

KIC 010010677

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})
010010677-01	OBS	No	288.849688	184.704873	1176.0	15.118	10.0	10.3	0.69	4778	2.30	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010010677-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

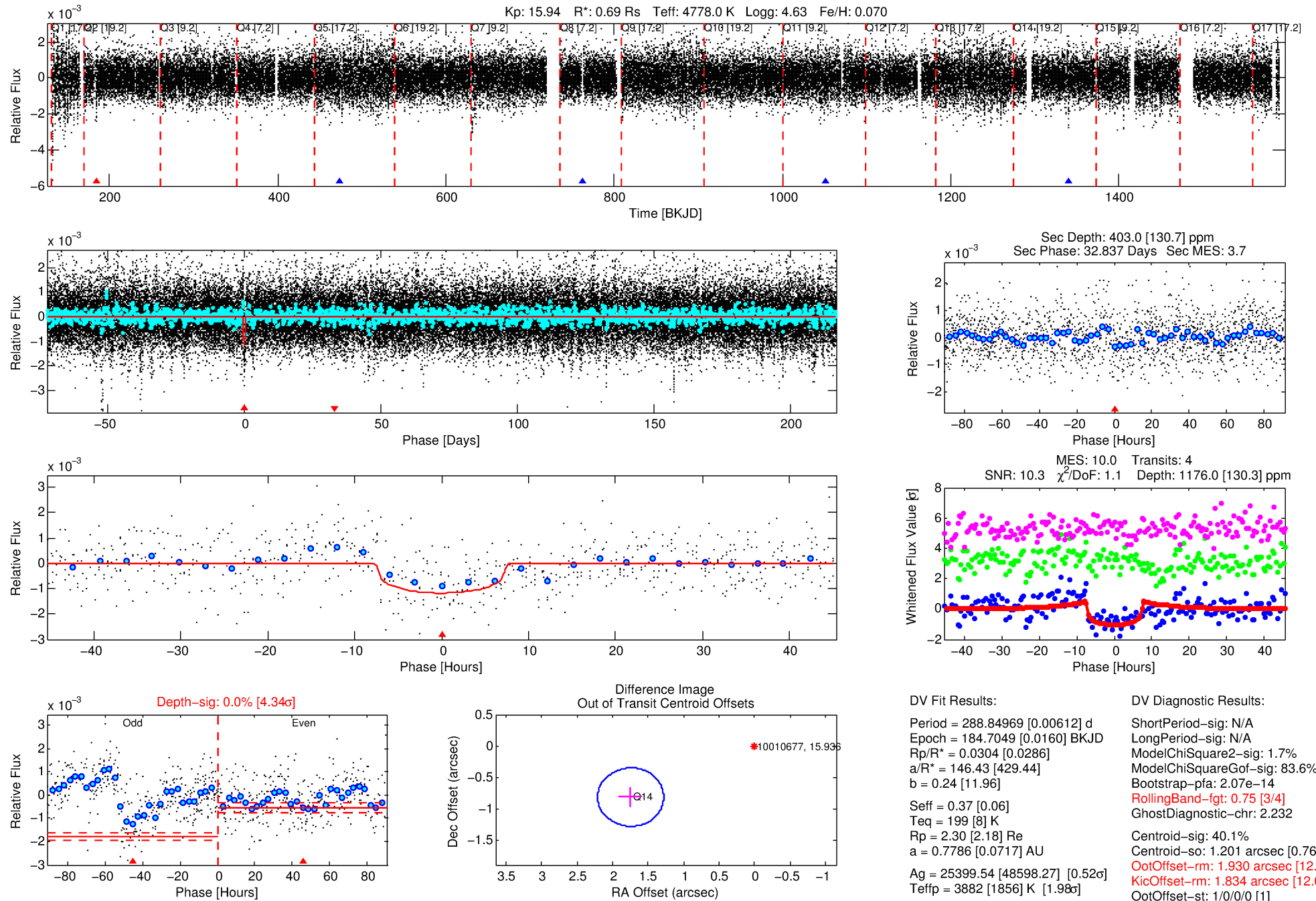
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010010677-01

No Significant Match Found

DV One-Page Summary

KIC: 10010677 Candidate: 1 of 1 Period: 288.850 d



DV Fit Results:

Period = 288.84969 [0.00612] d
Epoch = 184.7049 [0.0160] BKJD
Rp/R* = 0.0304 [0.0286]
a/R* = 146.43 [429.44]
b = 0.24 [11.96]
Seff = 0.37 [0.06]
Teq = 199 [8] K
Rp = 2.30 [2.18] Re
a = 0.7786 [0.0717] AU
Ag = 25399.54 [48598.27] [0.52 σ]
Teff = 3882 [1856] K [1.98 σ]

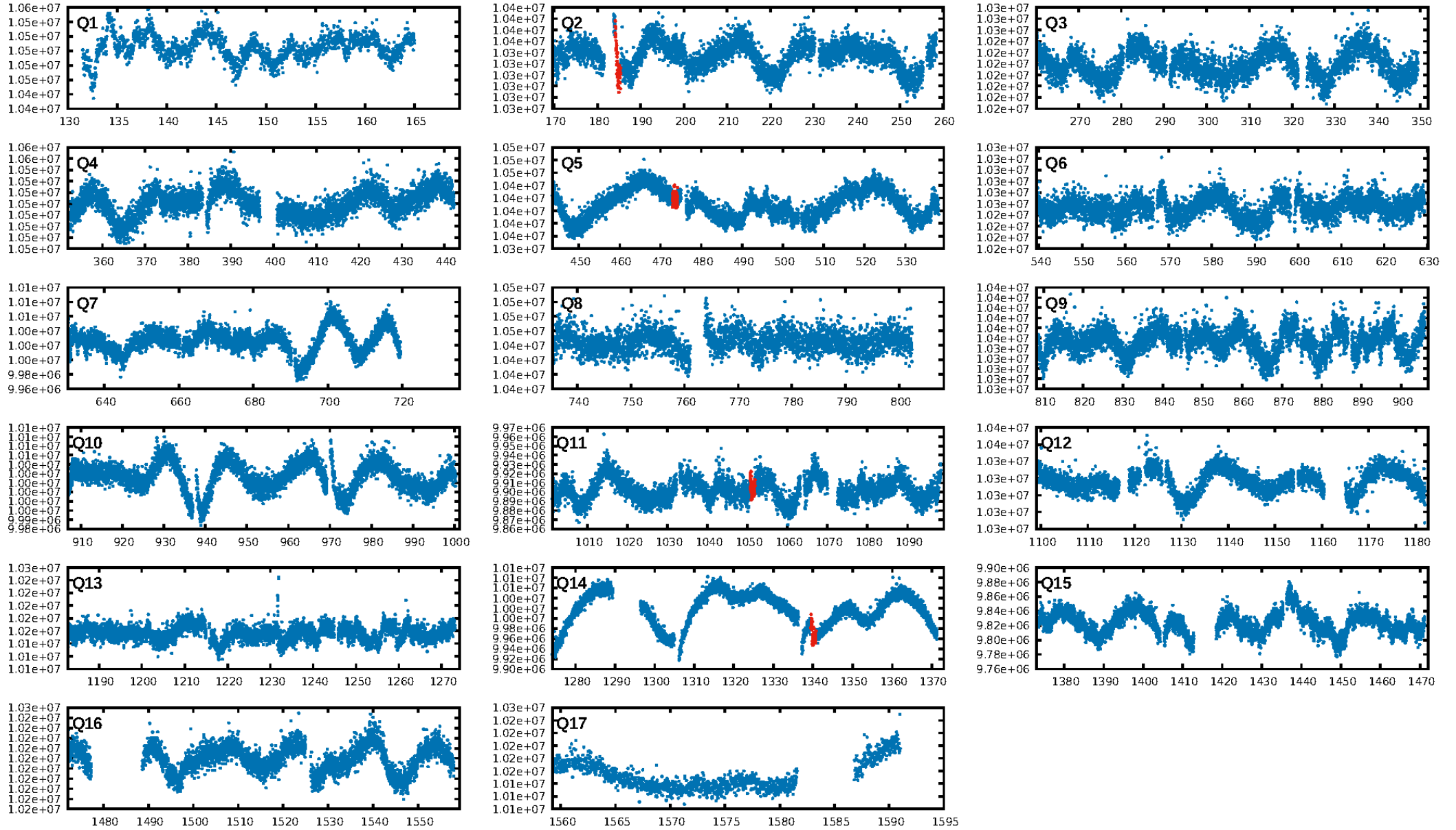
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.7%
ModelChiSquareGoF-sig: 83.6%
Bootstrap-pfa: 2.07e-14
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 2.232
Centroid-sig: 40.1%
Centroid-so: 1.201 arcsec [0.76 σ]
OotOffset-rm: 1.930 arcsec [12.43 σ]
KicOffset-rm: 1.834 arcsec [12.04 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

