

KIC 010753072

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})
010753072-01	OBS	No	371.534605	398.406904	1242.3	5.134	8.5	6.9	0.35	3489	1.27	0.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010753072-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

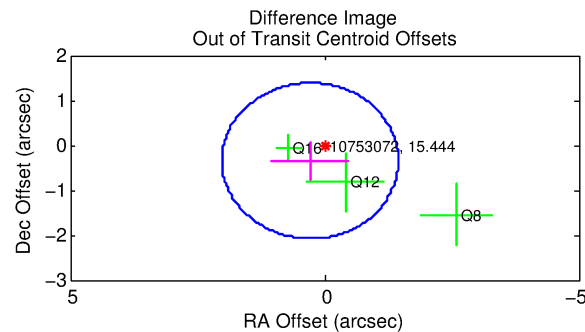
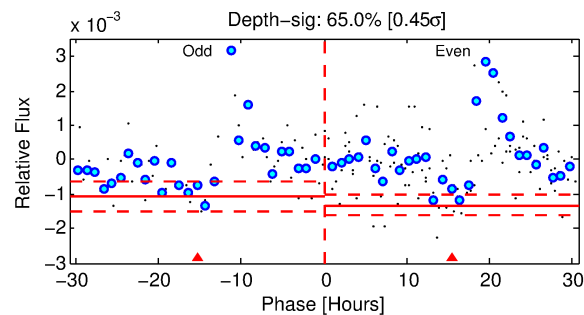
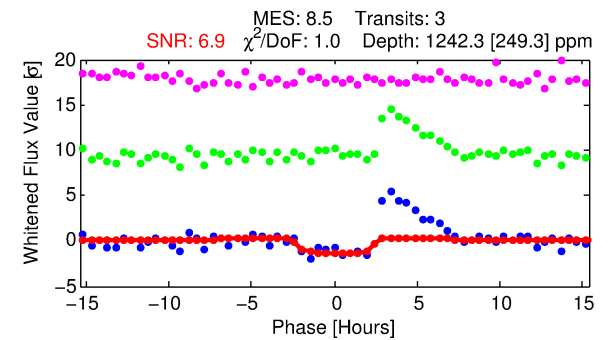
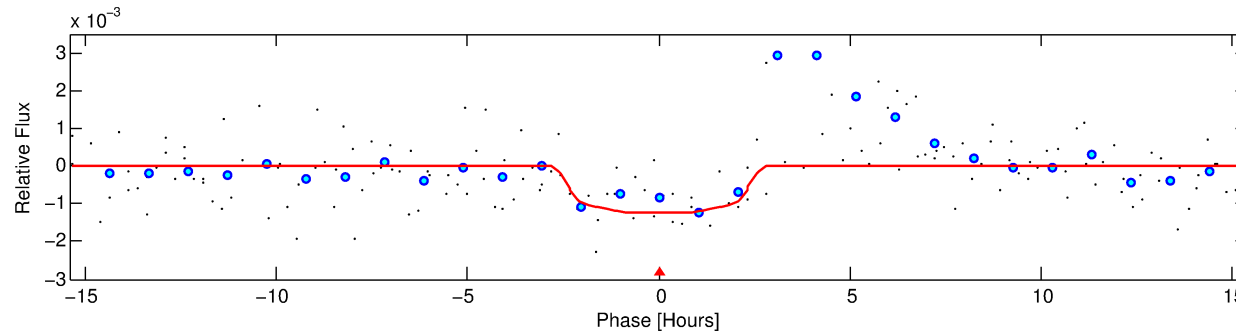
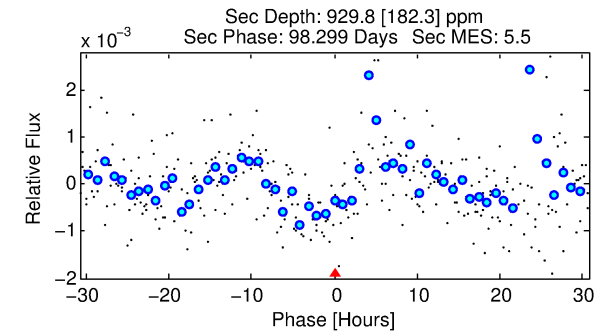
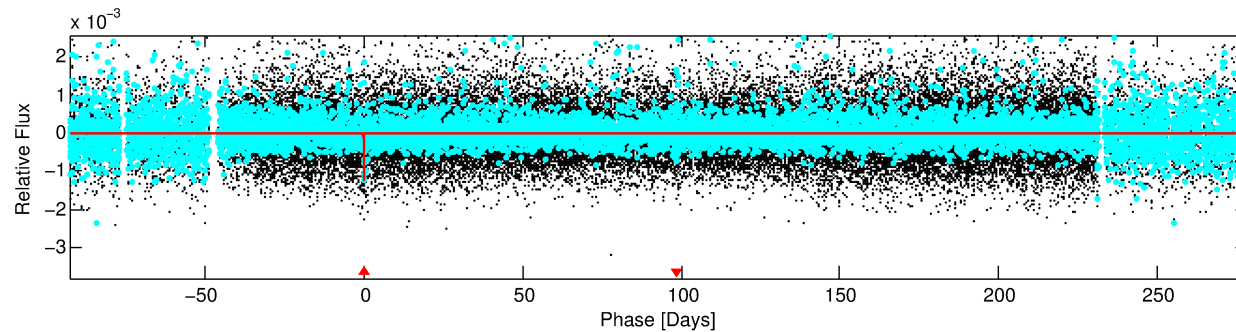
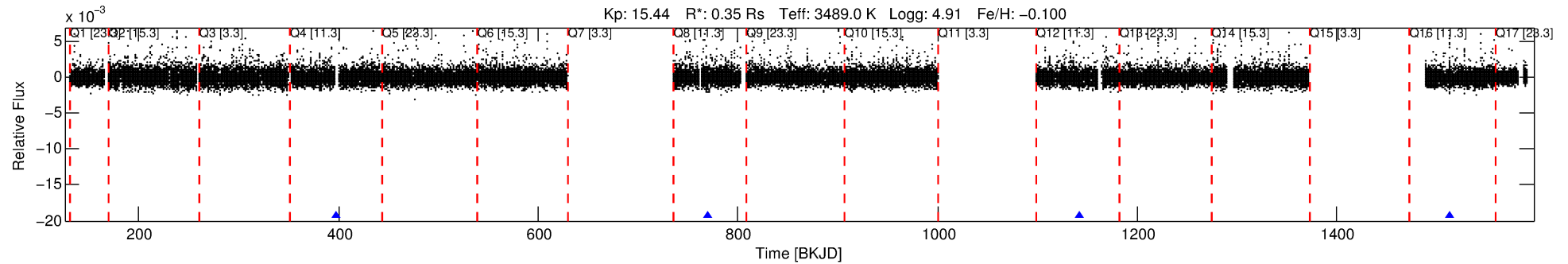
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010753072-01

No Significant Match Found

DV One-Page Summary

KIC: 10753072 Candidate: 1 of 1 Period: 371.535 d



DV Fit Results:

Period = 371.53460 [0.01038] d
Epoch = 398.4069 [0.0226] BKJD
Rp/R* = 0.0334 [0.1073]
a/R* = 473.97 [6635.45]
b = 0.58 [16.30]
Seff = 0.03 [0.00]
Teq = 107 [3] K
Rp = 1.27 [4.08] Re
a = 0.7179 [0.0502] AU
Ag = 164014.62 [1055140.03] [0.16 σ]
Teffp = 3334 [5362] K [0.60 σ]

