

KIC 010485047

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})
010485047-01	OBS	No	0.890545	131.750878	93.7	1.357	8.4	7.9	0.89	5868	0.93	2607.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010485047-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—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.

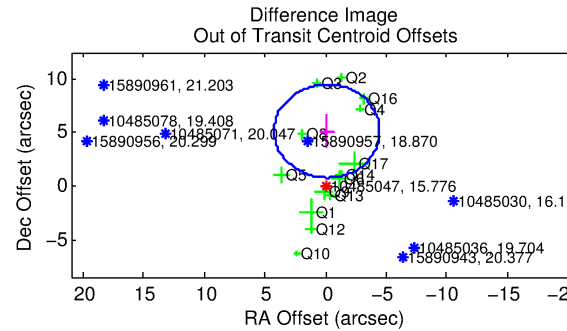
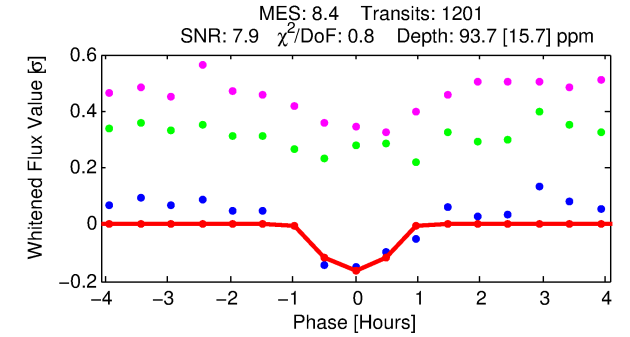
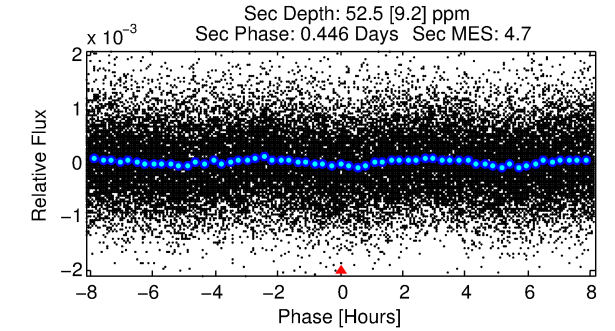
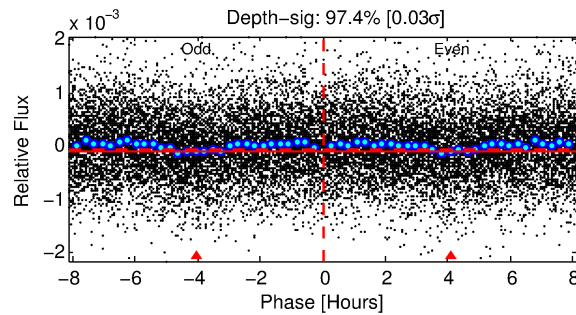
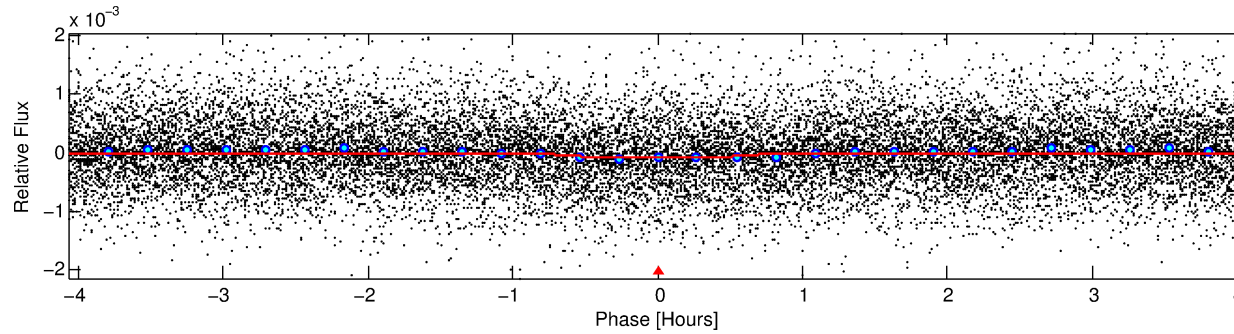
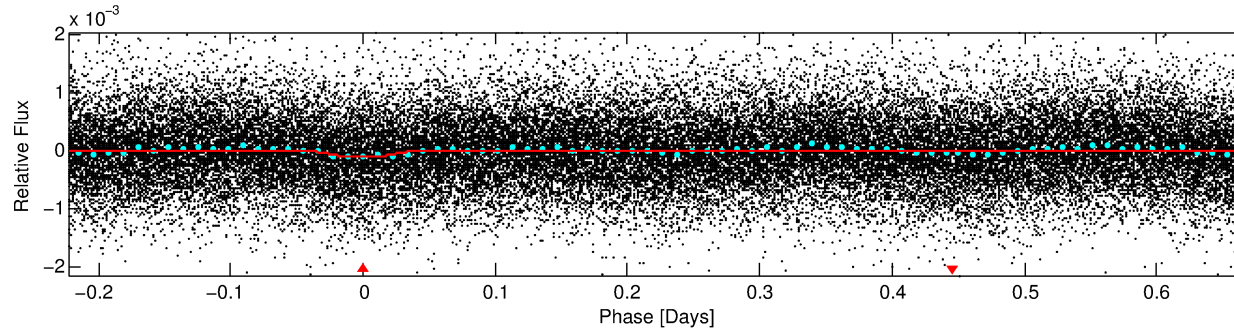
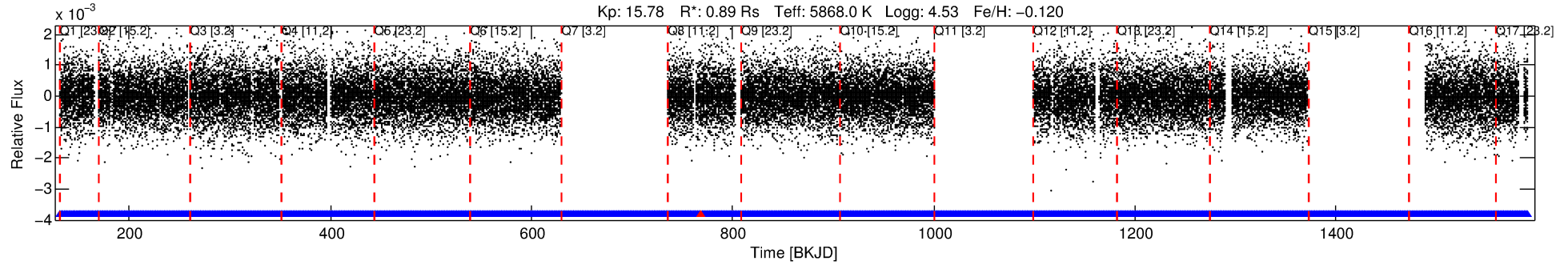
Ephemeris Match Information For 010485047-01

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
010485047-01	10485047	T-Cyg1-03567-pri	10485137	2:1	62.2	-8	-14	11.88	15.77	3944.50	Direct-PRF	0	1.46	2.27

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: 10485047 Candidate: 1 of 1 Period: 0.891 d



DV Fit Results:

Period = 0.89054 [0.00001] d
Epoch = 131.7509 [0.0028] BKJD
Rp/R* = 0.0095 [0.0055]
a/R* = 3.74 [9.25]
b = 0.70 [1.97]
Seff = 2607.39 [951.54]
Teq = 1822 [166] K
Rp = 0.93 [0.60] Re
a = 0.0180 [0.0042] AU
Ag = 10.91 [13.34] [0.74σ]
Teffp = 5120 [1512] K [2.17σ]

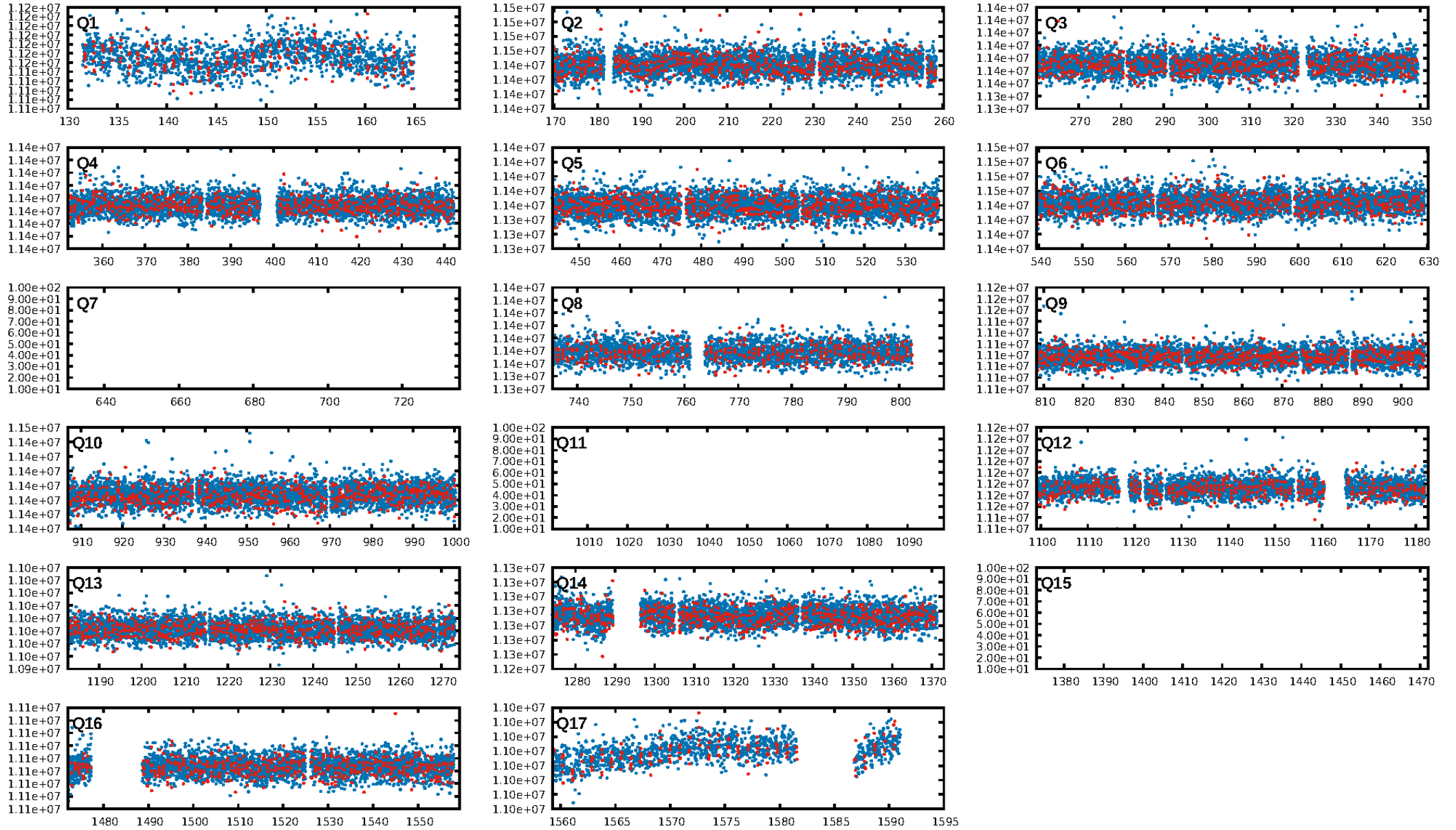
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.06e-18
RollingBand-fgt: 1.00 [1131/1132]
GhostDiagnostic-chr: -0.4374
Centroid-sig: 0.0%
Centroid-so: 4.770 arcsec [2.38σ]
OotOffset-rm: 5.135 arcsec [3.53σ]
KicOffset-rm: 5.215 arcsec [3.64σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

