

KIC 003972123

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})
003972123-01	OBS	No	3.227576	134.353938	81.1	17.940	8.6	8.9	0.96	5812	0.86	555.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003972123-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS

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

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

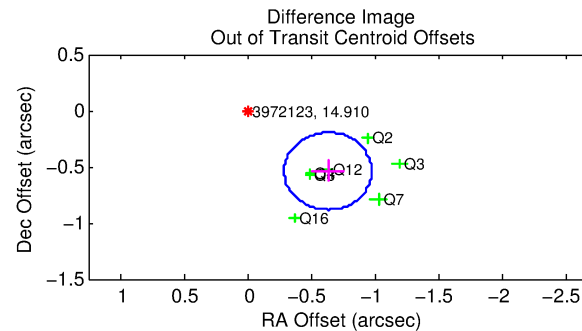
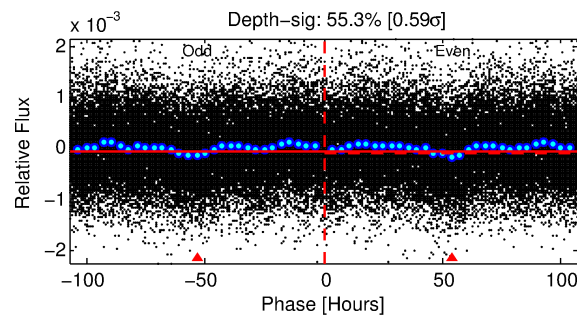
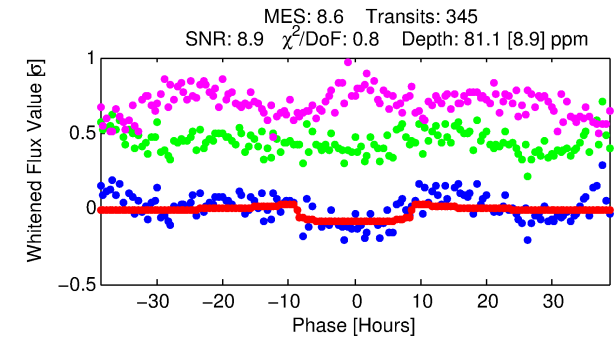
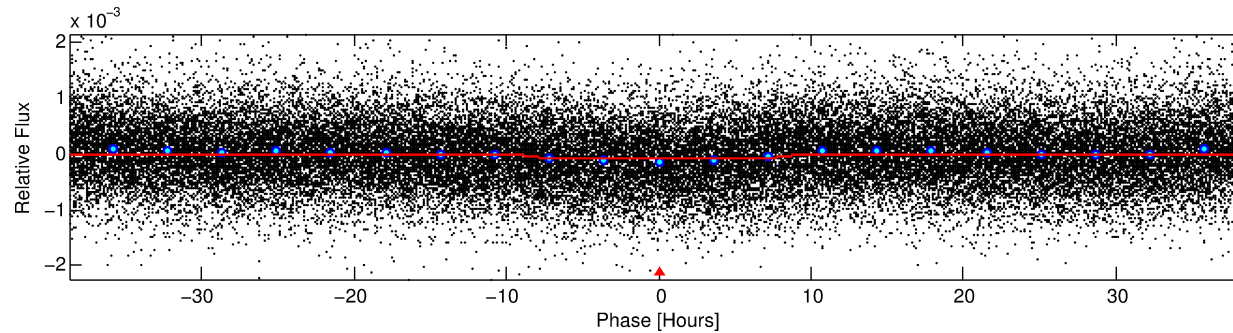
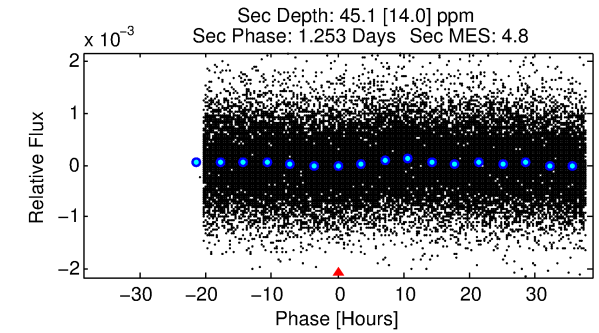
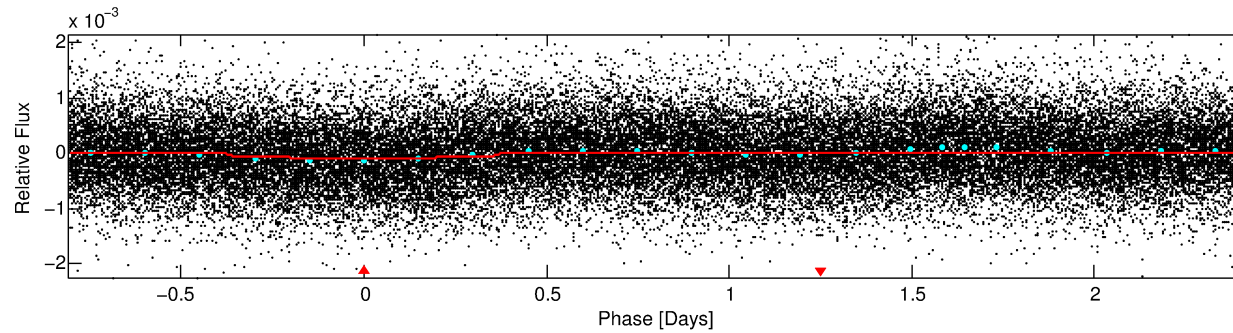
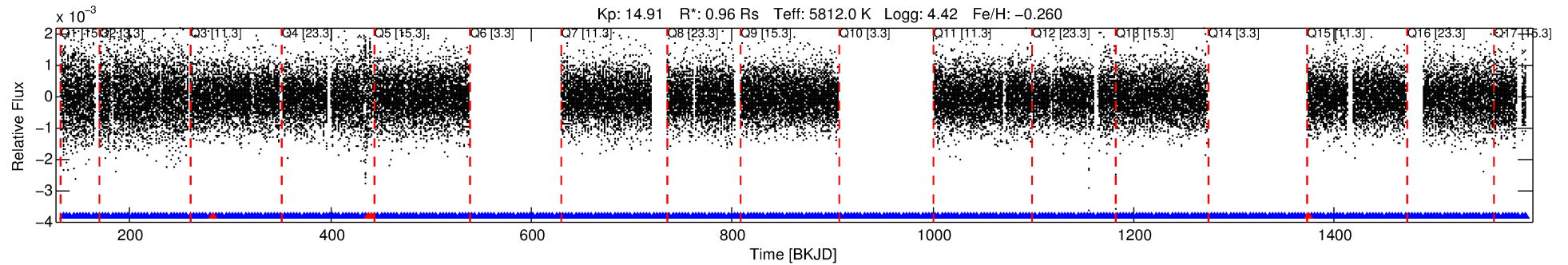
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003972123-01

No Significant Match Found

DV One-Page Summary

KIC: 3972123 Candidate: 1 of 1 Period: 3.228 d



DV Fit Results:

Period = 3.22758 [0.00007] d
Epoch = 134.3539 [0.0130] BKJD
Rp/R* = 0.0082 [0.0113]
a/R* = 1.51 [5.44]
b = 0.11 [57.37]
Seff = 555.01 [198.91]
Teq = 1238 [111] K
Rp = 0.86 [1.21] Re
a = 0.0411 [0.0093] AU
Ag = 57.07 [159.89] [0.35σ]
Teffp = 5260 [3660] K [1.10σ]

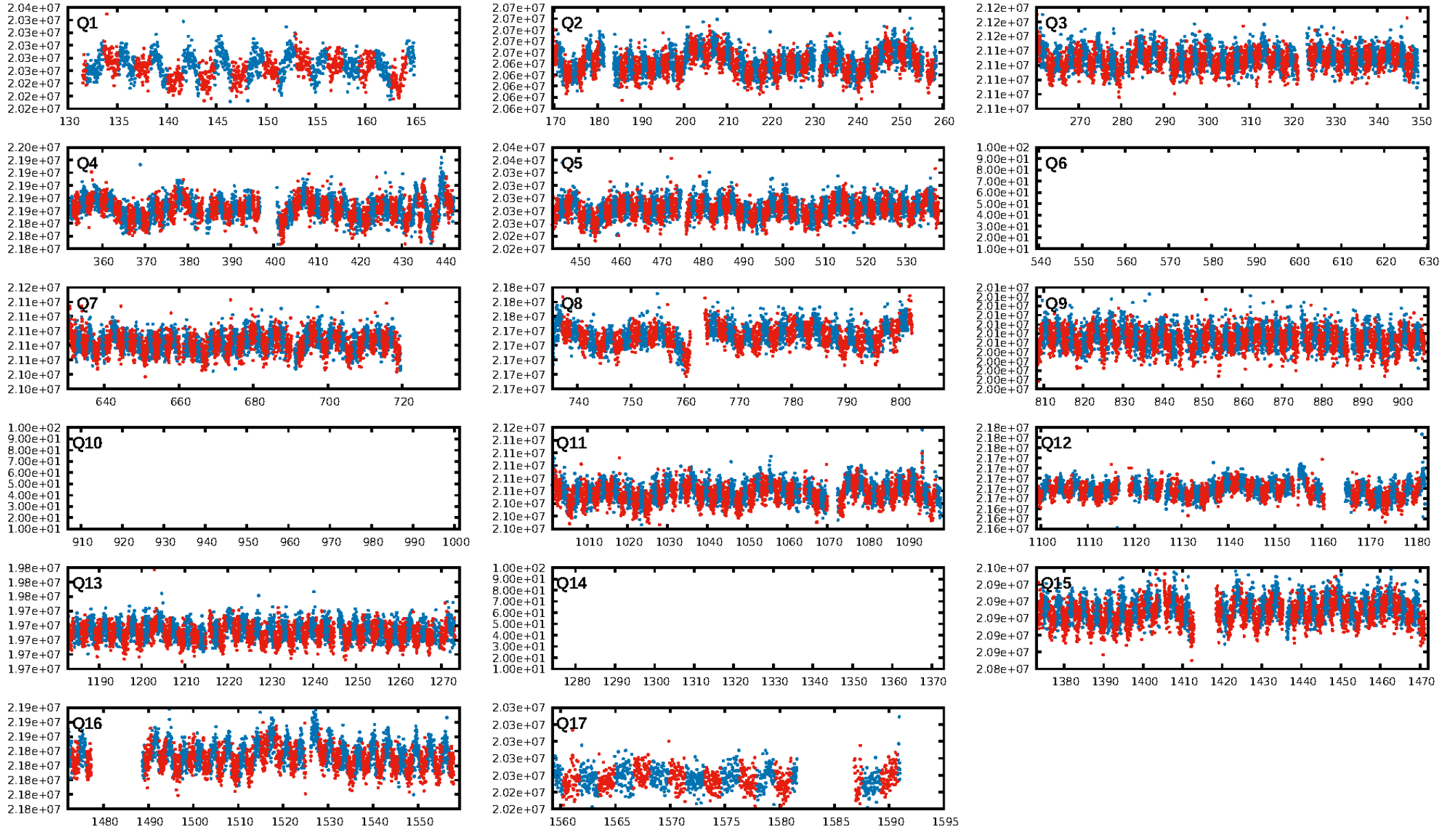
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.15e-12
RollingBand-fgt: 0.99 [322/326]
GhostDiagnostic-chr: -1.311
Centroid-sig: 0.0%
Centroid-so: 7.026 arcsec [15.89σ]
OotOffset-rm: 0.833 arcsec [7.27σ]
KicOffset-rm: 4.437 arcsec [23.61σ]
OotOffset-st: 1/2/4/0 [7]
KicOffset-st: 1/2/4/0 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [14/14]

