

KIC 004060411

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})
004060411-01	OBS	No	519.380822	137.467591	586.1	12.549	7.2	7.2	0.85	5619	2.41	0.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004060411-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_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.

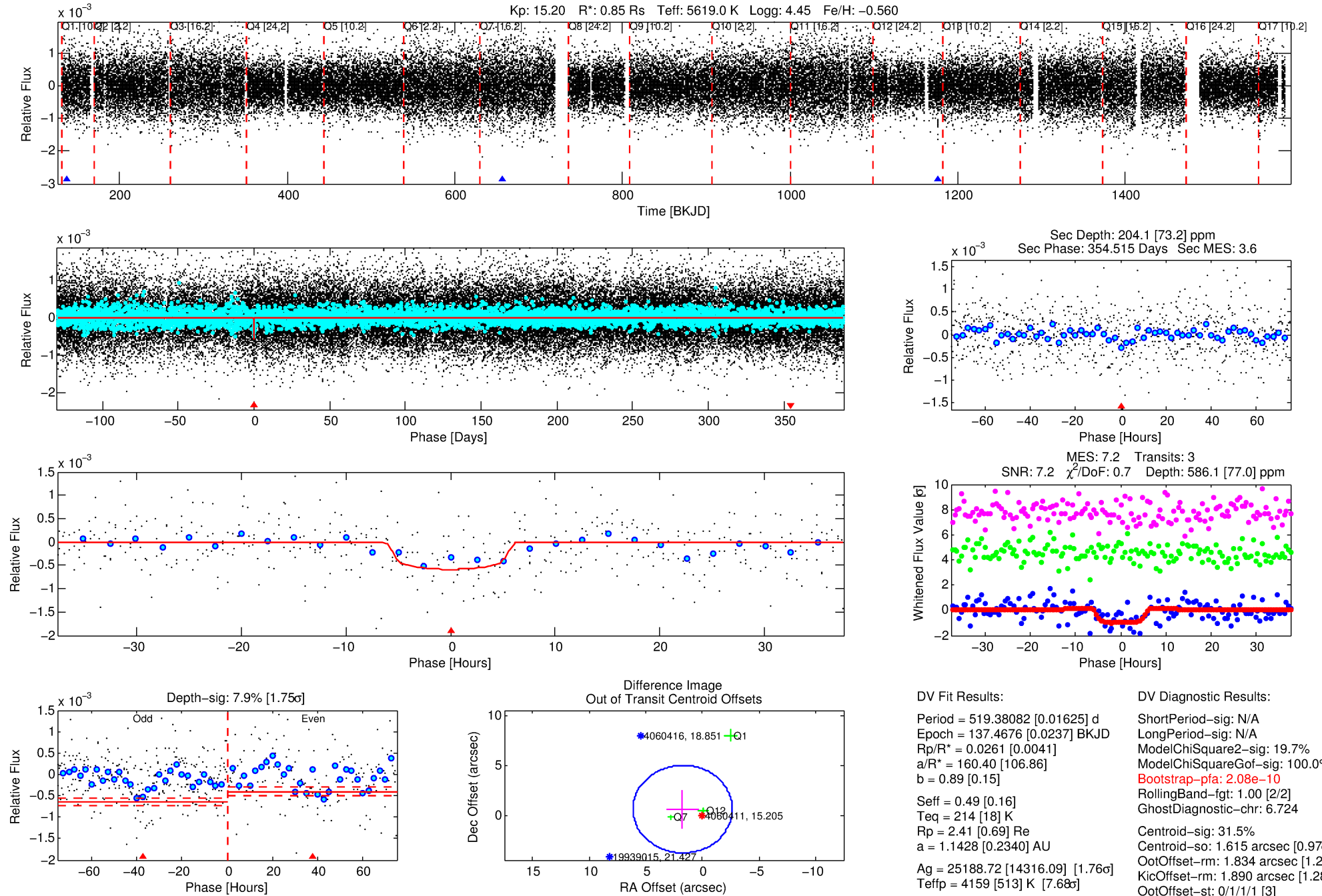
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004060411-01

No Significant Match Found

DV One-Page Summary

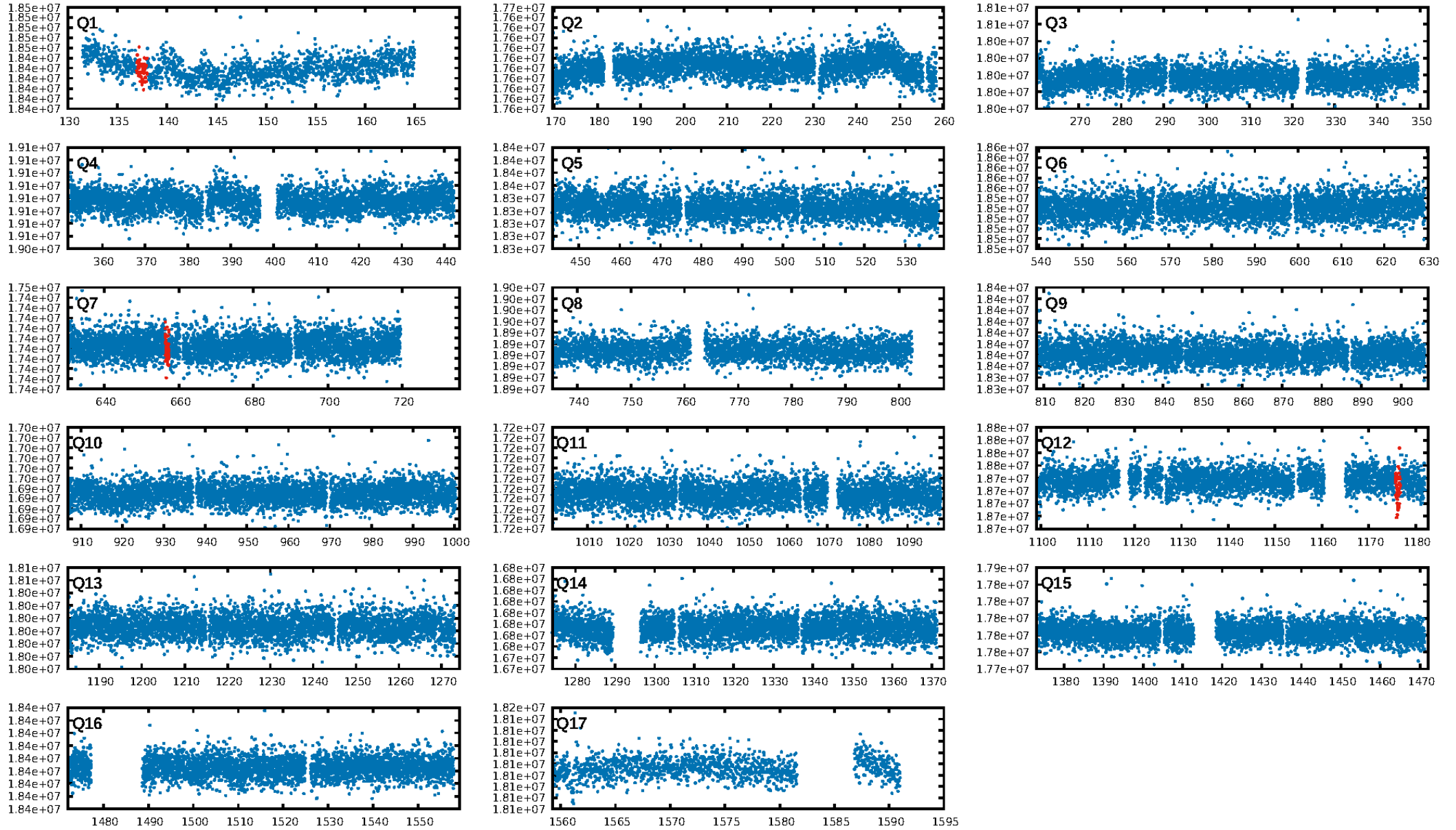
KIC: 4060411 Candidate: 1 of 1 Period: 519.381 d



