

KIC 006364276

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})
006364276-01	OBS	2873.01	5.243653	132.720879	221.6	14.672	25.6	30.1	0.63	4194	1.64	43.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006364276-01	OBS	FP	0.00	0	0	1	1	CENT_KIC_POS—HALO_GHOST—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 006364276-01

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
006364276-01	6364276	TT-Lyr-pri	6364290	1:1	154.7	-34	19	9.49	15.29	3847.40	Direct-PRF	0	0.70	1.08

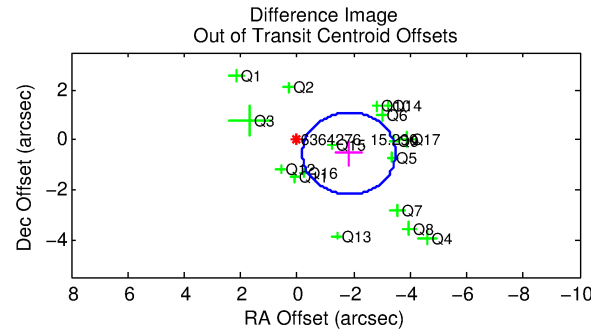
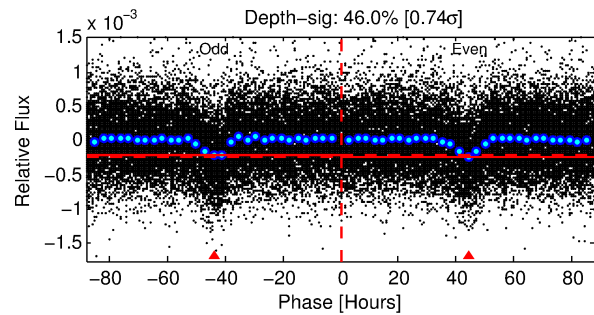
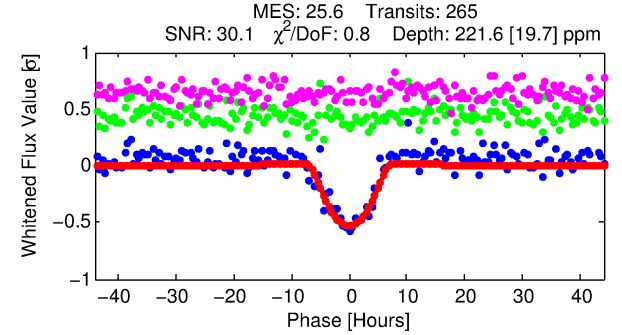
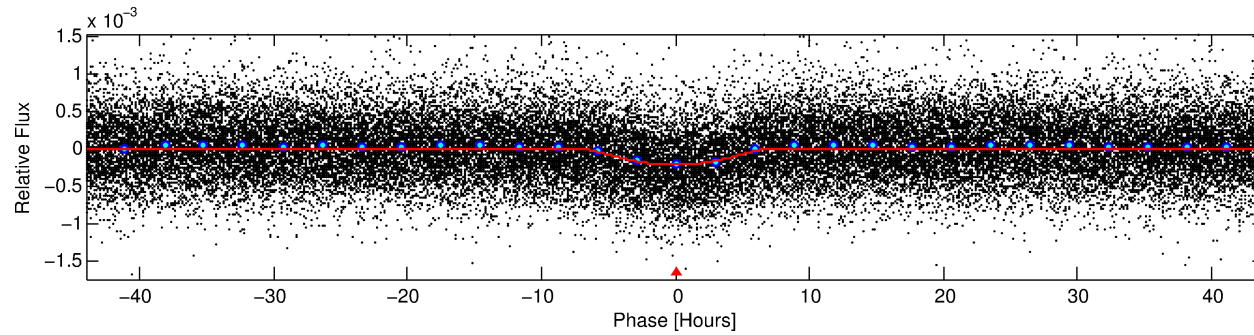
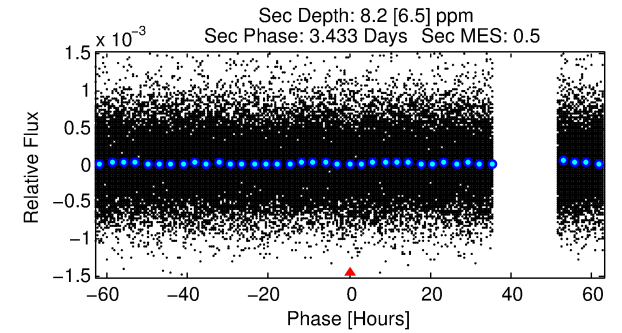
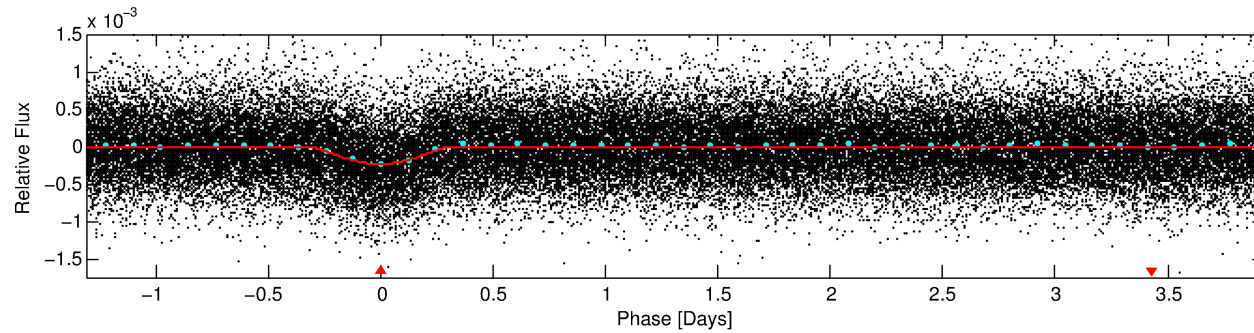
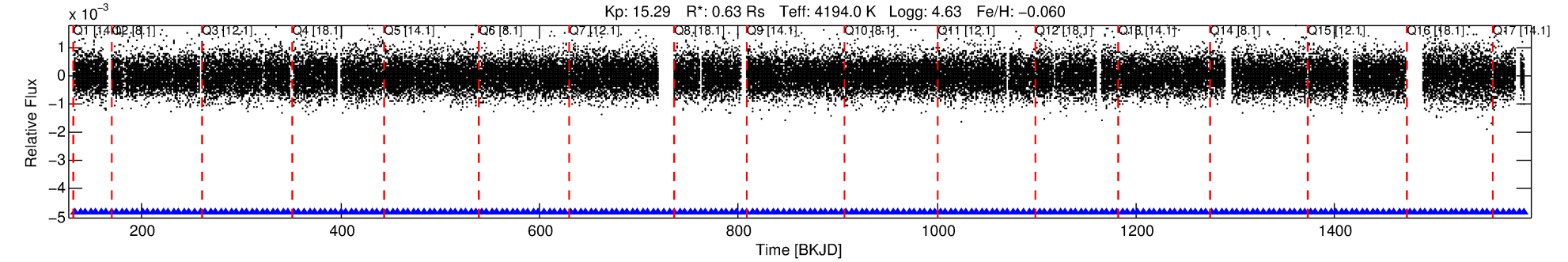
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period 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: 6364276 Candidate: 1 of 1 Period: 5.244 d

KOI: K02873.01 Corr: 0.985

Kp: 15.29 R*: 0.63 Rs Teff: 4194.0 K Logg: 4.63 Fe/H: -0.060



DV Fit Results:

Period = 5.24365 [0.00007] d
Epoch = 132.7209 [0.0112] BKJD
Rp/R* = 0.0239 [0.0117]
a/R* = 1.23 [0.06]
b = 0.99 [0.02]
Seff = 43.22 [7.26]
Teff = 654 [27] K
Rp = 1.64 [0.82] Re
a = 0.0504 [0.0038] AU
Ag = 4.27 [5.41] [0.60σ]
Teffp = 1453 [461] K [1.73σ]

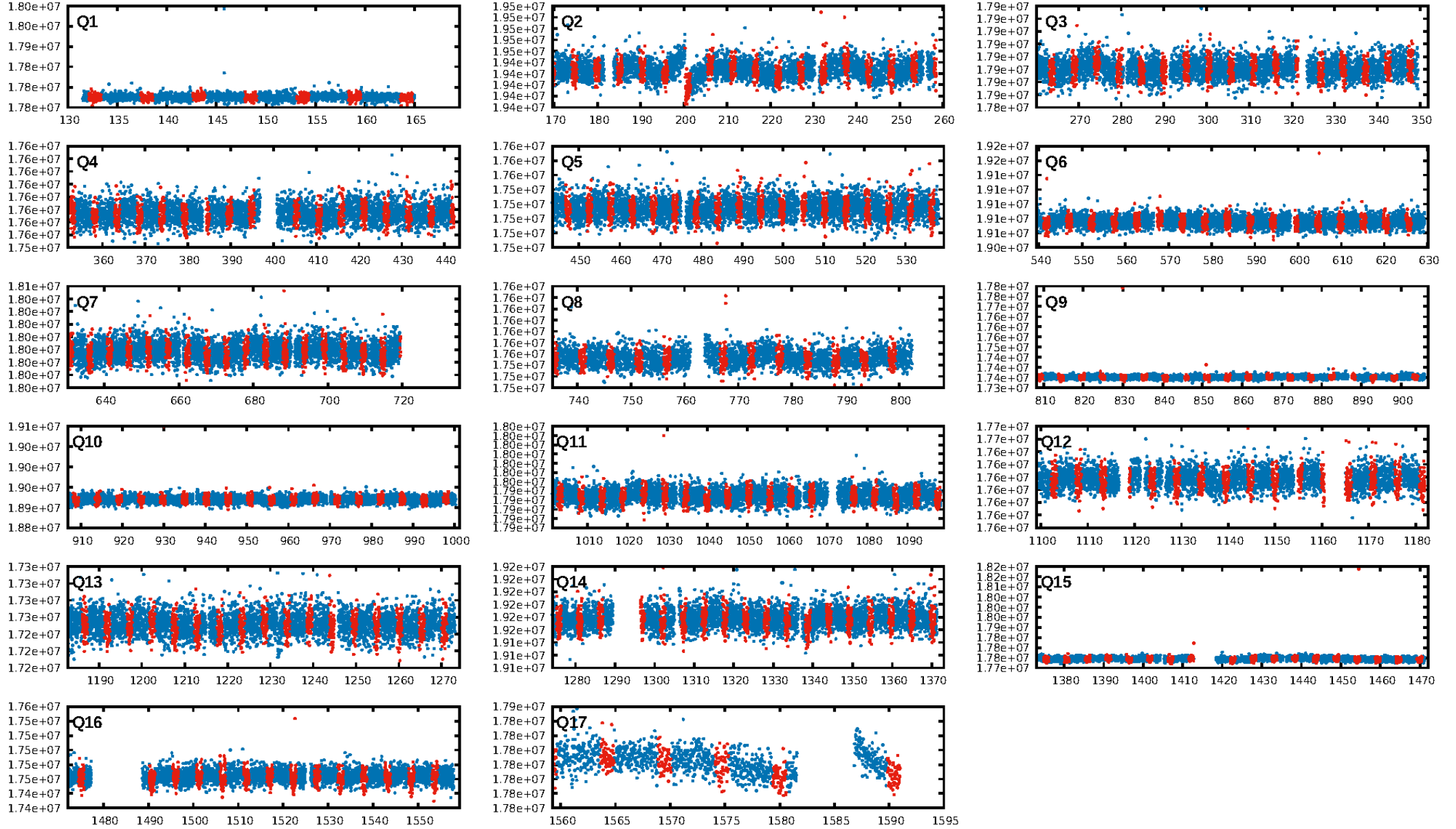
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.57e-134
RollingBand-fgt: 1.00 [252/252]
GhostDiagnostic-chr: 0.0379
Centroid-sig: 0.0%
Centroid-so: 2.151 arcsec [4.63σ]
OotOffset-rm: 1.910 arcsec [3.48σ]
KicOffset-rm: 2.126 arcsec [3.70σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

