

KIC 009642041

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})
009642041-01	OBS	No	0.859848	132.058943	0.0	2.104	24.0	0.0	1.59	6943	0.01	13392.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009642041-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

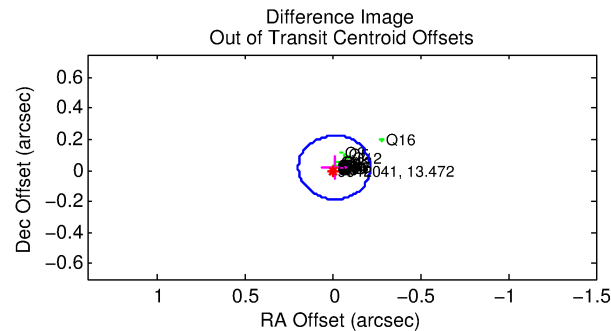
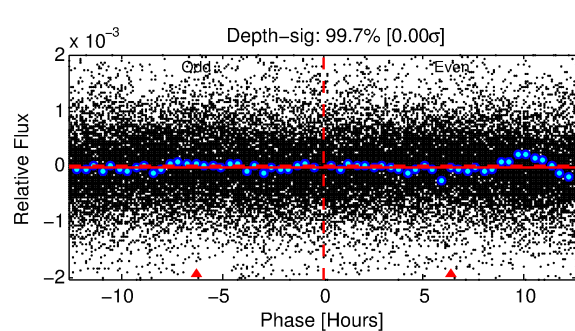
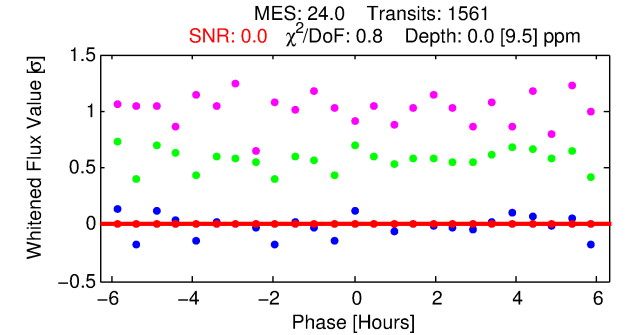
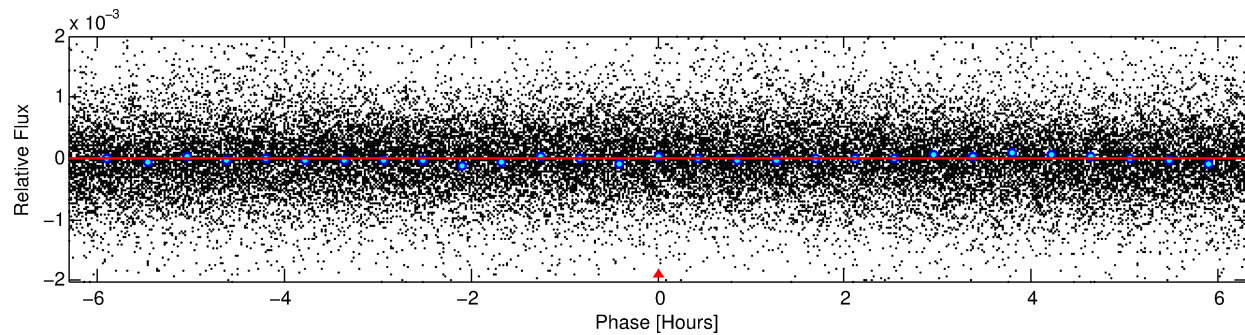
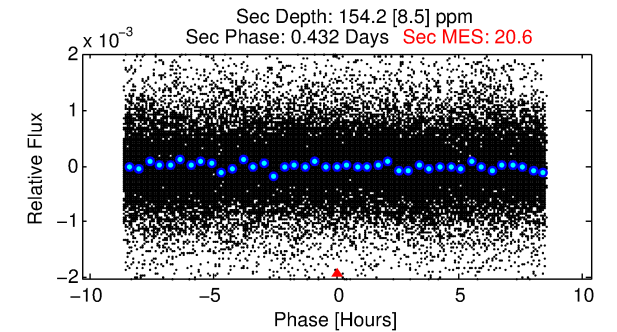
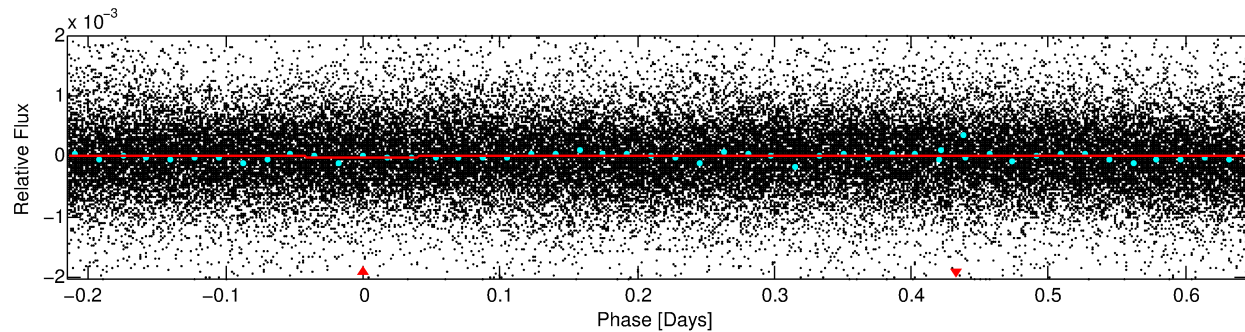
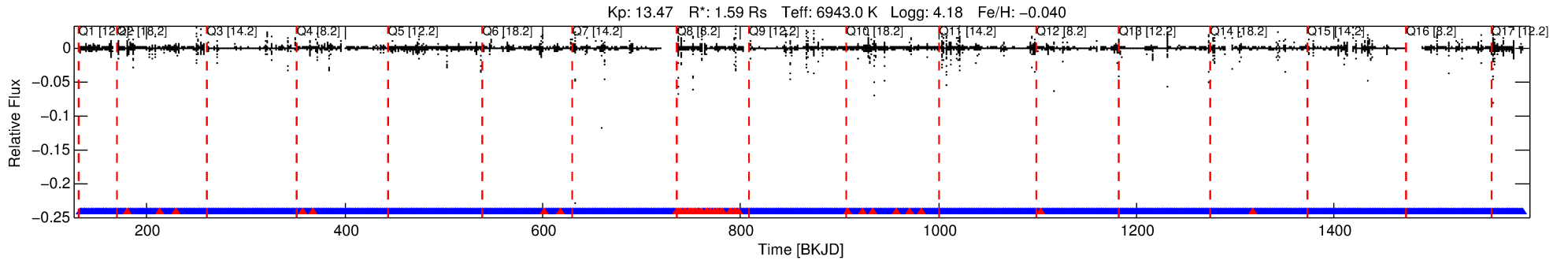
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009642041-01

No Significant Match Found

DV One-Page Summary

KIC: 9642041 Candidate: 1 of 1 Period: 0.860 d



DV Fit Results:

Period = 0.85985 [0.56363] d
Epoch = 132.0589 [79.9449] BKJD
Rp/R* = 0.0000 [0.1379]
a/R* = 1.82 [303.75]
b = 0.86 [182.71]
Seff = 13392.02 [12831.30]
Teq = 2743 [657] K
Rp = 0.01 [23.98] Re
a = 0.0199 [0.0101] AU
Ag = 780540.88 [5714703963.79] [0.00σ]
Teffp = 126060 [230753746] K [0.00σ]

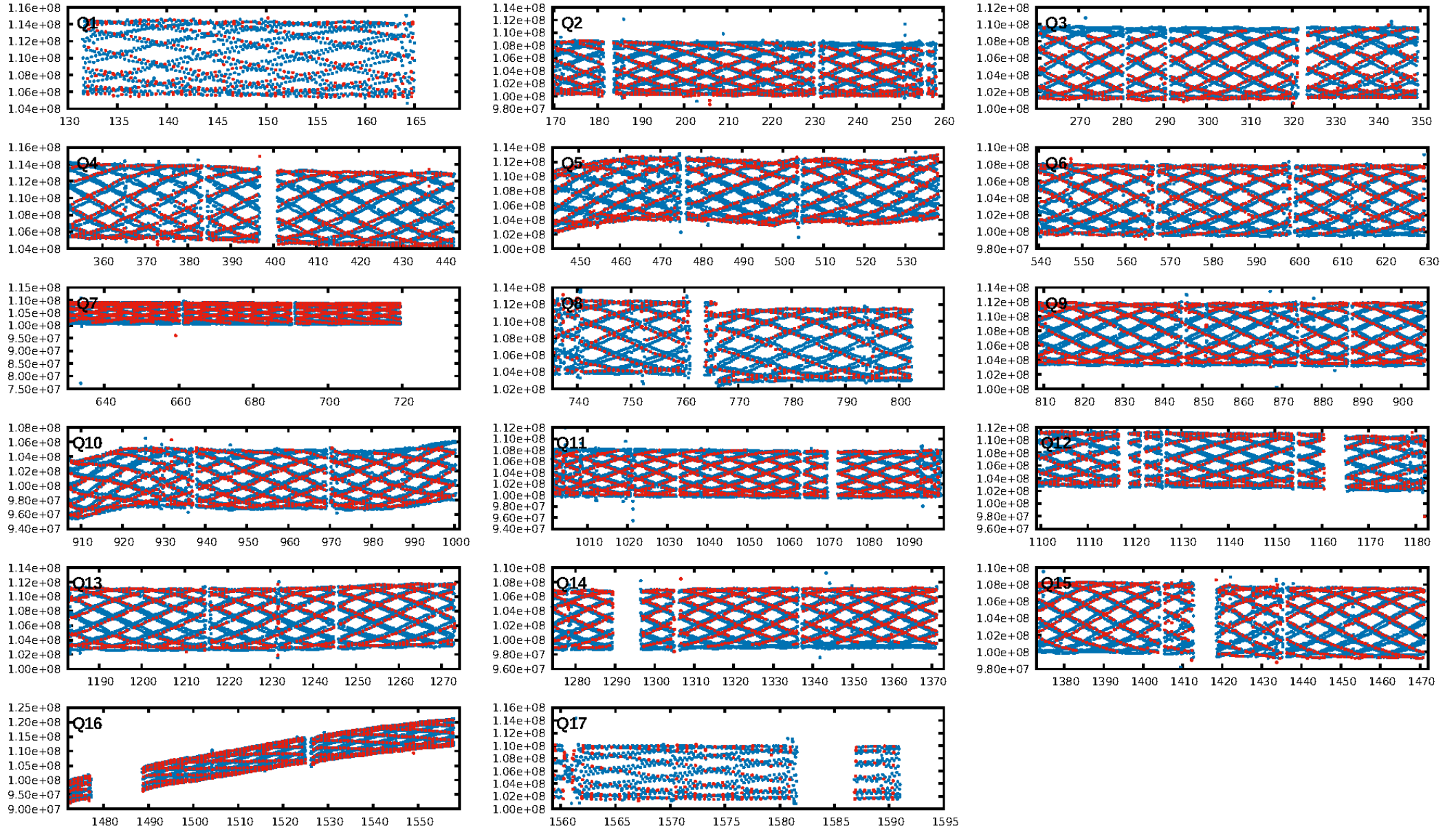
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.16e-33
RollingBand-fgt: 0.97 [1444/1491]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.022 arcsec [0.32σ]
KicOffset-rm: 0.037 arcsec [0.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