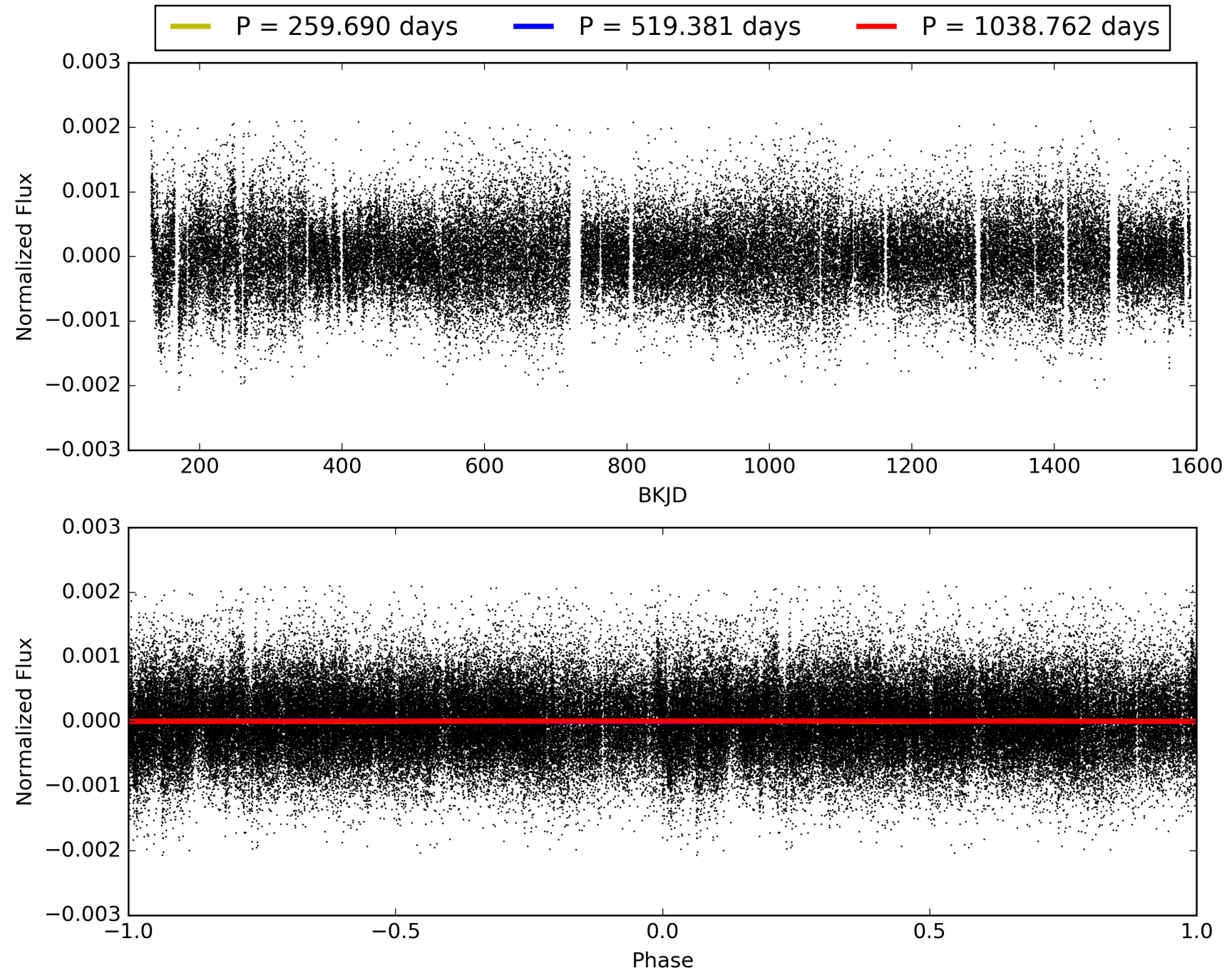
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:57:36 Z

