

KIC 008780458

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})
008780458-01	OBS	No	444.222172	469.056227	599.6	11.675	11.9	5.6	5.76	4613	15.35	10.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008780458-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

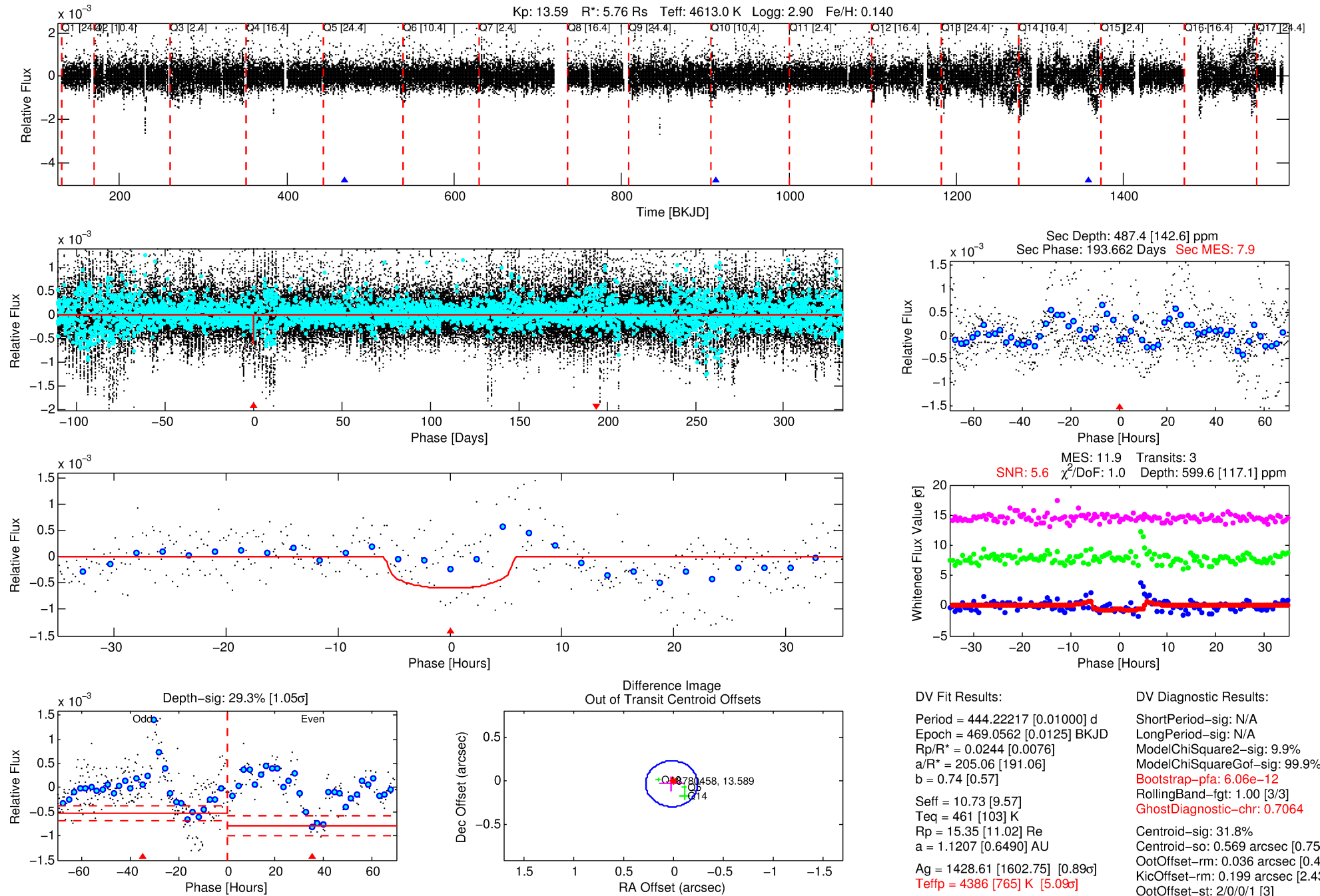
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008780458-01

No Significant Match Found

DV One-Page Summary

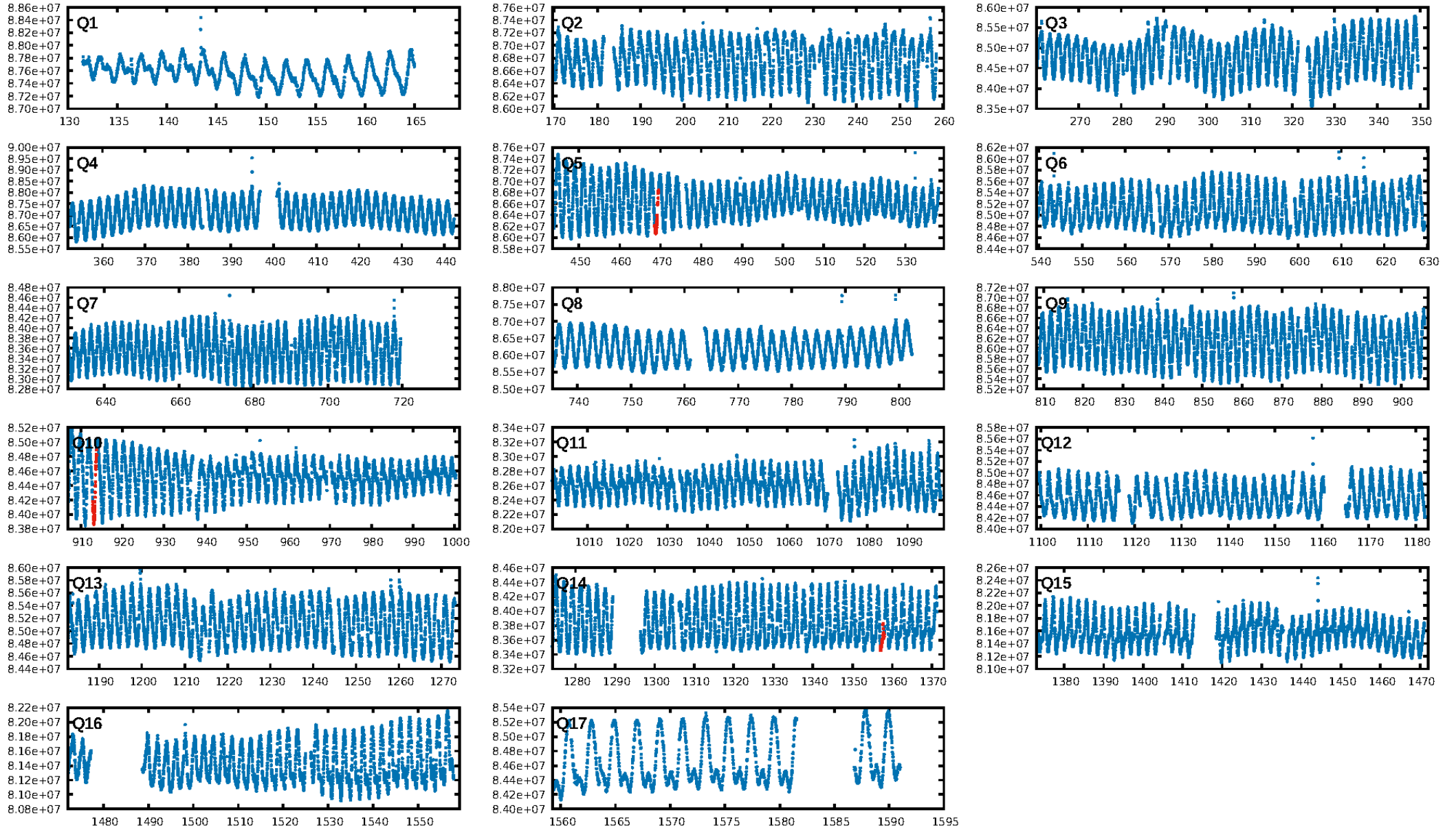
KIC: 8780458 Candidate: 1 of 1 Period: 444.222 d



