

KIC 010618758

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})
010618758-01	OBS	No	1.285039	131.645787	66.2	3.935	7.6	6.3	0.96	5999	0.91	1934.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010618758-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

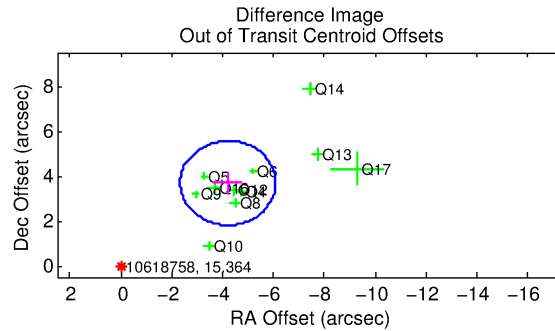
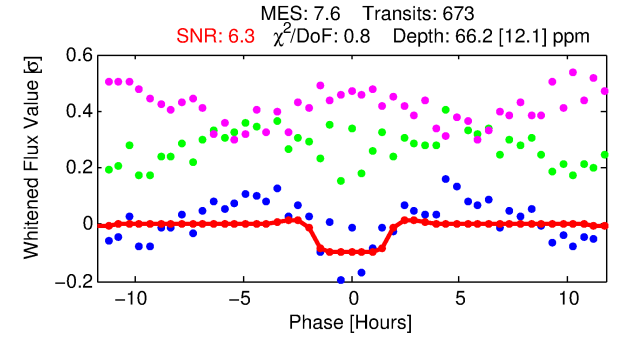
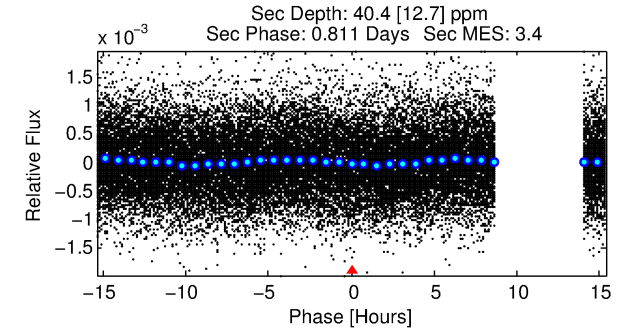
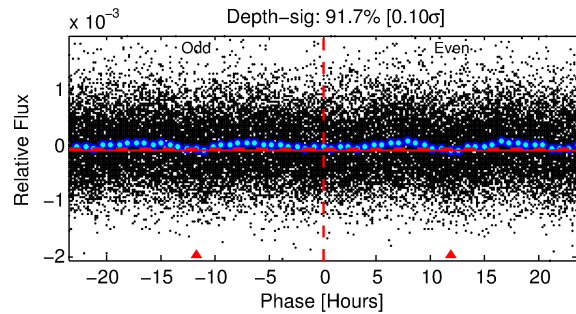
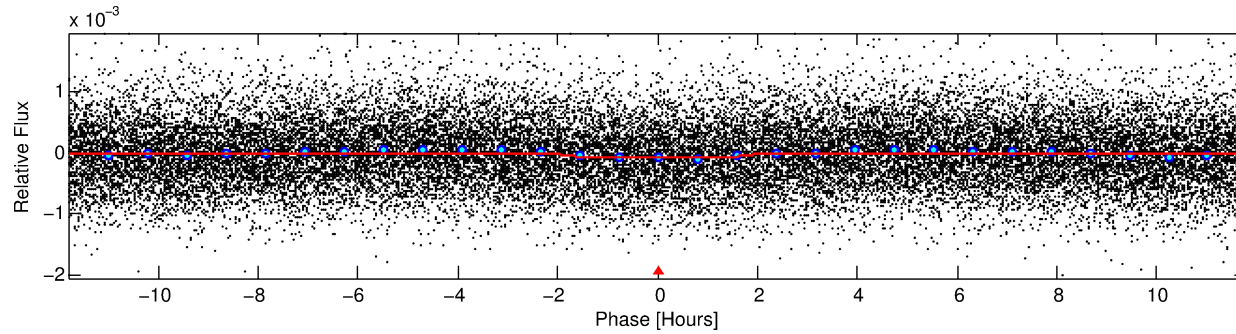
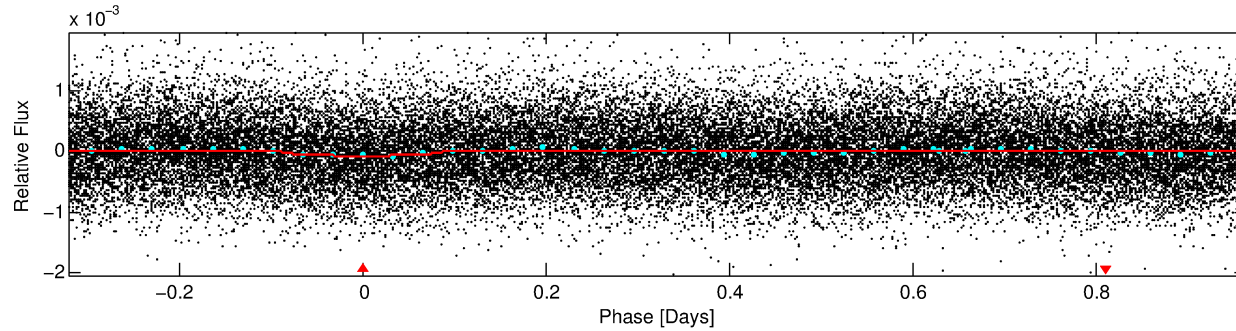
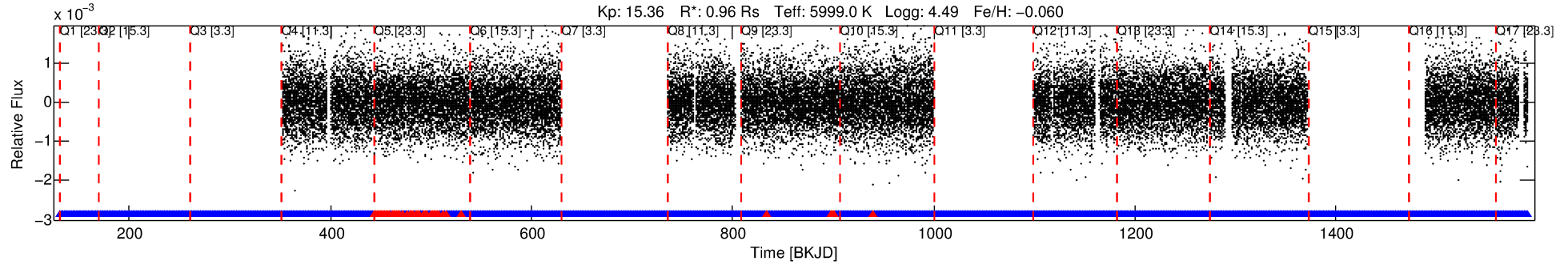
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010618758-01

No Significant Match Found

DV One-Page Summary

KIC: 10618758 Candidate: 1 of 1 Period: 1.285 d



DV Fit Results:

Period = 1.28504 [0.00002] d
Epoch = 131.6458 [0.0064] BKJD
Rp/R* = 0.0087 [0.0073]
a/R* = 1.53 [3.76]
b = 0.88 [1.09]
Seff = 1934.34 [739.18]
Teff = 1691 [162] K
Rp = 0.91 [0.81] Re
a = 0.0235 [0.0056] AU
Ag = 14.90 [26.09] [0.53 σ]
Teffp = 5137 [2212] K [1.55 σ]

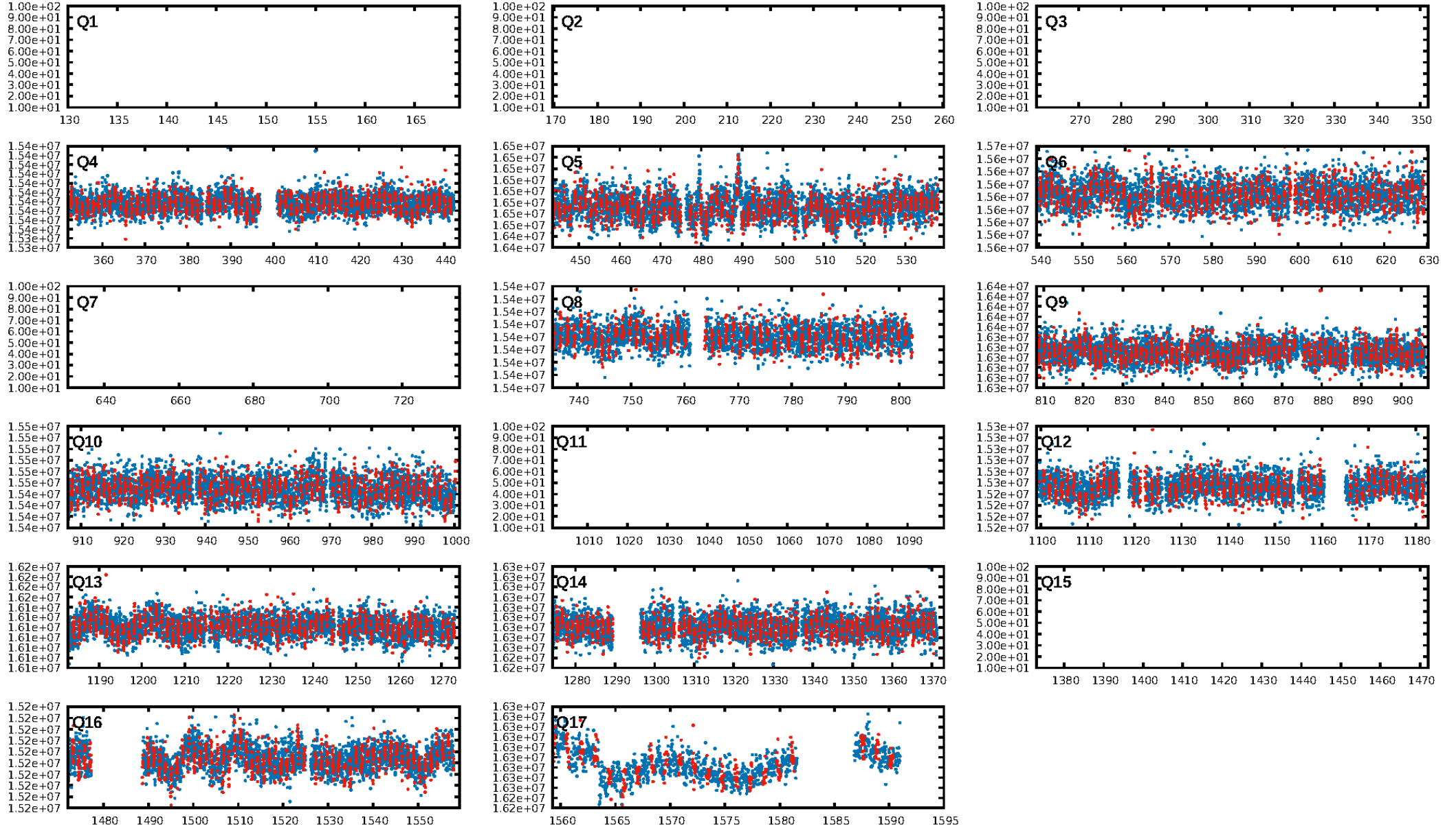
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.91e-12
RollingBand-fgt: 0.93 [605/652]
GhostDiagnostic-chr: 1.289
Centroid-sig: 0.0%
Centroid-so: 5.244 arcsec [2.71 σ]
OotOffset-rm: 5.593 arcsec [8.96 σ]
KicOffset-rm: 5.465 arcsec [6.80 σ]
OotOffset-st: 3/0/4/4 [11]
KicOffset-st: 3/0/4/4 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 1.00 [11/11]

