

KIC 009763796

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})
009763796-01	OBS	No	277.077402	251.225722	579.8	5.909	7.2	7.4	6.52	5160	18.66	26.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009763796-01	OBS	FP	0.03	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES

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

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

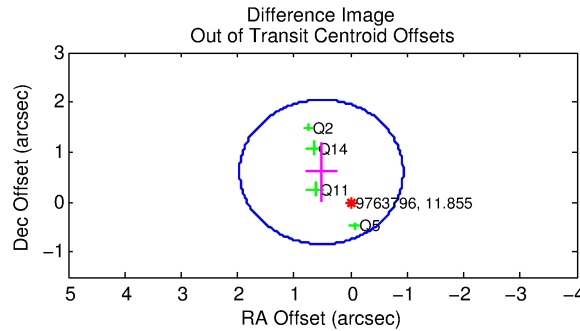
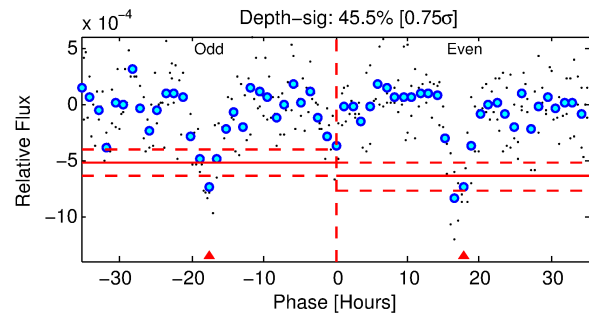
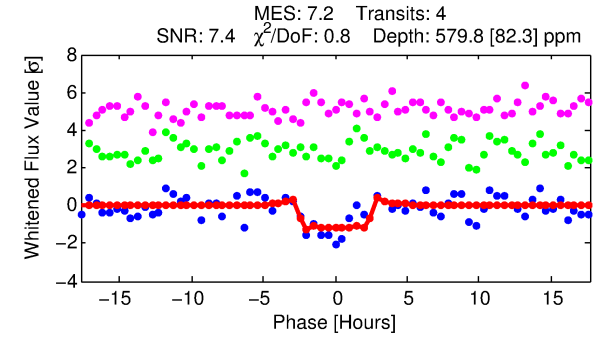
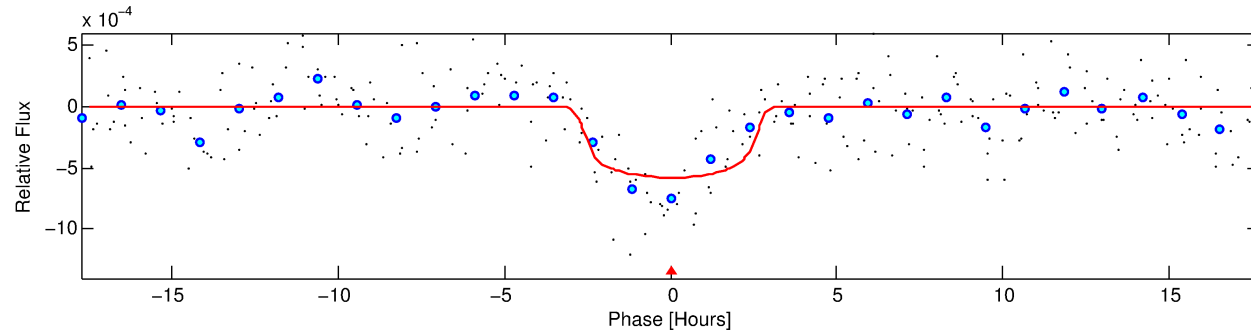
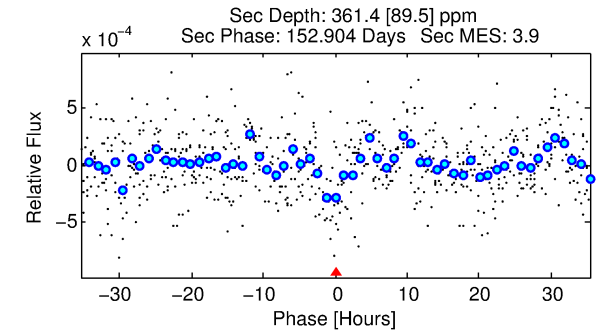
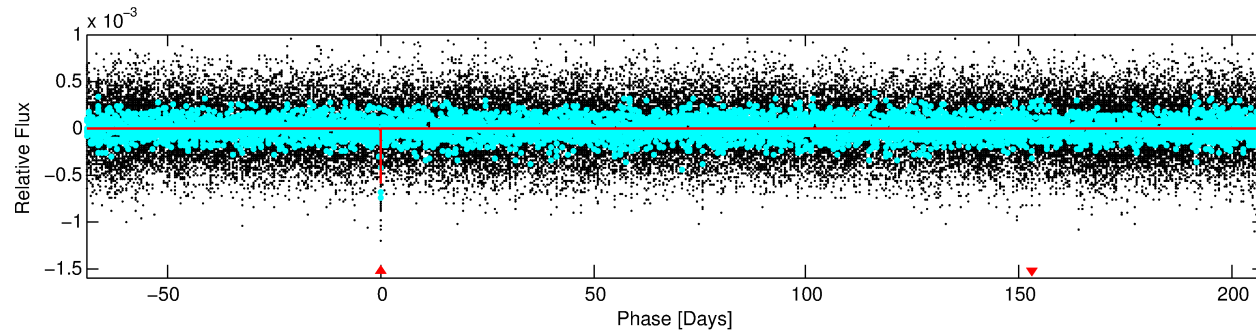
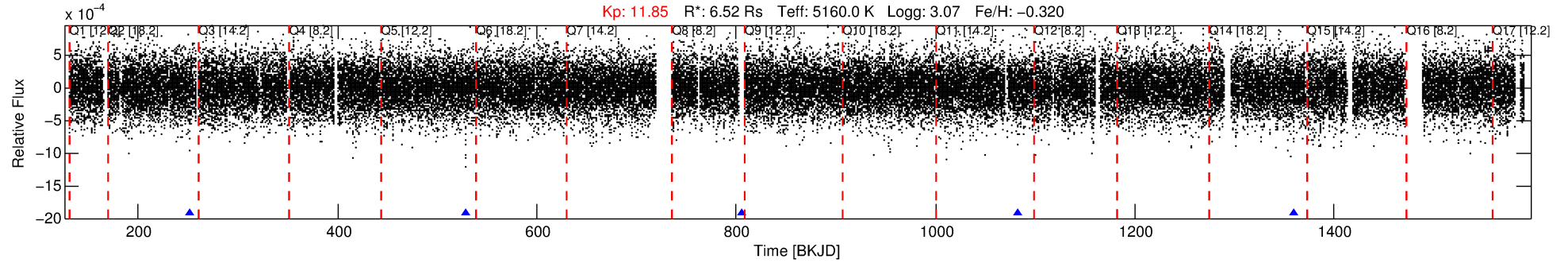
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009763796-01

No Significant Match Found

DV One-Page Summary

KIC: 9763796 Candidate: 1 of 1 Period: 277.077 d



DV Fit Results:

Period = 277.07740 [0.00301] d
Epoch = 251.2257 [0.0087] BKJD
 $R_p/R^* = 0.0262$ [0.0035]
 $a/R^* = 184.16$ [74.23]
 $b = 0.89$ [0.10]
 $T_{\text{eff}} = 26.10$ [4.79]
 $T_{\text{eq}} = 576$ [26] K
 $R_p = 18.66$ [4.61] R_e
 $a = 1.0166$ [0.1435] AU
 $A_g = 589.89$ [230.23] [2.56σ]
 $T_{\text{eff}} = 4392$ [415] K [9.17σ]

