

KIC 007115463

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 _⊕)
007115463-01	OBS	6823.01	0.566738	131.876850	14.5	3.237	11.5	4.4	0.97	6075	0.38	6177.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115463-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—HALO_GHOST—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.

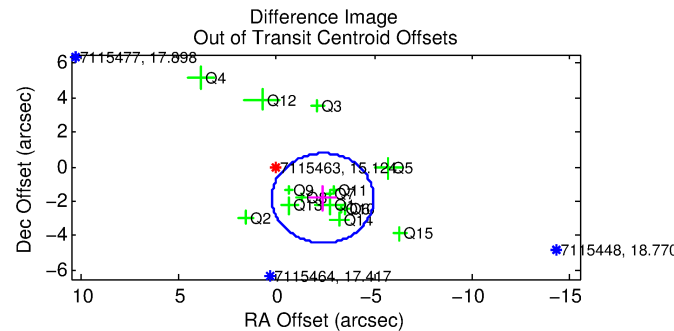
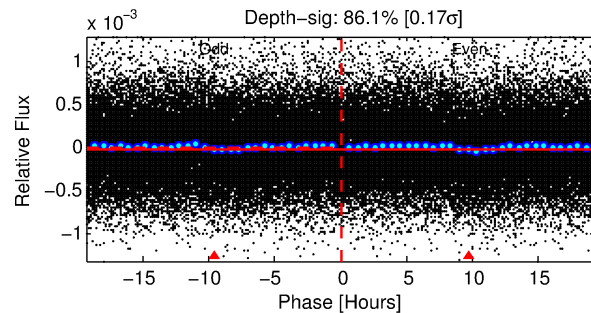
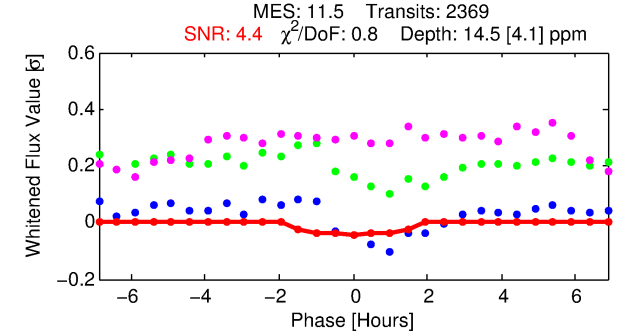
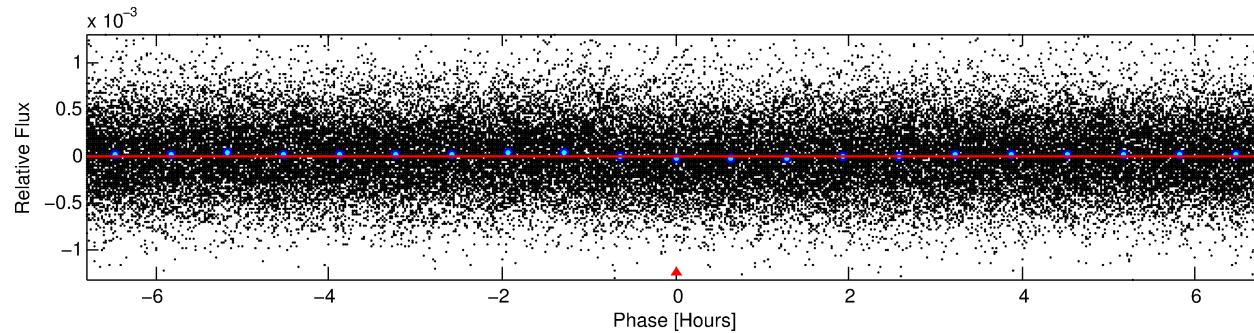
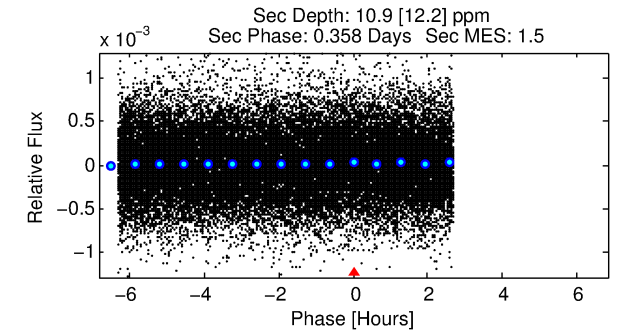
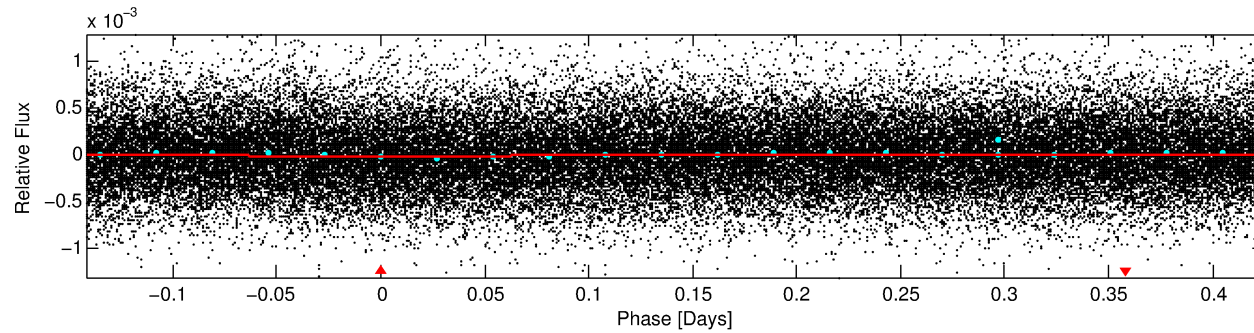
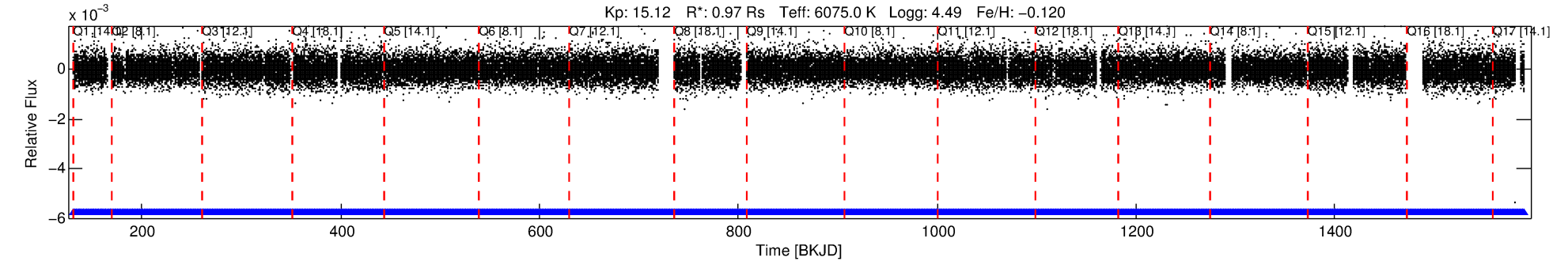
Ephemeris Match Information For 007115463-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007115463-01	7115463	RR-Lyr-pri	7198959	1:1	958.1	4	-241	7.86	15.12	41553.00	Direct-PRF	0	2.08	20.76

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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 σ_P < 5.0 and σ_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: 7115463 Candidate: 1 of 1 Period: 0.567 d
KOI: K06823 Corr: No Ephemeris Match



DV Fit Results:

Period = 0.56674 [0.00002] d
Epoch = 131.8768 [0.0092] BKJD
Rp/R* = 0.0036 [0.0051]
a/R* = 1.39 [4.64]
b = 0.45 [12.15]
Seff = 6177.12 [2499.00]
Teff = 2261 [229] K
Rp = 0.38 [0.55] Re
a = 0.0136 [0.0036] AU
Ag = 7.83 [24.05] [0.28σ]
Teffp = 5846 [4460] K [0.80σ]

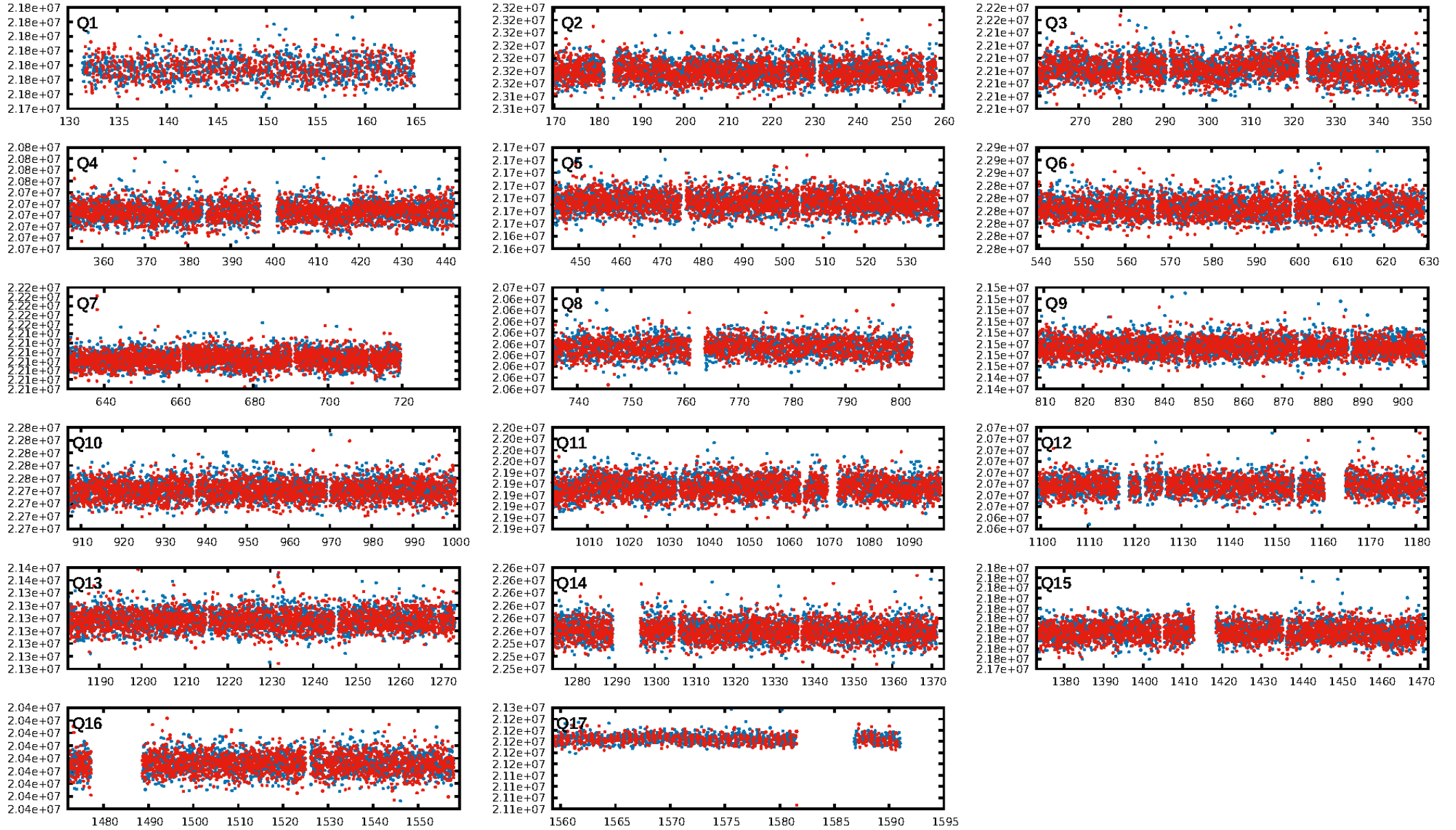
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.74e-26
RollingBand-fgt: 1.00 [2263/2263]
GhostDiagnostic-chr: 0.1282
Centroid-sig: N/A
Centroid-so: 2.306 arcsec [0.73σ]
OotOffset-rm: 2.979 arcsec [3.44σ]
KicOffset-rm: 2.984 arcsec [3.61σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

