

KIC 007874976

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})
007874976-01	OBS	8146.01	185.820773	295.034755	69.4	9.272	7.2	7.3	1.19	6137	1.13	4.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007874976-01	OBS	FP	0.14	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

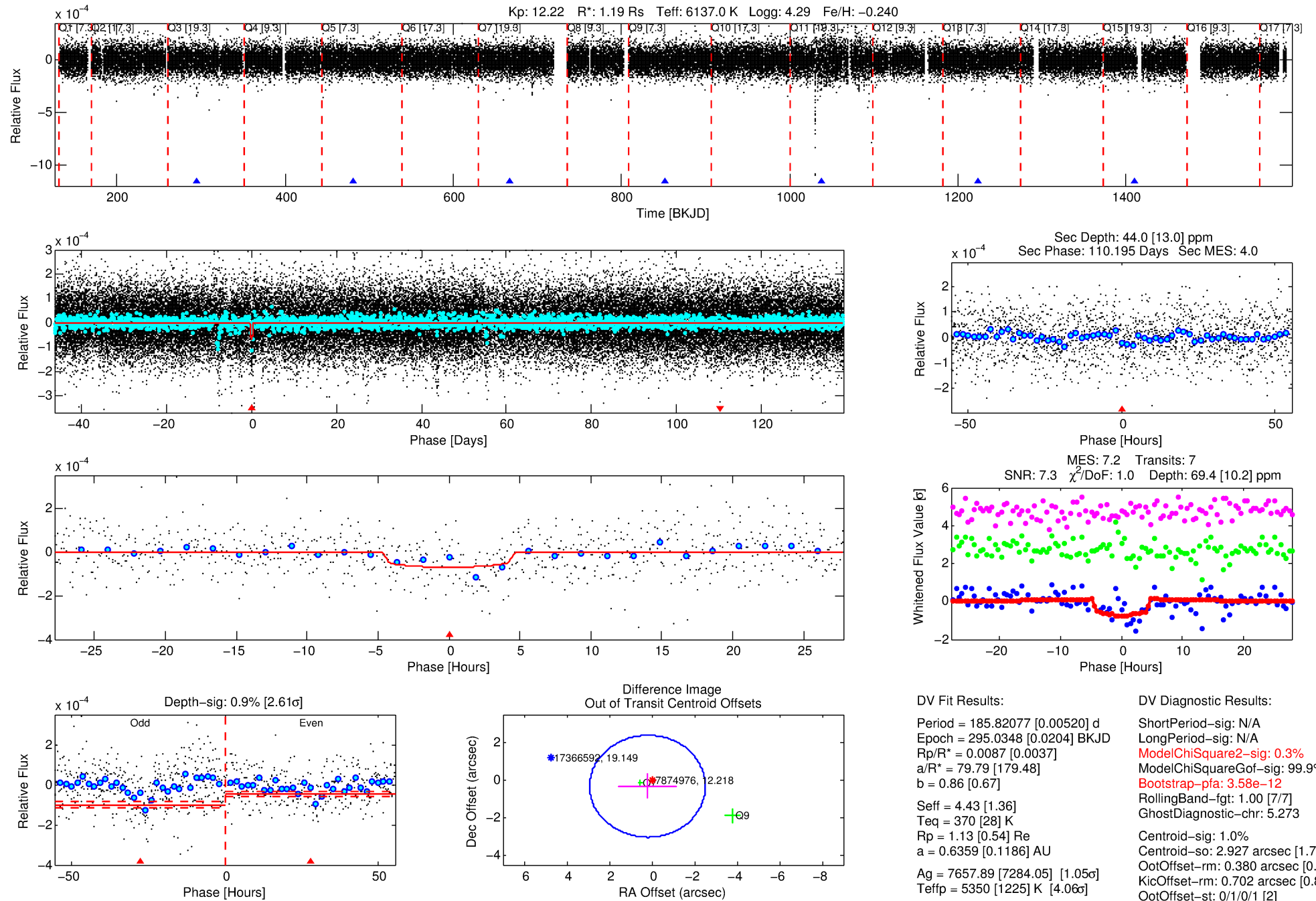
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007874976-01

No Significant Match Found

DV One-Page Summary

KIC: 7874976 Candidate: 1 of 1 Period: 185.821 d



DV Fit Results:

Period = 185.82077 [0.00520] d
Epoch = 295.0348 [0.0204] BKJD
Rp/R* = 0.0087 [0.0037]
a/R* = 79.79 [179.48]
b = 0.86 [0.67]
Seff = 4.43 [1.36]
Teq = 370 [28] K
Rp = 1.13 [0.54] Re
a = 0.6359 [0.1186] AU
Ag = 7657.89 [7284.05] [1.05 σ]
Teffp = 5350 [1225] K [4.06 σ]

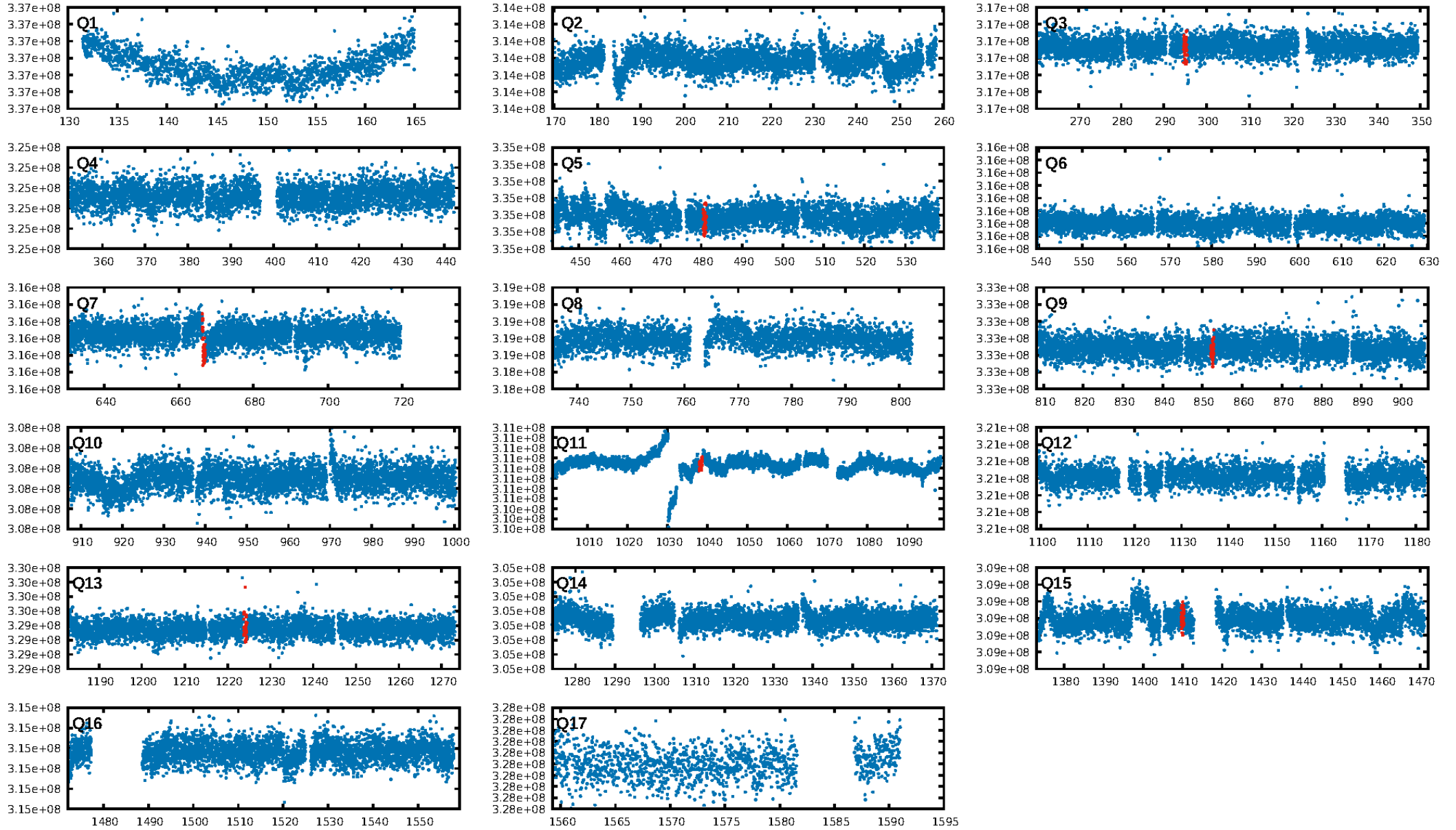
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.58e-12
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 5.273
Centroid-sig: 1.0%
Centroid-so: 2.927 arcsec [1.79 σ]
OotOffset-rm: 0.380 arcsec [0.42 σ]
KicOffset-rm: 0.702 arcsec [0.80 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [5/5]