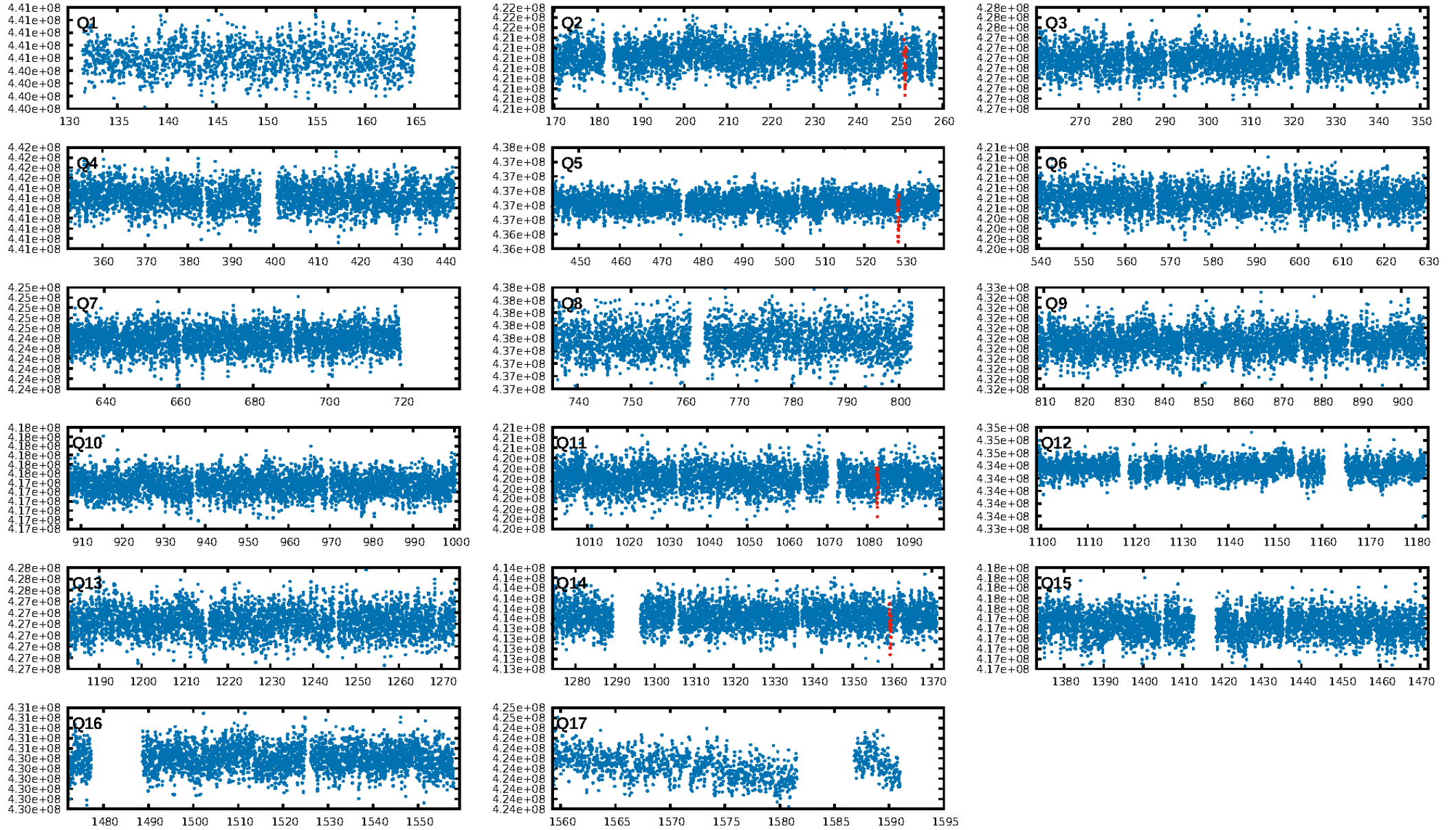
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 44.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.42e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 29.23
Centroid-sig: 53.7%
Centroid-so: 0.359 arcsec [1.20σ]
OotOffset-rm: 0.794 arcsec [1.65σ]
KicOffset-rm: 0.862 arcsec [1.69σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

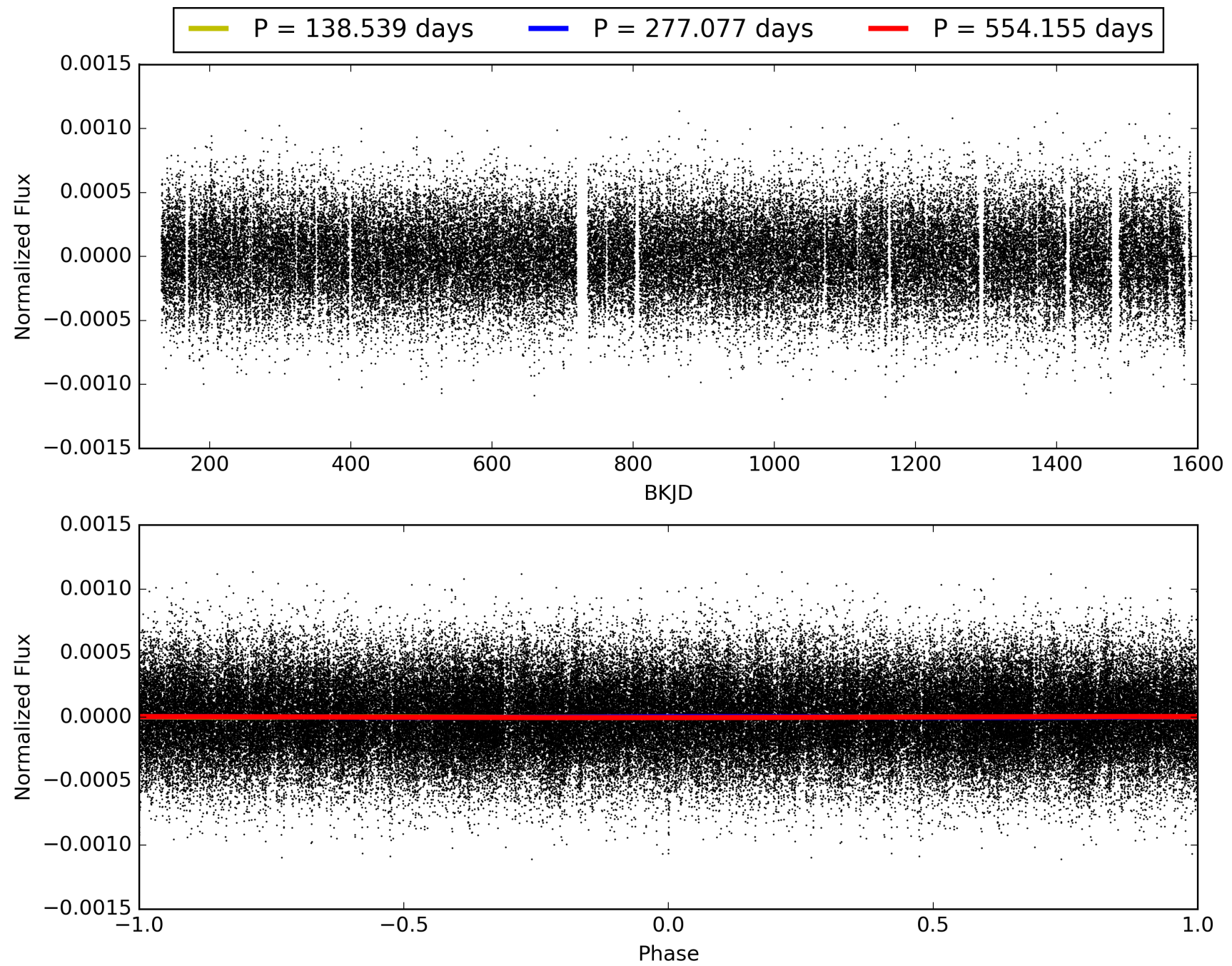
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:38:22 Z

