

KIC 007622473

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})
007622473-01	OBS	8139.01	40.242520	161.441254	183.2	4.702	11.7	11.9	89.88	3674	143.68	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007622473-01	OBS	FP	0.00	0	0	1	1	PLANET_IN_STAR—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

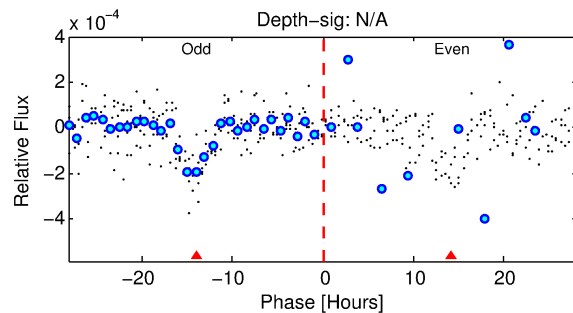
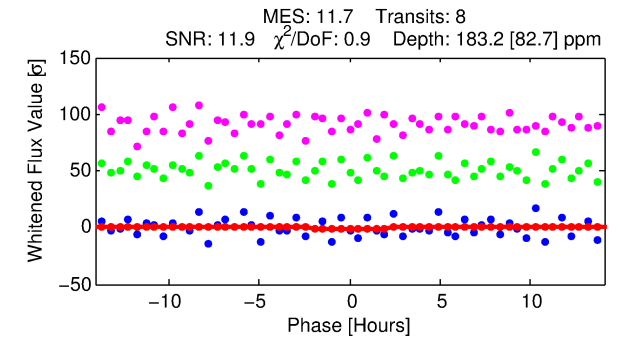
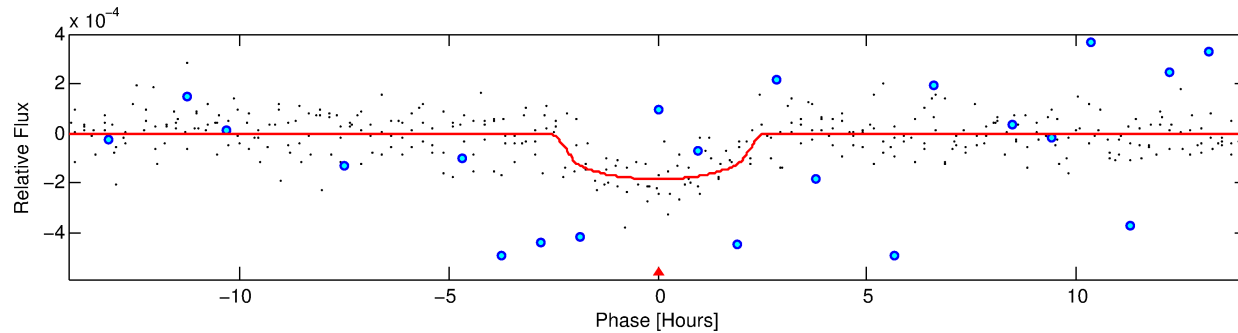
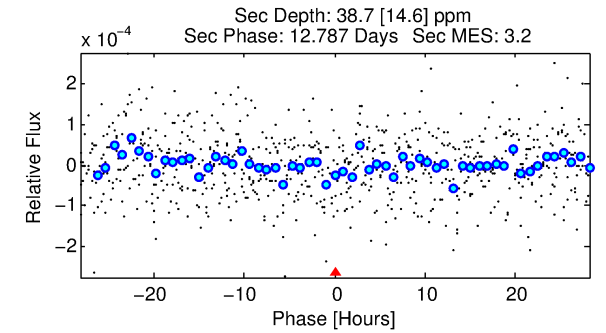
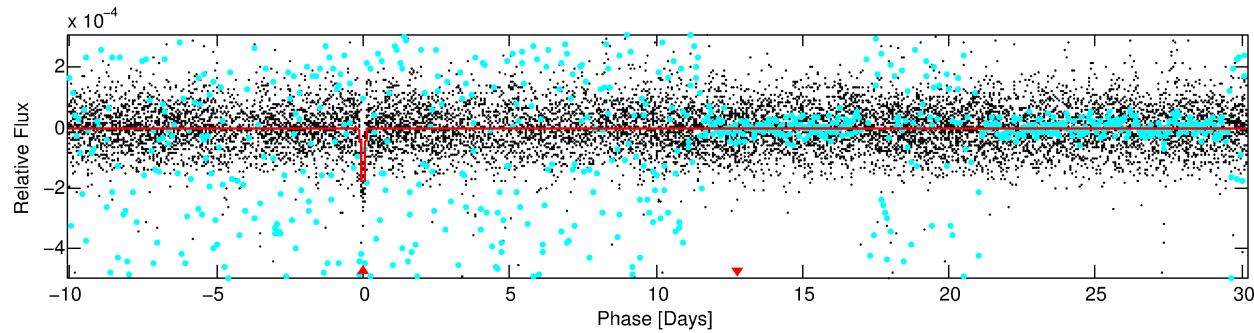
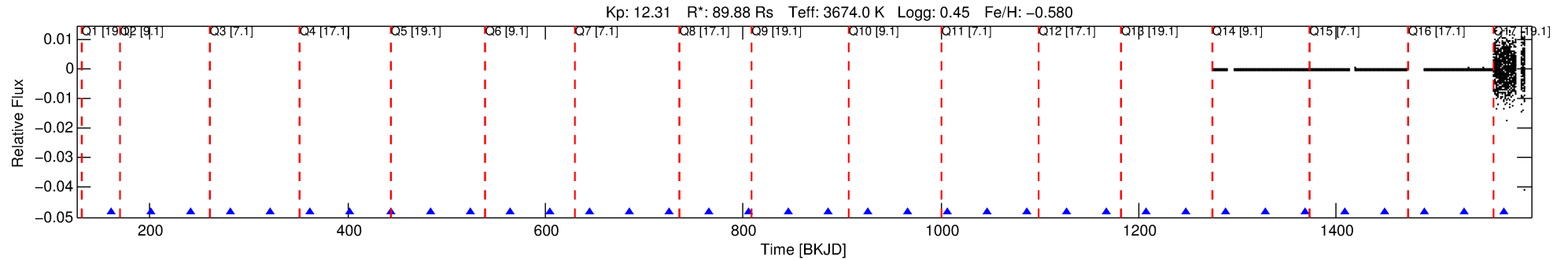
Ephemeris Match Information For 007622473-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007622473-01	7622473	1447.01	7622486	1:1	14.1	-4	1	13.09	12.31	902.13	Direct-PRF	0	2.27	2.58

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7622473 Candidate: 1 of 1 Period: 40.243 d



DV Fit Results:

Period = 40.24252 [0.00681] d
Epoch = 161.4413 [0.2106] BKJD
Rp/R* = 0.0146 [0.0313]
a/R* = 37.41 [233.53]
b = 0.84 [2.30]
Seff = N/A
Teq = N/A
Rp = 143.68 [309.82] Re
a = N/A
Ag = N/A
Teffp = N/A

