

KIC 010468514

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})
010468514-01	OBS	7331.01	0.850031	131.766656	3932.6	0.820	52.6	69.2	1.68	5164	10.86	6172.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010468514-01	OBS	PC	0.70	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.

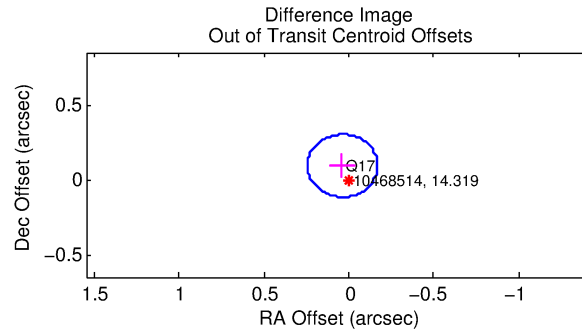
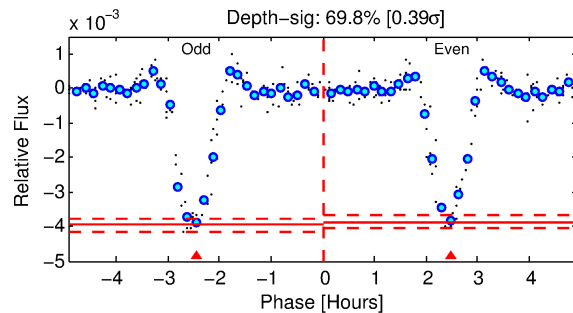
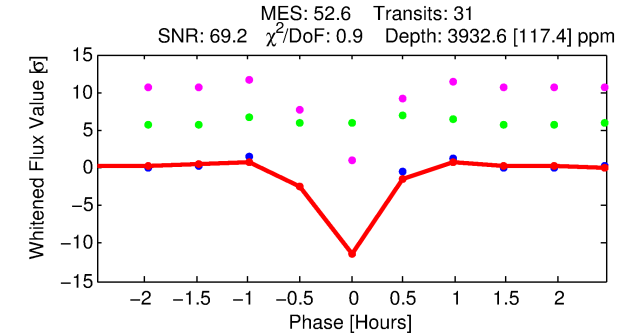
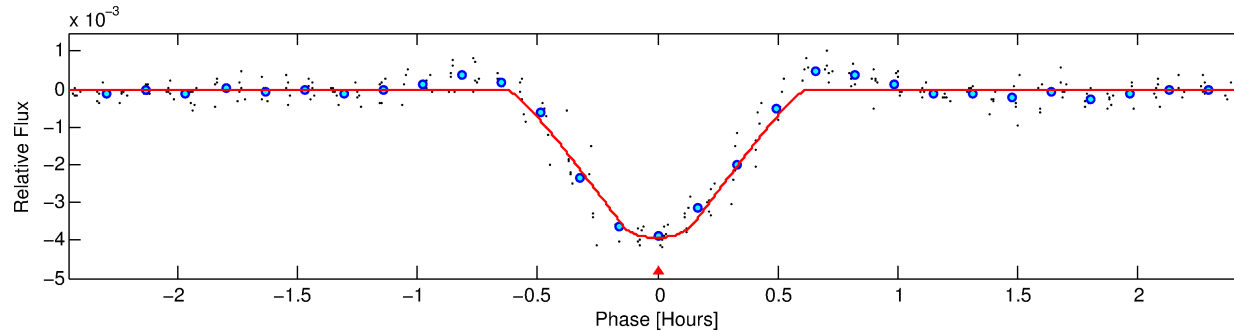
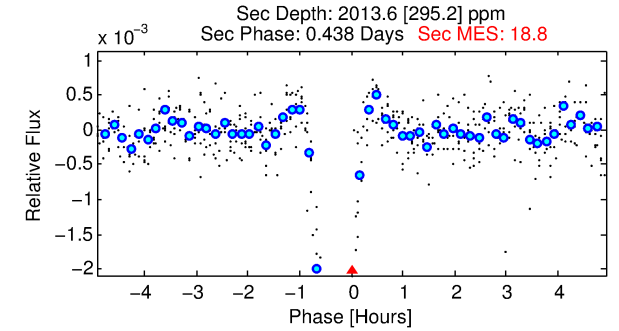
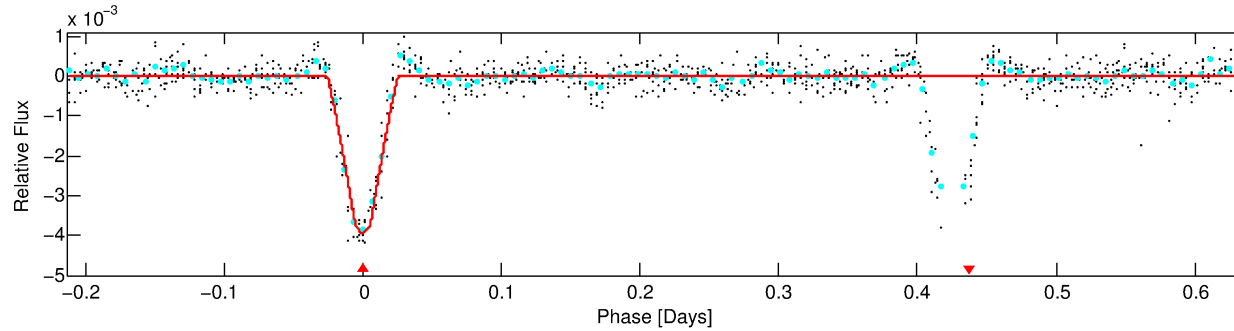
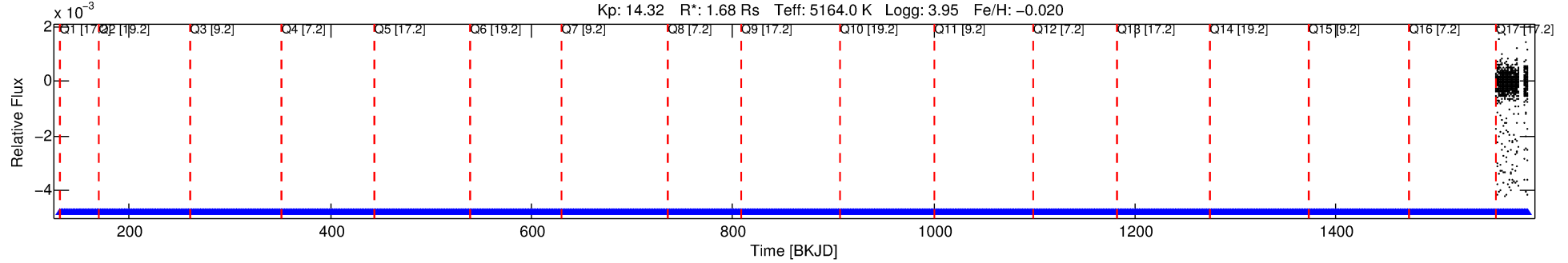
Ephemeris Match Information For 010468514-01

No Significant Match Found

DV One-Page Summary

KIC: 10468514 Candidate: 1 of 1 Period: 0.850 d
KOI: K07331 Corr: No Ephemeris Match

Kp: 14.32 R*: 1.68 Rs Teff: 5164.0 K Logg: 3.95 Fe/H: -0.020



DV Fit Results:

Period = 0.85003 [0.00000] d
Epoch = 131.7667 [0.0002] BKJD
Rp/R* = 0.0594 [0.0111]
a/R* = 7.44 [4.76]
b = 0.50 [1.01]
Seff = 6172.24 [6270.60]
Teq = 2260 [574] K
Rp = 10.86 [6.94] Re
a = 0.0170 [0.0105] AU
Ag = 2.72 [2.97] [0.58σ]
Teffp = 4489 [459] K [3.03σ]

