

KIC 006364162

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})
006364162-01	OBS	2889.01	5.243746	132.701032	223.1	15.017	27.3	31.9	1.06	6197	2.39	412.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006364162-01	OBS	FP	0.00	0	0	1	1	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 006364162-01

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
006364162-01	6364162	TT-Lyr-pri	6364290	1:1	149.6	-36	-12	9.49	15.16	3830.10	Direct-PRF	0	0.18	0.25

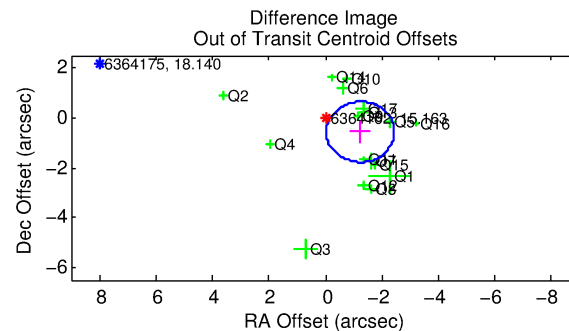
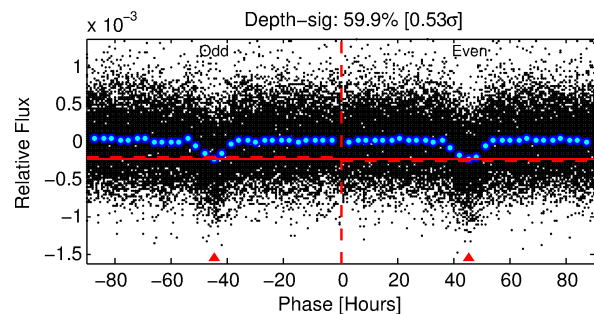
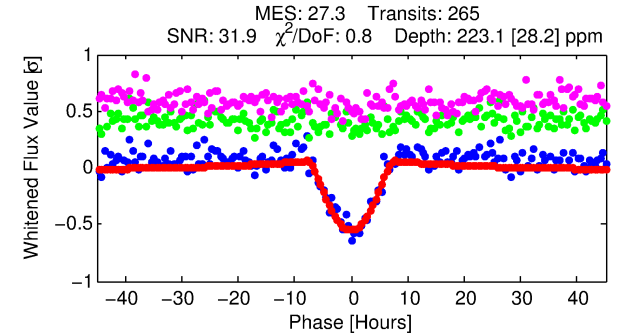
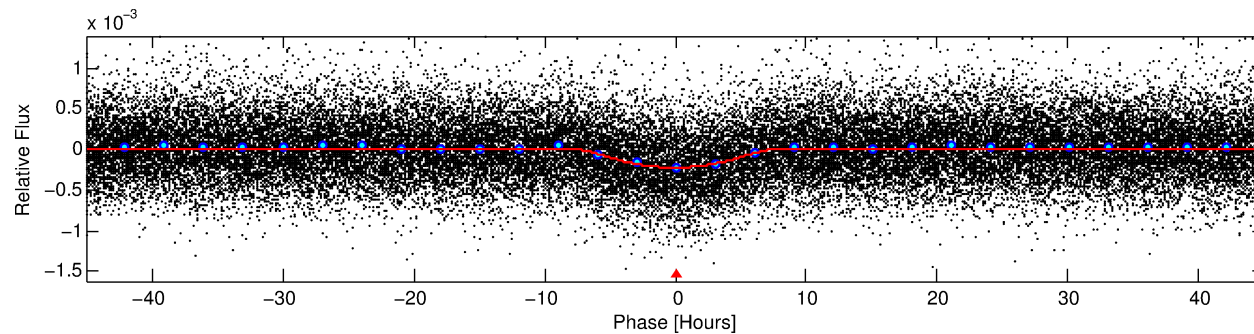
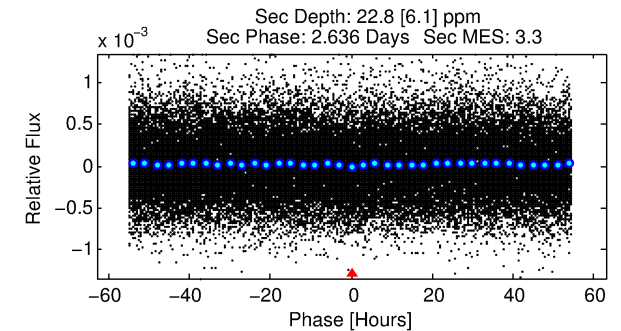
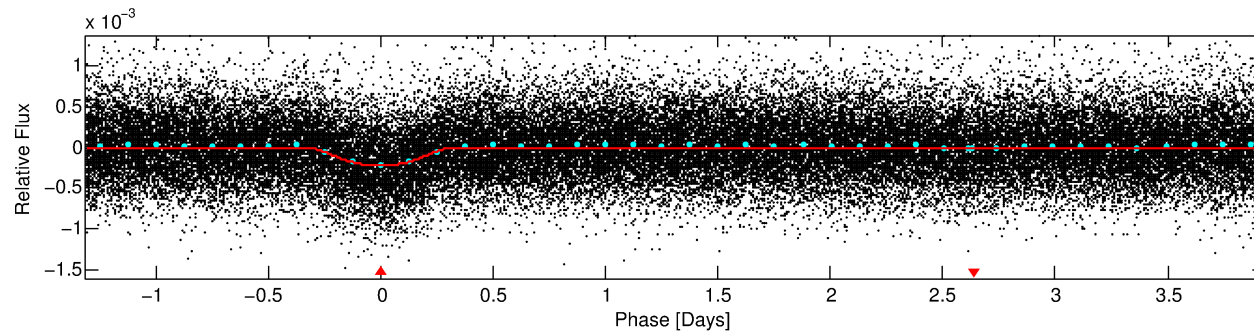
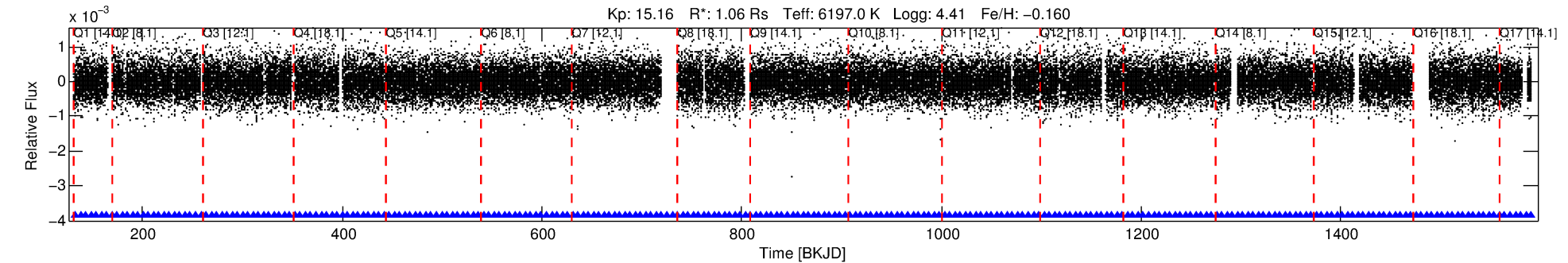
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period 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: 6364162 Candidate: 1 of 1 Period: 5.244 d

KOI: K02889.01 Corr: 0.982

Kp: 15.16 R*: 1.06 Rs Teff: 6197.0 K Logg: 4.41 Fe/H: -0.160



DV Fit Results:

Period = 5.24375 [0.00007] d
Epoch = 132.7010 [0.0103] BKJD
Rp/R* = 0.0207 [0.0057]
a/R* = 1.21 [0.04]
b = 0.99 [0.01]
Seff = 412.29 [168.58]
Teq = 1149 [117] K
Rp = 2.39 [1.01] Re
a = 0.0598 [0.0159] AU
Ag = 7.86 [5.62] [1.22σ]
Teffp = 2975 [465] K [3.80σ]

