

KIC 007031192

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})
007031192-01	OBS	No	0.566765	131.864274	18.5	4.500	7.5	7.3	1.09	6160	0.49	8234.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031192-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_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.

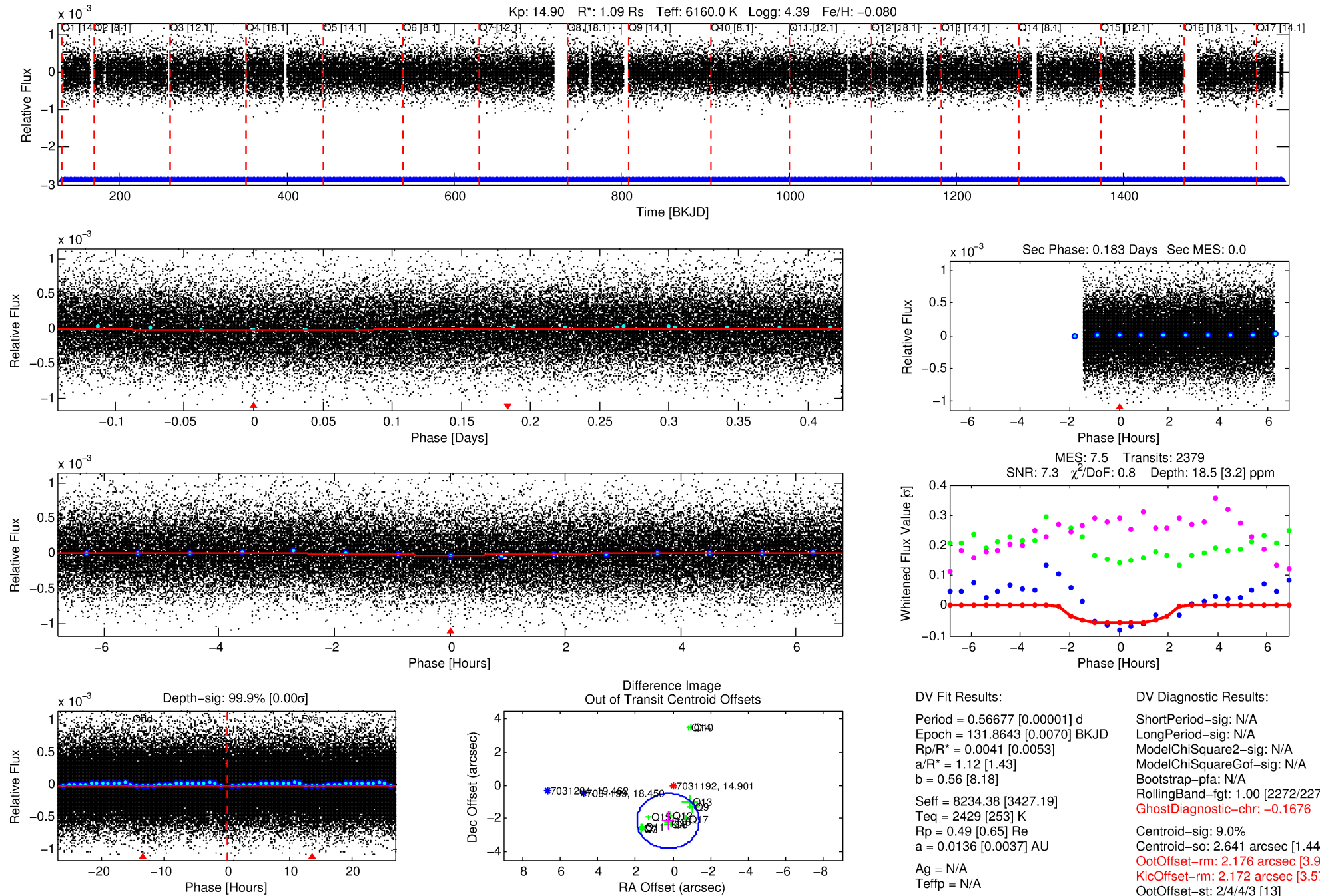
Ephemeris Match Information For 007031192-01

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
007031192-01	7031192	RR-Lyr-pri	7198959	1:1	1266.4	49	-315	7.86	14.90	34628.00	Direct-PRF	0	3.48	21.99

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: 7031192 Candidate: 1 of 1 Period: 0.567 d



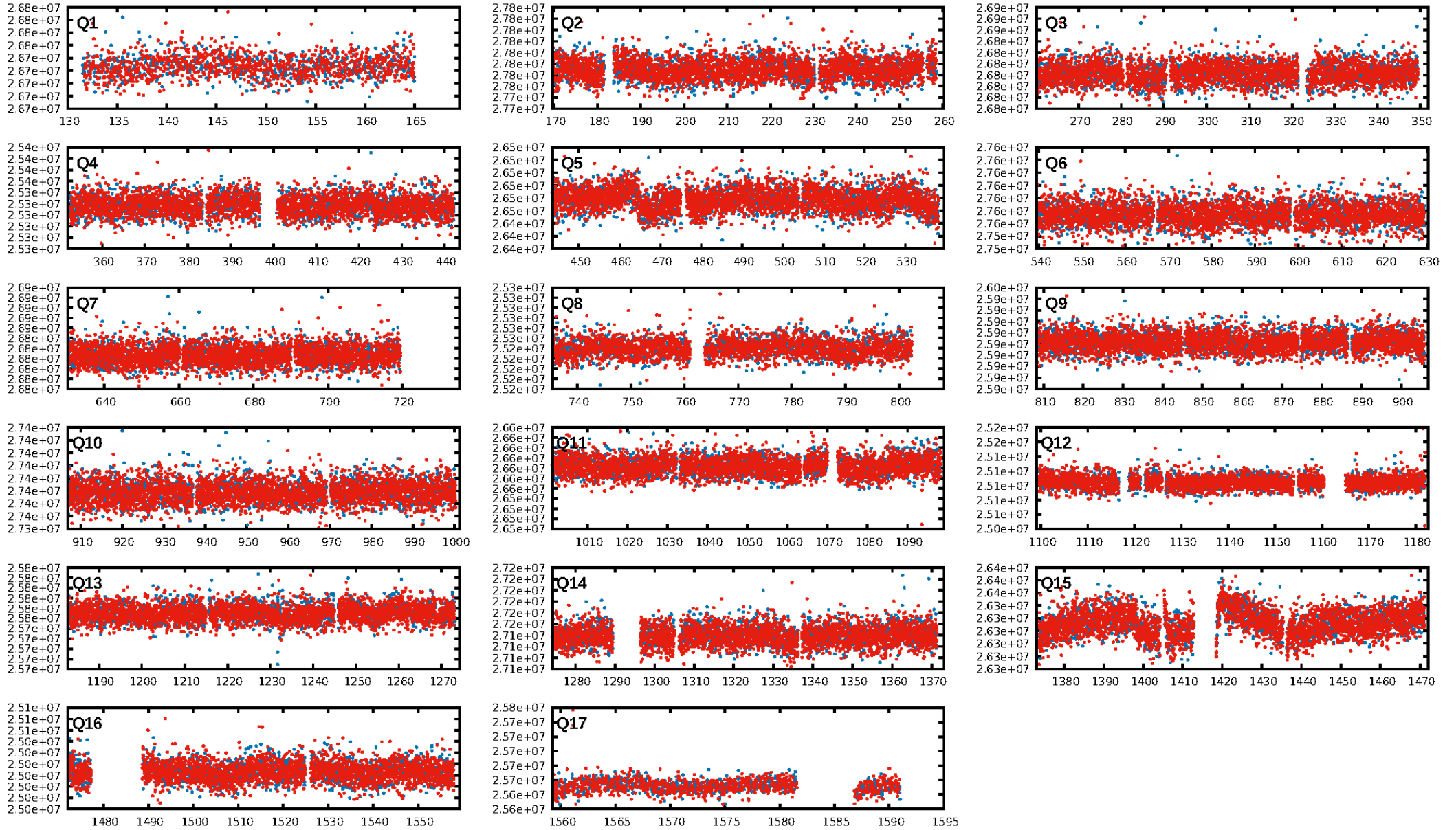
DV Fit Results:

Period = 0.56677 [0.00001] d
Epoch = 131.8643 [0.0070] BKJD
Rp/R* = 0.0041 [0.0053]
a/R* = 1.12 [1.43]
b = 0.56 [8.18]
Seff = 8234.38 [3427.19]
Teff = 2429 [253] K
Rp = 0.49 [0.65] Re
a = 0.0136 [0.0037] AU
Ag = N/A
Teffp = N/A

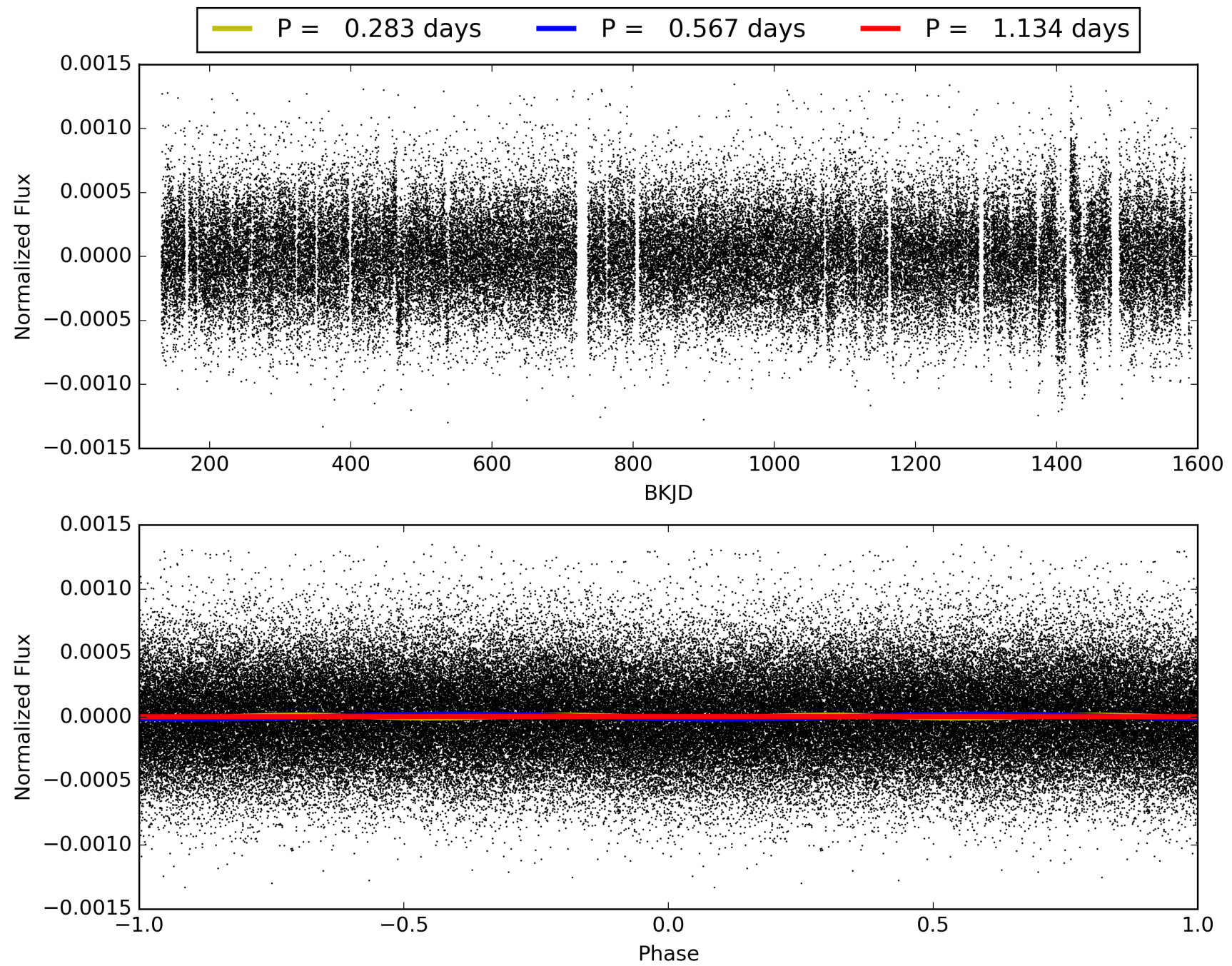
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2272/2272]
GhostDiagnostic-chr: -0.1676
Centroid-sig: 9.0%
Centroid-so: 2.641 arcsec [1.44 σ]
OotOffset-rm: 2.176 arcsec [3.95 σ]
KicOffset-rm: 2.172 arcsec [3.57 σ]
OotOffset-st: 2/4/4/3 [13]
KicOffset-st: 2/4/4/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007031192-01, PDC Light Curves