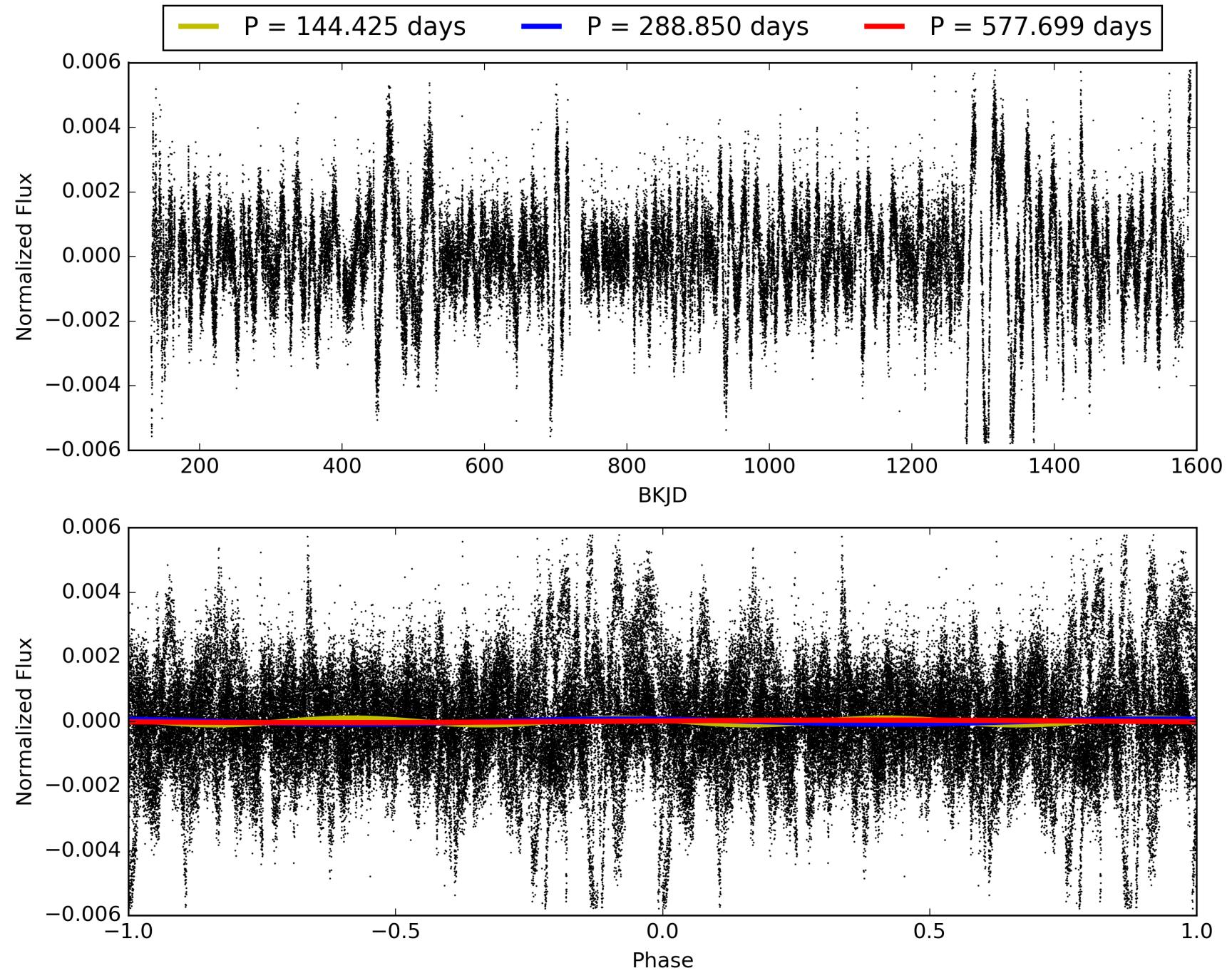
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:15:14 Z

