

KIC 007766113

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})
007766113-01	OBS	No	0.835400	131.623668	11.0	3.584	8.8	7.8	1.04	5964	0.36	3872.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007766113-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_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.

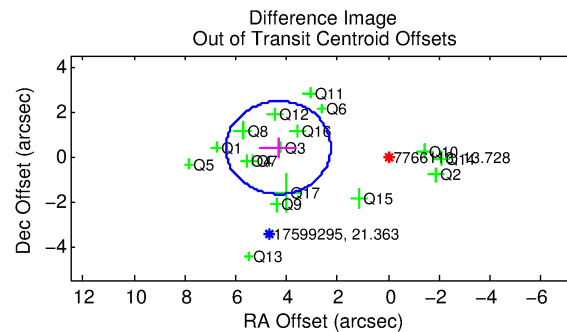
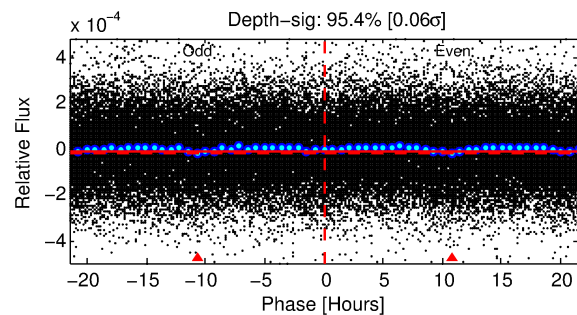
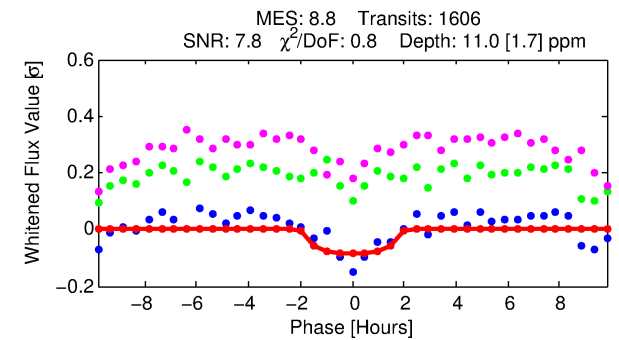
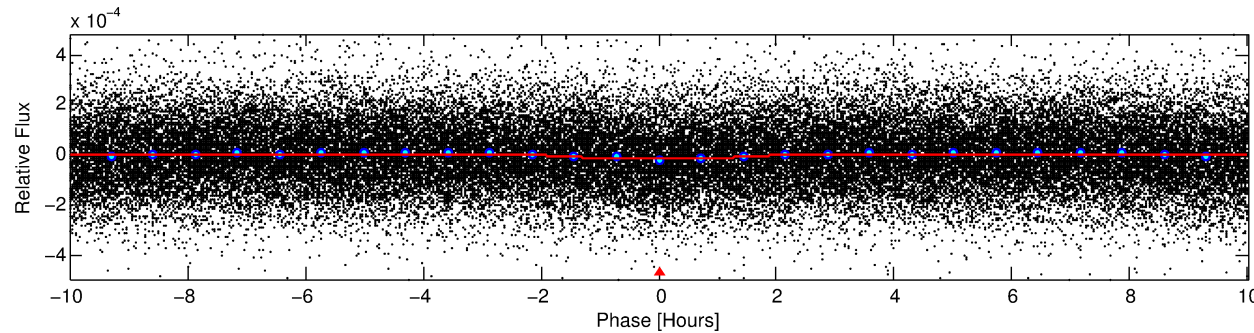
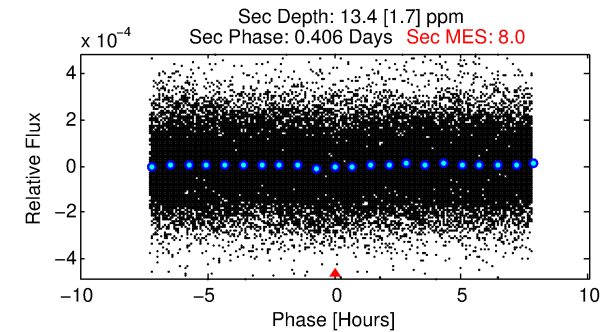
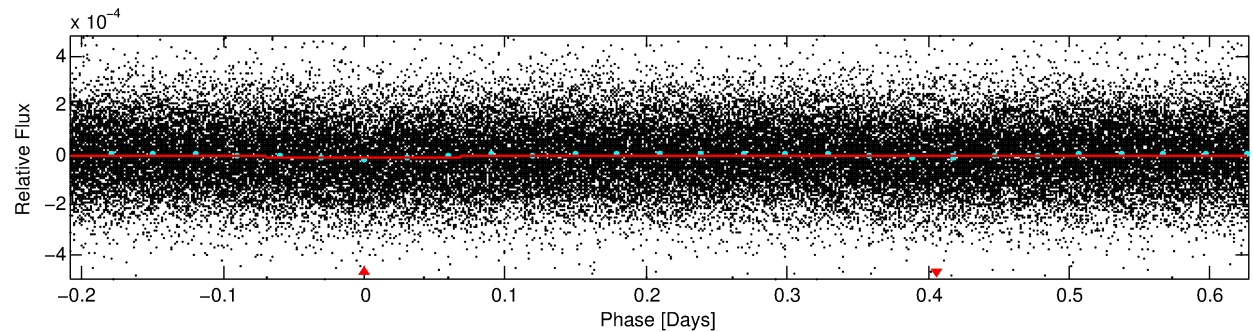
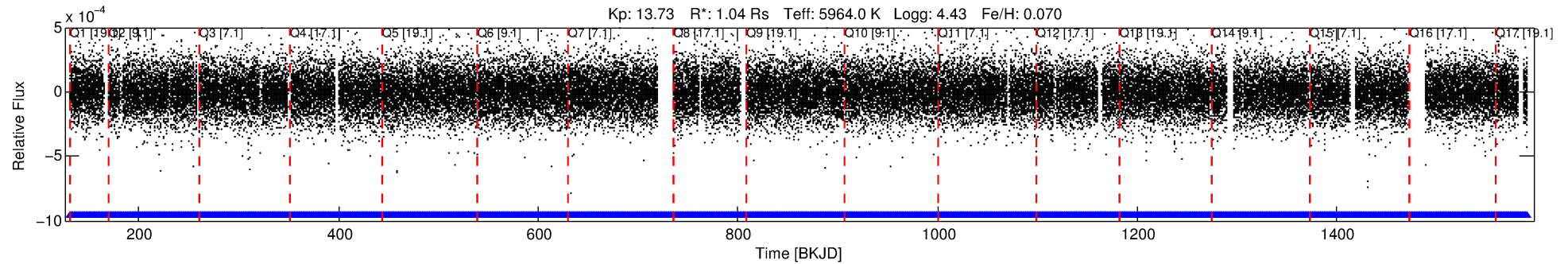
Ephemeris Match Information For 007766113-01

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
007766113-01	7766113	007766199-01	7766199	1:1	75.8	-9	17	13.29	13.73	0.45	Direct-PRF	1	0.35	0.15

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: 7766113 Candidate: 1 of 1 Period: 0.835 d



DV Fit Results:

Period = 0.83540 [0.00001] d
Epoch = 131.6237 [0.0057] BKJD
Rp/R* = 0.0032 [0.0011]
a/R* = 1.57 [1.47]
b = 0.65 [1.40]
Seff = 3872.44 [1620.60]
Teq = 2012 [210] K
Rp = 0.36 [0.17] Re
a = 0.0178 [0.0048] AU
Ag = 17.65 [14.20] [1.17σ]
Teffp = 6374 [1147] K [3.74σ]

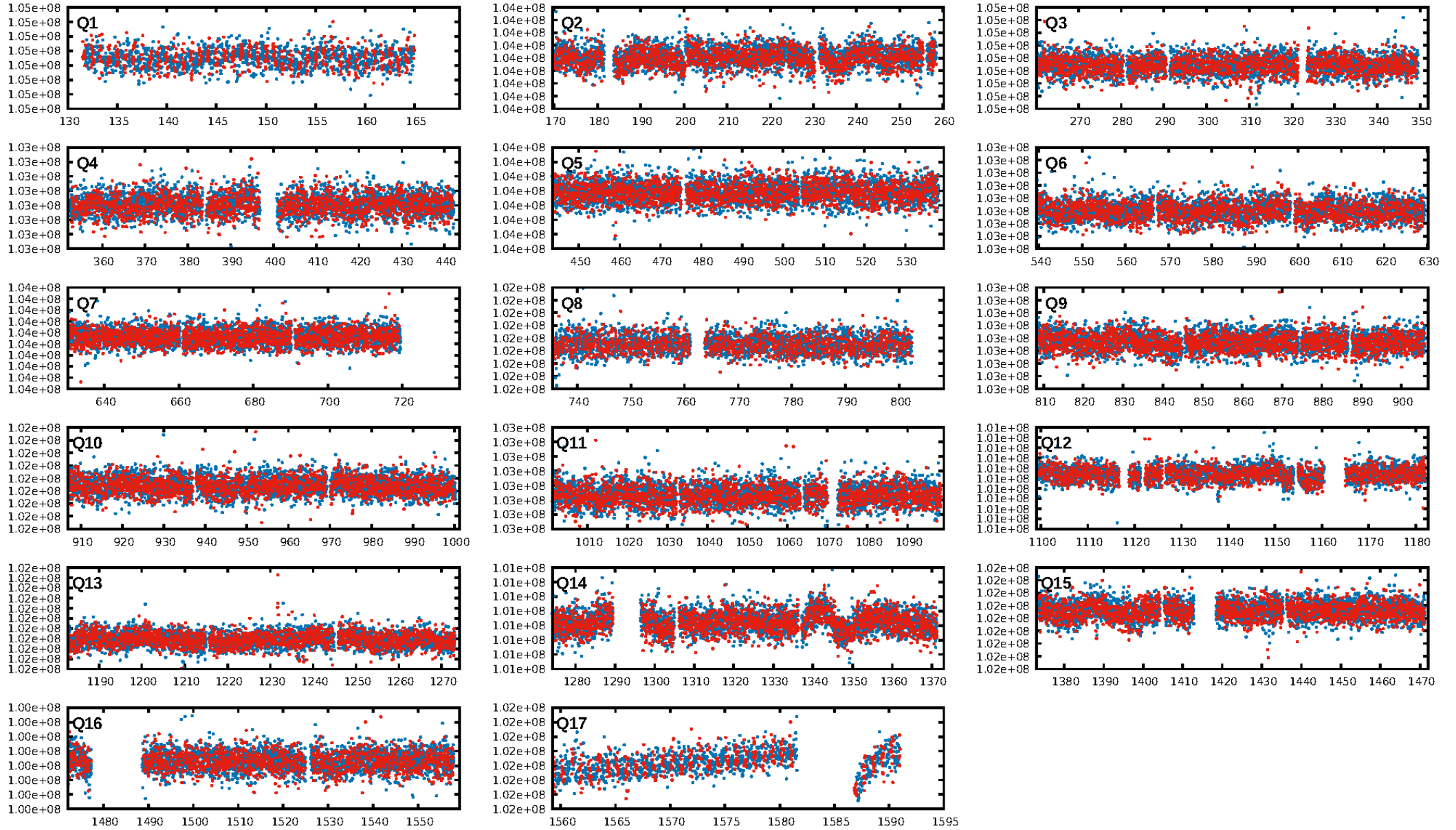
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.57e-15
RollingBand-fgt: 1.00 [1532/1532]
GhostDiagnostic-chr: 0.4016
Centroid-sig: 0.0%
Centroid-so: 4.028 arcsec [2.95σ]
OotOffset-rm: 4.342 arcsec [6.30σ]
KicOffset-rm: 4.444 arcsec [6.49σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

