

KIC 010272389

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})
010272389-01	OBS	4048.01	4.564405	133.094633	202.1	8.196	23.8	27.7	0.77	5270	2.24	157.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010272389-01	OBS	FP	0.00	0	0	0	1	EPHEM_MATCH

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.

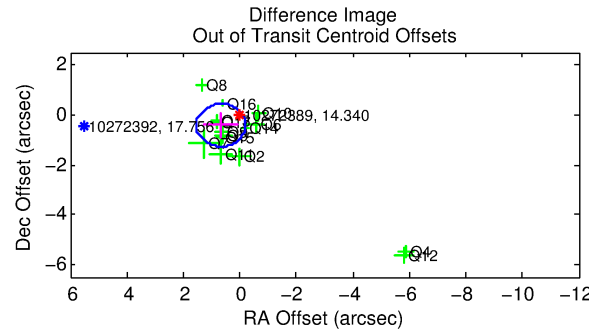
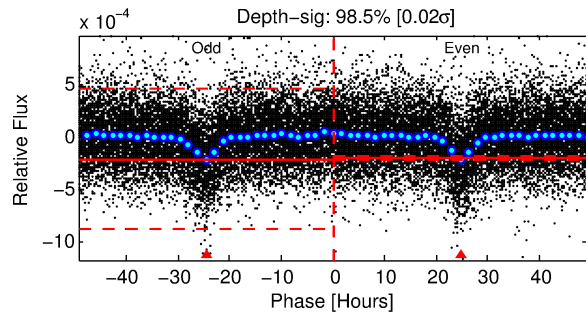
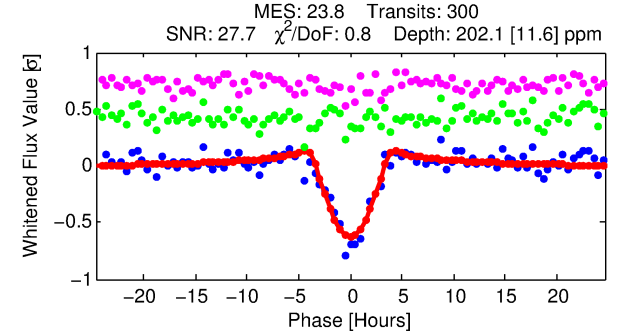
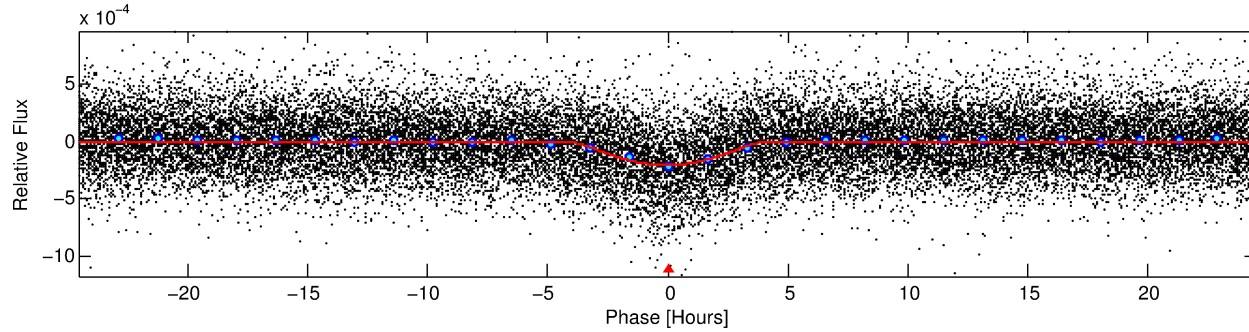
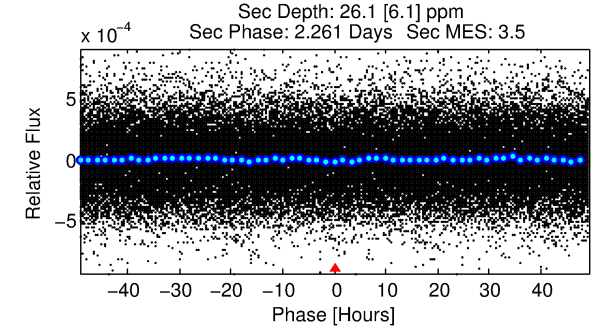
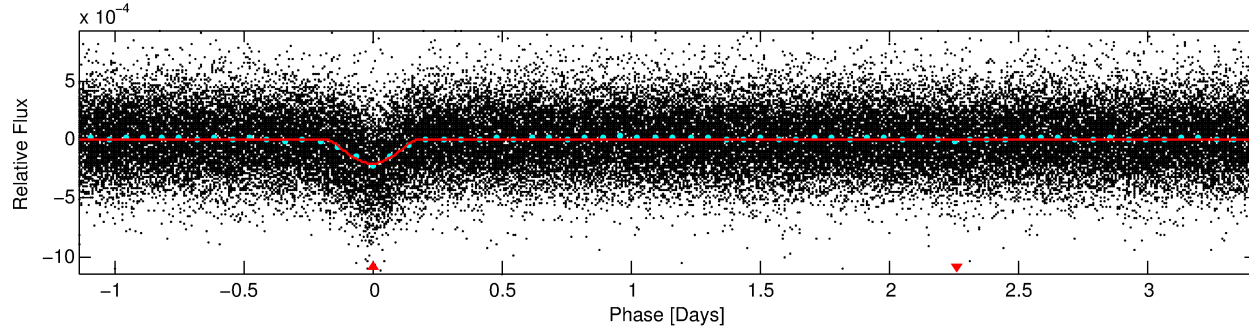
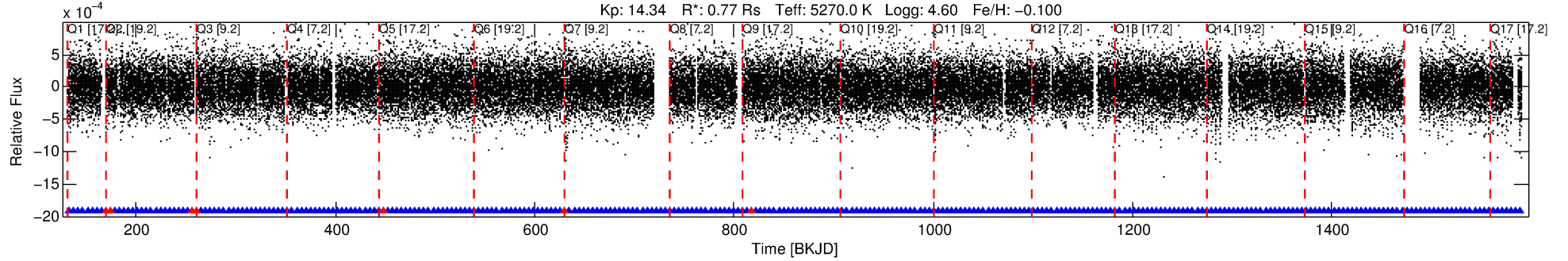
Ephemeris Match Information For 010272389-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
010272389-01	10272389	V850-Cyg-pri	10206340	1:1	311.7	78	1	11.20	14.34	2979.70	Direct-PRF	0	0.21	0.06

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10272389 Candidate: 1 of 1 Period: 4.564 d
KOI: K04048.01 Corr: 0.885



DV Fit Results:

Period = 4.56441 [0.00003] d
Epoch = 133.0946 [0.0058] BKJD
Rp/R* = 0.0267 [0.0246]
a/R* = 1.43 [0.16]
b = 1.00 [0.04]
Seff = 157.02 [35.47]
Teq = 903 [51] K
Rp = 2.24 [2.09] Re
a = 0.0511 [0.0068] AU
Ag = 7.46 [13.93] [0.46σ]
Teffp = 2306 [1073] K [1.31σ]

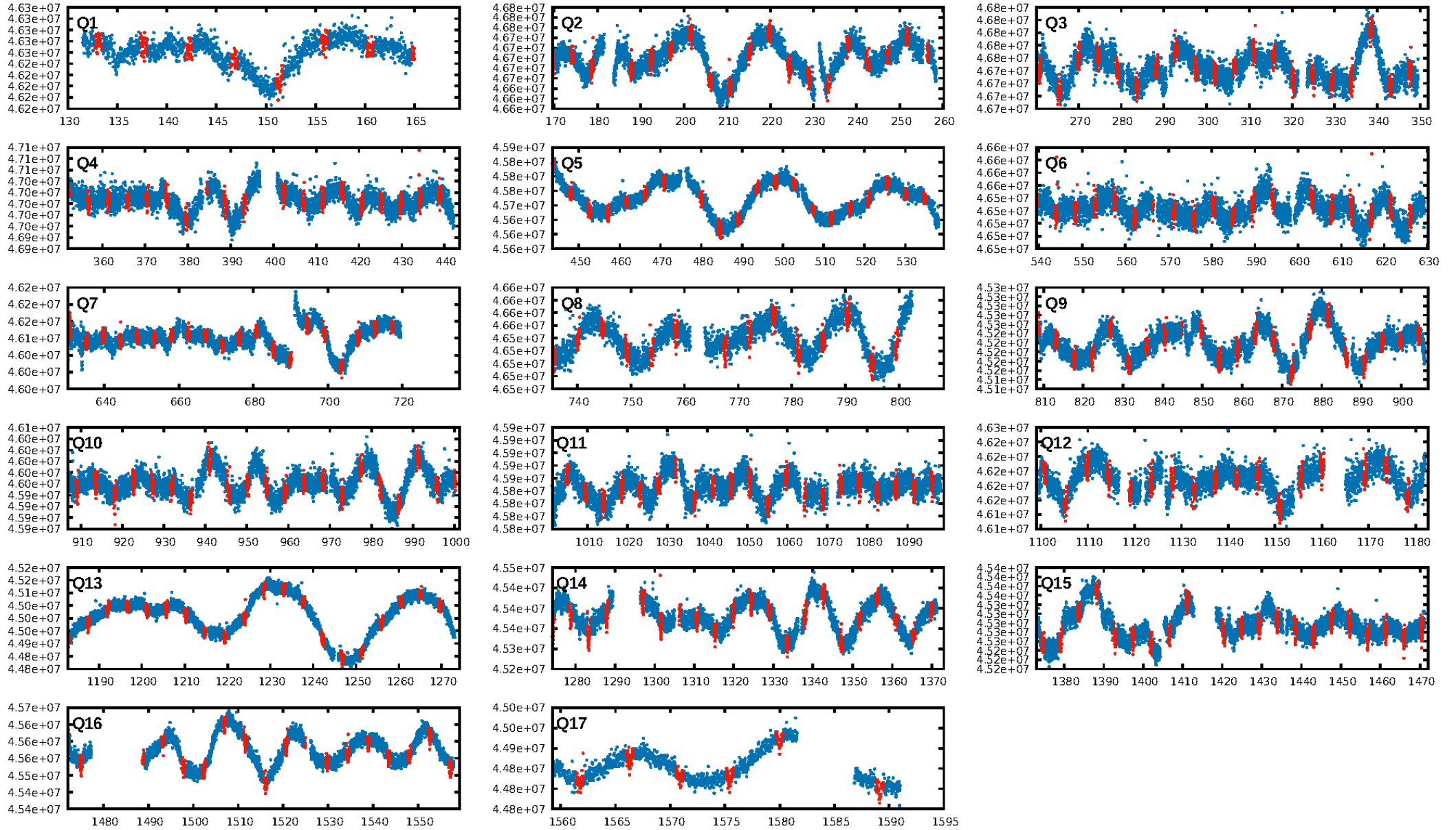
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.57e-108
RollingBand-fgt: 0.98 [279/286]
GhostDiagnostic-chr: 1.967
Centroid-sig: 0.0%
Centroid-so: 1.342 arcsec [3.13σ]
OotOffset-rm: 0.794 arcsec [2.77σ]
KicOffset-rm: 0.709 arcsec [2.64σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

