

KIC 007766209

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})
007766209-01	OBS	No	0.835440	131.580730	7.7	2.957	9.9	2.4	0.98	6277	0.28	4603.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007766209-01	OBS	FP	0.00	1	0	1	1	LPP_DV—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.

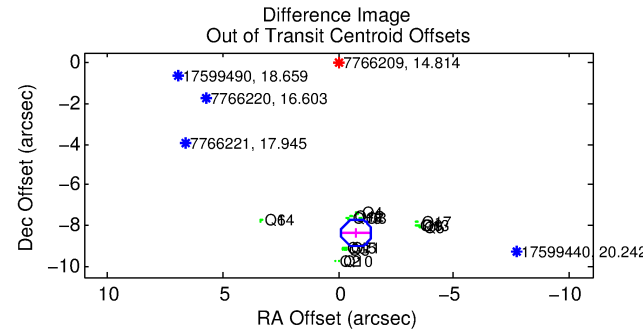
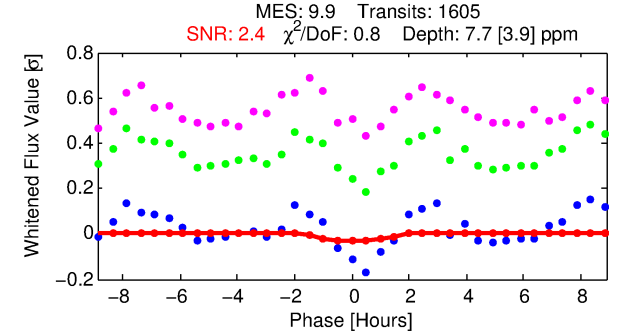
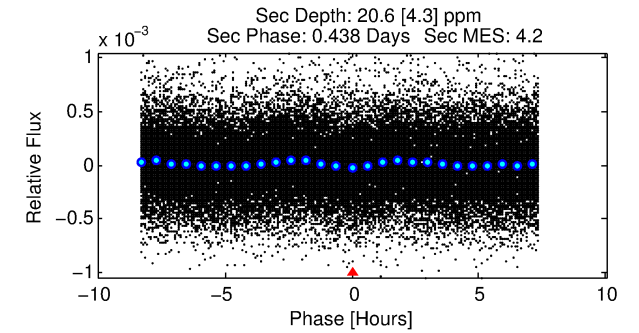
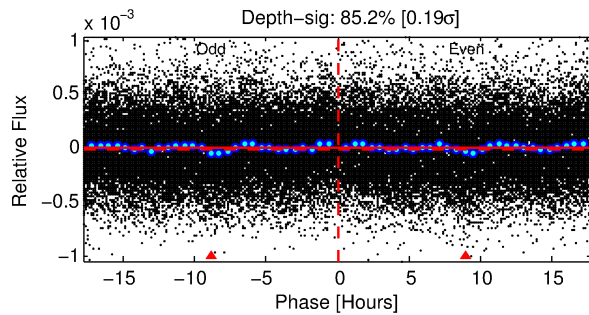
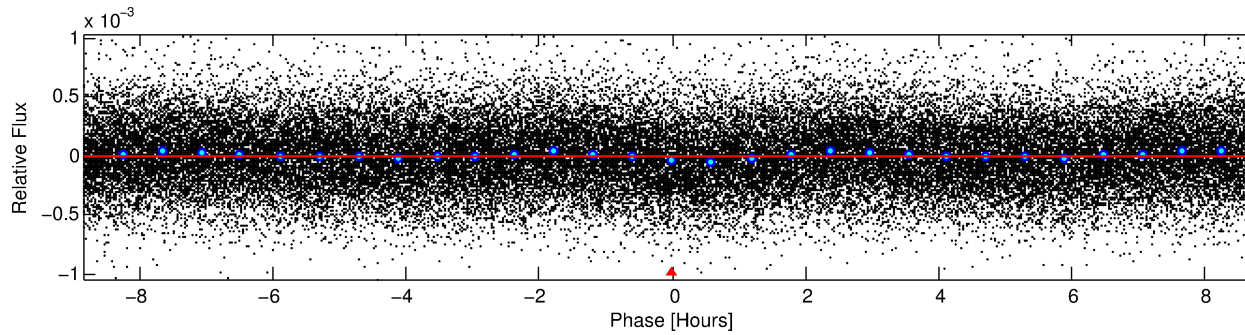
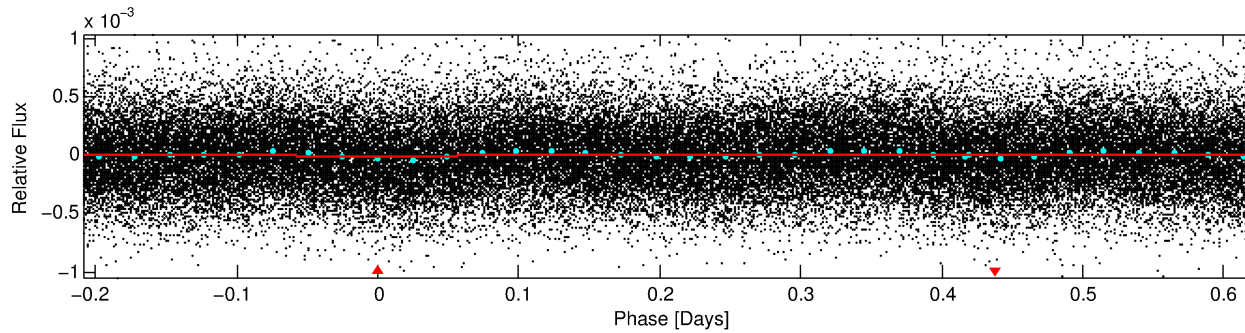
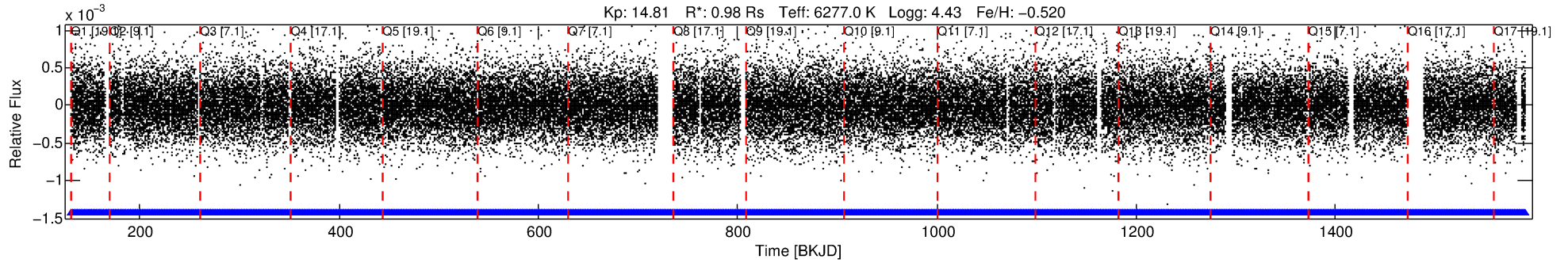
Ephemeris Match Information For 007766209-01

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
007766209-01	7766209	007766185-pri	7766185	1:1	28.1	6	3	12.11	14.81	50063.00	Direct-PRF	0	2.02	0.06

Notes: $P_1:P_2$ 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. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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: 7766209 Candidate: 1 of 1 Period: 0.835 d



DV Fit Results:

Period = 0.83544 [0.00004] d
Epoch = 131.5807 [0.0158] BKJD
Rp/R* = 0.0026 [0.0022]
a/R* = 2.01 [6.39]
b = 0.50 [6.42]
Seff = 4603.93 [1760.40]
Teq = 2100 [201] K
Rp = 0.28 [0.25] Re
a = 0.0171 [0.0041] AU
Ag = 42.00 [71.84] [0.57 σ]
Teffp = 8267 [3470] K [1.77 σ]

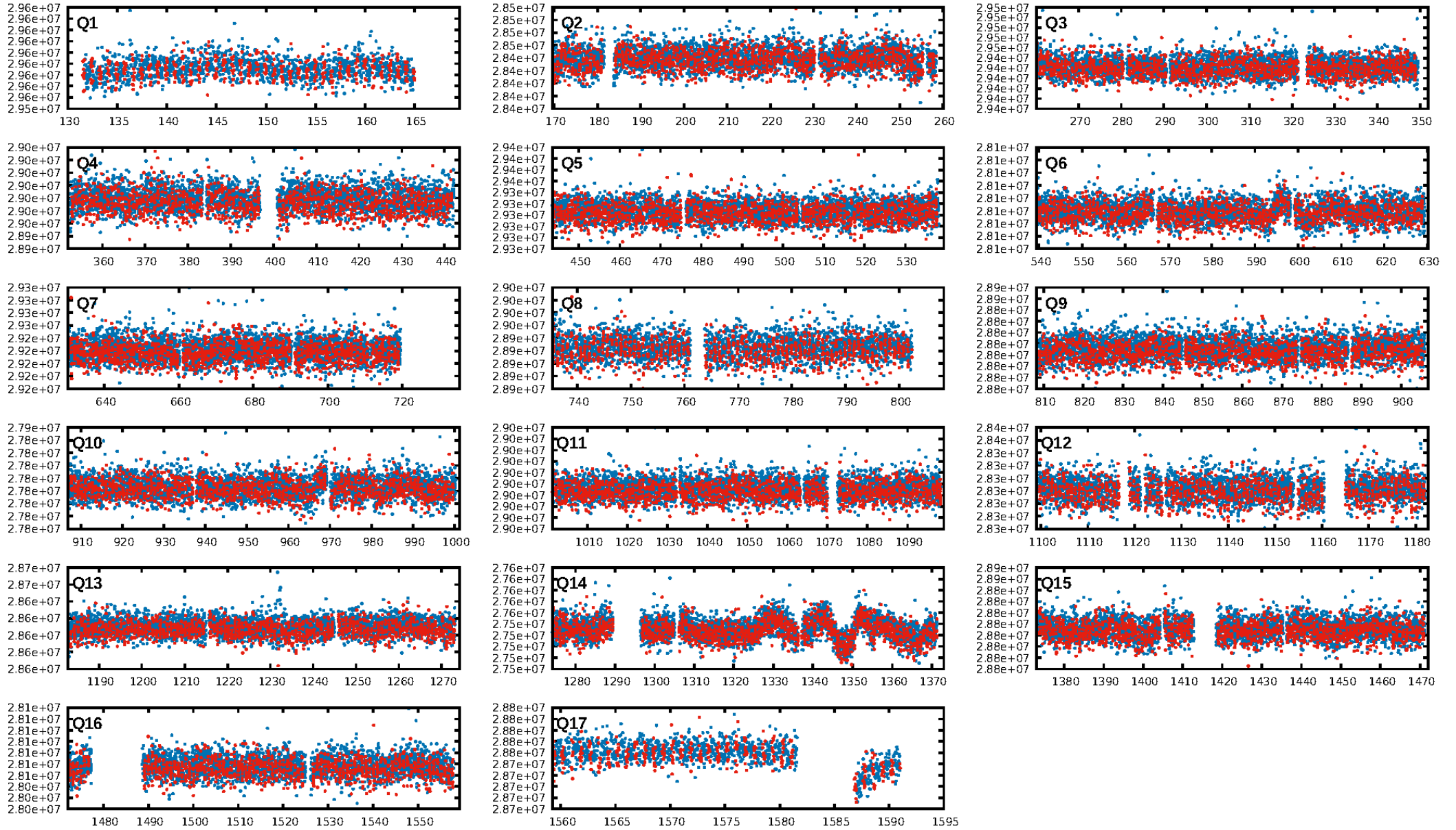
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.33e-23
RollingBand-fgt: 1.00 [1532/1532]
GhostDiagnostic-chr: -0.3097
Centroid-sig: 0.0%
Centroid-so: 37.495 arcsec [6.45 σ]
OotOffset-rm: 8.380 arcsec [37.47 σ]
KicOffset-rm: 8.195 arcsec [37.00 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 1.00 [17/17]

