

KIC 005103476

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})
005103476-01	OBS	No	440.875123	179.371547	389.1	18.046	7.1	6.6	0.95	6117	1.98	0.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005103476-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

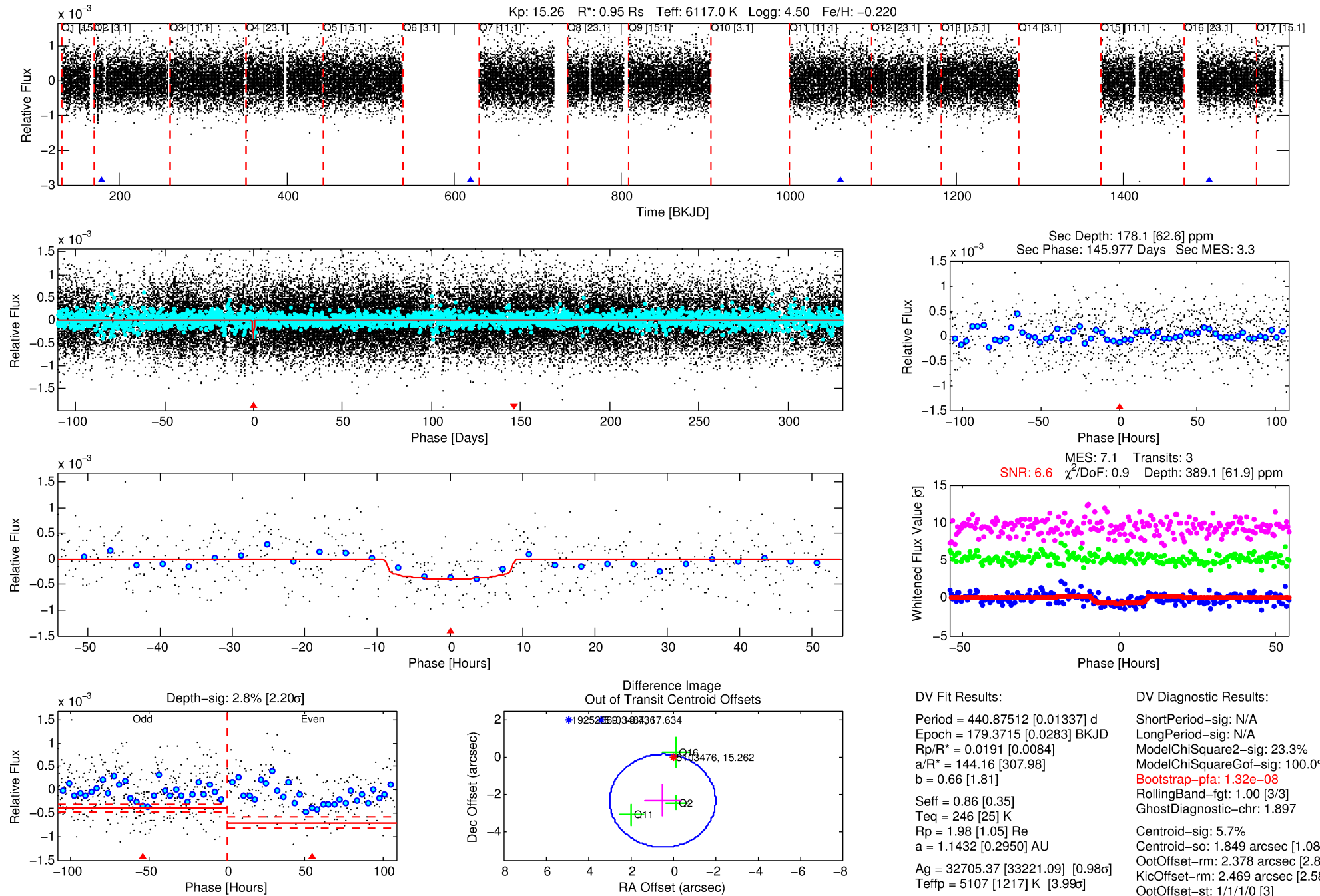
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005103476-01

No Significant Match Found

DV One-Page Summary

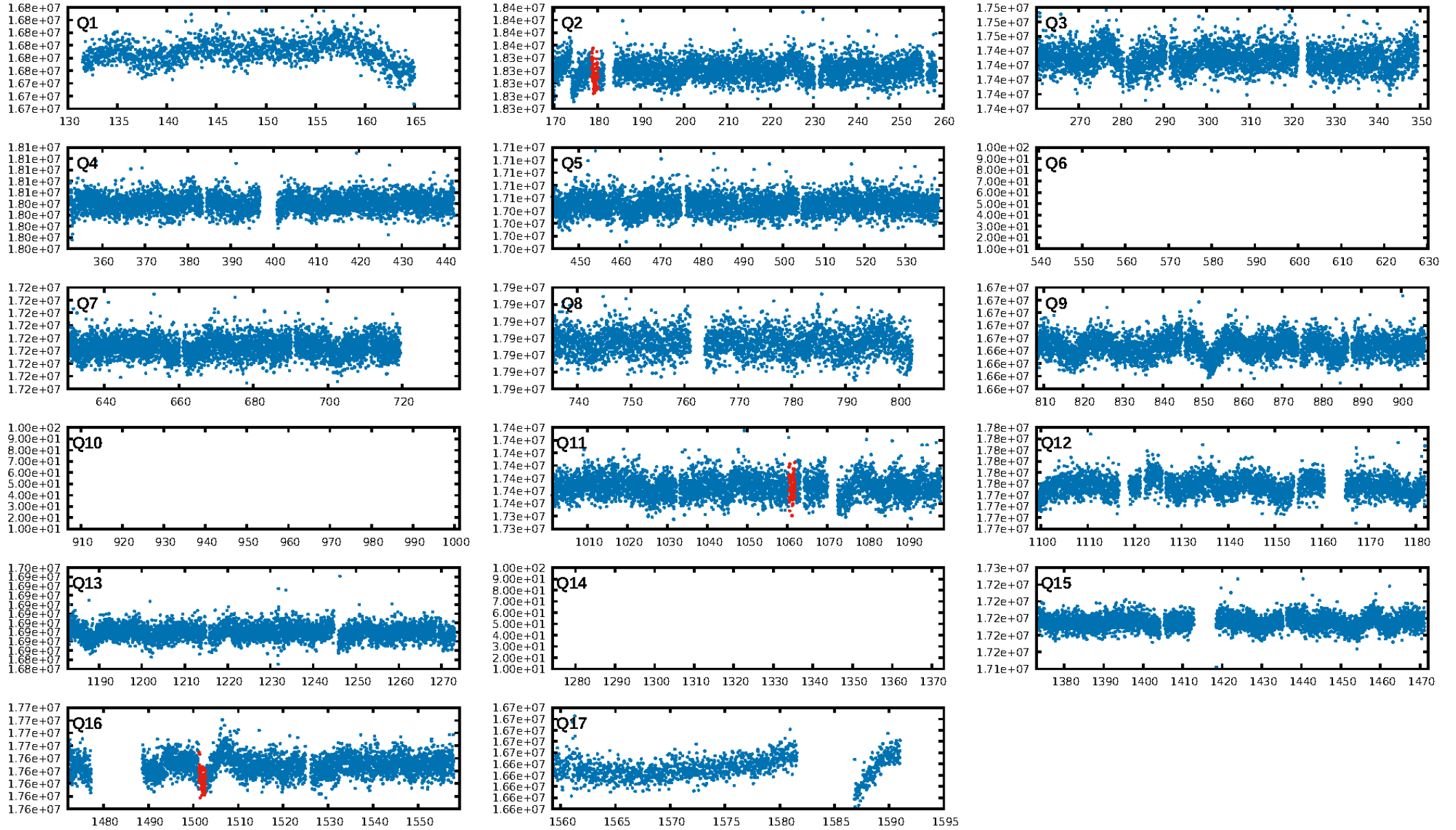
KIC: 5103476 Candidate: 1 of 1 Period: 440.875 d



