

KIC 003942775

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})
003942775-01	OBS	No	394.021660	493.931644	216.0	12.292	7.8	7.5	0.98	5880	1.55	0.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003942775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

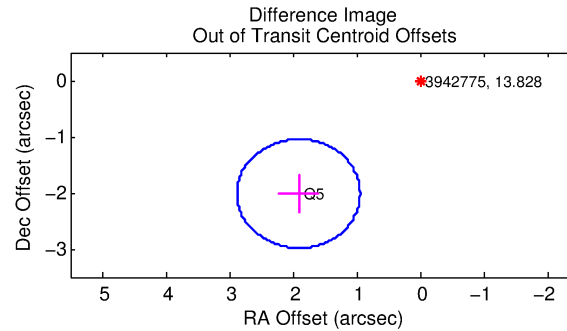
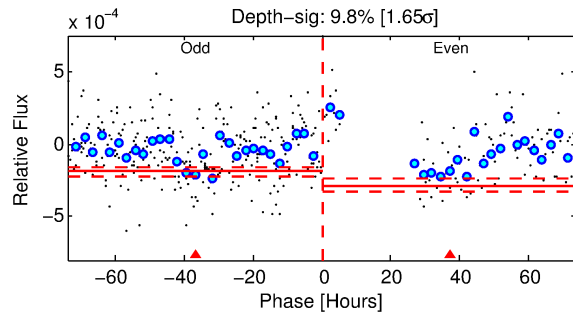
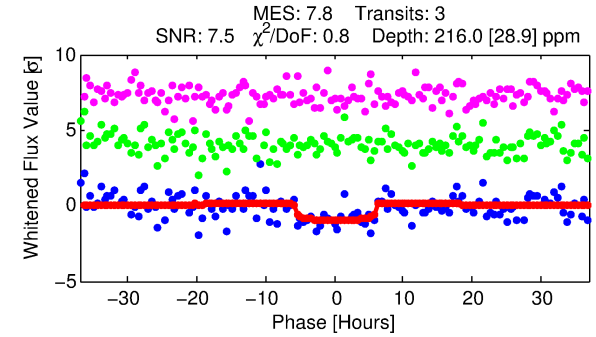
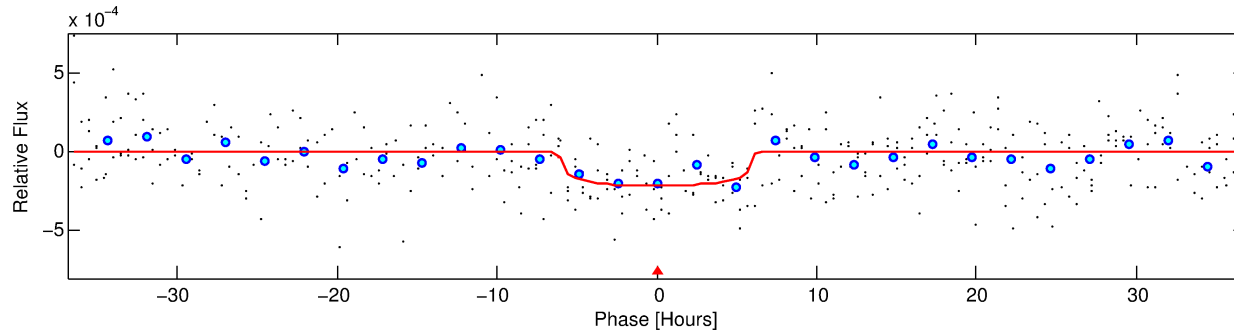
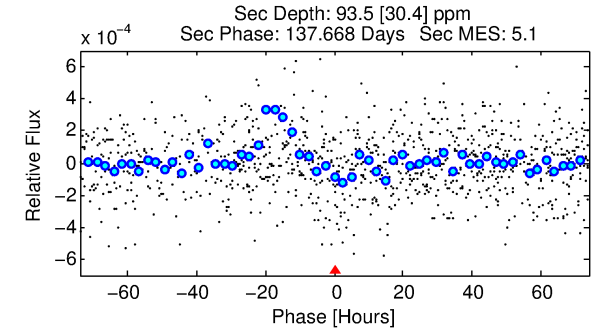
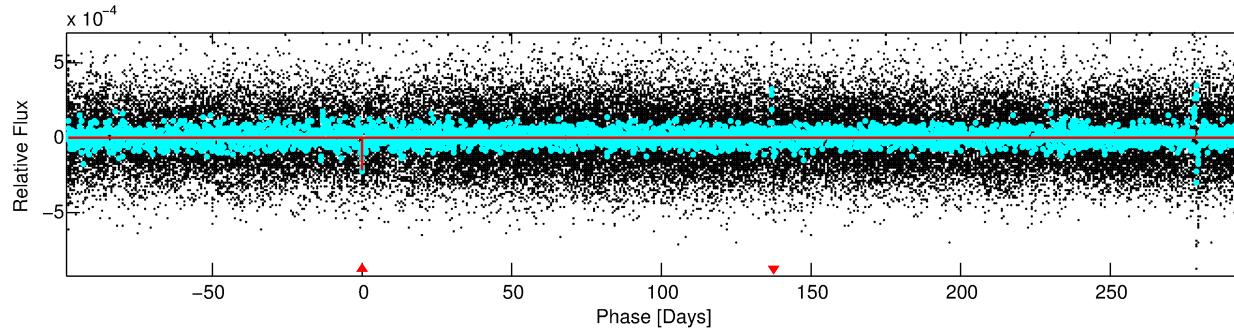
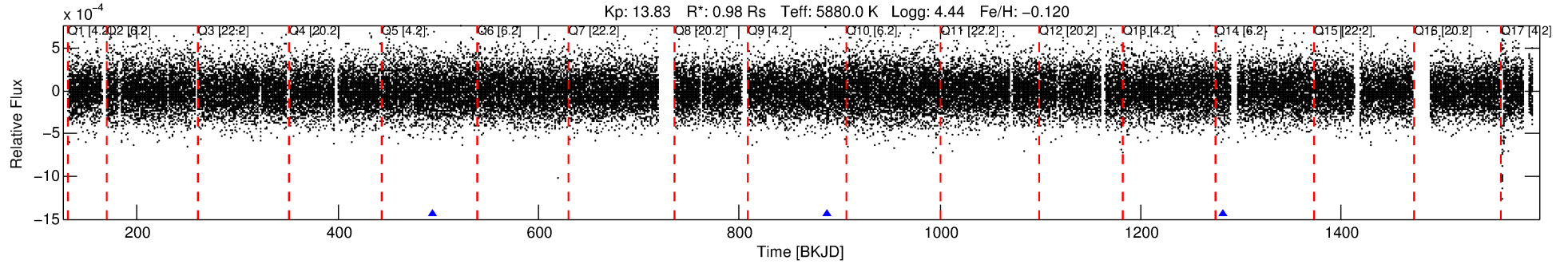
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003942775-01

No Significant Match Found

DV One-Page Summary

KIC: 3942775 Candidate: 1 of 1 Period: 394.022 d



DV Fit Results:

Period = 394.02166 [0.01629] d
Epoch = 493.9316 [0.0202] BKJD
Rp/R* = 0.0145 [0.0079]
a/R* = 174.68 [434.55]
b = 0.72 [1.68]
Seff = 0.96 [0.36]
Teq = 252 [24] K
Rp = 1.55 [0.96] Re
a = 1.0401 [0.2531] AU
Ag = 23059.26 [27538.19] [0.84σ]
Teffp = 4805 [1377] K [3.31σ]

