

KIC 007177766

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})
007177766-01	OBS	7819.01	0.769354	131.578199	28.0	1.552	9.5	11.8	2.94	5267	1.88	17406.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007177766-01	OBS	FP	0.00	1	0	0	1	MOD_NONUNIQ_ALT—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.

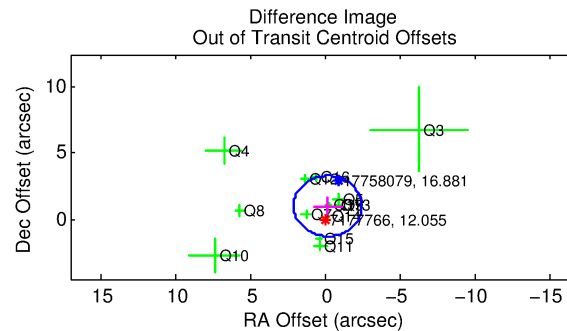
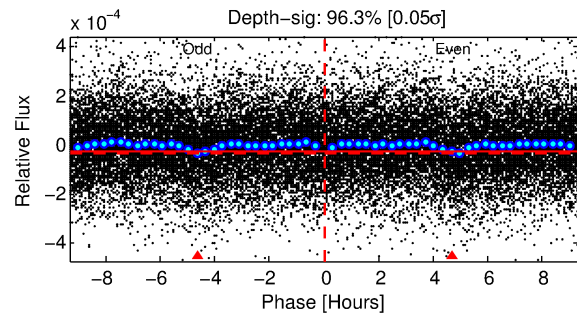
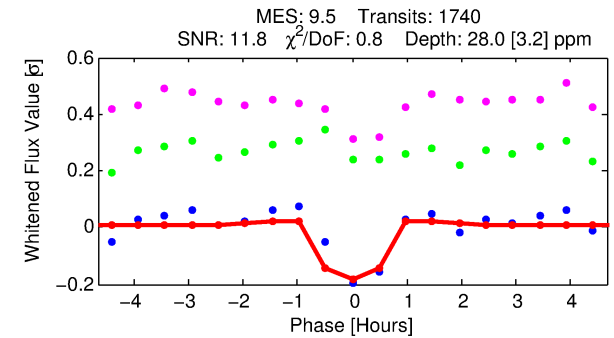
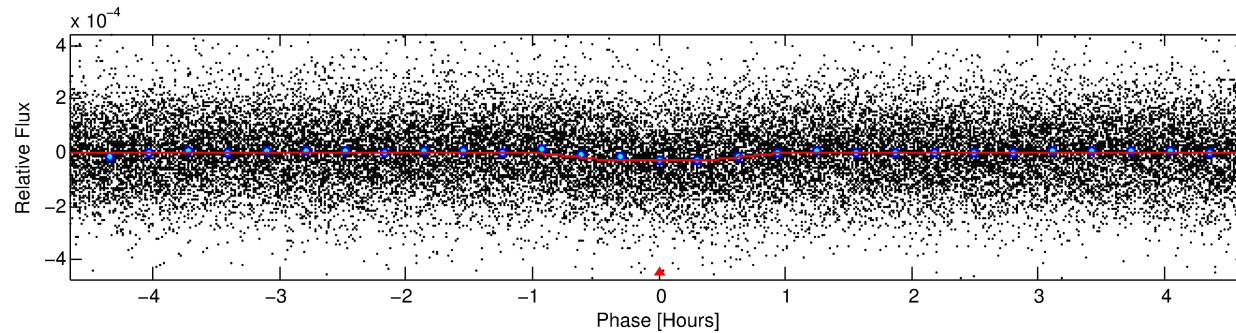
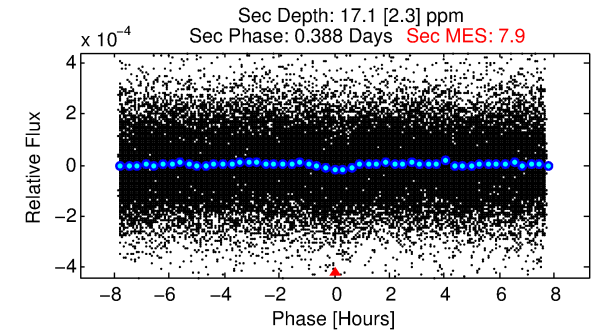
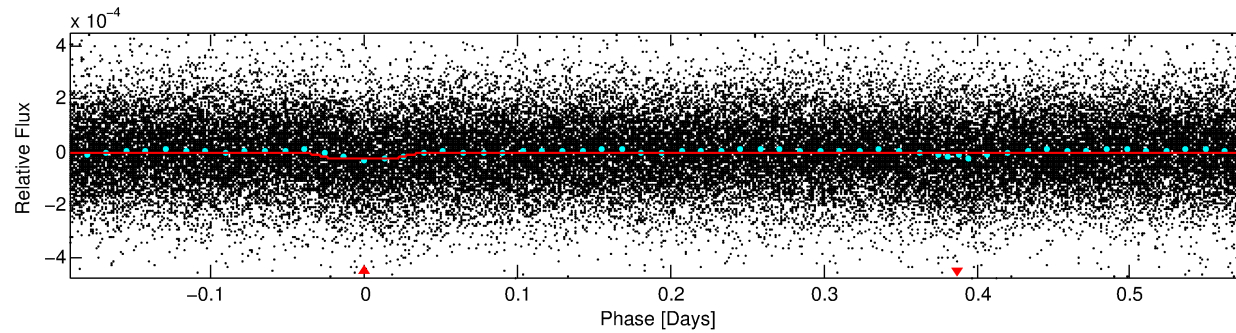
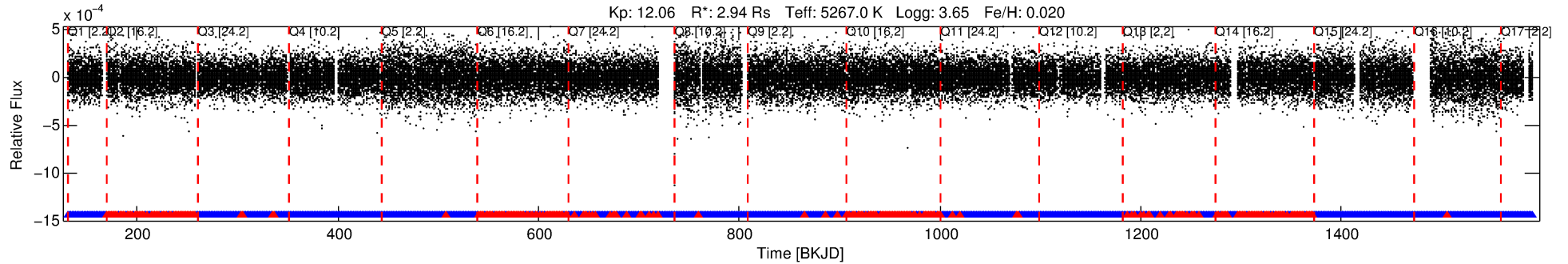
Ephemeris Match Information For 007177766-01

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
007177766-01	7177766	007259917-pri	7259917	2:1	494.9	124	0	12.13	12.05	14204.00	Col-Anomaly	0	1.19	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: 7177766 Candidate: 1 of 1 Period: 0.769 d



DV Fit Results:

Period = 0.76935 [0.00001] d
Epoch = 131.5782 [0.0016] BKJD
Rp/R* = 0.0059 [0.0018]
a/R* = 1.94 [1.85]
b = 0.90 [0.28]
Seff = 17406.75 [7364.55]
Teq = 2929 [310] K
Rp = 1.88 [0.82] Re
a = 0.0185 [0.0050] AU
Ag = 0.91 [0.67] [-0.14σ]
Teffp = 4419 [709] K [1.93σ]

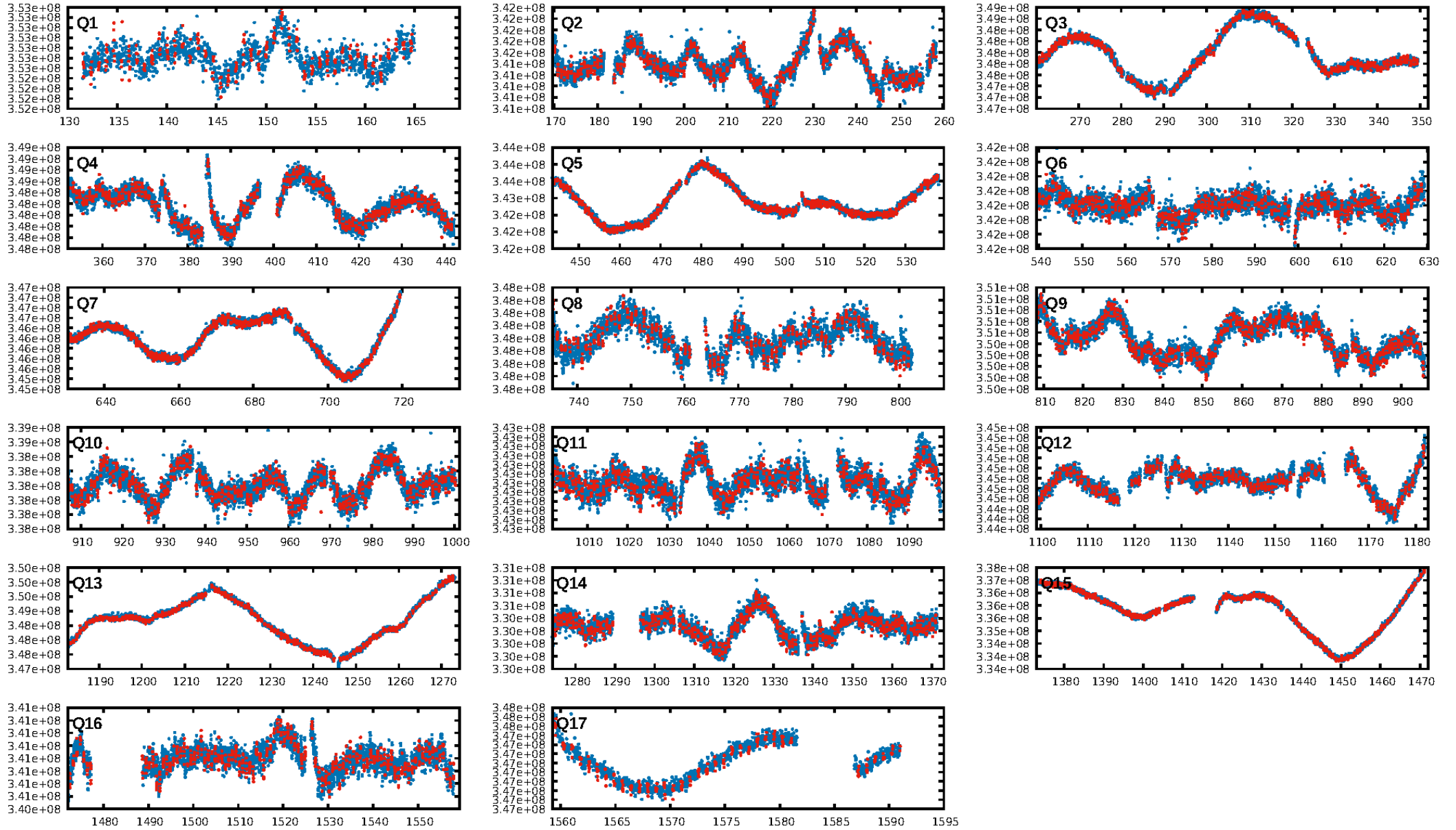
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.86e-19
RollingBand-fgt: 0.80 [1330/1661]
GhostDiagnostic-chr: 1.711
Centroid-sig: 0.0%
Centroid-so: 2.067 arcsec [4.08σ]
OotOffset-rm: 1.037 arcsec [1.36σ]
KicOffset-rm: 1.229 arcsec [1.62σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

