

KIC 007031195

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})
007031195-01	OBS	No	0.566742	131.905205	29.1	3.081	8.4	5.6	1.53	6501	0.84	19311.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031195-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—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.

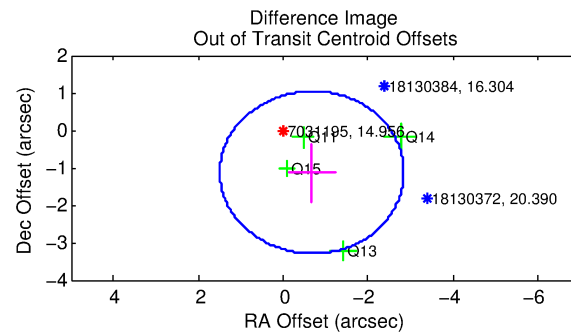
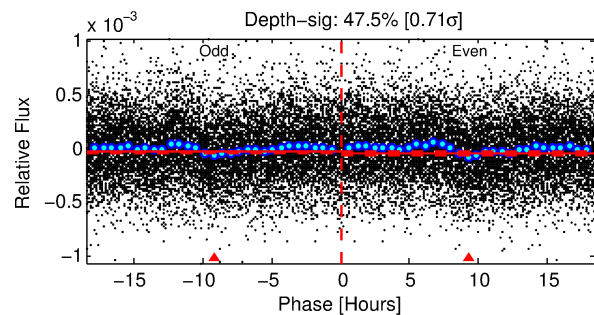
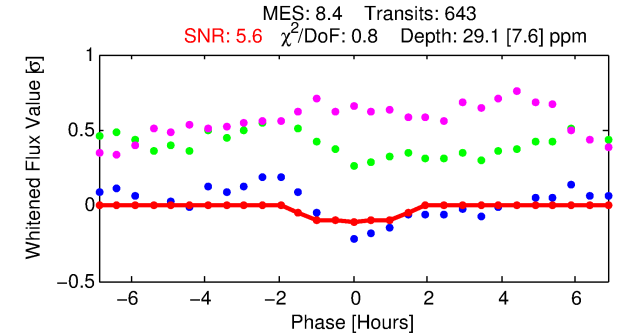
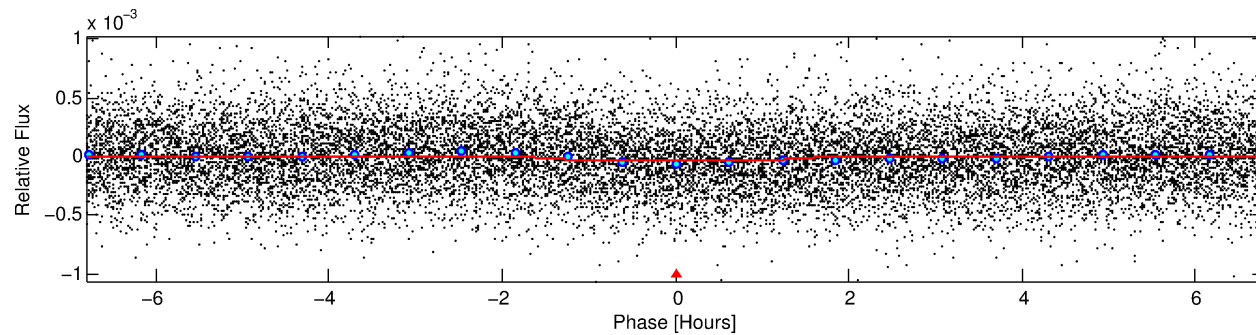
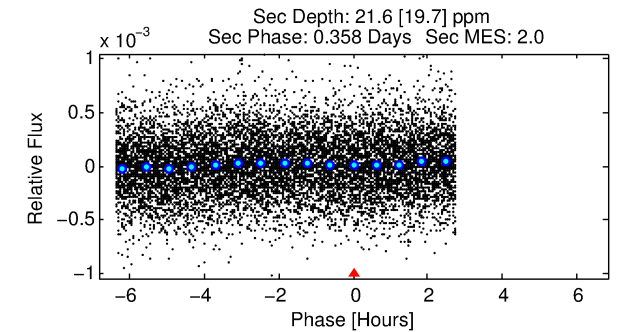
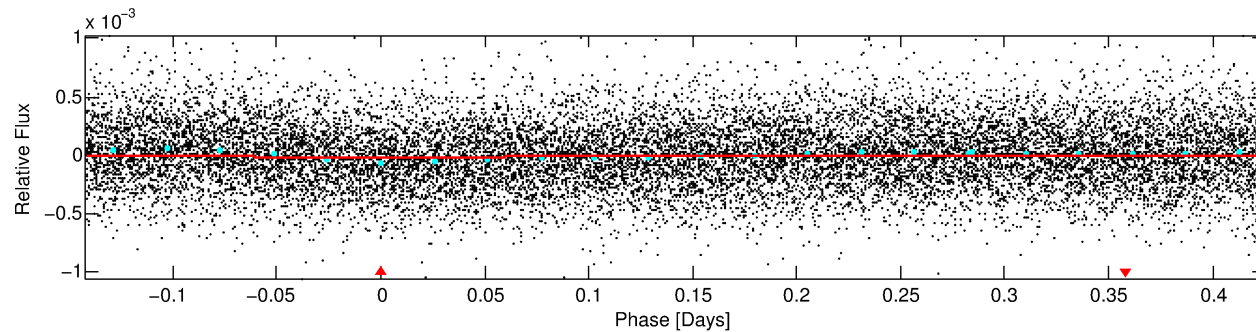
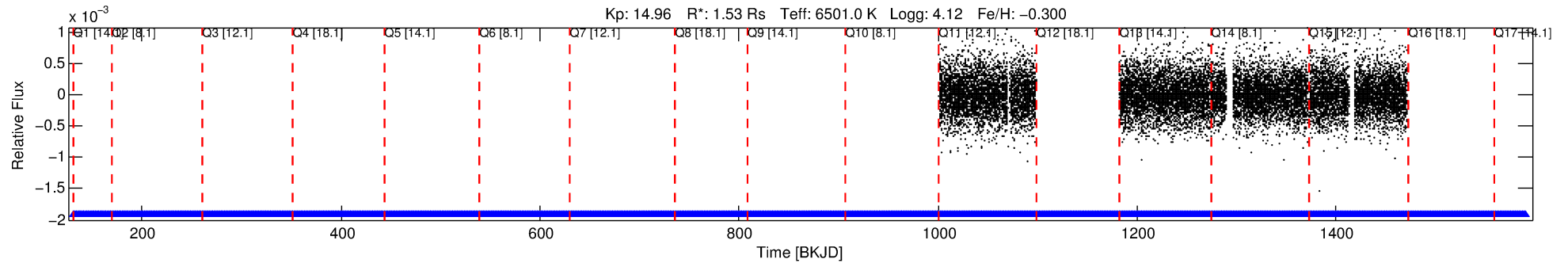
Ephemeris Match Information For 007031195-01

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
007031195-01	7031195	RR-Lyr-pri	7198959	1:1	1169.2	17	-294	7.86	14.95	21493.00	Direct-PRF	0	1.09	18.27

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: 7031195 Candidate: 1 of 1 Period: 0.567 d



