

KIC 004844622

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})
004844622-01	OBS	No	0.686341	132.225216	32.4	7.285	7.2	4.5	3.50	5257	1.99	30862.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004844622-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

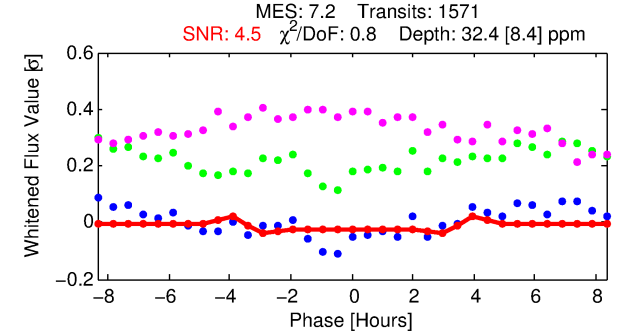
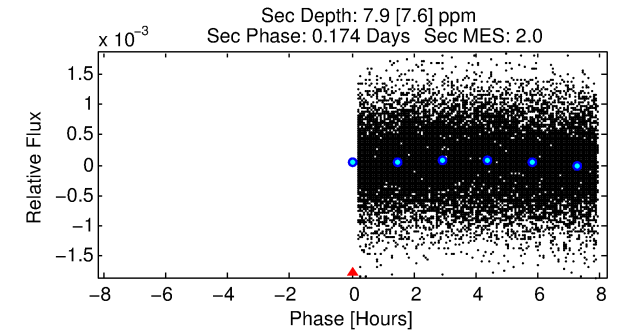
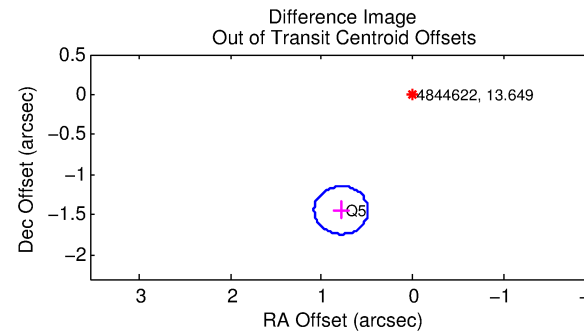
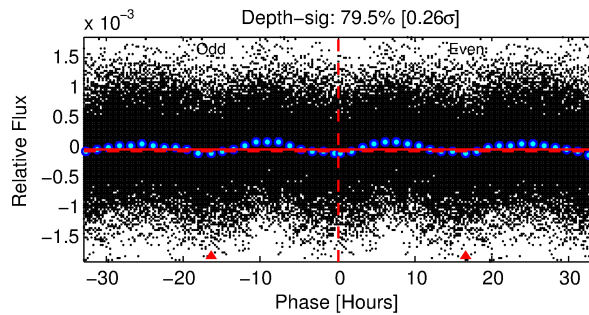
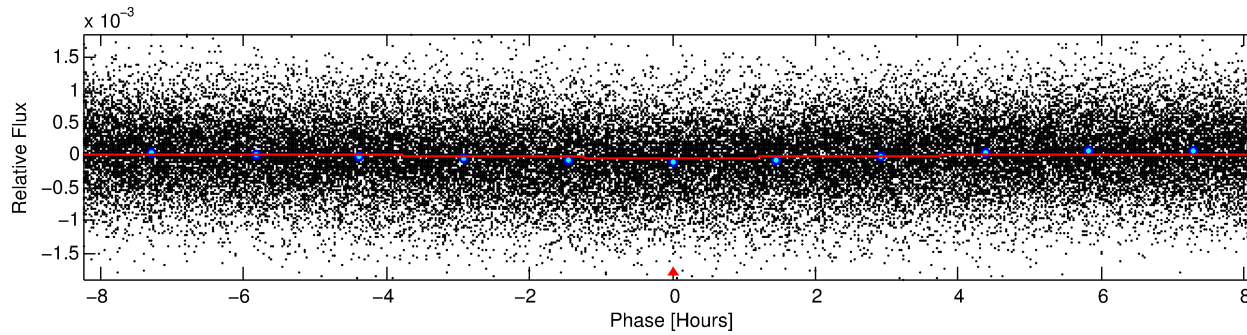
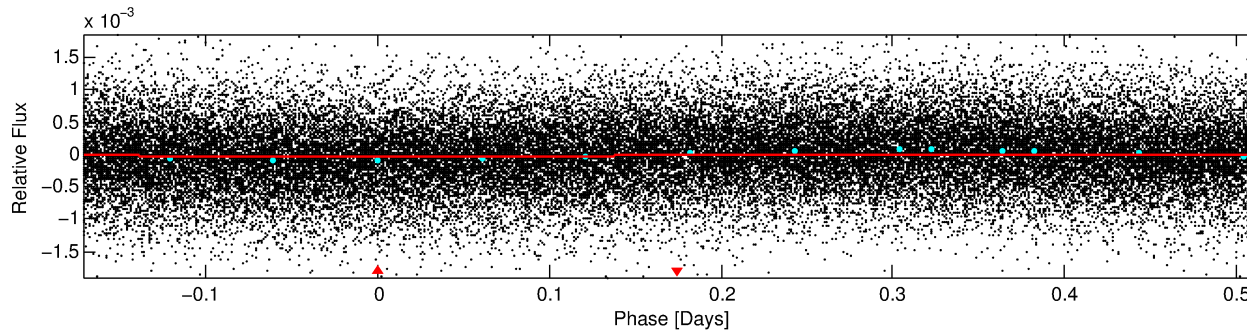
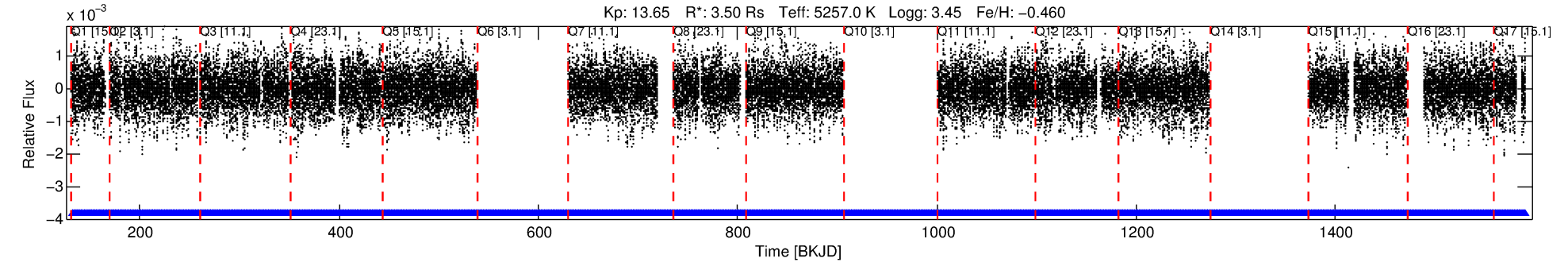
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004844622-01

No Significant Match Found

DV One-Page Summary

KIC: 4844622 Candidate: 1 of 1 Period: 0.686 d



DV Fit Results:

Period = 0.68634 [0.00003] d
Epoch = 132.2252 [0.0049] BKJD
Rp/R* = 0.0052 [0.0034]
a/R* = 1.02 [0.10]
b = 0.39 [6.16]
Seff = 30862.04 [20765.88]
Teq = 3380 [569] K
Rp = 1.99 [1.55] Re
a = 0.0165 [0.0068] AU
Ag = 0.30 [0.52] [-1.36 σ]
Teffp = 3851 [1565] K [0.28 σ]

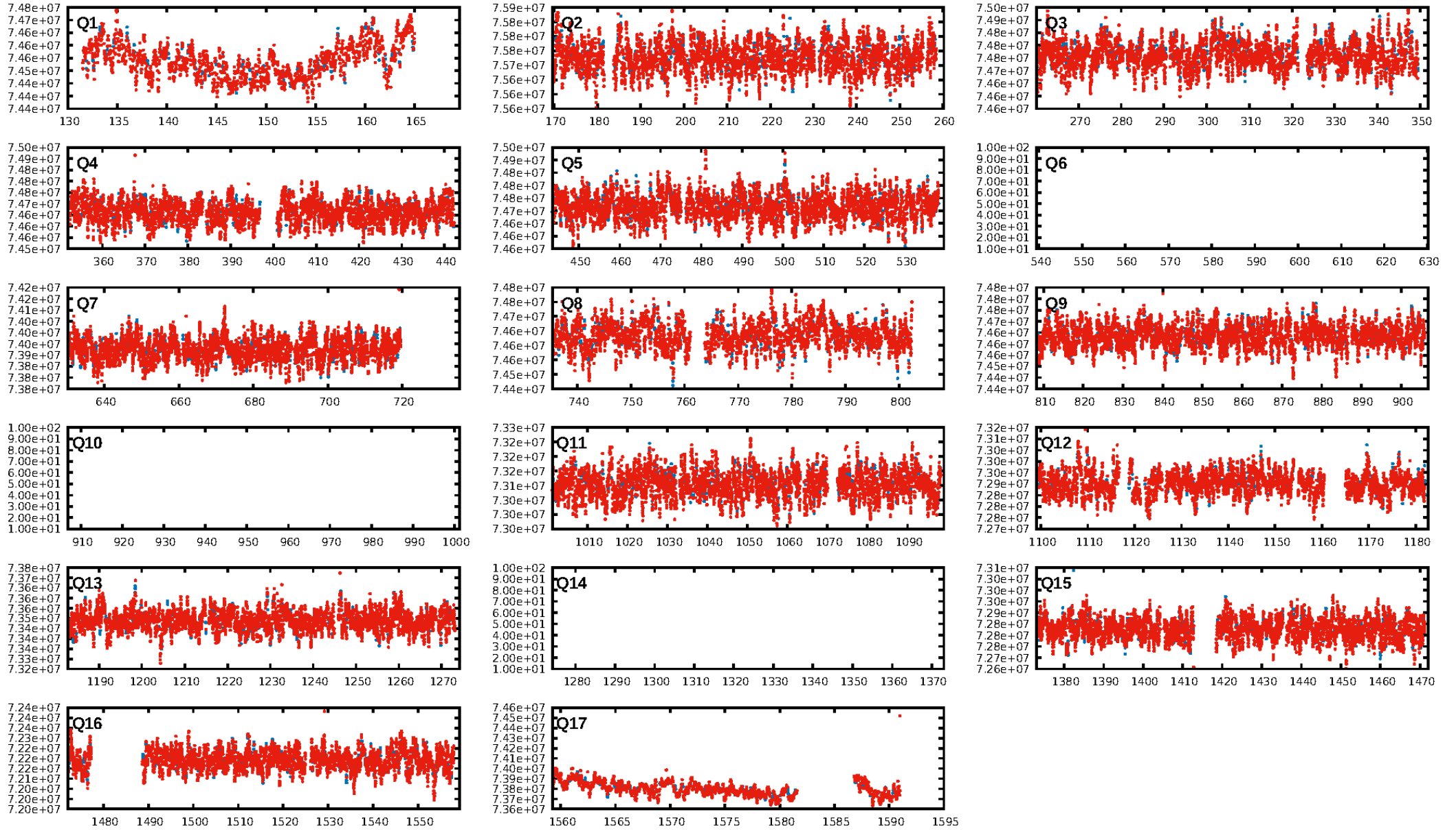
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1483/1483]
GhostDiagnostic-chr: 4.645
Centroid-sig: 0.0%
Centroid-so: 1.506 arcsec [1.48 σ]
OotOffset-rm: 1.643 arcsec [16.58 σ]
KicOffset-rm: 1.543 arcsec [15.49 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [14/14]