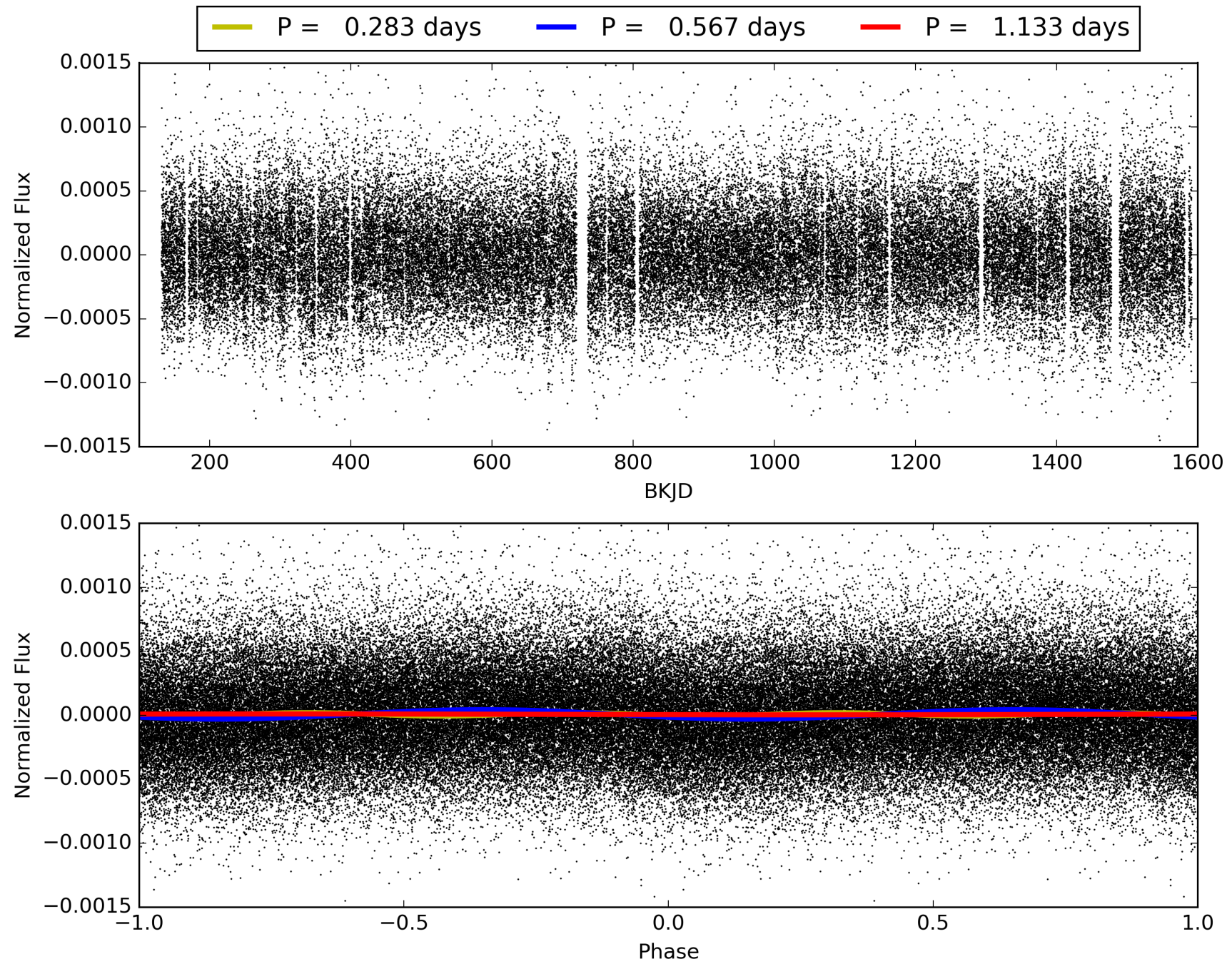
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:39:41 Z