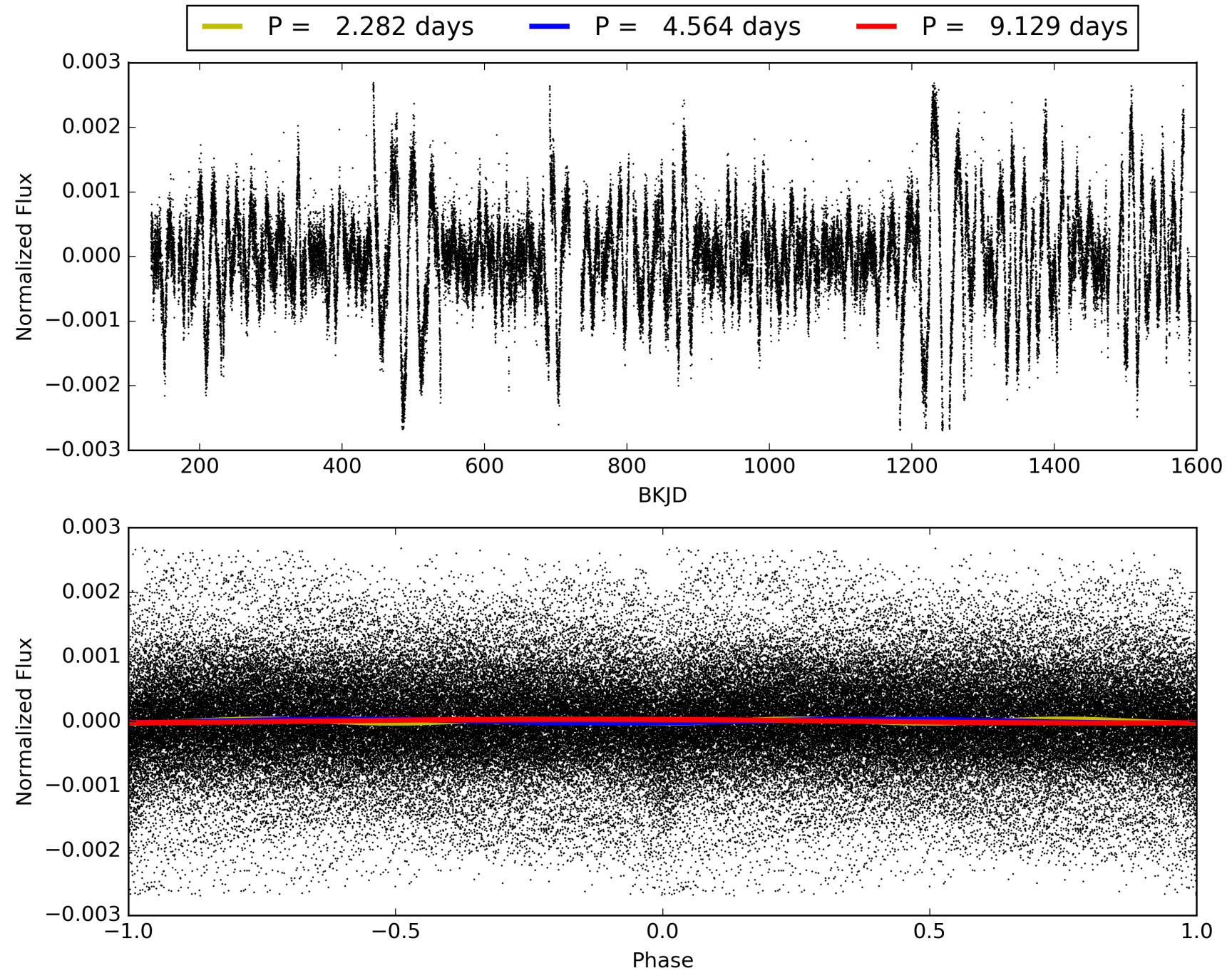
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:11:29 Z

