

KIC 008307759

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})
008307759-01	OBS	No	364.305729	249.431540	1395.6	19.391	10.8	10.4	1.08	6306	4.66	1.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008307759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

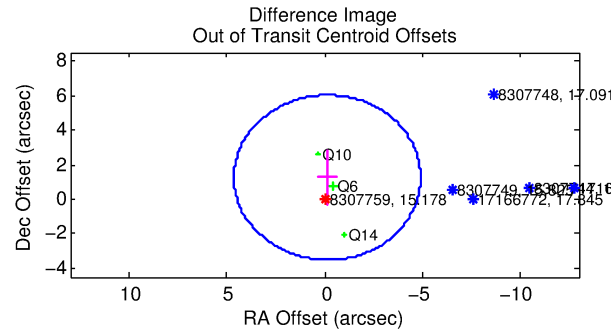
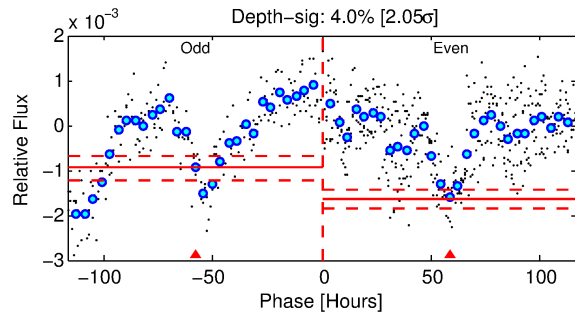
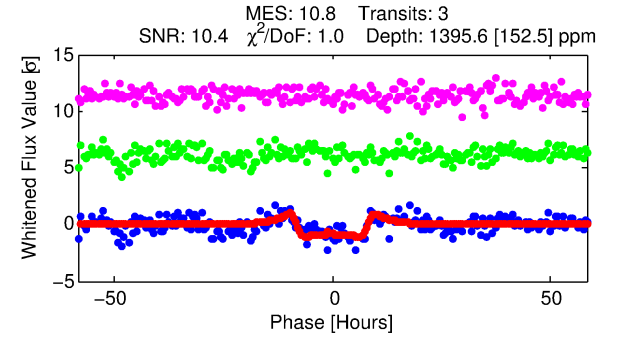
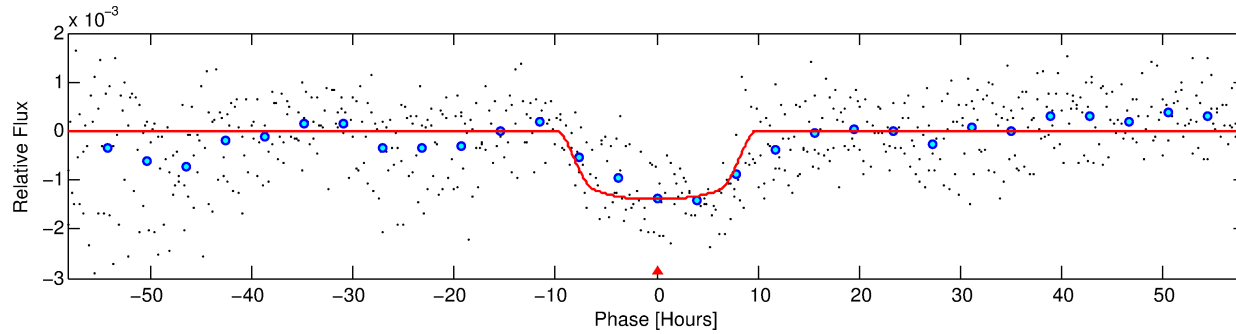
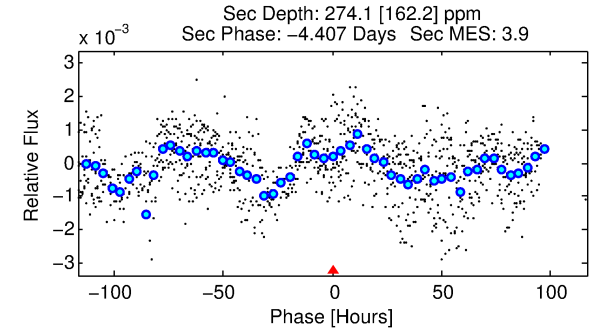
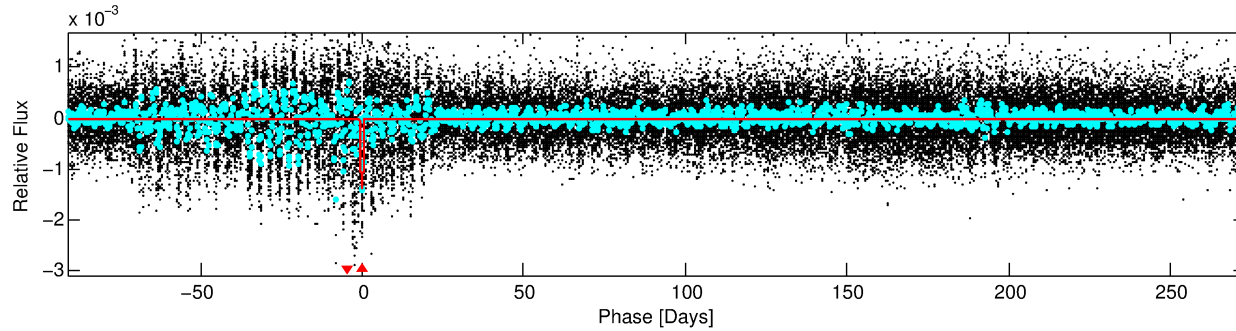
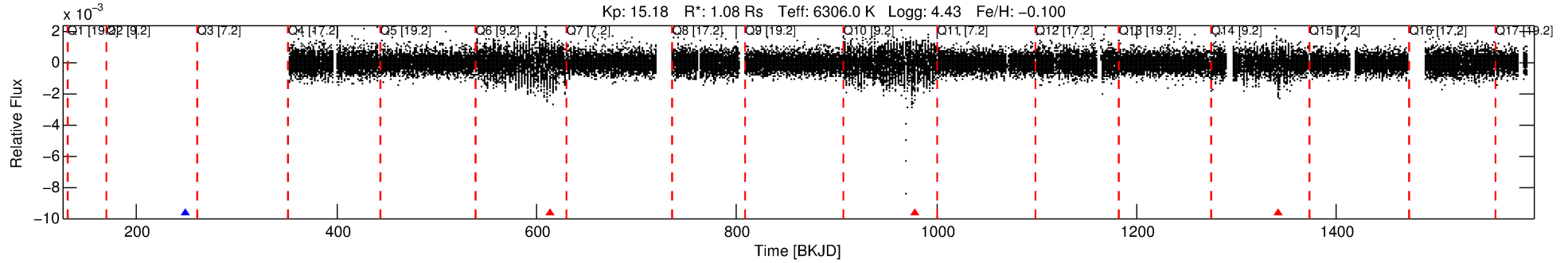
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008307759-01

No Significant Match Found

DV One-Page Summary

KIC: 8307759 Candidate: 1 of 1 Period: 364.306 d



DV Fit Results:

Period = 364.30573 [0.01246] d
Epoch = 249.4315 [0.0275] BKJD
Rp/R* = 0.0397 [0.0027]
a/R* = 78.41 [13.11]
b = 0.88 [0.04]
Self = 1.52 [0.66]
Teff = 283 [31] K
Rp = 4.66 [1.60] Re
a = 1.0388 [0.2892] AU
Ag = 7495.37 [5450.84] [1.37σ]
Teffp = 4073 [641] K [5.91σ]