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

TCE 004060411-01, PDC Light Curves

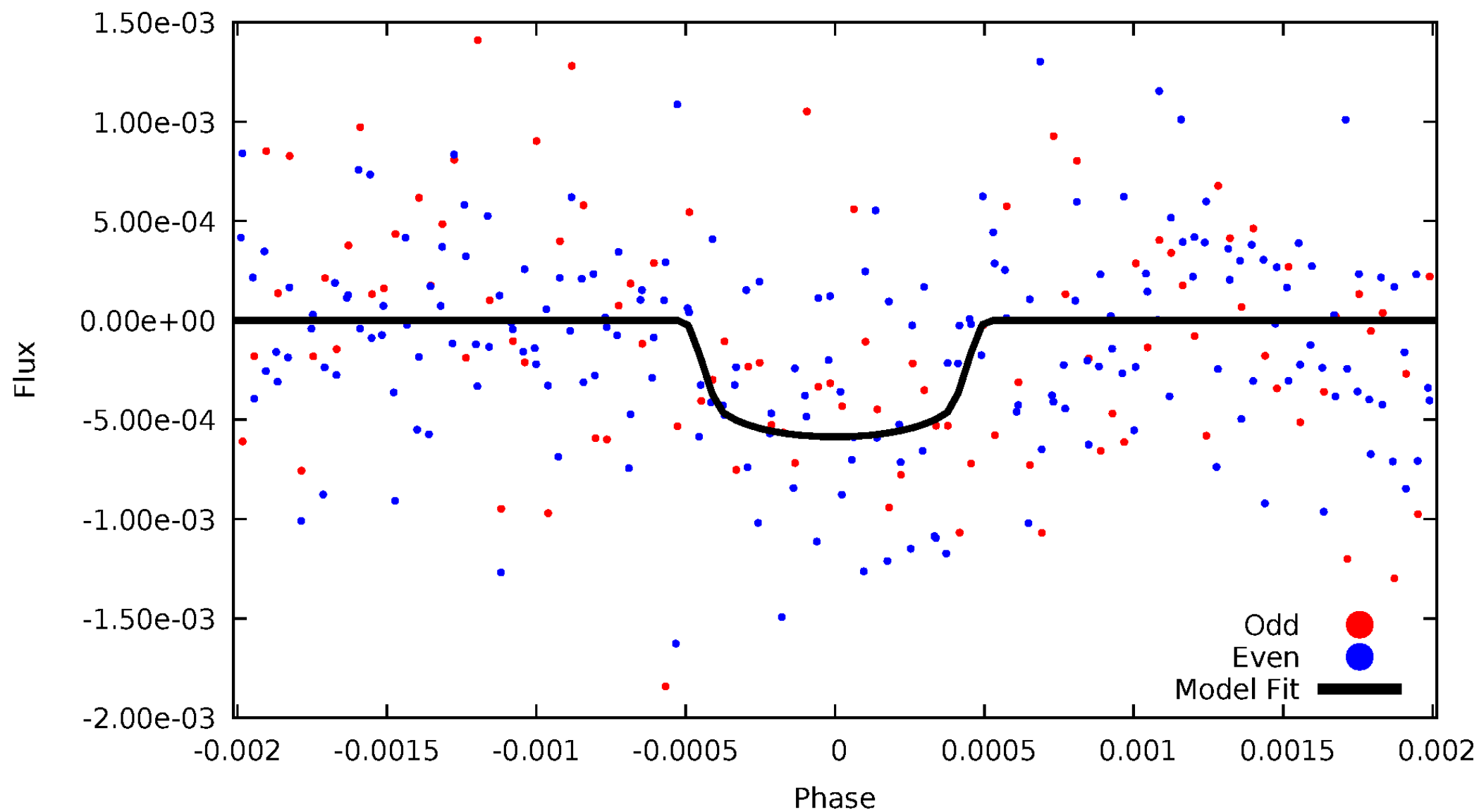


TCE 004060411-01



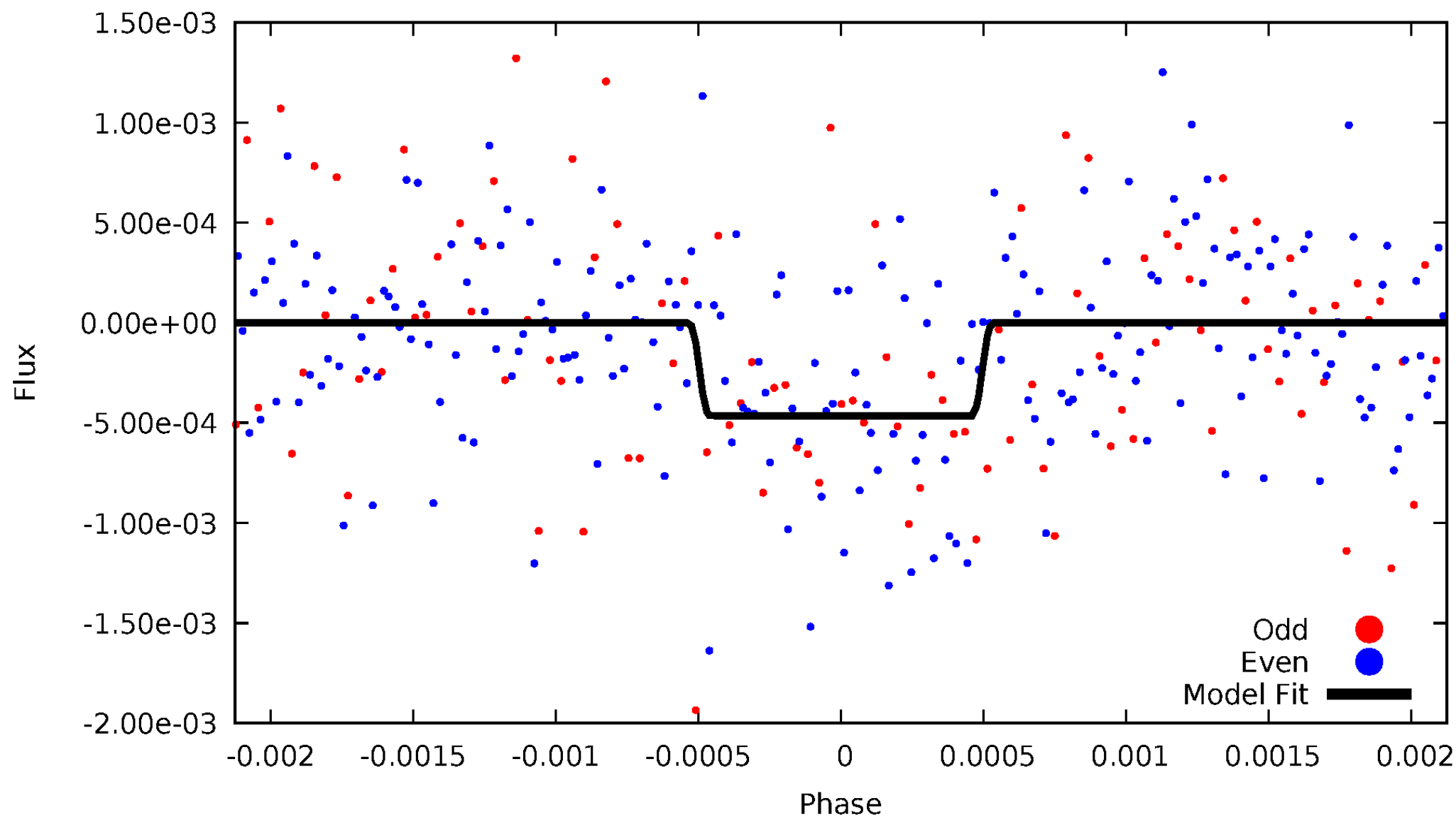
DV Odd/Even

TCE 004060411-01

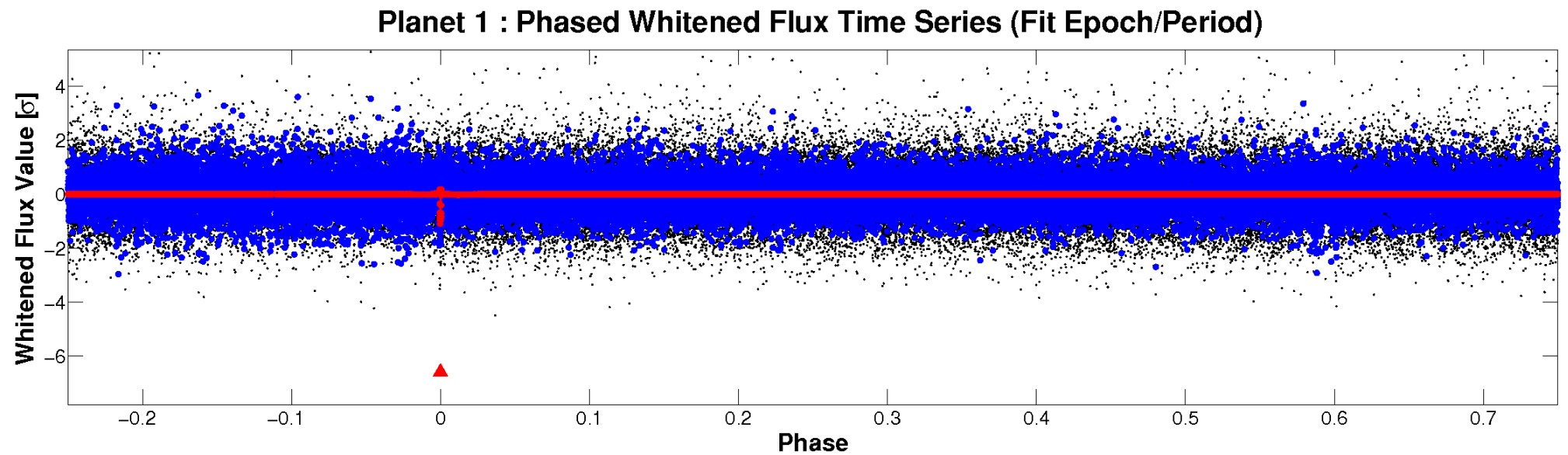
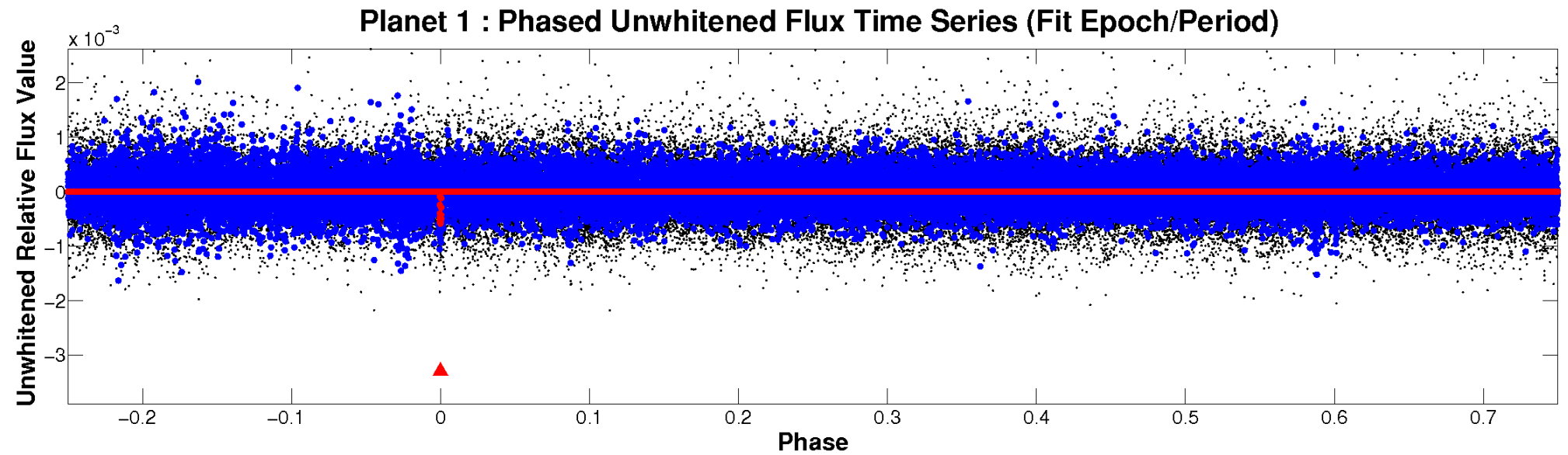


ALT Odd/Even