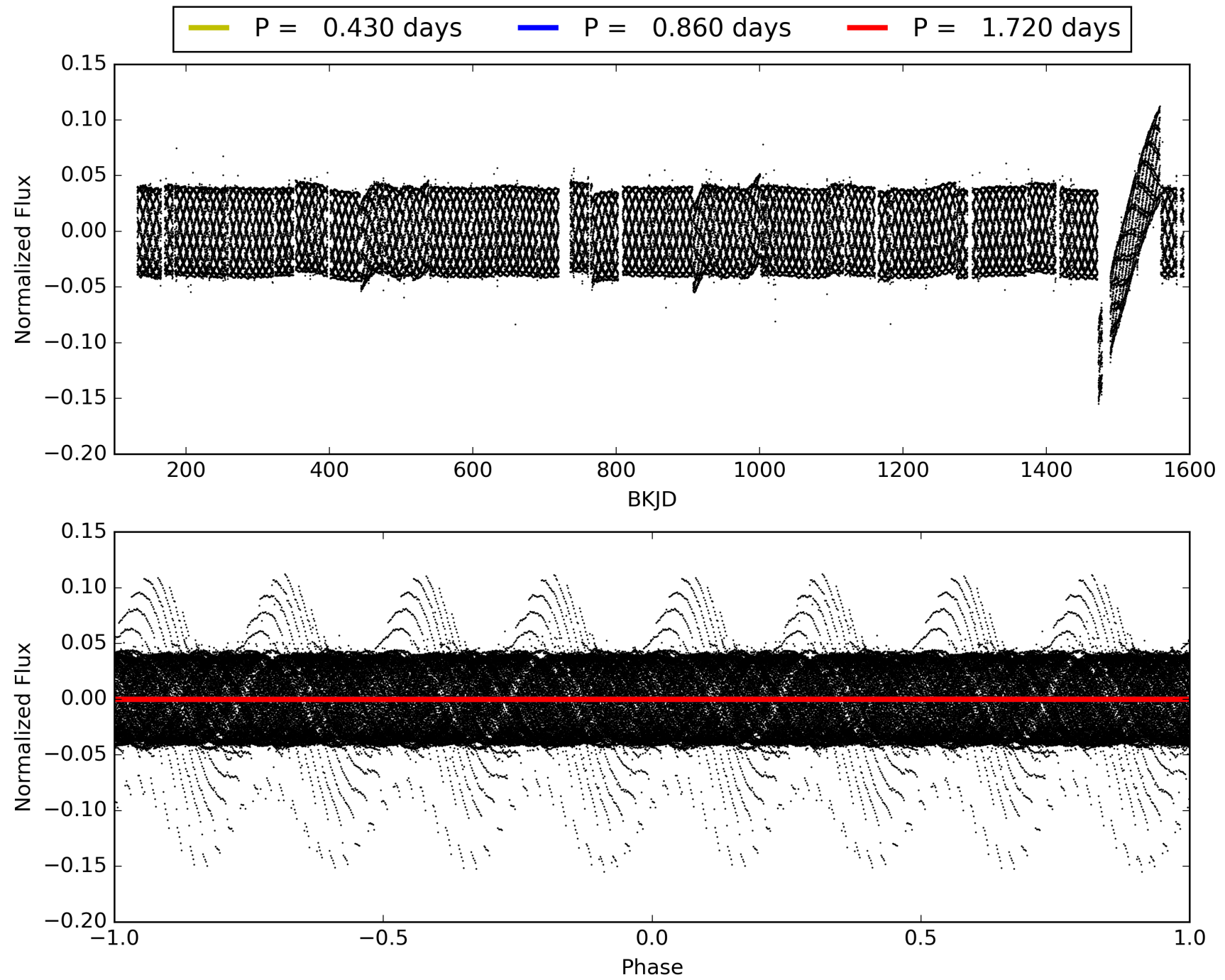
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:27:08 Z

