

KIC 008885047

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})
008885047-01	OBS	No	419.006011	512.181313	132.9	12.266	8.4	7.6	1.20	6210	1.57	1.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008885047-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

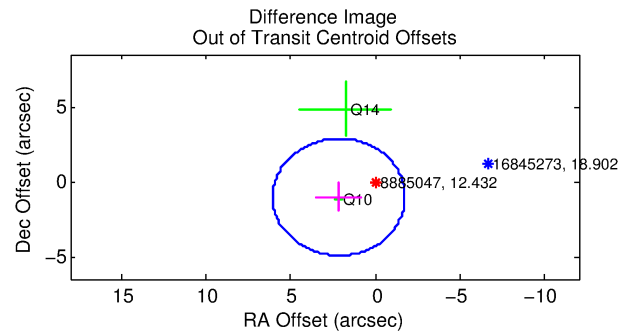
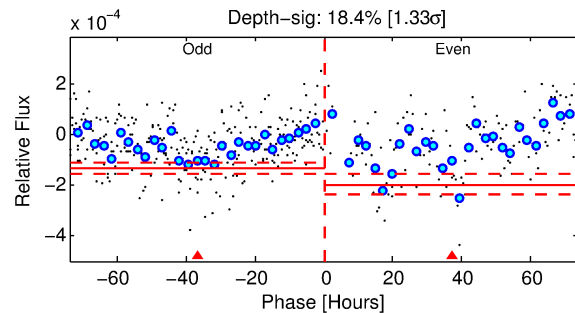
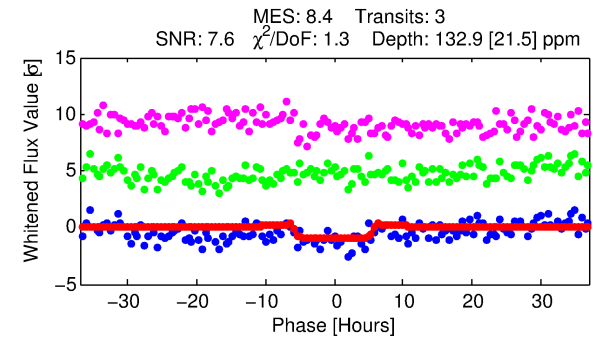
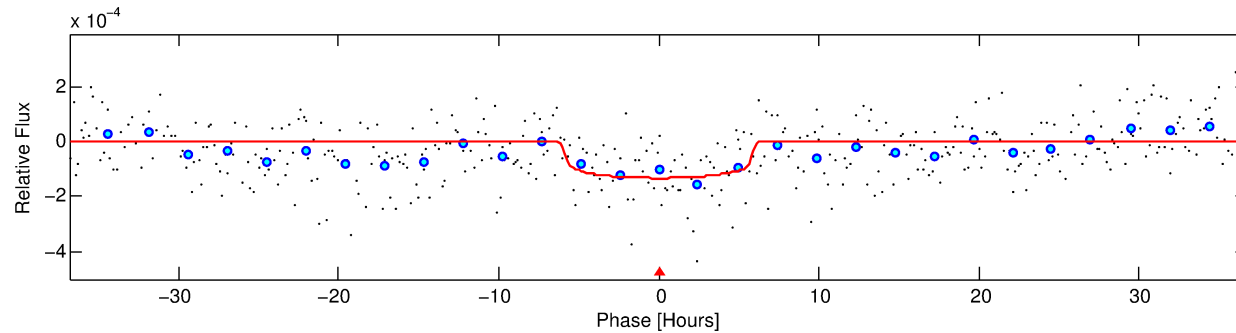
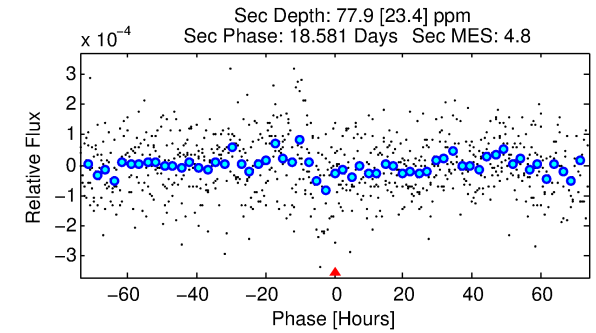
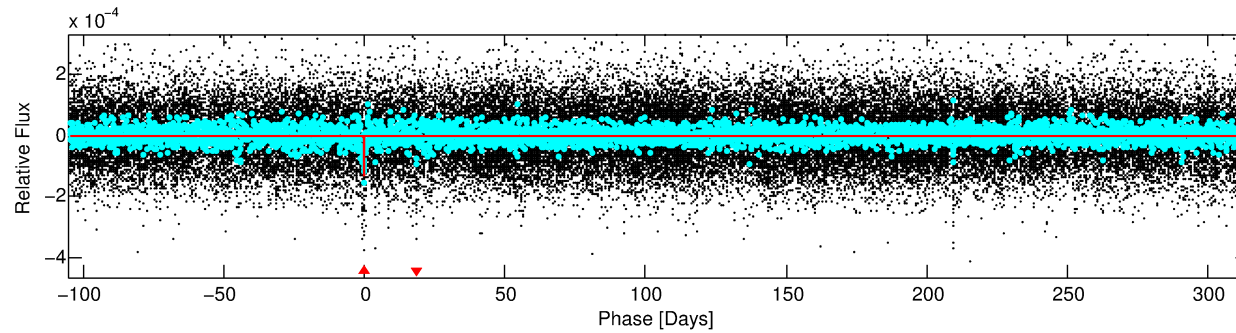
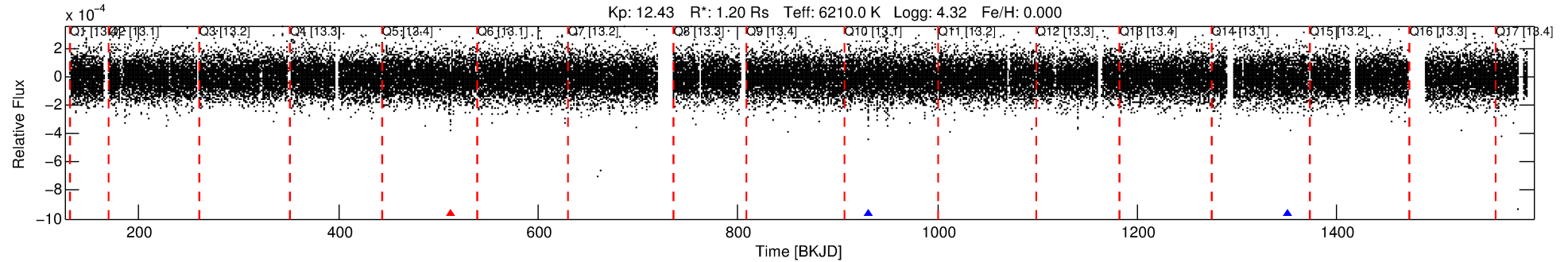
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008885047-01

No Significant Match Found

DV One-Page Summary

KIC: 8885047 Candidate: 1 of 1 Period: 419.006 d



DV Fit Results:

Period = 419.00601 [0.01404] d
Epoch = 512.1813 [0.0204] BKJD
Rp/R* = 0.0121 [0.0034]
a/R* = 139.42 [195.19]
b = 0.86 [0.43]
Seff = 1.49 [0.45]
Teq = 282 [21] K
Rp = 1.57 [0.57] Re
a = 1.1315 [0.2109] AU
Ag = 22166.92 [15501.38] [1.43σ]
Teffp = 5314 [873] K [5.76σ]

