

KIC 010319590

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})
010319590-01	OBS	No	309.064406	143.505494	40833.5	4.500	678.6	-1.0	1.06	5782	21.26	1.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010319590-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

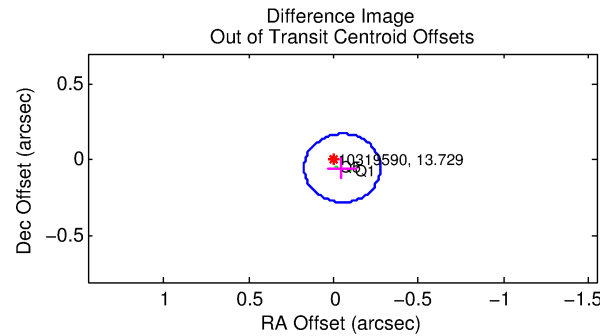
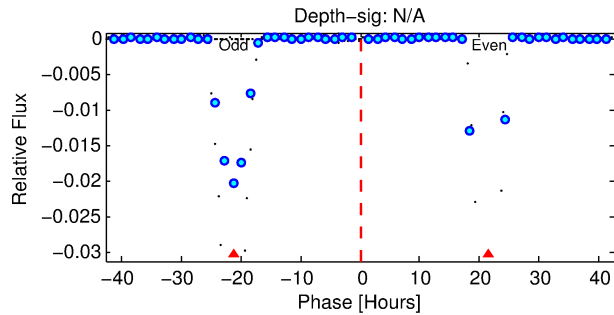
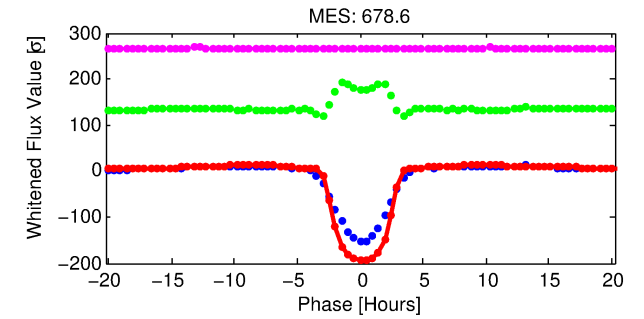
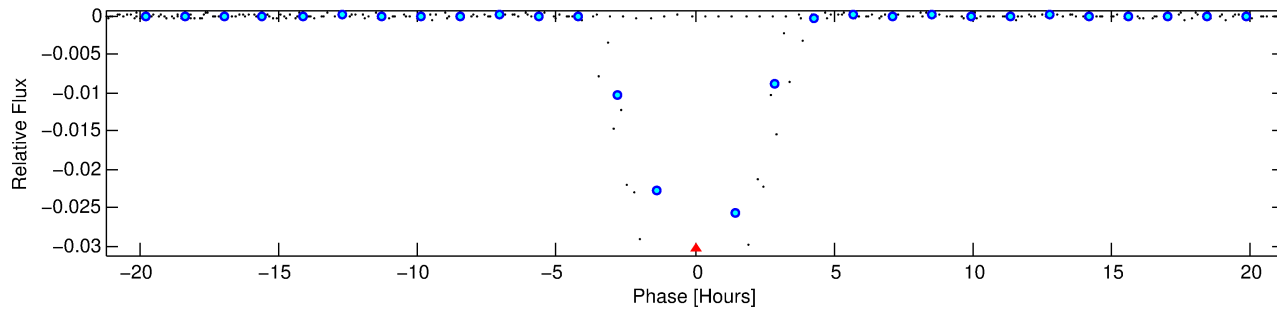
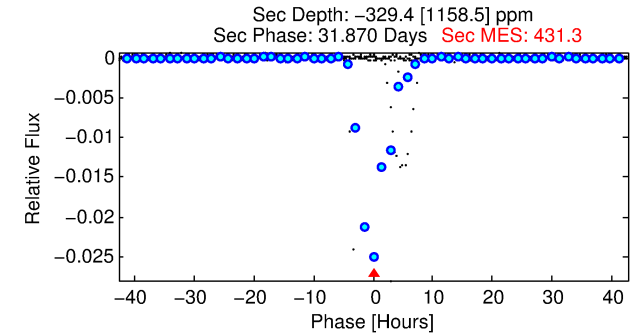
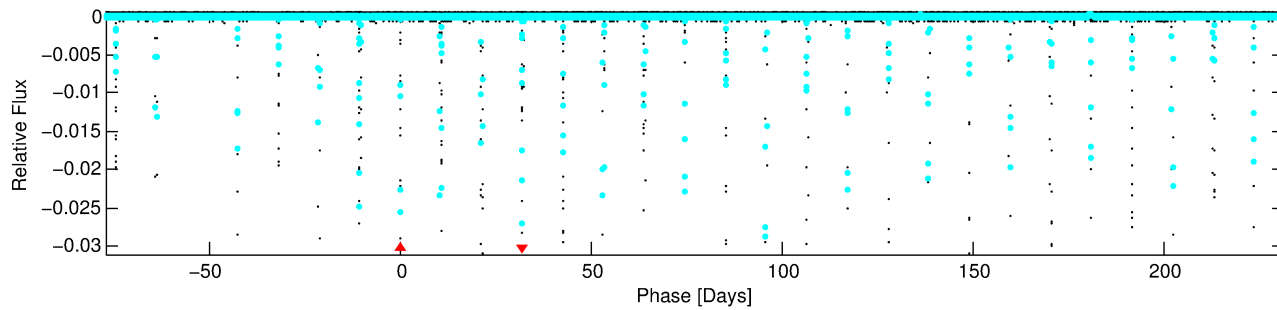
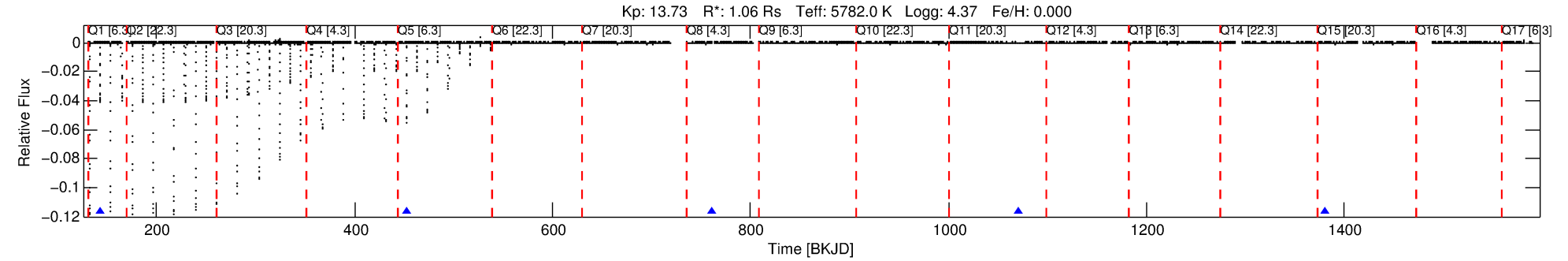
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010319590-01

No Significant Match Found

DV One-Page Summary

KIC: 10319590 Candidate: 1 of 1 Period: 309.064 d



TPS TCE Results:

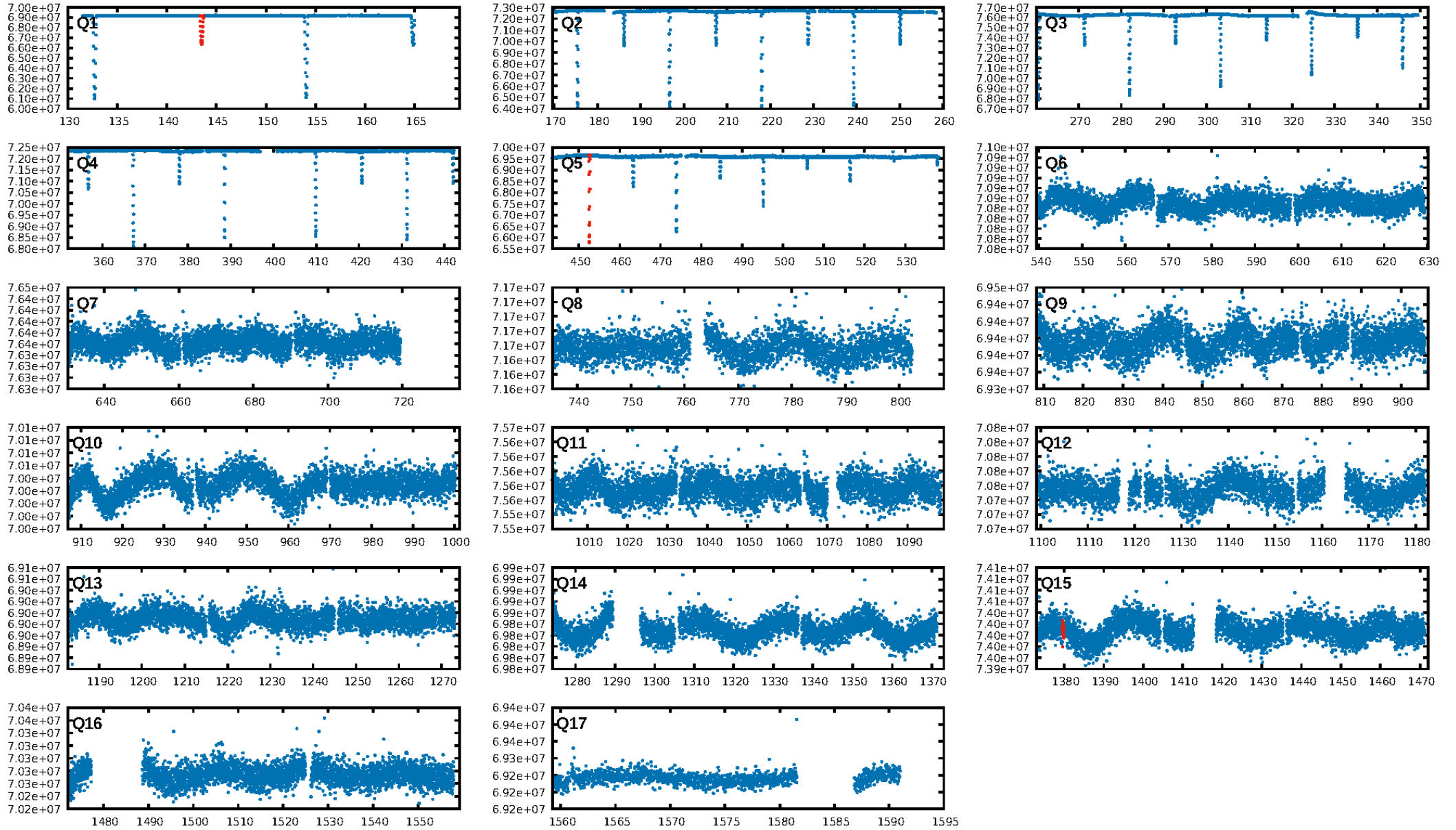
Period = 309.06441 d
Epoch = 143.5055 BKJD

DV fit results are unavailable

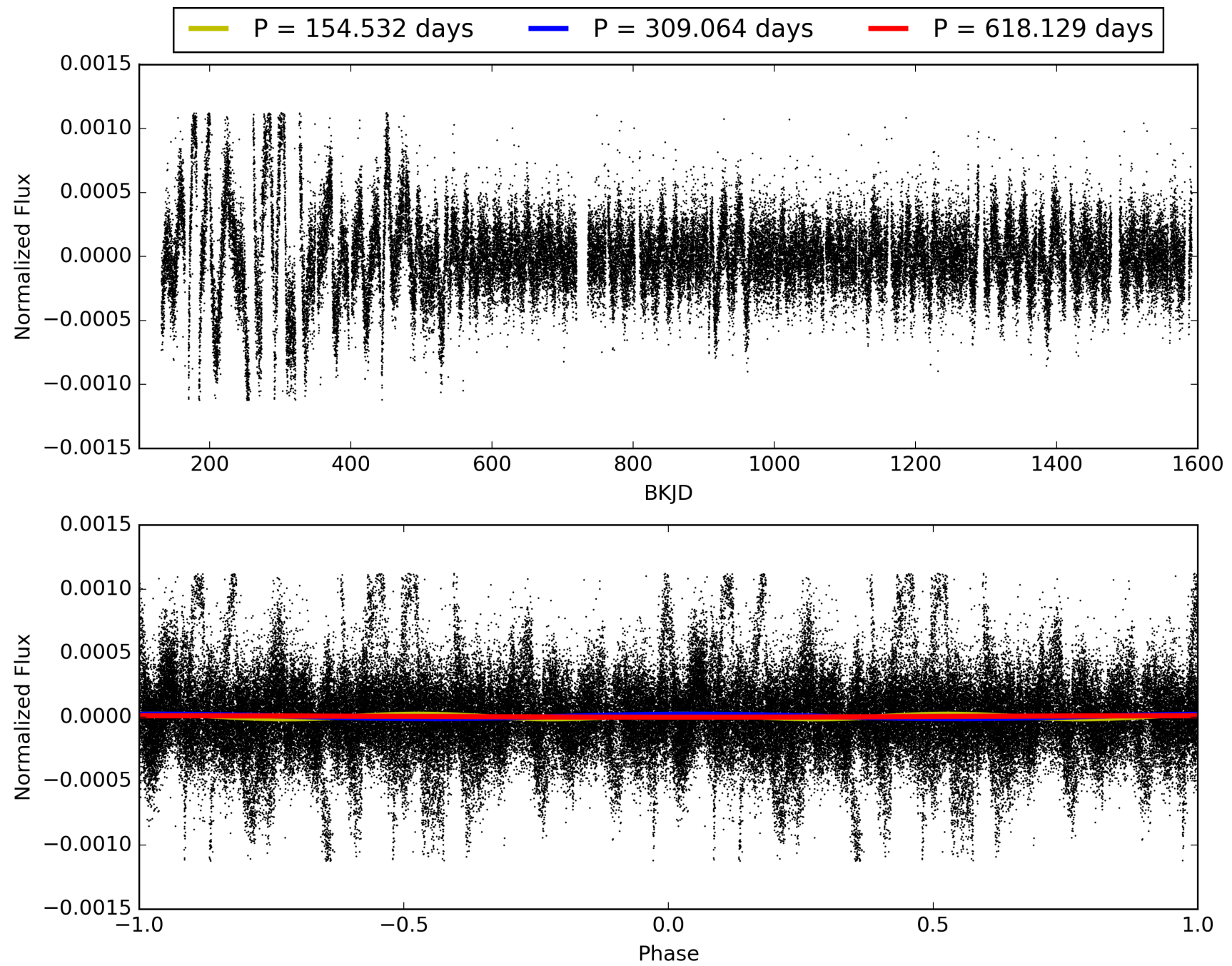
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.78e-47
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.5659
Centroid-sig: 4.4%
Centroid-so: 0.412 arcsec [19.24σ]
OotOffset-rm: 0.072 arcsec [0.96σ]
KicOffset-rm: 0.057 arcsec [0.67σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 010319590-01, PDC Light Curves