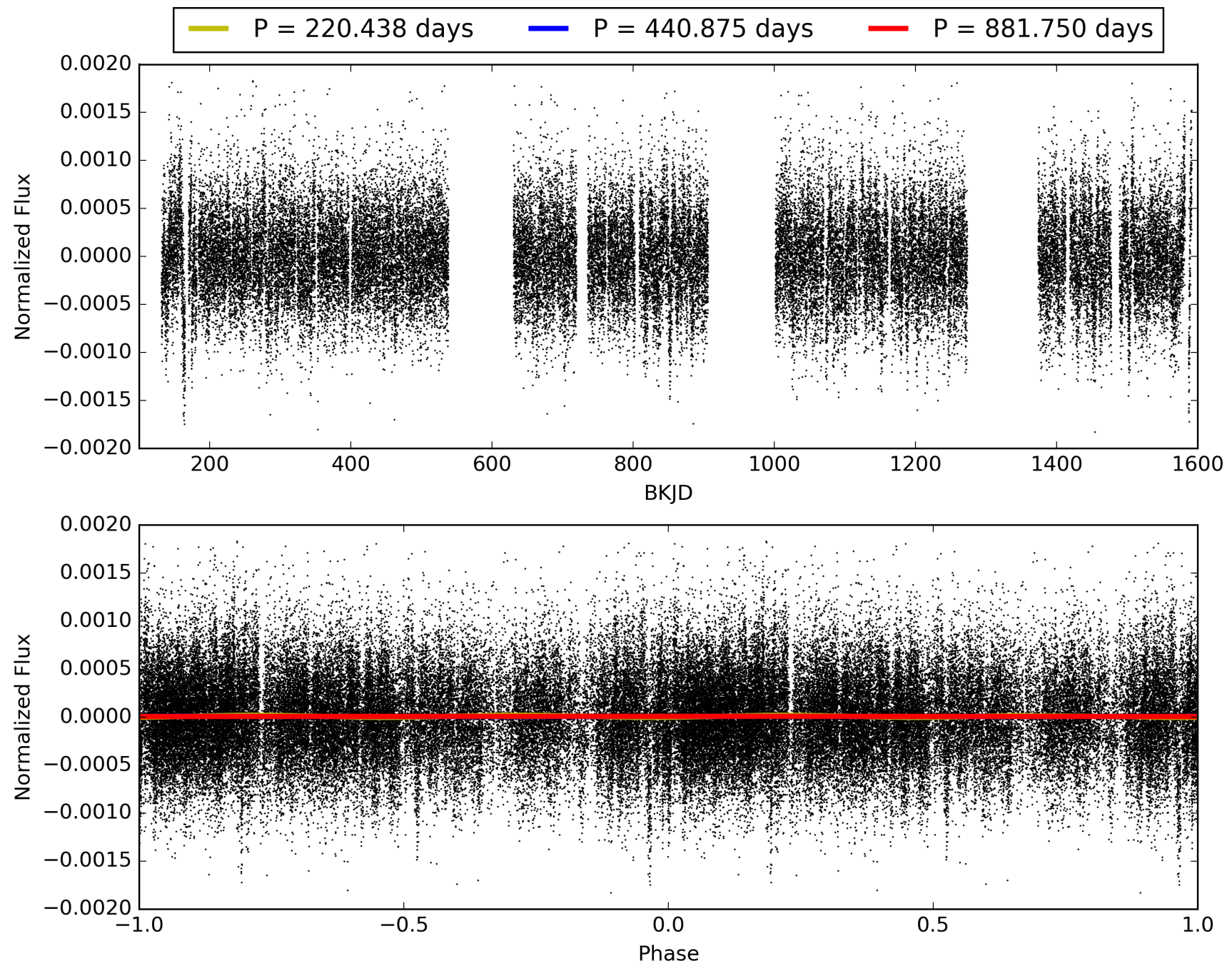
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:33:25 Z

