

KIC 010120503

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})
010120503-01	OBS	No	467.874897	146.833581	1436.2	14.089	8.5	7.4	16.34	5148	72.34	62.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010120503-01	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.

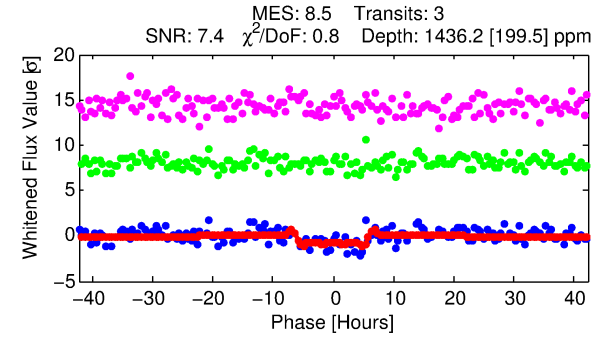
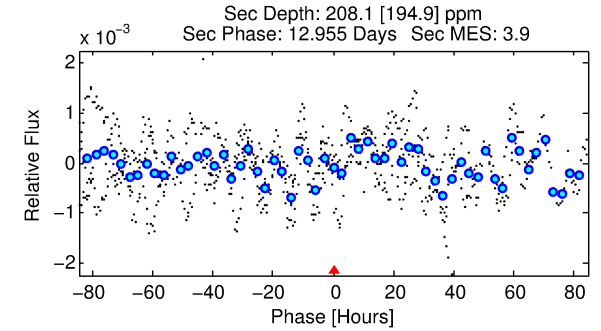
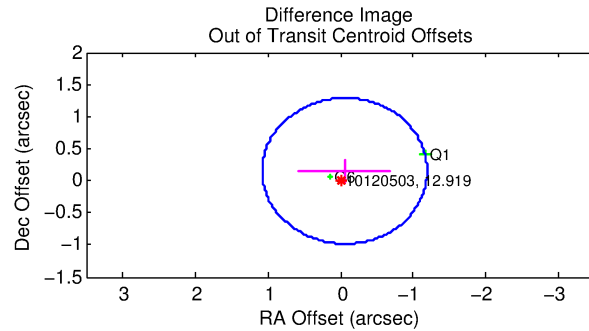
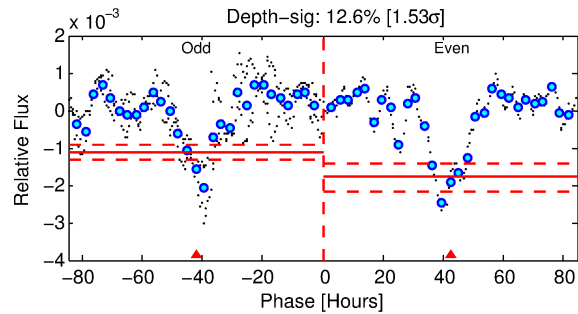
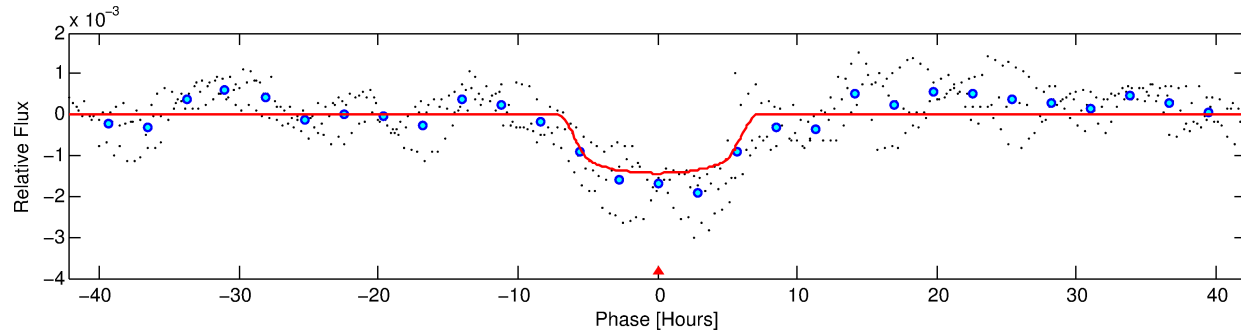
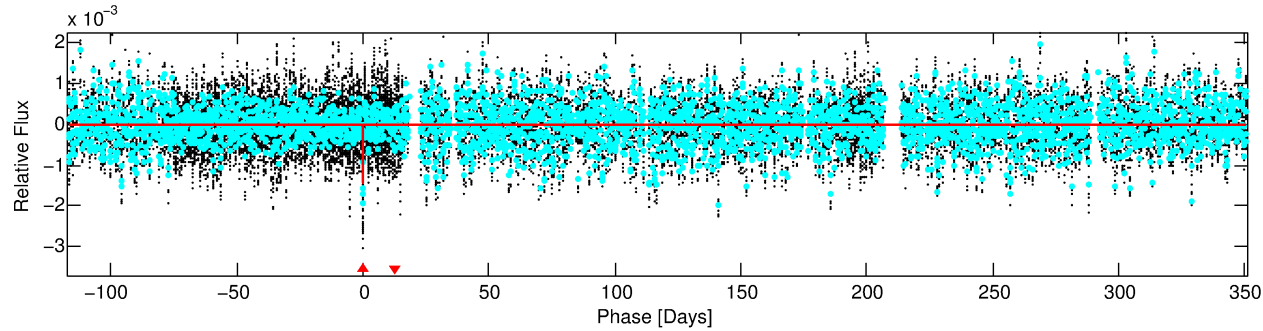
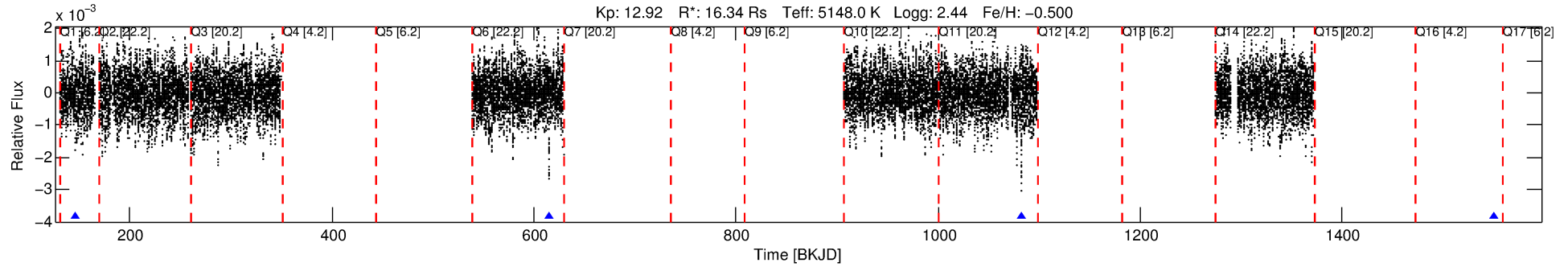
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010120503-01

No Significant Match Found

DV One-Page Summary

KIC: 10120503 Candidate: 1 of 1 Period: 467.875 d



DV Fit Results:

Period = 467.87490 [0.00838] d
Epoch = 146.8336 [0.0104] BKJD
Rp/R* = 0.0406 [0.0029]
a/R* = 144.13 [12.51]
b = 0.87 [0.02]
Seff = 62.45 [19.94]
Teq = 717 [57] K
Rp = 72.34 [26.15] Re
a = 1.6407 [0.3896] AU
Ag = 58.88 [57.60] [1.00 σ]
Teffp = 3070 [745] K [3.15 σ]