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

TCE 010272389-01, PDC Light Curves

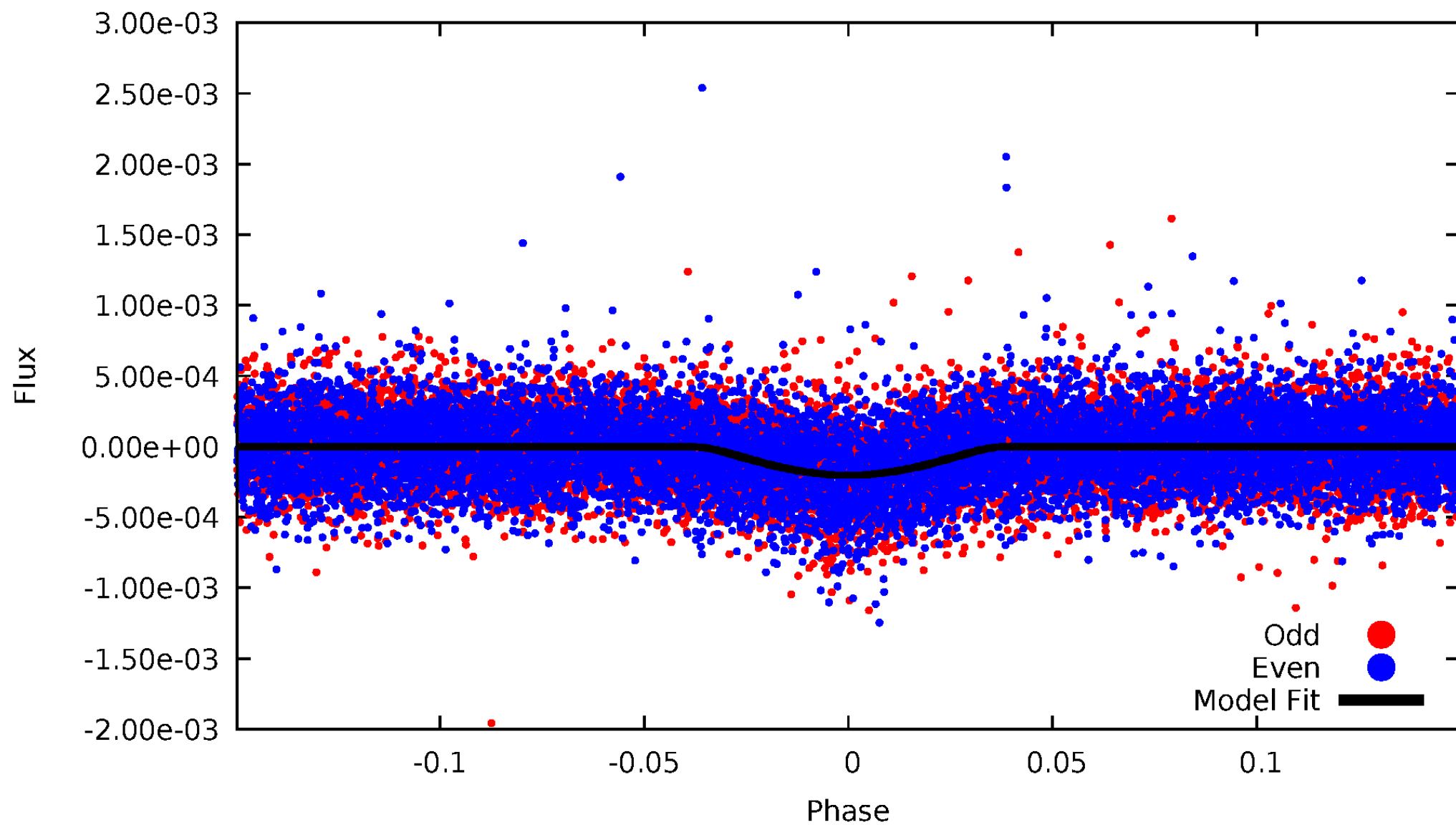


TCE 010272389-01



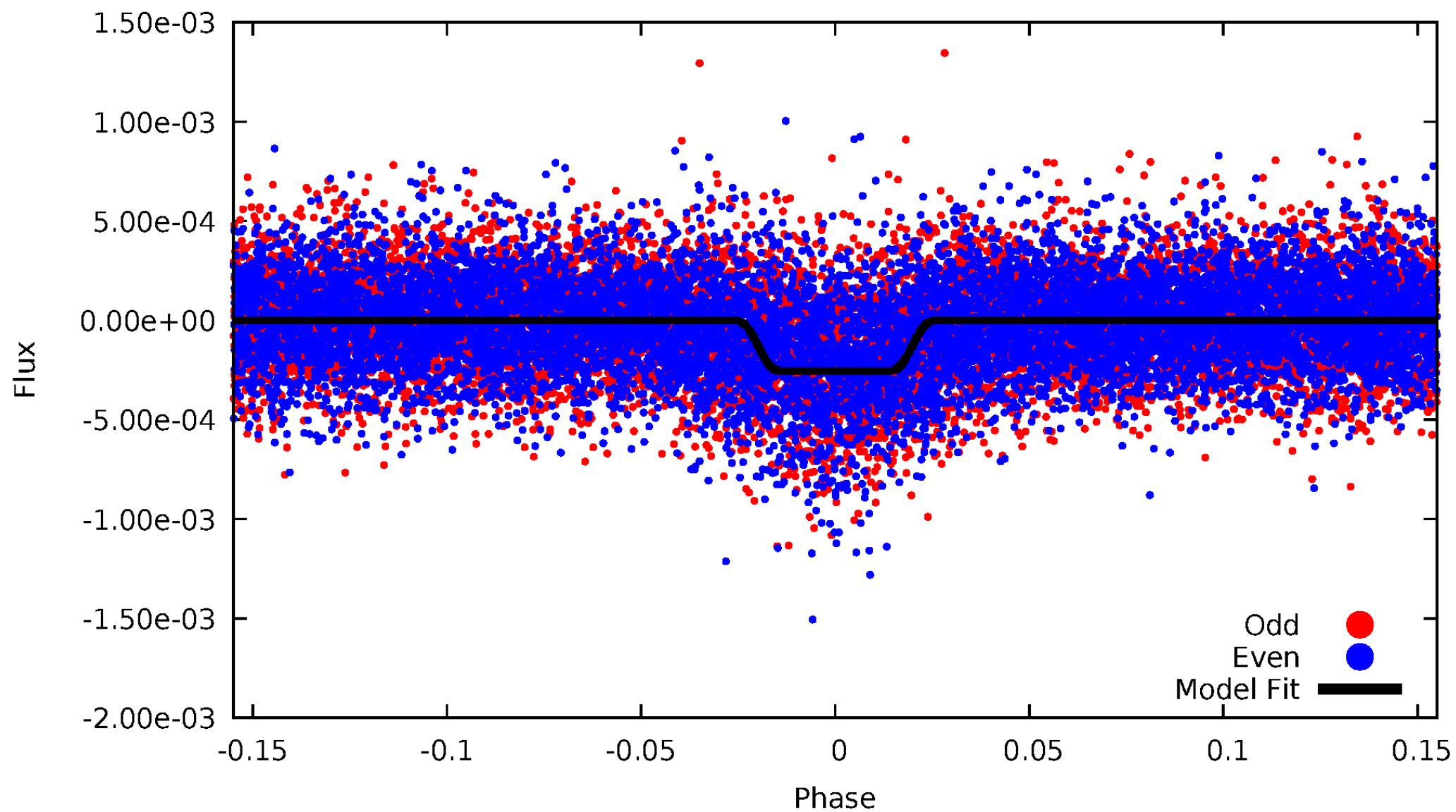
DV Odd/Even

TCE 010272389-01



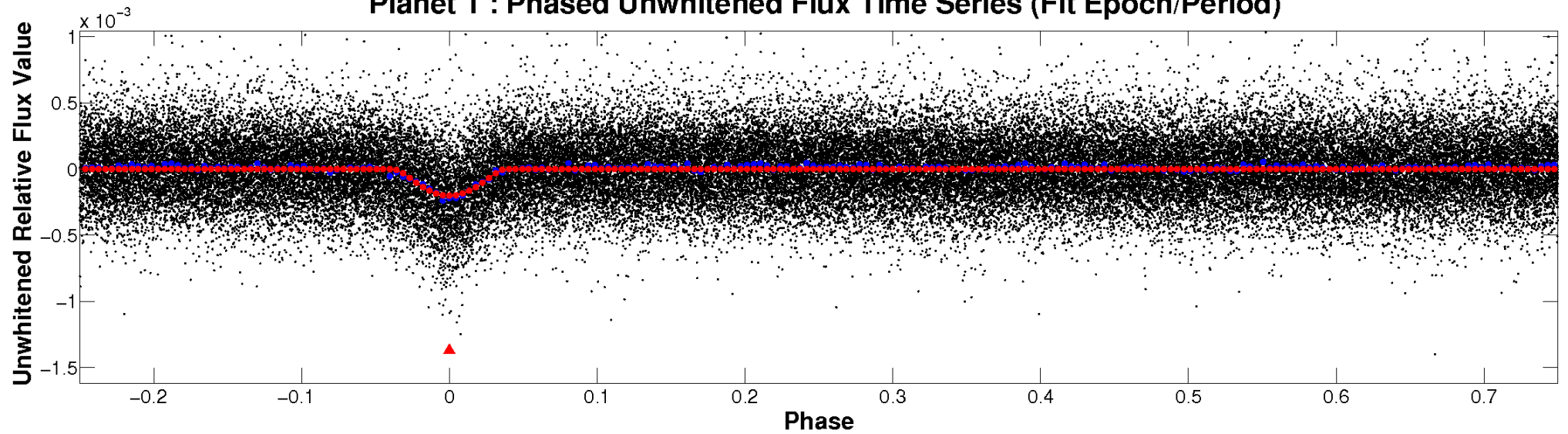
ALT Odd/Even

TCE 010272389-01

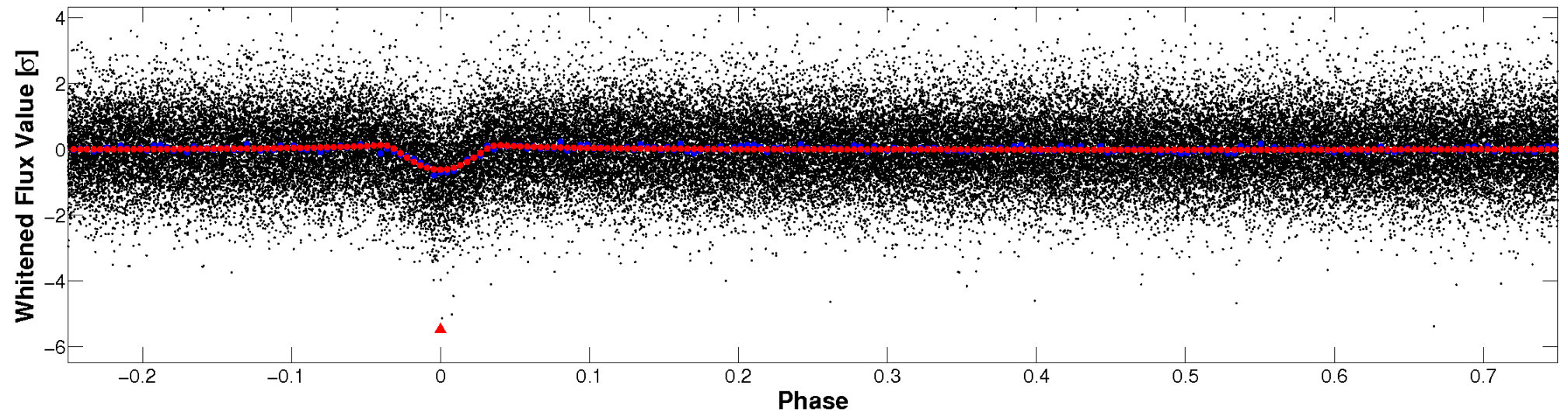


Non-Whitened Vs. Whitened Light Curve

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

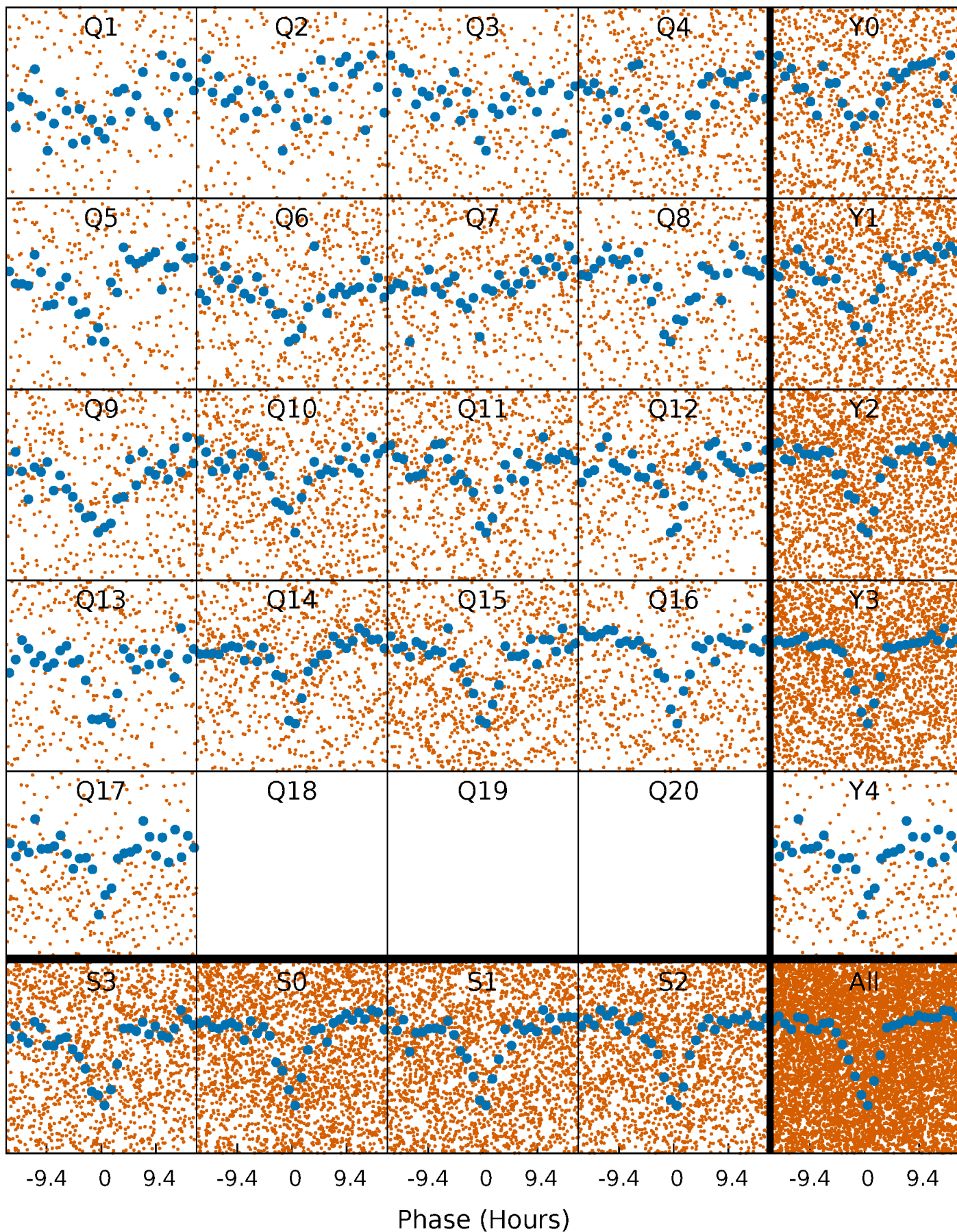


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



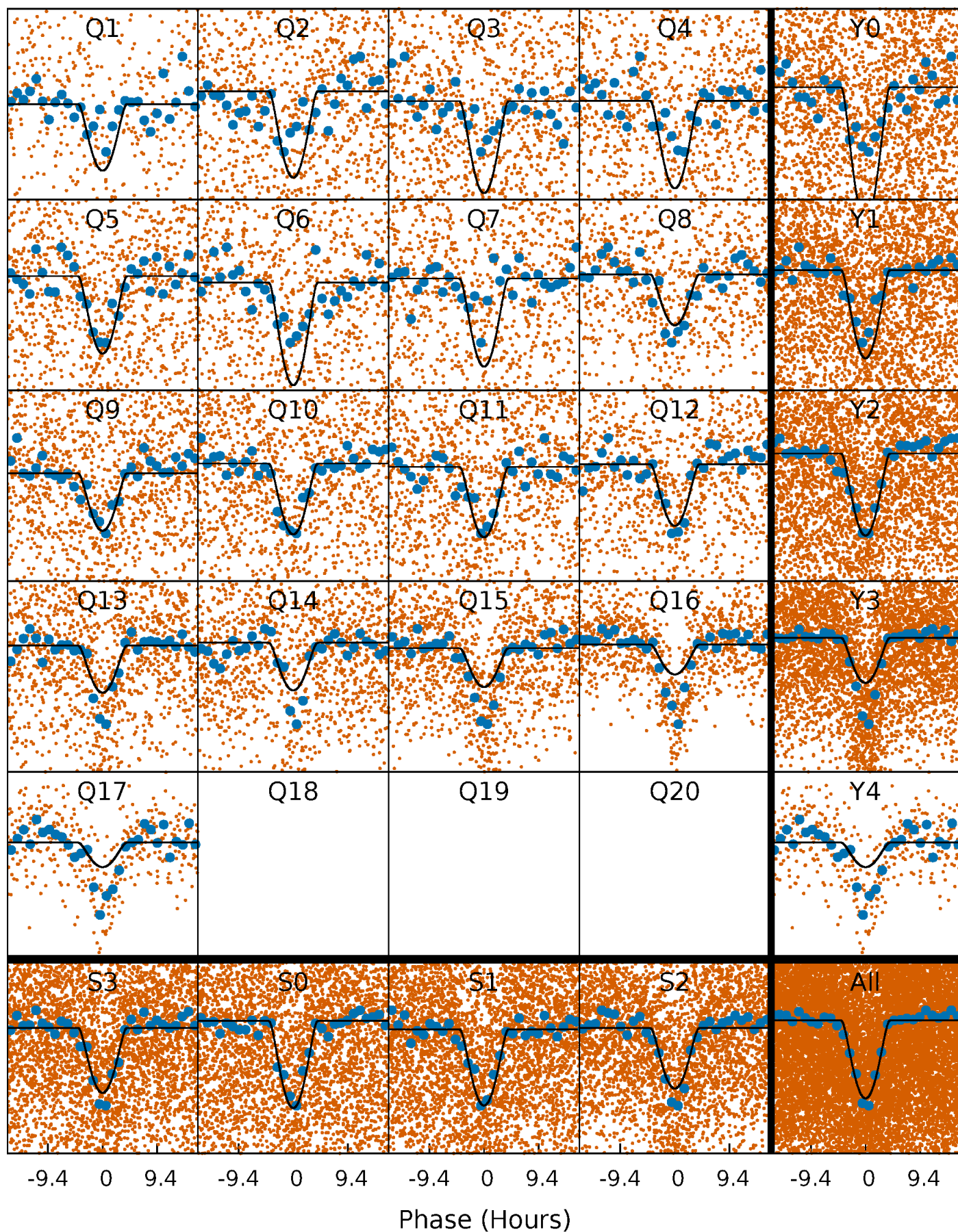
PDC Quarter-Phased Transit Curves

TCE 010272389-01 P= 4.564405 Days $T_0=133.094633$ (BKJD)



