

KIC 002437452

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})
002437452-01	OBS	6268.01	7.234958	134.583023	81920.3	8.124	2266.1	957.6	0.80	5653	35.07	119.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002437452-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—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.

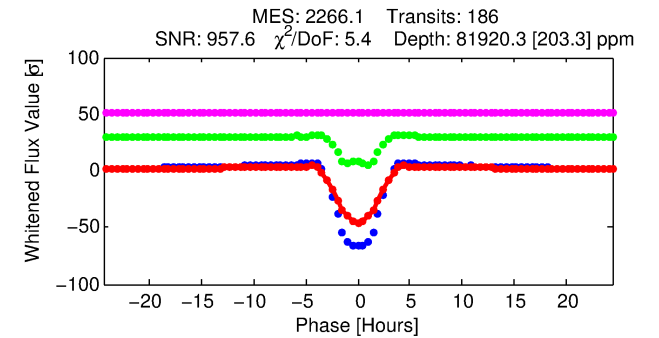
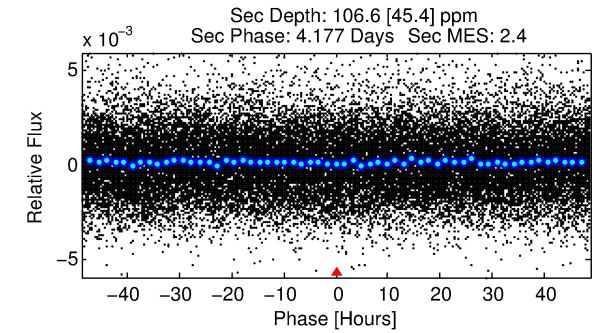
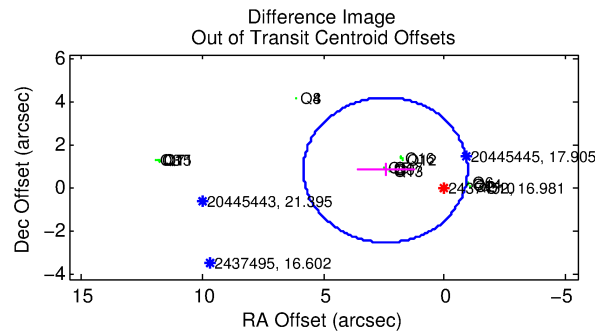
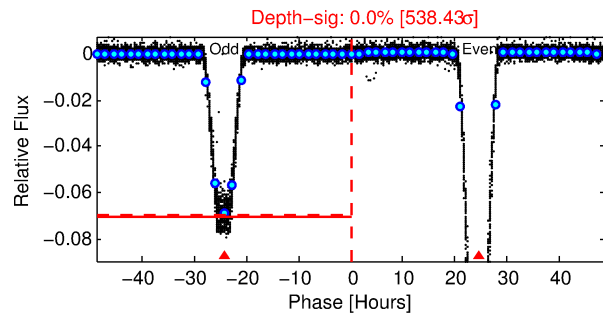
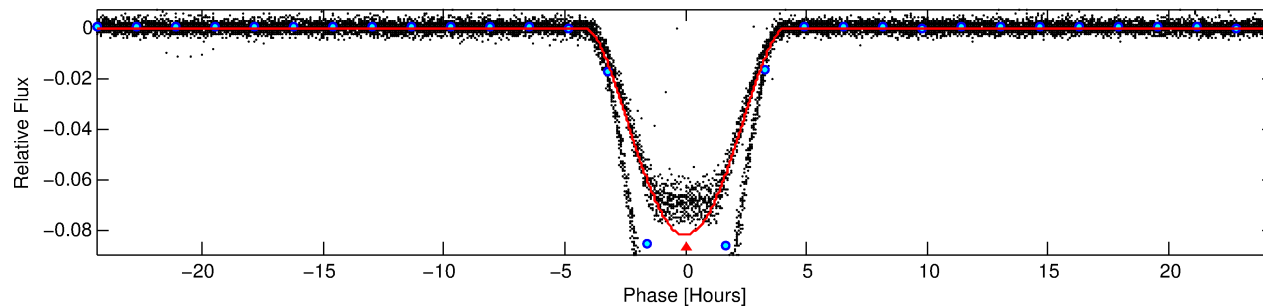
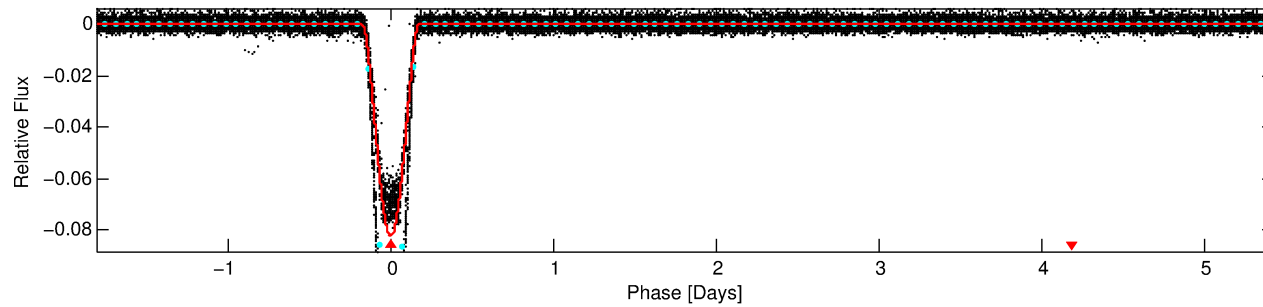
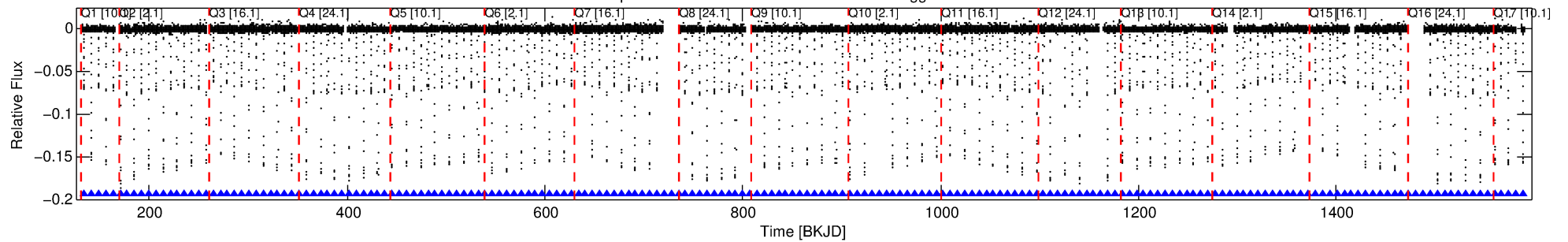
Ephemeris Match Information For 002437452-01

No Significant Match Found

DV One-Page Summary

KIC: 2437452 Candidate: 1 of 1 Period: 7.235 d
KOI: K06268.01 Corr: 0.971

Kp: 16.98 R*: 0.80 Rs Teff: 5653.0 K Logg: 4.57 Fe/H: -0.300



DV Fit Results:

Period = 7.23496 [0.00000] d
Epoch = 134.5830 [0.0003] BKJD
Rp/R* = 0.4028 [0.0712]
a/R* = 7.18 [0.03]
b = 0.94 [0.10]
Seff = 119.33 [39.08]
Teq = 843 [69] K
Rp = 35.07 [10.97] Re
a = 0.0699 [0.0148] AU
Ag = 0.23 [0.15] [-5.24σ]
Teffp = 905 [129] K [0.43σ]

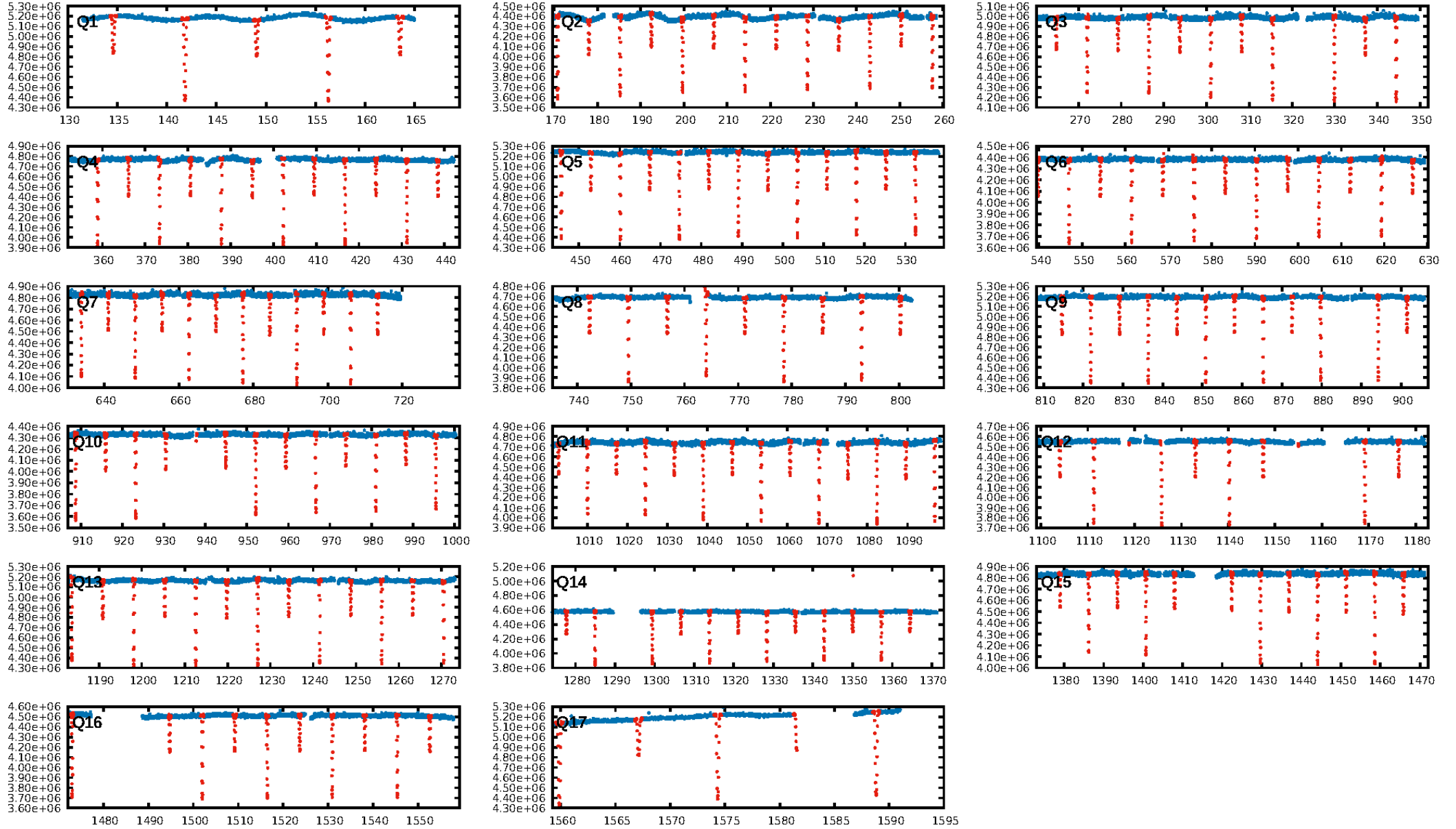
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [176/176]
GhostDiagnostic-chr: 2.437
Centroid-sig: 0.0%
Centroid-so: 0.640 arcsec [205.37σ]
OotOffset-rm: 2.573 arcsec [2.28σ]
KicOffset-rm: 0.268 arcsec [3.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

