

KIC 012217403

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
012217403-01	OBS	No	68.629570	174.803362	152.2	29.950	10.0	11.2	2.55	6608	6.19	90.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012217403-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

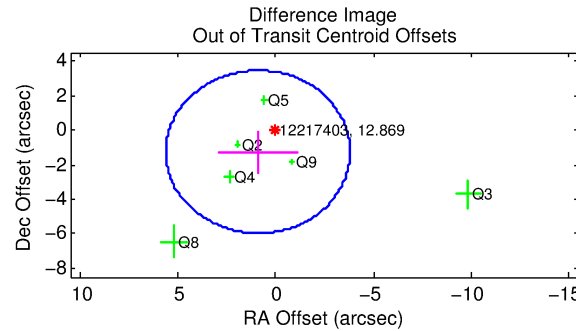
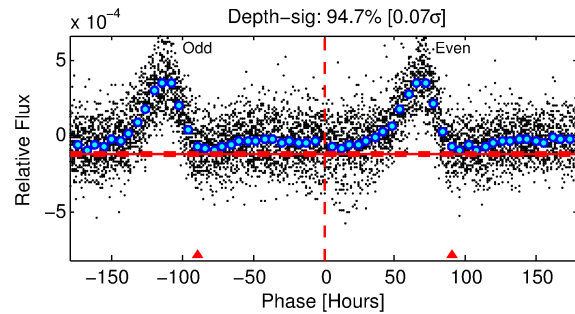
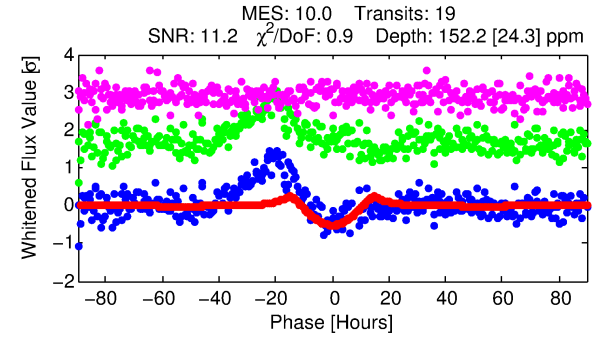
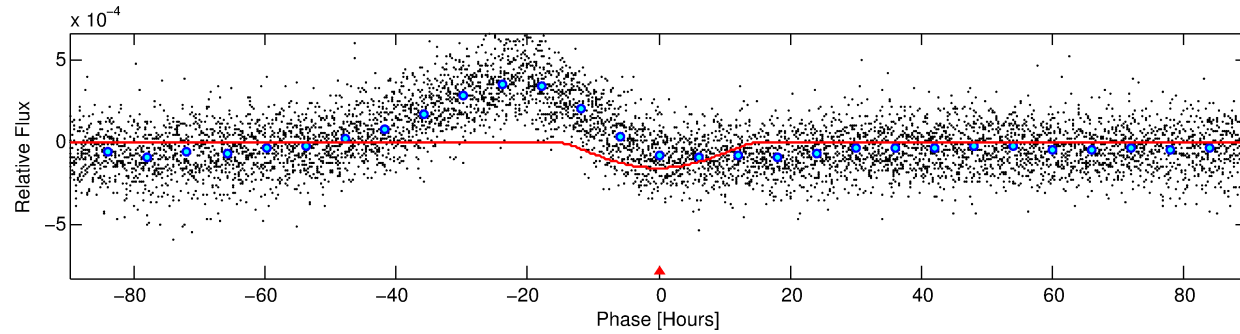
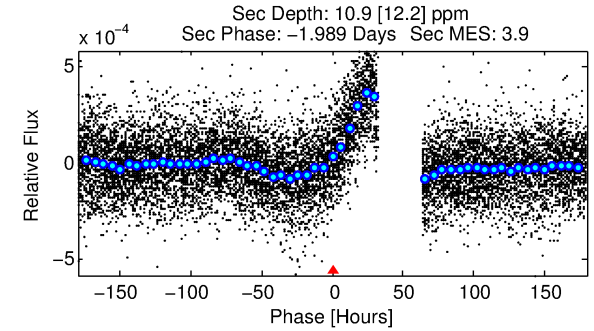
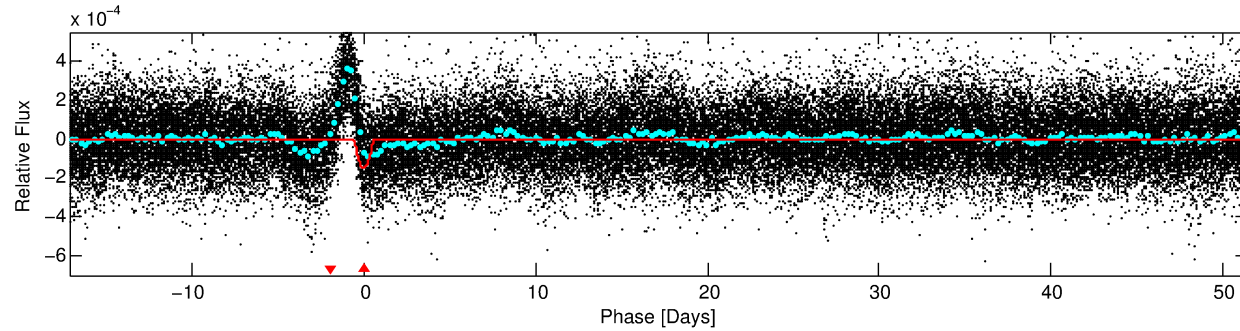
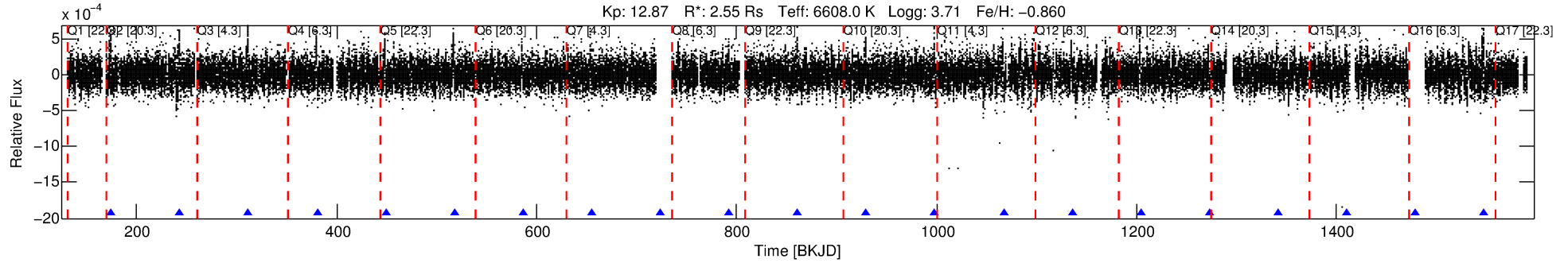
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012217403-01

No Significant Match Found

DV One-Page Summary

KIC: 12217403 Candidate: 1 of 1 Period: 68.630 d



DV Fit Results:

Period = 68.62957 [0.00376] d
Epoch = 174.8034 [0.0406] BKJD
Rp/R* = 0.0222 [0.0322]
a/R* = 3.86 [1.42]
b = 1.00 [0.05]
Seff = 90.89 [54.59]
Teq = 787 [118] K
Rp = 6.19 [9.27] Re
a = 0.3500 [0.1279] AU
Ag = 19.27 [60.90] [0.30σ]
Teffp = 2551 [1982] K [0.89σ]

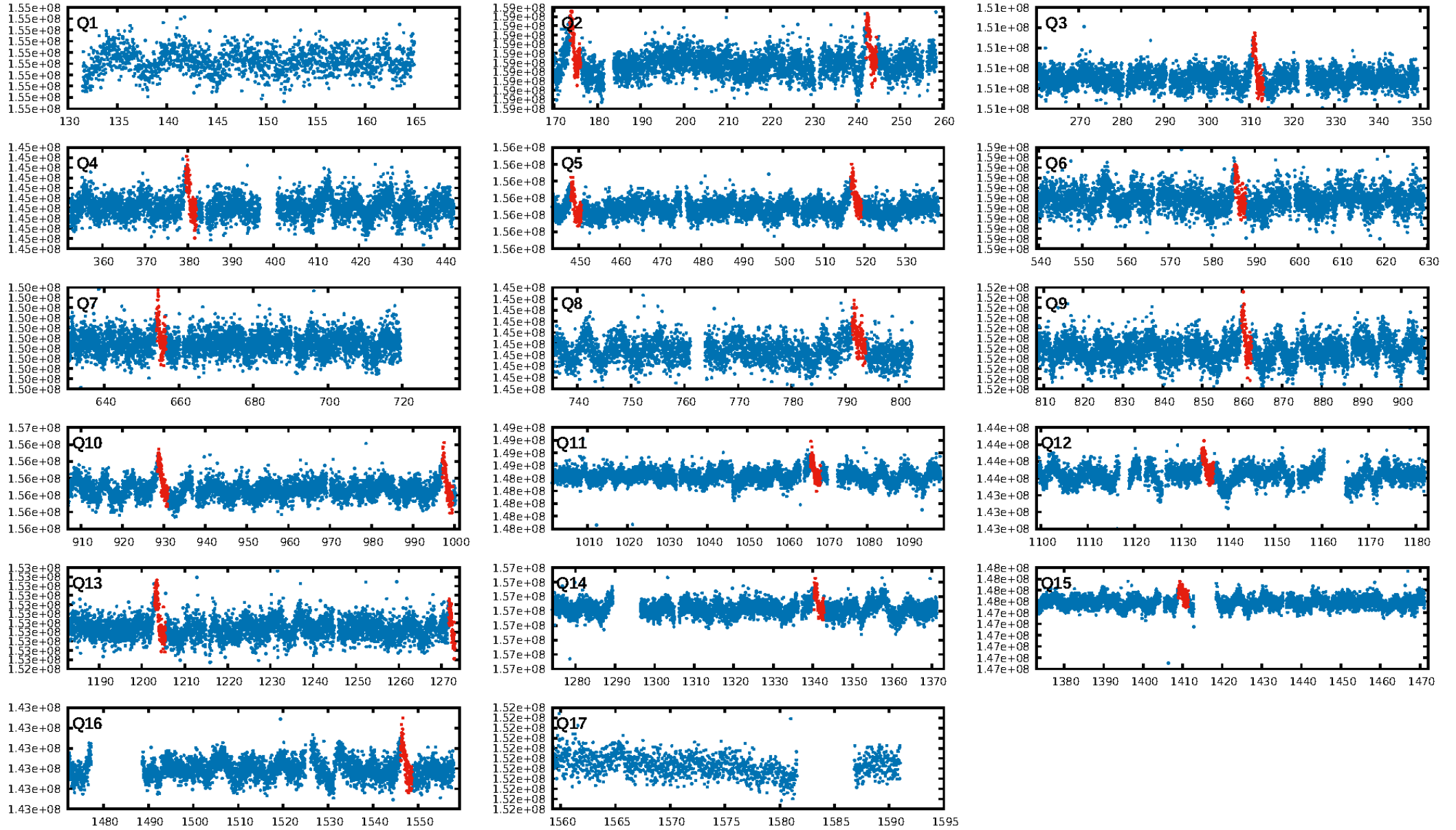
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.84e-21
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: 1.289
Centroid-sig: 73.6%
Centroid-so: 0.446 arcsec [0.61σ]
OotOffset-rm: 1.554 arcsec [0.99σ]
OotOffset-st: 1/1/2/2 [6]
KicOffset-rm: 1.634 arcsec [1.09σ]
KicOffset-st: 1/1/2/2 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [9/9]