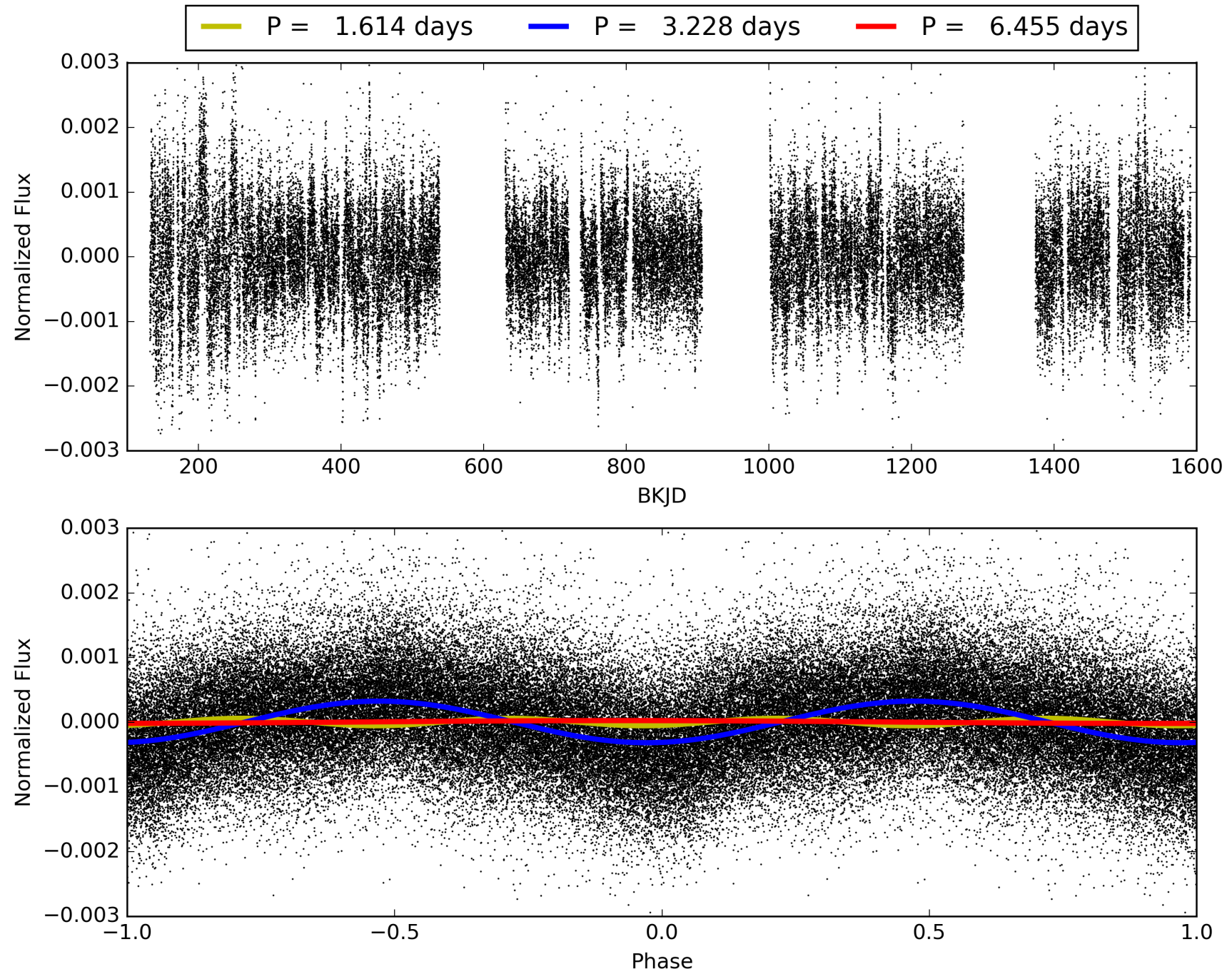
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:14:51 Z

