

KIC 006380750

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})
006380750-01	OBS	No	1.022183	132.544025	19.2	5.985	7.4	8.6	1.02	6203	0.52	3361.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006380750-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET—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.

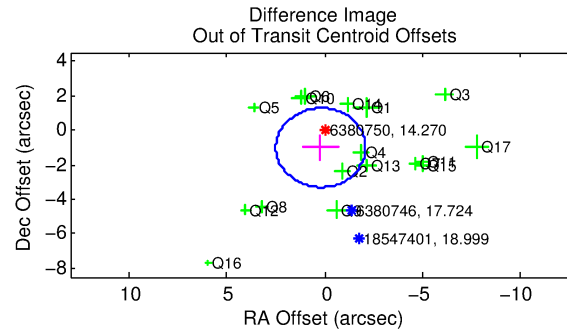
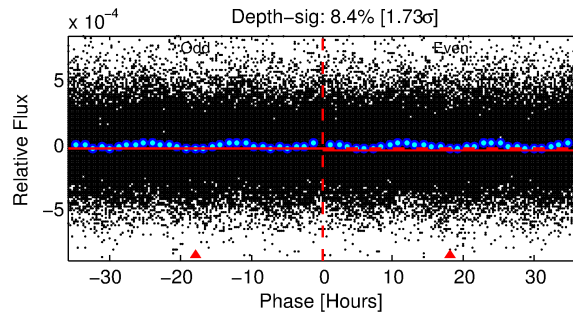
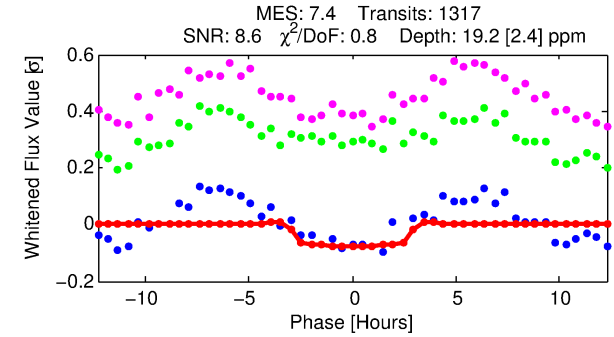
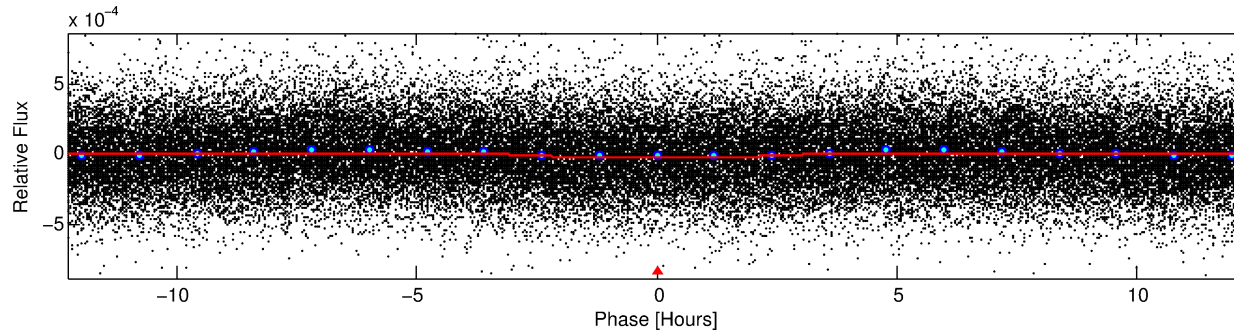
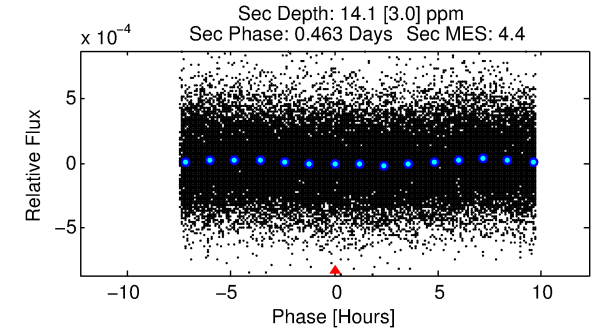
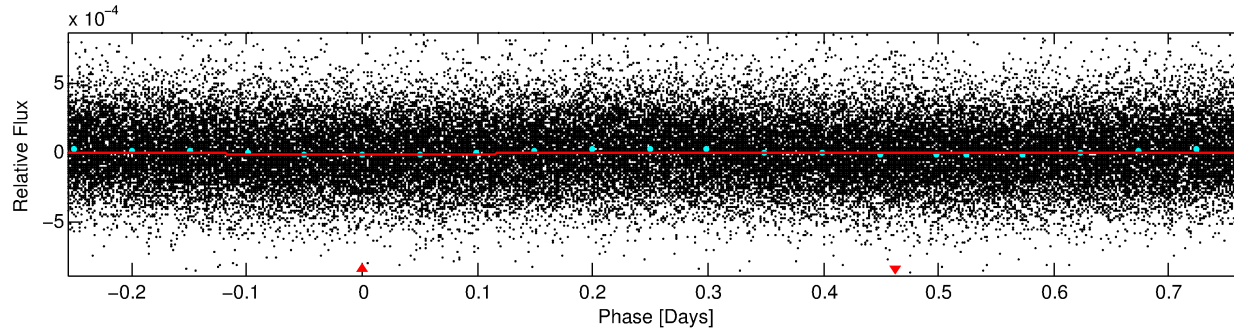
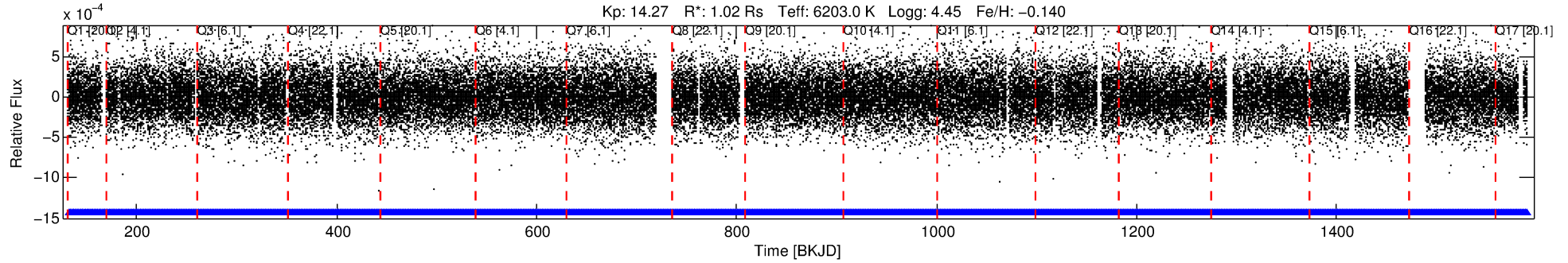
Ephemeris Match Information For 006380750-01

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
006380750-01	6380750	006380765-01	6380765	1:1	53.6	-13	5	14.85	14.27	1.68	Direct-PRF	1	1.80	1.00

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: 6380750 Candidate: 1 of 1 Period: 1.022 d



DV Fit Results:

Period = 1.02218 [0.00002] d
Epoch = 132.5440 [0.0072] BKJD
Rp/R* = 0.0046 [0.0034]
a/R* = 1.13 [0.98]
b = 0.87 [1.12]
Seff = 3361.35 [1470.22]
Teff = 1942 [212] K
Rp = 0.52 [0.42] Re
a = 0.0203 [0.0058] AU
Ag = 12.01 [18.55] [0.59σ]
Teffp = 5588 [2090] K [1.74σ]

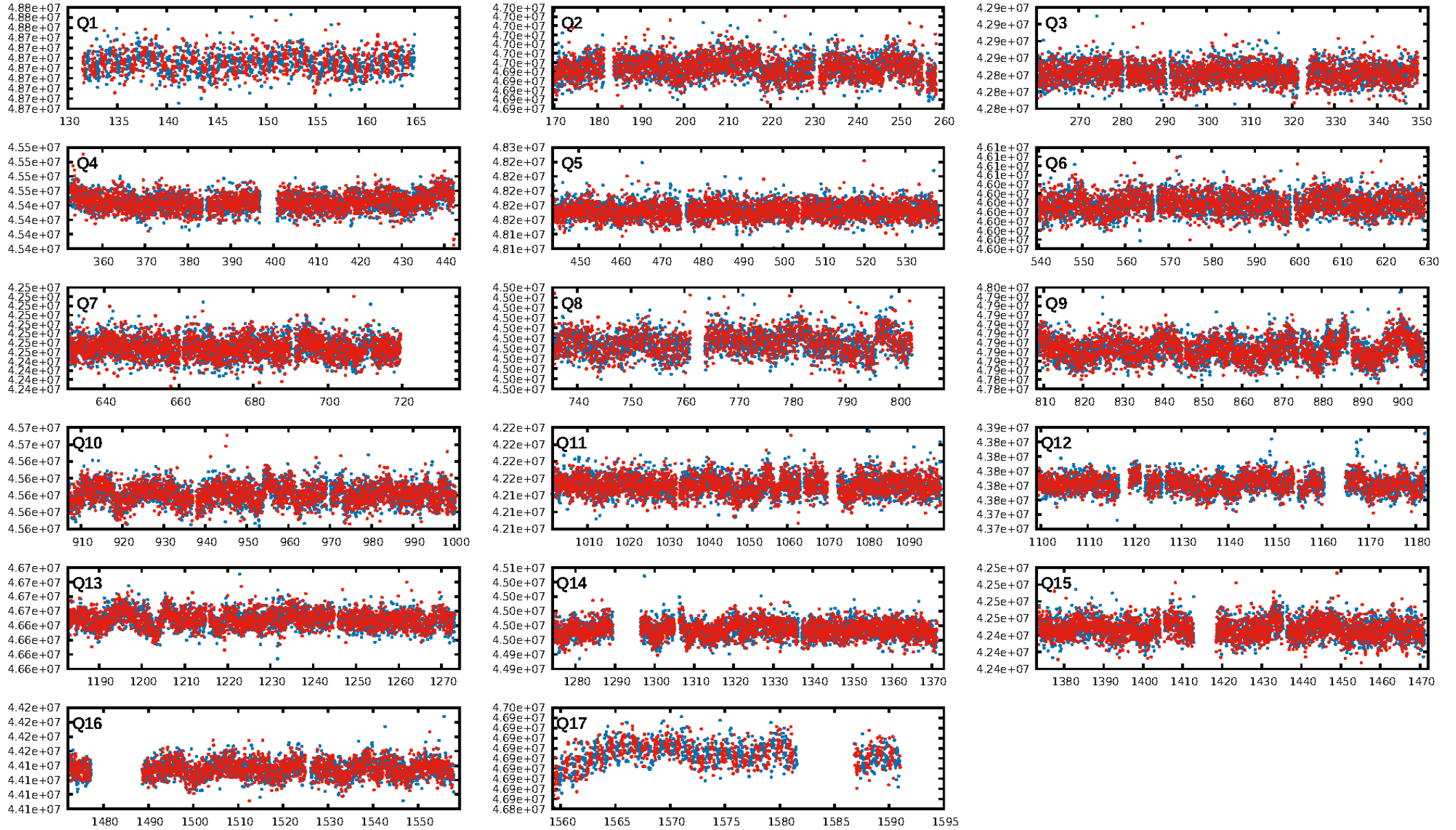
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.53e-09
RollingBand-fgt: 1.00 [1258/1258]
GhostDiagnostic-chr: 1.156
Centroid-sig: 0.2%
Centroid-so: 3.479 arcsec [2.38σ]
OotOffset-rm: 1.037 arcsec [1.36σ]
KicOffset-rm: 1.021 arcsec [1.30σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 1.00 [17/17]