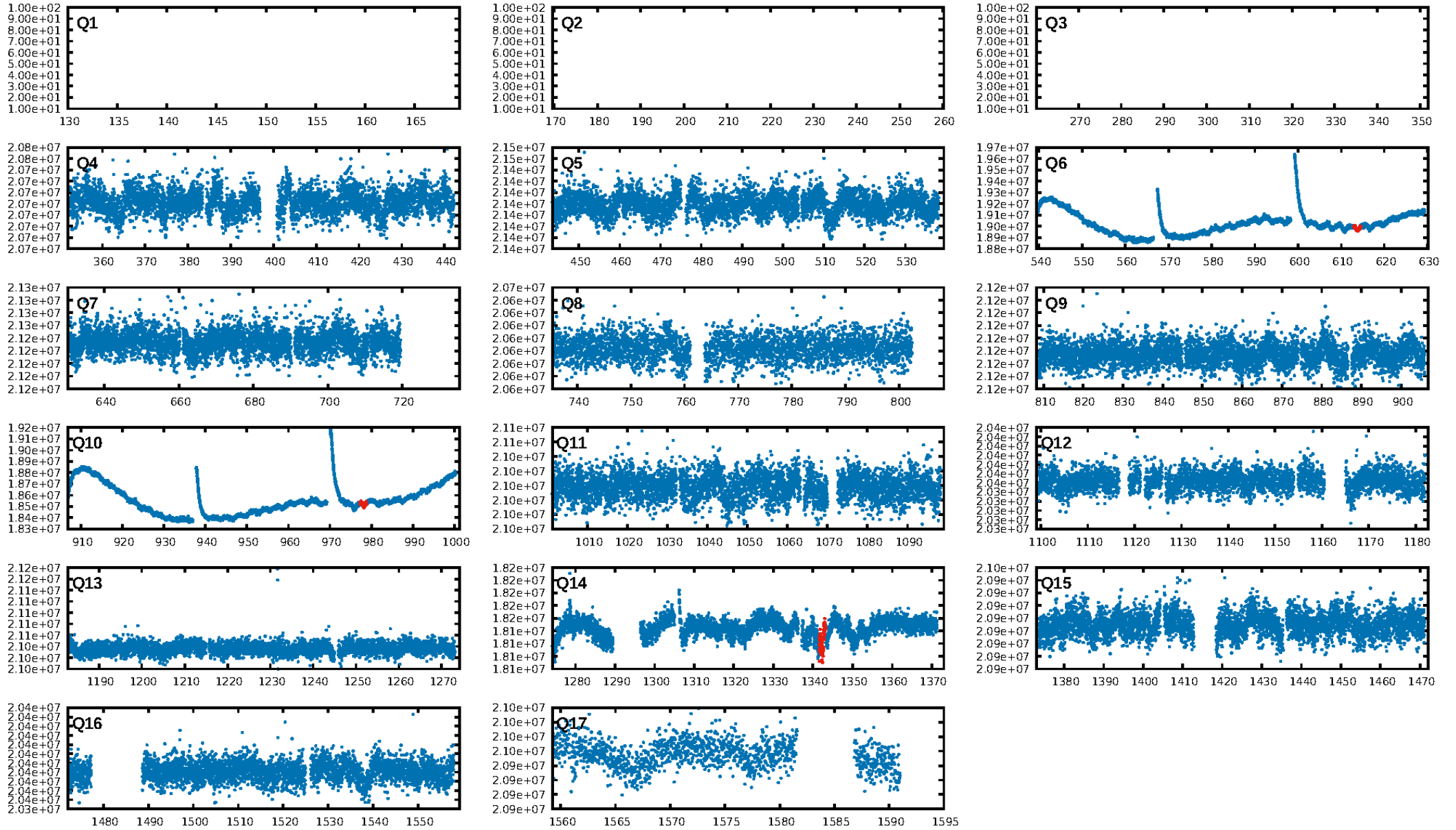
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.13e-13
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 2.125
Centroid-sig: 2.9%
Centroid-so: 1.459 arcsec [1.36σ]
OotOffset-rm: 1.262 arcsec [0.79σ]
KicOffset-rm: 0.890 arcsec [0.56σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

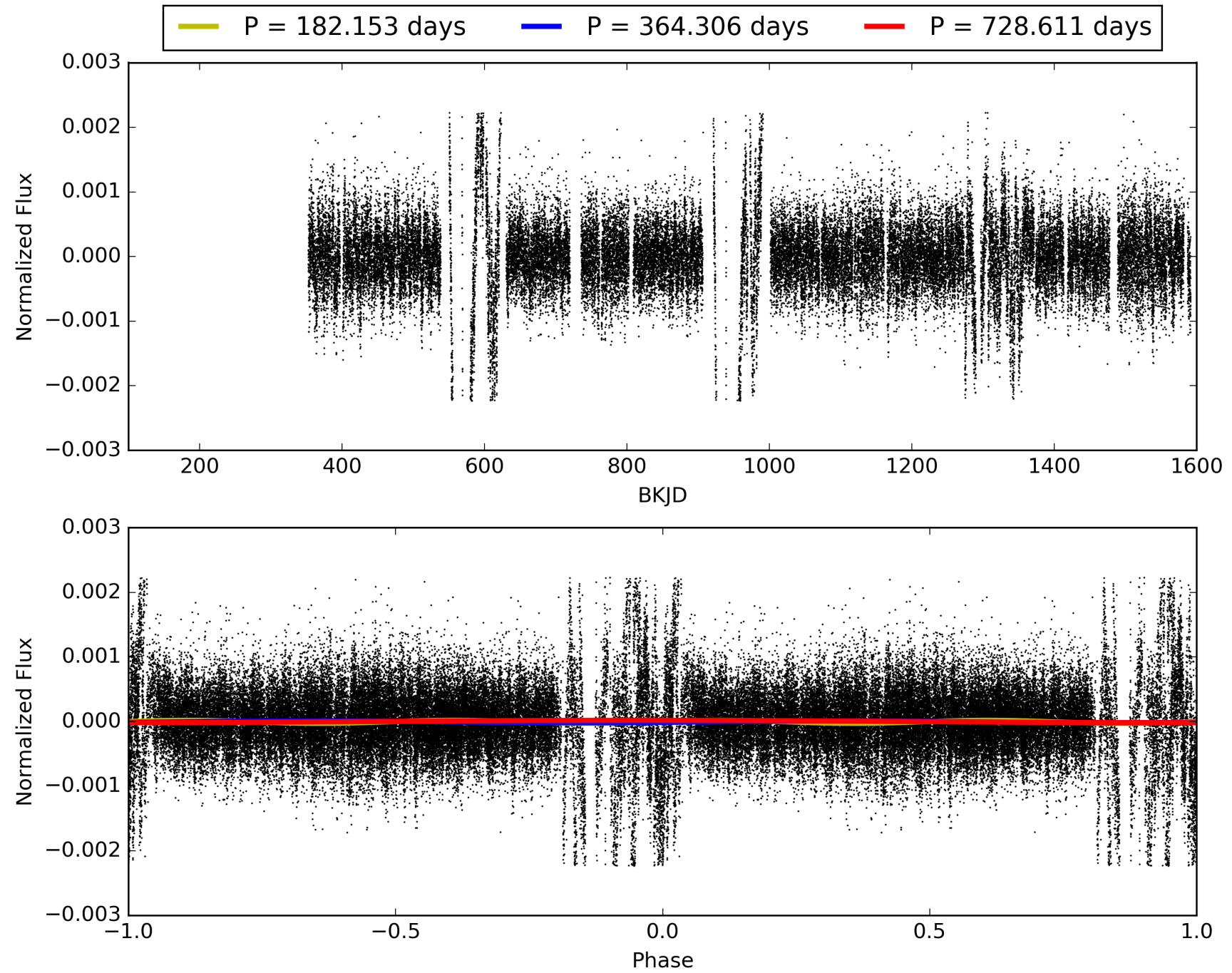
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:54:41 Z