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

TCE 005103476-01, PDC Light Curves

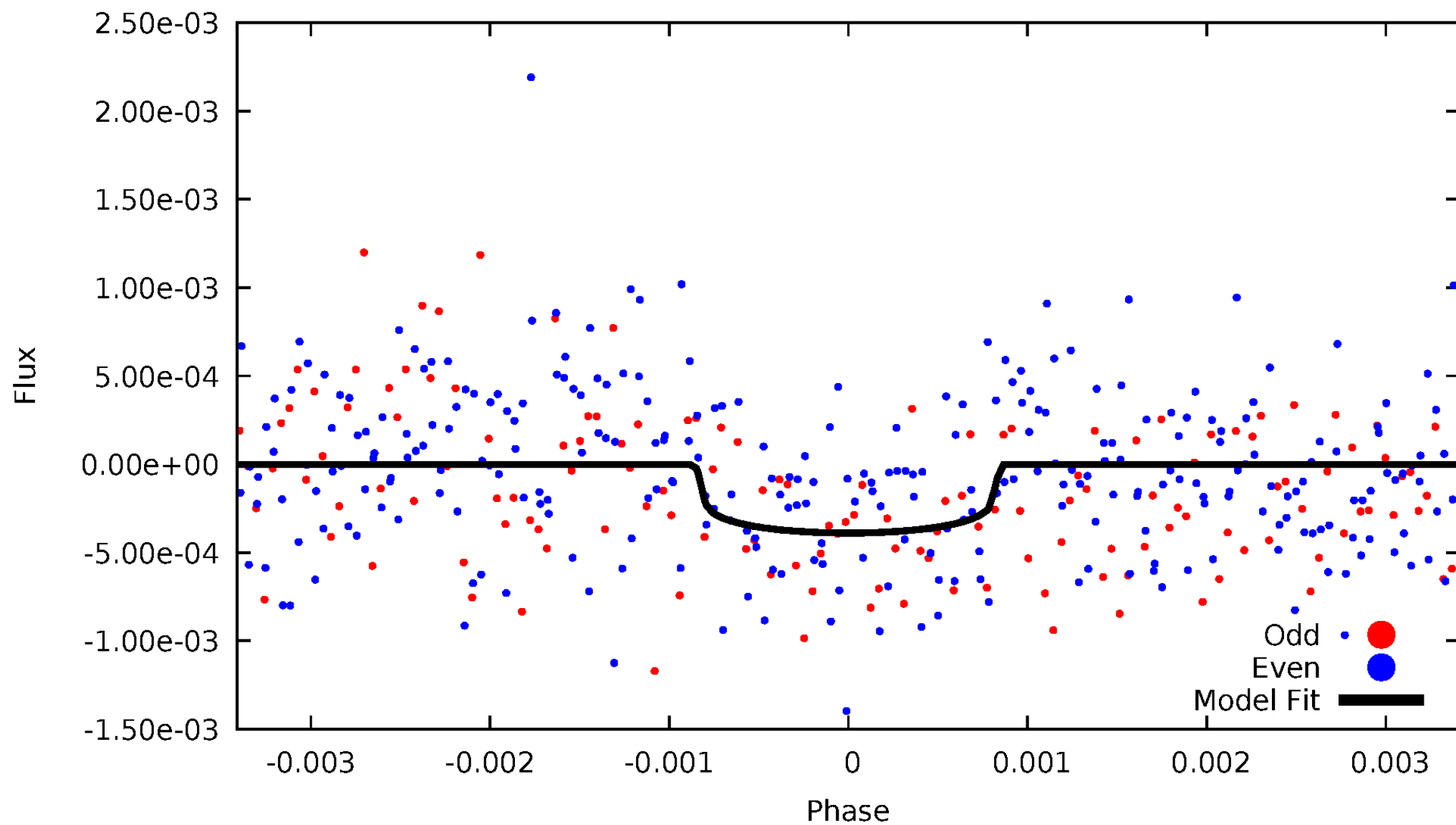


TCE 005103476-01



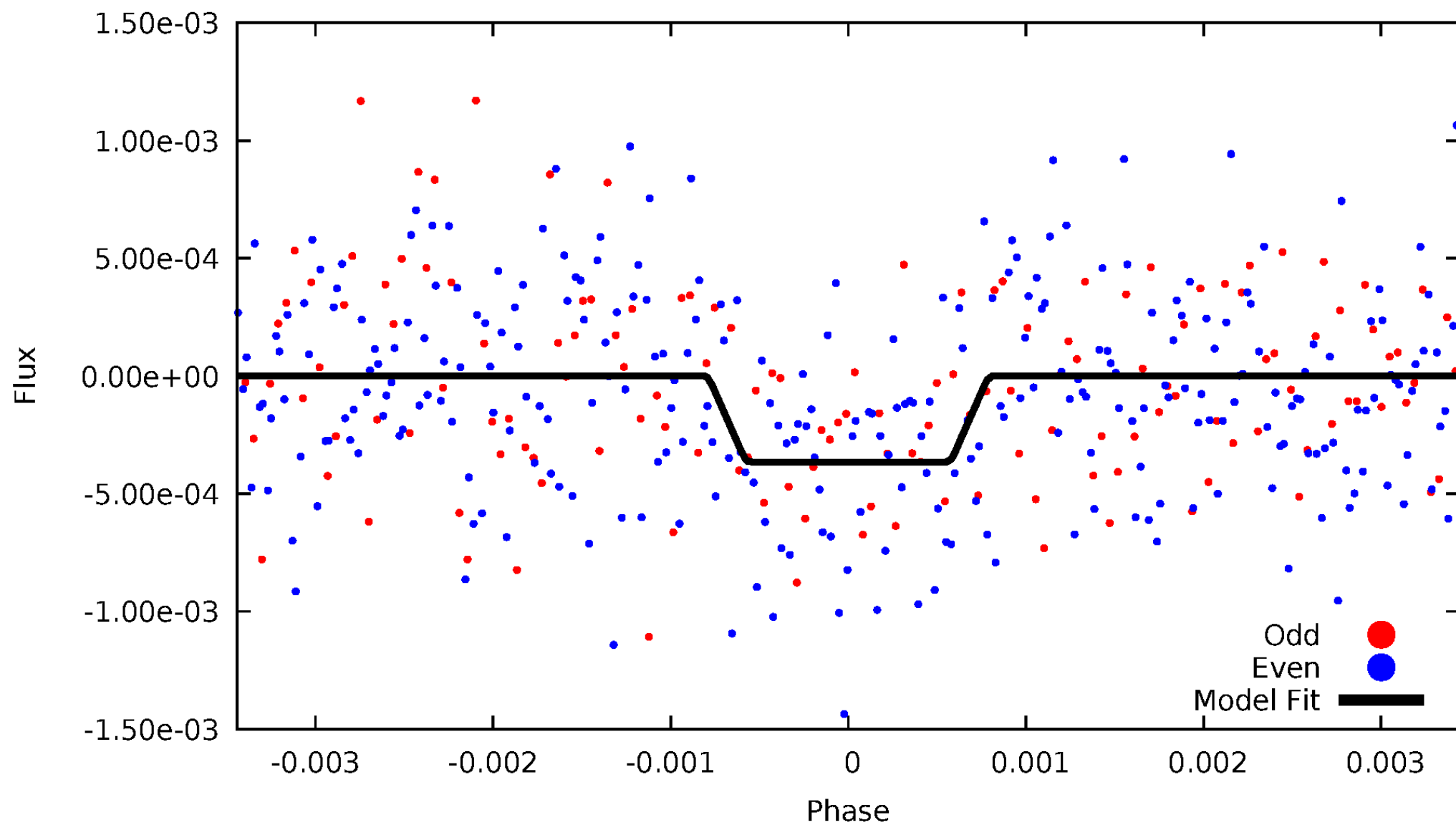
DV Odd/Even

TCE 005103476-01



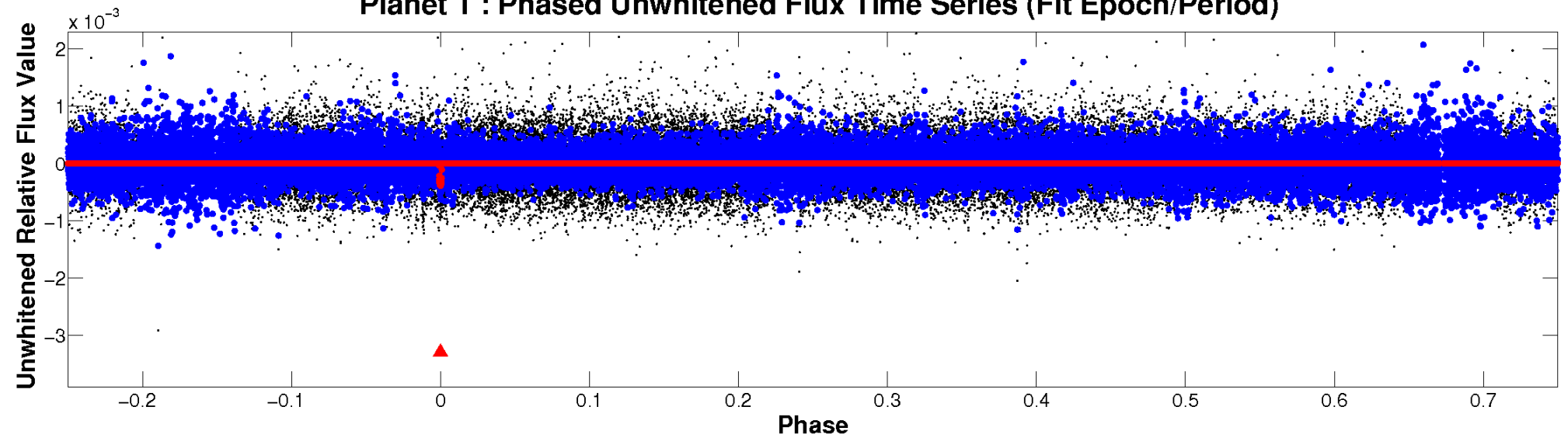
ALT Odd/Even

TCE 005103476-01

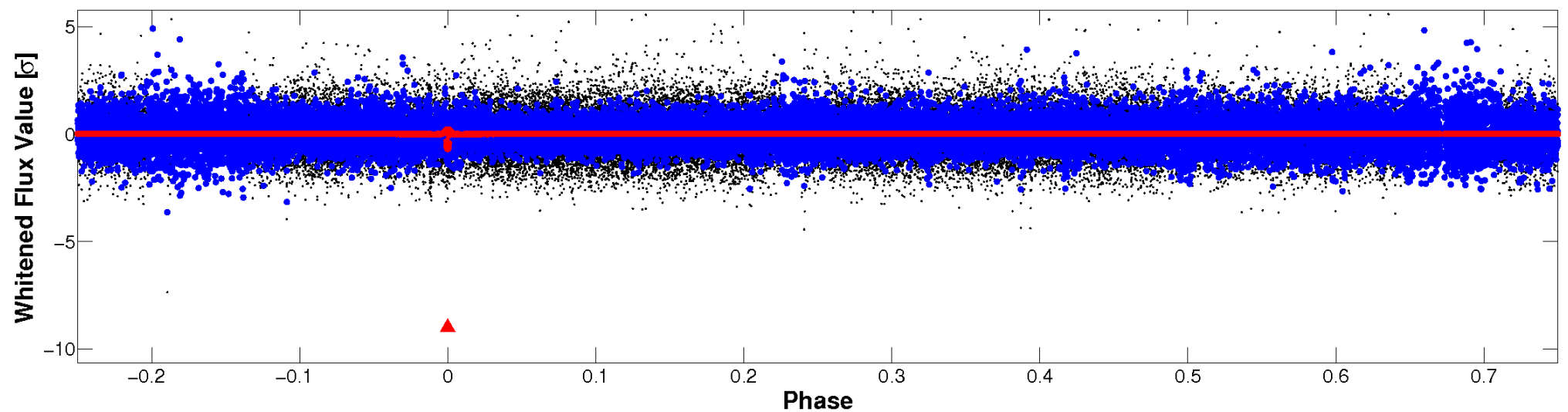


Non-Whitened Vs. Whitened Light Curve

