

KIC 009289894

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})
009289894-01	OBS	No	430.268540	407.499237	116.6	3.073	8.7	8.3	0.54	4461	0.68	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009289894-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_SATURATED

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

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

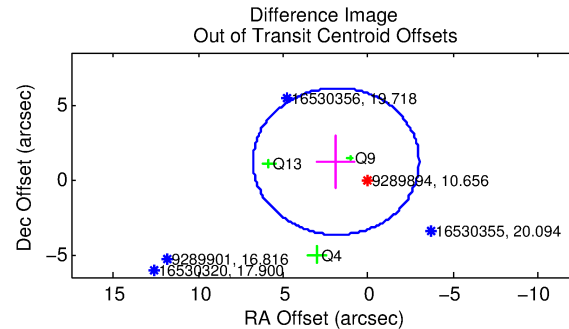
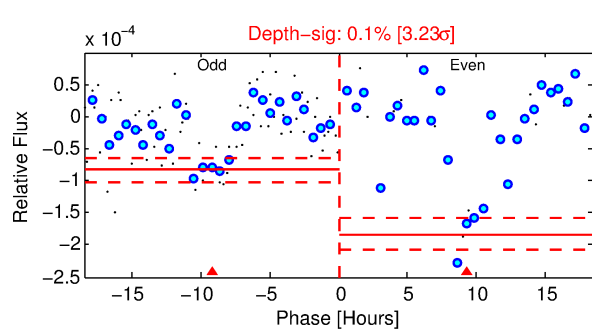
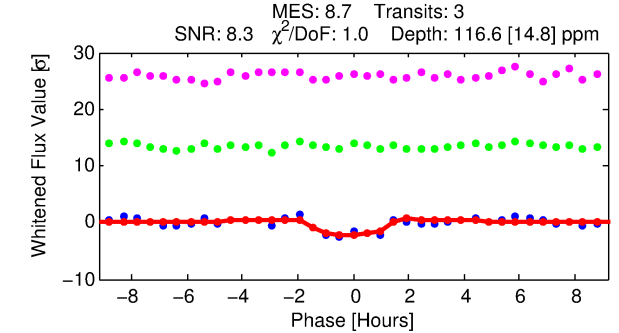
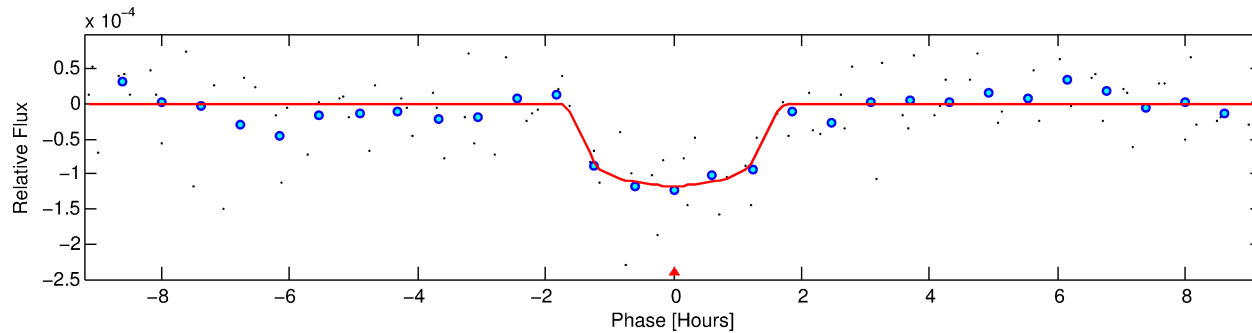
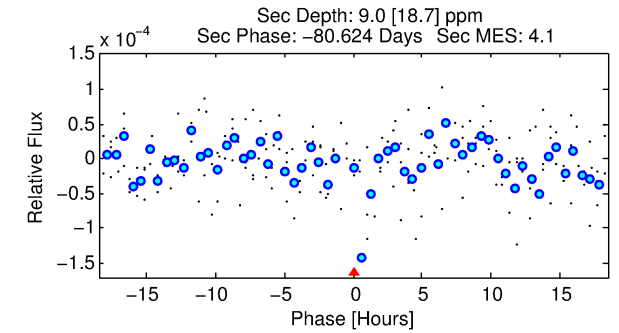
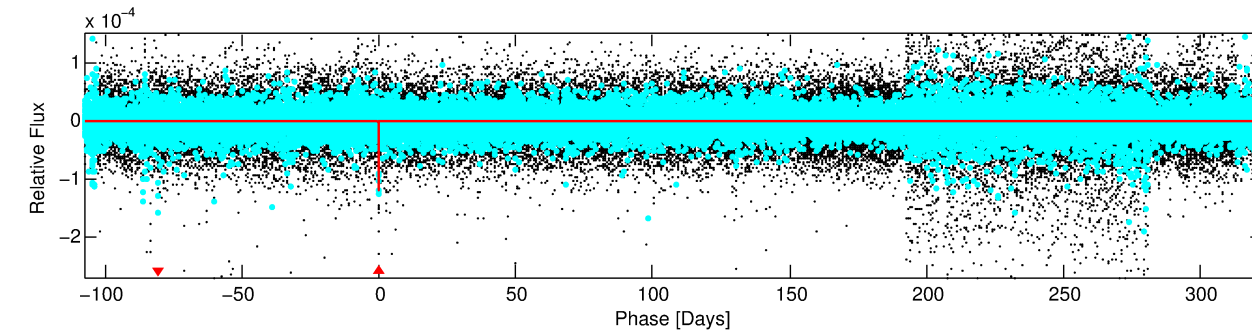
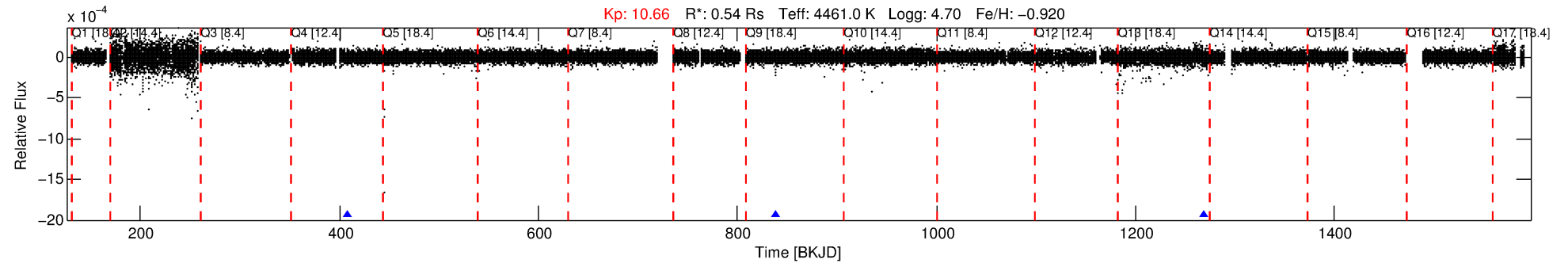
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009289894-01

No Significant Match Found

DV One-Page Summary

KIC: 9289894 Candidate: 1 of 1 Period: 430.269 d



DV Fit Results:

Period = 430.26854 [0.00626] d
Epoch = 407.4992 [0.0058] BKJD
Rp/R* = 0.0116 [0.0093]
a/R* = 563.08 [1813.56]
b = 0.86 [0.97]
Seff = 0.13 [0.02]
Teq = 152 [6] K
Rp = 0.68 [0.56] Re
a = 0.9064 [0.0675] AU
Ag = 8694.12 [22934.47] [0.38 σ]
Teffp = 2270 [1498] K [1.41 σ]

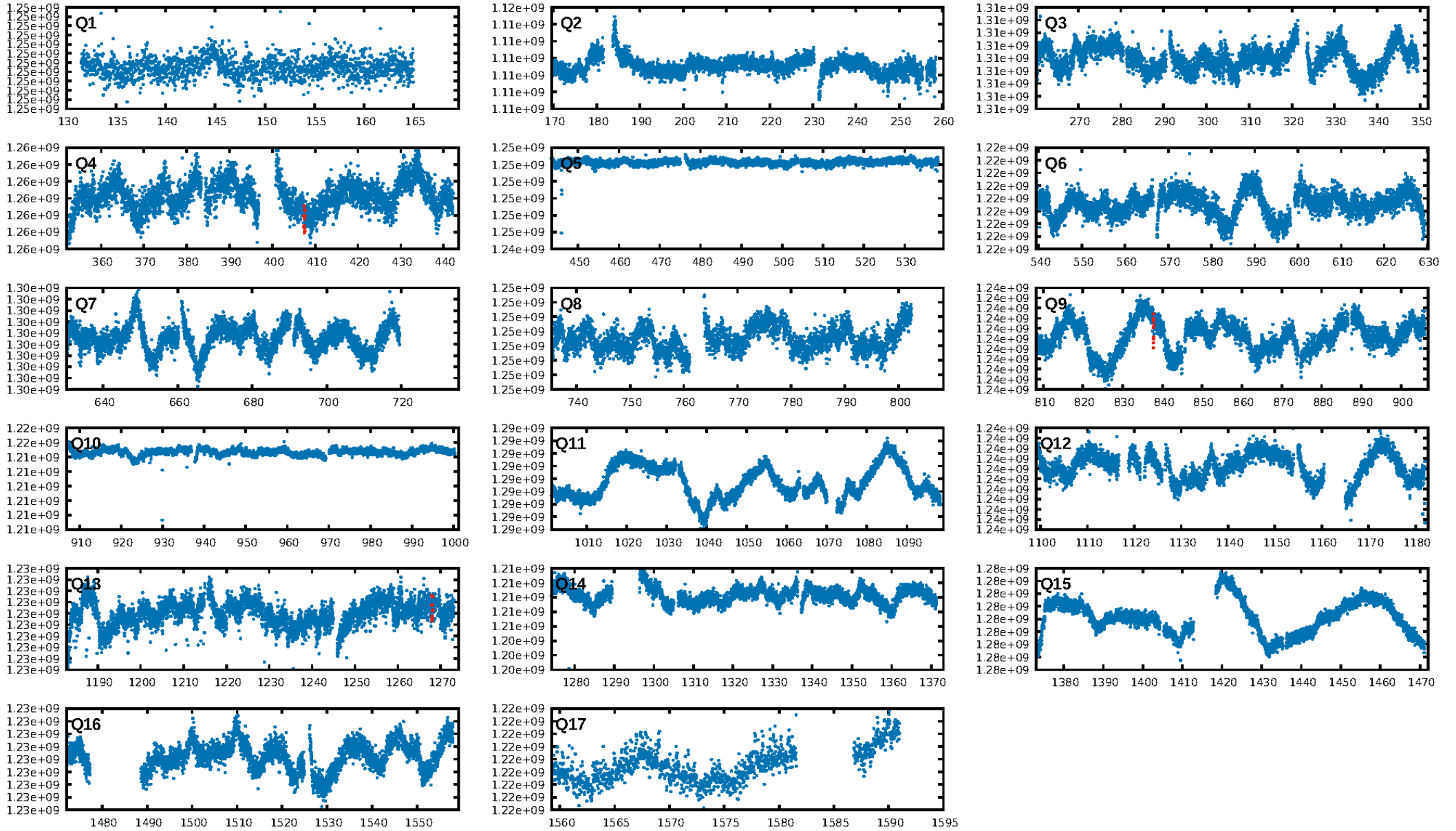
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.6%
ModelChiSquareGof-sig: 89.9%
Bootstrap-pfa: 3.54e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.413
Centroid-sig: 87.6%
Centroid-so: 1.421 arcsec [0.88 σ]
OotOffset-rm: 2.231 arcsec [1.37 σ]
KicOffset-rm: 3.633 arcsec [2.42 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

