

KIC 010732223

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})
010732223-01	OBS	No	297.856004	405.866591	1013.6	8.851	8.6	10.2	0.68	4541	2.83	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010732223-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

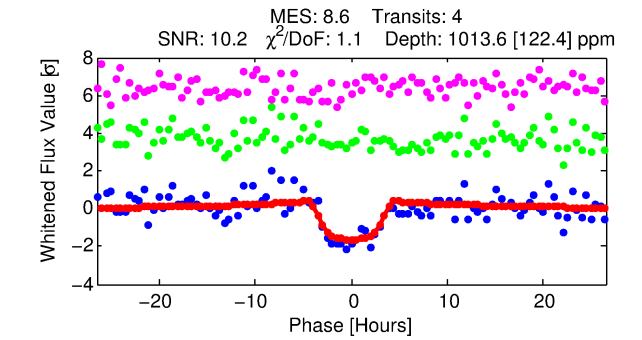
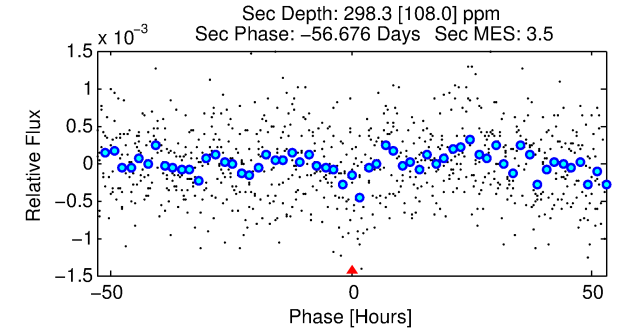
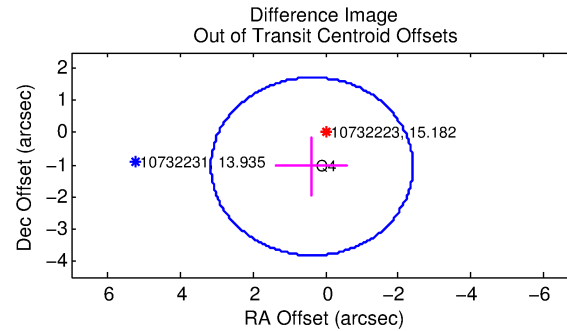
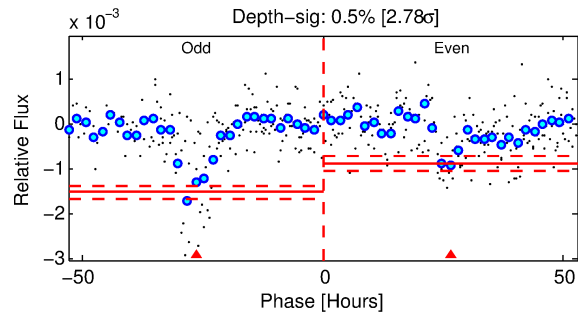
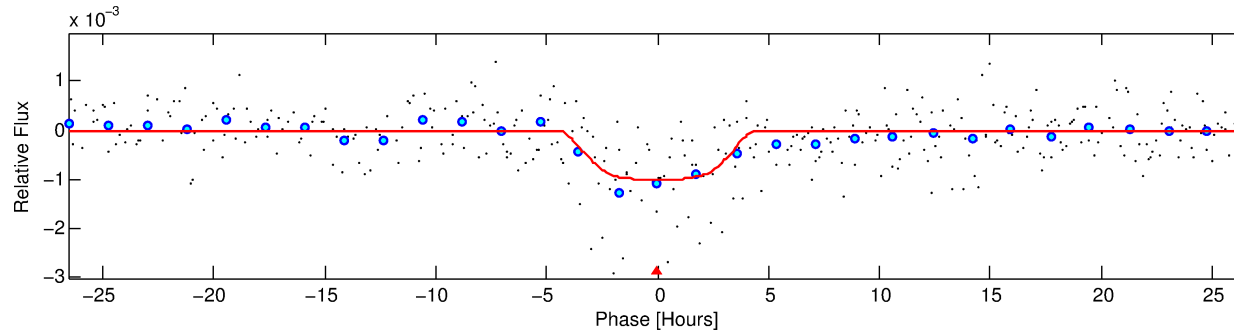
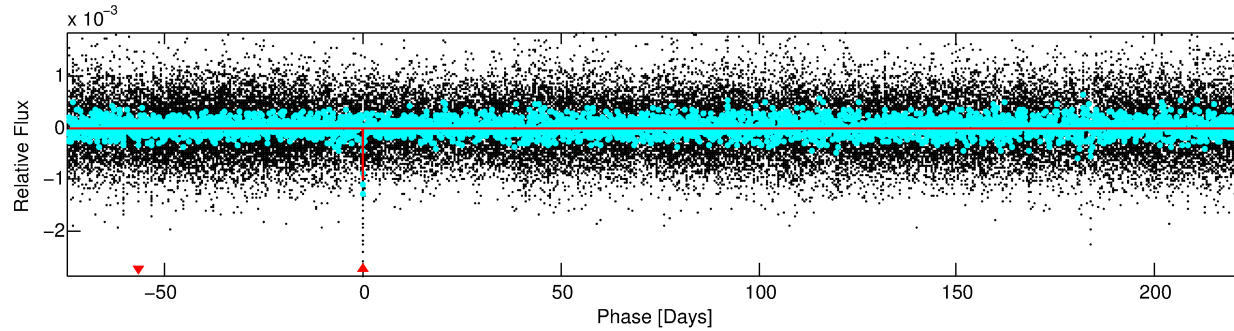
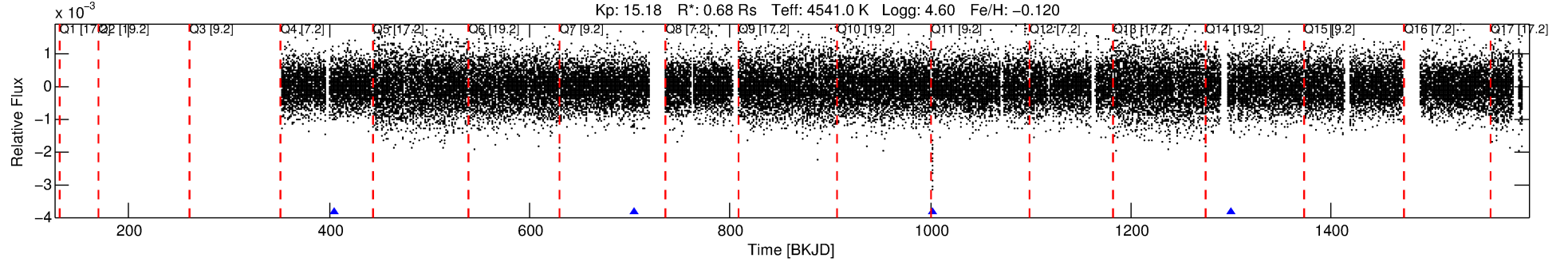
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010732223-01

No Significant Match Found

DV One-Page Summary

KIC: 10732223 Candidate: 1 of 1 Period: 297.856 d



DV Fit Results:

Period = 297.85600 [0.00866] d
Epoch = 405.8666 [0.0154] BKJD
Rp/R* = 0.0382 [0.0041]
a/R* = 114.69 [30.11]
b = 0.94 [0.04]
Seff = 0.30 [0.05]
Teq = 189 [8] K
Rp = 2.83 [0.39] Re
a = 0.7626 [0.0567] AU
Ag = 11926.50 [5171.36] [2.31 σ]
Teffp = 3054 [338] K [8.47 σ]