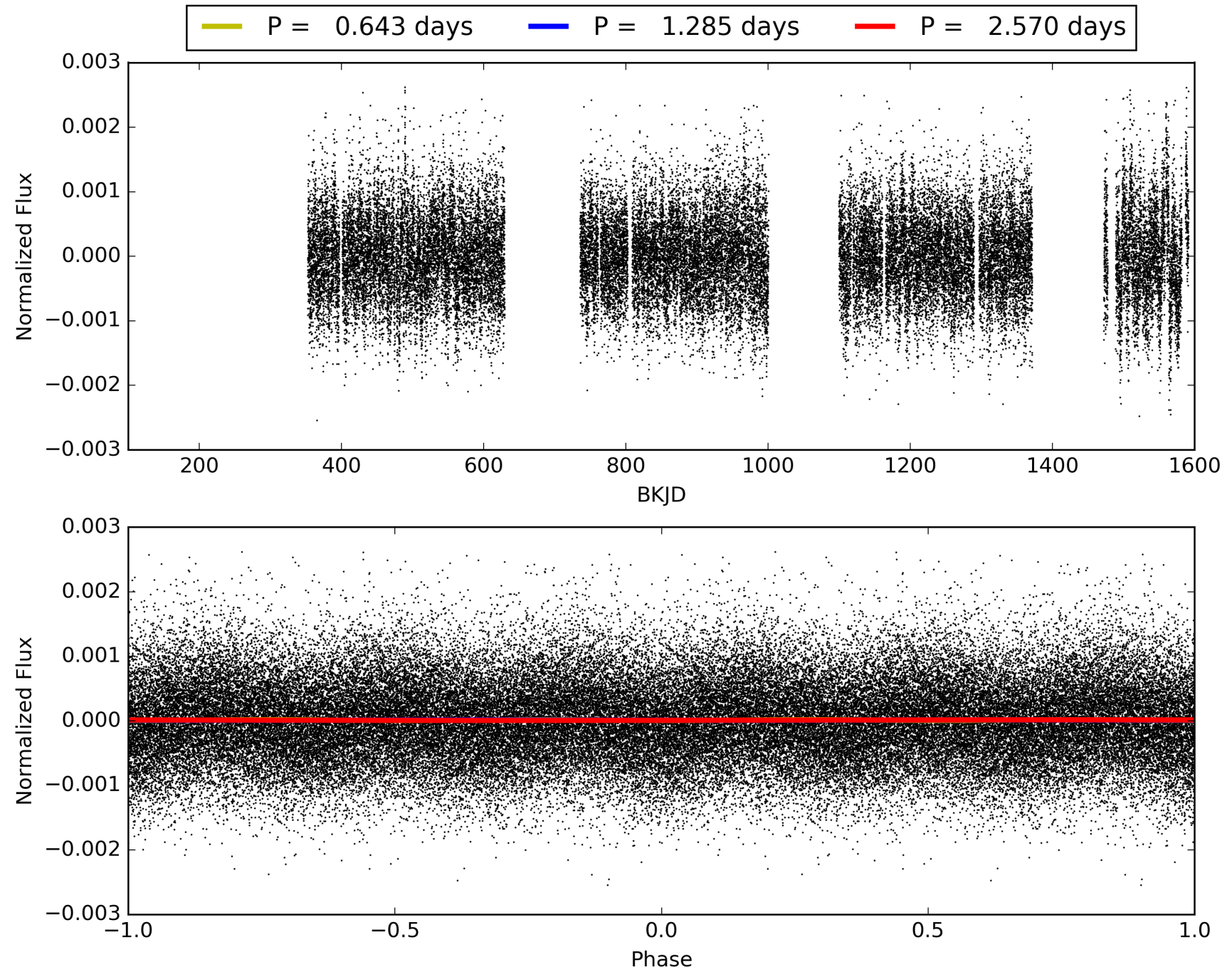
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:58:07 Z