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

TCE 007115463-01, PDC Light Curves

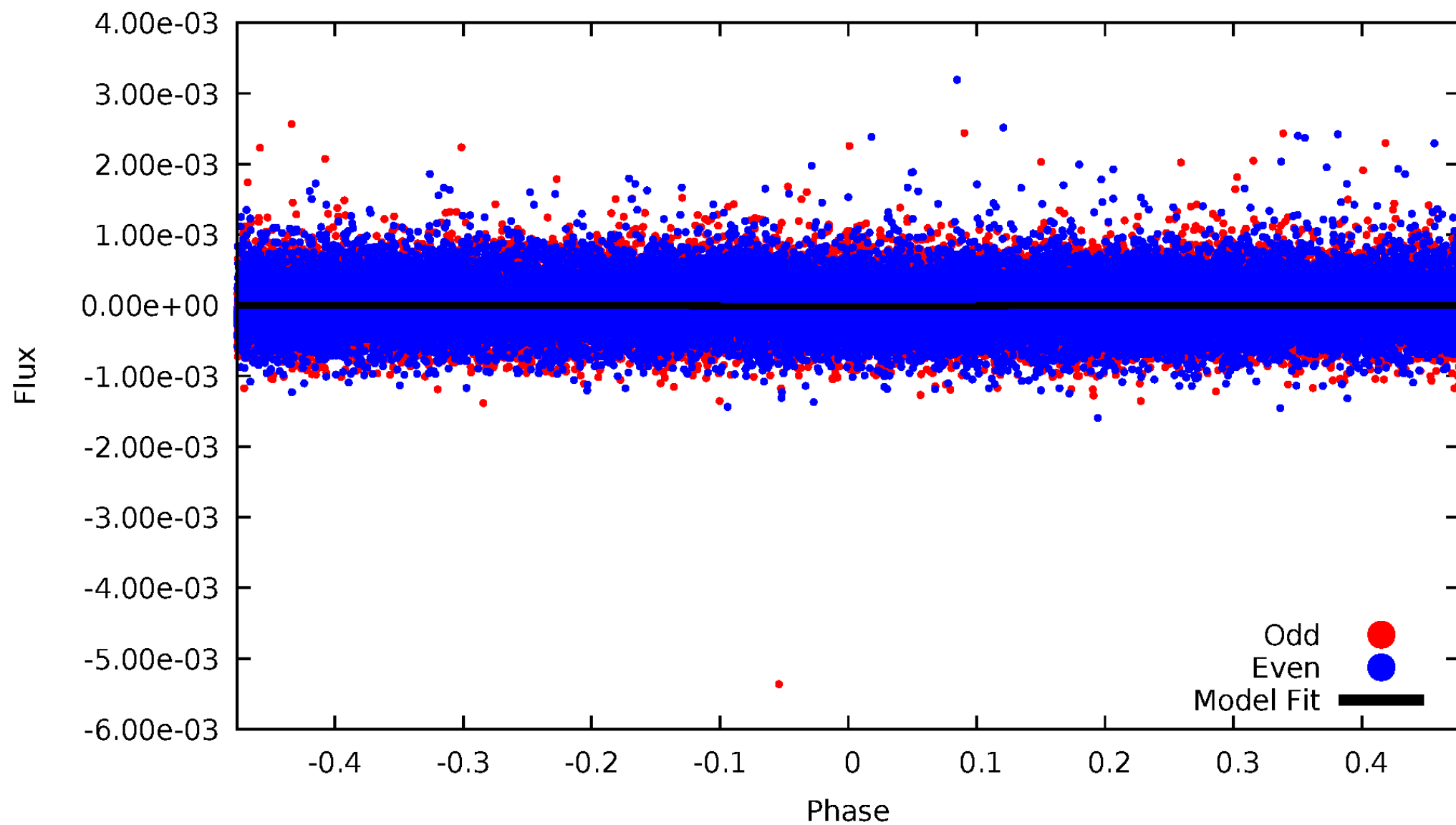


TCE 007115463-01



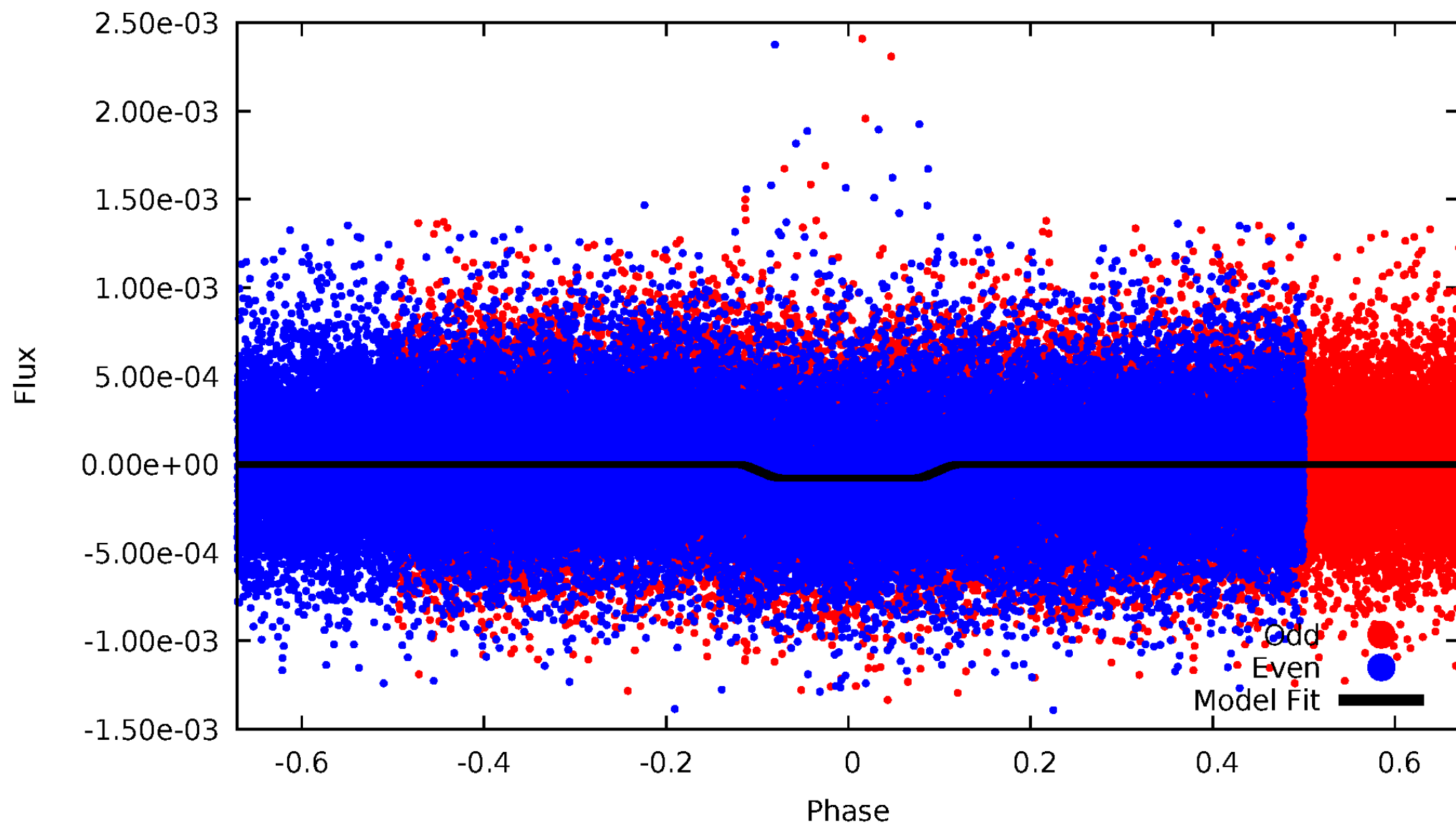
DV Odd/Even

TCE 007115463-01



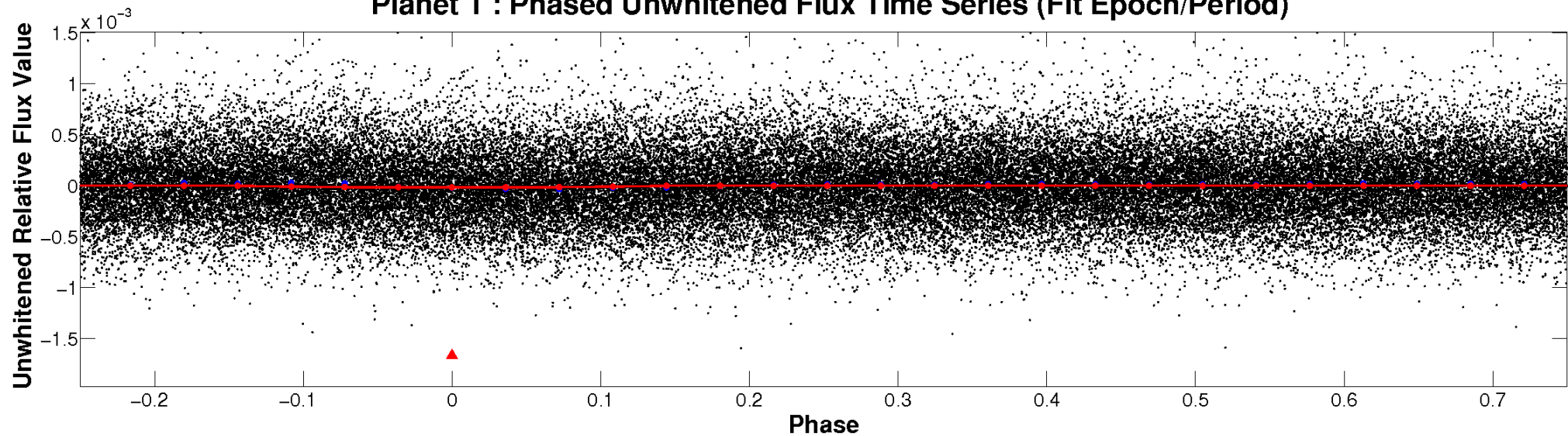
ALT Odd/Even

TCE 007115463-01

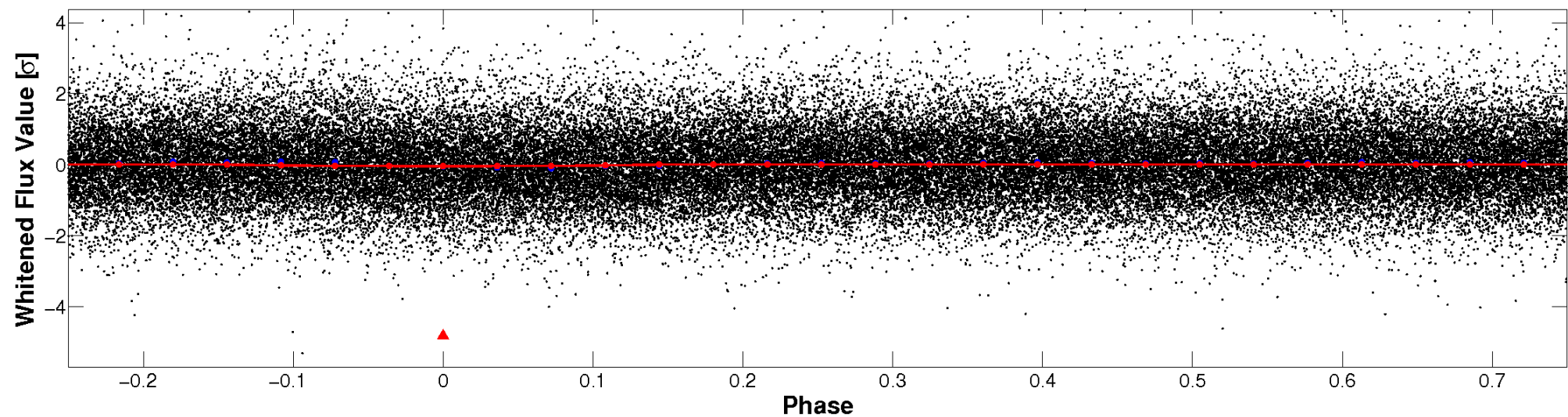


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

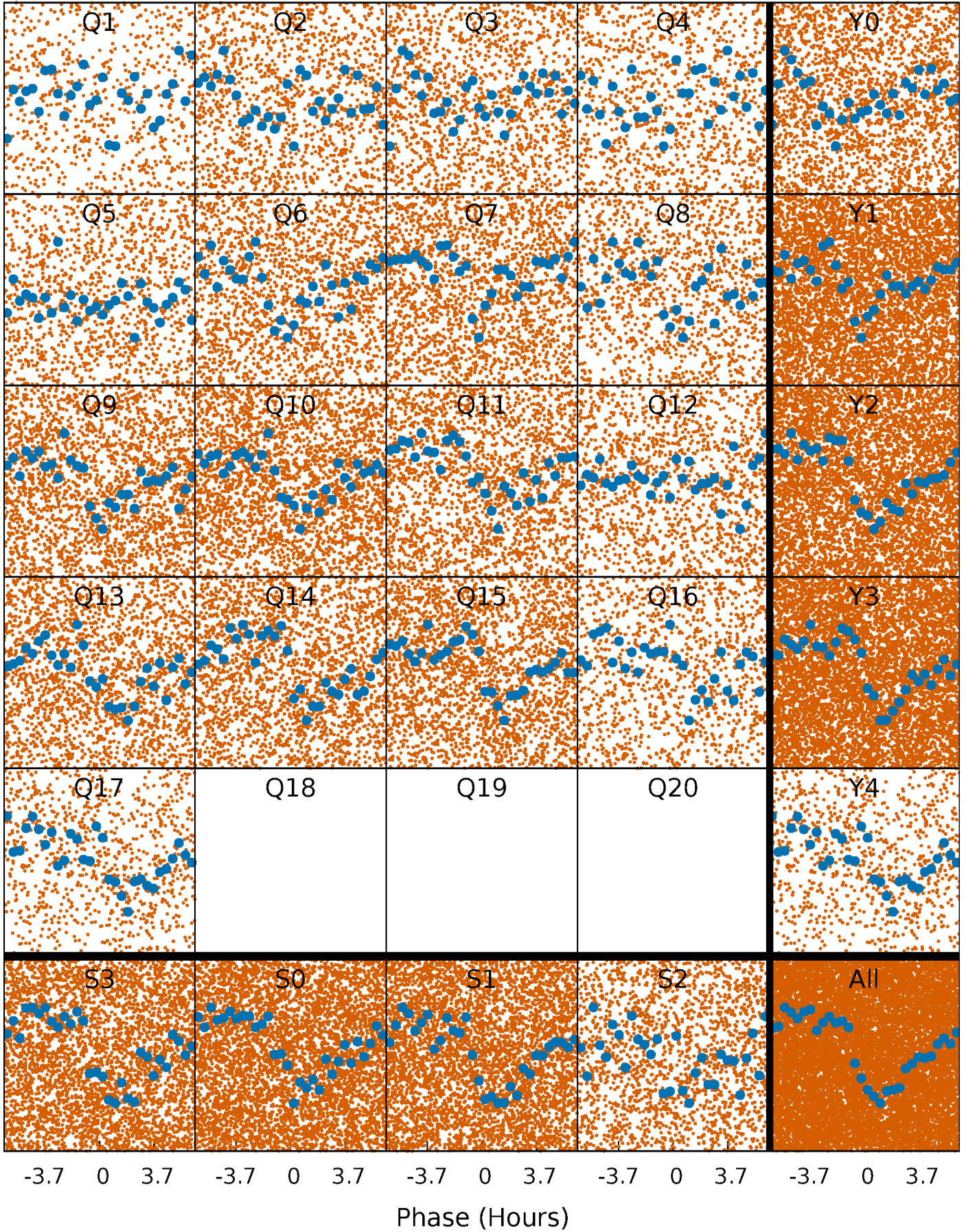


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



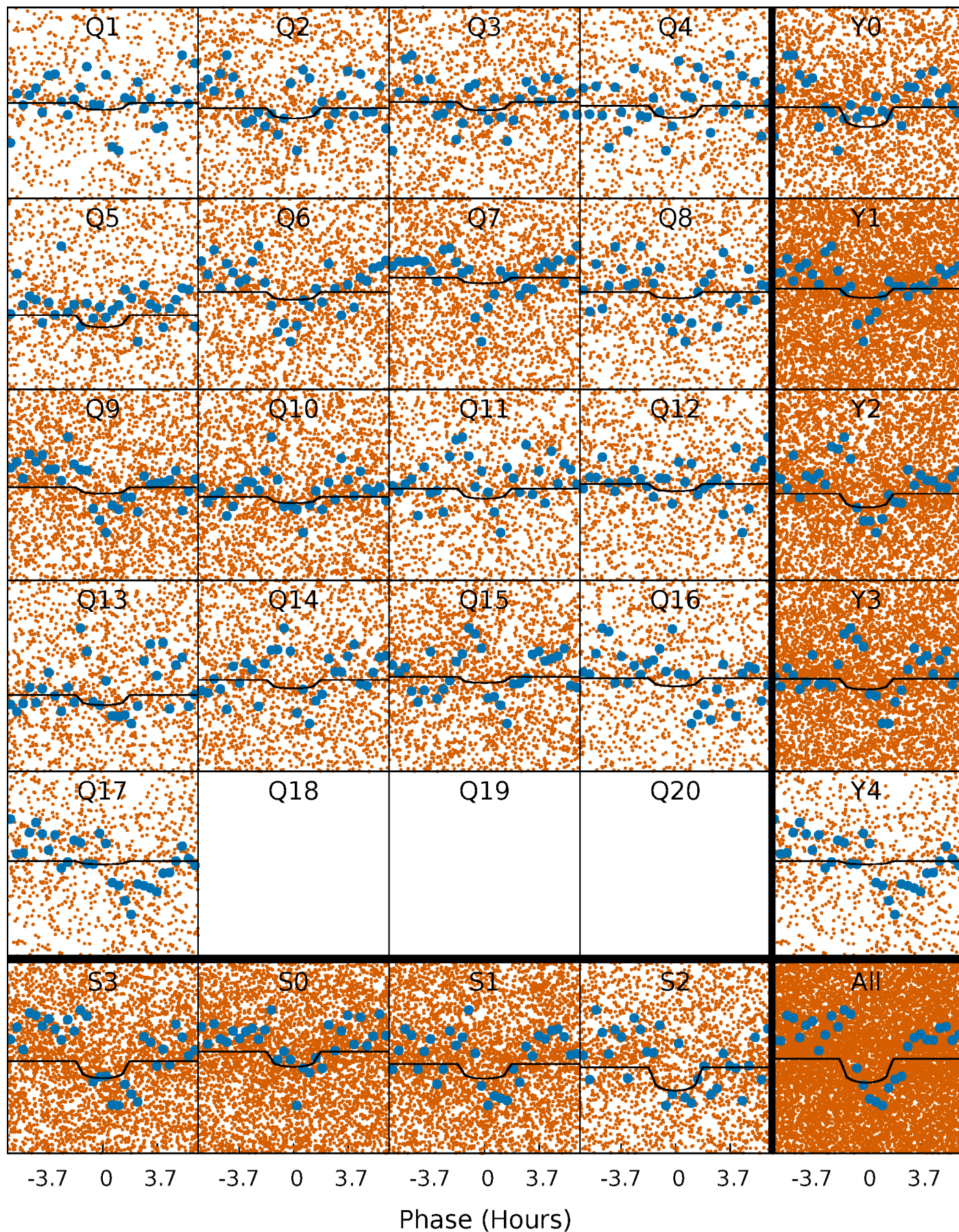
PDC Quarter-Phased Transit Curves

TCE 007115463-01 P= 0.566738 Days $T_0=131.876850$ (BKJD)