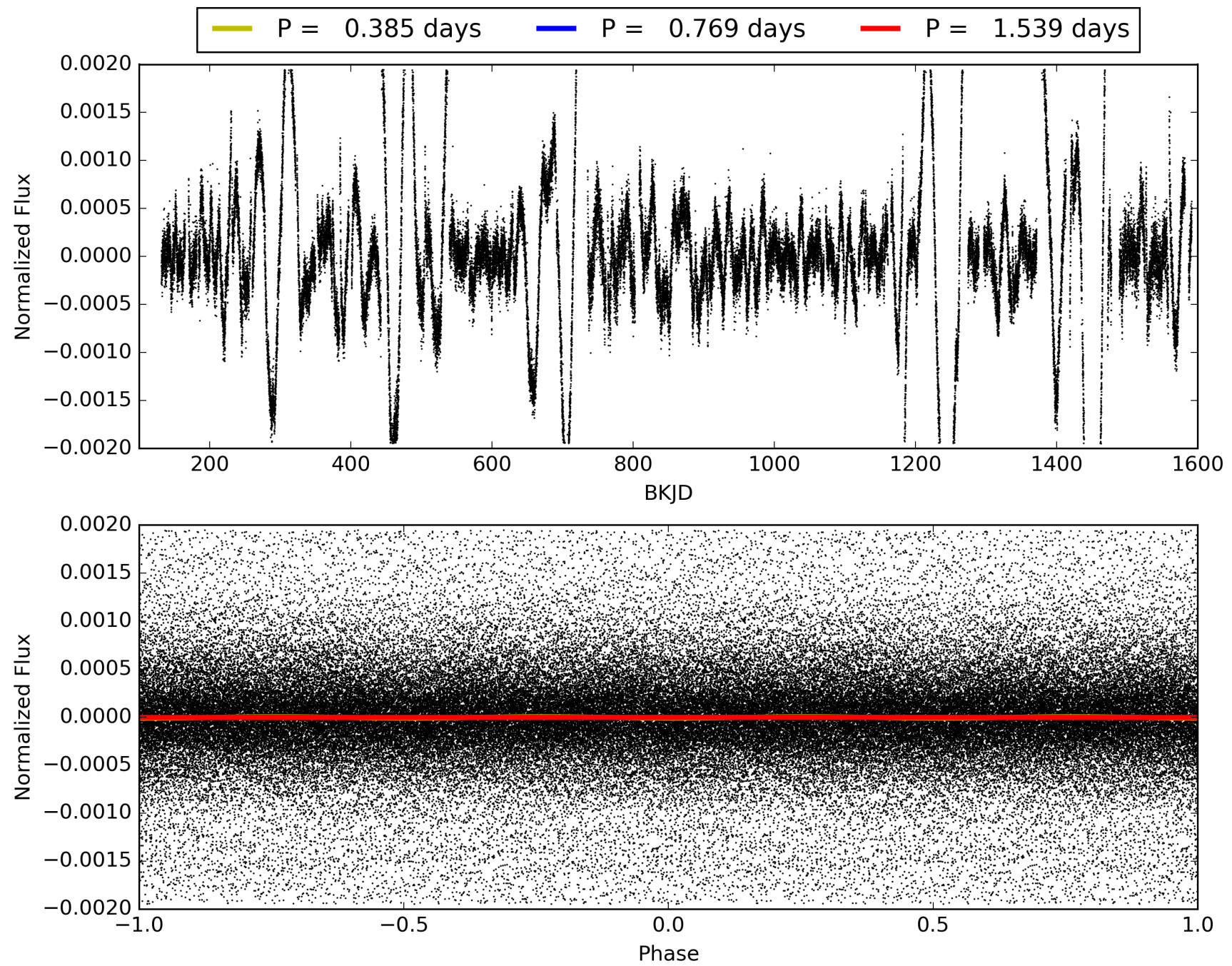
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:57:55 Z