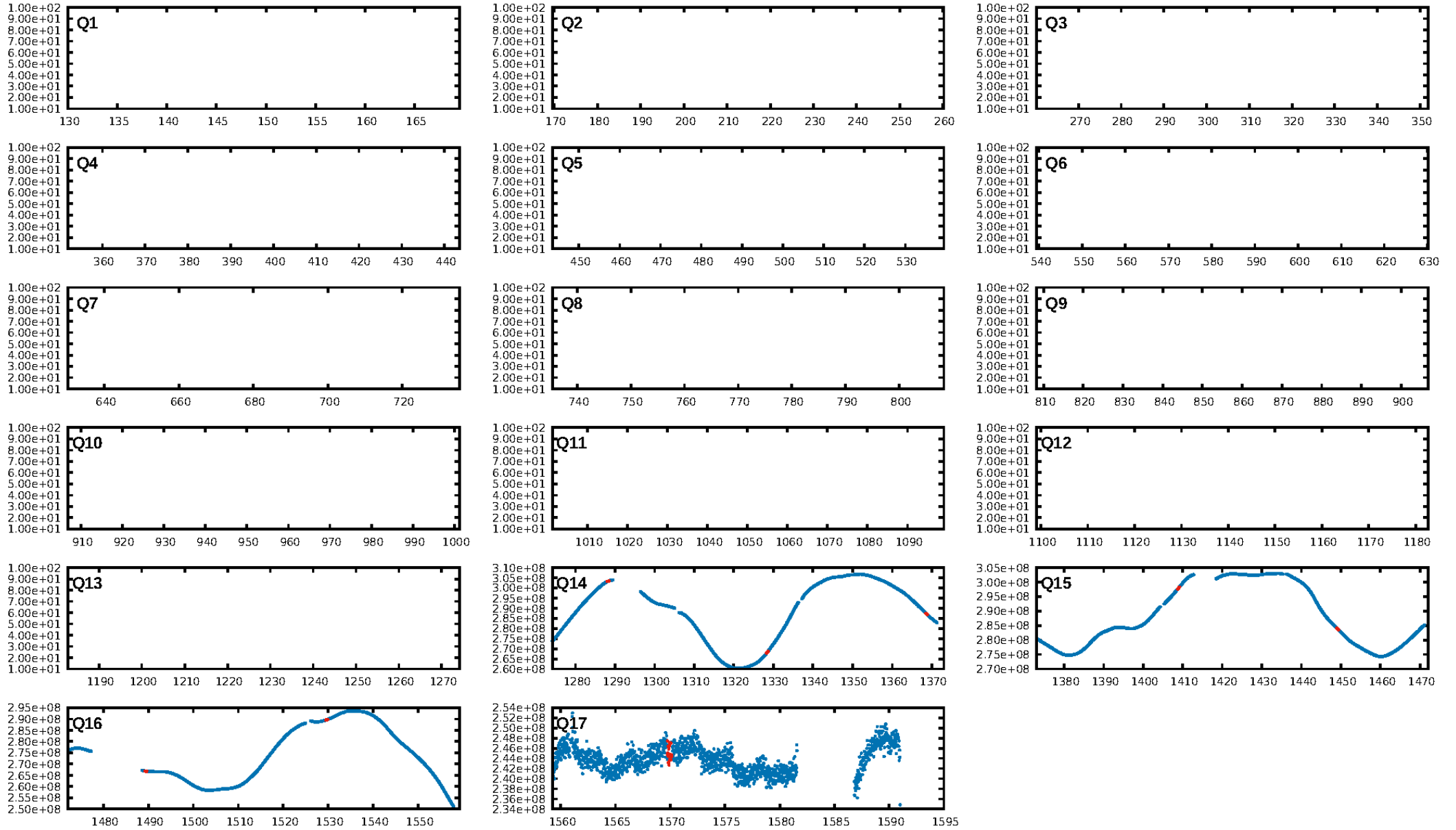
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 33.6%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 1.27e-14
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.08673
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

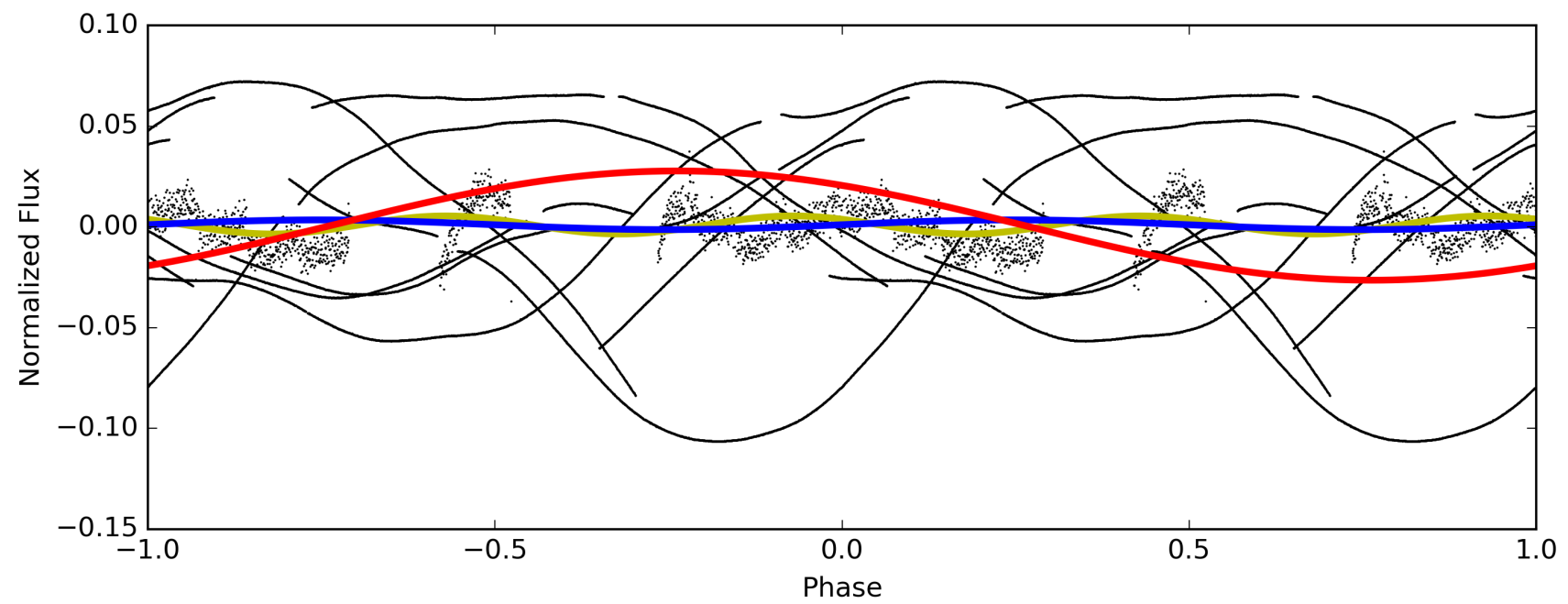
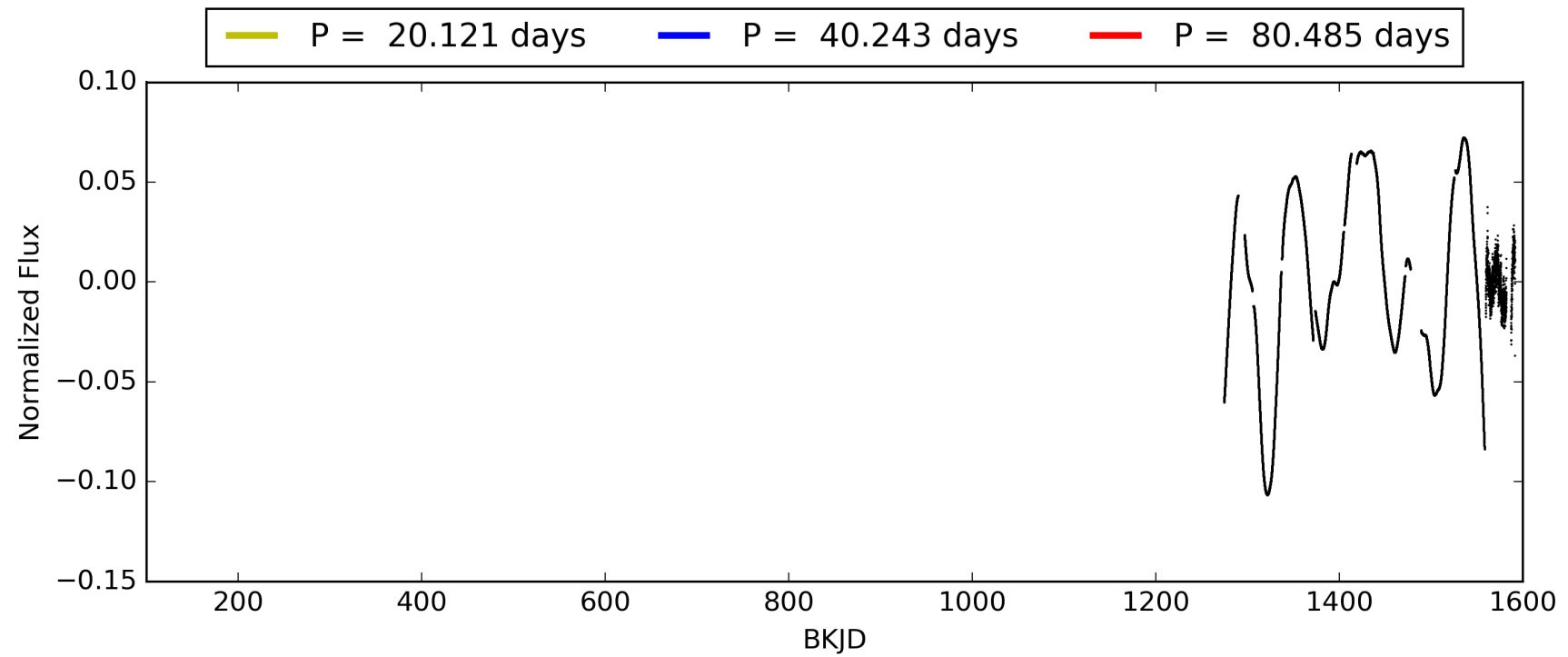
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:50:27 Z

