

KIC 006929016

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})
006929016-01	OBS	6790.01	0.733727	132.010872	76.8	2.911	11.0	9.9	0.80	5855	0.82	2879.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006929016-01	OBS	FP	0.00	0	1	0	1	MOD_SEC_DV—MOD_SEC_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 006929016-01

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
006929016-01	6929016	006669809-pri	6669809	1:1	1984.6	-499	2	10.76	15.77	3148.10	Col-Anomaly	0	1.53	0.52

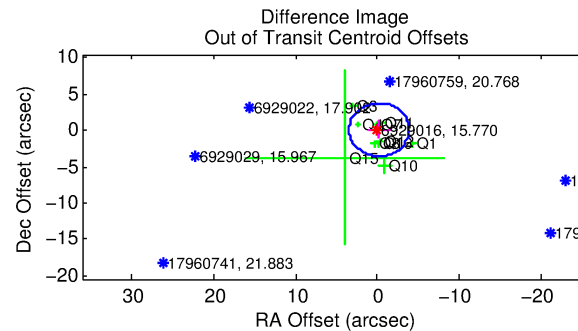
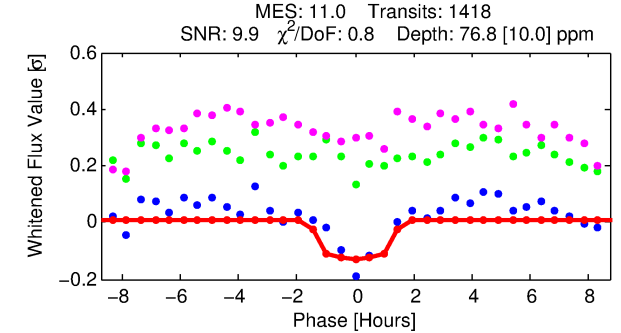
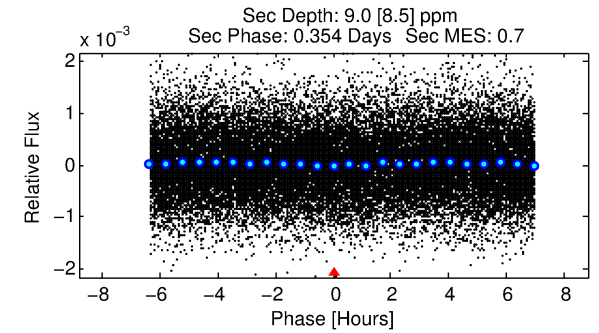
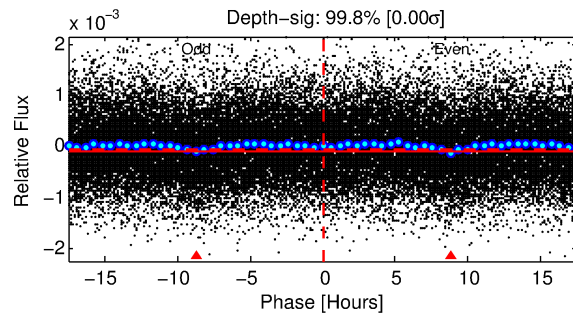
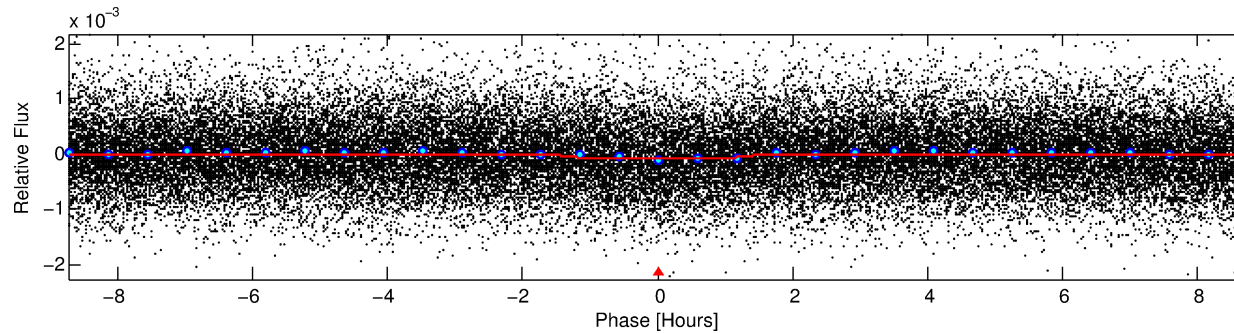
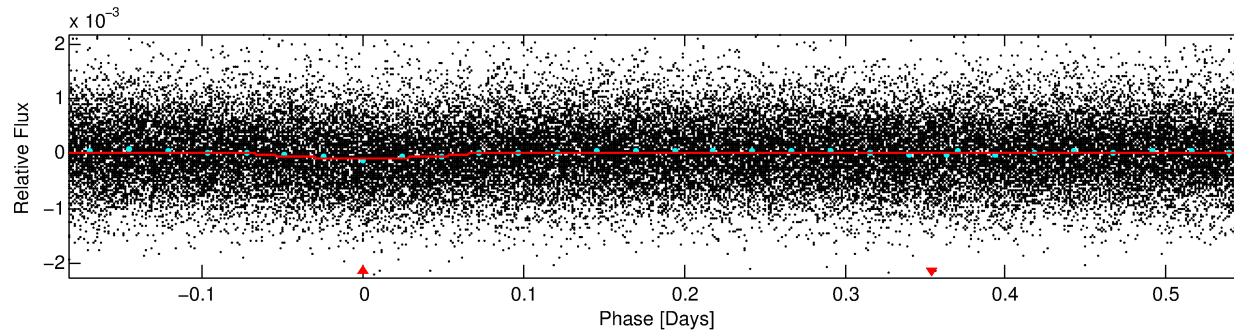
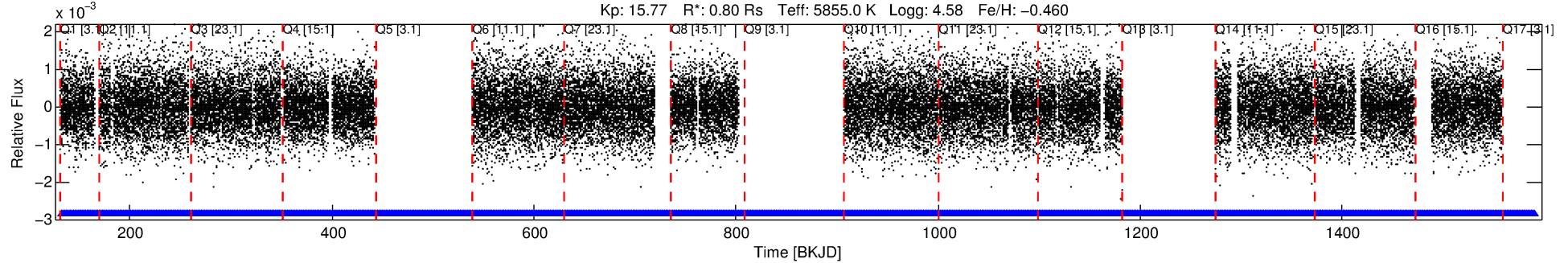
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period 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: 6929016 Candidate: 1 of 1 Period: 0.734 d

KOI: K06790.01 Corr: 0.939

Kp: 15.77 R*: 0.80 Rs Teff: 5855.0 K Logg: 4.58 Fe/H: -0.460



DV Fit Results:

Period = 0.73373 [0.00001] d
Epoch = 132.0109 [0.0037] BKJD
Rp/R* = 0.0095 [0.0070]
a/R* = 1.28 [1.95]
b = 0.90 [0.82]
Seff = 2879.13 [1029.45]
Teff = 1868 [167] K
Rp = 0.83 [0.65] Re
a = 0.0152 [0.0035] AU
Ag = 1.70 [3.04] [0.23σ]
Teffp = 3295 [1453] K [0.98σ]

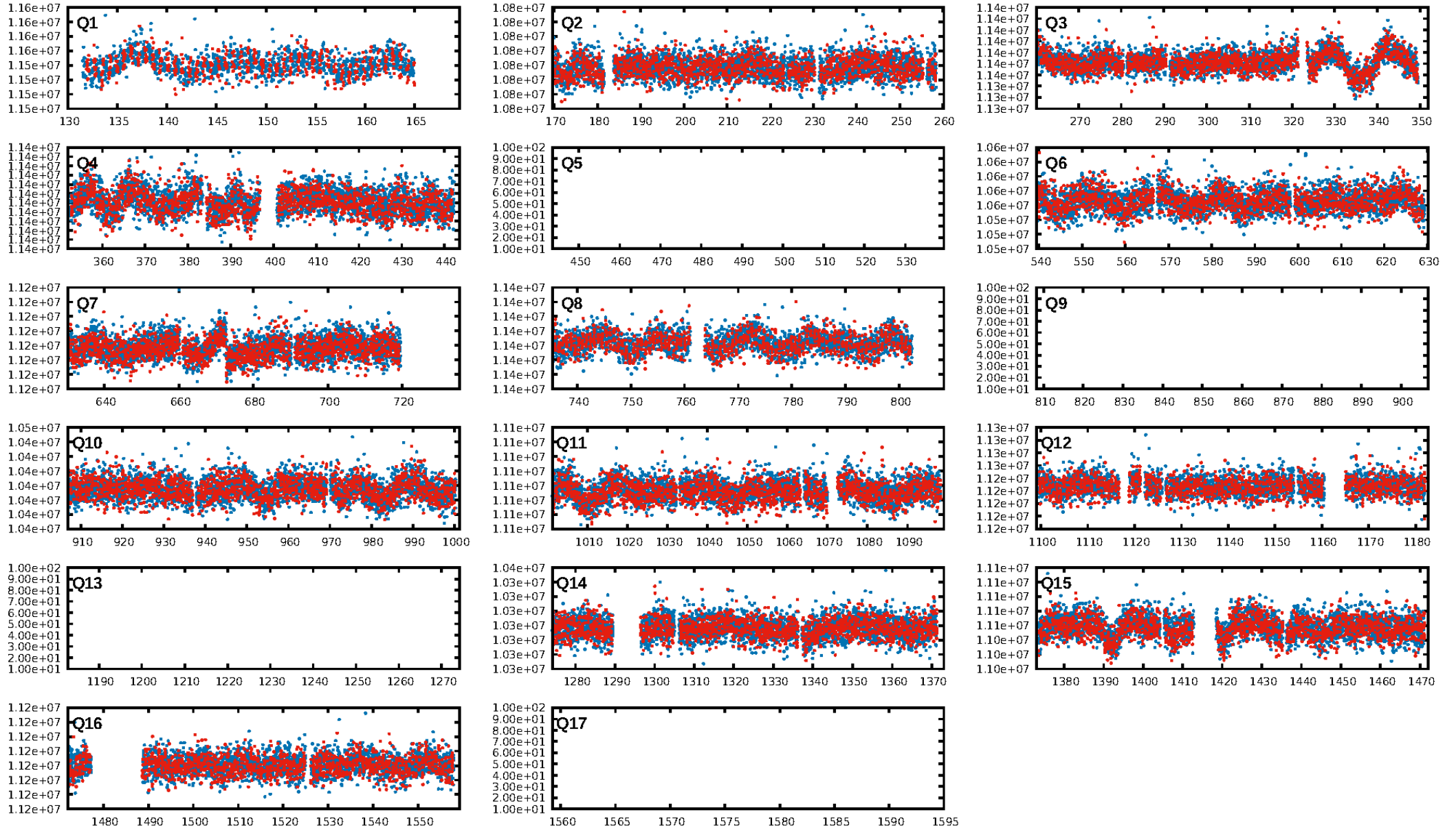
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.27e-25
RollingBand-fgt: 1.00 [1372/1372]
GhostDiagnostic-chr: 0.5156
Centroid-sig: 0.0%
Centroid-so: 5.033 arcsec [3.49σ]
OotOffset-rm: 0.188 arcsec [0.15σ]
KicOffset-rm: 0.146 arcsec [0.12σ]
OotOffset-st: 1/4/4/1 [10]
KicOffset-st: 1/4/4/1 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 1.00 [13/13]

