

KIC 007200303

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})
007200303-01	OBS	No	0.566773	131.827166	32.3	3.458	10.9	7.2	0.96	5825	0.55	5064.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007200303-01	OBS	FP	0.00	1	0	1	1	LPP_DV—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.

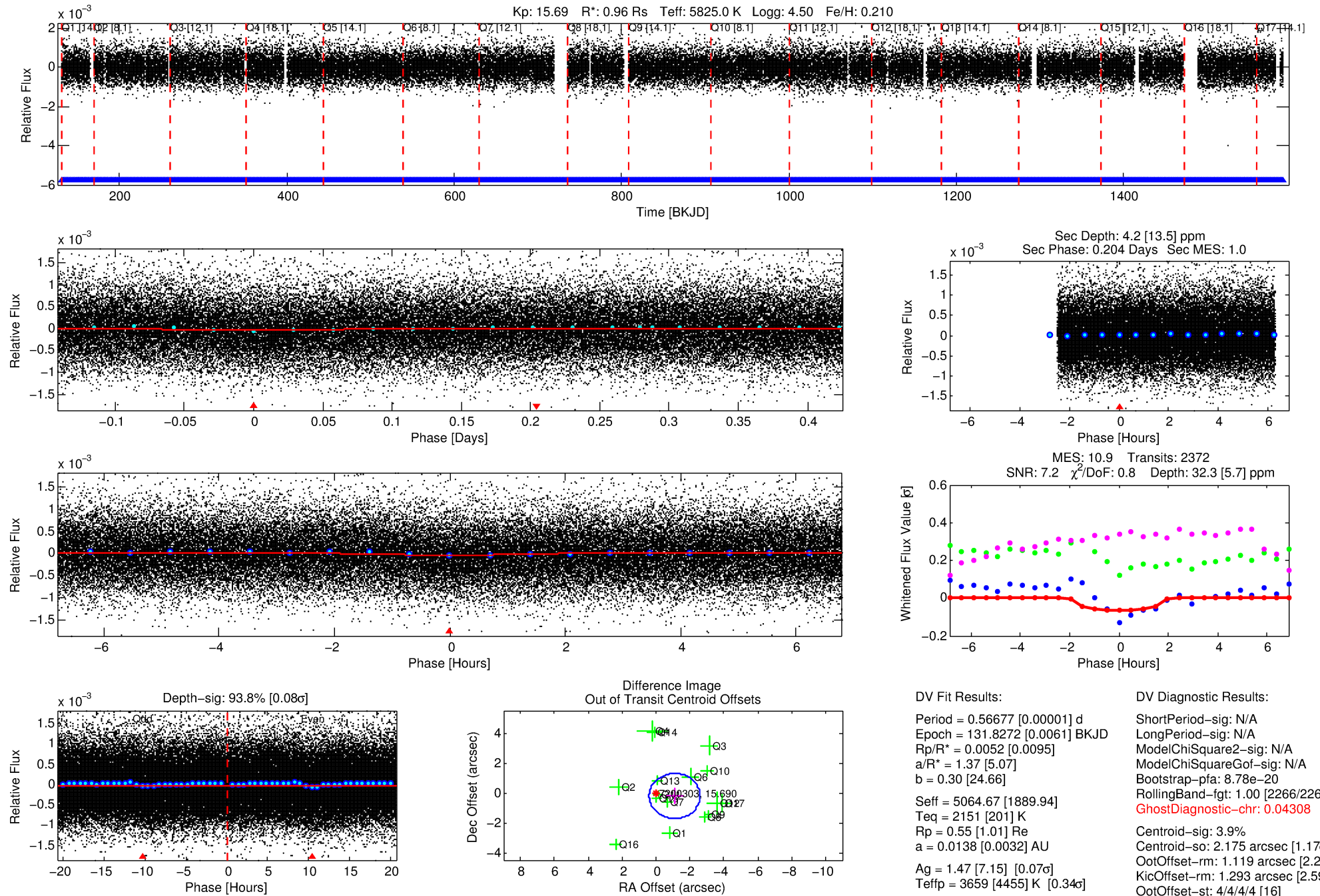
Ephemeris Match Information For 007200303-01

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
007200303-01	7200303	RR-Lyr-pri	7198959	1:1	1063.4	151	220	7.86	15.69	19478.00	Direct-PRF	0	0.96	12.61

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: 7200303 Candidate: 1 of 1 Period: 0.567 d



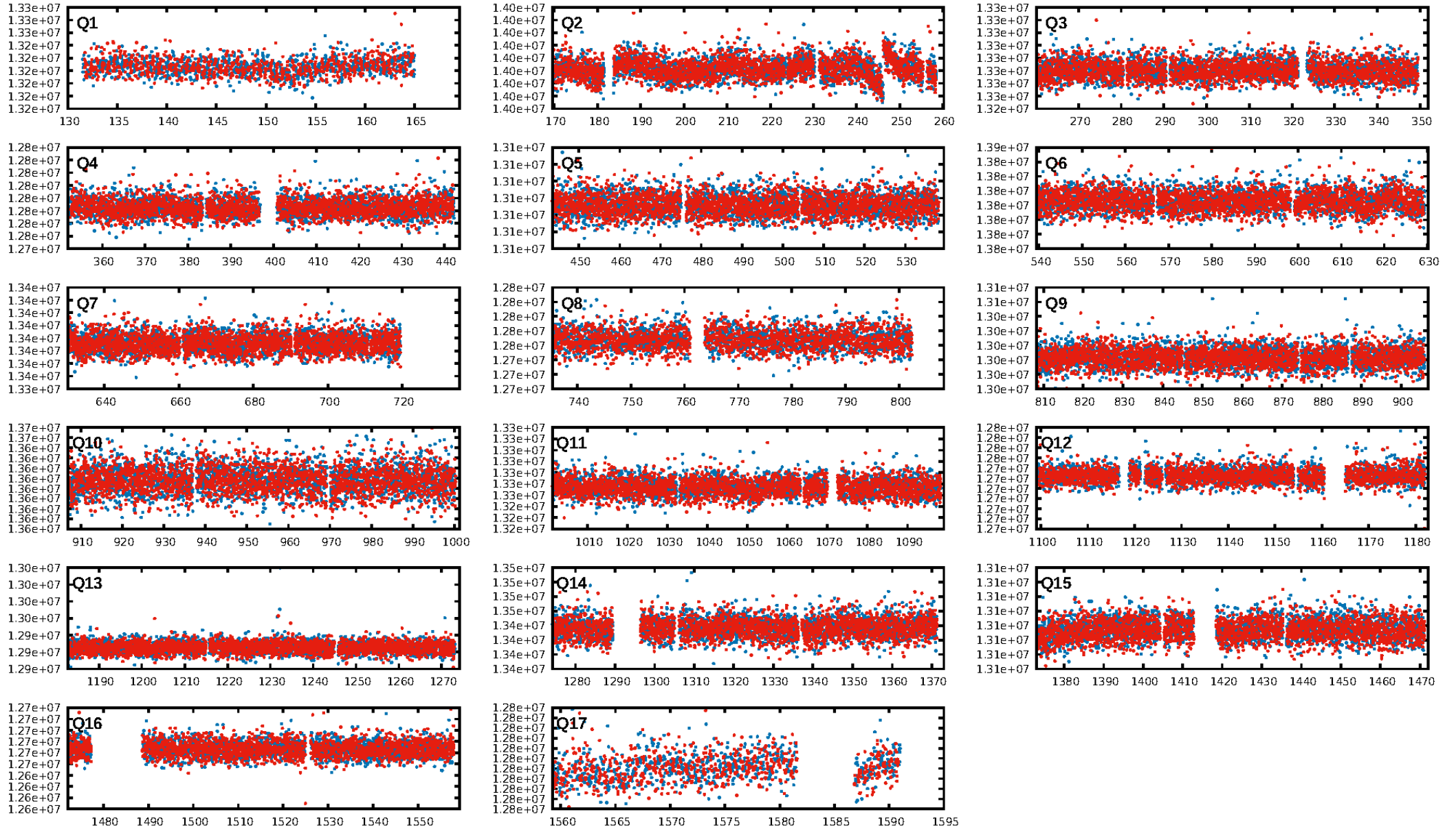
DV Fit Results:

Period = 0.56677 [0.00001] d
Epoch = 131.8272 [0.0061] BKJD
Rp/R* = 0.0052 [0.0095]
a/R* = 1.37 [5.07]
b = 0.30 [24.66]
Seff = 5064.67 [1889.94]
Teff = 2151 [201] K
Rp = 0.55 [1.01] Re
a = 0.0138 [0.0032] AU
Ag = 1.47 [7.15] [0.07 σ]
Teffp = 3659 [4455] K [0.34 σ]

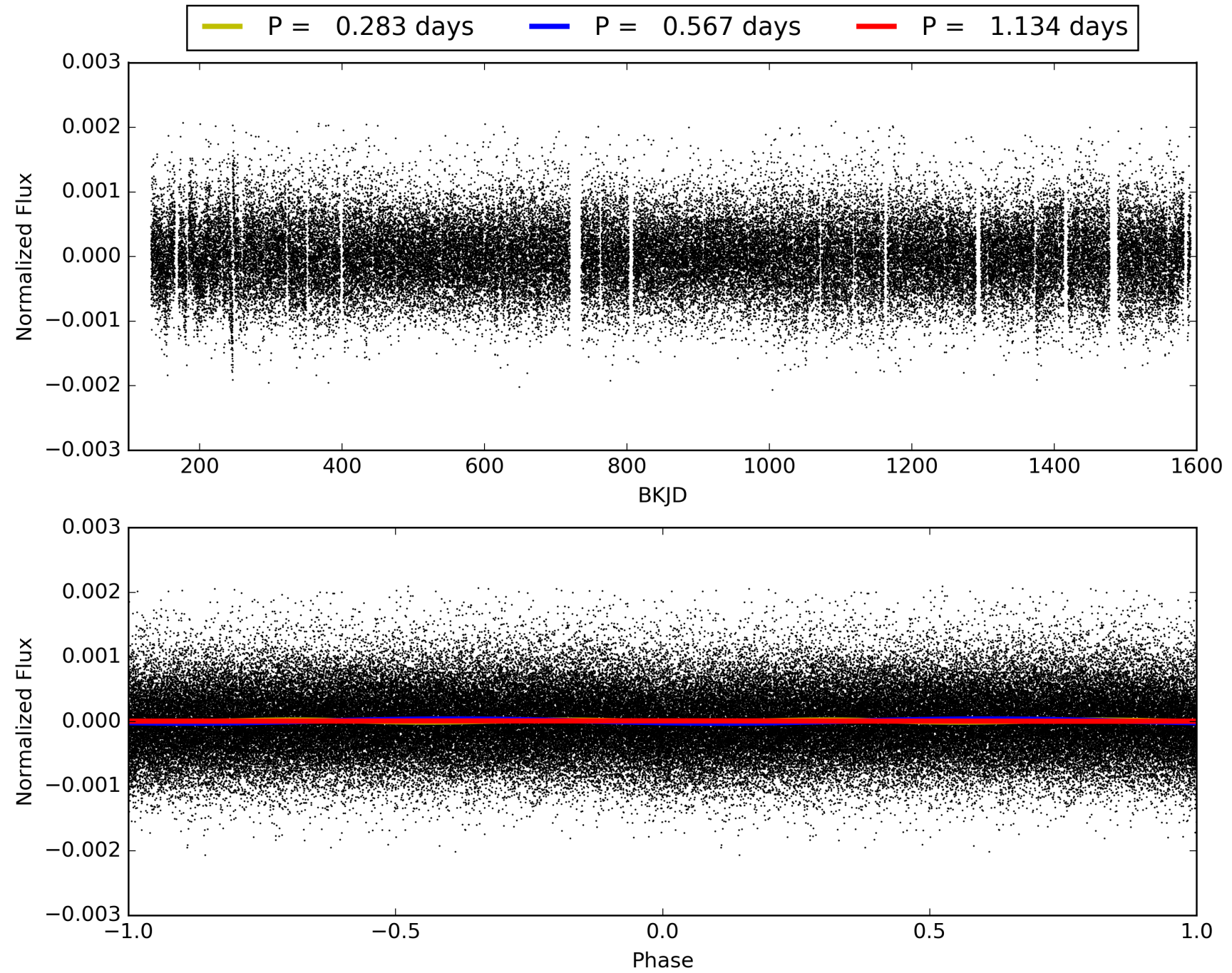
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.78e-20
RollingBand-fgt: 1.00 [2266/2266]
GhostDiagnostic-chr: 0.04308
Centroid-sig: 3.9%
Centroid-so: 2.175 arcsec [1.17 σ]
OotOffset-rm: 1.119 arcsec [2.23 σ]
KicOffset-rm: 1.293 arcsec [2.59 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.19 [3/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007200303-01, PDC Light Curves