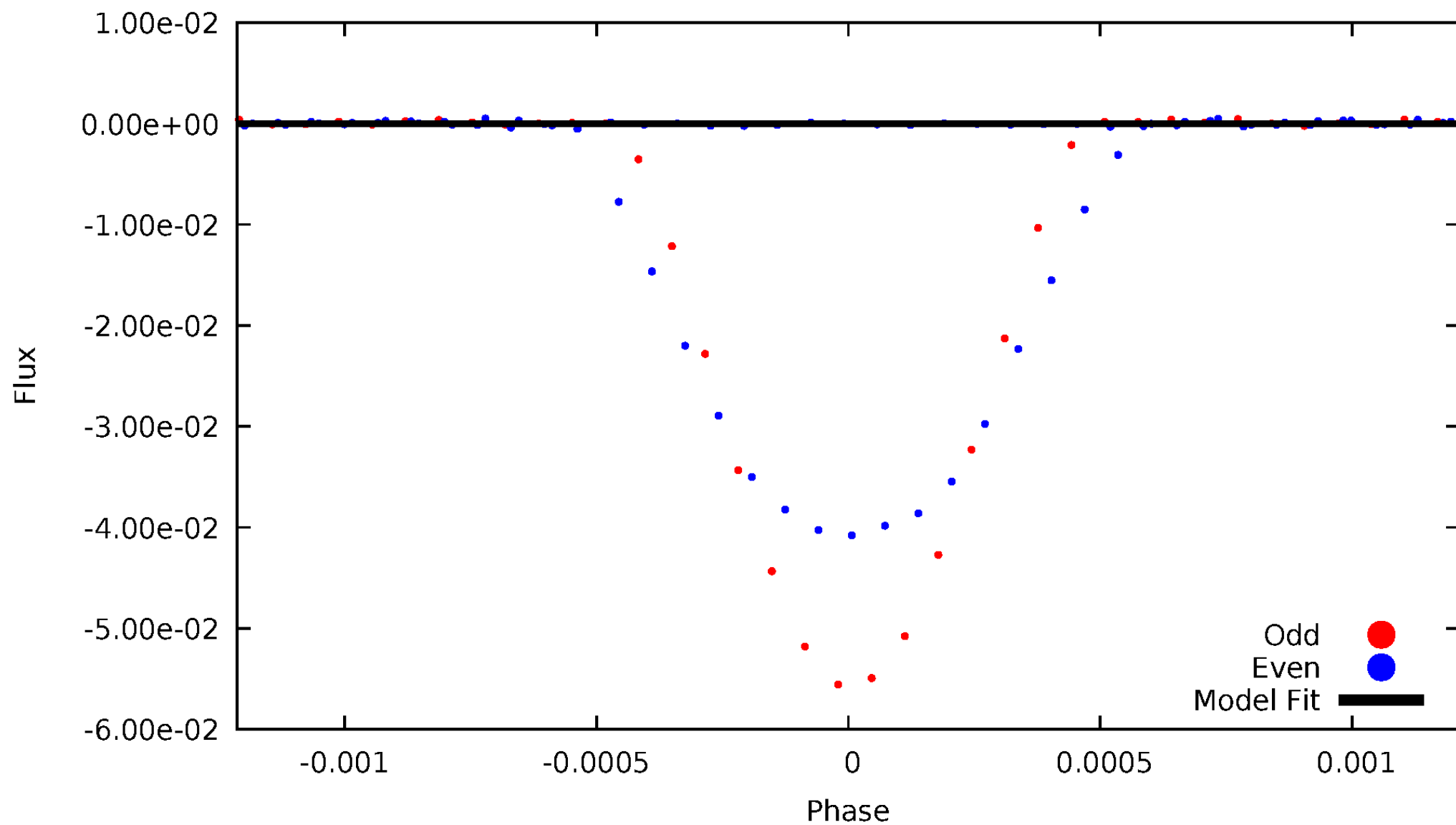


TCE 010319590-01



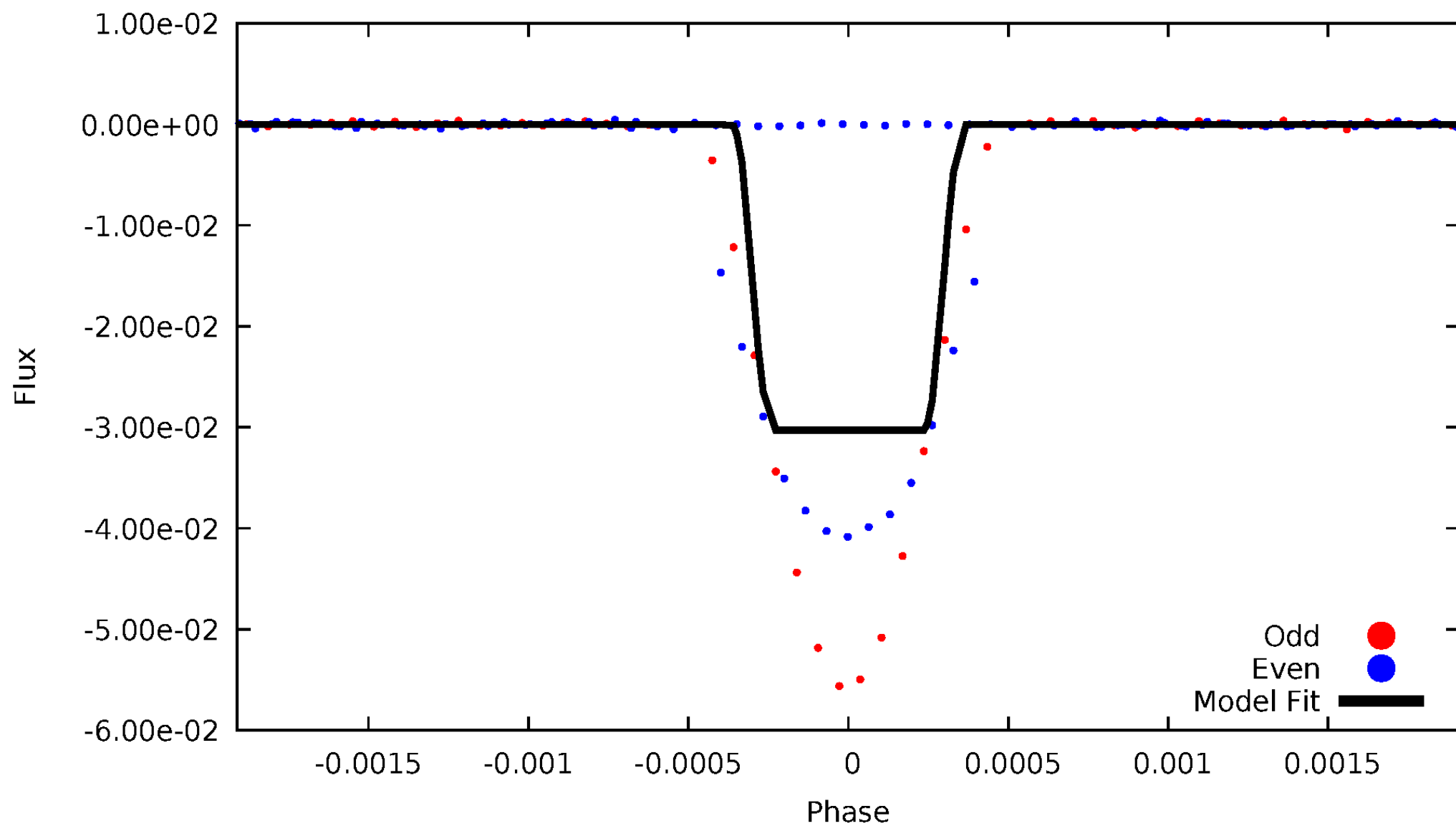
DV Odd/Even

TCE 010319590-01



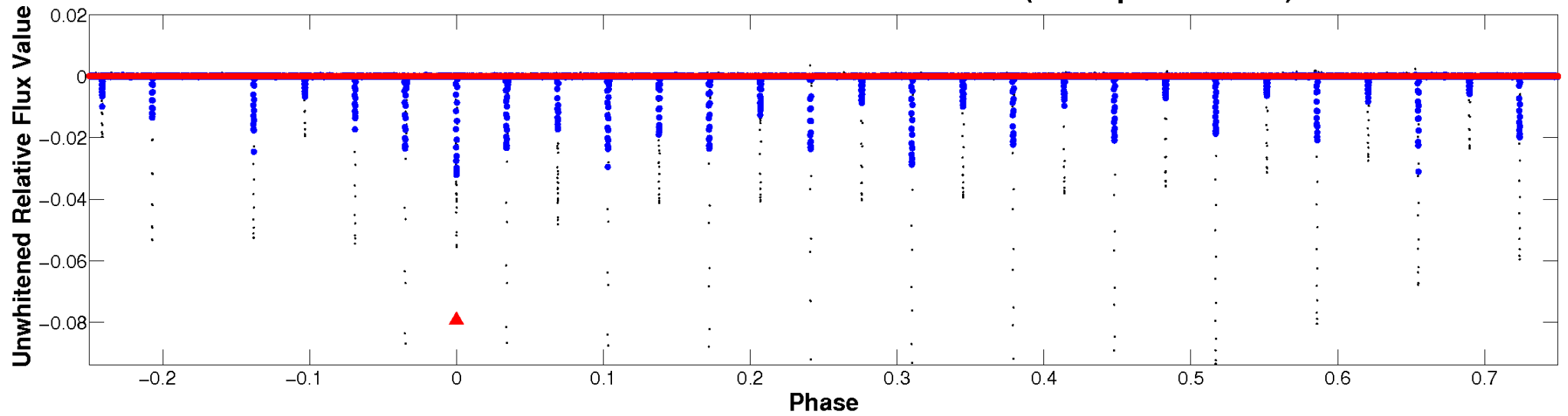
ALT Odd/Even

TCE 010319590-01



Non-Whitened Vs. Whitened Light Curve

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