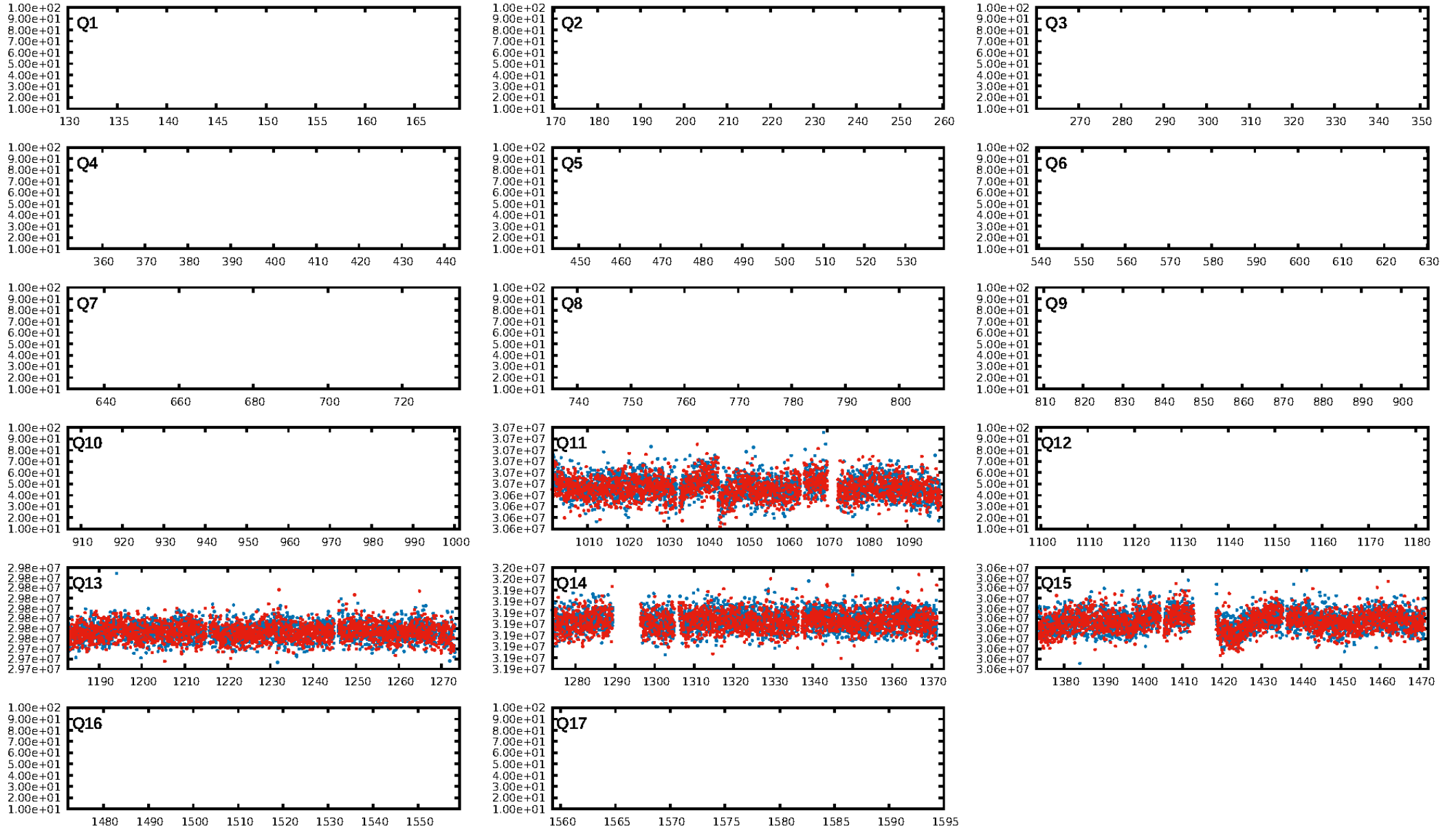
DV Fit Results:

Period = 0.56674 [0.00002] d
Epoch = 131.9052 [0.0066] BKJD
Rp/R* = 0.0050 [0.0079]
a/R* = 1.50 [7.06]
b = 0.28 [28.00]
Seff = 19311.08 [8542.20]
Teff = 3006 [332] K
Rp = 0.84 [1.34] Re
a = 0.0139 [0.0037] AU
Ag = 3.29 [10.84] [0.21σ]
Teffp = 6257 [5126] K [0.63σ]

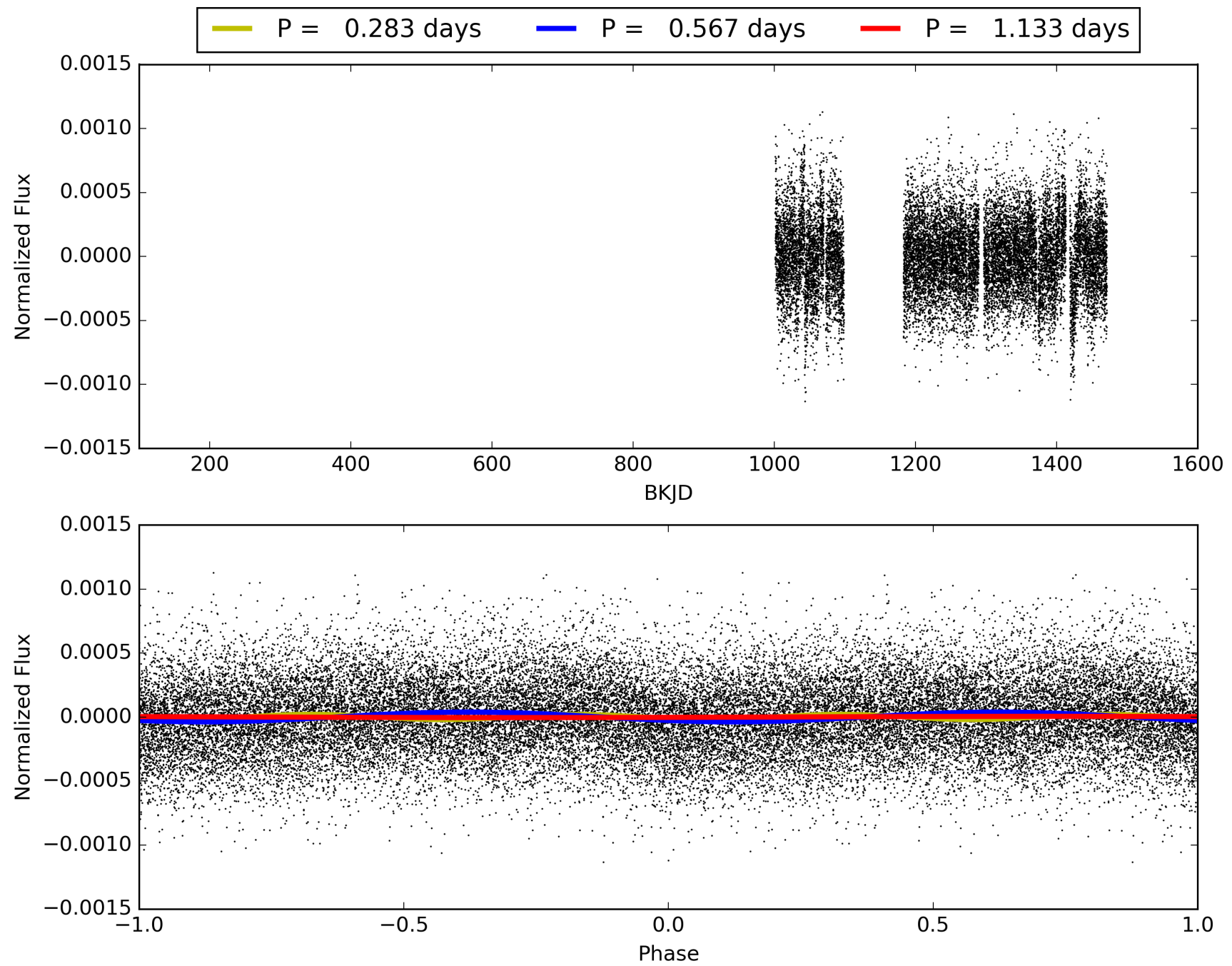
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.00e-14
RollingBand-fgt: 1.00 [643/643]
GhostDiagnostic-chr: -3.95
Centroid-sig: 0.2%
Centroid-so: 4.289 arcsec [1.91σ]
OotOffset-rm: 1.317 arcsec [1.82σ]
KicOffset-rm: 1.339 arcsec [1.97σ]
OotOffset-st: 1/2/0/1 [4]
KicOffset-st: 1/2/0/1 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 007031195-01, PDC Light Curves