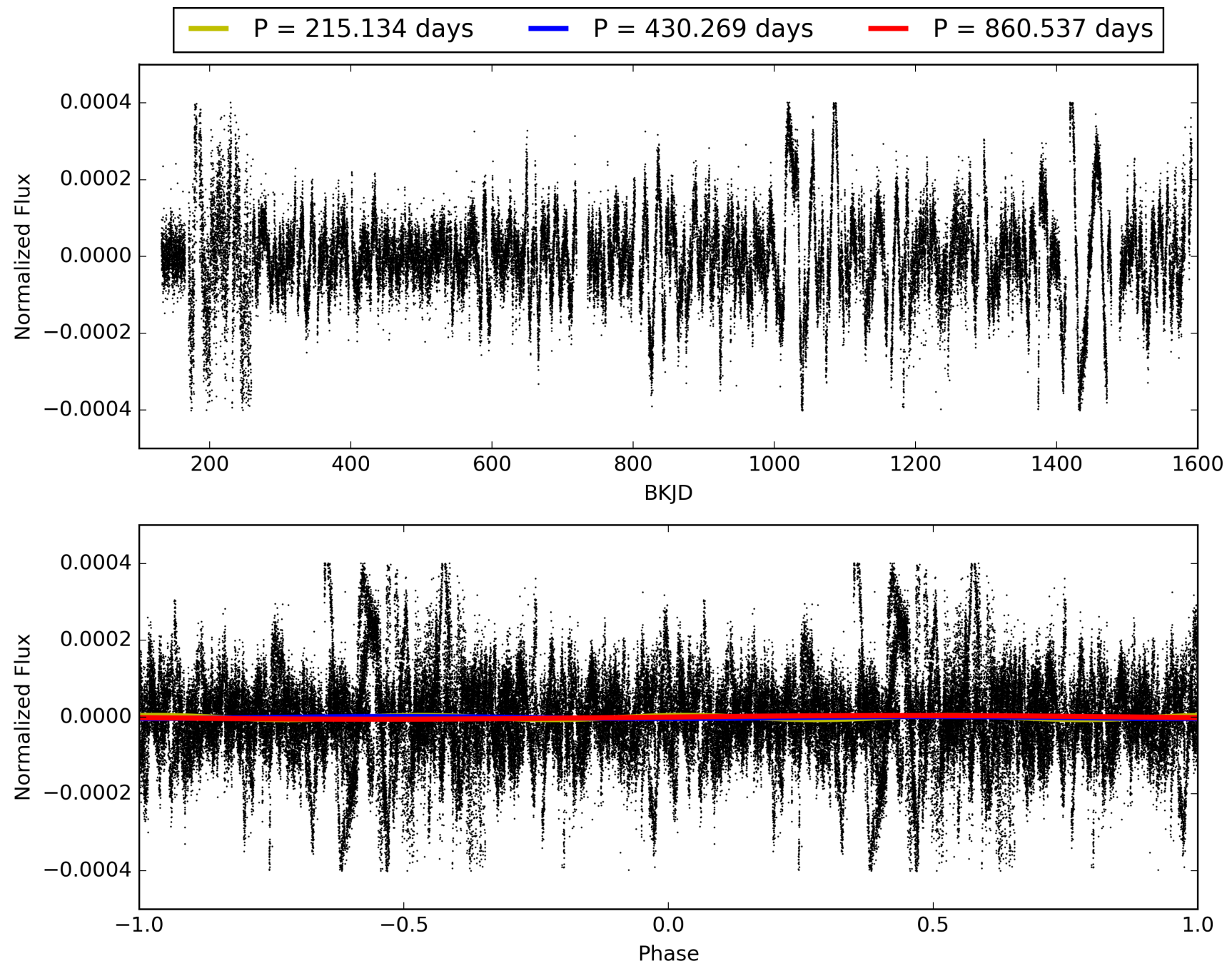
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:30:24 Z