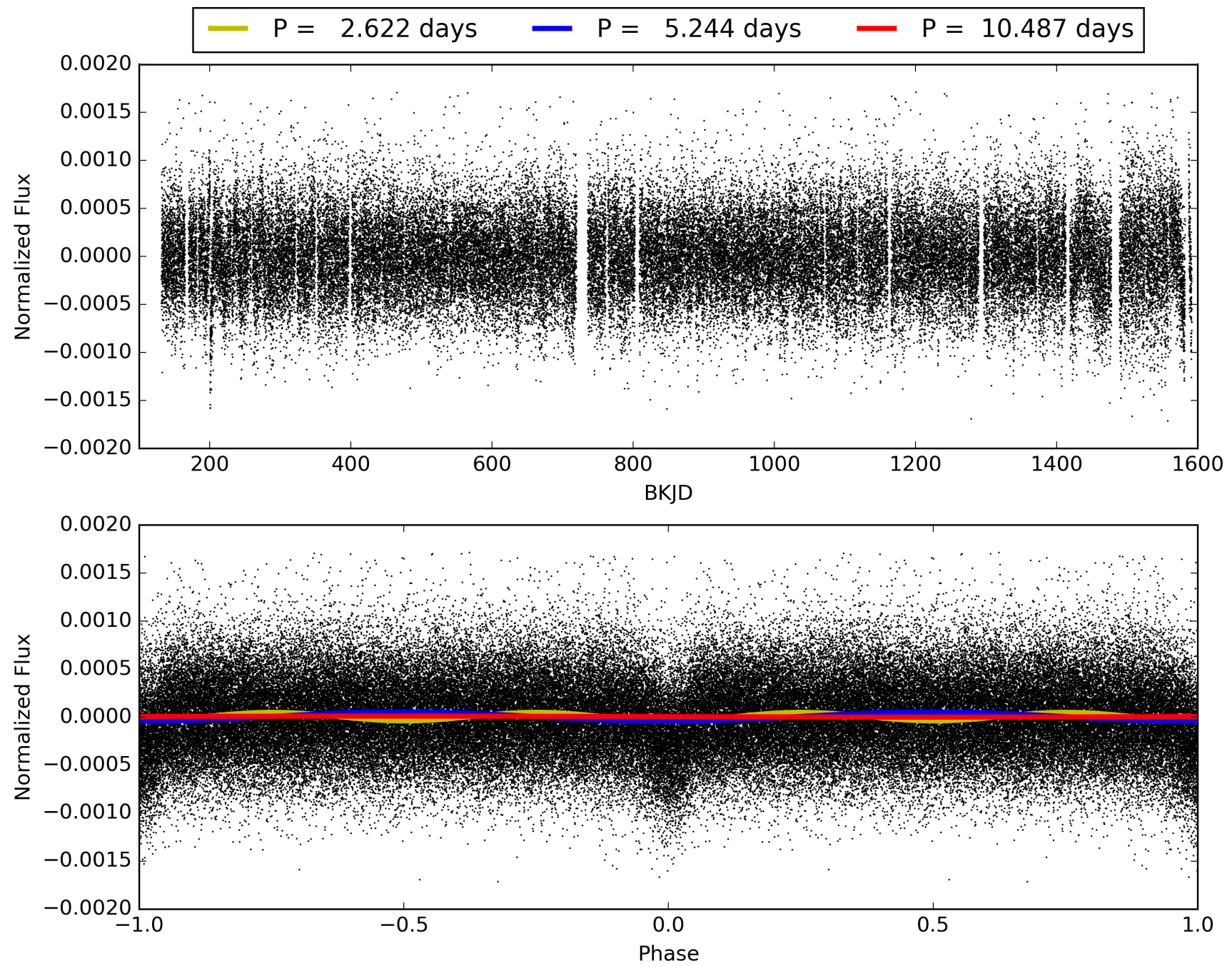
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:19:07 Z