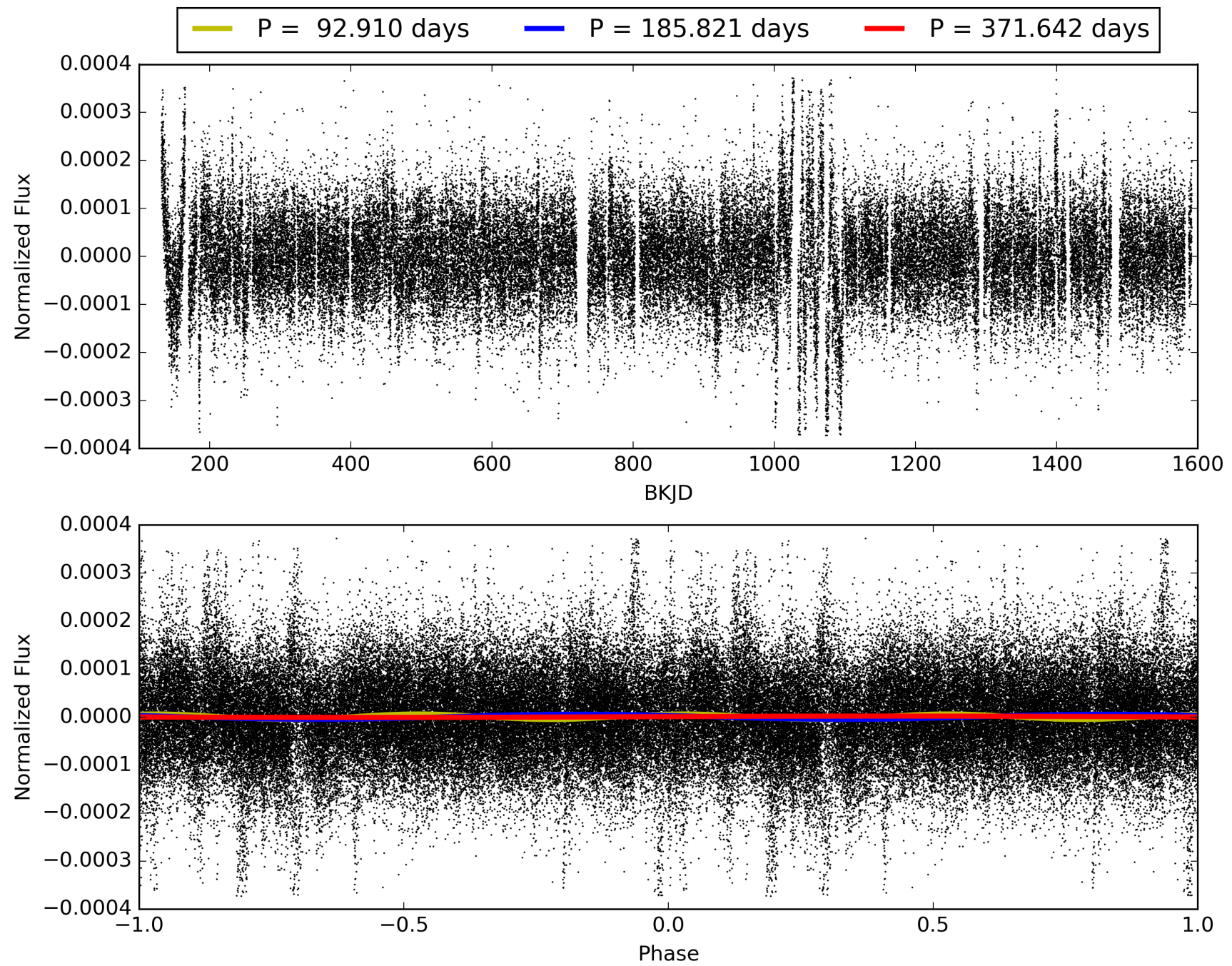
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:42:12 Z