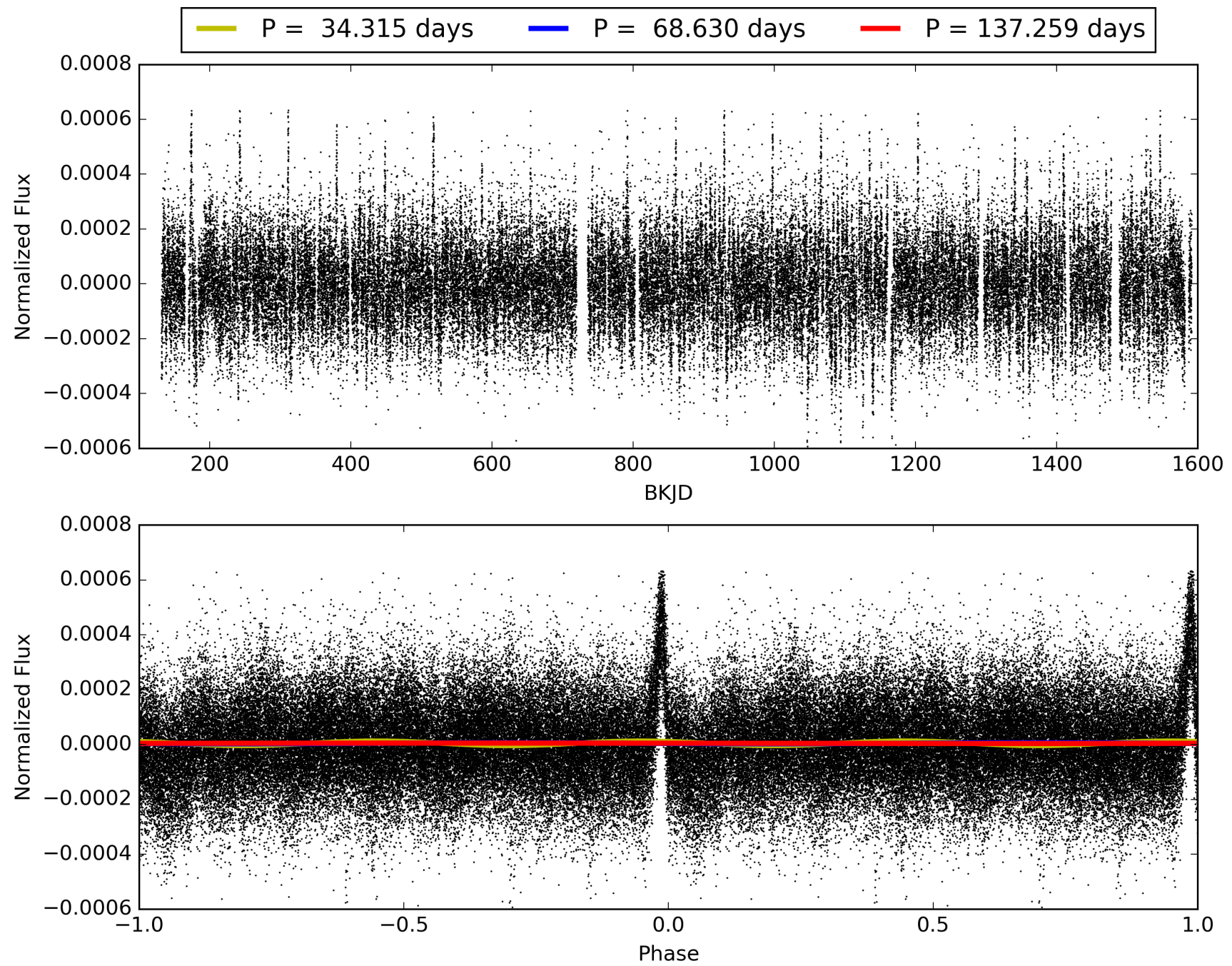
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:08:46 Z