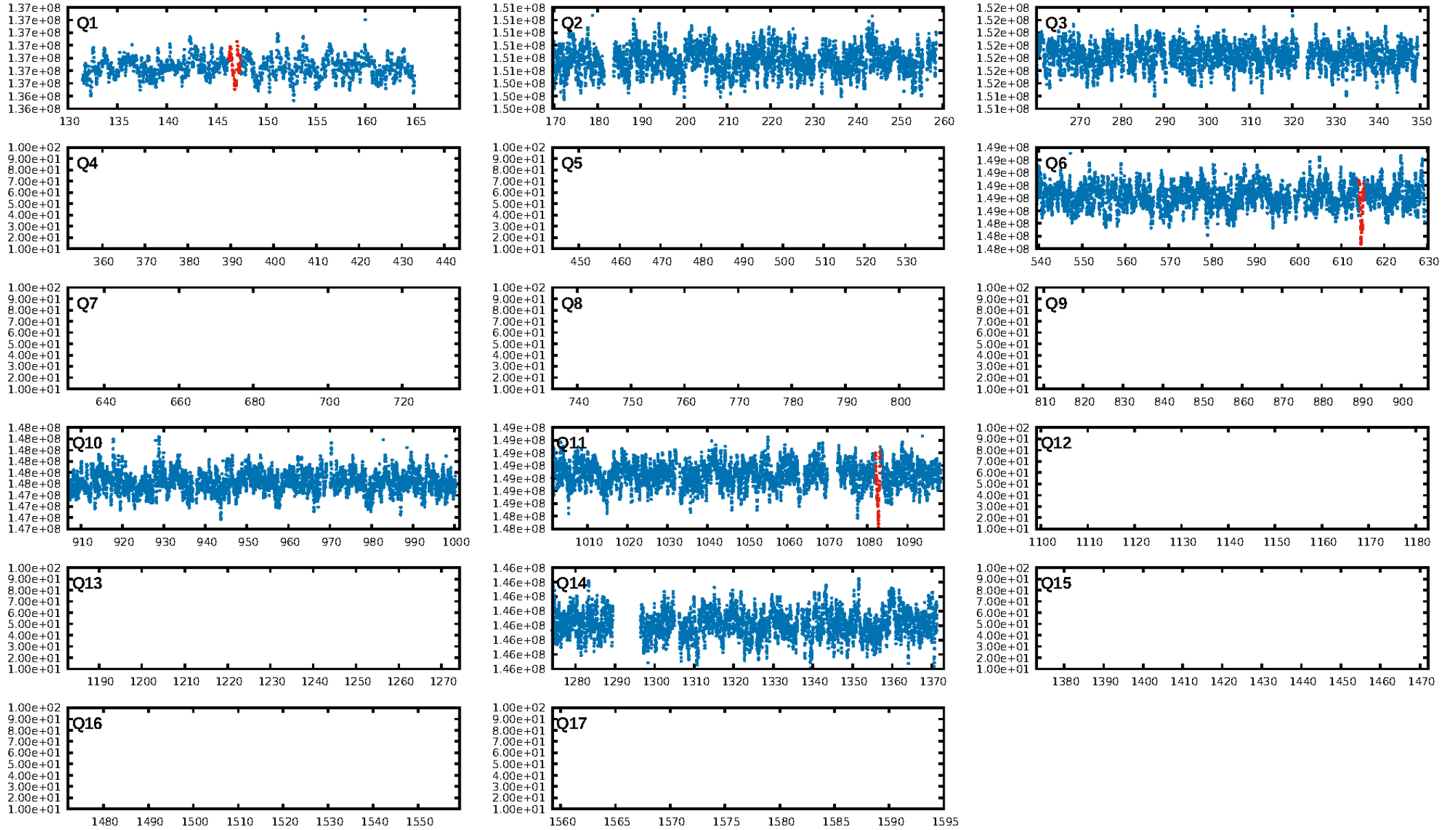
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.23e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 2.19
Centroid-sig: 17.2%
Centroid-so: 0.330 arcsec [1.65 σ]
OotOffset-rm: 0.161 arcsec [0.43 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.268 arcsec [0.64 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

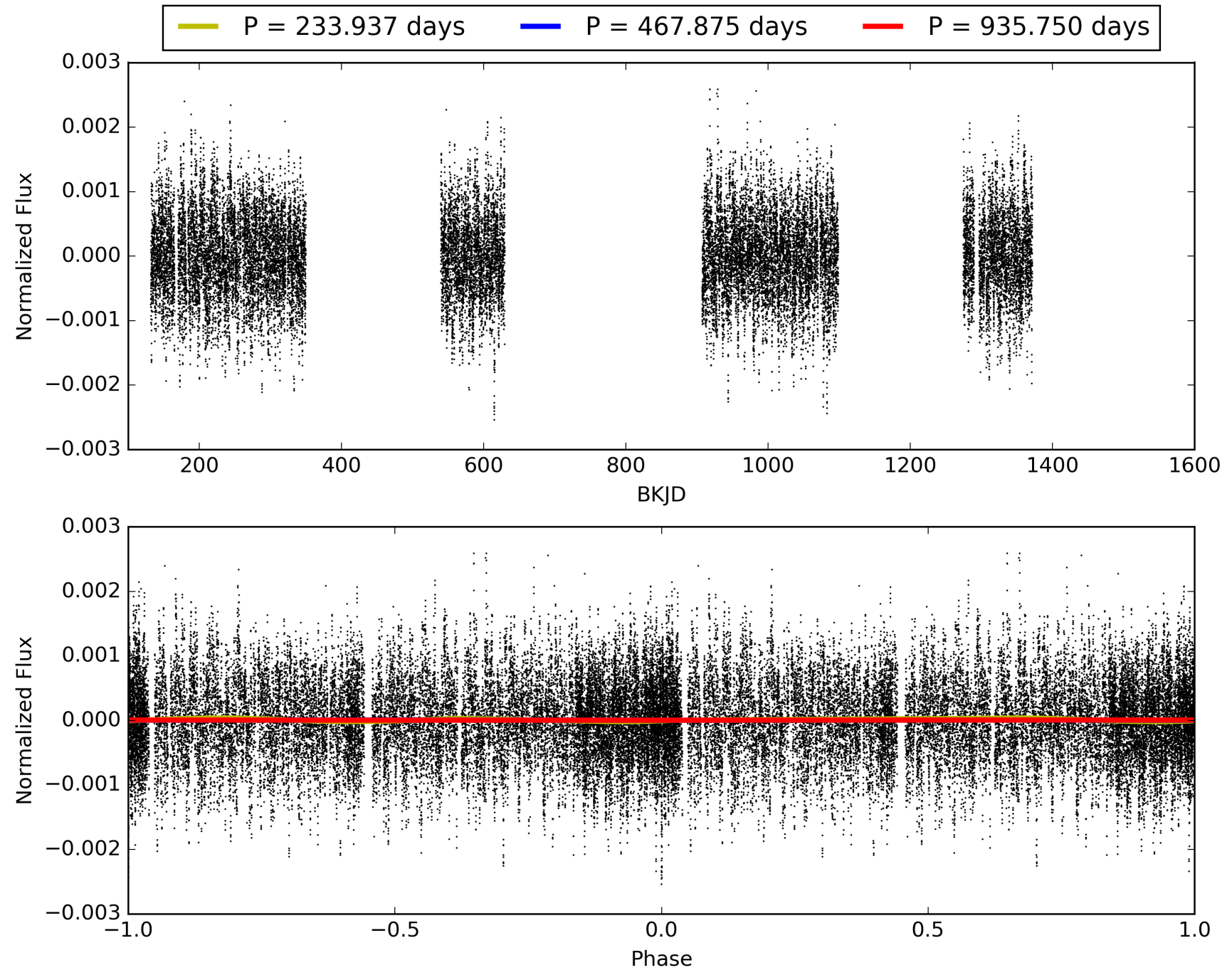
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:23:34 Z