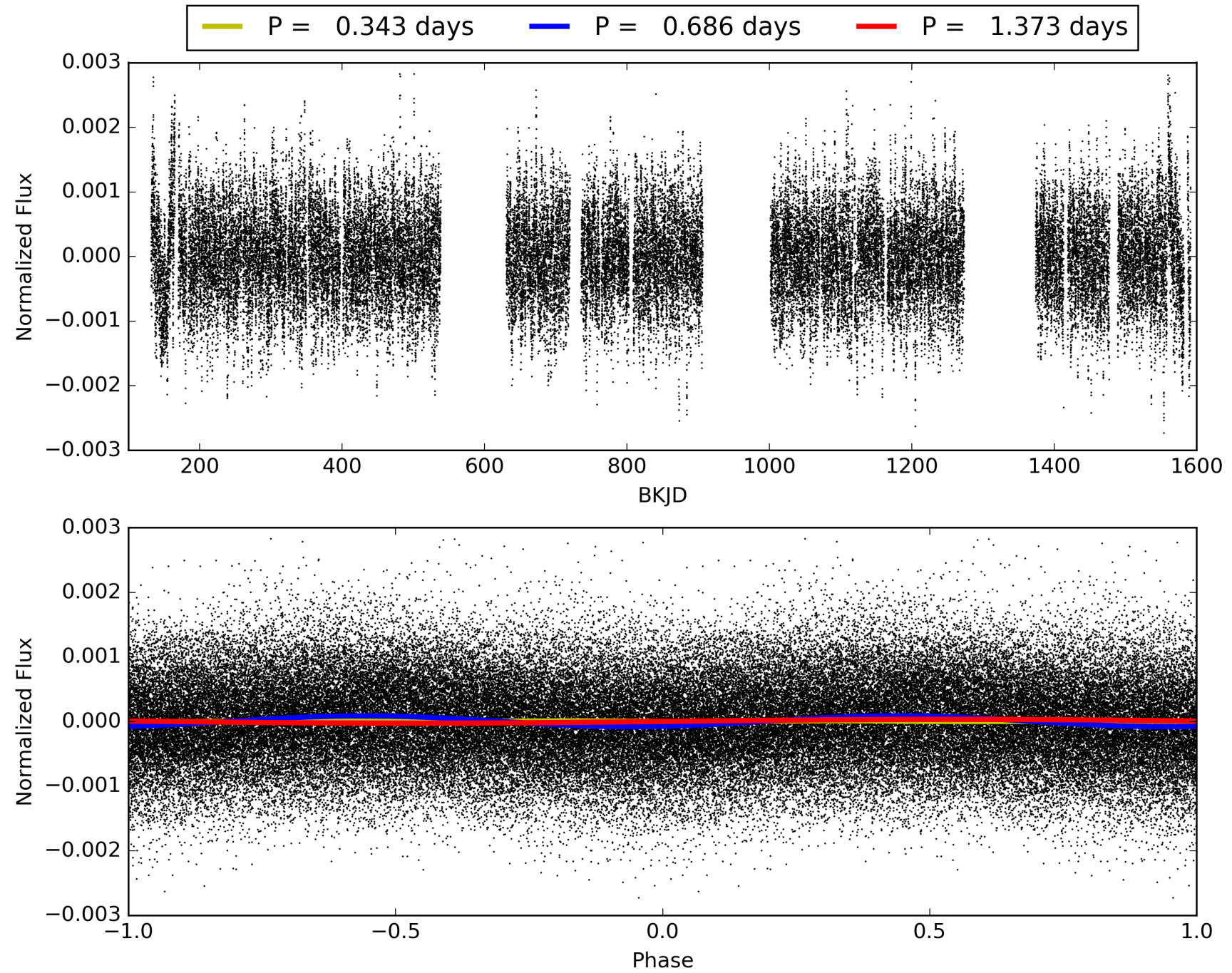
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:16:07 Z

