

KIC 009897089

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})
009897089-01	OBS	No	2.418250	131.795349	163.0	24.903	15.9	22.7	2.10	7435	2.69	7042.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009897089-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

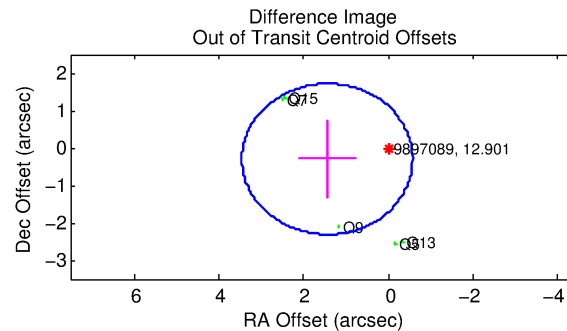
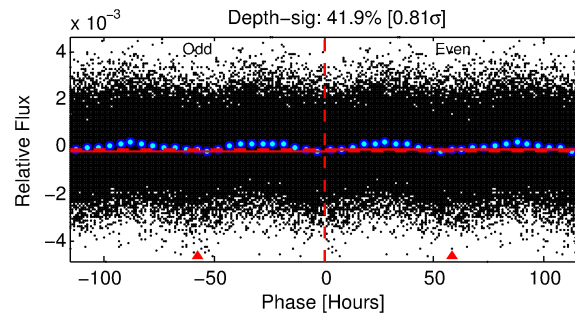
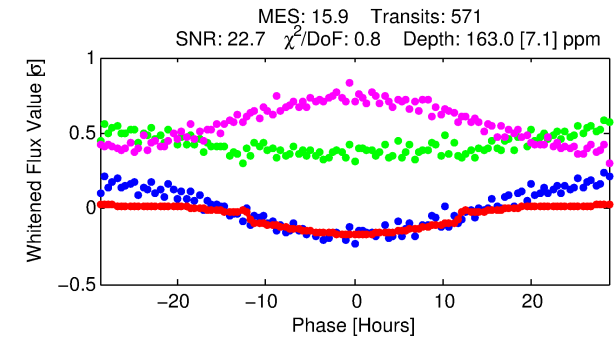
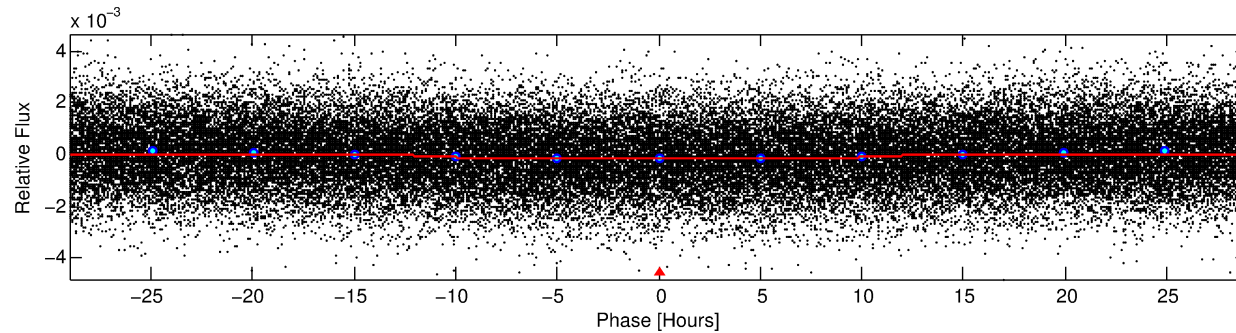
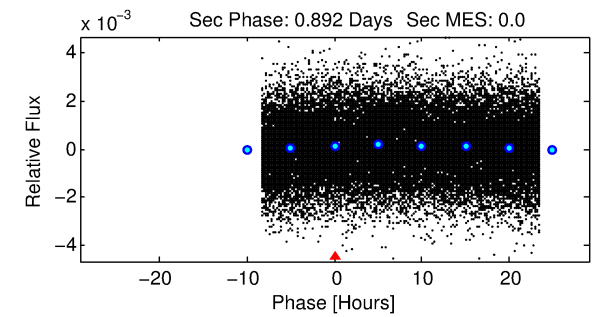
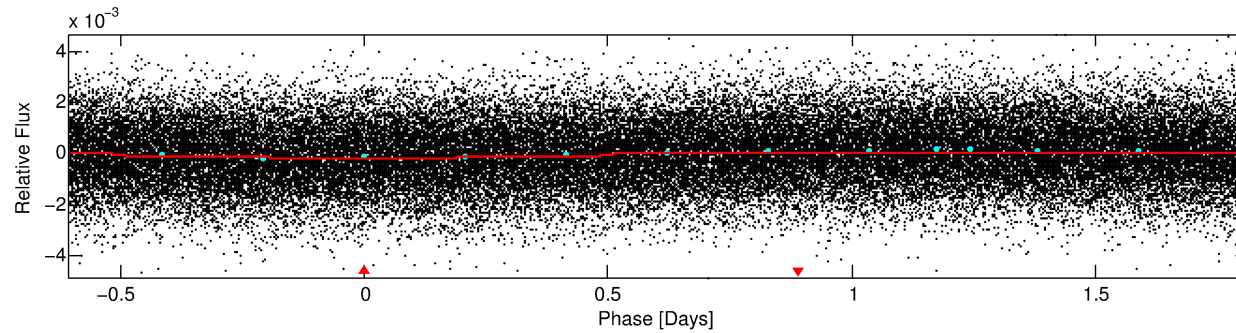
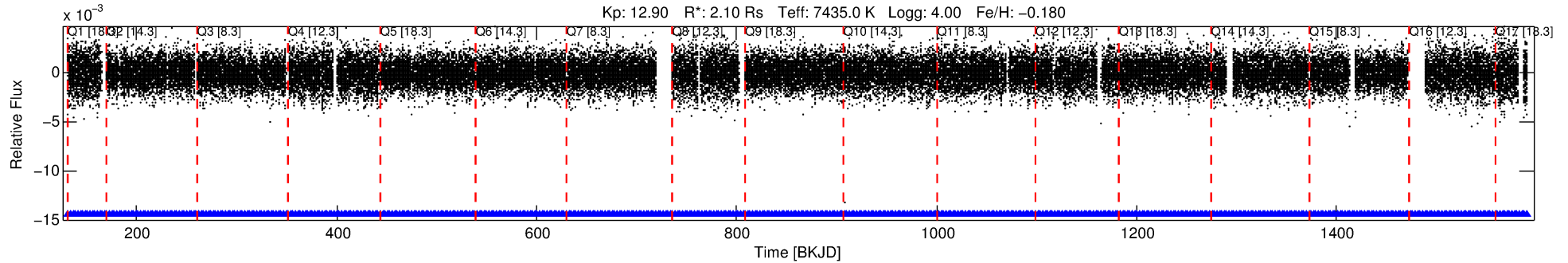
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009897089-01

No Significant Match Found

DV One-Page Summary

KIC: 9897089 Candidate: 1 of 1 Period: 2.418 d



DV Fit Results:

Period = 2.41825 [0.00005] d
Epoch = 131.7953 [0.0119] BKJD
Rp/R* = 0.0118 [0.0021]
a/R* = 1.04 [0.07]
b = 0.15 [6.09]
Seff = 7042.86 [1928.94]
Teq = 2336 [160] K
Rp = 2.69 [0.69] Re
a = 0.0413 [0.0072] AU
Ag = N/A
Teffp = N/A

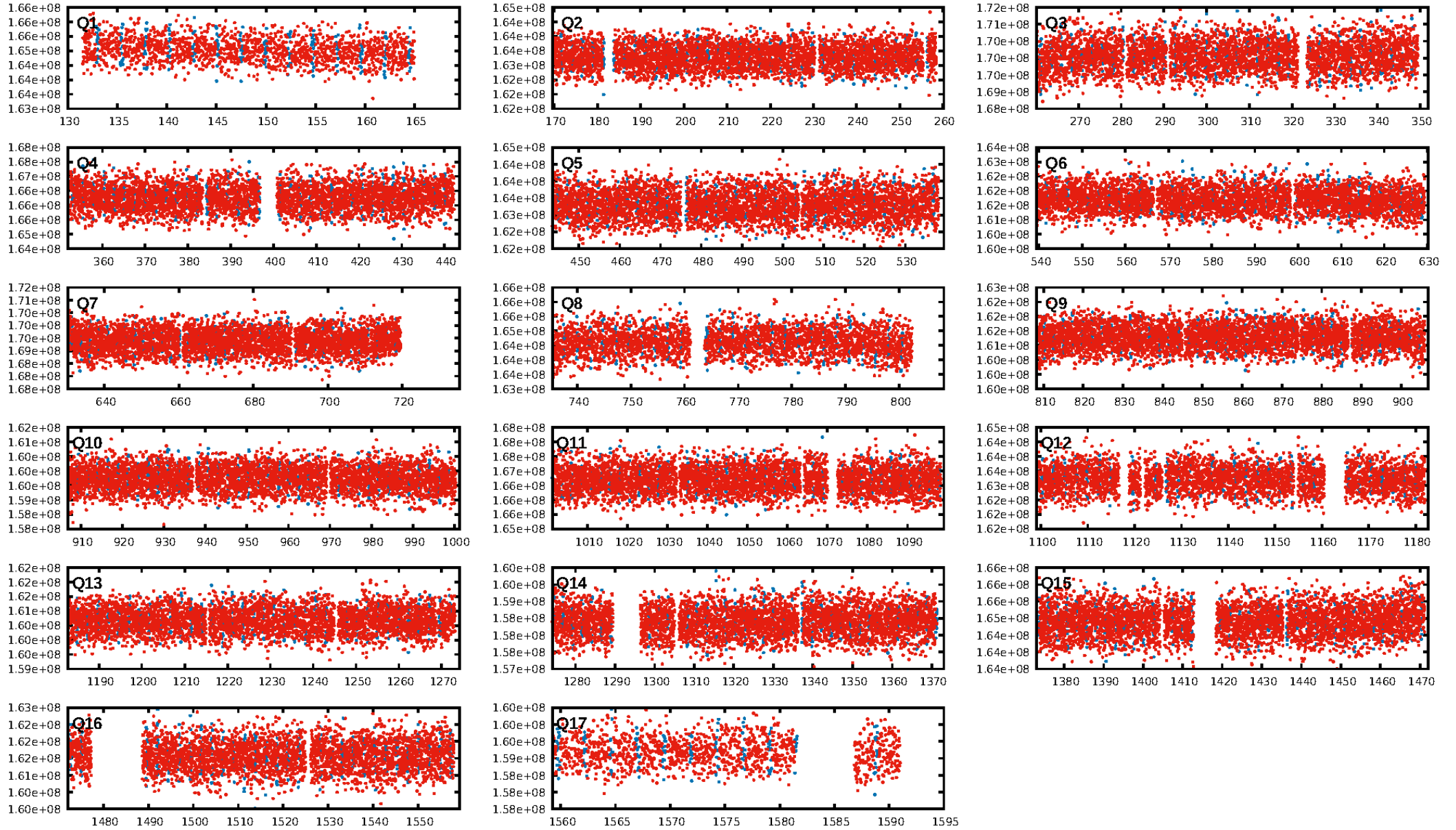
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [546/546]
GhostDiagnostic-chr: 2.034
Centroid-sig: 7.9%
Centroid-so: 0.308 arcsec [5.19σ]
OotOffset-rm: 1.468 arcsec [2.19σ]
KicOffset-rm: 1.422 arcsec [1.97σ]
OotOffset-st: 0/2/0/3 [5]
KicOffset-st: 0/2/0/3 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [17/17]

