

KIC 010535696

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})
010535696-01	OBS	No	0.933726	131.524166	40.2	3.355	7.3	7.0	0.85	4867	0.66	1188.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010535696-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—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.

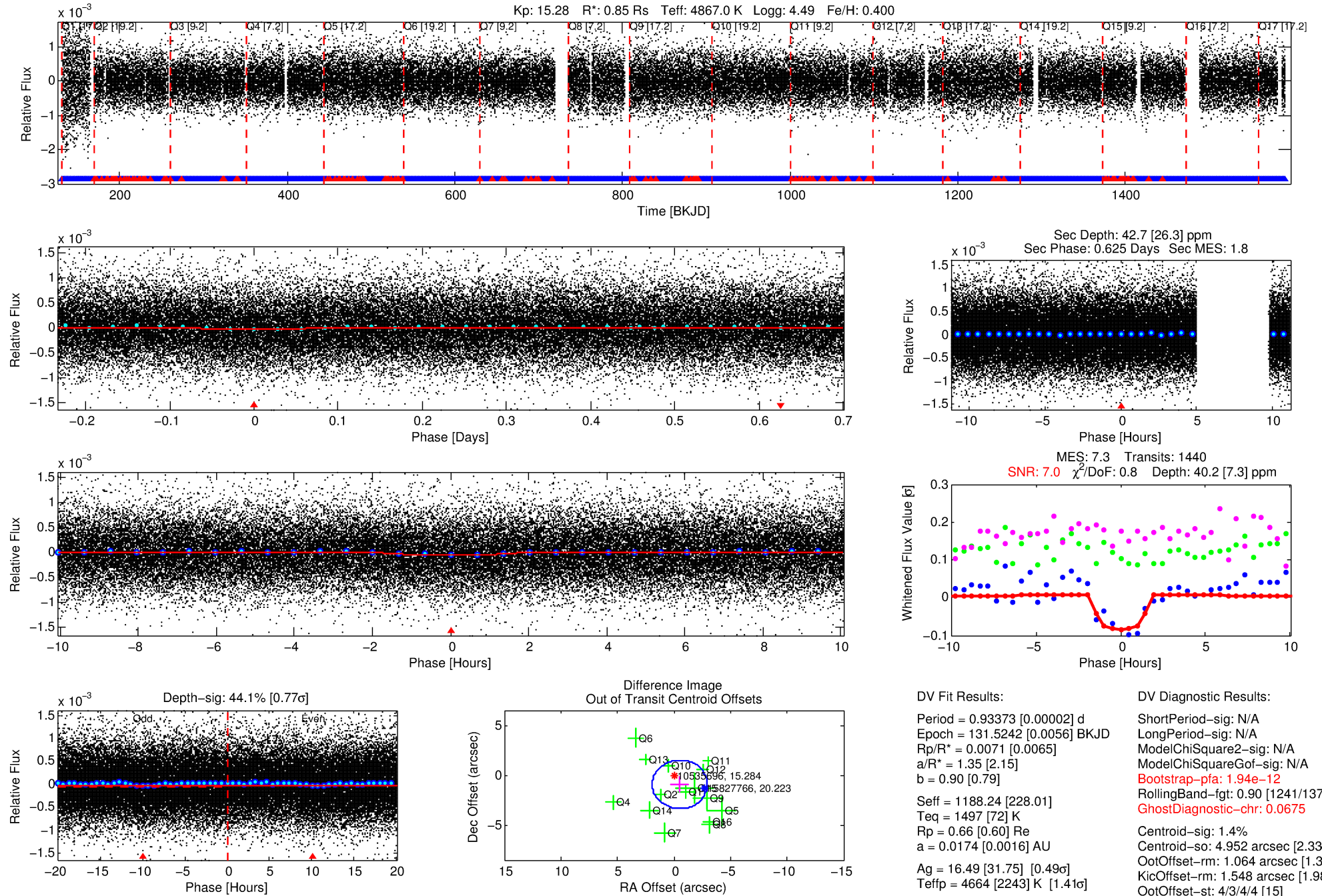
Ephemeris Match Information For 010535696-01

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
010535696-01	10535696	V2083-Cyg-pri	10342012	1:2	1992.0	444	-234	6.90	15.28	4958.00	Direct-PRF	0	4.17	0.54

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: 10535696 Candidate: 1 of 1 Period: 0.934 d



DV Fit Results:

Period = 0.93373 [0.00002] d
Epoch = 131.5242 [0.0056] BKJD
Rp/R* = 0.0071 [0.0065]
a/R* = 1.35 [2.15]
b = 0.90 [0.79]
Seff = 1188.24 [228.01]
Teff = 1497 [72] K
Rp = 0.66 [0.60] Re
a = 0.0174 [0.0016] AU
Ag = 16.49 [31.75] [0.49 σ]
Teffp = 4664 [2243] K [1.41 σ]

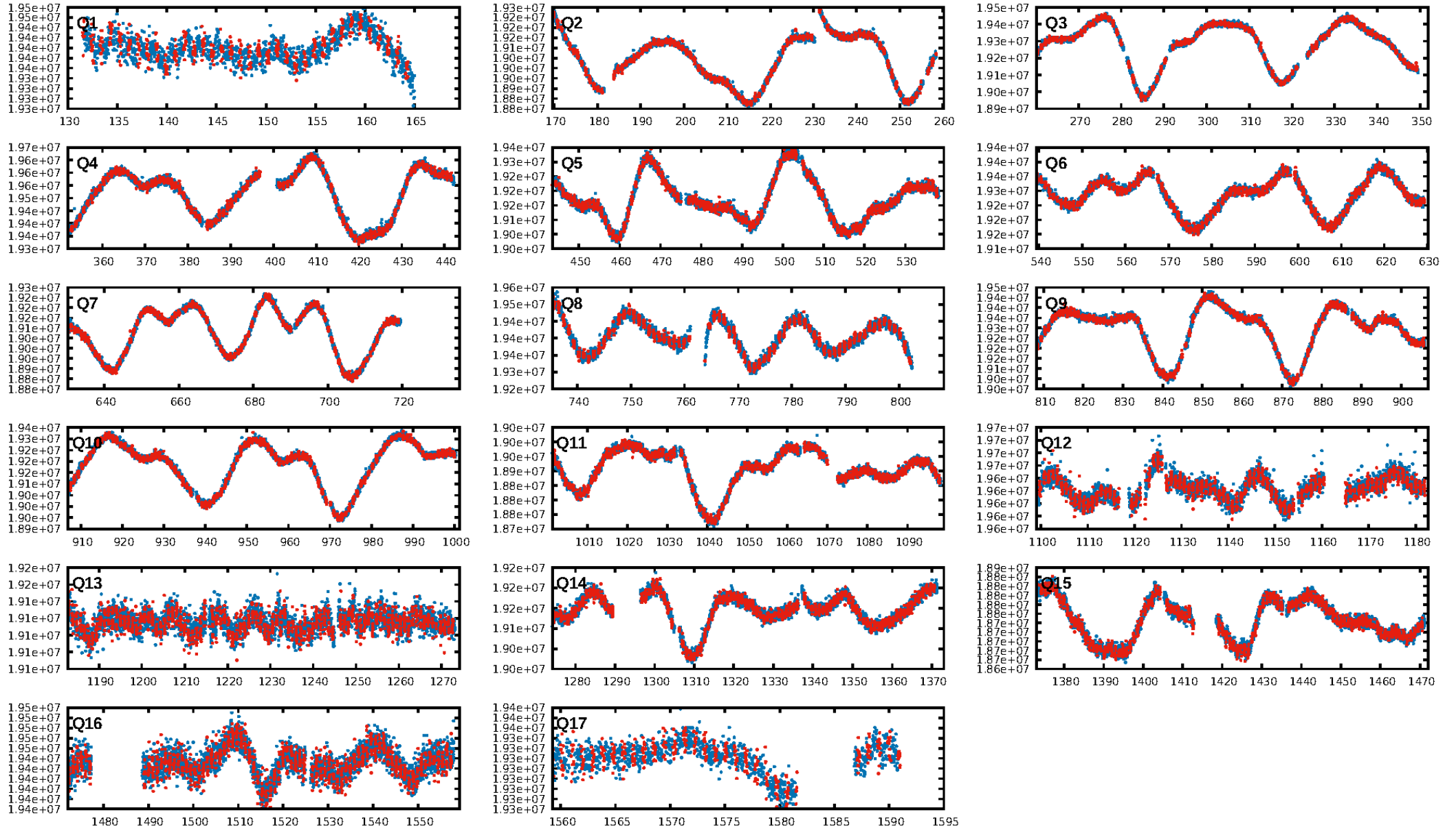
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.94e-12
RollingBand-fgt: 0.90 [1241/1374]
GhostDiagnostic-chr: 0.0675
Centroid-sig: 1.4%
Centroid-so: 4.952 arcsec [2.33 σ]
OotOffset-rm: 1.064 arcsec [1.31 σ]
KicOffset-rm: 1.548 arcsec [1.98 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [17/17]

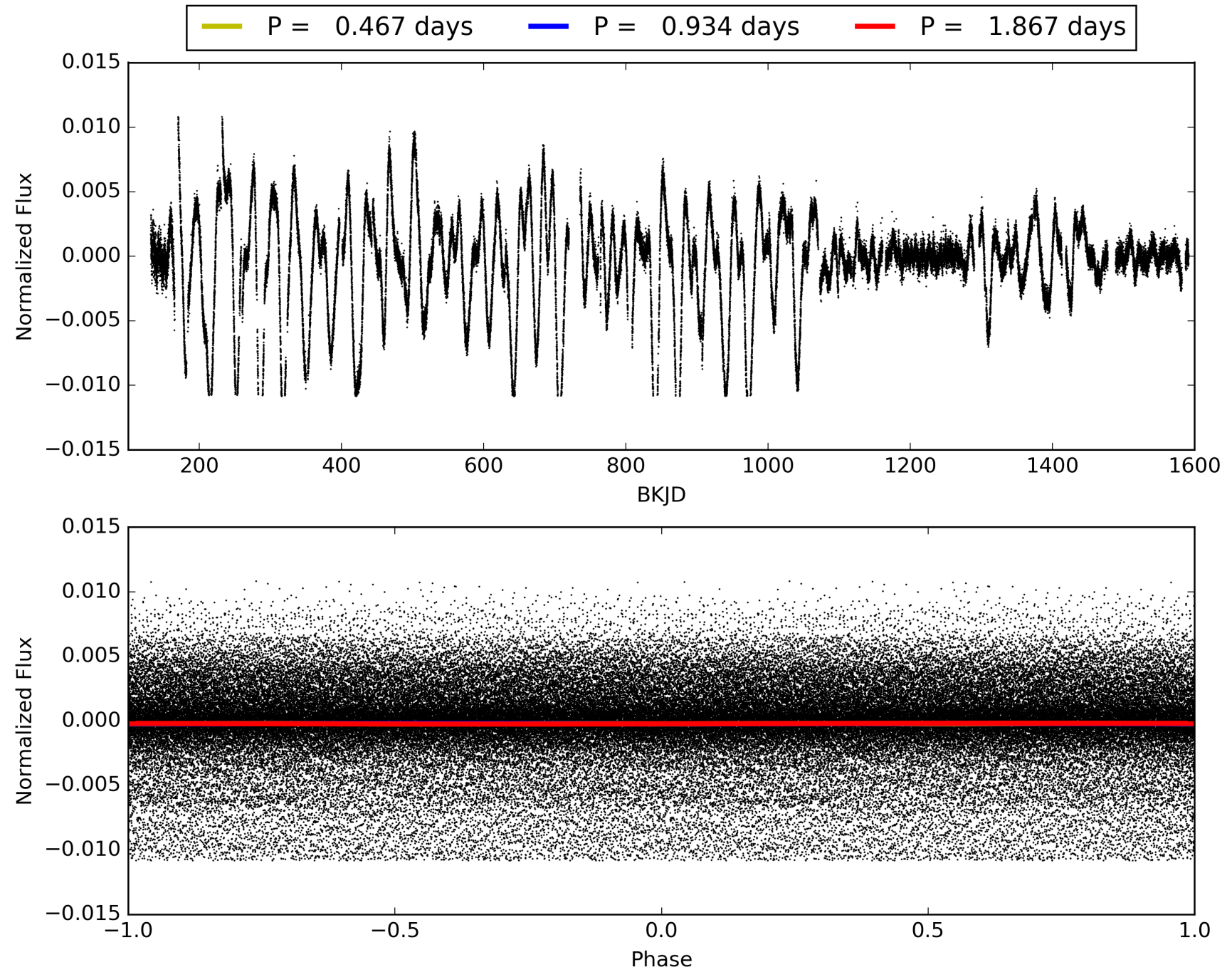
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:21:09 Z