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

TCE 004844622-01, PDC Light Curves

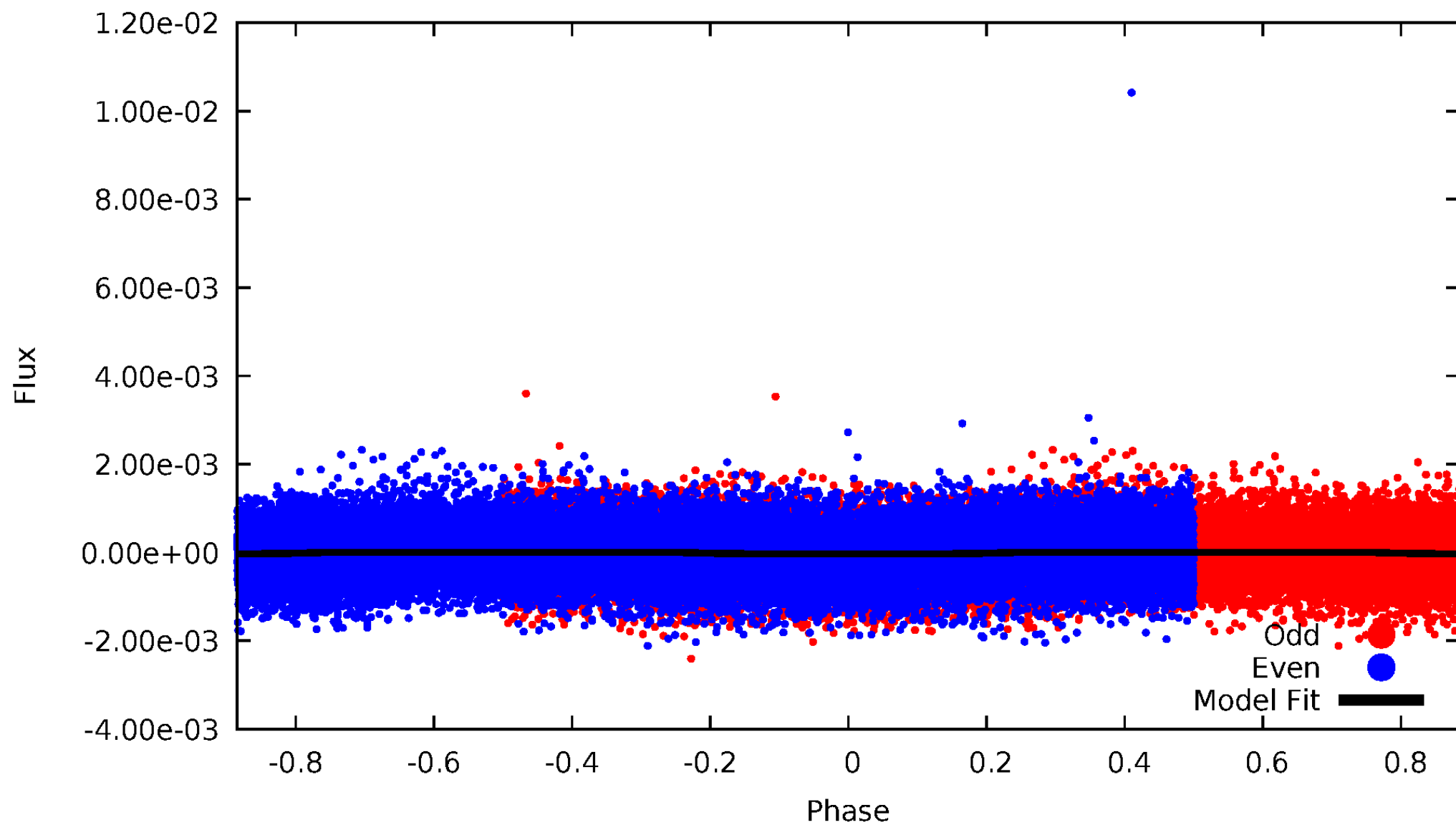


TCE 004844622-01



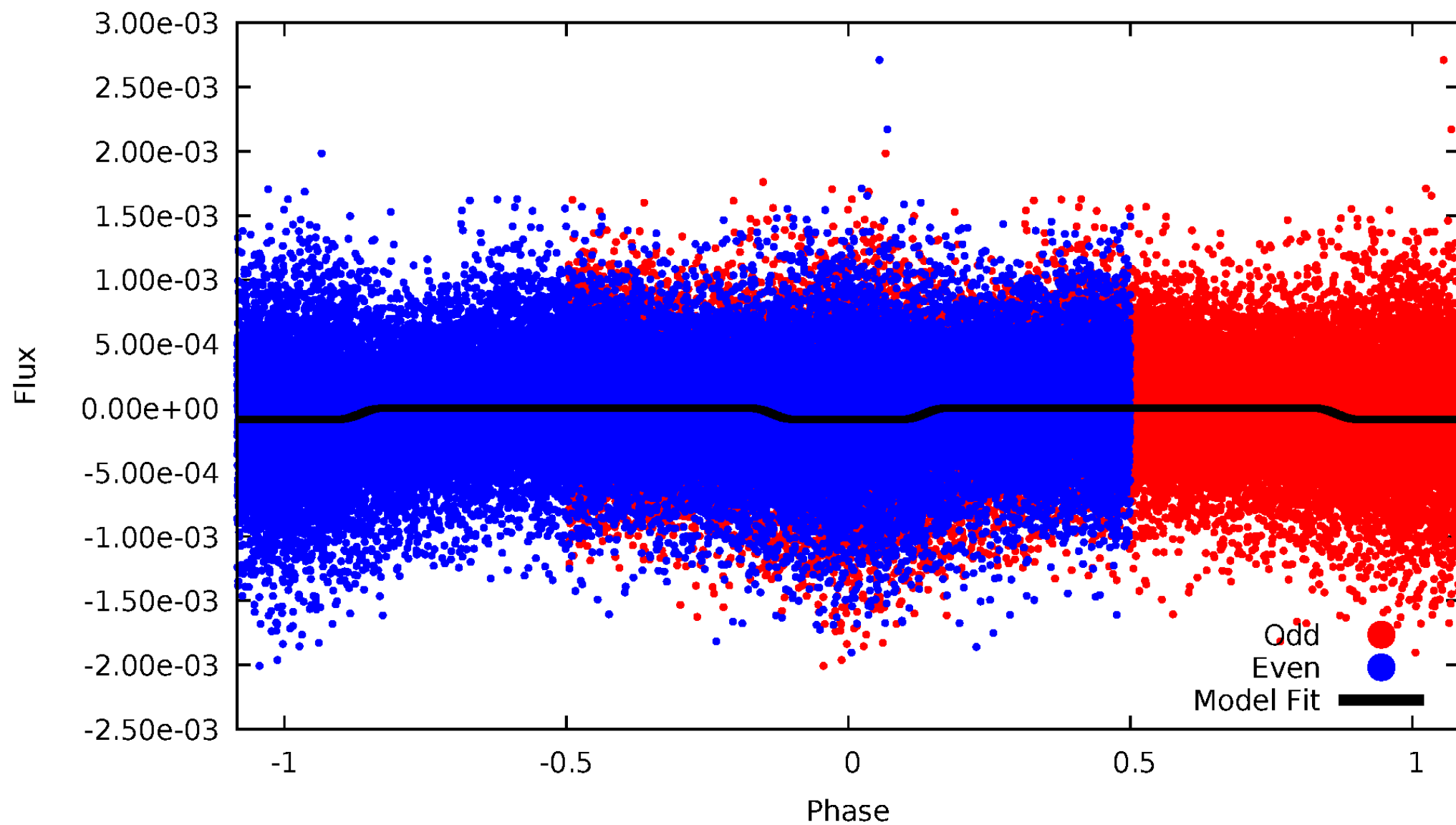
DV Odd/Even

TCE 004844622-01



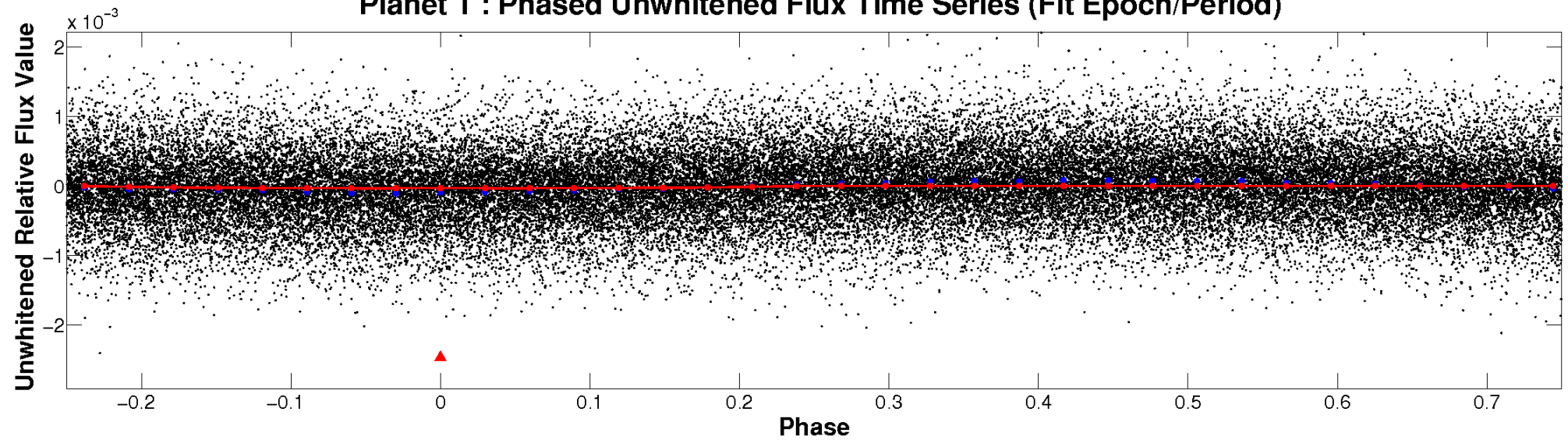
ALT Odd/Even

TCE 004844622-01

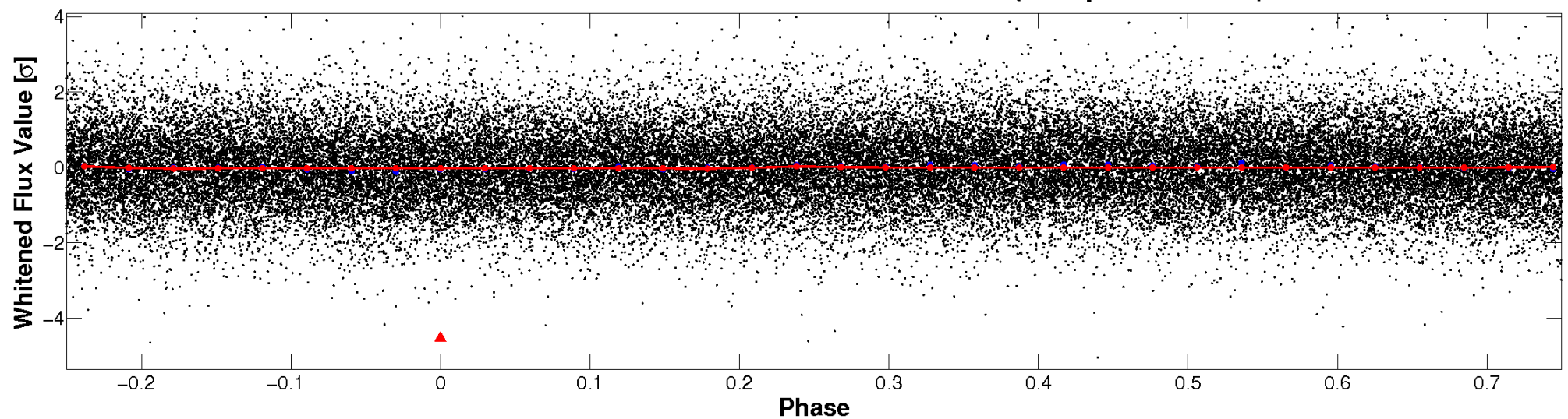


Non-Whitened Vs. Whitened Light Curve

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

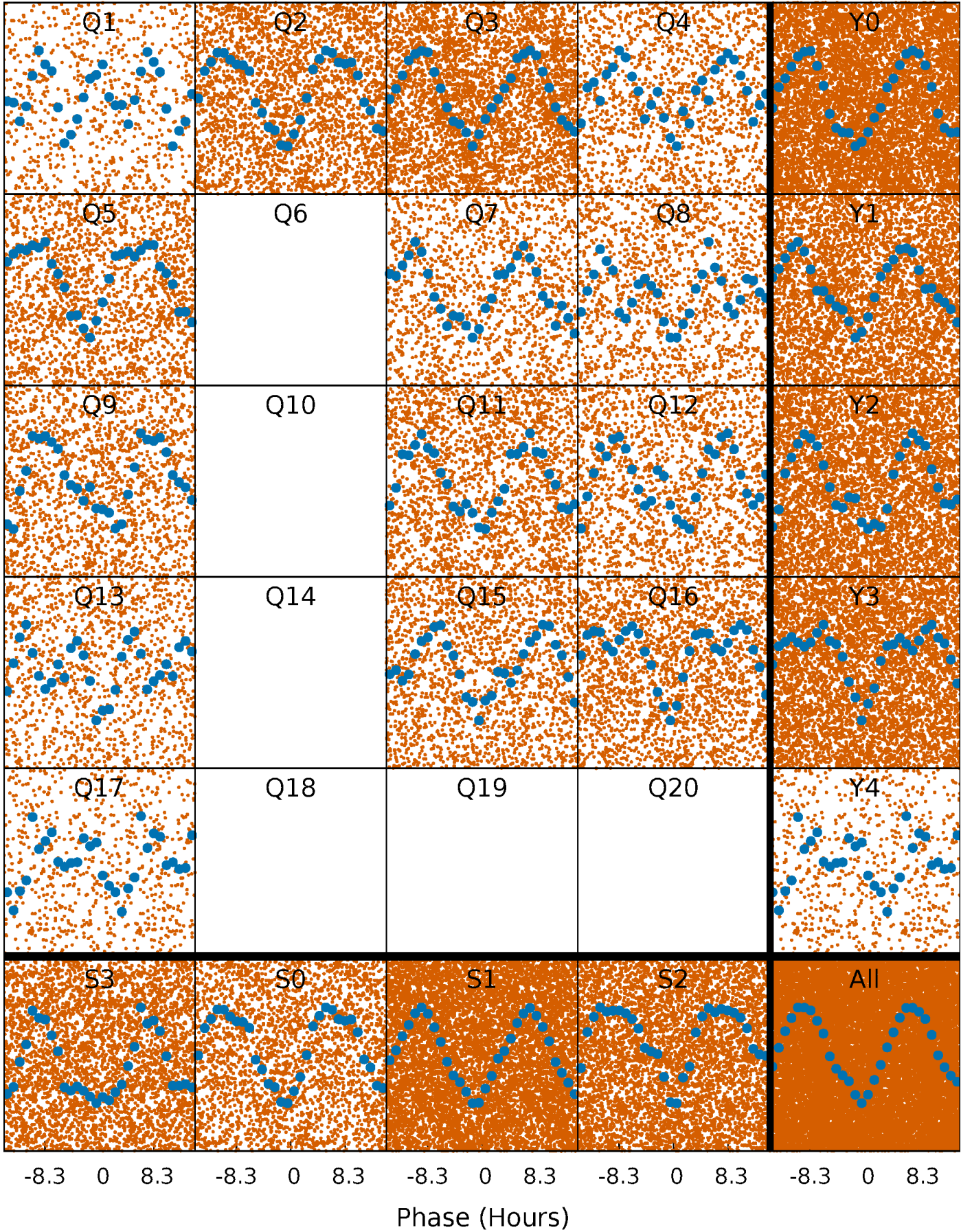