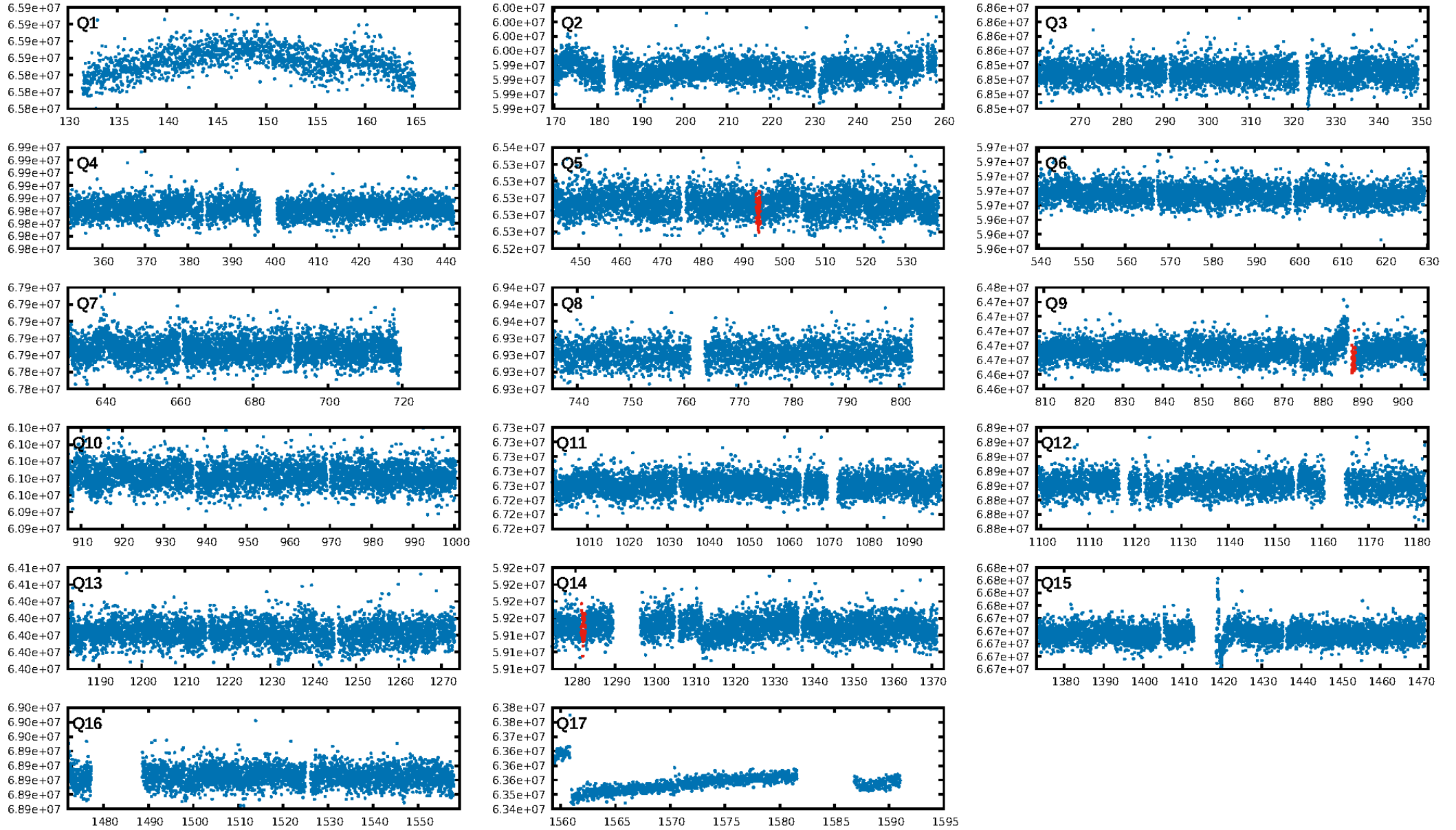
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 33.8%
ModelChiSquare60-sig: 100.0%
Bootstrap-pfa: 2.04e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.337
Centroid-sig: 1.8%
Centroid-so: 3.849 arcsec [1.92σ]
OotOffset-rm: 2.777 arcsec [8.59σ]
KicOffset-rm: 2.763 arcsec [8.54σ]
OotOffset-st: 0/0/0 [1]
KicOffset-st: 0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

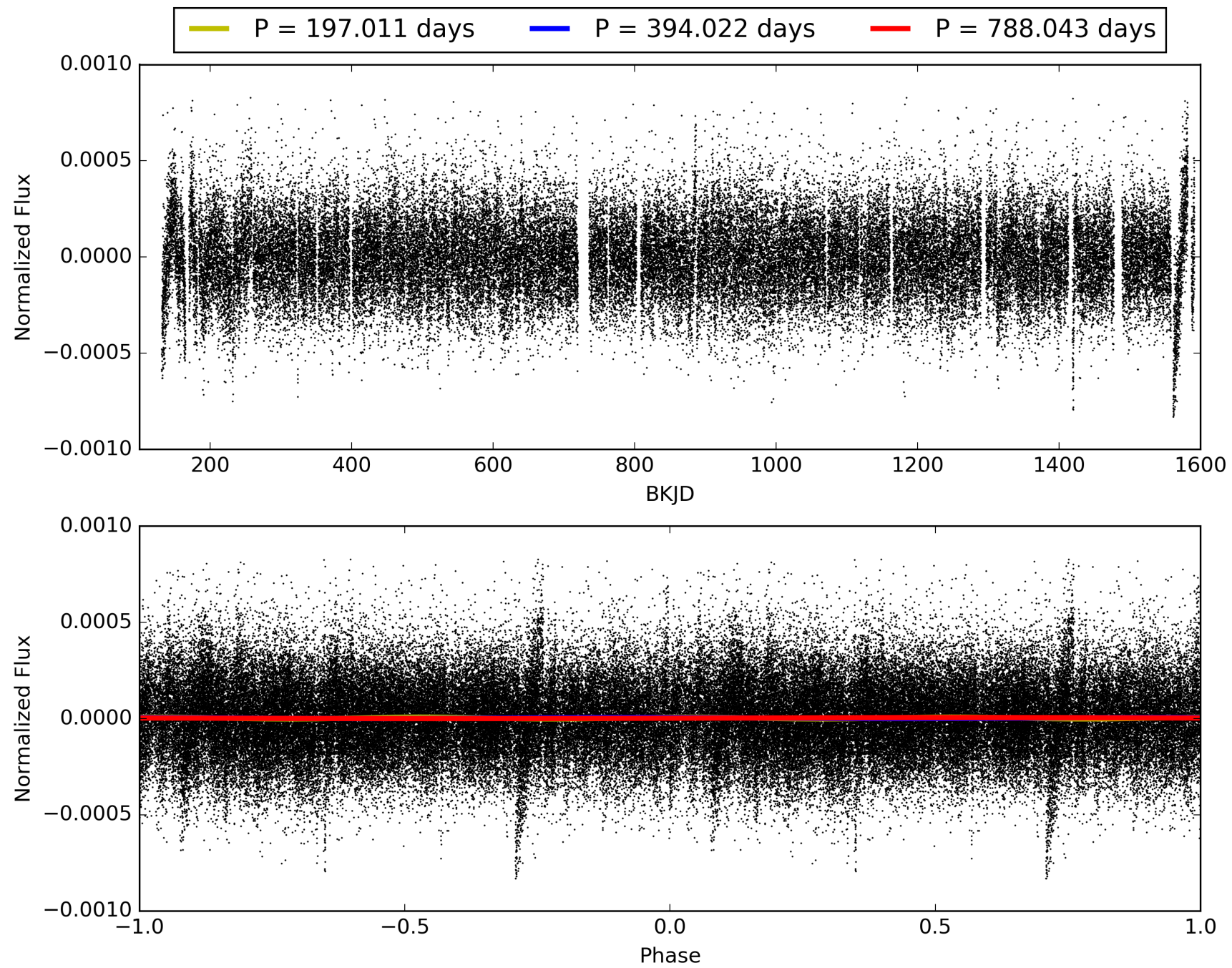
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:16:03 Z