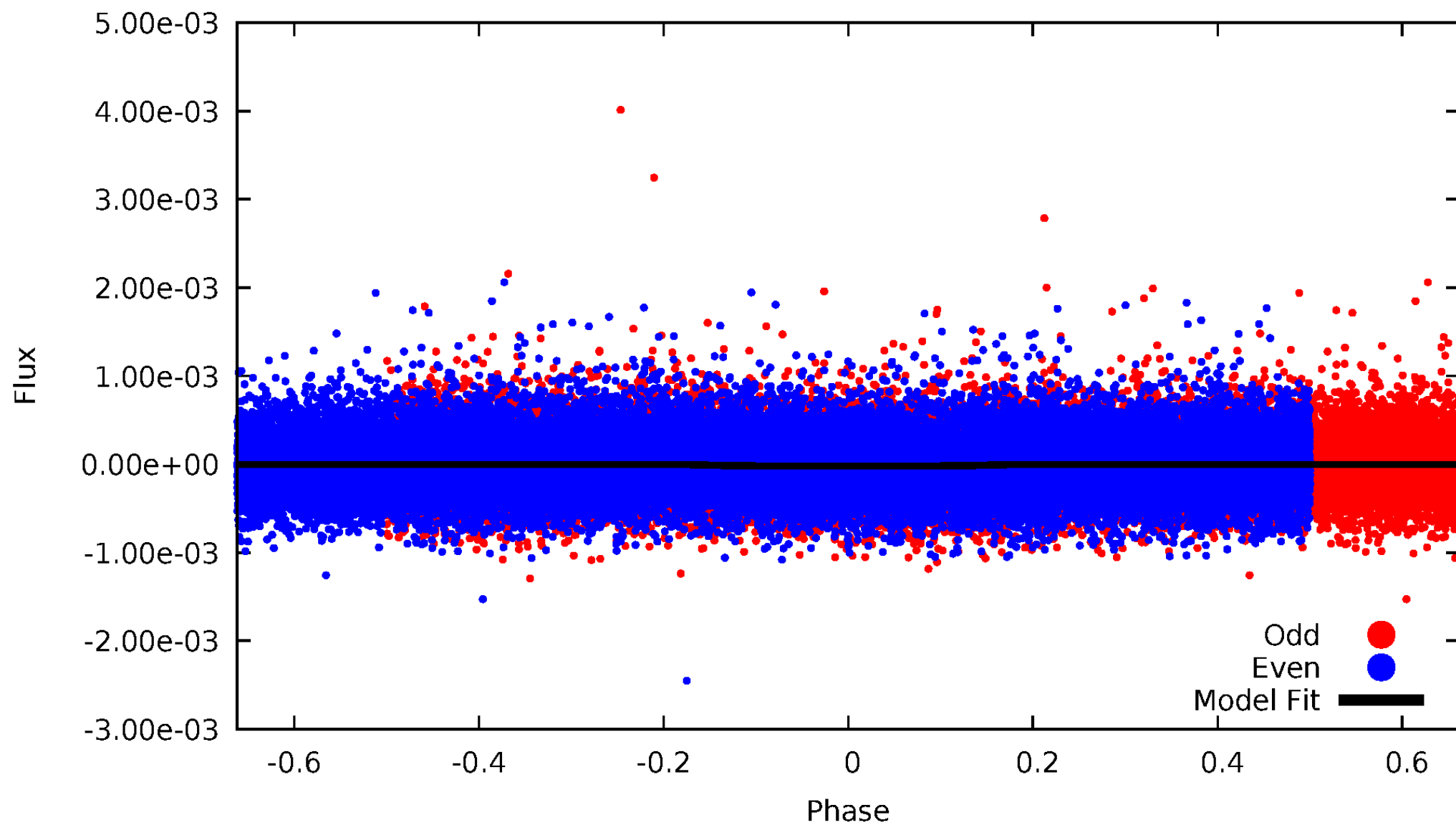


TCE 007031192-01



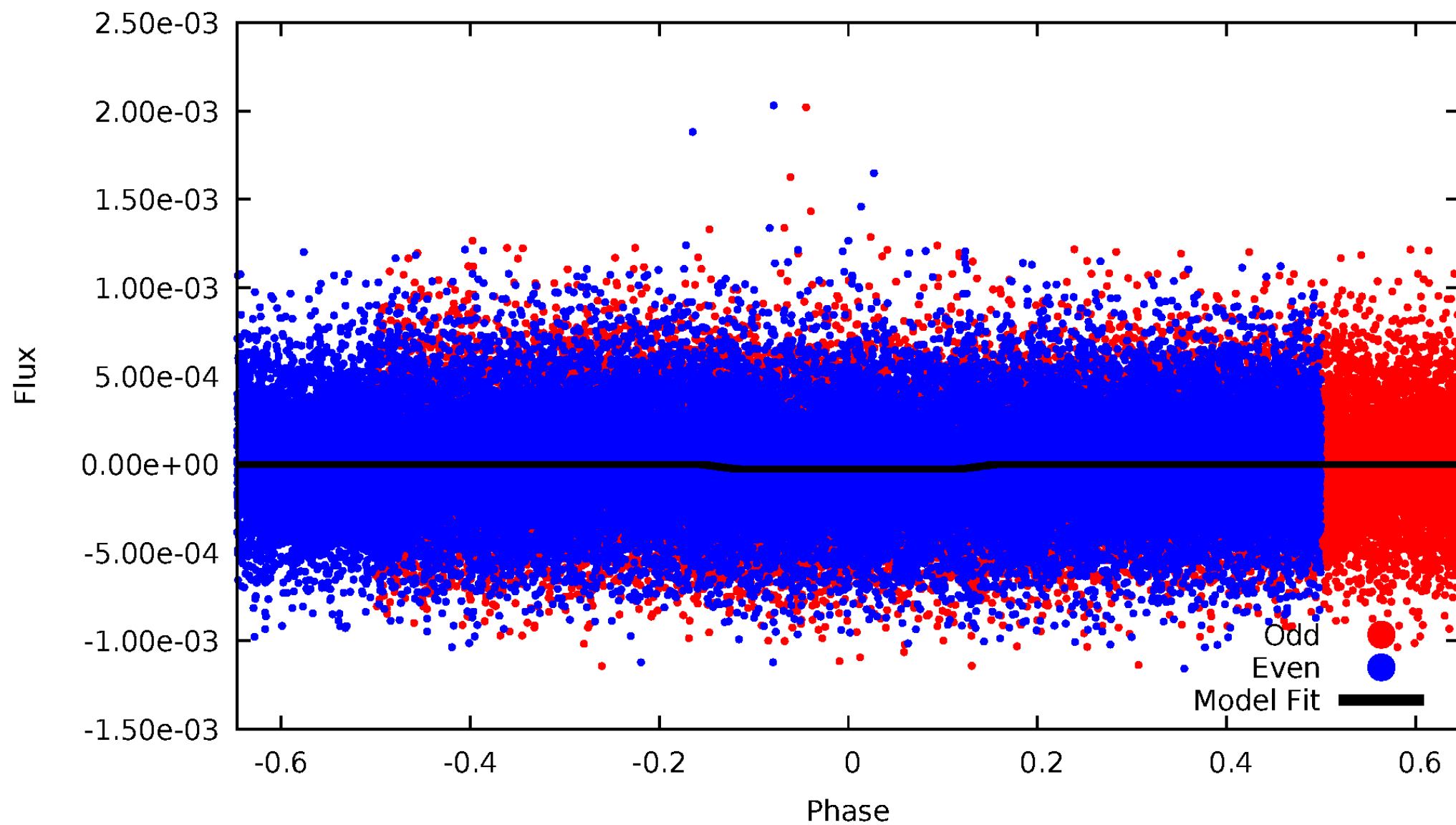
DV Odd/Even

TCE 007031192-01



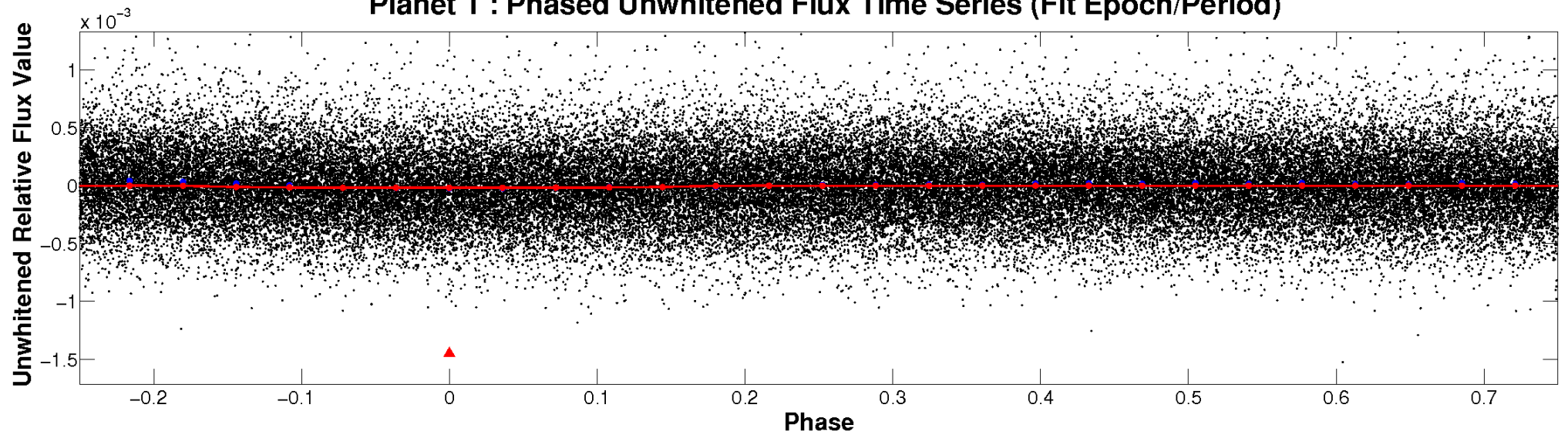
ALT Odd/Even

TCE 007031192-01

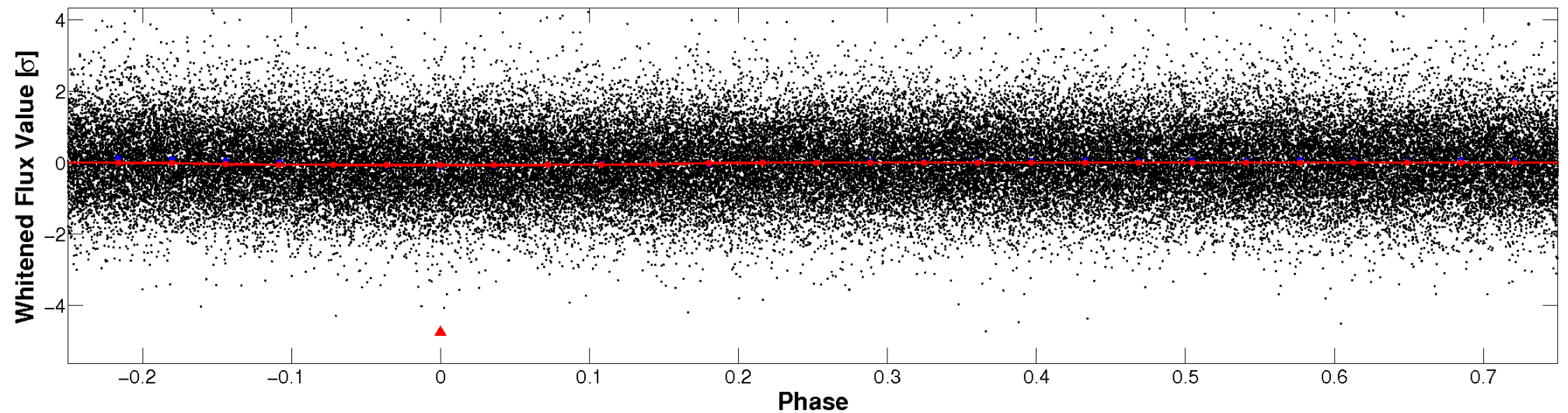


Non-Whitened Vs. Whitened Light Curve