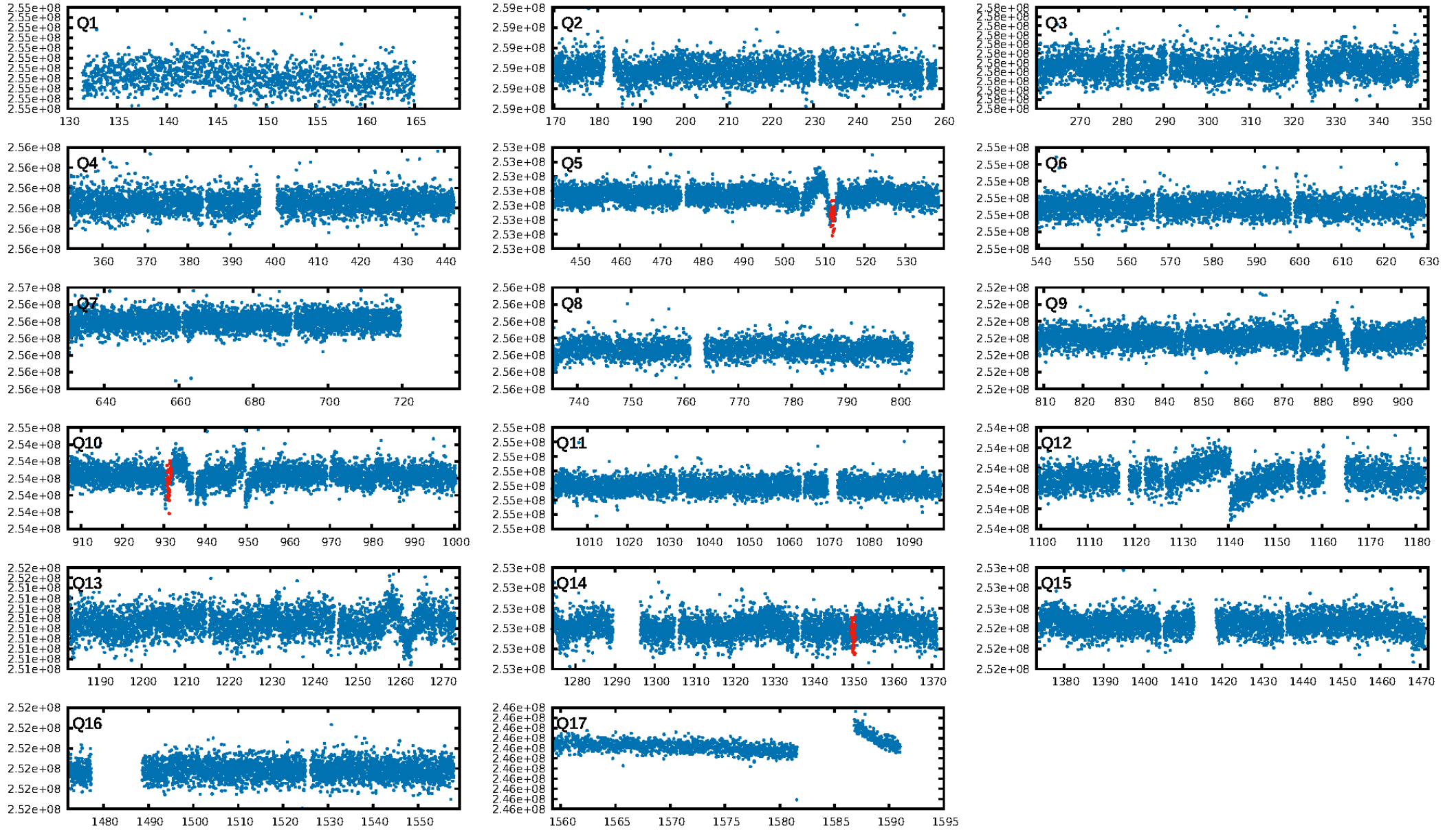
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.3%
ModelChiSquareGof-sig: 95.7%
Bootstrap-pfa: 1.67e-13
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -0.8038
Centroid-sig: 24.8%
Centroid-so: 1.928 arcsec [1.00σ]
OotOffset-rm: 2.396 arcsec [1.84σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 2.260 arcsec [1.75σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

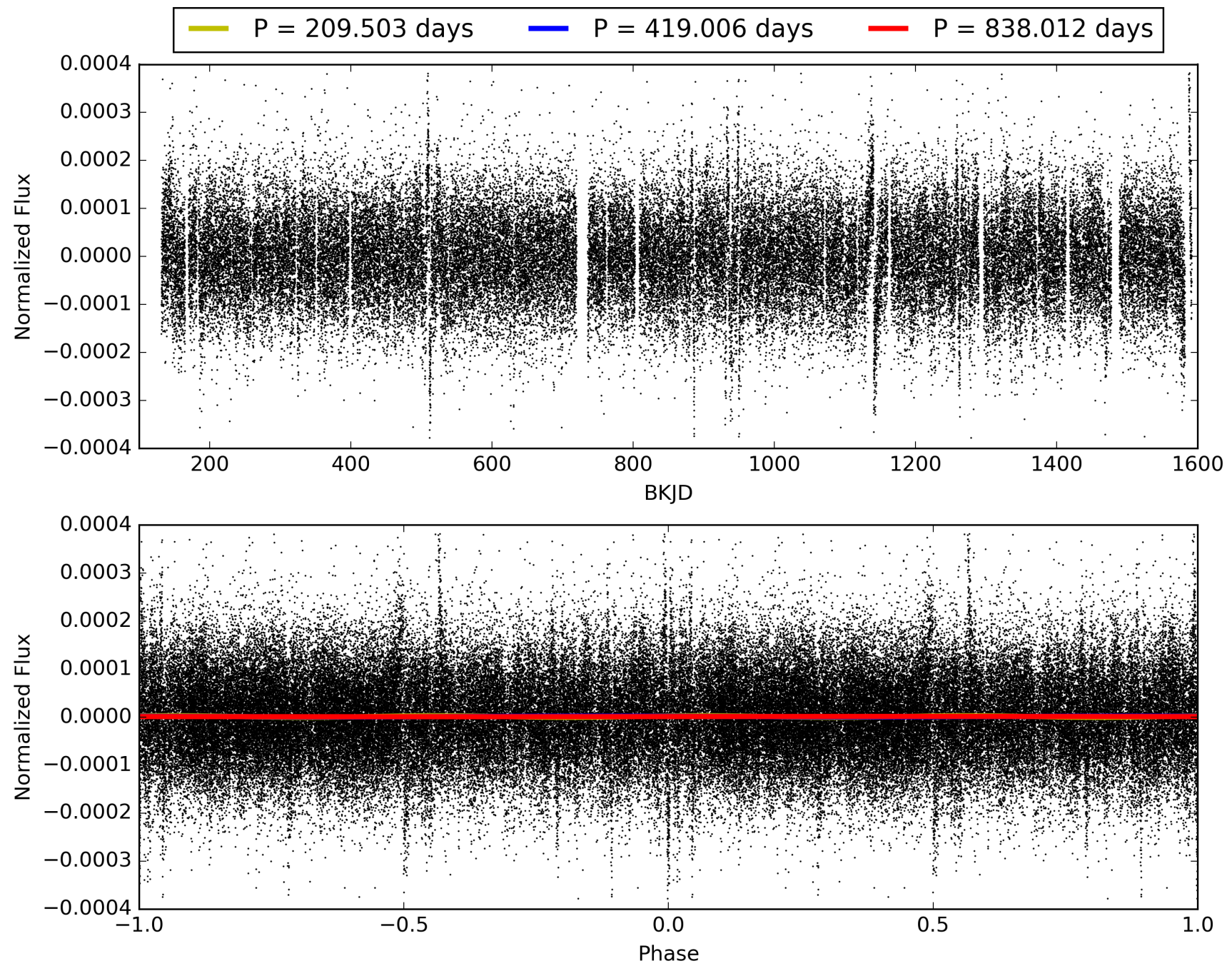
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:19:39 Z

