

KIC 002711606

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})
002711606-01	OBS	No	0.841203	131.539230	18.8	4.307	7.7	5.7	1.12	6256	0.51	5610.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002711606-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_KIC_POS—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.

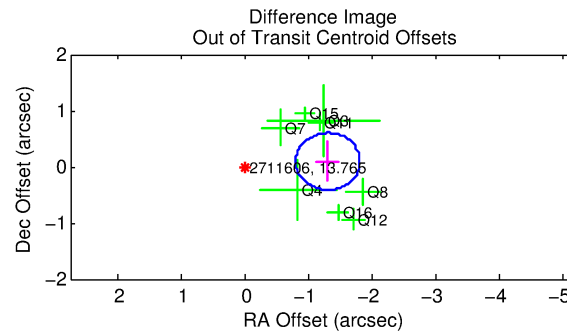
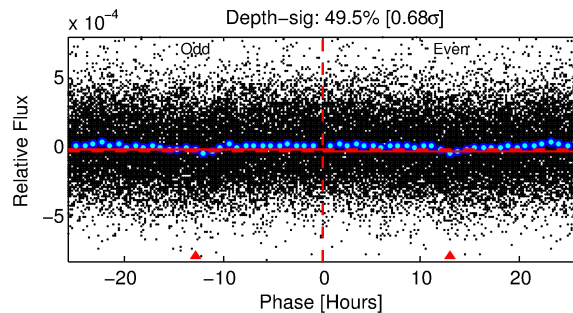
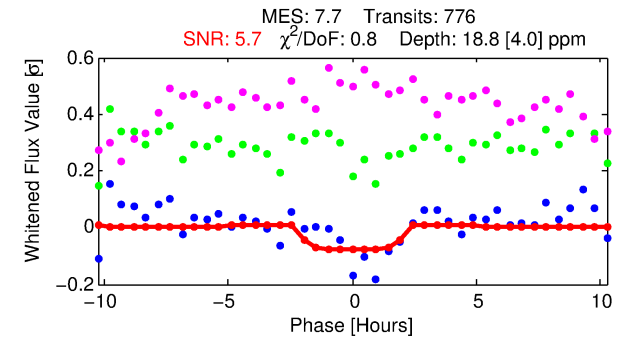
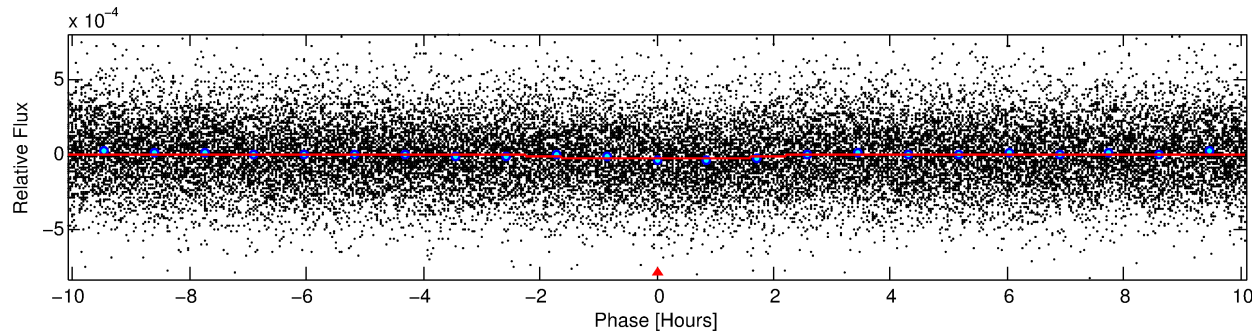
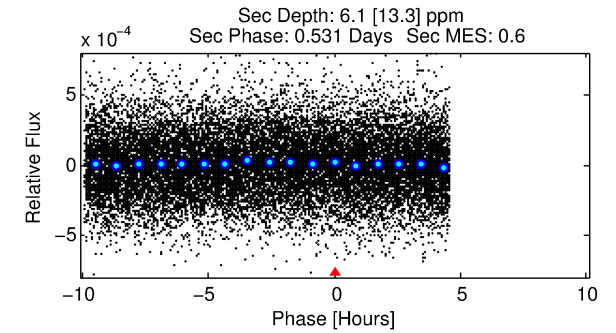
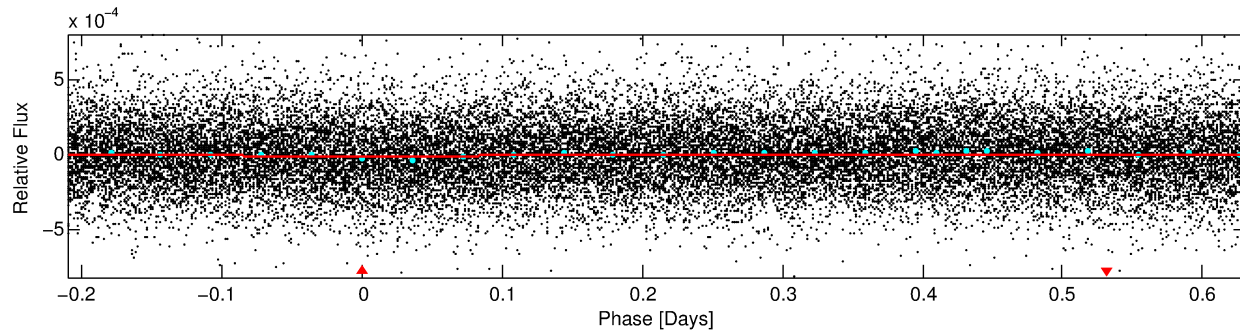
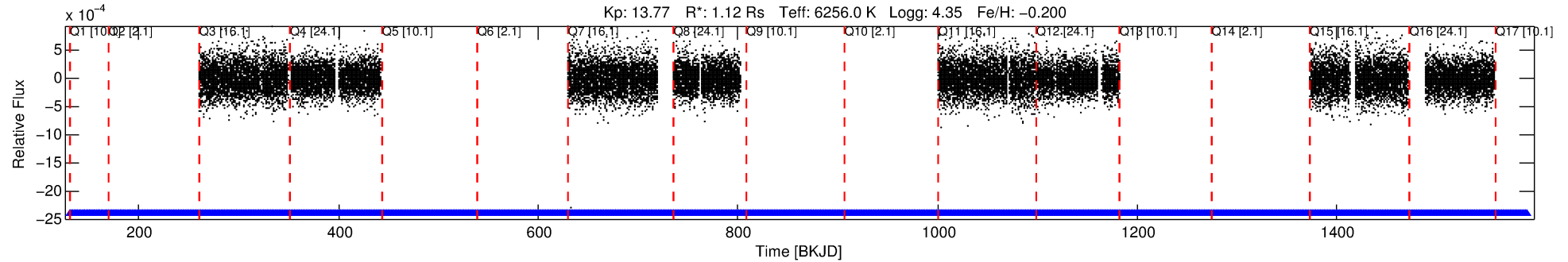
Ephemeris Match Information For 002711606-01

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
002711606-01	2711606	003339563-pri	3339563	1:1	1990.0	501	0	14.18	13.77	11863.00	Col-Anomaly	0	3.31	0.28

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: 2711606 Candidate: 1 of 1 Period: 0.841 d



DV Fit Results:

Period = 0.84120 [0.00002] d
Epoch = 131.5392 [0.0084] BKJD
Rp/R* = 0.0041 [0.0031]
a/R* = 1.47 [3.08]
b = 0.53 [5.31]
Seff = 5610.24 [2318.44]
Teq = 2207 [228] K
Rp = 0.51 [0.42] Re
a = 0.0176 [0.0047] AU
Ag = 4.06 [10.90] [0.28σ]
Teffp = 4845 [3222] K [0.82σ]

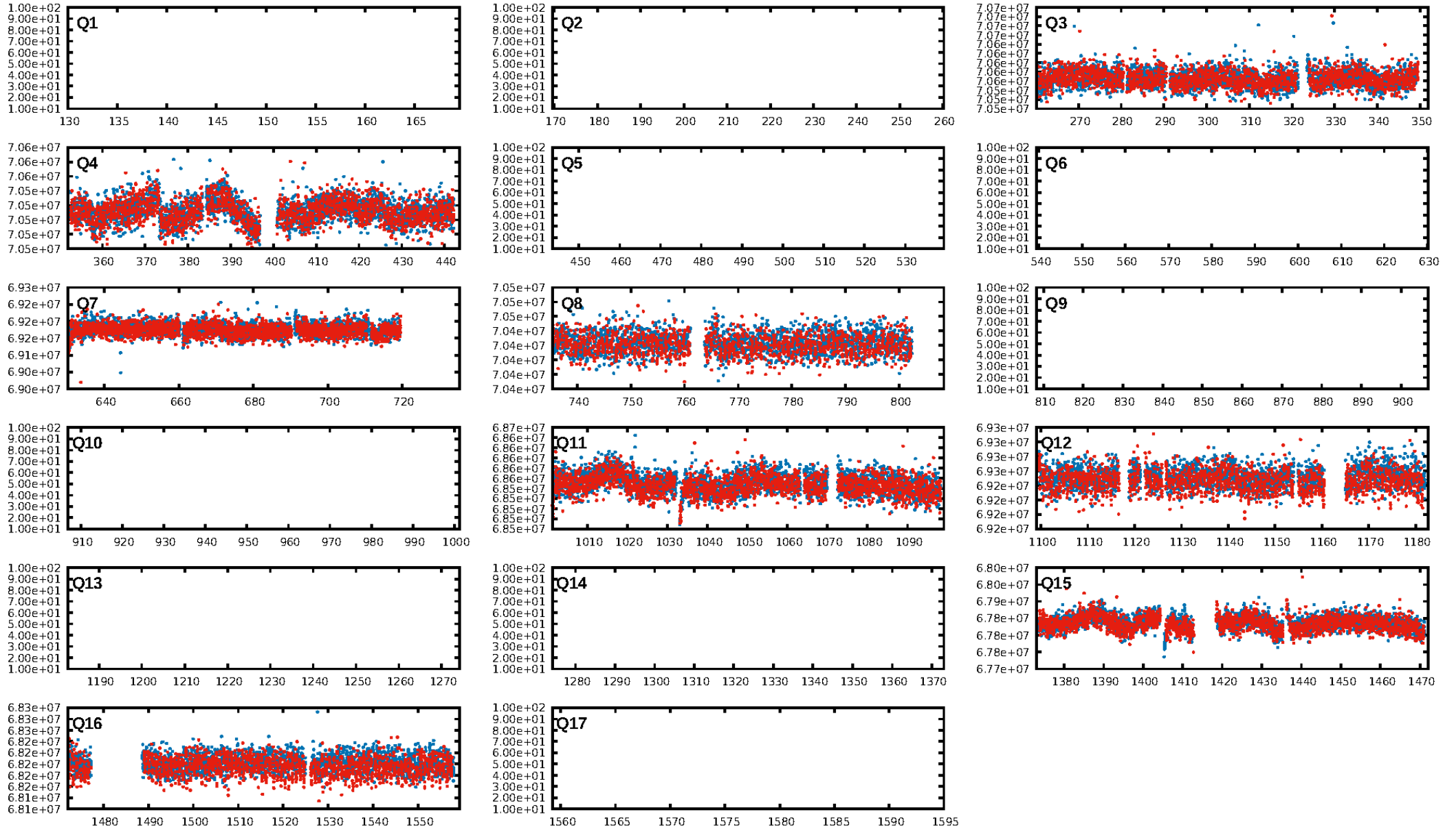
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.80e-16
RollingBand-fgt: 1.00 [776/776]
GhostDiagnostic-chr: 12.31
Centroid-sig: 46.9%
Centroid-so: 1.519 arcsec [1.08σ]
OotOffset-rm: 1.303 arcsec [7.72σ]
KicOffset-rm: 1.289 arcsec [7.20σ]
OotOffset-st: 0/4/4/0 [8]
KicOffset-st: 0/4/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