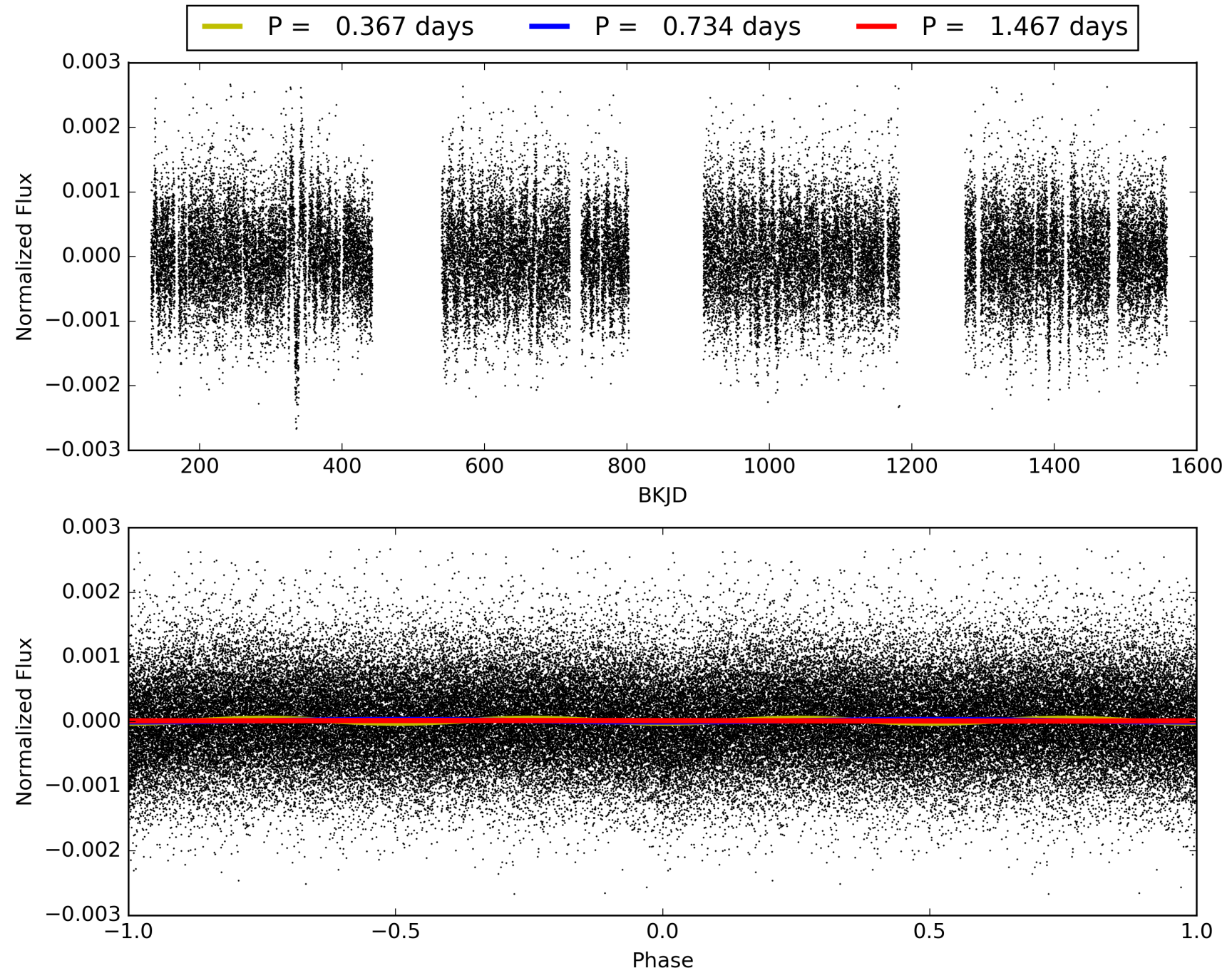
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:20:11 Z