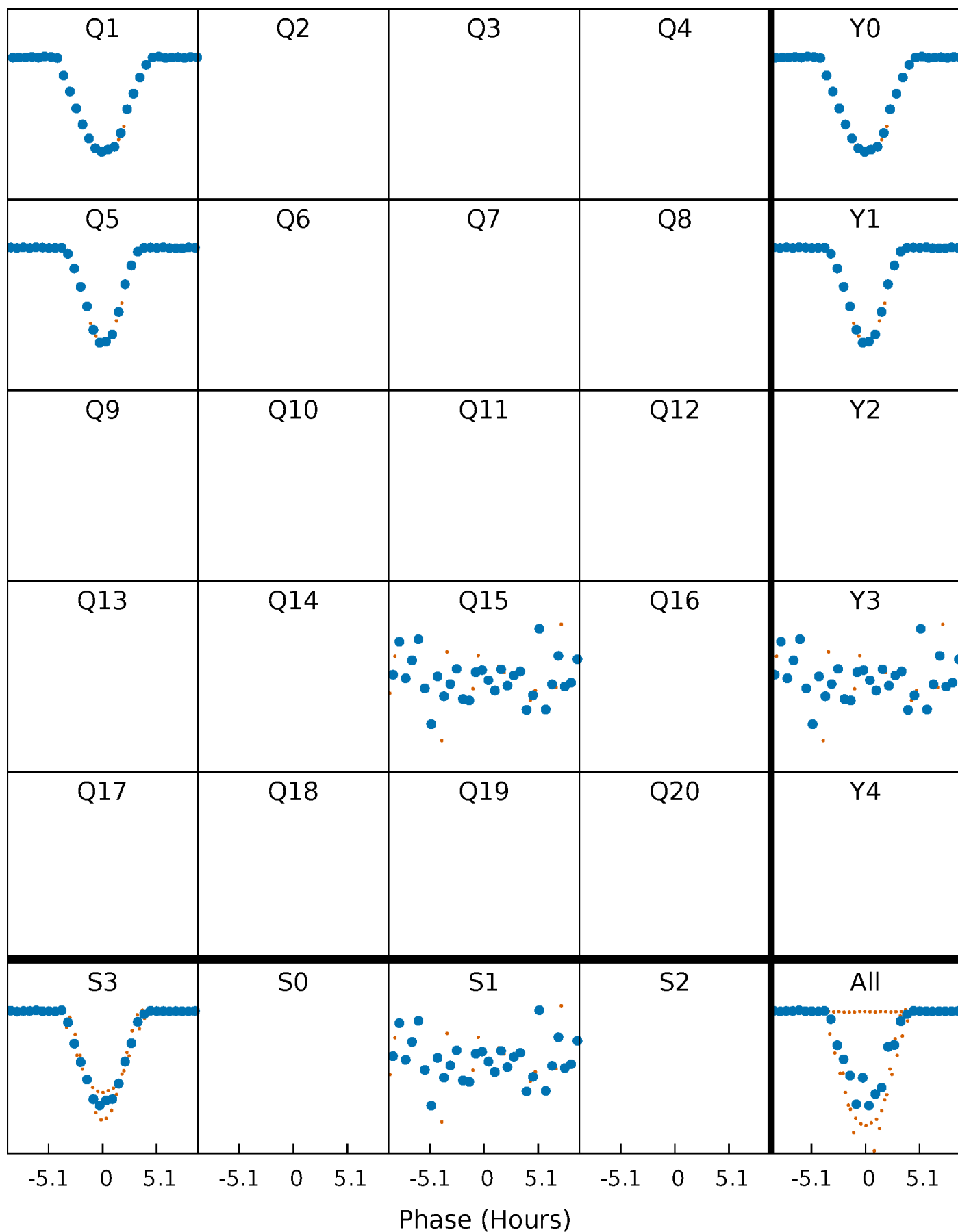


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



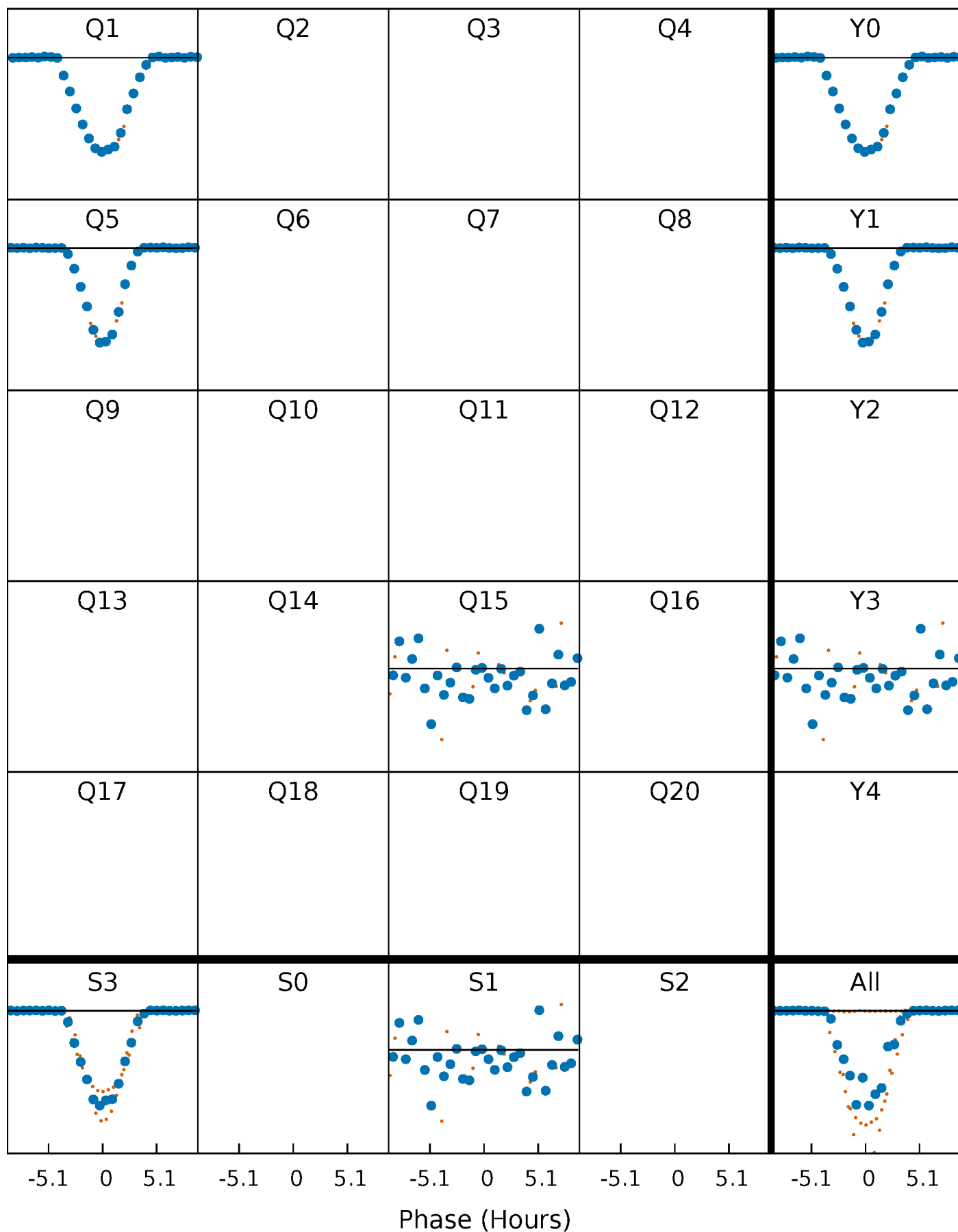
PDC Quarter-Phased Transit Curves

TCE 010319590-01 P=309.064406 Days $T_0=143.505494$ (BKJD)



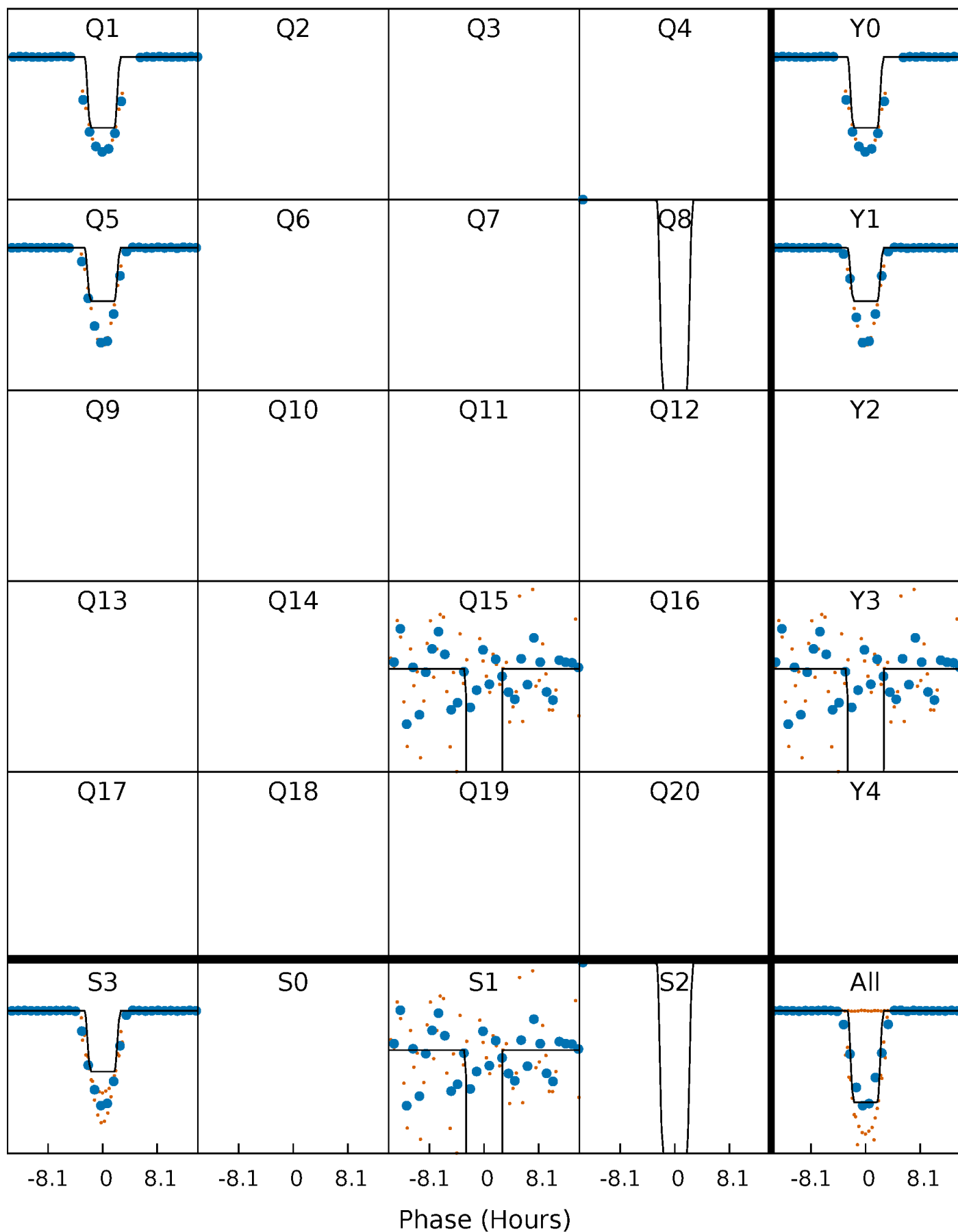