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

TCE 007622473-01, PDC Light Curves

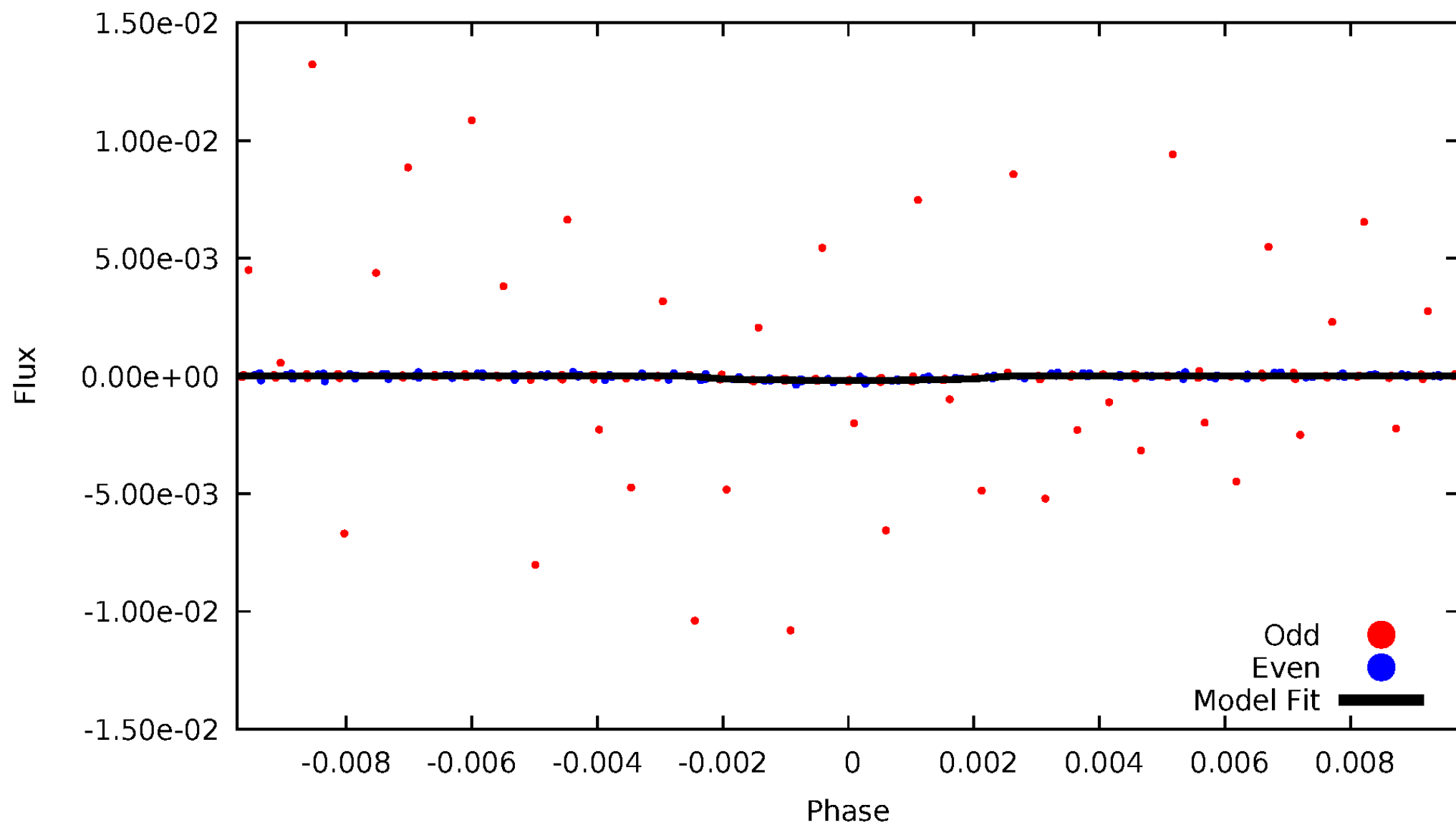


TCE 007622473-01



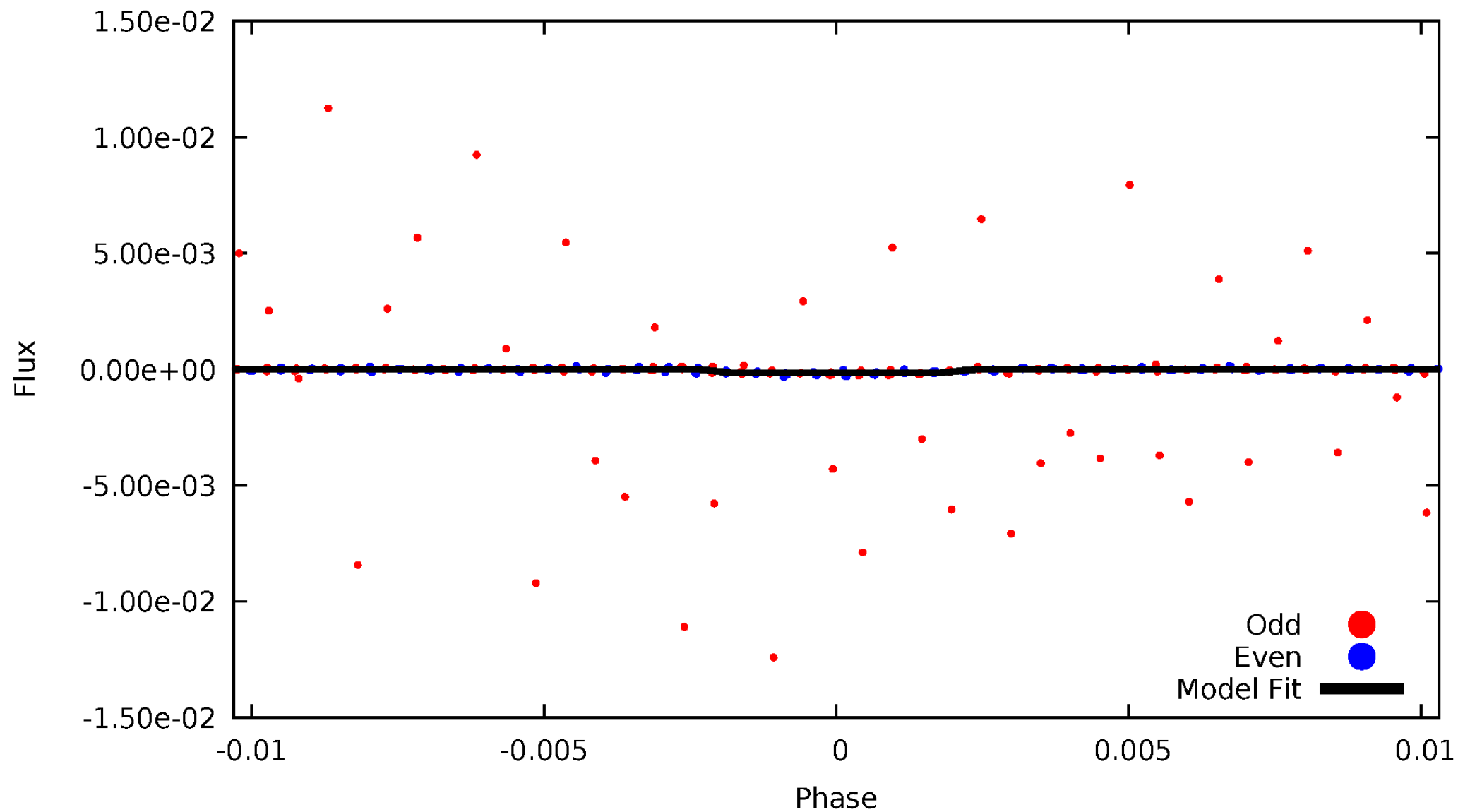
DV Odd/Even

TCE 007622473-01