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

TCE 003972123-01, PDC Light Curves

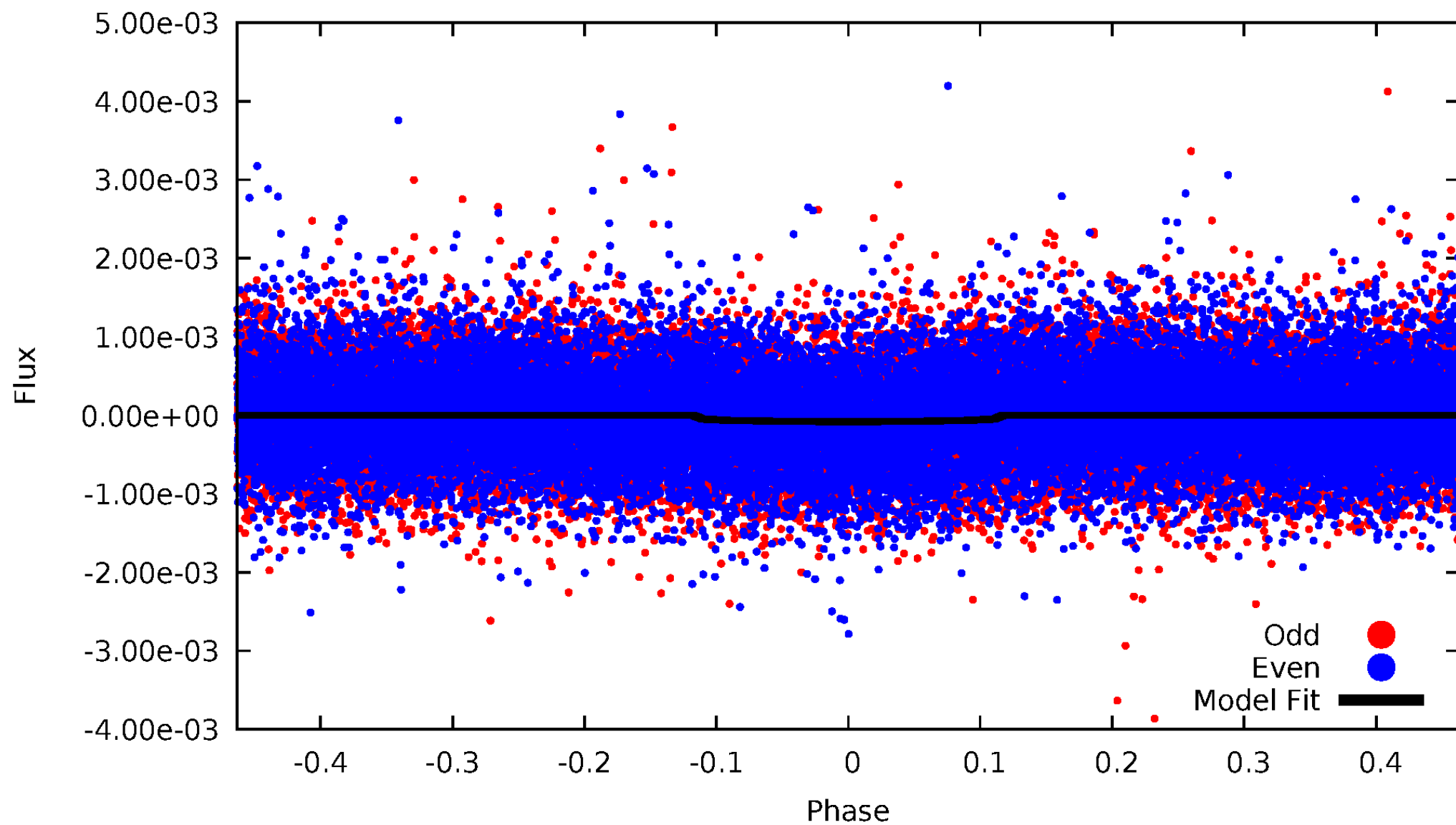


TCE 003972123-01



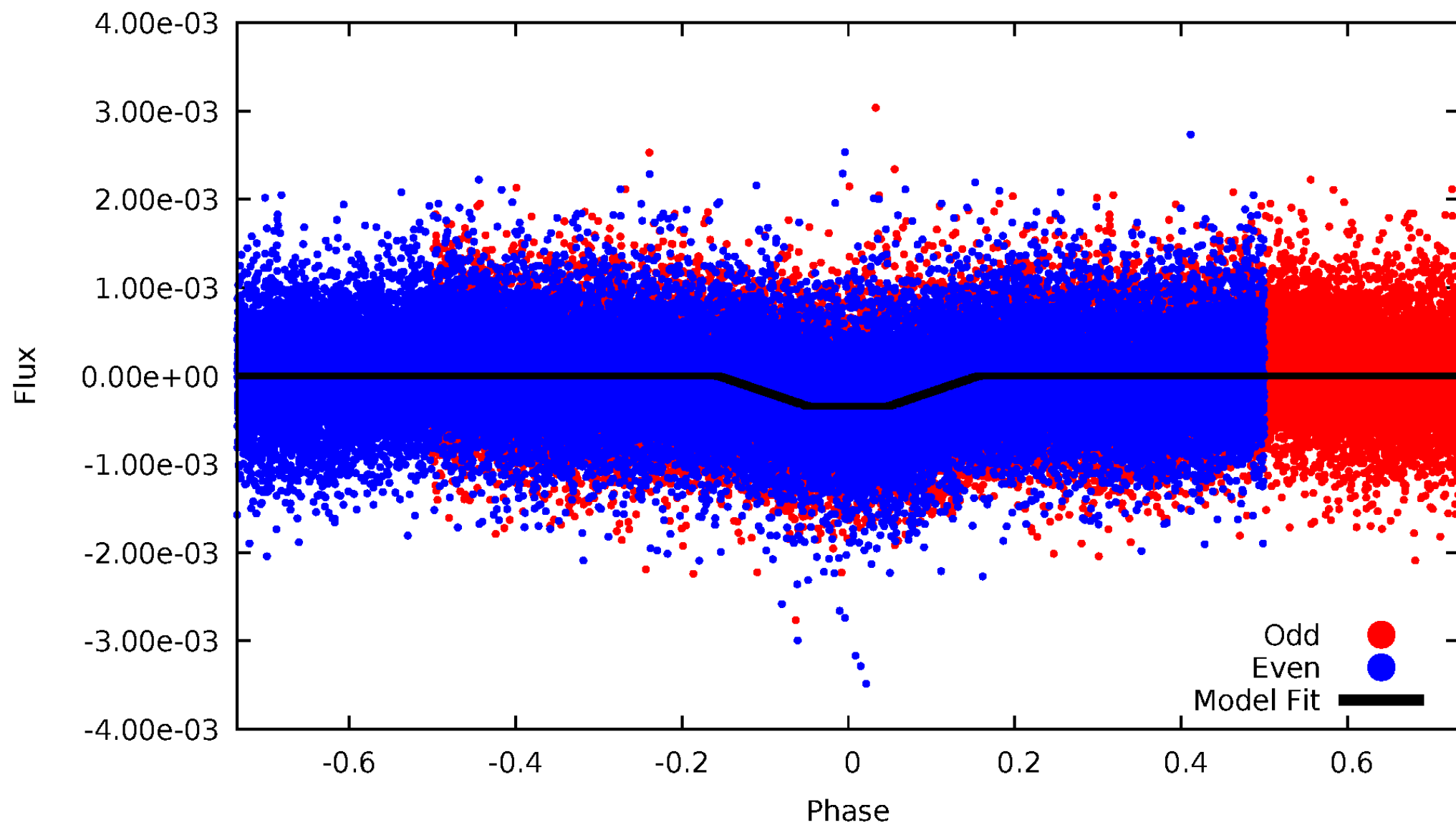
DV Odd/Even

TCE 003972123-01

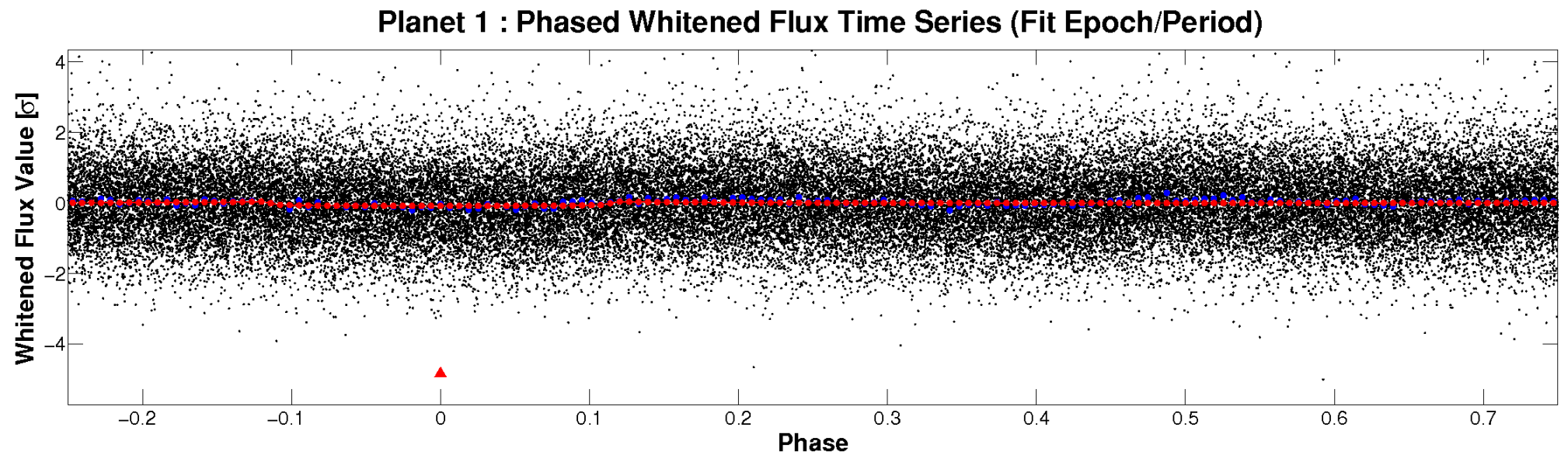
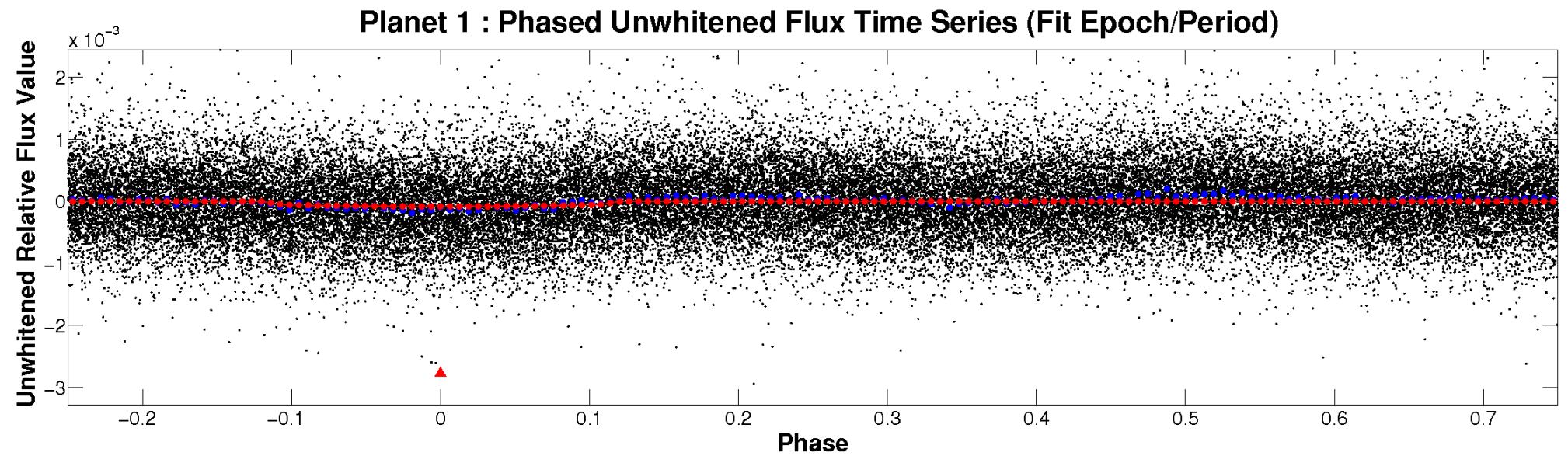