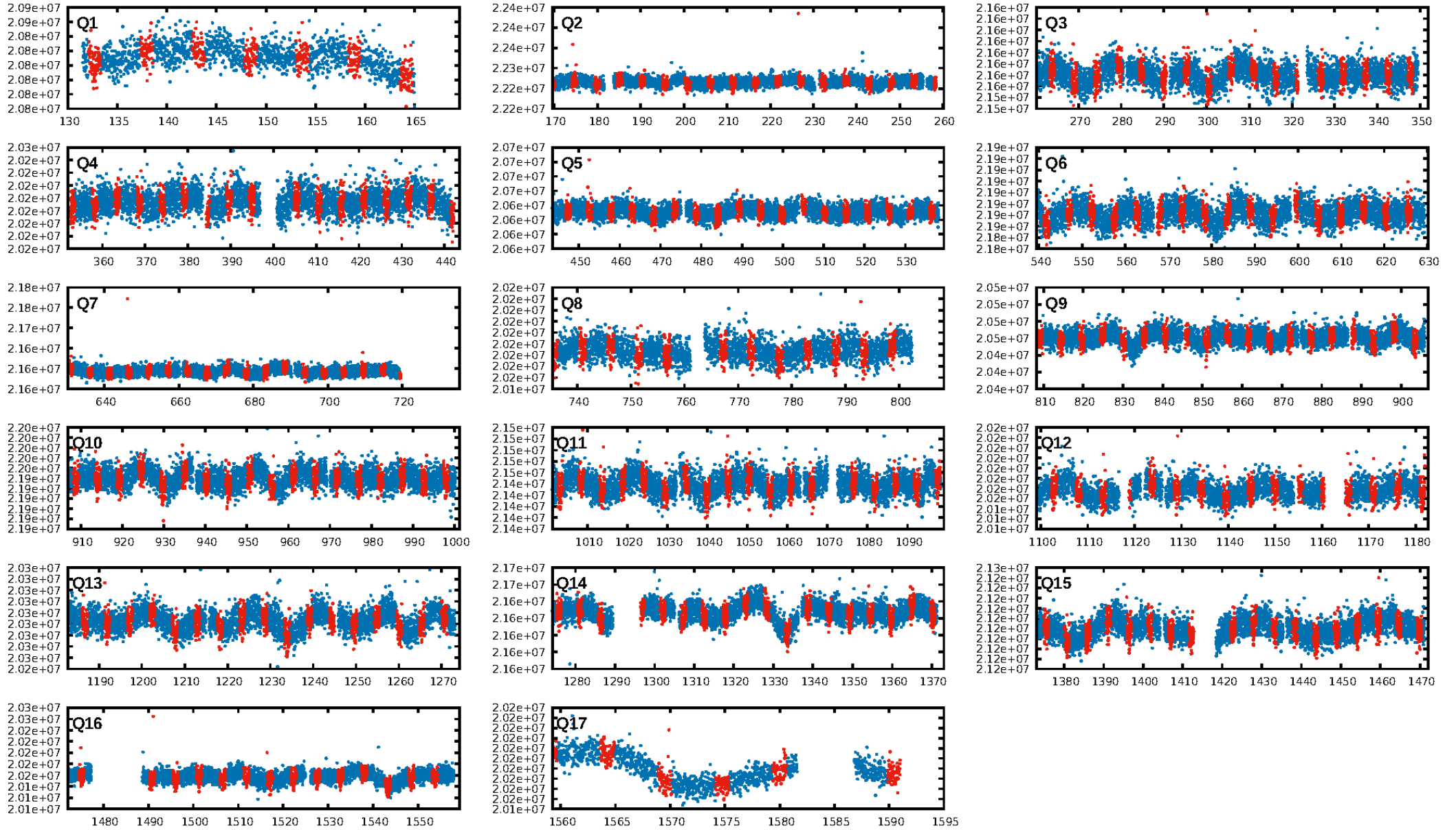
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-135
RollingBand-fgt: 1.00 [252/252]
GhostDiagnostic-chr: 0.03394
Centroid-sig: 0.0%
Centroid-so: 1.096 arcsec [3.02σ]
OotOffset-rm: 1.357 arcsec [3.37σ]
KicOffset-rm: 1.471 arcsec [3.32σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

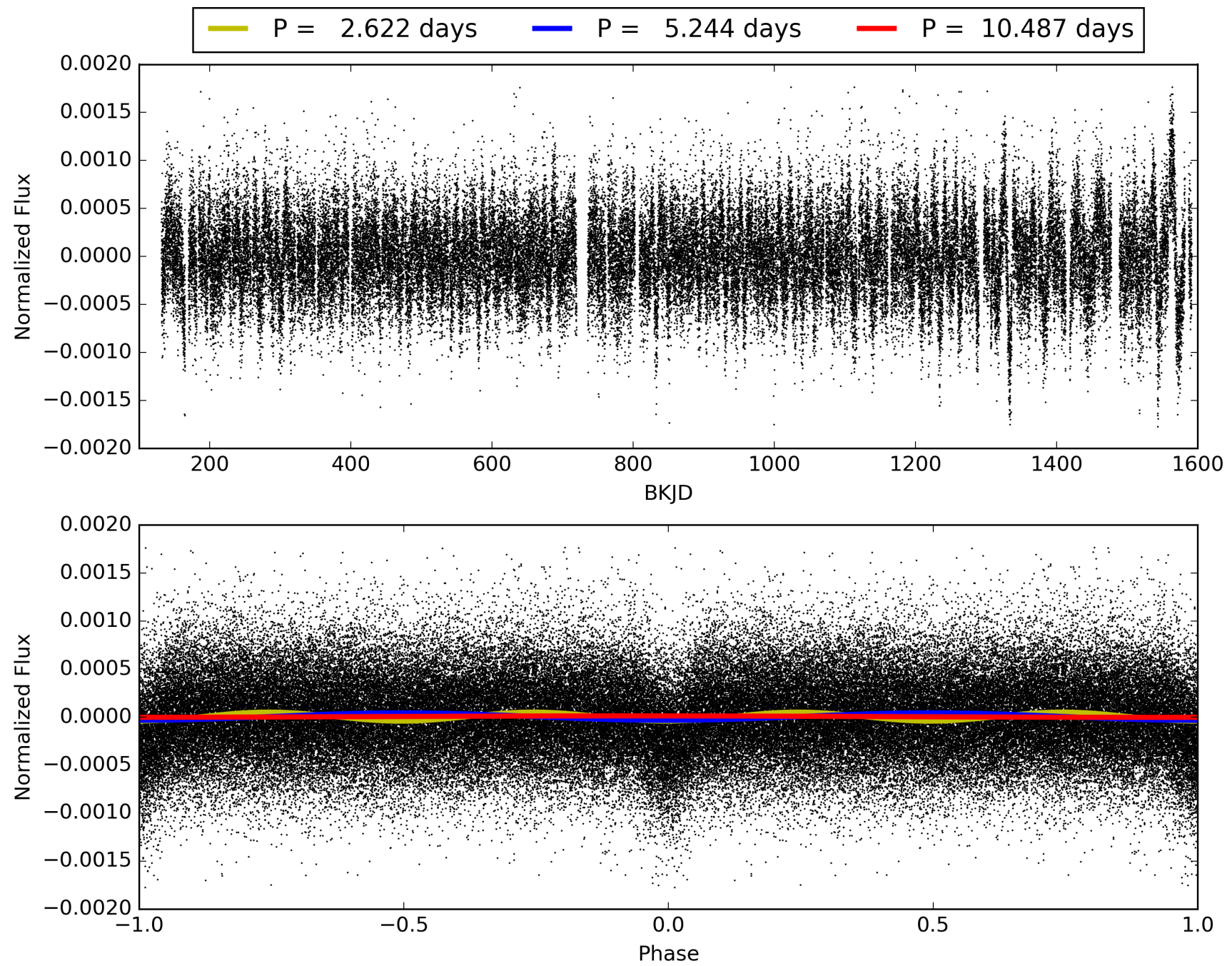
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:36:13 Z