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

TCE 009763796-01, PDC Light Curves

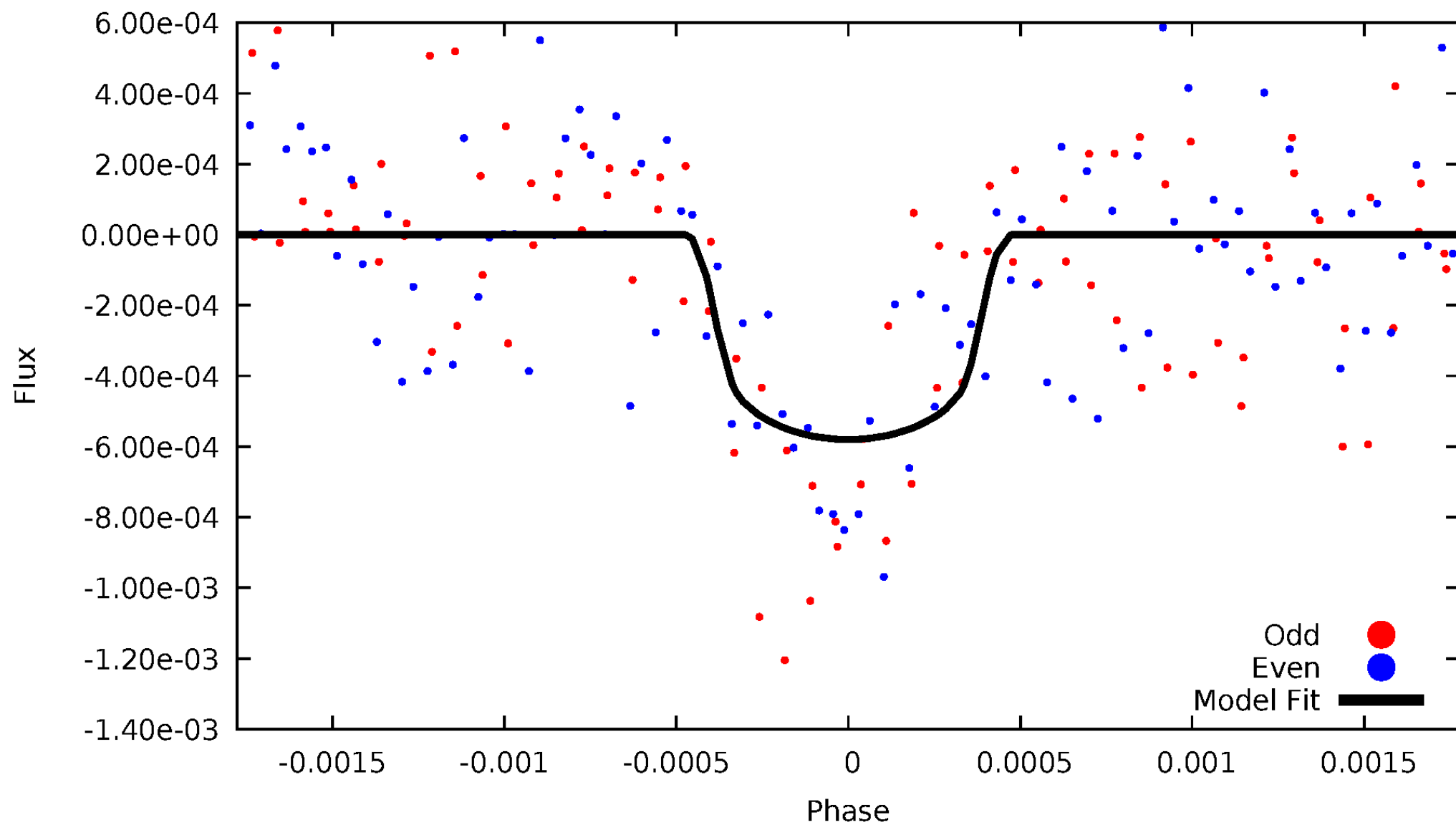


TCE 009763796-01



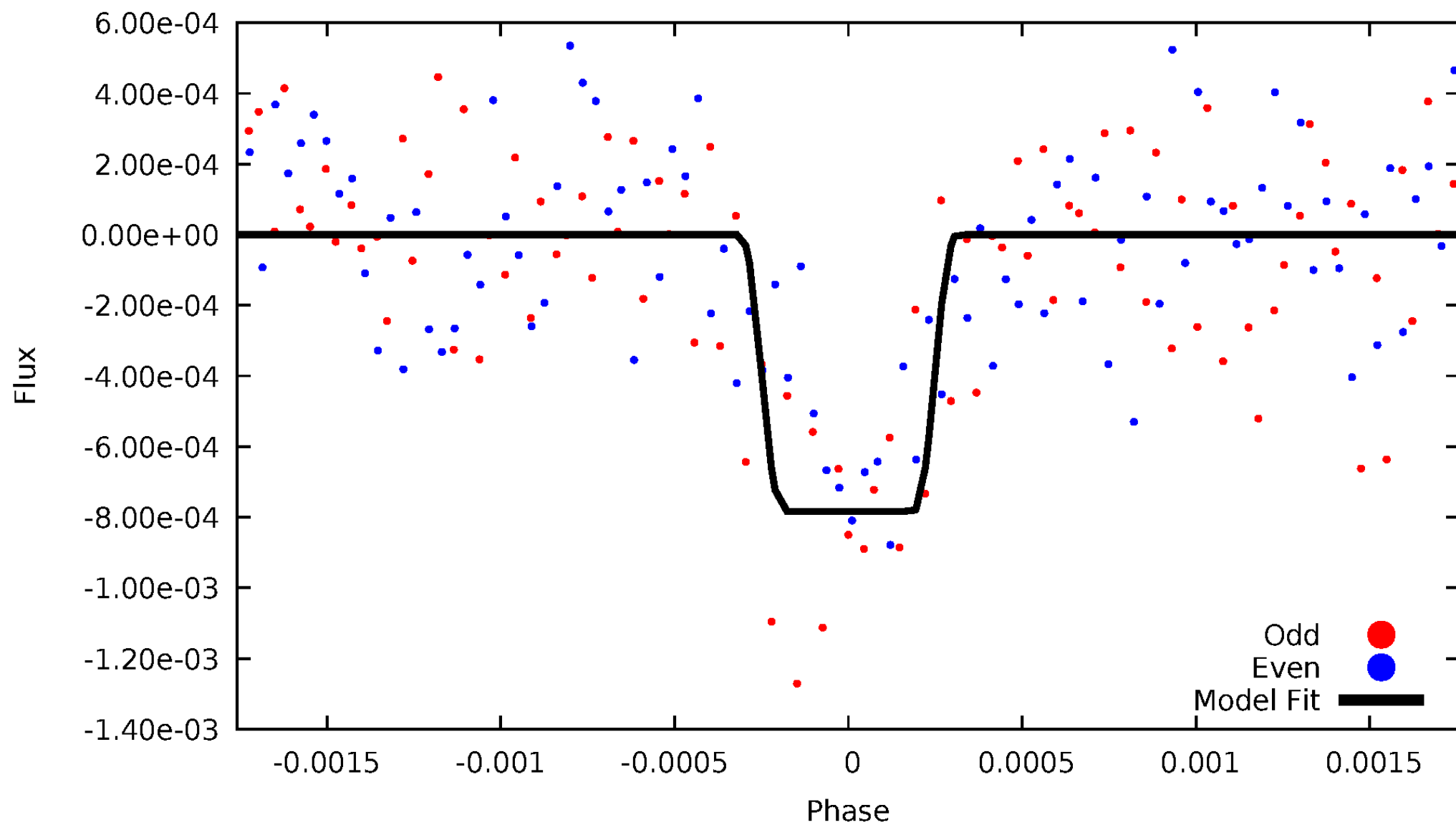
DV Odd/Even

TCE 009763796-01



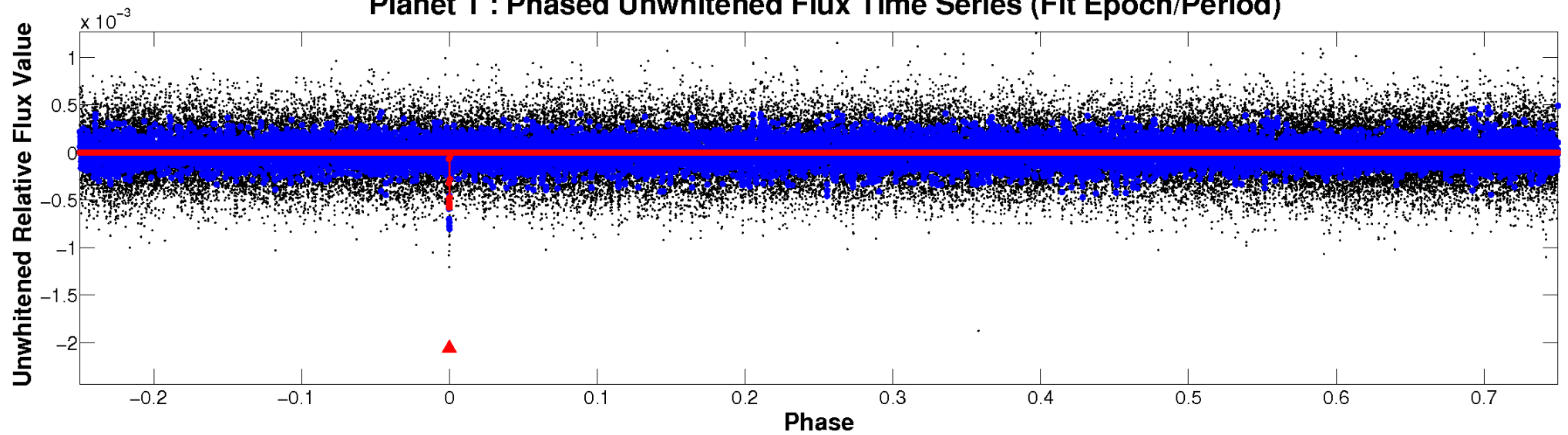
ALT Odd/Even

TCE 009763796-01