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

TCE 008307759-01, PDC Light Curves

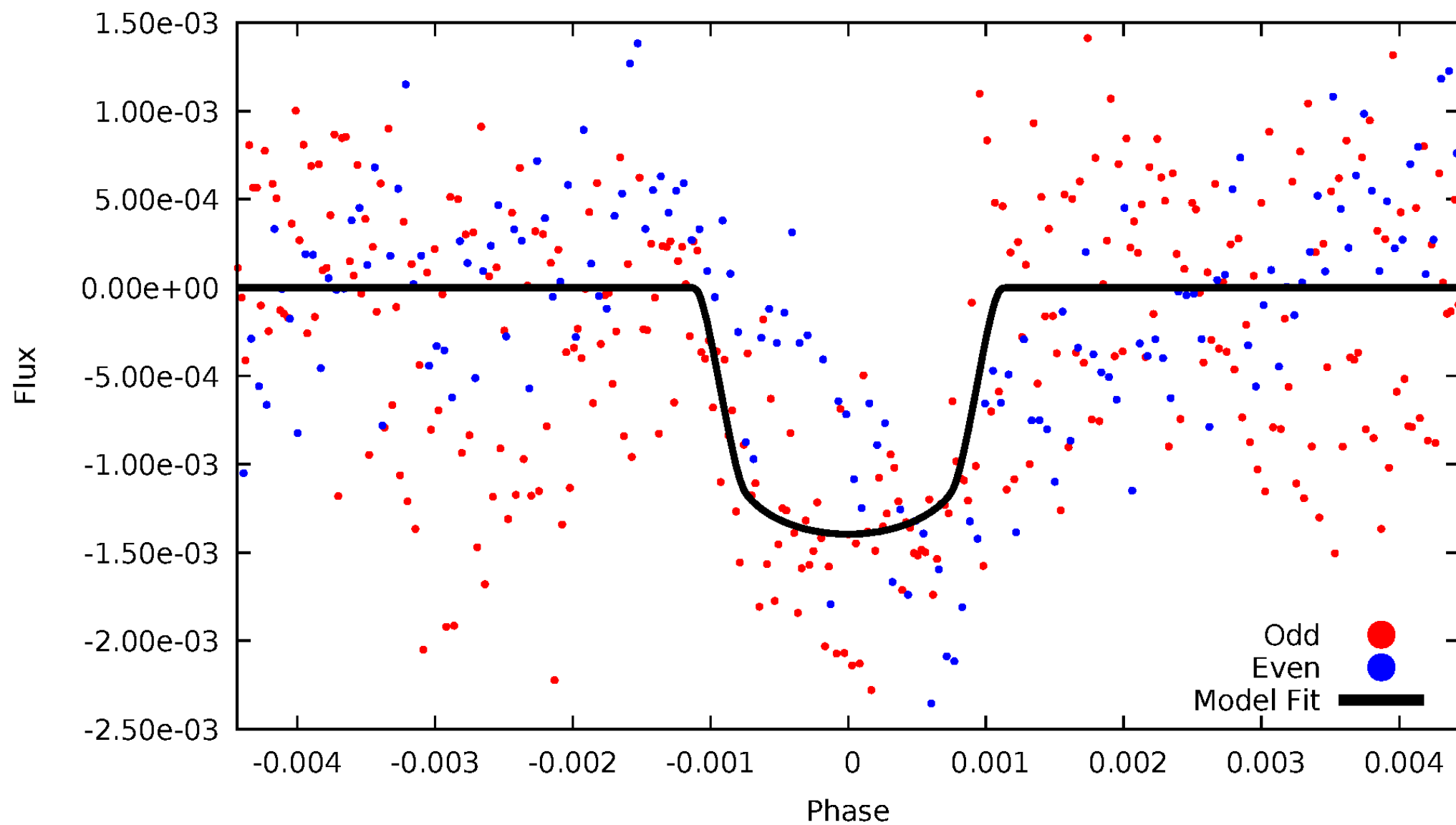


TCE 008307759-01



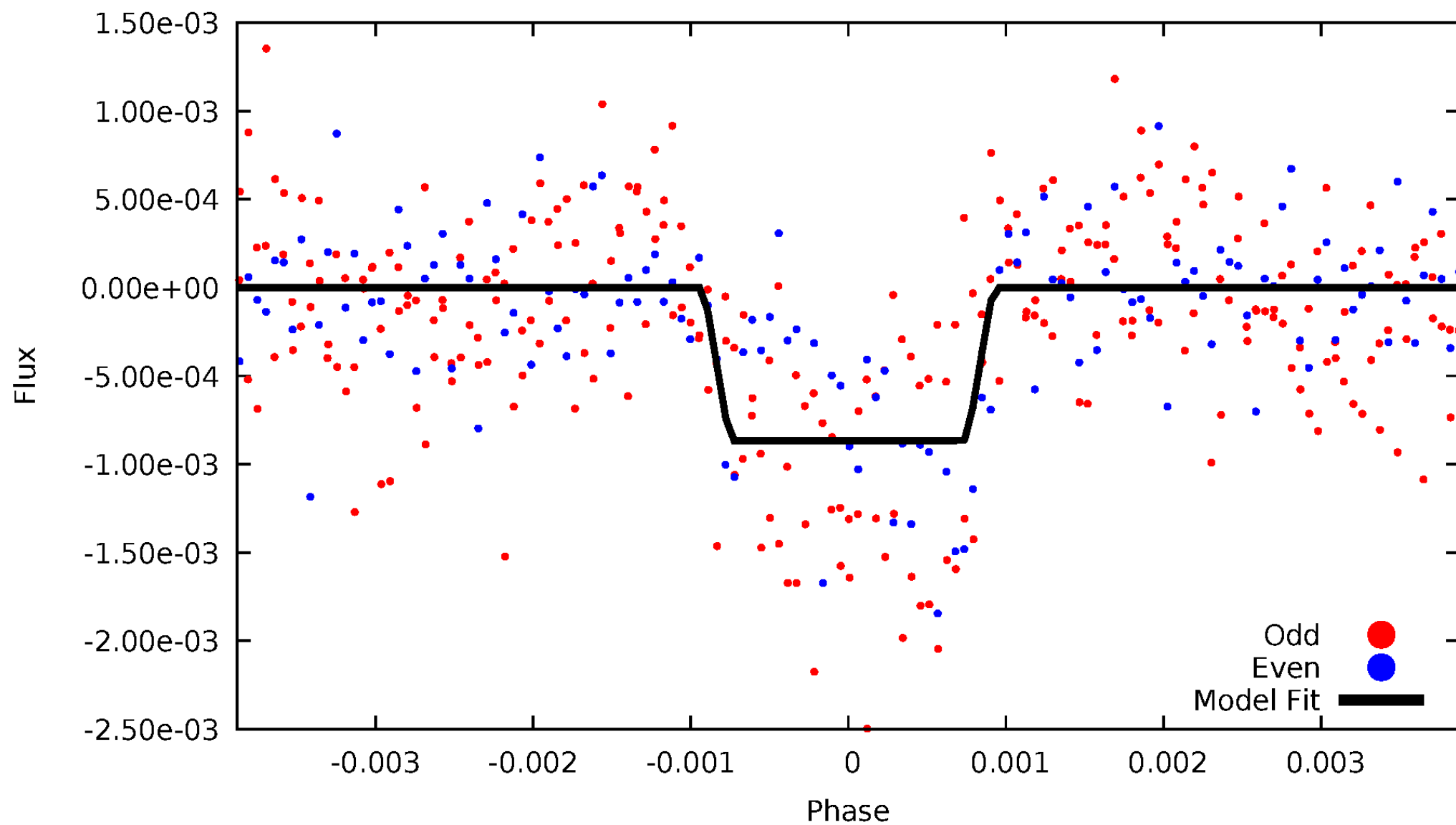
DV Odd/Even

TCE 008307759-01



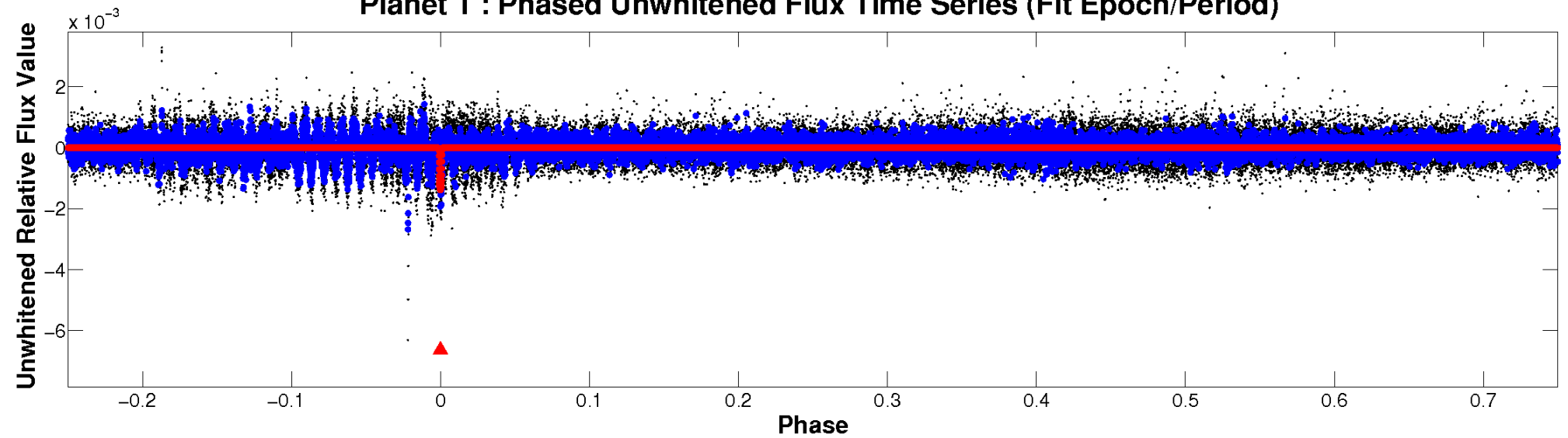
ALT Odd/Even

TCE 008307759-01