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

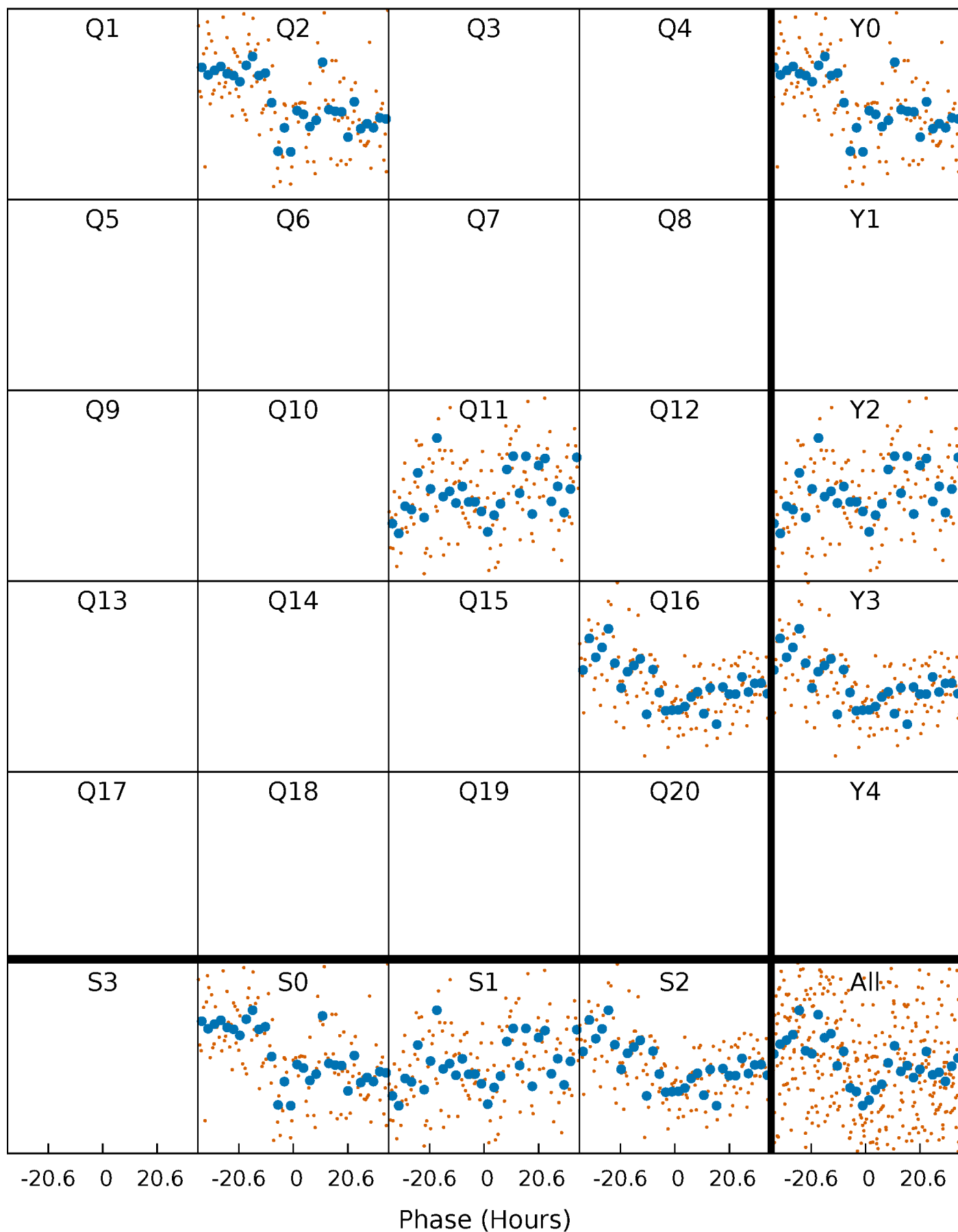


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



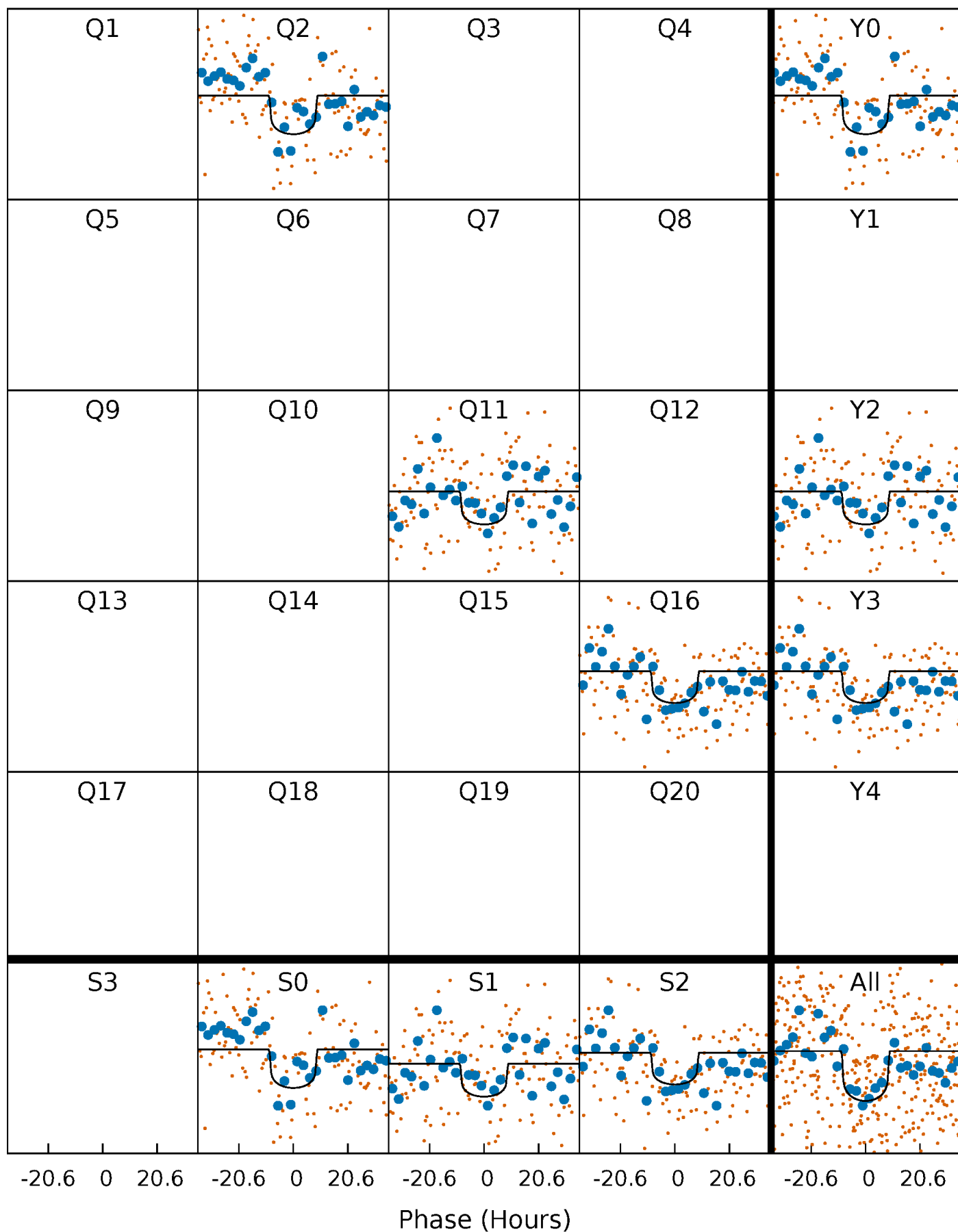
PDC Quarter-Phased Transit Curves

TCE 005103476-01 P=440.875122 Days $T_0=179.371547$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005103476-01 P=440.875122 Days $T_0=179.371547$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

