

KIC 010006284

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})
010006284-01	OBS	No	460.129933	364.391134	532.5	17.733	7.1	7.7	0.76	5366	1.79	0.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010006284-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—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.

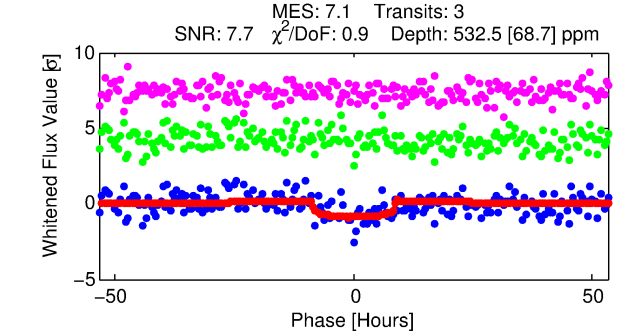
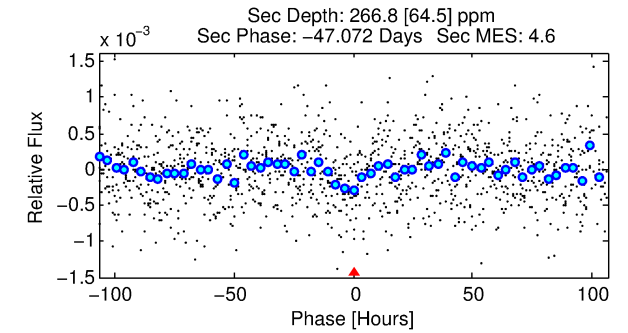
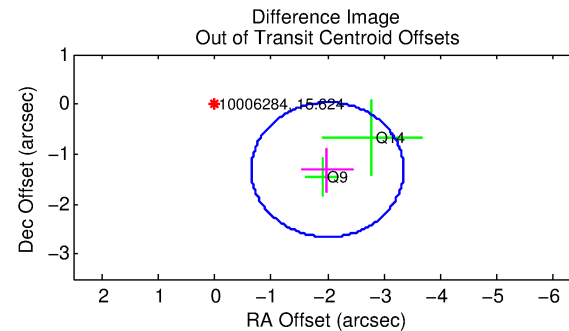
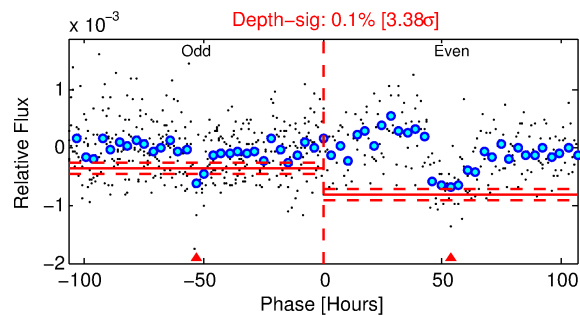
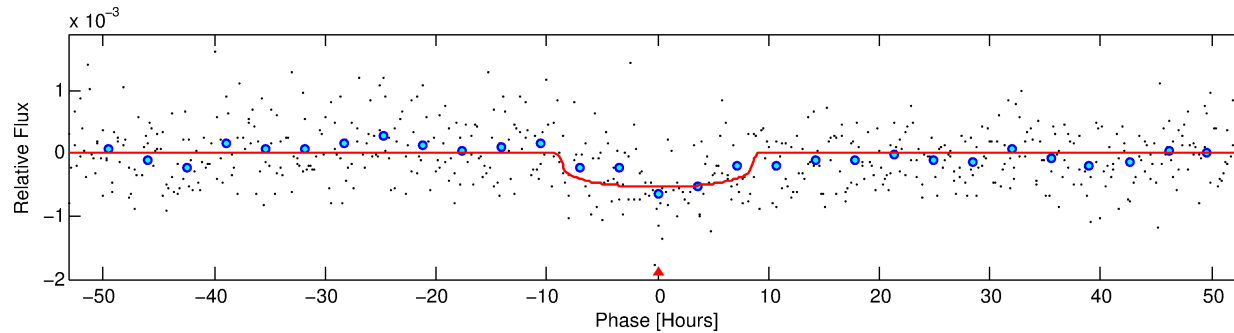
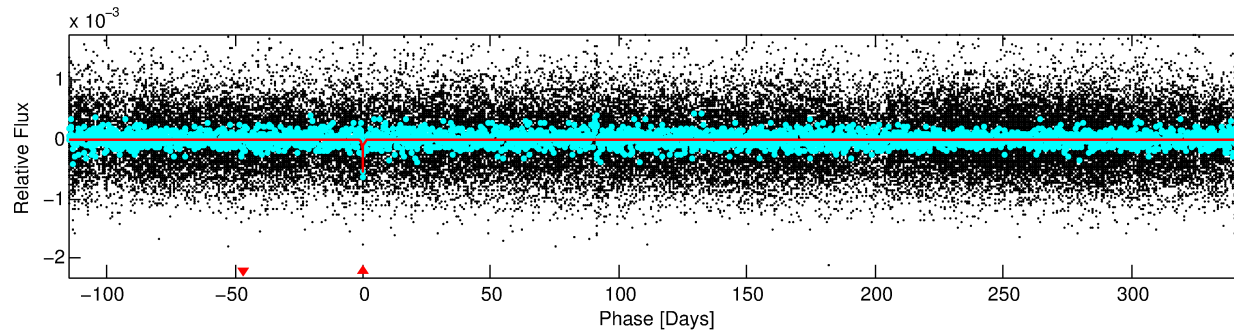
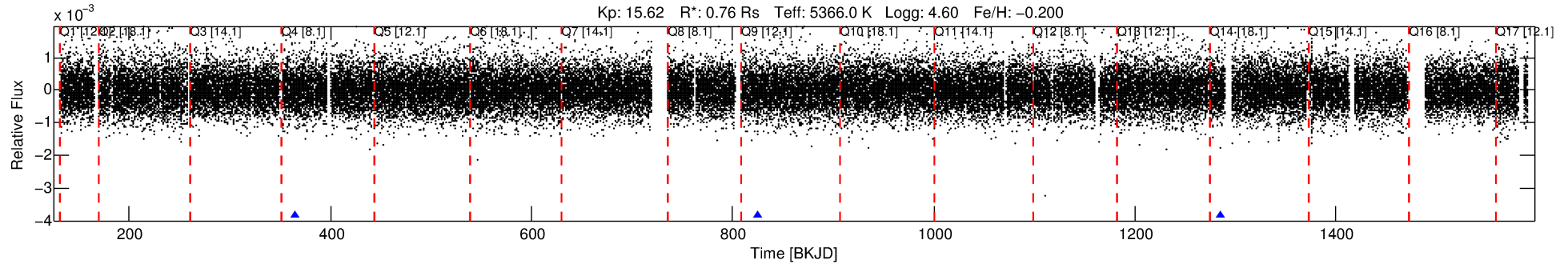
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010006284-01

No Significant Match Found

DV One-Page Summary

KIC: 10006284 Candidate: 1 of 1 Period: 460.130 d



DV Fit Results:

Period = 460.12993 [0.01974] d
Epoch = 364.3911 [0.0259] BKJD
Rp/R* = 0.0215 [0.0143]
a/R* = 174.95 [457.07]
b = 0.51 [3.77]
Seff = 0.35 [0.08]
Teq = 197 [12] K
Rp = 1.79 [1.23] Re
a = 1.1021 [0.1596] AU
Ag = 55746.53 [76169.67] [0.73 σ]
Teffp = 4673 [1584] K [2.83 σ]