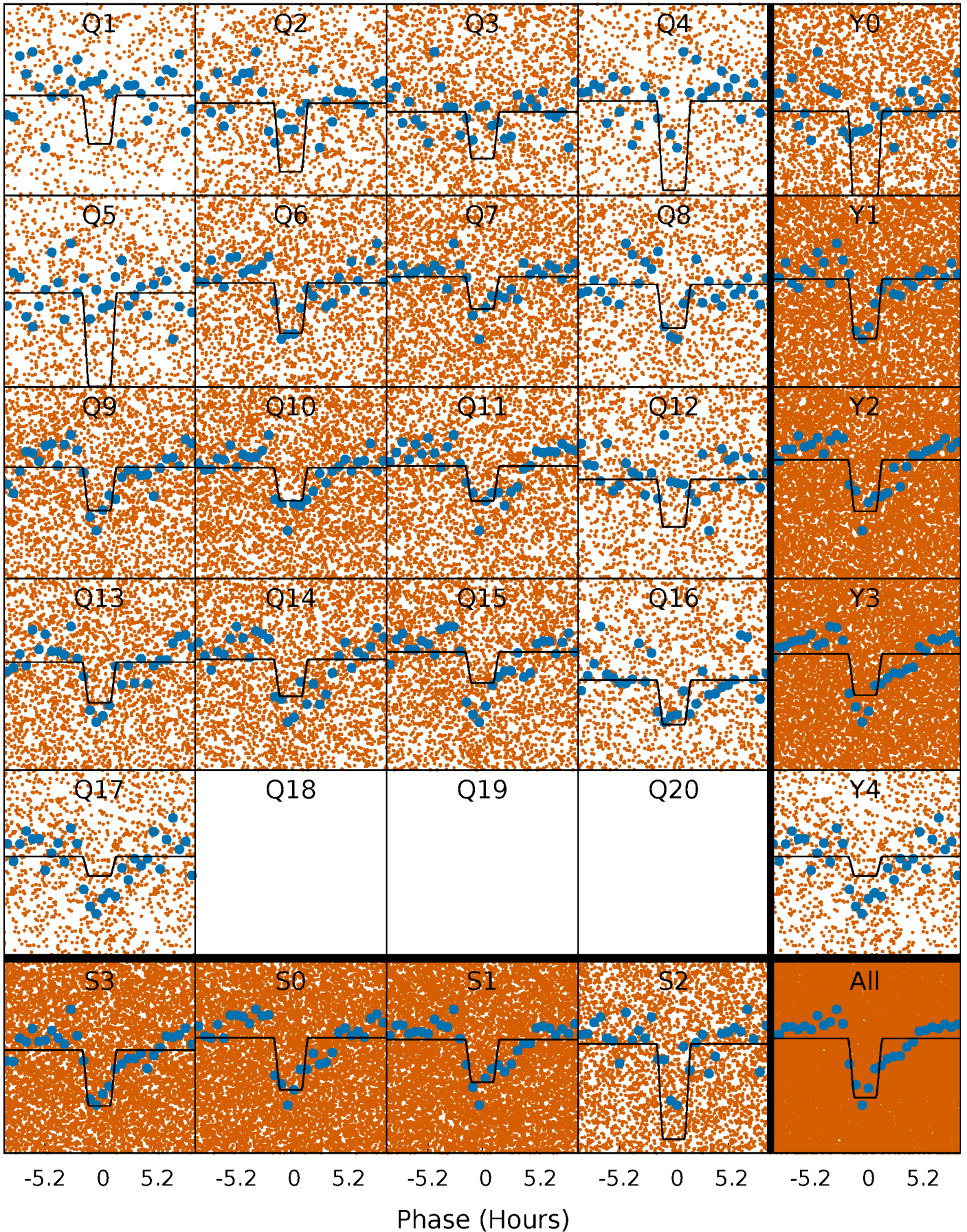
DV Quarter-Phased Transit Curves

TCE 007115463-01 P= 0.566738 Days $T_0=131.876850$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

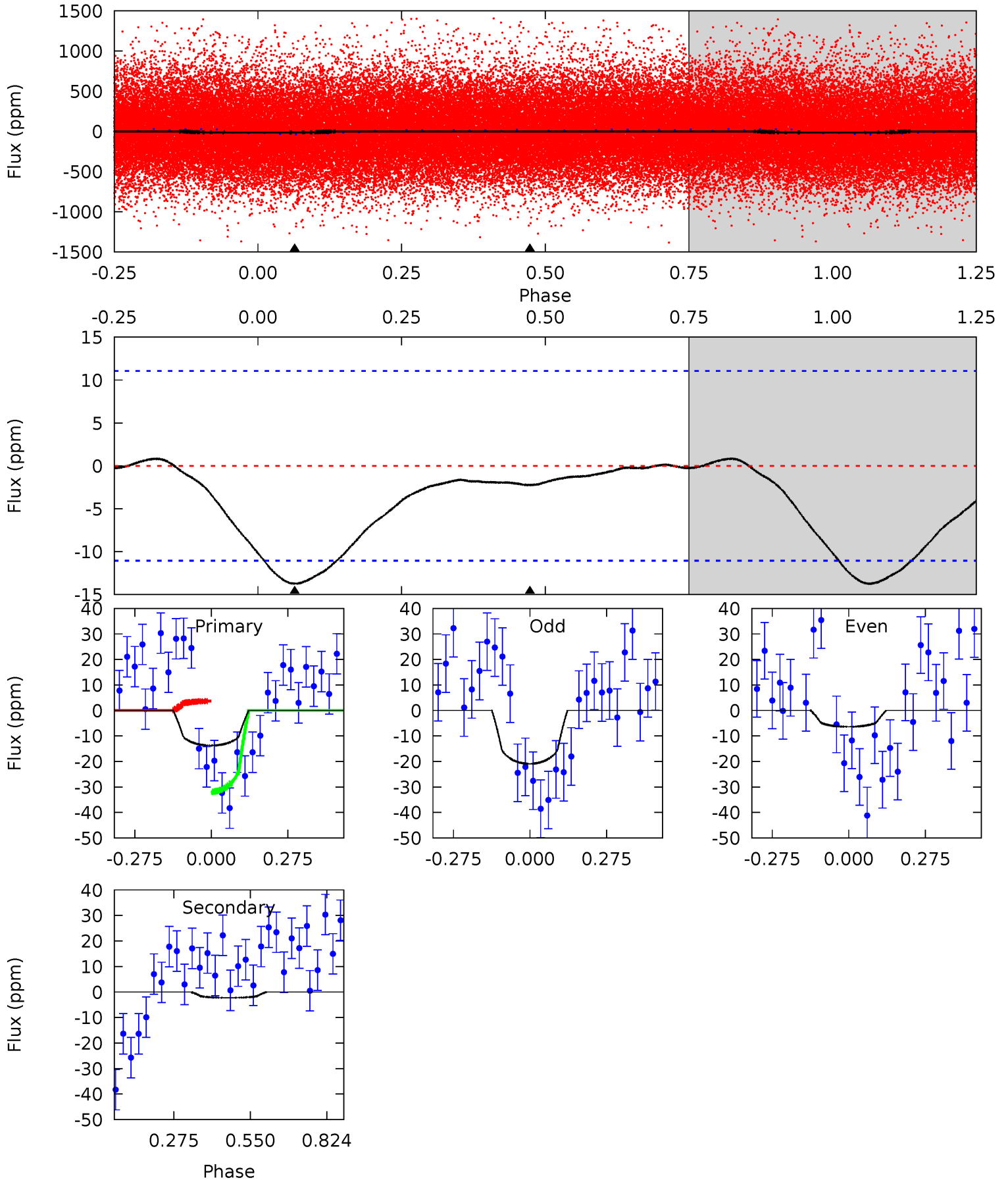
TCE 007115463-01 P= 0.566795 Days $T_0=131.826806$ (BKJD)



DV Model-Shift Uniqueness Test

007115463-01, P = 0.566738 Days, E = 131.310112 Days

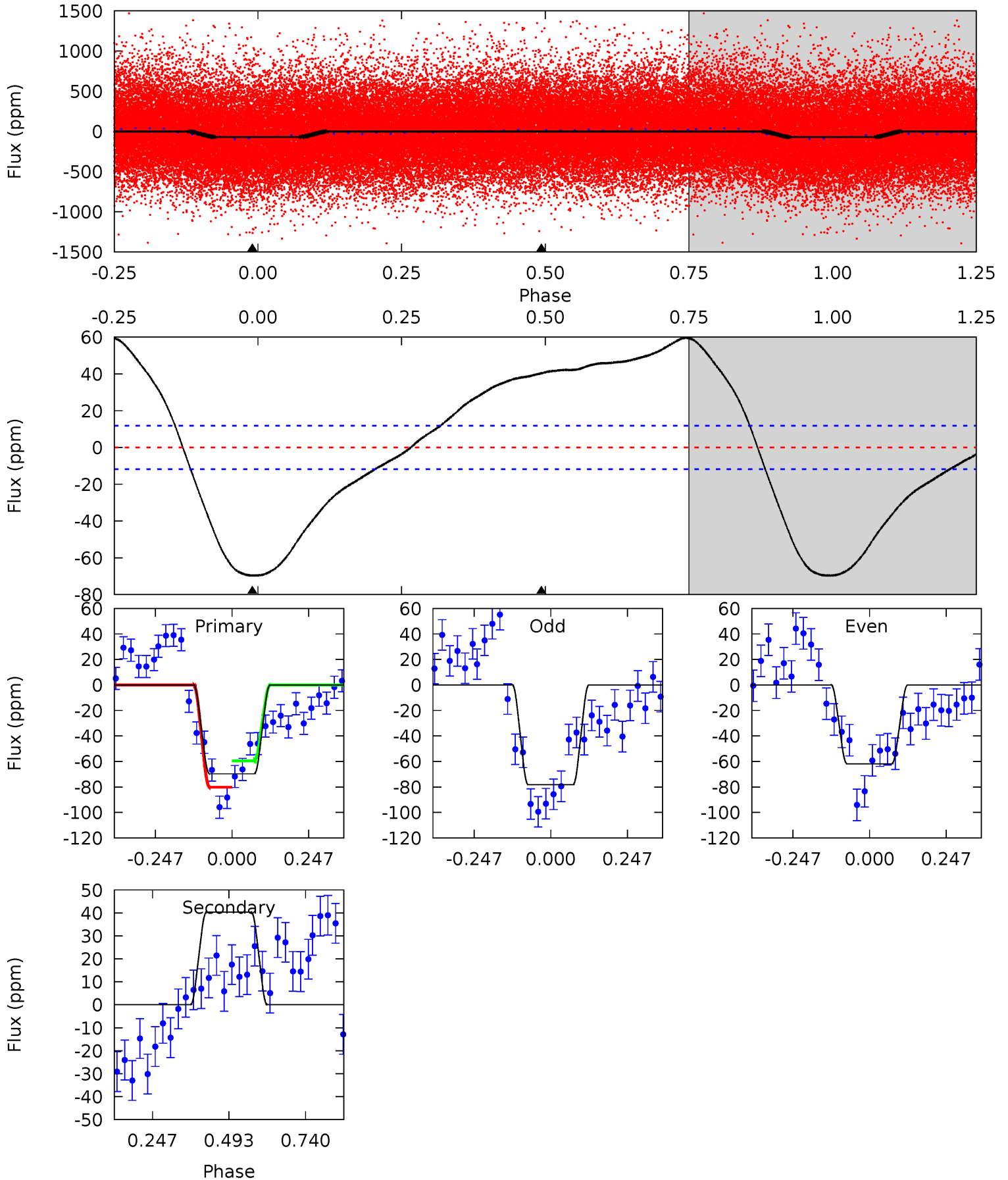
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	0.89	0	0	4.35	1.09	0.14	5.41	5.41	0.89	0.89	2.86	0.63	0.06	5.48