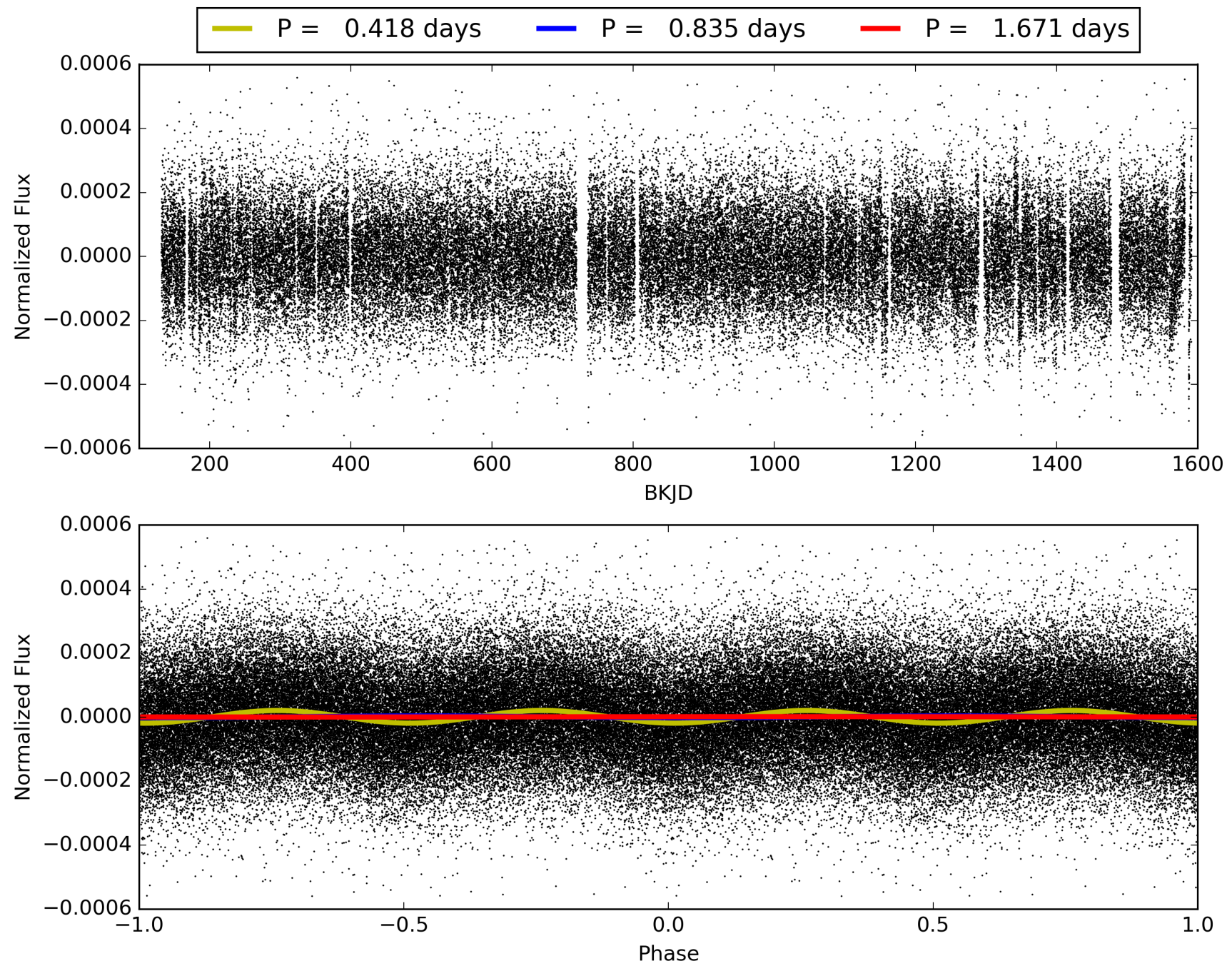
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:30:43 Z