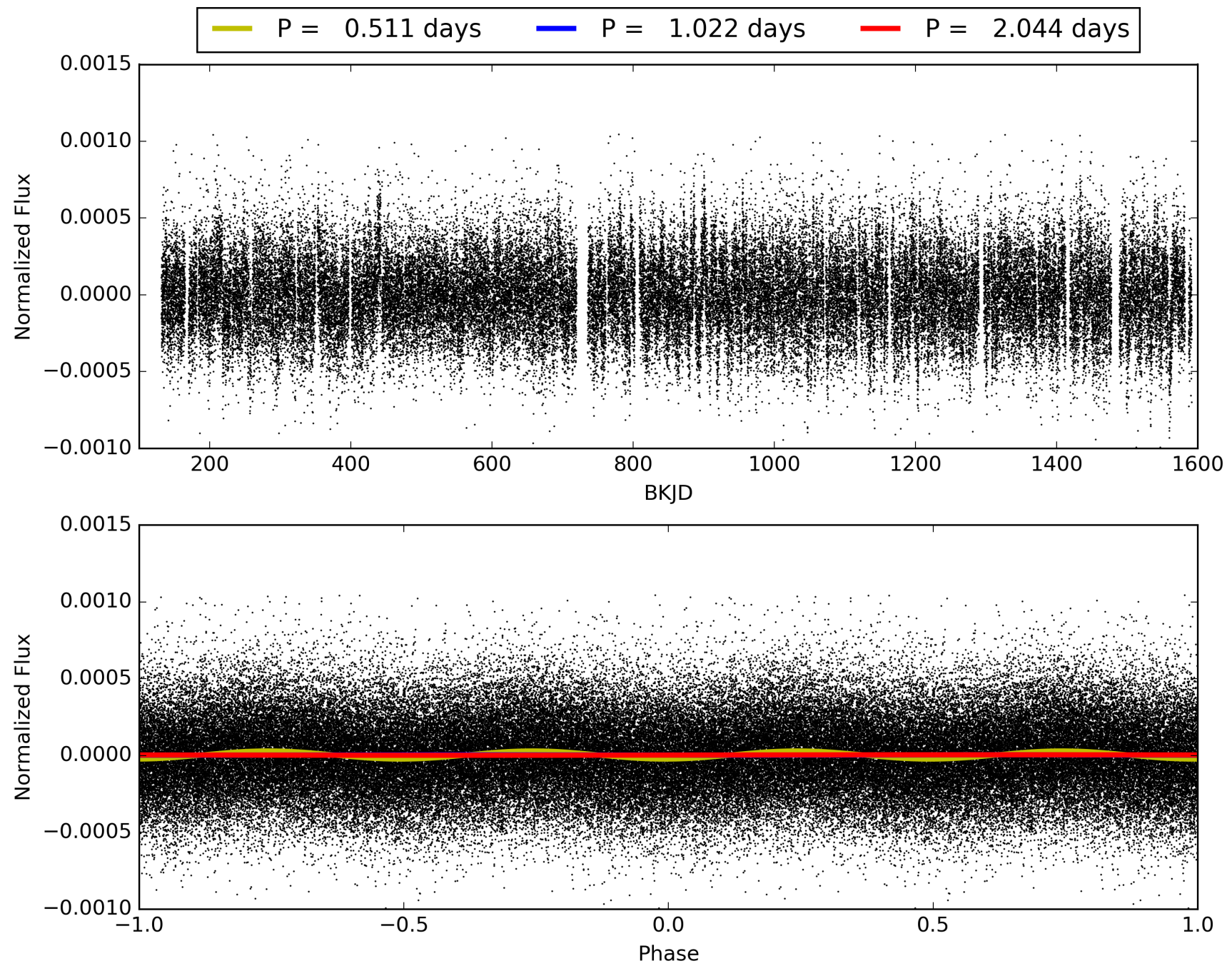
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:43:42 Z