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

TCE 009642041-01, PDC Light Curves

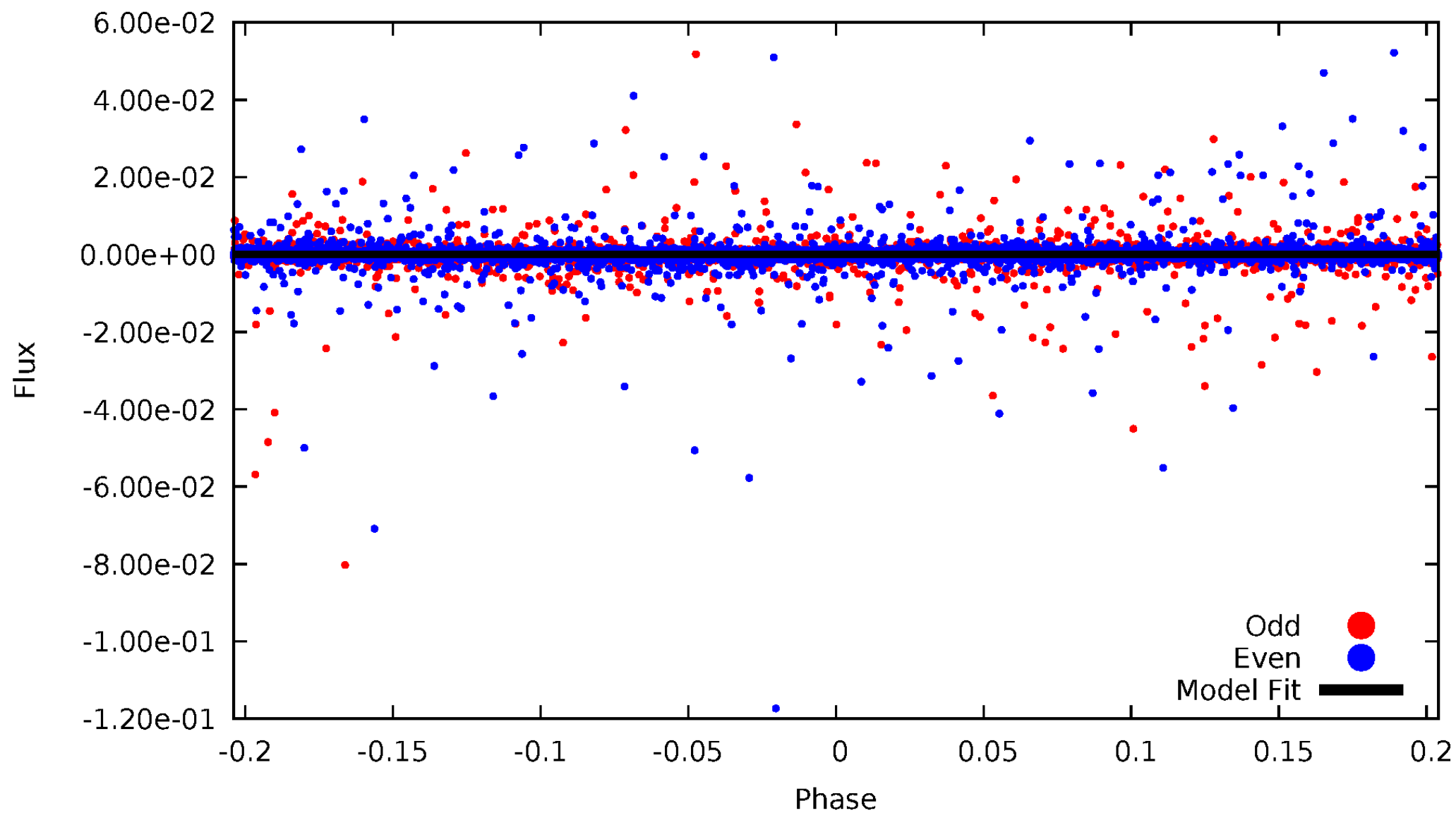


TCE 009642041-01



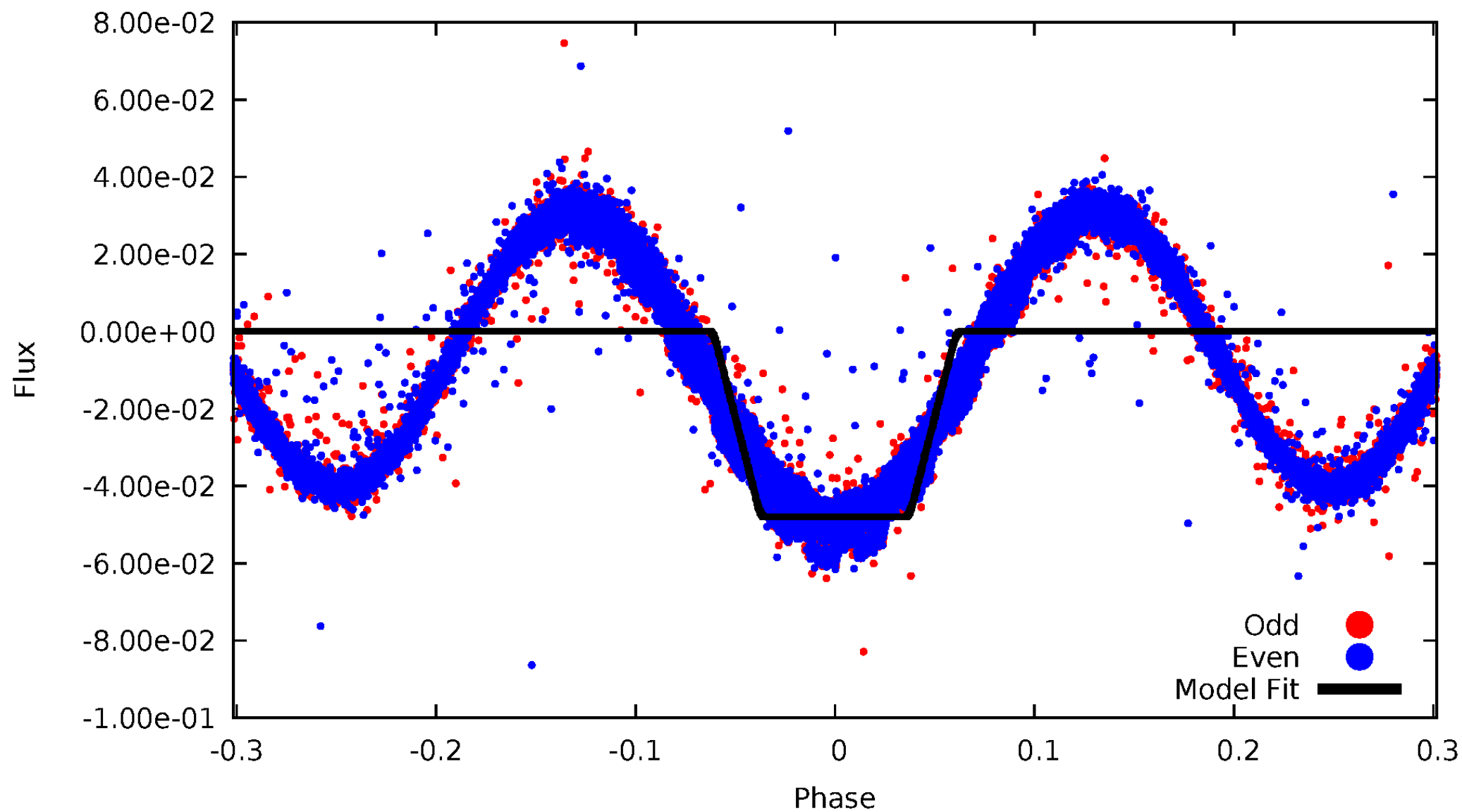
DV Odd/Even

TCE 009642041-01



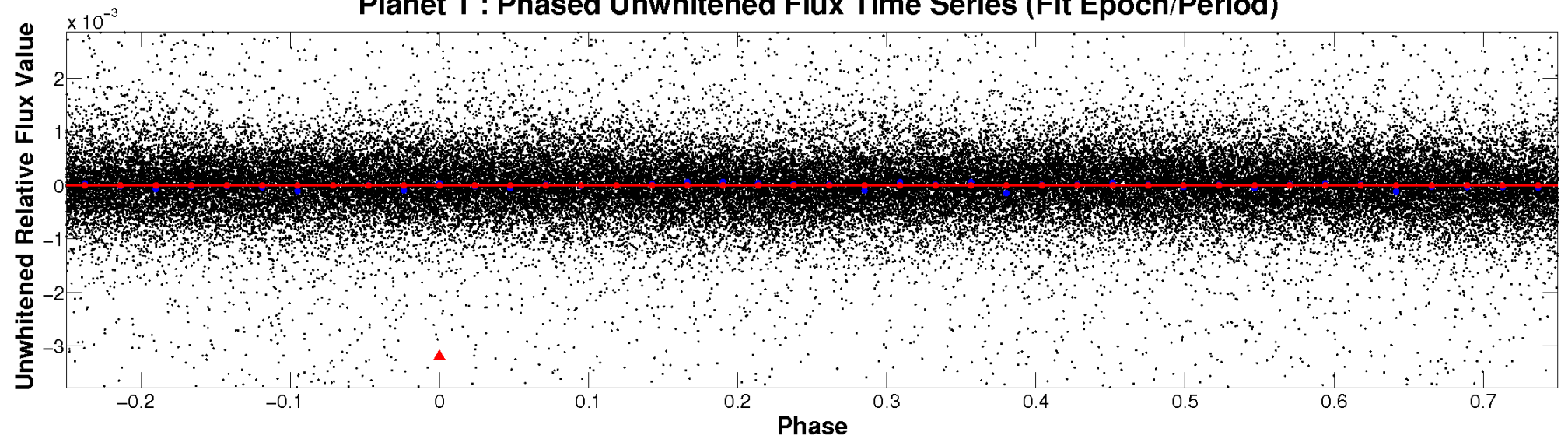
ALT Odd/Even

TCE 009642041-01

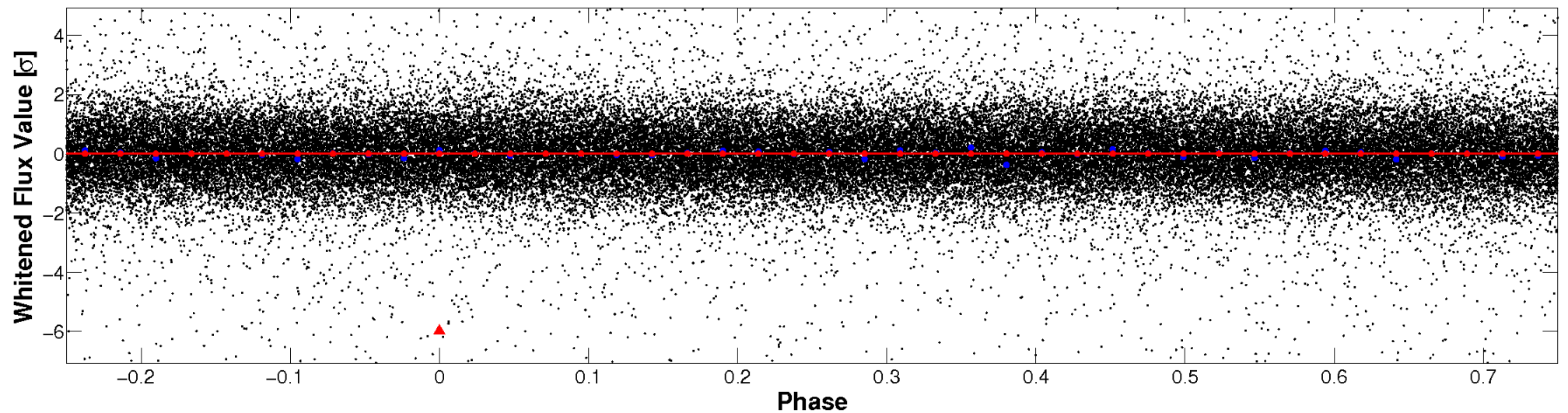


Non-Whitened Vs. Whitened Light Curve

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

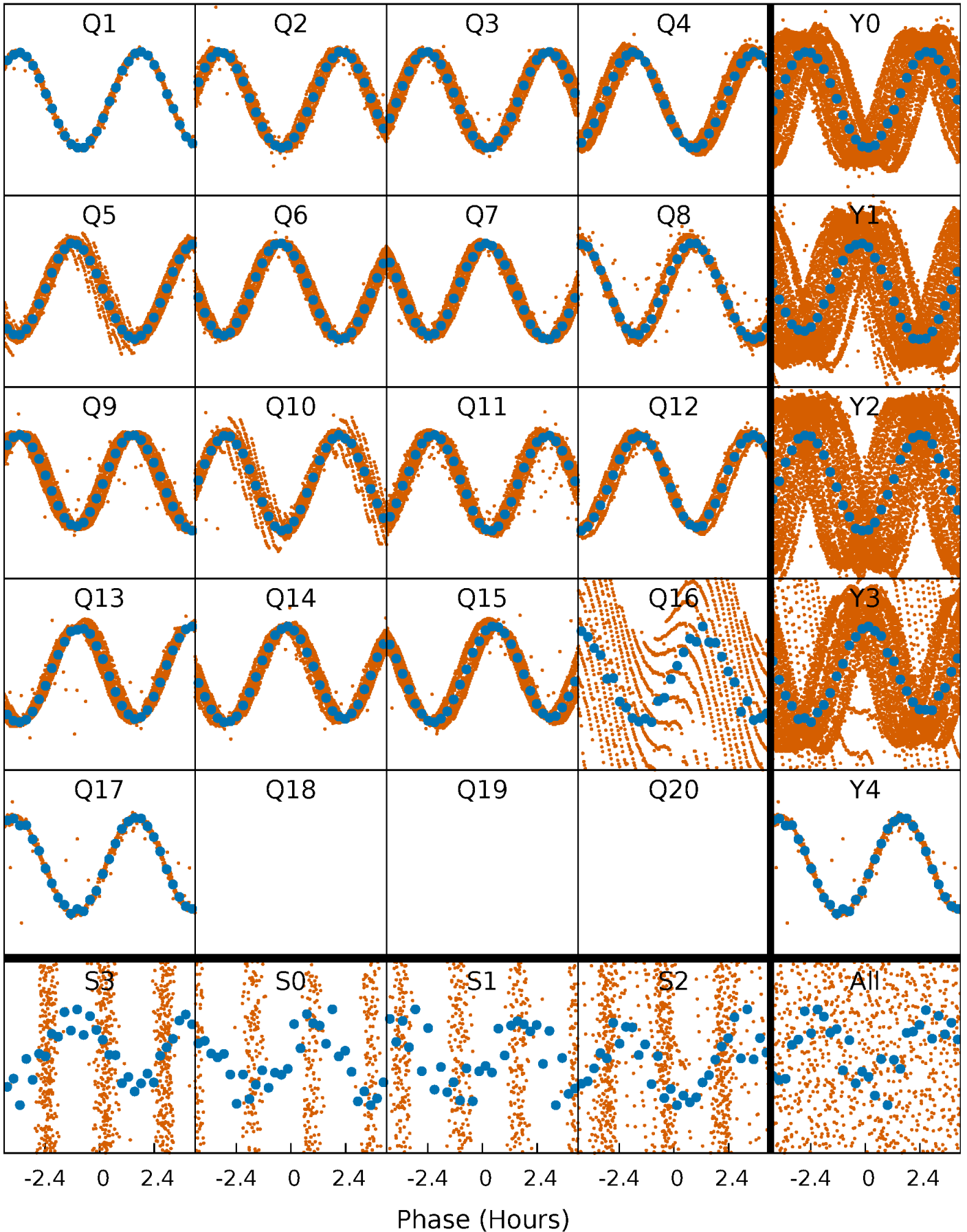