ALT Odd/Even

TCE 003972123-01

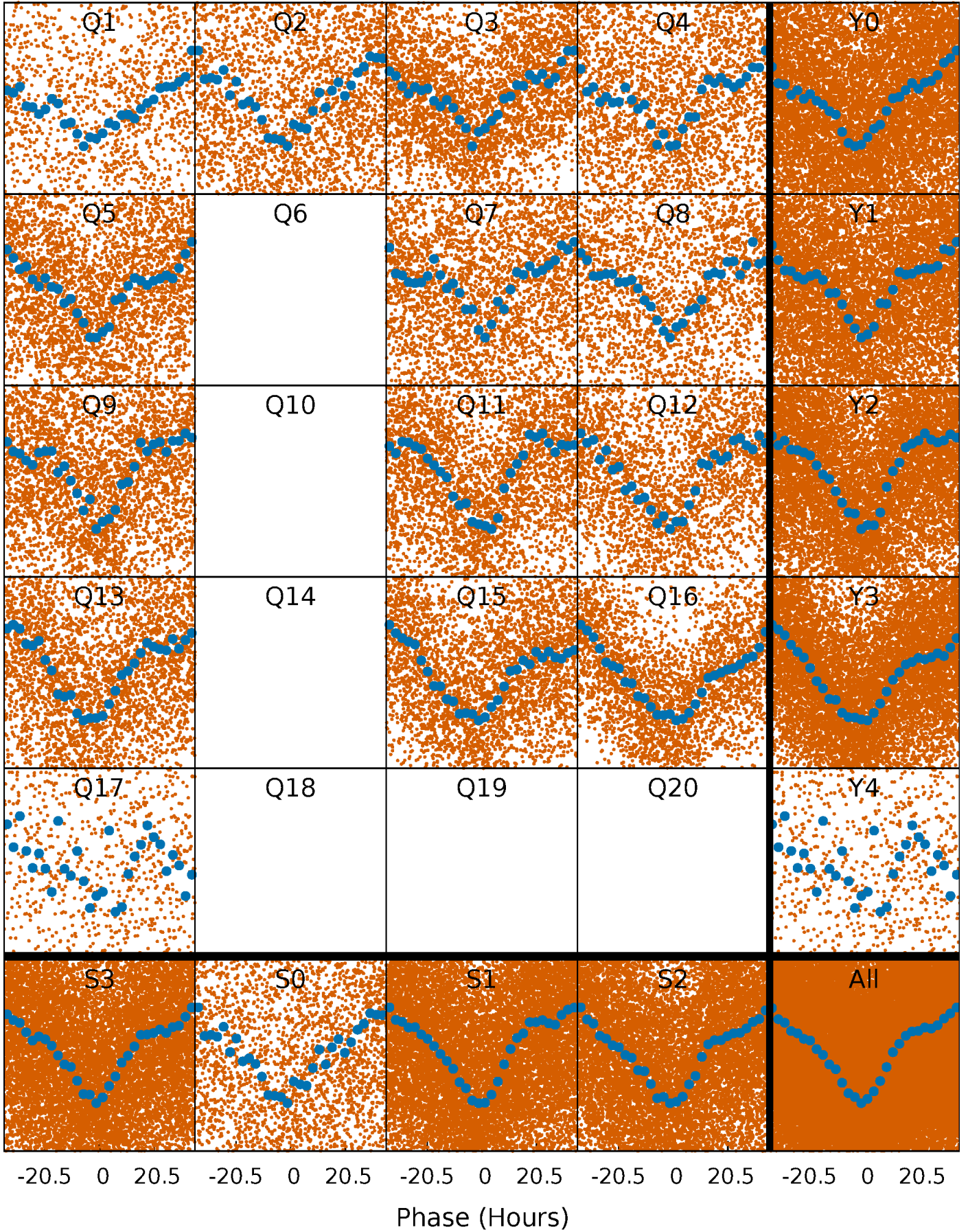


Non-Whitened Vs. Whitened Light Curve



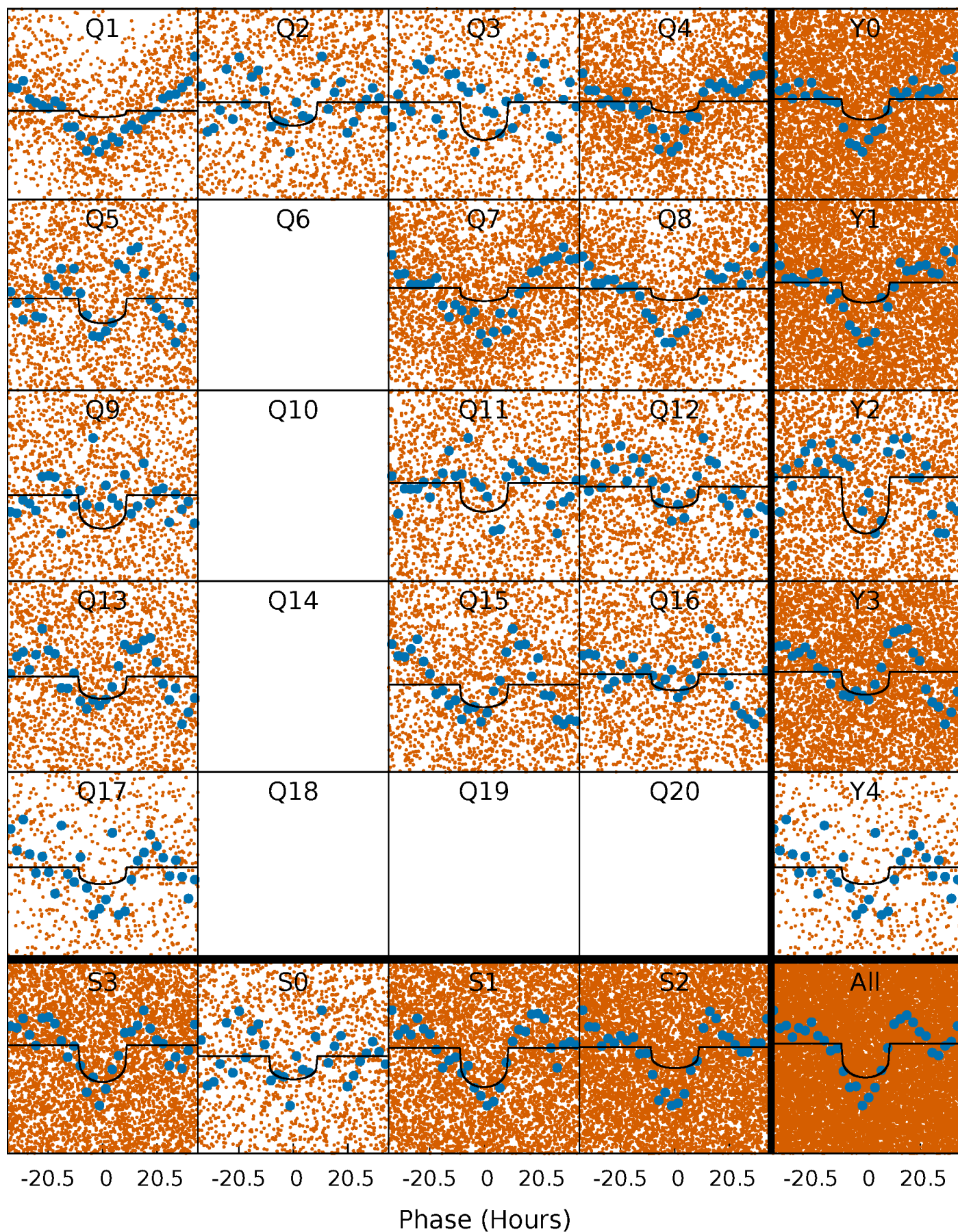
PDC Quarter-Phased Transit Curves

TCE 003972123-01 P= 3.227576 Days $T_0=134.353938$ (BKJD)



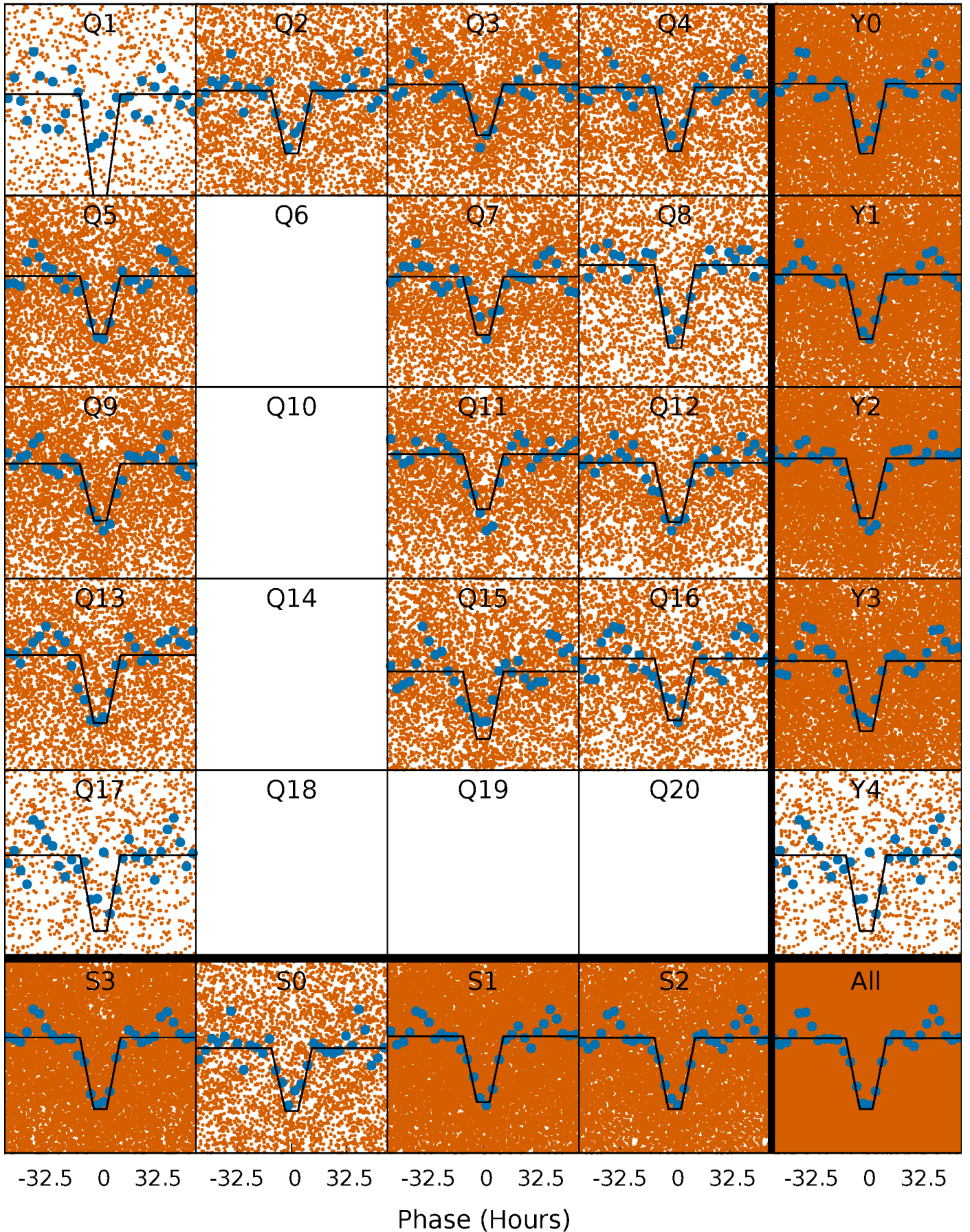
DV Quarter-Phased Transit Curves

TCE 003972123-01 P= 3.227576 Days $T_0=134.353938$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

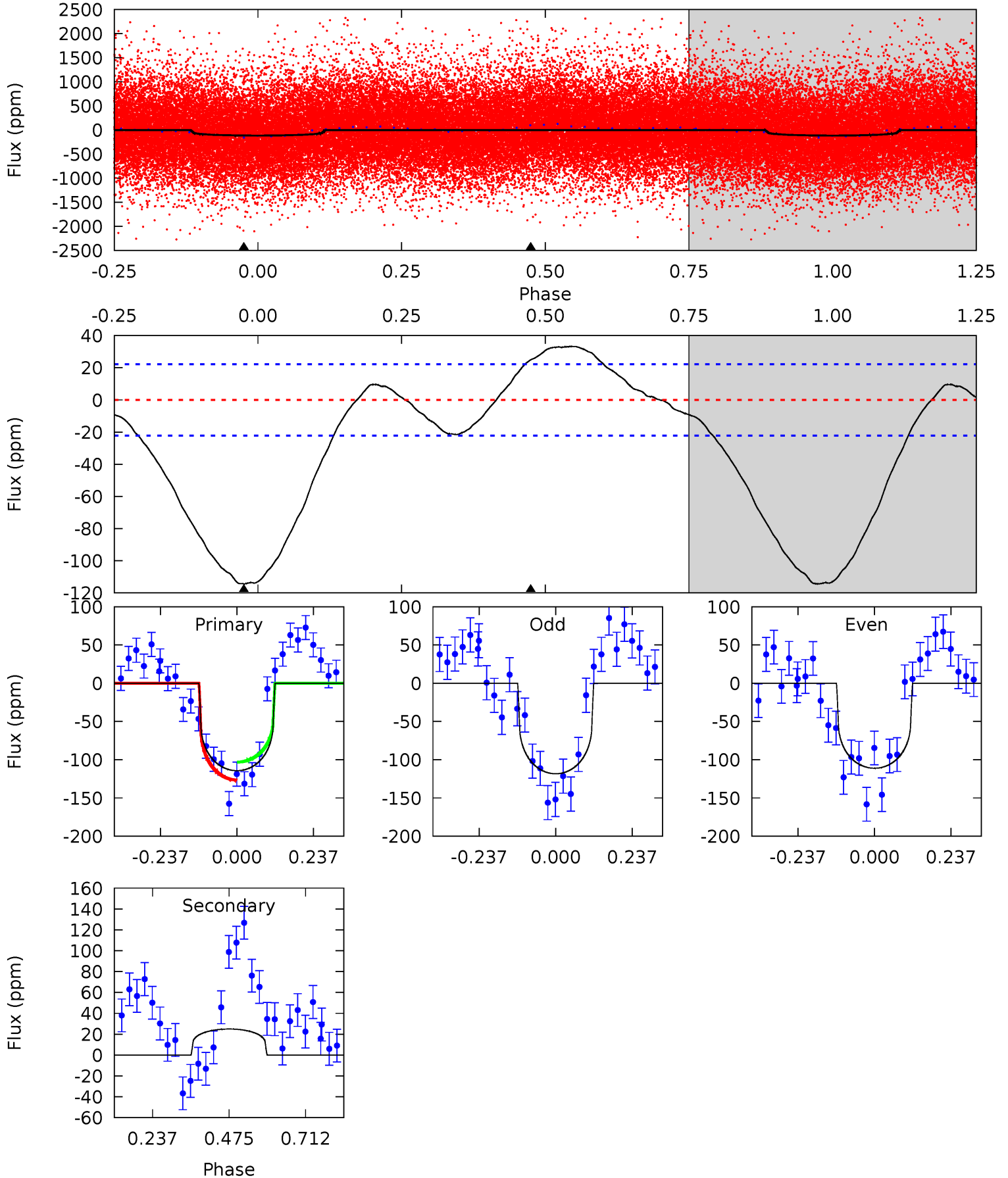
TCE 003972123-01 P= 3.227818 Days $T_0=134.263142$ (BKJD)



