

KIC 007031132

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 _⊕)
007031132-01	OBS	6804.01	0.566808	131.819703	9.7	3.224	10.3	9.8	0.91	5680	0.34	4316.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031132-01	OBS	FP	0.00	1	0	0	1	LPP_DV—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.

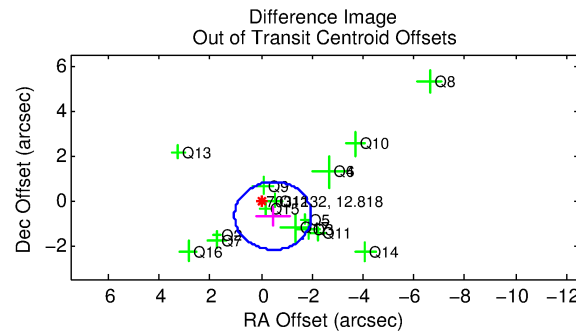
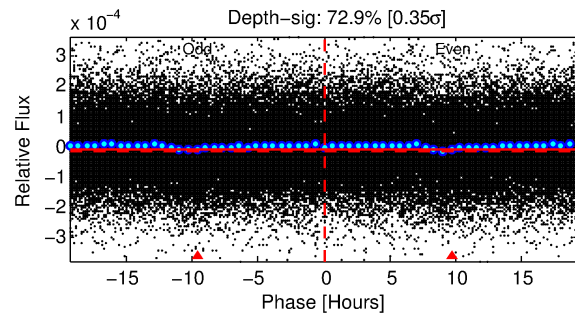
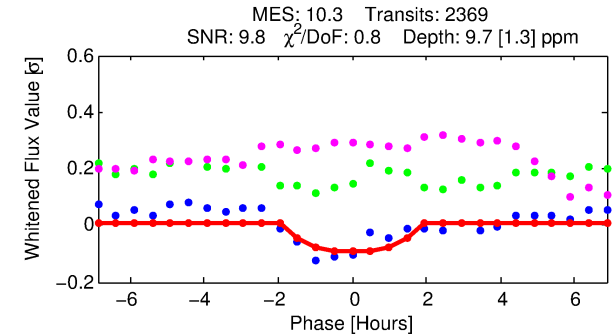
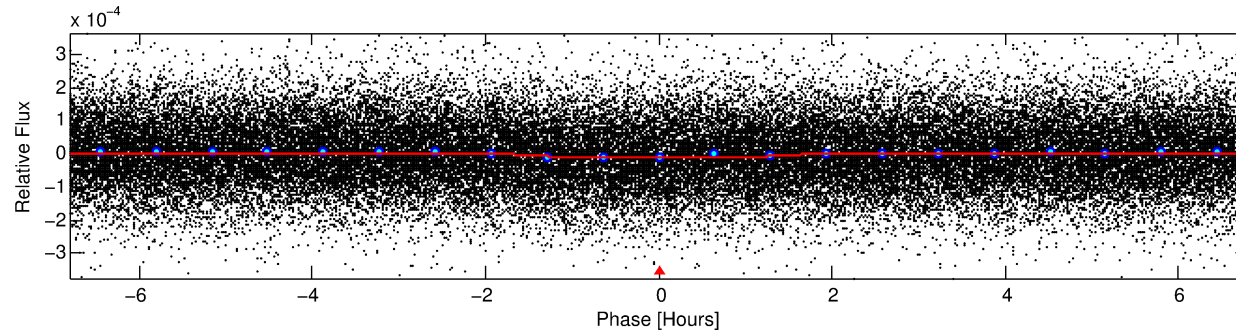
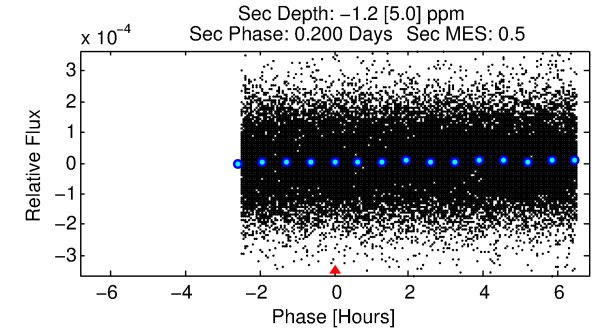
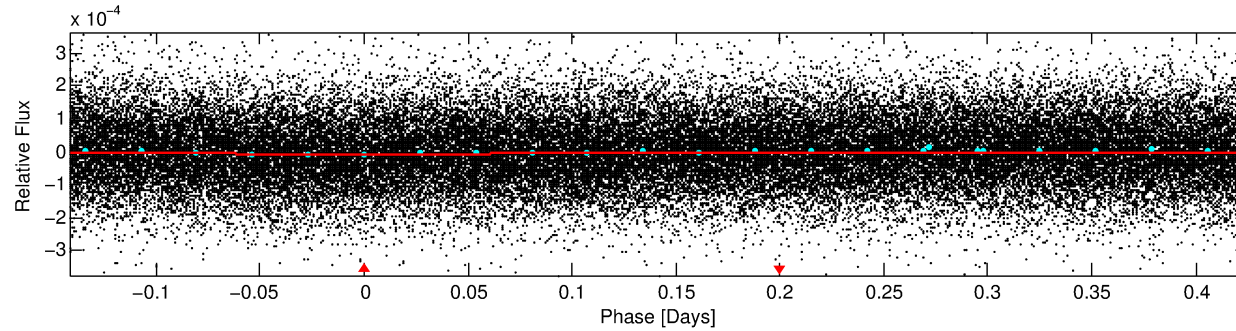
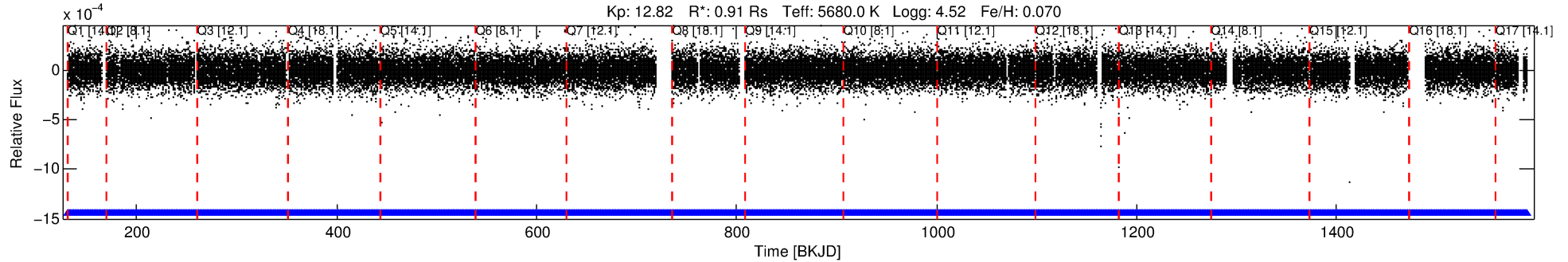
Ephemeris Match Information For 007031132-01

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
007031132-01	7031132	RR-Lyr-pri	7198959	1:1	1353.6	56	-336	7.86	12.82	62330.00	Direct-PRF	0	4.00	25.05

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: 7031132 Candidate: 1 of 1 Period: 0.567 d
KOI: K06804.01 Corr: 0.801



DV Fit Results:

Period = 0.56681 [0.00001] d
Epoch = 131.8197 [0.0038] BKJD
Rp/R* = 0.0034 [0.0019]
a/R* = 1.11 [0.58]
b = 0.90 [0.59]
Seff = 4316.15 [931.99]
Teff = 2067 [112] K
Rp = 0.34 [0.20] Re
a = 0.0133 [0.0018] AU
Ag = N/A
Teffp = N/A

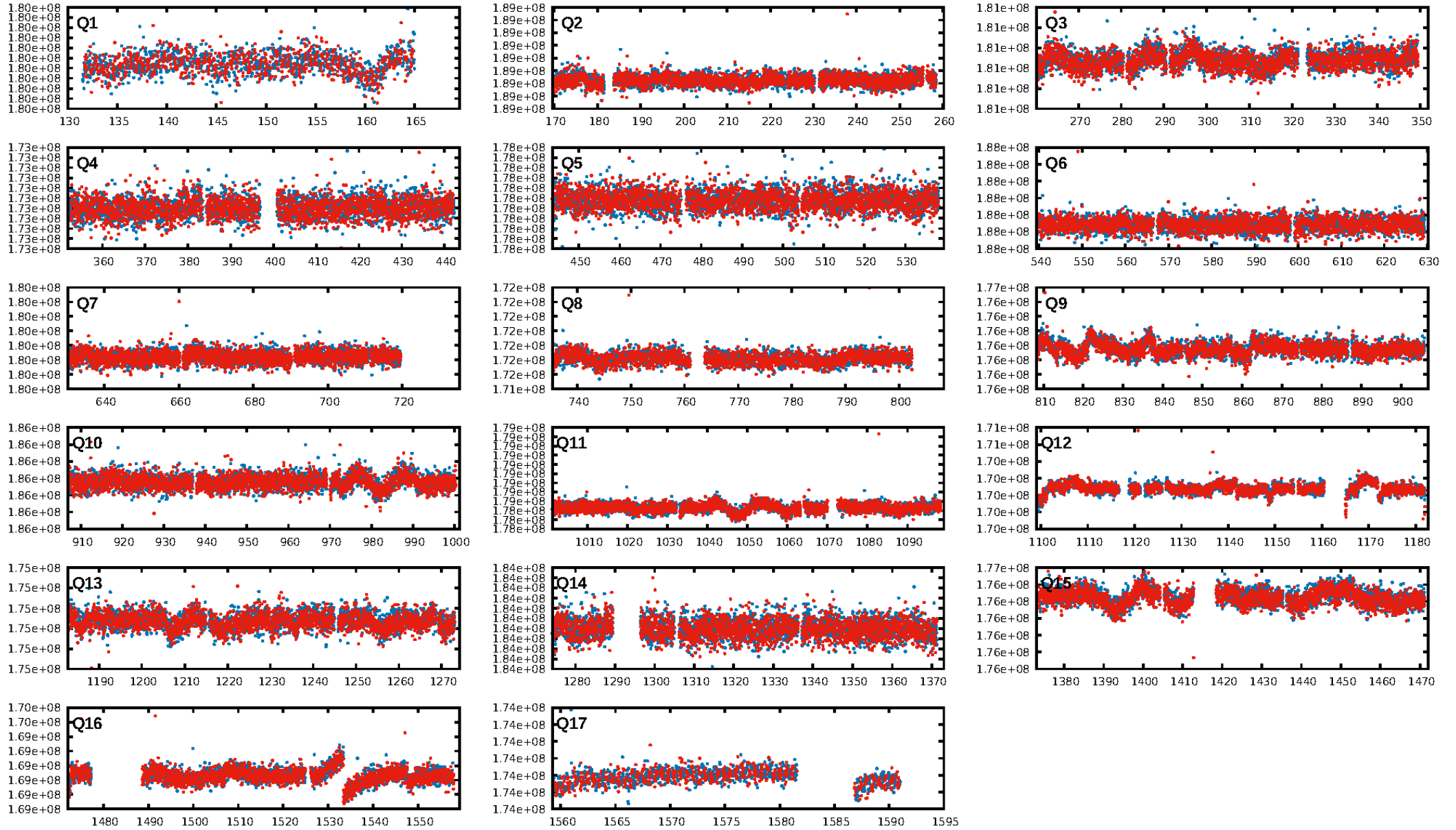
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.57e-18
RollingBand-fgt: 1.00 [2263/2263]
GhostDiagnostic-chr: 0.2644
Centroid-sig: 52.7%
Centroid-so: 0.935 arcsec [0.73σ]
OotOffset-rm: 0.830 arcsec [1.64σ]
KicOffset-rm: 0.905 arcsec [2.06σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 1.00 [17/17]