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

TCE 010535696-01, PDC Light Curves

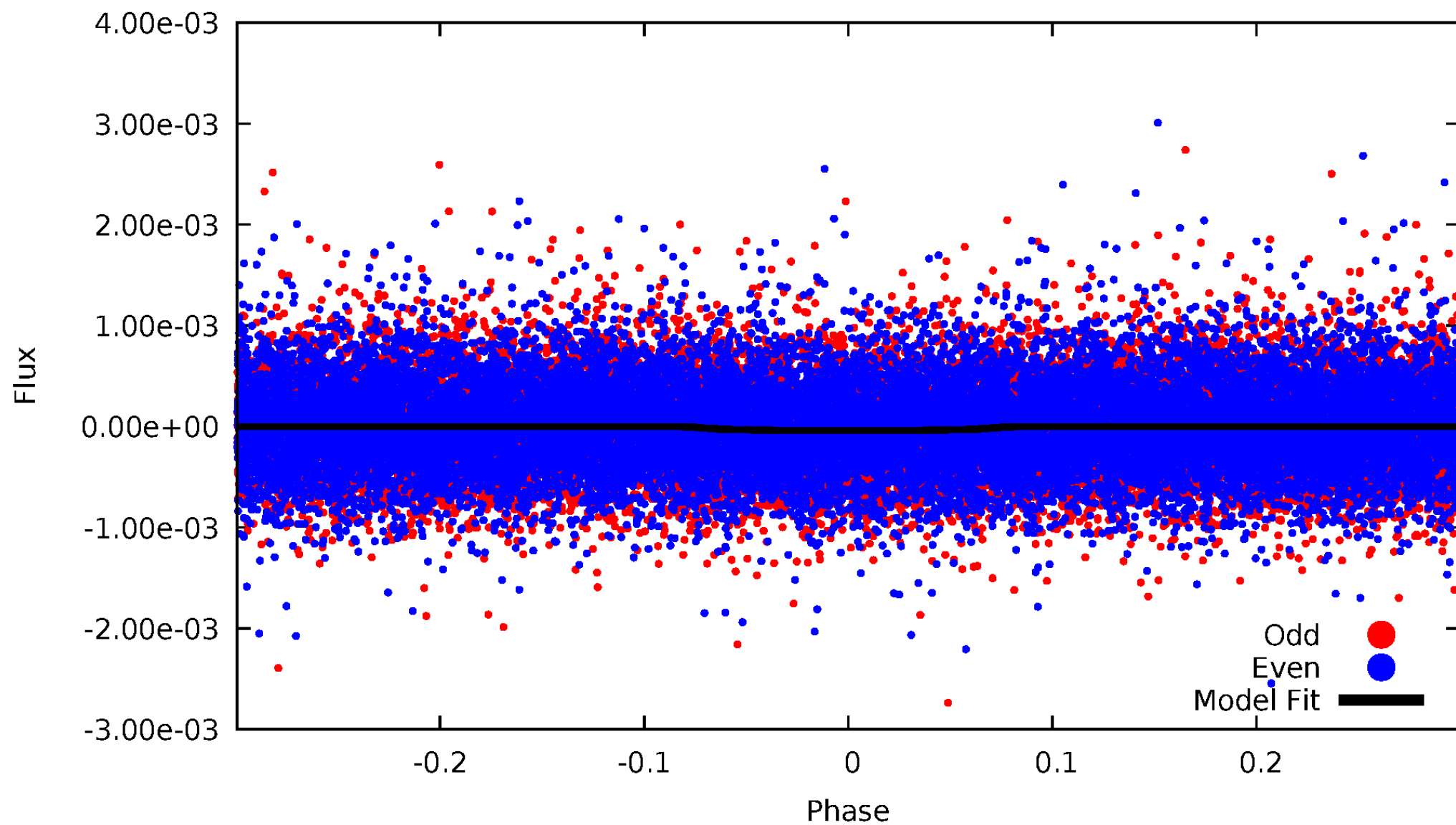


TCE 010535696-01



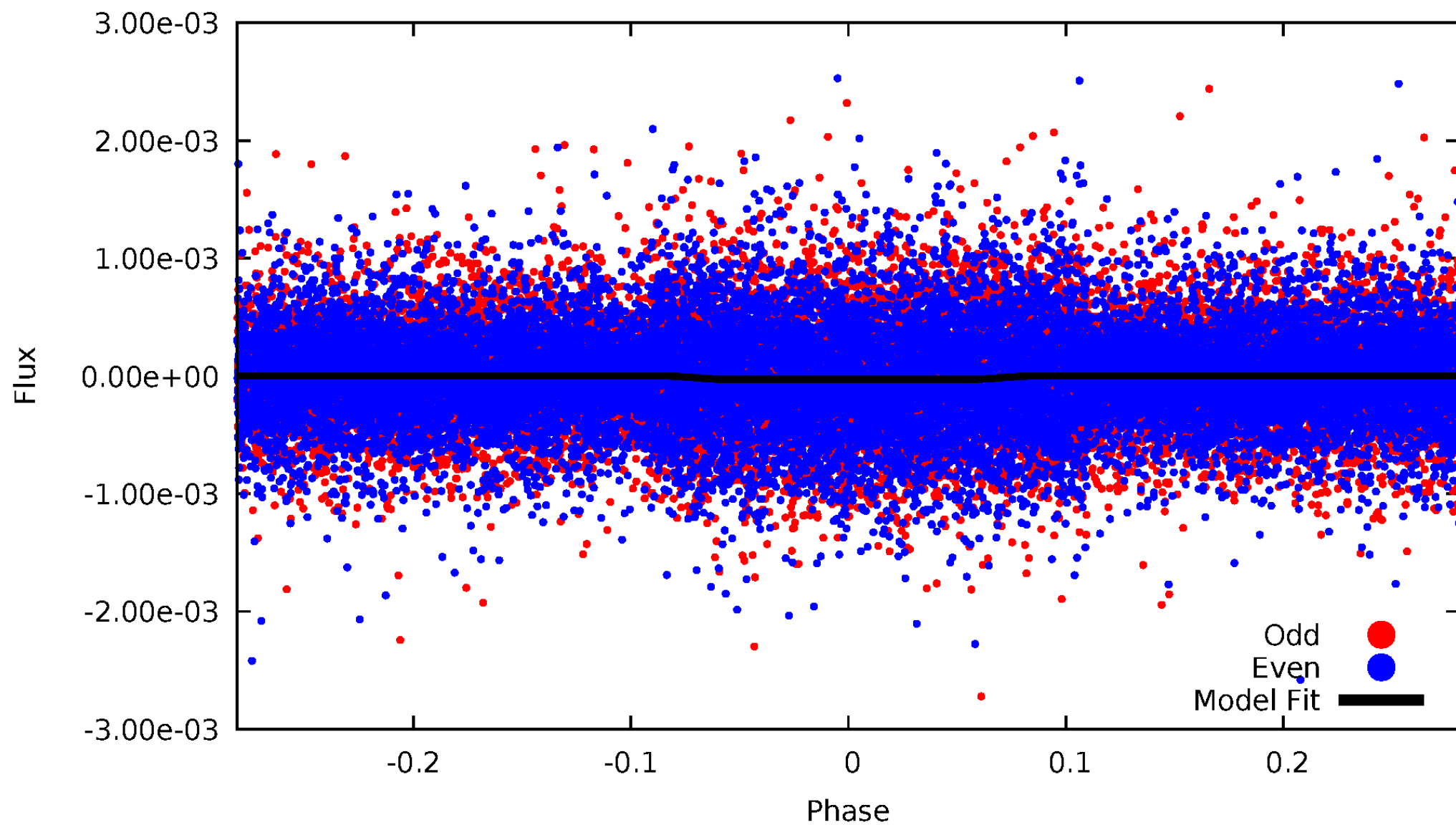
DV Odd/Even

TCE 010535696-01



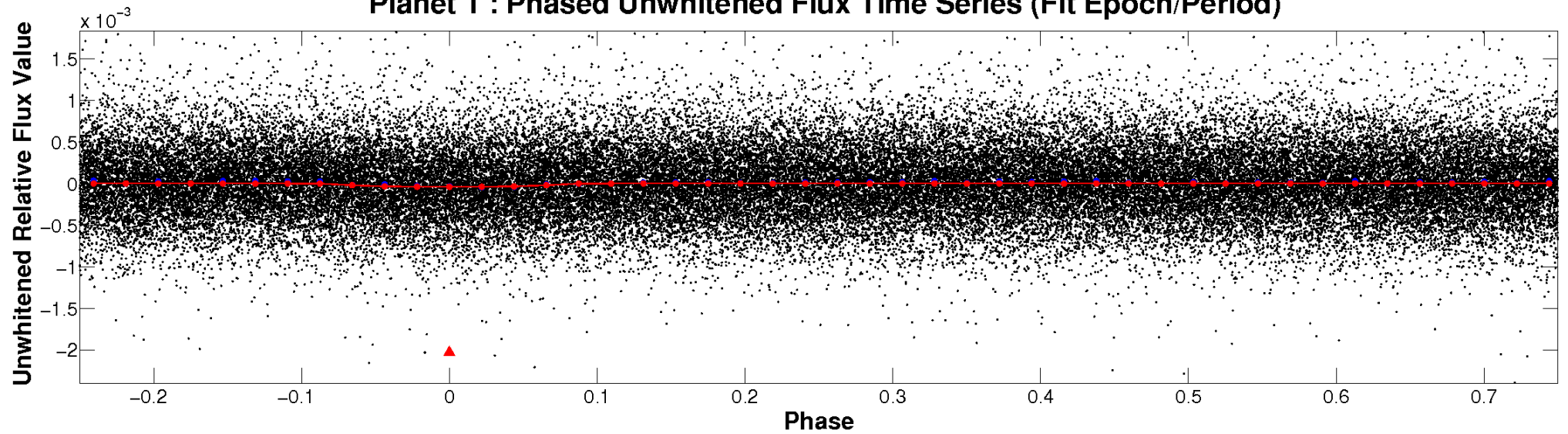
ALT Odd/Even

TCE 010535696-01

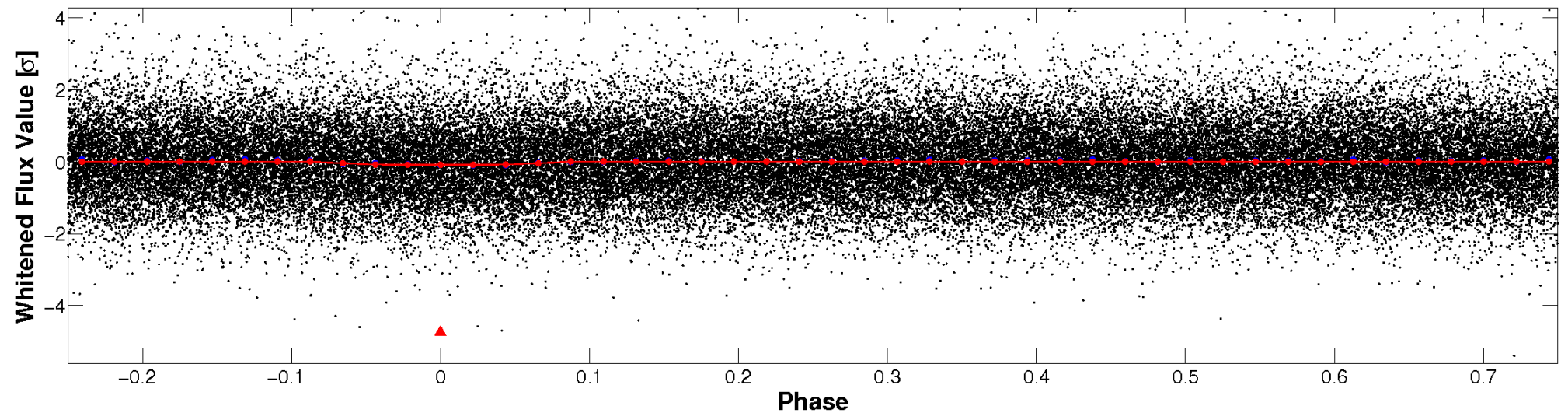