DV Model-Shift Uniqueness Test

003972123-01, P = 3.227576 Days, E = 131.126362 Days

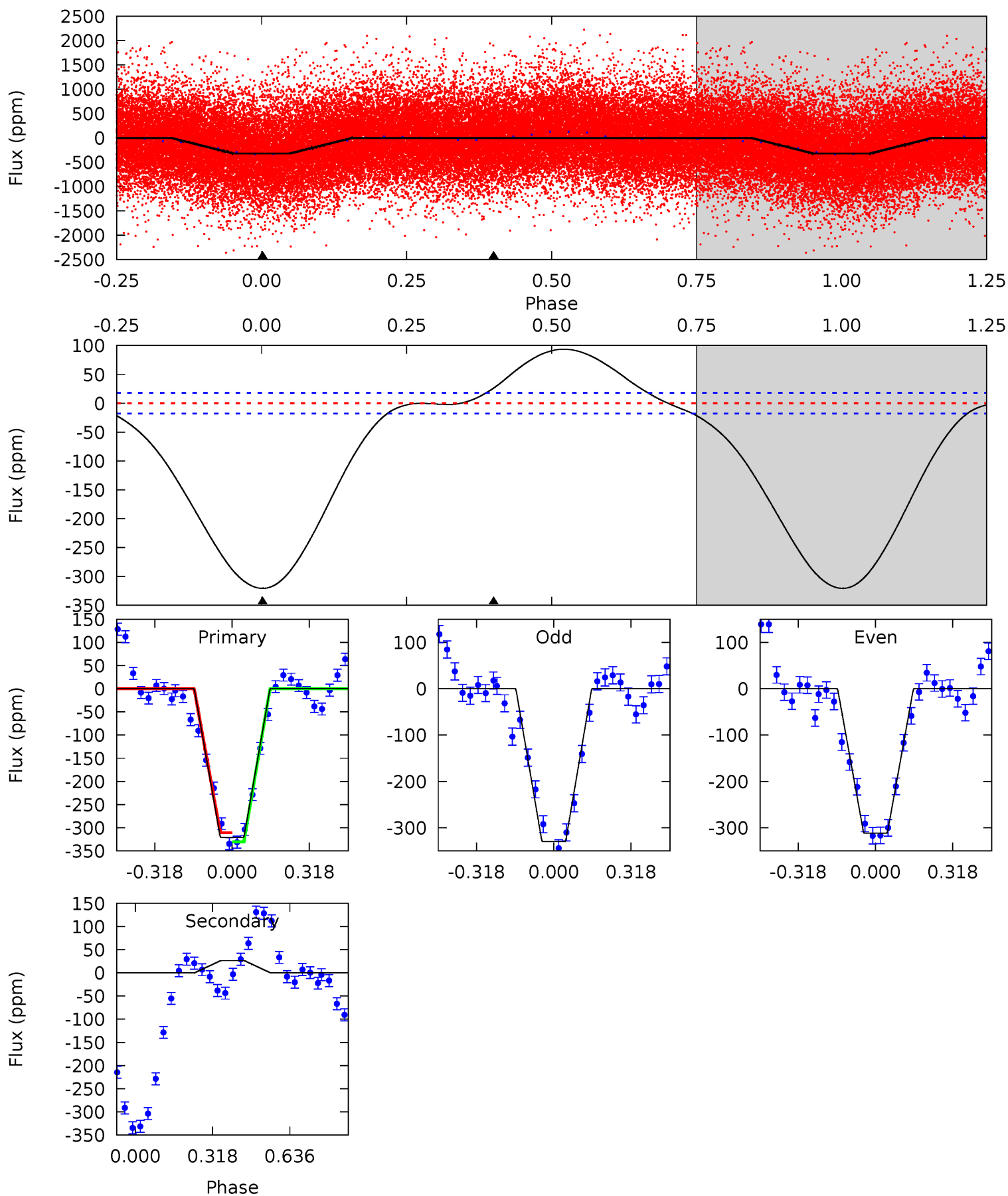
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	-4.91	0	0	4.38	1.18	1.29	22.5	22.5	-4.91	-4.91	0.71	1.35	0.23	2.32



Alt Model-Shift Uniqueness Test

003972123-01, P = 3.227818 Days, E = 131.035324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.1	-6.33	0	0	4.32	1.00	3.39	77.1	77.1	-6.33	-6.33	2.18	1.05	0.23	2.39



Stellar Parameters For KIC 003972123

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5812^{+156}_{-174}	$4.424^{+0.116}_{-0.188}$	$-0.260^{+0.300}_{-0.300}$	$0.957^{+0.252}_{-0.147}$	$0.888^{+0.121}_{-0.091}$	$1.426^{+0.764}_{-0.674}$
	+3%/-3%	+3%/-4%	+115%/-115%	+26%/-15%	+14%/-10%	+54%/-47%
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 003972123-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	25 ± 5	$1.19^{+1.16}_{-0.78}$	1750^{+115}_{-103}	-4208^{+847}_{-2454}	$-16.340^{+12.246}_{-123.709}$
Alt.	26 ± 4	$1.97^{+1.24}_{-1.09}$	1737^{+127}_{-87}	-3555^{+464}_{-1160}	$-6.157^{+3.863}_{-24.438}$

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 $A_{\text{obs}} \gg 1.0$

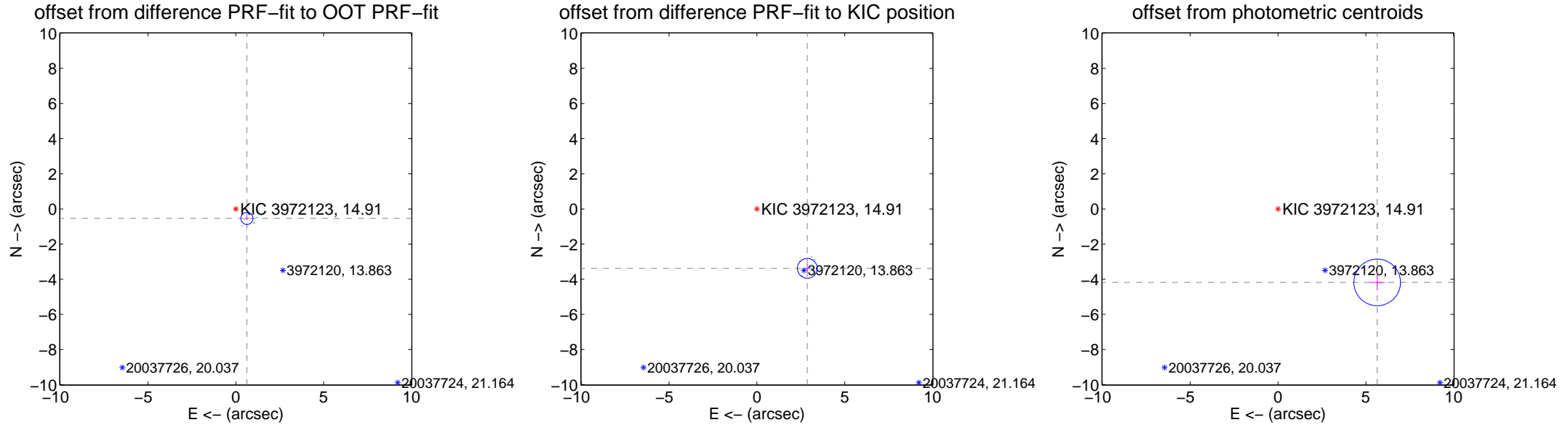
DV Centroid Data

Supplemental centroid analysis for 003972123-01. Kepler magnitude: 14.91. Transit SNR 8.87