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

TCE 007177766-01, PDC Light Curves

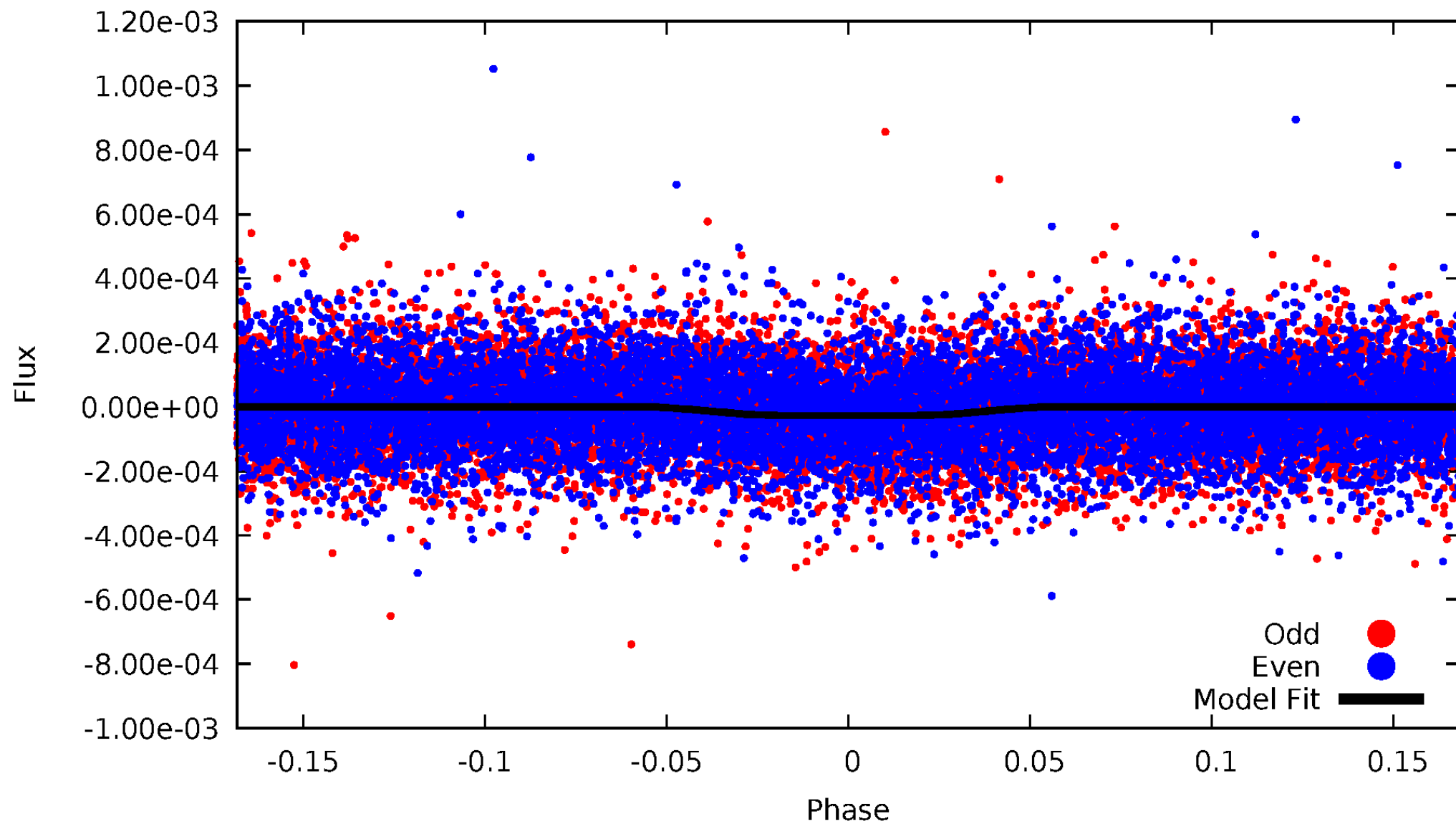


TCE 007177766-01



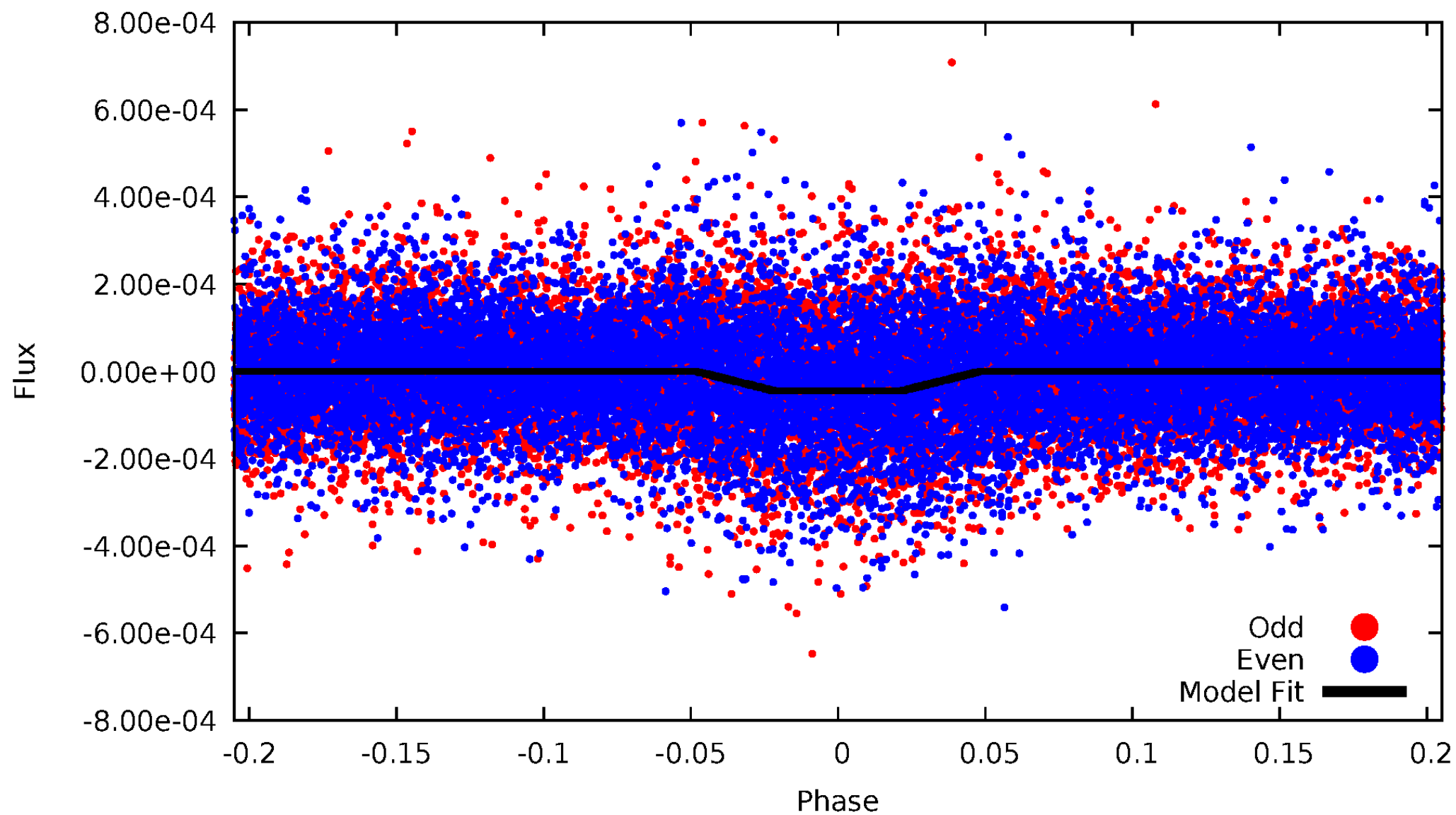
DV Odd/Even

TCE 007177766-01

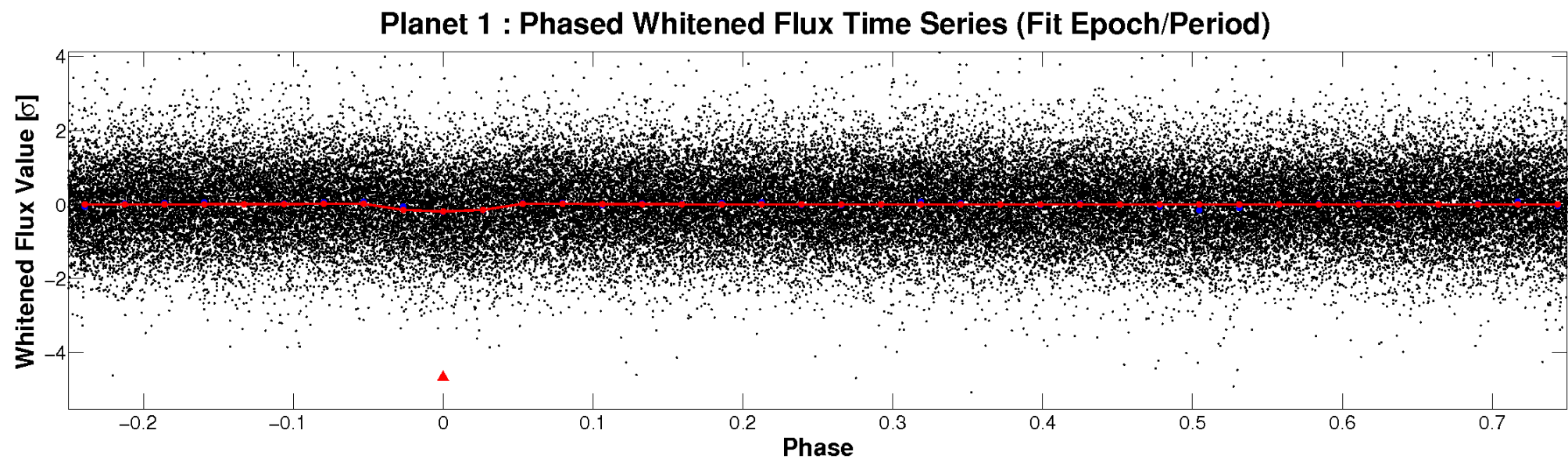
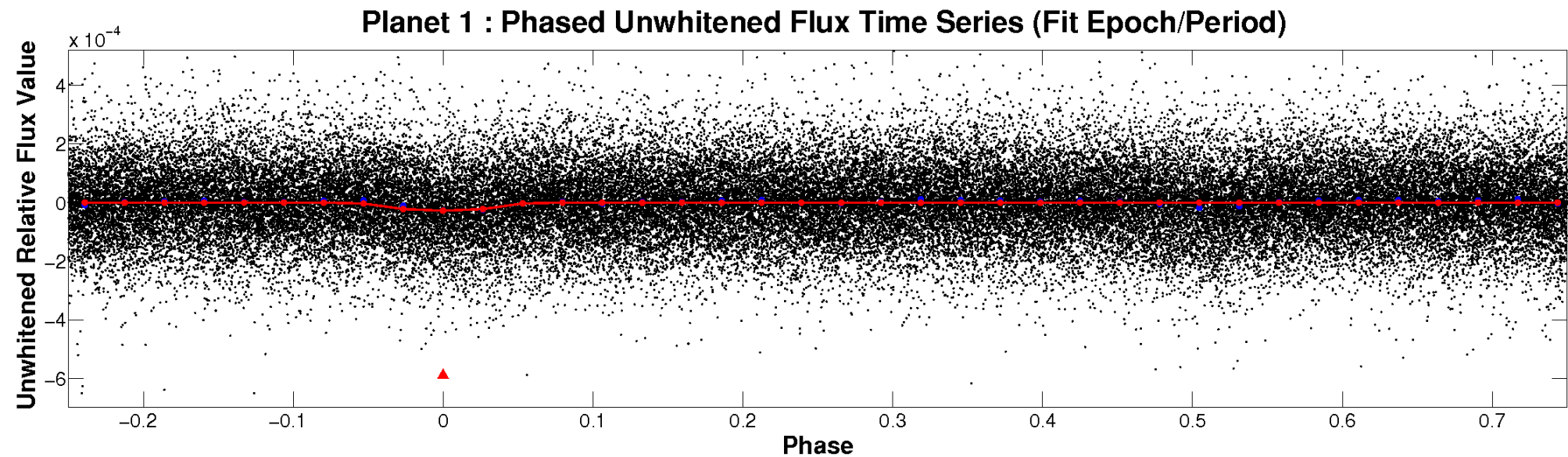


