

KIC 008391983

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})
008391983-01	OBS	7884.01	0.709664	131.976319	176.2	1.463	7.3	7.8	1.00	5618	1.59	4071.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008391983-01	OBS	PC	0.12	0	0	0	0	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.

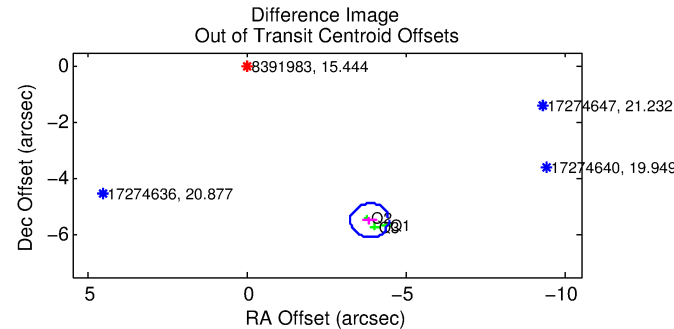
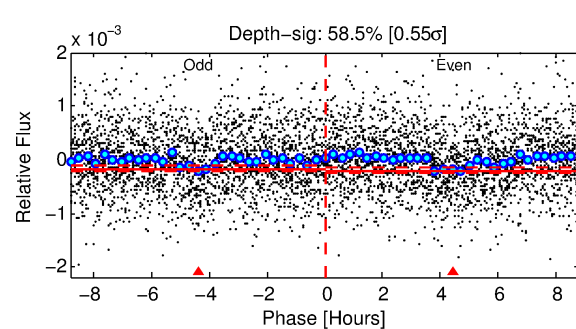
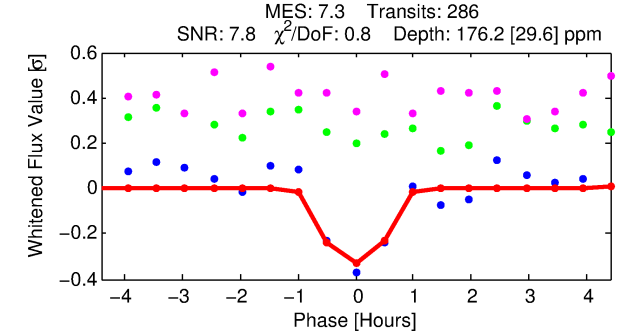
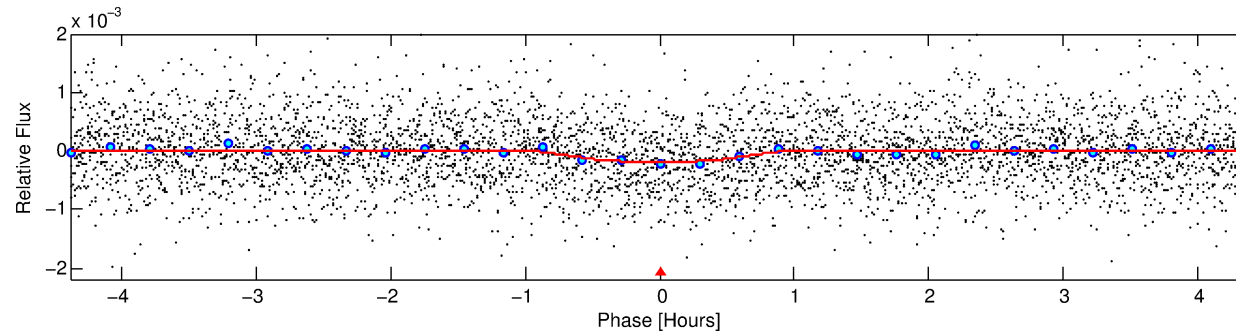
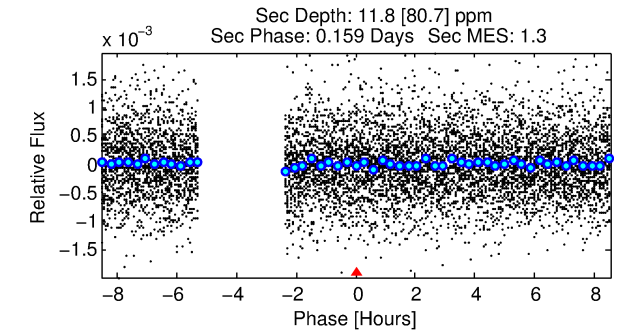
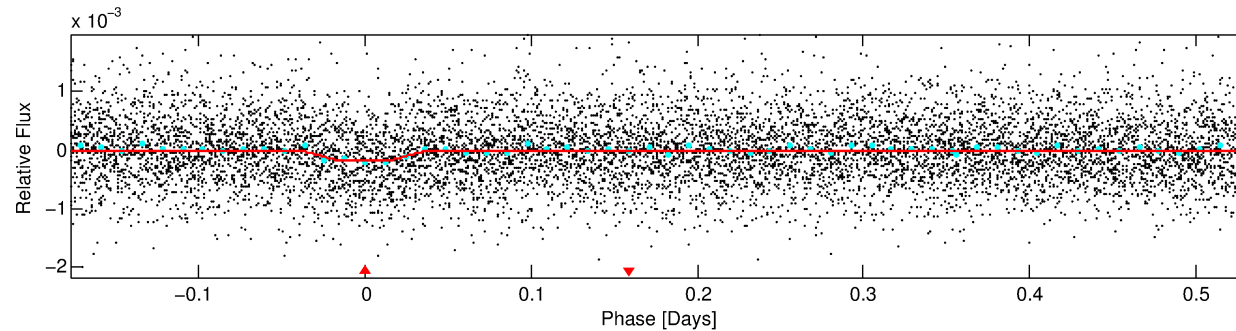
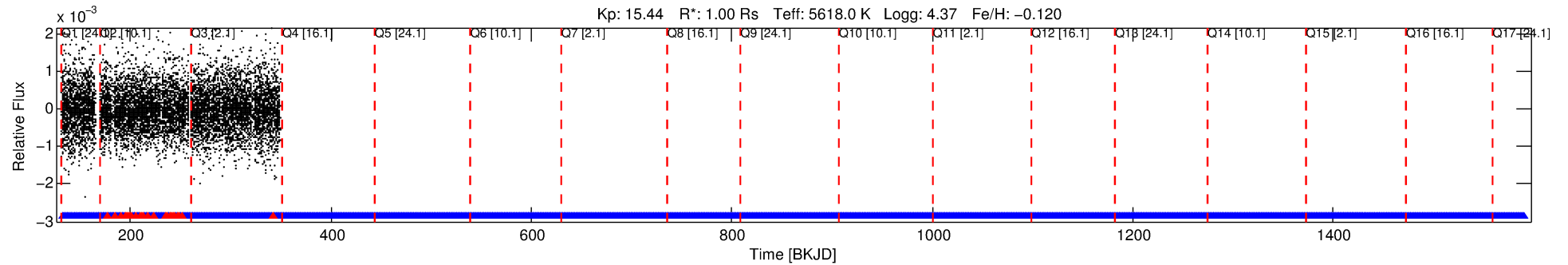
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008391983-01

No Significant Match Found

DV One-Page Summary

KIC: 8391983 Candidate: 1 of 1 Period: 0.710 d



DV Fit Results:

Period = 0.70966 [0.00003] d
Epoch = 131.9763 [0.0042] BKJD
Rp/R* = 0.0146 [0.0186]
a/R* = 1.97 [8.65]
b = 0.90 [1.27]
Seff = 4071.27 [1461.76]
Teq = 2037 [183] K
Rp = 1.59 [2.08] Re
a = 0.0148 [0.0034] AU
Ag = 0.56 [4.11] [-0.11σ]
Teff = 2729 [4970] K [0.14σ]