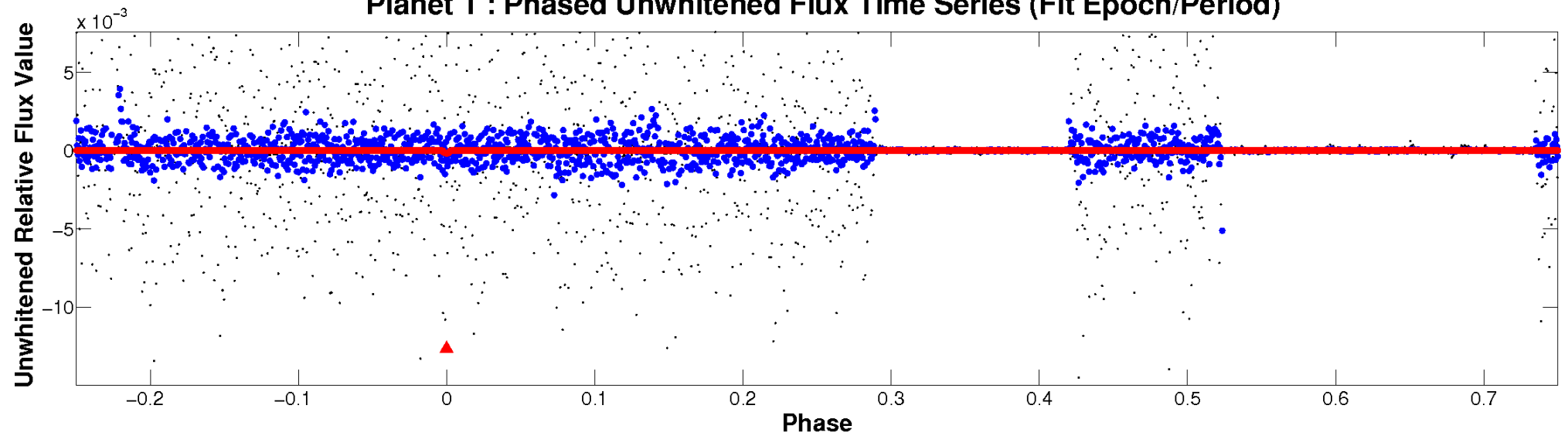
ALT Odd/Even

TCE 007622473-01

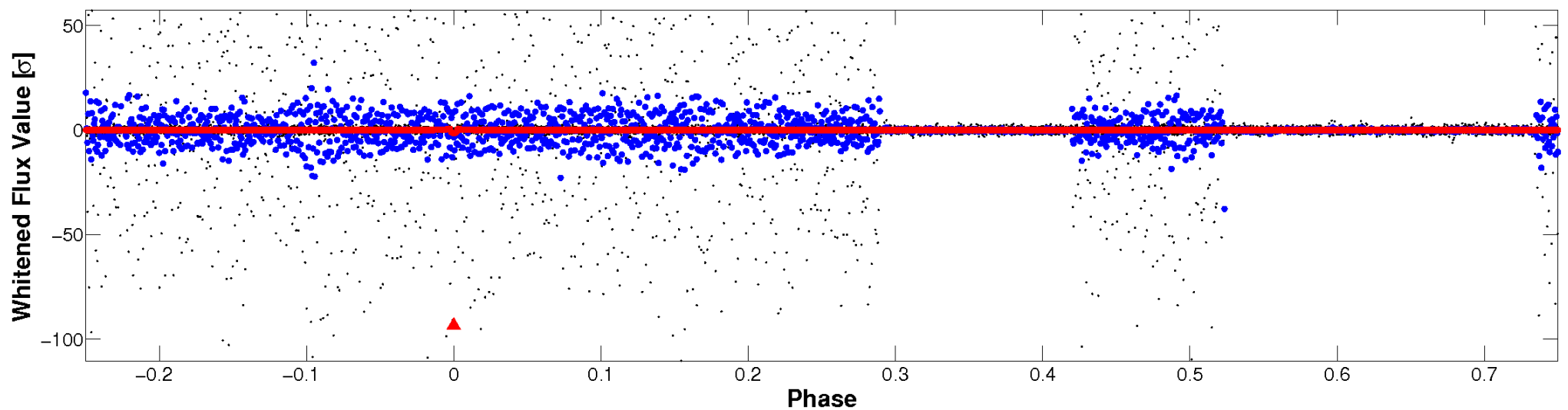


Non-Whitened Vs. Whitened Light Curve

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

