

KIC 005513893

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})
005513893-01	OBS	2741.01	0.755080	131.833335	35.8	3.311	18.7	20.3	2.13	5996	1.36	17391.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005513893-01	OBS	FP	0.00	0	0	0	1	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 005513893-01

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
005513893-01	5513893	005513861-01	5513861	1:1	47.9	11	-4	11.64	13.01	1753.70	Direct-PRF	0	3.73	2.06

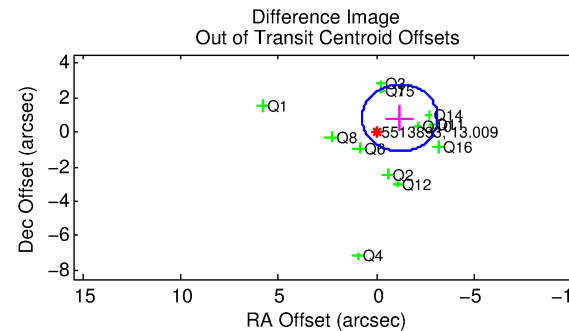
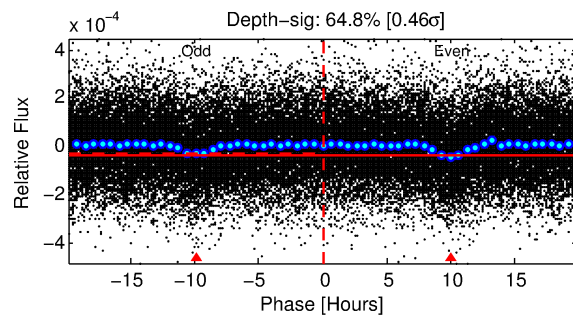
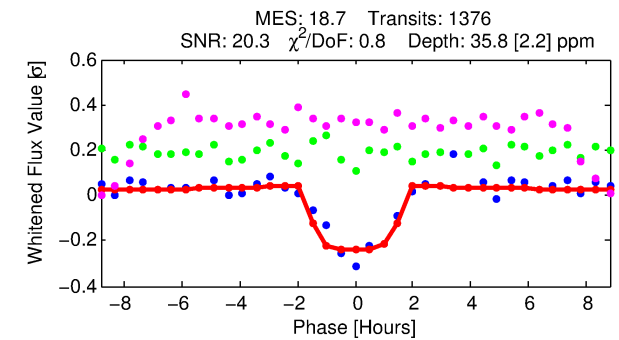
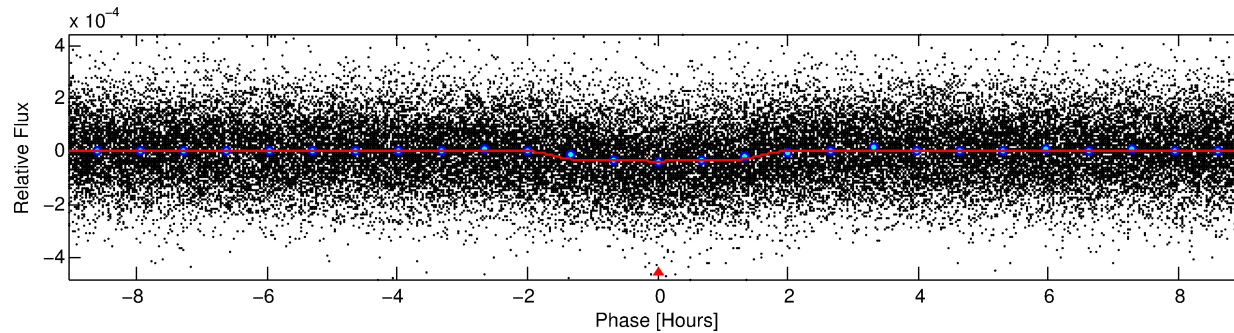
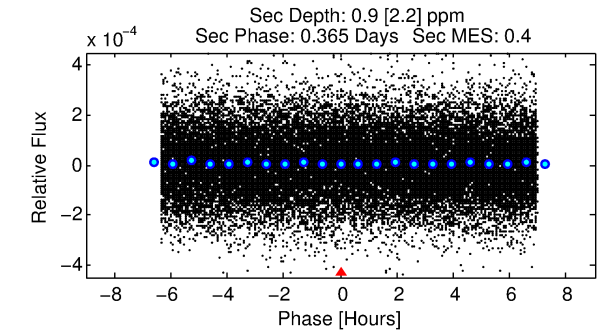
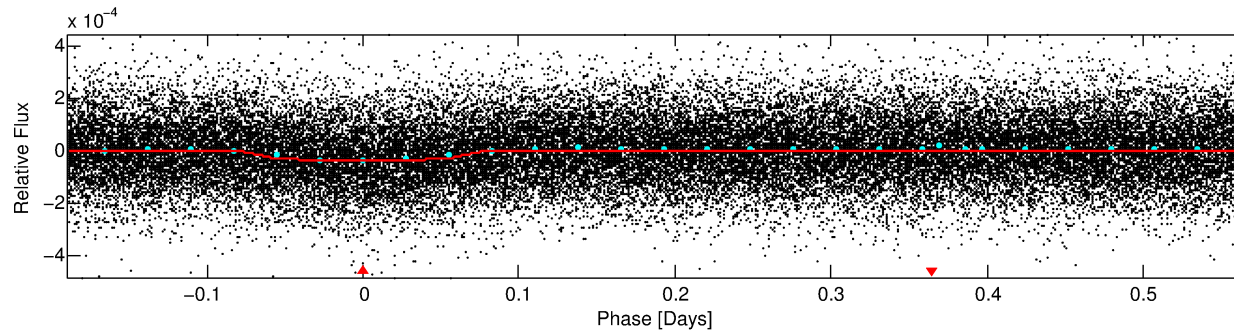
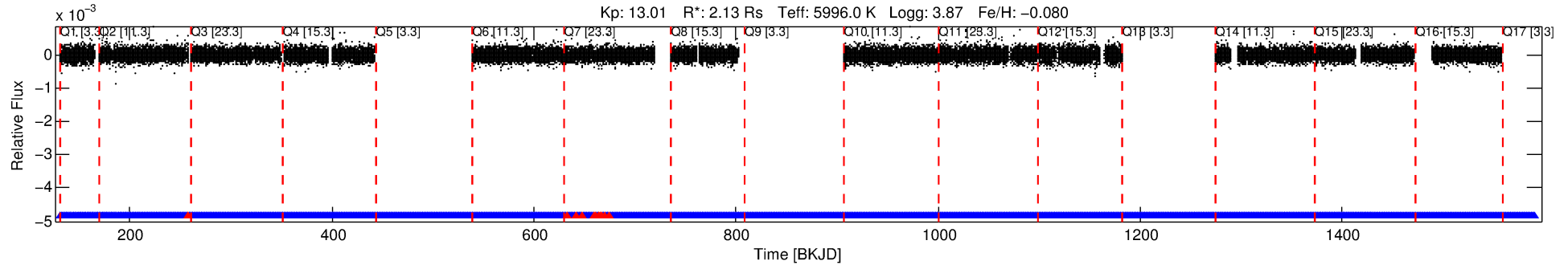
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 5513893 Candidate: 1 of 1 Period: 0.755 d

KOI: K02741.01 Corr: 0.902

Kp: 13.01 R*: 2.13 Rs Teff: 5996.0 K Logg: 3.87 Fe/H: -0.080



DV Fit Results:

Period = 0.75508 [0.00000] d
Epoch = 131.8333 [0.0017] BKJD
Rp/R* = 0.0059 [0.0011]
a/R* = 1.51 [0.80]
b = 0.69 [0.71]
Seff = 17391.26 [9044.69]
Teq = 2928 [381] K
Rp = 1.36 [0.56] Re
a = 0.0174 [0.0057] AU
Ag = 0.08 [0.20] [-4.52σ]
Teffp = 2387 [1549] K [-0.34σ]

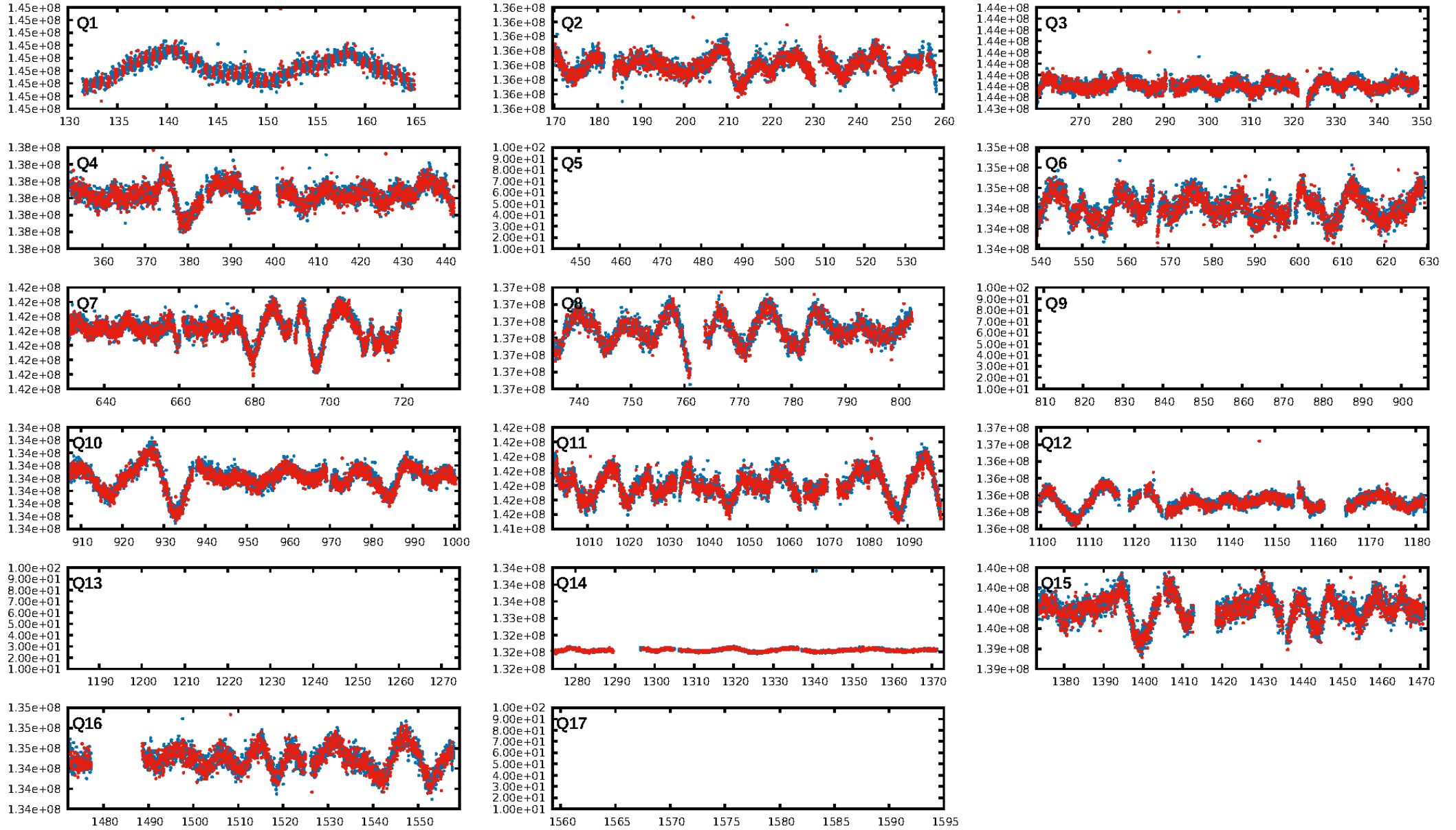
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.69e-62
RollingBand-fgt: 0.99 [1319/1331]
GhostDiagnostic-chr: 0.2998
Centroid-sig: 0.9%
Centroid-so: 0.930 arcsec [1.58σ]
OotOffset-rm: 1.441 arcsec [2.23σ]
KicOffset-rm: 1.456 arcsec [2.19σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 1.00 [13/13]