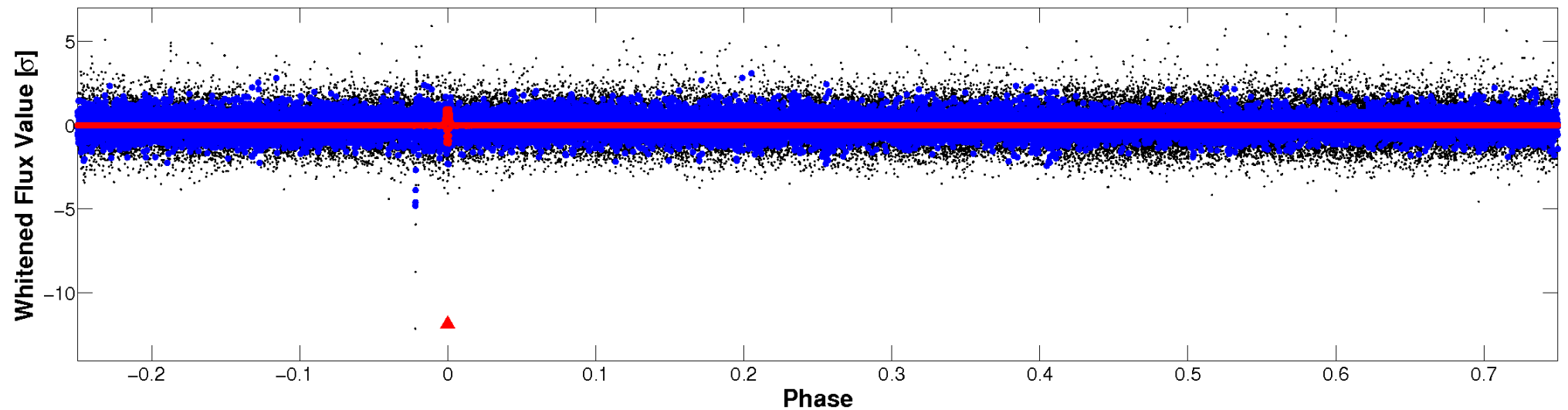


Non-Whitened Vs. Whitened Light Curve

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



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



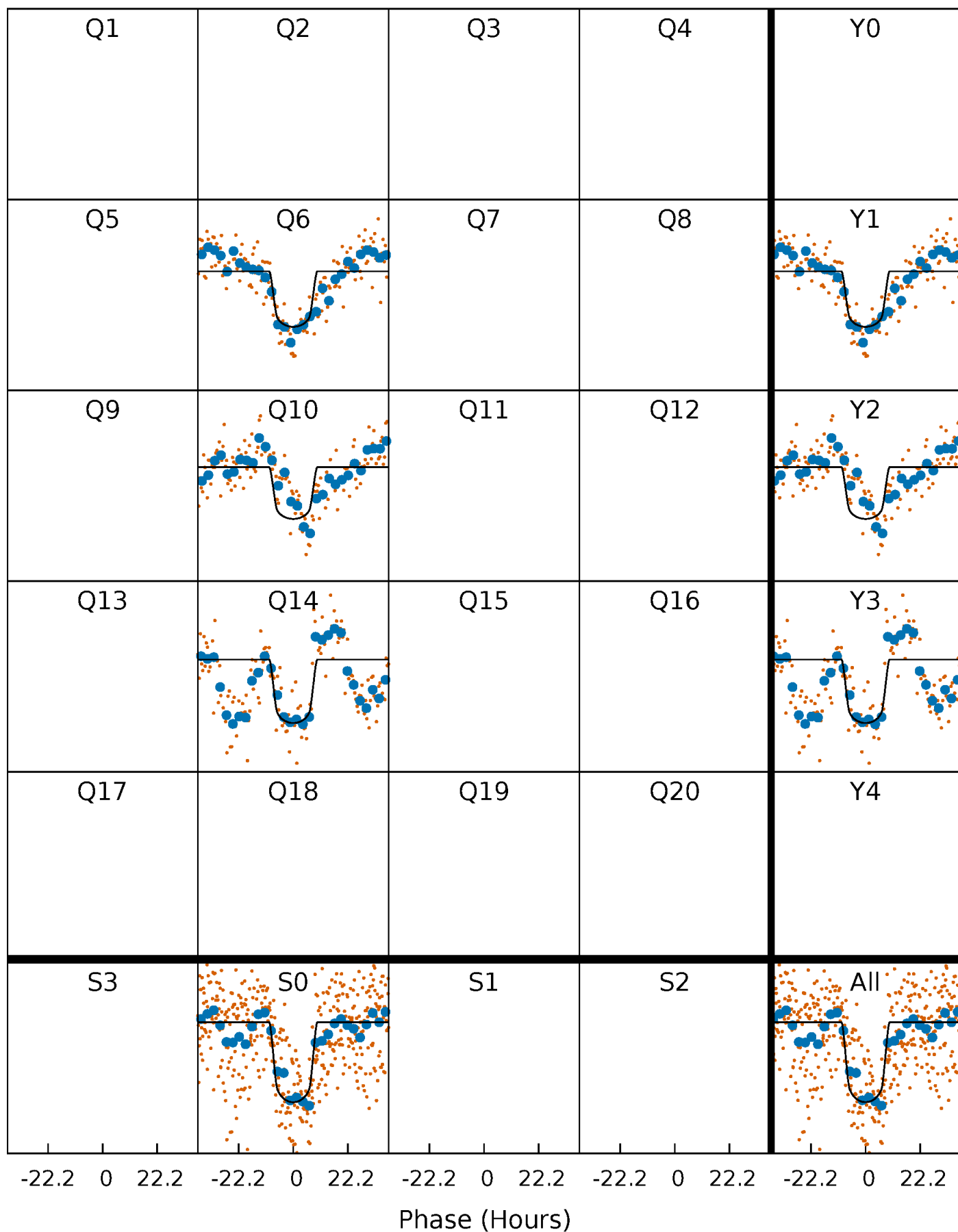
PDC Quarter-Phased Transit Curves

TCE 008307759-01 P=364.305729 Days $T_0=249.431541$ (BKJD)