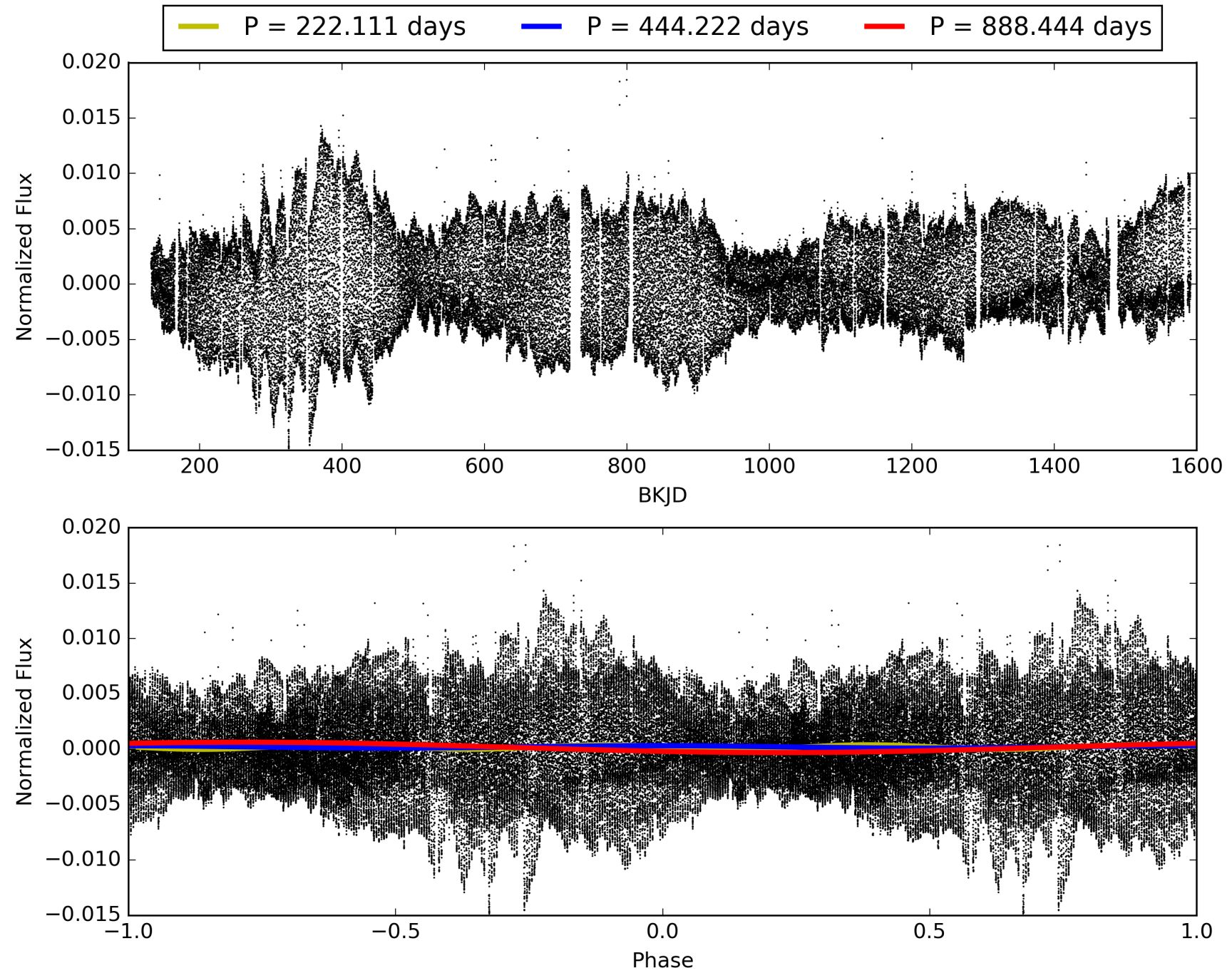
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:31:08 Z