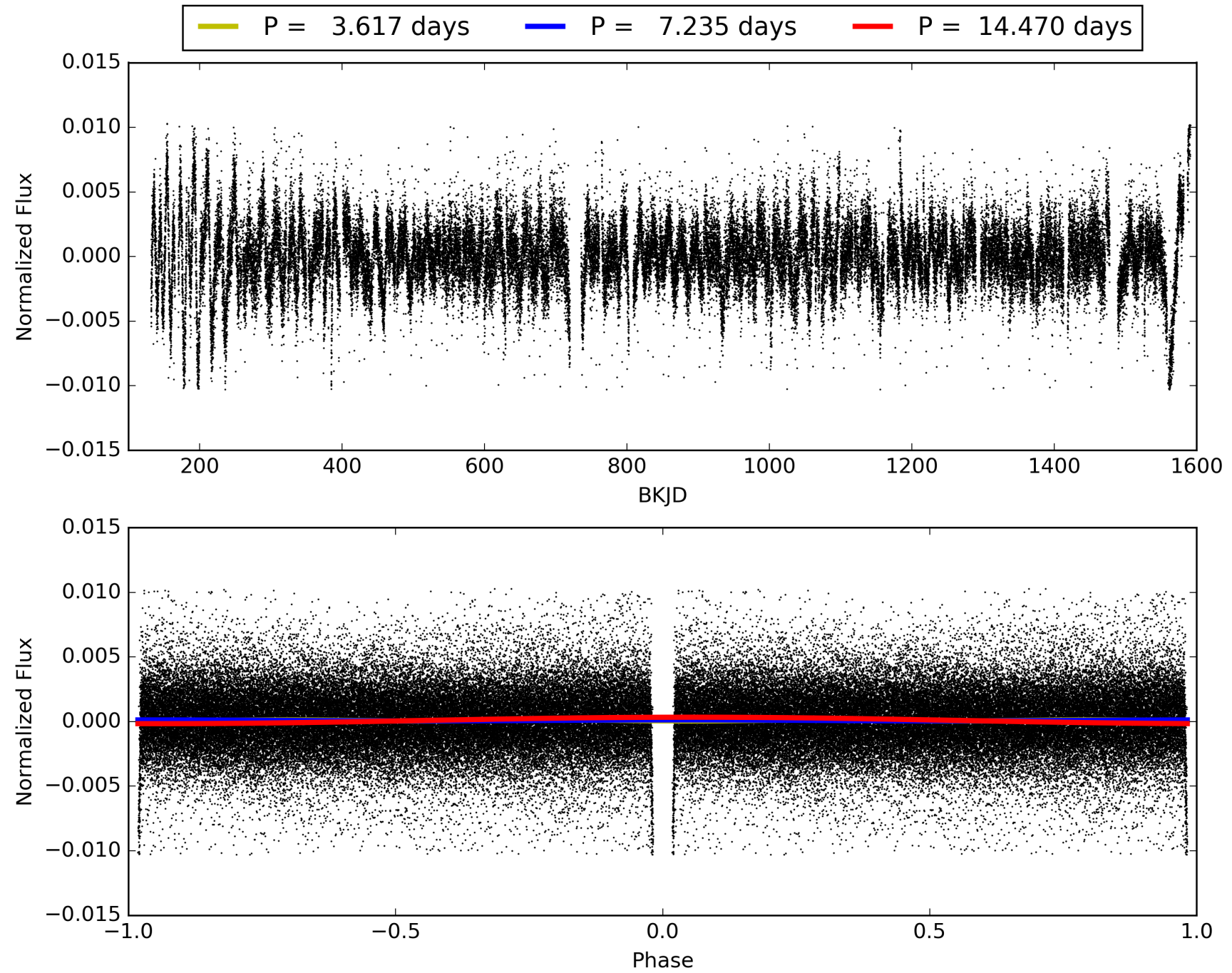
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:10:59 Z