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

TCE 006380750-01, PDC Light Curves

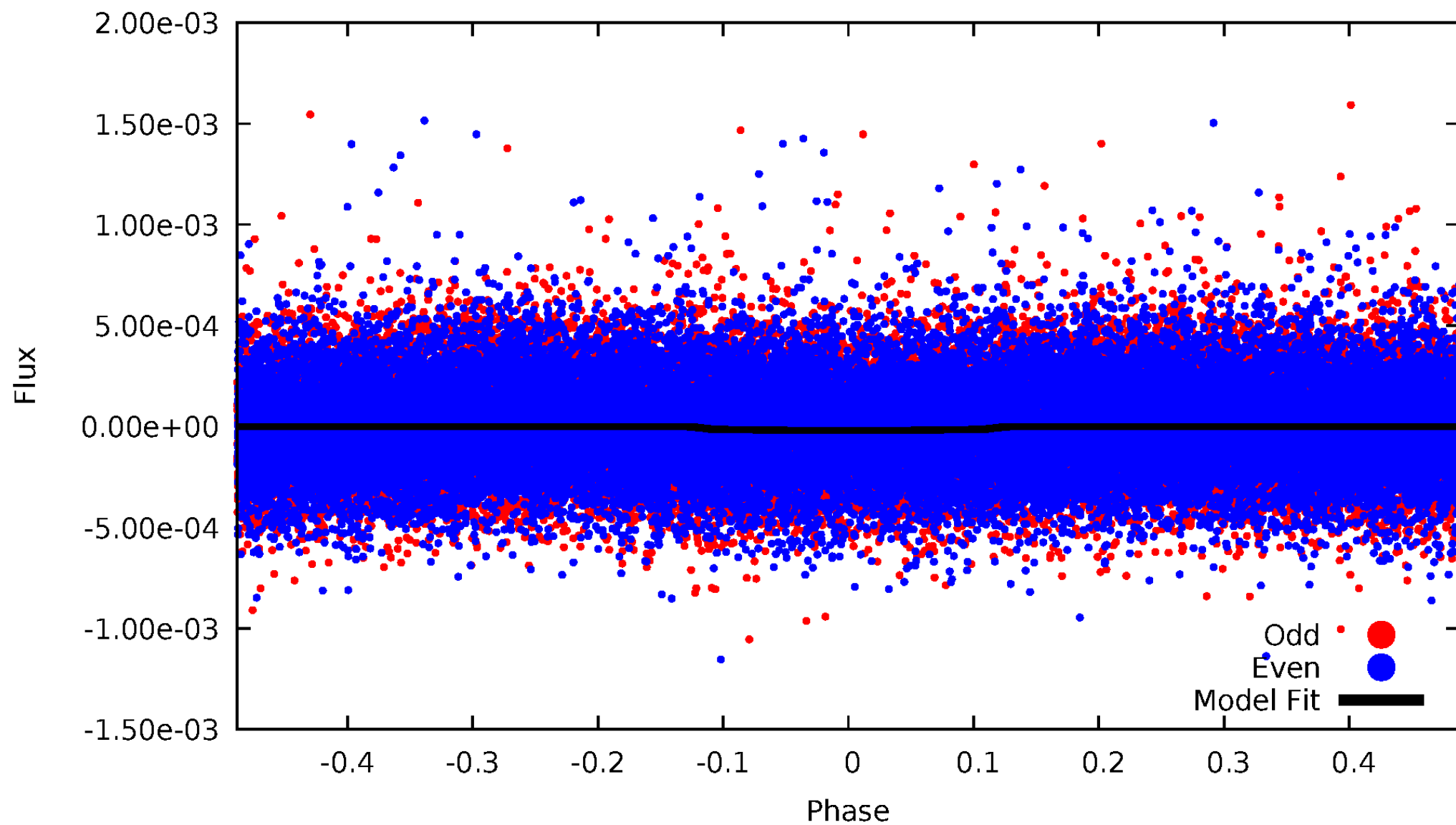


TCE 006380750-01



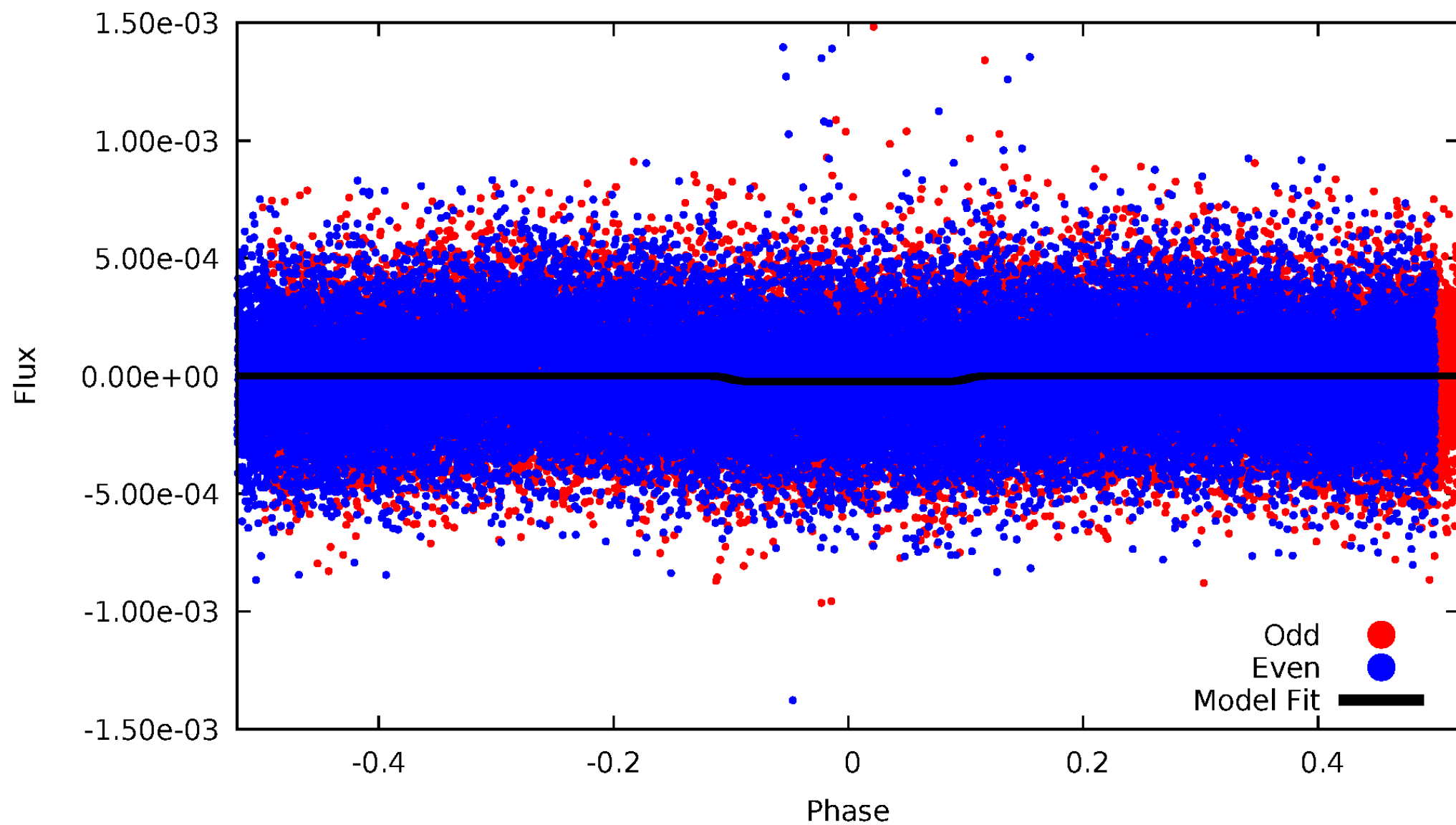
DV Odd/Even

TCE 006380750-01



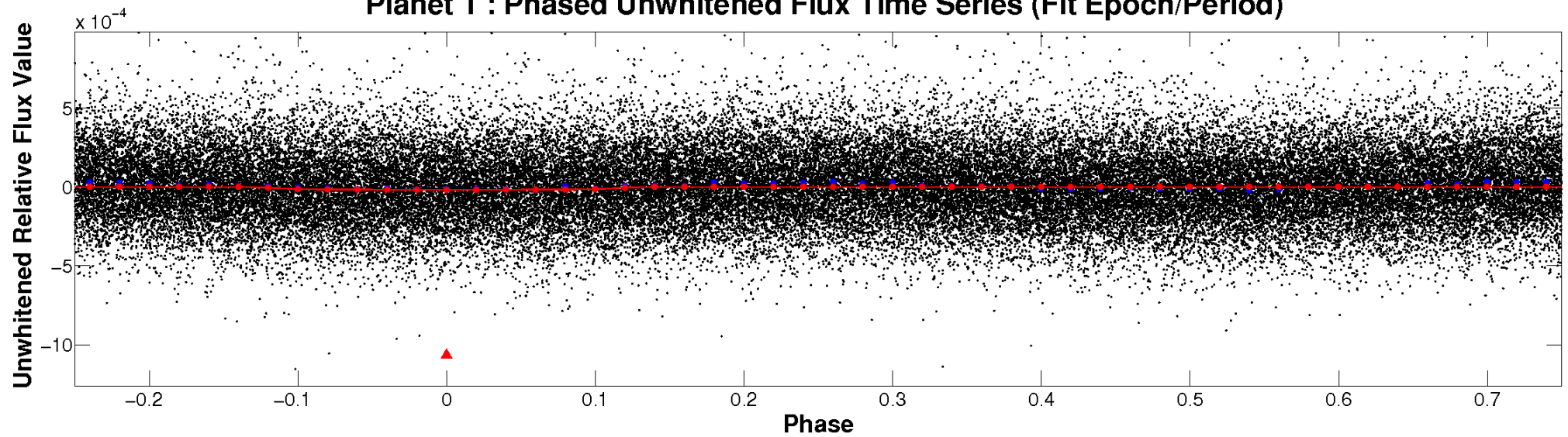
ALT Odd/Even

TCE 006380750-01

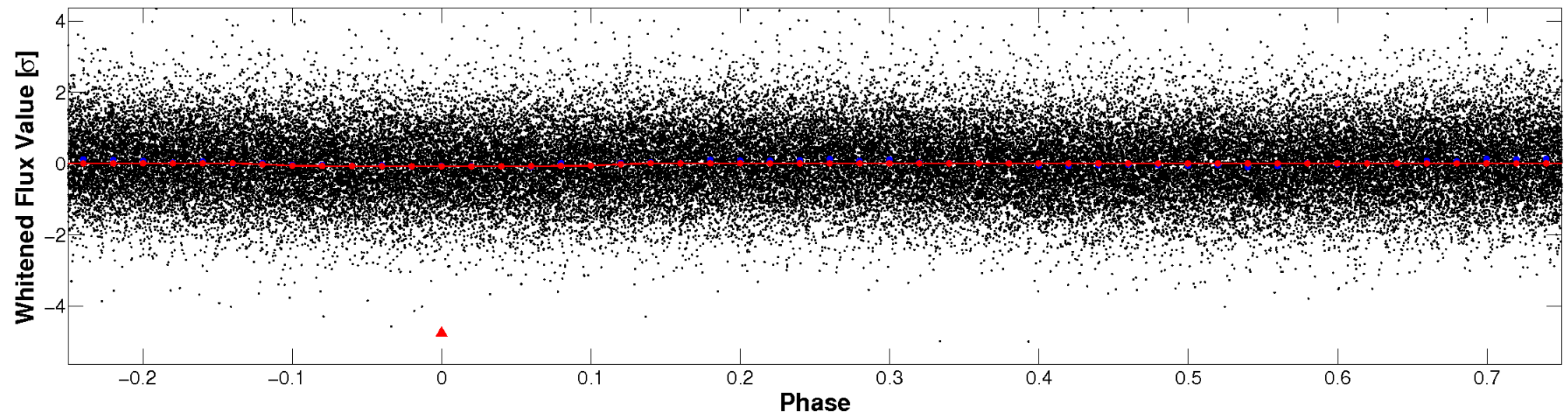


Non-Whitened Vs. Whitened Light Curve

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

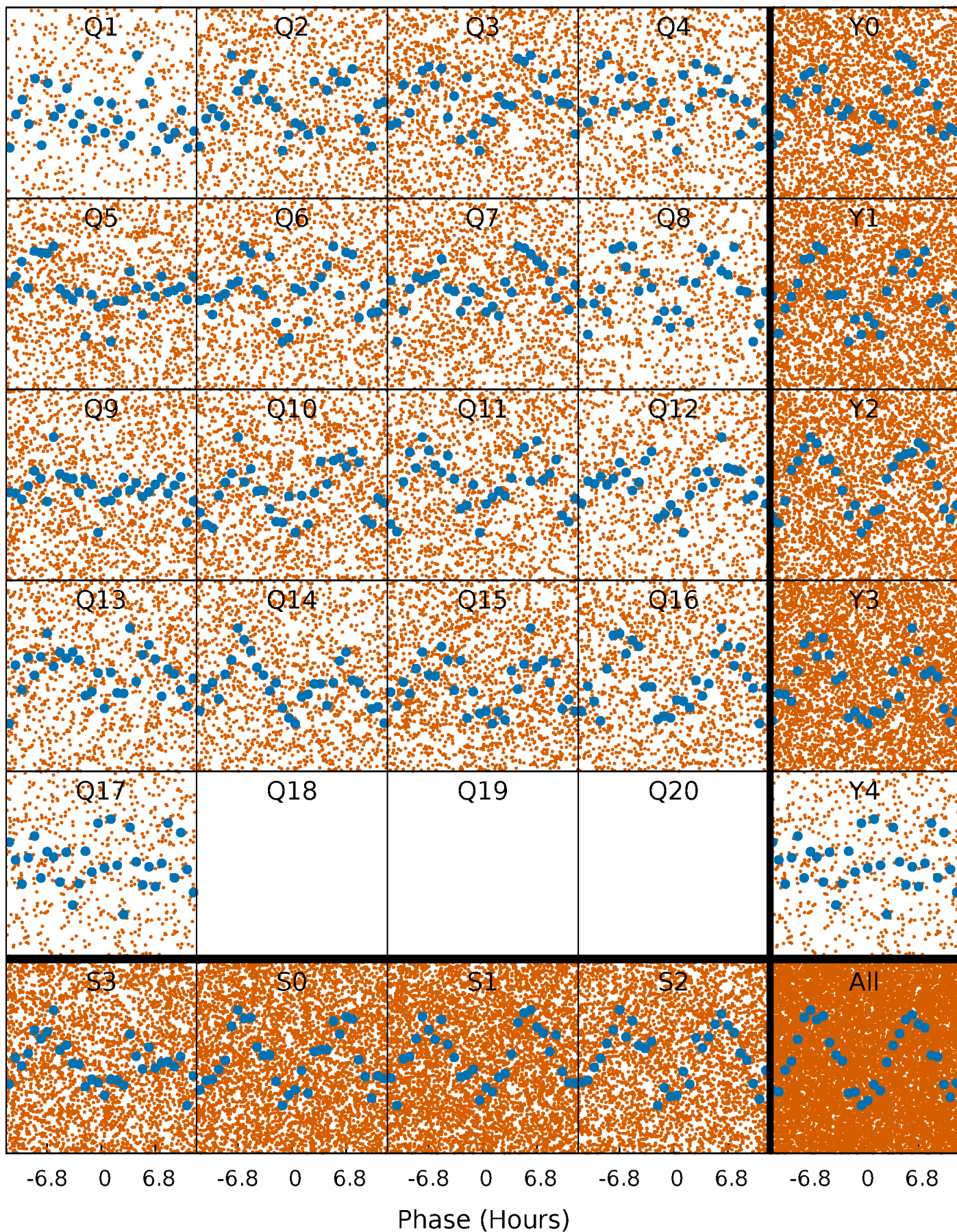


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



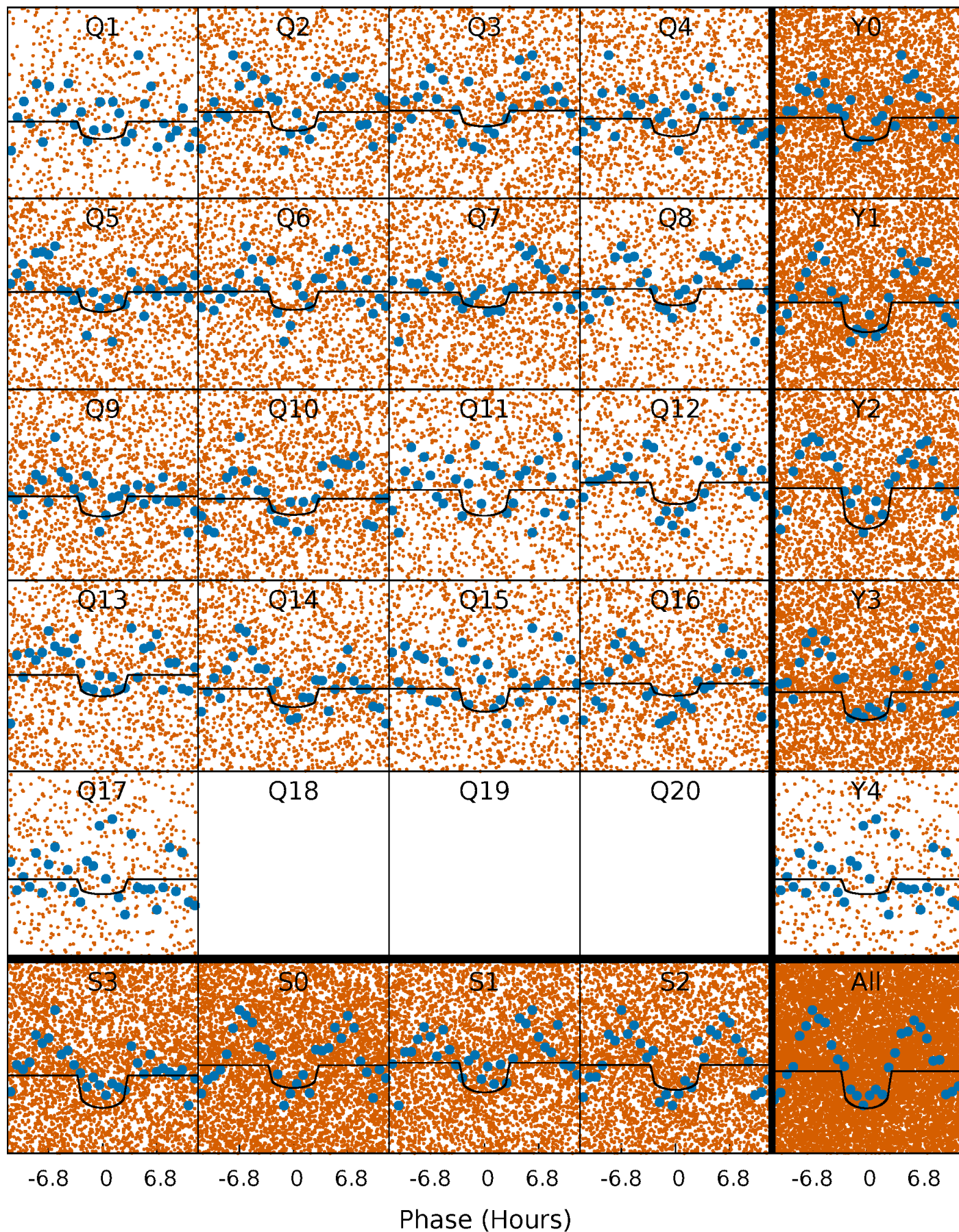
PDC Quarter-Phased Transit Curves

TCE 006380750-01 P= 1.022183 Days $T_0=132.544025$ (BKJD)