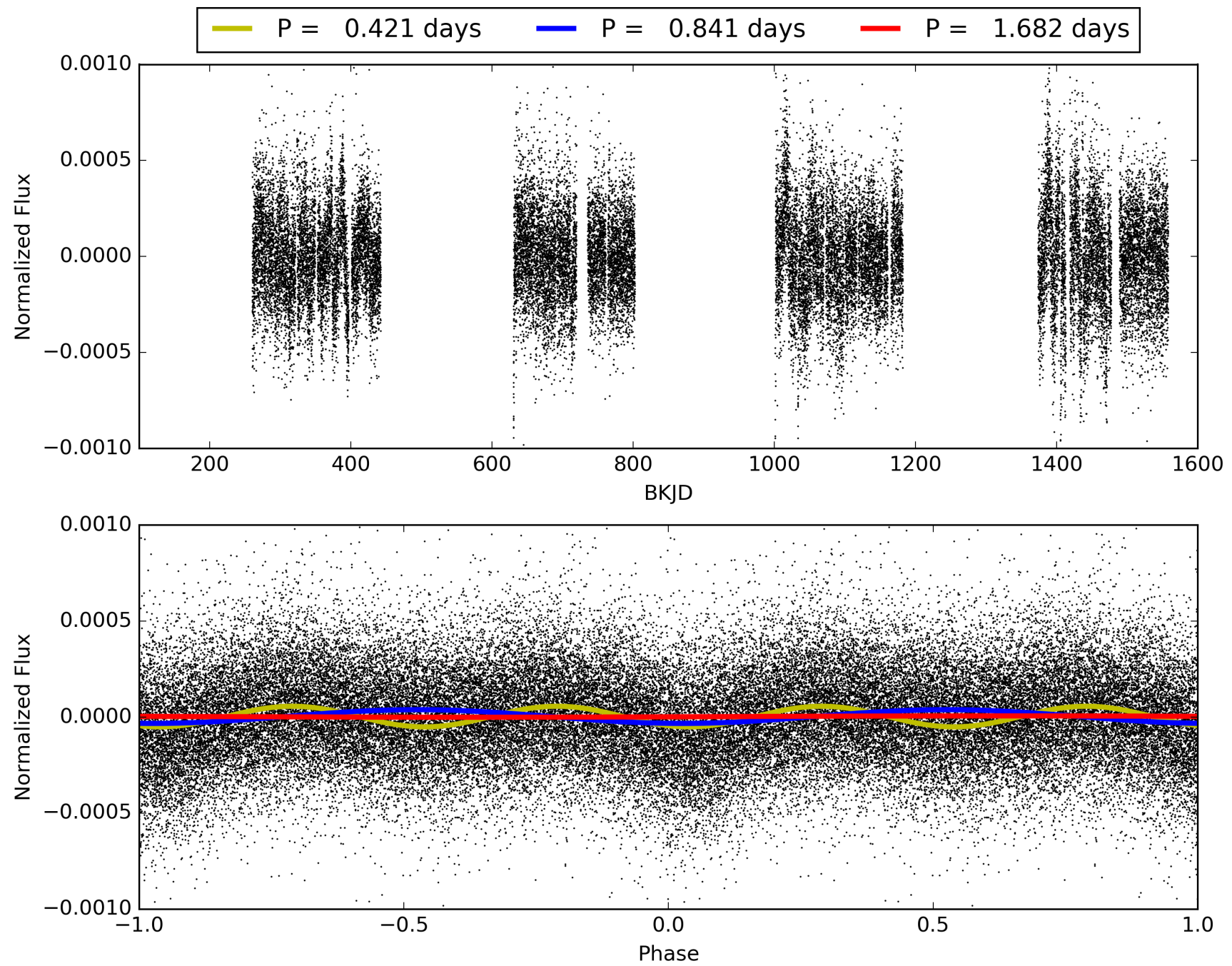
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:12:43 Z