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

TCE 010010677-01, PDC Light Curves

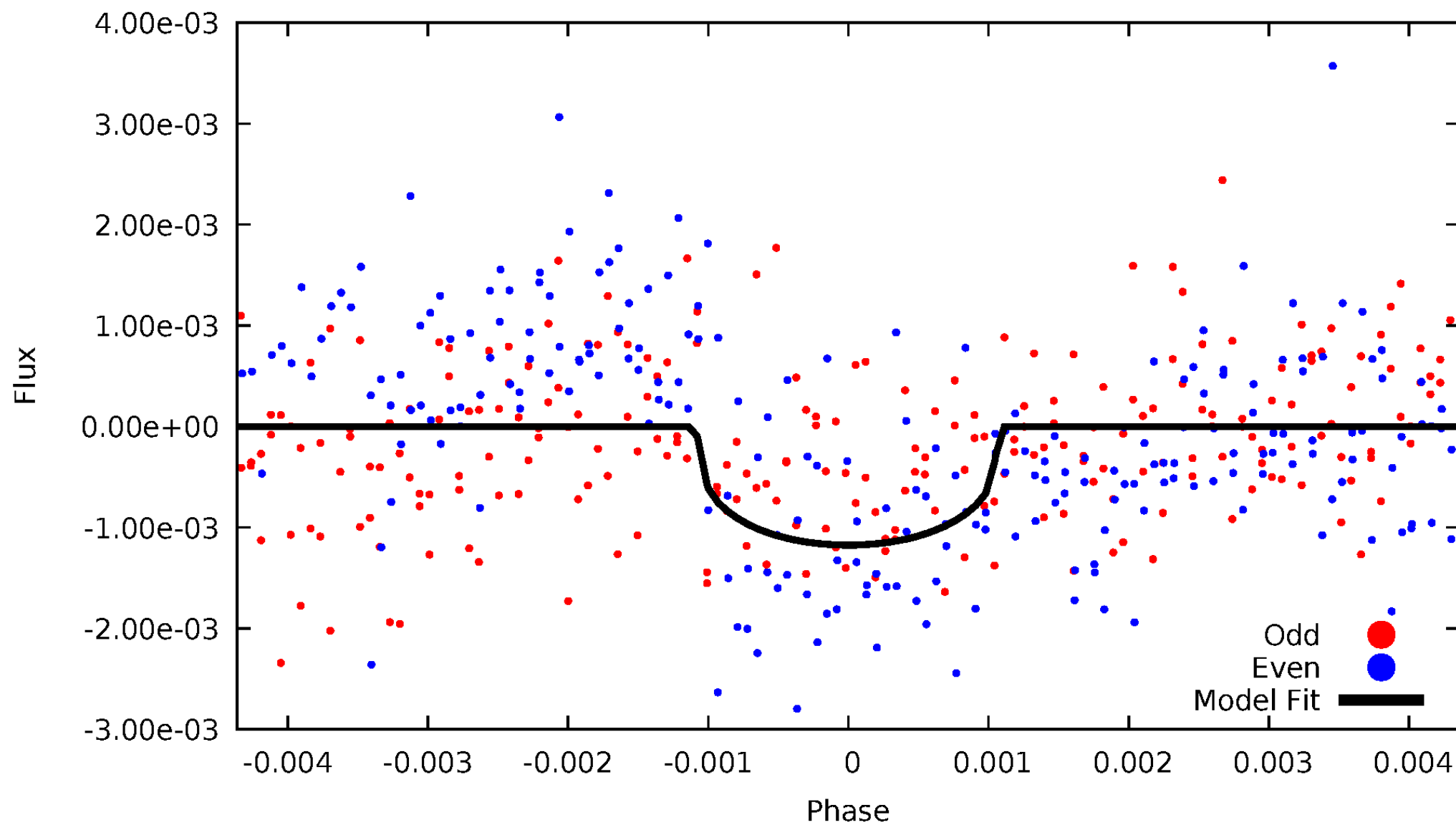


TCE 010010677-01



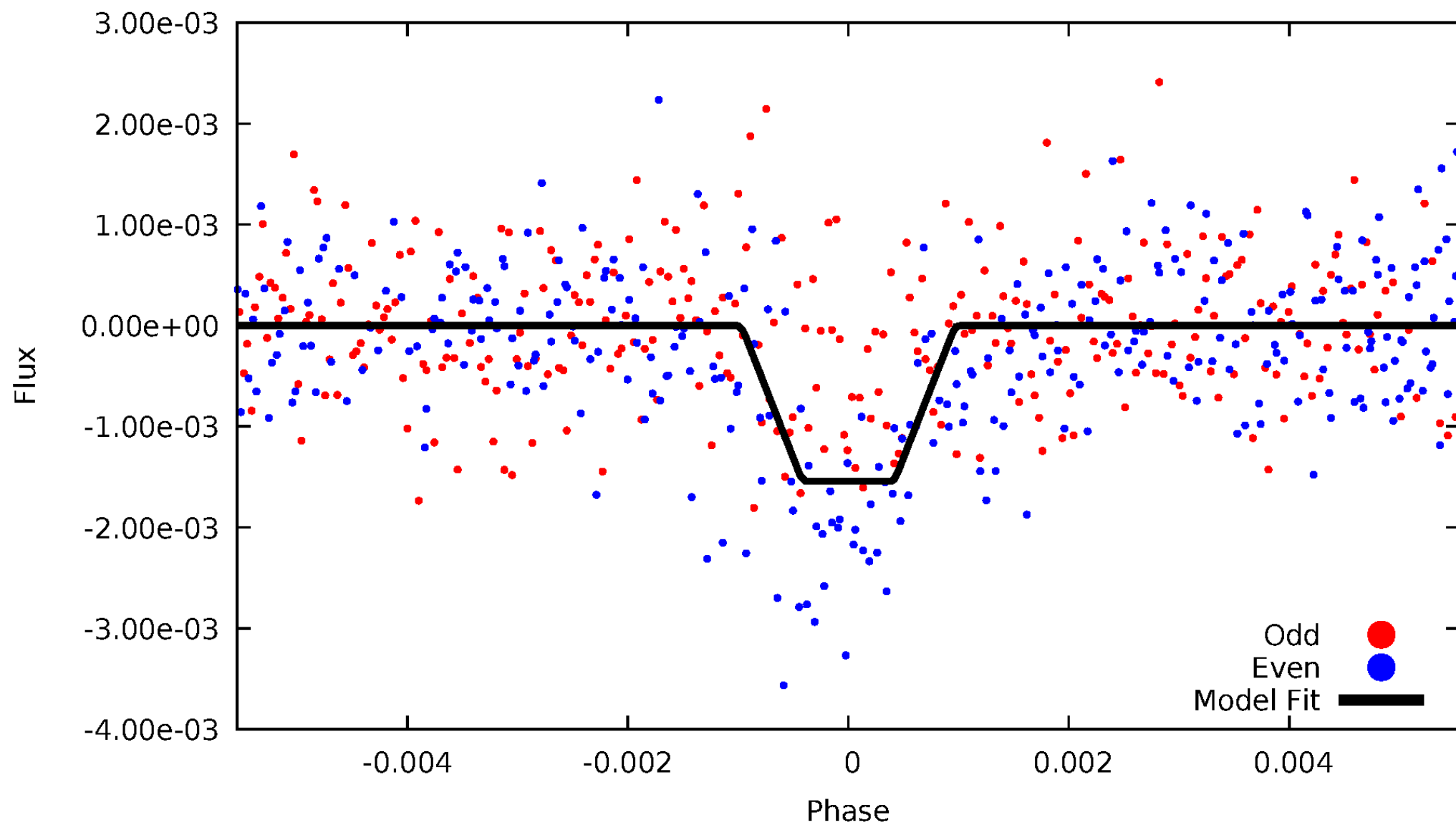
DV Odd/Even

TCE 010010677-01



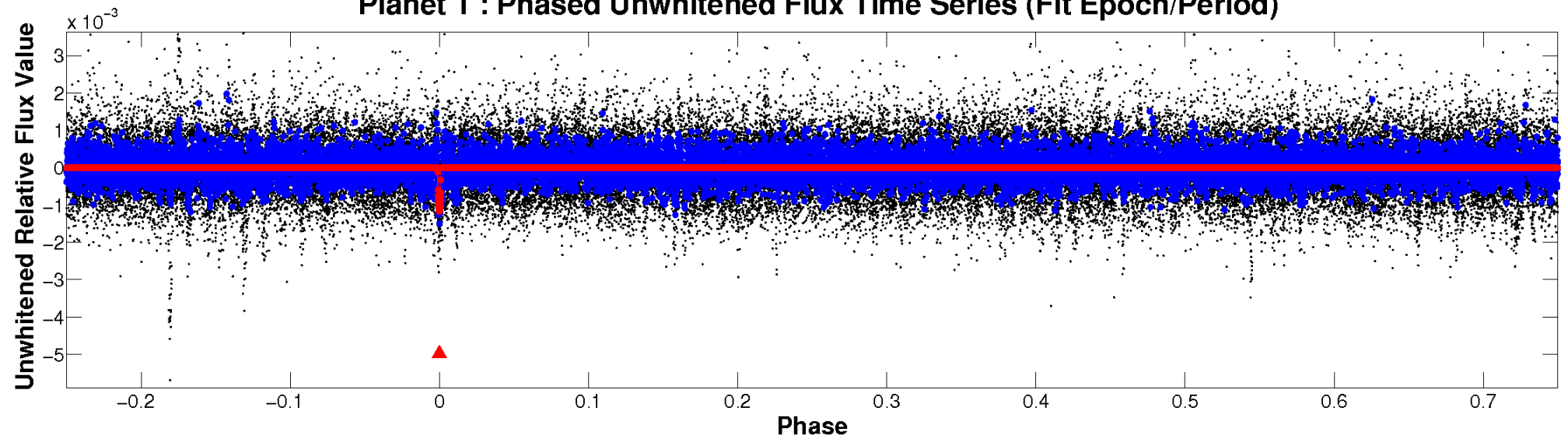
ALT Odd/Even

TCE 010010677-01

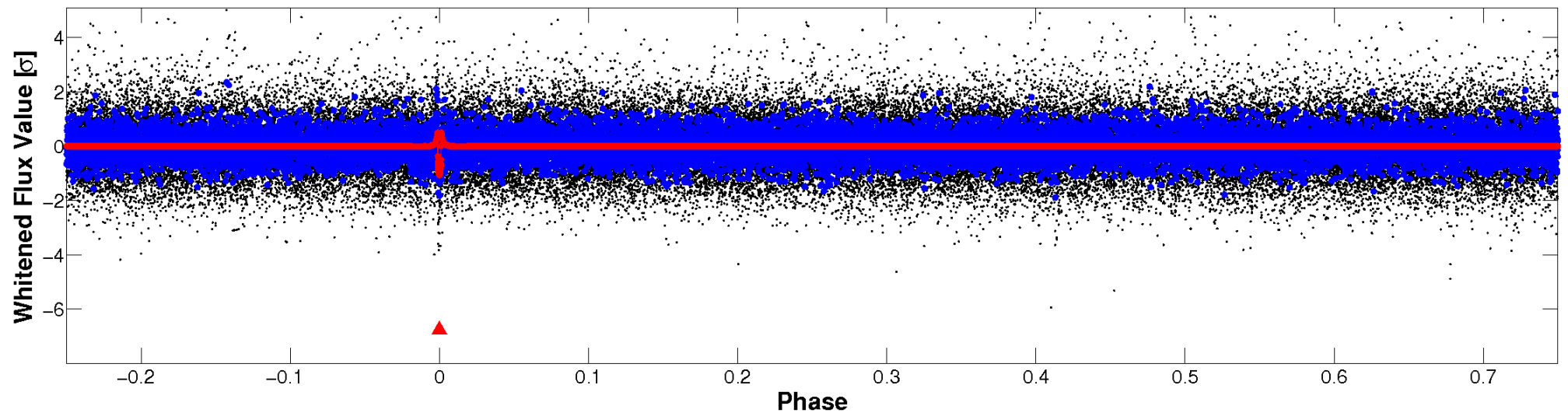


