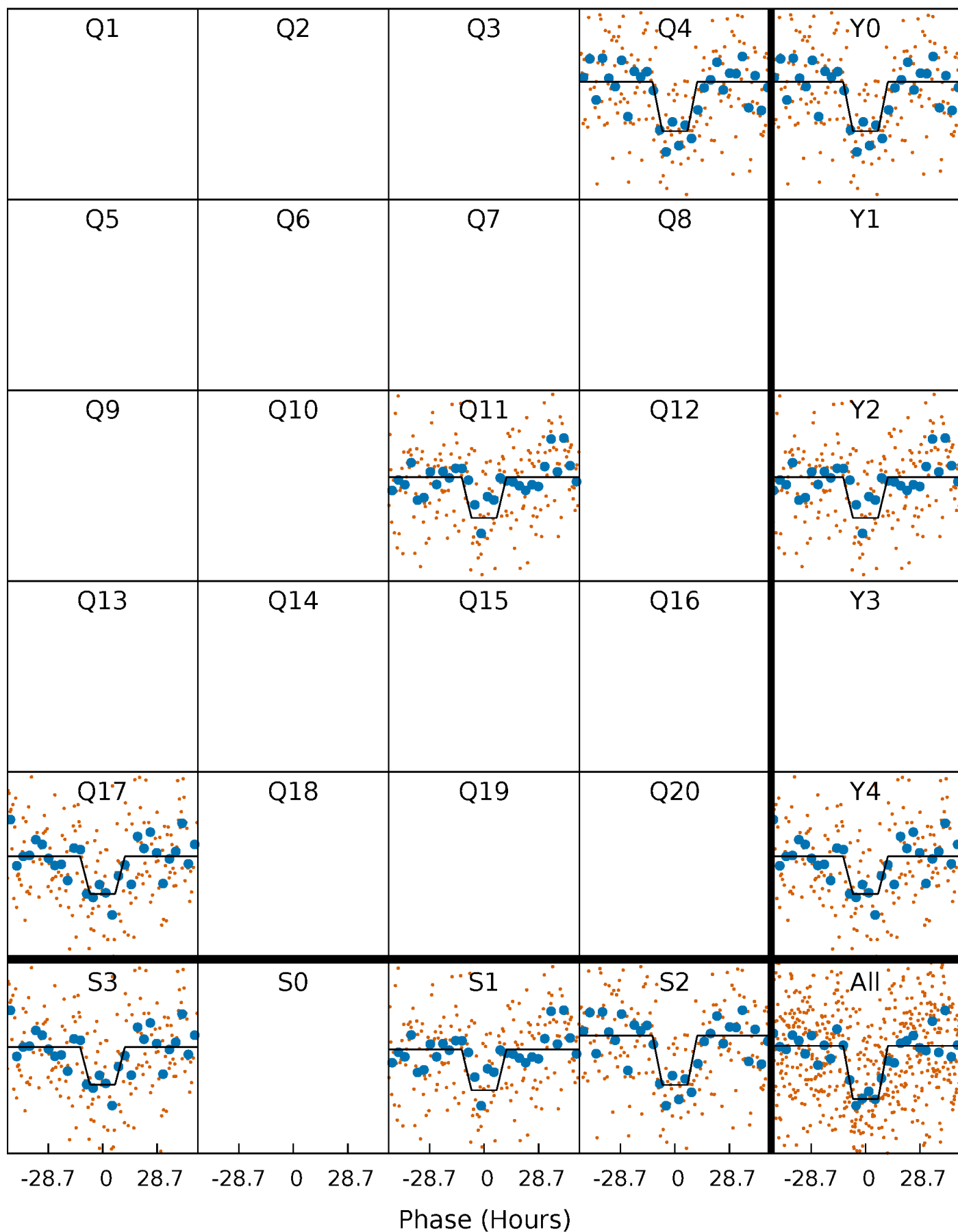
DV Quarter-Phased Transit Curves

TCE 005394238-01 P=571.401337 Days $T_0=435.350518$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