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

TCE 006364162-01, PDC Light Curves

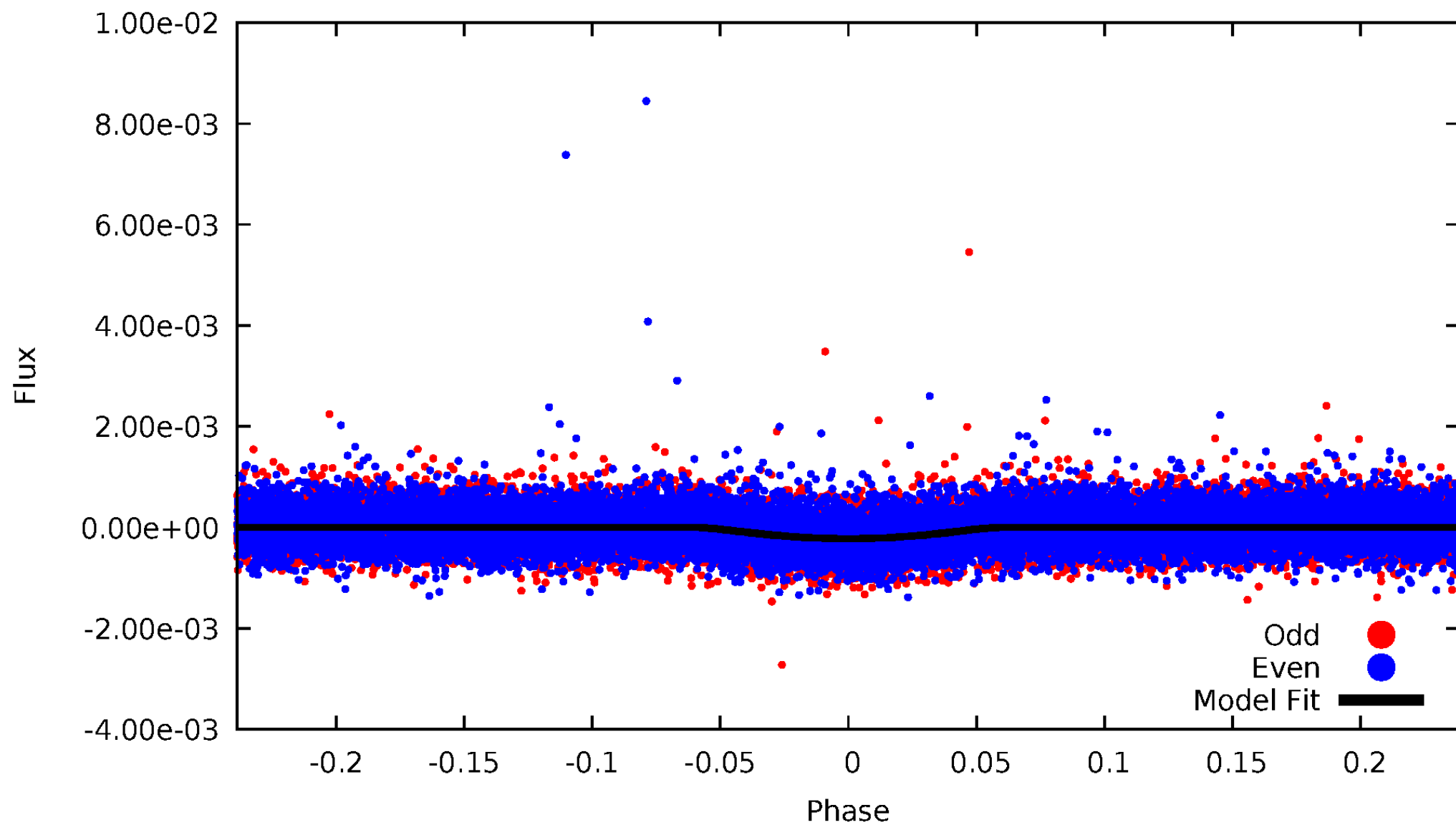


TCE 006364162-01



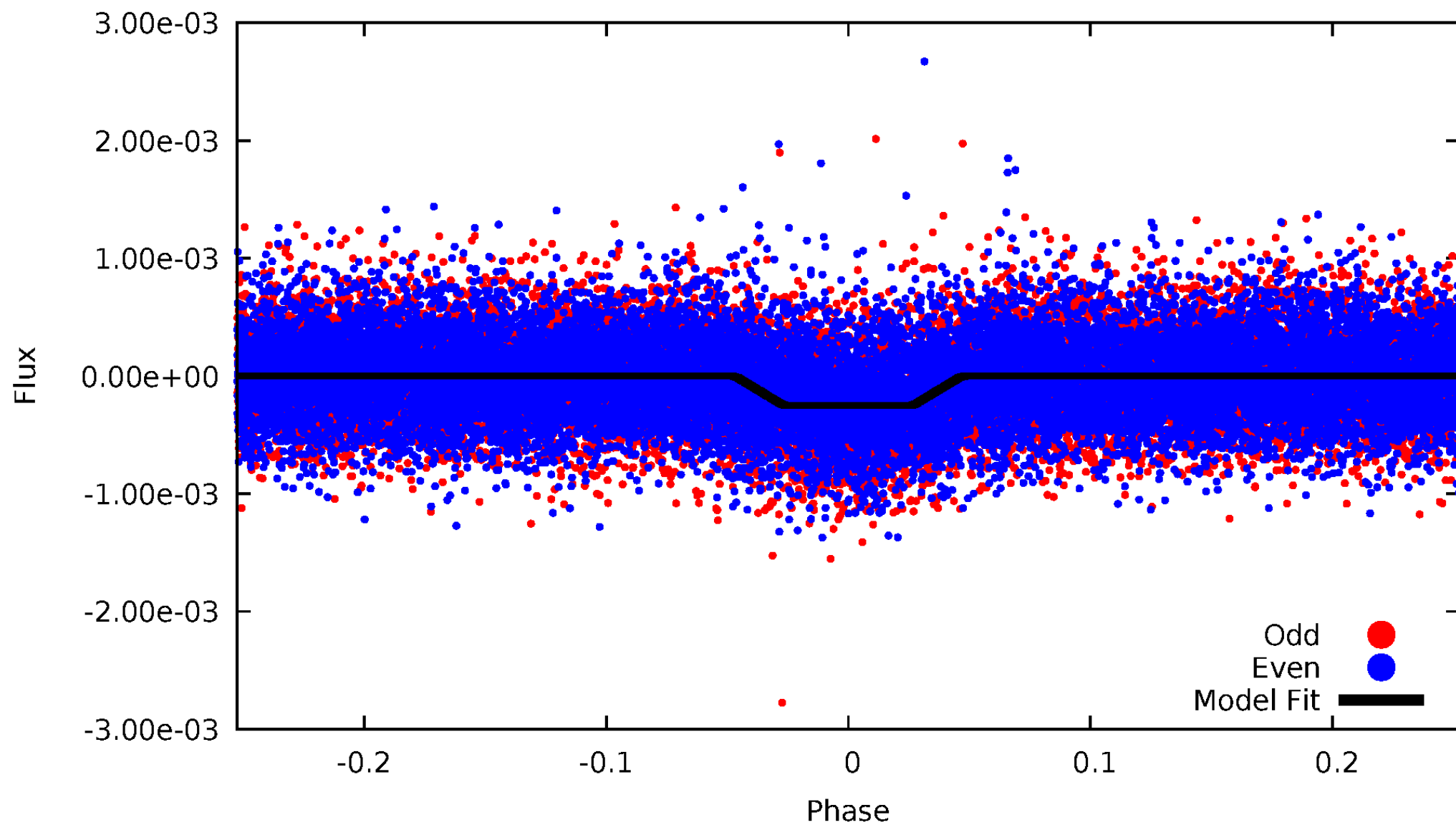
DV Odd/Even

TCE 006364162-01



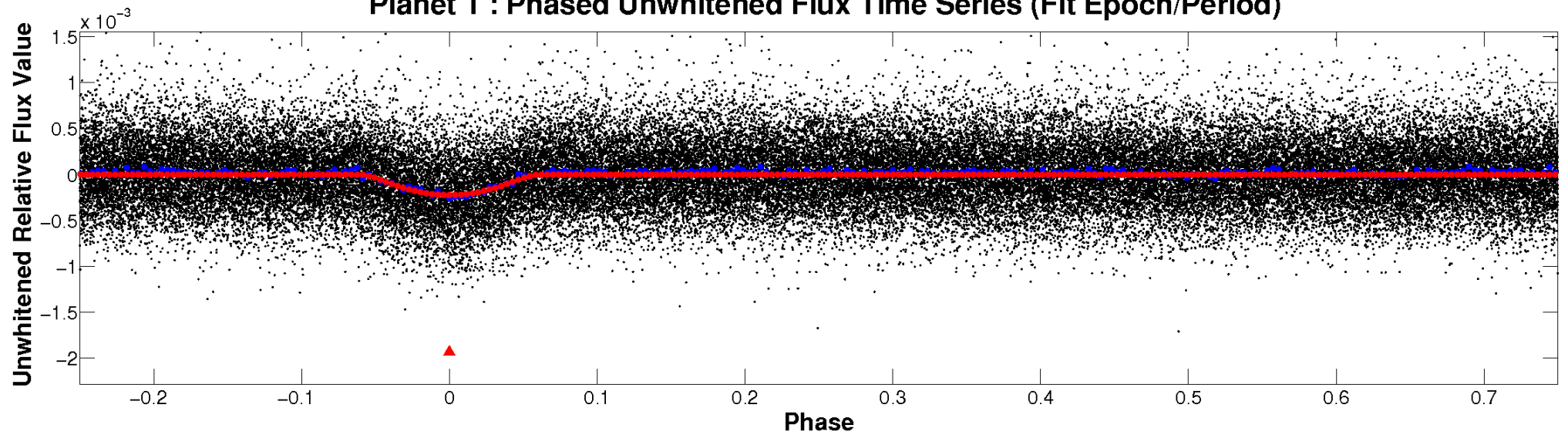
ALT Odd/Even

TCE 006364162-01

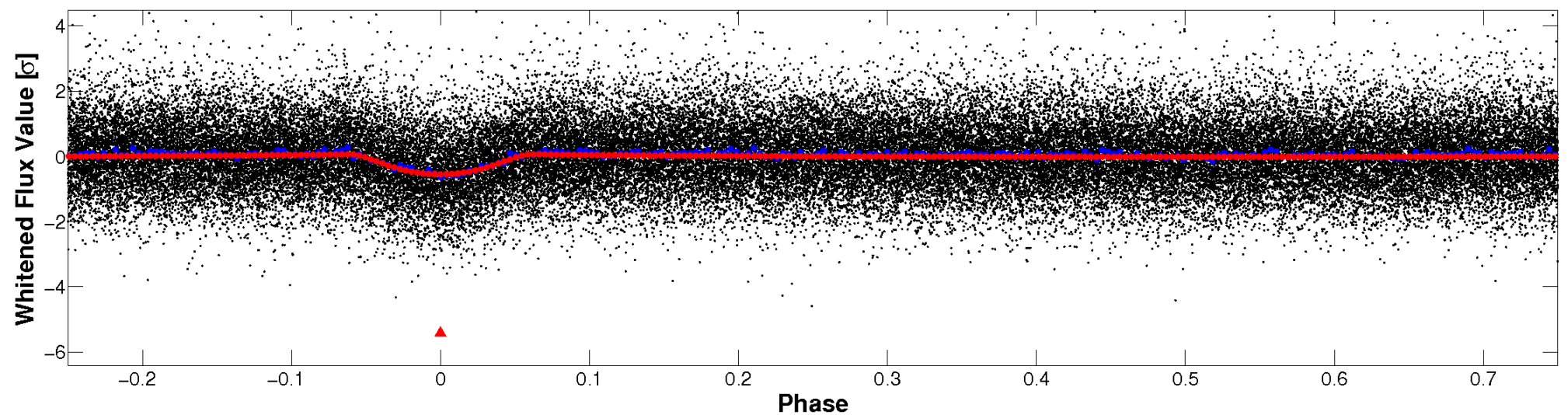


Non-Whitened Vs. Whitened Light Curve

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