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

TCE 010120503-01, PDC Light Curves

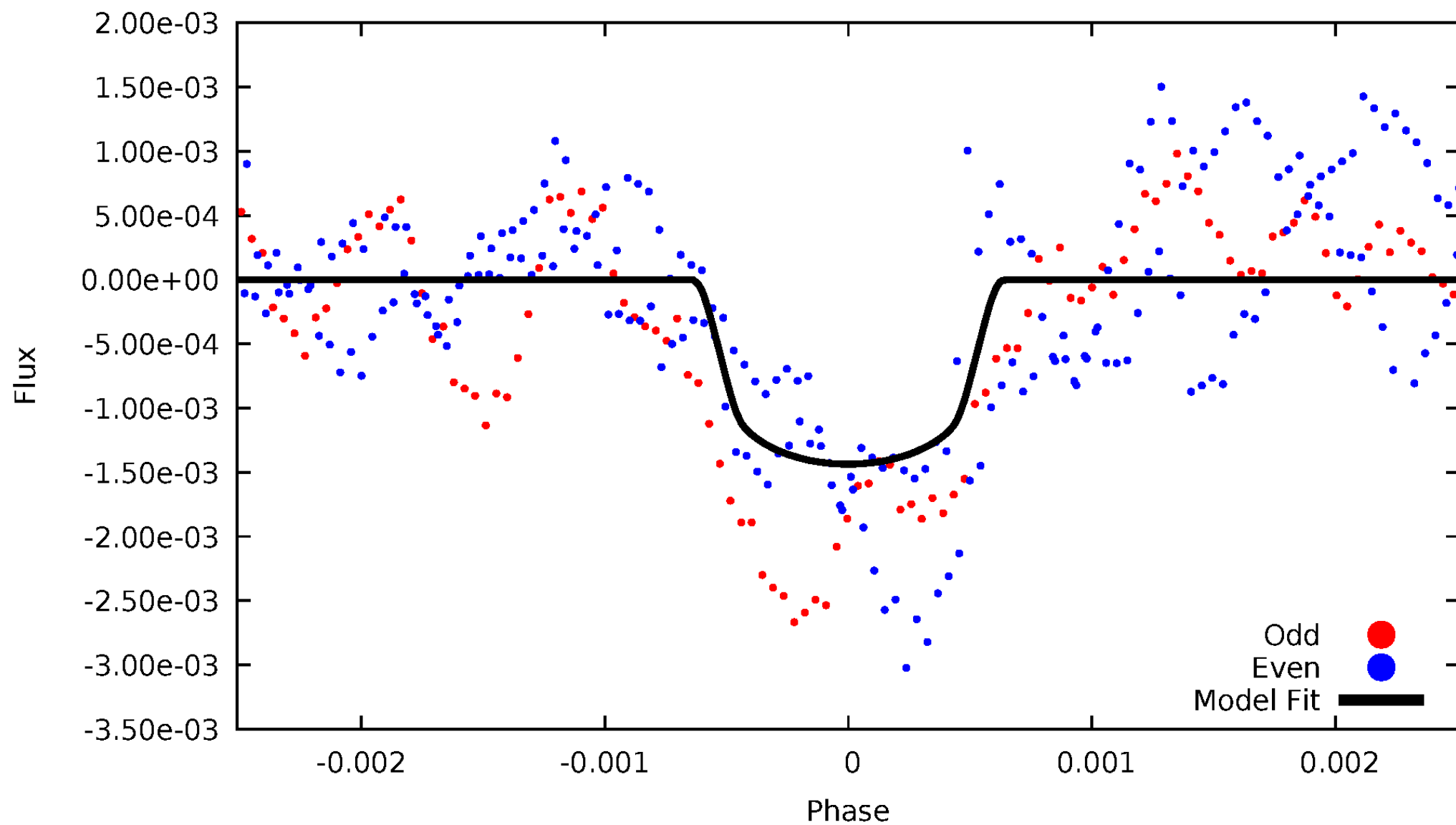


TCE 010120503-01



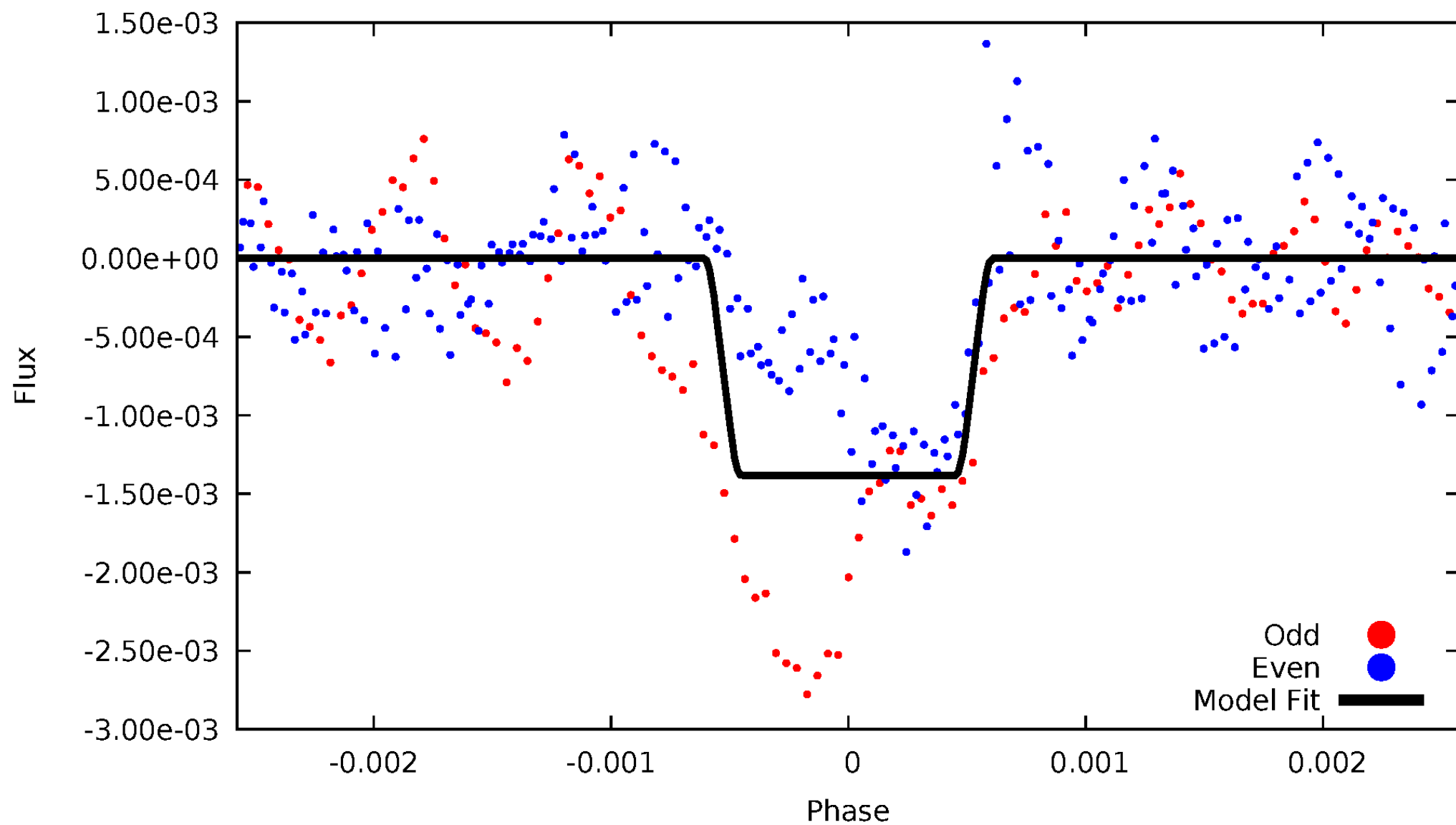
DV Odd/Even

TCE 010120503-01



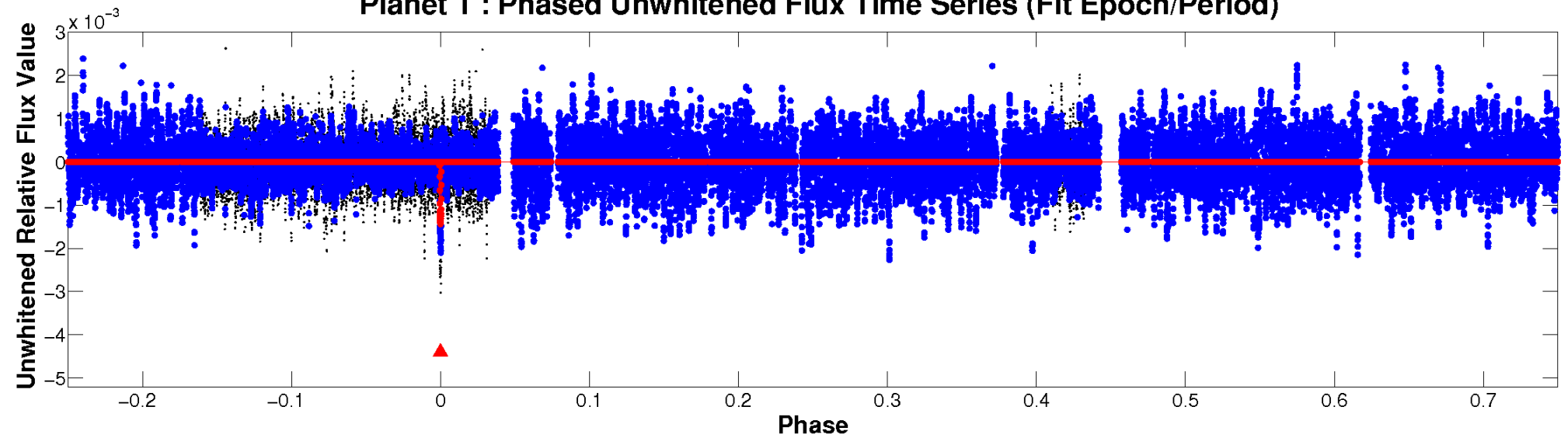
ALT Odd/Even

TCE 010120503-01

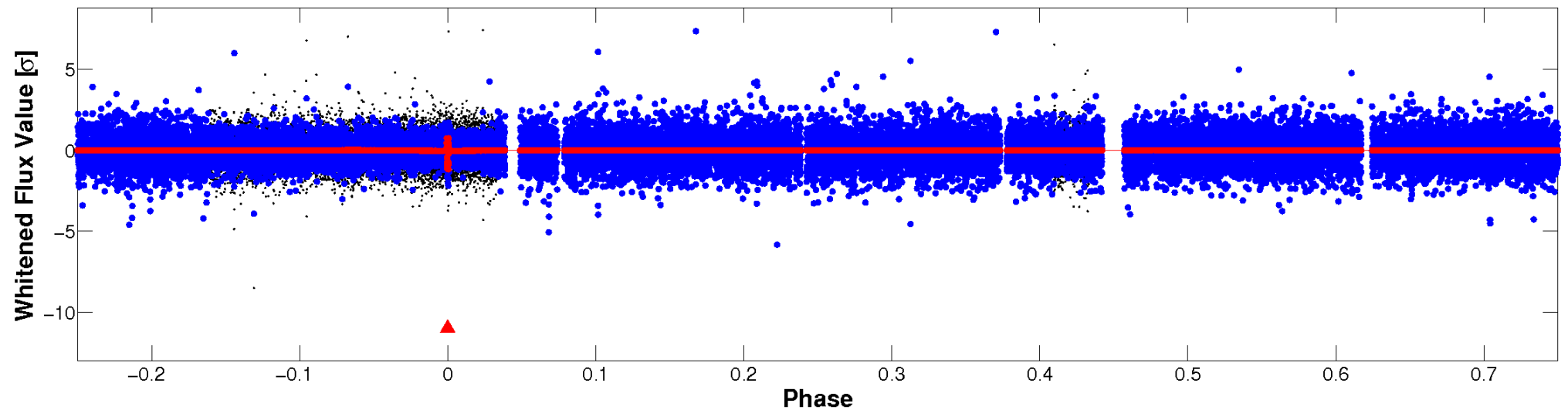