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

TCE 006929016-01, PDC Light Curves

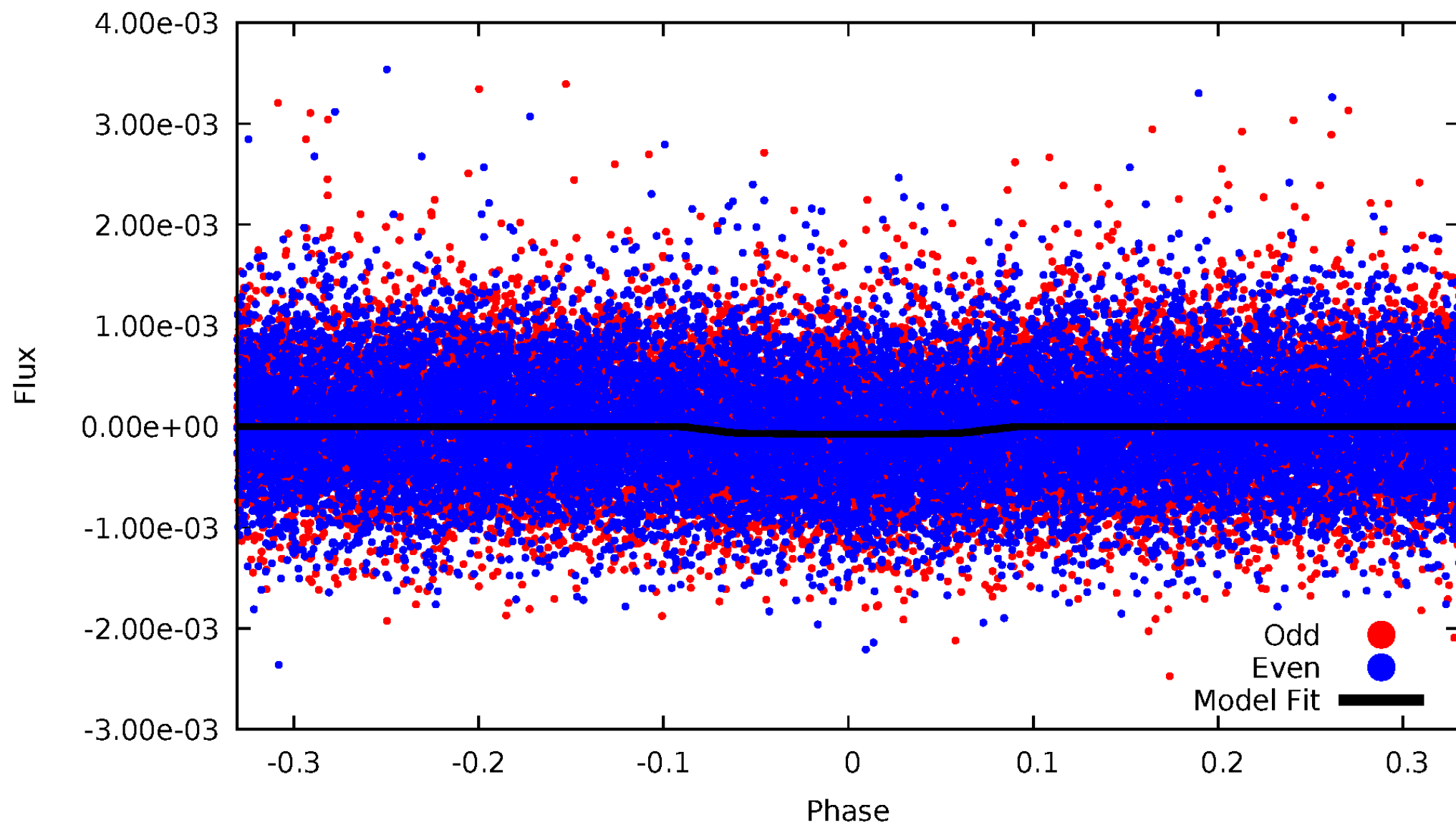


TCE 006929016-01



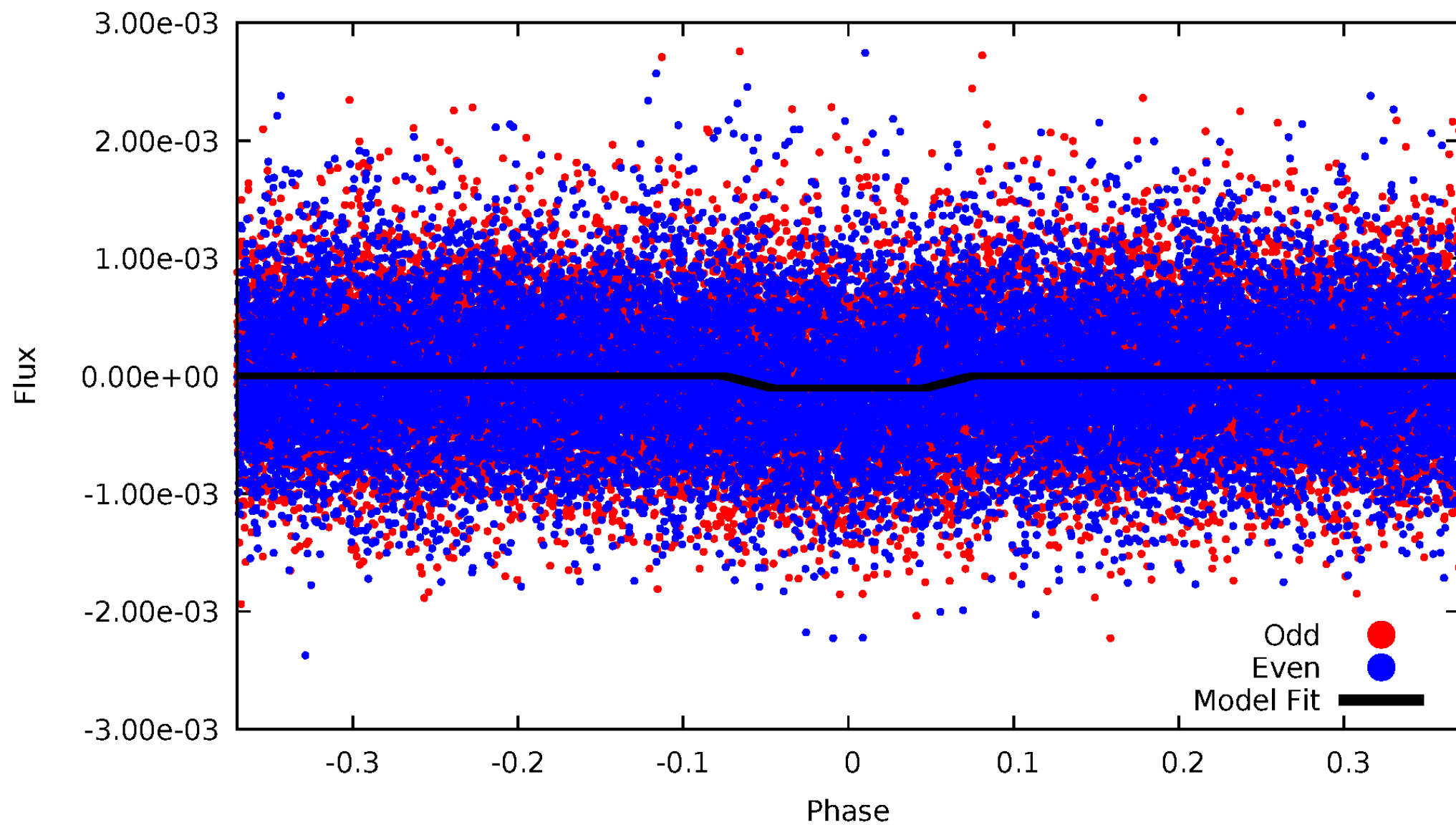
DV Odd/Even

TCE 006929016-01

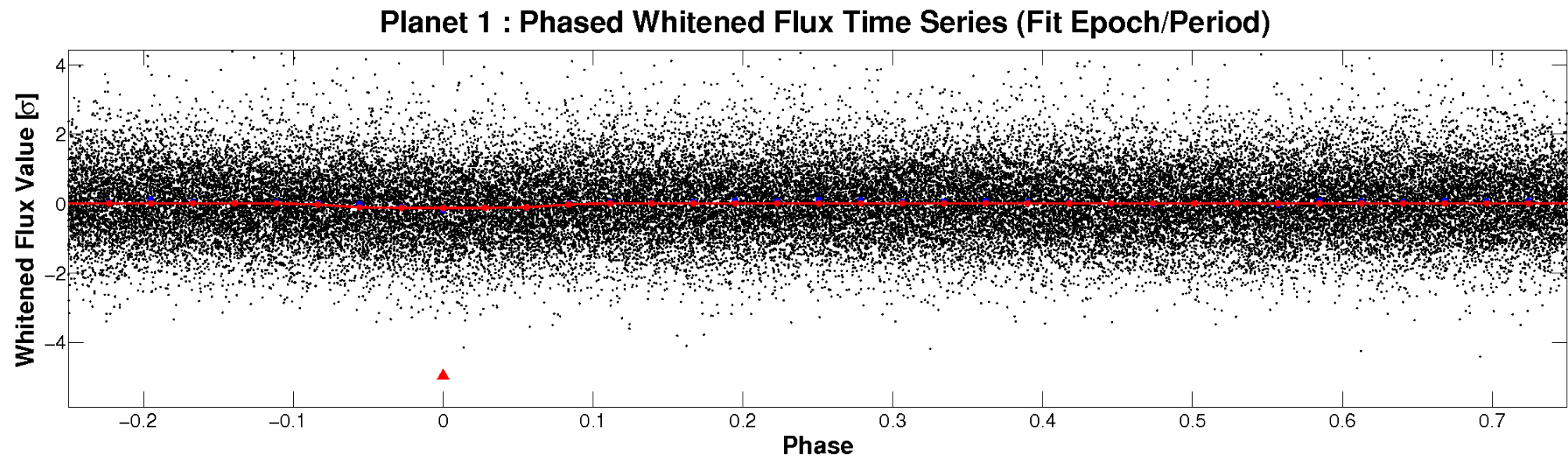
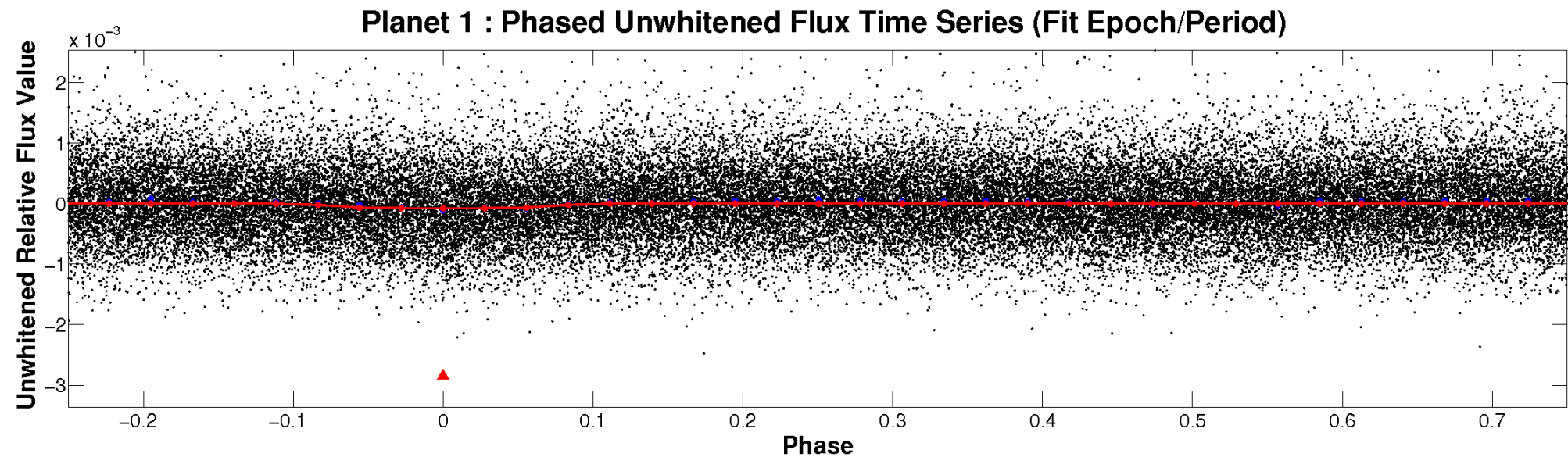