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

TCE 008780458-01, PDC Light Curves

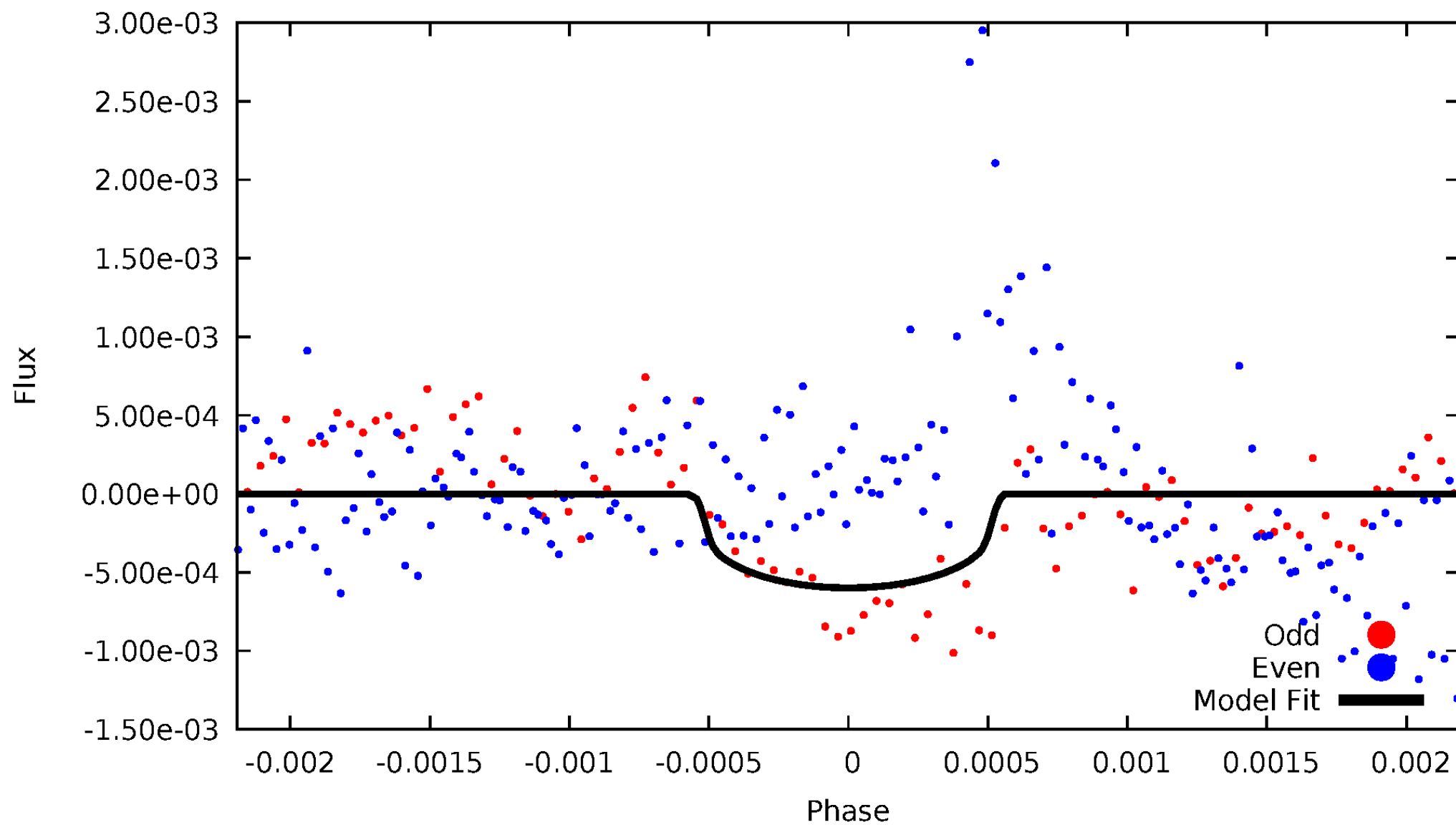


TCE 008780458-01



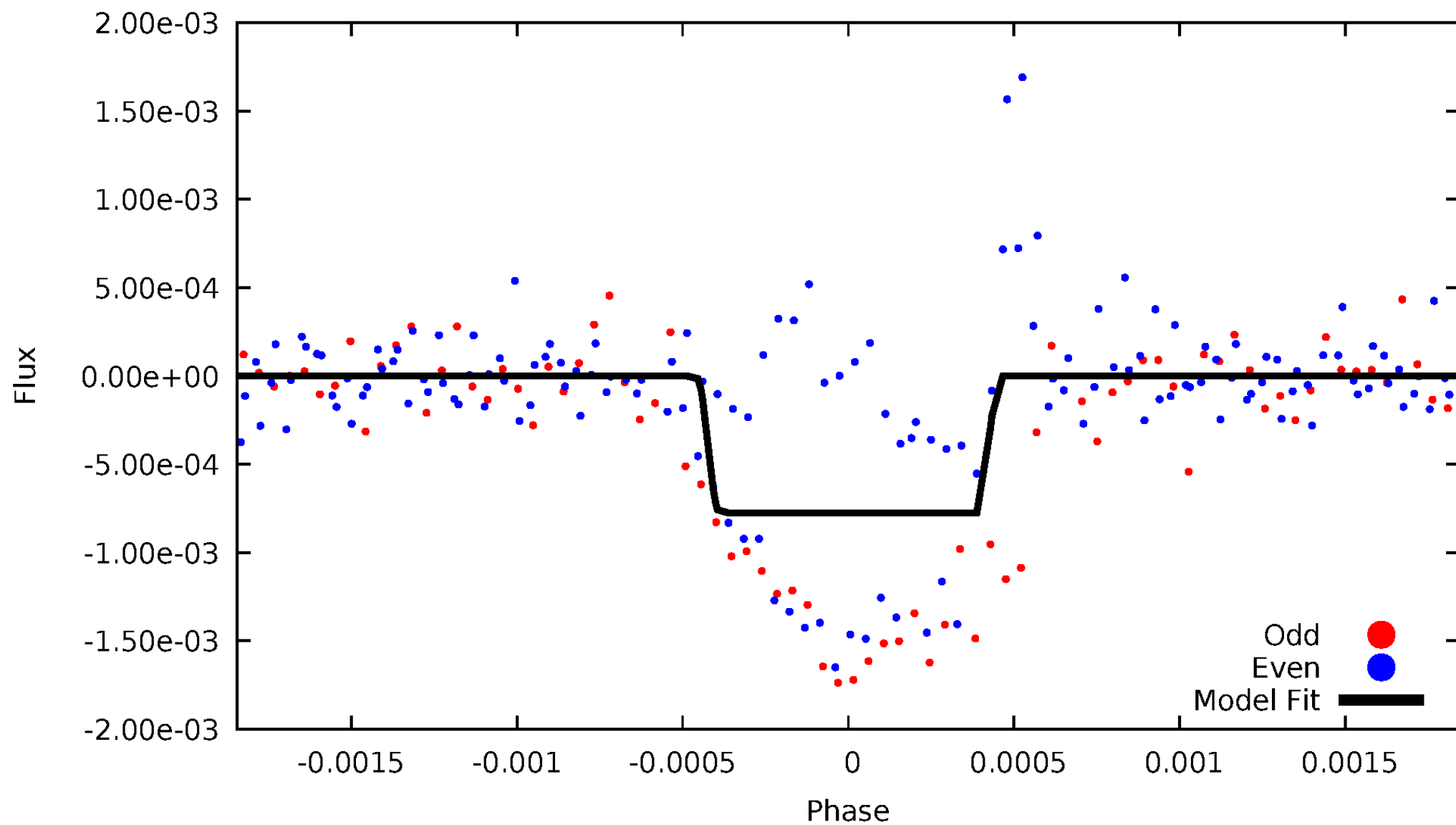
DV Odd/Even

TCE 008780458-01



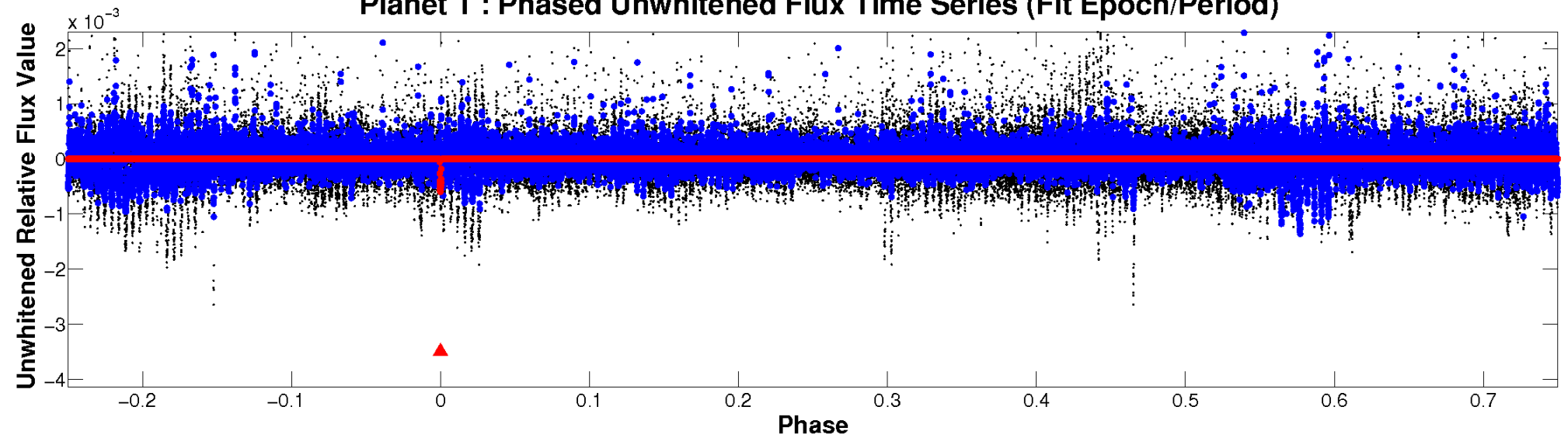
ALT Odd/Even

TCE 008780458-01

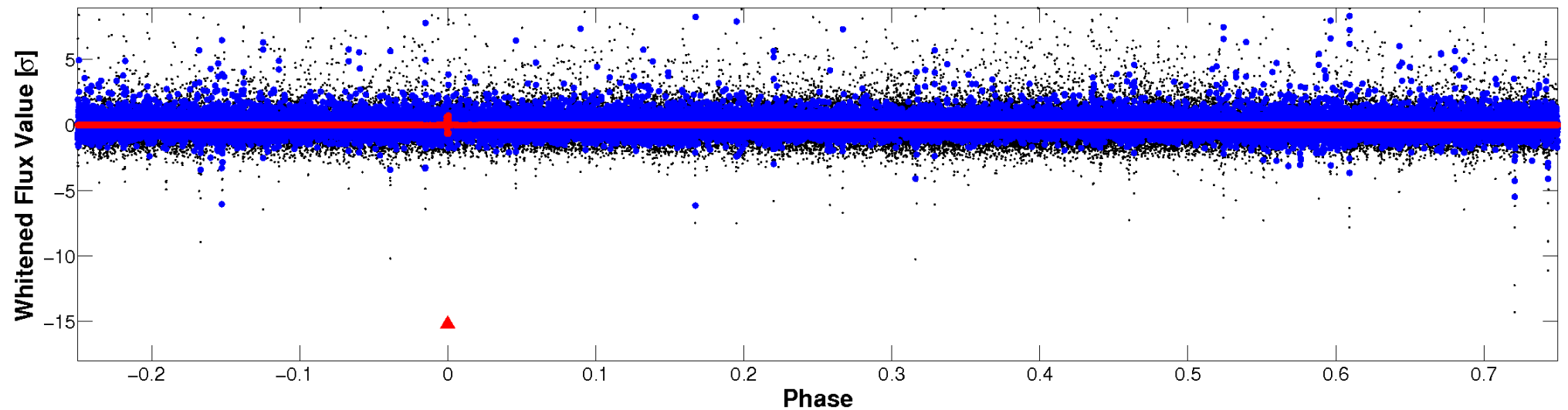


