

KIC 007590964

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})
007590964-01	OBS	No	387.810316	341.016938	629.4	5.721	8.7	7.6	1.67	5299	4.44	1.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007590964-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

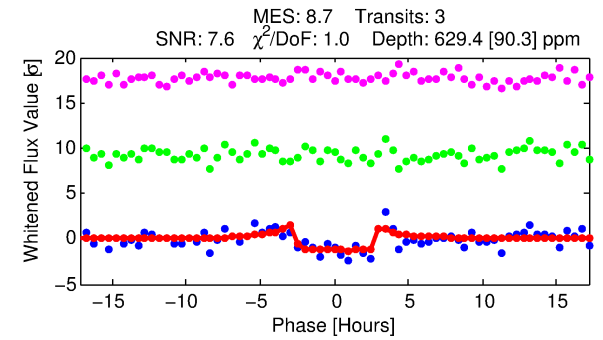
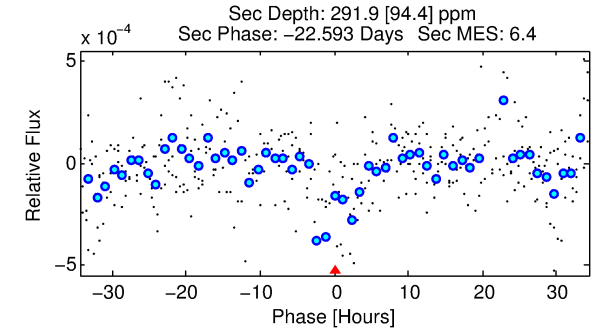
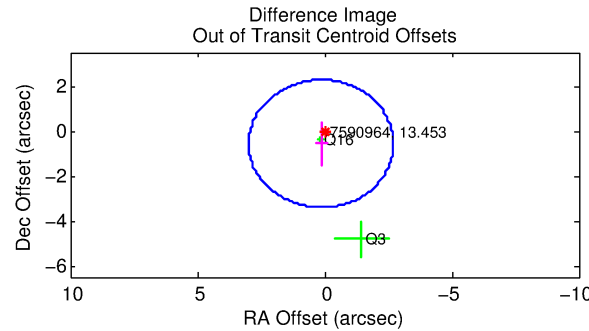
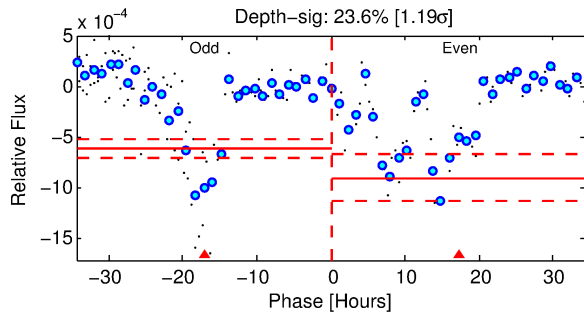
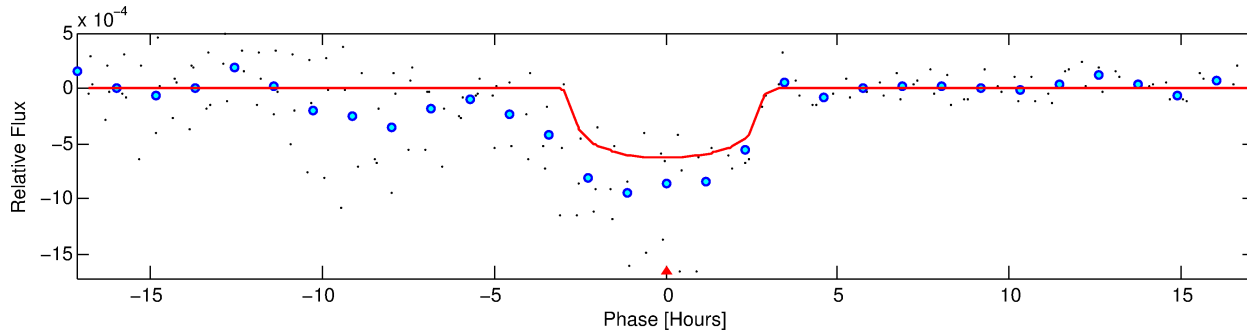
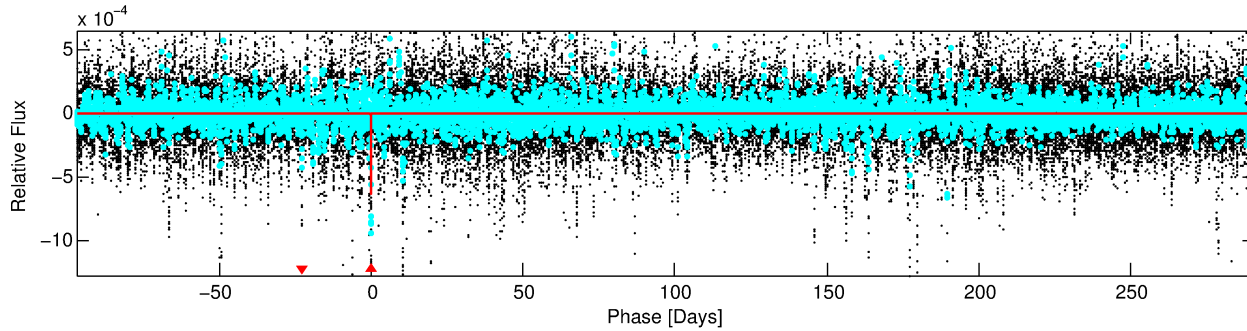
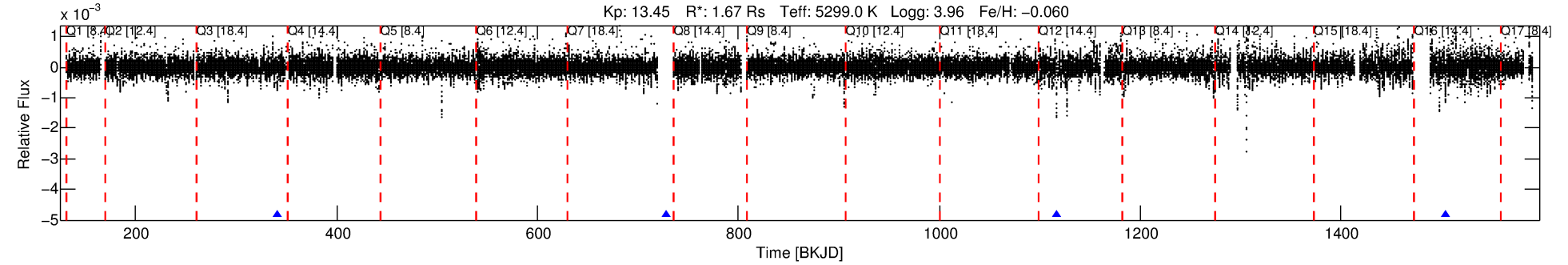
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007590964-01

No Significant Match Found

DV One-Page Summary

KIC: 7590964 Candidate: 1 of 1 Period: 387.810 d



DV Fit Results:

Period = 387.81032 [0.00313] d
Epoch = 341.0169 [0.0066] BKJD
Rp/R* = 0.0244 [0.0131]
a/R* = 394.73 [787.62]
b = 0.68 [1.57]
Seff = 1.90 [1.86]
Teff = 299 [73] K
Rp = 4.44 [3.25] Re
a = 1.0156 [0.5695] AU
Ag = 8412.79 [12421.09] [0.68 σ]
Teffp = 4435 [1256] K [3.29 σ]