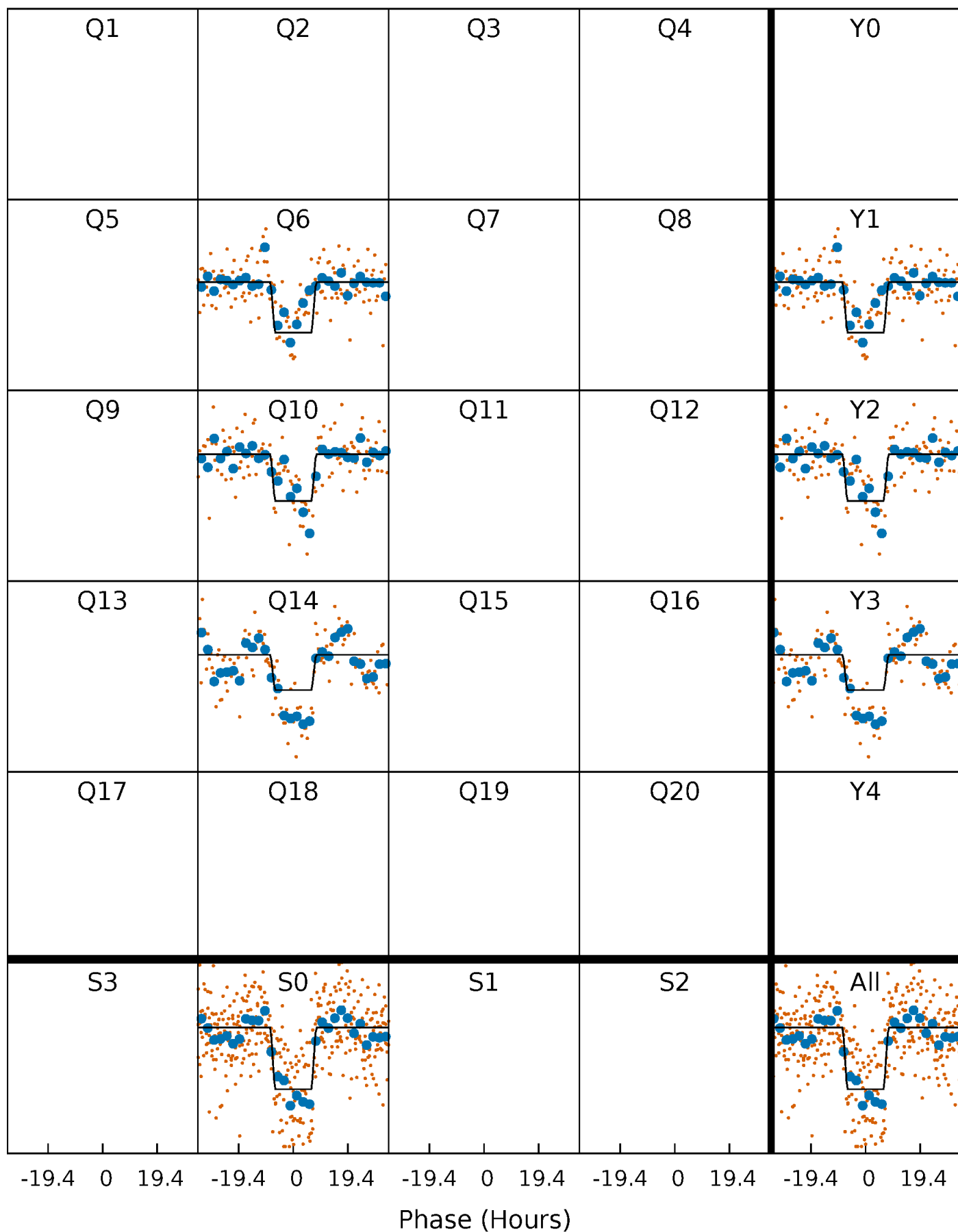
DV Quarter-Phased Transit Curves

TCE 008307759-01 P=364.305729 Days $T_0=249.431541$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

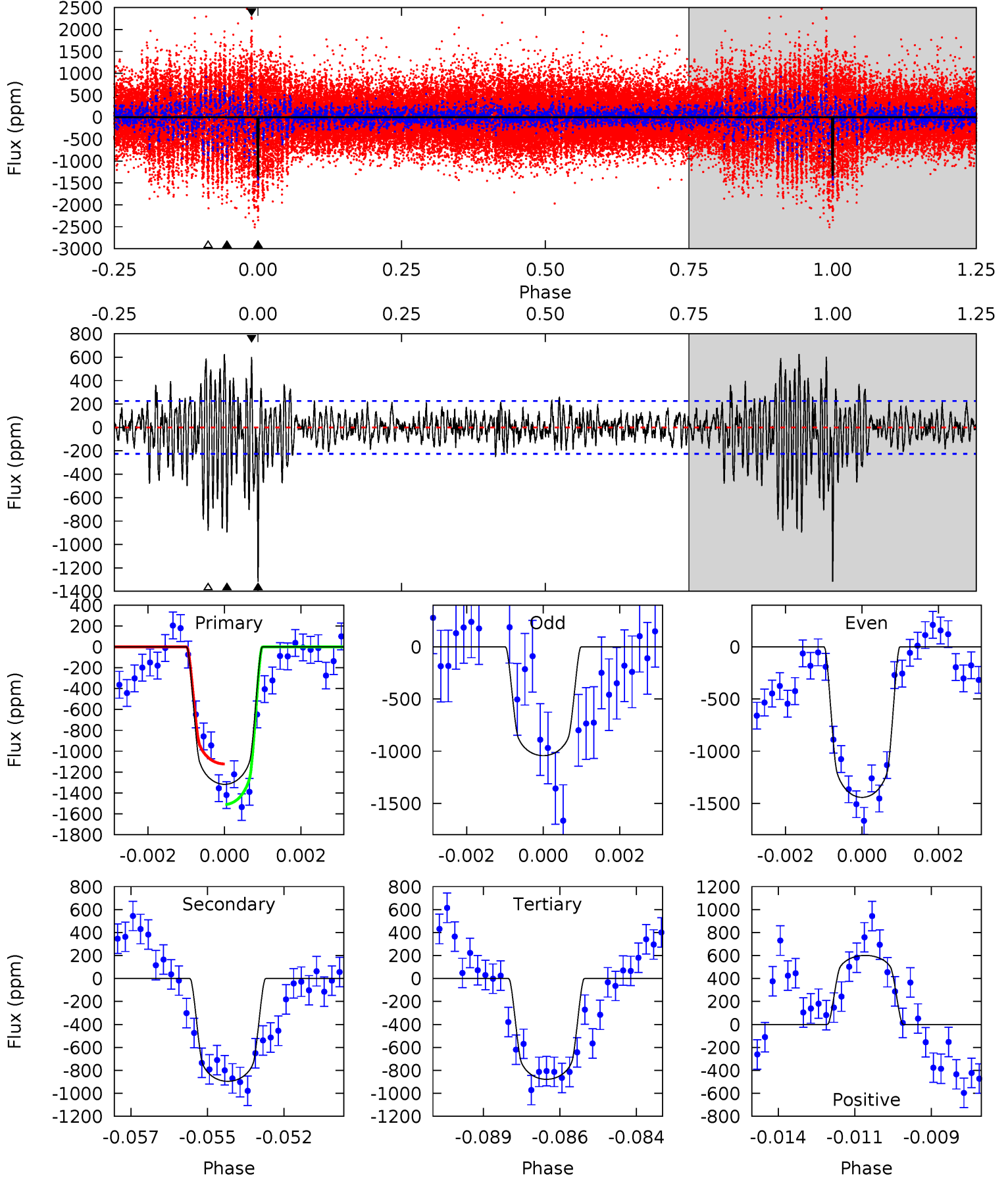
TCE 008307759-01 P=364.309941 Days $T_0=249.435613$ (BKJD)