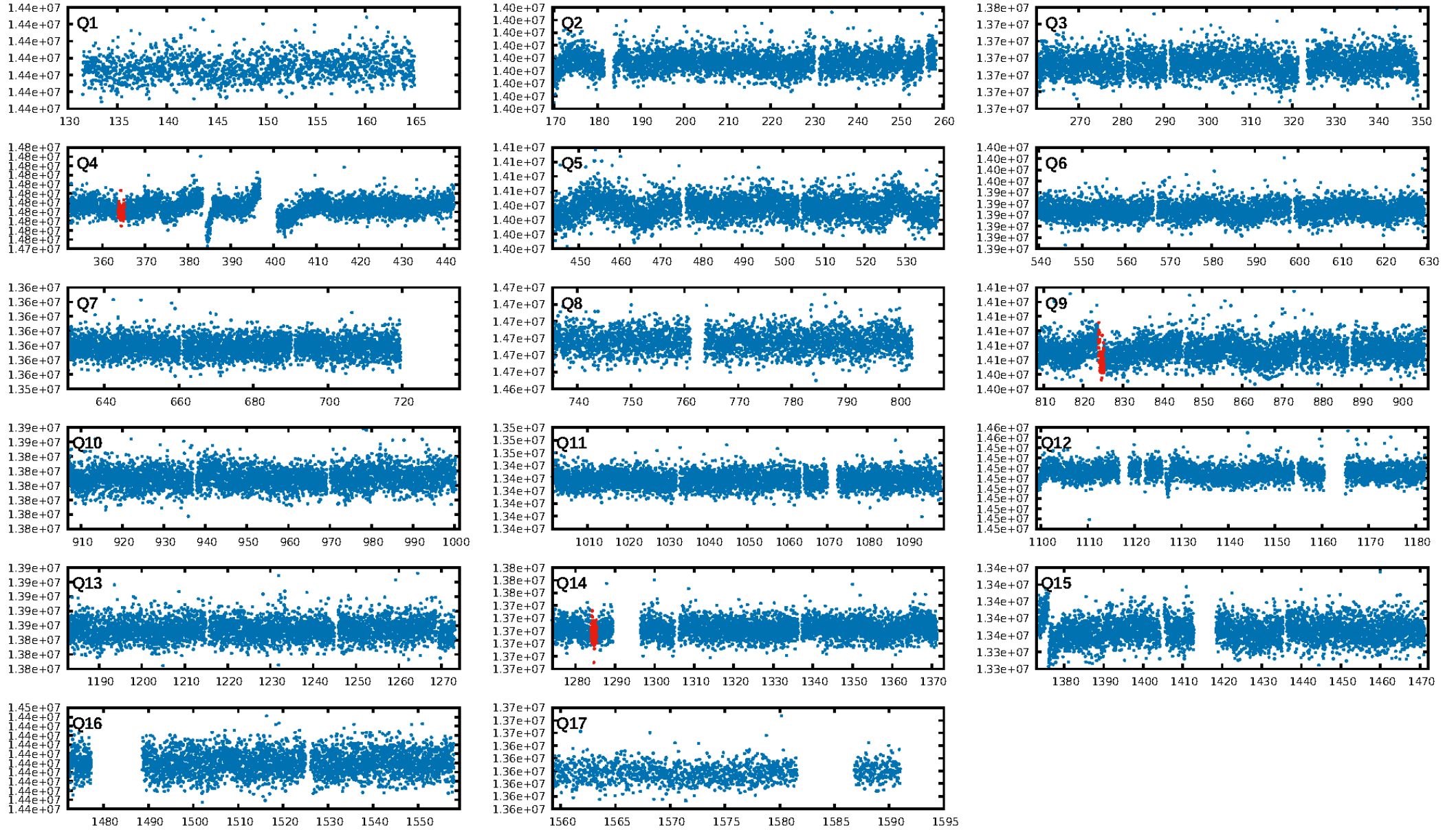
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.76e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -18.06
Centroid-sig: 15.5%
Centroid-so: 1.342 arcsec [1.00 σ]
OotOffset-rm: 2.390 arcsec [5.32 σ]
KicOffset-rm: 2.126 arcsec [4.73 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

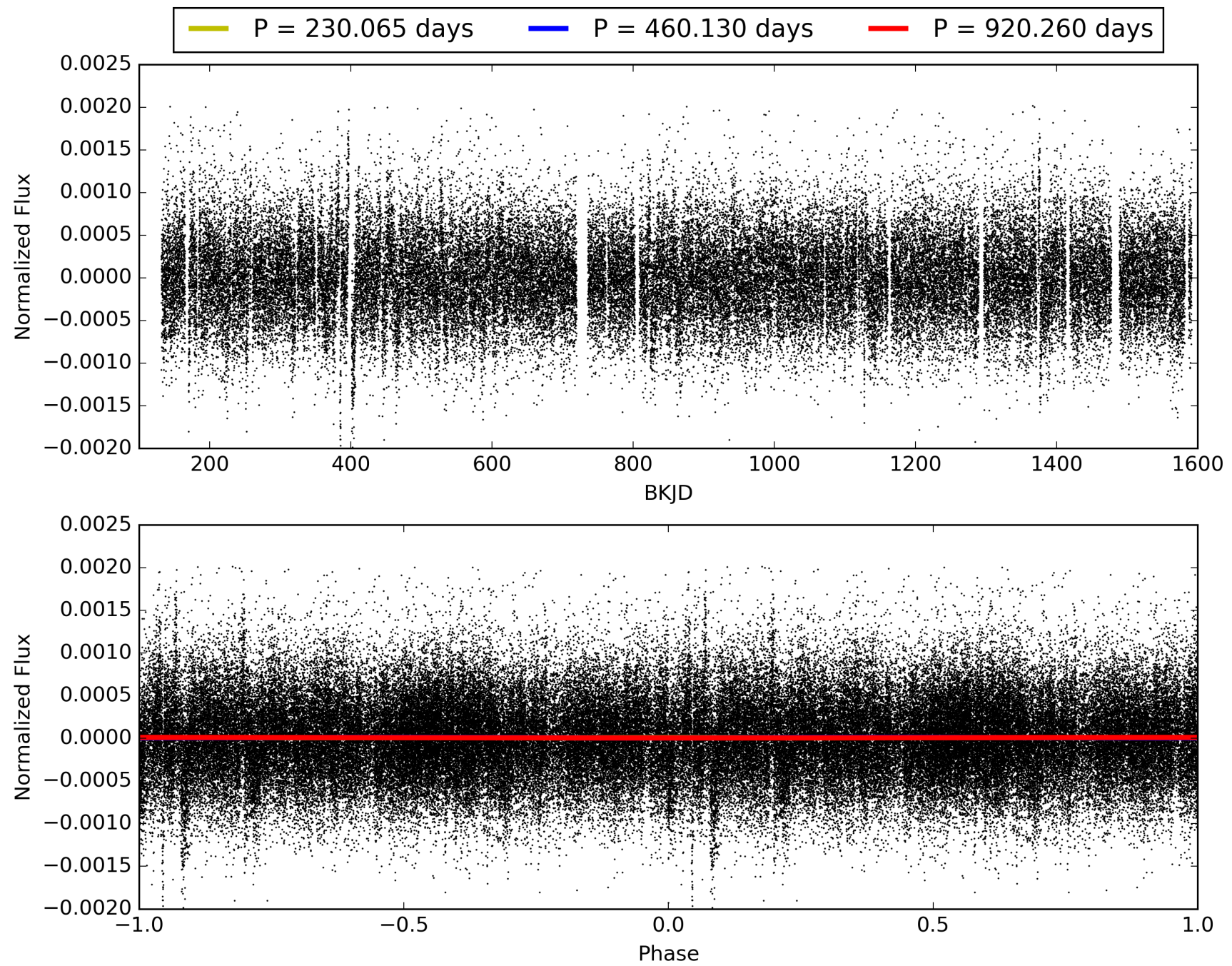
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:11:12 Z