Non-Whitened Vs. Whitened Light Curve

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

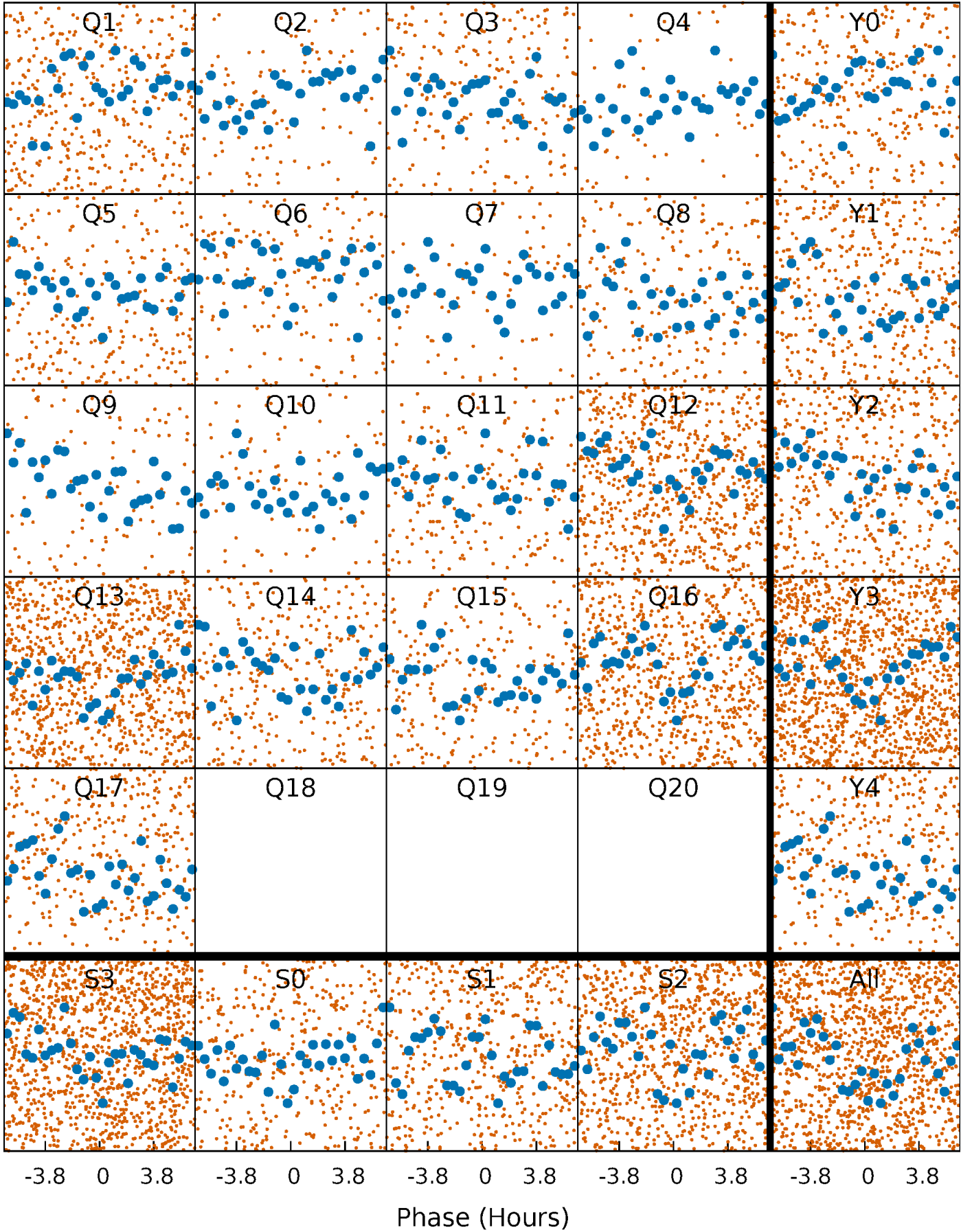


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



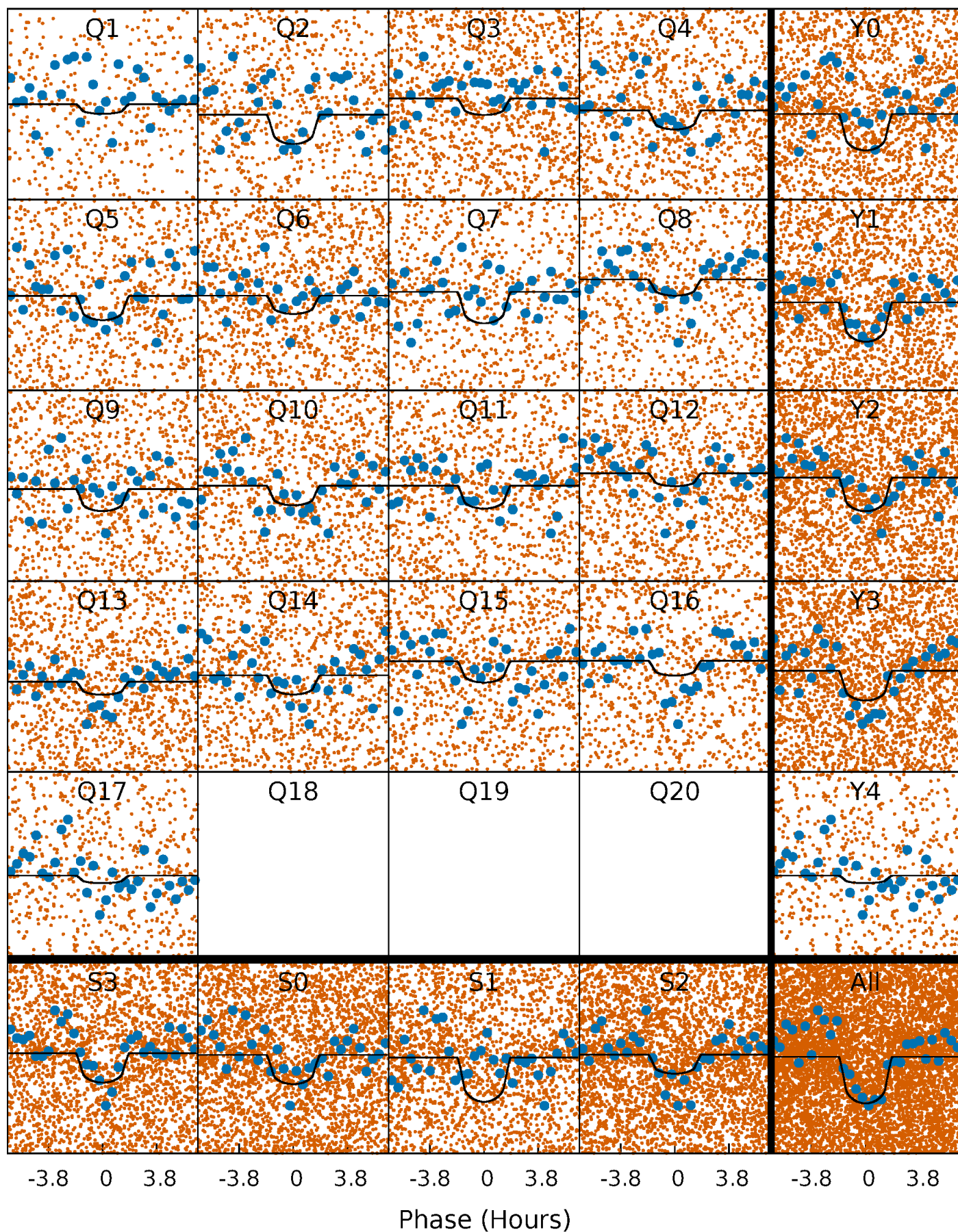
PDC Quarter-Phased Transit Curves

TCE 010535696-01 P= 0.933726 Days $T_0=131.524166$ (BKJD)