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

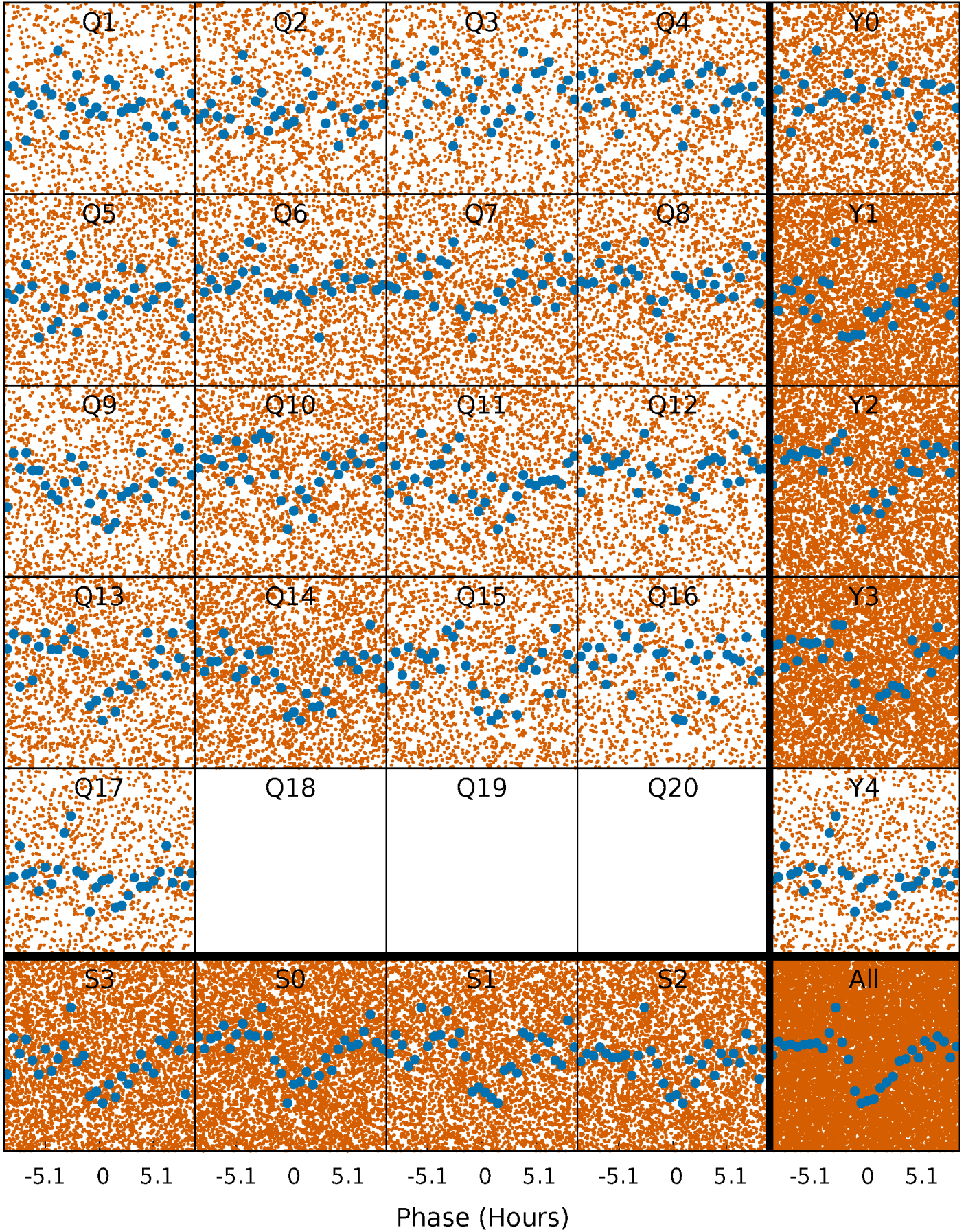


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



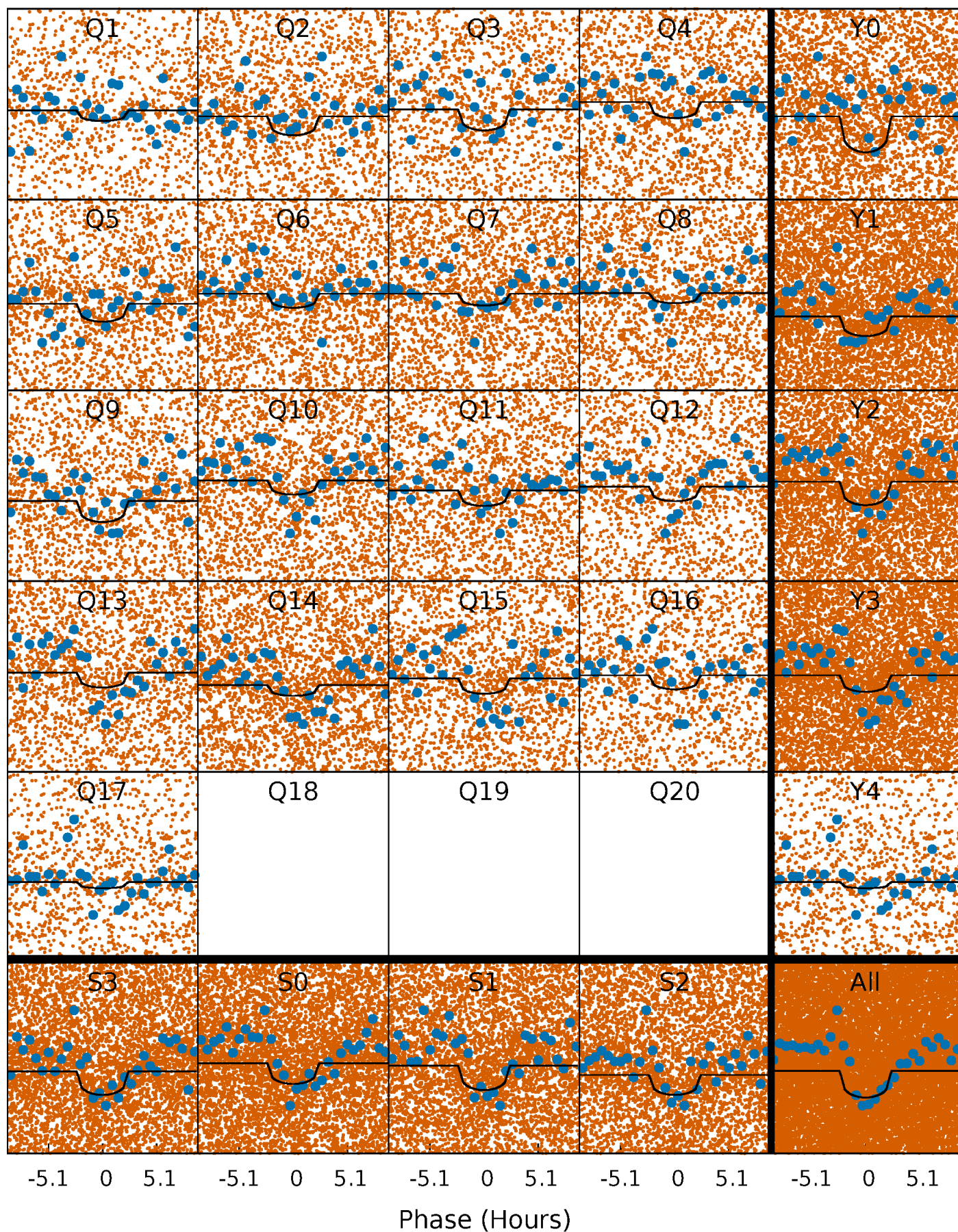
PDC Quarter-Phased Transit Curves

TCE 007031192-01 P= 0.566765 Days $T_0=131.864274$ (BKJD)