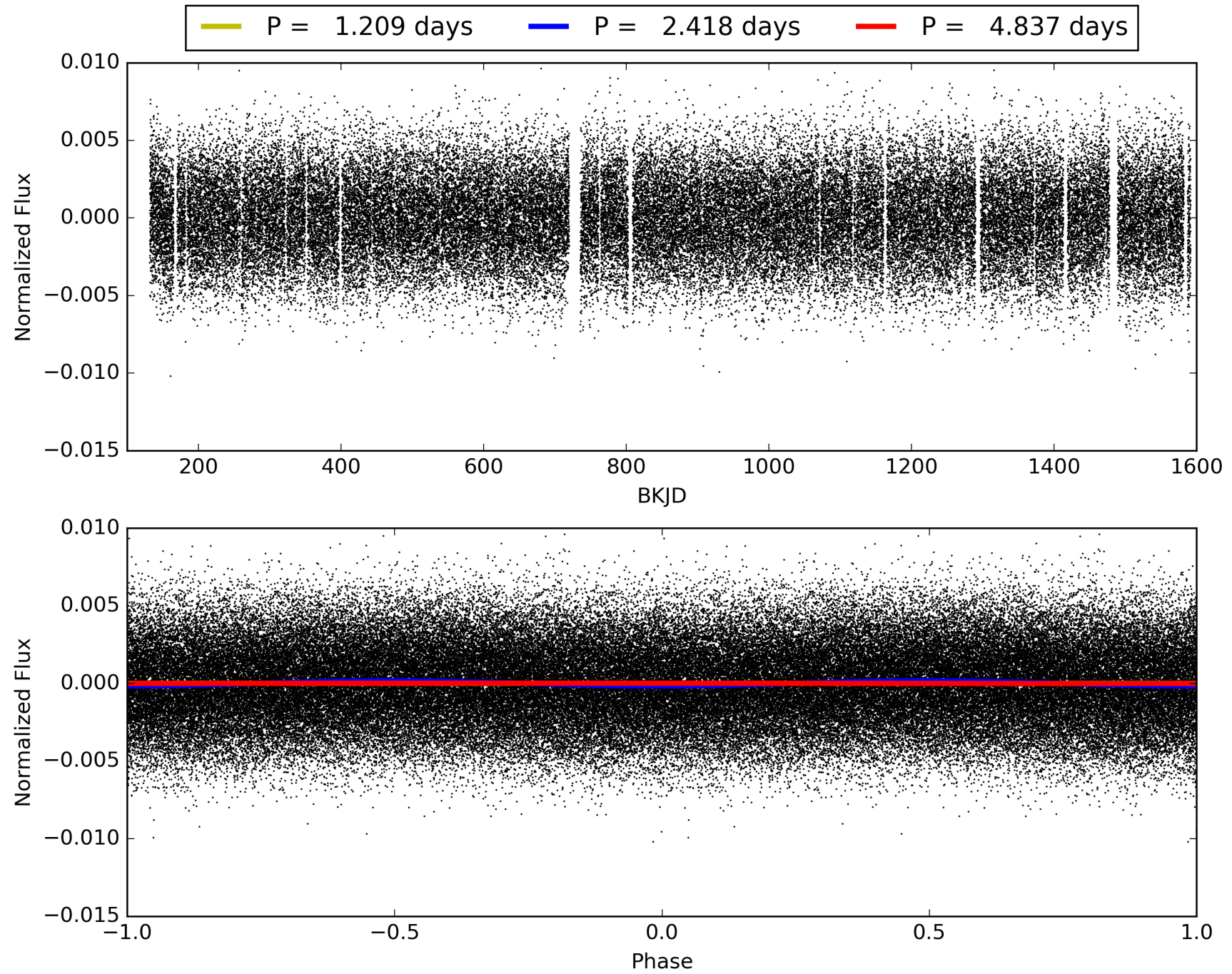
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:08:02 Z