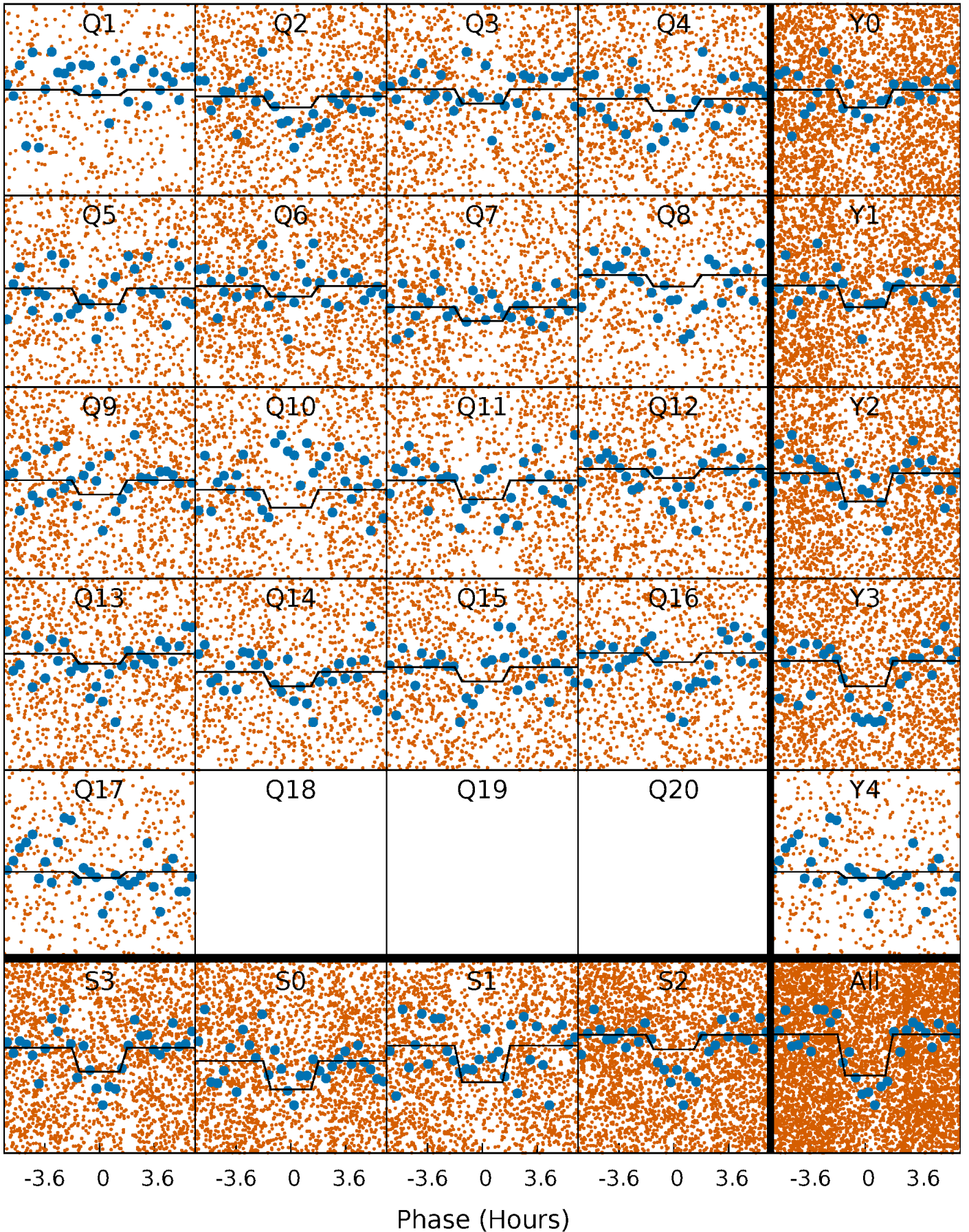
DV Quarter-Phased Transit Curves

TCE 010535696-01 P= 0.933726 Days $T_0=131.524166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

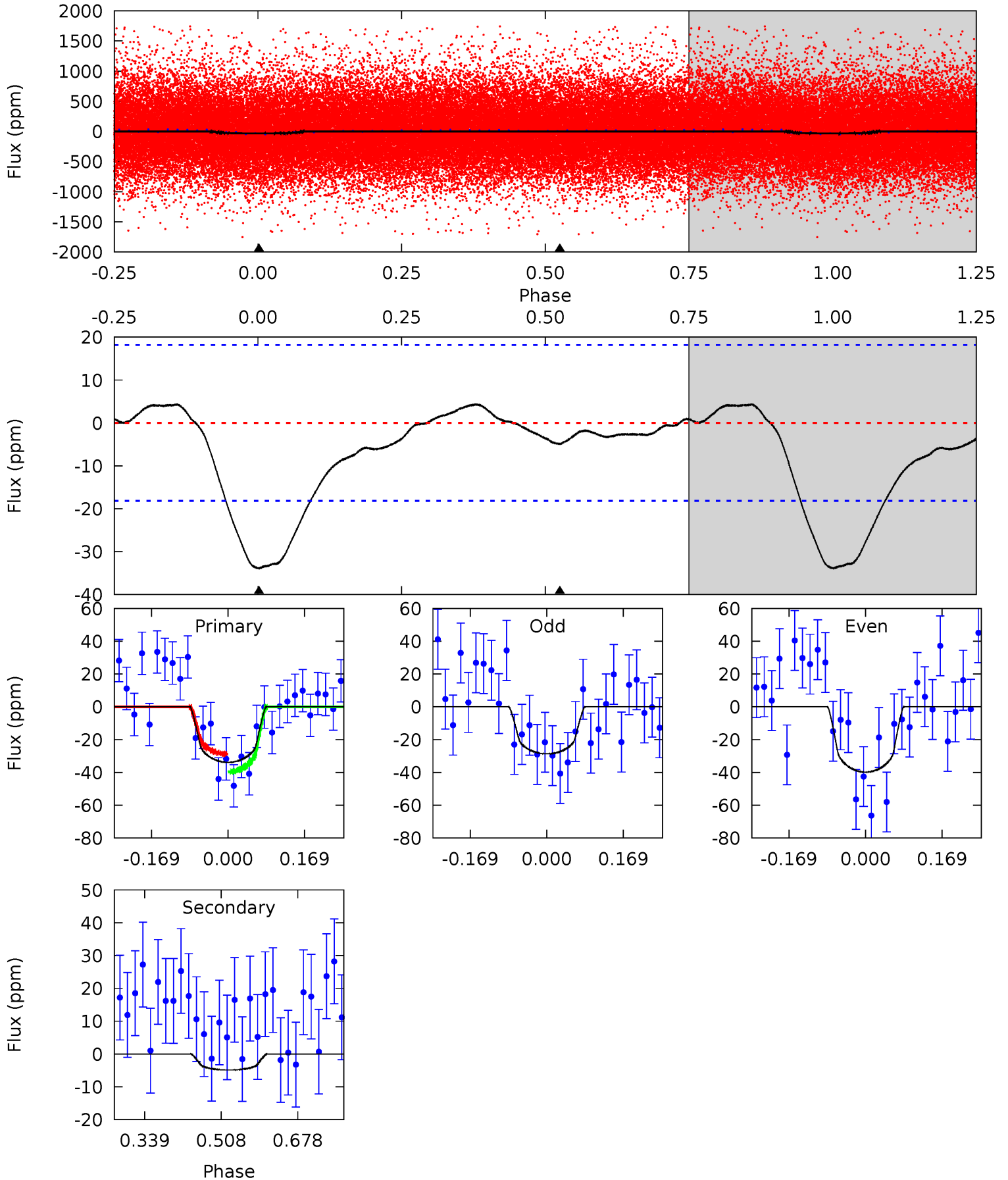
TCE 010535696-01 P= 0.933716 Days $T_0=131.523554$ (BKJD)



DV Model-Shift Uniqueness Test

010535696-01, P = 0.933726 Days, E = 130.590440 Days

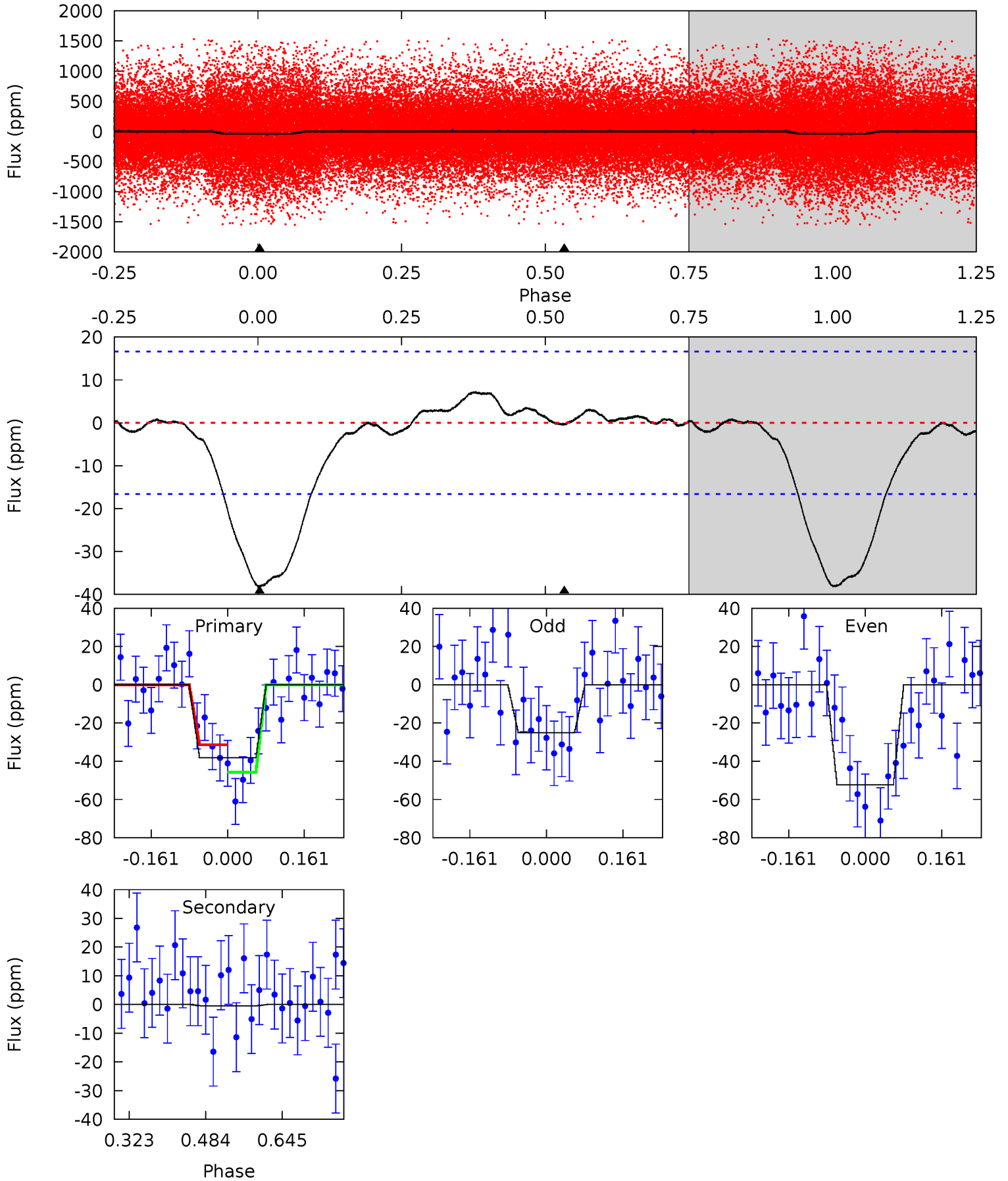
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	1.20	0	0	4.45	1.37	0.79	8.31	8.31	1.20	1.20	1.37	0.94	0.11	1.34