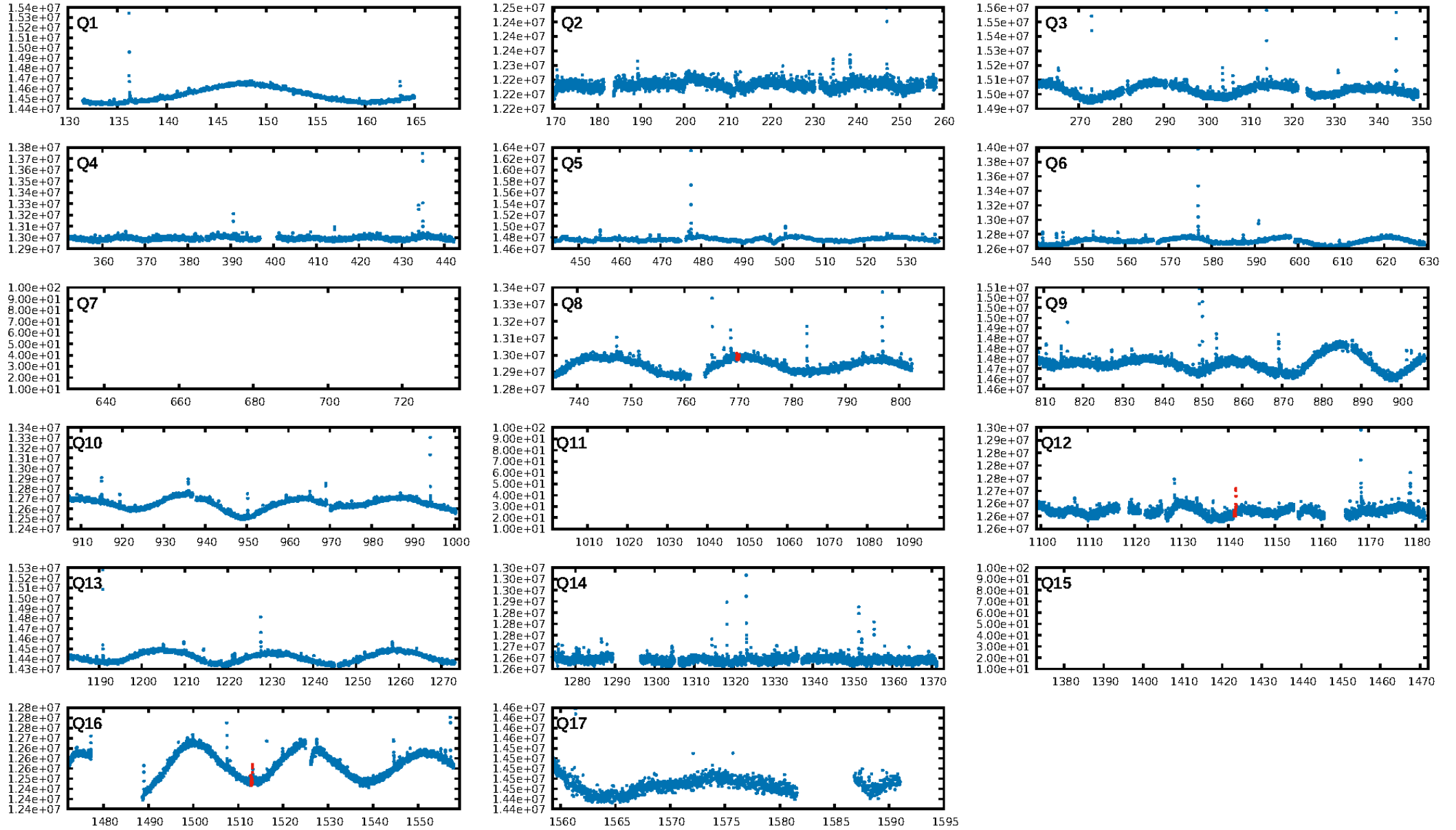
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.3%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 1.33e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.679
Centroid-sig: 33.7%
Centroid-so: 0.187 arcsec [0.13 σ]
OotOffset-rm: 0.450 arcsec [0.78 σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-rm: 0.488 arcsec [0.76 σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

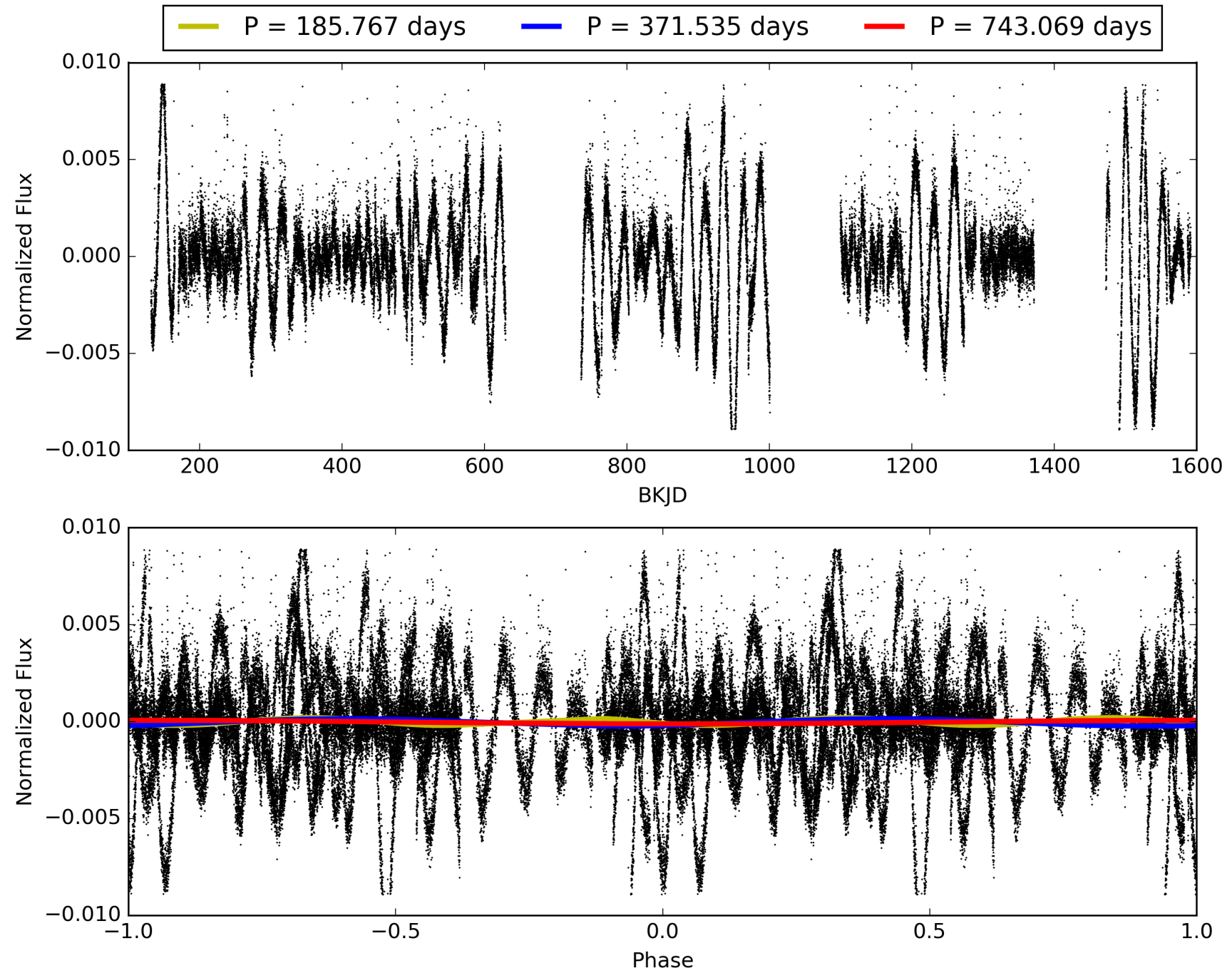
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:32:54 Z