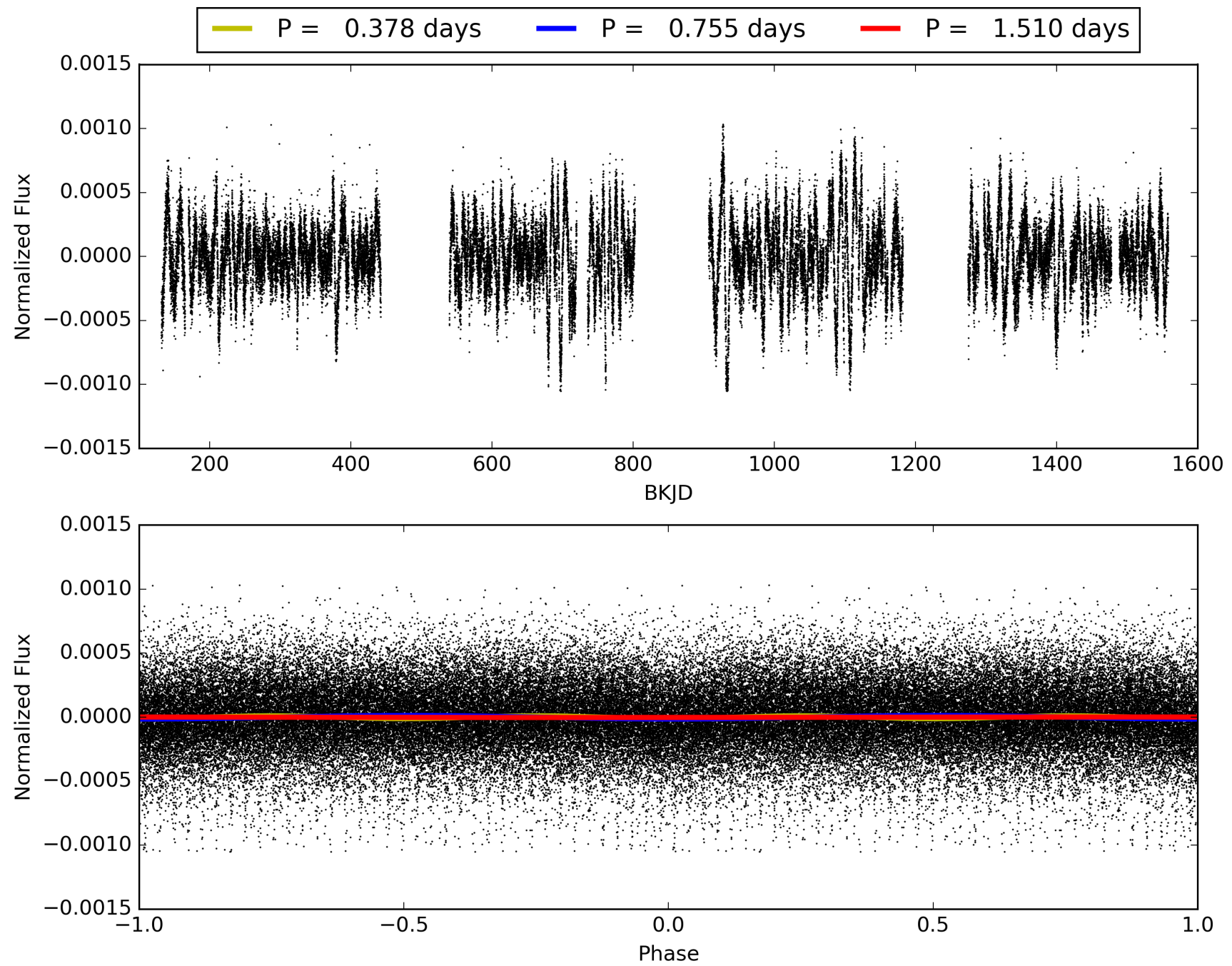
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:17:42 Z