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

TCE 010006284-01, PDC Light Curves

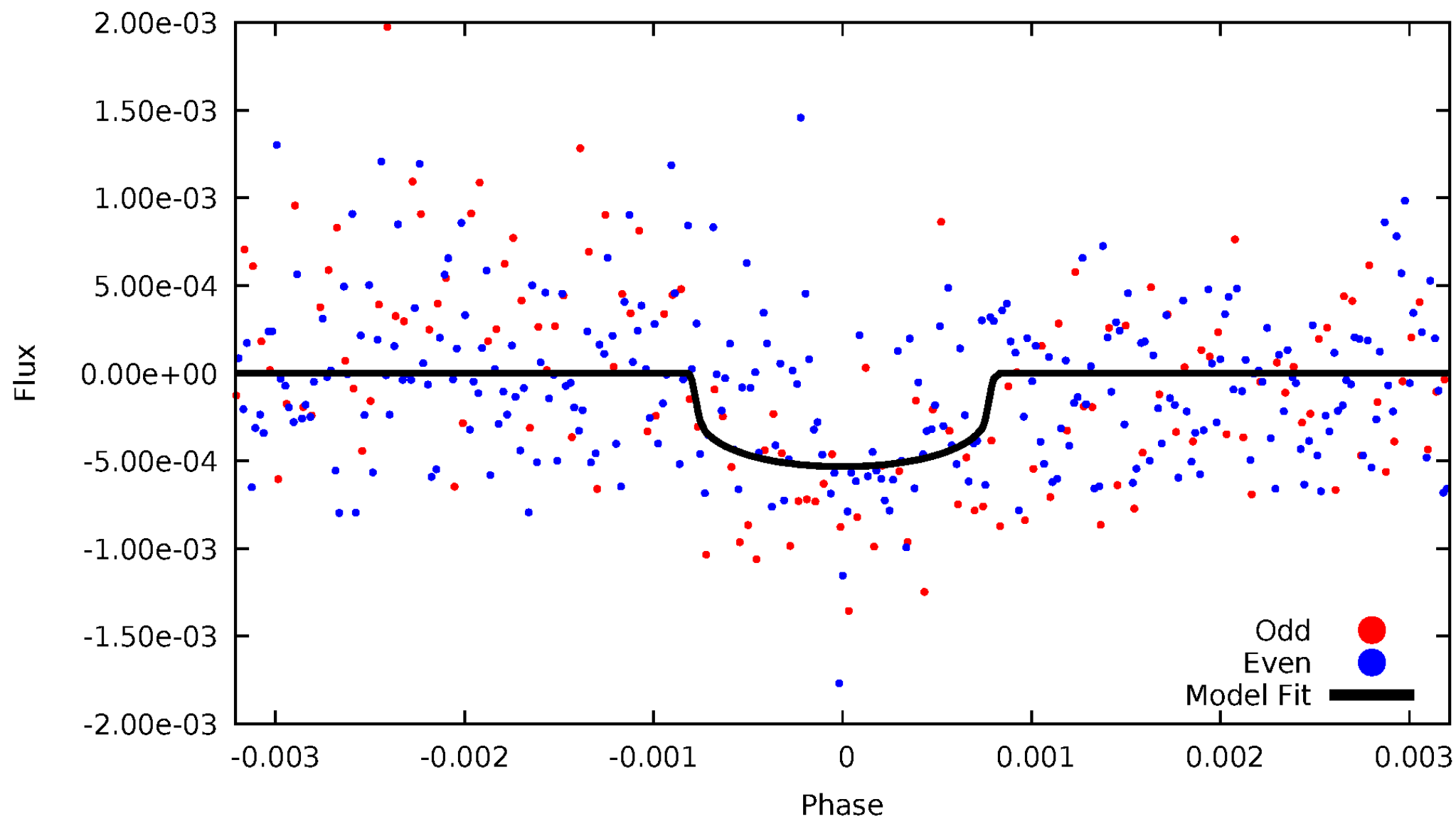


TCE 010006284-01



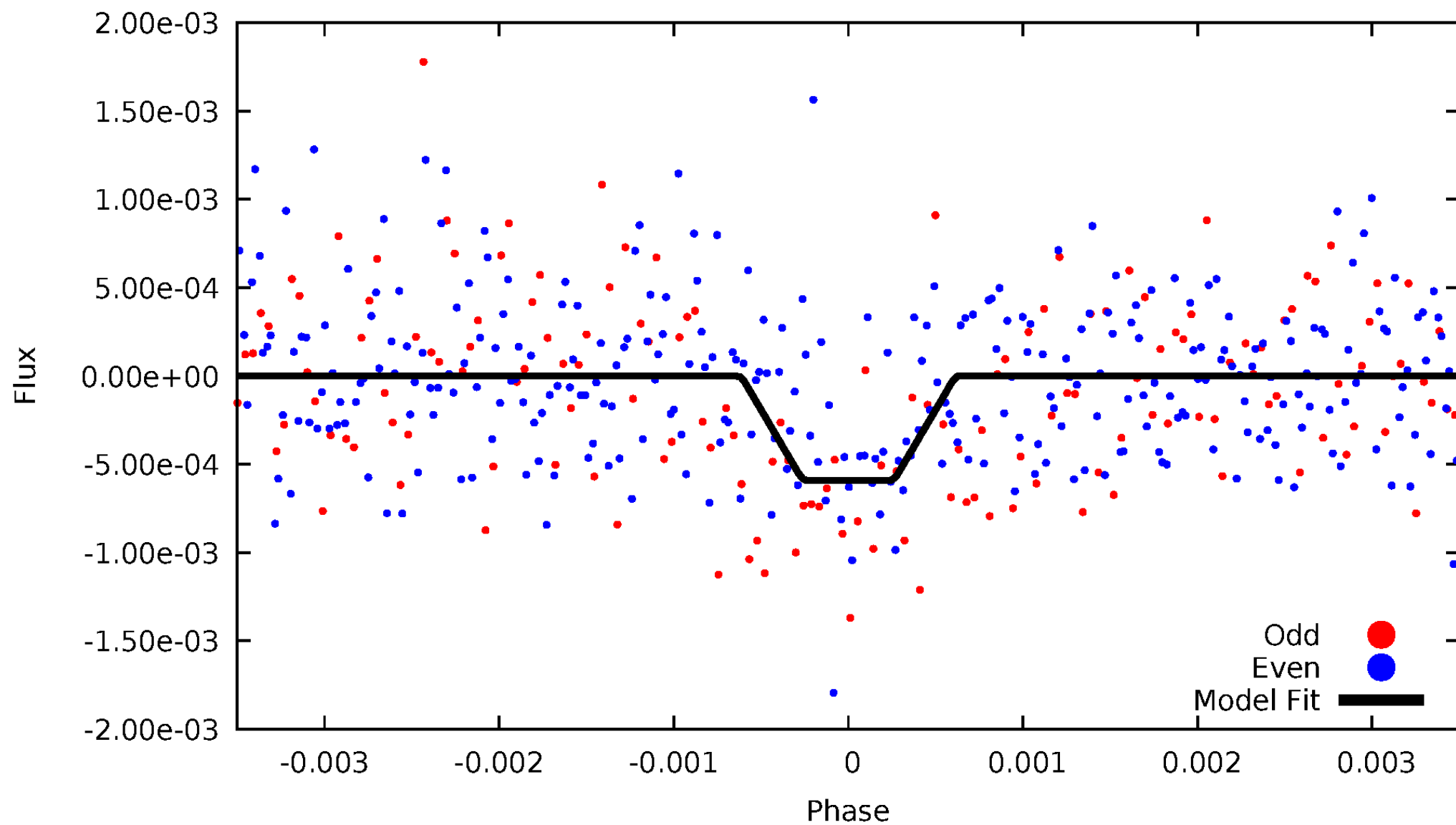
DV Odd/Even

TCE 010006284-01

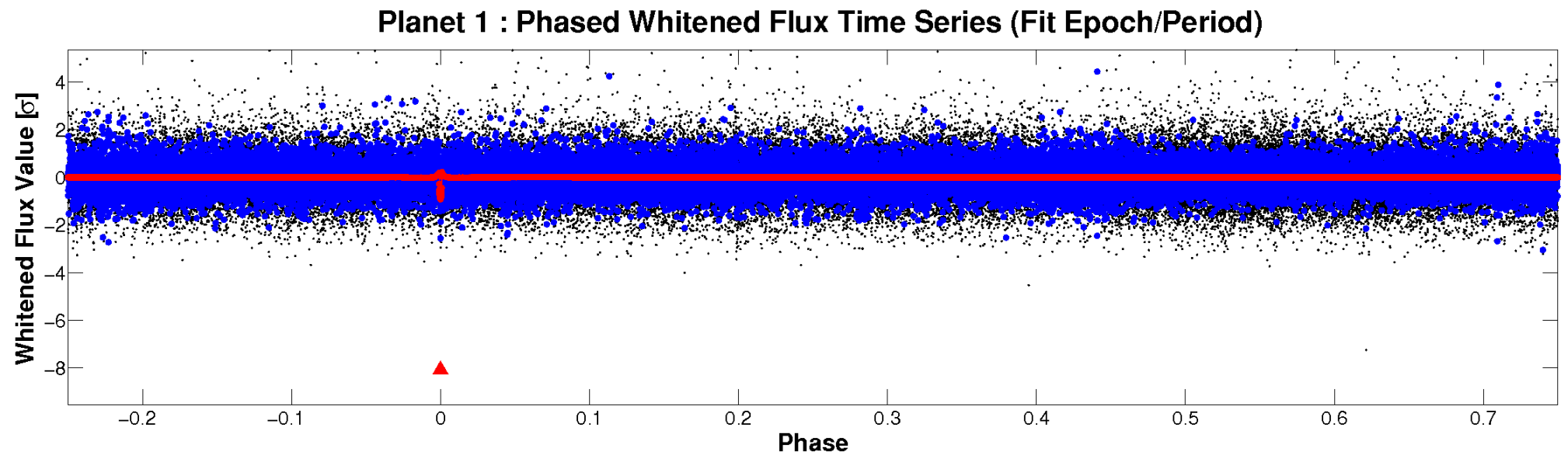
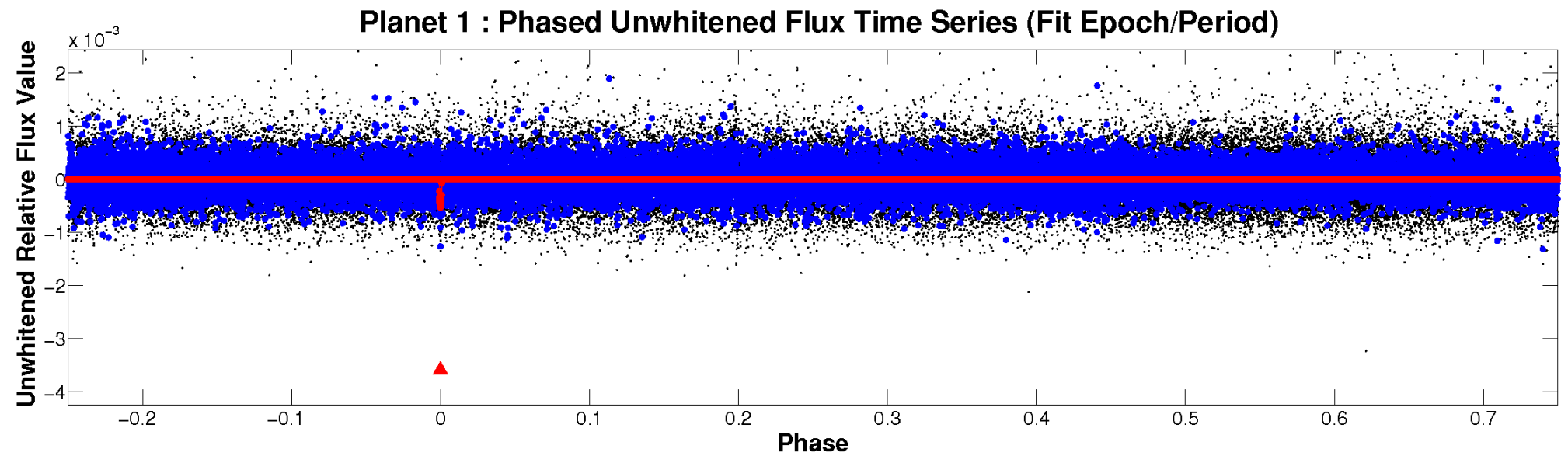