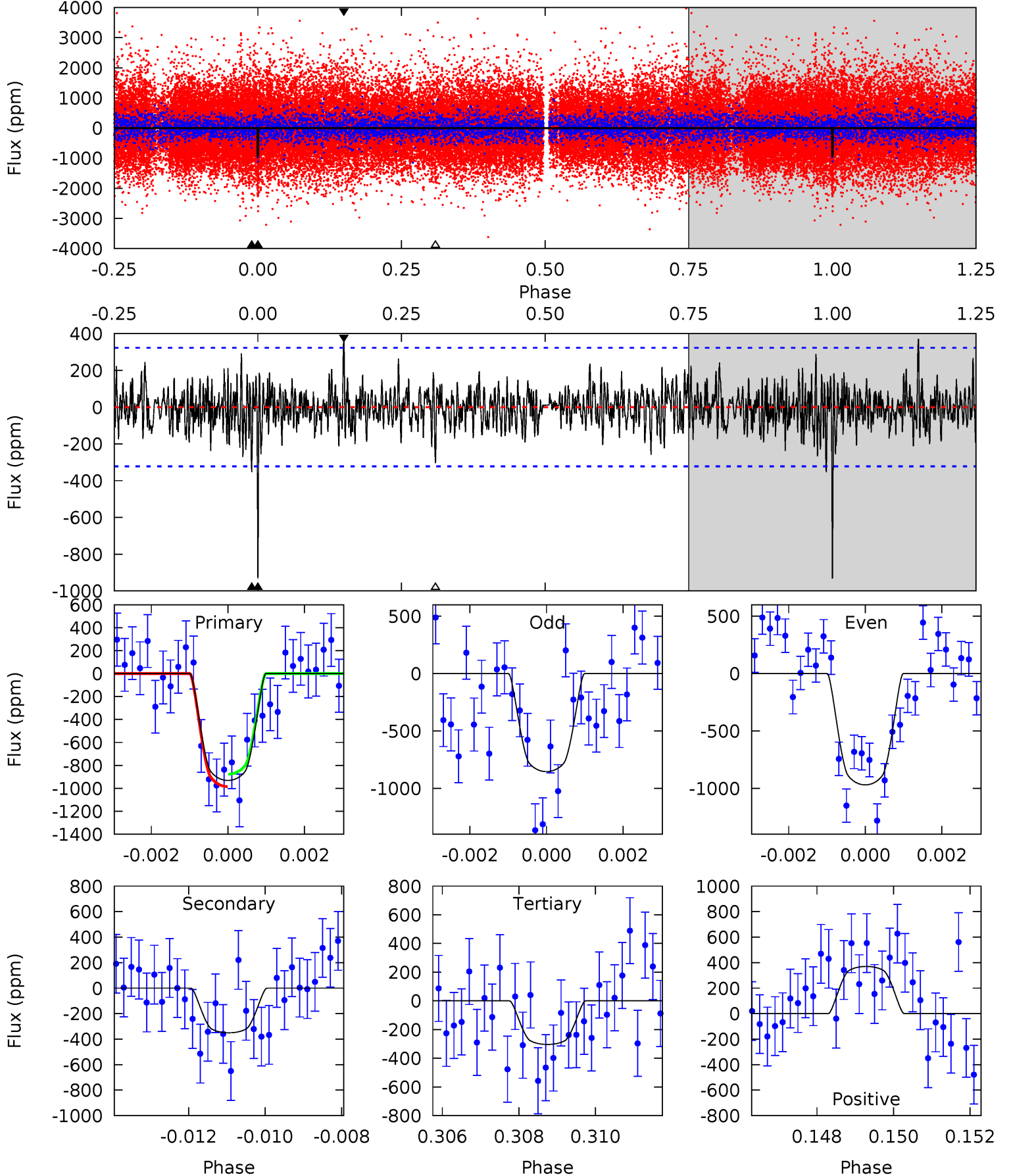
TCE 005394238-01 P=571.444939 Days $T_0=435.286021$ (BKJD)