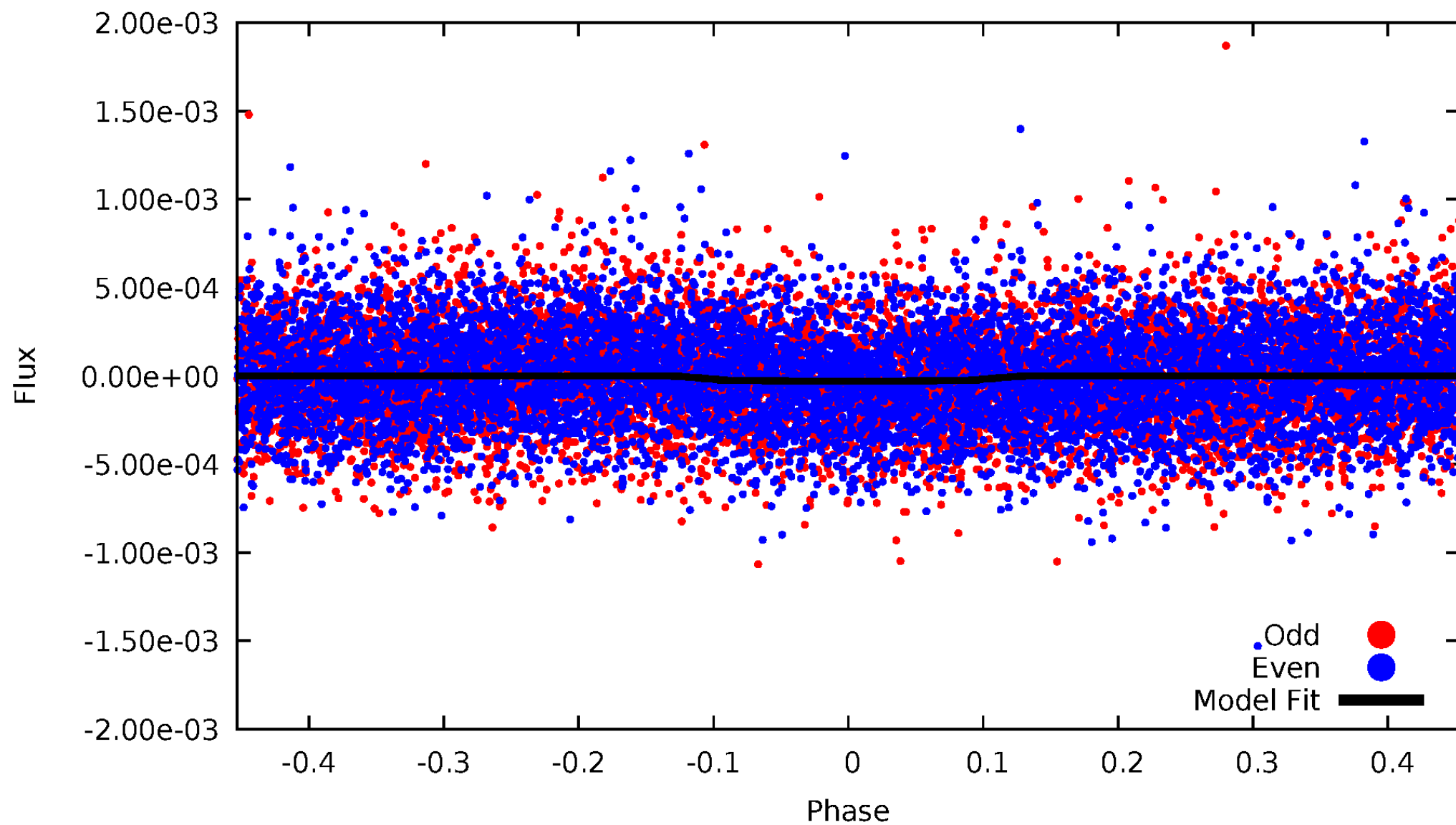


TCE 007031195-01



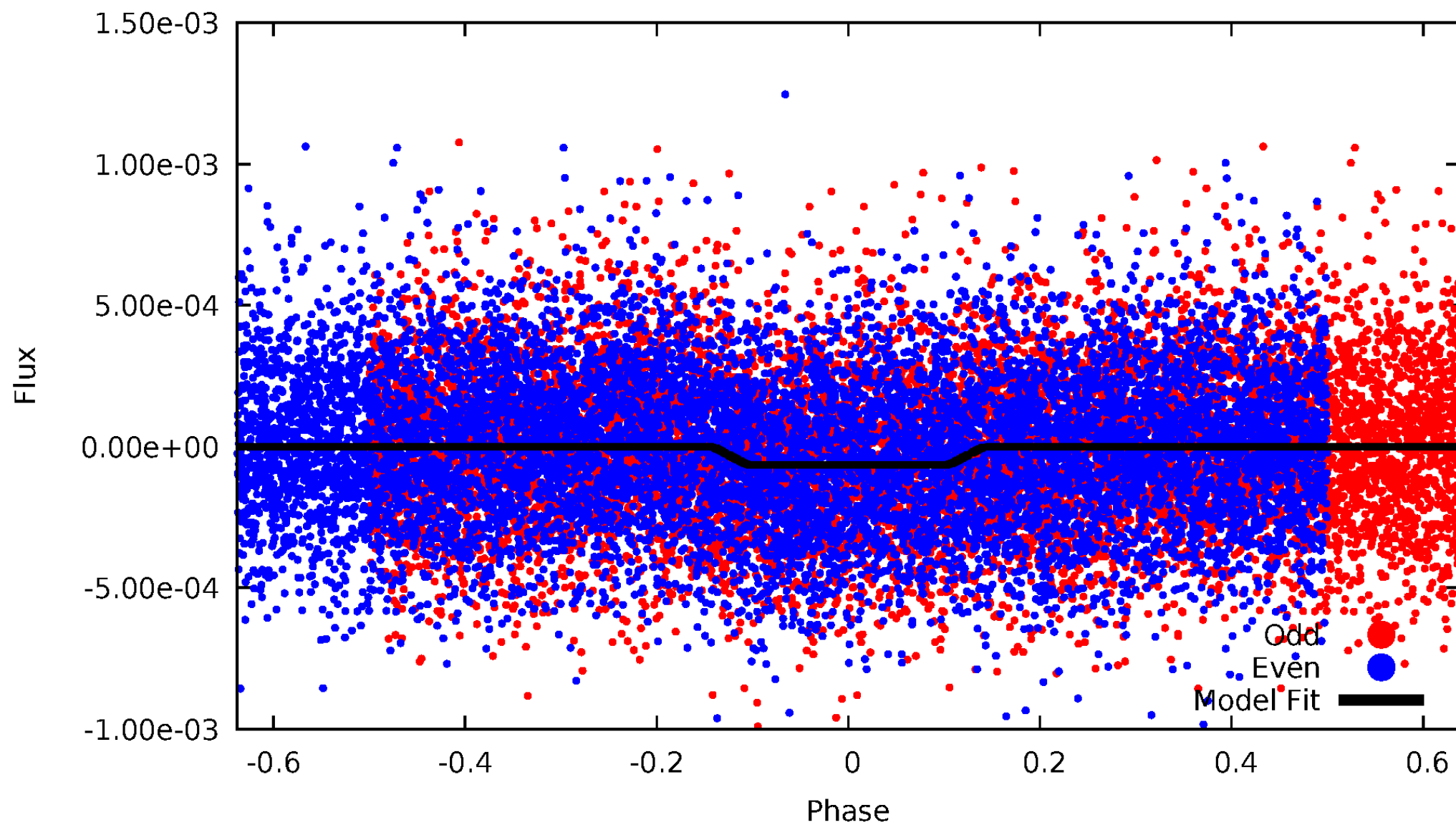
DV Odd/Even

TCE 007031195-01



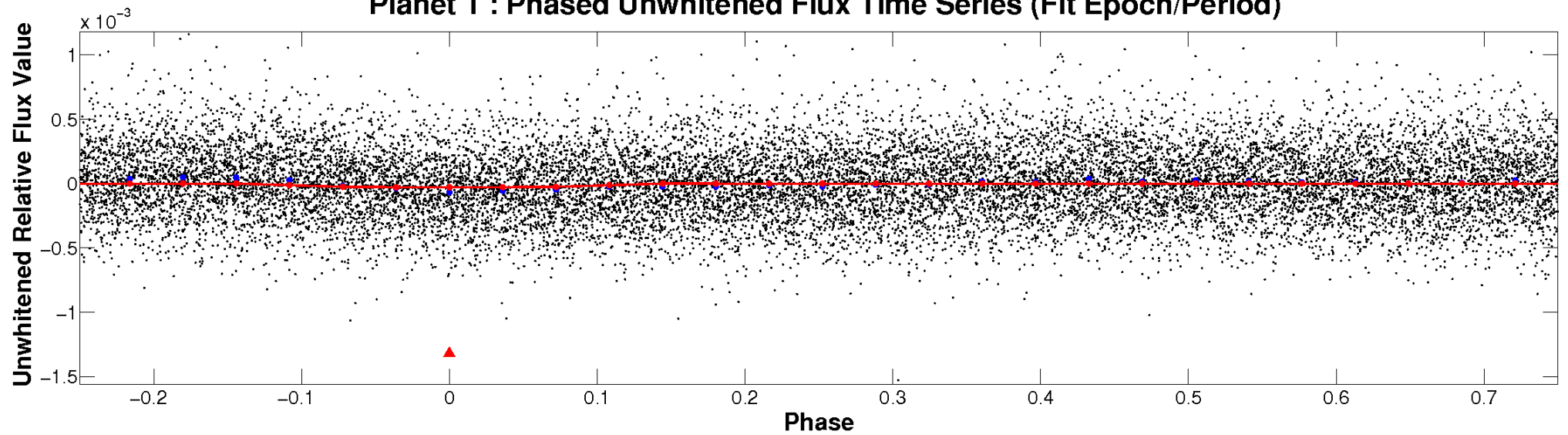
ALT Odd/Even

TCE 007031195-01

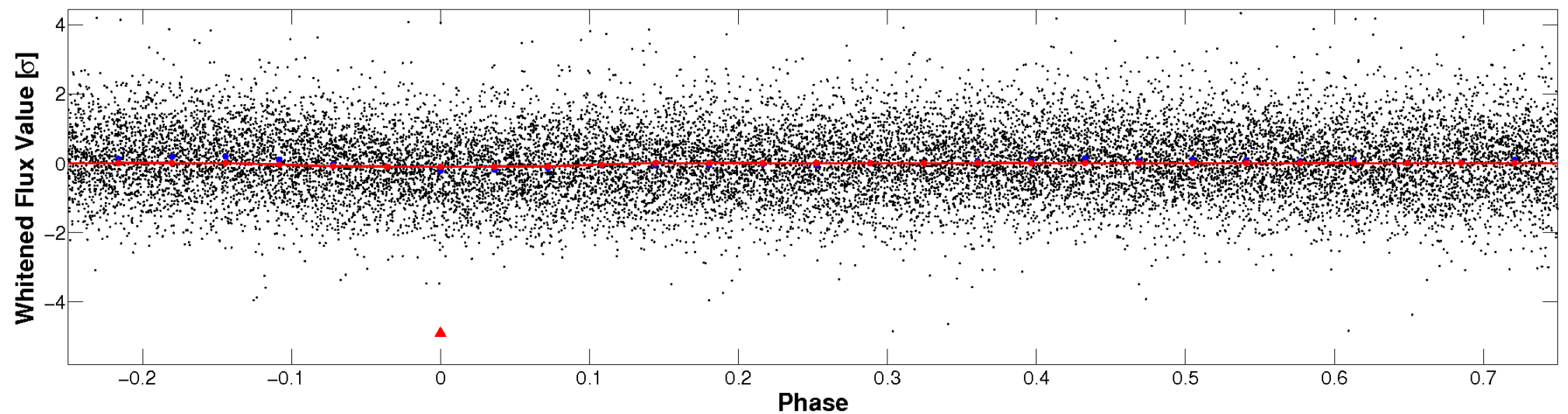


Non-Whitened Vs. Whitened Light Curve