ALT Odd/Even

TCE 006929016-01

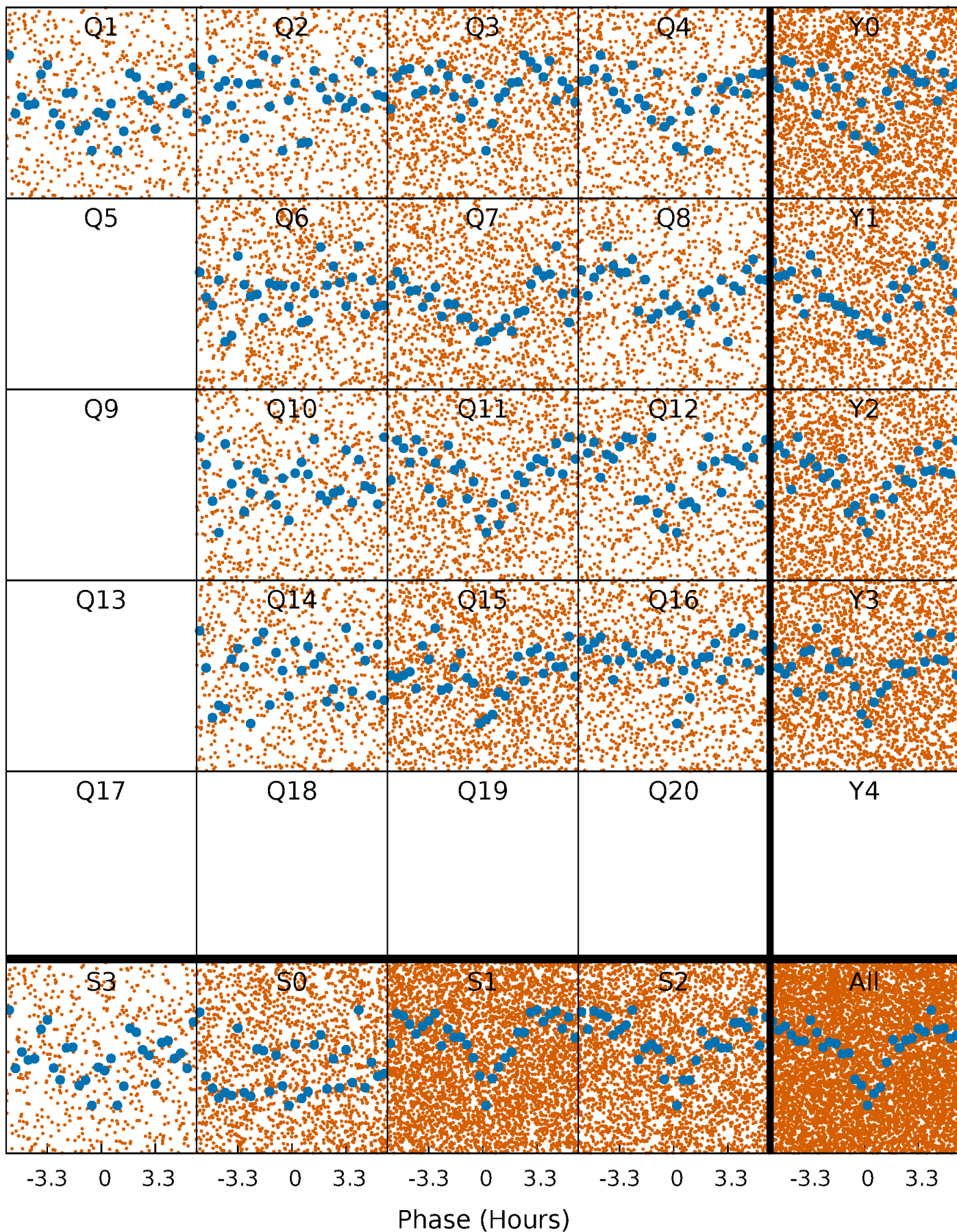


Non-Whitened Vs. Whitened Light Curve



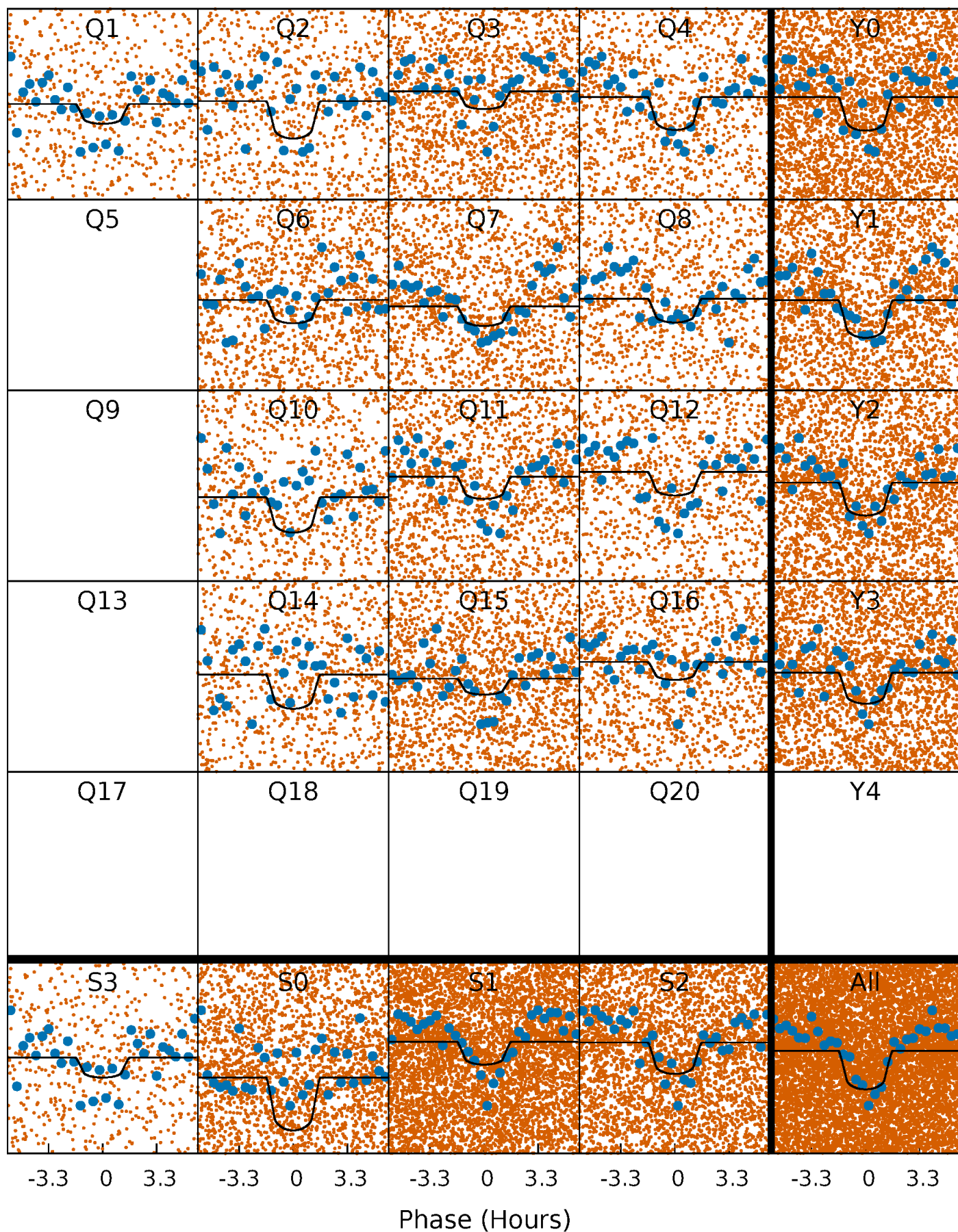
PDC Quarter-Phased Transit Curves

TCE 006929016-01 P= 0.733727 Days $T_0=132.010872$ (BKJD)



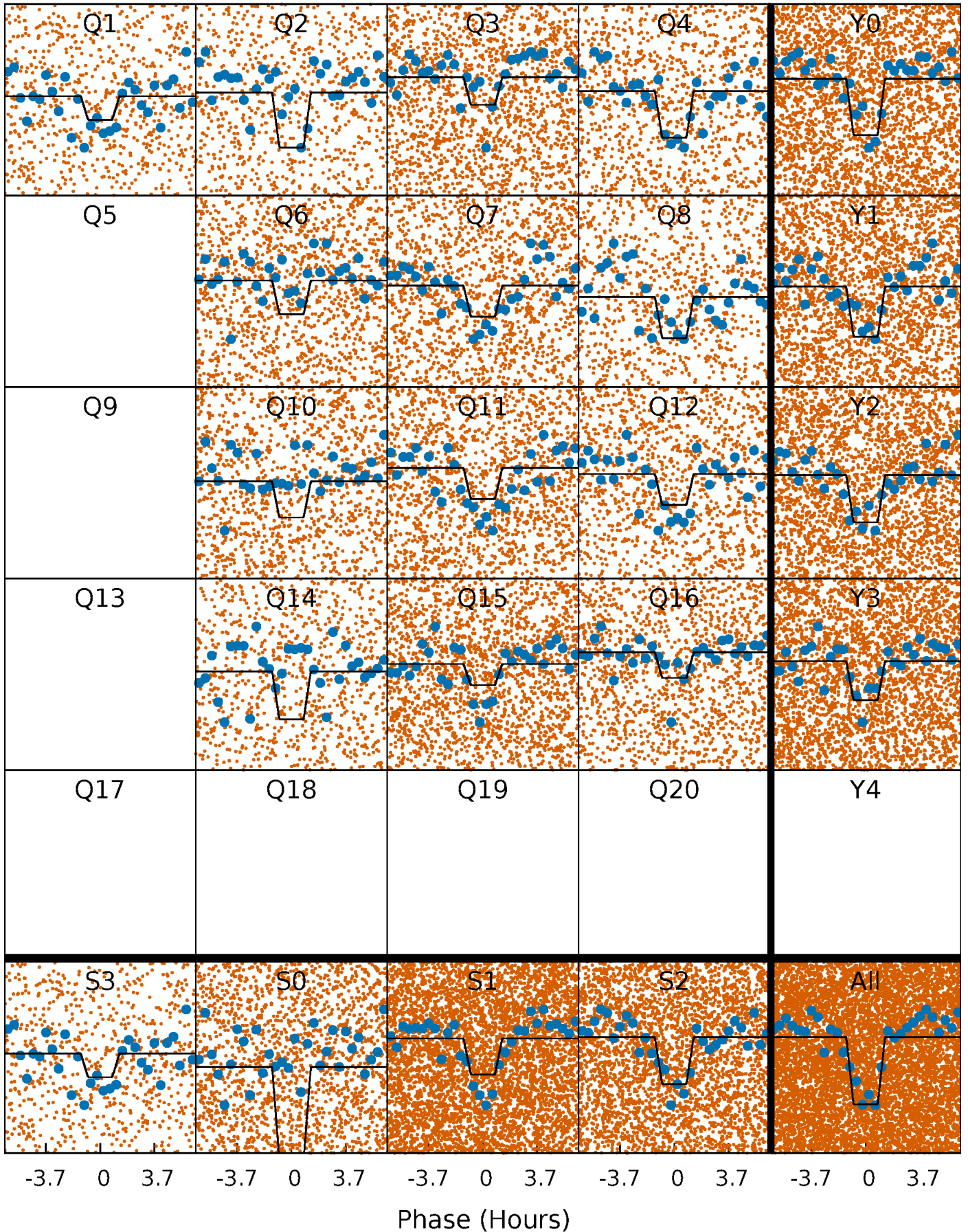
DV Quarter-Phased Transit Curves

TCE 006929016-01 P= 0.733727 Days $T_0=132.010872$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