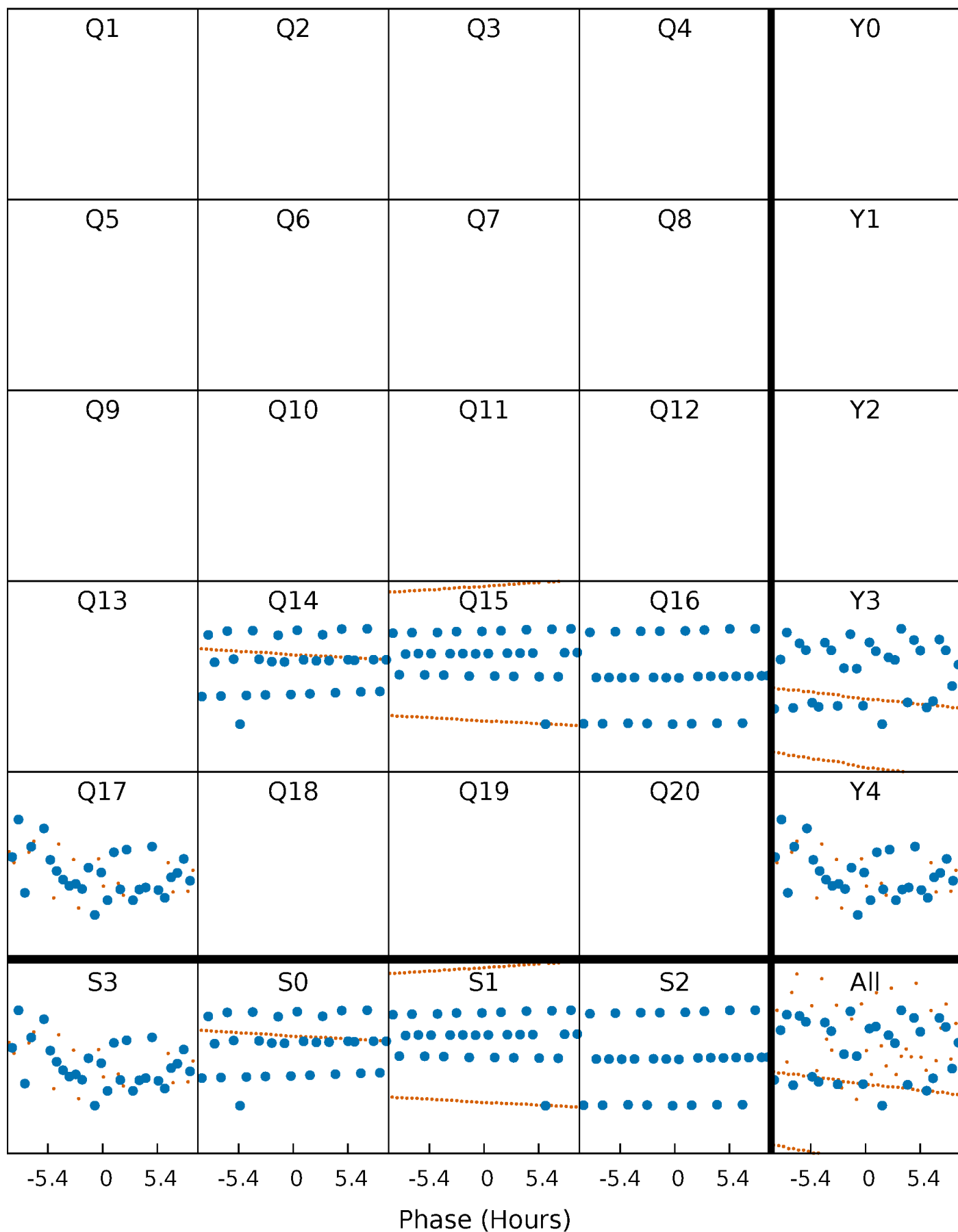


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



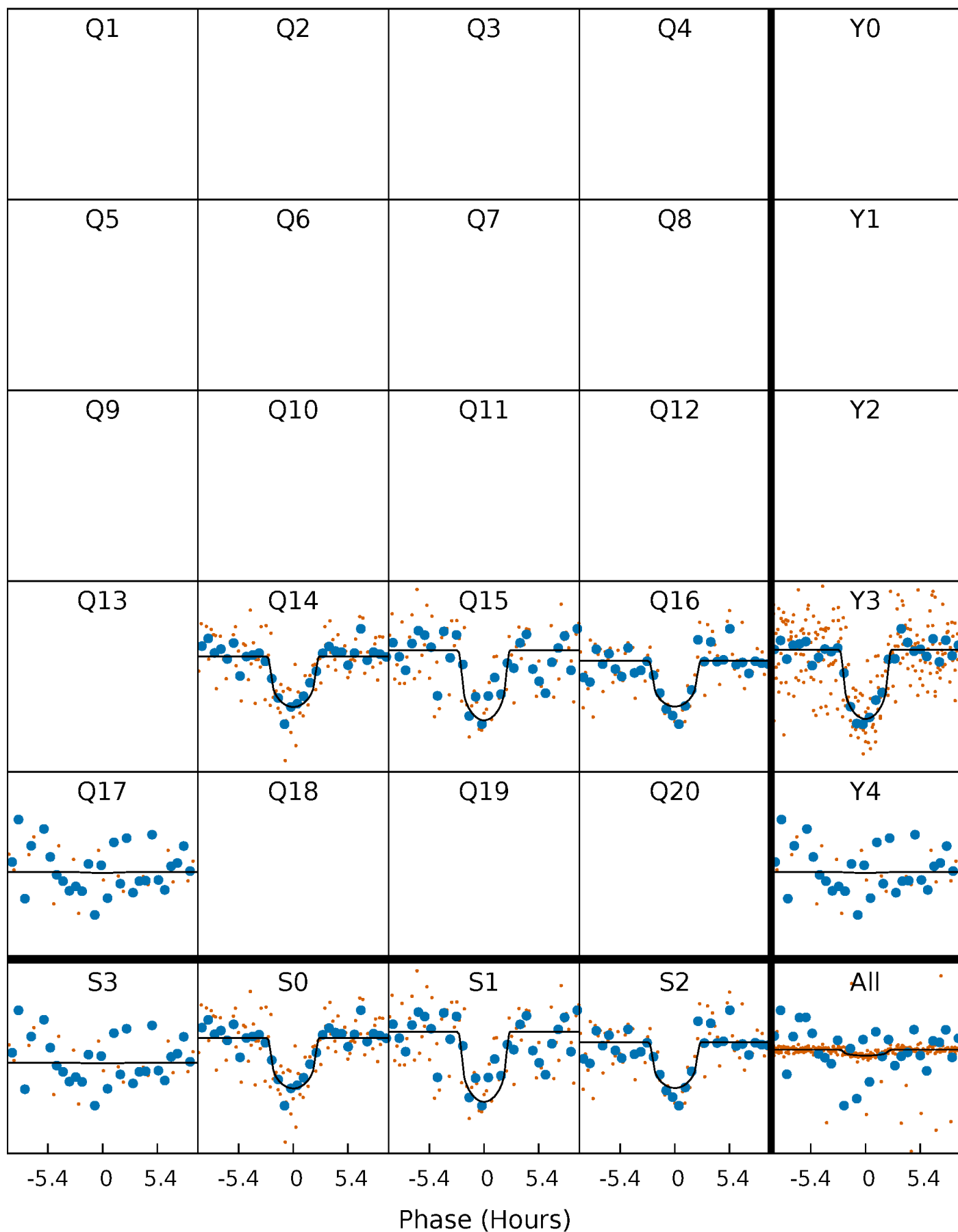
PDC Quarter-Phased Transit Curves

TCE 007622473-01 P= 40.242520 Days $T_0=161.441255$ (BKJD)