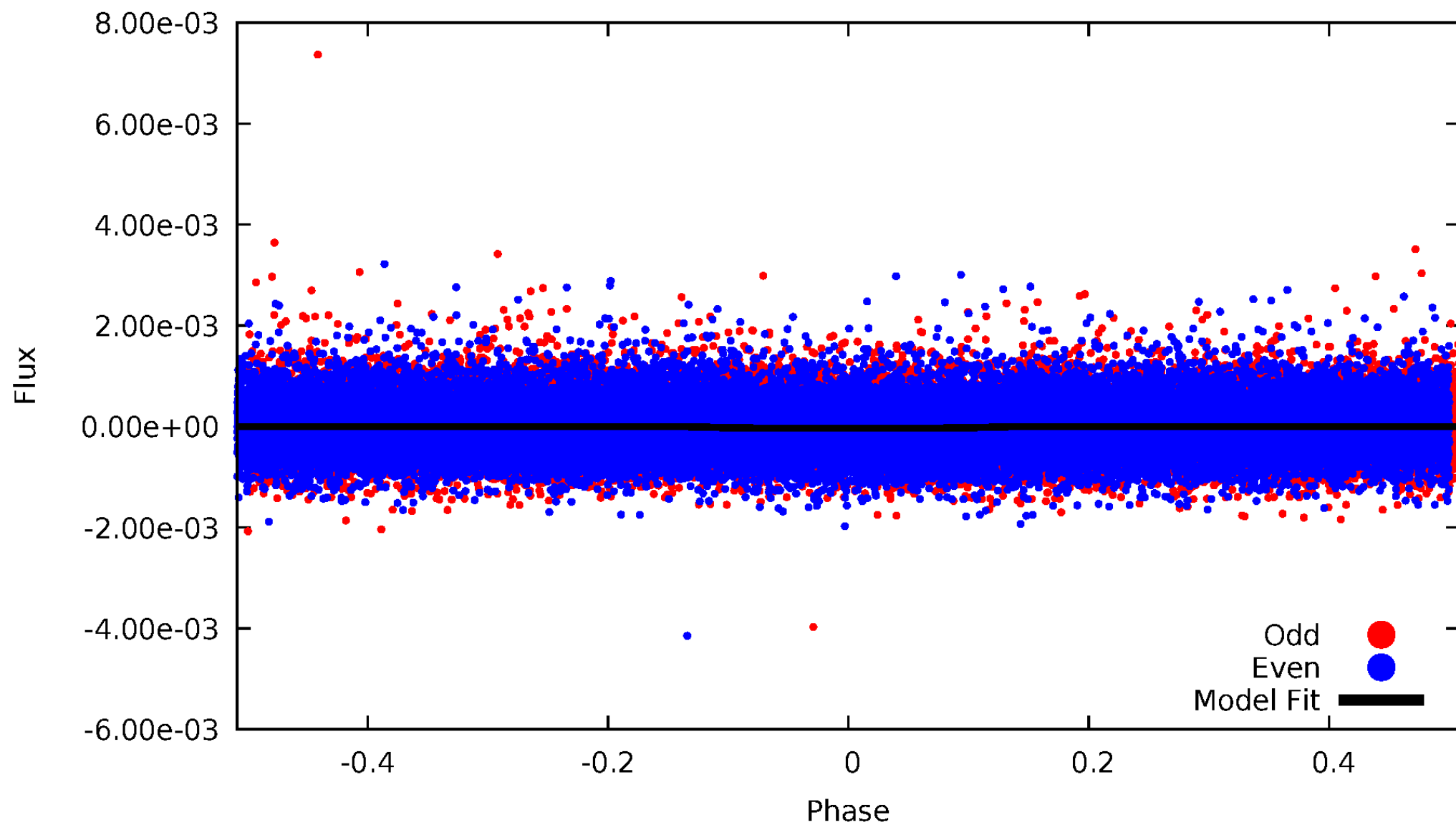


TCE 007200303-01



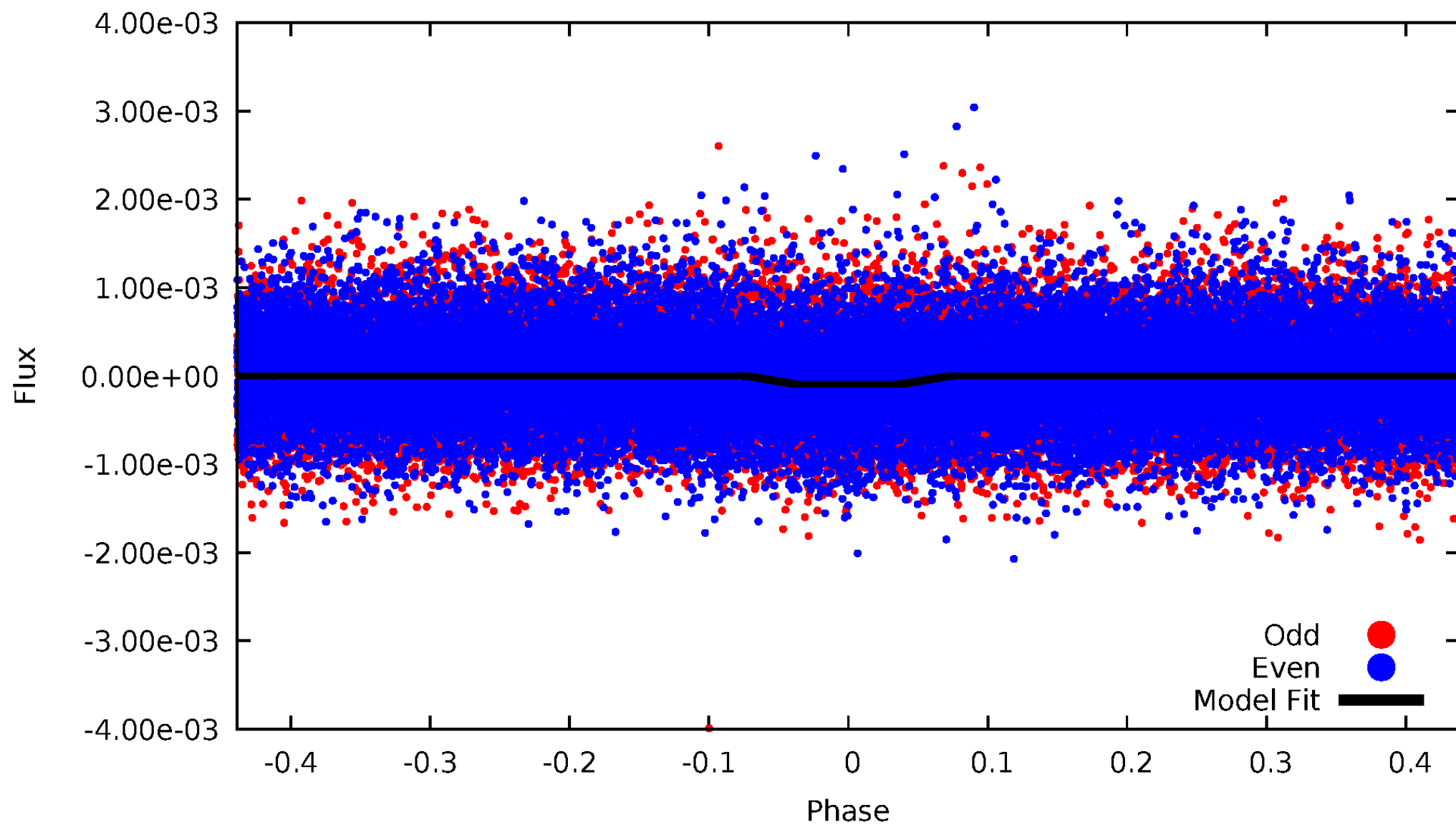
DV Odd/Even

TCE 007200303-01



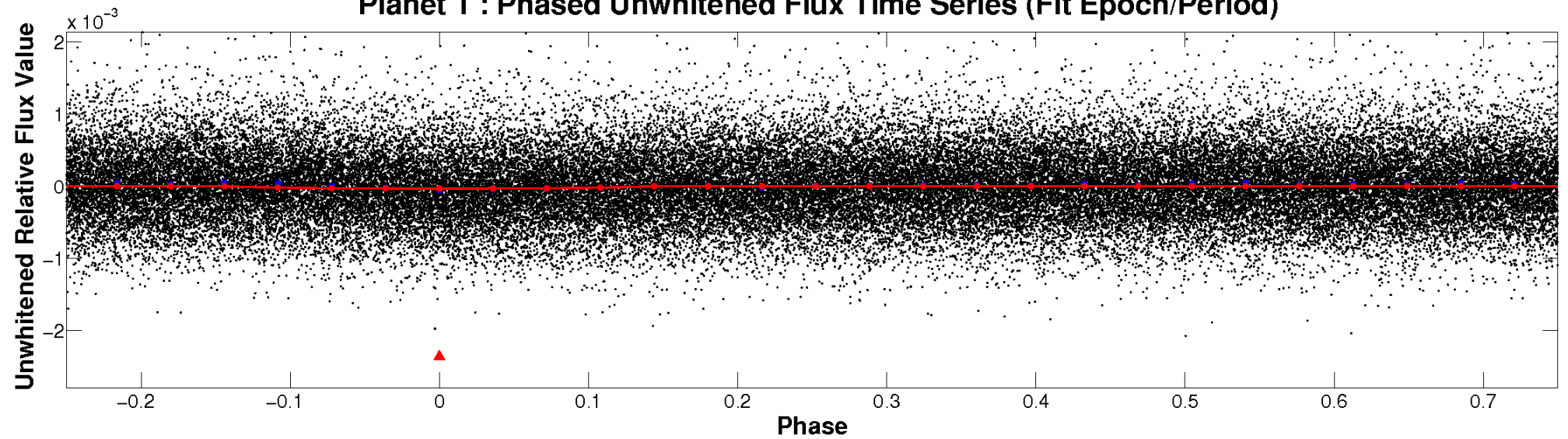
ALT Odd/Even

TCE 007200303-01

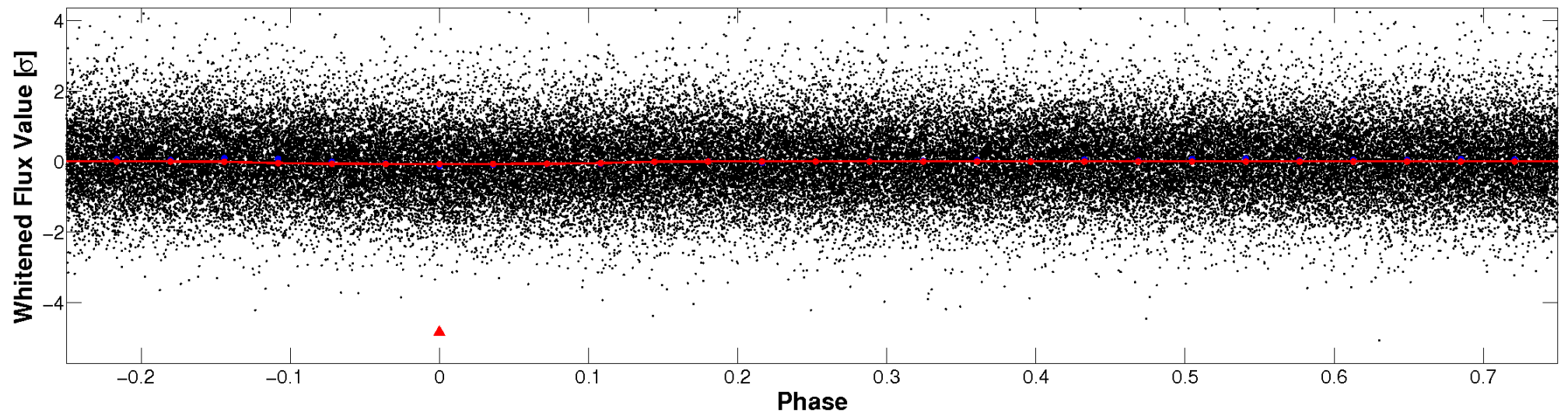


Non-Whitened Vs. Whitened Light Curve