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

TCE 002711606-01, PDC Light Curves

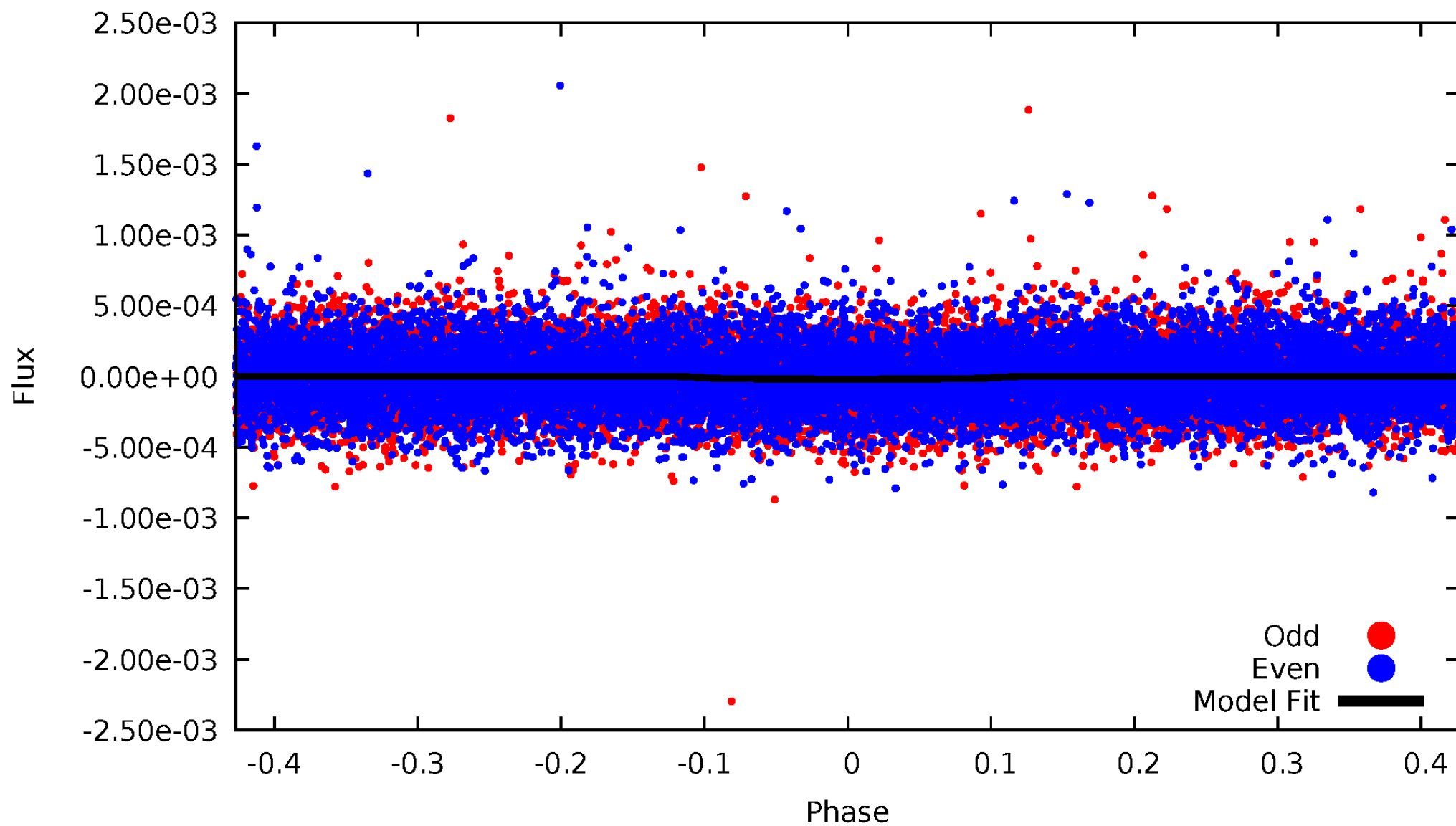


TCE 002711606-01



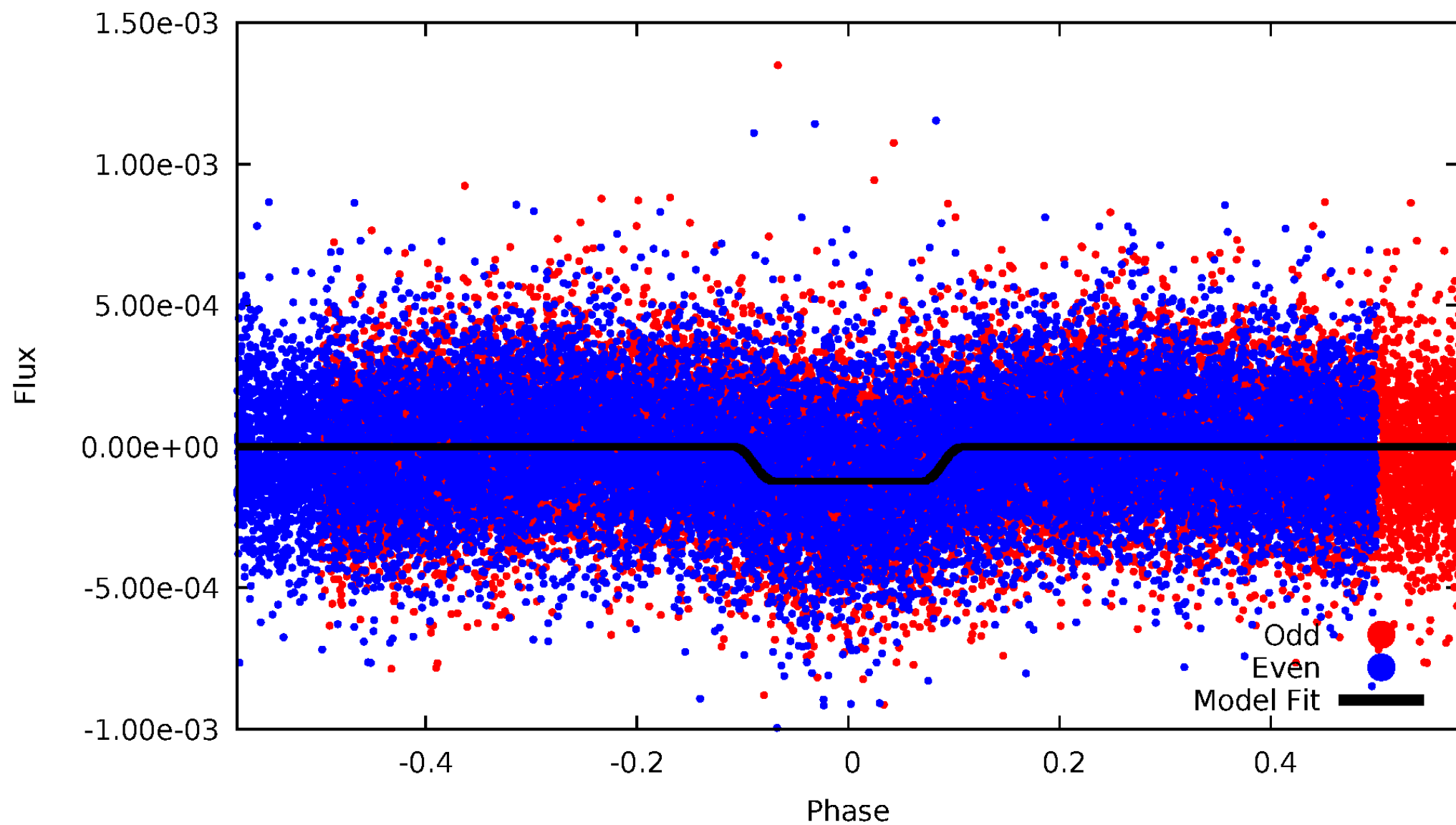
DV Odd/Even

TCE 002711606-01

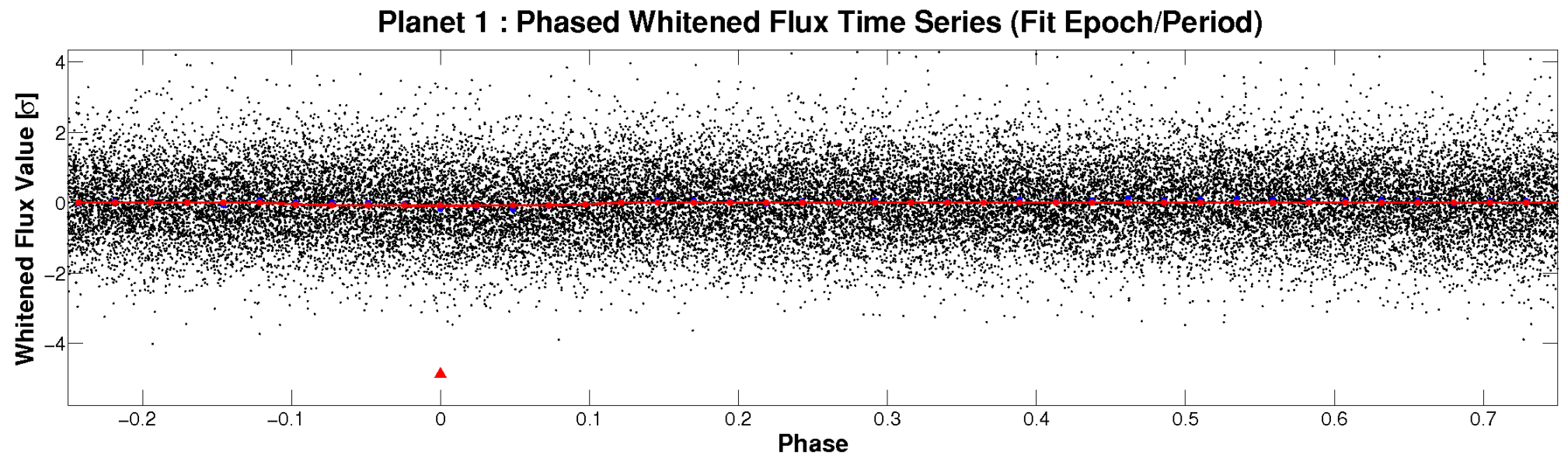
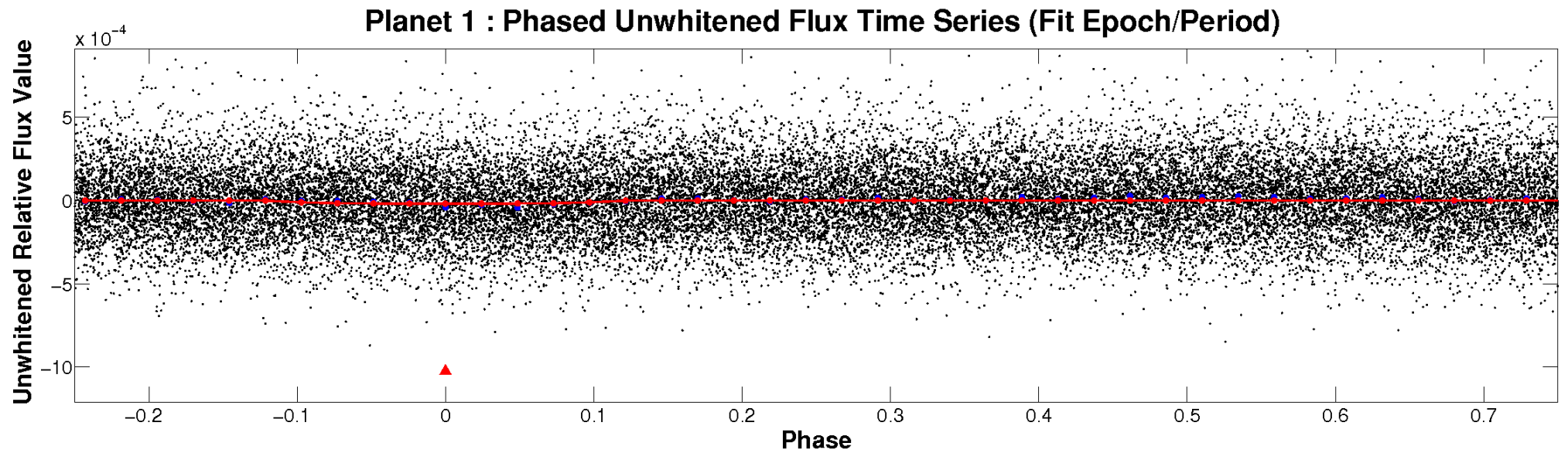