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

TCE 009289894-01, PDC Light Curves

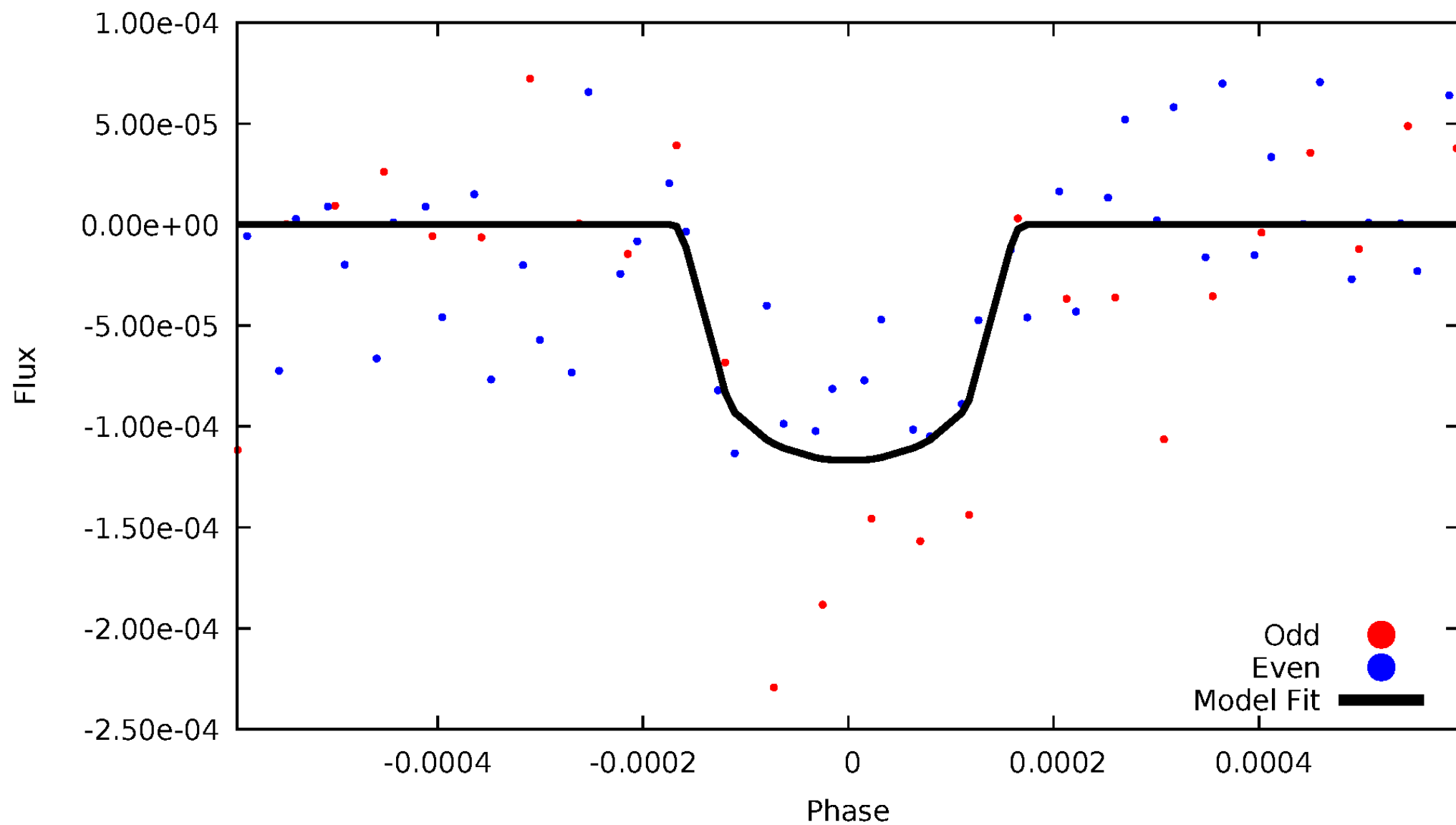


TCE 009289894-01



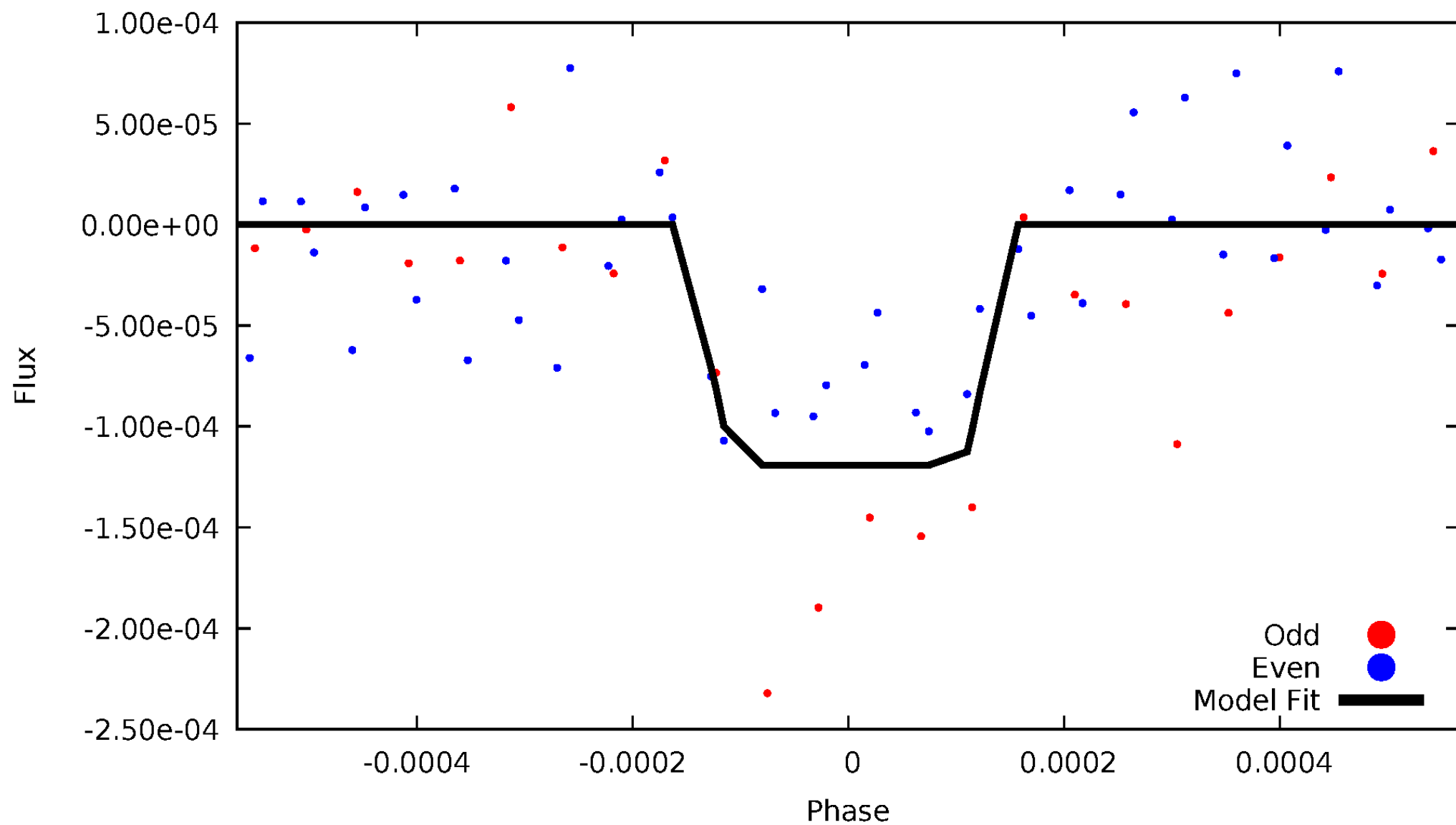
DV Odd/Even

TCE 009289894-01



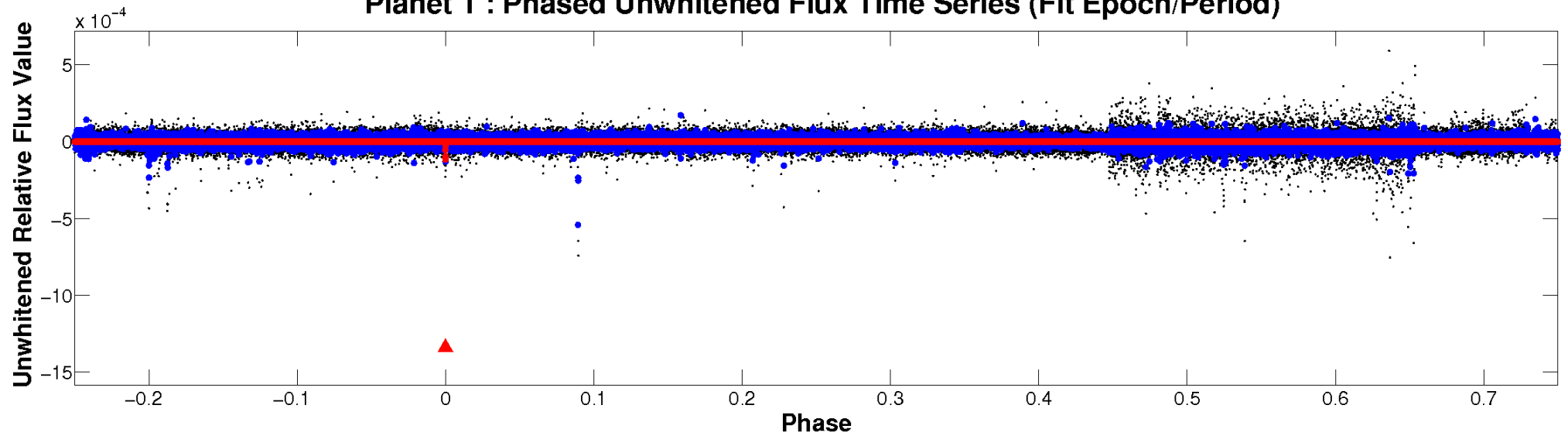
ALT Odd/Even

TCE 009289894-01

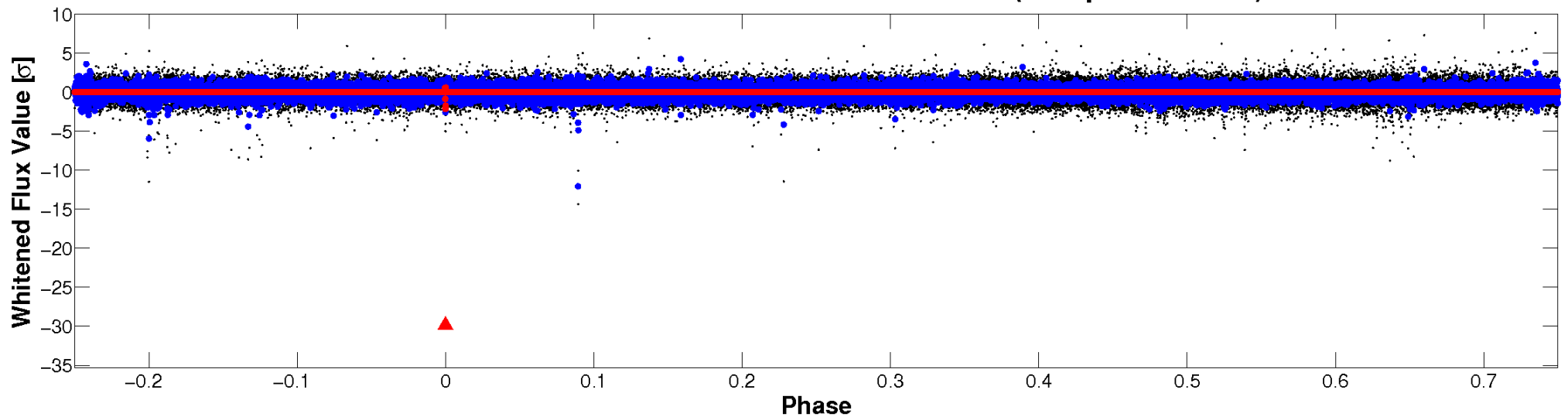


Non-Whitened Vs. Whitened Light Curve

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