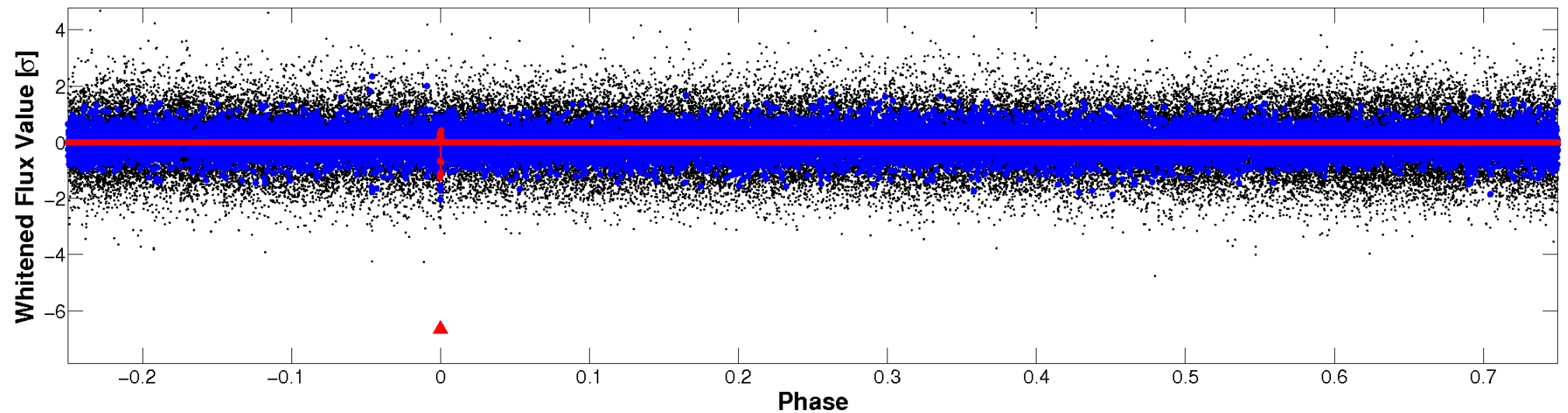


Non-Whitened Vs. Whitened Light Curve

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

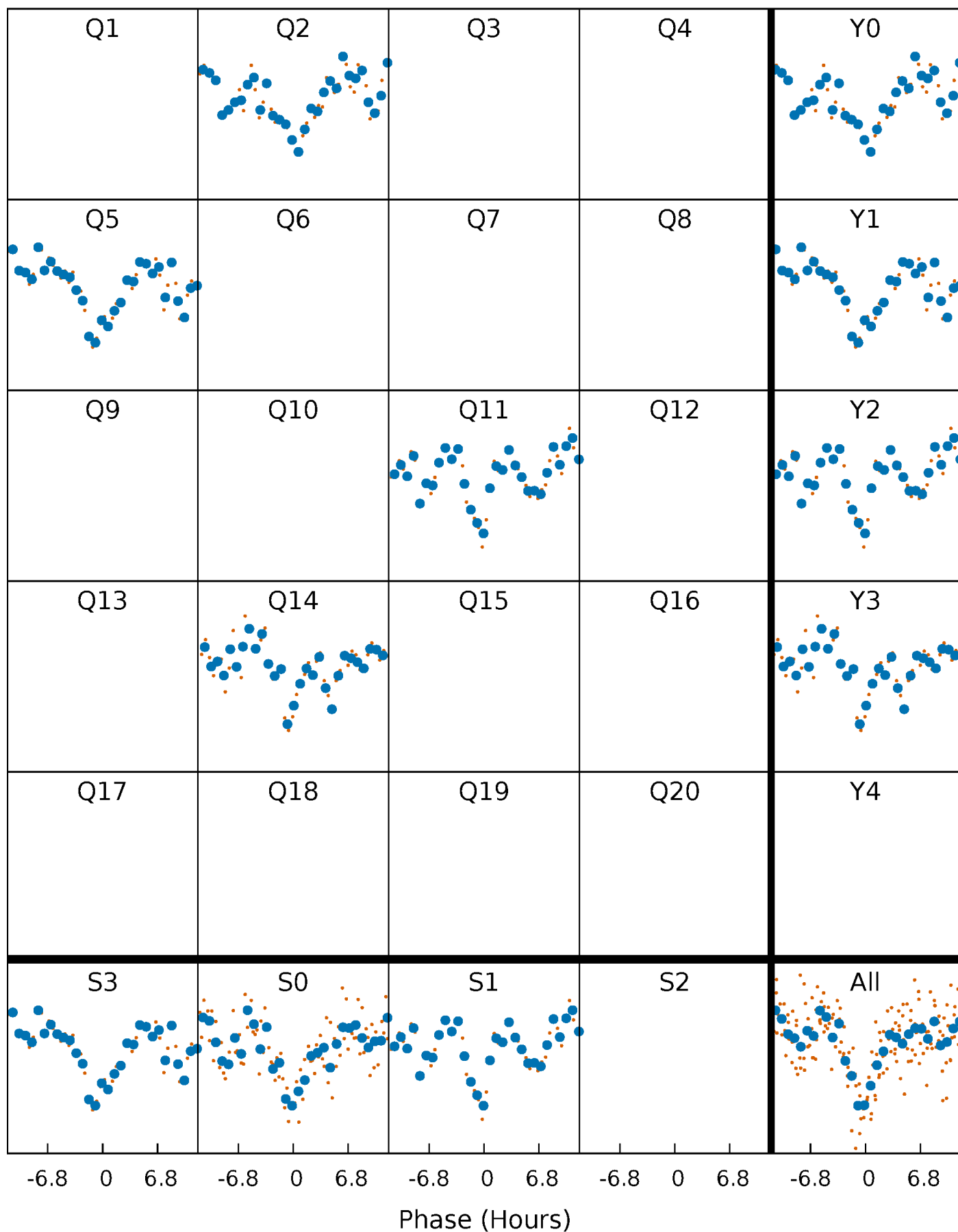


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 009763796-01 $P=277.077402$ Days $T_0=251.225722$ (BKJD)