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

TCE 007874976-01, PDC Light Curves

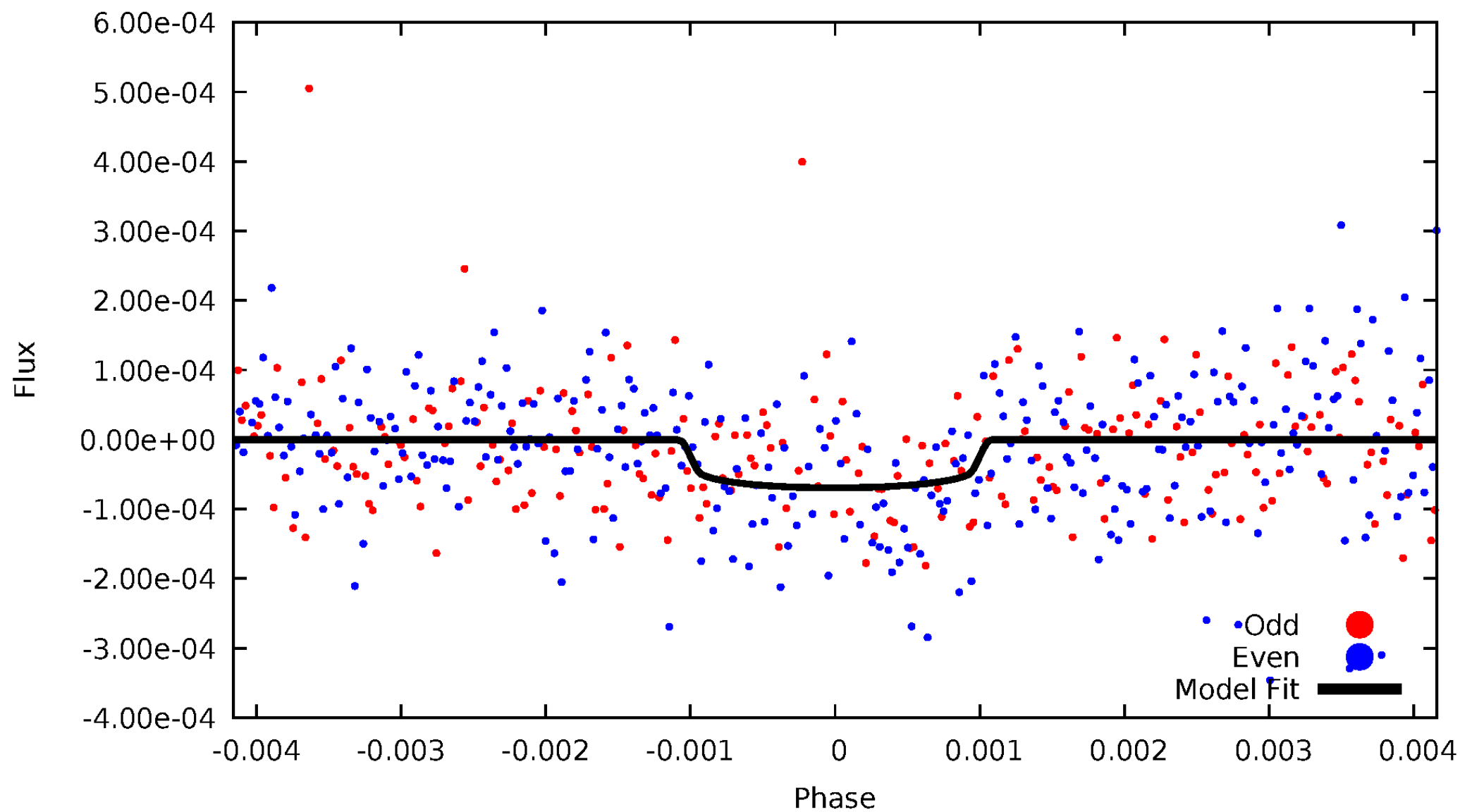


TCE 007874976-01



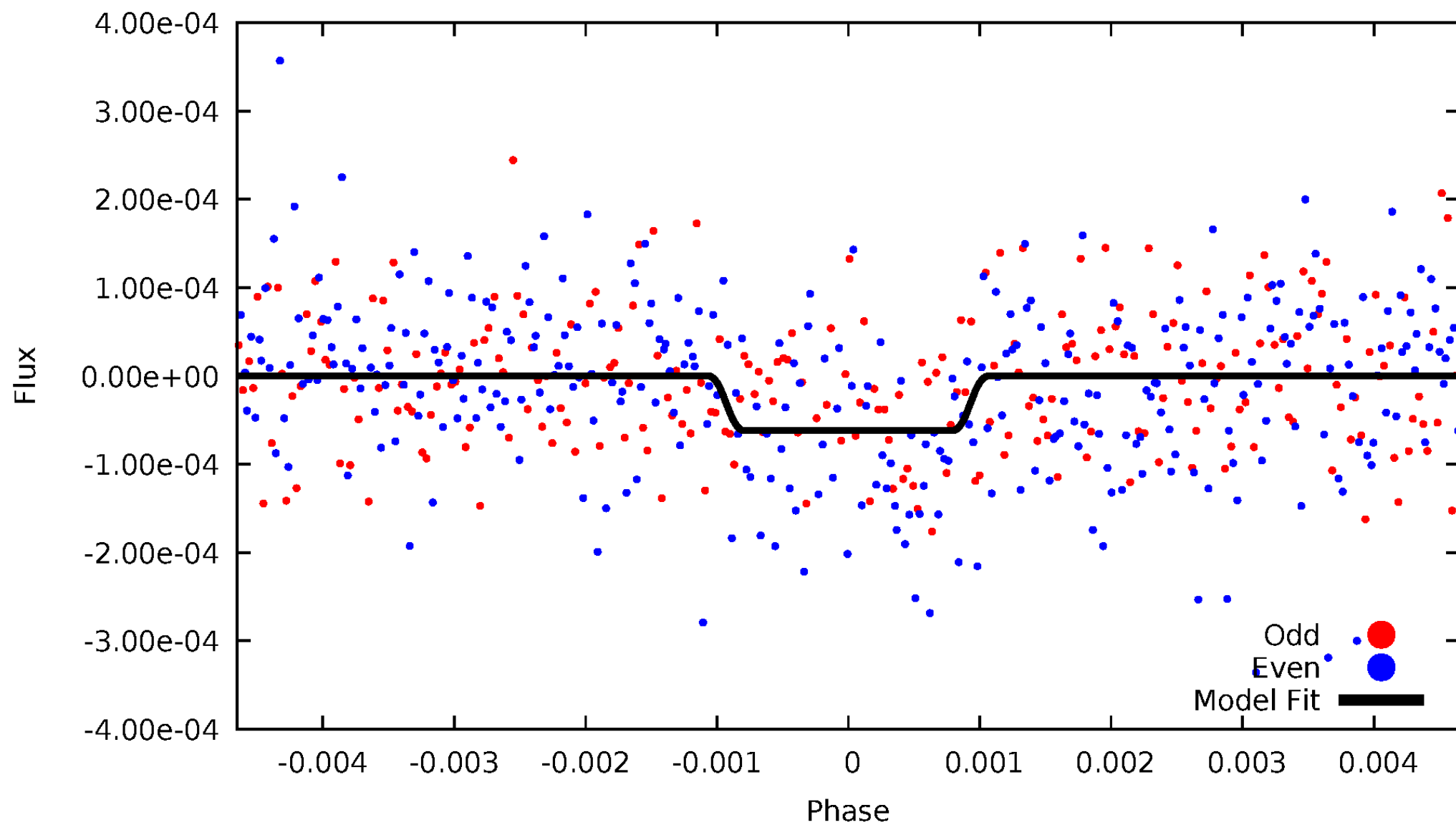
DV Odd/Even

TCE 007874976-01



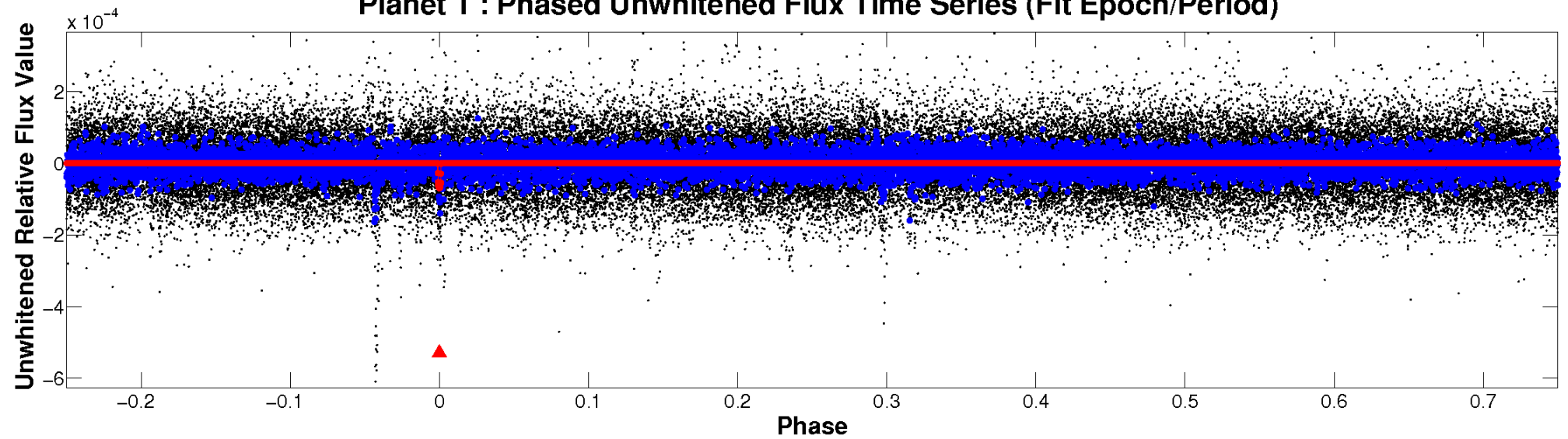
ALT Odd/Even

TCE 007874976-01

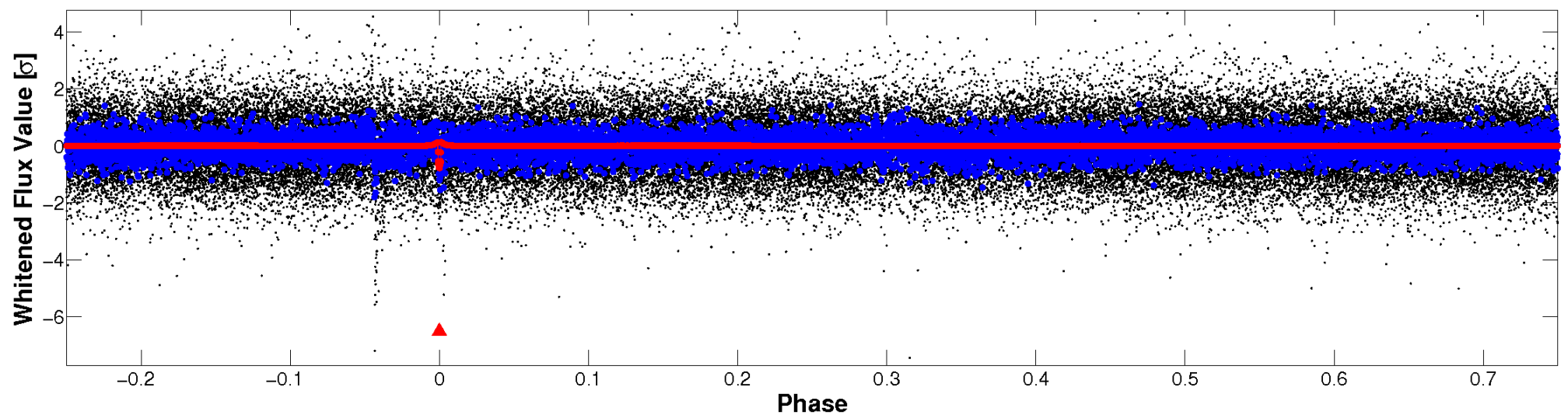


Non-Whitened Vs. Whitened Light Curve

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

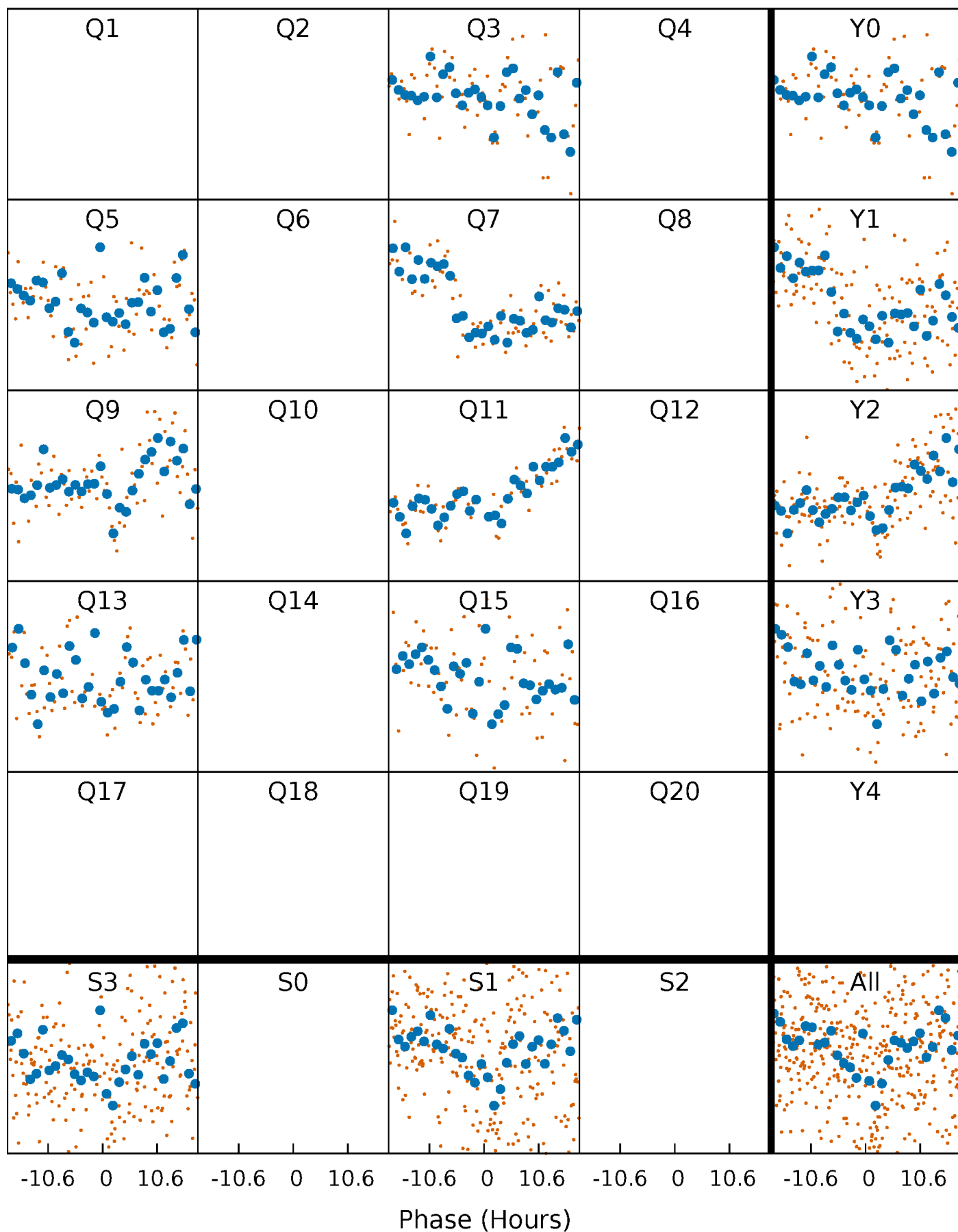