ALT Odd/Even

TCE 010006284-01

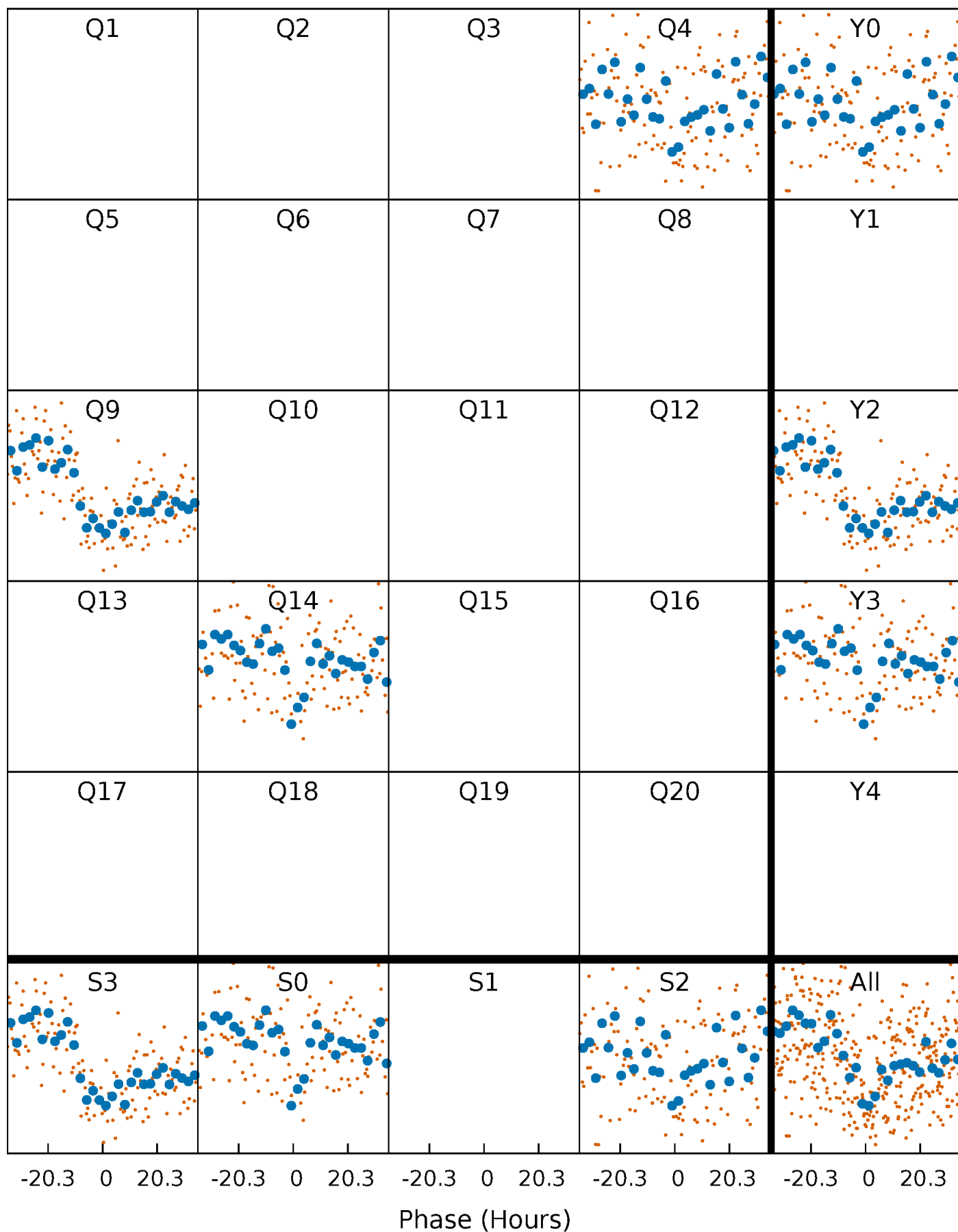


Non-Whitened Vs. Whitened Light Curve



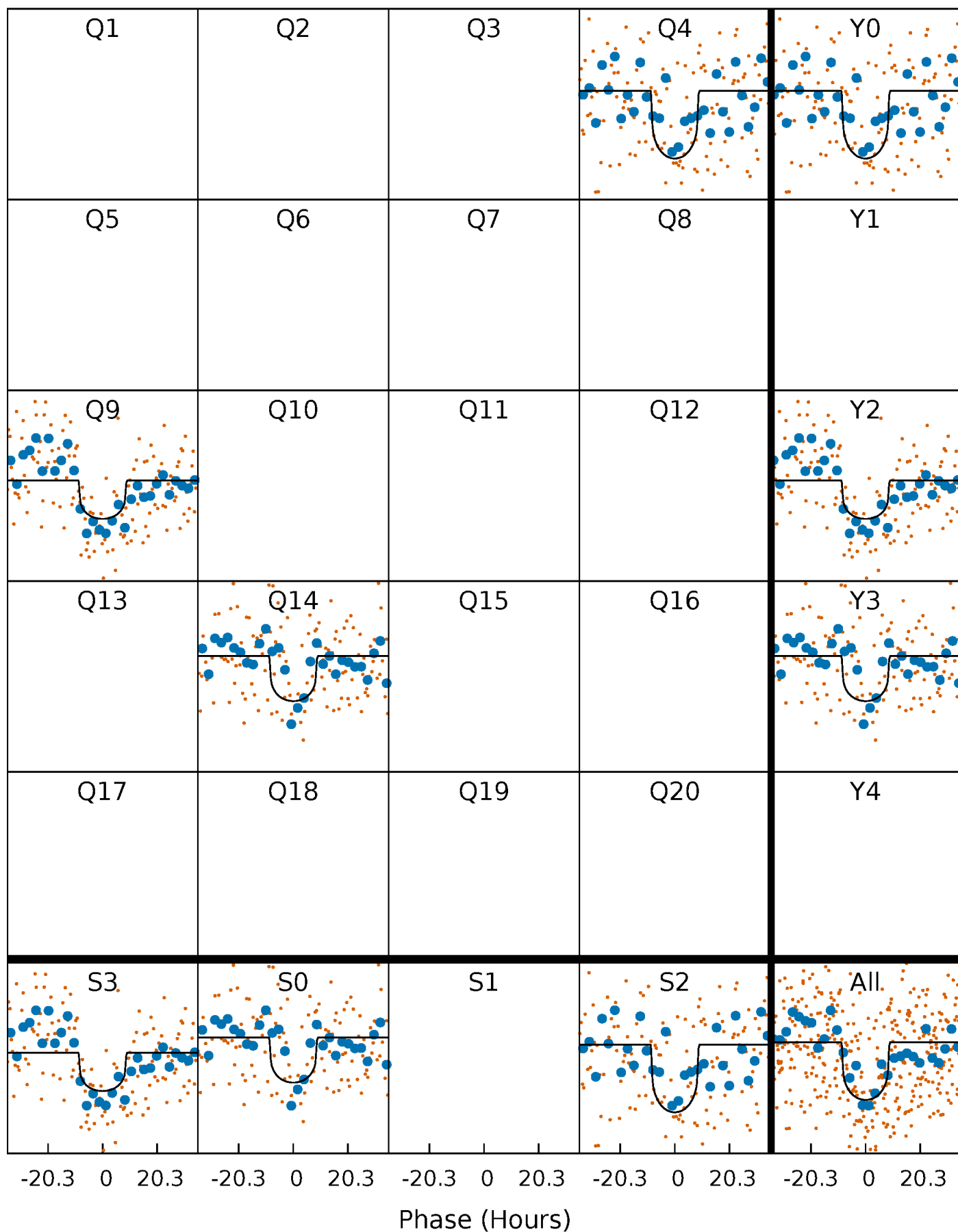
PDC Quarter-Phased Transit Curves

TCE 010006284-01 P=460.129933 Days $T_0=364.391134$ (BKJD)