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



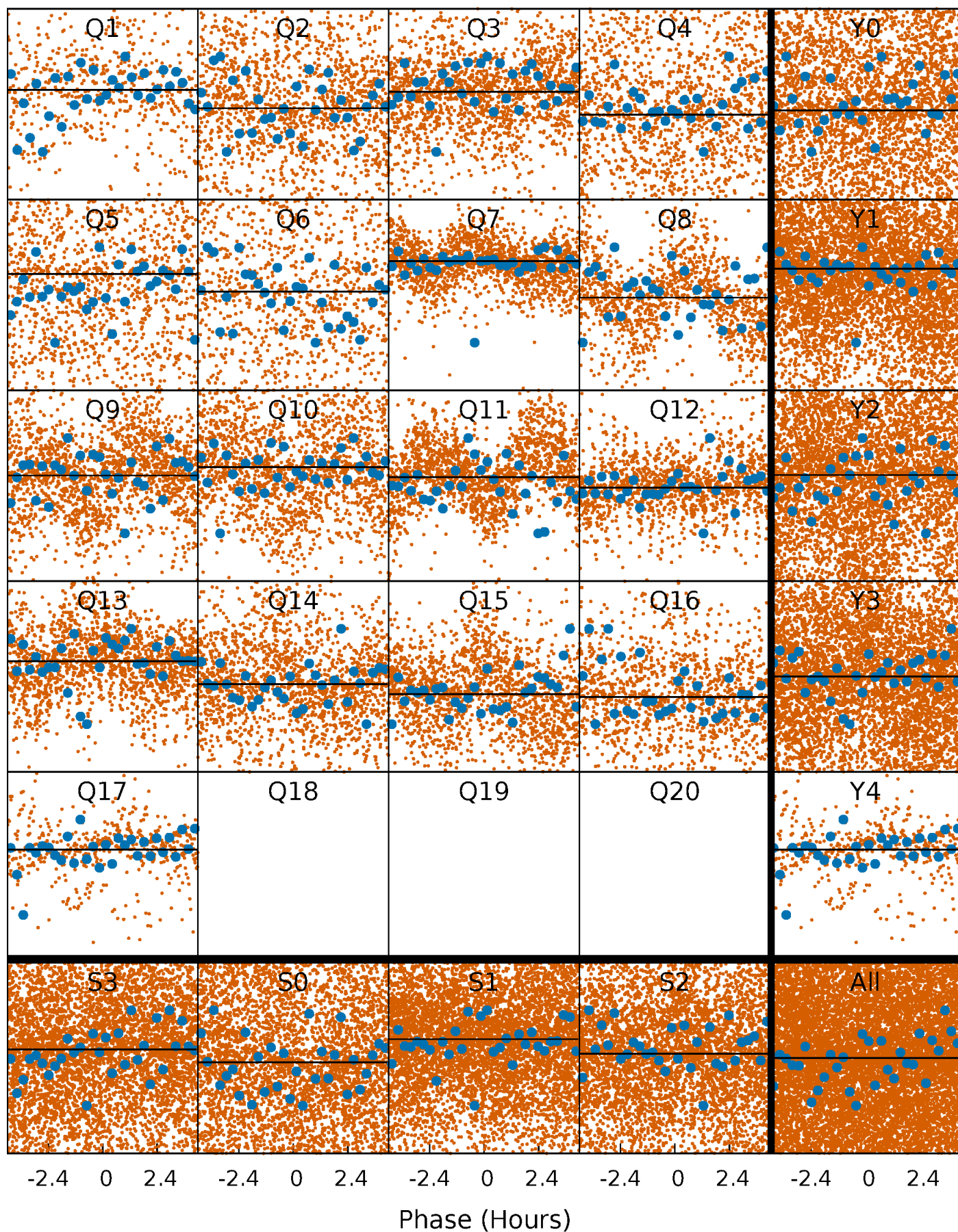
PDC Quarter-Phased Transit Curves

TCE 009642041-01 P= 0.859848 Days $T_0=132.058943$ (BKJD)



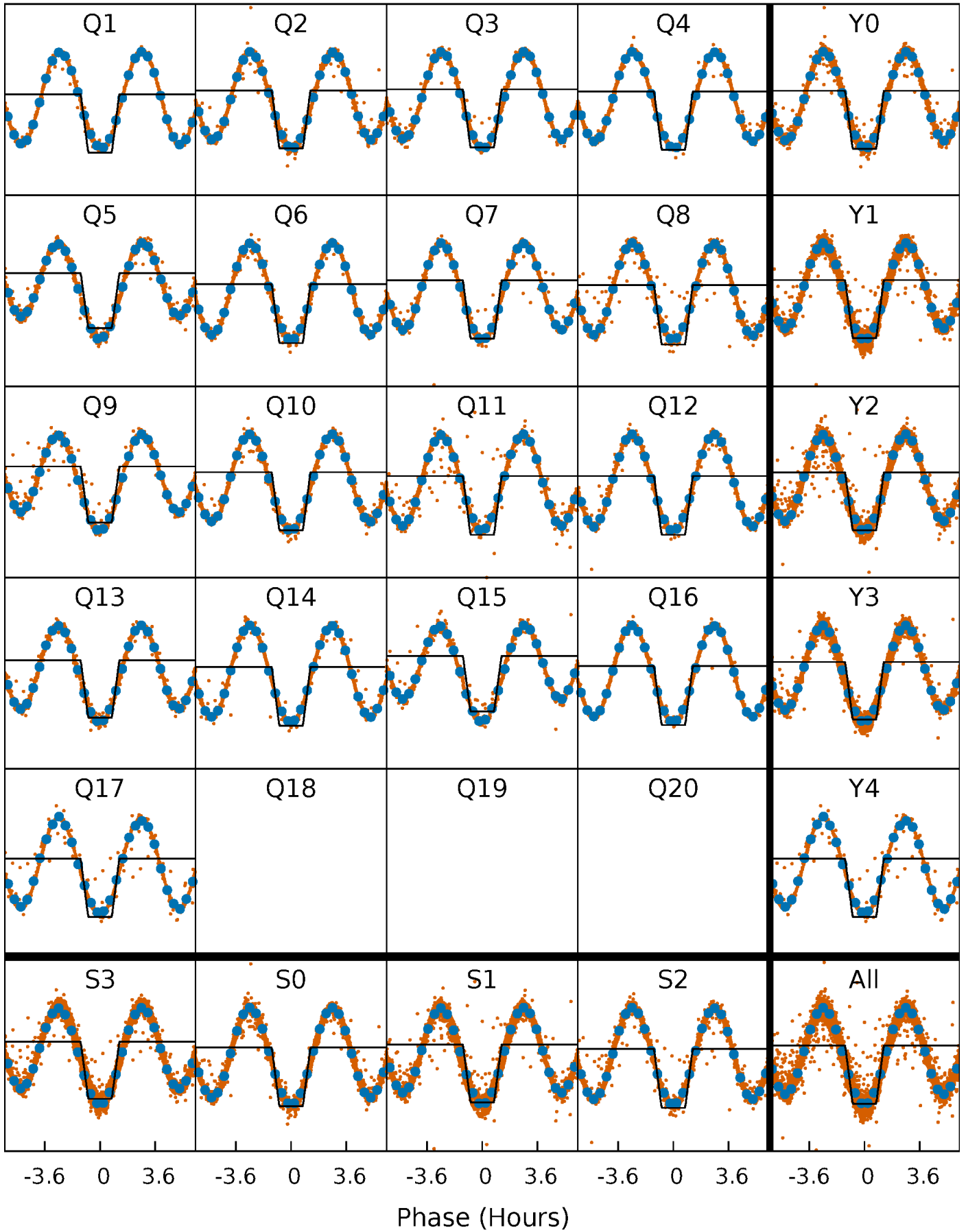
DV Quarter-Phased Transit Curves

TCE 009642041-01 P= 0.859848 Days $T_0=132.058943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

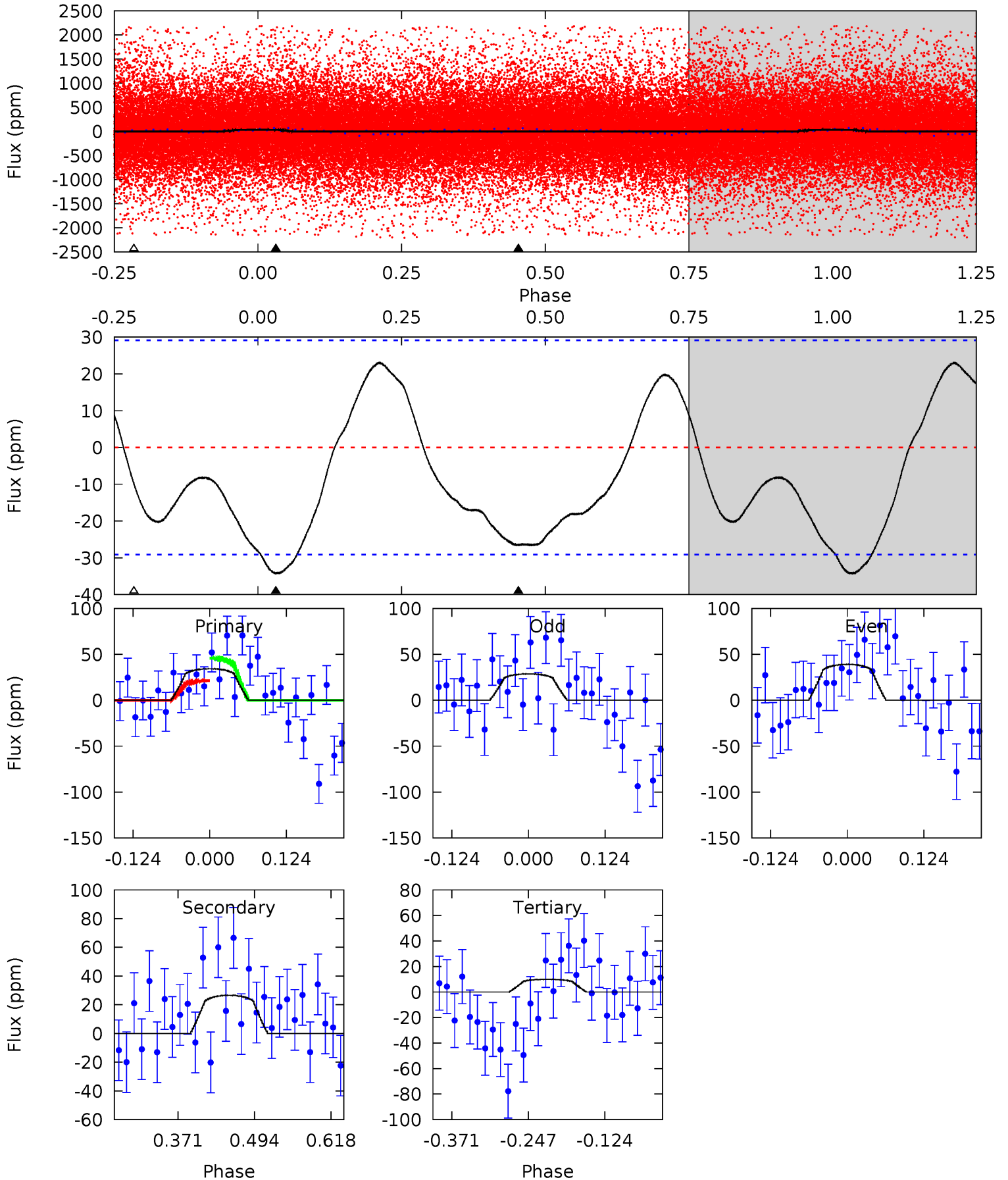
TCE 009642041-01 P= 0.860105 Days $T_0=132.014946$ (BKJD)