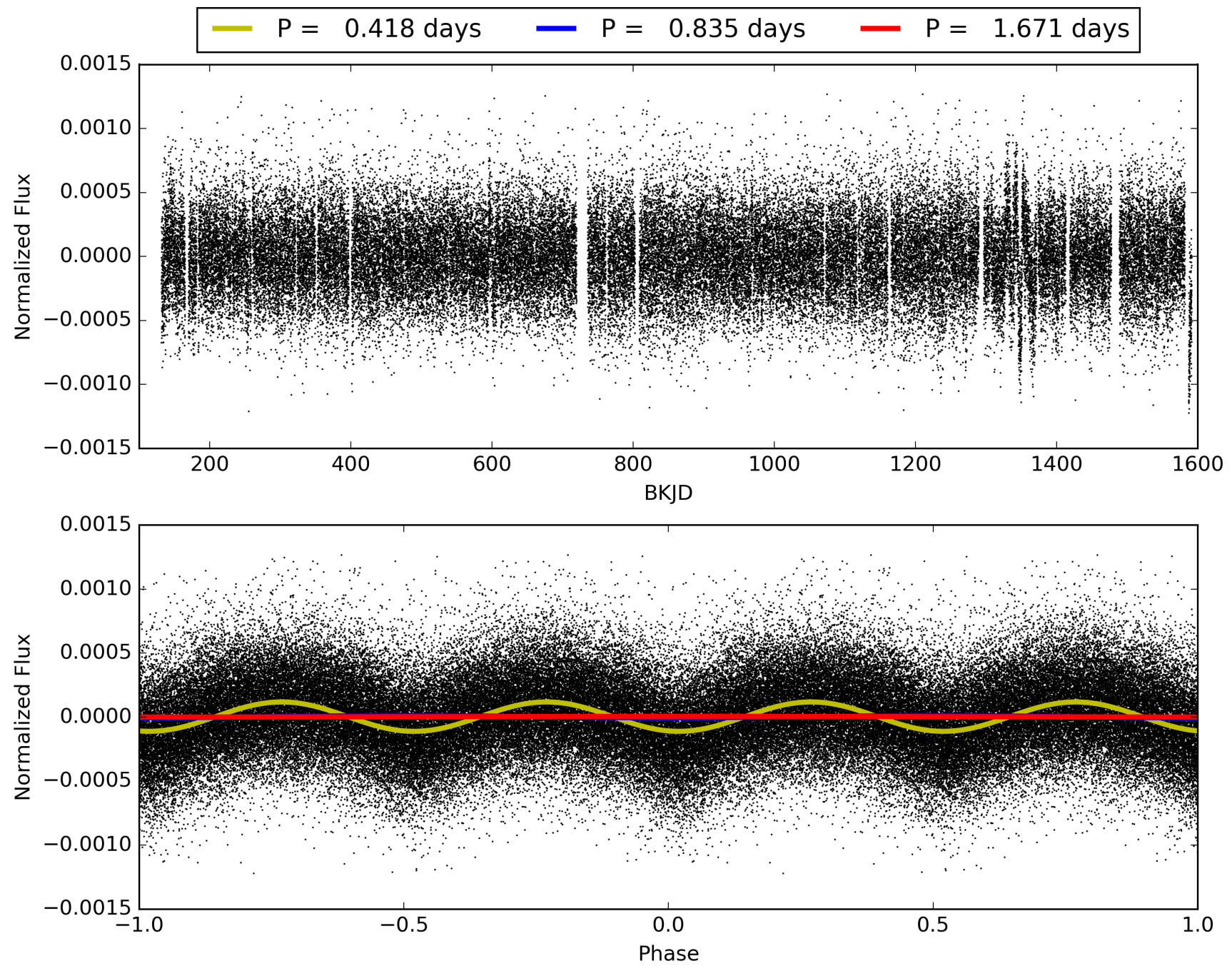
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:58:54 Z