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

TCE 005513893-01, PDC Light Curves

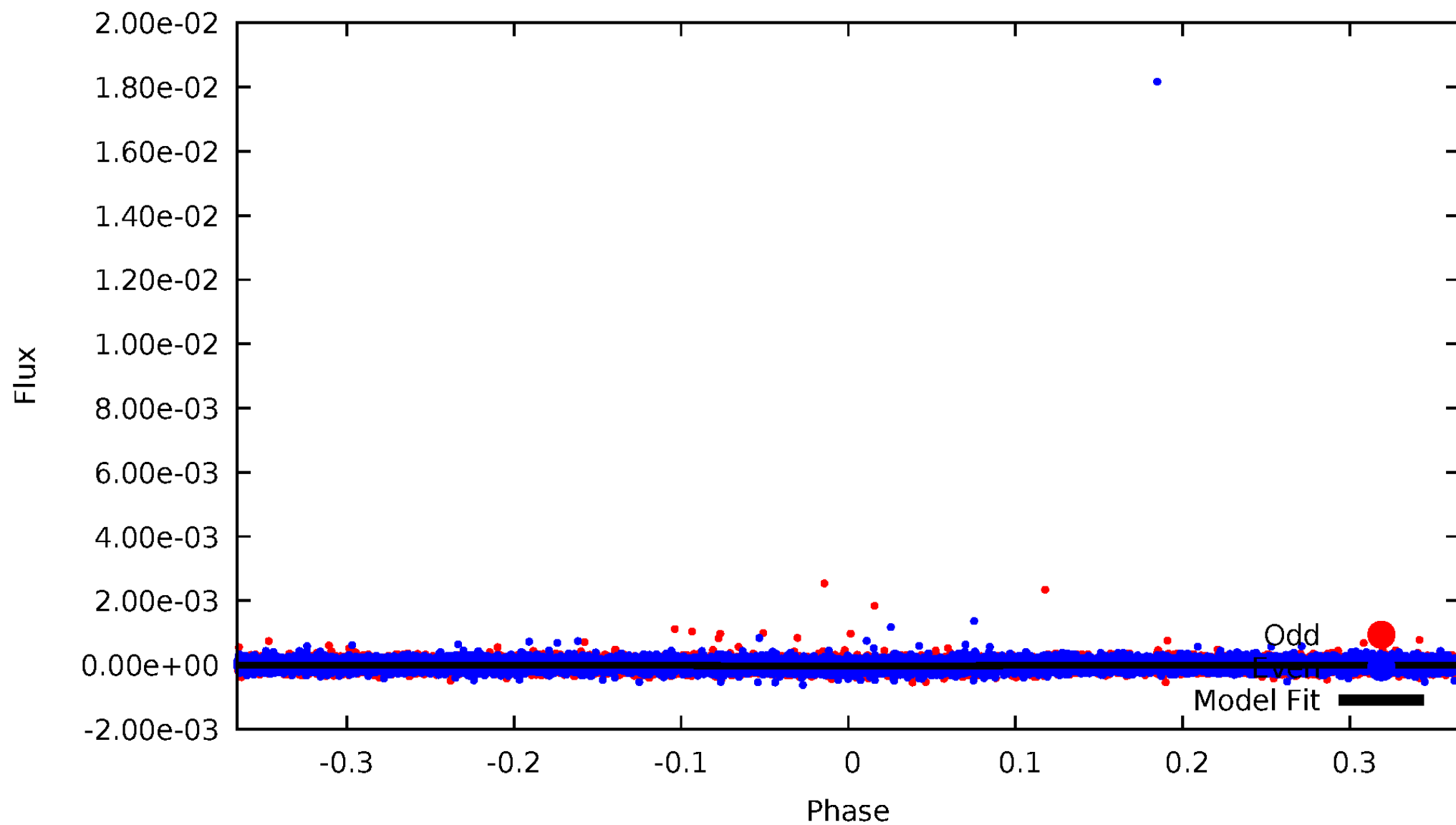


TCE 005513893-01



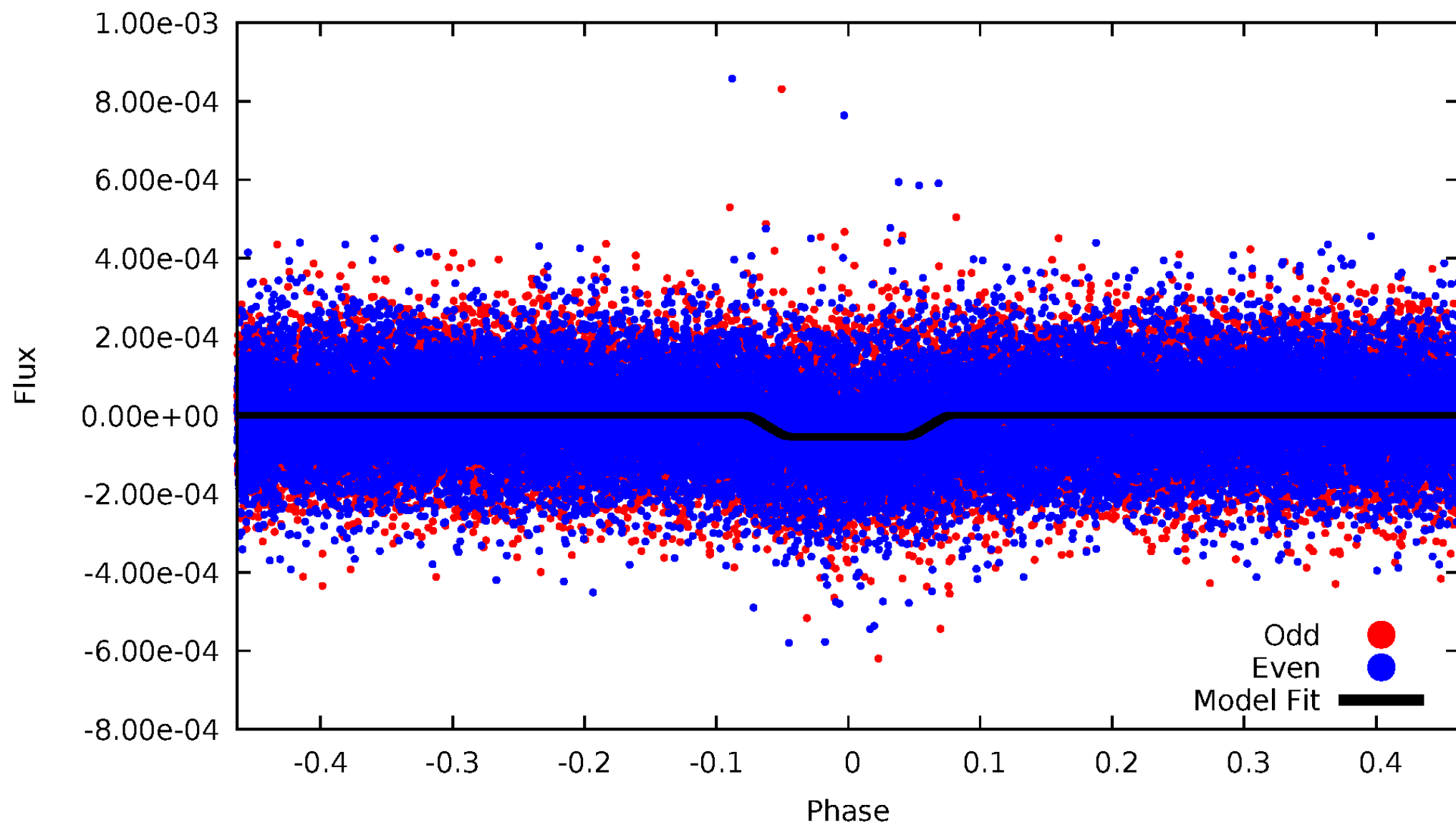
DV Odd/Even

TCE 005513893-01

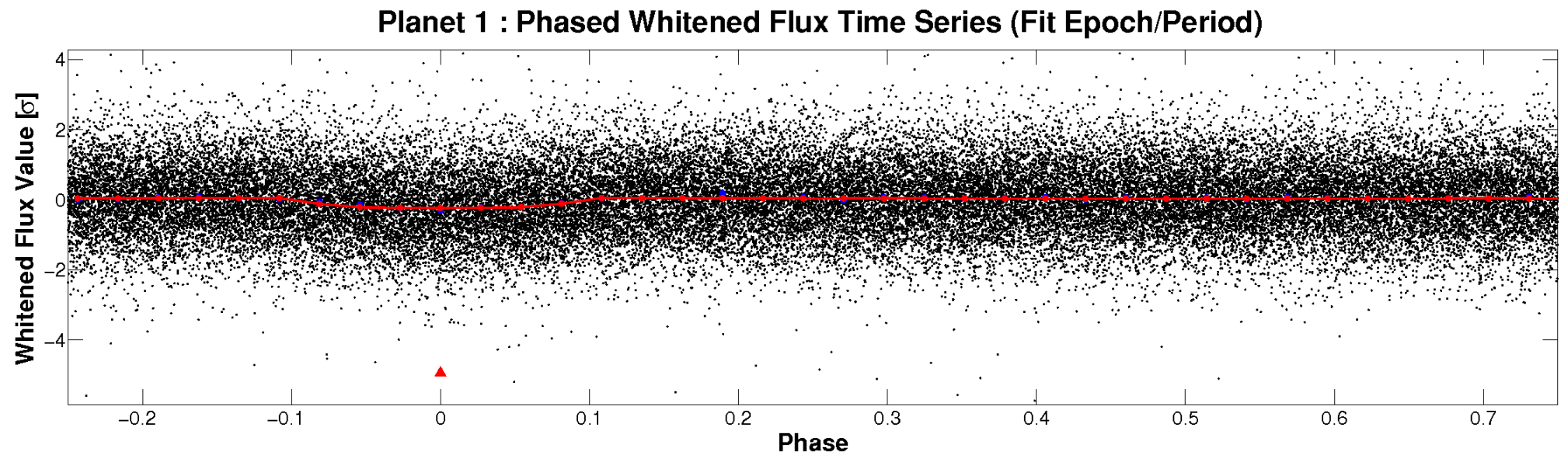
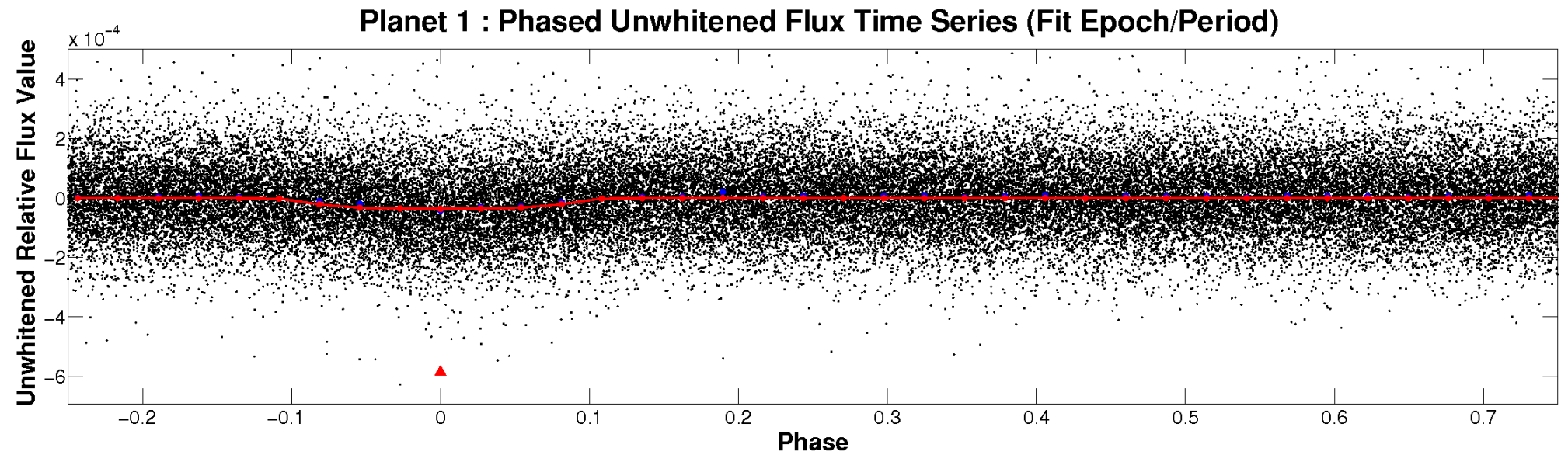