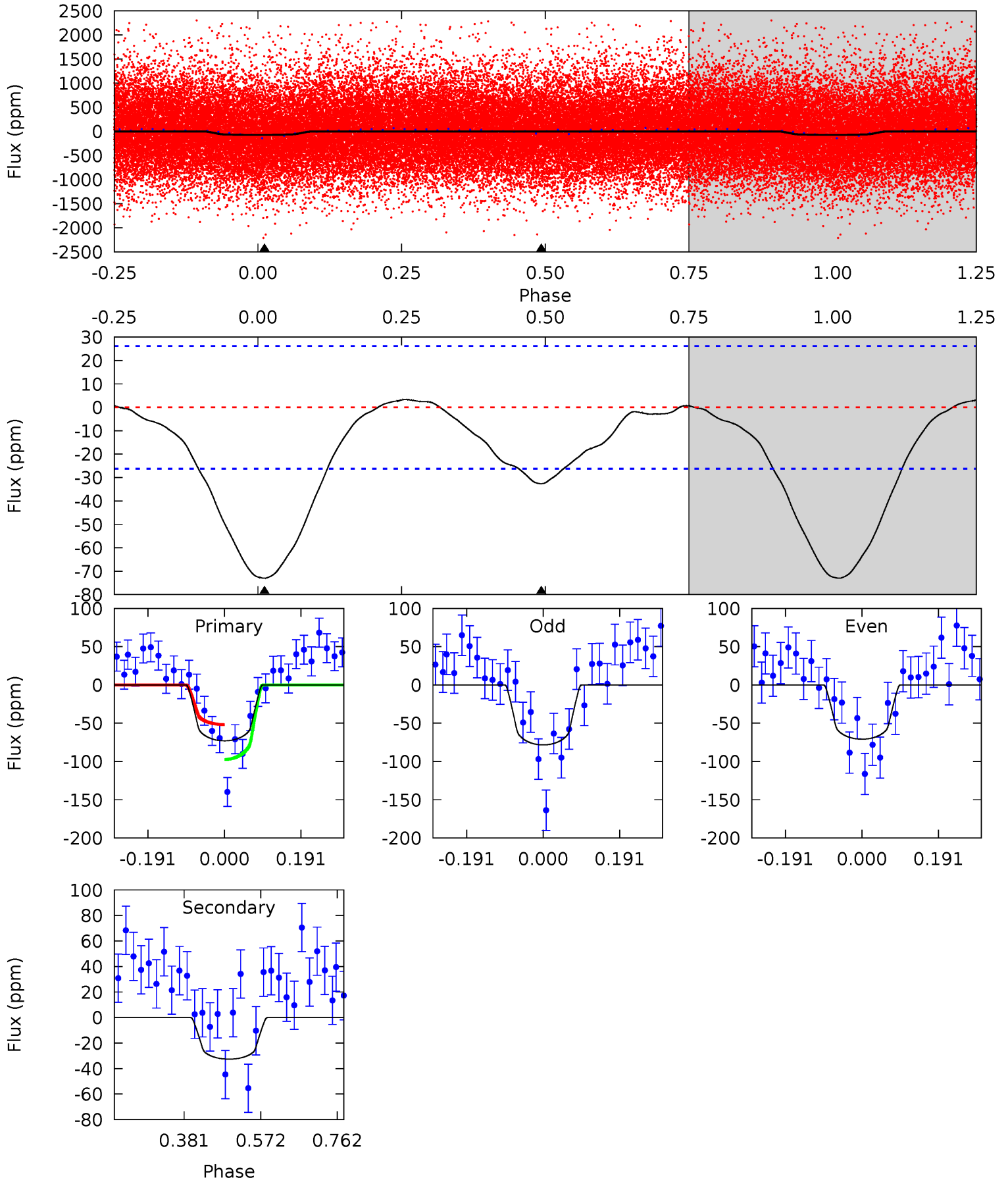
TCE 006929016-01 P= 0.733735 Days $T_0=132.012762$ (BKJD)



DV Model-Shift Uniqueness Test

006929016-01, P = 0.733727 Days, E = 131.277145 Days

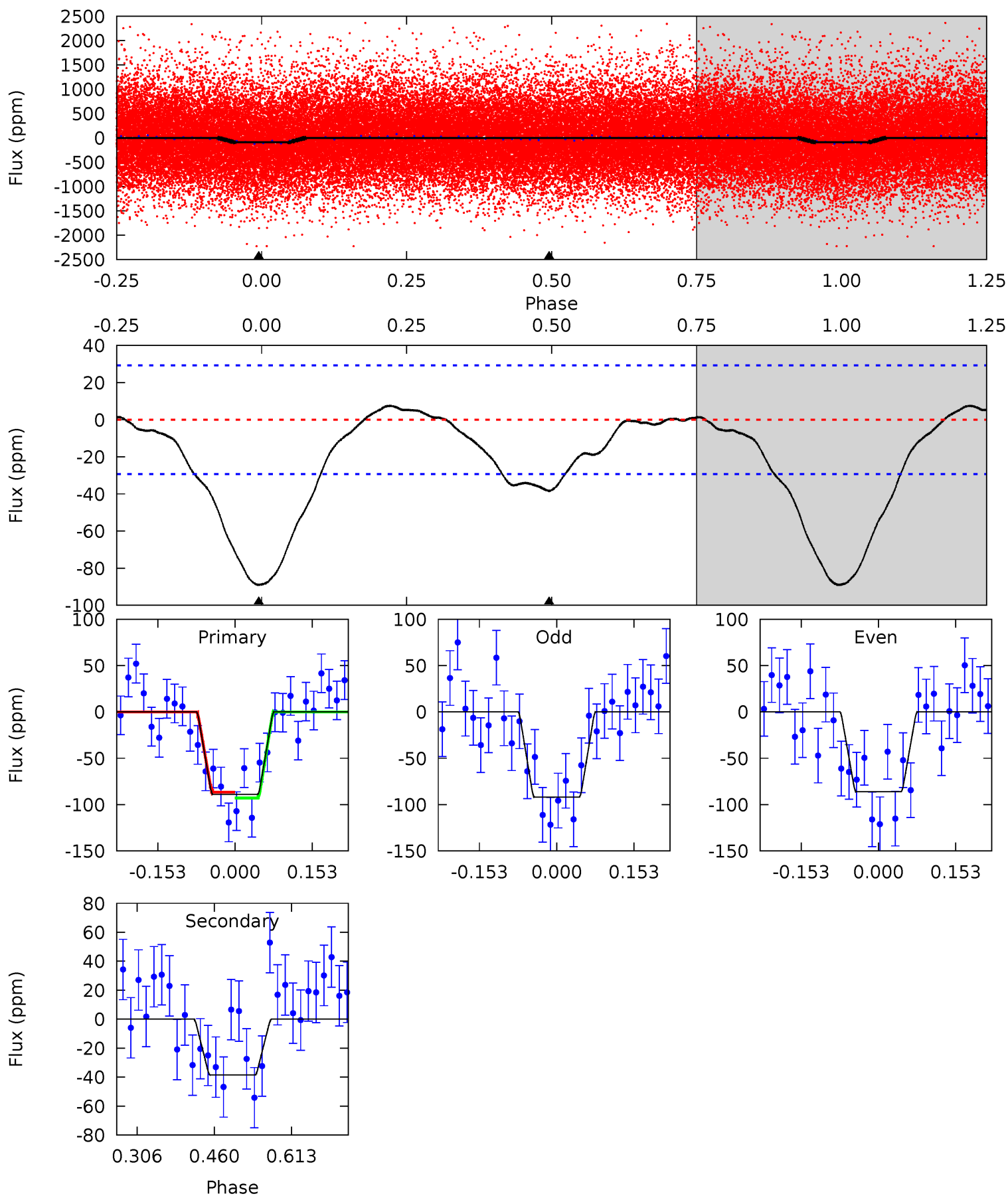
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	5.52	0	0	4.43	1.31	0.46	12.3	12.3	5.52	5.52	0.63	0.97	0.04	3.85



Alt Model-Shift Uniqueness Test

006929016-01, P = 0.733735 Days, E = 131.279027 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	5.87	0	0	4.47	1.43	0.64	13.6	13.6	5.87	5.87	0.44	0.98	0.08	0.48



Stellar Parameters For KIC 006929016

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+158}_{-175}	$4.578^{+0.033}_{-0.187}$	$-0.460^{+0.300}_{-0.300}$	$0.797^{+0.211}_{-0.056}$	$0.885^{+0.090}_{-0.108}$	$2.463^{+0.450}_{-1.209}$
	+3%/-3%	+1%/-4%	+65%/-65%	+26%/-7%	+10%/-12%	+18%/-49%
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 006929016-01 / KOI 6790.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 6	$0.92^{+0.66}_{-0.50}$	2668^{+167}_{-109}	4483^{+1976}_{-828}	$4.710^{+18.394}_{-3.052}$
Alt.	-38 ± 7	$0.97^{+0.62}_{-0.55}$	2671^{+165}_{-114}	4577^{+2292}_{-818}	$5.181^{+22.655}_{-3.242}$

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

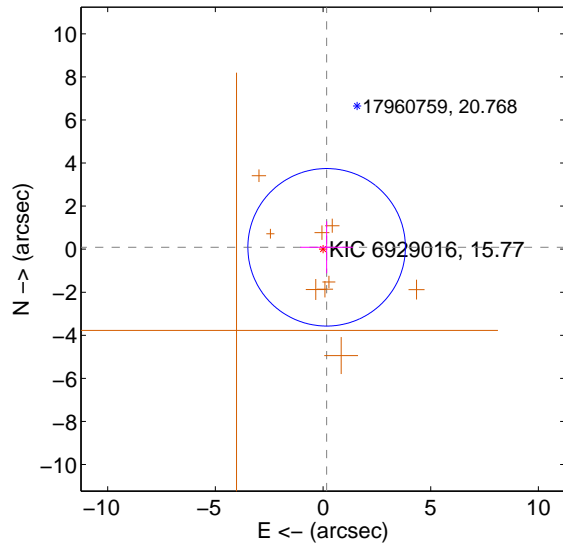
Supplemental centroid analysis for 006929016-01. Kepler magnitude: 15.77. Transit SNR 9.90