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

TCE 007766209-01, PDC Light Curves

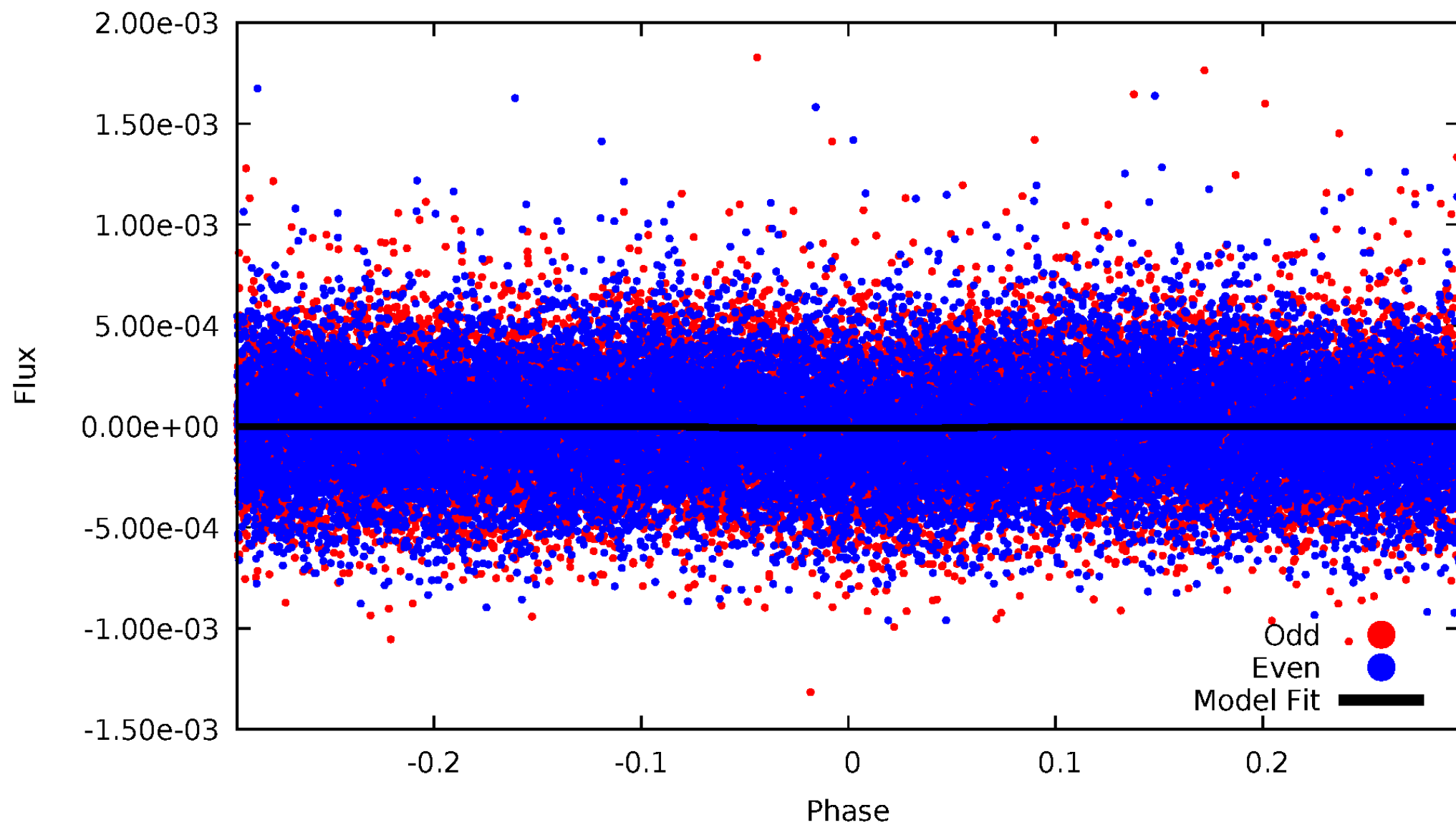


TCE 007766209-01



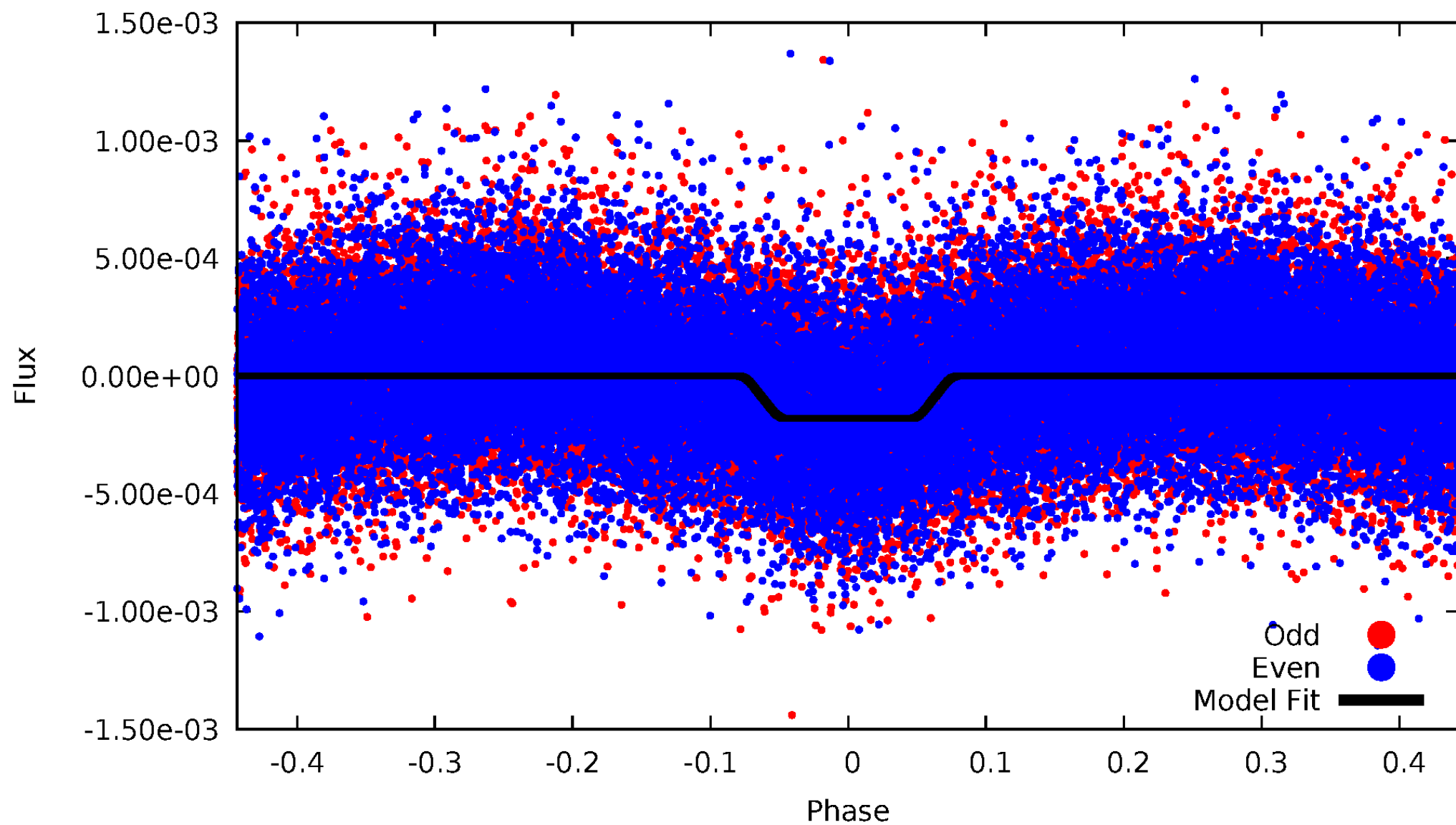
DV Odd/Even

TCE 007766209-01



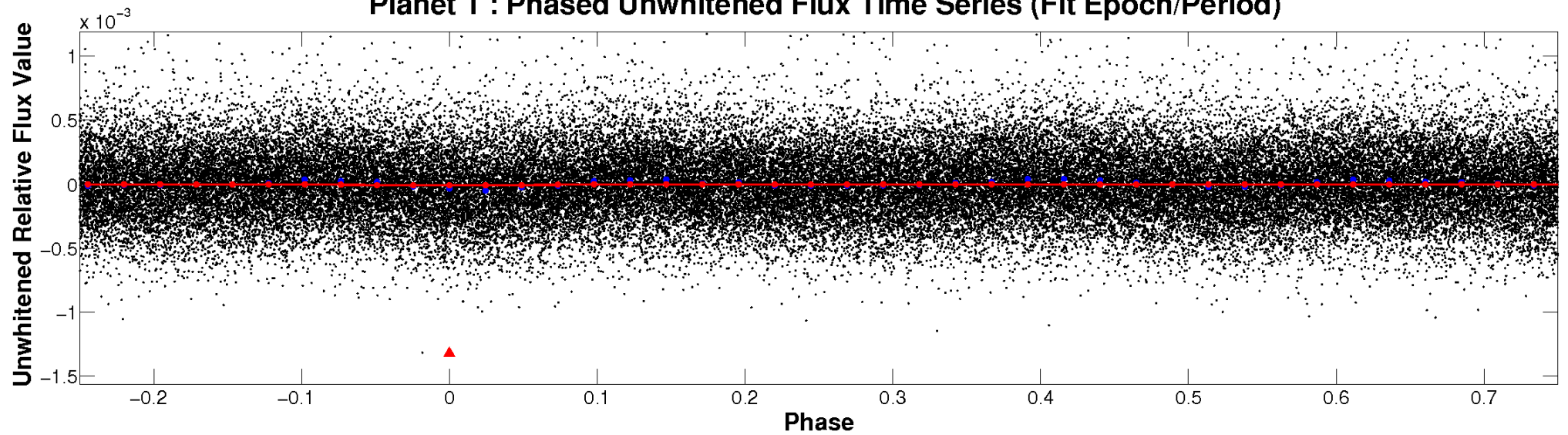
ALT Odd/Even

TCE 007766209-01

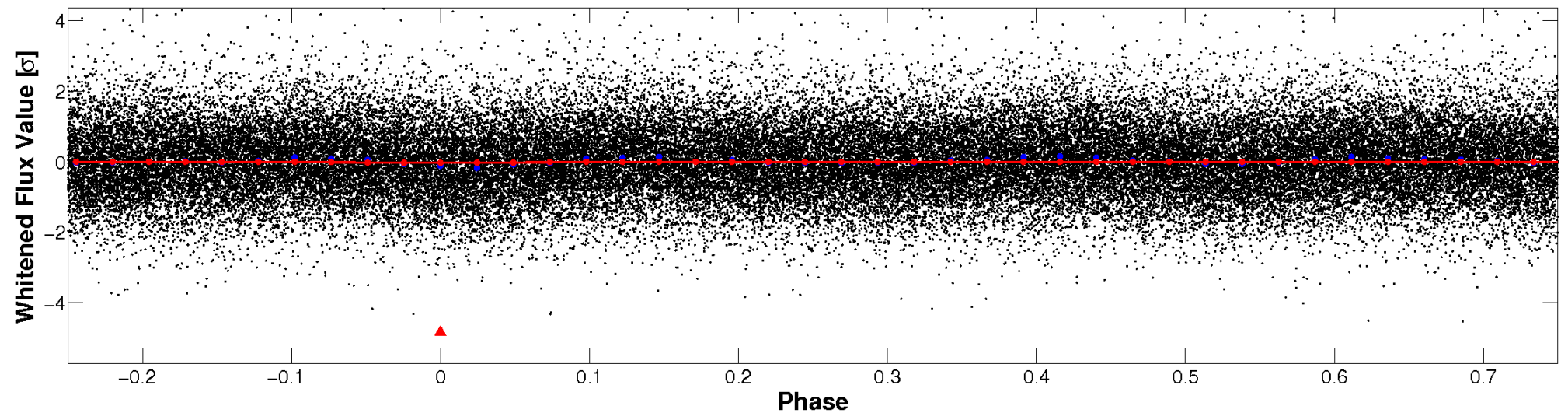


Non-Whitened Vs. Whitened Light Curve

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