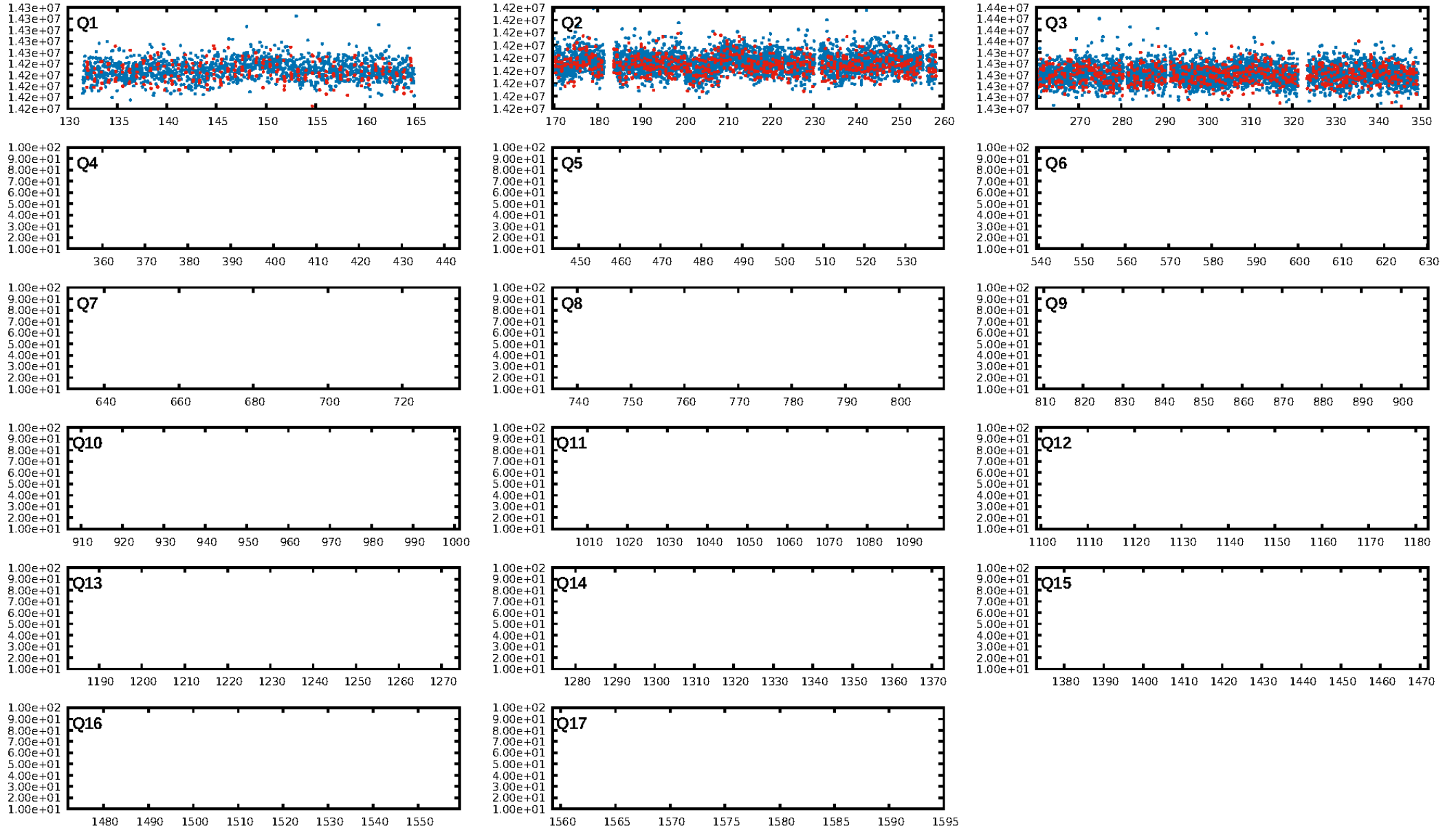
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 4.67e-18
RollingBand-fgt: 0.89 [212/239]
GhostDiagnostic-chr: -0.5768
Centroid-sig: 0.0%
Centroid-so: 17.453 arcsec [9.35σ]
OotOffset-rm: 6.699 arcsec [33.37σ]
KicOffset-rm: 6.702 arcsec [36.13σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

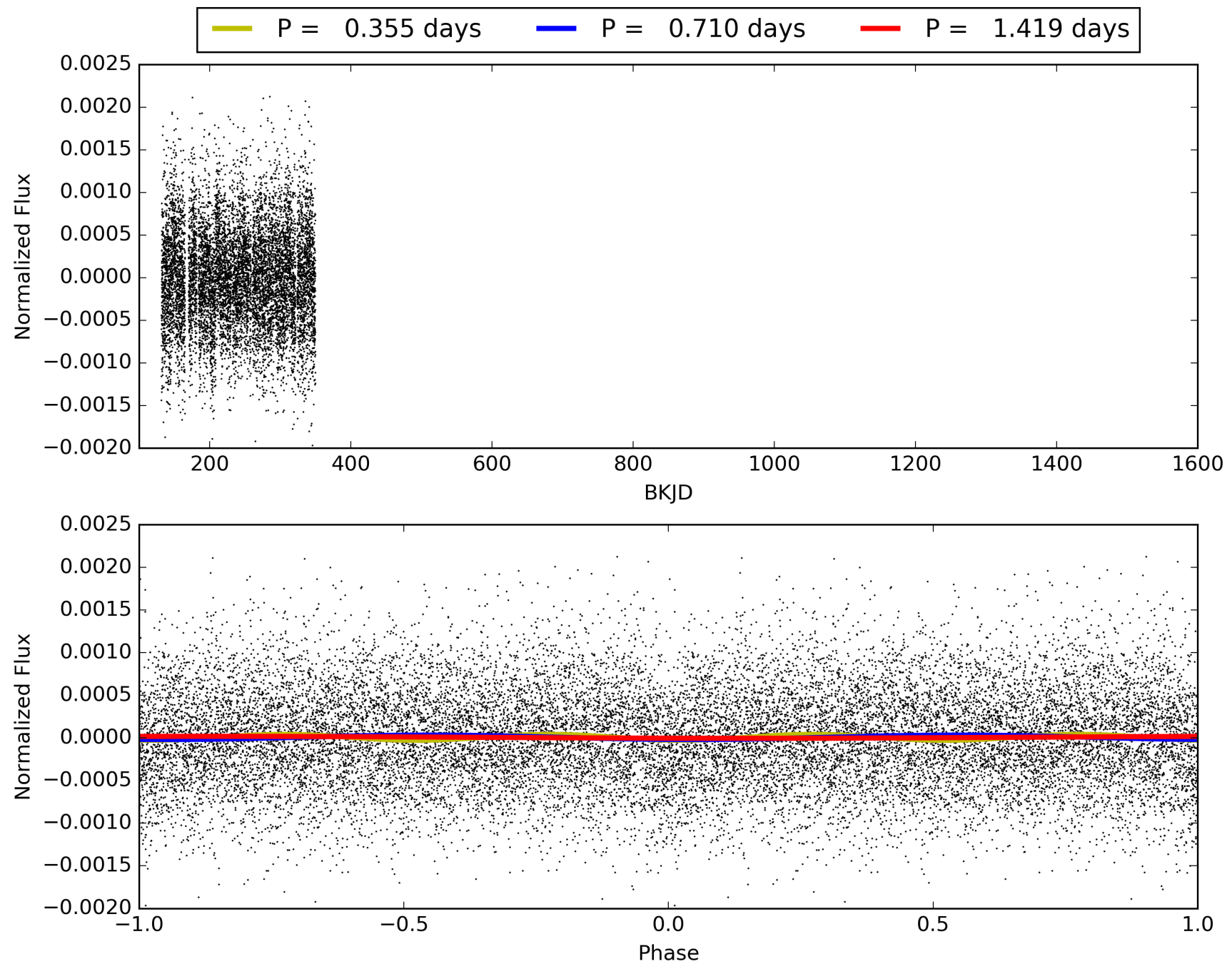
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:58:16 Z