TCE 004060411-01



Non-Whitened Vs. Whitened Light Curve



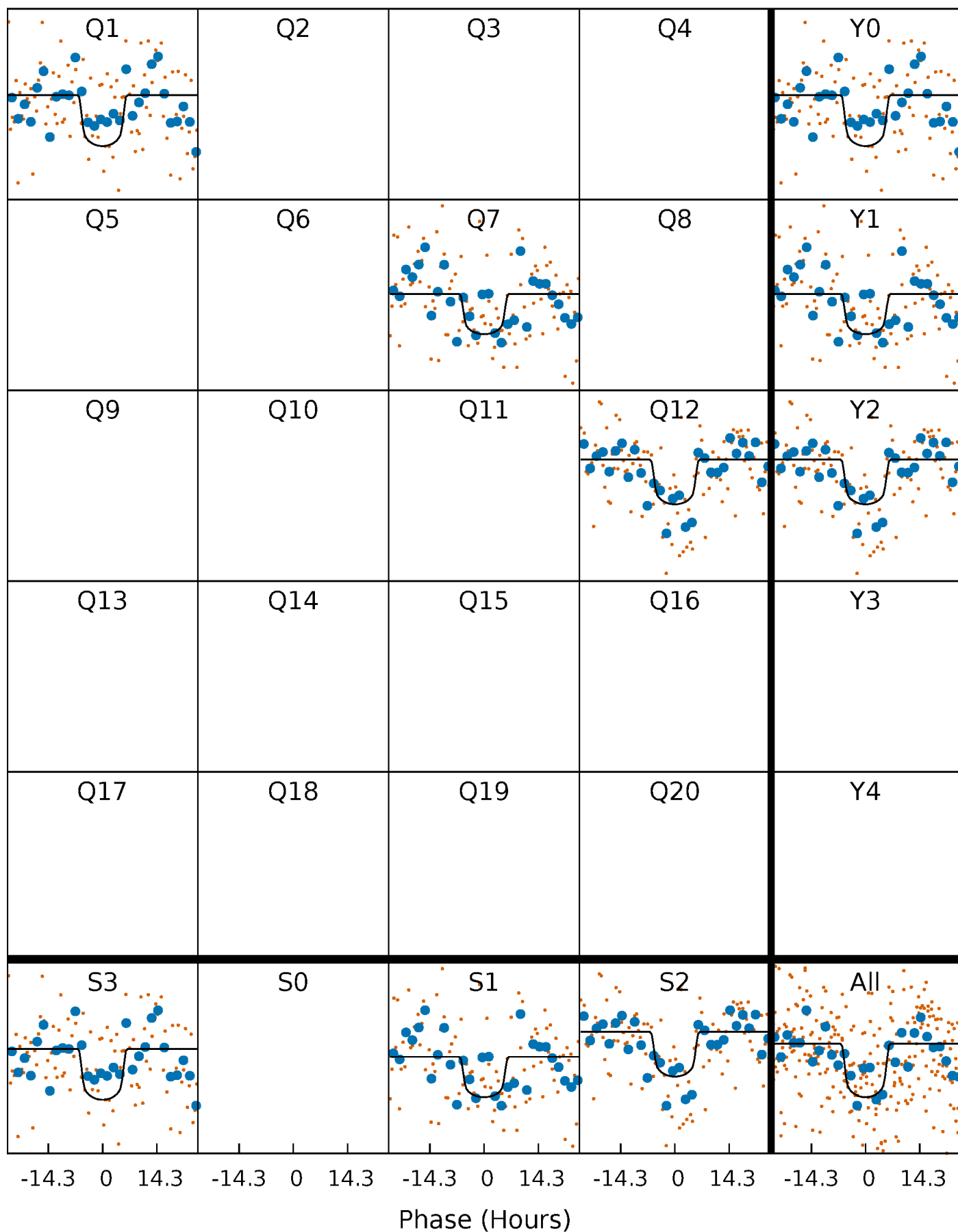
PDC Quarter-Phased Transit Curves

TCE 004060411-01 P=519.380822 Days $T_0=137.467591$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004060411-01 P=519.380822 Days $T_0=137.467591$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