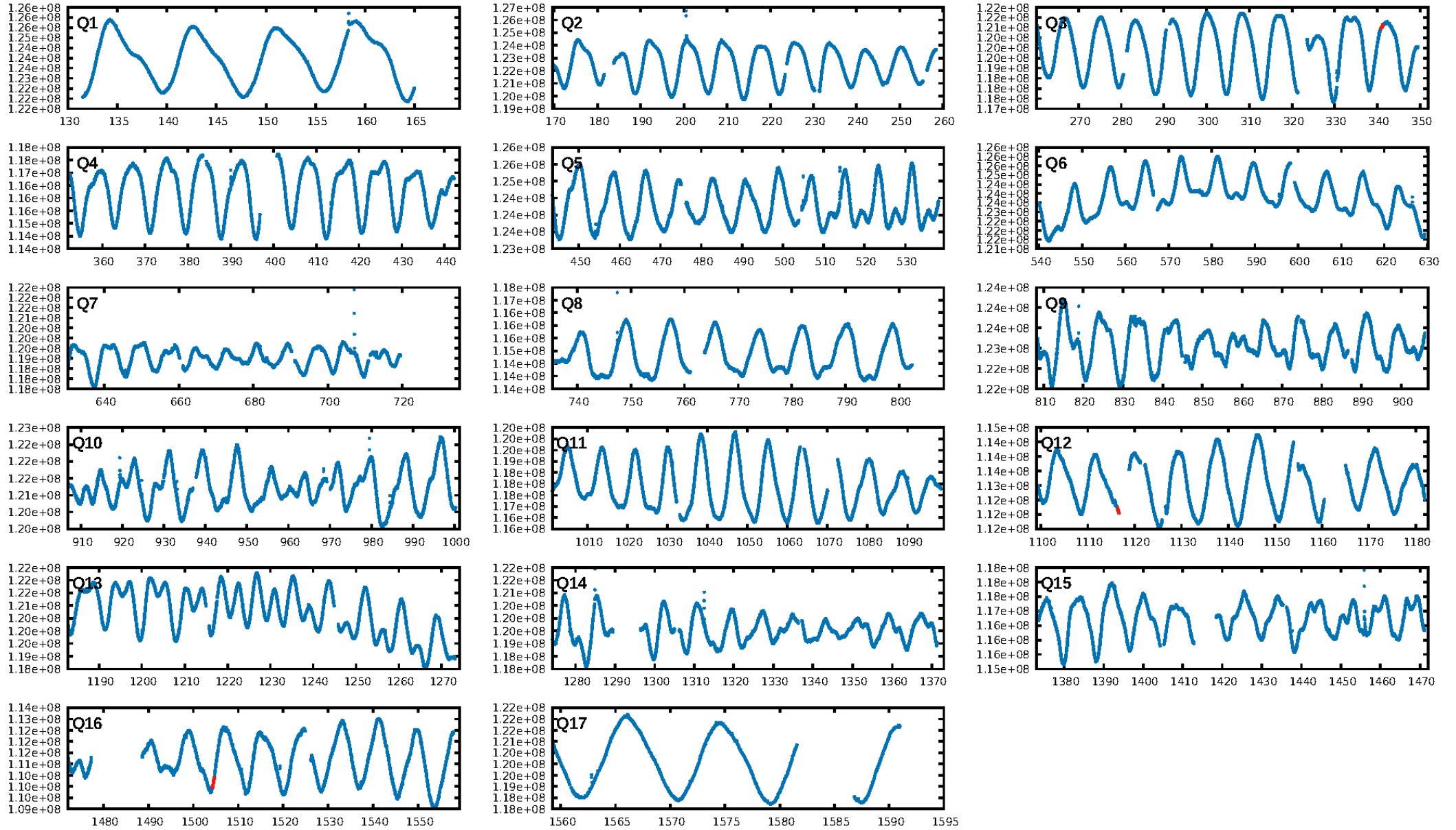
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.0%
ModelChiSquareGof-sig: 98.4%
Bootstrap-pfa: 5.62e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7728
Centroid-sig: 12.4%
Centroid-so: 0.761 arcsec [1.27 σ]
OotOffset-rm: 0.586 arcsec [0.62 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.762 arcsec [0.44 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

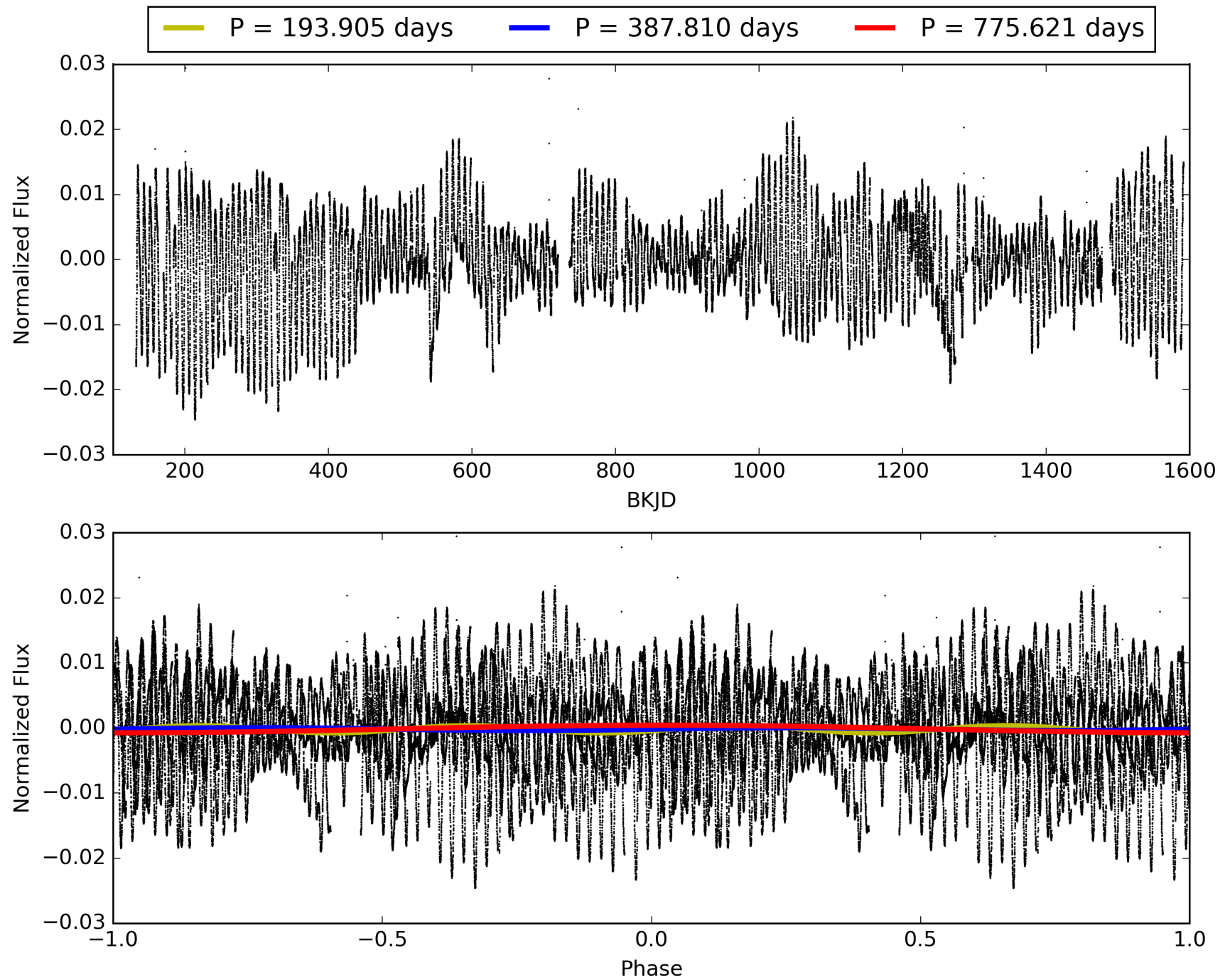
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:28:01 Z