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

TCE 010753072-01, PDC Light Curves

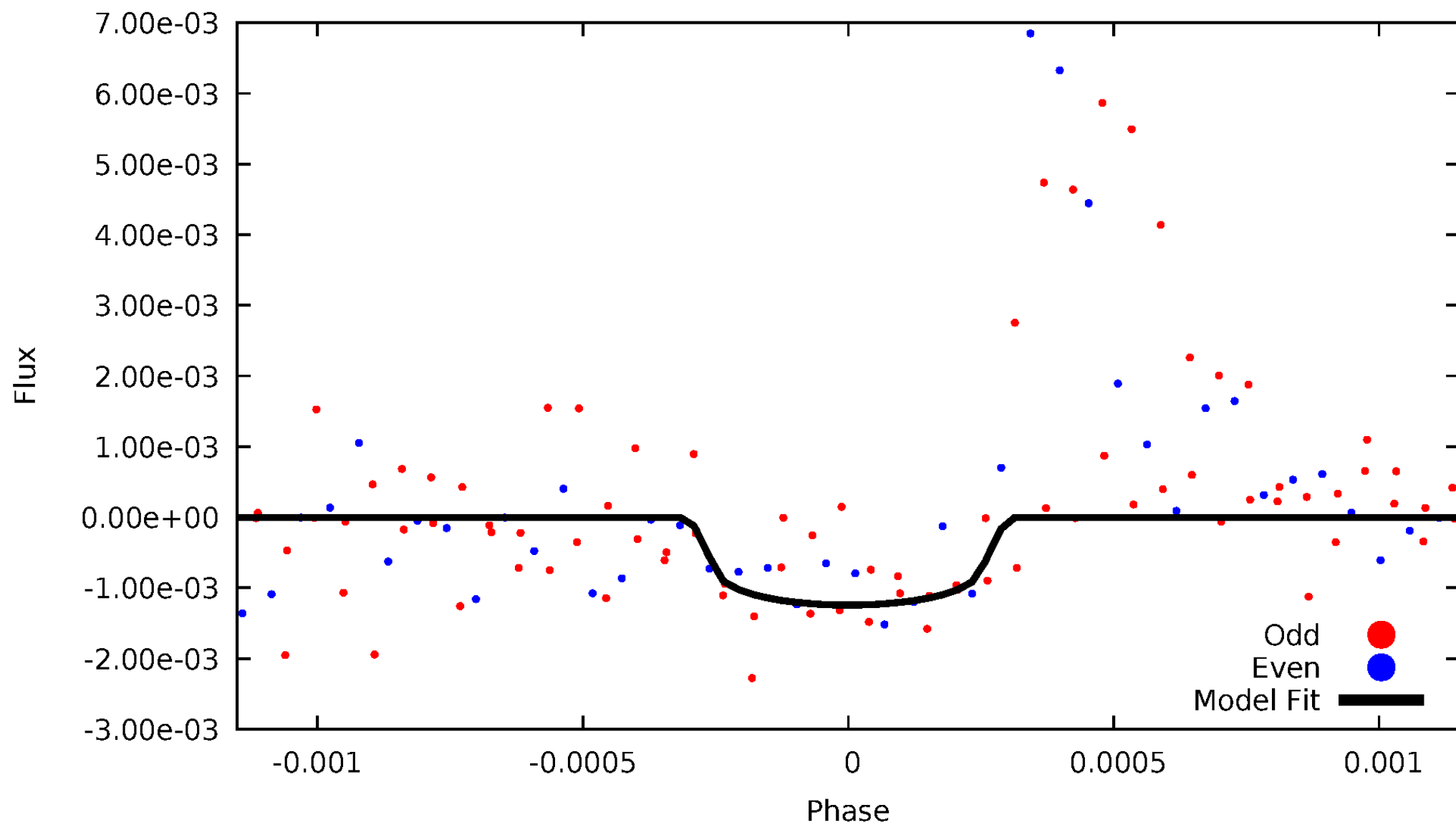


TCE 010753072-01



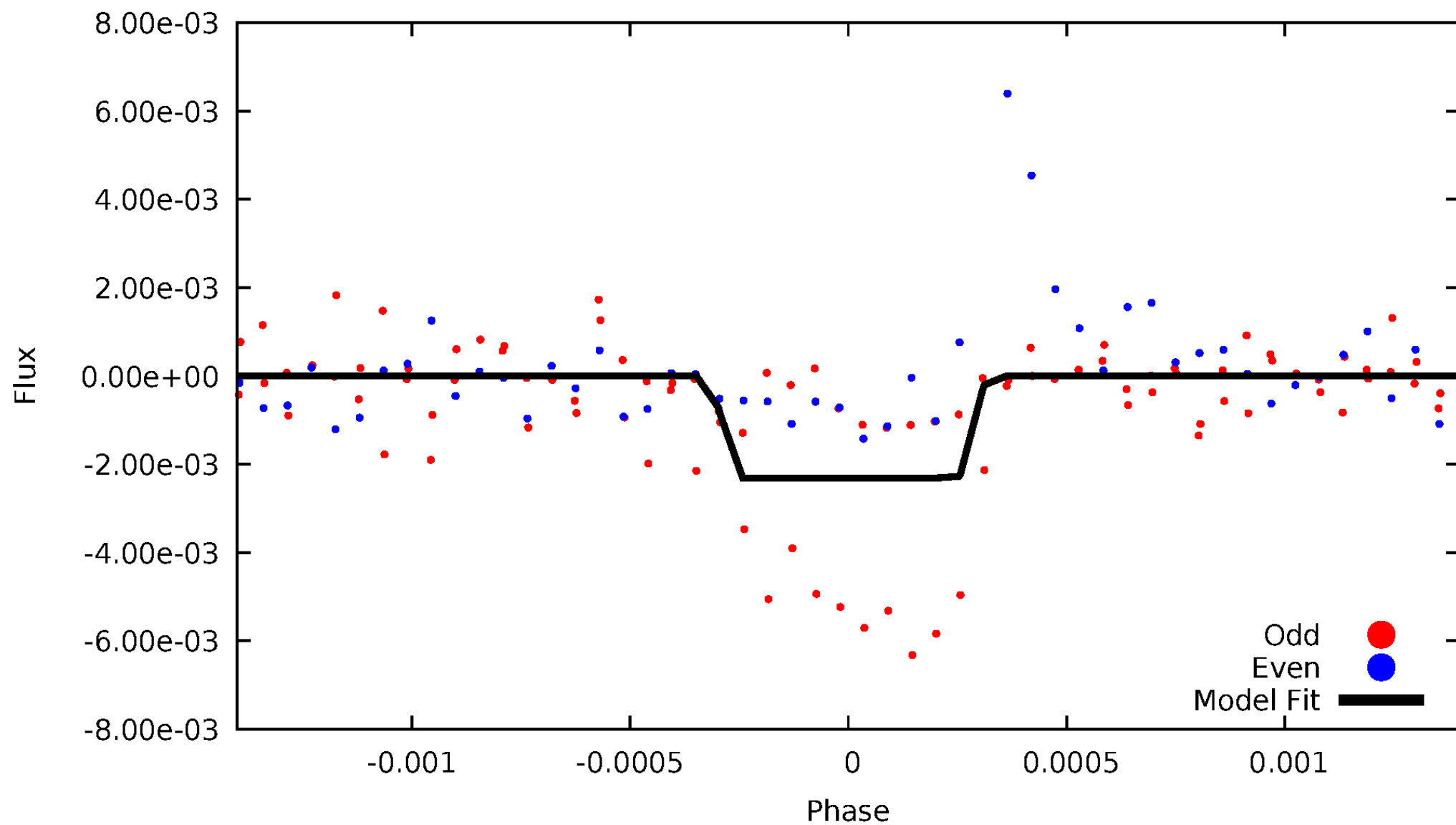
DV Odd/Even

TCE 010753072-01



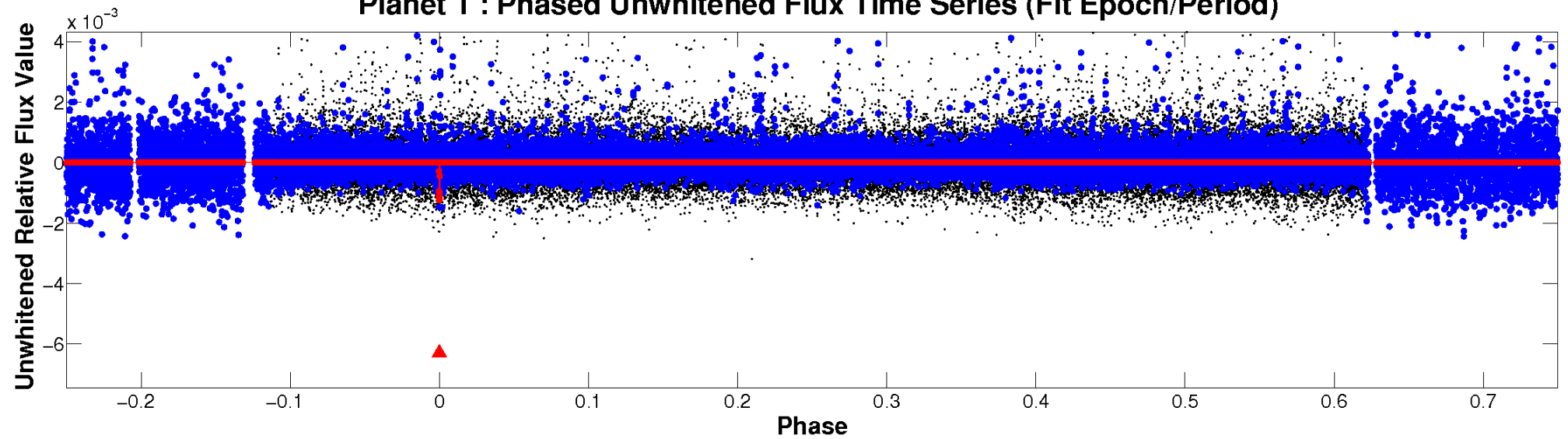
ALT Odd/Even

TCE 010753072-01