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

TCE 008391983-01, PDC Light Curves

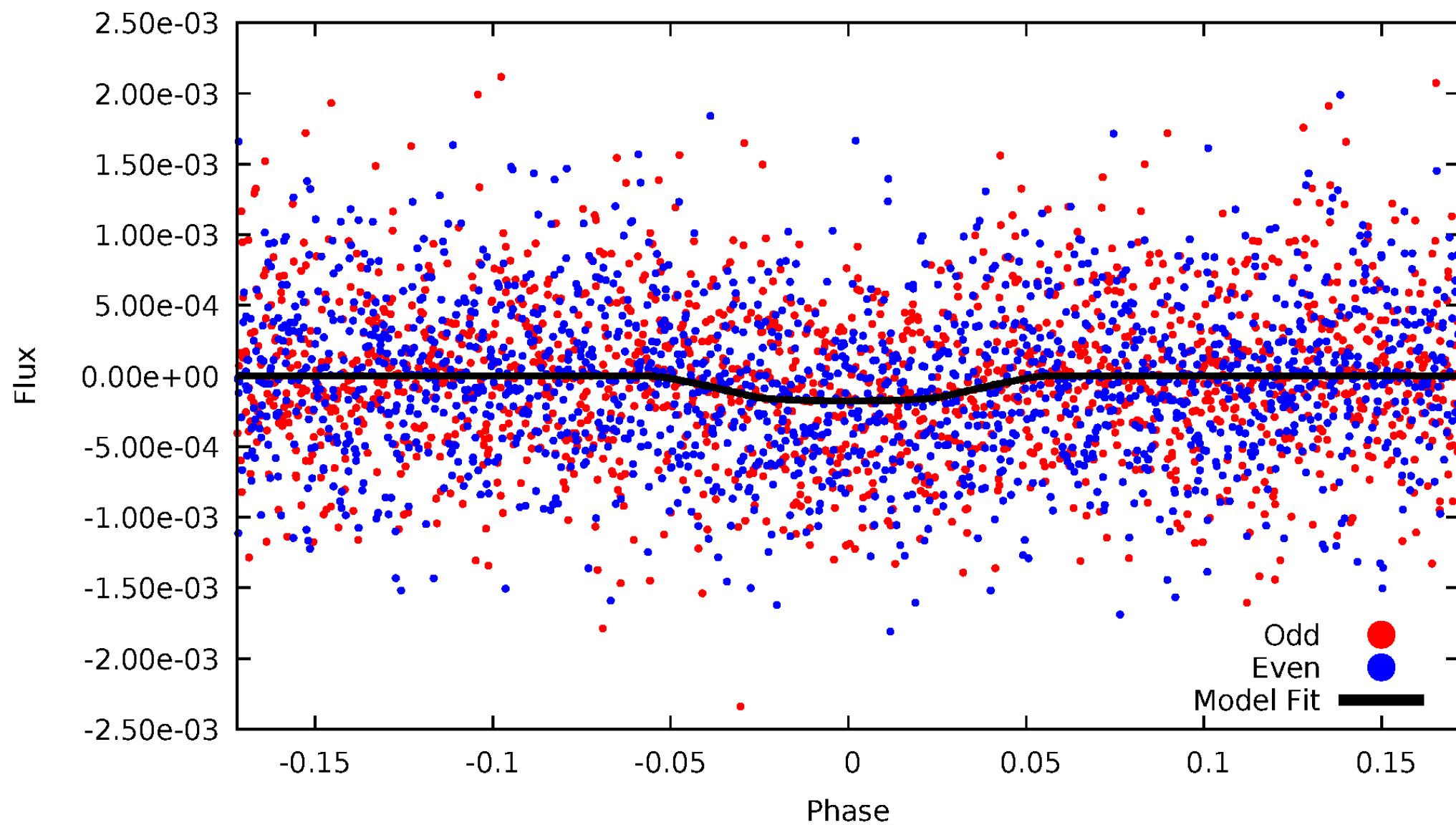


TCE 008391983-01