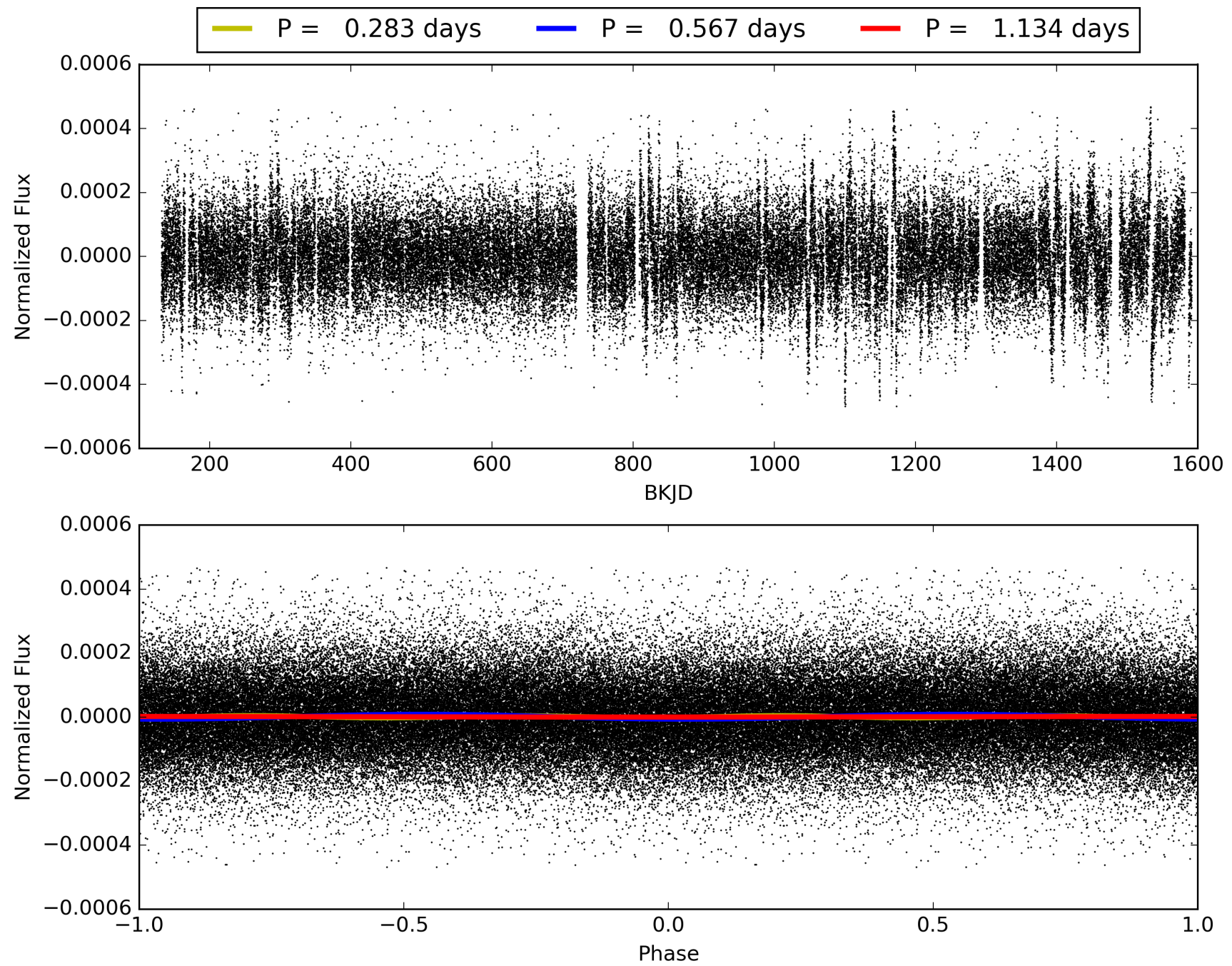
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:37:05 Z