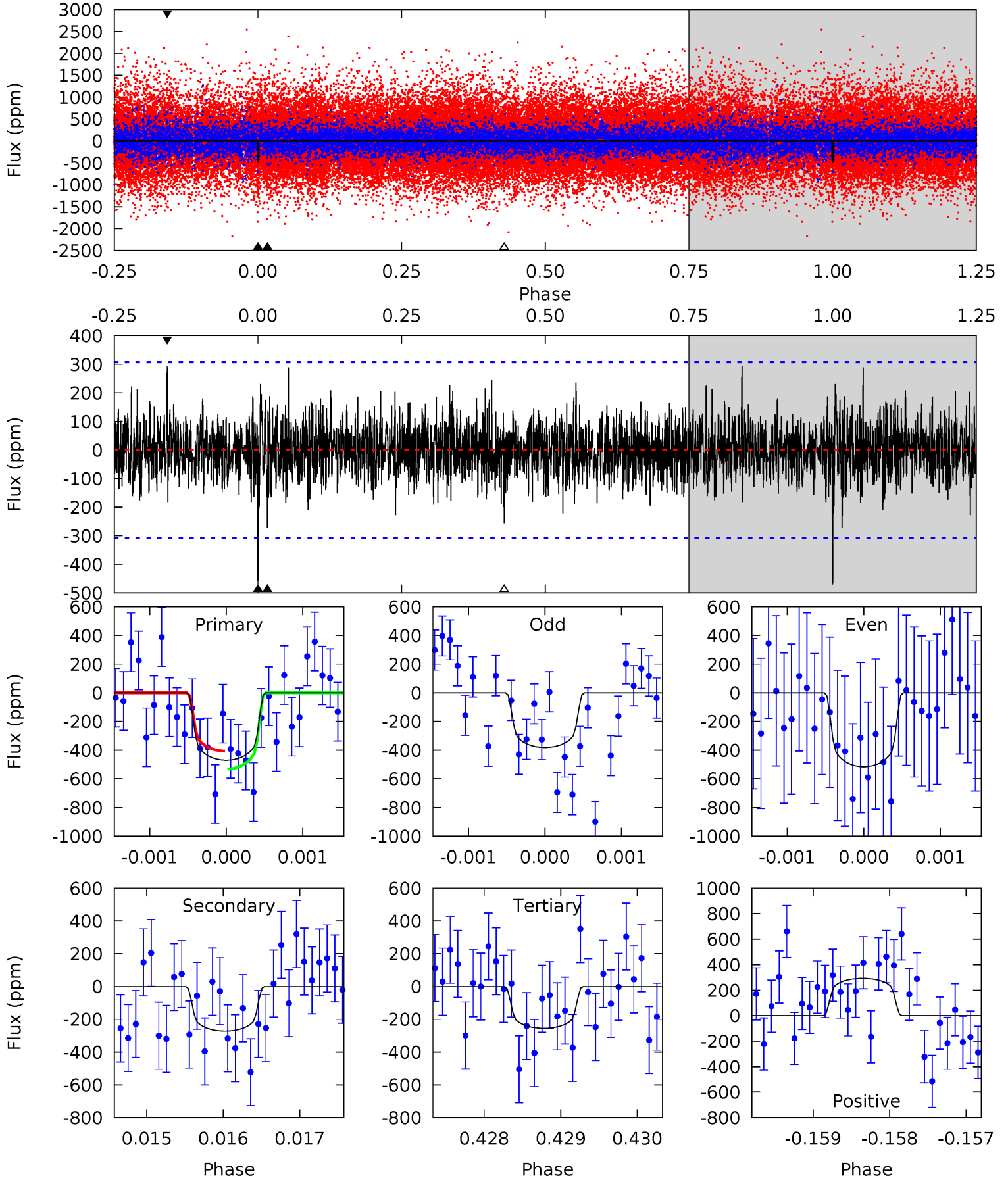
TCE 004060411-01 P=519.373417 Days $T_0=137.445042$ (BKJD)



DV Model-Shift Uniqueness Test

004060411-01, P = 519.380822 Days, E = 137.467591 Days

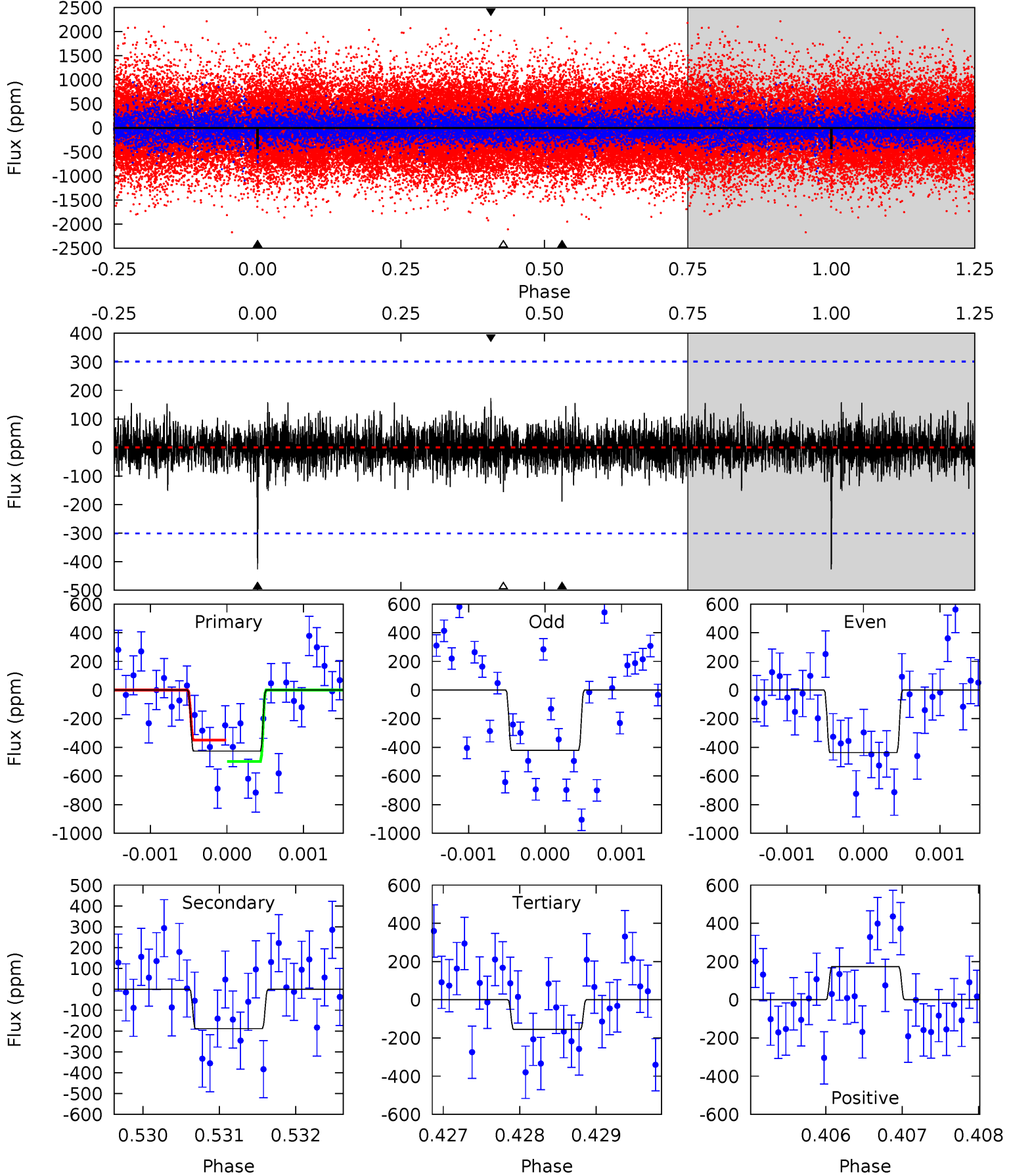
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.33	4.83	4.52	5.18	5.45	3.28	1.23	3.81	3.16	0.30	-0.35	1.15	1.23	0.38	1.12