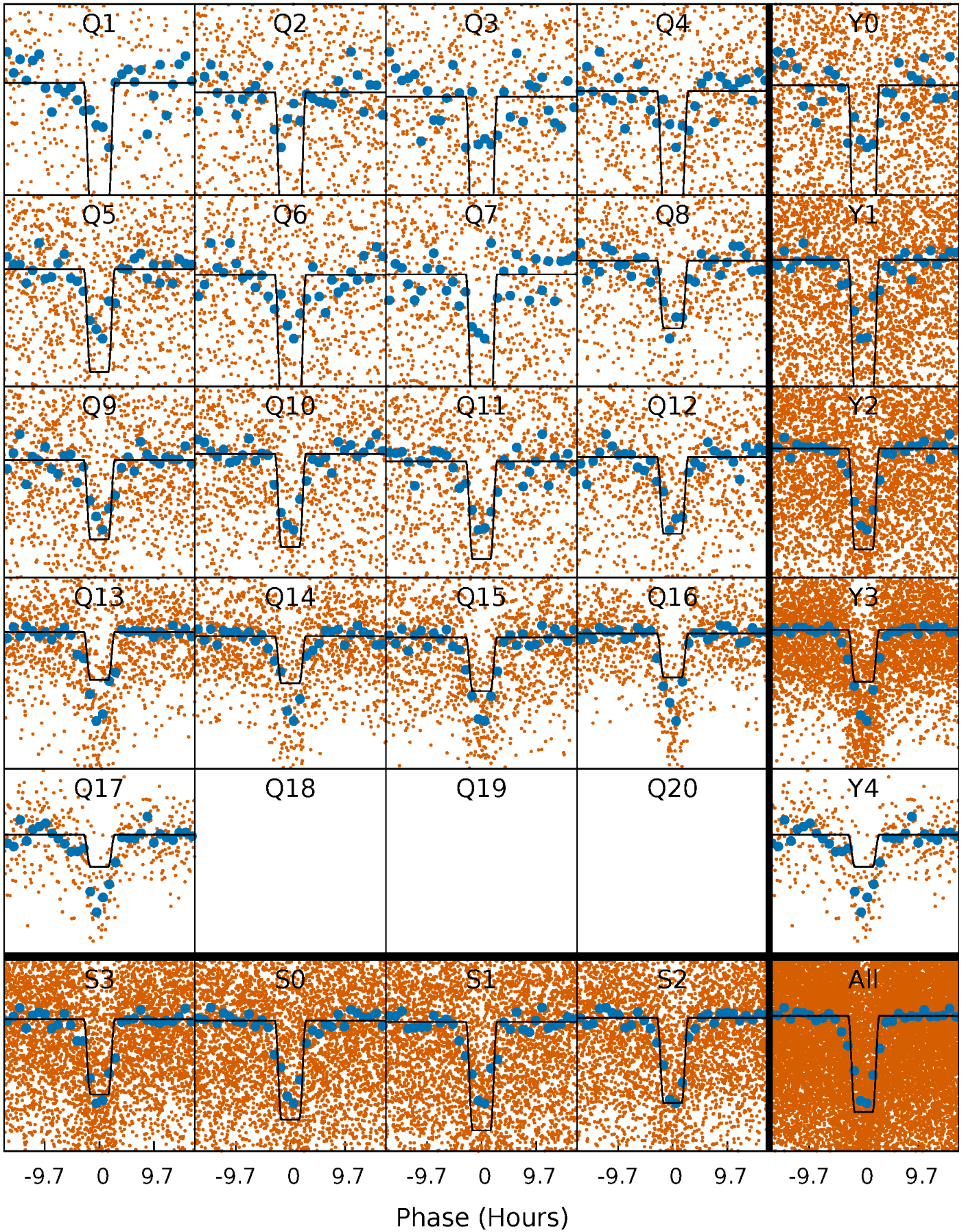
DV Quarter-Phased Transit Curves

TCE 010272389-01 P= 4.564405 Days $T_0=133.094633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

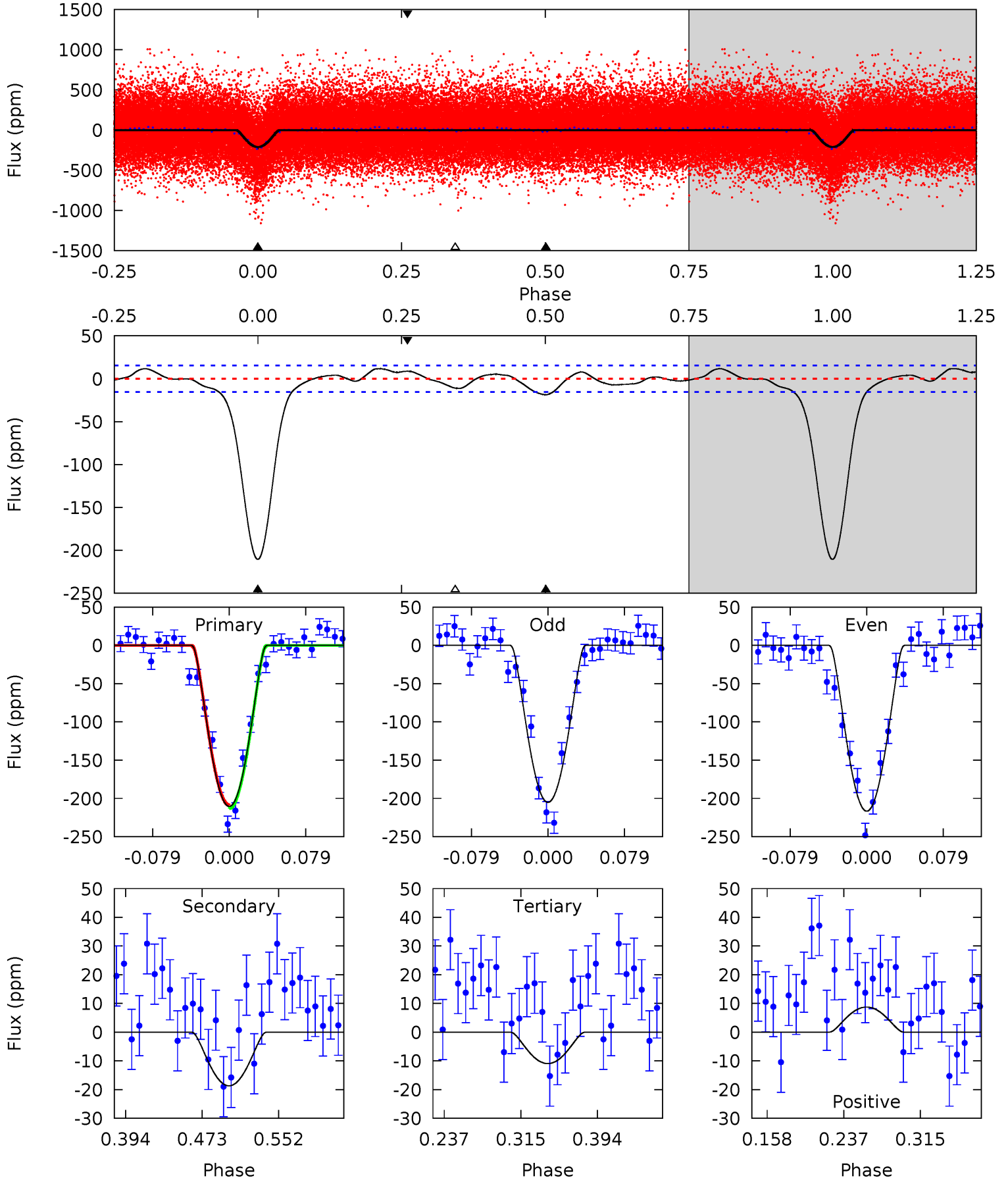
TCE 010272389-01 P= 4.564492 Days $T_0=133.073289$ (BKJD)



DV Model-Shift Uniqueness Test

010272389-01, P = 4.564405 Days, E = 128.530228 Days

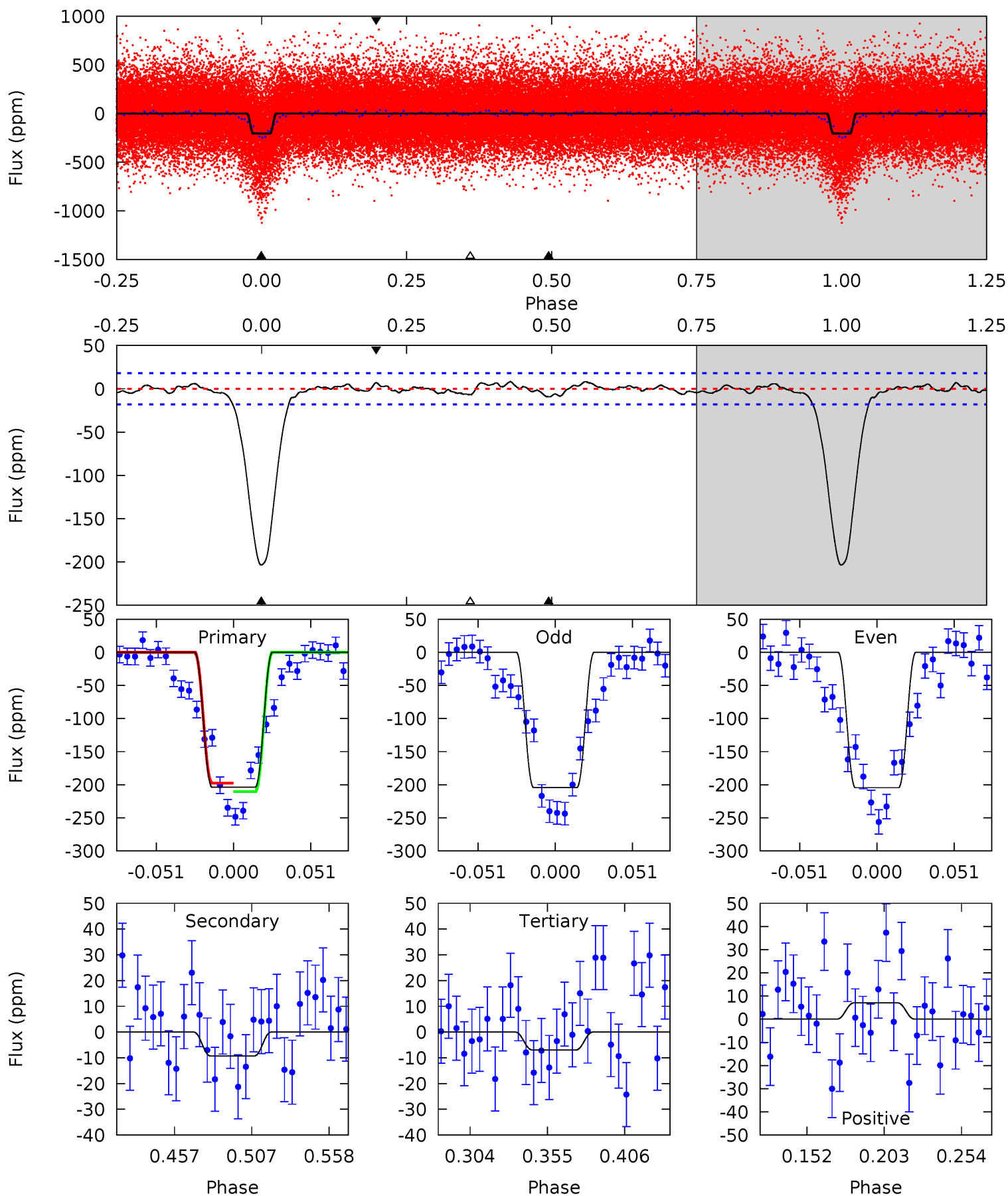
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.7	5.57	3.26	2.61	4.61	1.76	1.73	59.5	60.1	2.30	2.96	1.72	1.20	0.05	0.66