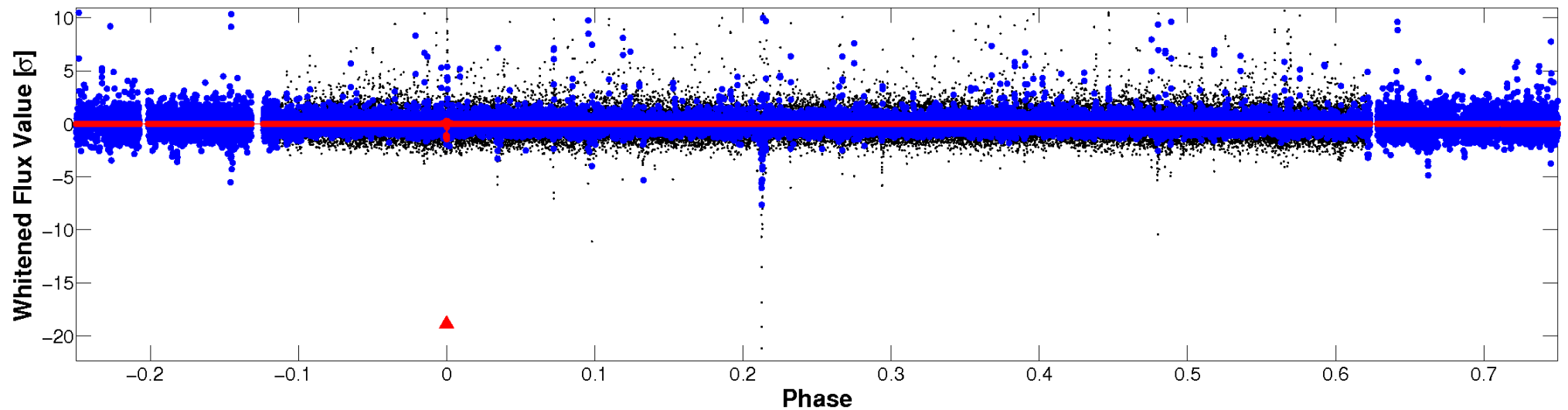


Non-Whitened Vs. Whitened Light Curve

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

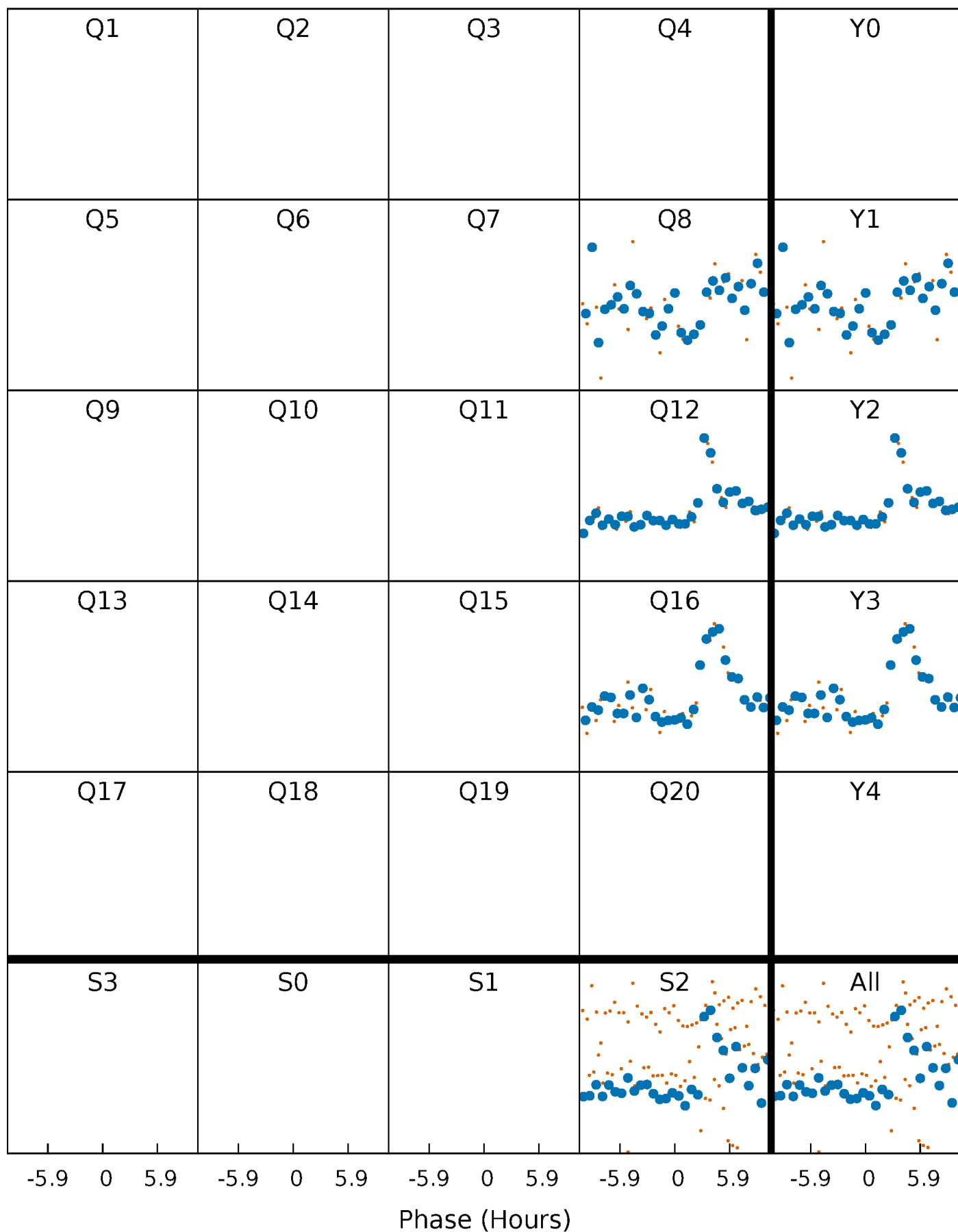


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



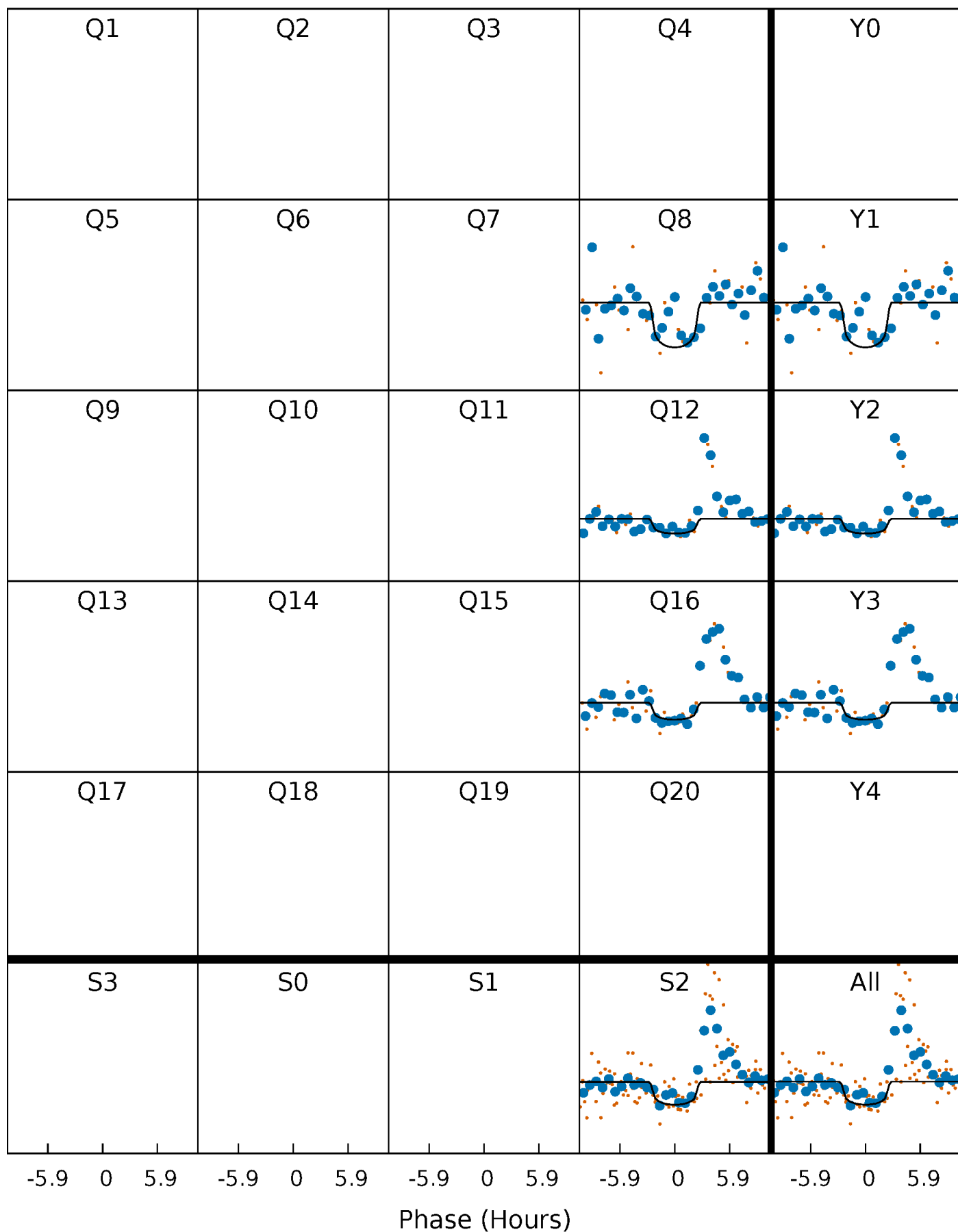
PDC Quarter-Phased Transit Curves