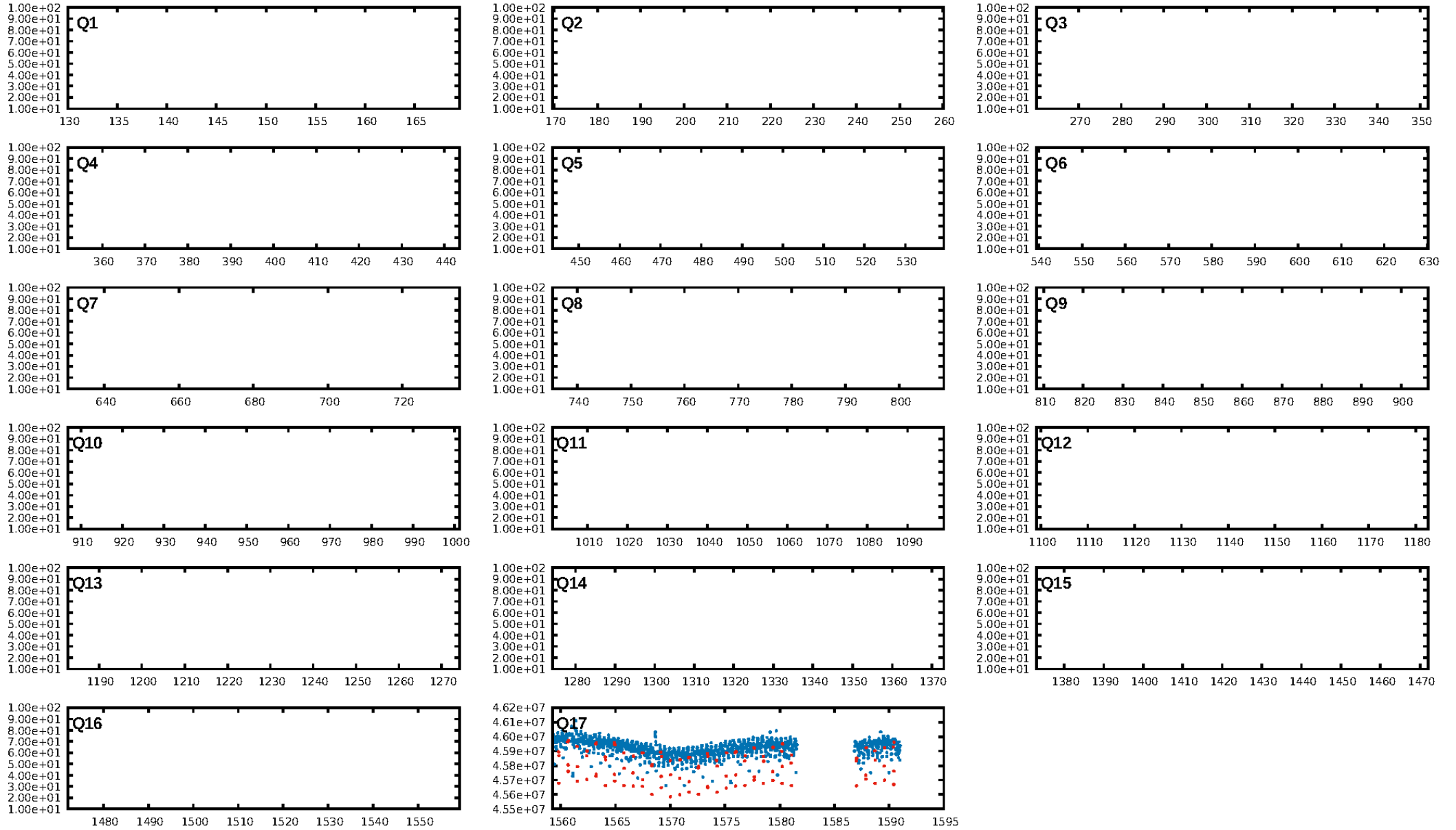
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.4%
ModelChiSquareGof-sig: 77.6%
Bootstrap-pfa: 3.91e-267
RollingBand-fgt: N/A
GhostDiagnostic-chr: 5.373
Centroid-sig: 2.0%
Centroid-so: 0.341 arcsec [0.63σ]
OotOffset-rm: 0.101 arcsec [1.46σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-rm: 0.306 arcsec [4.41σ]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

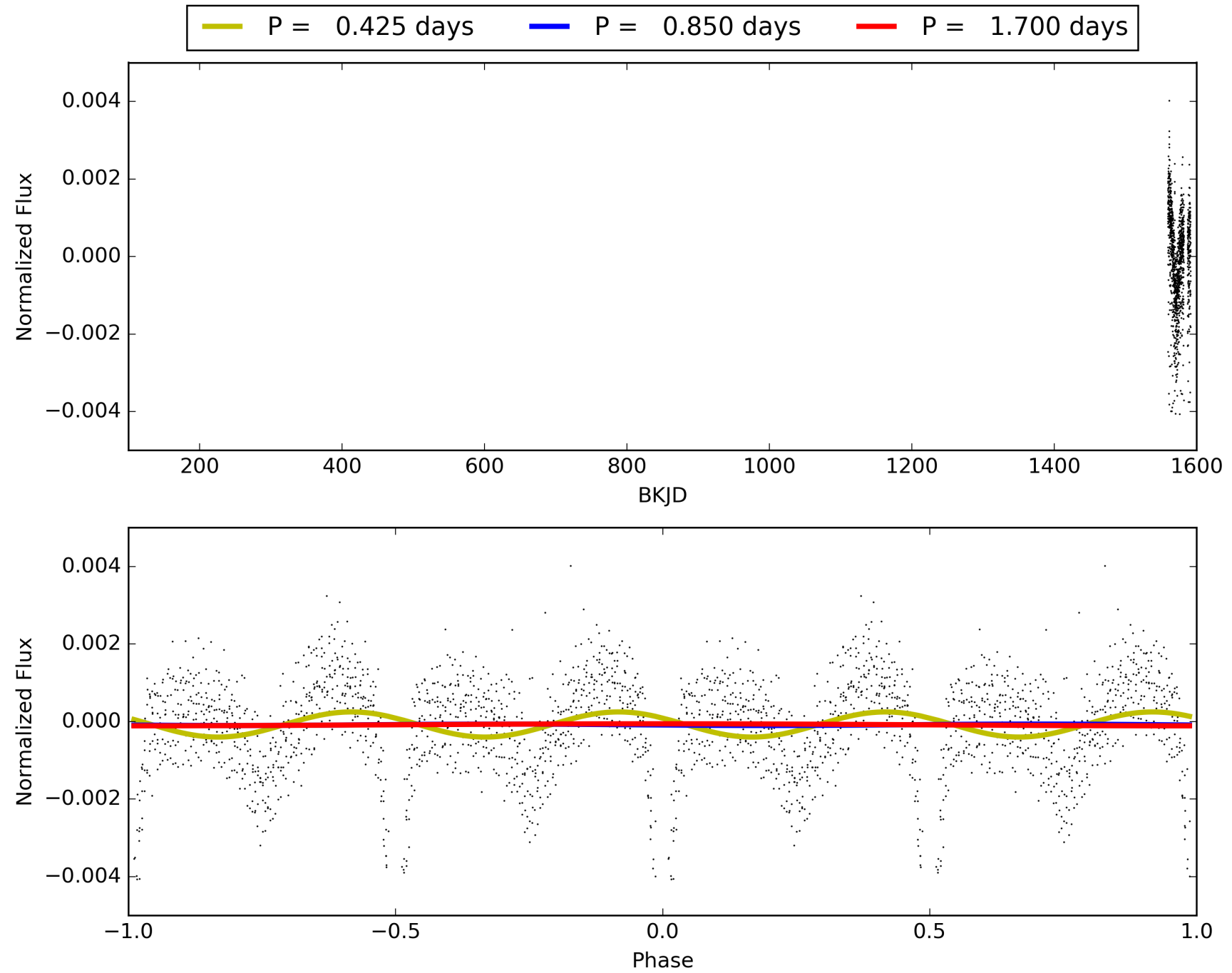
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:34:54 Z