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



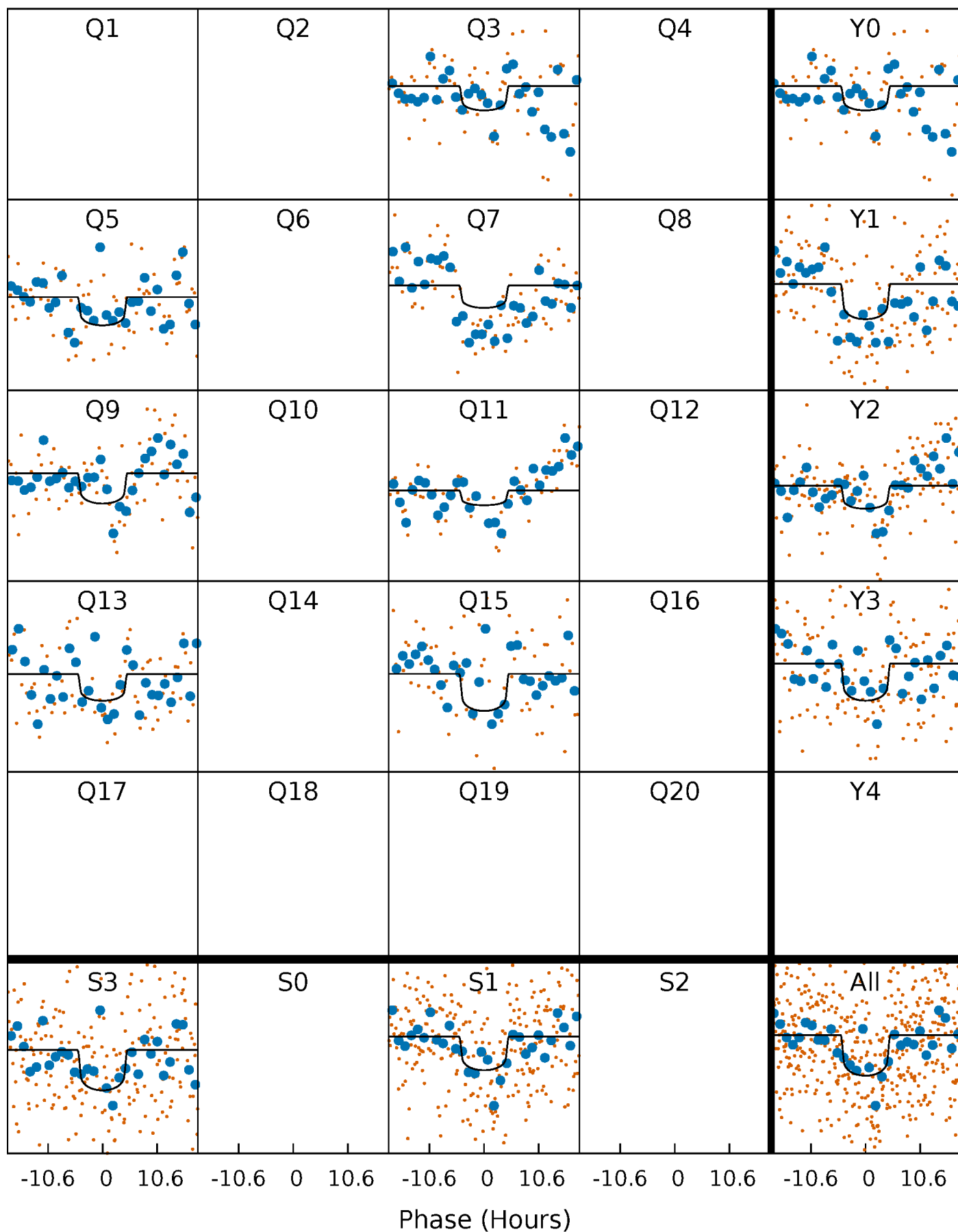
PDC Quarter-Phased Transit Curves

TCE 007874976-01 P=185.820773 Days $T_0=295.034755$ (BKJD)



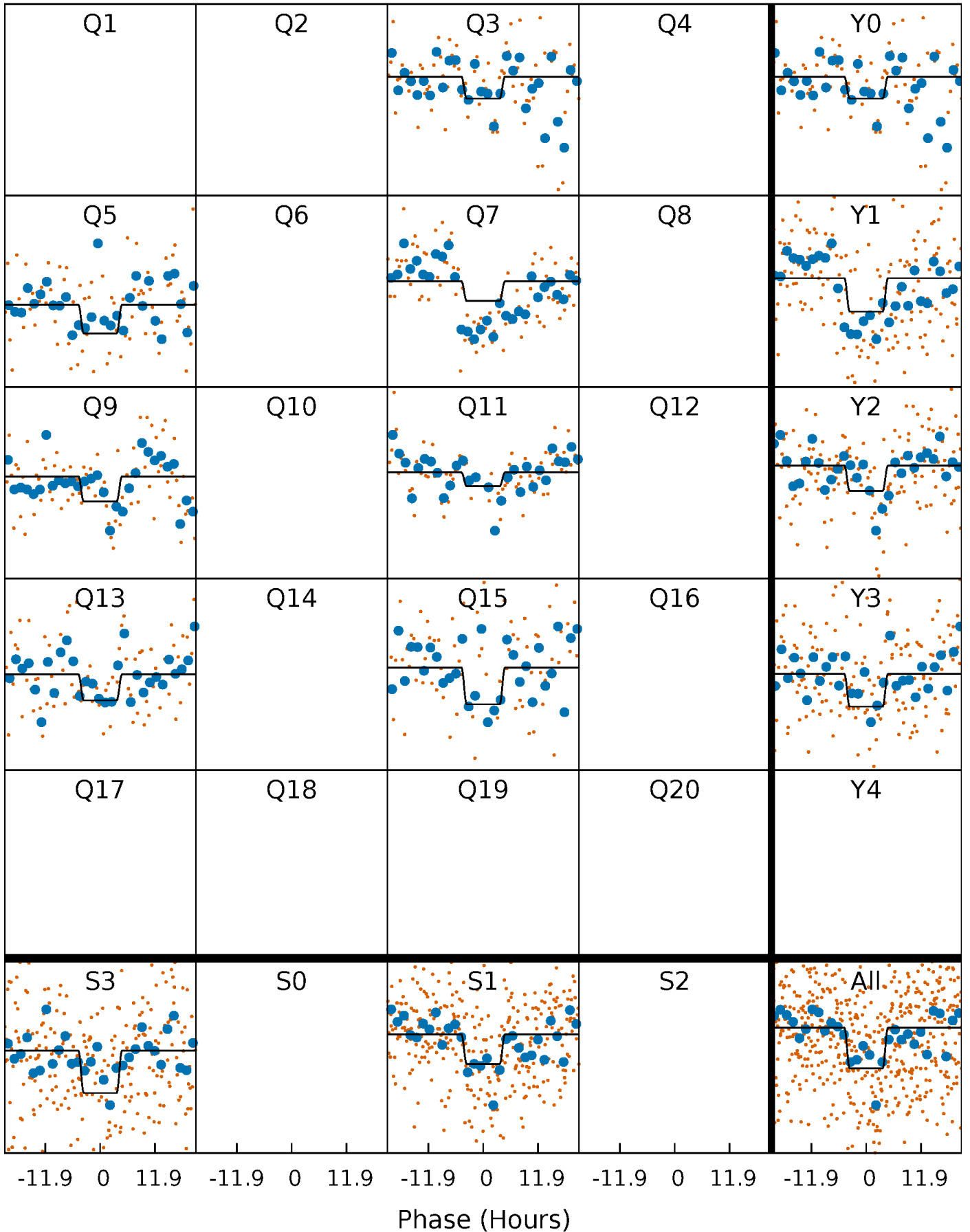
DV Quarter-Phased Transit Curves

TCE 007874976-01 P=185.820773 Days $T_0=295.034755$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

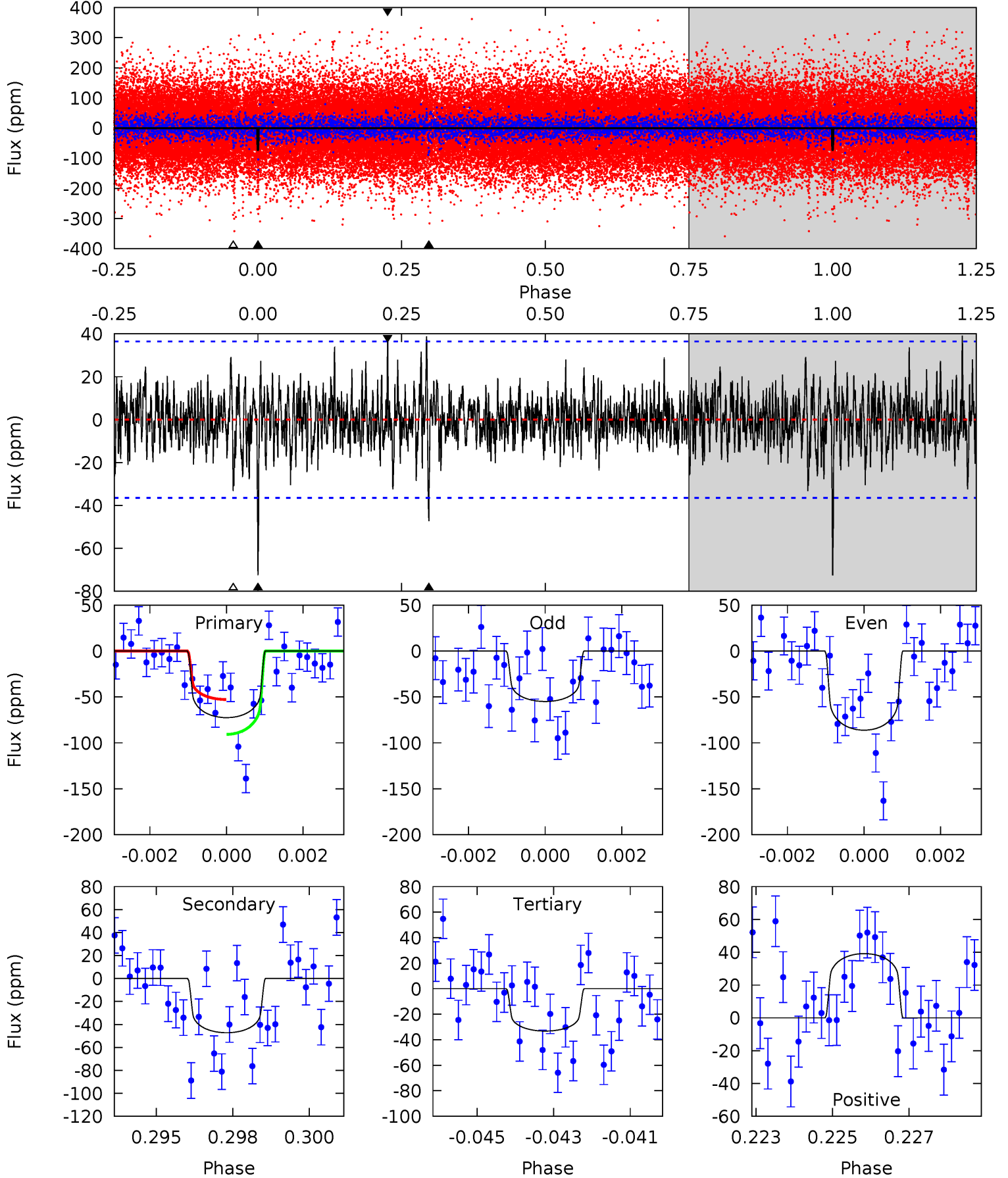
TCE 007874976-01 P=185.826121 Days $T_0=295.016822$ (BKJD)



