

KIC 007204991

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})
007204991-01	OBS	No	368.495934	171.487487	513.2	21.532	7.4	8.9	0.82	5693	2.28	0.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007204991-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

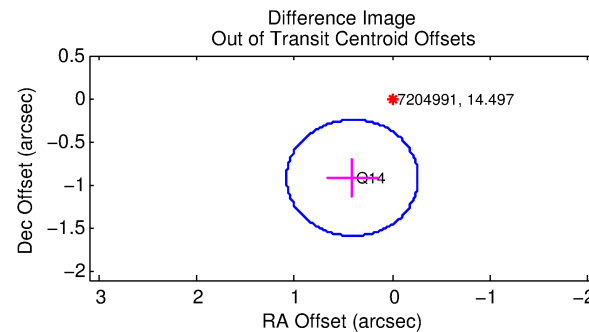
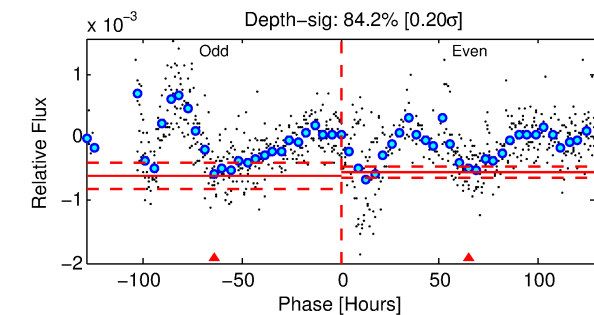
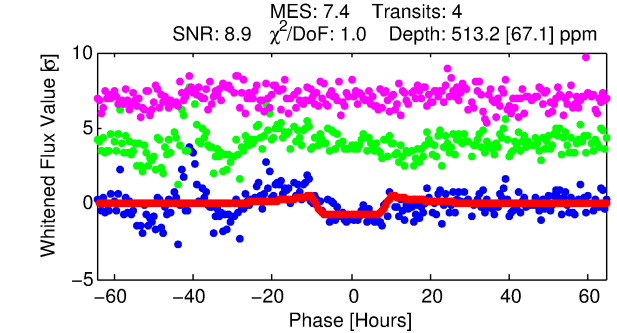
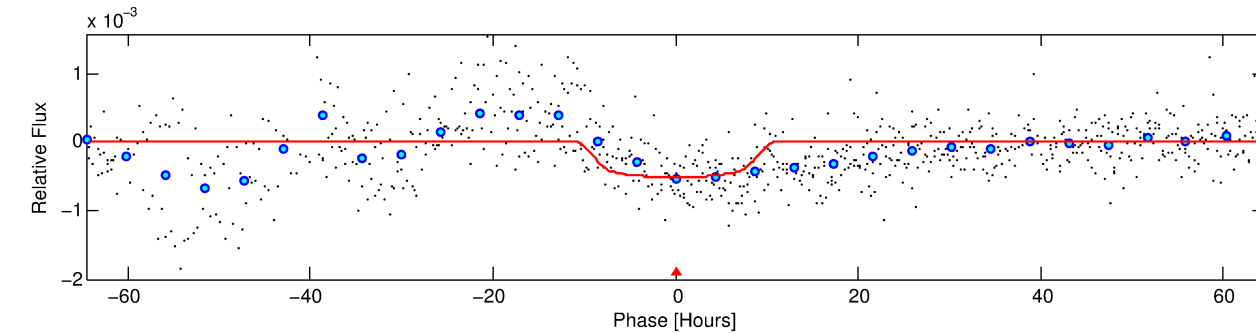
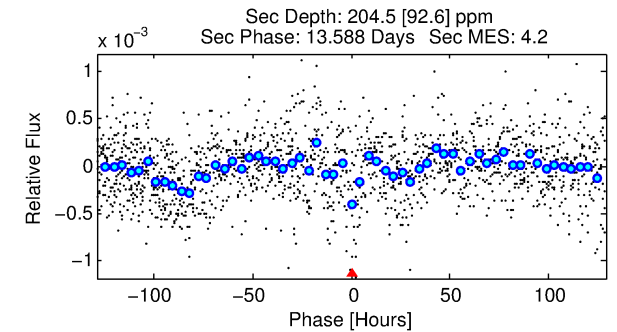
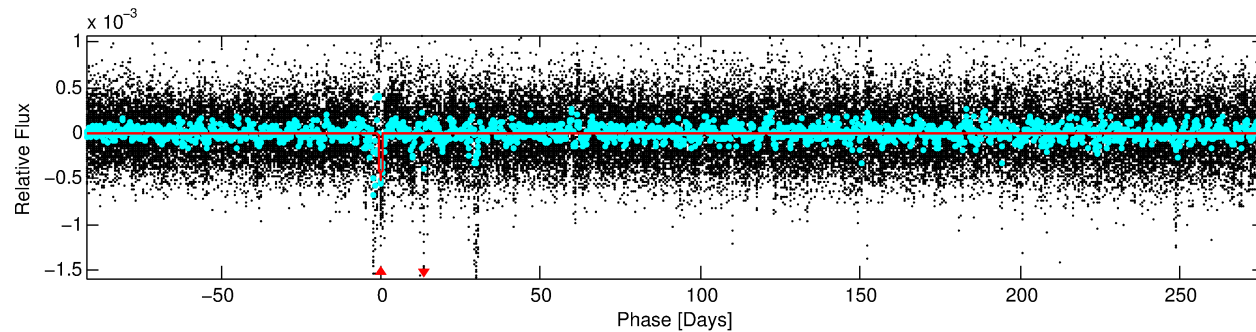
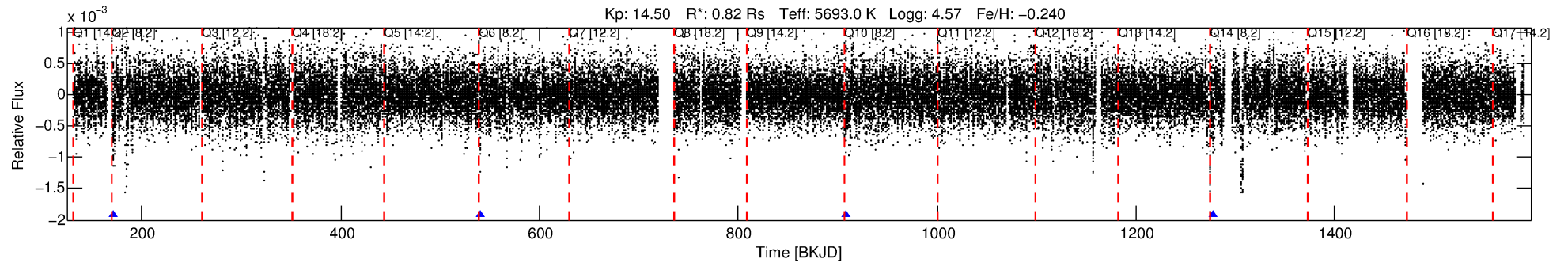
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007204991-01

No Significant Match Found

DV One-Page Summary

KIC: 7204991 Candidate: 1 of 1 Period: 368.496 d



DV Fit Results:

Period = 368.49593 [0.01591] d
Epoch = 171.4875 [0.0283] BKJD
Rp/R* = 0.0256 [0.0022]
a/R* = 56.10 [12.93]
b = 0.93 [0.03]
Seff = 0.66 [0.19]
Teff = 230 [16] K
Rp = 2.28 [0.55] Re
a = 0.9723 [0.1797] AU
Ag = 20497.08 [11330.33] [1.81 σ]
Teffp = 4257 [529] K [7.61 σ]