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

TCE 006364276-01, PDC Light Curves

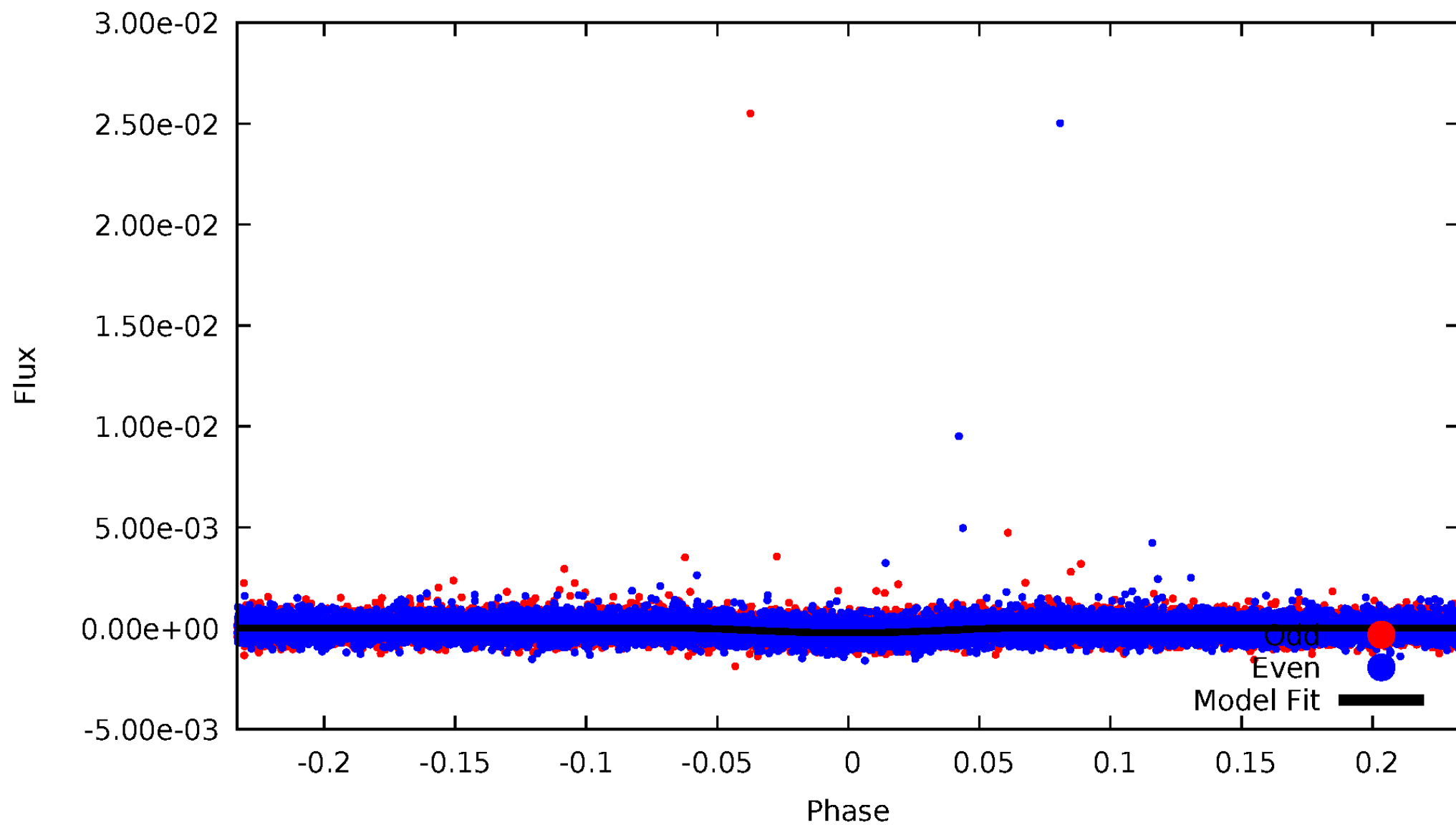


TCE 006364276-01



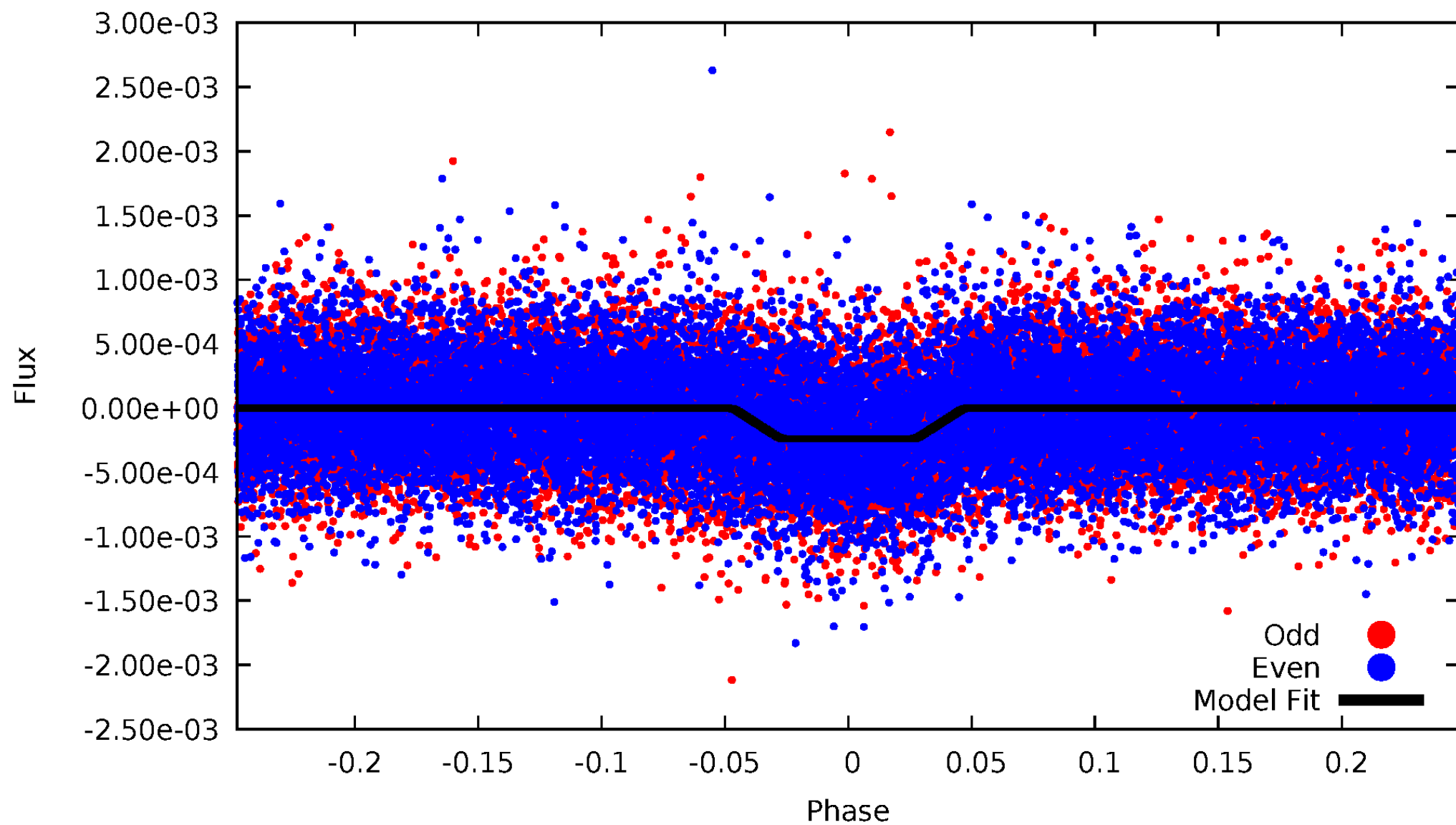
DV Odd/Even

TCE 006364276-01



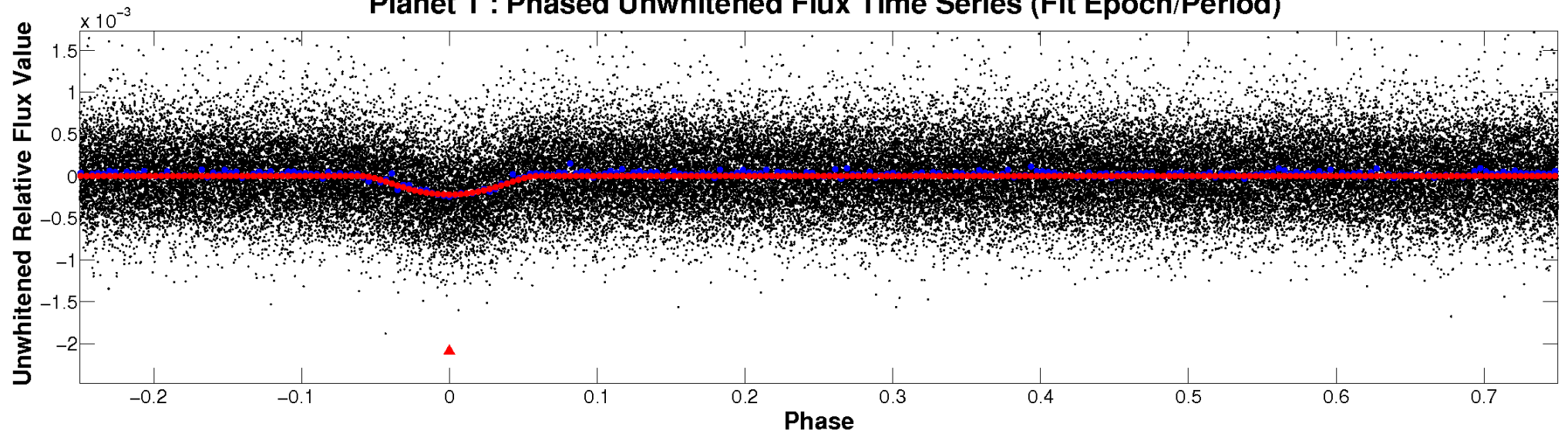
ALT Odd/Even

TCE 006364276-01

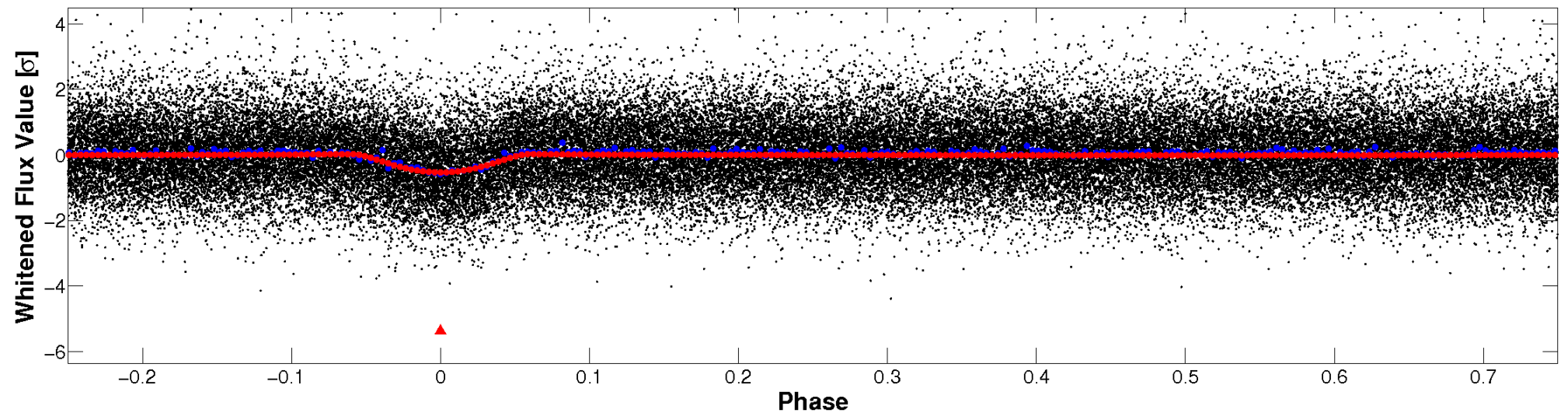


Non-Whitened Vs. Whitened Light Curve

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

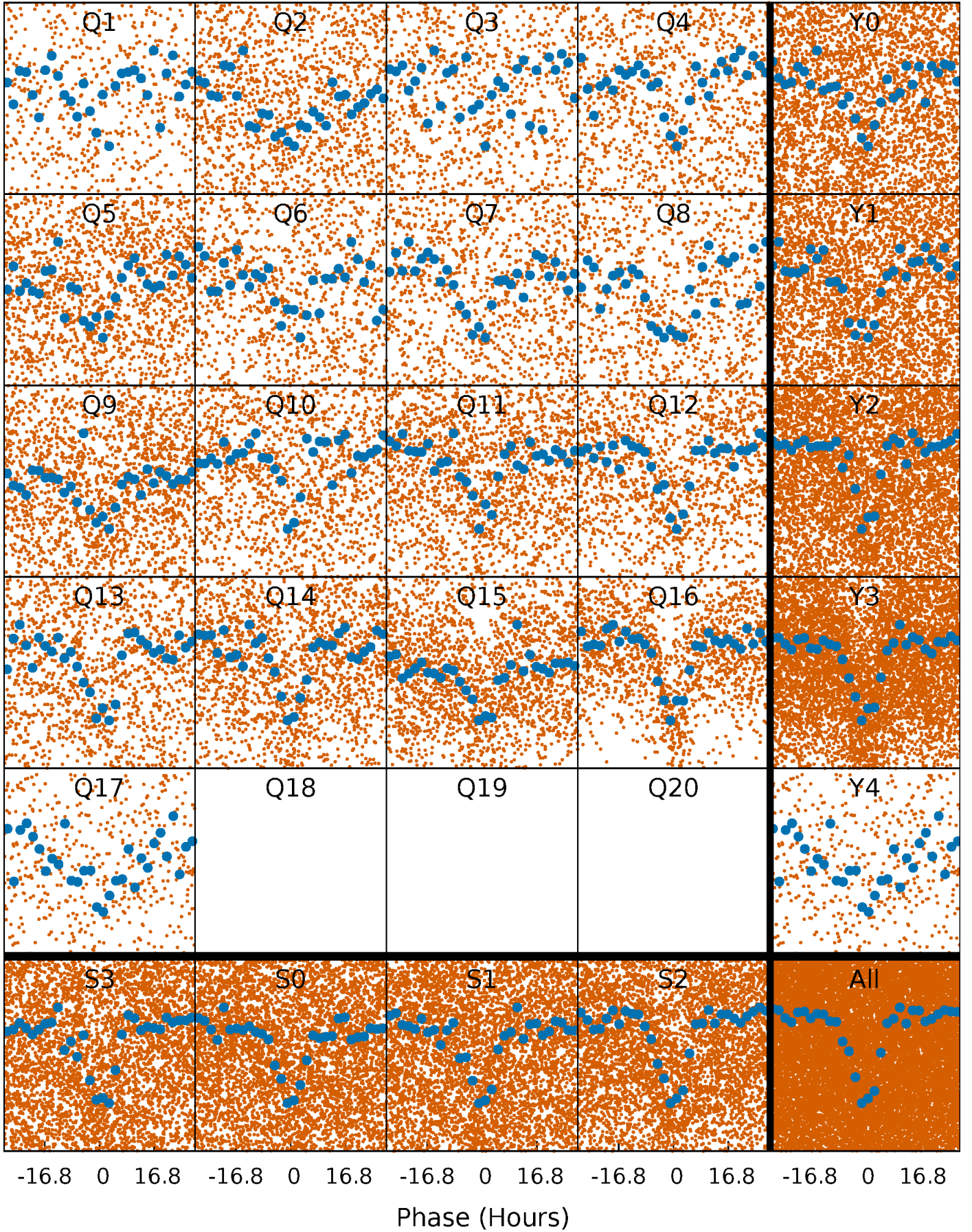