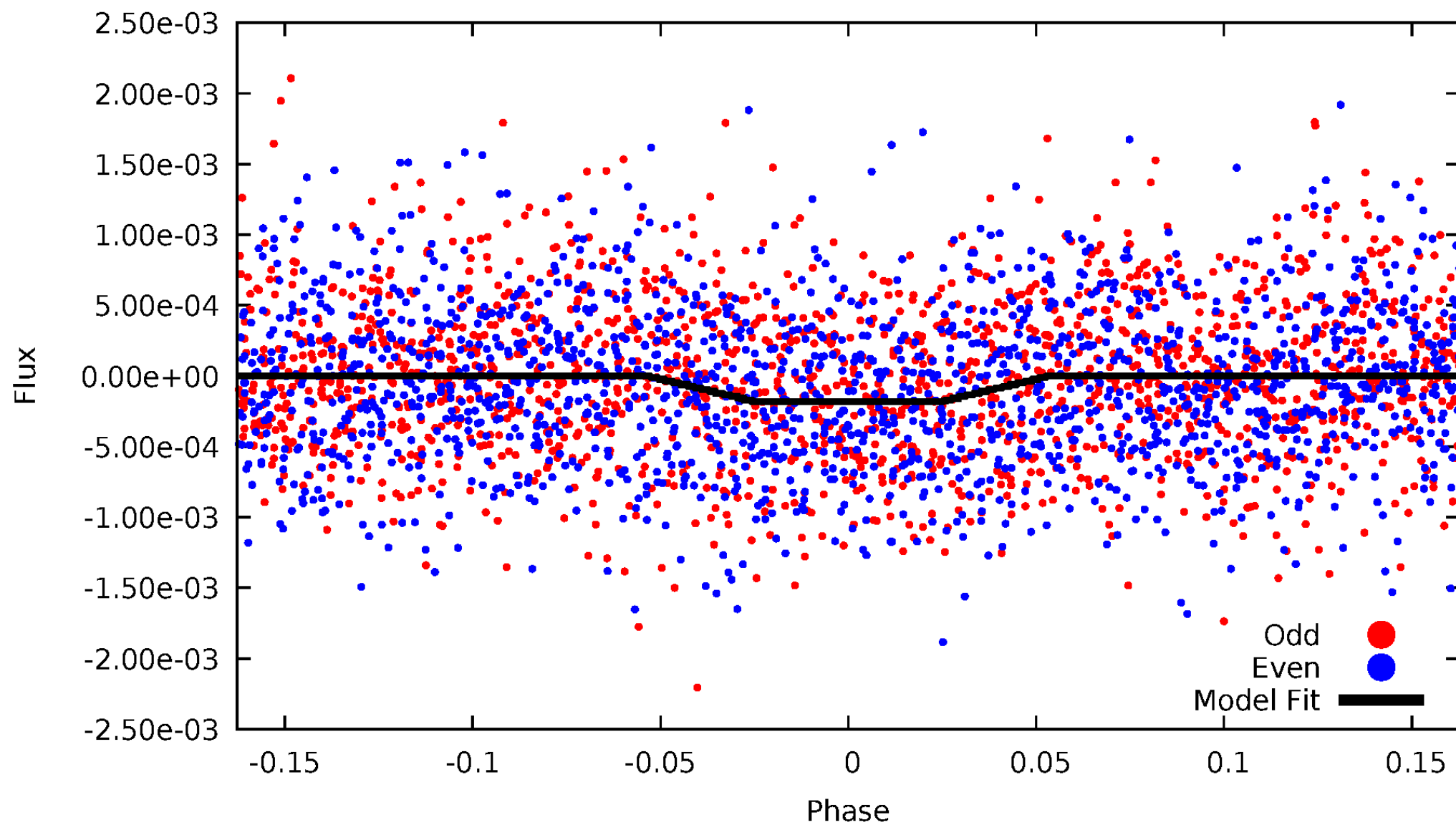
DV Odd/Even

TCE 008391983-01

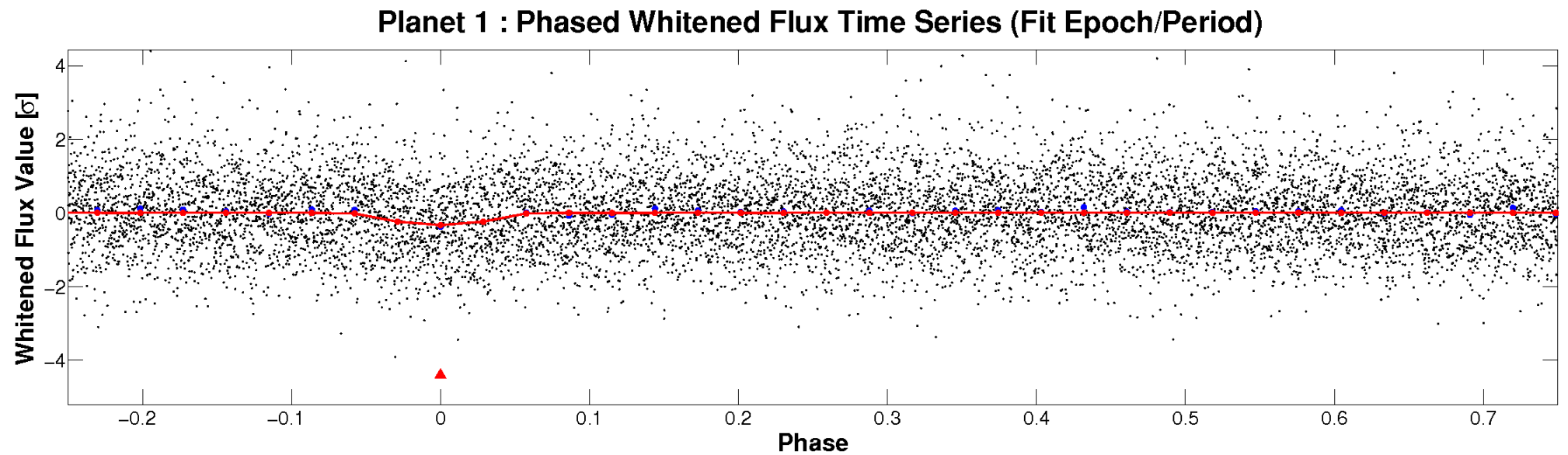
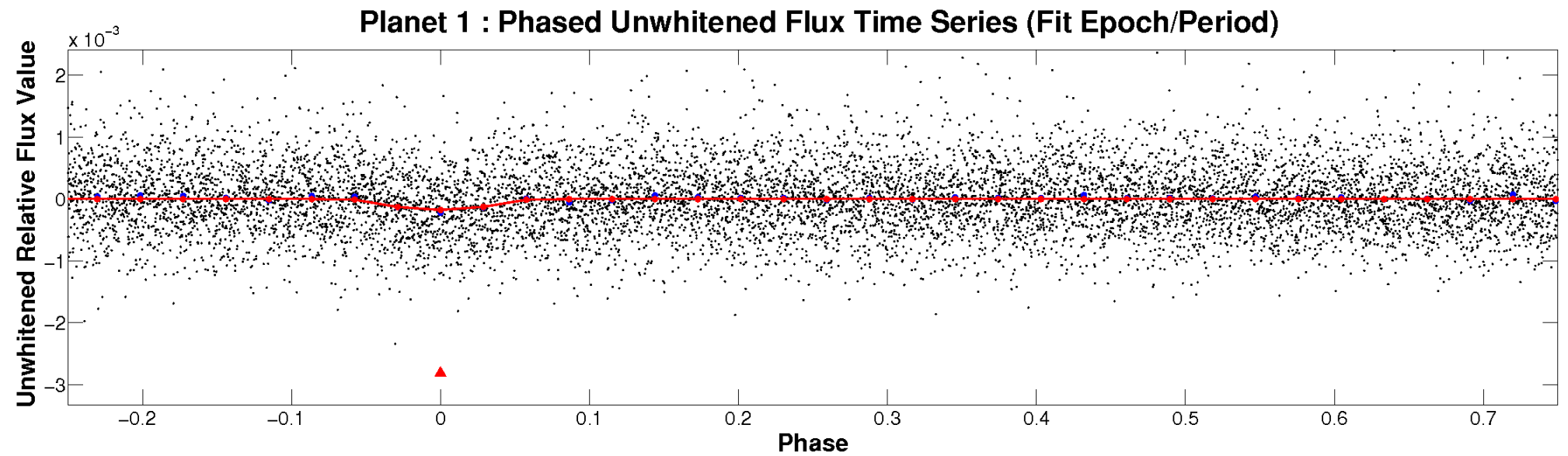