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



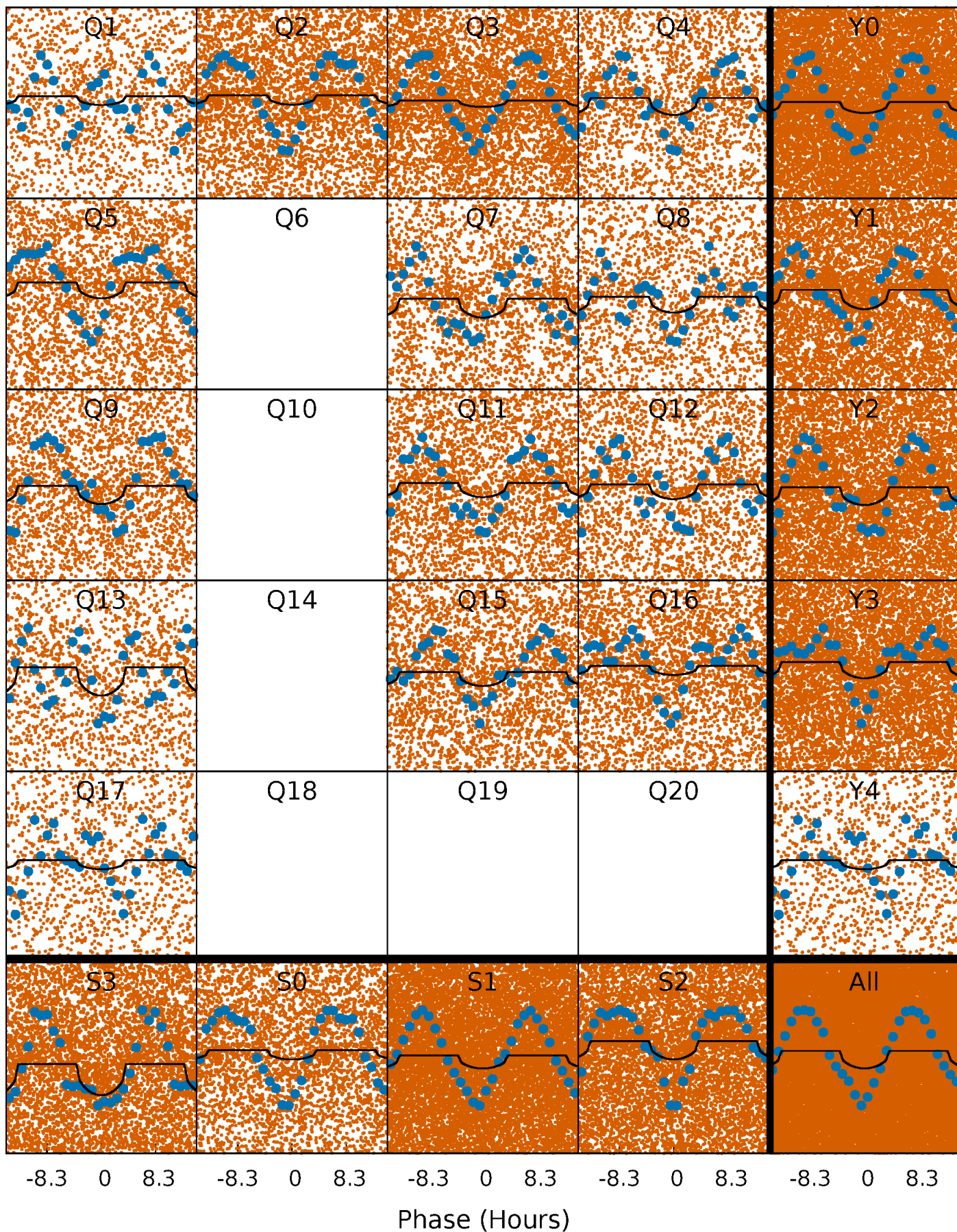
PDC Quarter-Phased Transit Curves

TCE 004844622-01 P= 0.686341 Days $T_0=132.225216$ (BKJD)



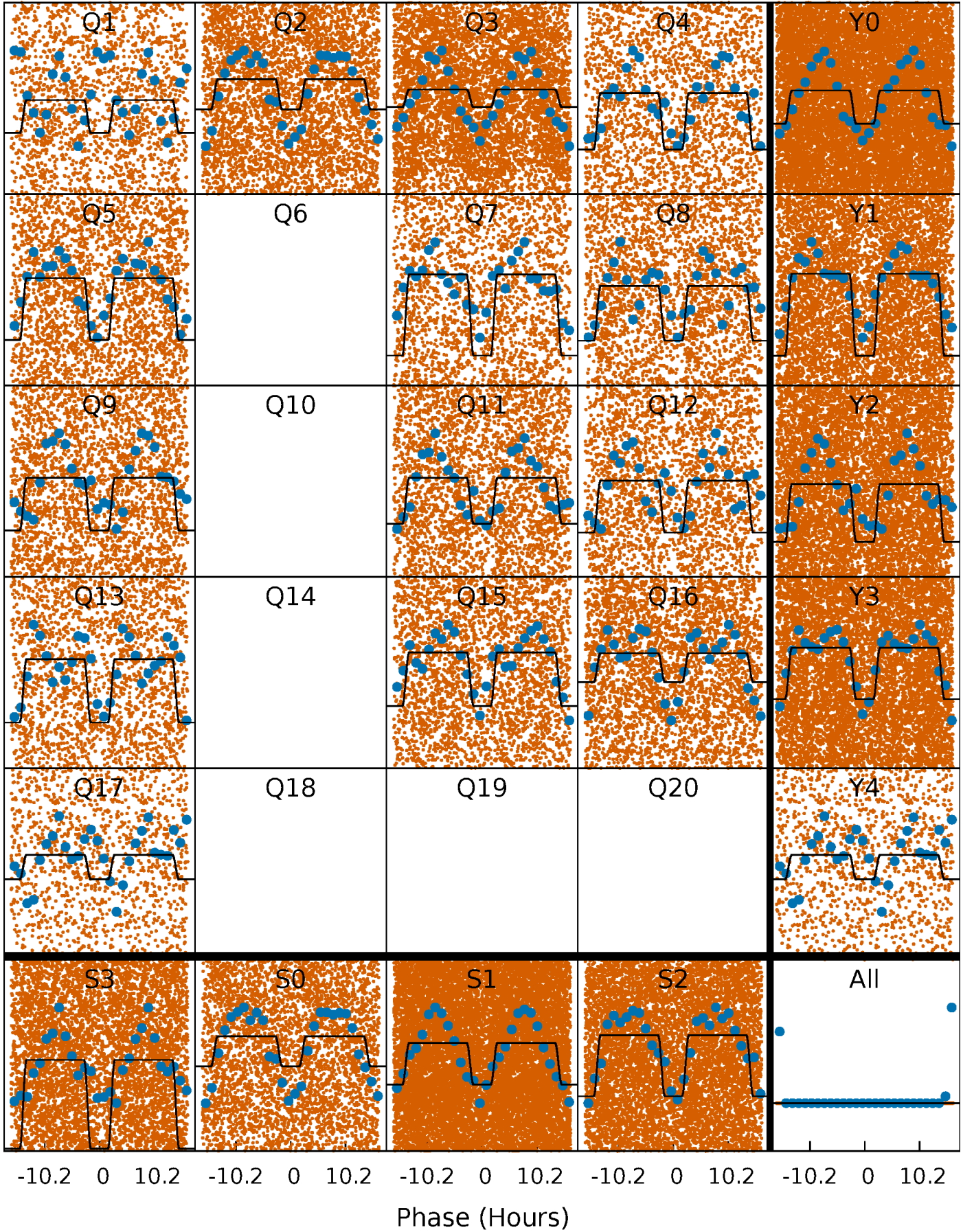
DV Quarter-Phased Transit Curves

TCE 004844622-01 P= 0.686341 Days $T_0=132.225216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

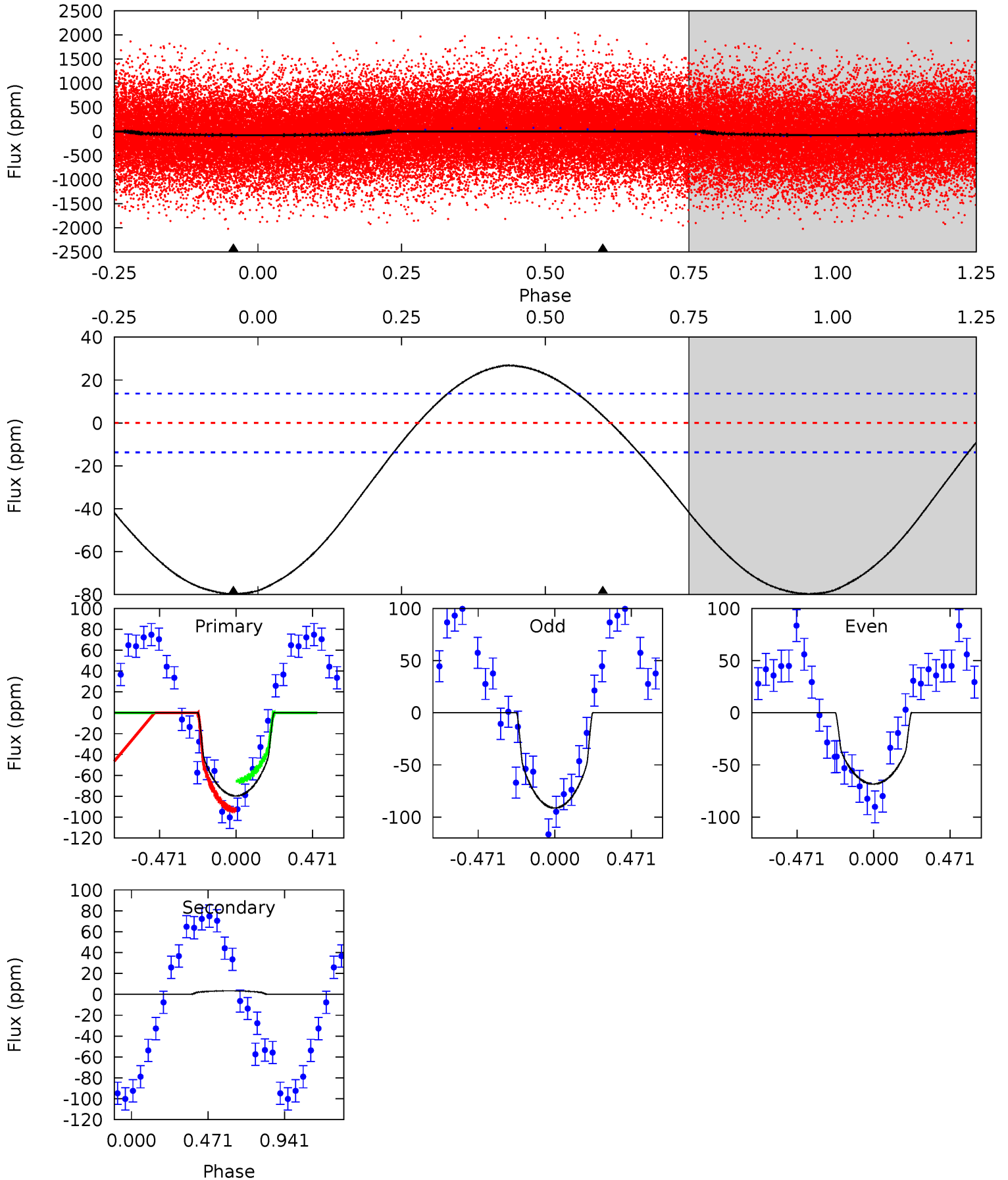
TCE 004844622-01 P= 0.686362 Days $T_0=132.179839$ (BKJD)