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

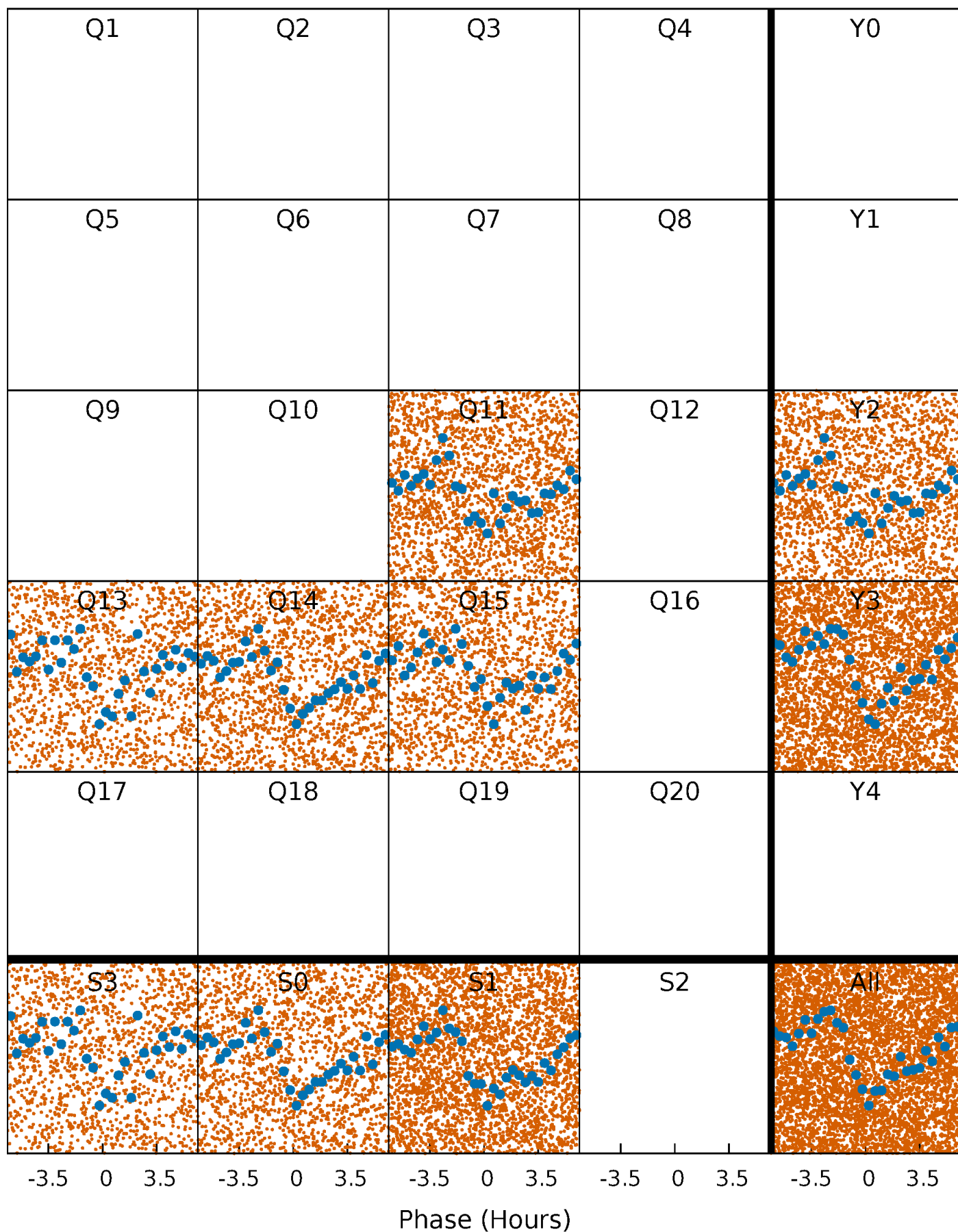


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



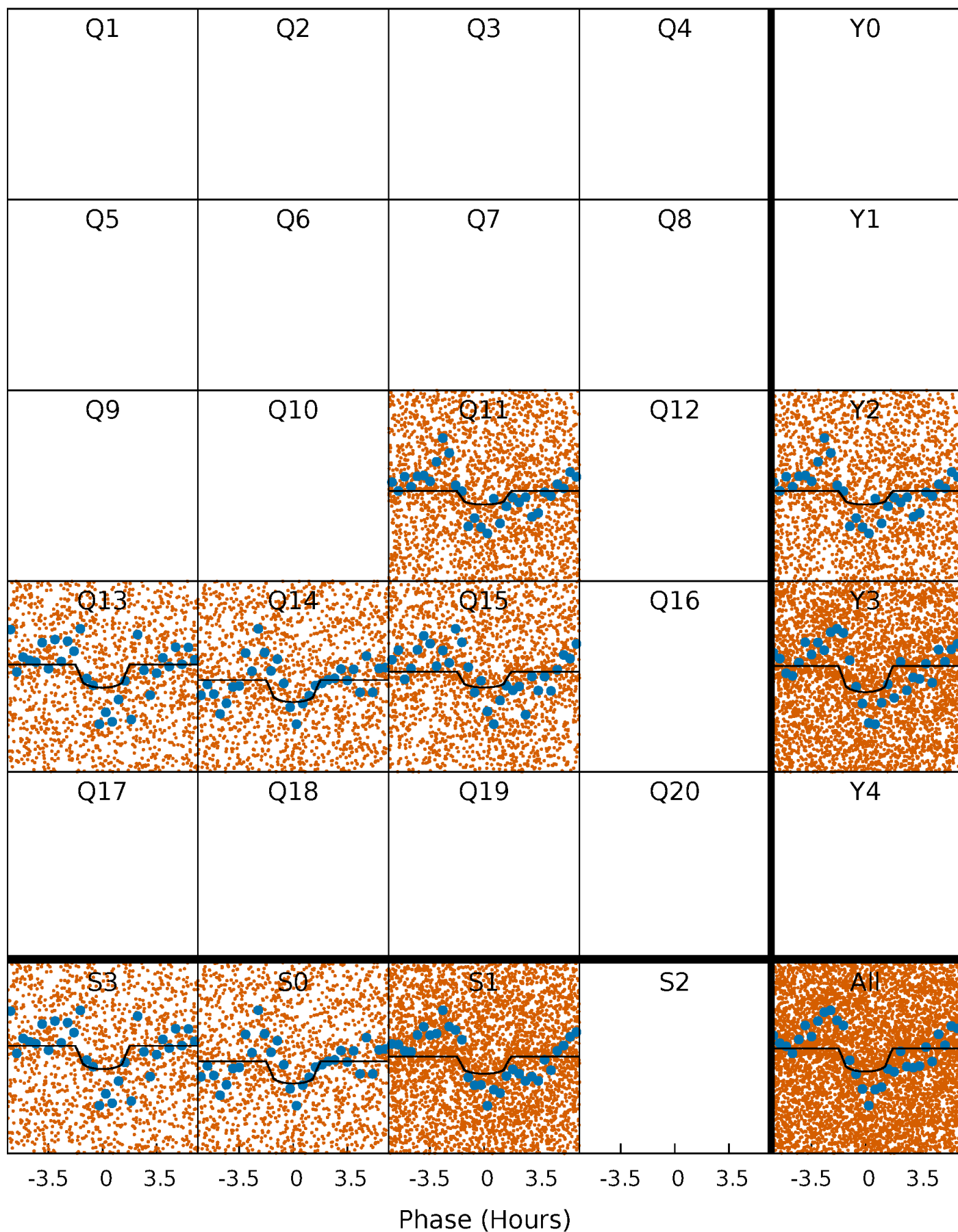
PDC Quarter-Phased Transit Curves

TCE 007031195-01 P= 0.566742 Days $T_0=131.905205$ (BKJD)