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



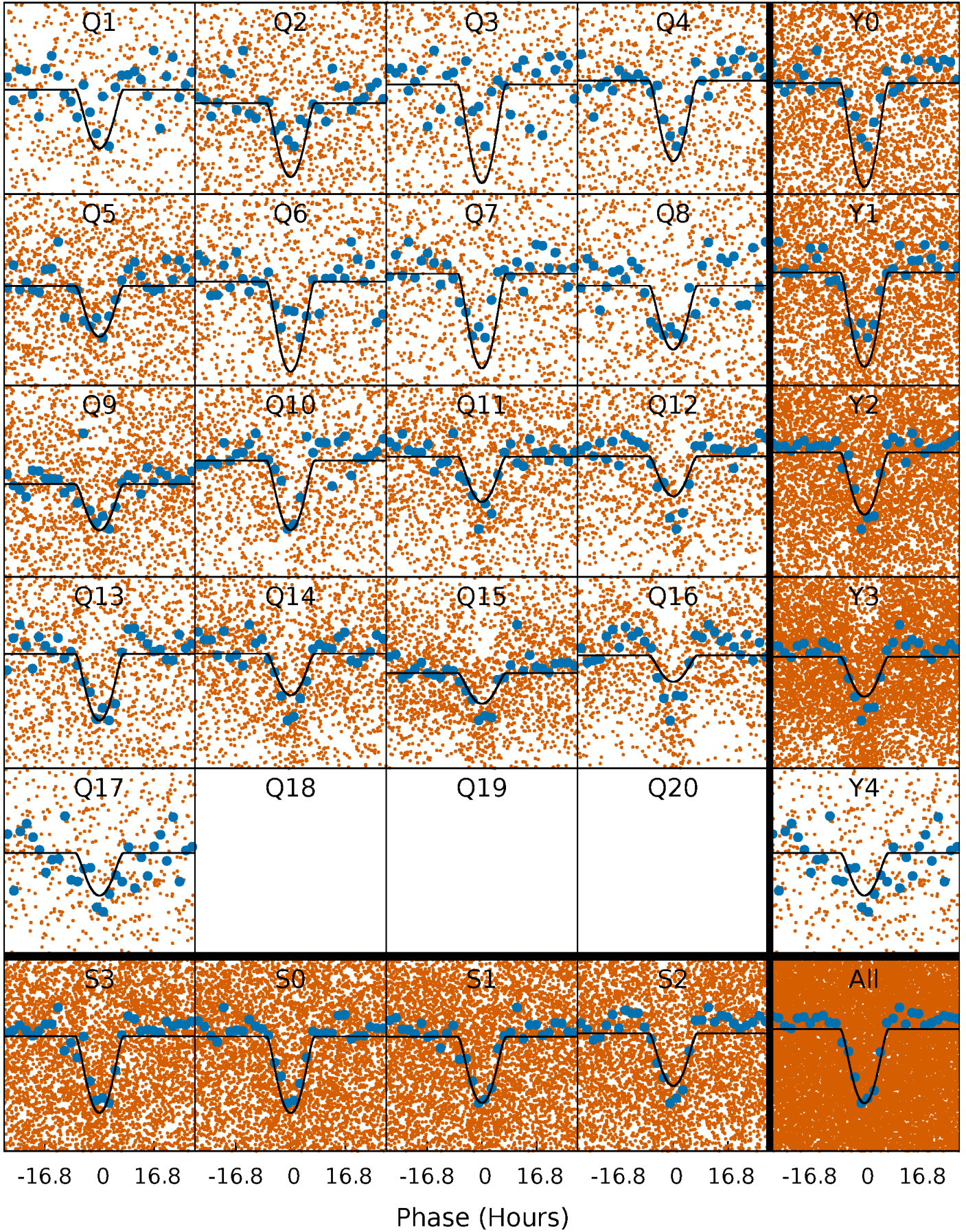
PDC Quarter-Phased Transit Curves

TCE 006364276-01 P= 5.243653 Days $T_0=132.720879$ (BKJD)



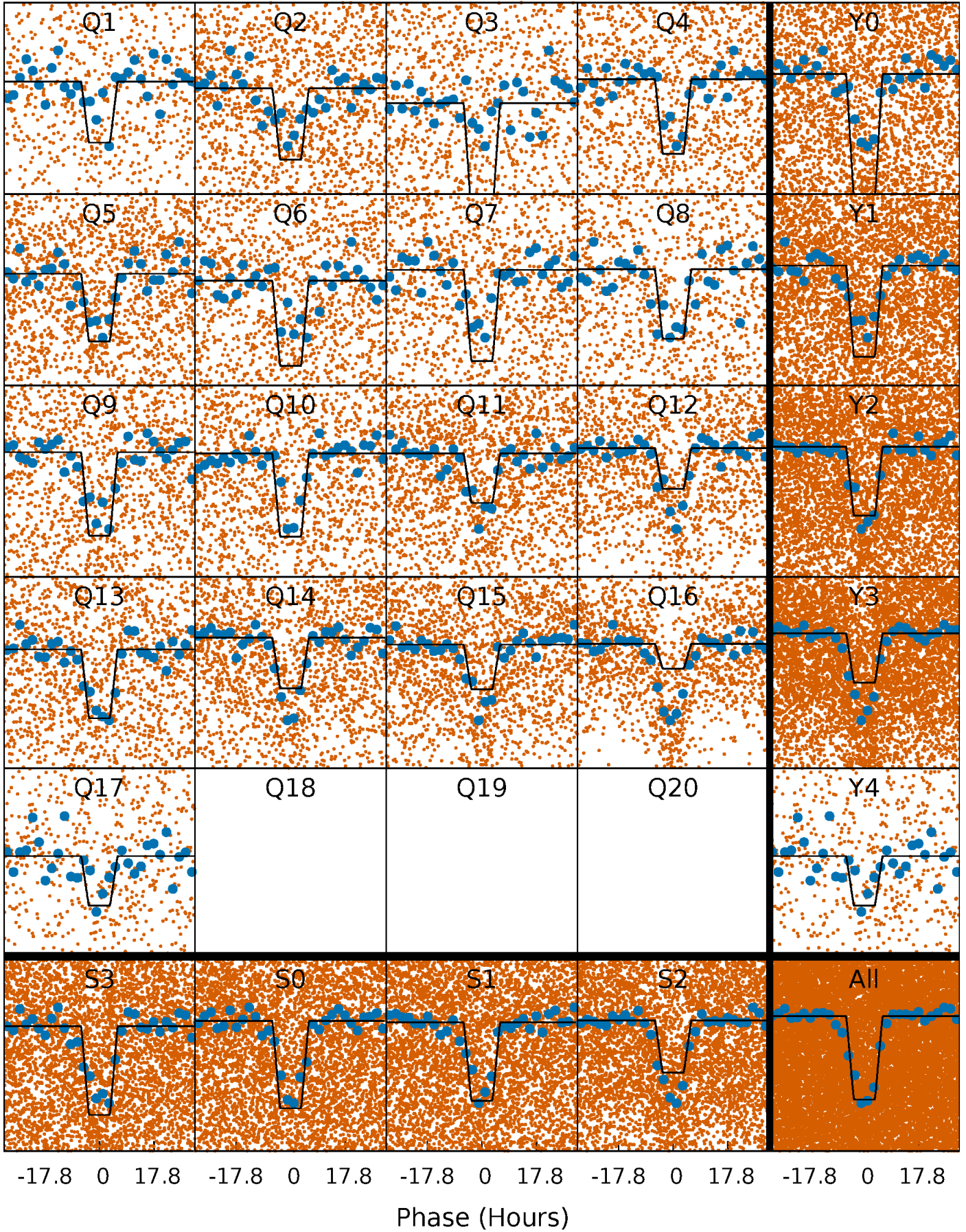
DV Quarter-Phased Transit Curves

TCE 006364276-01 P= 5.243653 Days $T_0=132.720879$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

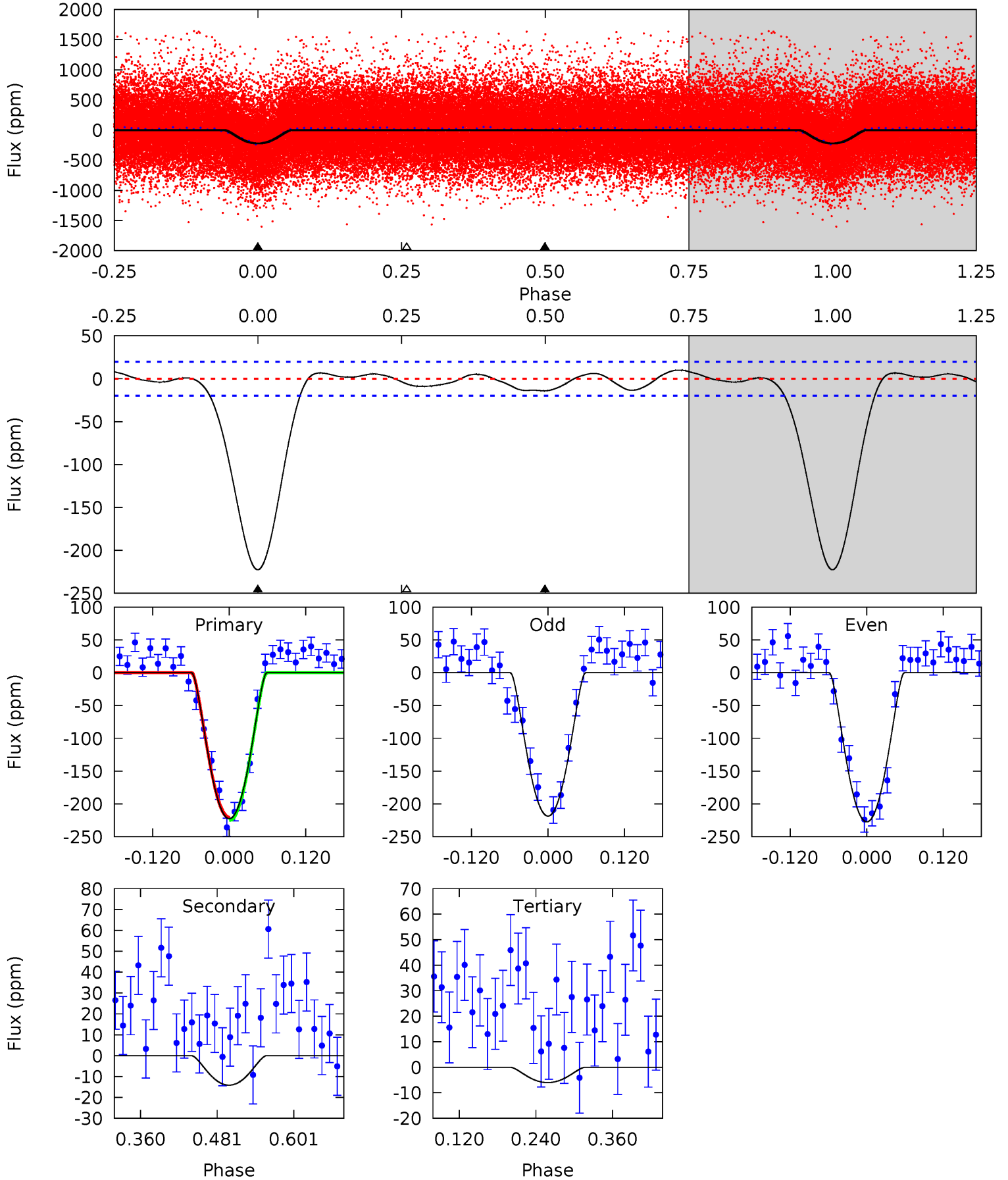
TCE 006364276-01 P= 5.243867 Days $T_0=132.684543$ (BKJD)