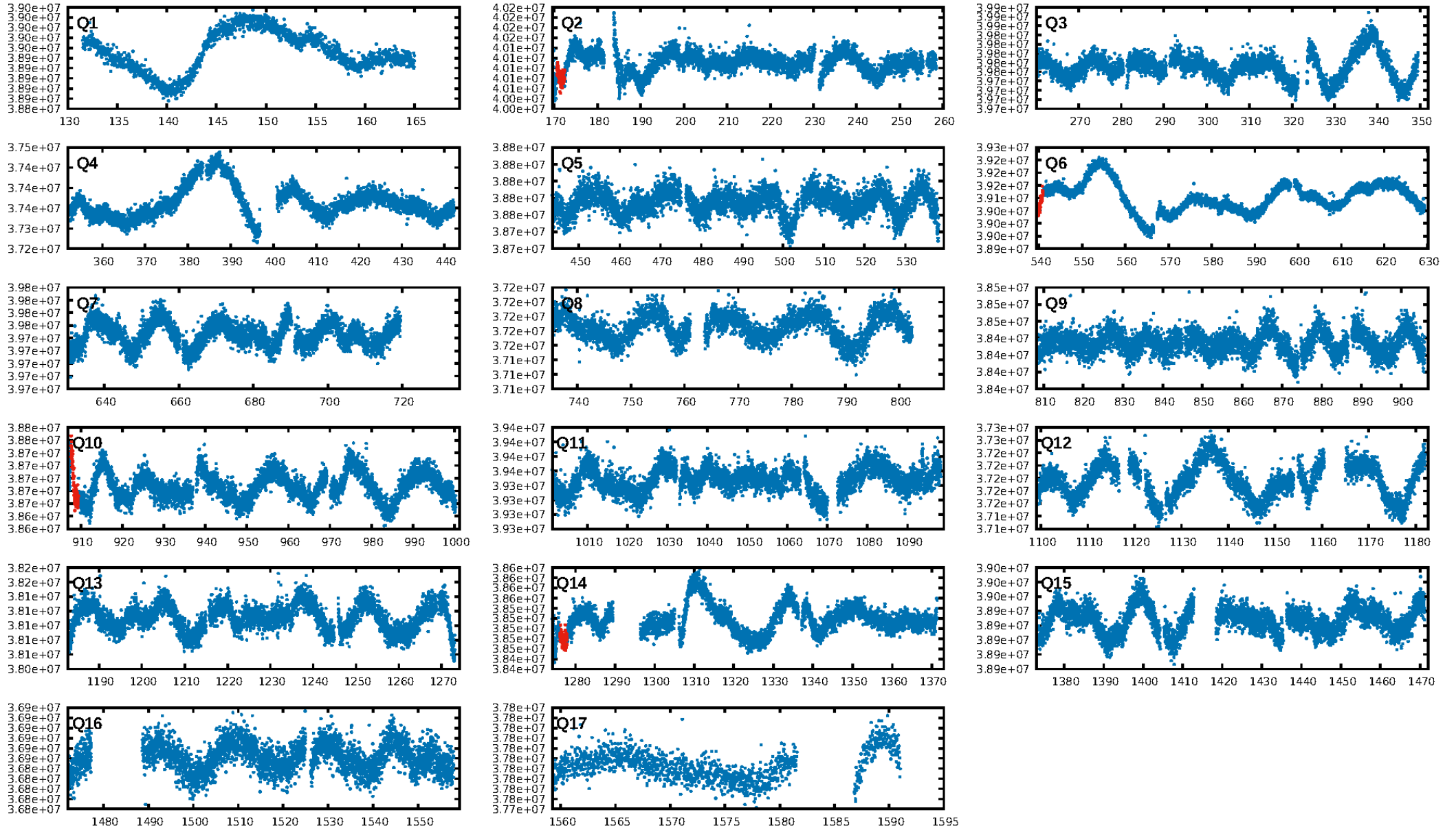
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.93e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.636
Centroid-sig: 37.3%
Centroid-so: 0.659 arcsec [0.75 σ]
OotOffset-rm: 1.005 arcsec [4.49 σ]
KicOffset-rm: 1.031 arcsec [4.53 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

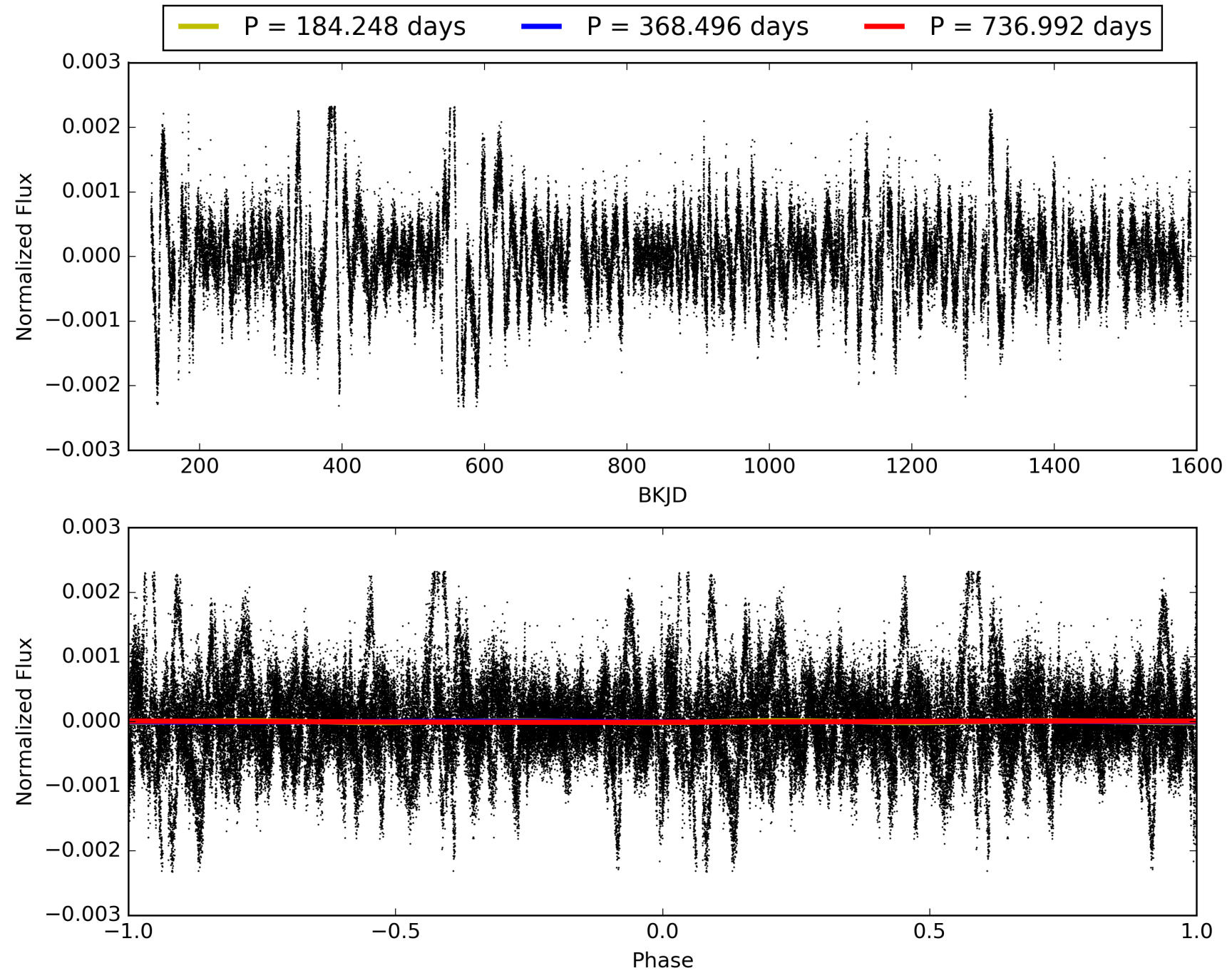
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:32:52 Z