ALT Odd/Even

TCE 008391983-01

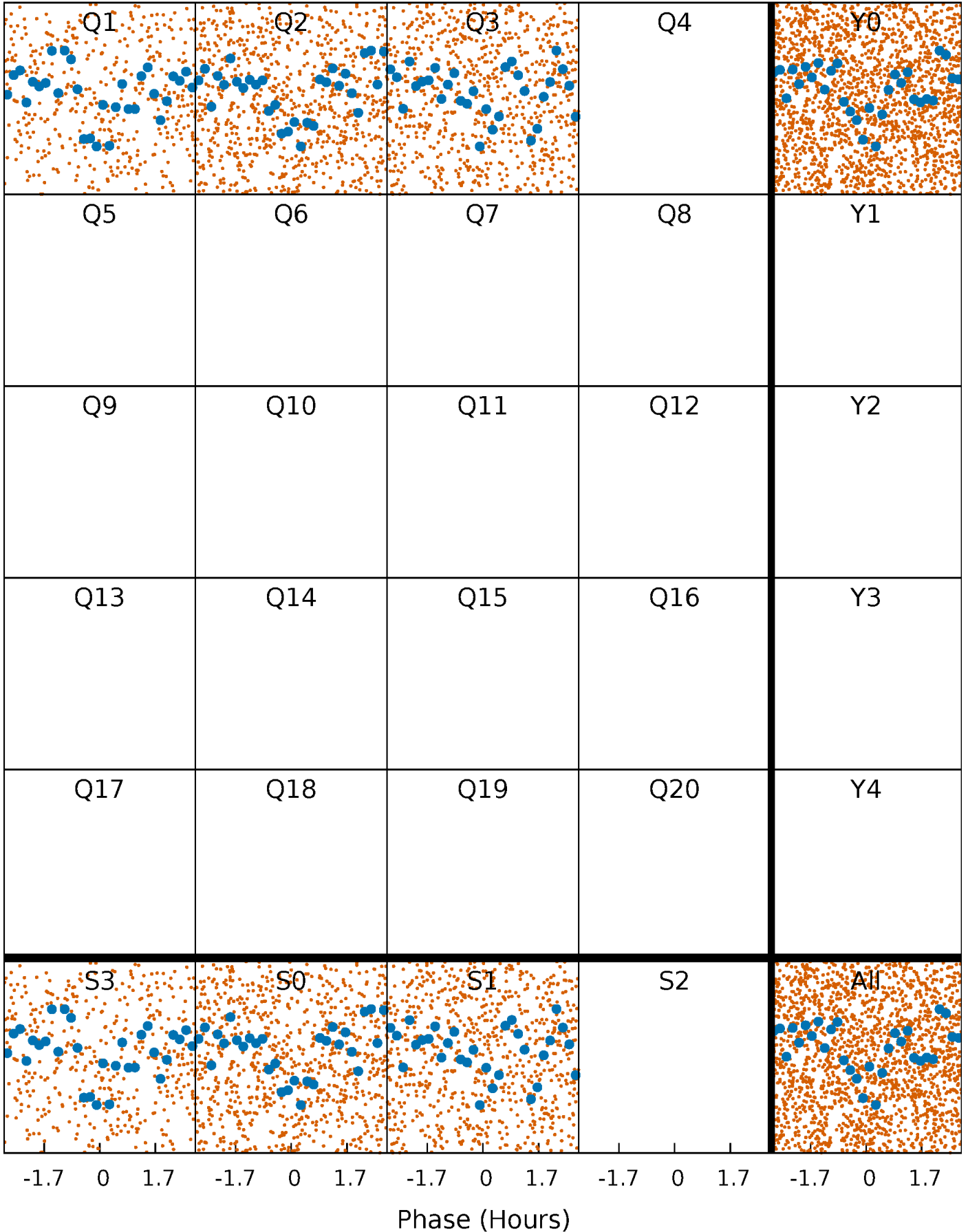


Non-Whitened Vs. Whitened Light Curve



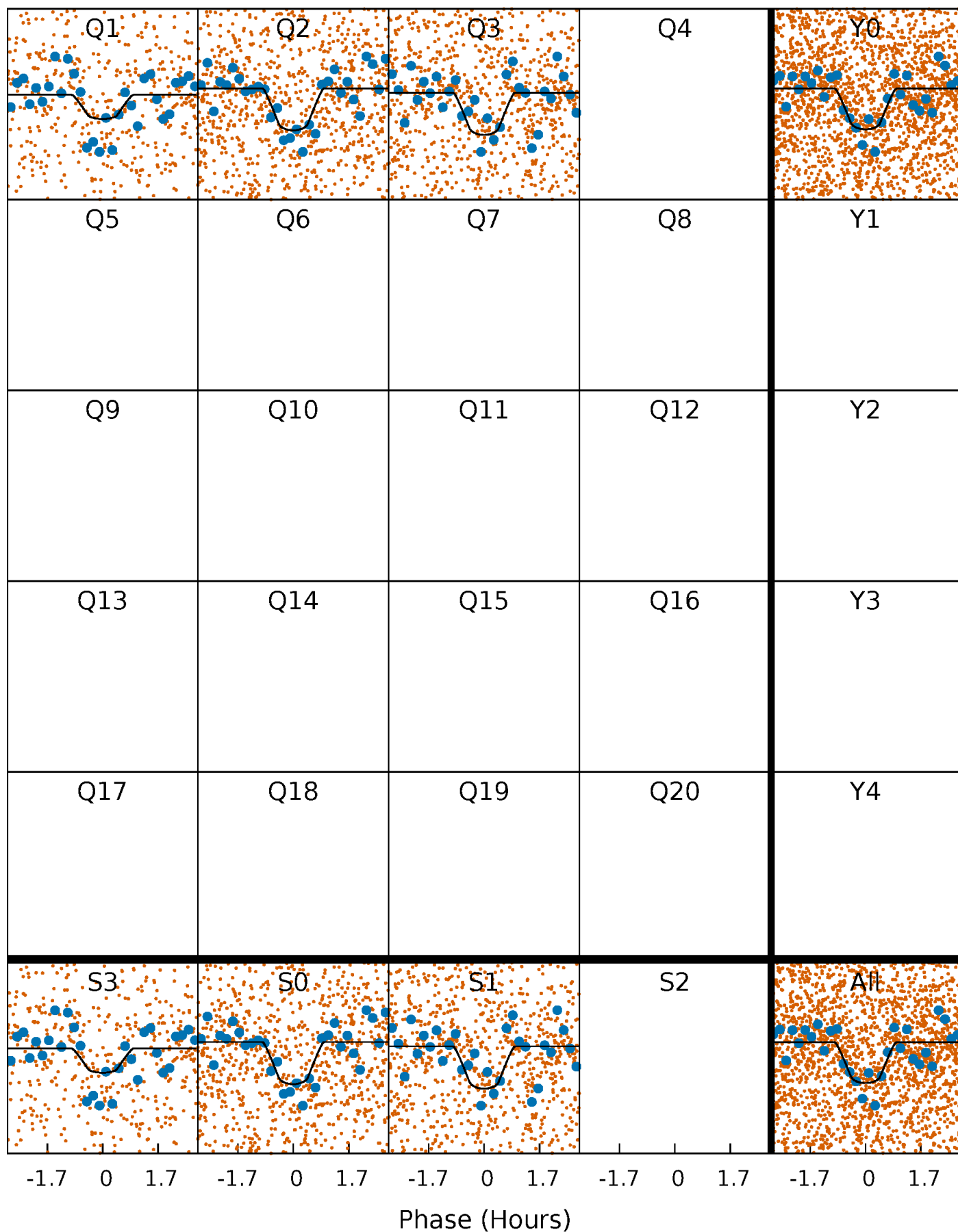
PDC Quarter-Phased Transit Curves

TCE 008391983-01 P= 0.709664 Days $T_0=131.976319$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008391983-01 P= 0.709664 Days $T_0=131.976319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