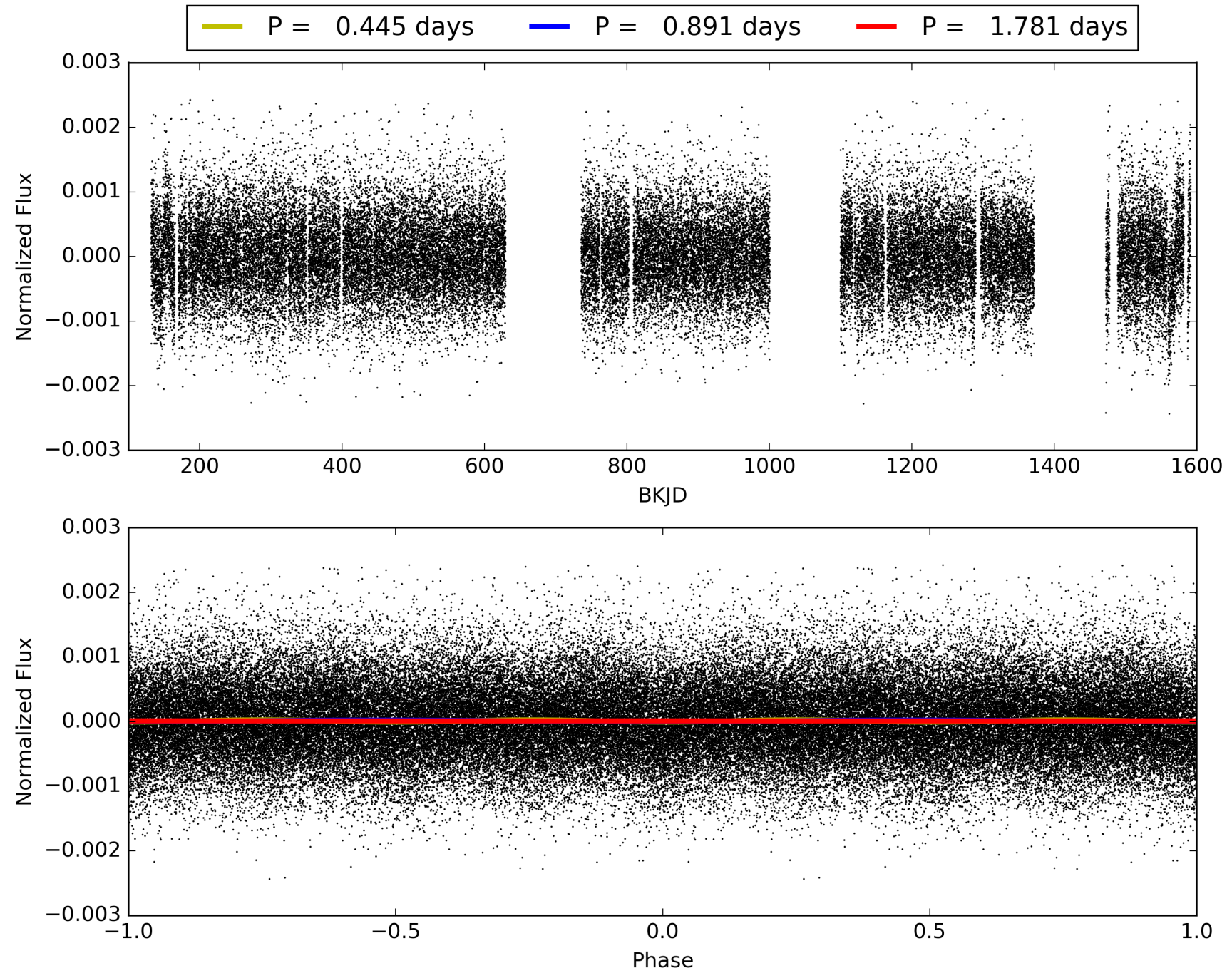
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:57:08 Z