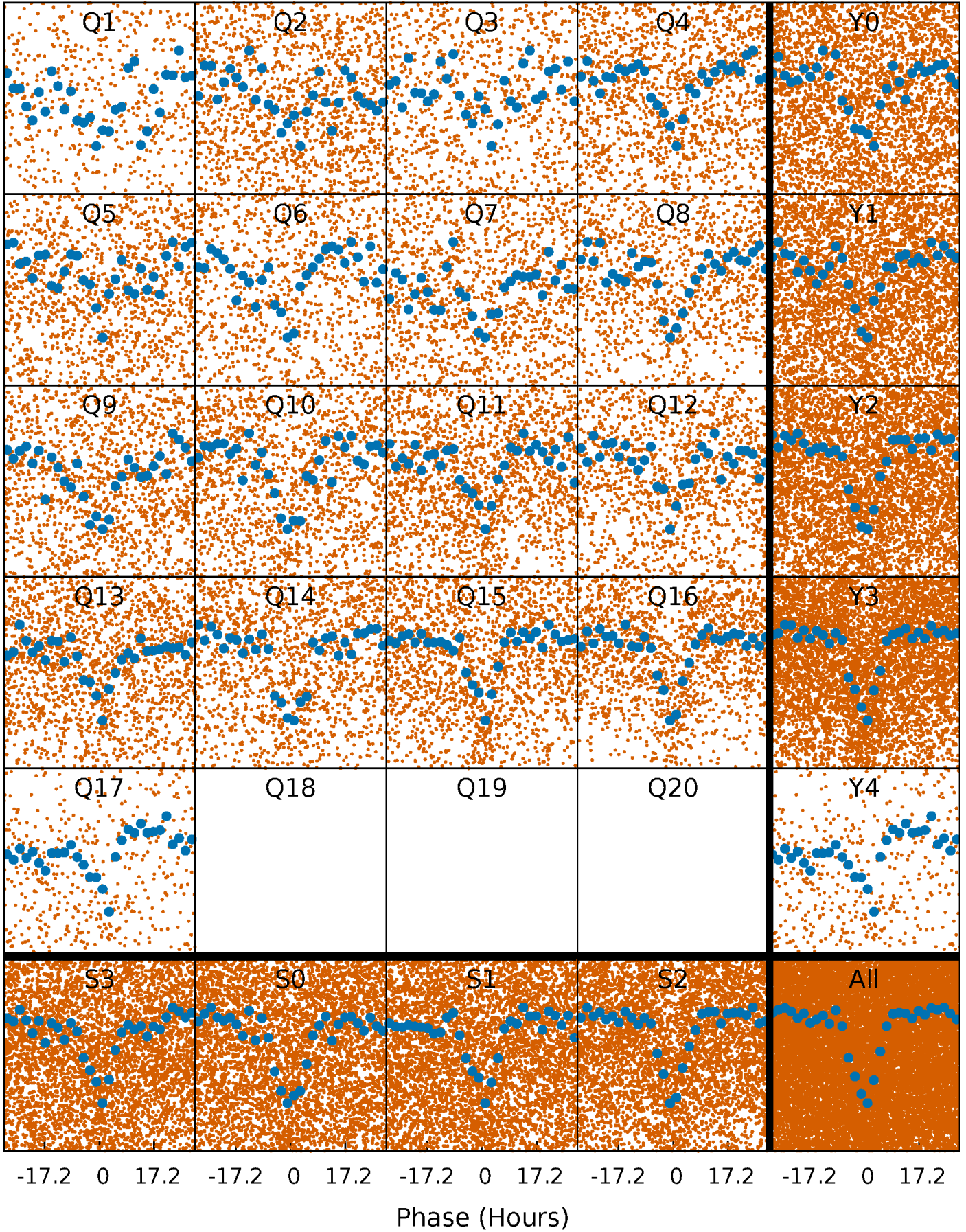


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



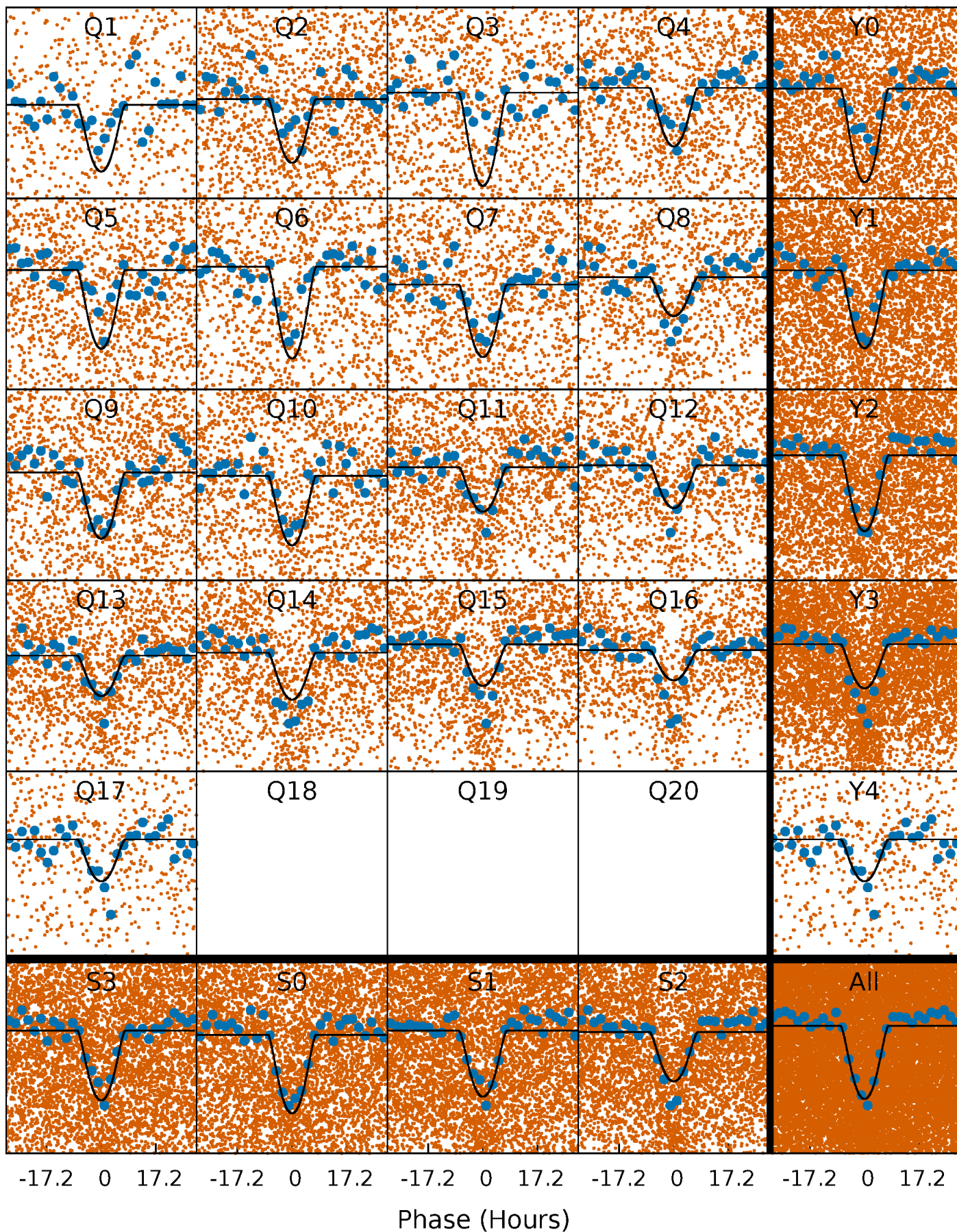
PDC Quarter-Phased Transit Curves

TCE 006364162-01 P= 5.243746 Days $T_0=132.701032$ (BKJD)



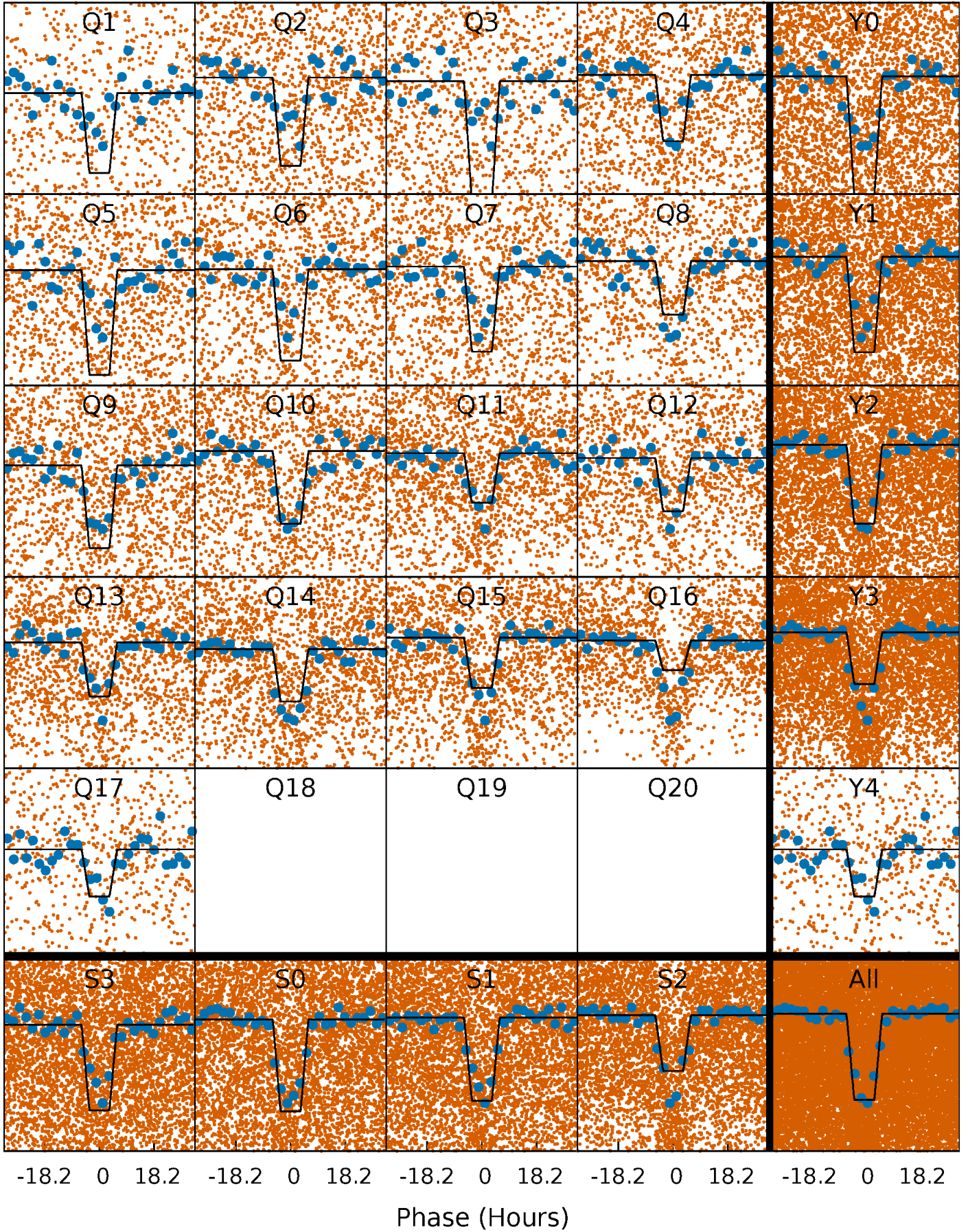
DV Quarter-Phased Transit Curves

TCE 006364162-01 P= 5.243746 Days $T_0=132.701032$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