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

TCE 012217403-01, PDC Light Curves

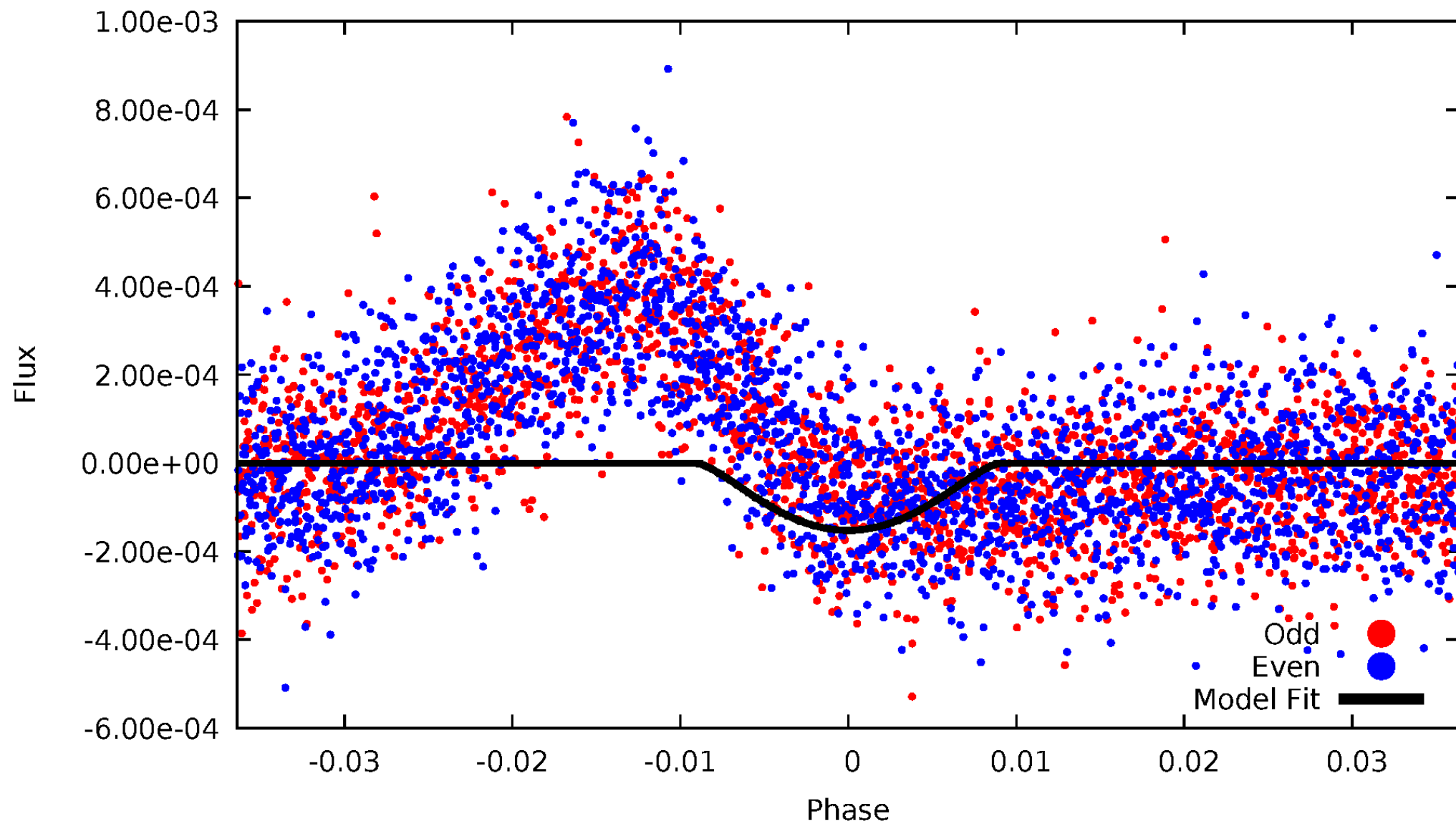


TCE 012217403-01



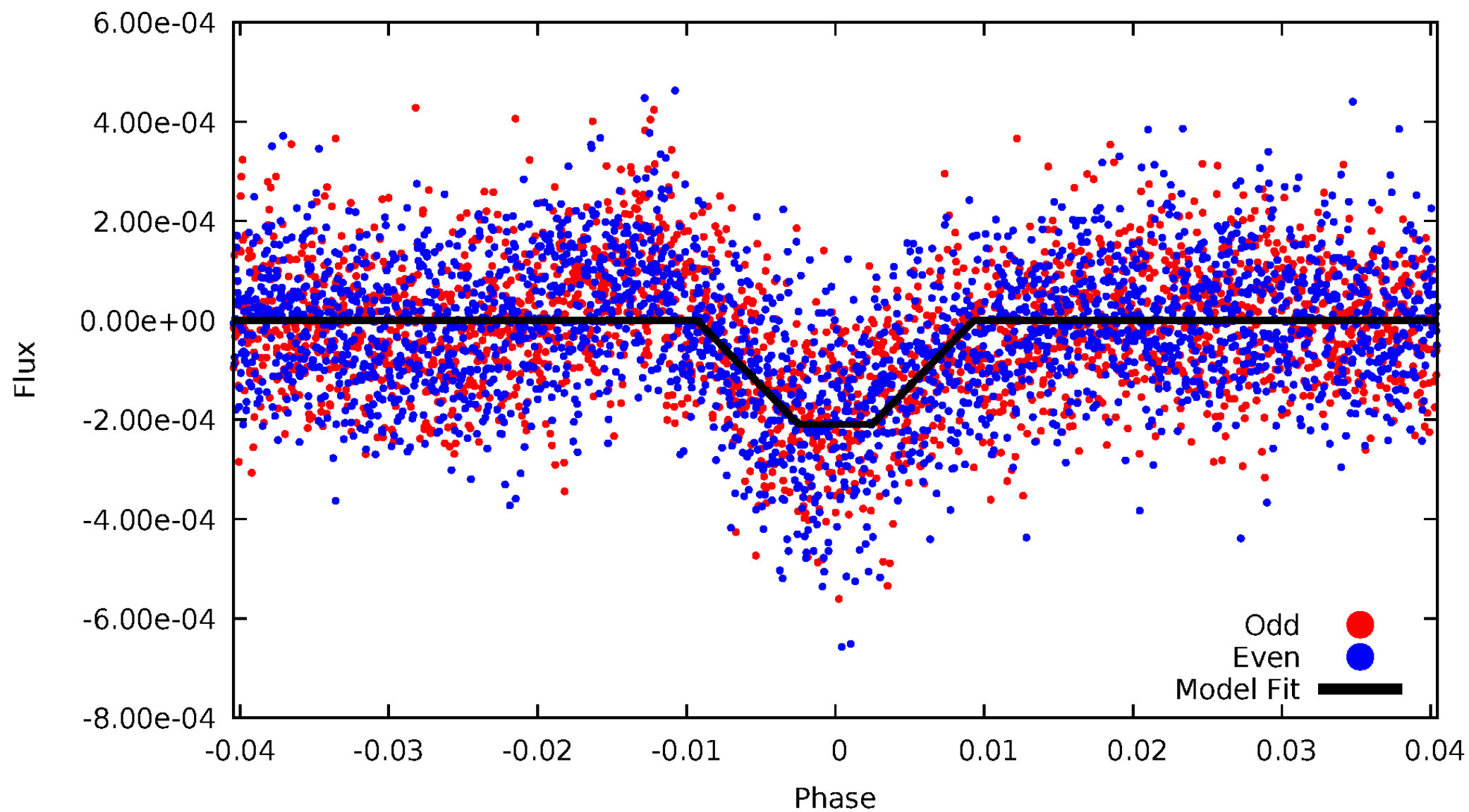
DV Odd/Even

TCE 012217403-01

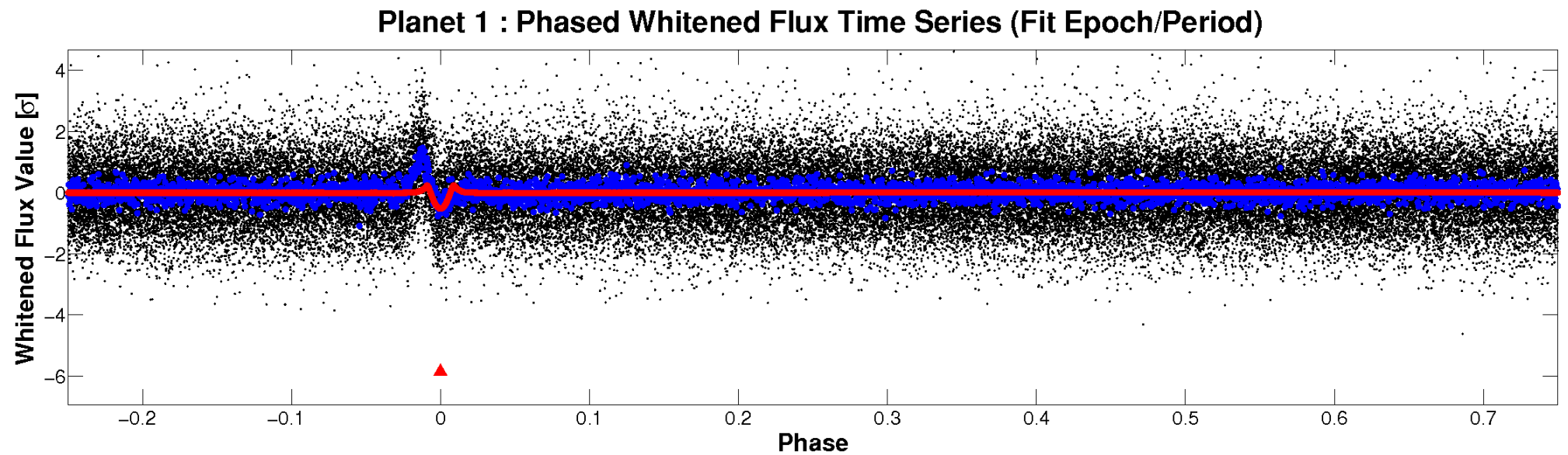
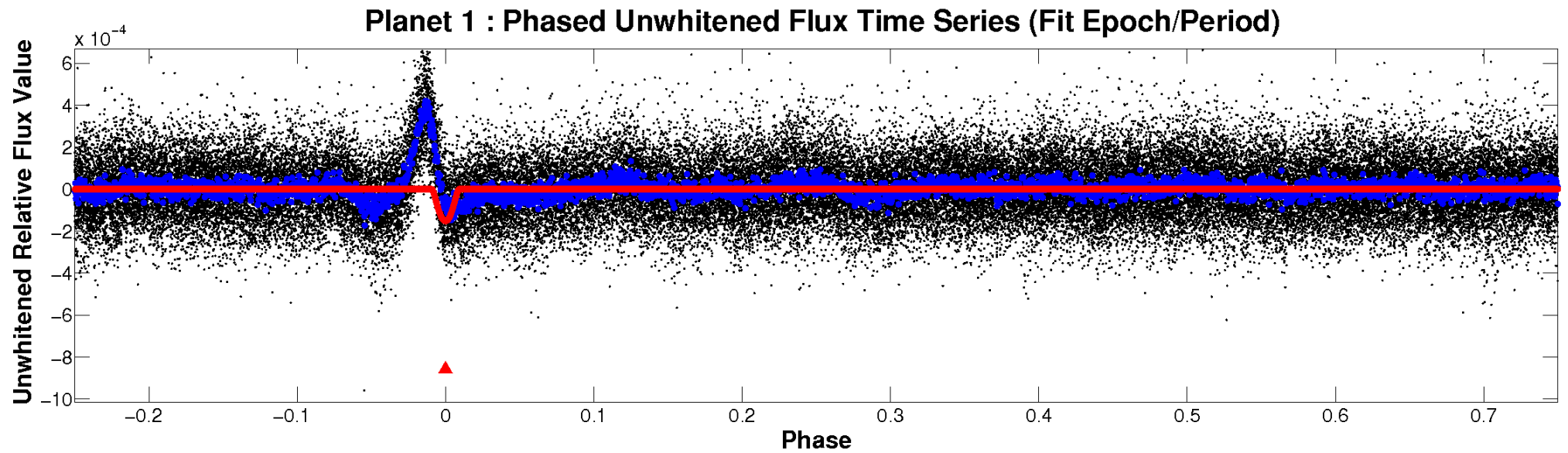