ALT Odd/Even

TCE 002711606-01

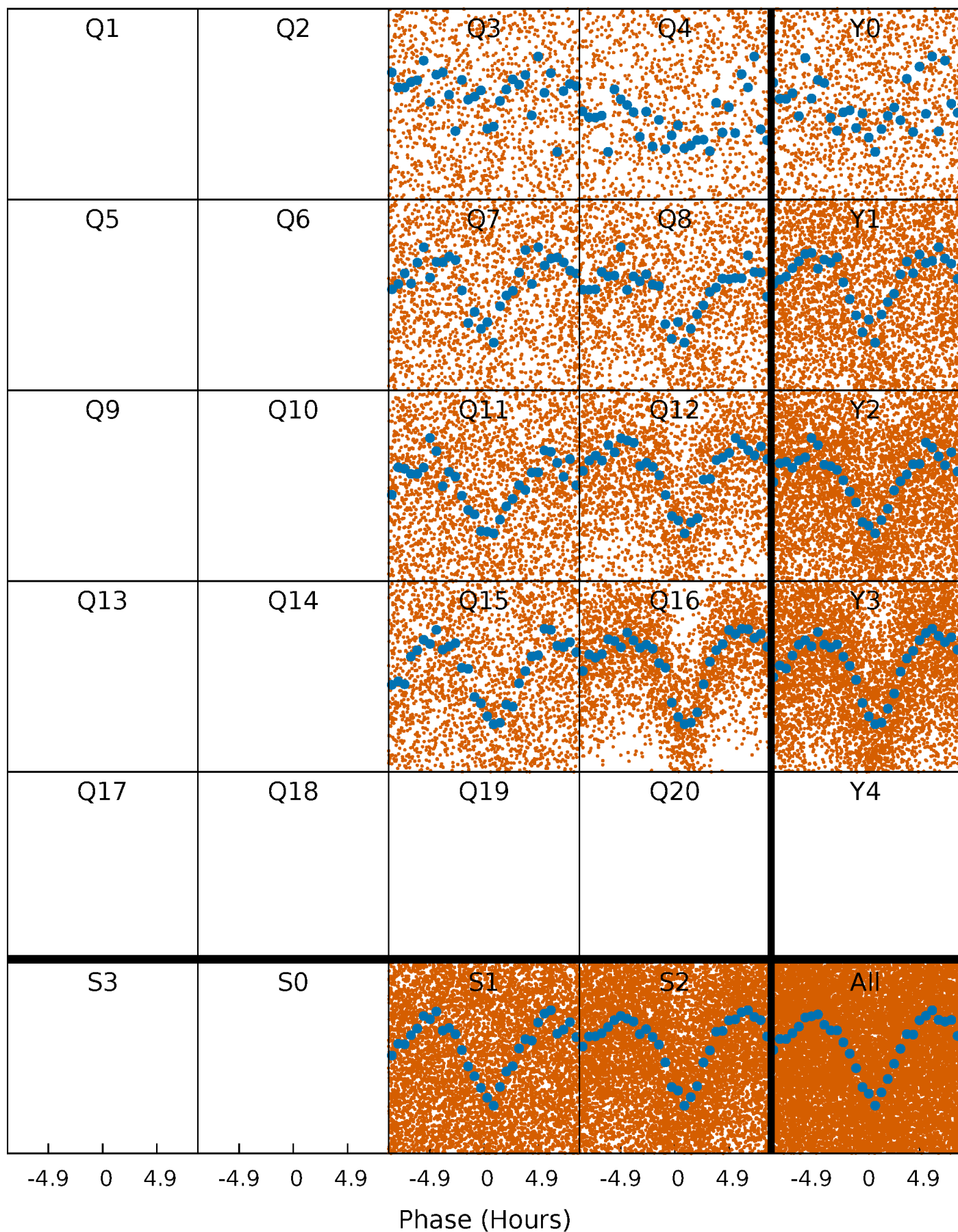


Non-Whitened Vs. Whitened Light Curve



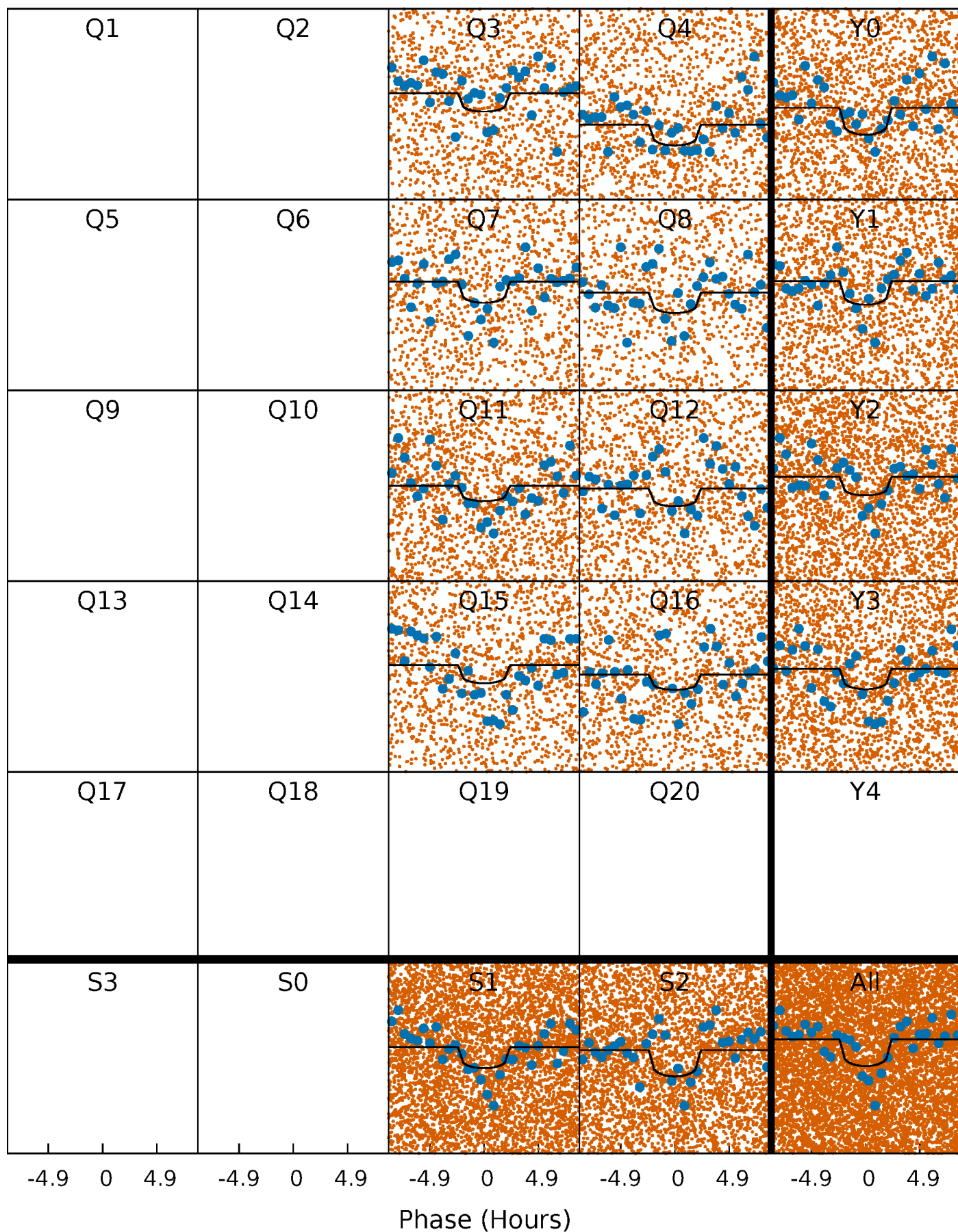
PDC Quarter-Phased Transit Curves

TCE 002711606-01 P= 0.841203 Days $T_0=131.539230$ (BKJD)



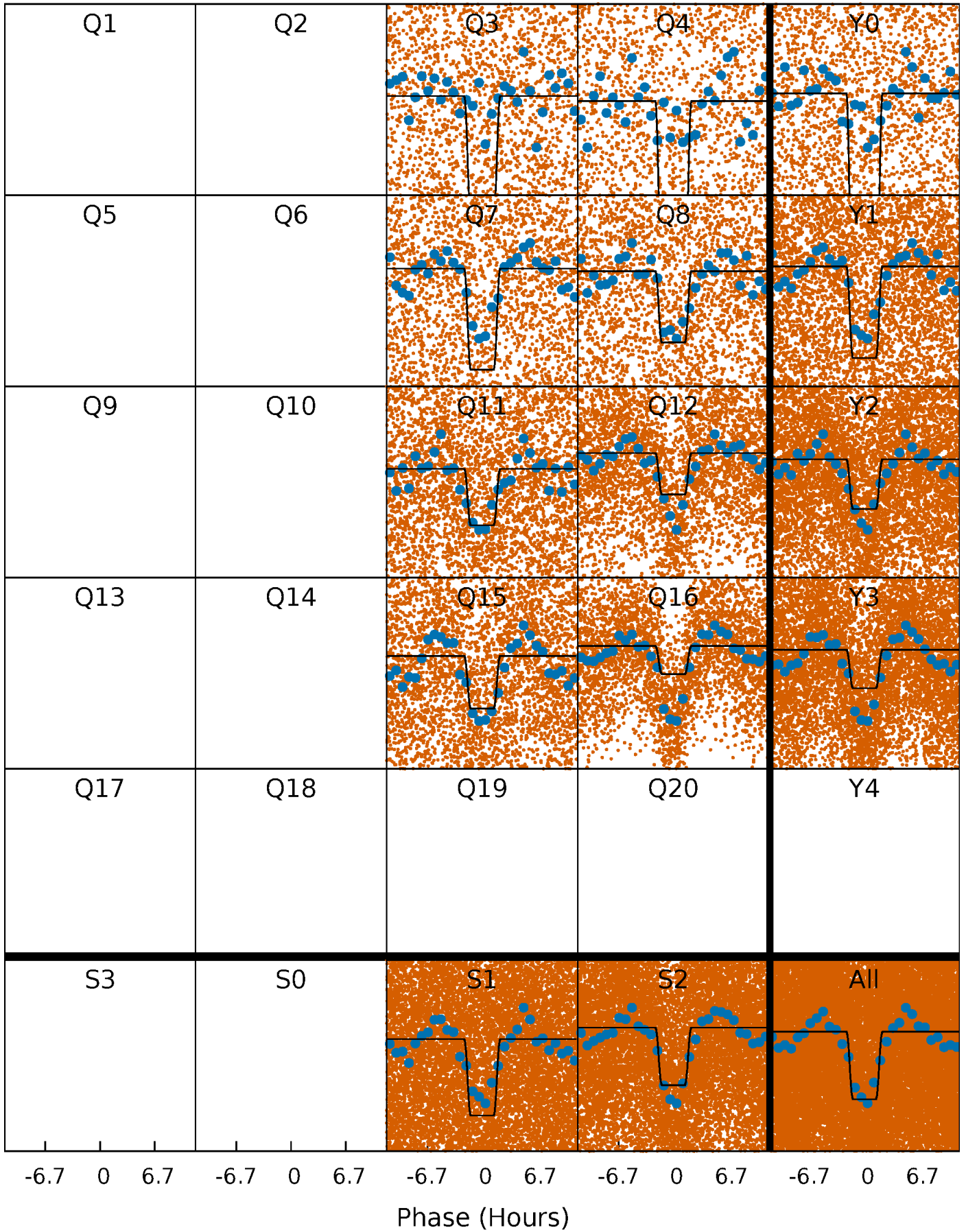
DV Quarter-Phased Transit Curves

TCE 002711606-01 P= 0.841203 Days $T_0=131.539230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

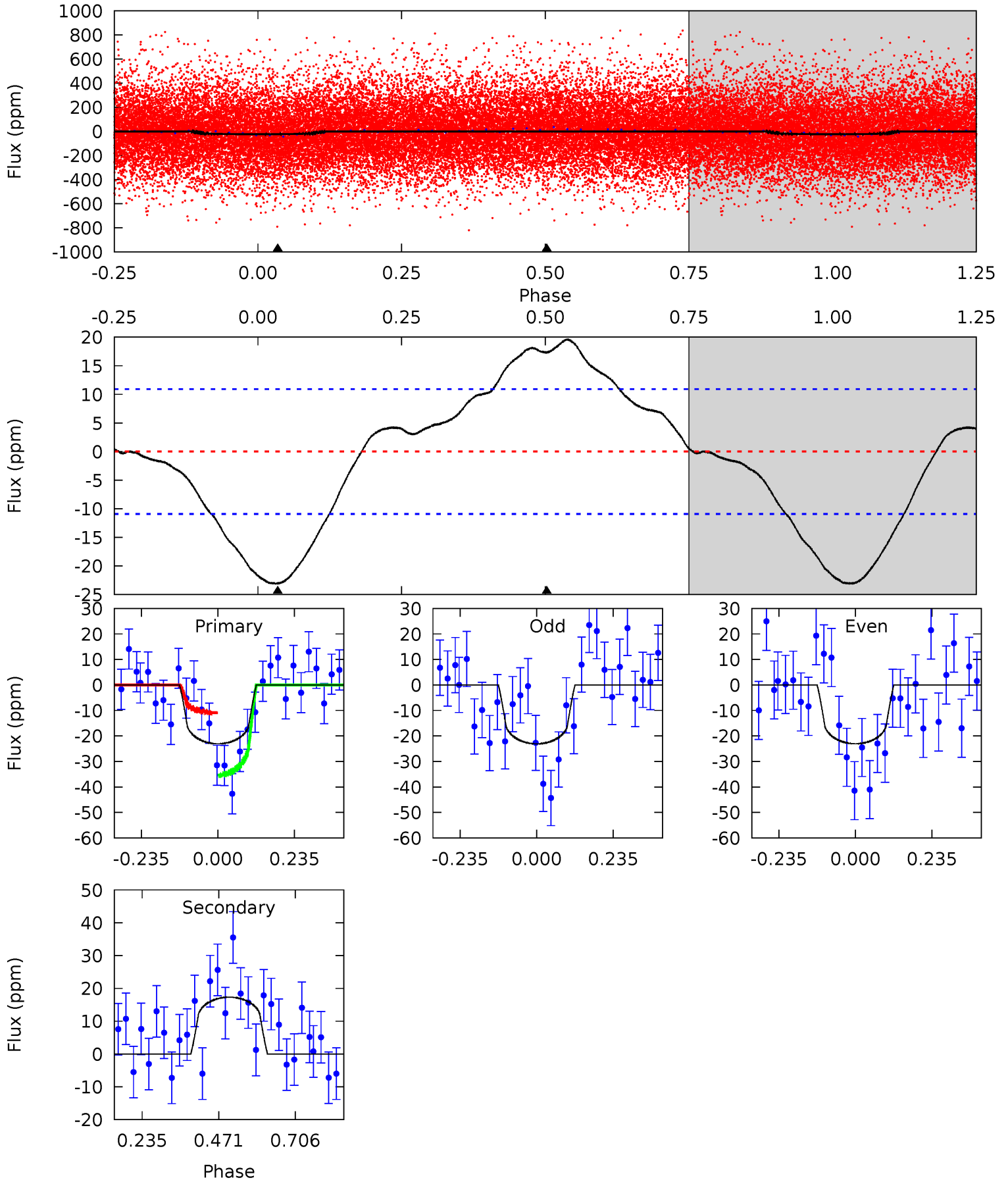
TCE 002711606-01 P= 0.841235 Days $T_0=131.530193$ (BKJD)