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

TCE 002437452-01, PDC Light Curves

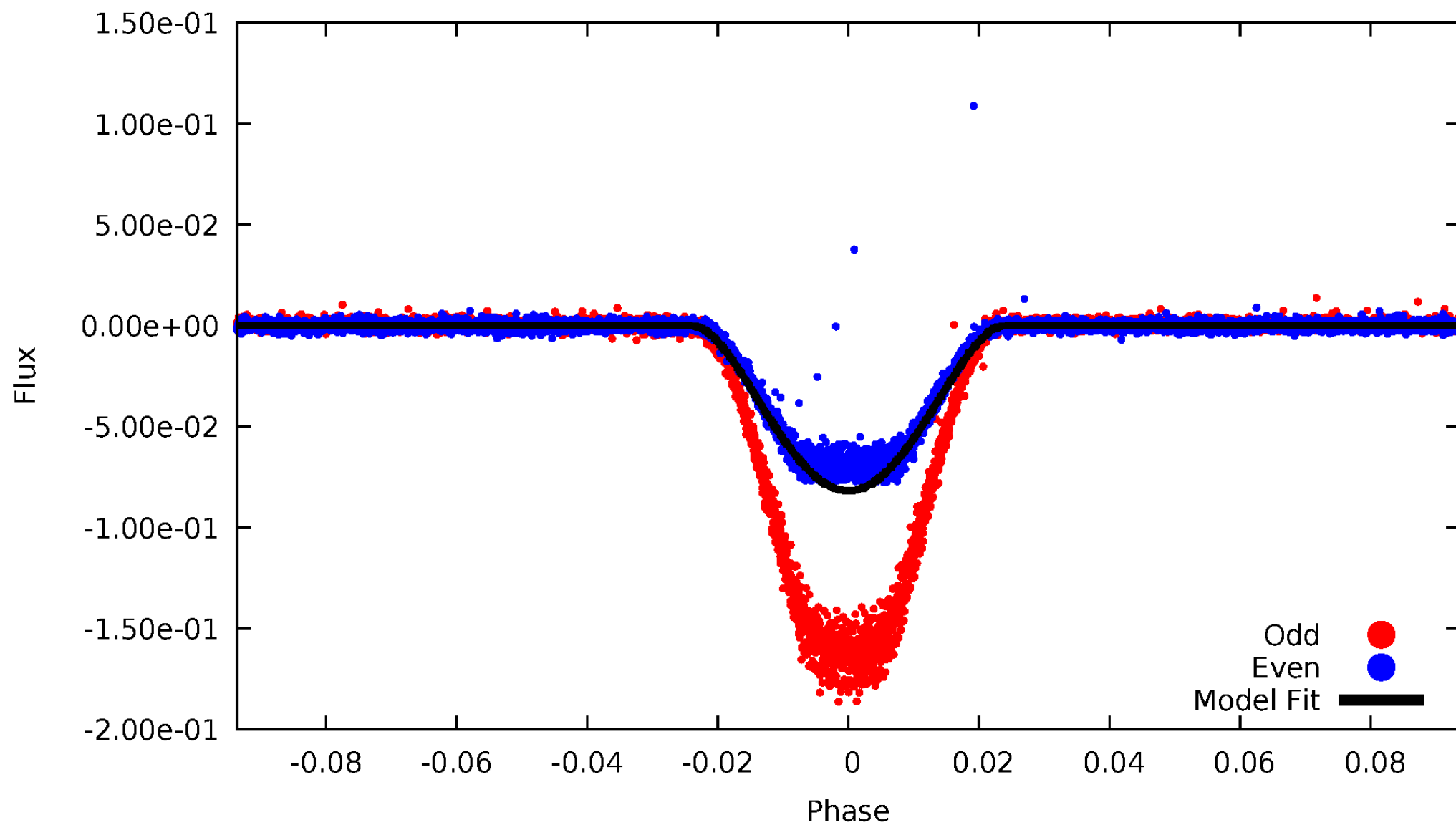


TCE 002437452-01



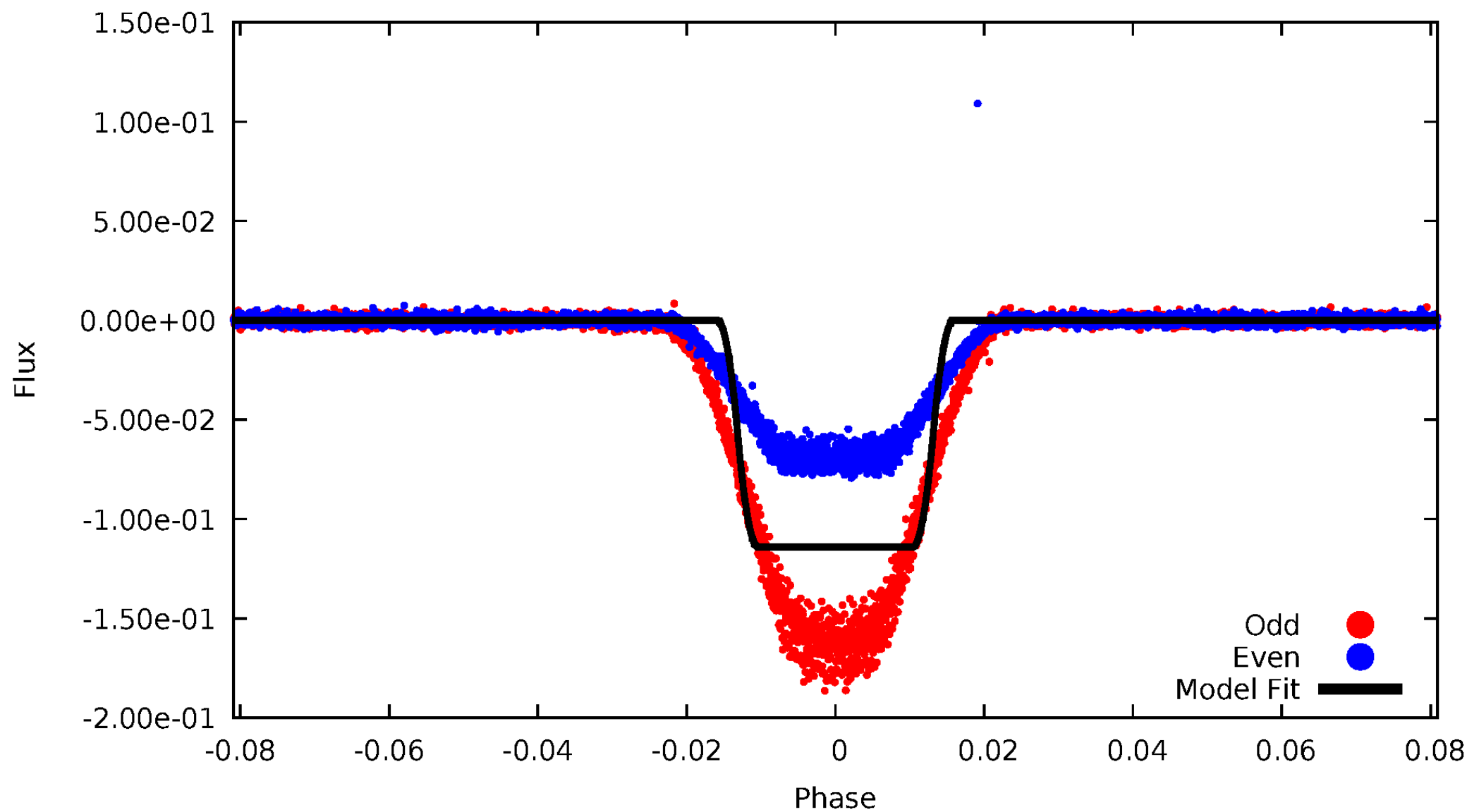
DV Odd/Even

TCE 002437452-01



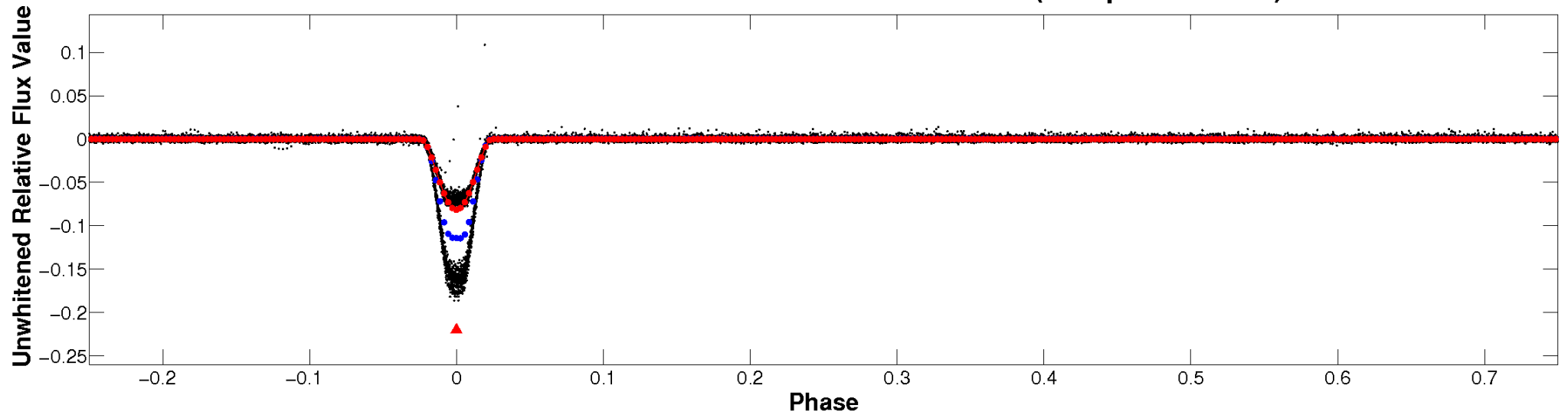
ALT Odd/Even

TCE 002437452-01

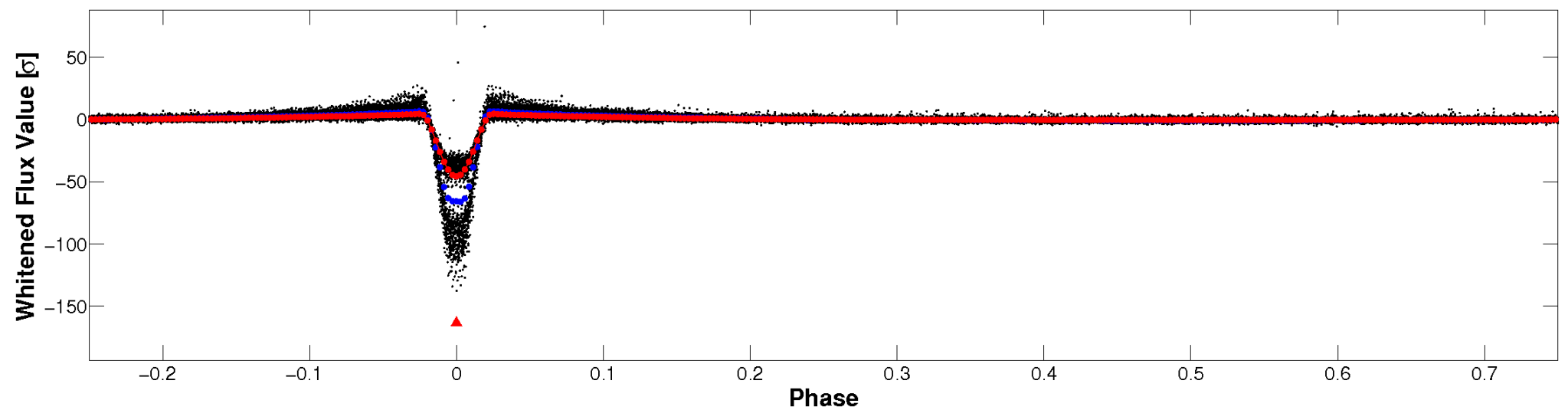


Non-Whitened Vs. Whitened Light Curve

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

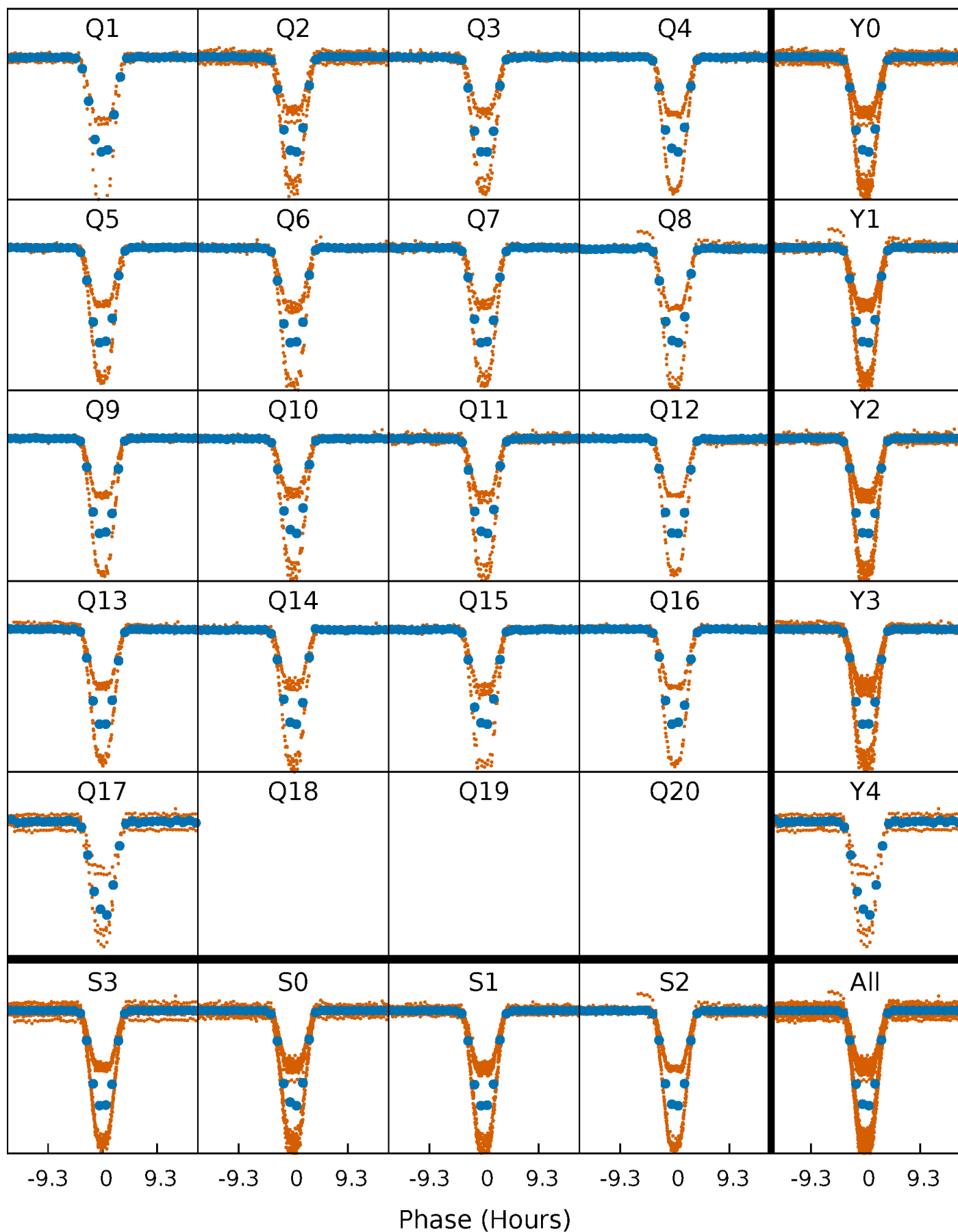


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



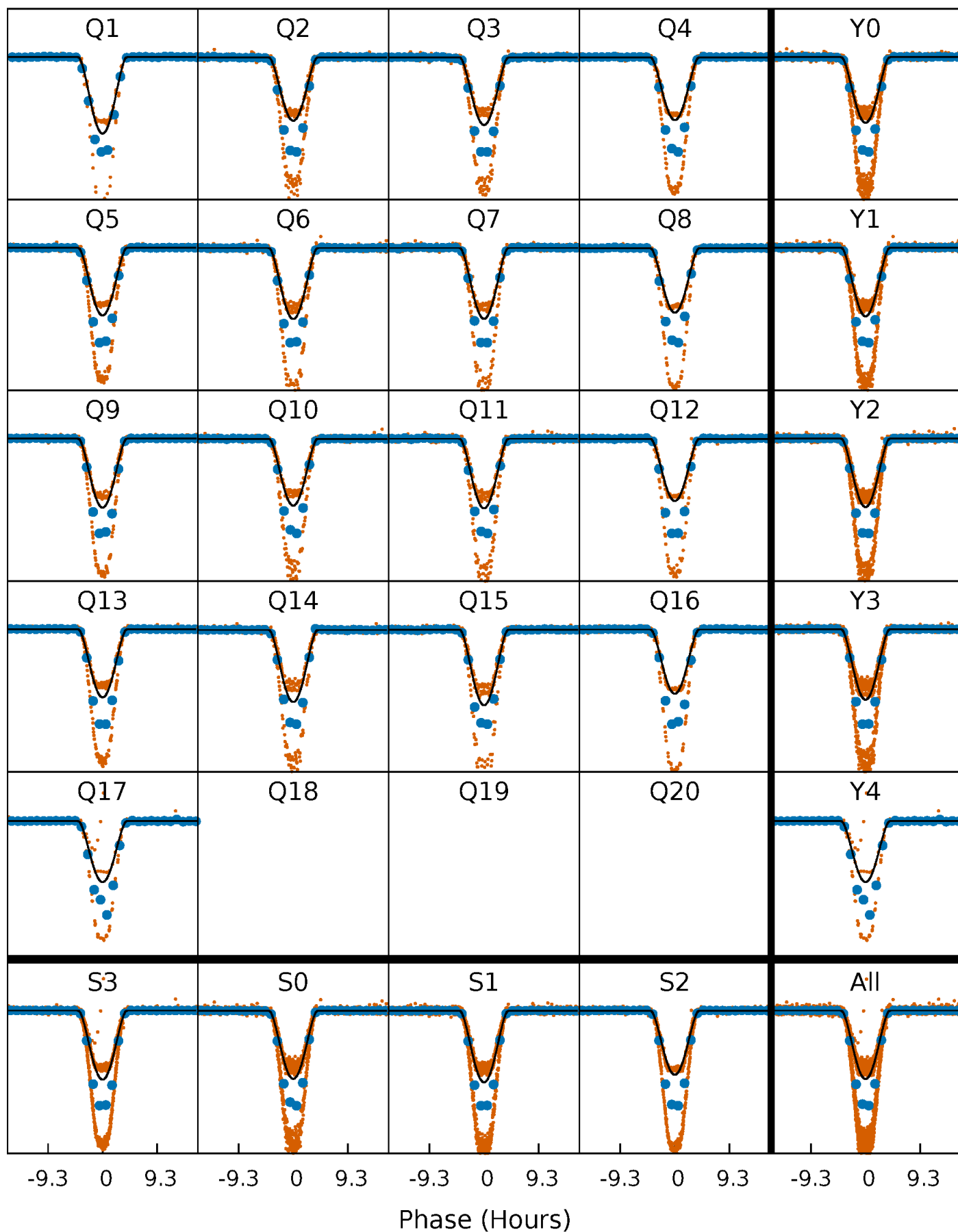
PDC Quarter-Phased Transit Curves

TCE 002437452-01 P= 7.234958 Days $T_0=134.583023$ (BKJD)