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

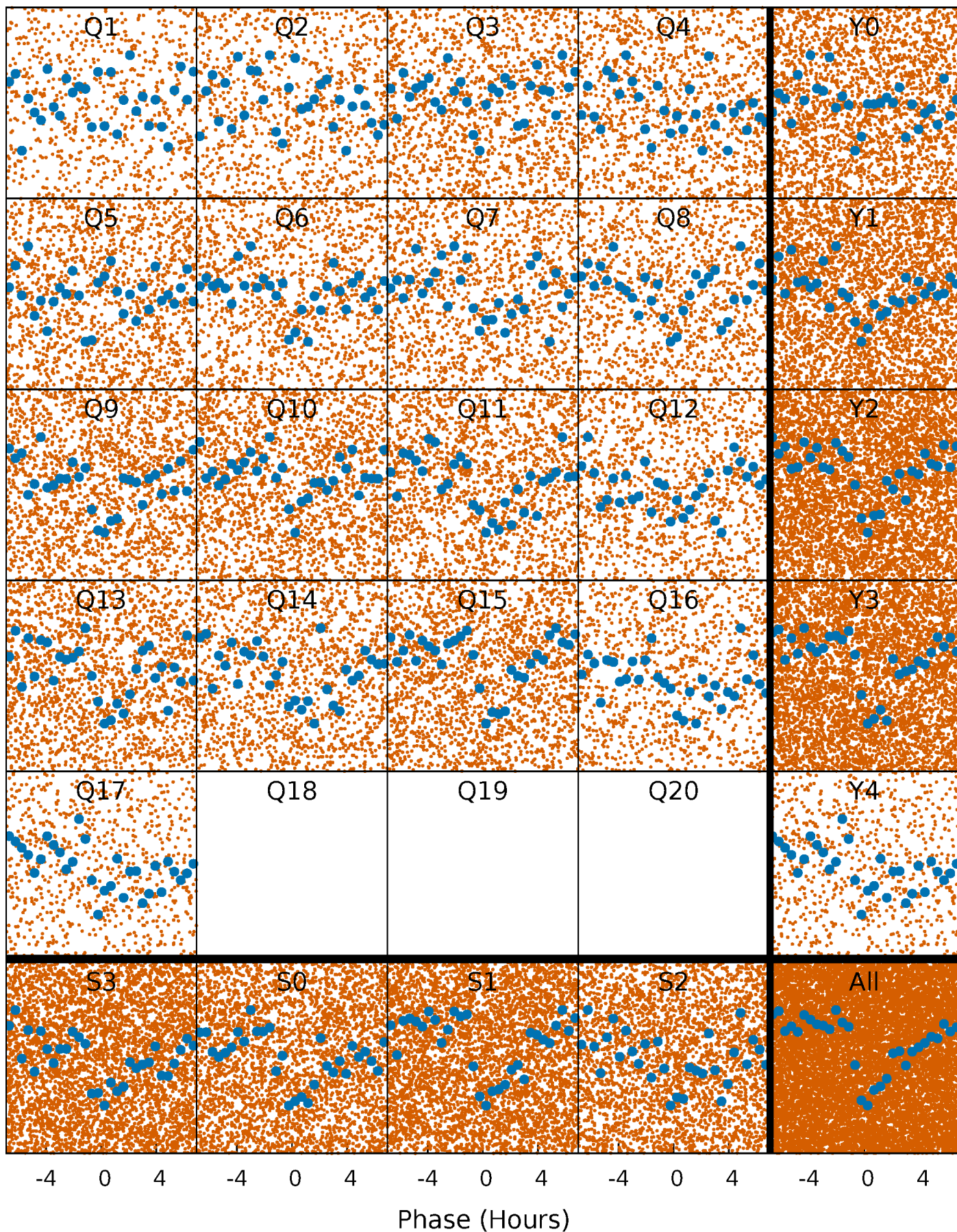


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



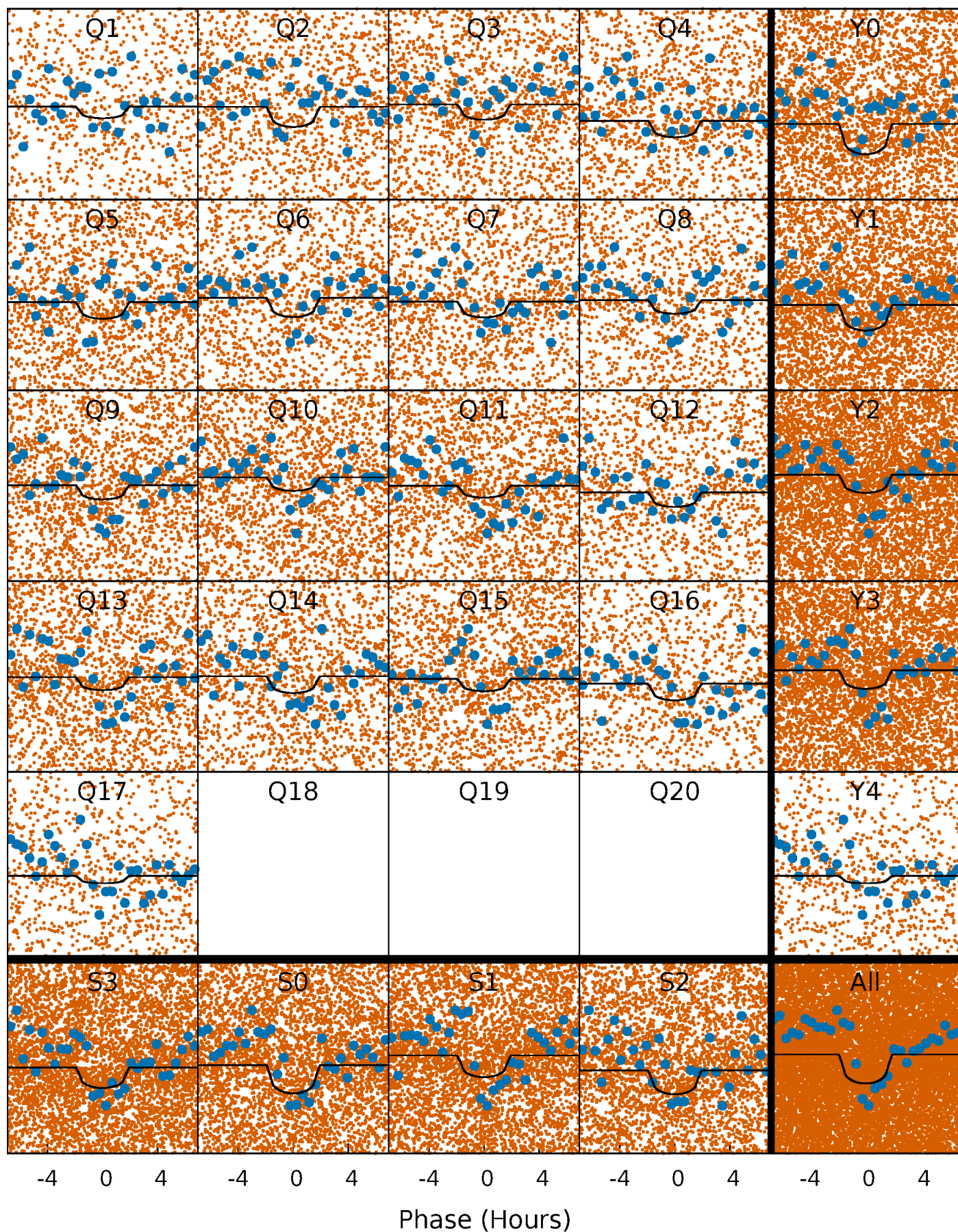
PDC Quarter-Phased Transit Curves

TCE 007200303-01 P= 0.566773 Days $T_0=131.827166$ (BKJD)



