

KIC 010272640

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})
010272640-01	OBS	1074.01	3.770542	134.657878	12272.0	3.786	655.8	628.3	1.07	6322	11.94	680.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010272640-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

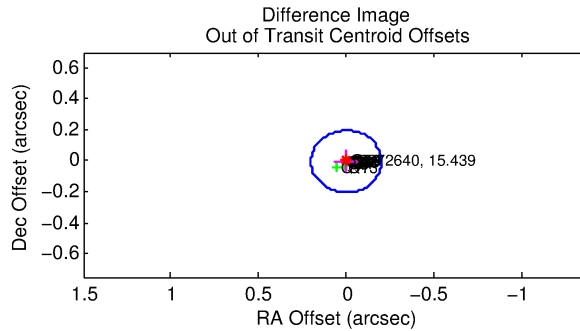
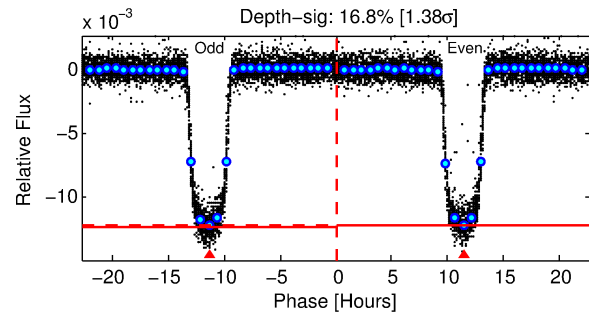
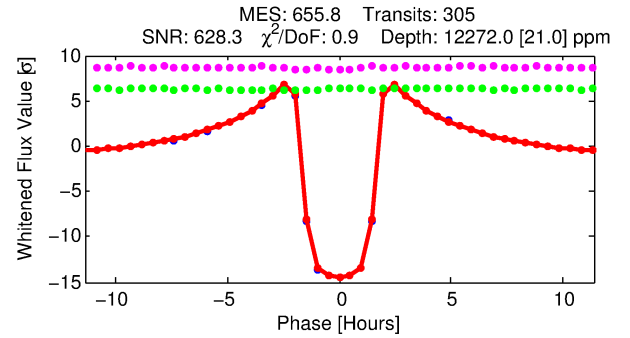
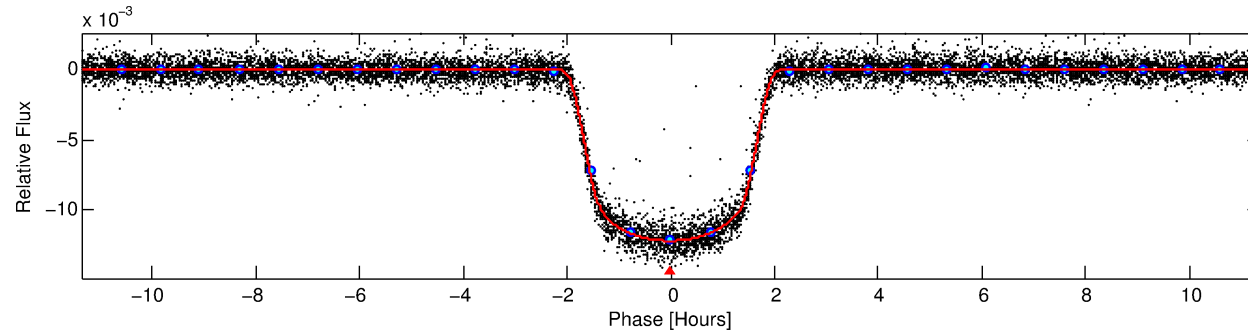
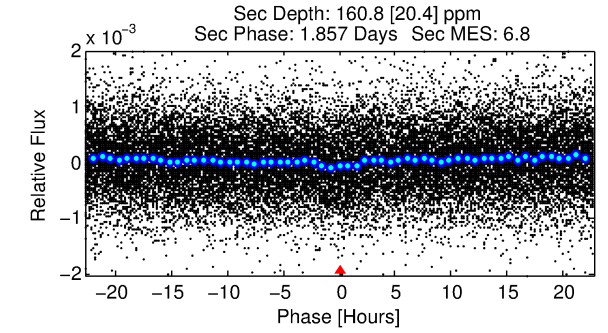
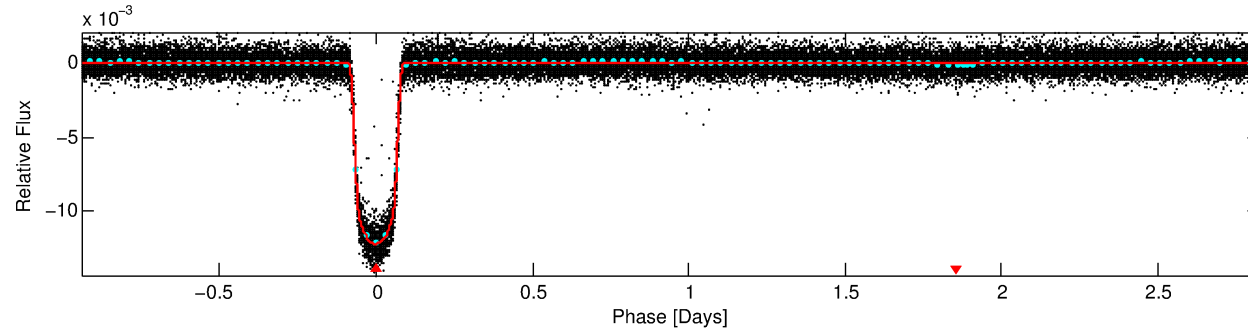
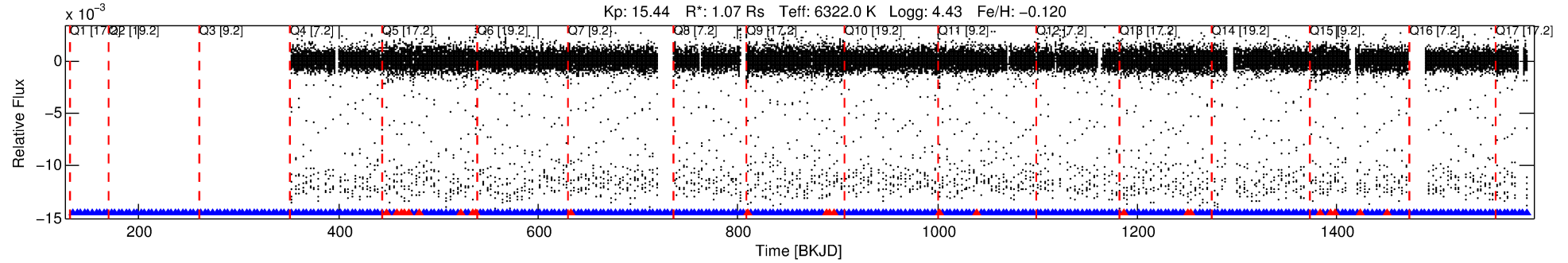
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010272640-01

No Significant Match Found

DV One-Page Summary

KIC: 10272640 Candidate: 1 of 1 Period: 3.771 d
KOI: K01074.01 Corr: 0.992



DV Fit Results:

Period = 3.77054 [0.00000] d
Epoch = 134.6579 [0.0001] BKJD
Rp/R* = 0.1018 [0.0005]
a/R* = 8.41 [0.18]
b = 0.01 [3.83]
Seff = 680.32 [290.68]
Teq = 1302 [139] K
Rp = 11.94 [4.04] Re
a = 0.0493 [0.0137] AU
Ag = 1.51 [0.62] [0.81 σ]
Teffp = 2231 [117] K [5.11 σ]

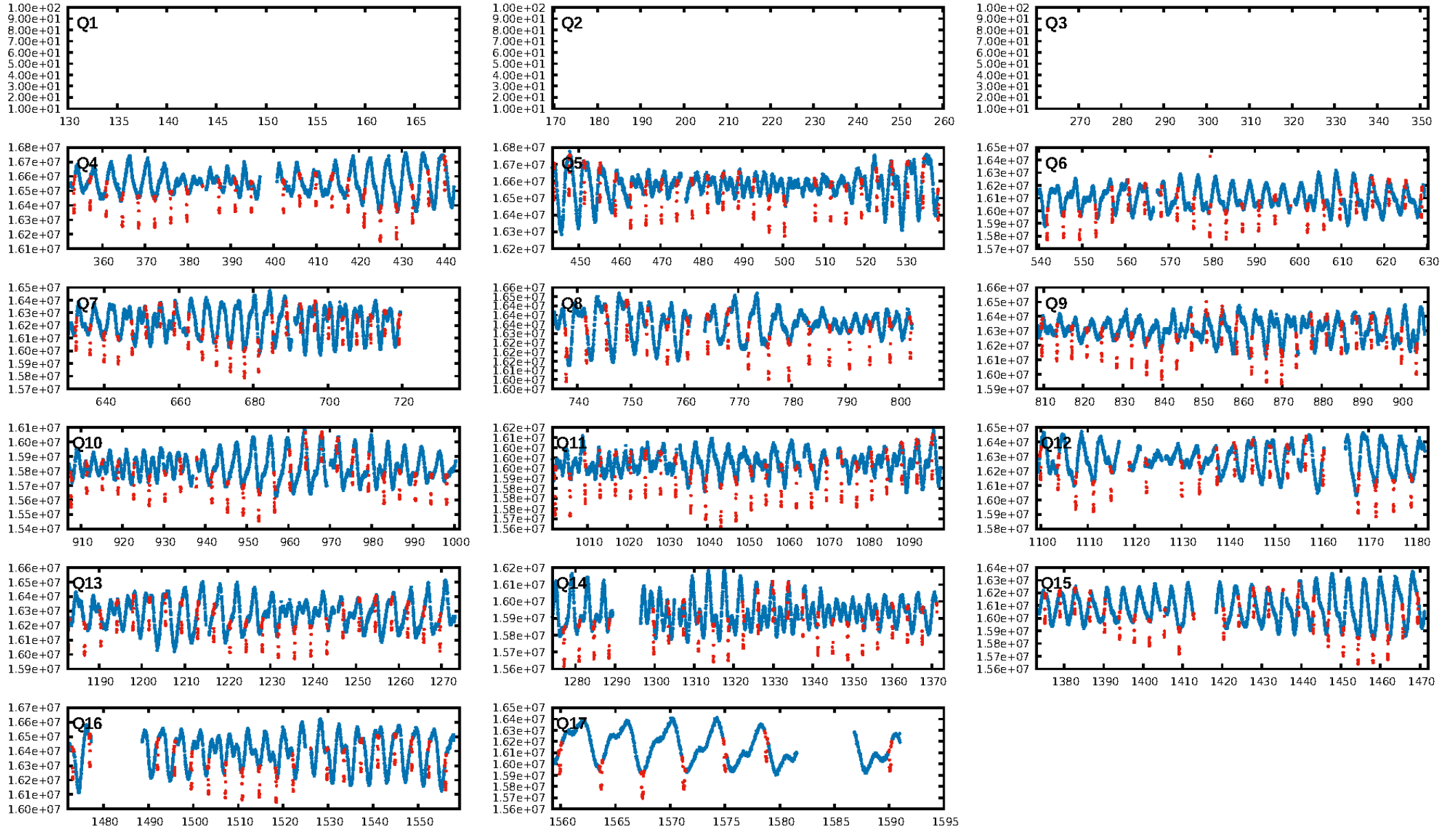
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.92 [274/298]
GhostDiagnostic-chr: 2.979
Centroid-sig: 0.0%
Centroid-so: 0.106 arcsec [6.87 σ]
OotOffset-rm: 0.005 arcsec [0.08 σ]
KicOffset-rm: 0.135 arcsec [1.92 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