DV Model-Shift Uniqueness Test

009642041-01, P = 0.859848 Days, E = 131.199095 Days

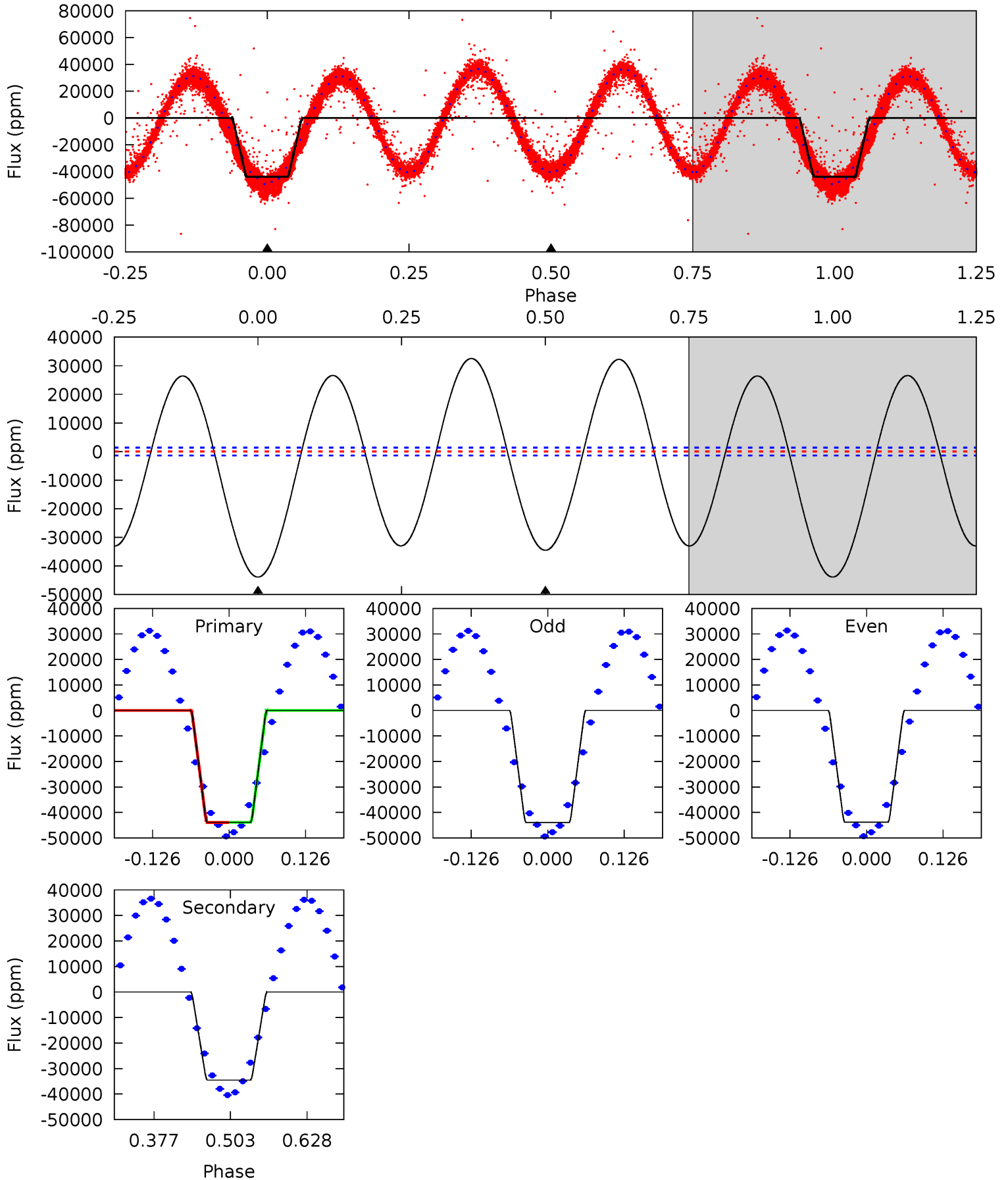
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	4.13	1.53	0	4.52	1.54	2.17	3.78	5.31	2.59	4.13	0.82	-2.46	0.40	1.92



Alt Model-Shift Uniqueness Test

009642041-01, P = 0.860105 Days, E = 131.154841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.4	114.3	0	0	4.52	1.53	74.4	145.4	145.4	114.3	114.3	0.07	1.03	0.43	0.11



Stellar Parameters For KIC 009642041

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6943^{+170}_{-267}	$4.184^{+0.124}_{-0.186}$	$-0.040^{+0.250}_{-0.350}$	$1.594^{+0.529}_{-0.326}$	$1.421^{+0.216}_{-0.216}$	$0.494^{+0.304}_{-0.251}$
	+2%/-4%	+3%/-4%	+625%/-875%	+33%/-20%	+15%/-15%	+62%/-51%
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 009642041-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-27 ± 6	$16.35^{+18.71}_{-11.73}$	3849^{+975}_{-636}	-3406^{+5095}_{-696}	$0.020^{+0.281}_{-0.016}$
Alt.	-34507 ± 302	$39.83^{+23.25}_{-20.72}$	3846^{+1211}_{-642}	6101^{+3336}_{-1354}	$5.026^{+18.457}_{-3.890}$

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 $A_{obs} \gg 1.0$

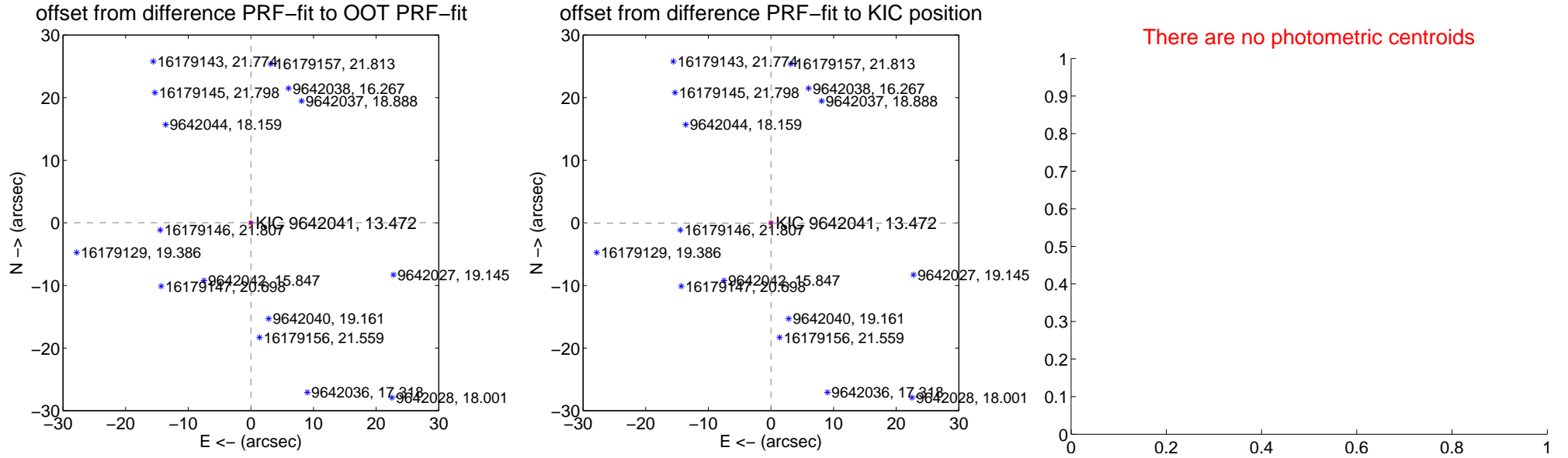
DV Centroid Data

Supplemental centroid analysis for 009642041-01. Kepler magnitude: 13.47. Transit SNR 0.00