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

TCE 007766113-01, PDC Light Curves

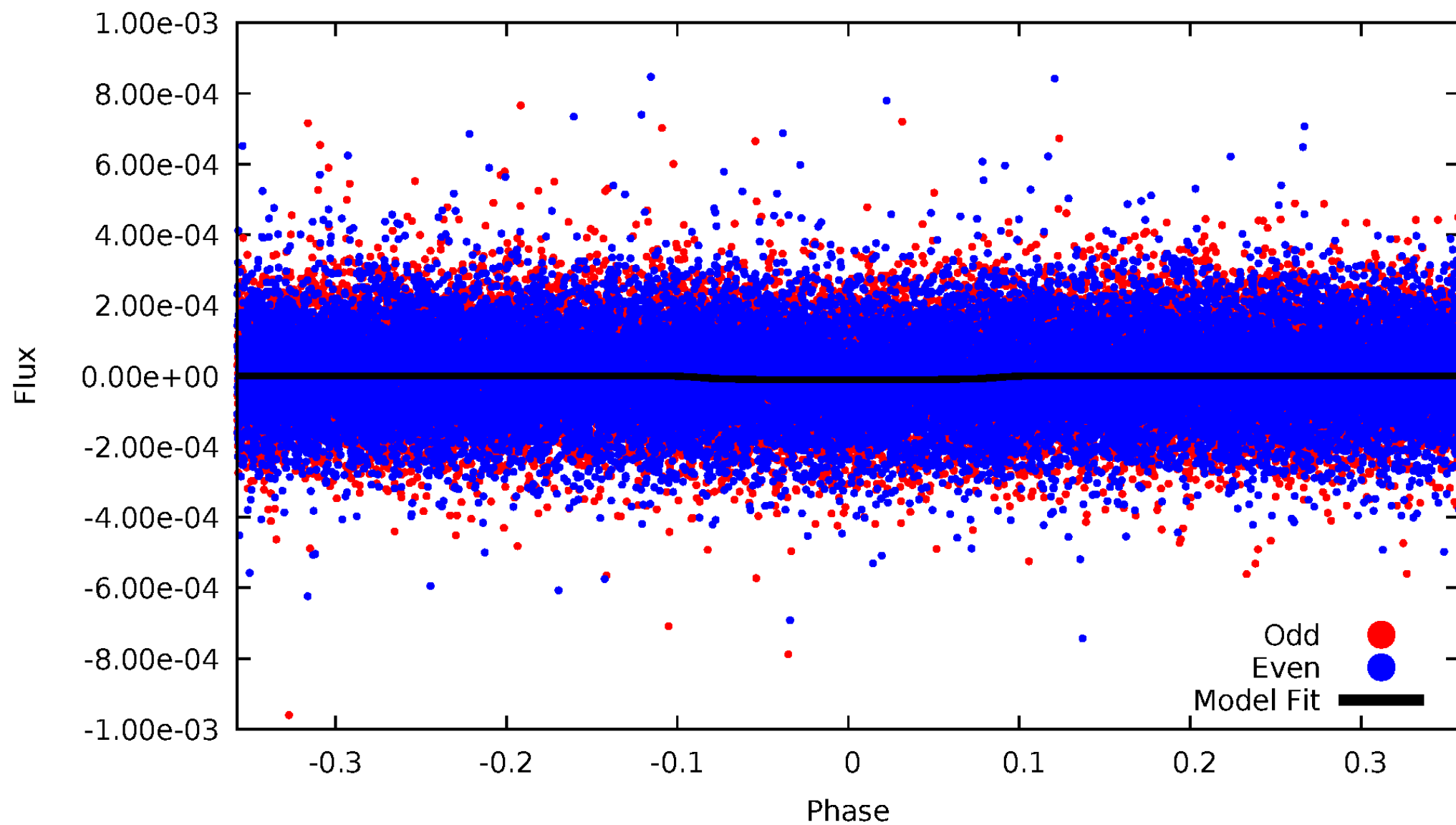


TCE 007766113-01



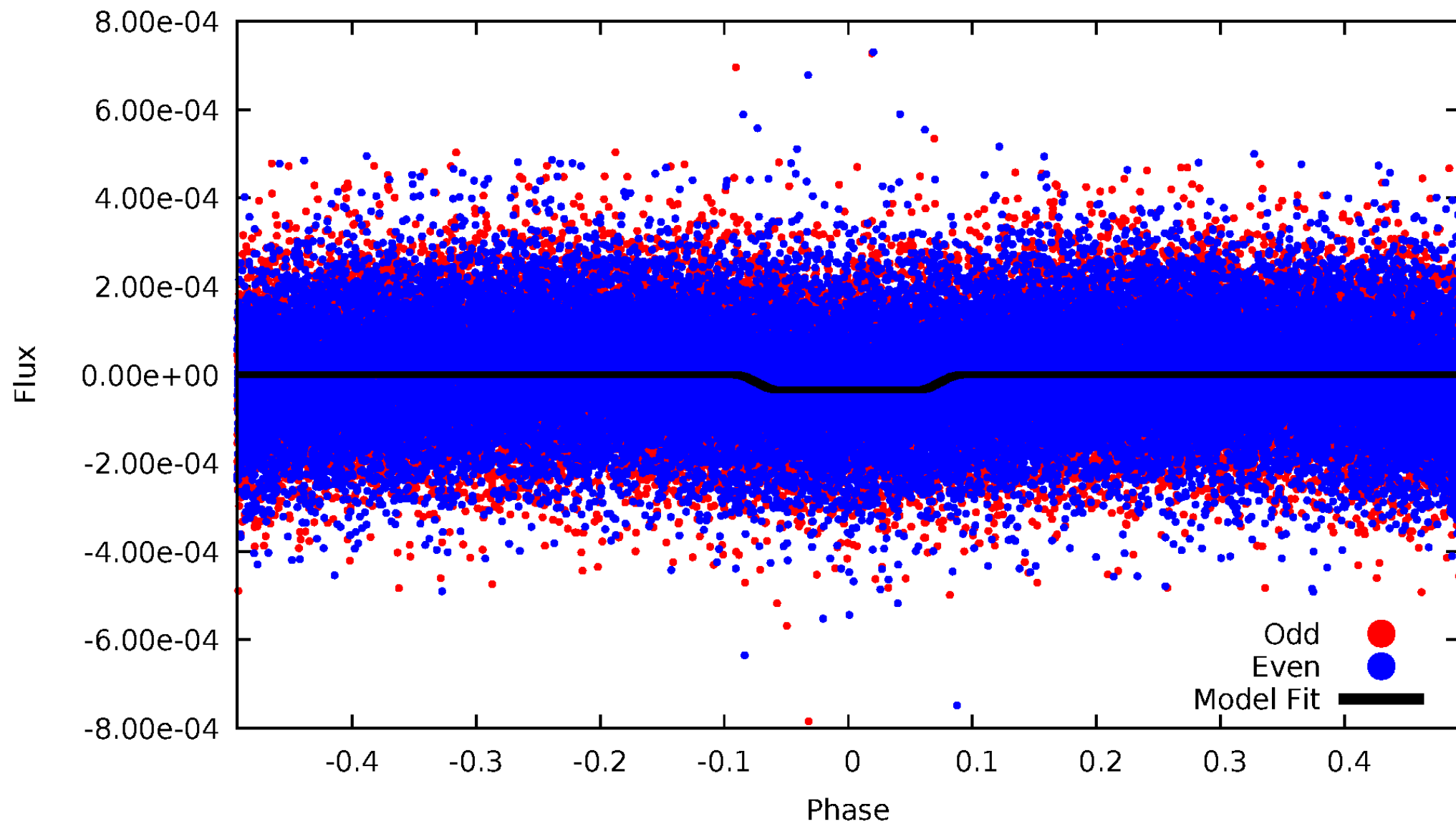
DV Odd/Even

TCE 007766113-01



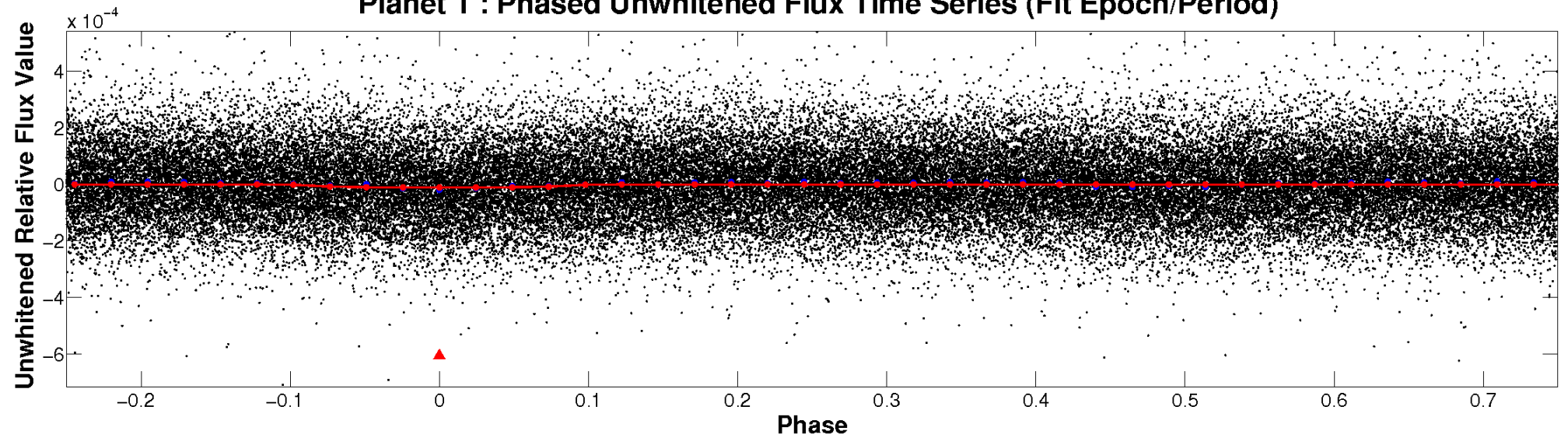
ALT Odd/Even

TCE 007766113-01

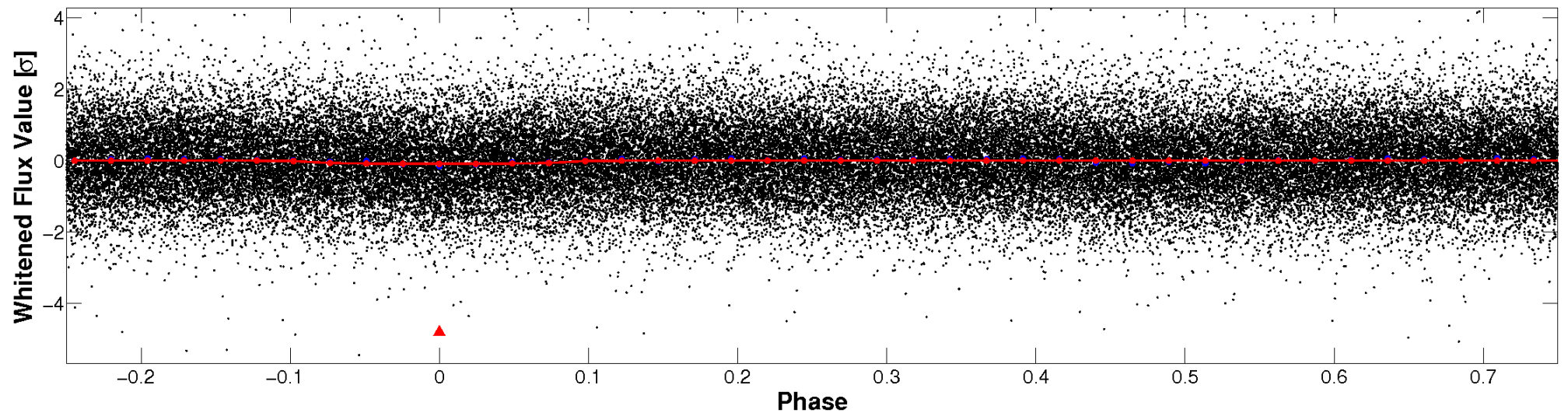


Non-Whitened Vs. Whitened Light Curve

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

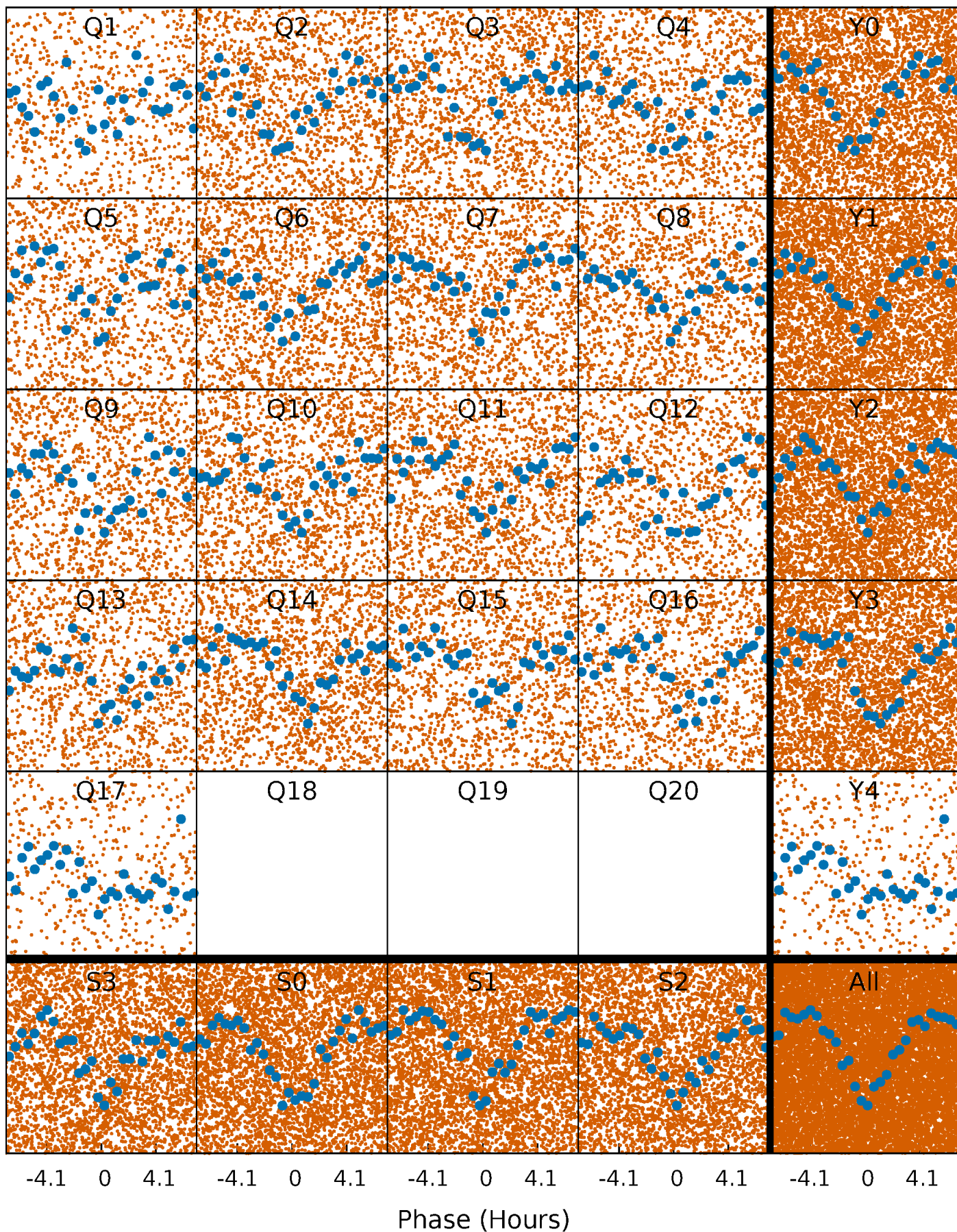