There are 0 quarters with good PRF difference image offsets

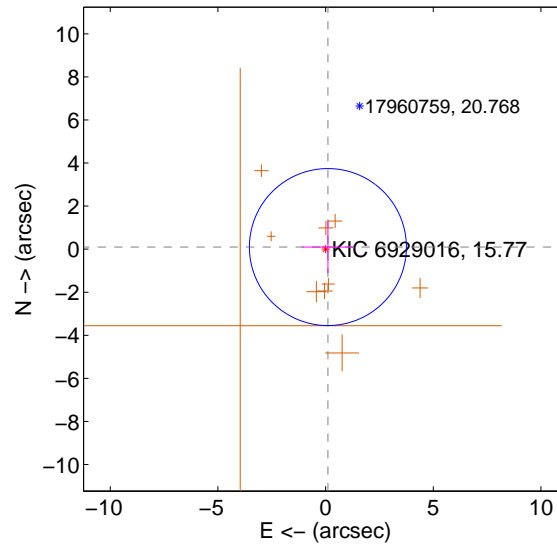
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.188 ± 1.219	0.15	-0.167 ± 1.223	0.087 ± 1.206
PRF-fit source offset from KIC position	0.146 ± 1.215	0.12	-0.108 ± 1.223	0.098 ± 1.206
photometric centroid source offset	5.03 ± 1.44	3.49	3.44 ± 1.42	-3.67 ± 1.47

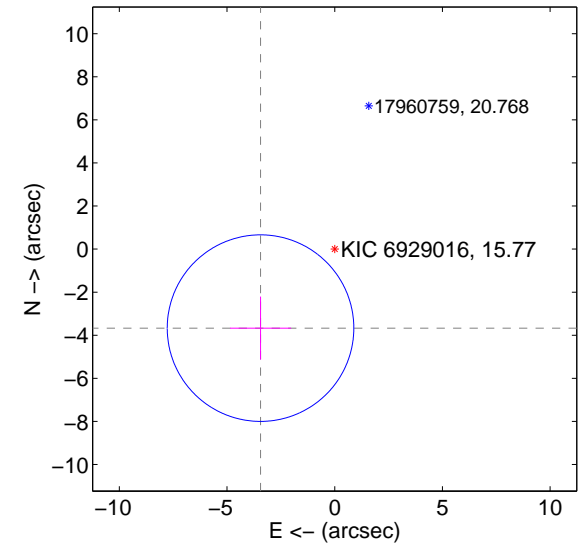
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

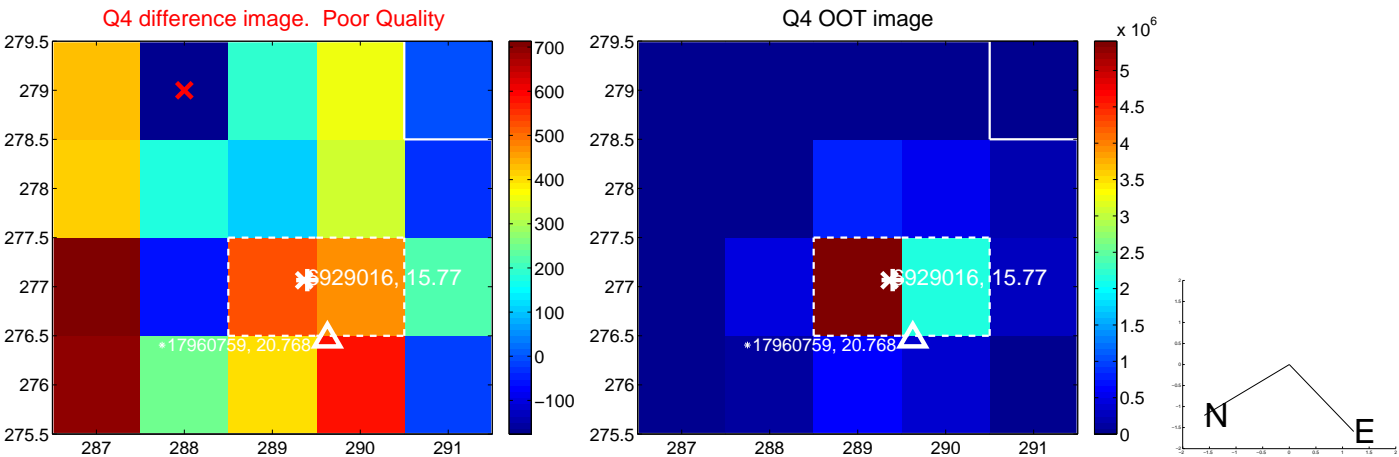
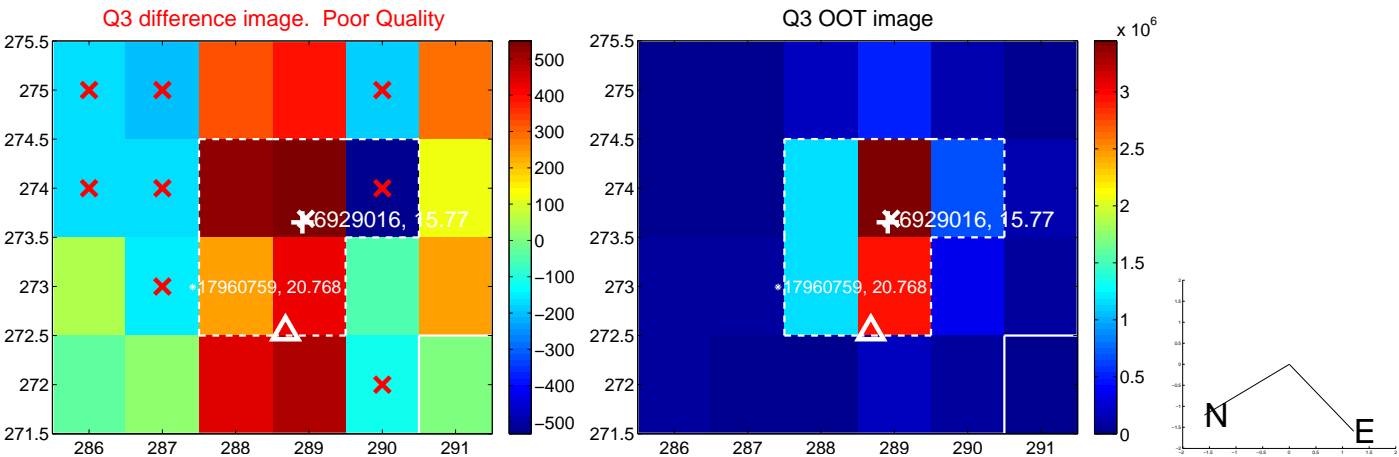
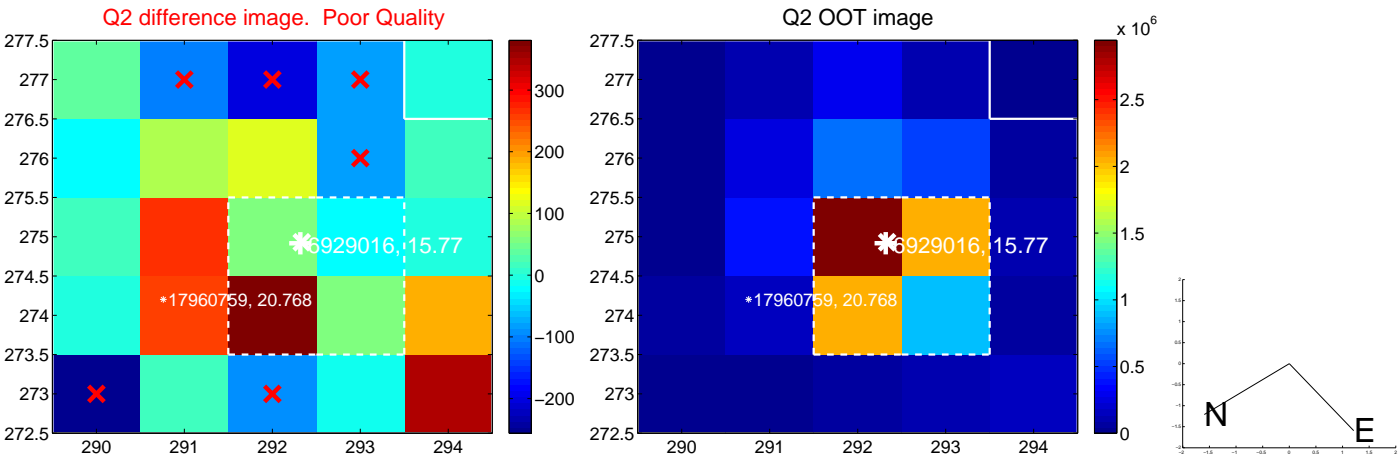
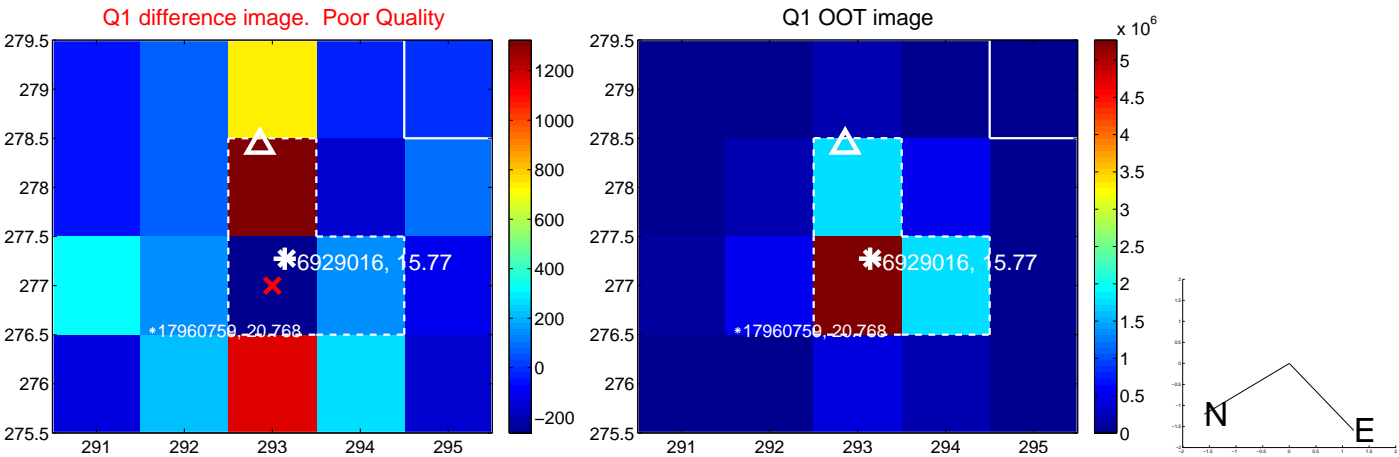