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

TCE 010618758-01, PDC Light Curves

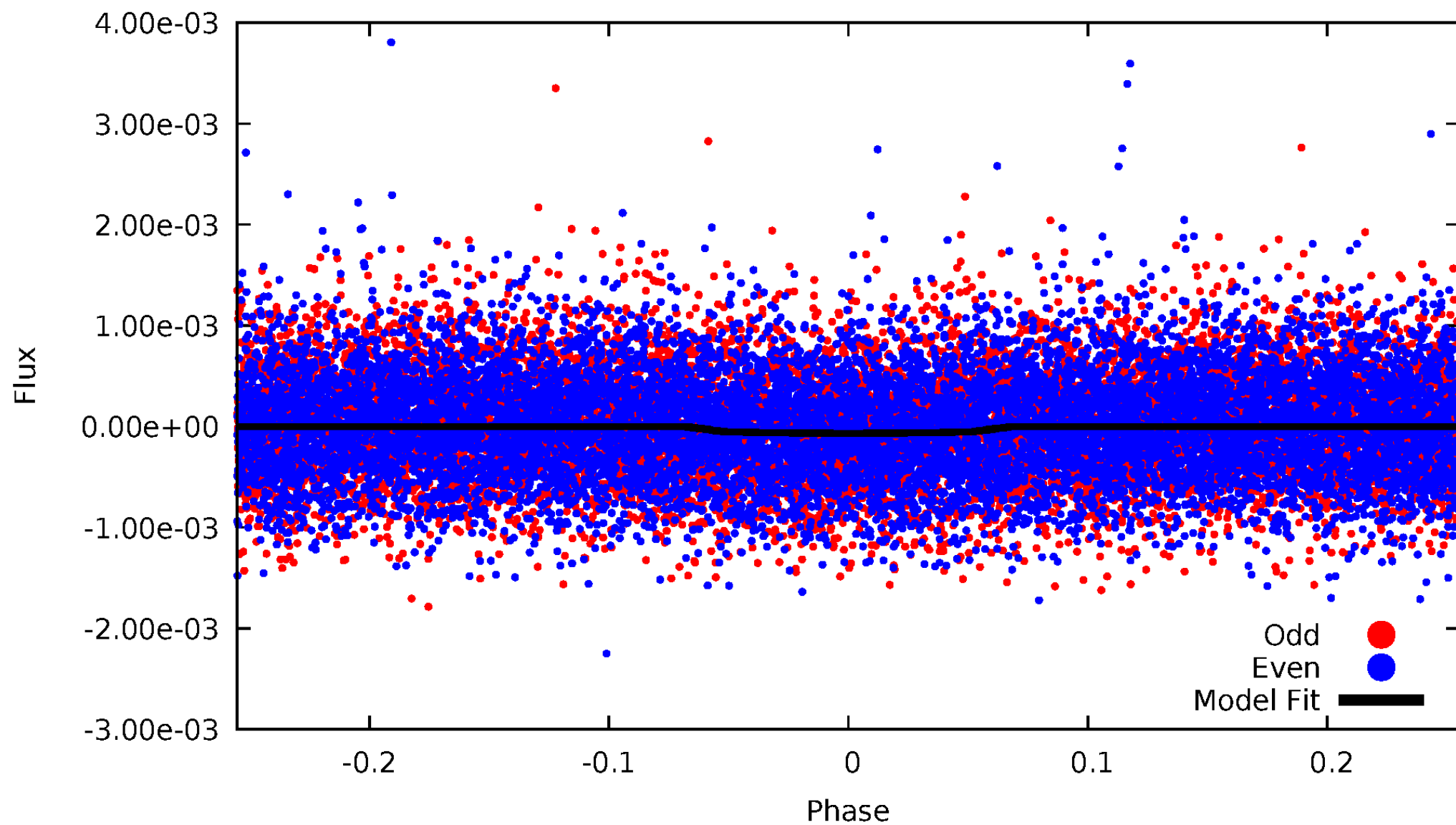


TCE 010618758-01



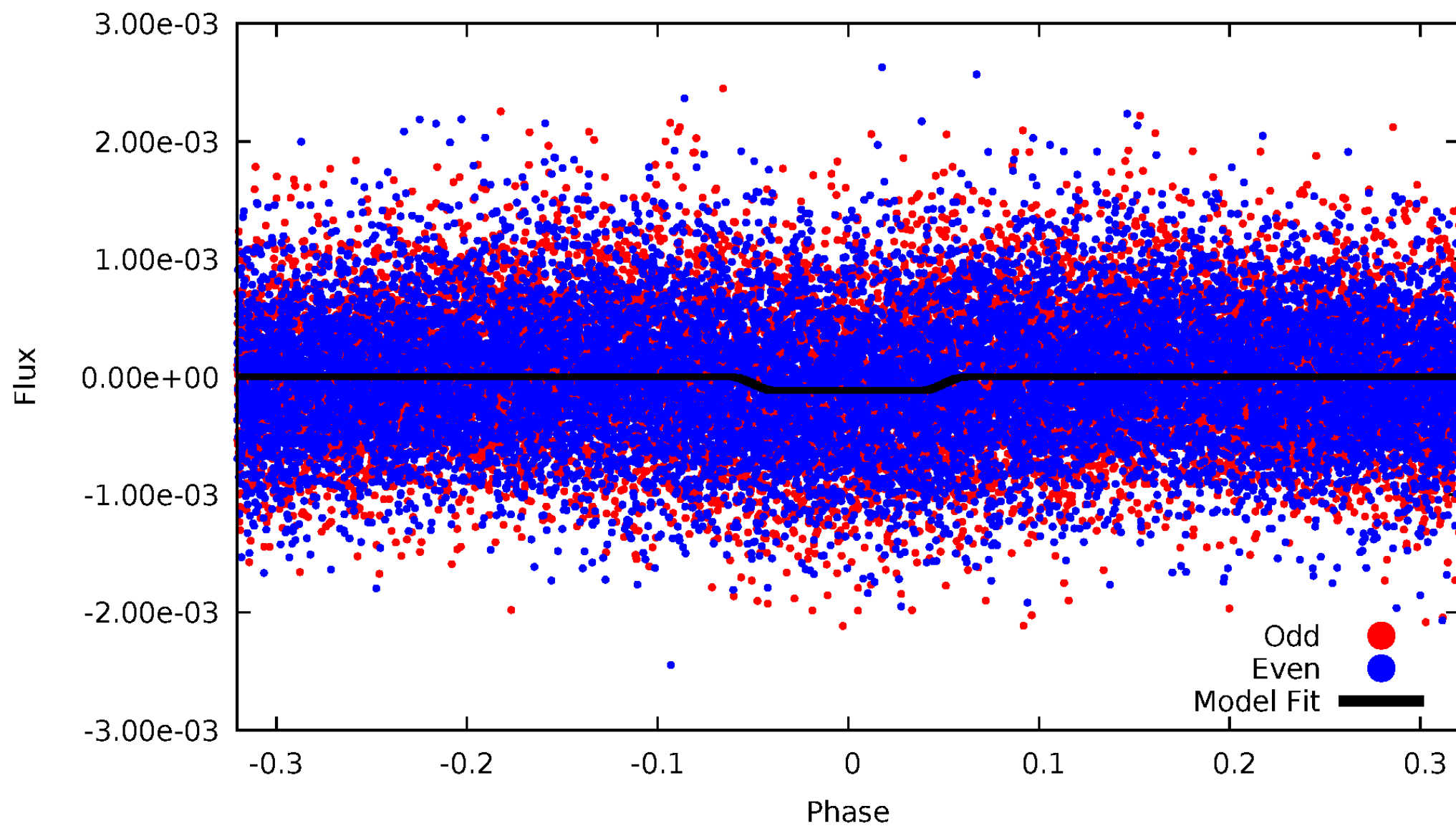
DV Odd/Even

TCE 010618758-01

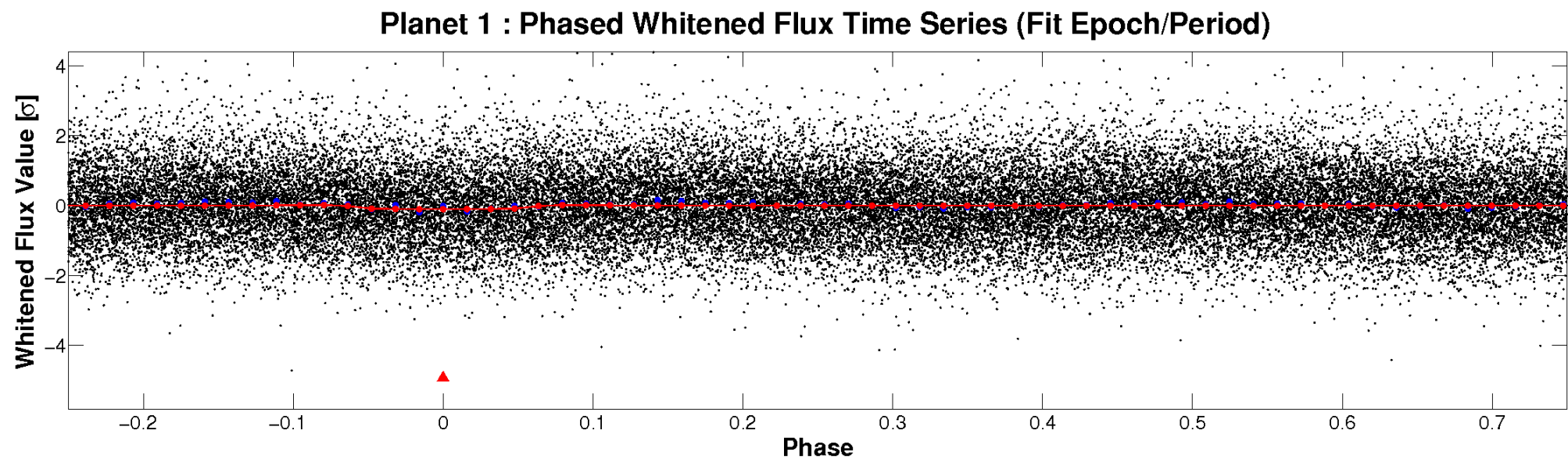
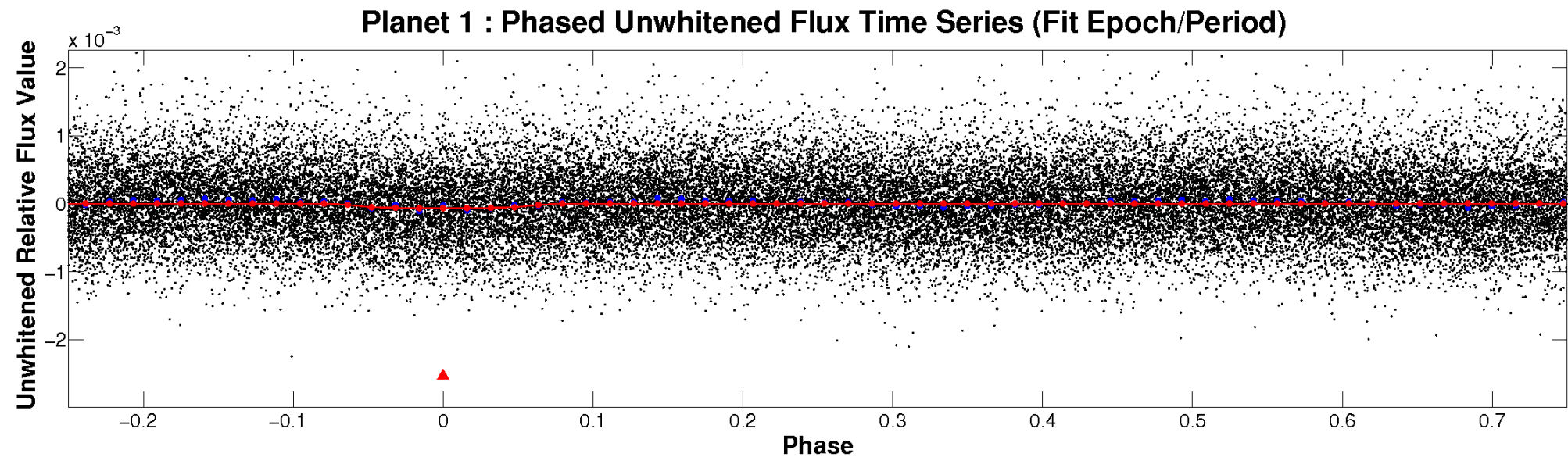