Alt Model-Shift Uniqueness Test

010535696-01, P = 0.933716 Days, E = 130.589838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	0.12	0	0	4.46	1.40	0.60	10.3	10.3	0.12	0.12	3.67	0.84	0.16	1.94



Stellar Parameters For KIC 010535696

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4867^{+145}_{-130}	$4.490^{+0.088}_{-0.080}$	$0.400^{+0.050}_{-0.300}$	$0.847^{+0.063}_{-0.084}$	$0.808^{+0.052}_{-0.047}$	$1.875^{+0.702}_{-0.430}$
	+3%/-3%	+2%/-2%	+12%/-75%	+7%/-10%	+6%/-6%	+37%/-23%
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 010535696-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 4	$0.78^{+0.57}_{-0.49}$	2092^{+80}_{-84}	2882^{+1202}_{-5221}	$1.112^{+6.919}_{-0.969}$
Alt.	-0 ± 4	$0.65^{+0.53}_{-0.44}$	2092^{+80}_{-87}	-2413^{+5819}_{-896}	$0.103^{+2.740}_{-1.963}$

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

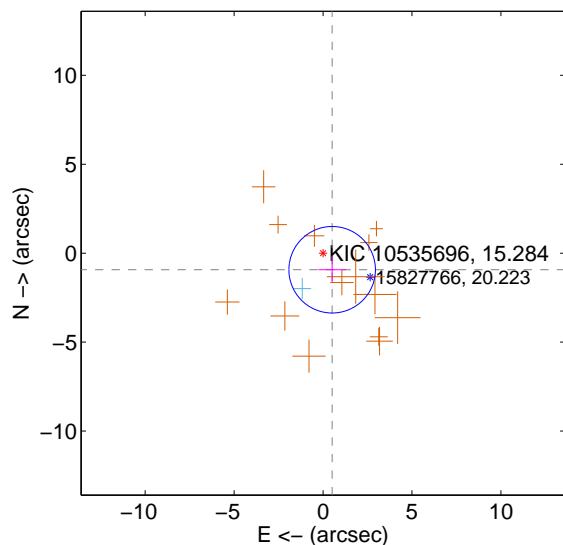
Supplemental centroid analysis for 010535696-01. Kepler magnitude: 15.28. Transit SNR 7.04

There are 1 quarters with good PRF difference image offsets

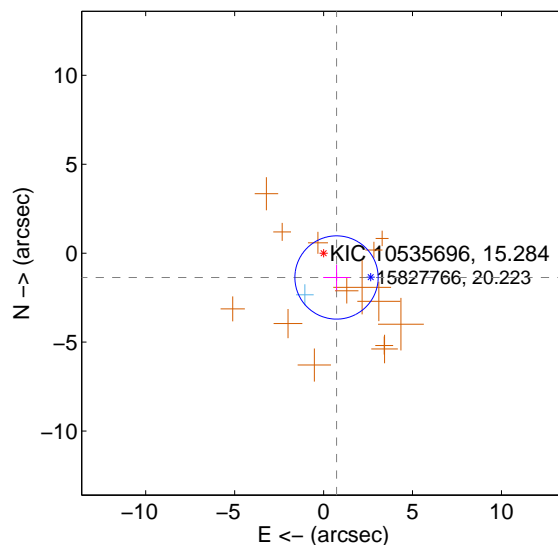
The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.064 ± 0.811	1.31	-0.513 ± 0.776	-0.932 ± 0.700
PRF-fit source offset from KIC position	1.548 ± 0.780	1.98	-0.727 ± 0.747	-1.367 ± 0.723
photometric centroid source offset	4.95 ± 2.13	2.33	-4.47 ± 2.19	-2.12 ± 1.81

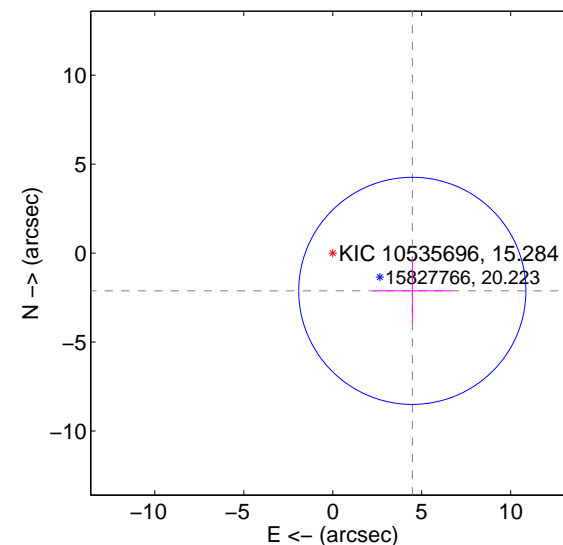
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

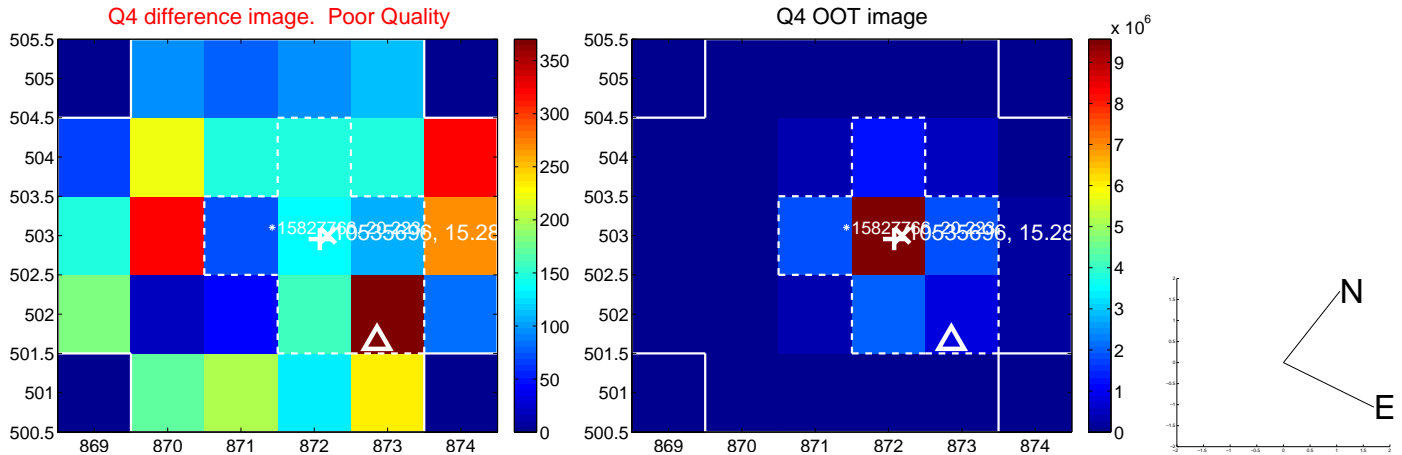
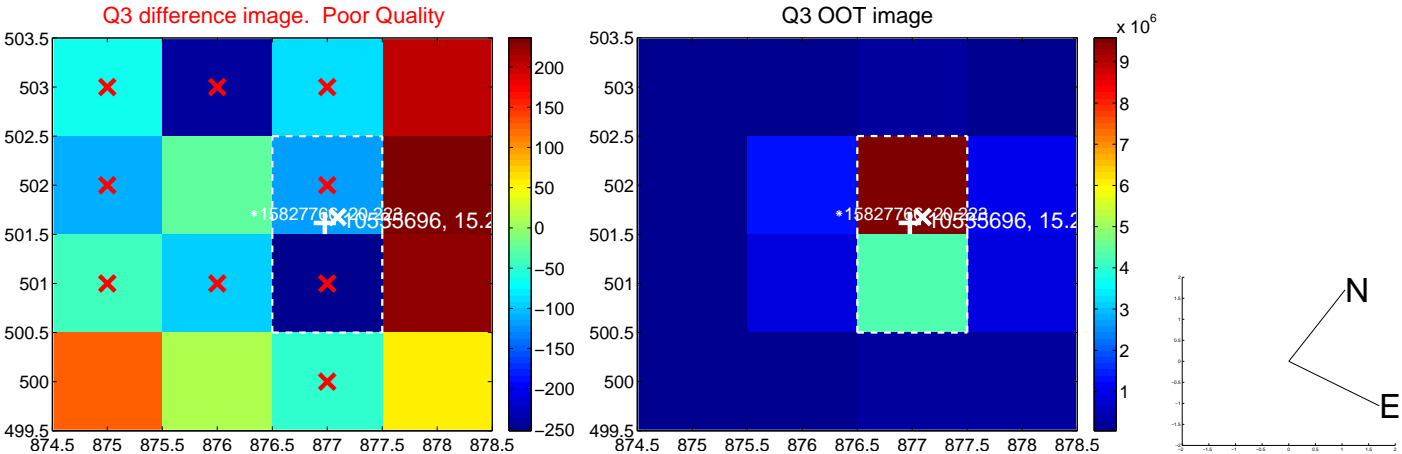
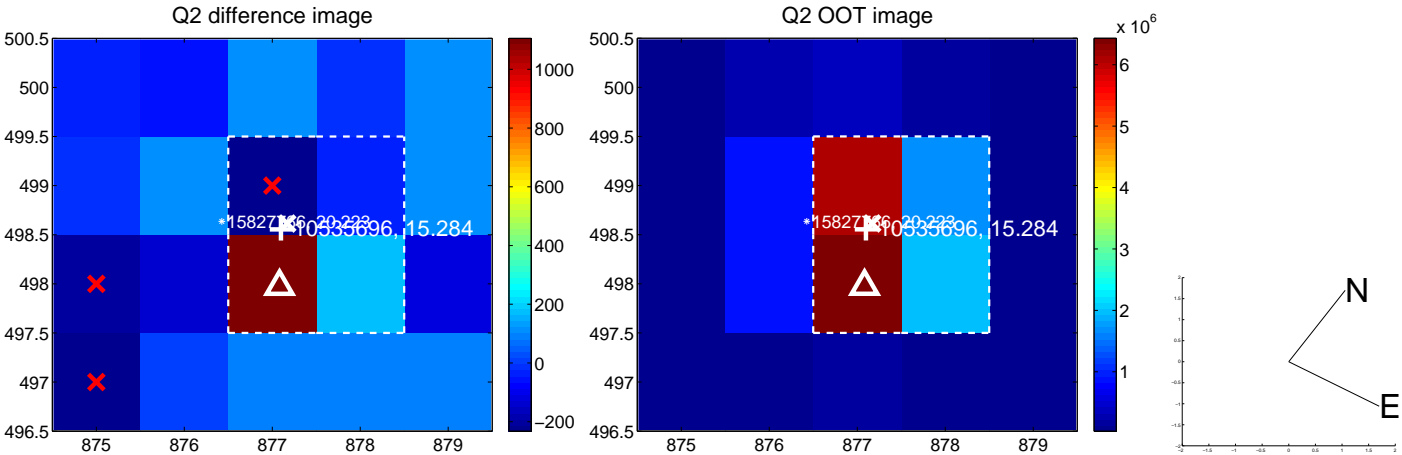
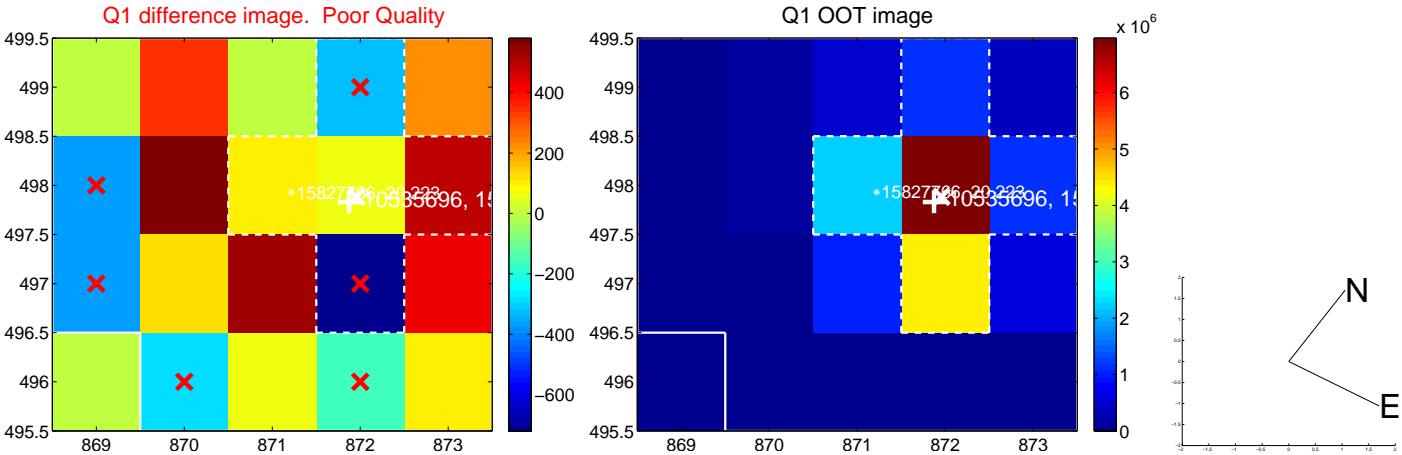