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

TCE 009897089-01, PDC Light Curves

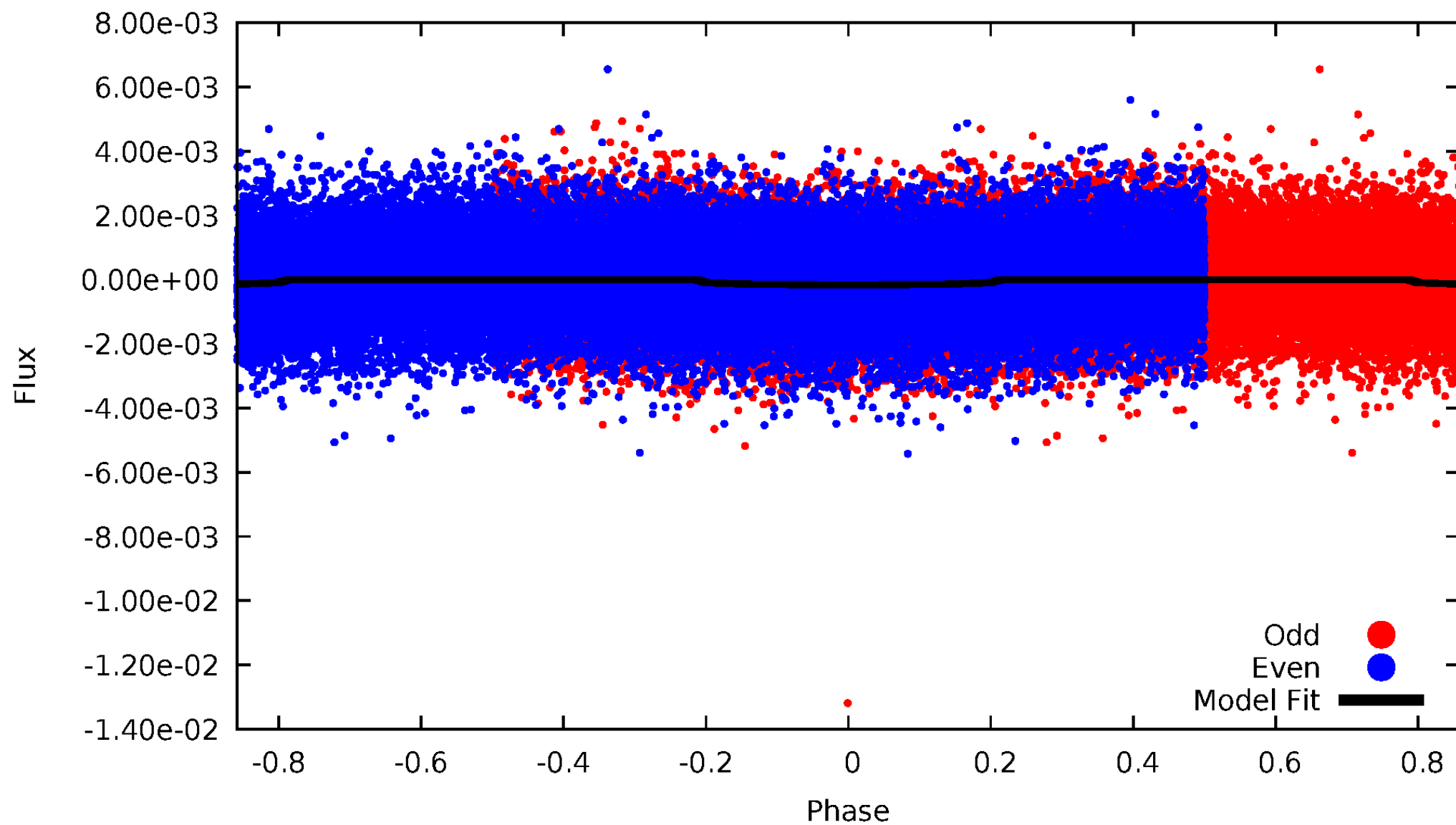


TCE 009897089-01



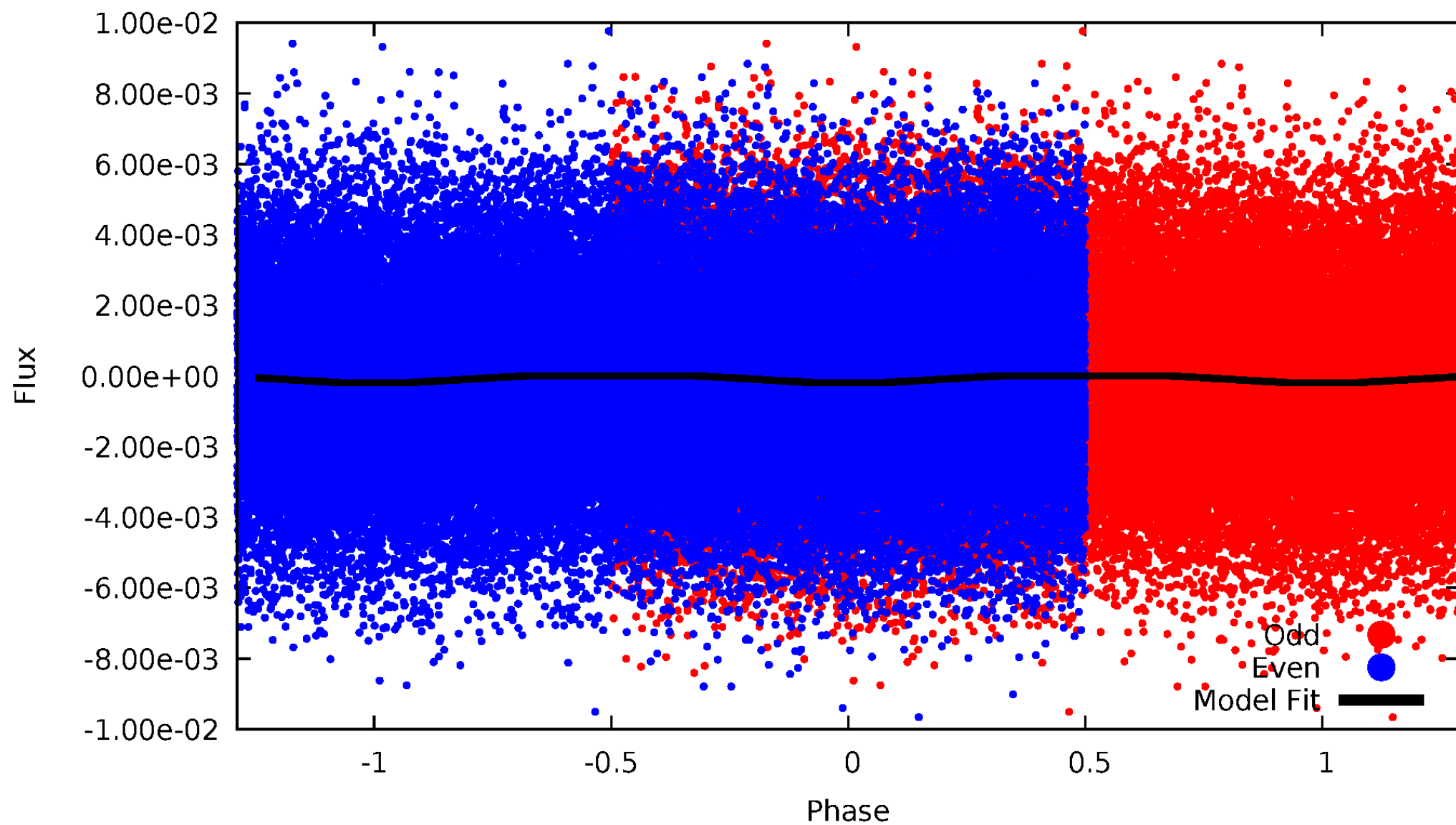
DV Odd/Even

TCE 009897089-01



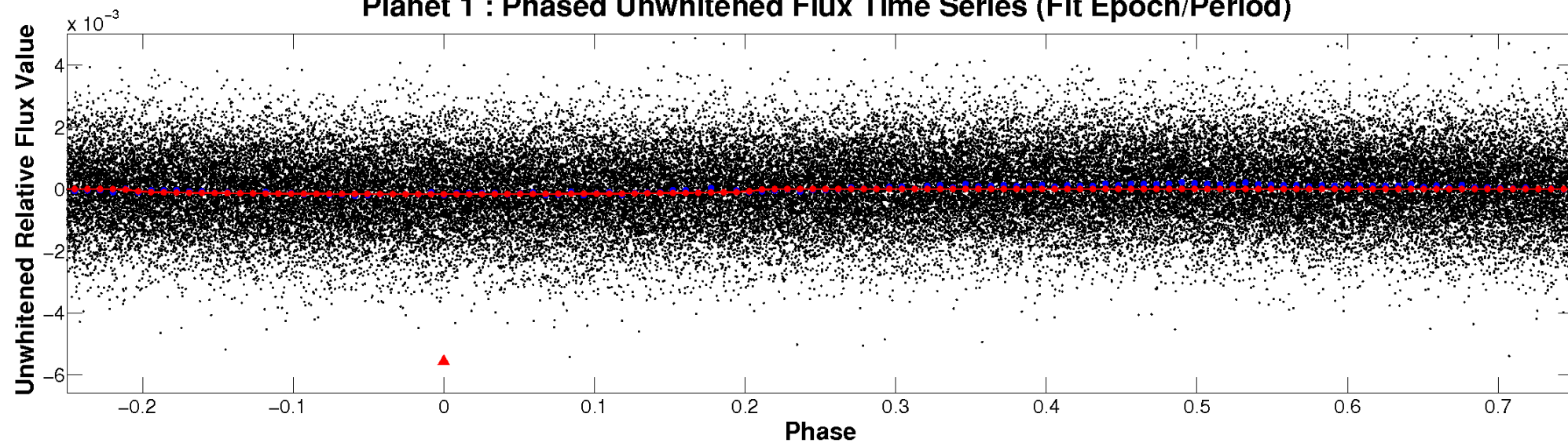
ALT Odd/Even

TCE 009897089-01

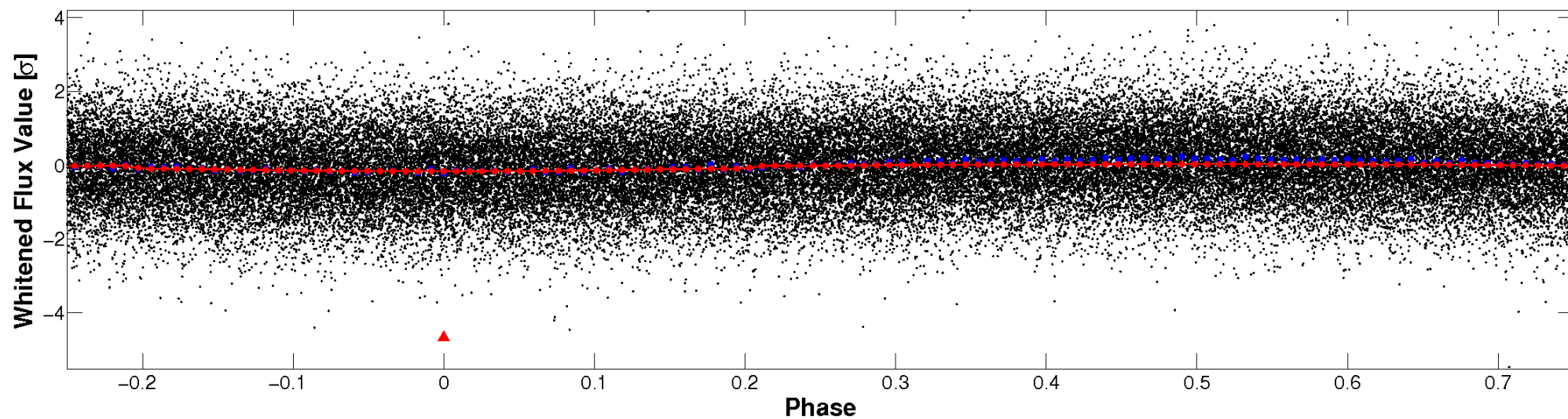


Non-Whitened Vs. Whitened Light Curve

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

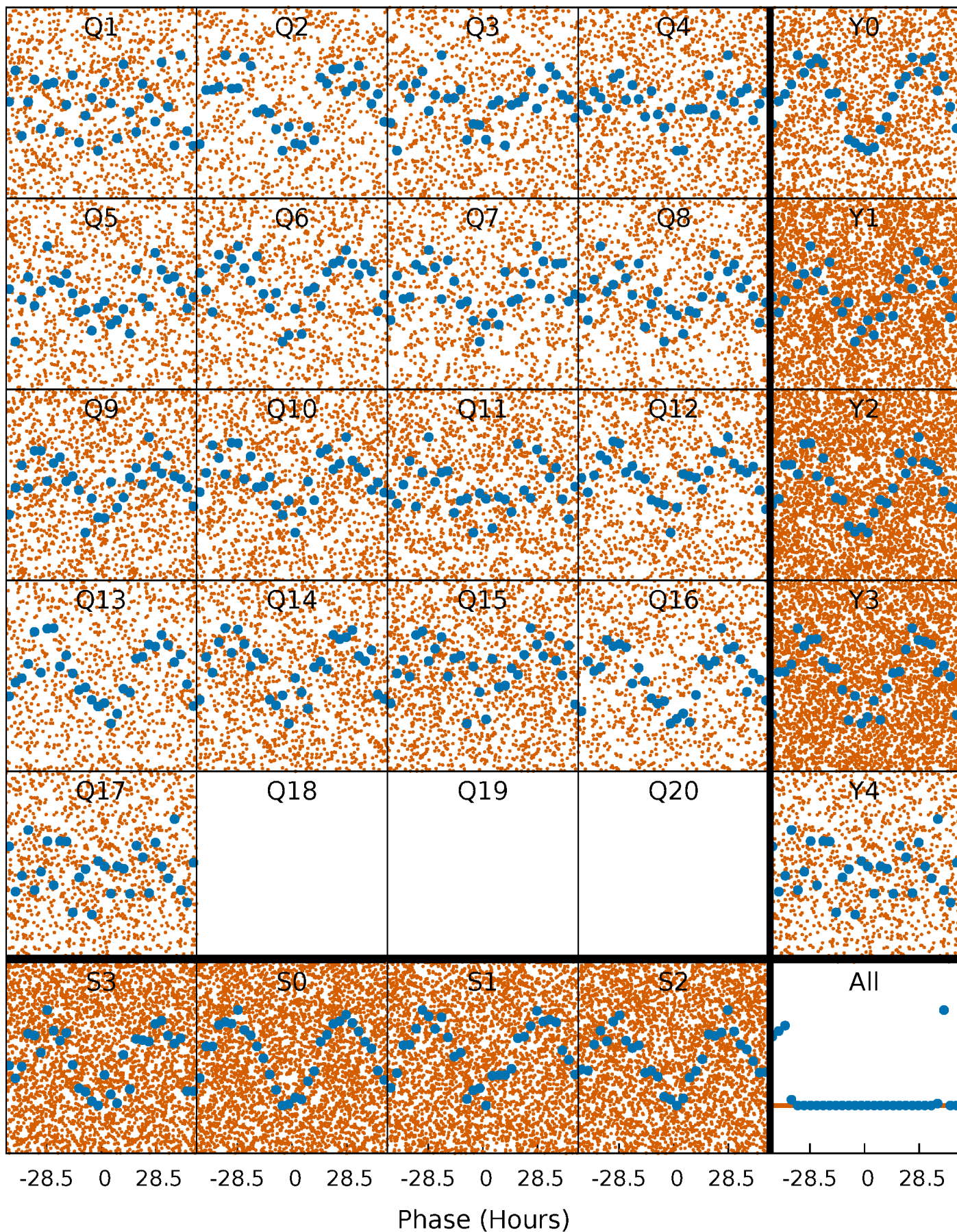


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



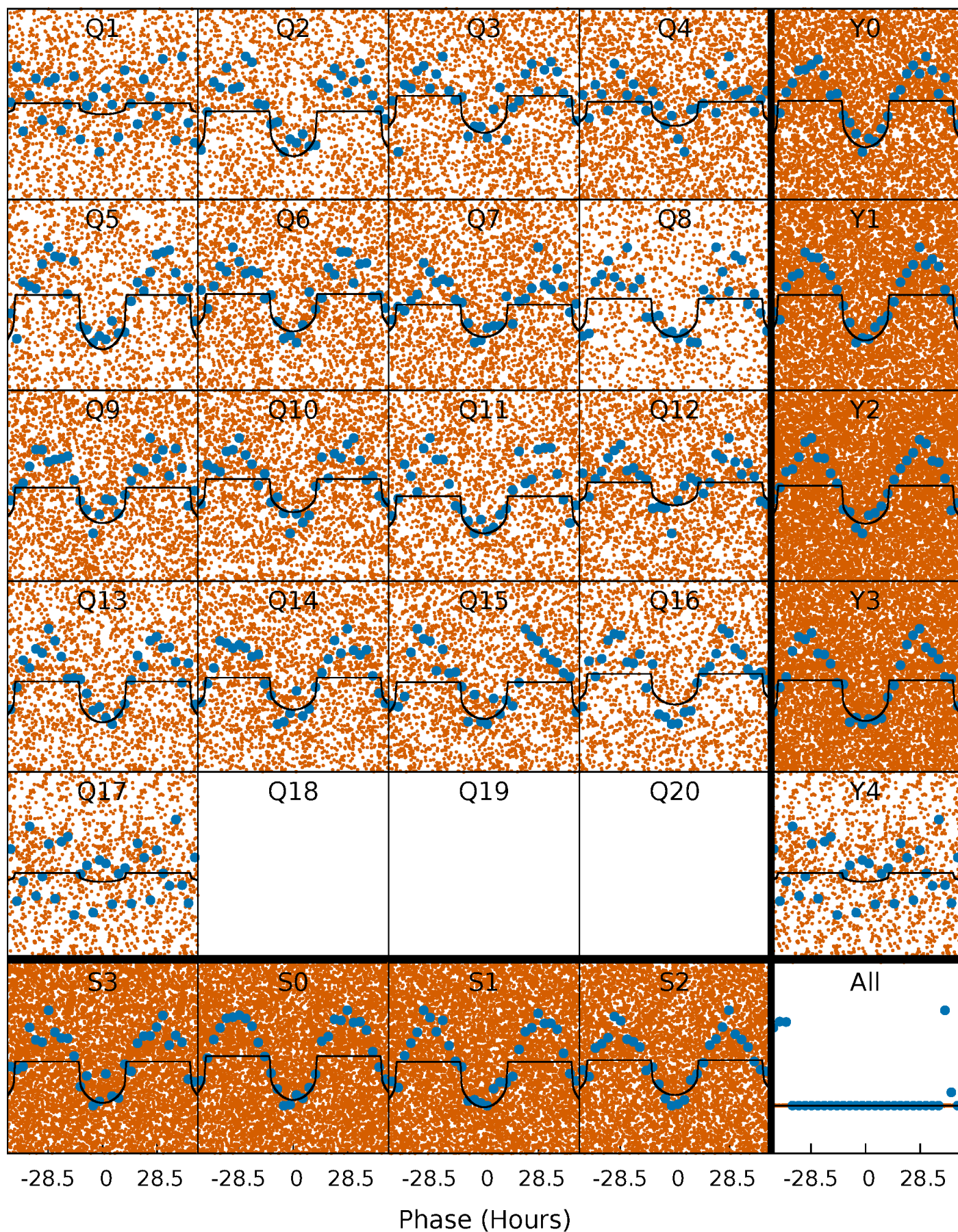
PDC Quarter-Phased Transit Curves

TCE 009897089-01 P= 2.418250 Days $T_0=131.795349$ (BKJD)