Non-Whitened Vs. Whitened Light Curve

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

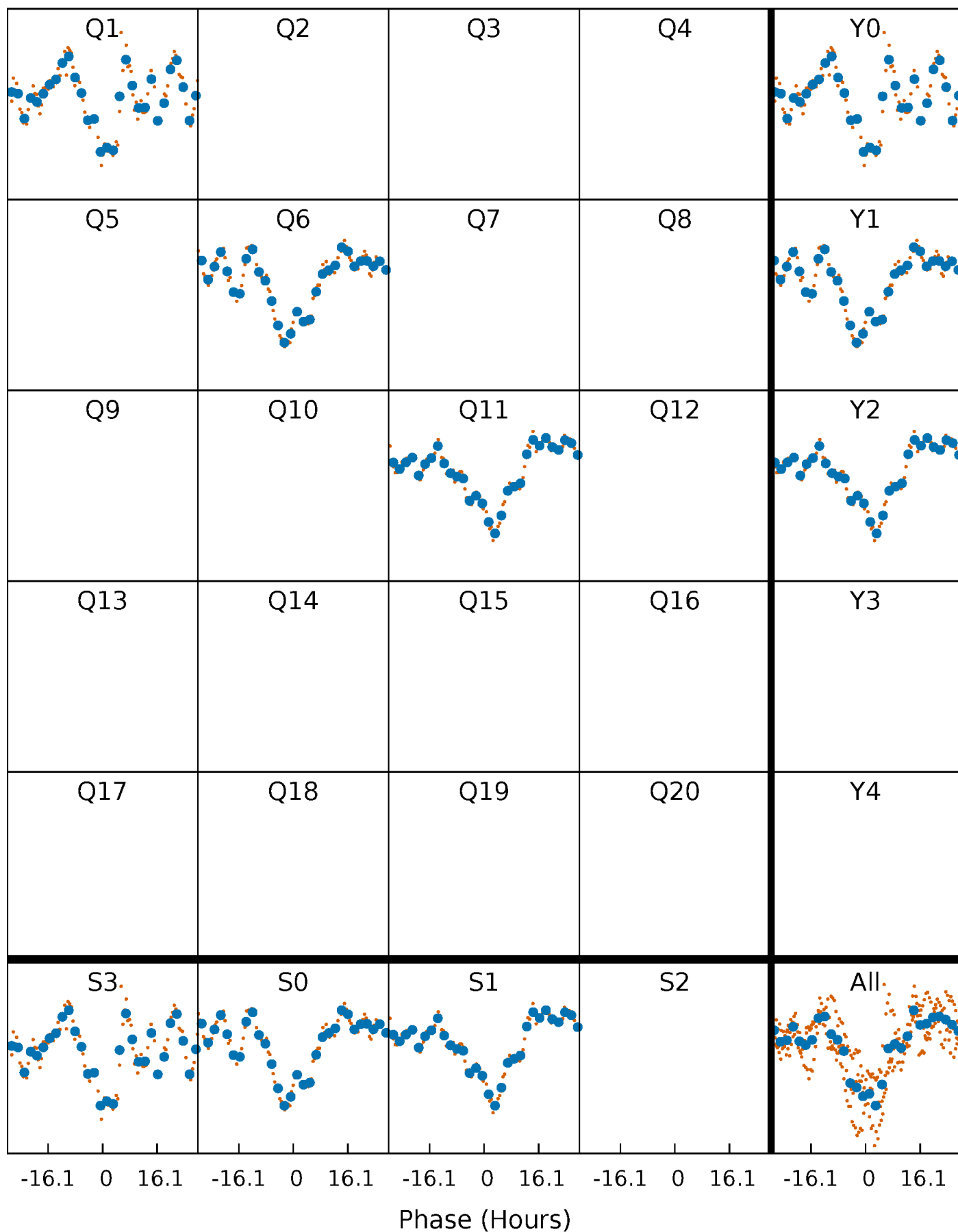


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



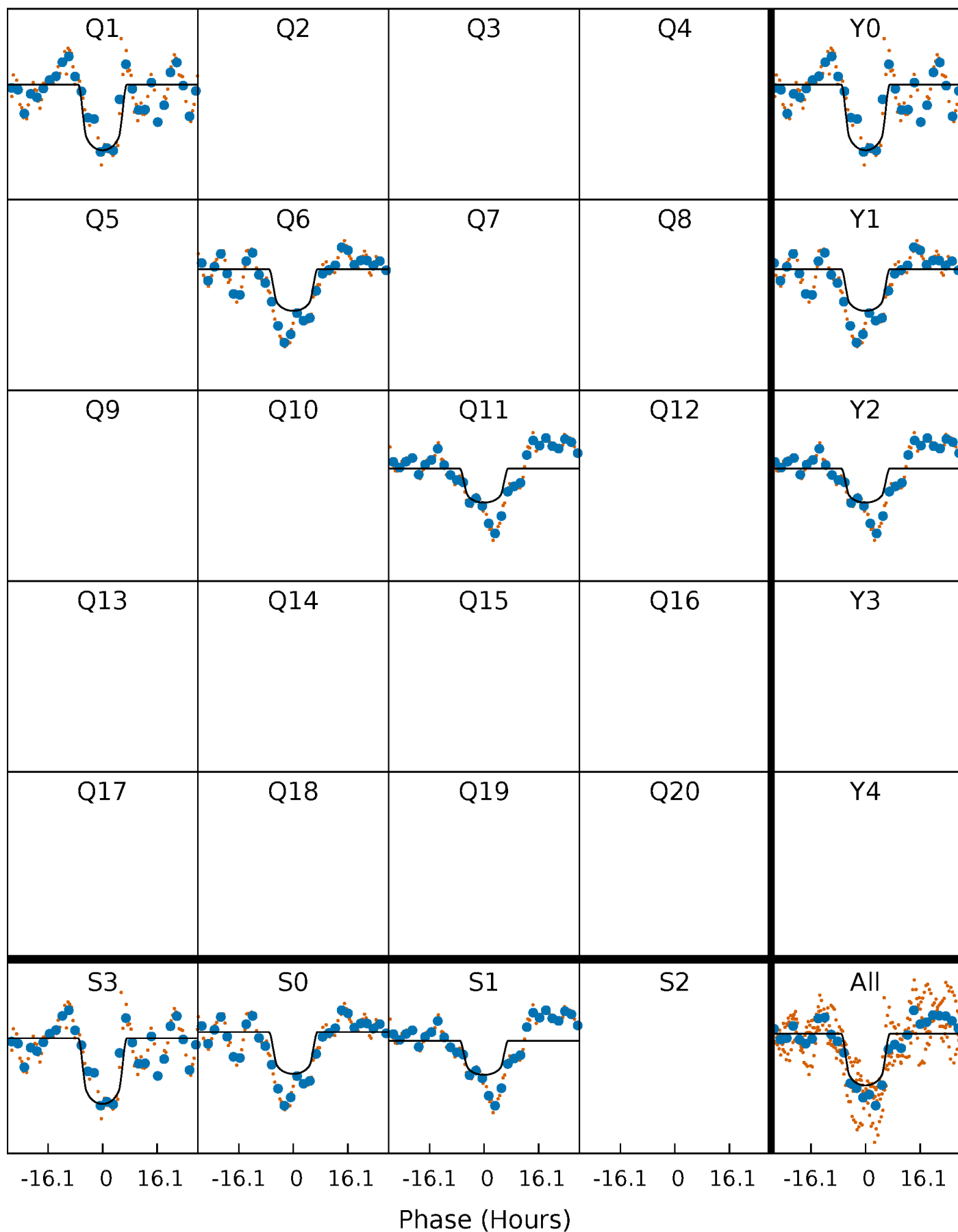
PDC Quarter-Phased Transit Curves

TCE 010120503-01 P=467.874897 Days $T_0=146.833581$ (BKJD)