Non-Whitened Vs. Whitened Light Curve

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

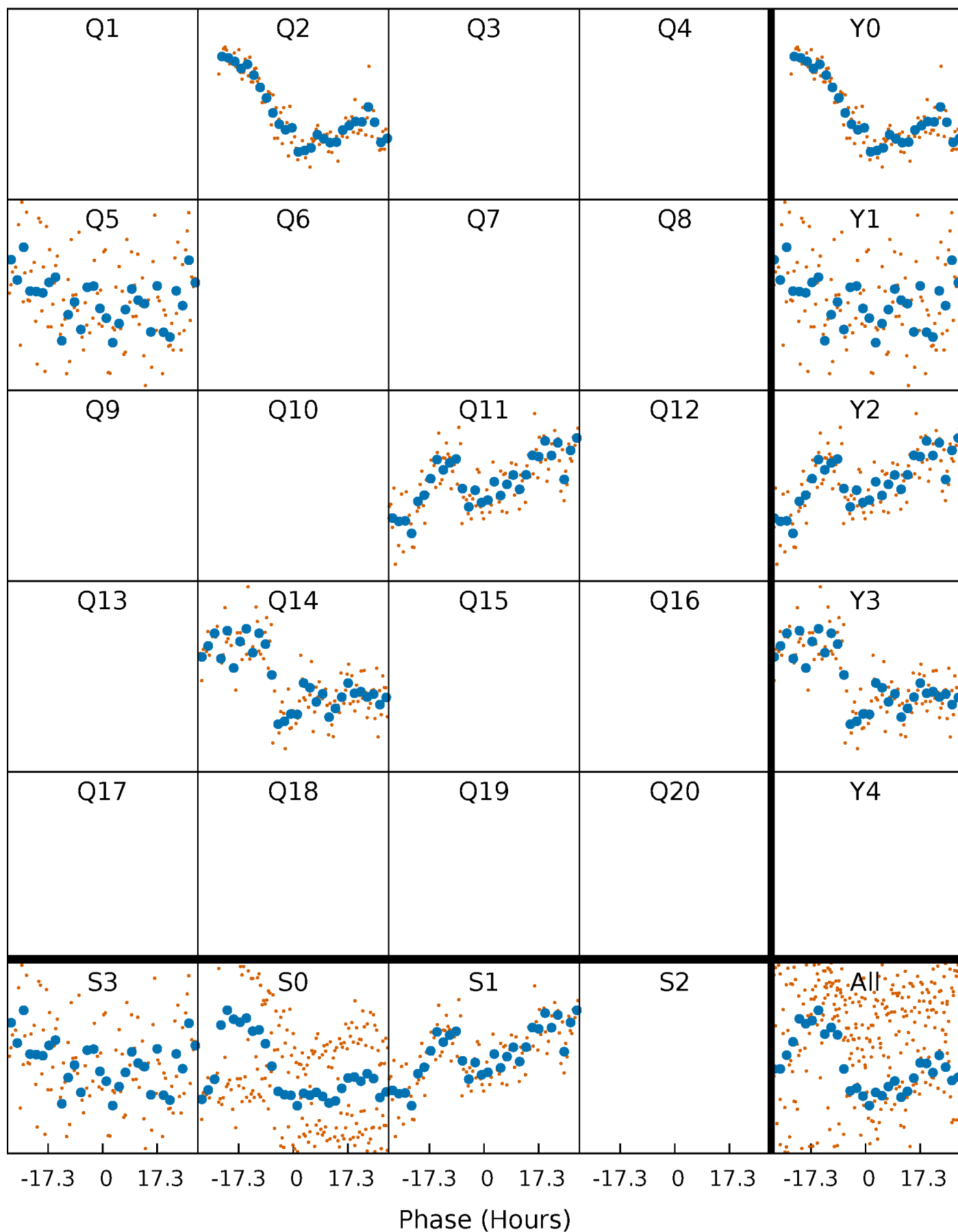


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



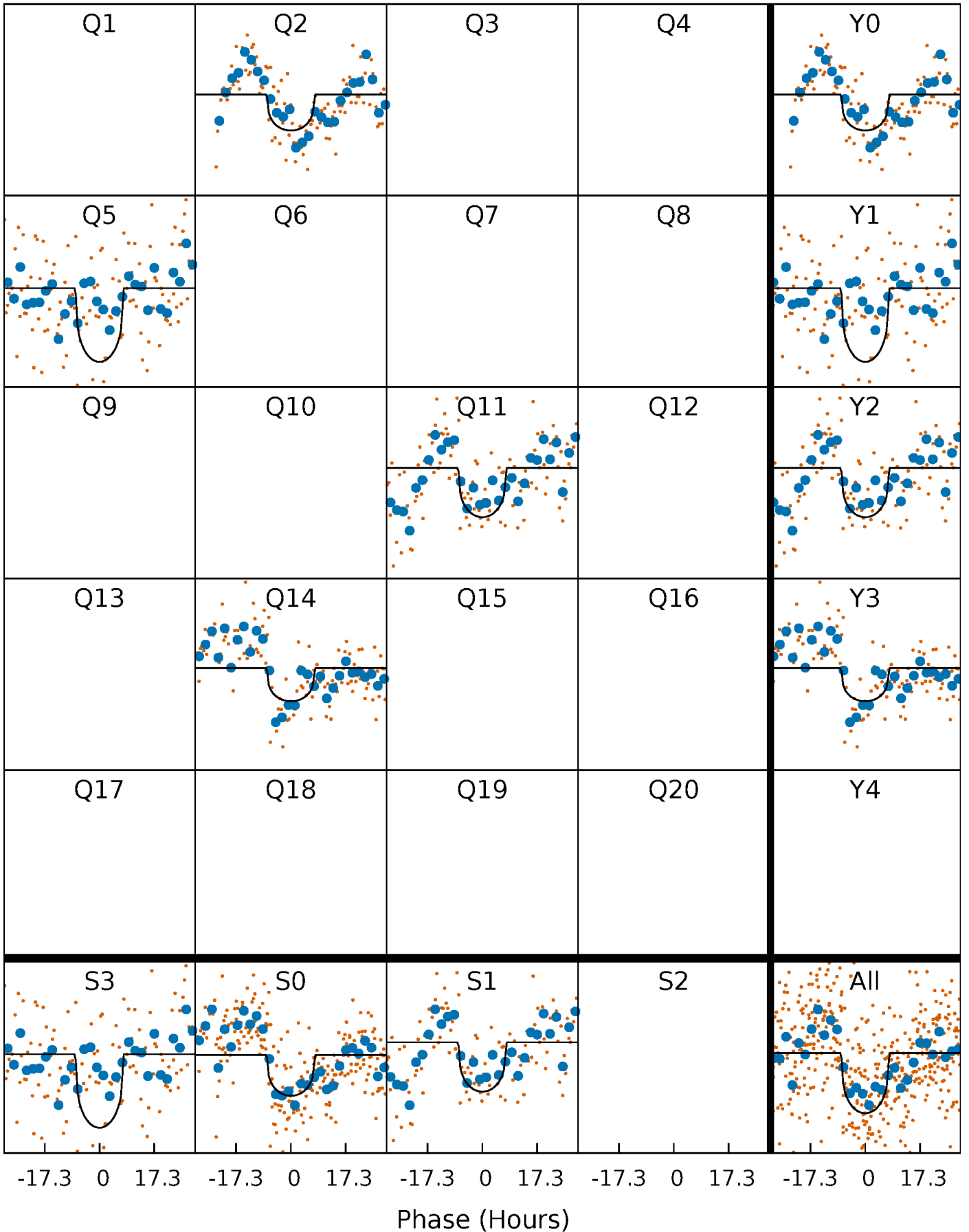
PDC Quarter-Phased Transit Curves

TCE 010010677-01 P=288.849688 Days $T_0=184.704873$ (BKJD)