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

TCE 007590964-01, PDC Light Curves

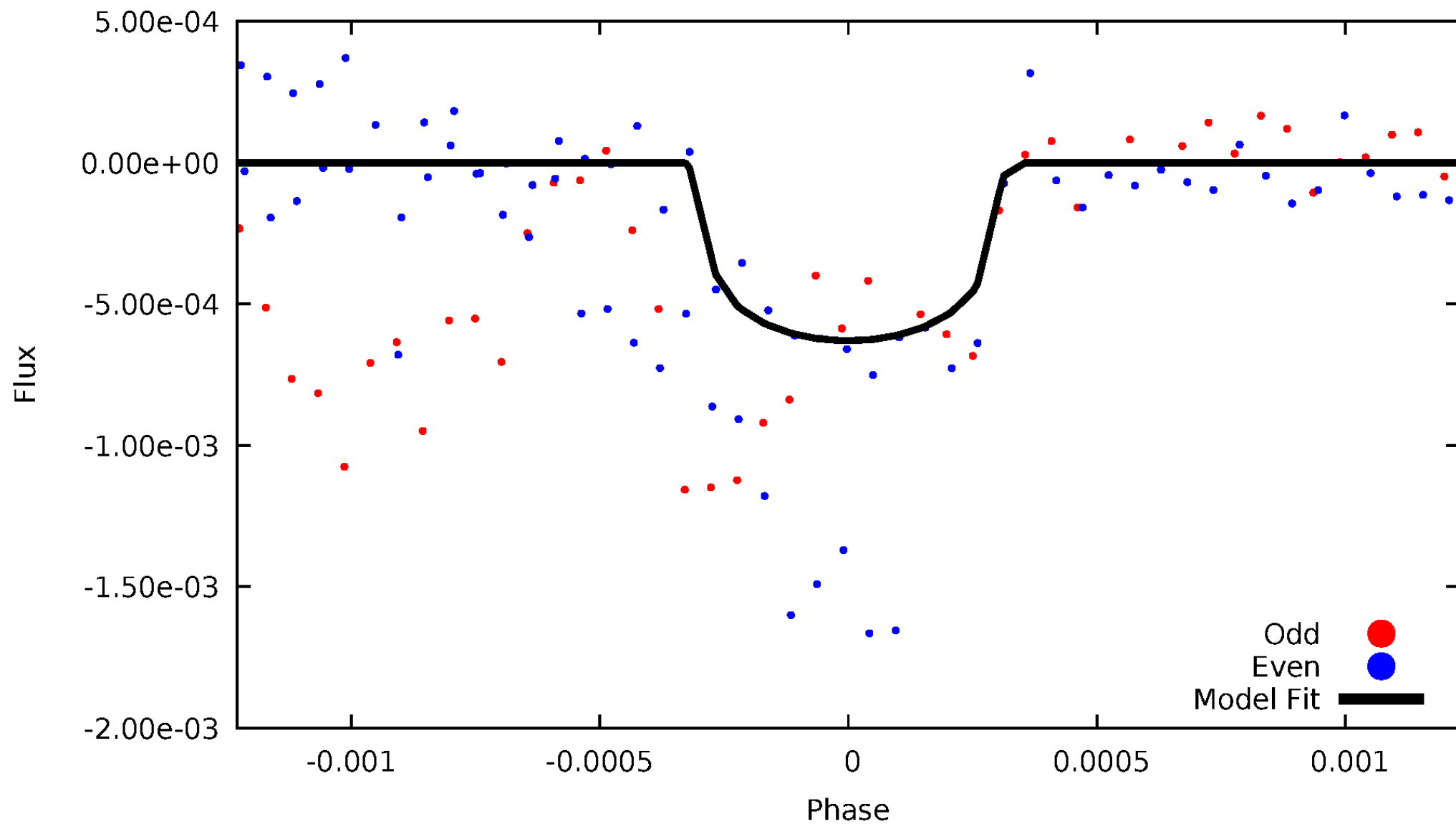


TCE 007590964-01



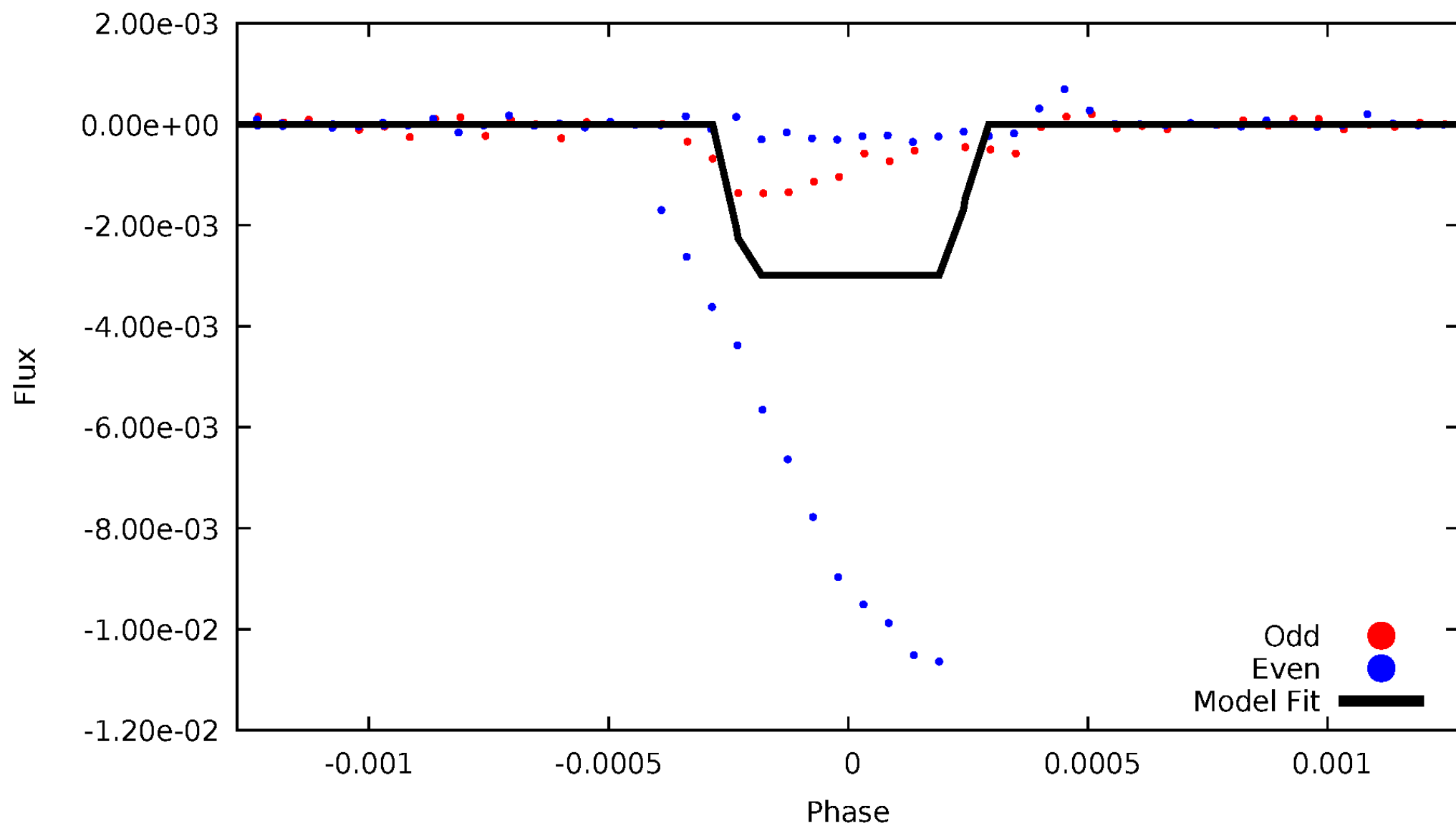
DV Odd/Even

TCE 007590964-01



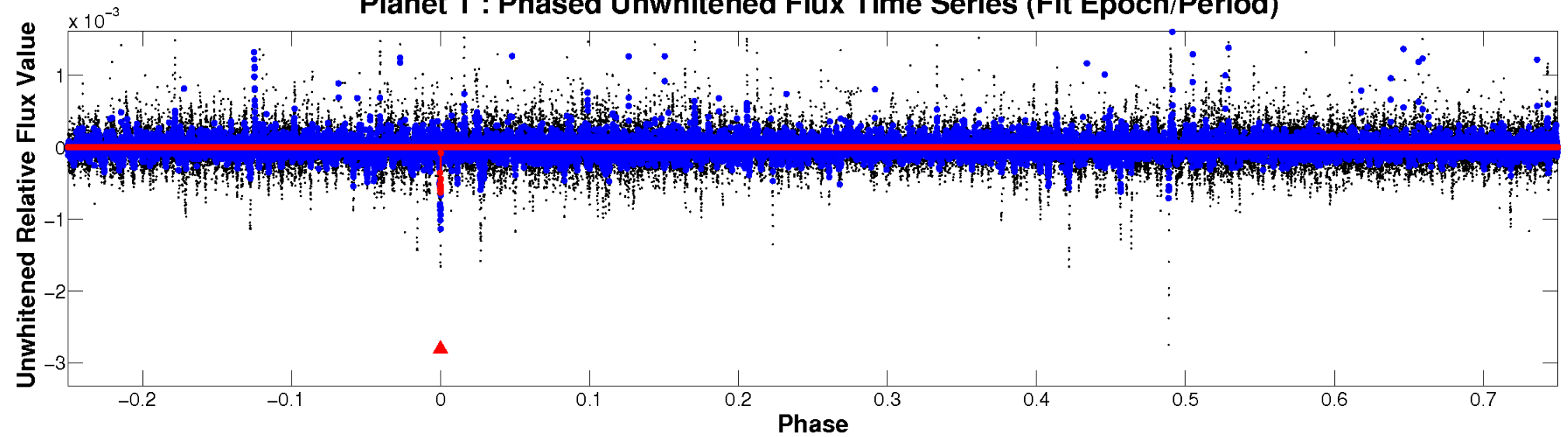
ALT Odd/Even