There are 7 quarters with good PRF difference image offsets

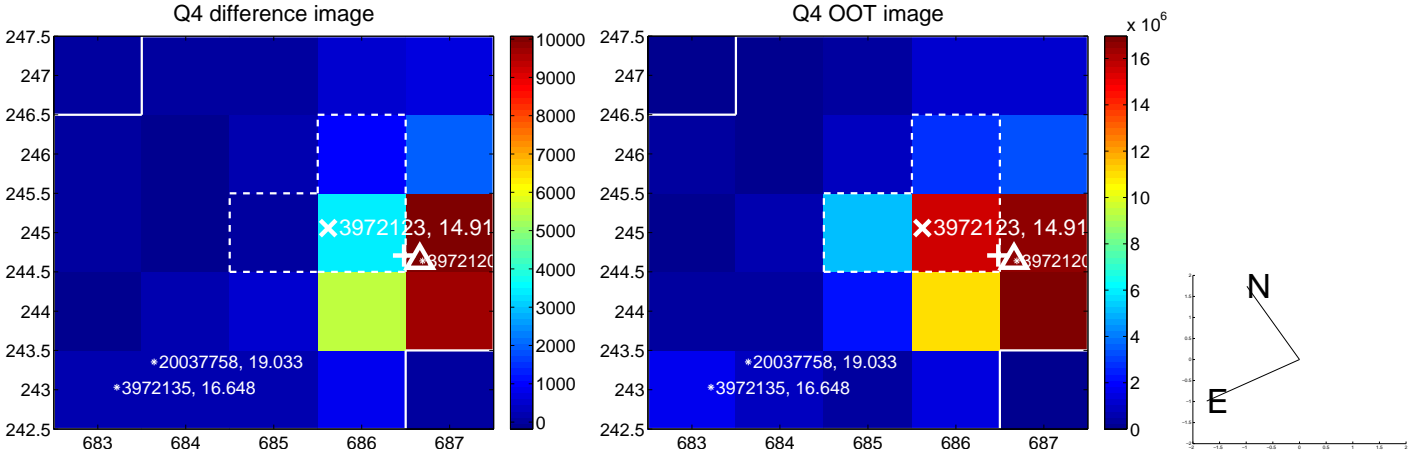
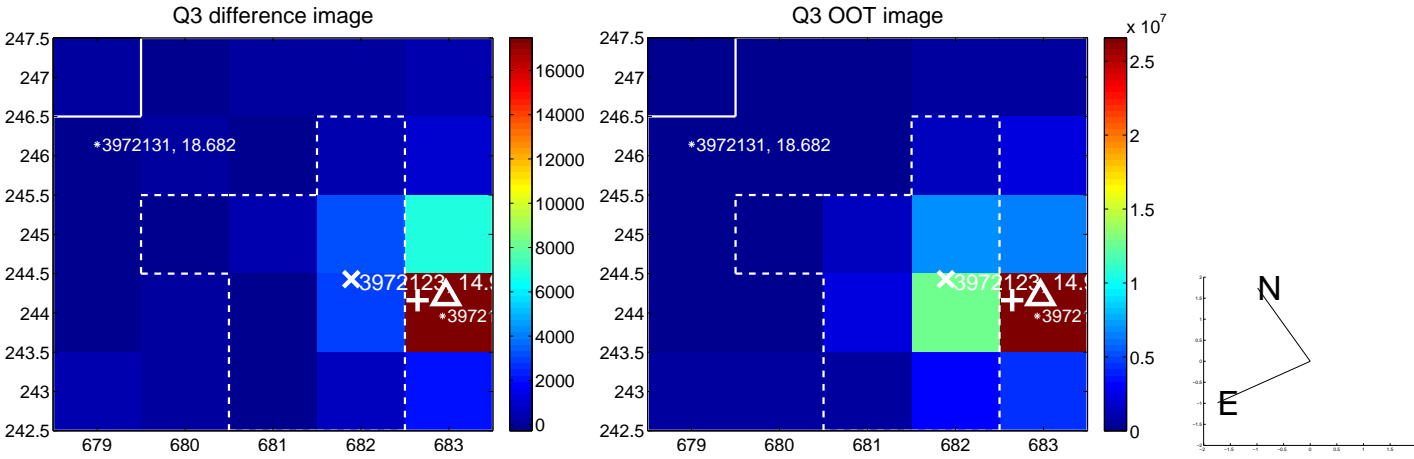
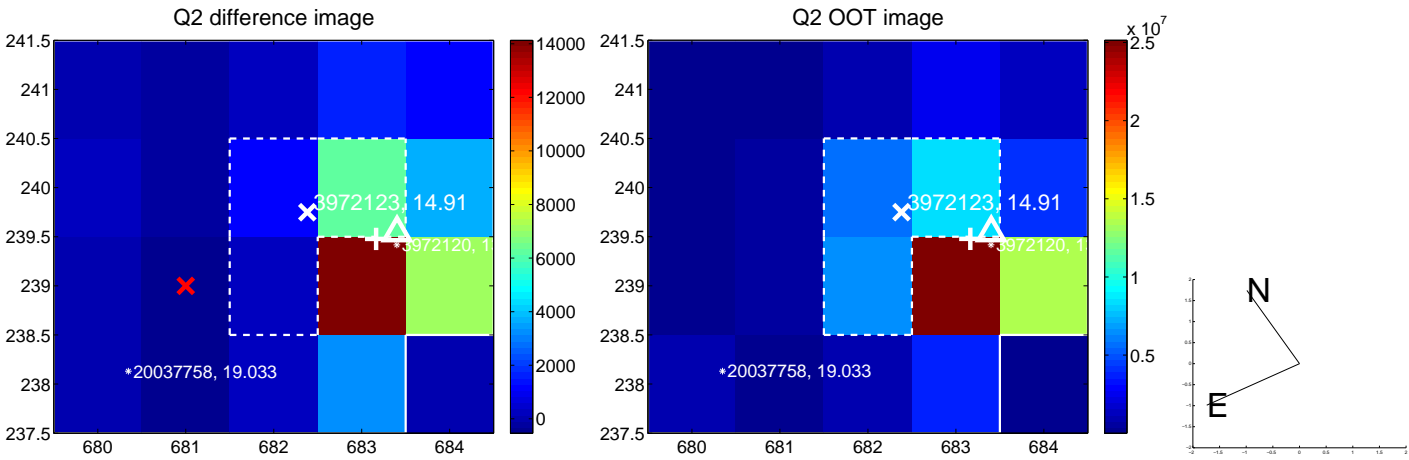
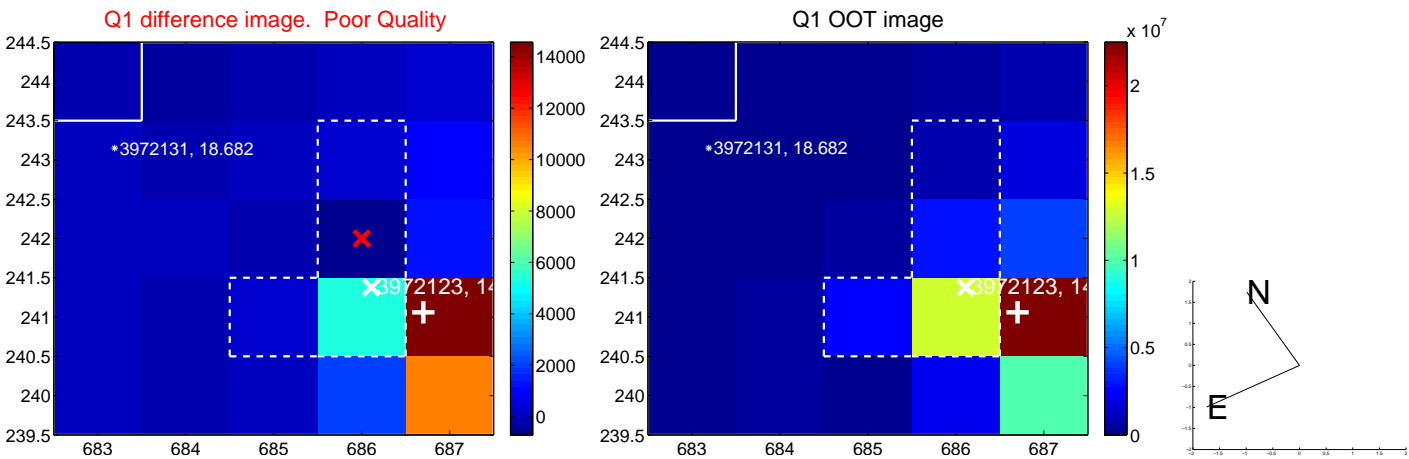
The OOT PRF centroid is offset from the target star catalog position by about 3.60 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.833 ± 0.115	7.27	-0.634 ± 0.128	-0.540 ± 0.093
PRF-fit source offset from KIC position	4.437 ± 0.188	23.61	-2.872 ± 0.112	-3.382 ± 0.228
photometric centroid source offset	7.03 ± 0.44	15.89	-5.65 ± 0.43	-4.18 ± 0.46

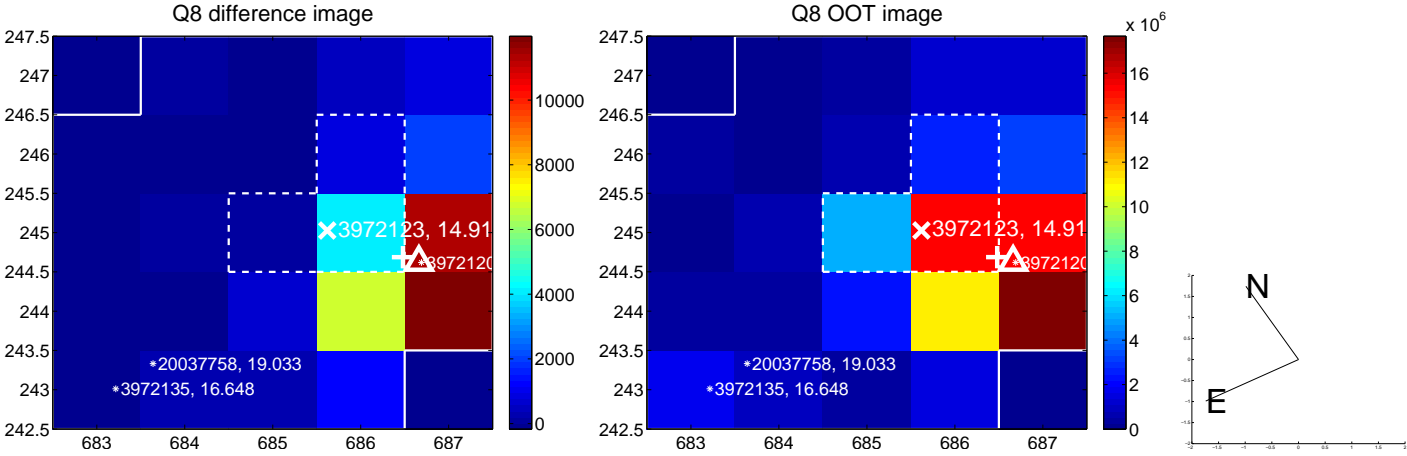
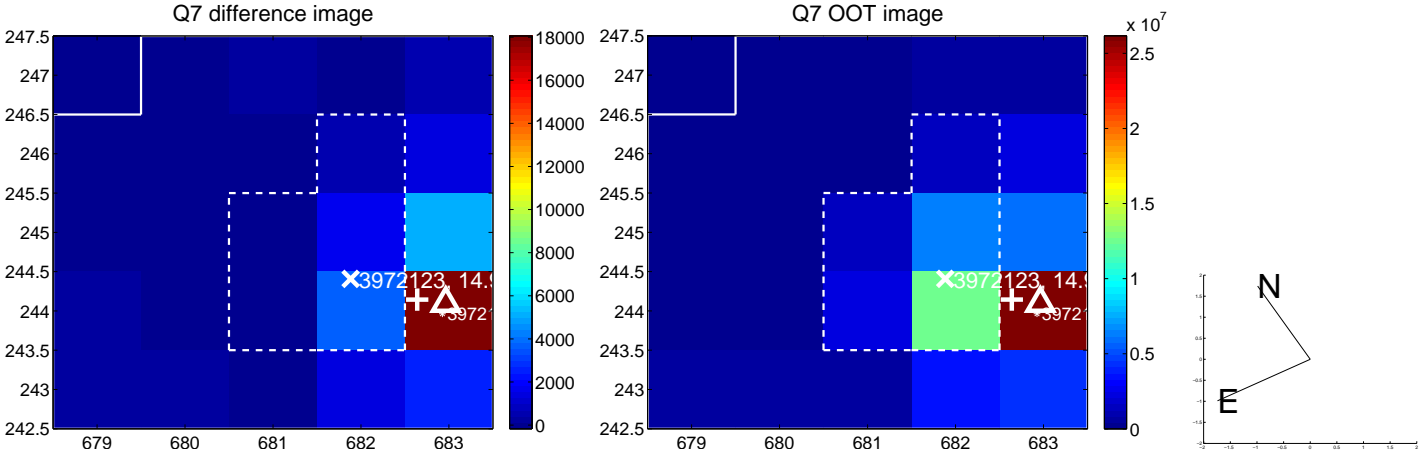
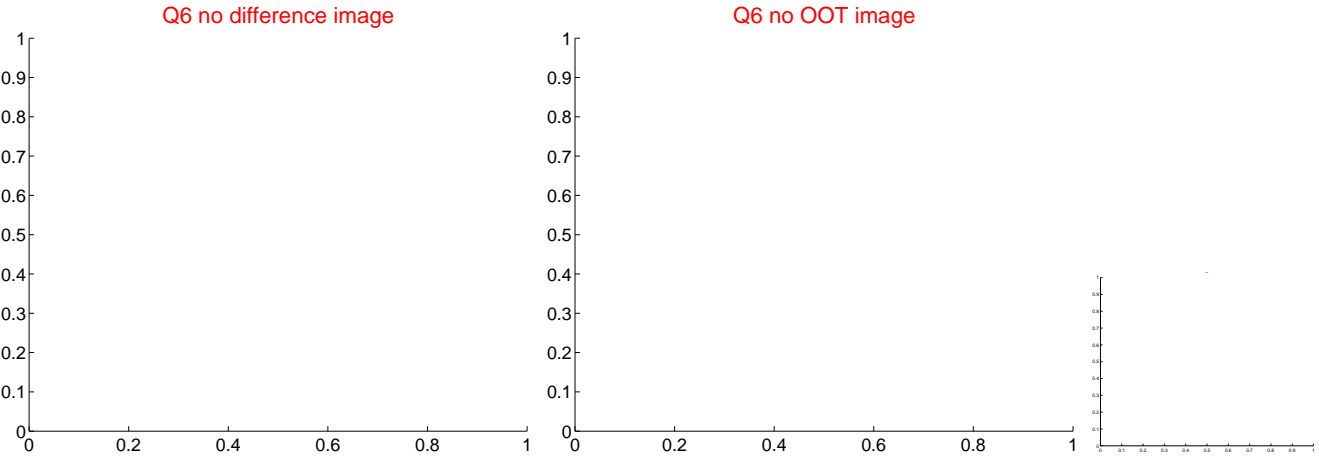
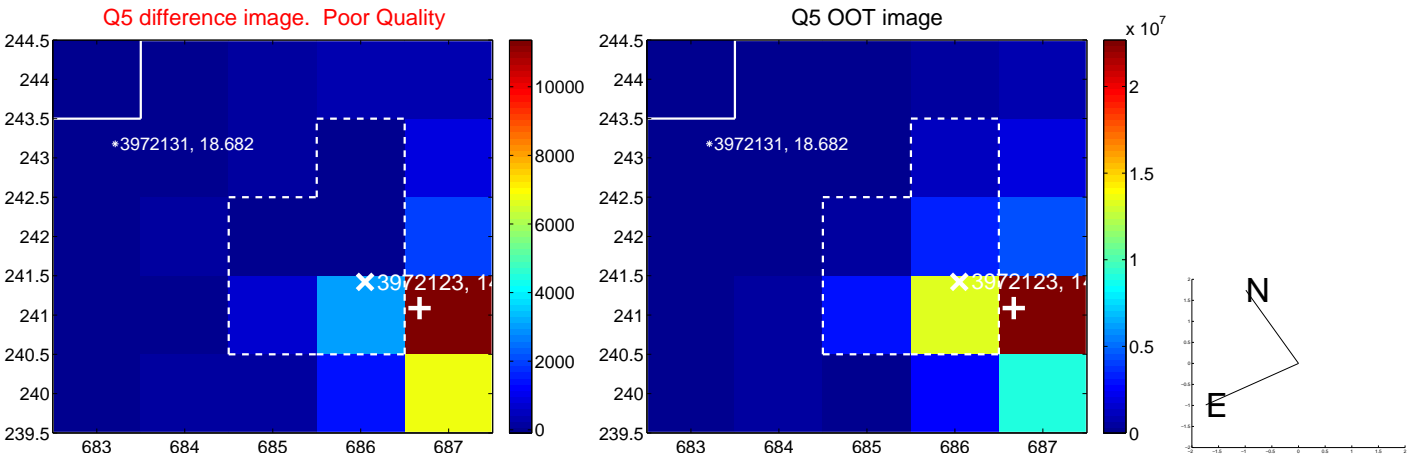