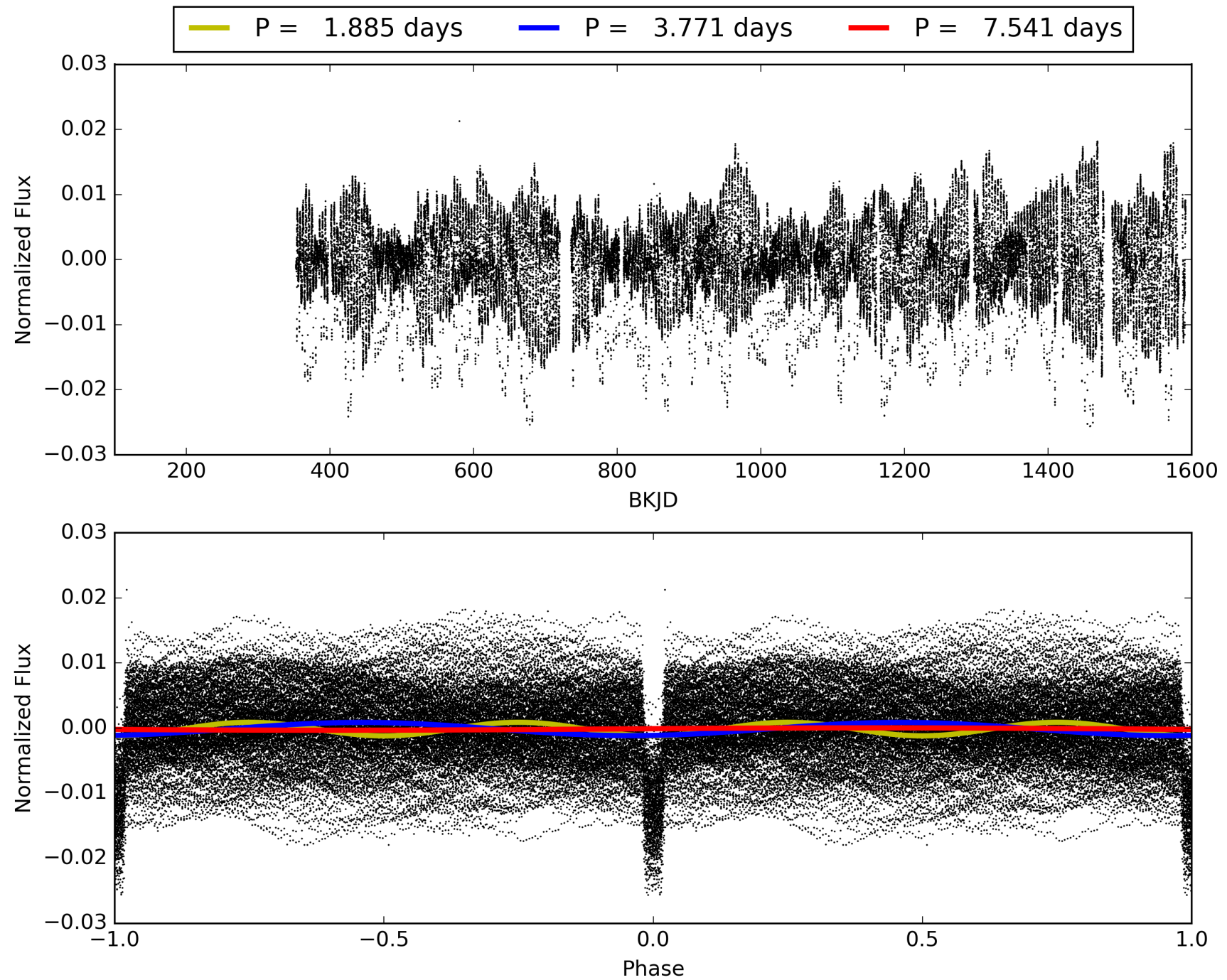
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:56:39 Z