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

TCE 007204991-01, PDC Light Curves

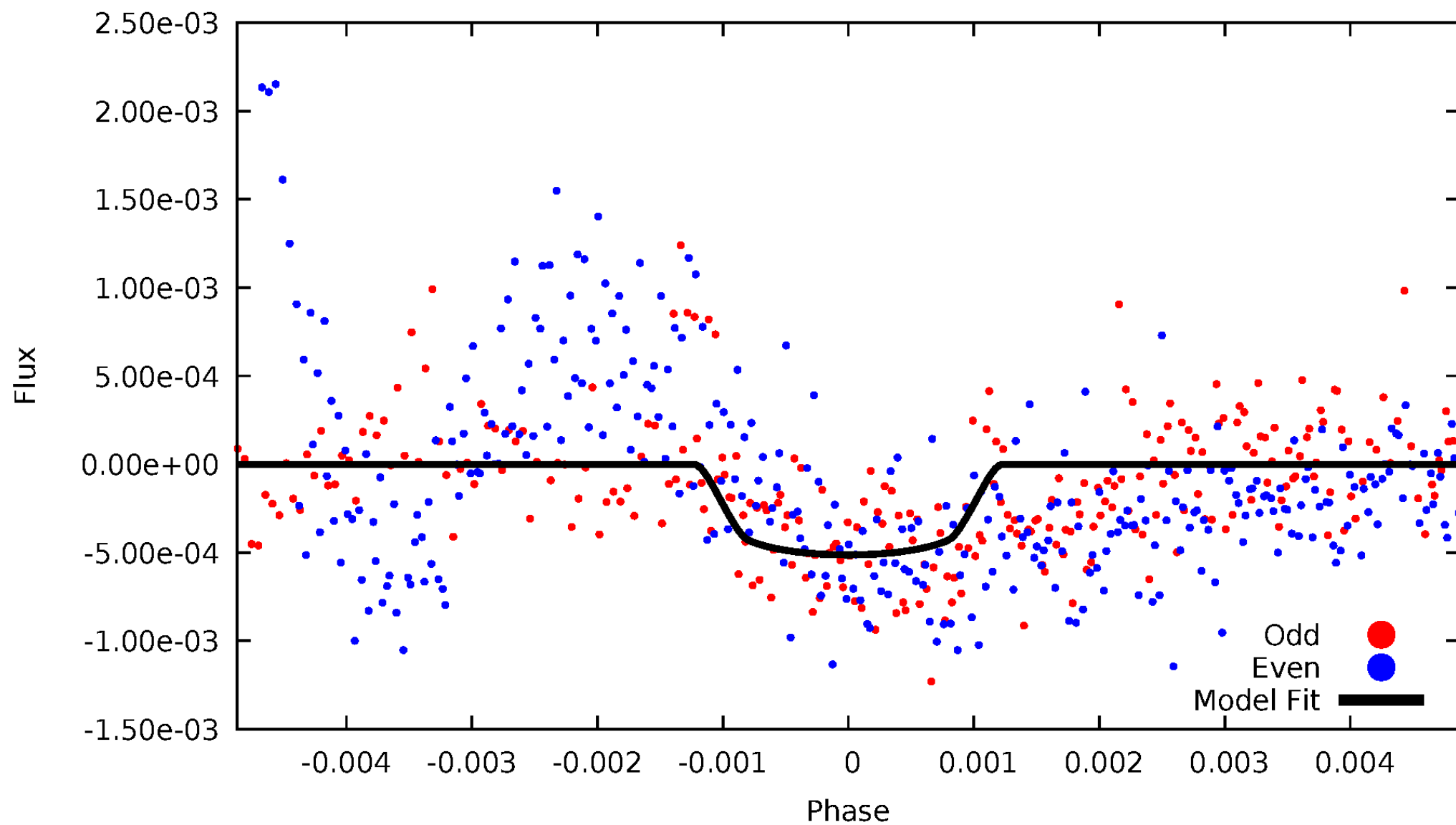


TCE 007204991-01