offset from photometric centroids

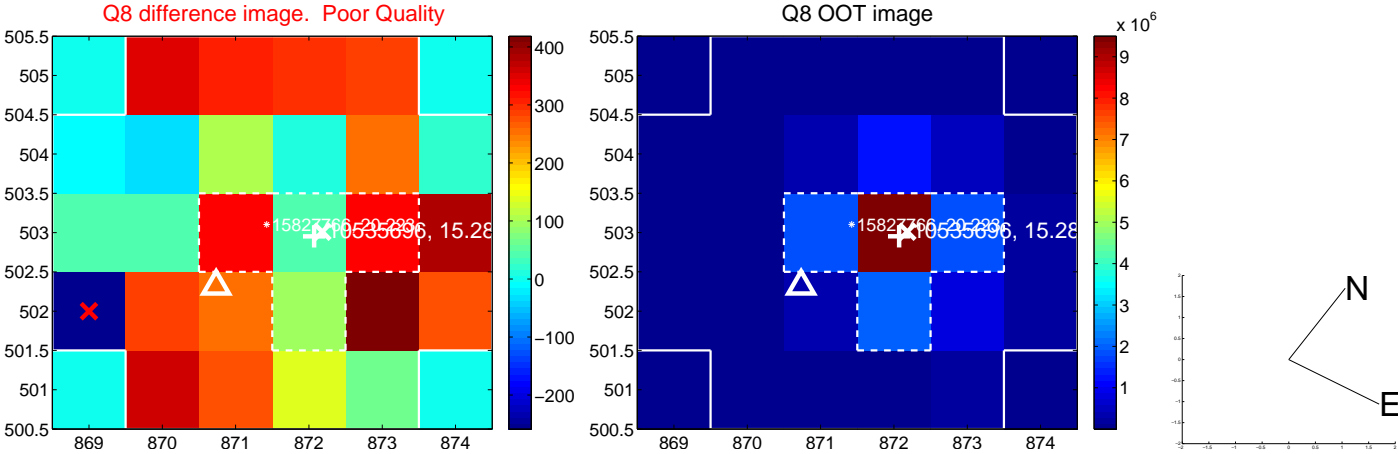
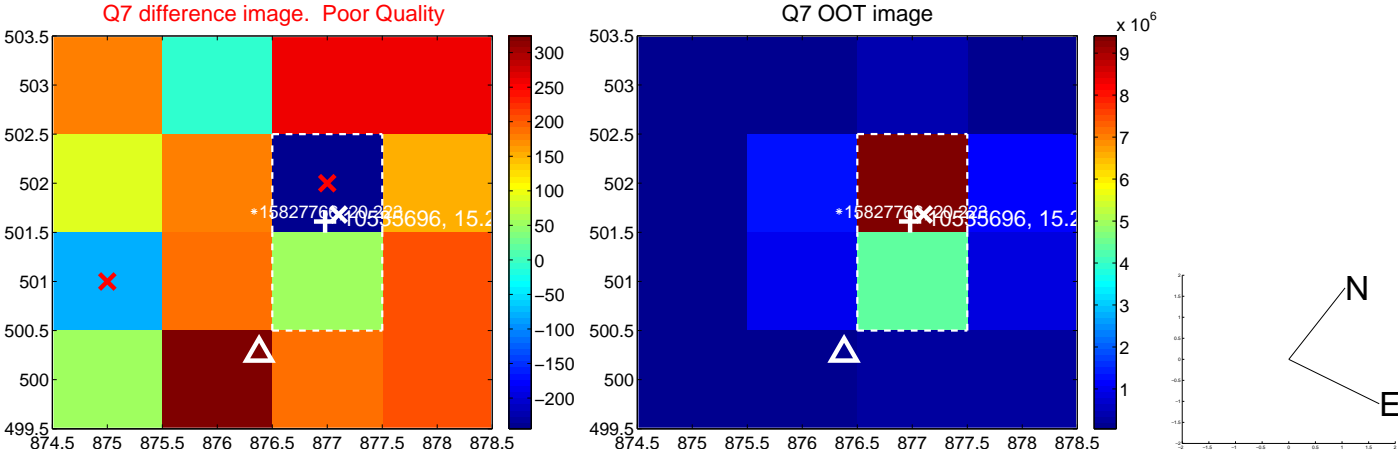
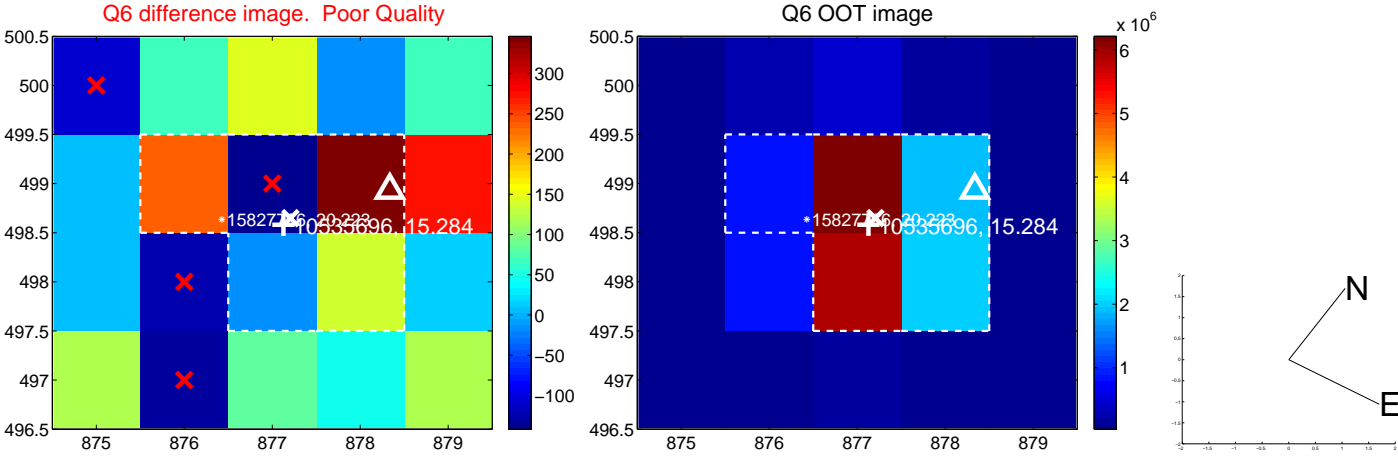
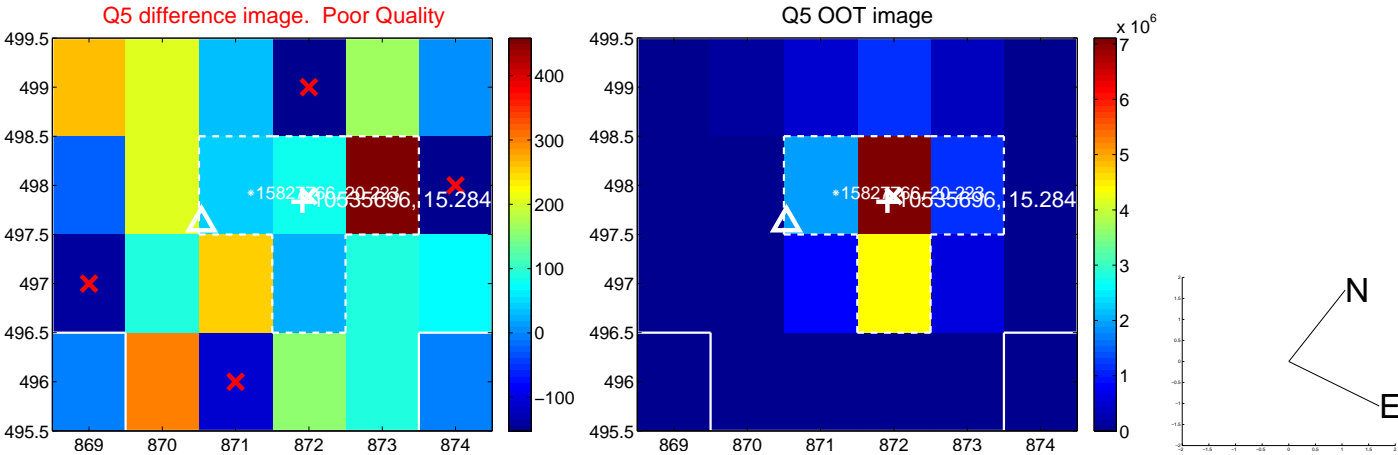