offset from photometric centroids

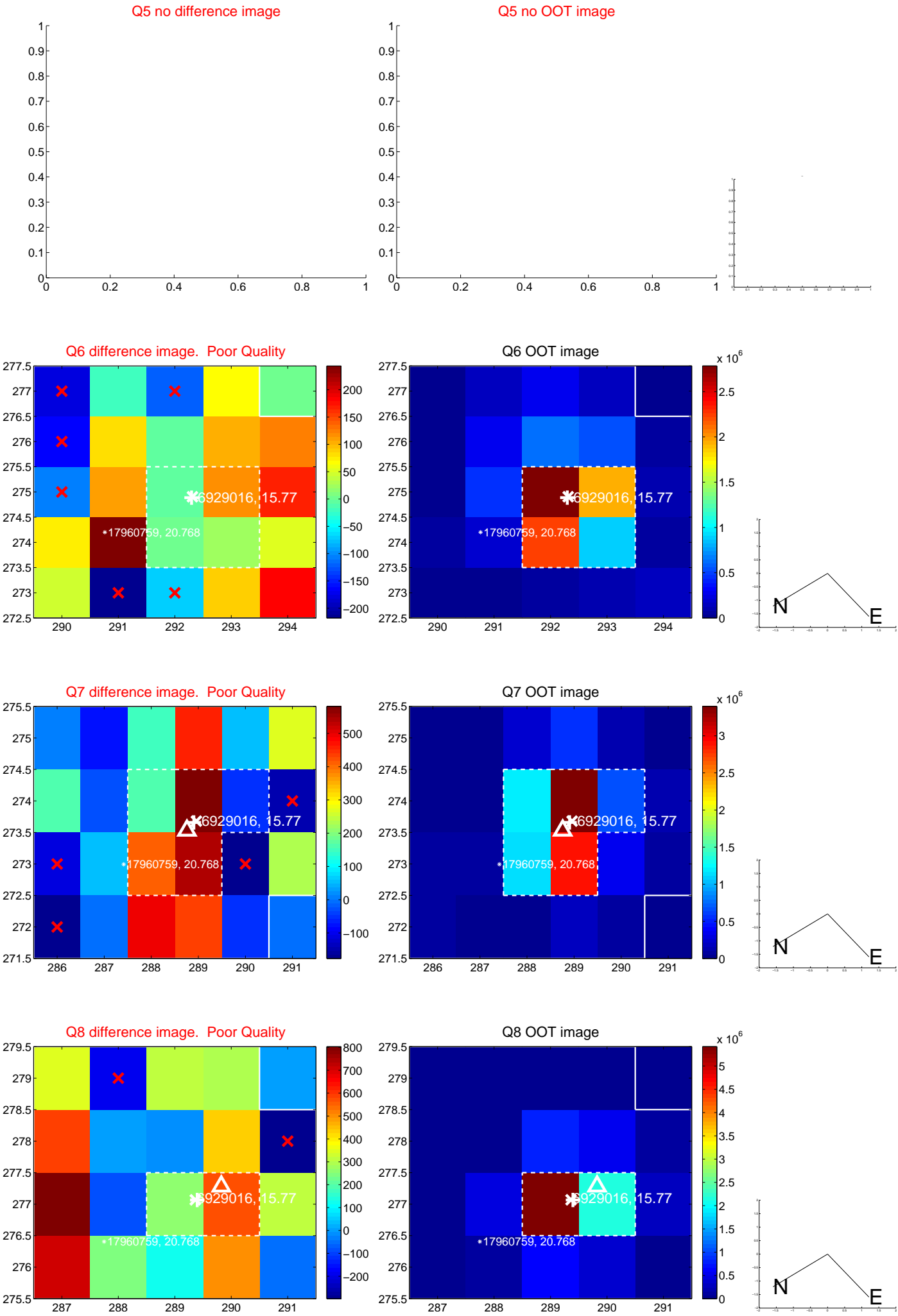


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

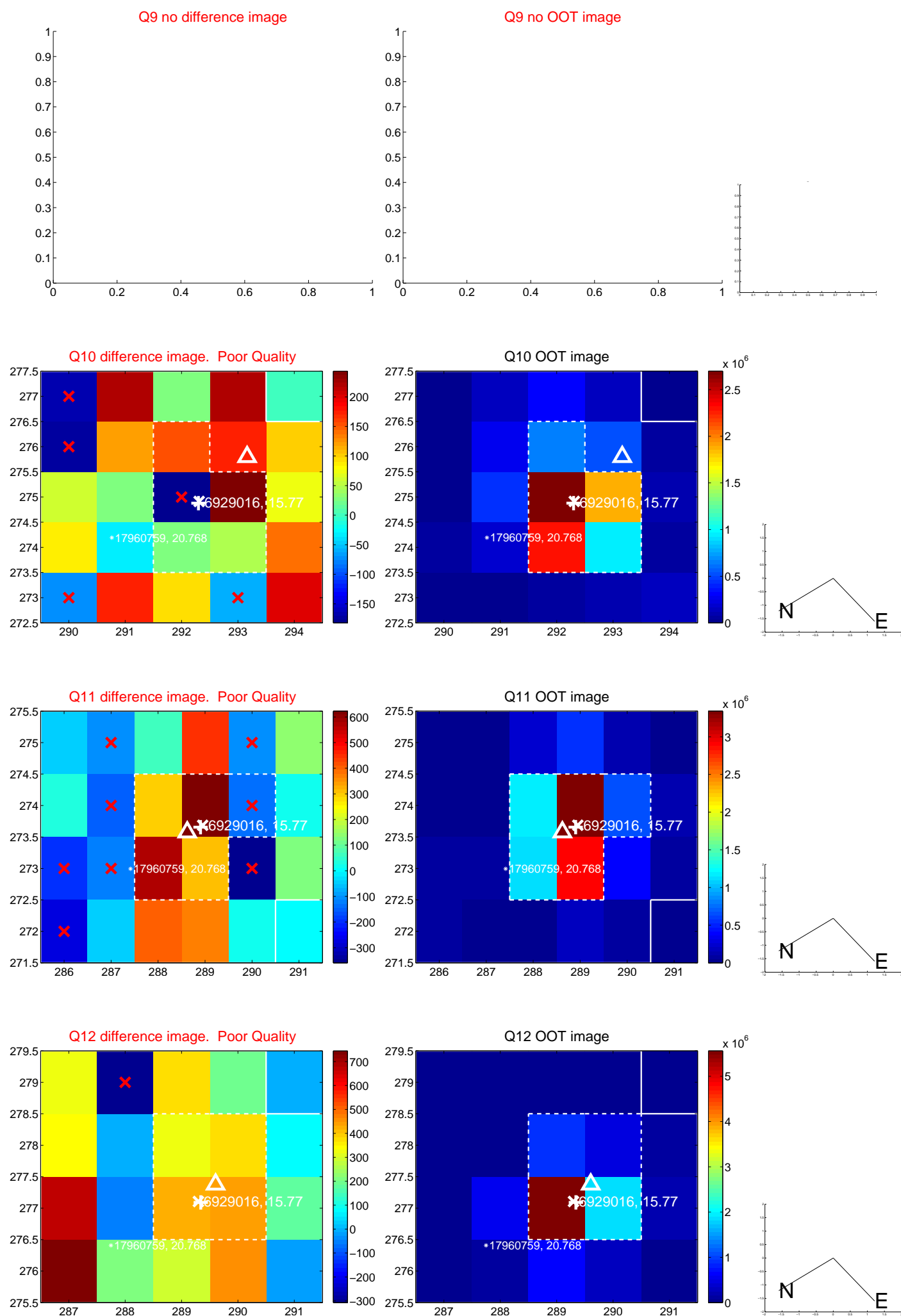
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