TCE 010753072-01 P=371.534605 Days $T_0=398.406904$ (BKJD)



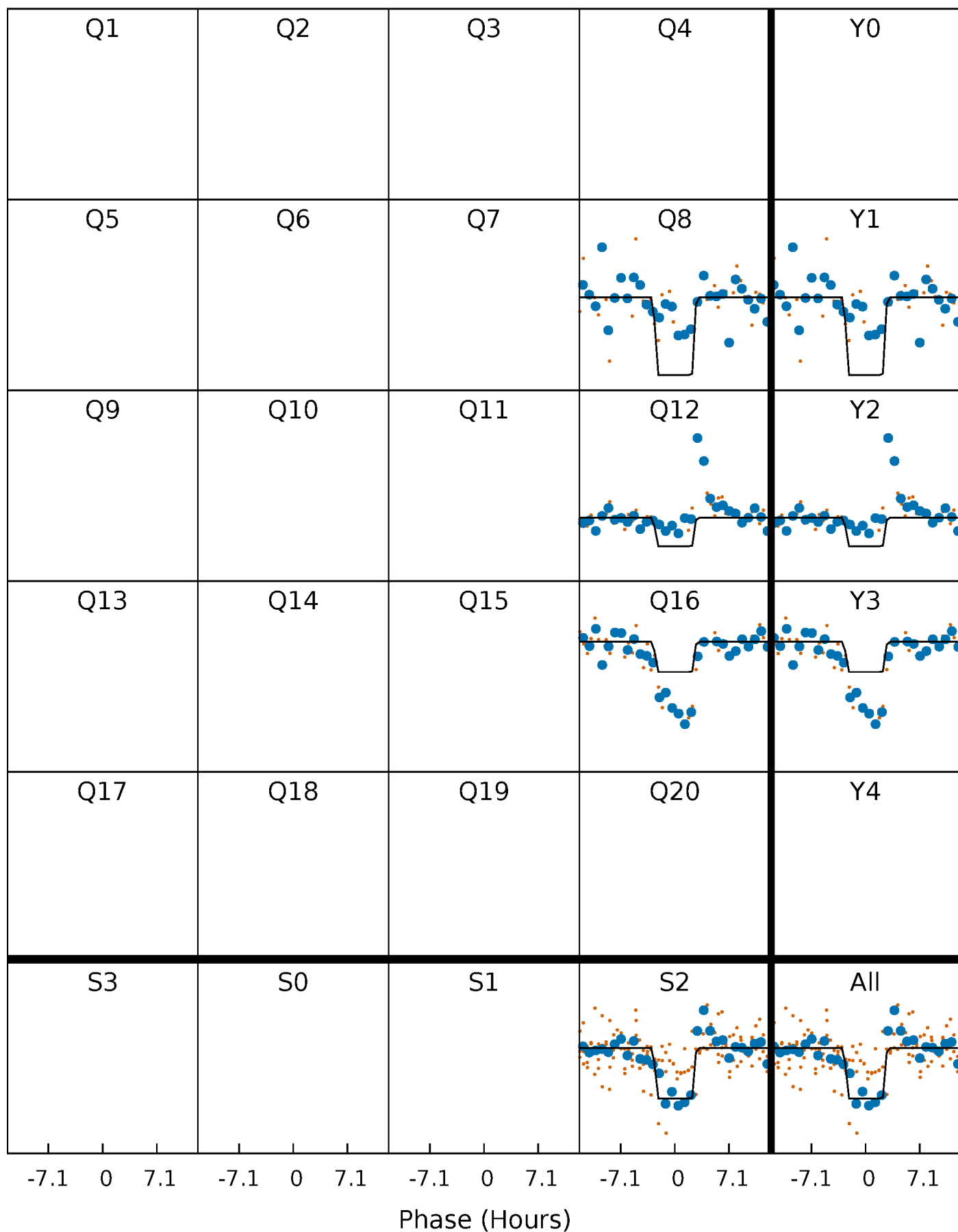
DV Quarter-Phased Transit Curves

TCE 010753072-01 $P=371.534605$ Days $T_0=398.406904$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

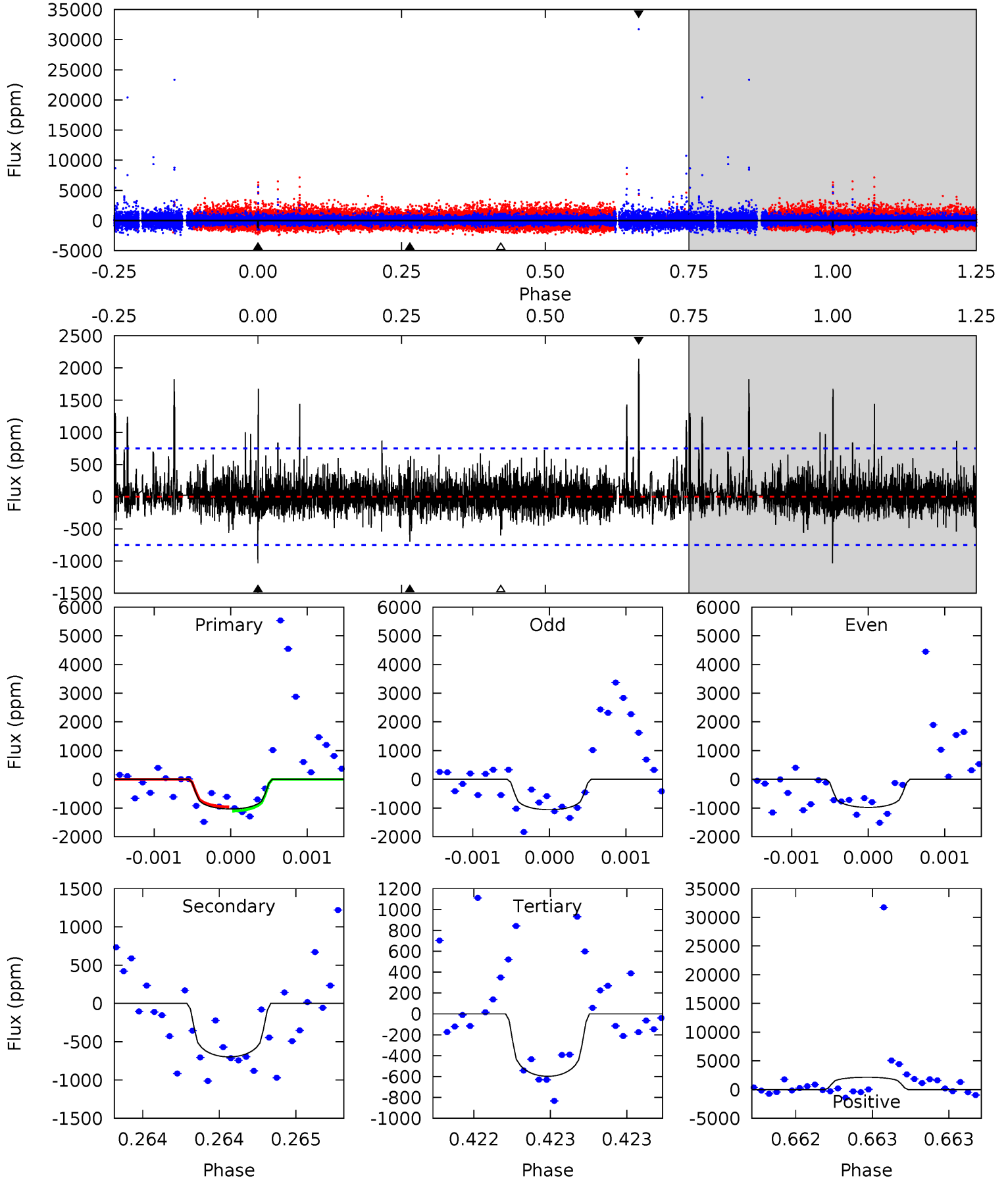
TCE 010753072-01 P=371.522988 Days $T_0=398.442501$ (BKJD)