ALT Odd/Even

TCE 007177766-01

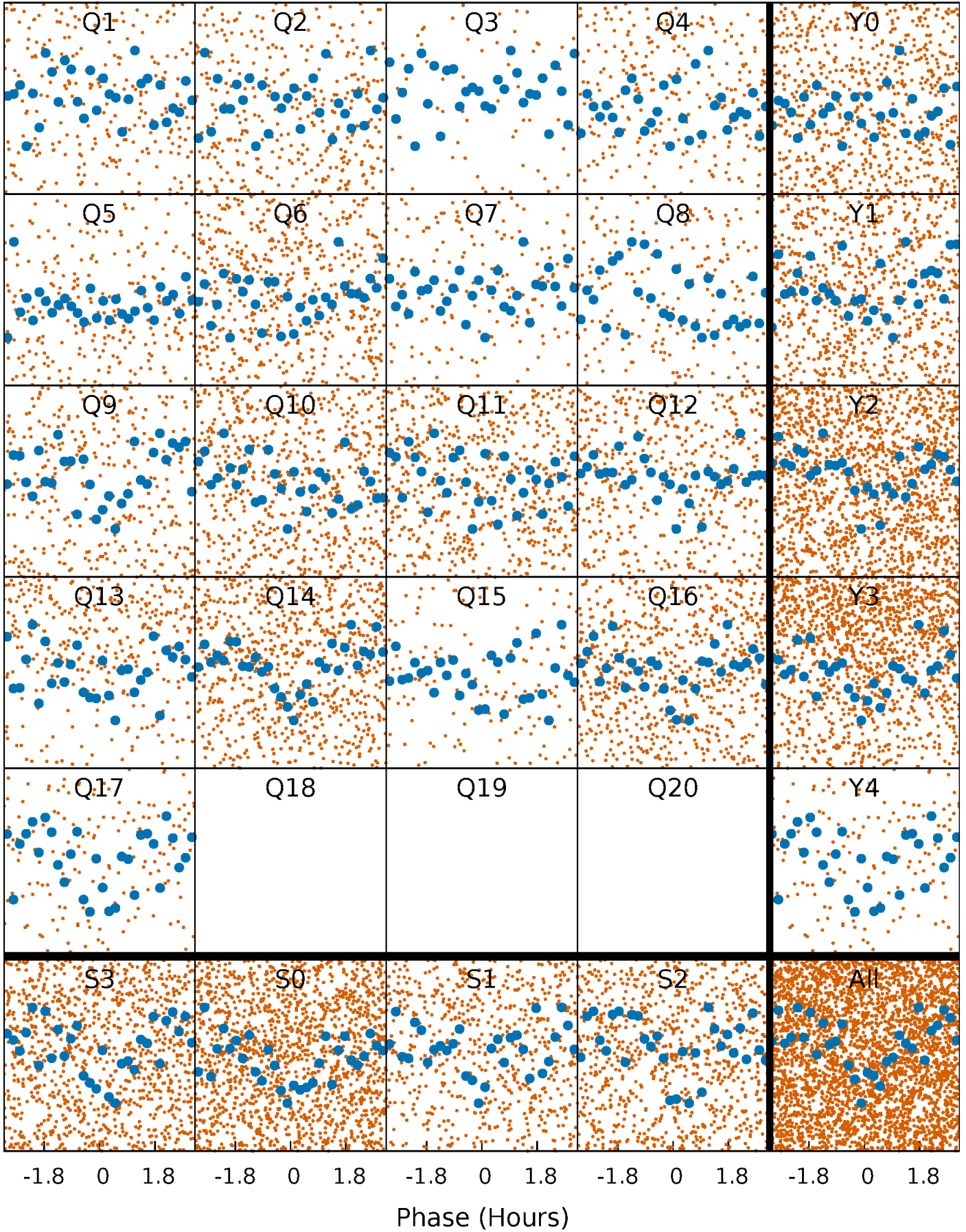


Non-Whitened Vs. Whitened Light Curve



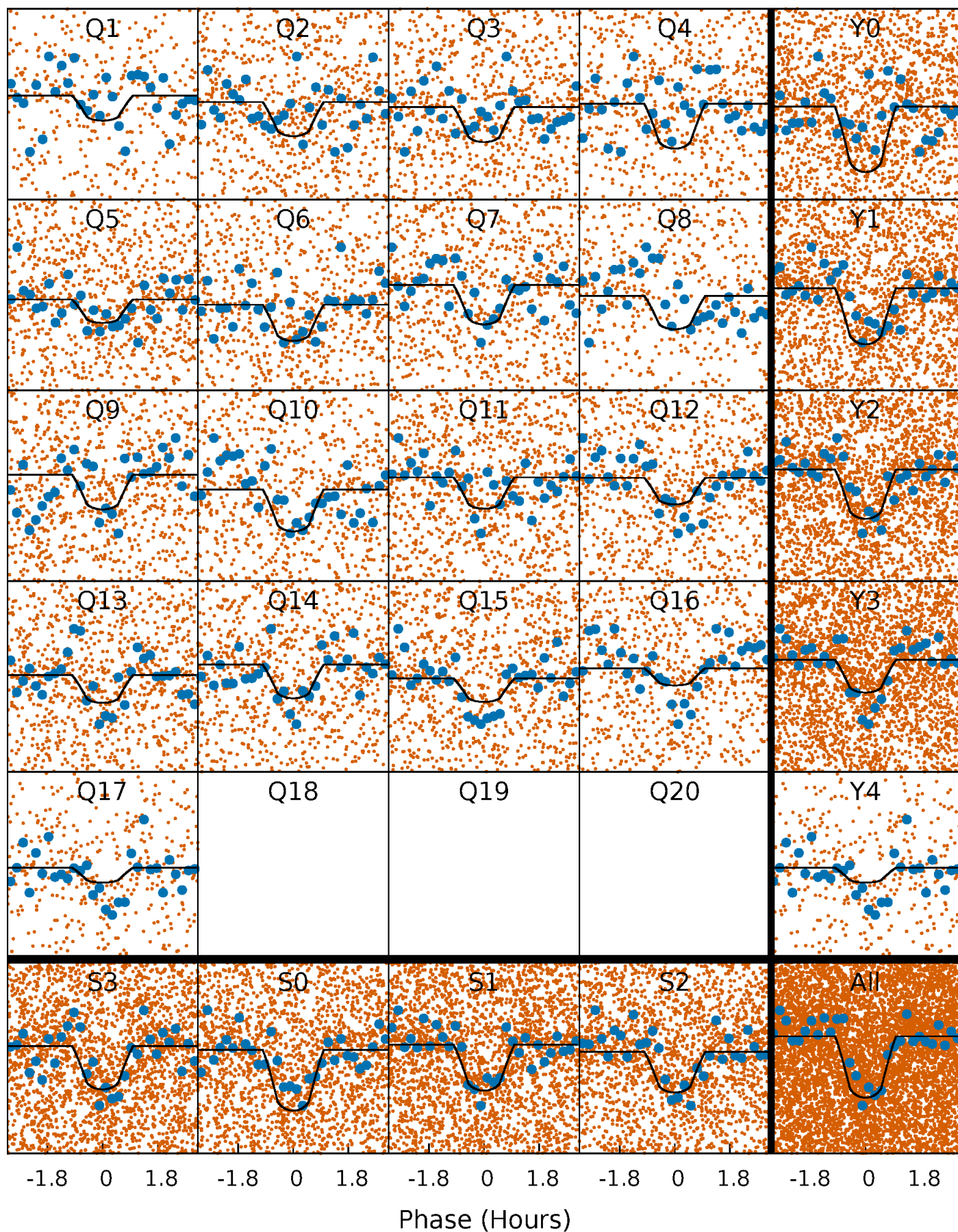
PDC Quarter-Phased Transit Curves

TCE 007177766-01 P= 0.769354 Days $T_0=131.578199$ (BKJD)



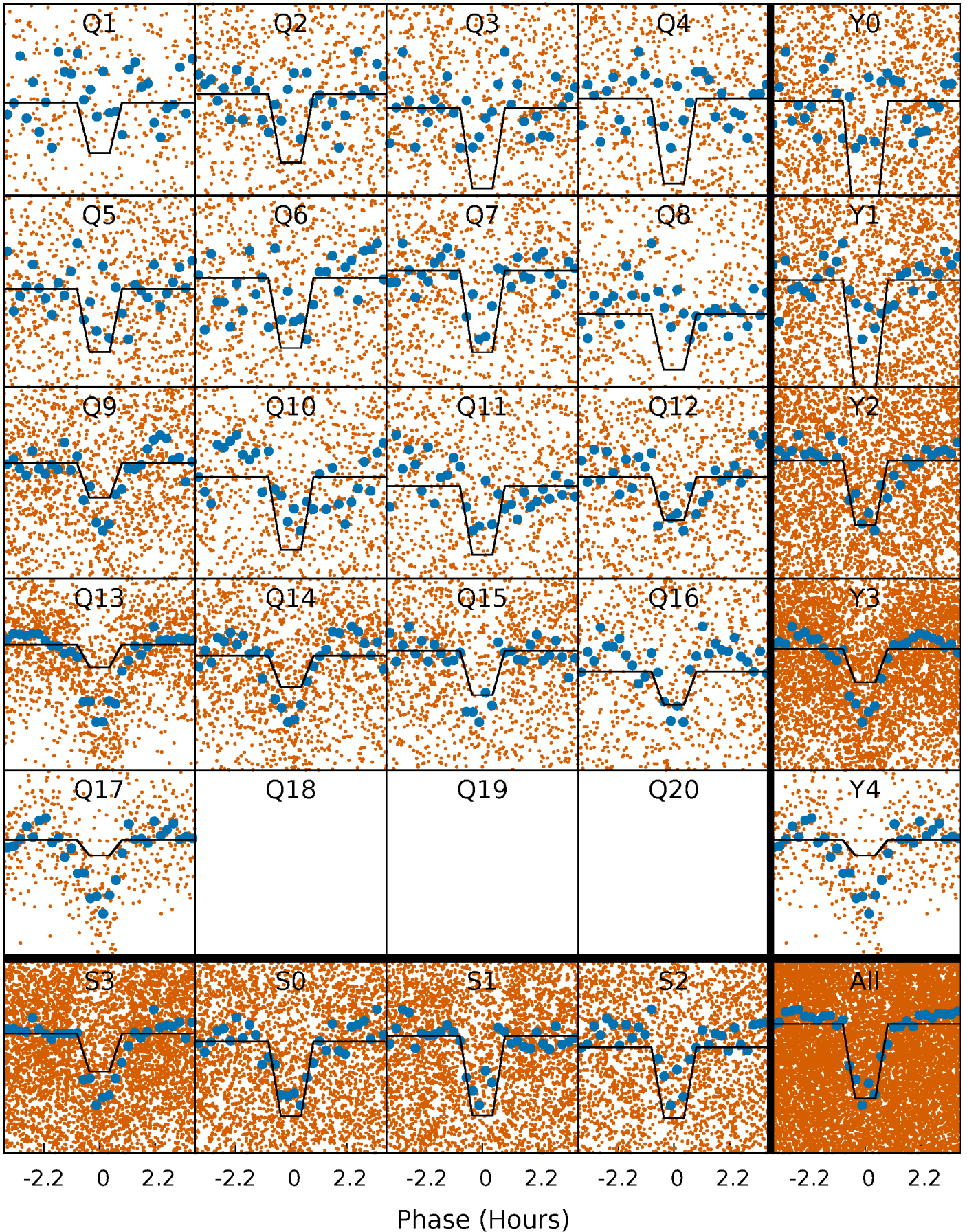
DV Quarter-Phased Transit Curves

TCE 007177766-01 P= 0.769354 Days $T_0=131.578199$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