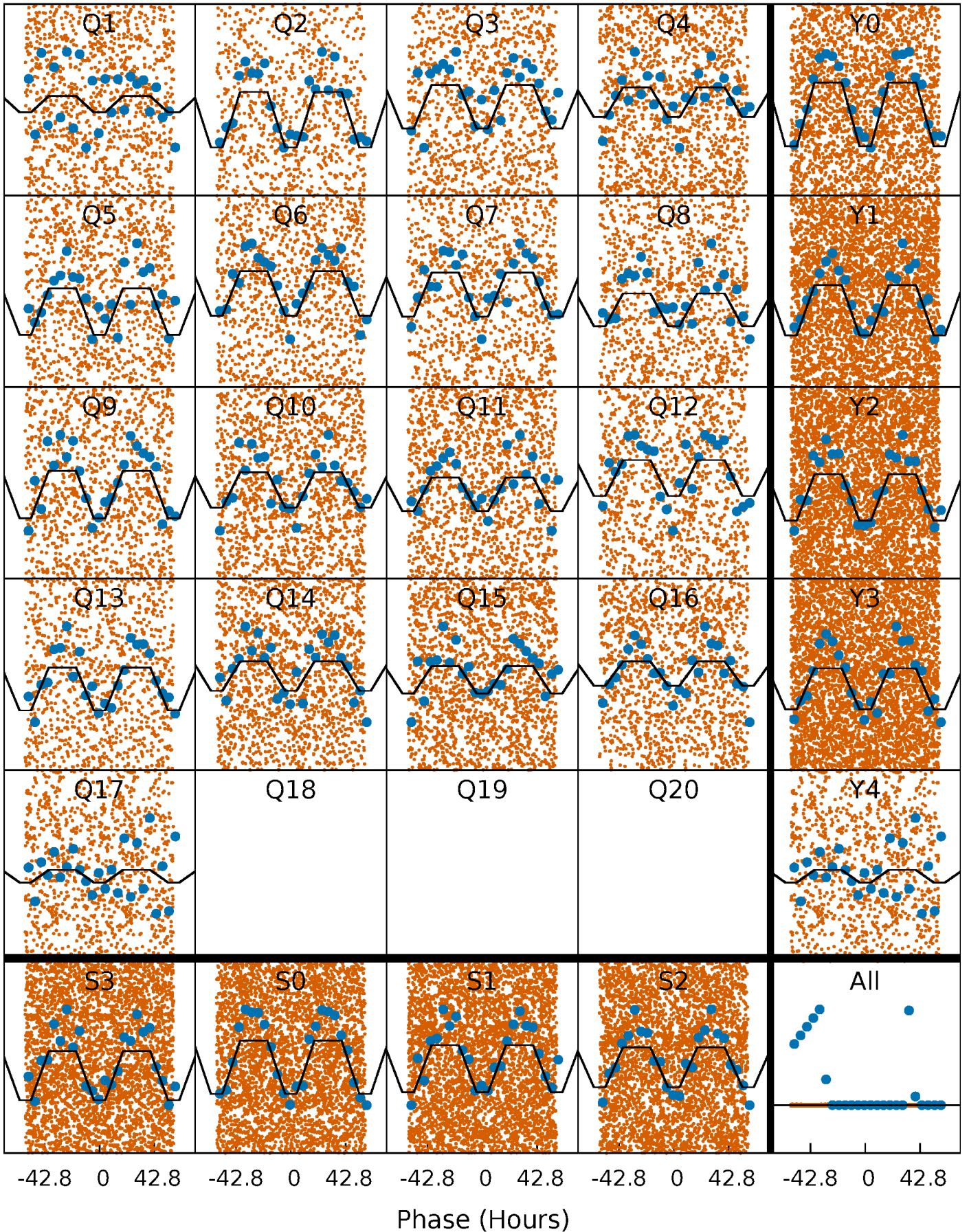
DV Quarter-Phased Transit Curves

TCE 009897089-01 P= 2.418250 Days $T_0=131.795349$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

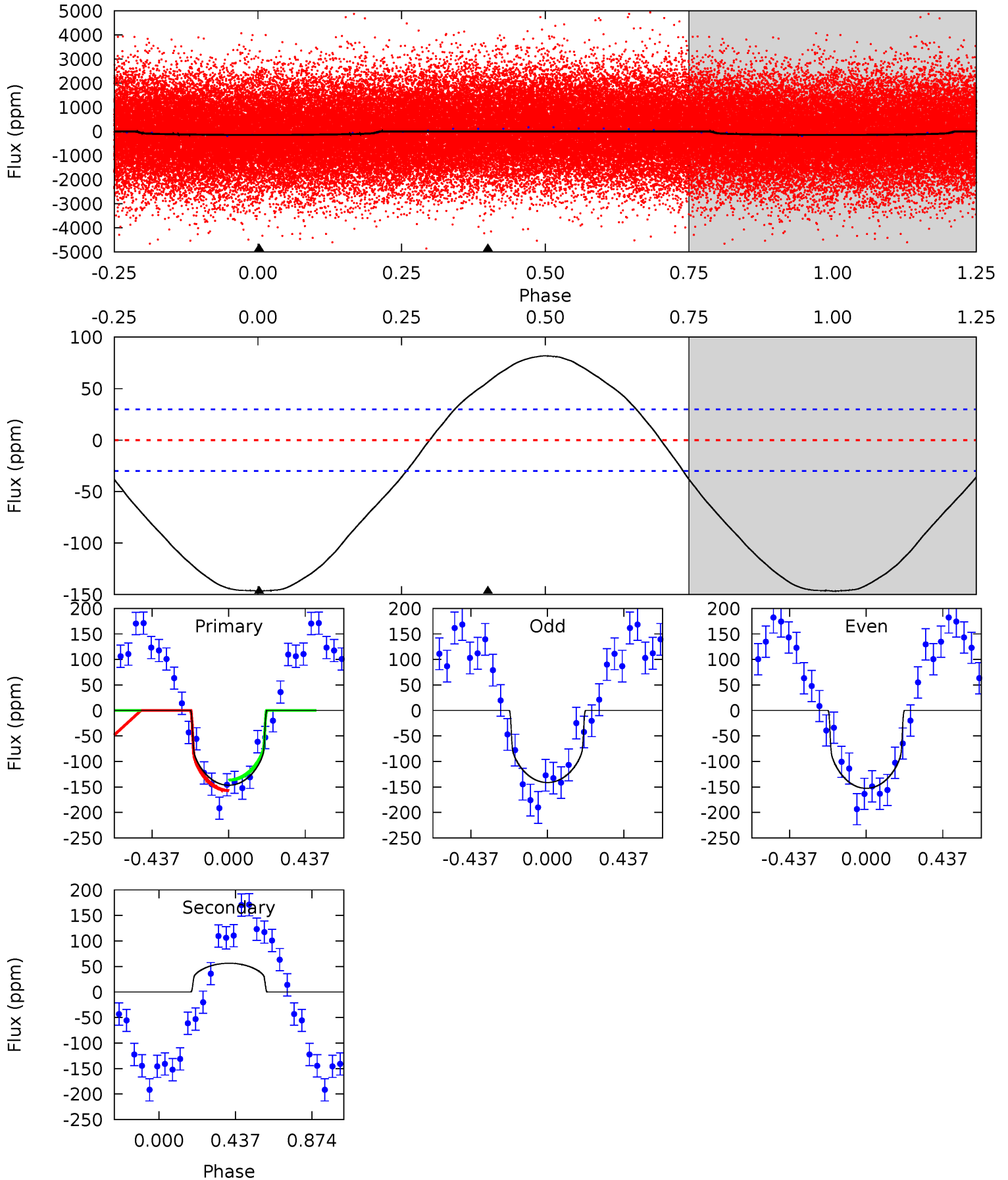
TCE 009897089-01 P= 2.418193 Days $T_0=131.784701$ (BKJD)



DV Model-Shift Uniqueness Test

009897089-01, P = 2.418250 Days, E = 129.377099 Days

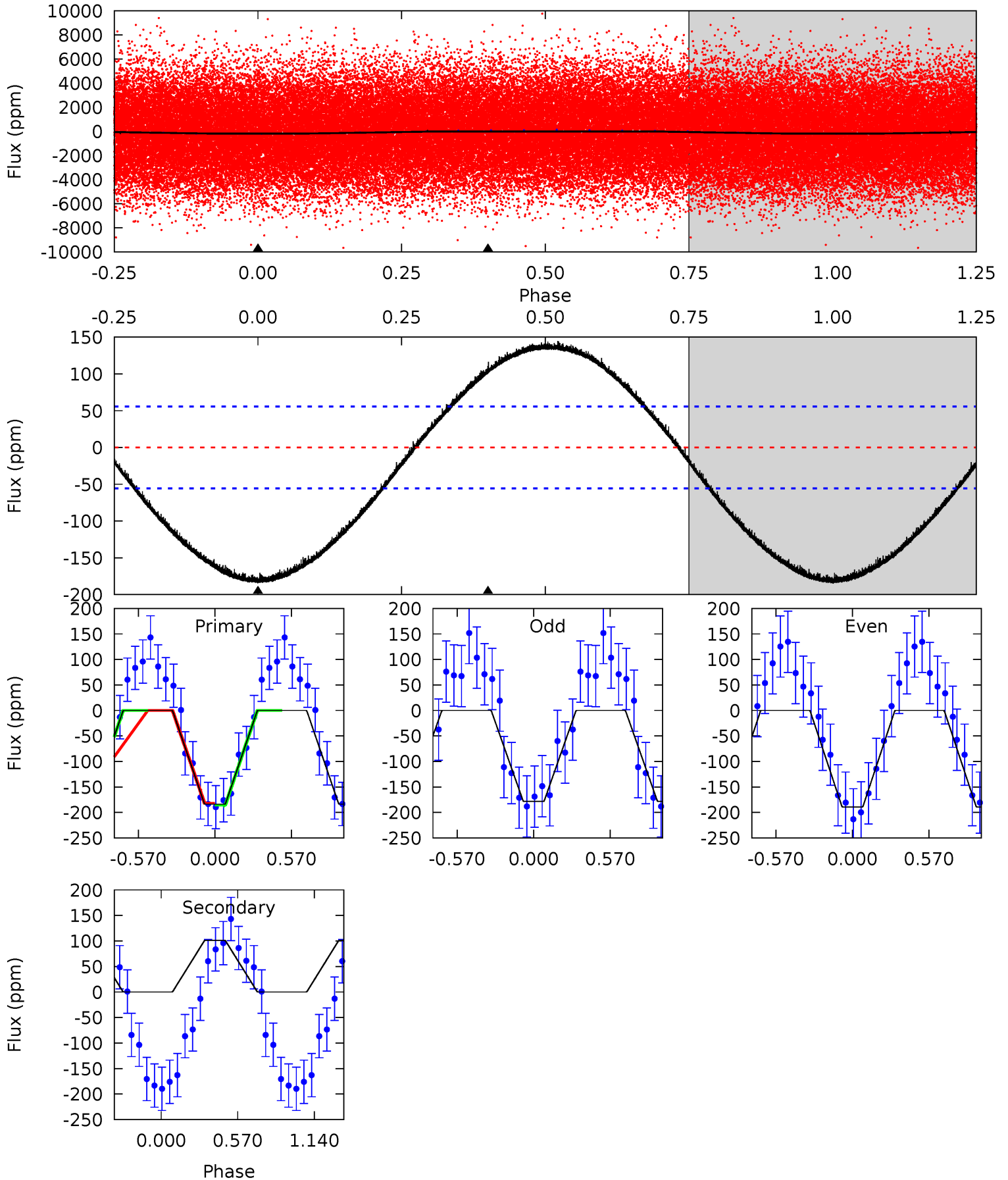
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.8	-7.99	0	0	4.25	0.78	3.02	20.8	20.8	-7.99	-7.99	0.80	0.94	0.36	1.47