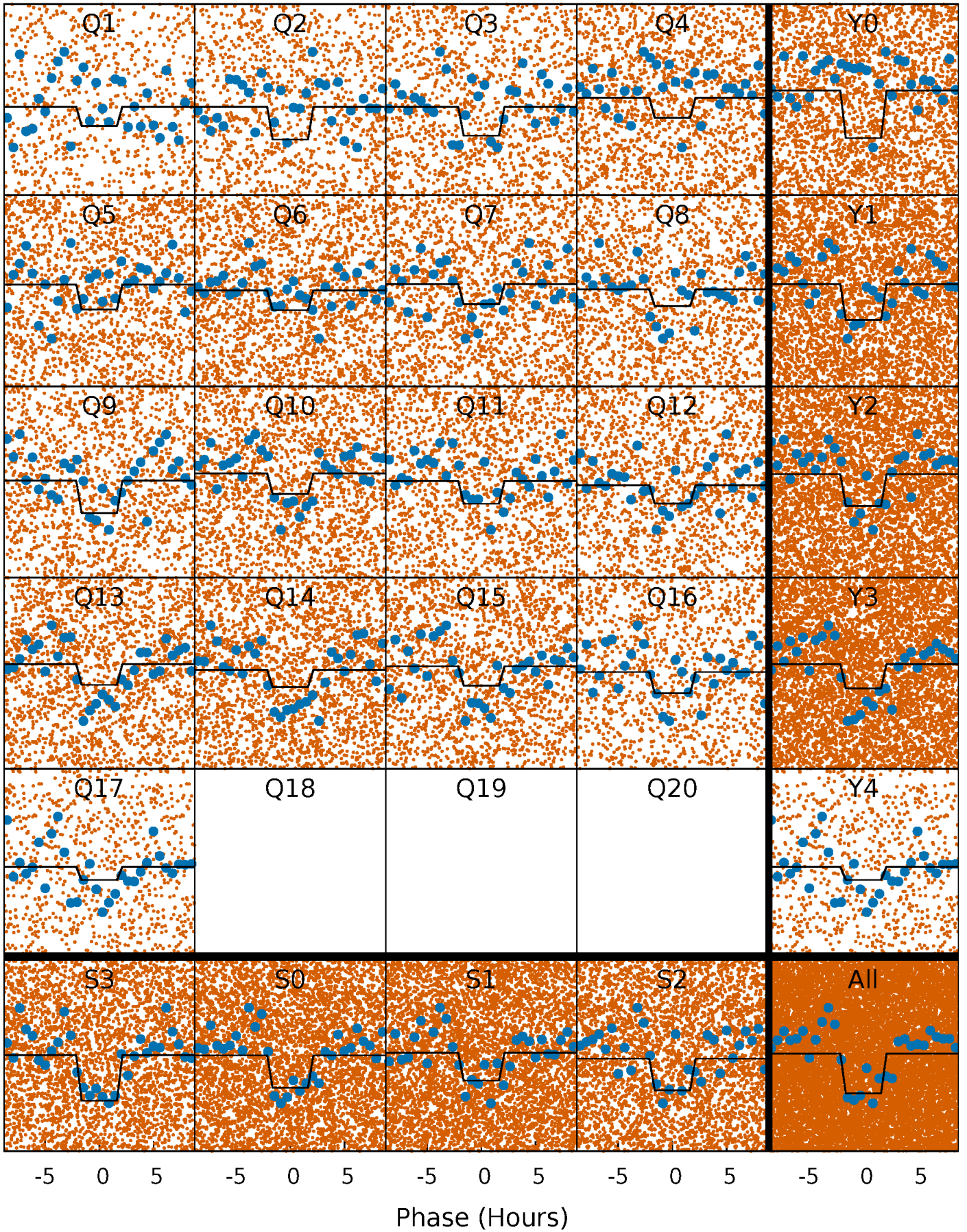
DV Quarter-Phased Transit Curves

TCE 007031192-01 P= 0.566765 Days $T_0=131.864274$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

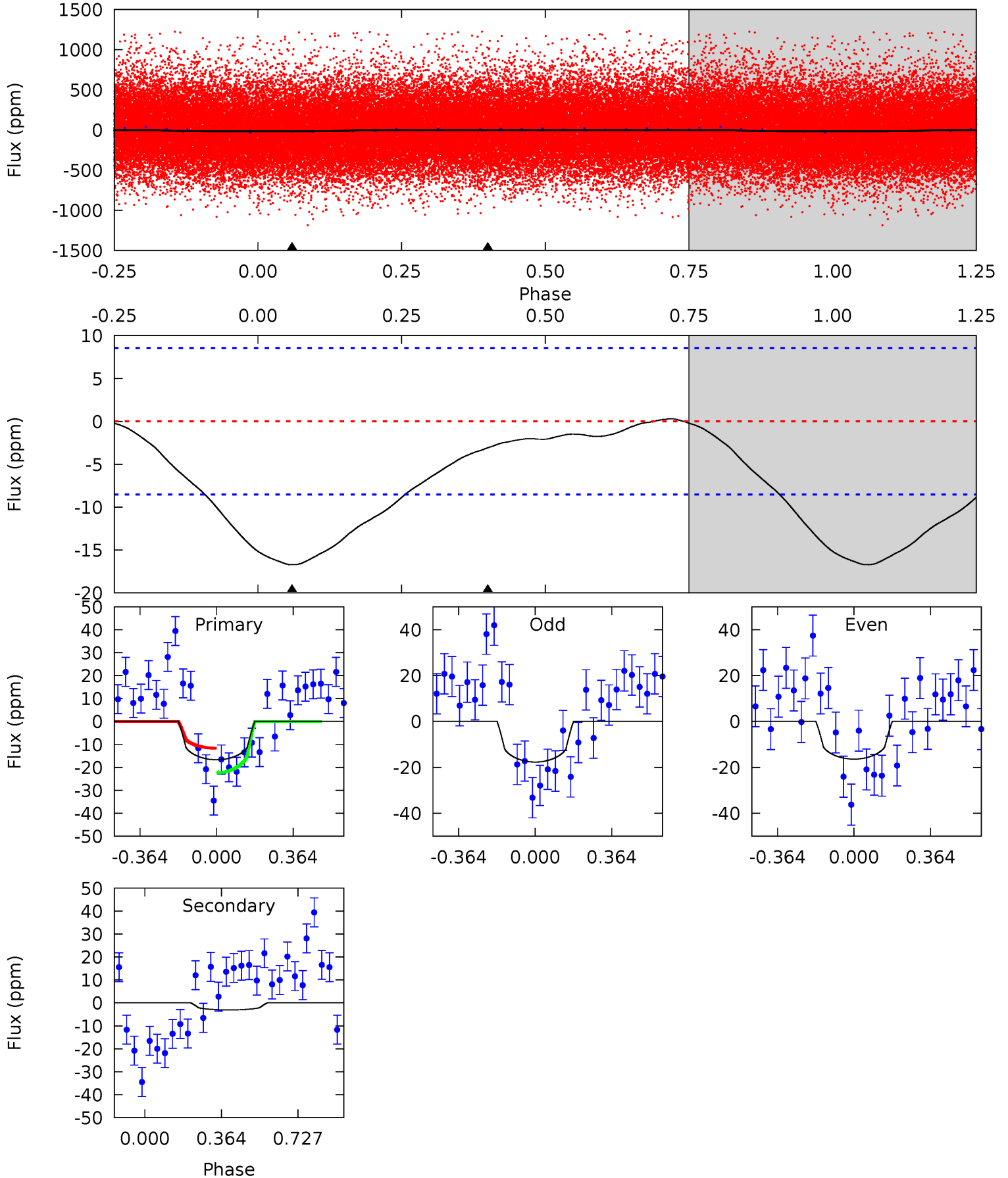
TCE 007031192-01 P= 0.566795 Days $T_0=131.841487$ (BKJD)



DV Model-Shift Uniqueness Test

007031192-01, P = 0.566765 Days, E = 131.297509 Days

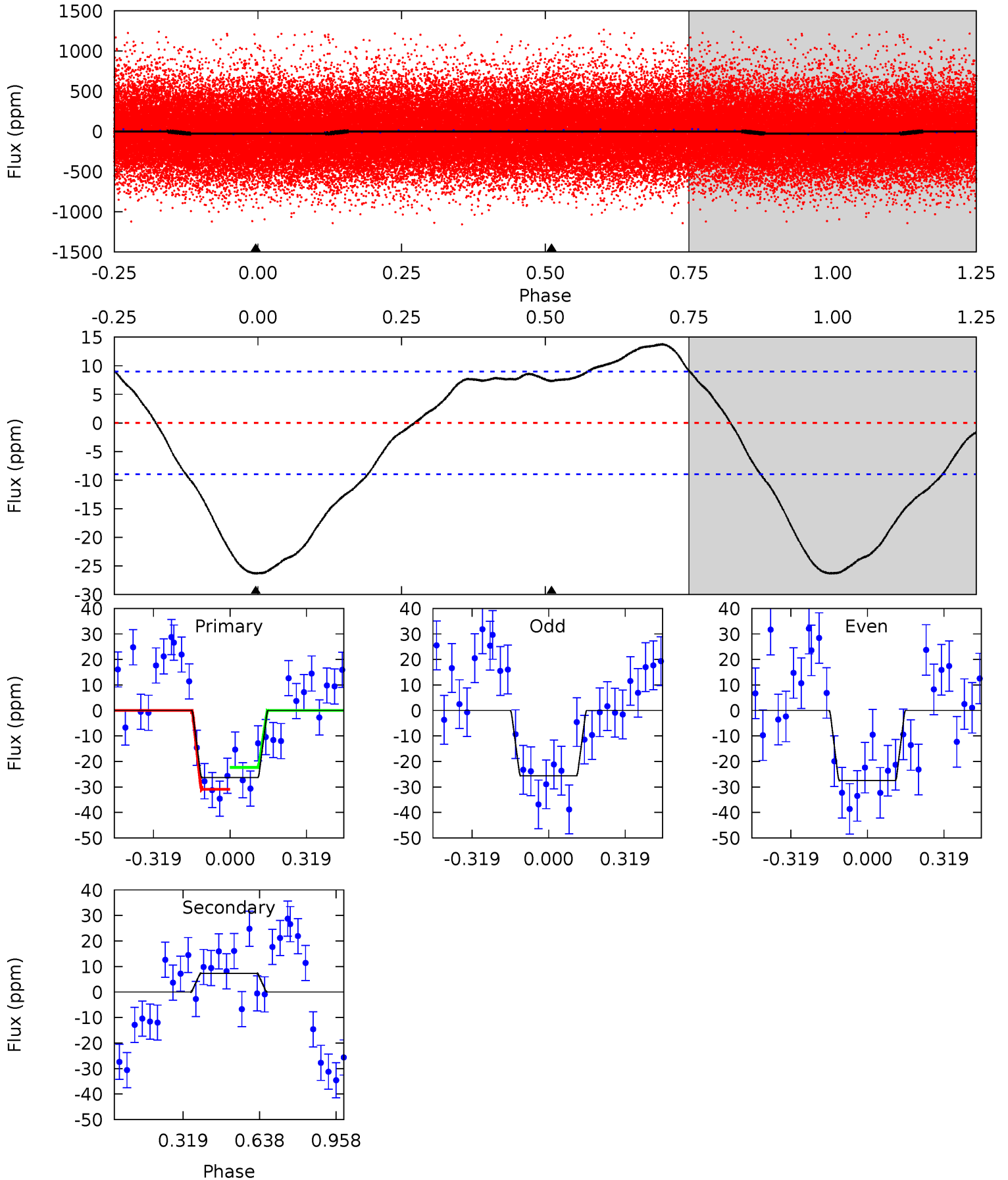
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.39	1.54	0	0	4.29	0.91	0.19	8.39	8.39	1.54	1.54	0.32	0.90	0.02	2.75



Alt Model-Shift Uniqueness Test

007031192-01, P = 0.566795 Days, E = 131.274692 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	-3.52	0	0	4.32	1.00	2.48	12.6	12.6	-3.52	-3.52	0.45	0.91	0.34	2.02



