

KIC 004917596

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})
004917596-01	OBS	1973.01	3.290129	133.153666	640.1	1.605	28.6	33.1	0.59	4484	1.84	97.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004917596-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

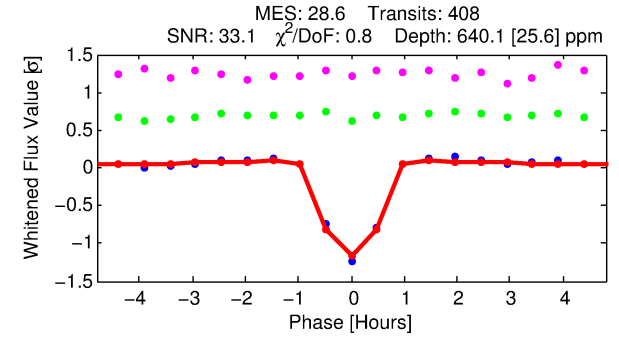
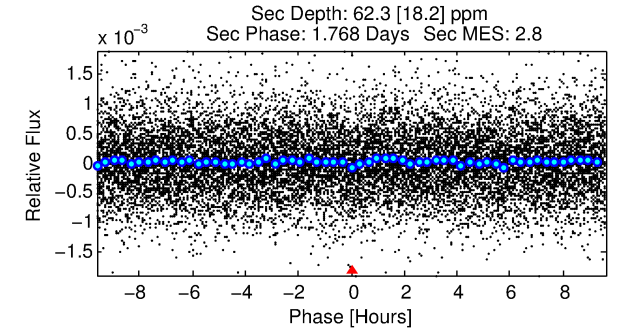
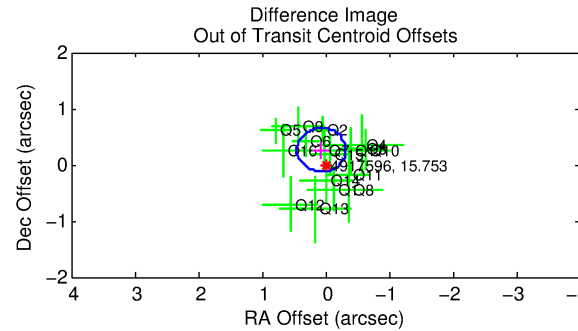
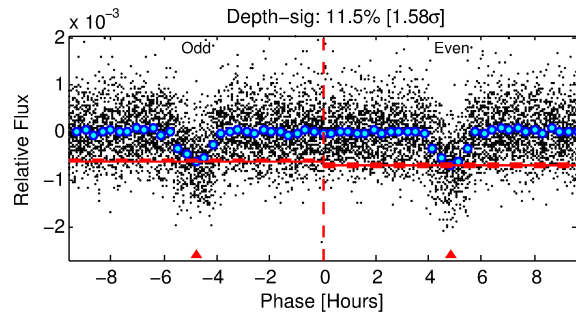
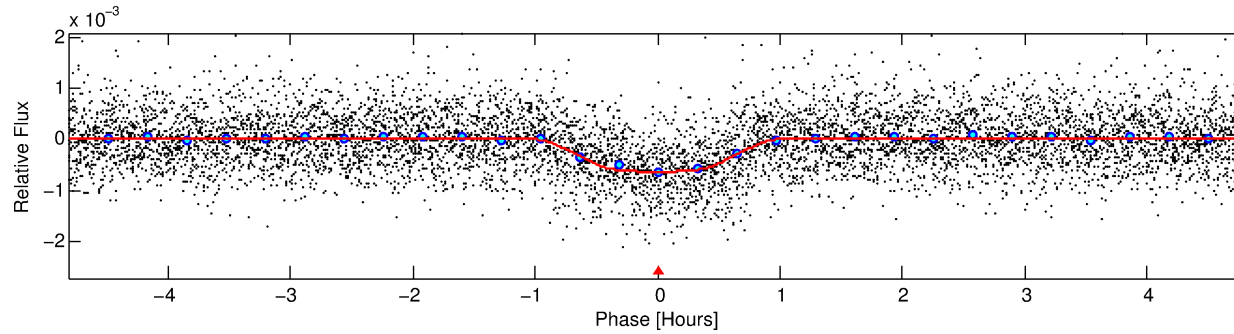
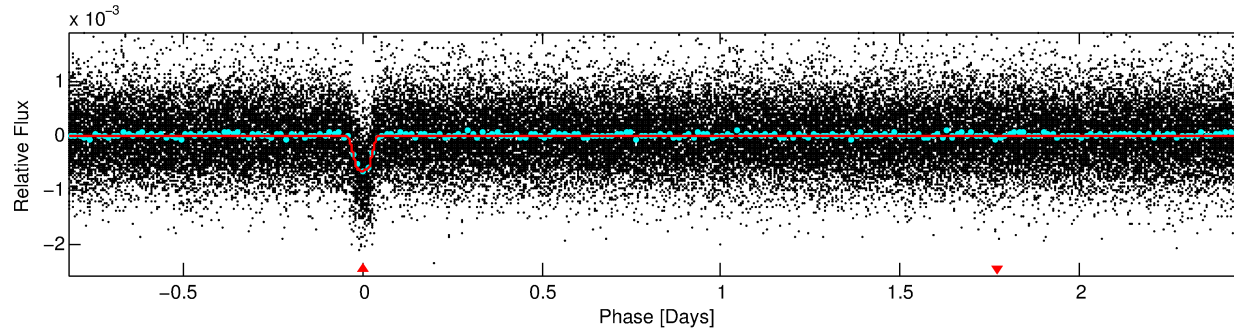
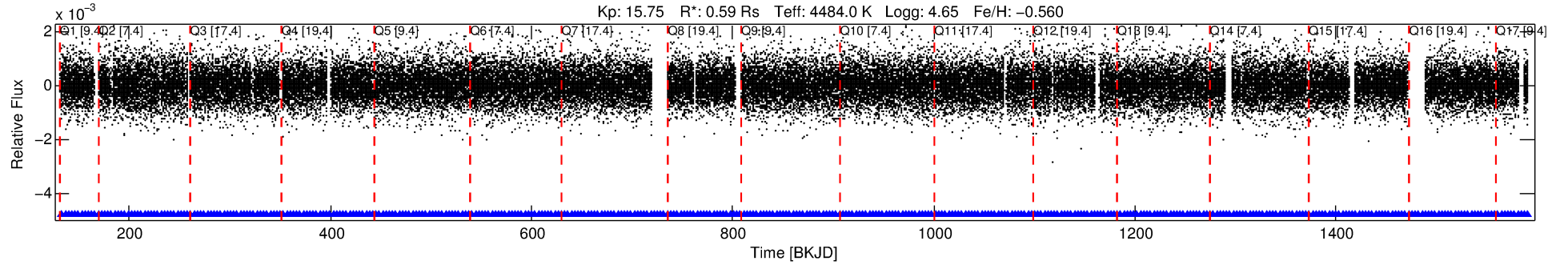
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004917596-01

No Significant Match Found

DV One-Page Summary

KIC: 4917596 Candidate: 1 of 1 Period: 3.290 d
KOI: K01973.01 Corr: 0.975



DV Fit Results:

Period = 3.29013 [0.00000] d
Epoch = 133.1537 [0.0008] BKJD
Rp/R* = 0.0284 [0.0053]
a/R* = 7.90 [5.41]
b = 0.90 [0.16]
Seff = 97.98 [15.32]
Teq = 802 [31] K
Rp = 1.84 [0.38] Re
a = 0.0361 [0.0026] AU
Ag = 13.16 [6.40] [1.90 σ]
Teffp = 2363 [290] K [5.36 σ]