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

TCE 007031132-01, PDC Light Curves

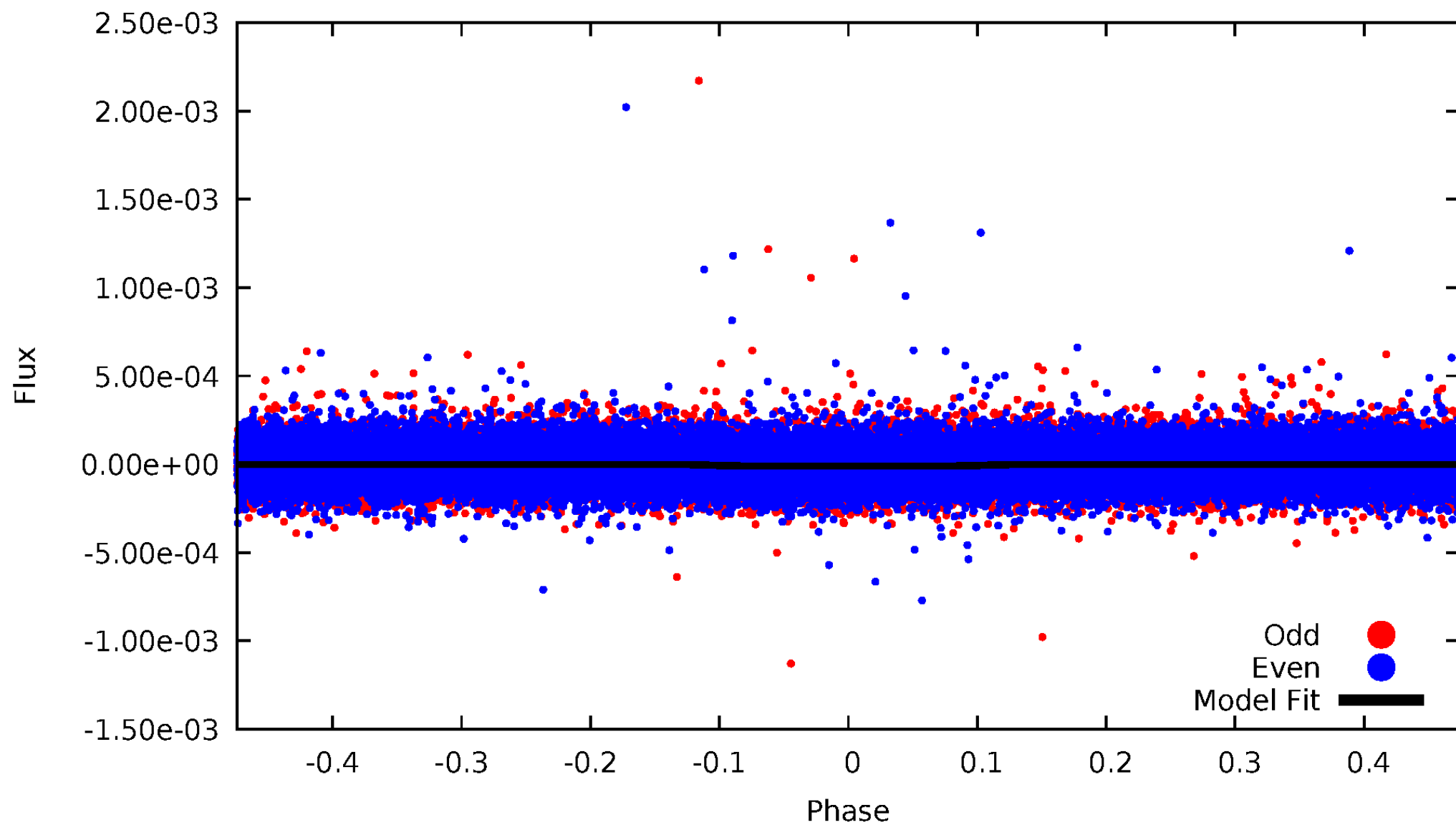


TCE 007031132-01



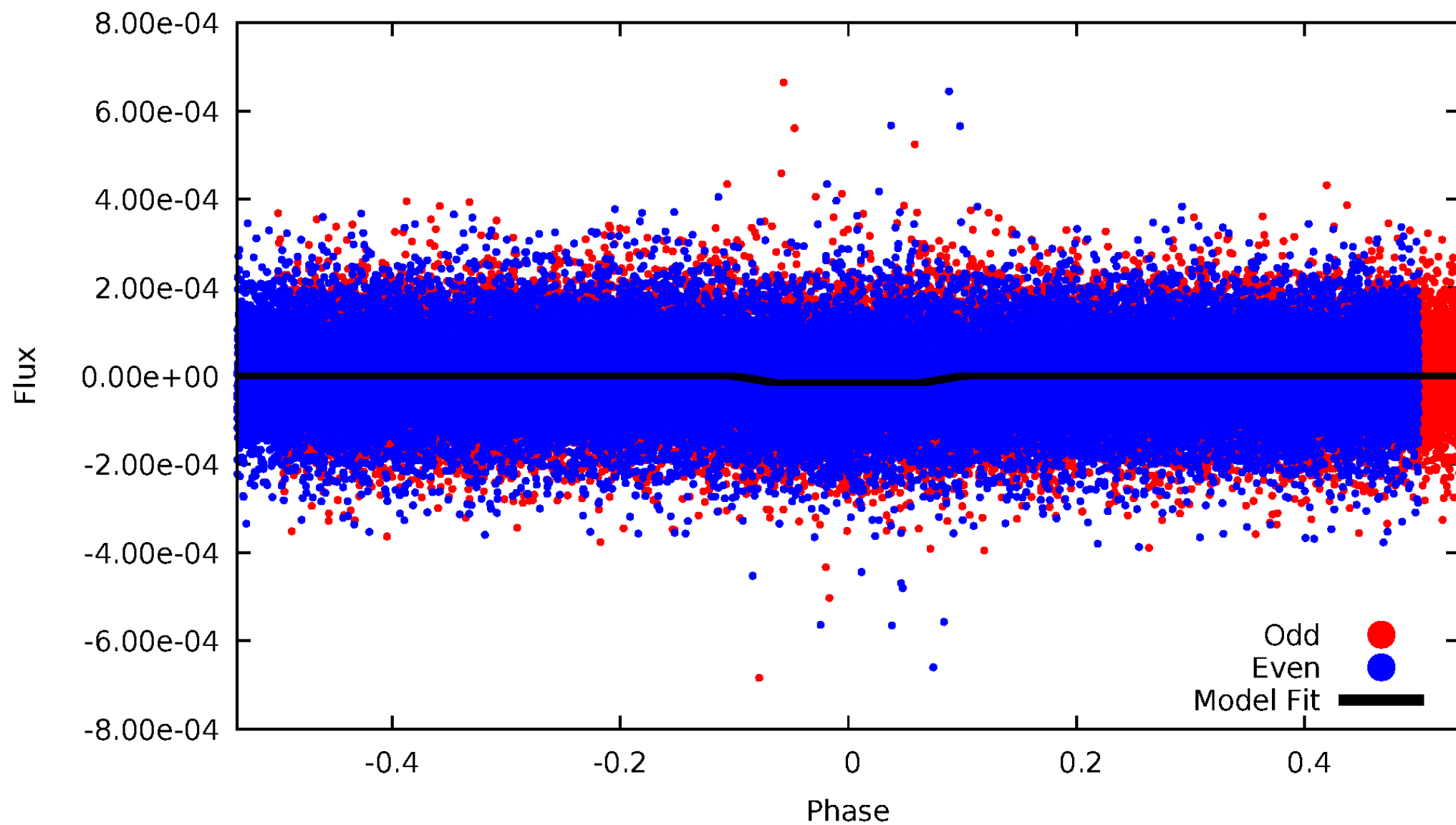
DV Odd/Even

TCE 007031132-01



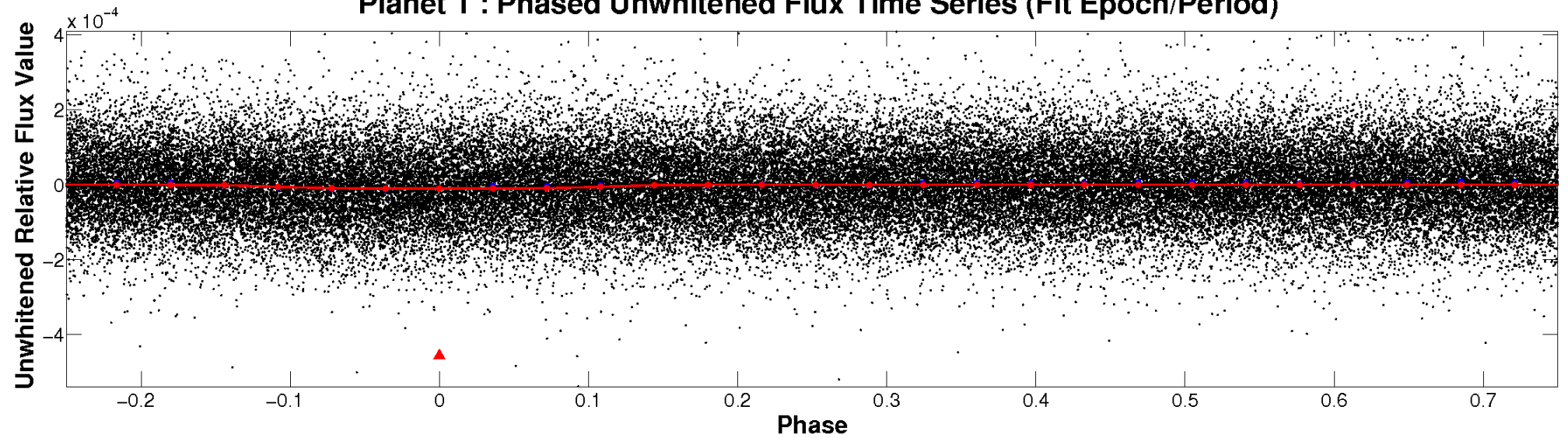
ALT Odd/Even

TCE 007031132-01

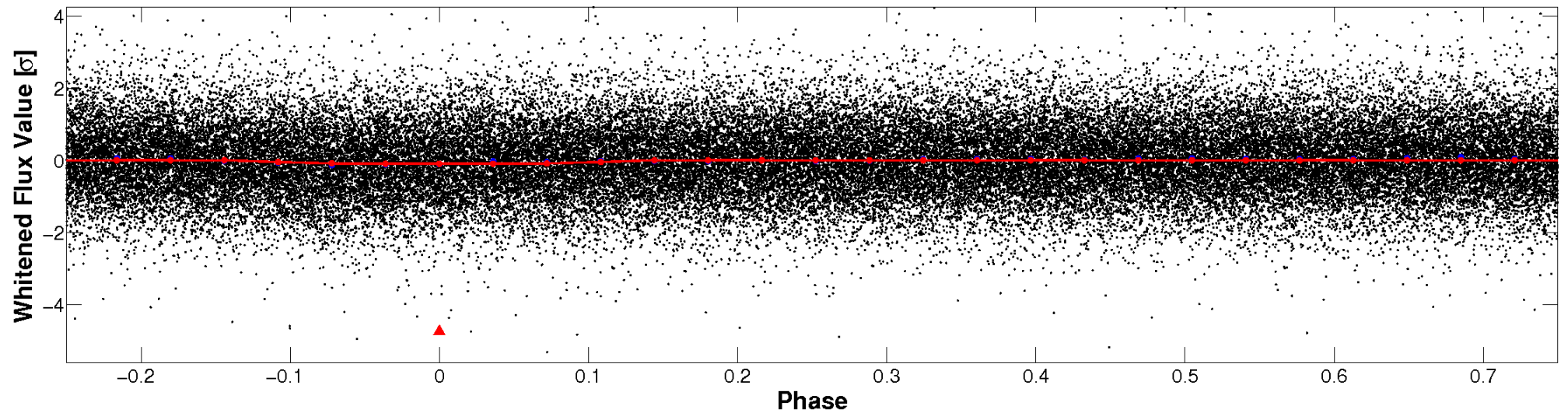


Non-Whitened Vs. Whitened Light Curve

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

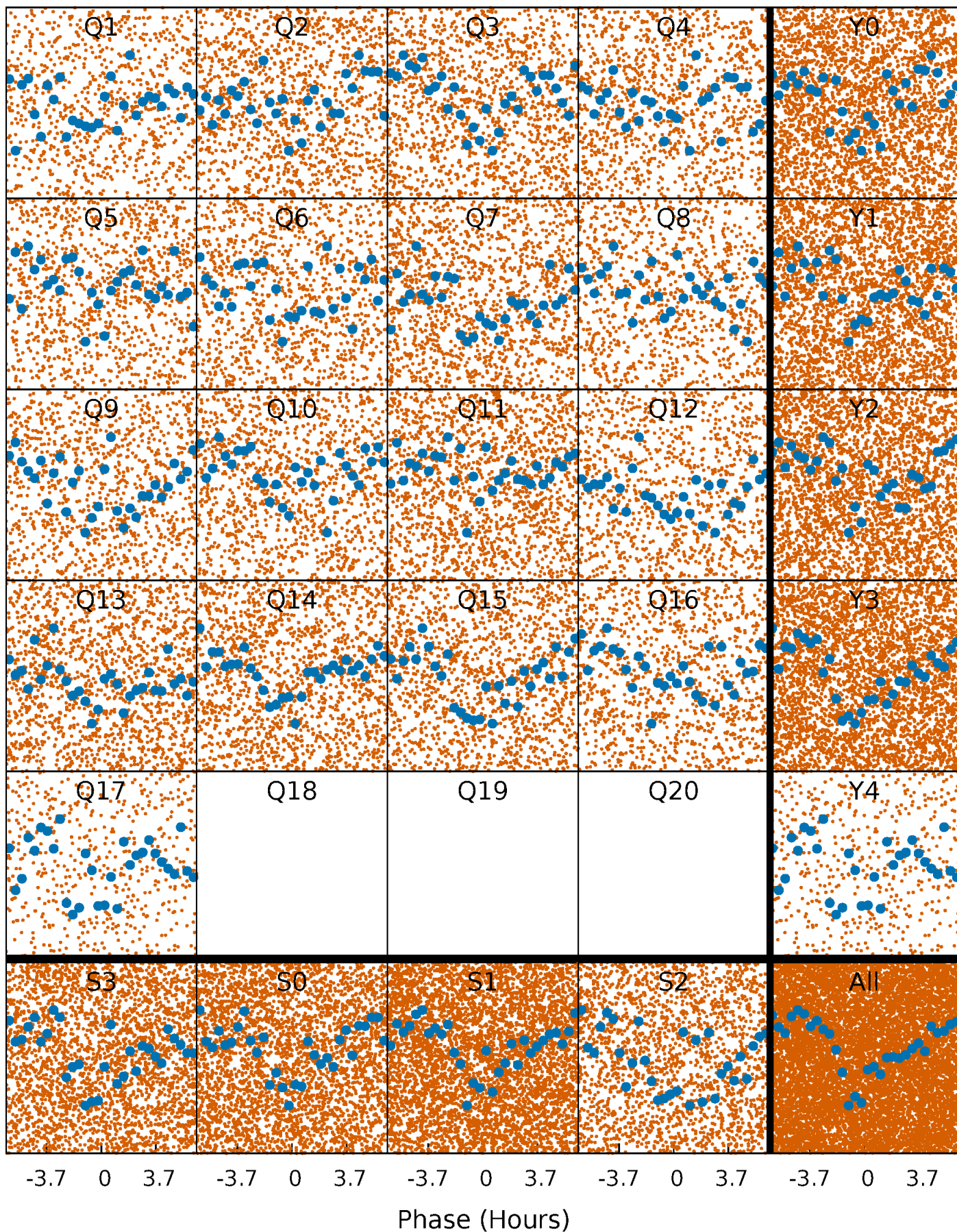