DV Model-Shift Uniqueness Test

008307759-01, P = 364.305729 Days, E = 249.431541 Days

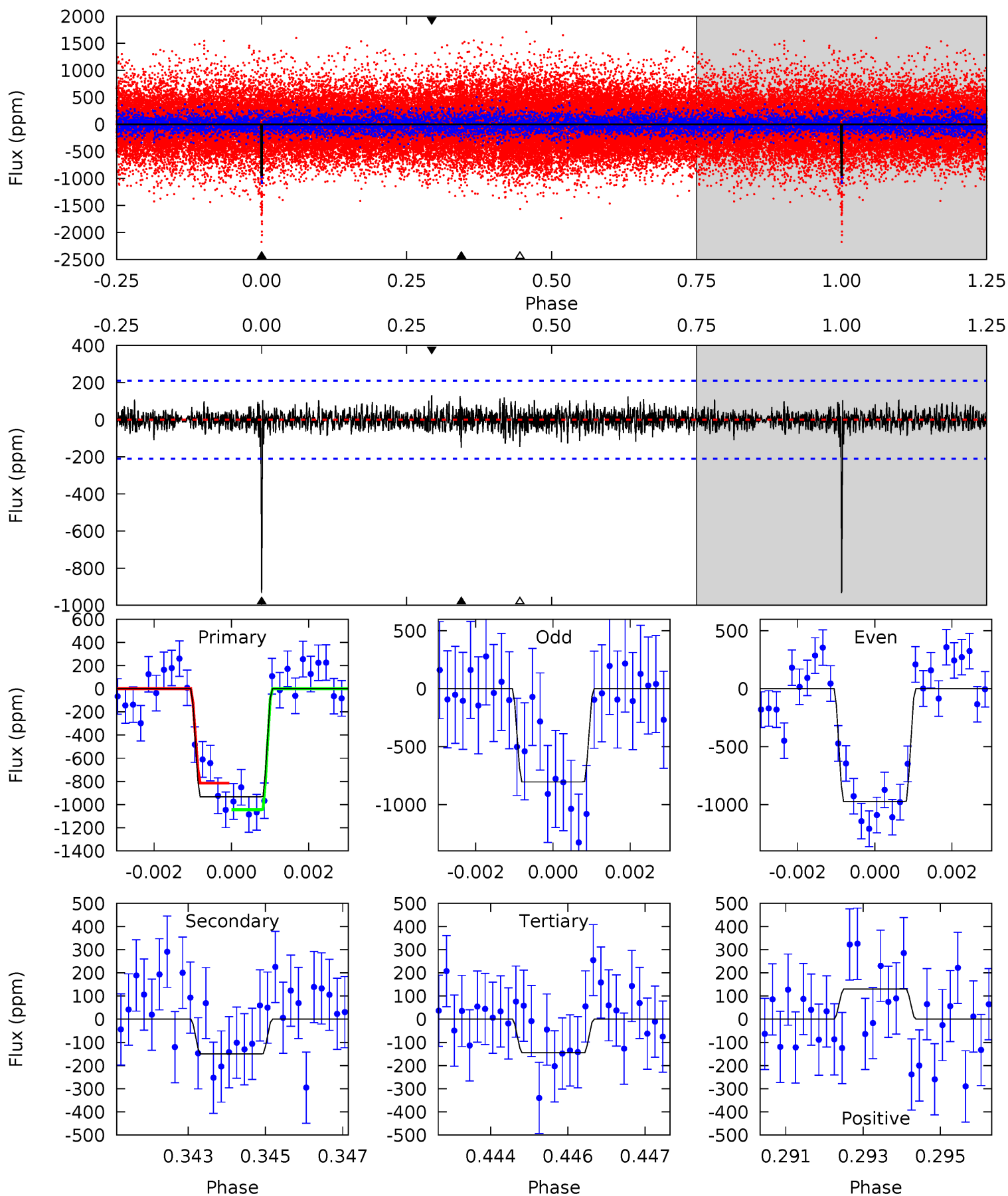
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	21.0	20.6	14.1	5.30	3.05	3.64	10.3	16.8	0.41	6.92	4.37	1.00	0.32	4.55



Alt Model-Shift Uniqueness Test

008307759-01, P = 364.309941 Days, E = 249.435613 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	3.80	3.68	3.31	5.35	3.12	0.88	20.0	20.4	0.12	0.50	2.01	1.17	0.12	2.92



Stellar Parameters For KIC 008307759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6306^{+174}_{-261}	$4.426^{+0.054}_{-0.216}$	$-0.100^{+0.250}_{-0.300}$	$1.076^{+0.361}_{-0.120}$	$1.126^{+0.168}_{-0.151}$	$1.272^{+0.376}_{-0.649}$
	+3%/-4%	+1%/-5%	+250%/-300%	+34%/-11%	+15%/-13%	+30%/-51%
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 008307759-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-895 ± 43	$4.82^{+0.87}_{-0.53}$	403^{+32}_{-20}	5478^{+270}_{-251}	22167^{+5673}_{-5513}
Alt.	-150 ± 39	$3.54^{+0.68}_{-0.45}$	403^{+29}_{-20}	4298^{+291}_{-305}	6711^{+3150}_{-2405}

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 $A_{\text{obs}} \gg 1.0$

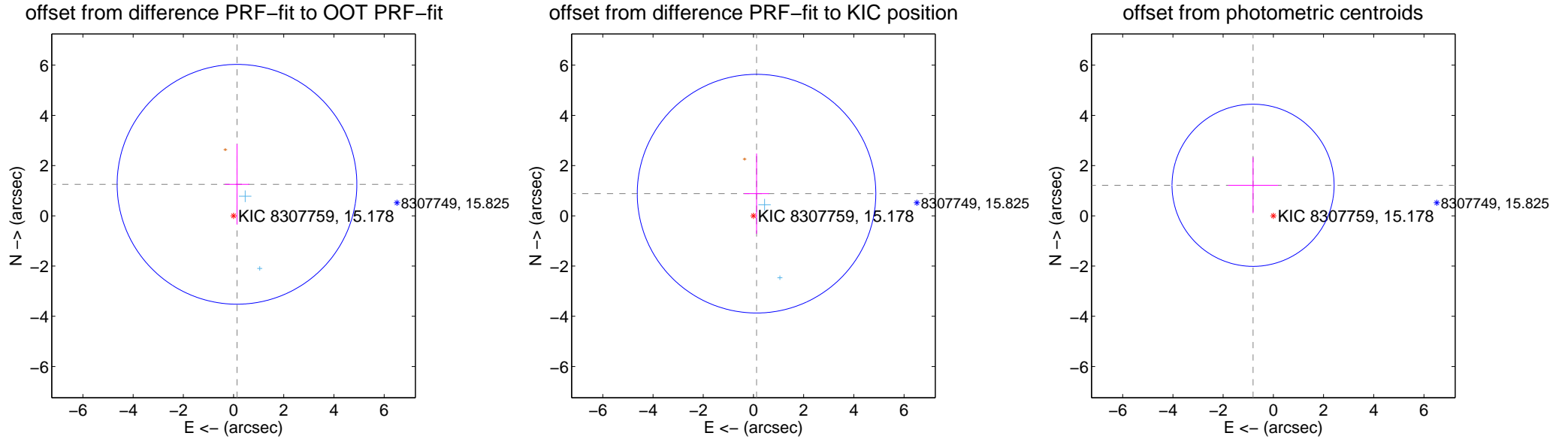
DV Centroid Data

Supplemental centroid analysis for 008307759-01. Kepler magnitude: 15.18. Transit SNR 10.40