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

TCE 003942775-01, PDC Light Curves

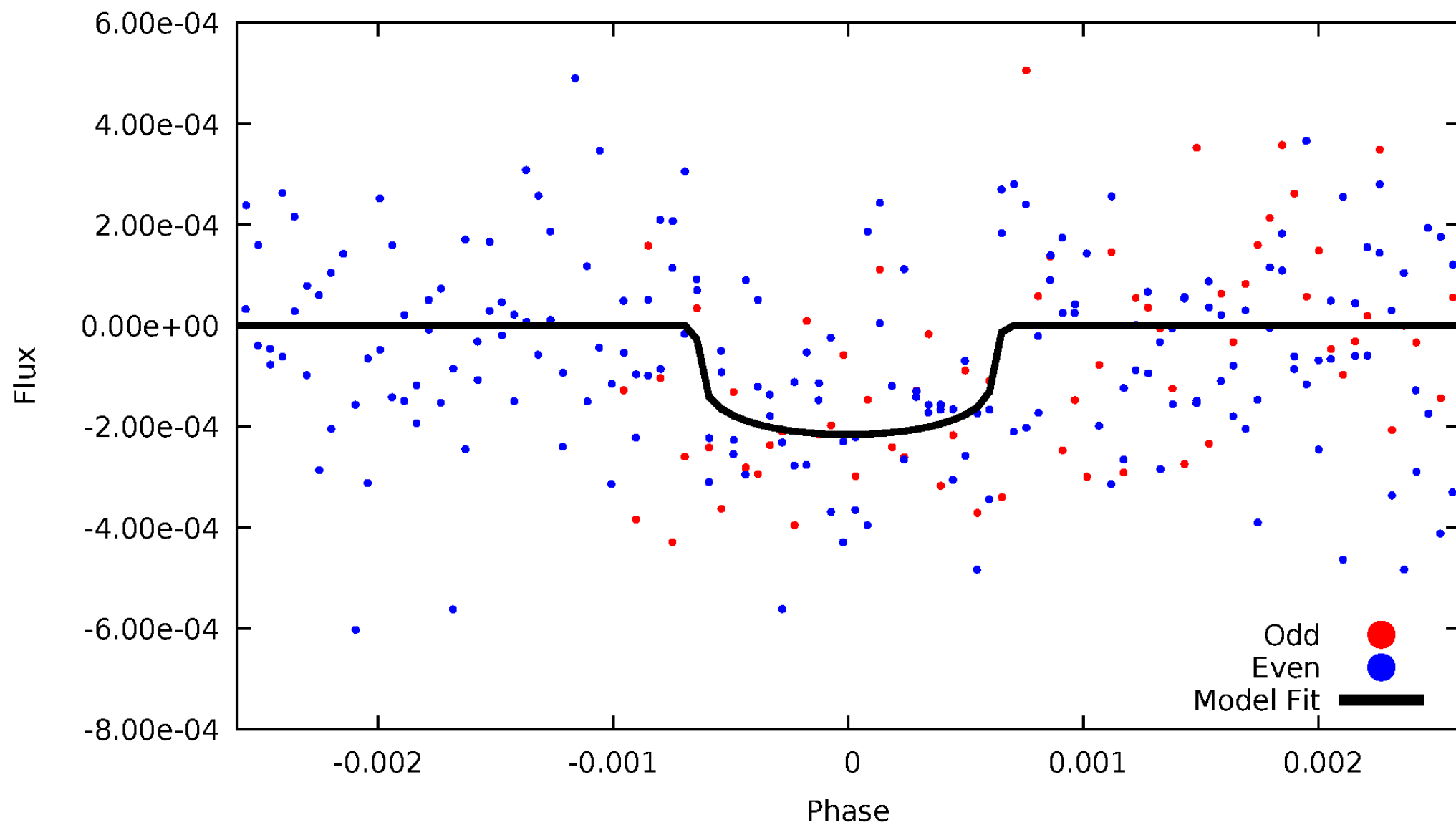


TCE 003942775-01



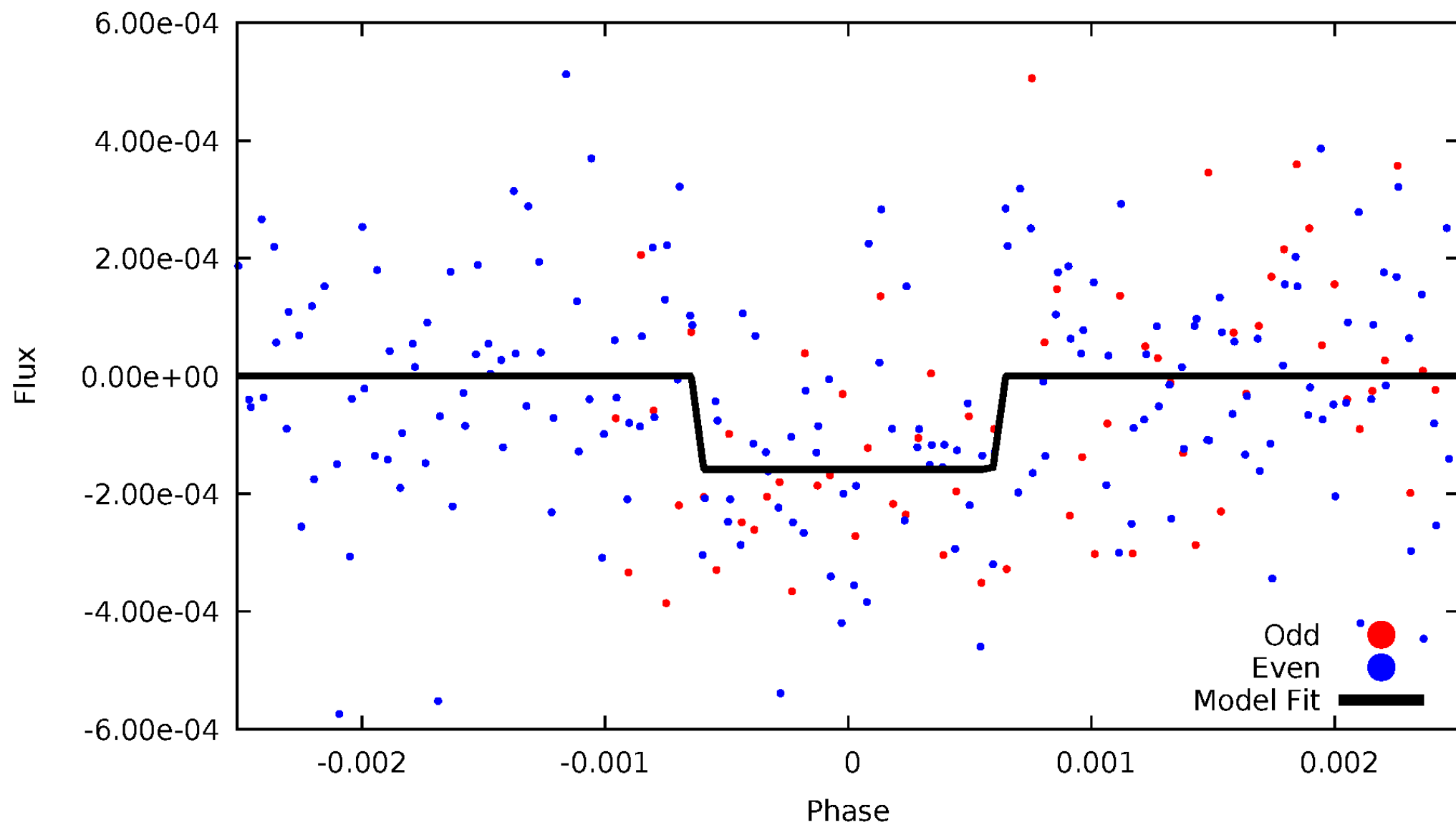
DV Odd/Even

TCE 003942775-01