ALT Odd/Even

TCE 005513893-01

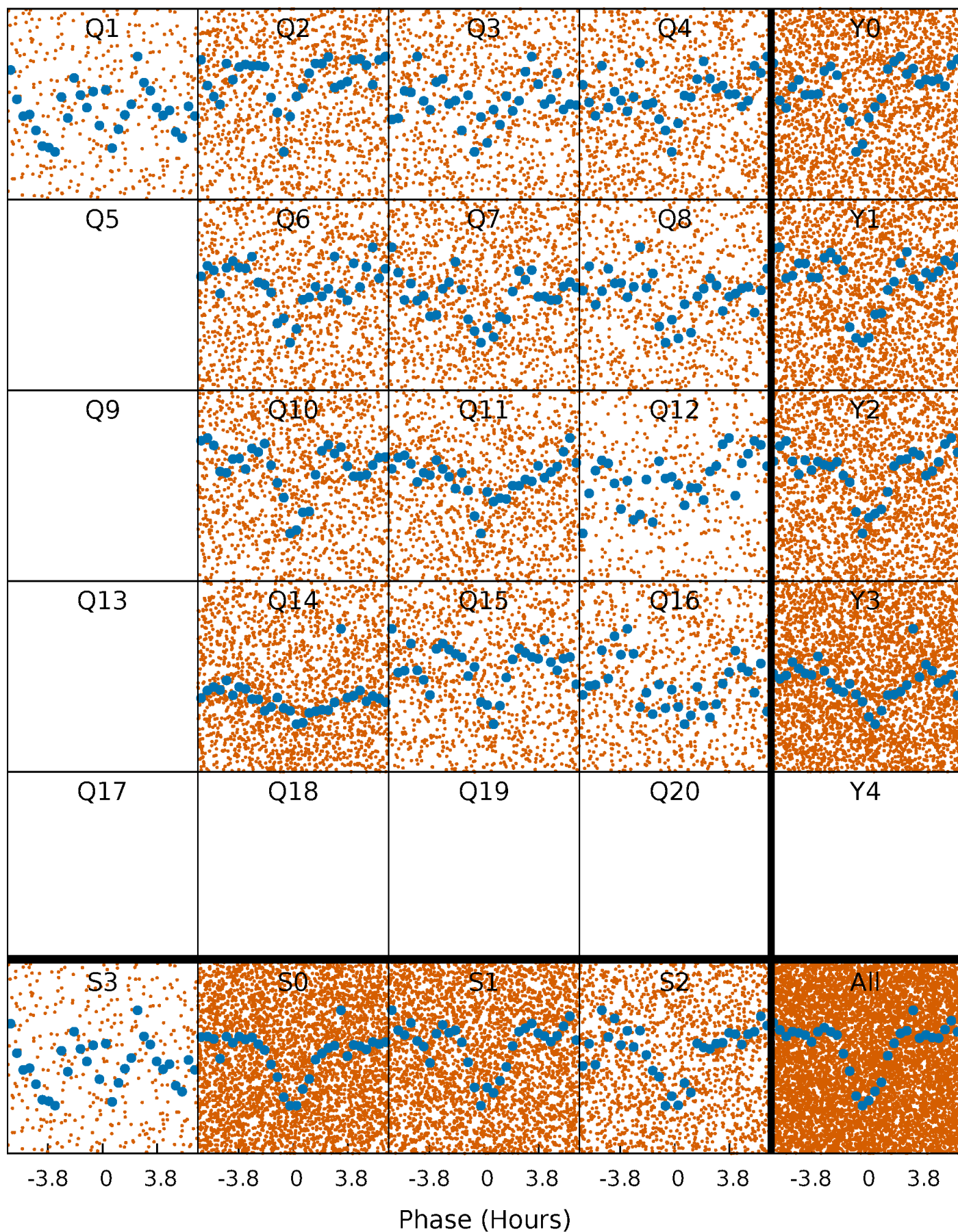


Non-Whitened Vs. Whitened Light Curve



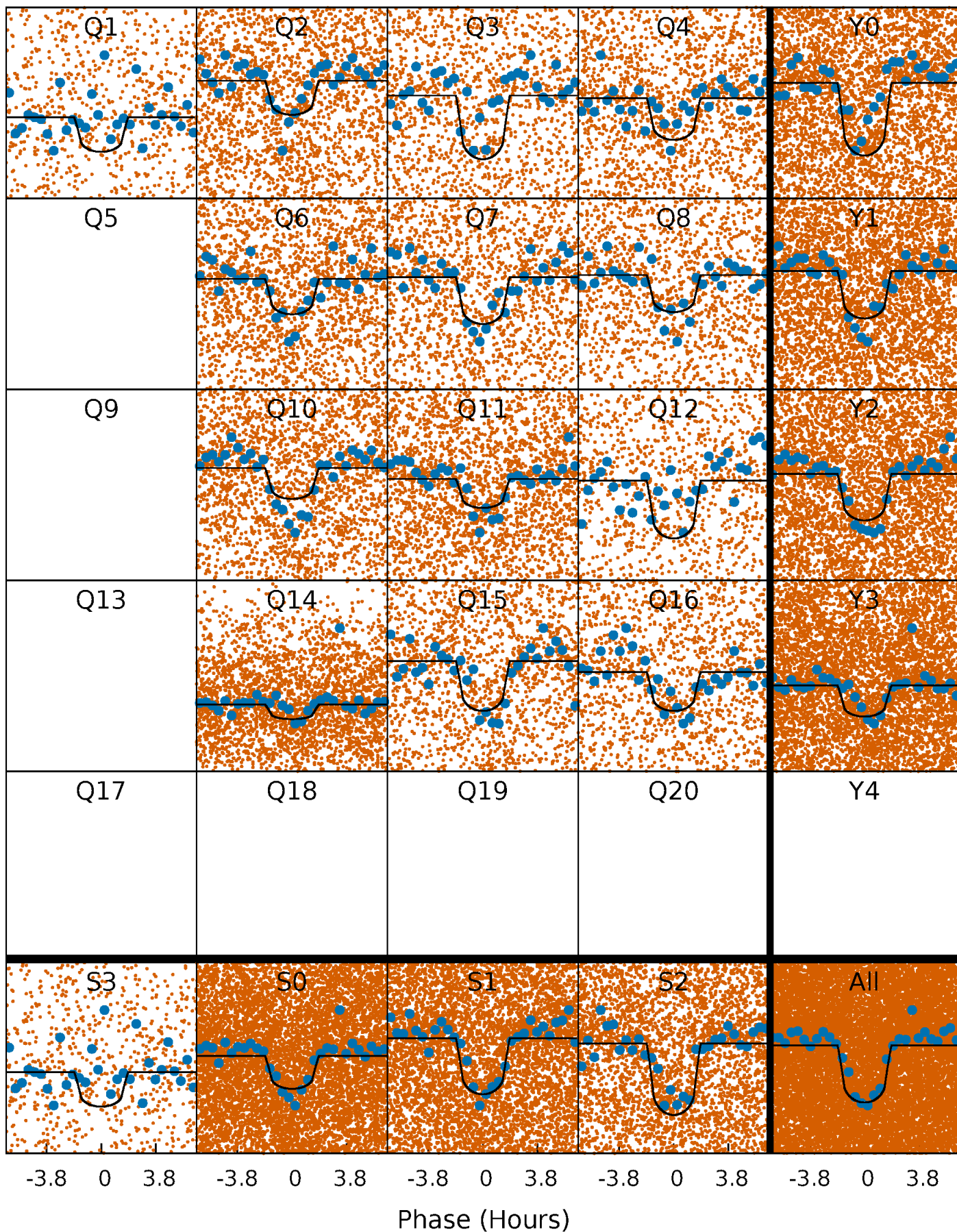
PDC Quarter-Phased Transit Curves

TCE 005513893-01 P= 0.755080 Days $T_0=131.833335$ (BKJD)



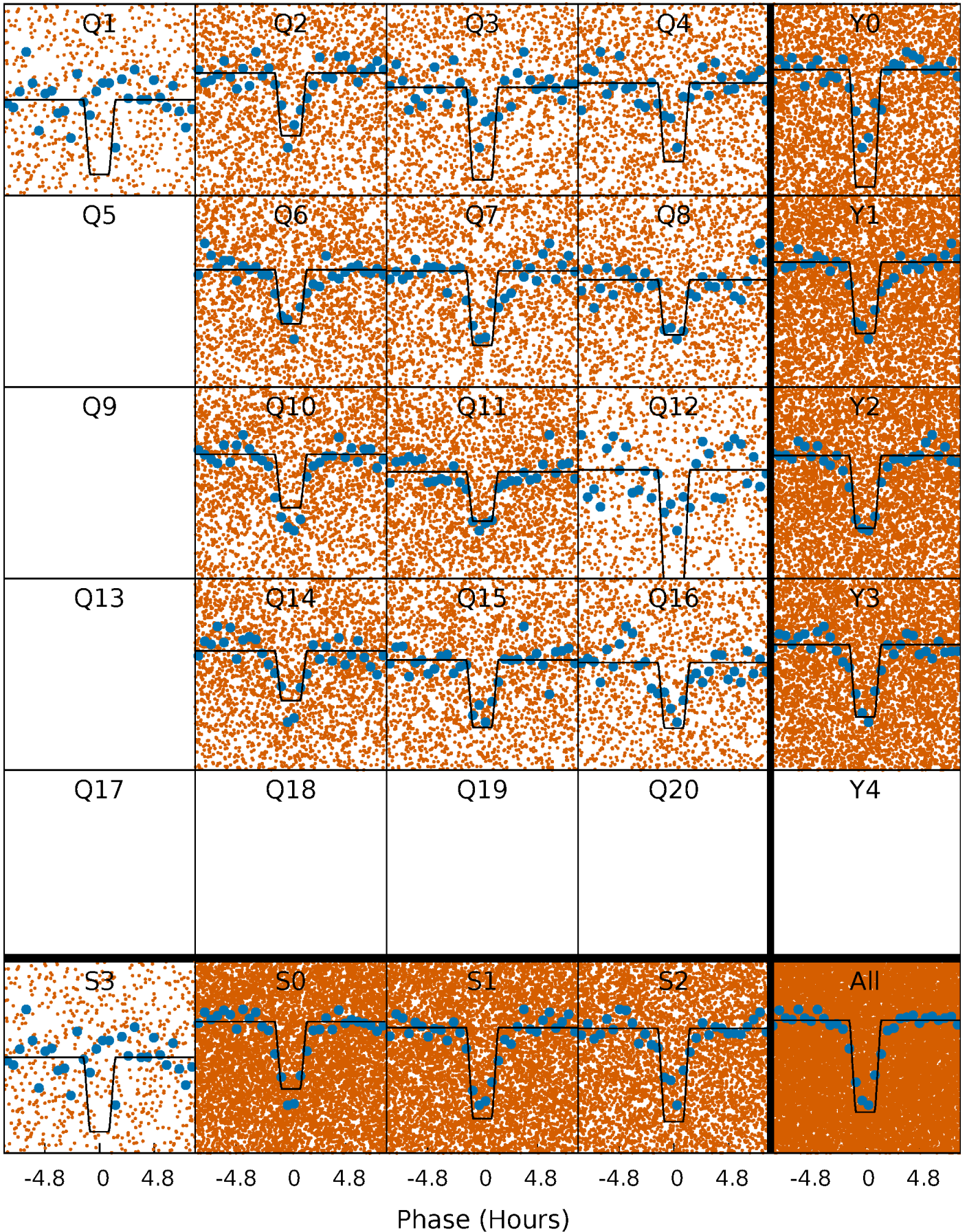
DV Quarter-Phased Transit Curves

TCE 005513893-01 P= 0.755080 Days $T_0=131.833335$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

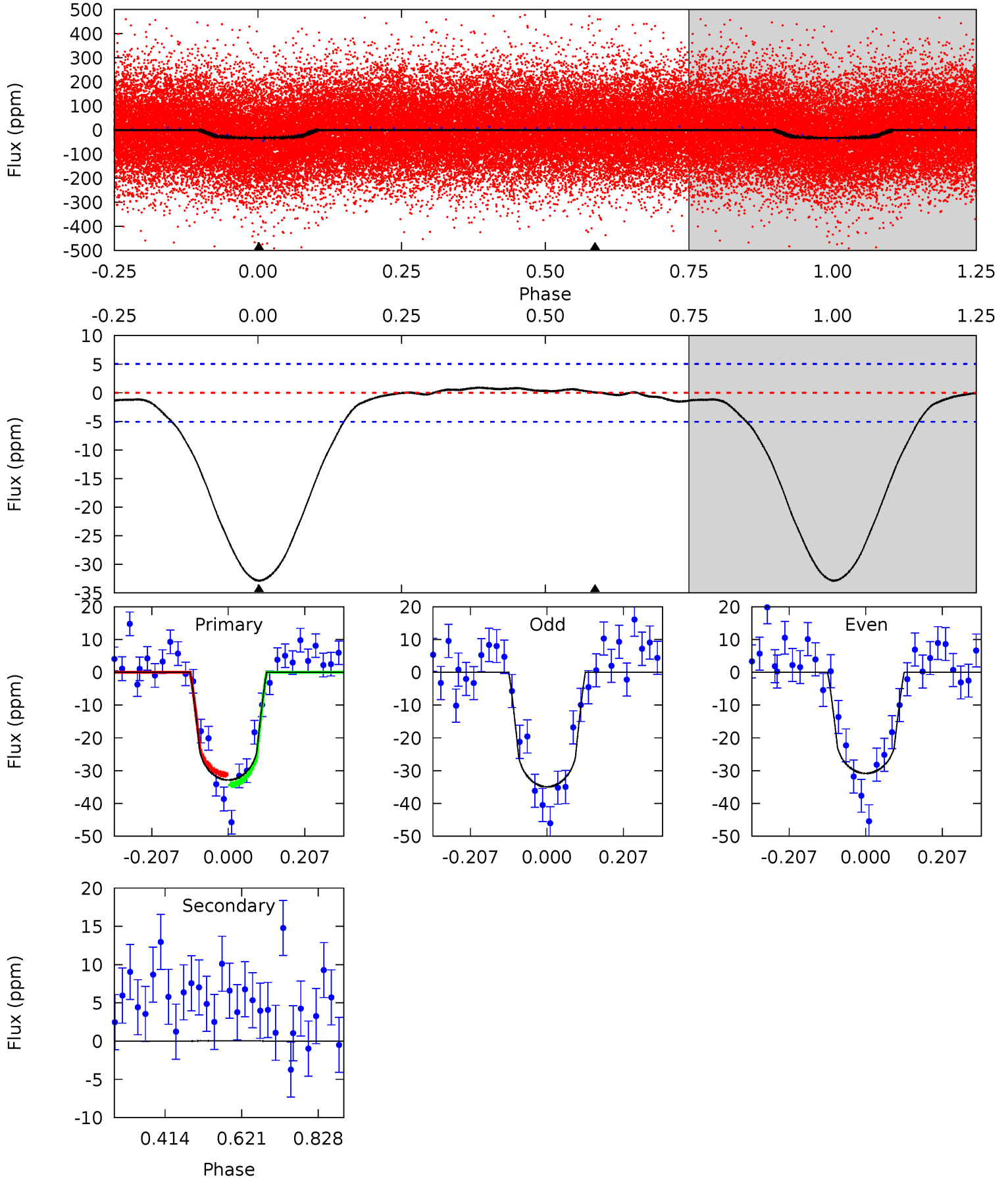
TCE 005513893-01 P= 0.755108 Days $T_0=131.809546$ (BKJD)