Stellar Parameters For KIC 007031192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6160^{+171}_{-236}	$4.386^{+0.090}_{-0.210}$	$-0.080^{+0.250}_{-0.300}$	$1.090^{+0.350}_{-0.150}$	$1.050^{+0.181}_{-0.120}$	$1.143^{+0.458}_{-0.628}$
	+3%/-4%	+2%/-5%	+312%/-375%	+32%/-14%	+17%/-11%	+40%/-55%
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 007031192-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$0.69^{+0.62}_{-0.46}$	3431^{+263}_{-194}	3224^{+2364}_{-6423}	$0.539^{+4.247}_{-0.445}$
Alt.	7 ± 2	$0.76^{+0.61}_{-0.49}$	3438^{+267}_{-200}	-4518^{+692}_{-2338}	$-1.260^{+0.890}_{-8.310}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

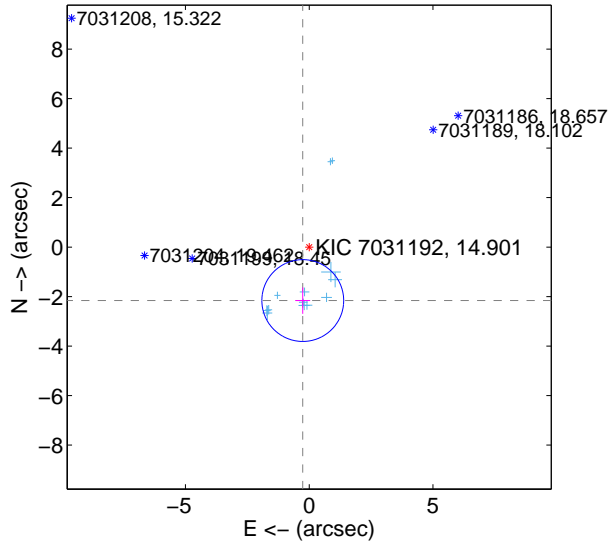
Supplemental centroid analysis for 007031192-01. Kepler magnitude: 14.90. Transit SNR 7.30

There are 13 quarters with good PRF difference image offsets

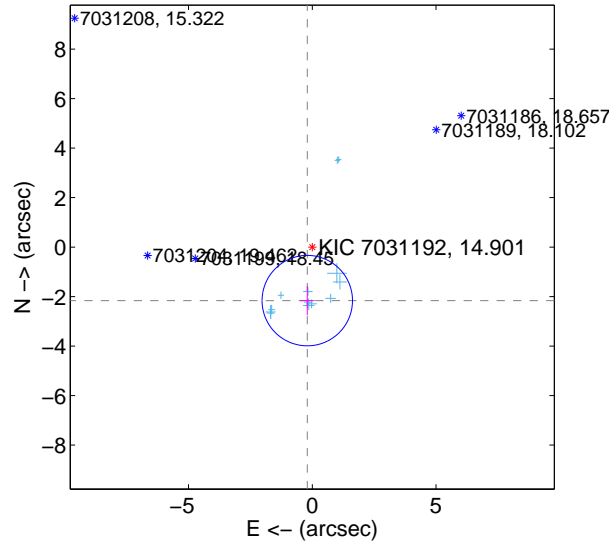
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.176 \pm 0.551	3.95	0.260 \pm 0.299	-2.160 \pm 0.534
PRF-fit source offset from KIC position	2.172 \pm 0.609	3.57	0.202 \pm 0.292	-2.163 \pm 0.593
photometric centroid source offset	2.64 \pm 1.84	1.44	-2.32 \pm 1.85	-1.26 \pm 1.80

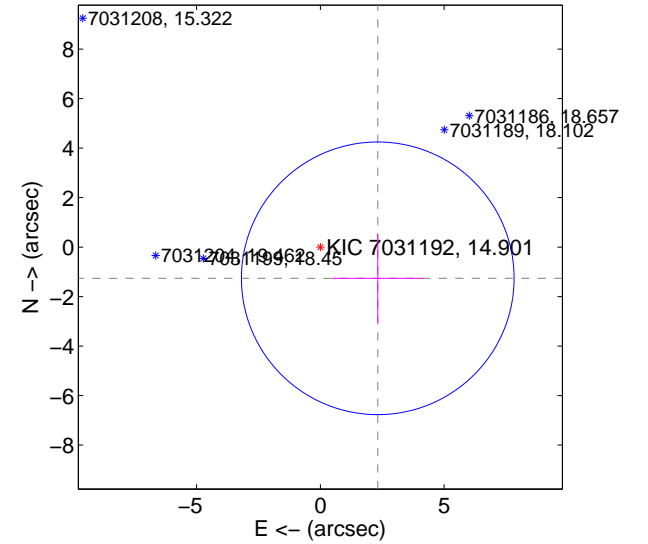
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

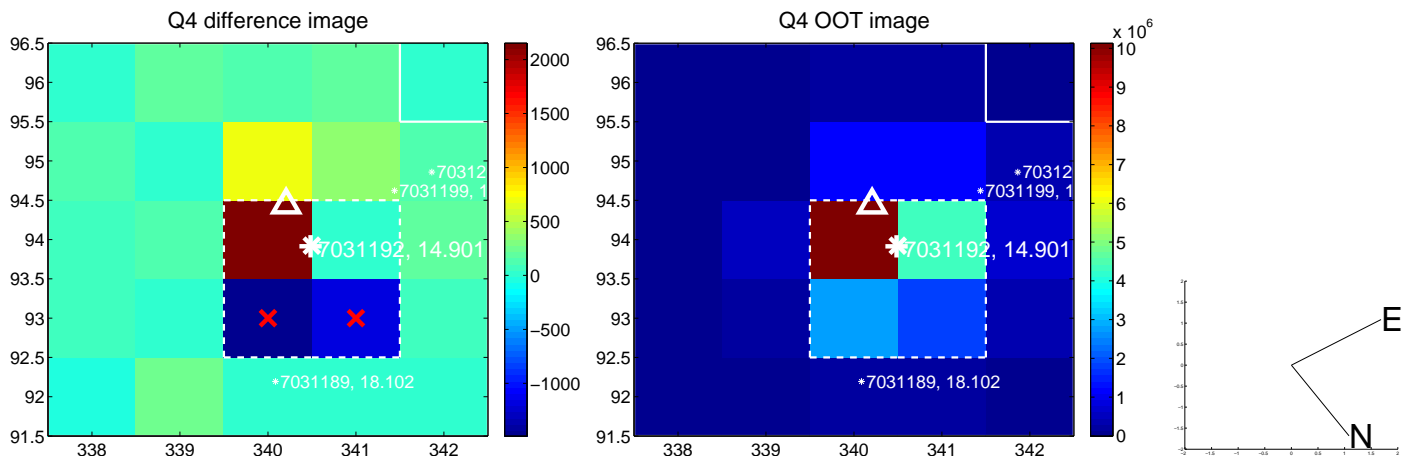
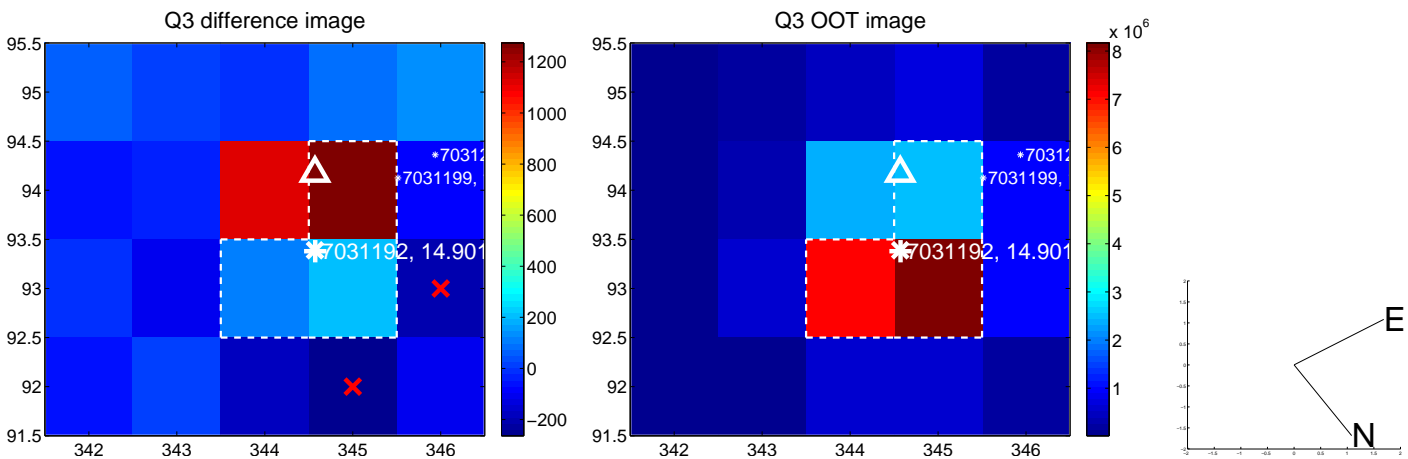
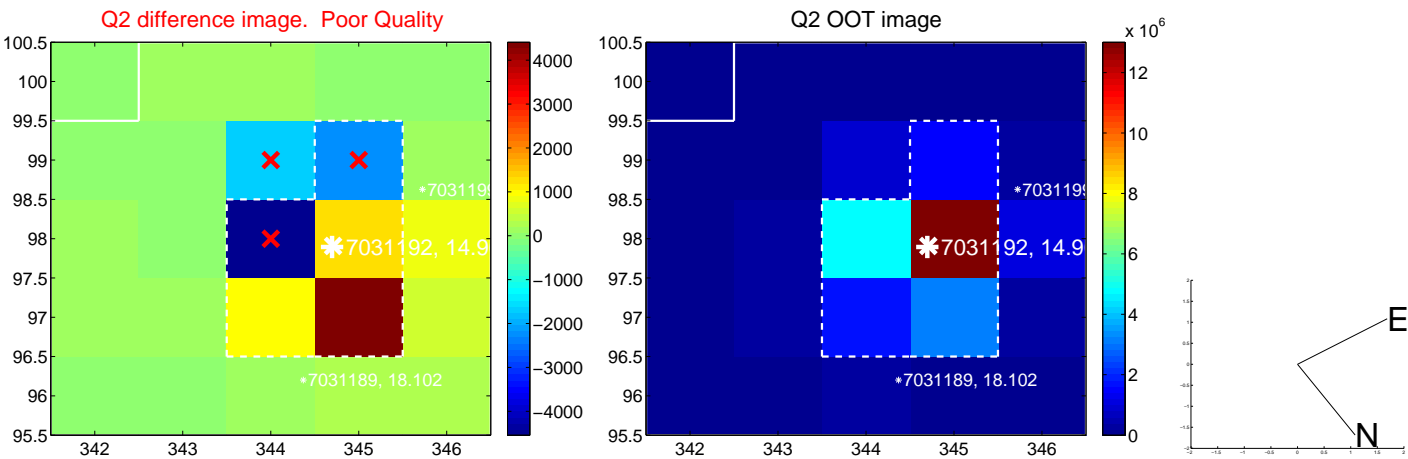
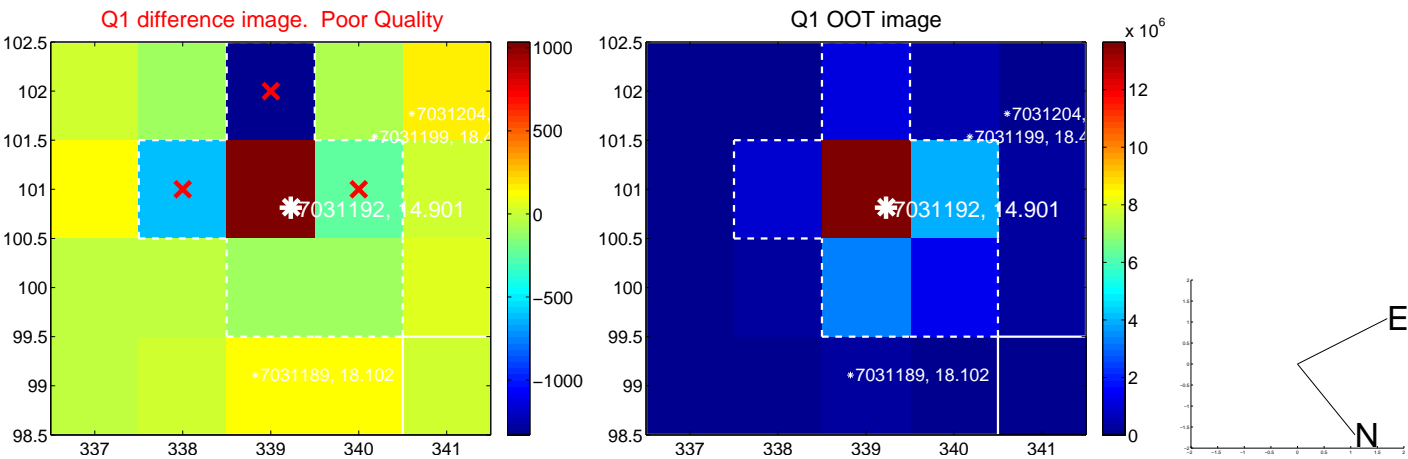