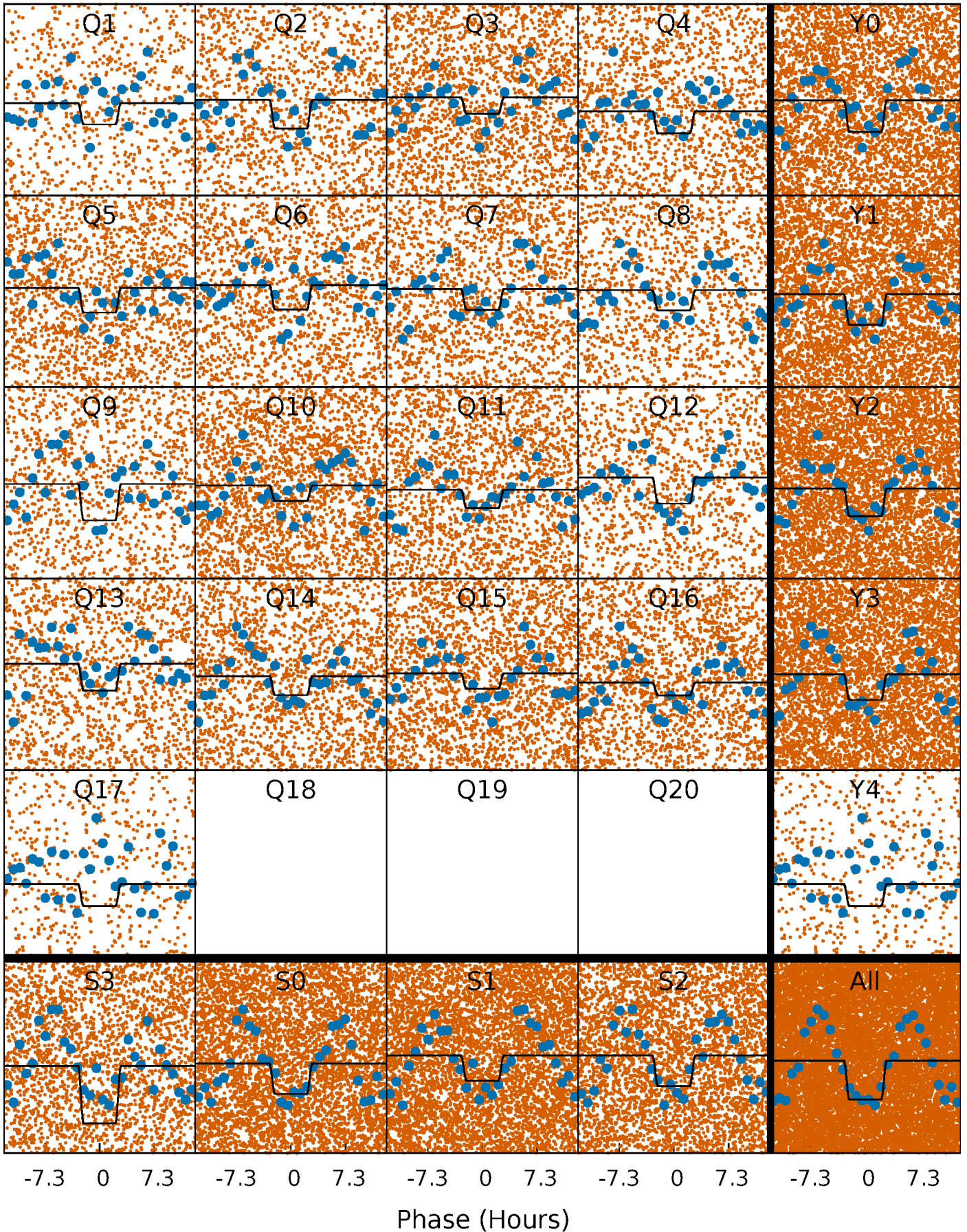
DV Quarter-Phased Transit Curves

TCE 006380750-01 P= 1.022183 Days $T_0=132.544025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

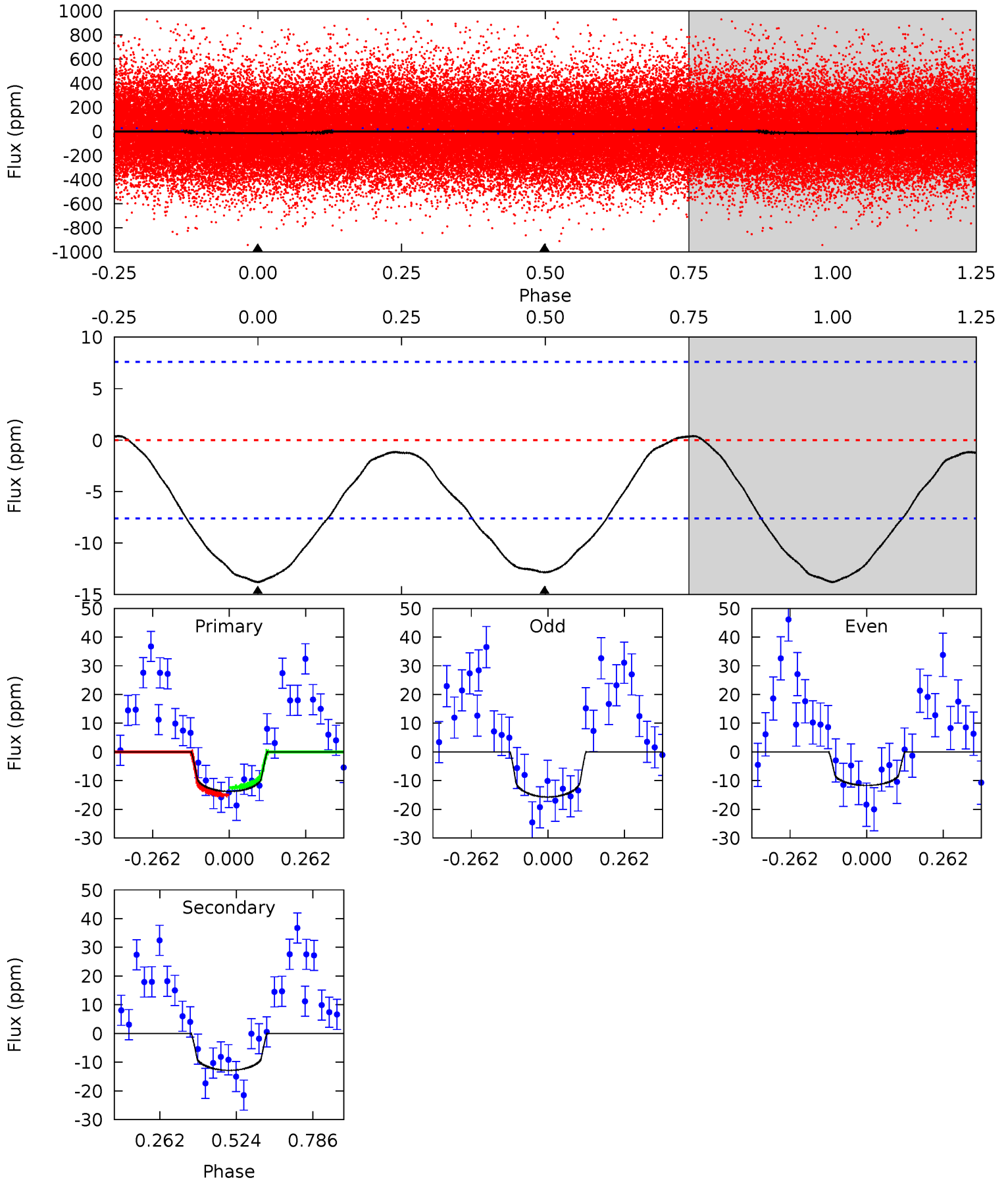
TCE 006380750-01 P= 1.022202 Days $T_0=132.523575$ (BKJD)



