

KIC 010664022

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})
010664022-01	OBS	No	416.696265	207.708664	409.0	16.908	9.3	7.9	0.77	5661	1.62	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010664022-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

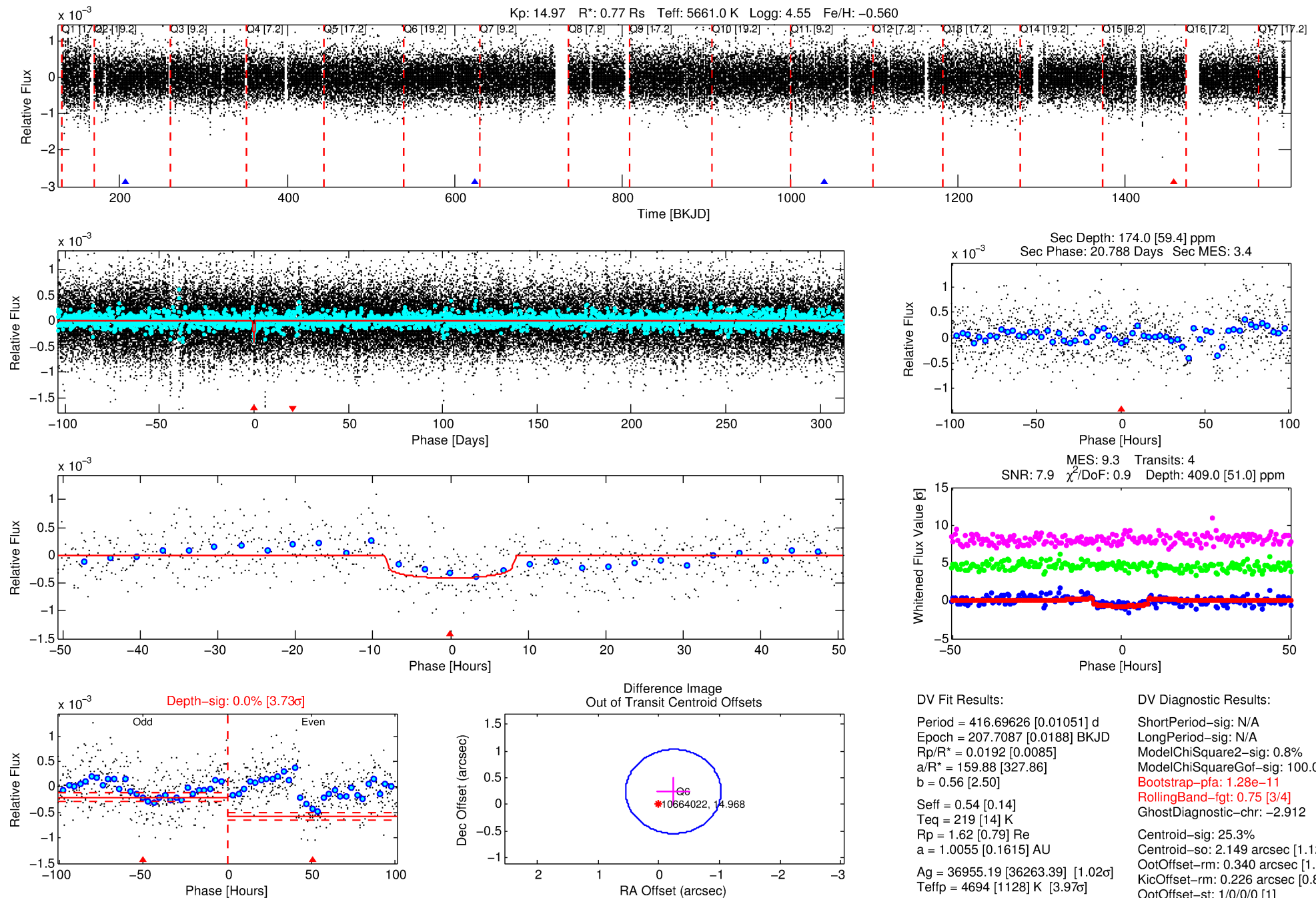
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010664022-01

No Significant Match Found

DV One-Page Summary

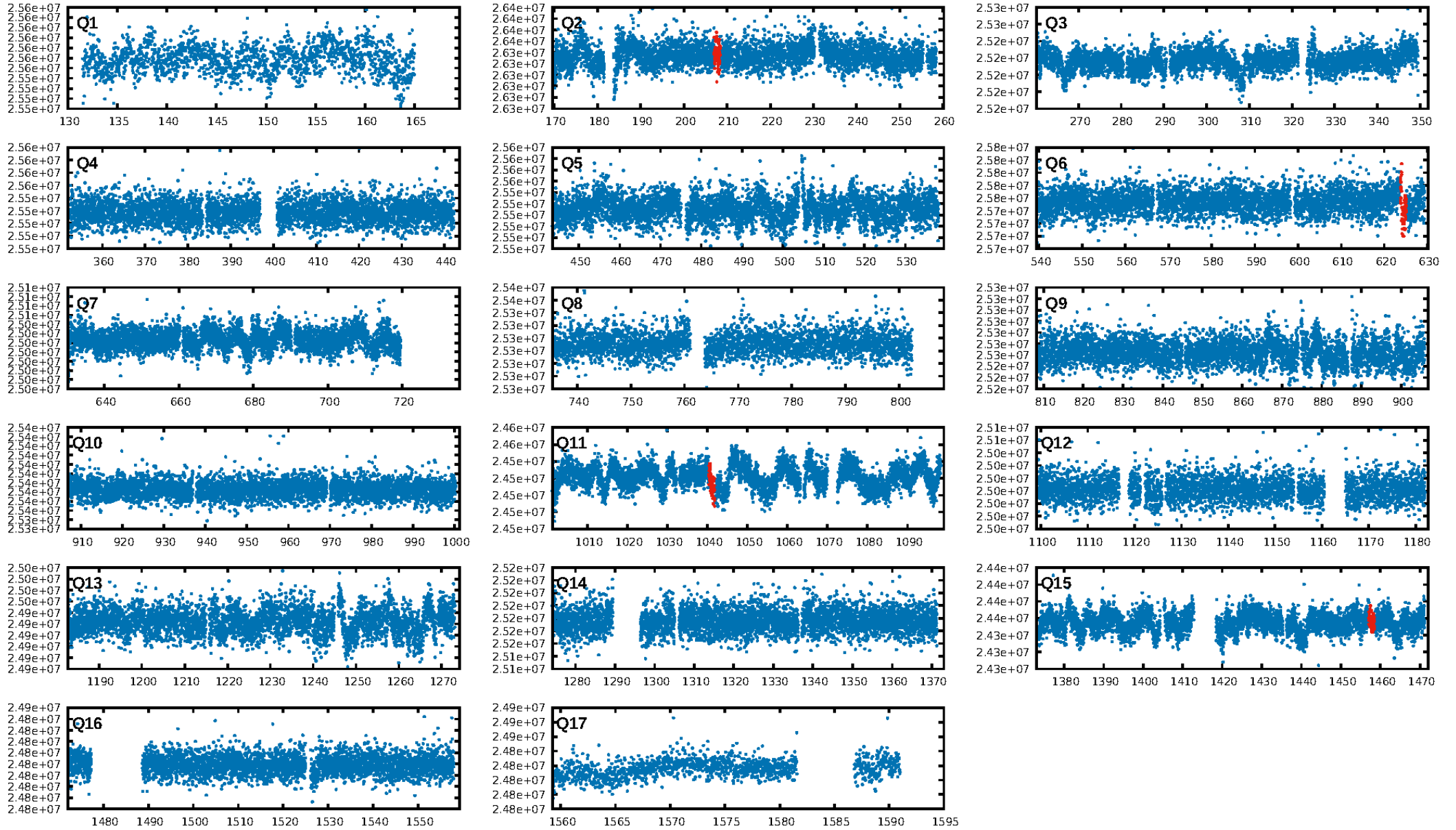
KIC: 10664022 Candidate: 1 of 1 Period: 416.696 d