Alt Model-Shift Uniqueness Test

004060411-01, P = 519.373417 Days, E = 137.445042 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.70	3.41	2.81	3.14	5.44	3.28	0.79	4.89	4.57	0.60	0.27	0.13	1.01	0.29	1.35



Stellar Parameters For KIC 004060411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5619^{+168}_{-168}	$4.449^{+0.140}_{-0.171}$	$-0.560^{+0.350}_{-0.300}$	$0.848^{+0.200}_{-0.133}$	$0.738^{+0.110}_{-0.047}$	$1.704^{+1.105}_{-0.781}$
	+3%/-3%	+3%/-4%	+62%/-54%	+24%/-16%	+15%/-6%	+65%/-46%
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 004060411-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-272 ± 56	$2.46^{+0.52}_{-0.47}$	299^{+21}_{-17}	4609^{+424}_{-339}	33247^{+17129}_{-12084}
Alt.	-189 ± 55	$2.02^{+0.50}_{-0.44}$	300^{+20}_{-19}	4612^{+528}_{-425}	33323^{+25743}_{-15461}

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

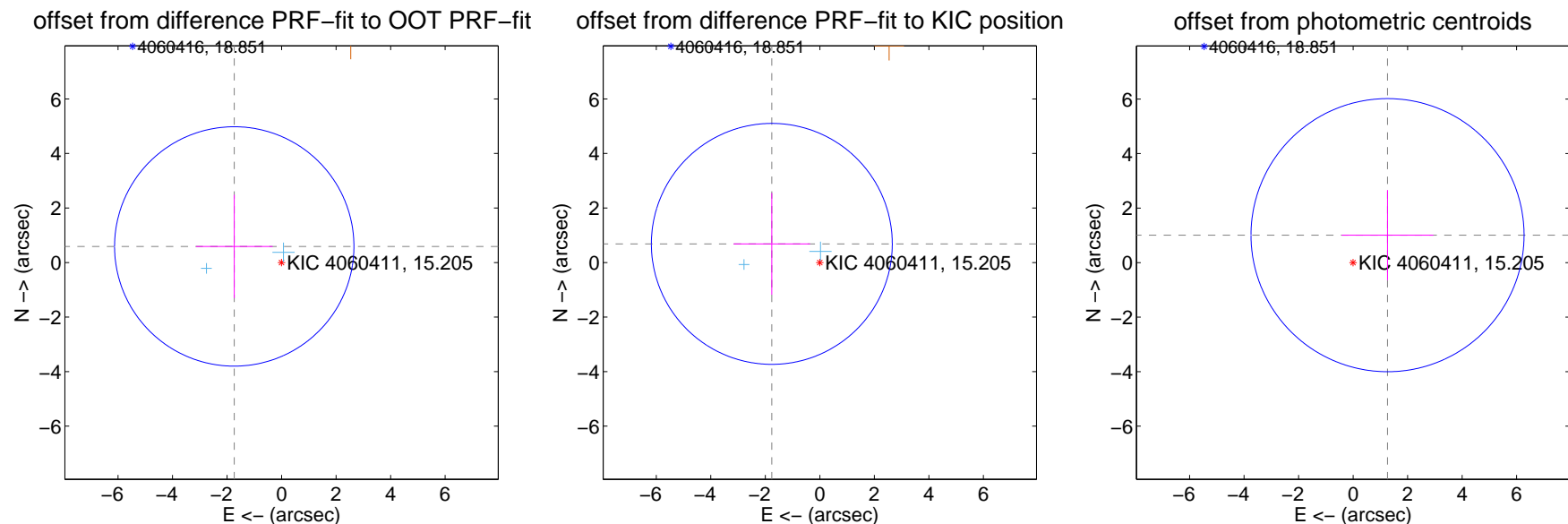
DV Centroid Data

Supplemental centroid analysis for 004060411-01. Kepler magnitude: 15.21. Transit SNR 7.24

There are 2 quarters with good PRF difference image offsets

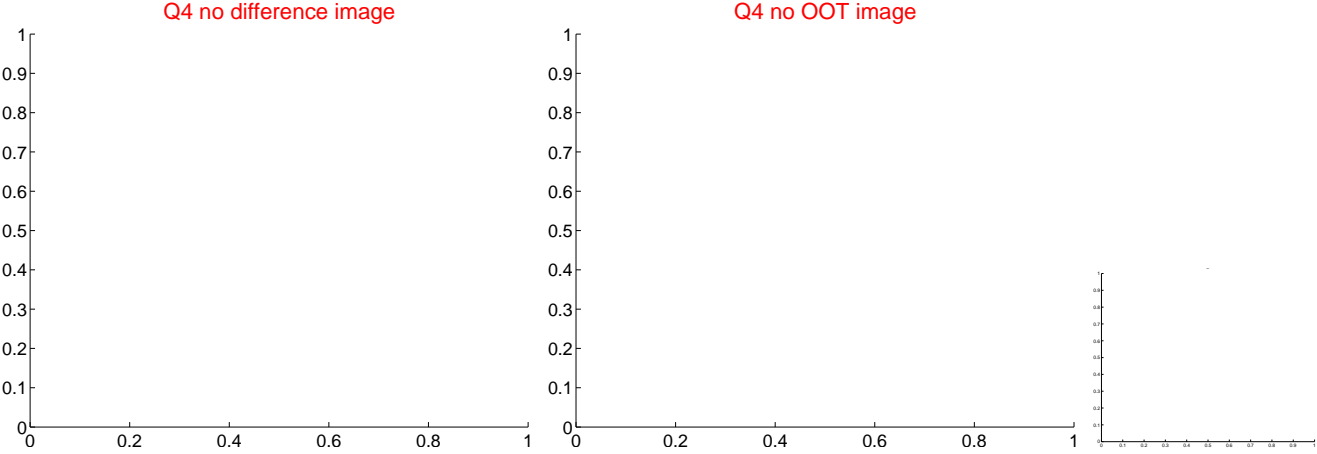
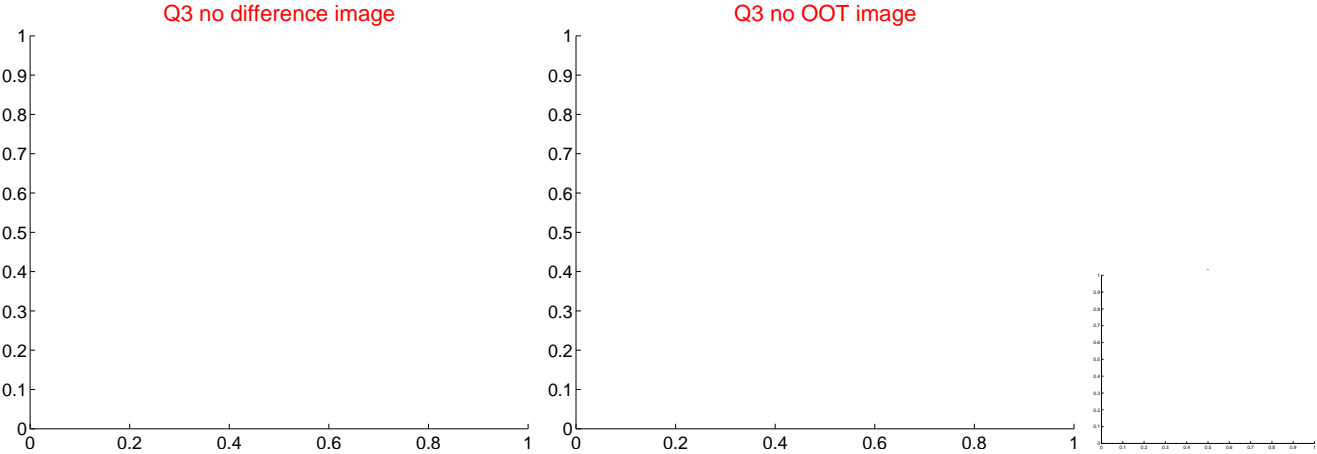
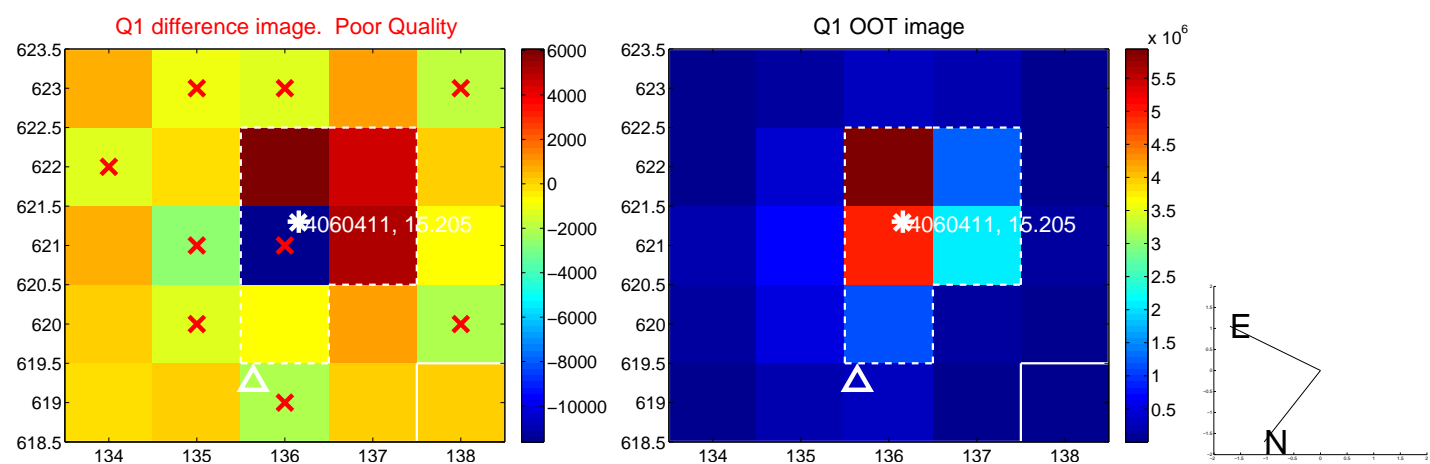
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.834 ± 1.463	1.25	1.736 ± 1.405	0.591 ± 1.893
PRF-fit source offset from KIC position	1.890 ± 1.473	1.28	1.762 ± 1.404	0.684 ± 1.865
photometric centroid source offset	1.62 ± 1.67	0.97	-1.26 ± 1.68	1.01 ± 1.65