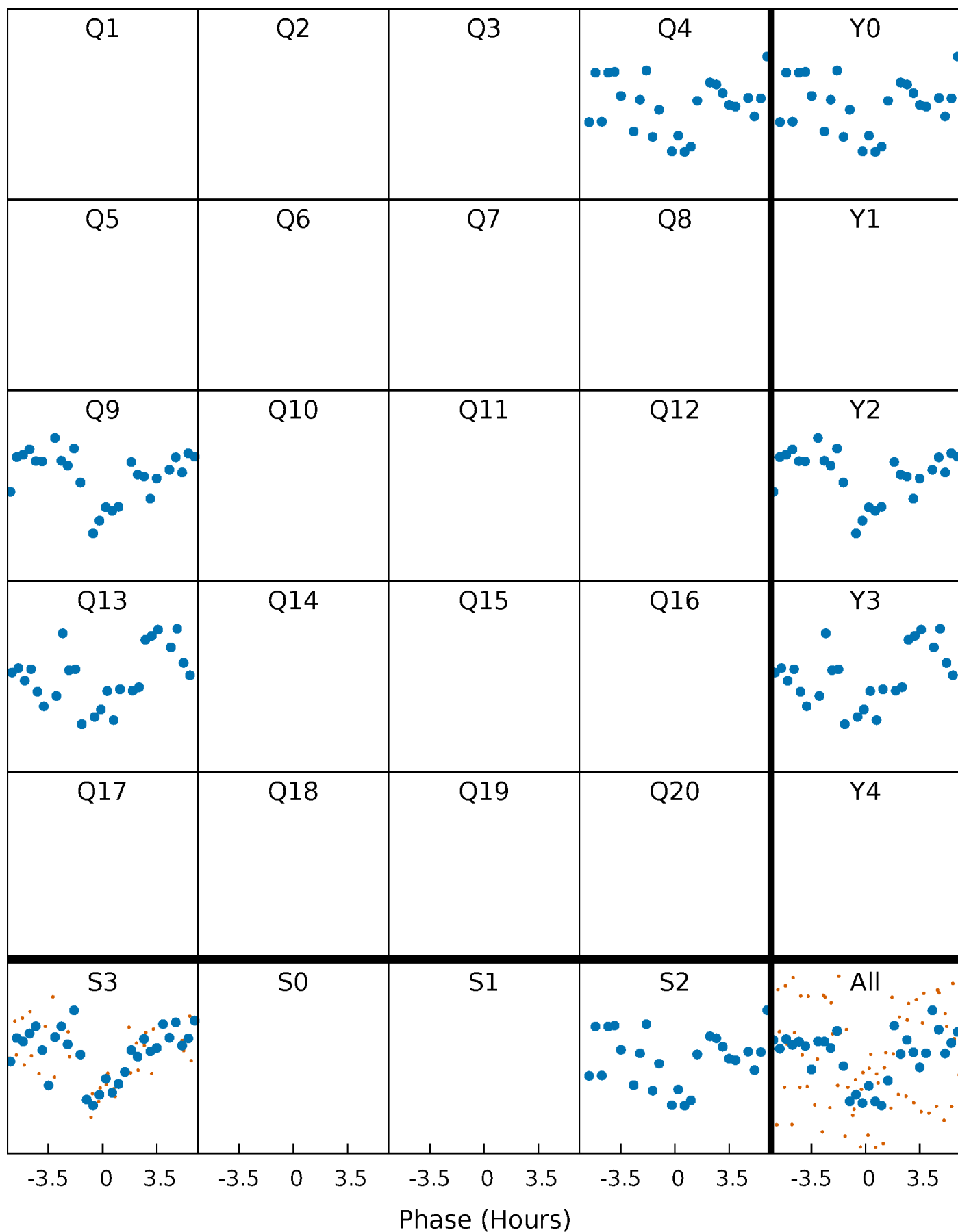


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



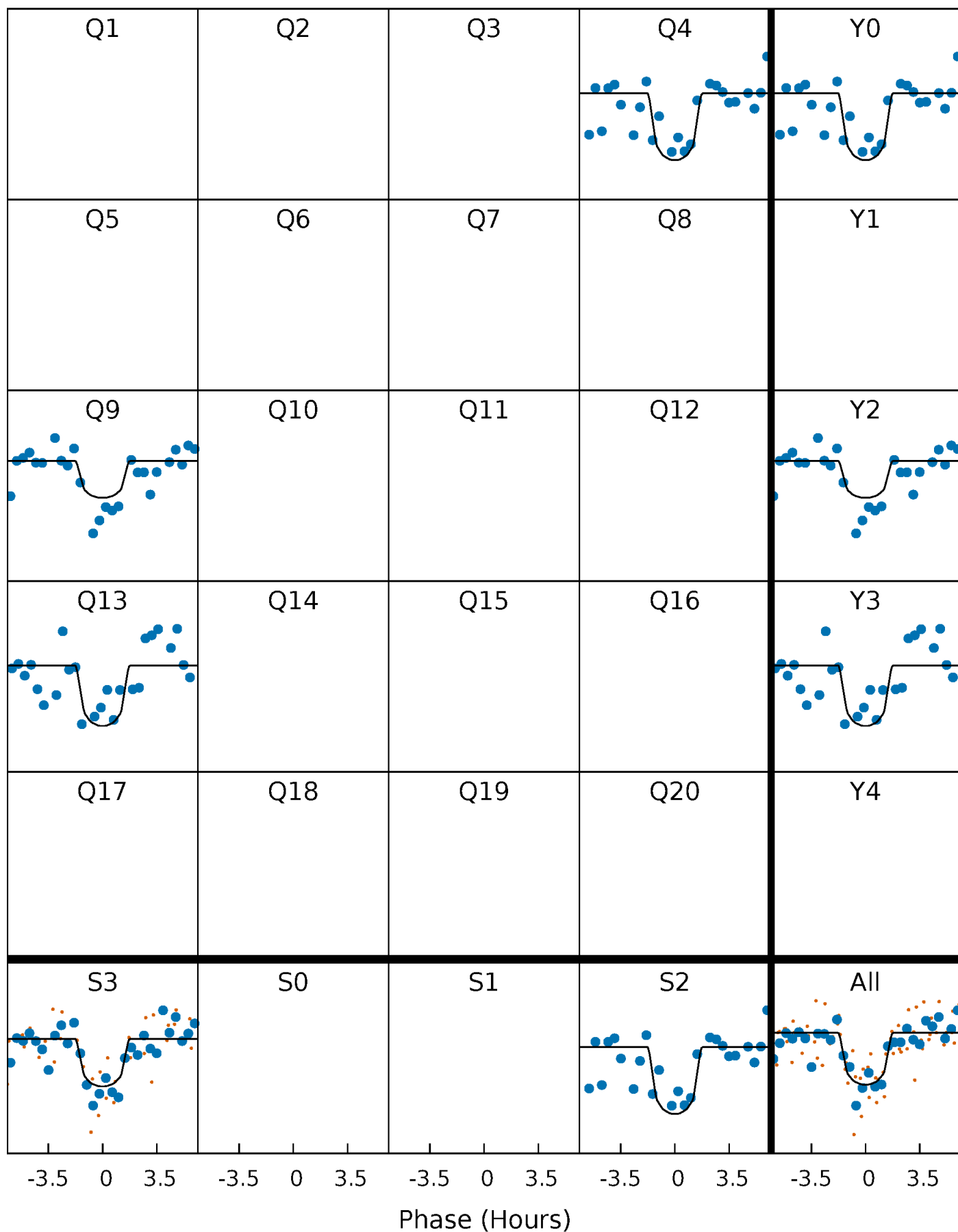
PDC Quarter-Phased Transit Curves

TCE 009289894-01 P=430.268540 Days $T_0=407.499237$ (BKJD)



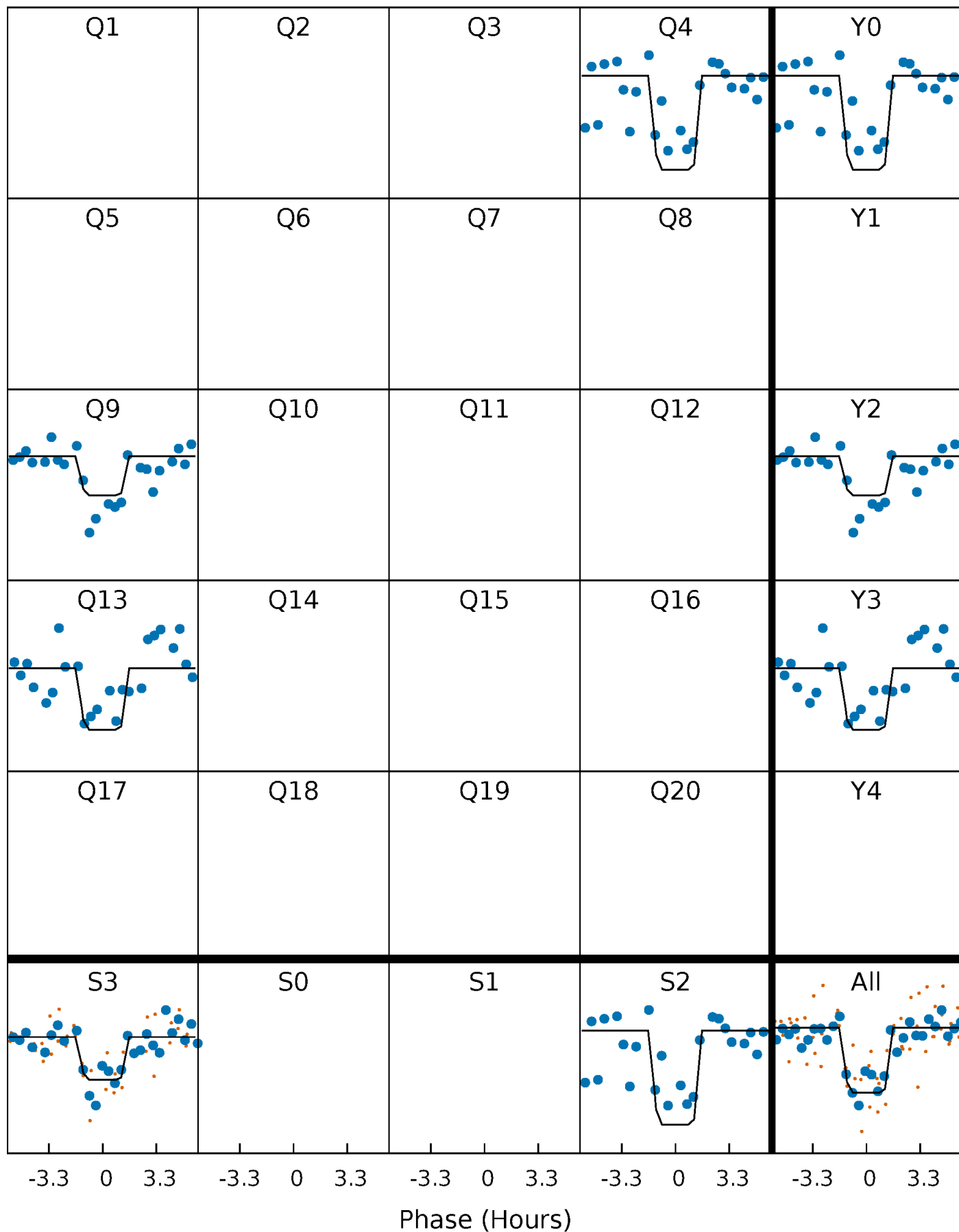
DV Quarter-Phased Transit Curves

TCE 009289894-01 P=430.268540 Days $T_0=407.499237$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