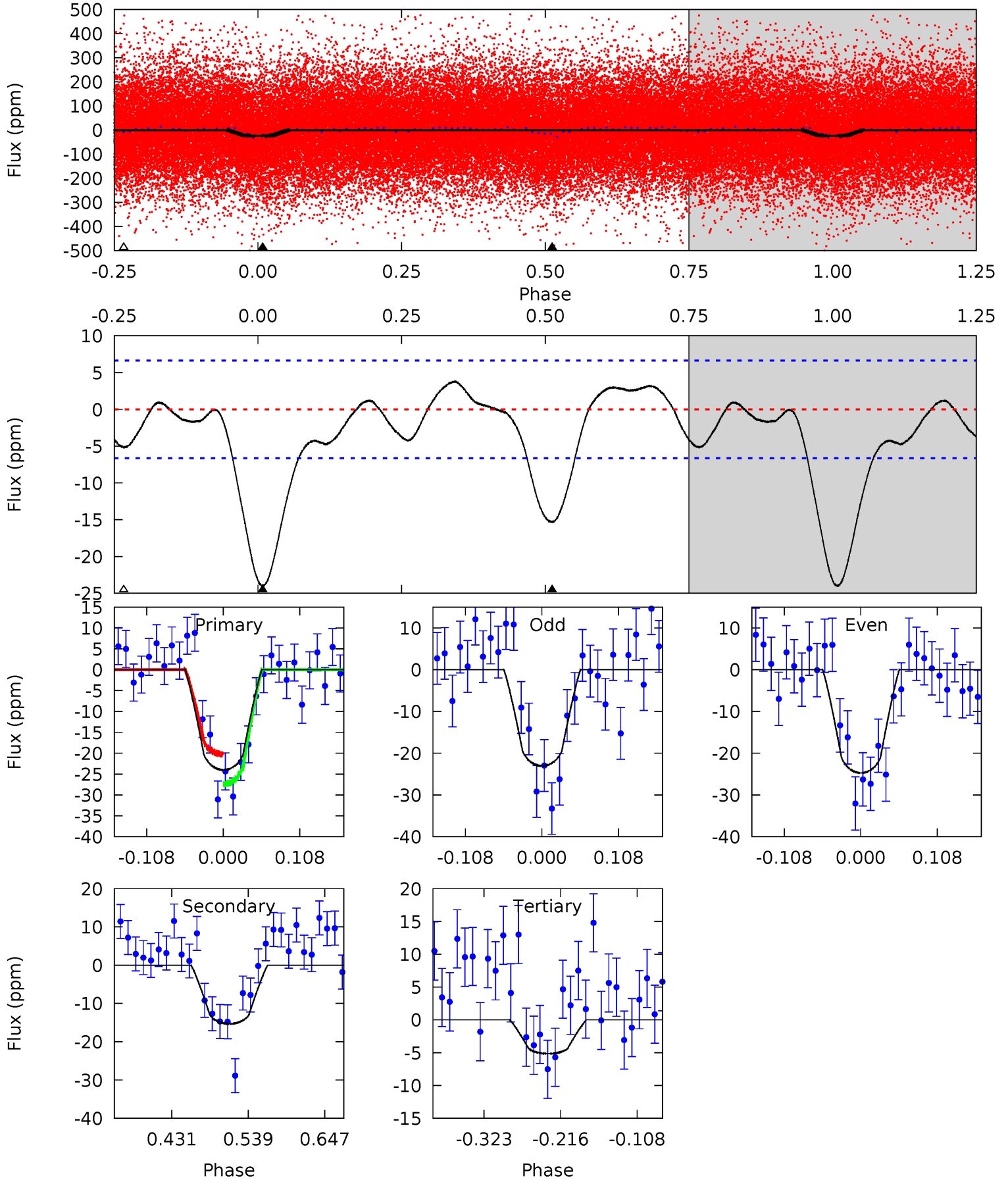
TCE 007177766-01 P= 0.769360 Days $T_0=131.575726$ (BKJD)



DV Model-Shift Uniqueness Test

007177766-01, P = 0.769354 Days, E = 130.808845 Days

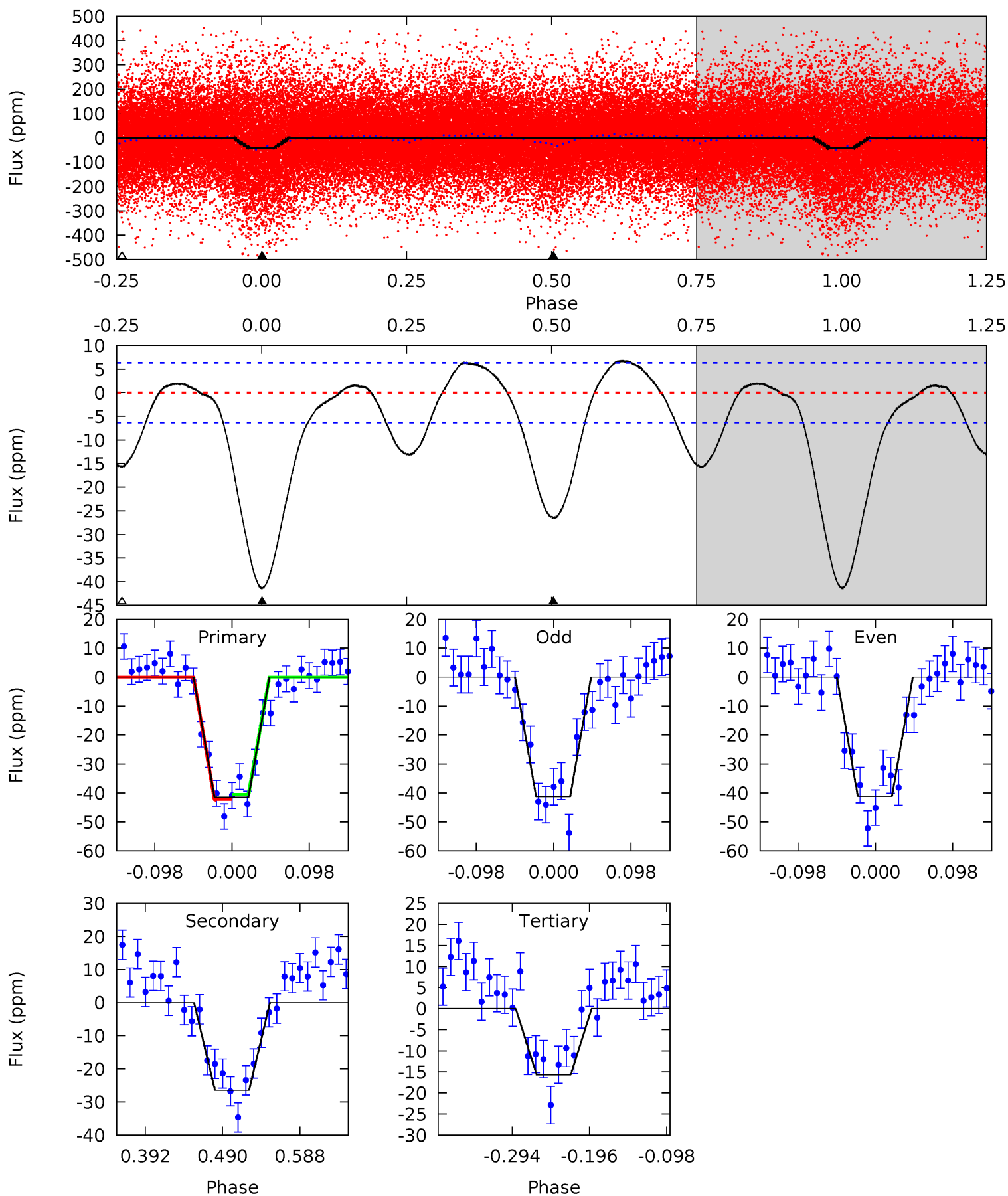
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	10.5	3.54	0	4.55	1.61	1.75	12.9	16.5	6.97	10.5	0.58	1.14	0.14	2.45



Alt Model-Shift Uniqueness Test

007177766-01, P = 0.769360 Days, E = 130.806366 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	19.2	11.3	0	4.57	1.65	4.75	18.6	29.9	7.81	19.2	0.03	1.03	0.14	0.61



Stellar Parameters For KIC 007177766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5267^{+146}_{-182}	$3.655^{+0.222}_{-0.167}$	$0.020^{+0.250}_{-0.300}$	$2.935^{+0.614}_{-0.921}$	$1.420^{+0.174}_{-0.407}$	$0.079^{+0.108}_{-0.035}$
	+3%/-3%	+6%/-5%	+1250%/-1500%	+21%/-31%	+12%/-29%	+136%/-44%
Source	PHO1	FLK73	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 007177766-01 / KOI 7819.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 1	$1.85^{+0.61}_{-0.59}$	4107^{+287}_{-338}	4066^{+848}_{-711}	$0.822^{+0.952}_{-0.372}$
Alt.	-27 ± 1	$2.08^{+0.68}_{-0.68}$	4085^{+276}_{-335}	4432^{+854}_{-584}	$1.134^{+1.318}_{-0.494}$

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

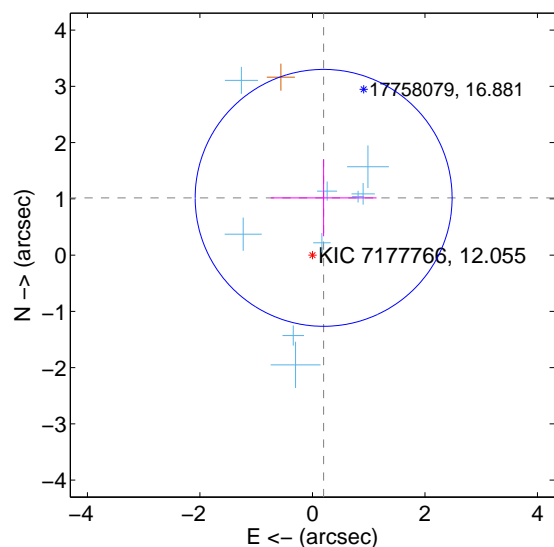
Supplemental centroid analysis for 007177766-01. Kepler magnitude: 12.05. Transit SNR 11.84