ALT Odd/Even

TCE 010618758-01

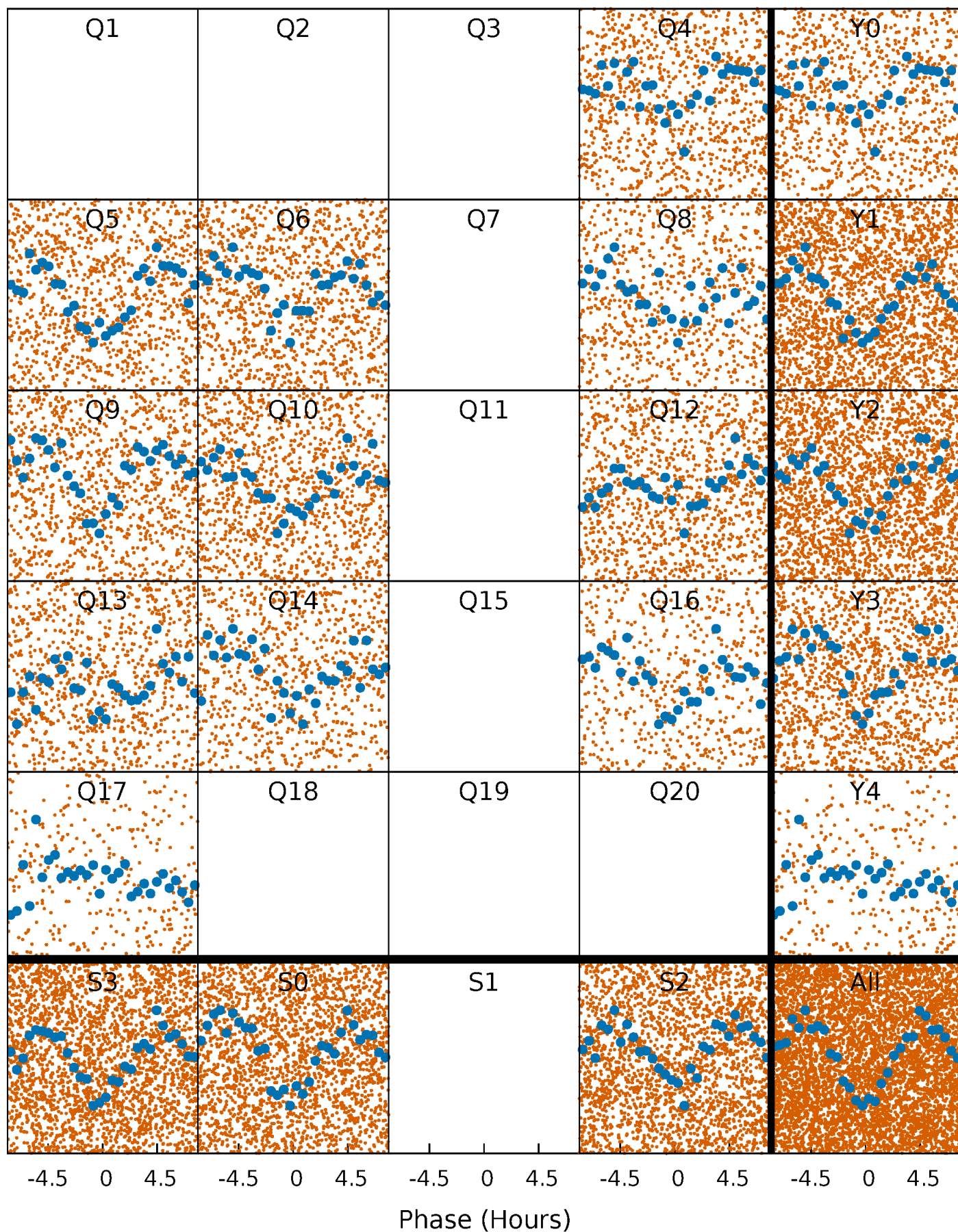


Non-Whitened Vs. Whitened Light Curve



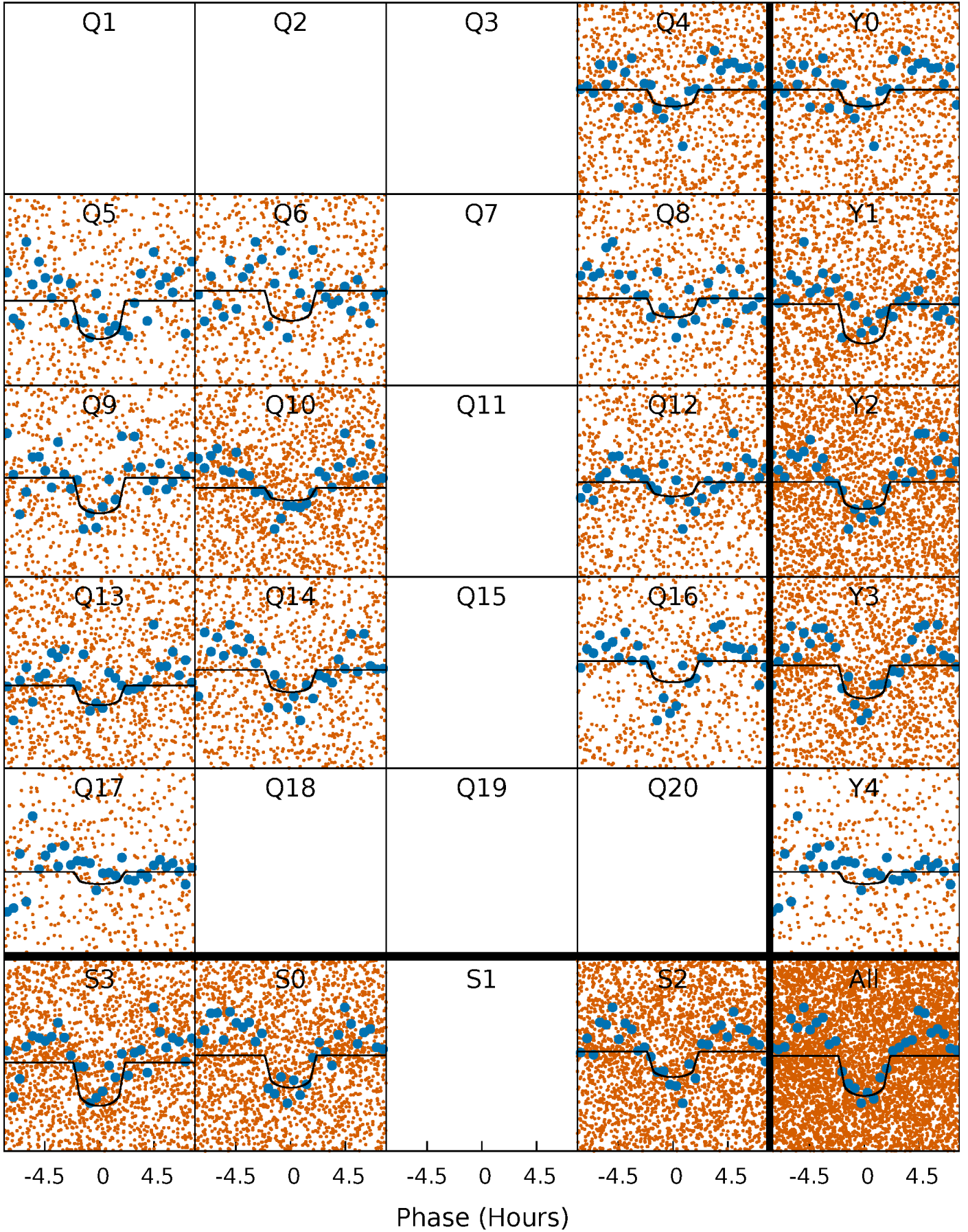
PDC Quarter-Phased Transit Curves

TCE 010618758-01 P= 1.285039 Days $T_0=131.645787$ (BKJD)



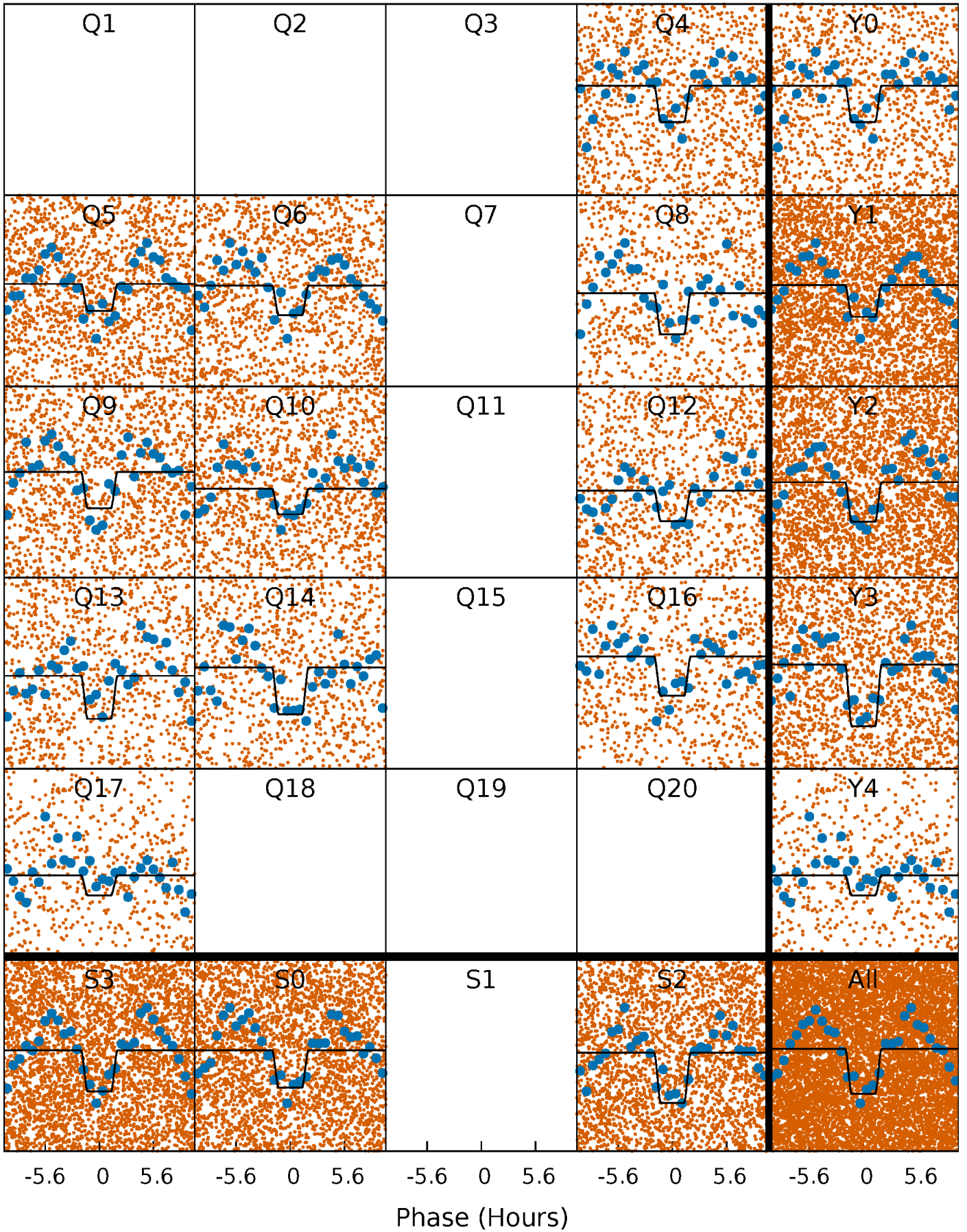
DV Quarter-Phased Transit Curves

TCE 010618758-01 P= 1.285039 Days $T_0=131.645787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