DV Quarter-Phased Transit Curves

TCE 010319590-01 P=309.064406 Days $T_0=143.505494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

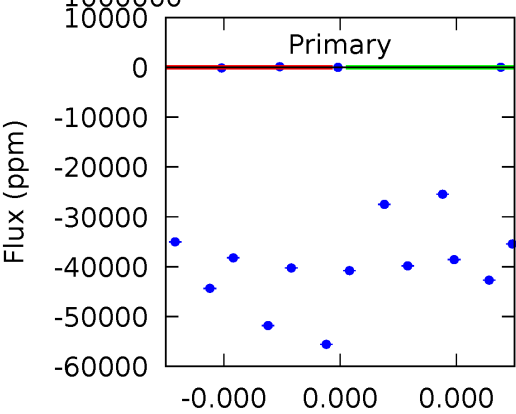
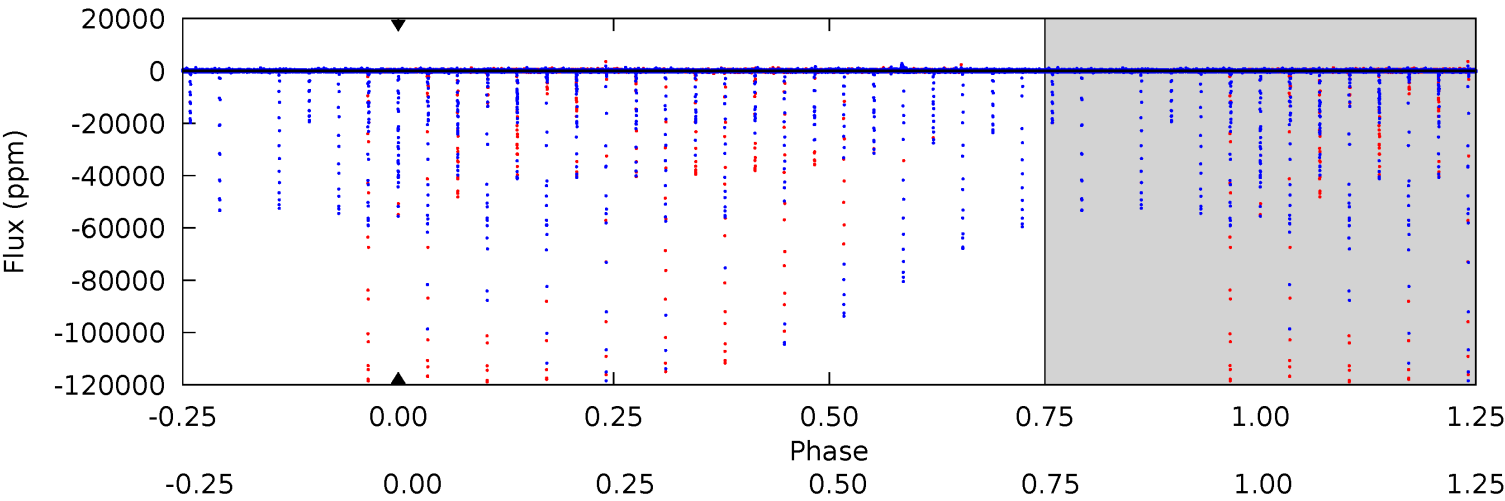
TCE 010319590-01 P=309.064406 Days $T_0=143.508192$ (BKJD)