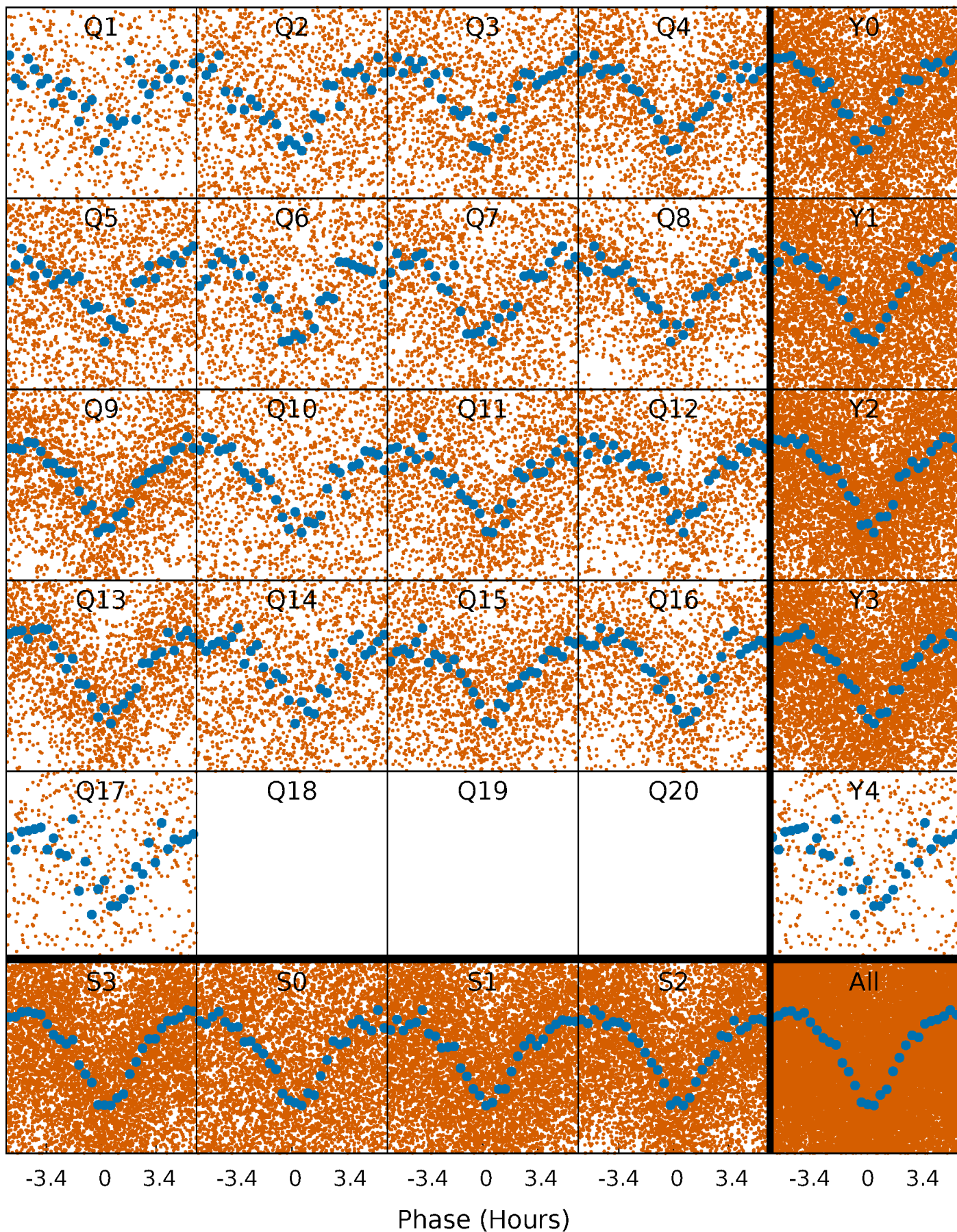


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



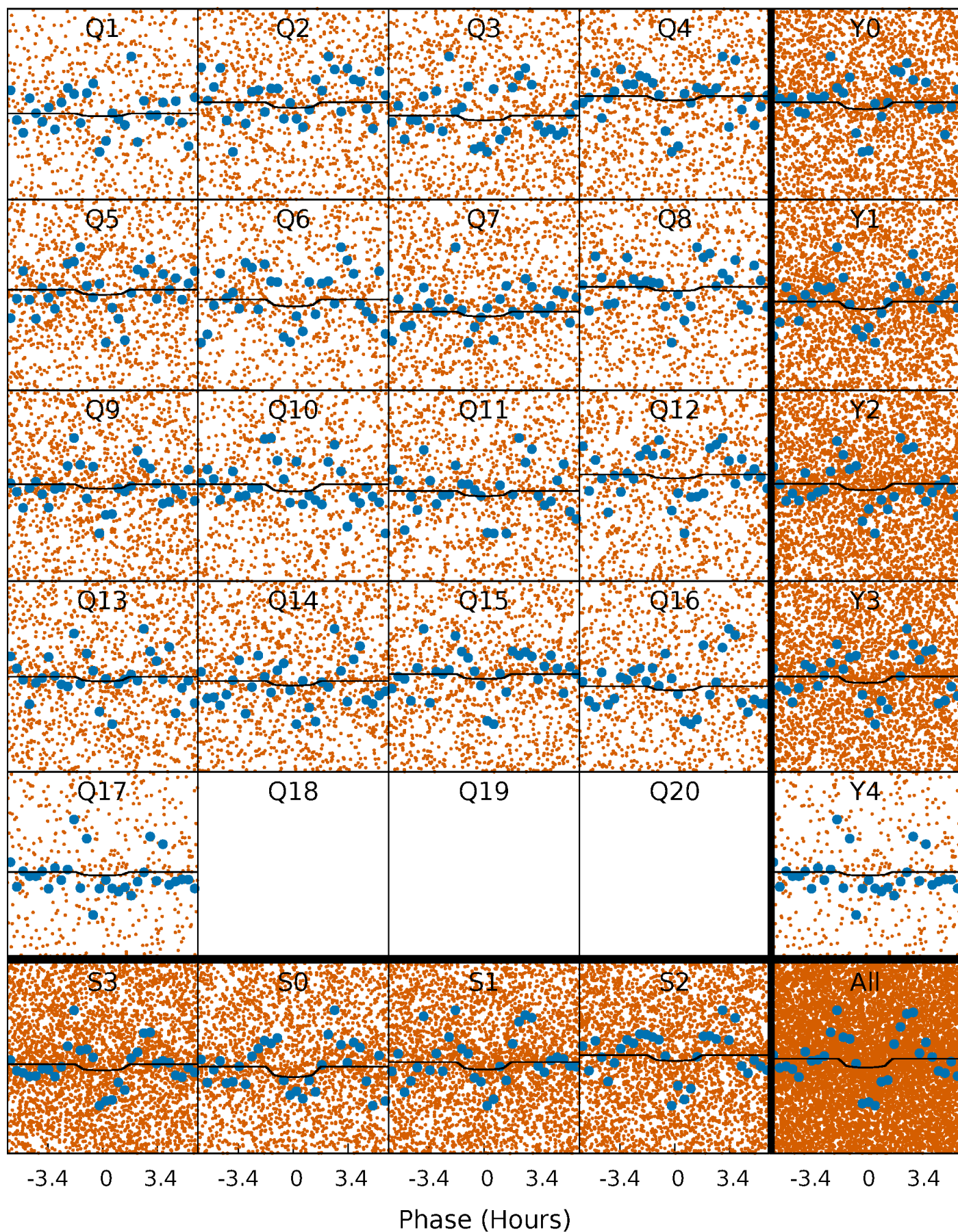
PDC Quarter-Phased Transit Curves

TCE 007766209-01 P= 0.835440 Days $T_0=131.580730$ (BKJD)



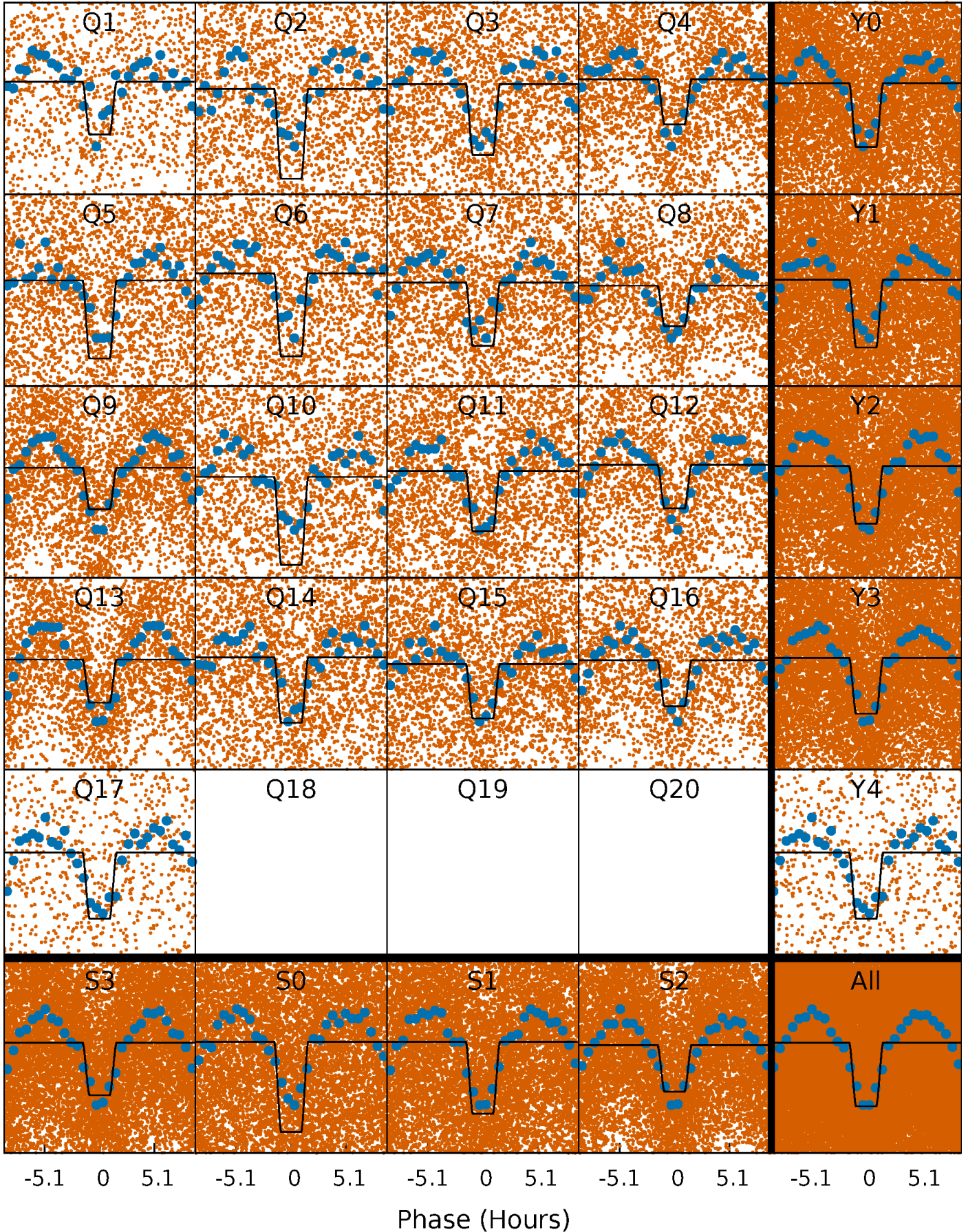
DV Quarter-Phased Transit Curves

TCE 007766209-01 P= 0.835440 Days $T_0=131.580730$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