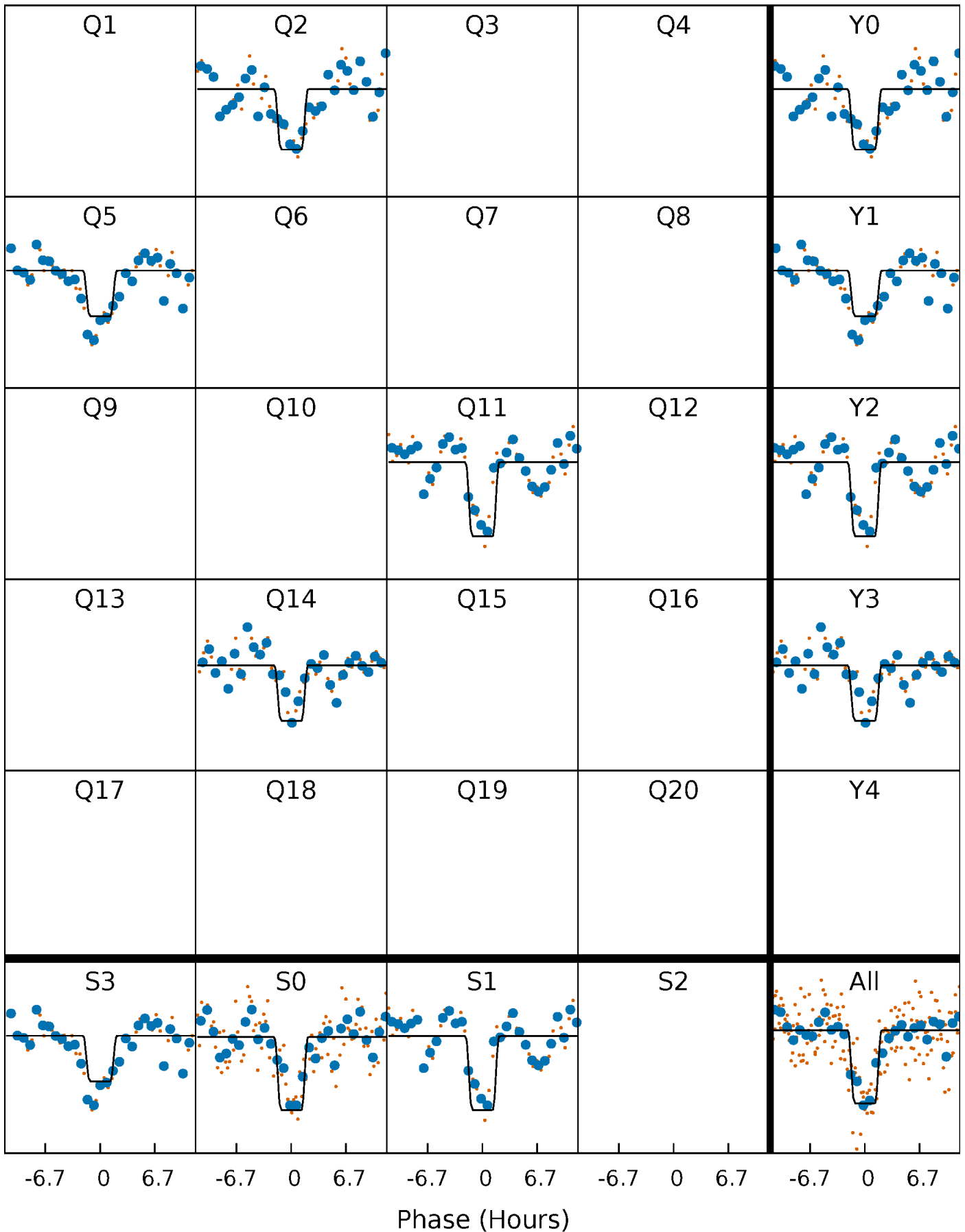
DV Quarter-Phased Transit Curves

TCE 009763796-01 P=277.077402 Days $T_0=251.225722$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

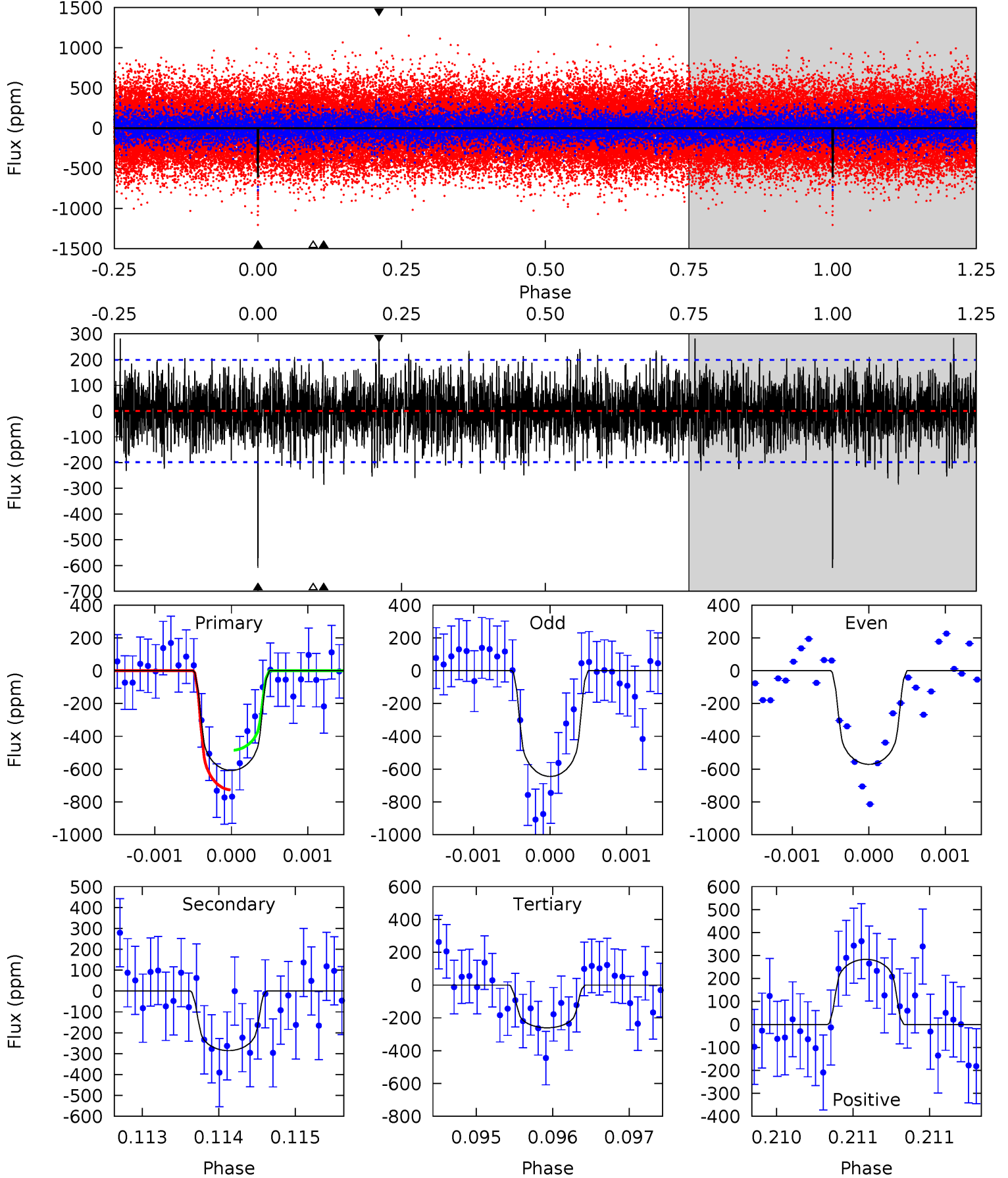
TCE 009763796-01 P=277.071976 Days $T_0=251.220850$ (BKJD)



DV Model-Shift Uniqueness Test

009763796-01, P = 277.077402 Days, E = 251.225722 Days

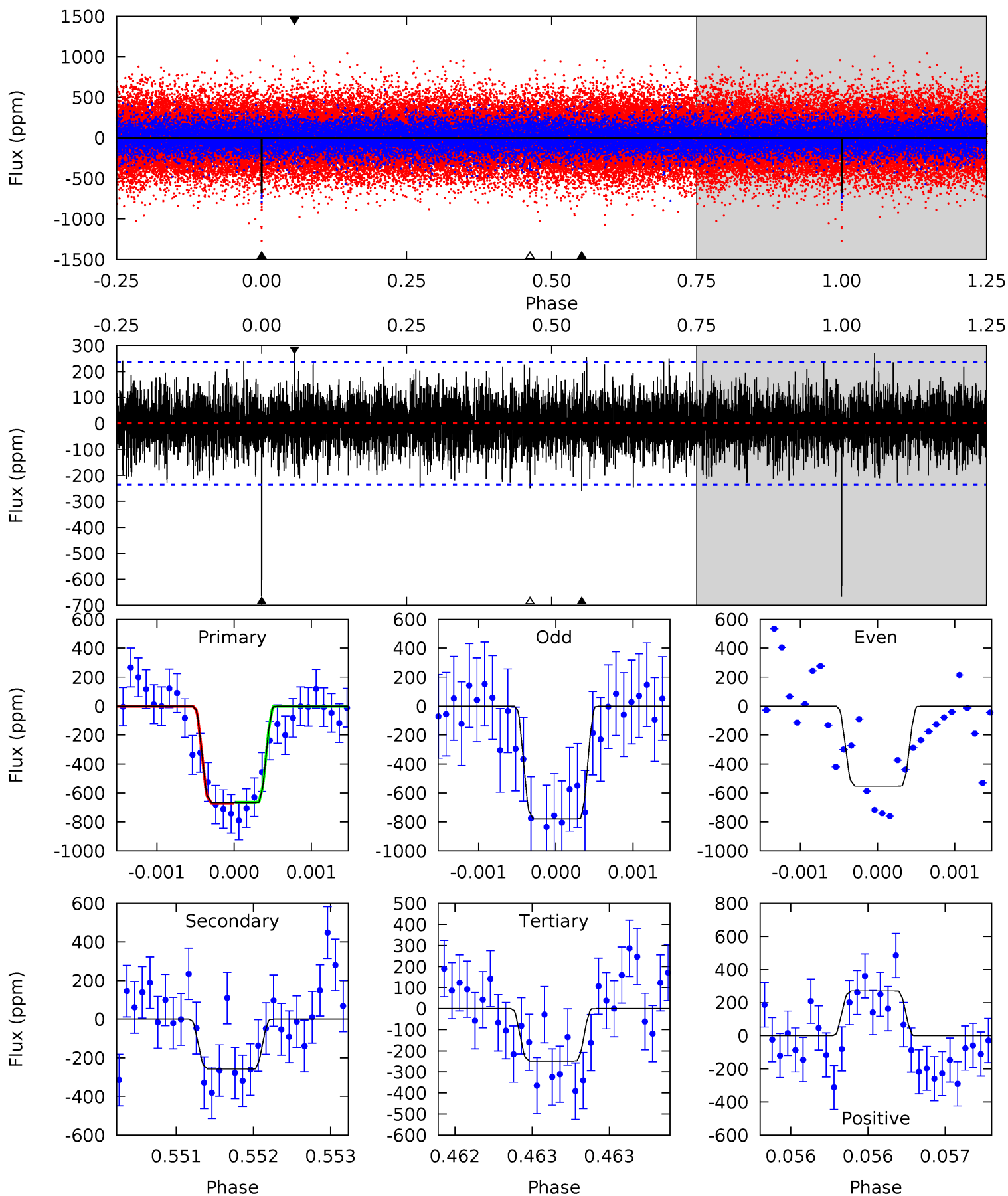
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	7.85	7.16	7.79	5.46	3.30	2.10	9.56	8.93	0.69	0.06	1.02	1.07	0.32	3.32