Non-Whitened Vs. Whitened Light Curve

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

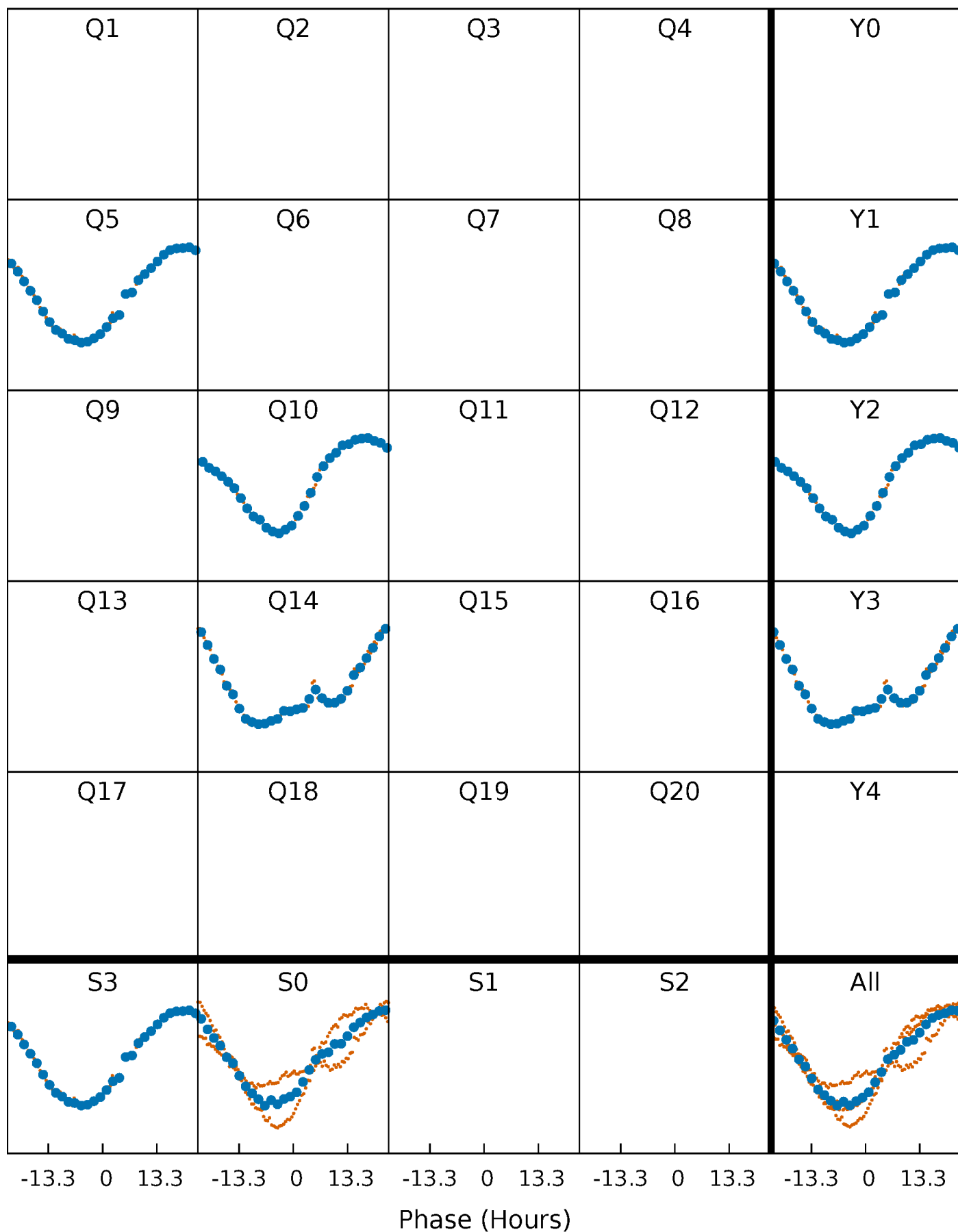


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



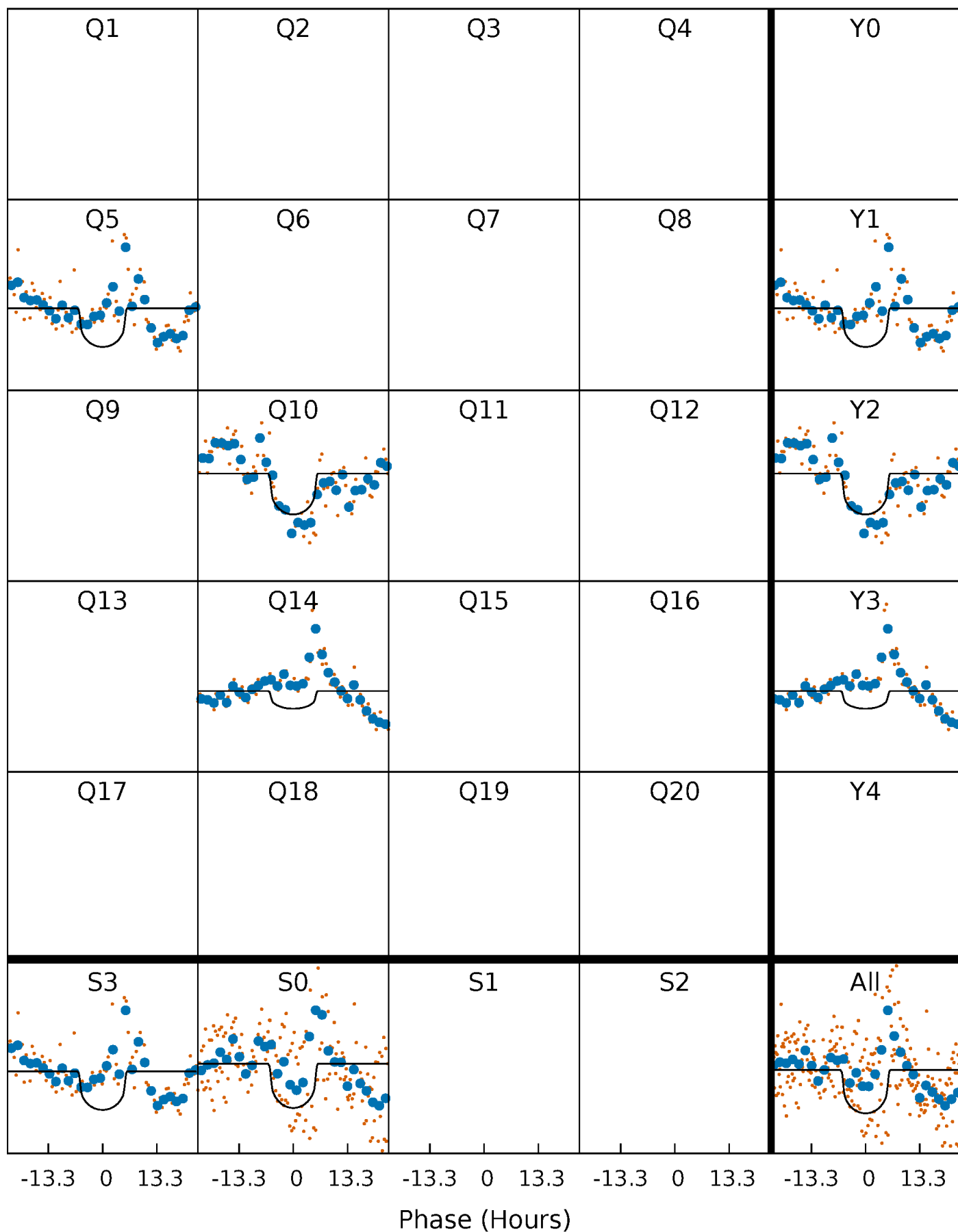
PDC Quarter-Phased Transit Curves

TCE 008780458-01 P=444.222172 Days $T_0=469.056227$ (BKJD)