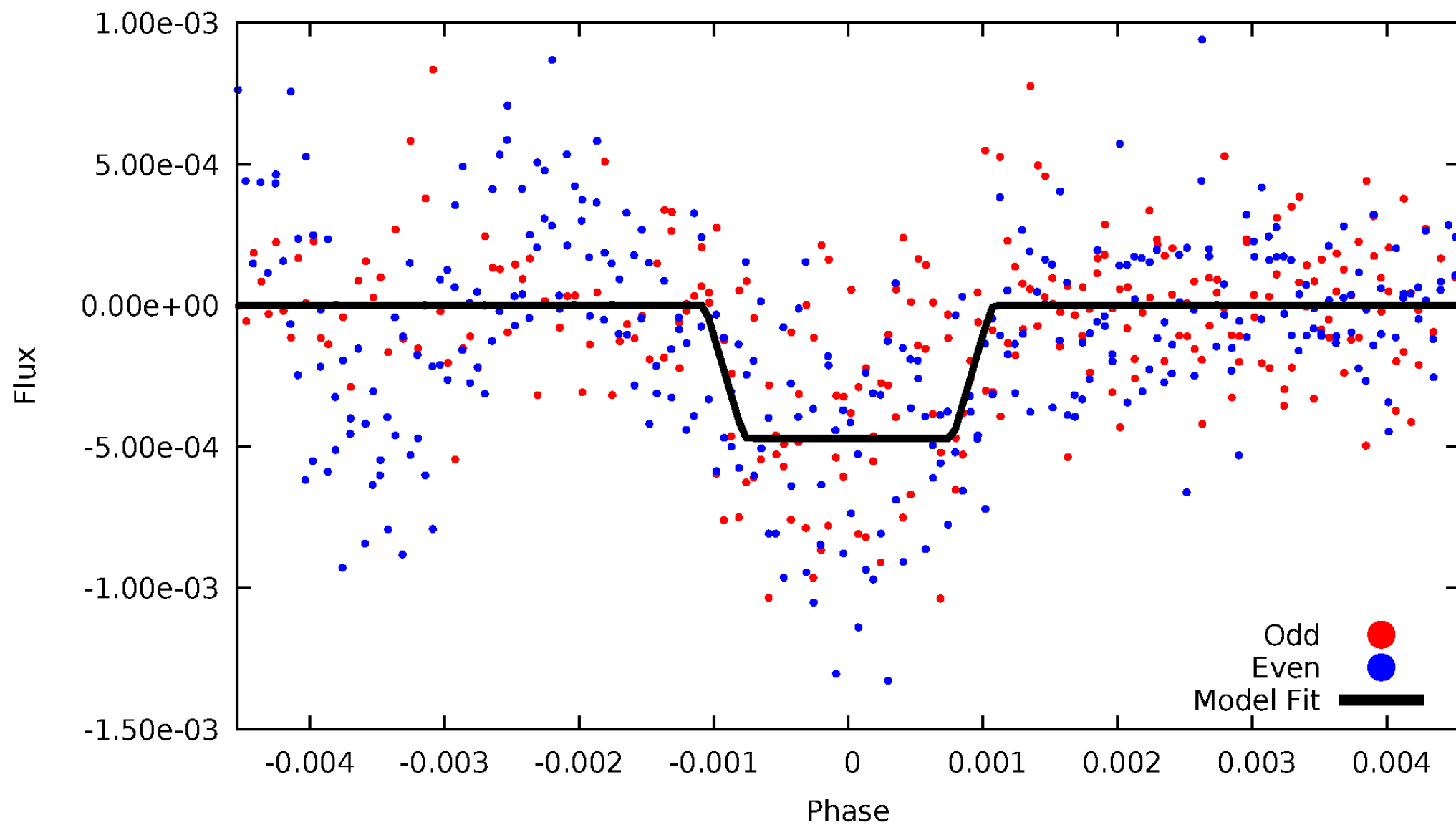
DV Odd/Even

TCE 007204991-01

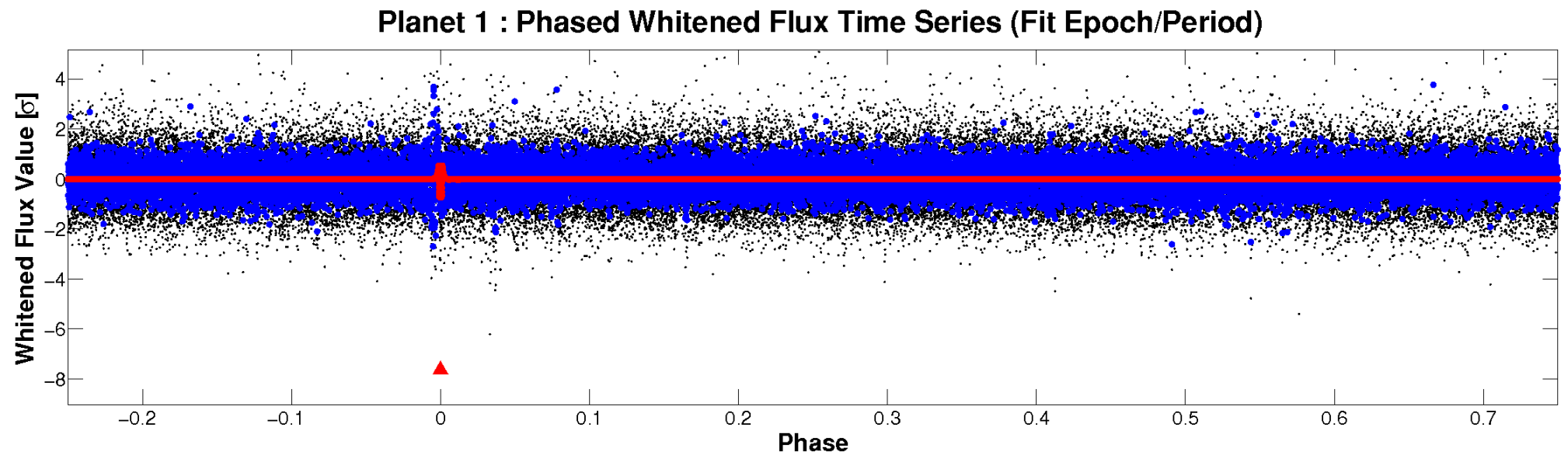
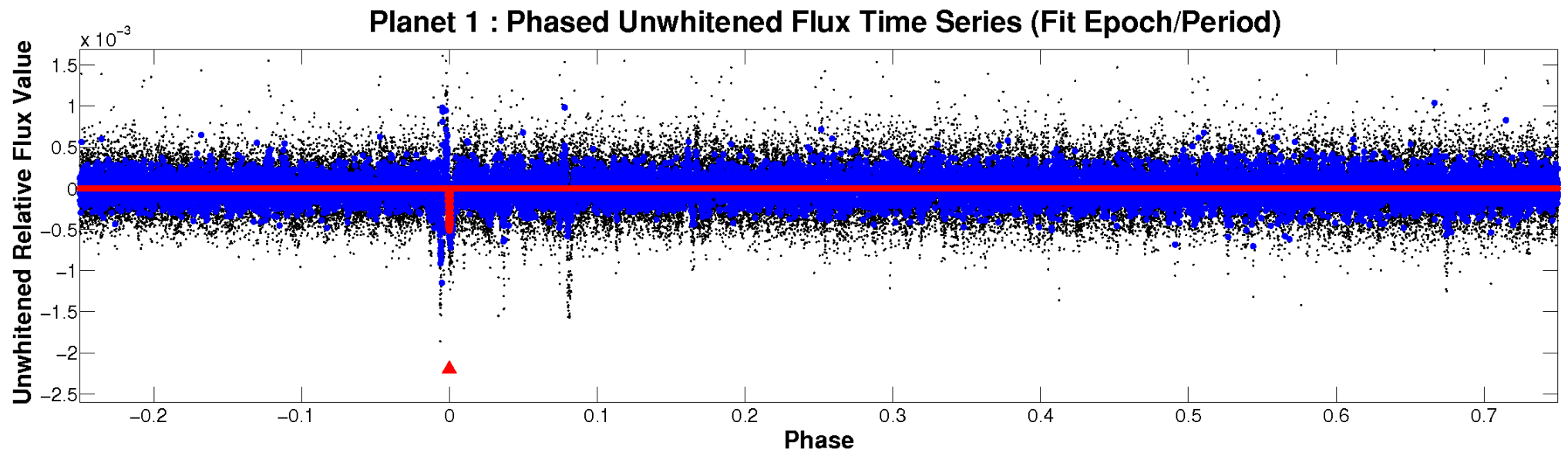