DV Model-Shift Uniqueness Test

010319590-01, P = 309.064406 Days, E = 143.505494 Days

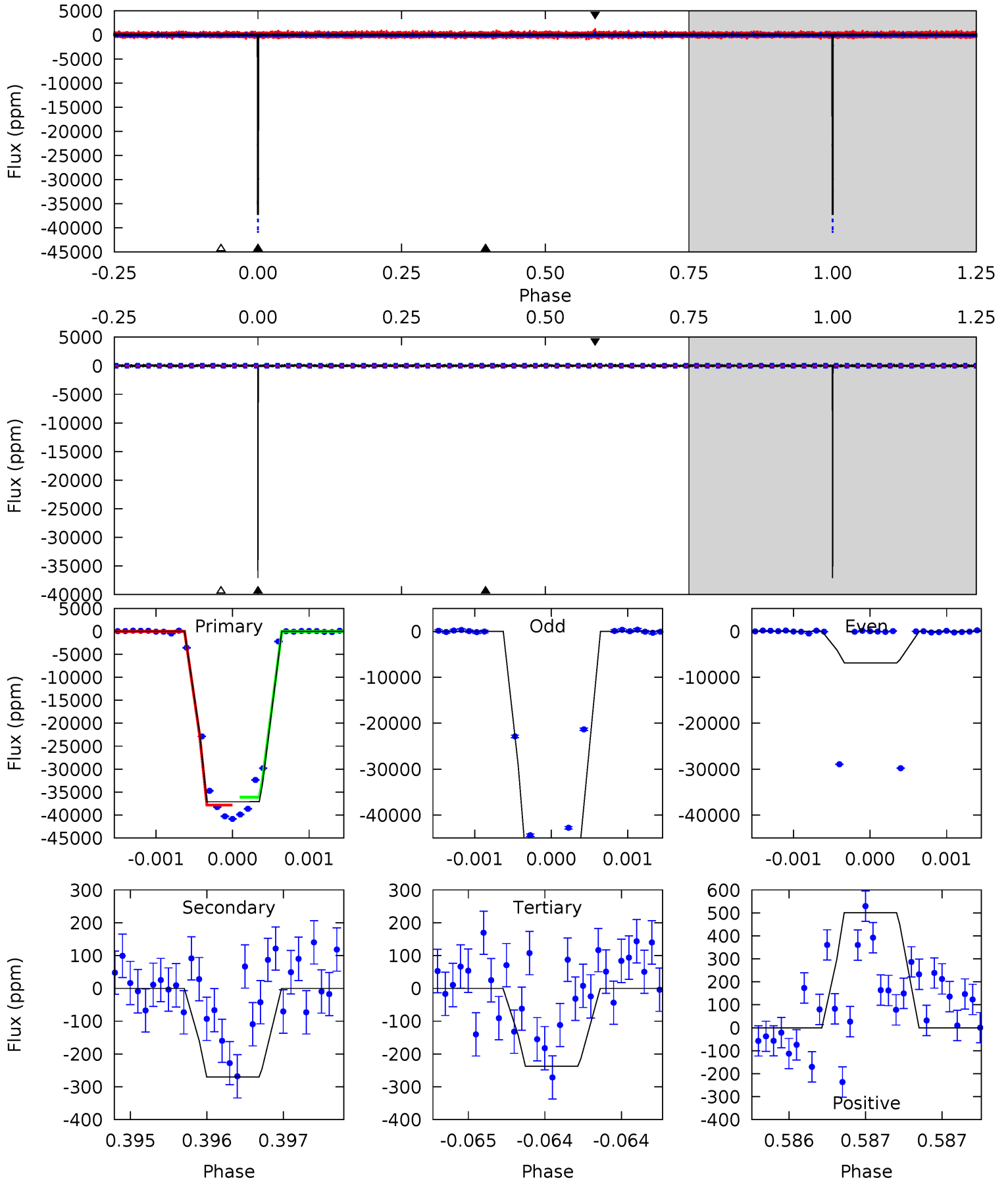
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010319590-01, P = 309.064406 Days, E = 143.508192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
630.5	4.59	4.03	8.51	5.52	3.40	1.08	626.5	622.0	0.56	-3.92	456.1	0.73	0.01	14.3



Stellar Parameters For KIC 010319590

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5782^{+156}_{-173}	$4.372^{+0.128}_{-0.192}$	$0.000^{+0.250}_{-0.300}$	$1.060^{+0.287}_{-0.167}$	$0.966^{+0.125}_{-0.102}$	$1.142^{+0.670}_{-0.572}$
	+3%/-3%	+3%/-4%	+inf%/-inf%	+27%/-16%	+13%/-11%	+59%/-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 010319590-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$21.49^{+12.91}_{-10.99}$	391^{+30}_{-22}	-2691^{+11161}_{-5662}	$-345.115^{+118140.153}_{-115195.267}$
Alt.	-270 ± 59	$22.24^{+12.54}_{-11.63}$	393^{+28}_{-22}	2546^{+546}_{-255}	234^{+787}_{-141}