Alt Model-Shift Uniqueness Test

007115463-01, P = 0.566795 Days, E = 131.260011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	-14.9	0	0	4.37	1.16	11.7	25.8	25.8	-14.9	-14.9	3.07	0.94	0.46	3.83



Stellar Parameters For KIC 007115463

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+189}_{-210}	$4.486^{+0.052}_{-0.208}$	$-0.120^{+0.250}_{-0.300}$	$0.969^{+0.300}_{-0.100}$	$1.048^{+0.139}_{-0.139}$	$1.622^{+0.455}_{-0.850}$
	+3%/-3%	+1%/-5%	+208%/-250%	+31%/-10%	+13%/-13%	+28%/-52%
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 007115463-01 / KOI 6823.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 3	$0.60^{+0.50}_{-0.38}$	3242^{+230}_{-180}	3077^{+2023}_{-6421}	$0.488^{+3.757}_{-0.526}$
Alt.	40 ± 3	$1.01^{+0.57}_{-0.50}$	3235^{+252}_{-163}	-5214^{+748}_{-1957}	$-3.917^{+2.289}_{-10.906}$

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

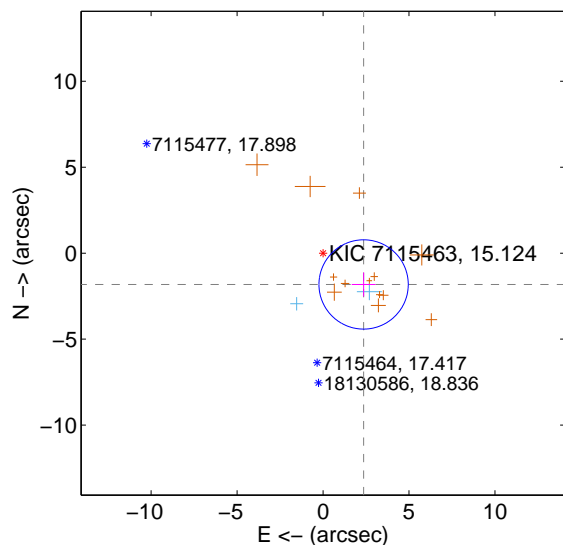
Supplemental centroid analysis for 007115463-01. Kepler magnitude: 15.12. Transit SNR 4.43

There are 2 quarters with good PRF difference image offsets

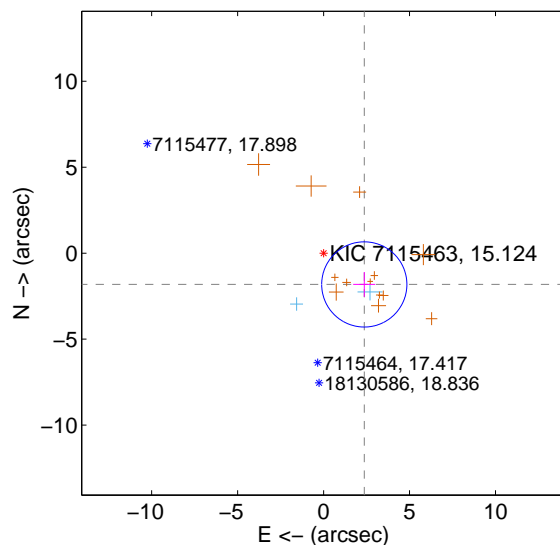
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.979 ± 0.865	3.44	-2.359 ± 0.691	-1.819 ± 0.696
PRF-fit source offset from KIC position	2.984 ± 0.826	3.61	-2.367 ± 0.643	-1.818 ± 0.721
photometric centroid source offset	2.31 ± 3.14	0.73	1.25 ± 3.27	1.94 ± 3.08

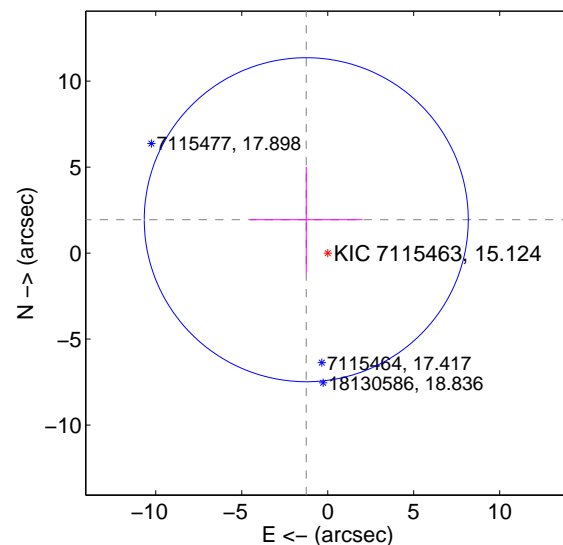
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

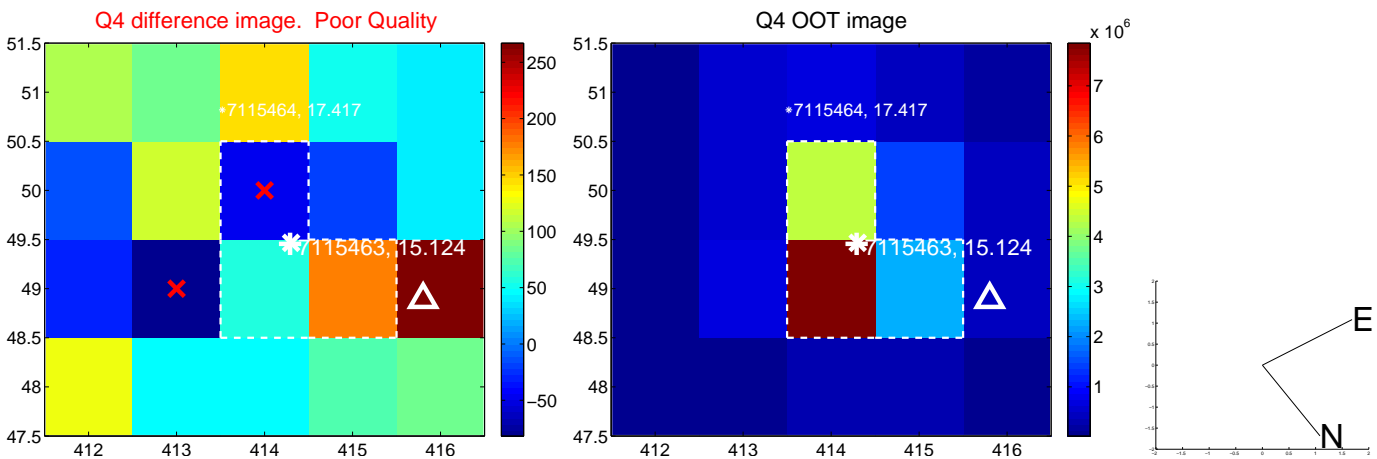
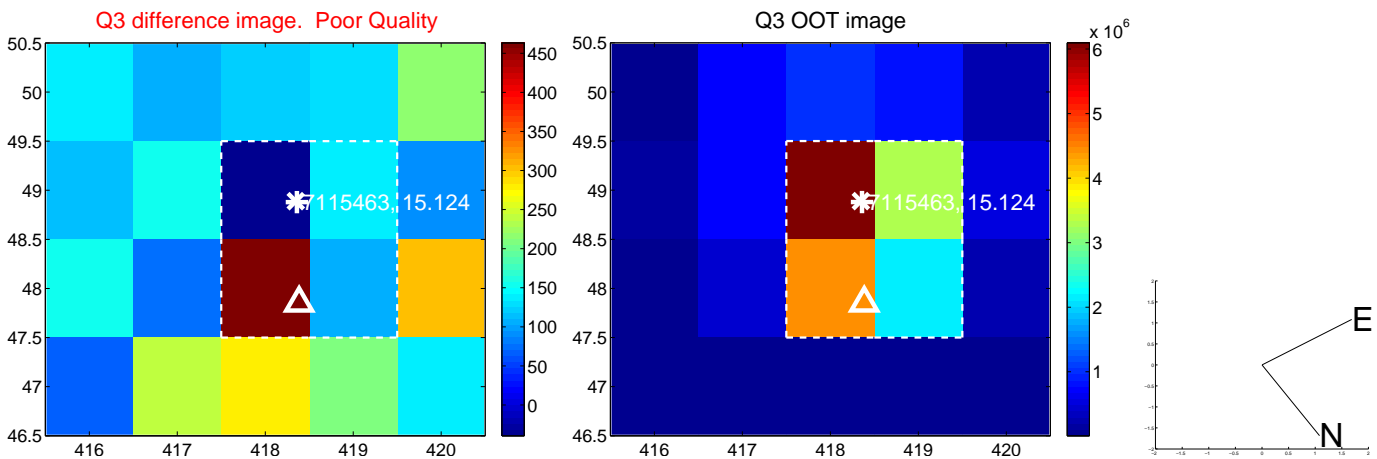
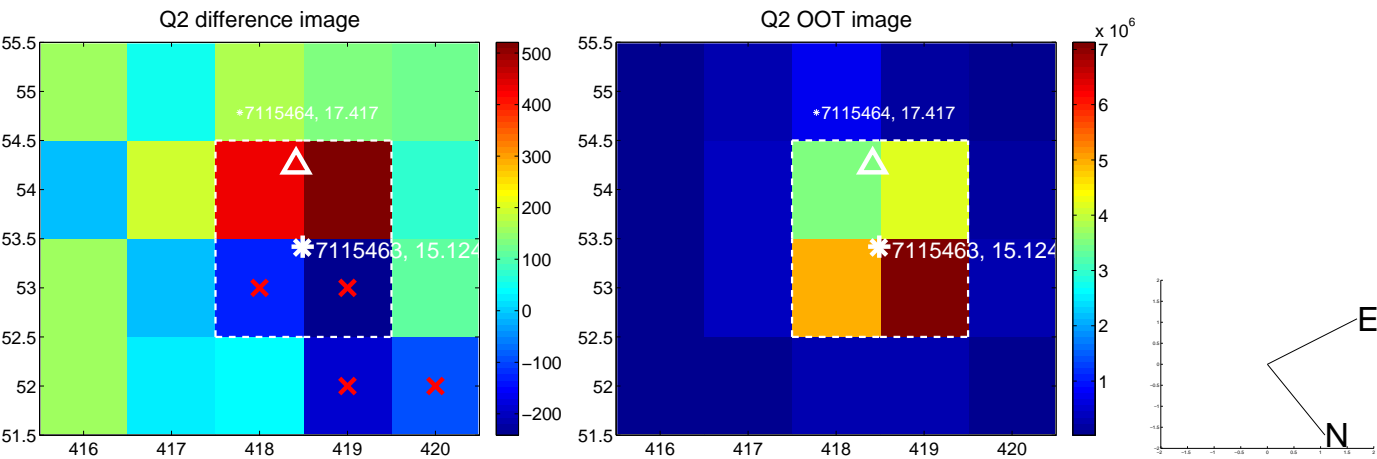
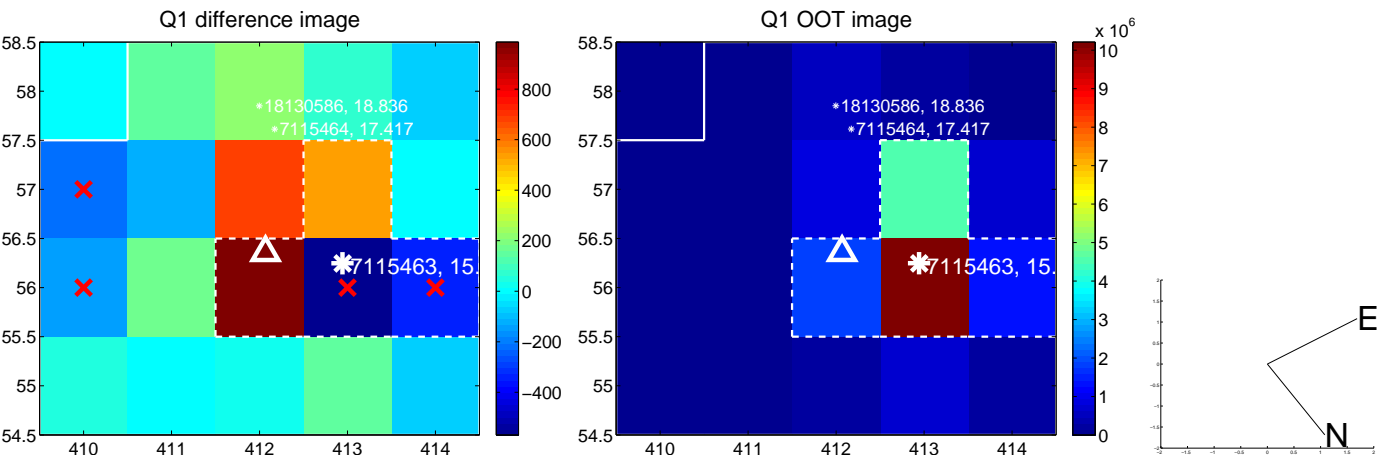