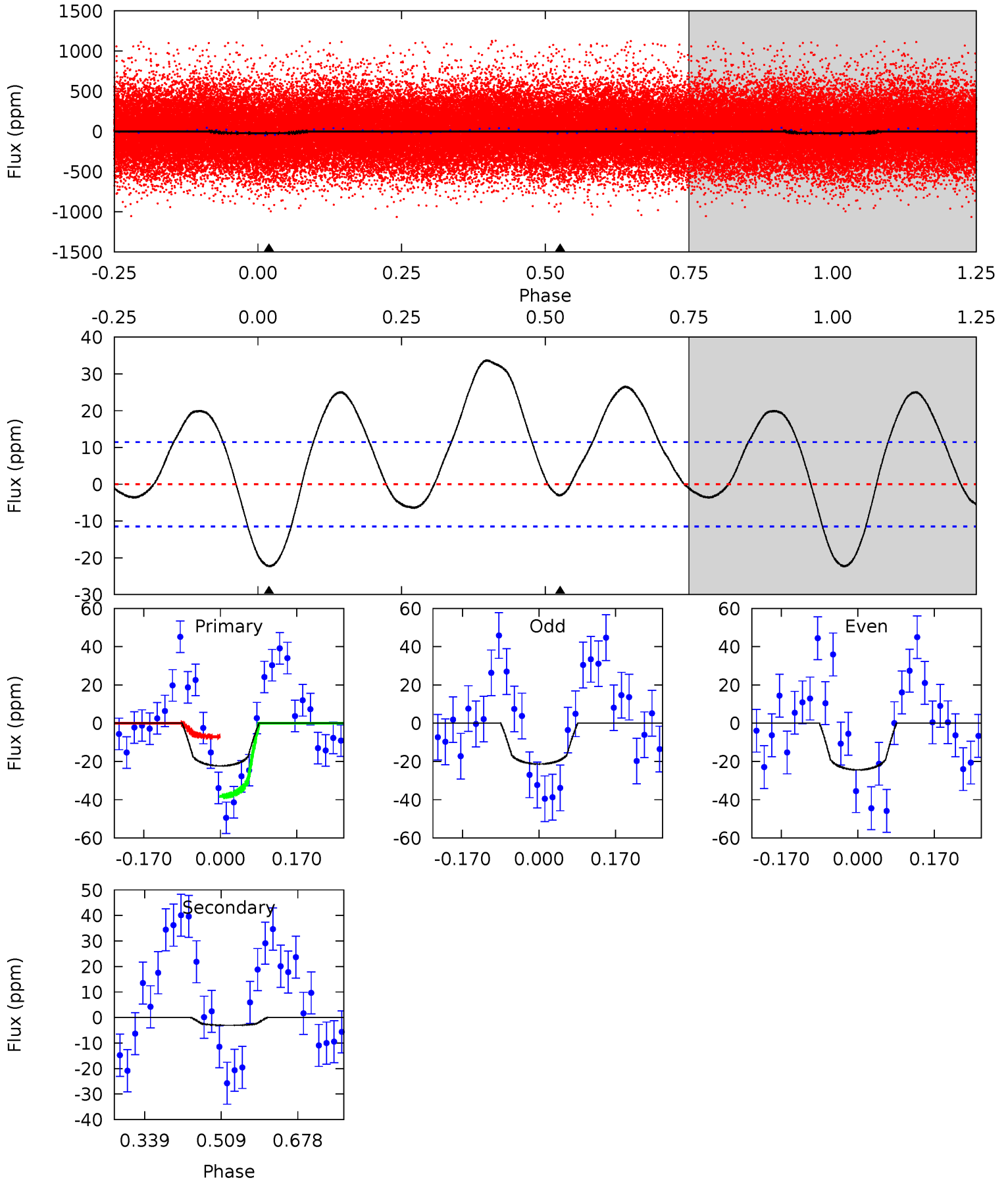
TCE 007766209-01 P= 0.835449 Days $T_0=131.588465$ (BKJD)



DV Model-Shift Uniqueness Test

007766209-01, P = 0.835440 Days, E = 130.745290 Days

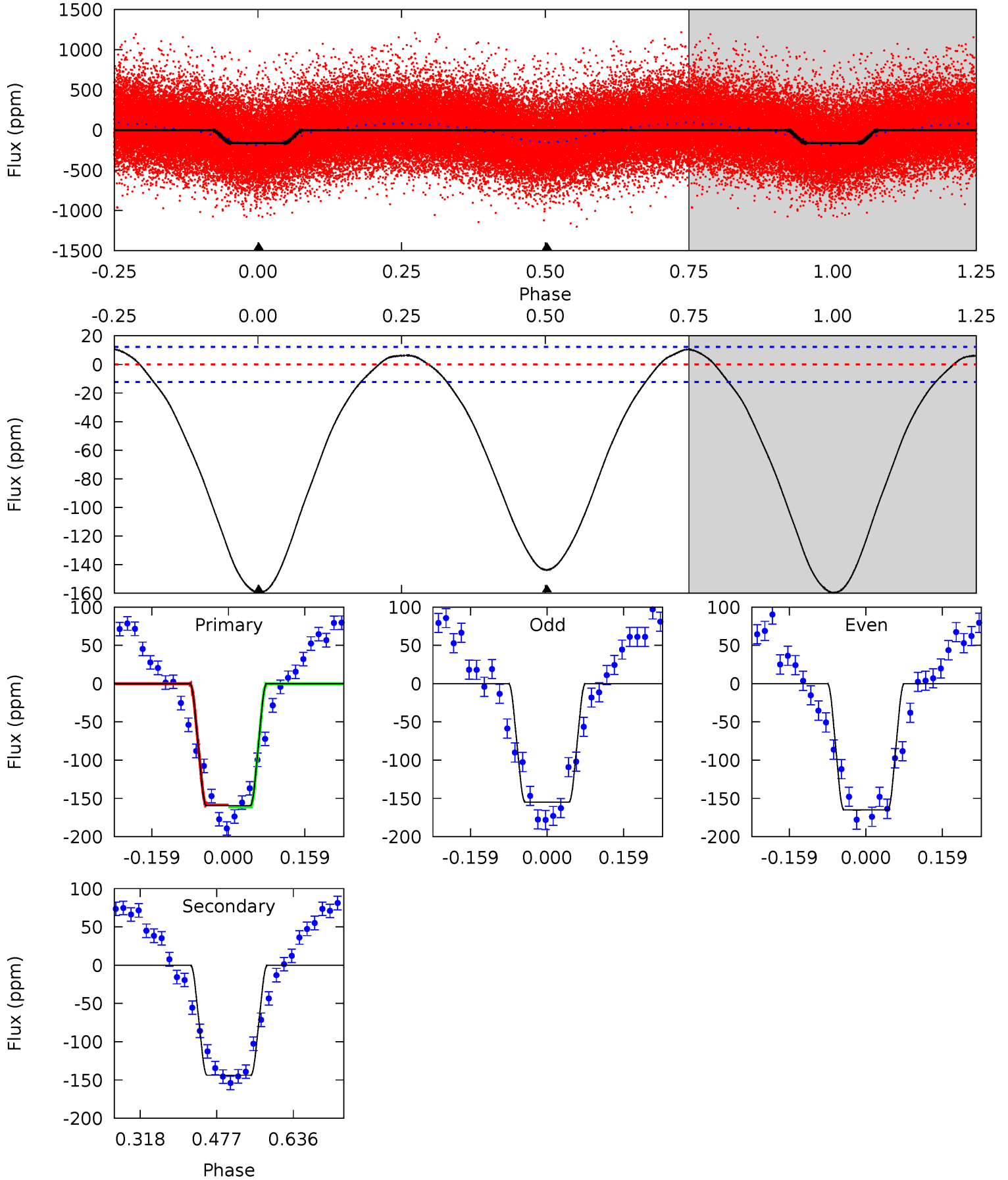
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	1.19	0	0	4.45	1.37	2.45	8.66	8.66	1.19	1.19	0.59	0.80	0.60	6.02



Alt Model-Shift Uniqueness Test

007766209-01, P = 0.835449 Days, E = 130.753016 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.1	52.3	0	0	4.47	1.41	3.40	58.1	58.1	52.3	52.3	1.86	1.00	0.06	0.44



Stellar Parameters For KIC 007766209

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6277^{+175}_{-219}	$4.431^{+0.098}_{-0.196}$	$-0.520^{+0.300}_{-0.300}$	$0.981^{+0.280}_{-0.120}$	$0.948^{+0.128}_{-0.105}$	$1.413^{+0.521}_{-0.700}$
	+3%/-3%	+2%/-4%	+58%/-58%	+29%/-12%	+14%/-11%	+37%/-50%
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 007766209-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 3	$0.33^{+0.24}_{-0.20}$	2958^{+193}_{-156}	4753^{+2954}_{-1767}	$4.020^{+23.753}_{-3.474}$
Alt.	-144 ± 3	$1.45^{+0.34}_{-0.28}$	2961^{+226}_{-152}	5910^{+635}_{-433}	11^{+5}_{-4}

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

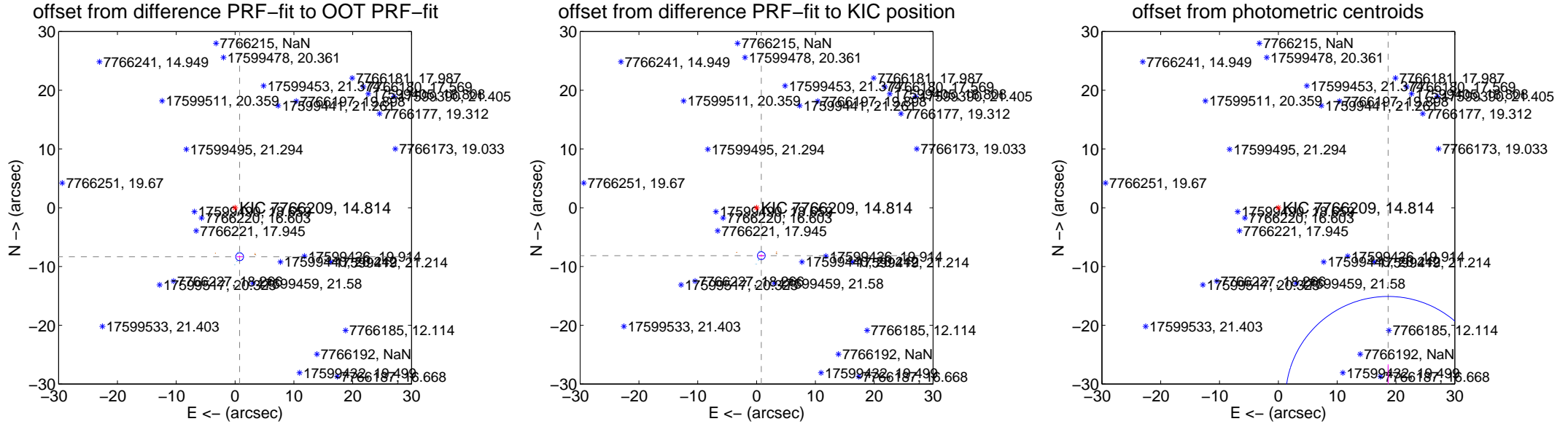
DV Centroid Data

Supplemental centroid analysis for 007766209-01. Kepler magnitude: 14.81. Transit SNR 2.40