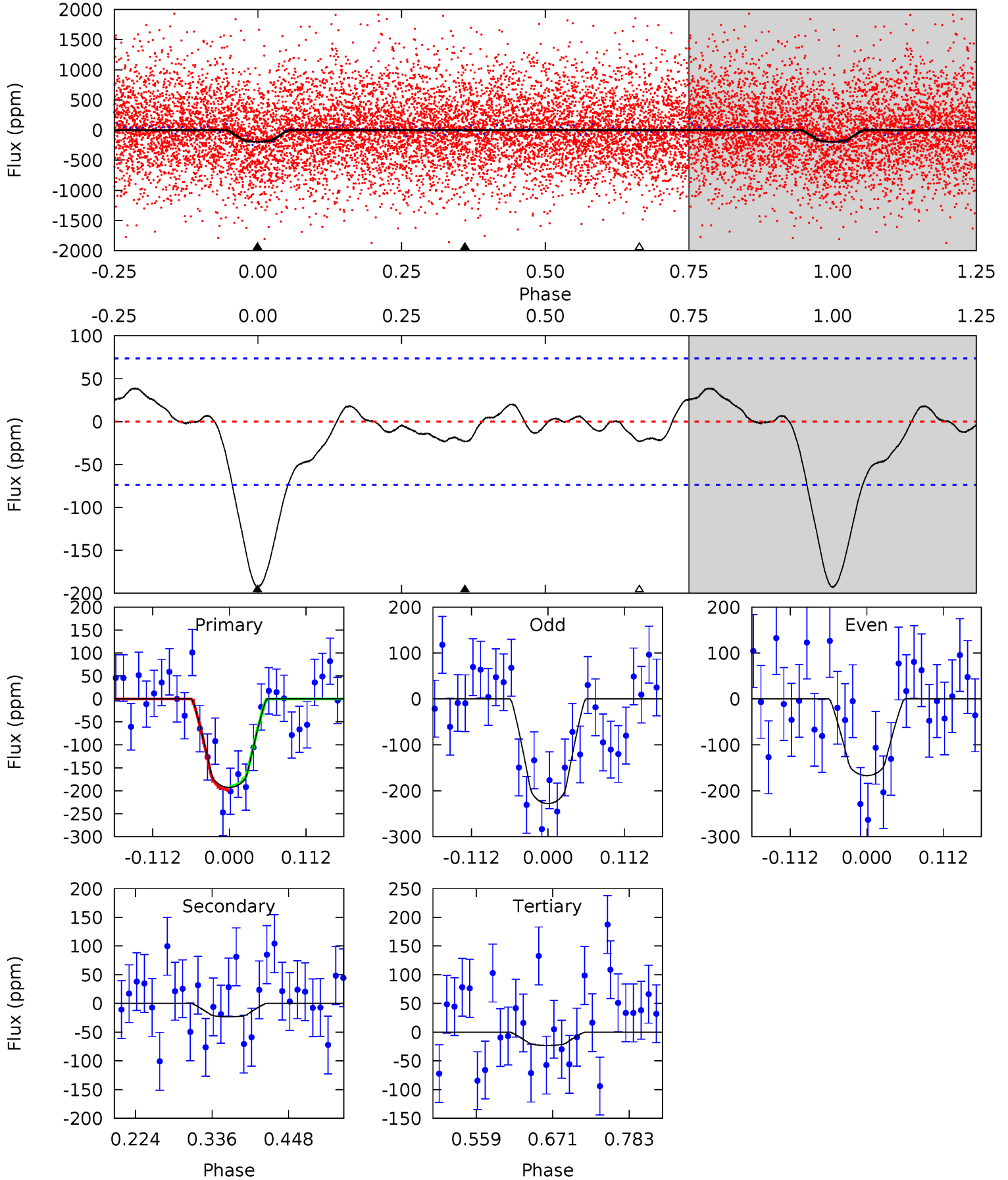
TCE 008391983-01 $P = 0.709602$ Days $T_0 = 131.985304$ (BKJD)



DV Model-Shift Uniqueness Test

008391983-01, P = 0.709664 Days, E = 131.266655 Days

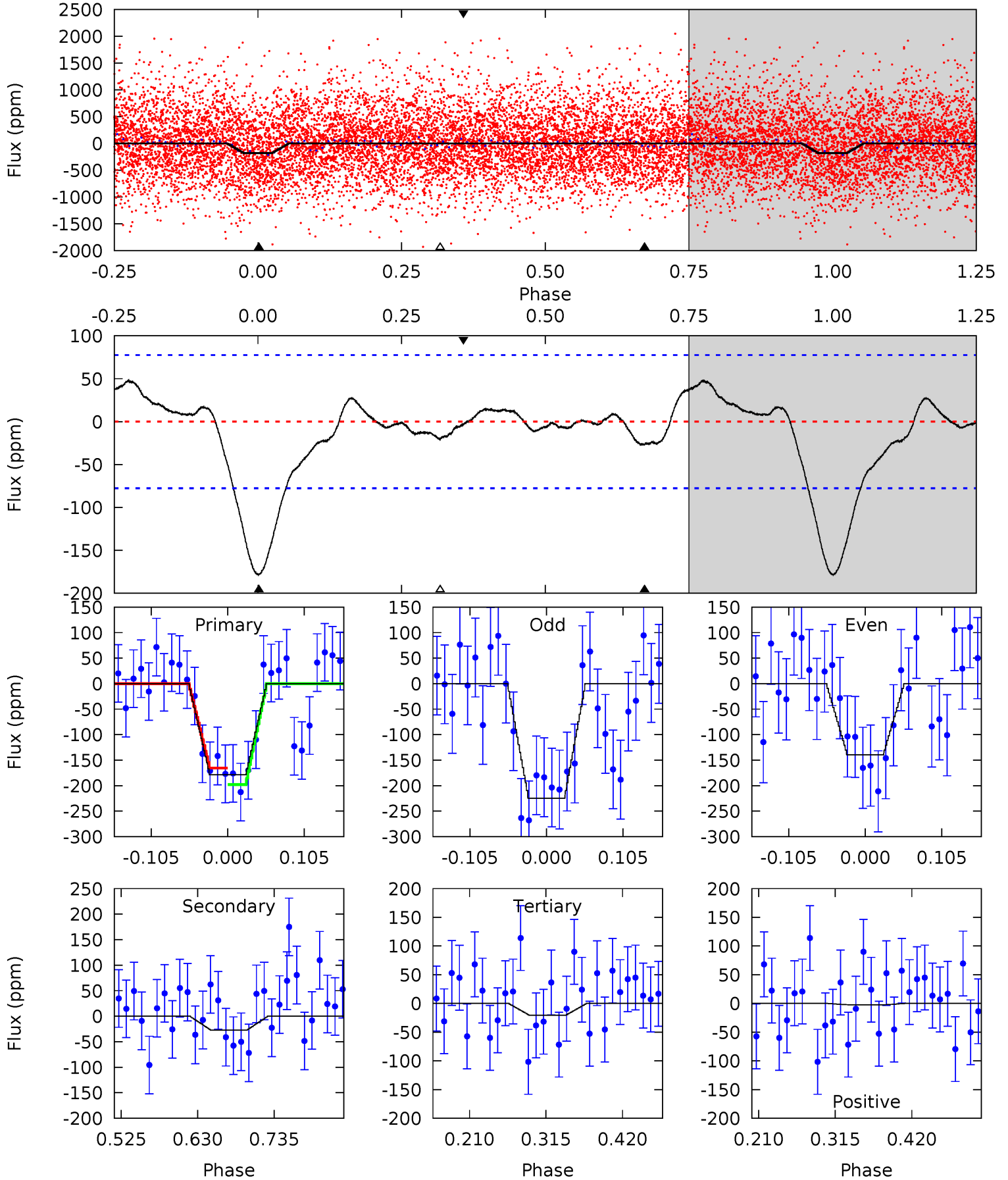
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	1.44	1.43	0	4.54	1.59	0.99	10.5	11.9	0.01	1.44	1.87	1.05	0.17	0.24



Alt Model-Shift Uniqueness Test

008391983-01, P = 0.709602 Days, E = 131.275702 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	1.60	1.22	-0.14	4.55	1.62	0.86	9.28	10.6	0.38	1.74	2.49	0.92	0.21	0.95



Stellar Parameters For KIC 008391983

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5618^{+169}_{-169}	$4.373^{+0.153}_{-0.187}$	$-0.120^{+0.300}_{-0.250}$	$1.002^{+0.269}_{-0.179}$	$0.865^{+0.125}_{-0.073}$	$1.212^{+0.889}_{-0.587}$
	+3%/-3%	+3%/-4%	+250%/-208%	+27%/-18%	+14%/-8%	+73%/-48%
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 008391983-01 / KOI 7884.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 16	$2.18^{+1.77}_{-1.38}$	2856^{+204}_{-180}	2811^{+1575}_{-5703}	$0.491^{+2.962}_{-0.400}$
Alt.	-27 ± 17	$2.06^{+1.95}_{-1.37}$	2859^{+217}_{-178}	3029^{+1823}_{-5835}	$0.636^{+4.762}_{-0.506}$