ALT Odd/Even

TCE 012217403-01

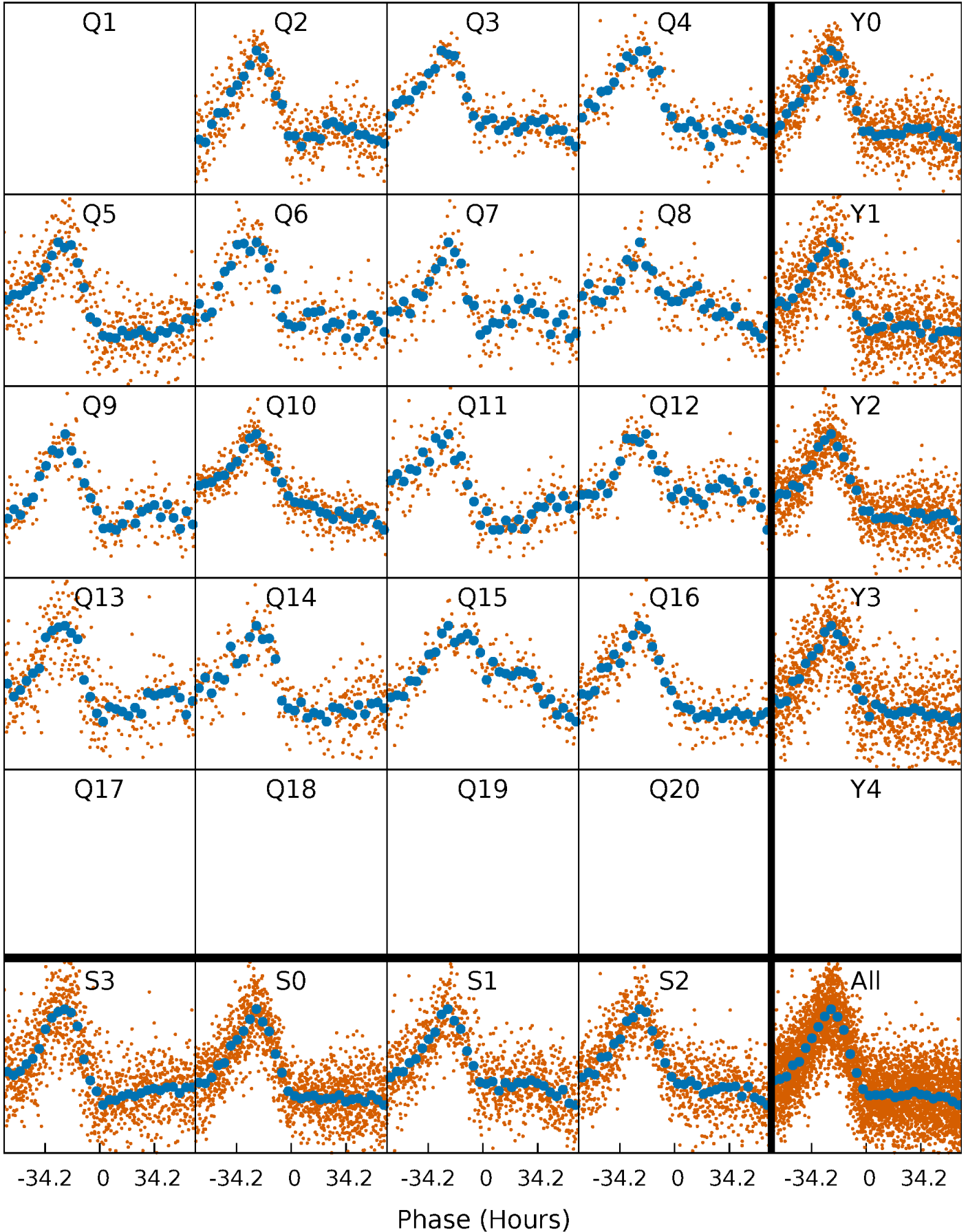


Non-Whitened Vs. Whitened Light Curve



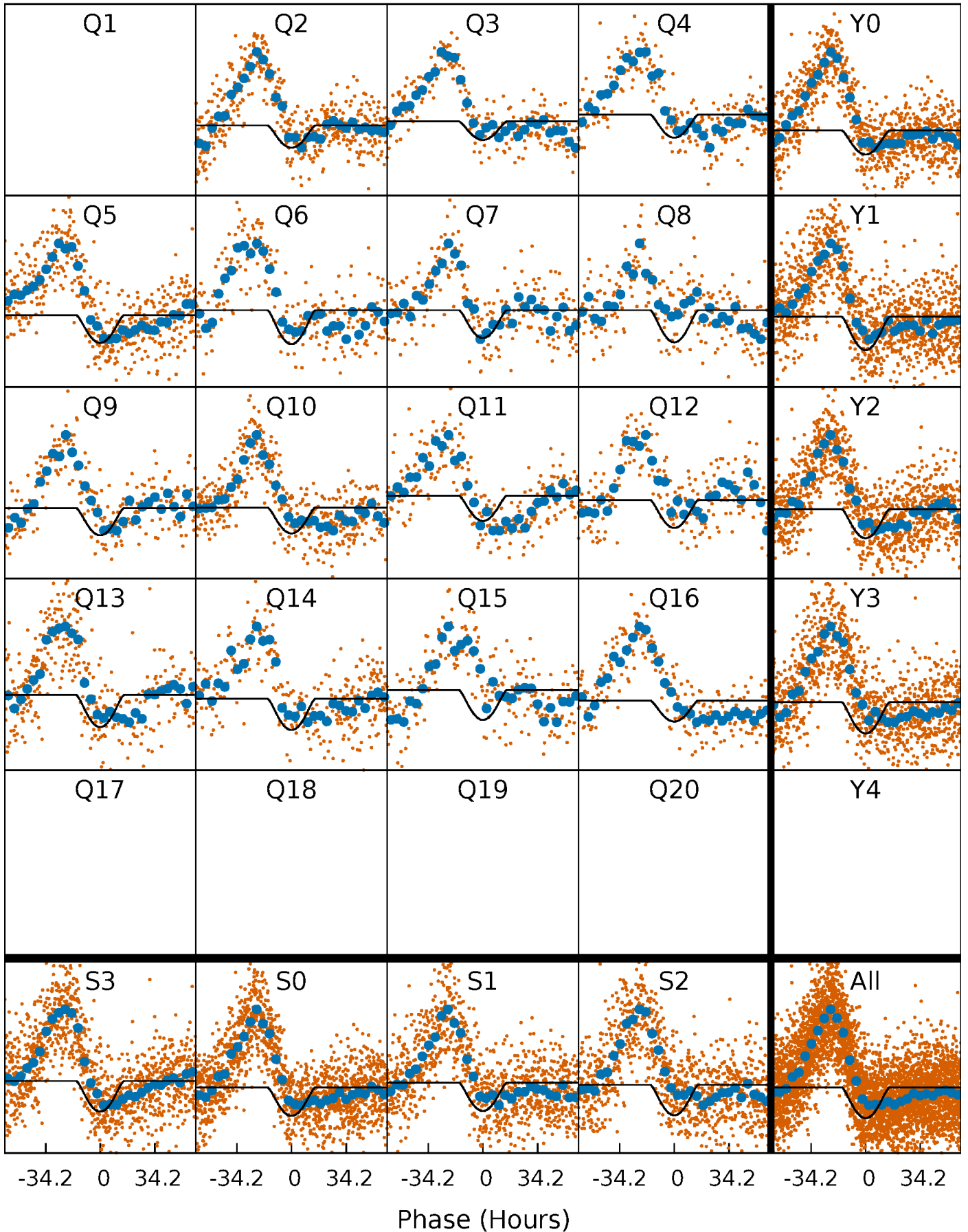
PDC Quarter-Phased Transit Curves

TCE 012217403-01 P= 68.629570 Days $T_0=174.803362$ (BKJD)



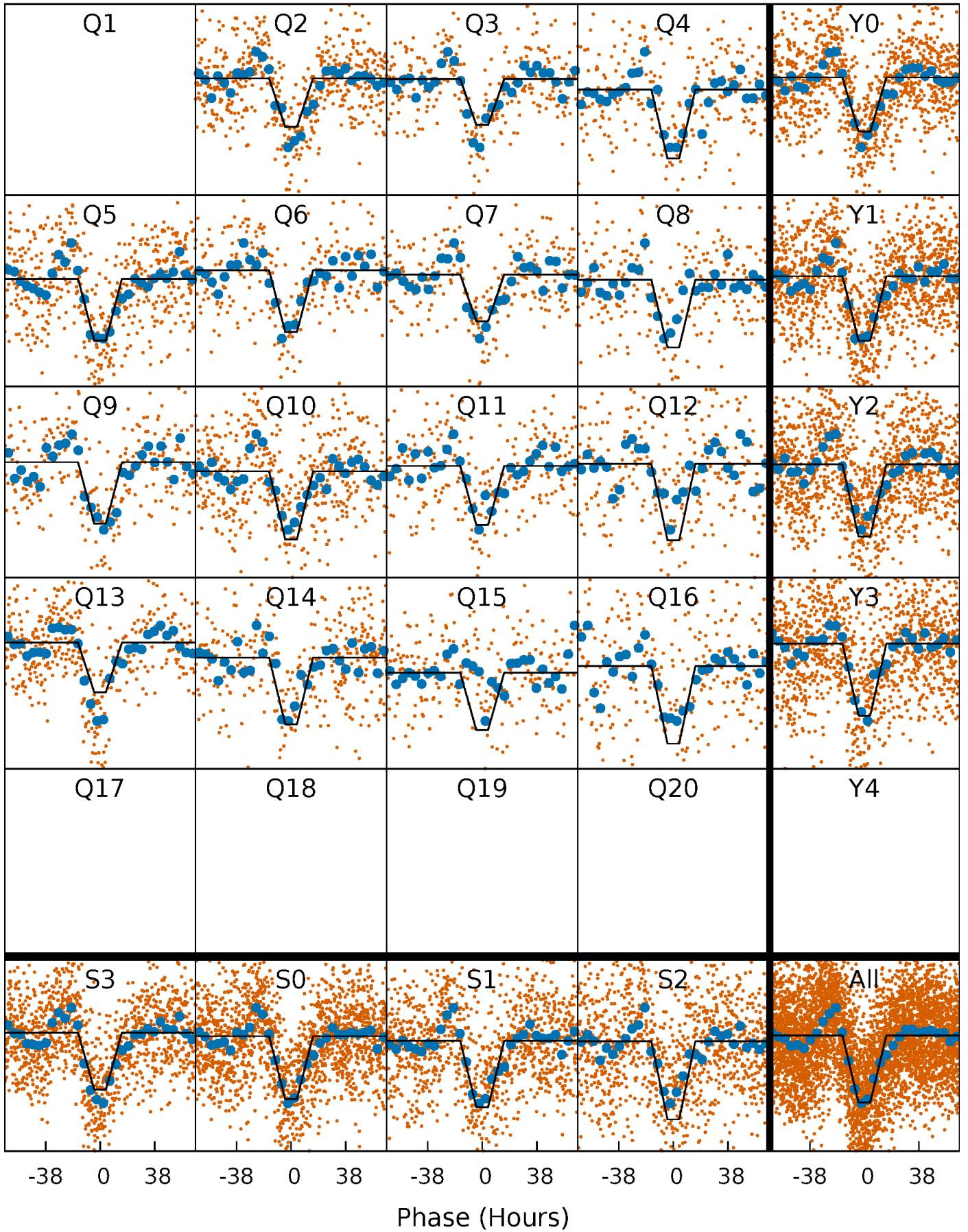
DV Quarter-Phased Transit Curves

TCE 012217403-01 P= 68.629570 Days $T_0=174.803362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