DV Model-Shift Uniqueness Test

010753072-01, P = 371.534605 Days, E = 26.872299 Days

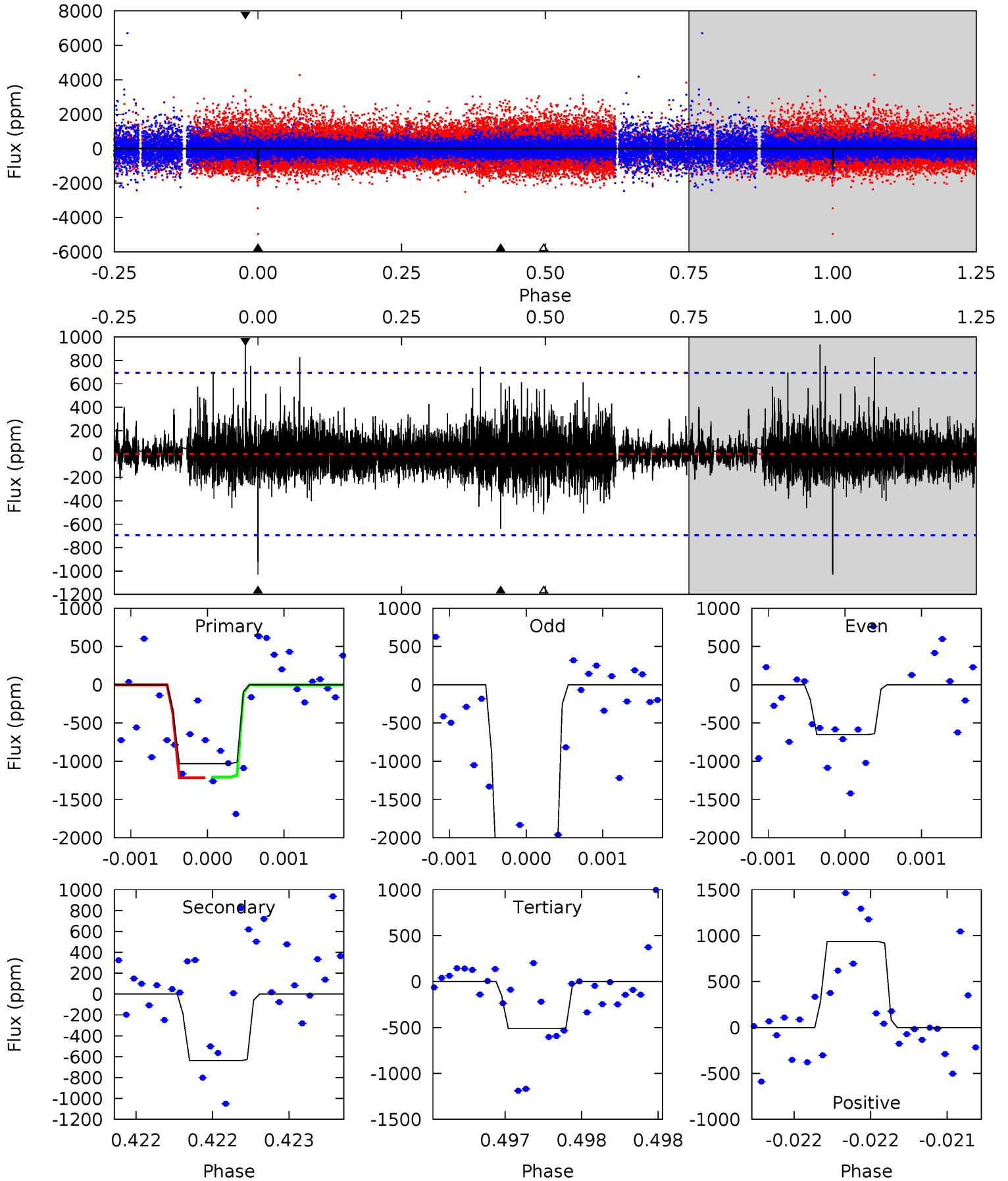
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	5.15	4.41	15.8	5.55	3.44	1.45	3.22	-8.19	0.74	-10.7	0.26	1.05	0.67	0.52



Alt Model-Shift Uniqueness Test

010753072-01, P = 371.522988 Days, E = 26.919513 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	5.07	4.08	7.44	5.52	3.41	1.04	4.11	0.75	1.00	-2.36	9.38	2.90	0.48	0.04



Stellar Parameters For KIC 010753072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3489^{+46}_{-46}	$4.908^{+0.033}_{-0.033}$	$-0.100^{+0.100}_{-0.100}$	$0.348^{+0.030}_{-0.034}$	$0.359^{+0.038}_{-0.041}$	$12.000^{+2.340}_{-1.795}$
	+1%/-1%	+1%/-1%	+100%/-100%	+9%/-10%	+11%/-11%	+19%/-15%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010753072-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-698 ± 136	$3.39^{+3.48}_{-2.49}$	150^{+3}_{-3}	2493^{+1070}_{-369}	$17619^{+201752}_{-13328}$
Alt.	-638 ± 126	$3.38^{+3.25}_{-2.32}$	150^{+3}_{-3}	2464^{+889}_{-349}	$15448^{+143744}_{-11375}$

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 $A_{obs} \gg 1.0$

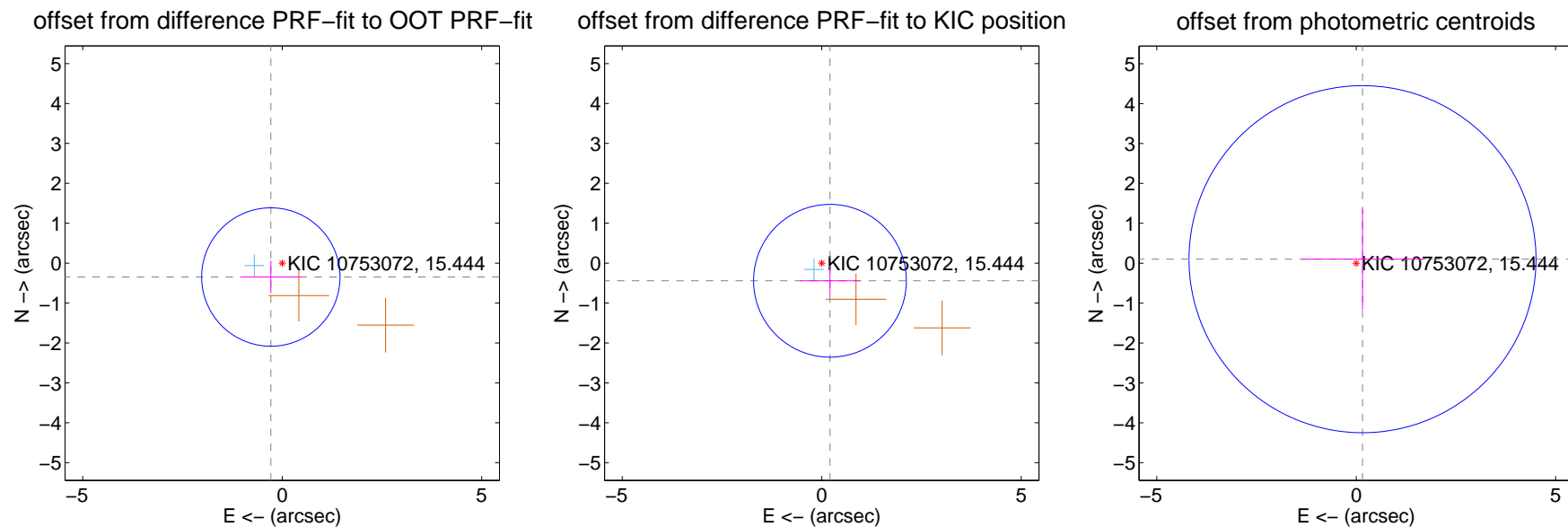
DV Centroid Data

Supplemental centroid analysis for 010753072-01. Kepler magnitude: 15.44. Transit SNR 6.92