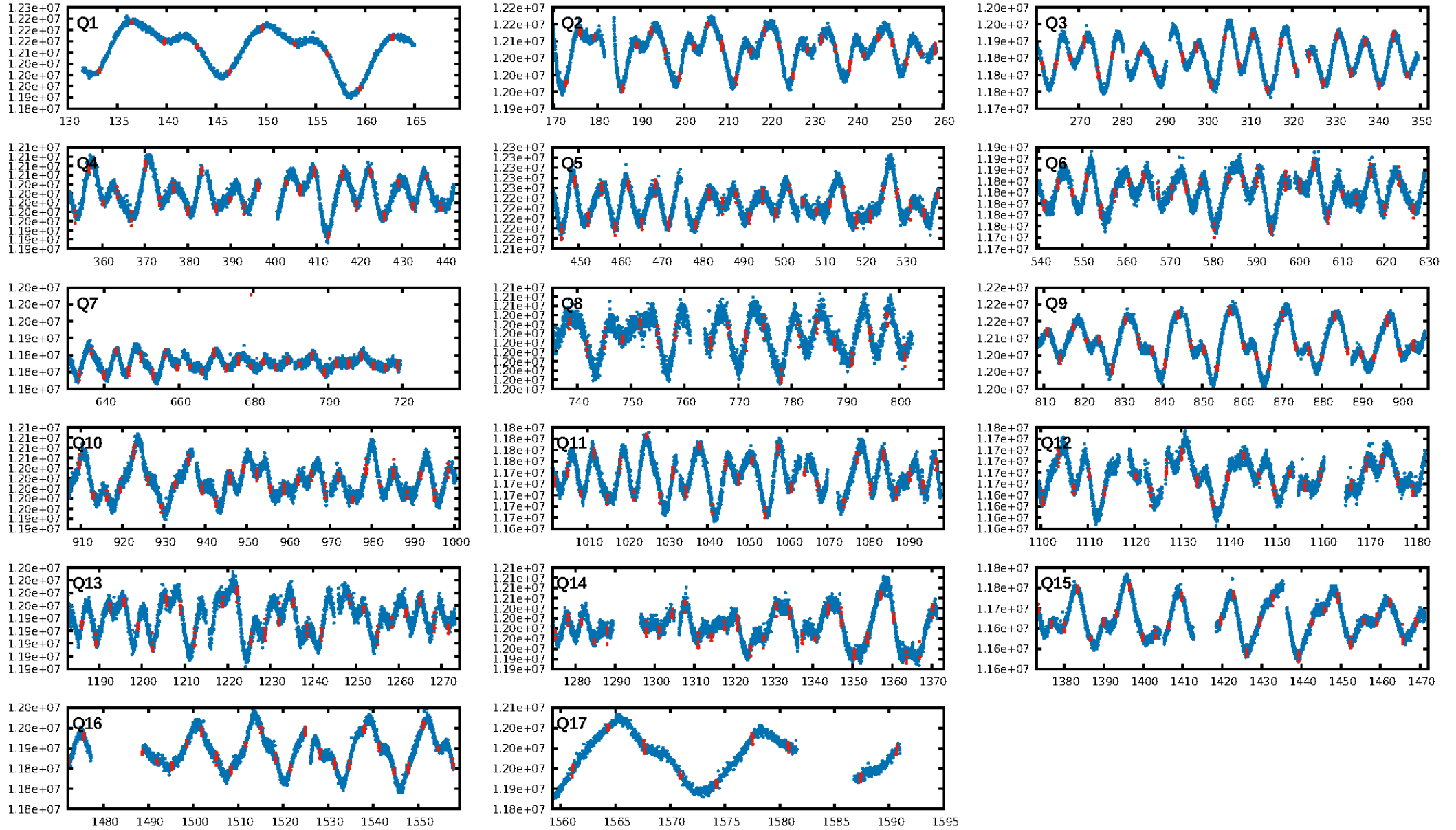
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.24e-172
RollingBand-fgt: 1.00 [389/389]
GhostDiagnostic-chr: 2.691
Centroid-sig: 22.5%
Centroid-so: 0.589 arcsec [1.41 σ]
OotOffset-rm: 0.272 arcsec [2.11 σ]
KicOffset-rm: 0.234 arcsec [1.76 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

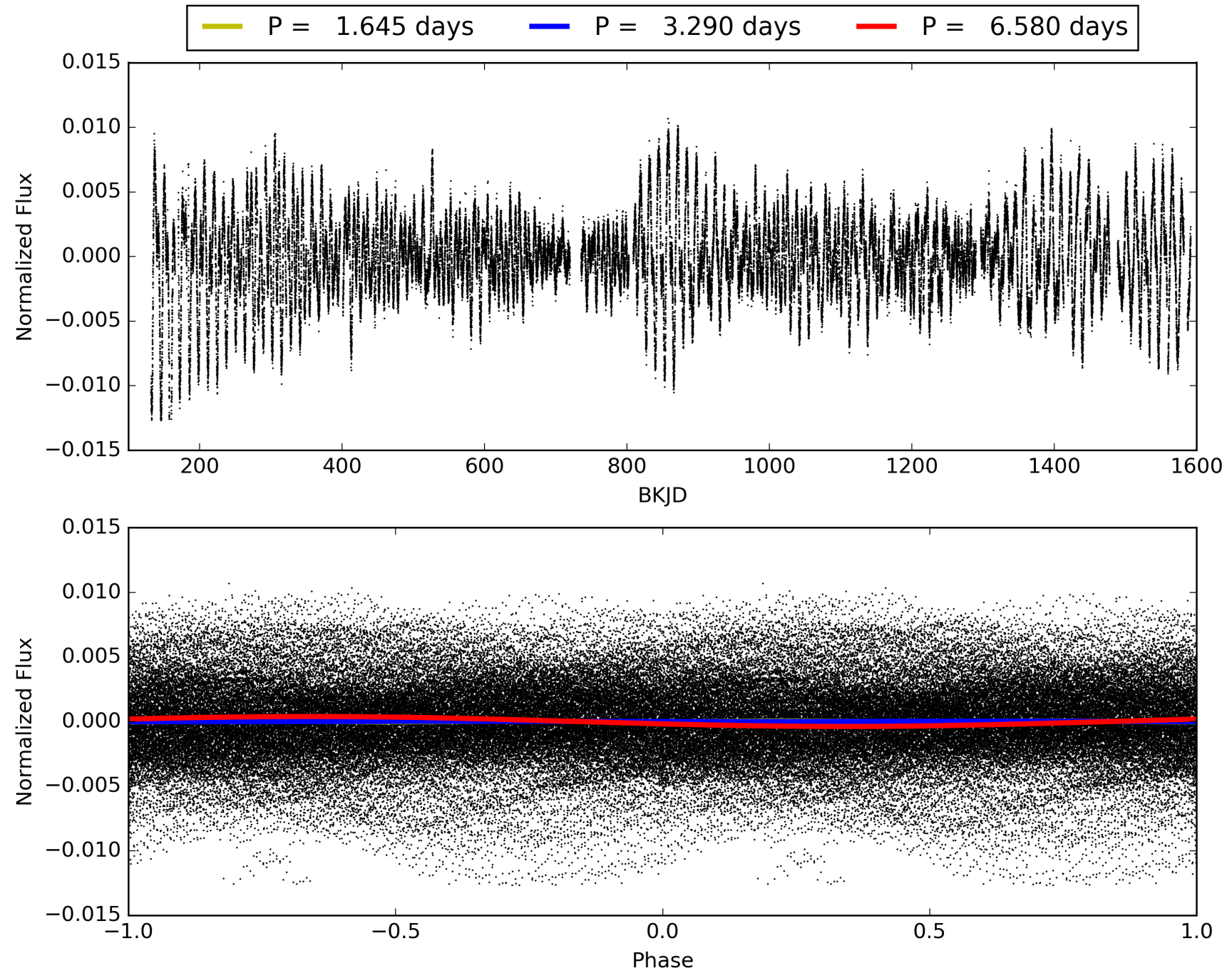
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:27:46 Z