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



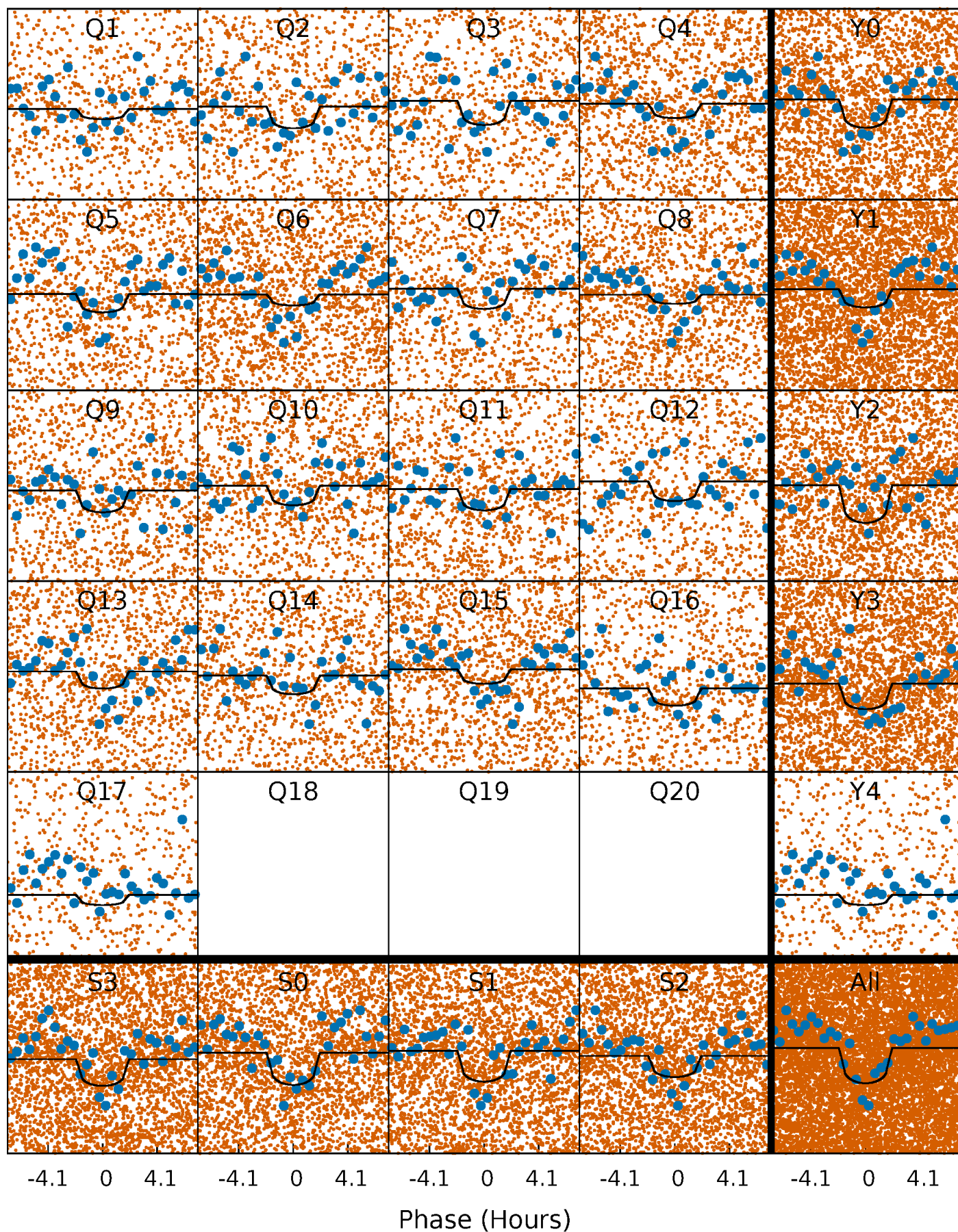
PDC Quarter-Phased Transit Curves

TCE 007766113-01 P= 0.835400 Days $T_0=131.623668$ (BKJD)



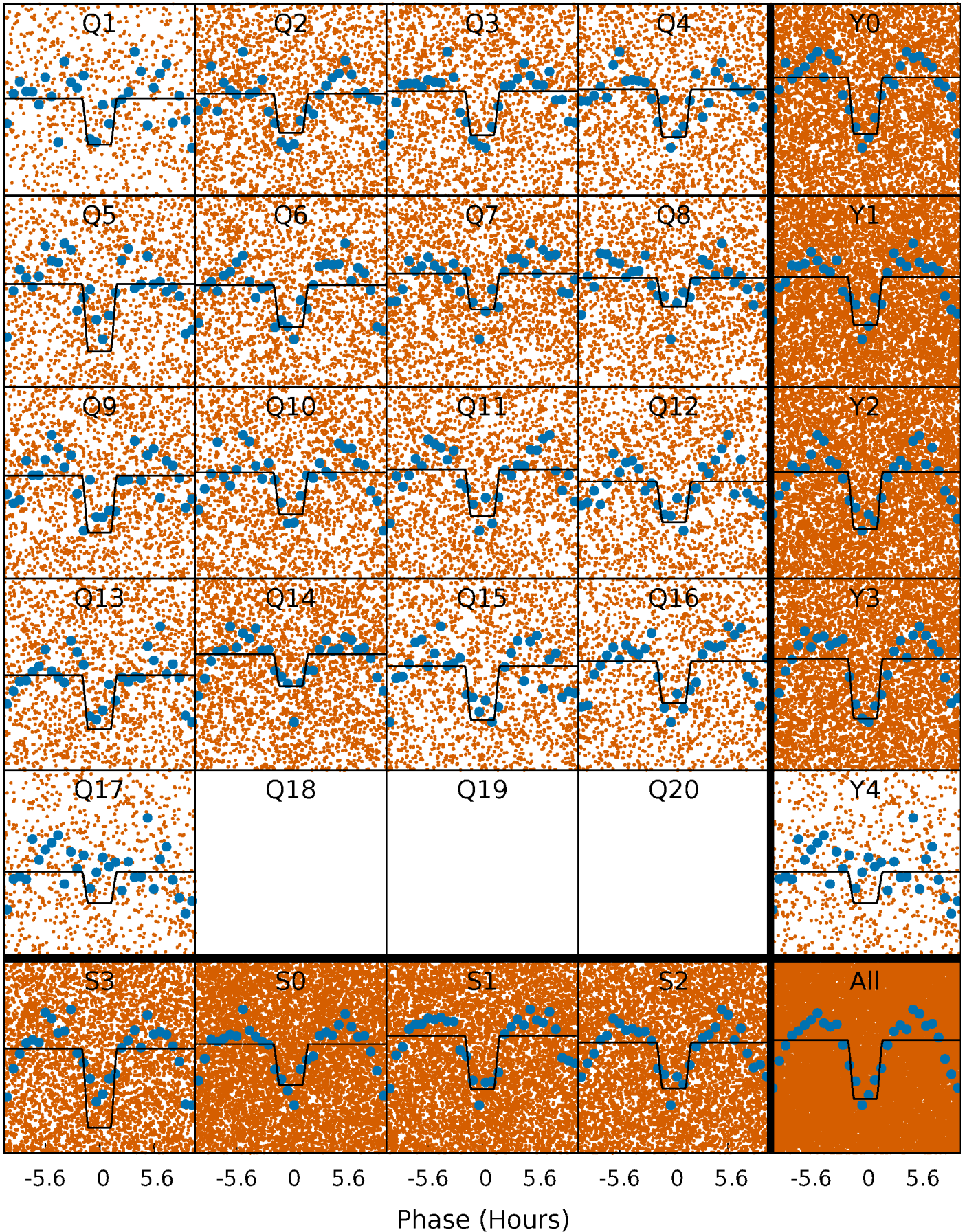
DV Quarter-Phased Transit Curves

TCE 007766113-01 P= 0.835400 Days $T_0=131.623668$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

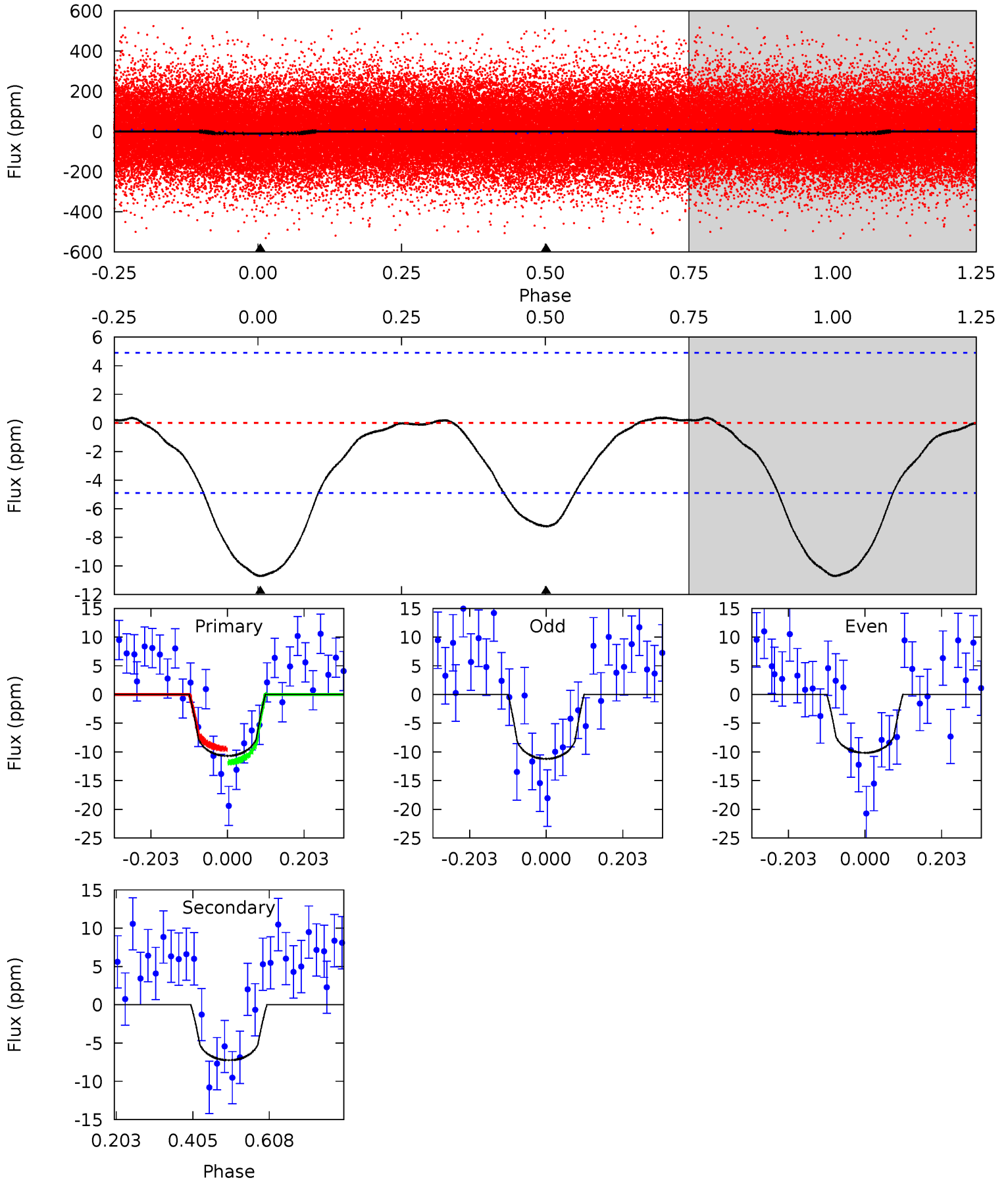
TCE 007766113-01 P= 0.835445 Days $T_0=131.593444$ (BKJD)