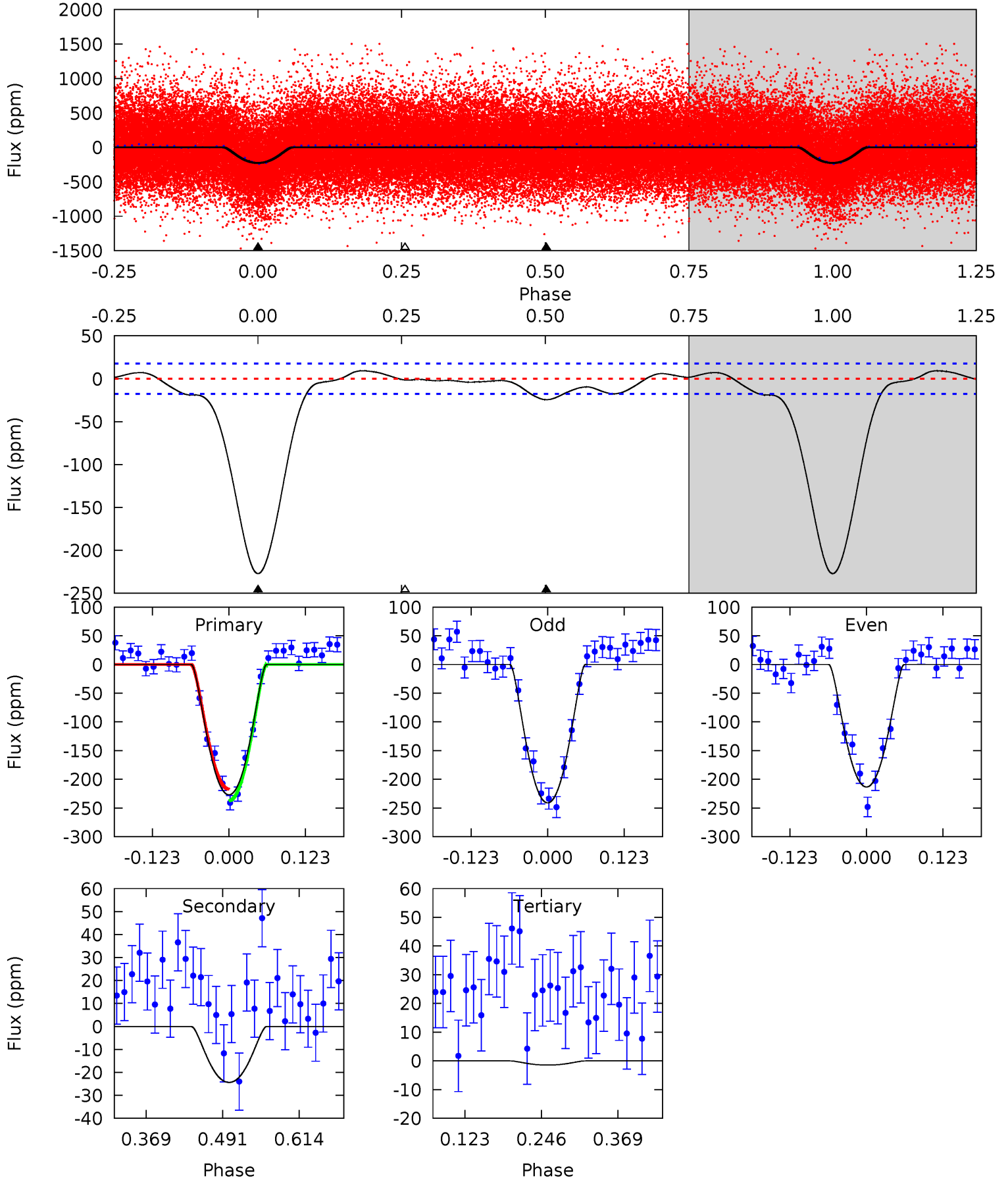
TCE 006364162-01 P= 5.243648 Days $T_0=132.721775$ (BKJD)



DV Model-Shift Uniqueness Test

006364162-01, P = 5.243746 Days, E = 127.457286 Days

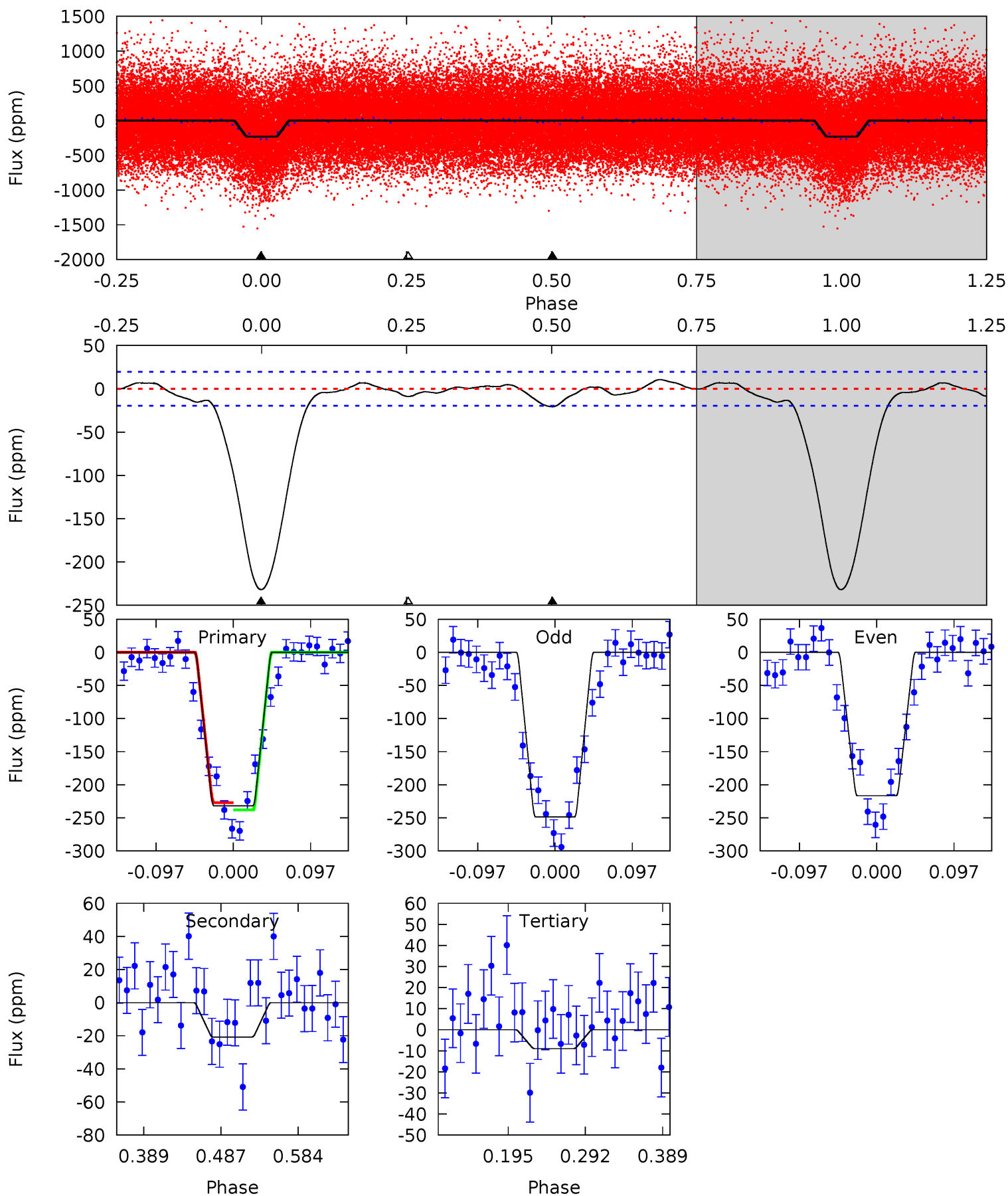
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.2	6.25	0.37	0	4.52	1.54	1.68	57.8	58.2	5.87	6.25	3.54	1.08	0.04	2.58



Alt Model-Shift Uniqueness Test

006364162-01, P = 5.243648 Days, E = 127.478127 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.1	4.85	2.09	0	4.57	1.66	1.36	52.0	54.1	2.75	4.85	3.73	1.05	0.04	1.25



Stellar Parameters For KIC 006364162

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6197^{+197}_{-240}	$4.406^{+0.087}_{-0.203}$	$-0.160^{+0.250}_{-0.300}$	$1.056^{+0.340}_{-0.146}$	$1.032^{+0.159}_{-0.130}$	$1.232^{+0.472}_{-0.653}$
	+3%/-4%	+2%/-5%	+156%/-188%	+32%/-14%	+15%/-13%	+38%/-53%
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 006364162-01 / KOI 2889.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 4	$2.51^{+0.80}_{-0.71}$	1621^{+123}_{-82}	3463^{+401}_{-290}	$7.612^{+7.315}_{-3.386}$
Alt.	-21 ± 4	$1.88^{+0.78}_{-0.66}$	1629^{+128}_{-93}	3713^{+620}_{-390}	12^{+15}_{-6}