DV Model-Shift Uniqueness Test

005513893-01, P = 0.755080 Days, E = 131.078255 Days

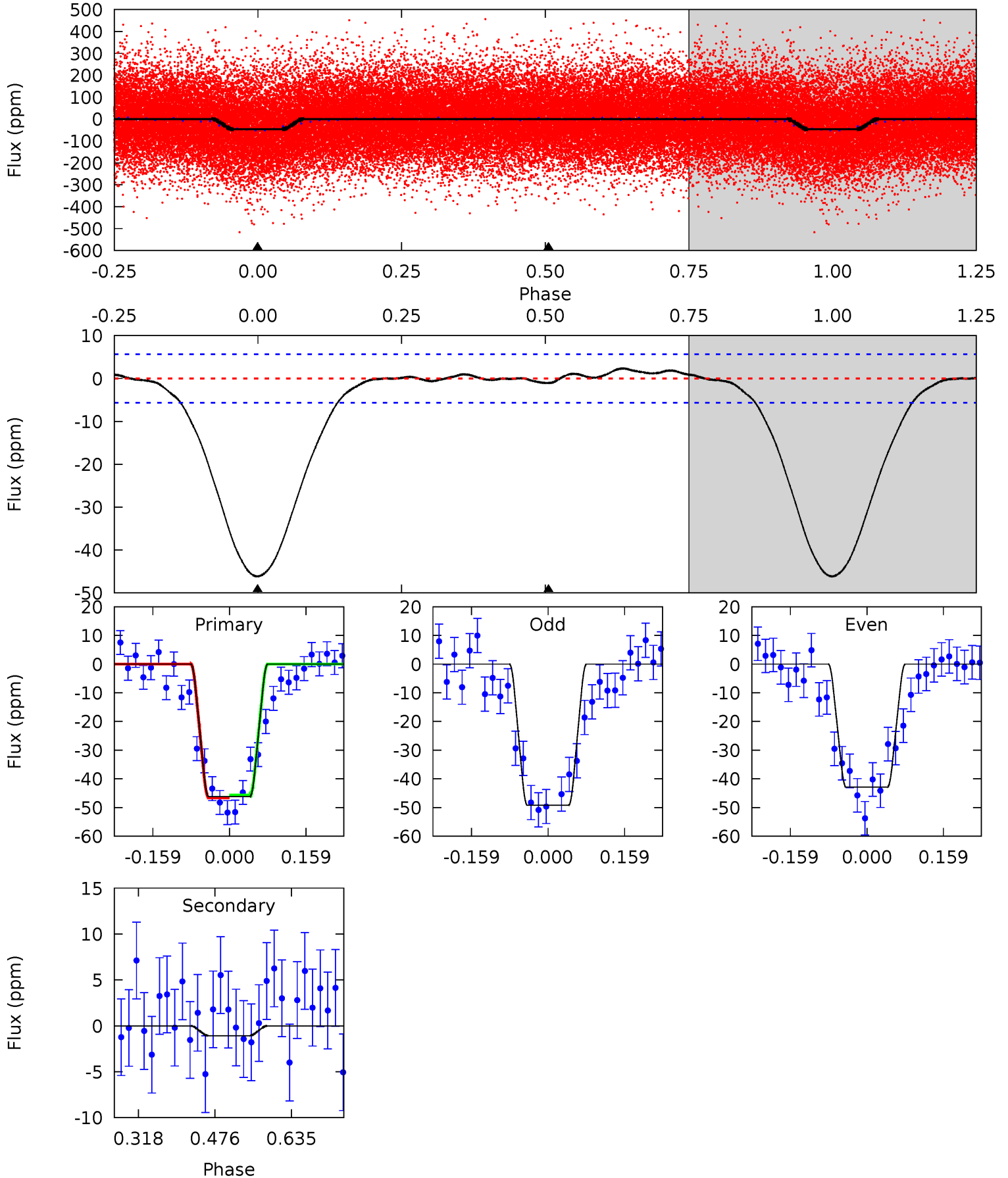
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	-0.05	0	0	4.41	1.26	0.37	28.6	28.6	-0.05	-0.05	1.78	0.98	0.03	1.37



Alt Model-Shift Uniqueness Test

005513893-01, P = 0.755108 Days, E = 131.054438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.4	0.84	0	0	4.47	1.41	0.80	36.4	36.4	0.84	0.84	2.49	0.97	0.05	0.36



Stellar Parameters For KIC 005513893

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5996^{+164}_{-164}	$3.870^{+0.292}_{-0.097}$	$-0.080^{+0.300}_{-0.250}$	$2.128^{+0.383}_{-0.766}$	$1.226^{+0.204}_{-0.227}$	$0.179^{+0.368}_{-0.056}$
	+3%/-3%	+8%/-3%	+375%/-312%	+18%/-36%	+17%/-19%	+206%/-31%
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 005513893-01 / KOI 2741.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$1.30^{+0.32}_{-0.33}$	4027^{+236}_{-356}	-3723^{+368}_{-258}	$-0.004^{+0.115}_{-0.133}$
Alt.	-1 ± 1	$1.64^{+0.35}_{-0.34}$	4011^{+244}_{-320}	-3543^{+388}_{-253}	$0.061^{+0.102}_{-0.072}$

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

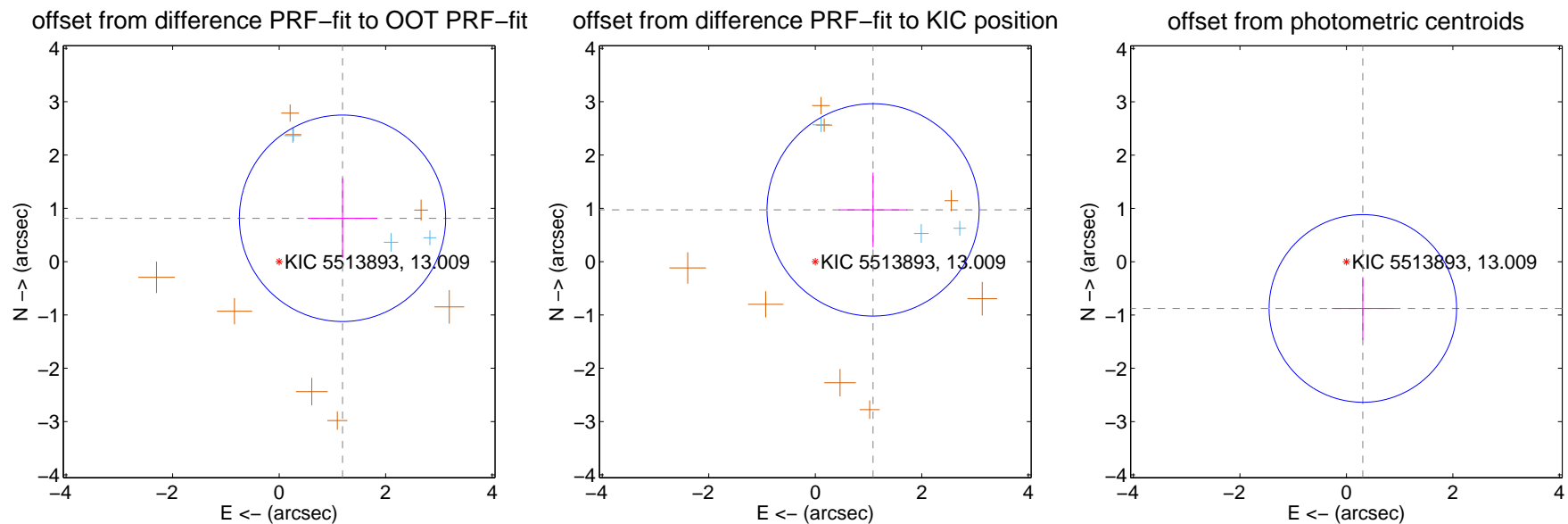
DV Centroid Data

Supplemental centroid analysis for 005513893-01. Kepler magnitude: 13.01. Transit SNR 20.29