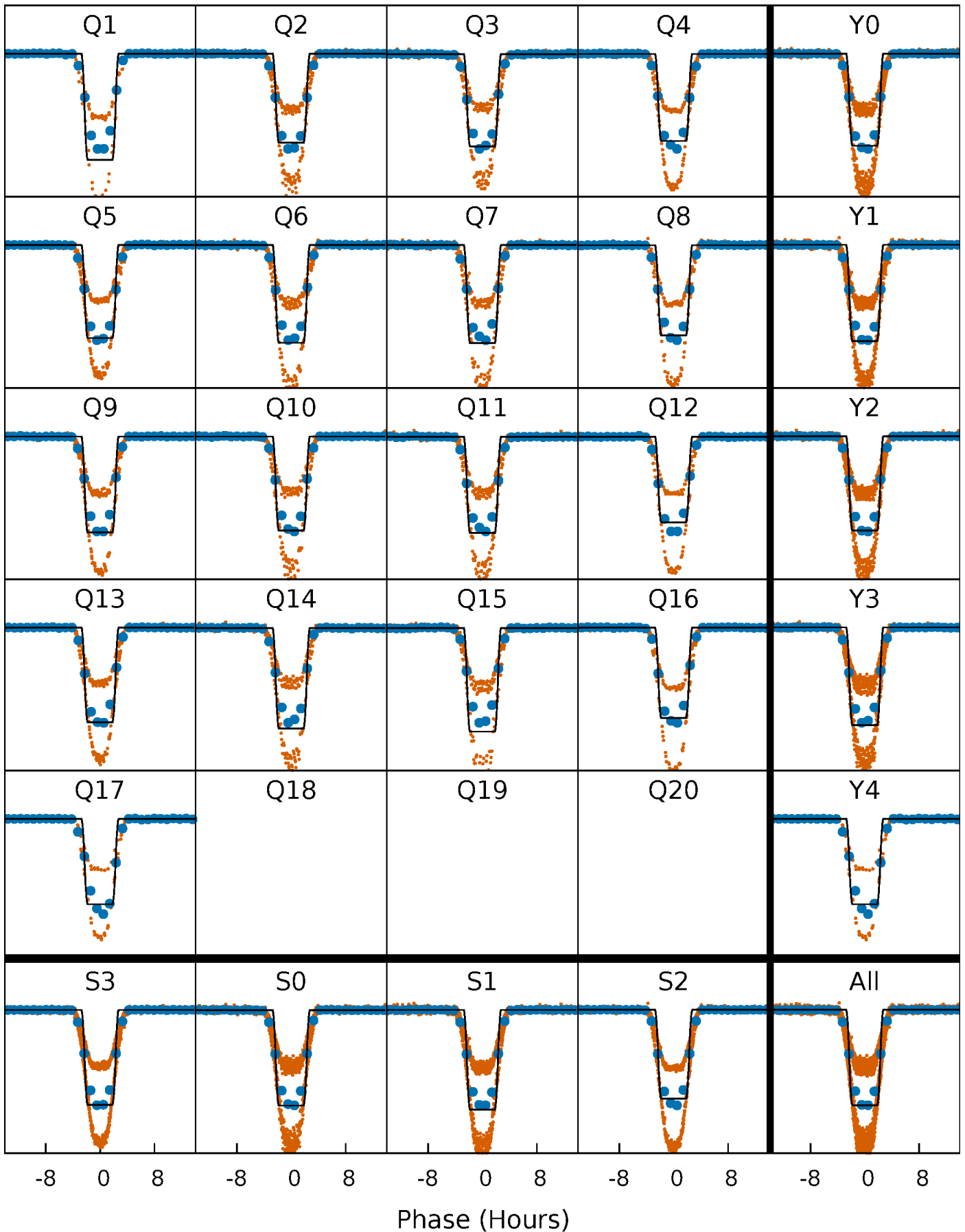
DV Quarter-Phased Transit Curves

TCE 002437452-01 P= 7.234958 Days $T_0=134.583023$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

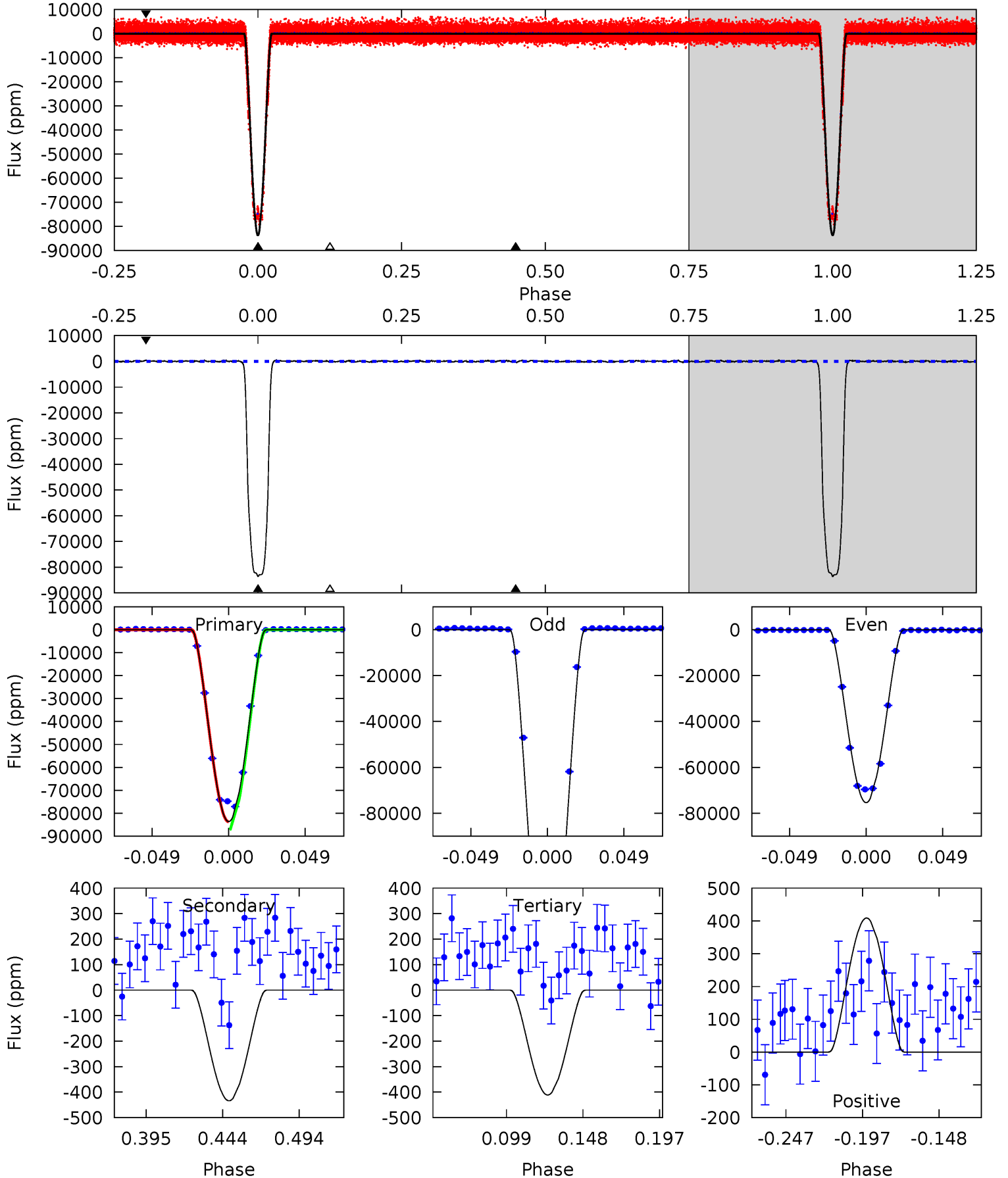
TCE 002437452-01 P= 7.234966 Days $T_0=134.582270$ (BKJD)



DV Model-Shift Uniqueness Test

002437452-01, P = 7.234958 Days, E = 127.348065 Days

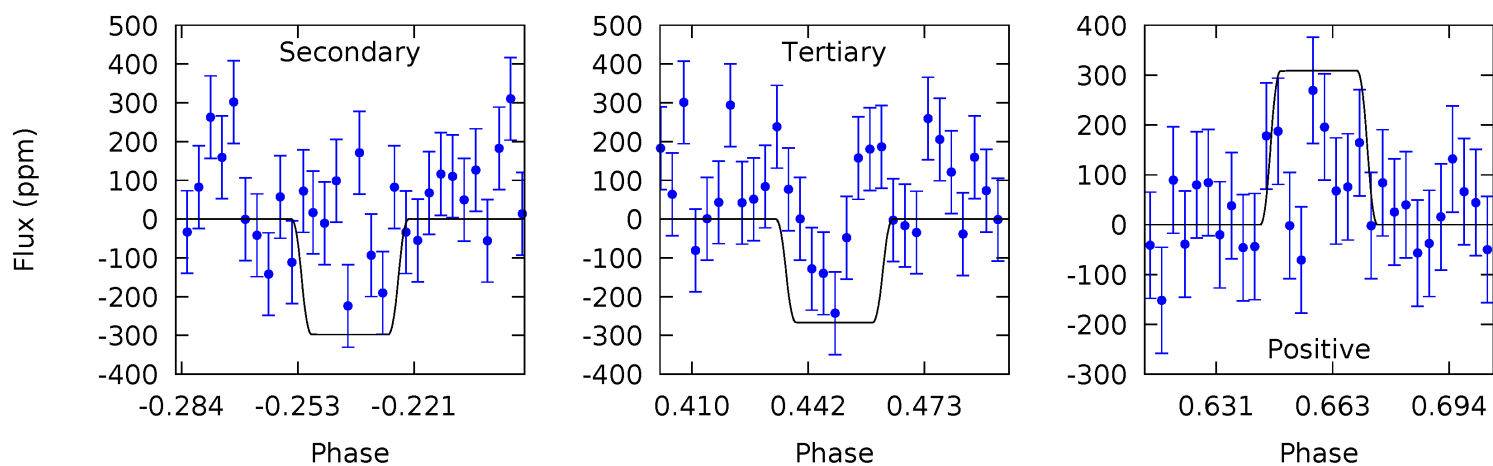
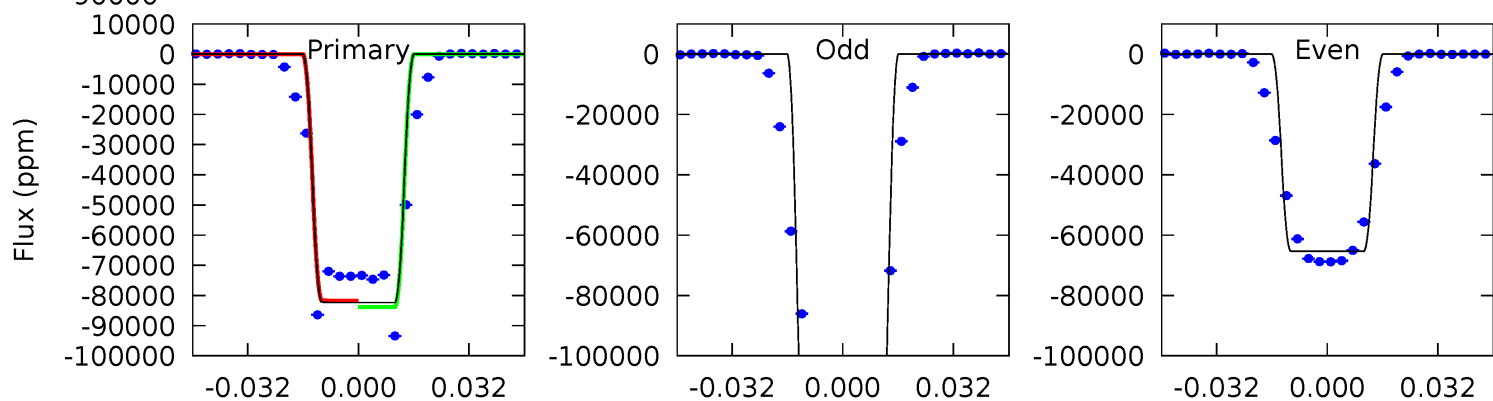
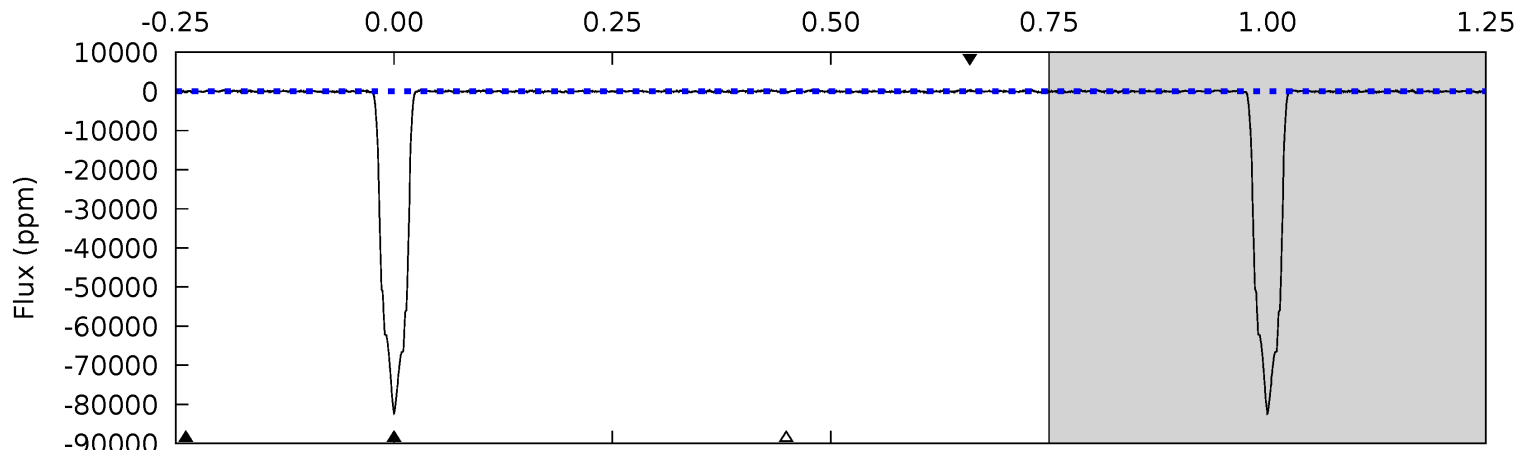
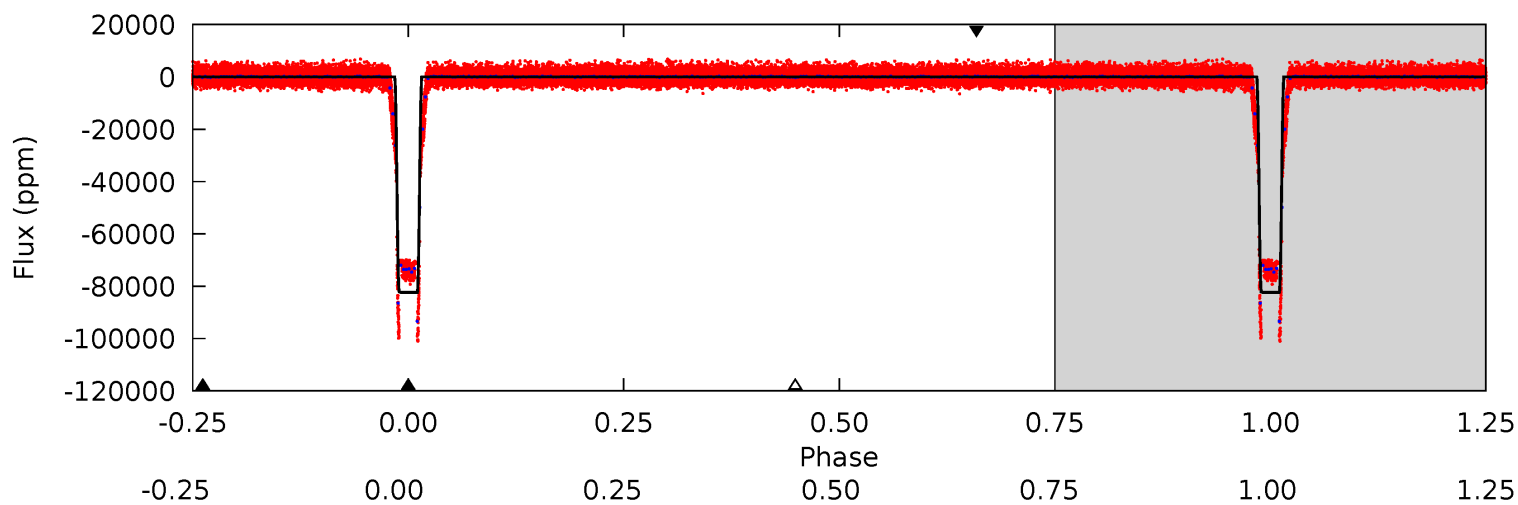
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1835	9.52	9.02	8.97	4.71	1.97	3.16	1826	1826	0.50	0.55	1397	1.25	0.01	37.4