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



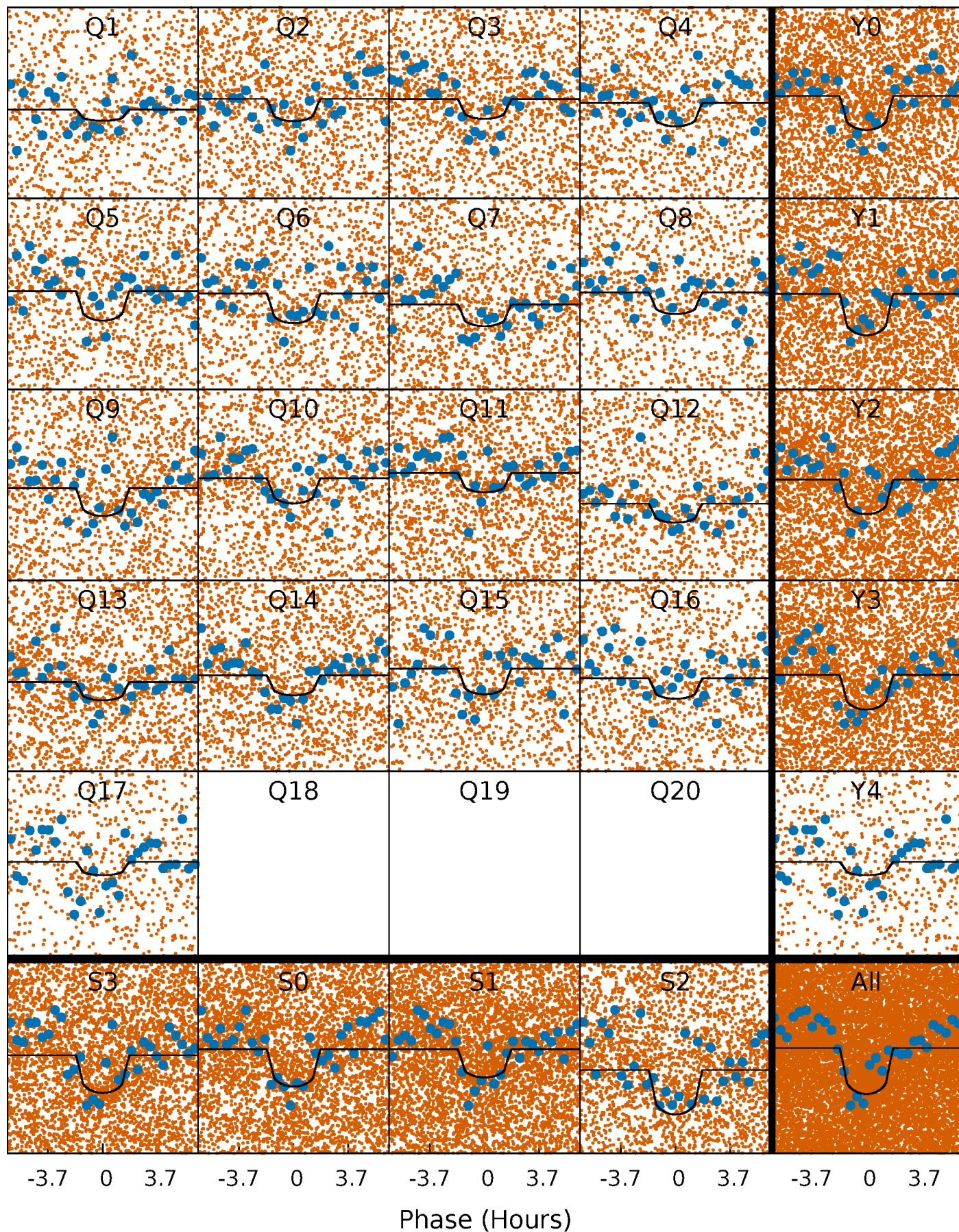
PDC Quarter-Phased Transit Curves

TCE 007031132-01 P= 0.566808 Days $T_0=131.819703$ (BKJD)



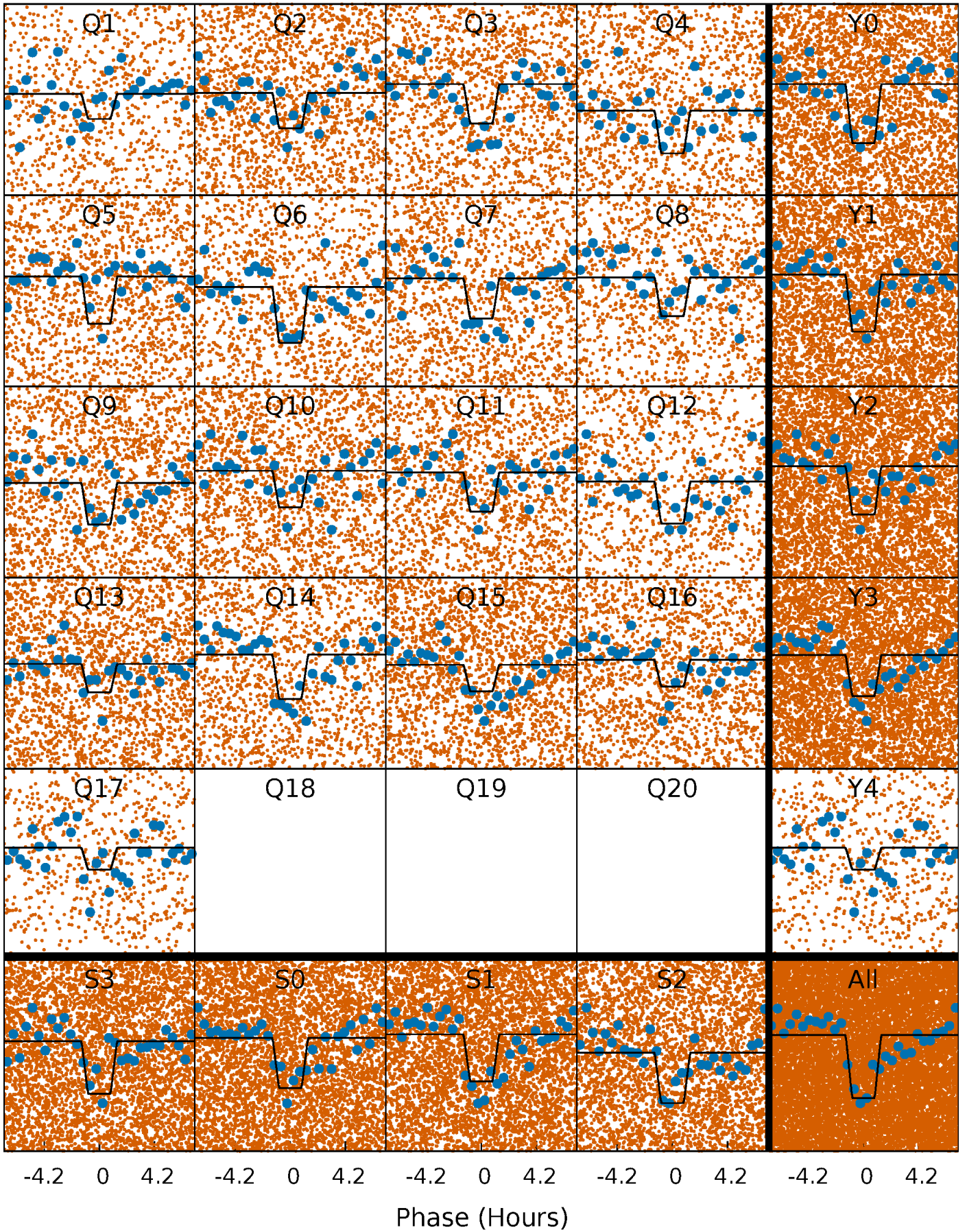
DV Quarter-Phased Transit Curves

TCE 007031132-01 P= 0.566808 Days $T_0=131.819703$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

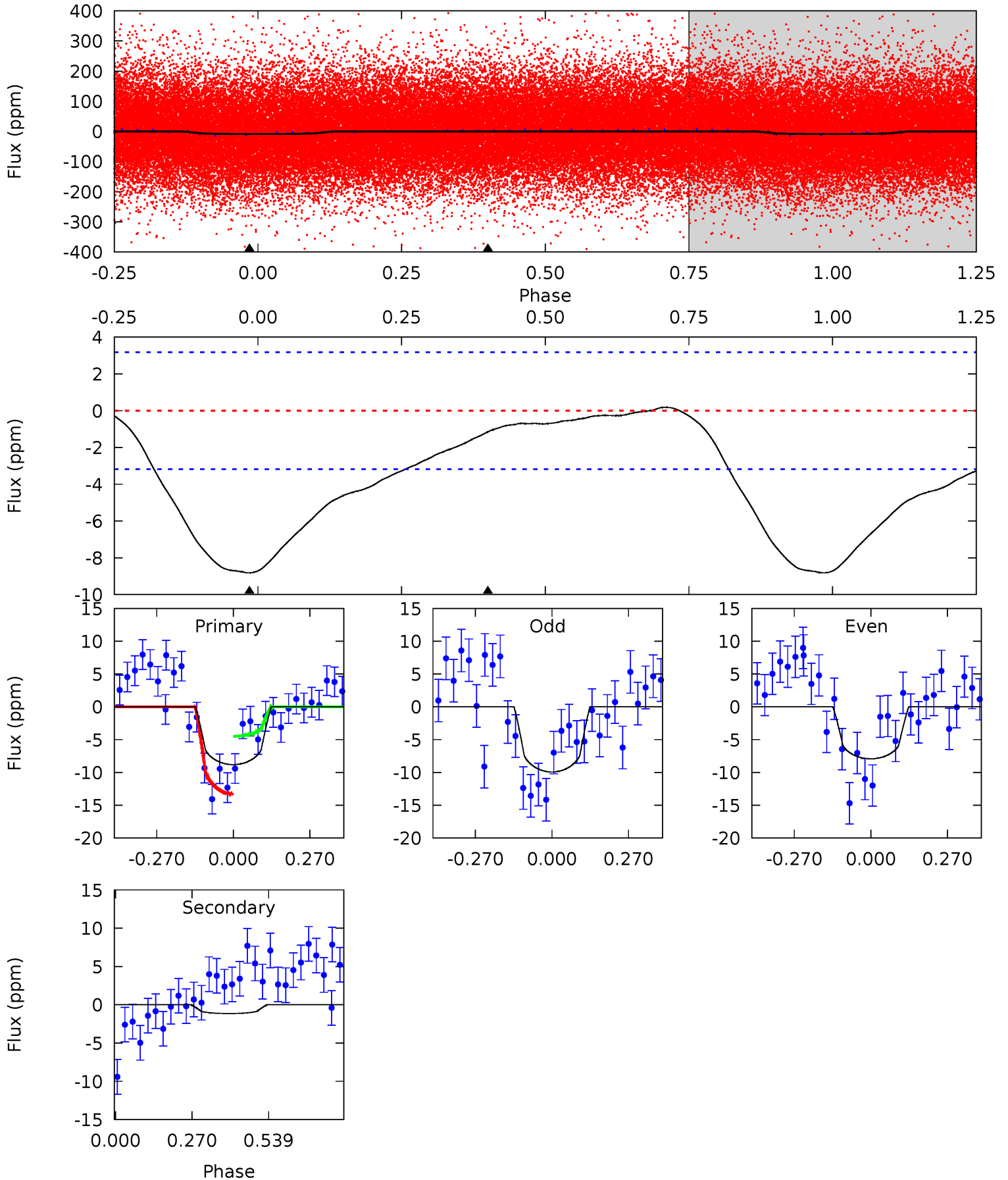
TCE 007031132-01 P= 0.566788 Days $T_0=131.825448$ (BKJD)