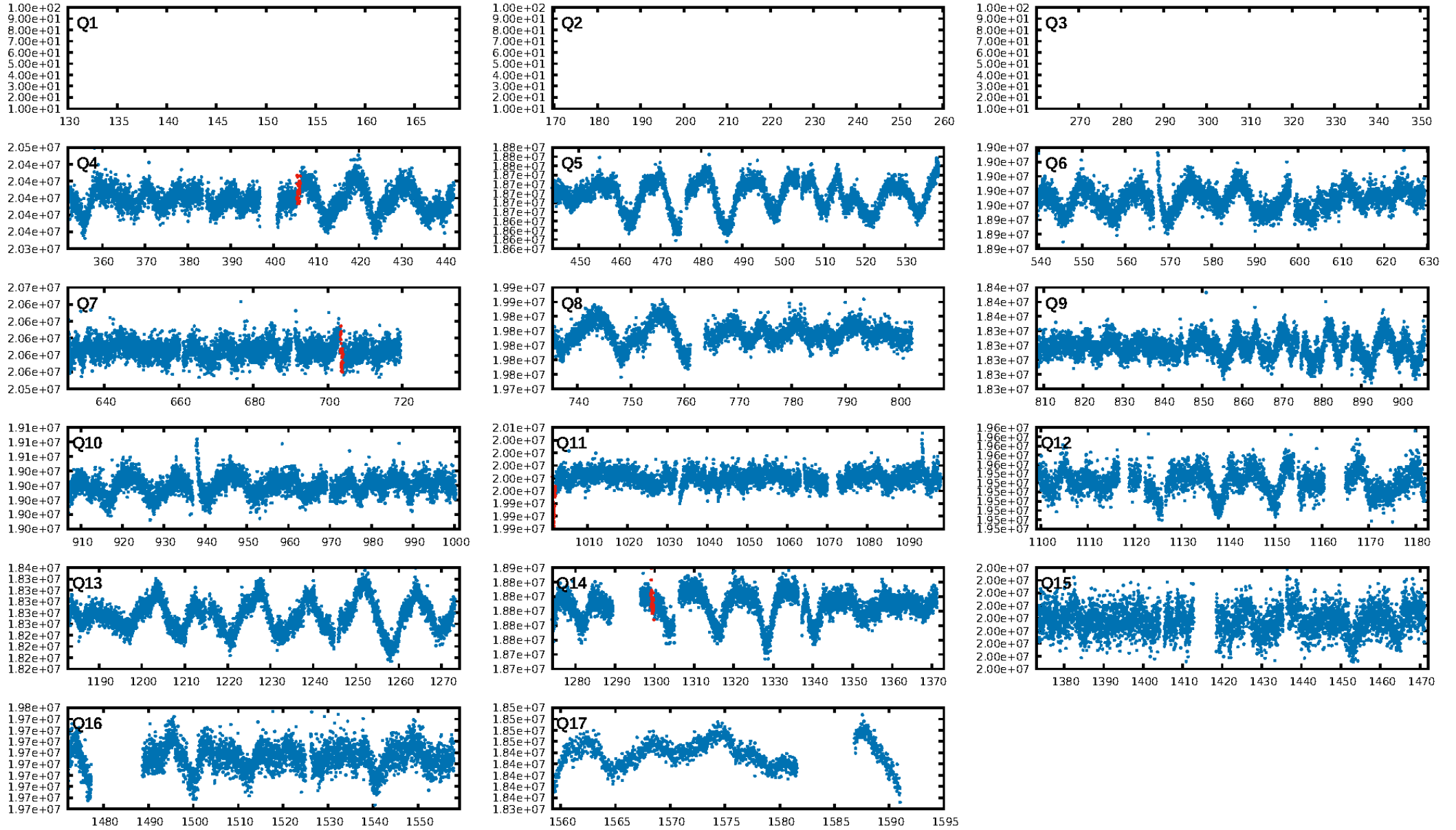
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 80.3%
Bootstrap-pfa: 4.36e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1646
Centroid-sig: 39.6%
Centroid-so: 3.233 arcsec [5.34 σ]
OotOffset-rm: 1.121 arcsec [1.21 σ]
KicOffset-rm: 3.595 arcsec [7.27 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

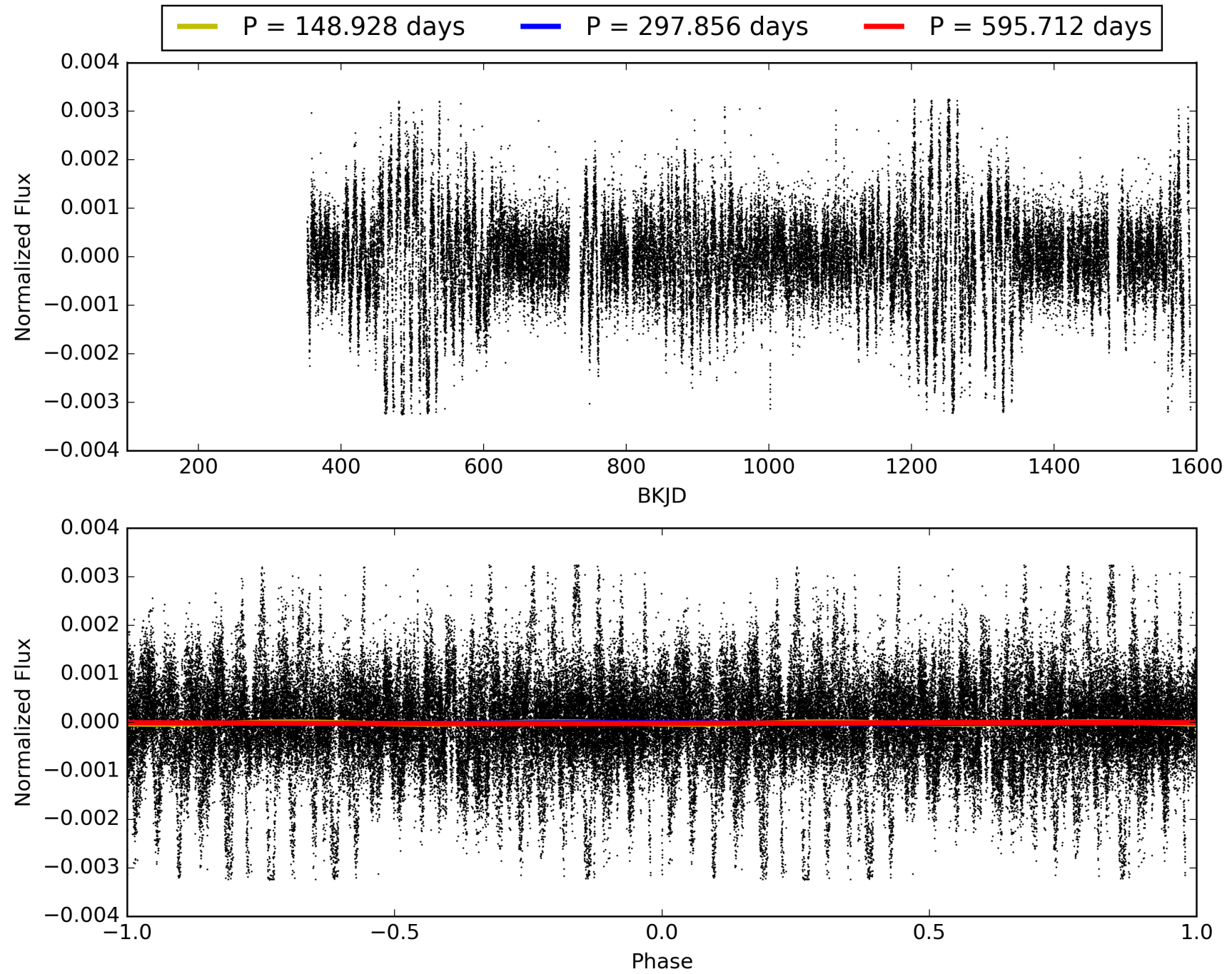
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:55:54 Z