Alt Model-Shift Uniqueness Test

009763796-01, P = 277.071976 Days, E = 251.220850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	6.05	5.83	6.33	5.54	3.43	1.65	9.78	9.28	0.22	-0.28	2.66	1.10	0.29	0.09



Stellar Parameters For KIC 009763796

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5160^{+40}_{-142}	$3.071^{+0.030}_{-0.030}$	$-0.320^{+0.100}_{-0.200}$	$6.517^{+0.340}_{-1.361}$	$1.824^{+0.161}_{-0.646}$	$0.009^{+0.003}_{-0.001}$
	+1%/-3%	+1%/-1%	+31%/-62%	+5%/-21%	+9%/-35%	+30%/-8%
Source	PHO55	AST55	SPE55	DSEP		

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

Secondary Eclipse Parameters for KIC 009763796-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-286 ± 36	$18.78^{+2.89}_{-2.68}$	803^{+15}_{-26}	4284^{+252}_{-237}	464^{+152}_{-122}
Alt.	-258 ± 43	$20.11^{+2.68}_{-3.04}$	803^{+15}_{-23}	4116^{+228}_{-228}	369^{+128}_{-101}

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

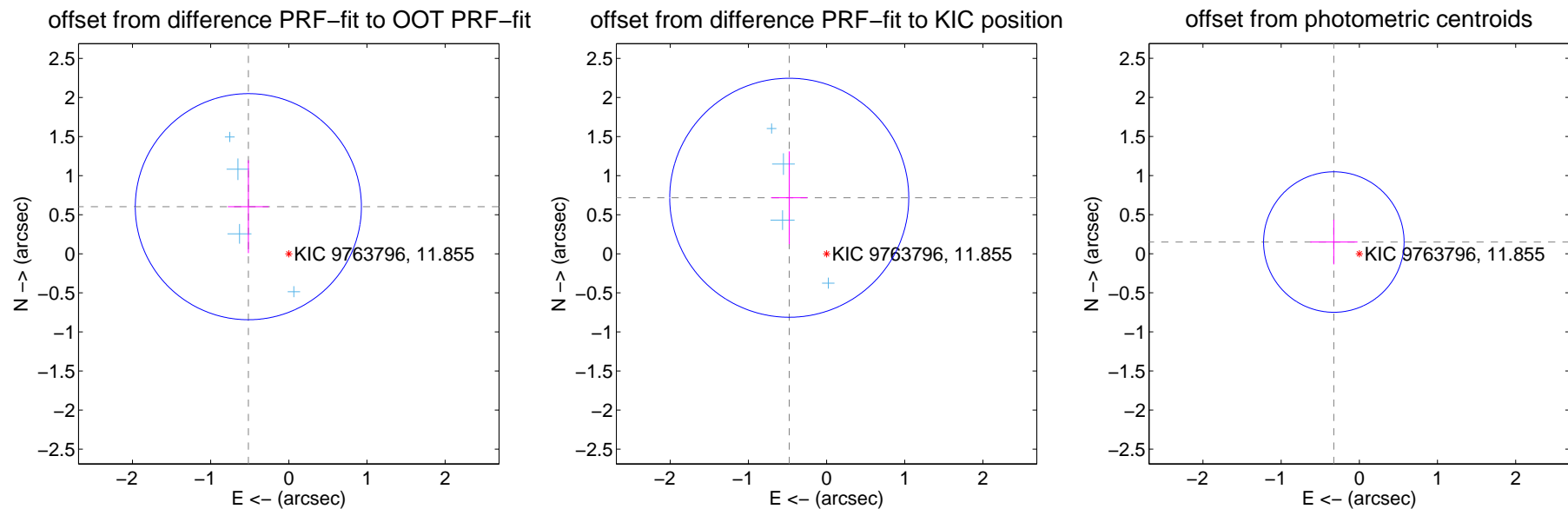
DV Centroid Data

Supplemental centroid analysis for 009763796-01. **Kepler magnitude: 11.86.** Transit SNR 7.36

There are 4 quarters with good PRF difference image offsets

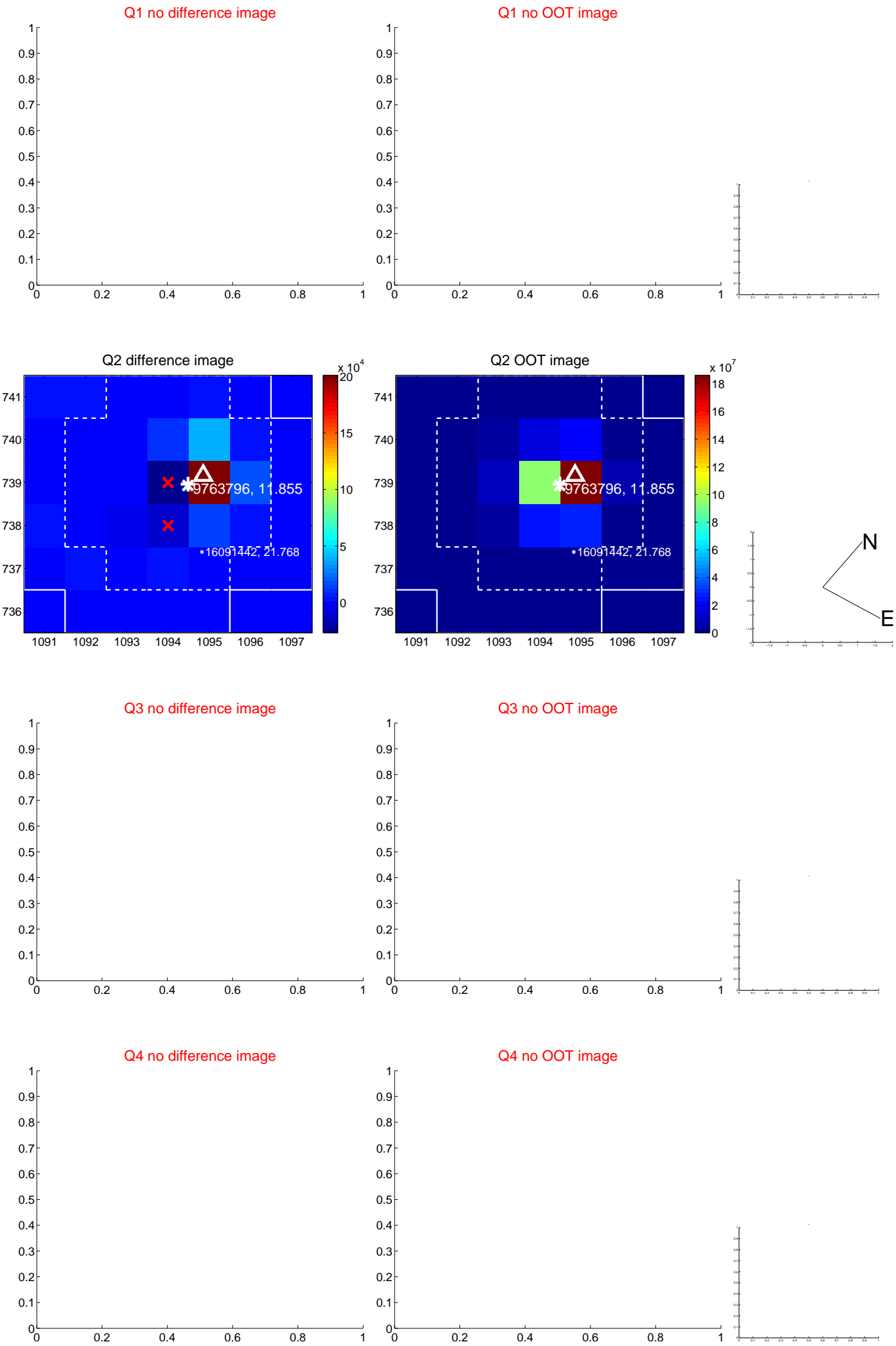
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.794 ± 0.482	1.65	0.518 ± 0.262	0.603 ± 0.594
PRF-fit source offset from KIC position	0.862 ± 0.510	1.69	0.478 ± 0.233	0.717 ± 0.593
photometric centroid source offset	0.36 ± 0.30	1.20	0.33 ± 0.30	0.15 ± 0.29