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

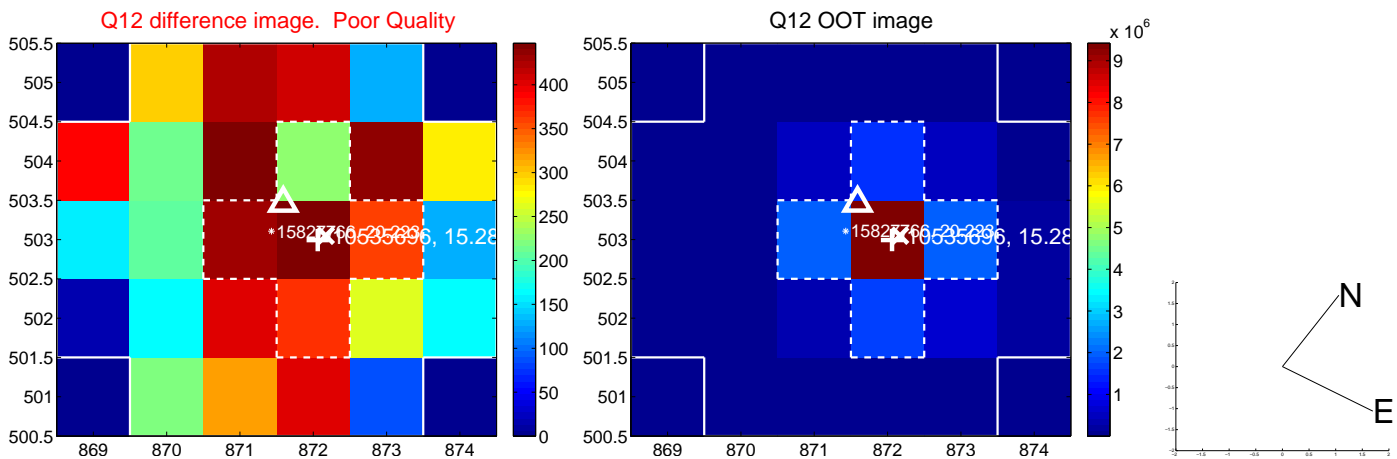
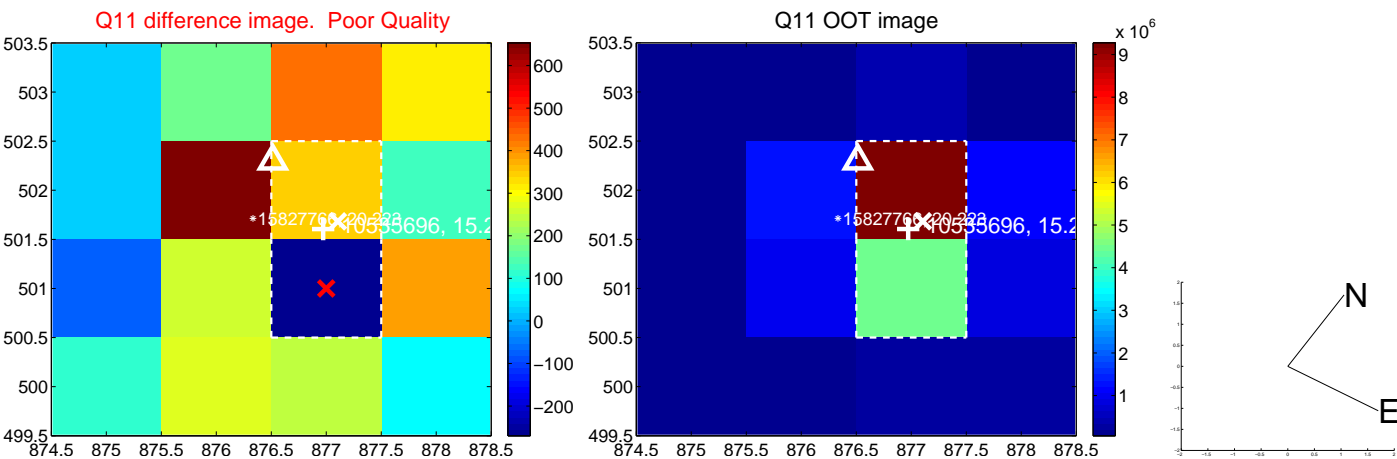
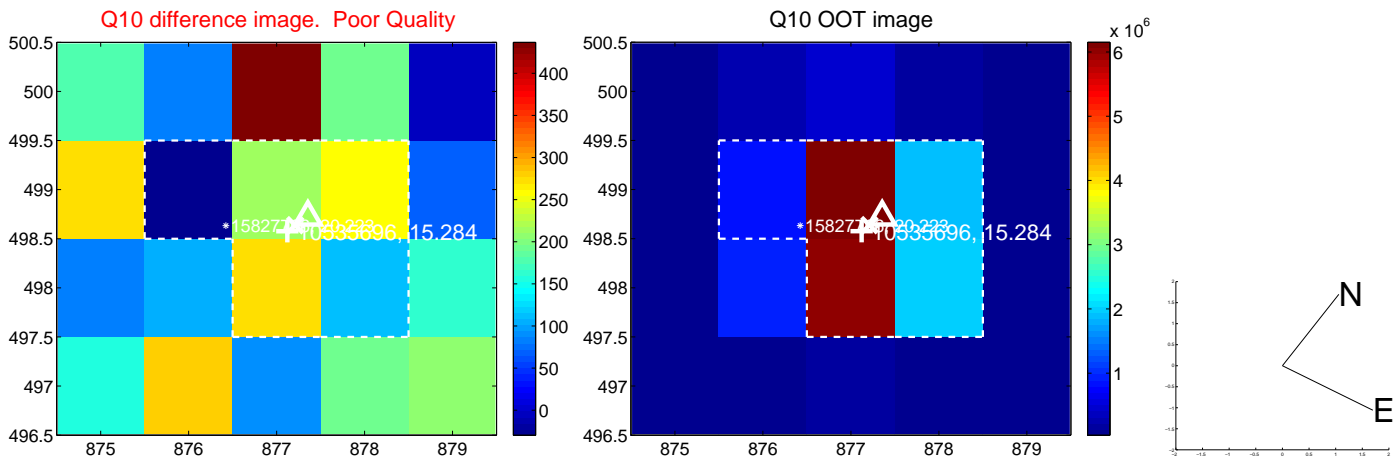
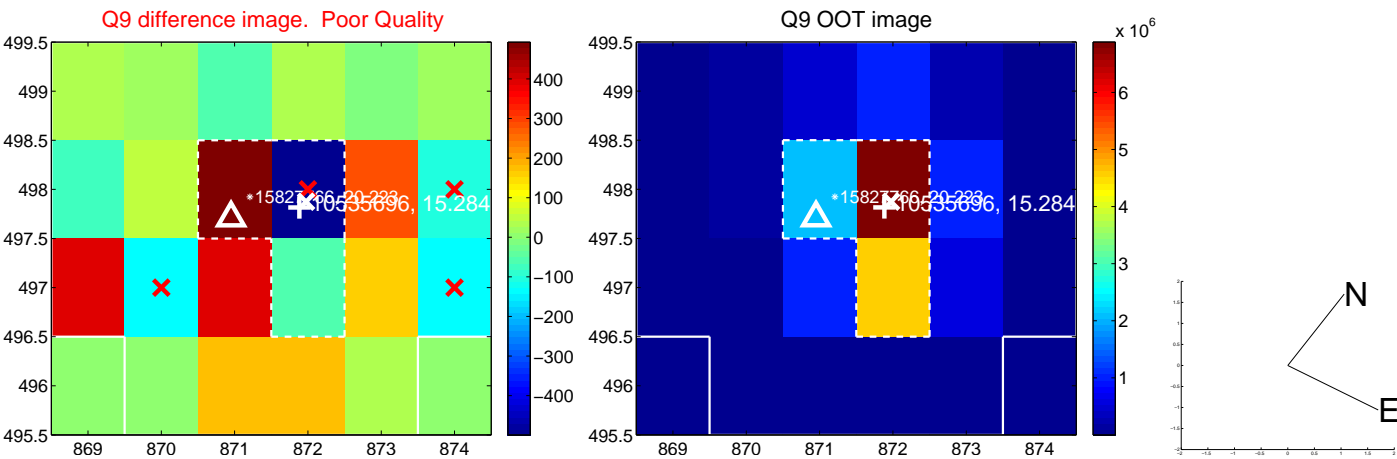
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