There are 9 quarters with good PRF difference image offsets

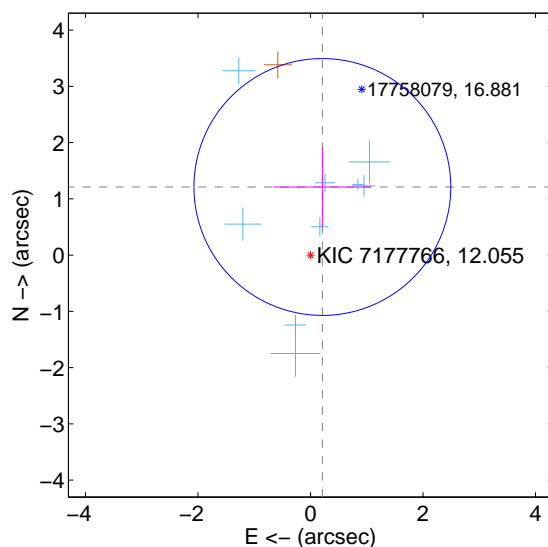
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.037 ± 0.761	1.36	-0.199 ± 0.940	1.018 ± 0.683
PRF-fit source offset from KIC position	1.229 ± 0.761	1.62	-0.210 ± 0.871	1.211 ± 0.703
photometric centroid source offset	2.07 ± 0.51	4.08	0.70 ± 0.61	1.94 ± 0.49

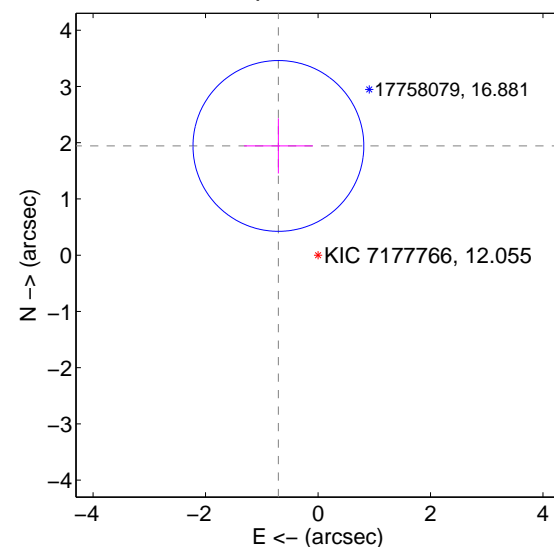
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

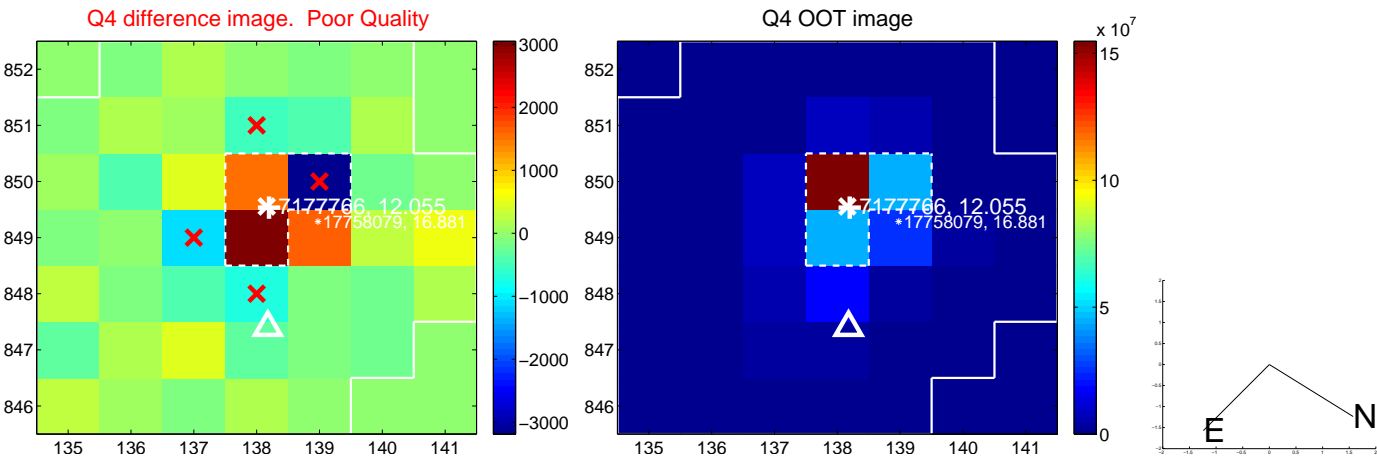
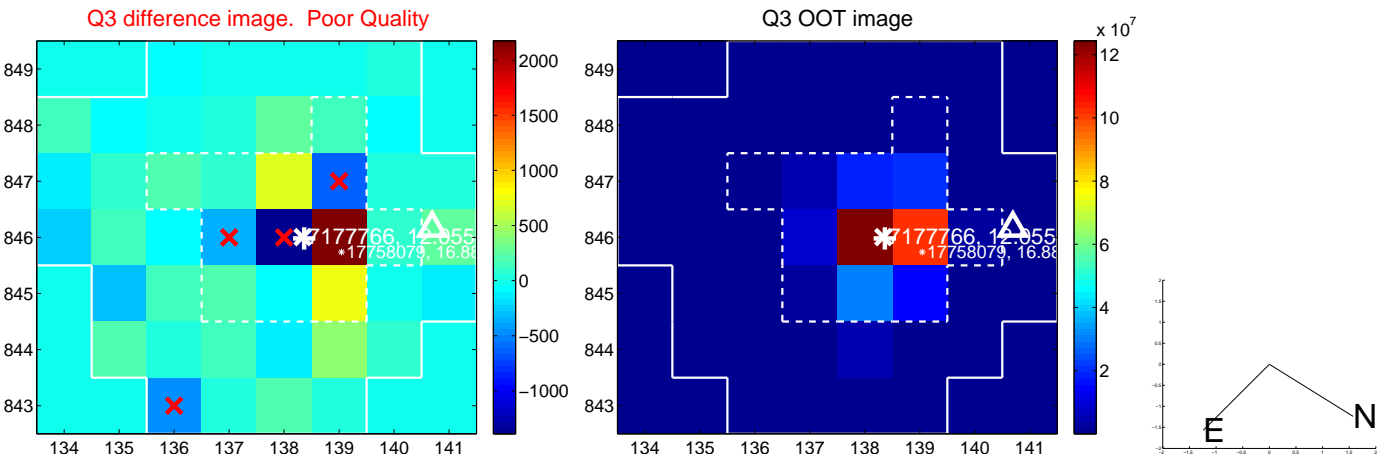
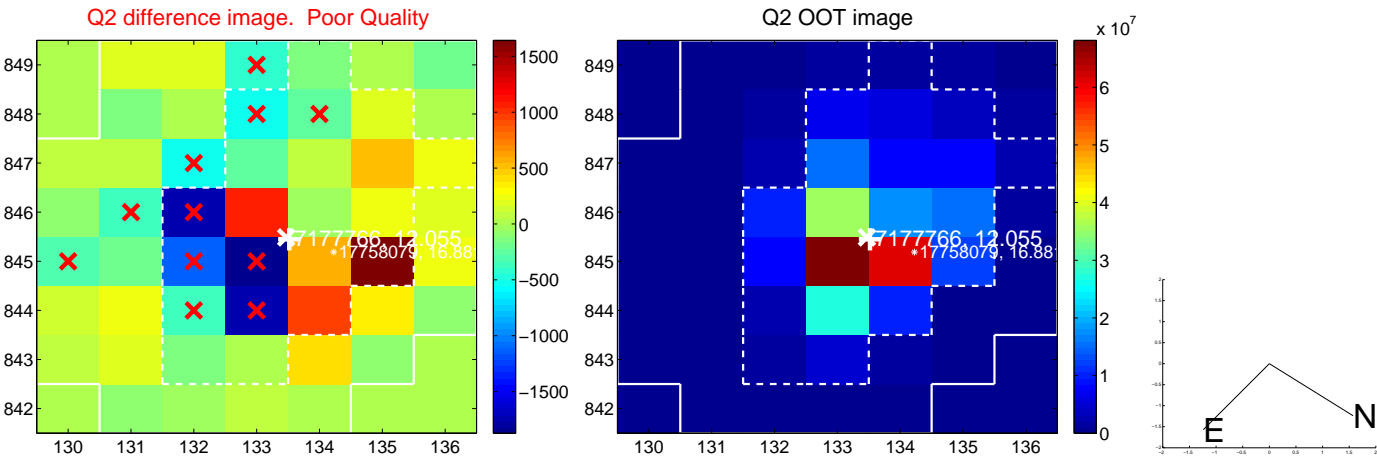
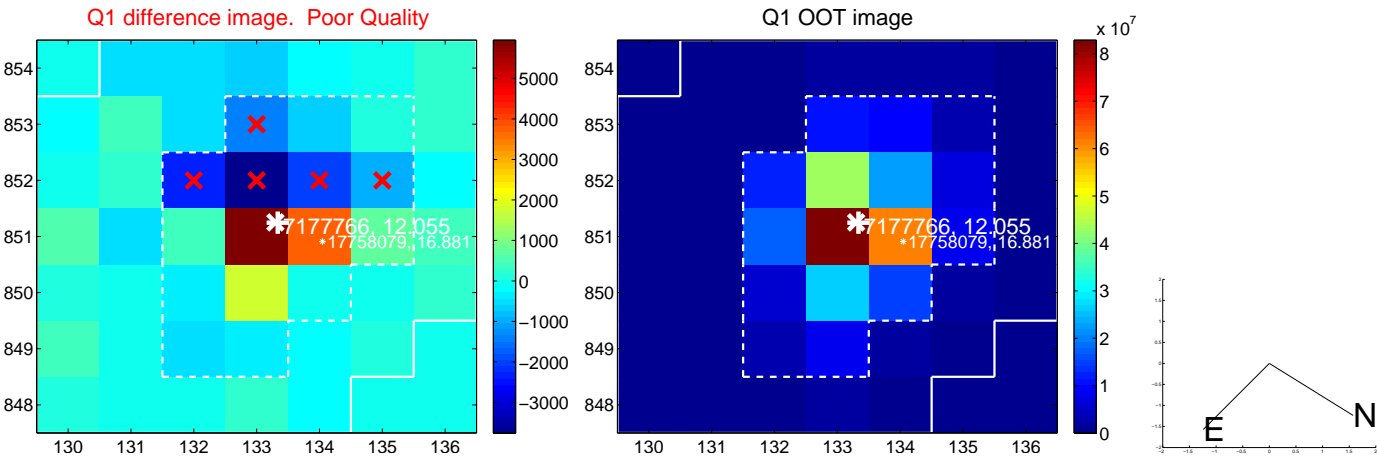