DV Model-Shift Uniqueness Test

005394238-01, $P = 571.401337$ Days, $E = 435.350518$ Days

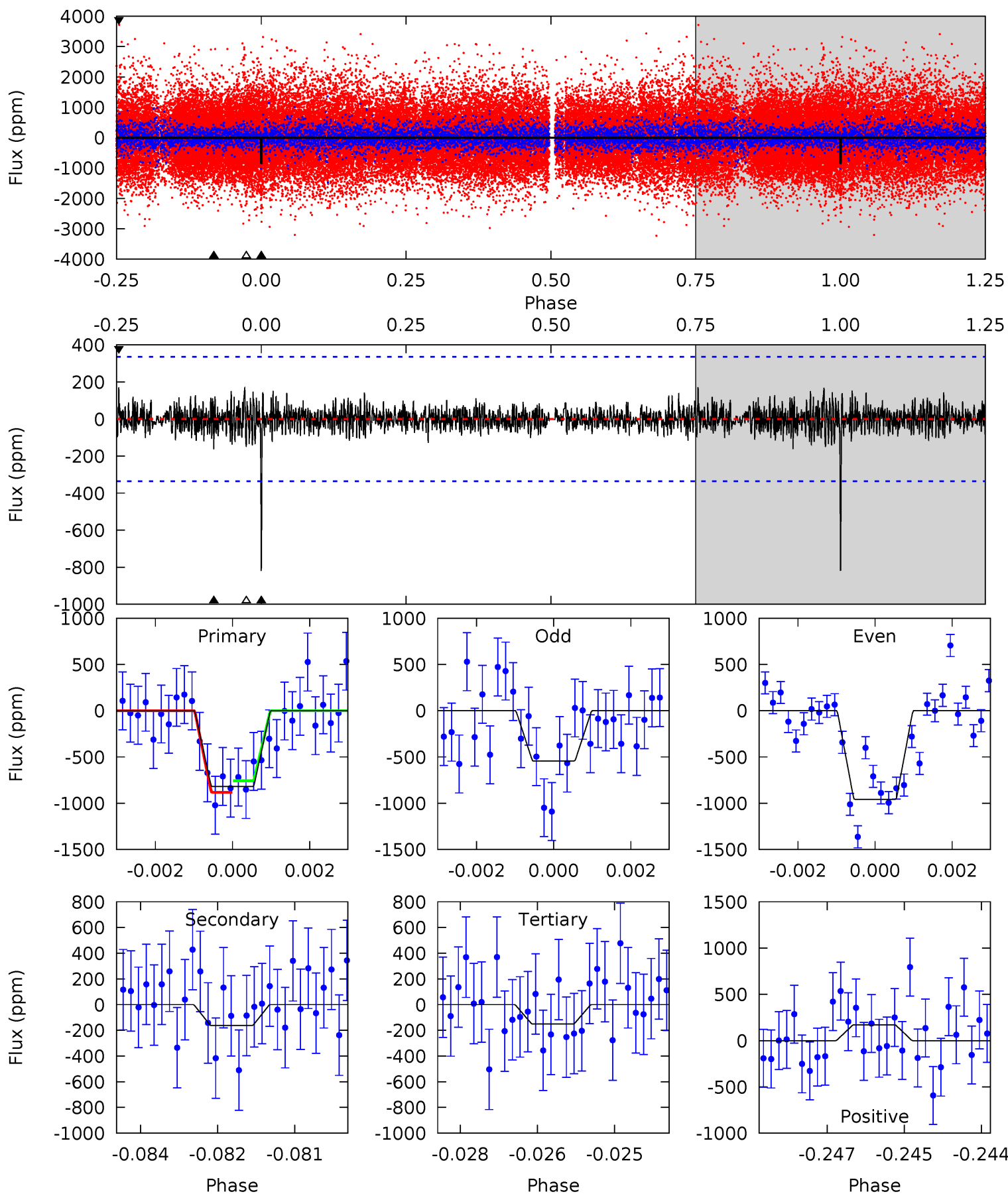
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	5.79	5.02	6.12	5.33	3.10	1.44	10.4	9.28	0.77	-0.32	0.90	1.02	0.28	0.90



Alt Model-Shift Uniqueness Test

005394238-01, P = 571.444939 Days, E = 435.286021 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	2.59	2.39	2.72	5.35	3.13	0.73	10.7	10.4	0.20	-0.13	3.11	0.89	0.17	0.99



Stellar Parameters For KIC 005394238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5608^{+186}_{-186}	$4.565^{+0.031}_{-0.168}$	$-0.140^{+0.300}_{-0.300}$	$0.825^{+0.205}_{-0.073}$	$0.914^{+0.094}_{-0.104}$	$2.294^{+0.509}_{-1.034}$
	+3%/-3%	+1%/-4%	+214%/-214%	+25%/-9%	+10%/-11%	+22%/-45%
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 005394238-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-350 ± 60	$3.21^{+0.51}_{-0.42}$	281^{+18}_{-12}	4374^{+264}_{-266}	30998^{+12244}_{-8843}
Alt.	-162 ± 63	$2.74^{+0.45}_{-0.41}$	281^{+17}_{-11}	4015^{+358}_{-361}	19817^{+11236}_{-8847}

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

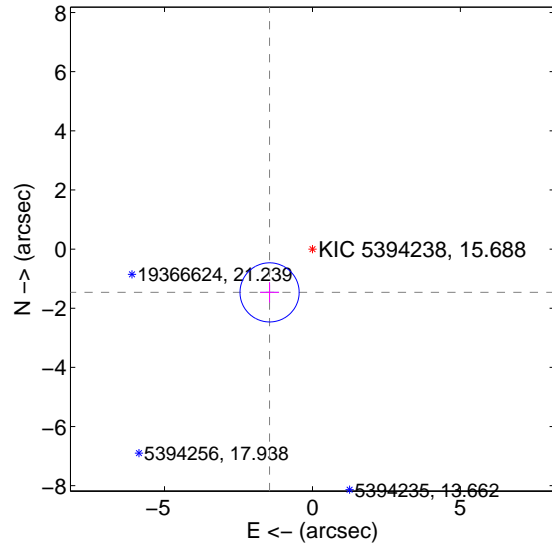
Supplemental centroid analysis for 005394238-01. Kepler magnitude: 15.69. Transit SNR 8.05