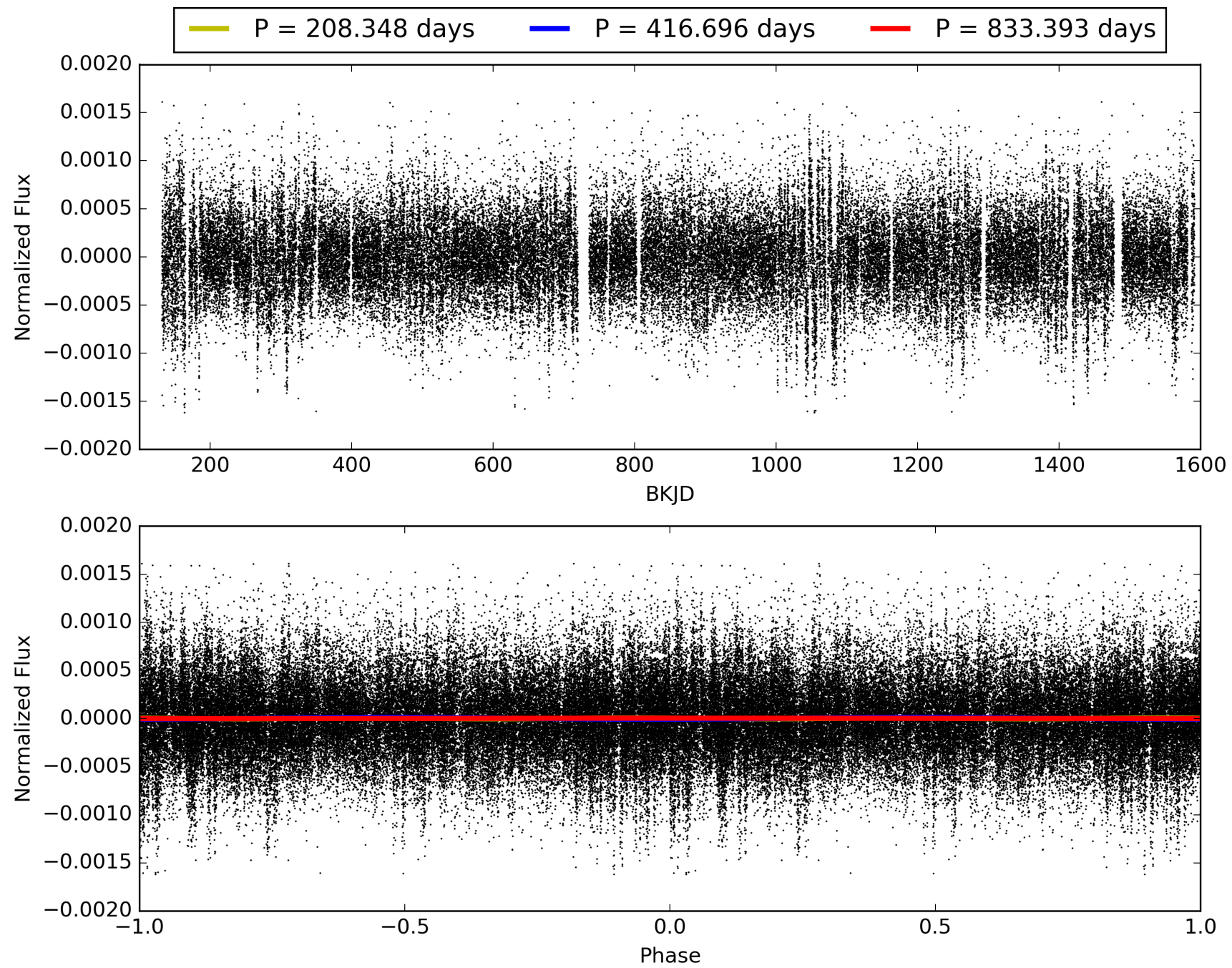
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:38:44 Z