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

TCE 004917596-01, PDC Light Curves

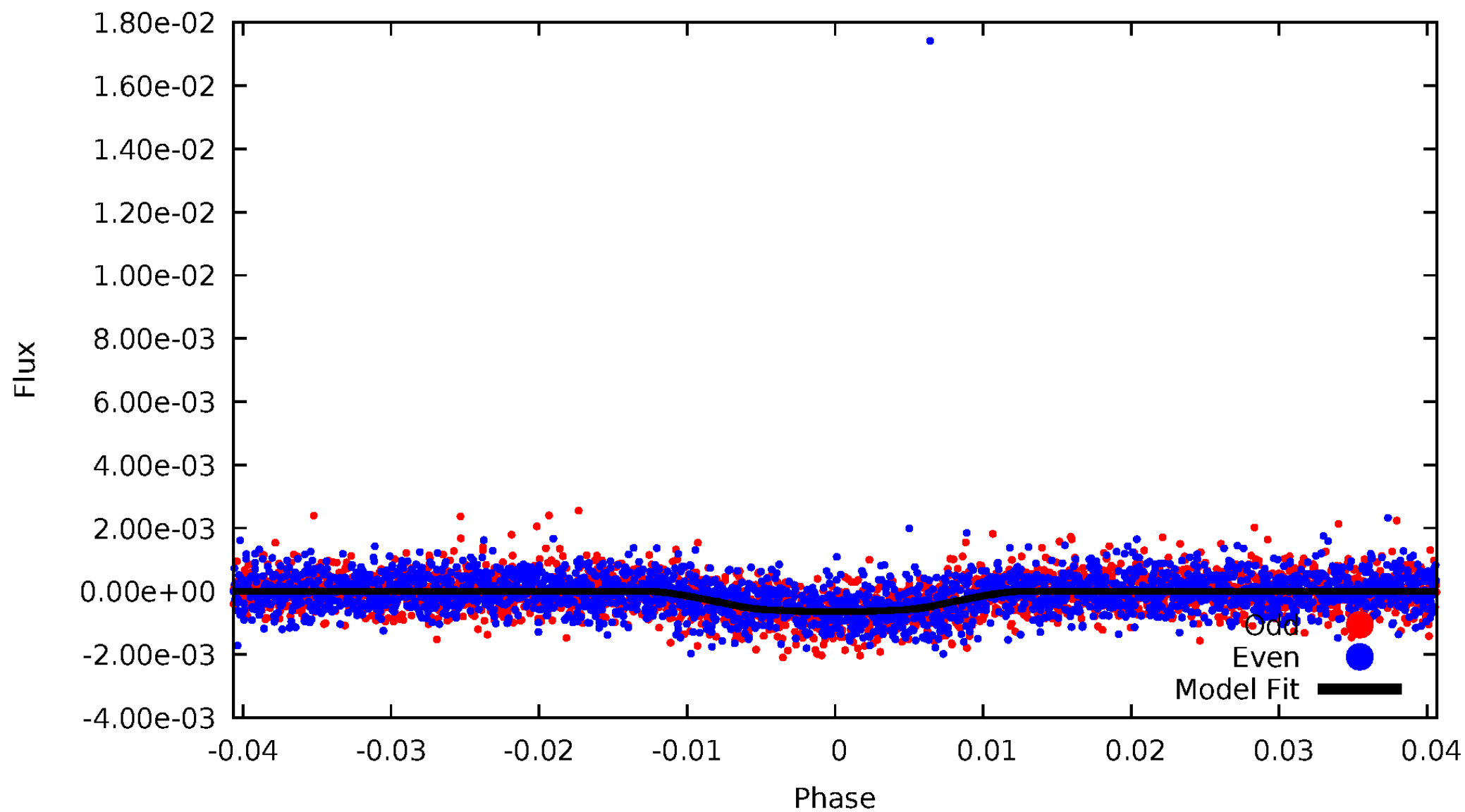


TCE 004917596-01



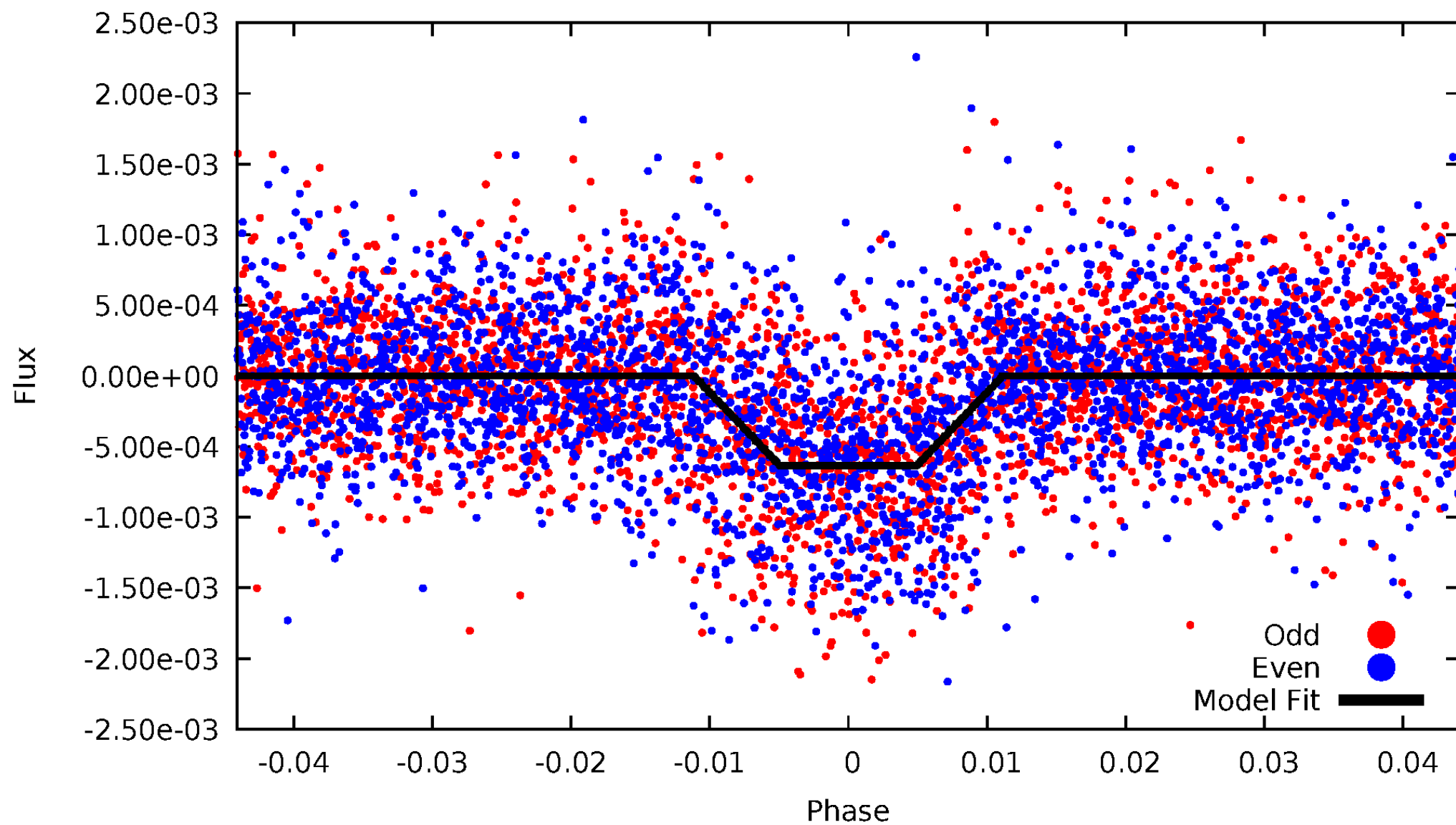
DV Odd/Even

TCE 004917596-01



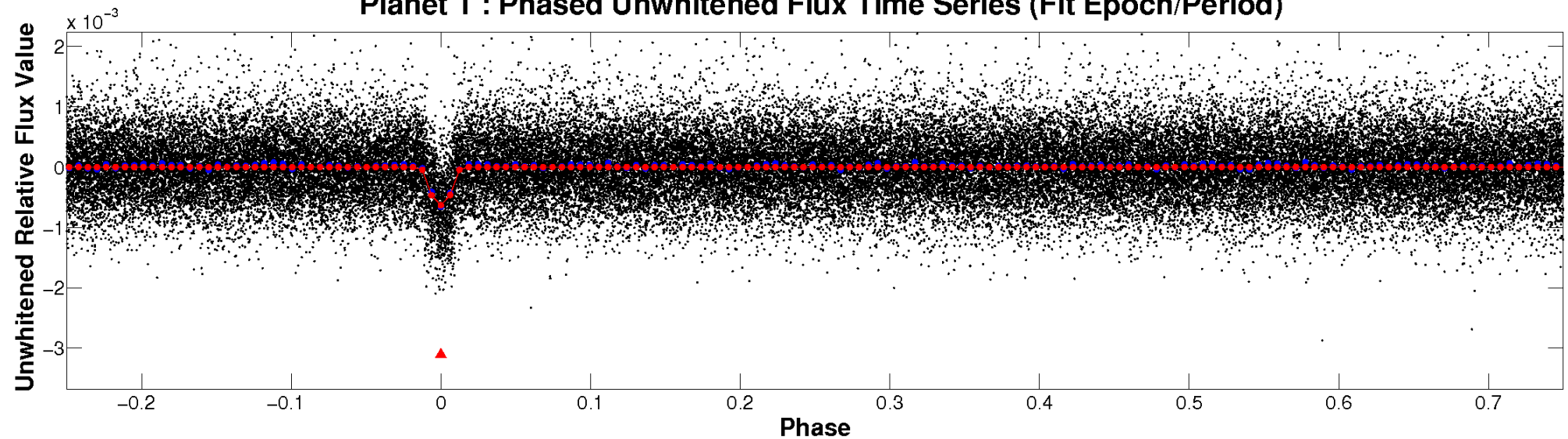
ALT Odd/Even

TCE 004917596-01

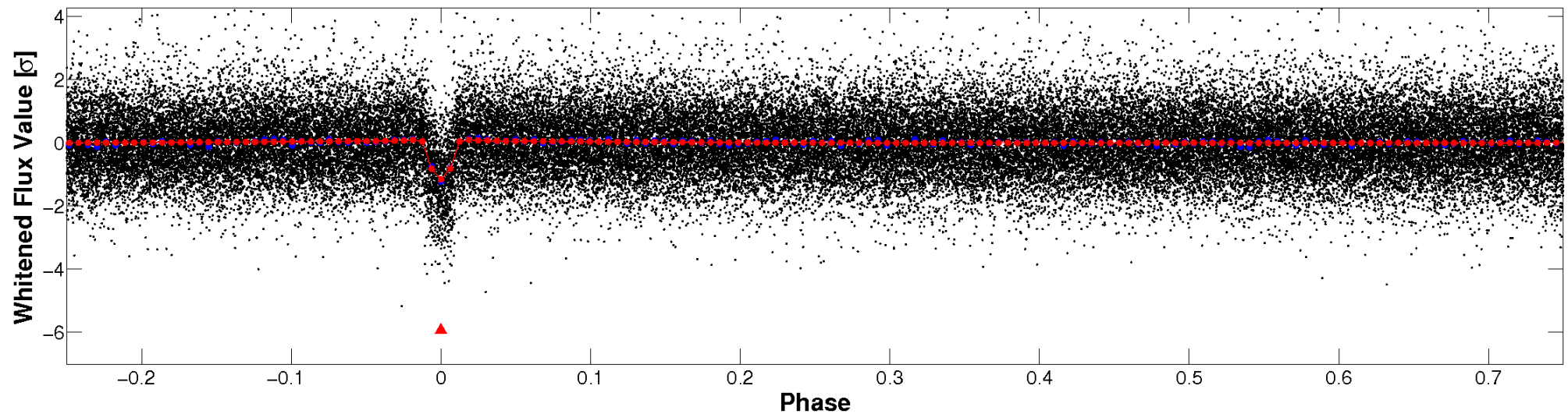