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

TCE 008885047-01, PDC Light Curves

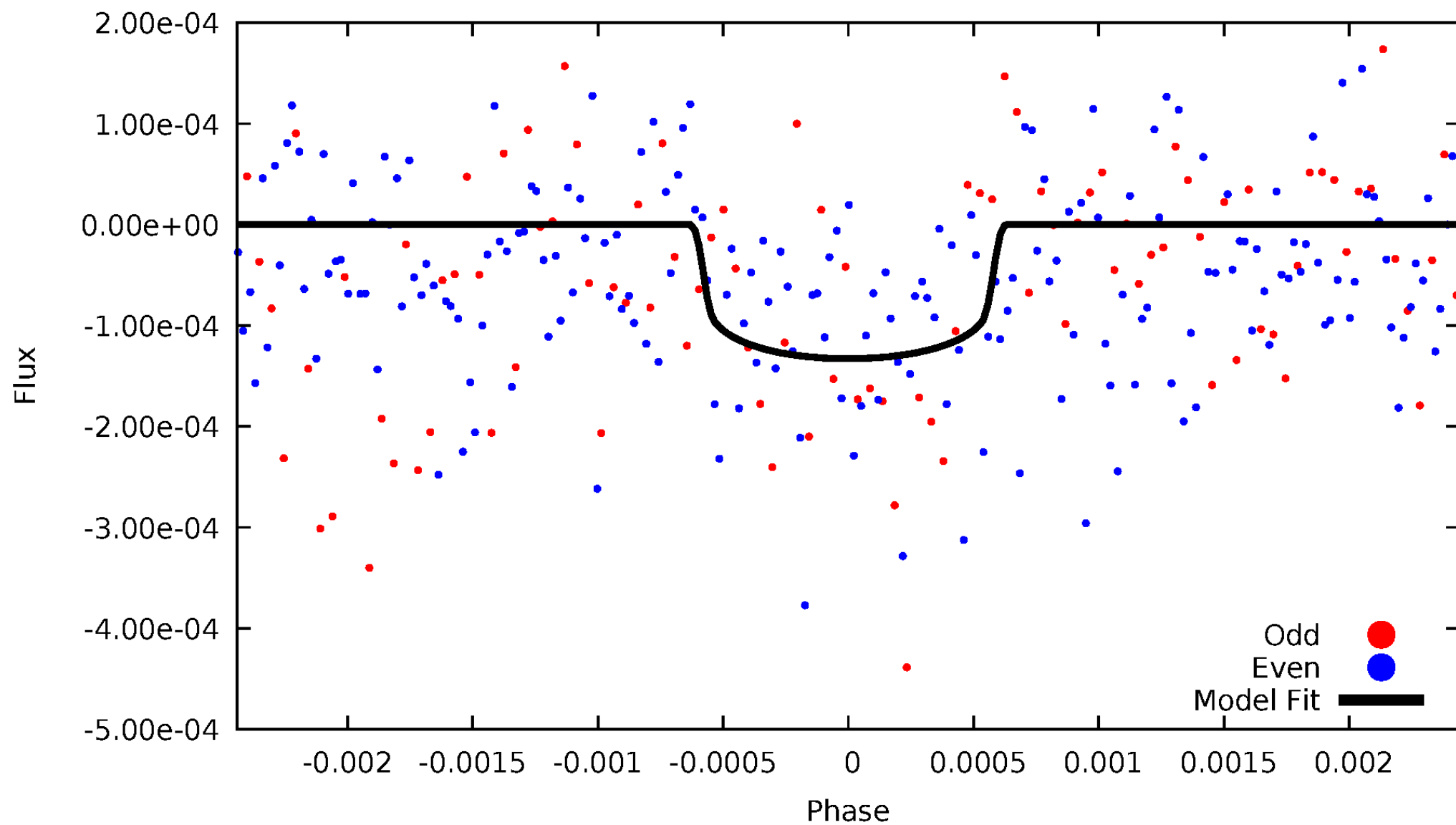


TCE 008885047-01



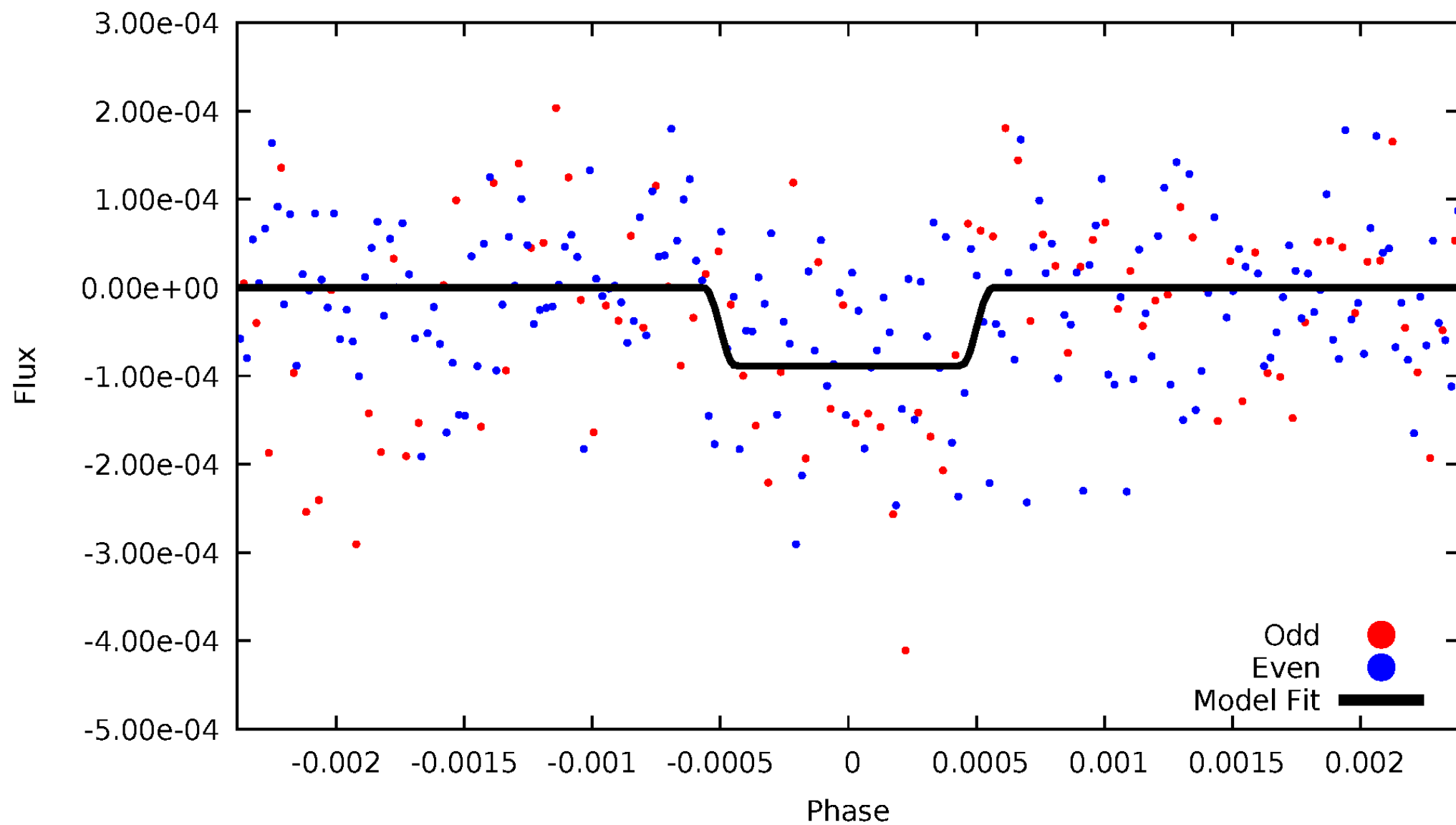
DV Odd/Even

TCE 008885047-01



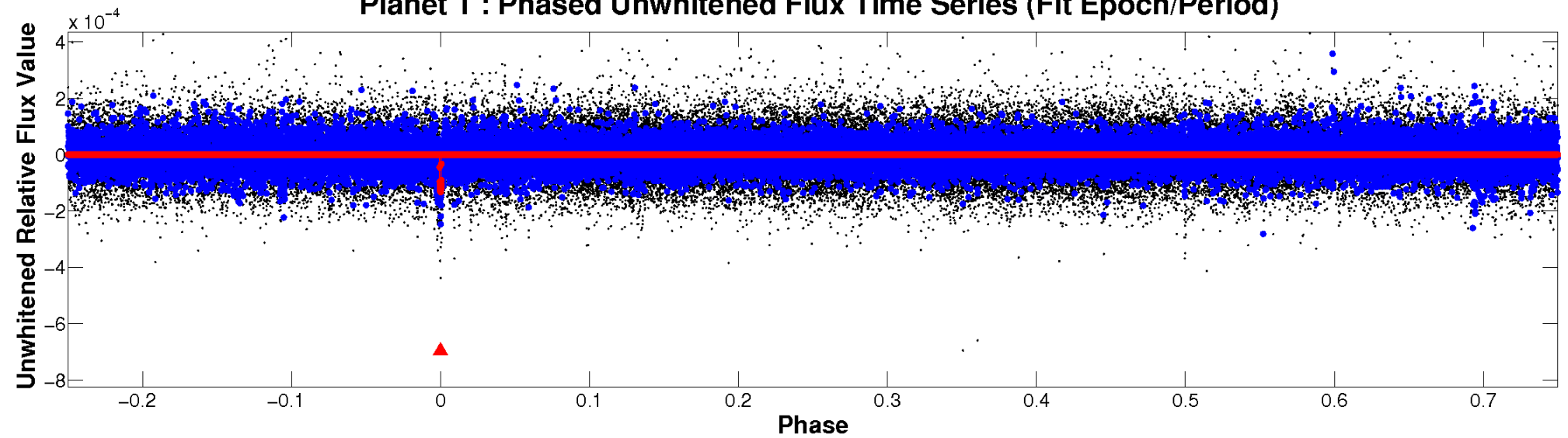
ALT Odd/Even

TCE 008885047-01

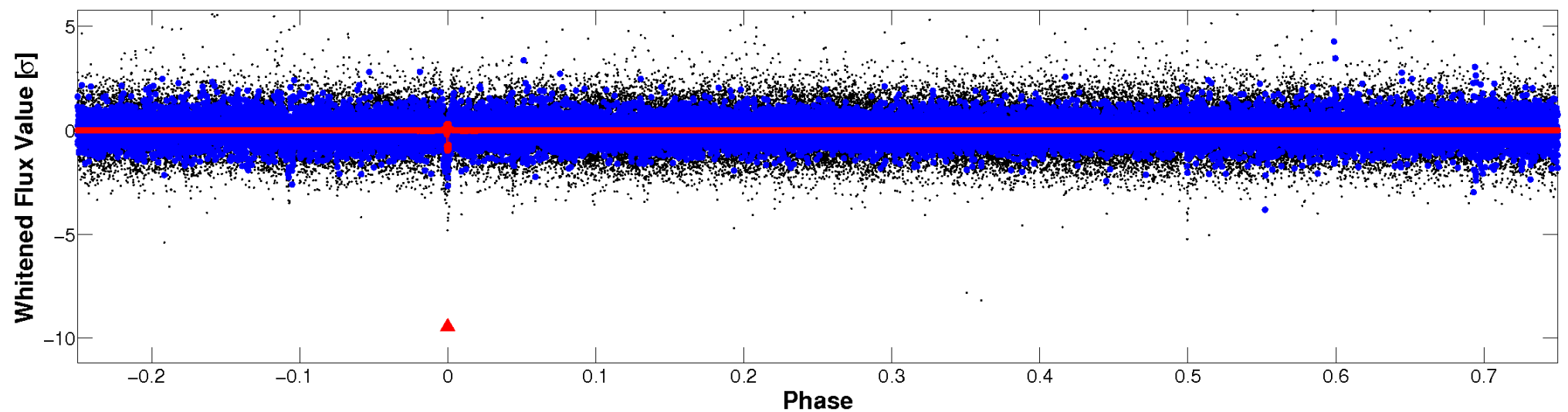