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

TCE 010485047-01, PDC Light Curves

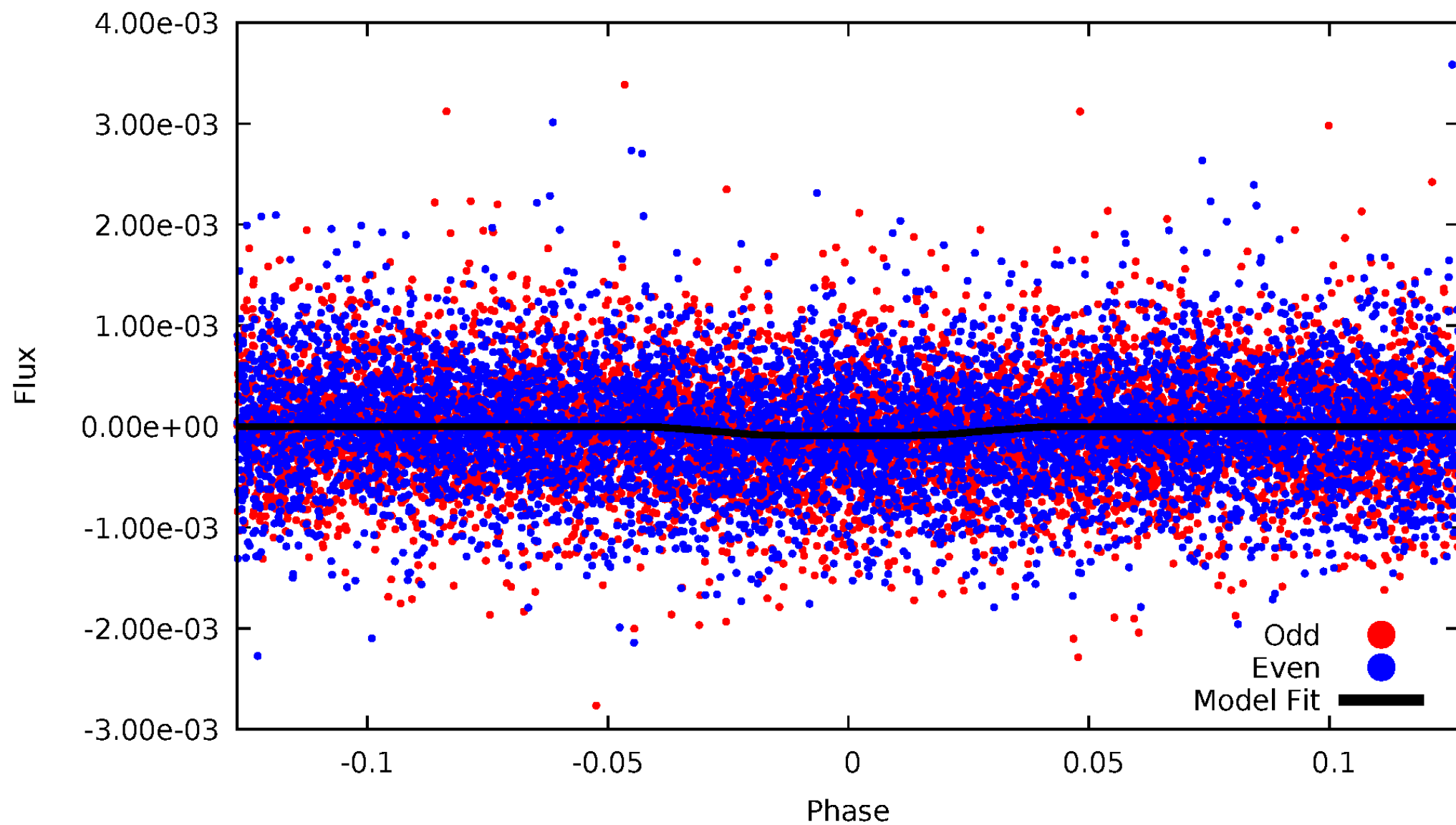


TCE 010485047-01



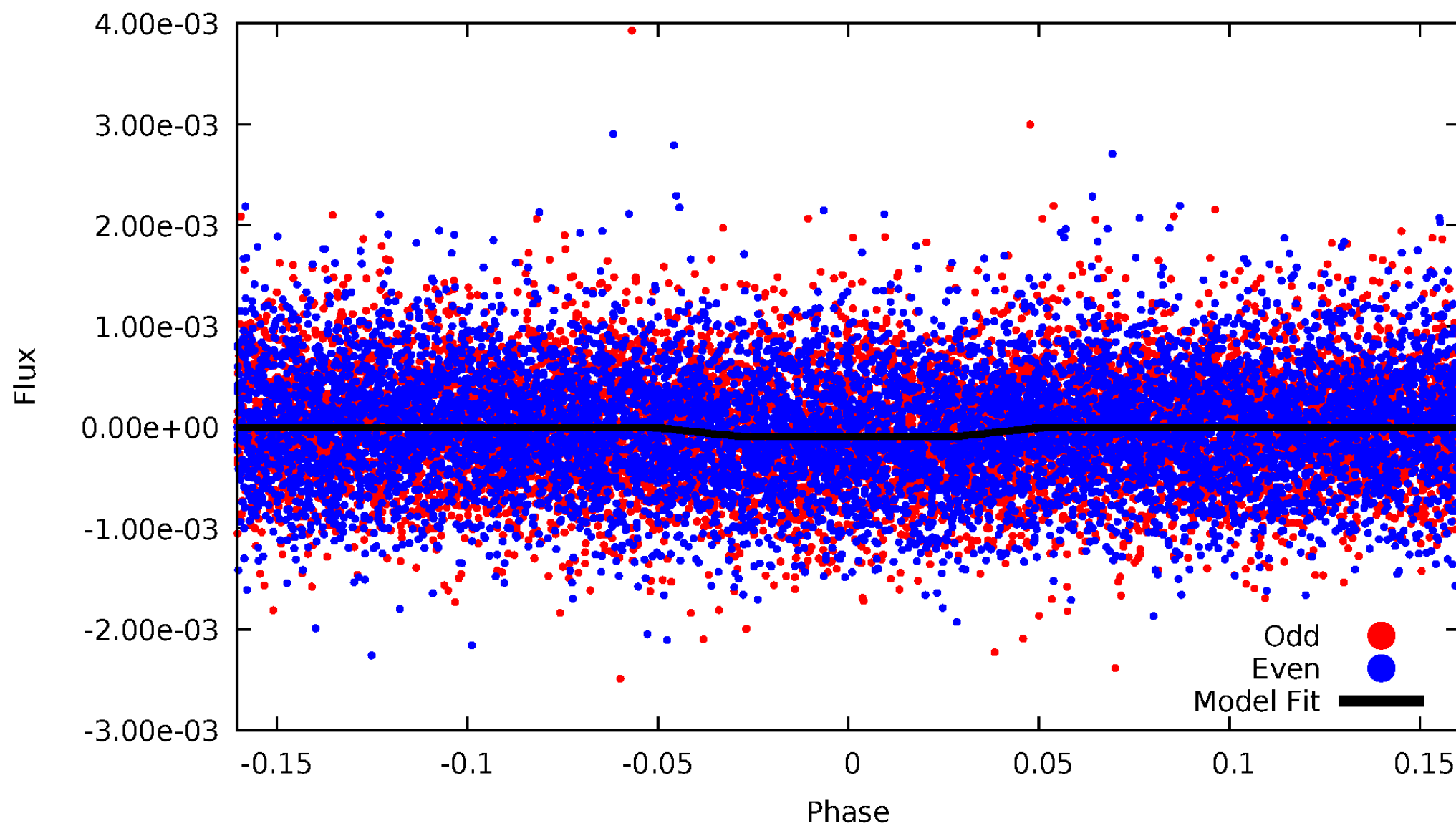
DV Odd/Even

TCE 010485047-01



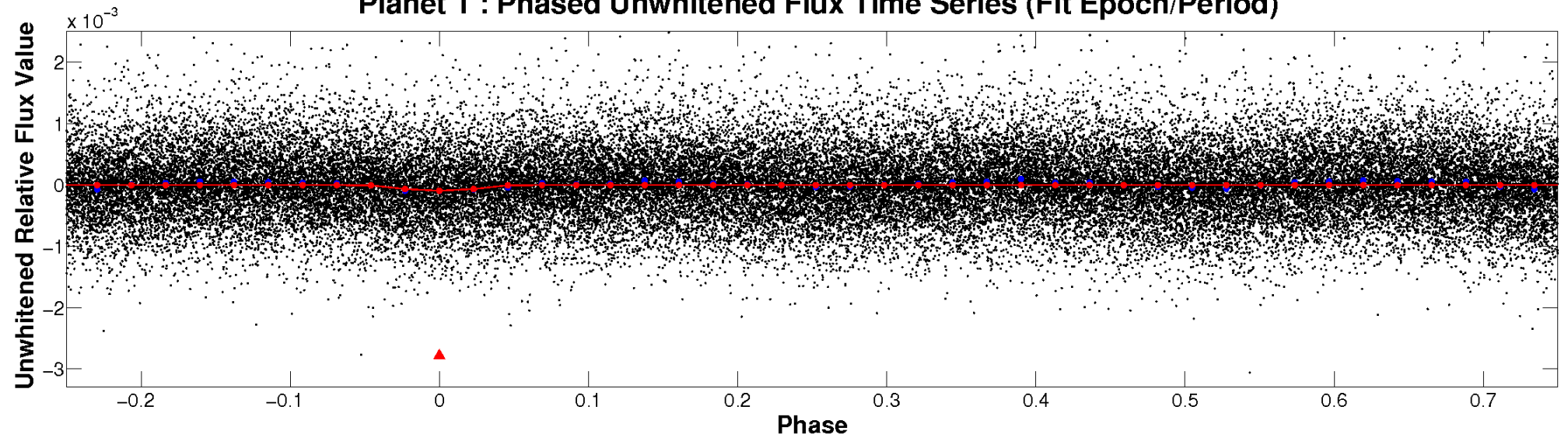
ALT Odd/Even

TCE 010485047-01

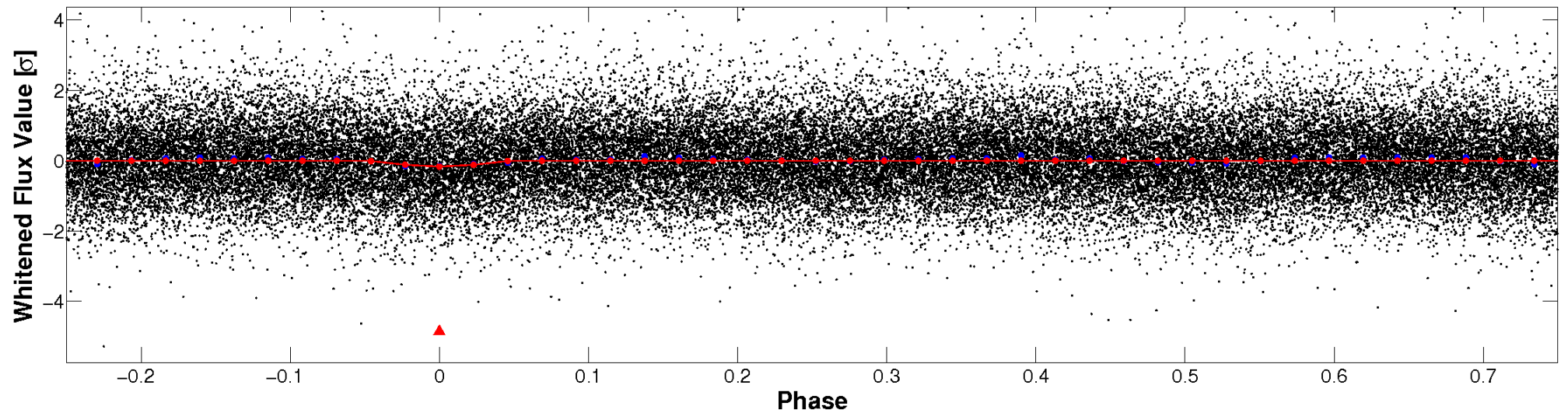


Non-Whitened Vs. Whitened Light Curve

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

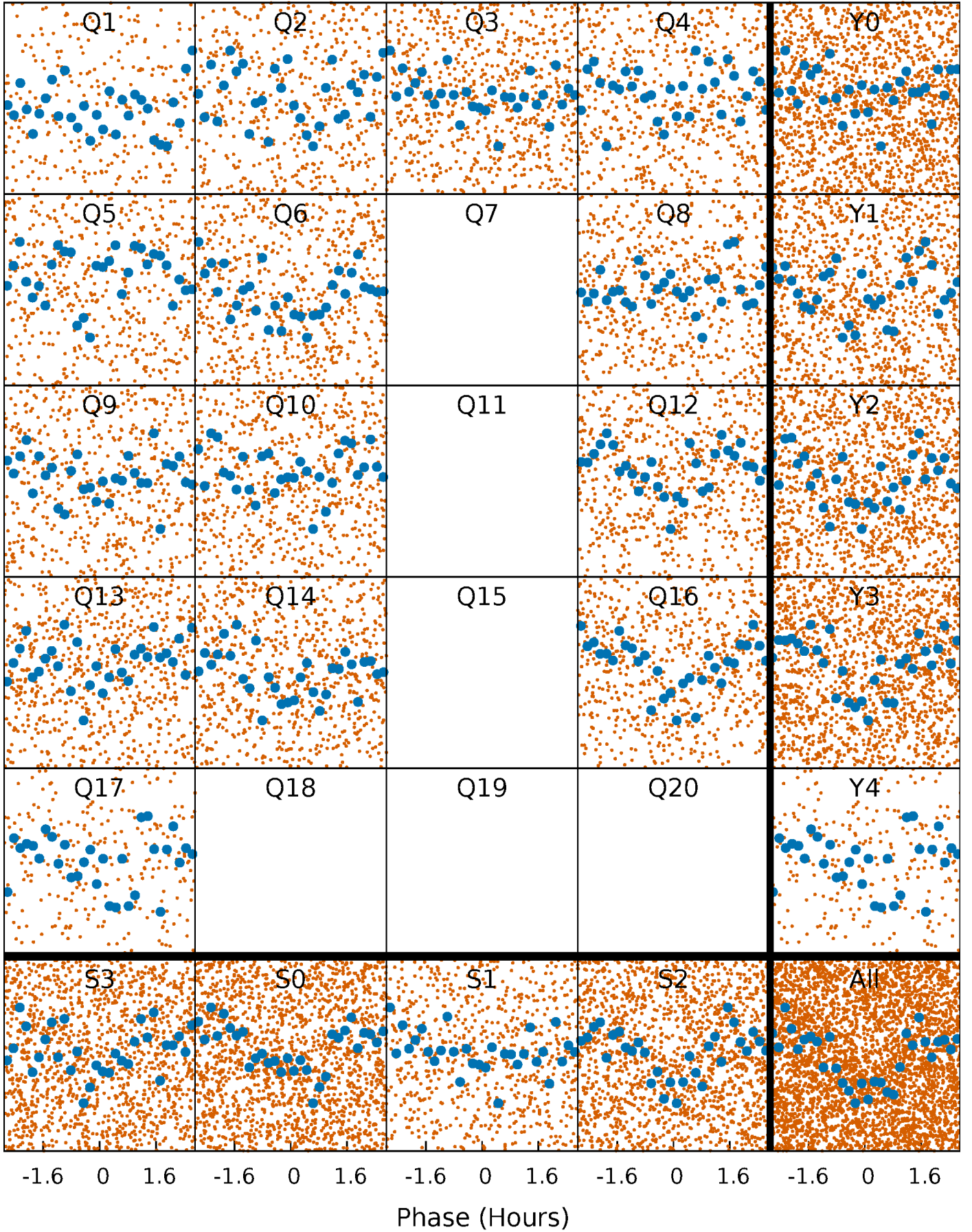


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



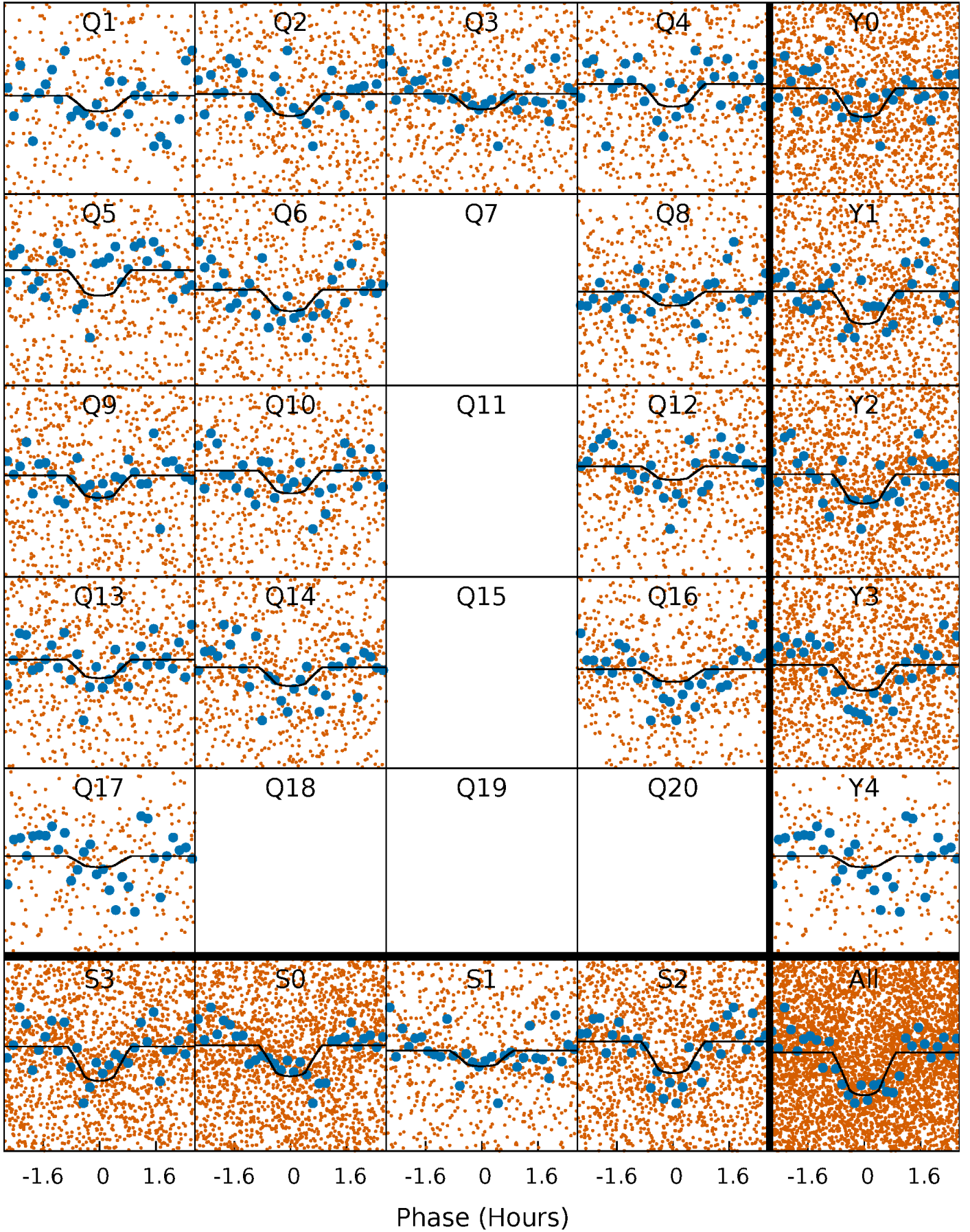
PDC Quarter-Phased Transit Curves

TCE 010485047-01 P= 0.890545 Days $T_0=131.750878$ (BKJD)