DV Model-Shift Uniqueness Test

006364276-01, P = 5.243653 Days, E = 127.477226 Days

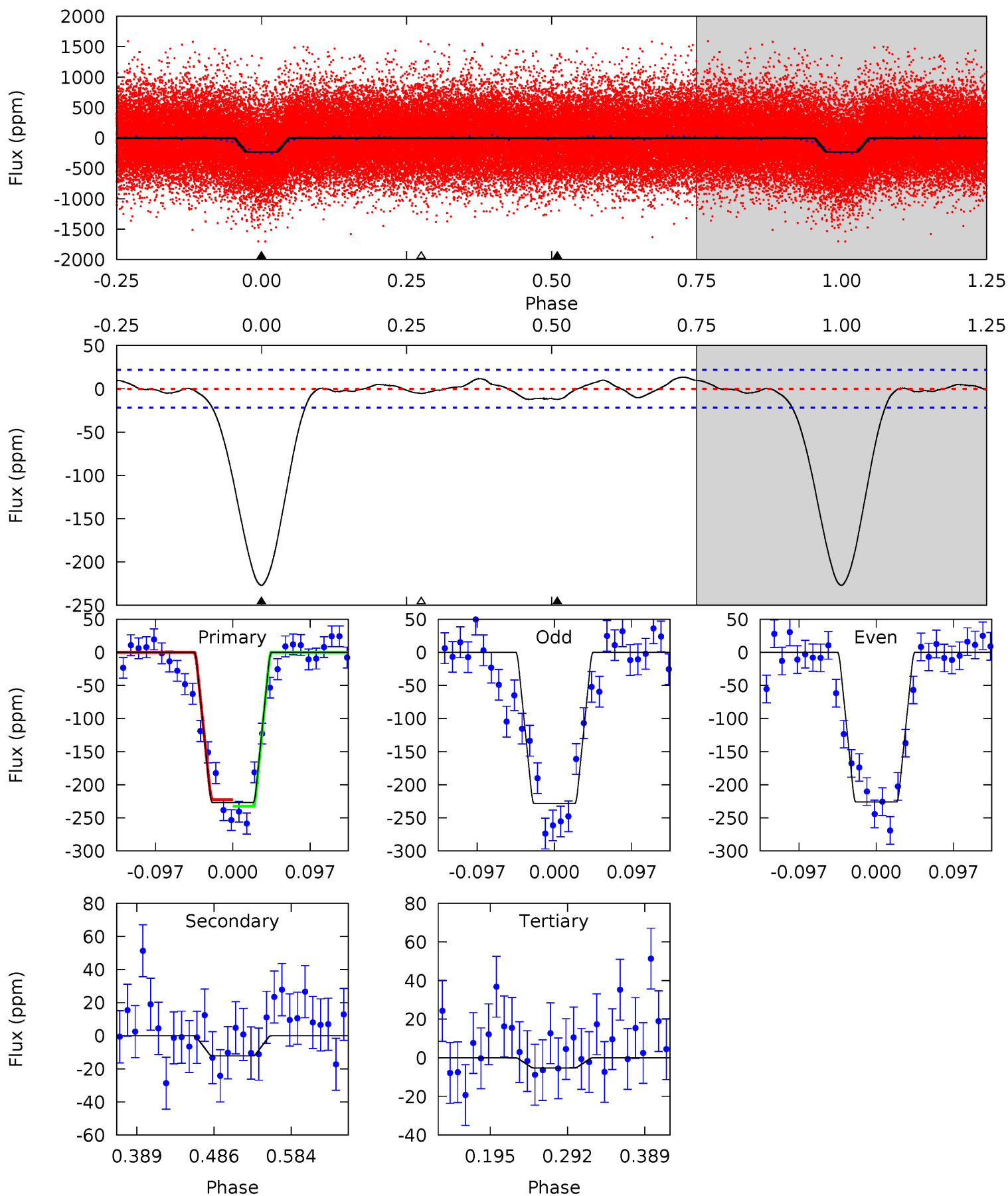
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.1	3.24	1.38	0	4.53	1.55	1.38	49.7	51.1	1.86	3.24	1.02	0.98	0.04	0.52



Alt Model-Shift Uniqueness Test

006364276-01, P = 5.243867 Days, E = 127.440676 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.6	2.56	1.11	0	4.57	1.66	1.15	46.5	47.6	1.45	2.56	0.24	1.09	0.06	1.06



Stellar Parameters For KIC 006364276

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4194^{+126}_{-139}	$4.633^{+0.053}_{-0.021}$	$-0.060^{+0.300}_{-0.300}$	$0.629^{+0.040}_{-0.060}$	$0.619^{+0.059}_{-0.059}$	$3.510^{+0.815}_{-0.348}$
	+3%/-3%	+1%/-0%	+500%/-500%	+6%/-10%	+10%/-10%	+23%/-10%
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 006364276-01 / KOI 2873.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 4	$1.61^{+0.87}_{-0.73}$	908^{+29}_{-36}	2403^{+430}_{-250}	$7.032^{+17.884}_{-4.094}$
Alt.	-12 ± 5	$1.19^{+0.73}_{-0.67}$	909^{+29}_{-35}	2547^{+674}_{-318}	11^{+52}_{-7}

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 $A_{obs} \gg 1.0$

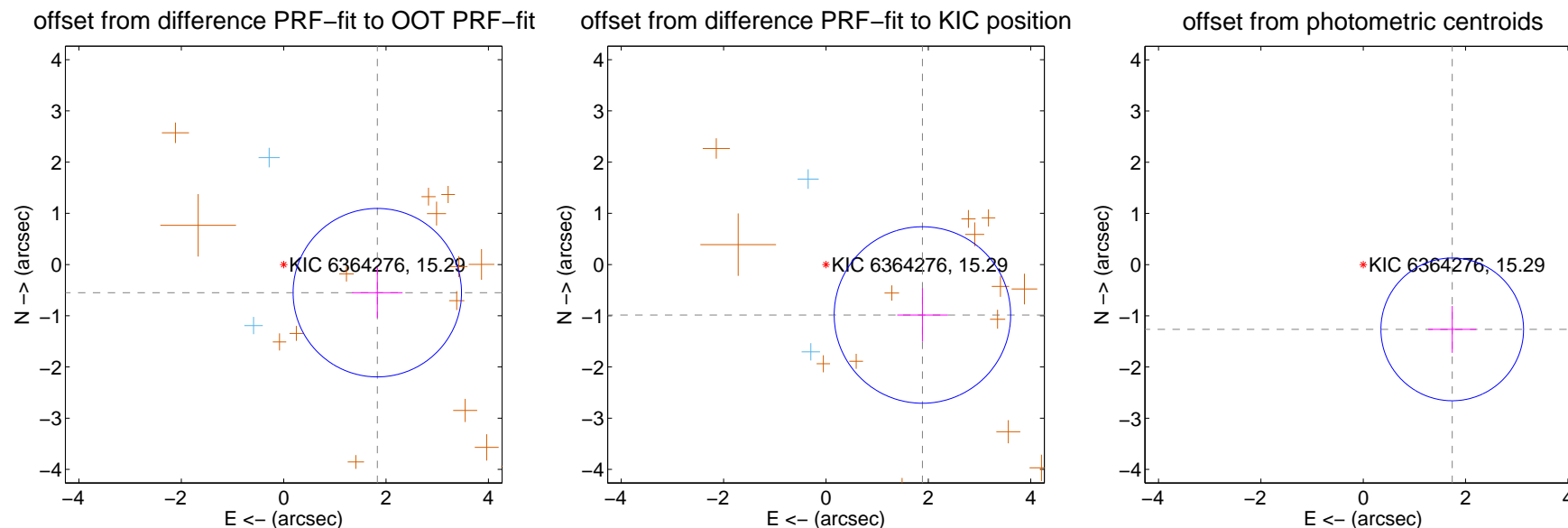
DV Centroid Data

Supplemental centroid analysis for 006364276-01. Kepler magnitude: 15.29. Transit SNR 30.07