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

TCE 010272640-01, PDC Light Curves

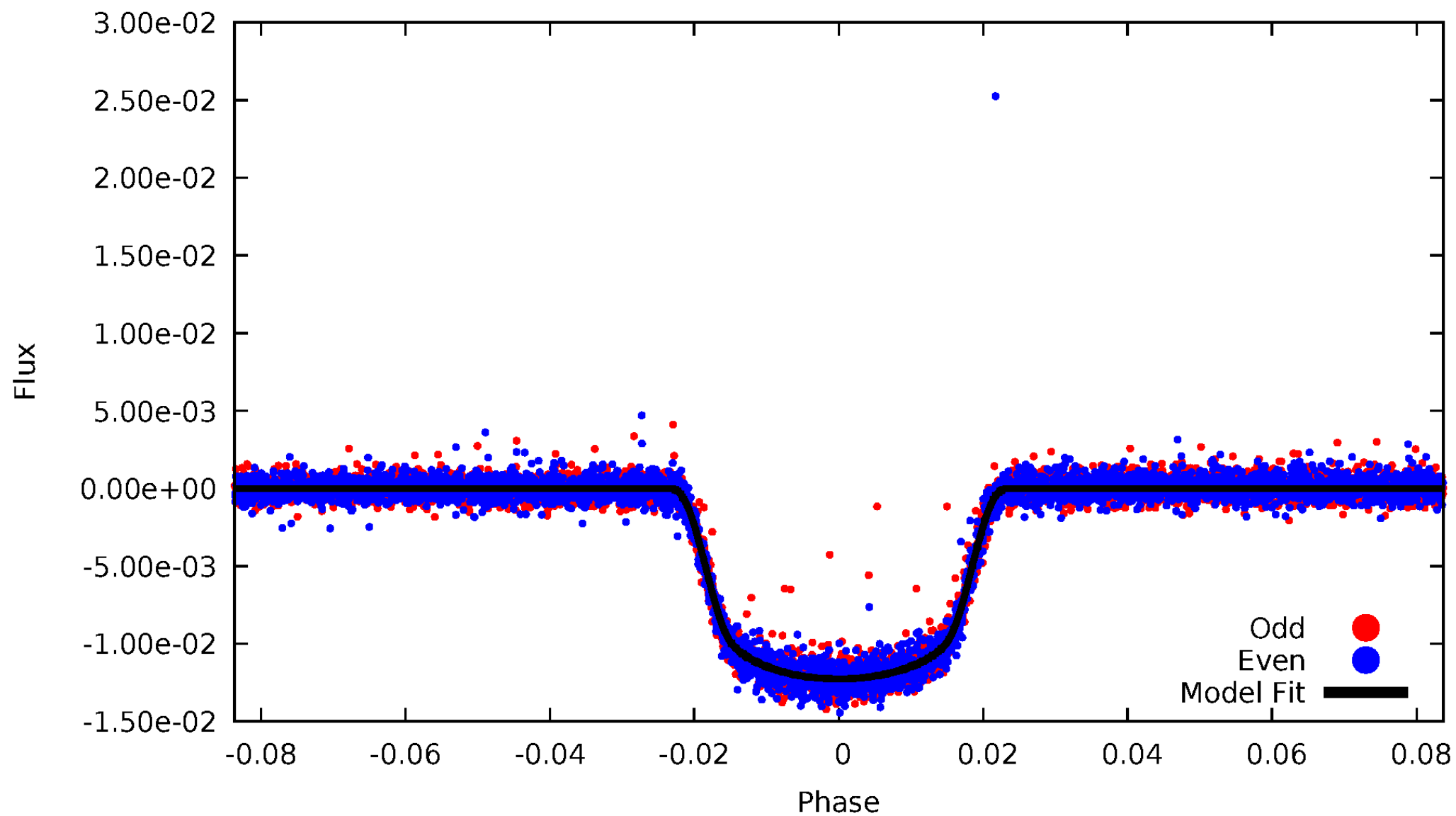


TCE 010272640-01



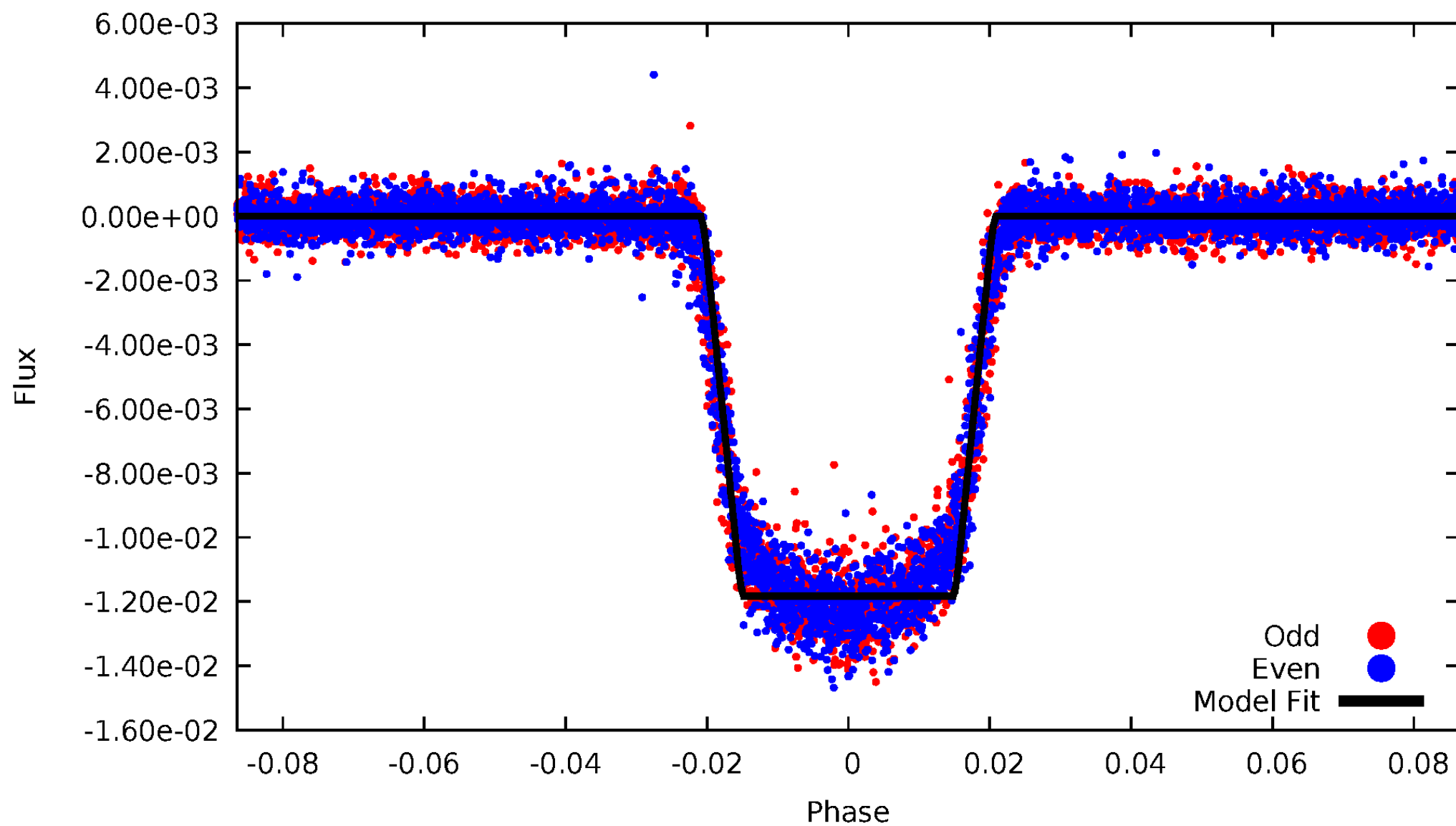
DV Odd/Even

TCE 010272640-01



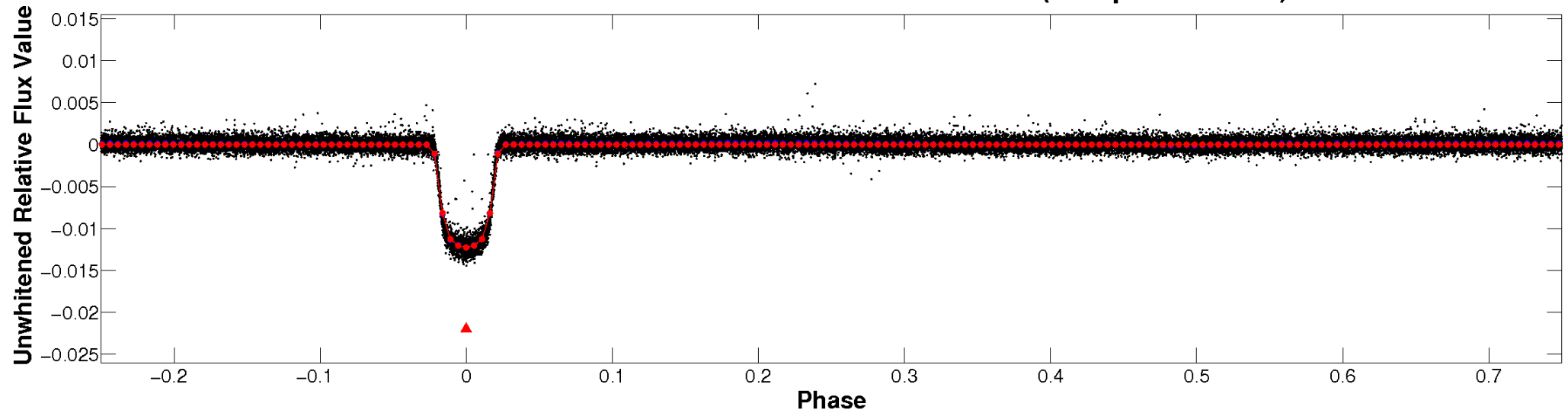
ALT Odd/Even

TCE 010272640-01

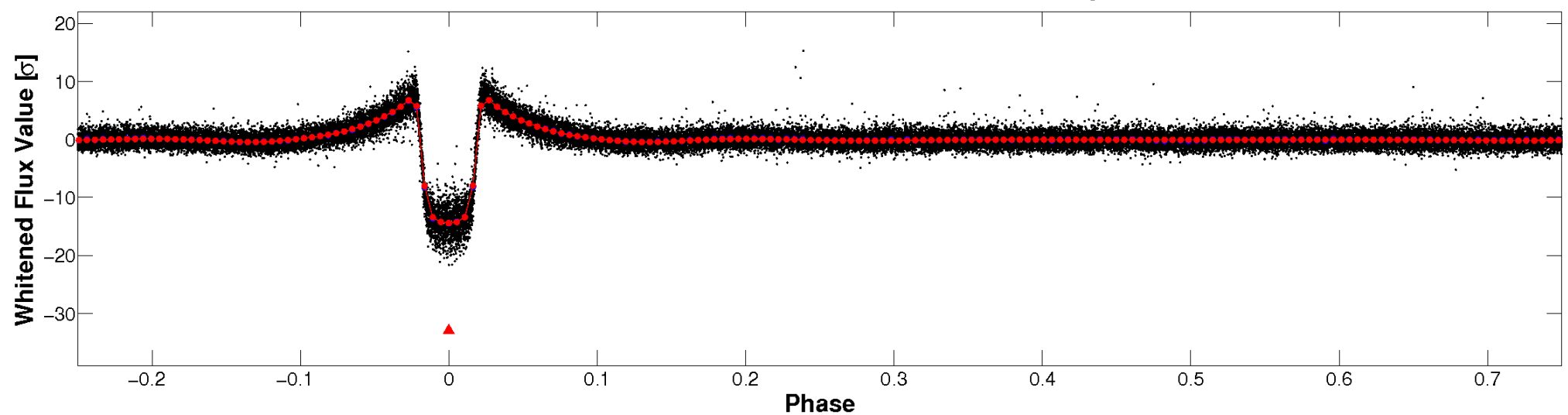


Non-Whitened Vs. Whitened Light Curve

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

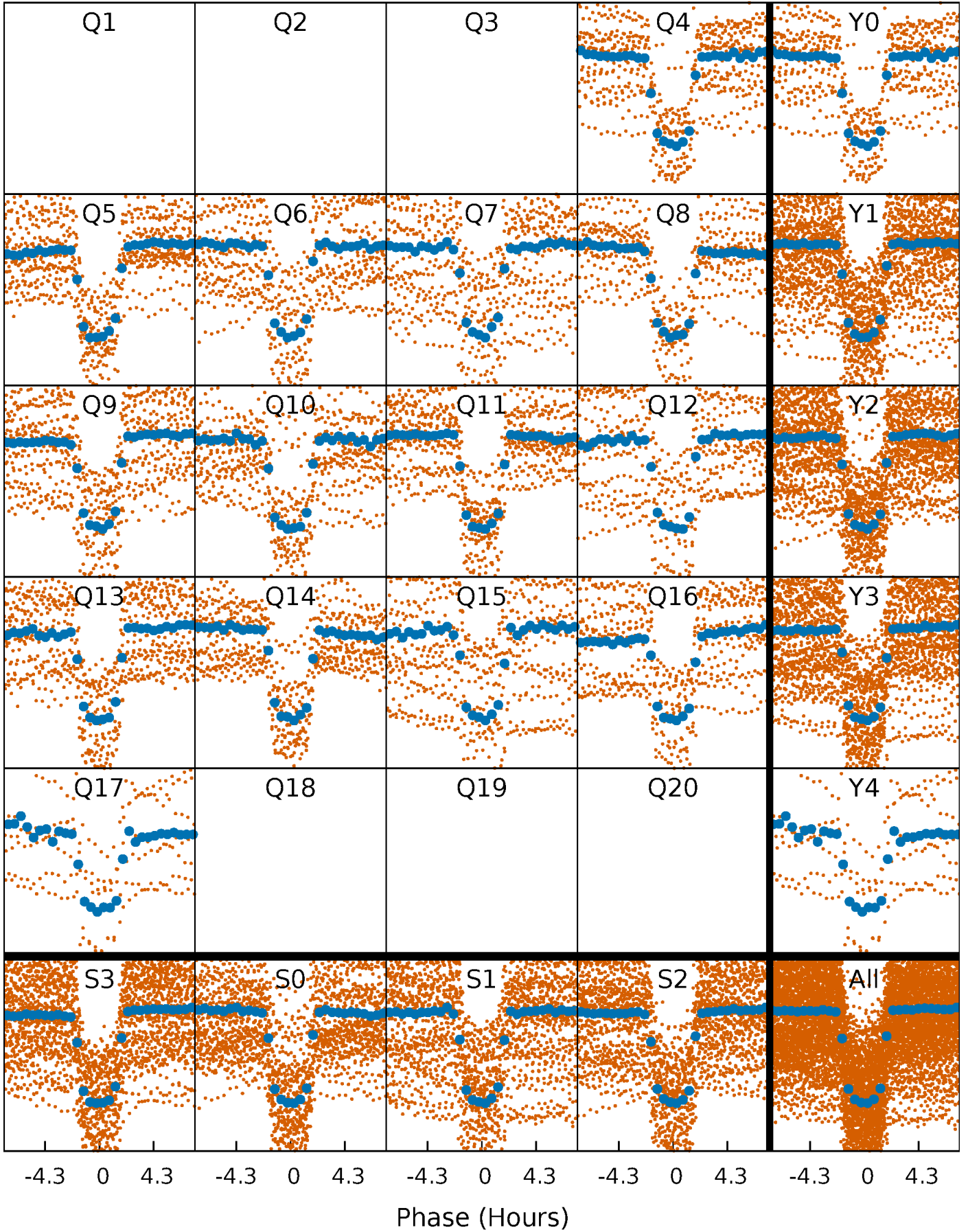


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



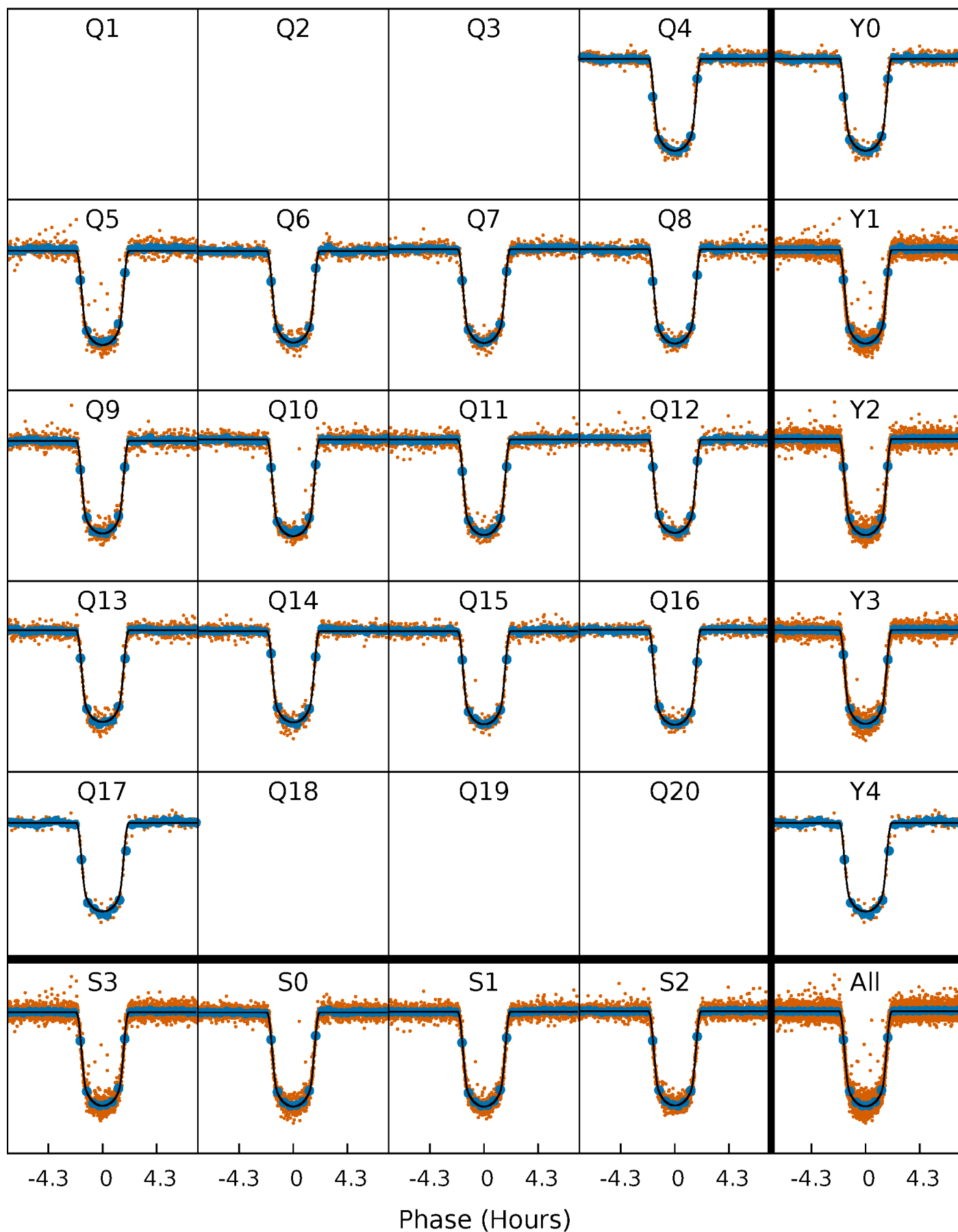
PDC Quarter-Phased Transit Curves

TCE 010272640-01 P= 3.770542 Days $T_0=134.657878$ (BKJD)