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

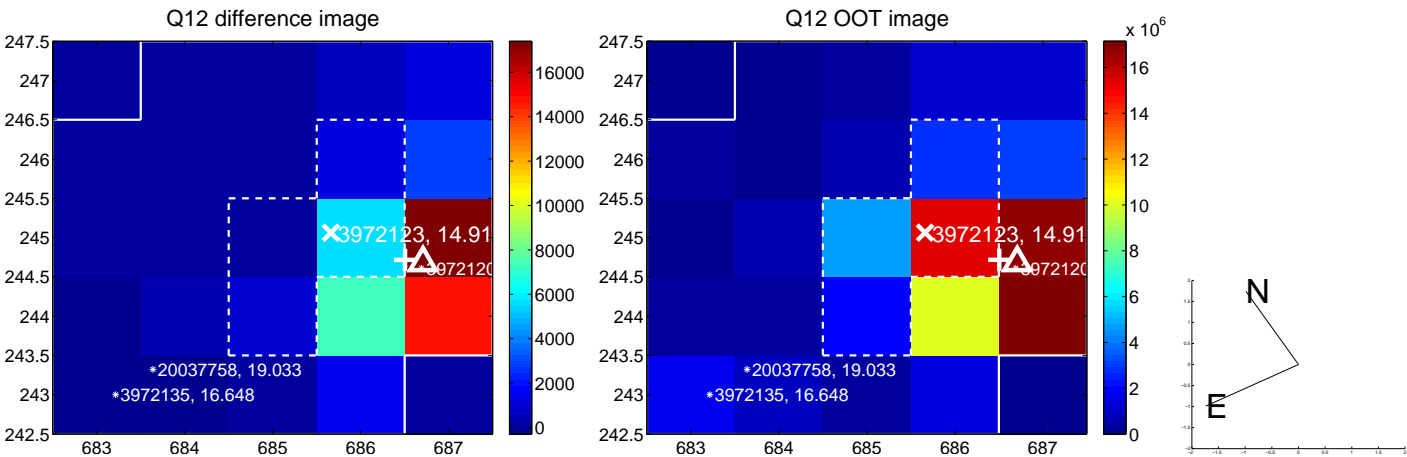
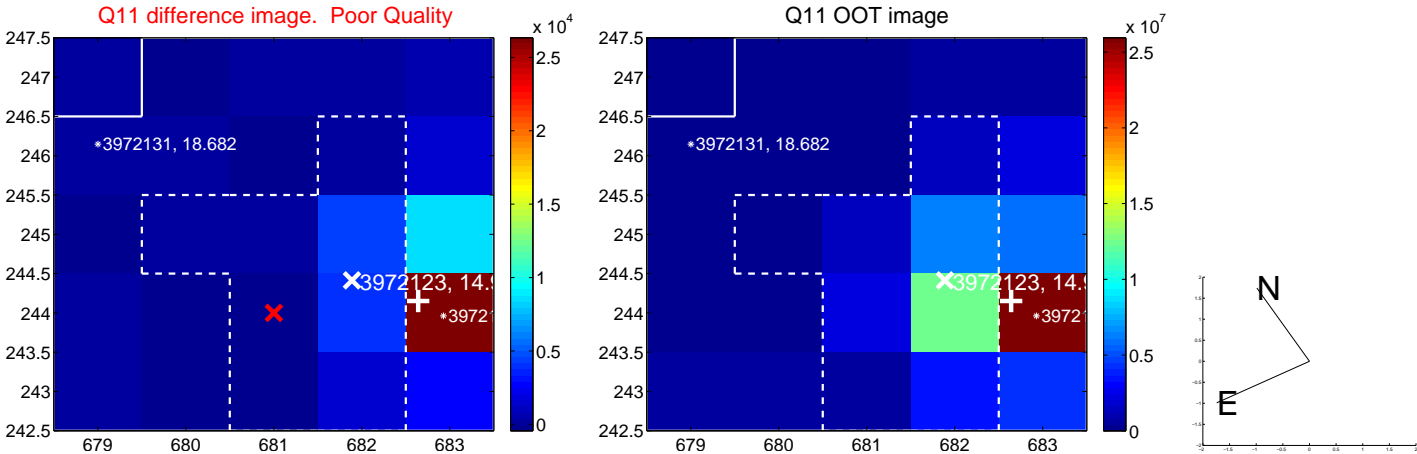
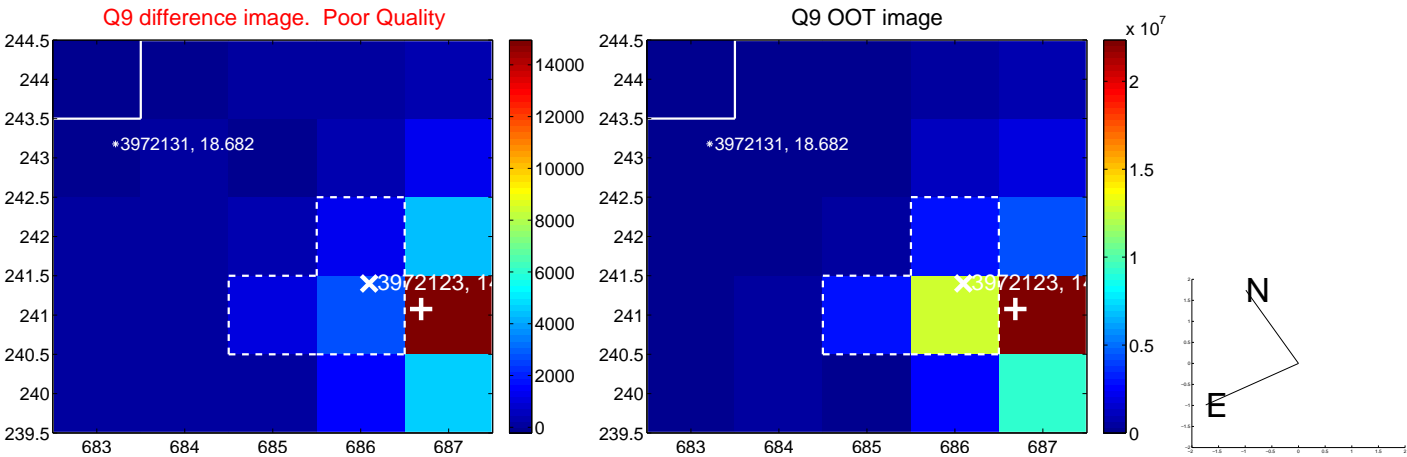
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