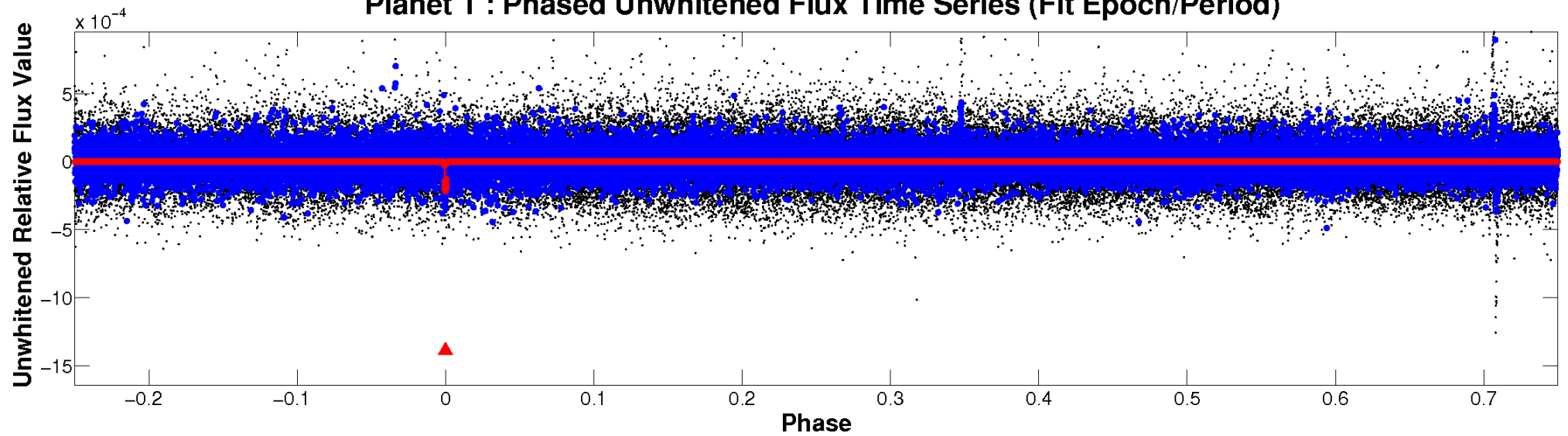
ALT Odd/Even

TCE 003942775-01

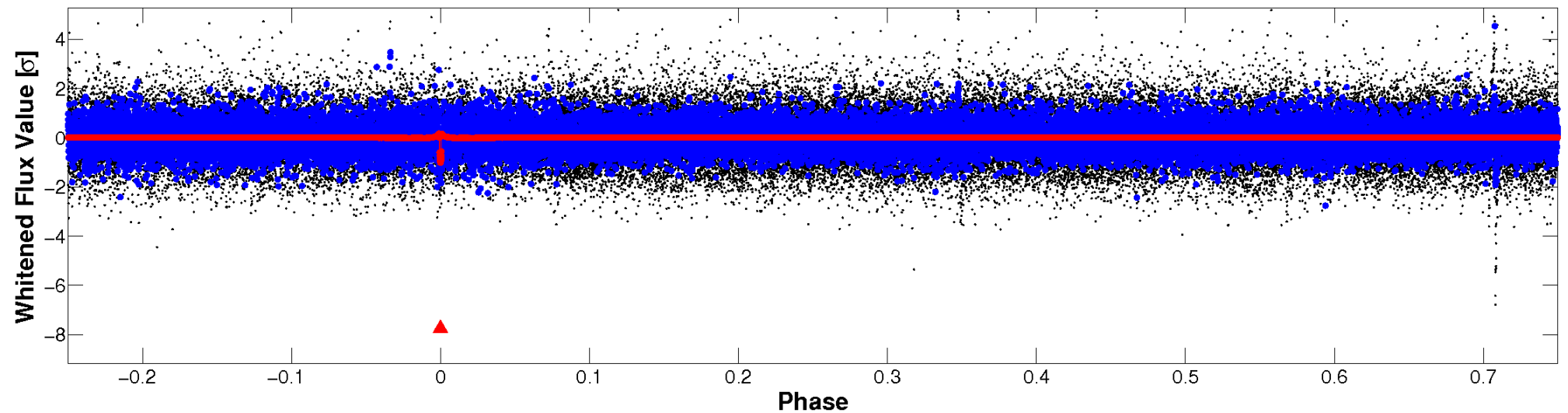


Non-Whitened Vs. Whitened Light Curve

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