DV Model-Shift Uniqueness Test

007031132-01, P = 0.566808 Days, E = 131.252895 Days

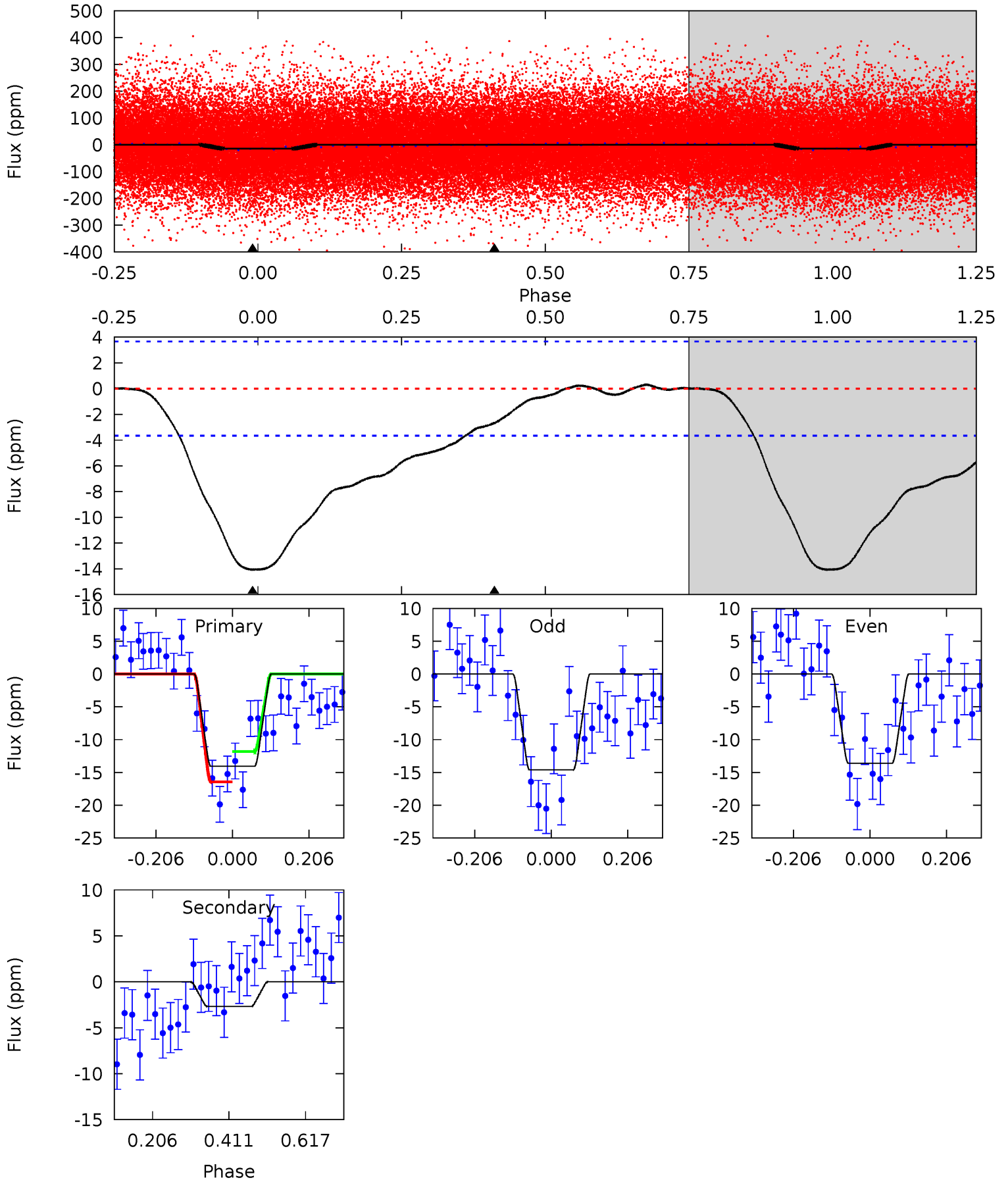
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	1.58	0	0	4.35	1.10	0.16	12.1	12.1	1.58	1.58	1.39	0.92	0.02	6.05



Alt Model-Shift Uniqueness Test

007031132-01, P = 0.566788 Days, E = 131.258660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	3.23	0	0	4.41	1.27	1.86	17.0	17.0	3.23	3.23	0.61	0.97	0.02	2.77



Stellar Parameters For KIC 007031132

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5680^{+76}_{-85}	$4.516^{+0.023}_{-0.120}$	$0.070^{+0.150}_{-0.150}$	$0.908^{+0.130}_{-0.041}$	$0.988^{+0.050}_{-0.065}$	$1.857^{+0.197}_{-0.615}$
	+1%/-1%	+1%/-3%	+214%/-214%	+14%/-5%	+5%/-7%	+11%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007031132-01 / KOI 6804.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$0.36^{+0.20}_{-0.18}$	2933^{+100}_{-75}	3320^{+1241}_{-5978}	$0.816^{+2.910}_{-0.626}$
Alt.	-3 ± 1	$0.41^{+0.18}_{-0.19}$	2921^{+109}_{-68}	3775^{+1124}_{-605}	$1.535^{+3.560}_{-0.846}$

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 $A_{obs} \gg 1.0$

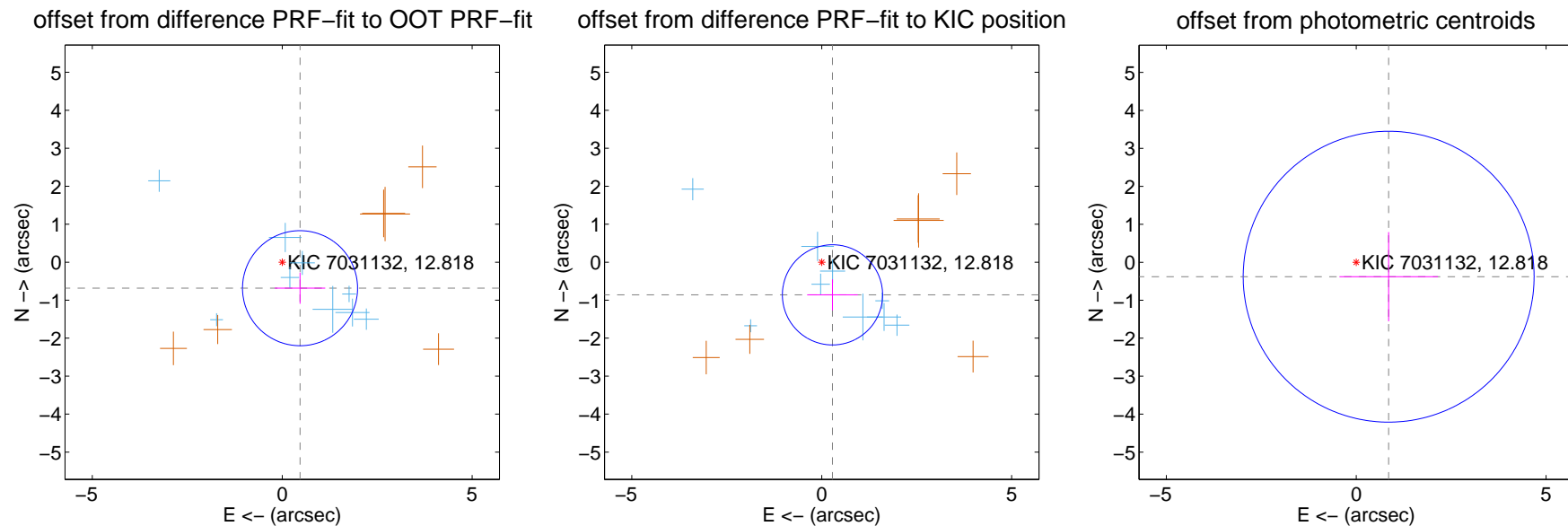
DV Centroid Data

Supplemental centroid analysis for 007031132-01. Kepler magnitude: 12.82. Transit SNR 9.77