Non-Whitened Vs. Whitened Light Curve

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

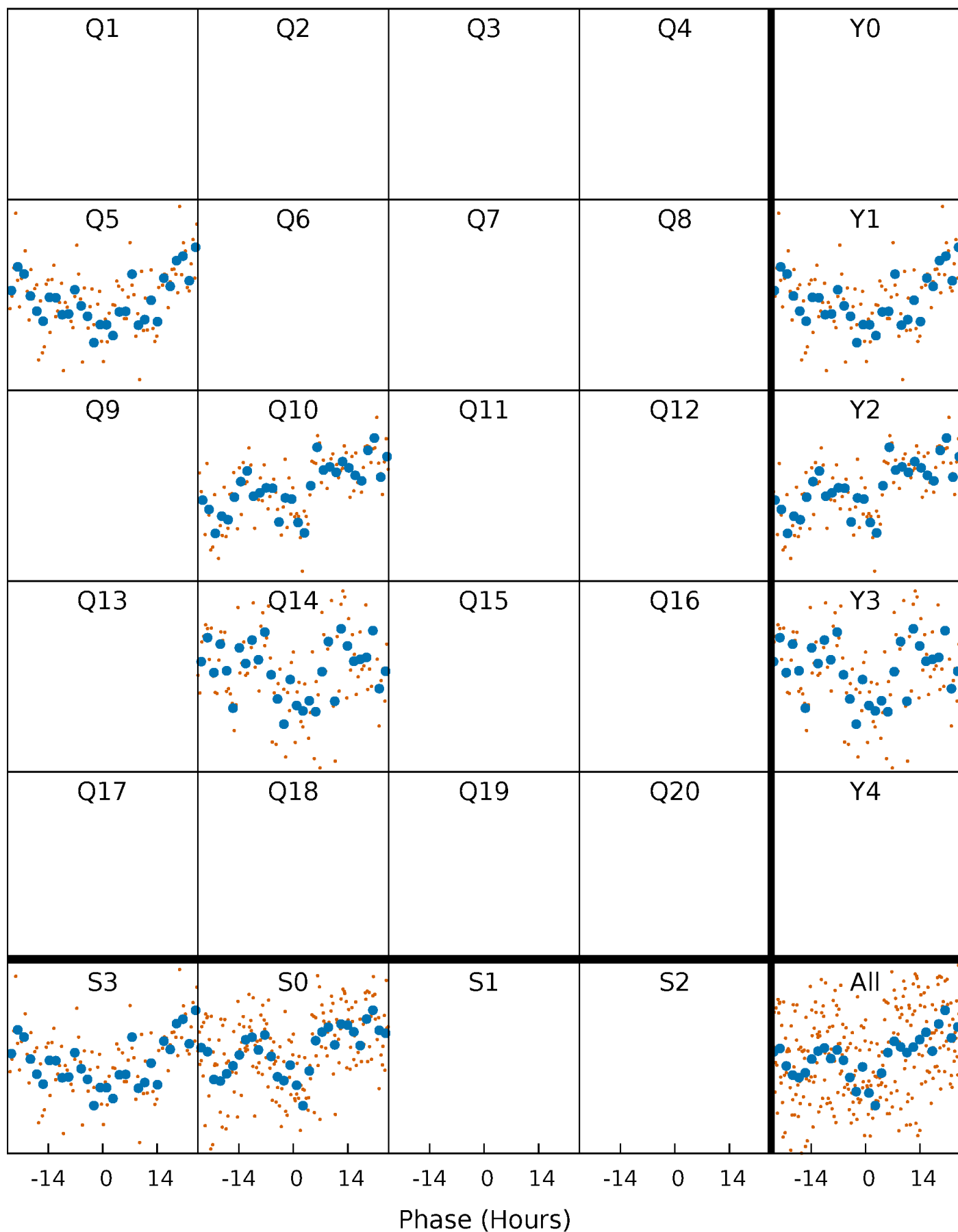


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



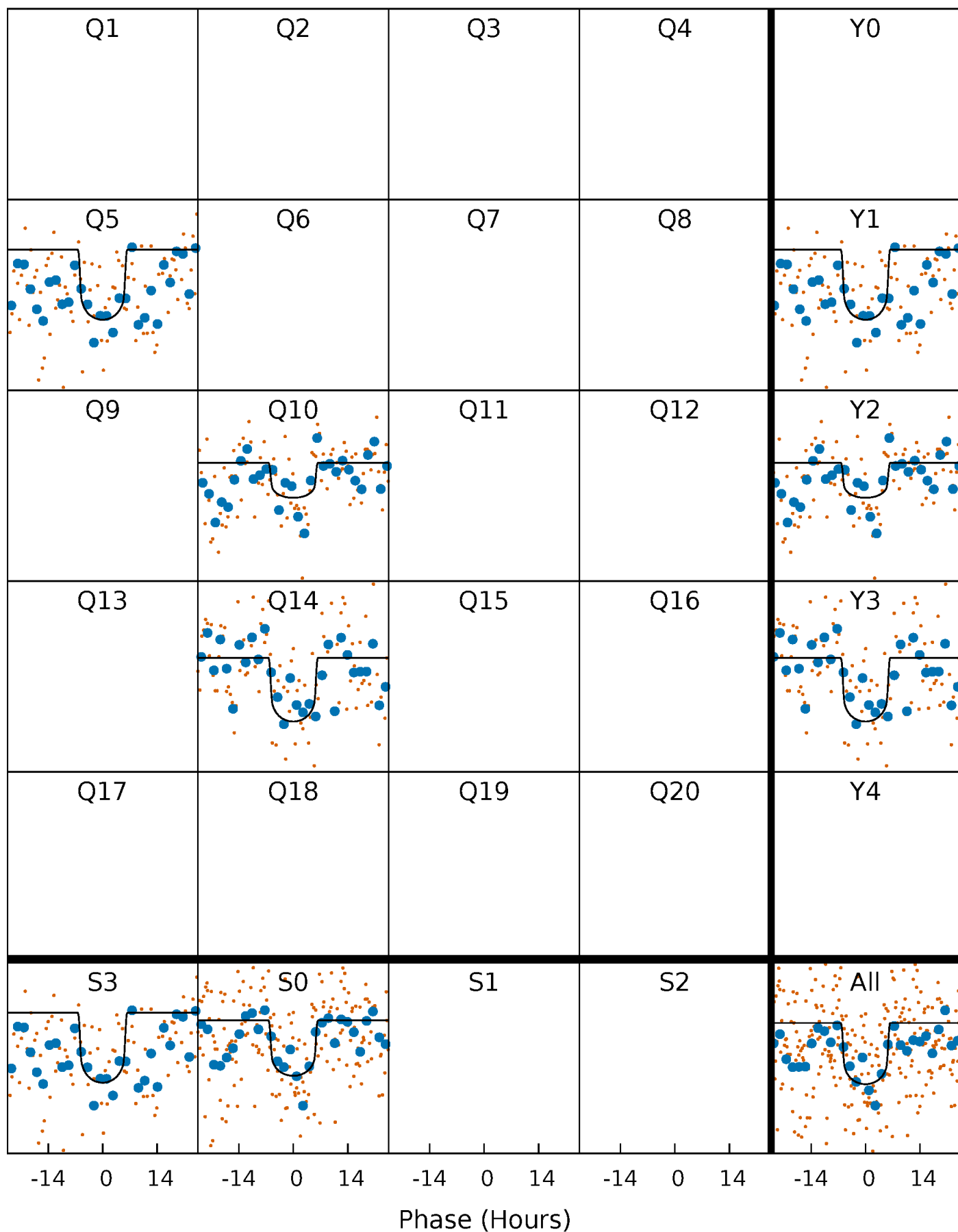
PDC Quarter-Phased Transit Curves

TCE 008885047-01 P=419.006011 Days $T_0=512.181313$ (BKJD)