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 $A_{obs} \gg 1.0$

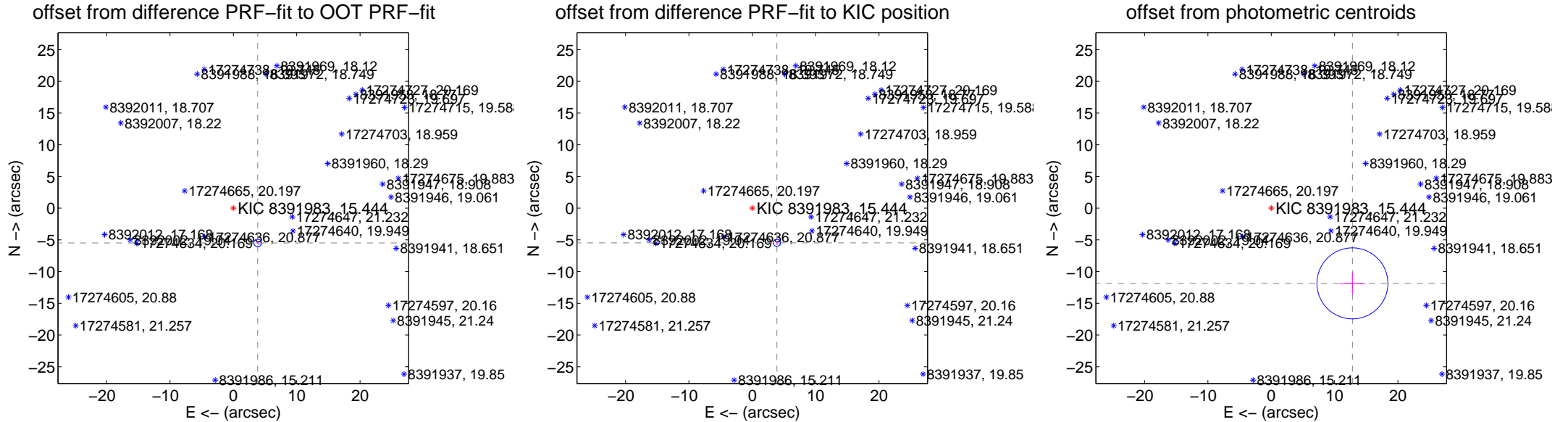
DV Centroid Data

Supplemental centroid analysis for 008391983-01. Kepler magnitude: 15.44. Transit SNR 7.82

There are 3 quarters with good PRF difference image offsets

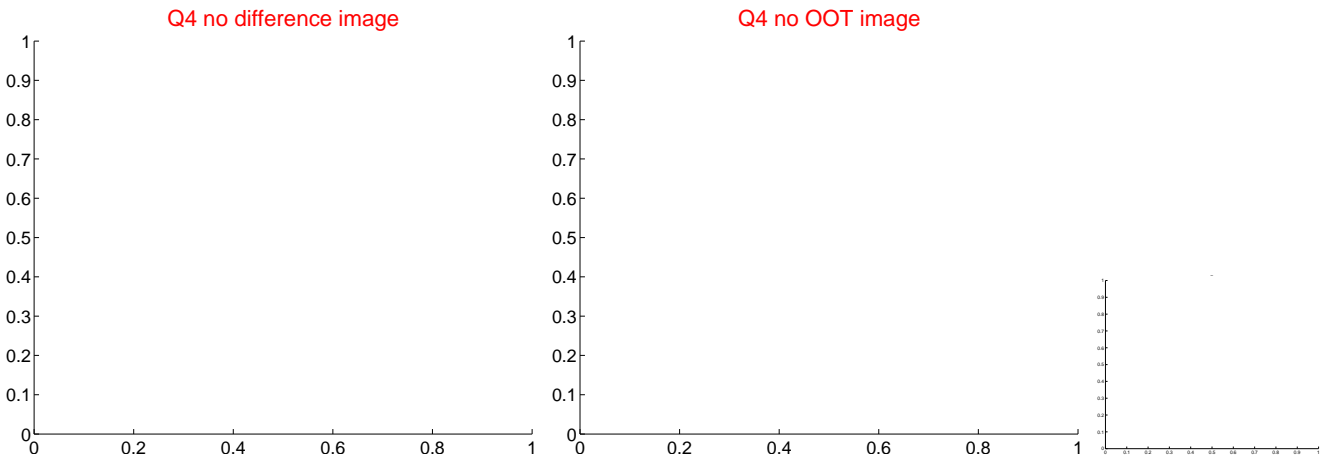
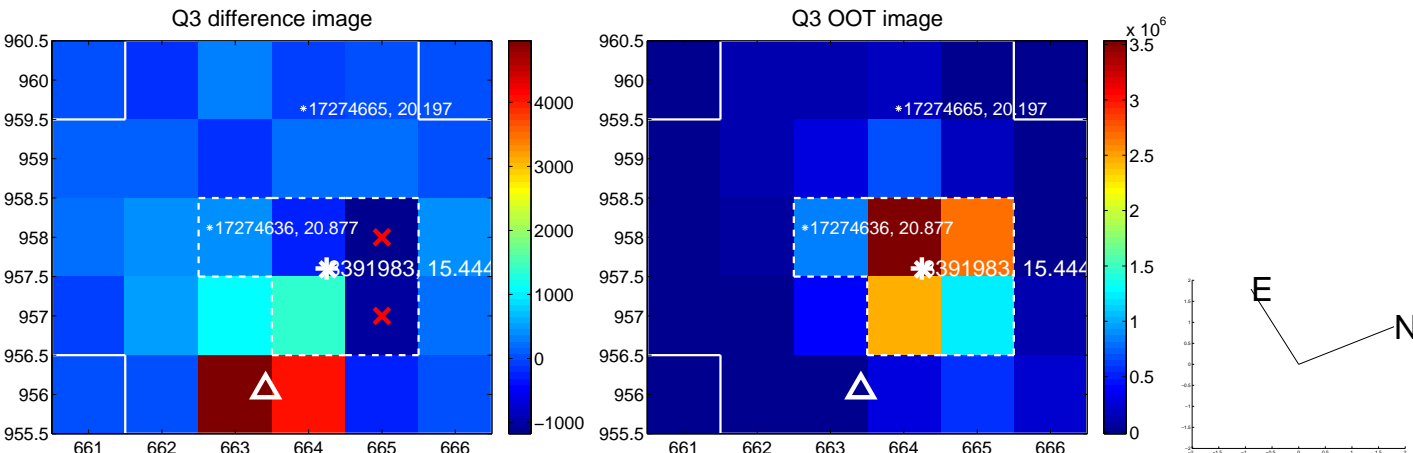
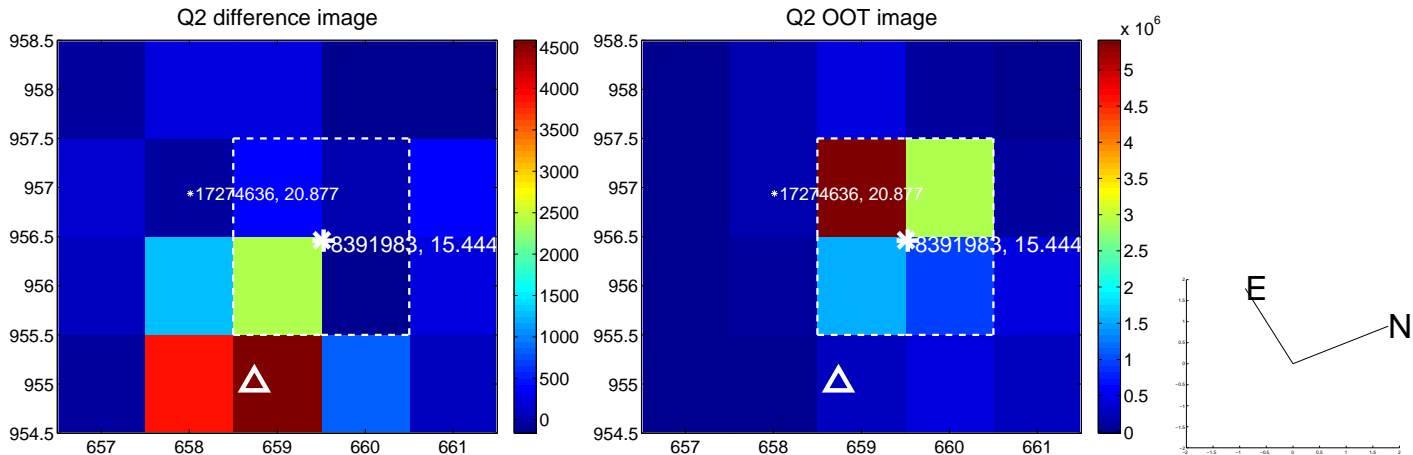
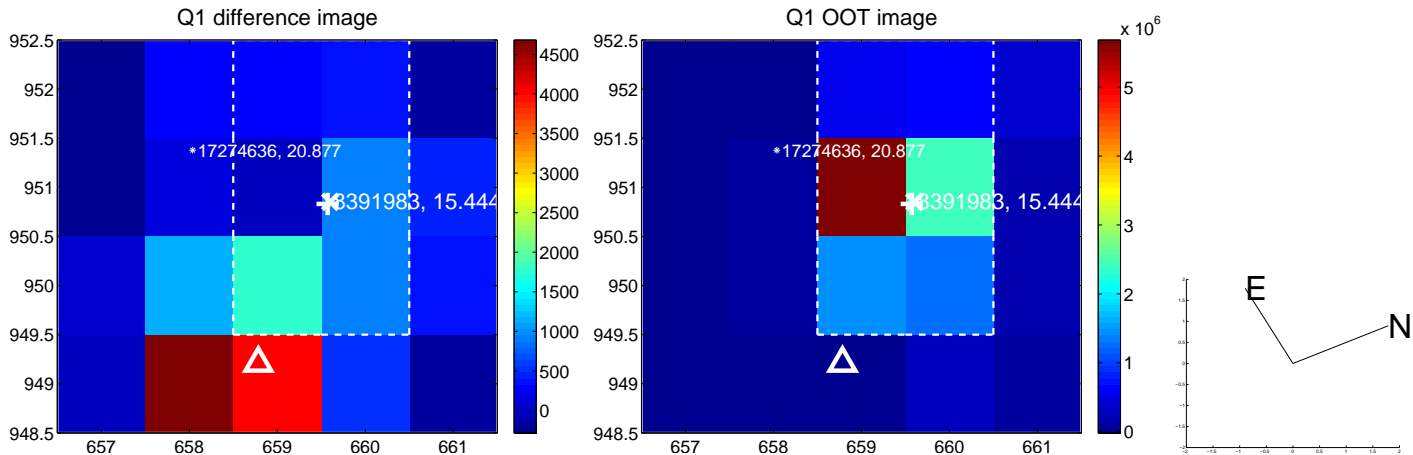
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.699 \pm 0.201	33.37	-3.848 \pm 0.217	-5.483 \pm 0.112
PRF-fit source offset from KIC position	6.702 \pm 0.185	36.13	-3.876 \pm 0.149	-5.467 \pm 0.201
photometric centroid source offset	17.45 \pm 1.87	9.35	-12.81 \pm 1.99	-11.86 \pm 1.71