There are 11 quarters with good PRF difference image offsets

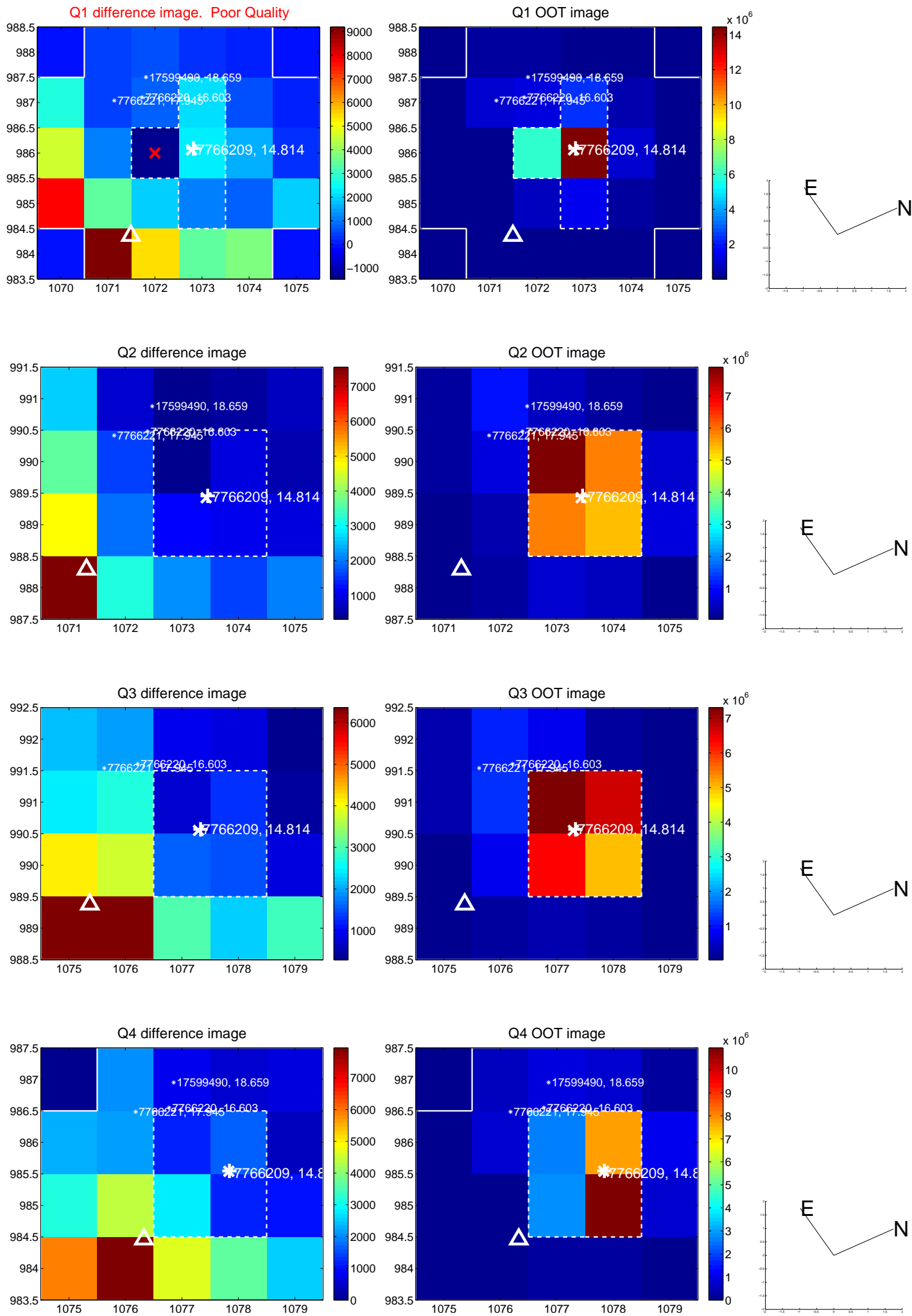
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.380 \pm 0.224	37.47	-0.776 \pm 0.539	-8.344 \pm 0.219
PRF-fit source offset from KIC position	8.195 \pm 0.221	37.00	-0.806 \pm 0.528	-8.155 \pm 0.216
photometric centroid source offset	37.50 \pm 5.81	6.45	-18.66 \pm 5.62	-32.52 \pm 5.87