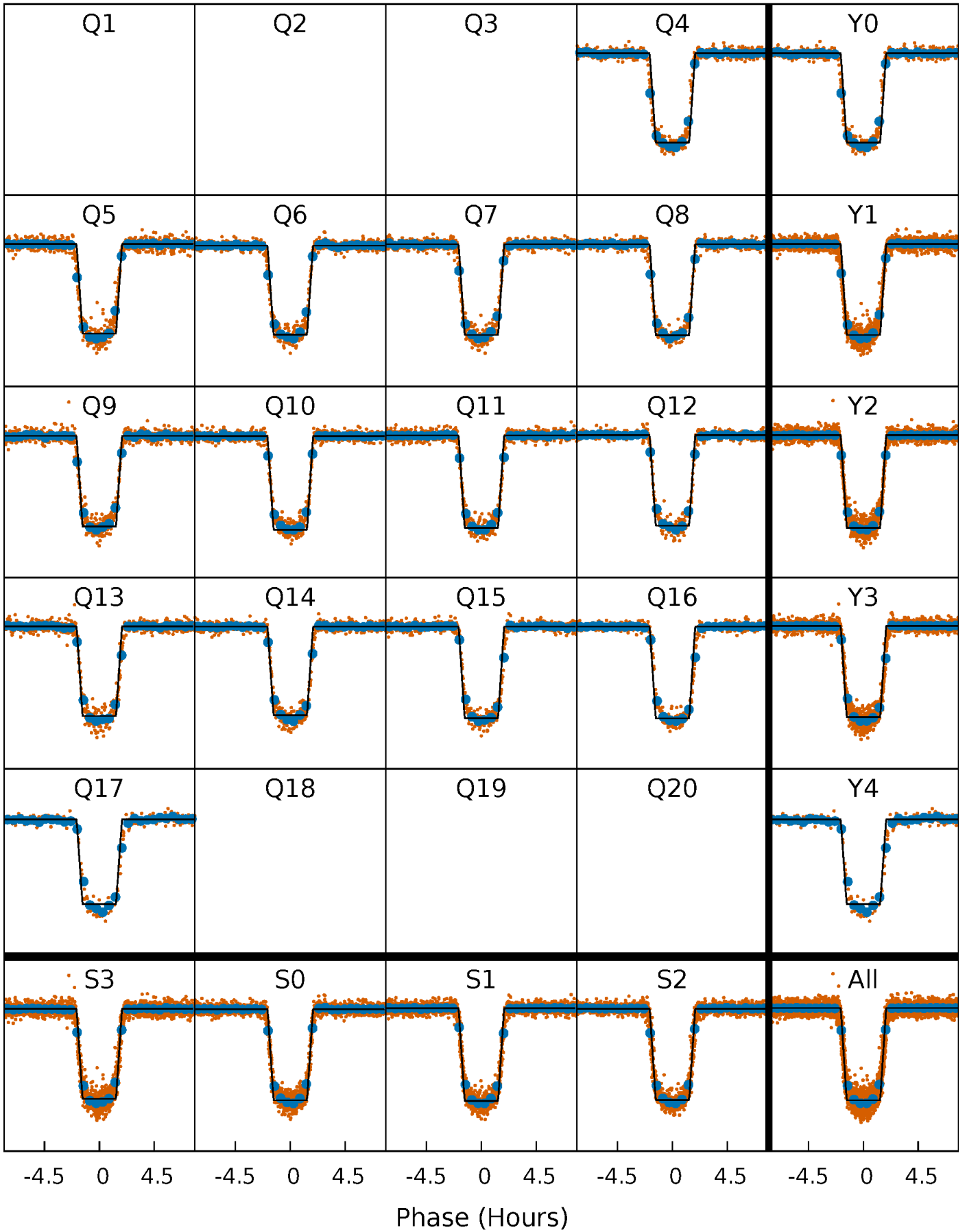
DV Quarter-Phased Transit Curves

TCE 010272640-01 P= 3.770542 Days $T_0=134.657878$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

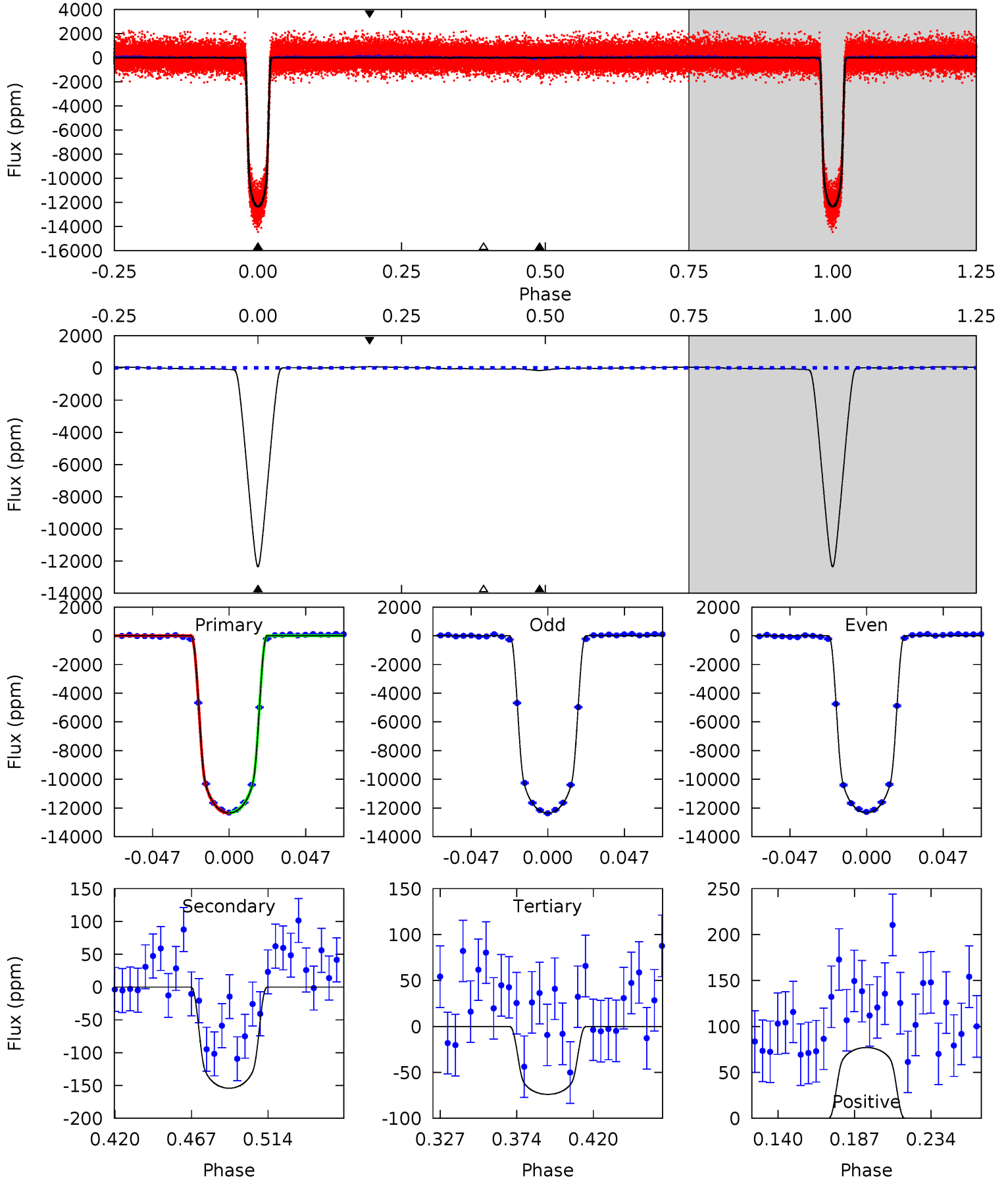
TCE 010272640-01 P= 3.770518 Days $T_0=134.663166$ (BKJD)