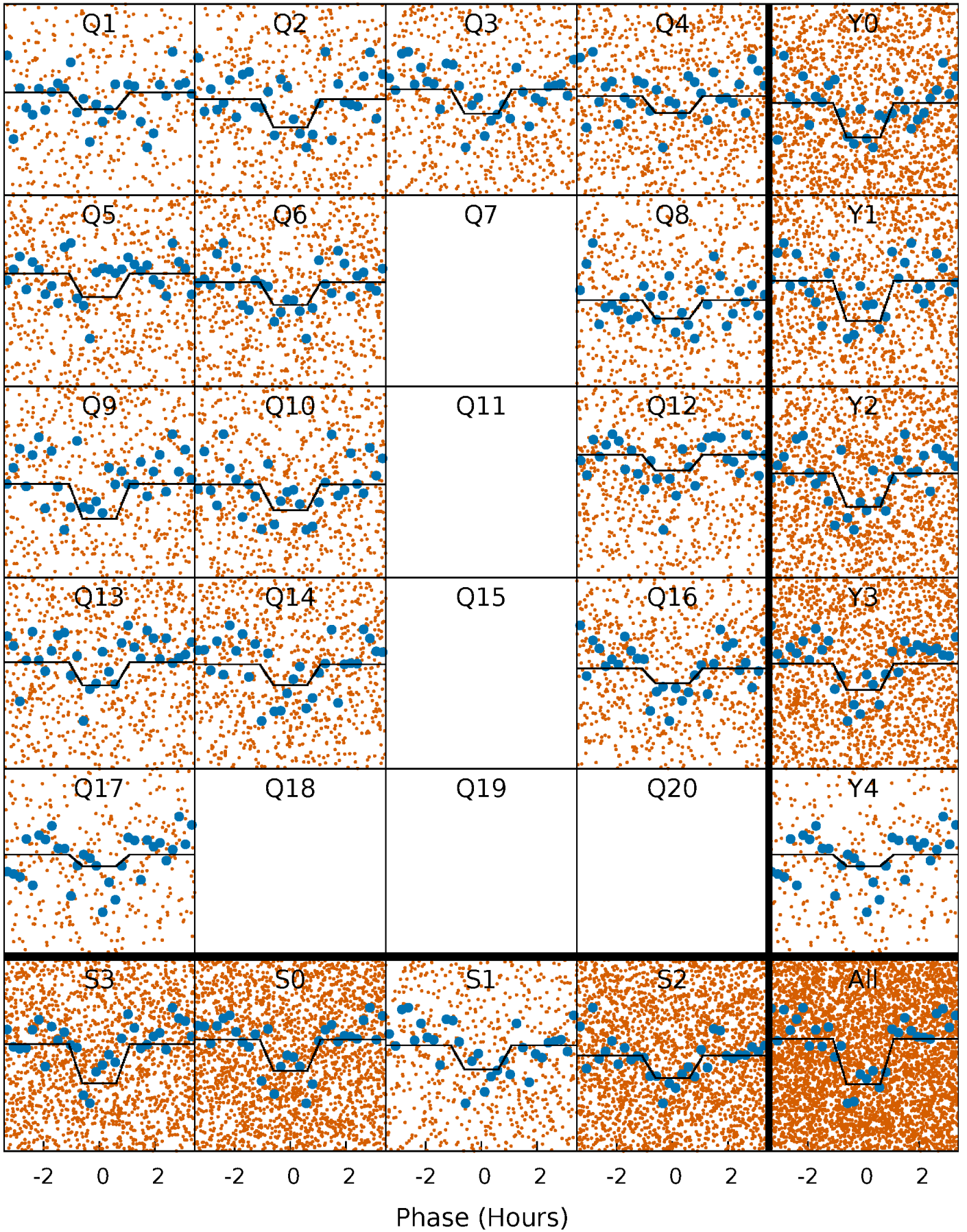
DV Quarter-Phased Transit Curves

TCE 010485047-01 P= 0.890545 Days $T_0=131.750878$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

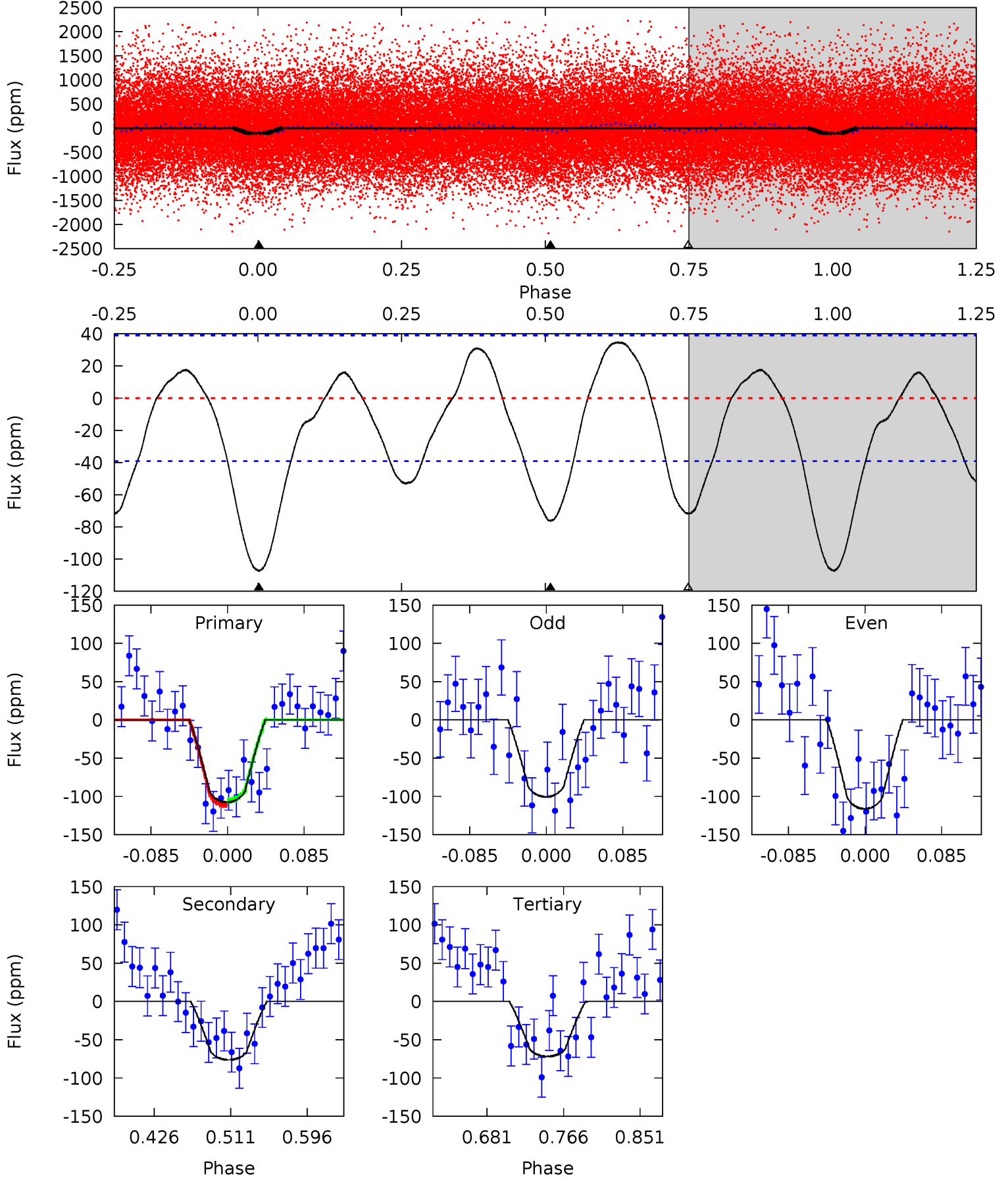
TCE 010485047-01 P= 0.890551 Days $T_0=131.750617$ (BKJD)



DV Model-Shift Uniqueness Test

010485047-01, P = 0.890545 Days, E = 130.860333 Days

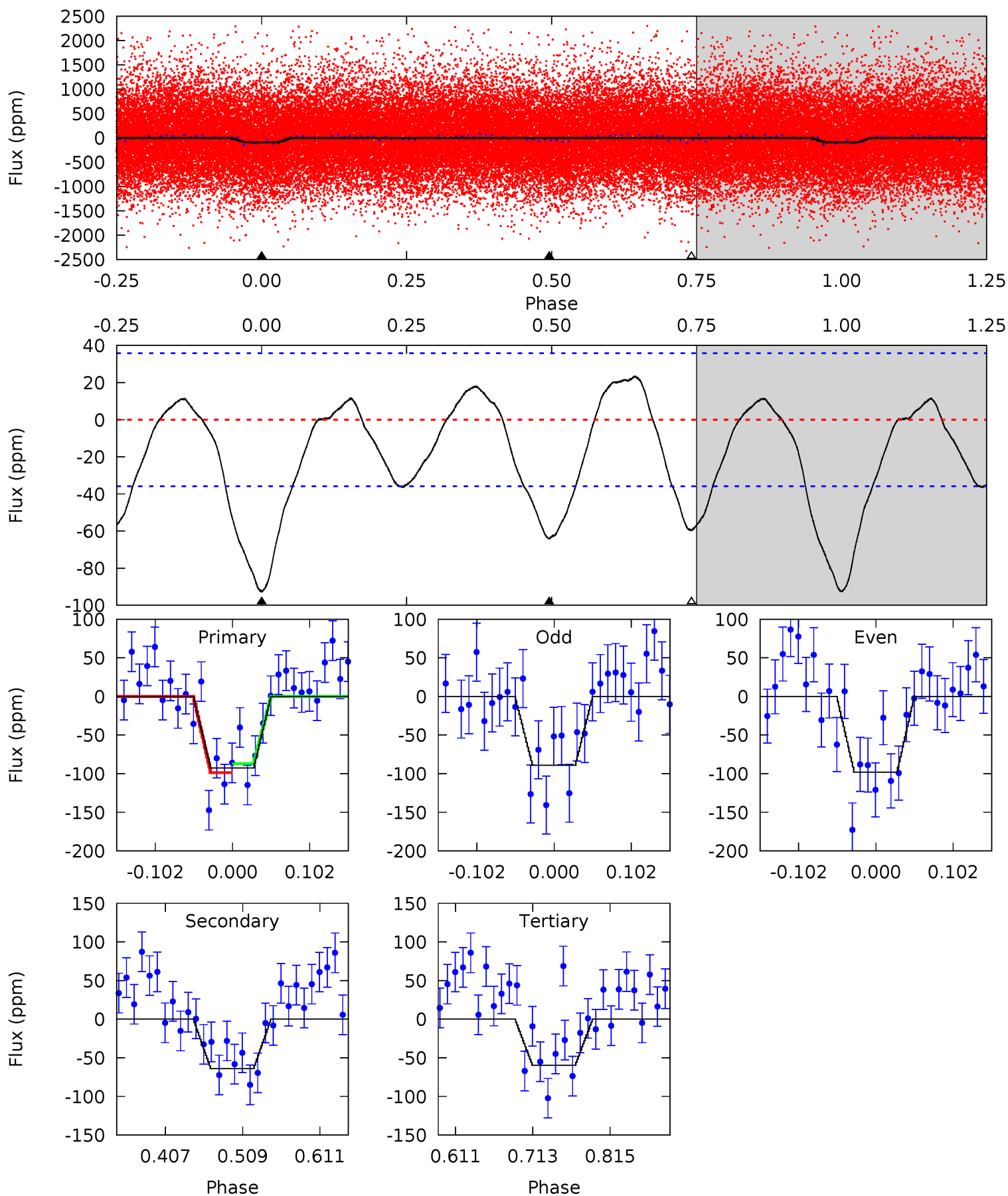
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	8.97	8.44	0	4.60	1.72	3.54	4.21	12.6	0.53	8.97	0.92	1.01	0.24	0.33