There are 2 quarters with good PRF difference image offsets

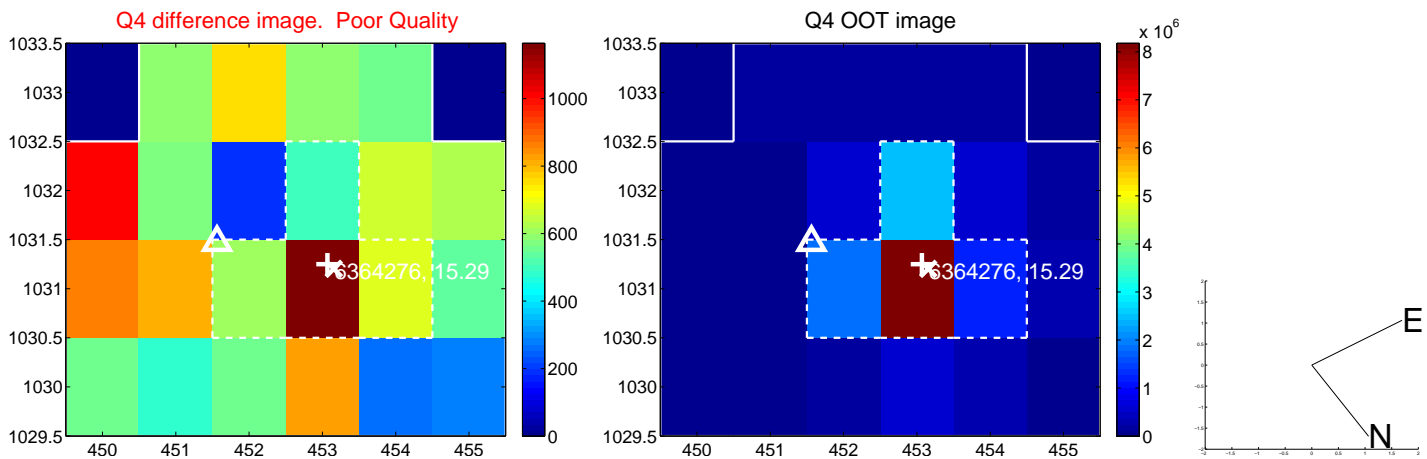
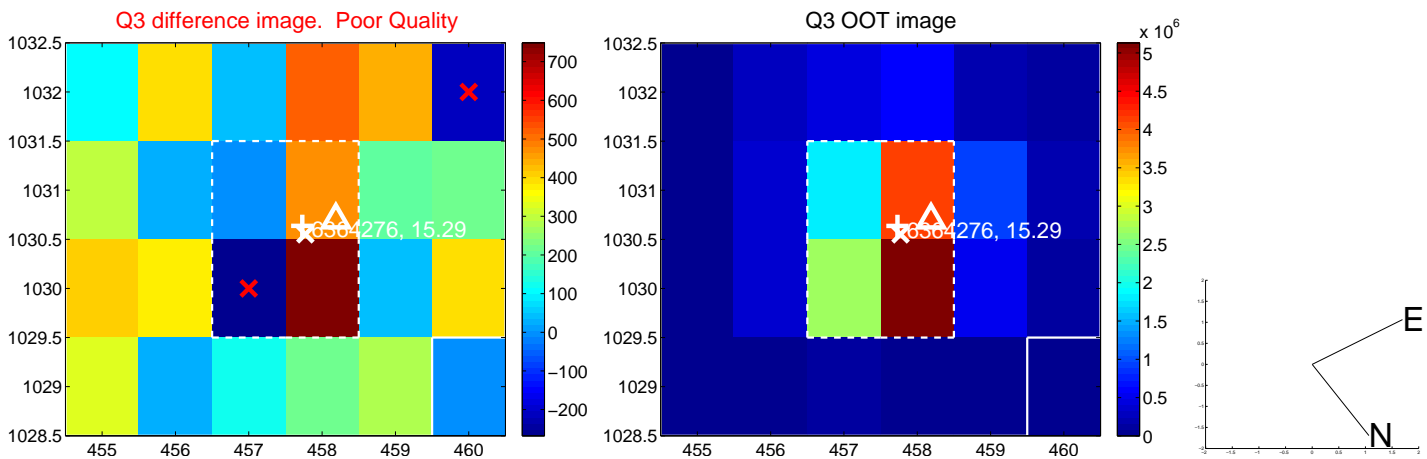
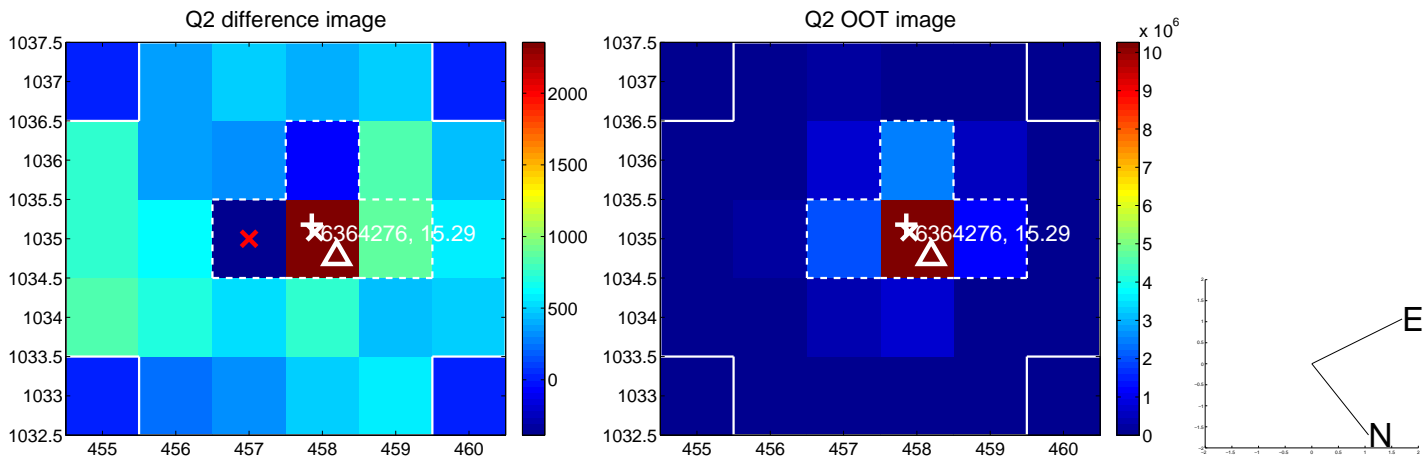
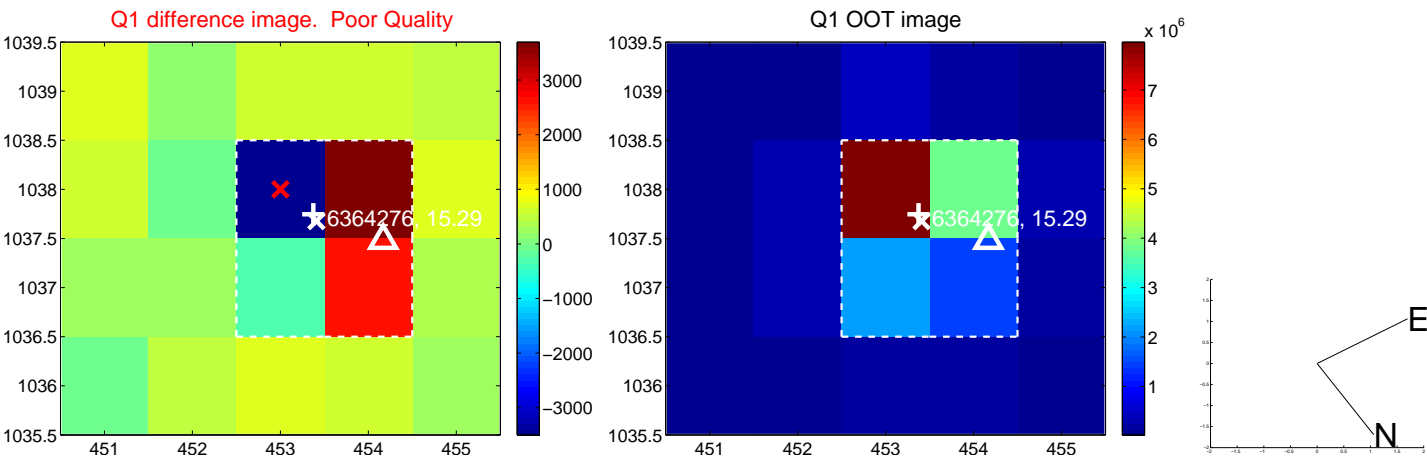
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.910 ± 0.548	3.48	-1.829 ± 0.493	-0.549 ± 0.492
PRF-fit source offset from KIC position	2.126 ± 0.575	3.70	-1.884 ± 0.493	-0.985 ± 0.520
photometric centroid source offset	2.15 ± 0.46	4.63	-1.74 ± 0.47	-1.27 ± 0.46

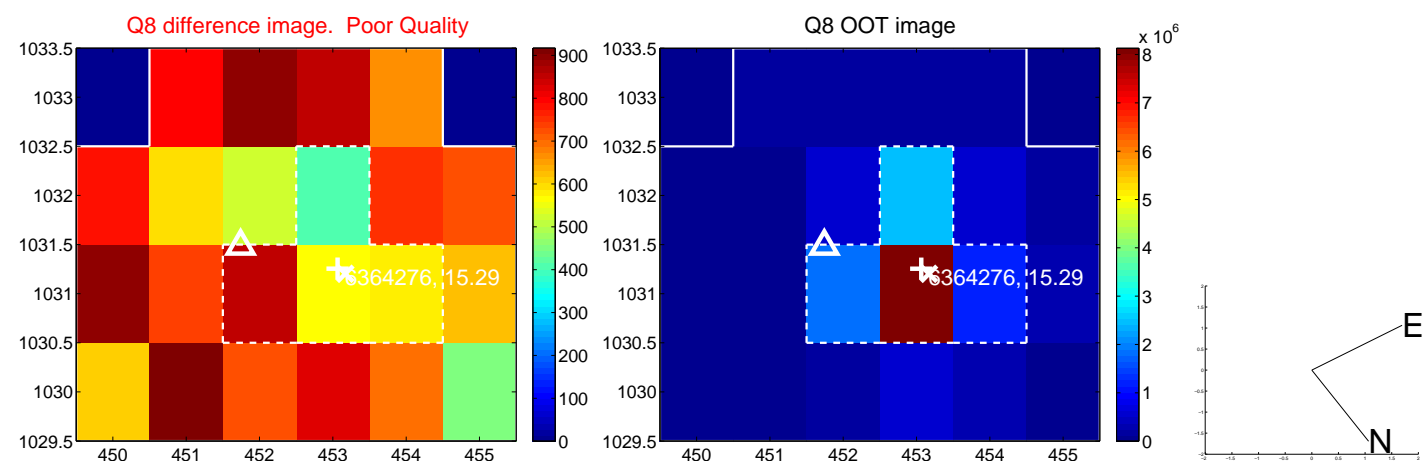
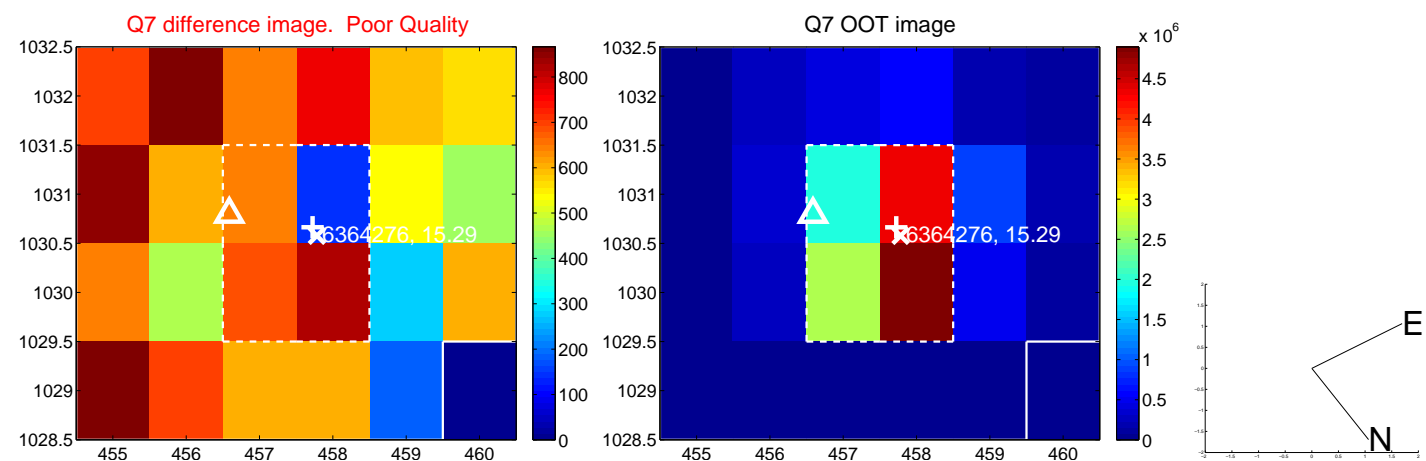
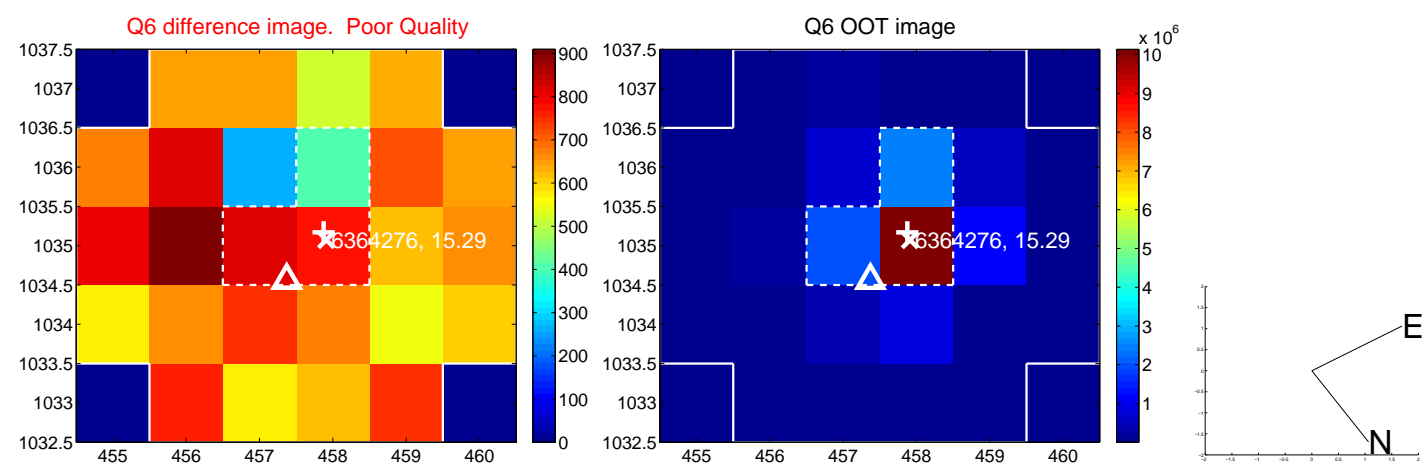
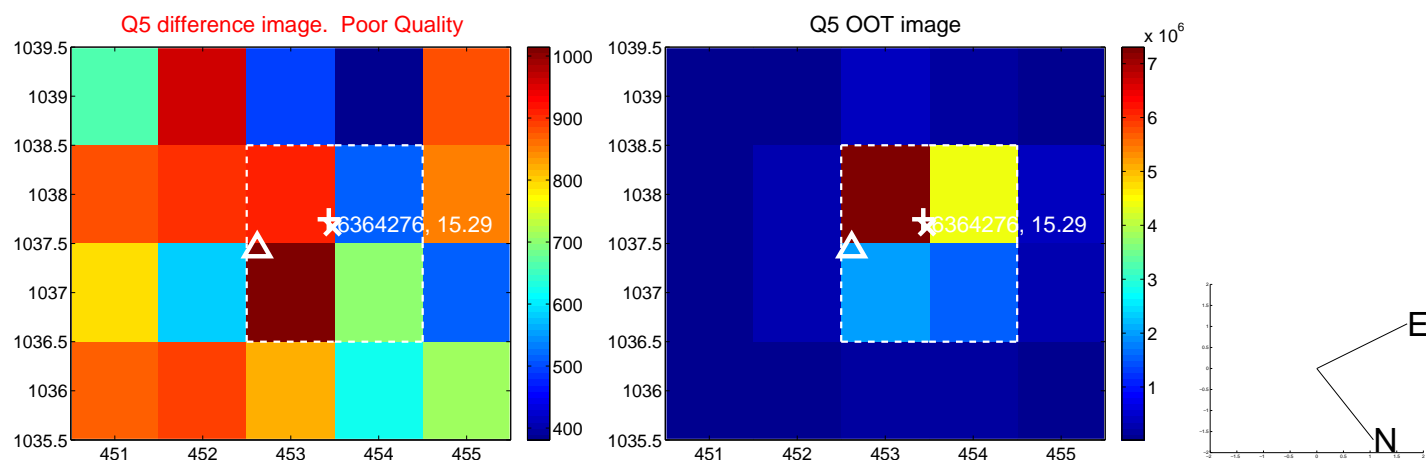