ALT Odd/Even

TCE 007204991-01

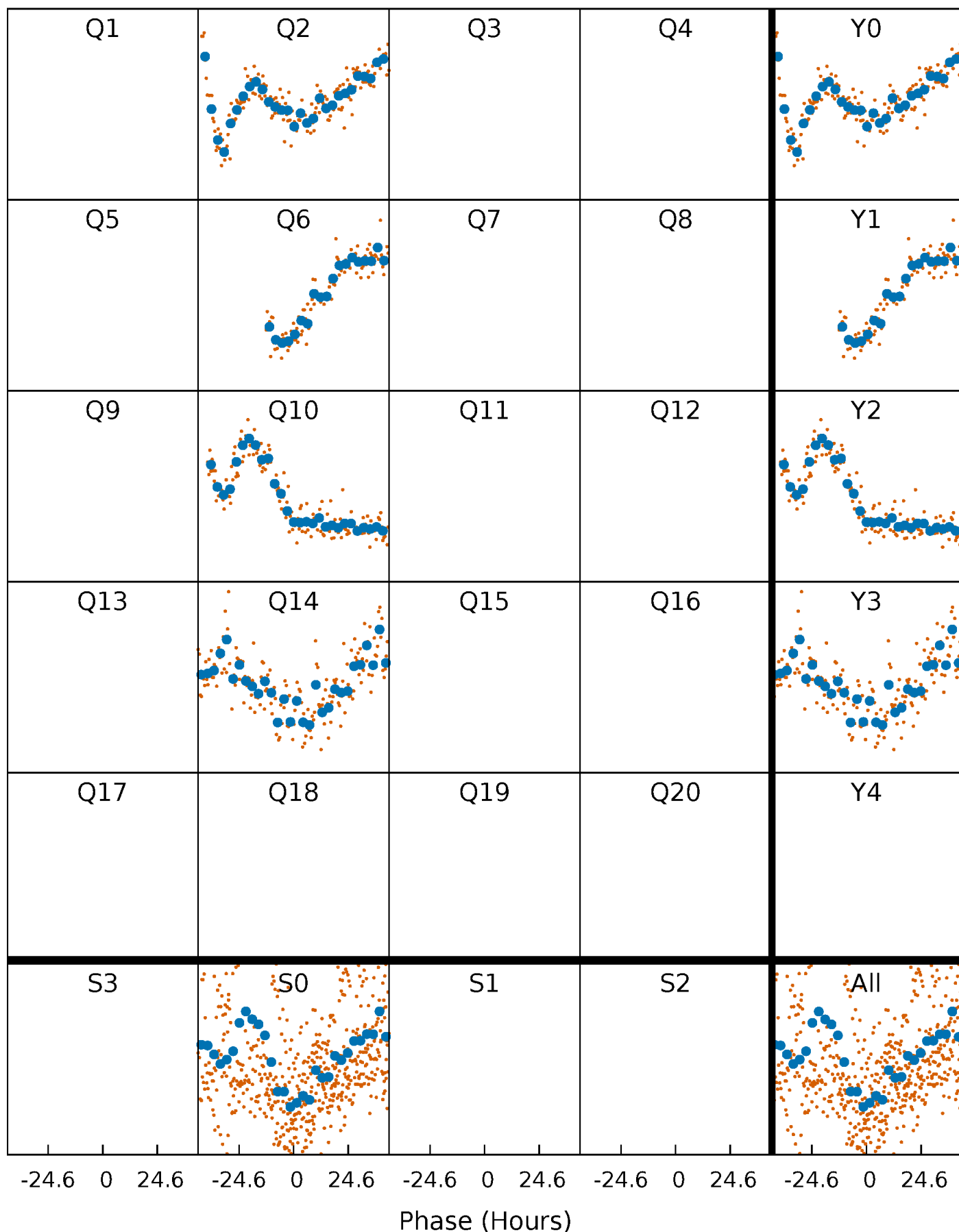


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 007204991-01 P=368.495934 Days $T_0=171.487487$ (BKJD)



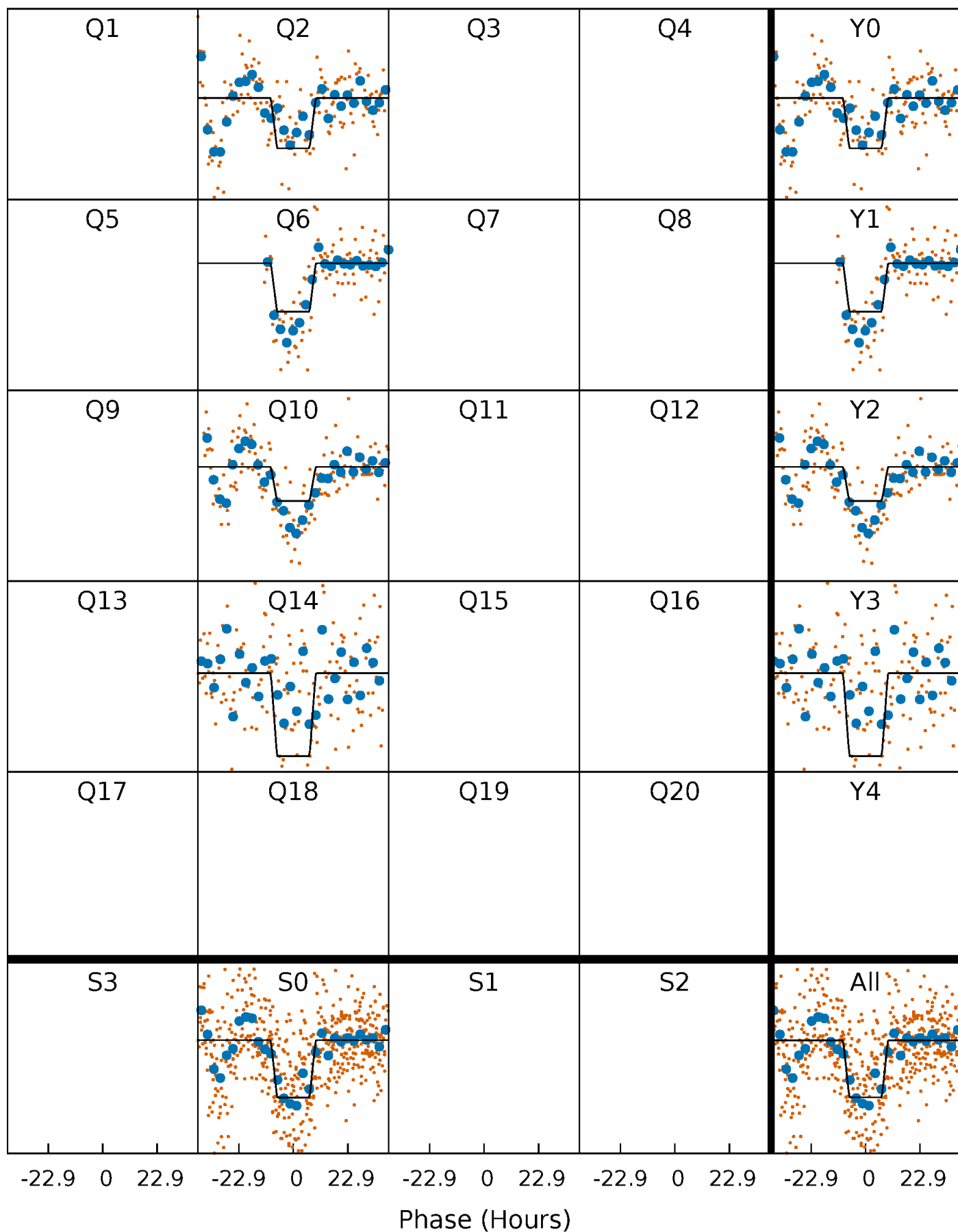
DV Quarter-Phased Transit Curves

TCE 007204991-01 P=368.495934 Days $T_0=171.487487$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

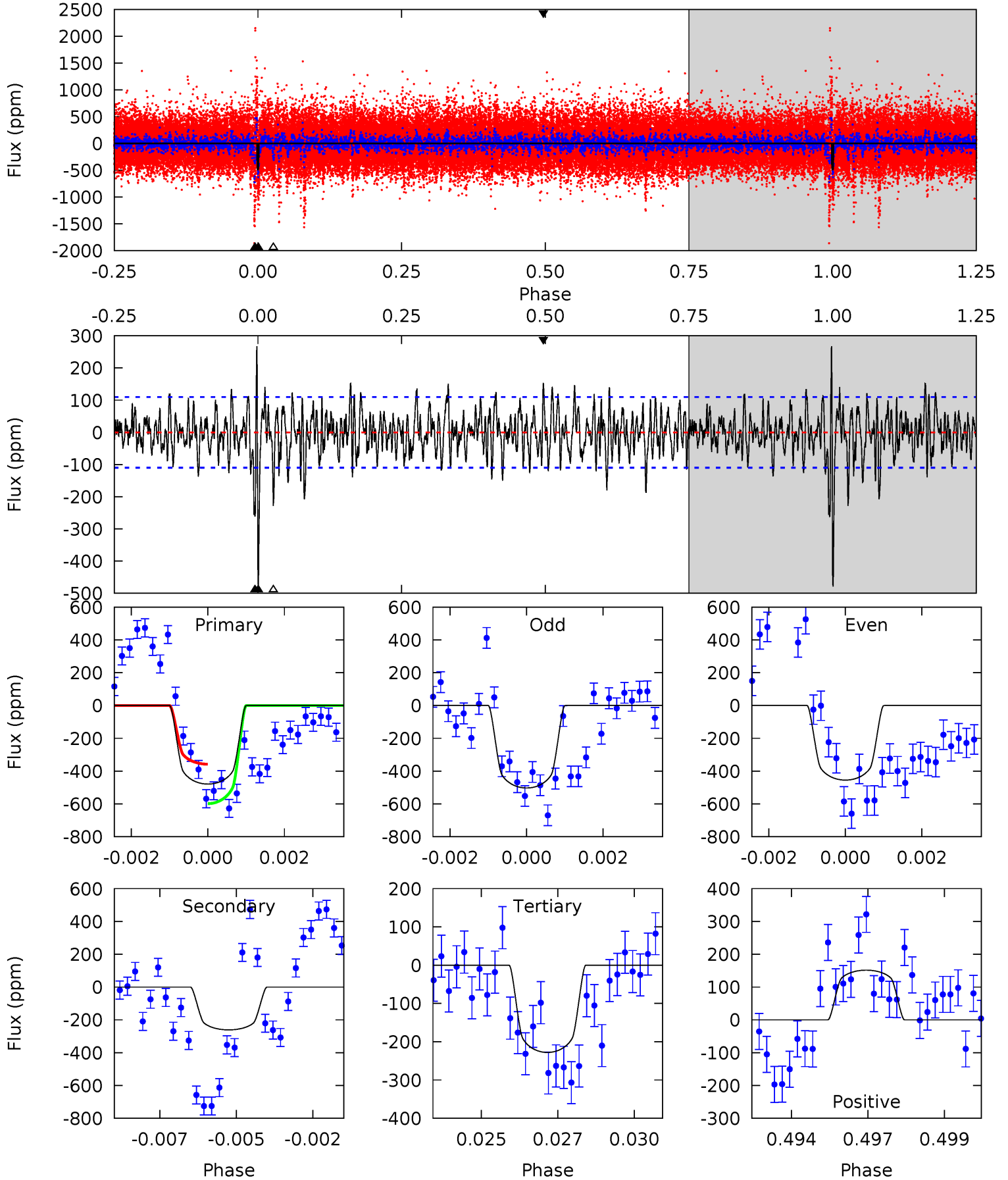
TCE 007204991-01 P=368.457954 Days $T_0=171.516694$ (BKJD)