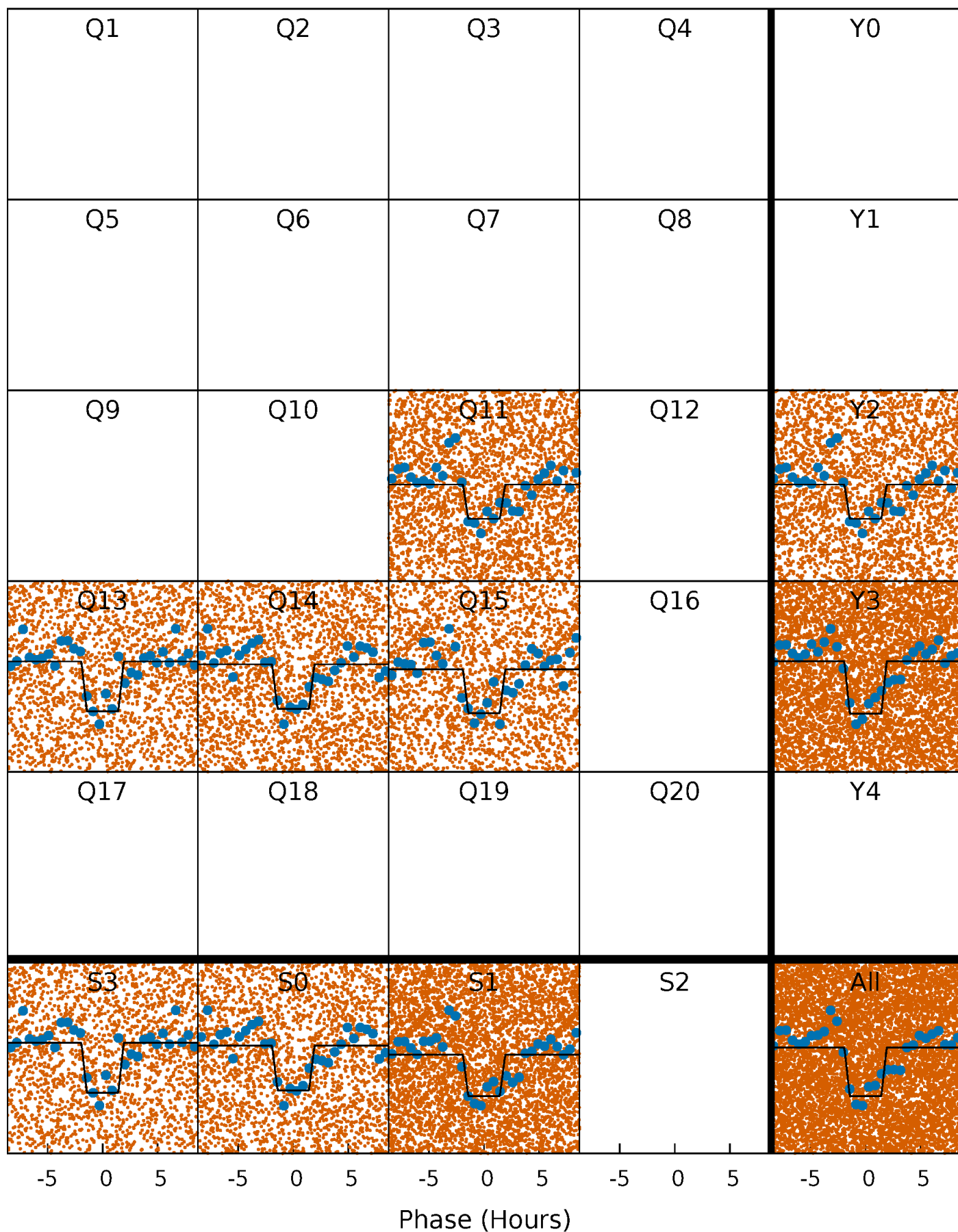
DV Quarter-Phased Transit Curves

TCE 007031195-01 P= 0.566742 Days $T_0=131.905205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

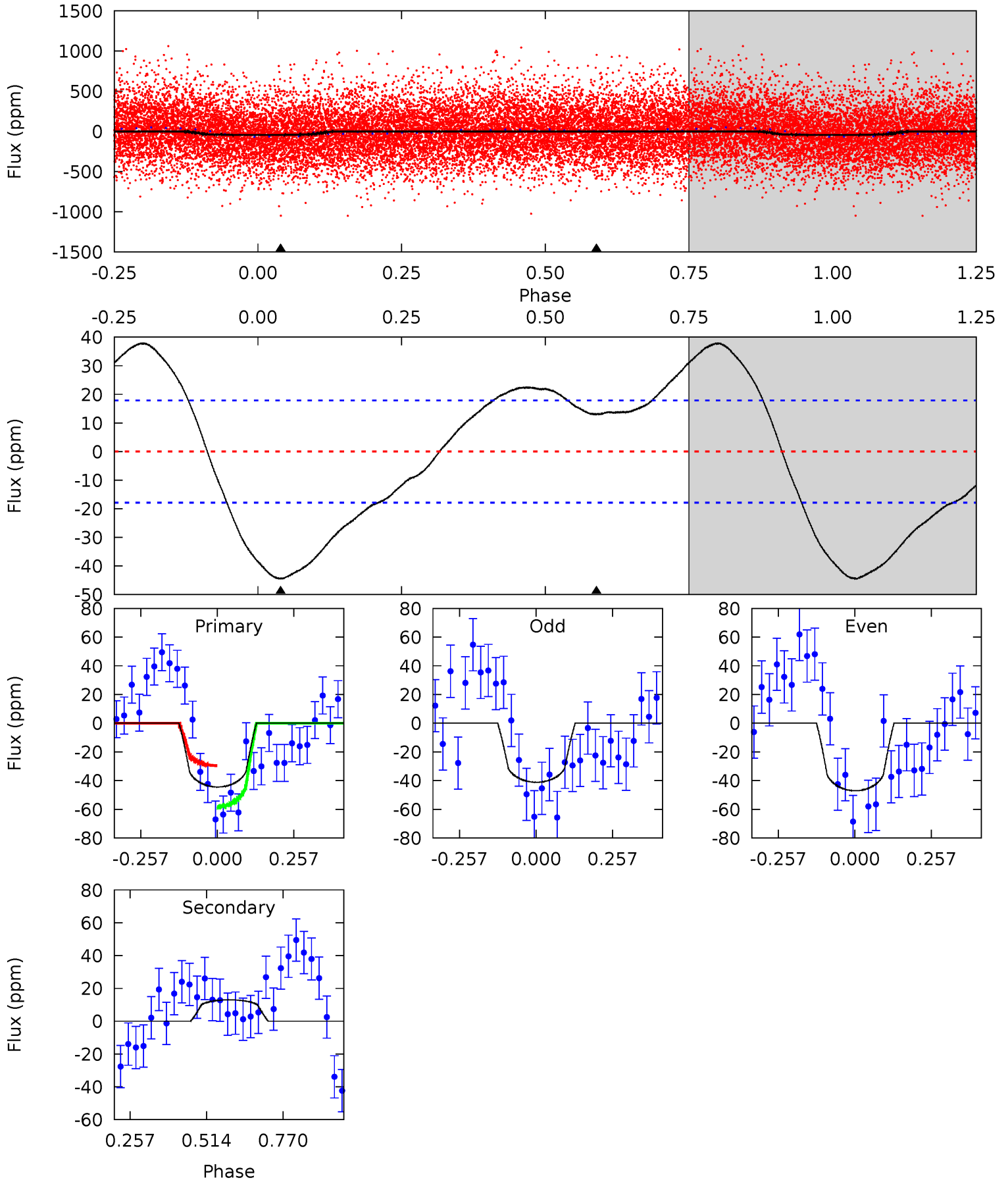
TCE 007031195-01 P= 0.566808 Days $T_0=131.810618$ (BKJD)