There are 1 quarters with good PRF difference image offsets

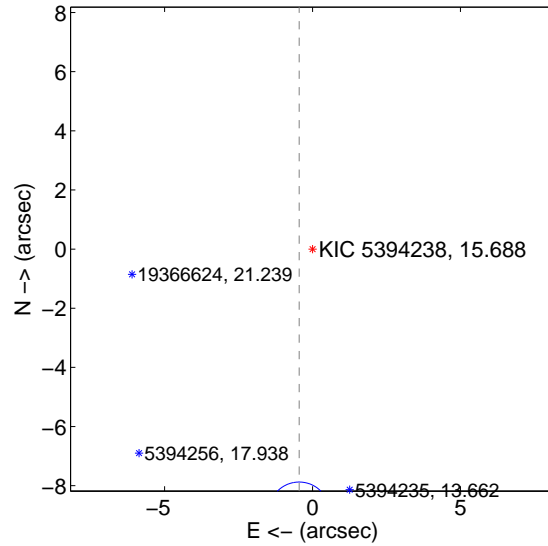
The OOT PRF centroid is offset from the target star catalog position by about 7.51 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.060 ± 0.333	6.18	1.449 ± 0.322	-1.464 ± 0.344
PRF-fit source offset from KIC position	8.920 ± 0.344	25.92	0.452 ± 0.322	-8.909 ± 0.344
photometric centroid source offset	4.97 ± 0.62	8.05	0.36 ± 0.38	-4.95 ± 0.62

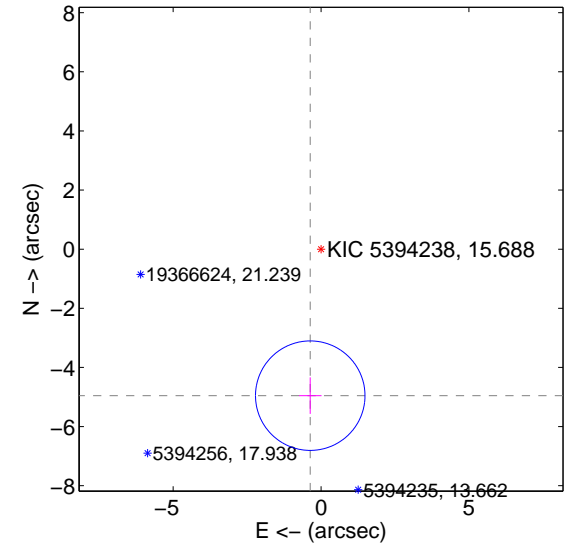
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



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.



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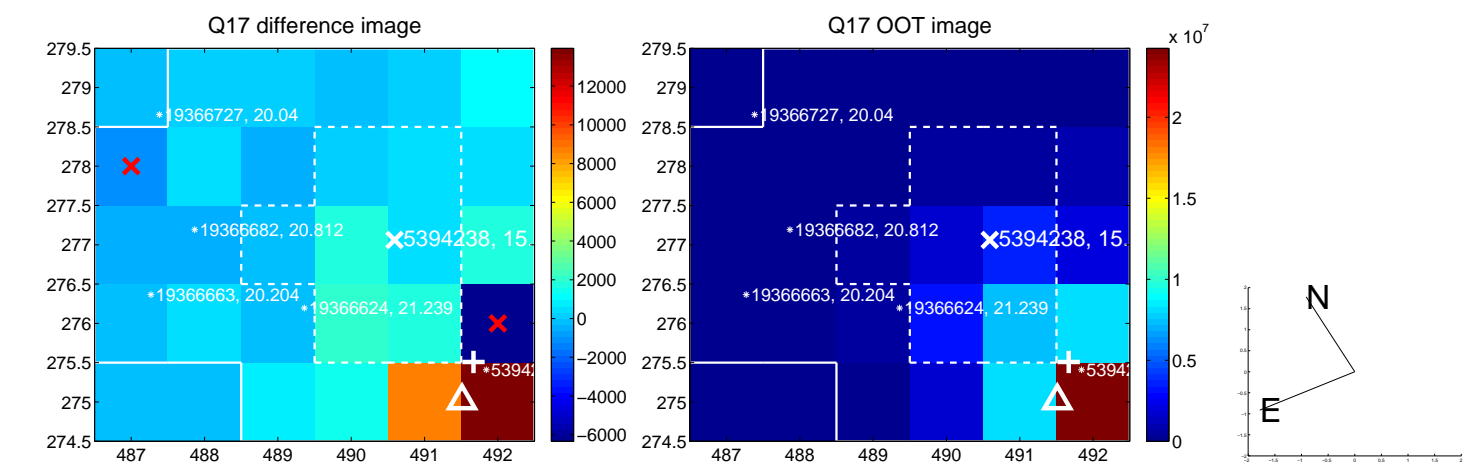
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