DV Model-Shift Uniqueness Test

007204991-01, P = 368.495934 Days, E = 171.487487 Days

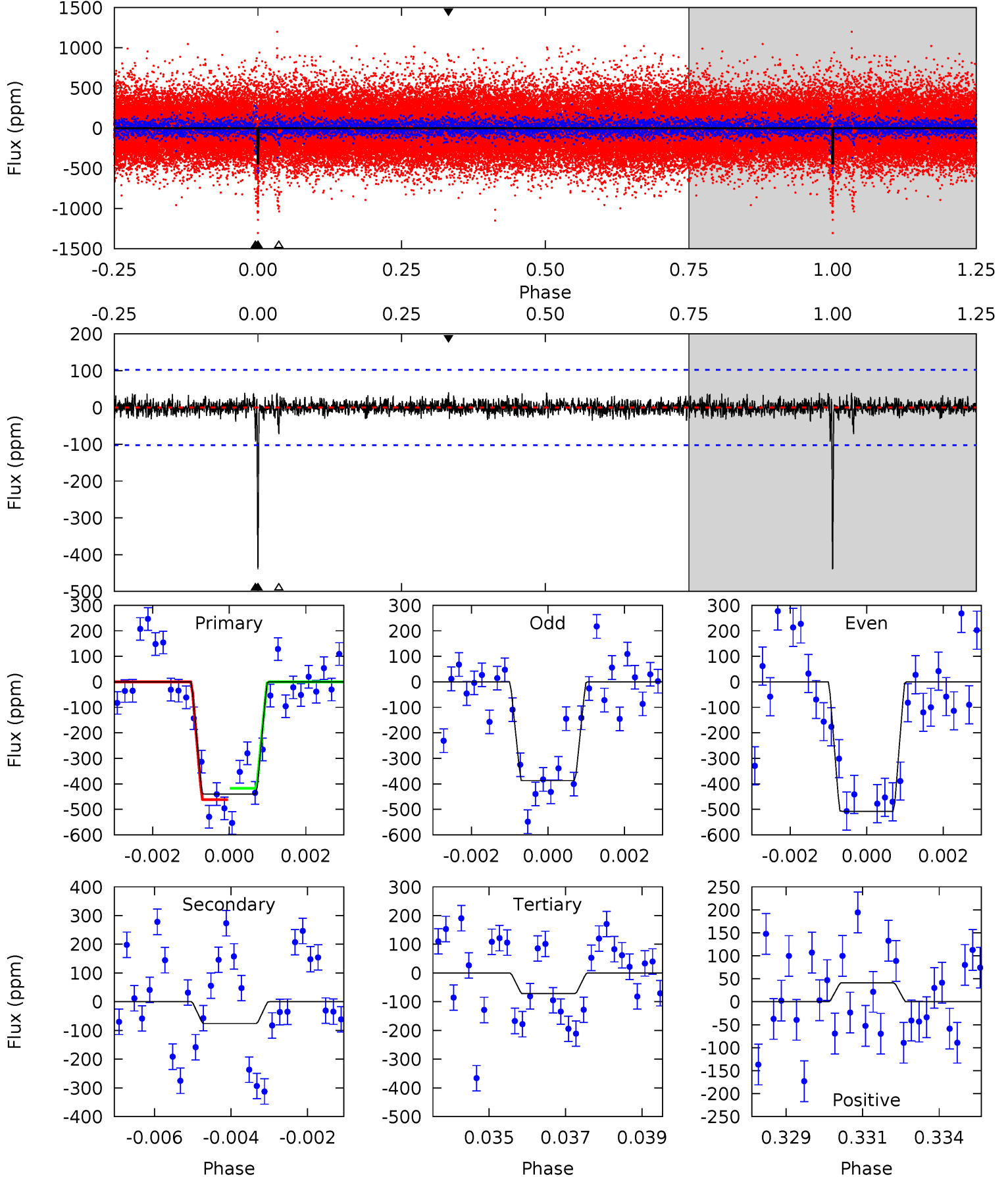
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.0	12.6	11.0	7.28	5.29	3.03	2.72	12.1	15.8	1.59	5.27	1.16	0.95	0.36	5.79



Alt Model-Shift Uniqueness Test

007204991-01, P = 368.457954 Days, E = 171.516694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	3.94	3.73	2.12	5.31	3.07	0.58	19.1	20.7	0.21	1.82	3.13	0.98	0.09	1.16



Stellar Parameters For KIC 007204991

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+135}_{-152}	$4.570^{+0.038}_{-0.143}$	$-0.240^{+0.300}_{-0.300}$	$0.816^{+0.182}_{-0.073}$	$0.911^{+0.088}_{-0.107}$	$2.357^{+0.461}_{-0.978}$
	+2%/-3%	+1%/-3%	+125%/-125%	+22%/-9%	+10%/-12%	+20%/-41%
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 007204991-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-261 ± 21	$2.35^{+0.30}_{-0.26}$	326^{+18}_{-12}	4664^{+223}_{-195}	24424^{+6044}_{-5417}
Alt.	-76 ± 19	$2.00^{+0.29}_{-0.25}$	327^{+15}_{-12}	3932^{+278}_{-228}	9663^{+4378}_{-2963}