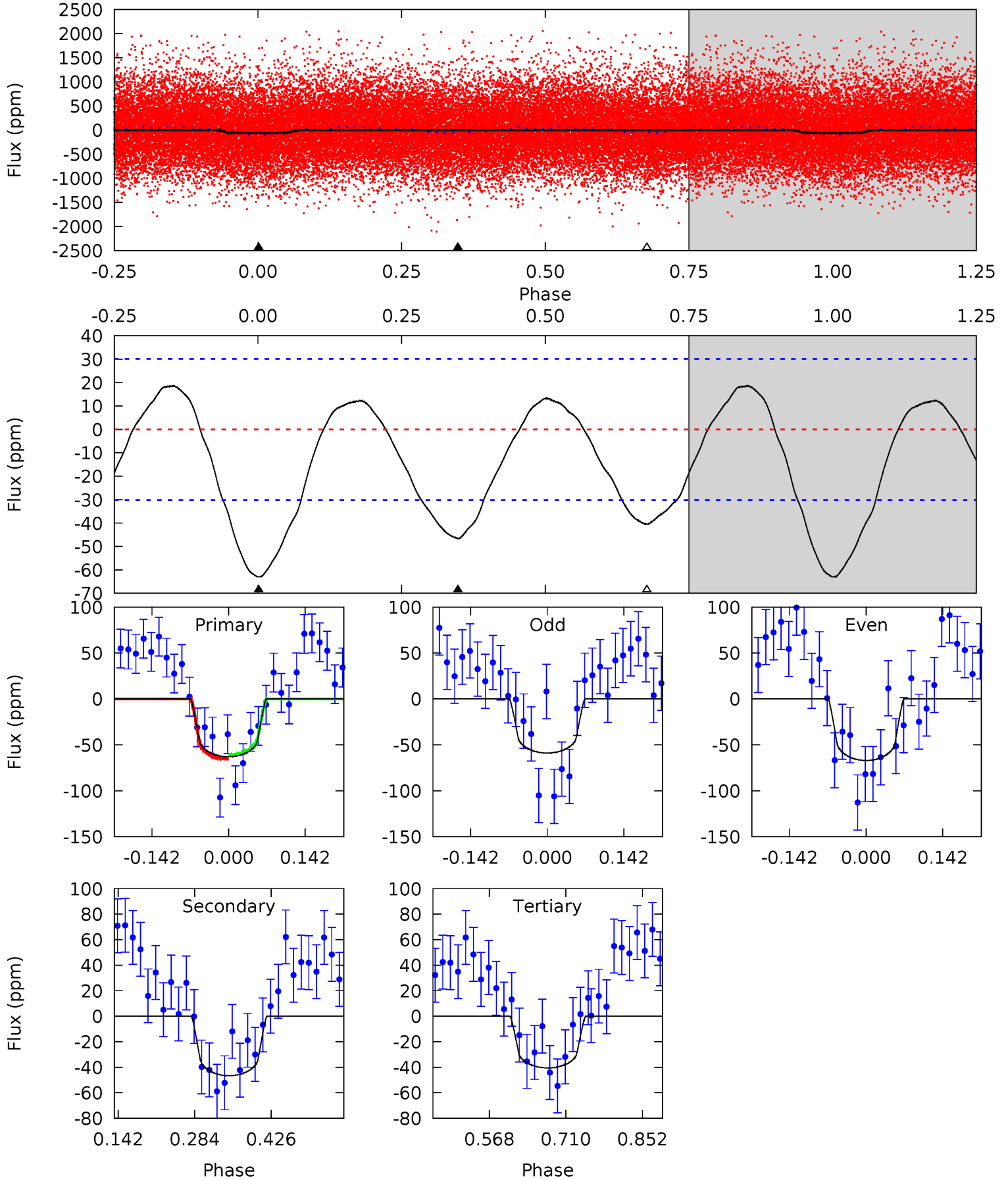
TCE 010618758-01 P= 1.285060 Days $T_0=131.631741$ (BKJD)



DV Model-Shift Uniqueness Test

010618758-01, P = 1.285039 Days, E = 131.645787 Days

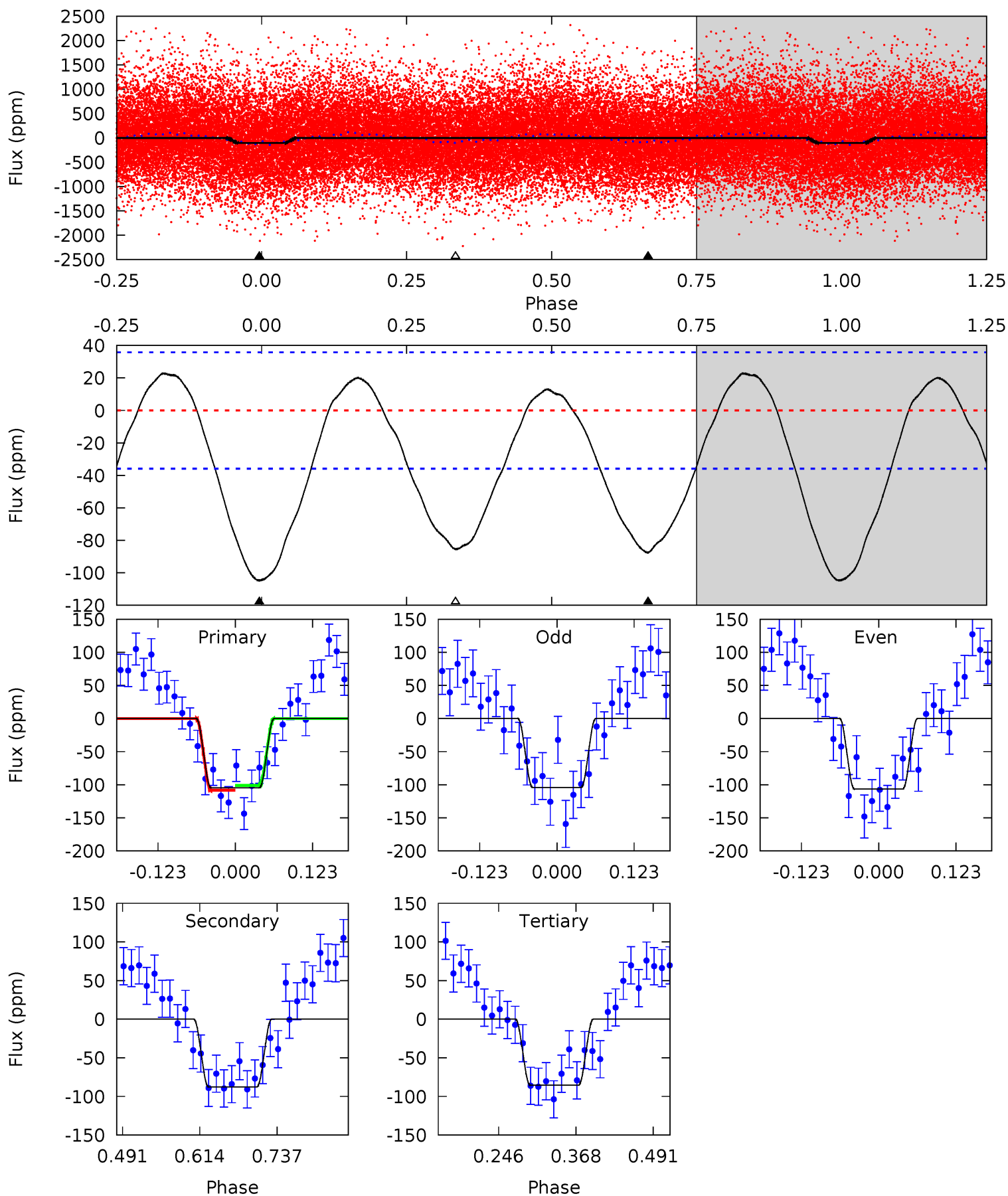
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.38	6.95	6.03	0	4.49	1.47	2.97	3.35	9.38	0.91	6.95	0.60	0.92	0.23	0.34



Alt Model-Shift Uniqueness Test

010618758-01, P = 1.285060 Days, E = 131.631741 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	11.0	10.8	0	4.52	1.54	4.61	2.44	13.2	0.28	11.0	0.15	1.03	0.18	0.46



Stellar Parameters For KIC 010618758

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5999^{+189}_{-232}	$4.494^{+0.048}_{-0.192}$	$-0.060^{+0.250}_{-0.350}$	$0.959^{+0.270}_{-0.108}$	$1.045^{+0.126}_{-0.139}$	$1.670^{+0.412}_{-0.802}$
	+3%/-4%	+1%/-4%	+417%/-583%	+28%/-11%	+12%/-13%	+25%/-48%
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 010618758-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 7	$1.03^{+0.78}_{-0.64}$	2419^{+160}_{-128}	5147^{+3188}_{-1052}	13^{+71}_{-9}
Alt.	-88 ± 8	$1.24^{+0.86}_{-0.74}$	2414^{+174}_{-126}	5452^{+3562}_{-1069}	17^{+86}_{-11}

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

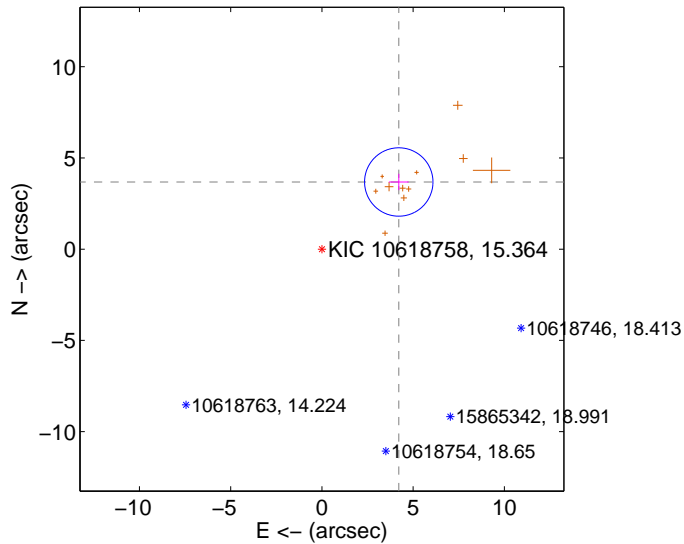
Supplemental centroid analysis for 010618758-01. Kepler magnitude: 15.36. Transit SNR 6.35

There are 0 quarters with good PRF difference image offsets

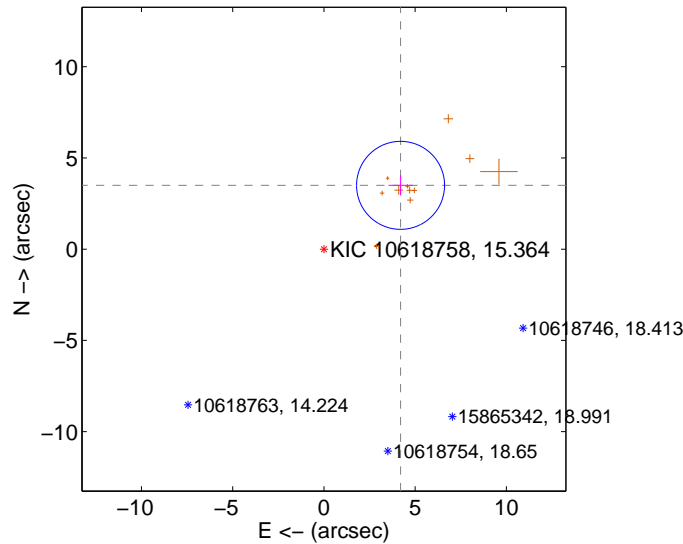
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.593 ± 0.625	8.96	-4.211 ± 0.544	3.681 ± 0.448
PRF-fit source offset from KIC position	5.465 ± 0.804	6.80	-4.200 ± 0.666	3.497 ± 0.555
photometric centroid source offset	5.24 ± 1.93	2.71	-4.99 ± 1.96	1.62 ± 1.63