DV Model-Shift Uniqueness Test

007874976-01, P = 185.820773 Days, E = 109.213982 Days

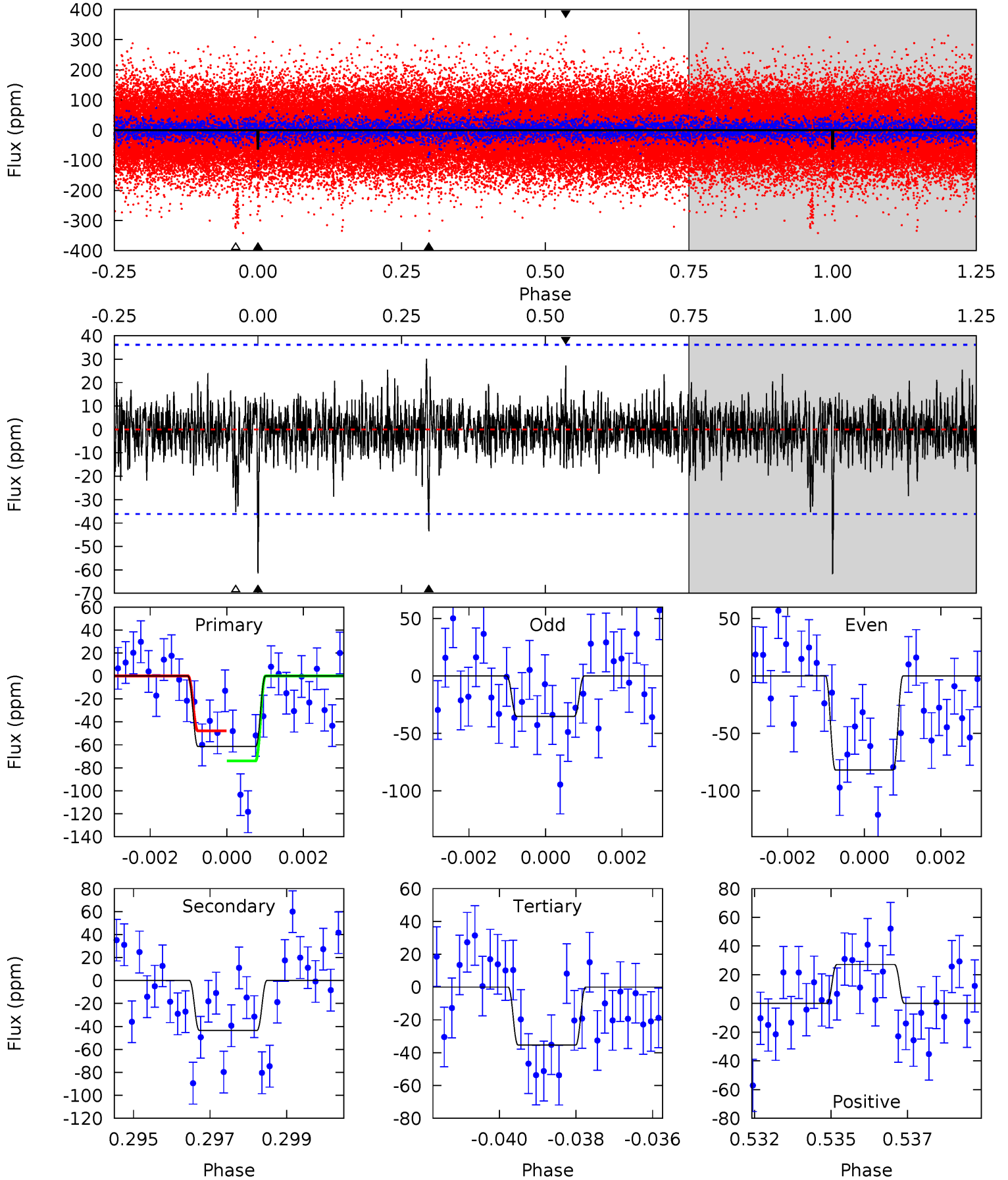
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	6.88	4.84	5.71	5.31	3.07	1.35	5.74	4.87	2.05	1.18	2.26	1.47	0.35	2.76



Alt Model-Shift Uniqueness Test

007874976-01, P = 185.826121 Days, E = 109.190701 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	6.40	5.20	3.99	5.32	3.08	1.06	3.85	5.05	1.20	2.41	3.42	1.50	0.33	1.92



Stellar Parameters For KIC 007874976

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6137^{+165}_{-184}	$4.286^{+0.160}_{-0.131}$	$-0.240^{+0.300}_{-0.300}$	$1.187^{+0.250}_{-0.205}$	$0.993^{+0.140}_{-0.115}$	$0.836^{+0.597}_{-0.351}$
	+3%/-3%	+4%/-3%	+125%/-125%	+21%/-17%	+14%/-12%	+71%/-42%
Source	PHO1	FLK73	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 007874976-01 / KOI 8146.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 7	$1.11^{+0.52}_{-0.46}$	516^{+32}_{-30}	5494^{+1661}_{-832}	8639^{+15477}_{-4843}
Alt.	-44 ± 7	$1.02^{+0.46}_{-0.47}$	515^{+28}_{-29}	5629^{+2036}_{-863}	9356^{+21411}_{-5191}

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

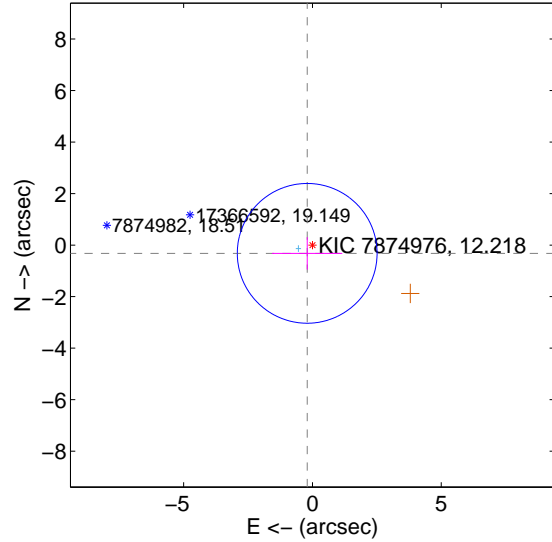
Supplemental centroid analysis for 007874976-01. Kepler magnitude: 12.22. Transit SNR 7.28

There are 1 quarters with good PRF difference image offsets

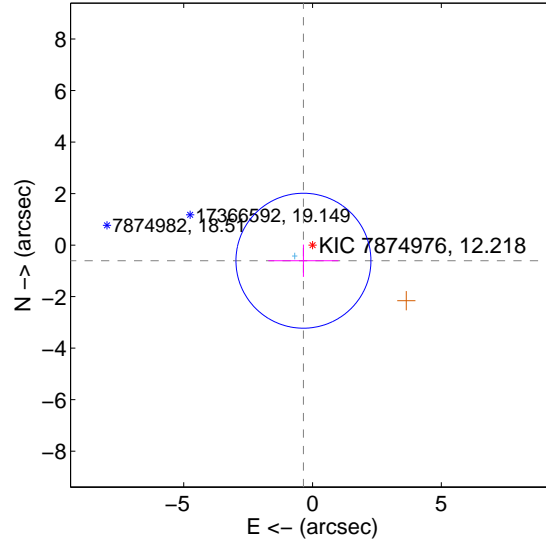
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 ± 0.904	0.42	0.204 ± 1.364	-0.320 ± 0.629
PRF-fit source offset from KIC position	0.702 ± 0.873	0.80	0.353 ± 1.362	-0.607 ± 0.627
photometric centroid source offset	2.93 ± 1.63	1.79	-1.75 ± 1.60	-2.35 ± 1.65

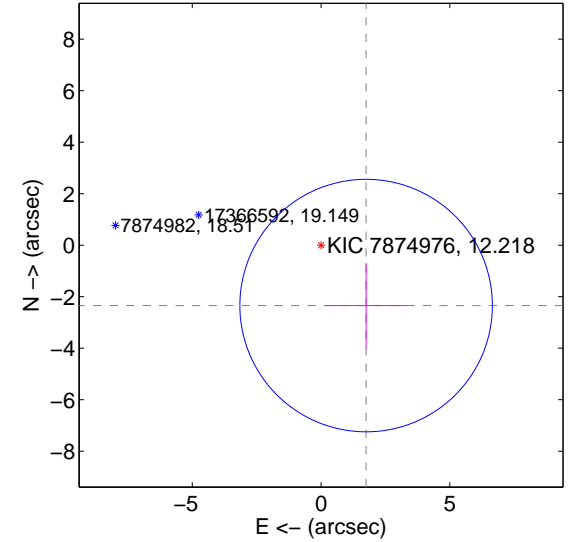
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