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 $A_{obs} \gg 1.0$

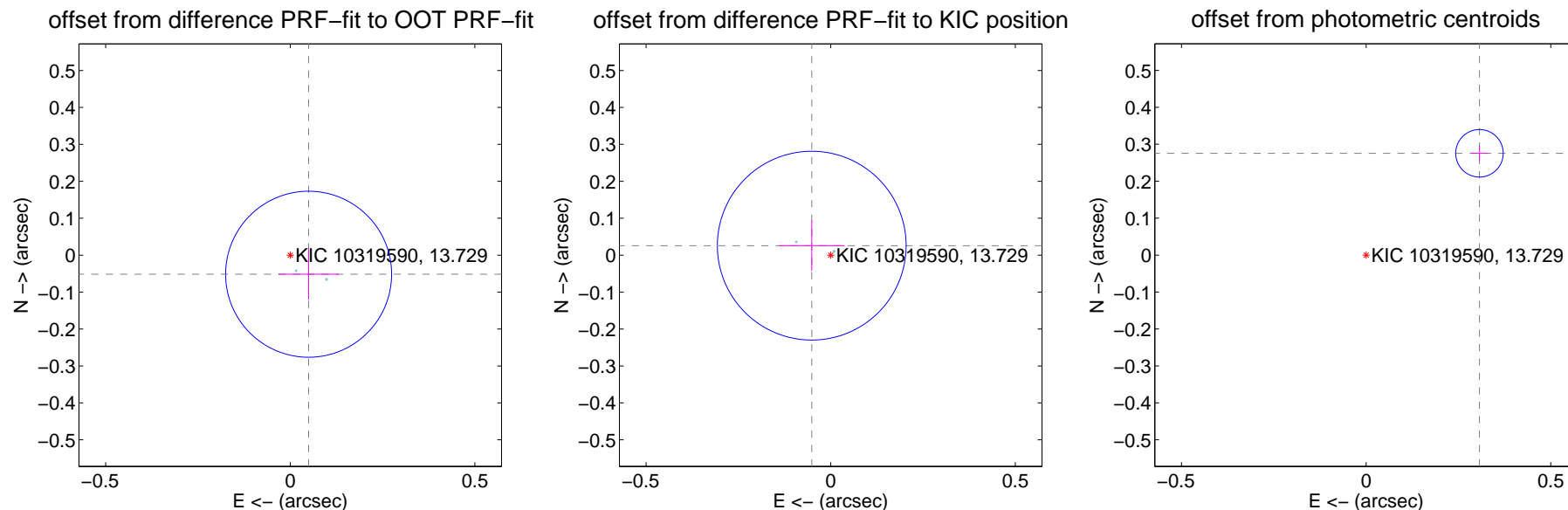
DV Centroid Data

Supplemental centroid analysis for 010319590-01. Kepler magnitude: 13.73. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

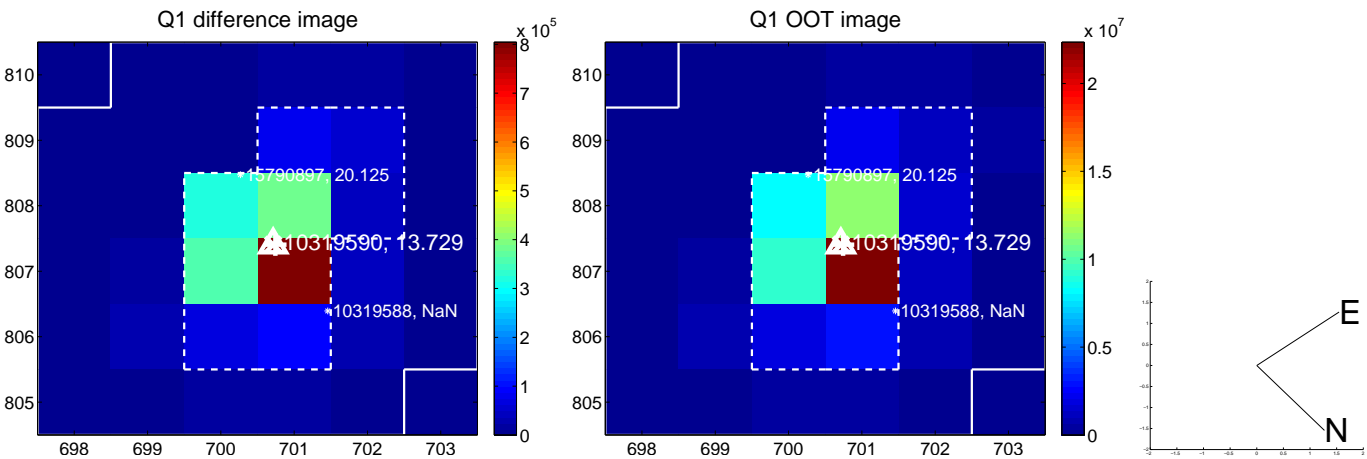
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.072 ± 0.075	0.96	-0.050 ± 0.082	-0.052 ± 0.068
PRF-fit source offset from KIC position	0.057 ± 0.085	0.67	0.051 ± 0.089	0.026 ± 0.068
photometric centroid source offset	0.41 ± 0.02	19.24	-0.31 ± 0.02	0.28 ± 0.02