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 $A_{obs} \gg 1.0$

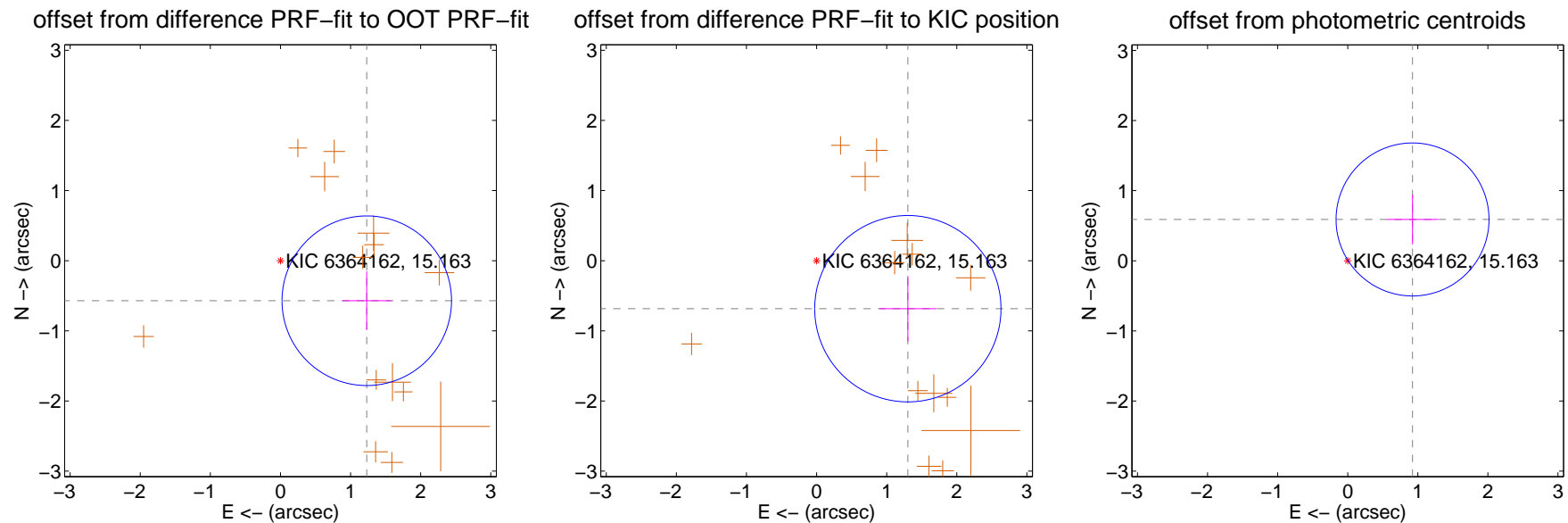
DV Centroid Data

Supplemental centroid analysis for 006364162-01. Kepler magnitude: 15.16. Transit SNR 31.92

There are 1 quarters with good PRF difference image offsets

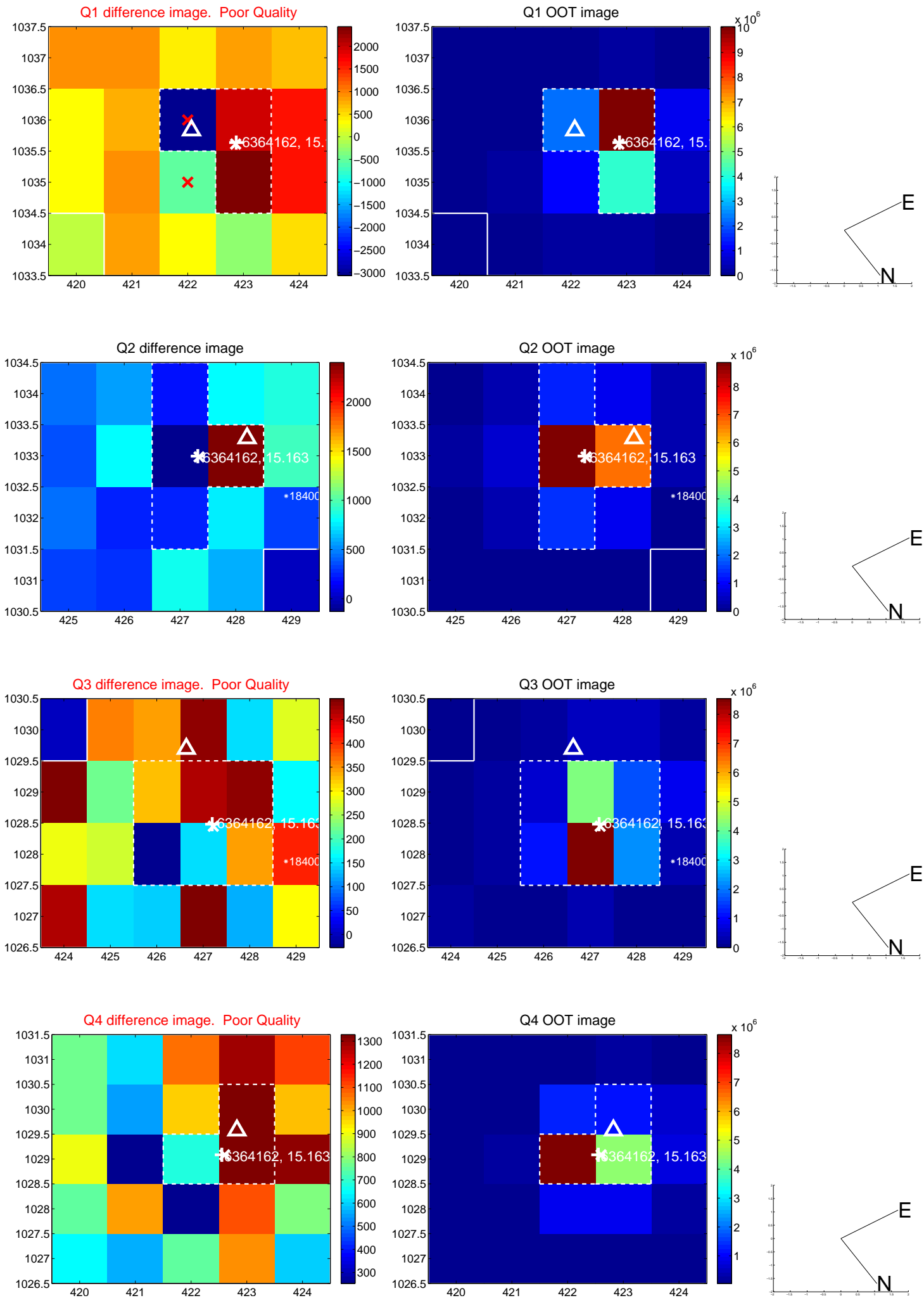
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.357 ± 0.403	3.37	-1.231 ± 0.350	-0.571 ± 0.417
PRF-fit source offset from KIC position	1.471 ± 0.443	3.32	-1.302 ± 0.410	-0.684 ± 0.467
photometric centroid source offset	1.10 ± 0.36	3.02	-0.92 ± 0.37	0.59 ± 0.36