DV Model-Shift Uniqueness Test

004844622-01, P = 0.686341 Days, E = 130.852534 Days

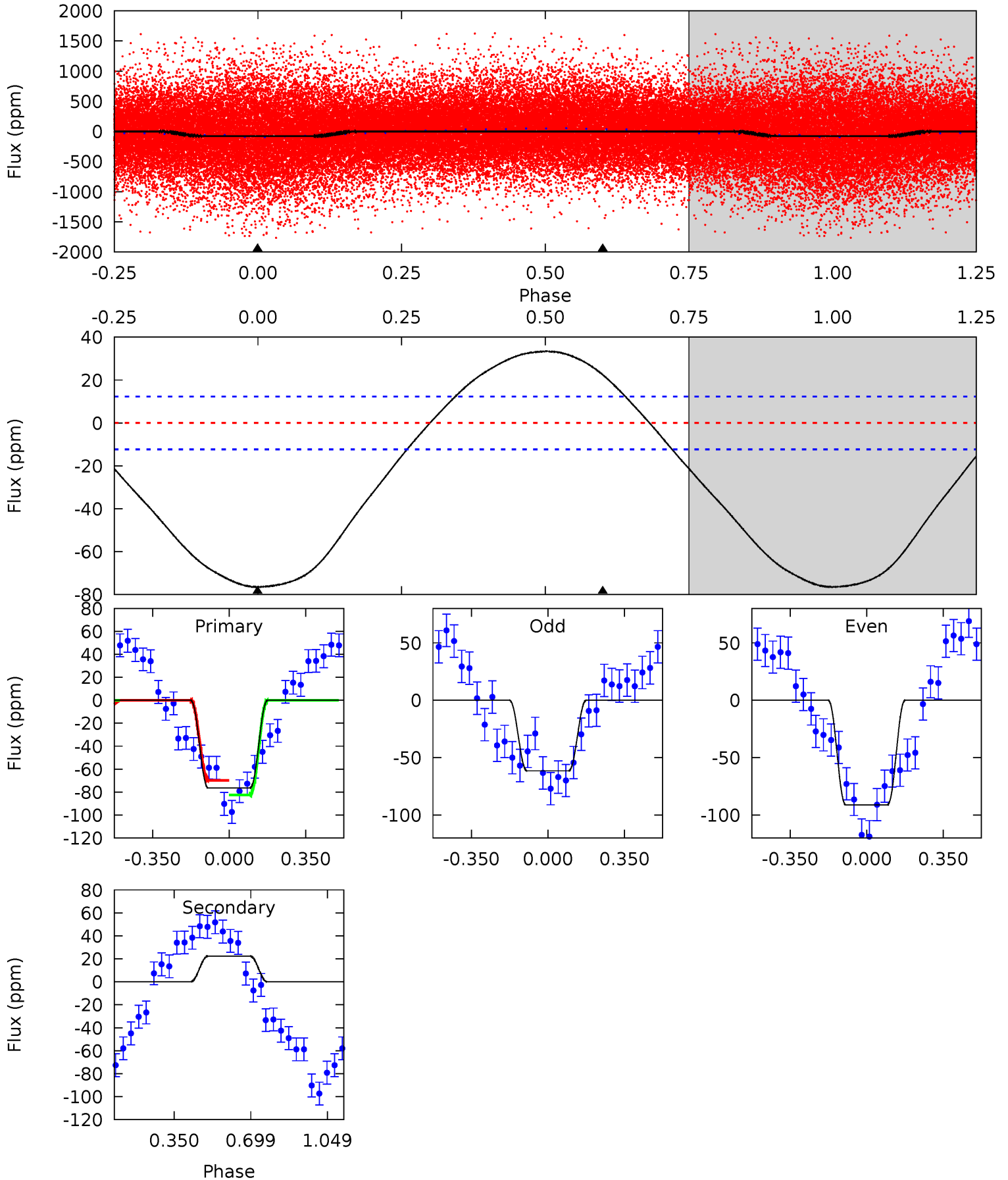
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	-1.05	0	0	4.23	0.72	2.70	24.6	24.6	-1.05	-1.05	3.52	1.23	0.25	4.29



Alt Model-Shift Uniqueness Test

004844622-01, P = 0.686362 Days, E = 131.493477 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	-7.82	0	0	4.29	0.94	3.00	26.7	26.7	-7.82	-7.82	5.20	1.19	0.30	1.94



Stellar Parameters For KIC 004844622

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5257^{+143}_{-159}	$3.452^{+0.390}_{-0.260}$	$-0.460^{+0.300}_{-0.250}$	$3.495^{+1.211}_{-1.480}$	$1.262^{+0.169}_{-0.365}$	$0.042^{+0.140}_{-0.022}$
	+3%/-3%	+11%/-8%	+65%/-54%	+35%/-42%	+13%/-29%	+336%/-53%
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 004844622-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	3 ± 3	$2.05^{+1.46}_{-1.21}$	4725^{+527}_{-552}	-4432^{+504}_{-682}	$-0.096^{+0.090}_{-0.525}$
Alt.	22 ± 3	$3.26^{+1.67}_{-1.25}$	4701^{+510}_{-529}	-4717^{+388}_{-550}	$-0.297^{+0.167}_{-0.480}$

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 $A_{obs} \gg 1.0$

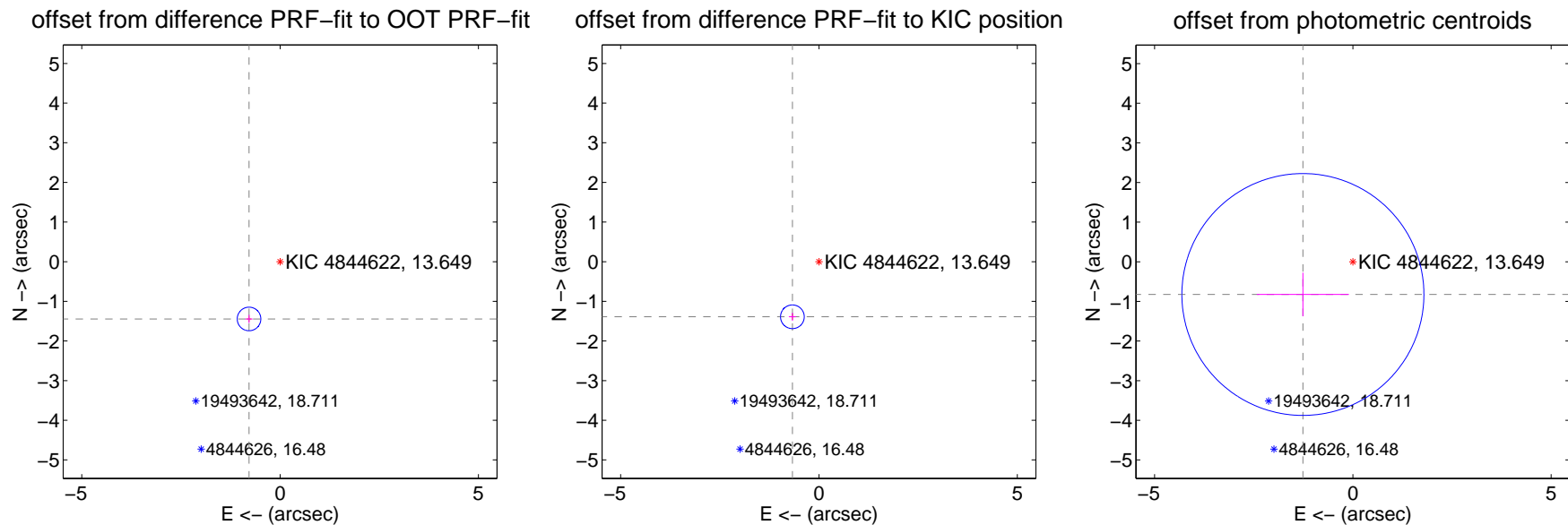
DV Centroid Data

Supplemental centroid analysis for 004844622-01. Kepler magnitude: 13.65. Transit SNR 4.46