Alt Model-Shift Uniqueness Test

010485047-01, P = 0.890551 Days, E = 130.860066 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	8.16	7.59	0	4.56	1.64	2.88	4.21	11.8	0.57	8.16	0.56	0.91	0.20	0.76



Stellar Parameters For KIC 010485047

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5868^{+157}_{-192}	$4.530^{+0.044}_{-0.187}$	$-0.120^{+0.300}_{-0.300}$	$0.894^{+0.246}_{-0.082}$	$0.987^{+0.116}_{-0.127}$	$1.946^{+0.444}_{-0.935}$
	+3%/-3%	+1%/-4%	+250%/-250%	+28%/-9%	+12%/-13%	+23%/-48%
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 010485047-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-76 ± 9	$1.01^{+0.53}_{-0.54}$	2595^{+166}_{-121}	5497^{+2774}_{-963}	13^{+47}_{-8}
Alt.	-64 ± 8	$1.01^{+0.55}_{-0.51}$	2594^{+167}_{-111}	5281^{+2253}_{-922}	11^{+33}_{-7}

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

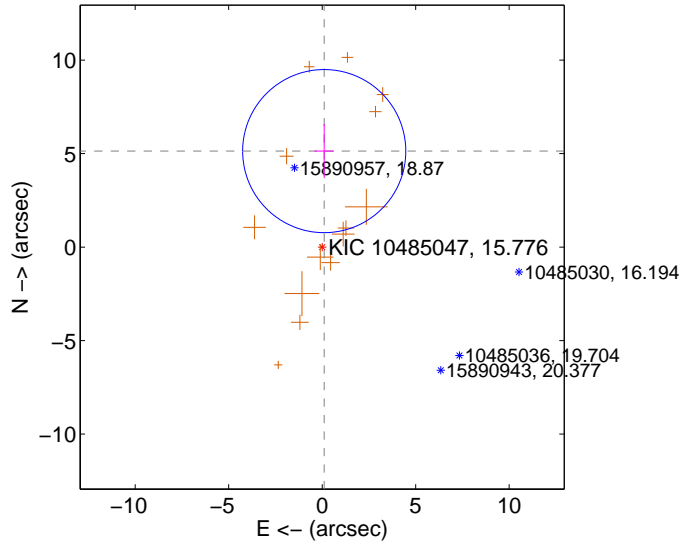
Supplemental centroid analysis for 010485047-01. Kepler magnitude: 15.78. Transit SNR 7.95

There are 0 quarters with good PRF difference image offsets

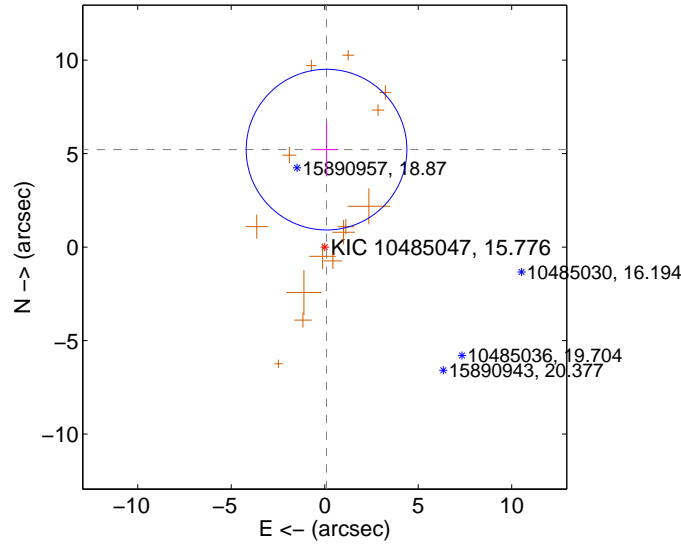
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.135 ± 1.454	3.53	-0.109 ± 0.521	5.134 ± 1.449
PRF-fit source offset from KIC position	5.215 ± 1.432	3.64	-0.097 ± 0.625	5.214 ± 1.432
photometric centroid source offset	4.77 ± 2.01	2.38	1.89 ± 1.86	-4.38 ± 2.03

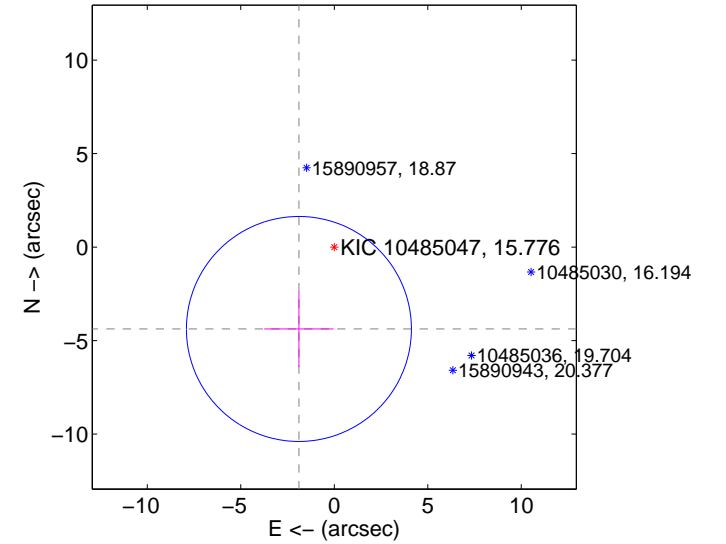
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

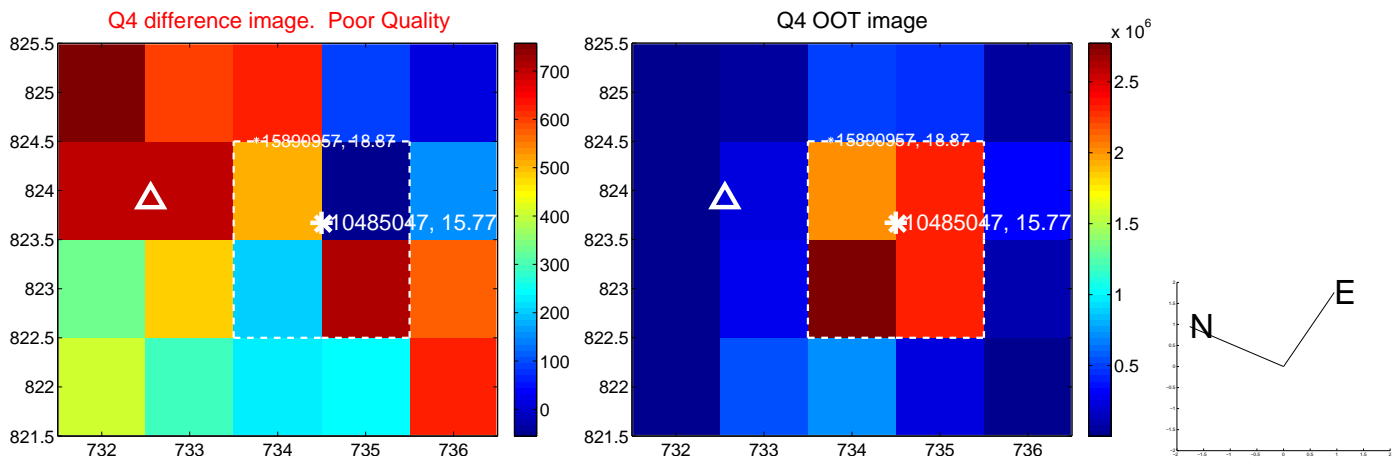
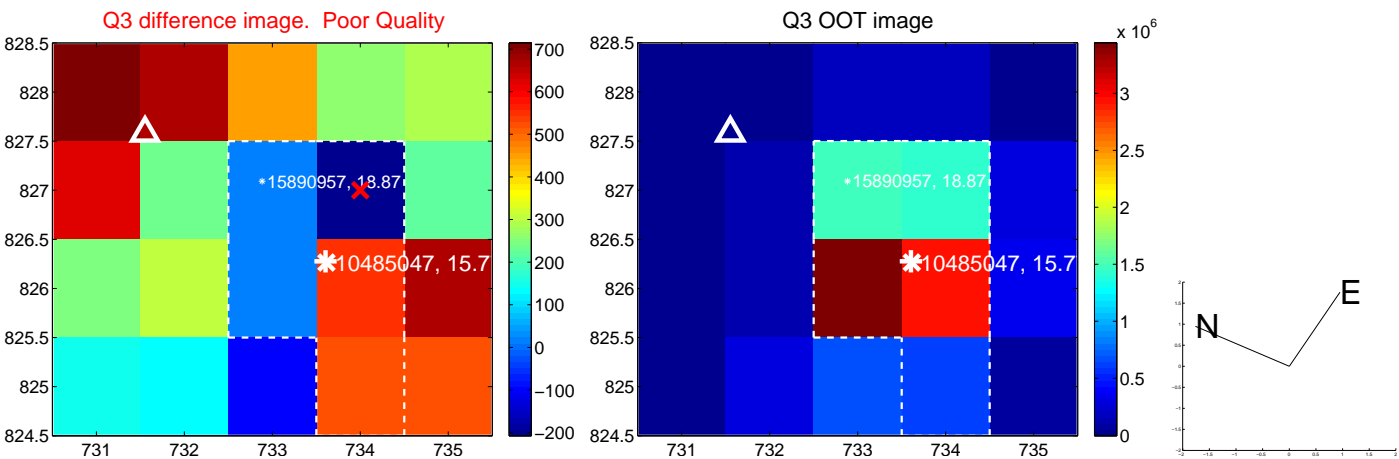
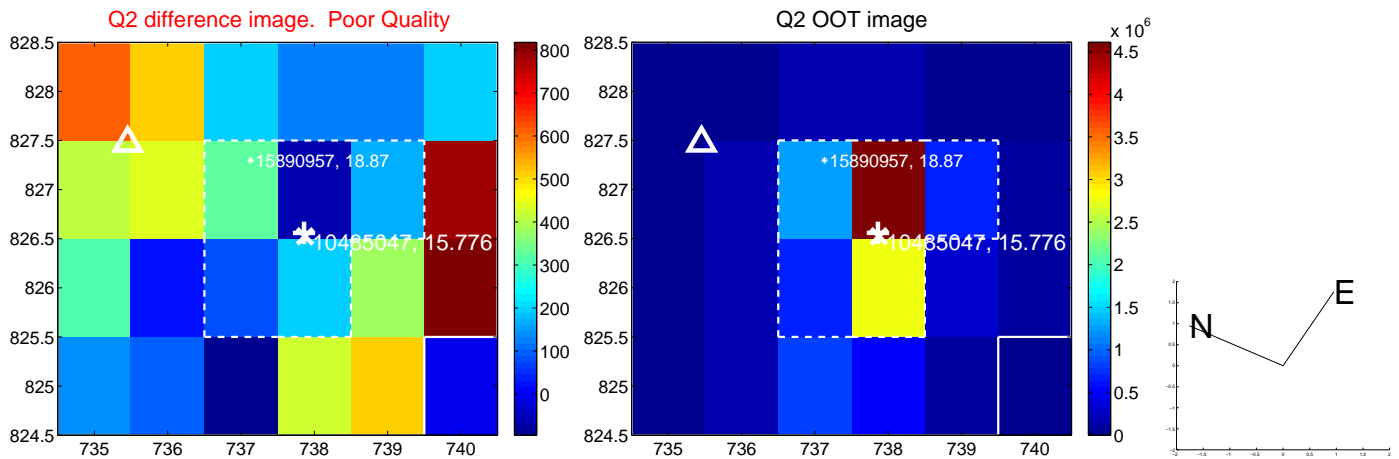
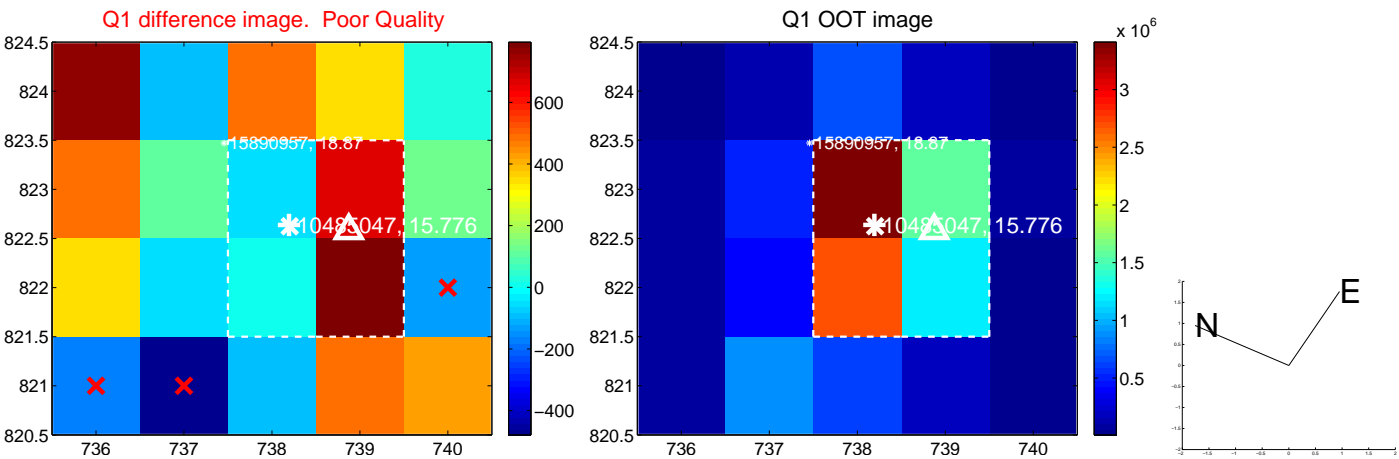