TCE 007590964-01

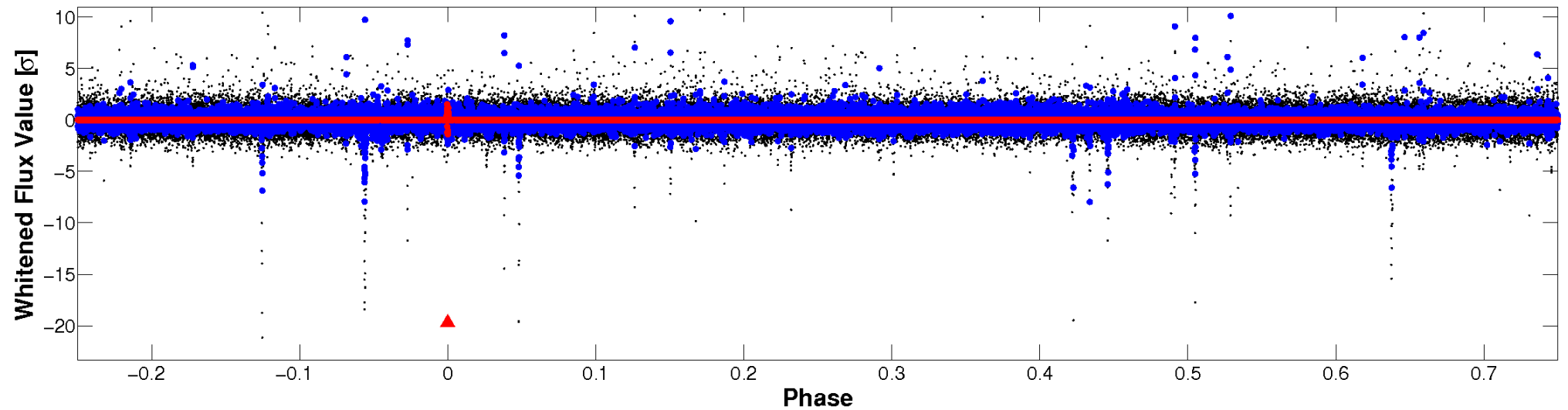


Non-Whitened Vs. Whitened Light Curve

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

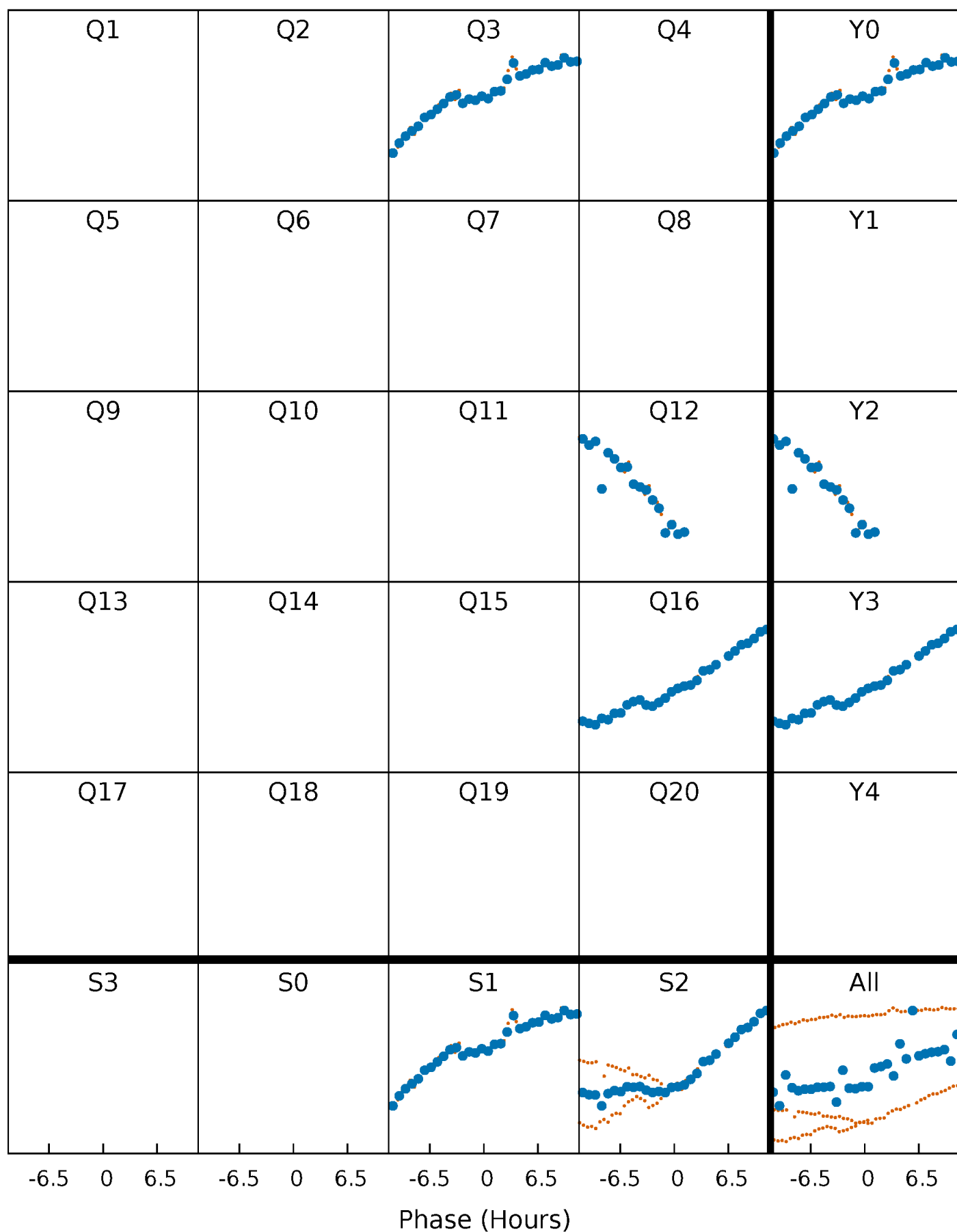


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



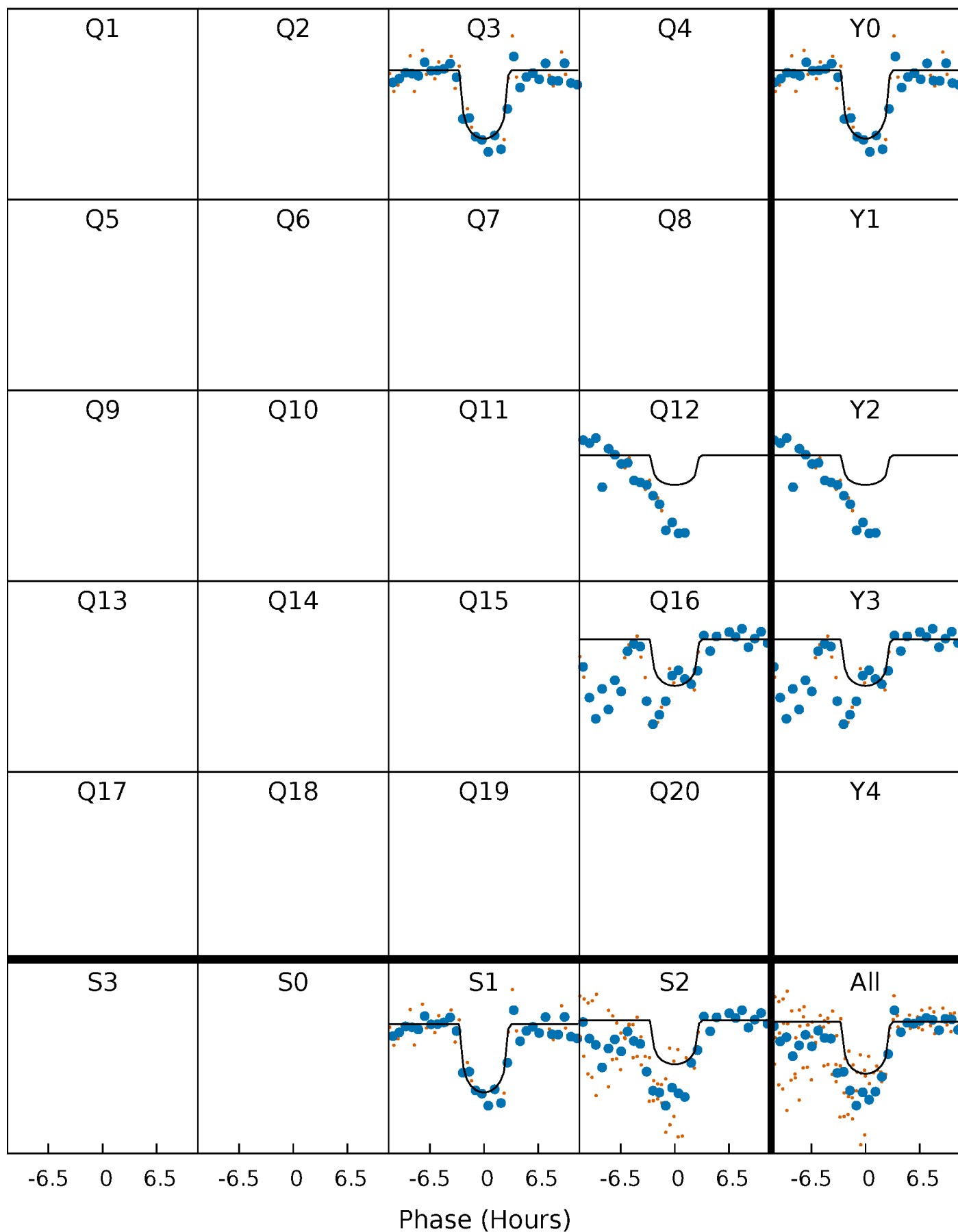