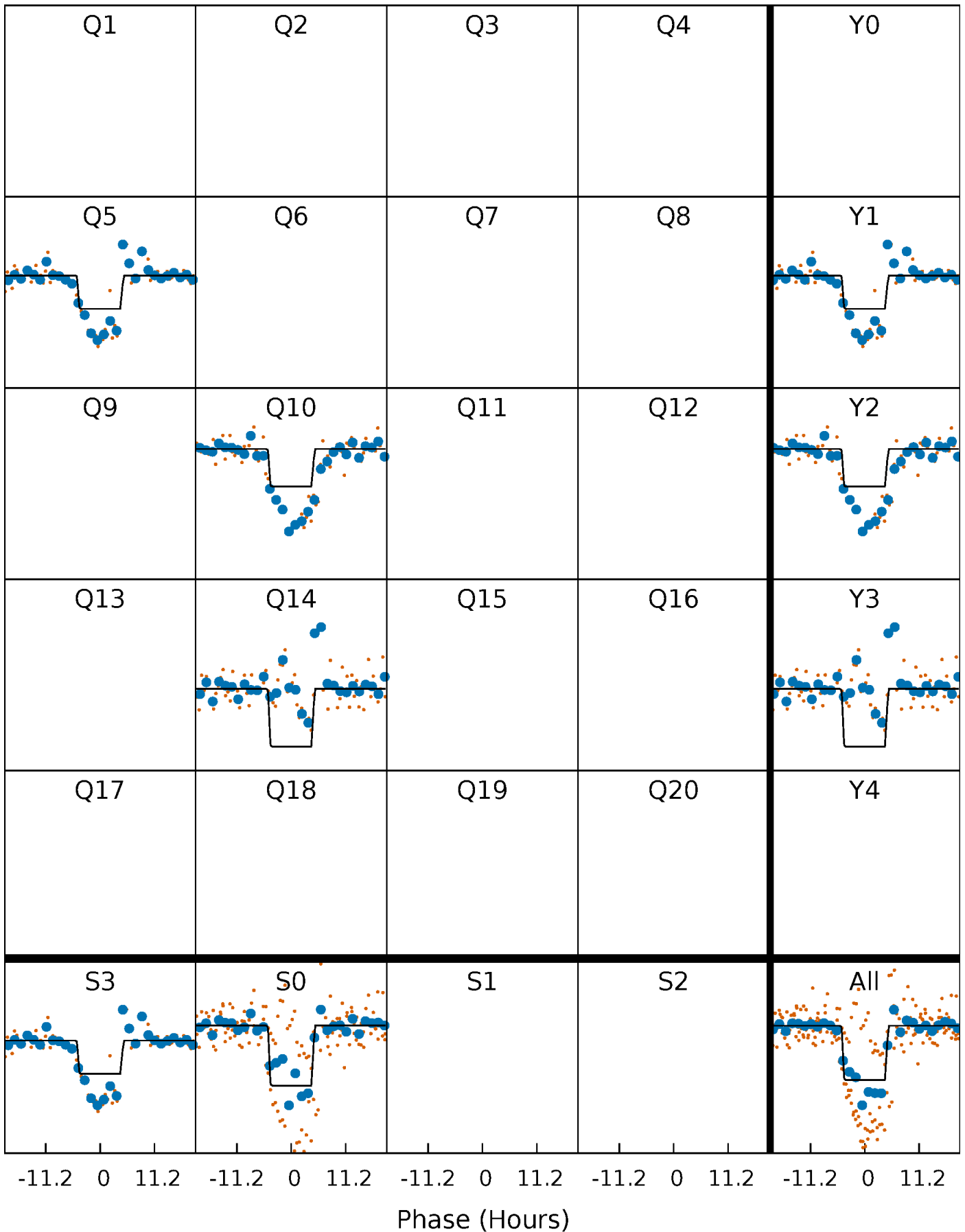
DV Quarter-Phased Transit Curves

TCE 008780458-01 P=444.222172 Days $T_0=469.056227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

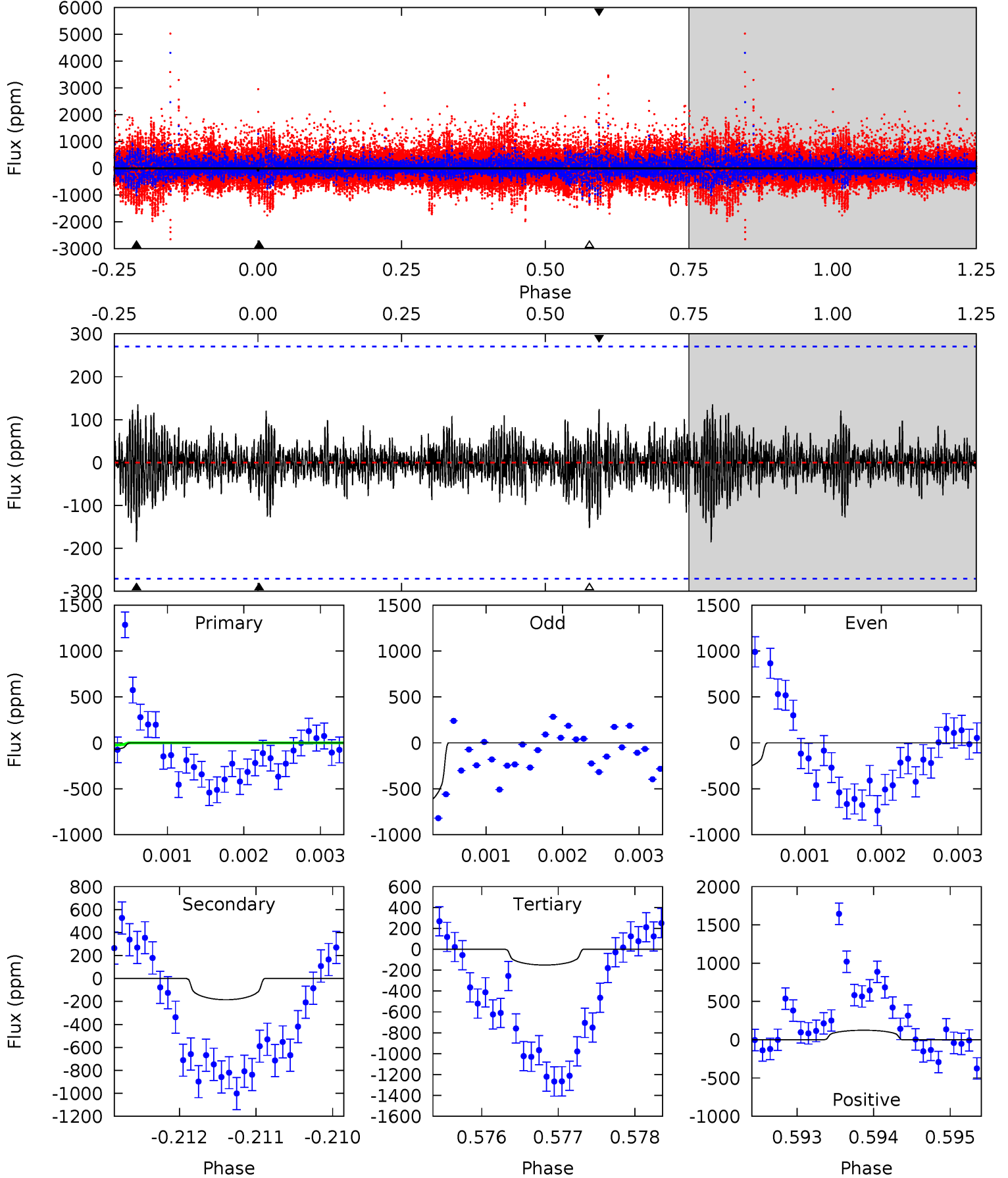
TCE 008780458-01 P=444.205161 Days $T_0=469.070462$ (BKJD)