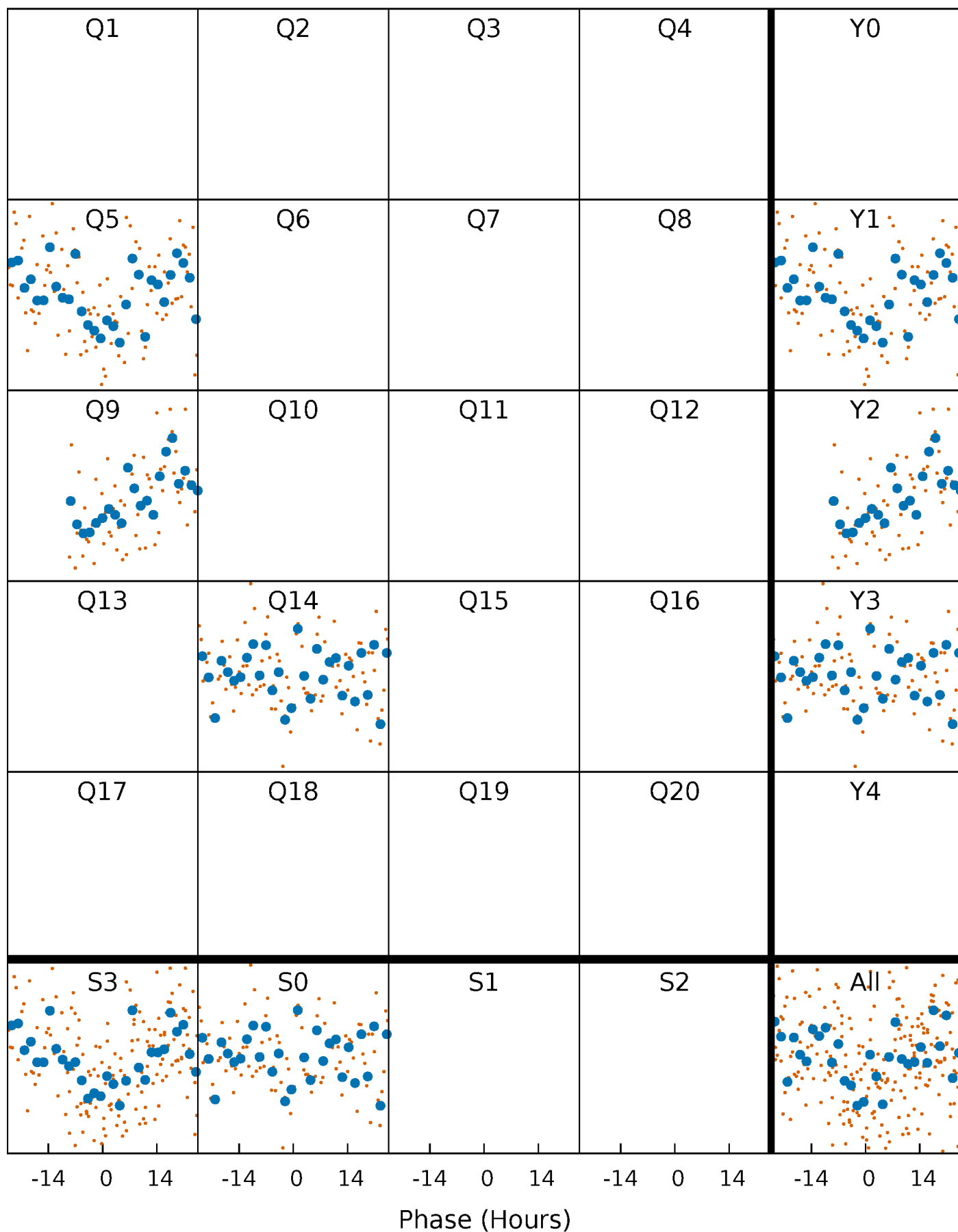


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



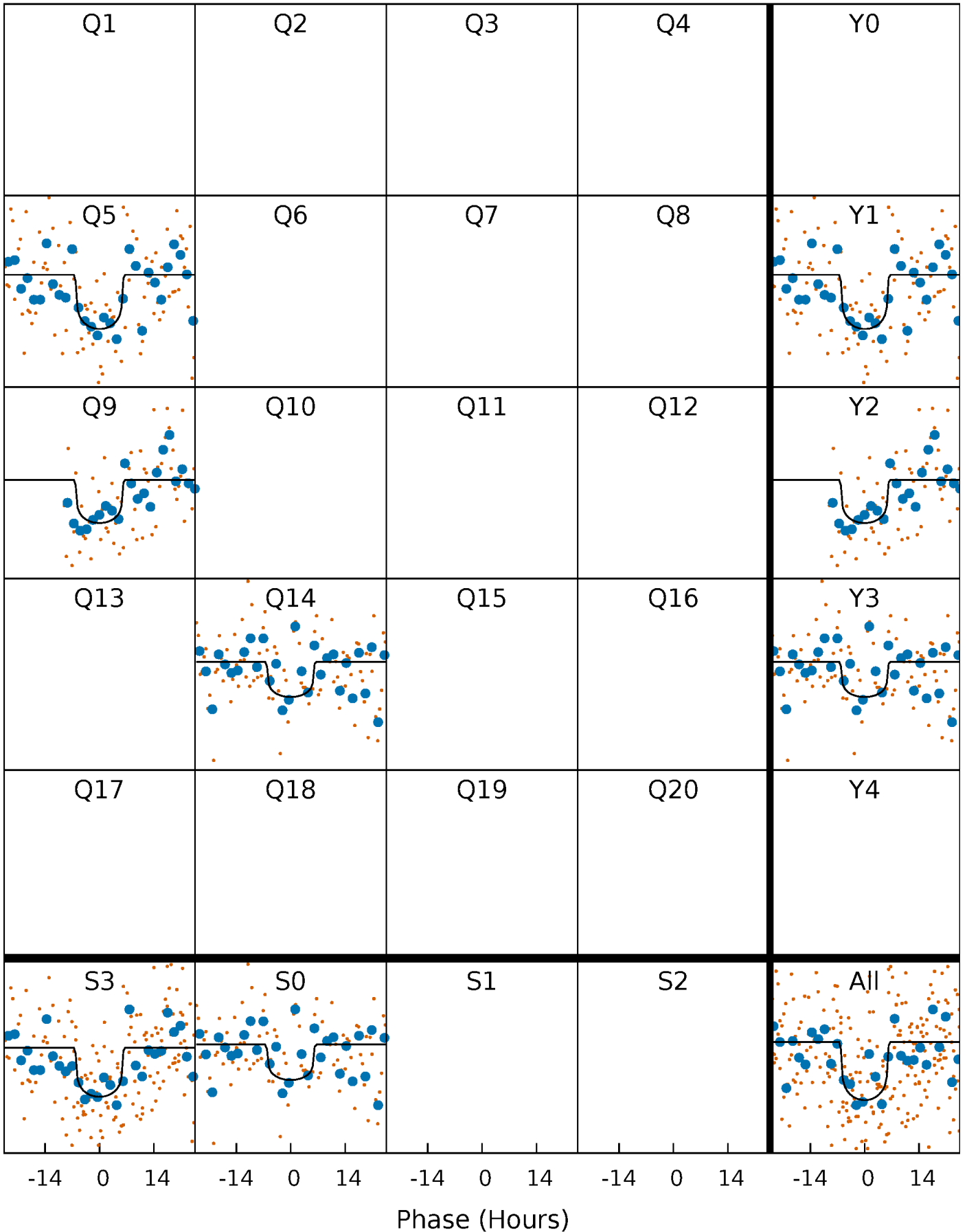
PDC Quarter-Phased Transit Curves

TCE 003942775-01 P=394.021660 Days $T_0=493.931644$ (BKJD)