PDC Quarter-Phased Transit Curves

TCE 007590964-01 P=387.810316 Days $T_0=341.016937$ (BKJD)



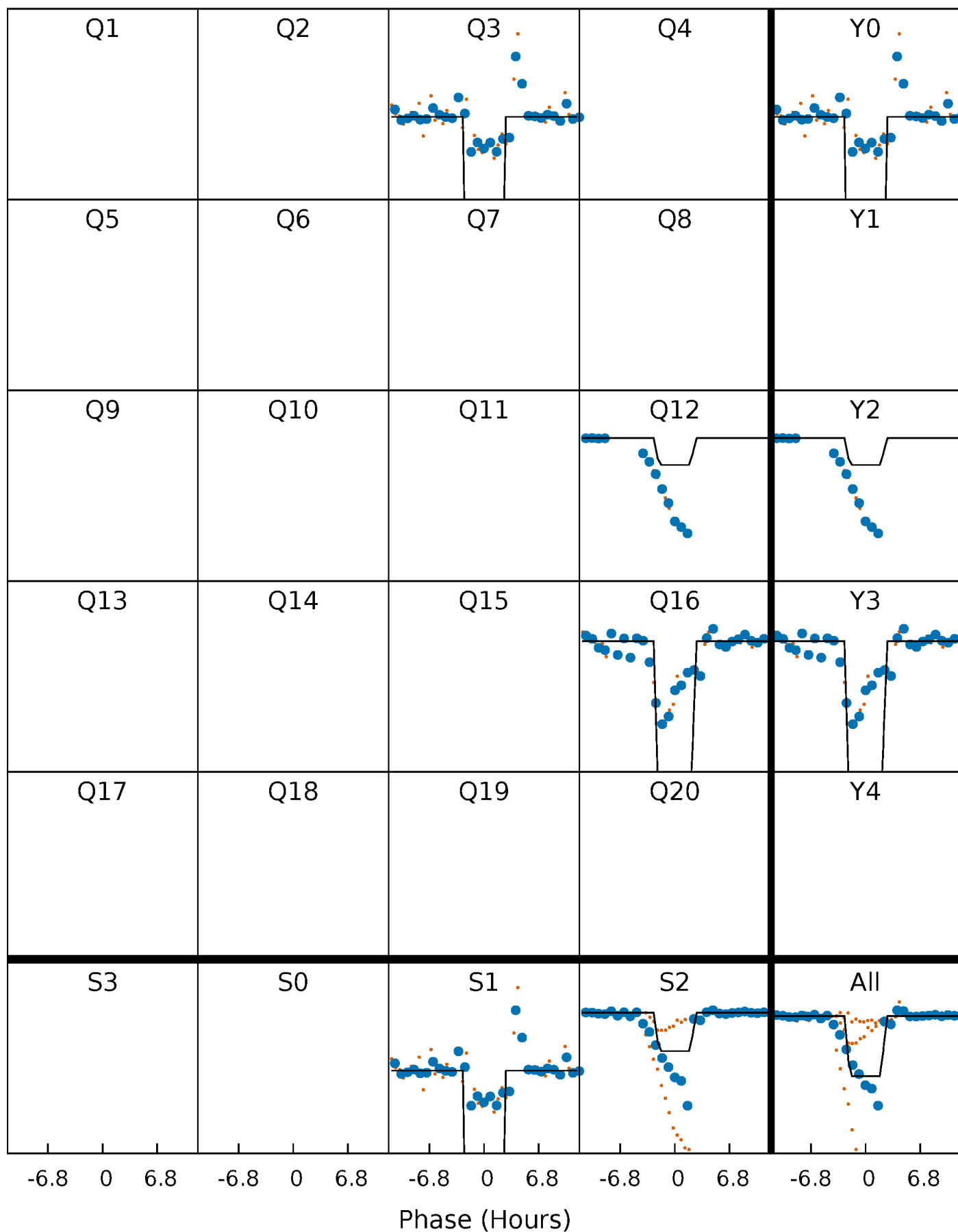
DV Quarter-Phased Transit Curves

TCE 007590964-01 P=387.810316 Days $T_0=341.016937$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