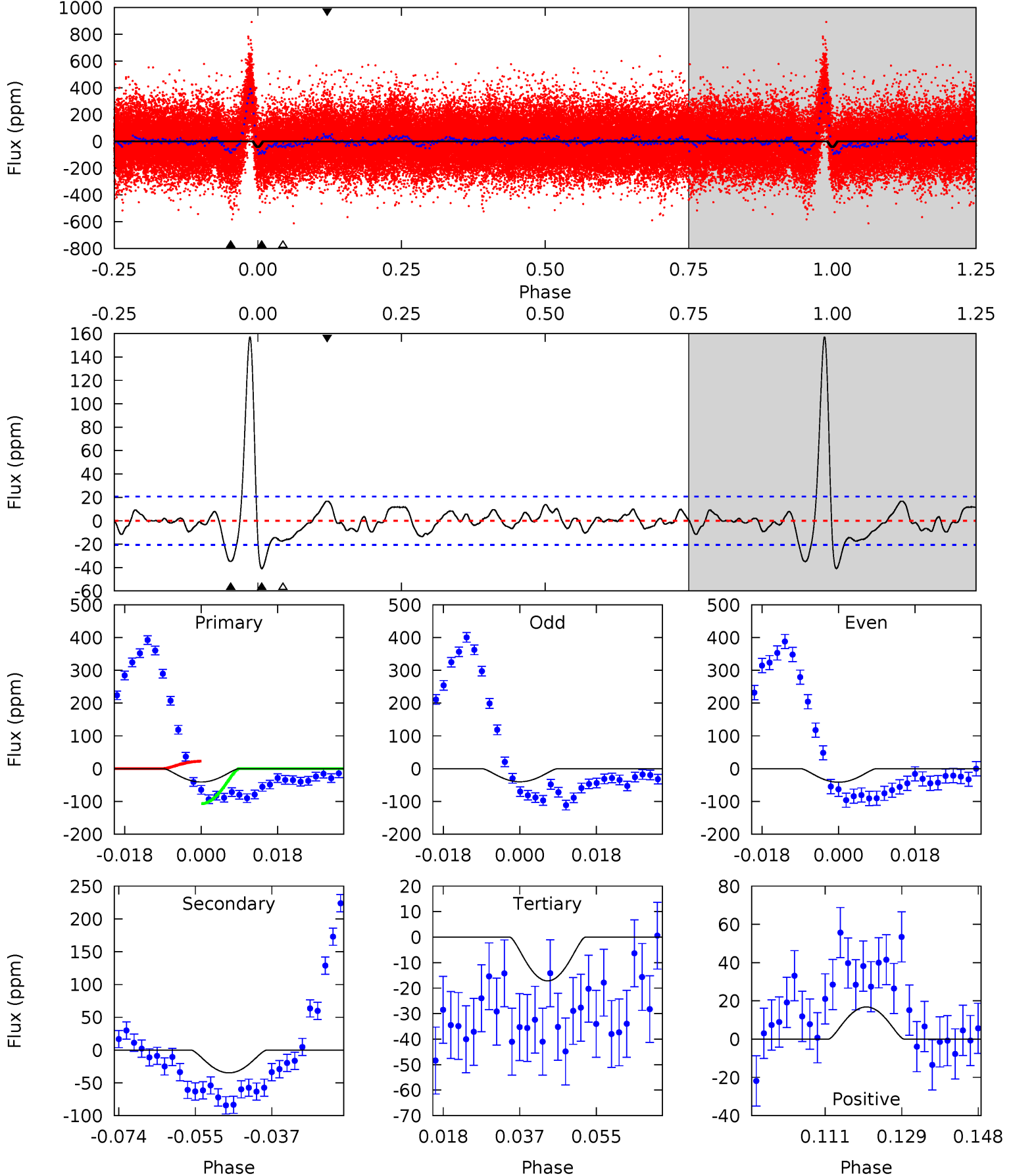
TCE 012217403-01 P= 68.628659 Days $T_0=174.824542$ (BKJD)



DV Model-Shift Uniqueness Test

012217403-01, P = 68.629570 Days, E = 106.173792 Days

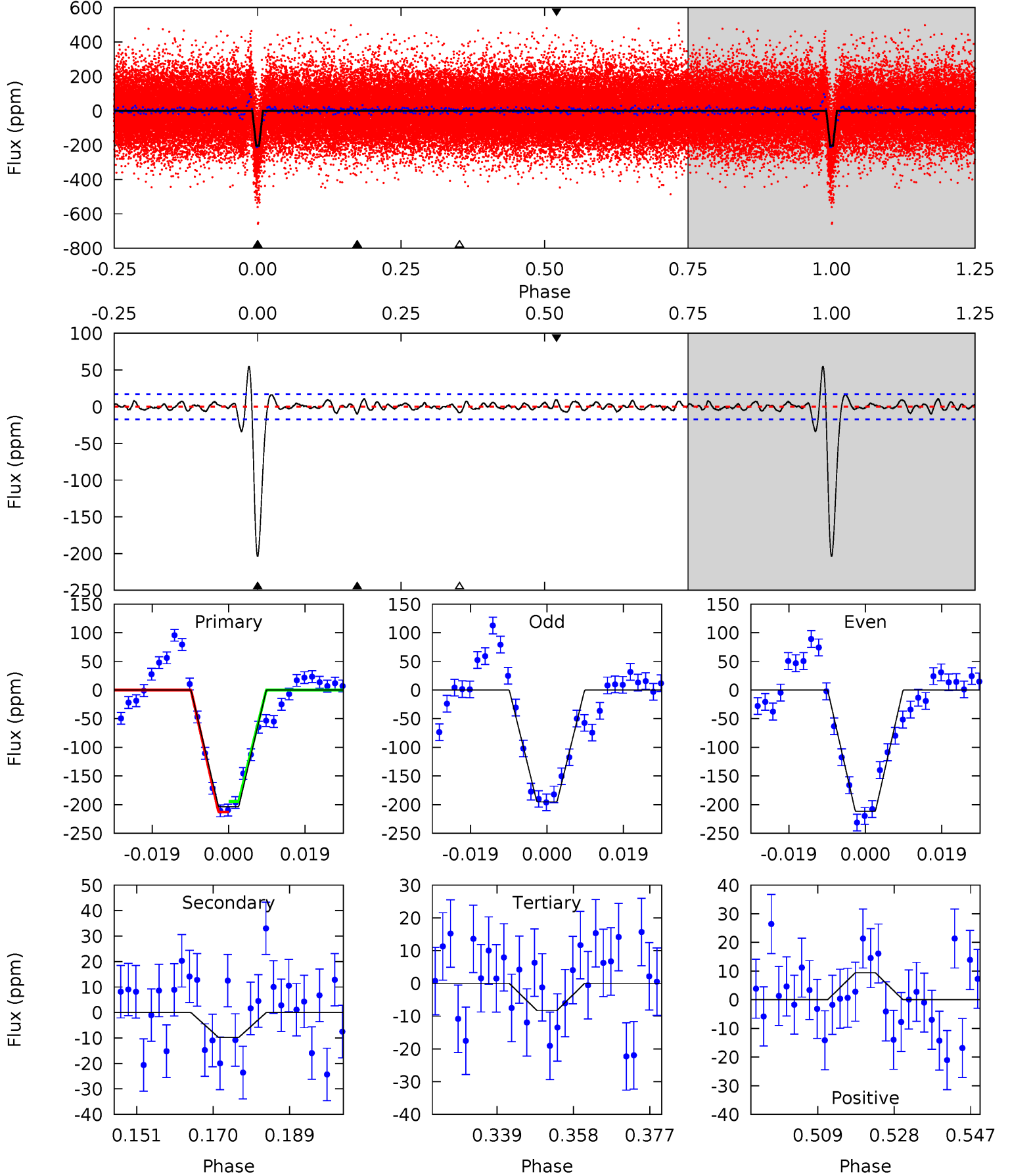
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.68	8.26	4.08	4.00	4.91	2.36	3.85	5.61	5.69	4.19	4.27	0.16	0.85	0.79	10.3



Alt Model-Shift Uniqueness Test

012217403-01, P = 68.628659 Days, E = 106.195883 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.4	2.81	2.37	2.70	4.90	2.35	1.40	56.1	55.7	0.44	0.12	2.32	1.03	0.21	2.64



Stellar Parameters For KIC 012217403

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6608^{+176}_{-215}	$3.708^{+0.345}_{-0.115}$	$-0.860^{+0.400}_{-0.250}$	$2.553^{+0.445}_{-0.964}$	$1.214^{+0.197}_{-0.262}$	$0.103^{+0.265}_{-0.035}$
	+3%/-3%	+9%/-3%	+47%/-29%	+17%/-38%	+16%/-22%	+257%/-34%
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 012217403-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 4	$7.87^{+7.72}_{-4.85}$	1074^{+76}_{-96}	3385^{+1479}_{-570}	38^{+226}_{-28}
Alt.	-10 ± 3	$7.25^{+6.97}_{-5.13}$	1080^{+69}_{-110}	2887^{+1305}_{-494}	12^{+122}_{-9}