offset from photometric centroids

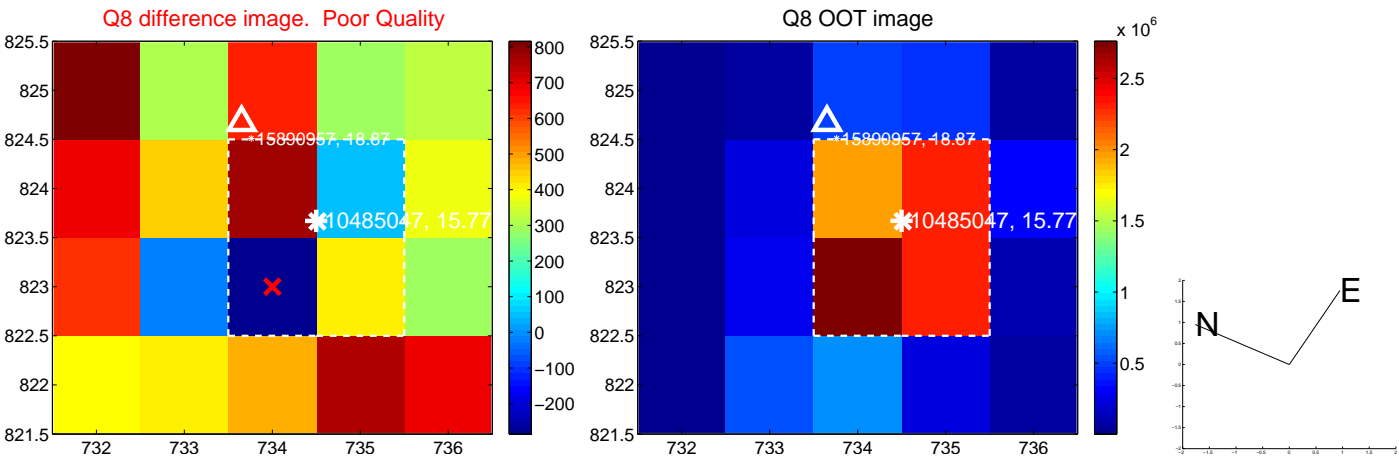
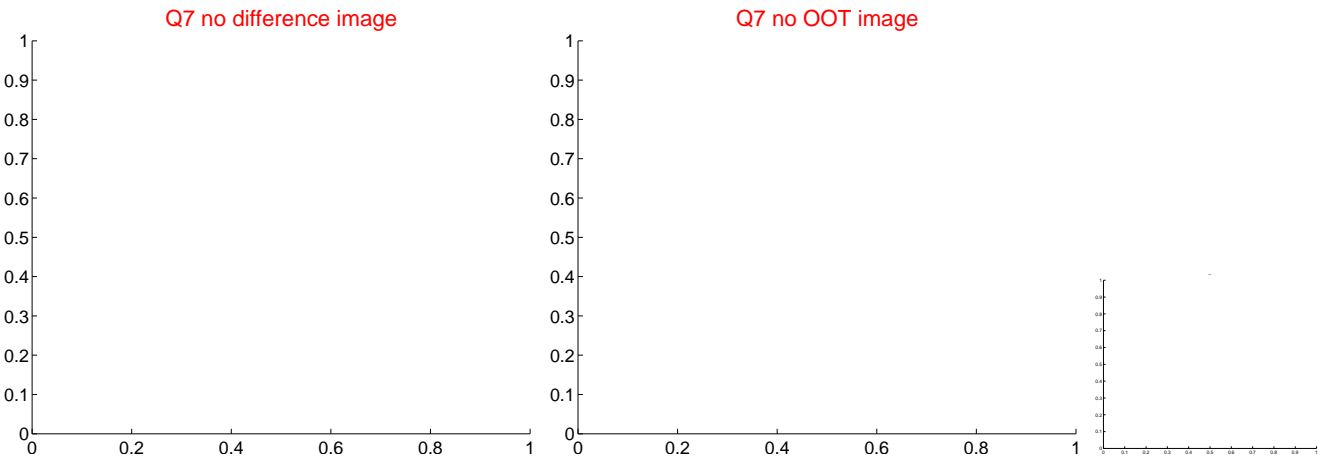
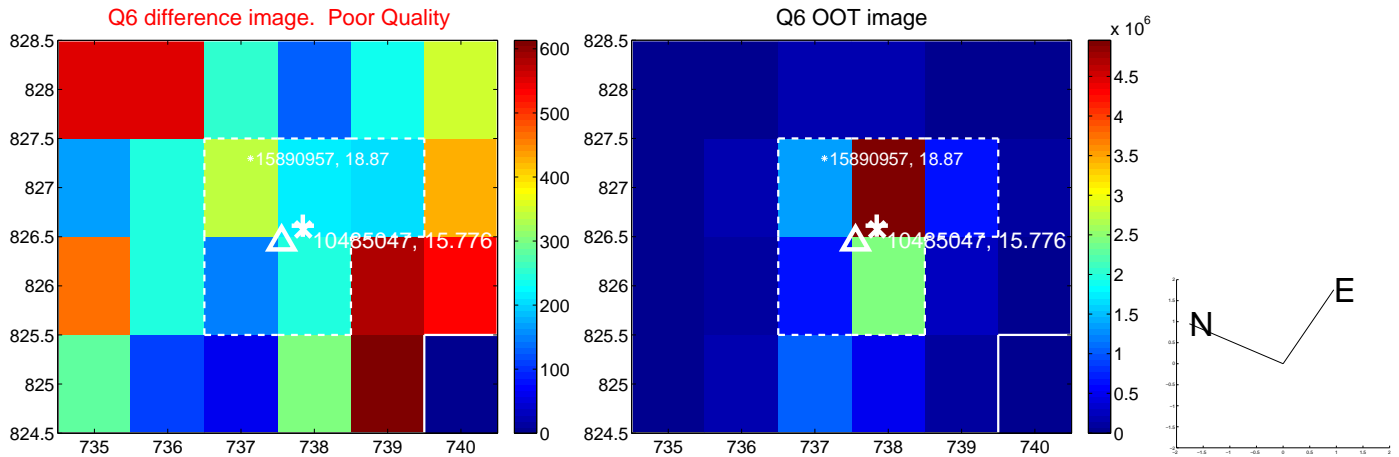
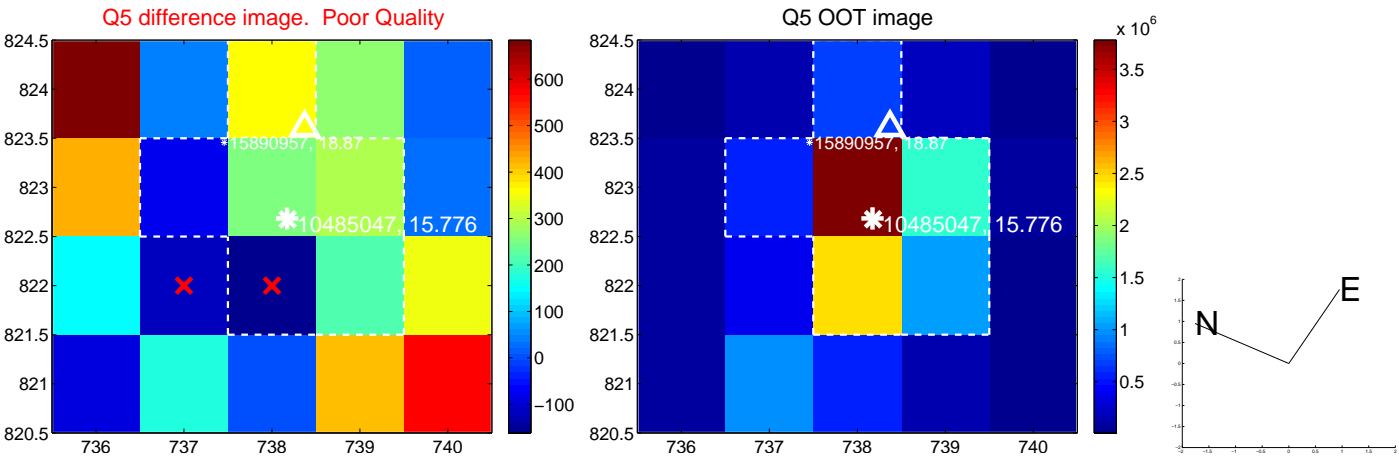