Alt Model-Shift Uniqueness Test

010272389-01, P = 4.564492 Days, E = 128.508797 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.8	2.42	1.80	1.83	4.71	1.95	1.01	51.0	50.9	0.61	0.59	0.04	1.12	0.04	1.66



Stellar Parameters For KIC 010272389

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5270^{+158}_{-142}	$4.596^{+0.032}_{-0.104}$	$-0.100^{+0.300}_{-0.300}$	$0.770^{+0.122}_{-0.066}$	$0.863^{+0.060}_{-0.103}$	$2.663^{+0.481}_{-0.856}$
	+3%/-3%	+1%/-2%	+300%/-300%	+16%/-9%	+7%/-12%	+18%/-32%
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 010272389-01 / KOI 4048.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 3	$2.62^{+1.91}_{-1.59}$	1281^{+51}_{-45}	2703^{+911}_{-412}	$3.787^{+22.672}_{-2.577}$
Alt.	-9 ± 4	$2.23^{+1.75}_{-1.47}$	1278^{+63}_{-46}	2572^{+914}_{-512}	$2.633^{+19.325}_{-2.010}$

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

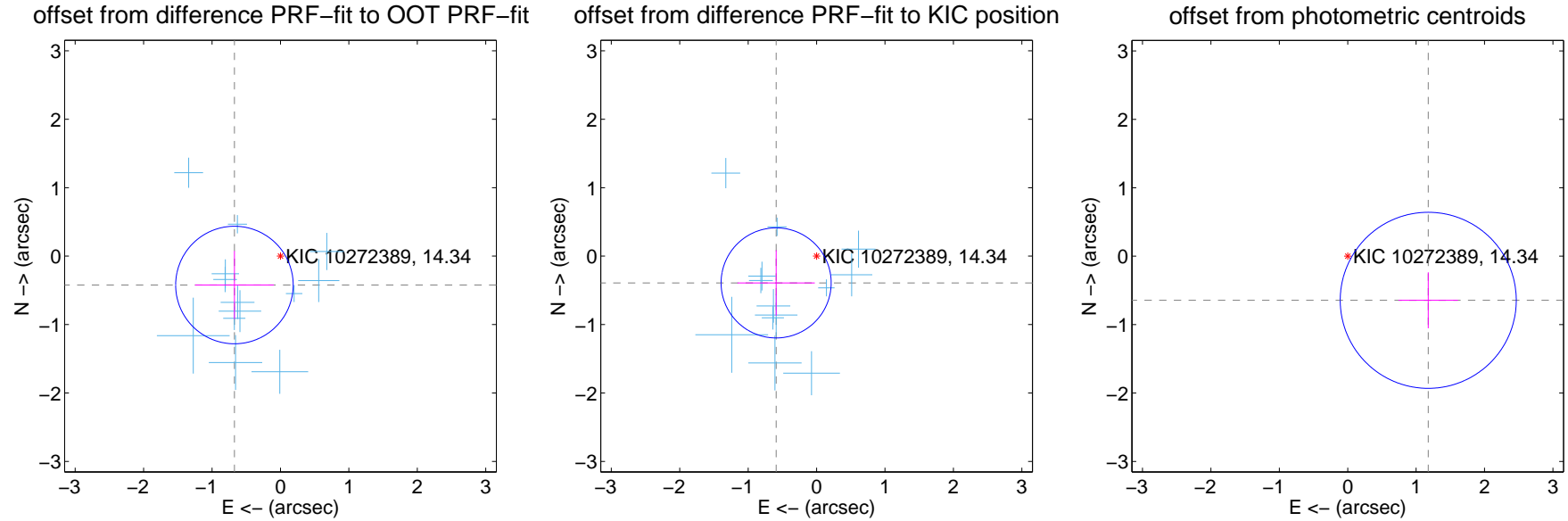
DV Centroid Data

Supplemental centroid analysis for 010272389-01. Kepler magnitude: 14.34. Transit SNR 27.75

There are 13 quarters with good PRF difference image offsets

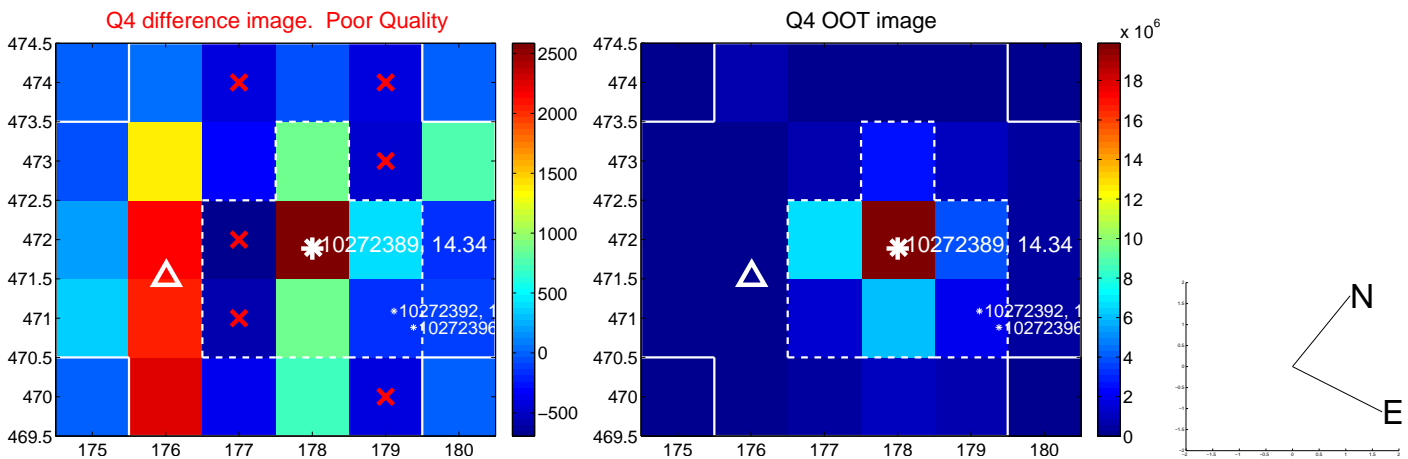
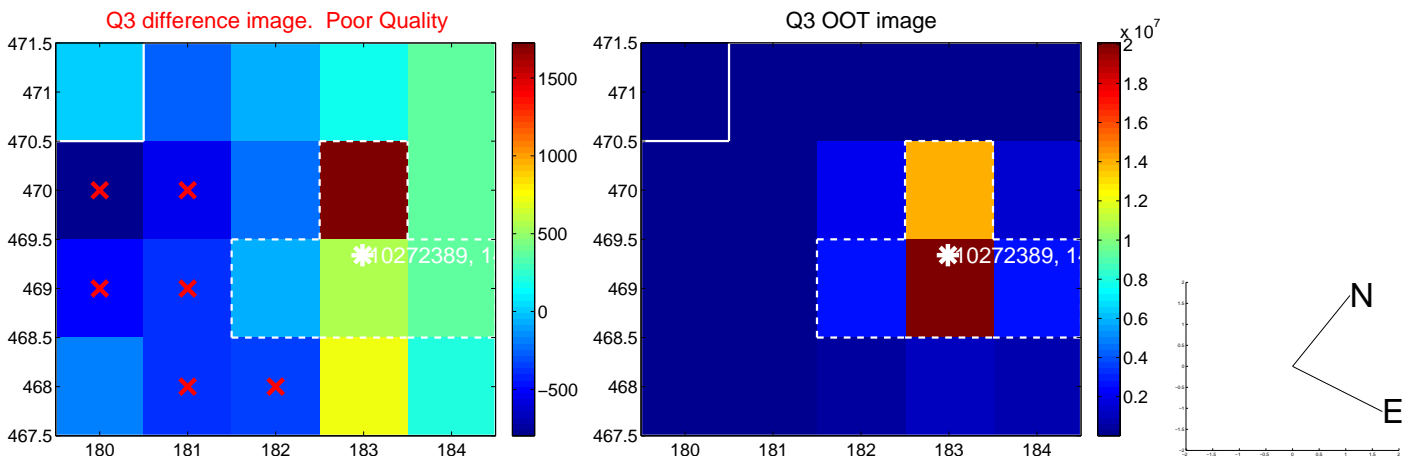
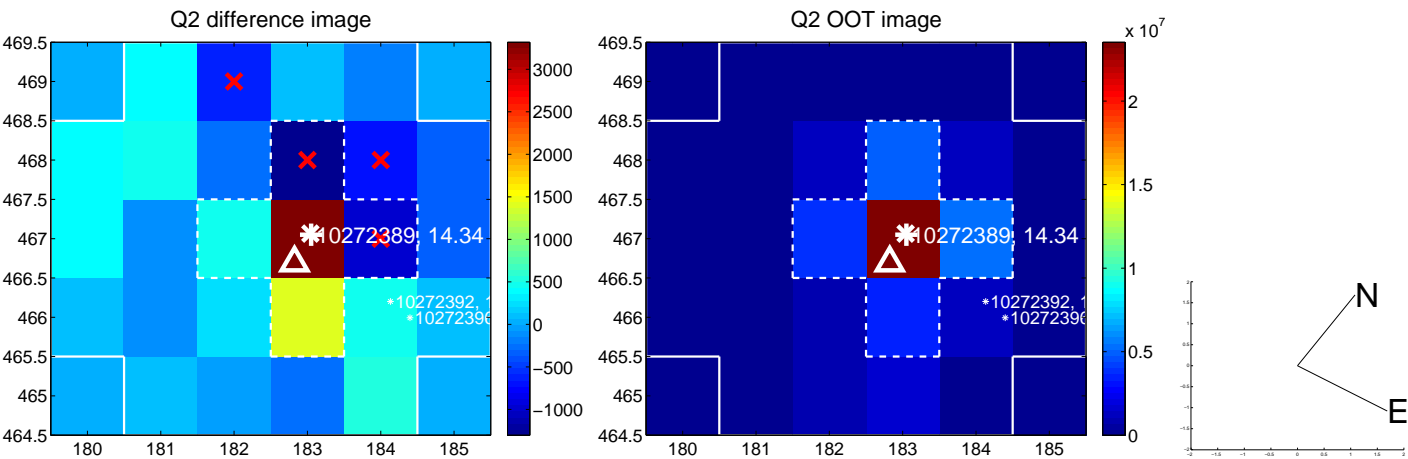
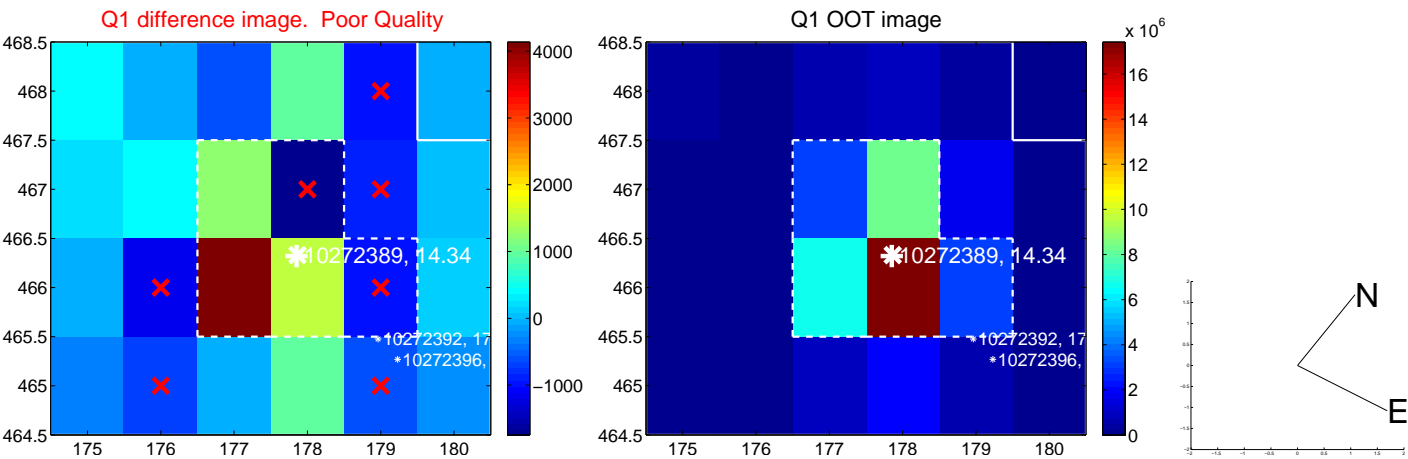
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.794 ± 0.286	2.77	0.673 ± 0.575	-0.422 ± 0.498
PRF-fit source offset from KIC position	0.709 ± 0.268	2.64	0.591 ± 0.566	-0.391 ± 0.478
photometric centroid source offset	1.34 ± 0.43	3.13	-1.18 ± 0.43	-0.64 ± 0.41