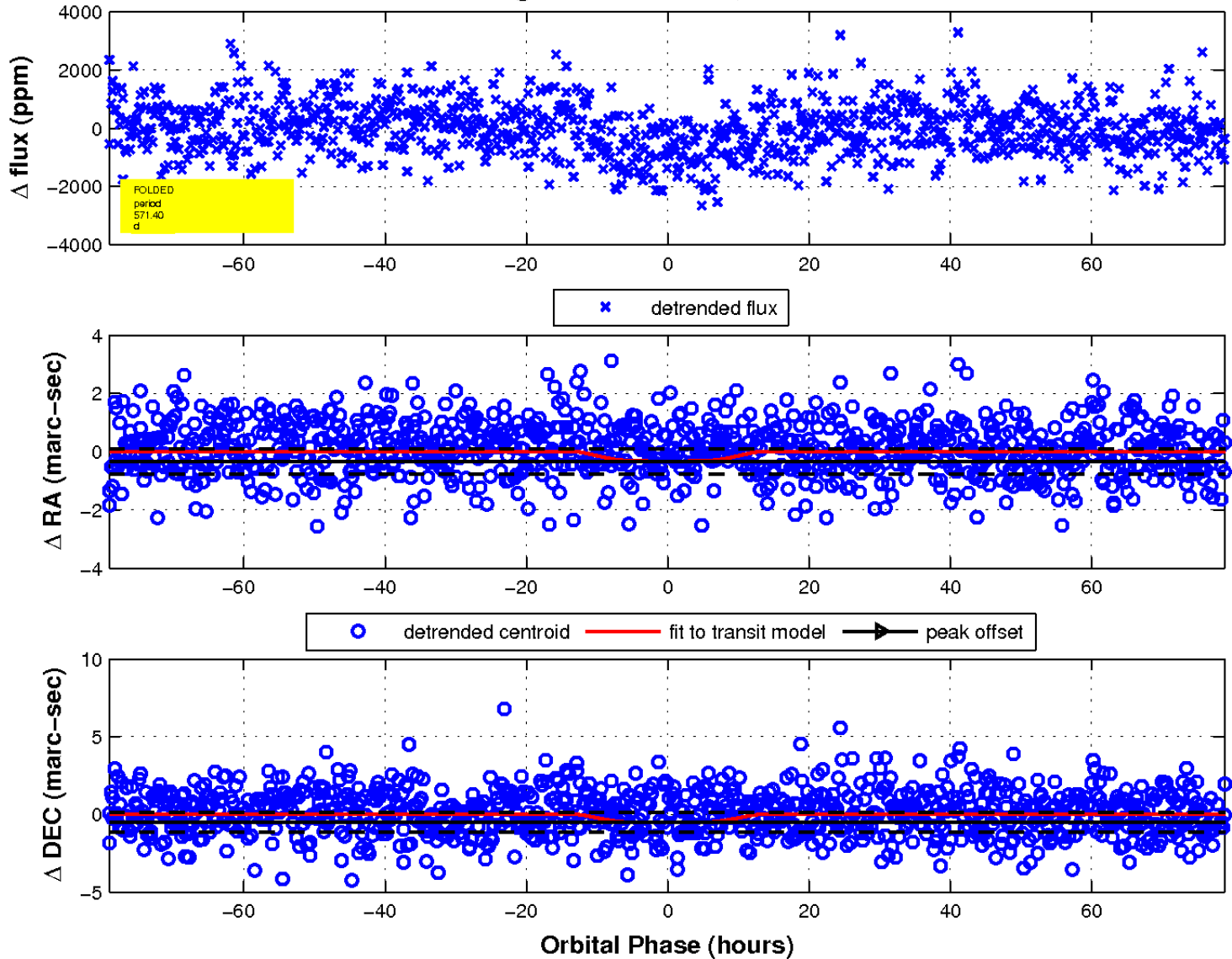
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