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

TCE 010732223-01, PDC Light Curves

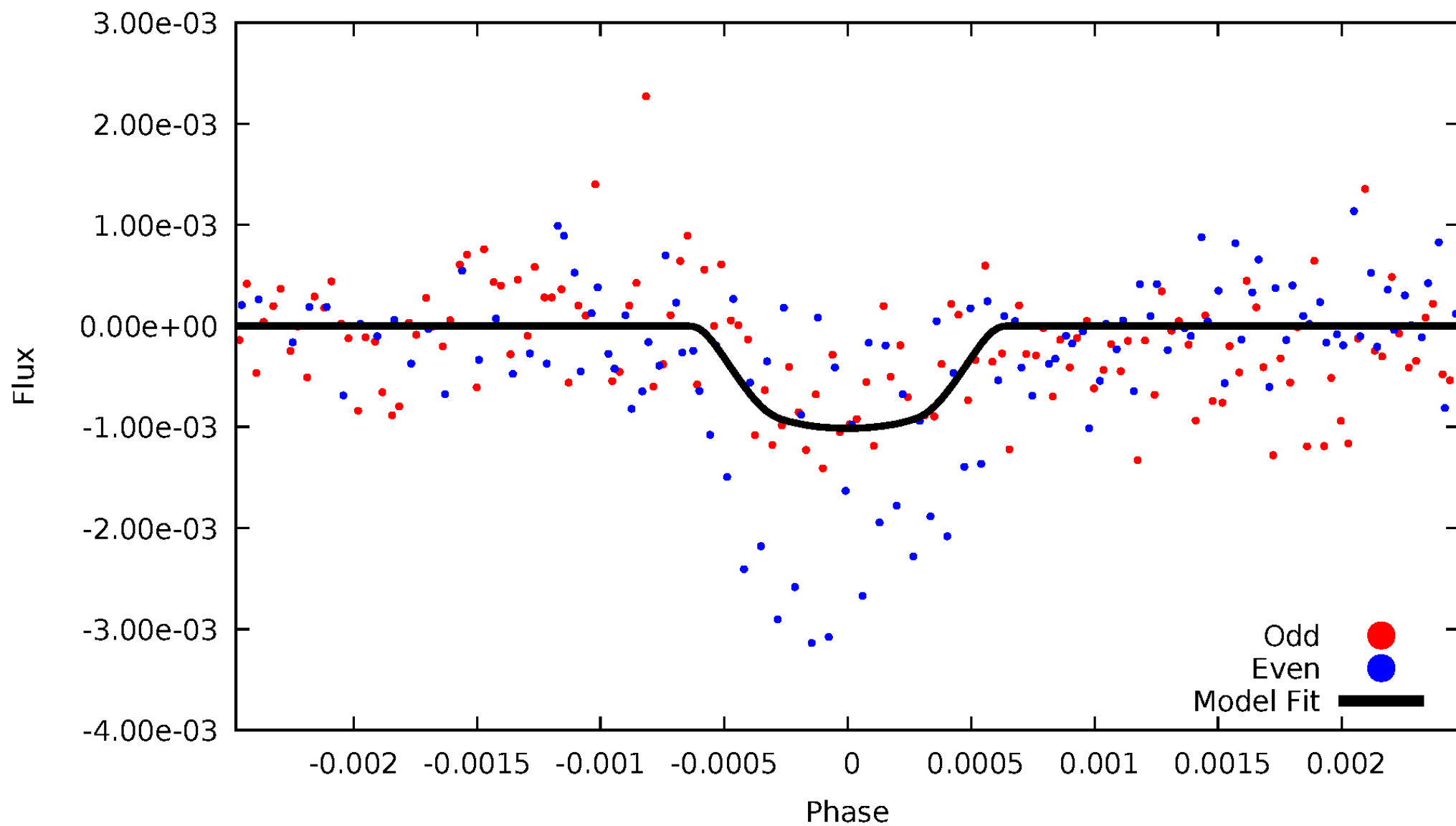


TCE 010732223-01



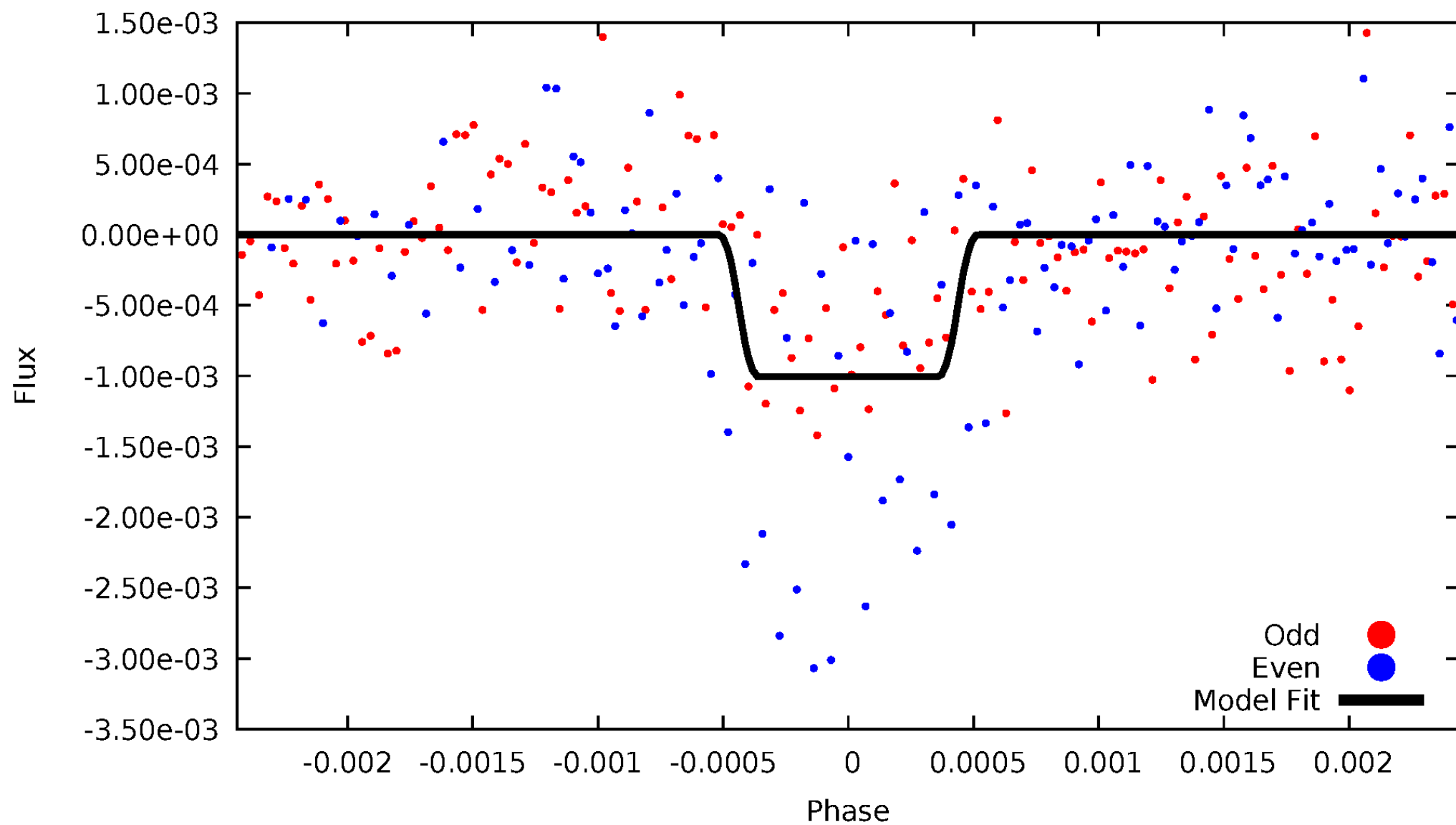
DV Odd/Even

TCE 010732223-01



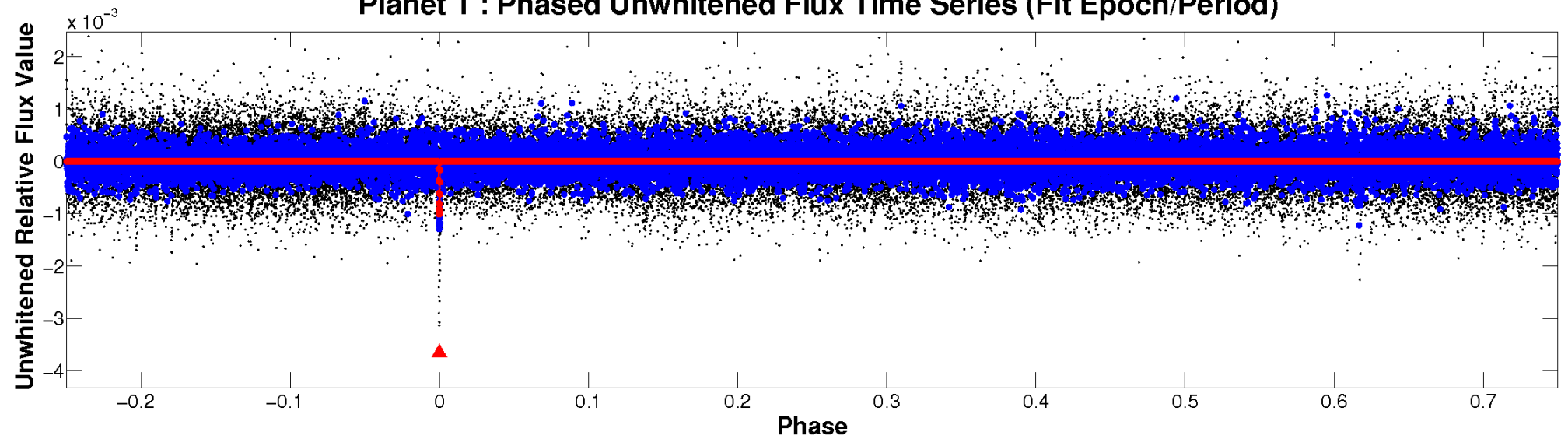
ALT Odd/Even

TCE 010732223-01