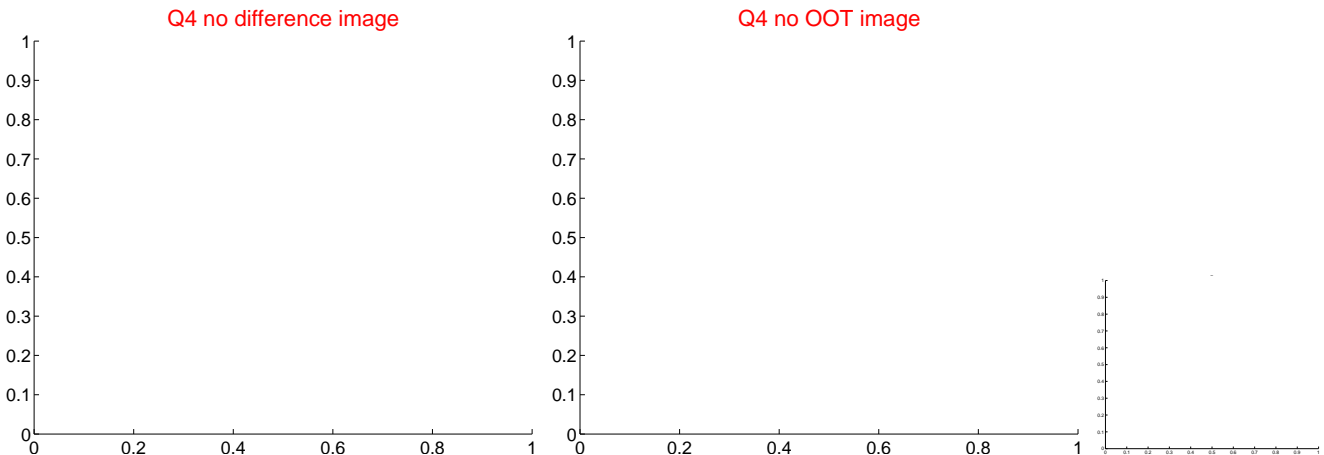
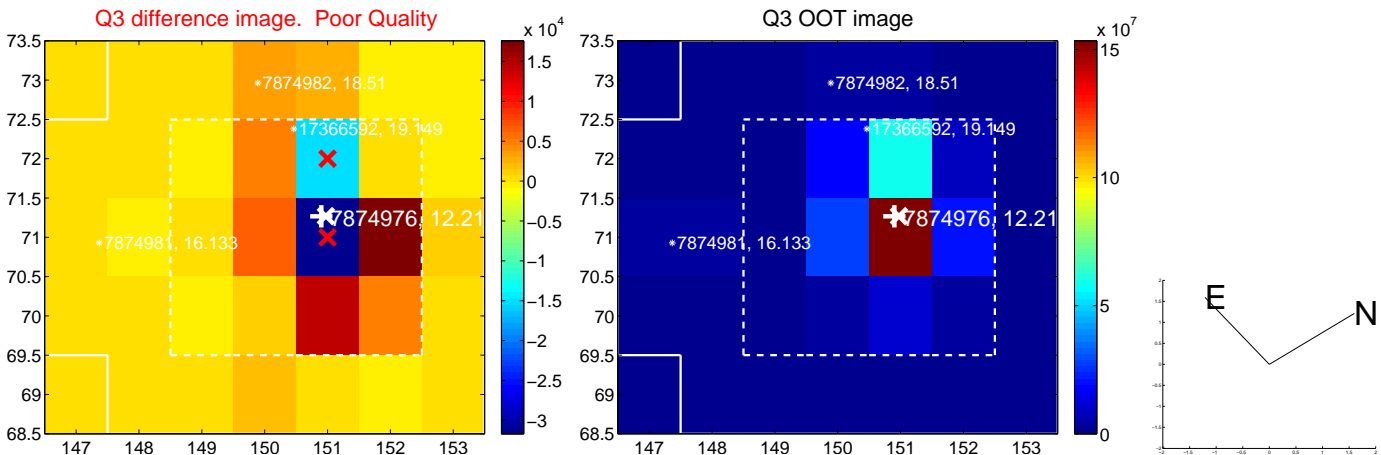
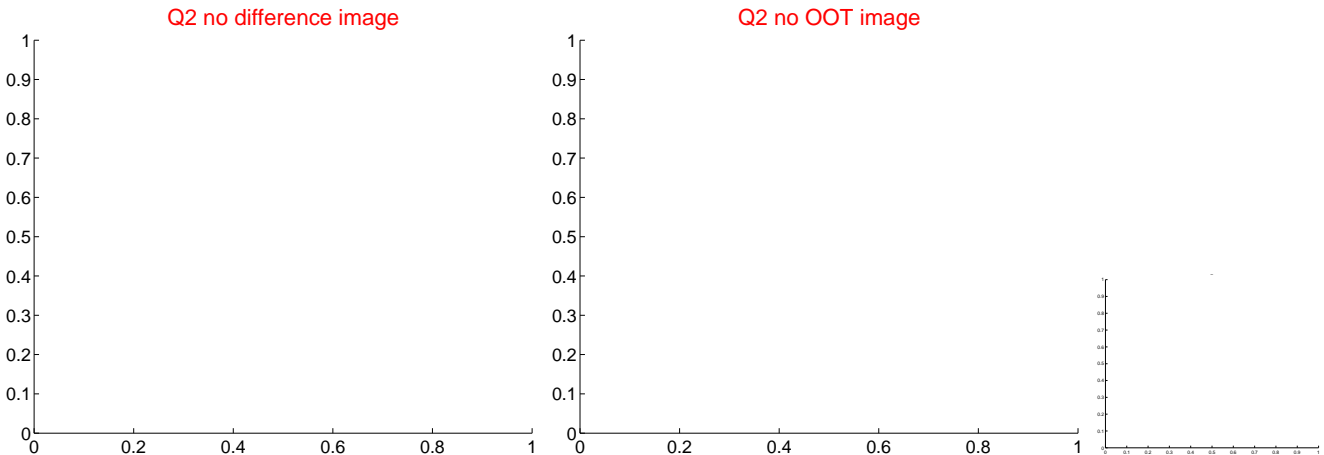
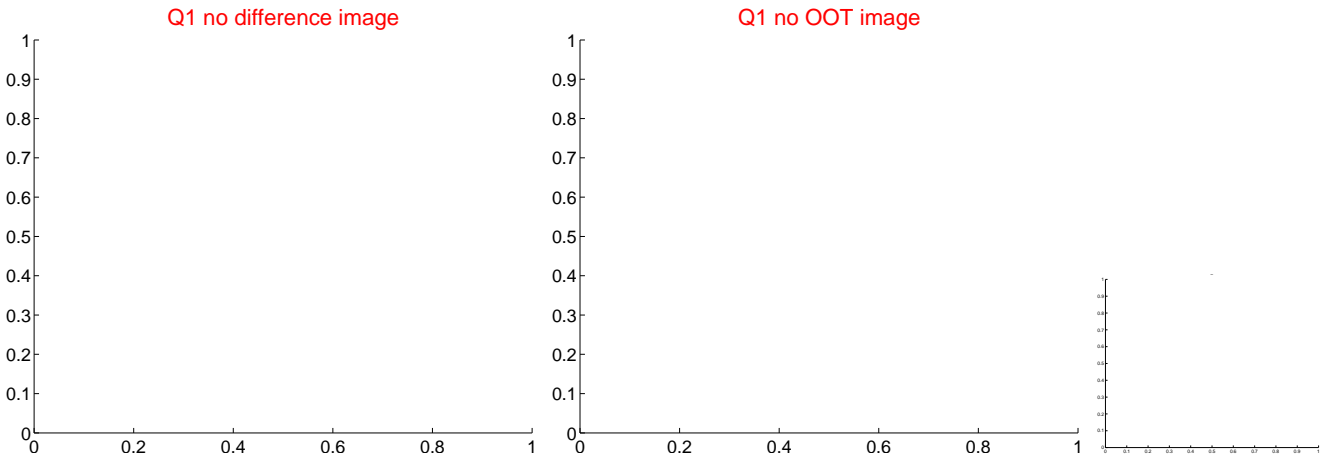