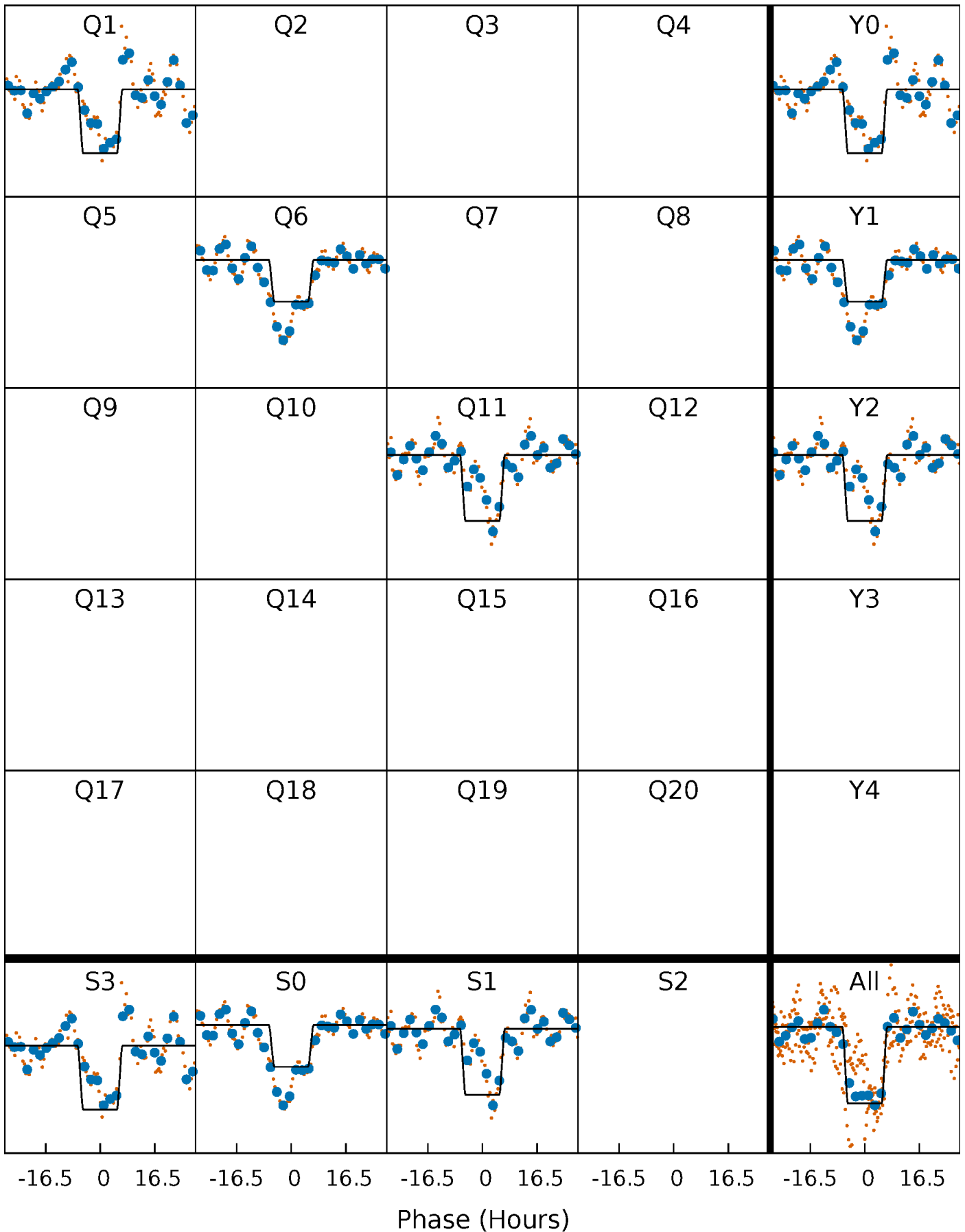
DV Quarter-Phased Transit Curves

TCE 010120503-01 P=467.874897 Days $T_0=146.833581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

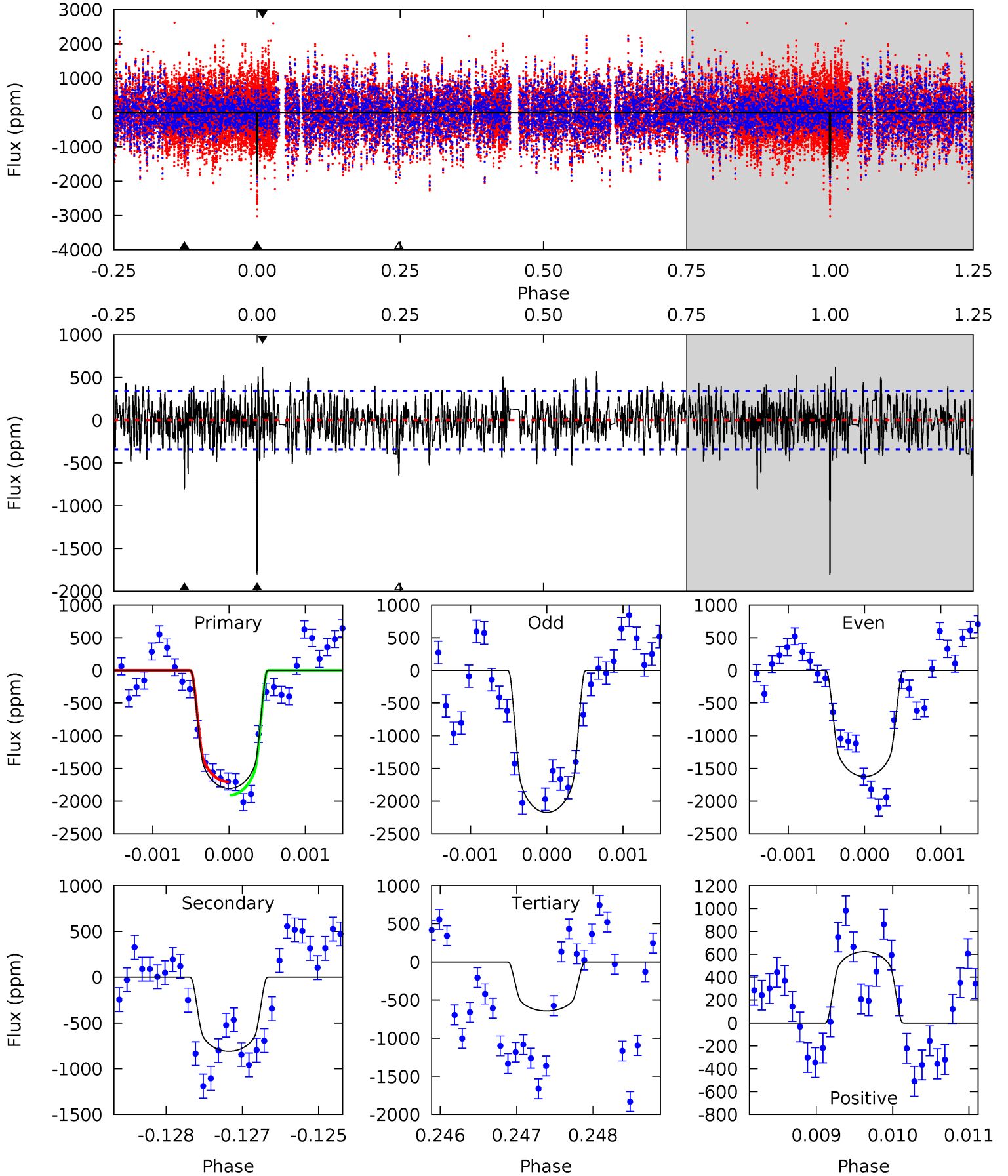
TCE 010120503-01 P=467.894468 Days $T_0=146.791268$ (BKJD)