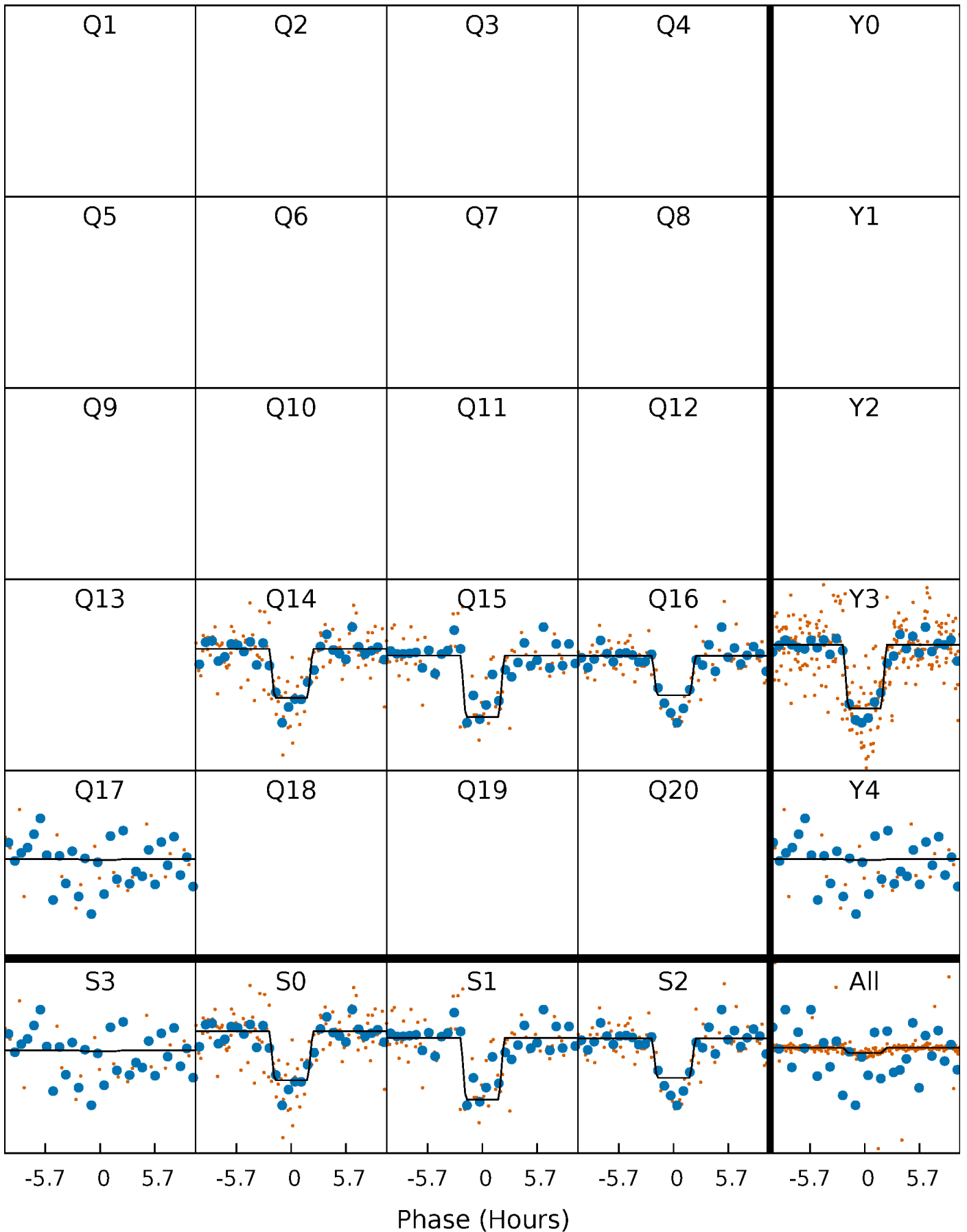
DV Quarter-Phased Transit Curves

TCE 007622473-01 P= 40.242520 Days $T_0=161.441255$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

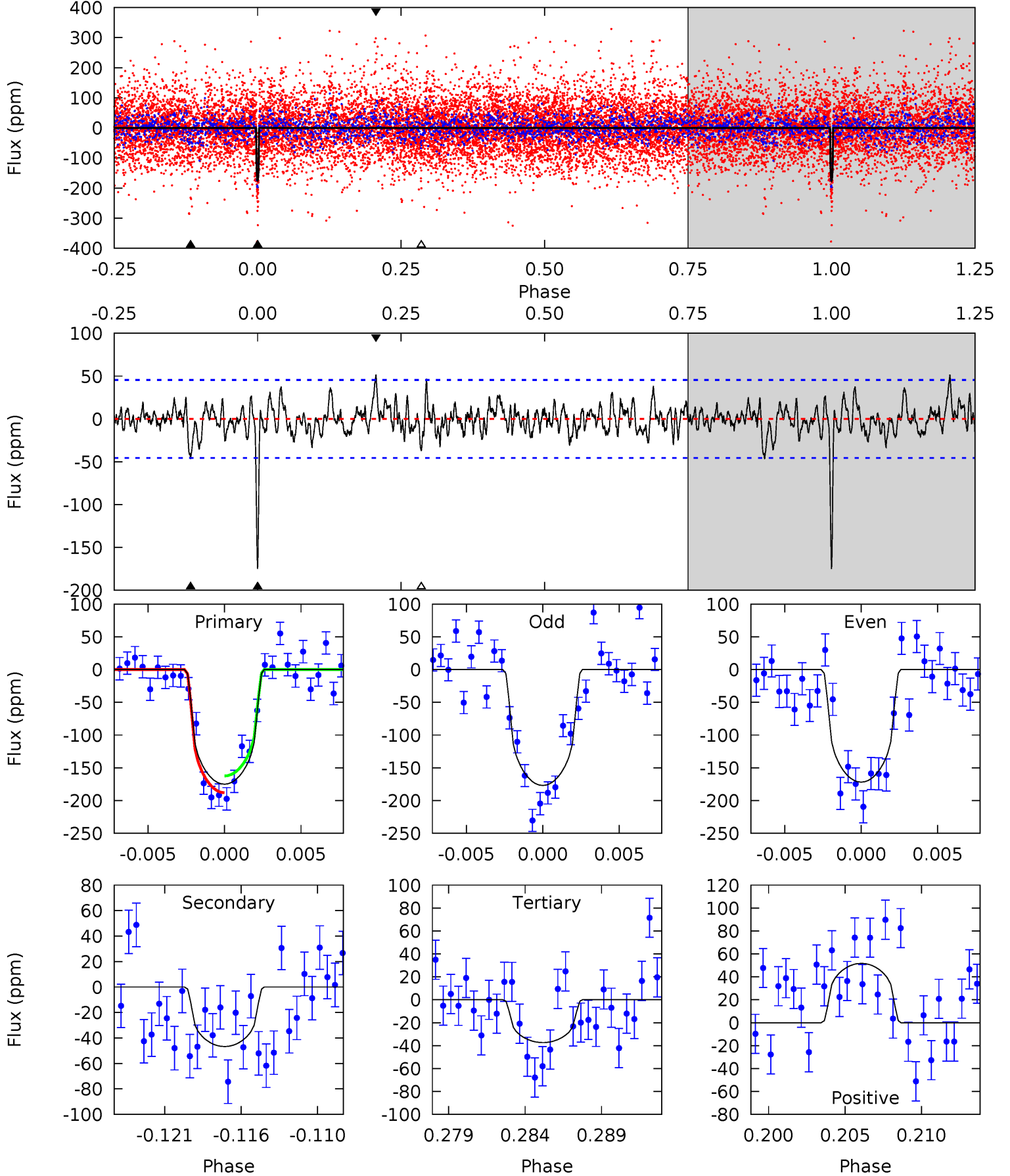
TCE 007622473-01 P= 40.243008 Days $T_0=161.430259$ (BKJD)