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

TCE 010664022-01, PDC Light Curves

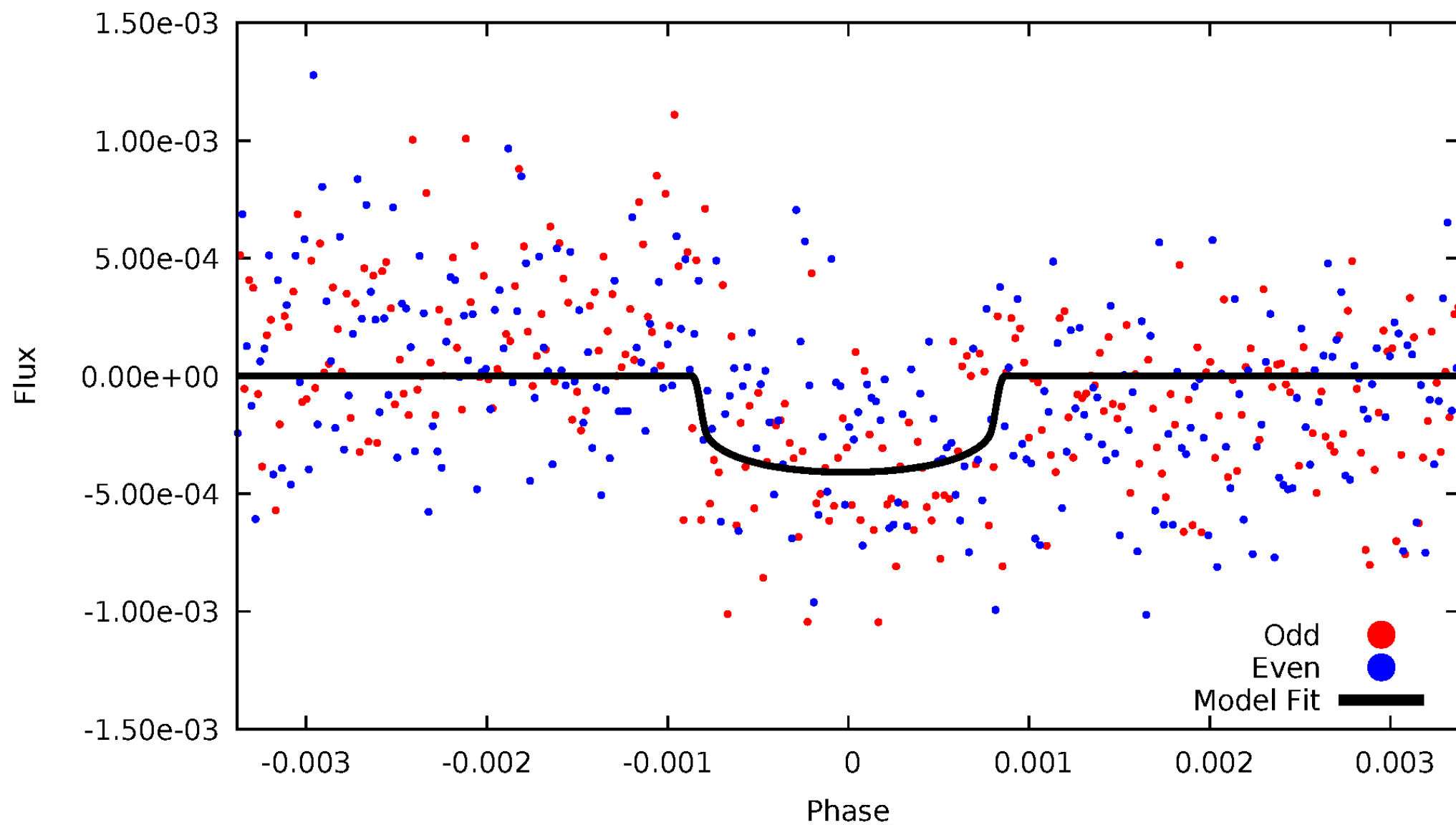


TCE 010664022-01



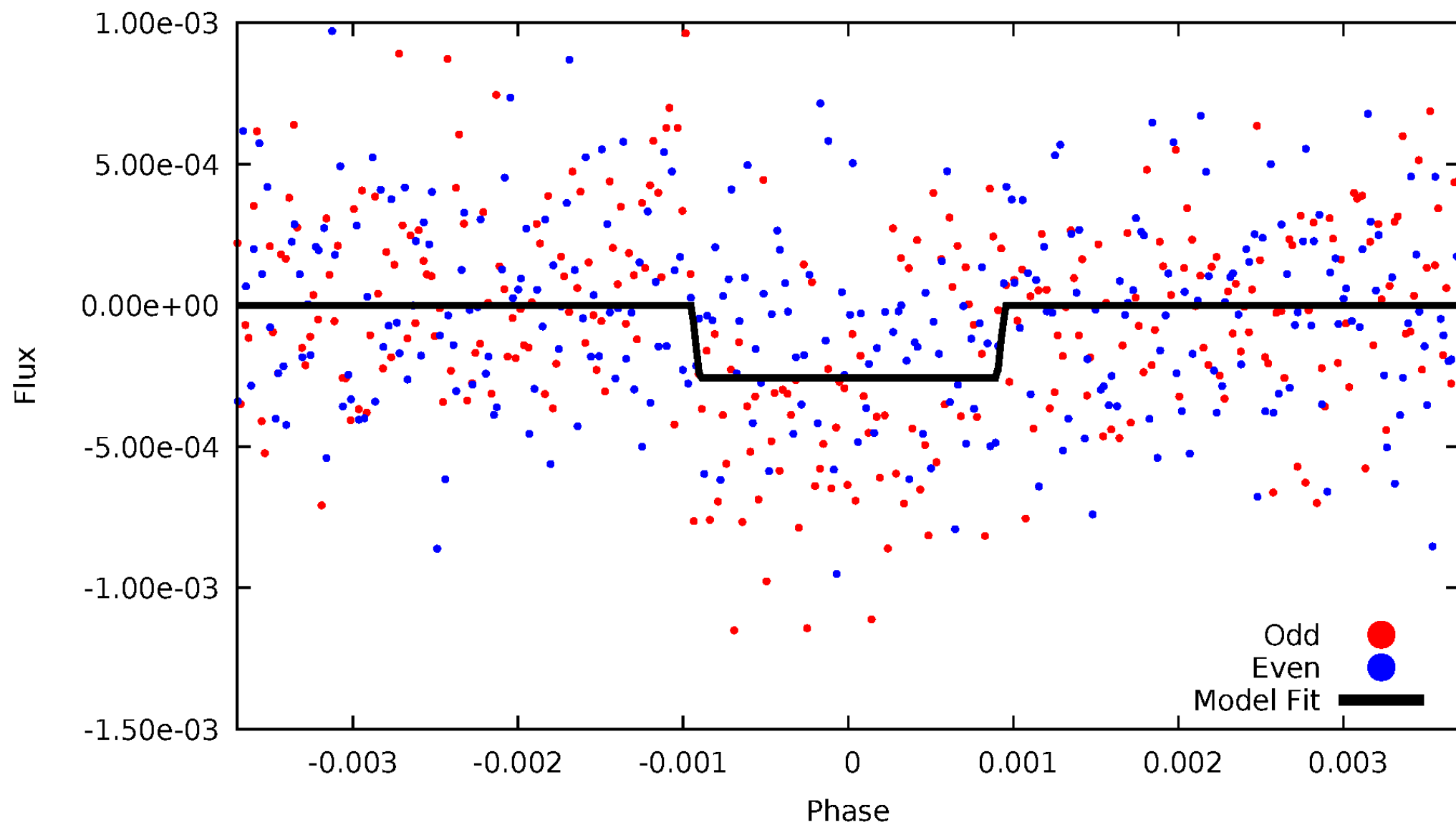
DV Odd/Even

TCE 010664022-01



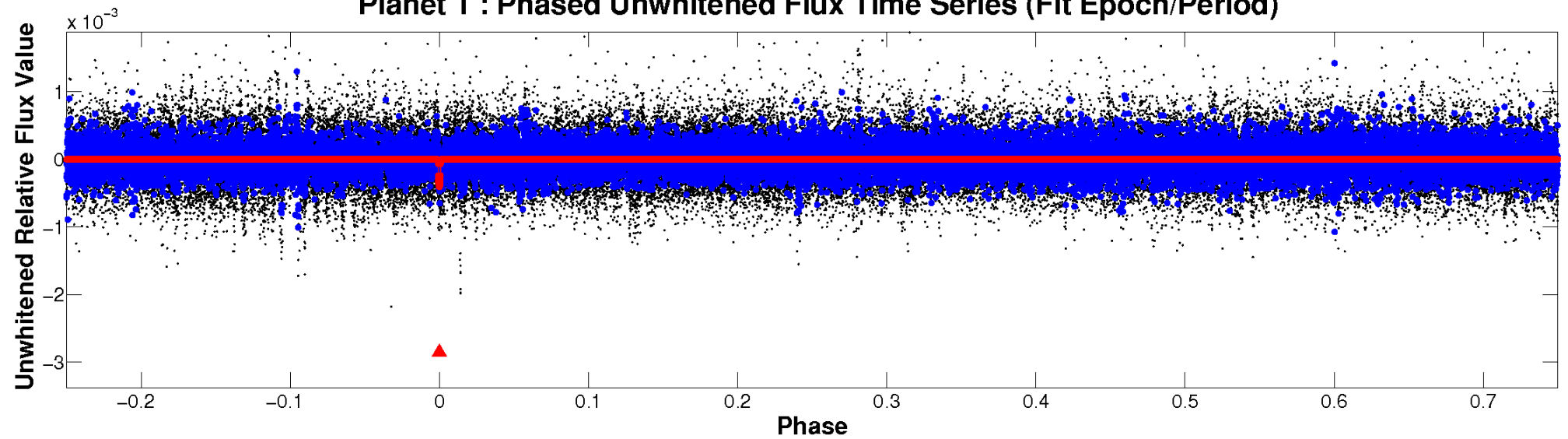
ALT Odd/Even

TCE 010664022-01

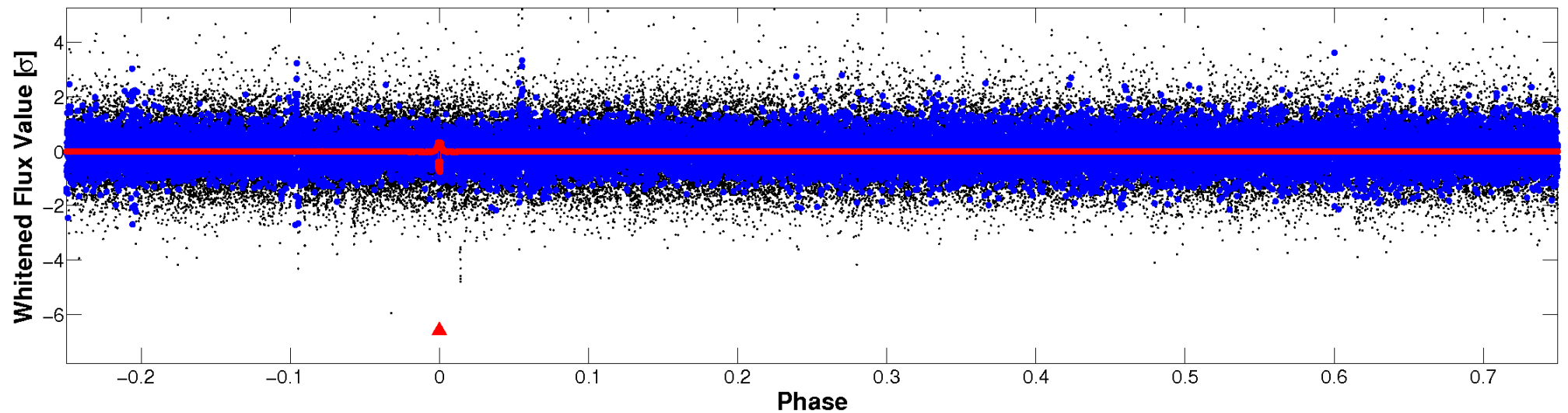


Non-Whitened Vs. Whitened Light Curve