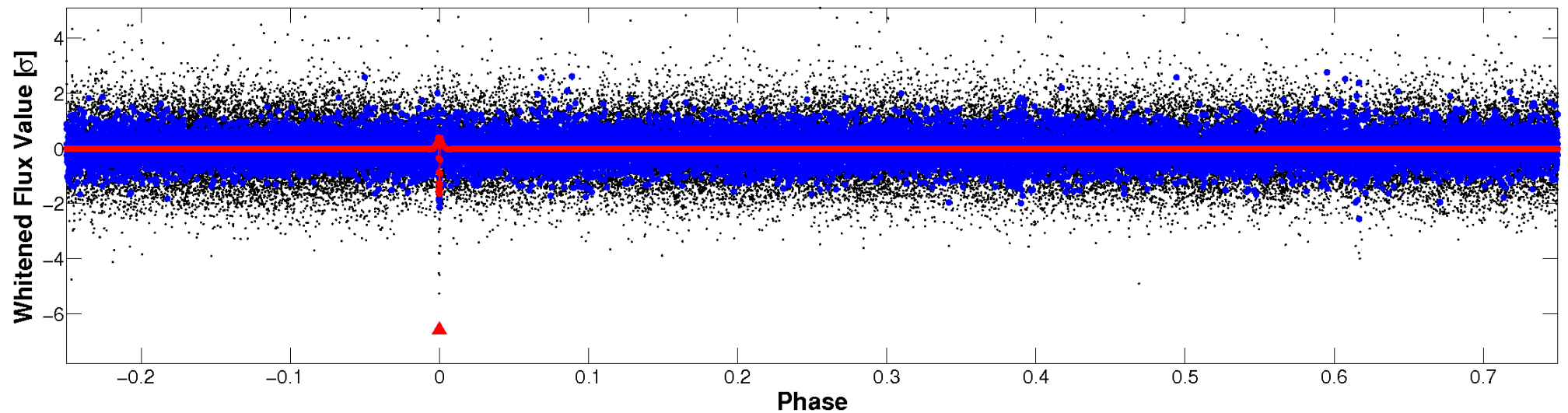


Non-Whitened Vs. Whitened Light Curve

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

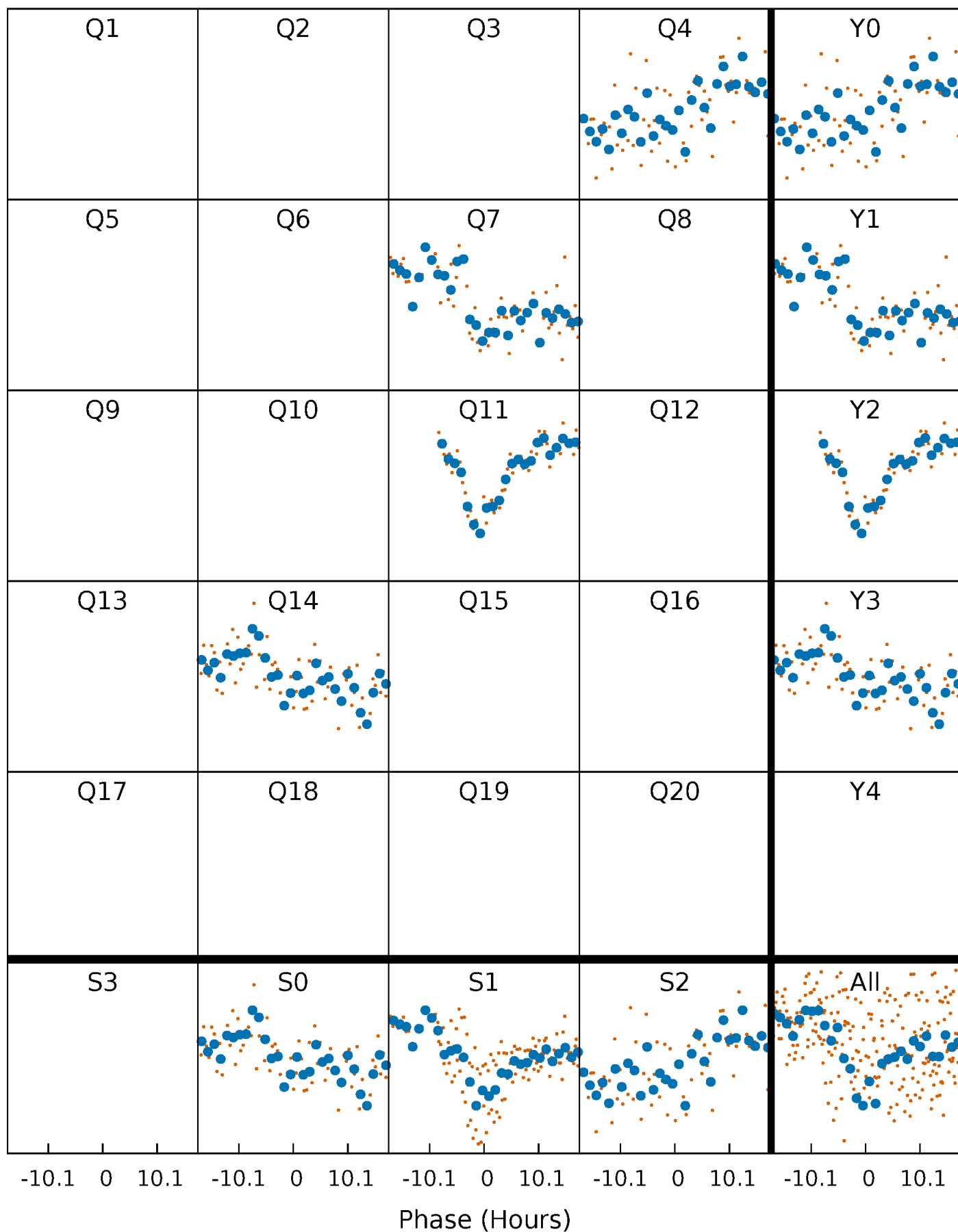


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



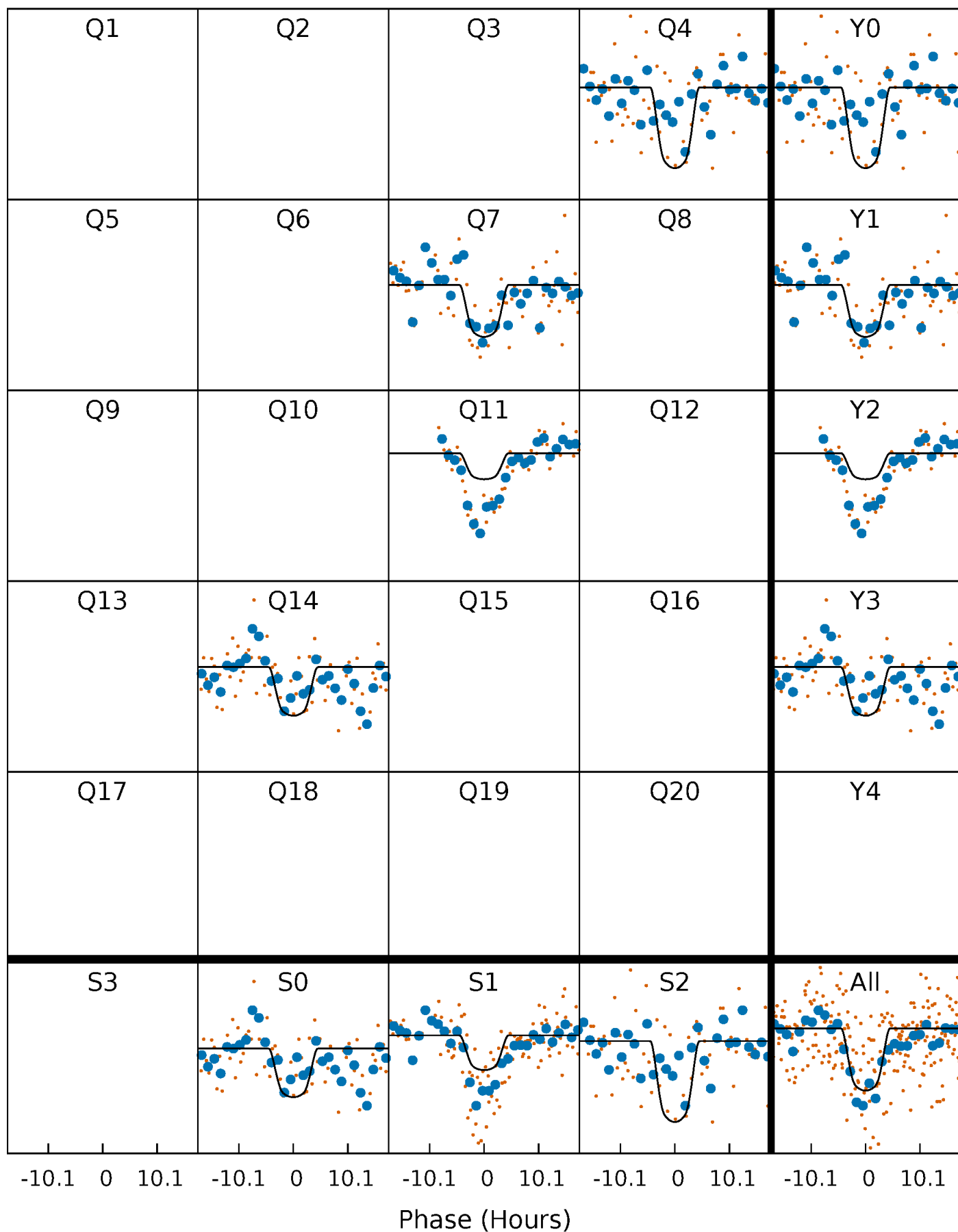
PDC Quarter-Phased Transit Curves