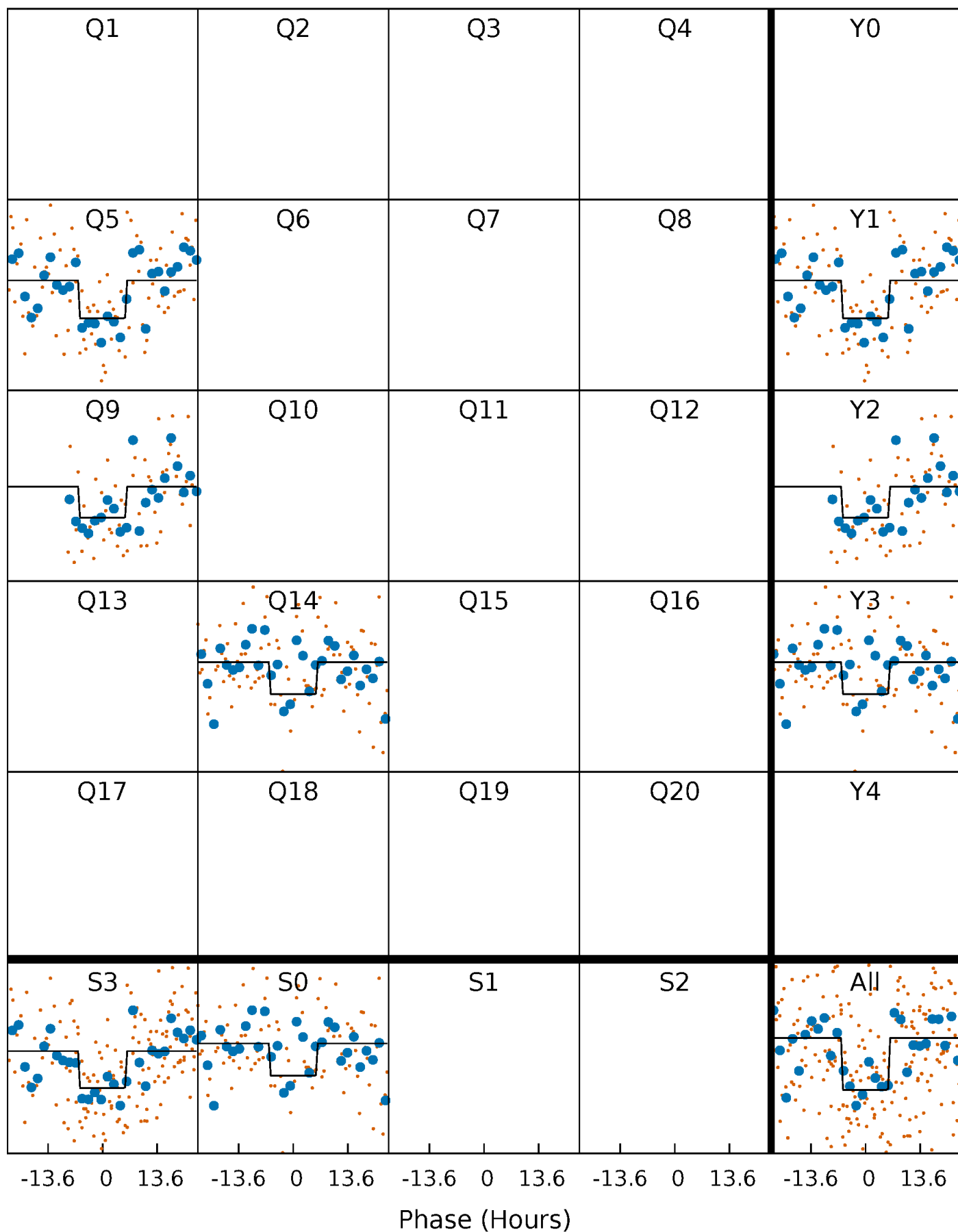
DV Quarter-Phased Transit Curves

TCE 003942775-01 P=394.021660 Days $T_0=493.931644$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

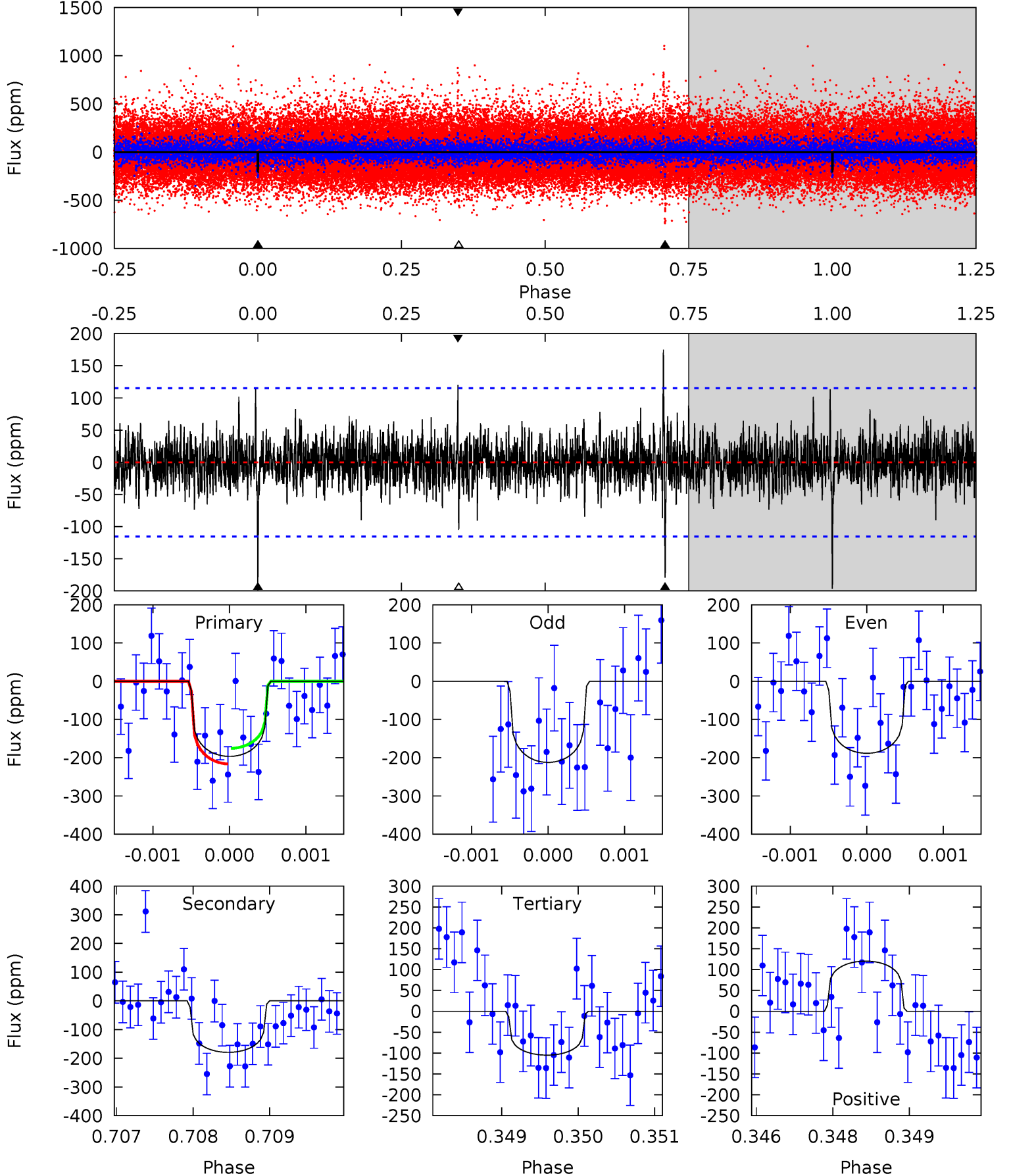
TCE 003942775-01 P=394.020337 Days $T_0=493.933648$ (BKJD)