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

TCE 010468514-01, PDC Light Curves

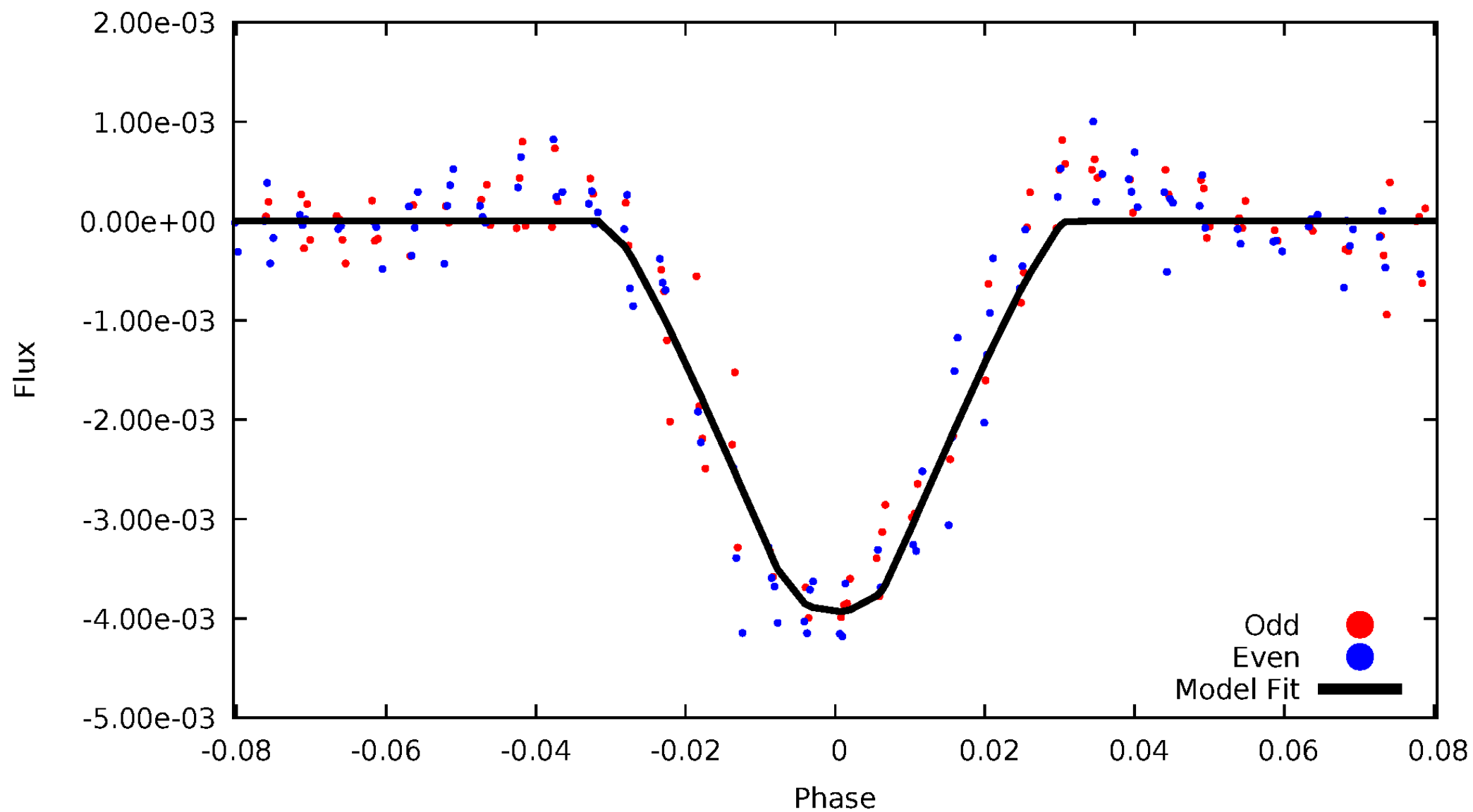


TCE 010468514-01



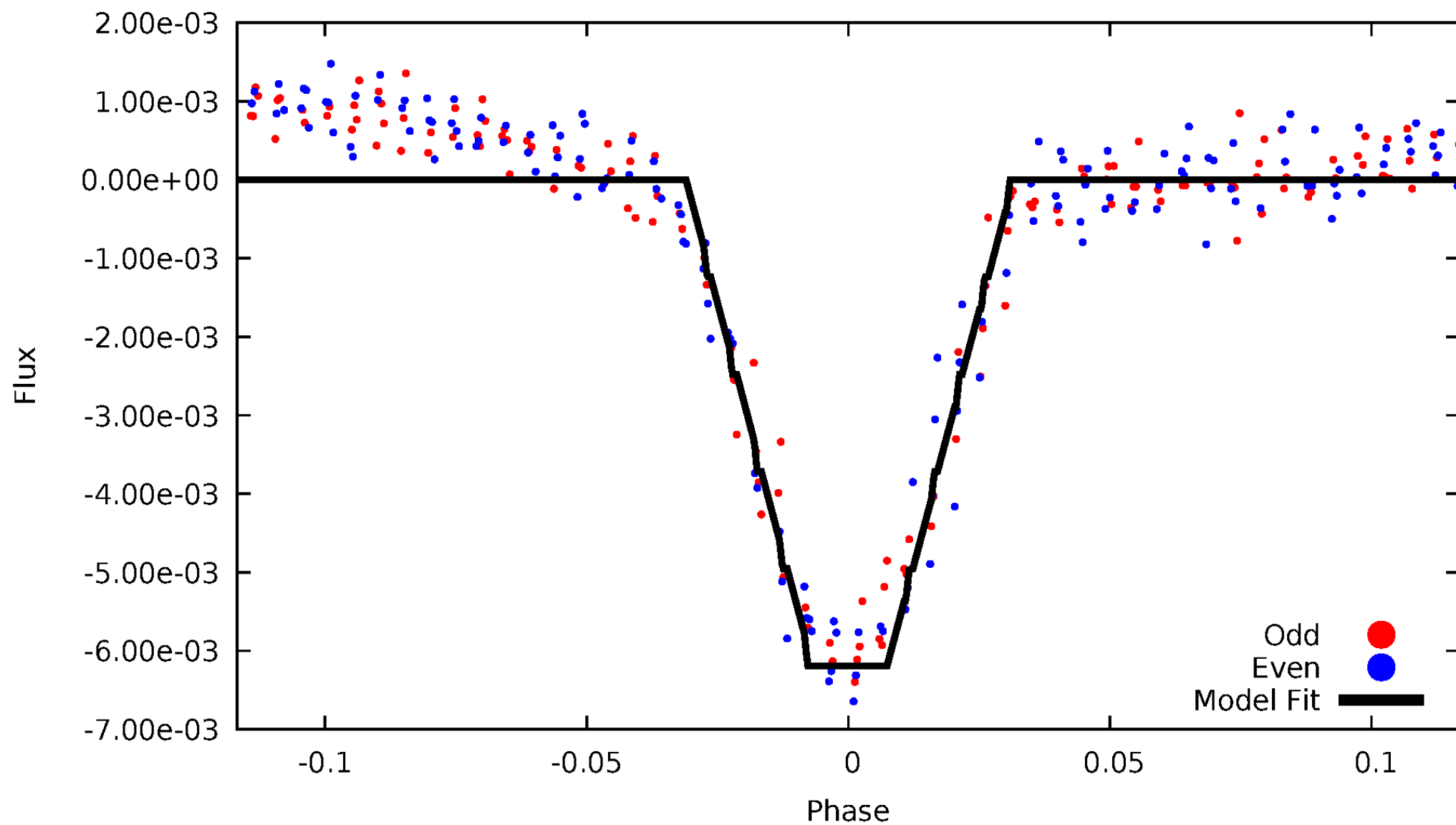
DV Odd/Even

TCE 010468514-01



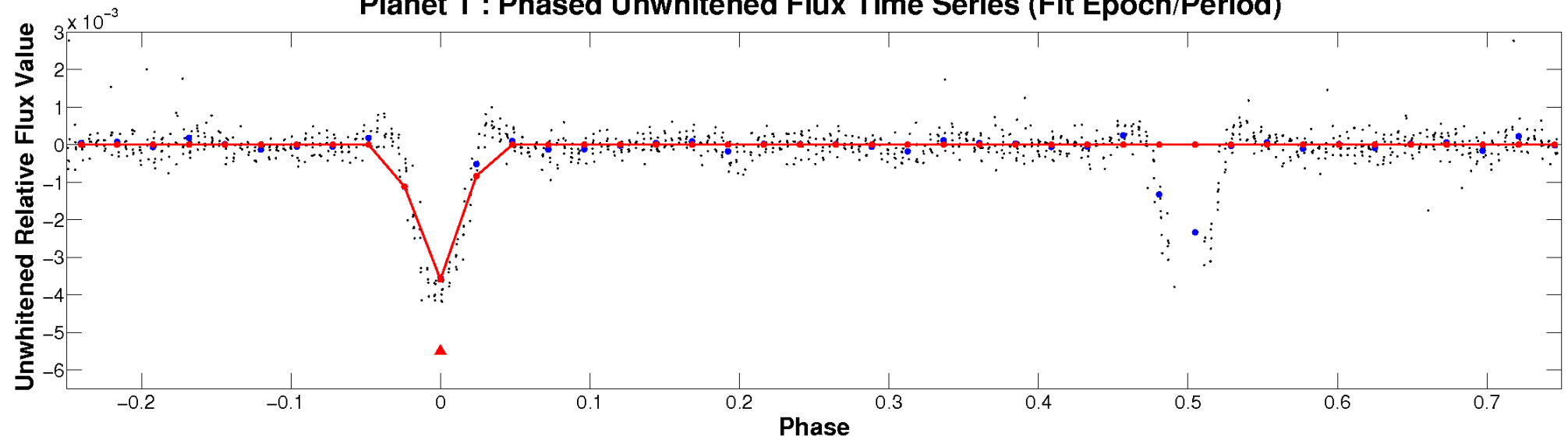
ALT Odd/Even