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

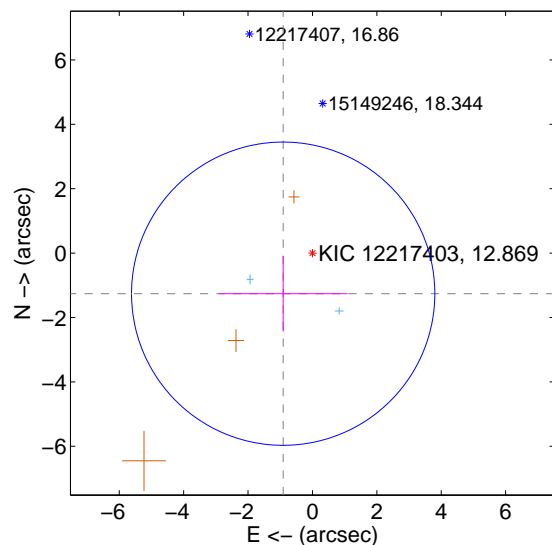
Supplemental centroid analysis for 012217403-01. Kepler magnitude: 12.87. Transit SNR 11.24

There are 2 quarters with good PRF difference image offsets

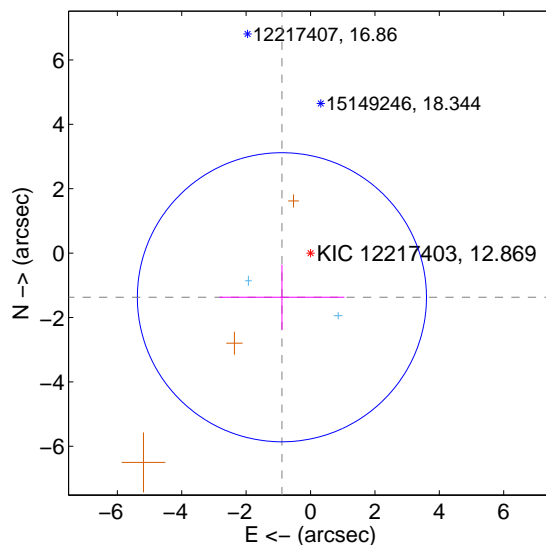
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.554 ± 1.570	0.99	0.909 ± 1.998	-1.261 ± 1.176
PRF-fit source offset from KIC position	1.634 ± 1.496	1.09	0.889 ± 1.941	-1.371 ± 1.008
photometric centroid source offset	0.45 ± 0.73	0.61	-0.18 ± 0.65	0.41 ± 0.74

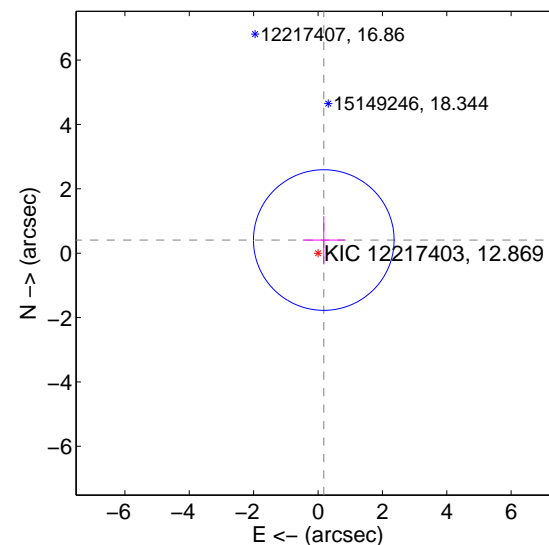
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