DV Model-Shift Uniqueness Test

010120503-01, P = 467.874897 Days, E = 146.833581 Days

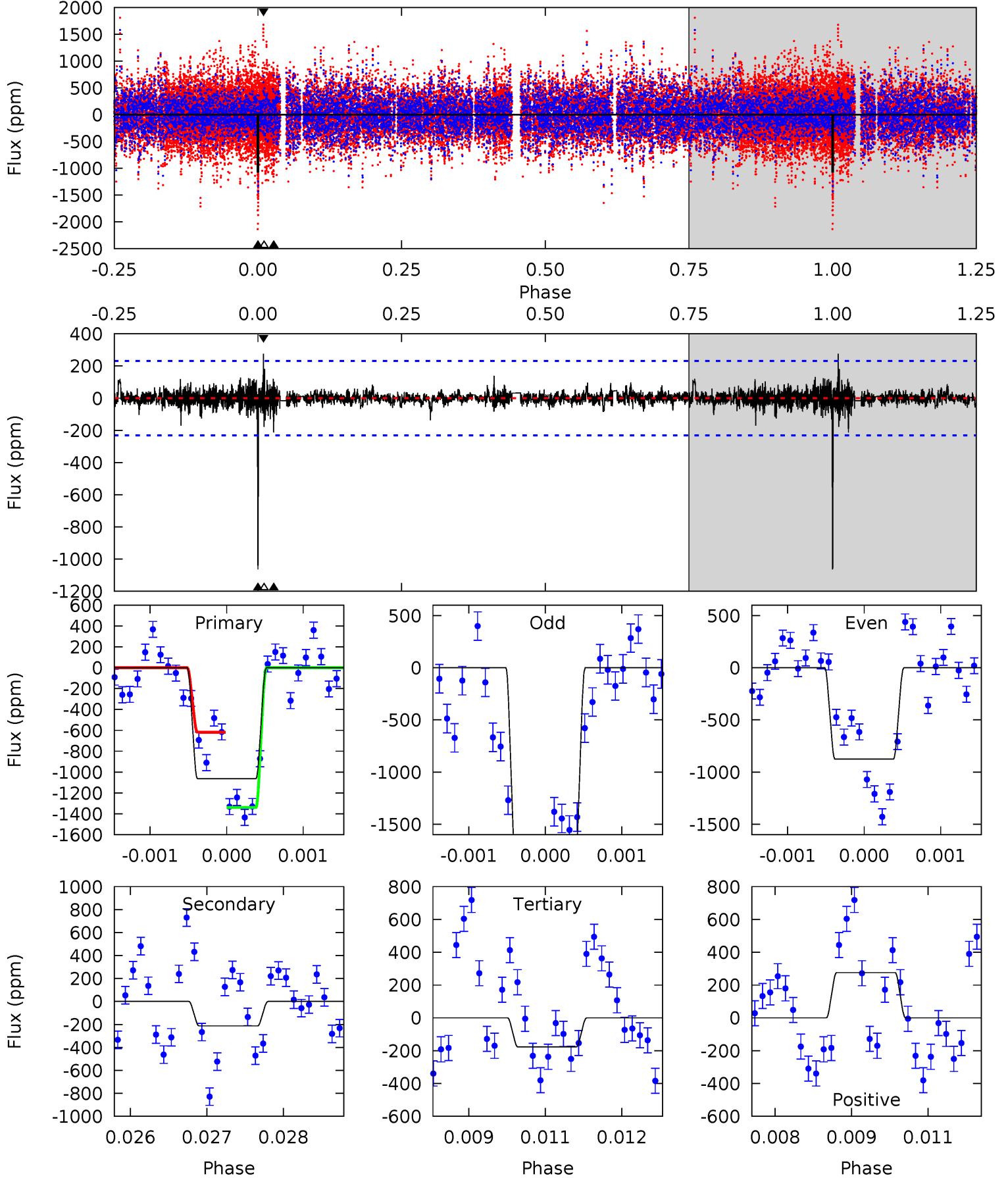
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	12.9	10.2	9.91	5.41	3.22	2.95	18.5	18.8	2.66	2.97	4.14	0.87	0.26	1.63



Alt Model-Shift Uniqueness Test

010120503-01, P = 467.894468 Days, E = 146.791268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	5.01	4.16	6.49	5.42	3.24	0.80	20.8	18.5	0.85	-1.48	13.5	1.39	0.21	8.28



Stellar Parameters For KIC 010120503

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5148^{+107}_{-269}	$2.441^{+0.033}_{-0.027}$	$-0.500^{+0.050}_{-0.350}$	$16.344^{+0.609}_{-5.788}$	$2.692^{+0.172}_{-1.463}$	$0.001^{+0.000}_{-0.000}$
	+2%/-5%	+1%/-1%	+10%/-70%	+4%/-35%	+6%/-54%	+57%/-8%
Source	PHO1	AST9	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 010120503-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-810 ± 63	$74.10^{+5.27}_{-6.48}$	1001^{+28}_{-52}	4414^{+198}_{-227}	226^{+45}_{-35}
Alt.	-213 ± 43	$67.49^{+5.85}_{-6.44}$	999^{+26}_{-53}	3583^{+185}_{-193}	71^{+21}_{-17}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

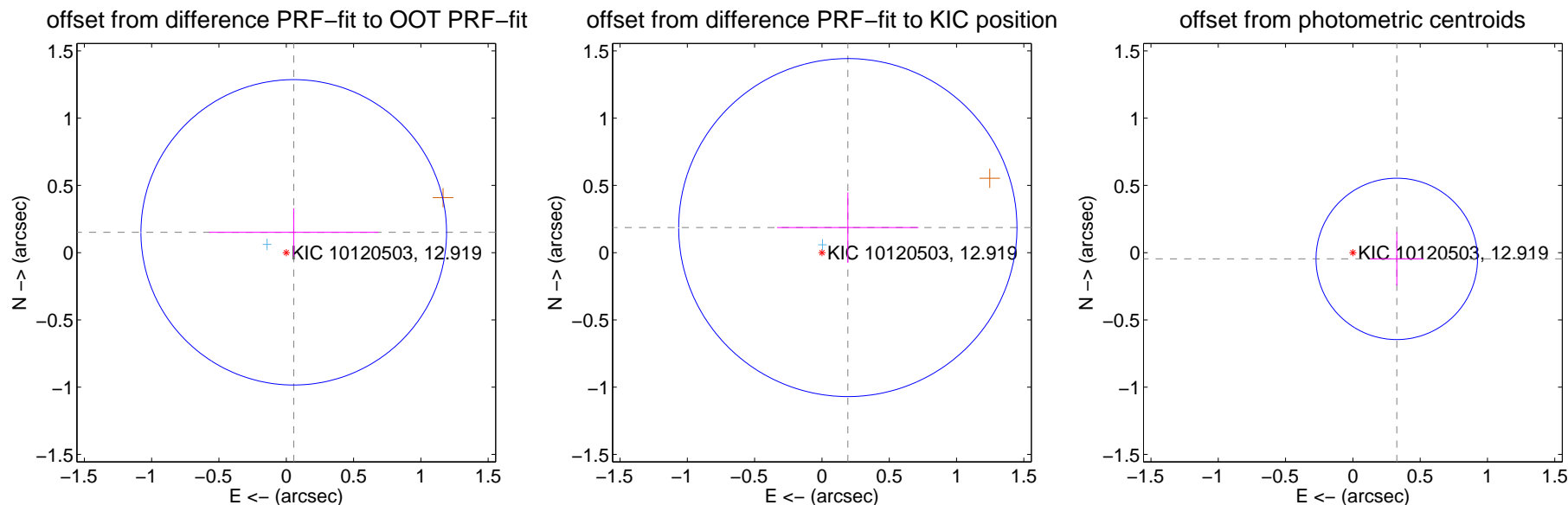
DV Centroid Data

Supplemental centroid analysis for 010120503-01. Kepler magnitude: 12.92. Transit SNR 7.38