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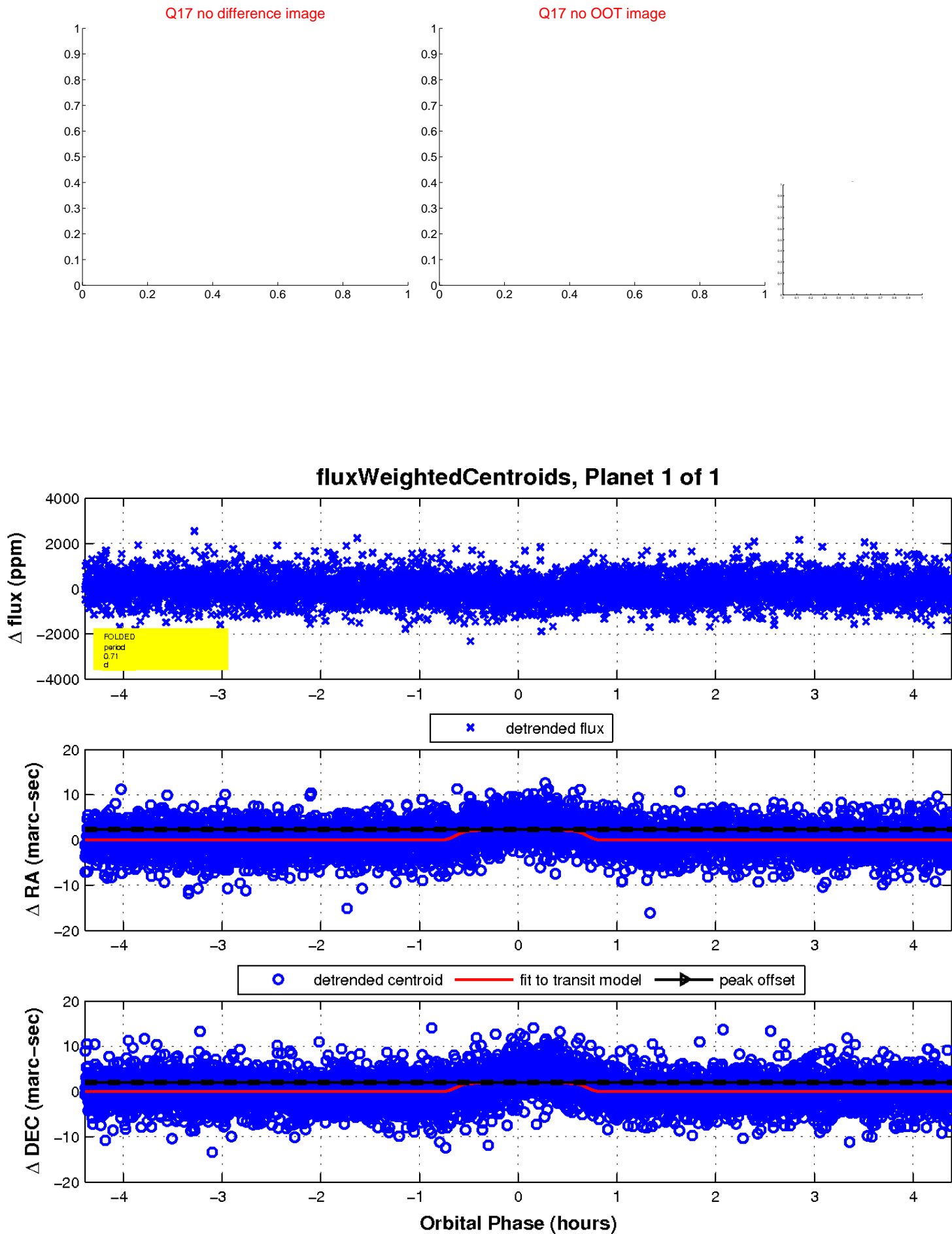
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