DV Model-Shift Uniqueness Test

003942775-01, P = 394.021660 Days, E = 99.909984 Days

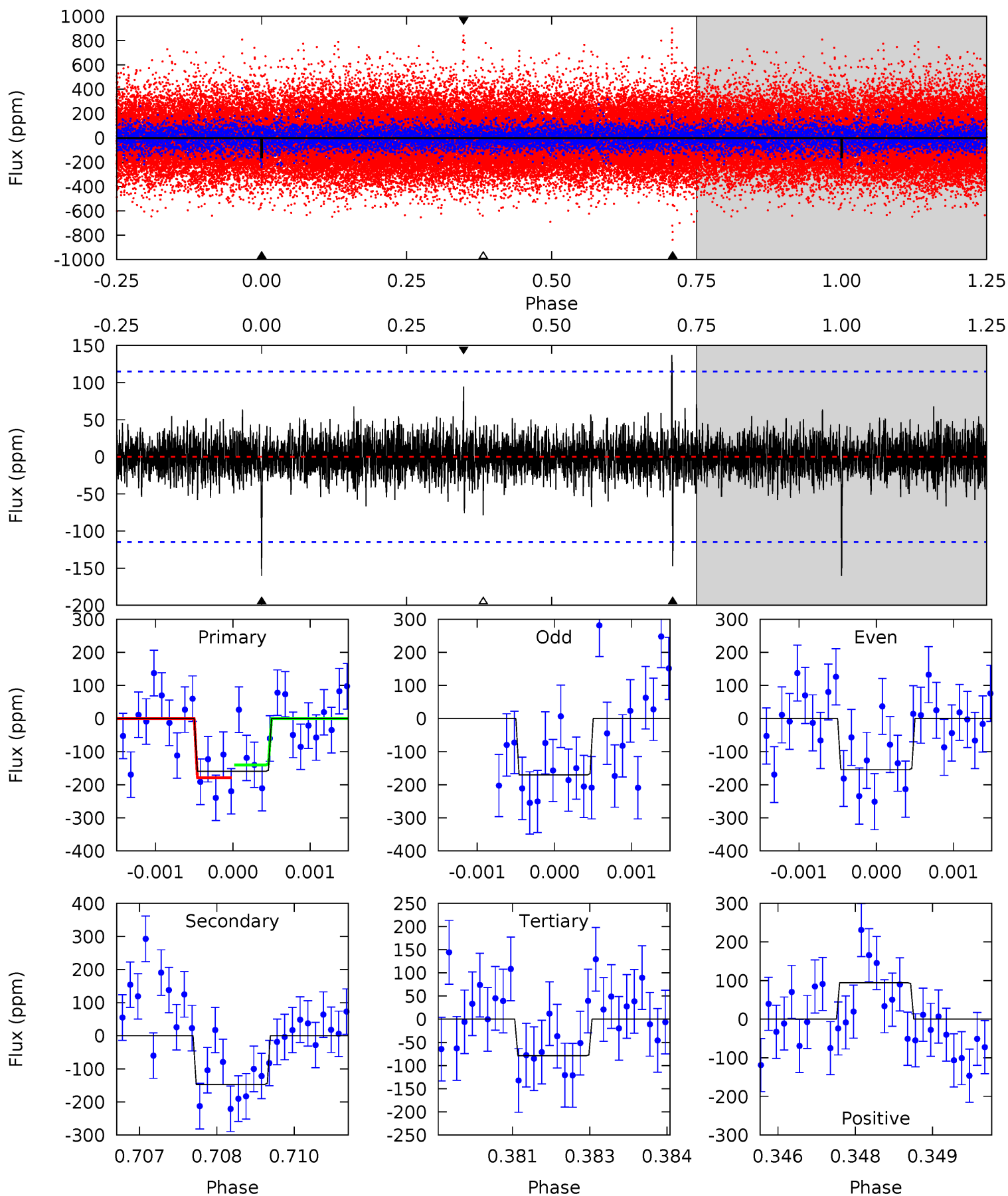
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	8.41	4.92	5.64	5.40	3.22	1.18	4.29	3.57	3.49	2.77	0.53	0.92	0.47	0.96



Alt Model-Shift Uniqueness Test

003942775-01, P = 394.020337 Days, E = 99.913311 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.52	6.92	3.71	4.44	5.41	3.22	0.87	3.81	3.08	3.21	2.48	0.35	0.93	0.46	0.90



Stellar Parameters For KIC 003942775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5880^{+141}_{-176}	$4.438^{+0.084}_{-0.196}$	$-0.120^{+0.300}_{-0.300}$	$0.983^{+0.282}_{-0.121}$	$0.966^{+0.121}_{-0.110}$	$1.434^{+0.517}_{-0.740}$
	+2%/-3%	+2%/-4%	+250%/-250%	+29%/-12%	+13%/-11%	+36%/-52%
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 003942775-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-179 ± 21	$1.56^{+0.93}_{-0.78}$	356^{+25}_{-16}	5714^{+2740}_{-1040}	$43276^{+131788}_{-26254}$
Alt.	-147 ± 21	$1.43^{+0.87}_{-0.76}$	357^{+27}_{-18}	5683^{+2847}_{-1042}	$40932^{+144125}_{-25307}$

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

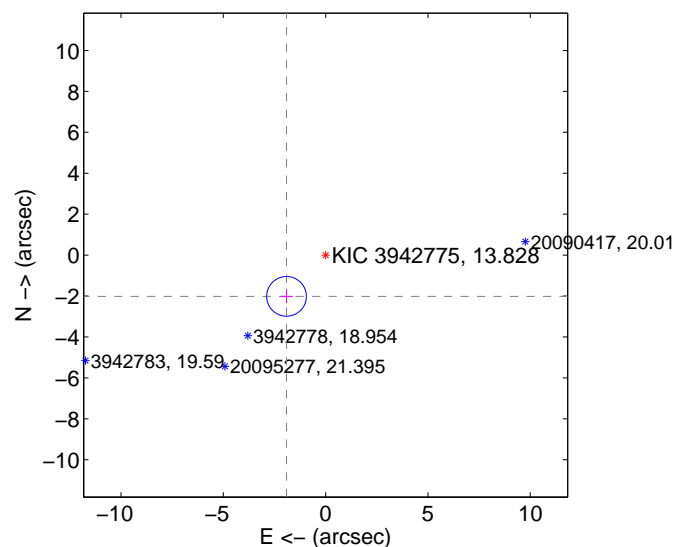
Supplemental centroid analysis for 003942775-01. Kepler magnitude: 13.83. Transit SNR 7.53

There are 1 quarters with good PRF difference image offsets

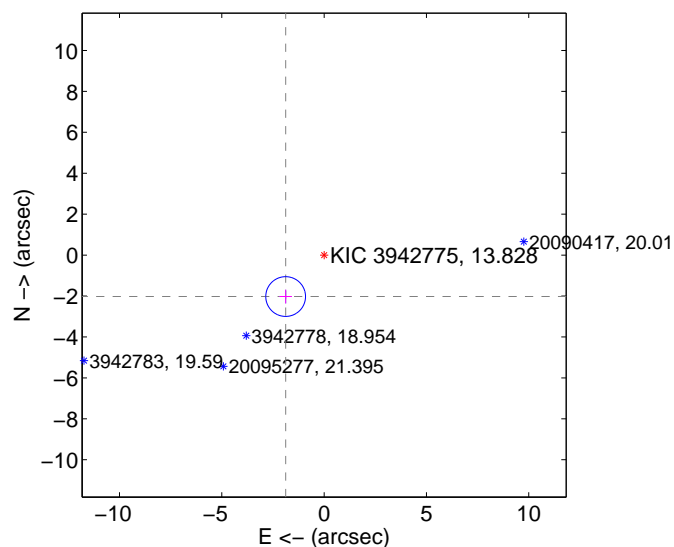
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.777 ± 0.323	8.59	1.911 ± 0.305	-2.016 ± 0.339
PRF-fit source offset from KIC position	2.763 ± 0.324	8.54	1.880 ± 0.305	-2.025 ± 0.339
photometric centroid source offset	3.85 ± 2.00	1.92	-3.83 ± 2.00	0.42 ± 2.42