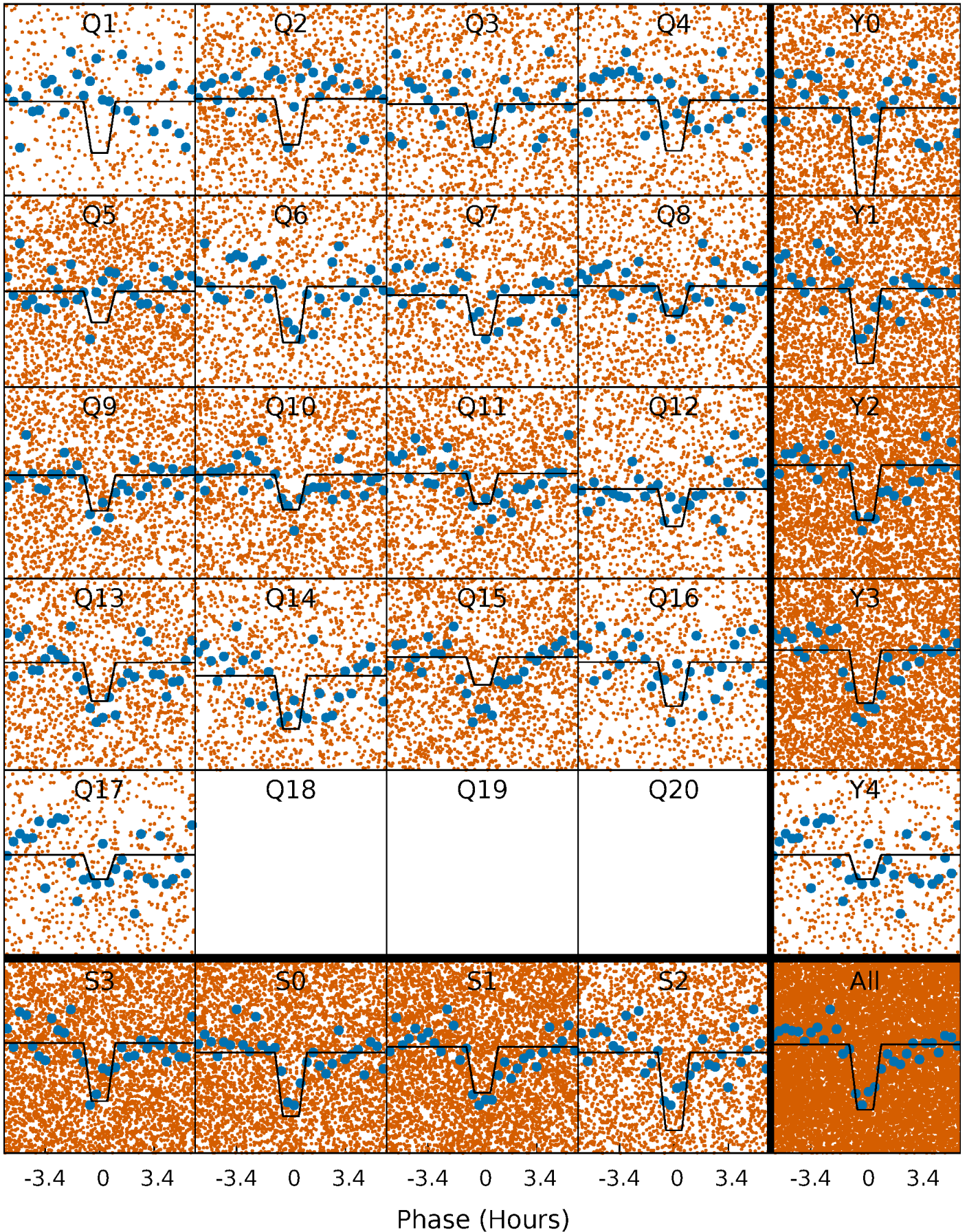
DV Quarter-Phased Transit Curves

TCE 007200303-01 P= 0.566773 Days $T_0=131.827166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

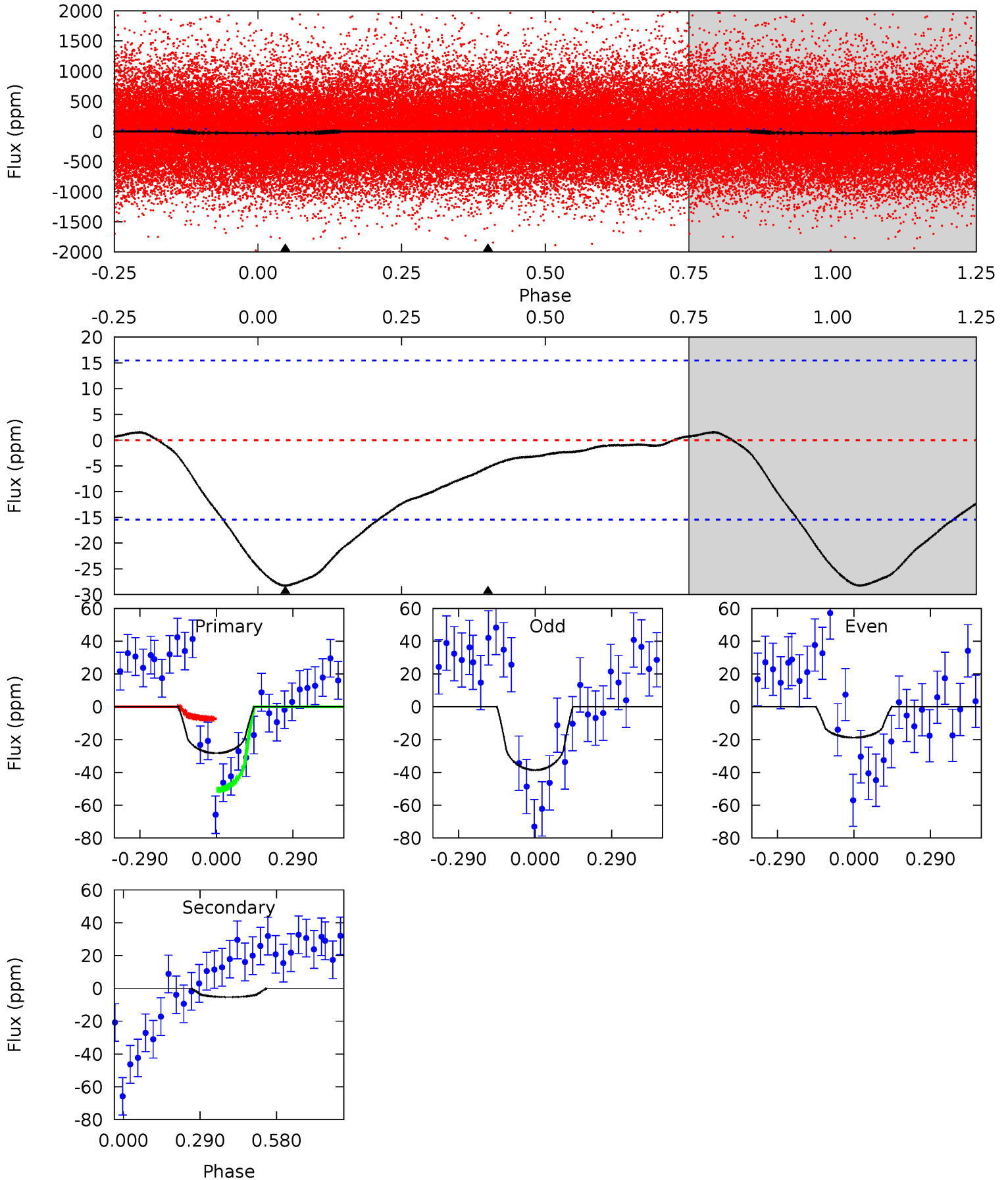
TCE 007200303-01 P= 0.566801 Days $T_0=131.796921$ (BKJD)



DV Model-Shift Uniqueness Test

007200303-01, P = 0.566773 Days, E = 131.260393 Days

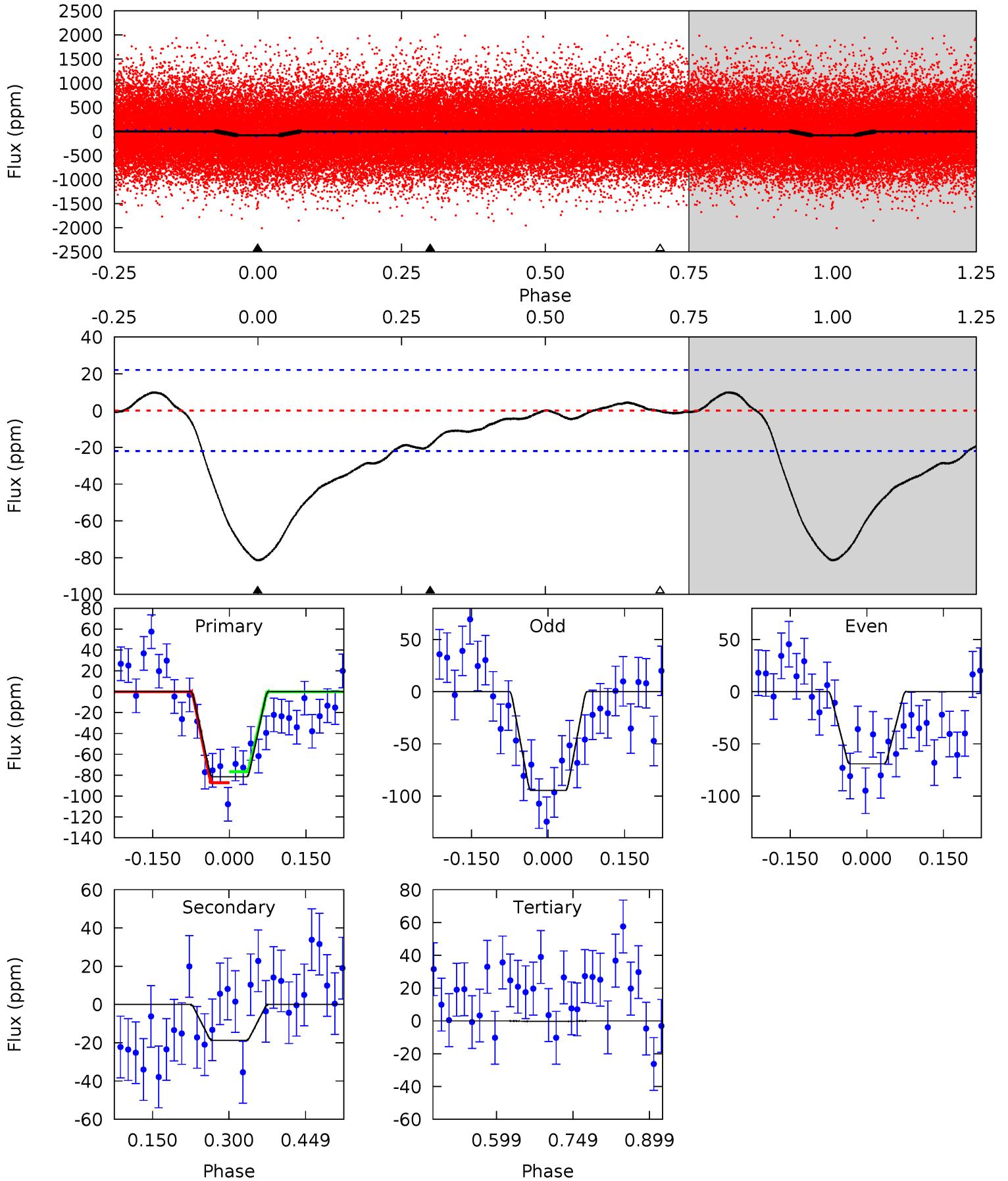
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	1.49	0	0	4.34	1.06	0.23	7.94	7.94	1.49	1.49	2.81	0.82	0.05	6.09