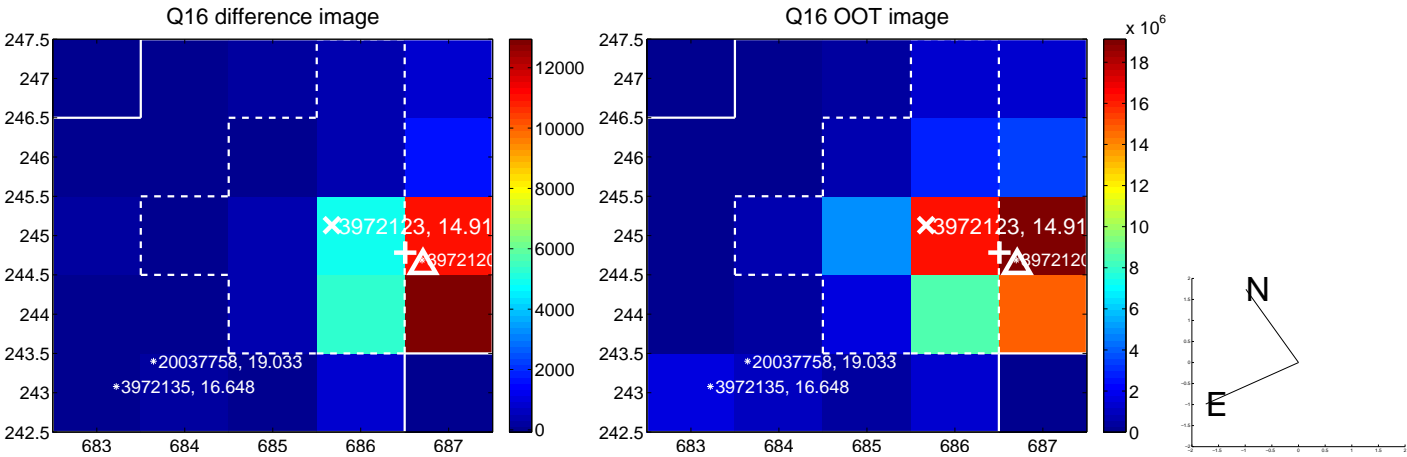
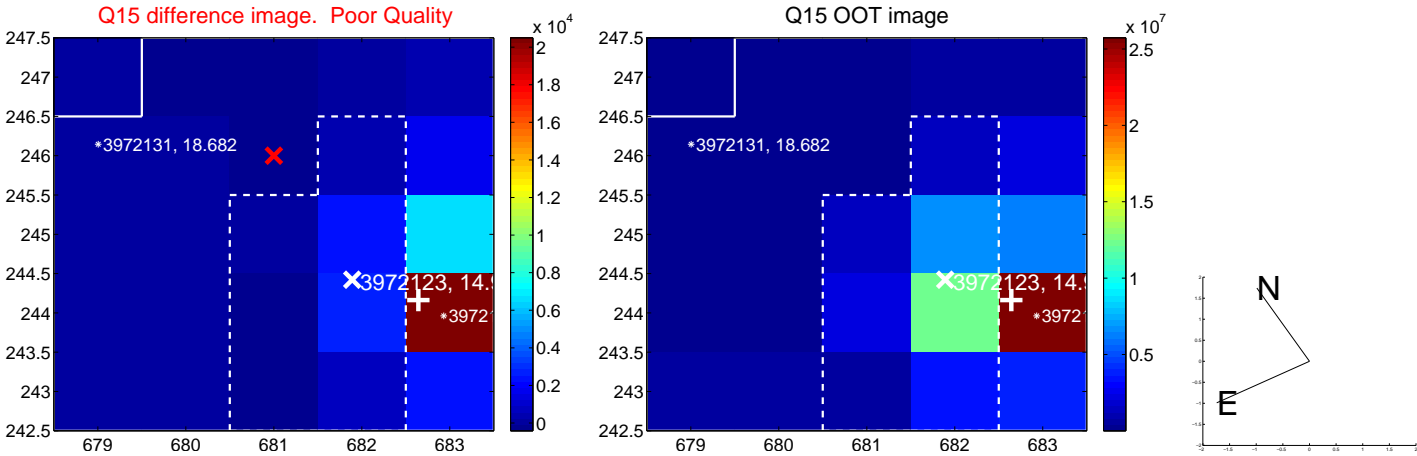
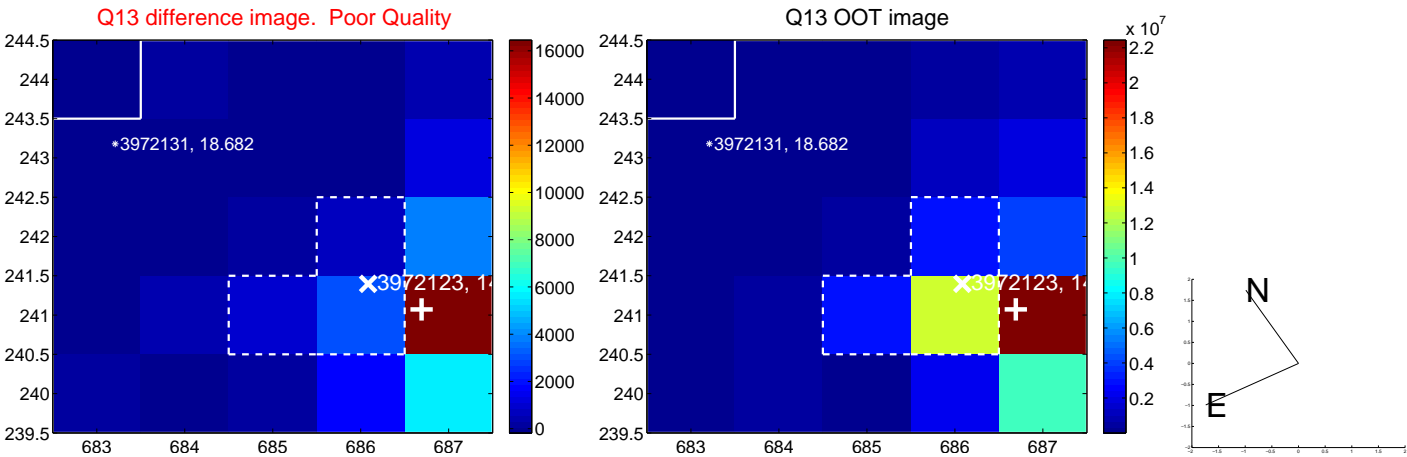
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



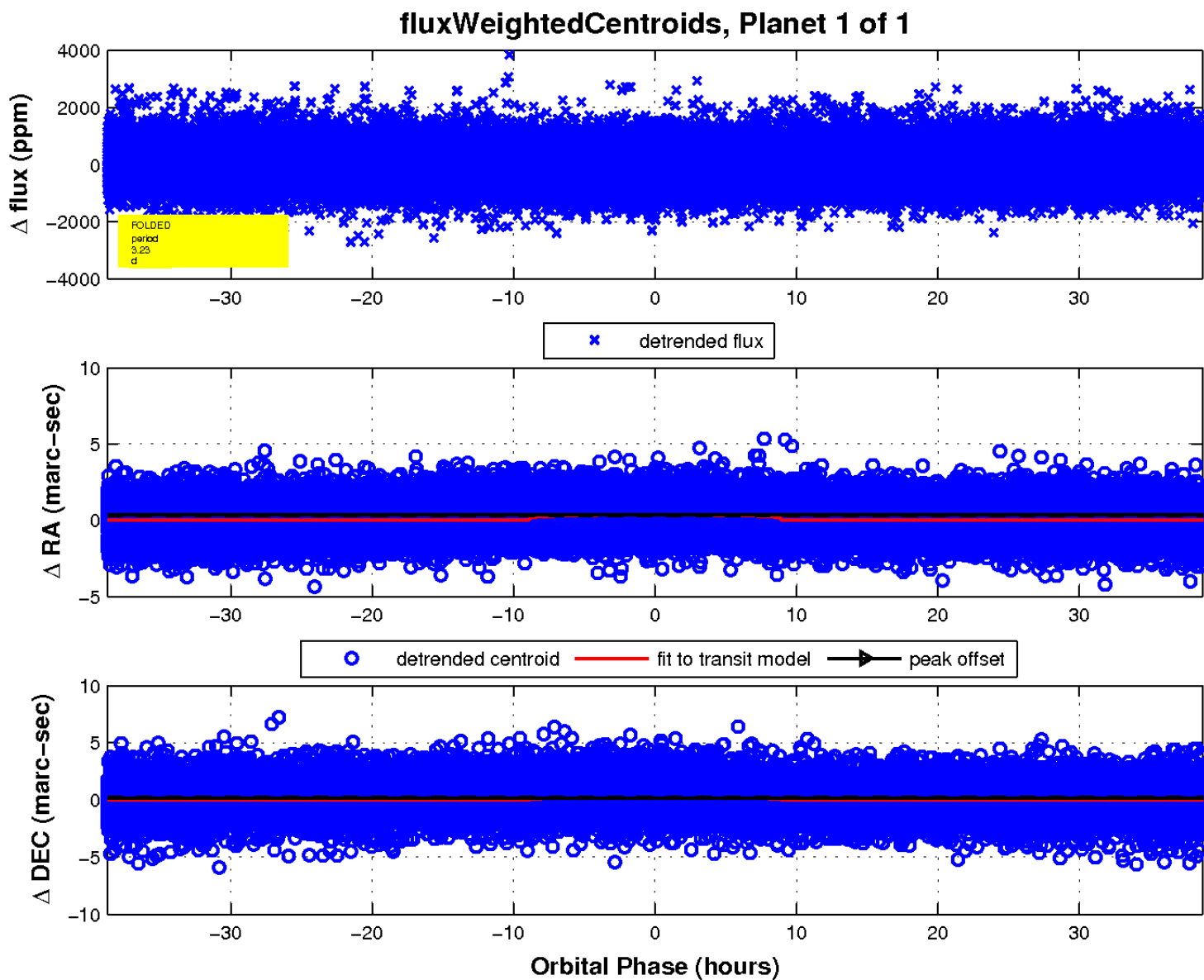
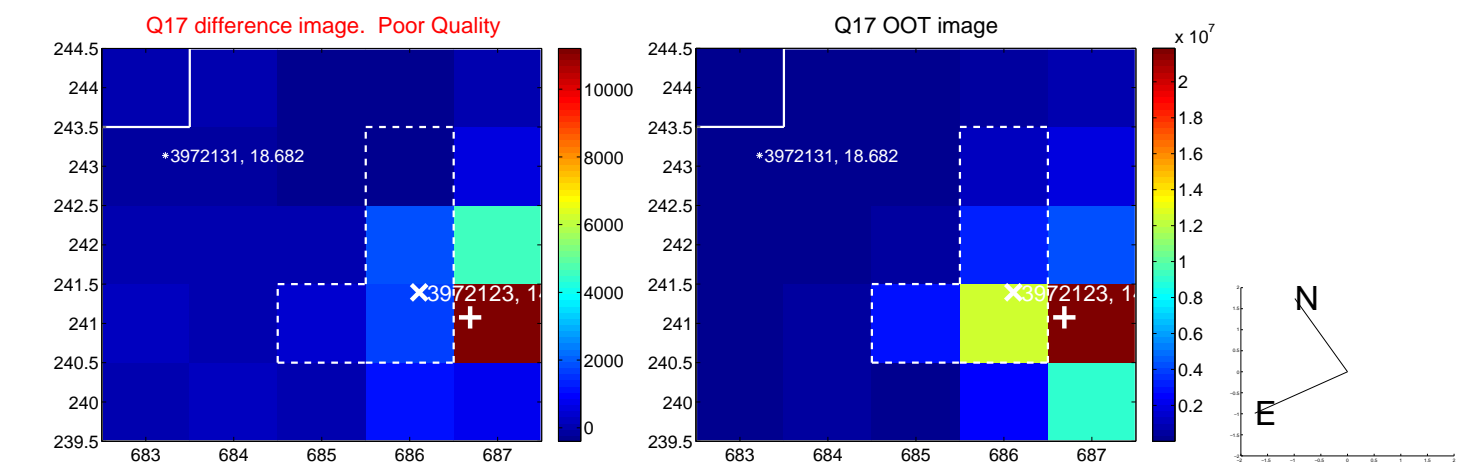
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