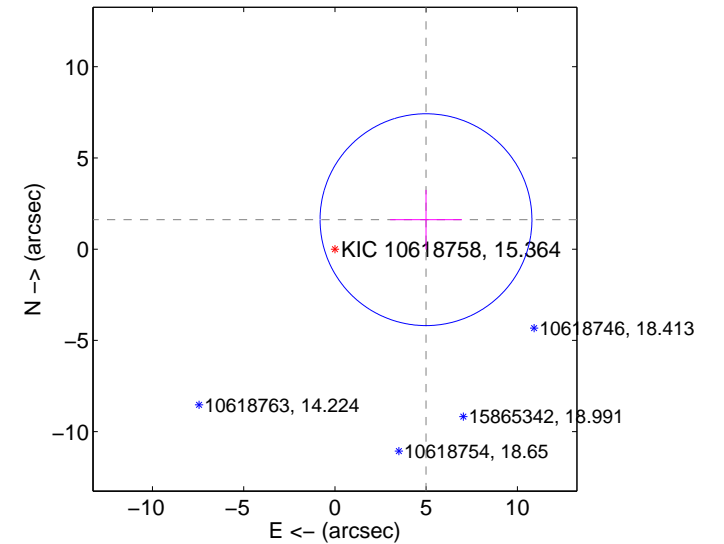
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

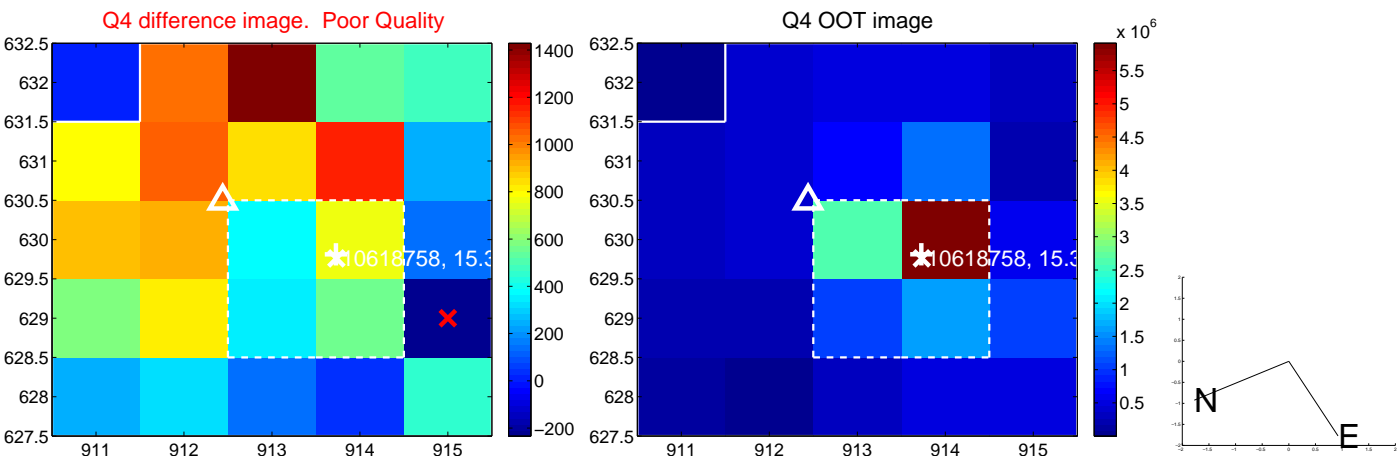


offset from photometric centroids

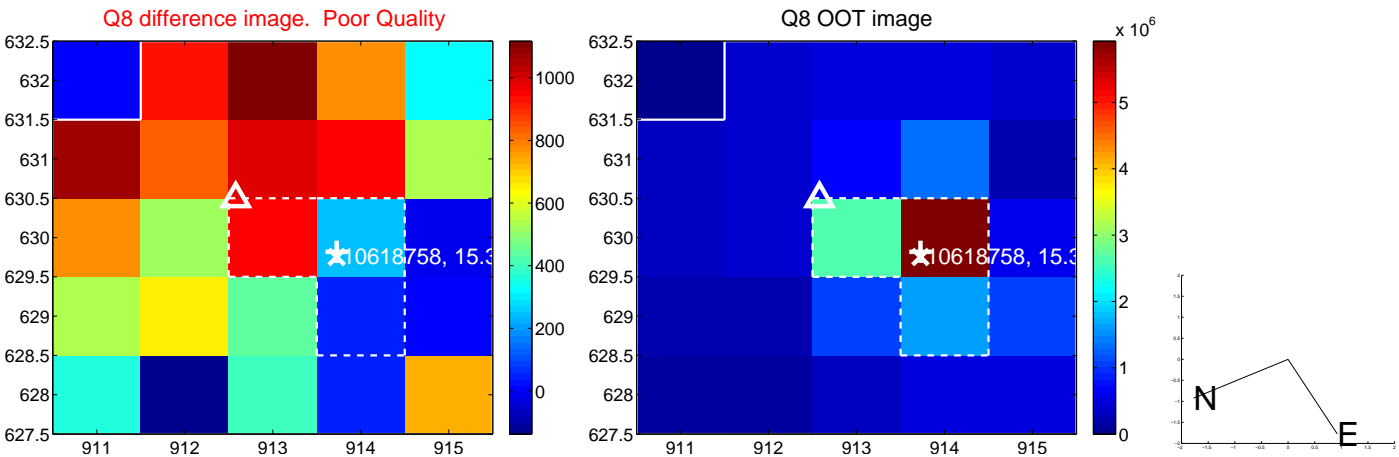
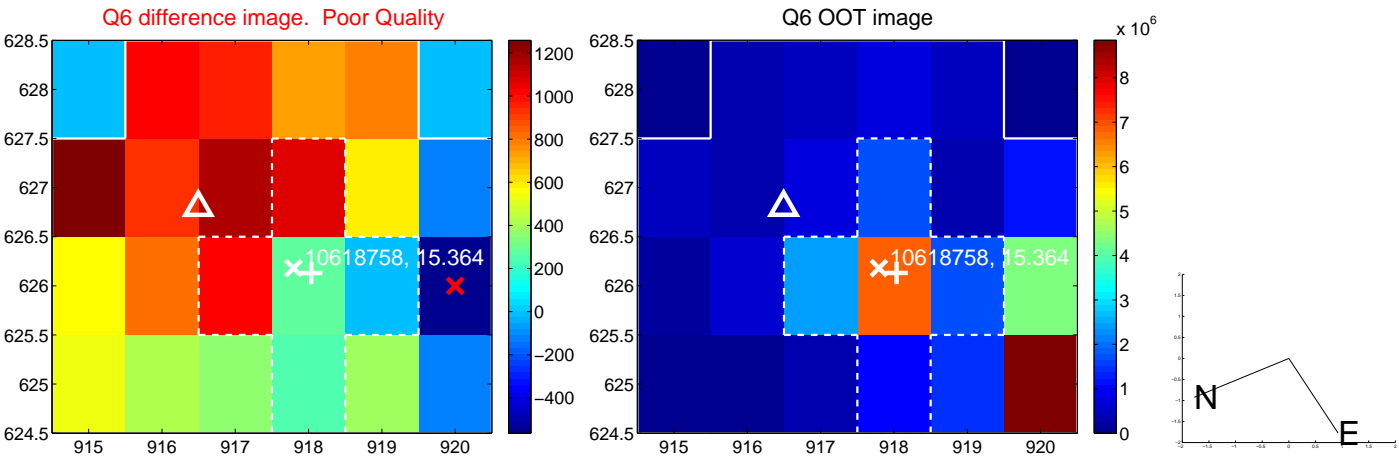
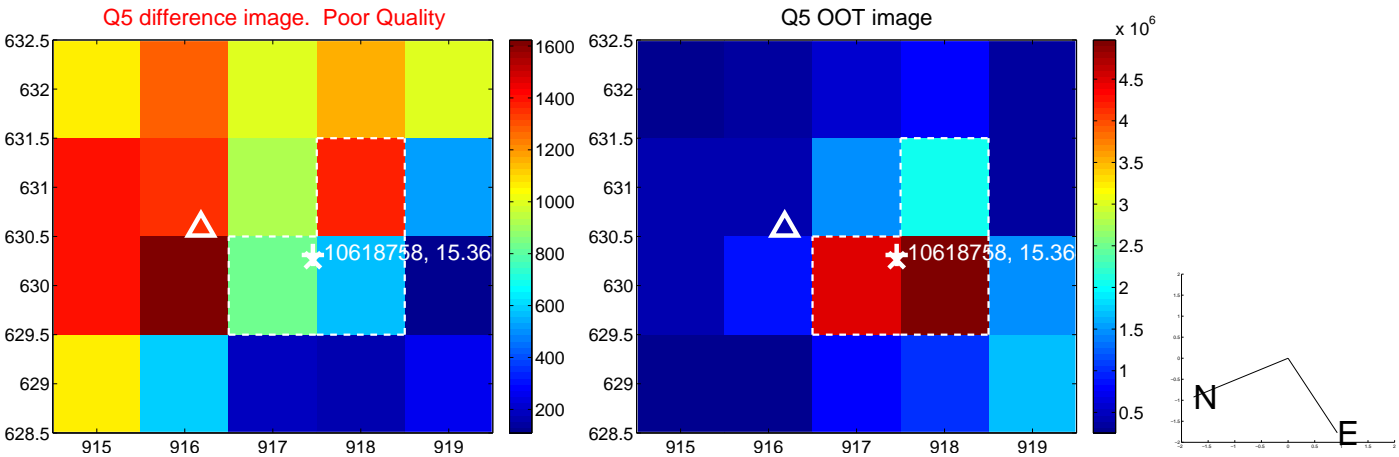