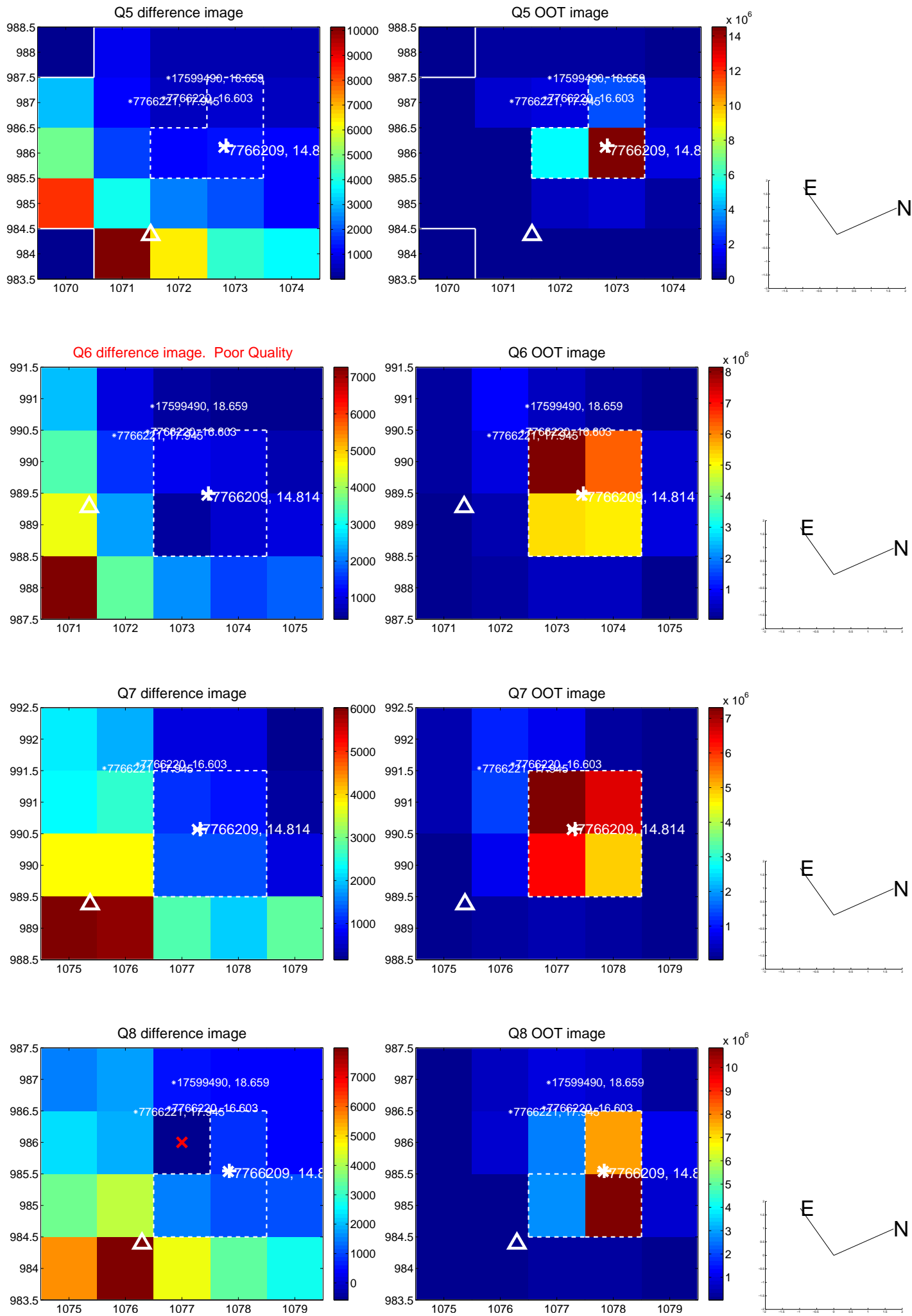


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

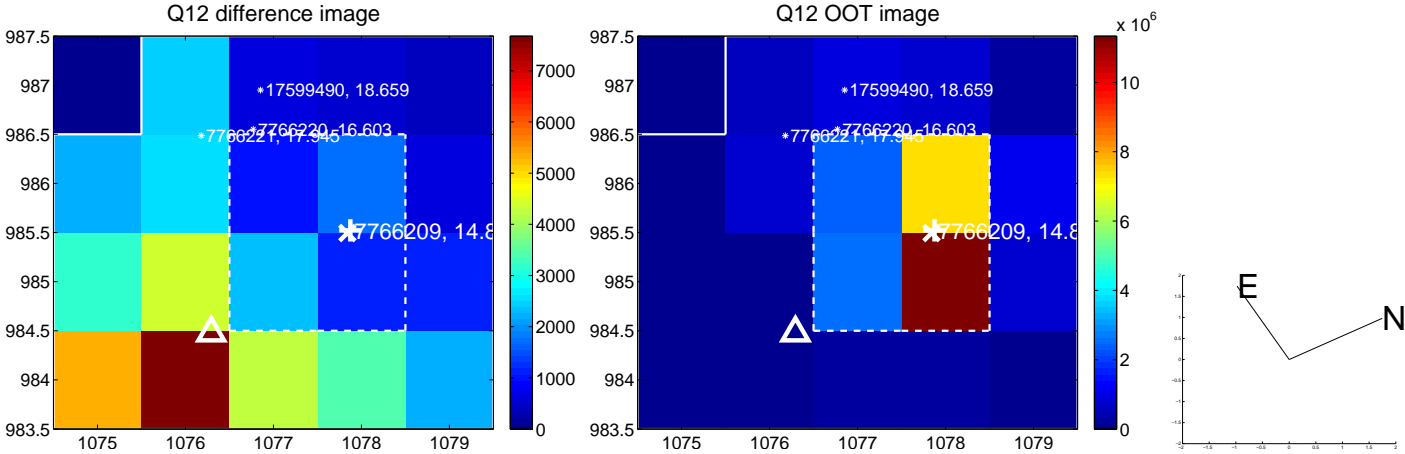
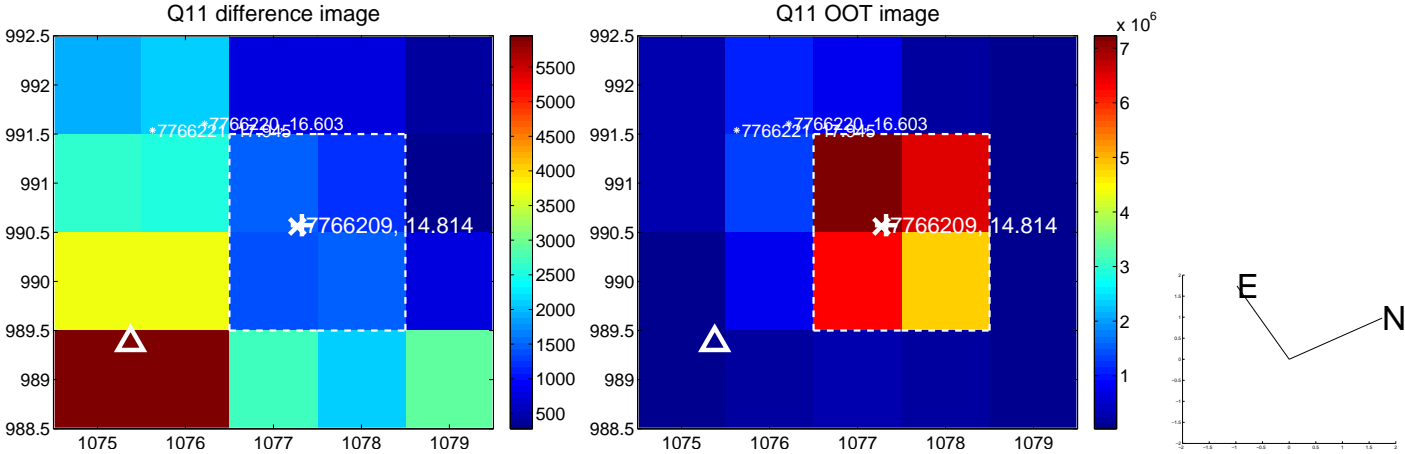
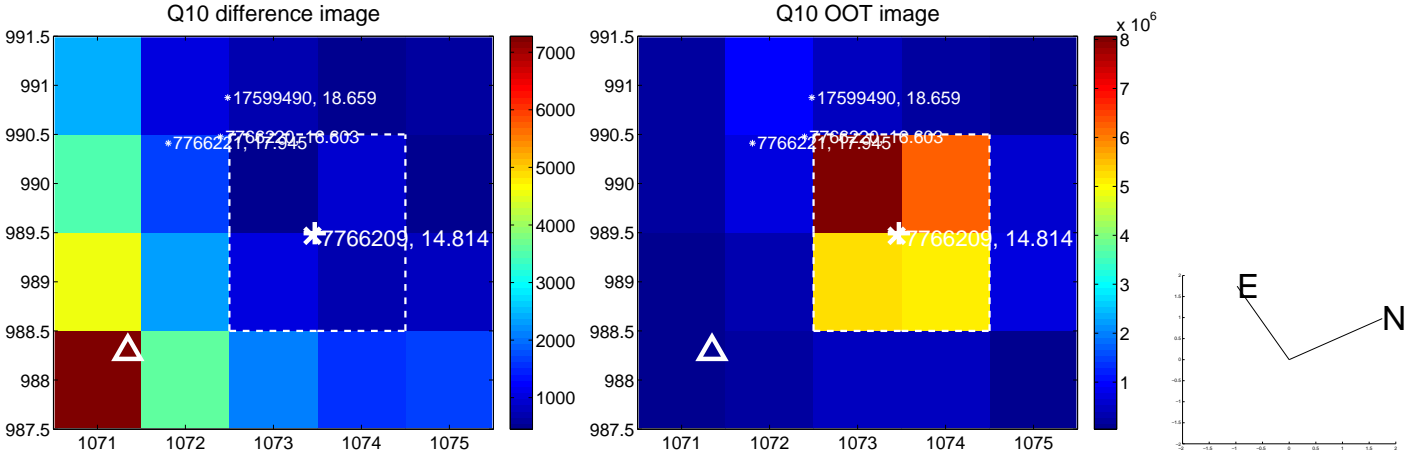
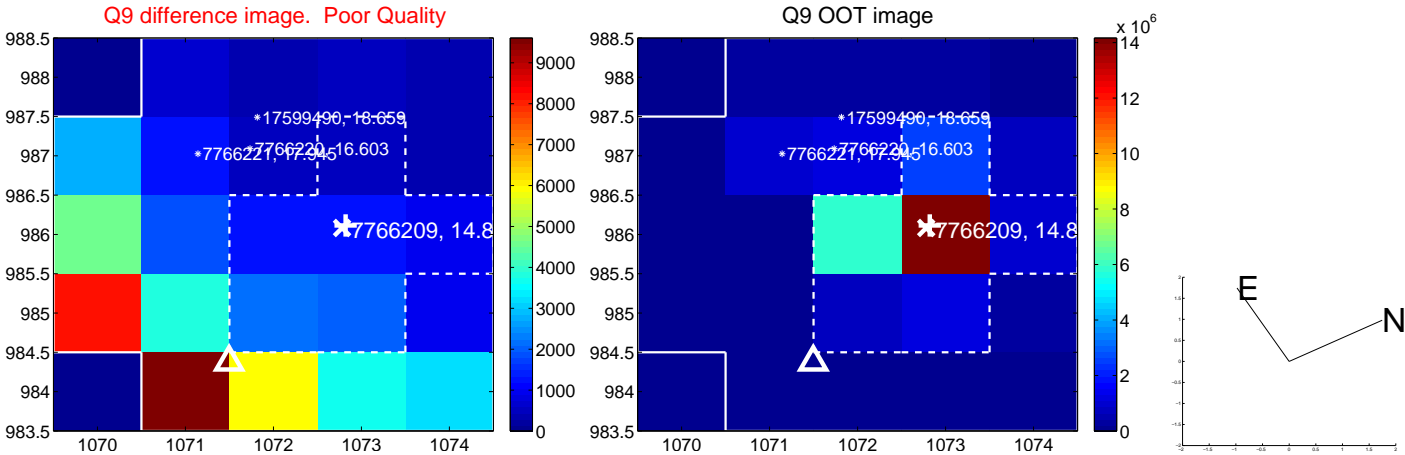
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