TCE 010732223-01 P=297.856004 Days $T_0=405.866591$ (BKJD)



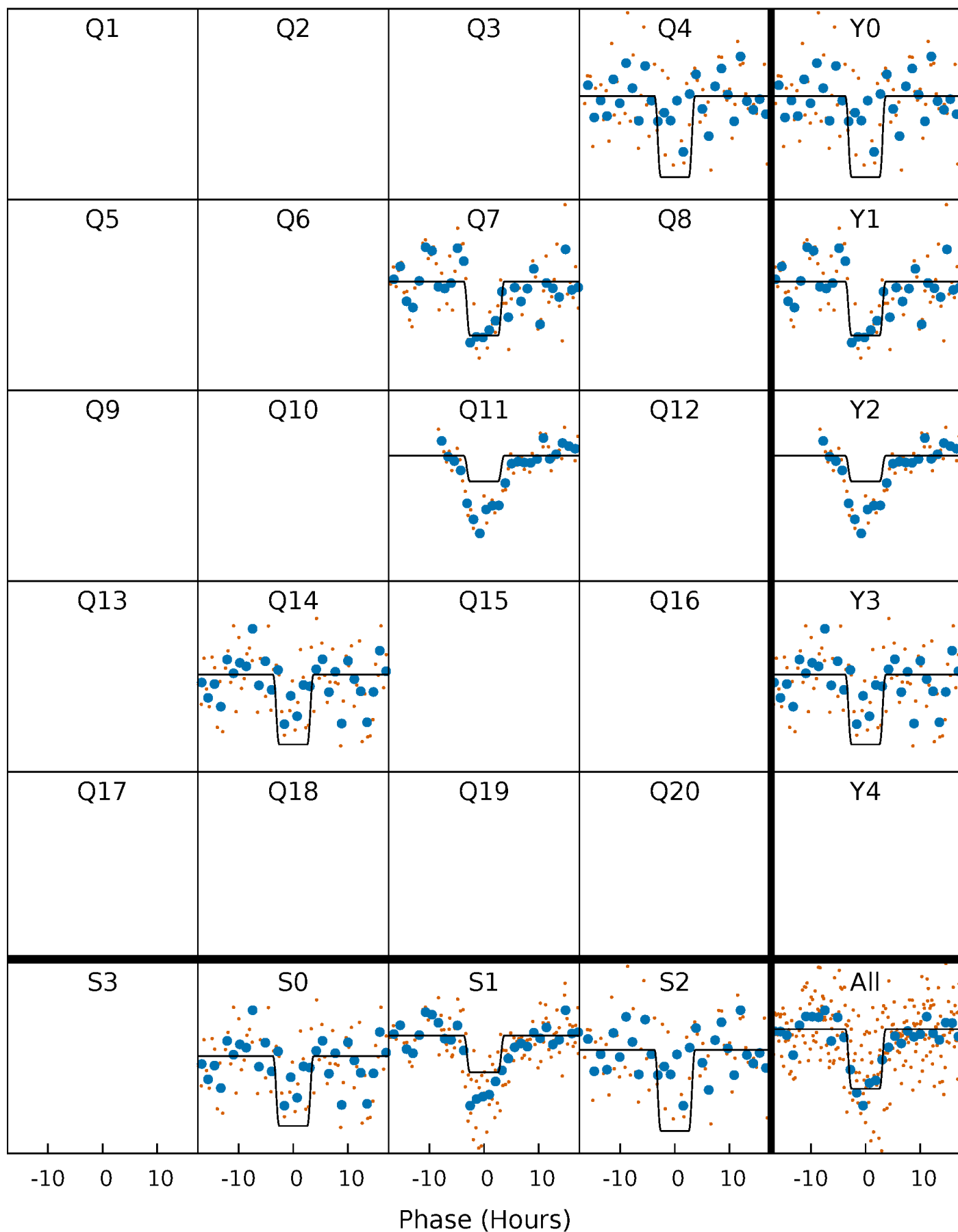
DV Quarter-Phased Transit Curves

TCE 010732223-01 P=297.856004 Days $T_0=405.866591$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

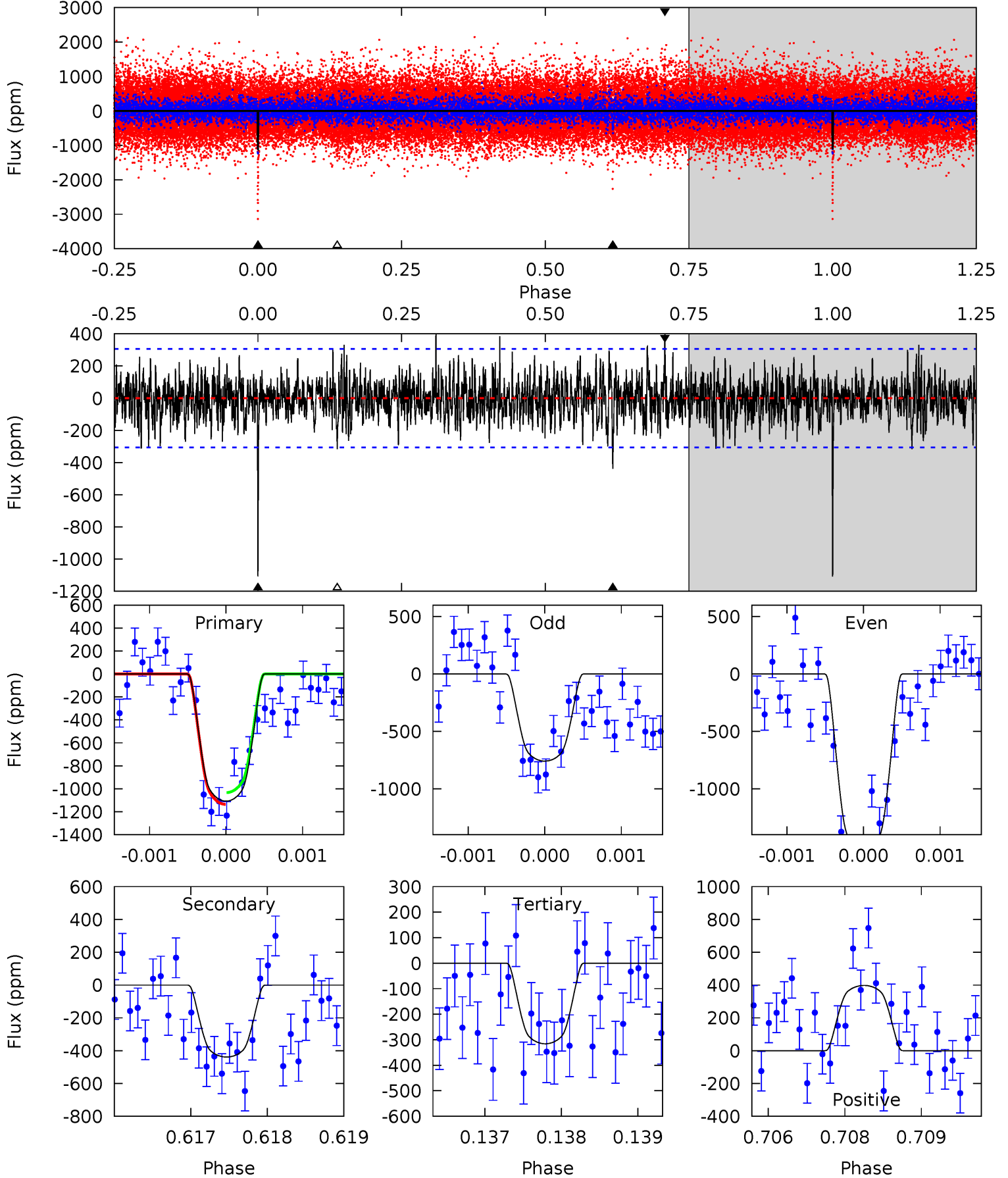
TCE 010732223-01 P=297.846382 Days $T_0=405.883406$ (BKJD)