DV Model-Shift Uniqueness Test

006380750-01, P = 1.022183 Days, E = 130.499659 Days

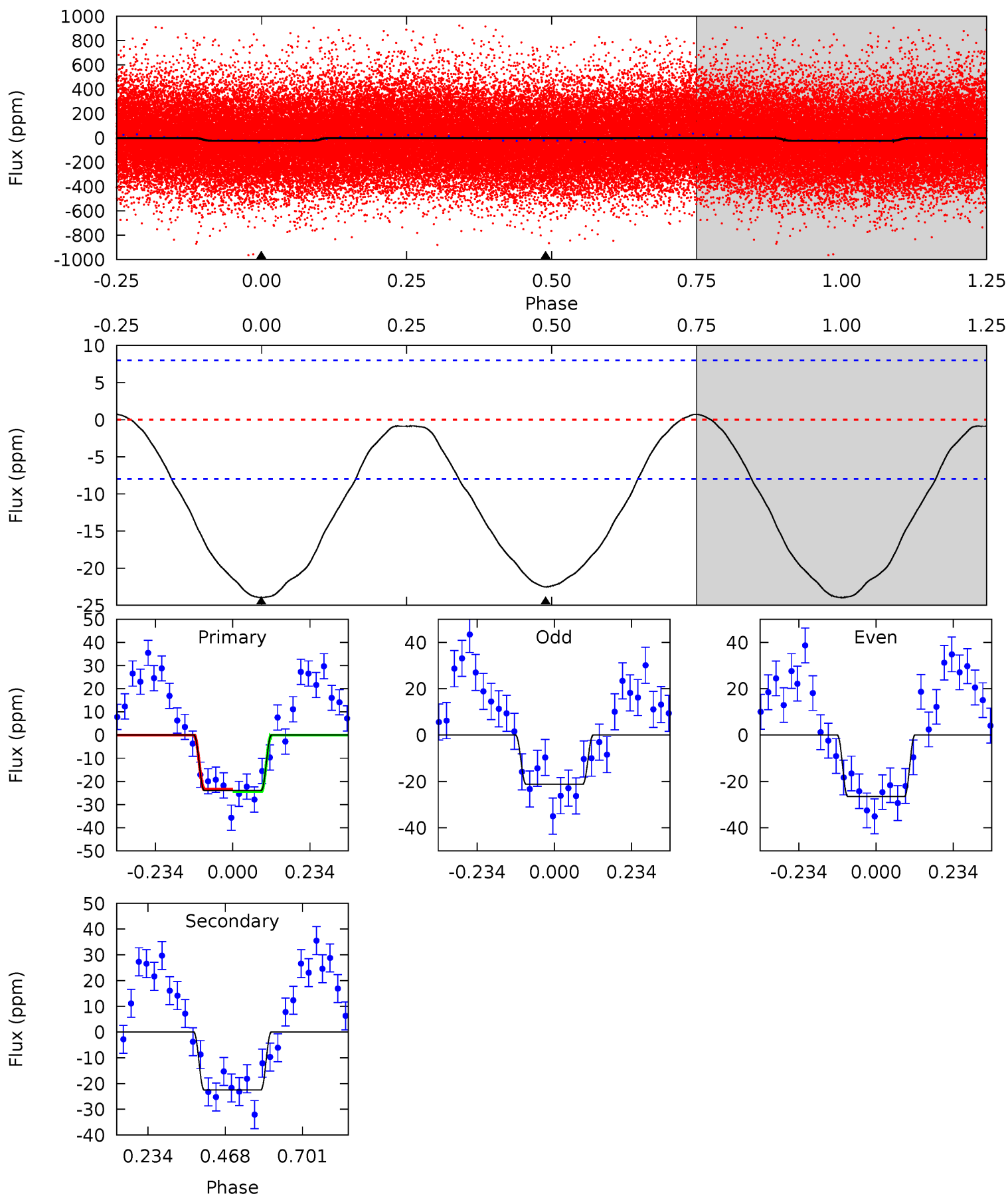
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.90	7.36	0	0	4.36	1.12	0.44	7.90	7.90	7.36	7.36	1.16	0.87	0.03	0.75



Alt Model-Shift Uniqueness Test

006380750-01, P = 1.022202 Days, E = 131.501373 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	12.4	0	0	4.38	1.19	0.36	13.1	13.1	12.4	12.4	1.47	1.05	0.03	0.26



Stellar Parameters For KIC 006380750

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6203^{+168}_{-225}	$4.448^{+0.056}_{-0.224}$	$-0.140^{+0.250}_{-0.350}$	$1.023^{+0.350}_{-0.117}$	$1.068^{+0.159}_{-0.144}$	$1.404^{+0.431}_{-0.779}$
	+3%/-4%	+1%/-5%	+179%/-250%	+34%/-11%	+15%/-13%	+31%/-55%
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 006380750-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 2	$0.57^{+0.39}_{-0.31}$	2771^{+227}_{-151}	5291^{+2880}_{-1011}	$8.878^{+32.833}_{-5.856}$
Alt.	-23 ± 2	$0.61^{+0.41}_{-0.32}$	2767^{+210}_{-150}	5856^{+3151}_{-1166}	13^{+45}_{-9}

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 $A_{obs} \gg 1.0$

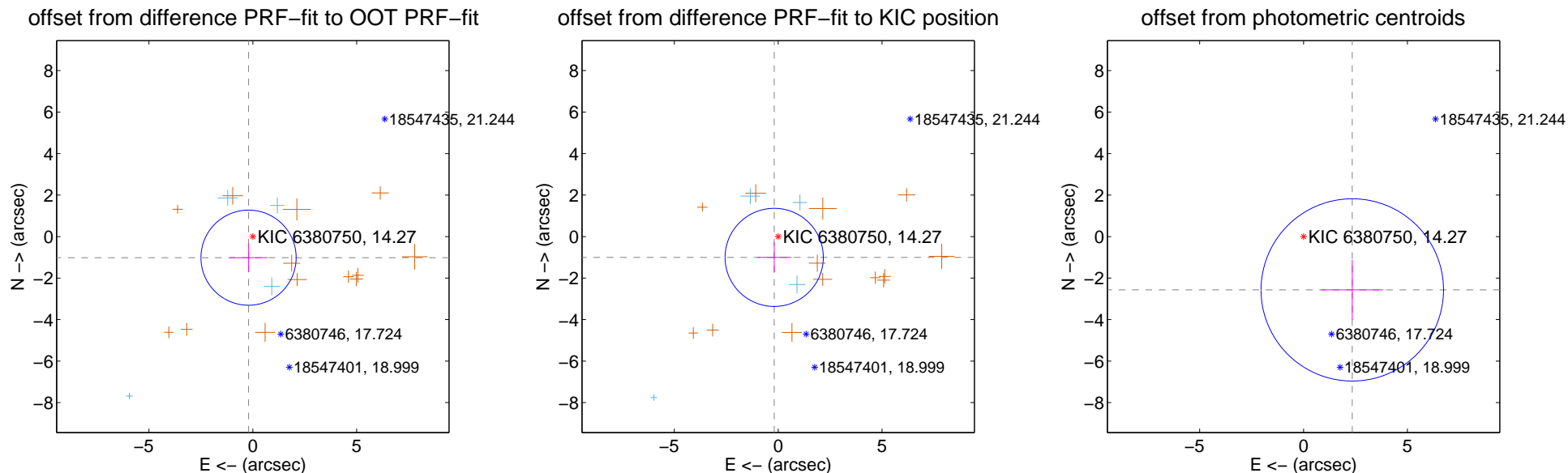
DV Centroid Data

Supplemental centroid analysis for 006380750-01. Kepler magnitude: 14.27. Transit SNR 8.57

There are 4 quarters with good PRF difference image offsets

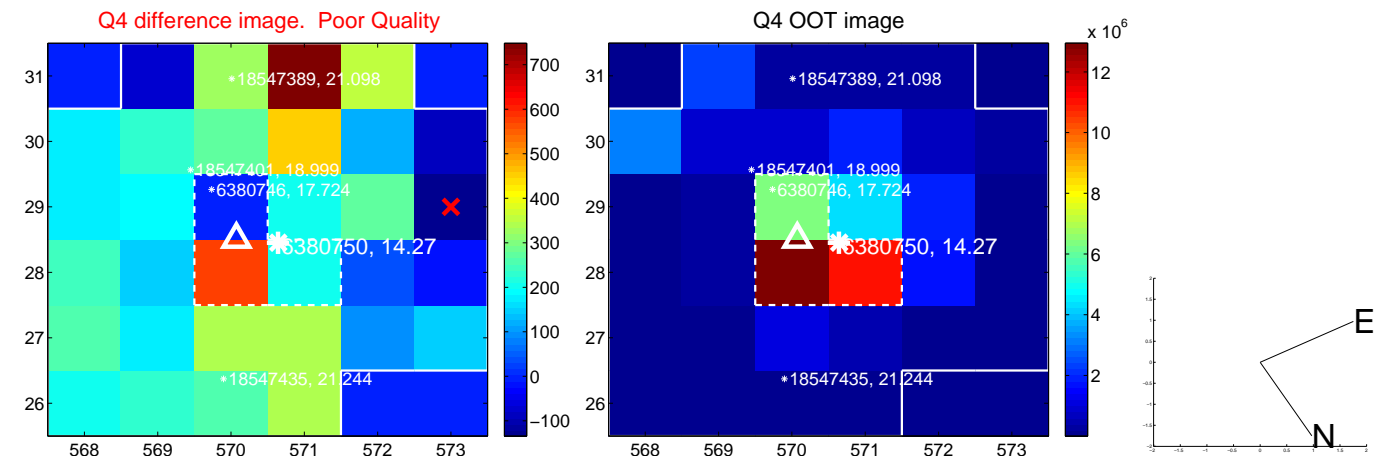
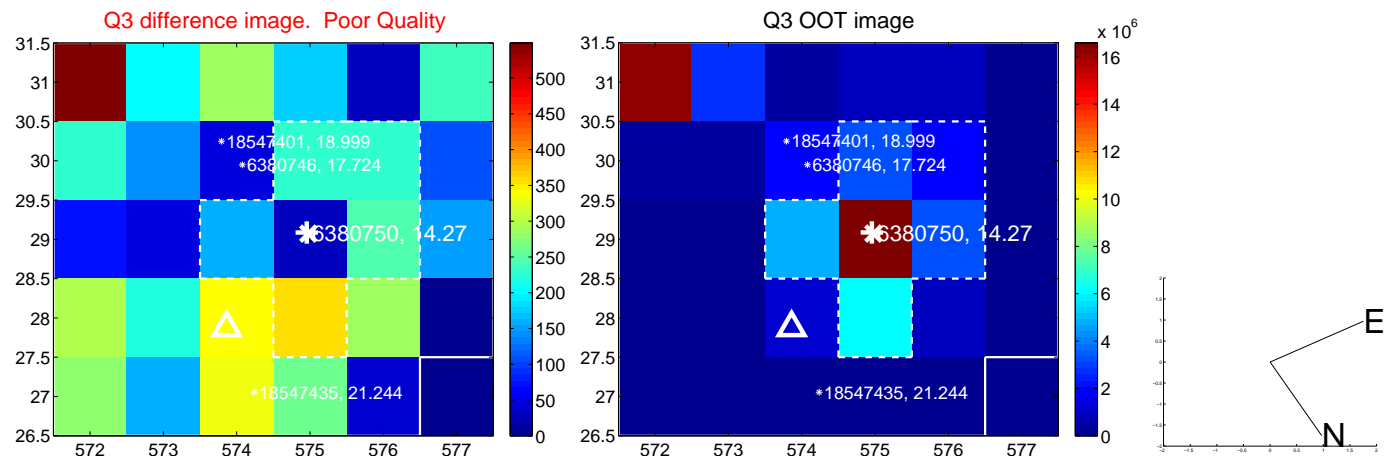
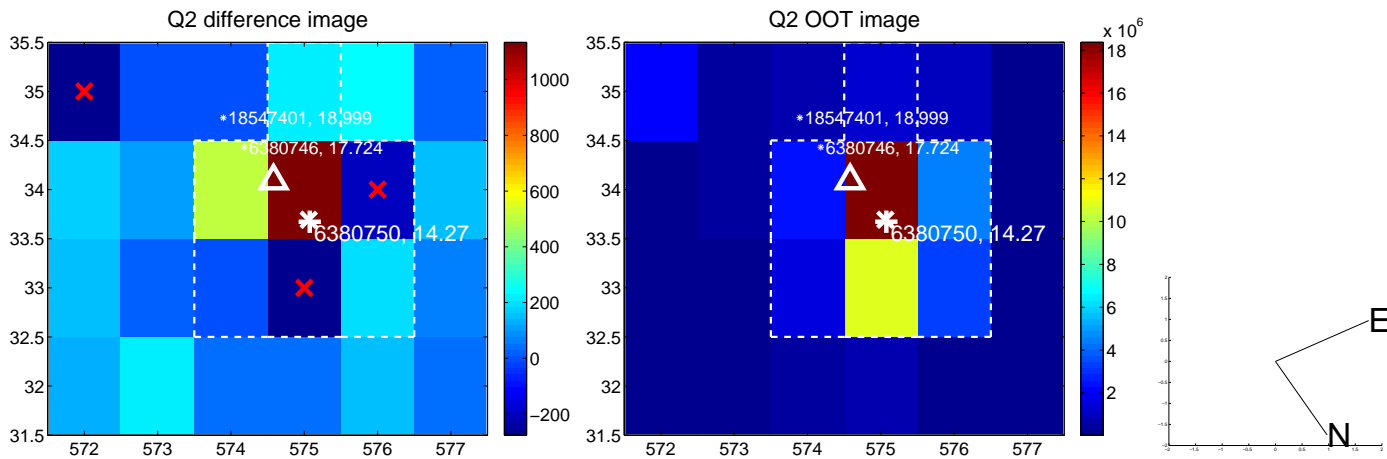
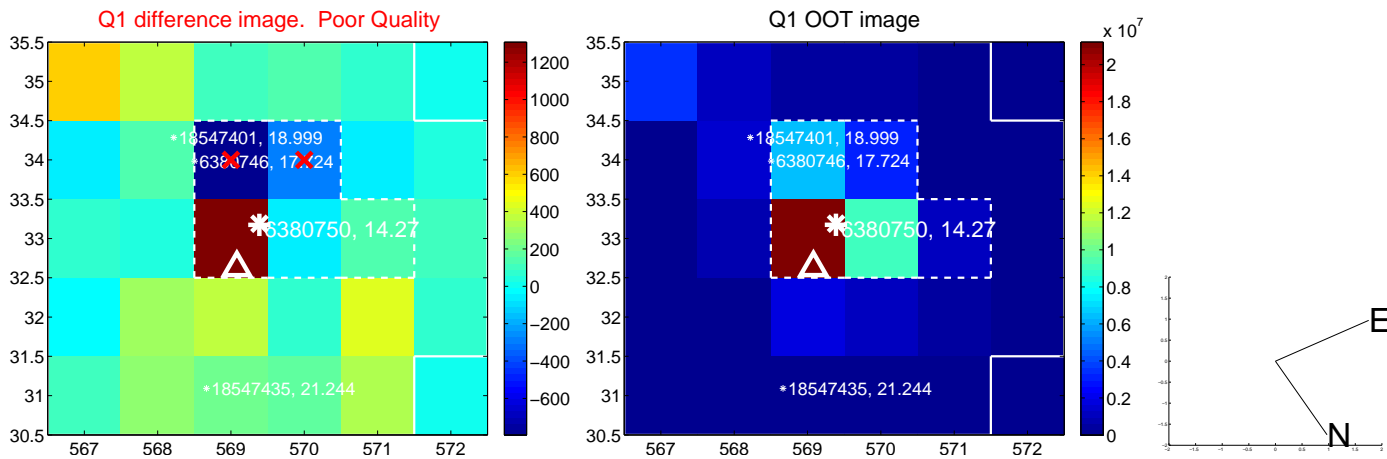
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.037 ± 0.764	1.36	0.205 ± 0.925	-1.016 ± 0.689
PRF-fit source offset from KIC position	1.021 ± 0.788	1.30	0.192 ± 0.813	-1.002 ± 0.735
photometric centroid source offset	3.48 ± 1.46	2.38	-2.35 ± 1.48	-2.57 ± 1.45