Alt Model-Shift Uniqueness Test

009897089-01, P = 2.418193 Days, E = 129.366508 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	-7.60	0	0	4.19	0.57	2.25	13.8	13.8	-7.60	-7.60	0.41	1.04	0.44	0.14



Stellar Parameters For KIC 009897089

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7435^{+81}_{-81}	$4.002^{+0.156}_{-0.117}$	$-0.180^{+0.150}_{-0.150}$	$2.097^{+0.356}_{-0.395}$	$1.607^{+0.144}_{-0.158}$	$0.245^{+0.205}_{-0.082}$
	+1%/-1%	+4%/-3%	+83%/-83%	+17%/-19%	+9%/-10%	+84%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009897089-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	56 ± 7	$2.66^{+0.57}_{-0.49}$	3262^{+159}_{-161}	-5916^{+454}_{-628}	$-7.403^{+2.424}_{-3.873}$
Alt.	101 ± 13	$3.08^{+0.55}_{-0.54}$	3266^{+141}_{-173}	-6362^{+473}_{-630}	$-10.021^{+3.000}_{-4.860}$

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 $A_{obs} \gg 1.0$

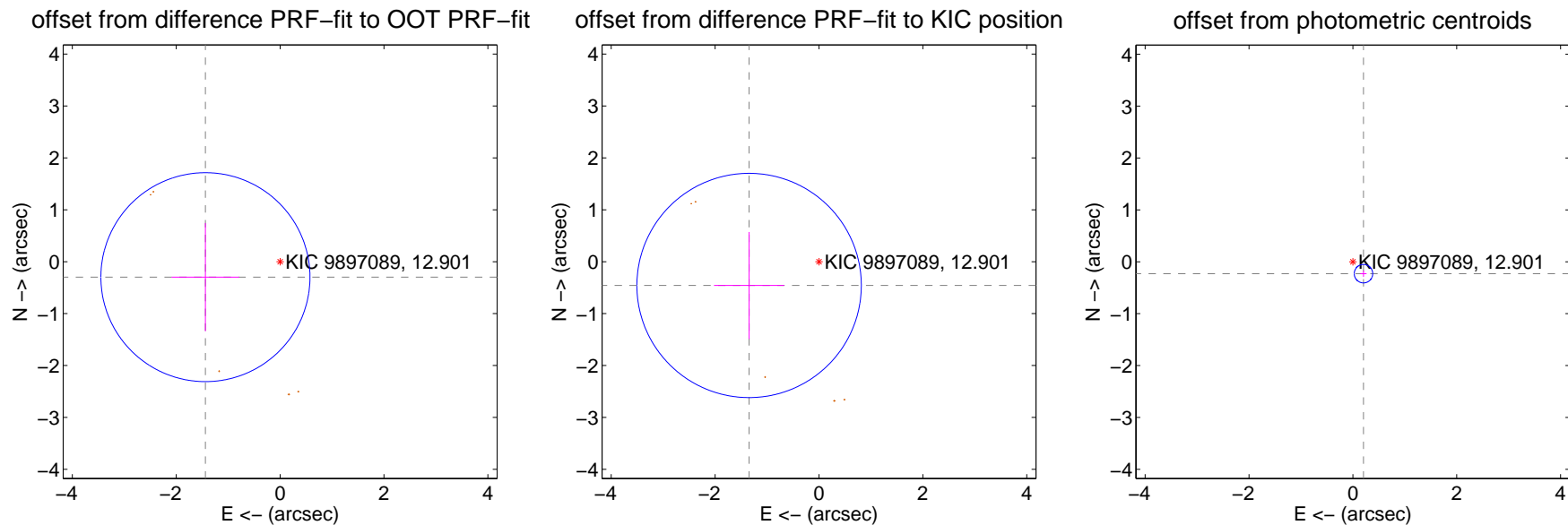
DV Centroid Data

Supplemental centroid analysis for 009897089-01. Kepler magnitude: 12.90. Transit SNR 22.68

There are 0 quarters with good PRF difference image offsets

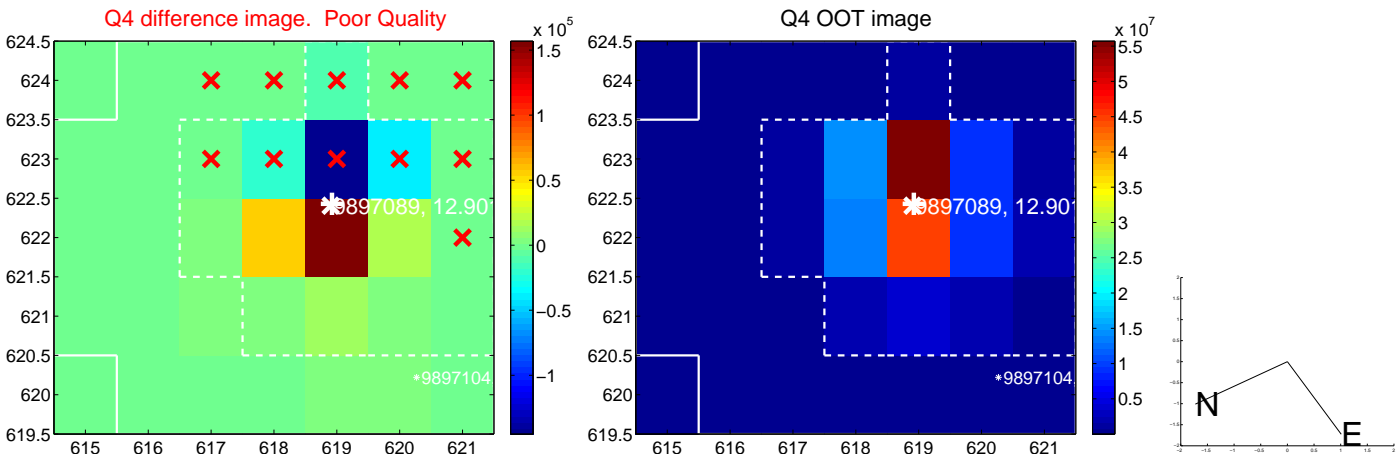
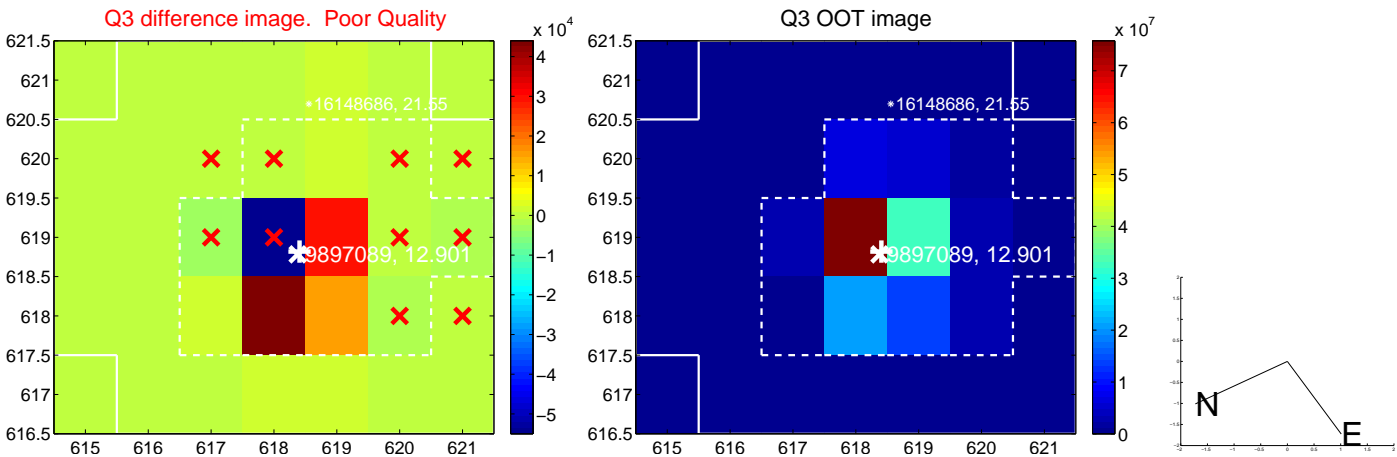
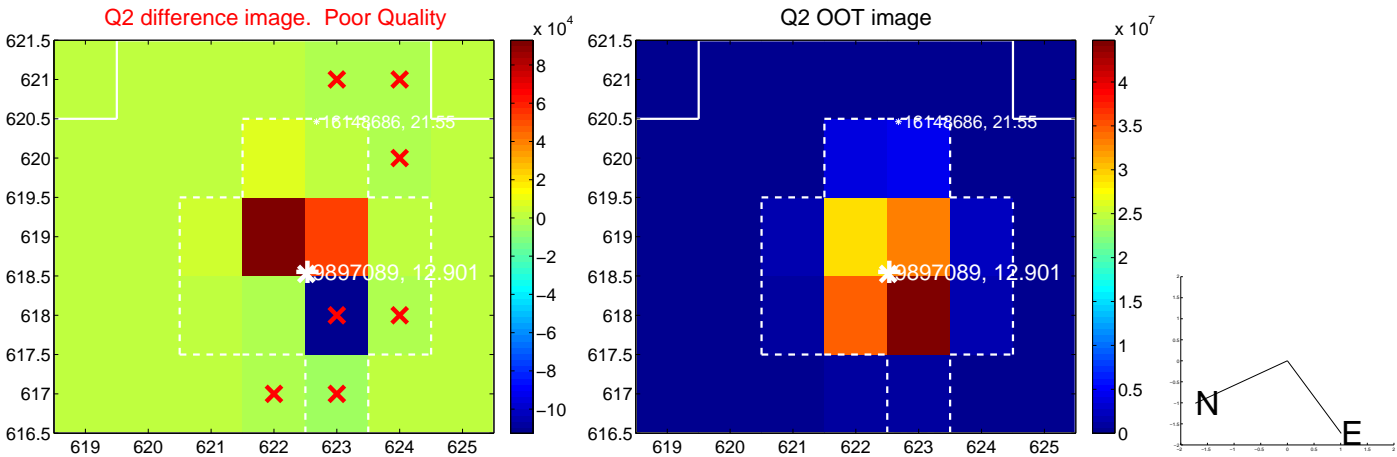
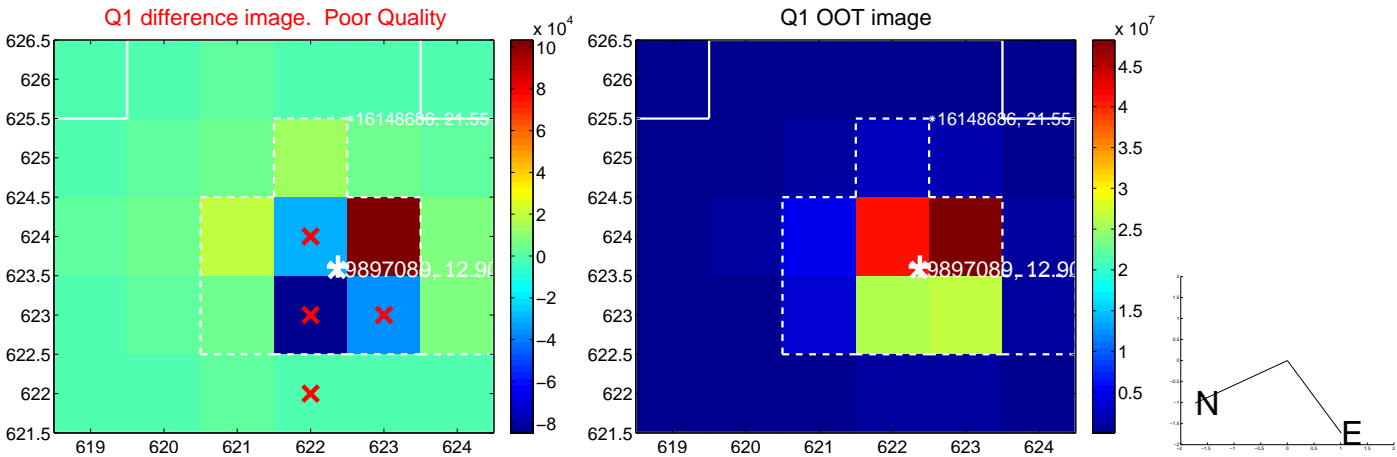
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.468 ± 0.671	2.19	1.438 ± 0.650	-0.298 ± 1.042
PRF-fit source offset from KIC position	1.422 ± 0.720	1.97	1.346 ± 0.675	-0.458 ± 1.031
photometric centroid source offset	0.31 ± 0.06	5.19	-0.20 ± 0.06	-0.23 ± 0.06