DV Model-Shift Uniqueness Test

010732223-01, P = 297.856004 Days, E = 108.010587 Days

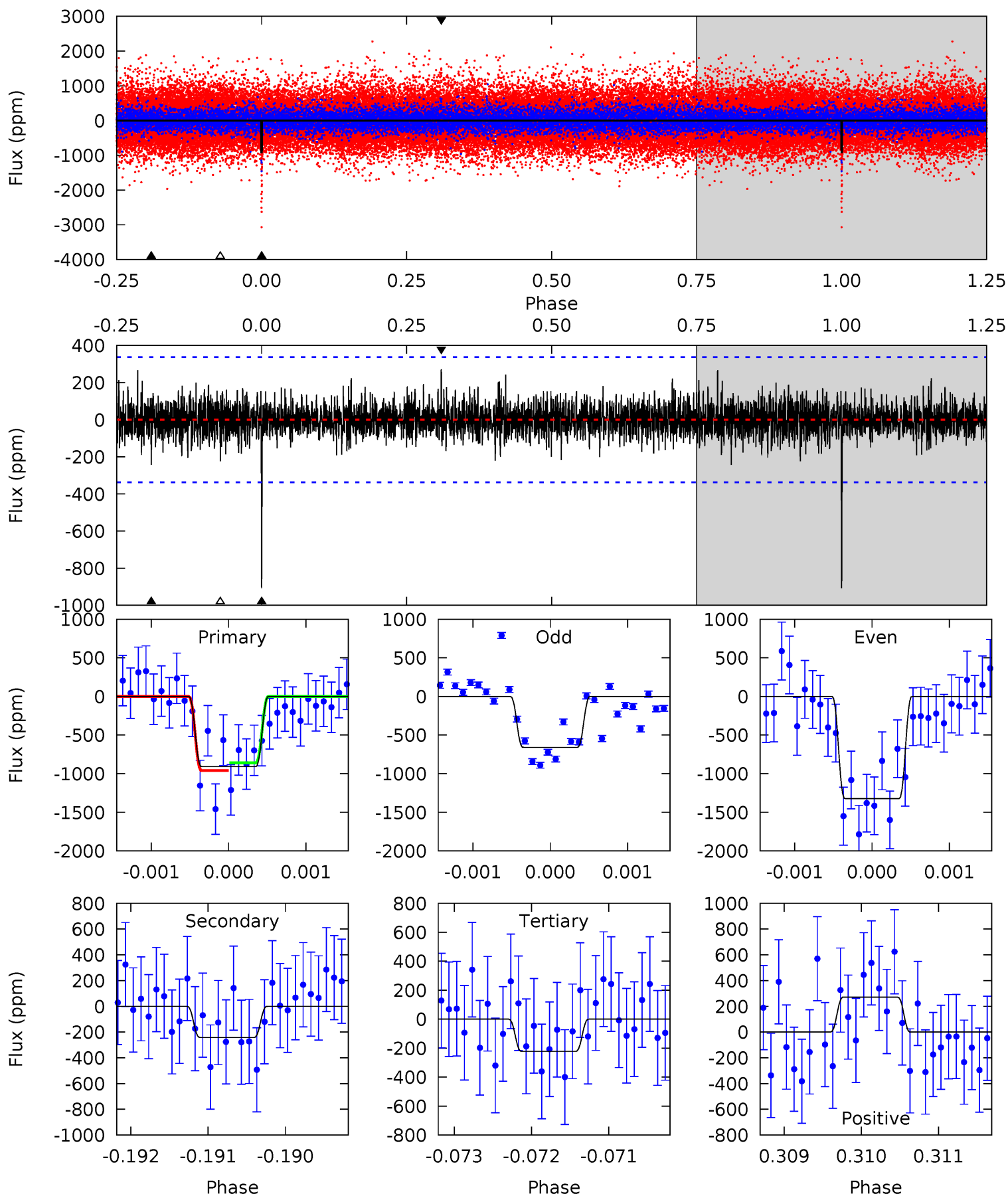
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	7.75	5.58	7.02	5.41	3.22	1.79	14.0	12.5	2.17	0.72	7.02	1.52	0.26	0.90



Alt Model-Shift Uniqueness Test

010732223-01, P = 297.846382 Days, E = 108.037024 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	3.92	3.59	4.38	5.45	3.29	1.03	11.1	10.3	0.32	-0.47	5.47	1.50	0.23	0.80



Stellar Parameters For KIC 010732223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4541^{+159}_{-159}	$4.598^{+0.059}_{-0.027}$	$-0.120^{+0.300}_{-0.300}$	$0.679^{+0.048}_{-0.060}$	$0.666^{+0.073}_{-0.055}$	$2.996^{+0.755}_{-0.342}$
	+4%/-4%	+1%/-1%	+250%/-250%	+7%/-9%	+11%/-8%	+25%/-11%
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 010732223-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-439 ± 57	$2.81^{+0.35}_{-0.34}$	263^{+9}_{-11}	3667^{+193}_{-175}	18238^{+5274}_{-3945}
Alt.	-242 ± 62	$2.33^{+0.32}_{-0.33}$	261^{+11}_{-10}	3522^{+259}_{-223}	14517^{+6815}_{-4745}

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 $A_{obs} \gg 1.0$

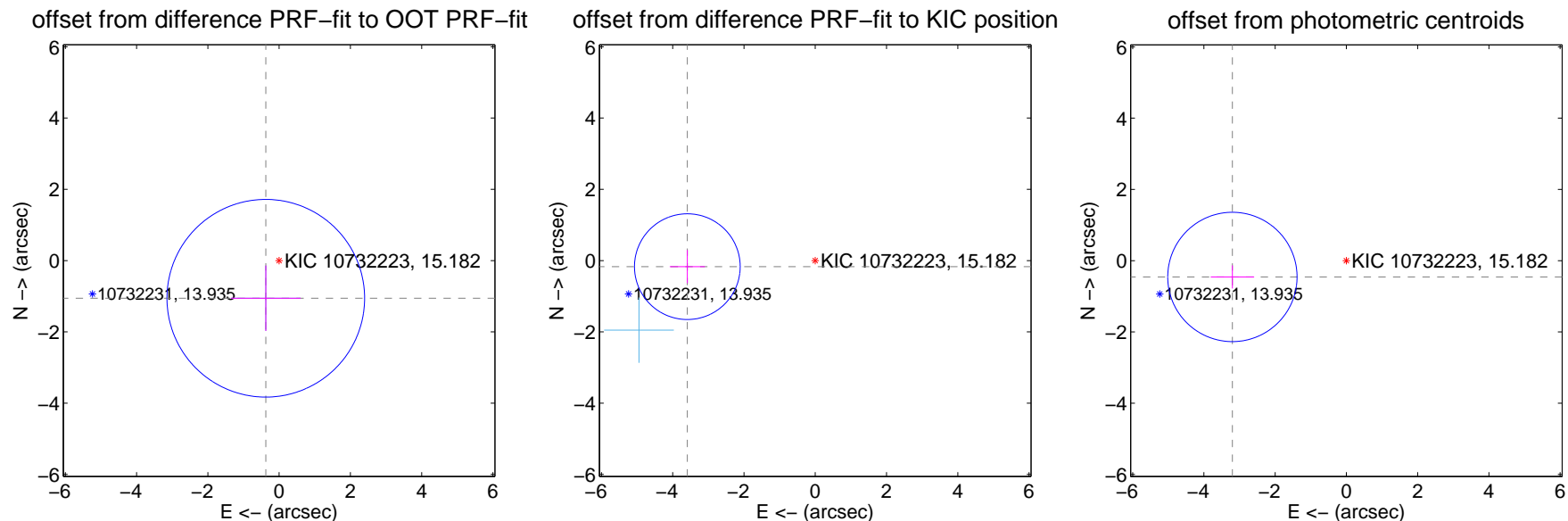
DV Centroid Data

Supplemental centroid analysis for 010732223-01. Kepler magnitude: 15.18. Transit SNR 10.22