There are 9 quarters with good PRF difference image offsets

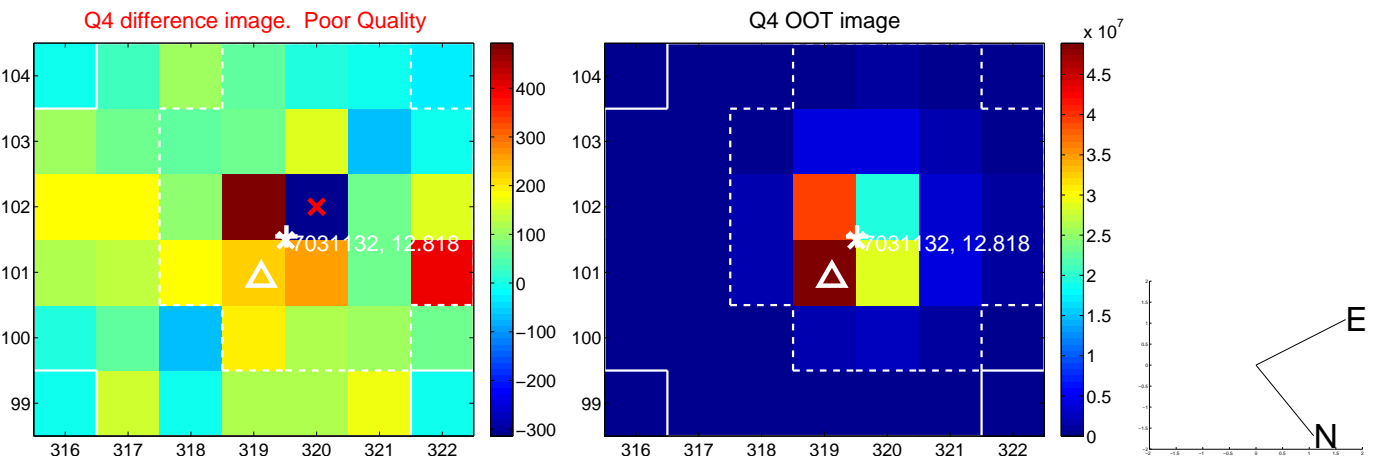
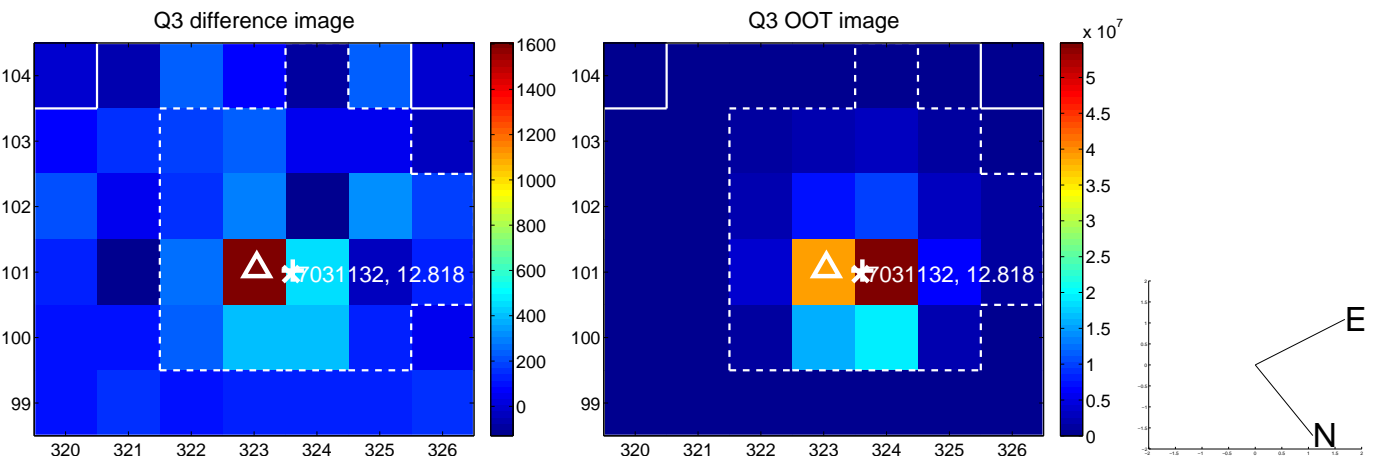
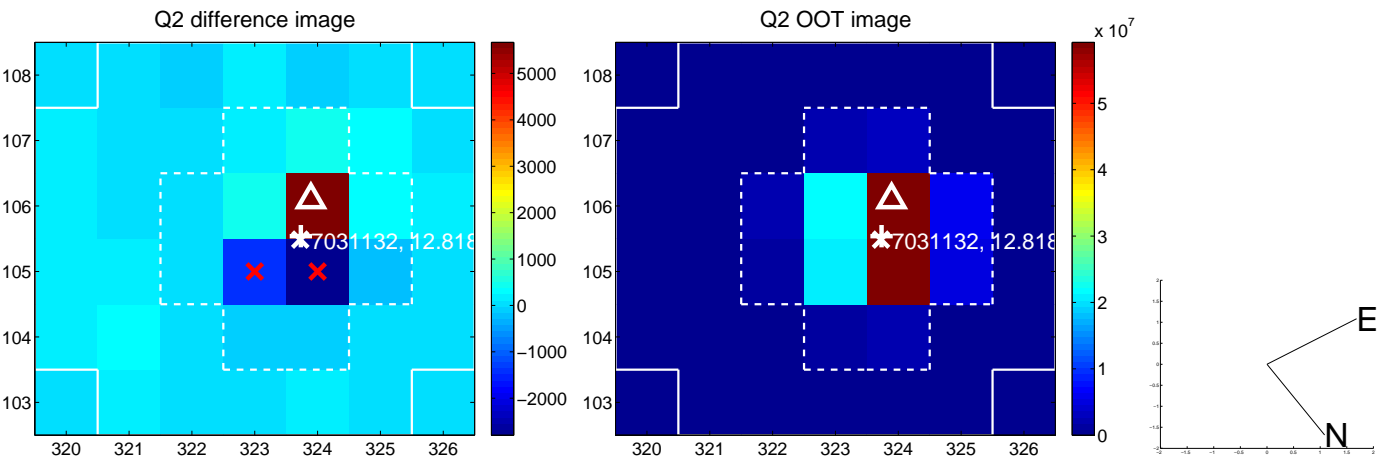
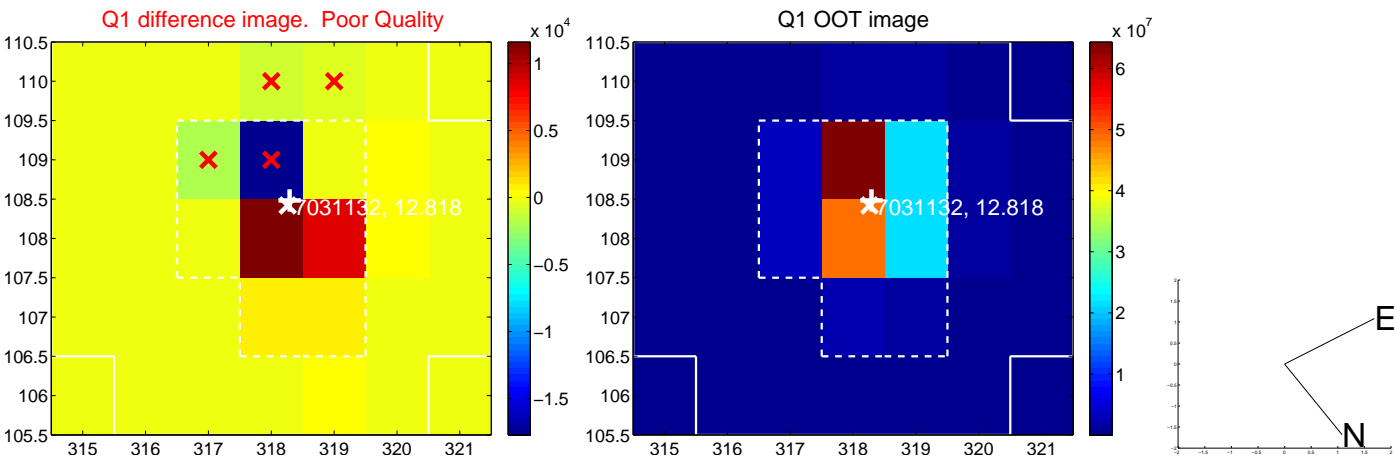
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.830 ± 0.505	1.64	-0.469 ± 0.665	-0.685 ± 0.409
PRF-fit source offset from KIC position	0.905 ± 0.440	2.06	-0.284 ± 0.666	-0.860 ± 0.408
photometric centroid source offset	0.94 ± 1.28	0.73	-0.85 ± 1.30	-0.38 ± 1.17