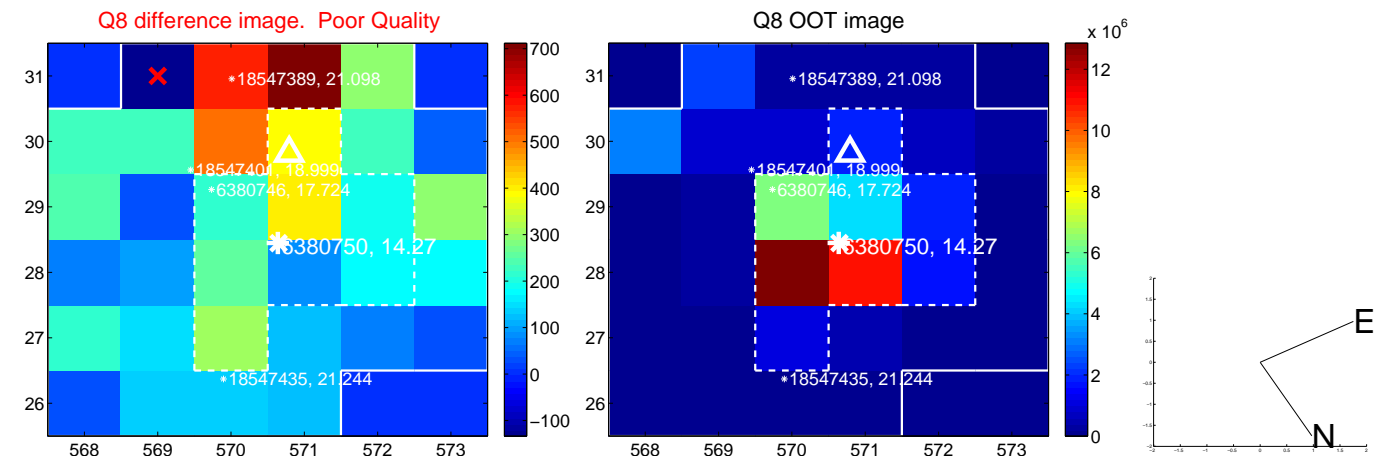
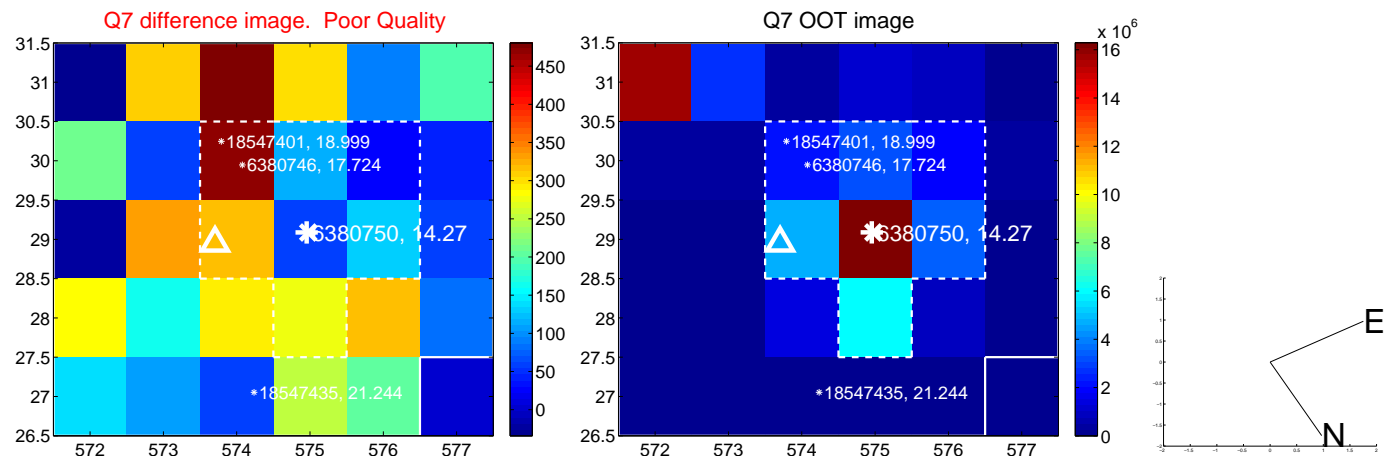
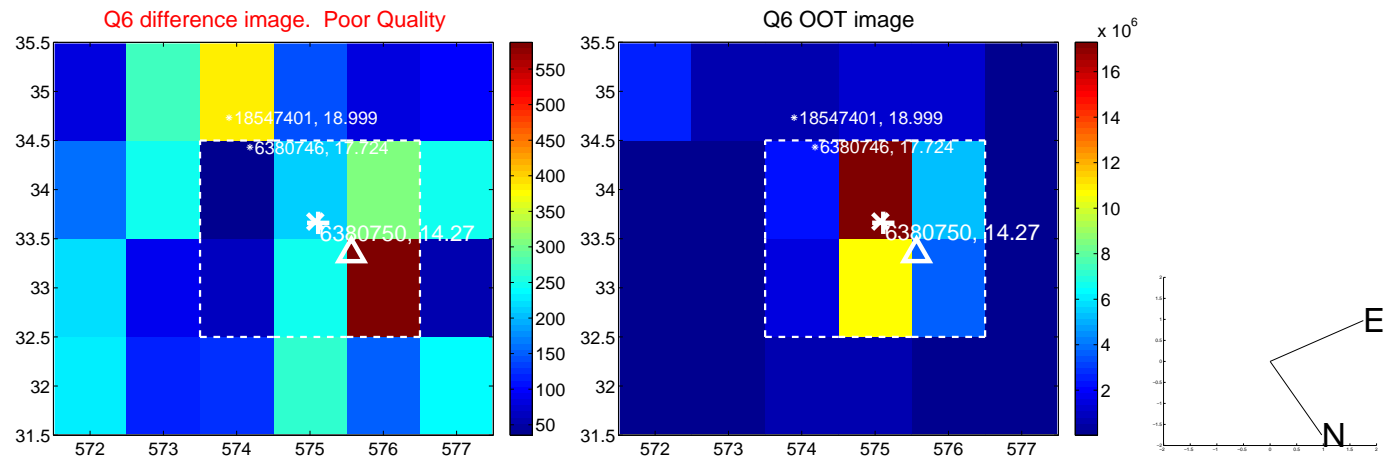
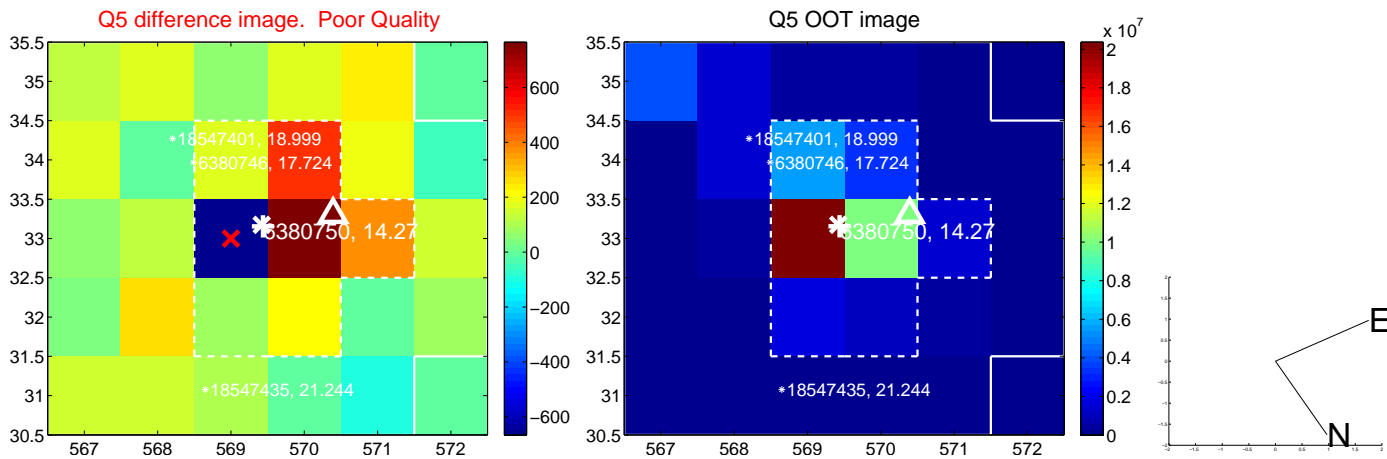