offset from photometric centroids

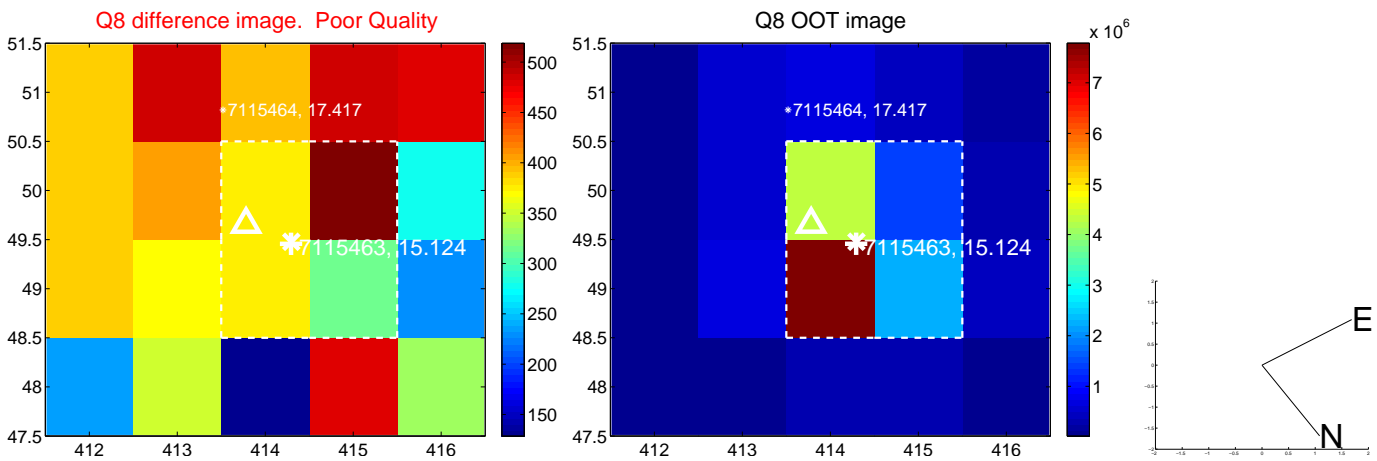
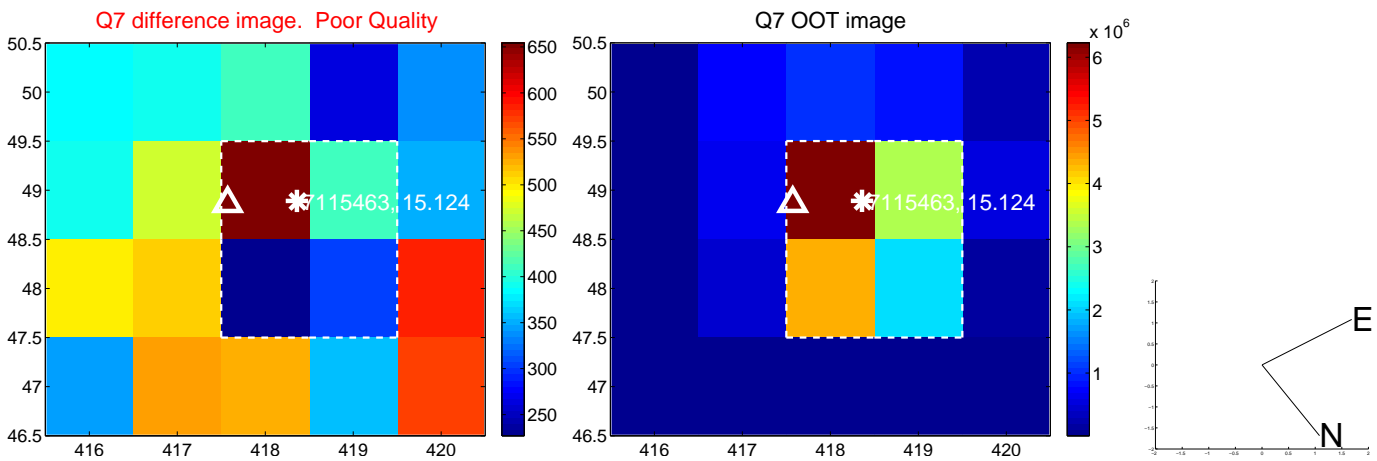
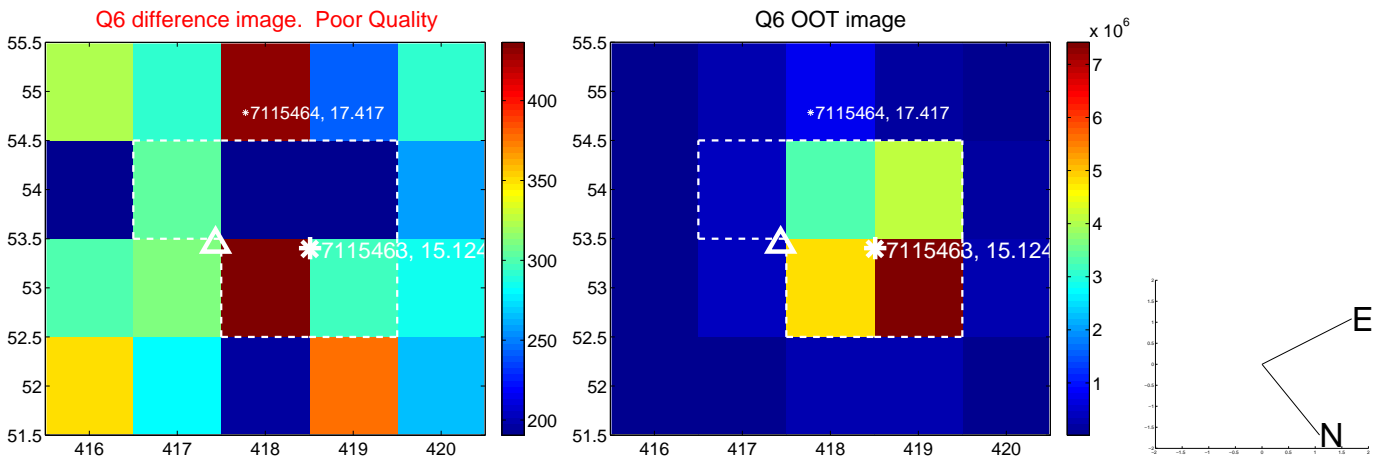
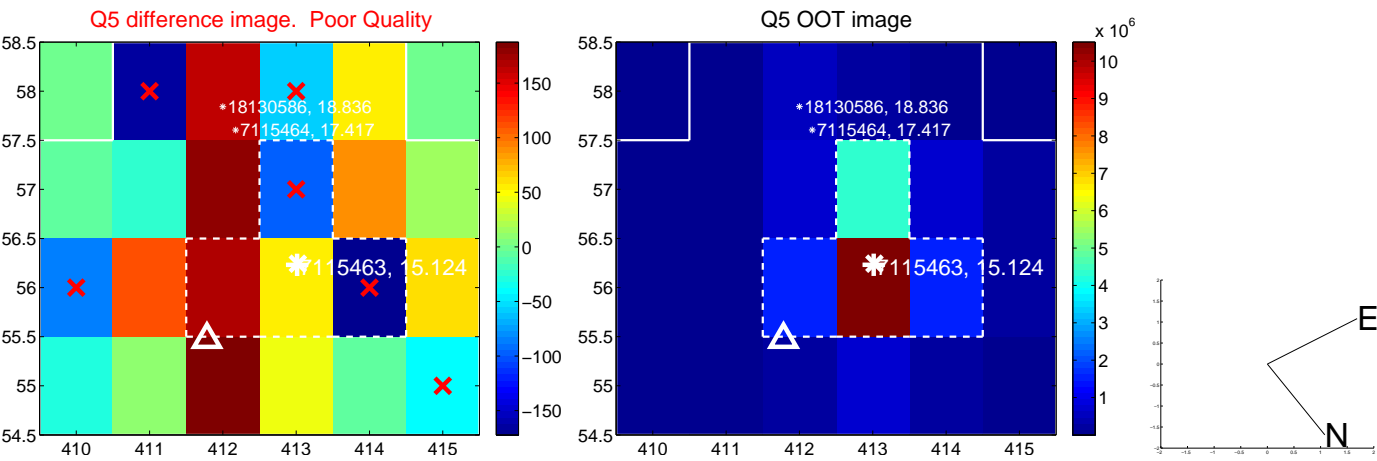