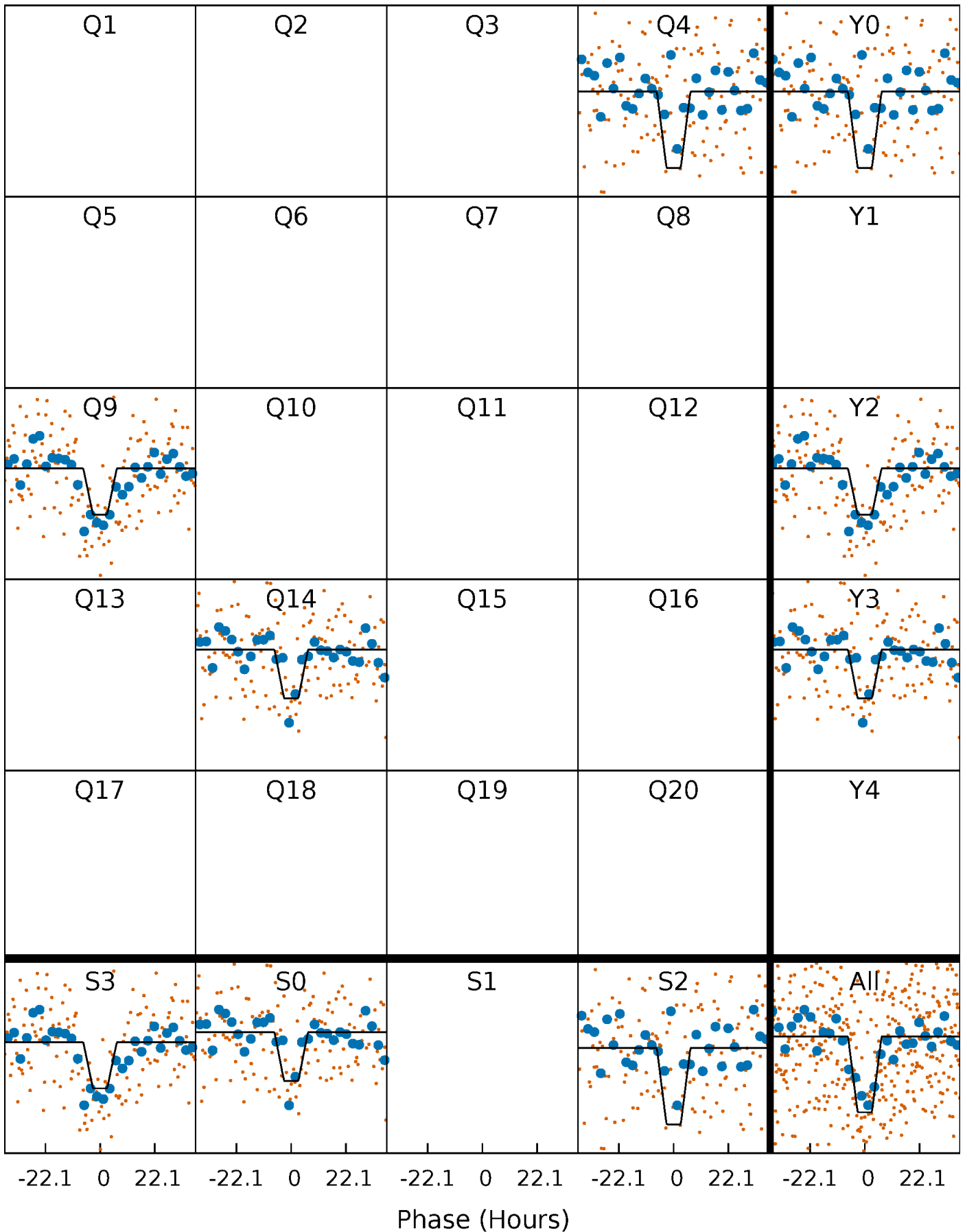
DV Quarter-Phased Transit Curves

TCE 010006284-01 P=460.129933 Days $T_0=364.391134$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

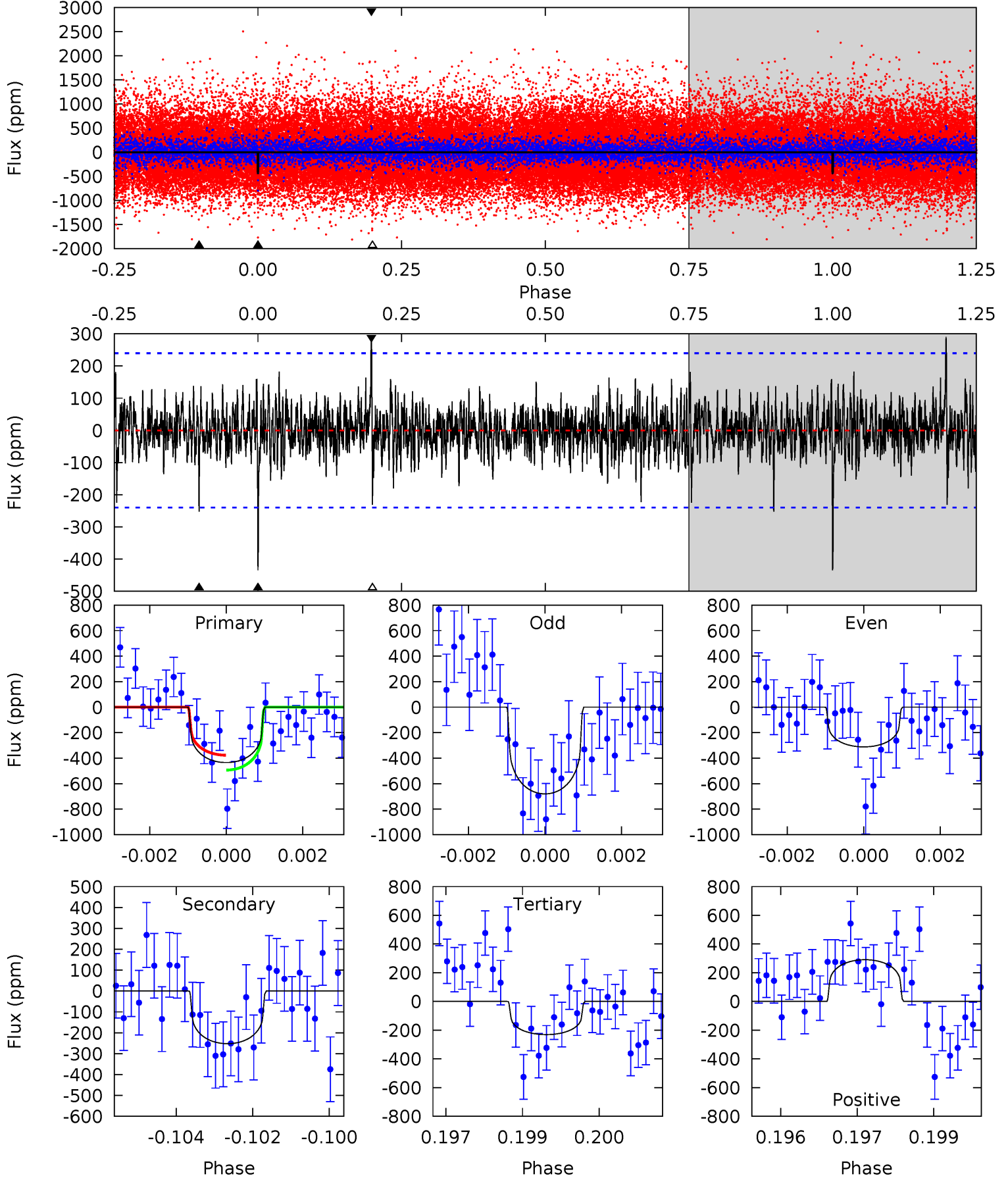
TCE 010006284-01 P=460.150149 Days $T_0=364.381560$ (BKJD)