Non-Whitened Vs. Whitened Light Curve

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

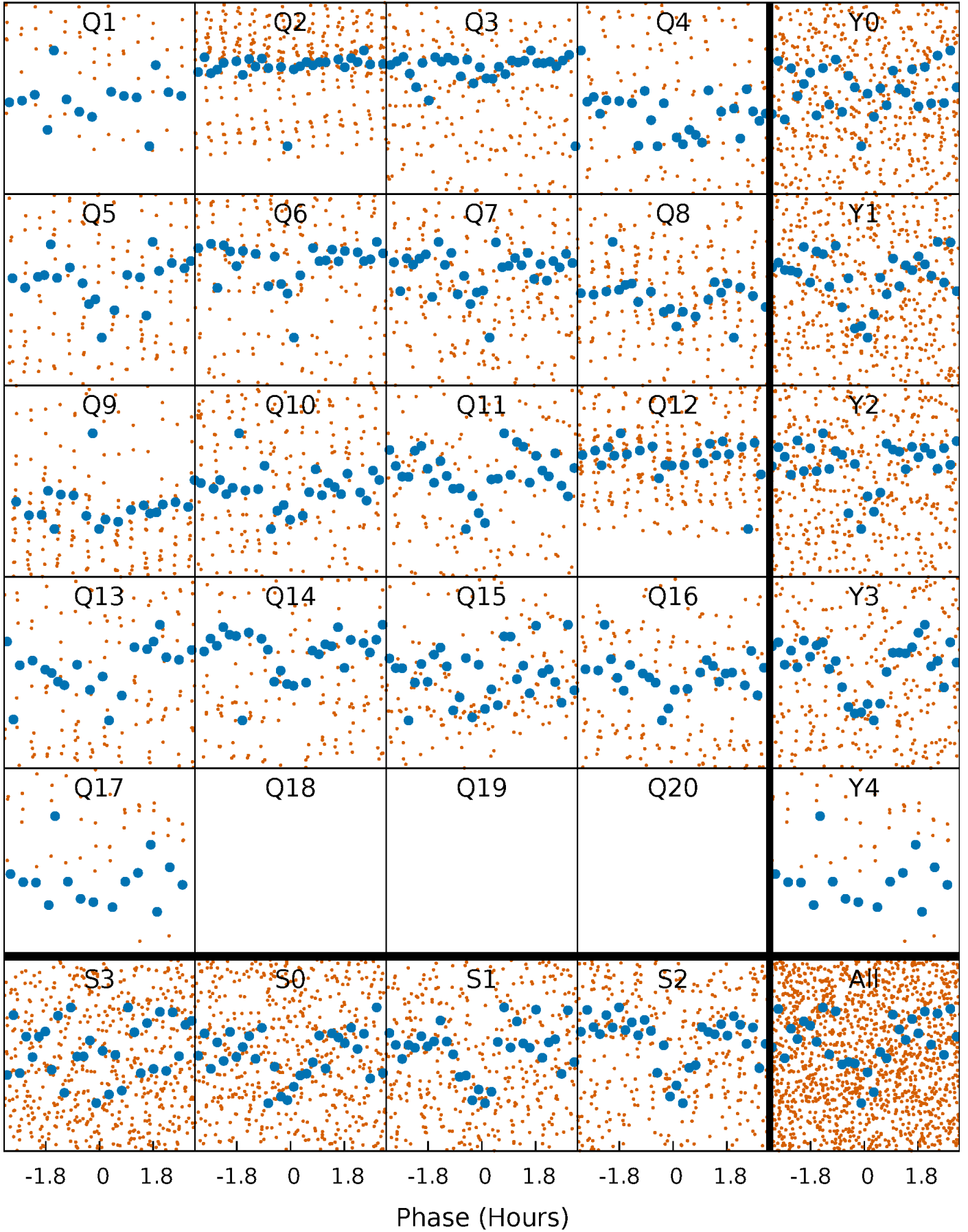


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



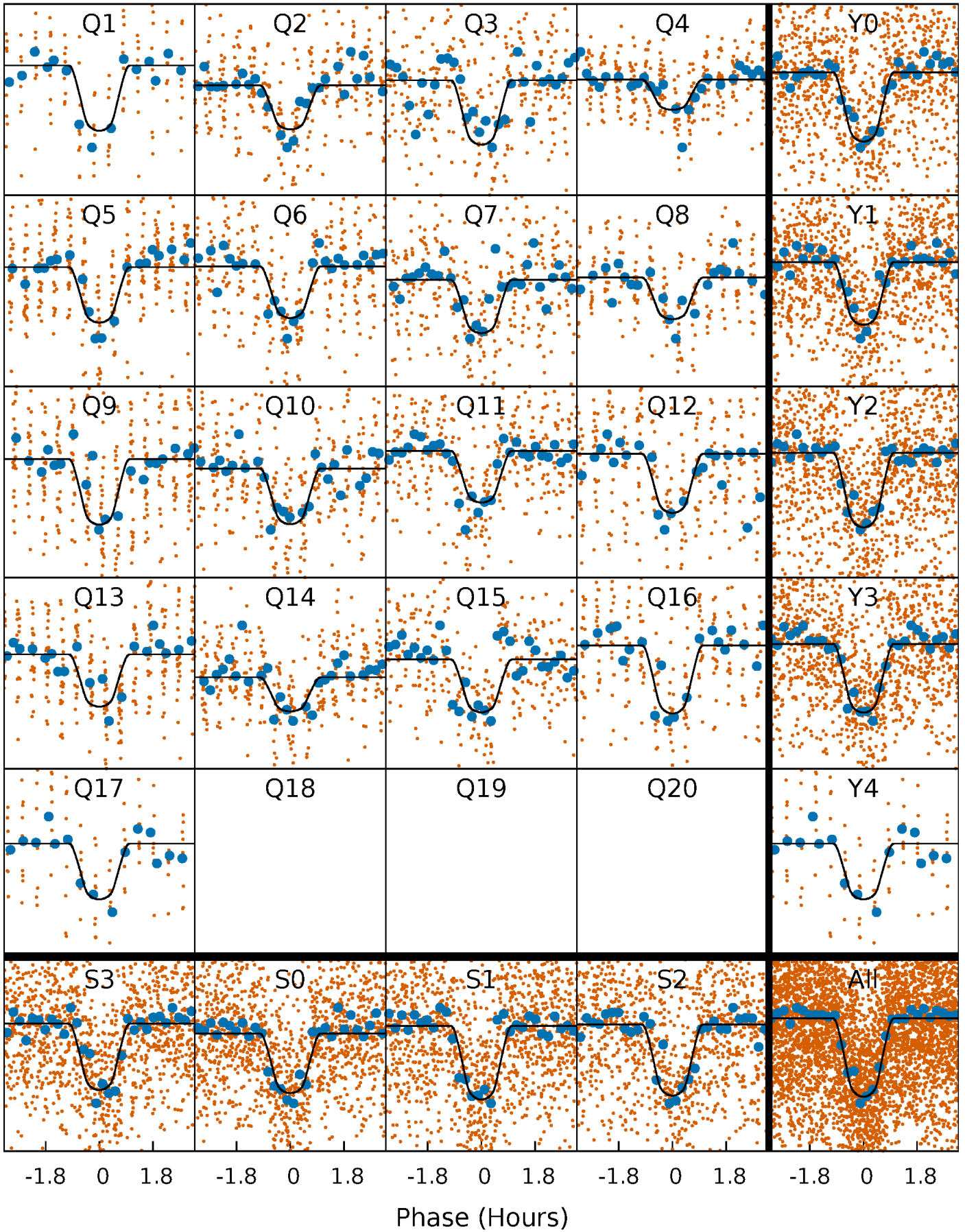
PDC Quarter-Phased Transit Curves

TCE 004917596-01 P= 3.290129 Days $T_0=133.153666$ (BKJD)