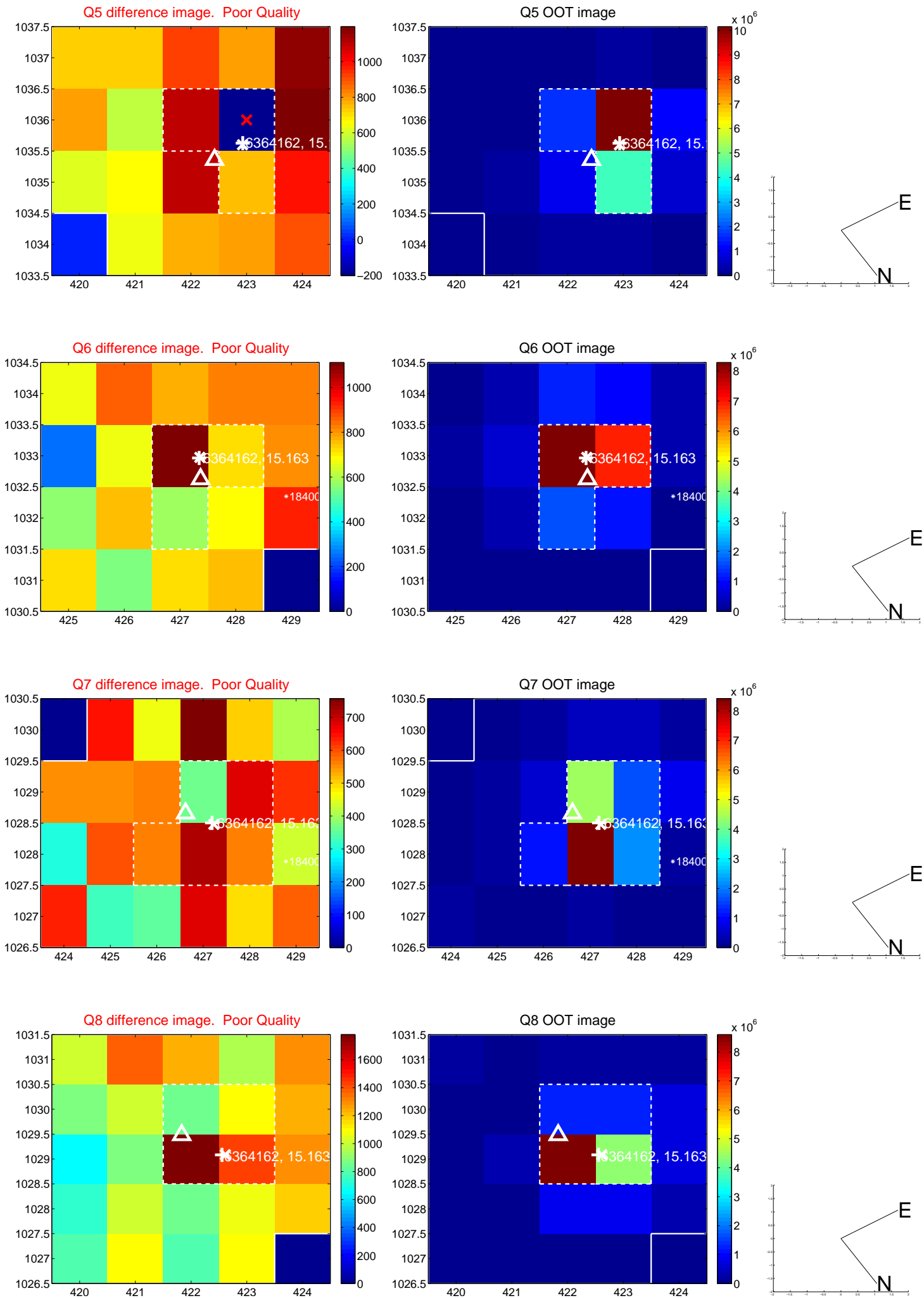


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

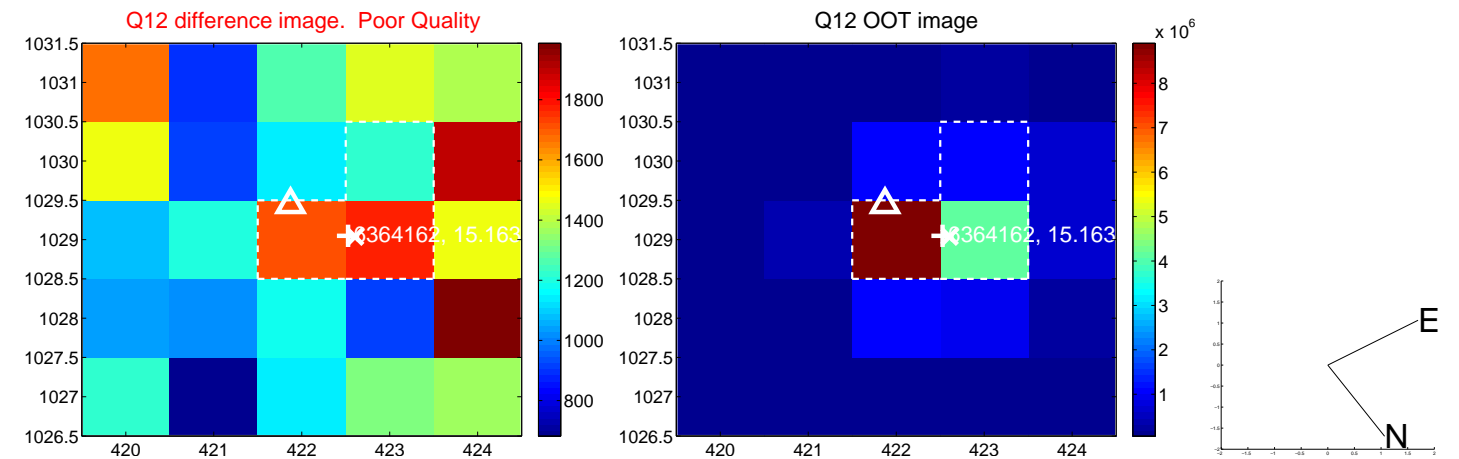
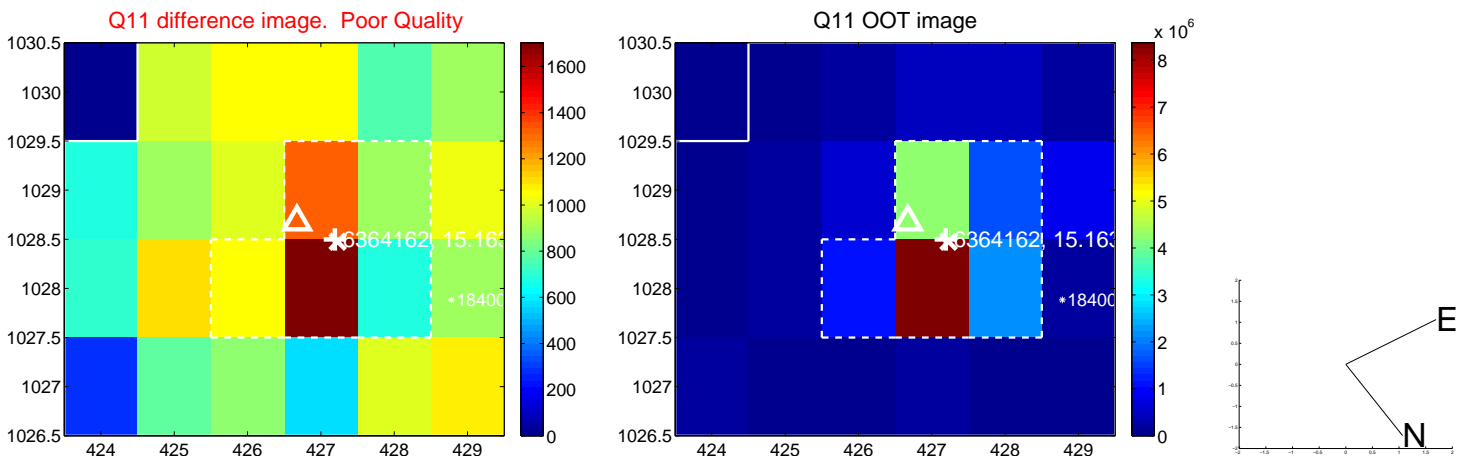
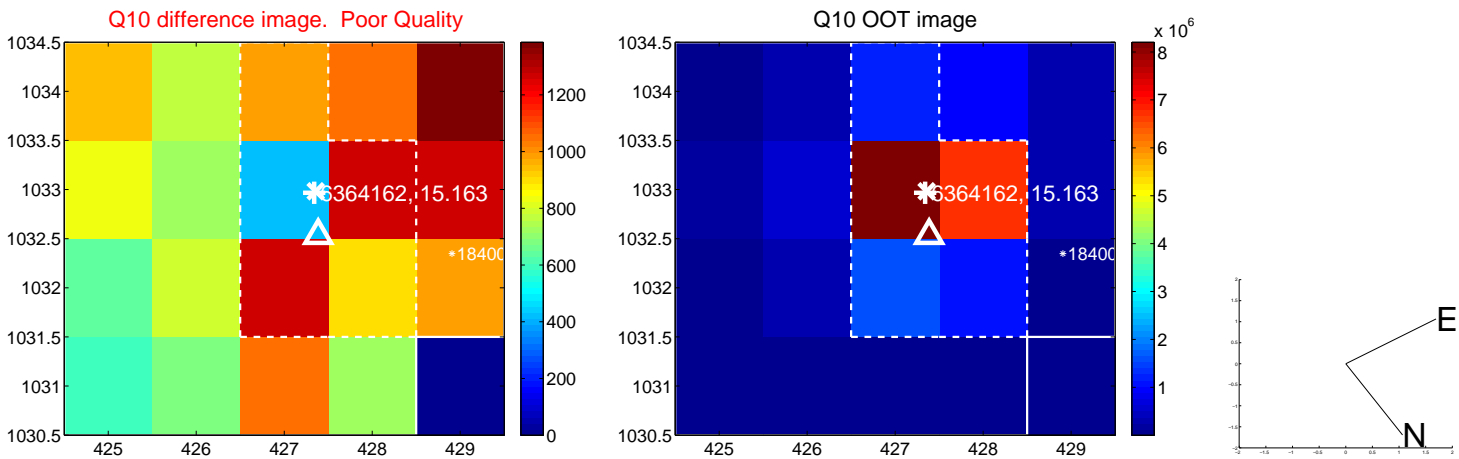
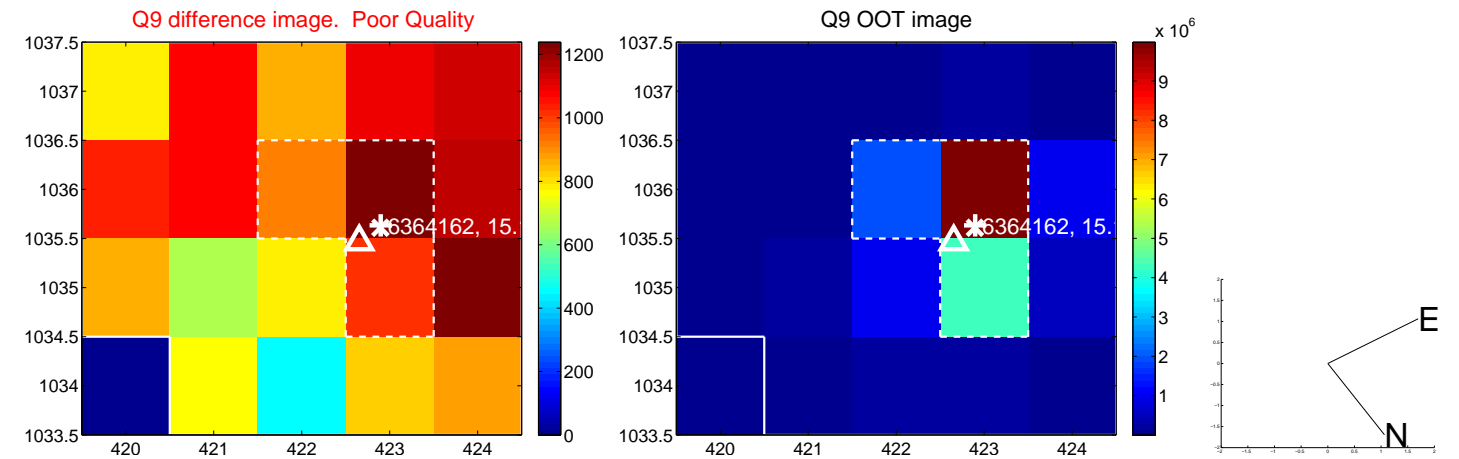
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