DV Model-Shift Uniqueness Test

008780458-01, $P = 444.222172$ Days, $E = 24.834055$ Days

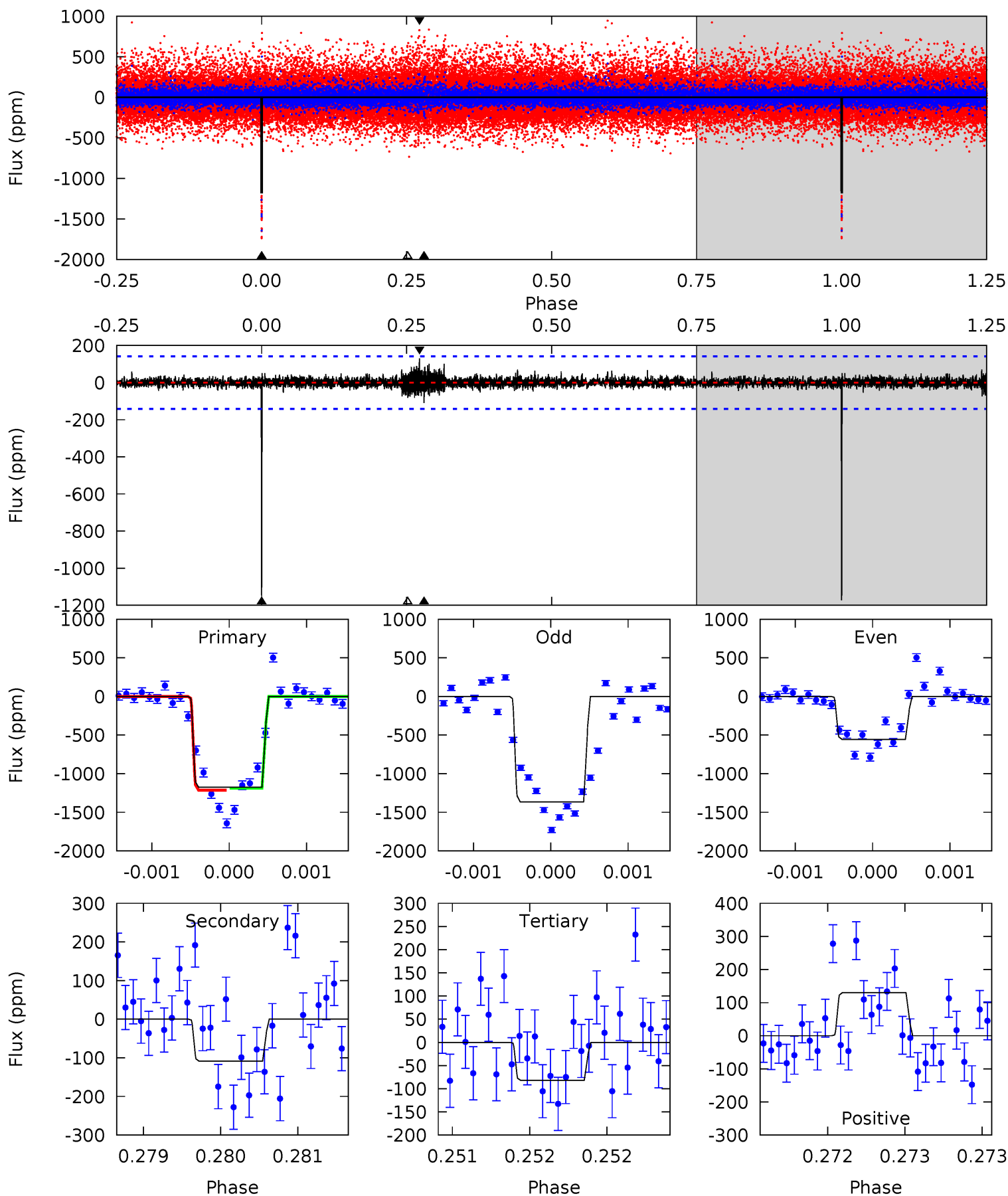
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.74	3.72	3.04	2.49	5.43	3.26	0.76	-1.30	-0.75	0.68	1.23	4.10	-70.2	0.42	1.12



Alt Model-Shift Uniqueness Test

008780458-01, $P = 444.205161$ Days, $E = 24.865301$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.3	4.20	3.17	5.03	5.47	3.32	0.64	42.1	40.3	1.03	-0.83	16.1	0.73	0.10	0



Stellar Parameters For KIC 008780458

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4613^{+126}_{-103}	$2.895^{+0.504}_{-0.336}$	$0.140^{+0.200}_{-0.250}$	$5.762^{+3.725}_{-2.484}$	$0.951^{+0.316}_{-0.230}$	$0.007^{+0.035}_{-0.005}$
	+3%/-2%	+17%/-12%	+143%/-179%	+65%/-43%	+33%/-24%	+494%/-69%
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 008780458-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-185 ± 50	$14.89^{+7.62}_{-5.65}$	638^{+103}_{-88}	3709^{+525}_{-372}	569^{+906}_{-327}
Alt.	-109 ± 26	$16.70^{+7.78}_{-6.04}$	633^{+96}_{-84}	3275^{+377}_{-270}	259^{+380}_{-141}

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 $A_{obs} \gg 1.0$

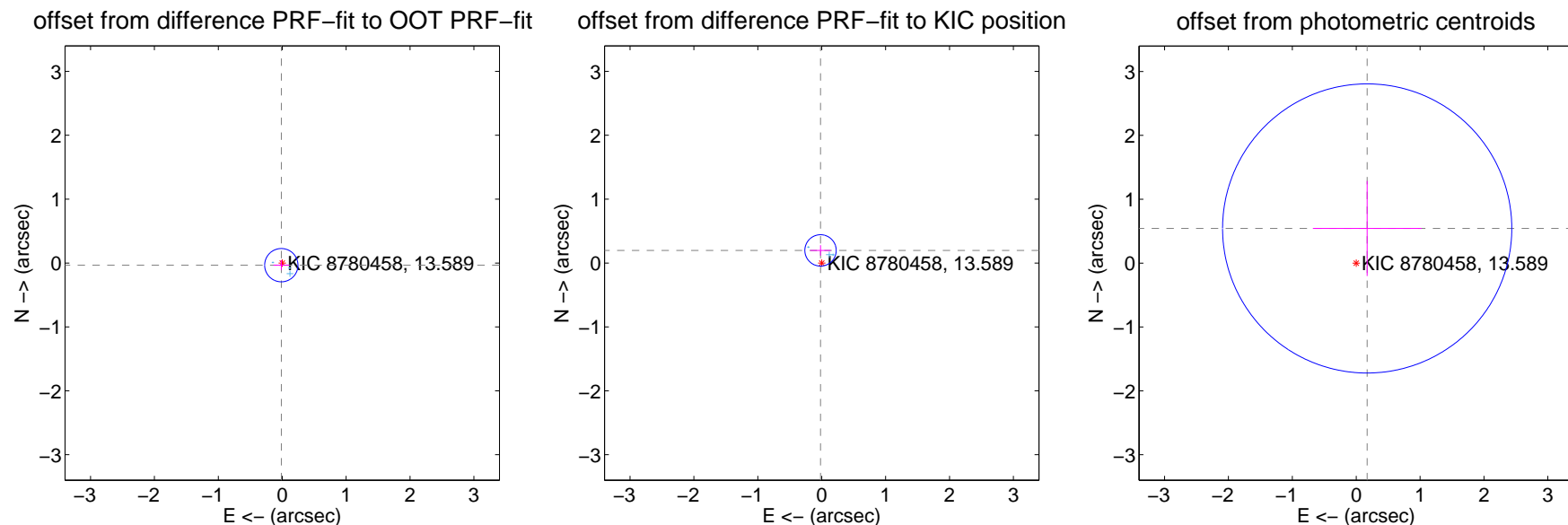
DV Centroid Data

Supplemental centroid analysis for 008780458-01. Kepler magnitude: 13.59. Transit SNR 5.58