Alt Model-Shift Uniqueness Test

007200303-01, P = 0.566801 Days, E = 131.230120 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	3.80	0.07	0	4.48	1.44	0.83	16.5	16.5	3.73	3.80	2.60	1.03	0.11	1.06



Stellar Parameters For KIC 007200303

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5825^{+156}_{-191}	$4.504^{+0.046}_{-0.196}$	$0.210^{+0.200}_{-0.300}$	$0.965^{+0.257}_{-0.086}$	$1.083^{+0.102}_{-0.147}$	$1.699^{+0.318}_{-0.845}$
	+3%/-3%	+1%/-4%	+95%/-143%	+27%/-9%	+9%/-14%	+19%/-50%
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 007200303-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 4	$0.95^{+0.88}_{-0.63}$	3062^{+191}_{-142}	2887^{+1987}_{-5884}	$0.486^{+3.623}_{-0.403}$
Alt.	-19 ± 5	$1.25^{+0.99}_{-0.76}$	3068^{+193}_{-144}	3701^{+2084}_{-1217}	$1.225^{+7.336}_{-0.868}$

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

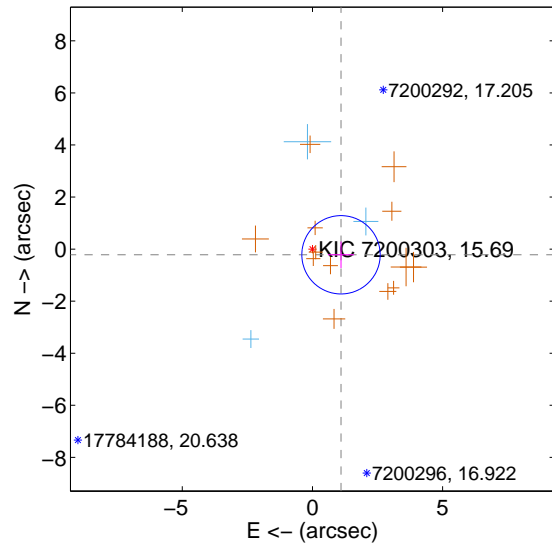
Supplemental centroid analysis for 007200303-01. Kepler magnitude: 15.69. Transit SNR 7.20

There are 3 quarters with good PRF difference image offsets

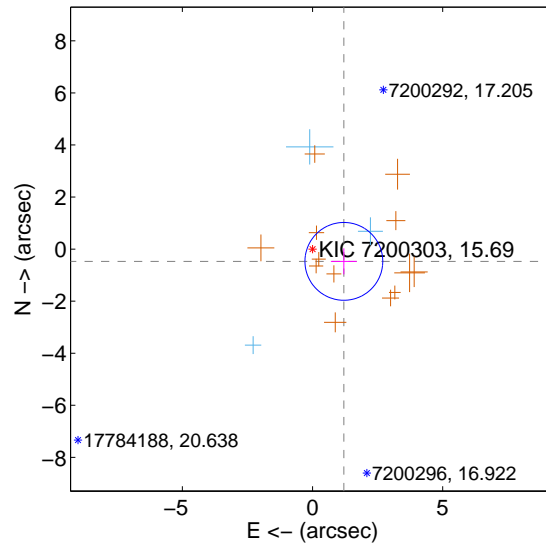
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.119 ± 0.502	2.23	-1.098 ± 0.501	-0.219 ± 0.510
PRF-fit source offset from KIC position	1.293 ± 0.498	2.59	-1.204 ± 0.498	-0.472 ± 0.500
photometric centroid source offset	2.17 ± 1.86	1.17	-0.39 ± 1.67	2.14 ± 1.86

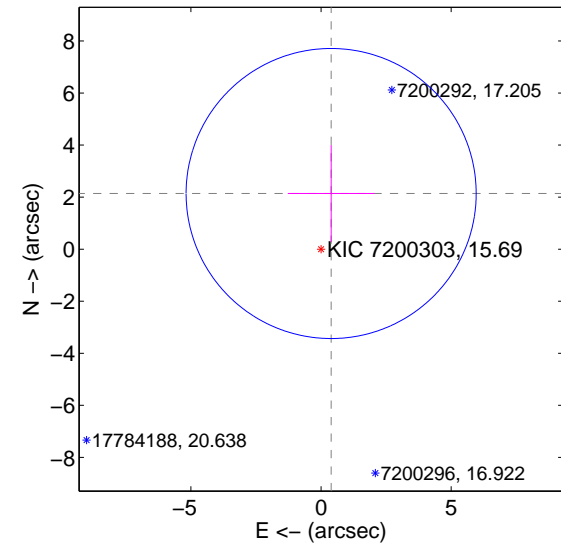
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

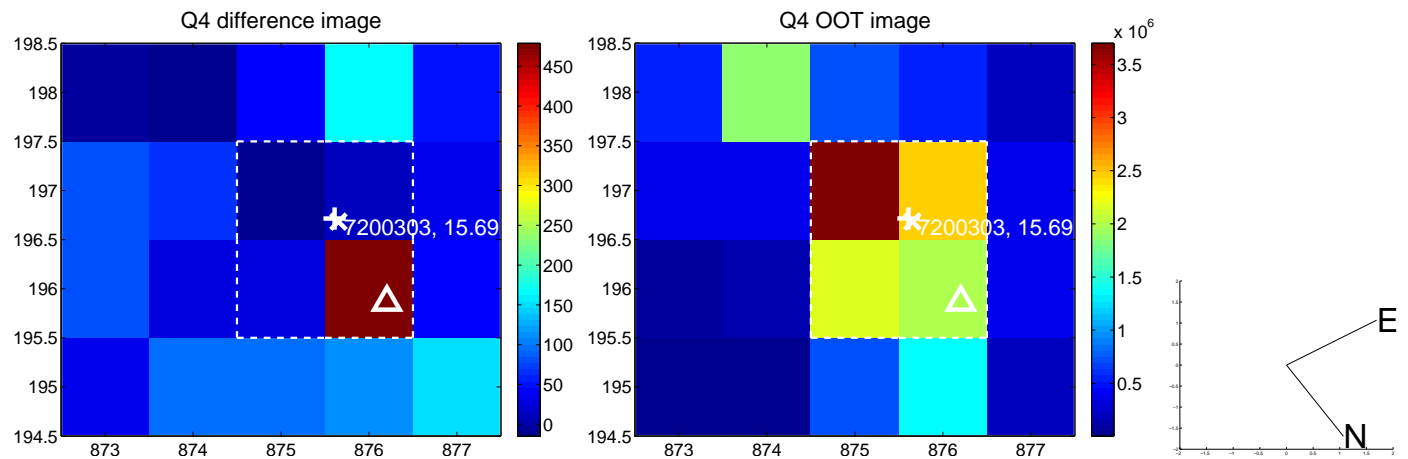
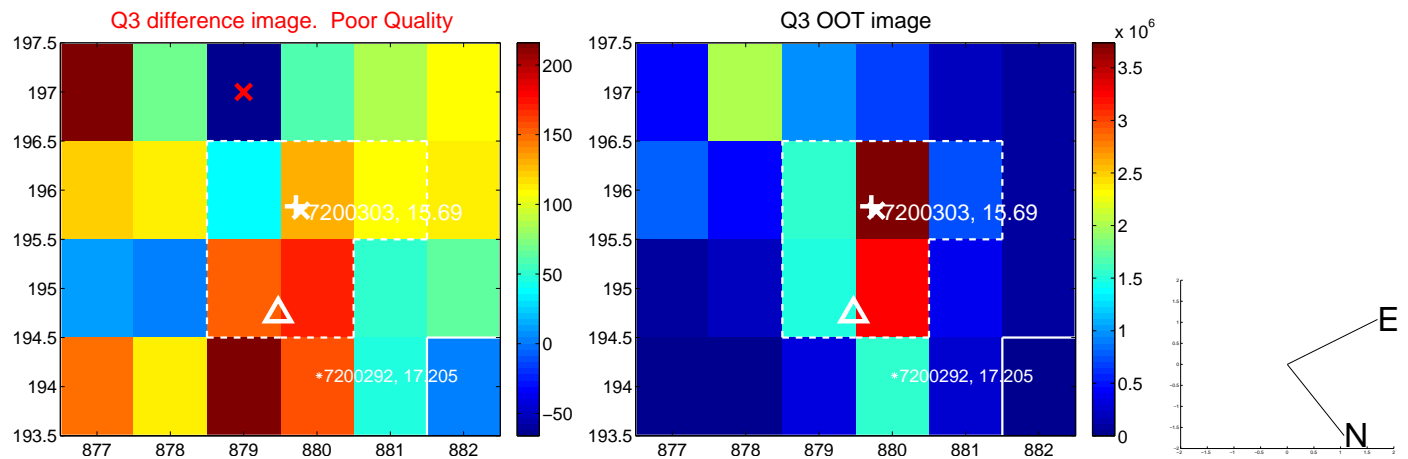
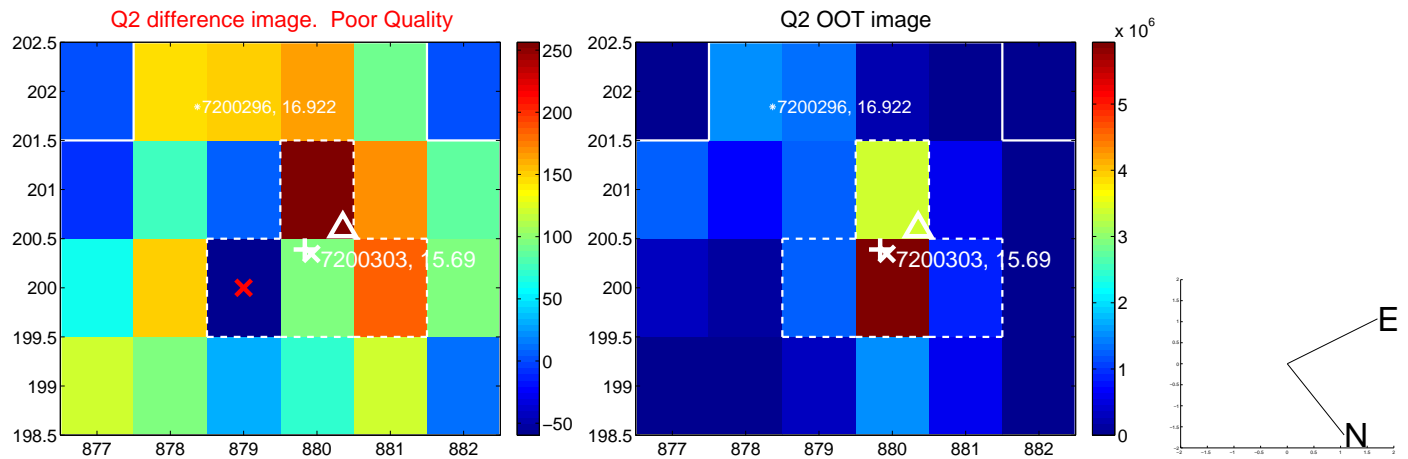
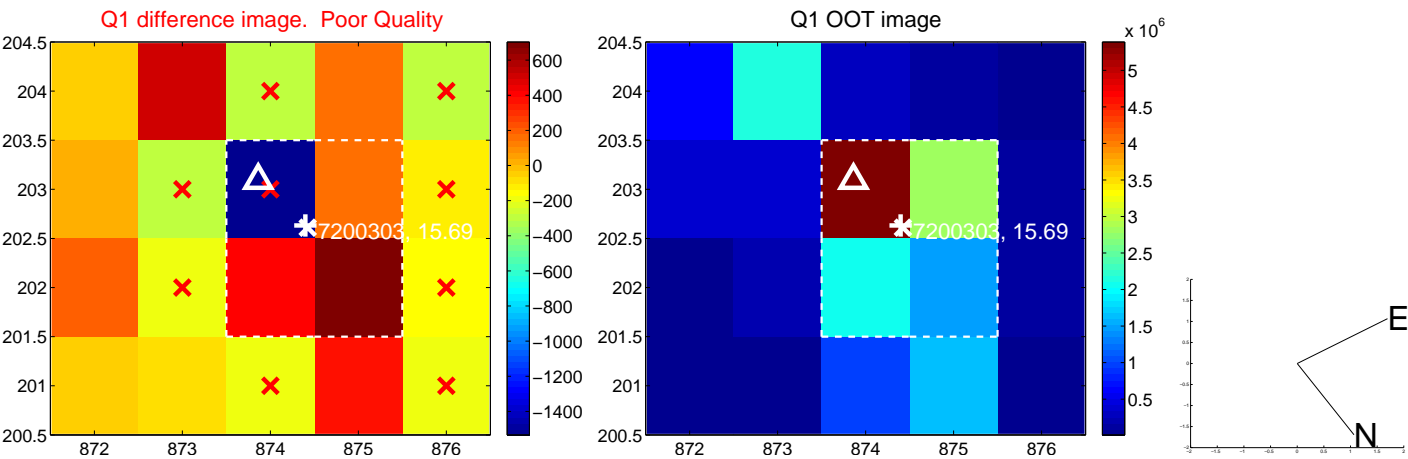