TCE 010468514-01

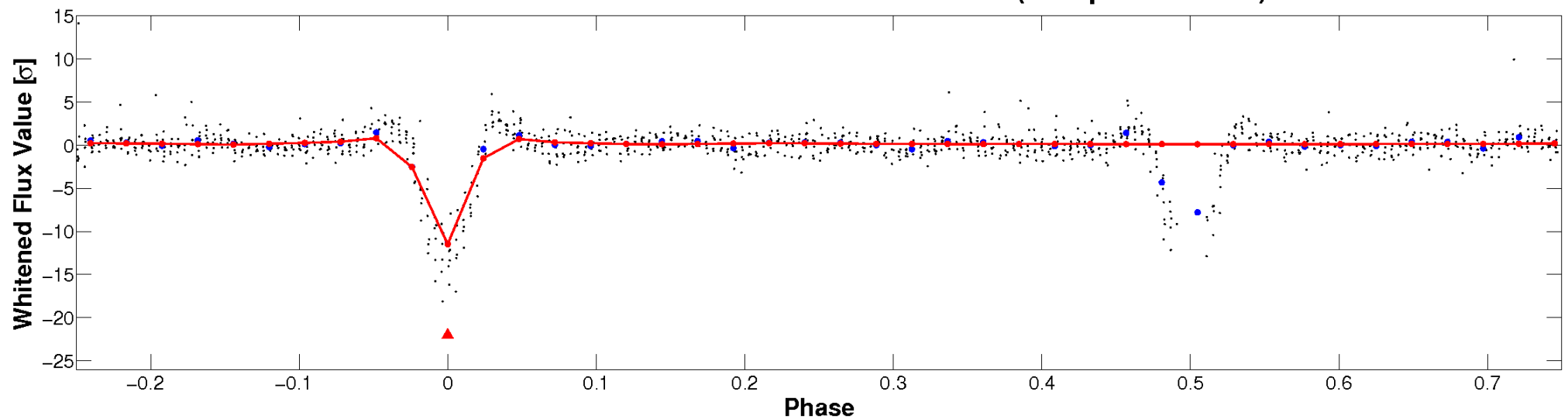


Non-Whitened Vs. Whitened Light Curve

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

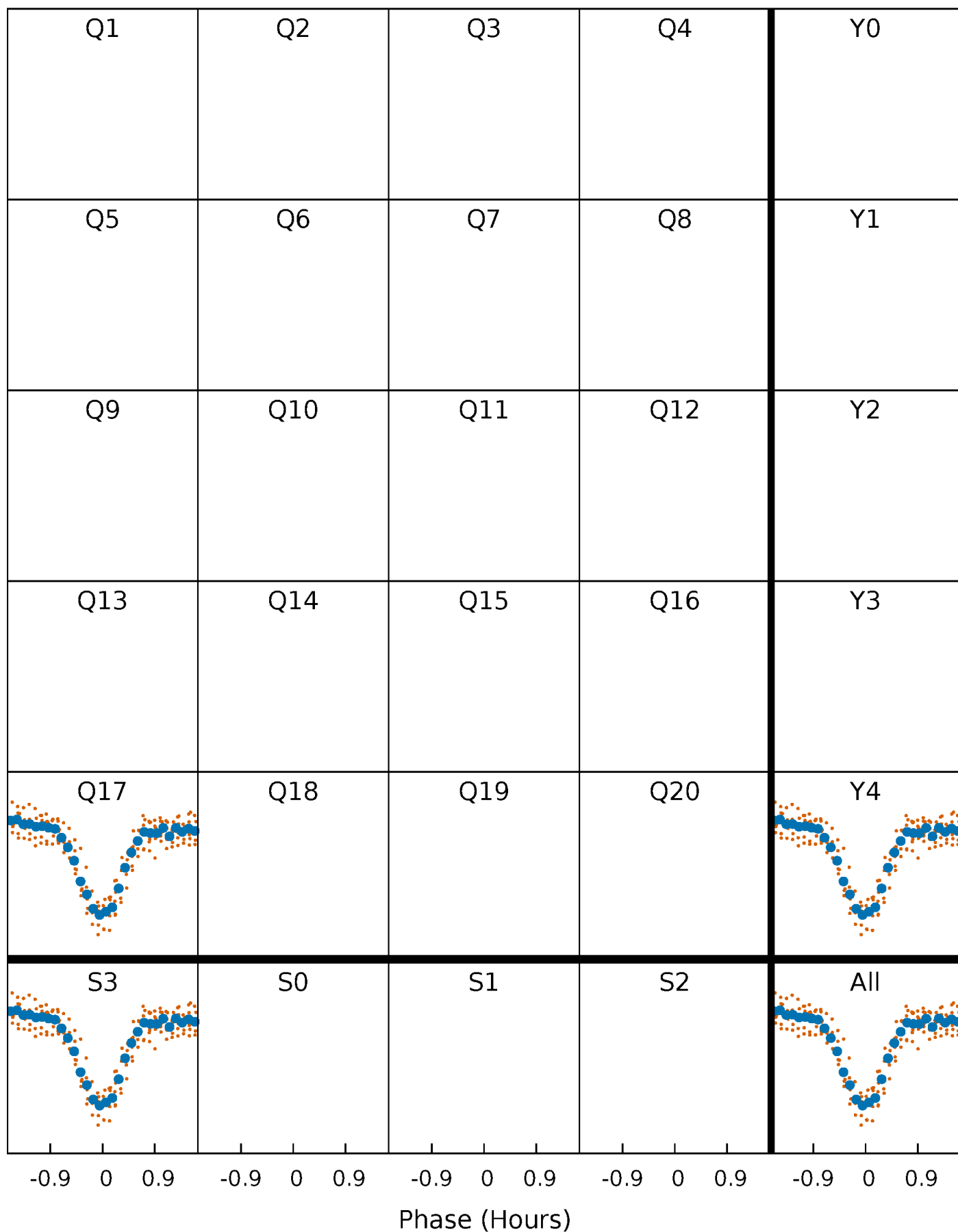


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



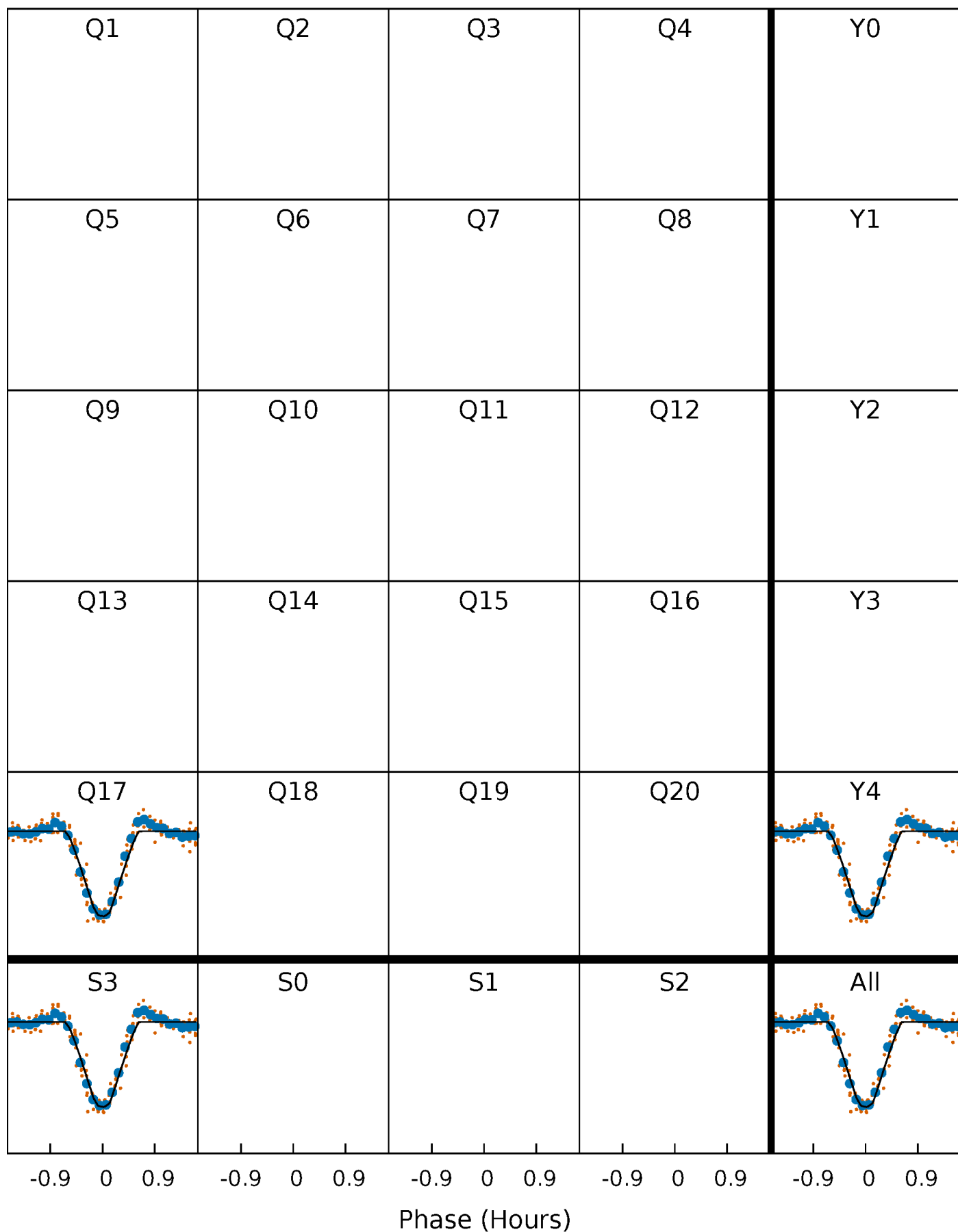