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.036 ± 0.087	0.42	0.014 ± 0.122	-0.033 ± 0.079
PRF-fit source offset from KIC position	0.199 ± 0.082	2.43	0.019 ± 0.161	0.198 ± 0.081
photometric centroid source offset	0.57 ± 0.75	0.75	-0.17 ± 0.85	0.54 ± 0.74

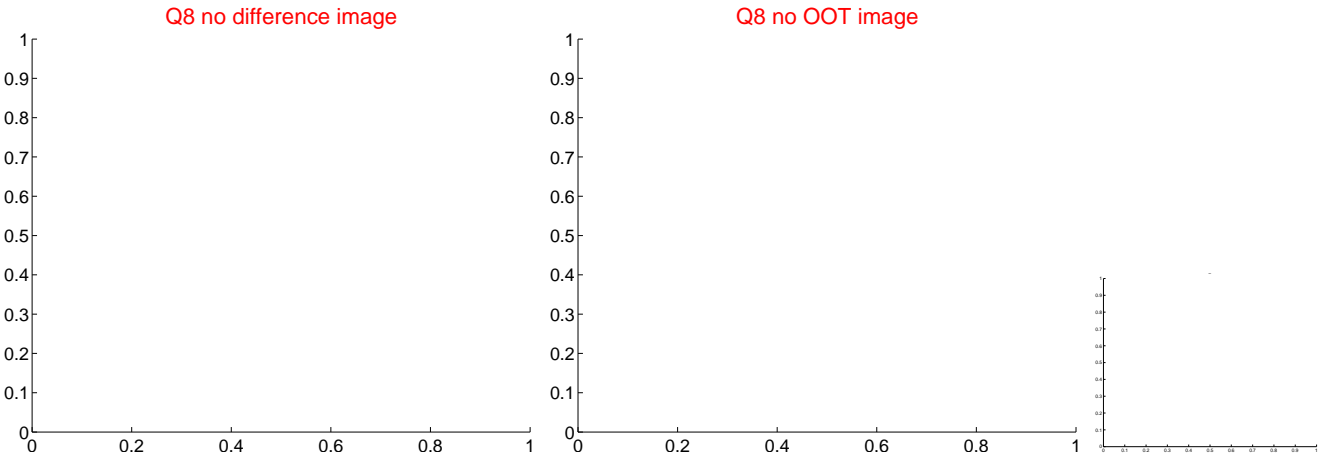
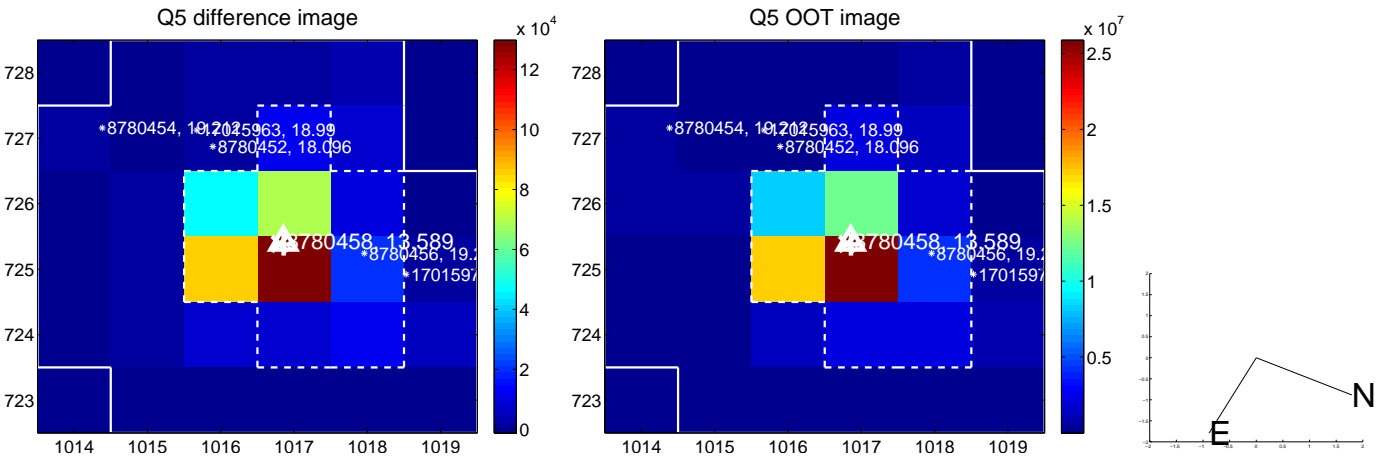


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

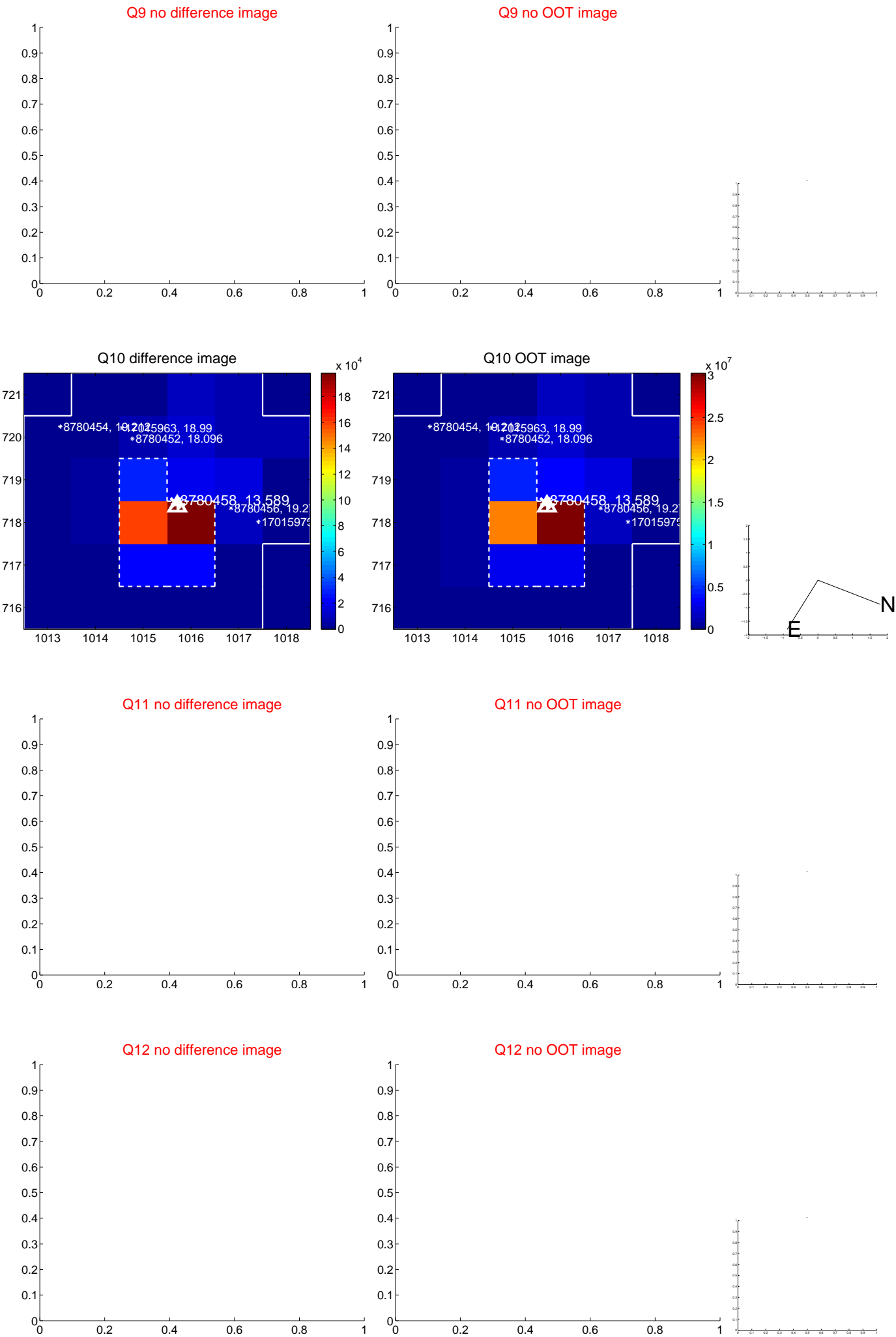
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