offset from photometric centroids

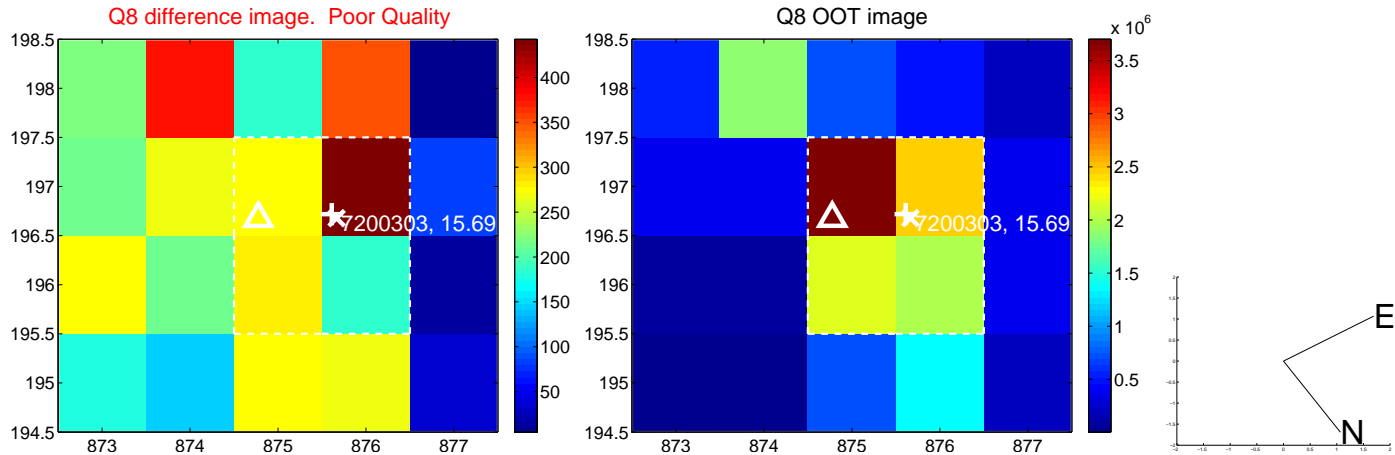
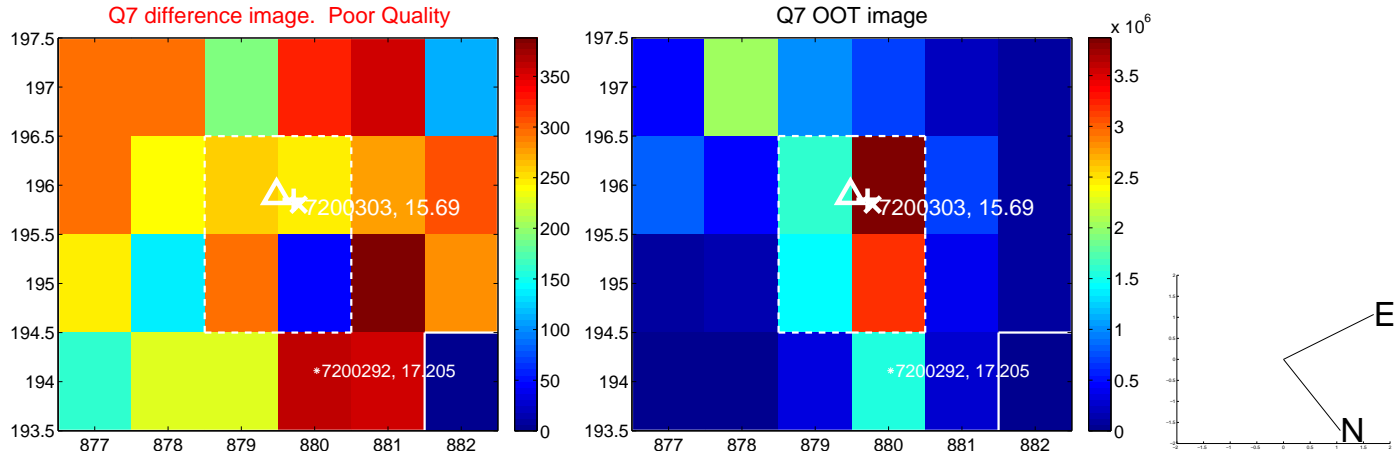
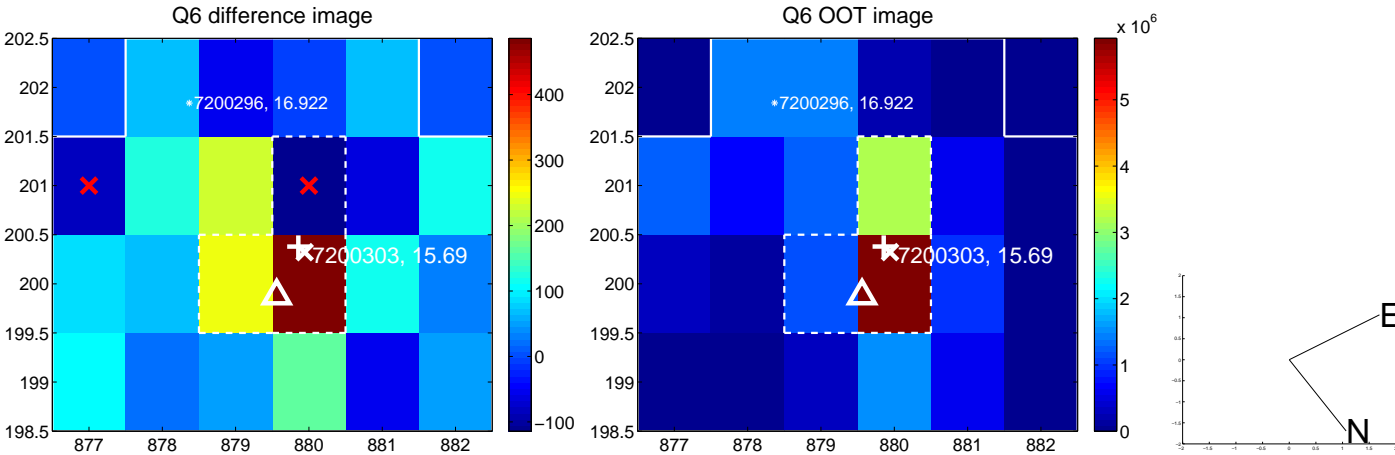
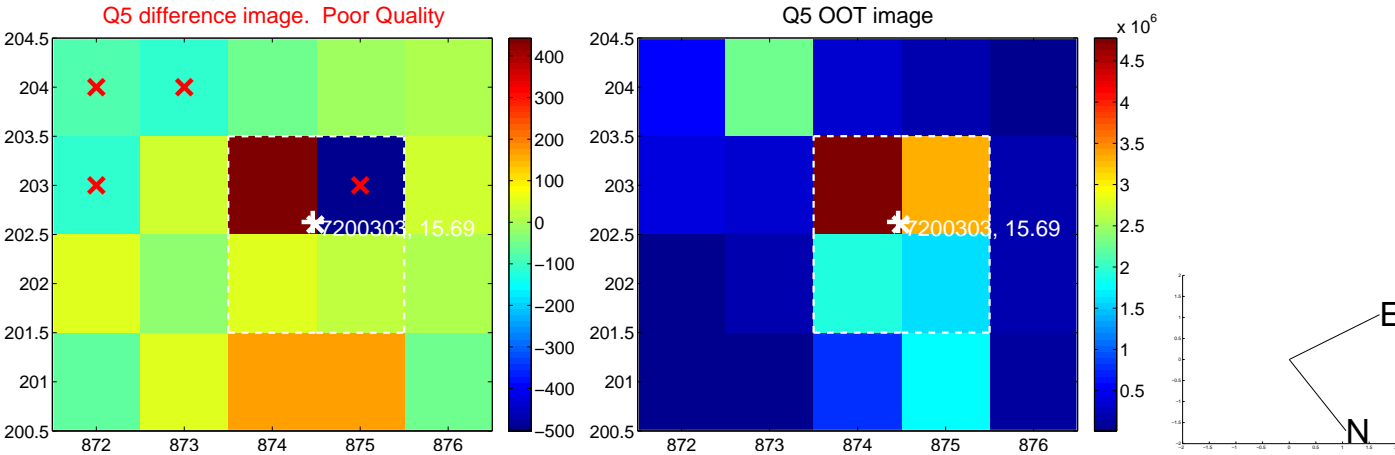