DV Model-Shift Uniqueness Test

007766113-01, P = 0.835400 Days, E = 130.788268 Days

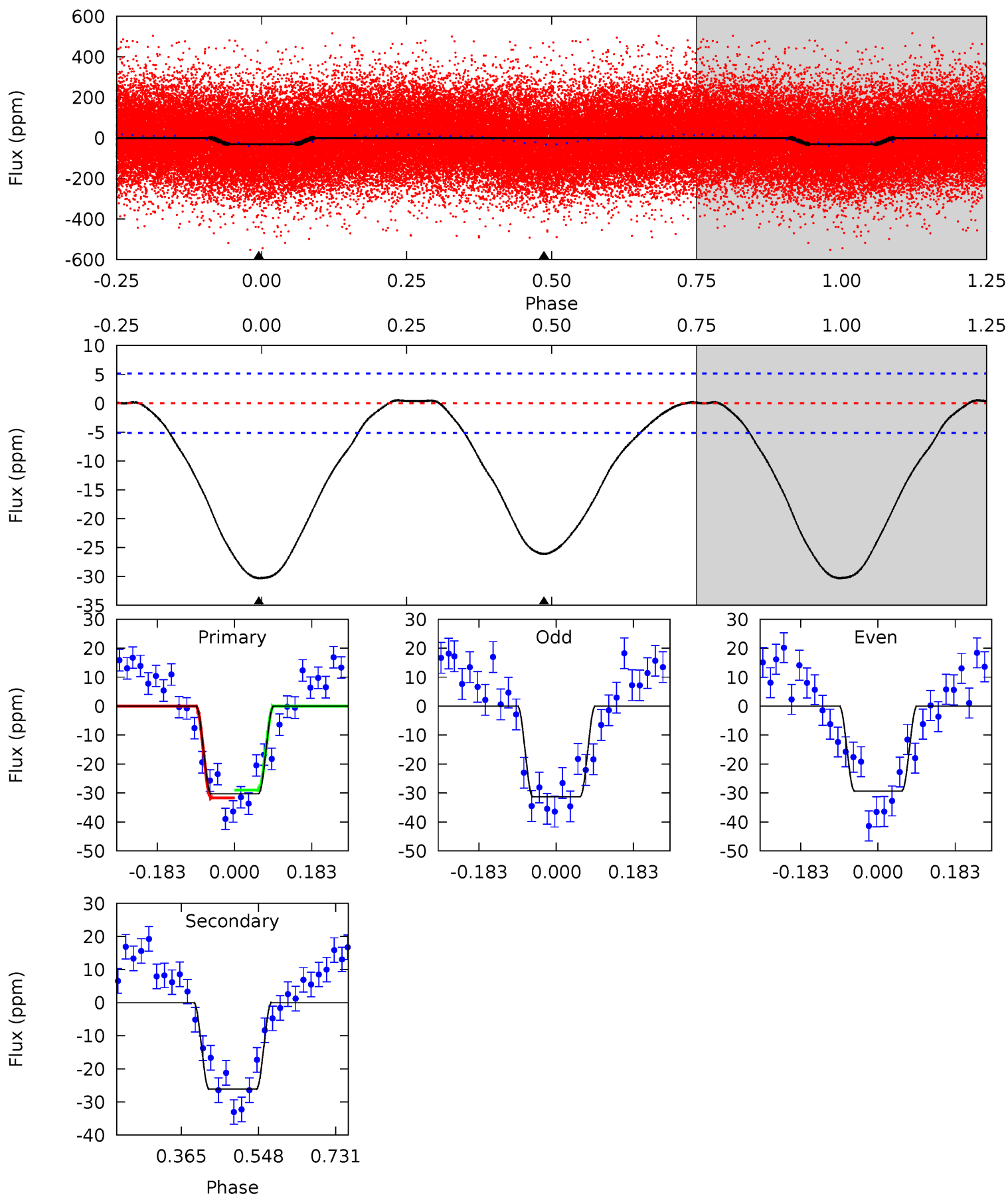
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	6.52	0	0	4.41	1.27	0.23	9.64	9.64	6.52	6.52	0.48	1.07	0.03	1.06



Alt Model-Shift Uniqueness Test

007766113-01, P = 0.835445 Days, E = 130.757999 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	22.4	0	0	4.44	1.33	0.90	26.0	26.0	22.4	22.4	0.85	1.01	0.02	1.14



Stellar Parameters For KIC 007766113

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5964^{+184}_{-226}	$4.435^{+0.070}_{-0.210}$	$0.070^{+0.250}_{-0.300}$	$1.038^{+0.342}_{-0.114}$	$1.069^{+0.148}_{-0.134}$	$1.345^{+0.403}_{-0.736}$
	+3%/-4%	+2%/-5%	+357%/-429%	+33%/-11%	+14%/-13%	+30%/-55%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007766113-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-7 ± 1	$0.38^{+0.14}_{-0.13}$	2859^{+210}_{-164}	5355^{+1253}_{-677}	$8.288^{+11.691}_{-3.731}$
Alt.	-26 ± 1	$0.70^{+0.18}_{-0.15}$	2869^{+207}_{-167}	5520^{+596}_{-480}	$9.111^{+5.413}_{-3.342}$

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 $A_{obs} \gg 1.0$

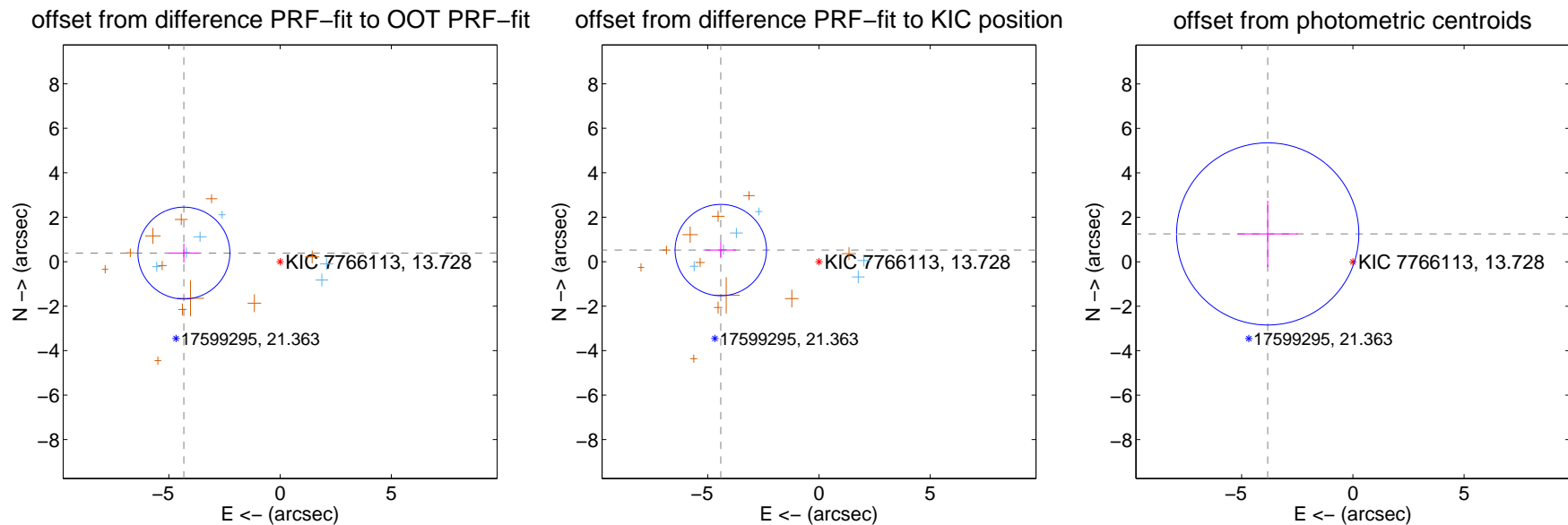
DV Centroid Data

Supplemental centroid analysis for 007766113-01. Kepler magnitude: 13.73. Transit SNR 7.76

There are 6 quarters with good PRF difference image offsets

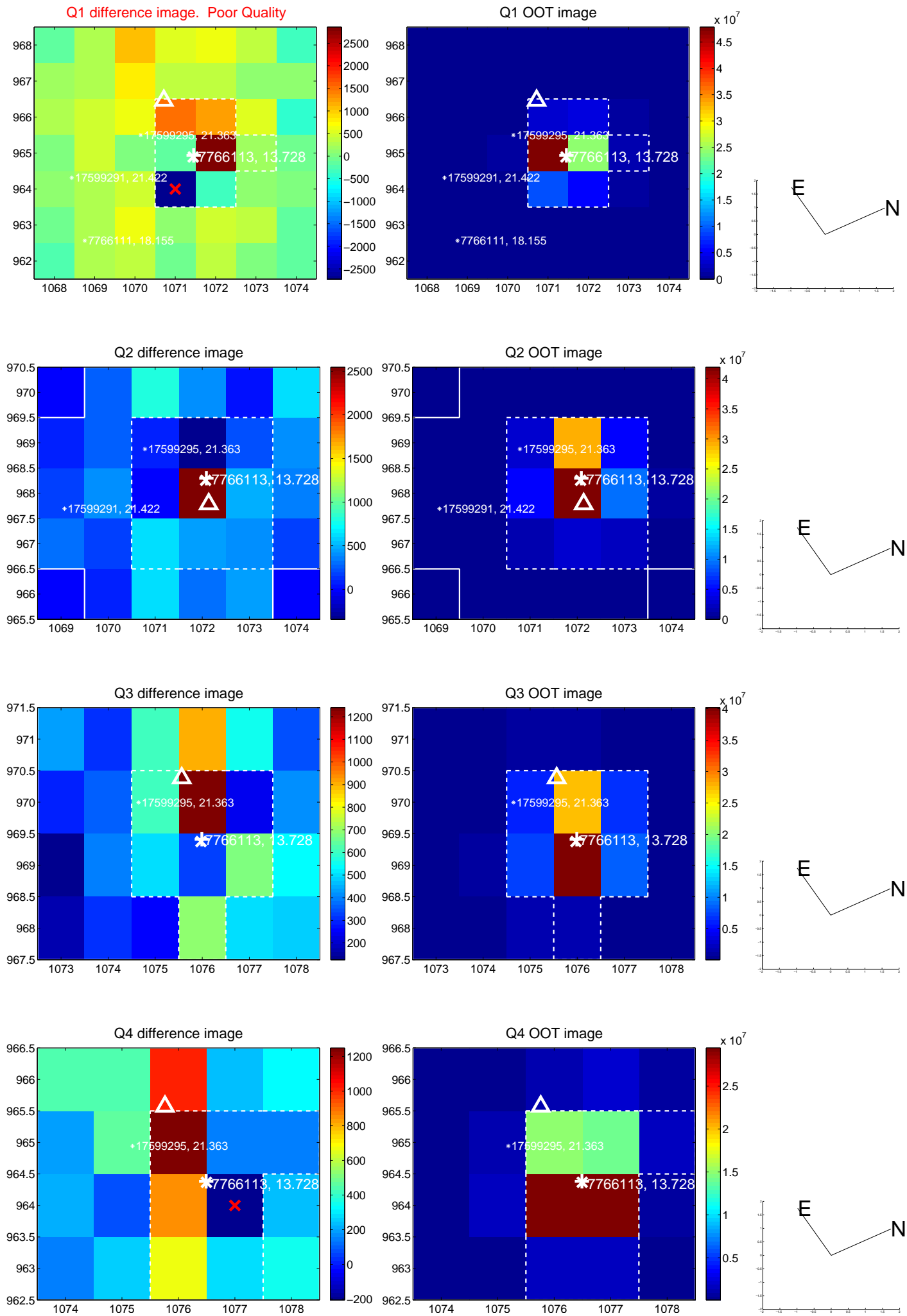
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.342 ± 0.689	6.30	4.325 ± 0.692	0.387 ± 0.422
PRF-fit source offset from KIC position	4.444 ± 0.685	6.49	4.413 ± 0.688	0.523 ± 0.362
photometric centroid source offset	4.03 ± 1.37	2.95	3.83 ± 1.35	1.25 ± 1.50