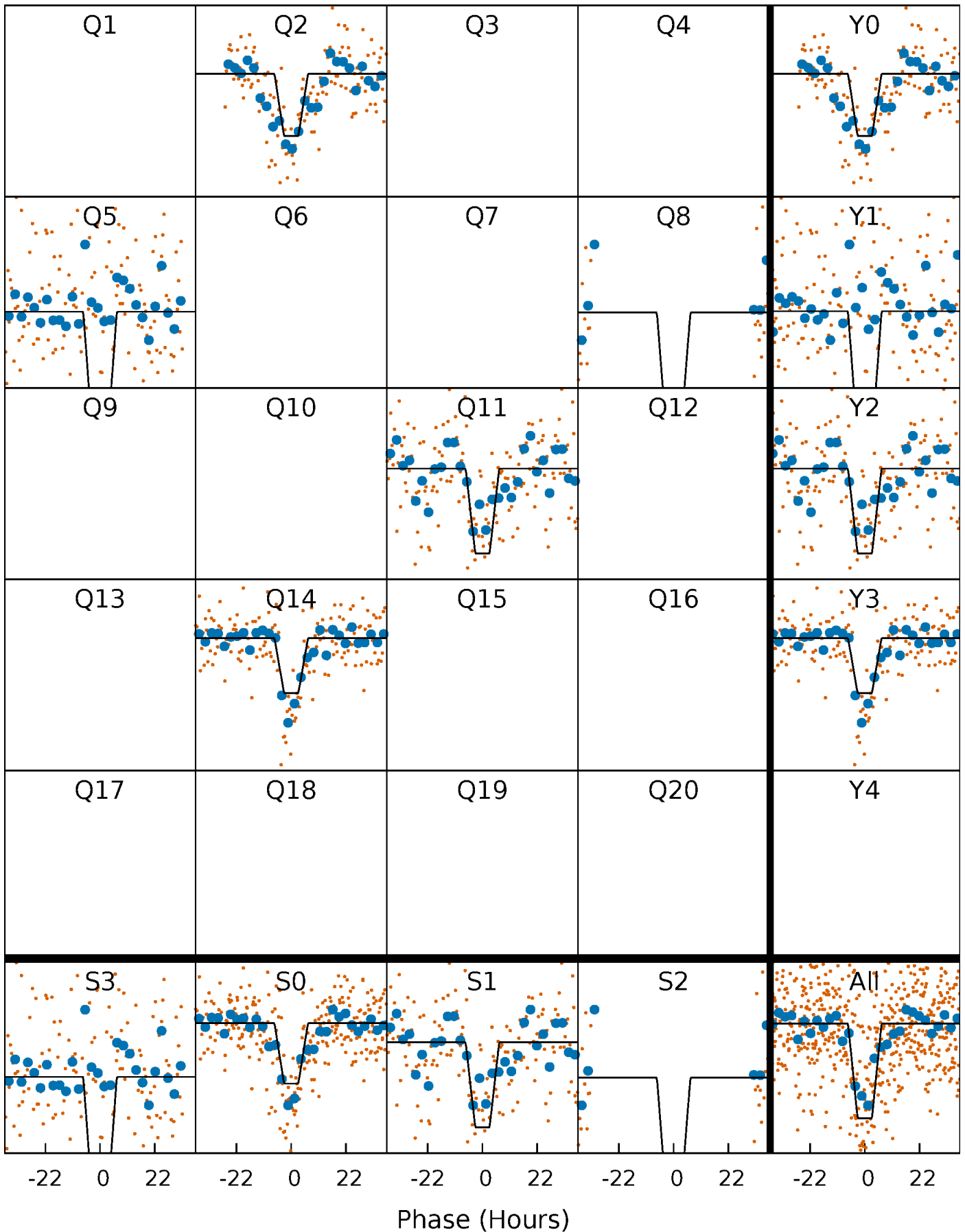
DV Quarter-Phased Transit Curves

TCE 010010677-01 P=288.849688 Days $T_0=184.704873$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

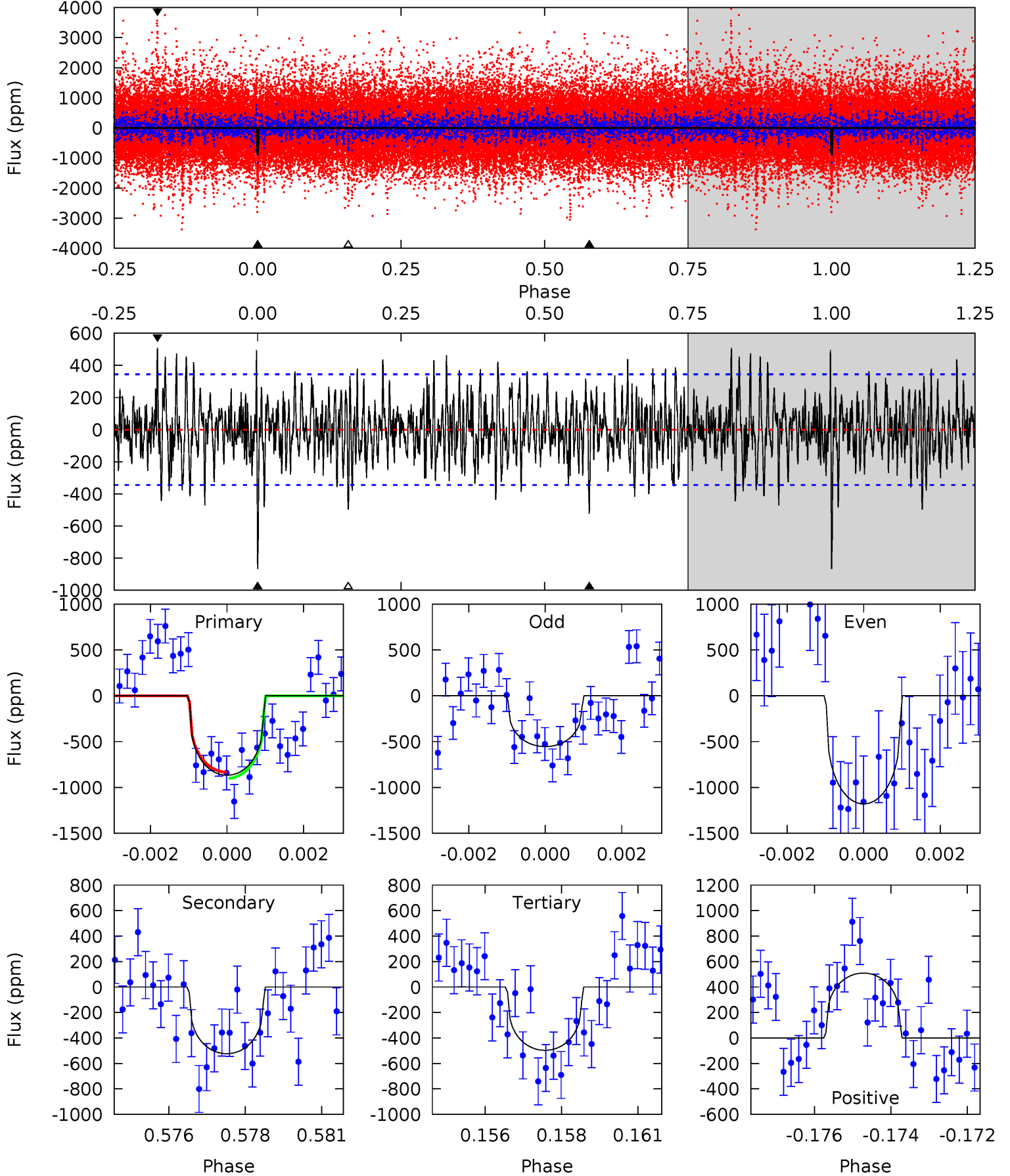
TCE 010010677-01 P=288.794315 Days $T_0=184.827036$ (BKJD)