There are 0 quarters with good PRF difference image offsets

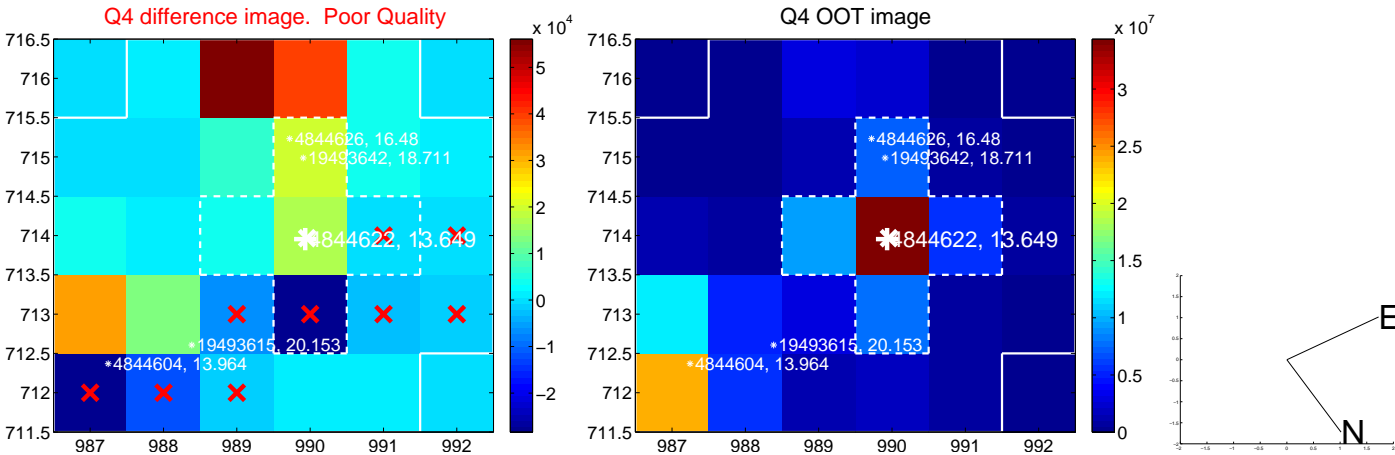
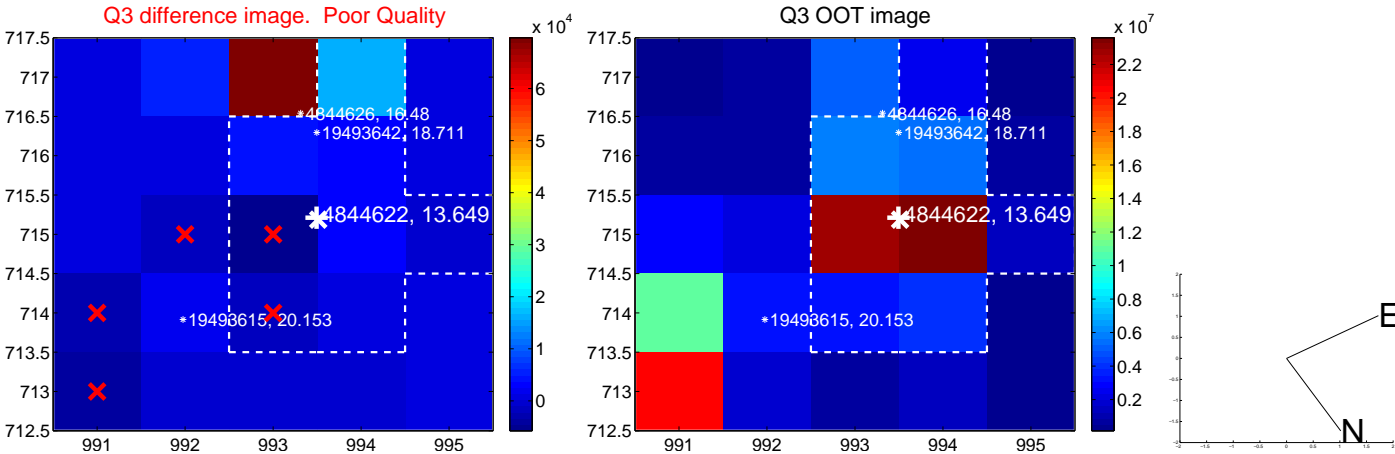
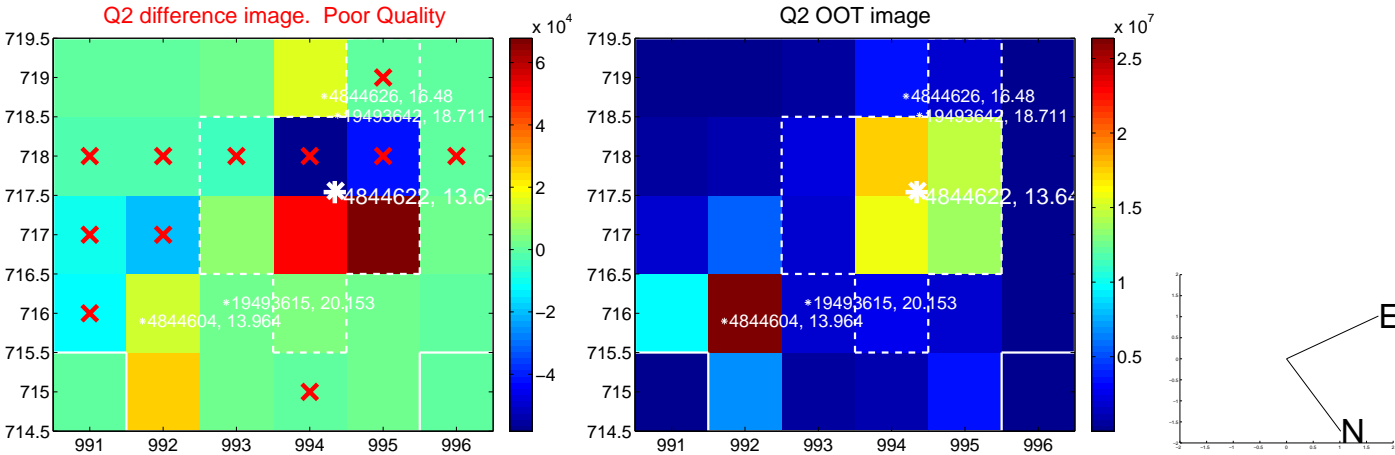
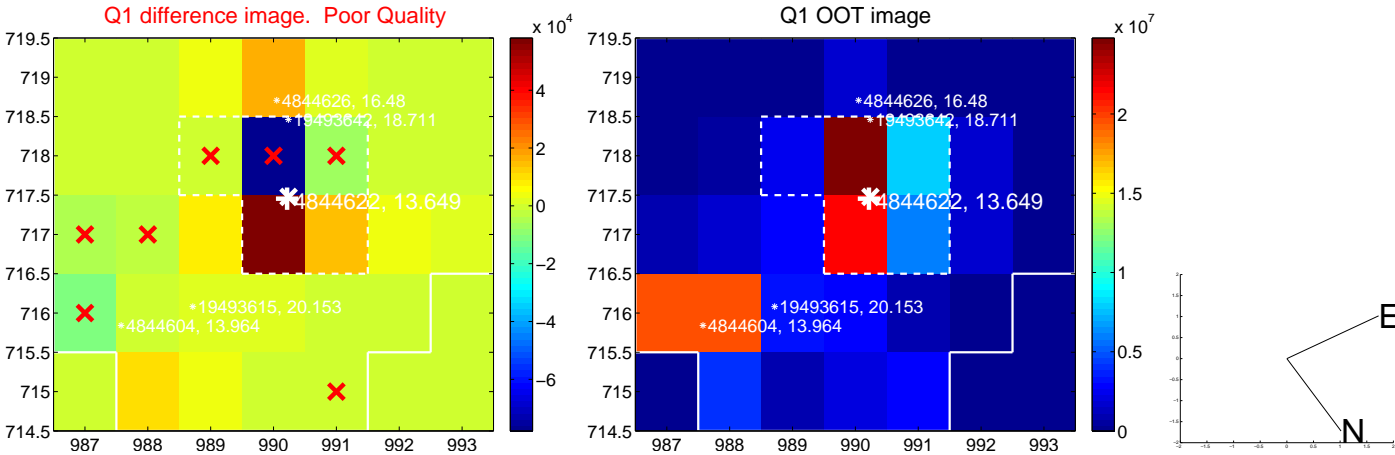
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.643 ± 0.099	16.58	0.783 ± 0.089	-1.444 ± 0.102
PRF-fit source offset from KIC position	1.543 ± 0.100	15.49	0.670 ± 0.089	-1.390 ± 0.102
photometric centroid source offset	1.51 ± 1.02	1.48	1.26 ± 1.16	-0.83 ± 0.55

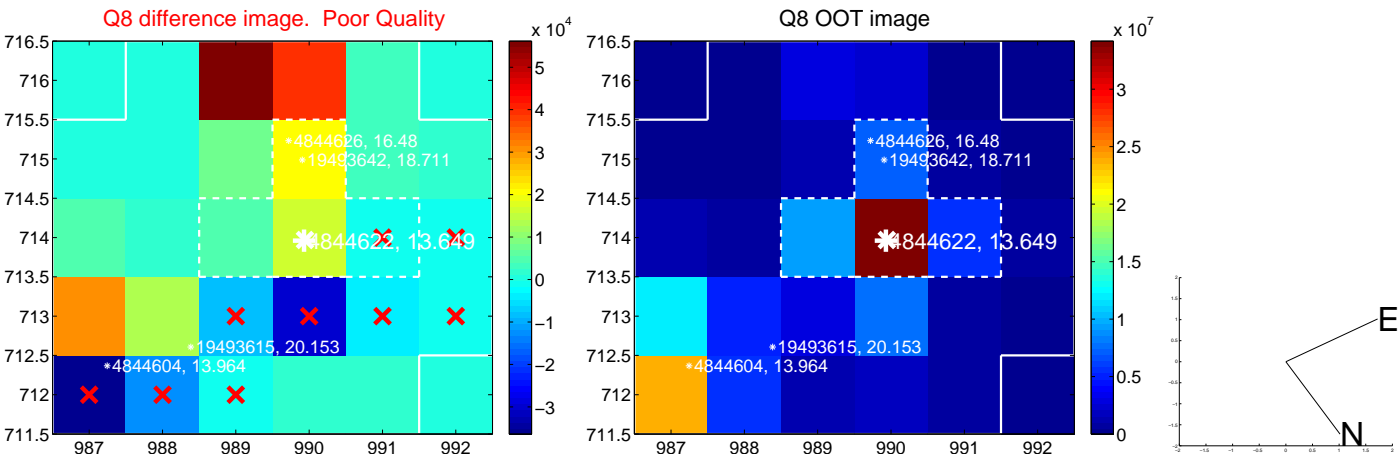
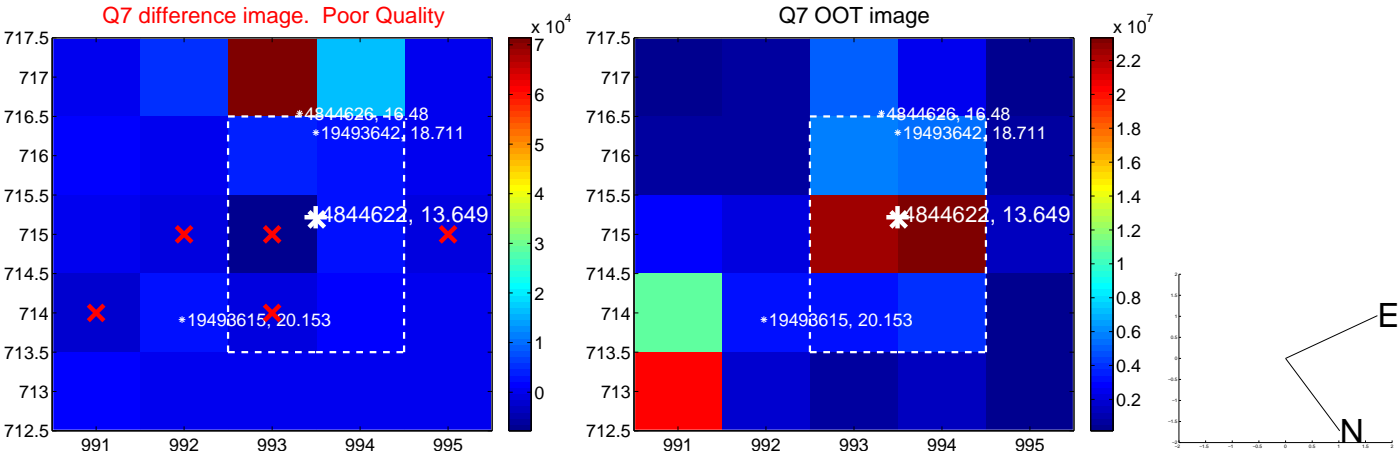
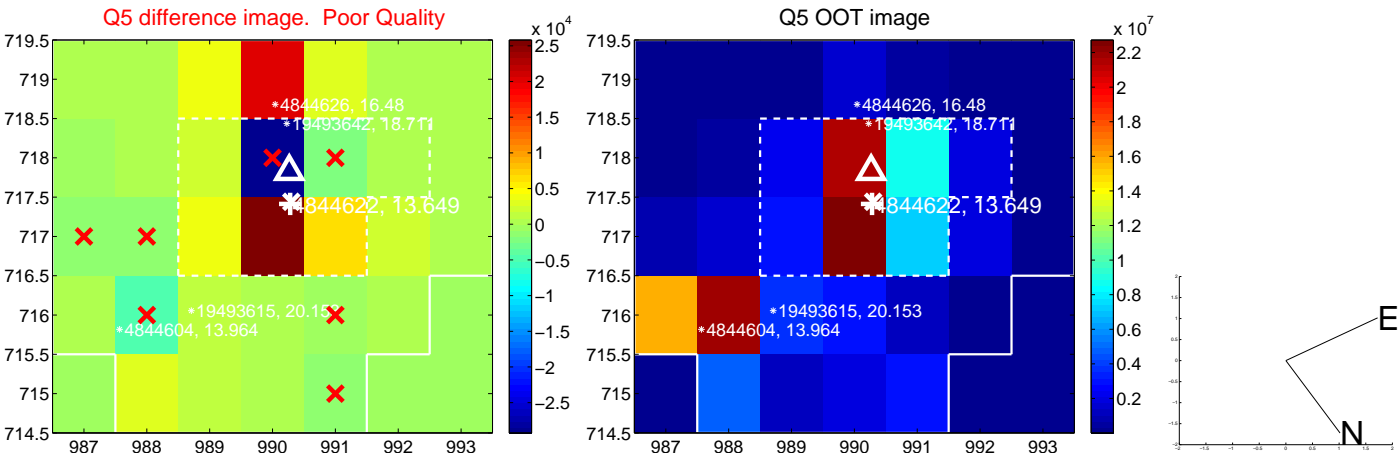