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

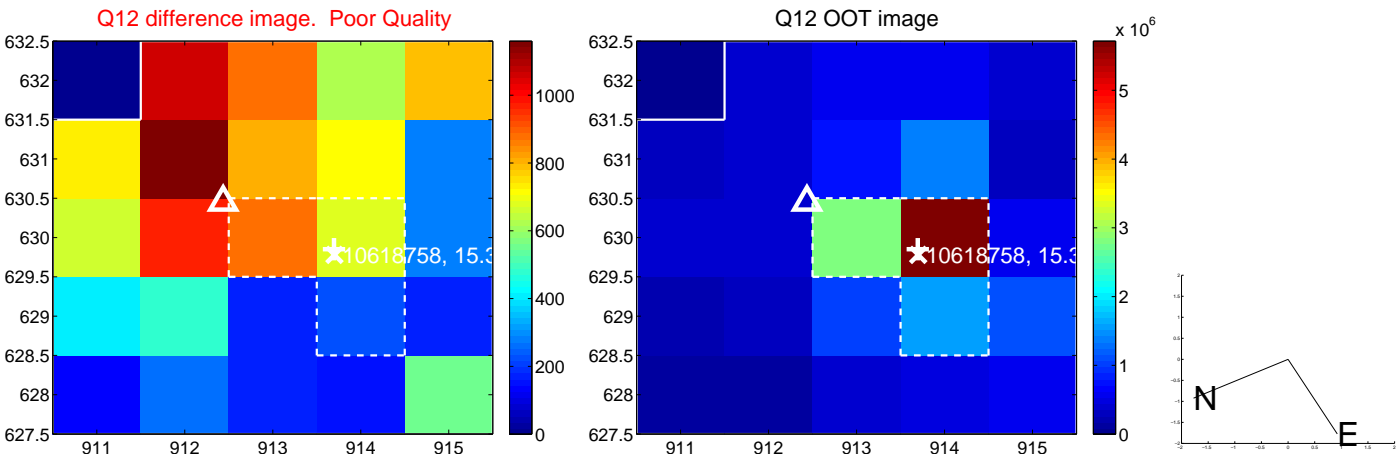
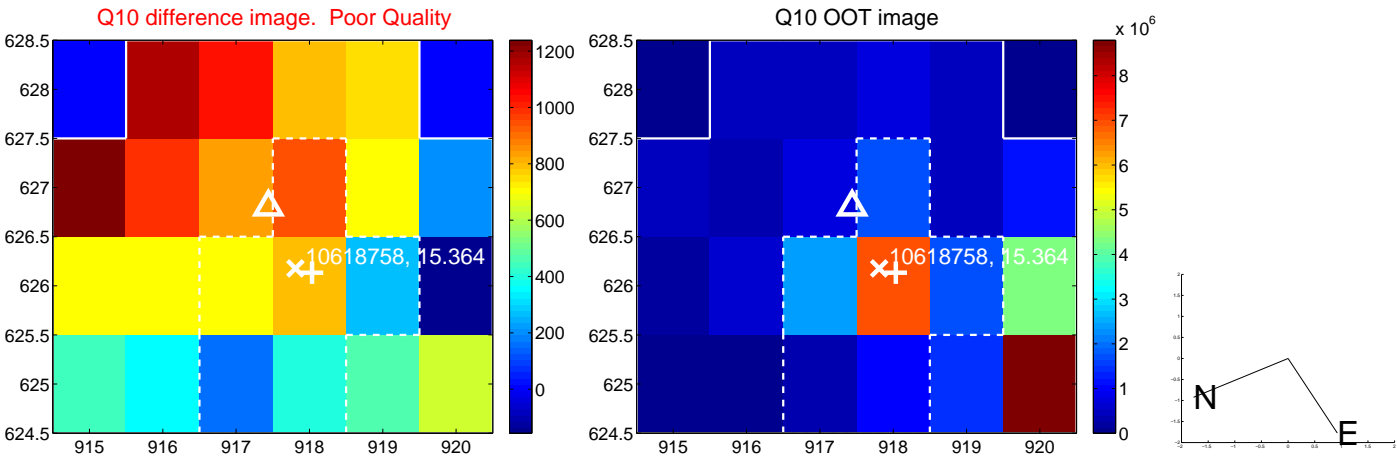
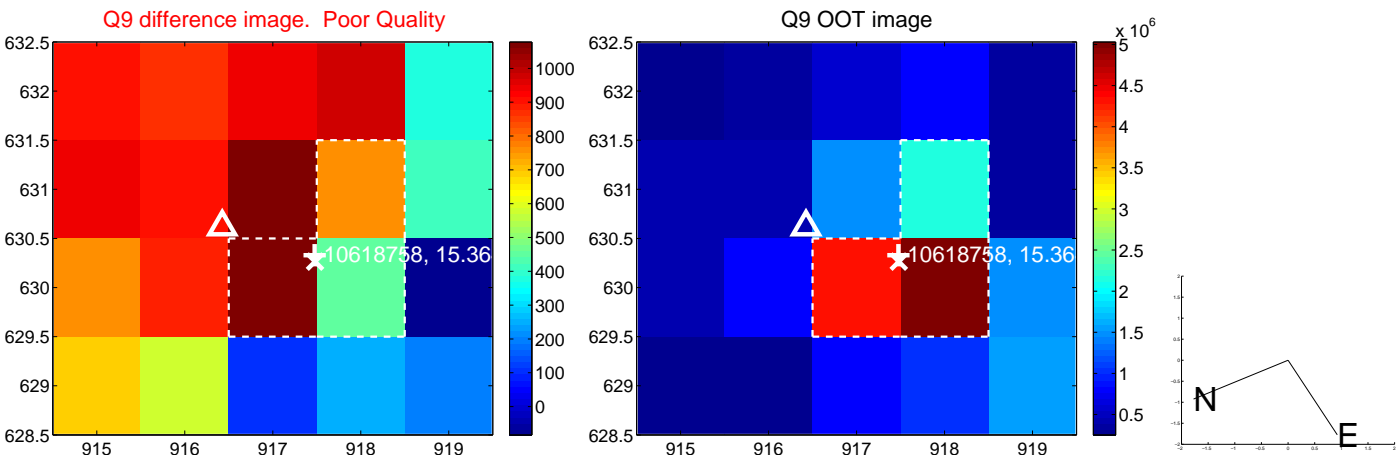
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