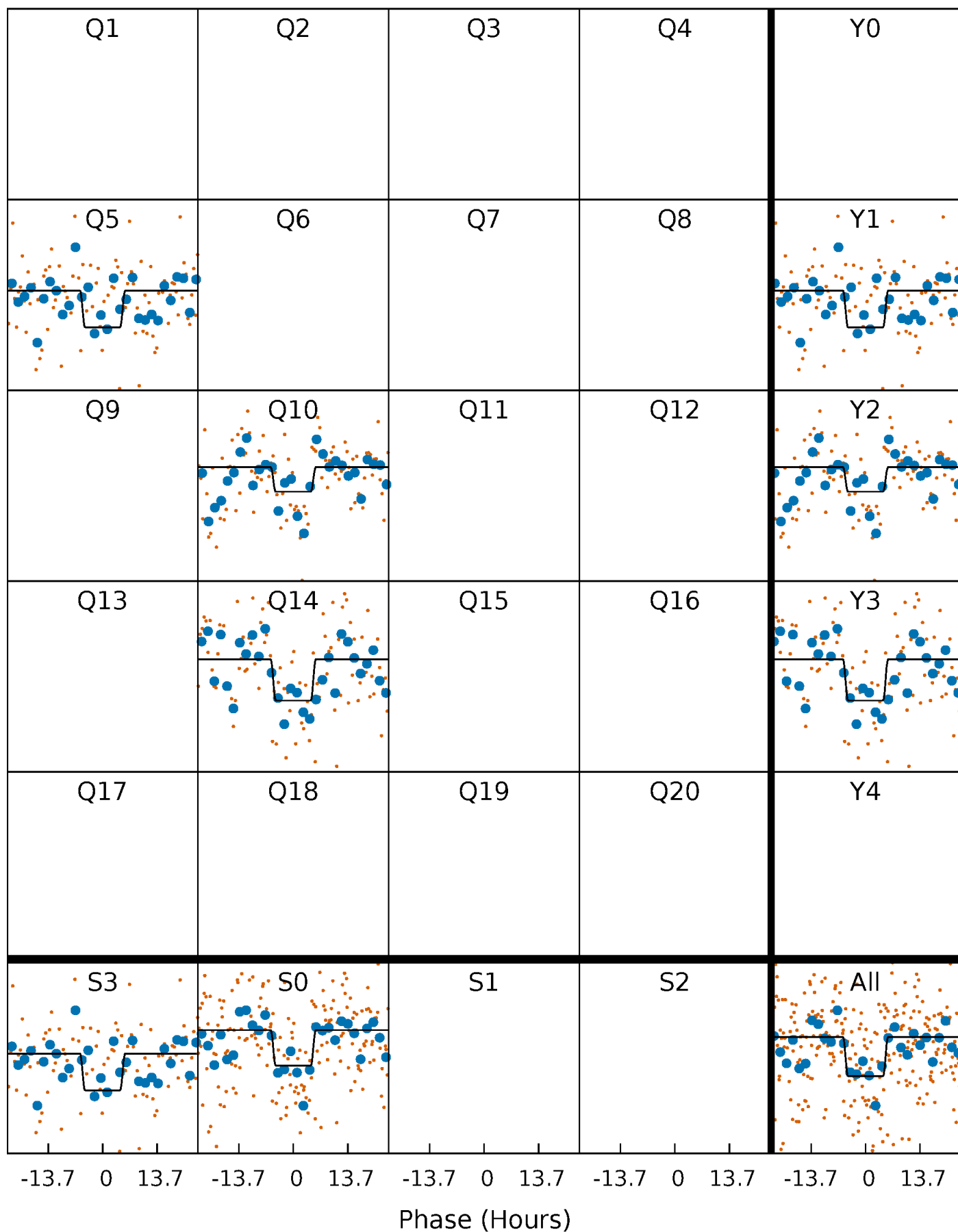
DV Quarter-Phased Transit Curves

TCE 008885047-01 P=419.006011 Days $T_0=512.181313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

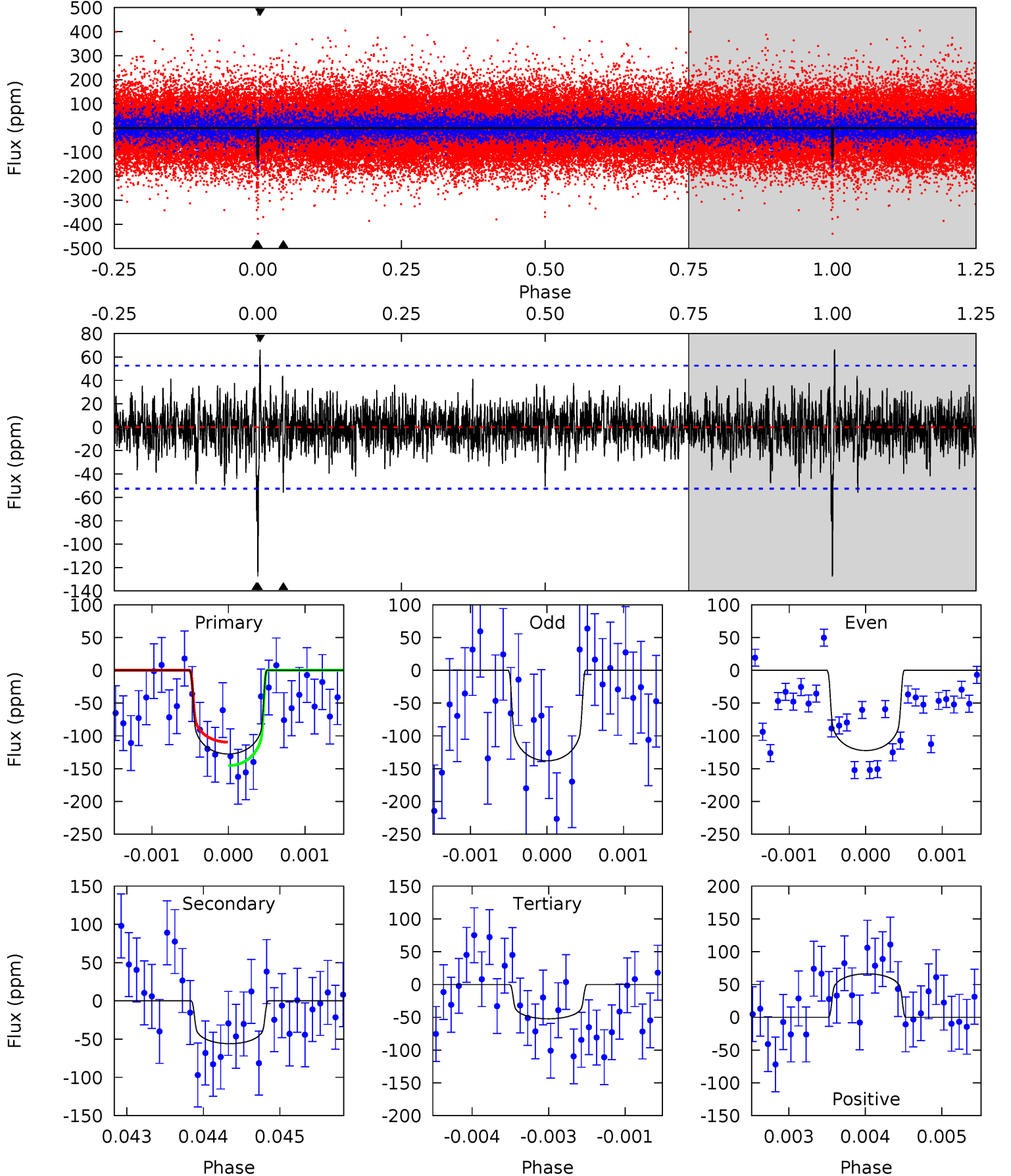
TCE 008885047-01 P=418.996959 Days $T_0=512.194369$ (BKJD)