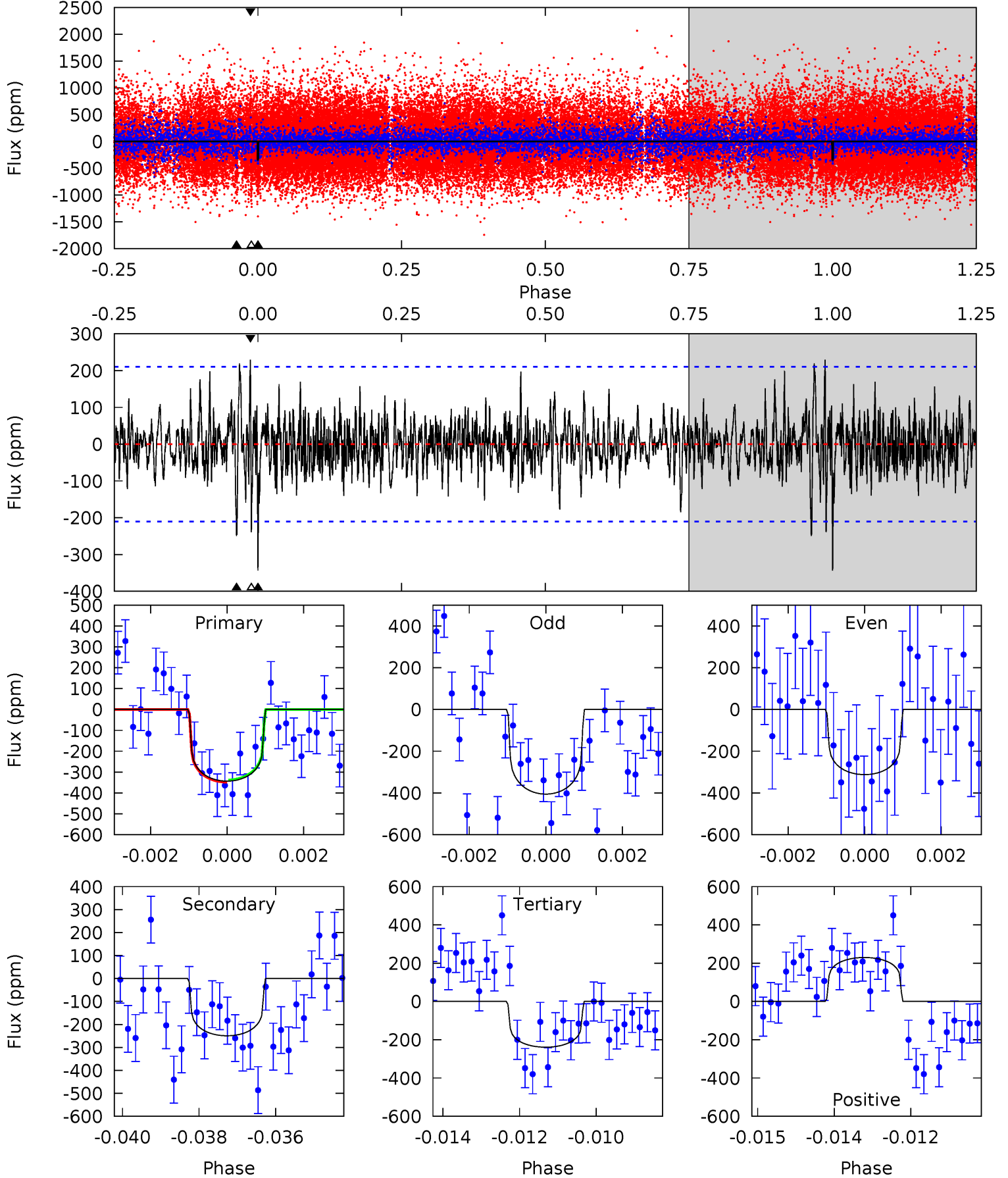
TCE 005103476-01 P=440.888113 Days $T_0=179.351539$ (BKJD)



DV Model-Shift Uniqueness Test

005103476-01, P = 440.875122 Days, E = 179.371547 Days

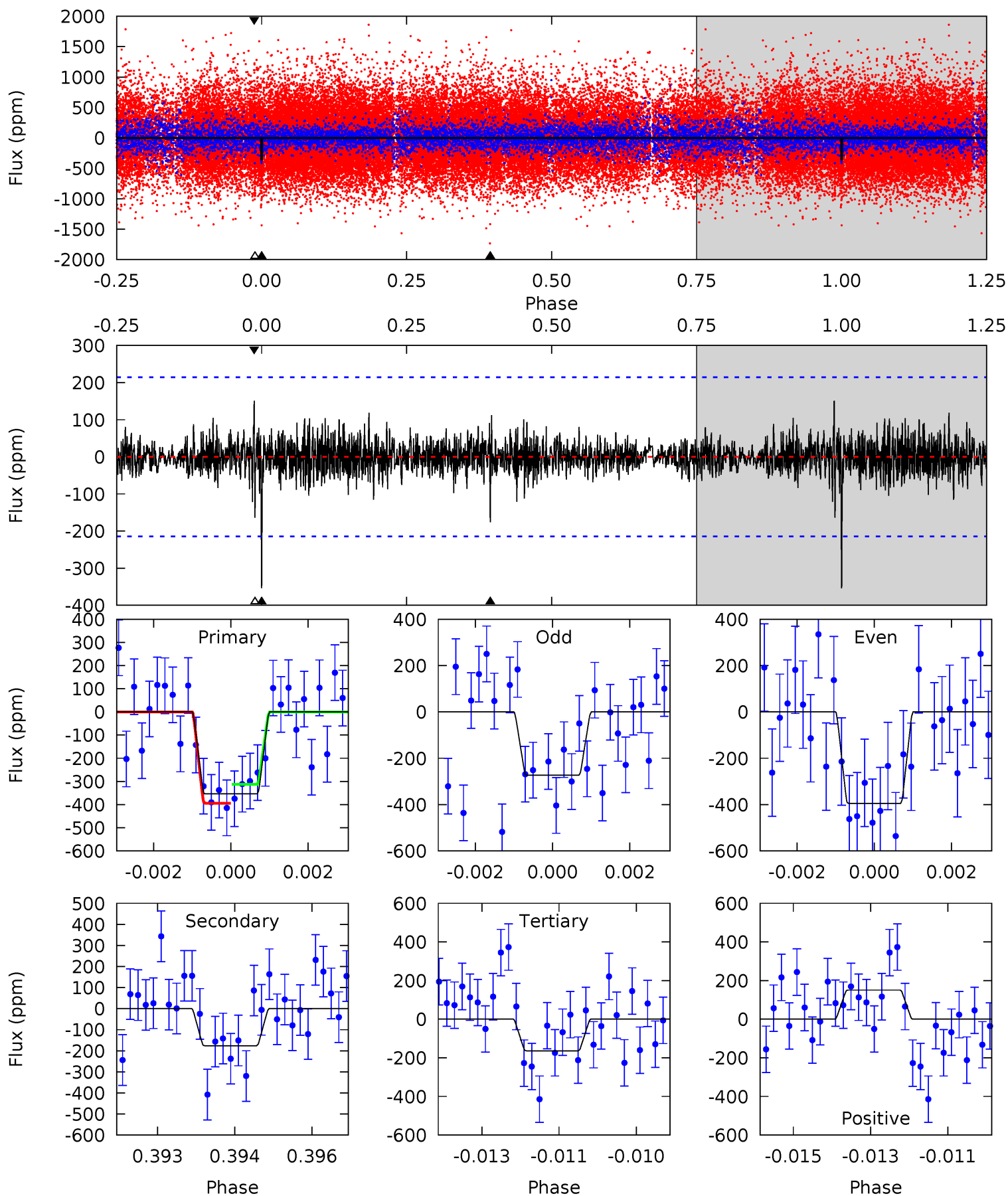
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.74	6.35	6.08	5.85	5.35	3.13	1.38	2.66	2.89	0.27	0.50	1.13	0.90	0.40	0.12