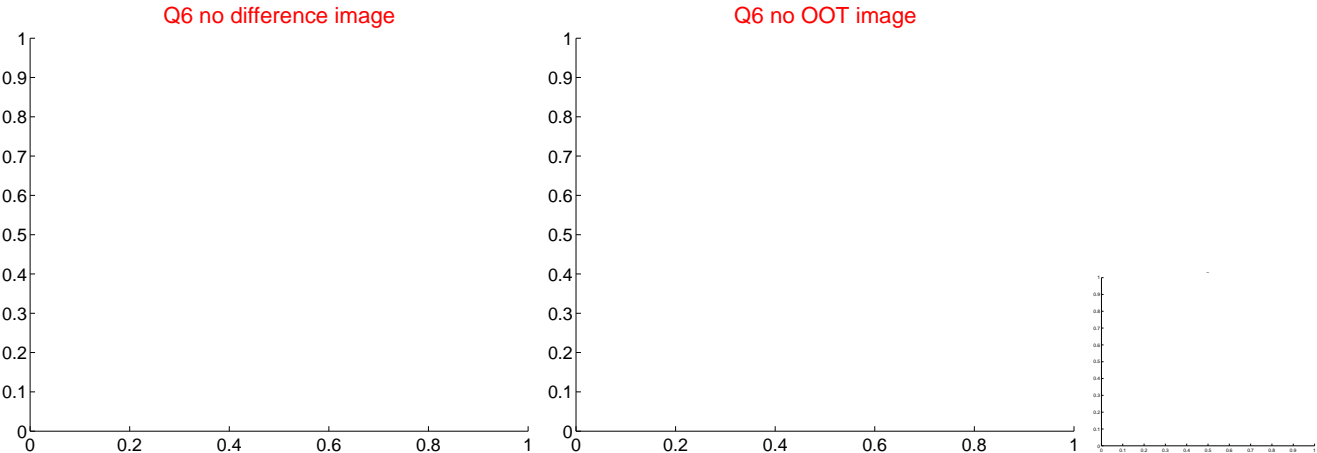
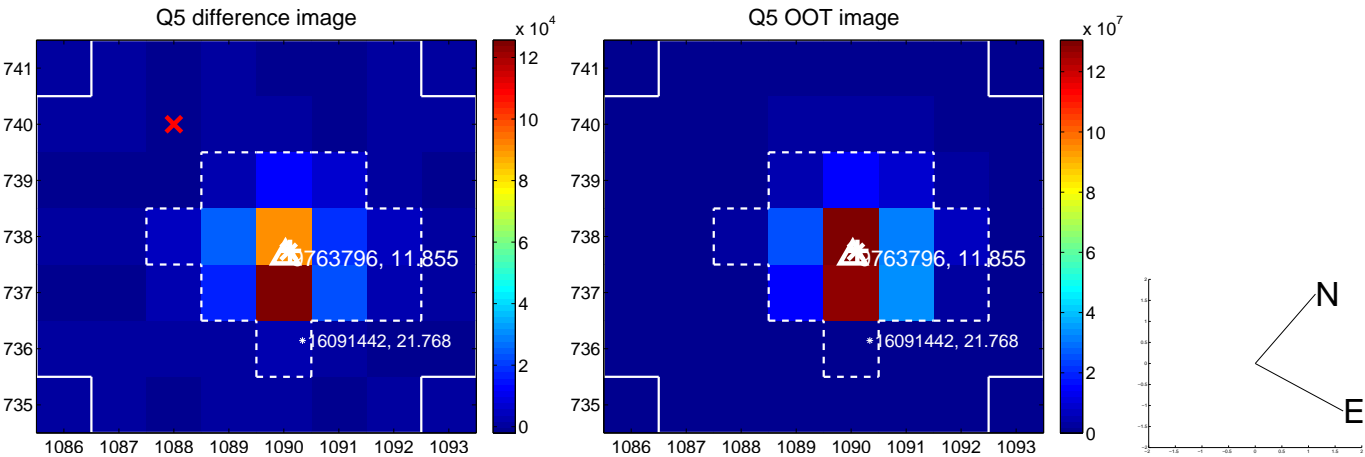


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

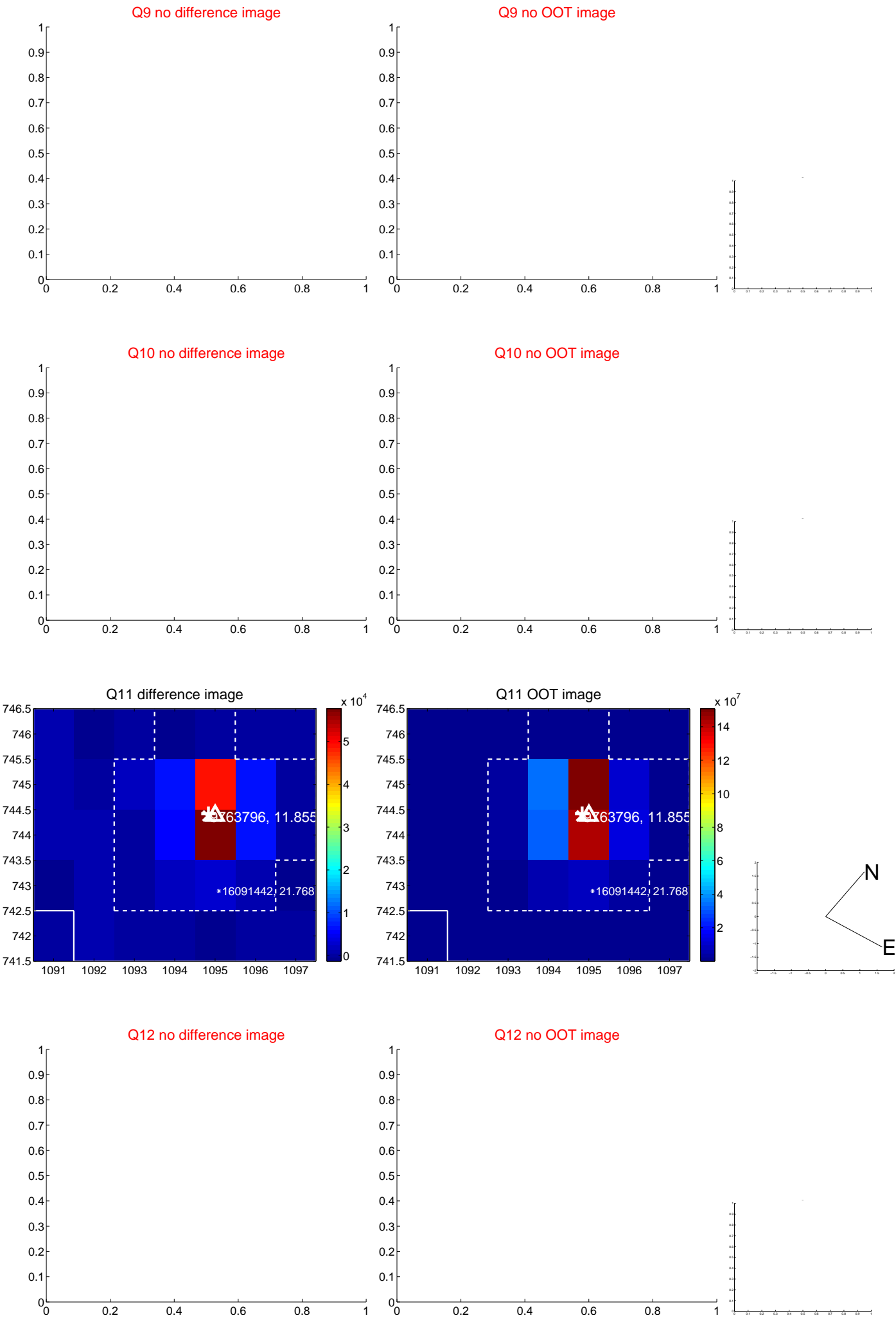
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