DV Model-Shift Uniqueness Test

007622473-01, P = 40.242520 Days, E = 161.441255 Days

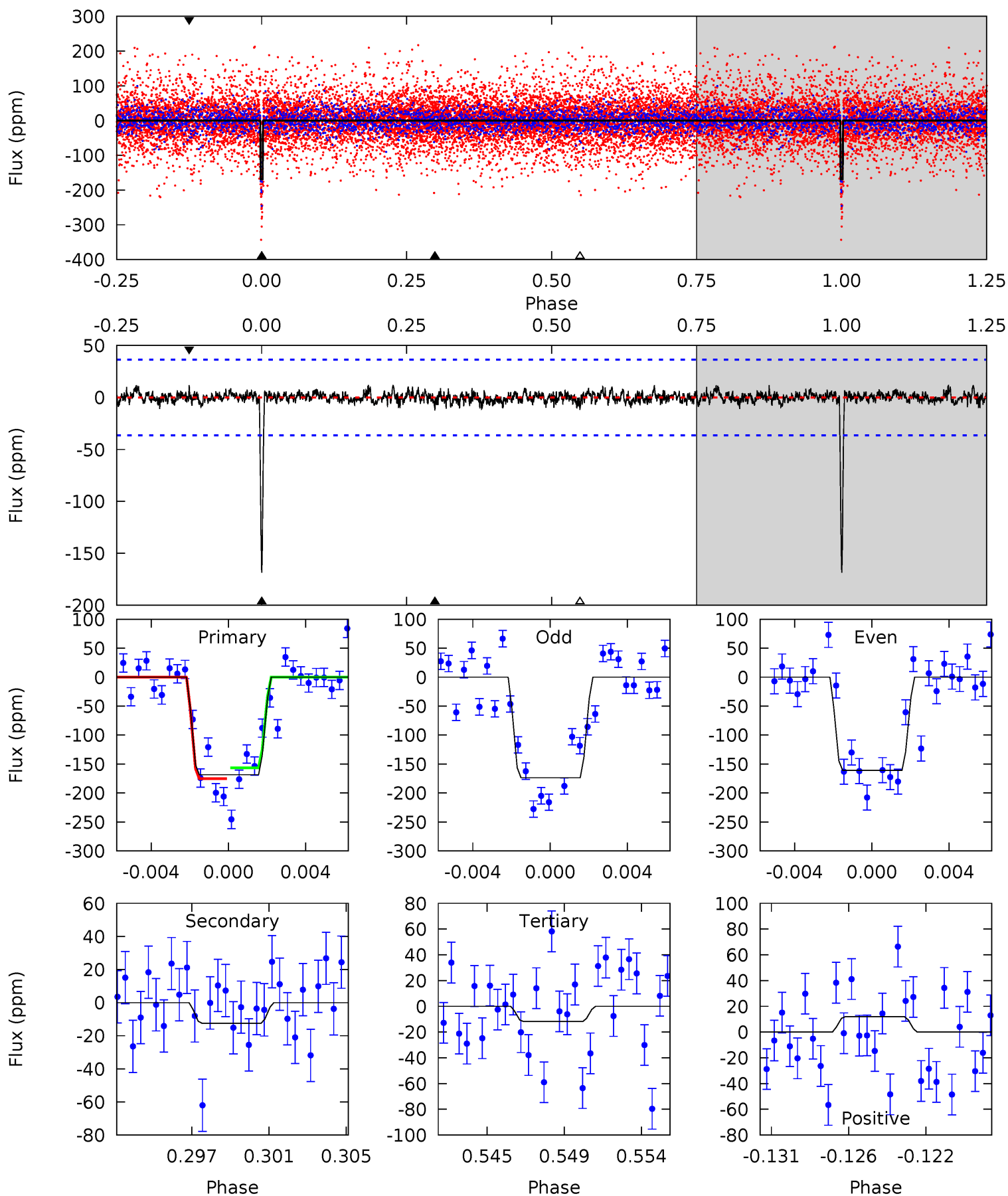
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	5.28	4.22	5.85	5.15	2.79	1.48	15.6	13.9	1.06	-0.56	0.23	2.18	0.23	1.45



Alt Model-Shift Uniqueness Test

007622473-01, P = 40.243008 Days, E = 161.430259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	1.77	1.68	1.69	5.18	2.85	0.52	22.3	22.3	0.09	0.08	0.60	3.14	0.07	0



Stellar Parameters For KIC 007622473

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3674^{+80}_{-58}	$0.452^{+0.162}_{-0.095}$	$-0.580^{+0.150}_{-0.100}$	$89.878^{+25.474}_{-11.757}$	$0.833^{+0.374}_{-0.021}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+36%/-21%	+26%/-17%	+28%/-13%	+45%/-3%	+69%/-35%
Source	SPE74	KIC0	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 007622473-01 / KOI 8139.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 9	$266.17^{+259.95}_{-178.89}$	4567^{+231}_{-225}	-3638^{+475}_{-161}	$0.019^{+0.162}_{-0.014}$
Alt.	-12 ± 7	$256.76^{+262.05}_{-174.77}$	4558^{+248}_{-222}	-3673^{+181}_{-152}	$0.004^{+0.040}_{-0.003}$

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 $A_{obs} \gg 1.0$

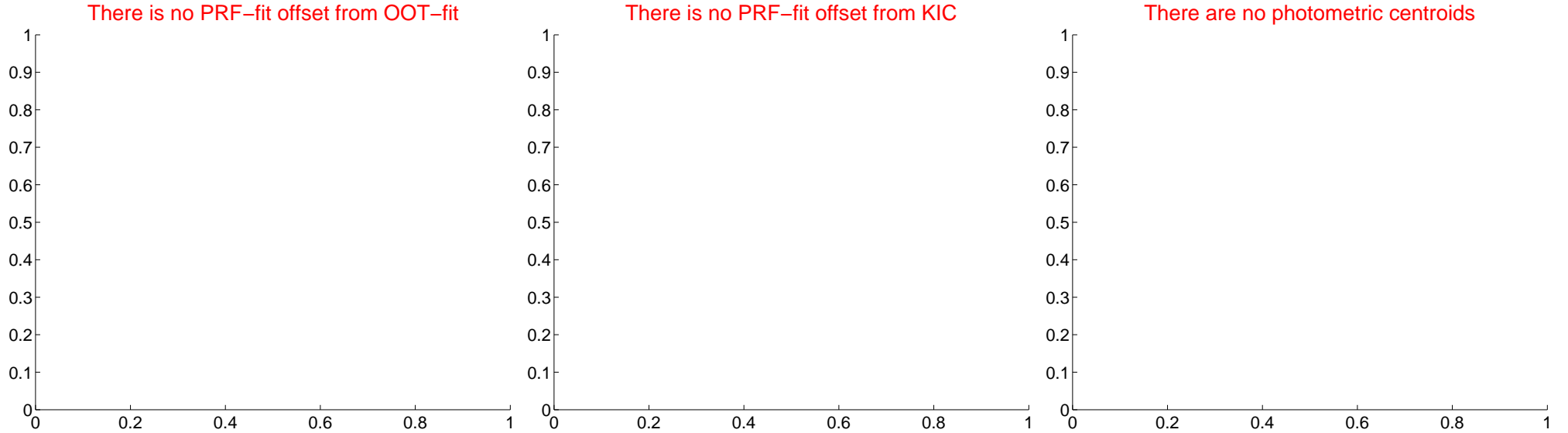
DV Centroid Data

Supplemental centroid analysis for 007622473-01. Kepler magnitude: 12.31. Transit SNR 11.89

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	—	—	—	—



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.



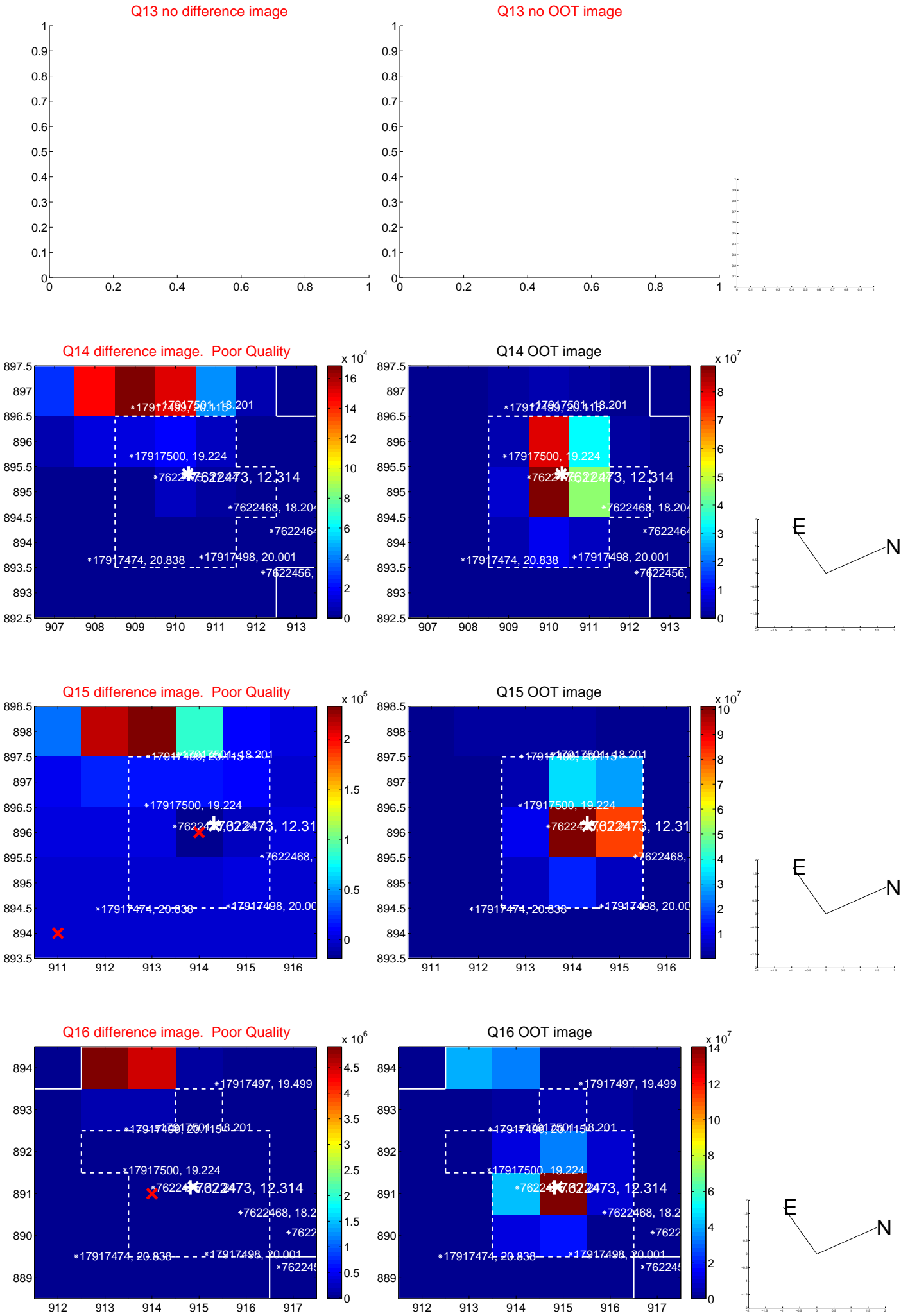
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