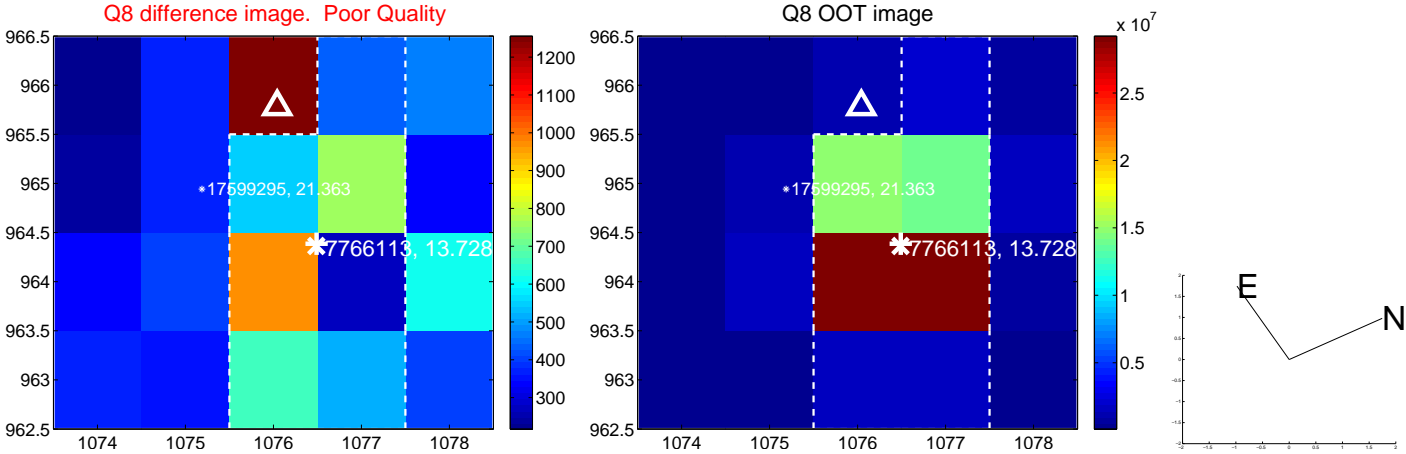
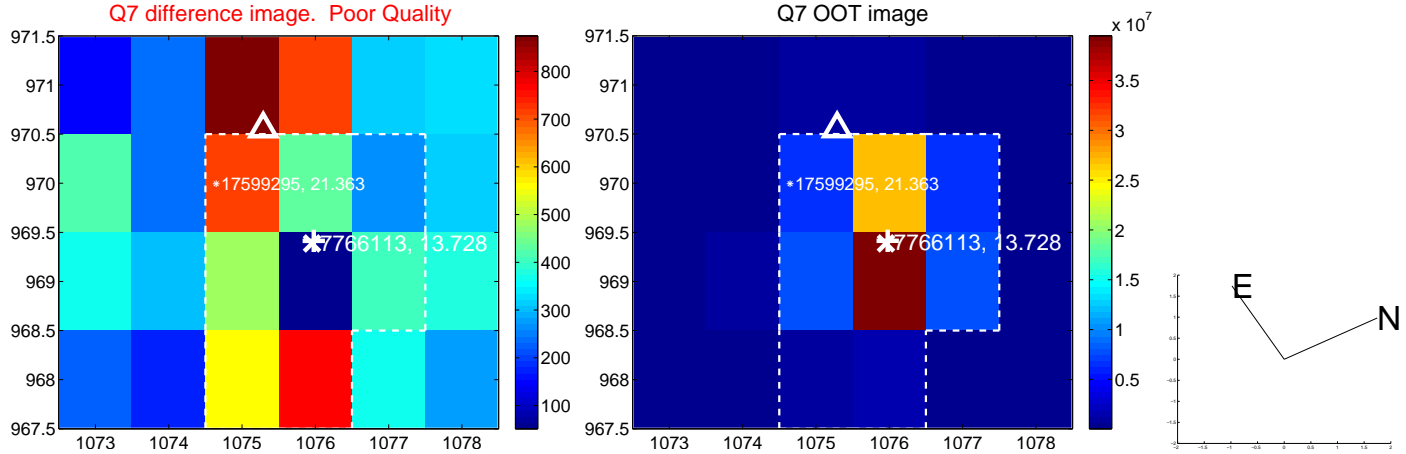
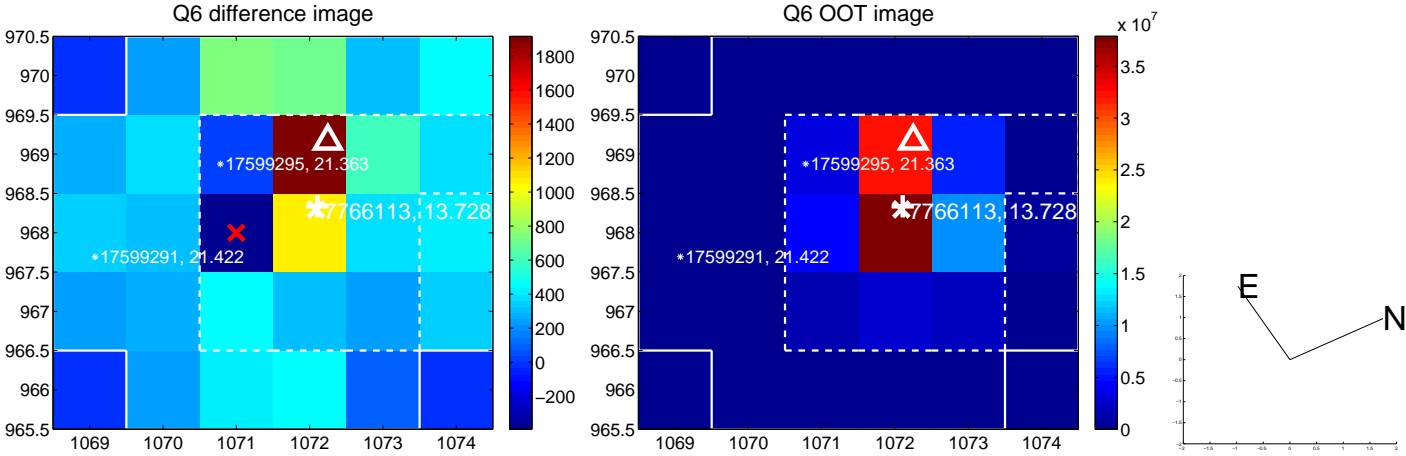
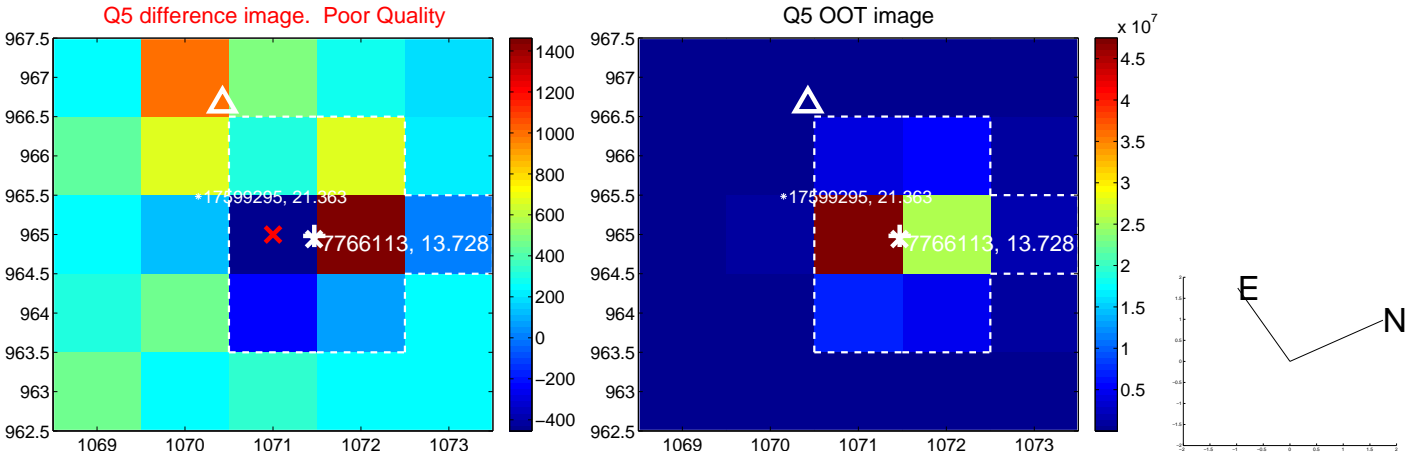