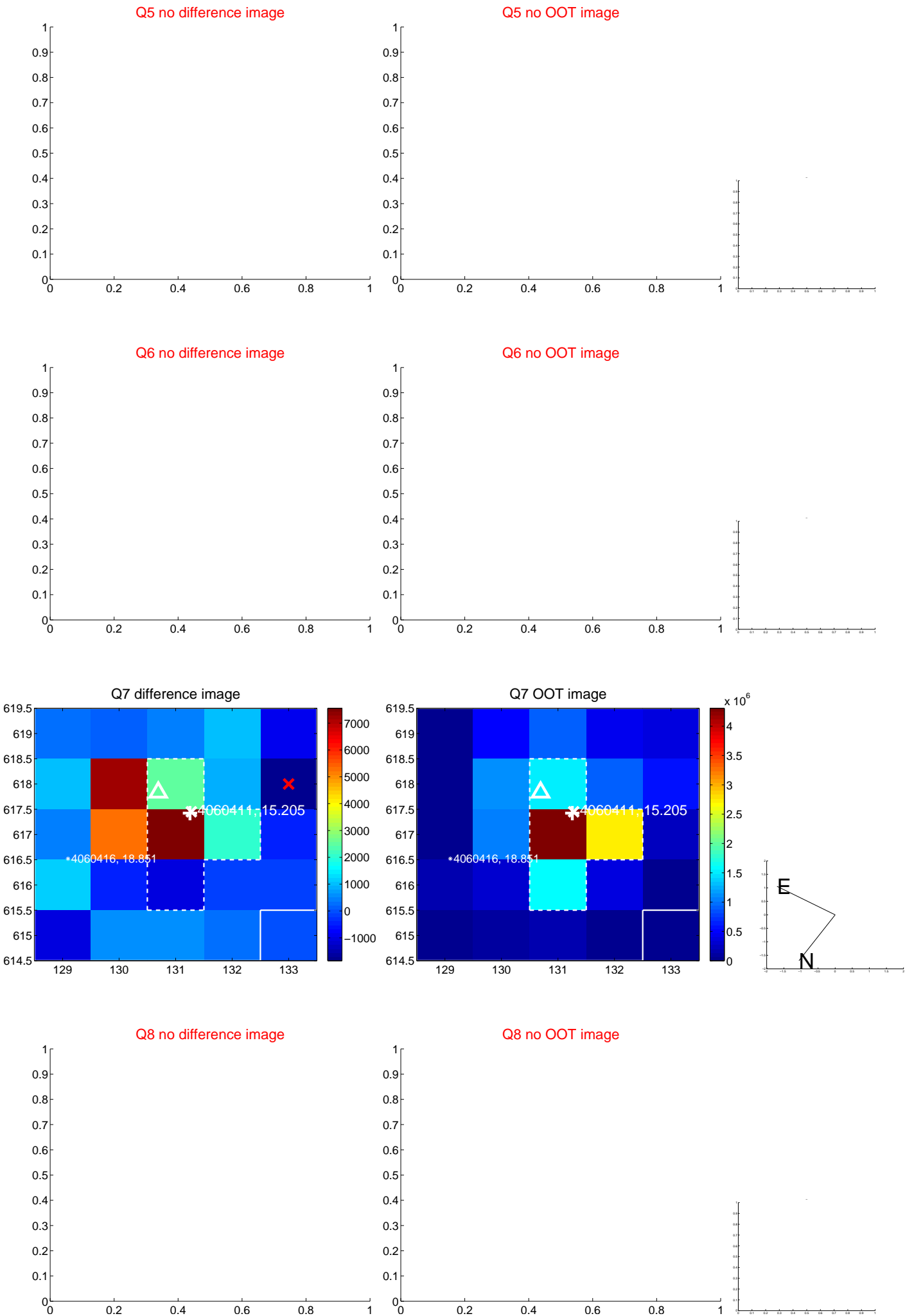


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

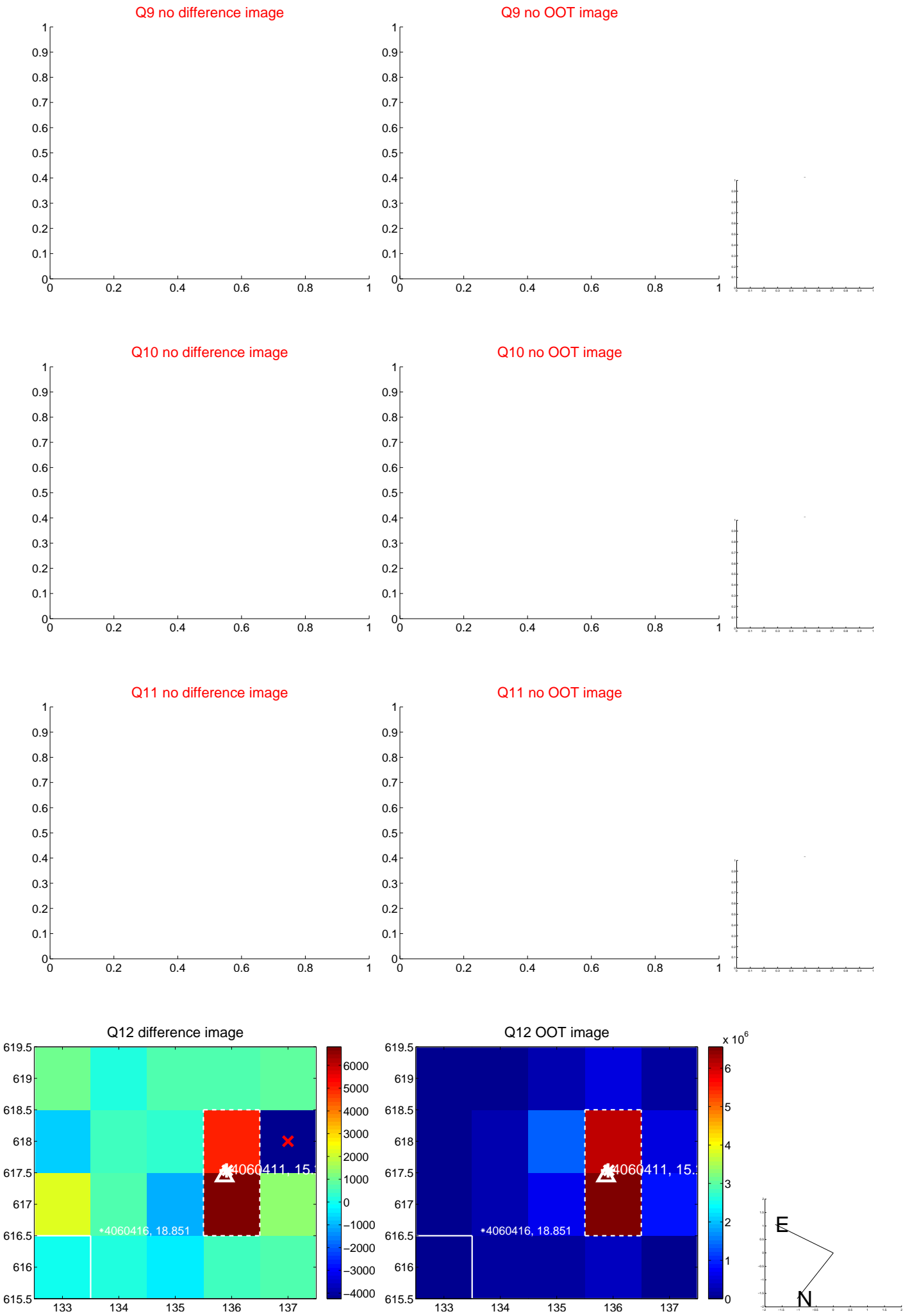