DV Model-Shift Uniqueness Test

010010677-01, P = 288.849688 Days, E = 184.704873 Days

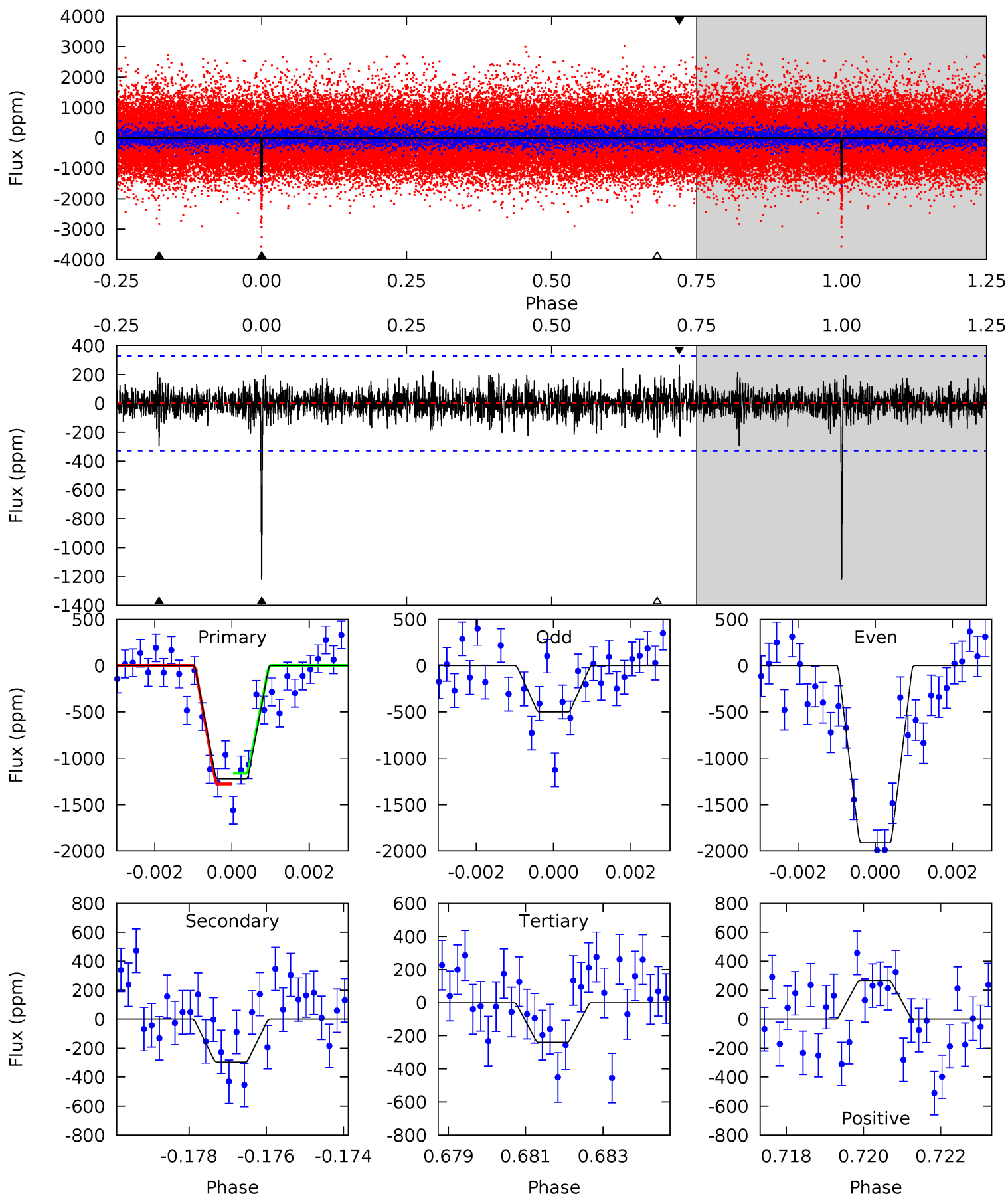
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	8.07	7.66	7.85	5.31	3.06	2.35	5.71	5.52	0.41	0.22	4.84	0.91	0.37	0.52



Alt Model-Shift Uniqueness Test

010010677-01, P = 288.794315 Days, E = 184.827036 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	4.81	3.88	4.36	5.32	3.09	1.08	16.0	15.5	0.92	0.45	11.6	0.86	0.18	0.93



Stellar Parameters For KIC 010010677

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4778^{+129}_{-129}	$4.634^{+0.020}_{-0.064}$	$0.070^{+0.250}_{-0.300}$	$0.693^{+0.081}_{-0.038}$	$0.790^{+0.041}_{-0.071}$	$3.349^{+0.345}_{-0.855}$
	+3%/-3%	+0%/-1%	+357%/-429%	+12%/-5%	+5%/-9%	+10%/-26%
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 010010677-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-523 ± 65	$2.90^{+2.17}_{-1.82}$	281^{+9}_{-9}	3993^{+1976}_{-685}	$21566^{+132526}_{-14859}$
Alt.	-295 ± 61	$3.30^{+2.31}_{-1.96}$	282^{+9}_{-9}	3446^{+1329}_{-511}	9063^{+46873}_{-6088}

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 $A_{obs} \gg 1.0$

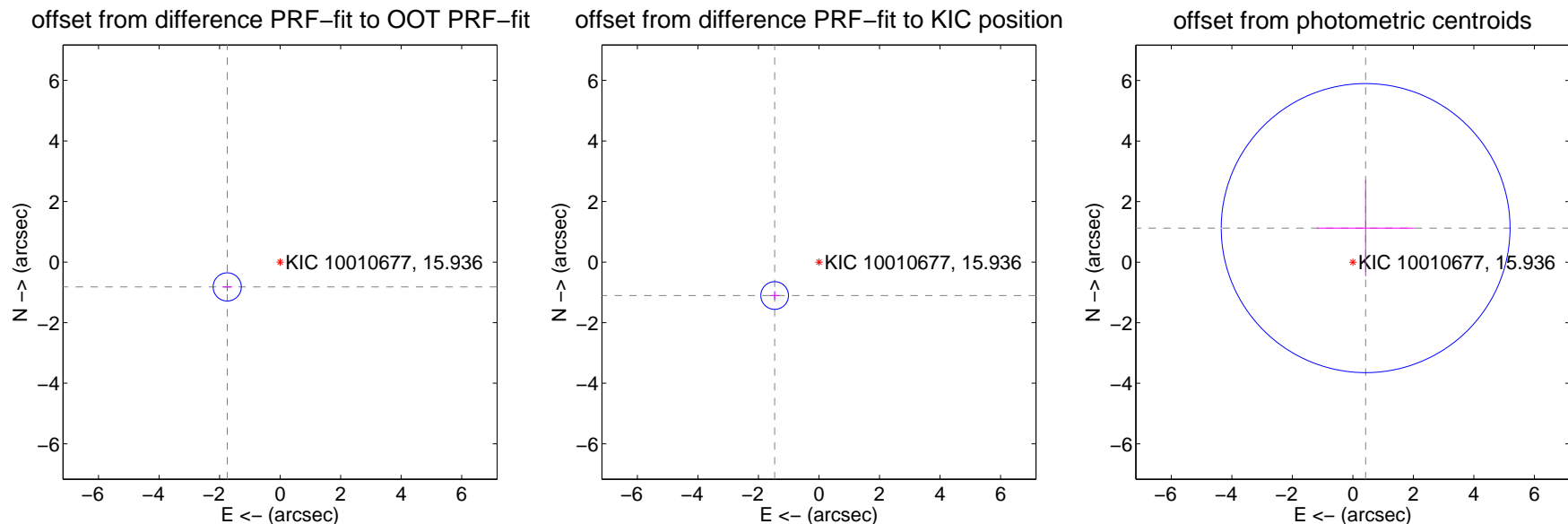
DV Centroid Data

Supplemental centroid analysis for 010010677-01. Kepler magnitude: 15.94. Transit SNR 10.25

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.930 ± 0.155	12.43	1.747 ± 0.158	-0.820 ± 0.141
PRF-fit source offset from KIC position	1.834 ± 0.152	12.04	1.465 ± 0.158	-1.103 ± 0.141
photometric centroid source offset	1.20 ± 1.59	0.76	-0.42 ± 1.61	1.12 ± 1.59