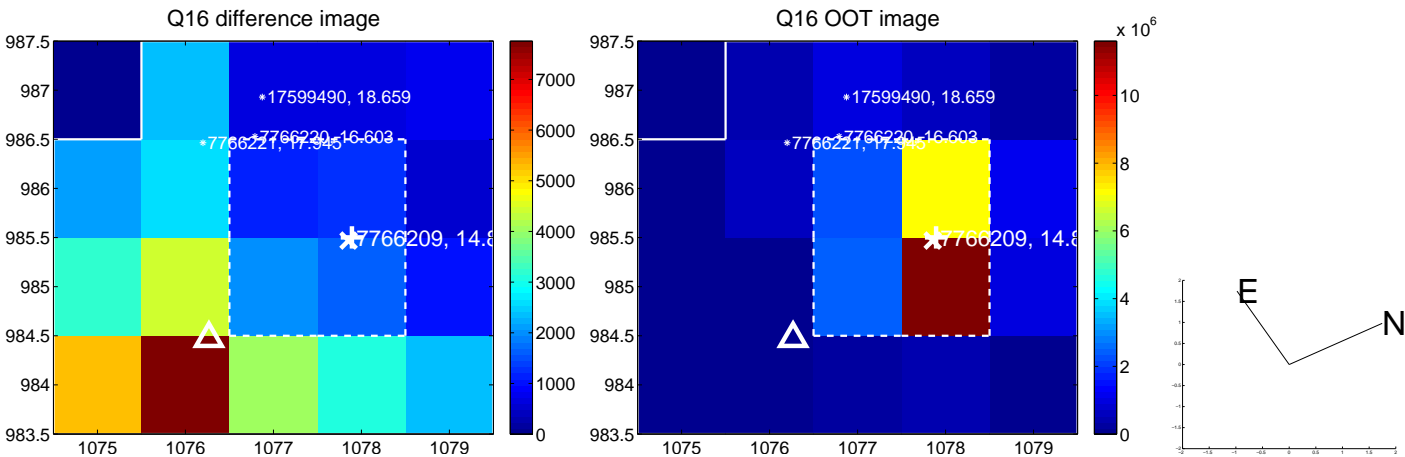
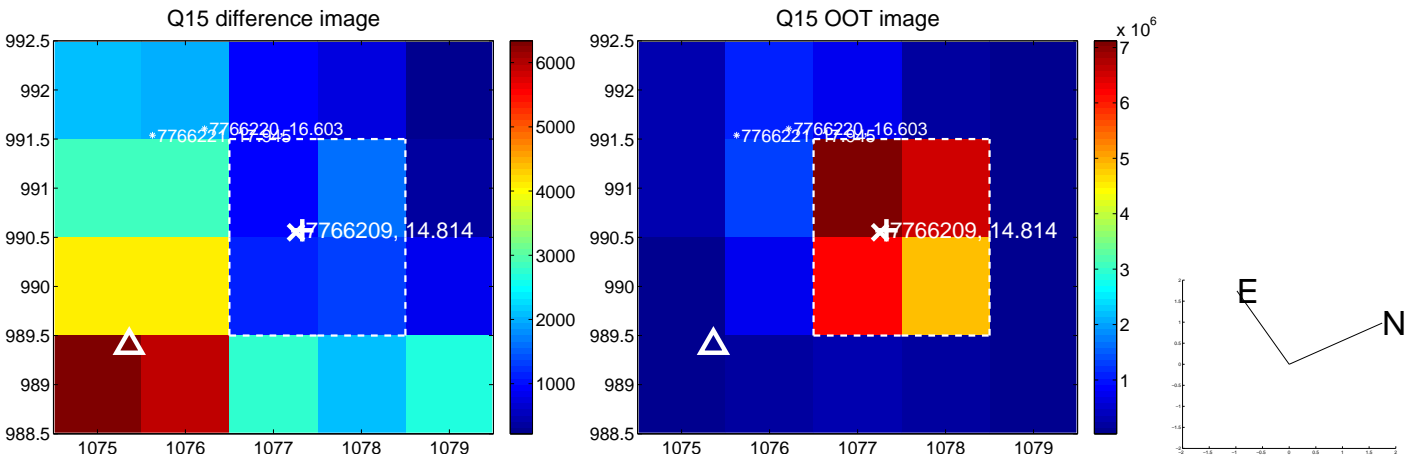
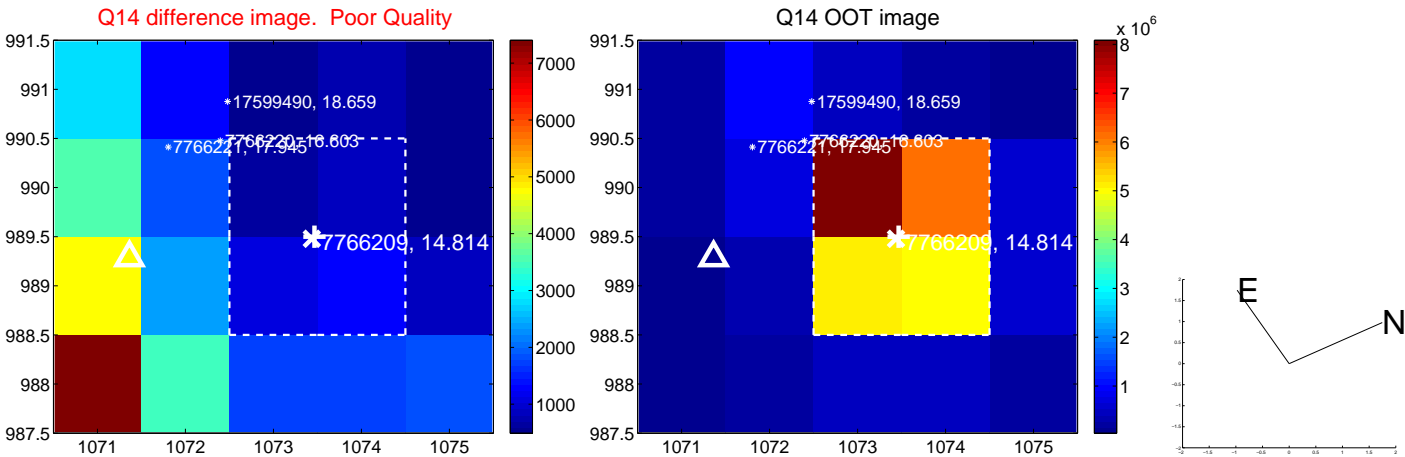
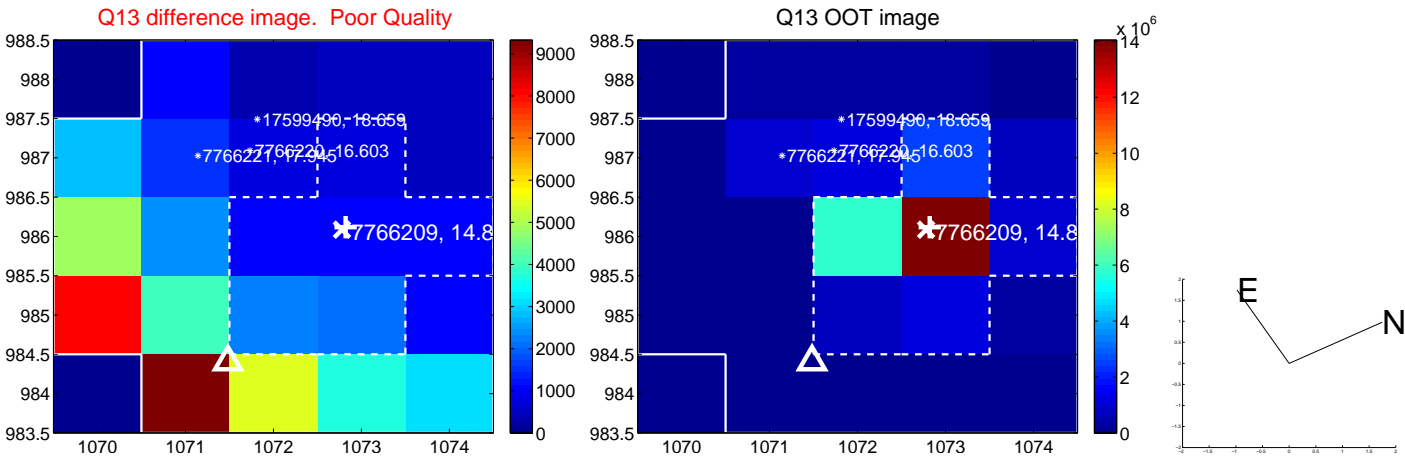
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



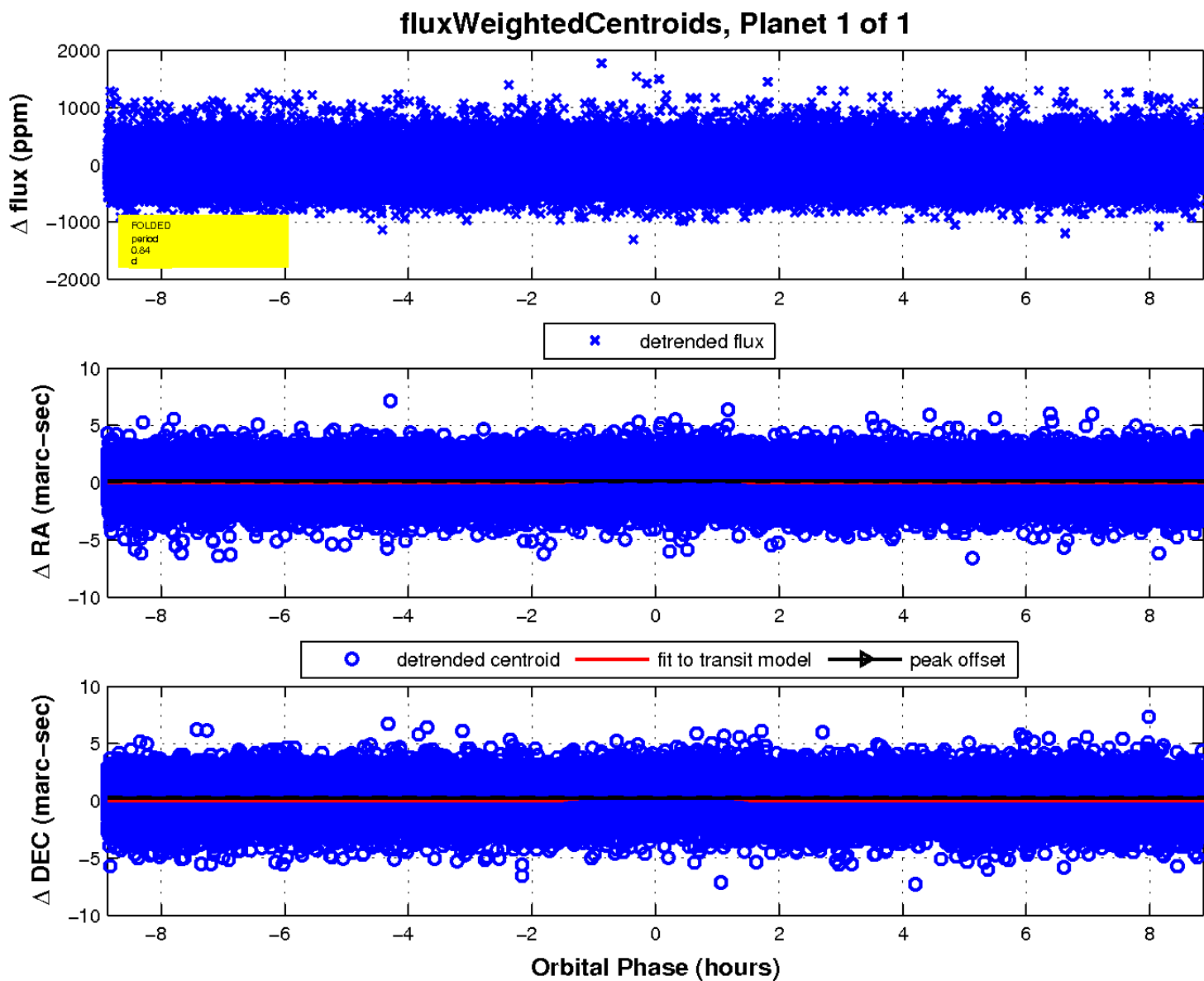
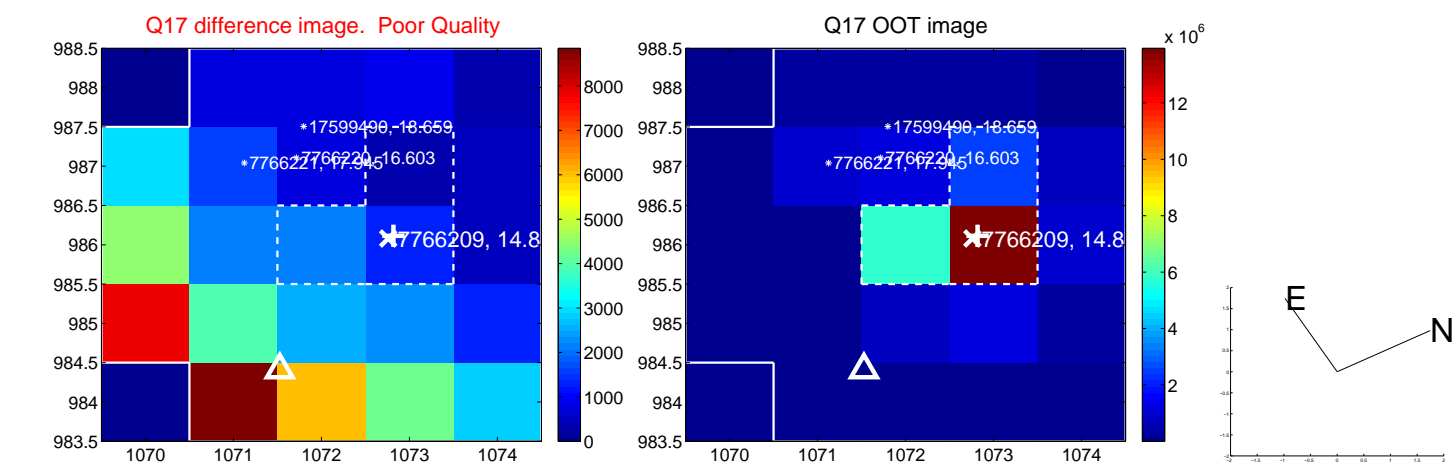
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