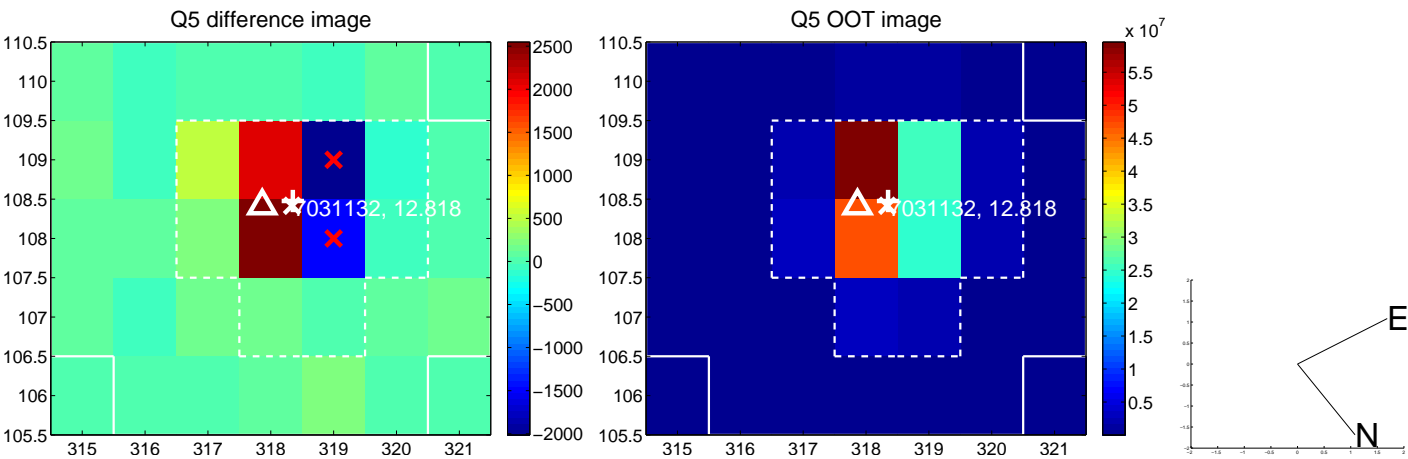


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

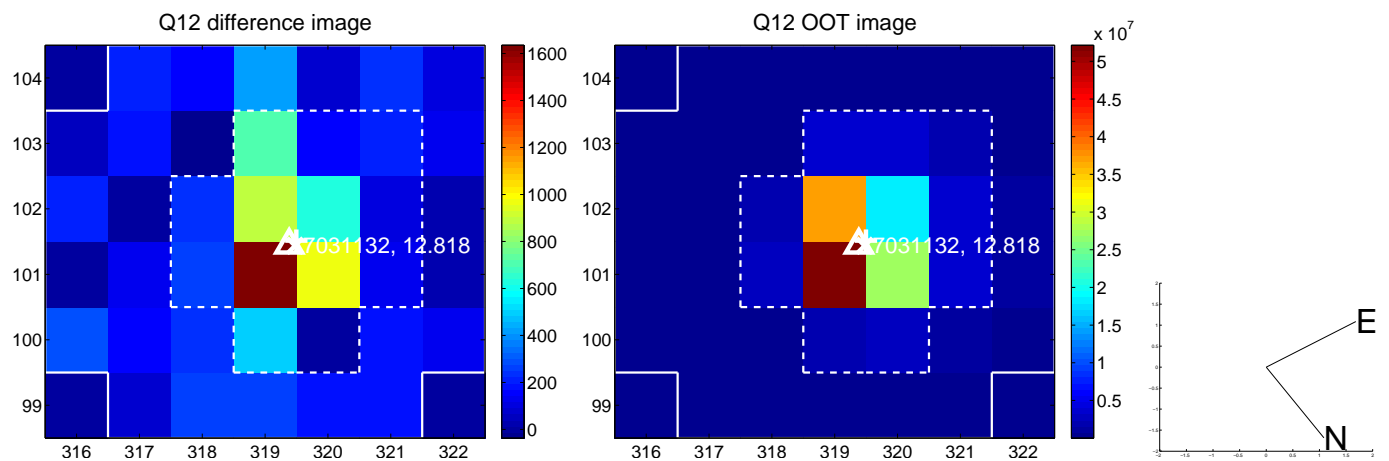
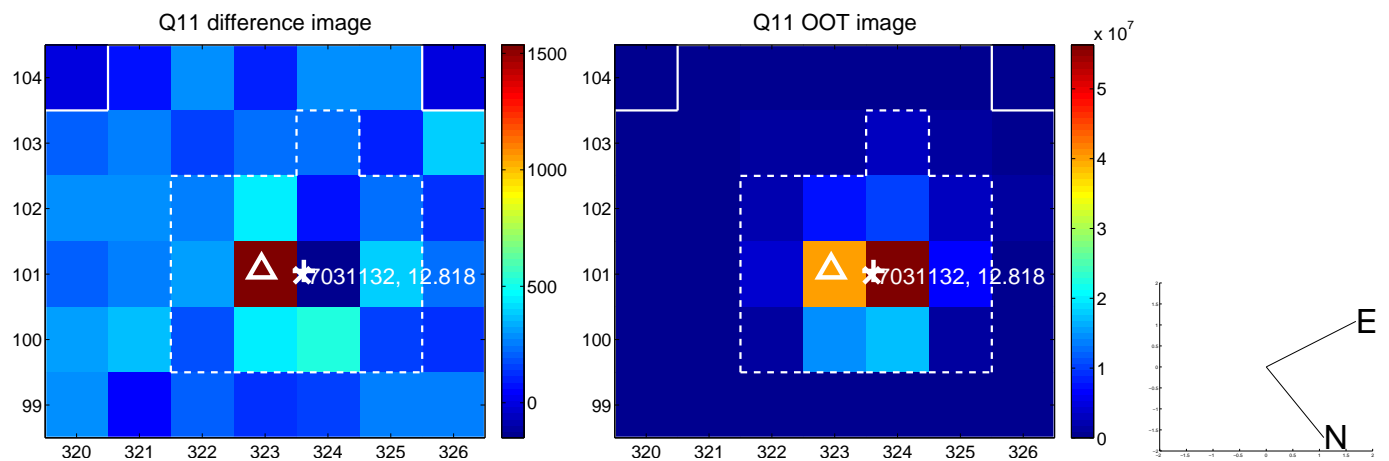
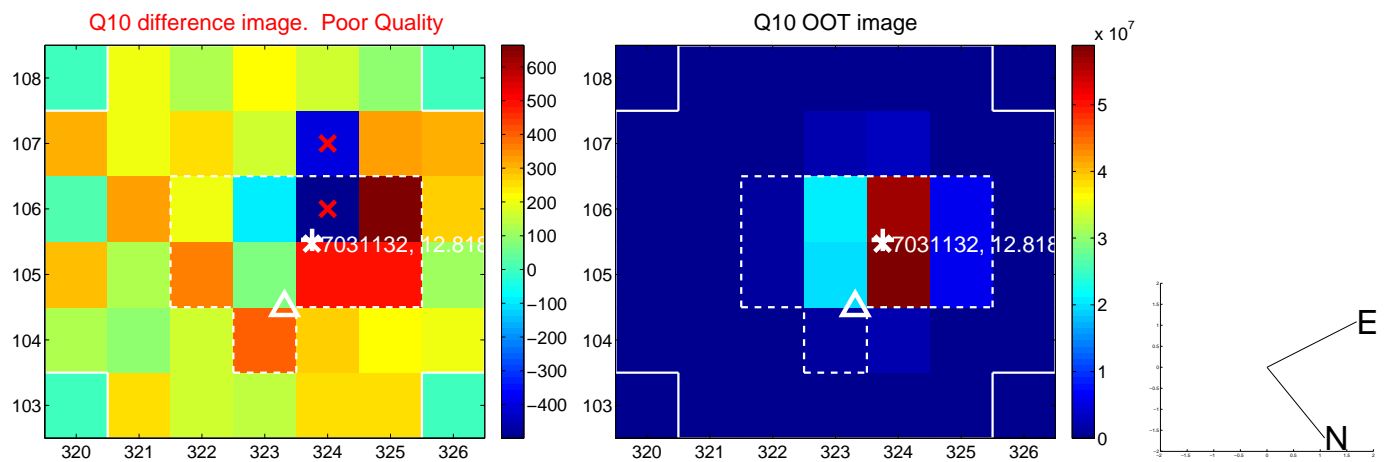
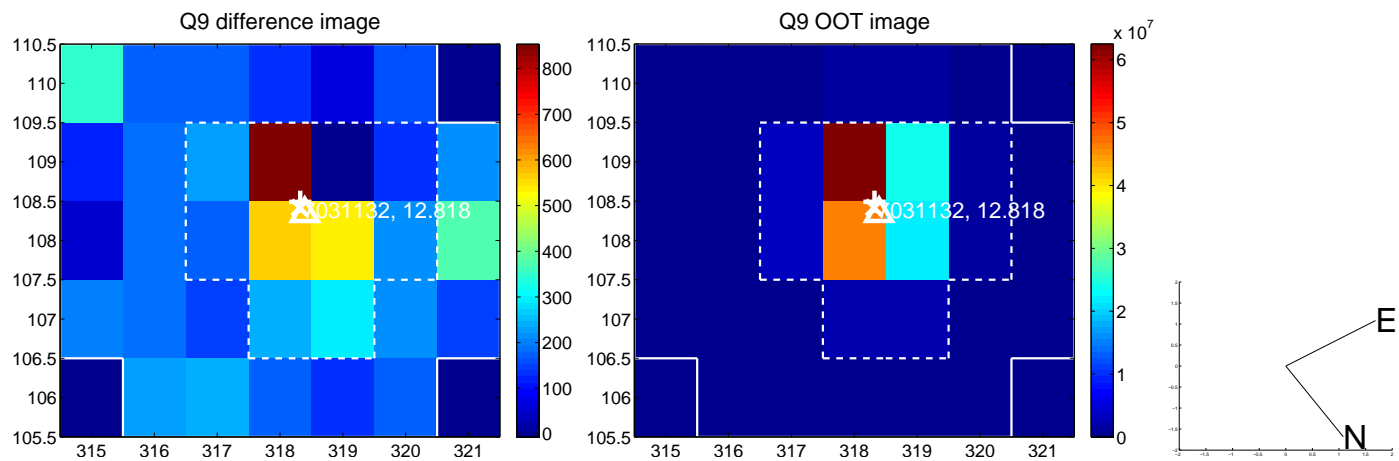
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