DV Model-Shift Uniqueness Test

008885047-01, $P = 419.006011$ Days, $E = 93.175302$ Days

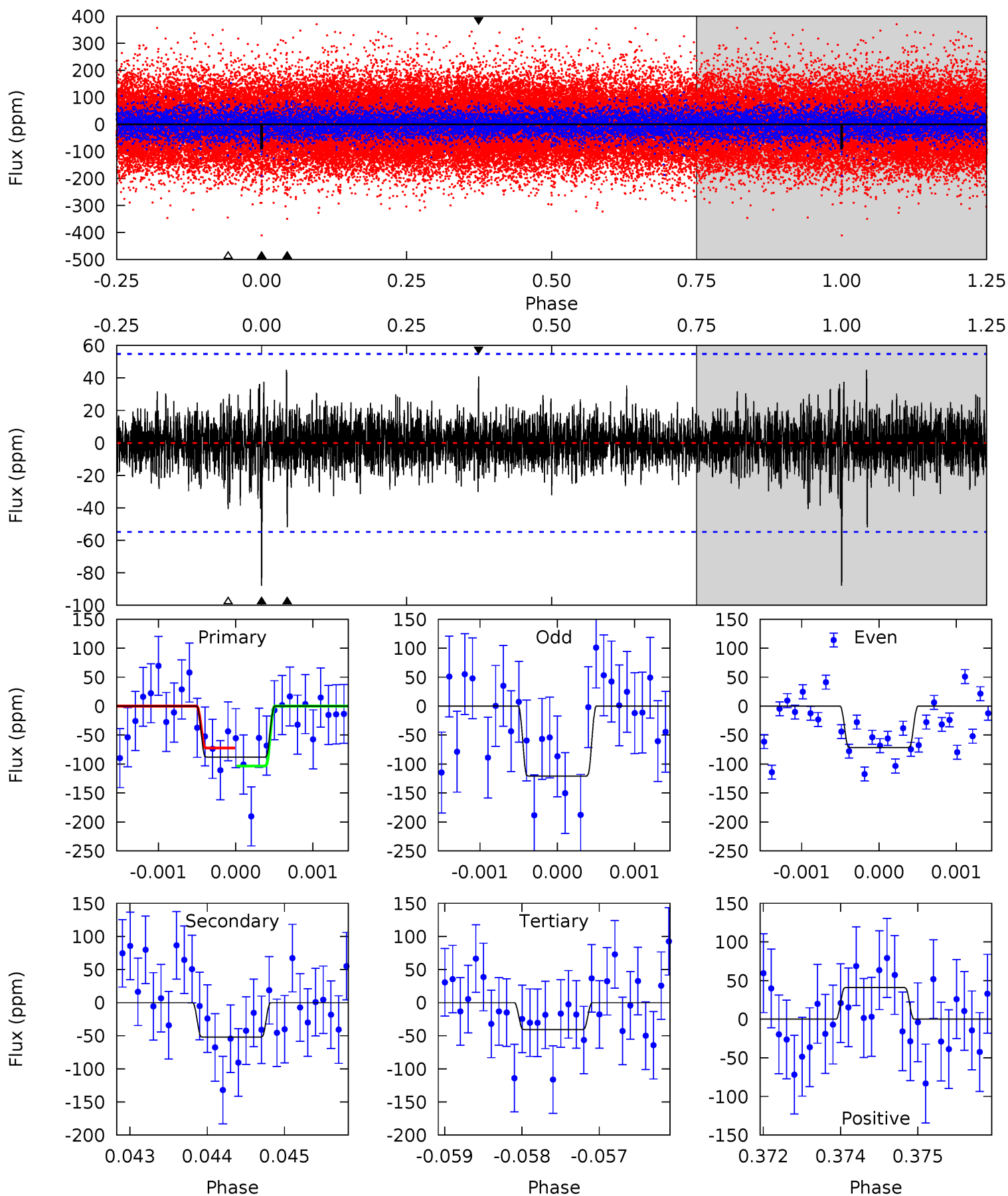
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	5.75	5.38	6.82	5.41	3.23	1.35	7.75	6.31	0.37	-1.06	0.76	0.92	0.34	1.85



Alt Model-Shift Uniqueness Test

008885047-01, P = 418.996959 Days, E = 93.197410 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	5.16	4.02	4.05	5.43	3.26	0.99	4.69	4.66	1.13	1.10	2.28	0.89	0.34	1.55



Stellar Parameters For KIC 008885047

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6210^{+149}_{-204}	$4.324^{+0.100}_{-0.150}$	$0.000^{+0.250}_{-0.300}$	$1.196^{+0.263}_{-0.175}$	$1.099^{+0.147}_{-0.133}$	$0.905^{+0.408}_{-0.389}$
	+2%/-3%	+2%/-3%	+inf%/-inf%	+22%/-15%	+13%/-12%	+45%/-43%
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 008885047-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-56 ± 10	$1.57^{+0.51}_{-0.48}$	395^{+23}_{-20}	4972^{+899}_{-509}	15567^{+16419}_{-6827}
Alt.	-52 ± 10	$1.28^{+0.49}_{-0.50}$	396^{+24}_{-20}	5390^{+1525}_{-716}	21735^{+39066}_{-10132}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

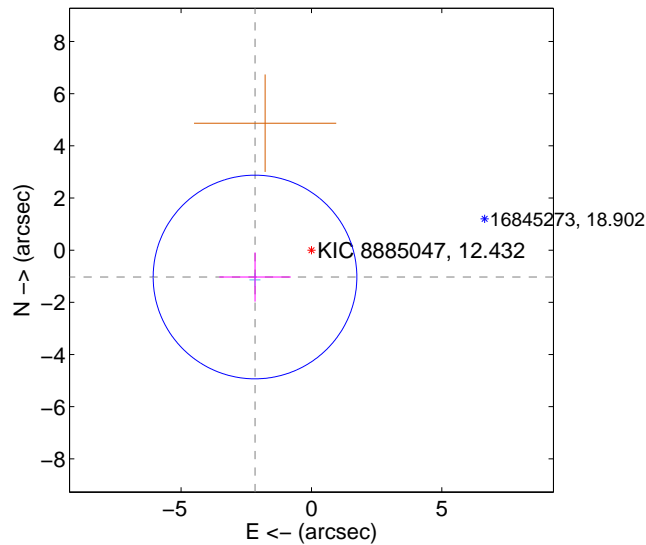
Supplemental centroid analysis for 008885047-01. Kepler magnitude: 12.43. Transit SNR 7.55

There are 1 quarters with good PRF difference image offsets

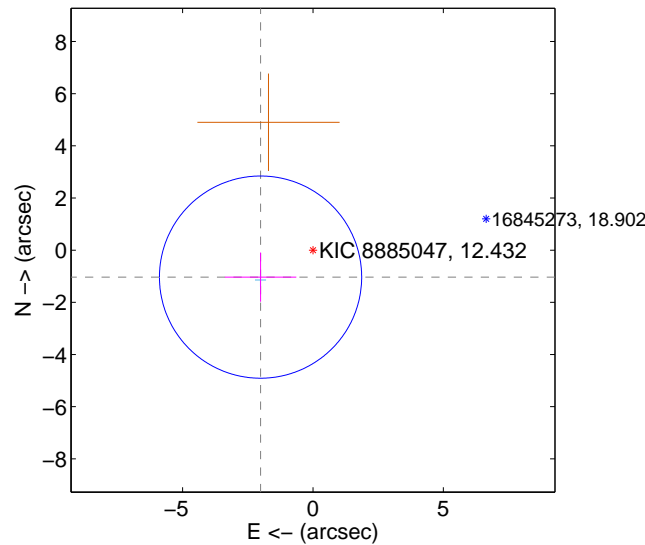
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.396 ± 1.301	1.84	2.164 ± 1.369	-1.029 ± 0.945
PRF-fit source offset from KIC position	2.260 ± 1.292	1.75	2.010 ± 1.369	-1.033 ± 0.945
photometric centroid source offset	1.93 ± 1.93	1.00	1.11 ± 2.01	1.58 ± 1.90

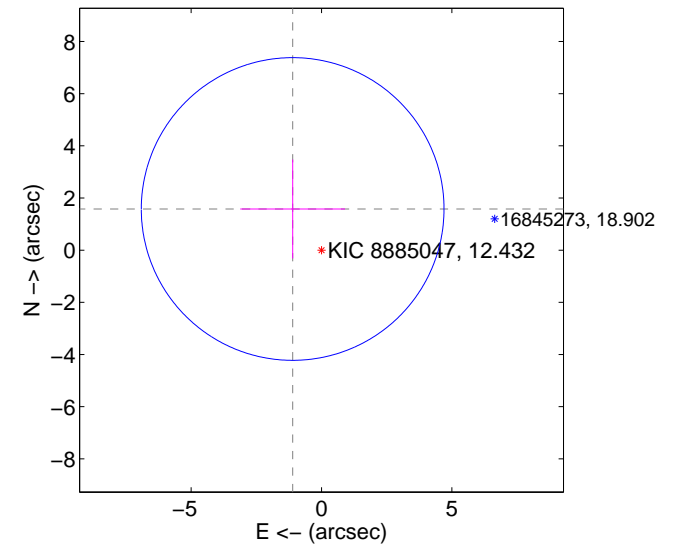
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