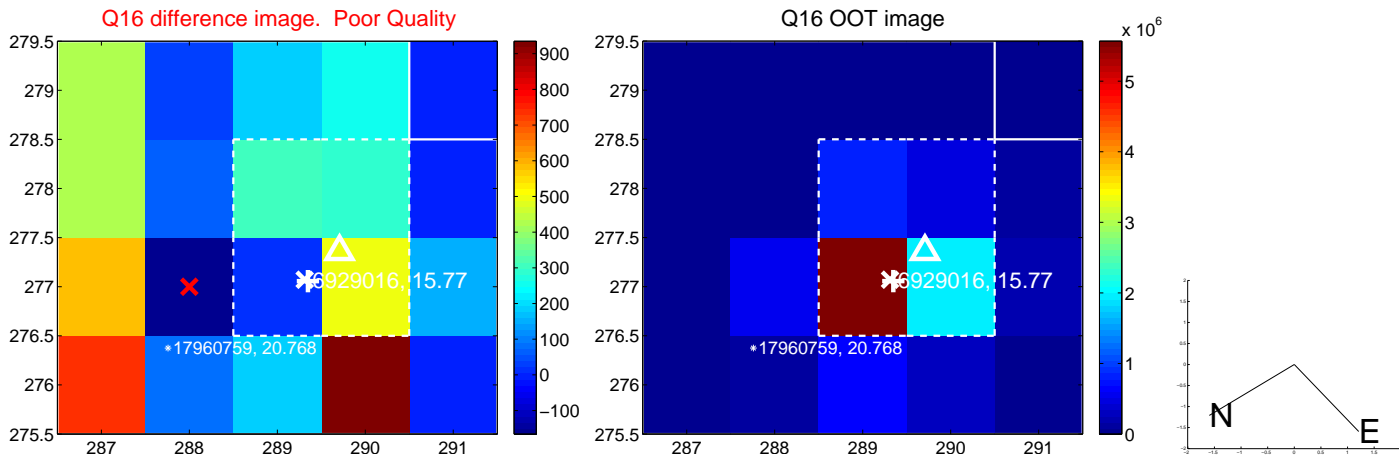
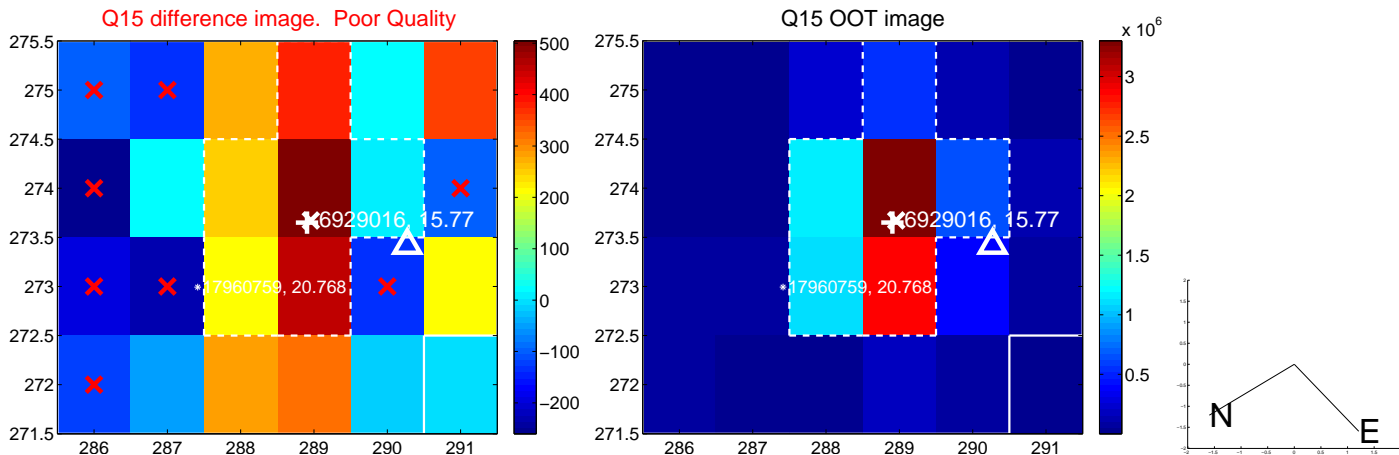
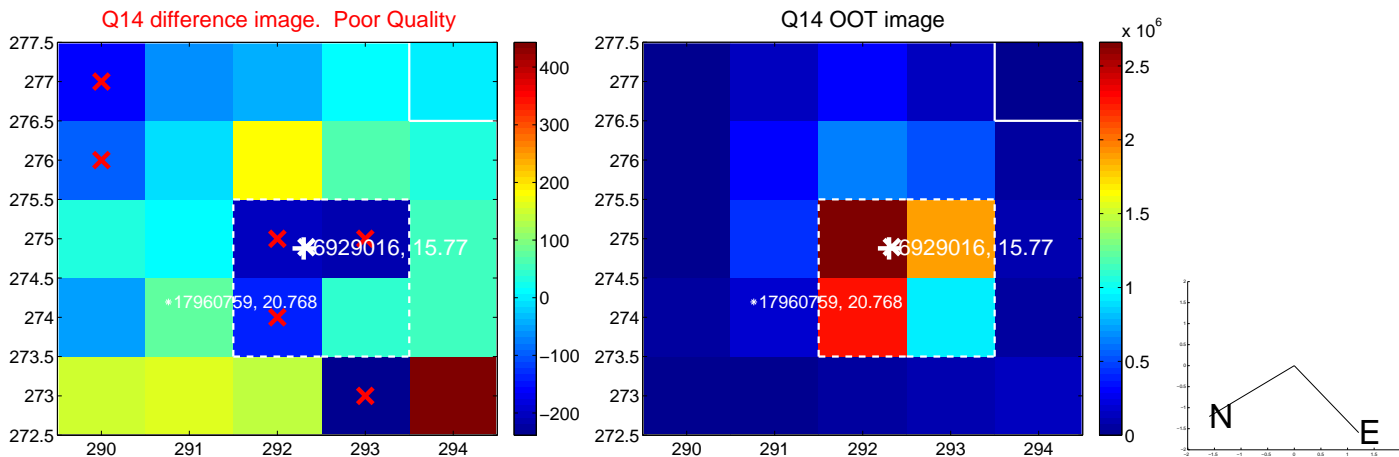
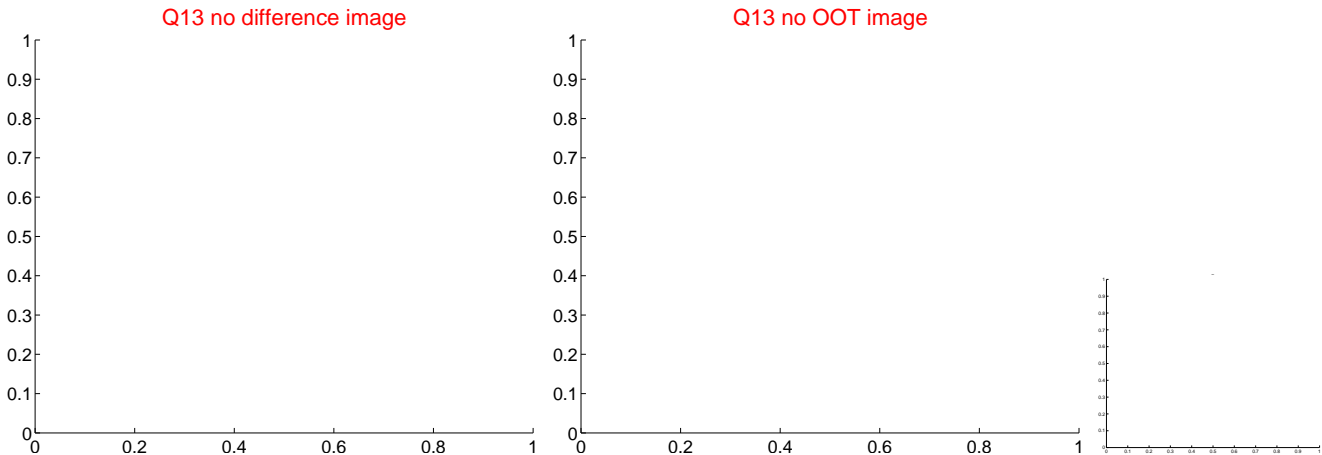
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



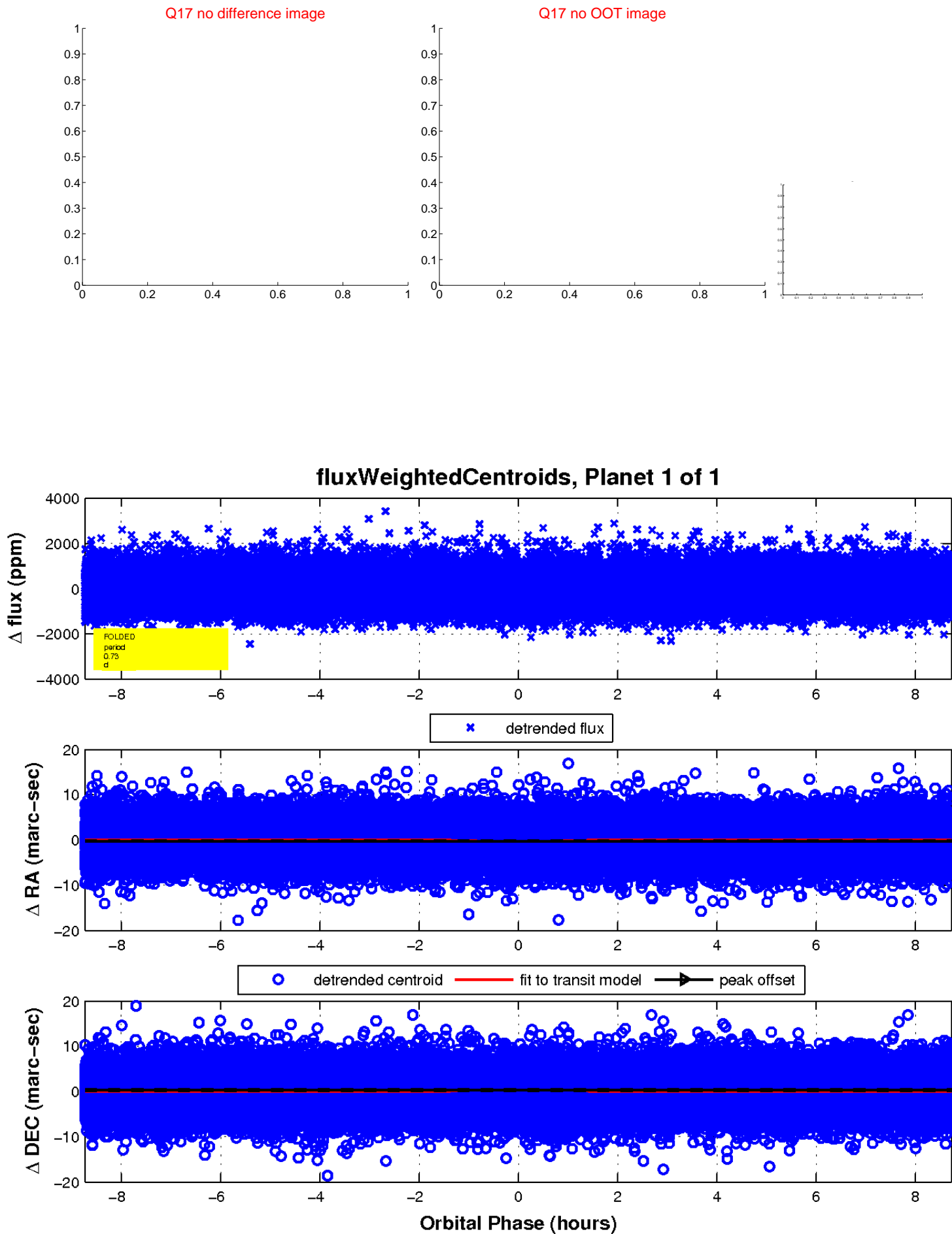
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