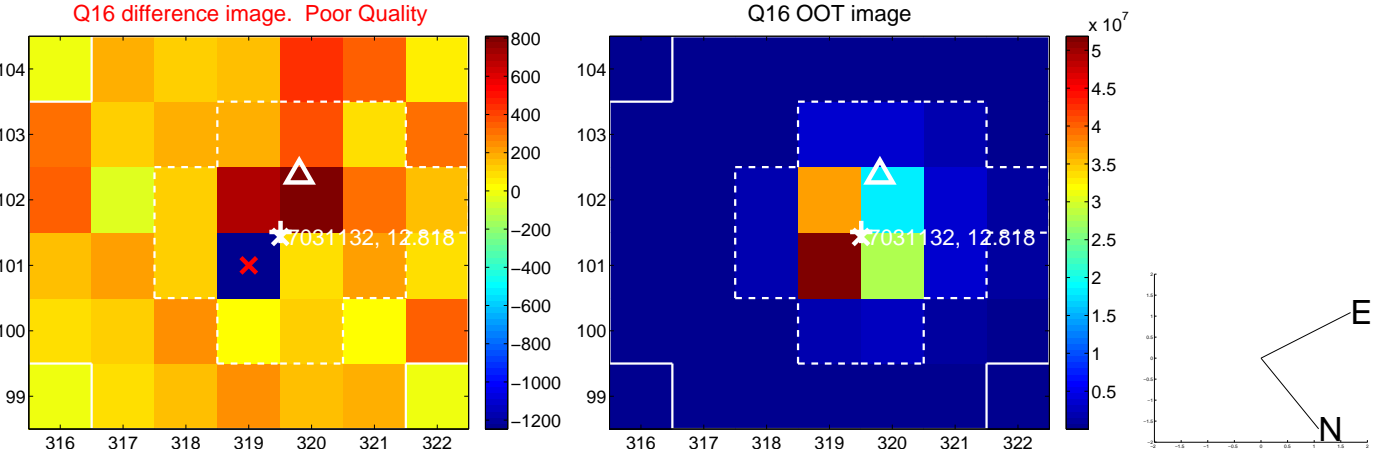
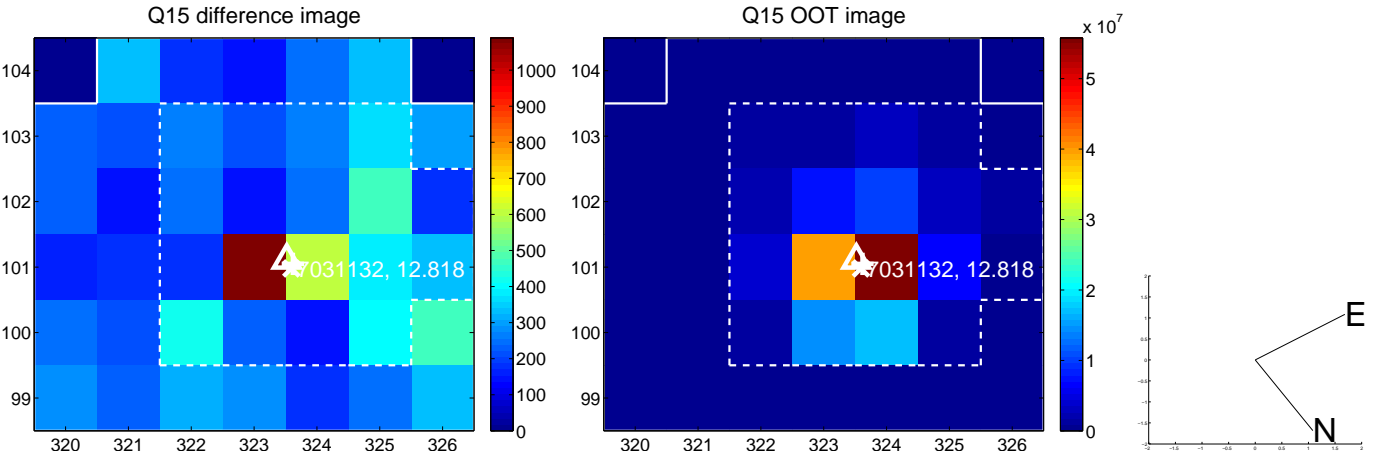
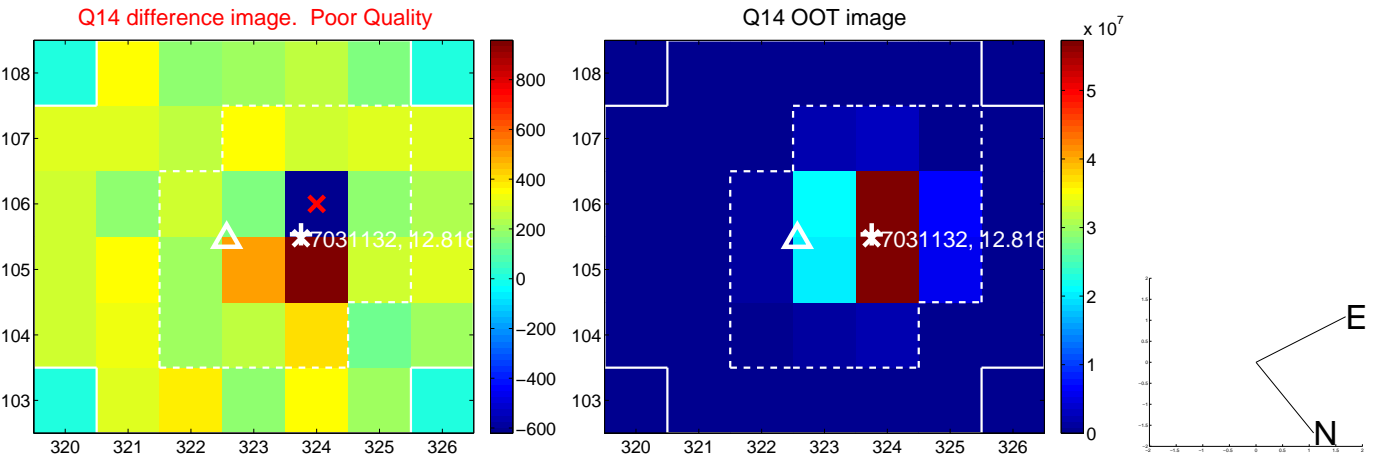
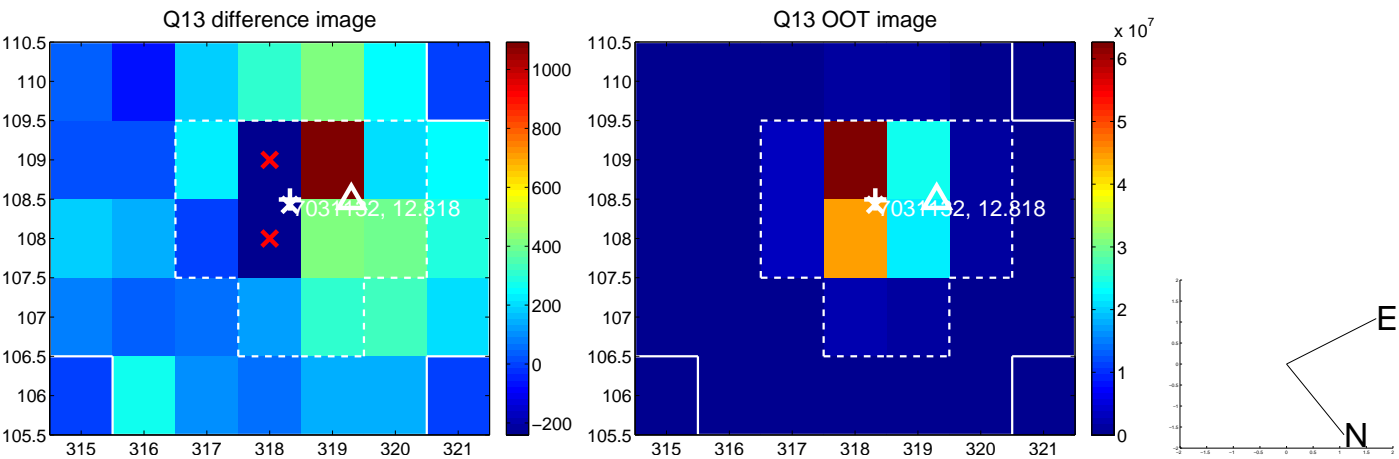
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



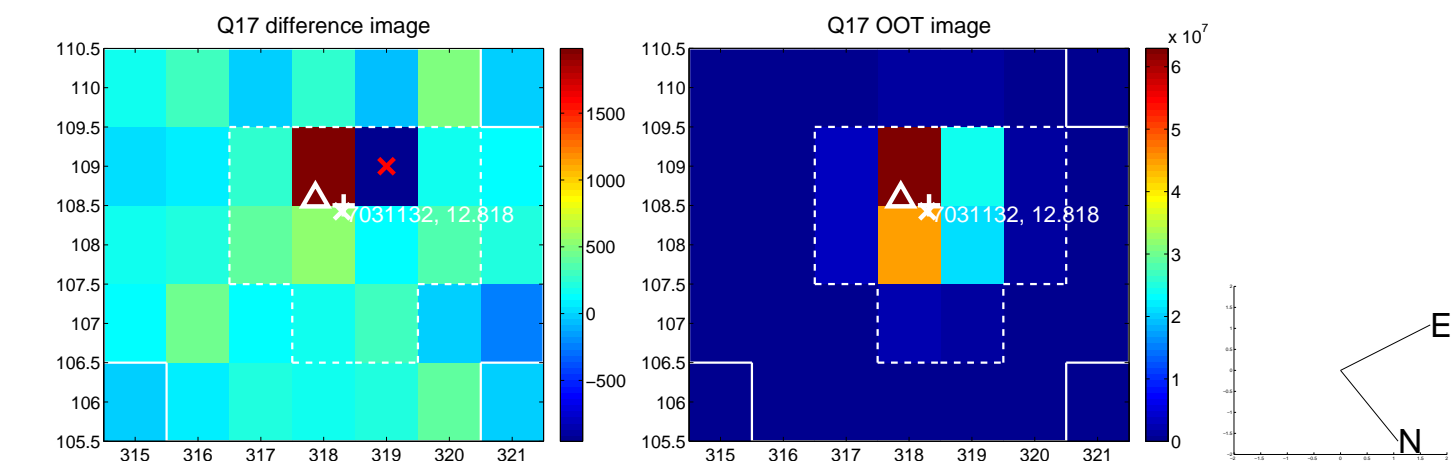
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



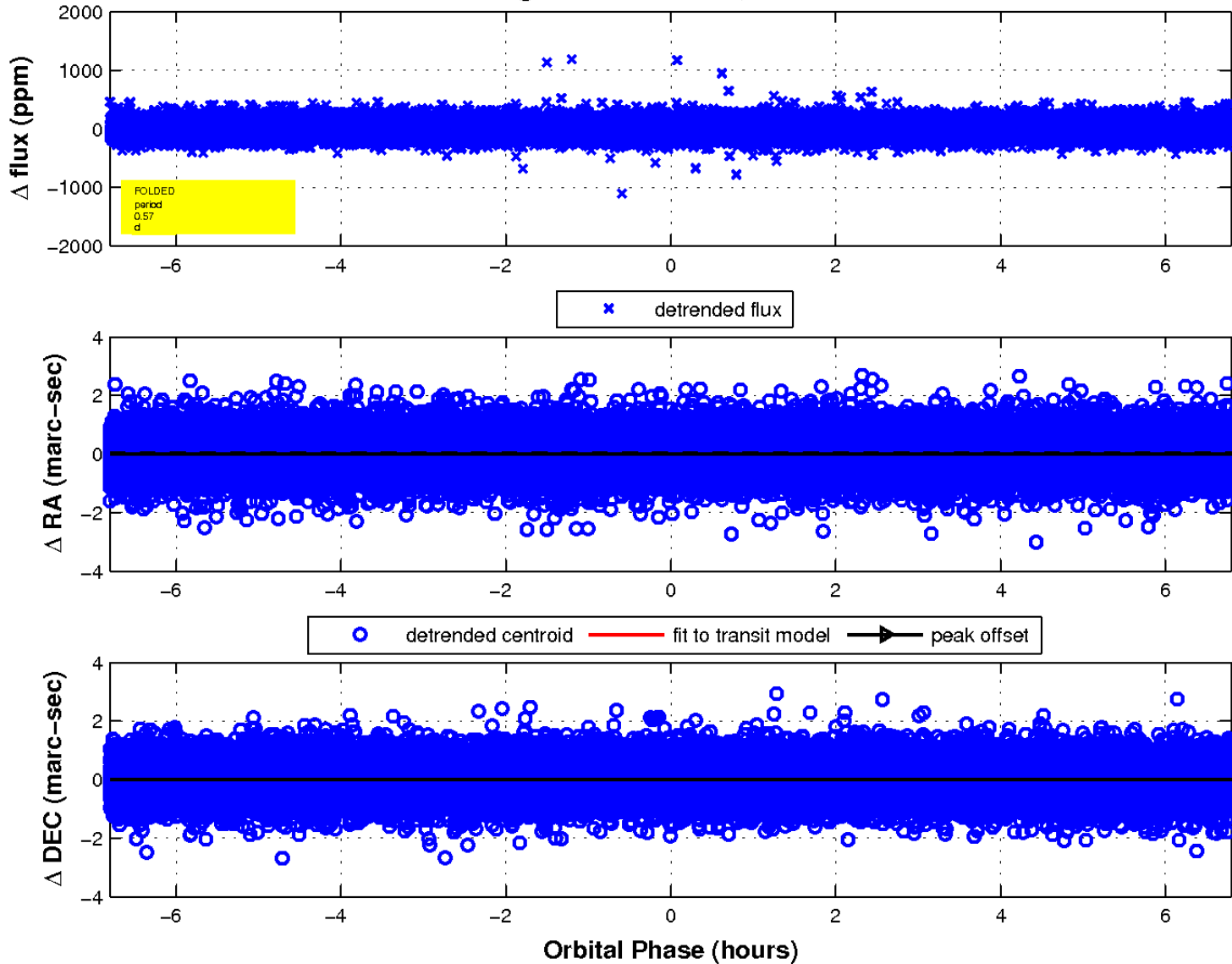
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