Alt Model-Shift Uniqueness Test

002437452-01, P = 7.234966 Days, E = 127.347304 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1035	3.74	3.35	3.88	4.80	2.15	1.24	1032	1031	0.39	-0.14	905.4	1.42	0.00	0



Stellar Parameters For KIC 002437452

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5653^{+186}_{-186}	$4.573^{+0.040}_{-0.160}$	$-0.300^{+0.300}_{-0.300}$	$0.798^{+0.206}_{-0.069}$	$0.868^{+0.097}_{-0.097}$	$2.410^{+0.528}_{-1.085}$
	+3%/-3%	+1%/-3%	+100%/-100%	+26%/-9%	+11%/-11%	+22%/-45%
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 002437452-01 / KOI 6268.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-434 ± 46	$36.58^{+7.18}_{-6.97}$	1198^{+74}_{-53}	2123^{+141}_{-142}	$0.862^{+0.444}_{-0.276}$
Alt.	-298 ± 80	$30.21^{+7.17}_{-6.61}$	1200^{+72}_{-51}	2120^{+174}_{-206}	$0.838^{+0.576}_{-0.333}$

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

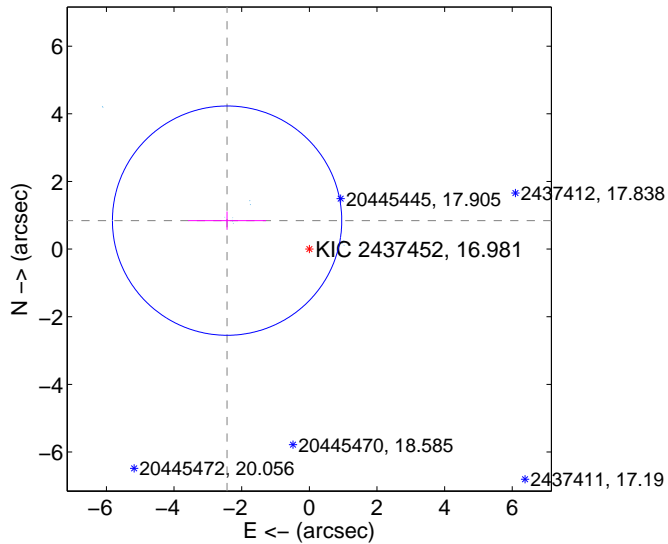
Supplemental centroid analysis for 002437452-01. Kepler magnitude: 16.98. Transit SNR 957.62

There are 17 quarters with good PRF difference image offsets

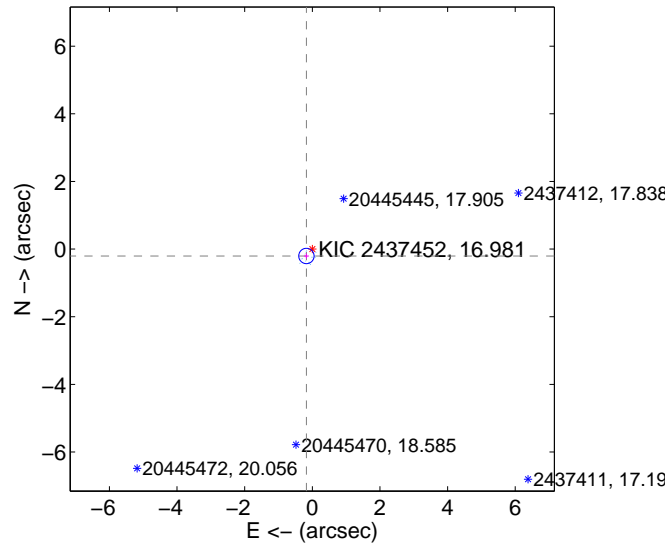
The OOT PRF centroid is offset from the target star catalog position by about 2.31 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.573 ± 1.130	2.28	2.432 ± 1.152	0.841 ± 0.272
PRF-fit source offset from KIC position	0.268 ± 0.076	3.55	0.175 ± 0.075	-0.204 ± 0.074
photometric centroid source offset	0.64 ± 0.00	205.37	0.06 ± 0.00	-0.64 ± 0.00

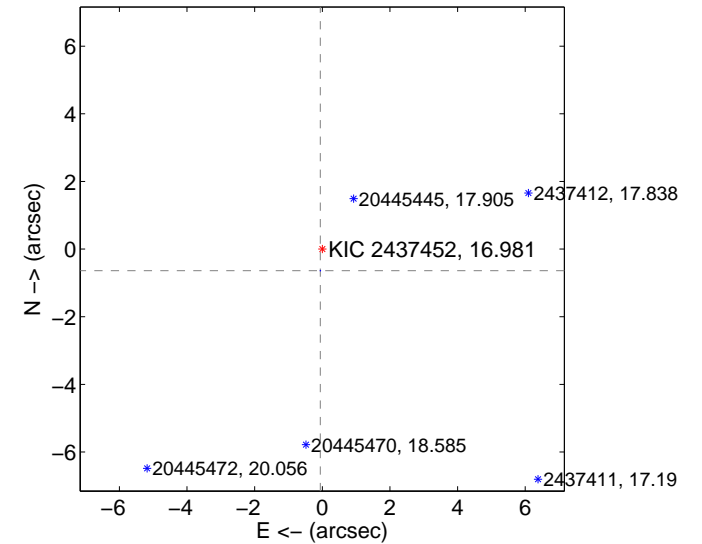
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