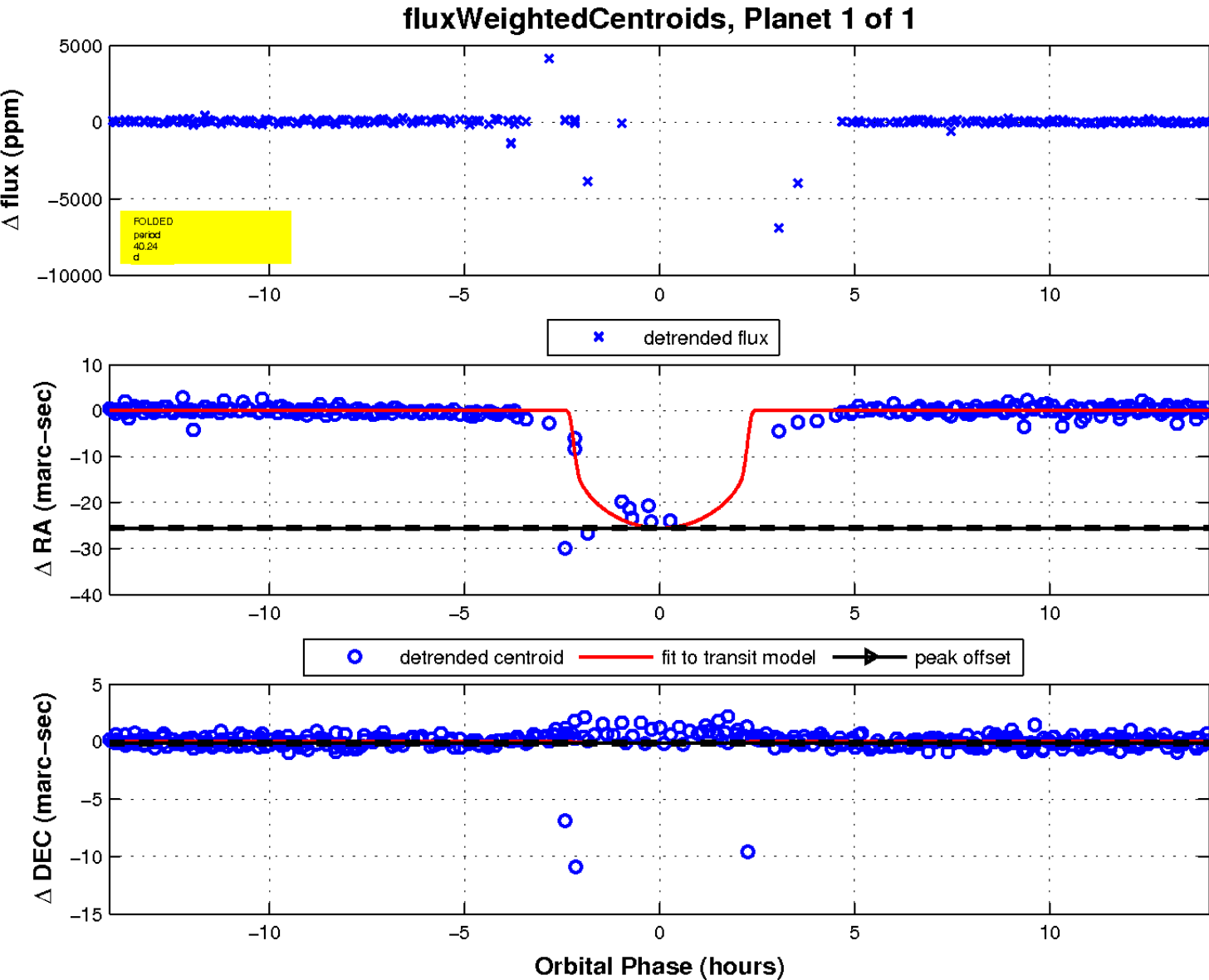
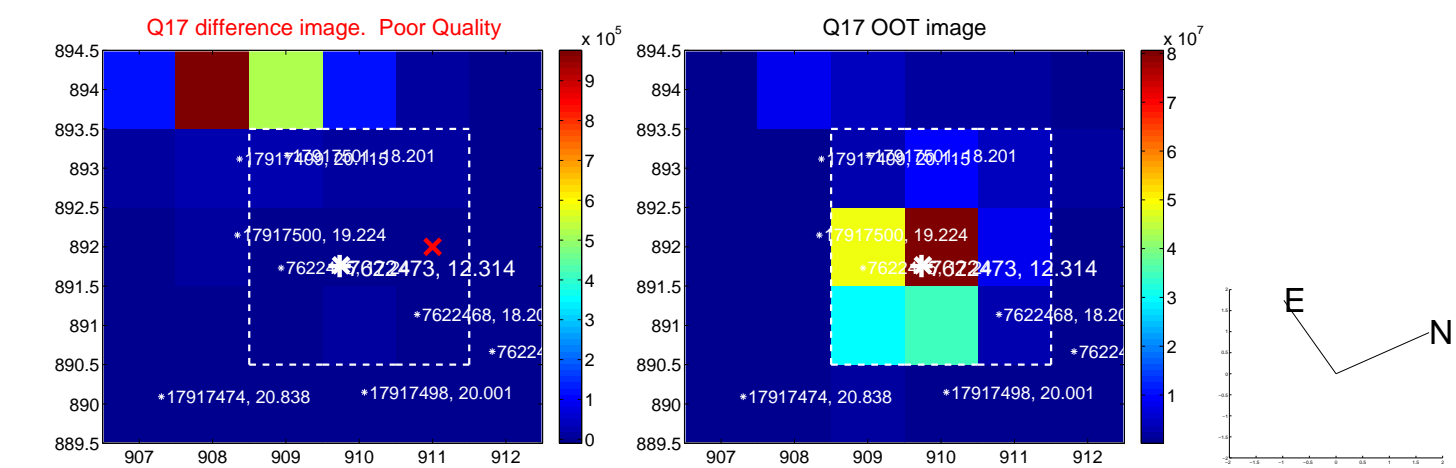
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