There are 9 quarters with good PRF difference image offsets

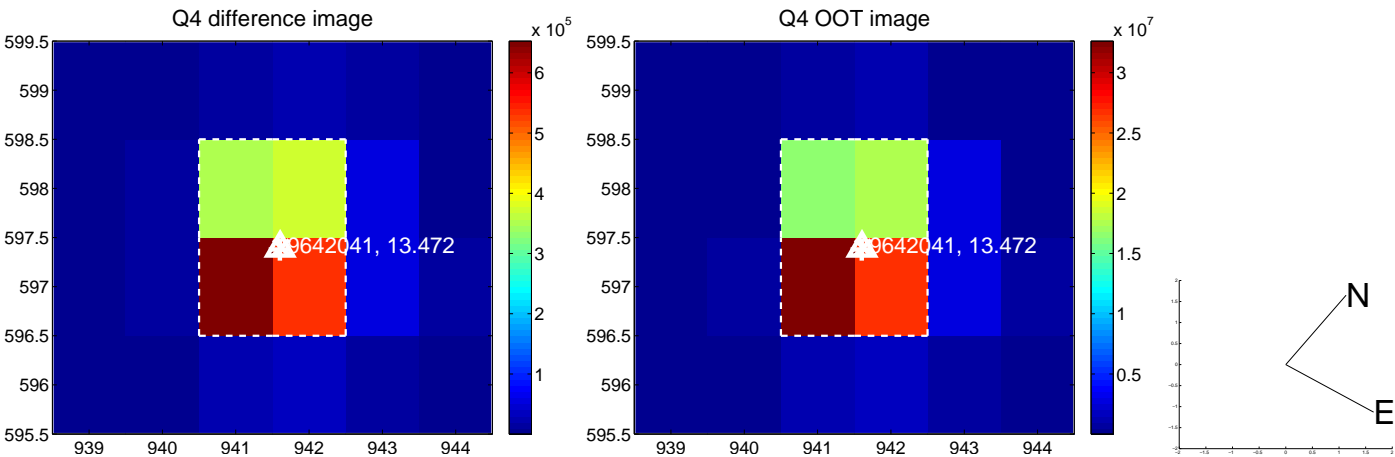
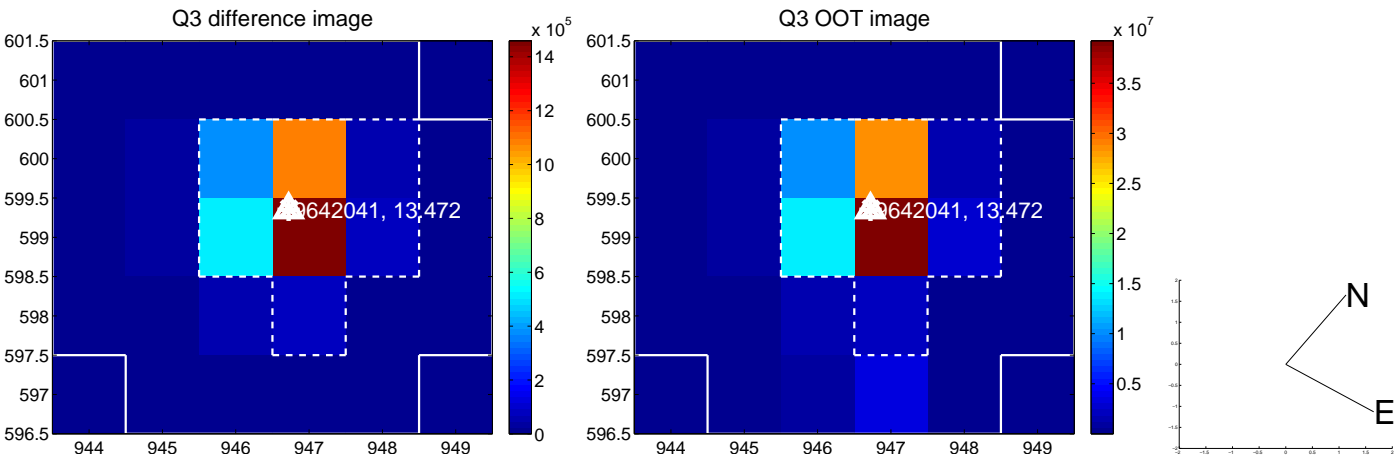
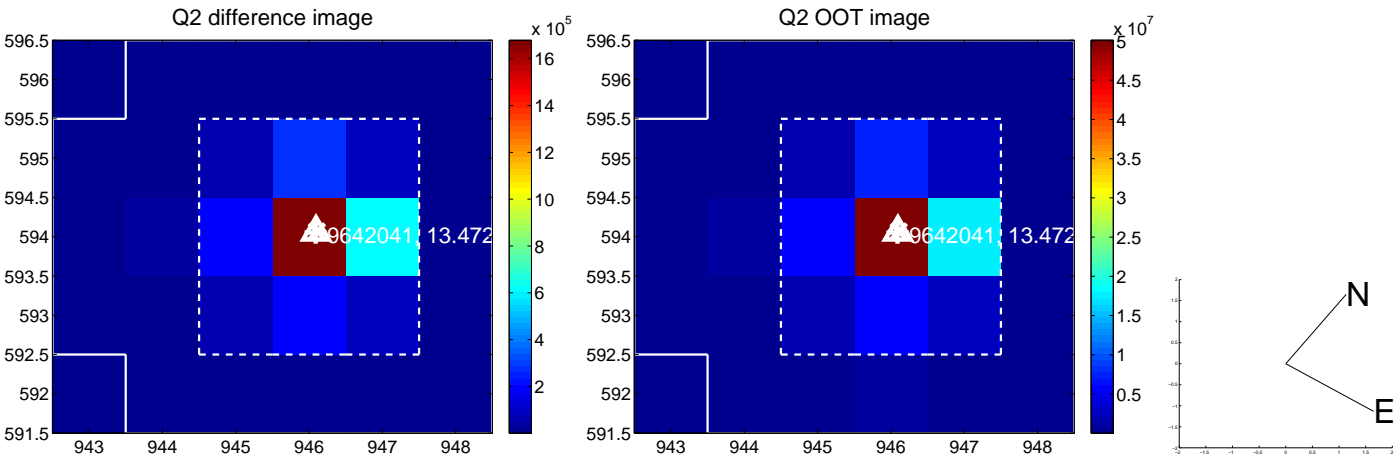
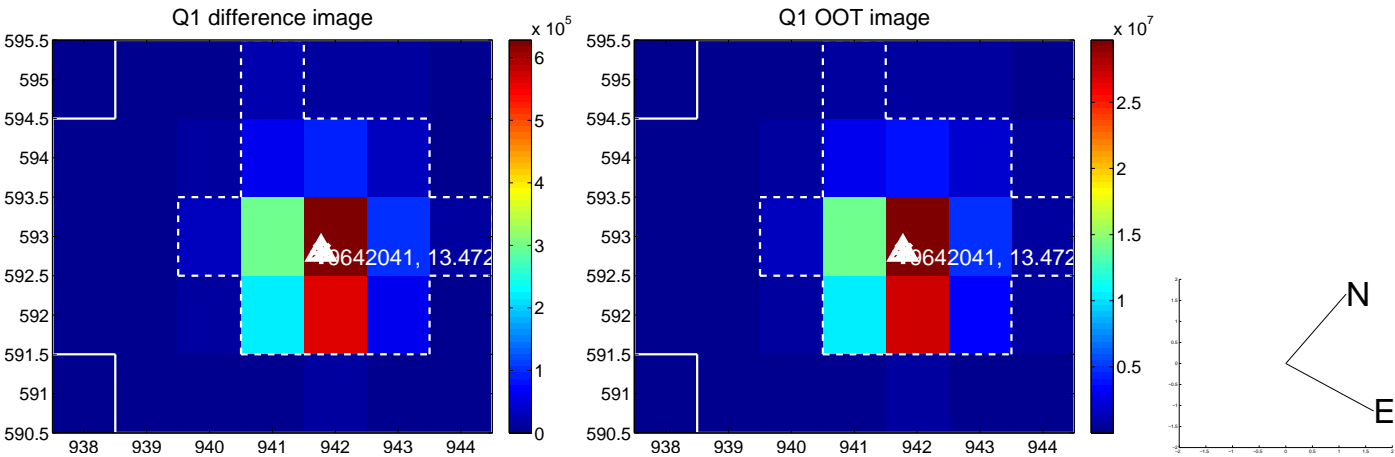
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.068	0.32	-0.009 ± 0.068	0.020 ± 0.068
PRF-fit source offset from KIC position	0.037 ± 0.067	0.55	-0.009 ± 0.068	-0.036 ± 0.068
photometric centroid source offset	—	—	—	—

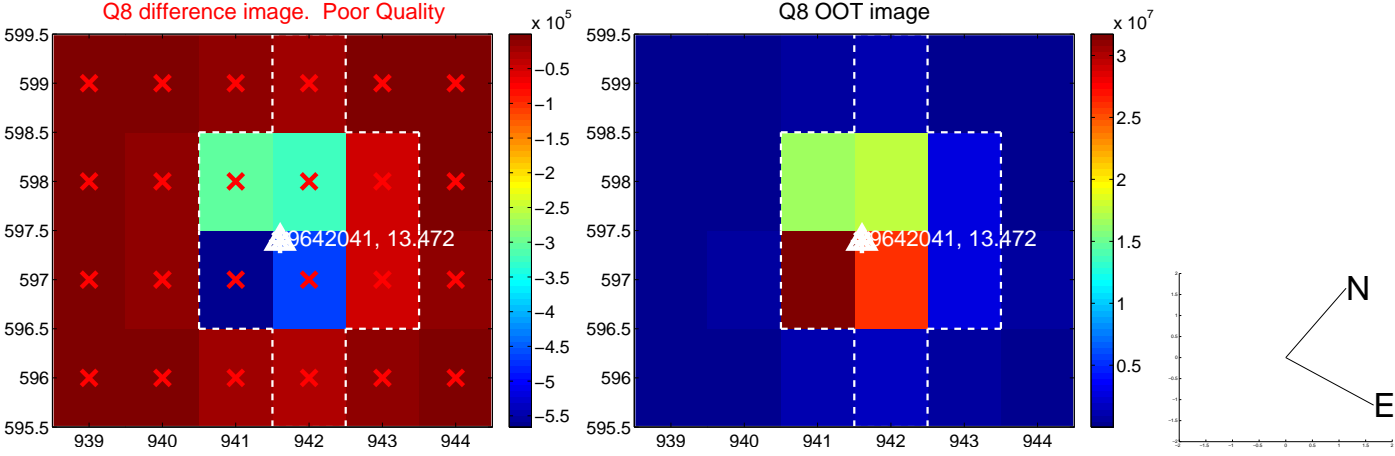
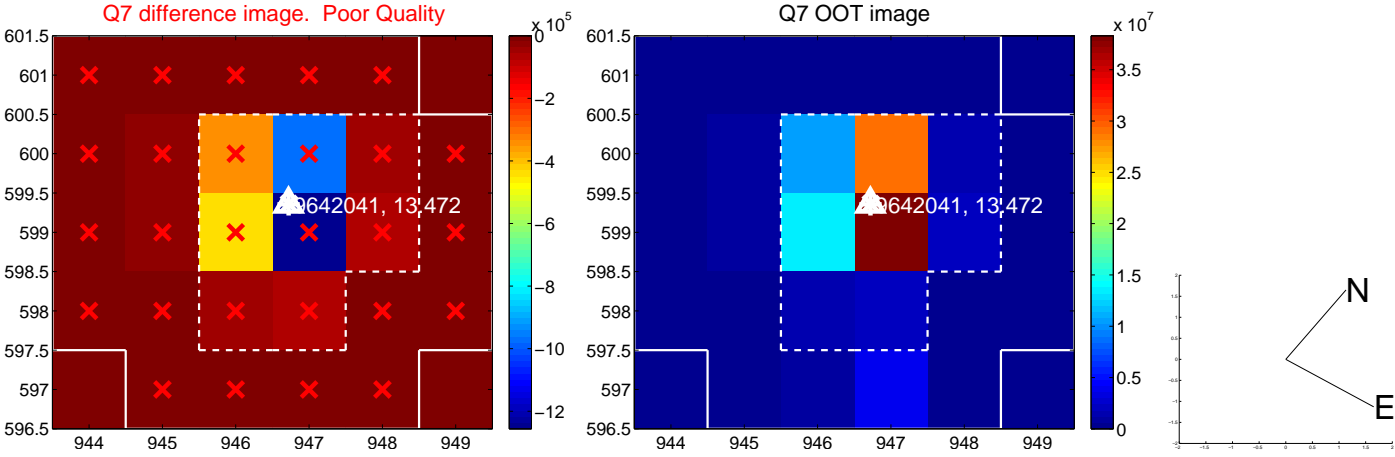
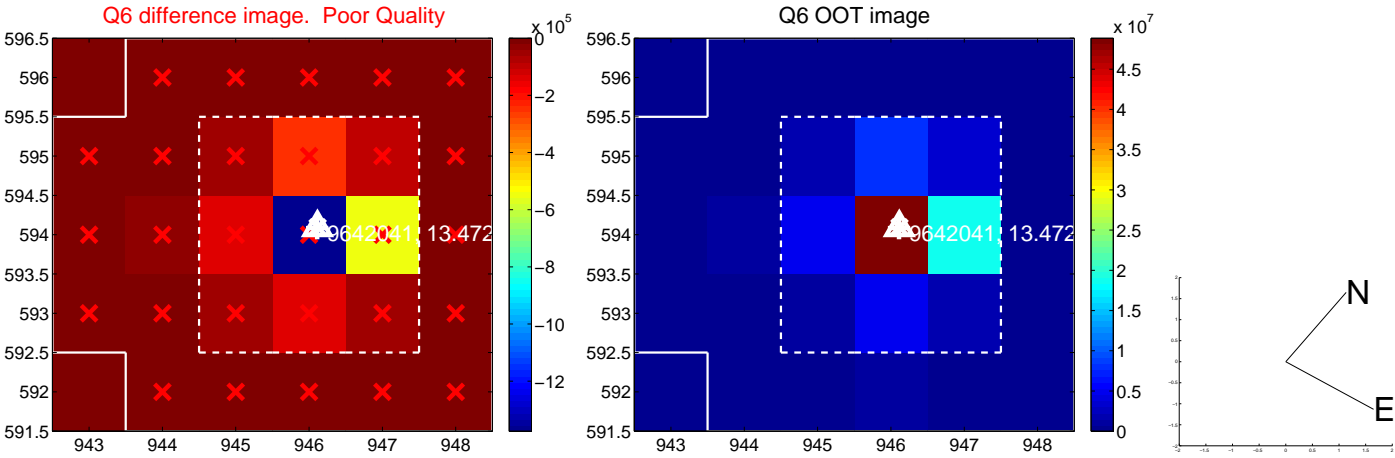
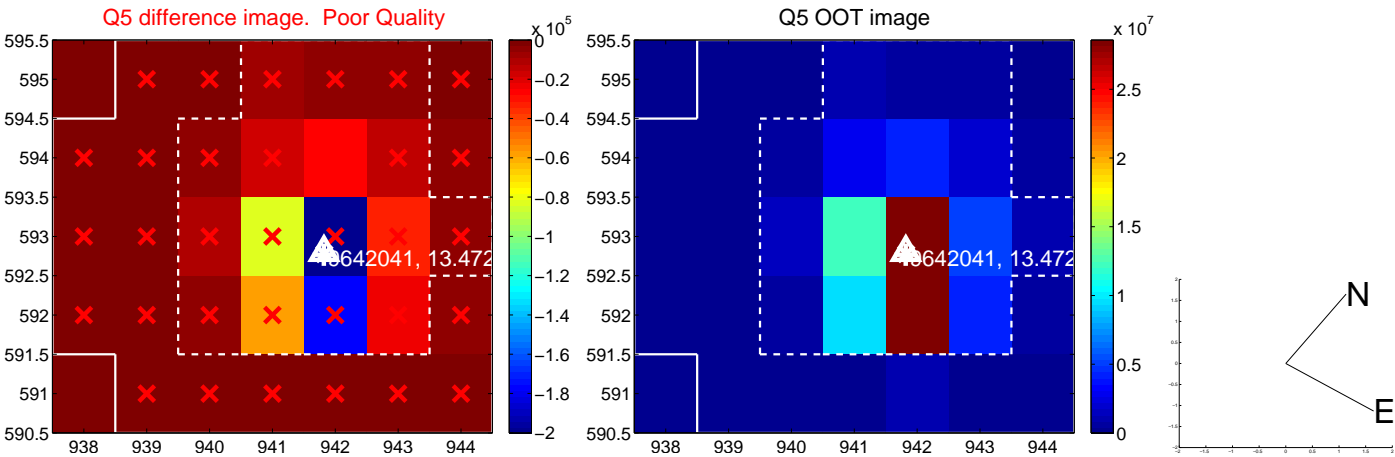