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.262 ± 1.591	0.79	-0.137 ± 0.485	1.254 ± 1.600
PRF-fit source offset from KIC position	0.890 ± 1.584	0.56	-0.124 ± 0.496	0.882 ± 1.598
photometric centroid source offset	1.46 ± 1.08	1.36	0.81 ± 0.99	1.22 ± 1.11

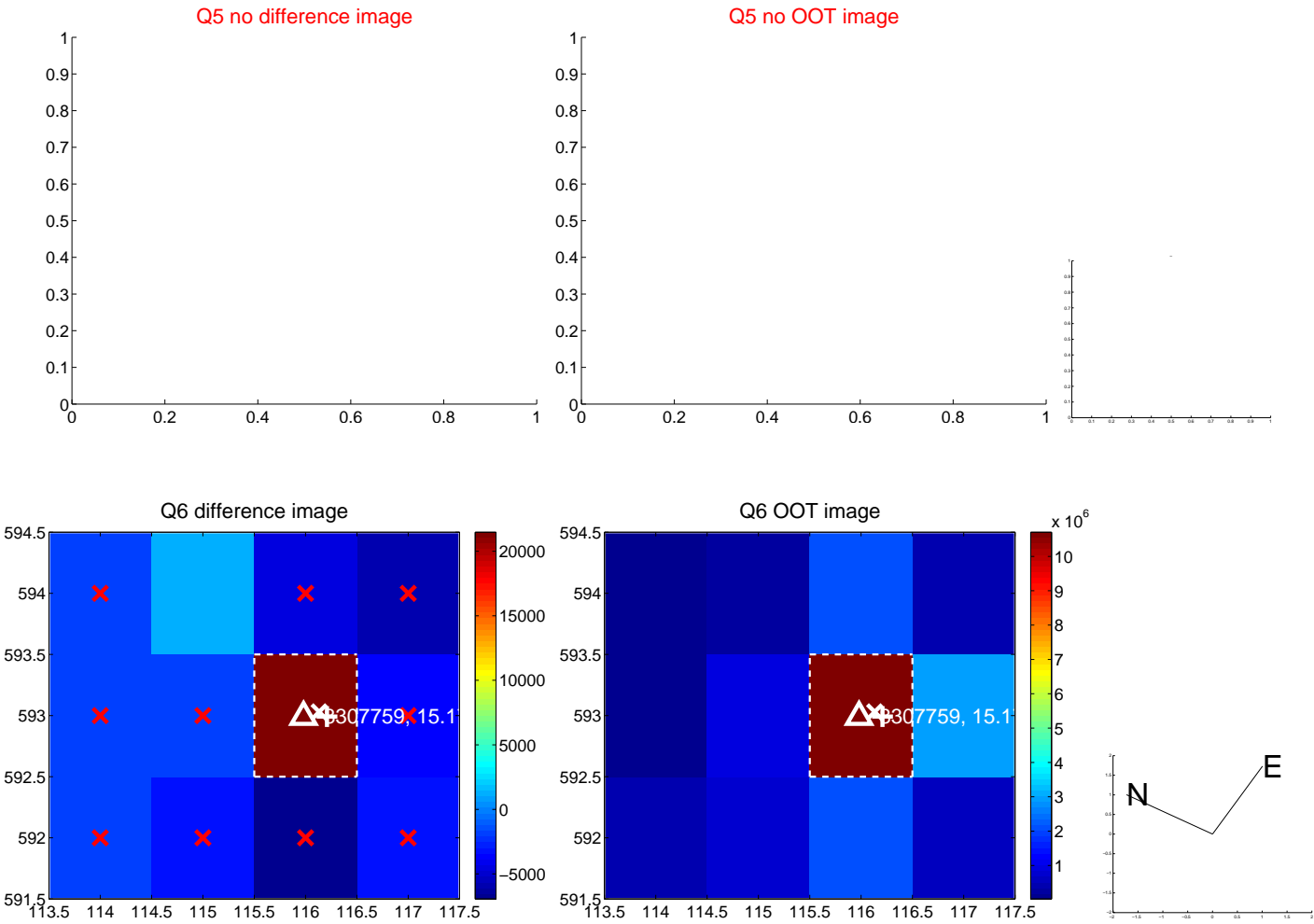


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

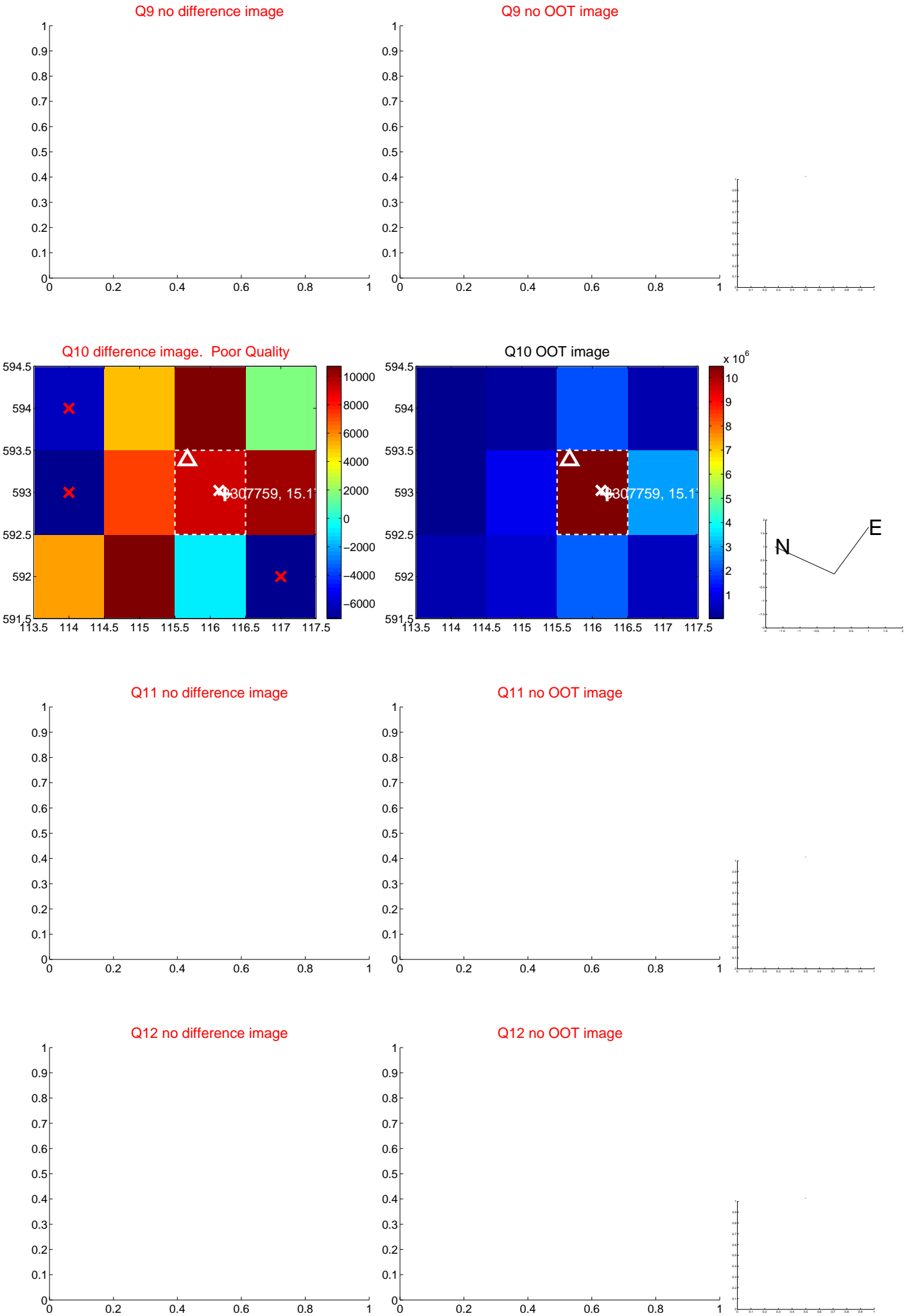
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