There are 3 quarters with good PRF difference image offsets

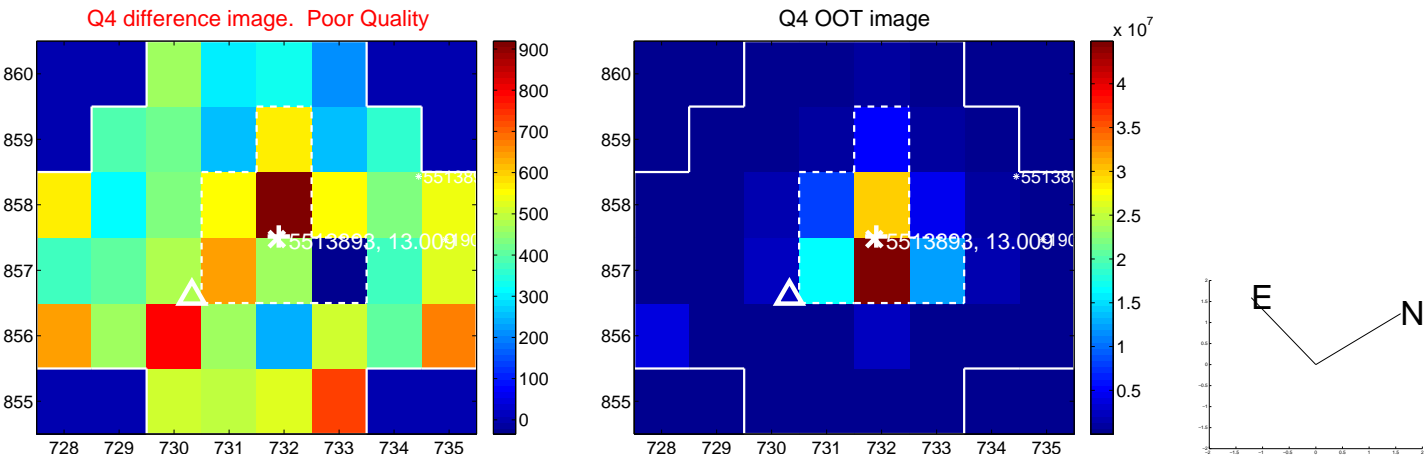
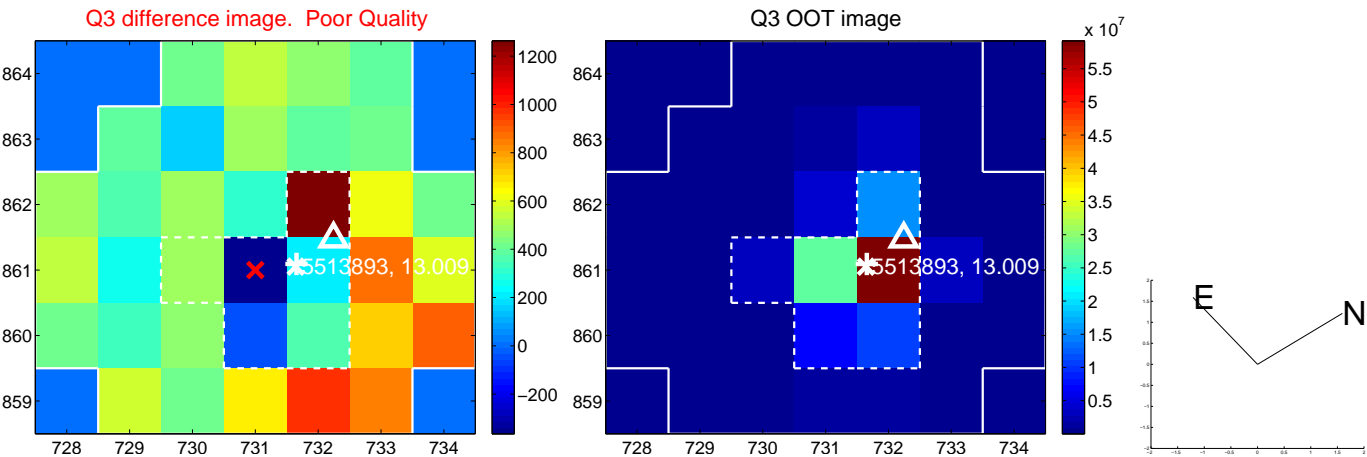
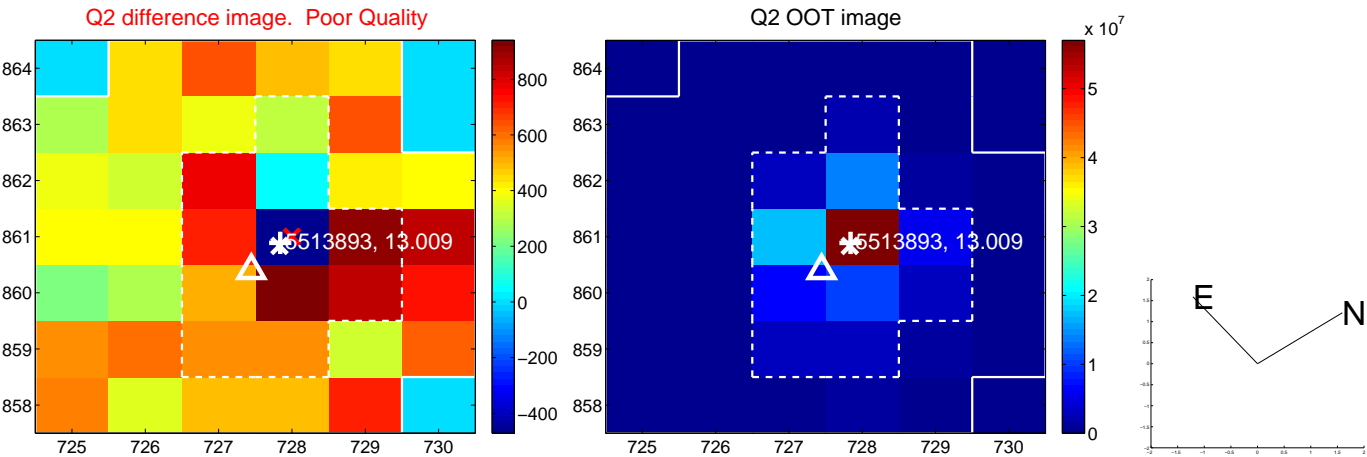
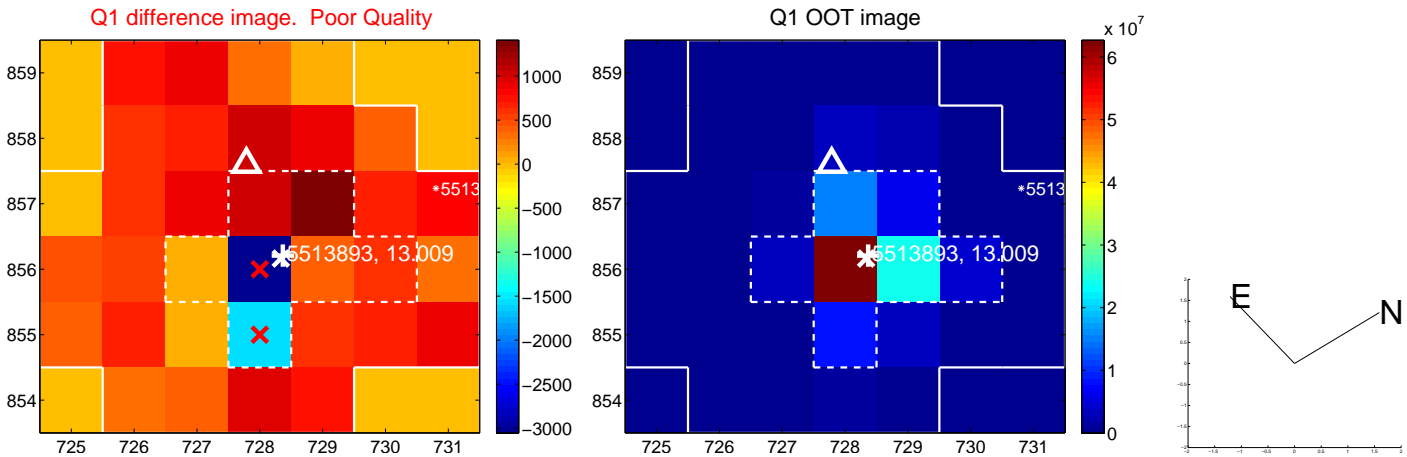
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.441 ± 0.645	2.23	-1.190 ± 0.652	0.813 ± 0.749
PRF-fit source offset from KIC position	1.456 ± 0.664	2.19	-1.085 ± 0.642	0.971 ± 0.700
photometric centroid source offset	0.93 ± 0.59	1.58	-0.31 ± 0.58	-0.88 ± 0.59



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.