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

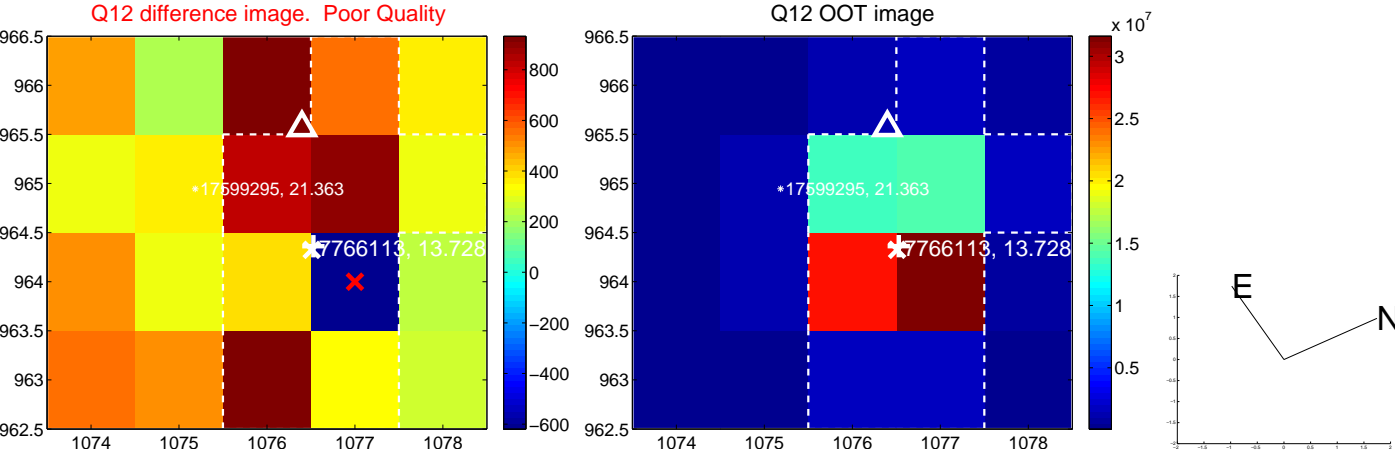
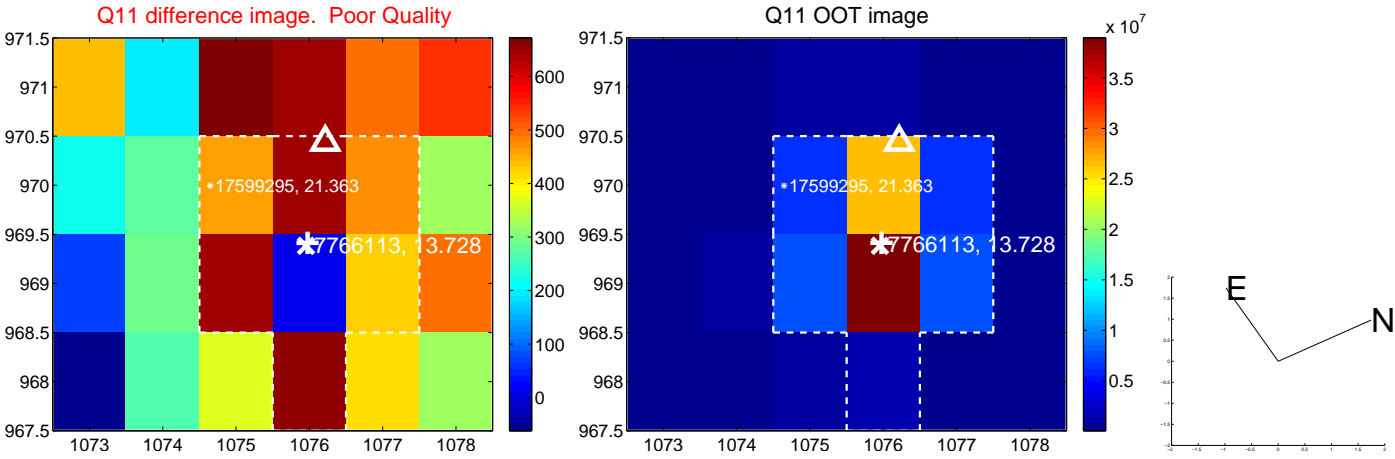
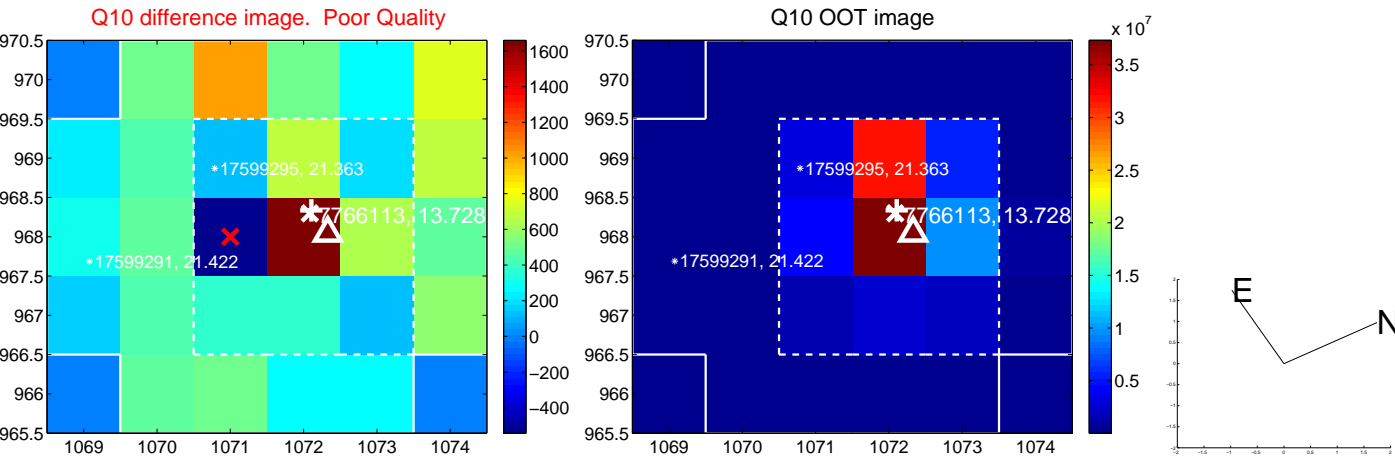
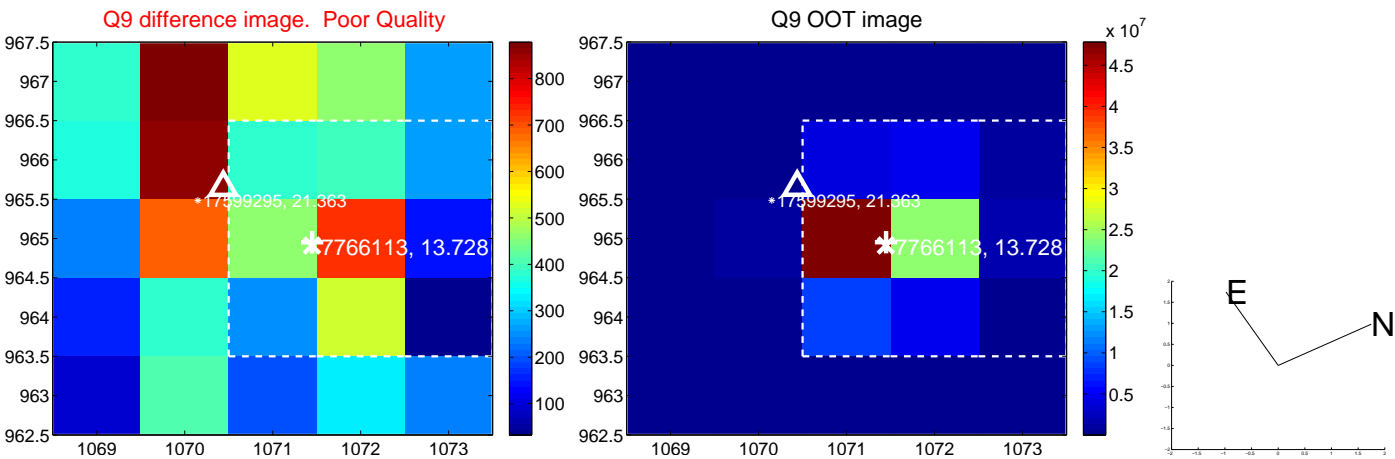
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