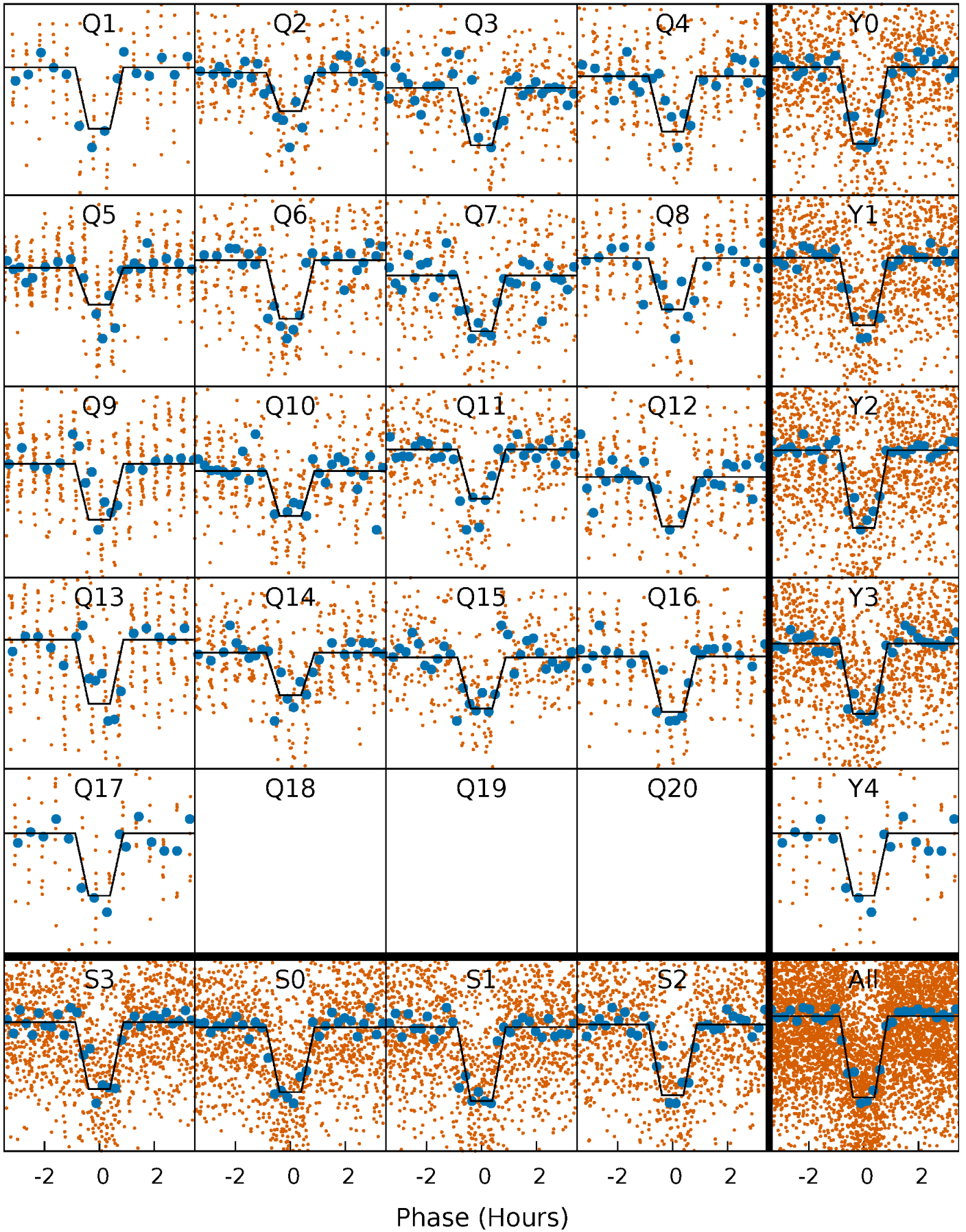
DV Quarter-Phased Transit Curves

TCE 004917596-01 $P = 3.290129$ Days $T_0 = 133.153666$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

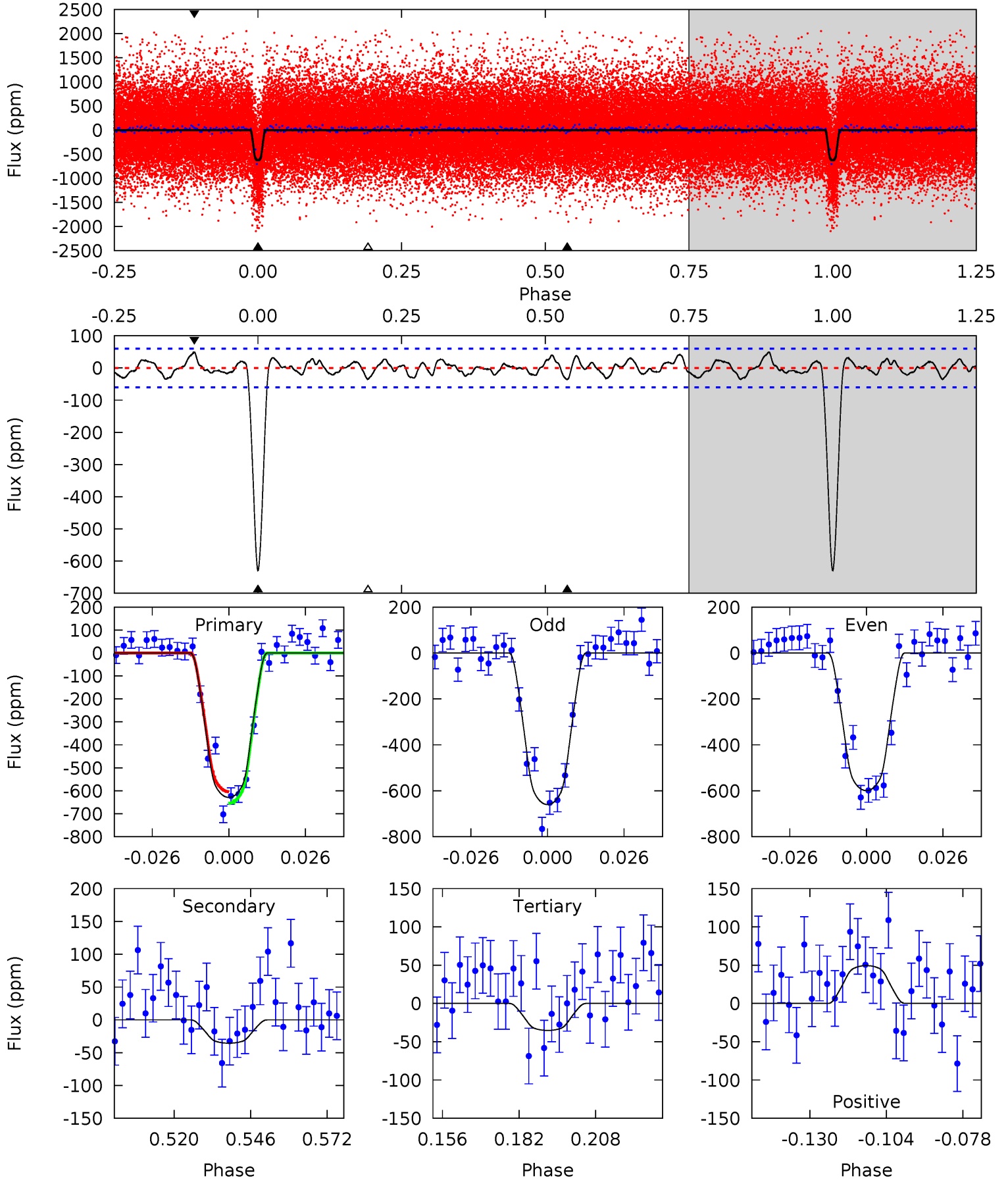
TCE 004917596-01 P= 3.290125 Days $T_0=133.155115$ (BKJD)



DV Model-Shift Uniqueness Test

004917596-01, P = 3.290129 Days, E = 129.863537 Days

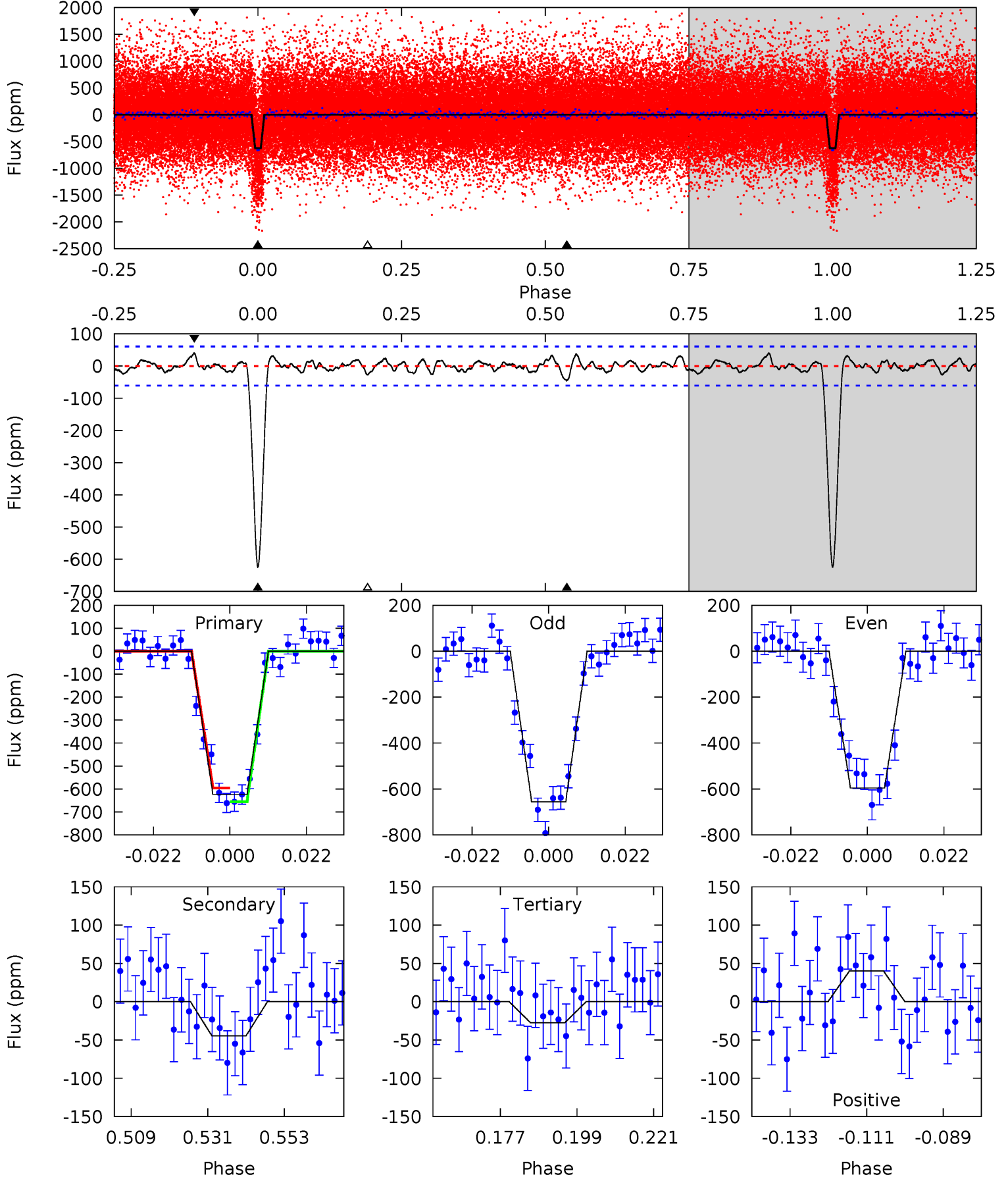
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.7	2.87	2.84	3.99	4.84	2.23	1.37	47.9	46.7	0.02	-1.12	2.46	0.94	0.07	2.03