There are 1 quarters with good PRF difference image offsets

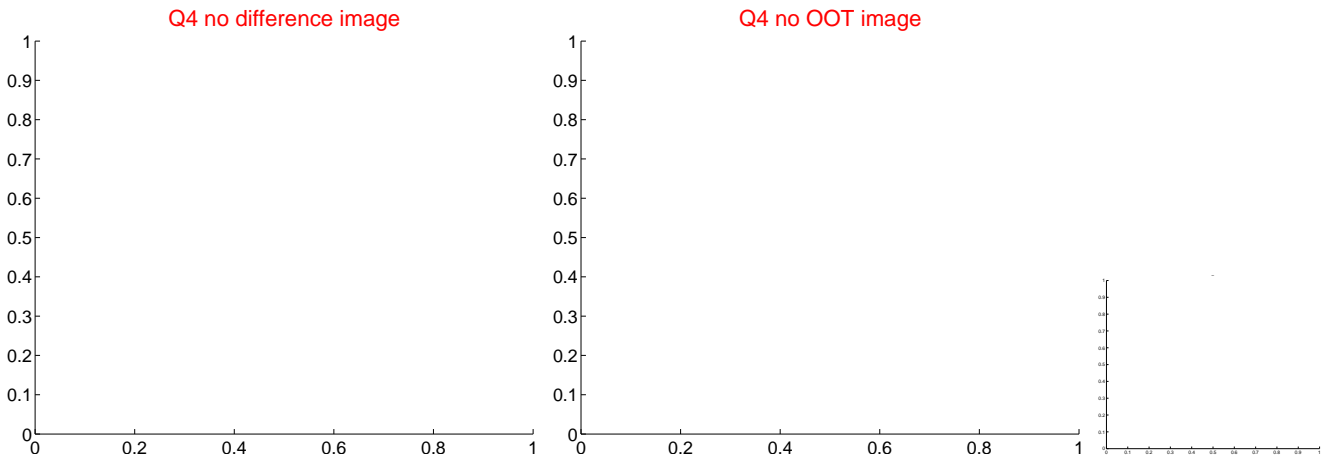
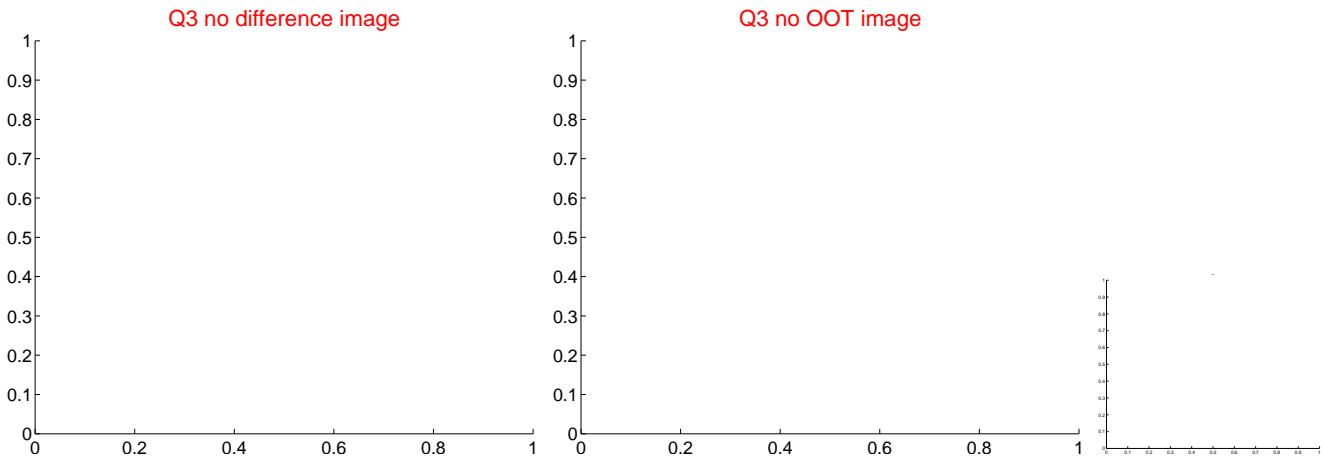
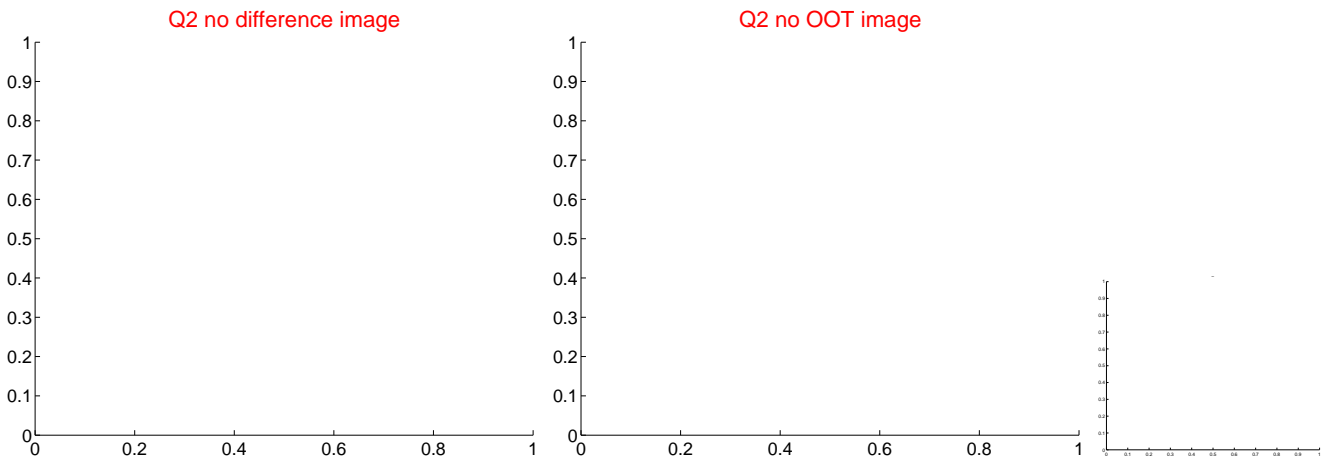
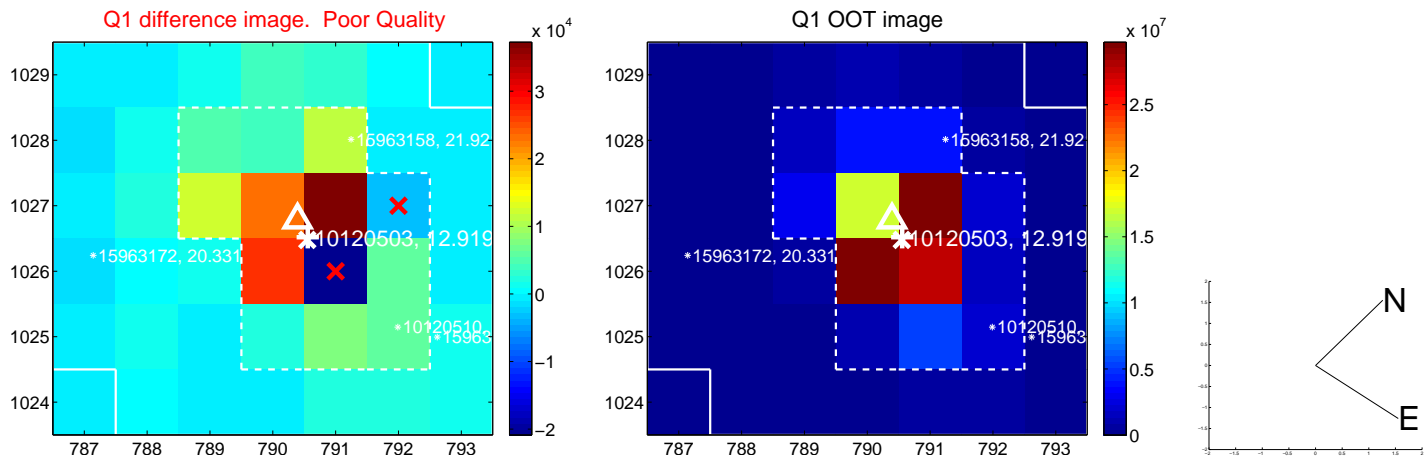
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.161 ± 0.378	0.43	-0.056 ± 0.630	0.151 ± 0.179
PRF-fit source offset from KIC position	0.268 ± 0.419	0.64	-0.192 ± 0.525	0.186 ± 0.262
photometric centroid source offset	0.33 ± 0.20	1.65	-0.33 ± 0.20	-0.05 ± 0.20



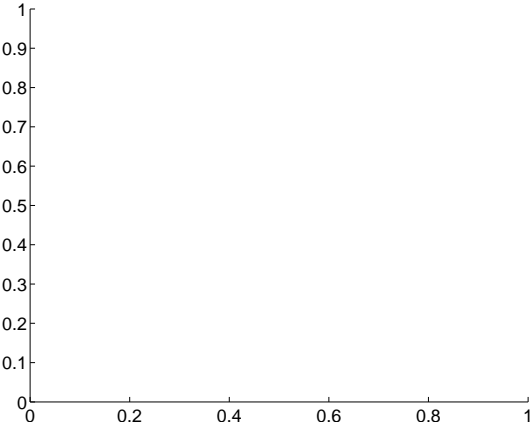
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