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

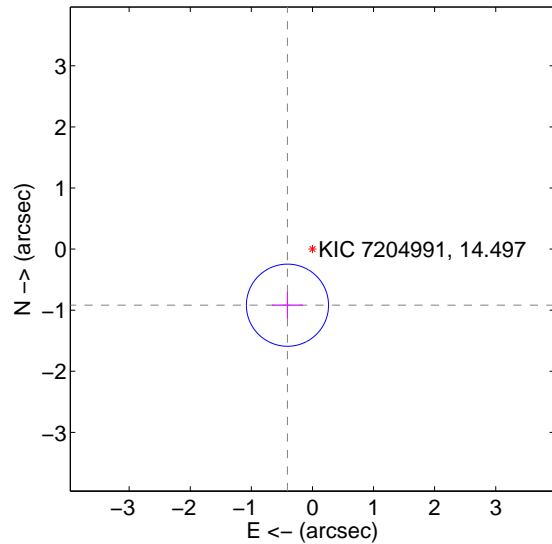
Supplemental centroid analysis for 007204991-01. Kepler magnitude: 14.50. Transit SNR 8.95

There are 1 quarters with good PRF difference image offsets

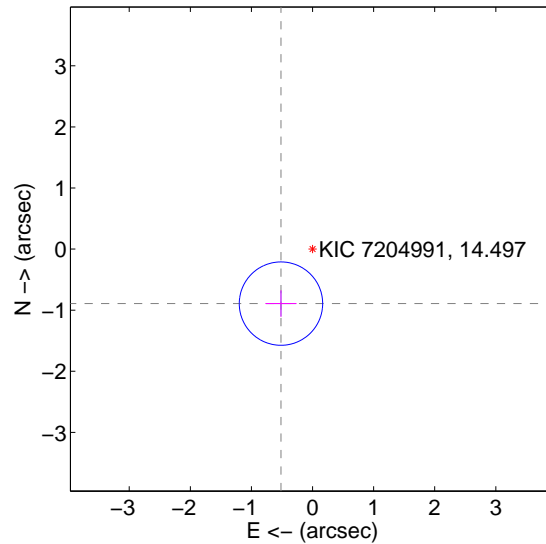
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.005 ± 0.224	4.49	0.409 ± 0.255	-0.918 ± 0.217
PRF-fit source offset from KIC position	1.031 ± 0.227	4.53	0.517 ± 0.255	-0.892 ± 0.217
photometric centroid source offset	0.66 ± 0.88	0.75	-0.35 ± 0.80	0.56 ± 0.91

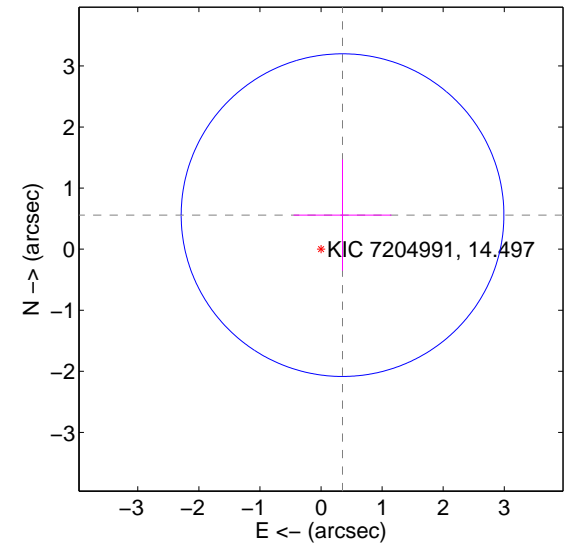
offset from difference PRF-fit to OOT PRF-fit



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.



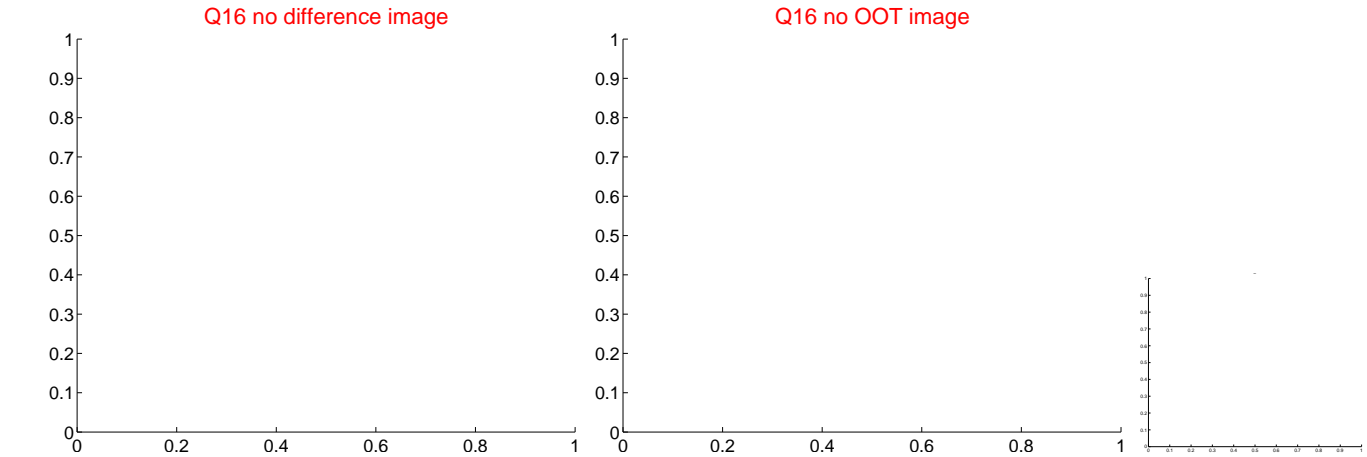
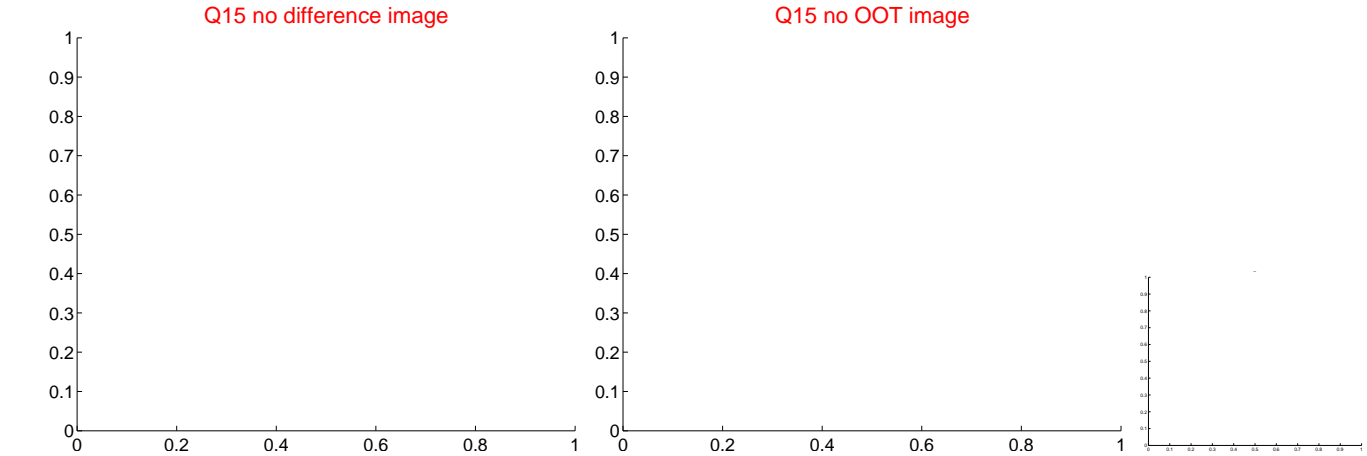
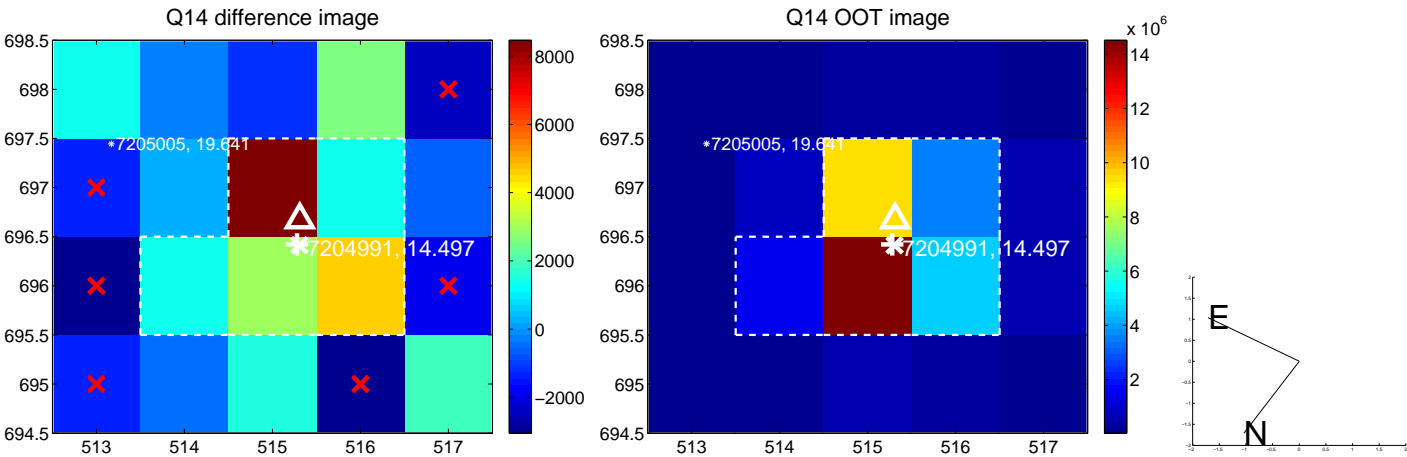
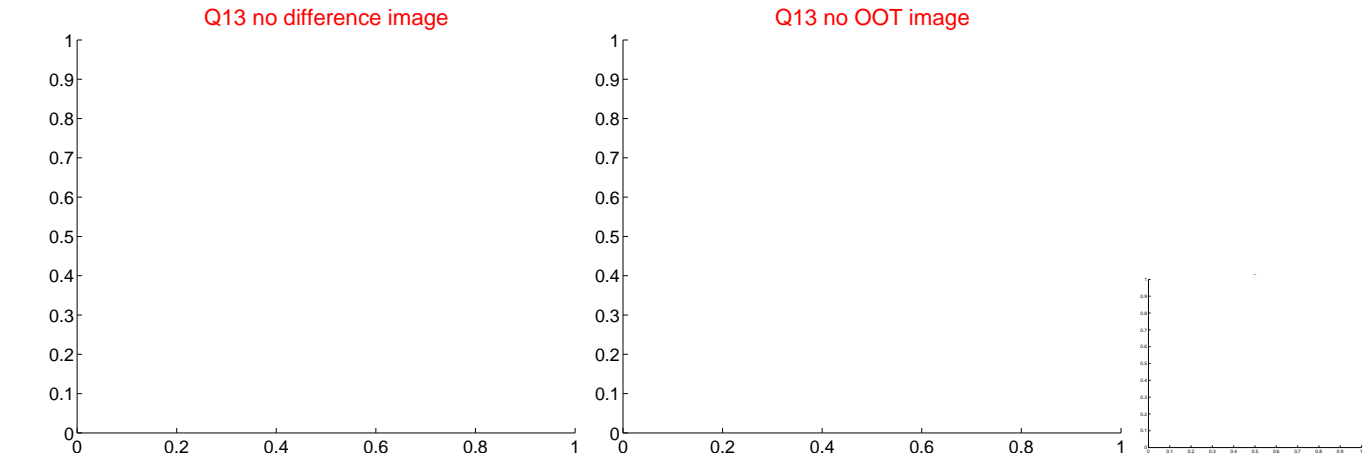
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