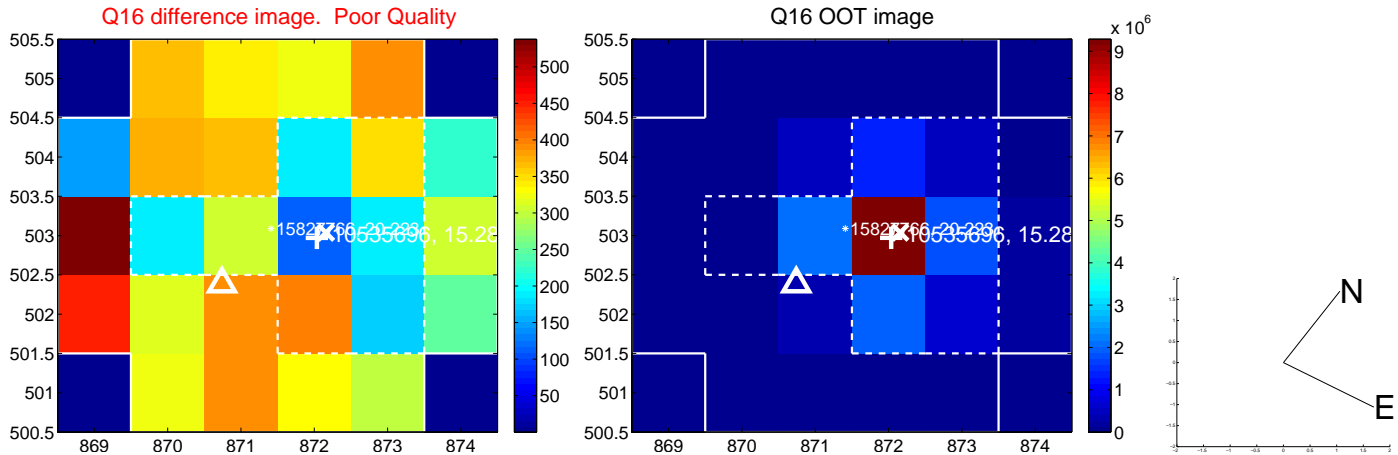
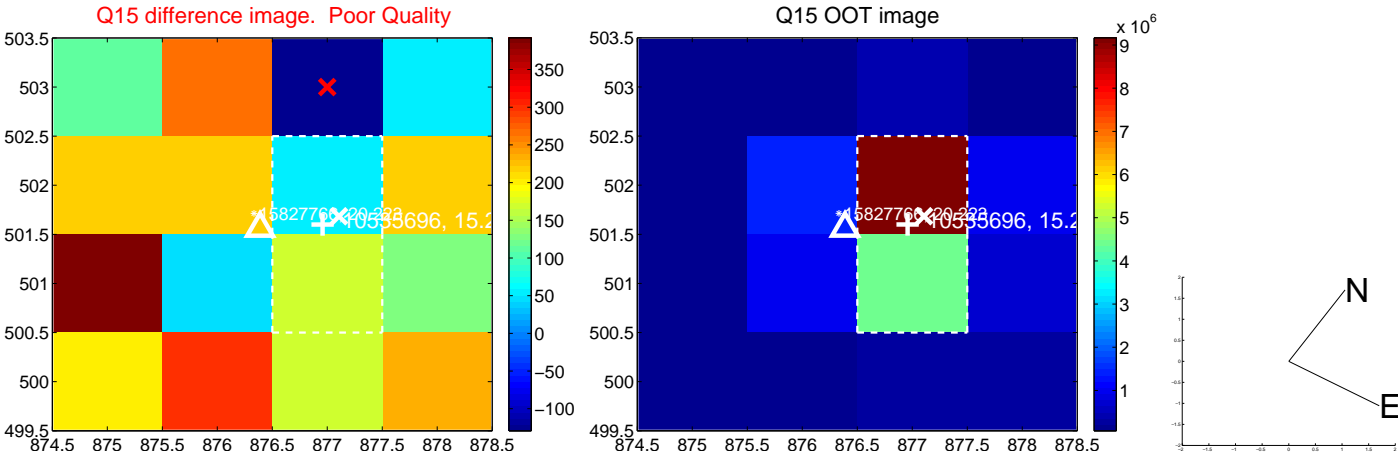
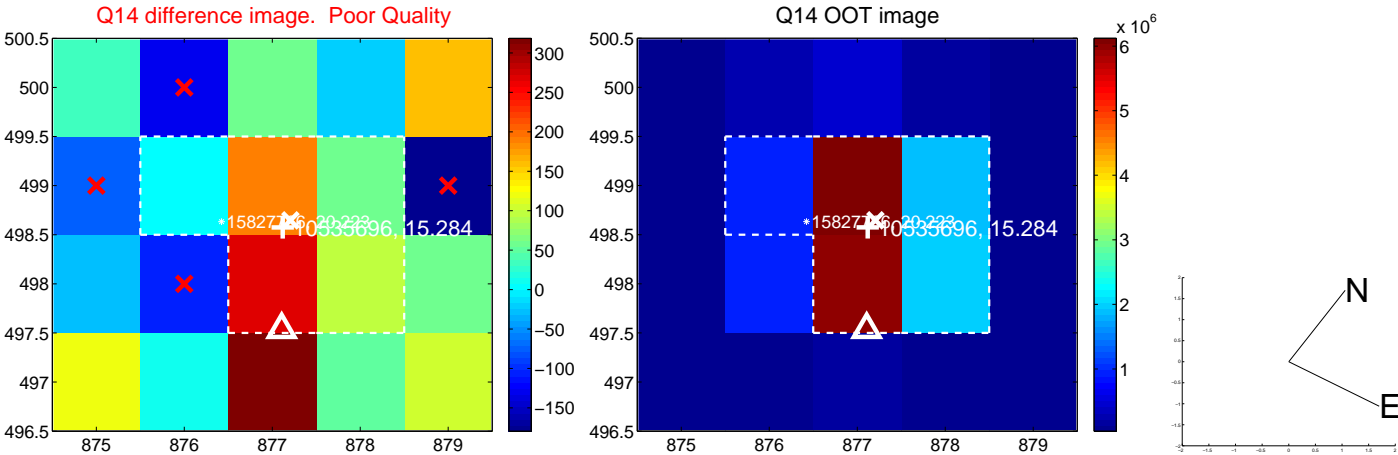
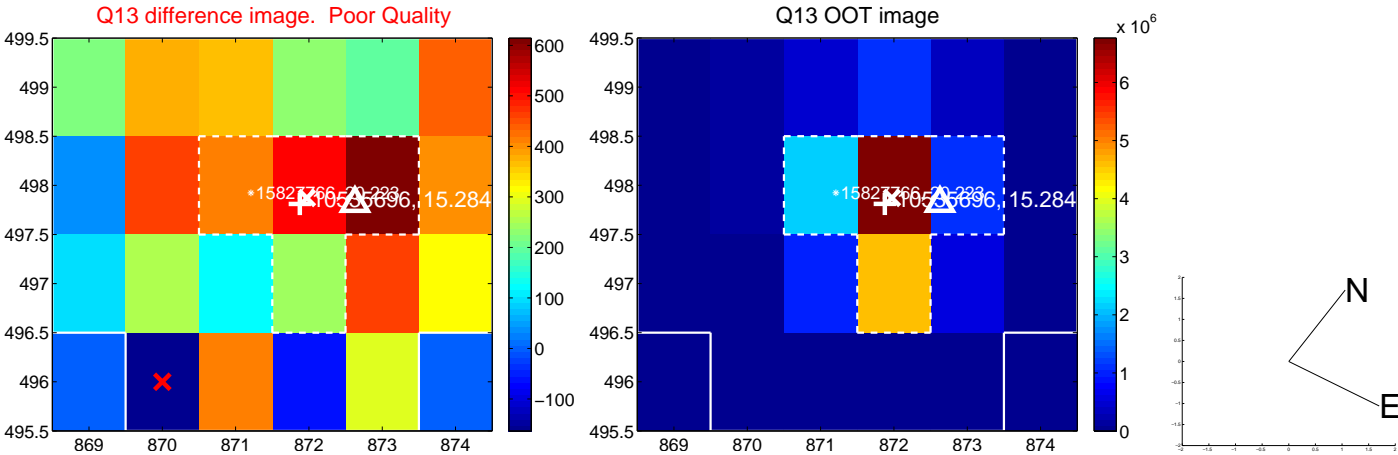
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



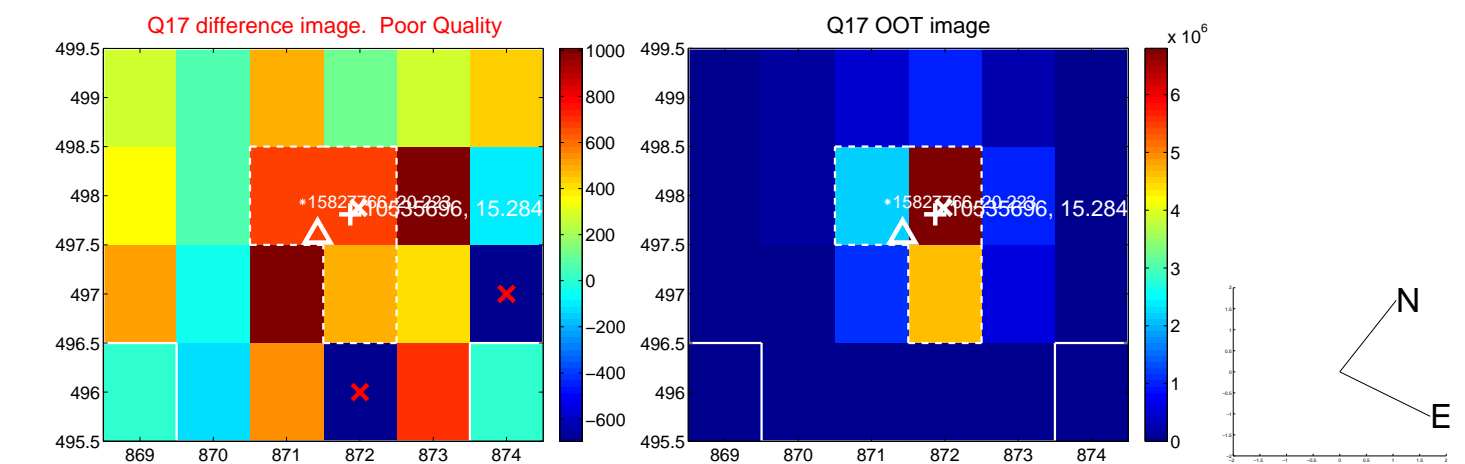
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



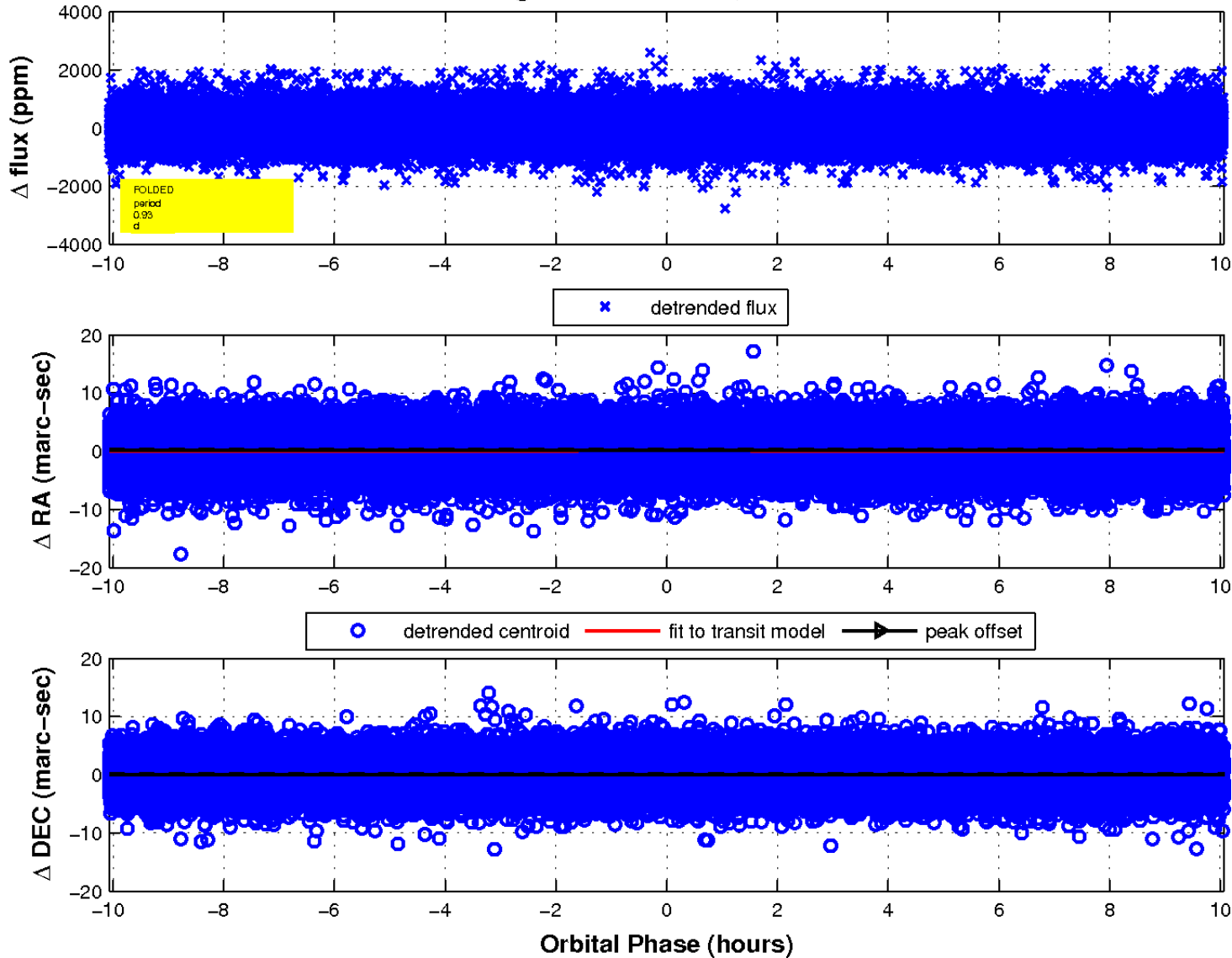
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