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

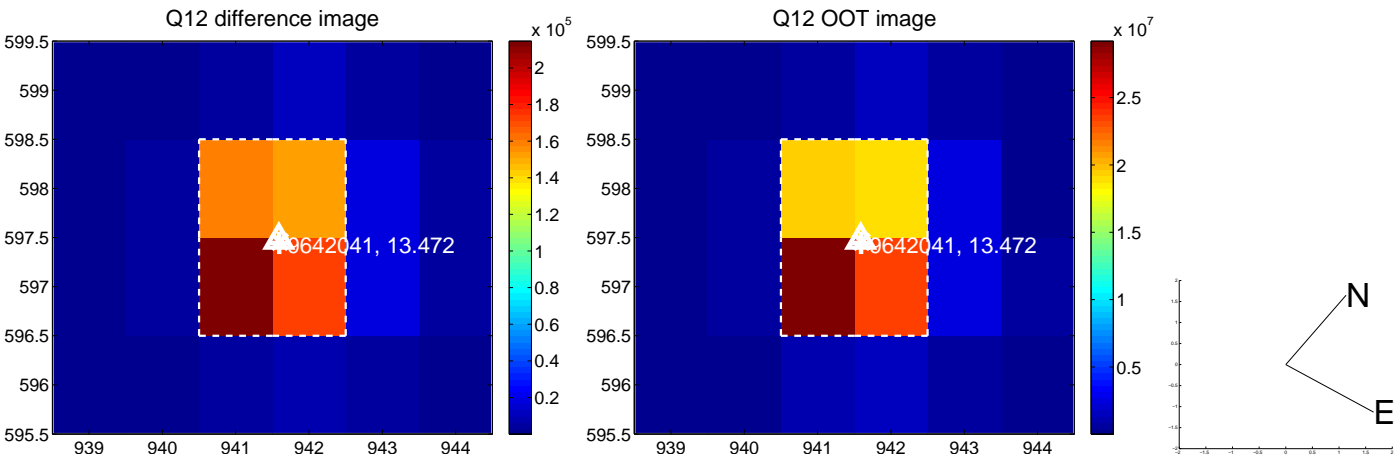
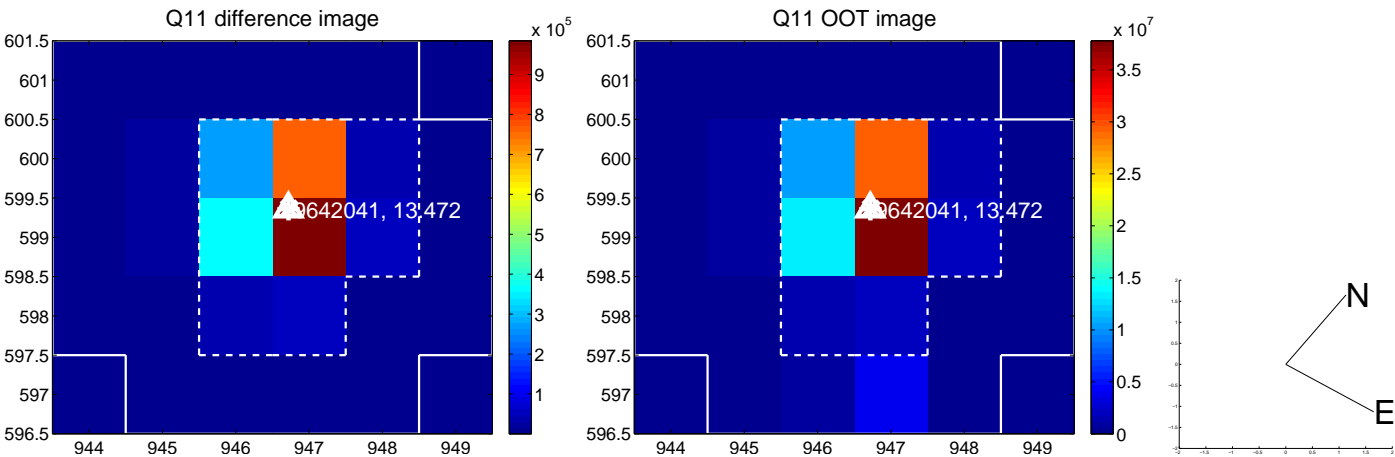
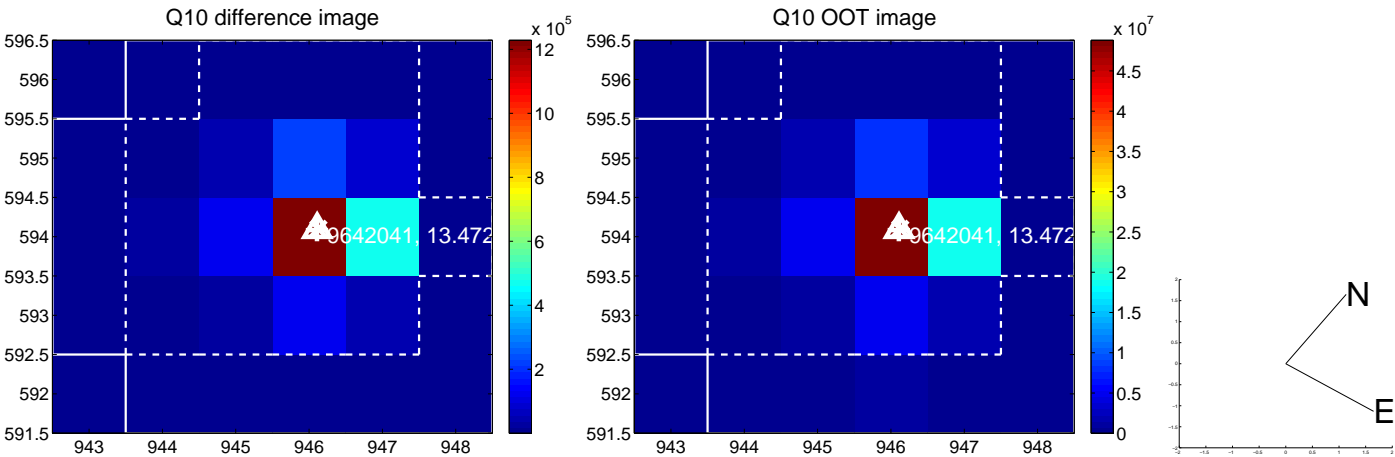
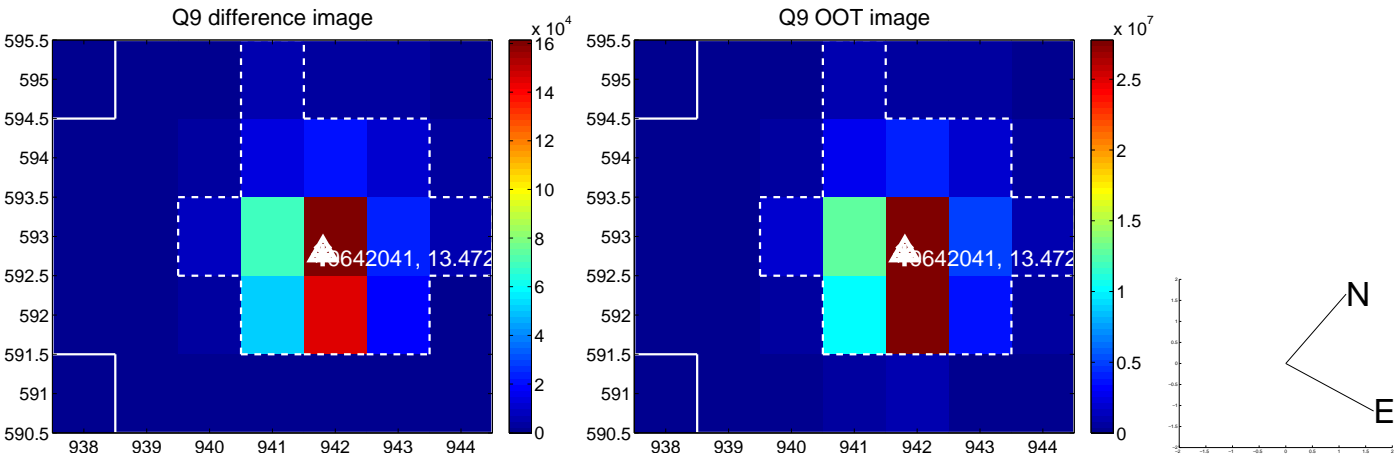
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