Alt Model-Shift Uniqueness Test

004917596-01, P = 3.290125 Days, E = 129.864990 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.0	3.57	2.21	3.22	4.87	2.29	1.01	47.8	46.8	1.36	0.35	2.42	0.95	0.06	2.41



Stellar Parameters For KIC 004917596

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4484^{+134}_{-134}	$4.654^{+0.054}_{-0.027}$	$-0.560^{+0.300}_{-0.300}$	$0.594^{+0.046}_{-0.051}$	$0.580^{+0.063}_{-0.039}$	$3.905^{+0.977}_{-0.501}$
	+3%/-3%	+1%/-1%	+54%/-54%	+8%/-9%	+11%/-7%	+25%/-13%
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 004917596-01 / KOI 1973.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 12	$1.82^{+0.34}_{-0.37}$	1115^{+40}_{-37}	2727^{+195}_{-196}	$7.801^{+4.956}_{-3.407}$
Alt.	-45 ± 12	$1.60^{+0.35}_{-0.34}$	1114^{+36}_{-36}	2905^{+253}_{-209}	12^{+9}_{-5}

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

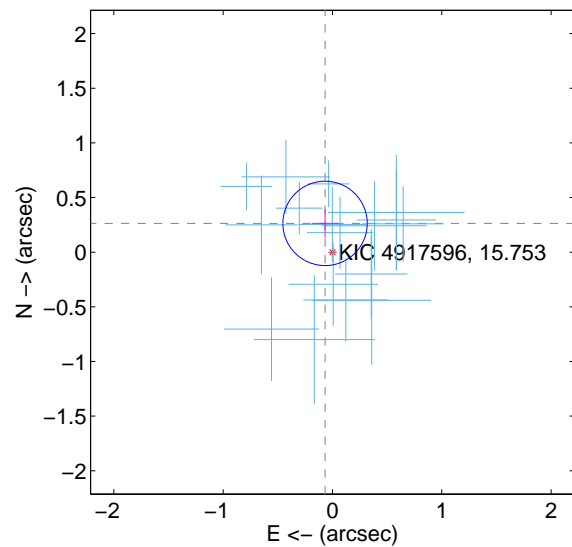
Supplemental centroid analysis for 004917596-01. Kepler magnitude: 15.75. Transit SNR 33.05

There are 17 quarters with good PRF difference image offsets

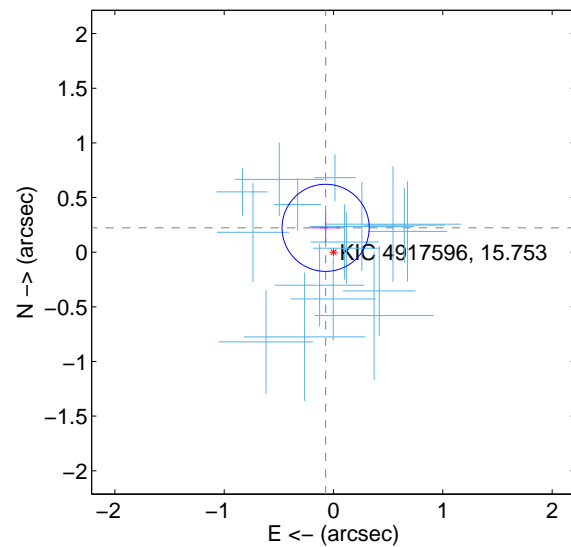
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.272 ± 0.129	2.11	0.068 ± 0.122	0.263 ± 0.131
PRF-fit source offset from KIC position	0.234 ± 0.133	1.76	0.072 ± 0.129	0.223 ± 0.132
photometric centroid source offset	0.59 ± 0.42	1.41	0.56 ± 0.42	-0.17 ± 0.39

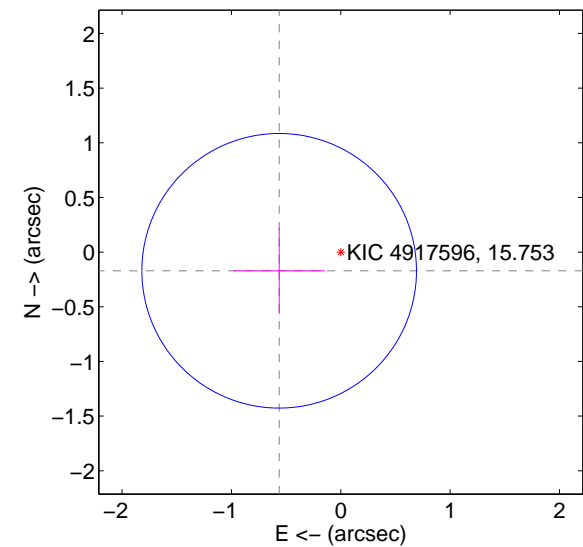
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