PDC Quarter-Phased Transit Curves

TCE 010468514-01 P= 0.850031 Days $T_0=131.766656$ (BKJD)



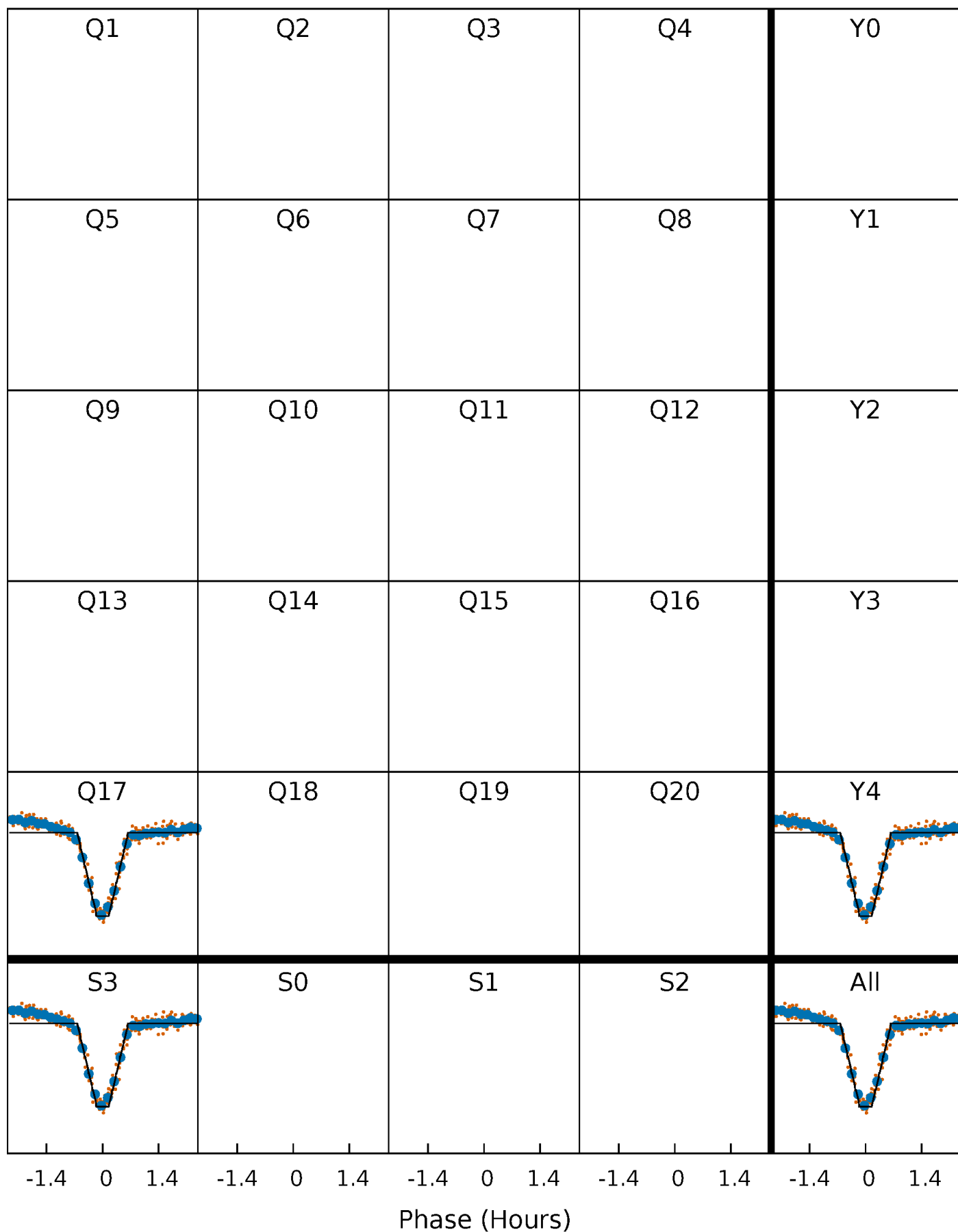
DV Quarter-Phased Transit Curves

TCE 010468514-01 P= 0.850031 Days $T_0=131.766656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