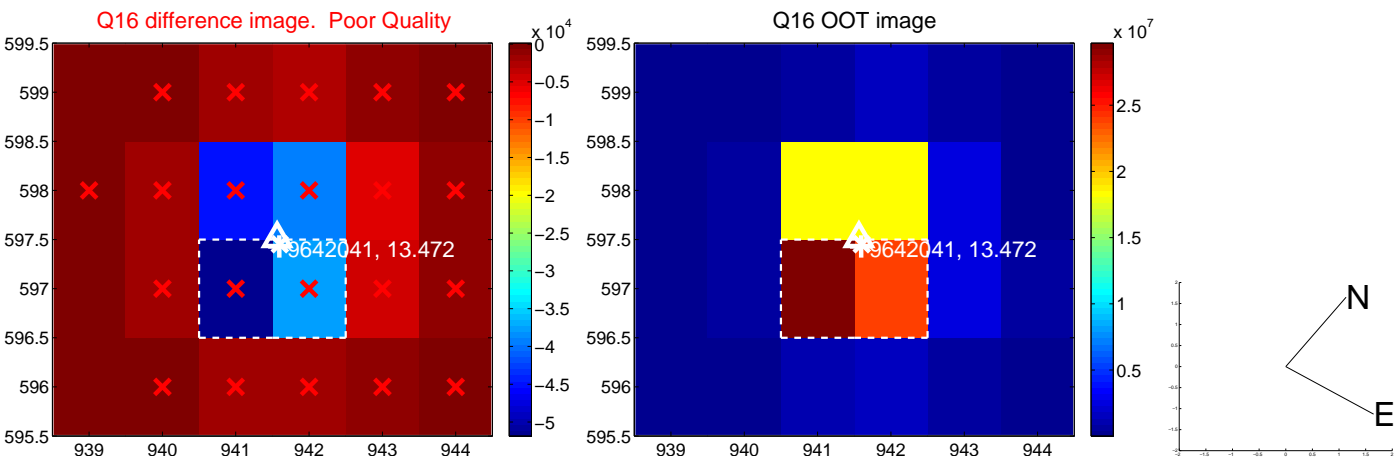
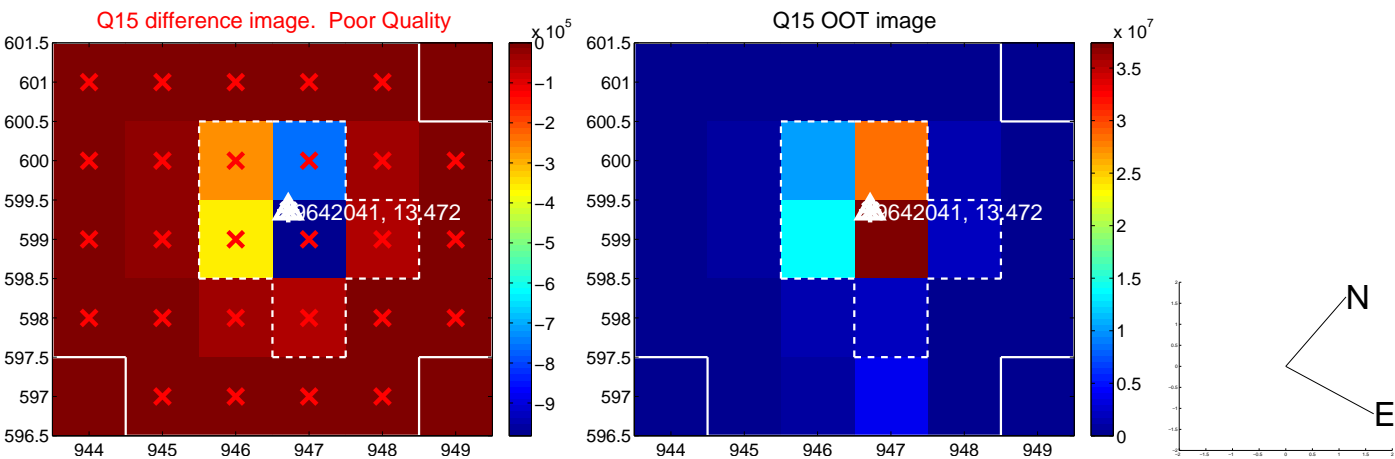
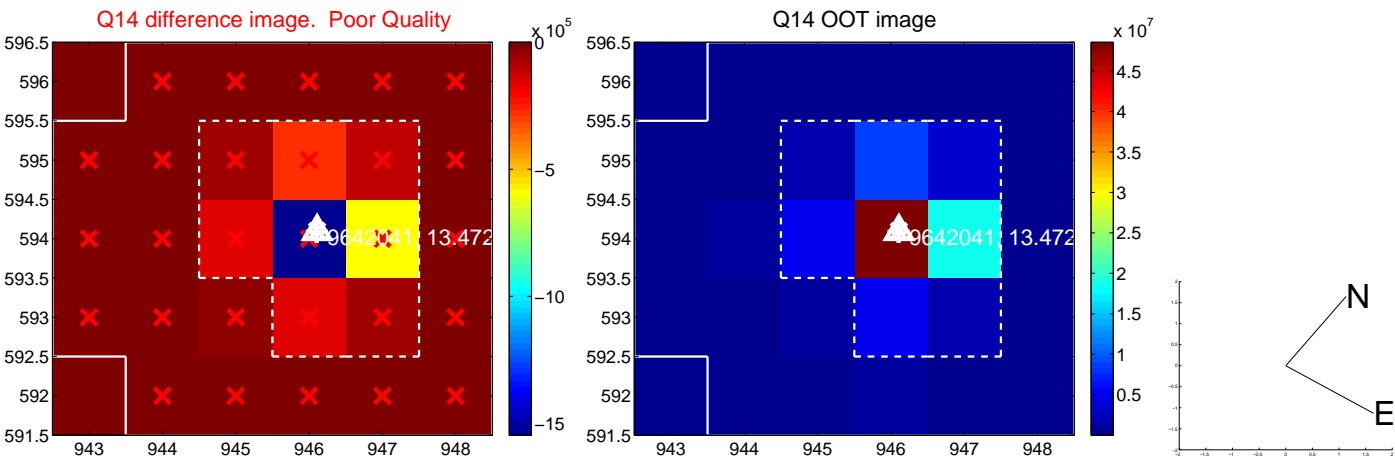
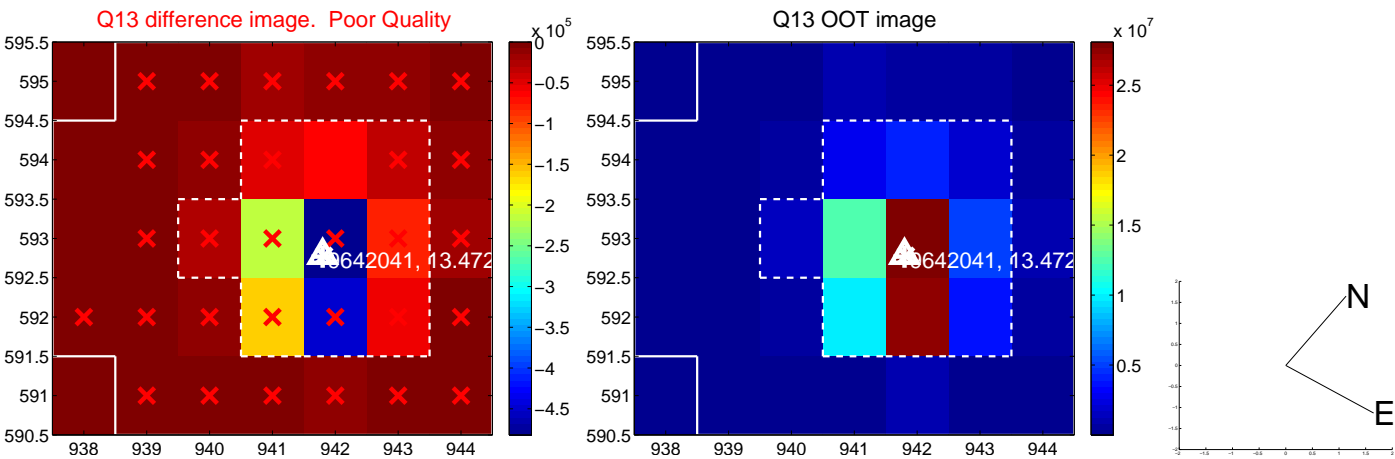
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



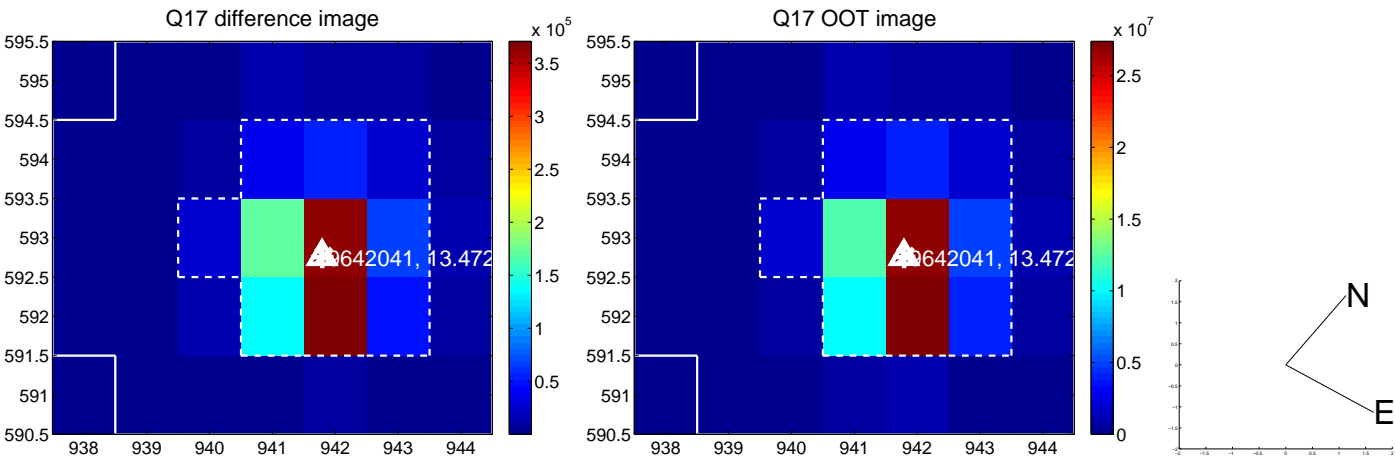
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