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

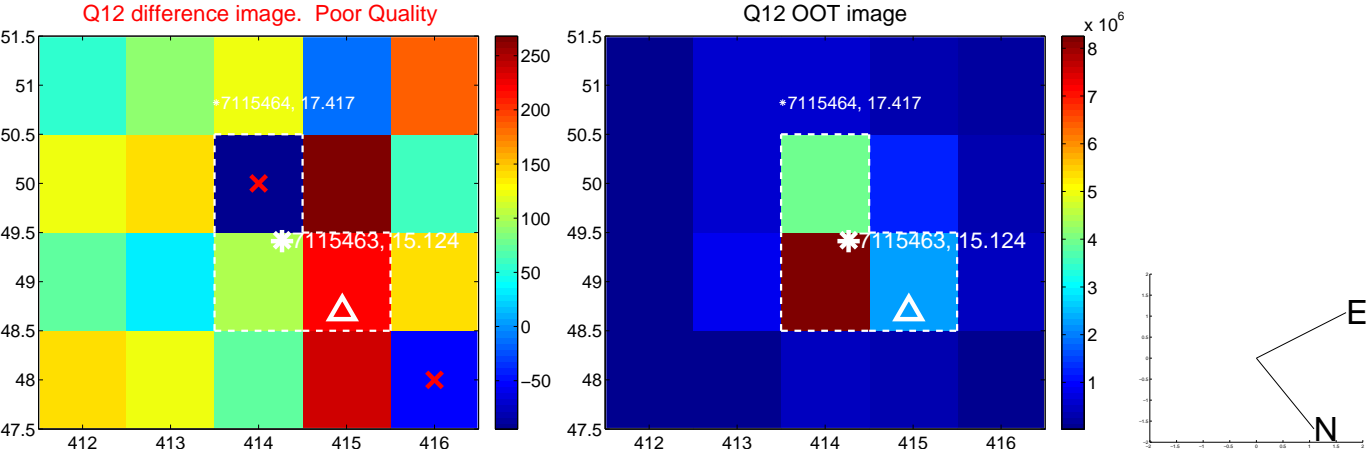
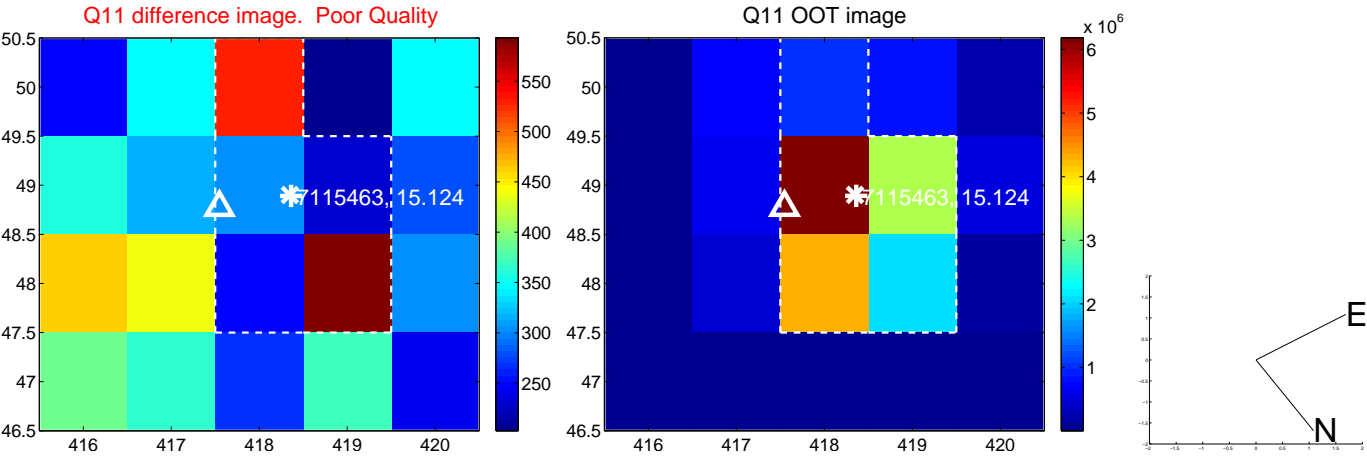
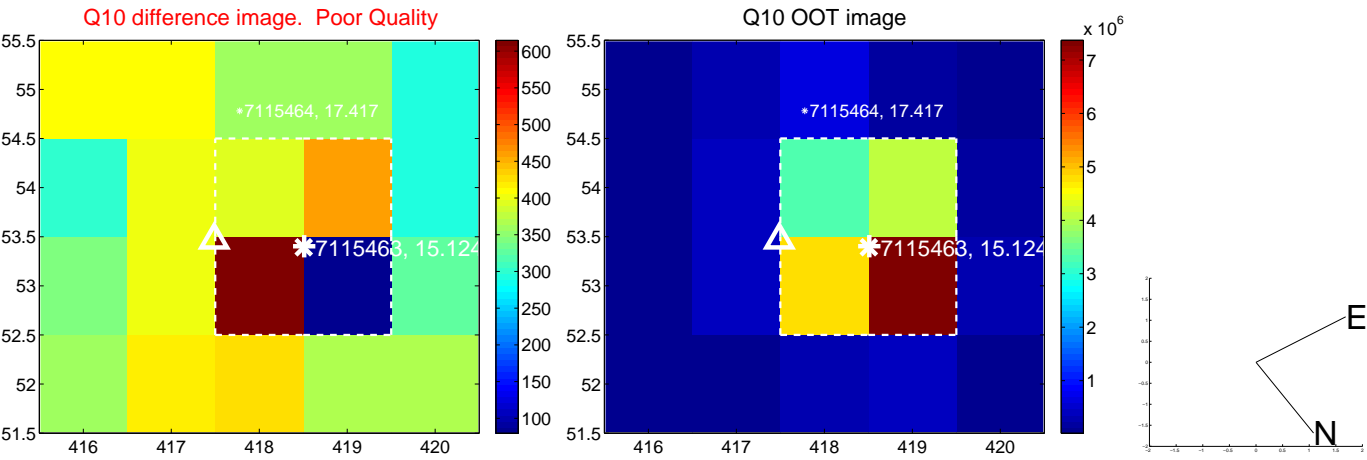
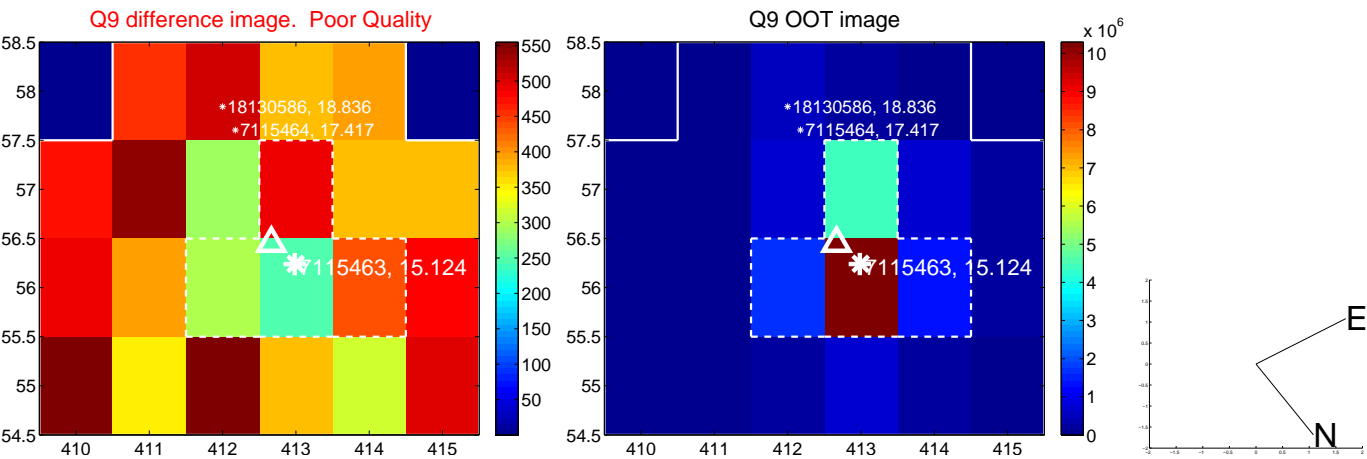
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