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

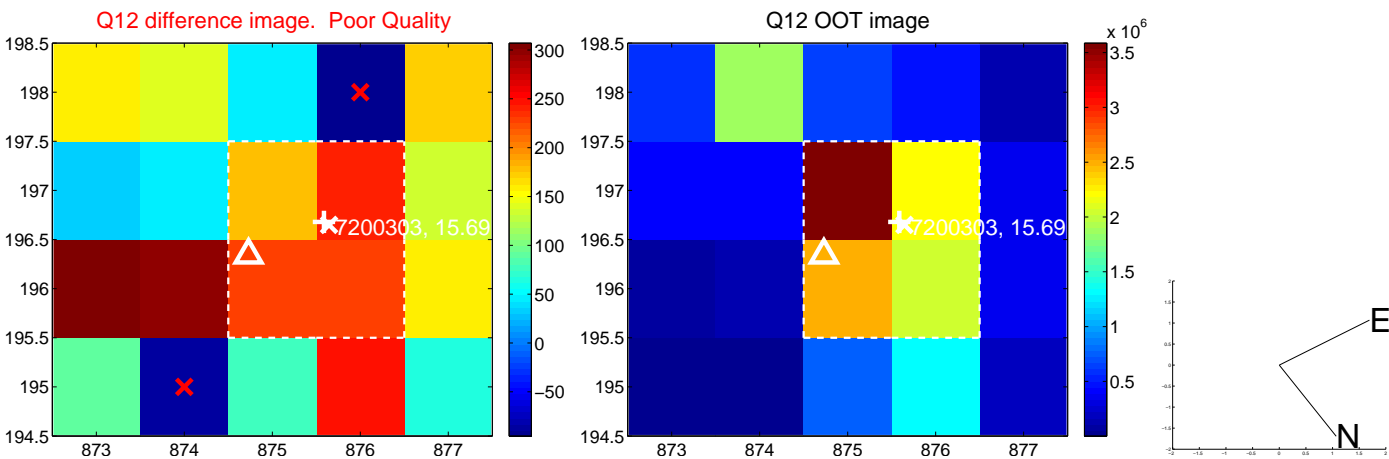
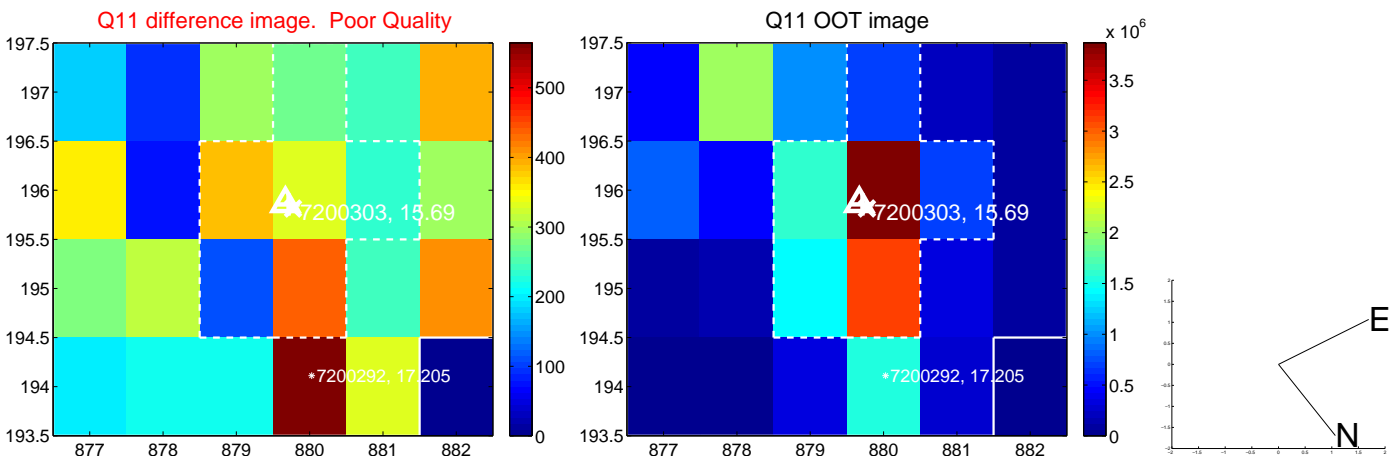
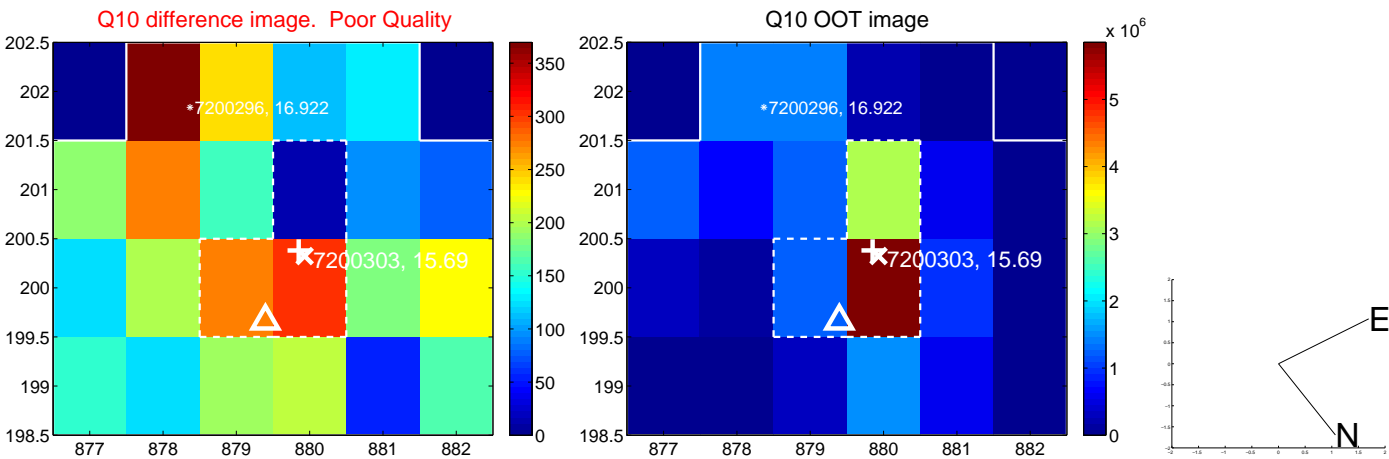
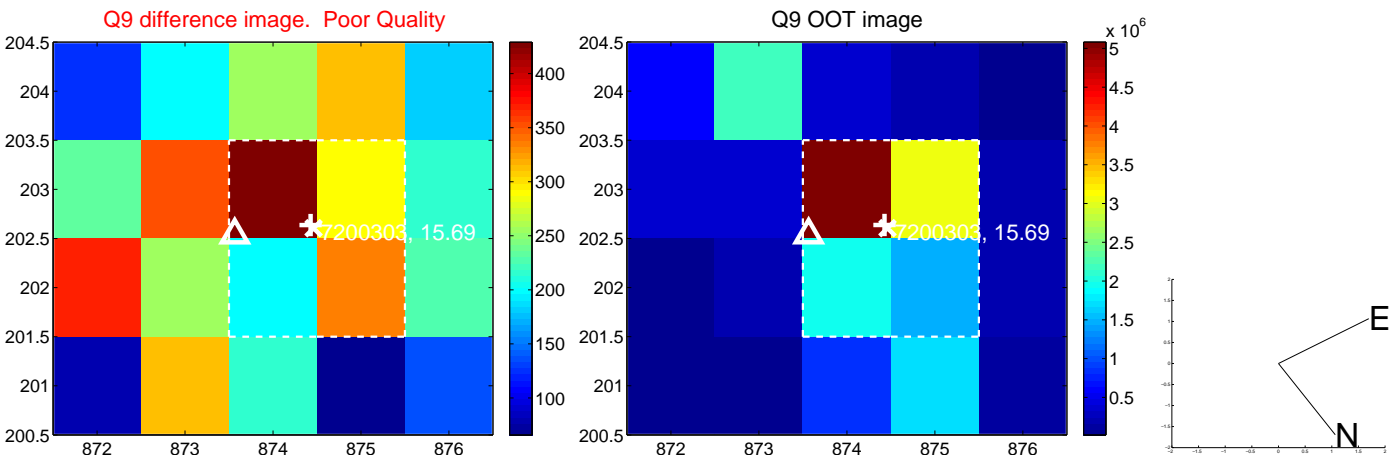
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