Alt Model-Shift Uniqueness Test

005103476-01, P = 440.888113 Days, E = 179.351539 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.86	4.40	4.09	3.78	5.37	3.15	0.82	4.77	5.08	0.31	0.62	1.44	1.13	0.30	1.02



Stellar Parameters For KIC 005103476

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6117^{+182}_{-218}	$4.496^{+0.052}_{-0.208}$	$-0.220^{+0.250}_{-0.350}$	$0.947^{+0.288}_{-0.096}$	$1.025^{+0.139}_{-0.139}$	$1.702^{+0.453}_{-0.902}$
	+3%/-4%	+1%/-5%	+114%/-159%	+30%/-10%	+14%/-14%	+27%/-53%
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 005103476-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-249 ± 39	$2.15^{+0.95}_{-0.94}$	351^{+27}_{-17}	5482^{+1897}_{-794}	37729^{+82695}_{-19766}
Alt.	-176 ± 40	$2.05^{+0.98}_{-0.82}$	351^{+25}_{-18}	5144^{+1417}_{-741}	28254^{+51275}_{-15332}

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 $A_{obs} \gg 1.0$

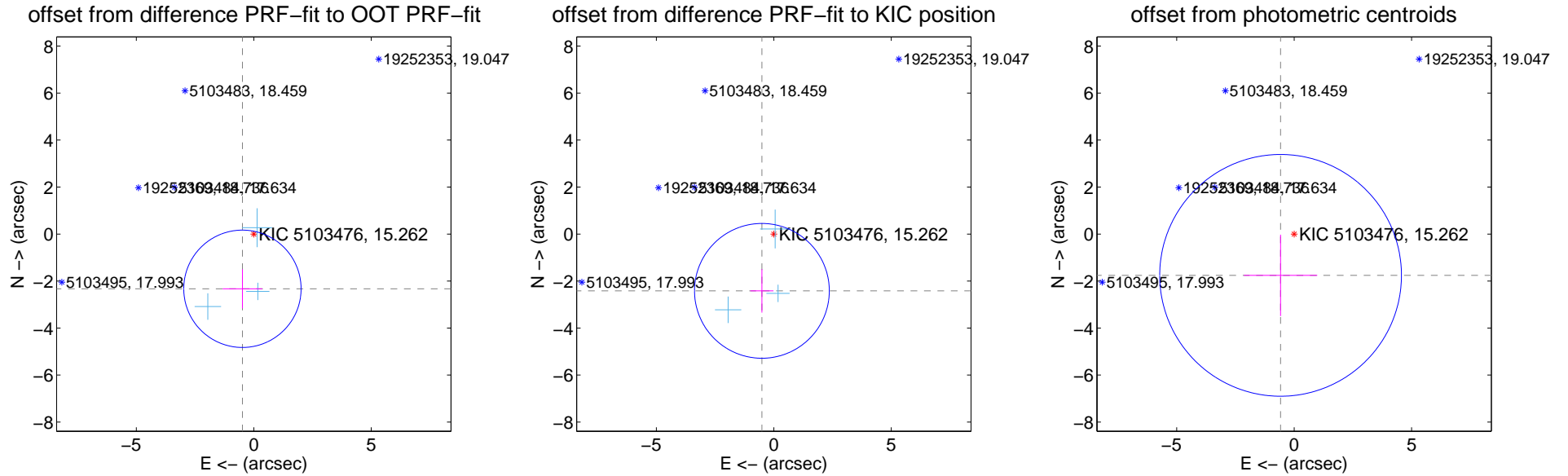
DV Centroid Data

Supplemental centroid analysis for 005103476-01. Kepler magnitude: 15.26. Transit SNR 6.57

There are 3 quarters with good PRF difference image offsets

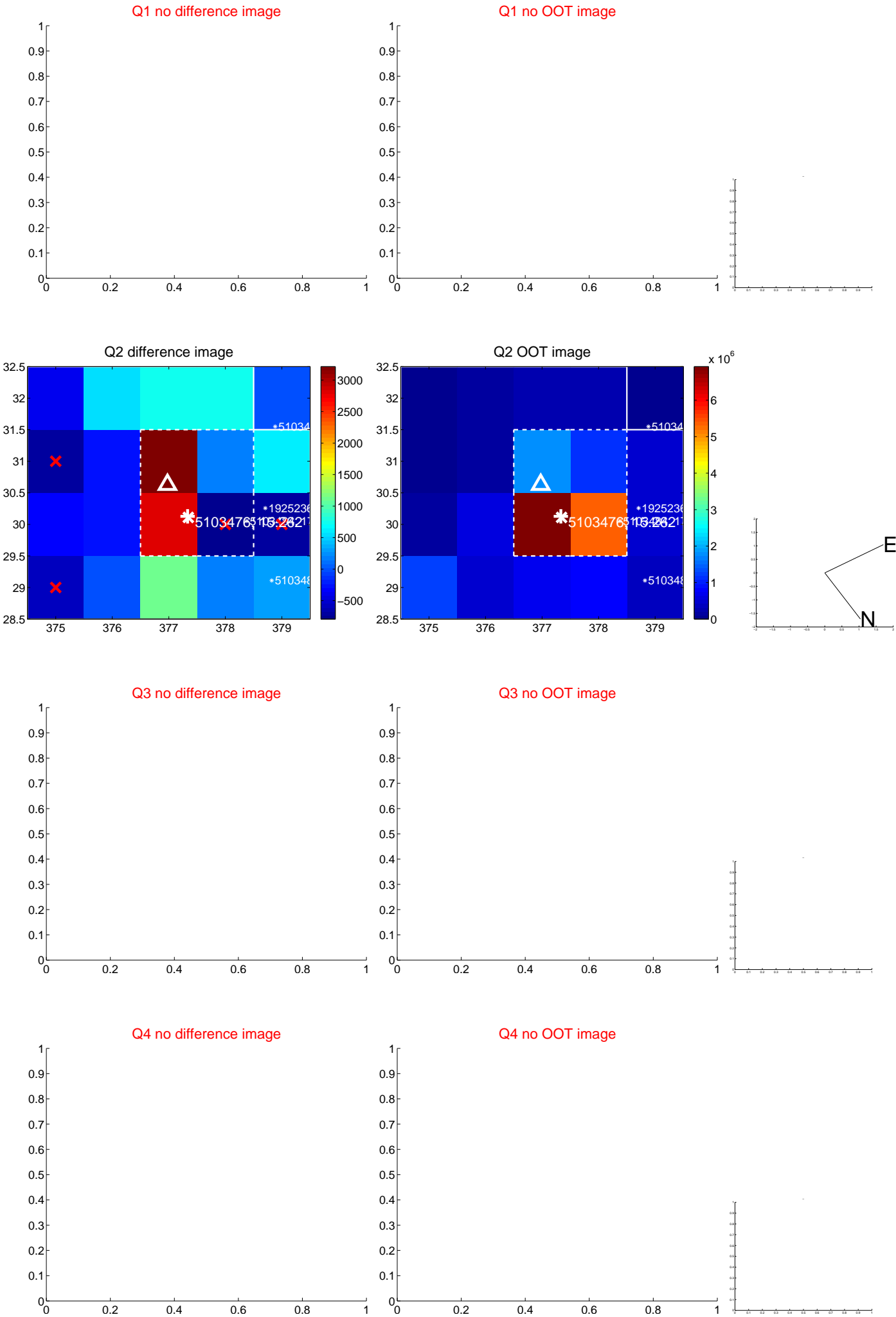
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.378 ± 0.832	2.86	0.483 ± 0.841	-2.329 ± 0.832
PRF-fit source offset from KIC position	2.469 ± 0.956	2.58	0.506 ± 0.492	-2.417 ± 0.925
photometric centroid source offset	1.85 ± 1.71	1.08	0.58 ± 1.56	-1.76 ± 1.73



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.