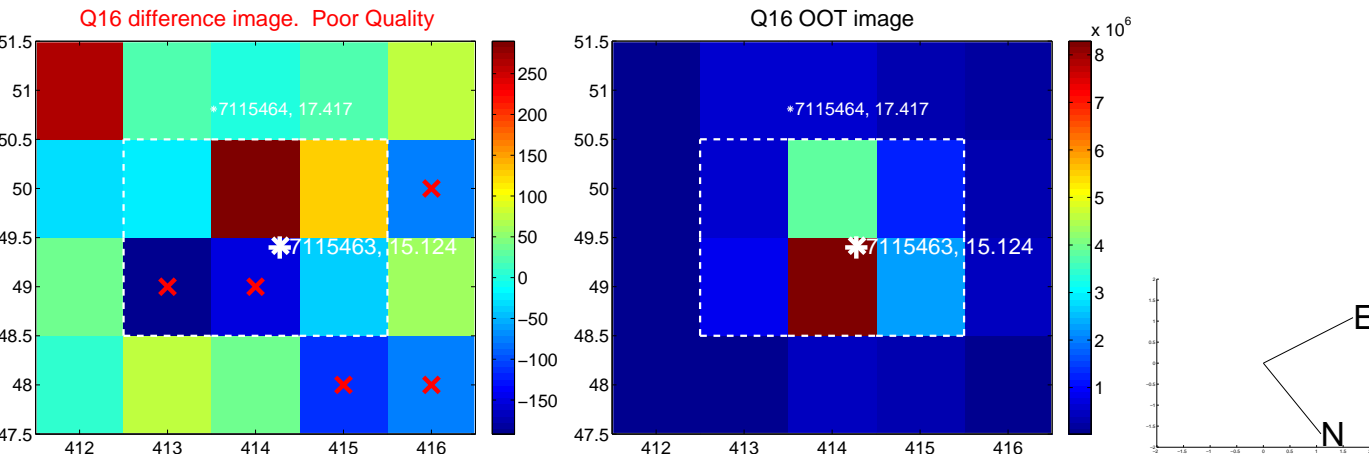
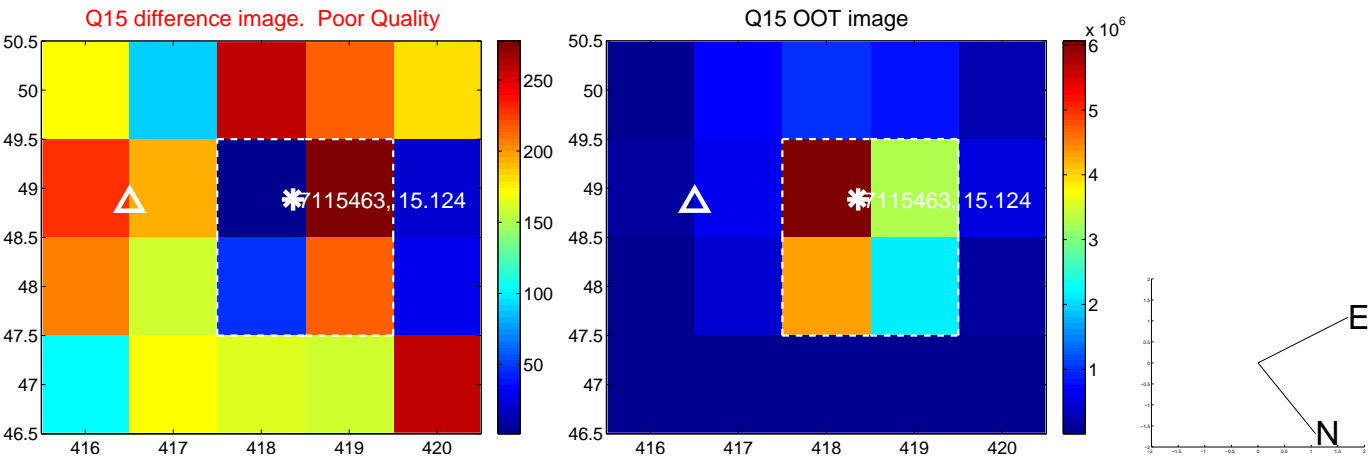
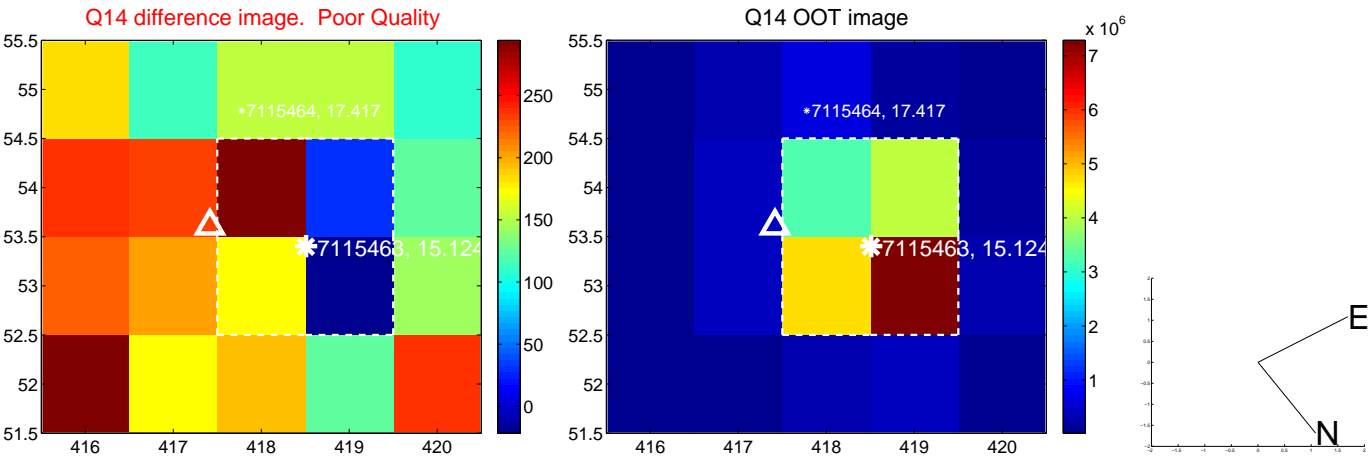
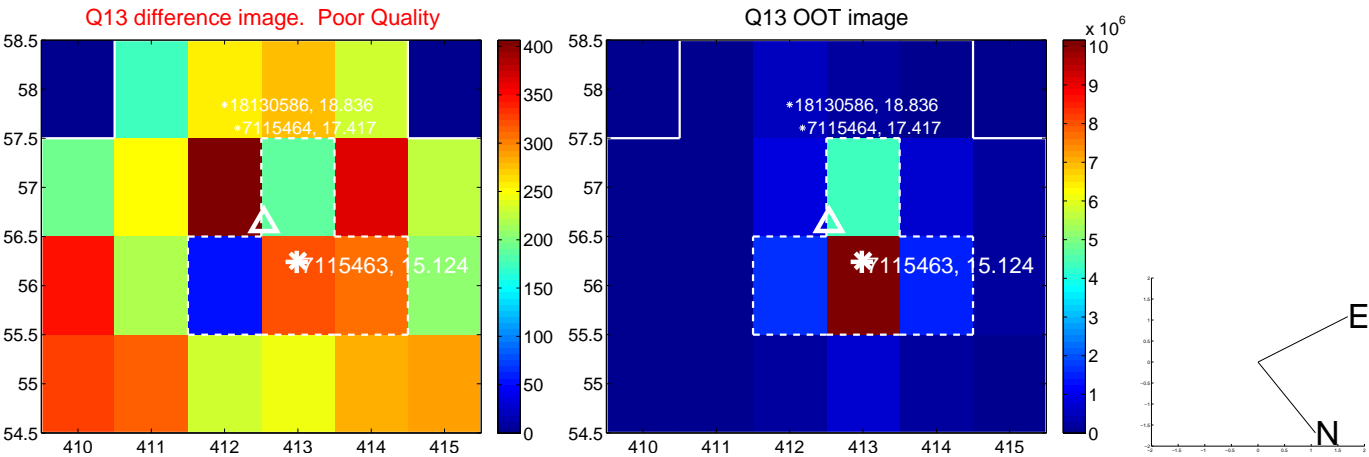
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



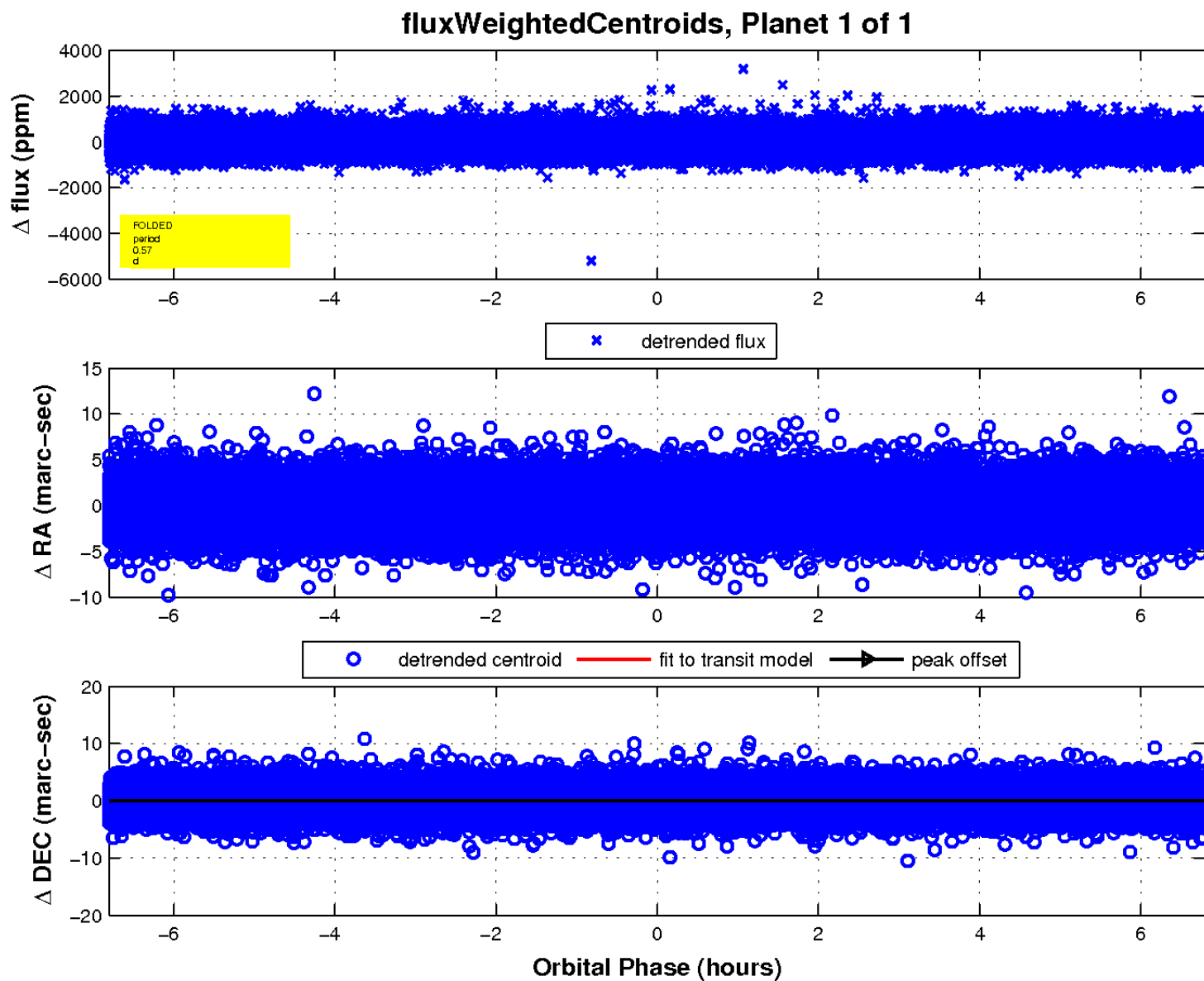
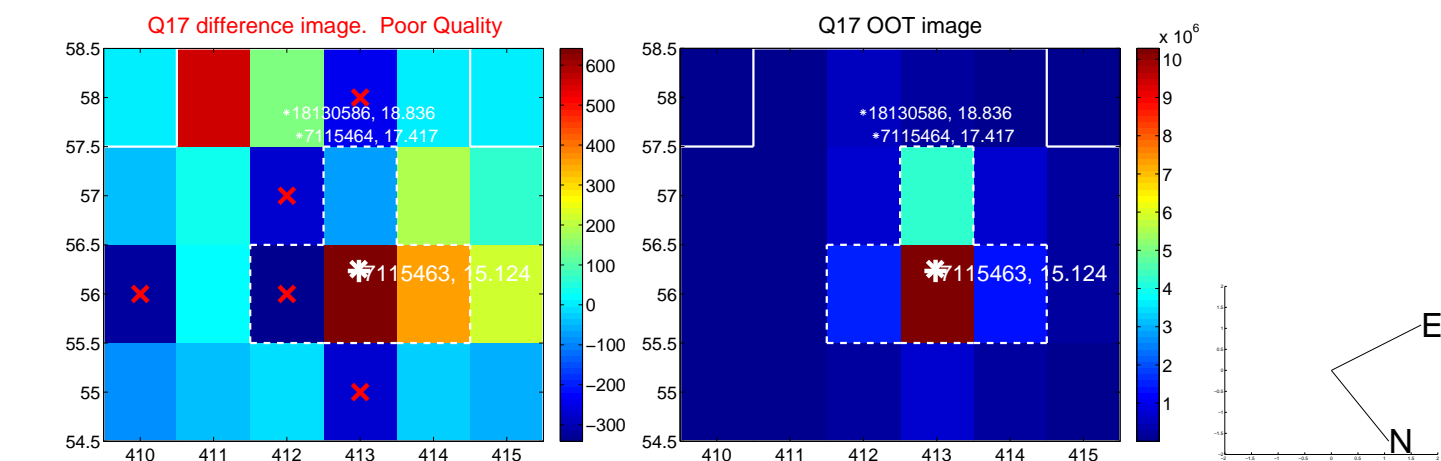
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