DV Model-Shift Uniqueness Test

002711606-01, P = 0.841203 Days, E = 131.539230 Days

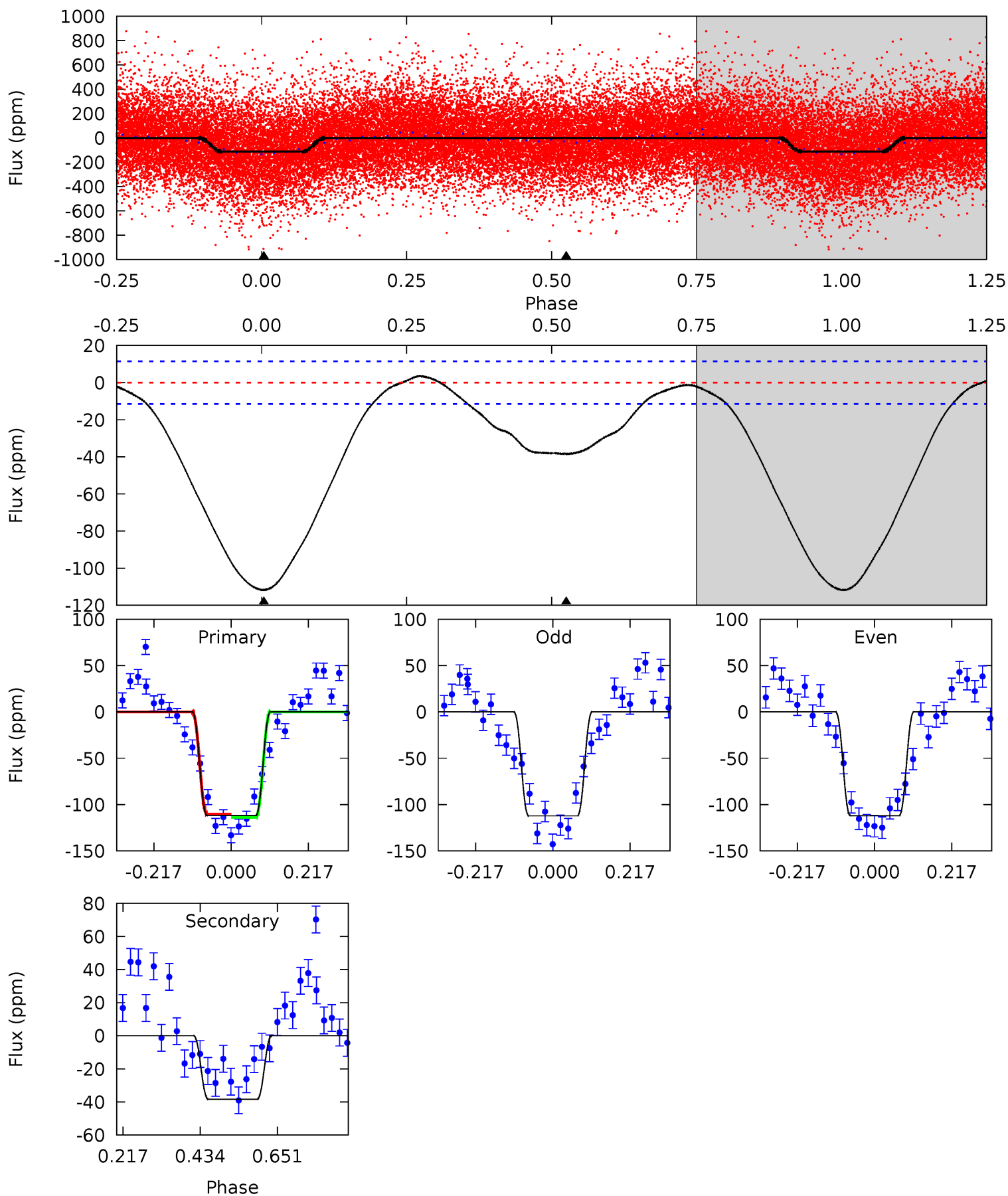
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.25	-6.95	0	0	4.38	1.19	0.63	9.25	9.25	-6.95	-6.95	0.01	1.19	0.46	4.94



Alt Model-Shift Uniqueness Test

002711606-01, P = 0.841235 Days, E = 131.530193 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	14.7	0	0	4.40	1.23	1.21	42.7	42.7	14.7	14.7	0.02	1.06	0.03	0.68



Stellar Parameters For KIC 002711606

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6256^{+197}_{-263}	$4.347^{+0.124}_{-0.201}$	$-0.200^{+0.250}_{-0.300}$	$1.125^{+0.367}_{-0.183}$	$1.023^{+0.185}_{-0.108}$	$1.012^{+0.509}_{-0.541}$
	+3%/-4%	+3%/-5%	+125%/-150%	+33%/-16%	+18%/-11%	+50%/-53%
Source	KIC0	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 002711606-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	17 ± 2	$0.54^{+0.37}_{-0.31}$	3080^{+239}_{-195}	-6196^{+1304}_{-4159}	$-10.499^{+6.937}_{-47.469}$
Alt.	-38 ± 3	$1.41^{+0.46}_{-0.40}$	3099^{+245}_{-215}	4657^{+787}_{-489}	$3.286^{+3.284}_{-1.408}$

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

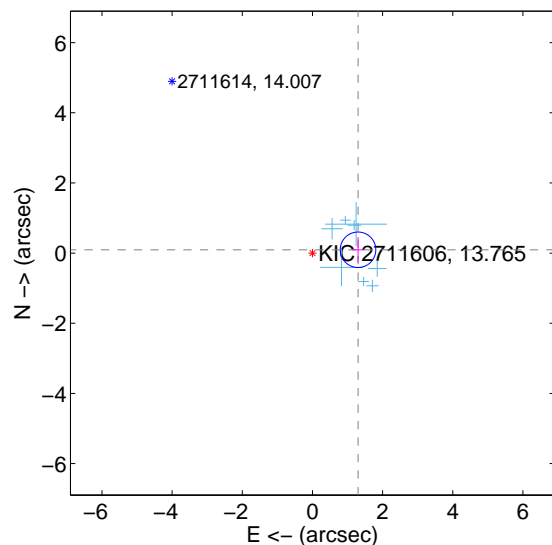
Supplemental centroid analysis for 002711606-01. Kepler magnitude: 13.77. Transit SNR 5.66

There are 8 quarters with good PRF difference image offsets

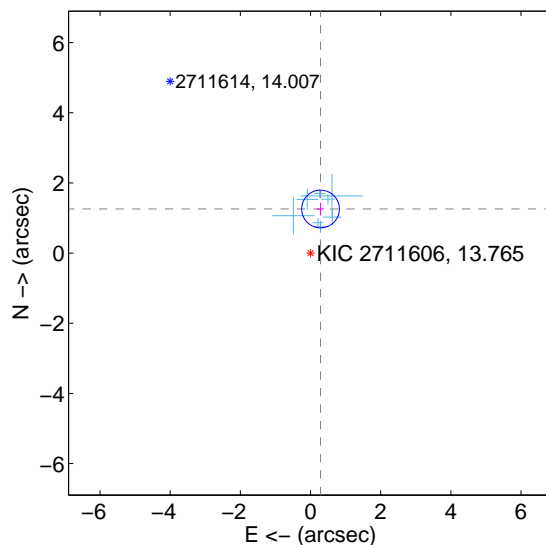
The OOT PRF centroid is offset from the target star catalog position by about 2.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.303 ± 0.169	7.72	-1.299 ± 0.167	0.095 ± 0.358
PRF-fit source offset from KIC position	1.289 ± 0.179	7.20	-0.285 ± 0.103	1.257 ± 0.182
photometric centroid source offset	1.52 ± 1.41	1.08	-0.47 ± 1.41	1.44 ± 1.41

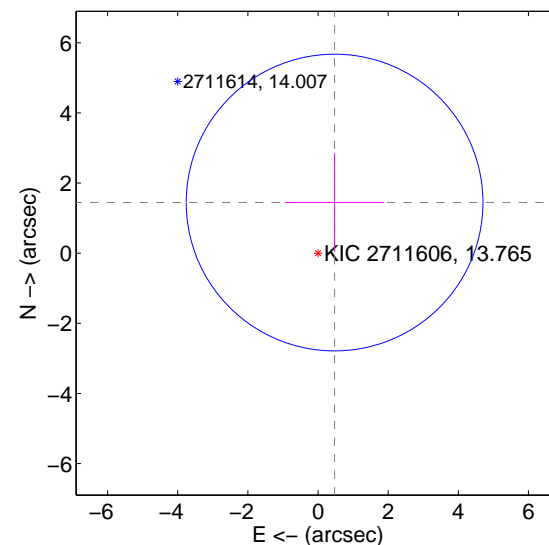
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



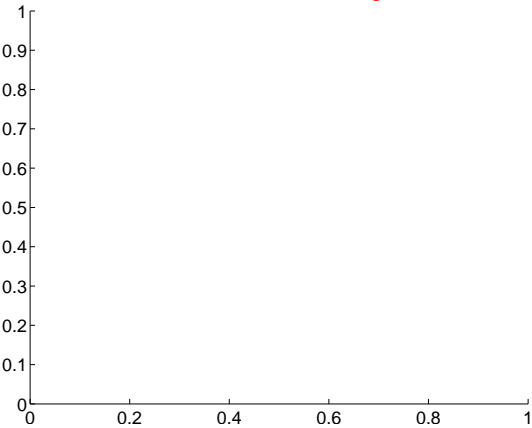
offset from photometric centroids



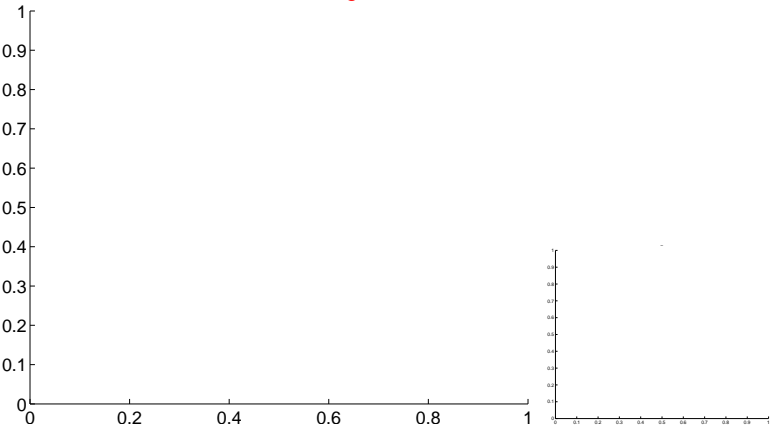
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