DV Model-Shift Uniqueness Test

007031195-01, P = 0.566742 Days, E = 131.905205 Days

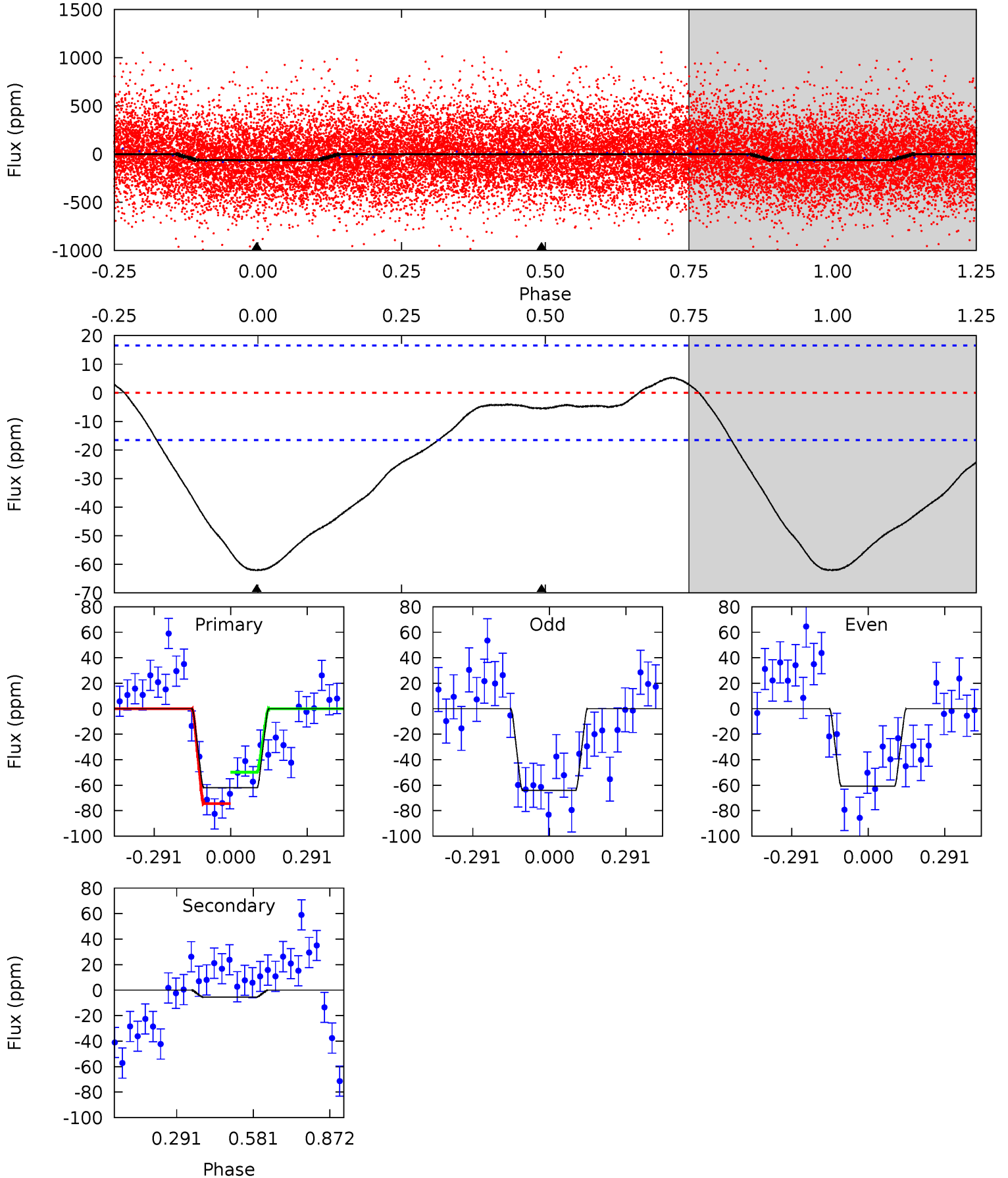
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	-3.18	0	0	4.36	1.13	2.31	10.9	10.9	-3.18	-3.18	0.72	0.94	0.46	3.57



Alt Model-Shift Uniqueness Test

007031195-01, P = 0.566808 Days, E = 131.810618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	1.44	0	0	4.34	1.06	3.78	16.3	16.3	1.44	1.44	0.41	1.02	0.08	3.24



Stellar Parameters For KIC 007031195

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6501^{+181}_{-227}	$4.119^{+0.246}_{-0.164}$	$-0.300^{+0.250}_{-0.300}$	$1.532^{+0.421}_{-0.421}$	$1.124^{+0.192}_{-0.157}$	$0.440^{+0.594}_{-0.207}$
	+3%/-3%	+6%/-4%	+83%/-100%	+27%/-27%	+17%/-14%	+135%/-47%
Source	KIC0	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 007031195-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	13 ± 4	$1.16^{+1.15}_{-0.76}$	4150^{+328}_{-343}	-4969^{+777}_{-3001}	$-0.967^{+0.727}_{-7.730}$
Alt.	-5 ± 4	$1.51^{+1.39}_{-0.88}$	4189^{+288}_{-342}	-3146^{+7980}_{-658}	$0.200^{+1.266}_{-0.168}$

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

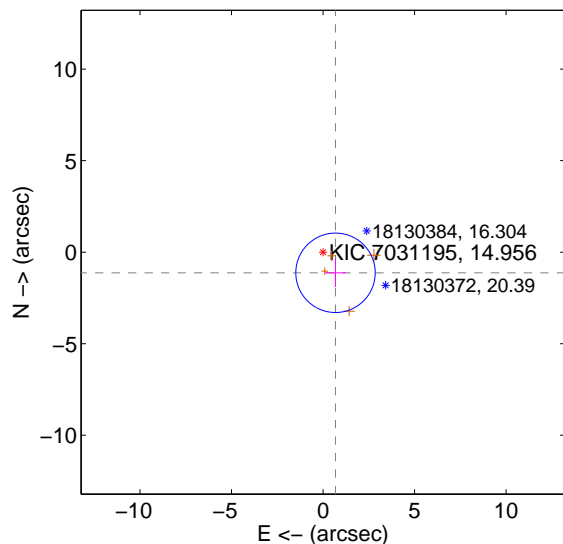
Supplemental centroid analysis for 007031195-01. Kepler magnitude: 14.96. Transit SNR 5.62

There are 0 quarters with good PRF difference image offsets

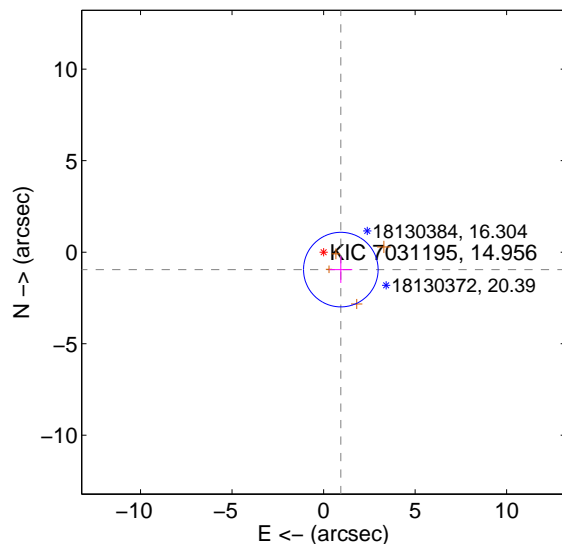
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.317 ± 0.723	1.82	-0.682 ± 0.557	-1.127 ± 0.775
PRF-fit source offset from KIC position	1.339 ± 0.679	1.97	-0.942 ± 0.626	-0.952 ± 0.727
photometric centroid source offset	4.29 ± 2.24	1.91	0.92 ± 1.99	4.19 ± 2.25

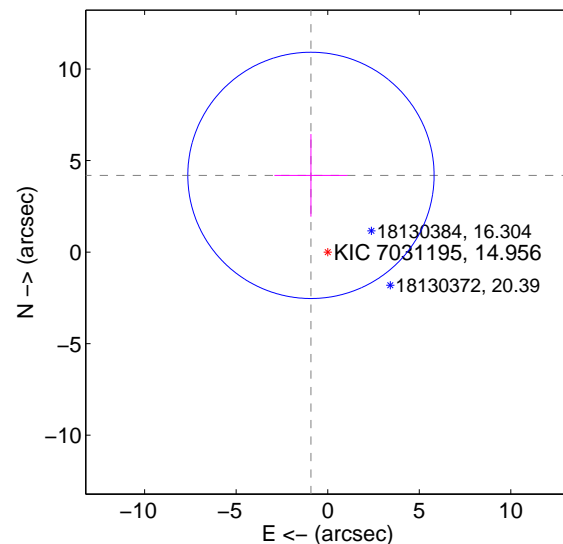
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

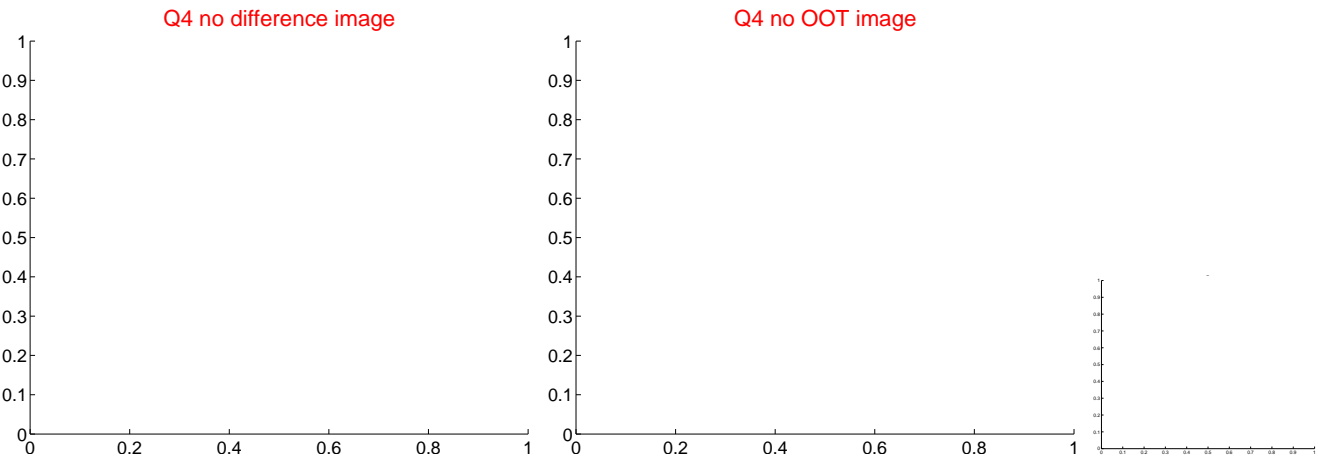


offset from photometric centroids



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.