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

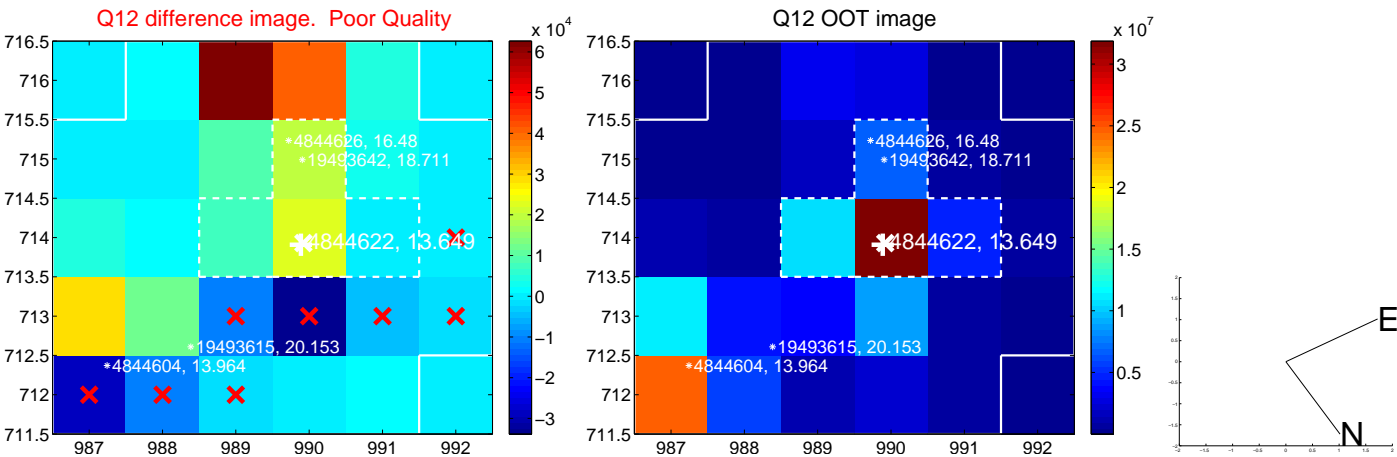
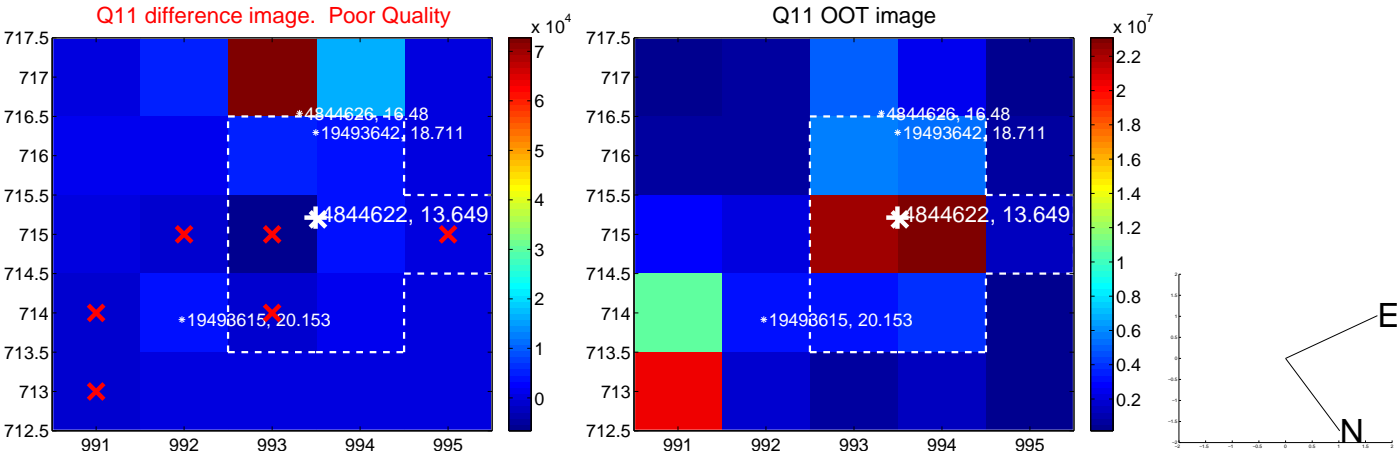
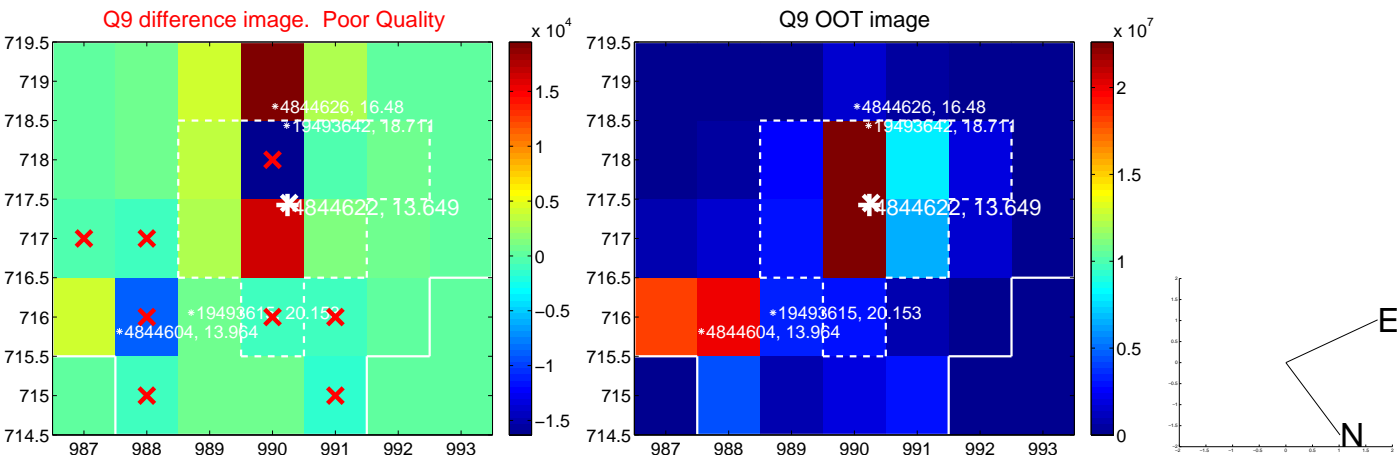
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