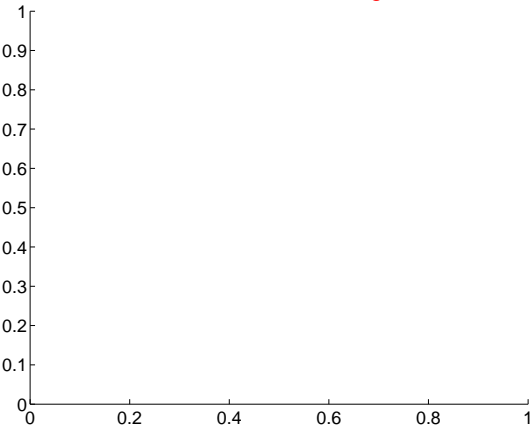
Q1 no difference image



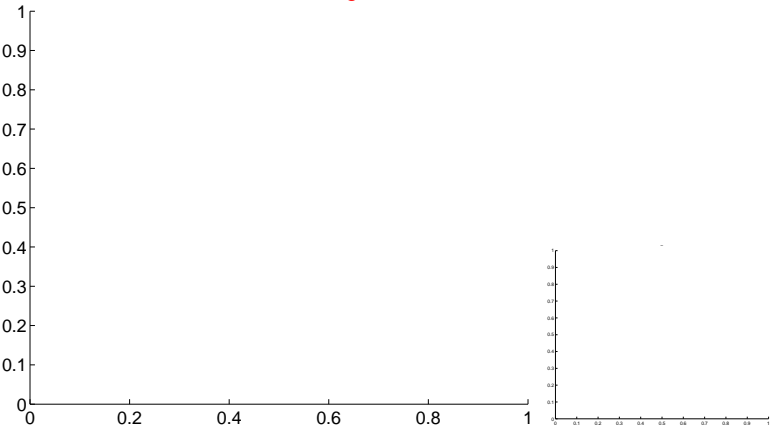
Q1 no OOT image



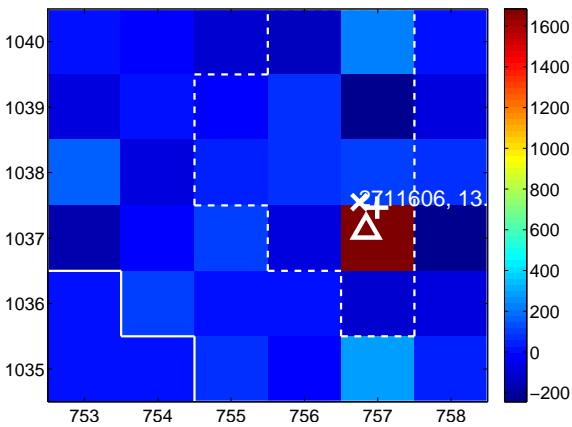
Q2 no difference image



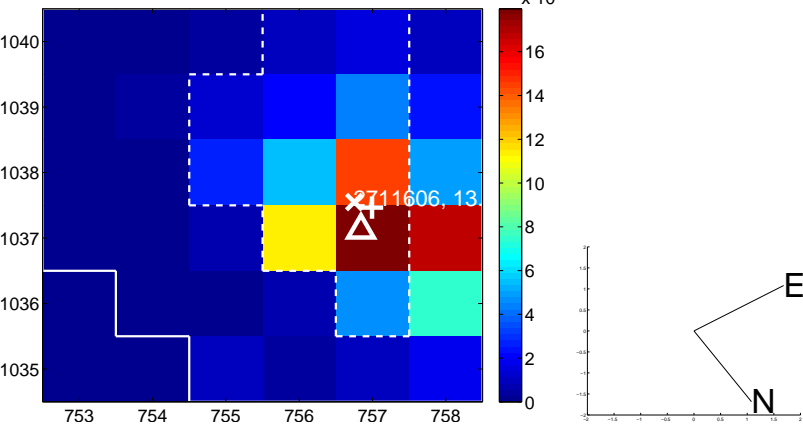
Q2 no OOT image



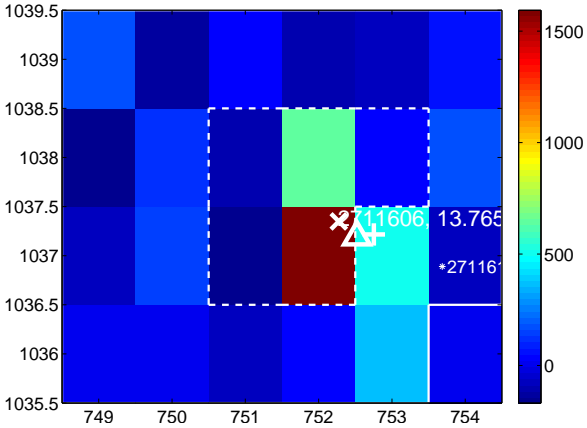
Q3 difference image



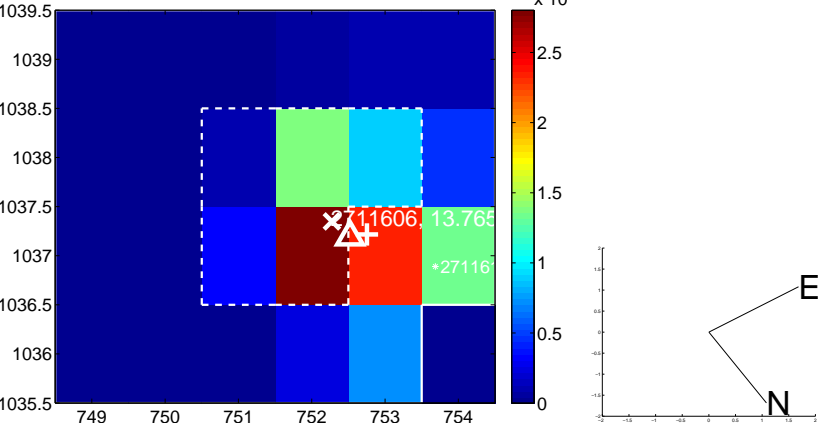
Q3 OOT image



Q4 difference image

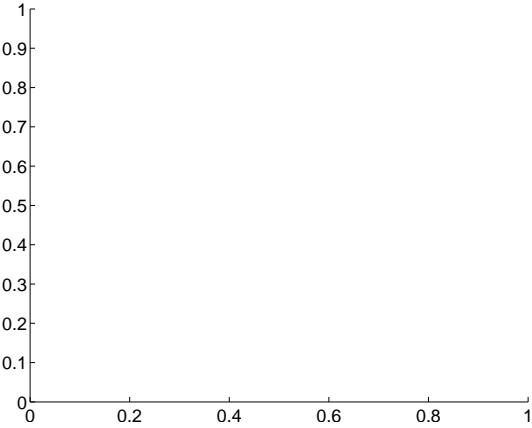


Q4 OOT image

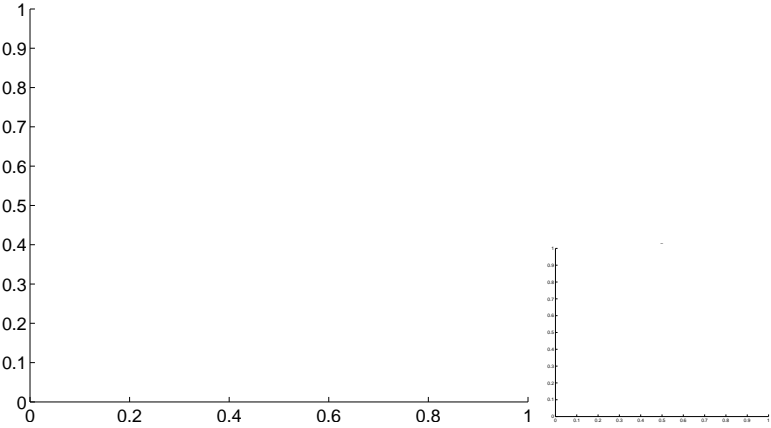


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

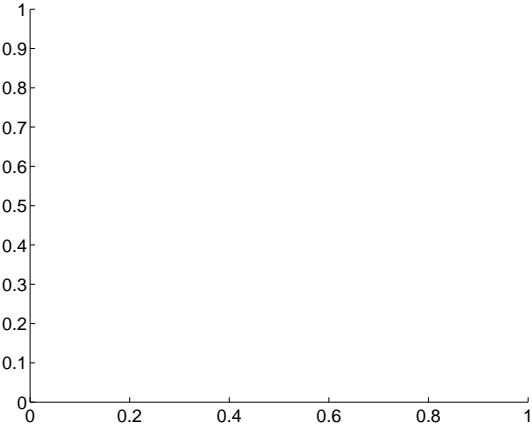
Q5 no difference image



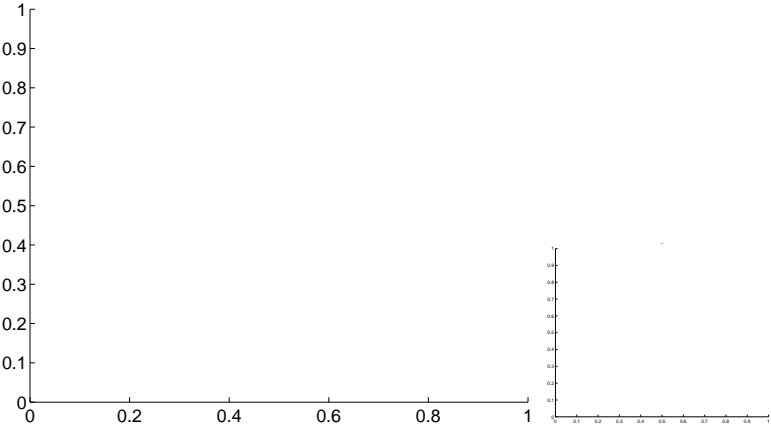
Q5 no OOT image



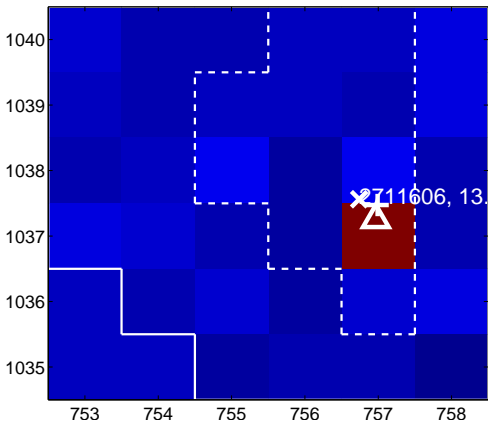
Q6 no difference image



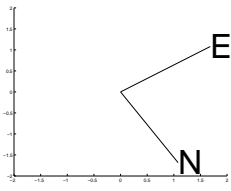
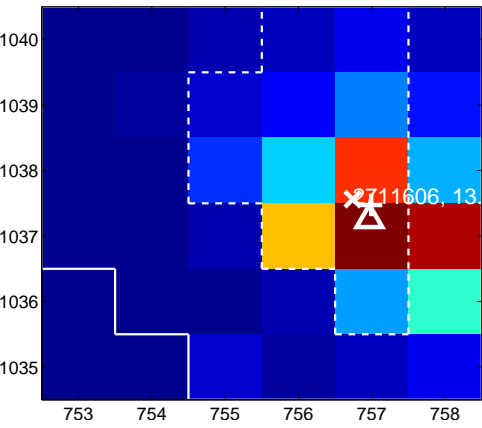
Q6 no OOT image