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

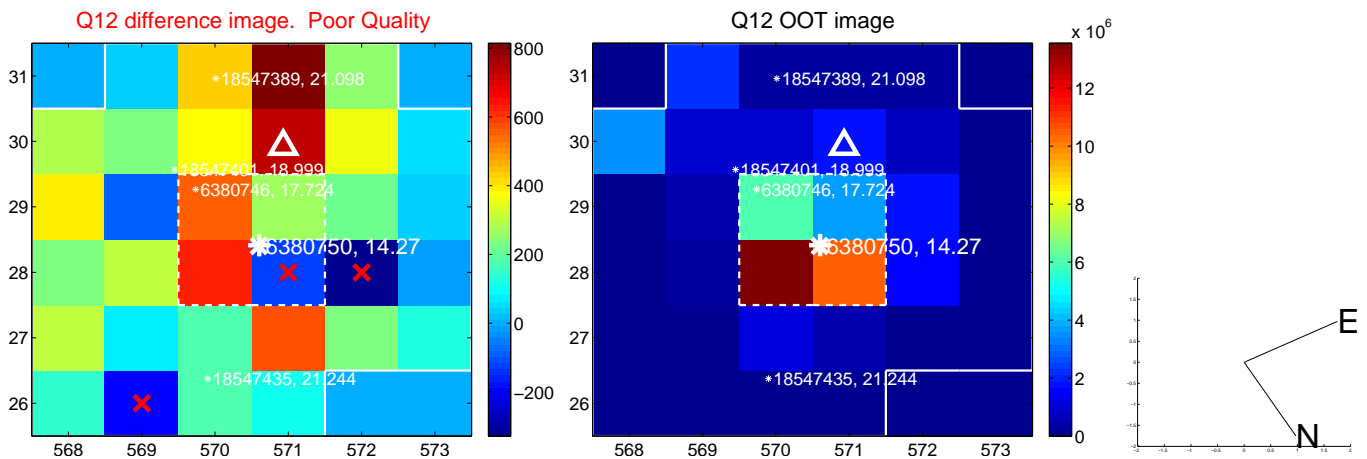
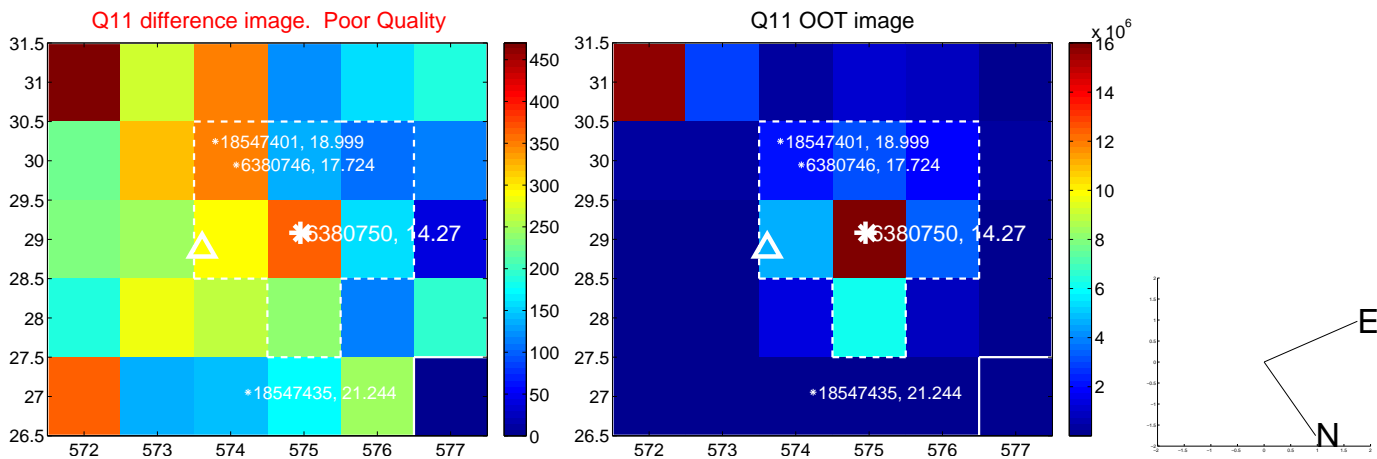
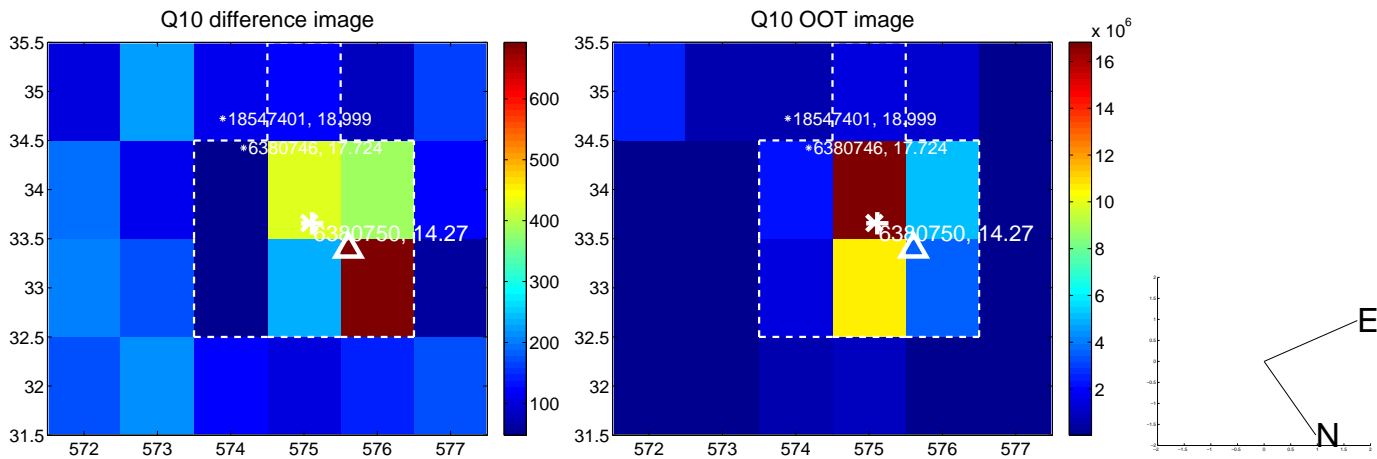
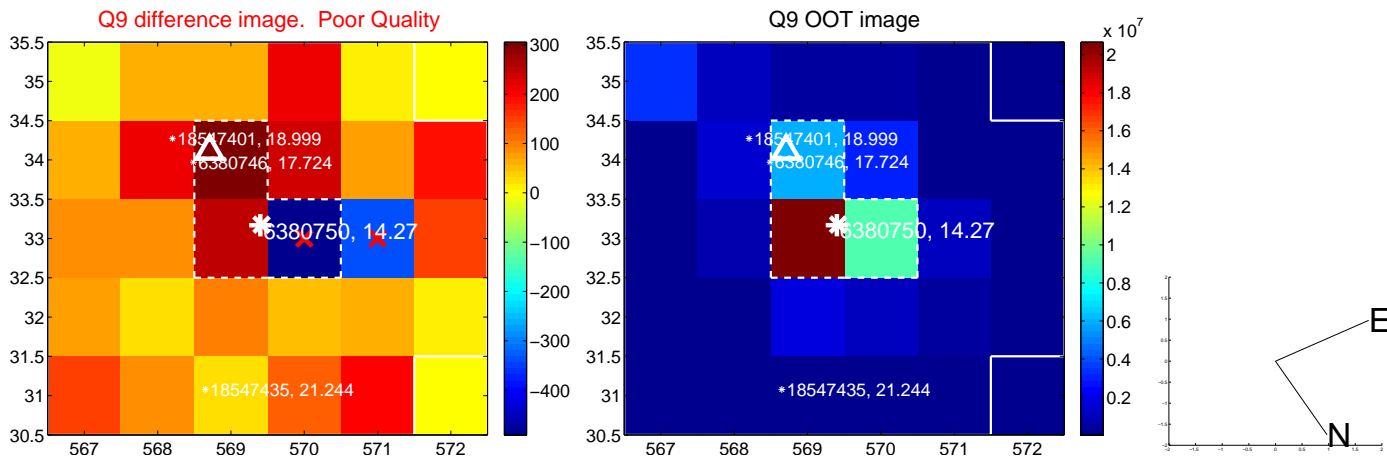
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