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



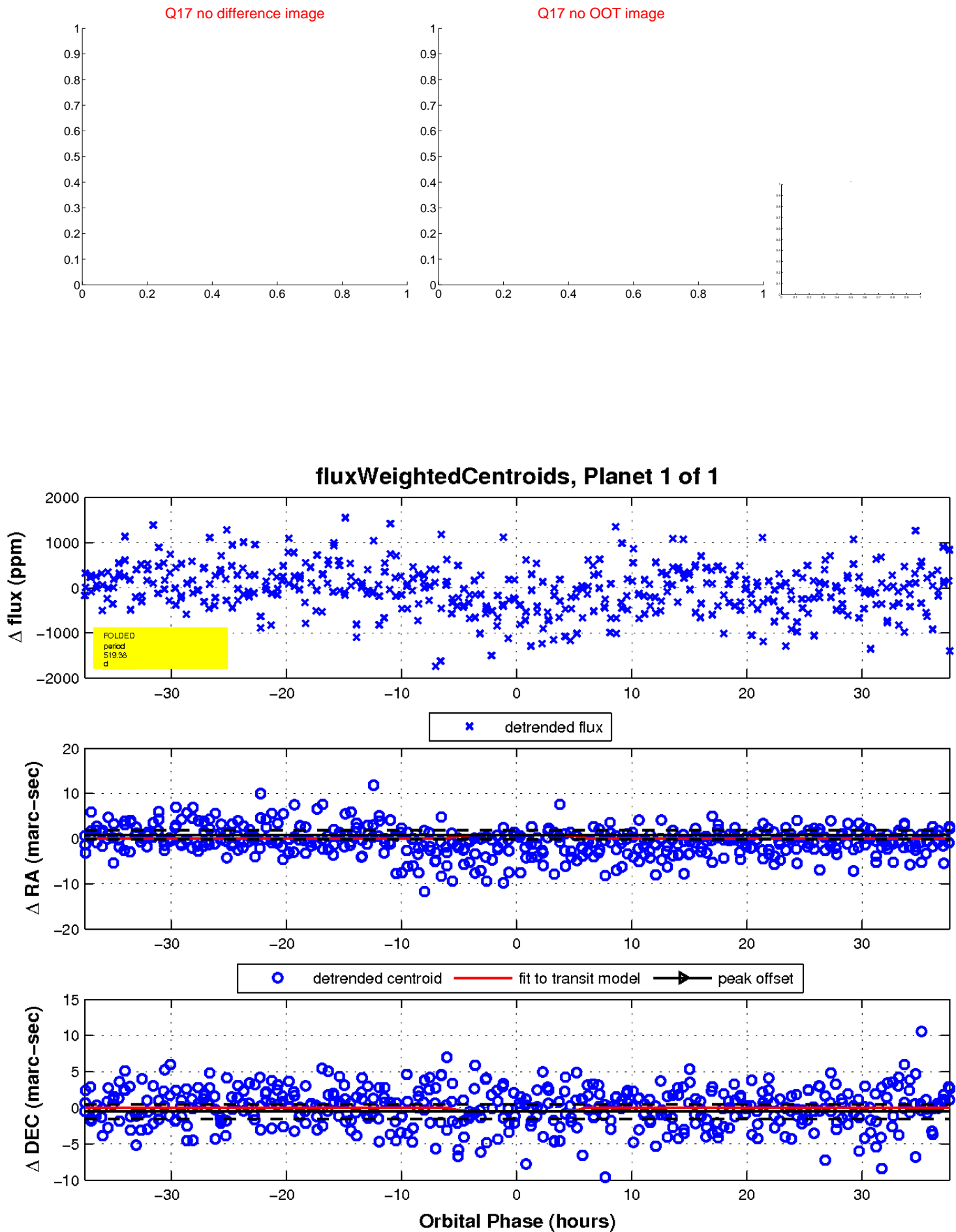
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