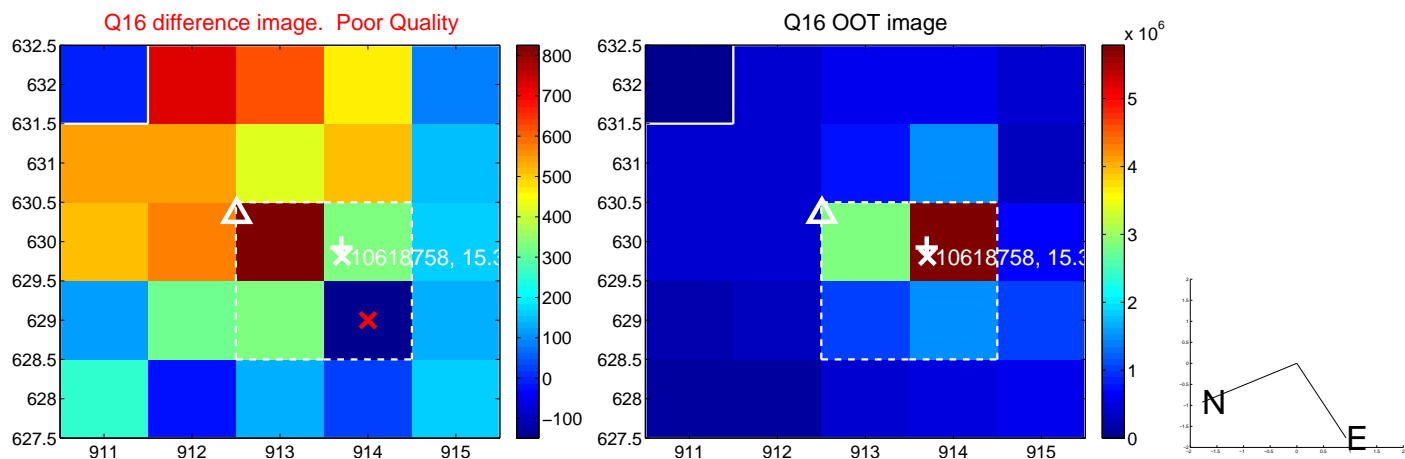
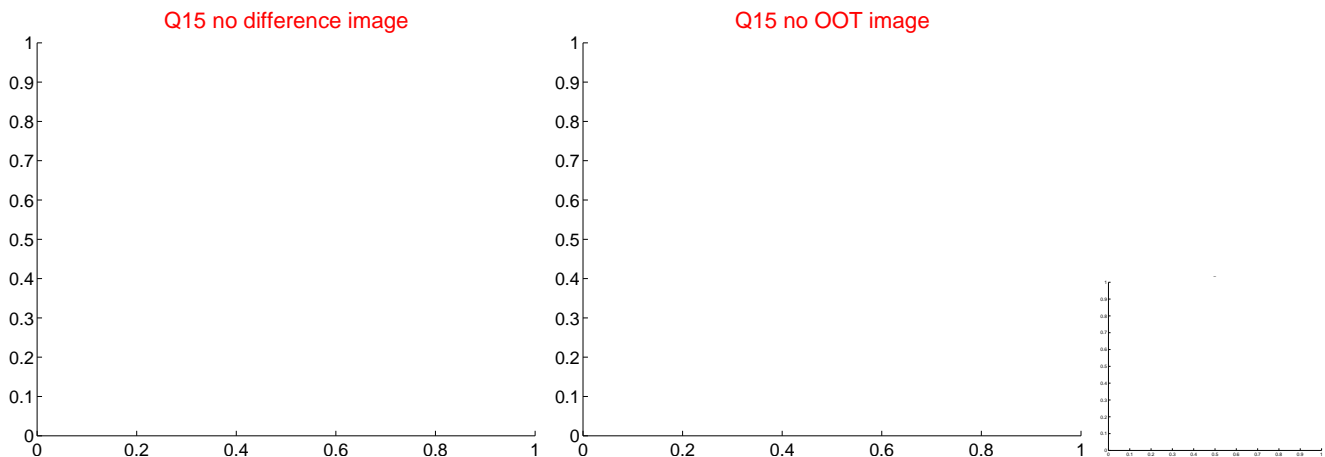
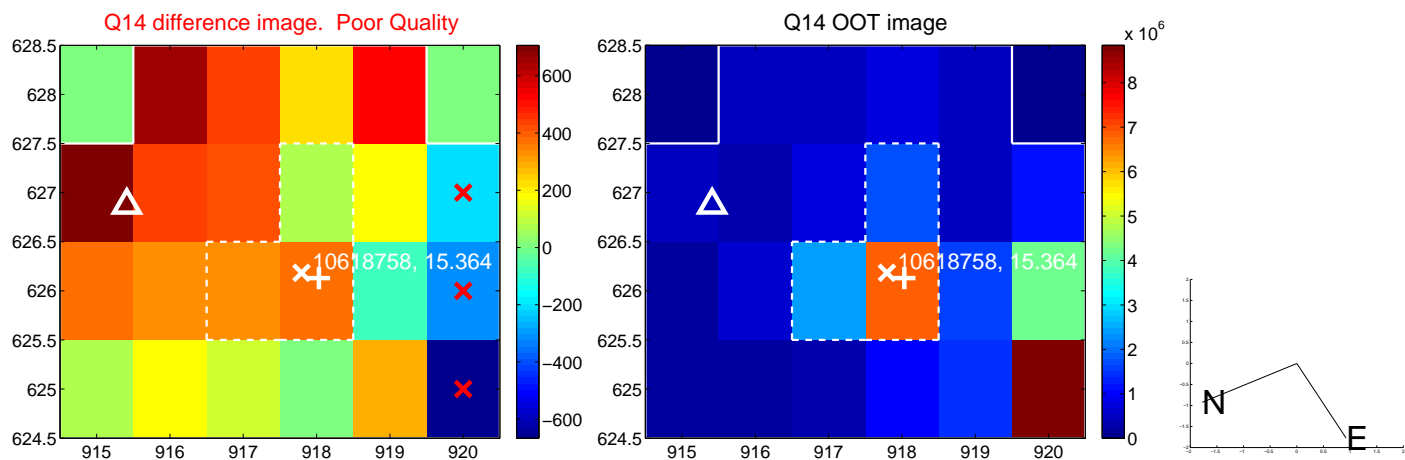
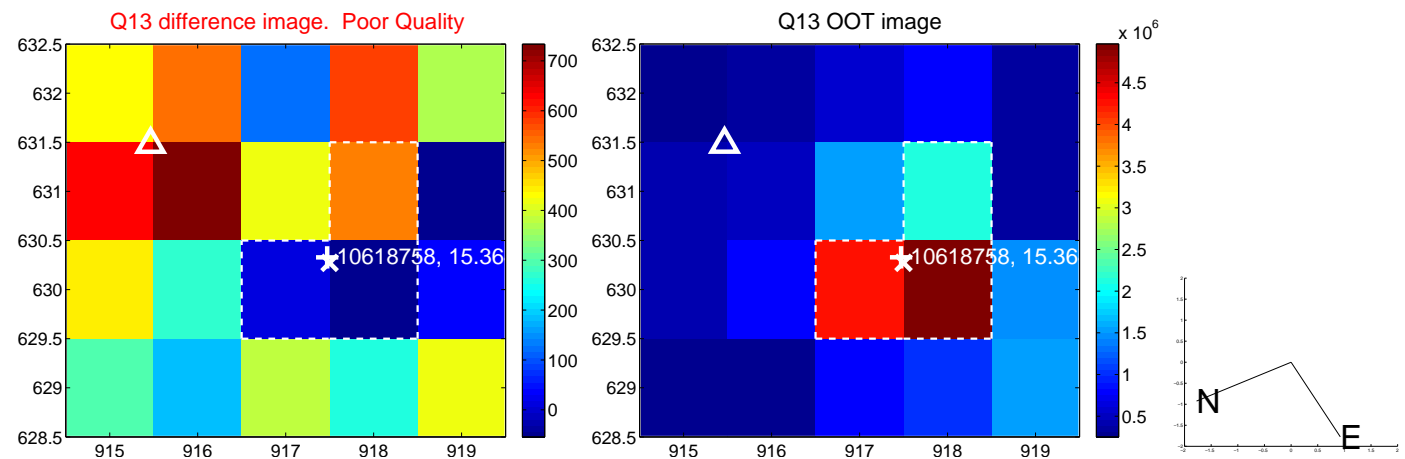
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



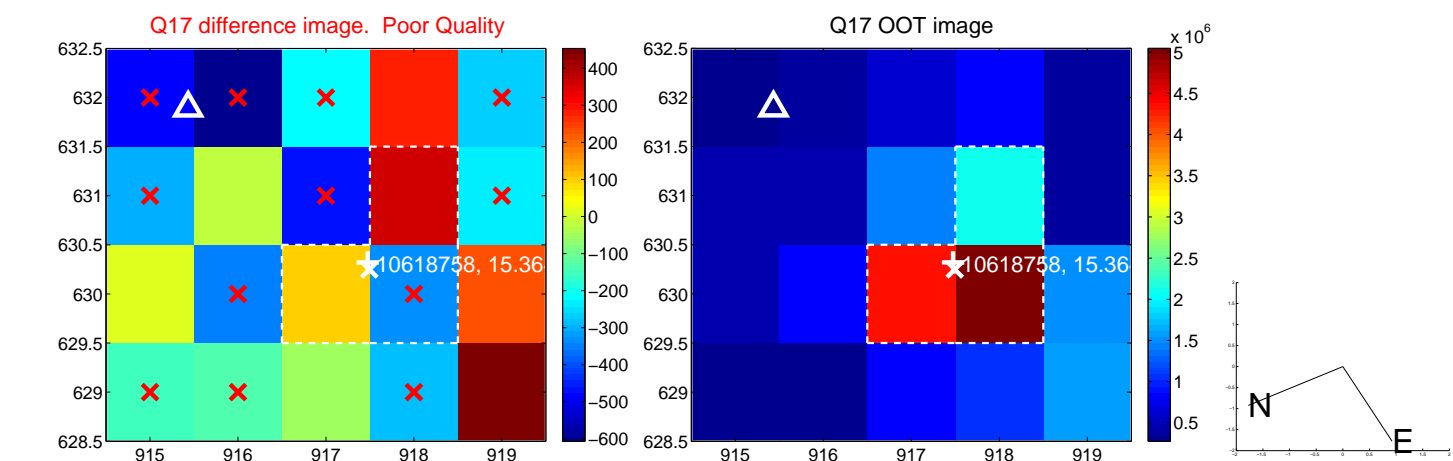
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



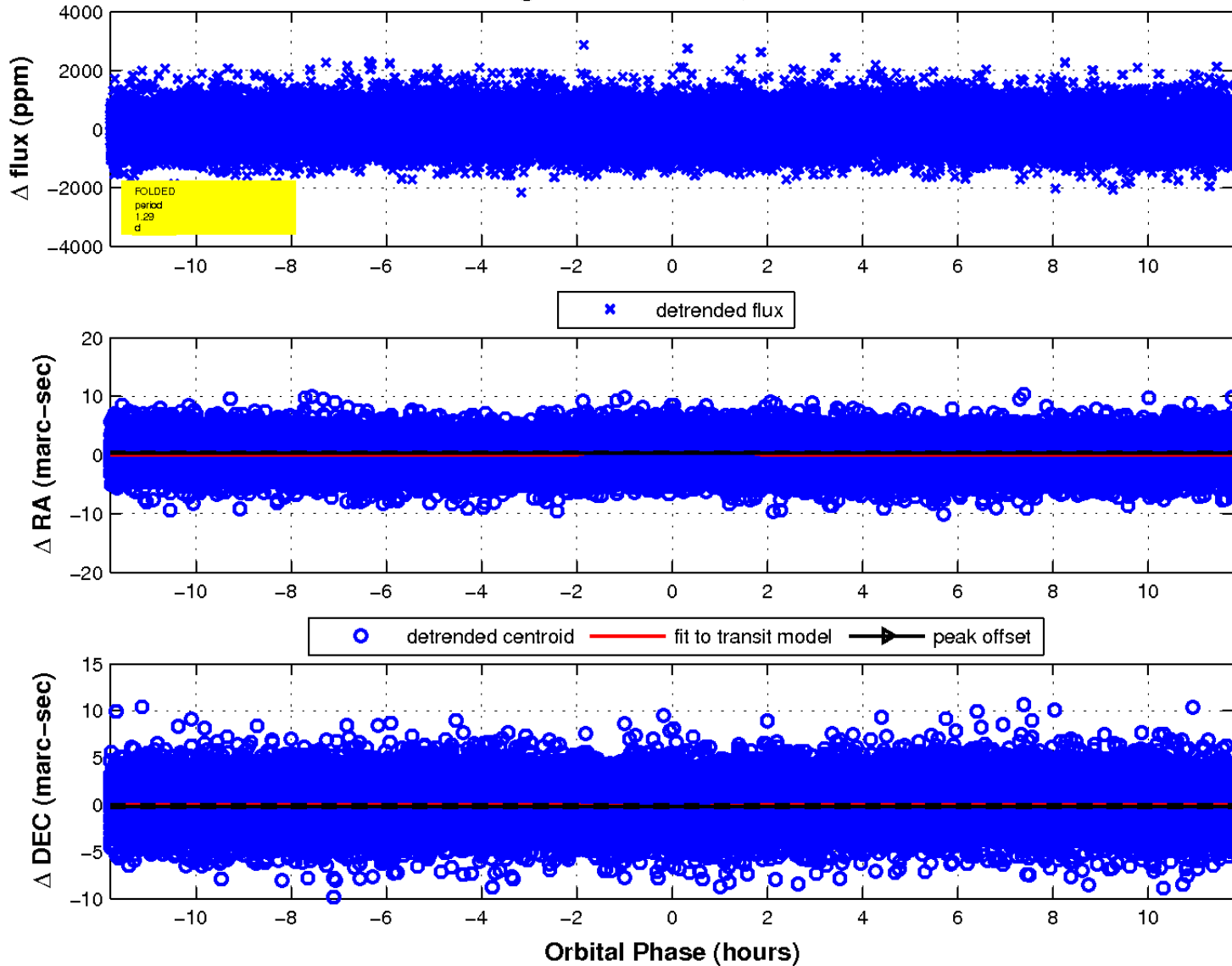
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