offset from photometric centroids

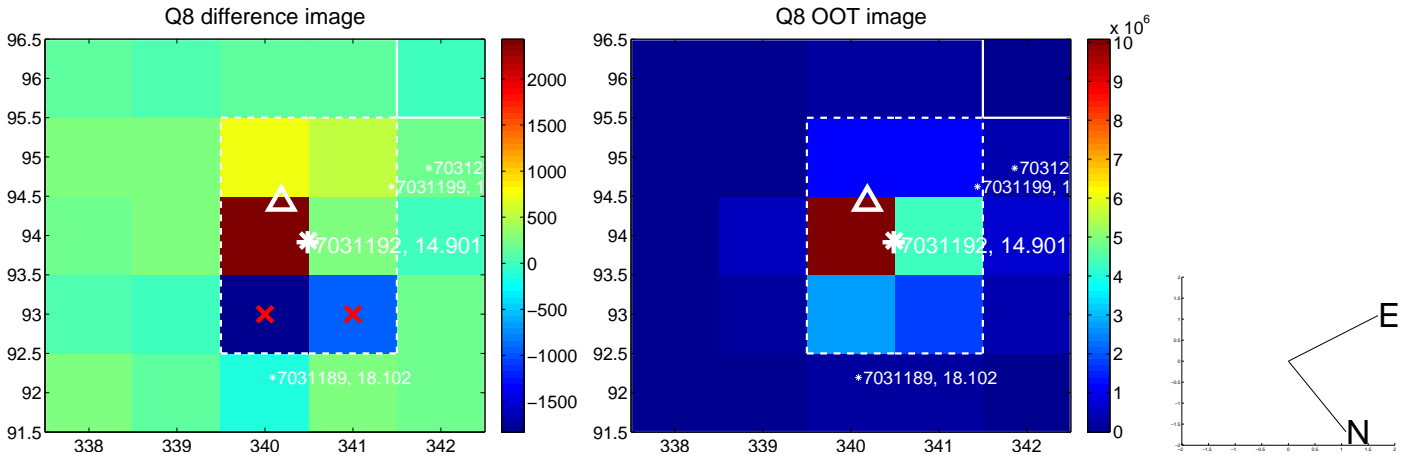
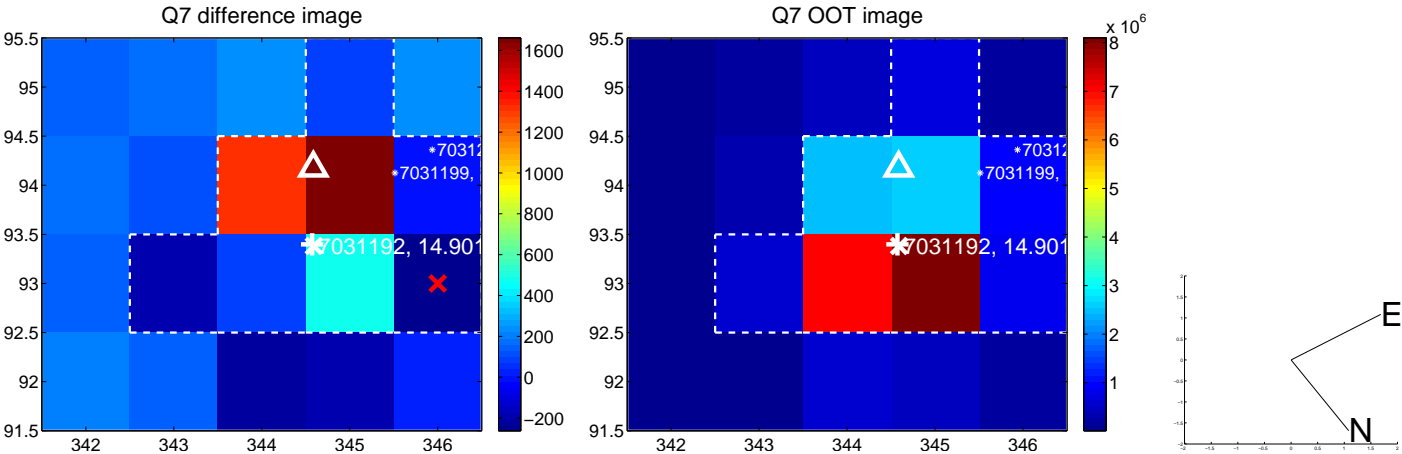
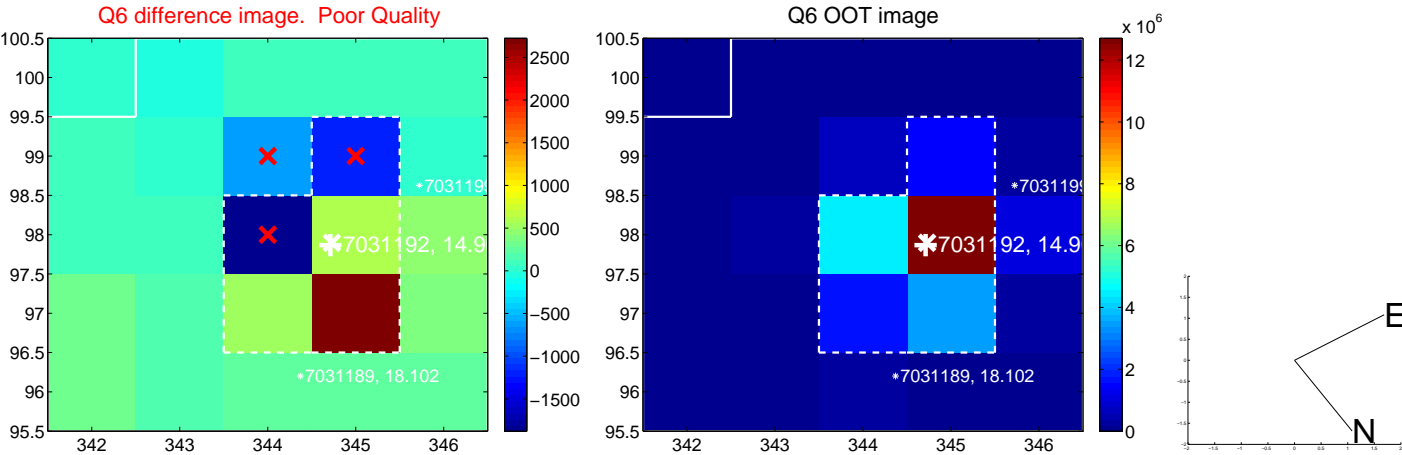
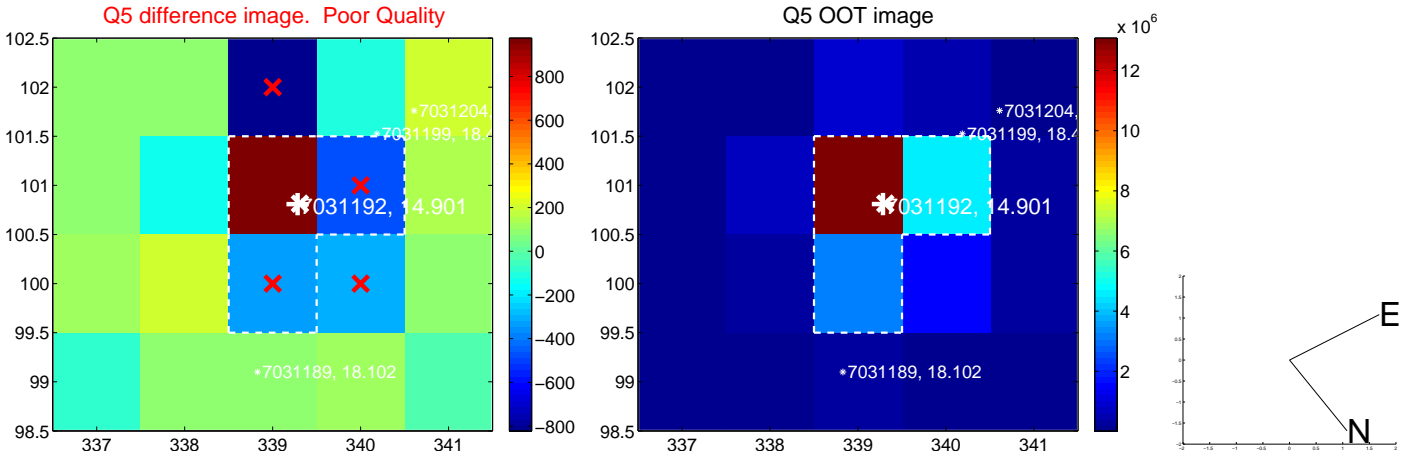