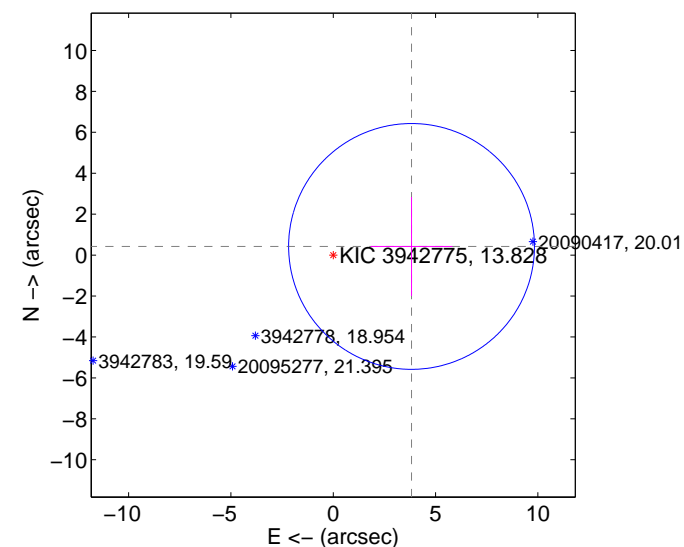
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

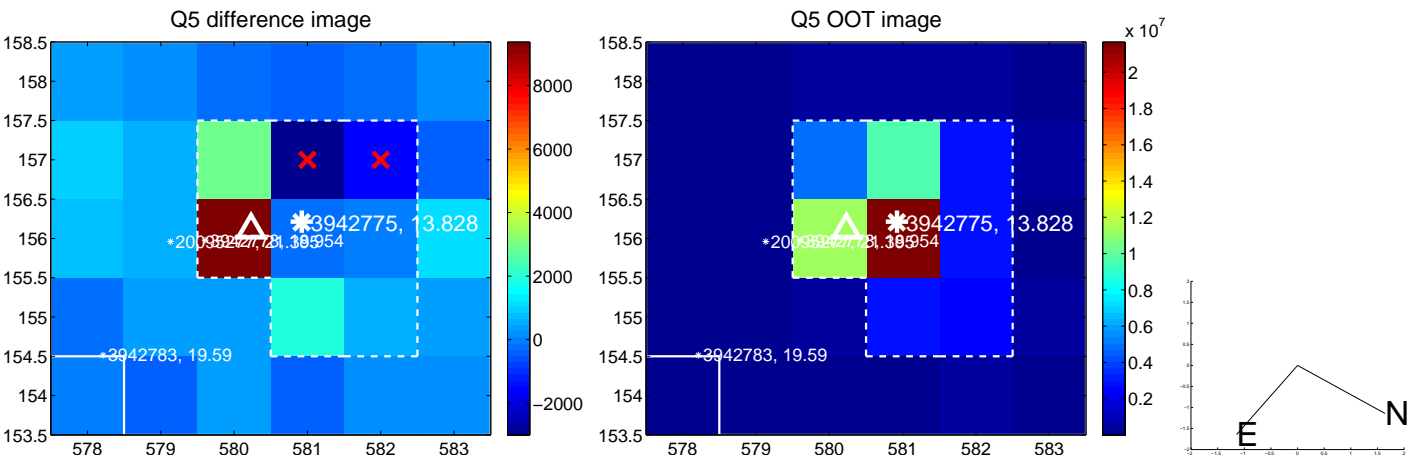


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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



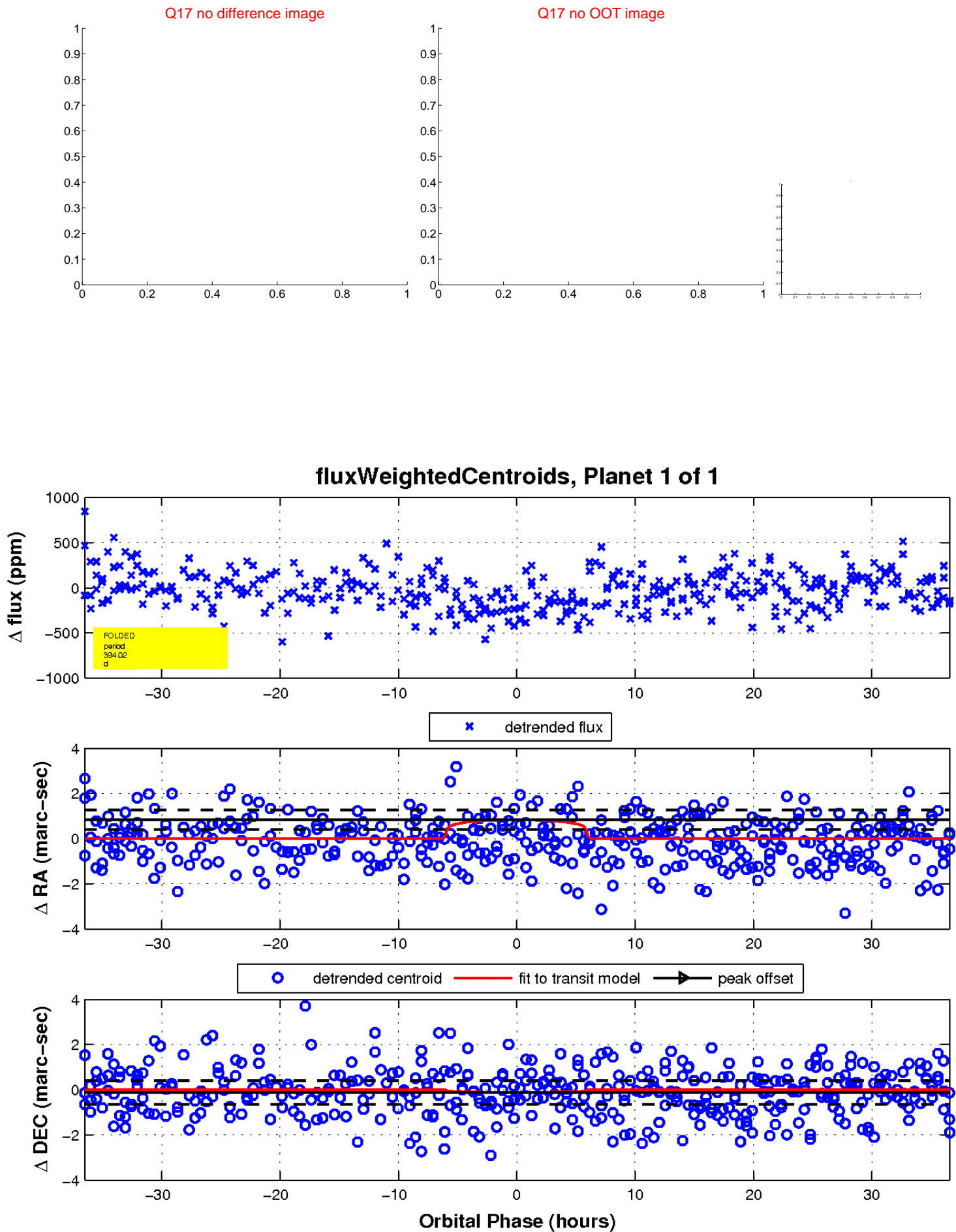
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