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.450 ± 0.578	0.78	0.286 ± 0.763	-0.348 ± 0.408
PRF-fit source offset from KIC position	0.488 ± 0.638	0.76	-0.207 ± 0.747	-0.442 ± 0.362
photometric centroid source offset	0.19 ± 1.45	0.13	-0.16 ± 1.52	0.10 ± 1.26

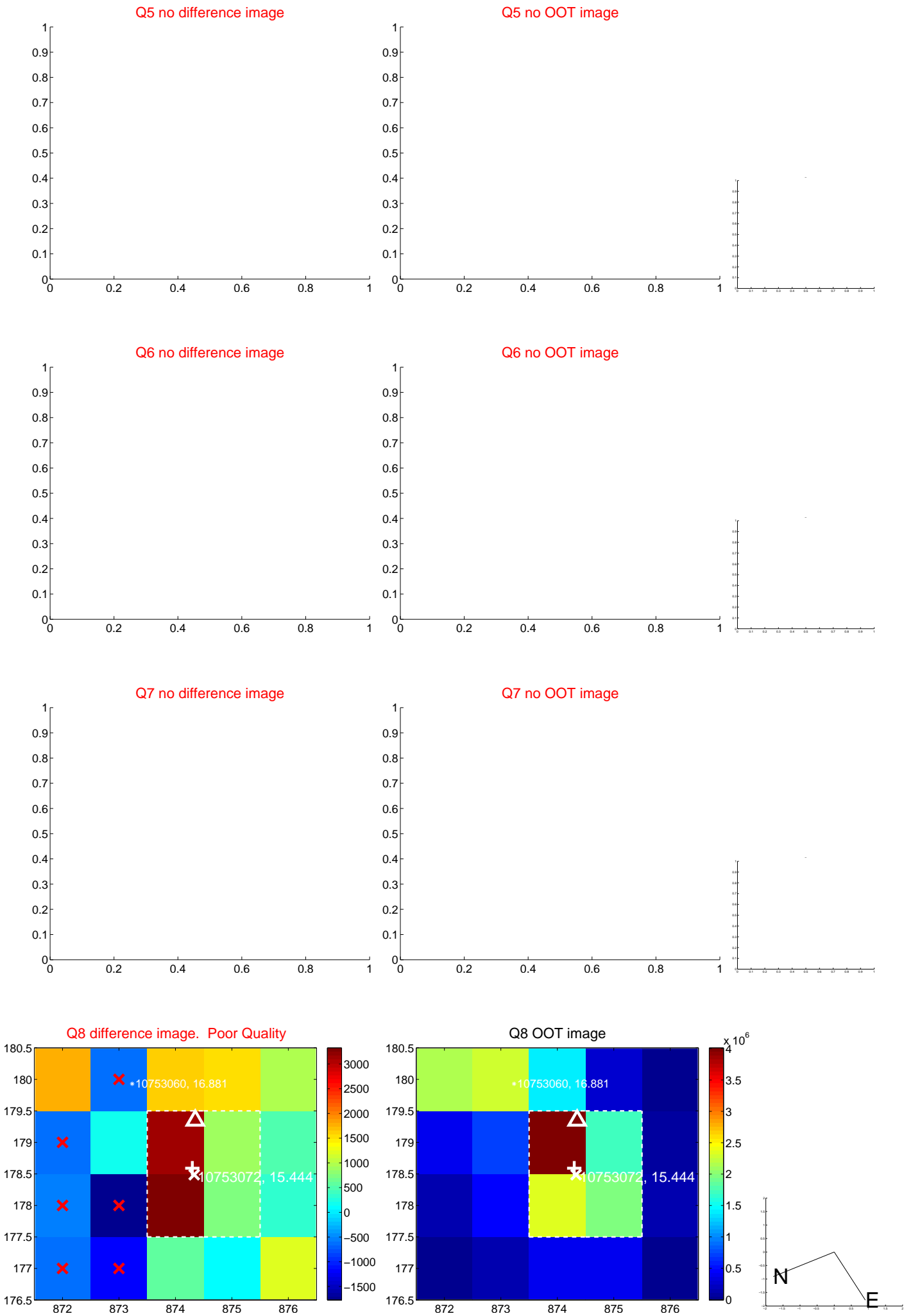


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

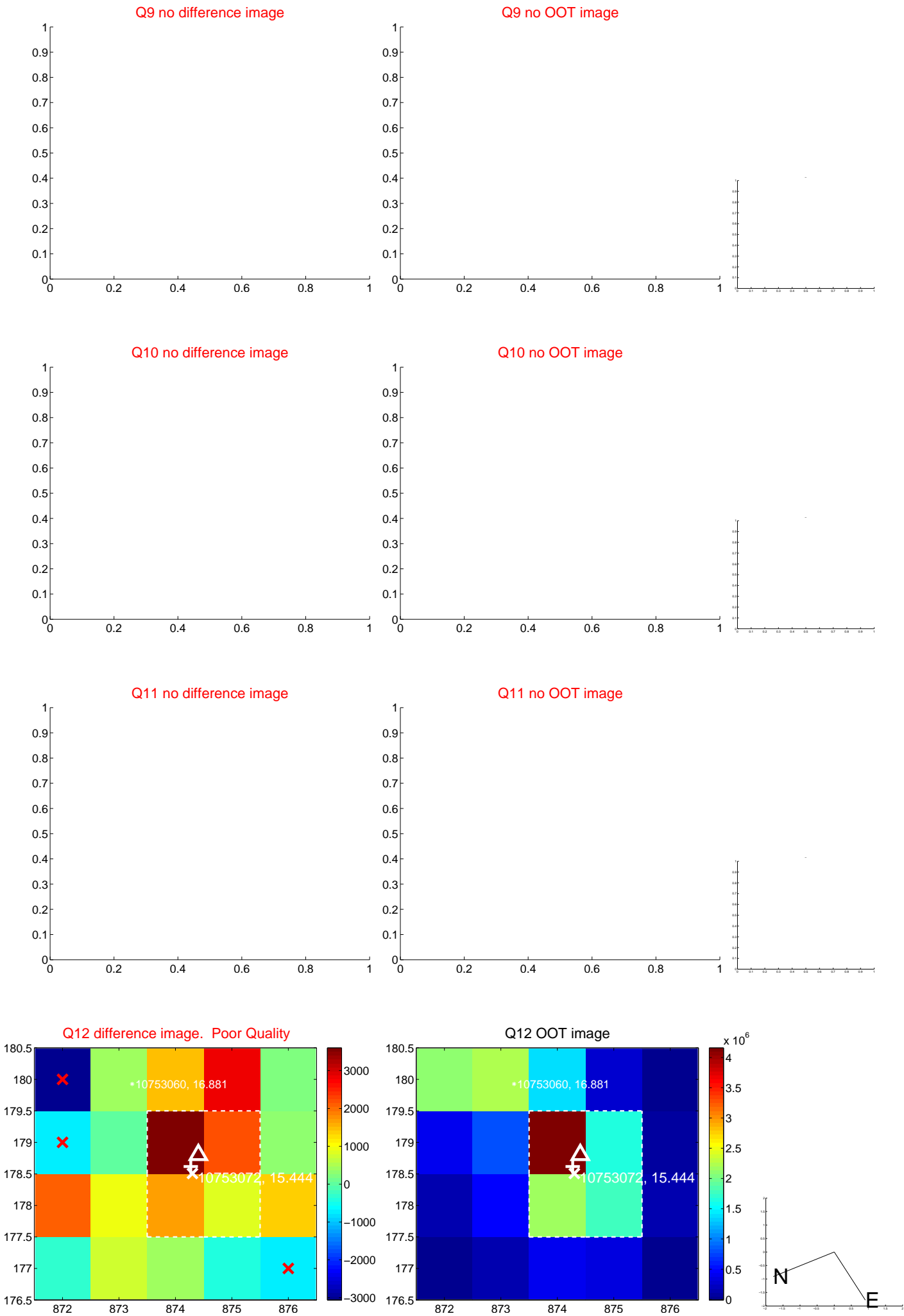
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