DV Model-Shift Uniqueness Test

010272640-01, P = 3.770542 Days, E = 134.657878 Days

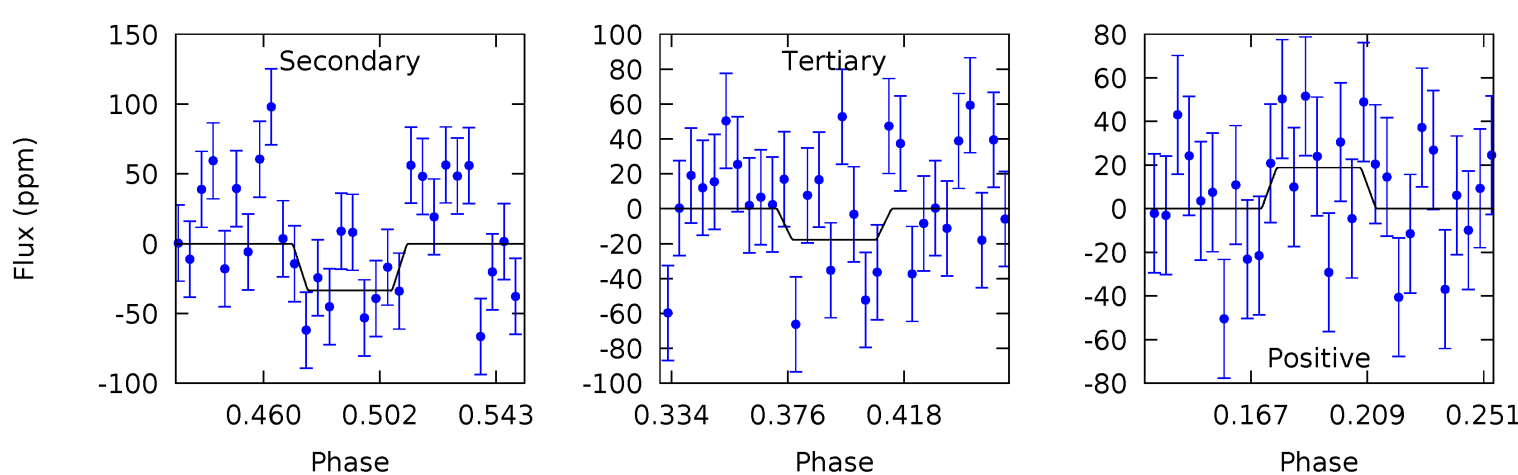
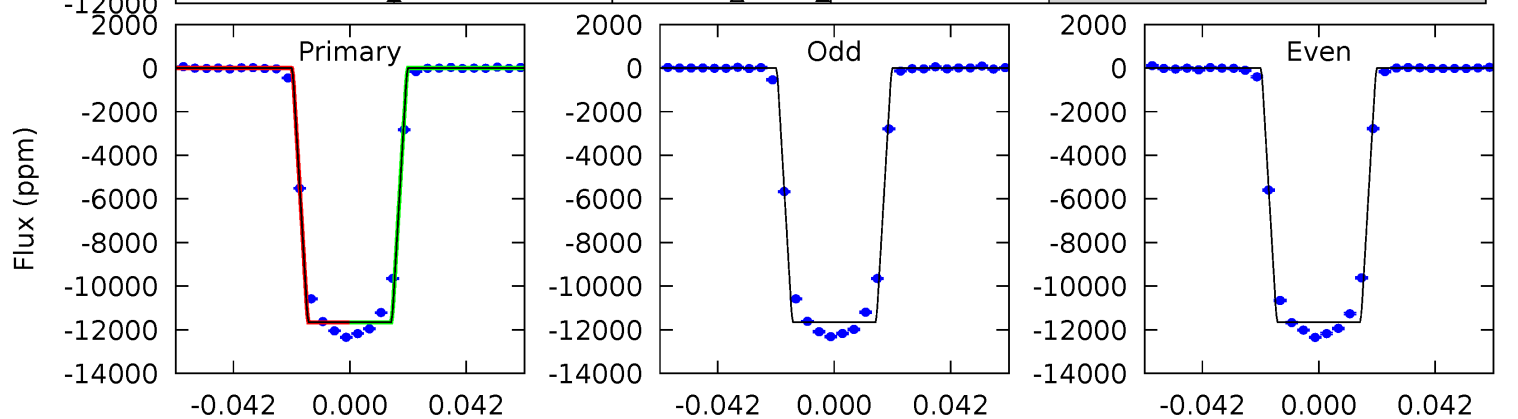
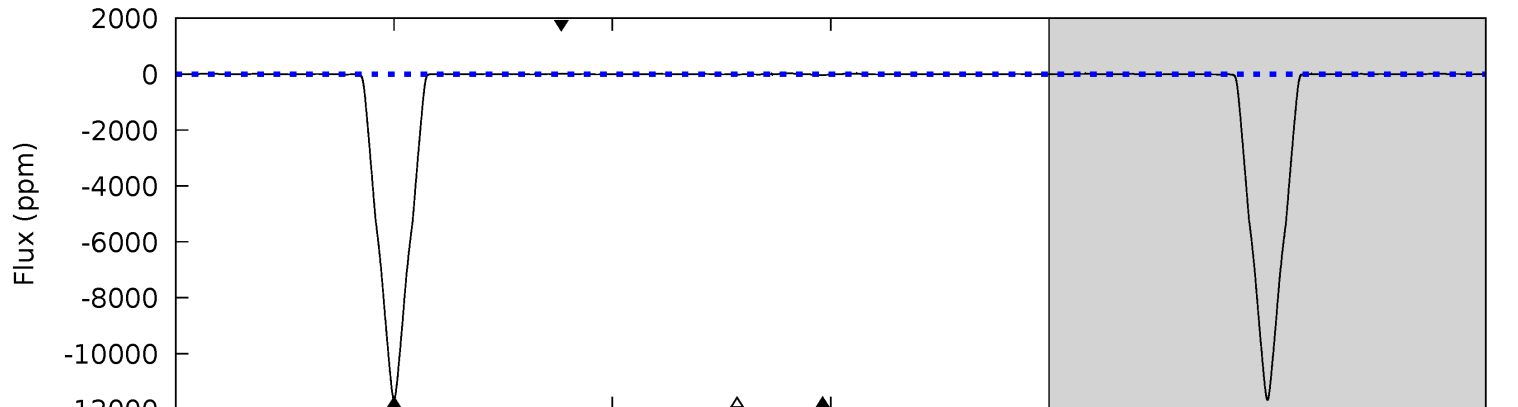
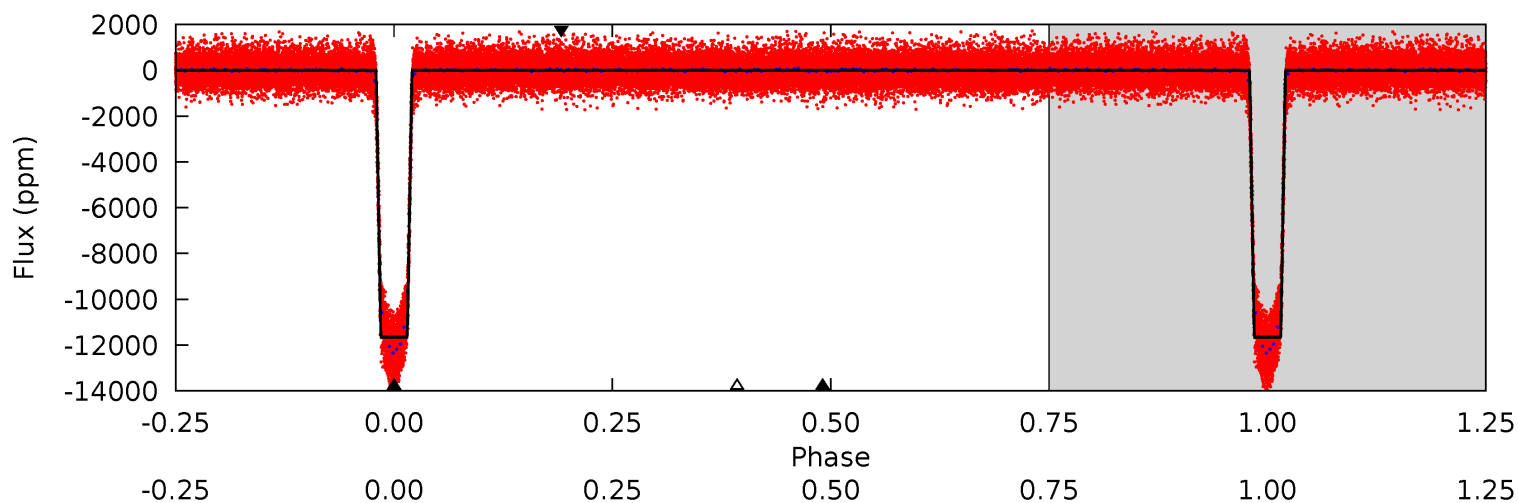
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1132	14.1	6.78	7.06	4.72	1.99	3.62	1125	1124	7.36	7.07	0.94	1.00	0.01	1.13



Alt Model-Shift Uniqueness Test

010272640-01, P = 3.770518 Days, E = 134.663166 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1235	3.56	1.88	1.99	4.74	2.04	0.72	1233	1233	1.68	1.57	0.57	1.00	0.00	0



Stellar Parameters For KIC 010272640

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6322^{+175}_{-263}	$4.426^{+0.056}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.075^{+0.364}_{-0.121}$	$1.124^{+0.164}_{-0.148}$	$1.274^{+0.381}_{-0.659}$
	+3%/-4%	+1%/-5%	+208%/-250%	+34%/-11%	+15%/-13%	+30%/-52%
Source	KIC0	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 010272640-01 / KOI 1074.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-154 ± 11	$12.16^{+2.08}_{-0.87}$	1856^{+124}_{-103}	2802^{+66}_{-78}	$1.339^{+0.238}_{-0.316}$
Alt.	-34 ± 9	$13.11^{+2.24}_{-1.06}$	1854^{+137}_{-97}	-1960^{+3846}_{-275}	$0.252^{+0.081}_{-0.086}$

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

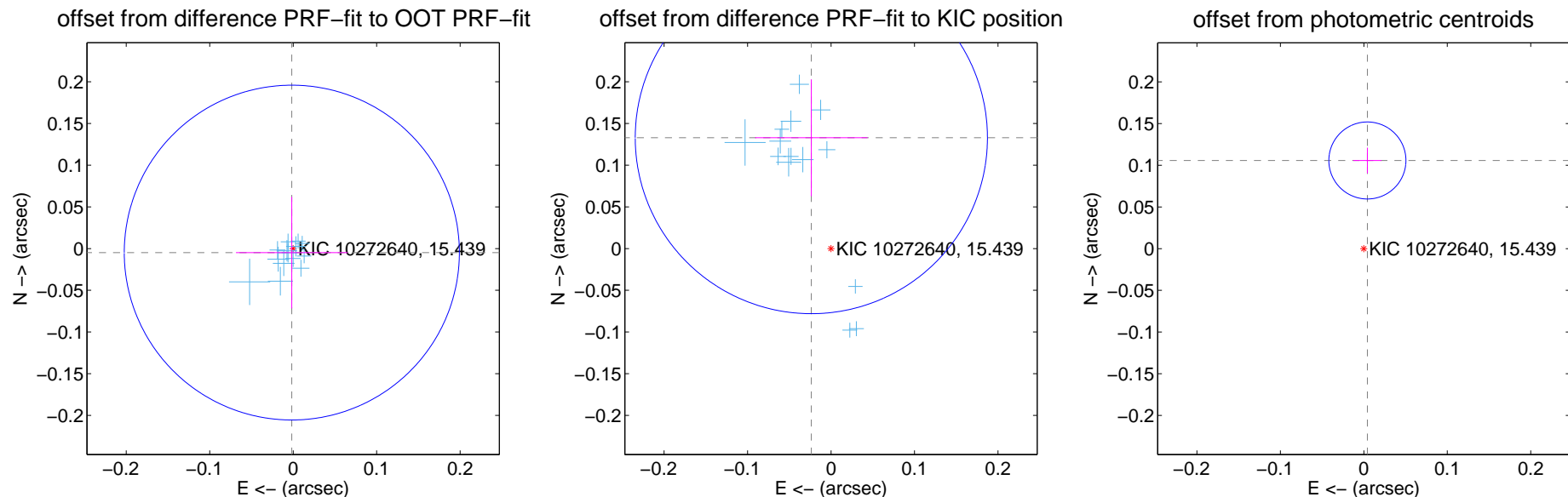
DV Centroid Data

Supplemental centroid analysis for 010272640-01. Kepler magnitude: 15.44. Transit SNR 628.34