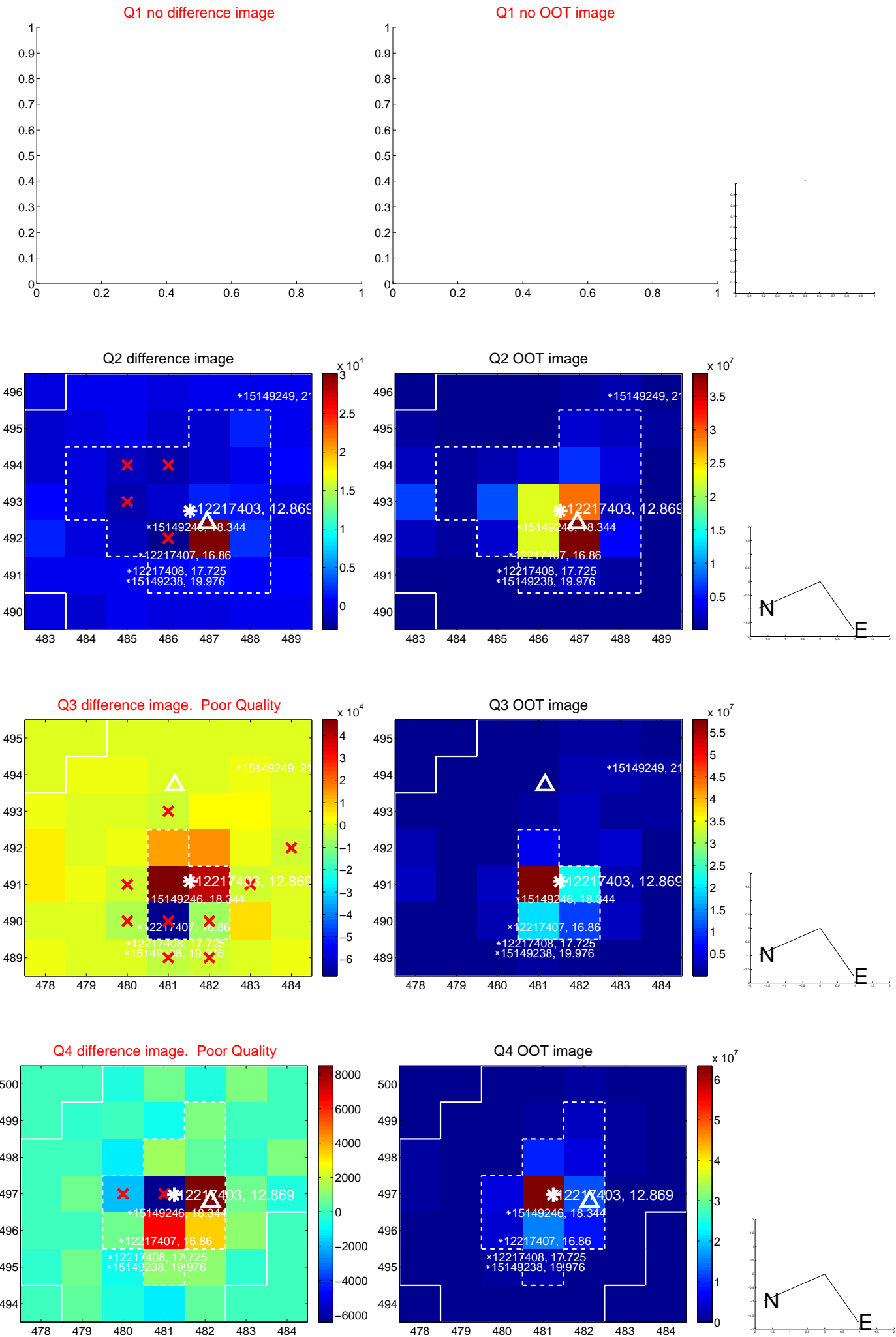


offset from photometric centroids

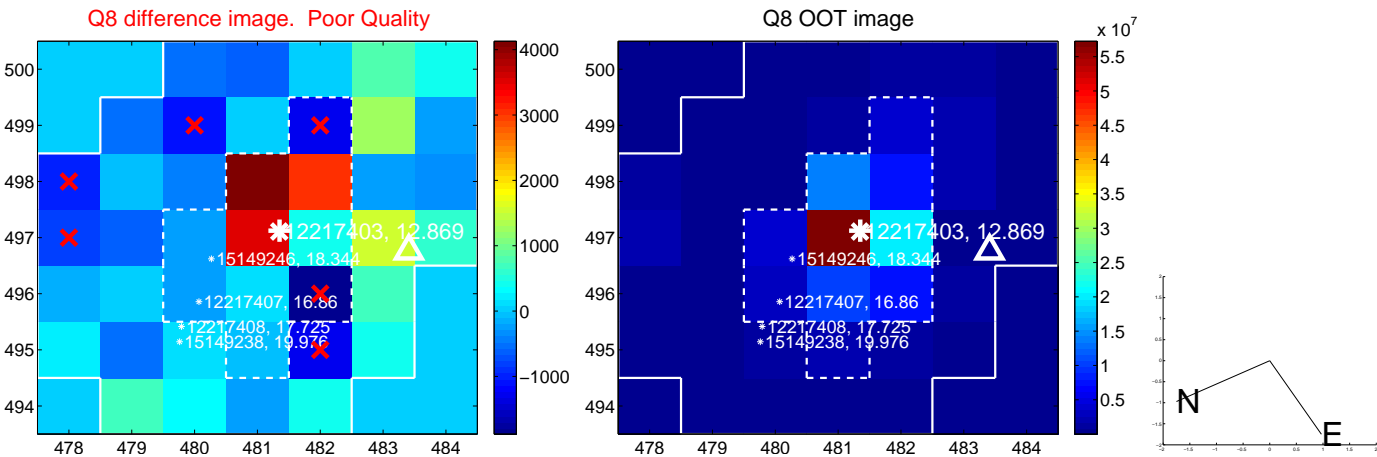
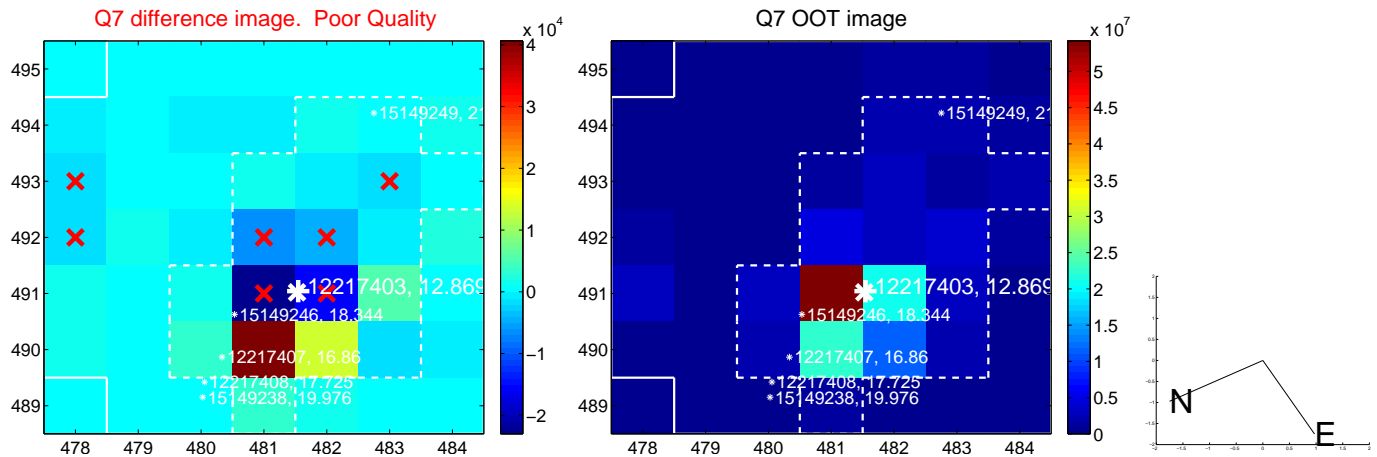
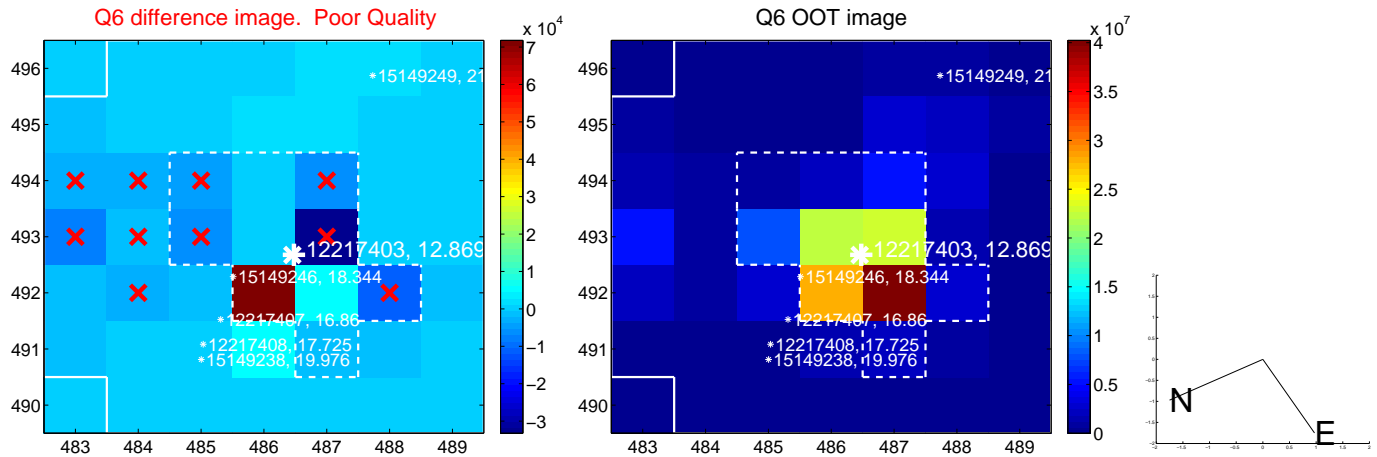
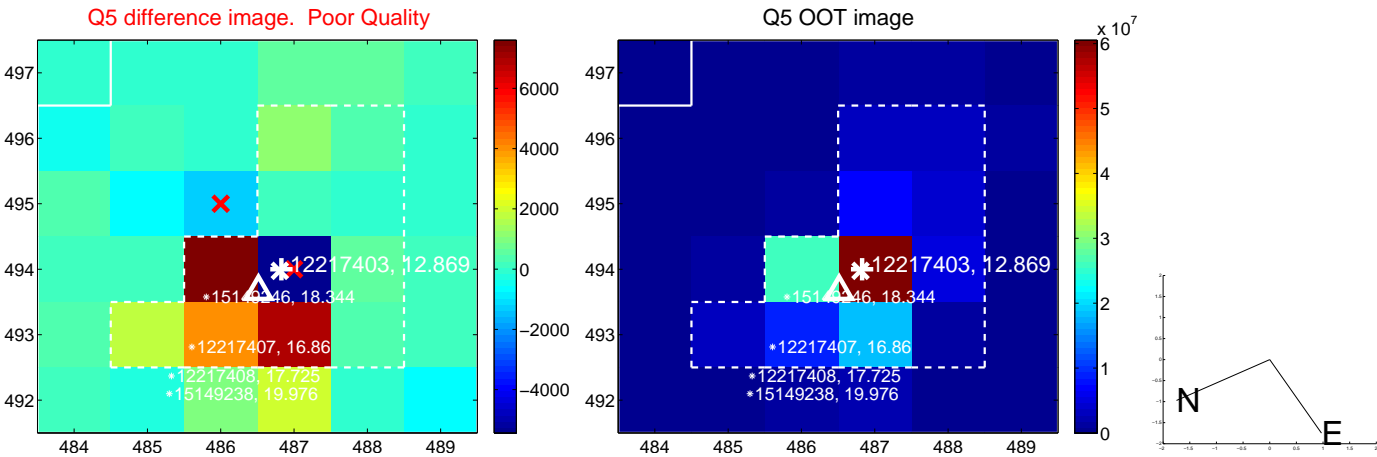


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

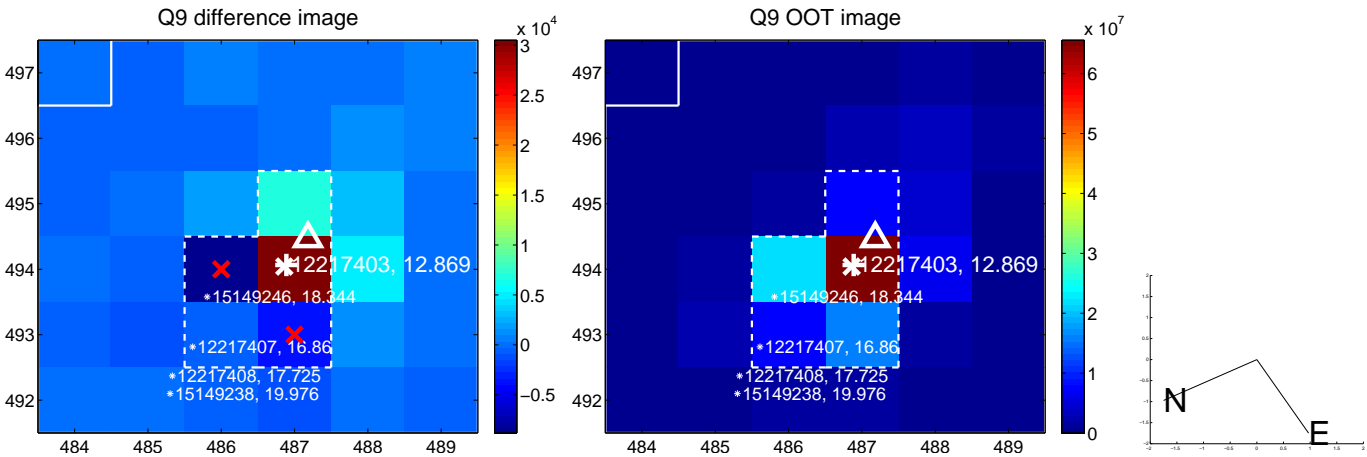
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