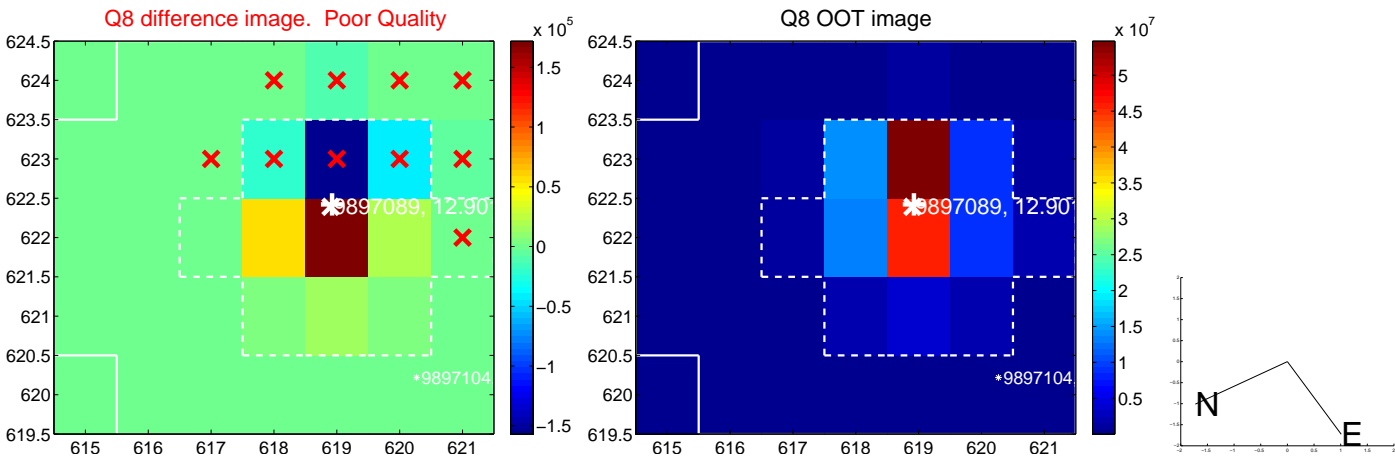
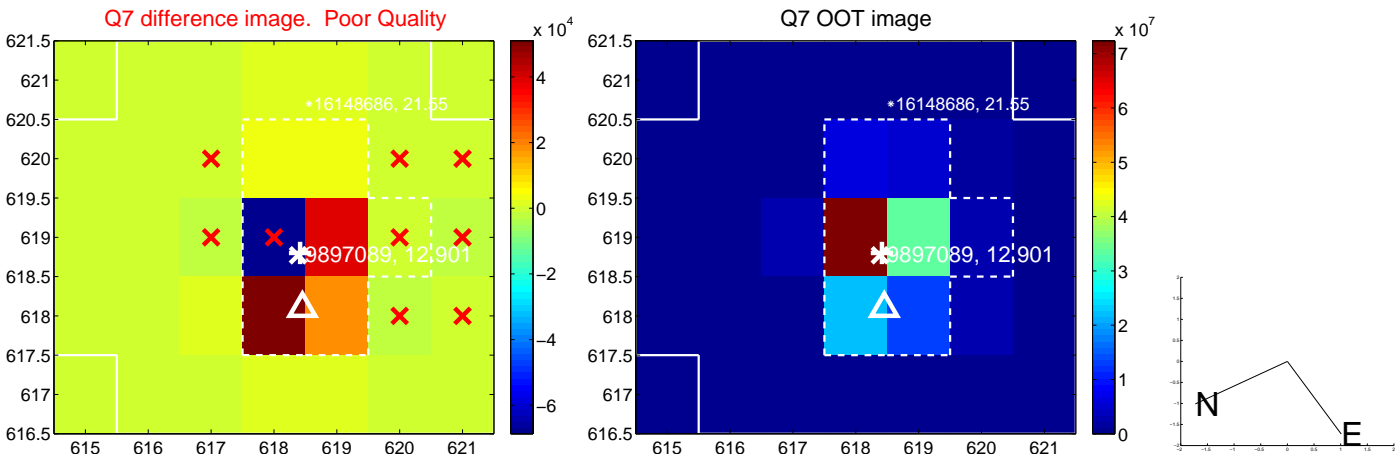
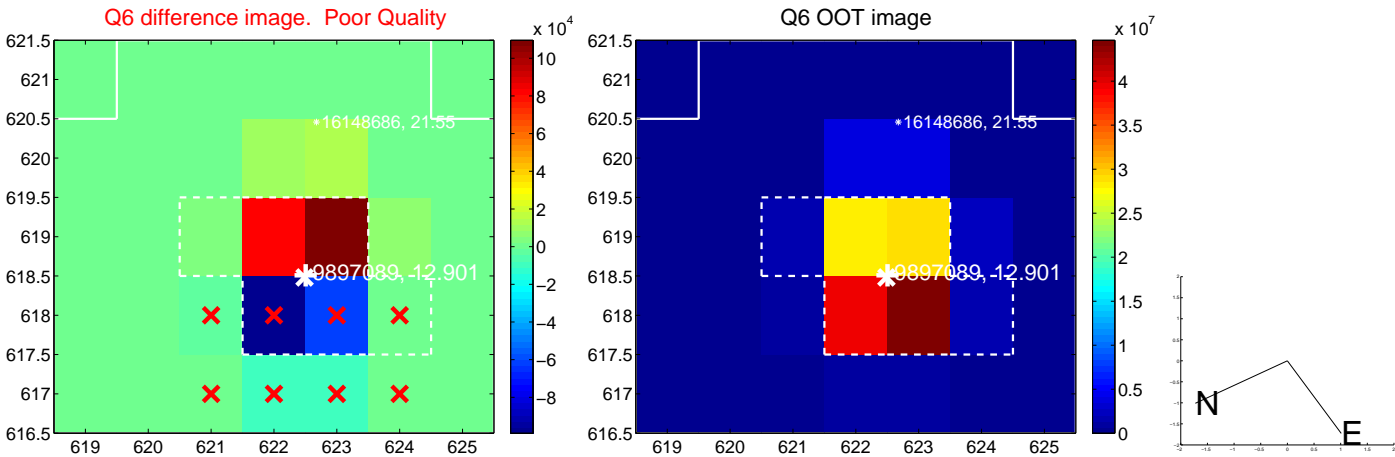
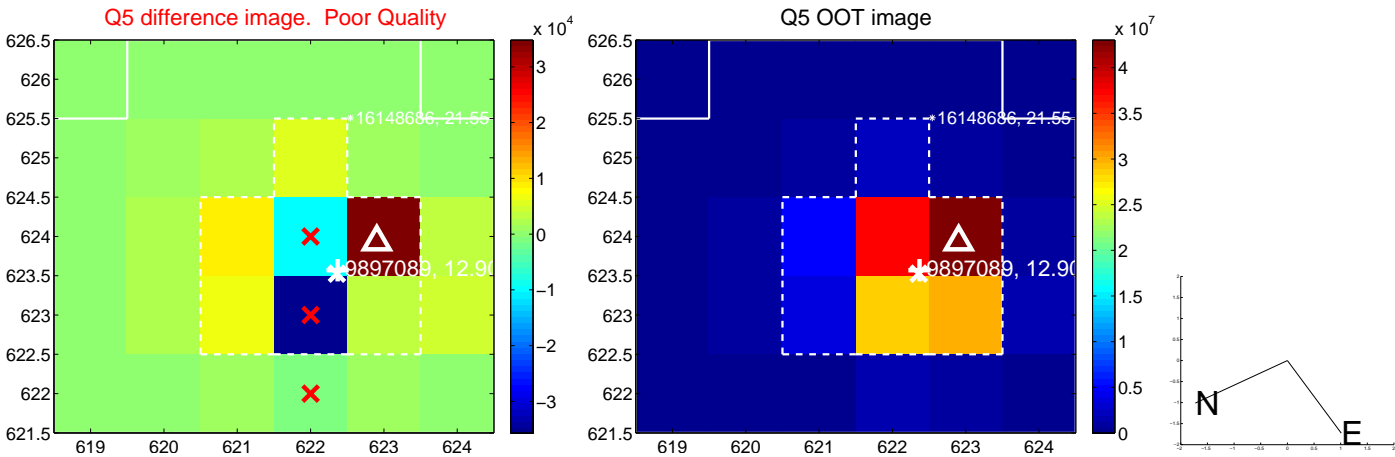