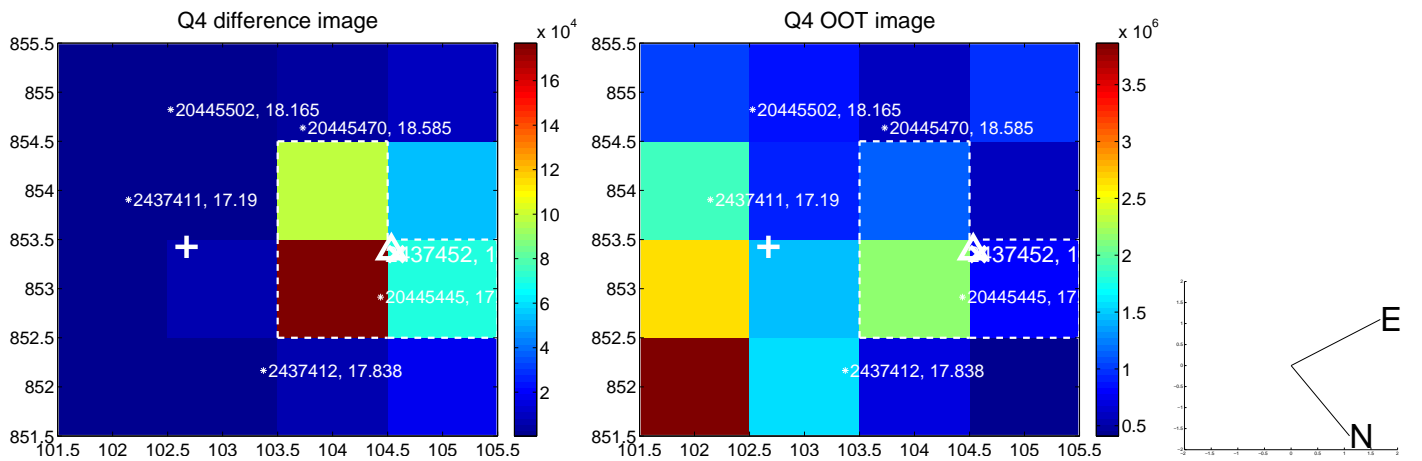
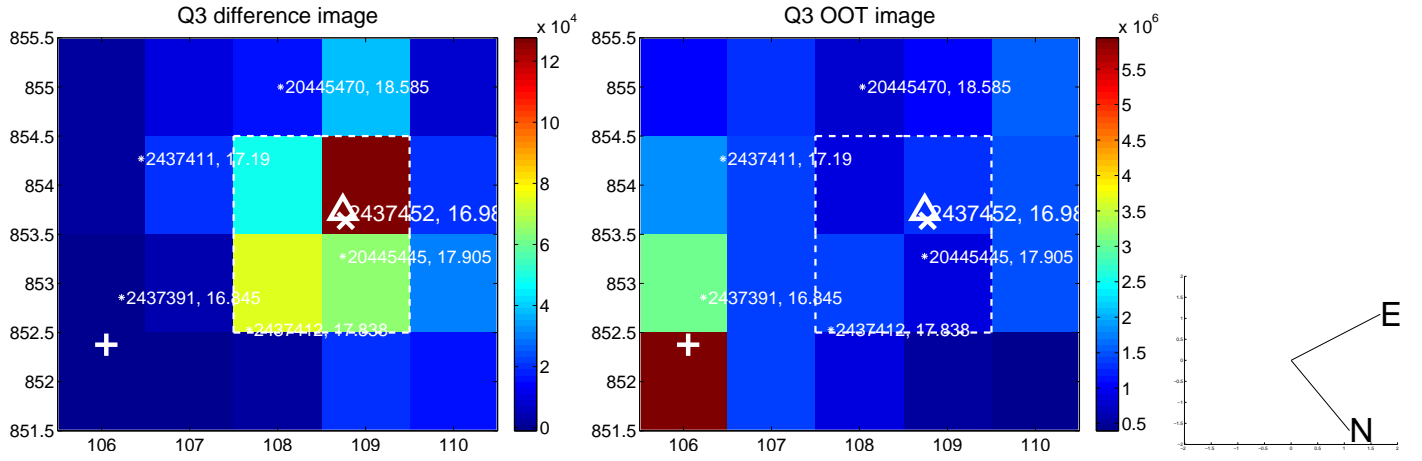
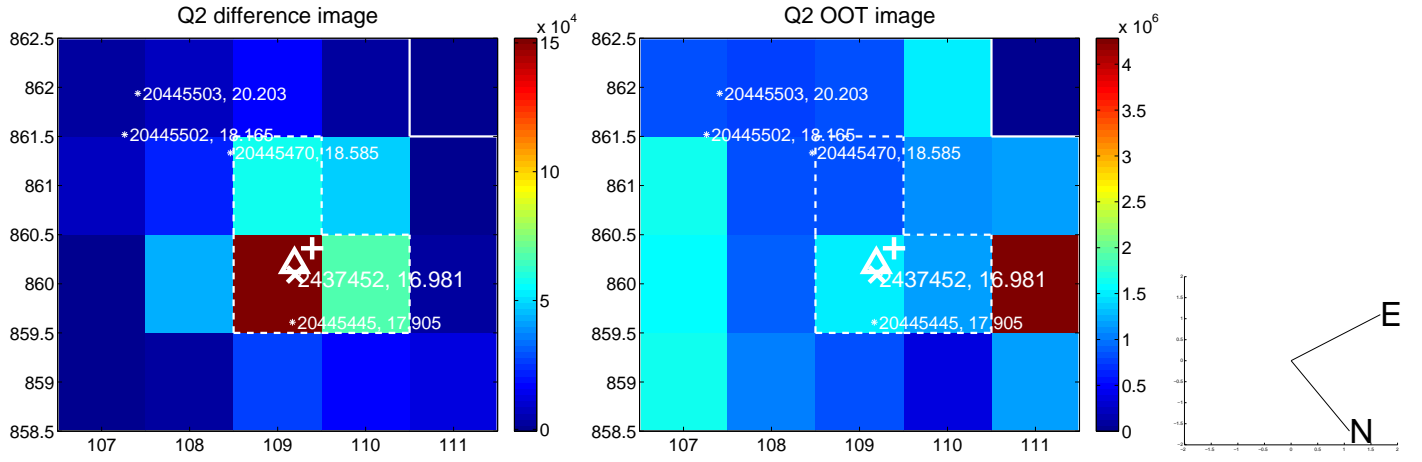
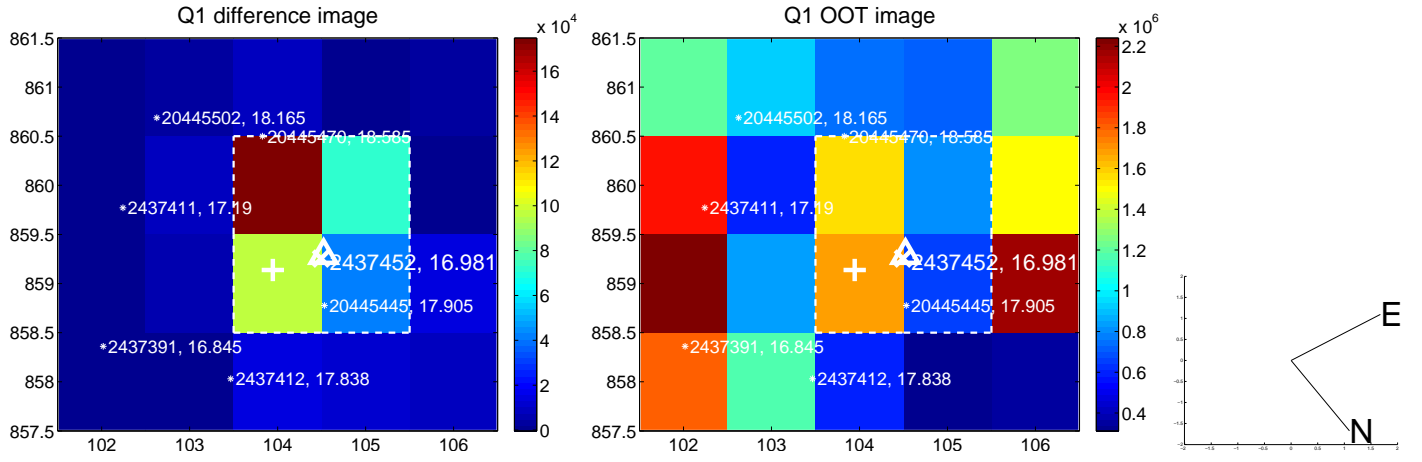


offset from photometric centroids

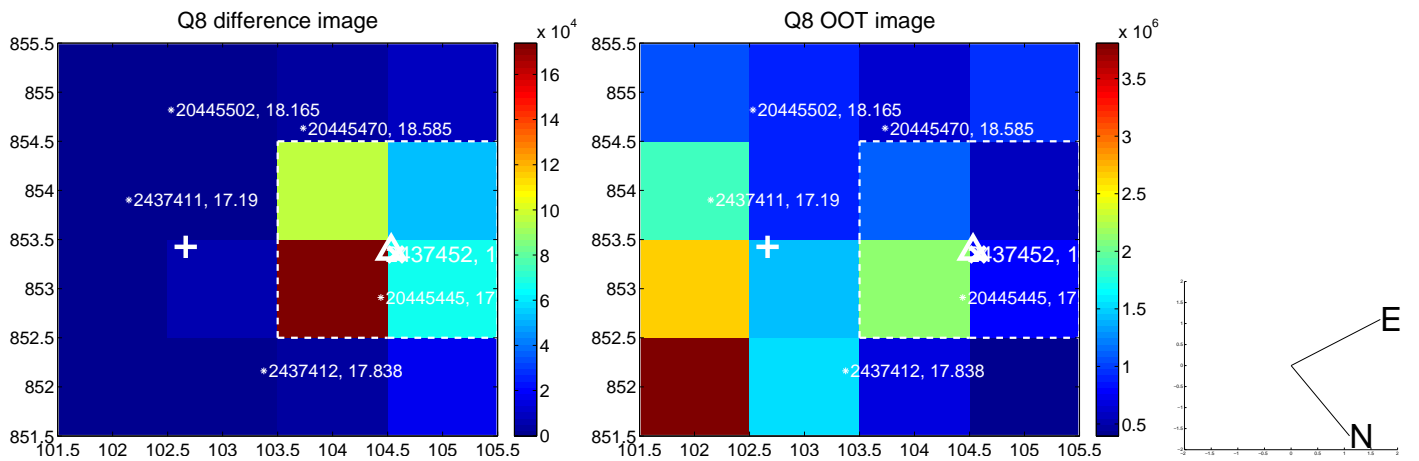
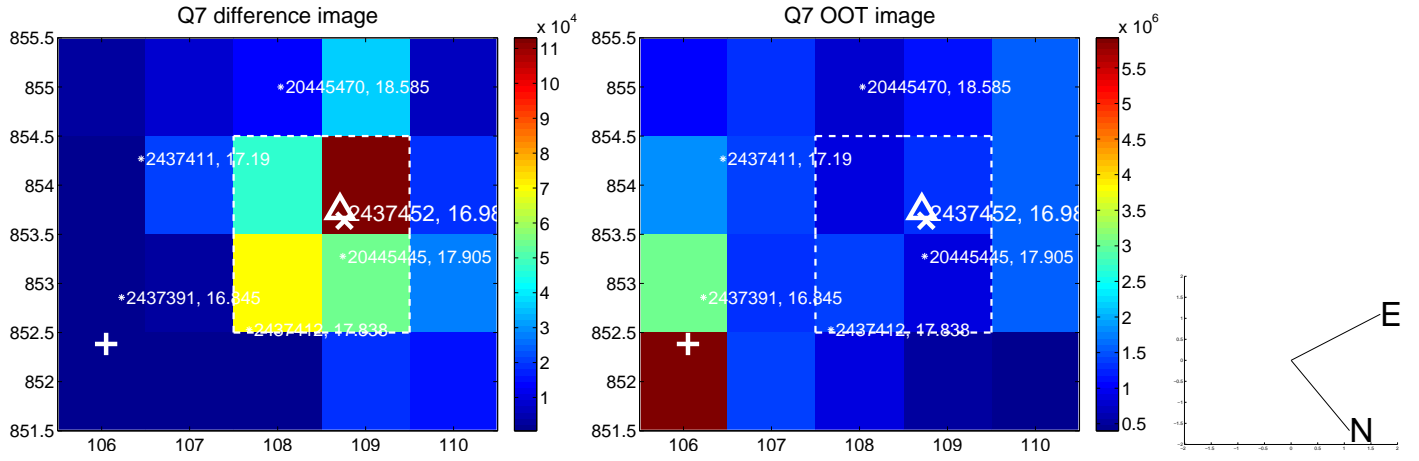
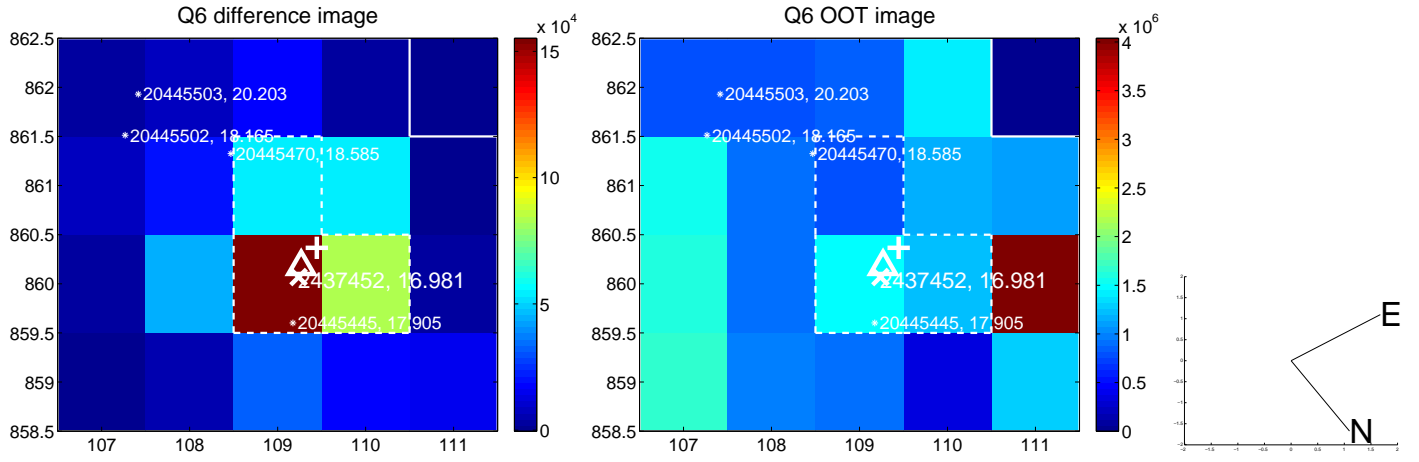
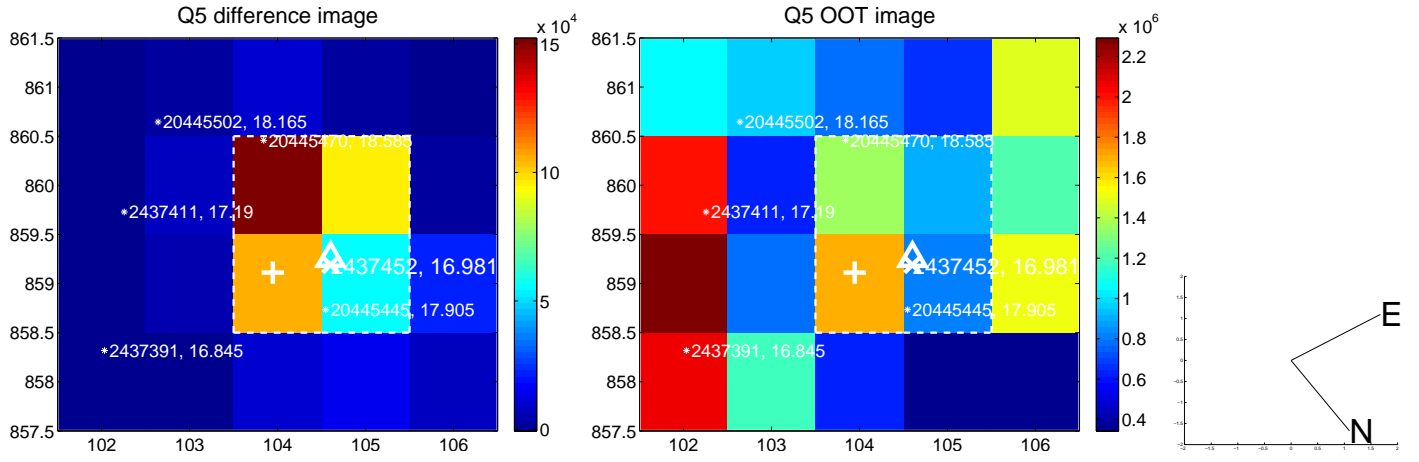