offset from photometric centroids

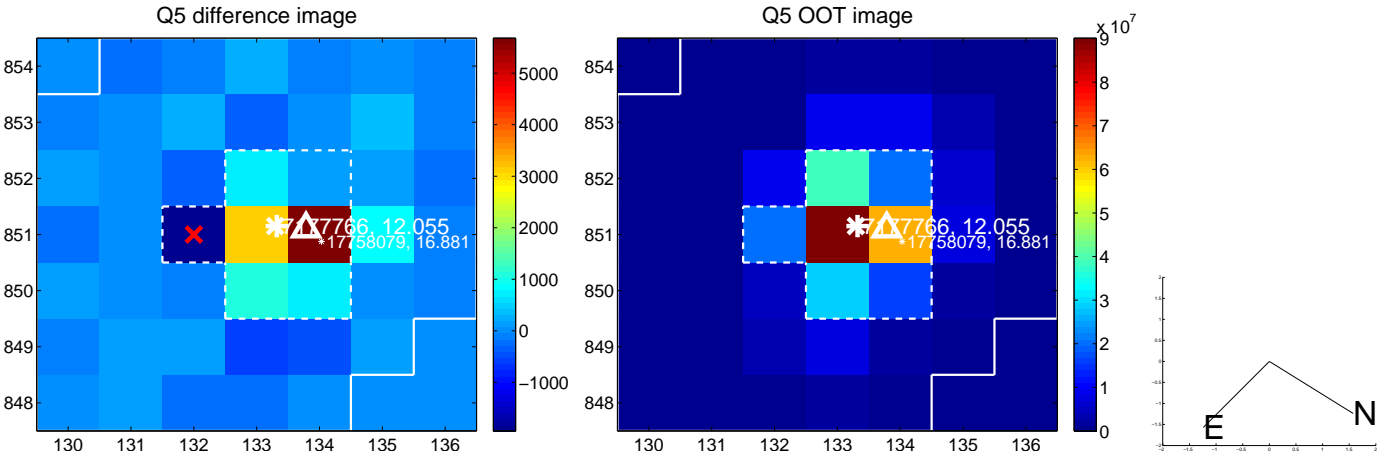


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

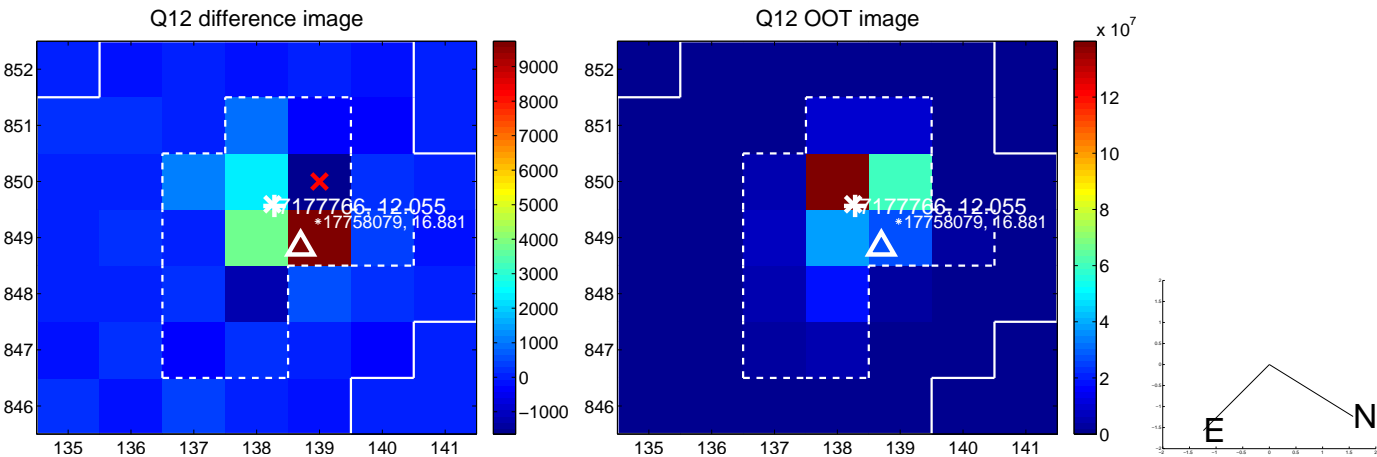
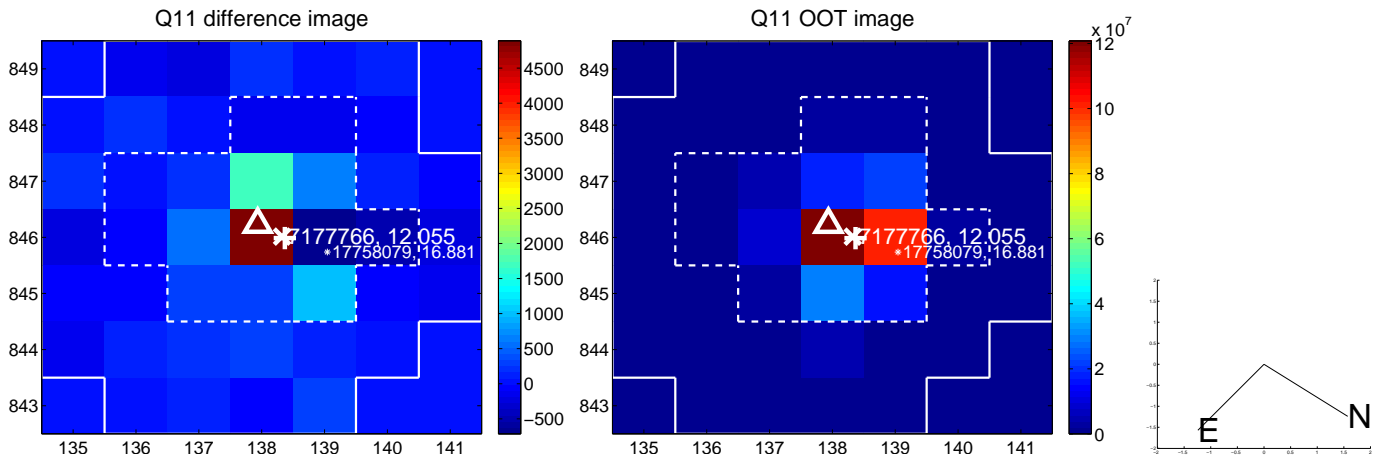
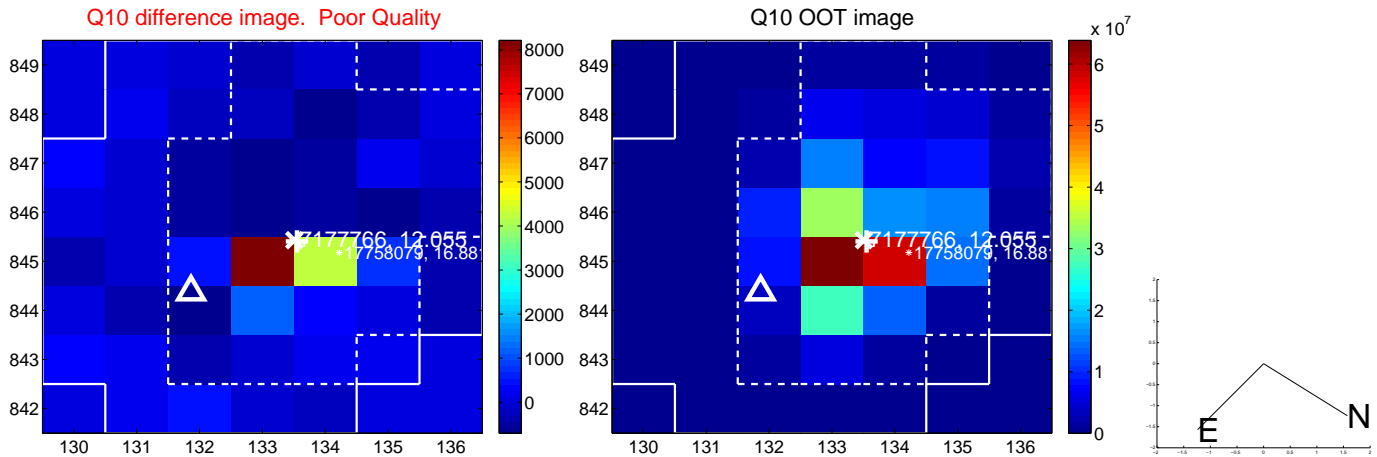
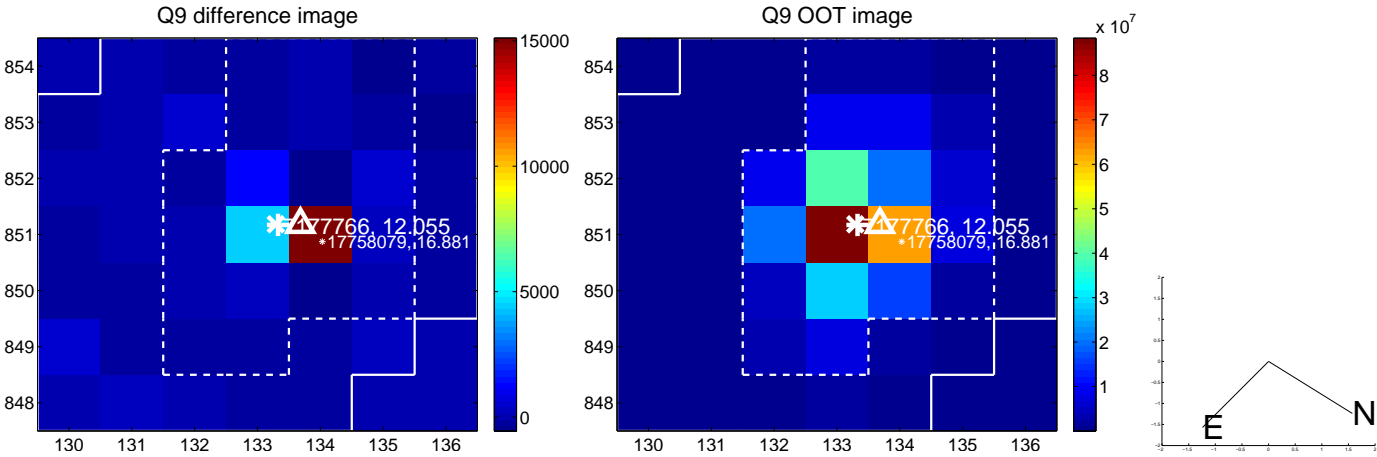
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