There are 14 quarters with good PRF difference image offsets

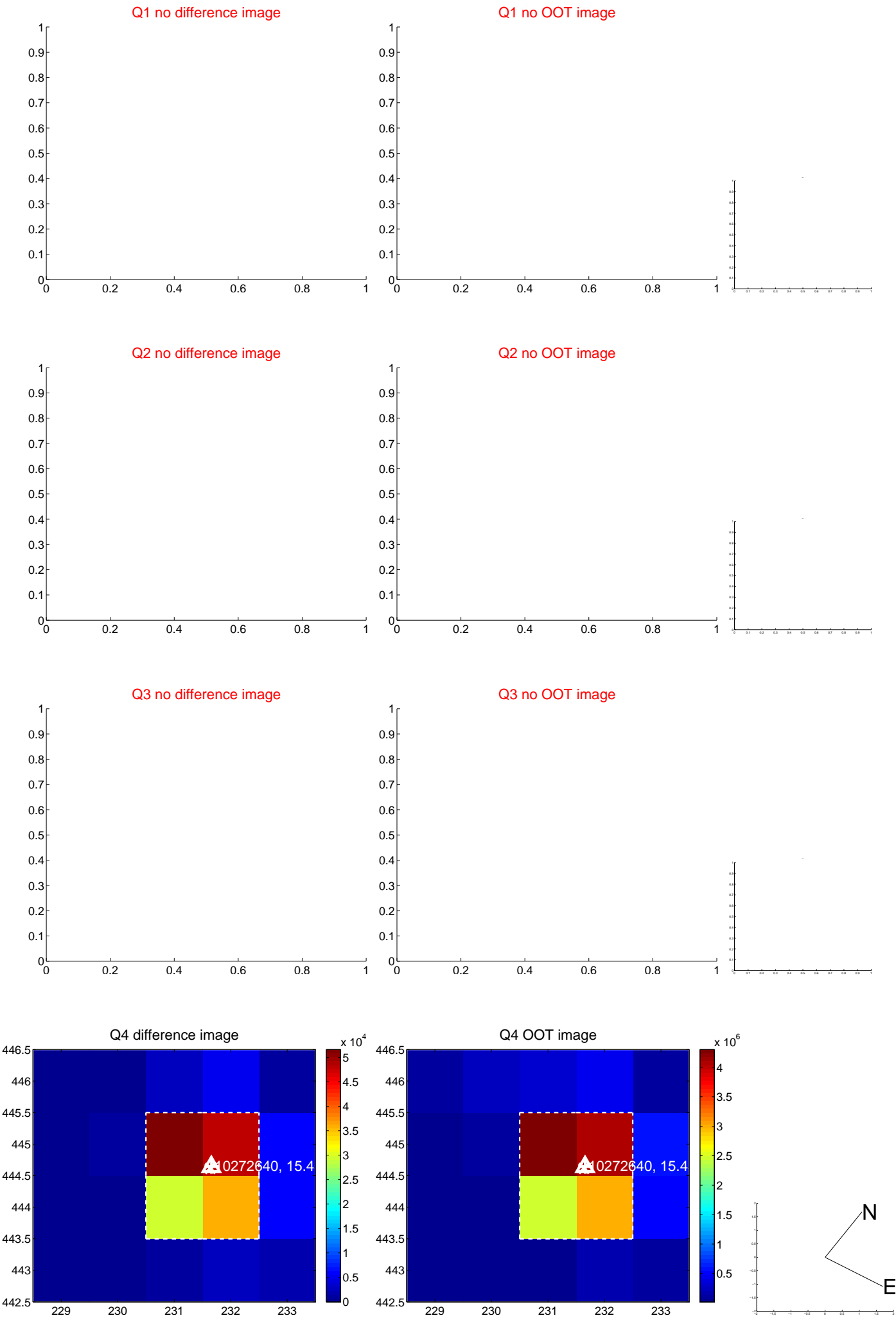
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.005 ± 0.067	0.08	0.002 ± 0.067	-0.005 ± 0.067
PRF-fit source offset from KIC position	0.135 ± 0.070	1.92	0.024 ± 0.067	0.133 ± 0.070
photometric centroid source offset	0.11 ± 0.02	6.87	-0.00 ± 0.02	0.11 ± 0.02

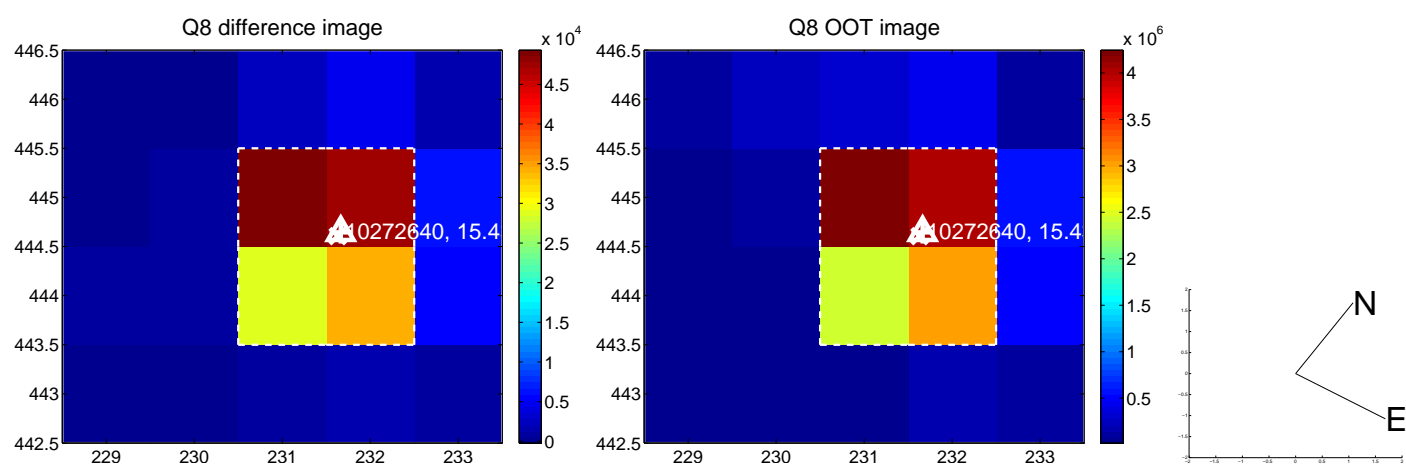
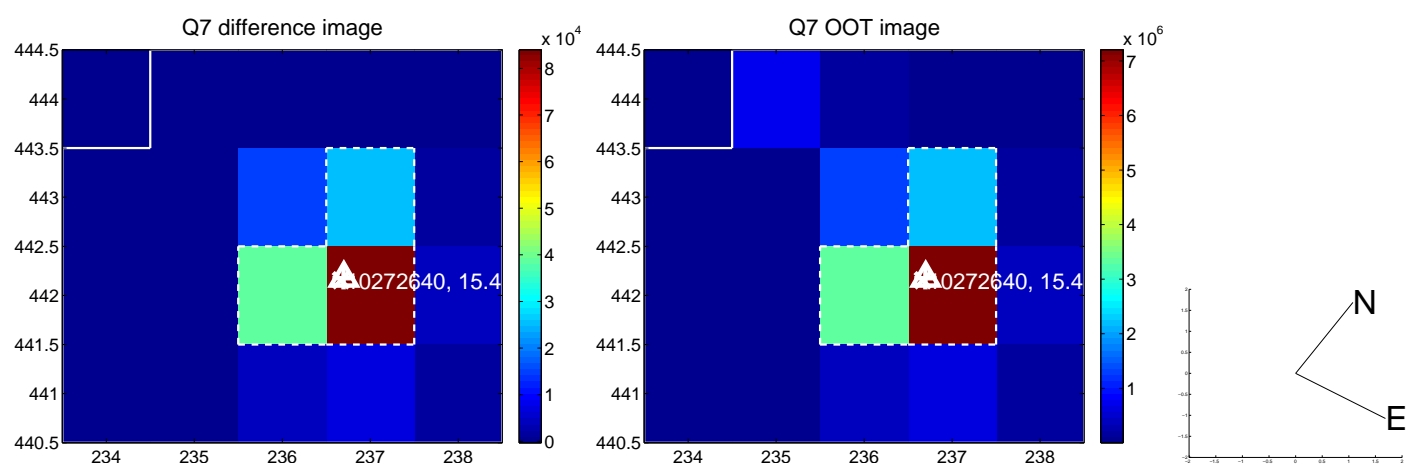
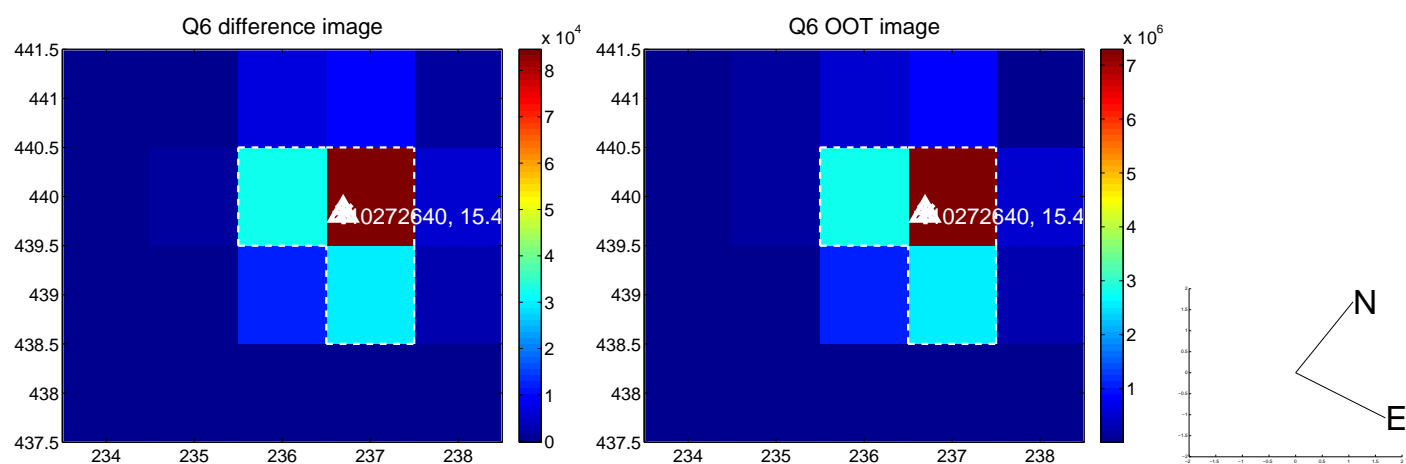
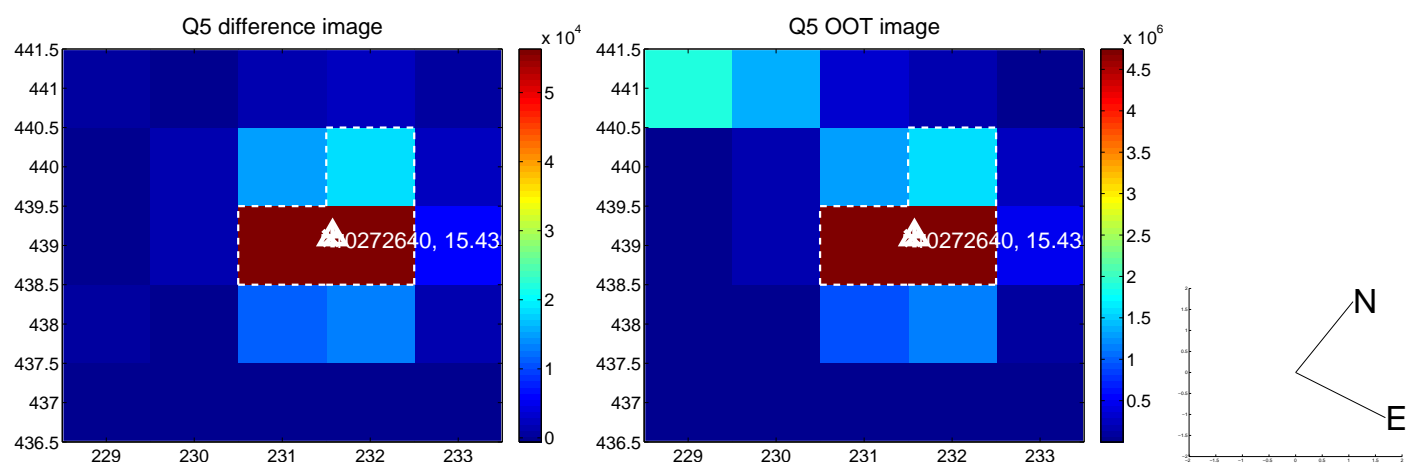