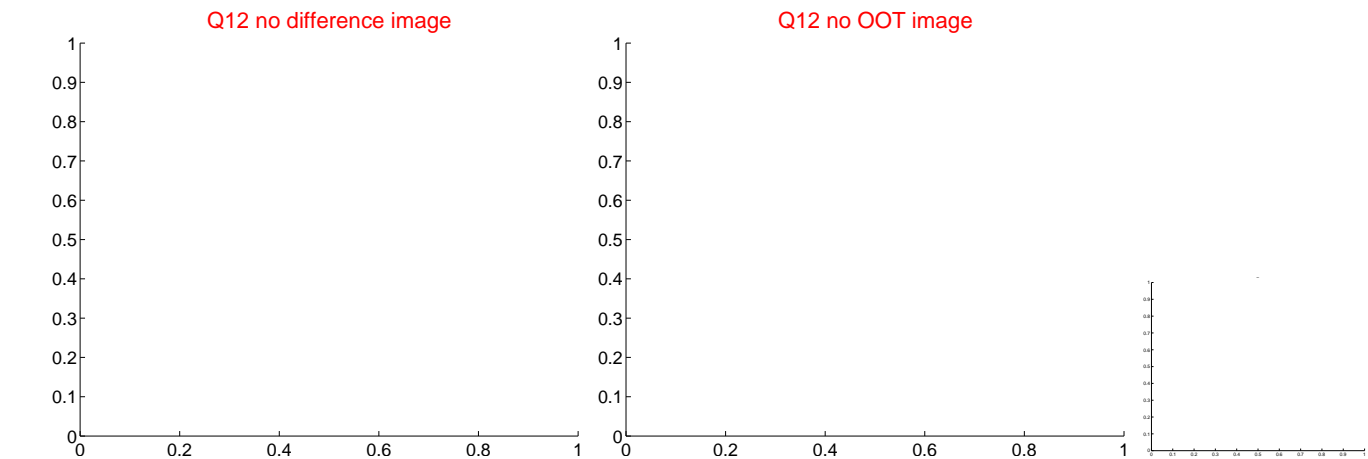
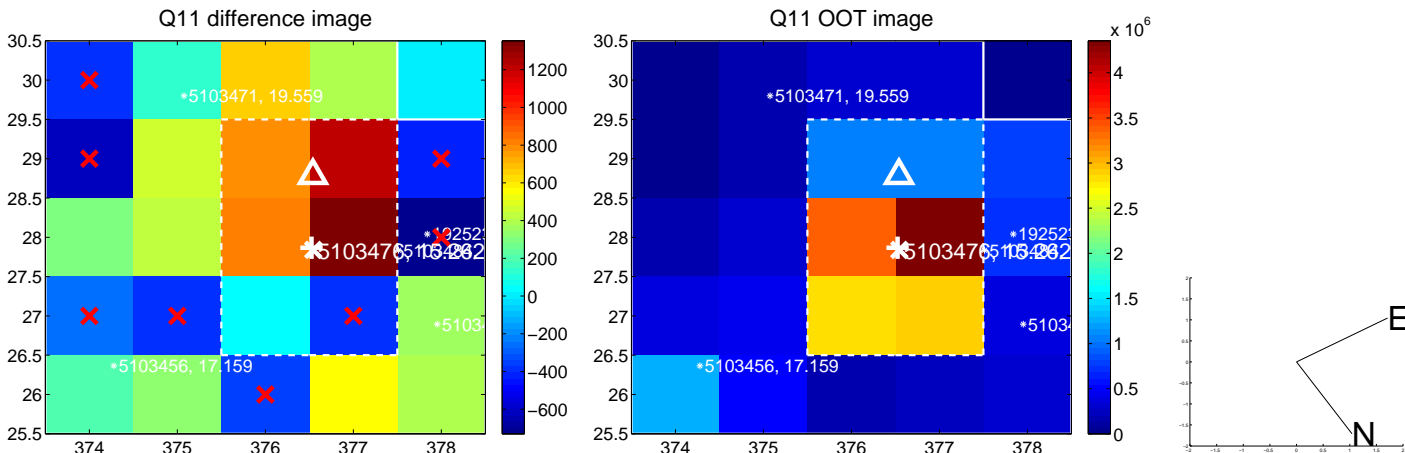
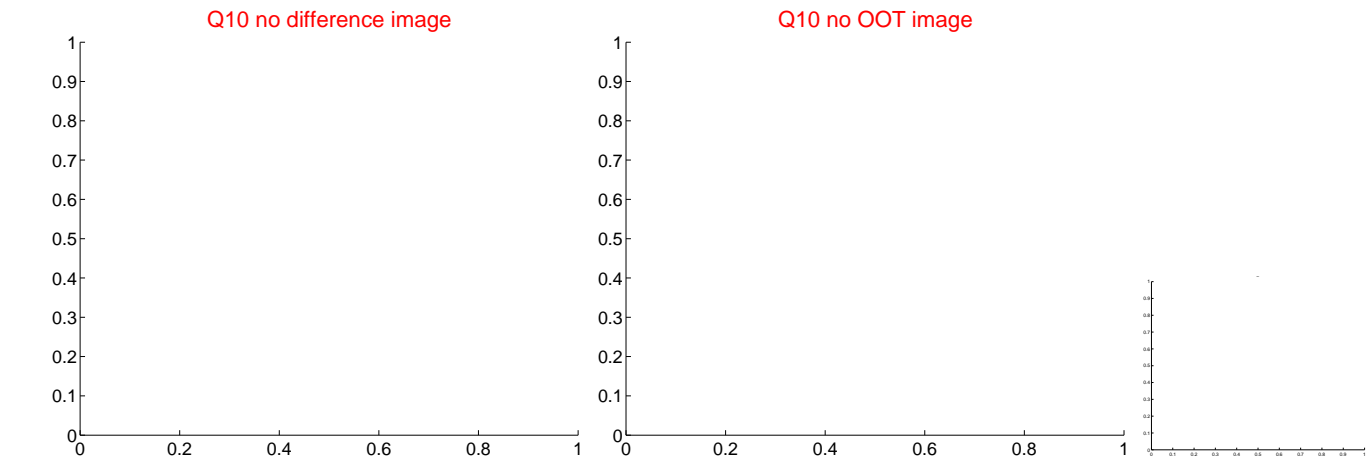
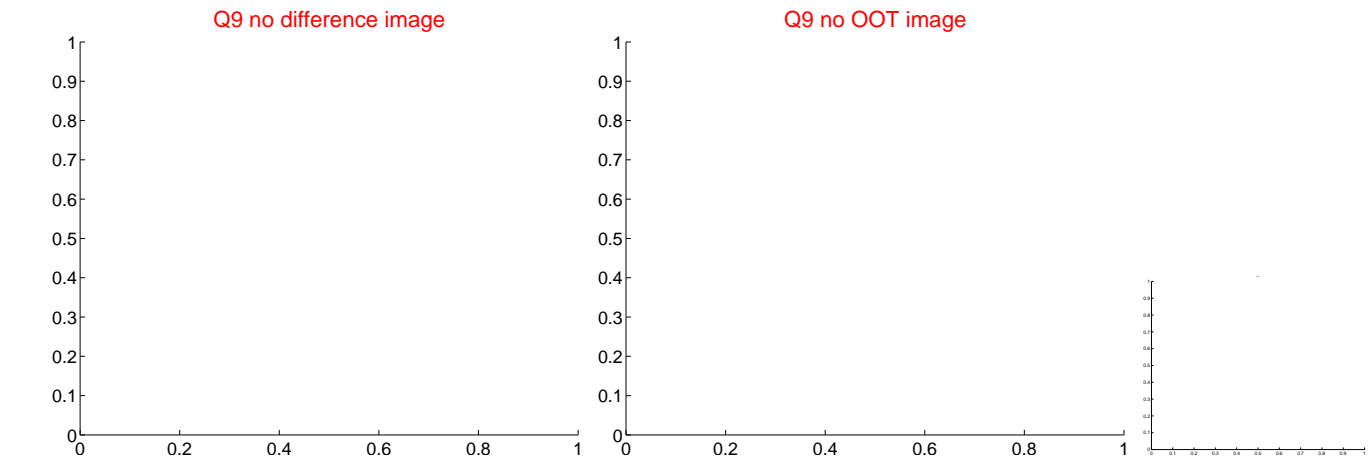
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