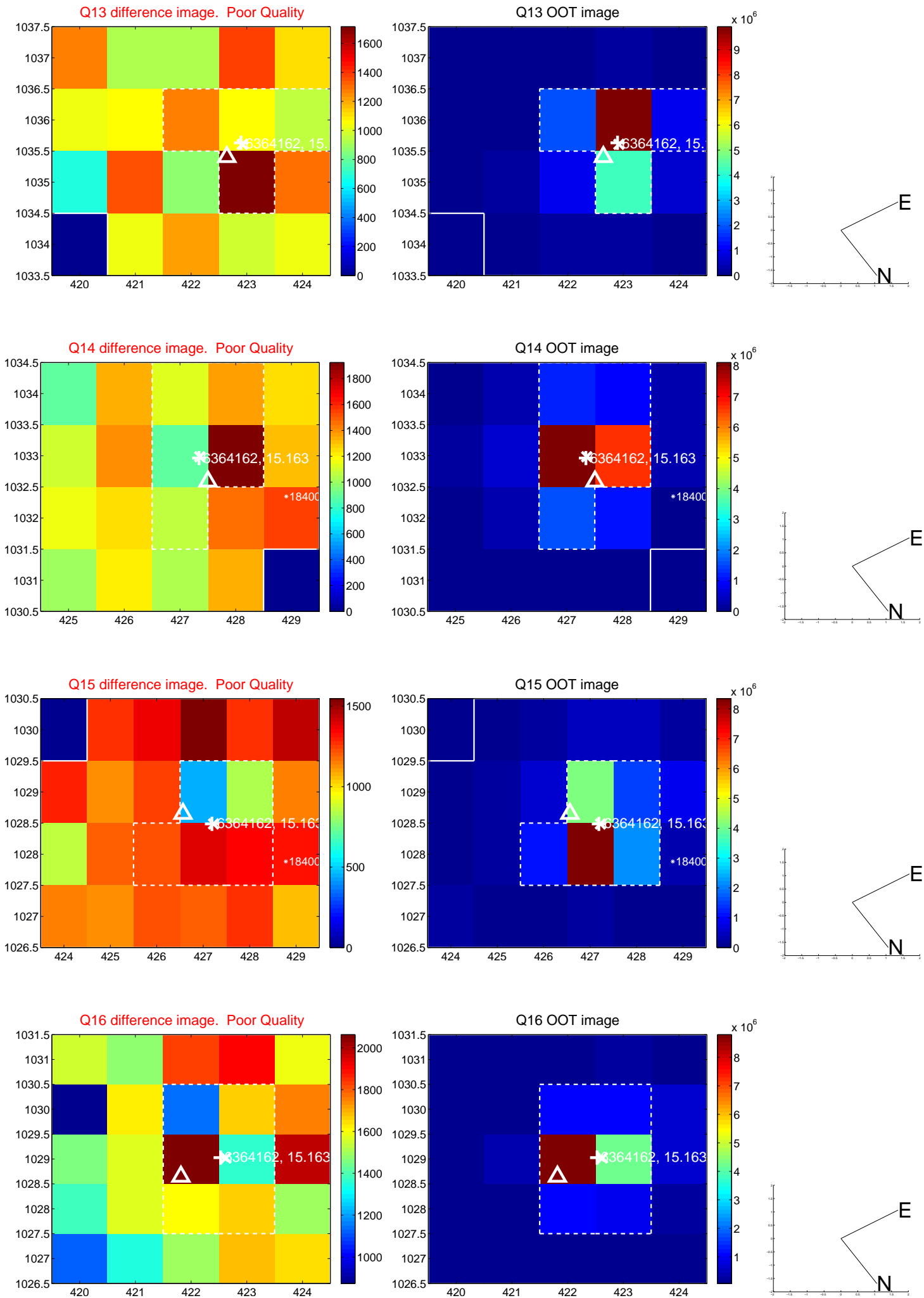
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



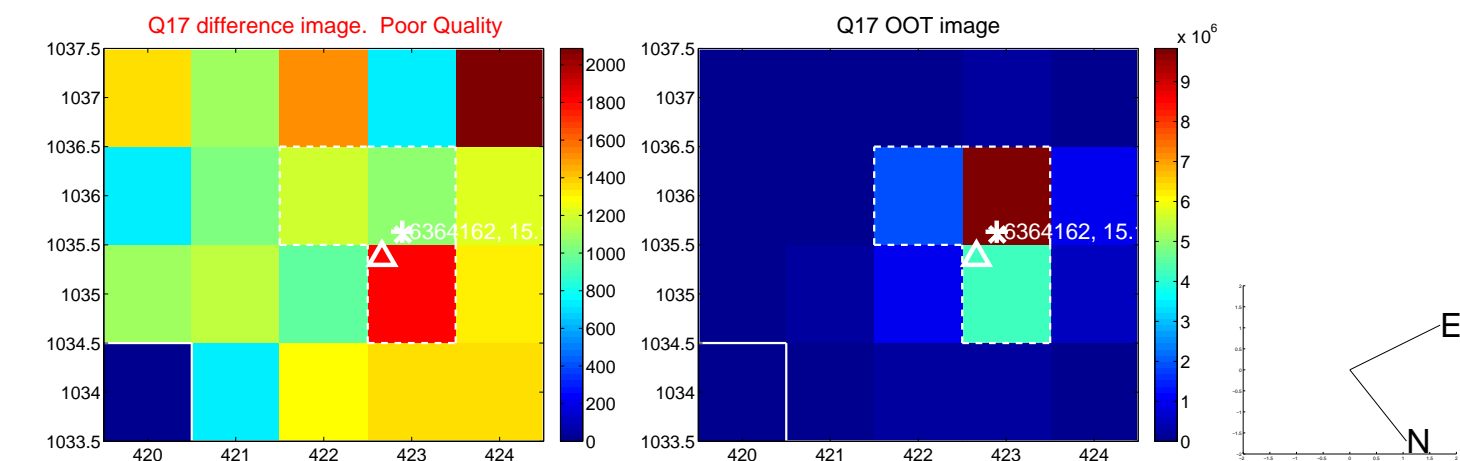
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



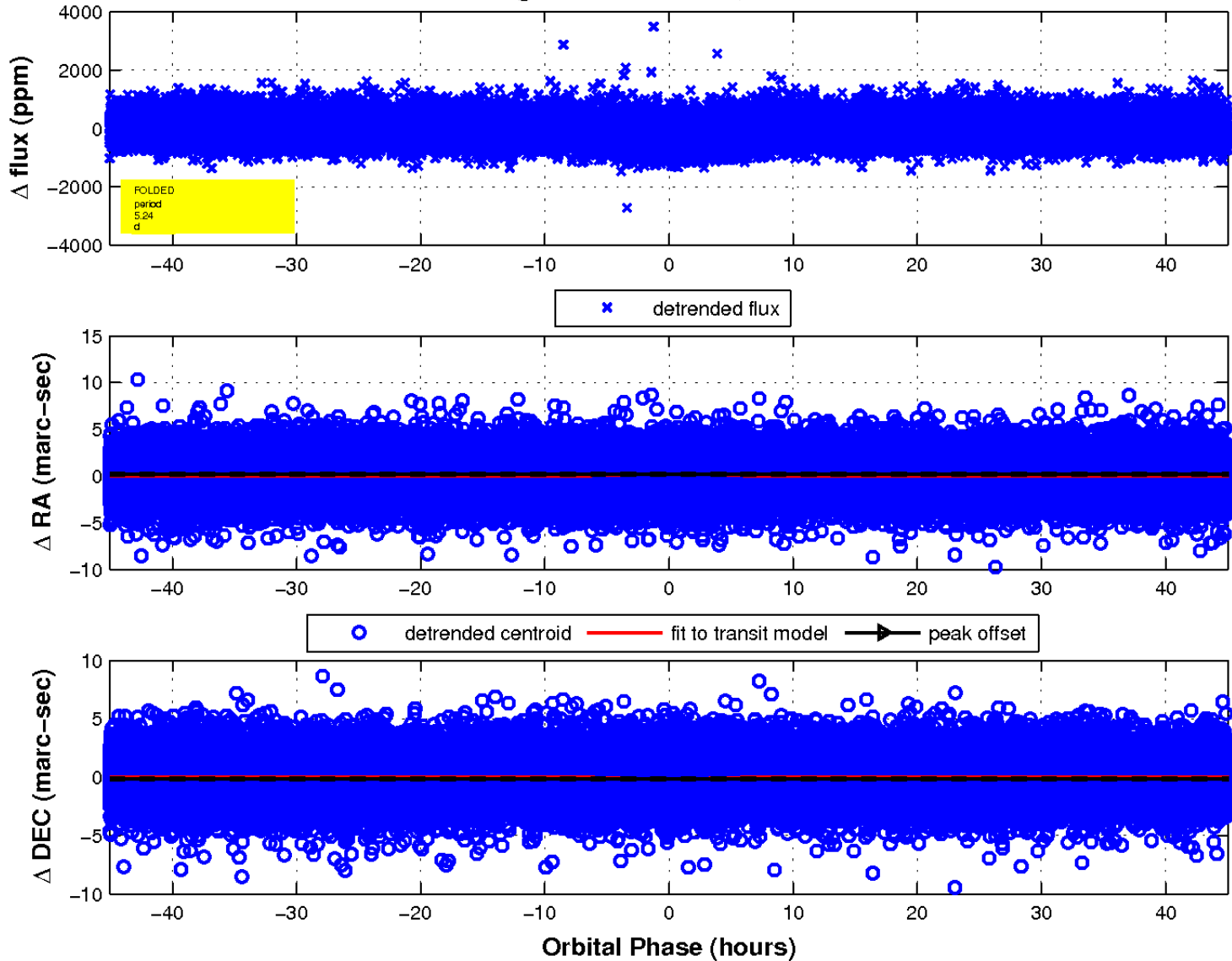
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