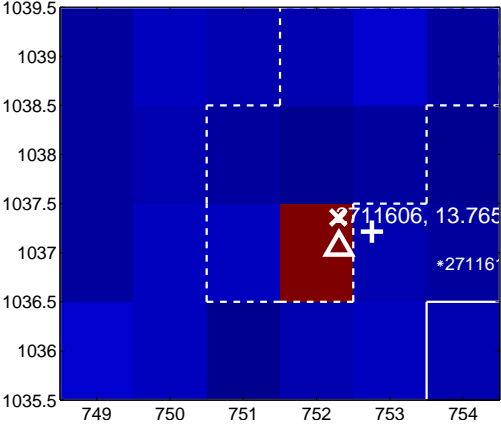
Q7 difference image



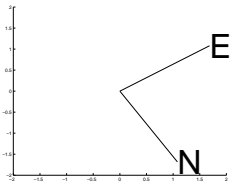
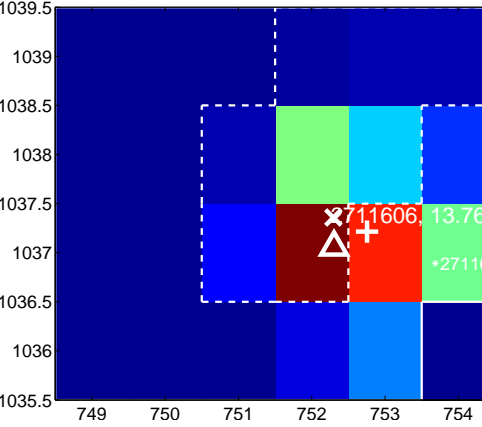
Q7 OOT image



Q8 difference image

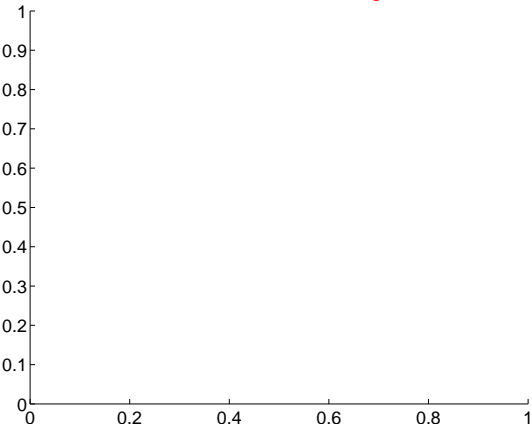


Q8 OOT image

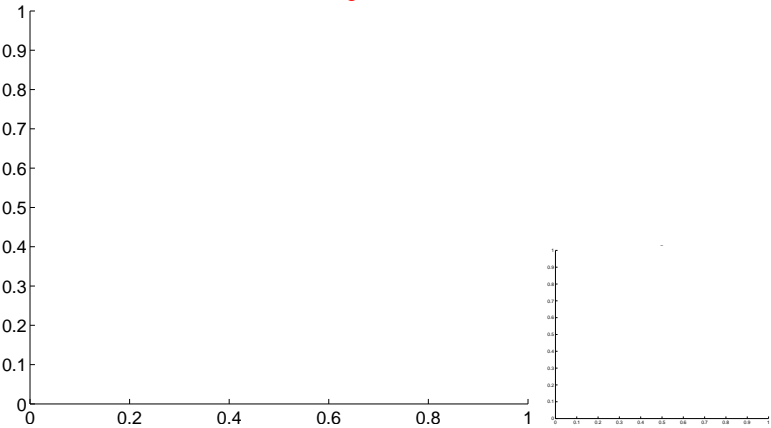


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

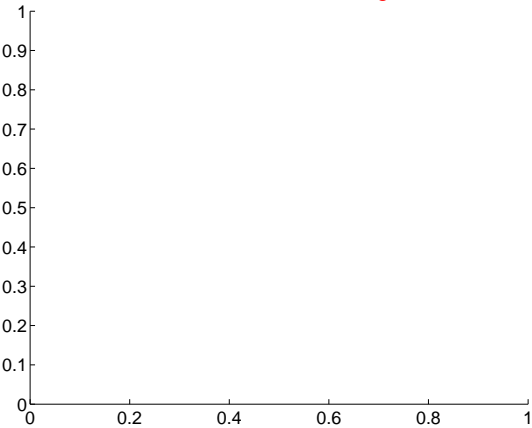
Q9 no difference image



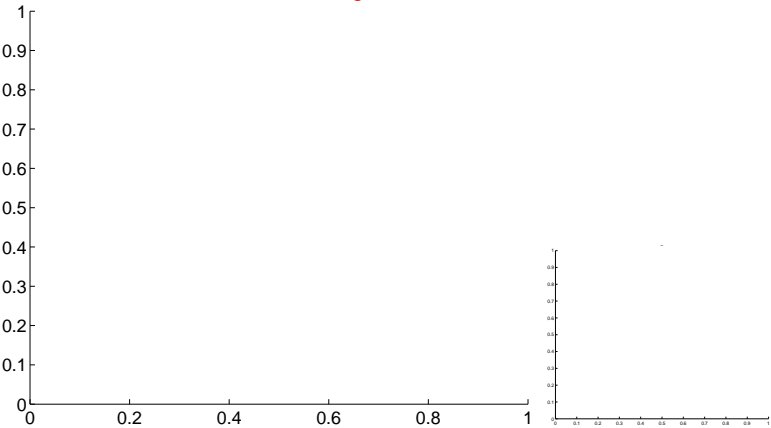
Q9 no OOT image



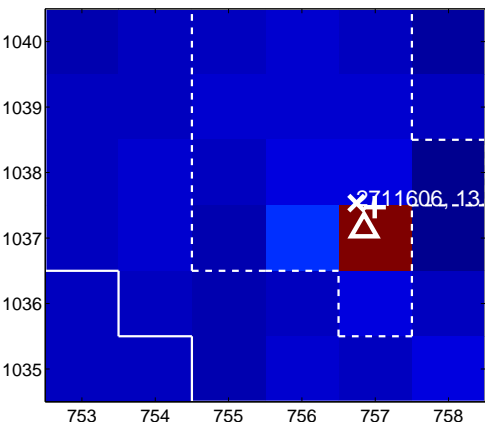
Q10 no difference image



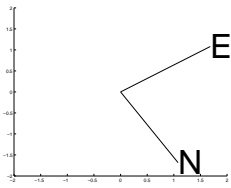
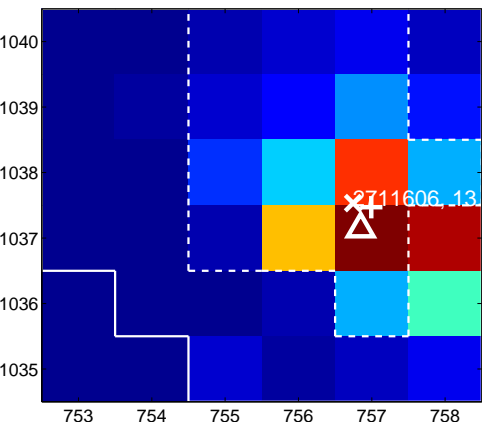
Q10 no OOT image



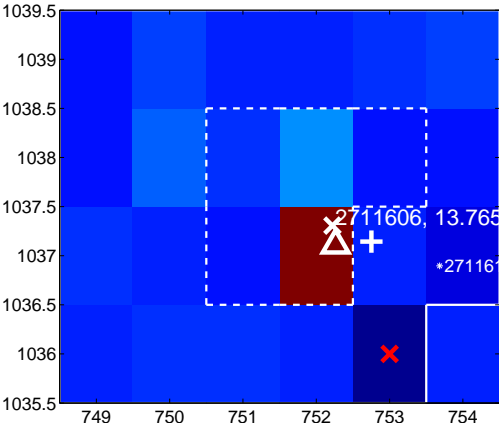
Q11 difference image



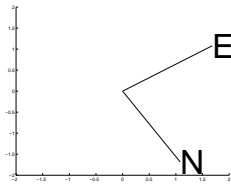
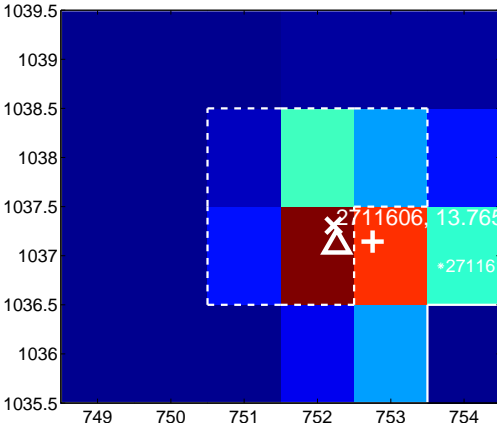
Q11 OOT image