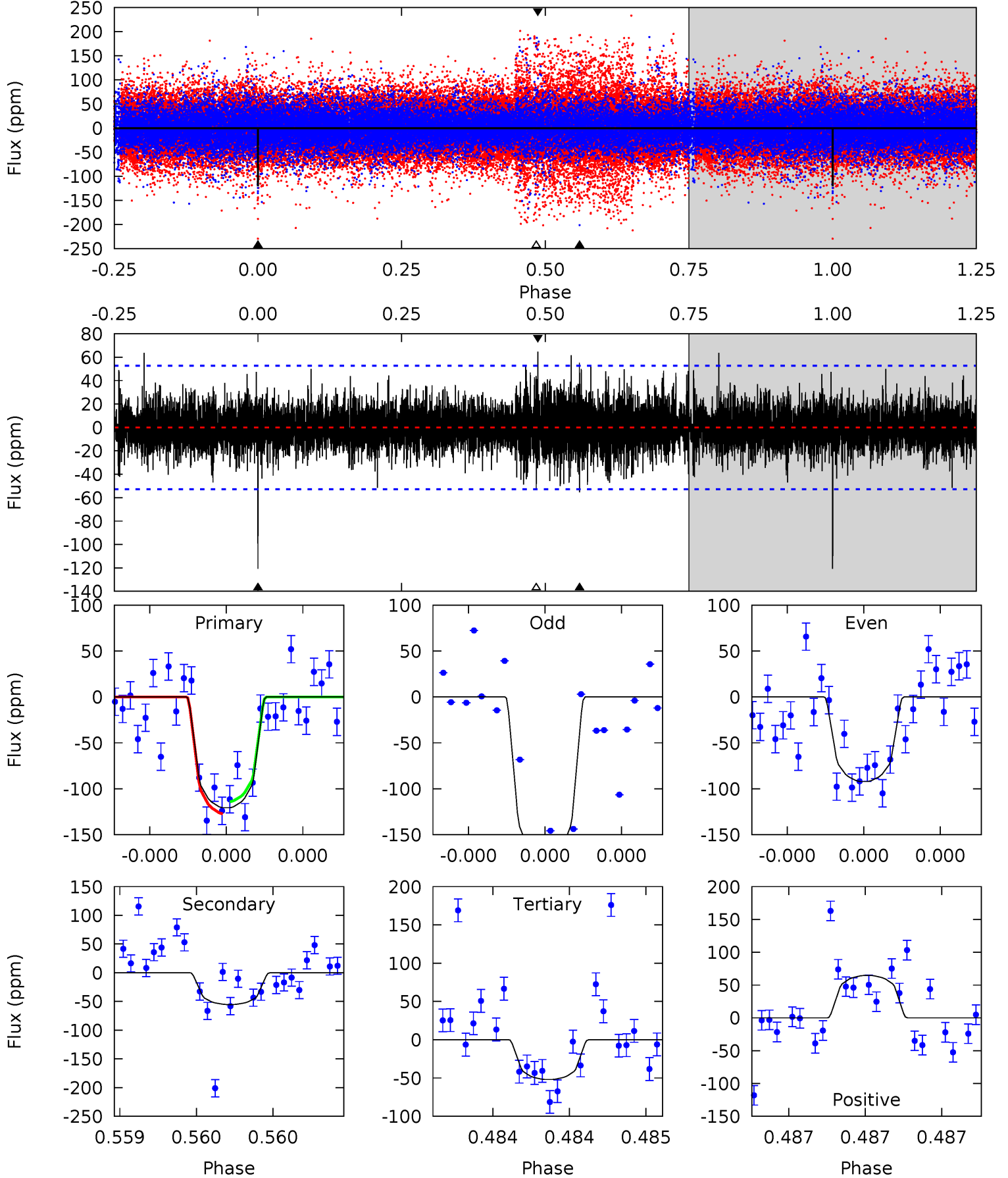
TCE 009289894-01 P=430.269473 Days $T_0=407.499444$ (BKJD)



DV Model-Shift Uniqueness Test

009289894-01, P = 430.268540 Days, E = 407.499237 Days

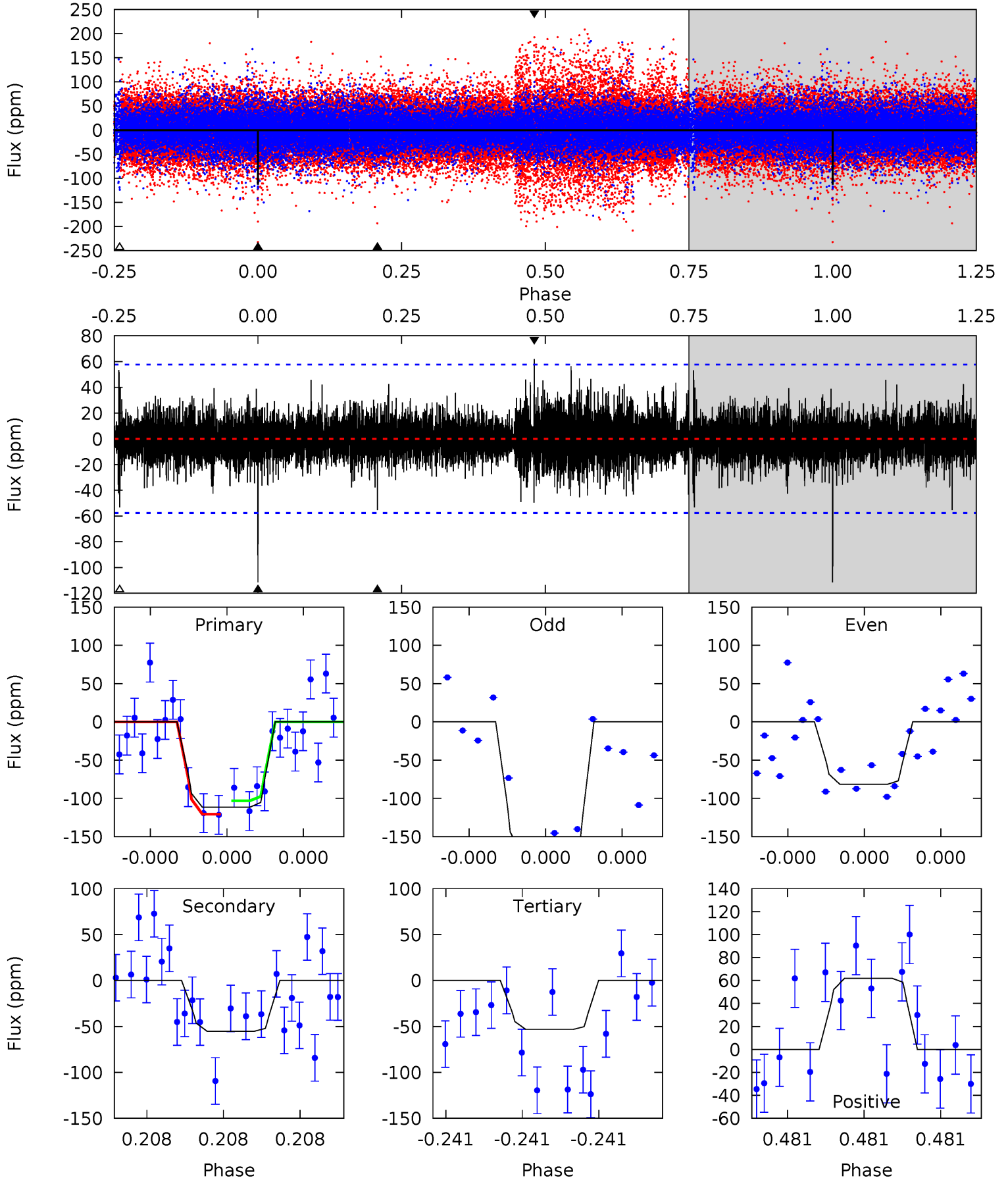
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	5.92	5.55	6.91	5.64	3.59	1.43	7.35	6.00	0.37	-0.99	4.09	1.30	0.35	0.71



Alt Model-Shift Uniqueness Test

009289894-01, P = 430.269473 Days, E = 407.499444 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	5.46	5.26	6.12	5.69	3.66	1.15	5.75	4.90	0.19	-0.66	4.32	1.32	0.36	0.86



Stellar Parameters For KIC 009289894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4461^{+120}_{-146}	$4.701^{+0.059}_{-0.032}$	$-0.920^{+0.300}_{-0.300}$	$0.541^{+0.039}_{-0.048}$	$0.535^{+0.045}_{-0.030}$	$4.767^{+1.191}_{-0.610}$
	+3%/-3%	+1%/-1%	+33%/-33%	+7%/-9%	+8%/-6%	+25%/-13%
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 009289894-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-55 ± 9	$0.76^{+0.53}_{-0.43}$	211^{+7}_{-7}	3610^{+1335}_{-538}	$42268^{+185611}_{-28189}$
Alt.	-55 ± 10	$0.73^{+0.52}_{-0.46}$	211^{+8}_{-7}	3700^{+1813}_{-579}	$46744^{+299546}_{-30966}$

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

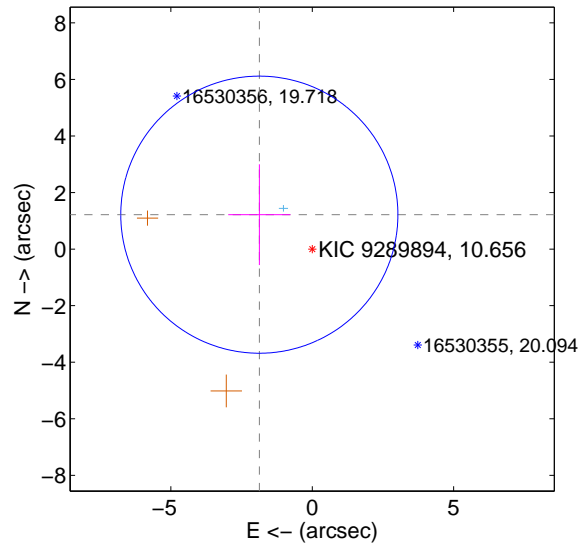
Supplemental centroid analysis for 009289894-01. **Kepler magnitude: 10.66.** Transit SNR 8.31

There are 1 quarters with good PRF difference image offsets

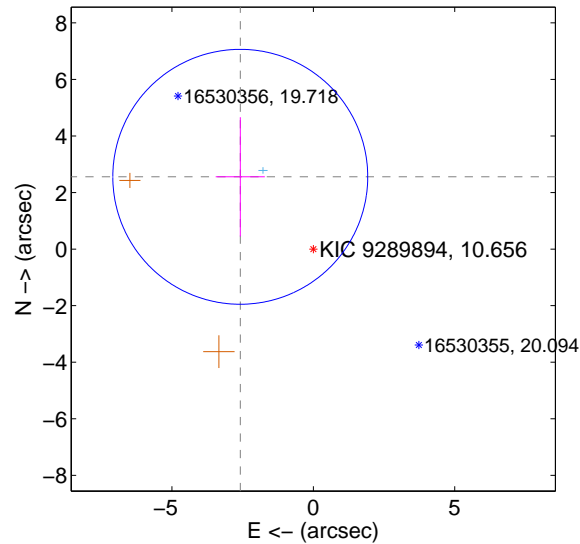
The direct PRF centroid is offset from the target star catalog position by about 1.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.231 ± 1.633	1.37	1.870 ± 1.098	1.217 ± 1.783
PRF-fit source offset from KIC position	3.633 ± 1.502	2.42	2.583 ± 0.869	2.555 ± 2.107
photometric centroid source offset	1.42 ± 1.62	0.88	0.32 ± 1.57	1.38 ± 1.62