DV Model-Shift Uniqueness Test

010006284-01, P = 460.129933 Days, E = 364.391134 Days

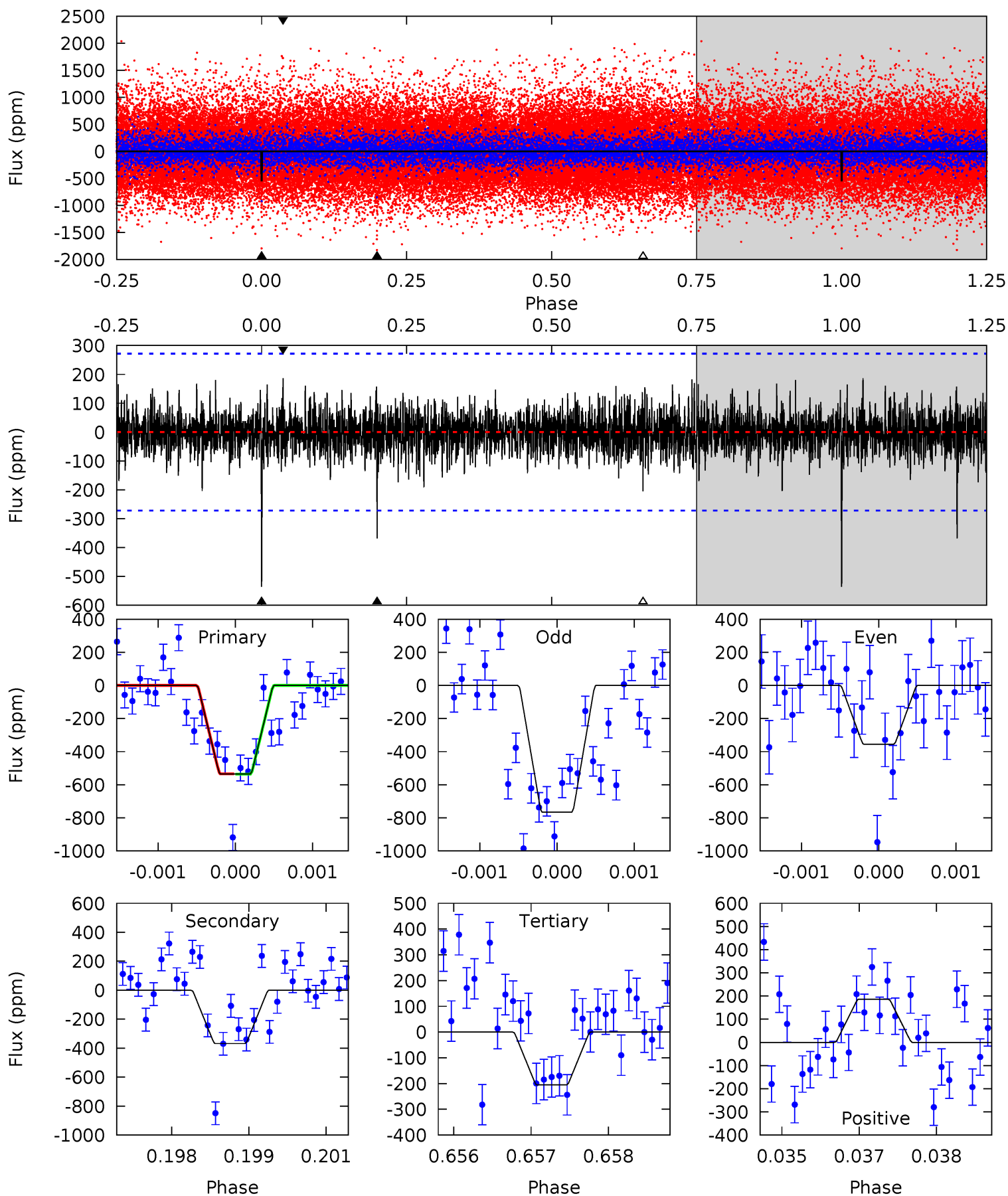
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	5.64	5.16	6.51	5.36	3.15	1.27	4.55	3.21	0.48	-0.86	3.93	1.32	0.40	1.31



Alt Model-Shift Uniqueness Test

010006284-01, P = 460.150149 Days, E = 364.381560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	7.34	4.09	3.71	5.41	3.22	1.08	6.58	6.96	3.25	3.63	3.95	0.92	0.26	0.02



Stellar Parameters For KIC 010006284

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5366^{+159}_{-159}	$4.601^{+0.035}_{-0.112}$	$-0.200^{+0.300}_{-0.300}$	$0.761^{+0.133}_{-0.061}$	$0.853^{+0.078}_{-0.096}$	$2.723^{+0.426}_{-0.965}$
	+3%/-3%	+1%/-2%	+150%/-150%	+17%/-8%	+9%/-11%	+16%/-35%
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 010006284-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-252 ± 45	$1.92^{+1.15}_{-1.03}$	279^{+12}_{-11}	4568^{+1936}_{-705}	$43759^{+167192}_{-26597}$
Alt.	-368 ± 50	$2.11^{+1.18}_{-1.07}$	279^{+13}_{-11}	4830^{+1880}_{-794}	$54326^{+174471}_{-31827}$

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

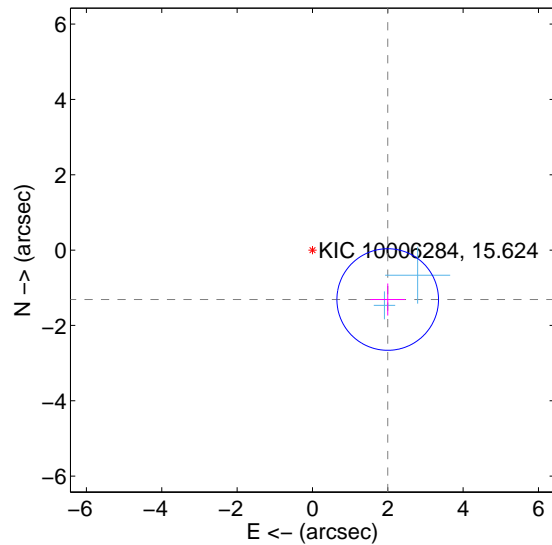
Supplemental centroid analysis for 010006284-01. Kepler magnitude: 15.62. Transit SNR 7.72

There are 2 quarters with good PRF difference image offsets

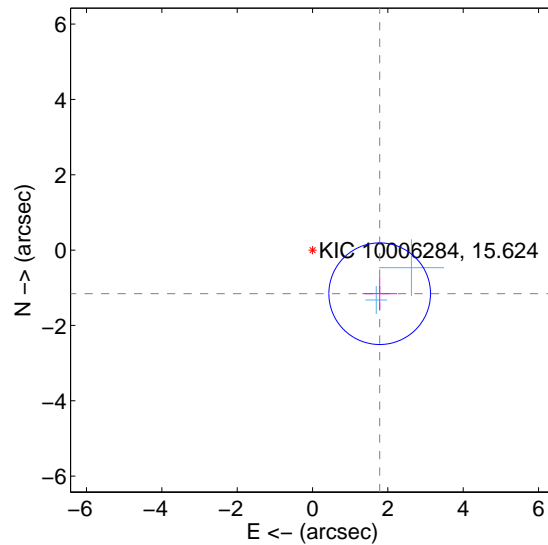
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.390 ± 0.449	5.32	-1.998 ± 0.459	-1.312 ± 0.425
PRF-fit source offset from KIC position	2.126 ± 0.450	4.73	-1.783 ± 0.459	-1.158 ± 0.425
photometric centroid source offset	1.34 ± 1.34	1.00	-0.85 ± 1.38	-1.04 ± 1.31

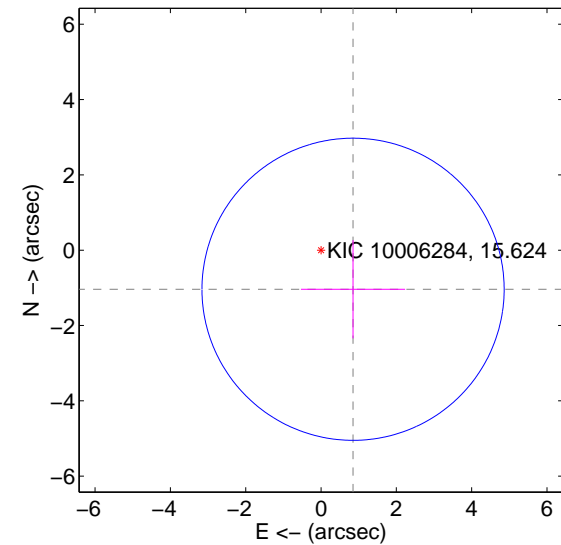
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