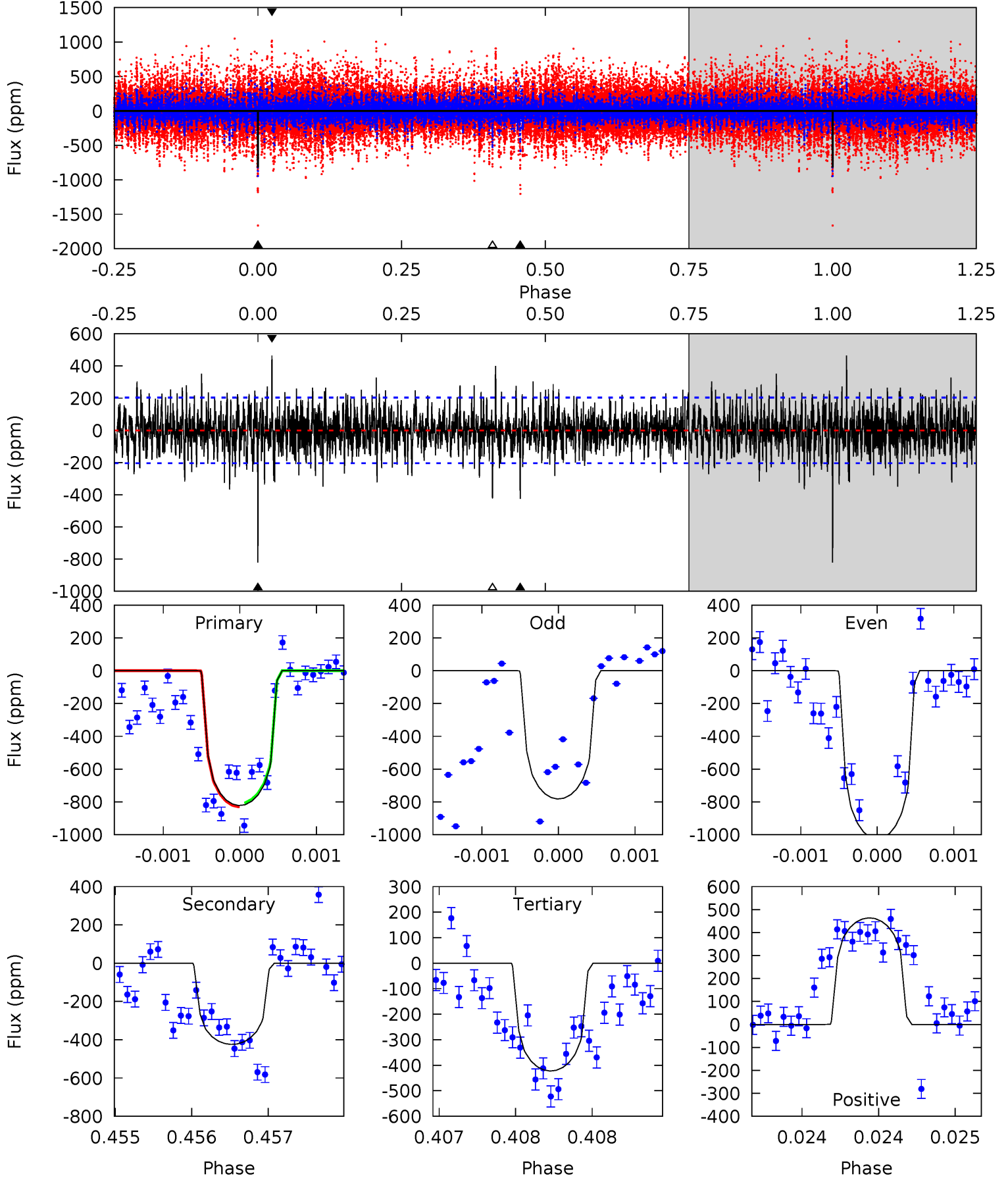
TCE 007590964-01 P=387.808535 Days $T_0=340.983859$ (BKJD)



DV Model-Shift Uniqueness Test

007590964-01, P = 387.810316 Days, E = 341.016937 Days

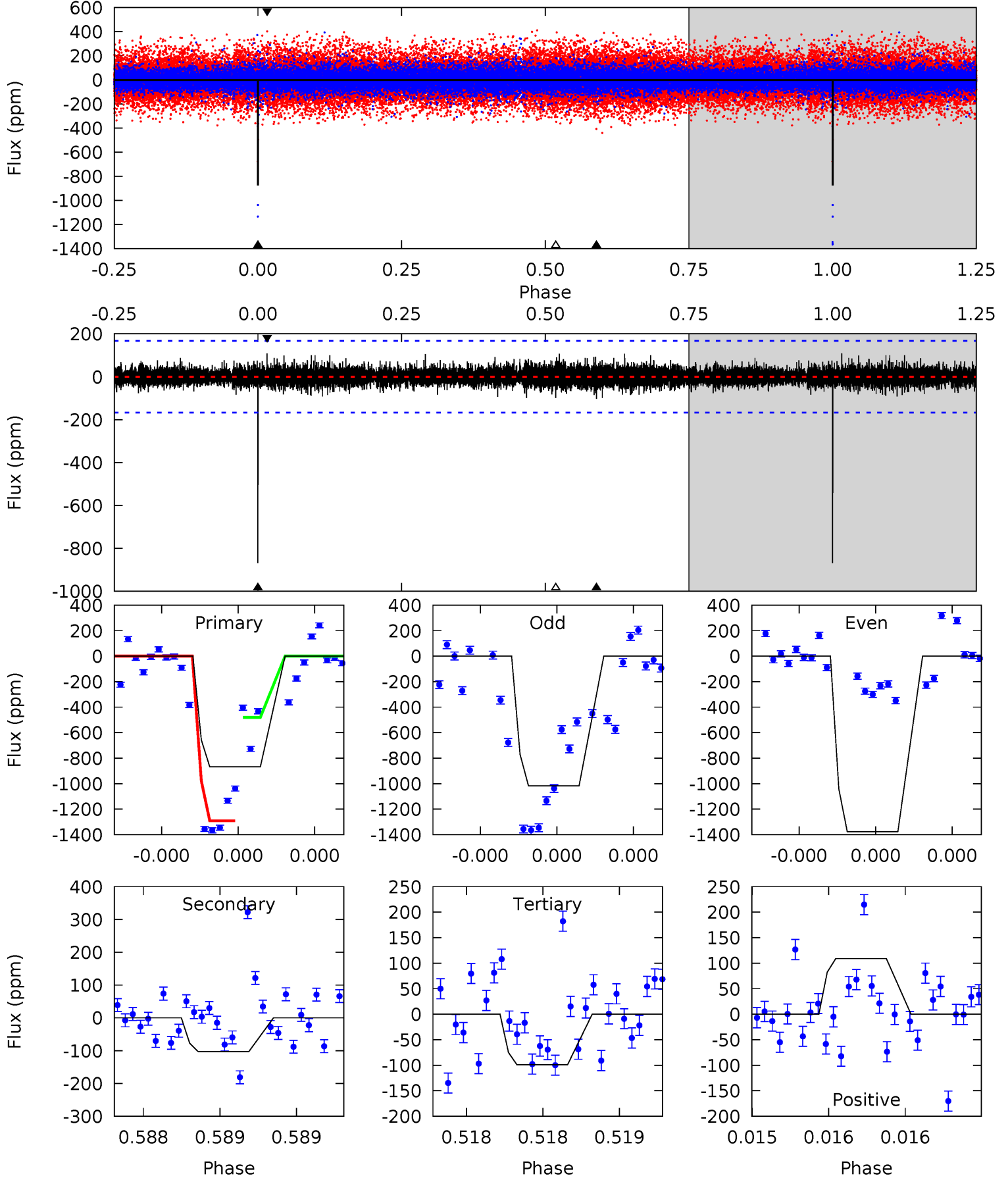
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	11.5	11.4	12.6	5.53	3.41	2.42	10.8	9.70	0.05	-1.07	2.83	1.26	0.36	0.30