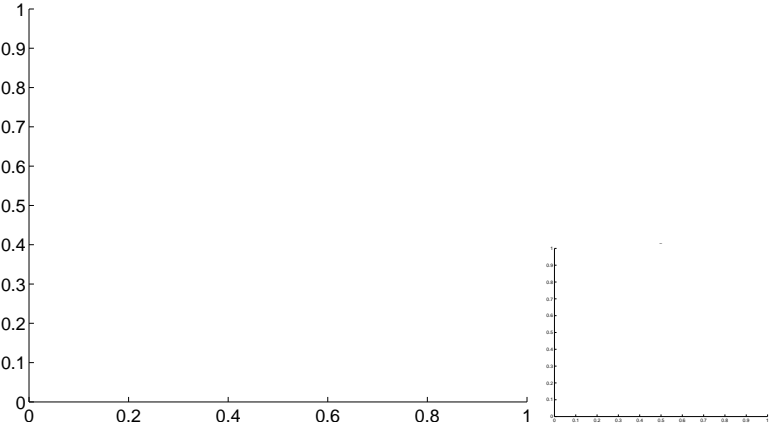


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

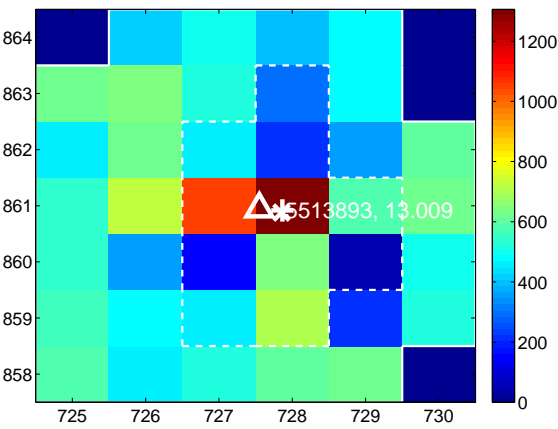
Q5 no difference image



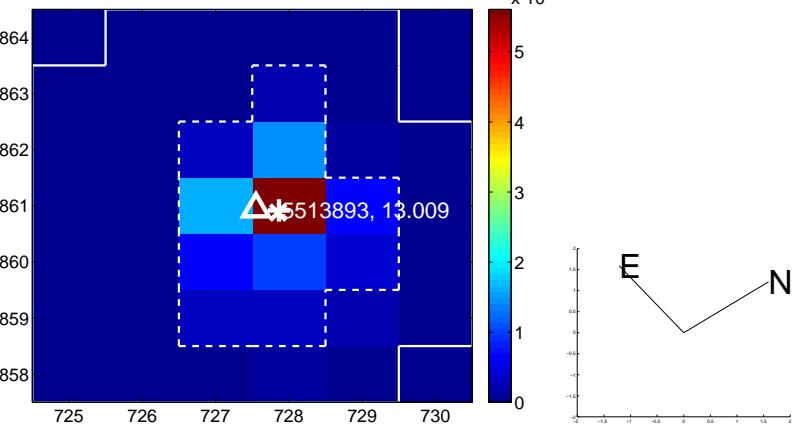
Q5 no OOT image



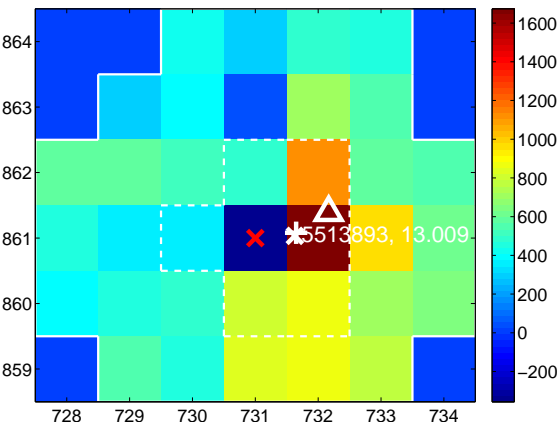
Q6 difference image. Poor Quality



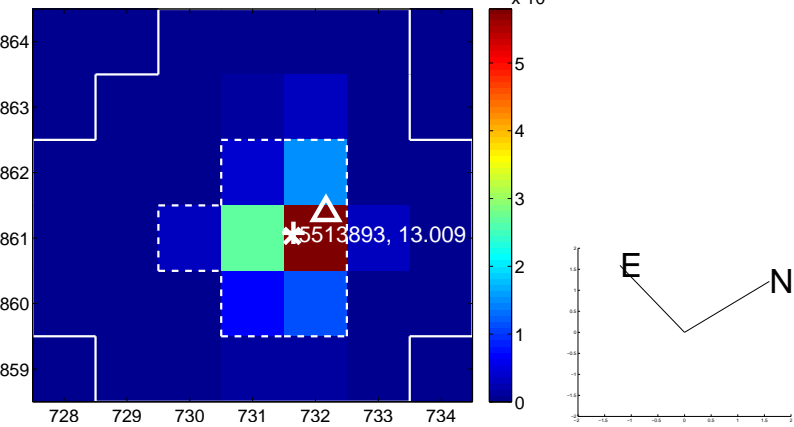
Q6 OOT image



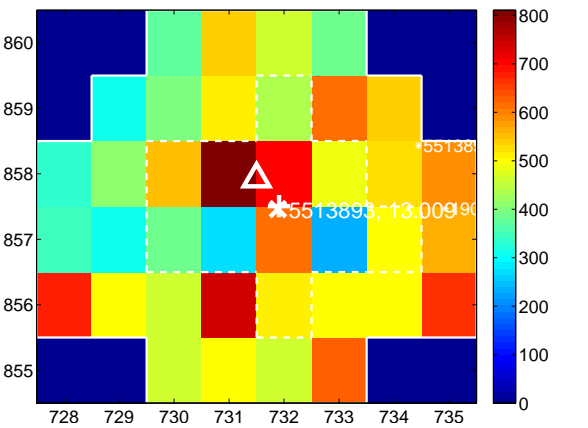
Q7 difference image. Poor Quality



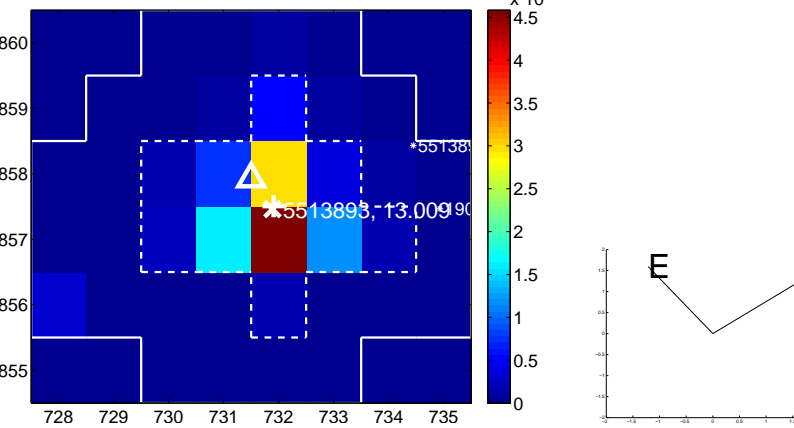
Q7 OOT image



Q8 difference image. Poor Quality



Q8 OOT image



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

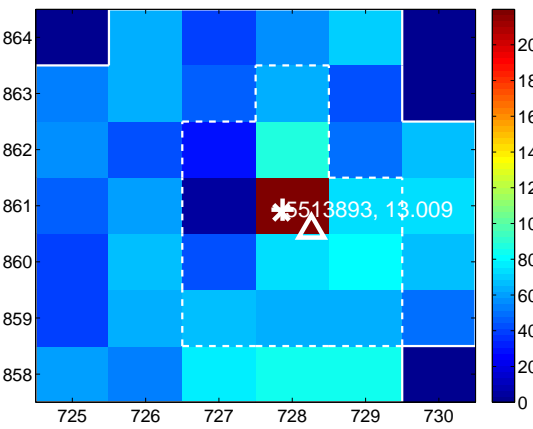
Q9 no difference image



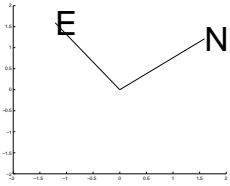
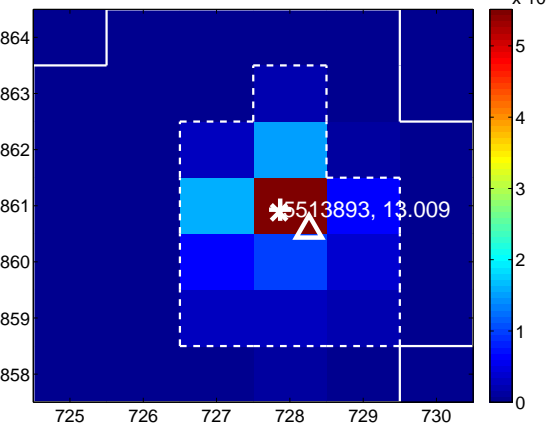
Q9 no OOT image



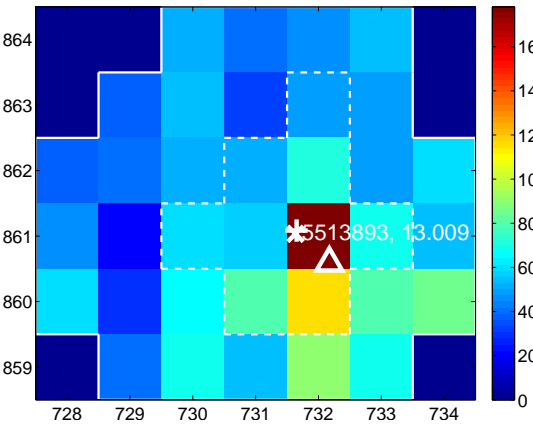
Q10 difference image



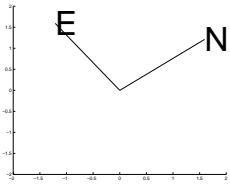
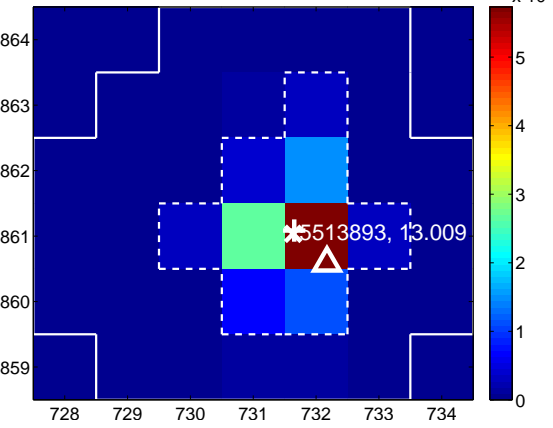
Q10 OOT image



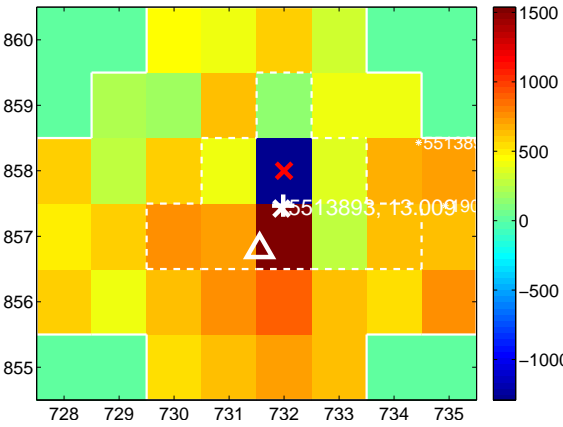
Q11 difference image



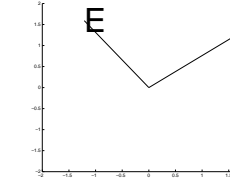
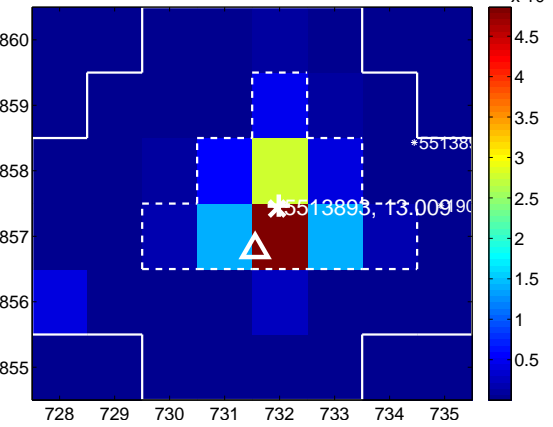
Q11 OOT image