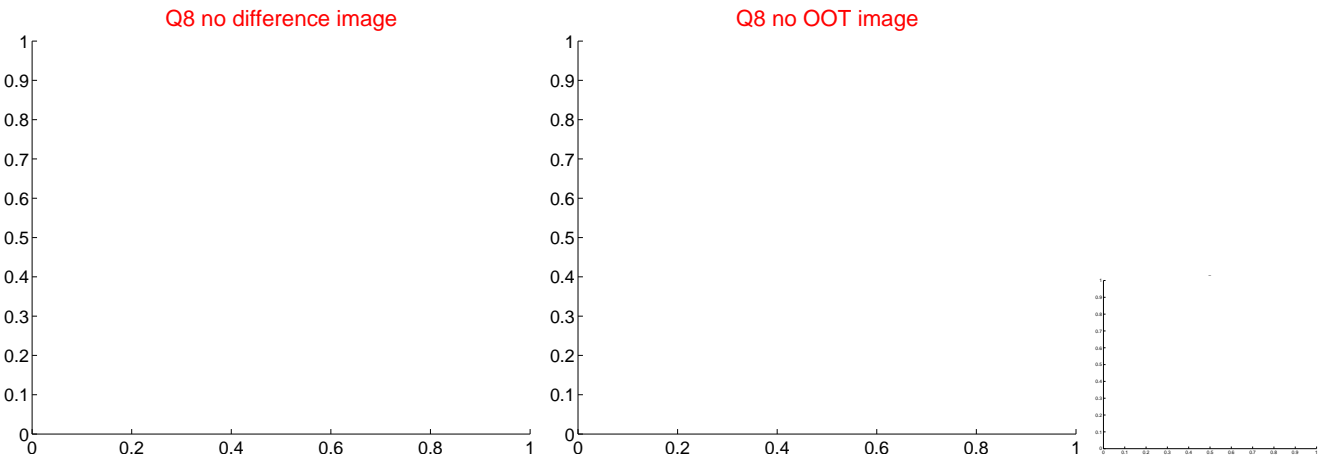
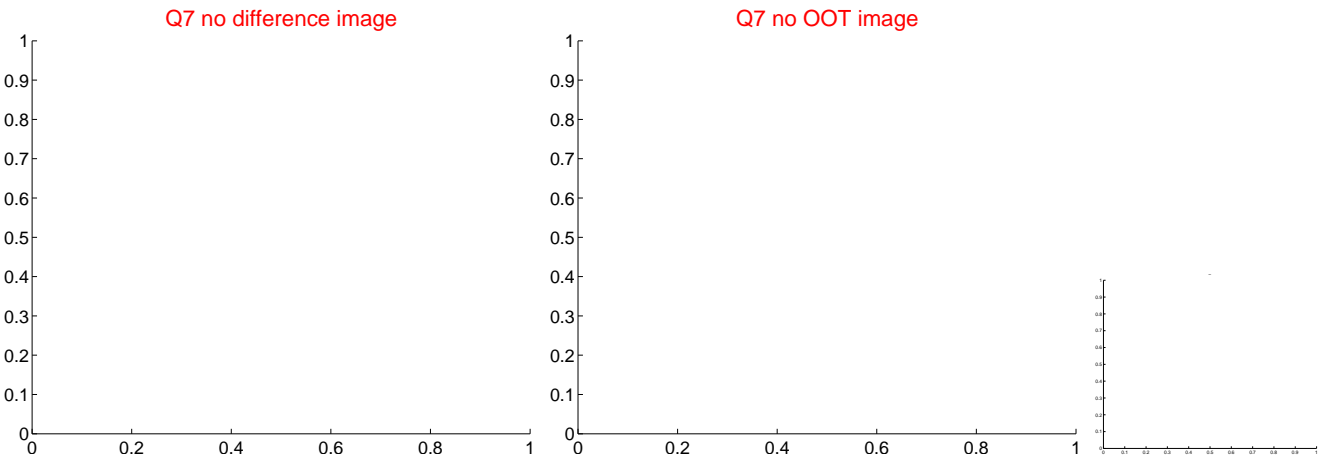
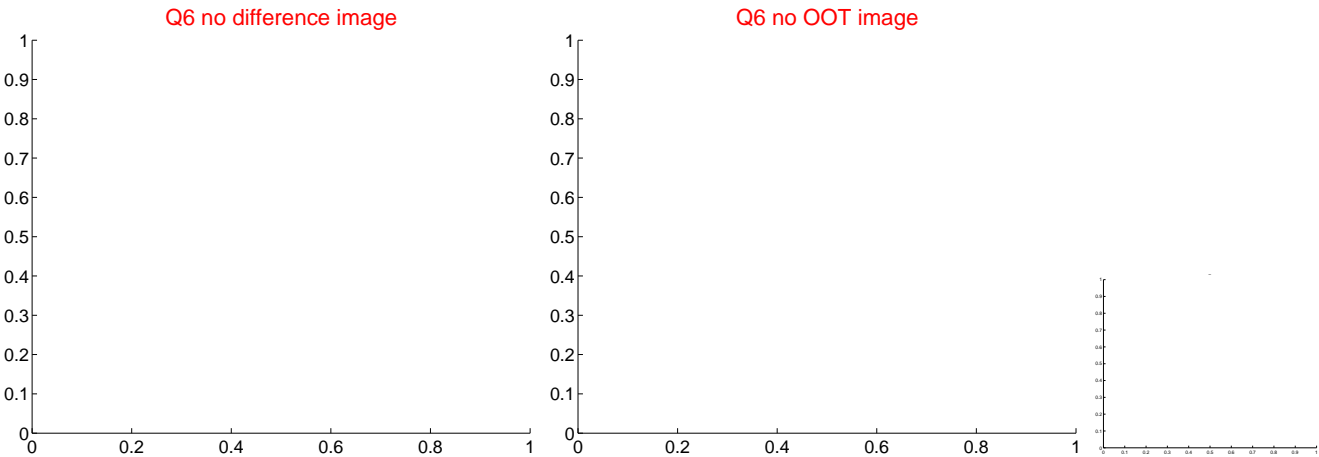
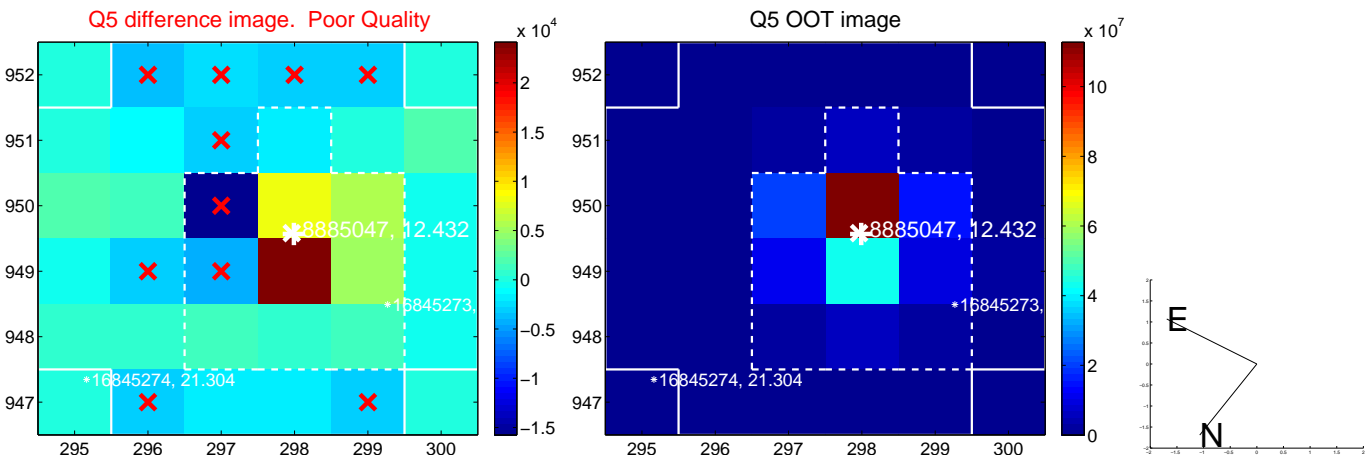


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

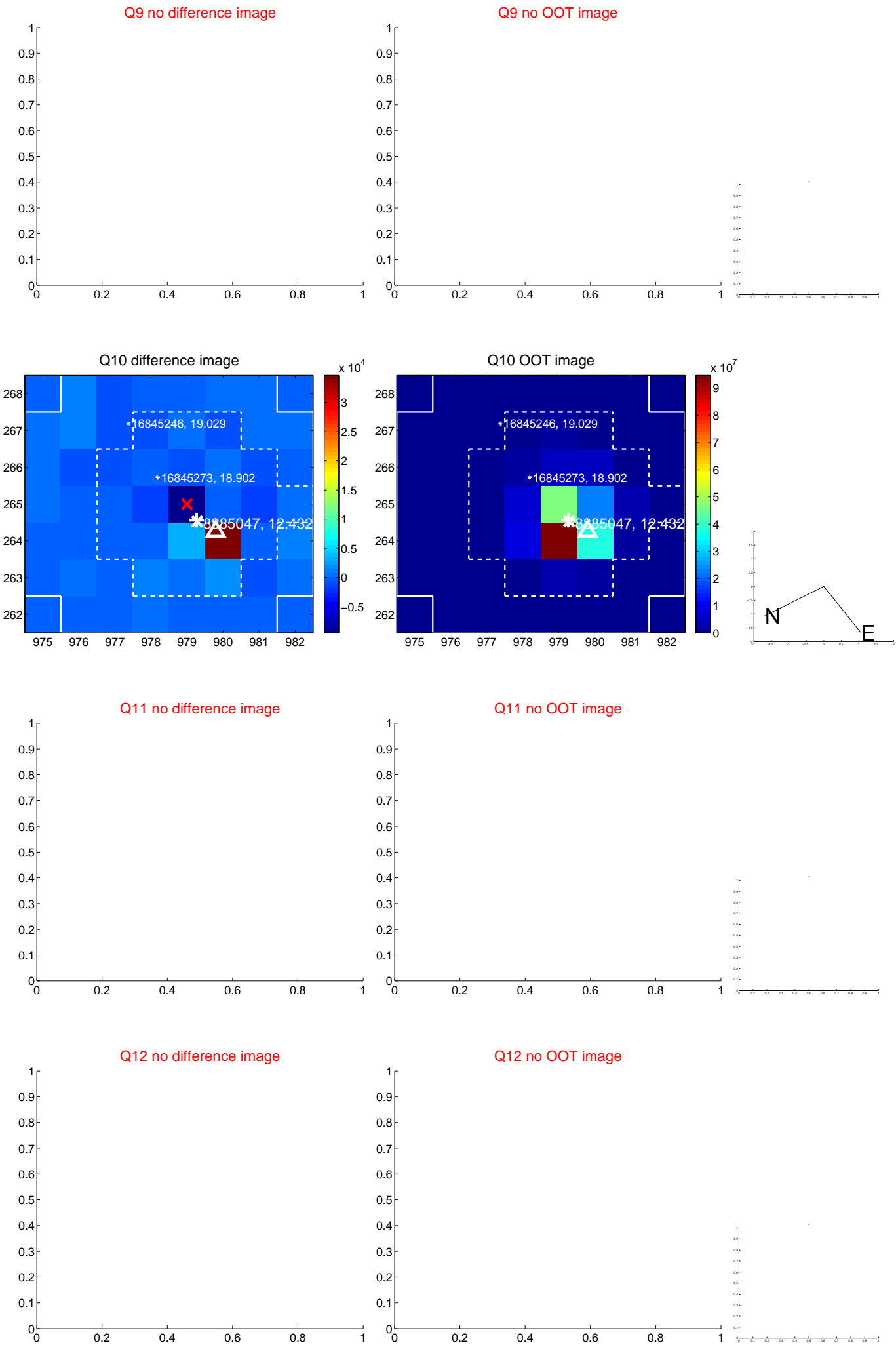
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