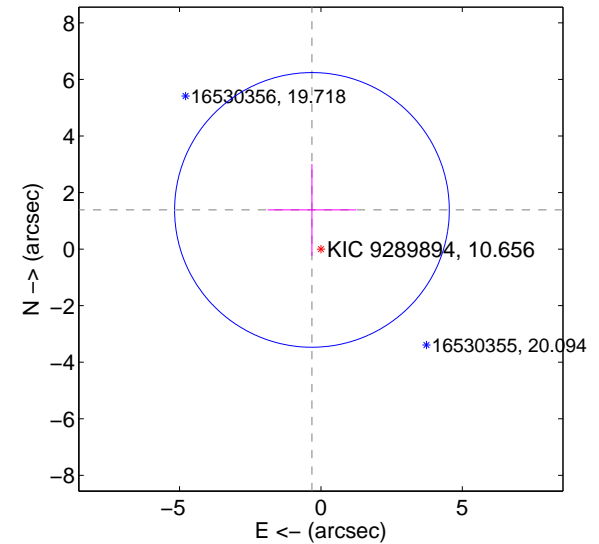
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

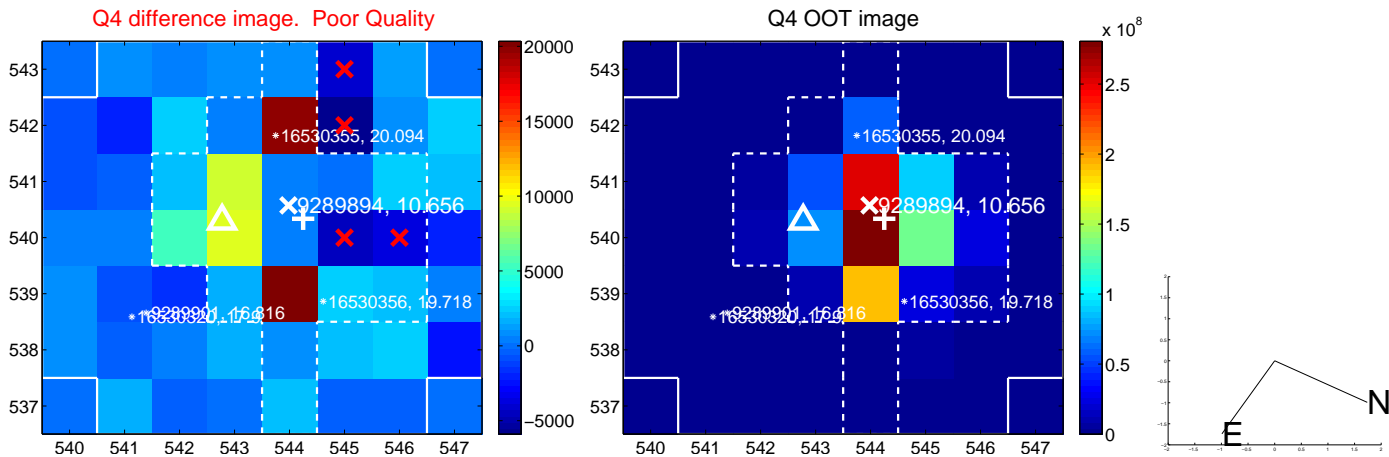
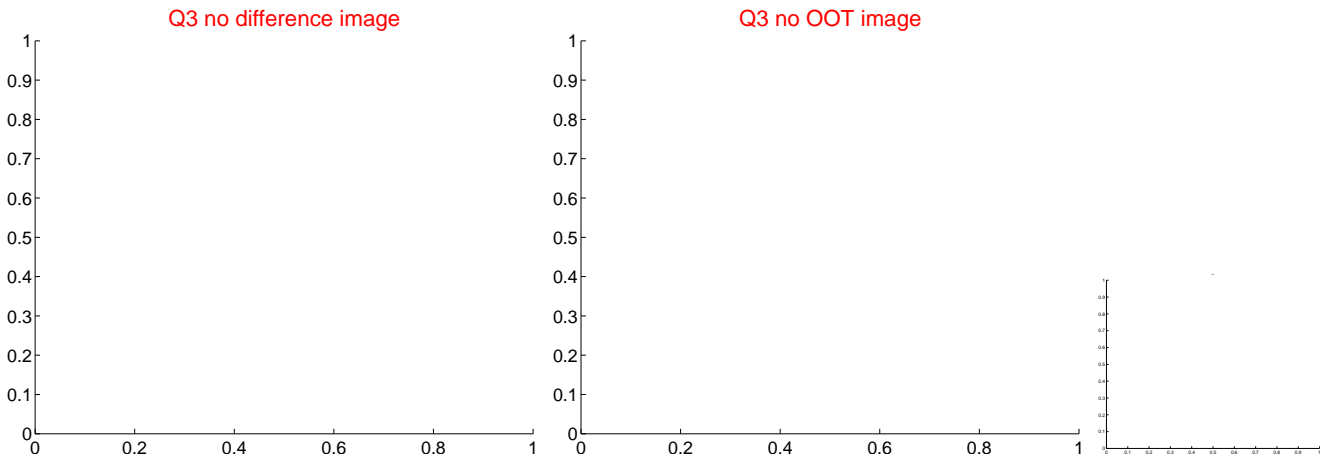
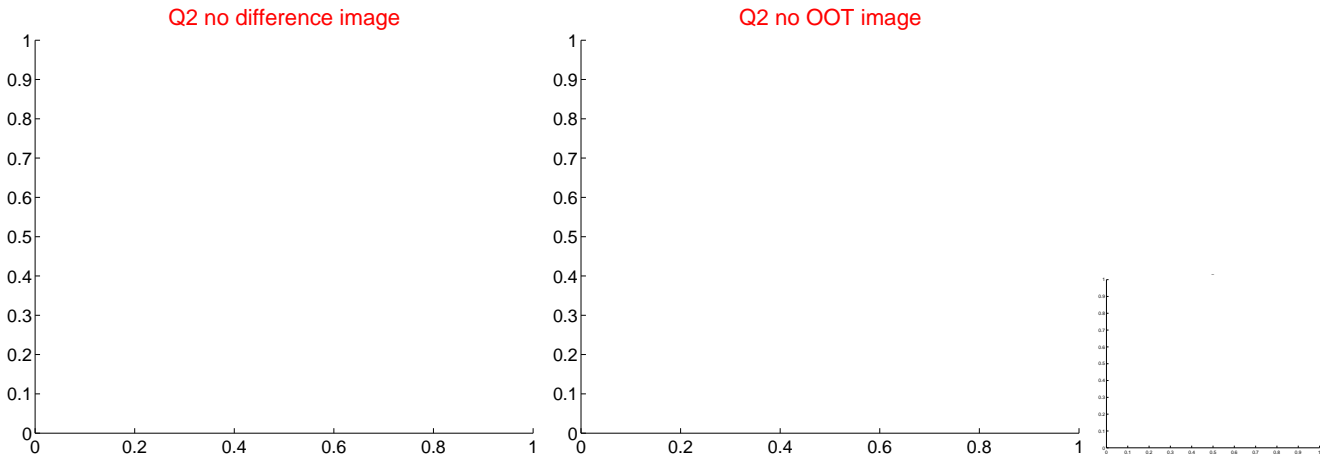
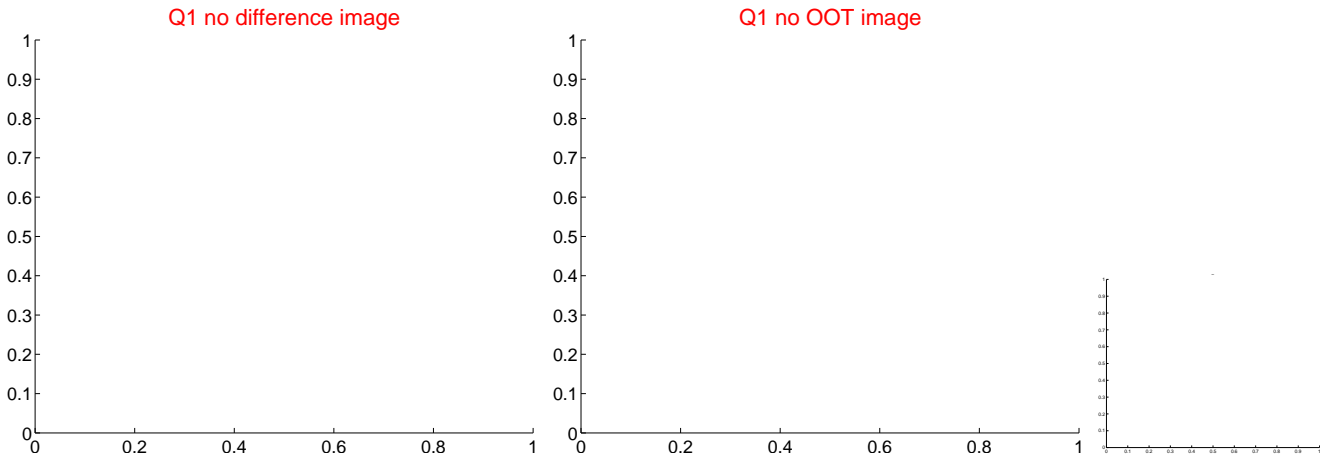