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

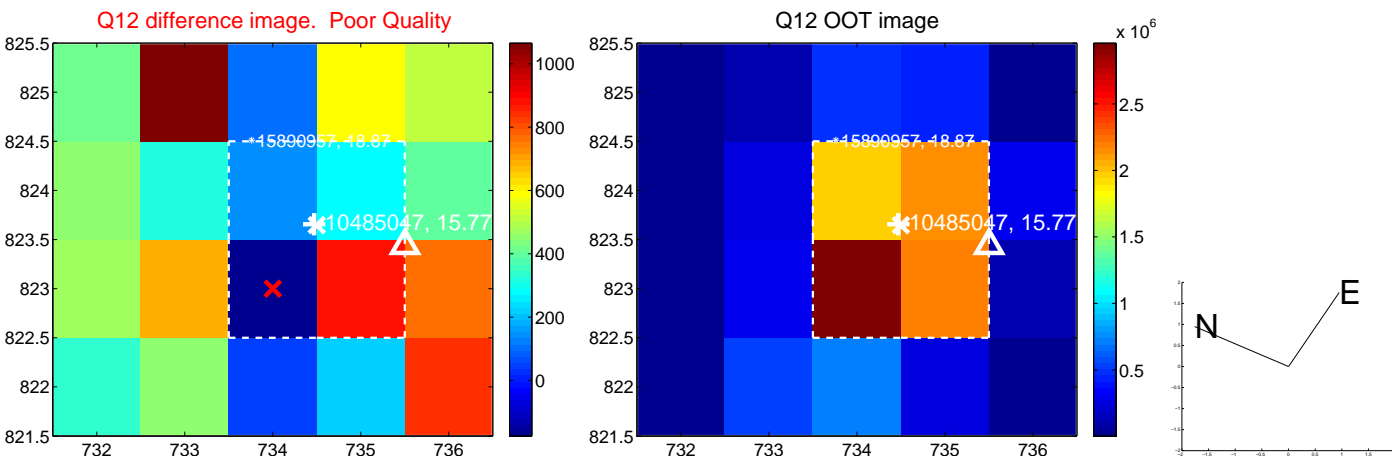
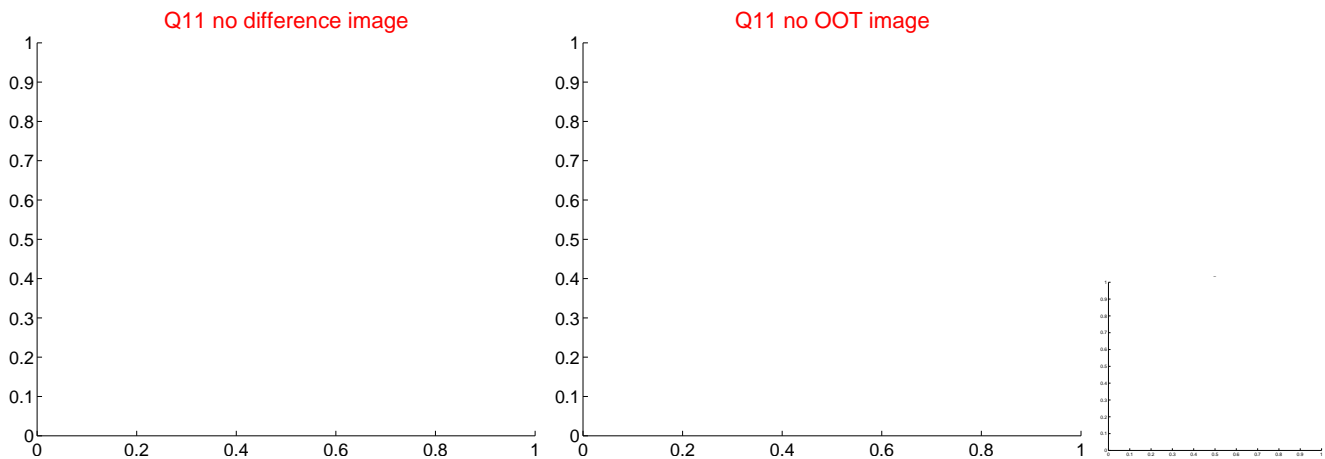
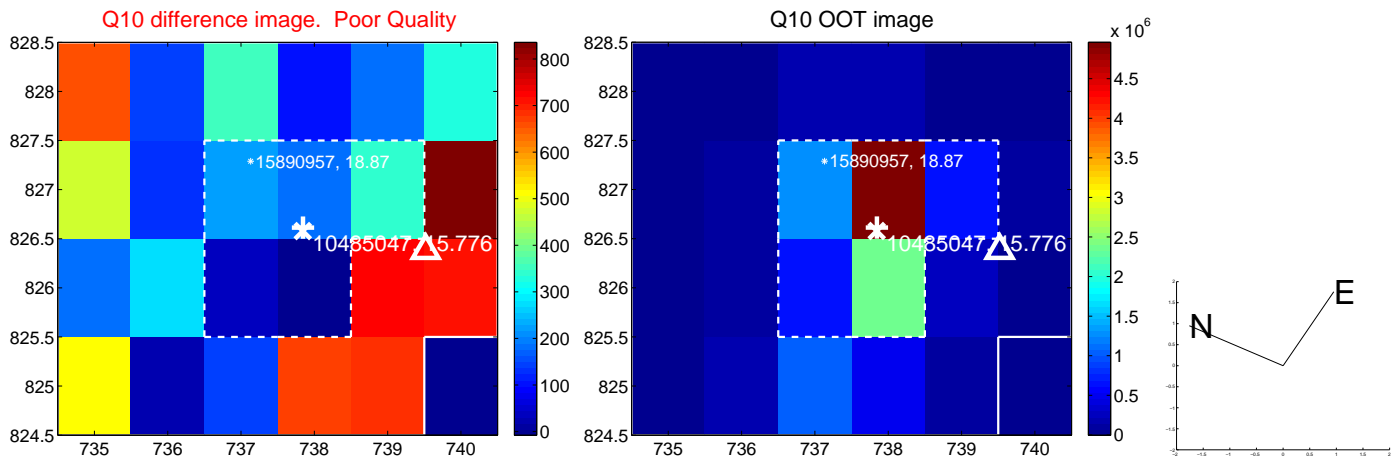
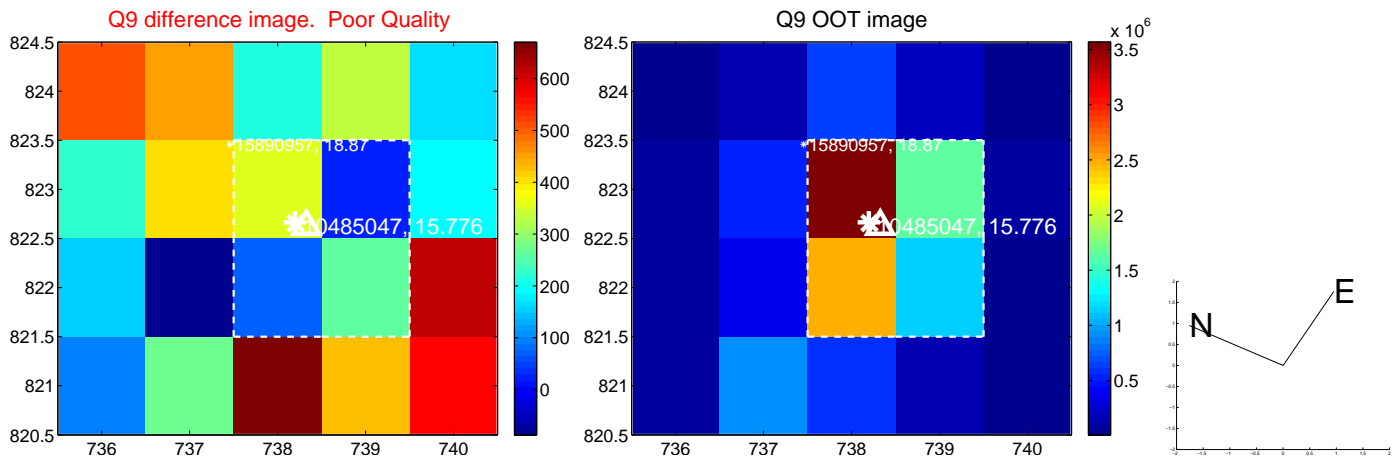
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