offset from photometric centroids

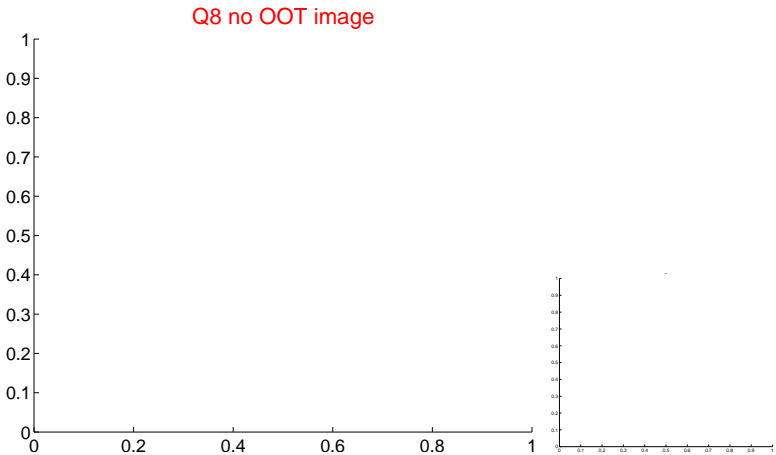
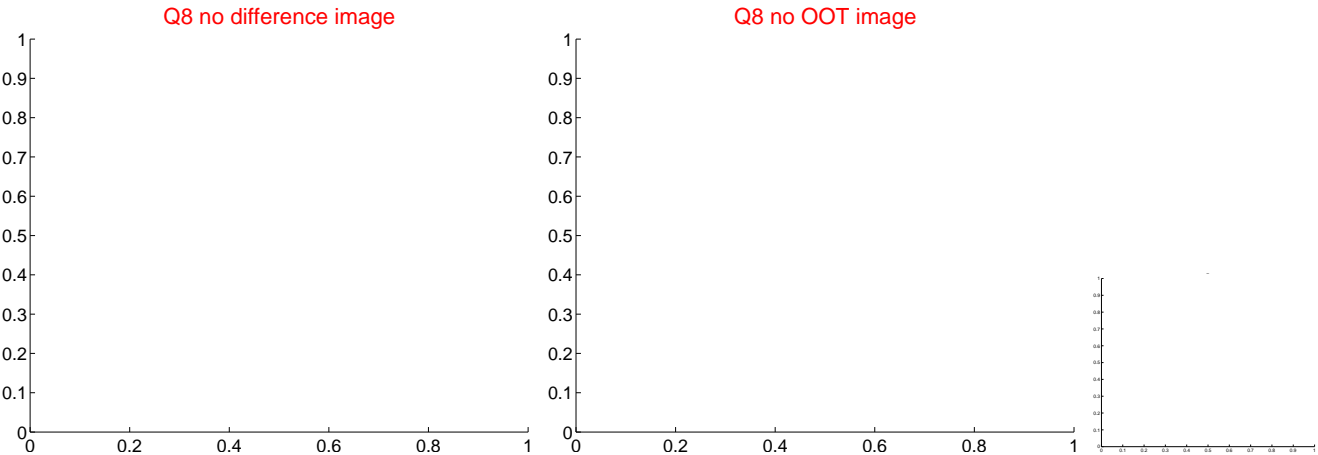
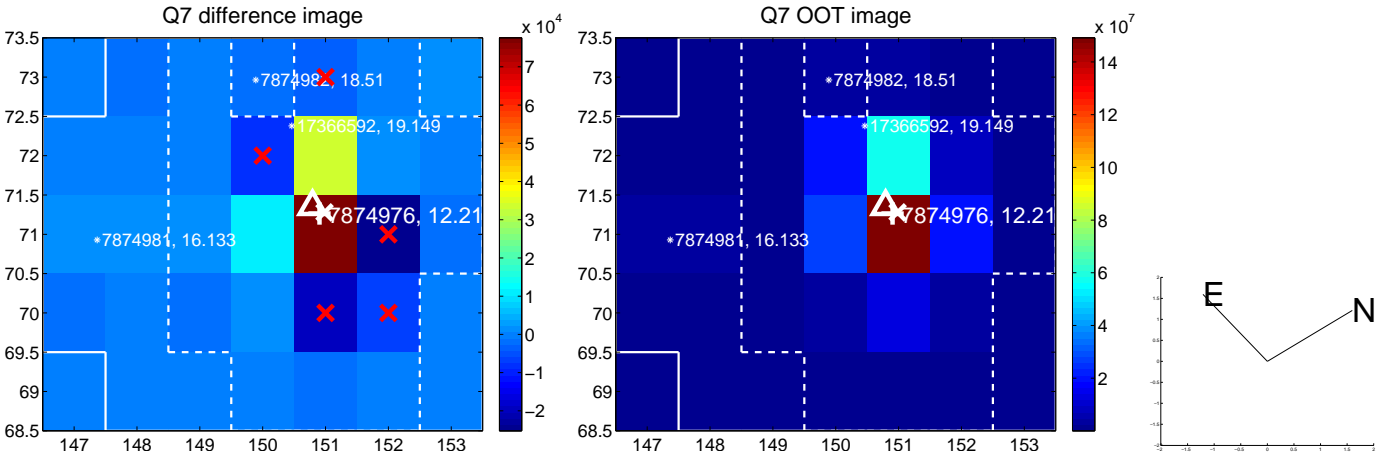
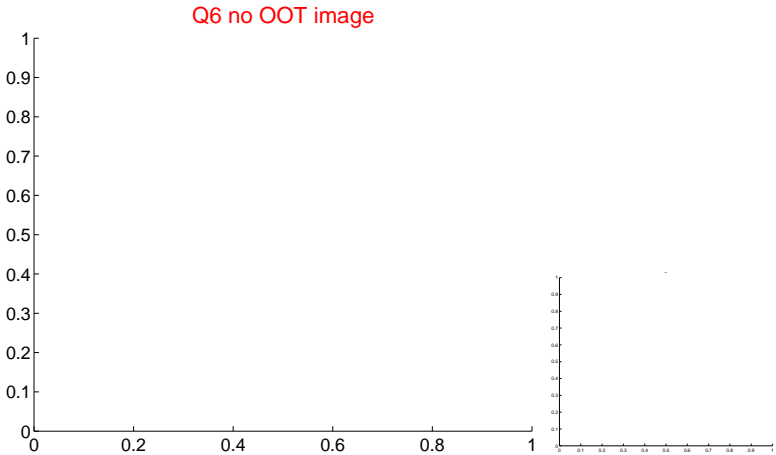
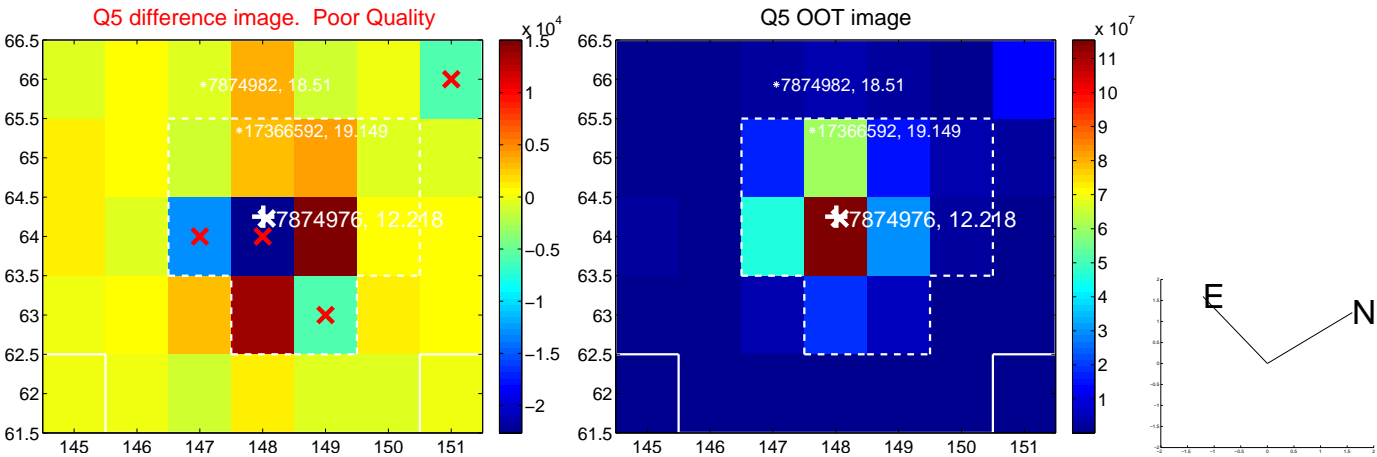


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

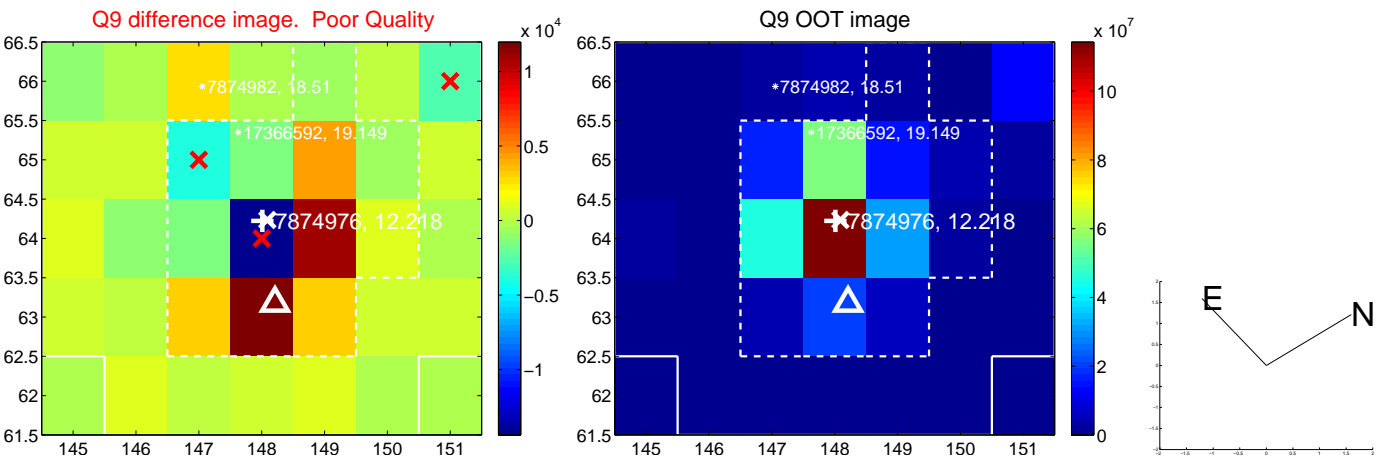
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