offset from photometric centroids

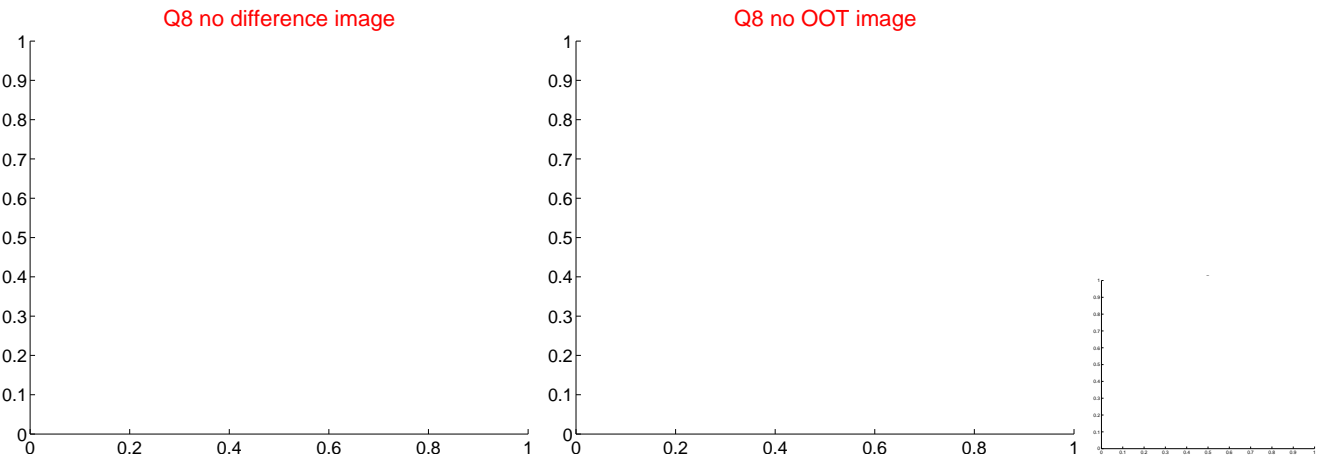


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

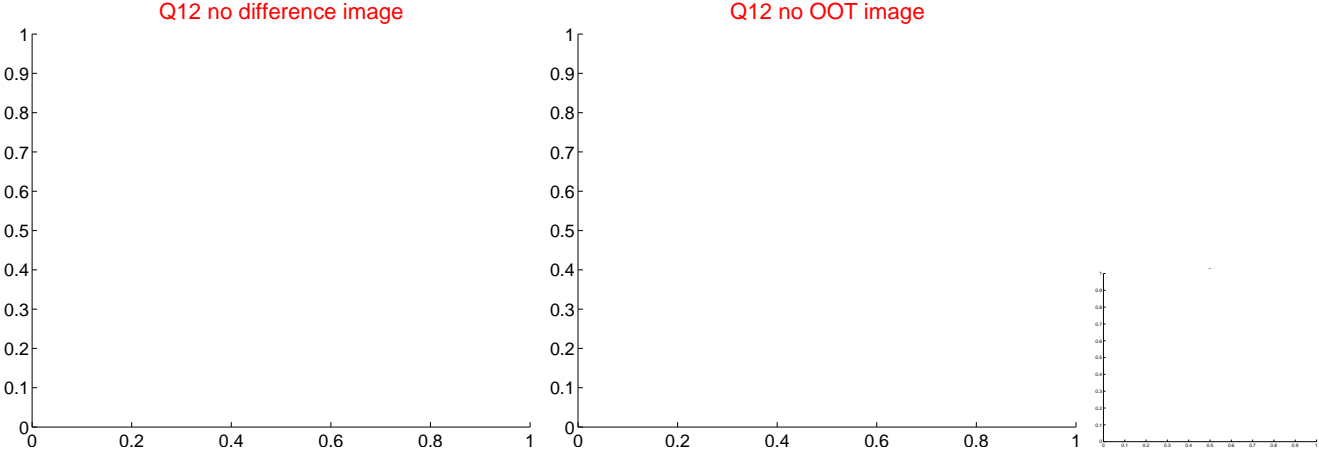
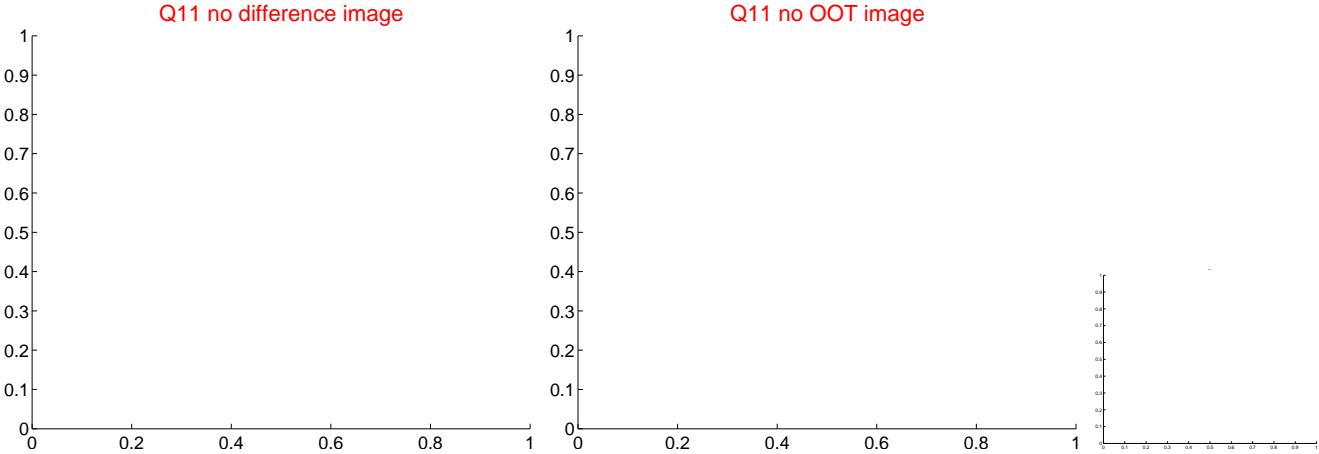
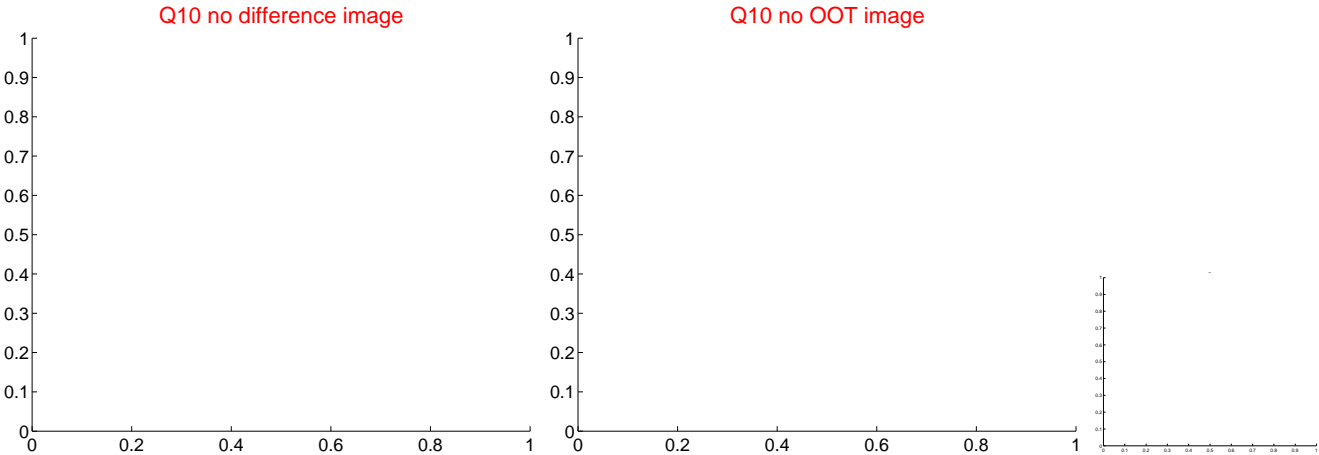
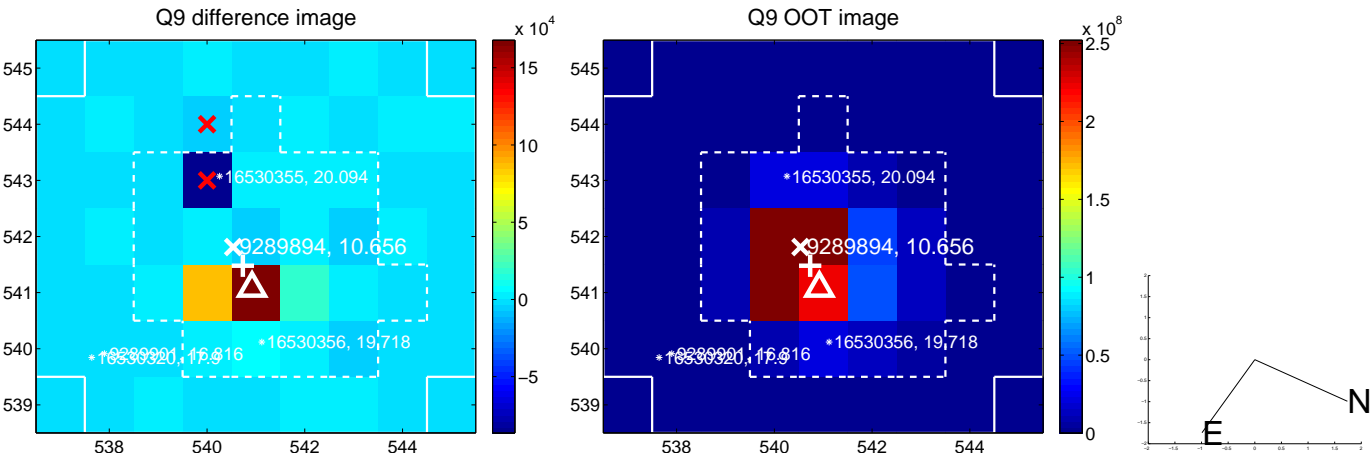
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