Alt Model-Shift Uniqueness Test

007590964-01, P = 387.808535 Days, E = 340.983859 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	3.43	3.30	3.63	5.58	3.49	0.74	25.7	25.4	0.13	-0.20	7.47	3.21	0.11	13.6



Stellar Parameters For KIC 007590964

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5299^{+222}_{-167}	$3.962^{+0.588}_{-0.252}$	$-0.060^{+0.300}_{-0.250}$	$1.667^{+0.832}_{-0.832}$	$0.929^{+0.113}_{-0.124}$	$0.282^{+1.874}_{-0.195}$
	+4%/-3%	+15%/-6%	+500%/-417%	+50%/-50%	+12%/-13%	+664%/-69%
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 007590964-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-424 ± 37	$4.22^{+2.85}_{-2.19}$	412^{+58}_{-60}	4874^{+1772}_{-723}	13341^{+45533}_{-8538}
Alt.	-103 ± 30	$9.34^{+3.66}_{-3.33}$	411^{+54}_{-60}	2943^{+275}_{-225}	653^{+922}_{-345}

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

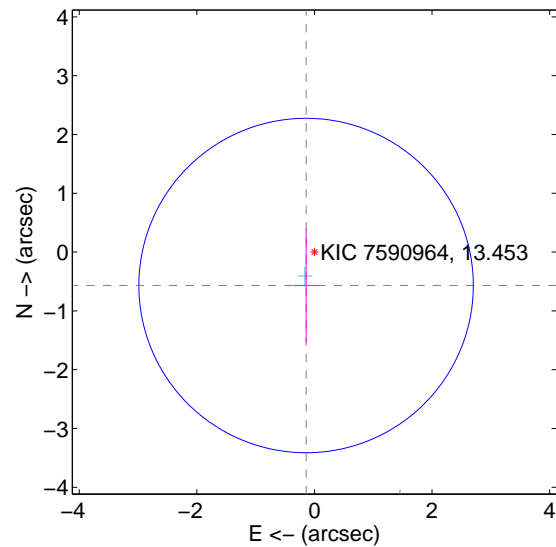
Supplemental centroid analysis for 007590964-01. Kepler magnitude: 13.45. Transit SNR 7.63

There are 1 quarters with good PRF difference image offsets

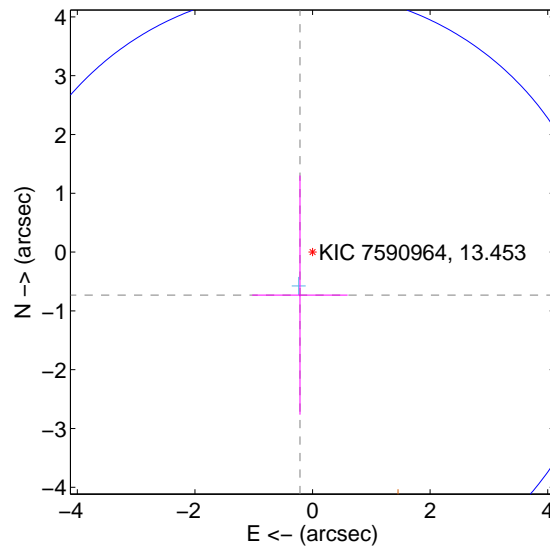
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.586 ± 0.948	0.62	0.142 ± 0.218	-0.568 ± 0.975
PRF-fit source offset from KIC position	0.762 ± 1.726	0.44	0.214 ± 0.811	-0.731 ± 2.034
photometric centroid source offset	0.76 ± 0.60	1.27	0.46 ± 0.65	0.61 ± 0.57

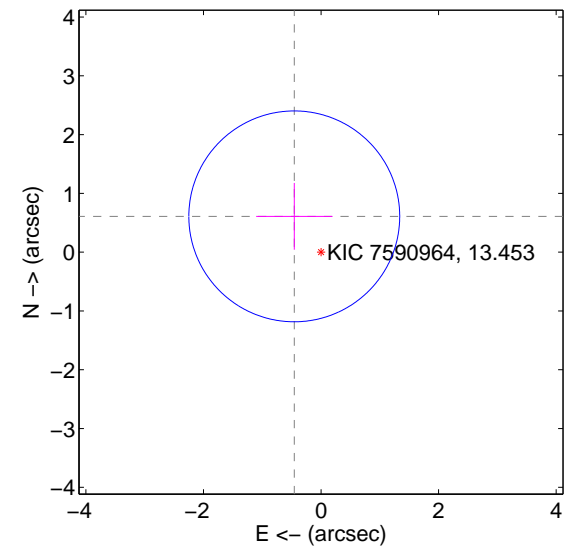
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