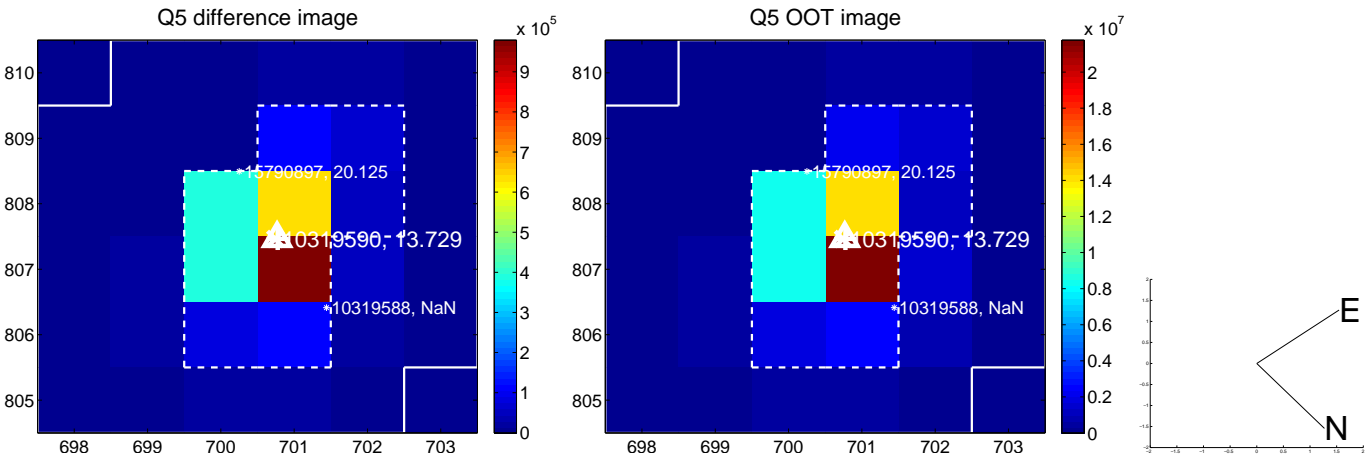


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



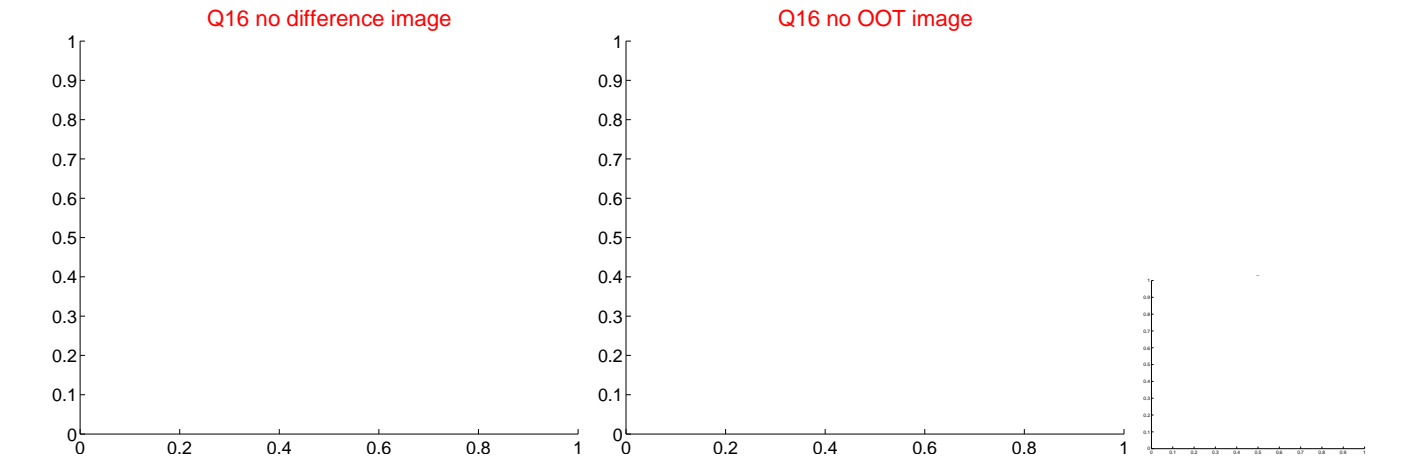
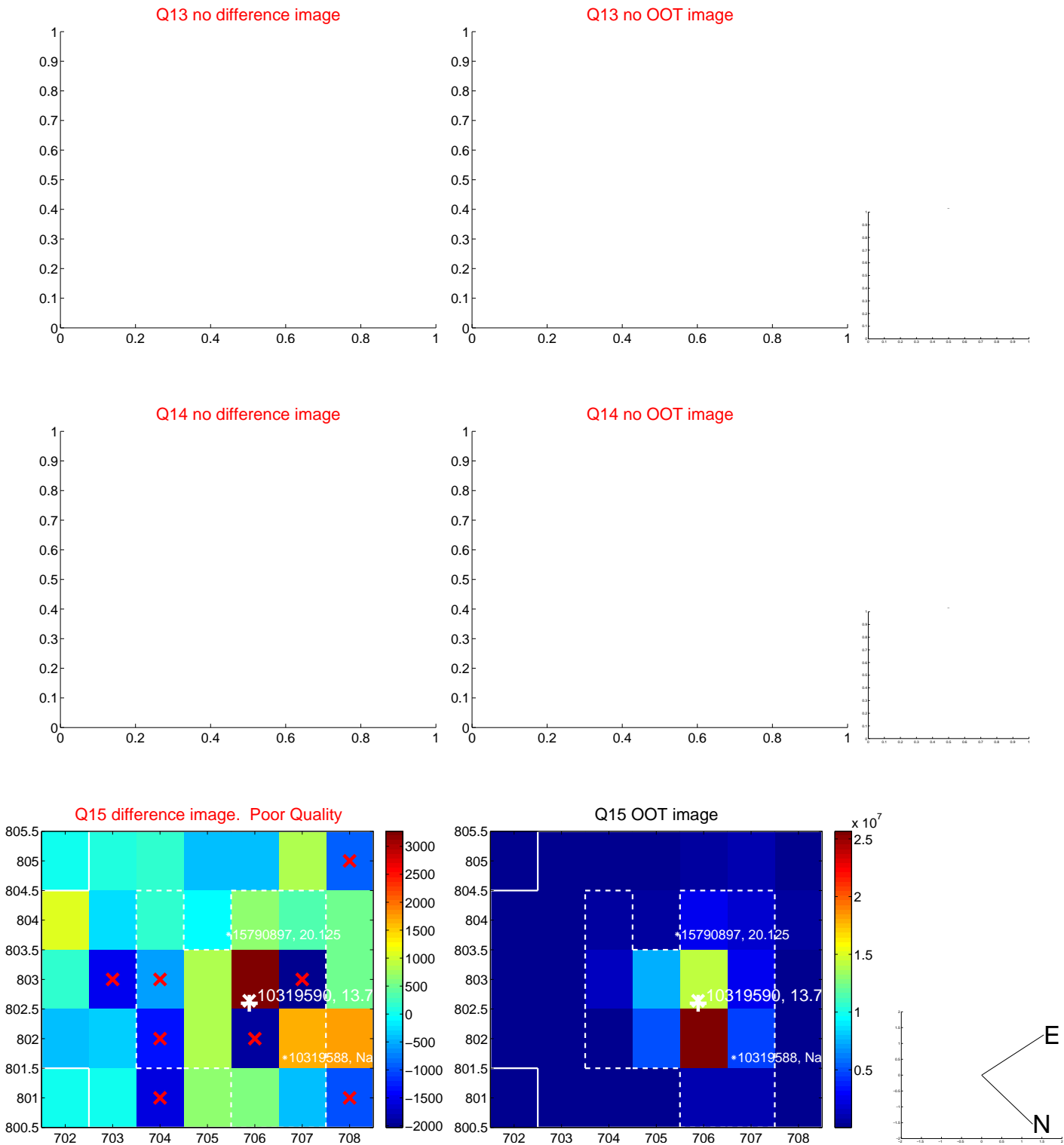
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



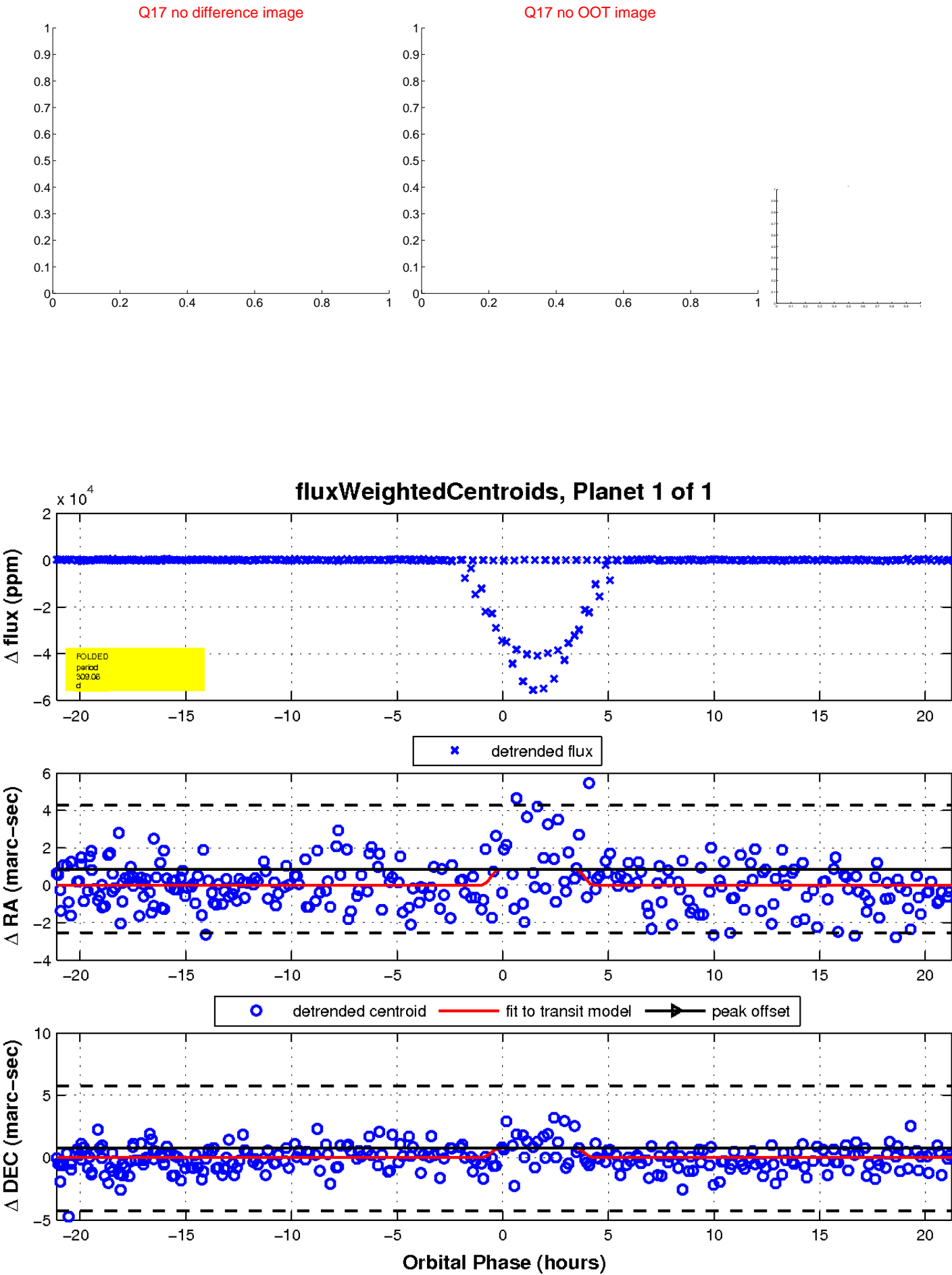
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