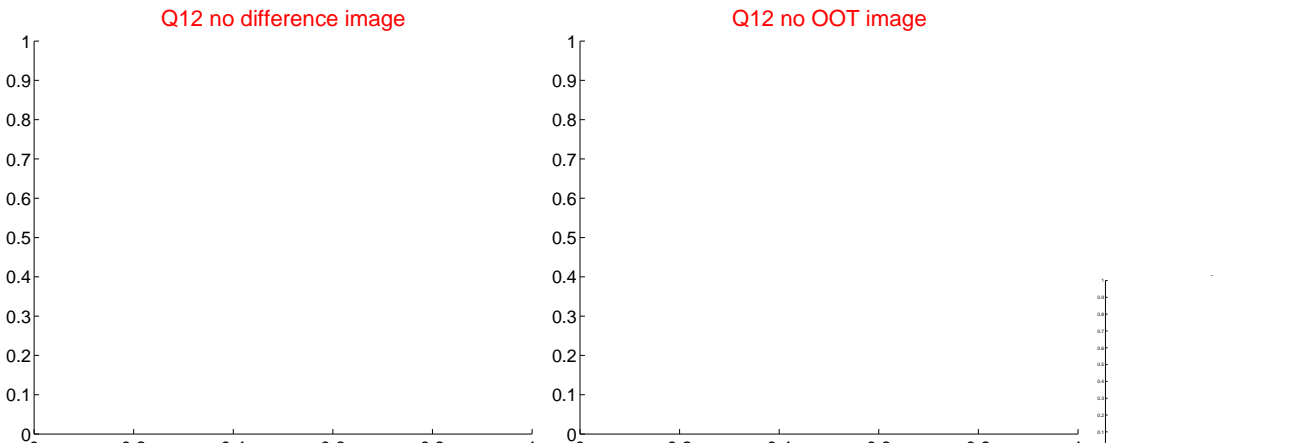
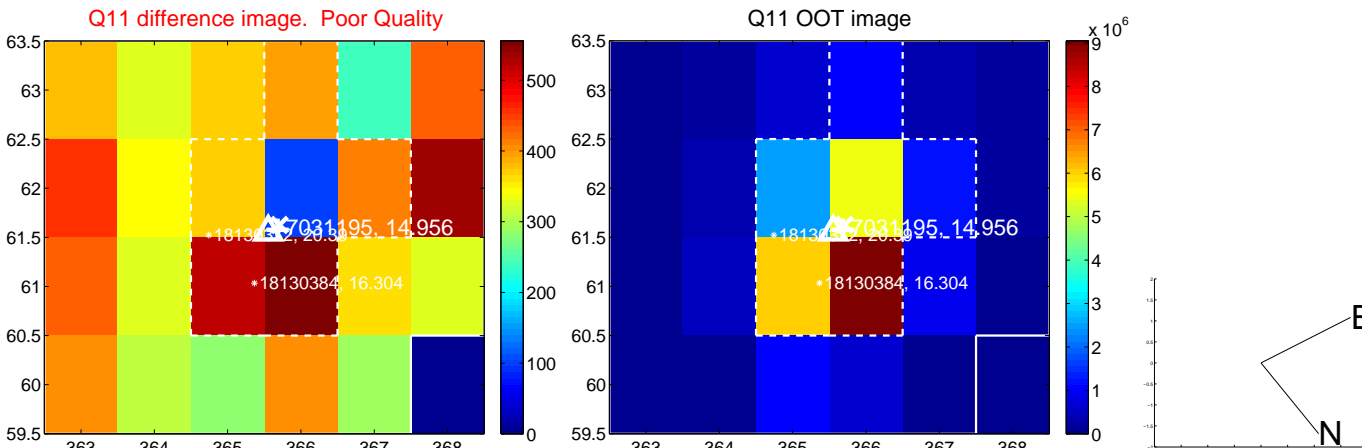
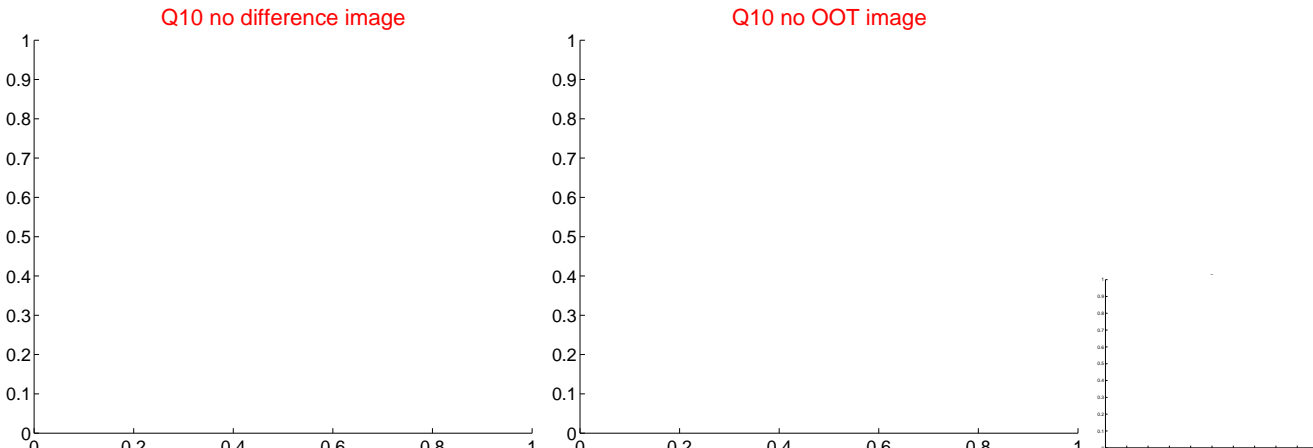
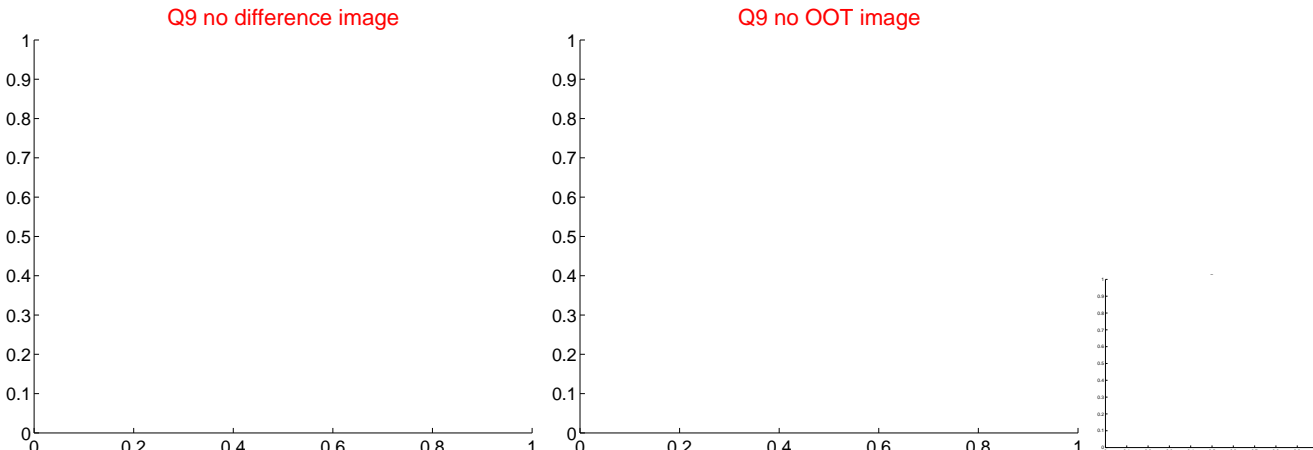
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