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

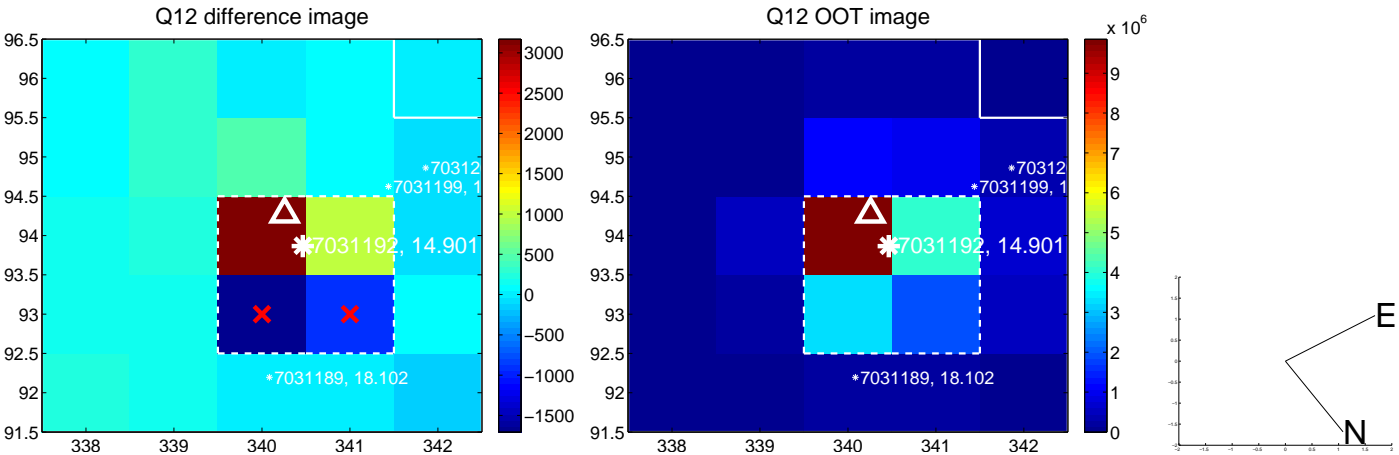
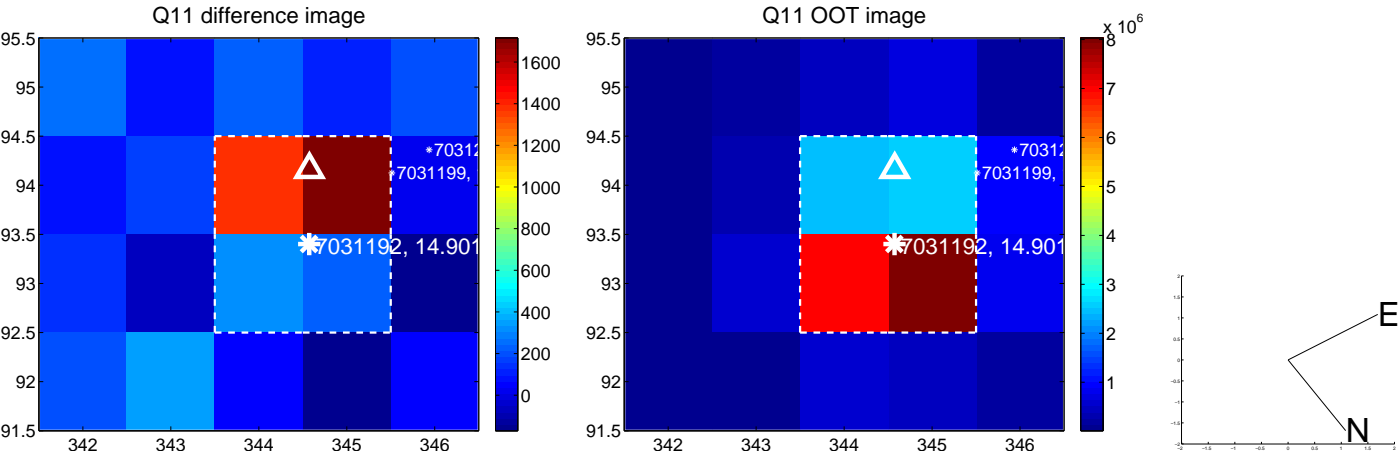
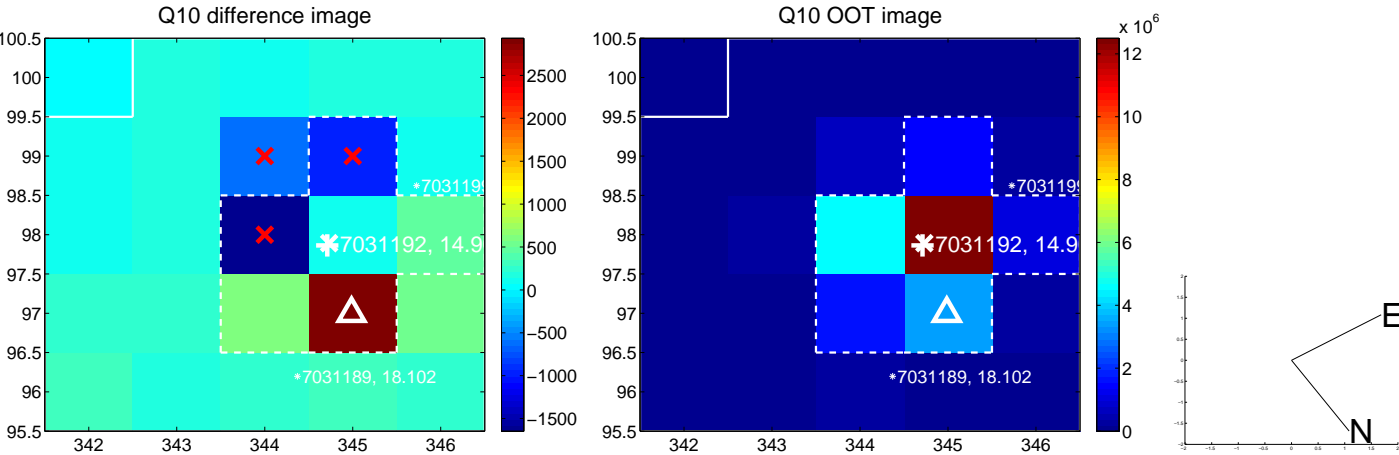
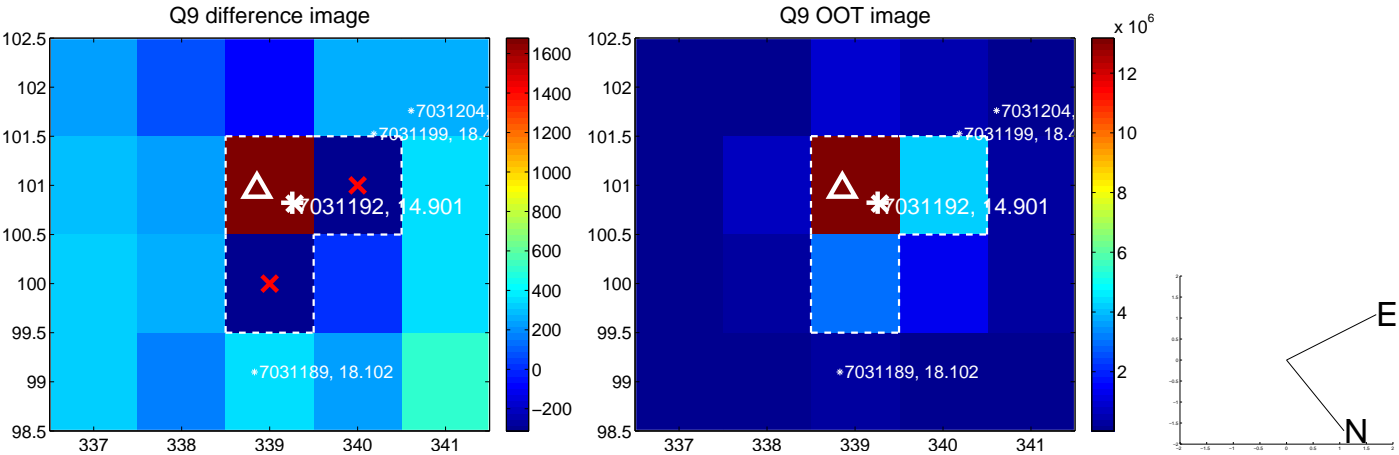
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