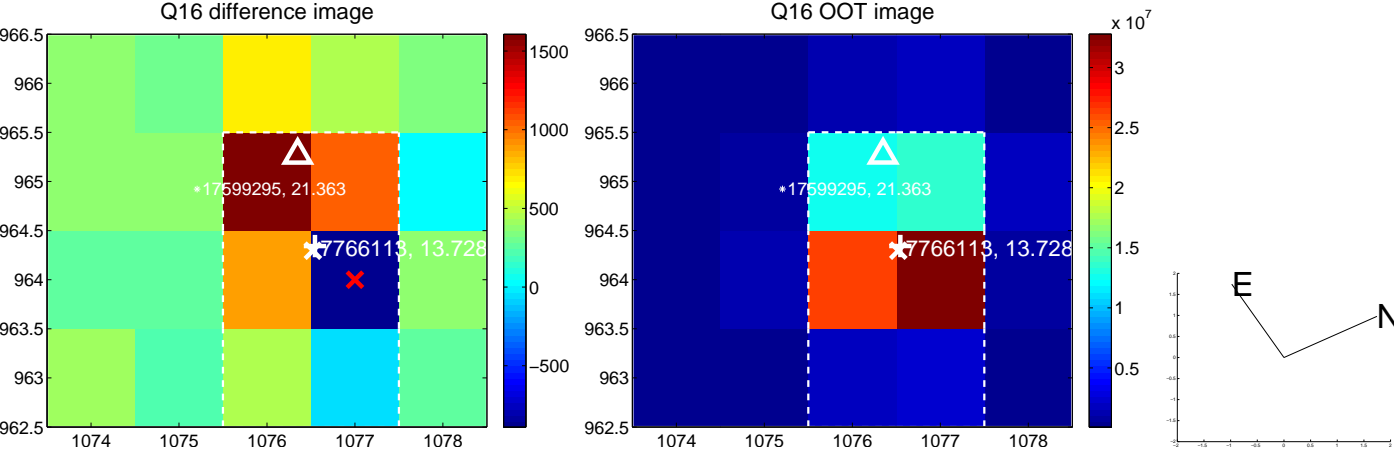
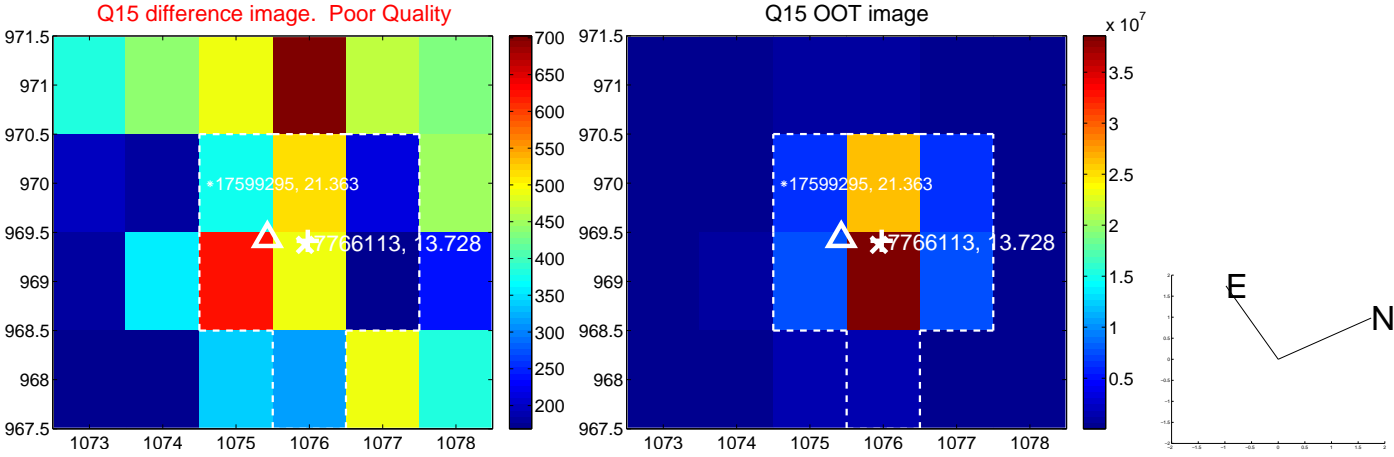
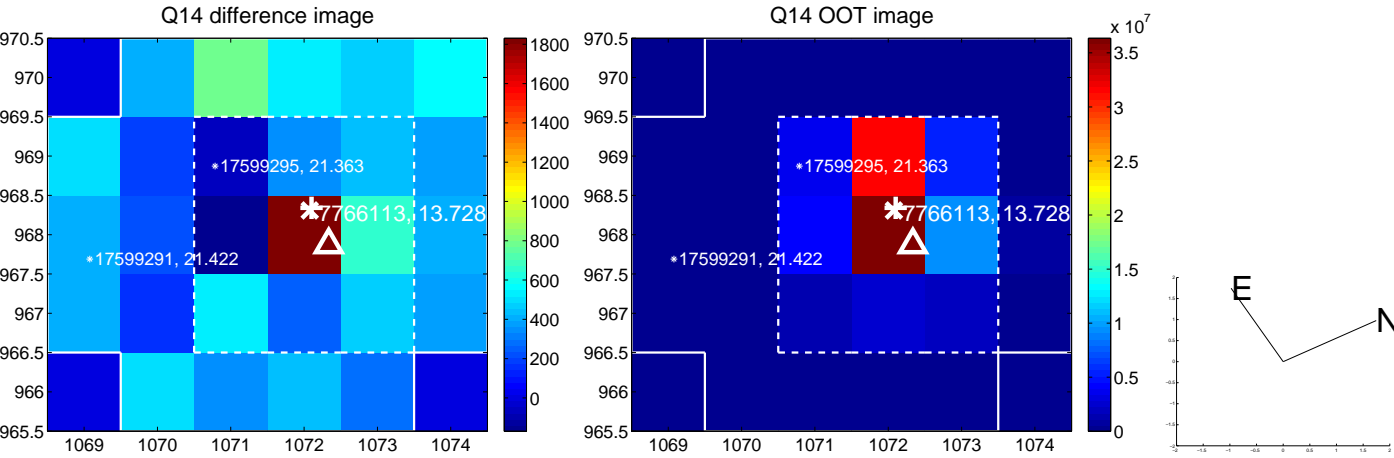
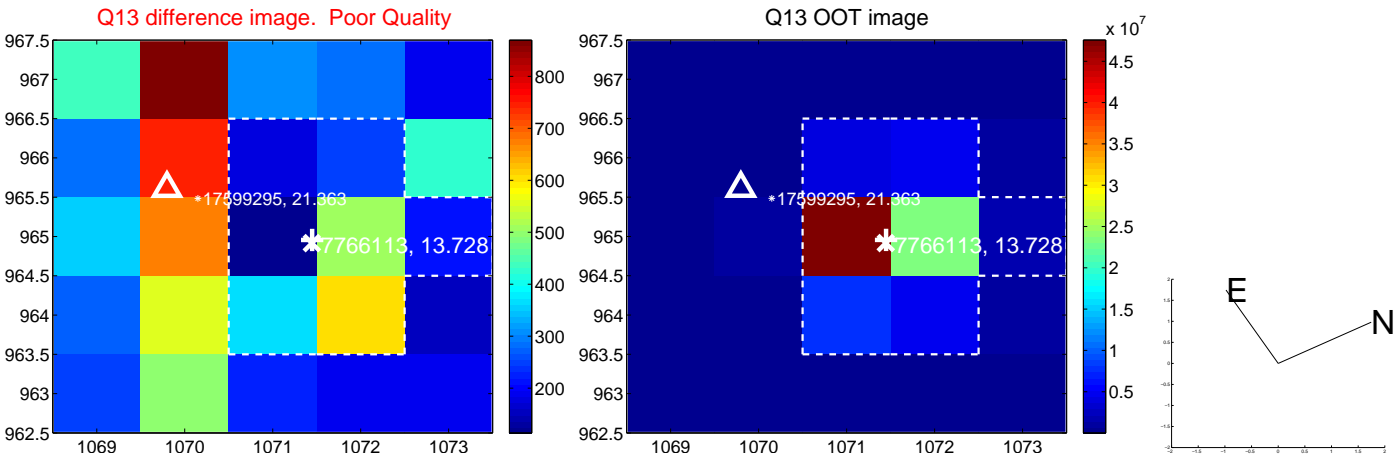
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



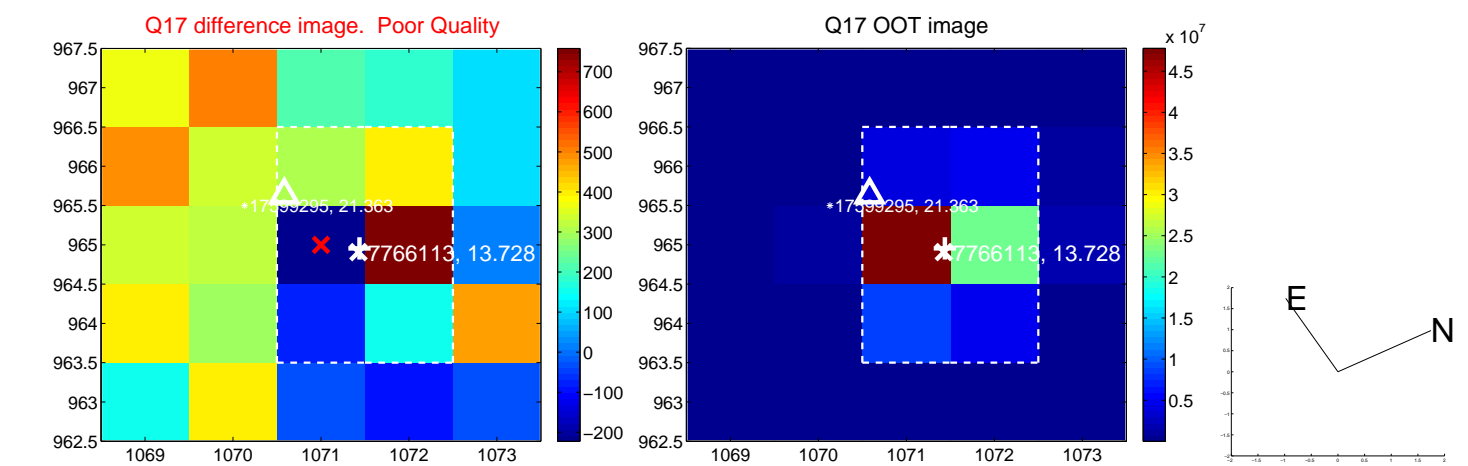
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



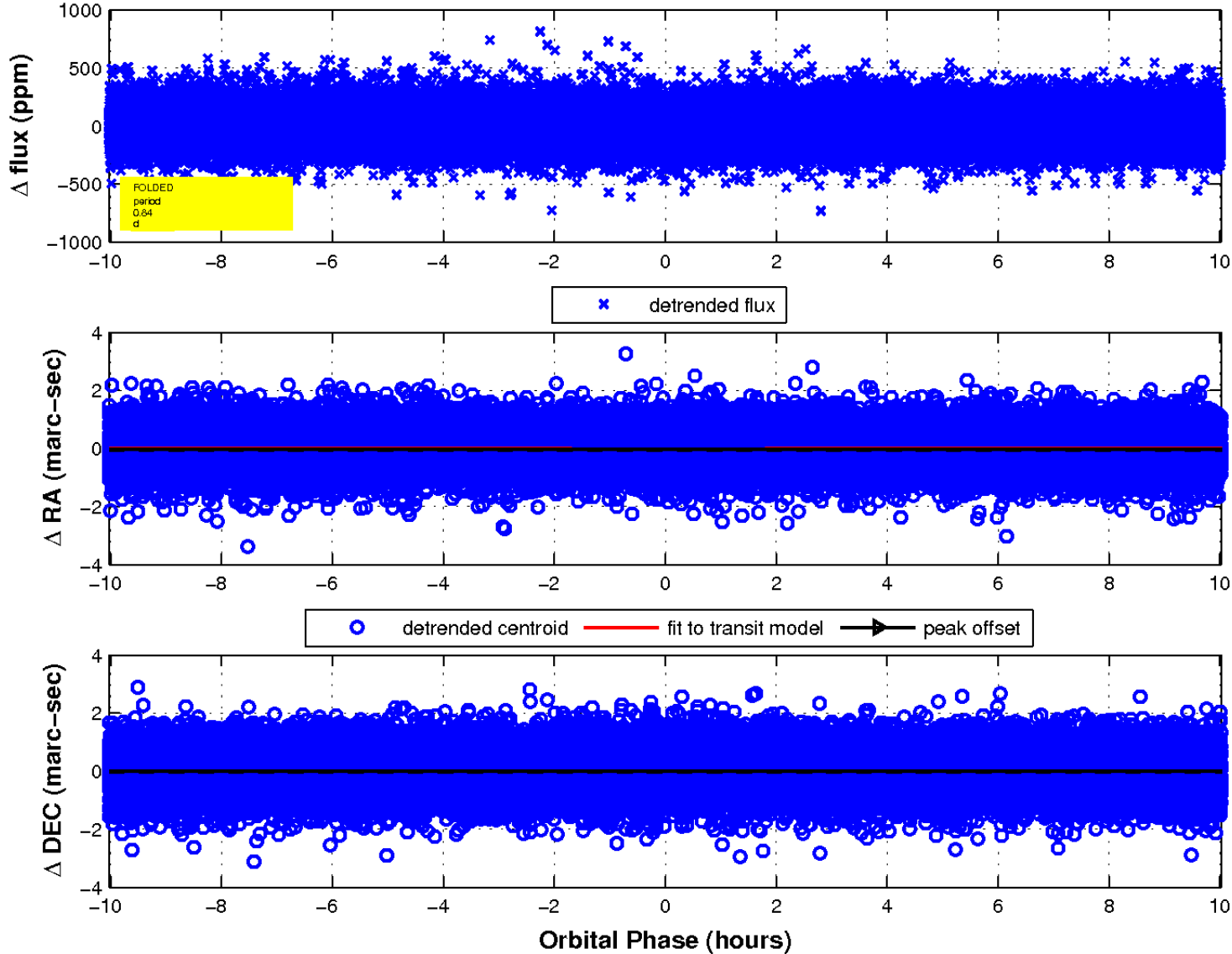
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