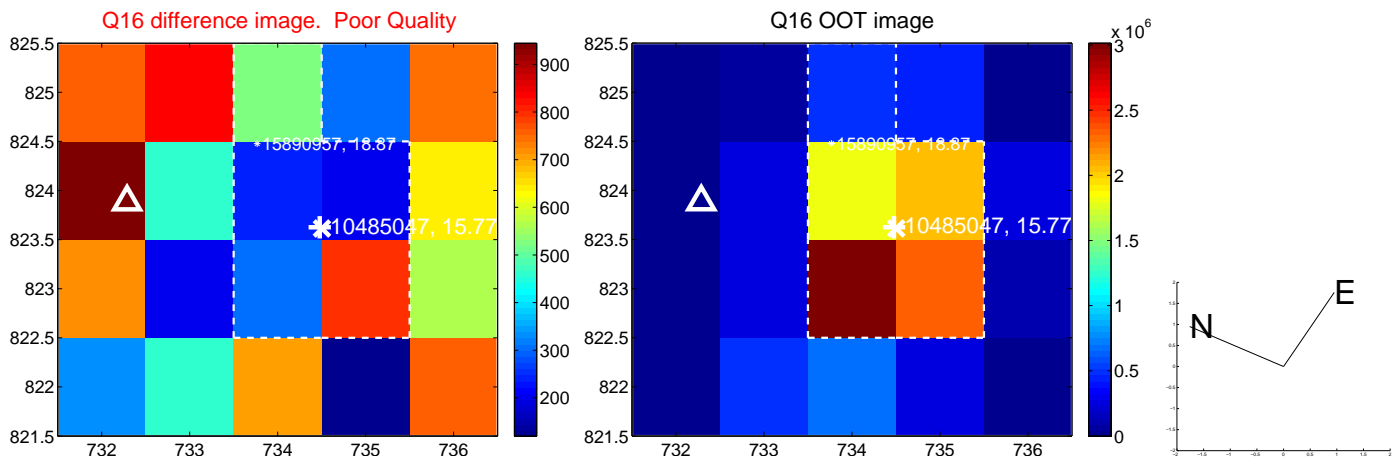
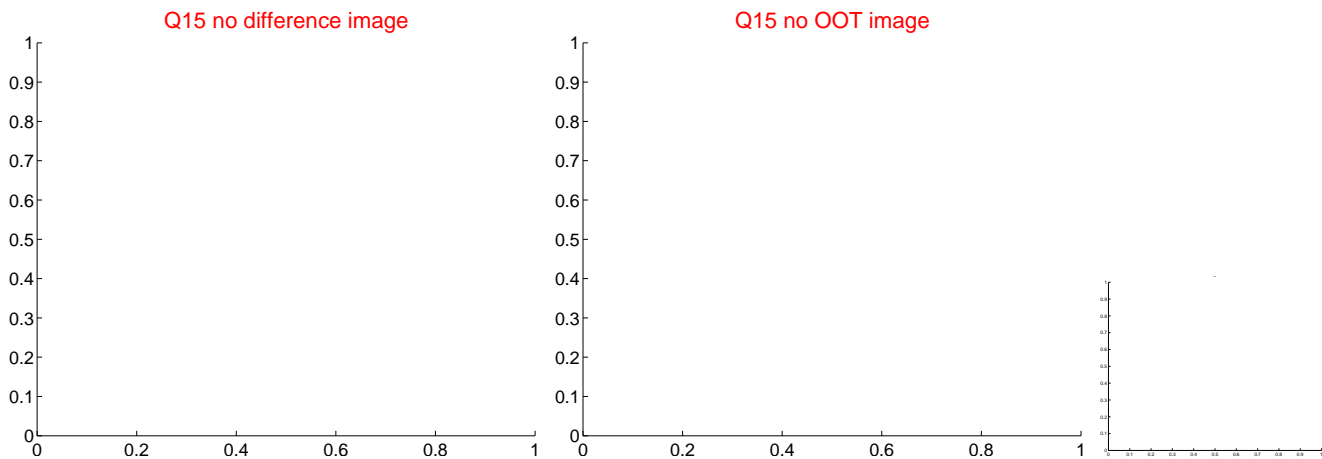
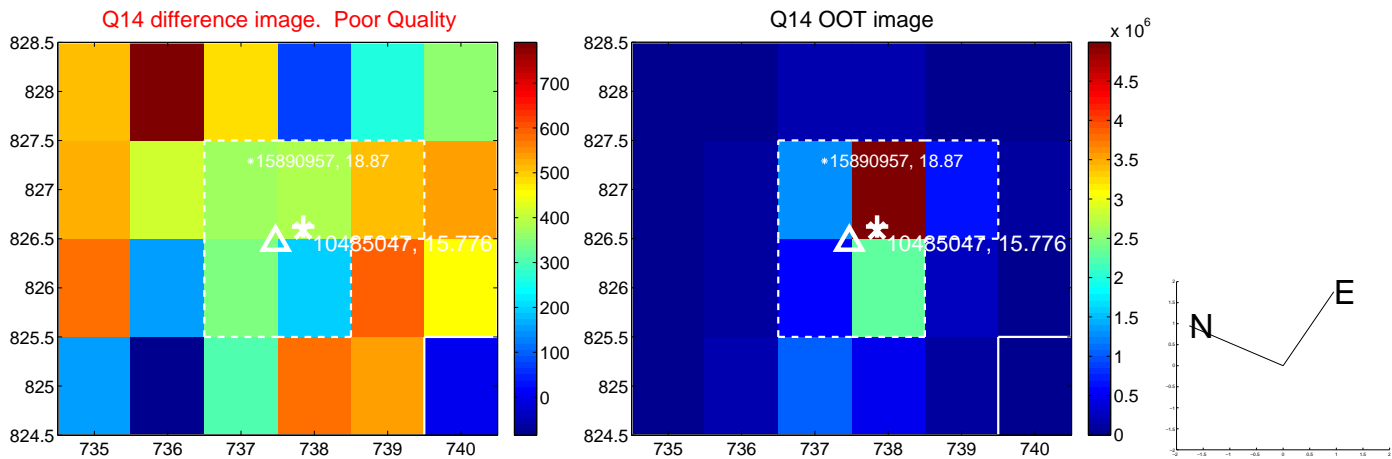
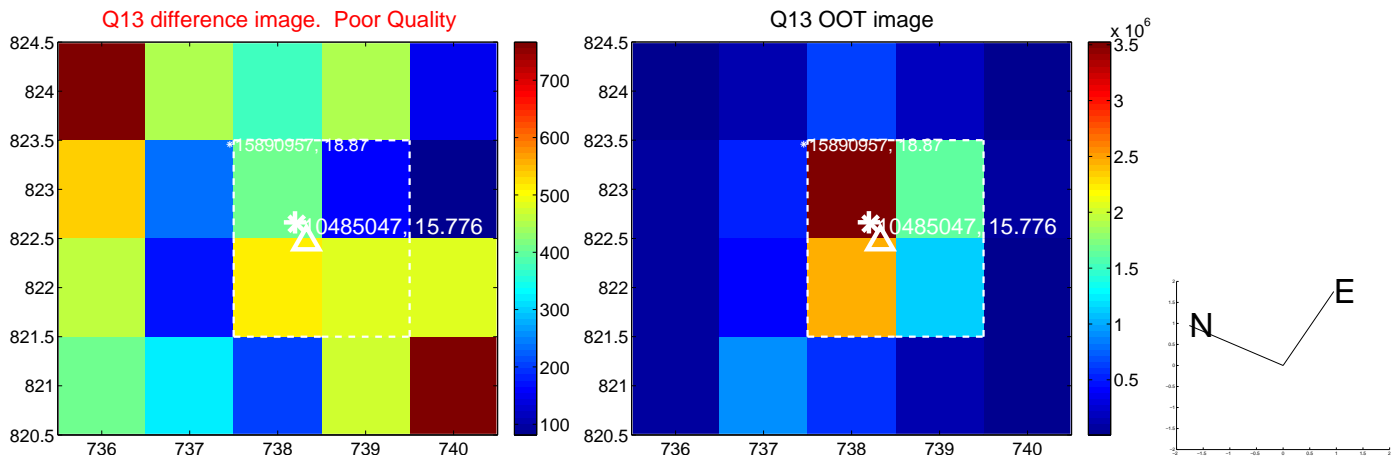
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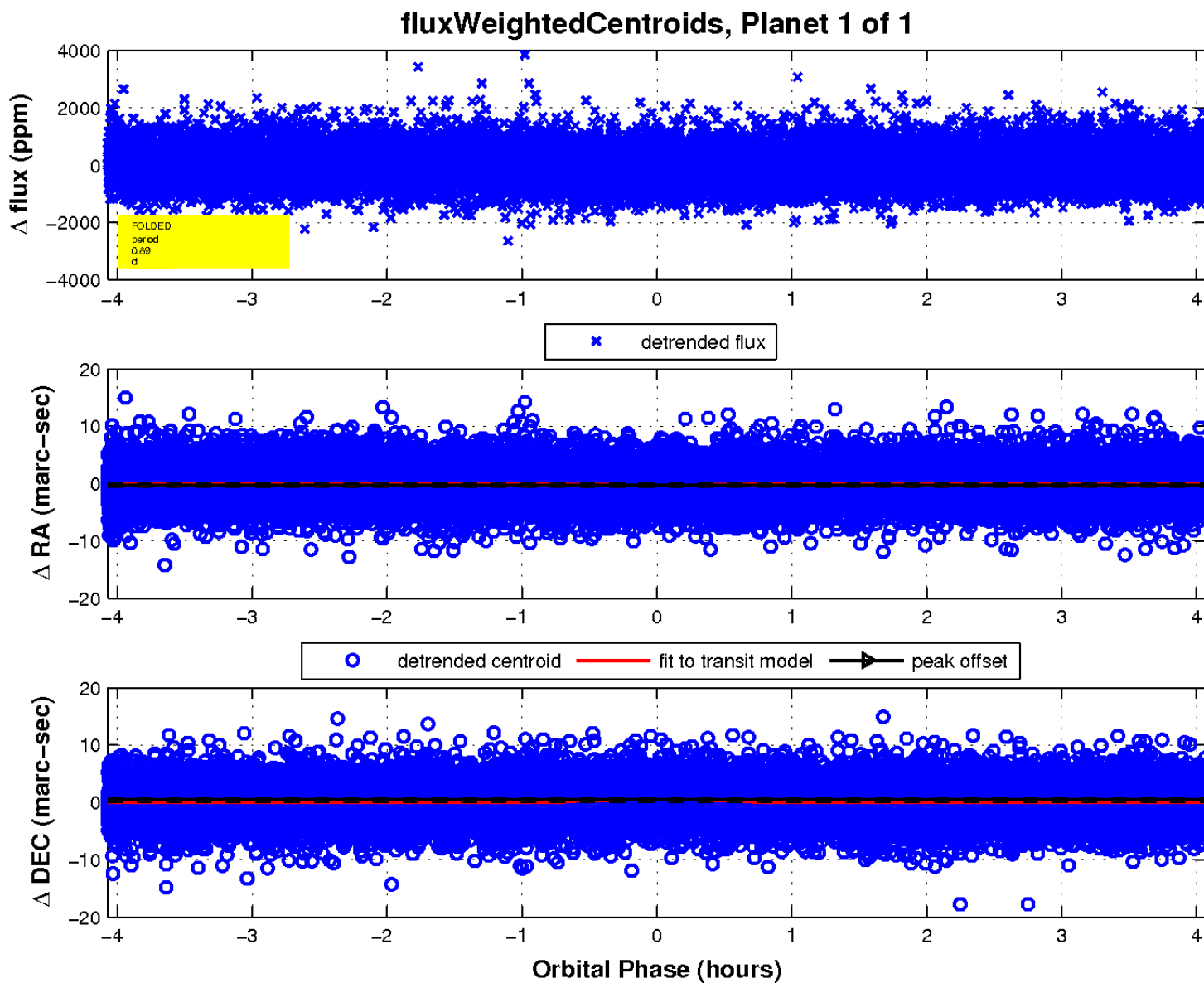
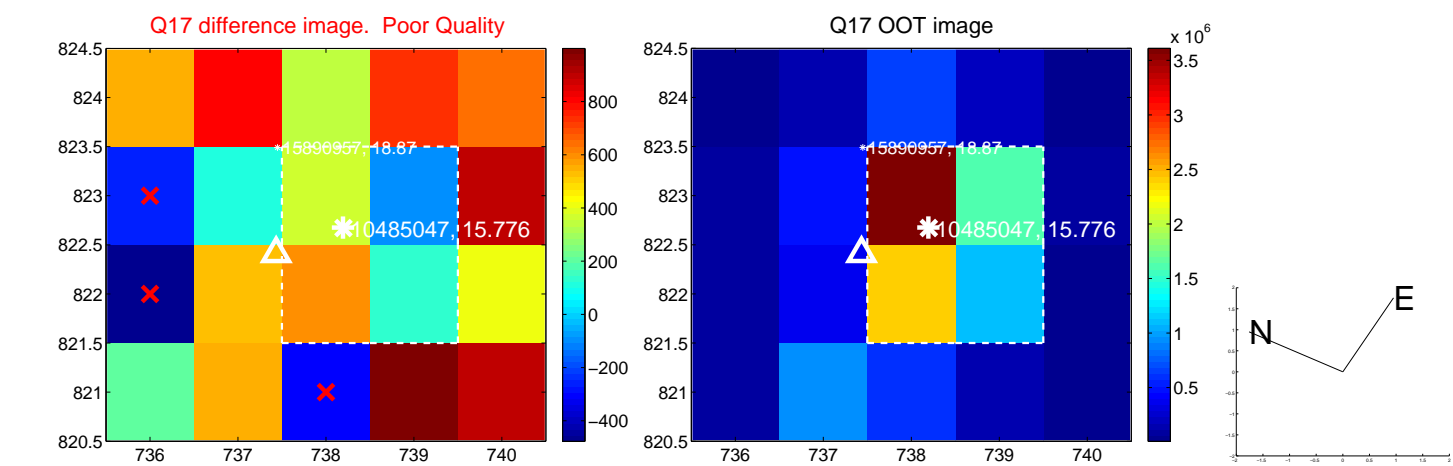
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