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

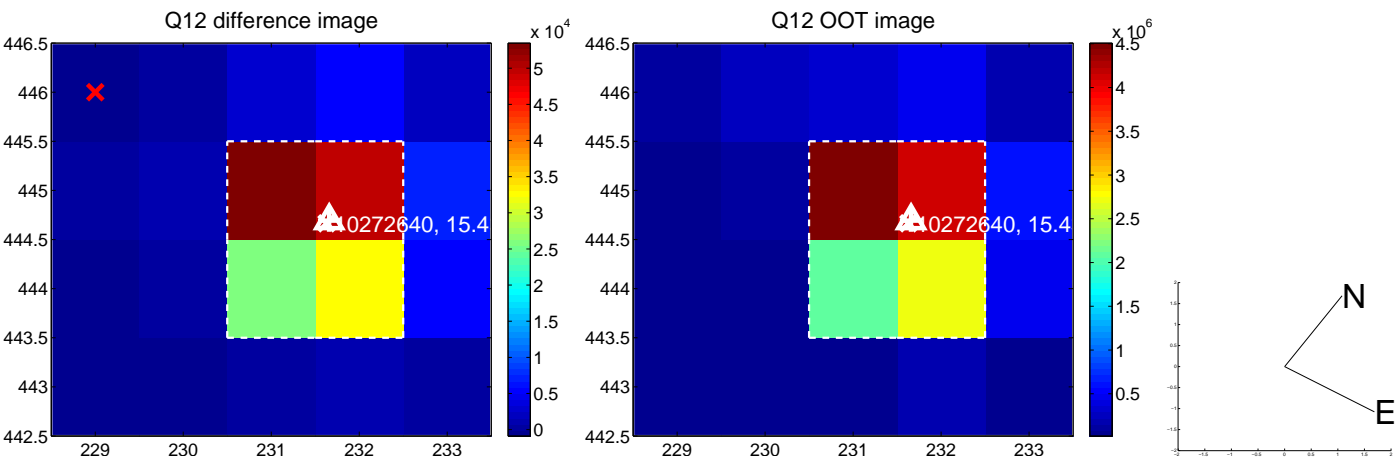
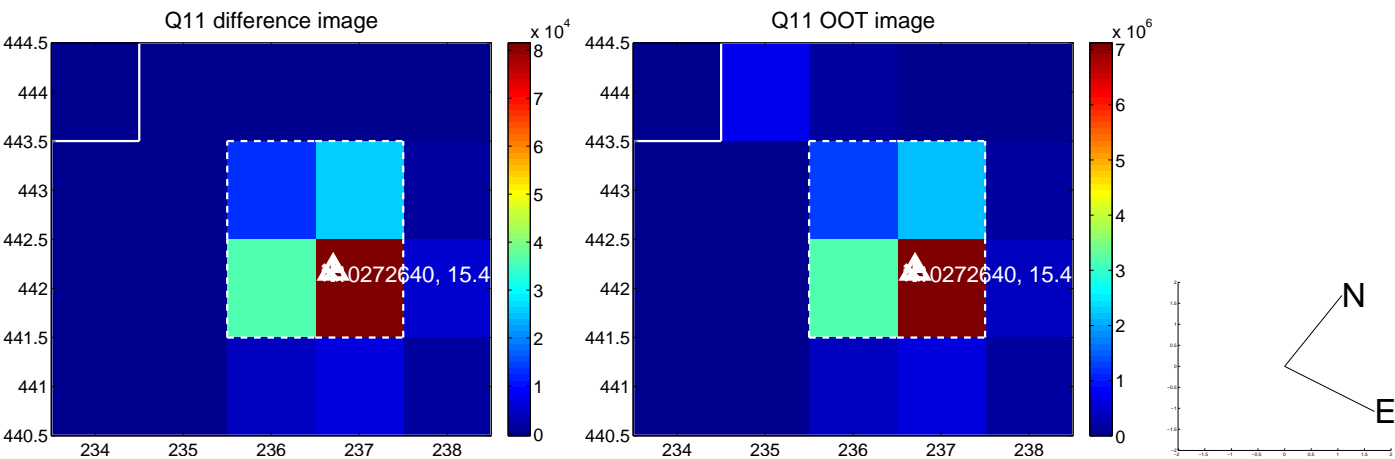
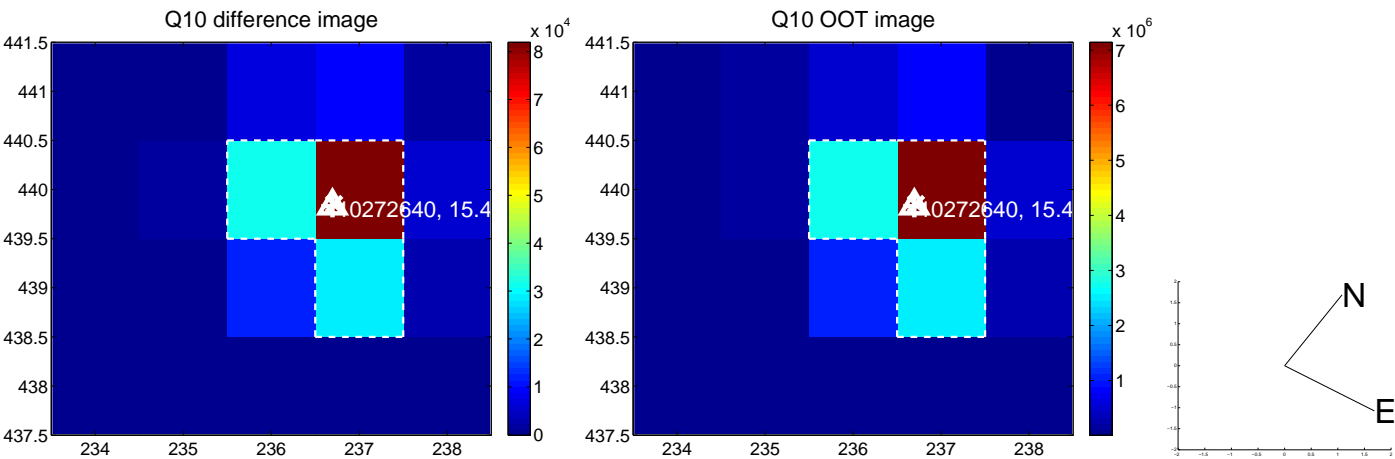
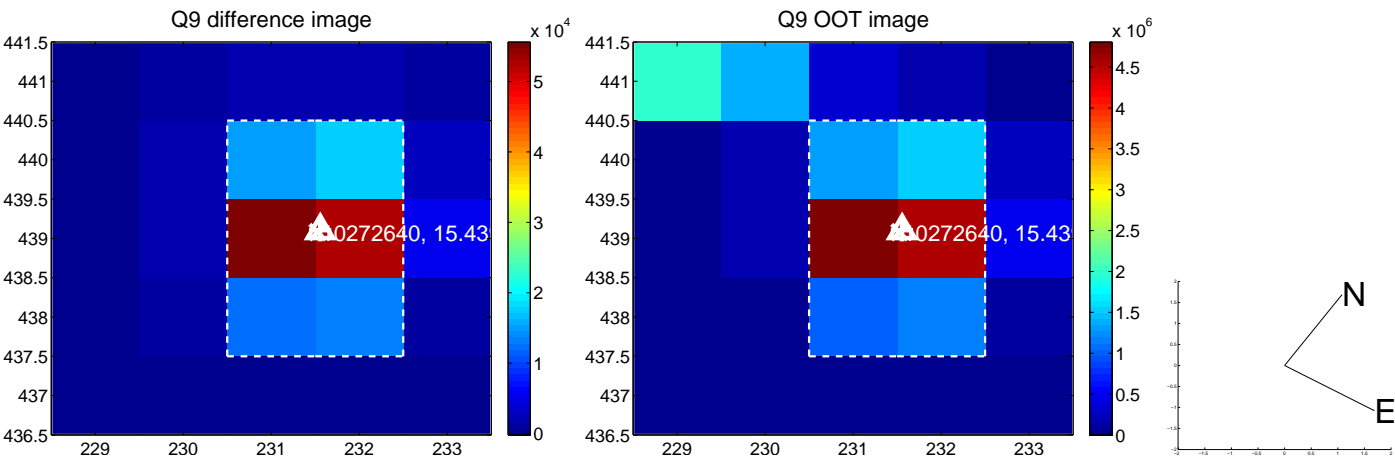
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