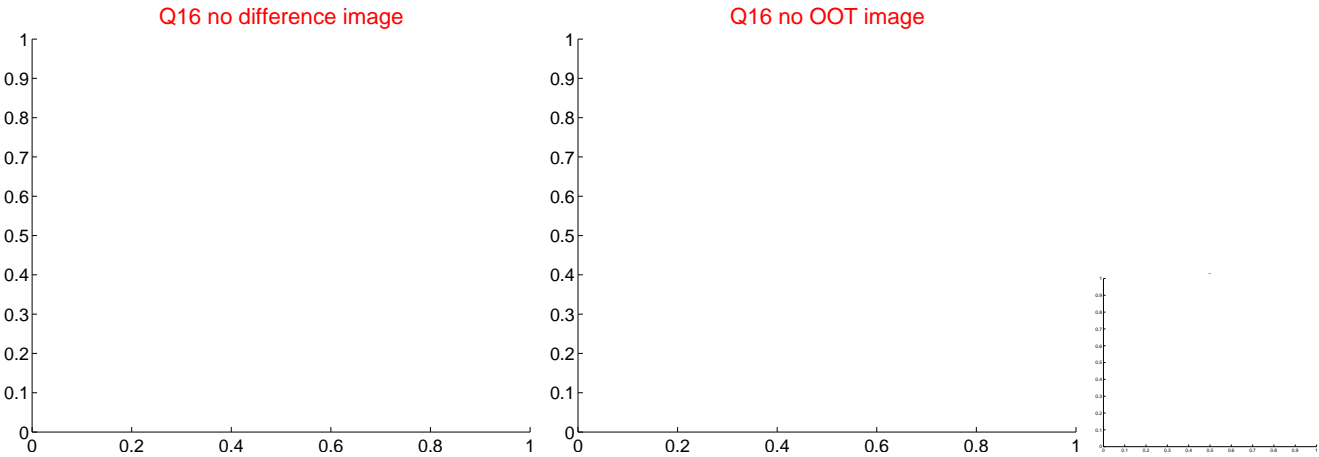
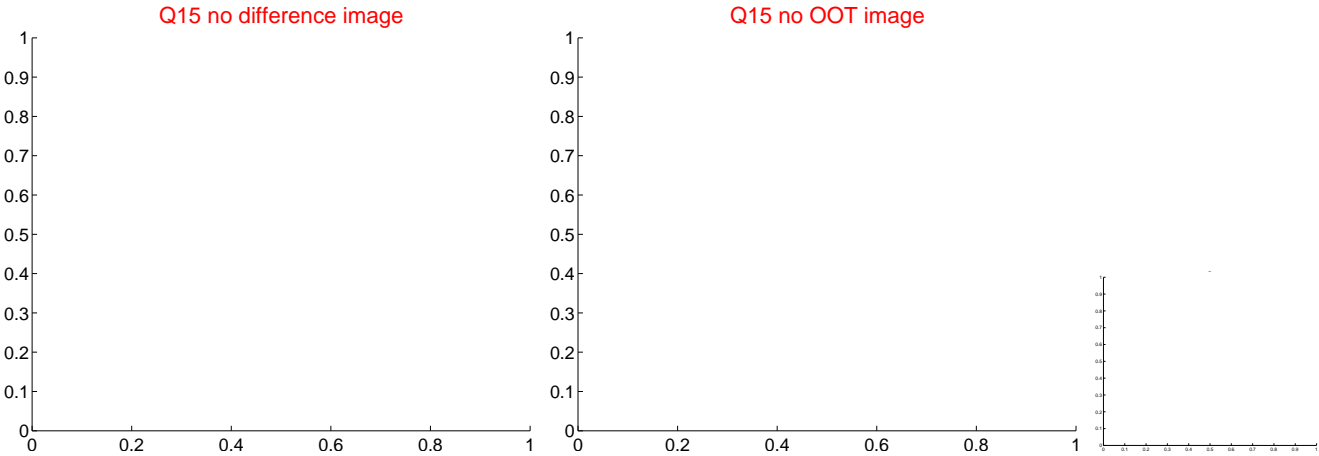
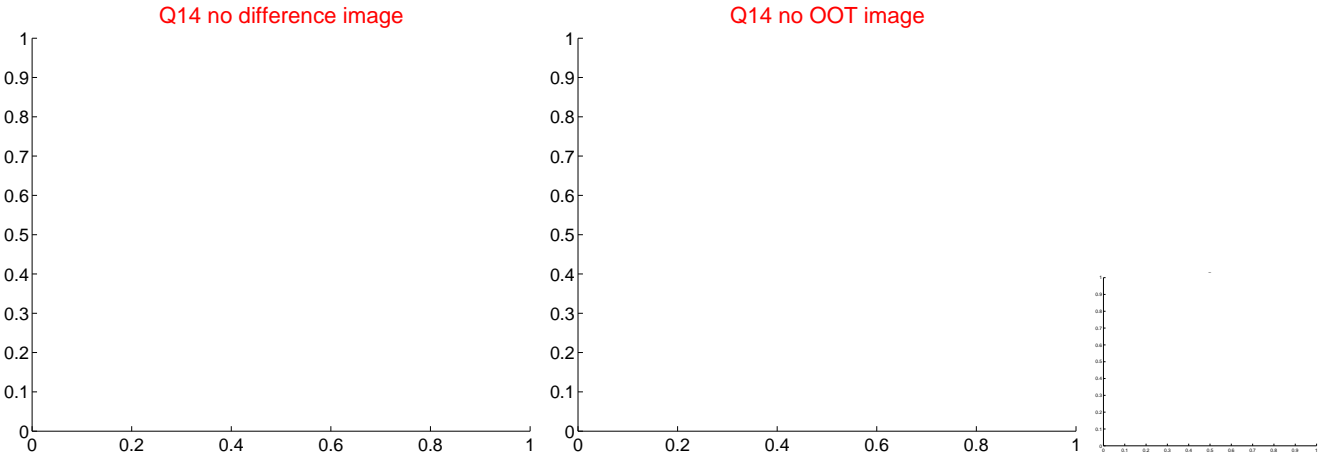
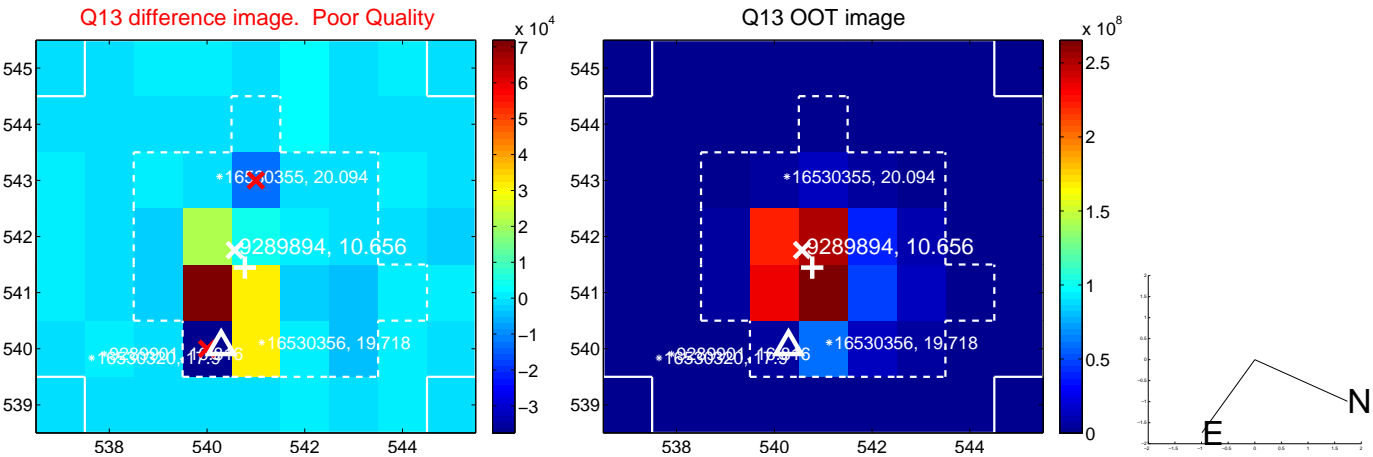
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



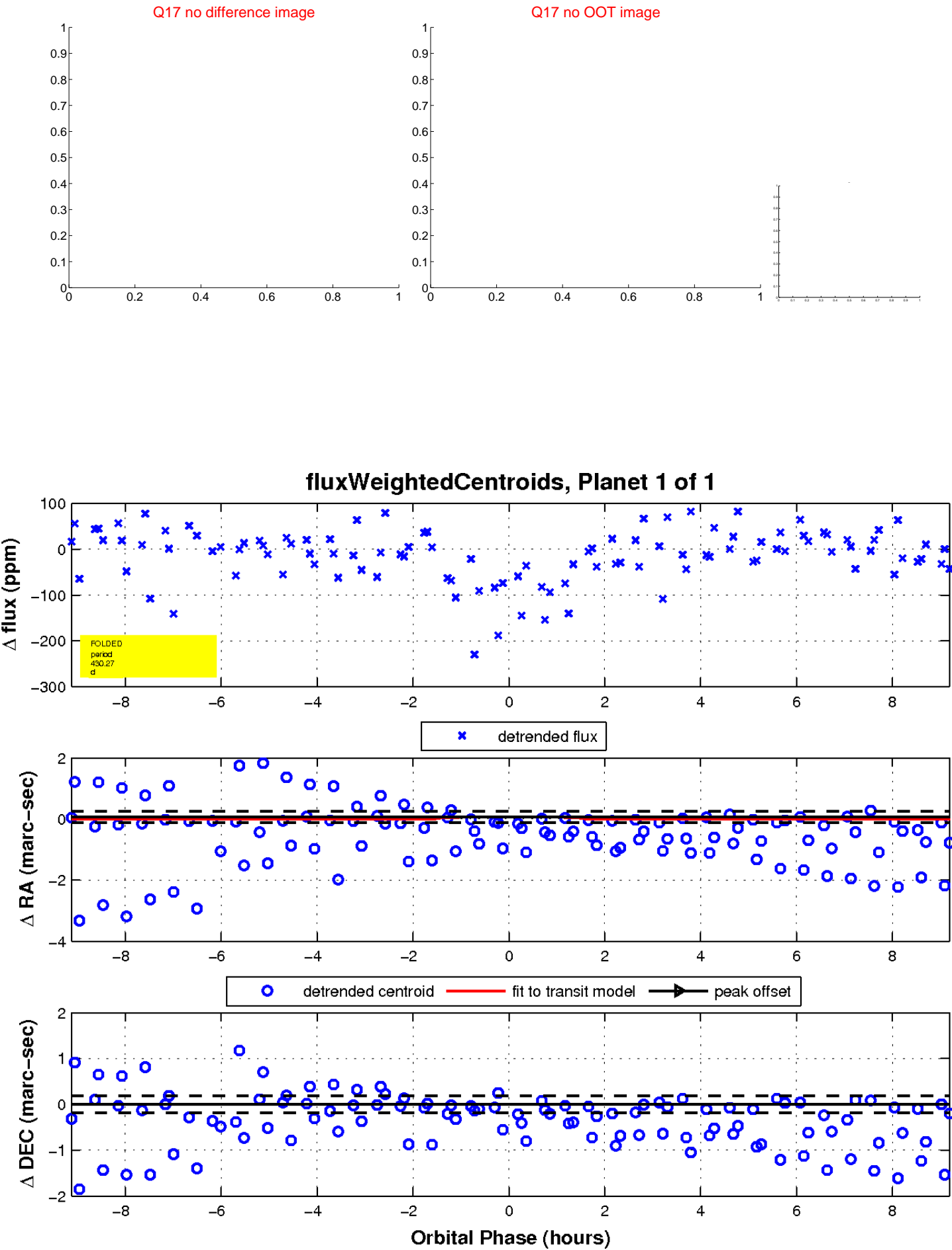
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