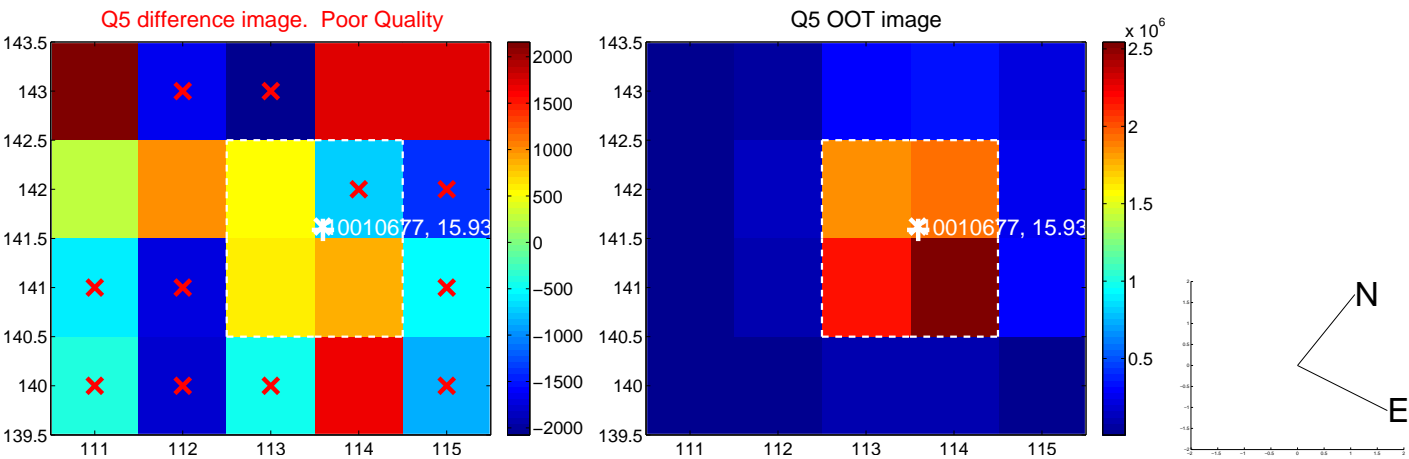


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

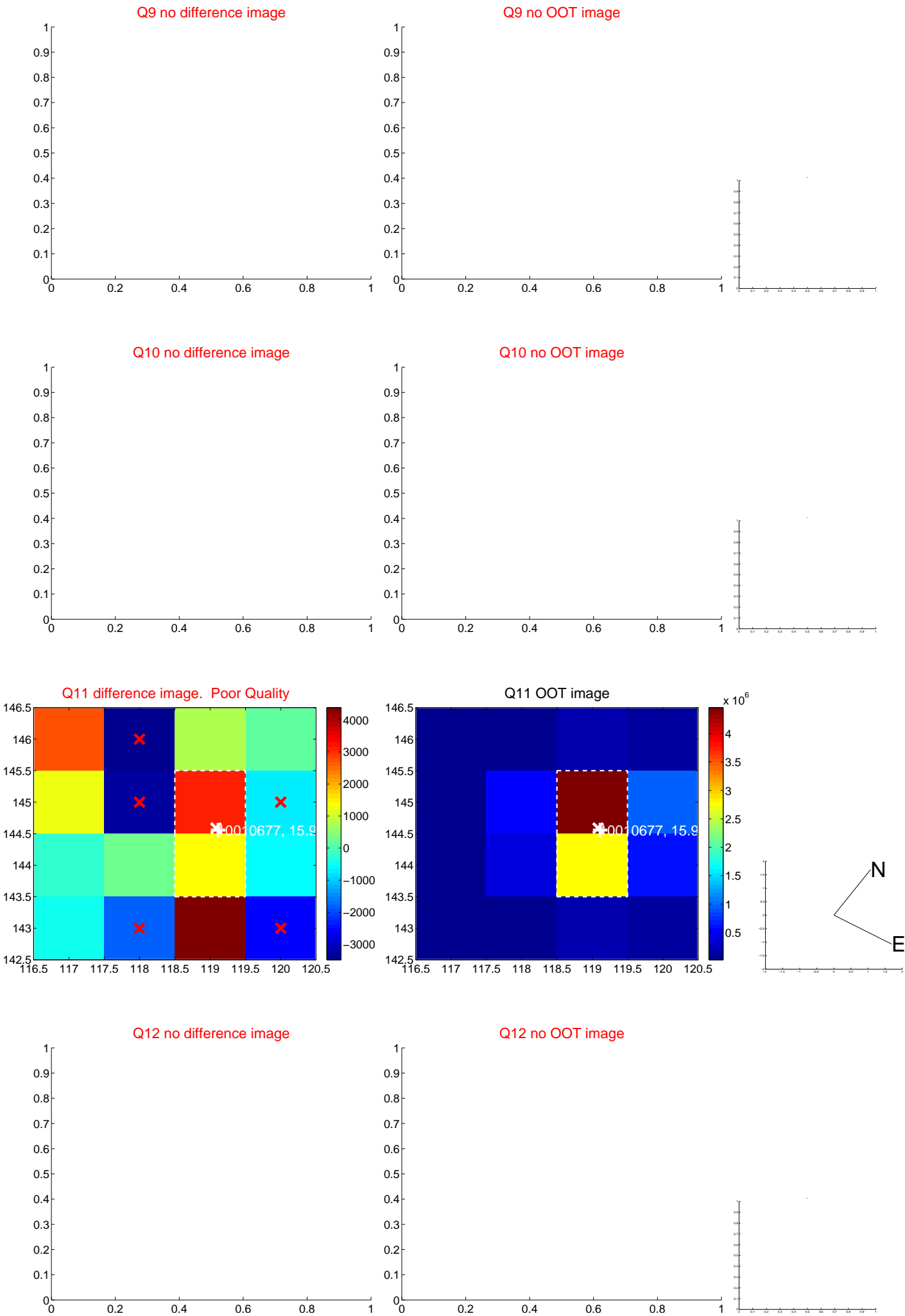
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