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

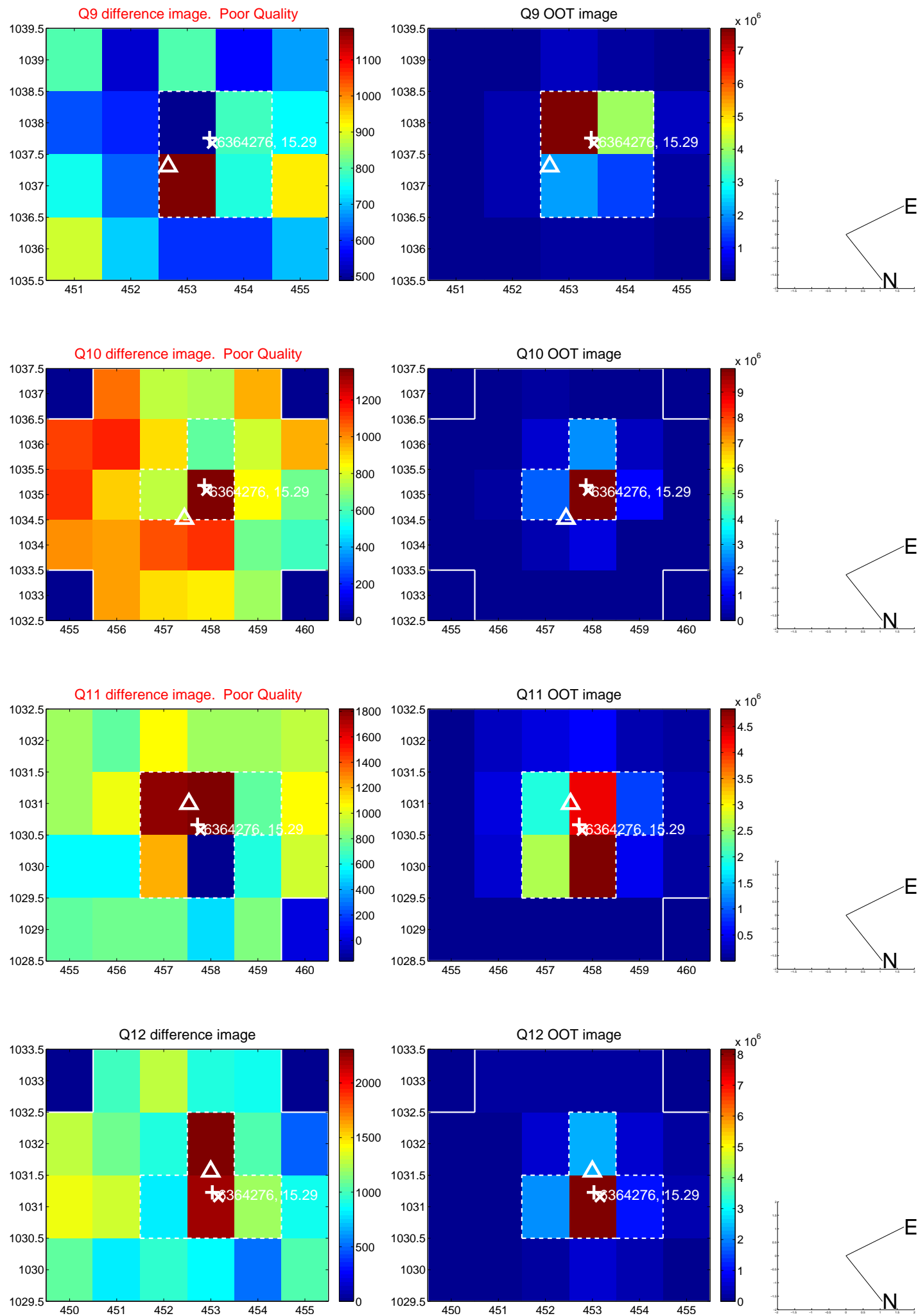
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