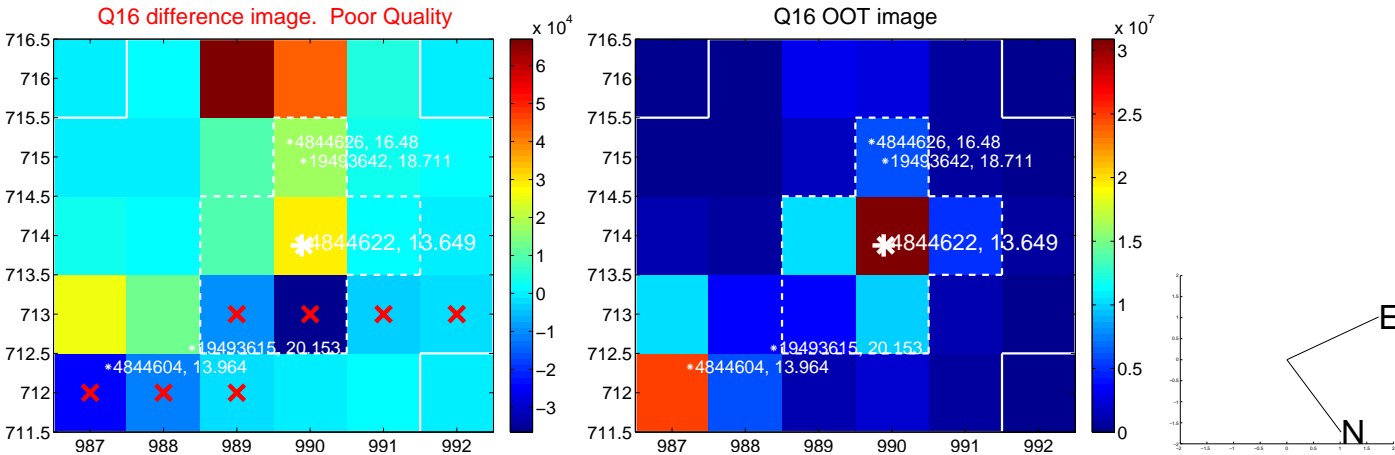
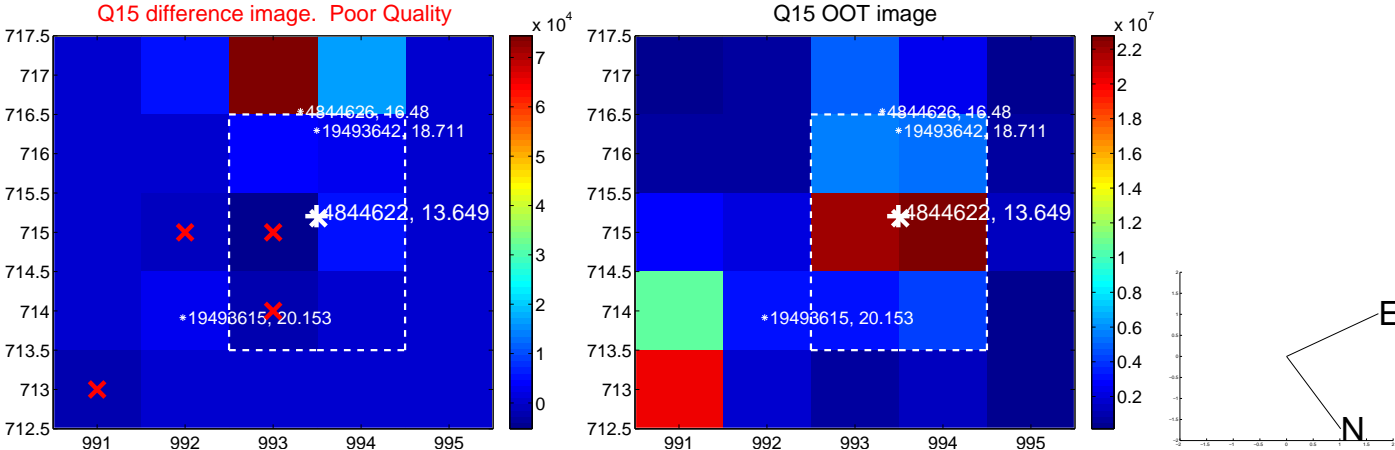
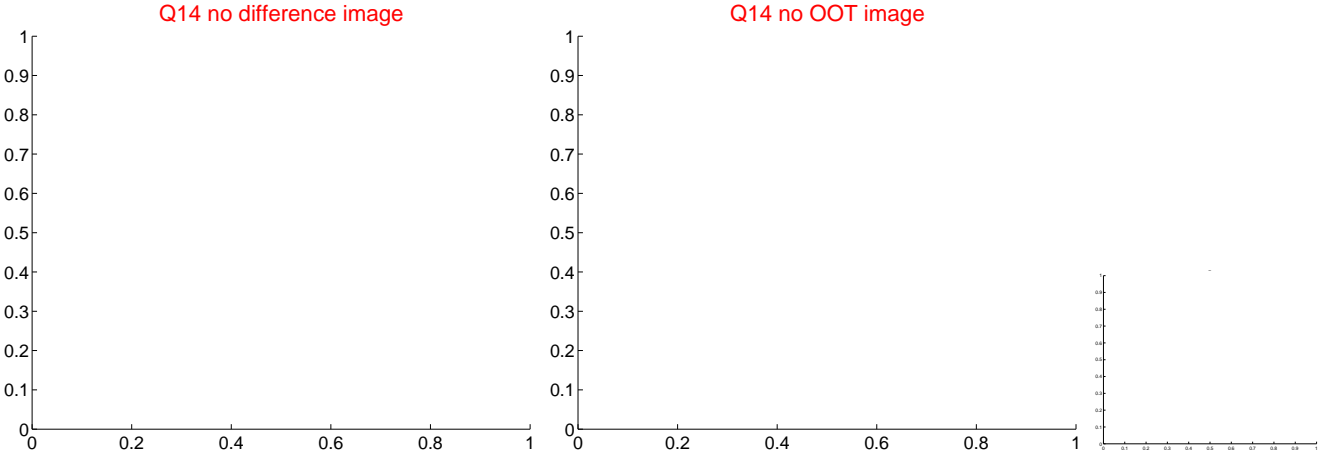
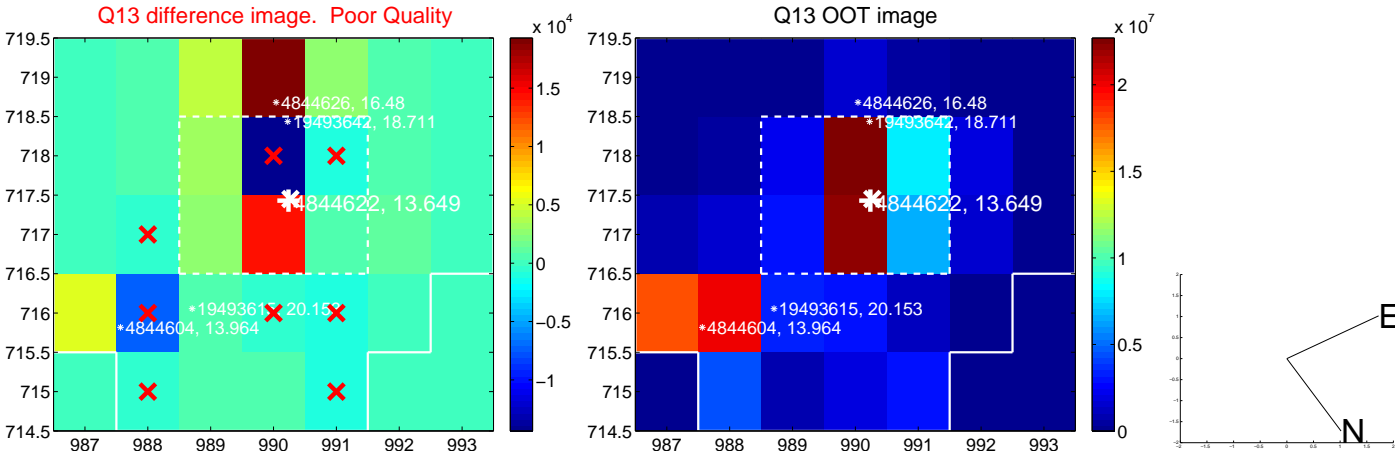
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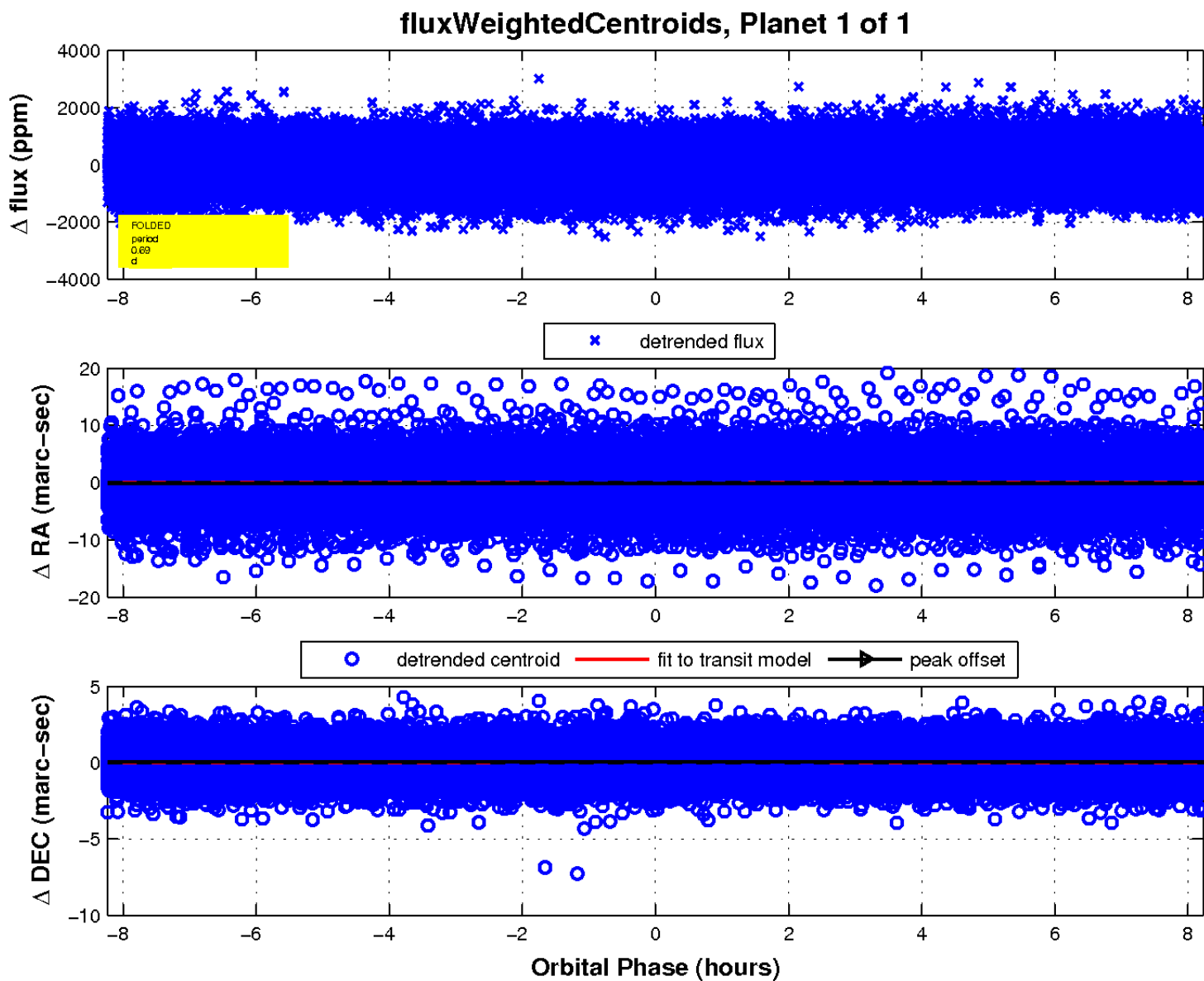
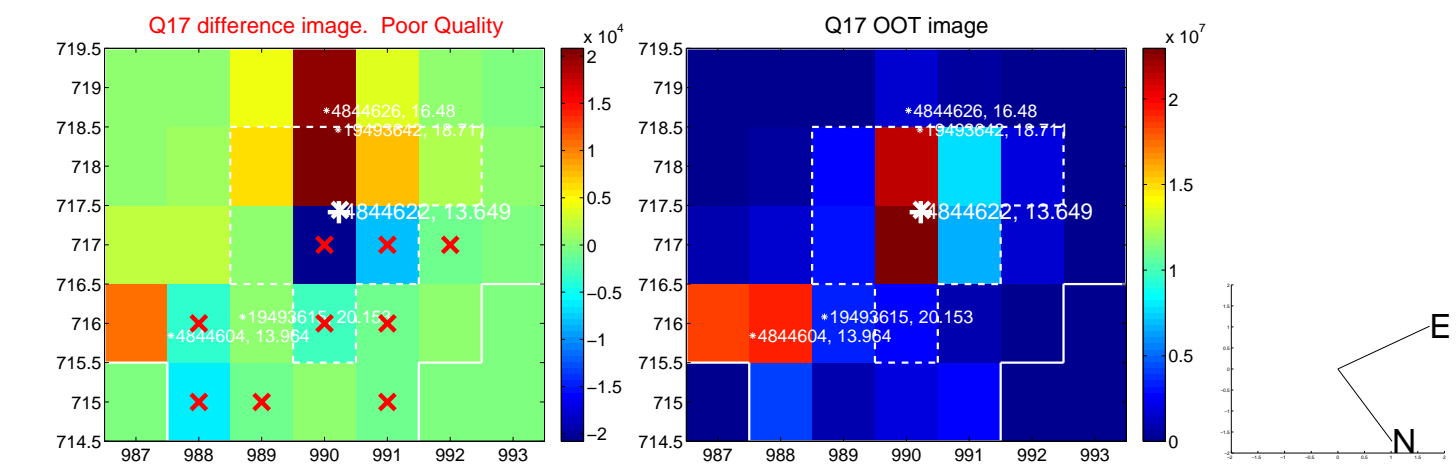
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