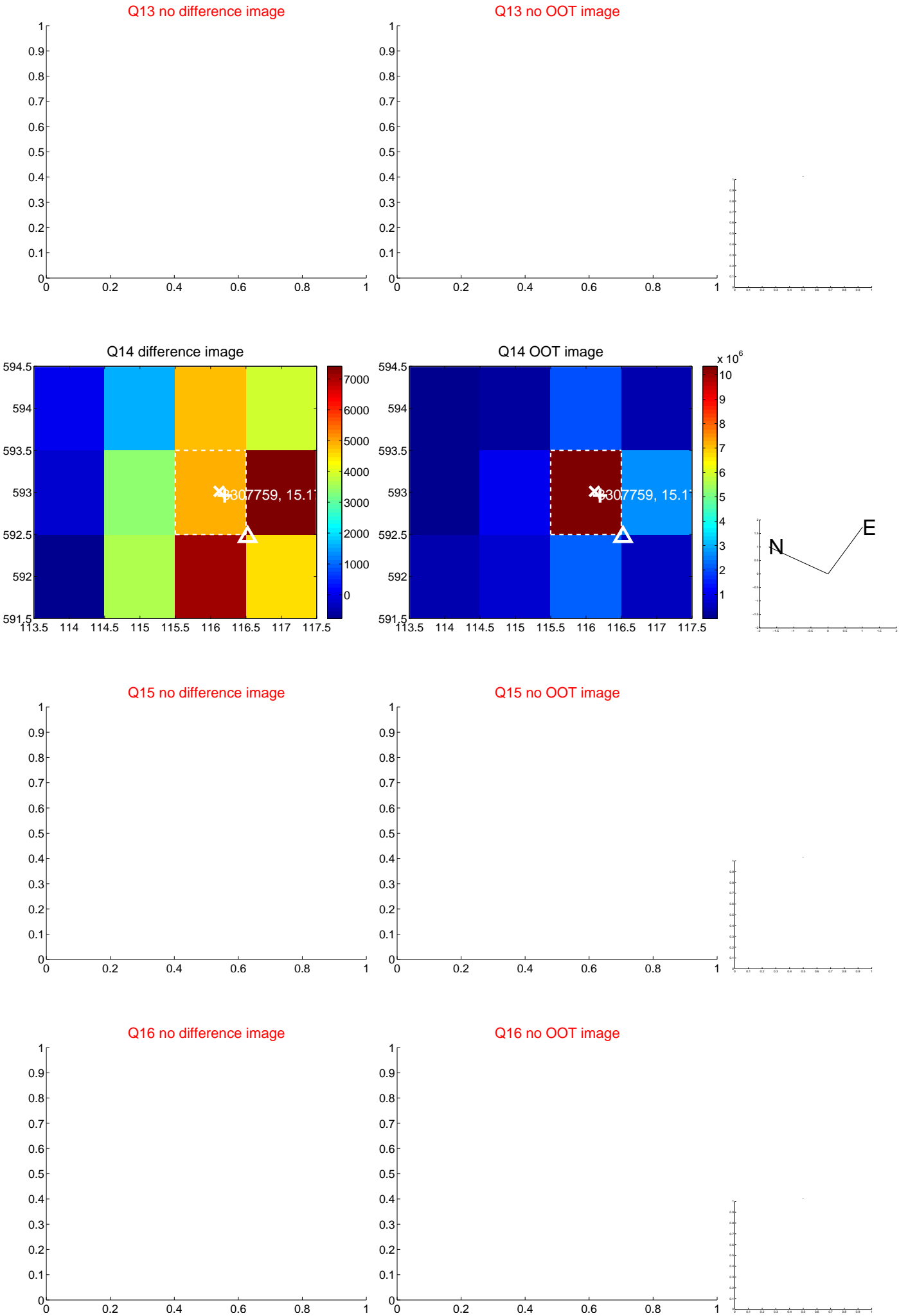
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



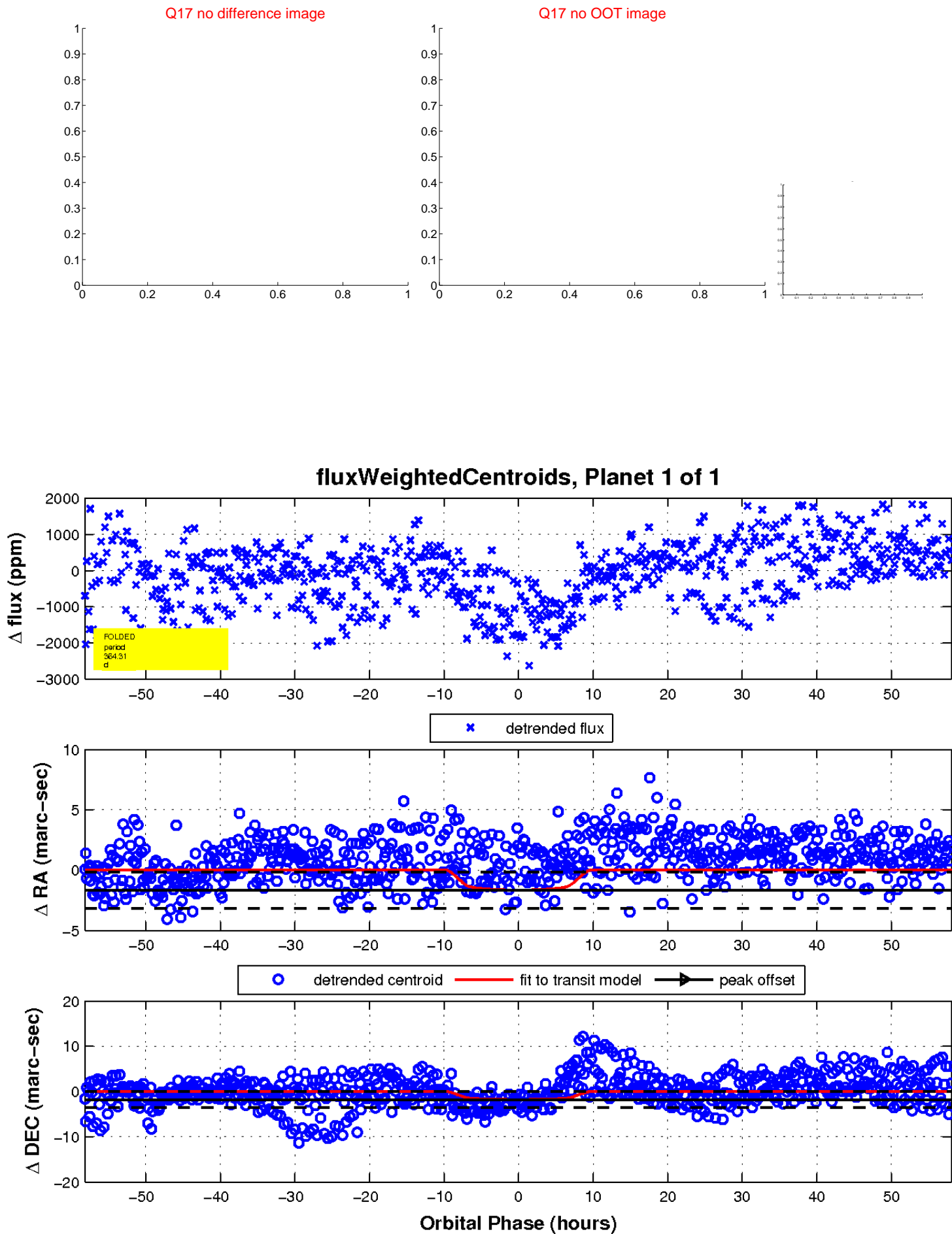
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