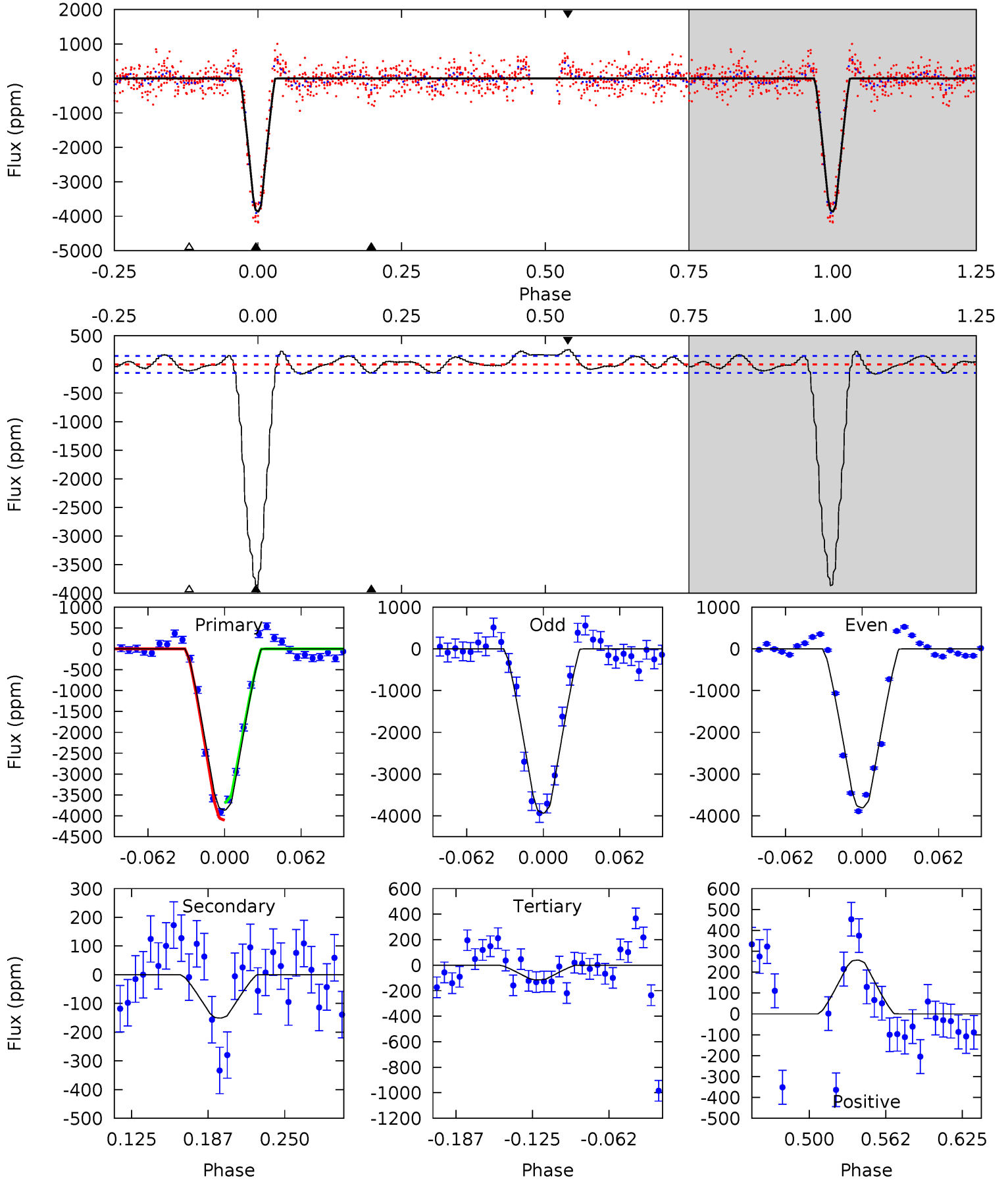
TCE 010468514-01 P= 0.850024 Days $T_0=131.777930$ (BKJD)



DV Model-Shift Uniqueness Test

010468514-01, P = 0.850031 Days, E = 131.766656 Days

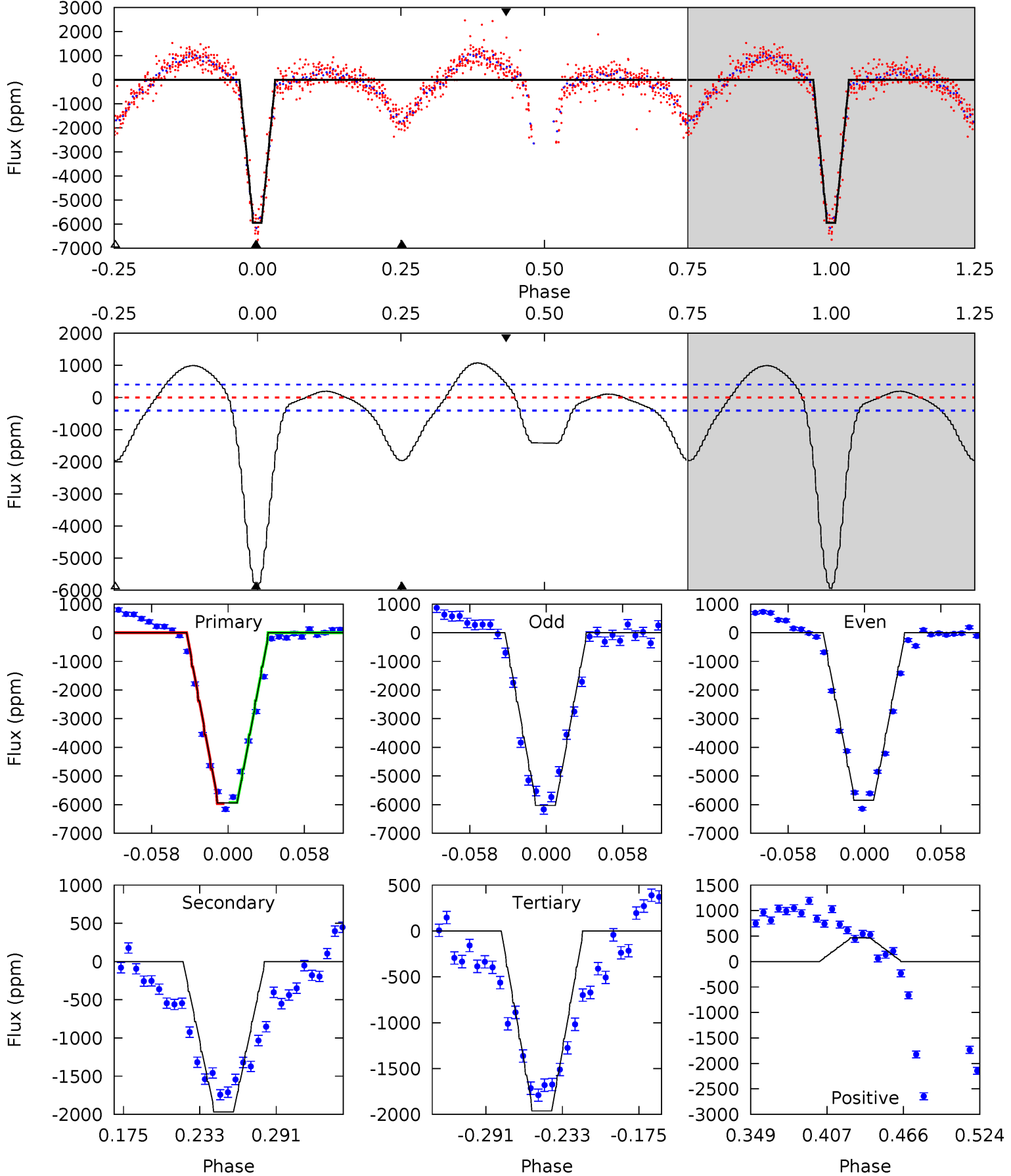
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
122.6	4.79	3.65	8.17	4.66	1.86	2.98	118.9	114.4	1.13	-3.39	2.02	1.00	0.06	6.93



Alt Model-Shift Uniqueness Test

010468514-01, P = 0.850024 Days, E = 131.777930 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.8	22.8	22.7	5.39	4.68	1.89	8.59	46.1	63.4	0.06	17.4	1.06	0.99	0.15	0.21