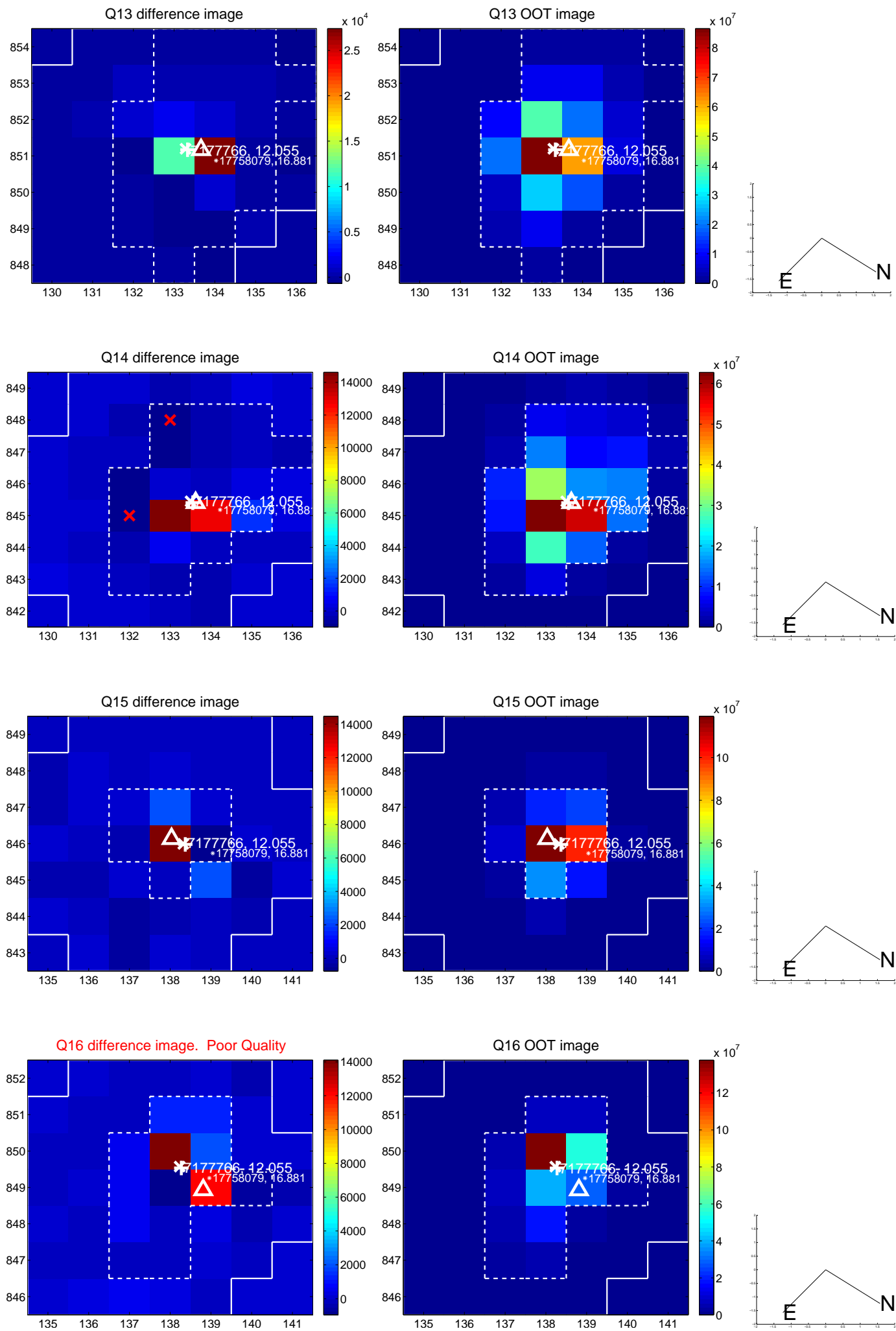
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



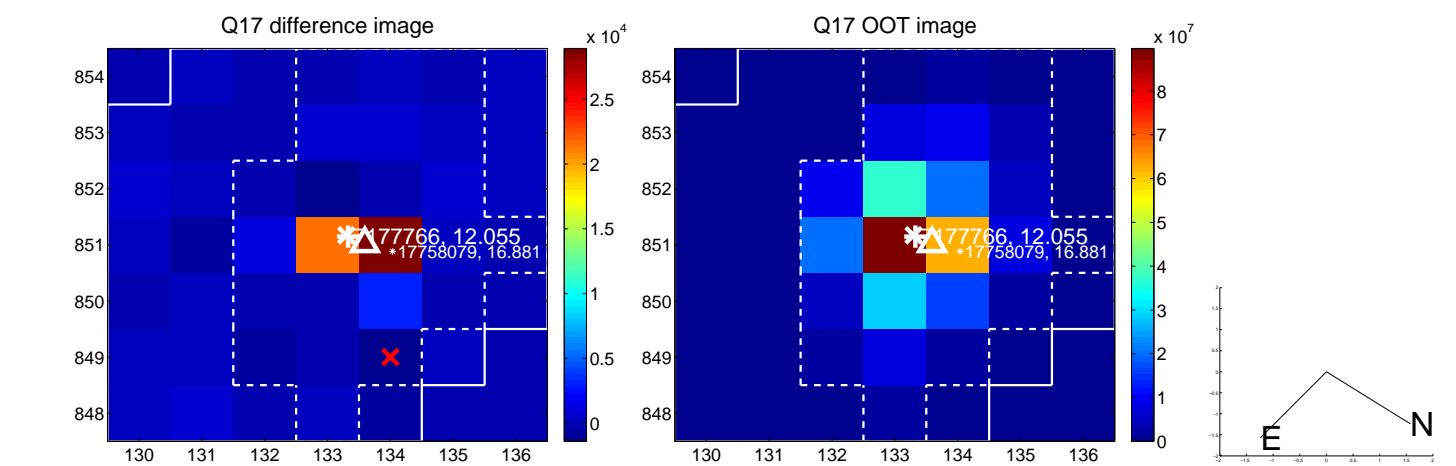
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



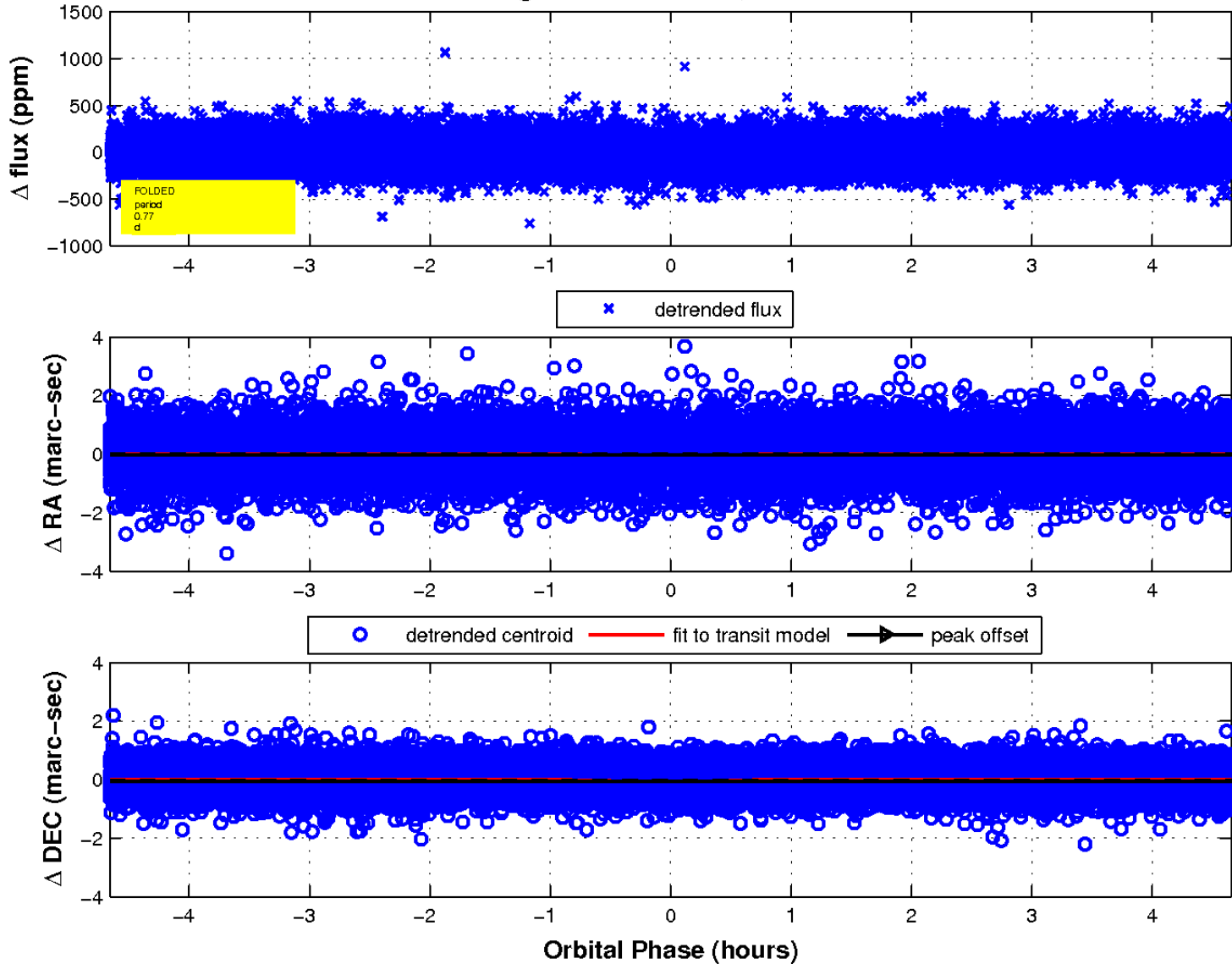
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