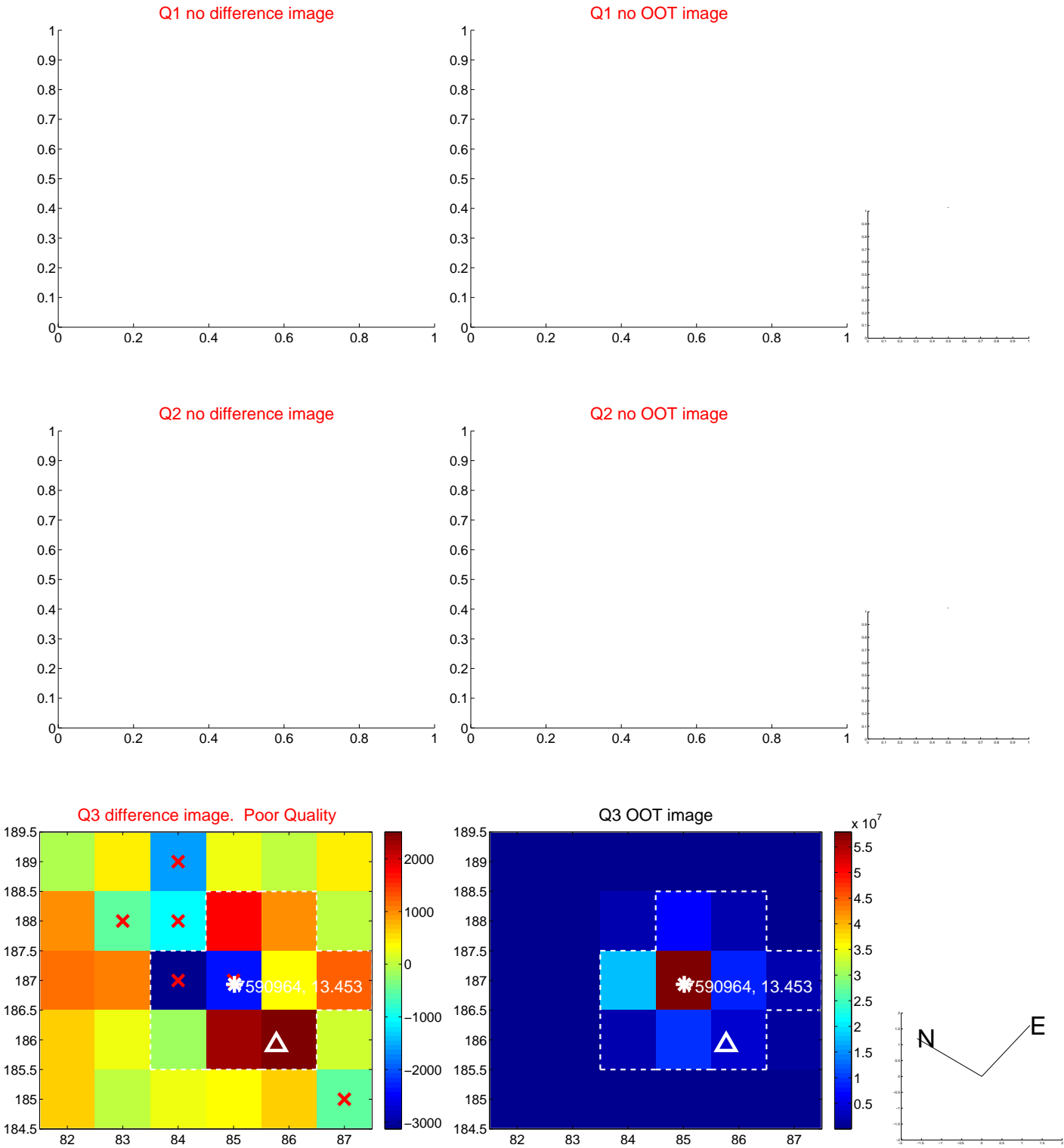


offset from photometric centroids



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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



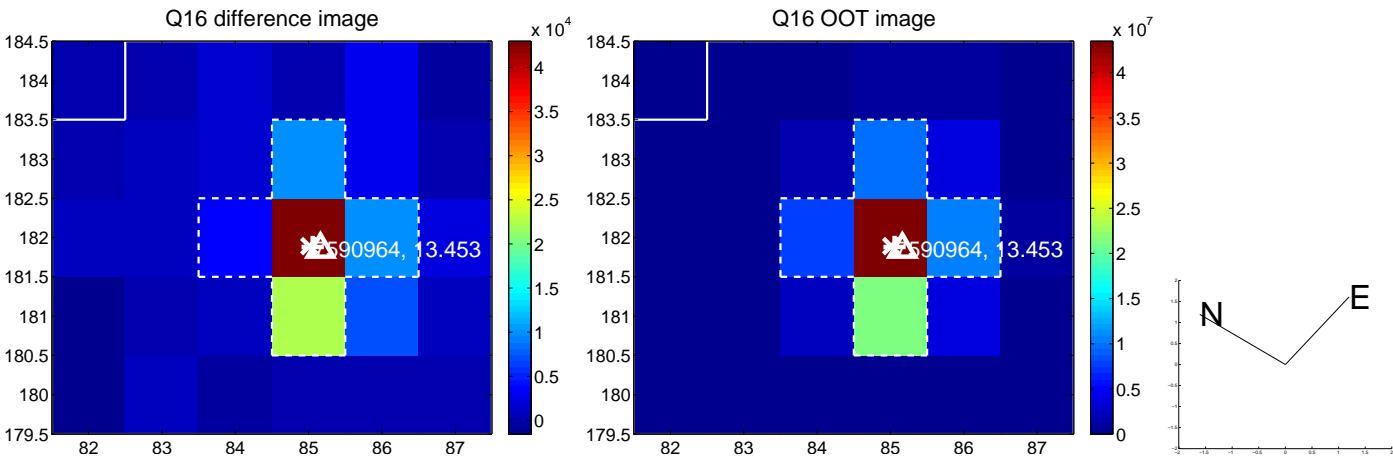
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



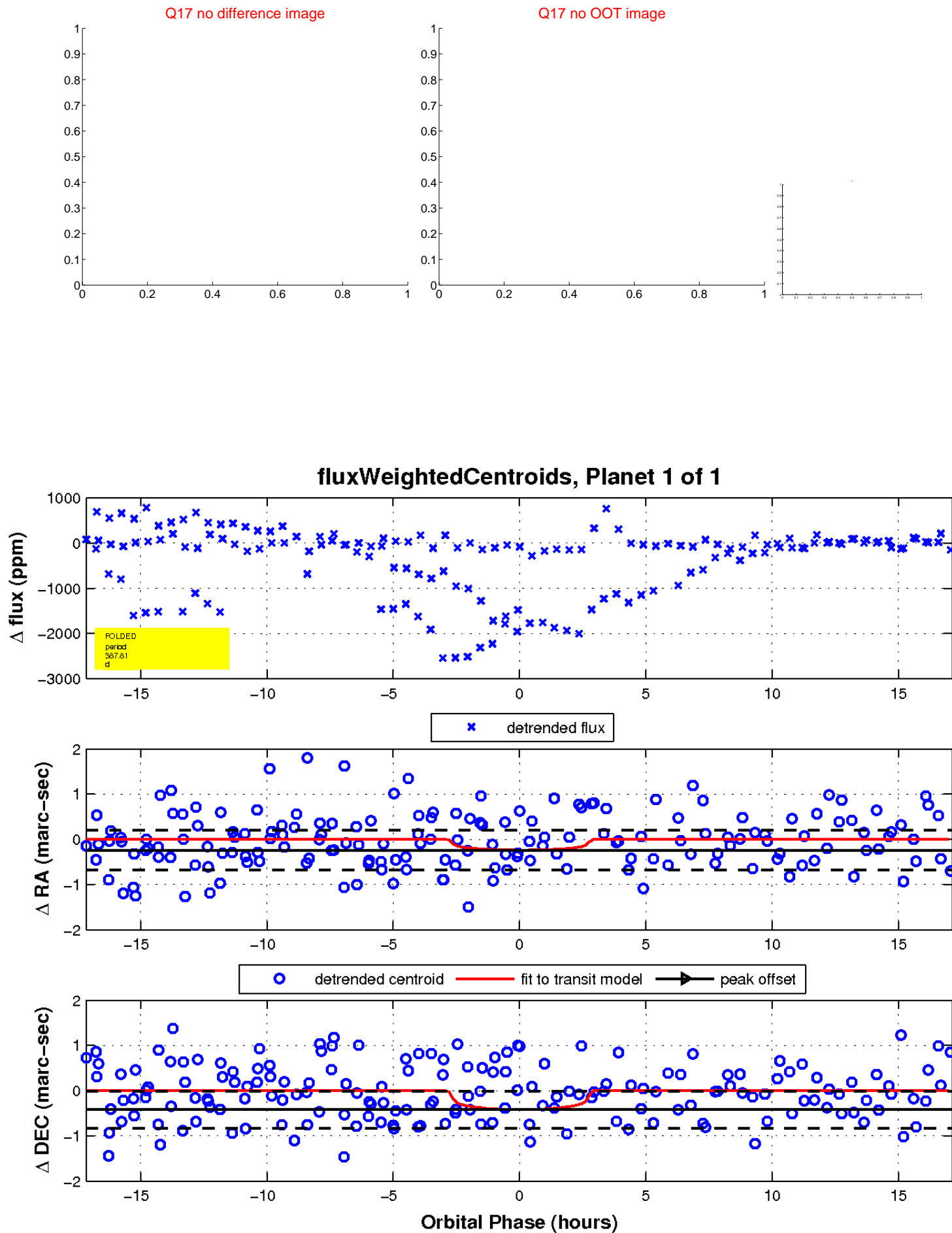
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