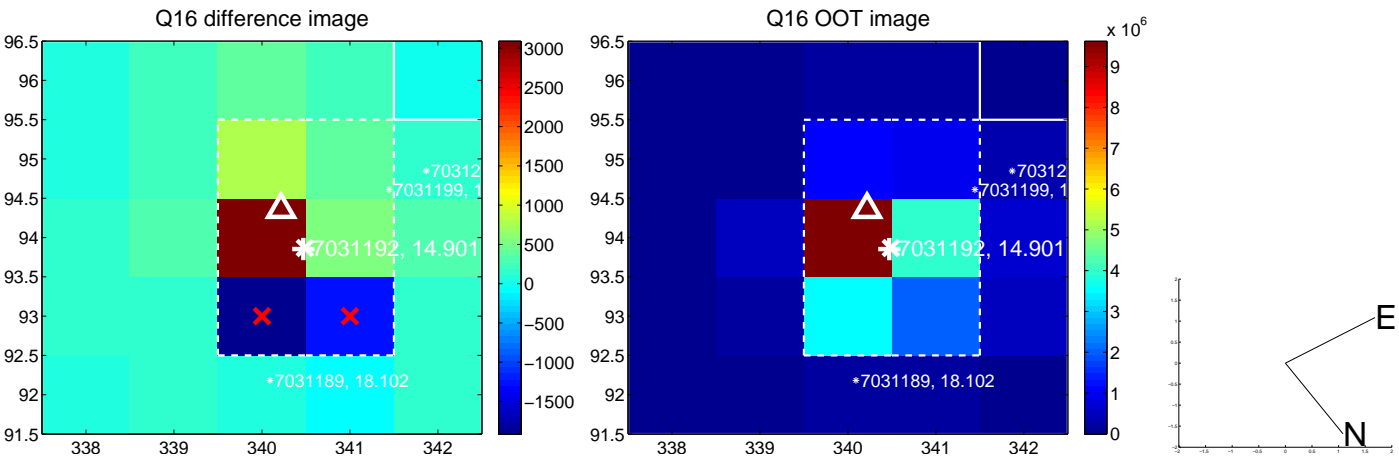
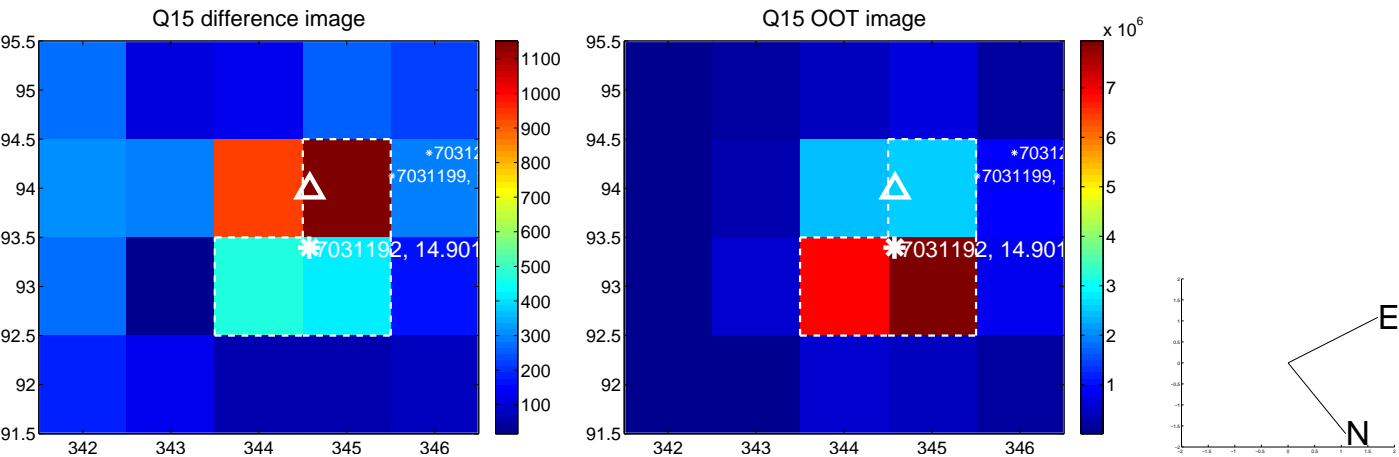
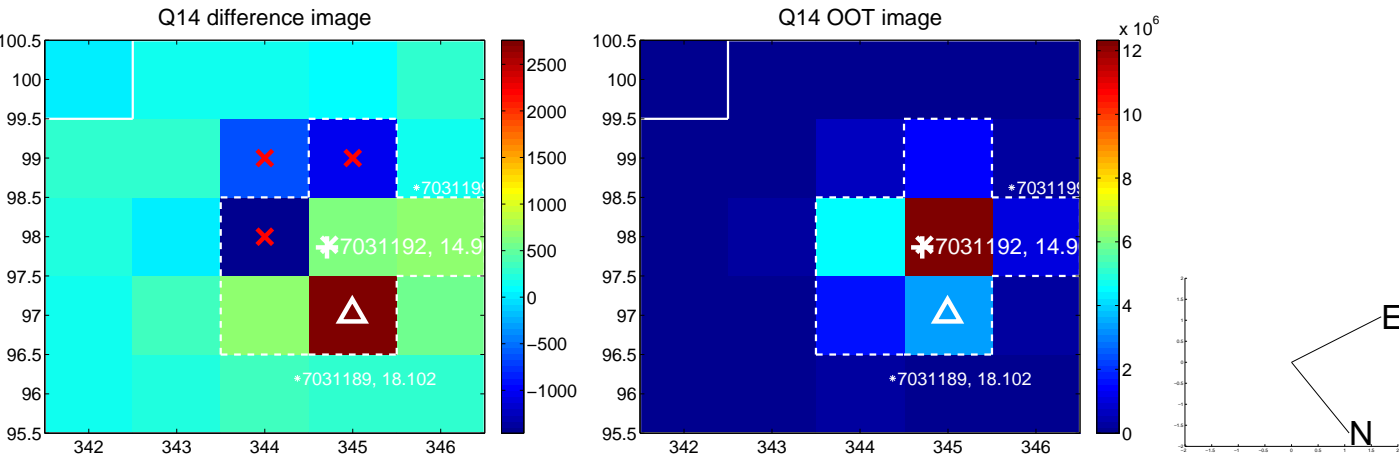
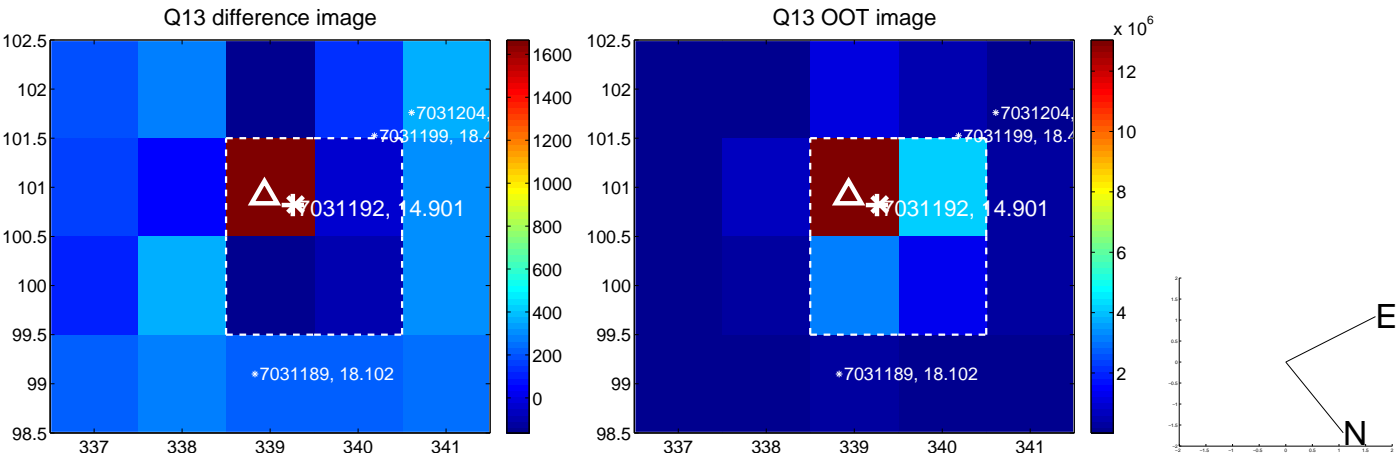
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



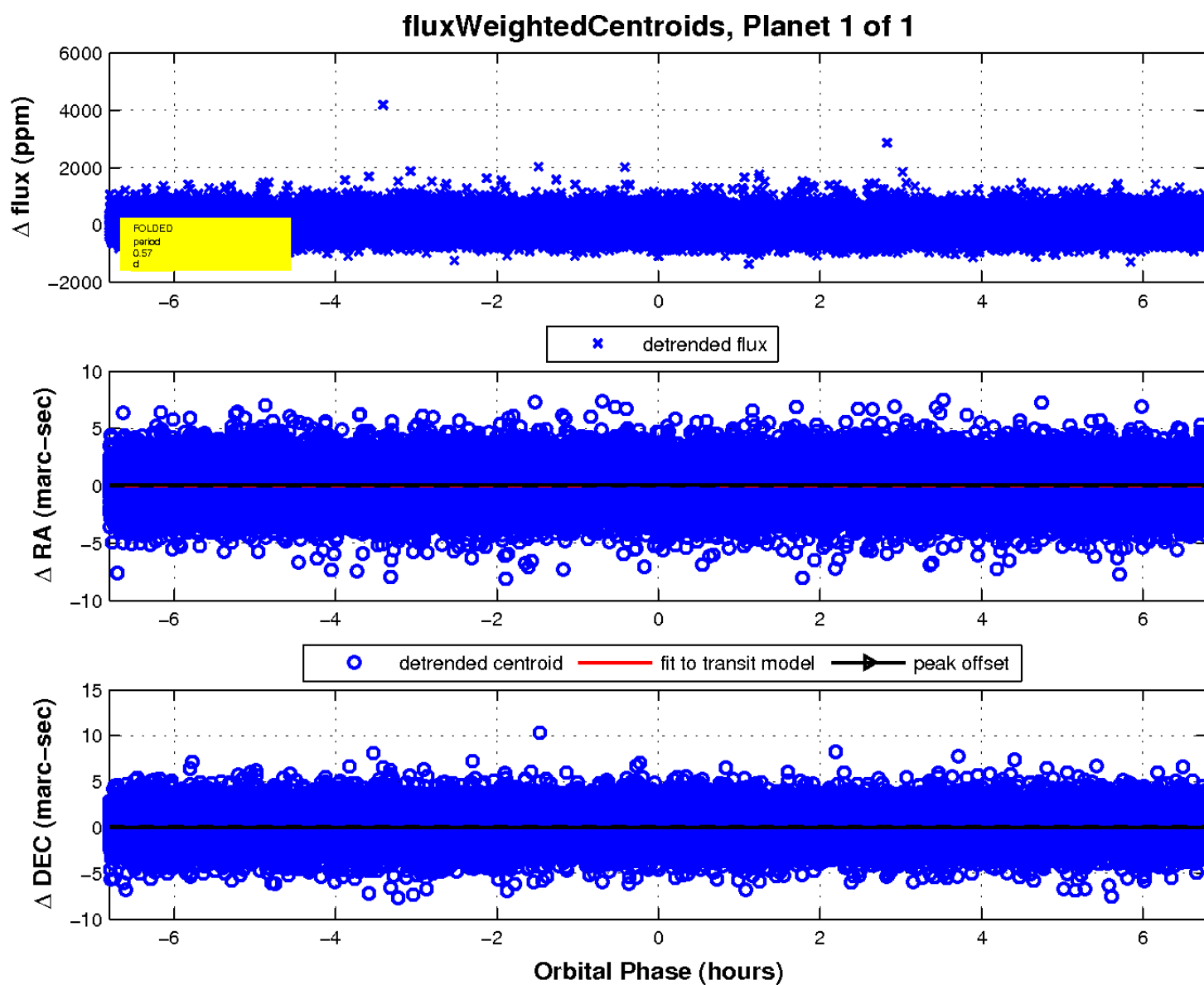
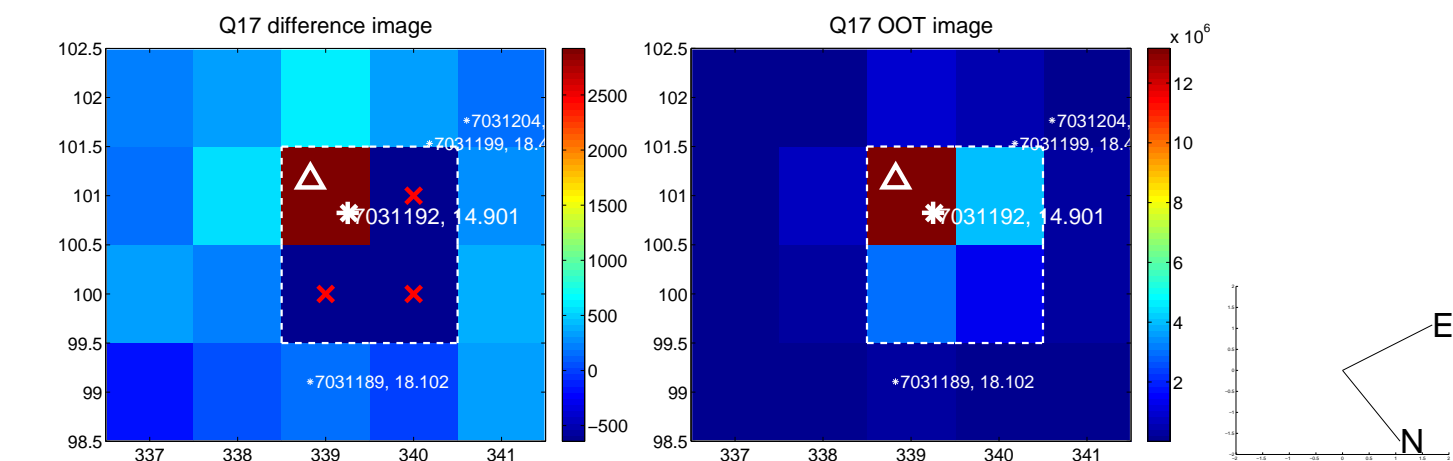
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