There are 2 quarters with good PRF difference image offsets

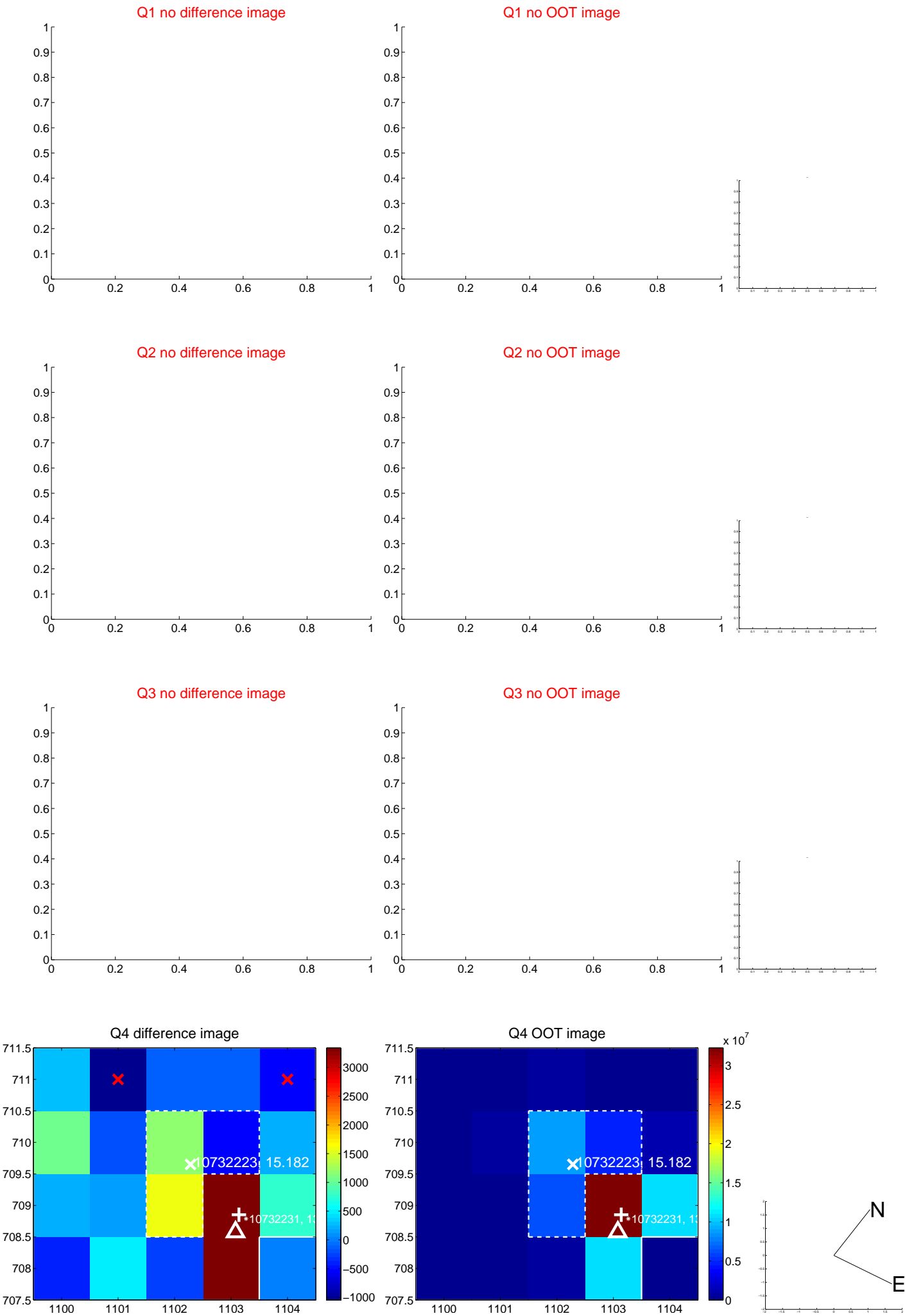
The OOT PRF centroid is offset from the target star catalog position by about 4.66 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.121 ± 0.924	1.21	0.375 ± 0.979	-1.057 ± 0.917
PRF-fit source offset from KIC position	3.595 ± 0.494	7.27	3.591 ± 0.495	-0.170 ± 0.465
photometric centroid source offset	3.23 ± 0.61	5.34	3.20 ± 0.61	-0.46 ± 0.32