Stellar Parameters For KIC 010468514

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5164^{+102}_{-102}	$3.949^{+0.604}_{-0.325}$	$-0.020^{+0.300}_{-0.250}$	$1.676^{+1.025}_{-0.839}$	$0.910^{+0.172}_{-0.125}$	$0.272^{+2.238}_{-0.196}$
	+2%/-2%	+15%/-8%	+1500%/-1250%	+61%/-50%	+19%/-14%	+822%/-72%
Source	KIC0	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 010468514-01 / KOI 7331.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-151 ± 32	$10.53^{+4.03}_{-3.28}$	3132^{+443}_{-458}	-2634^{+5294}_{-512}	$0.212^{+0.237}_{-0.100}$
Alt.	-1967 ± 86	$13.82^{+5.37}_{-4.12}$	3099^{+498}_{-445}	3964^{+299}_{-277}	$1.676^{+1.810}_{-0.810}$

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

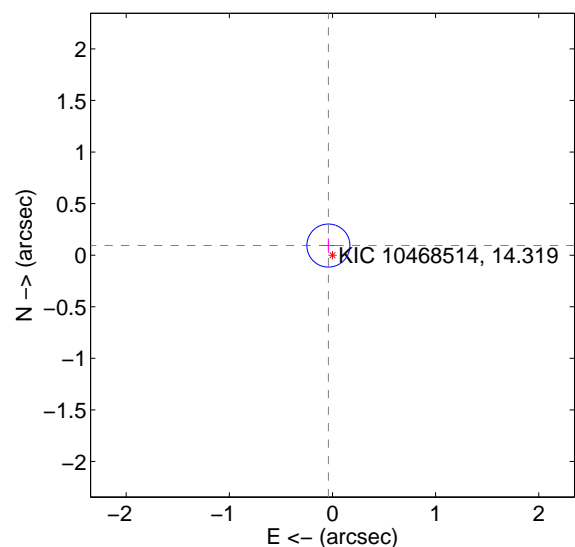
Supplemental centroid analysis for 010468514-01. Kepler magnitude: 14.32. Transit SNR 69.16

There are 1 quarters with good PRF difference image offsets

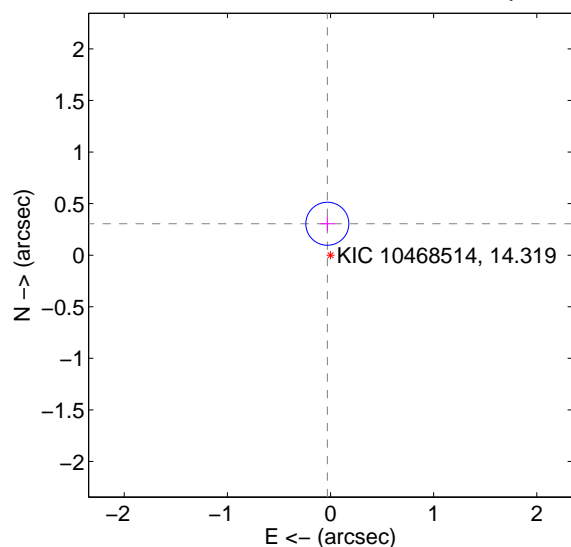
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.070	1.46	0.039 ± 0.070	0.093 ± 0.069
PRF-fit source offset from KIC position	0.306 ± 0.069	4.41	0.031 ± 0.070	0.305 ± 0.069
photometric centroid source offset	0.34 ± 0.54	0.63	0.16 ± 1.10	0.30 ± 0.21

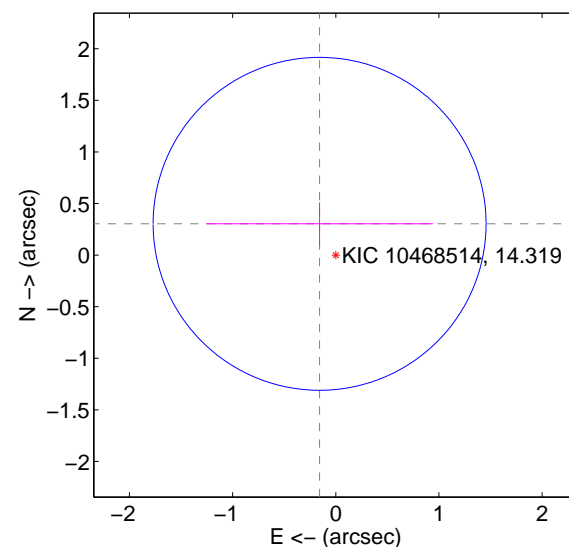
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