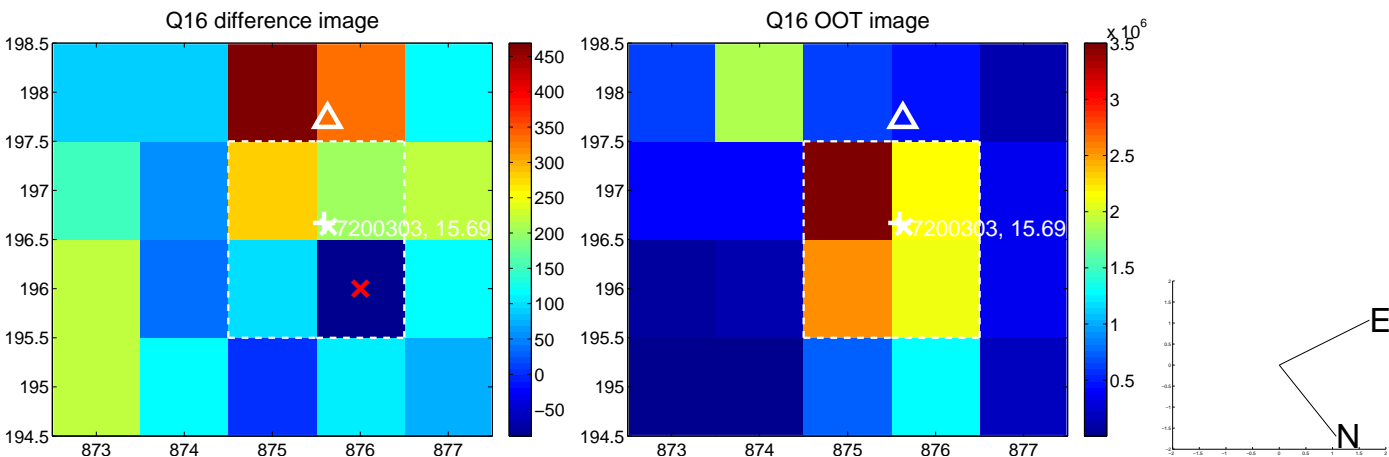
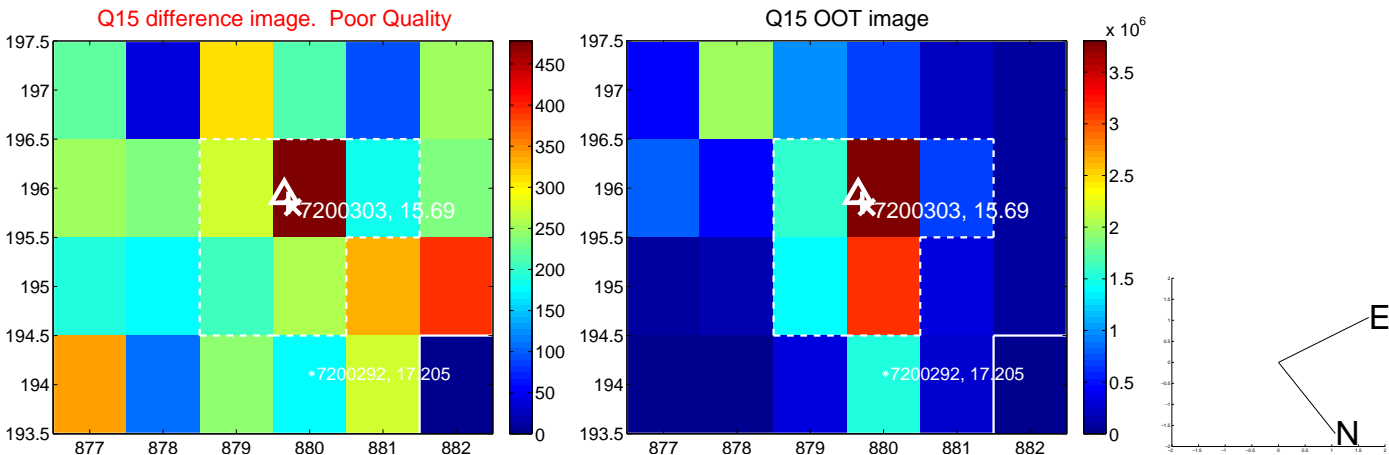
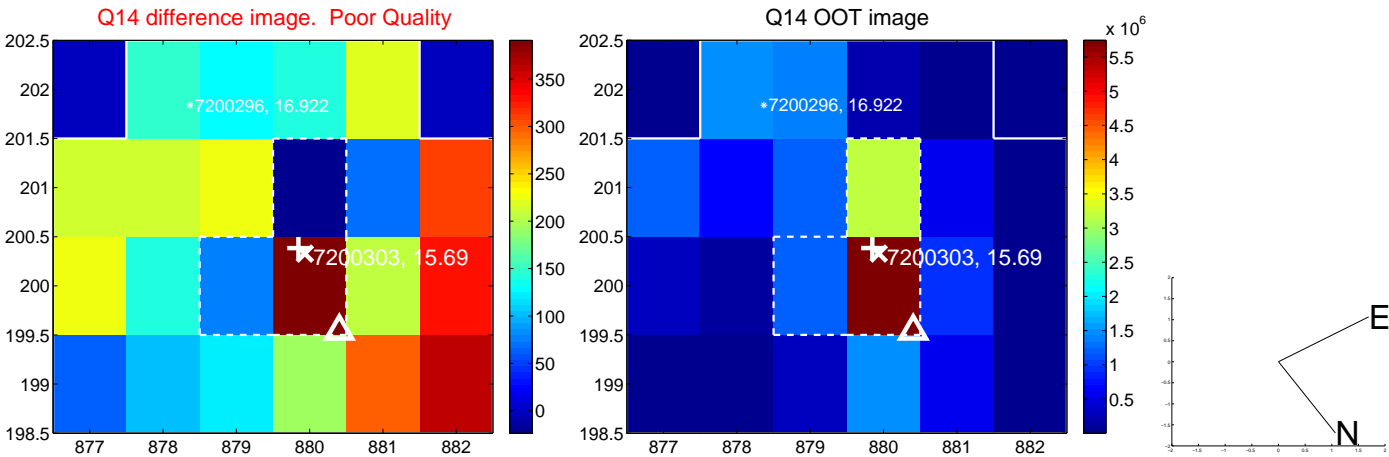
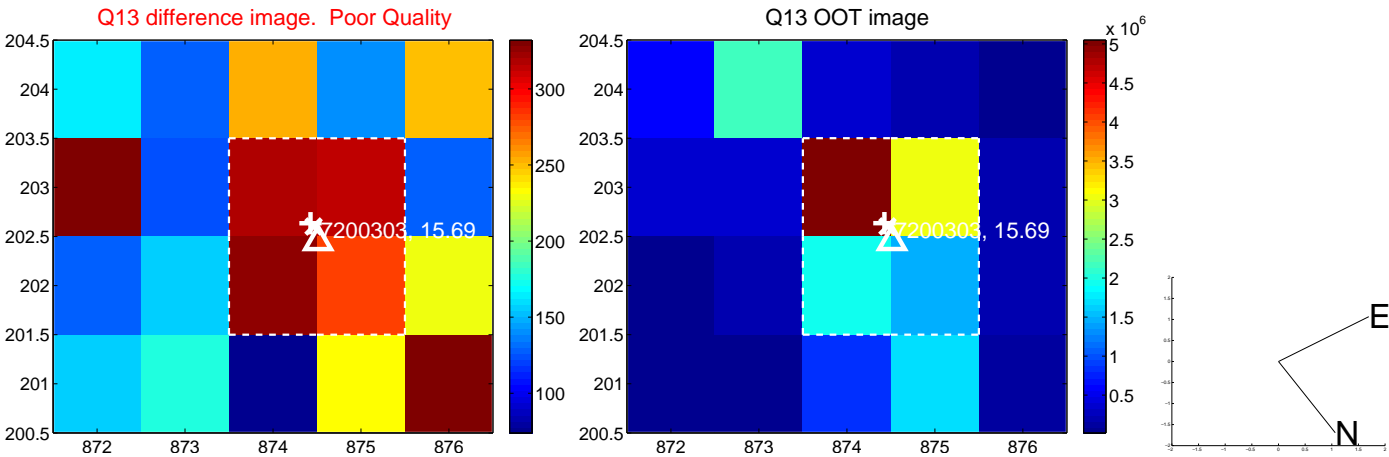
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



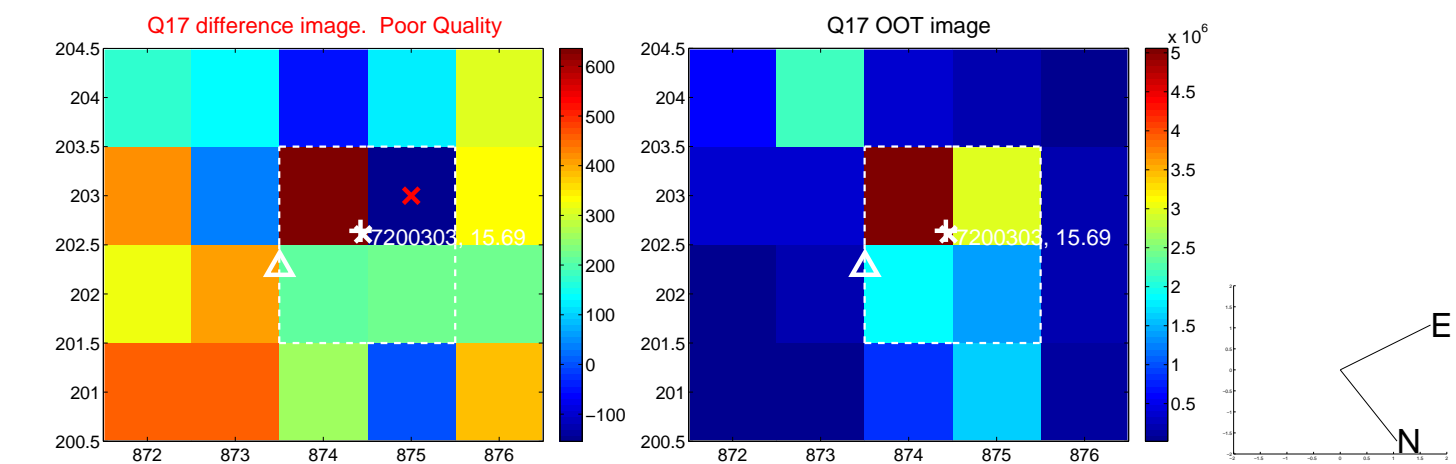
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



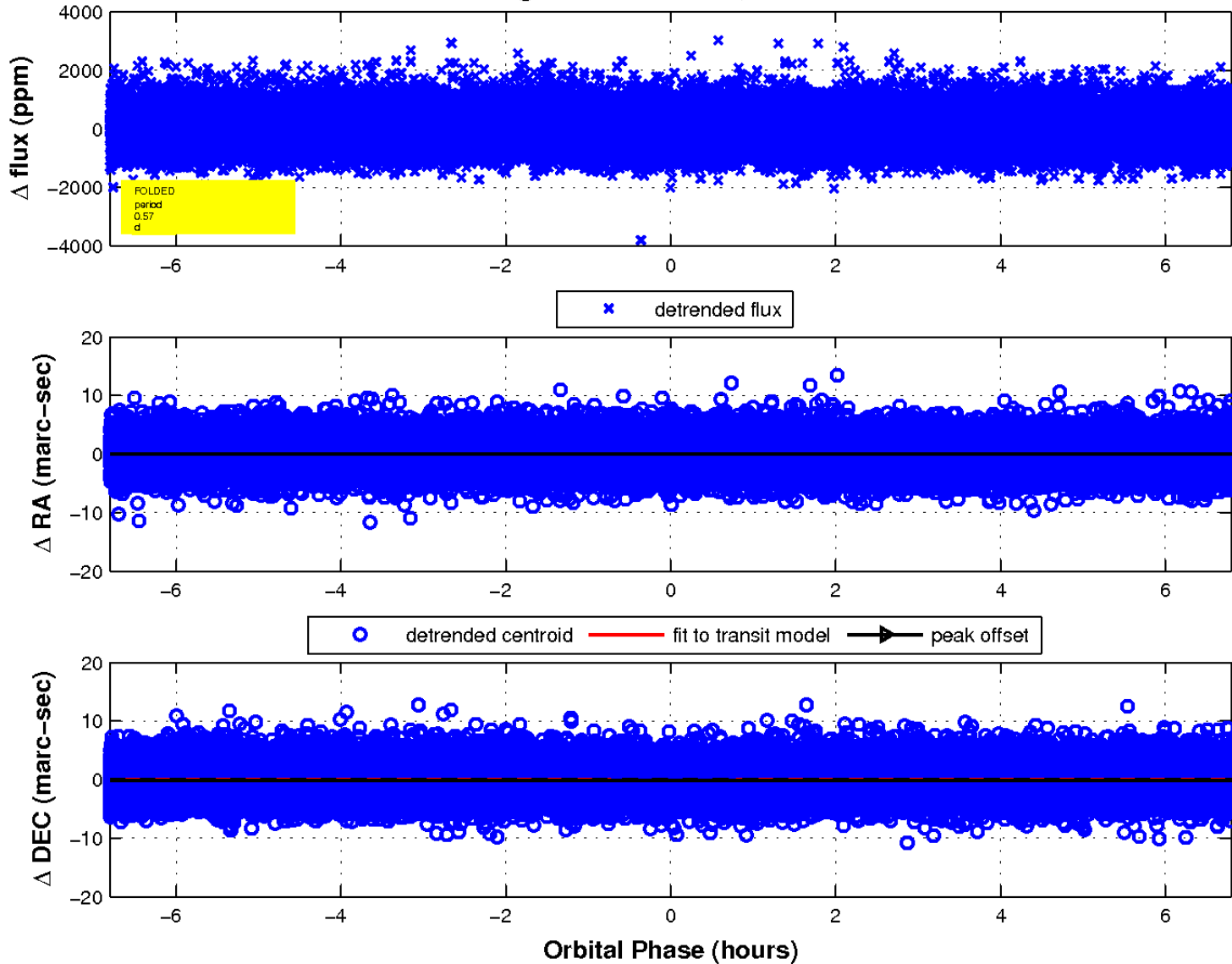
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