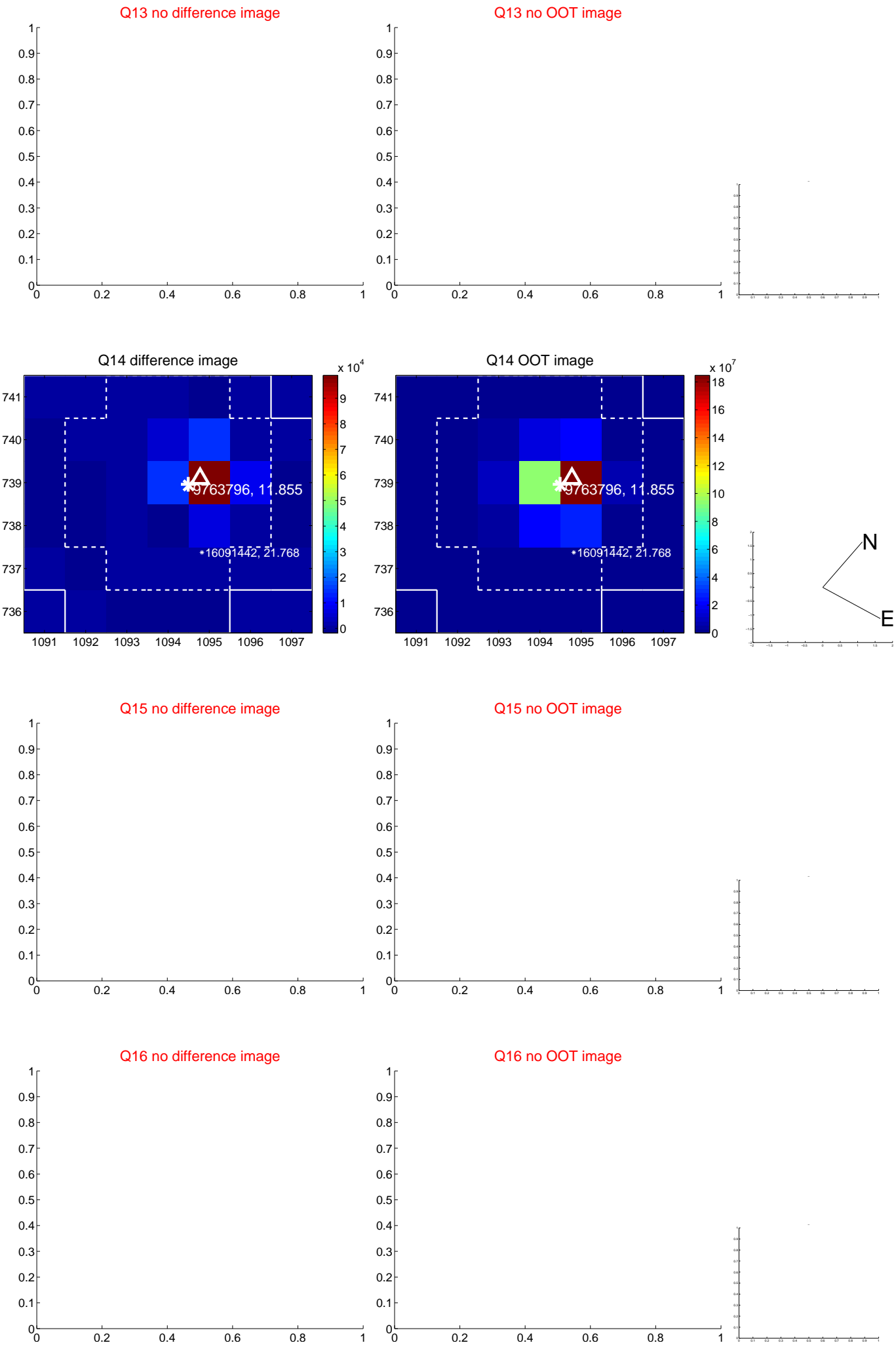
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



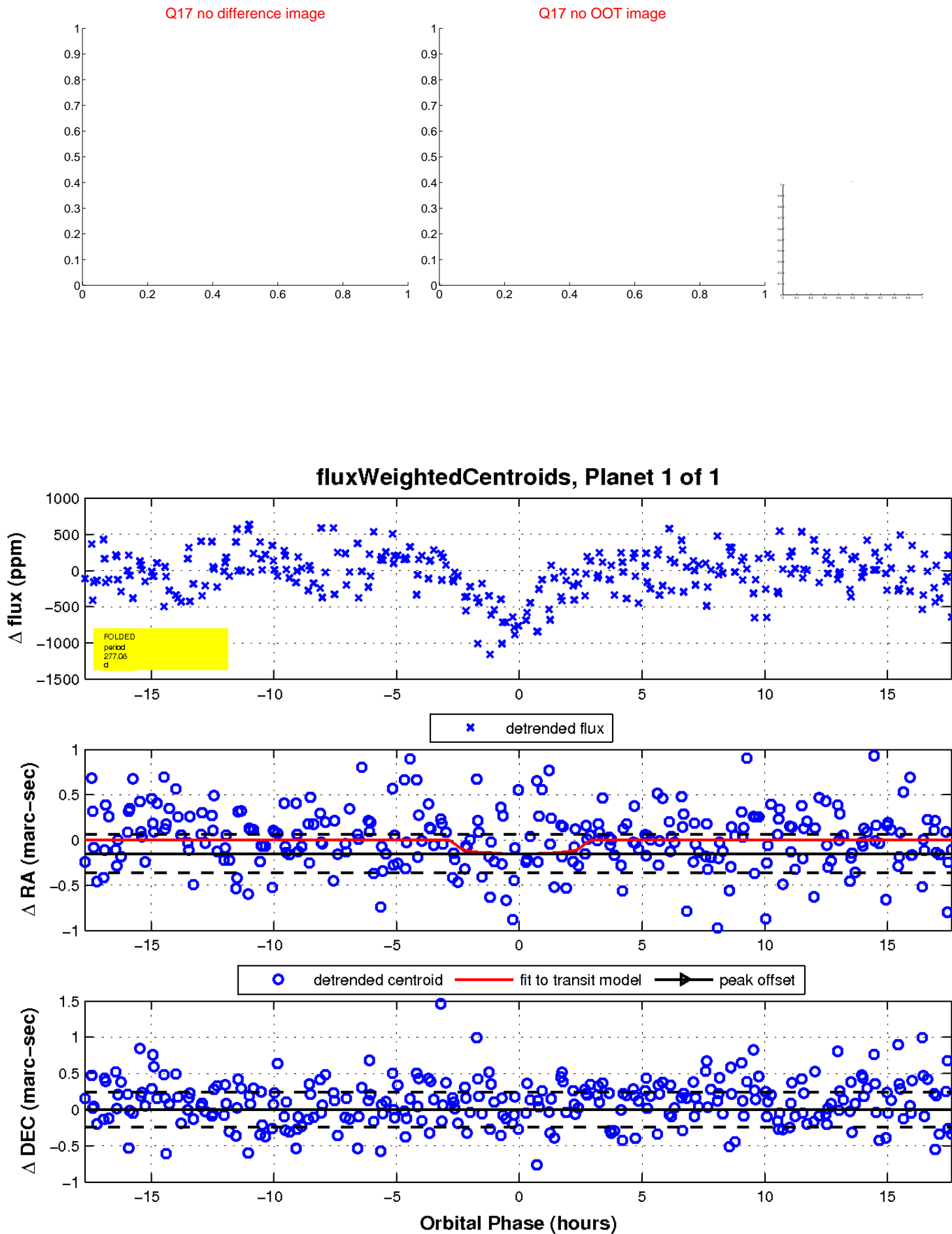
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