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

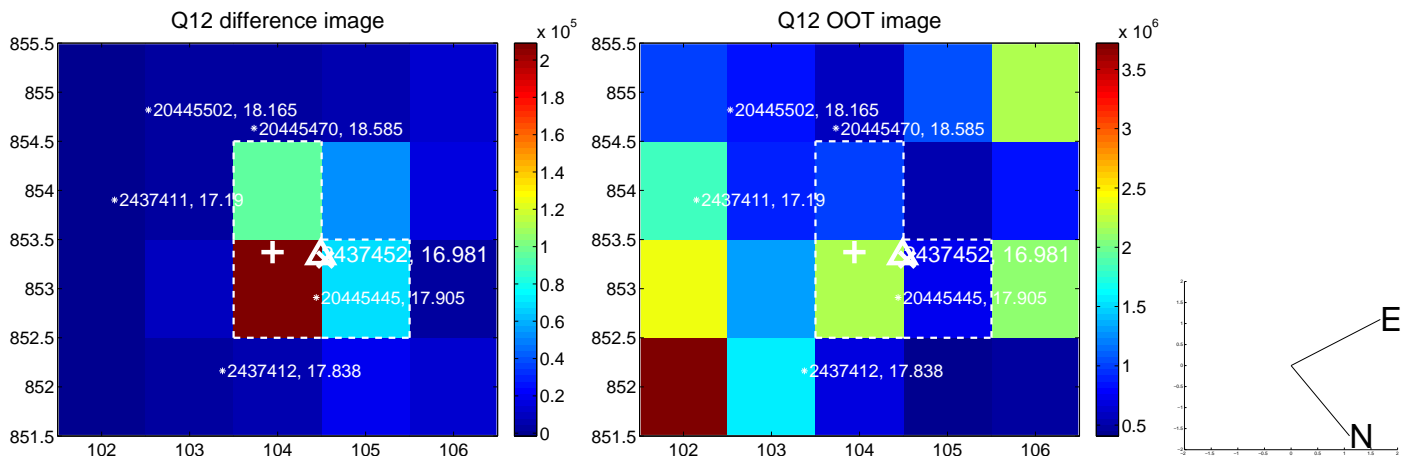
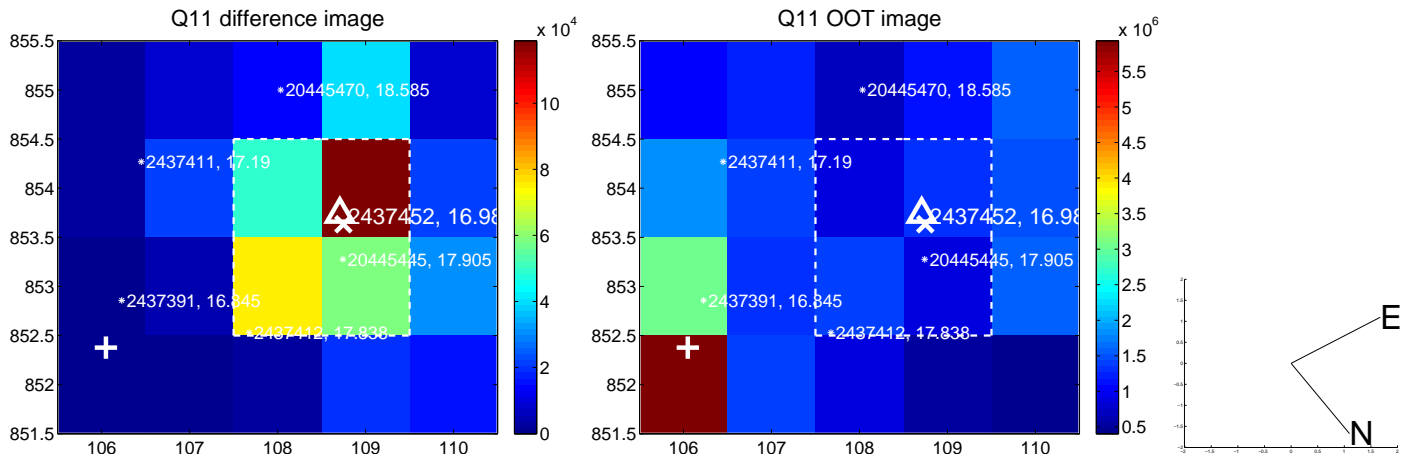
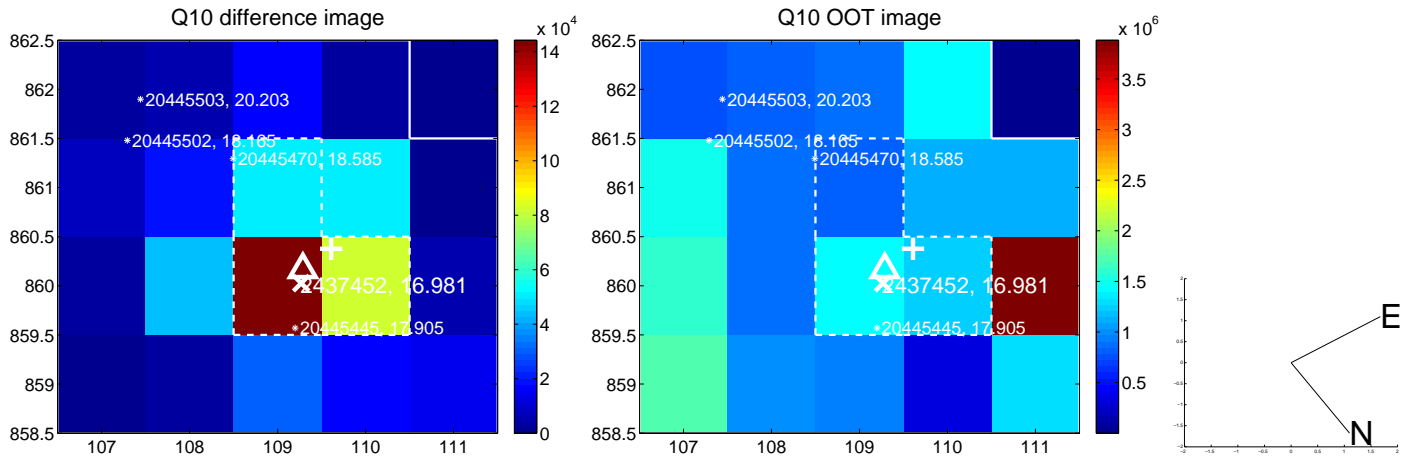
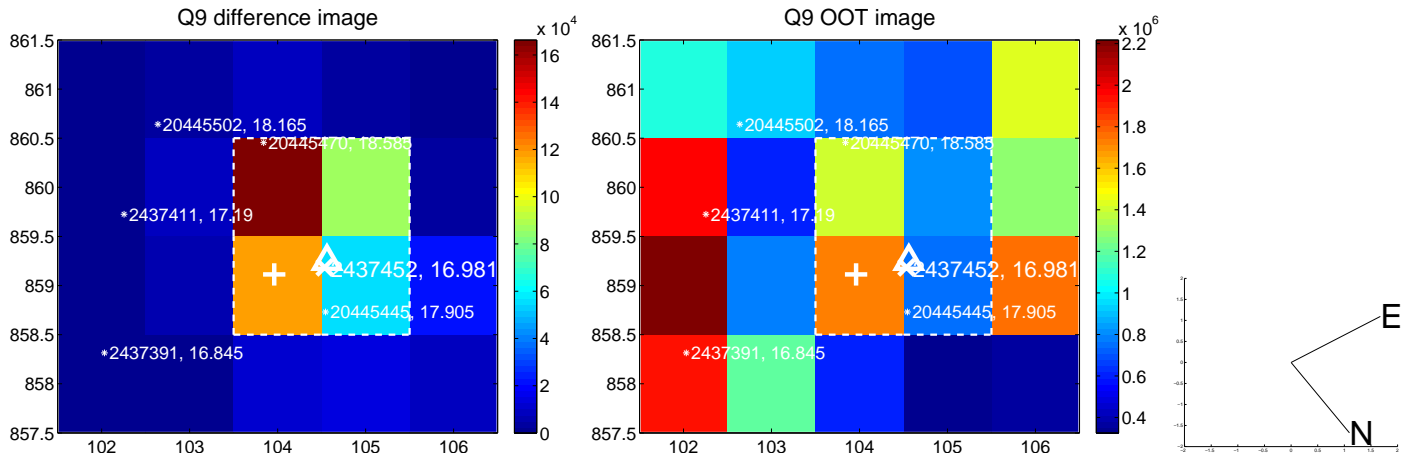
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