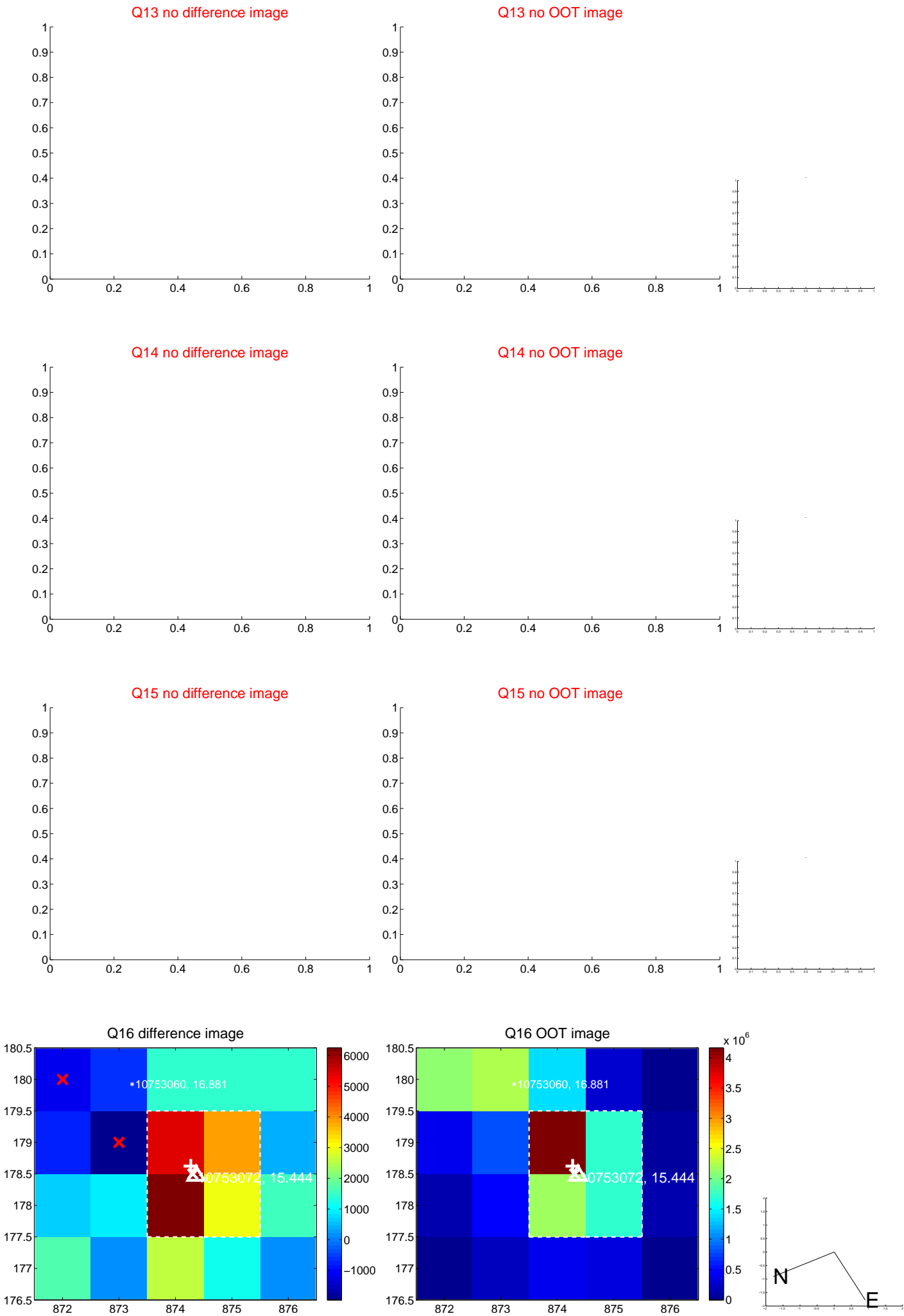
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



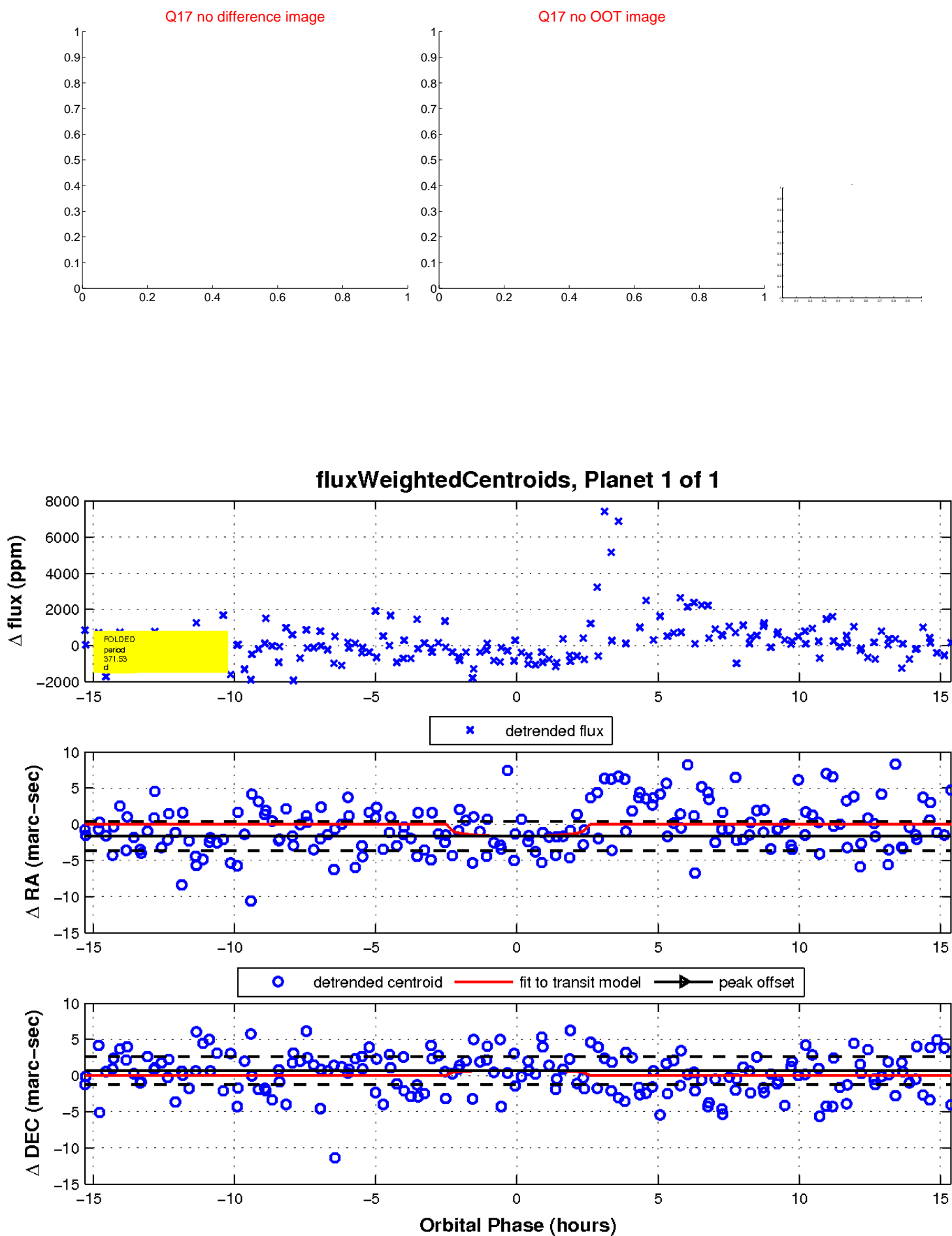
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