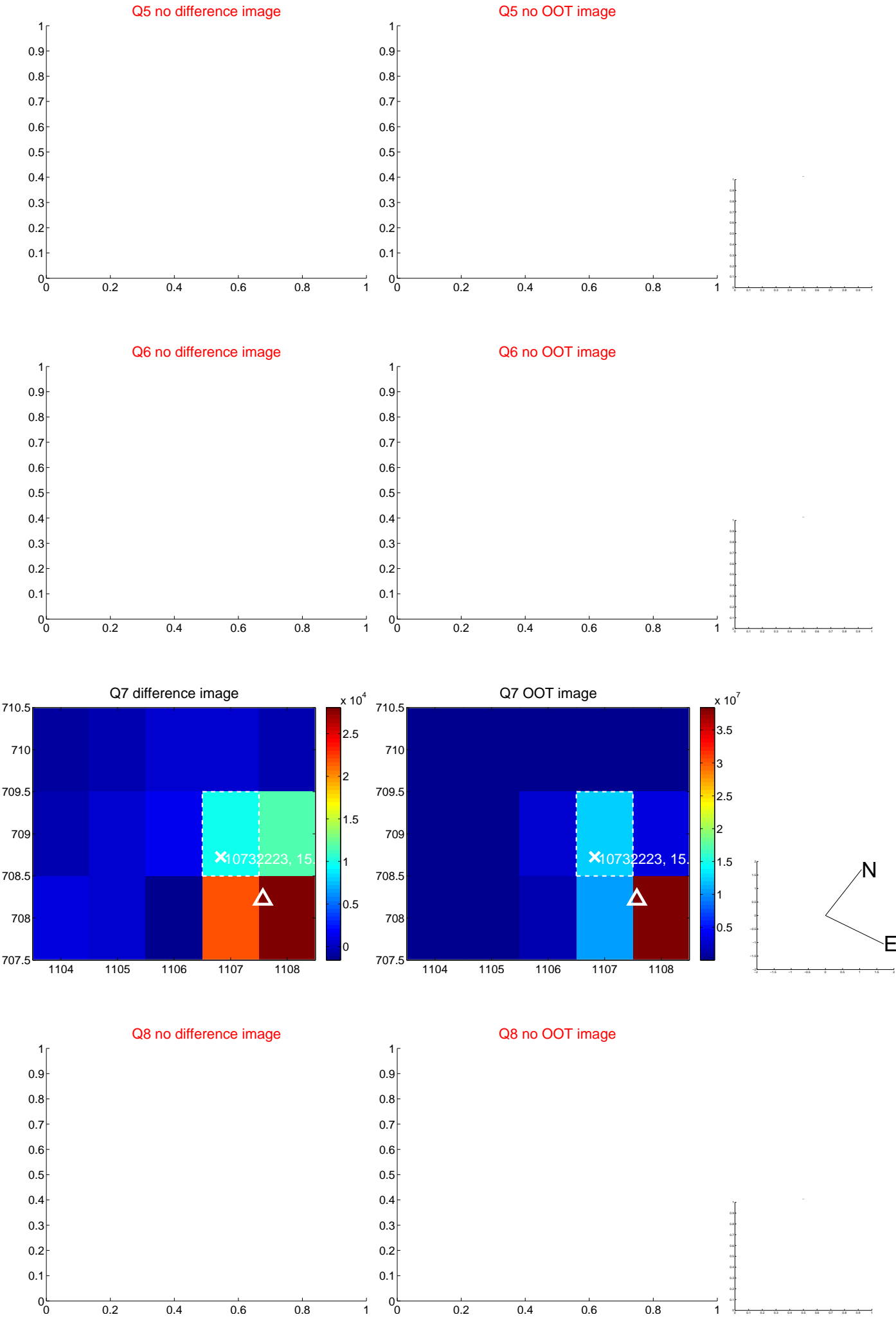


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



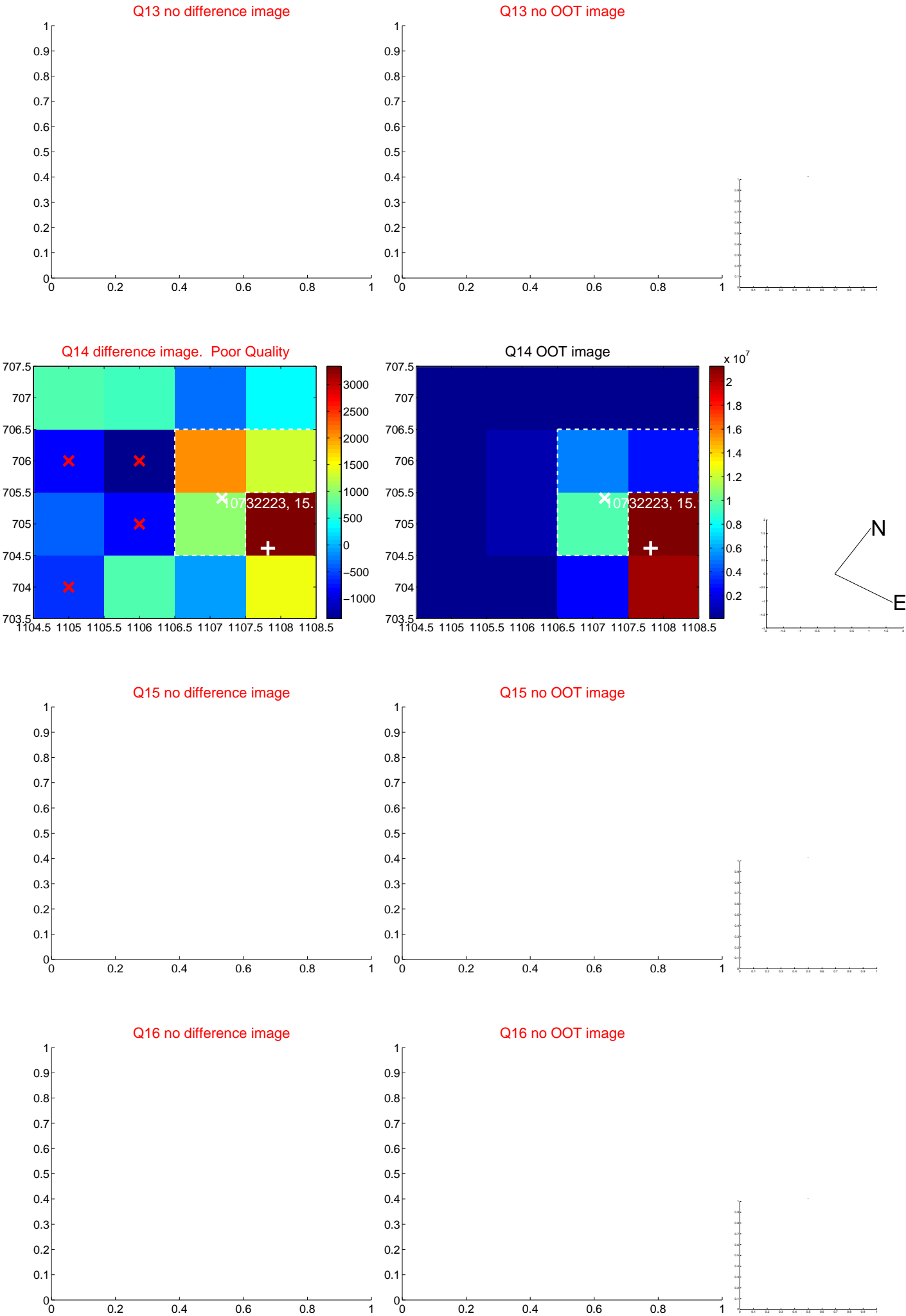
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



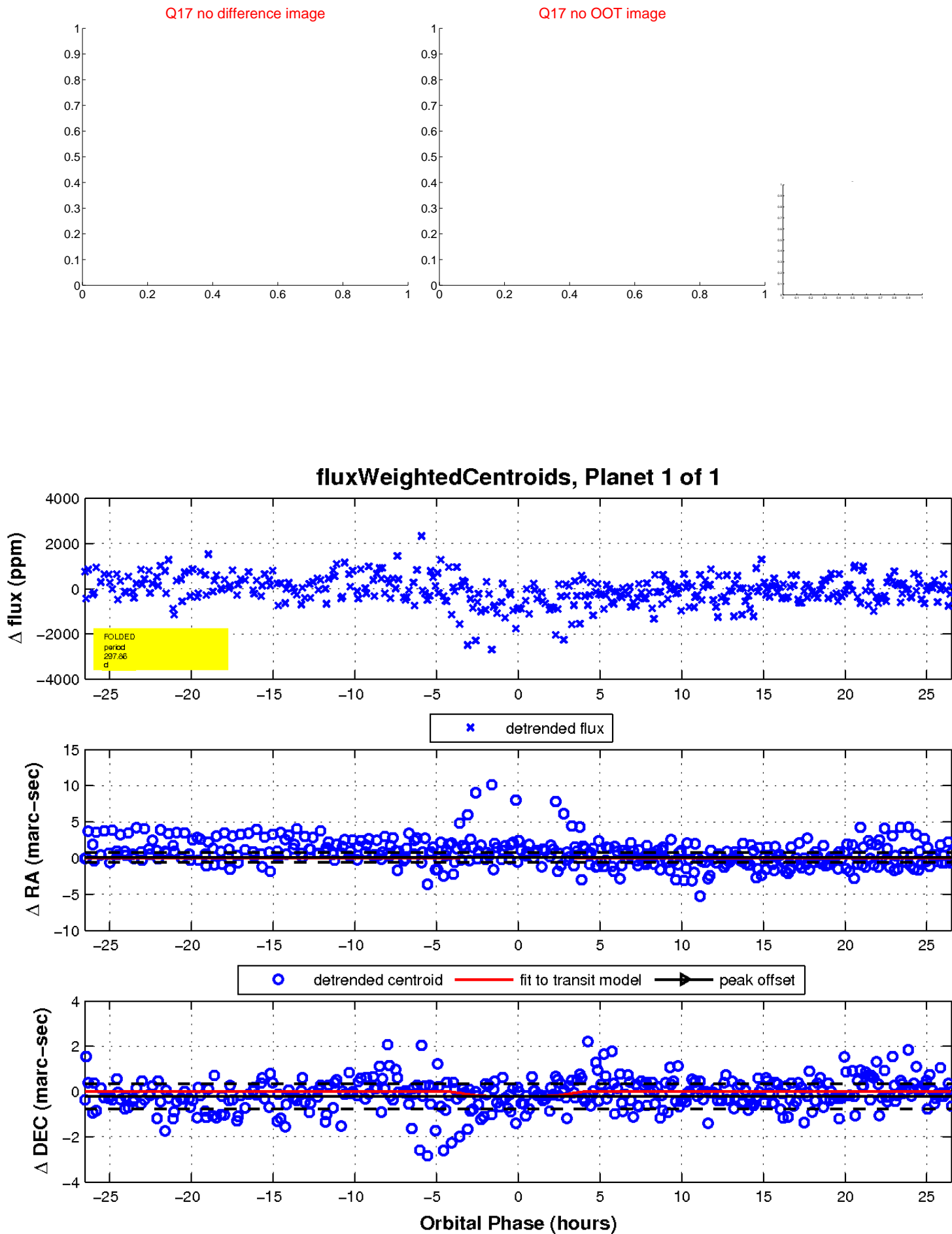
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