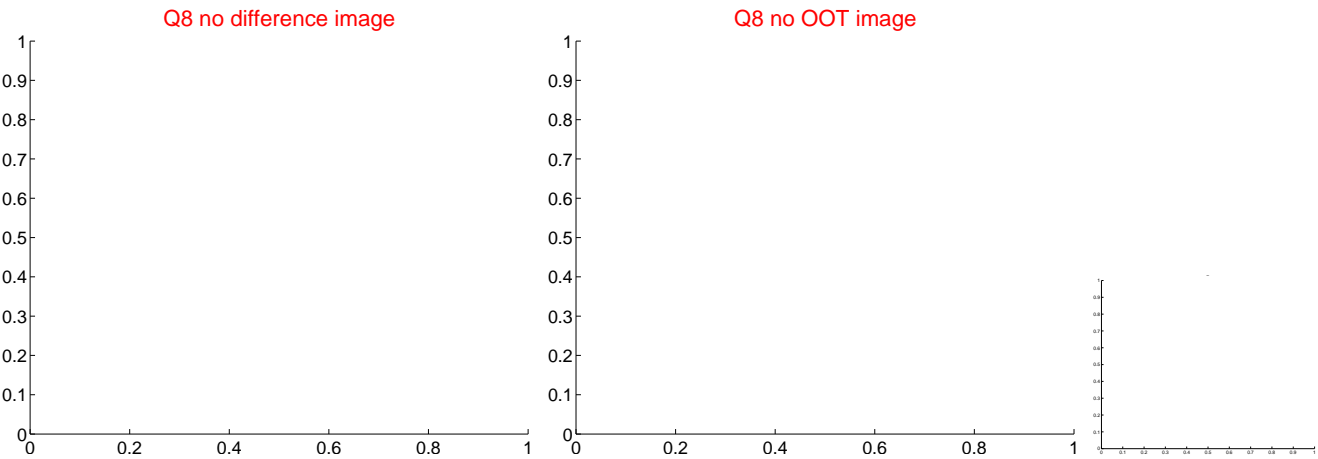
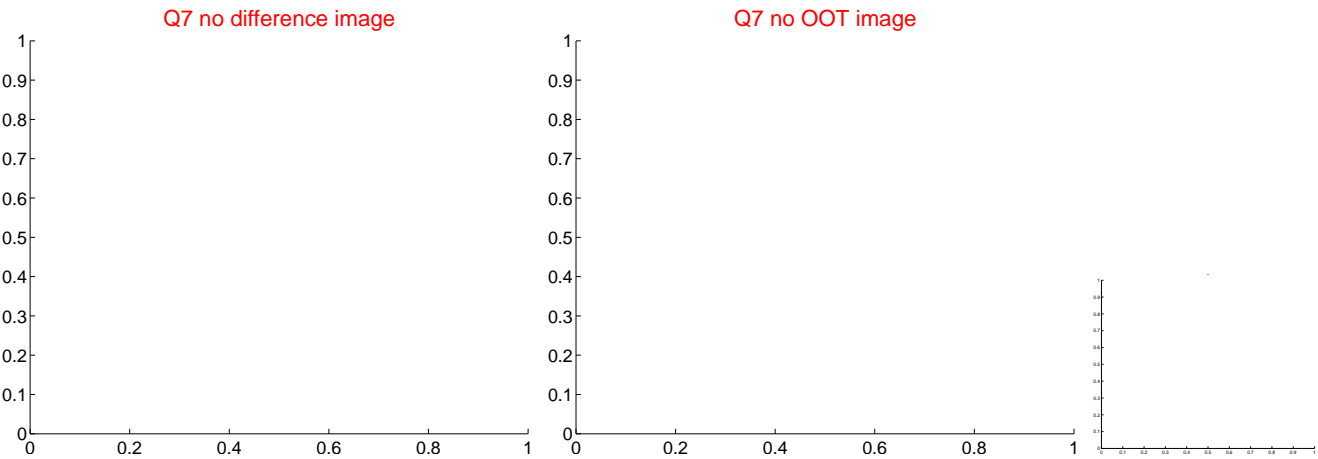
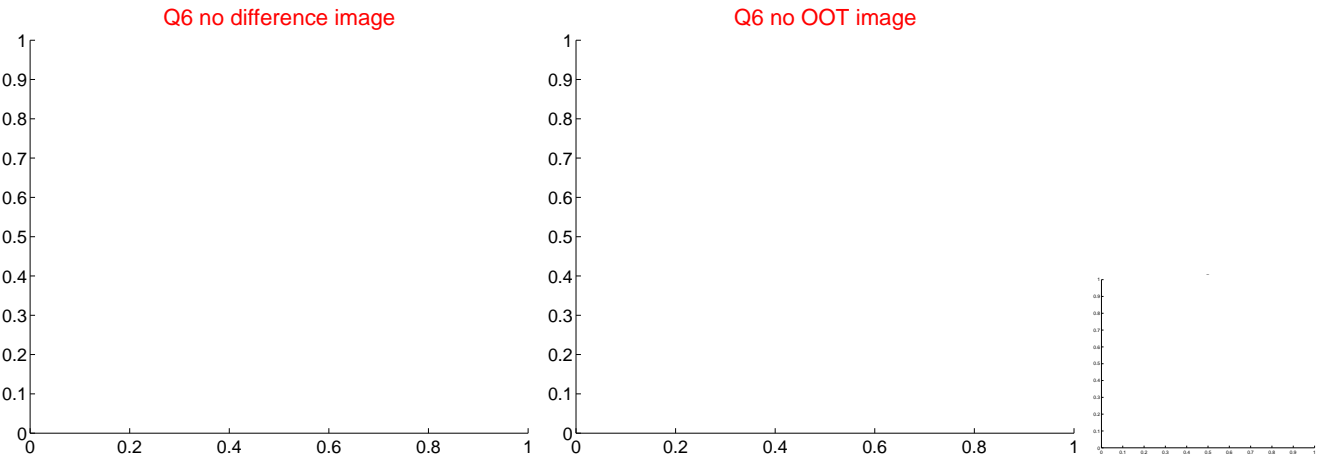
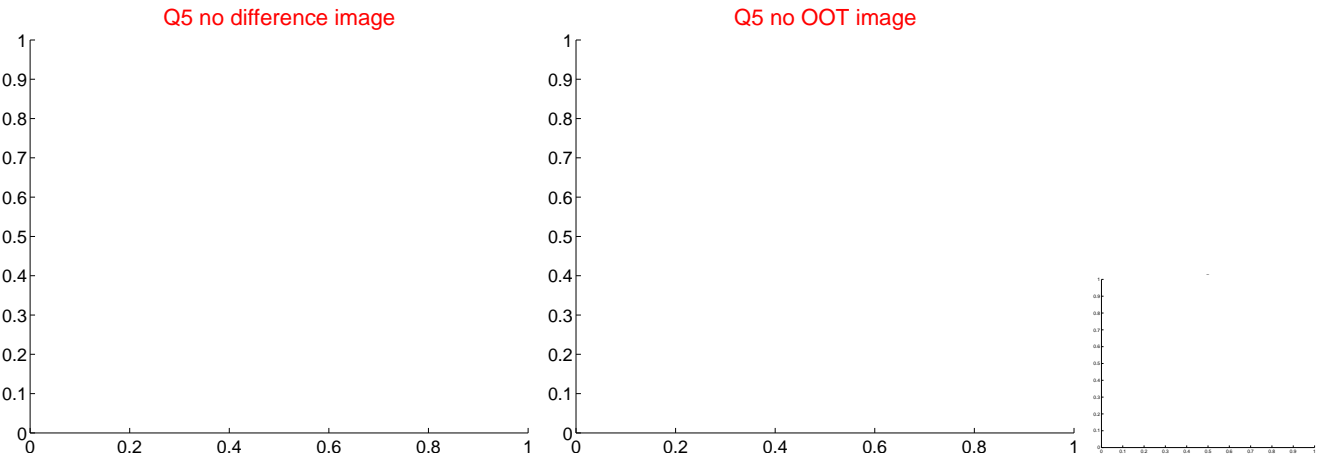


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



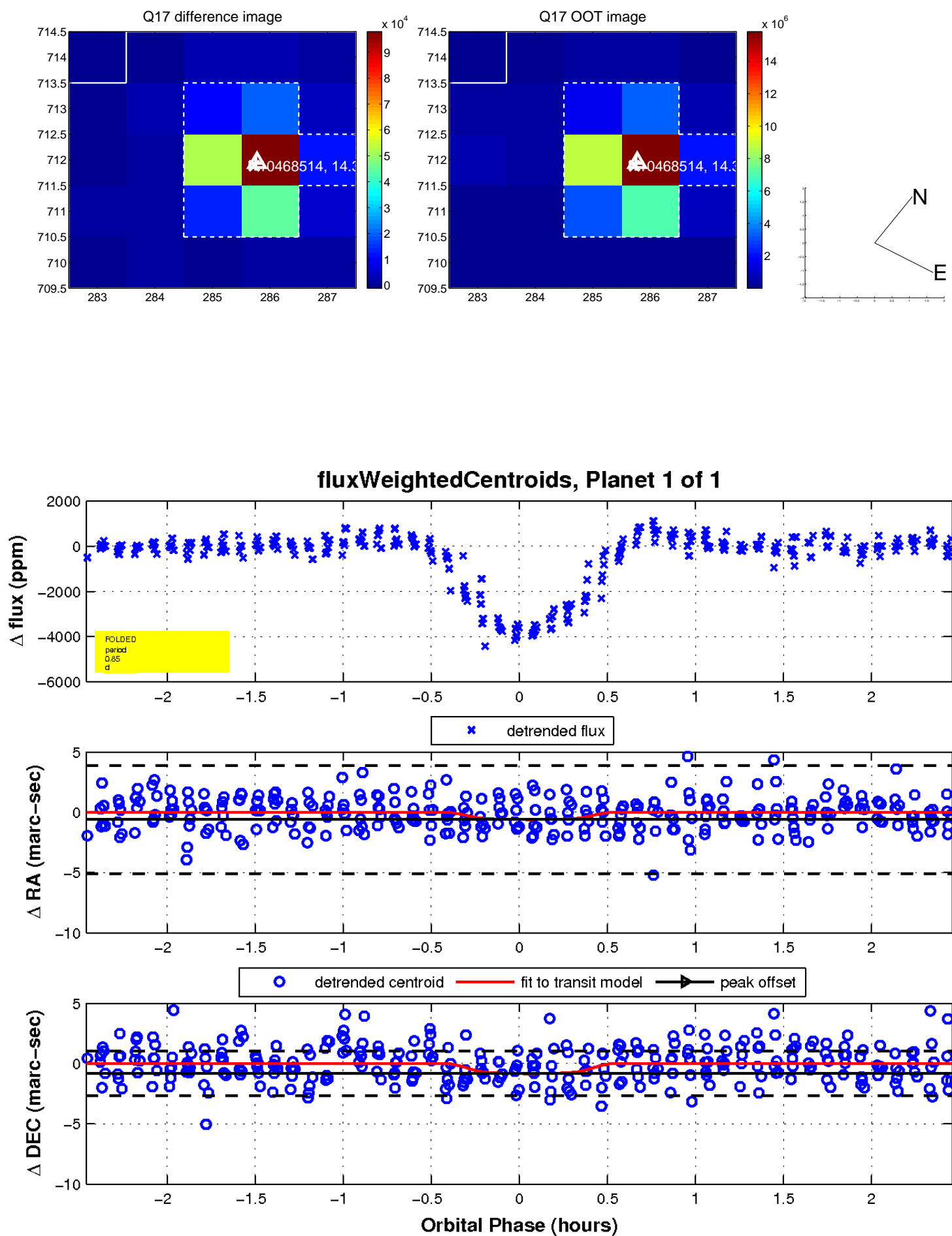
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