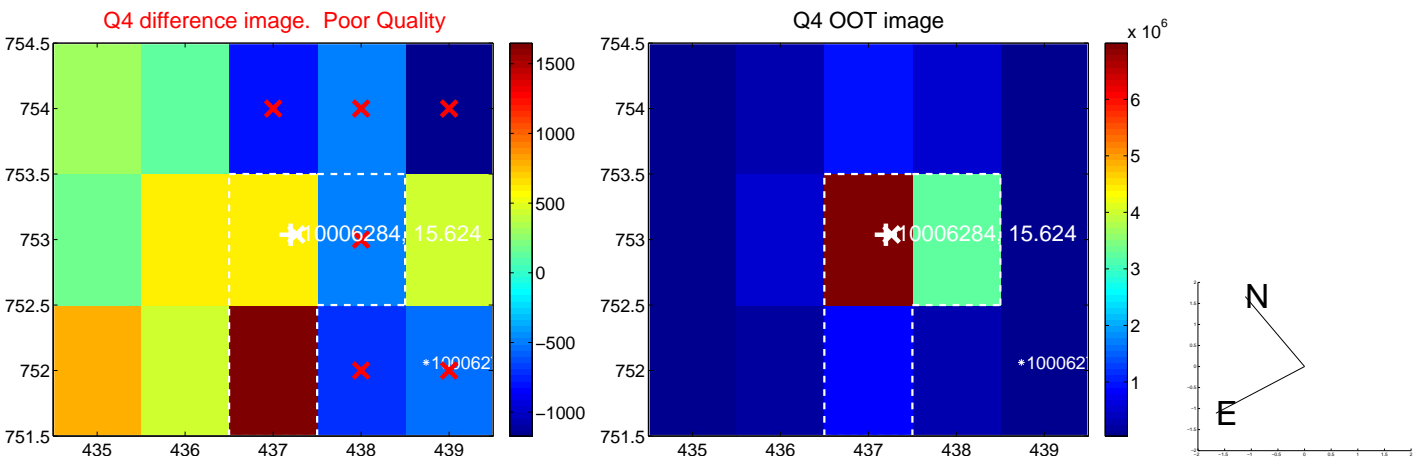
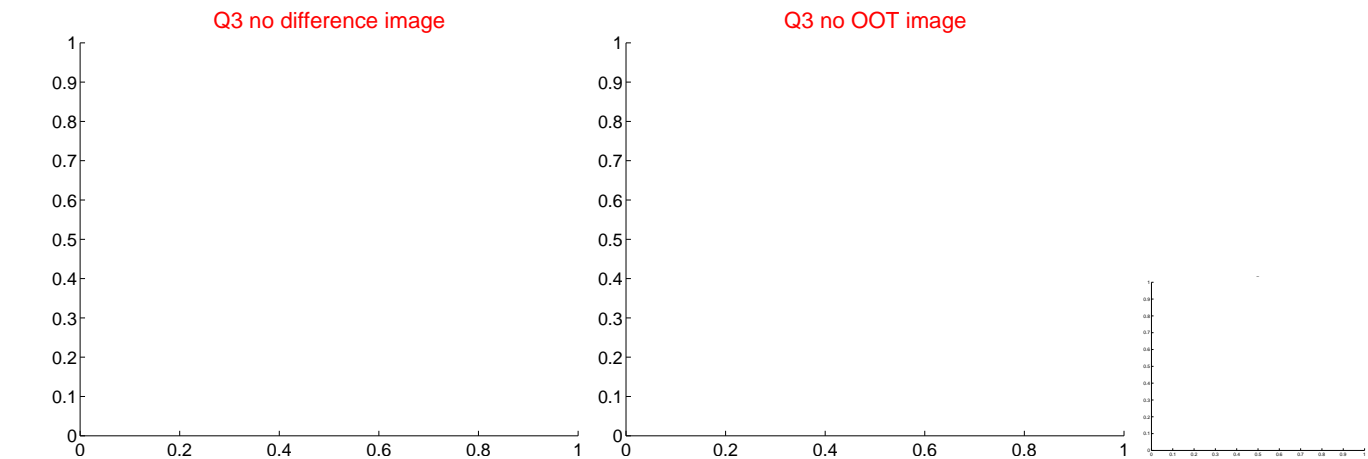
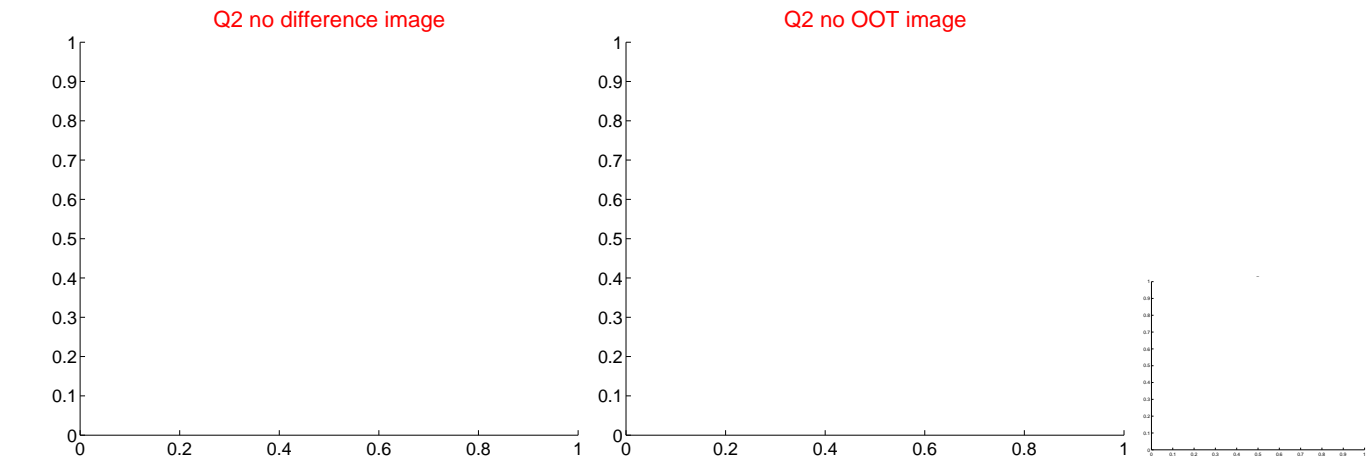
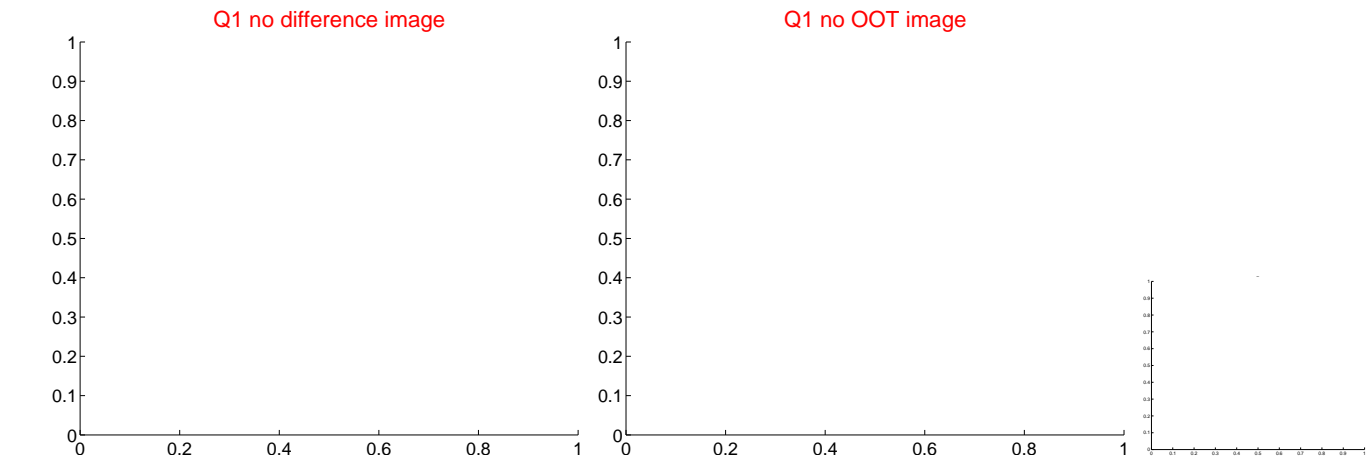


offset from photometric centroids



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.