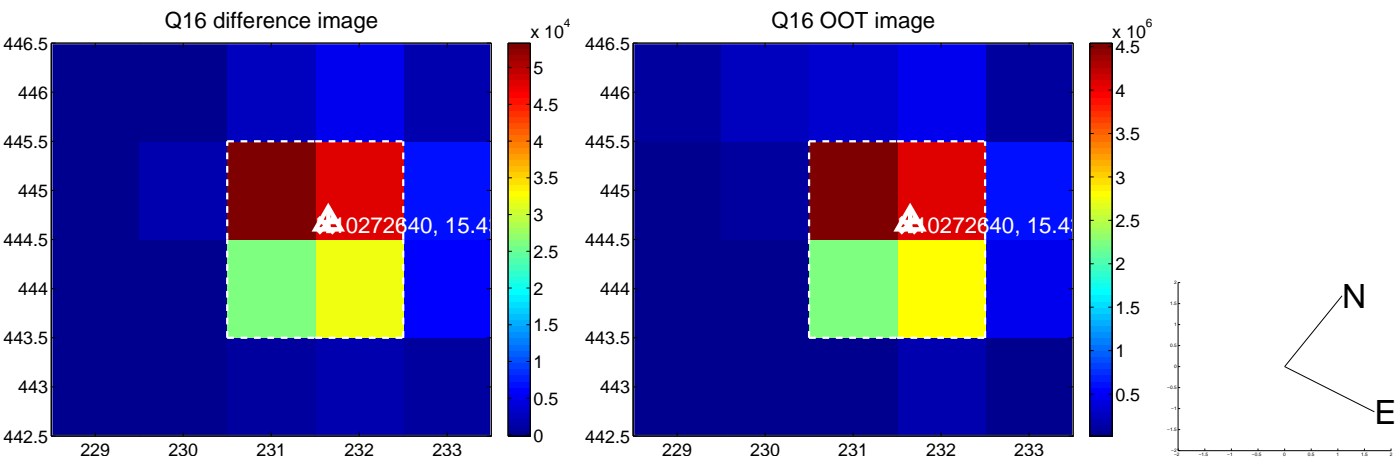
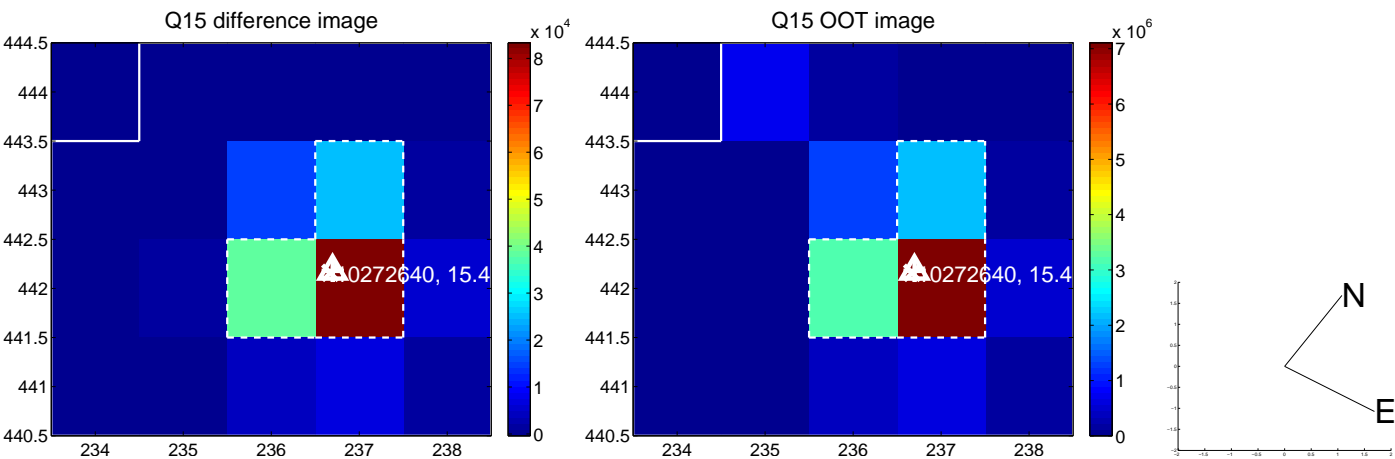
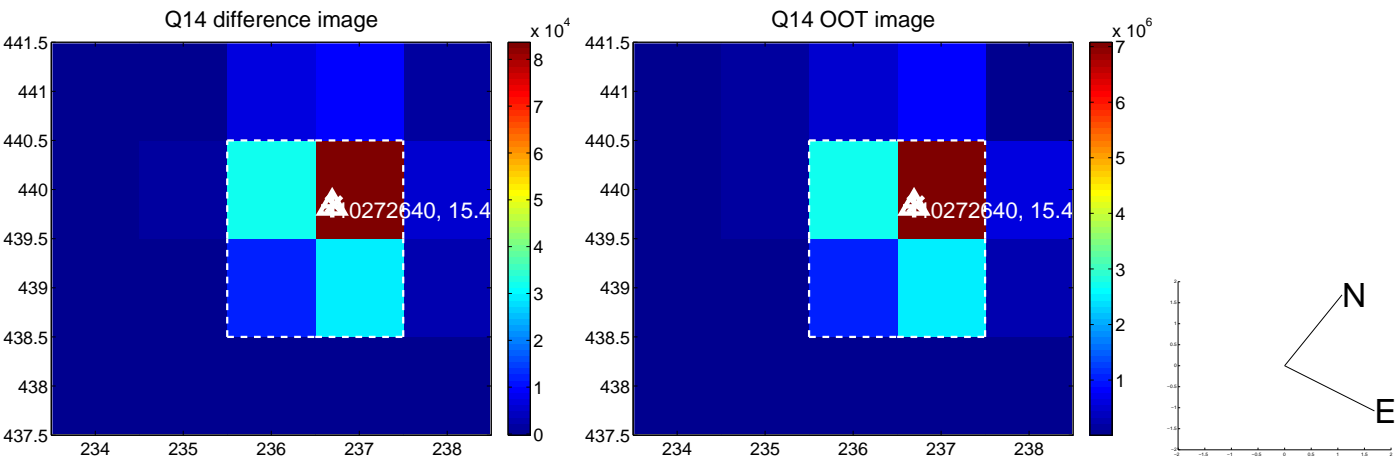
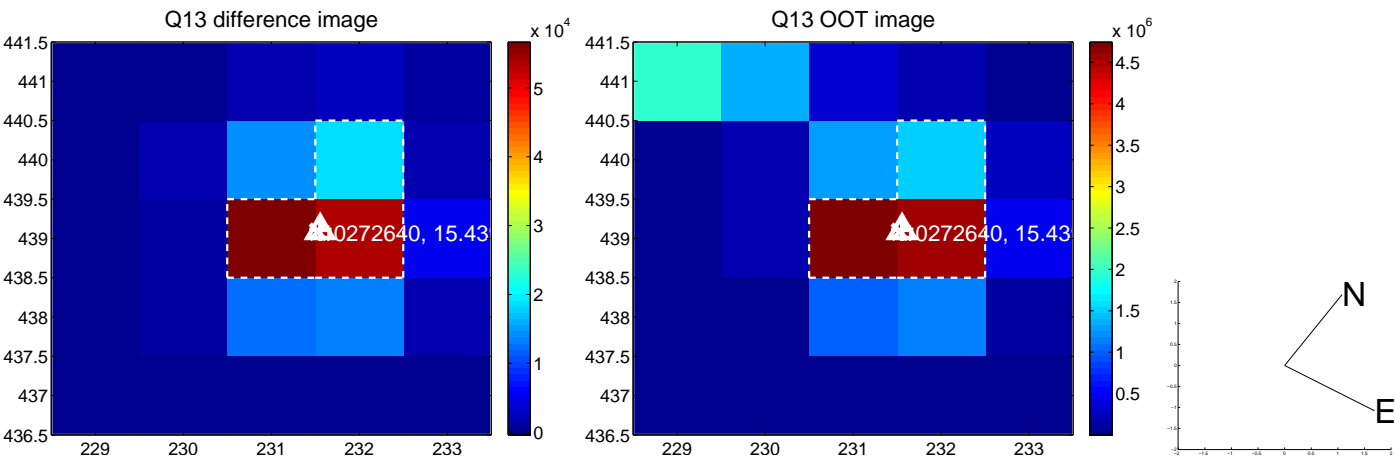
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



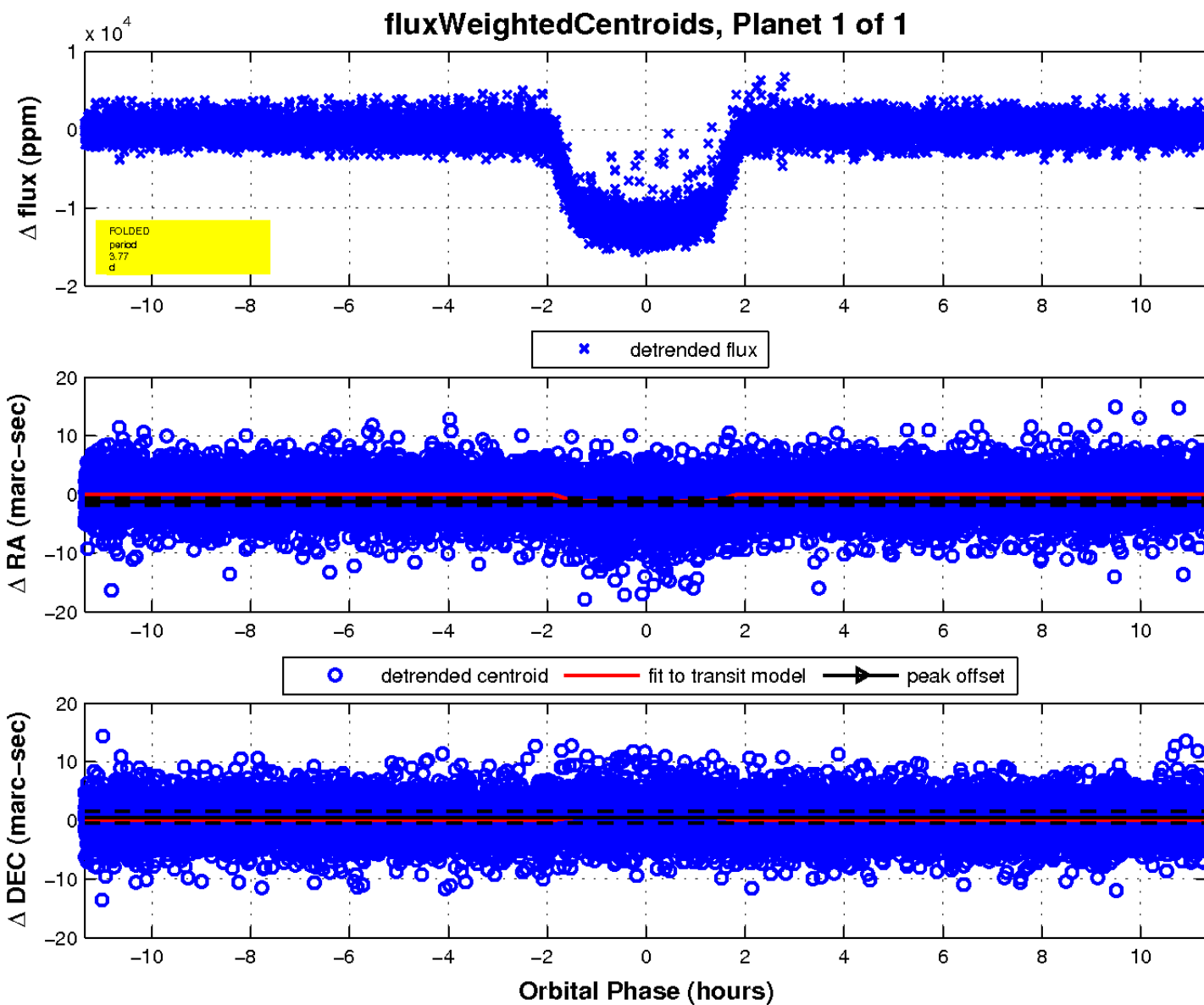
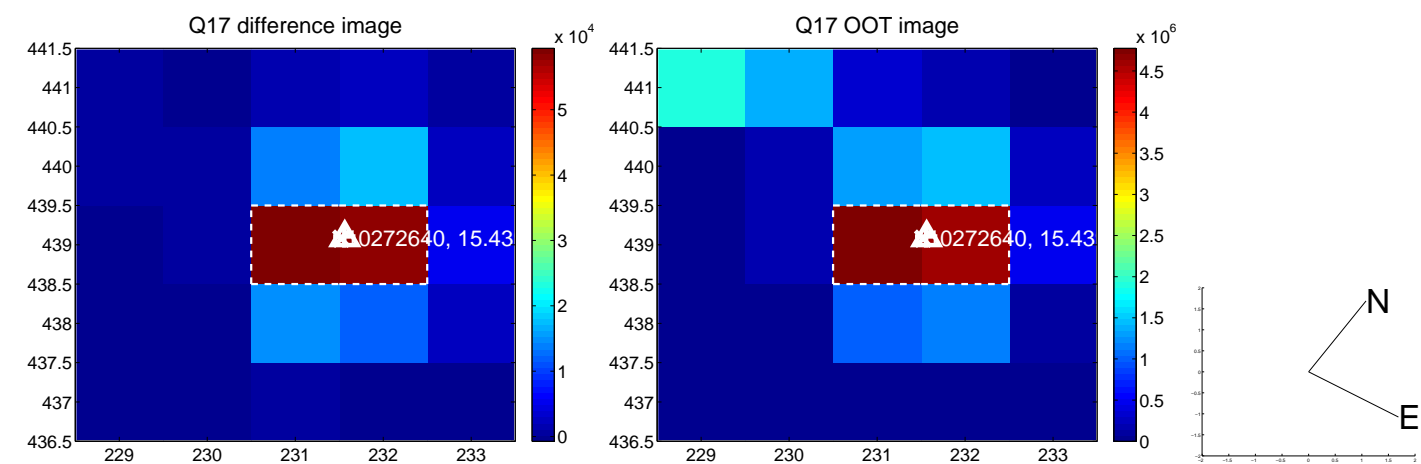
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