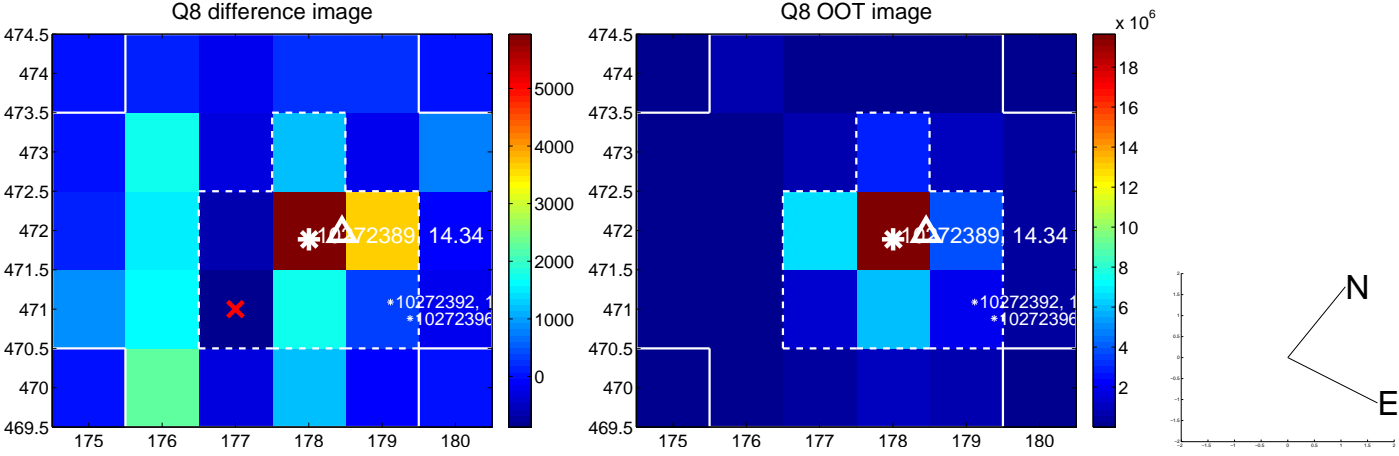
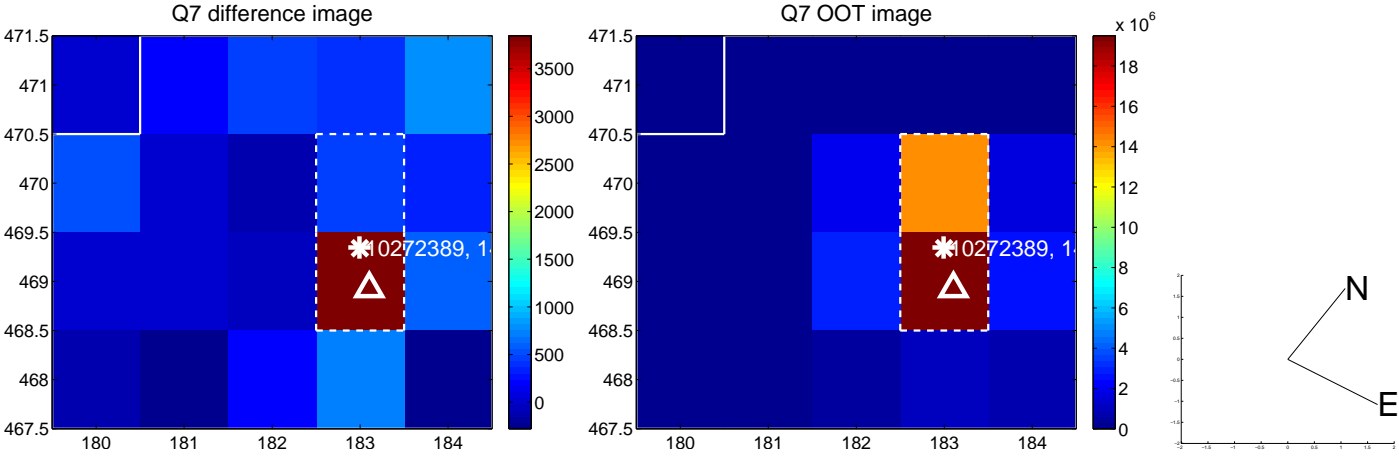
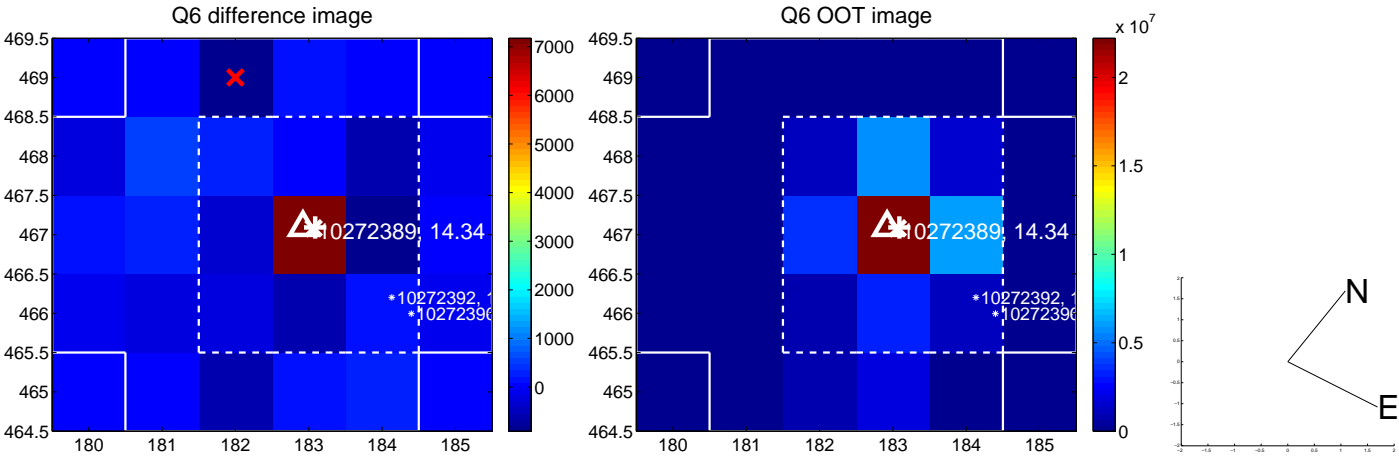
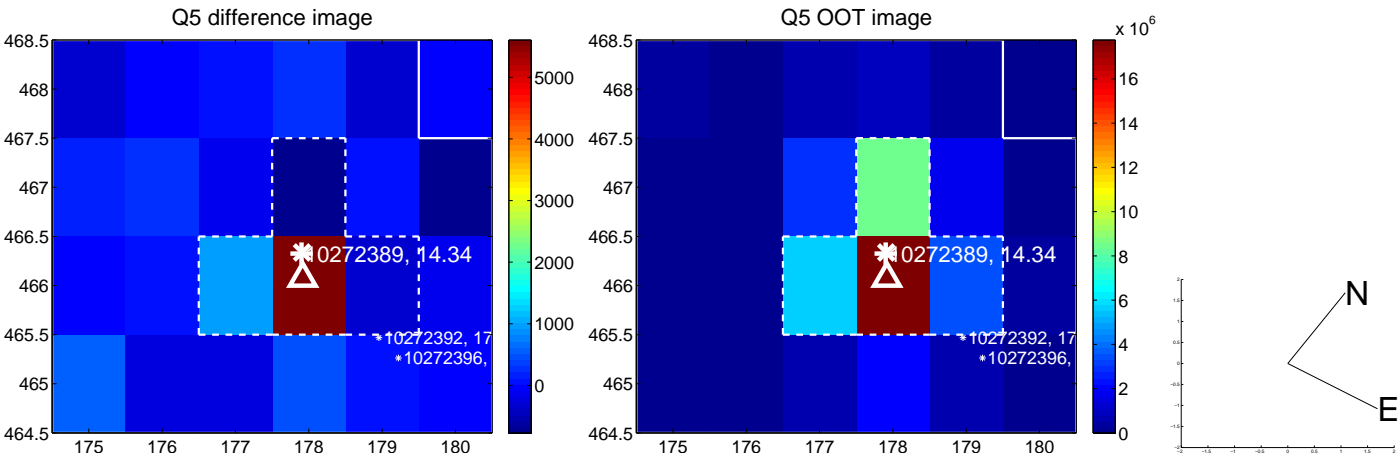