Q12 difference image

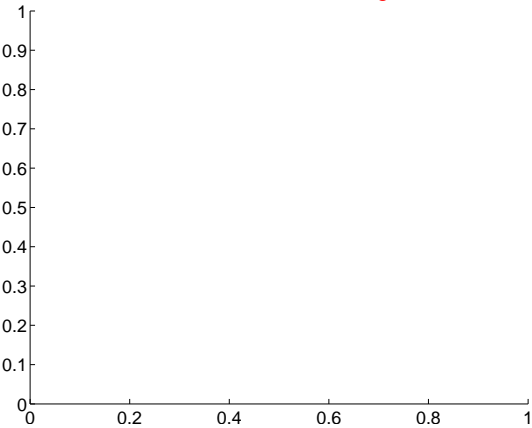


Q12 OOT image

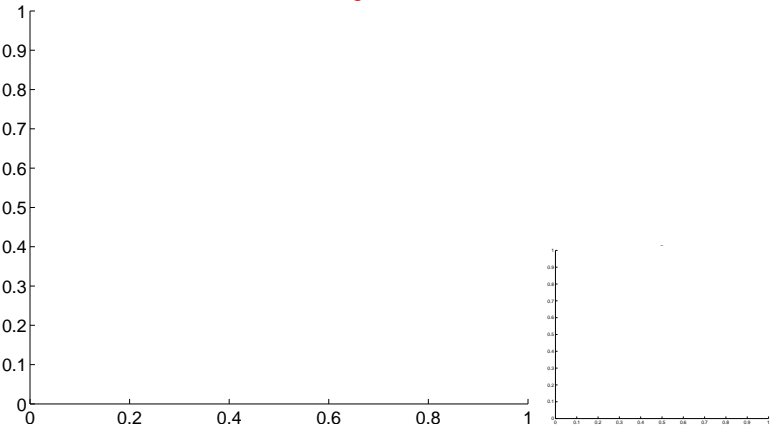


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

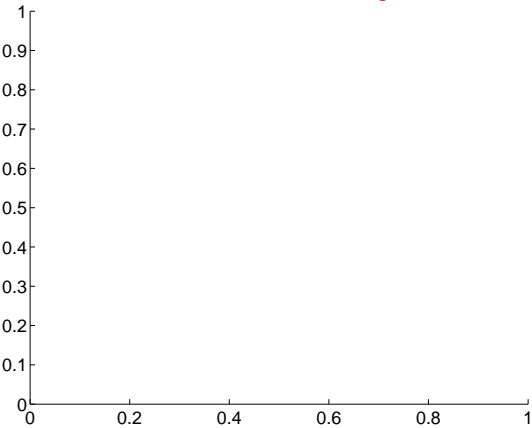
Q13 no difference image



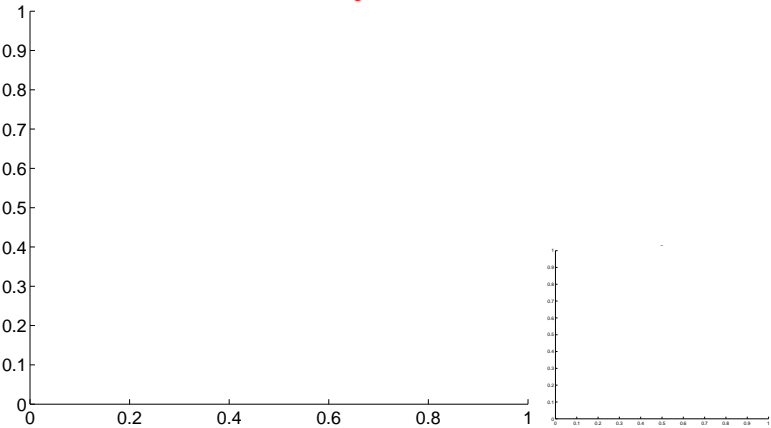
Q13 no OOT image



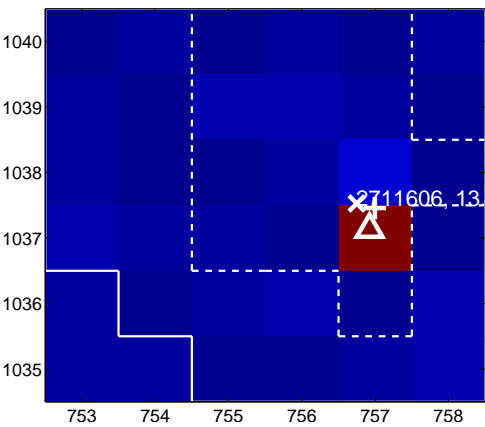
Q14 no difference image



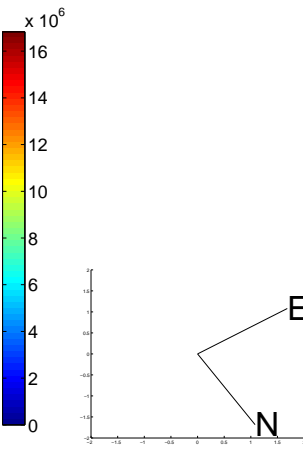
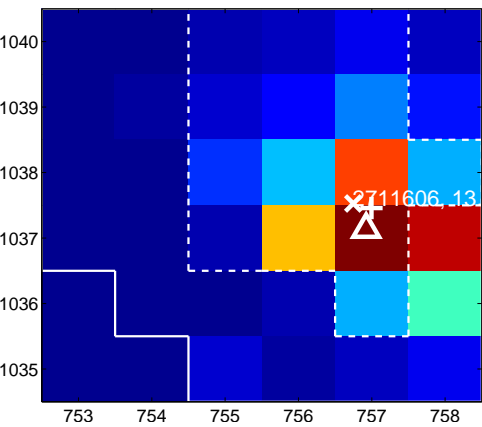
Q14 no OOT image



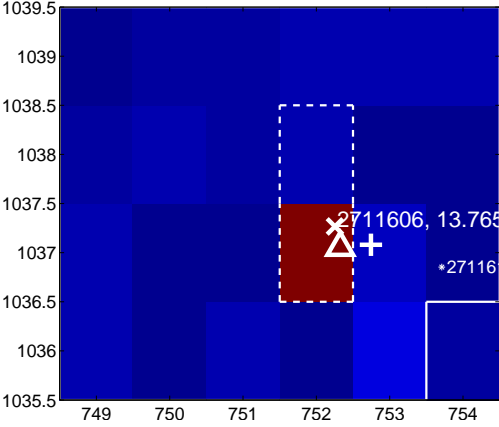
Q15 difference image



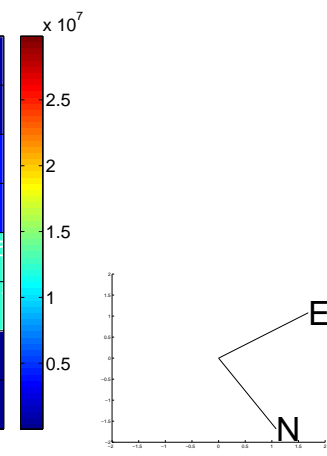
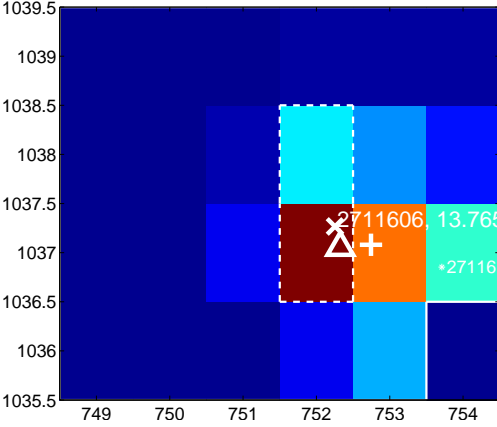
Q15 OOT image



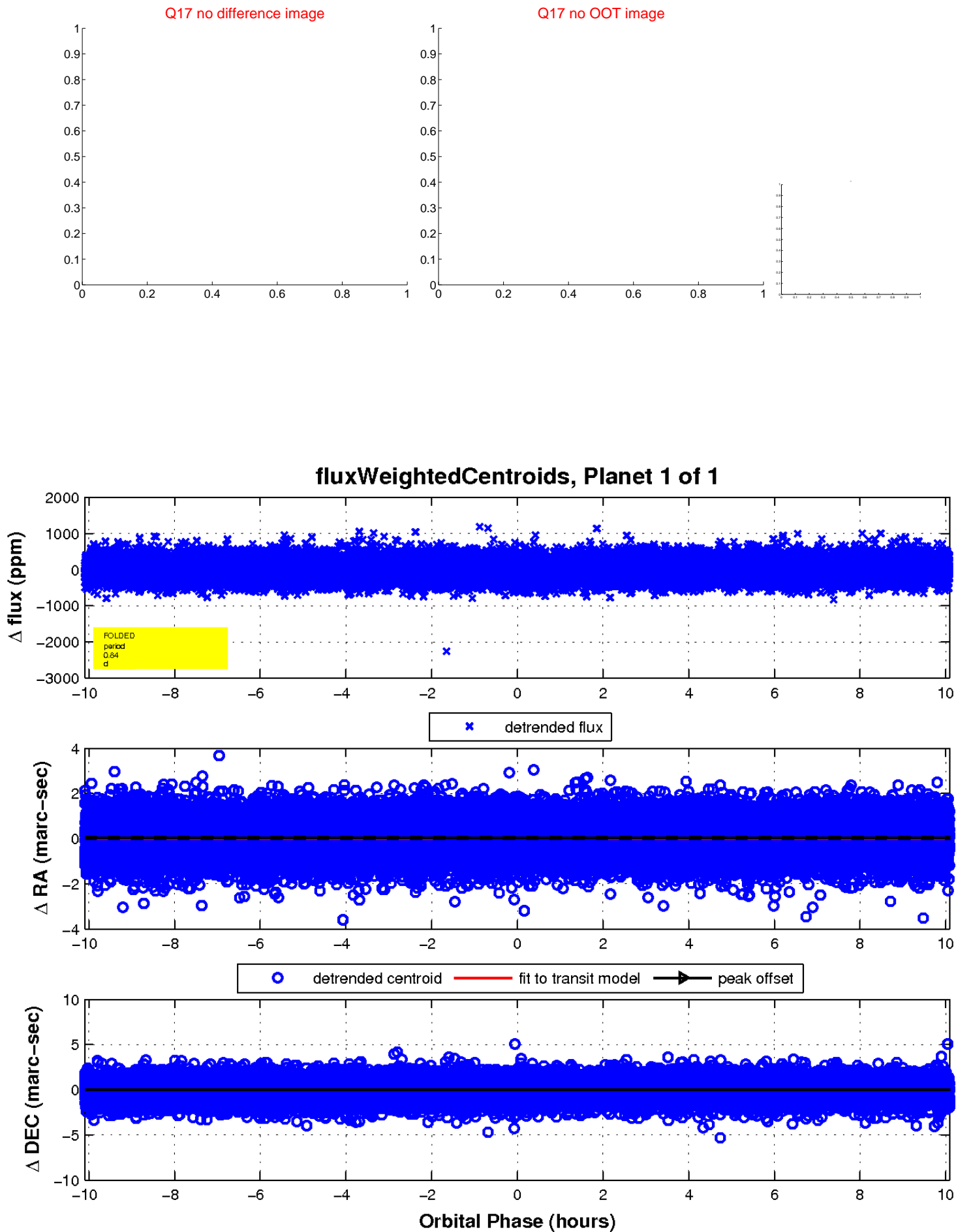
Q16 difference image



Q16 OOT image



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



UKIRT Image