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



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



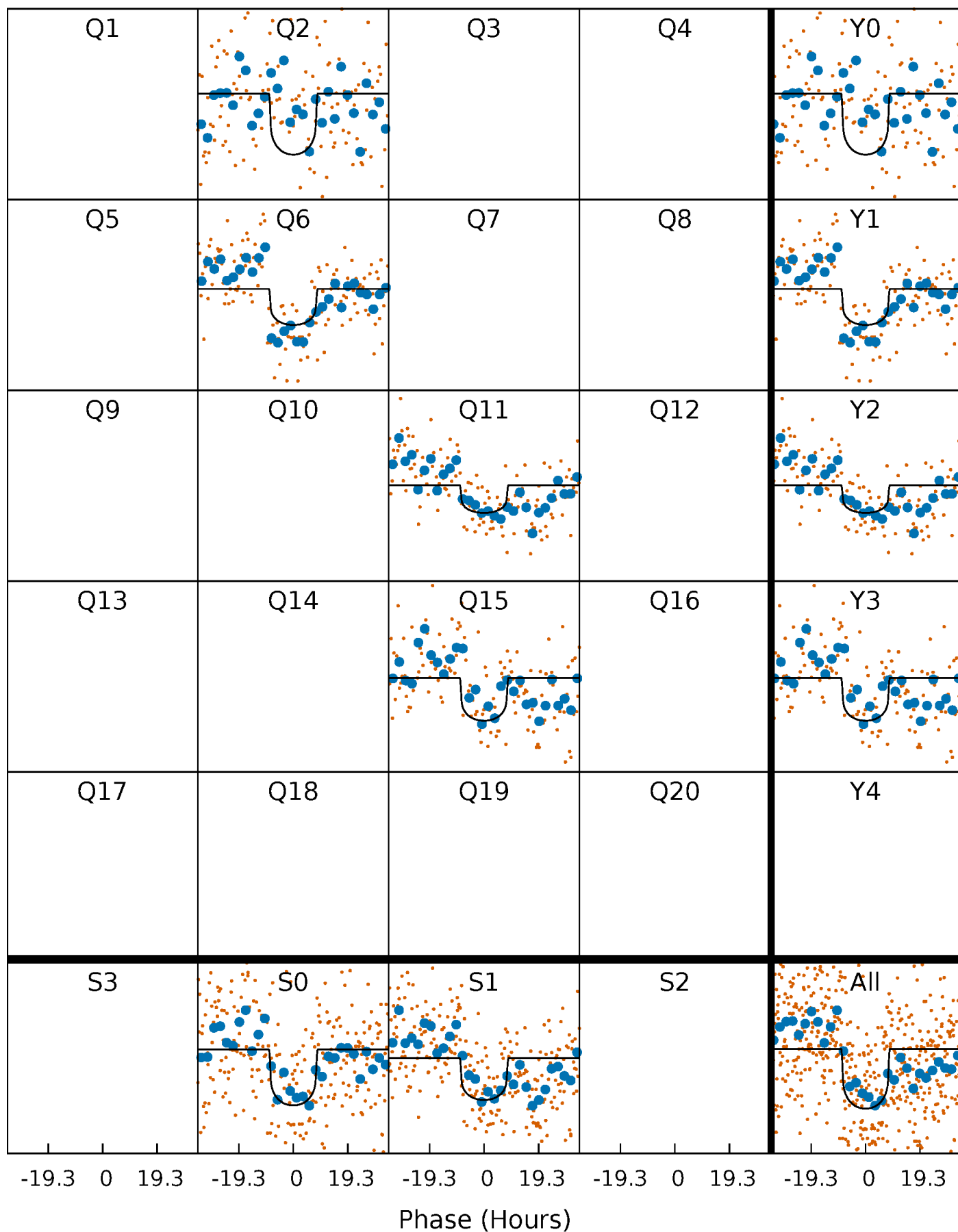
PDC Quarter-Phased Transit Curves

TCE 010664022-01 P=416.696265 Days $T_0=207.708664$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010664022-01 P=416.696265 Days $T_0=207.708664$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