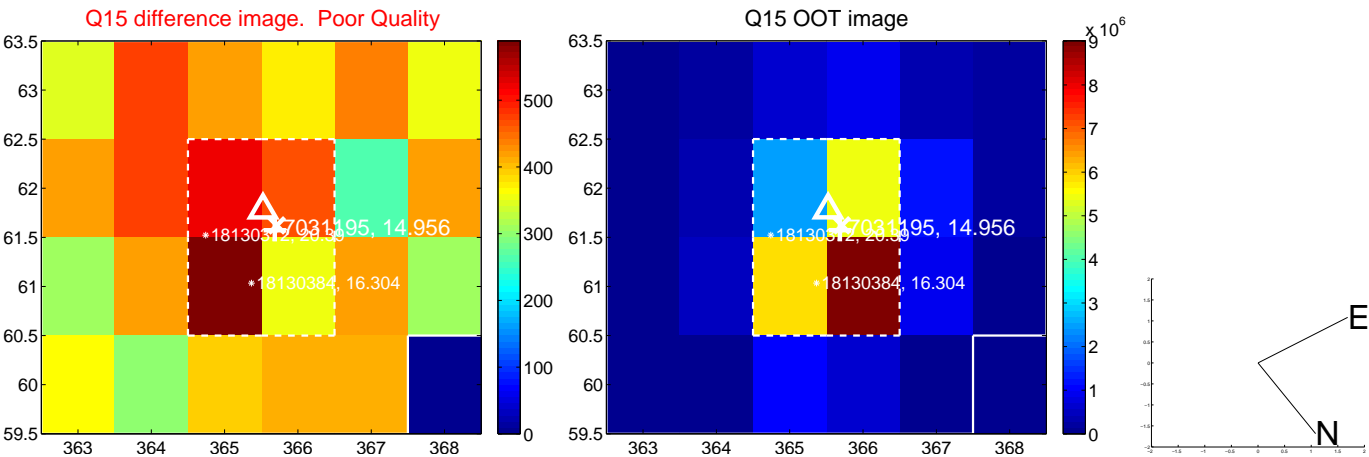
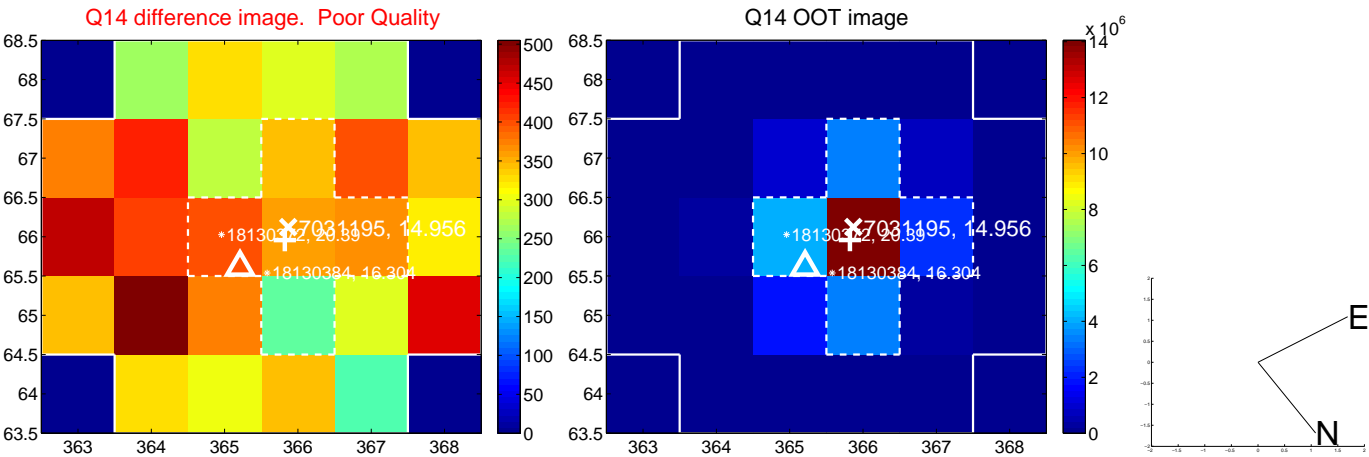
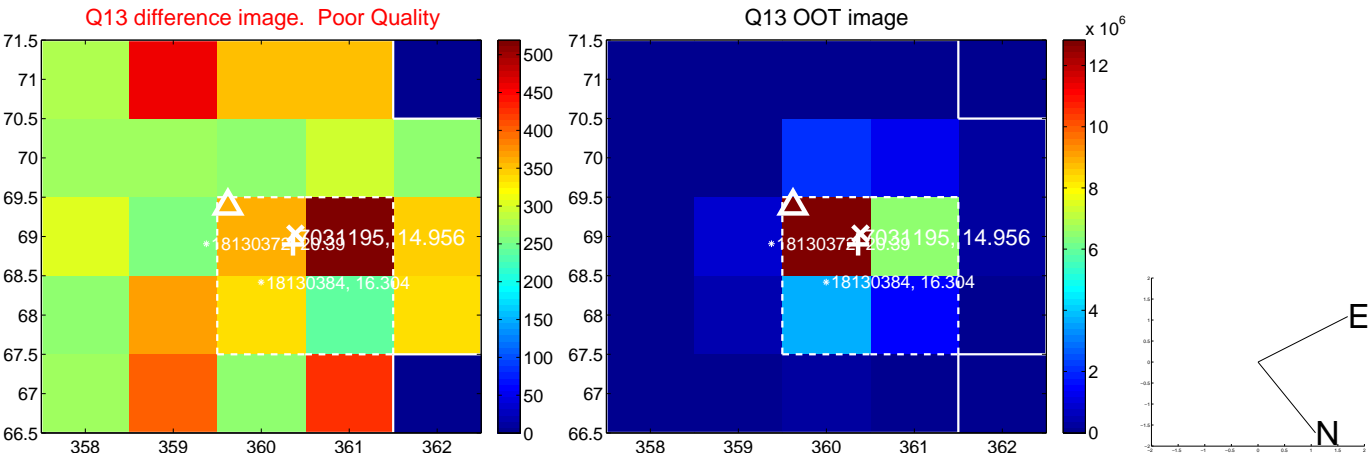
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



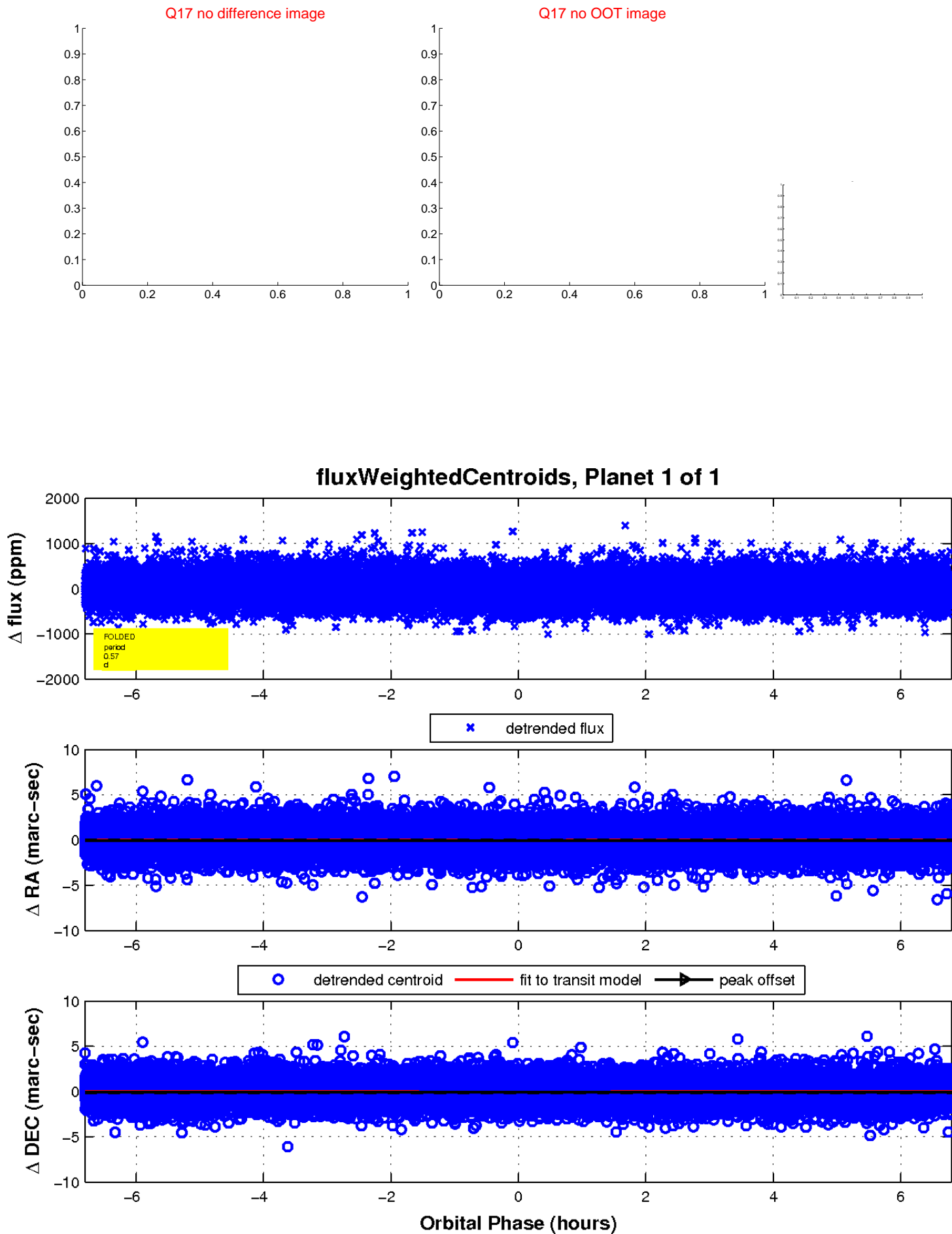
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UKIRT Image

Declination