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

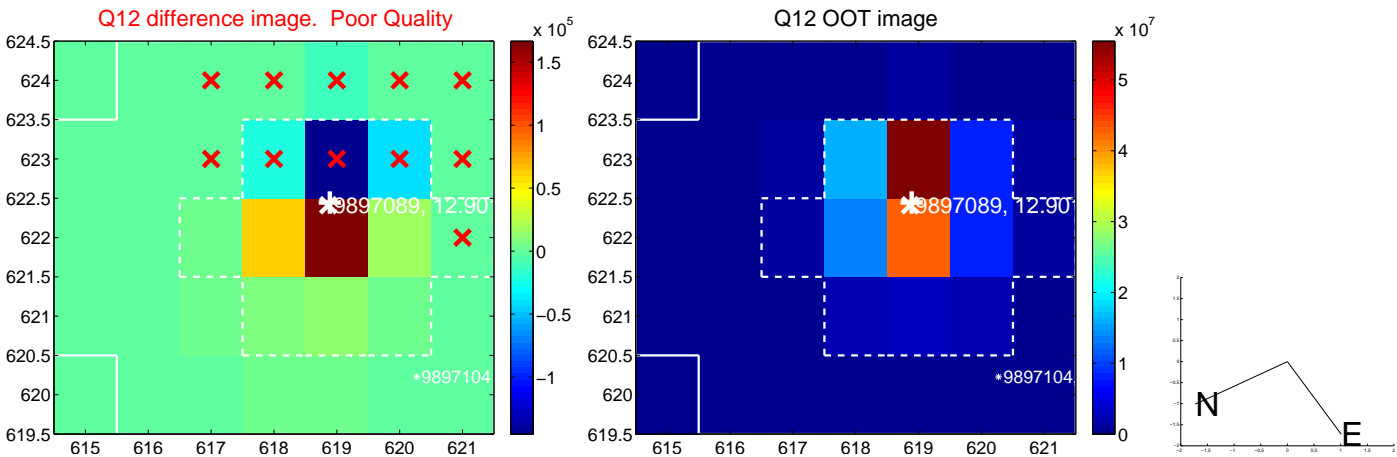
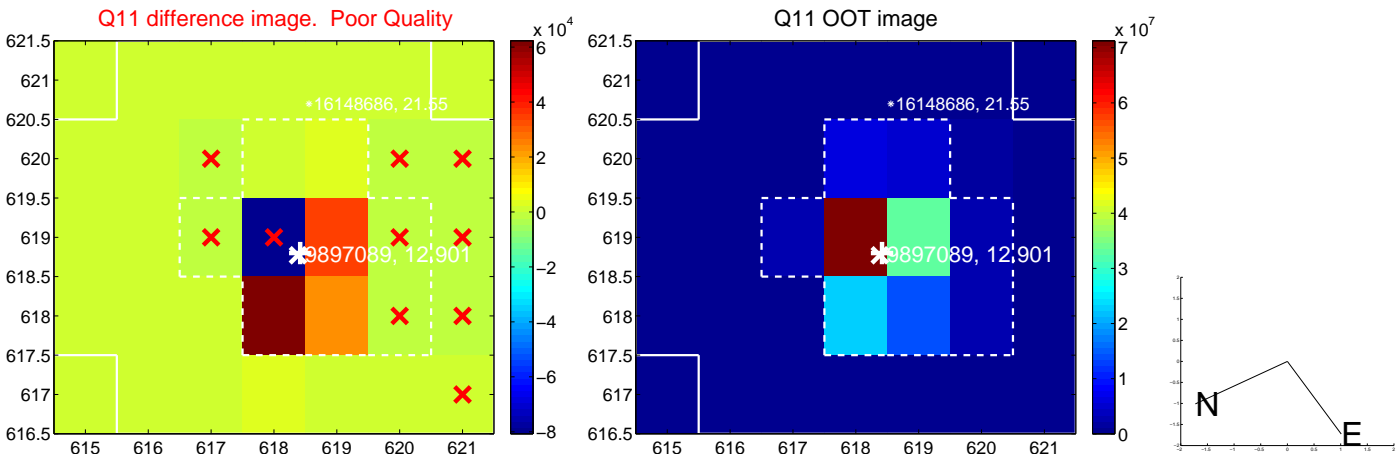
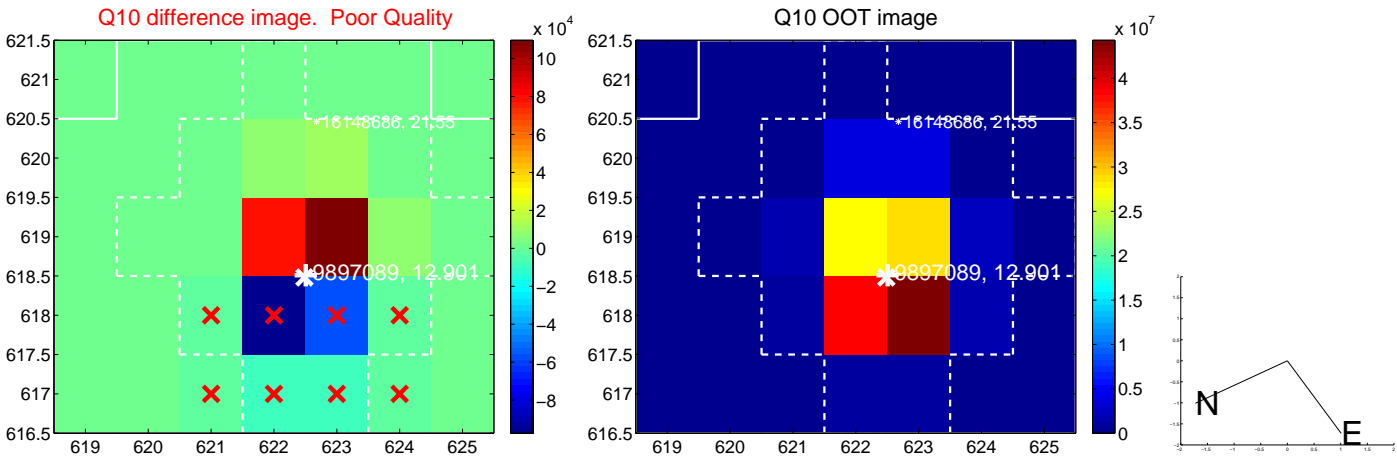
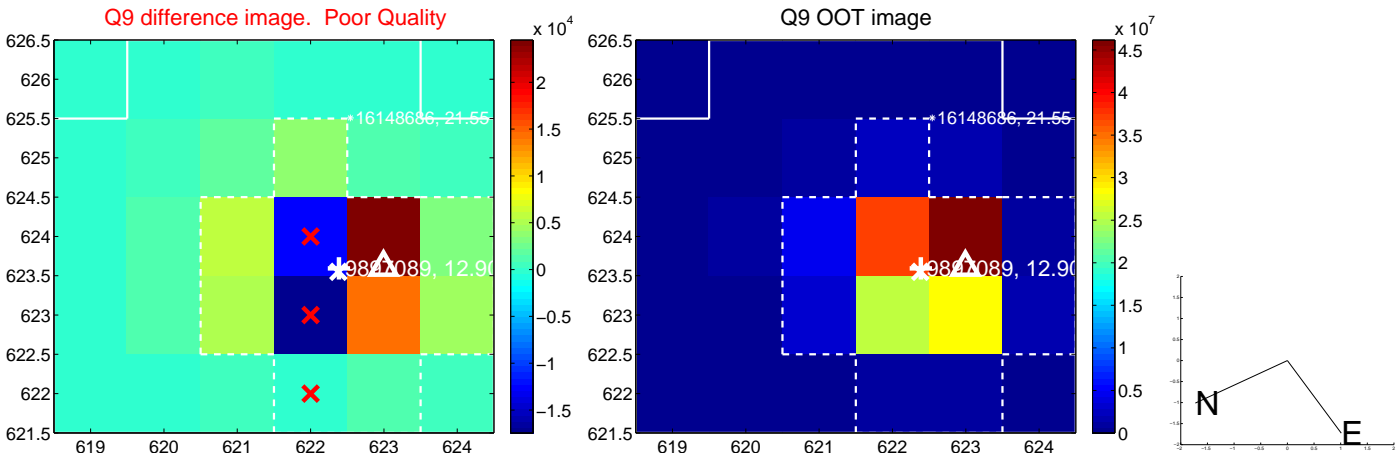
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