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

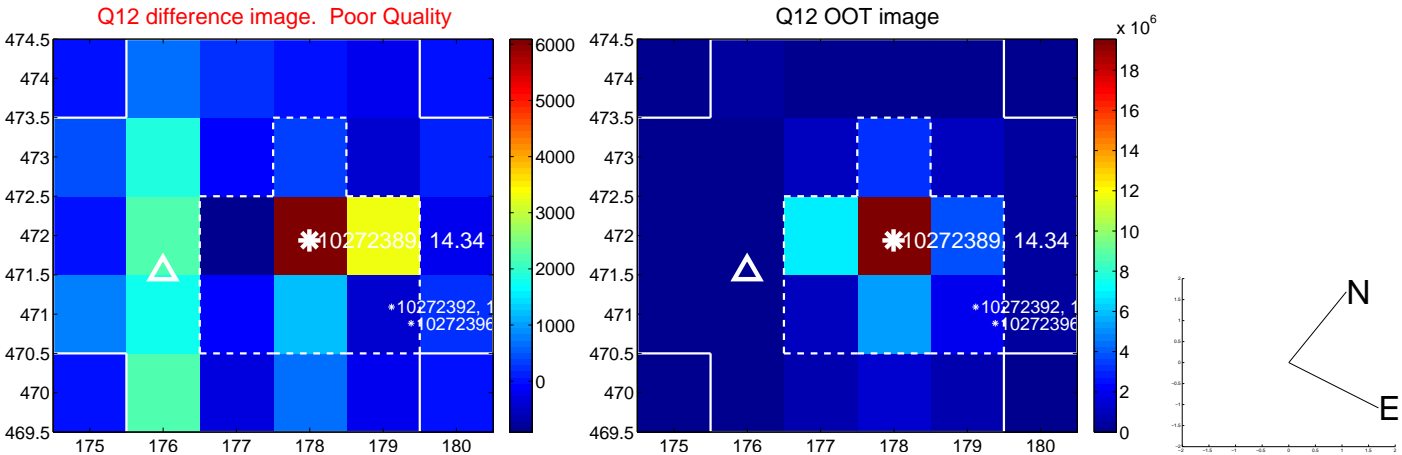
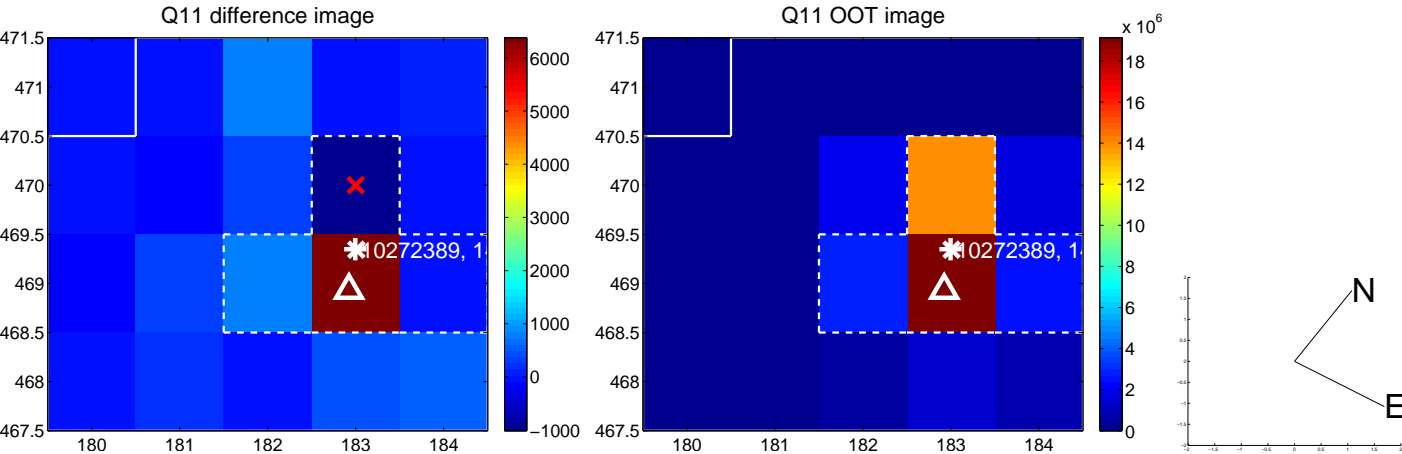
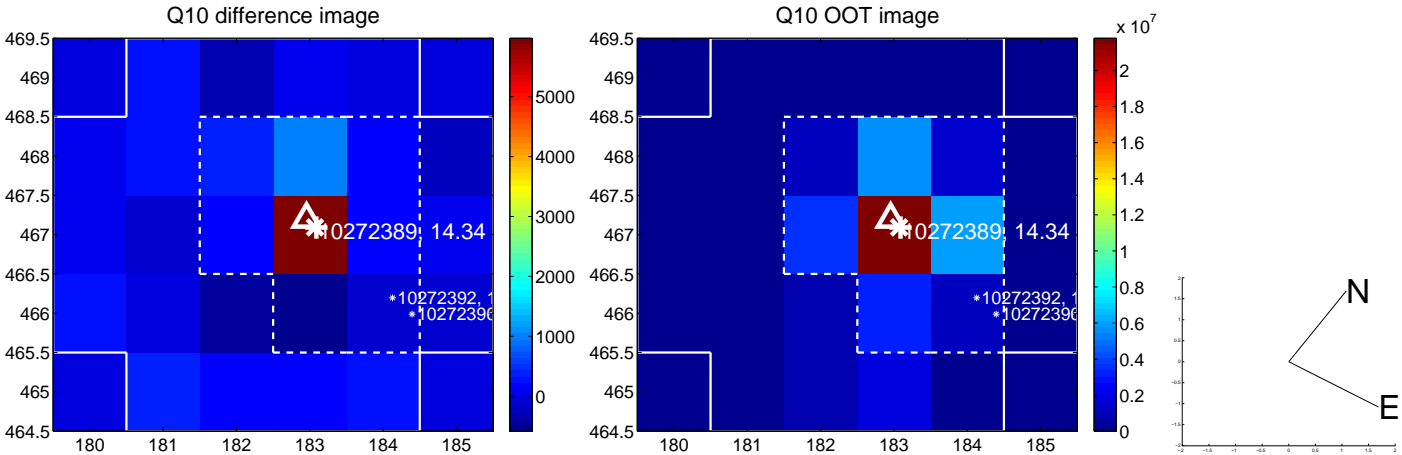
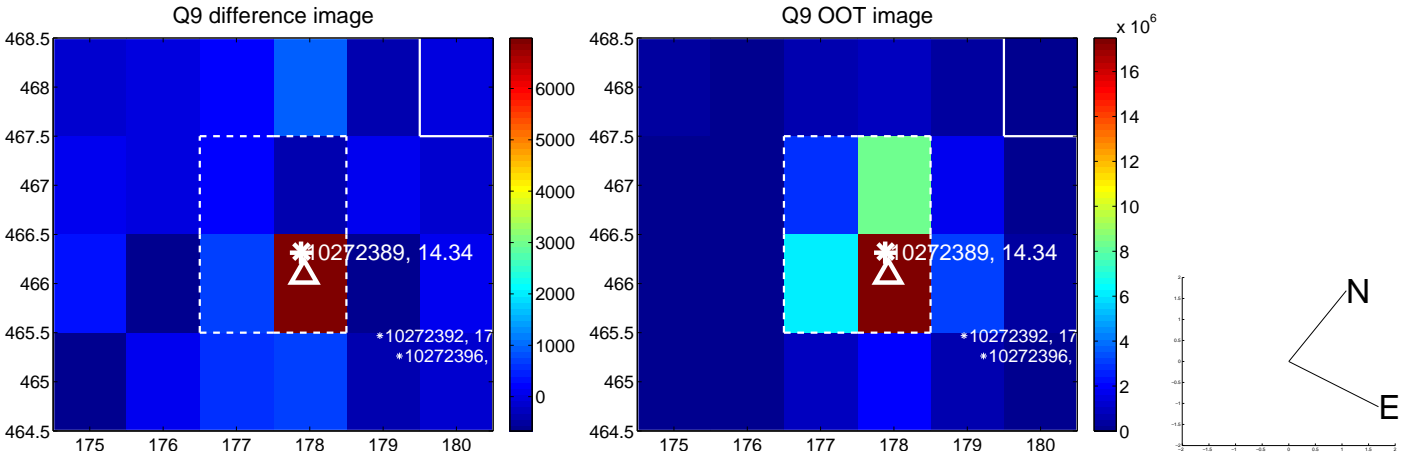
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