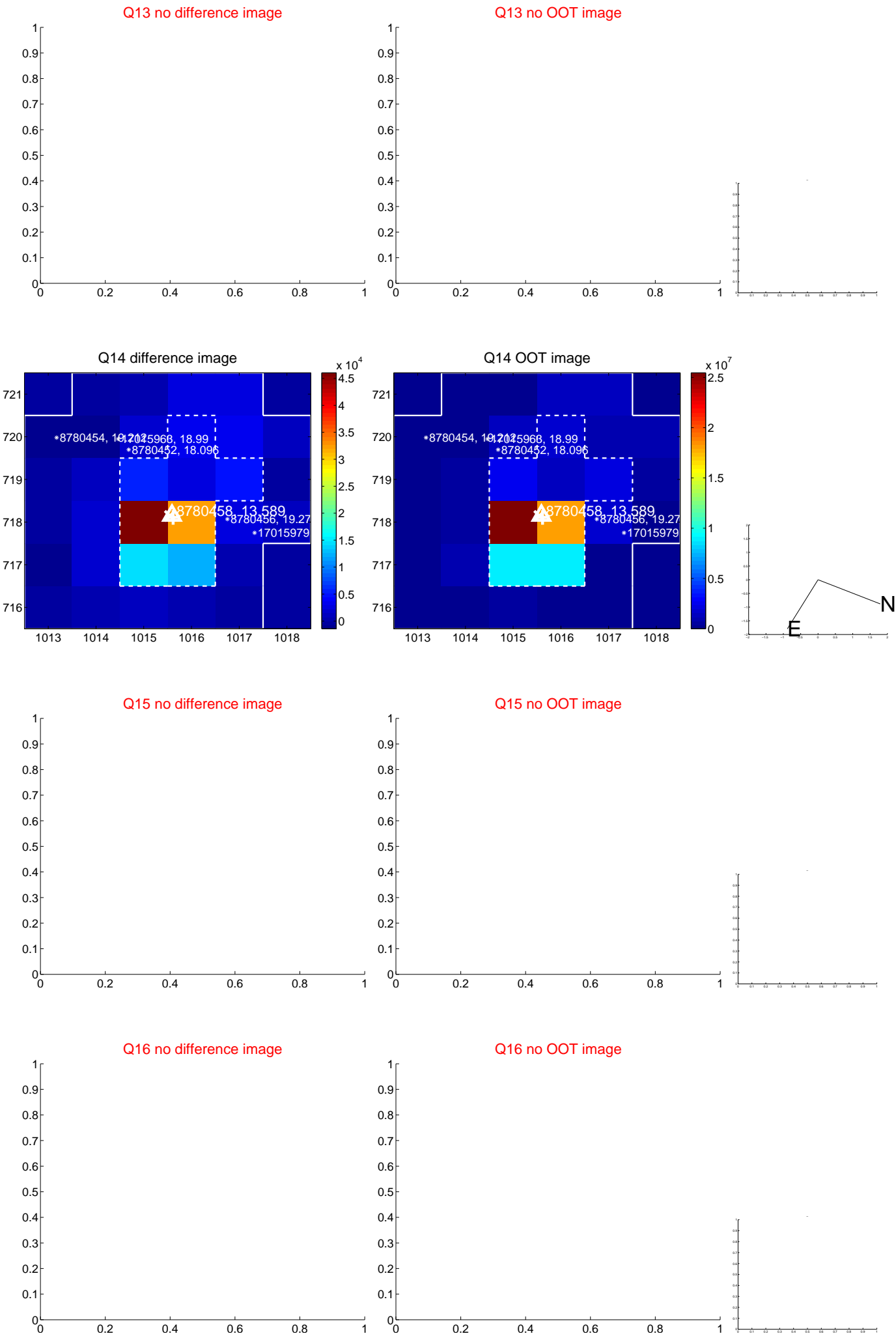
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



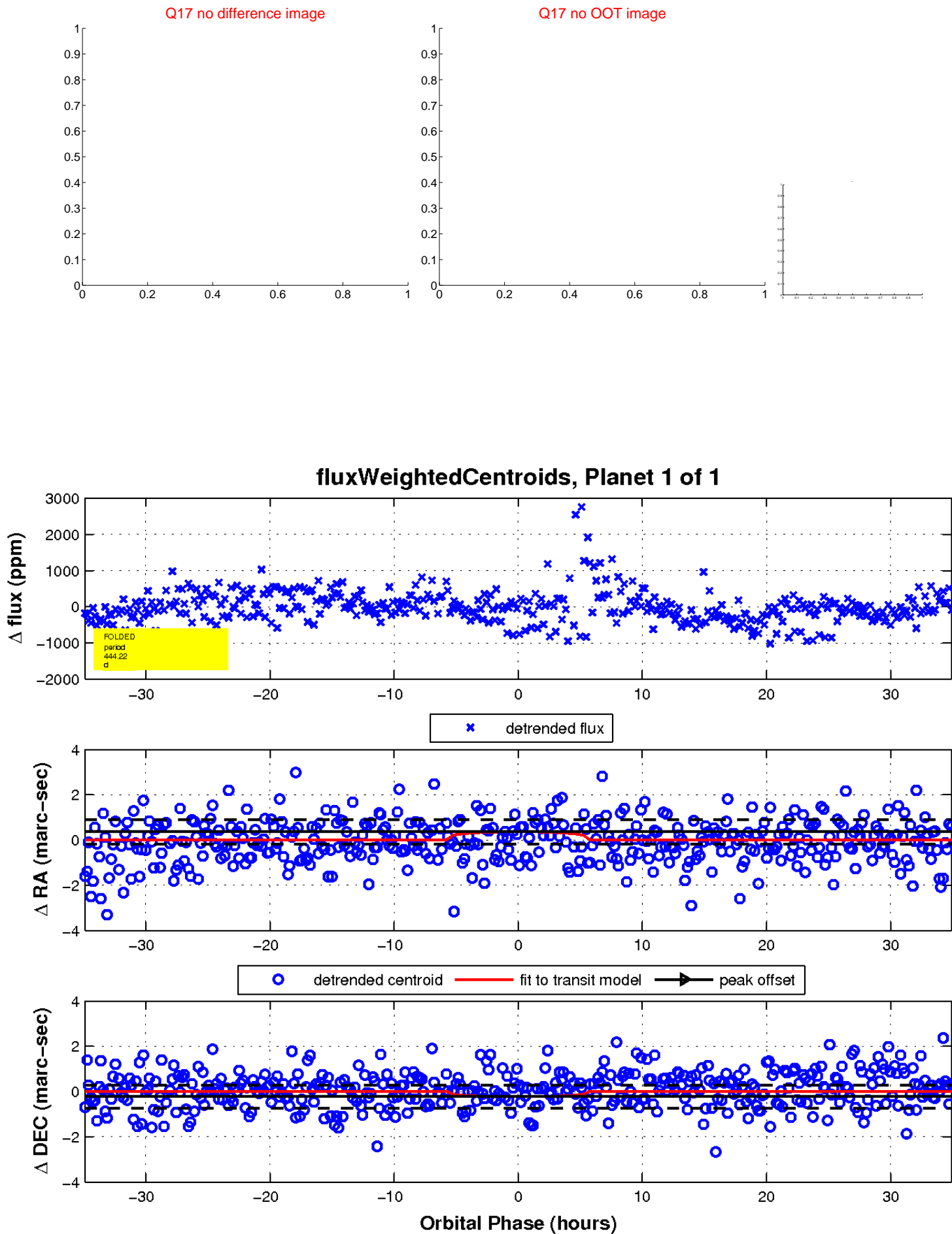
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