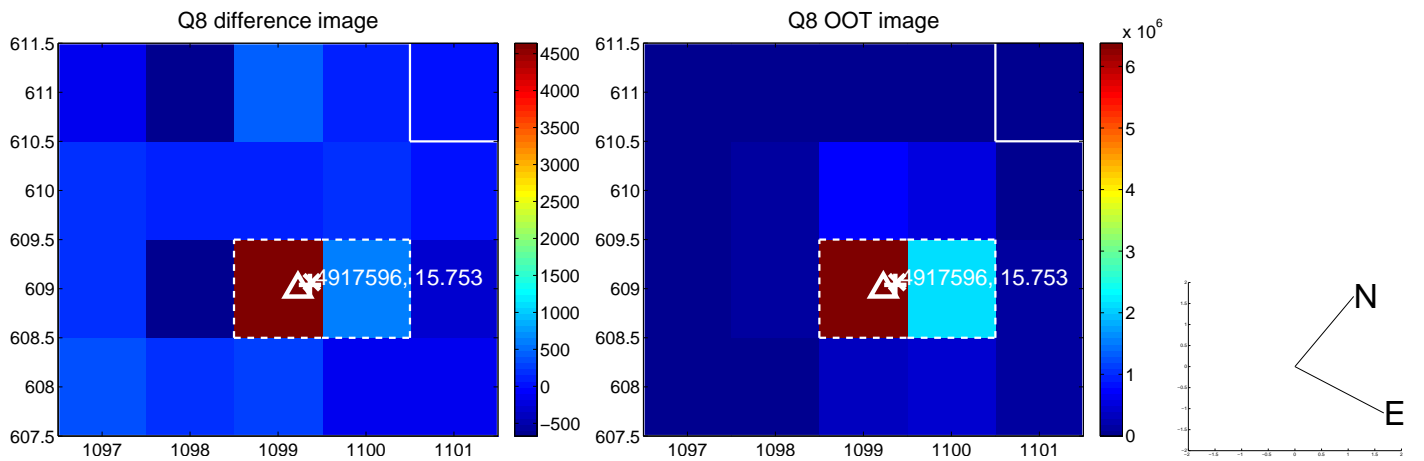
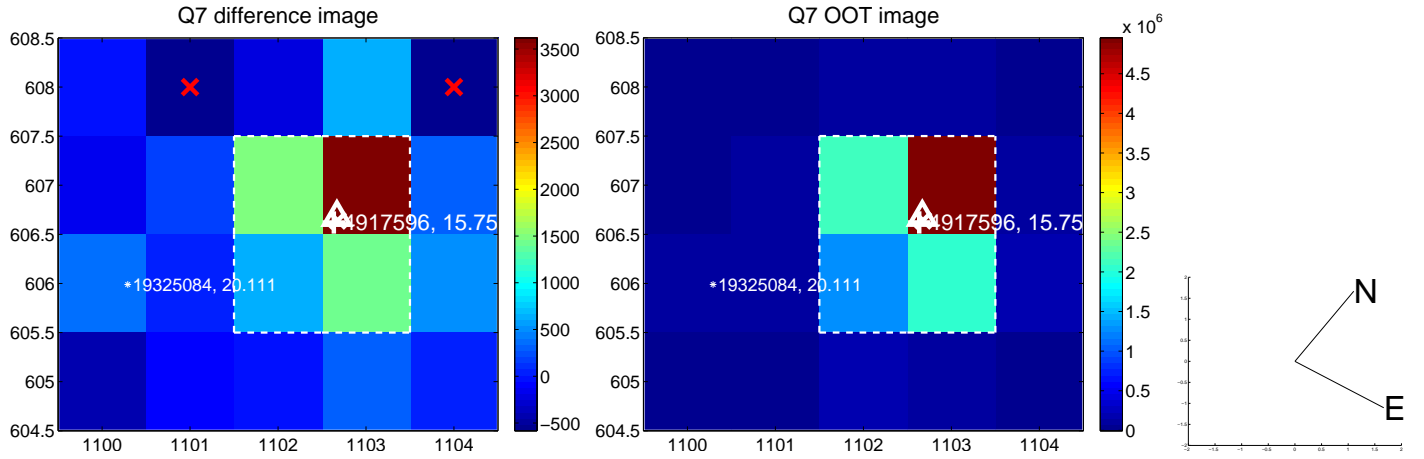
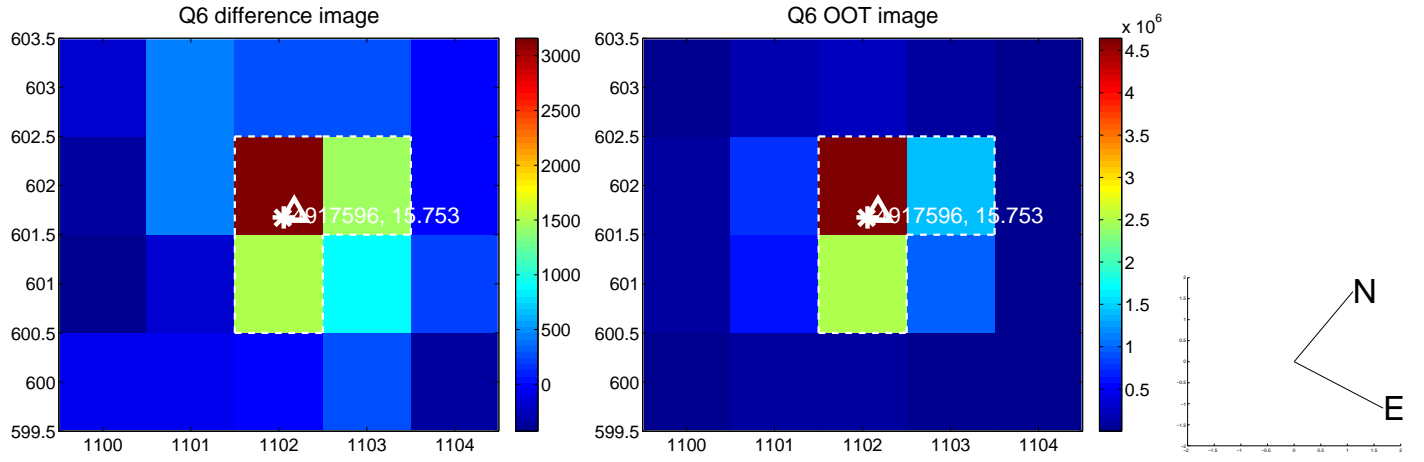
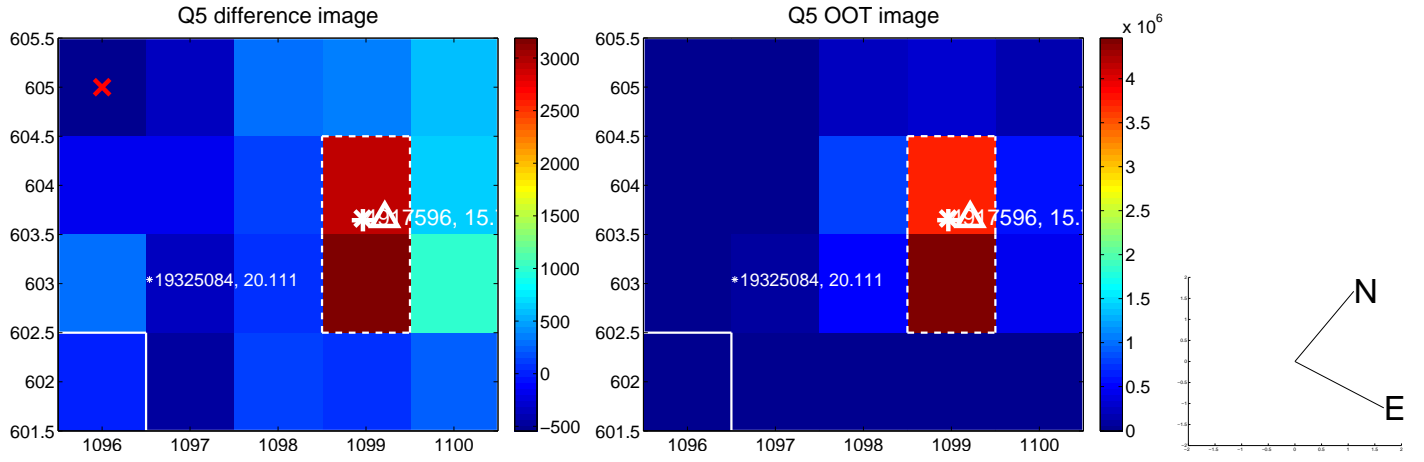