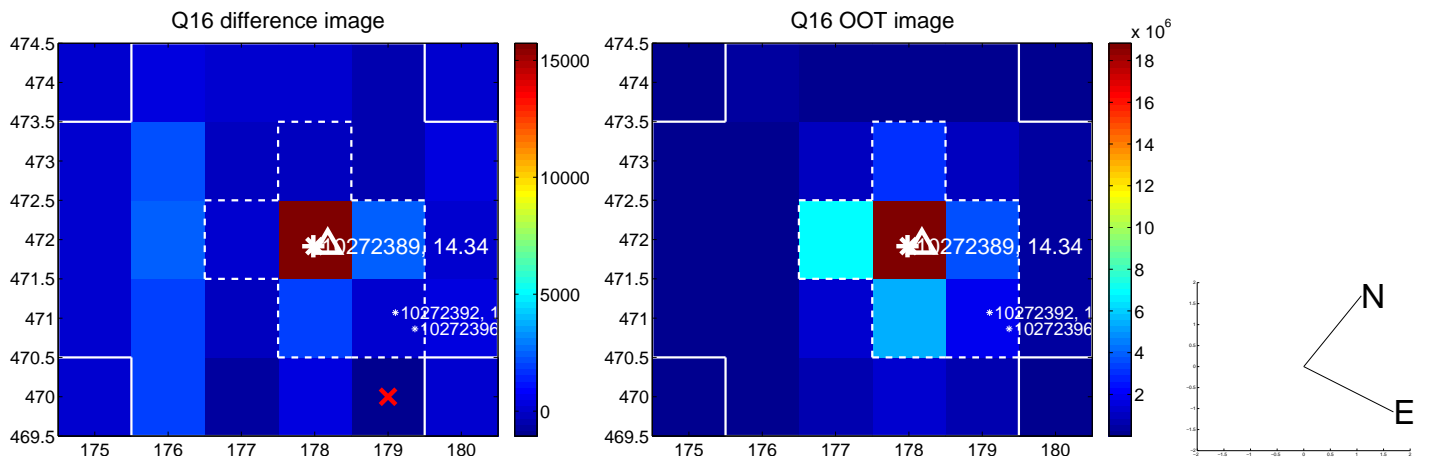
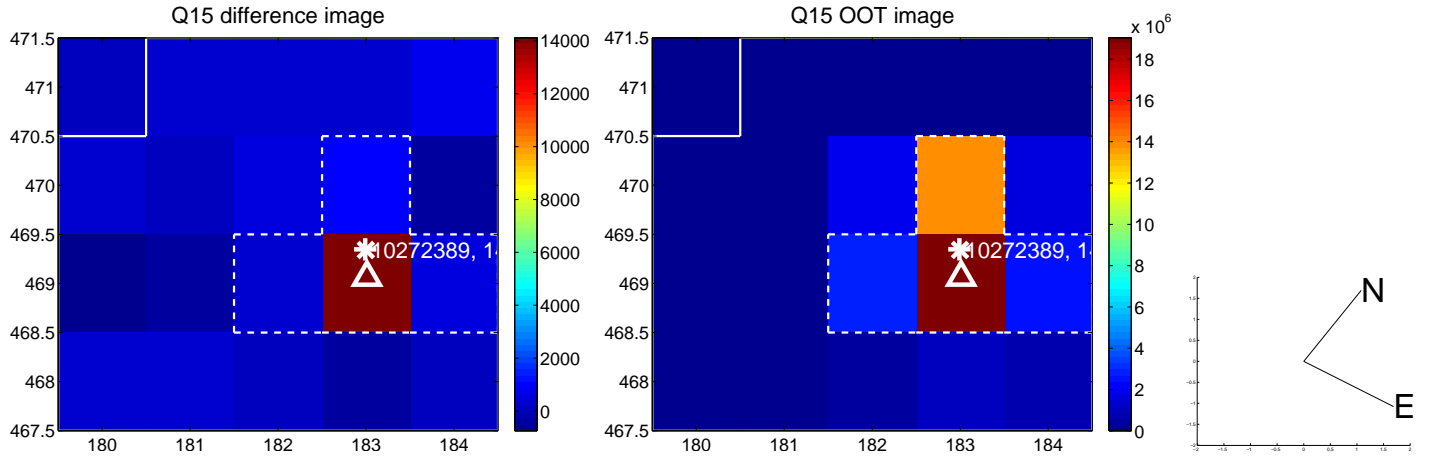
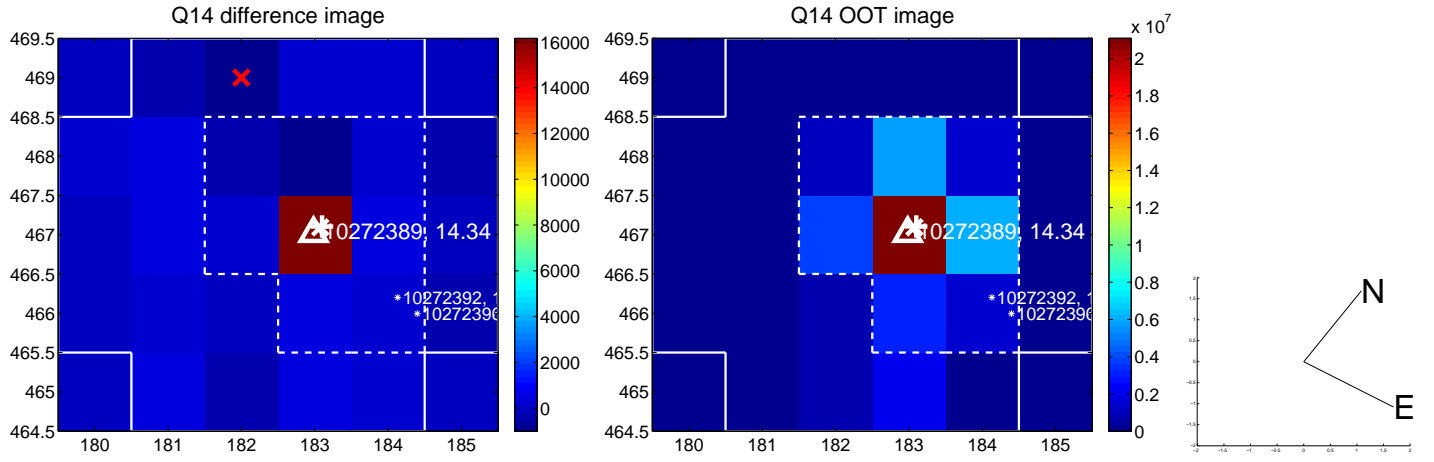
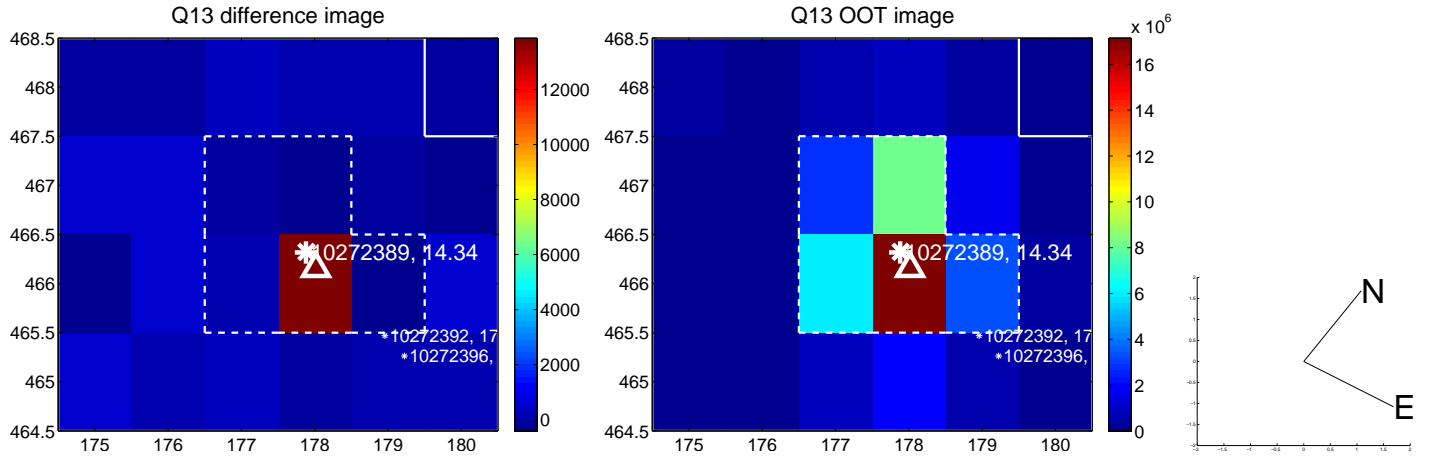
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



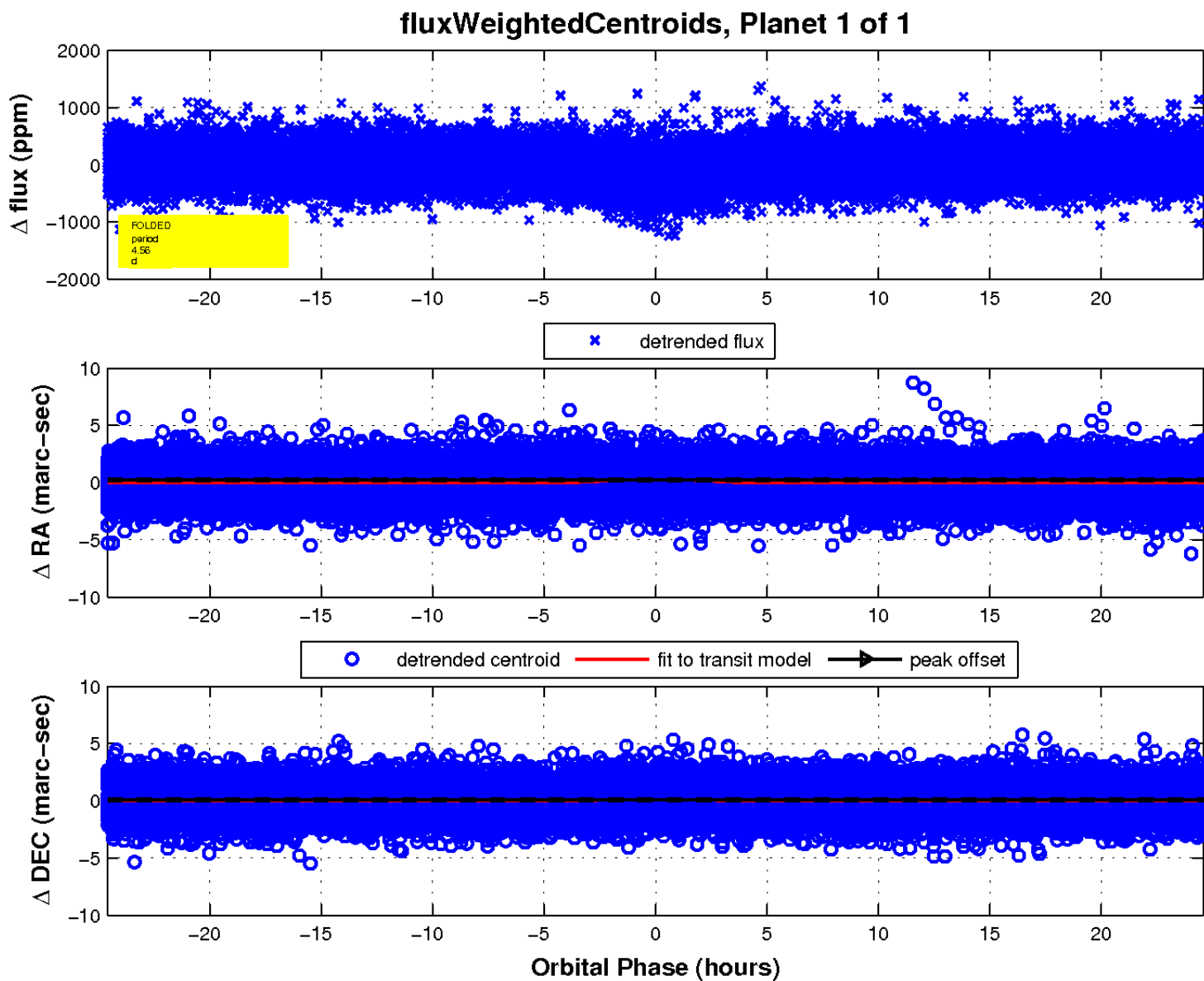
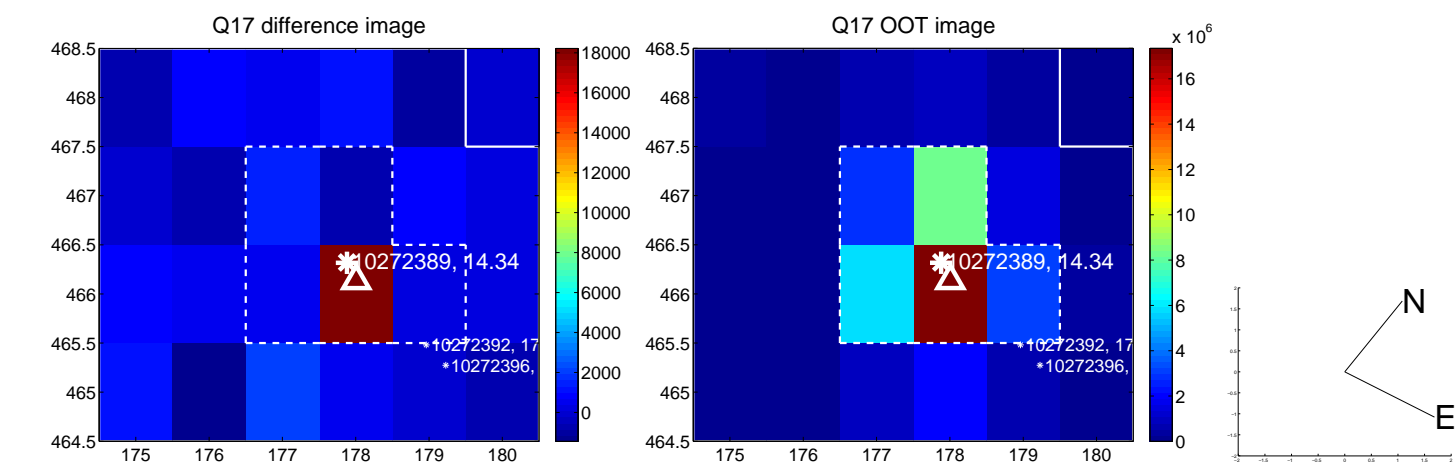
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