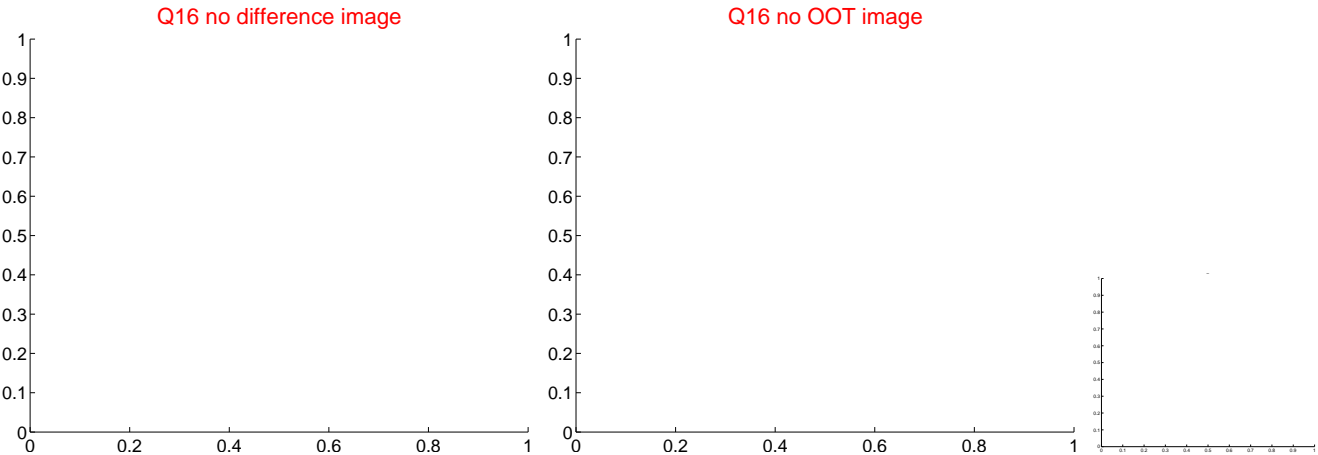
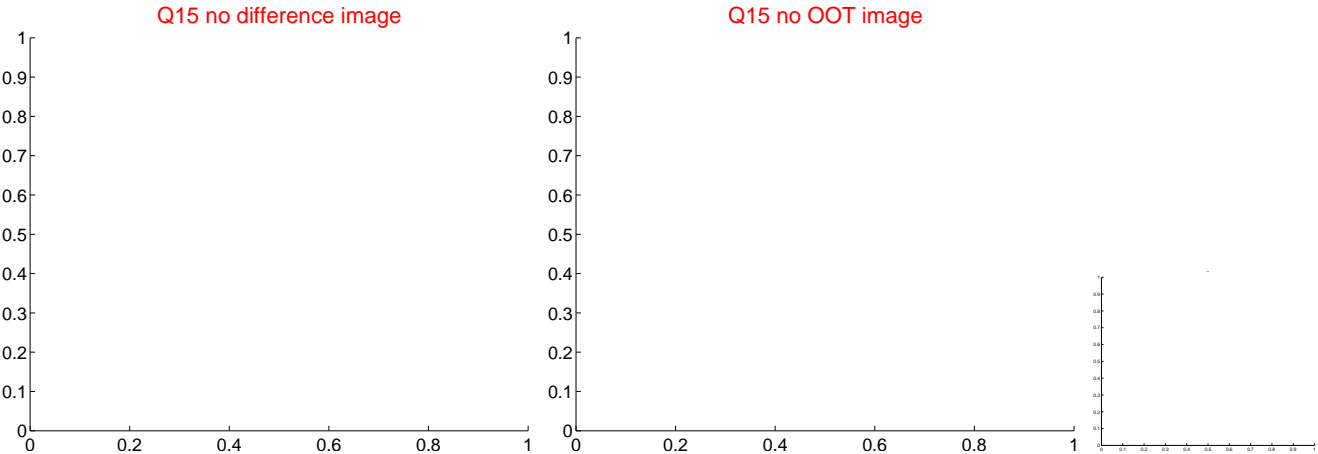
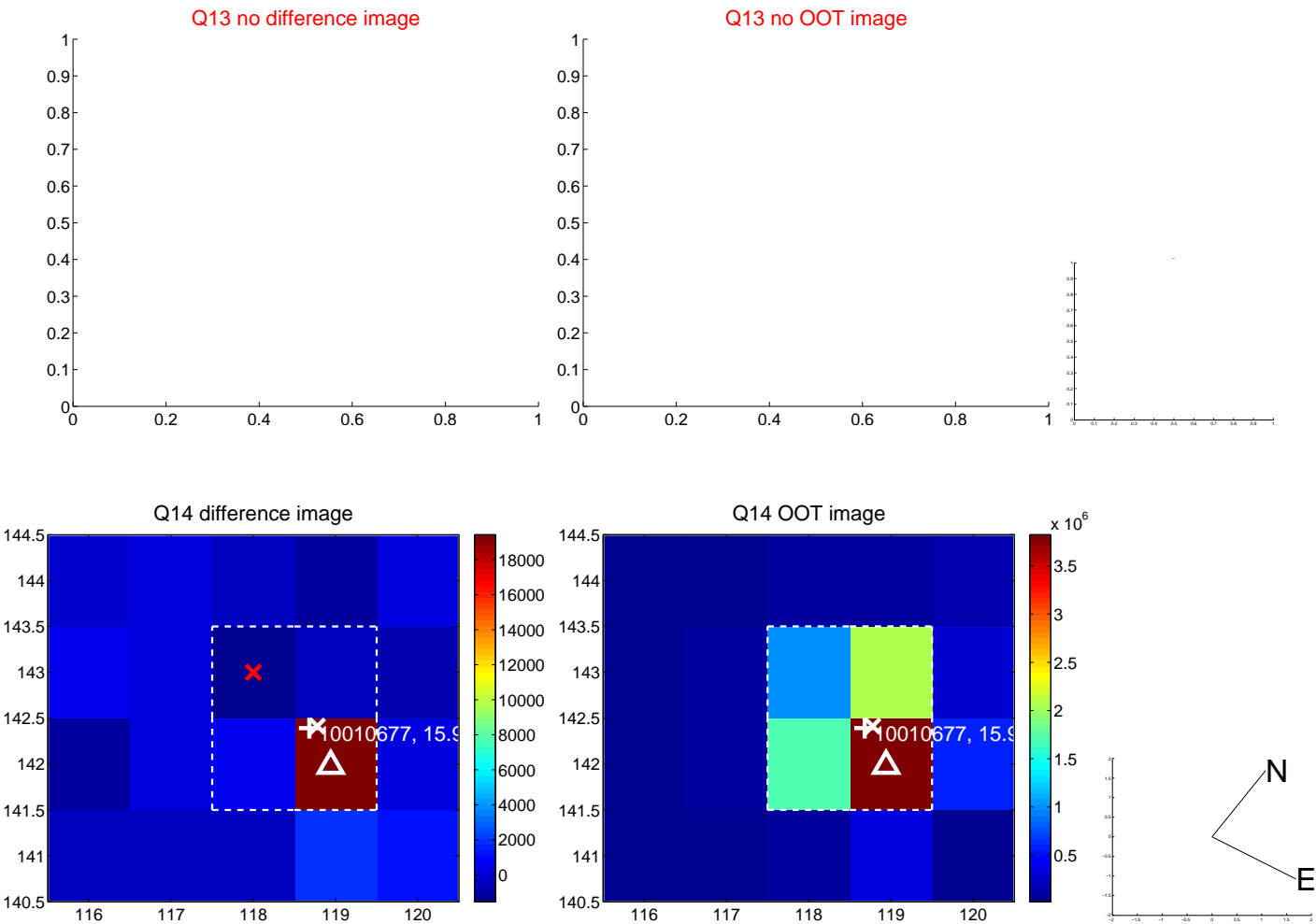
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



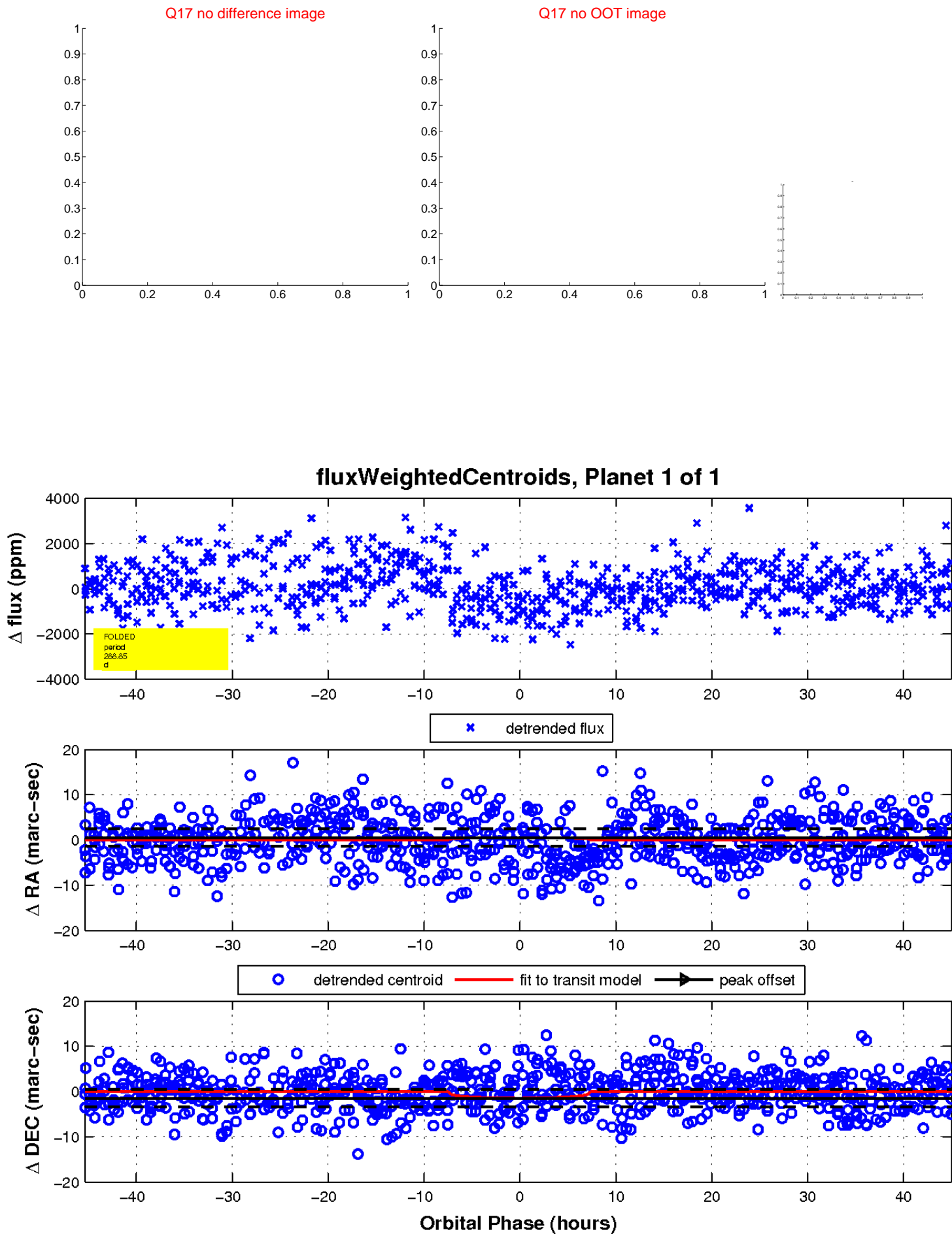
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