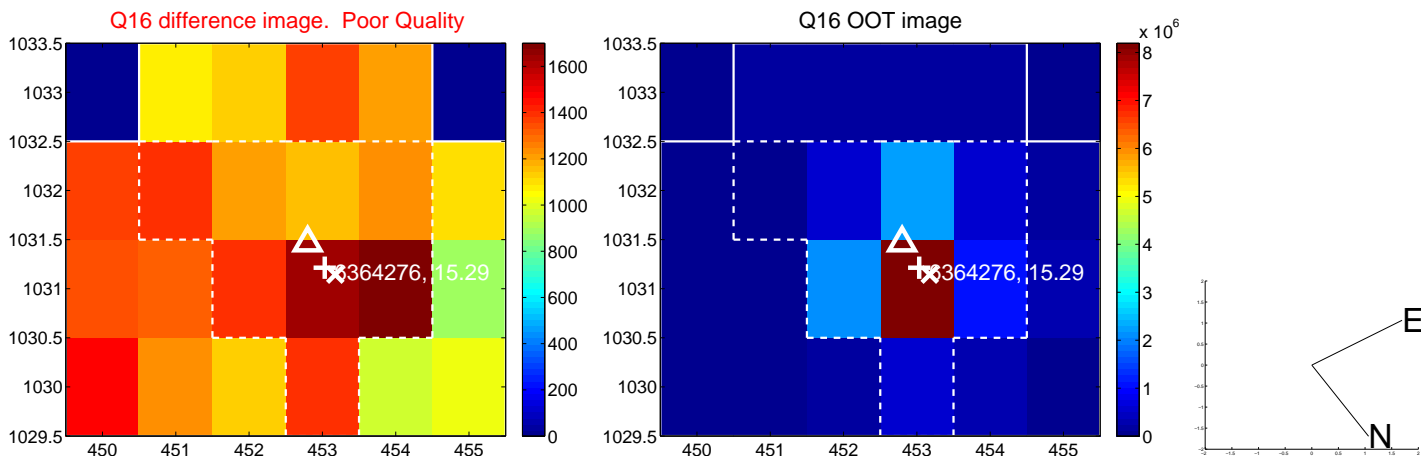
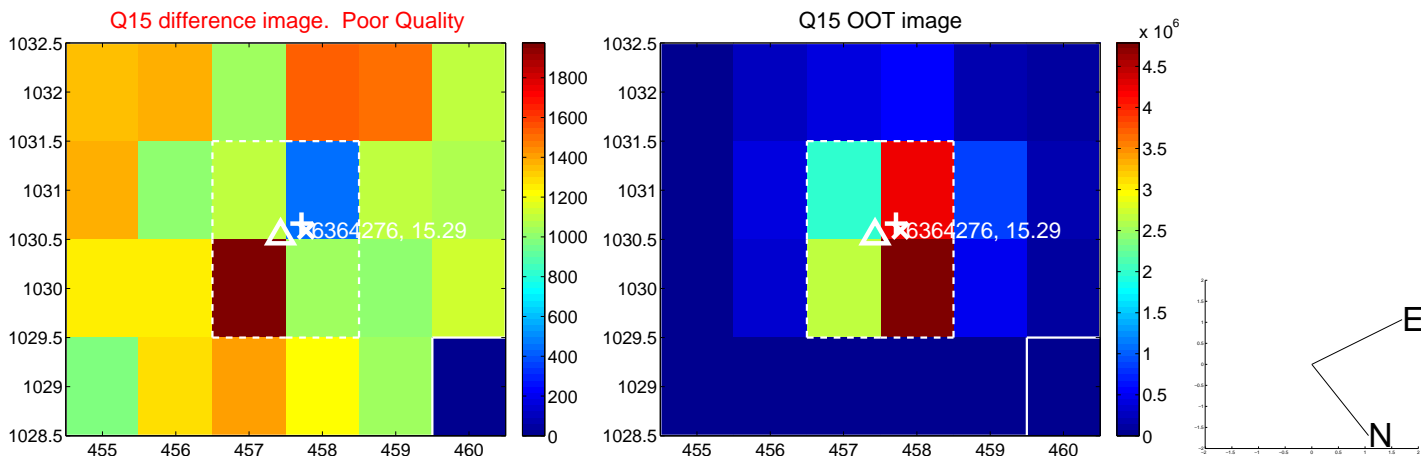
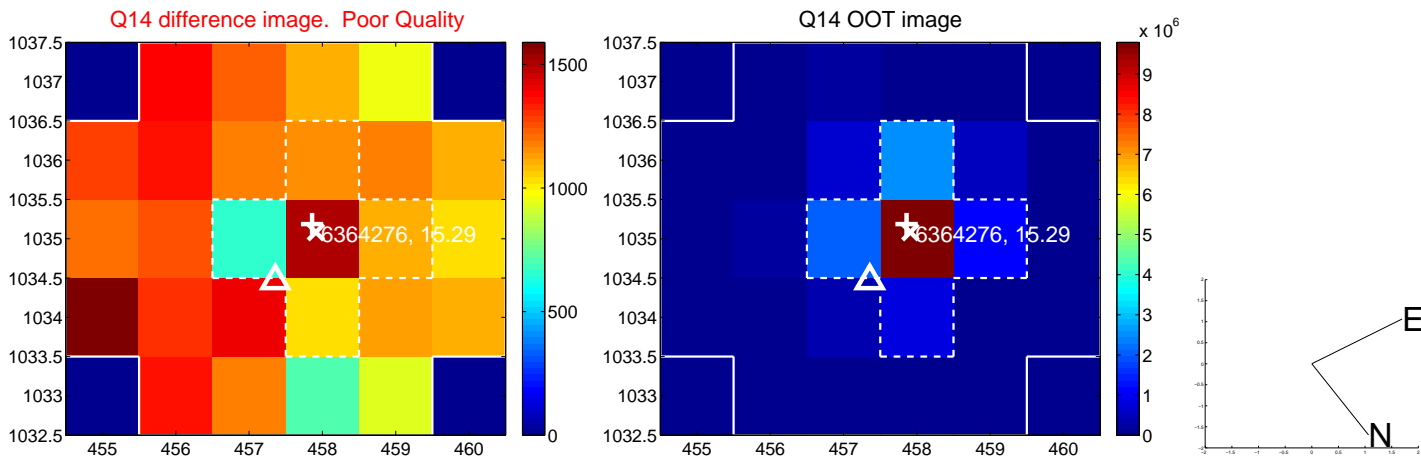
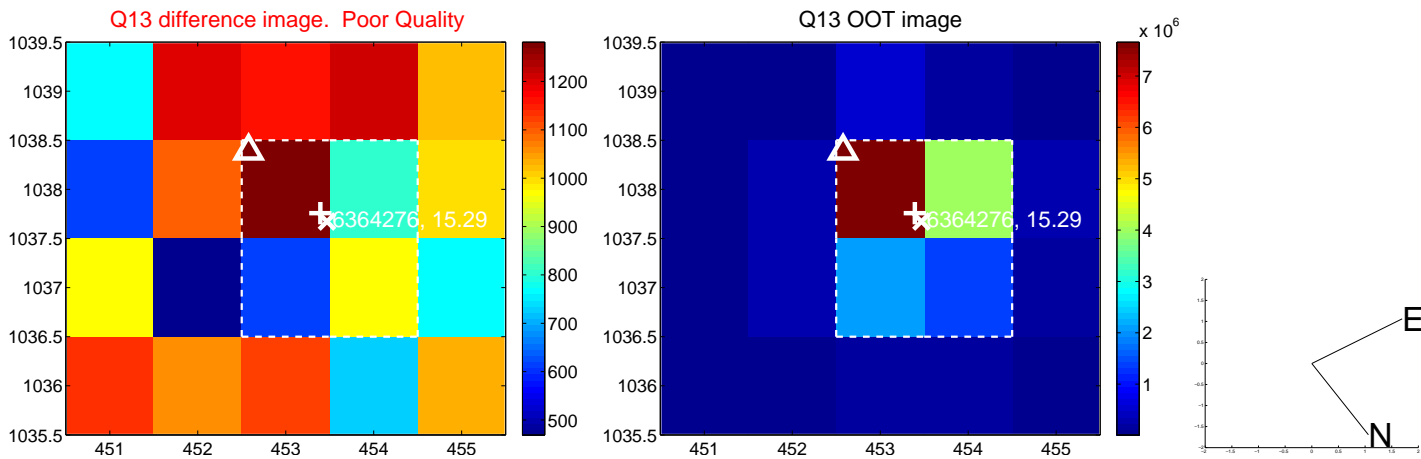
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



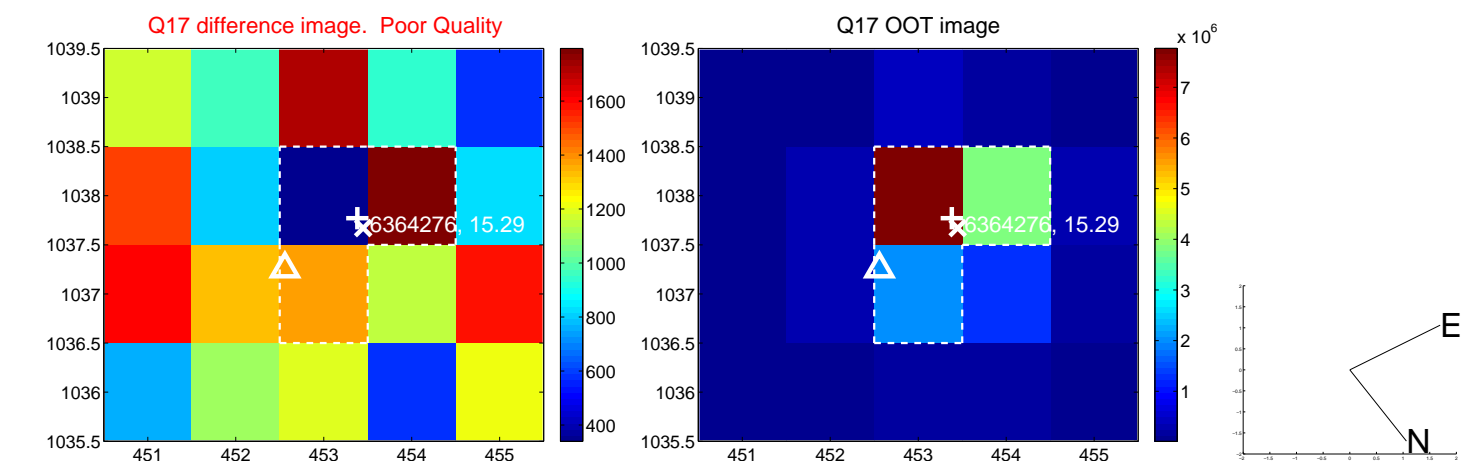
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



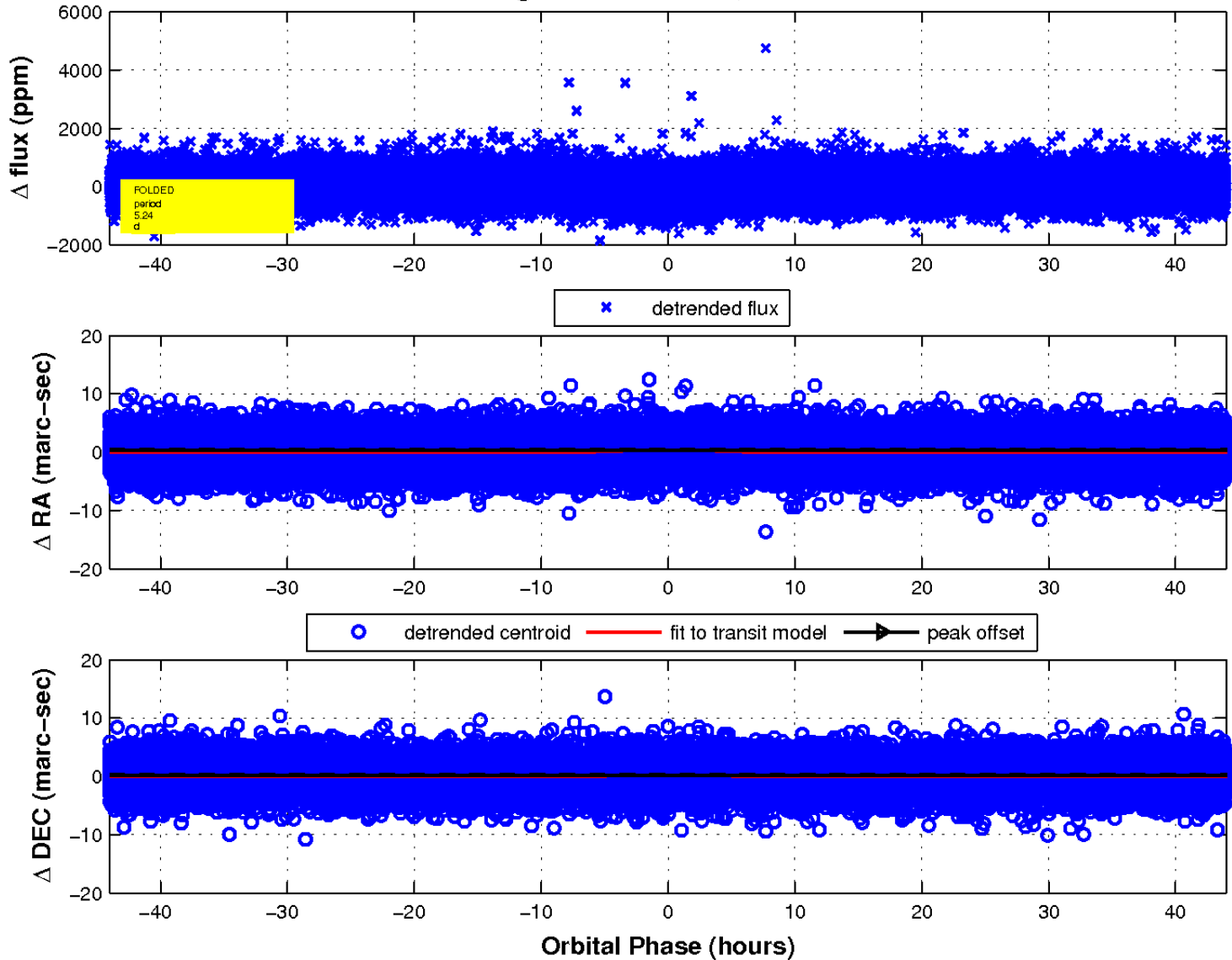
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