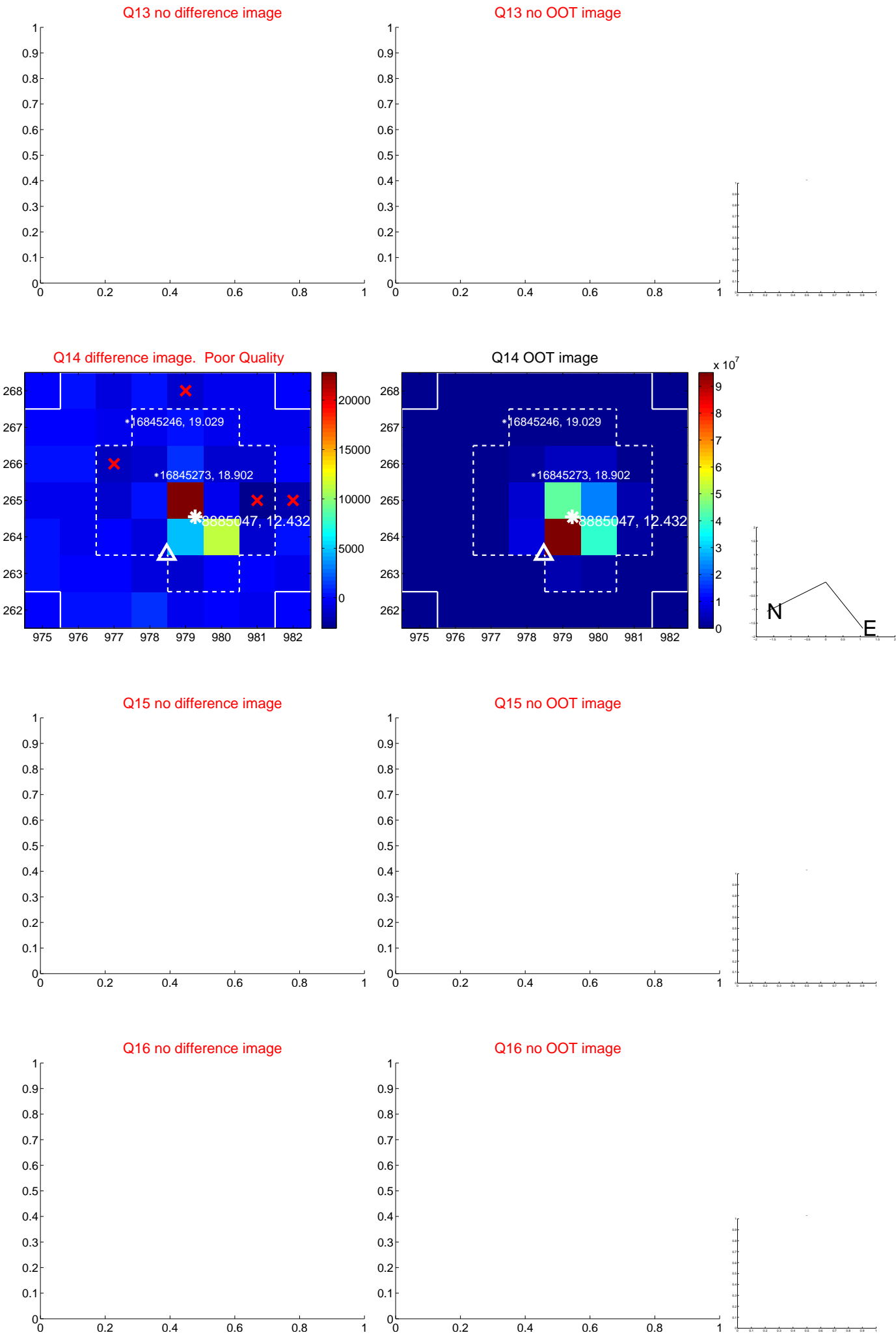
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



Q14 difference image. Poor Quality

Q14 OOT image

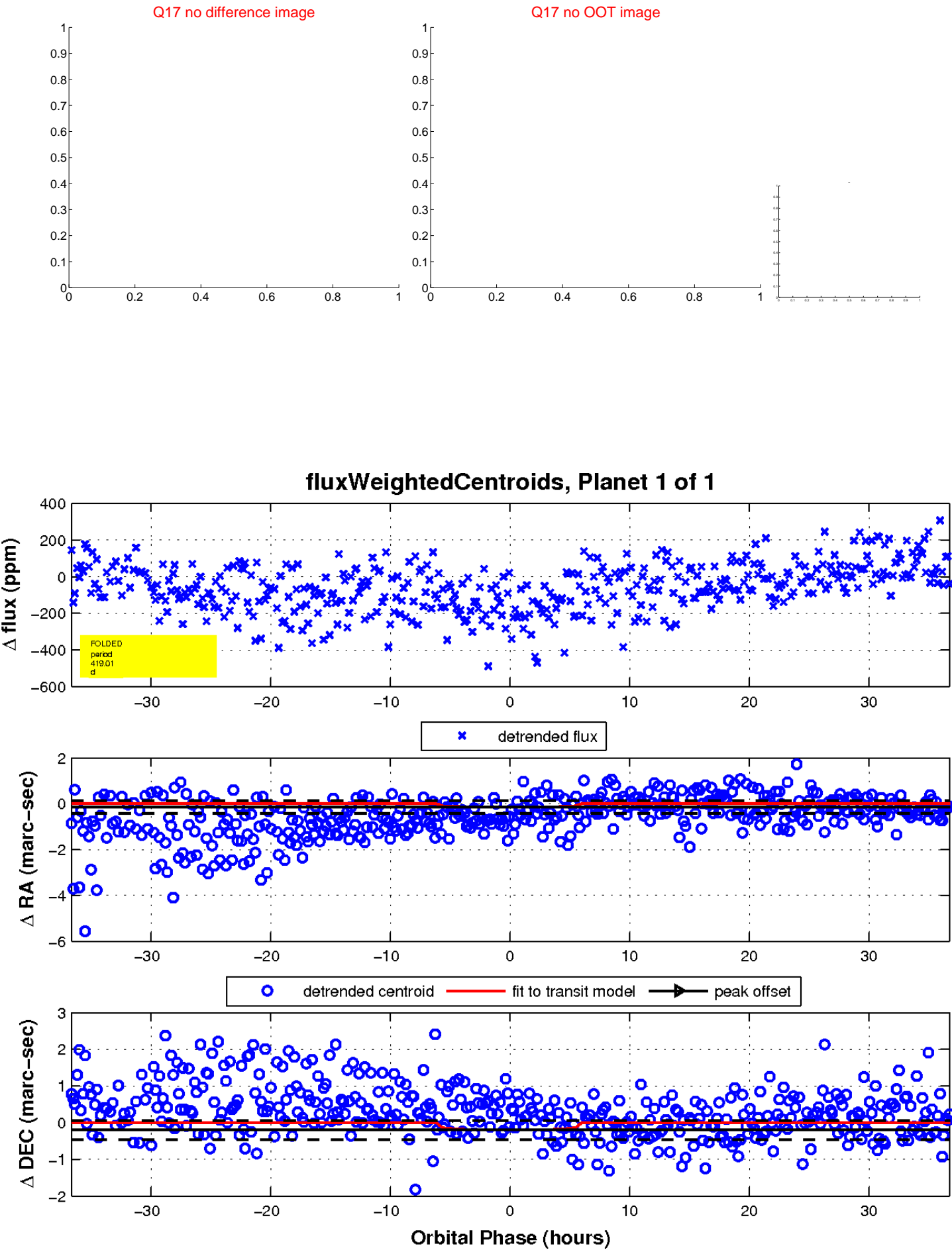
Q15 no difference image

Q15 no OOT image

Q16 no difference image

Q16 no OOT image

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



UKIRT Image

Declination