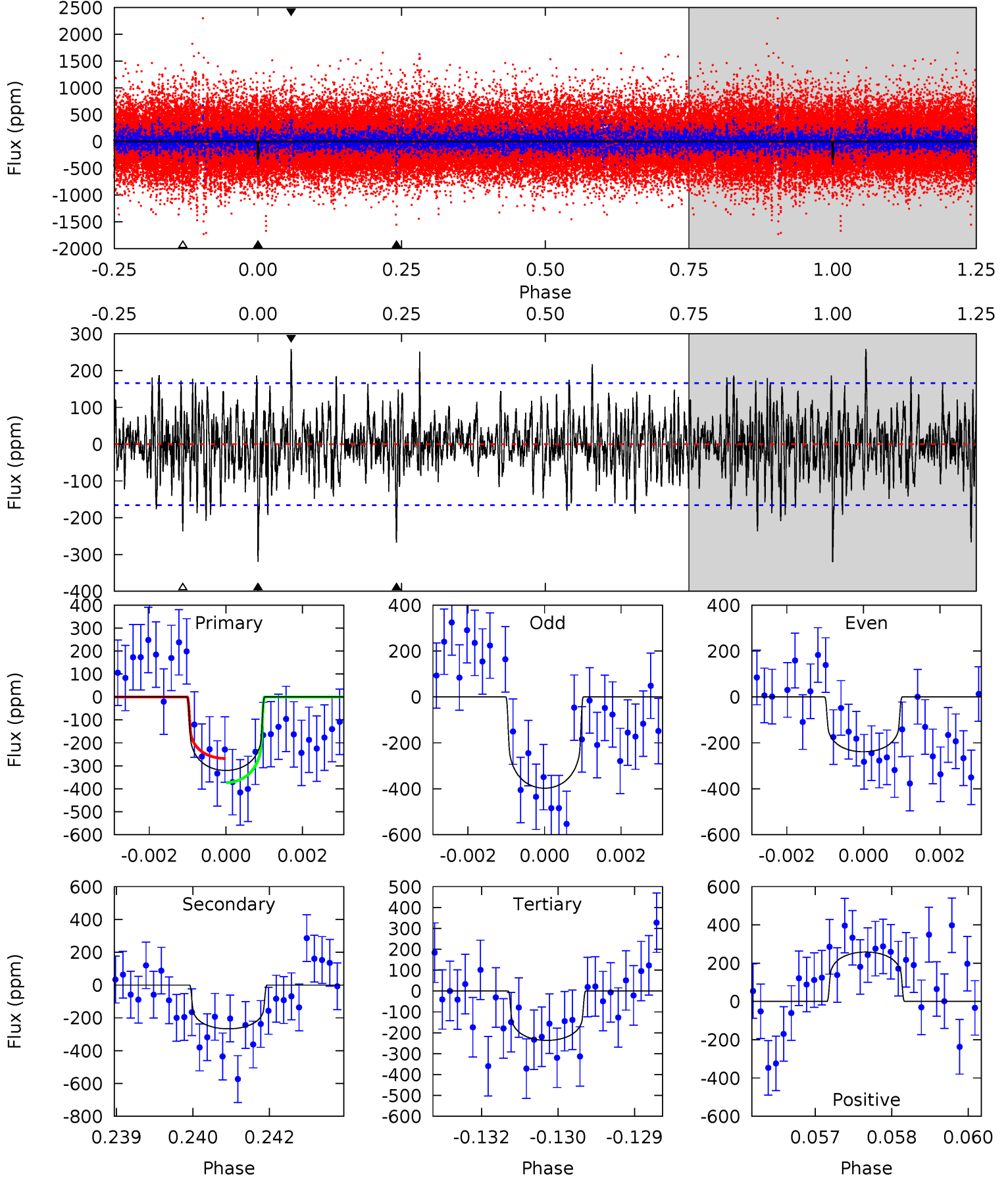
TCE 010664022-01 P=416.756079 Days $T_0=207.658872$ (BKJD)



DV Model-Shift Uniqueness Test

010664022-01, P = 416.696265 Days, E = 207.708664 Days

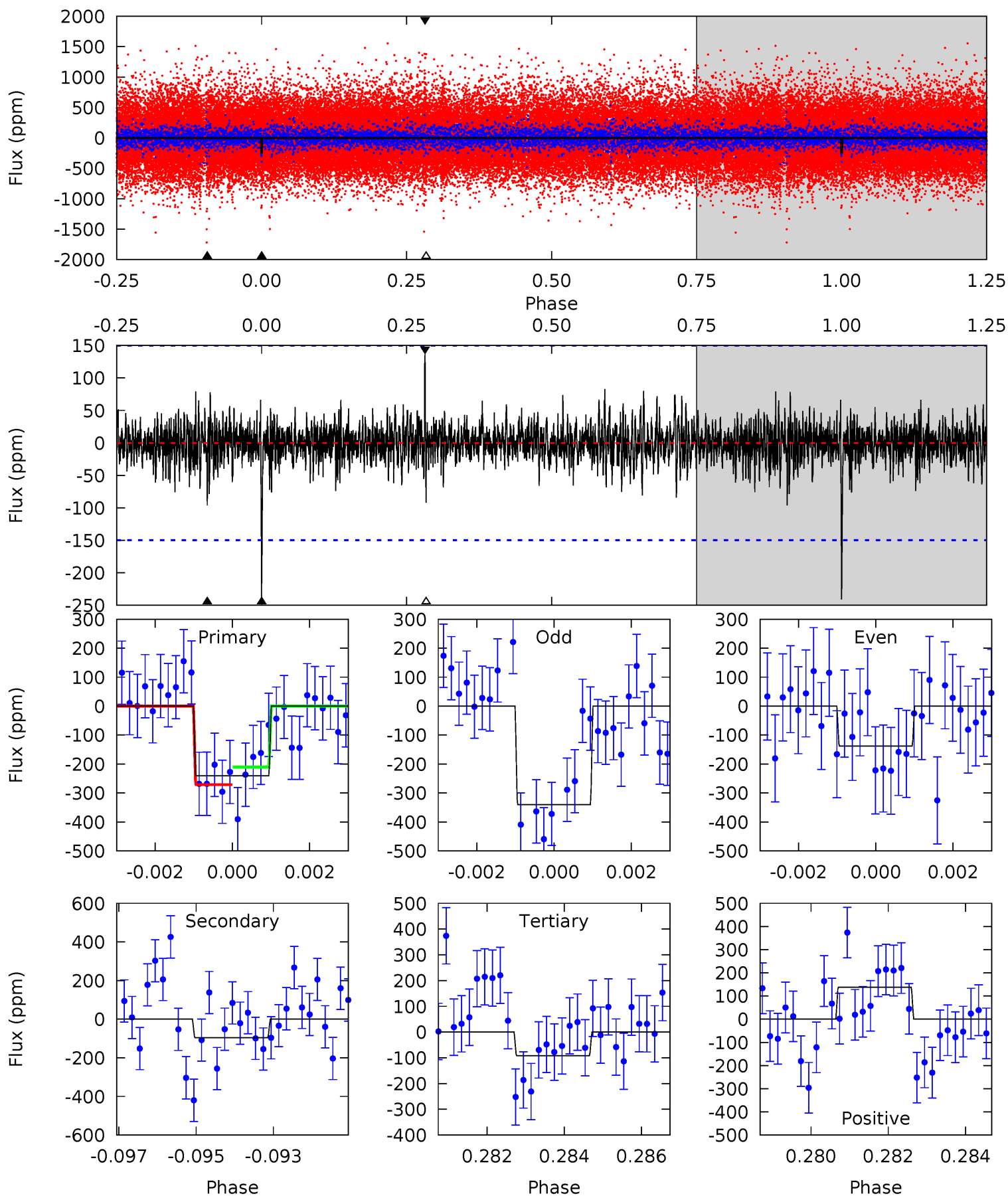
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	8.61	7.63	8.33	5.35	3.14	2.02	2.70	2.00	0.98	0.27	2.56	1.04	0.45	1.69