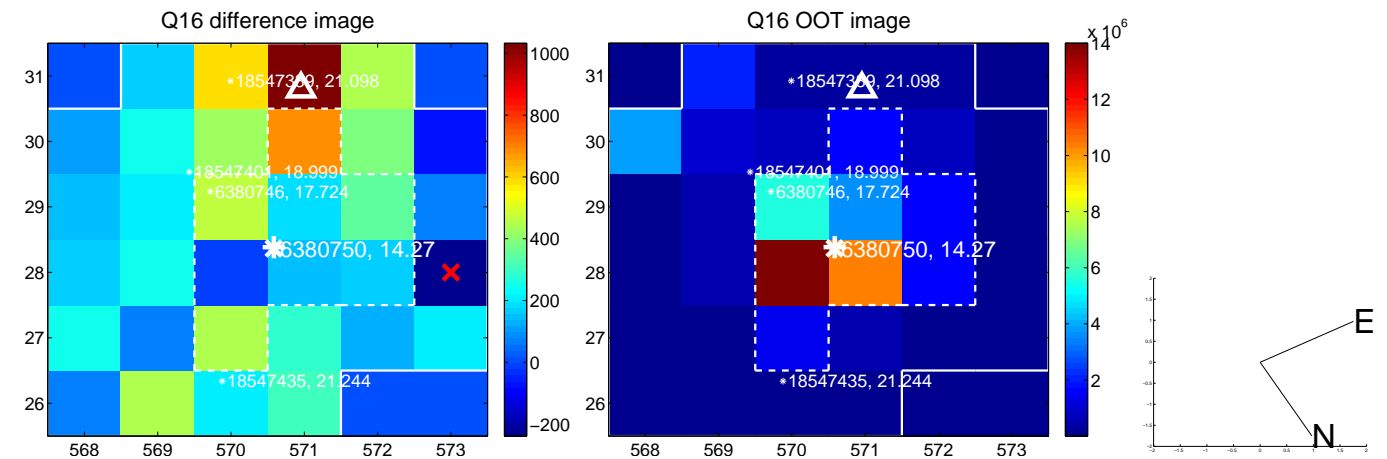
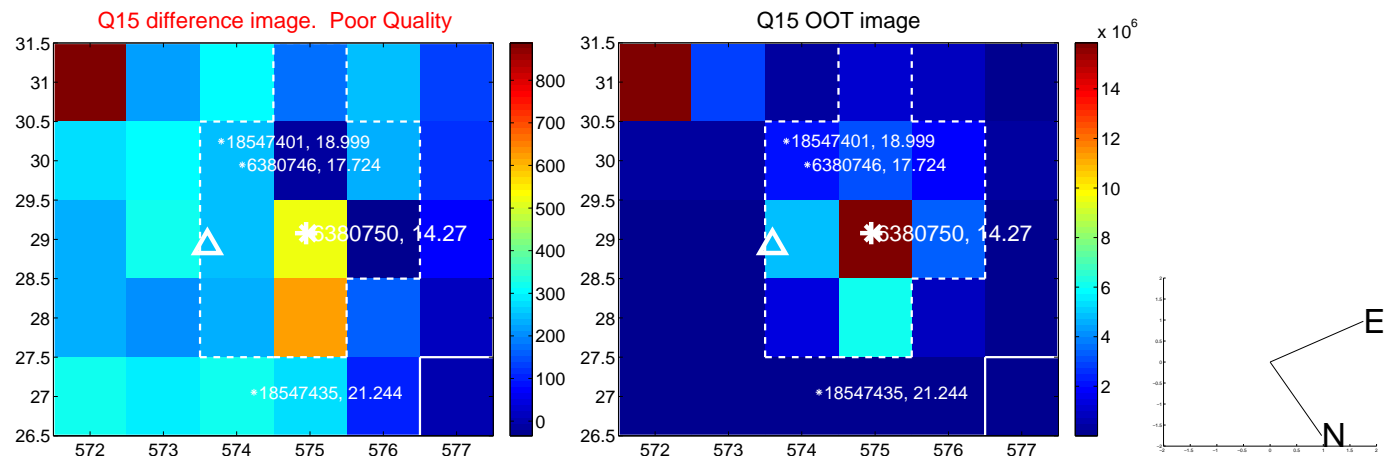
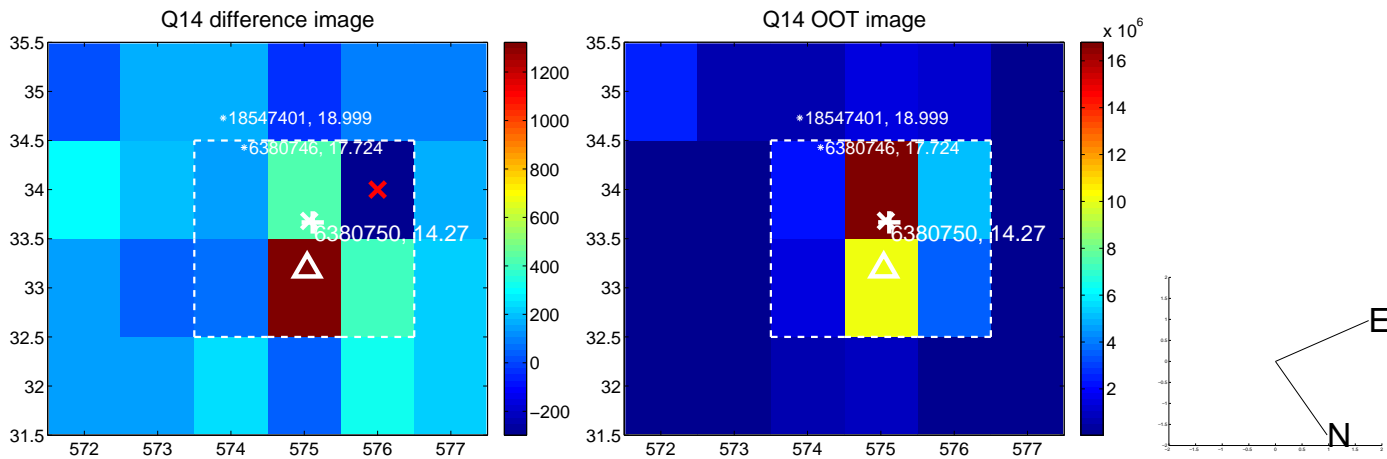
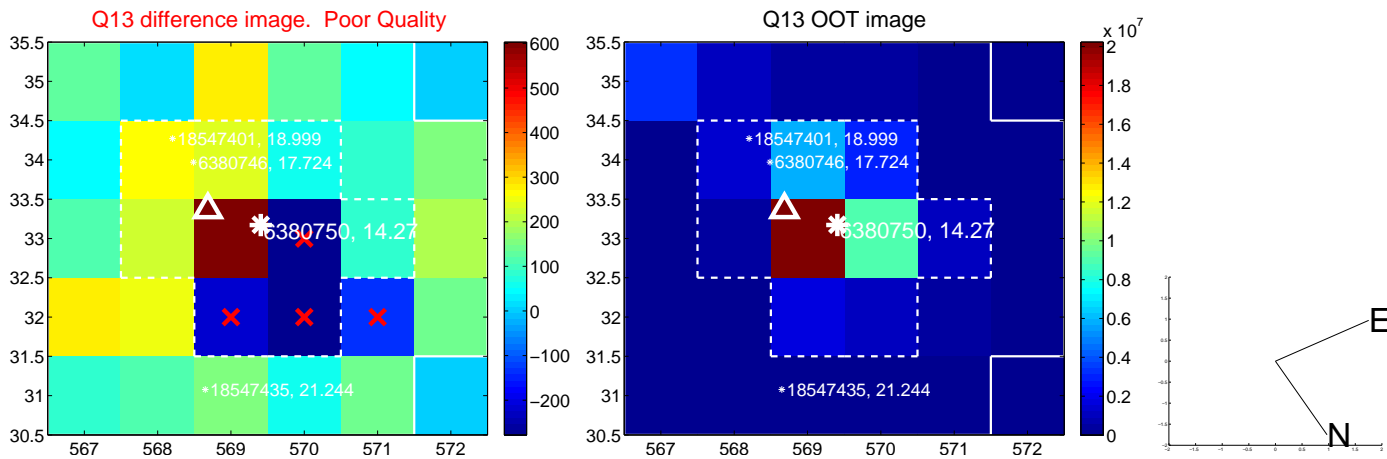
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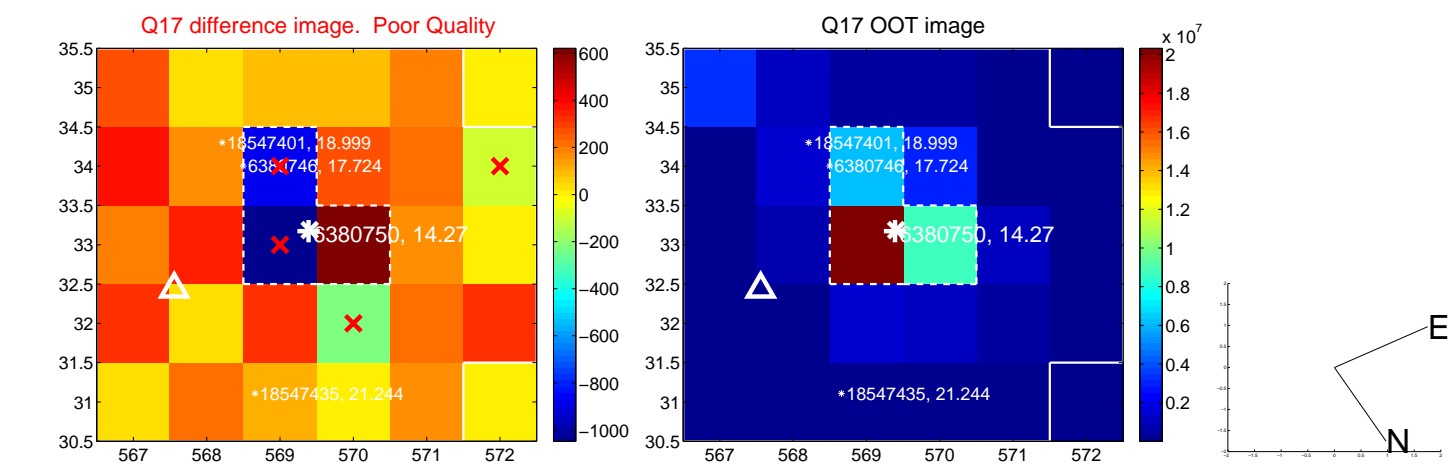
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



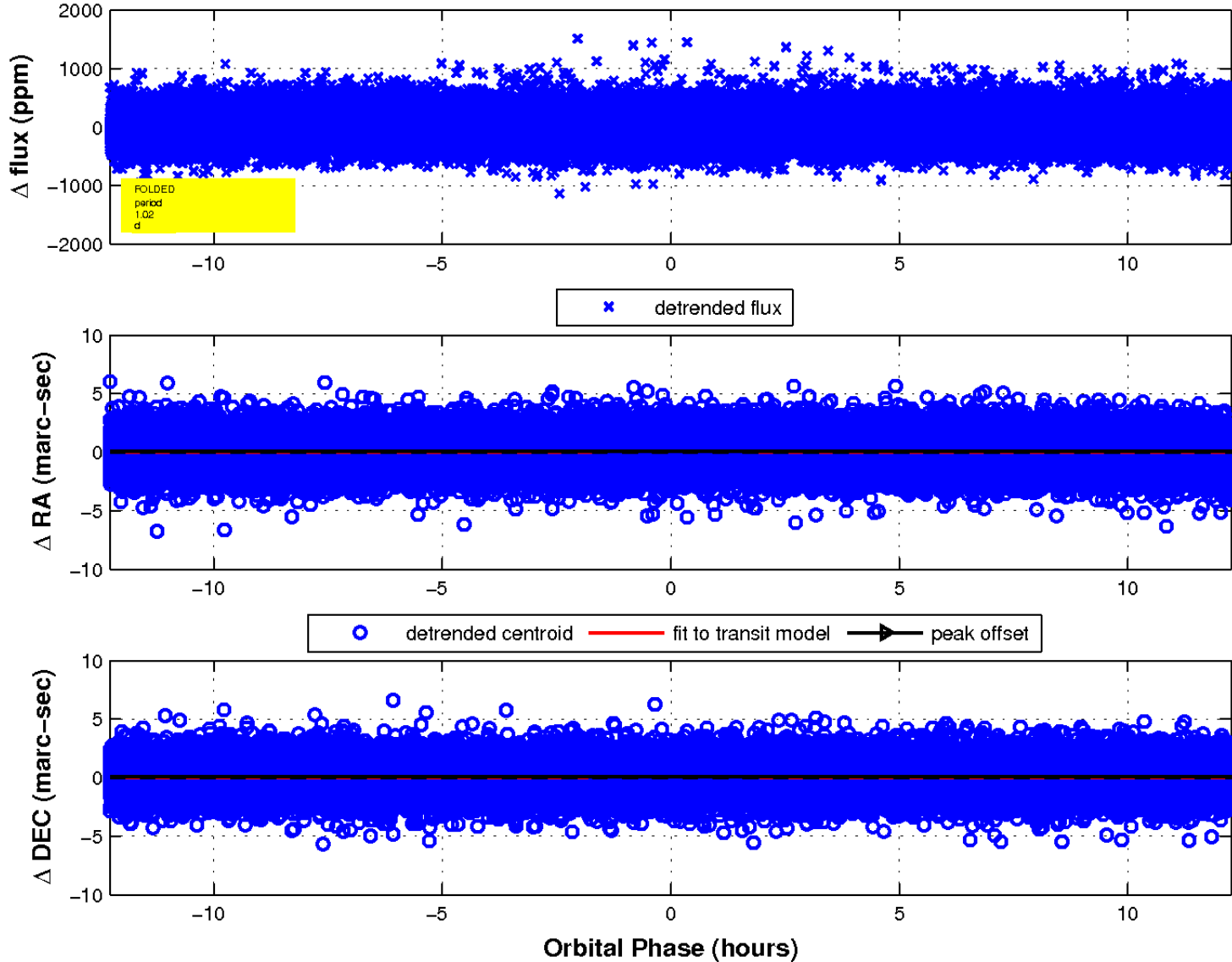
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