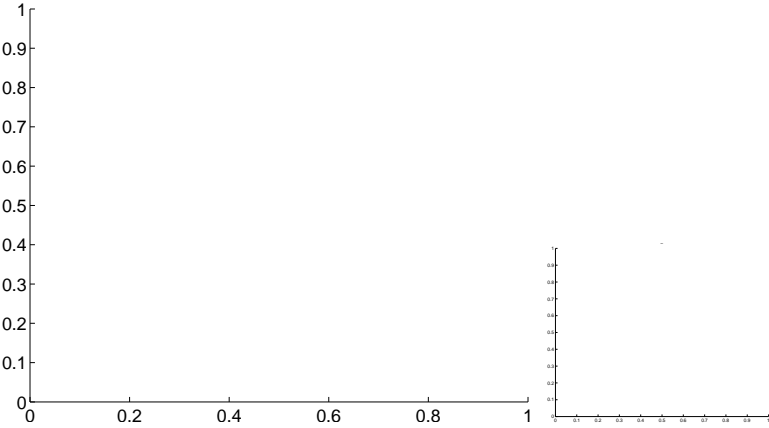


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

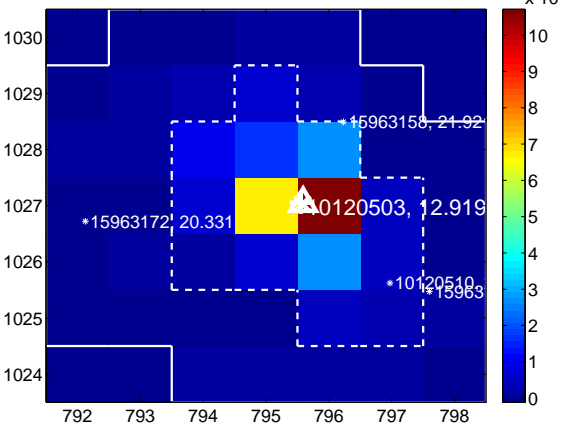
Q5 no difference image



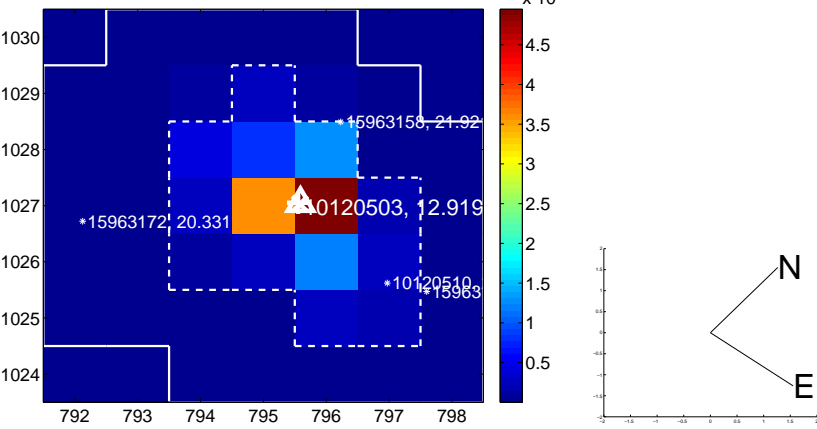
Q5 no OOT image



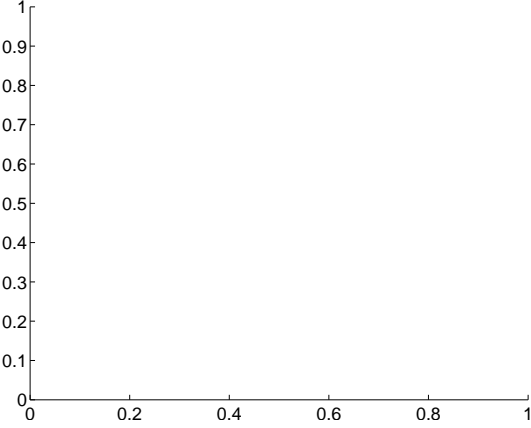
Q6 difference image



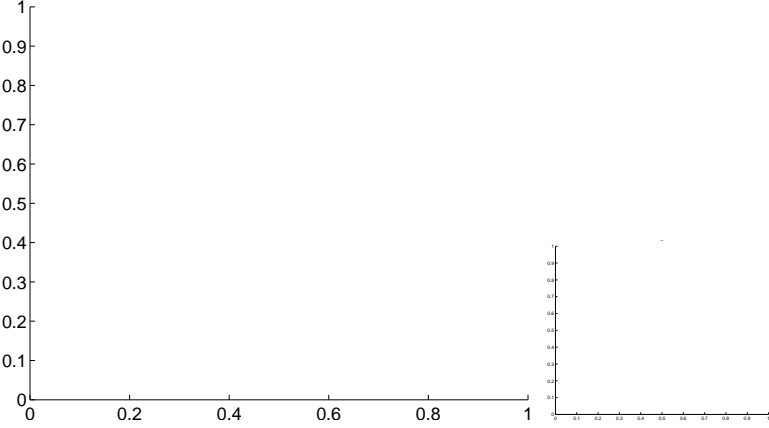
Q6 OOT image



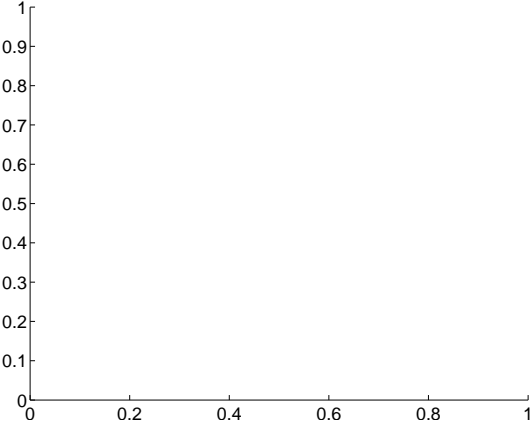
Q7 no difference image



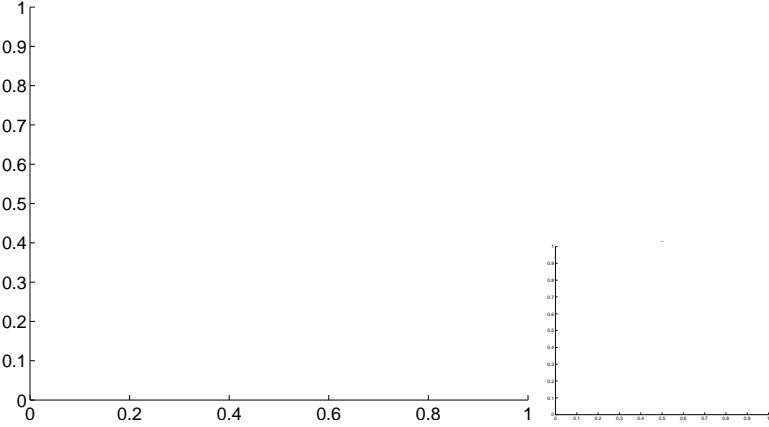
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



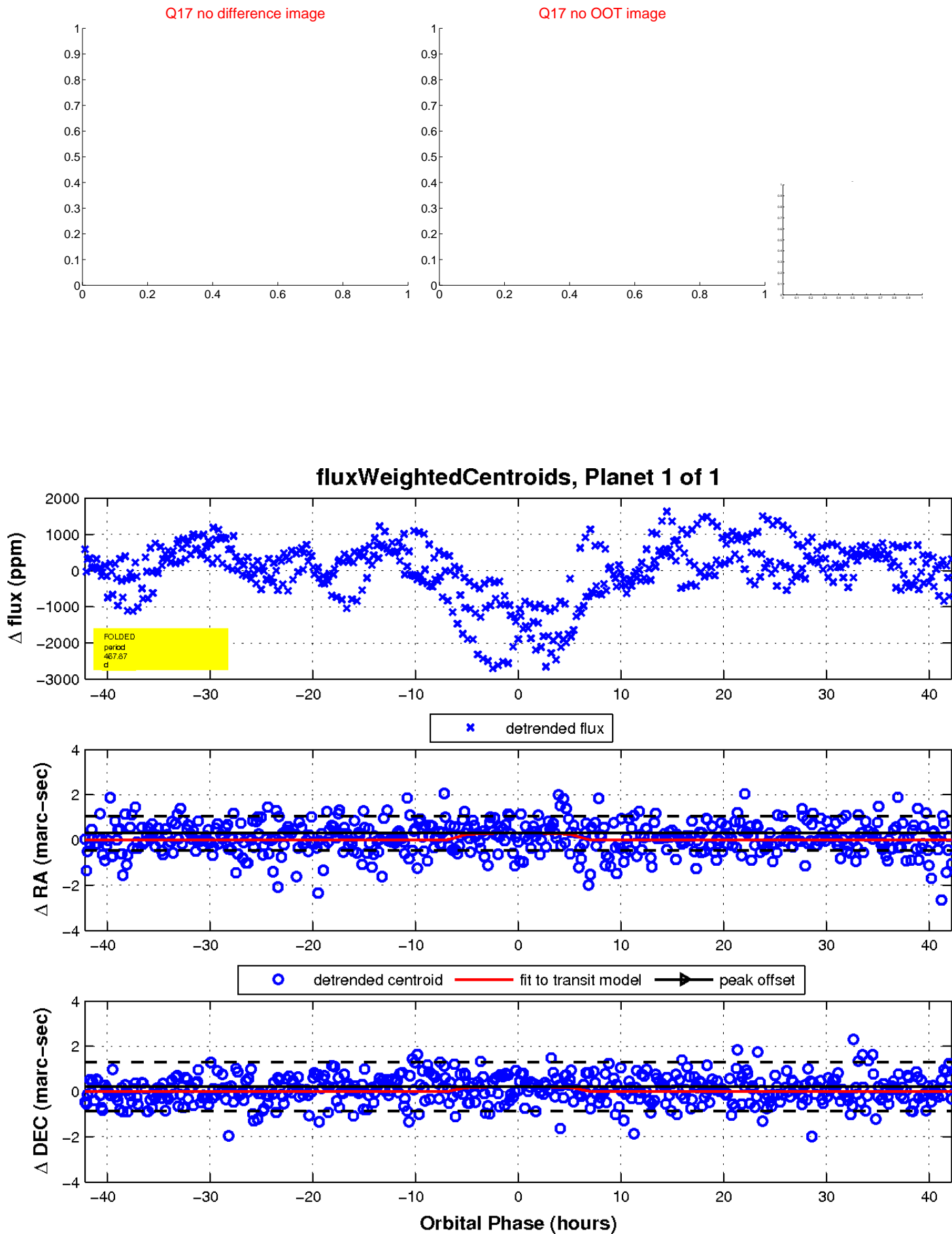
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