Alt Model-Shift Uniqueness Test

010664022-01, P = 416.756079 Days, E = 207.658872 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.59	3.43	3.28	4.93	5.34	3.11	0.81	5.31	3.66	0.15	-1.50	3.60	1.40	0.36	1.08



Stellar Parameters For KIC 010664022

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5661^{+170}_{-153}	$4.554^{+0.067}_{-0.124}$	$-0.560^{+0.300}_{-0.300}$	$0.773^{+0.150}_{-0.069}$	$0.780^{+0.096}_{-0.056}$	$2.380^{+0.669}_{-0.875}$
	+3%/-3%	+1%/-3%	+54%/-54%	+19%/-9%	+12%/-7%	+28%/-37%
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 010664022-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-267 ± 31	$1.65^{+0.74}_{-0.73}$	308^{+16}_{-13}	5284^{+1708}_{-772}	$54714^{+115852}_{-29029}$
Alt.	-96 ± 28	$1.45^{+0.77}_{-0.73}$	308^{+16}_{-12}	4494^{+1613}_{-655}	25694^{+78447}_{-14986}

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

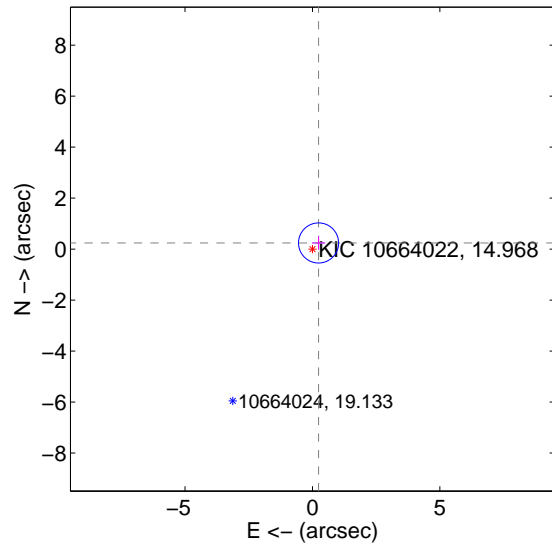
Supplemental centroid analysis for 010664022-01. Kepler magnitude: 14.97. Transit SNR 7.92

There are 1 quarters with good PRF difference image offsets

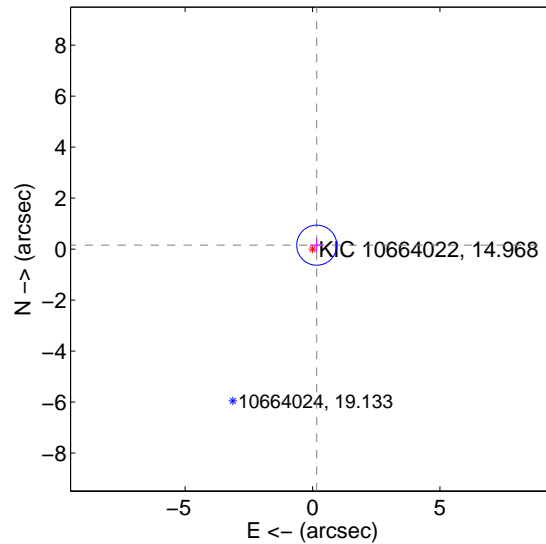
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.340 ± 0.262	1.30	-0.240 ± 0.262	0.241 ± 0.263
PRF-fit source offset from KIC position	0.226 ± 0.262	0.86	-0.166 ± 0.262	0.153 ± 0.263
photometric centroid source offset	2.15 ± 1.92	1.12	1.39 ± 1.75	-1.64 ± 2.04

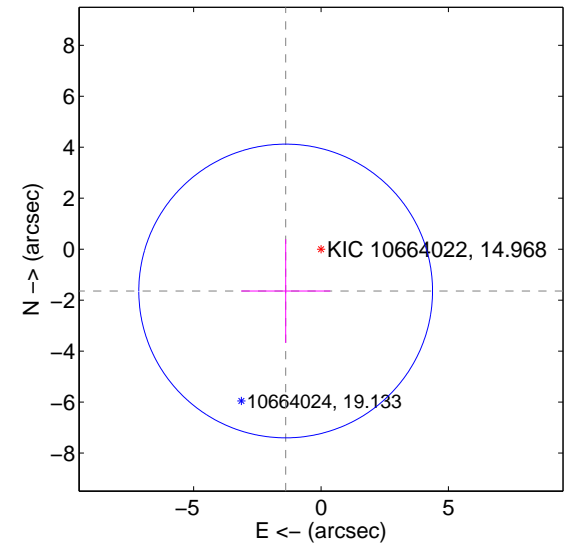
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