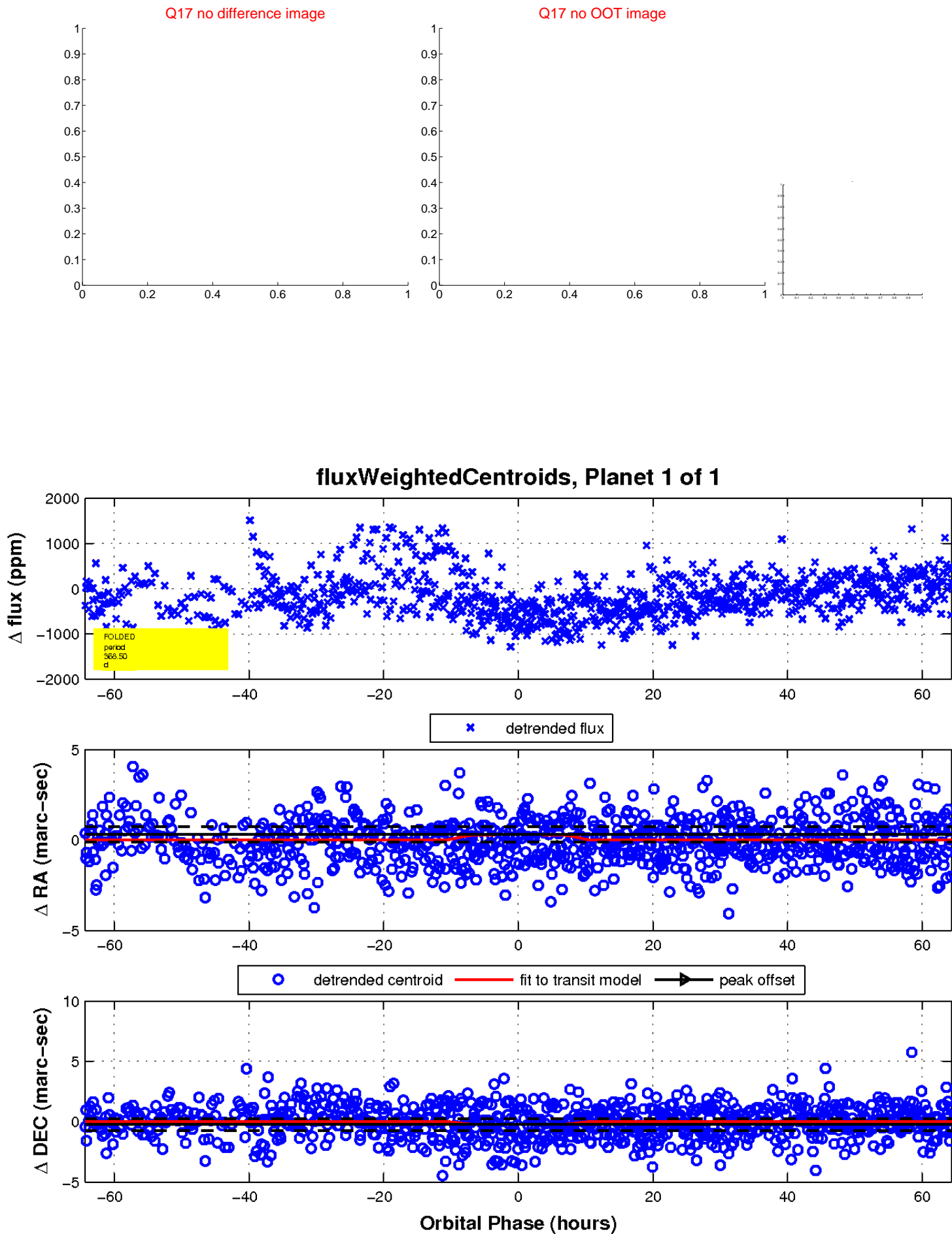
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