Q12 difference image. Poor Quality

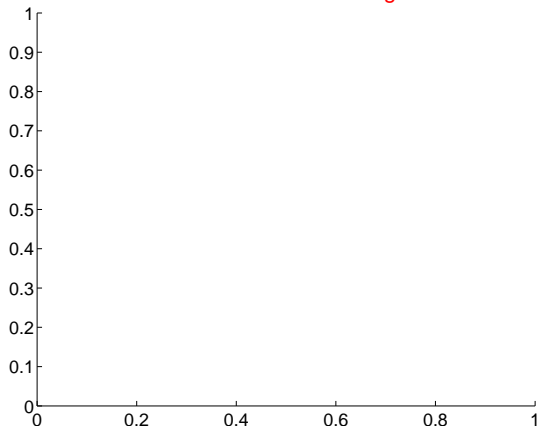


Q12 OOT image

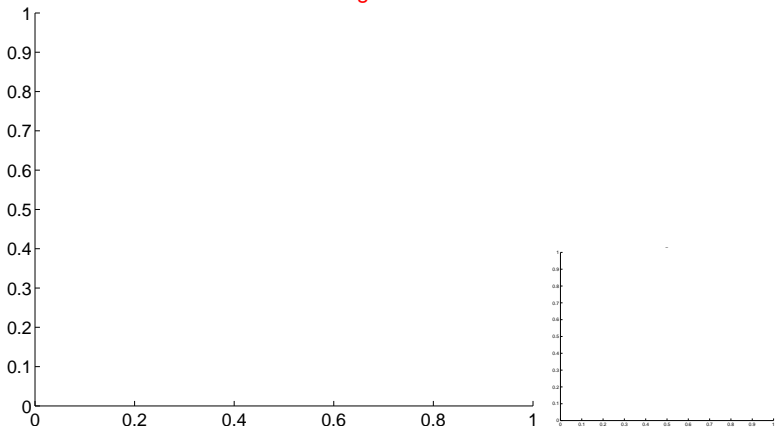


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

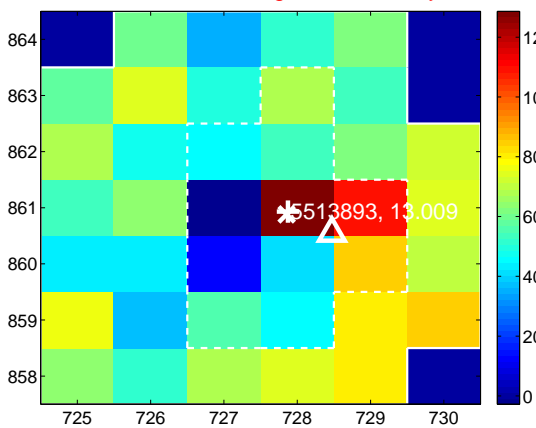
Q13 no difference image



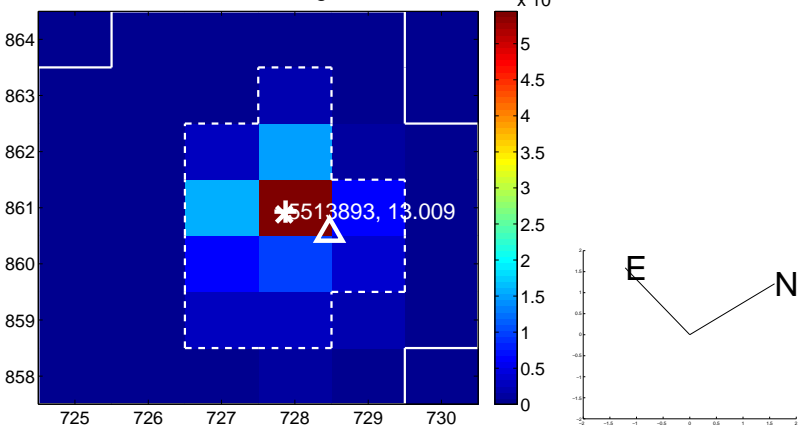
Q13 no OOT image



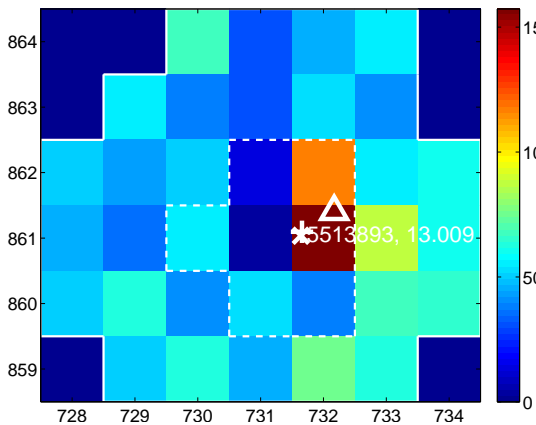
Q14 difference image. Poor Quality



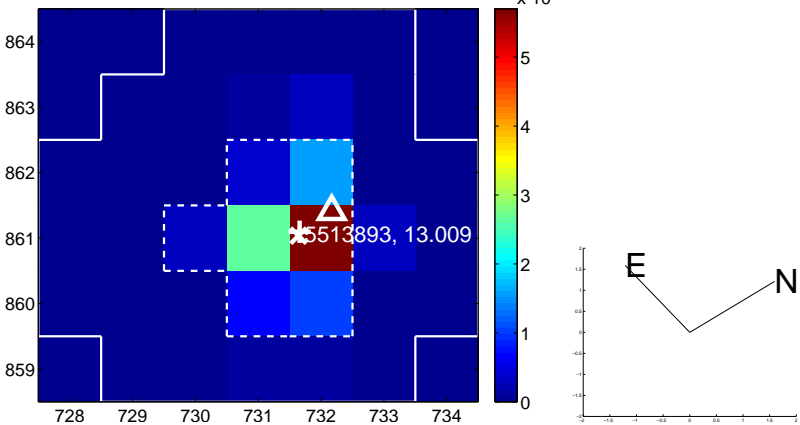
Q14 OOT image



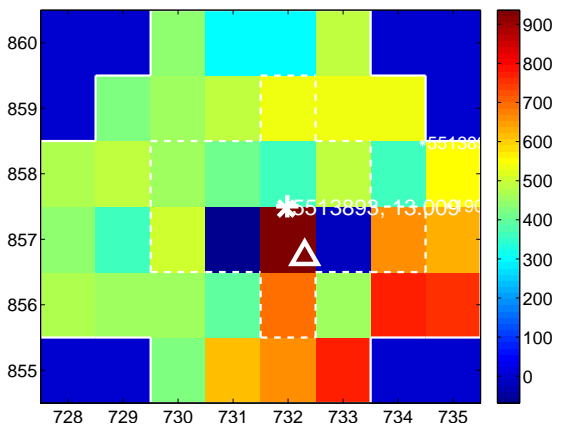
Q15 difference image



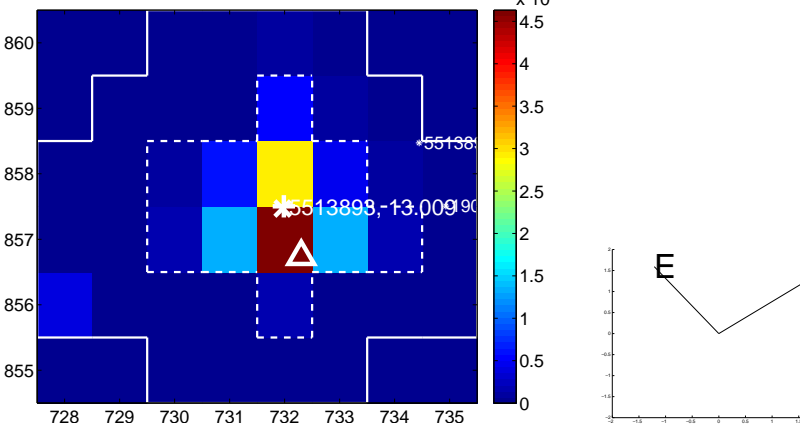
Q15 OOT image



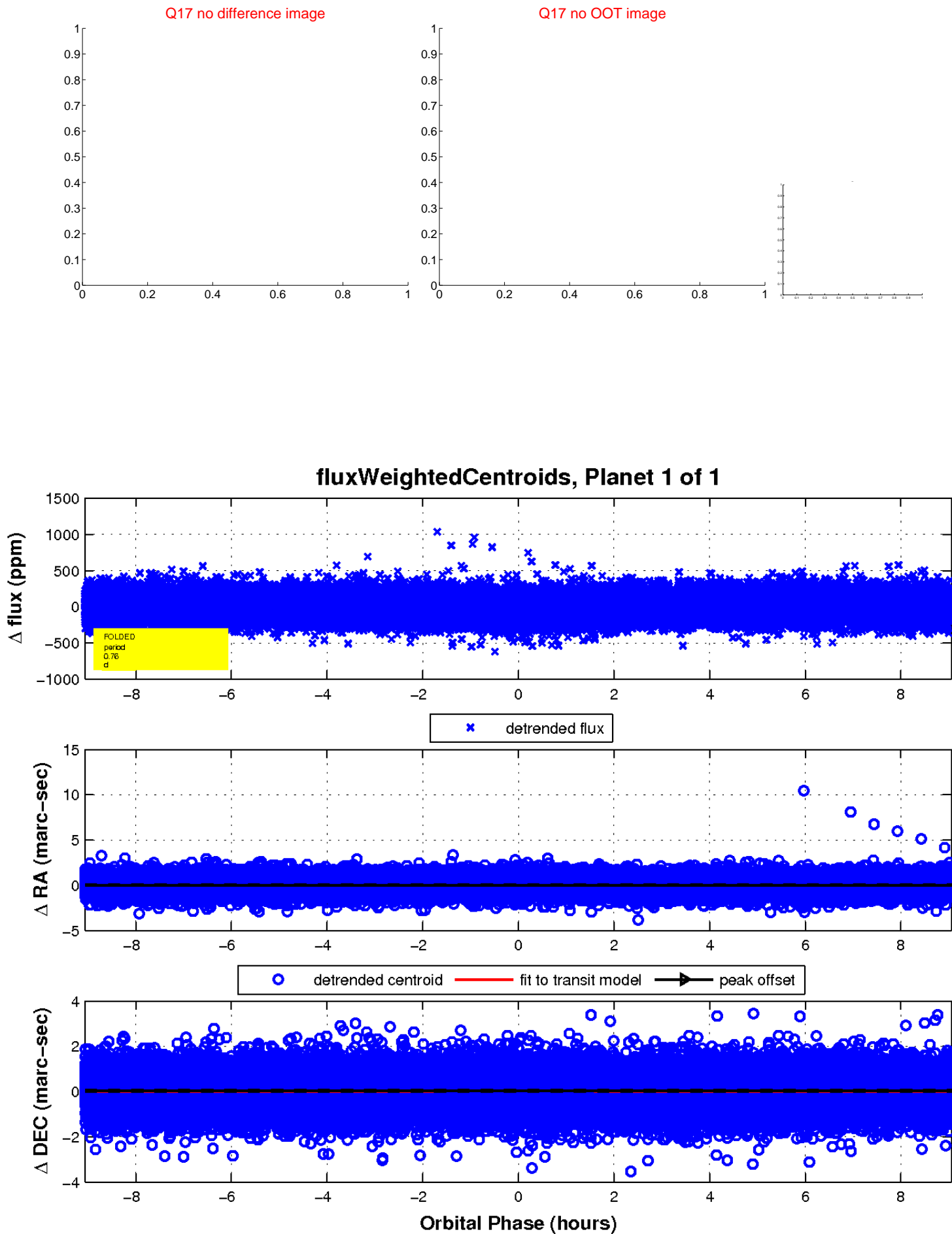
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