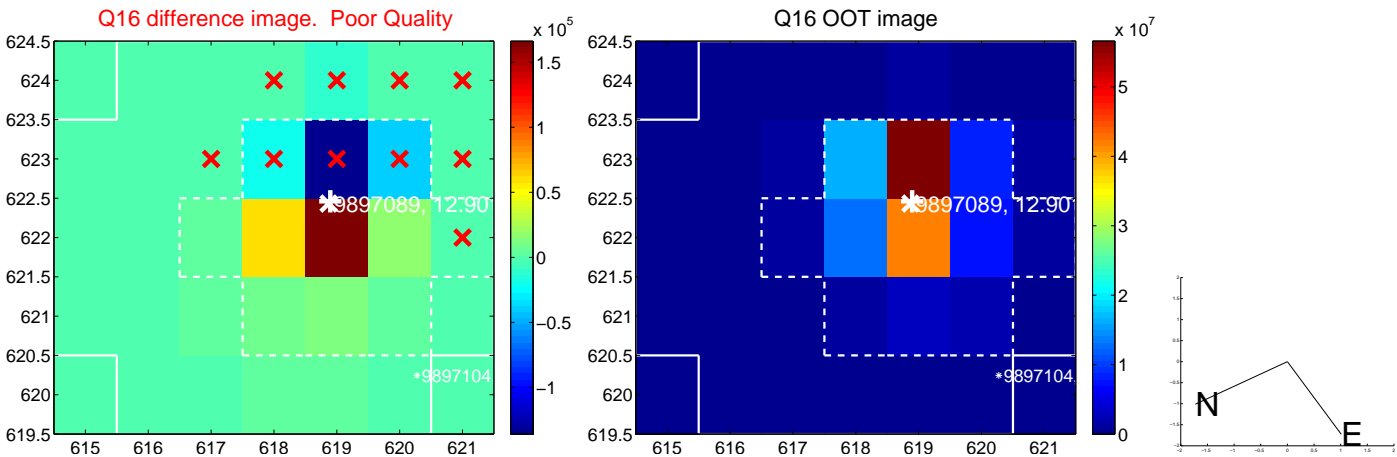
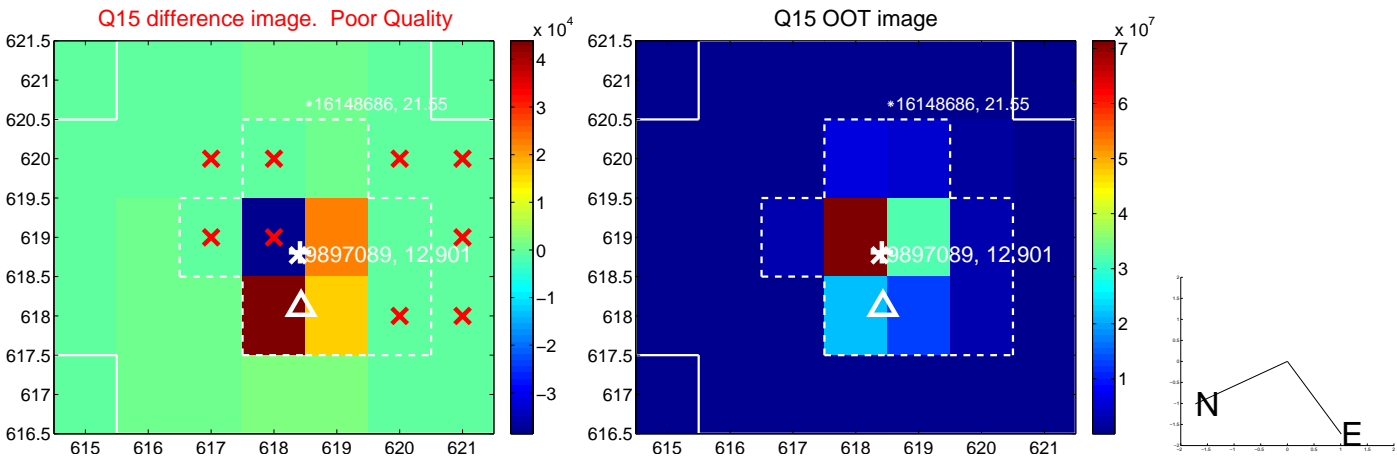
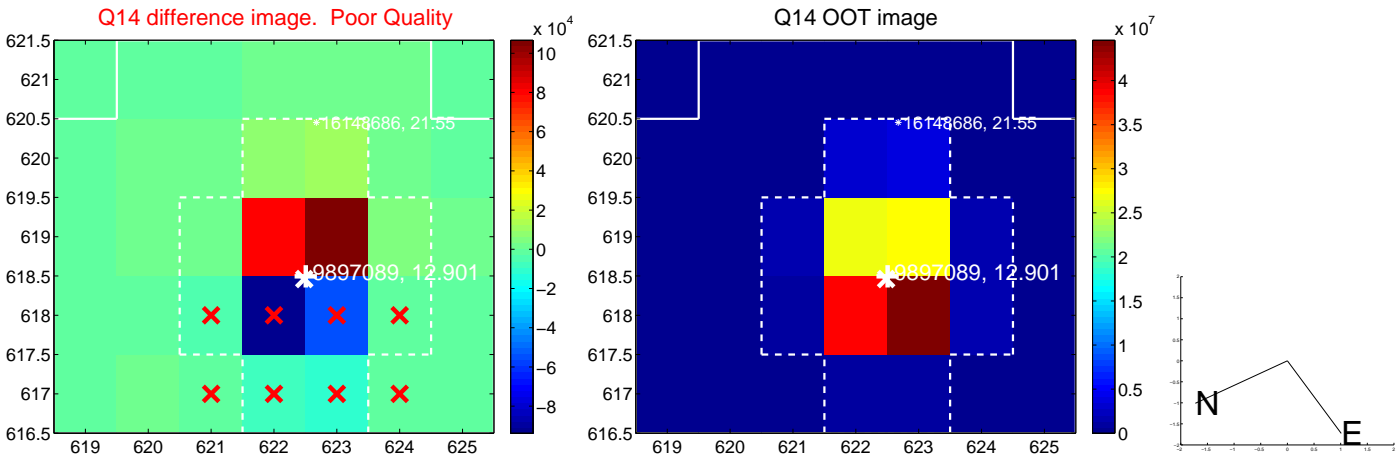
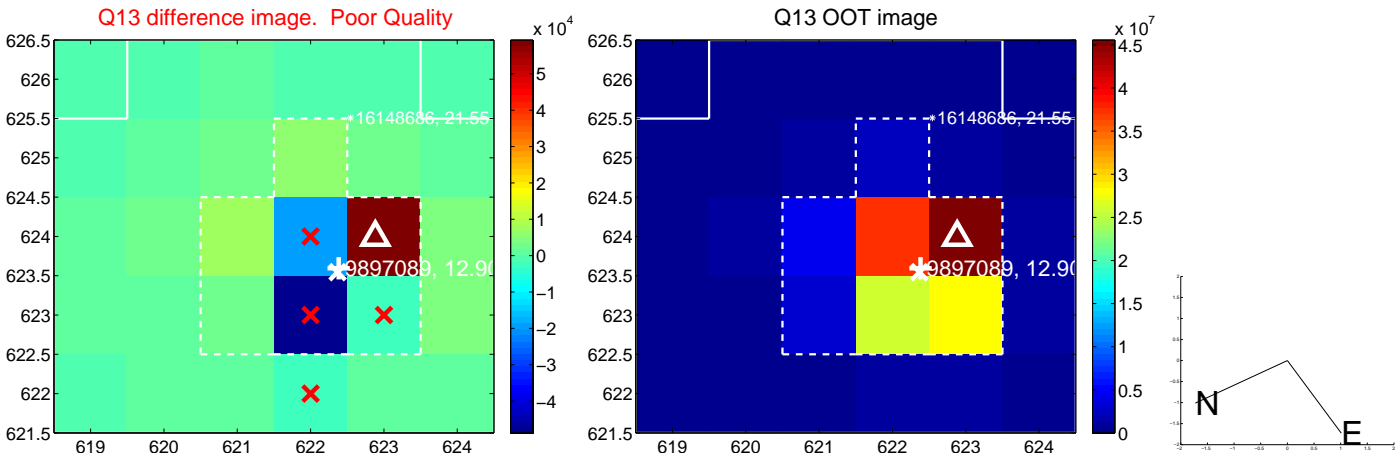
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



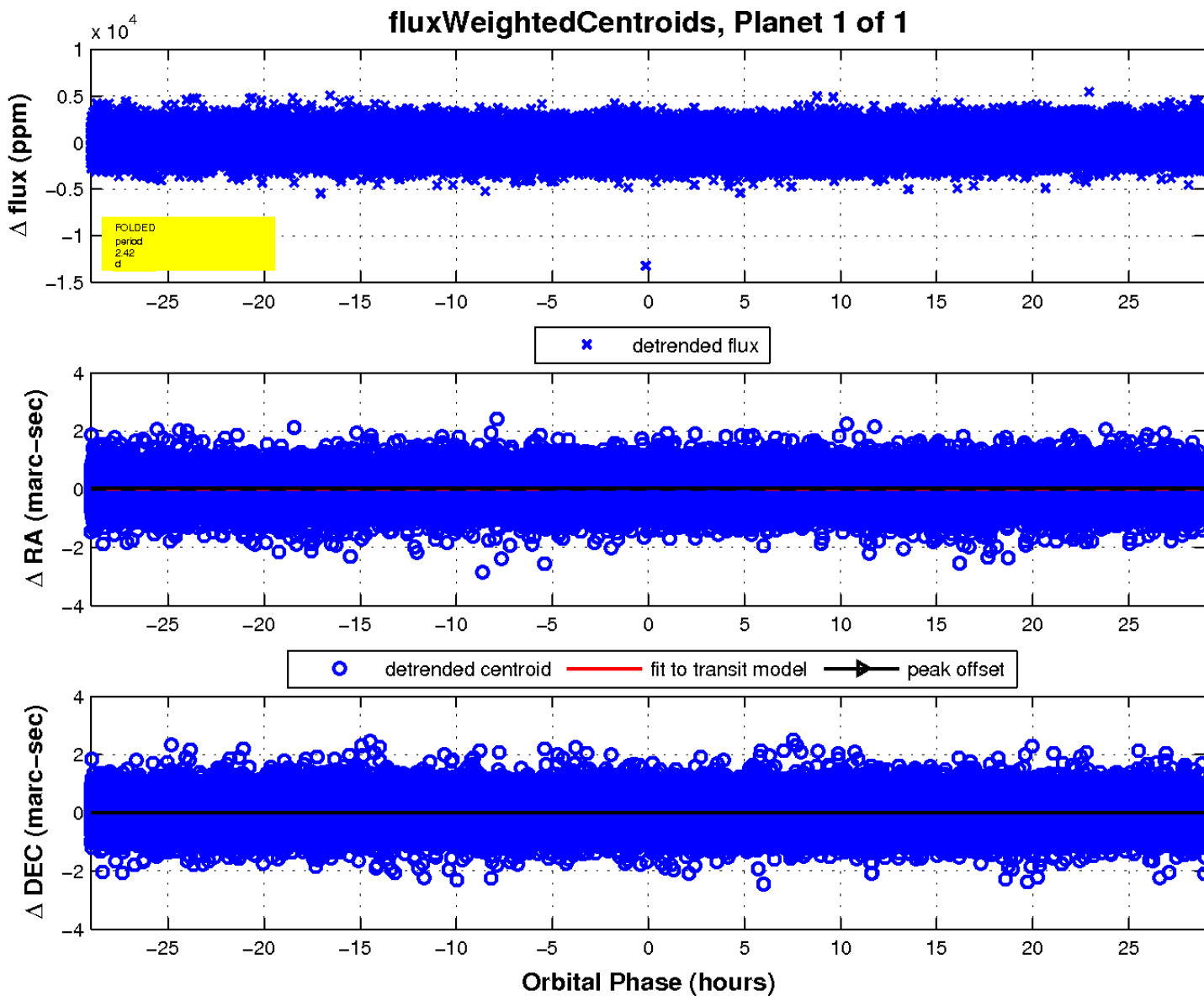
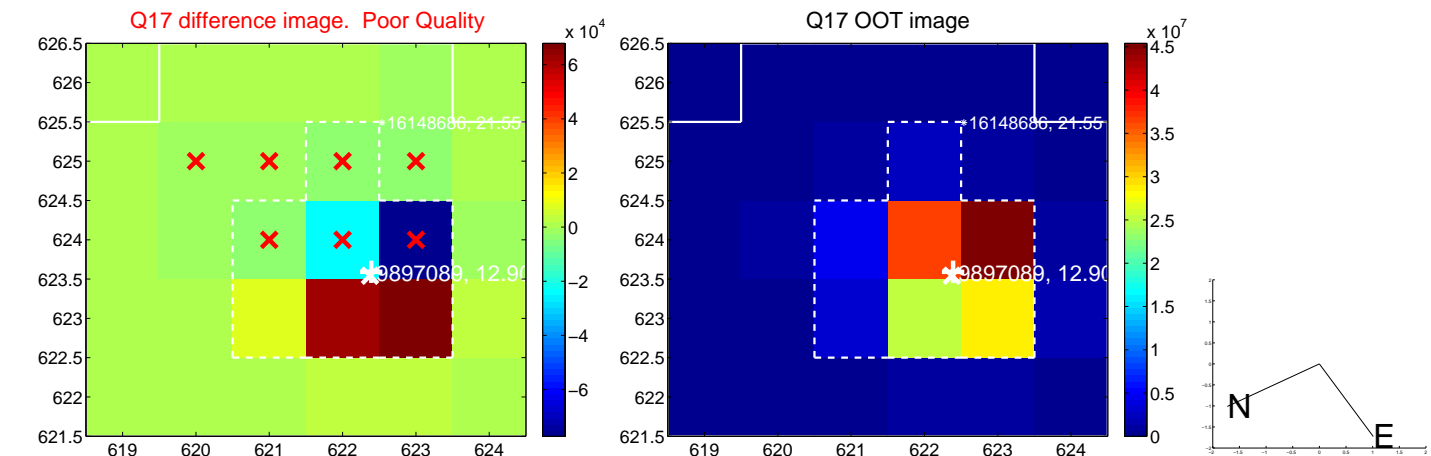
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