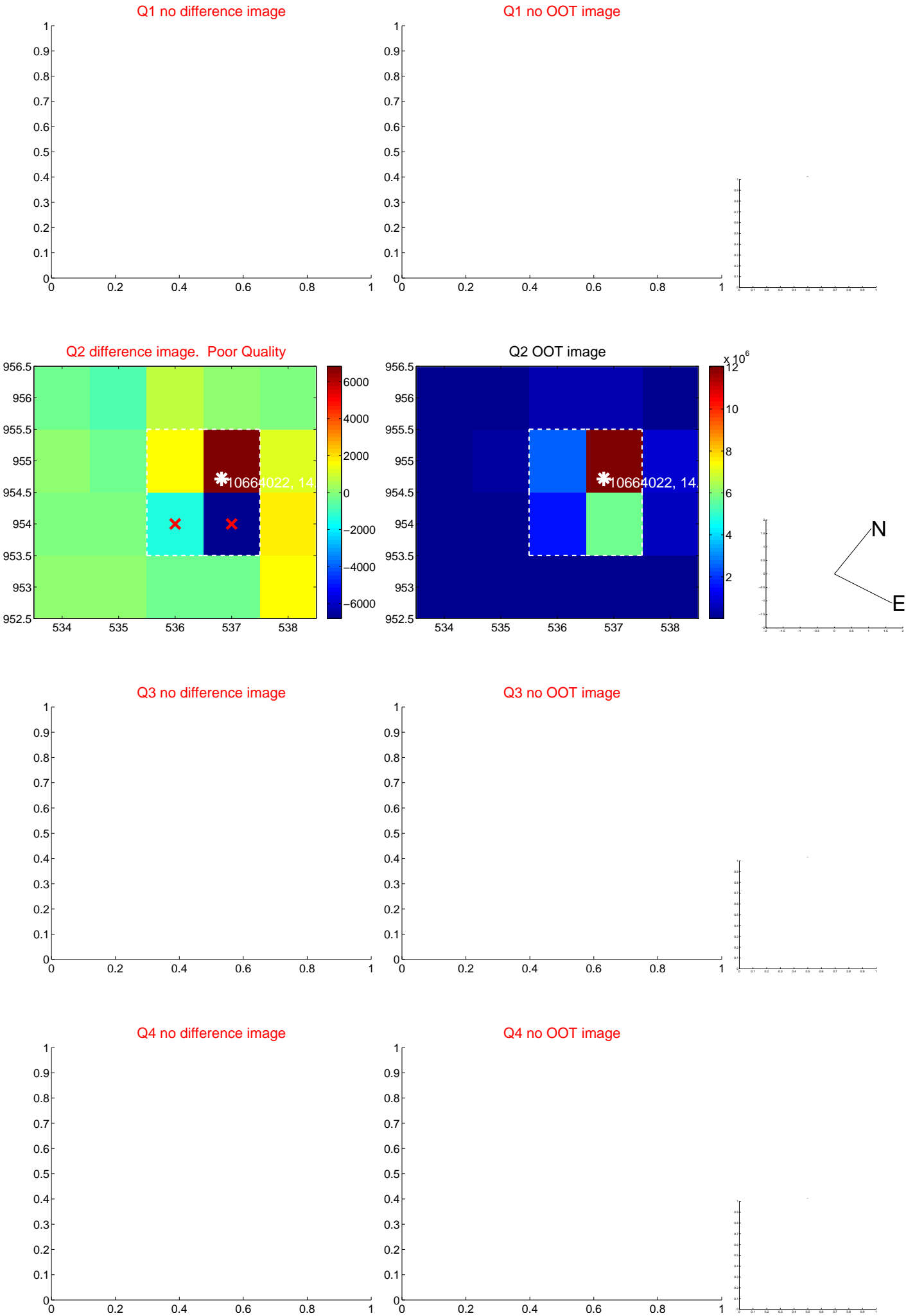


offset from photometric centroids

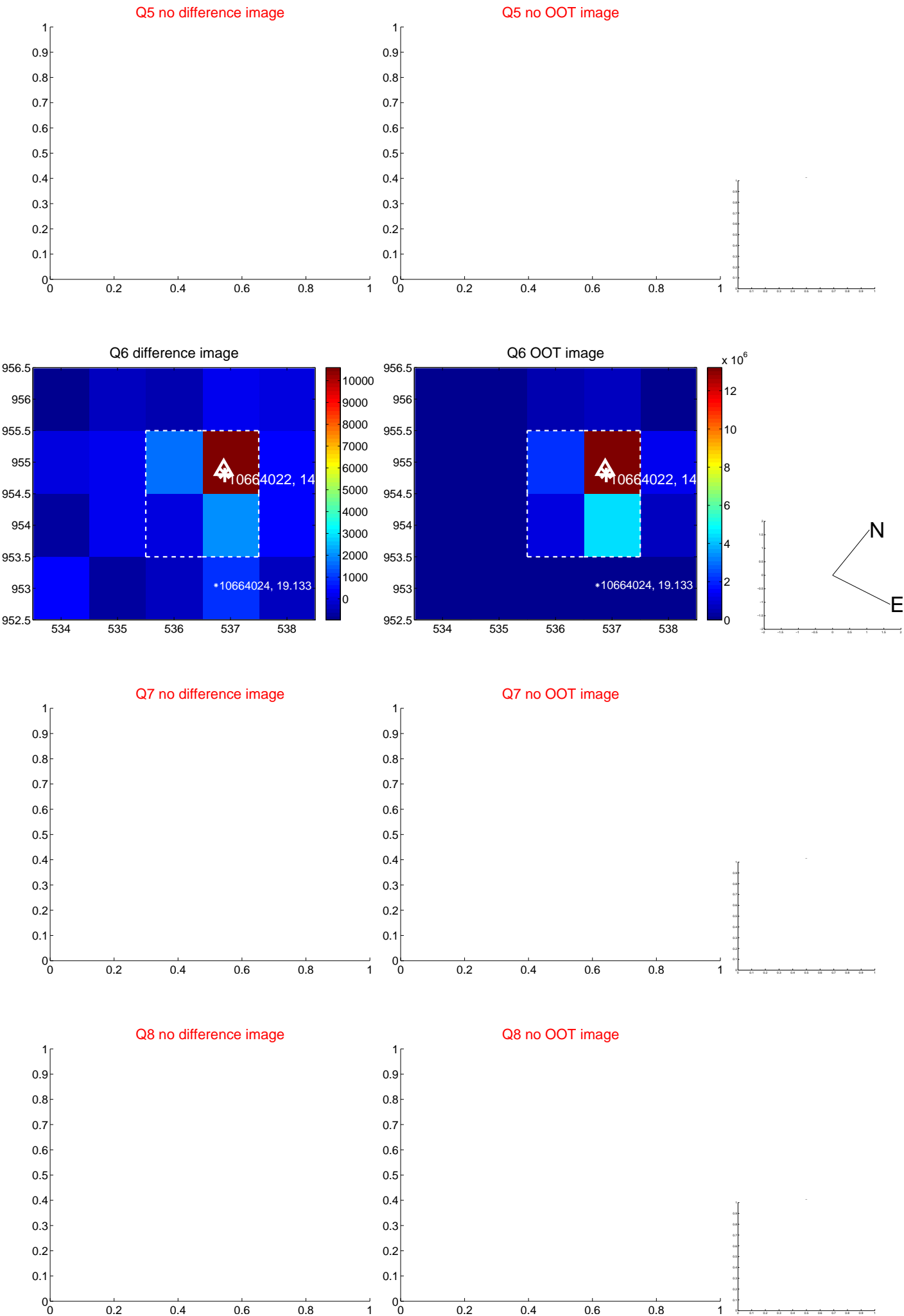


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