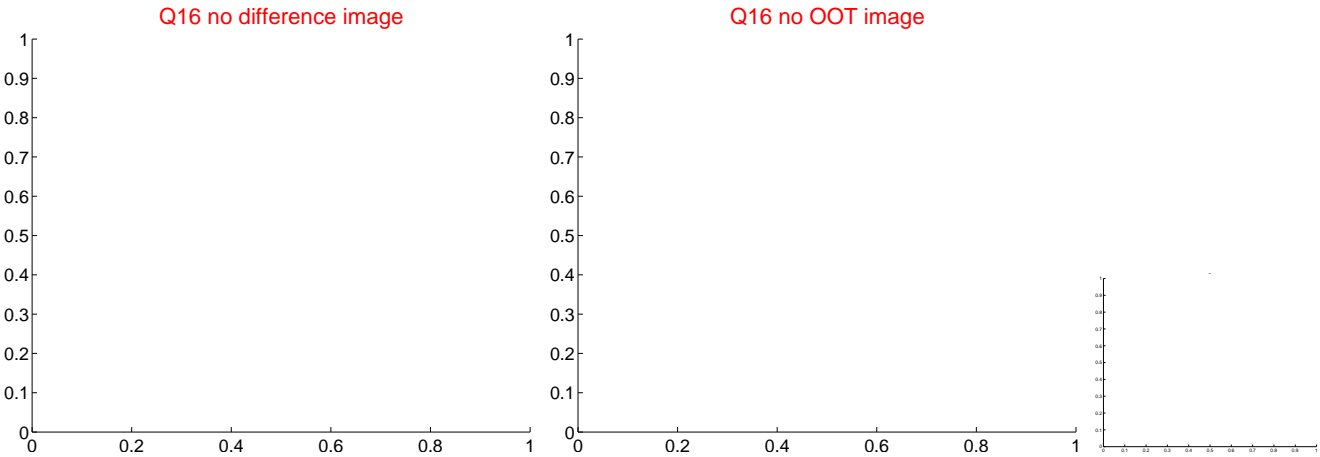
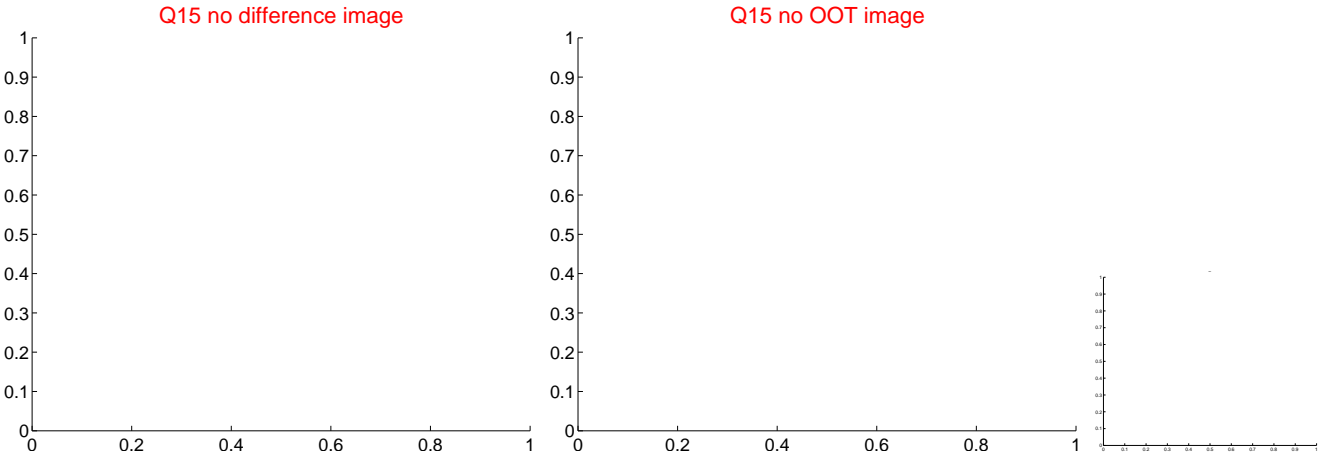
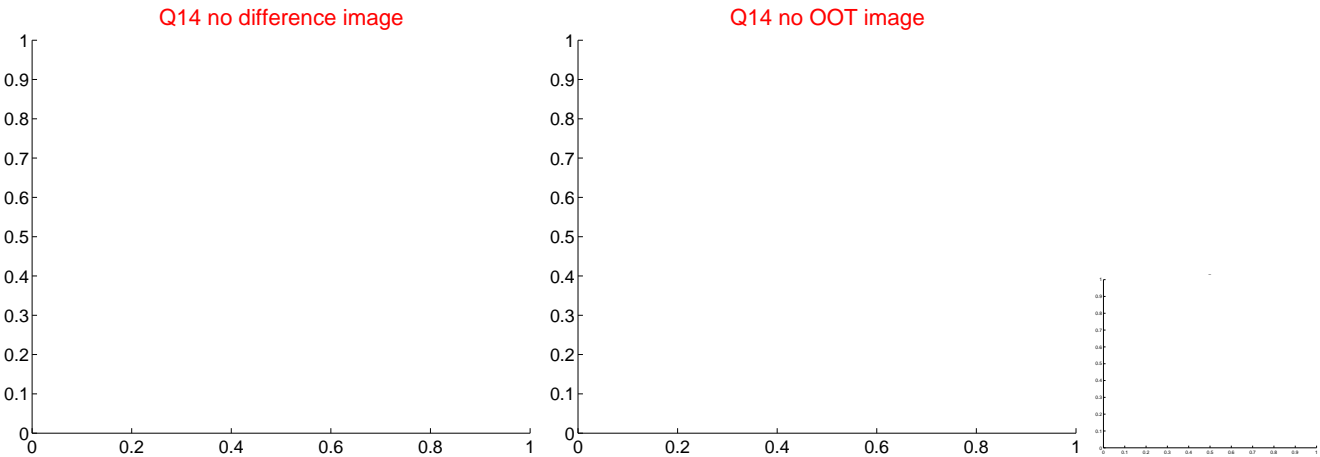
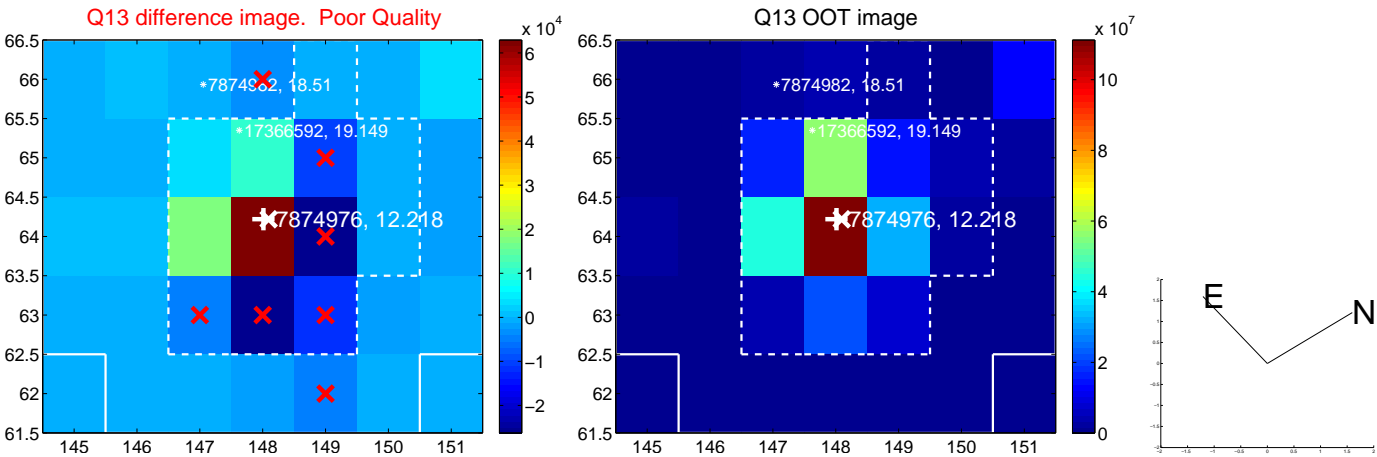
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



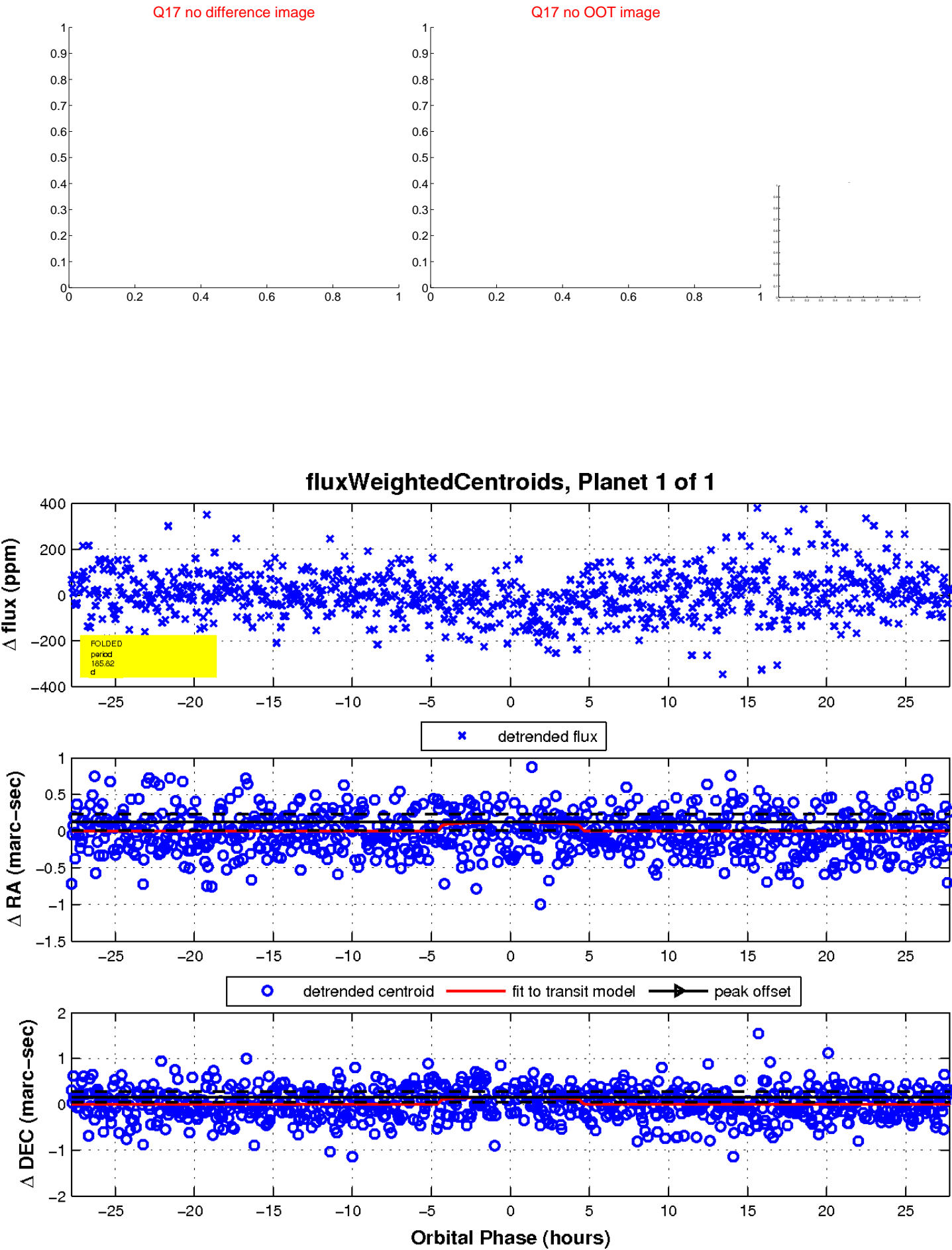
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