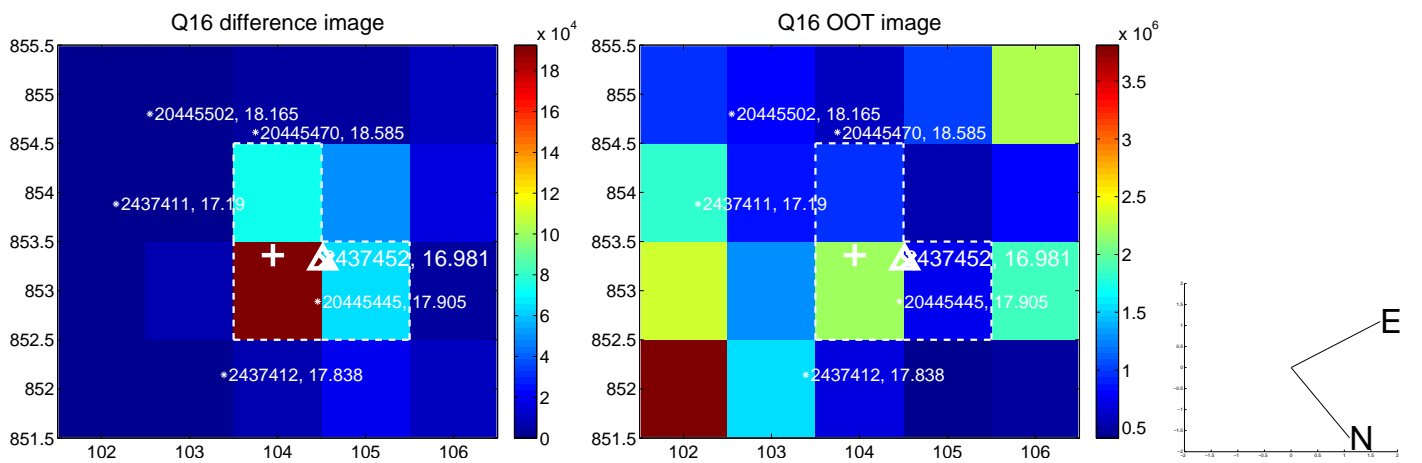
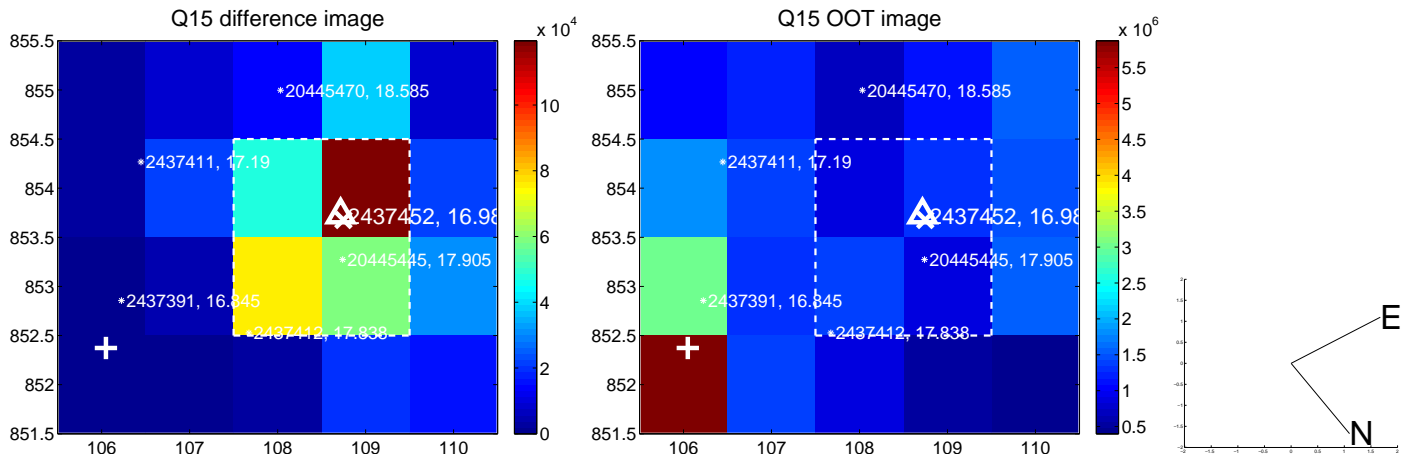
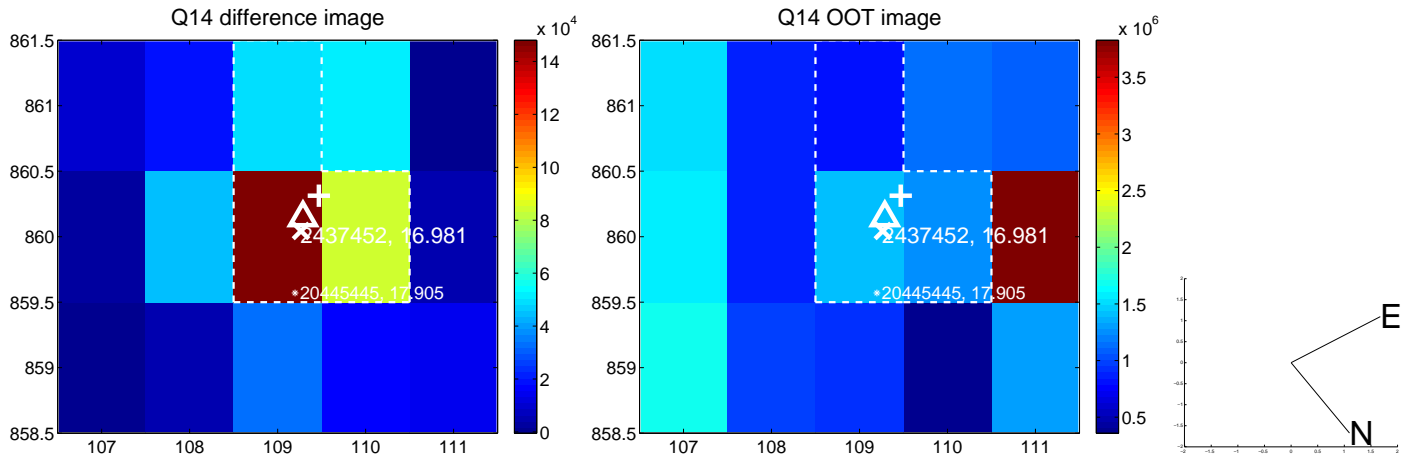
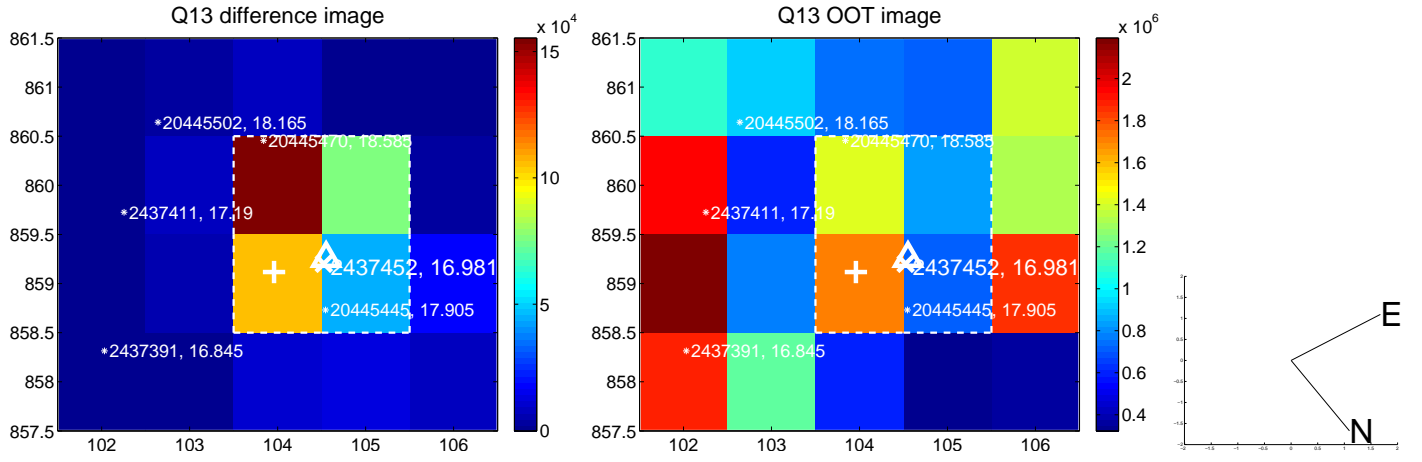
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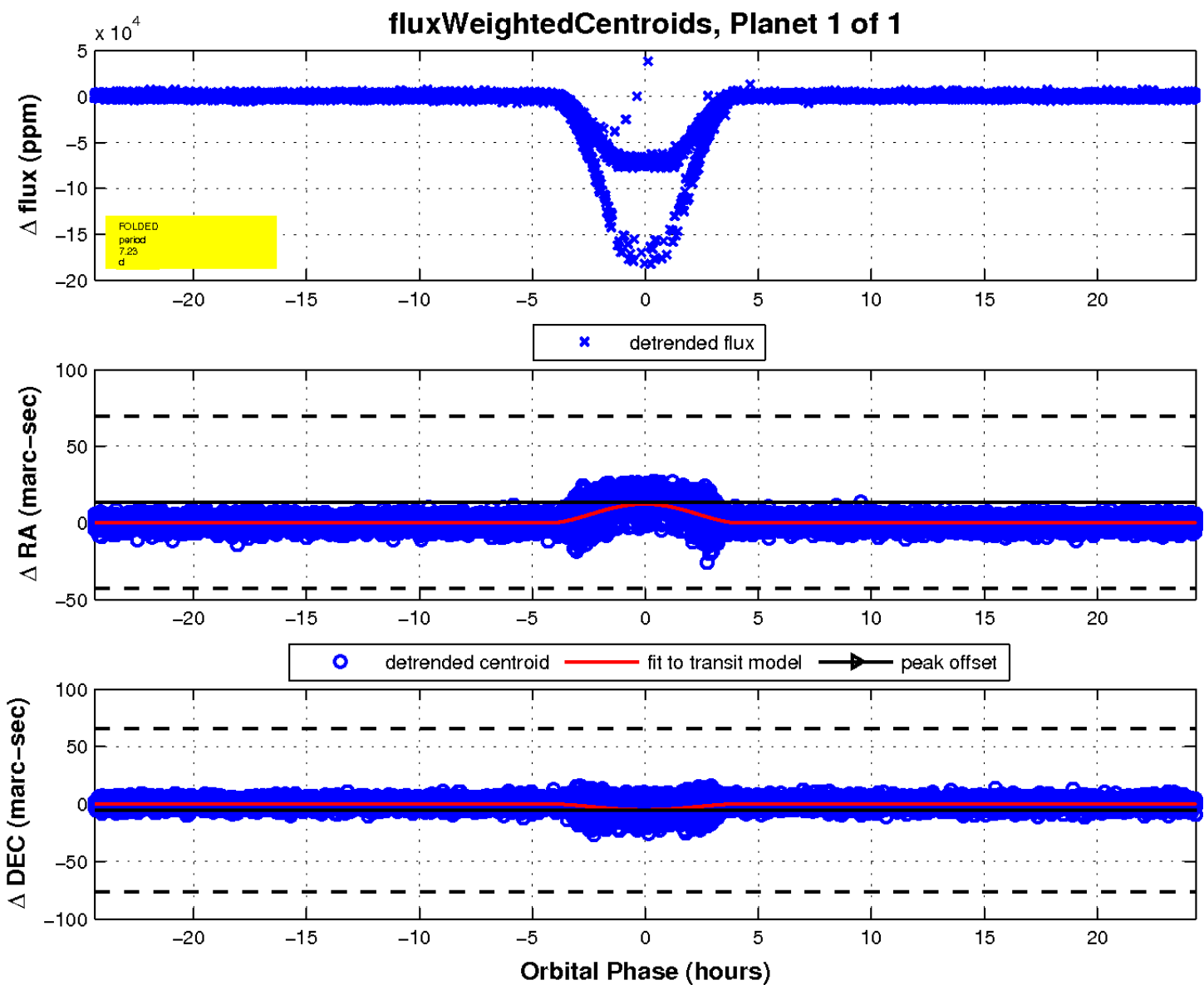
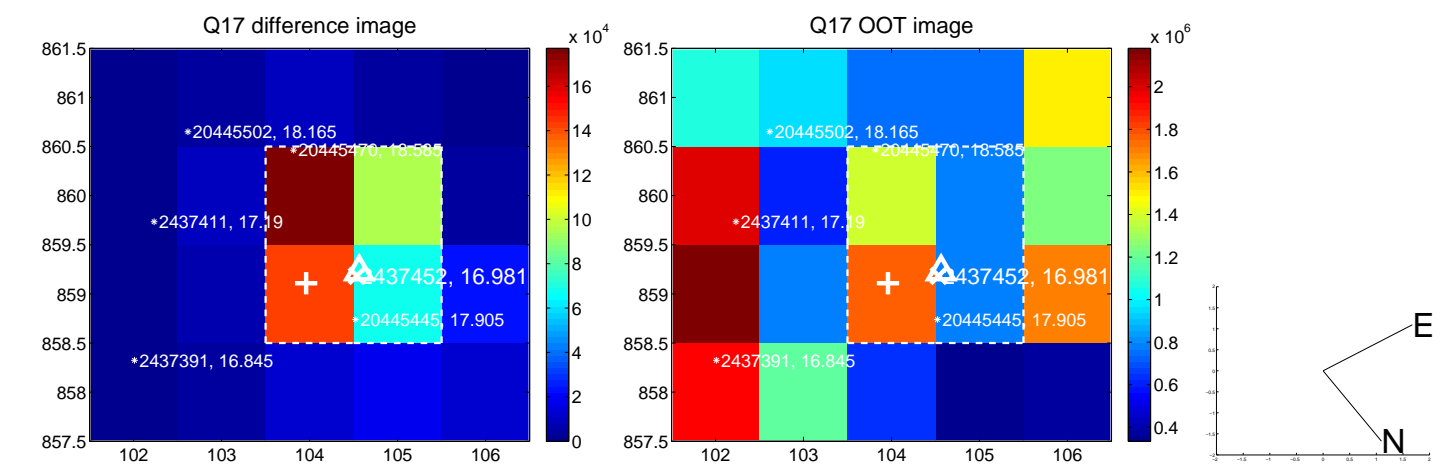
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