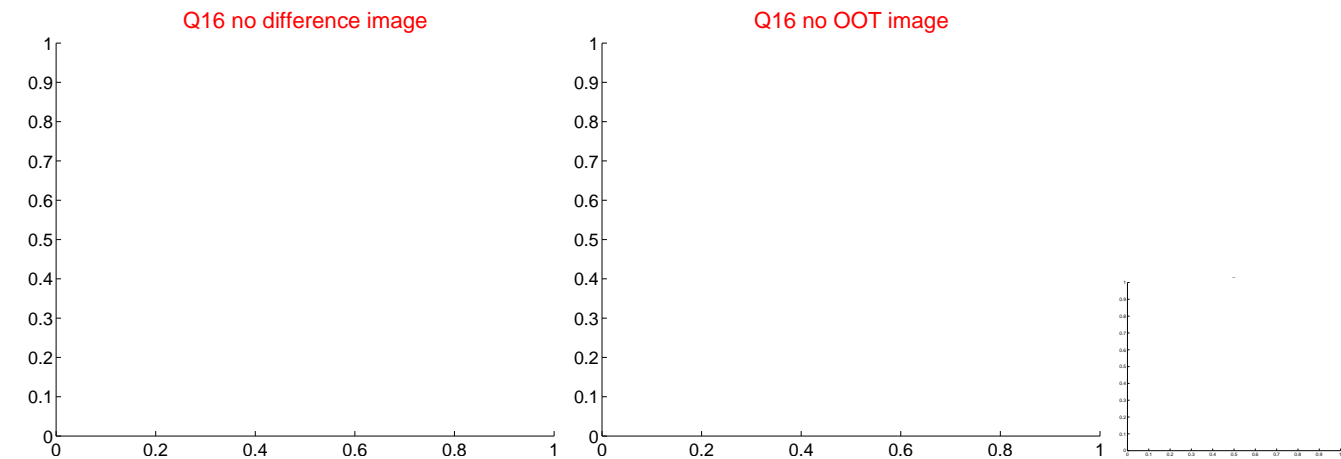
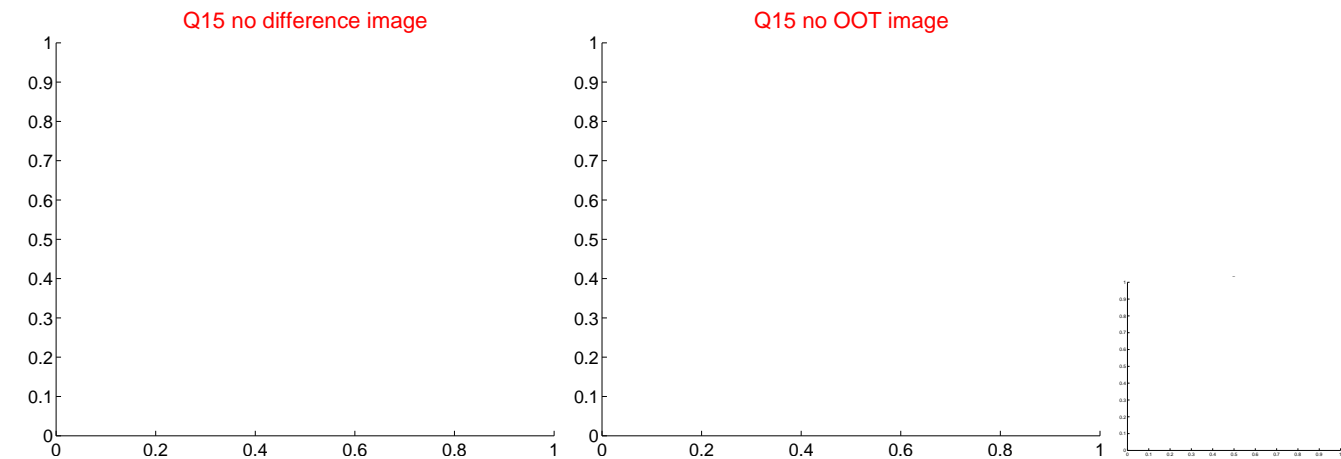
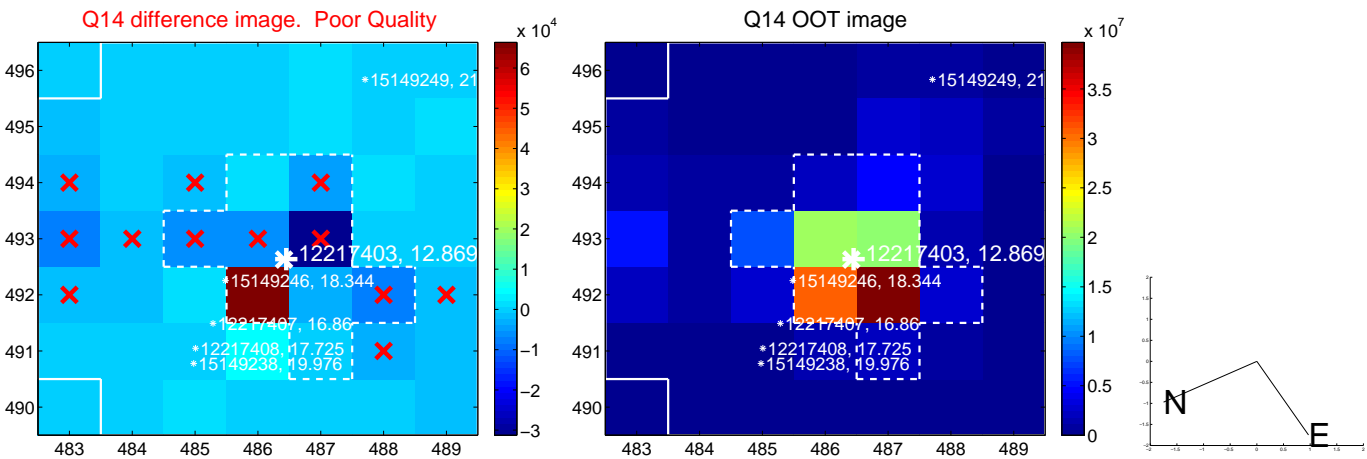
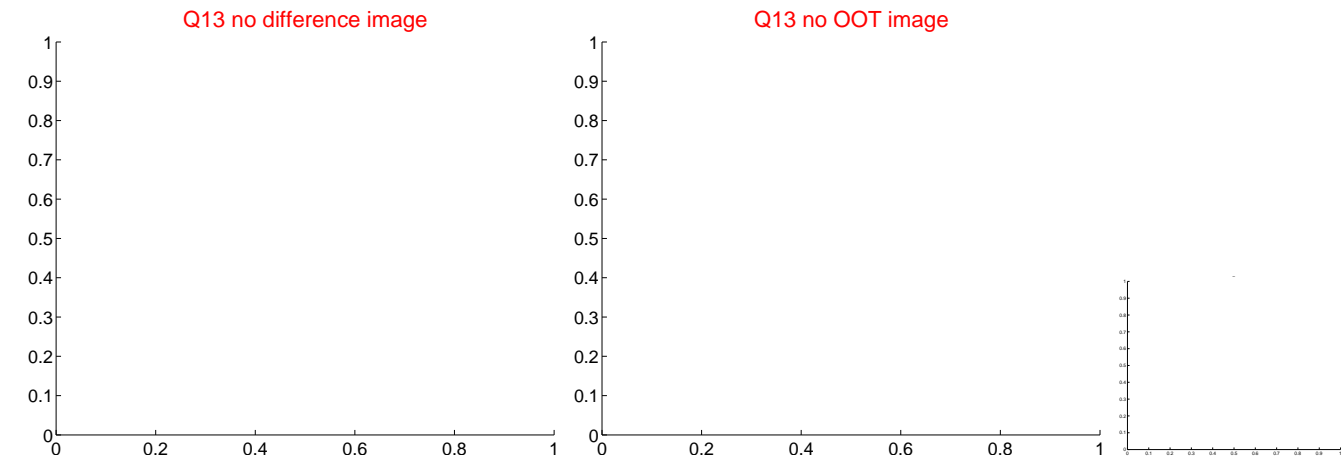
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



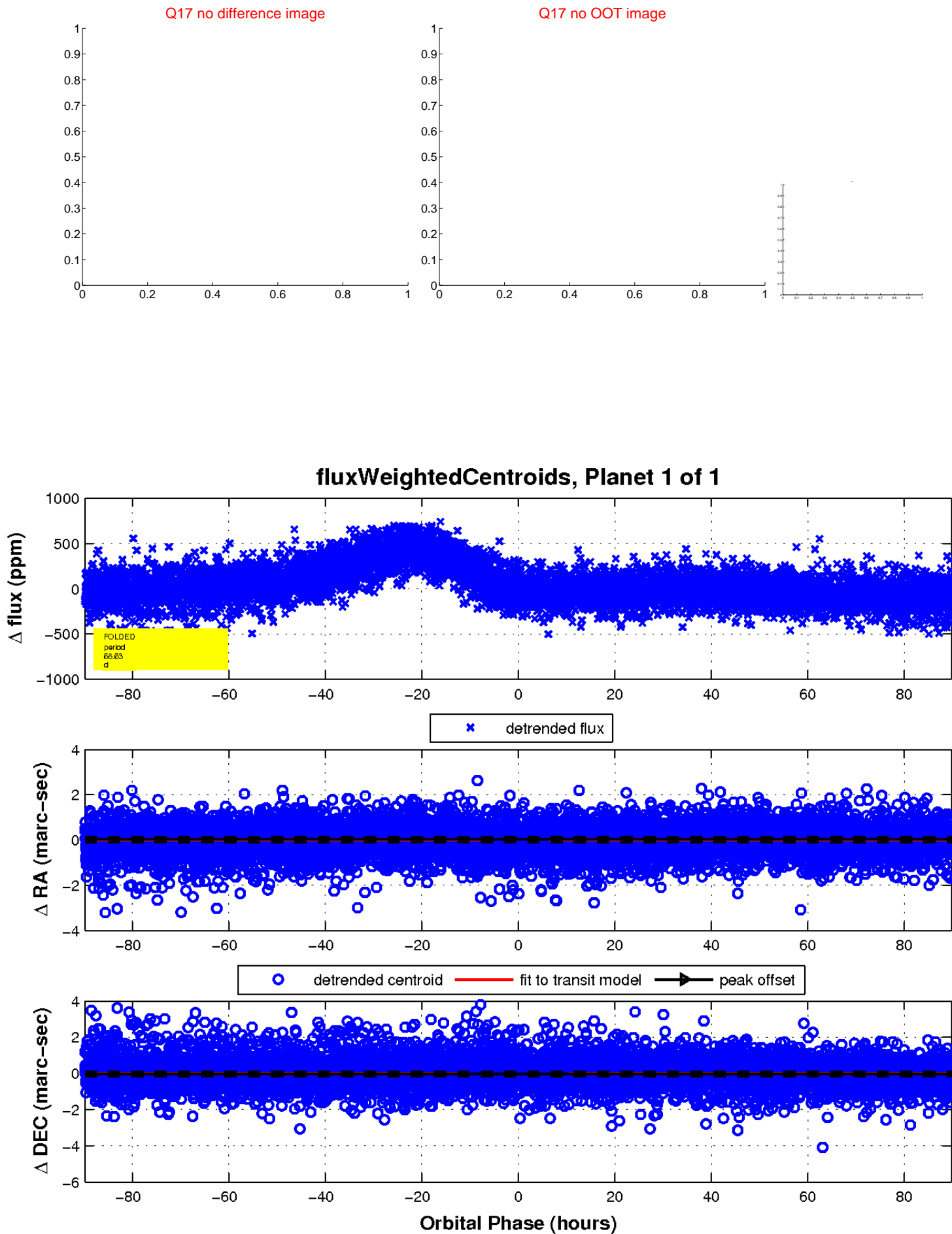
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