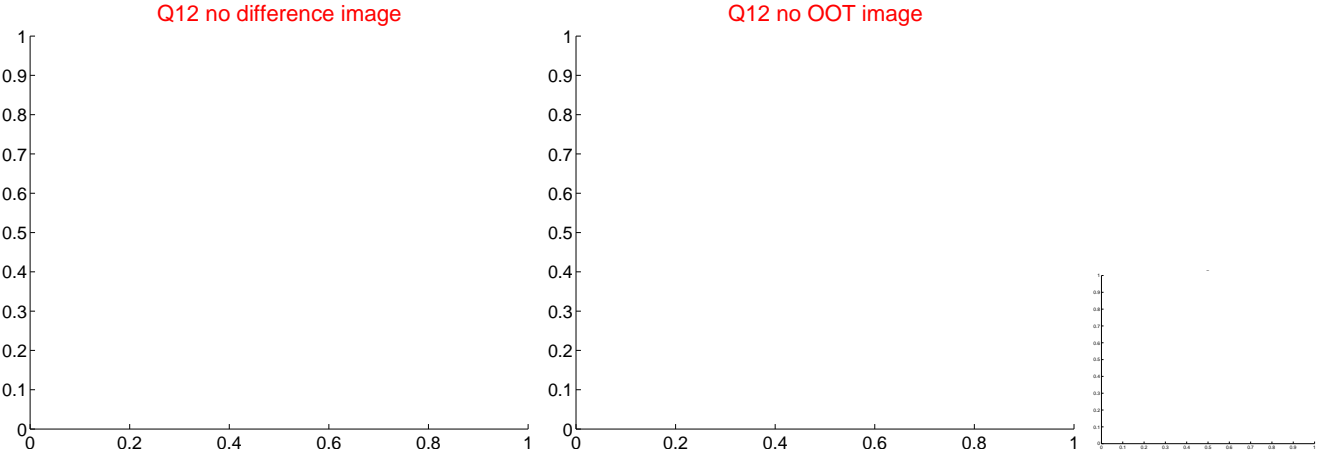
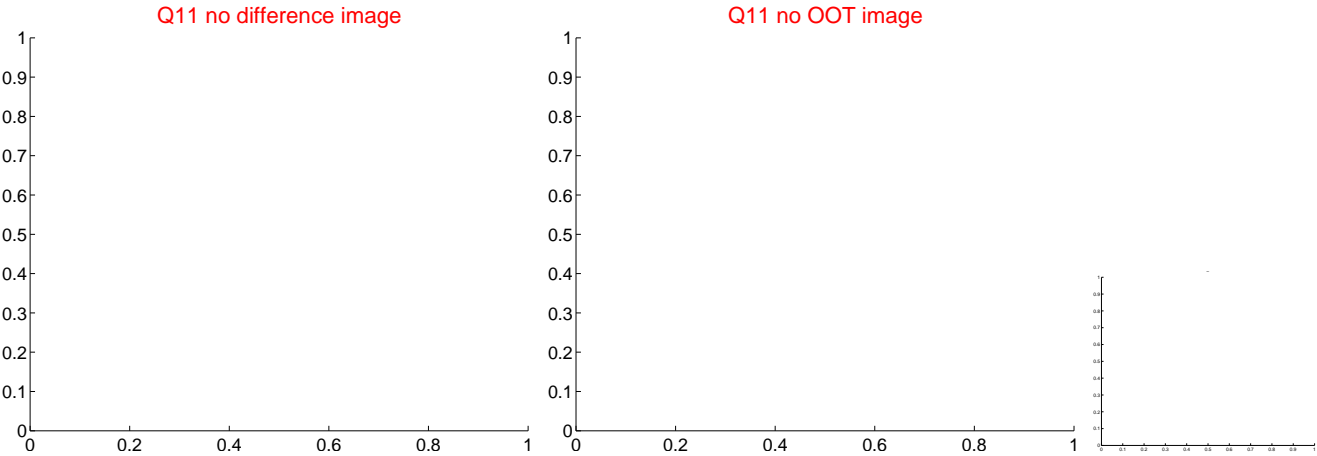
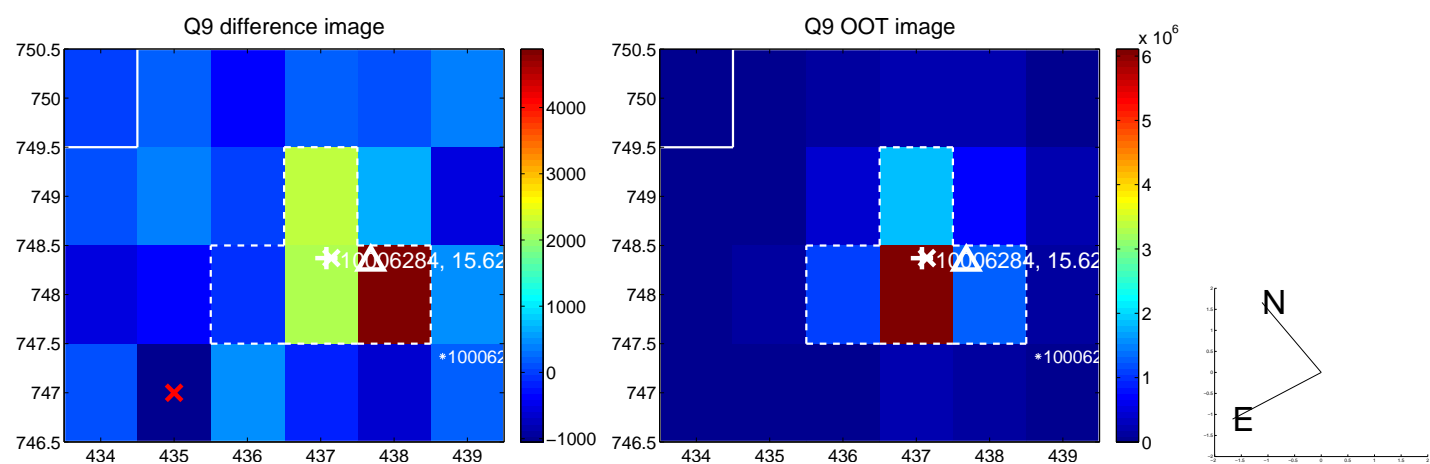
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



white ×: 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.

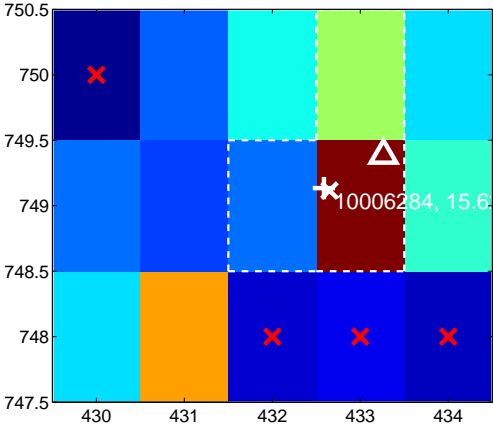
Q13 no difference image



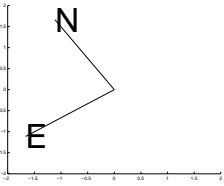
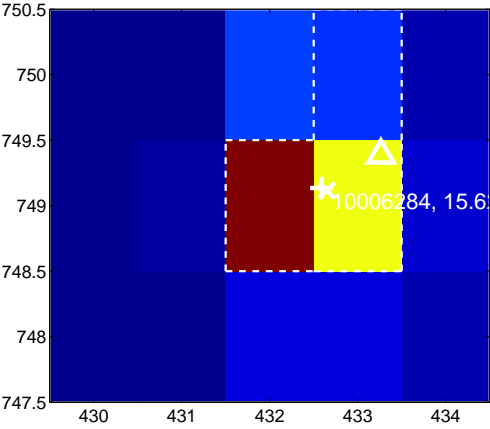
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



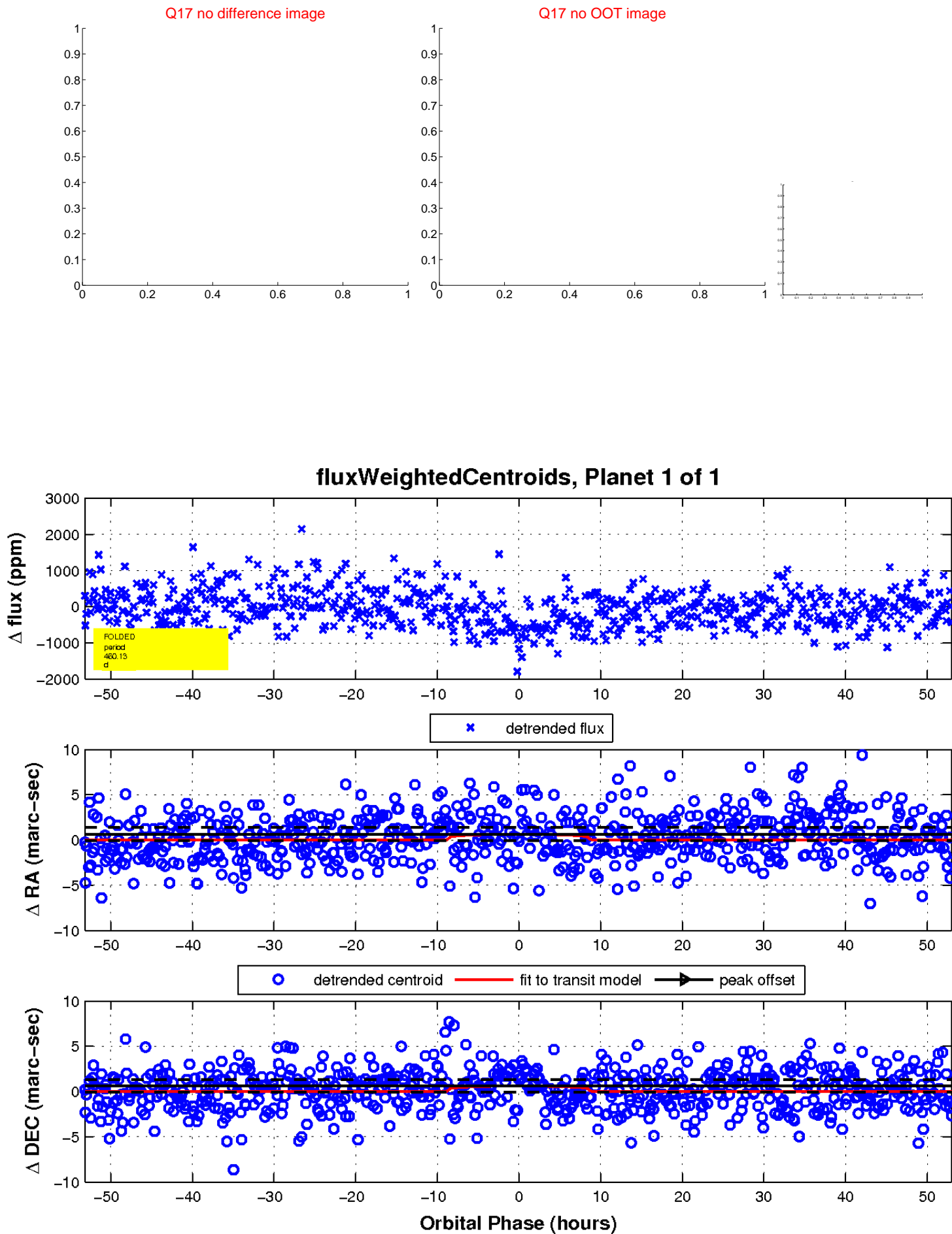
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