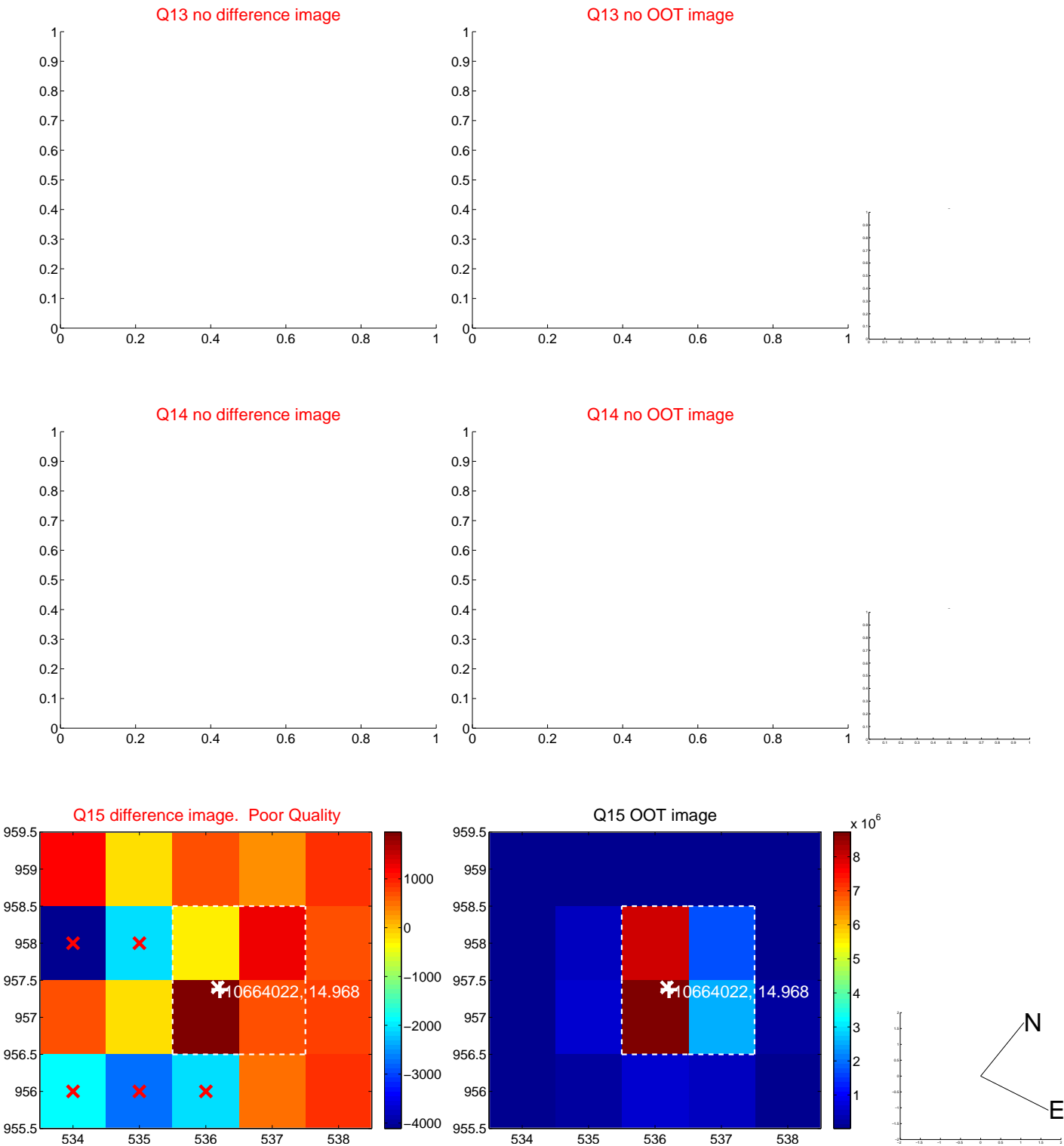
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



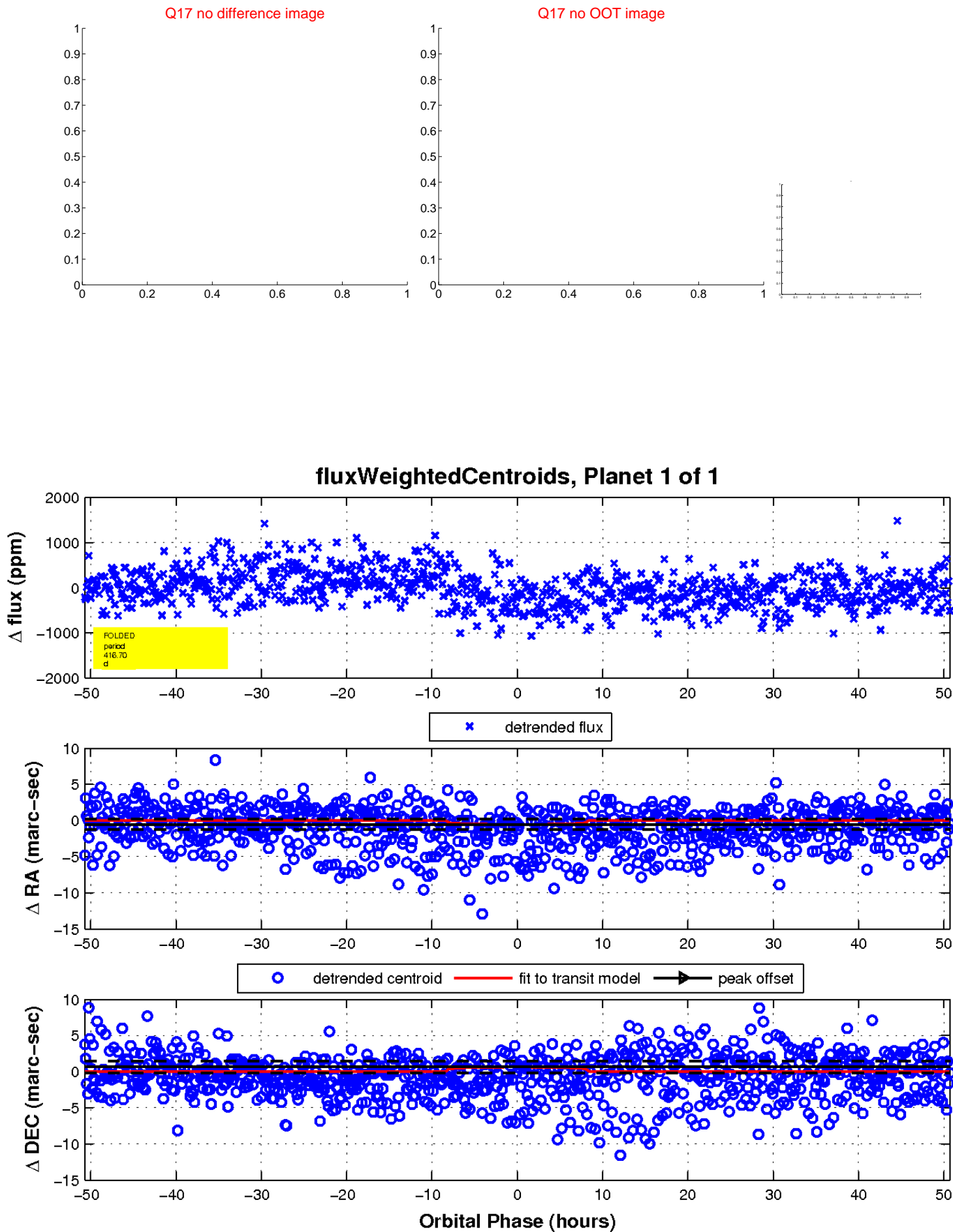
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