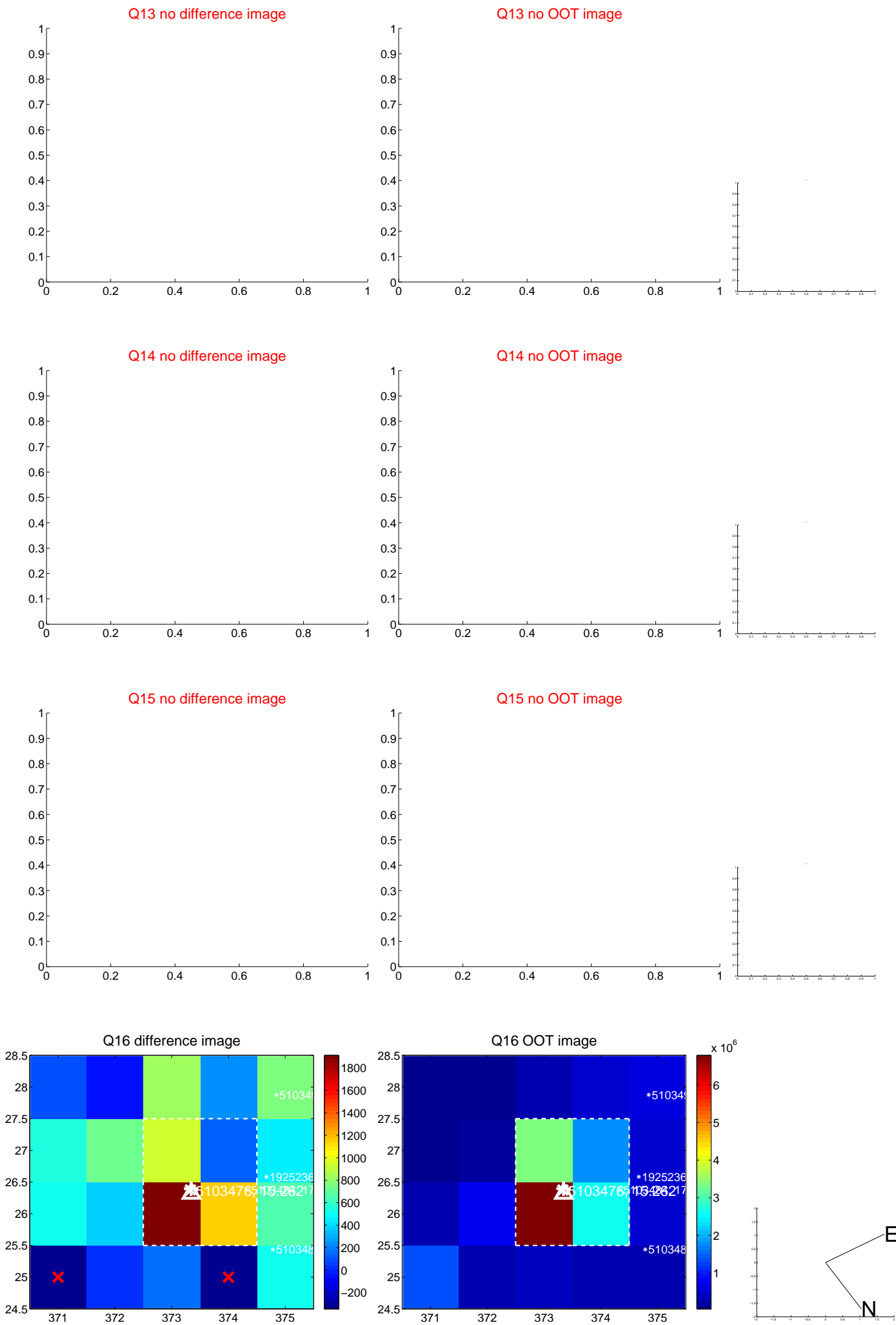
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



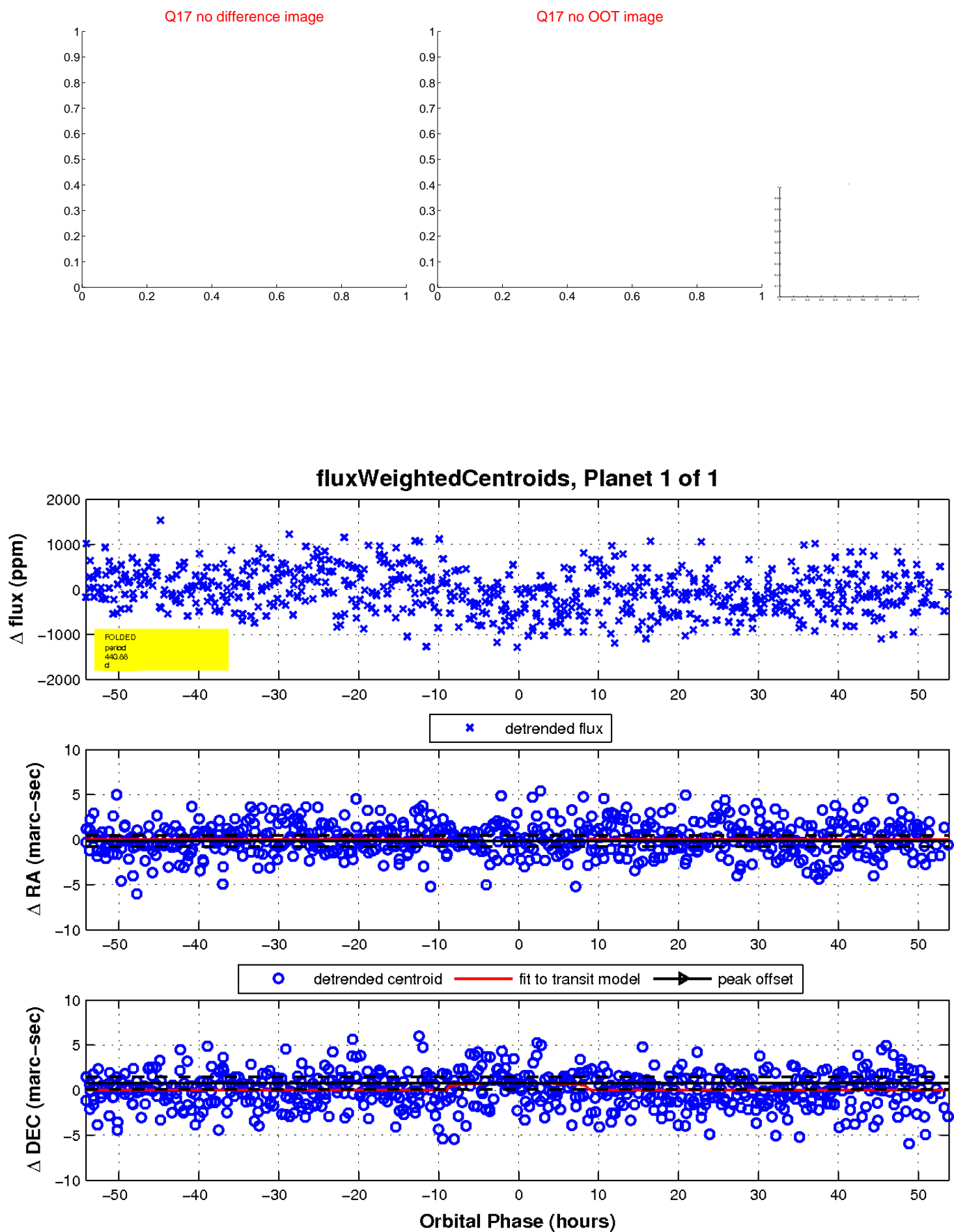
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