offset from photometric centroids

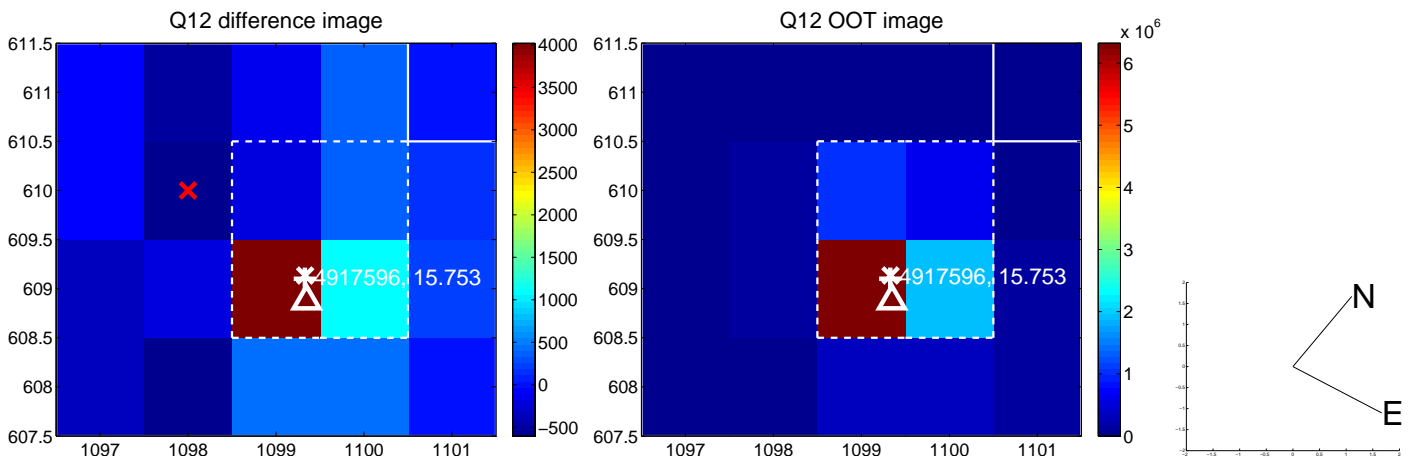
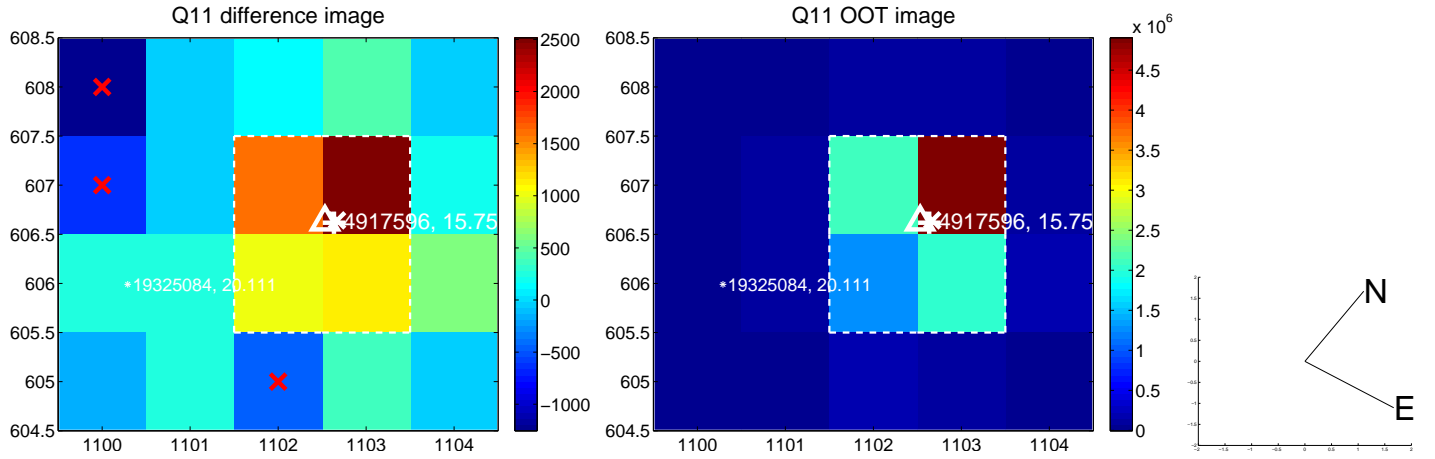
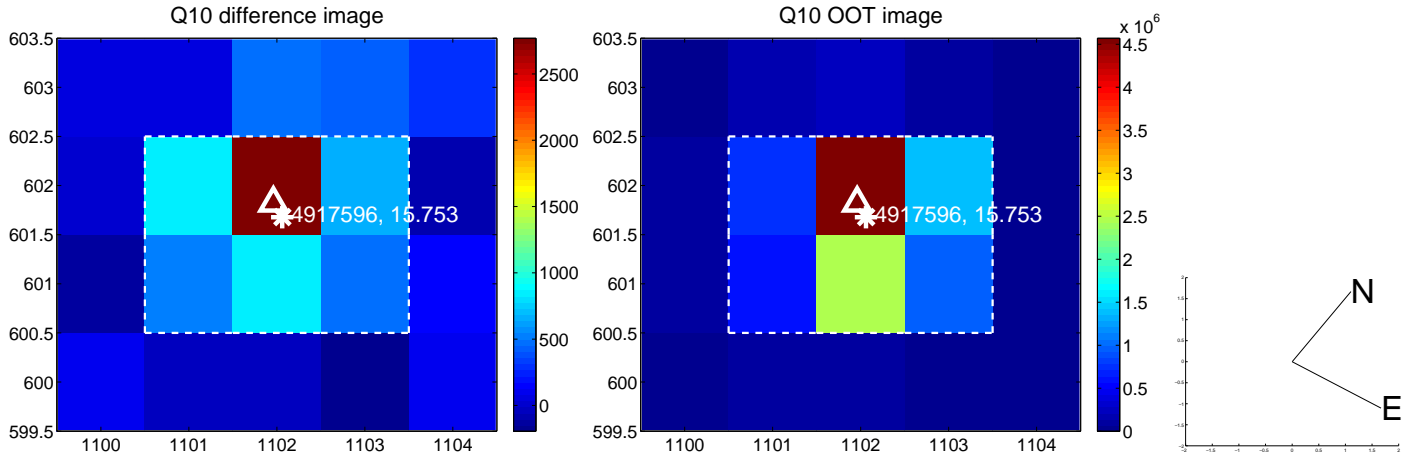
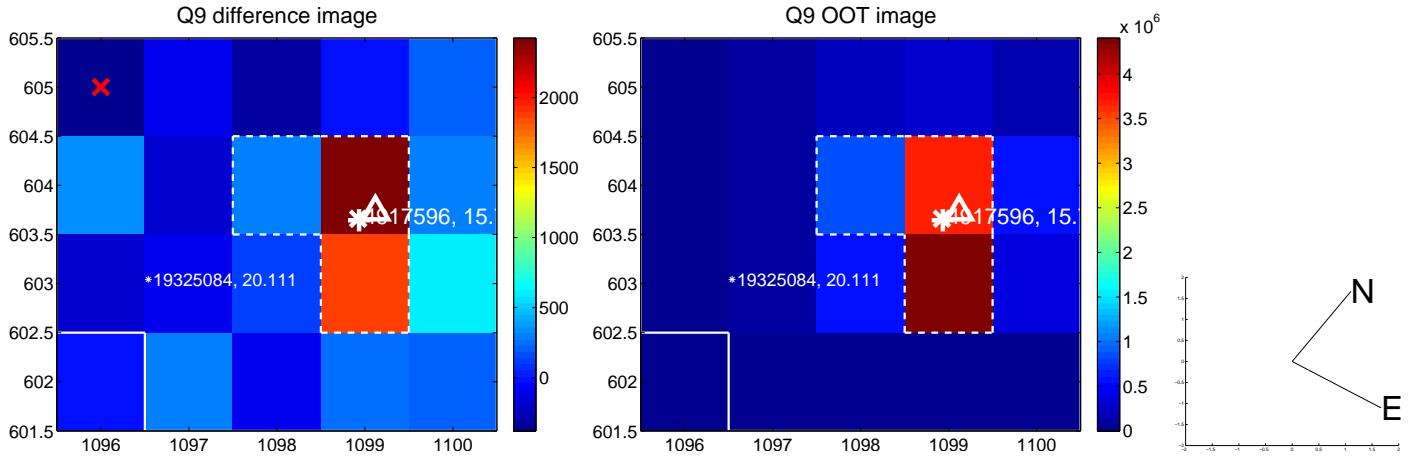


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

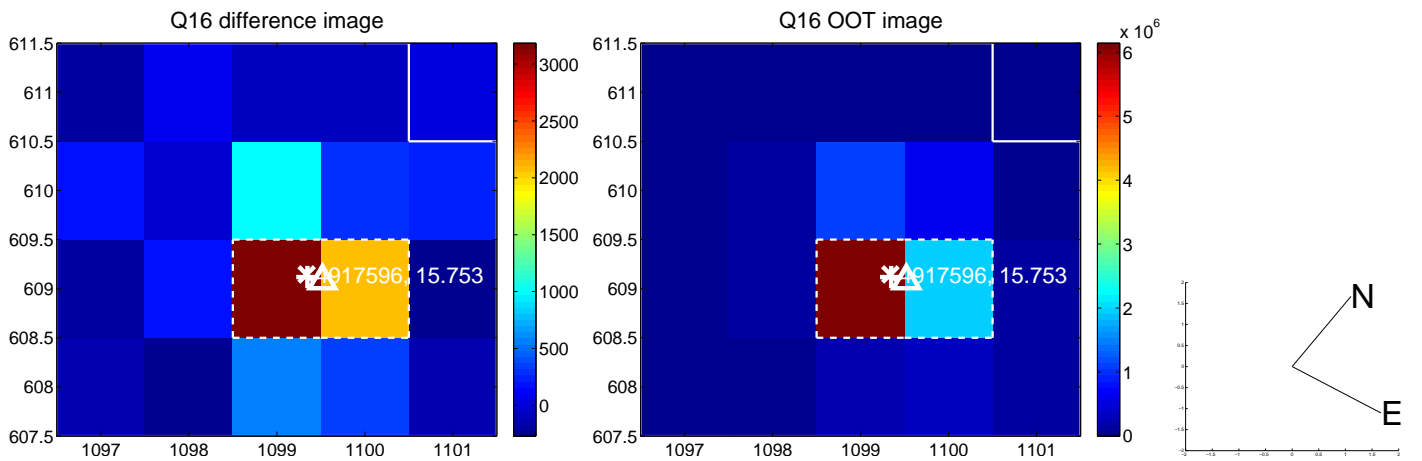
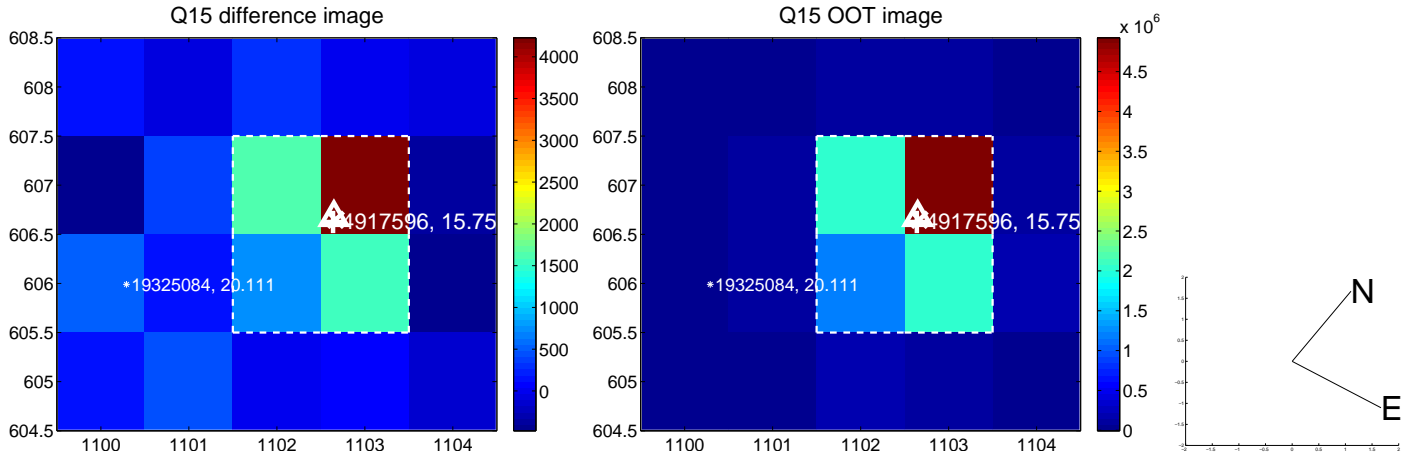
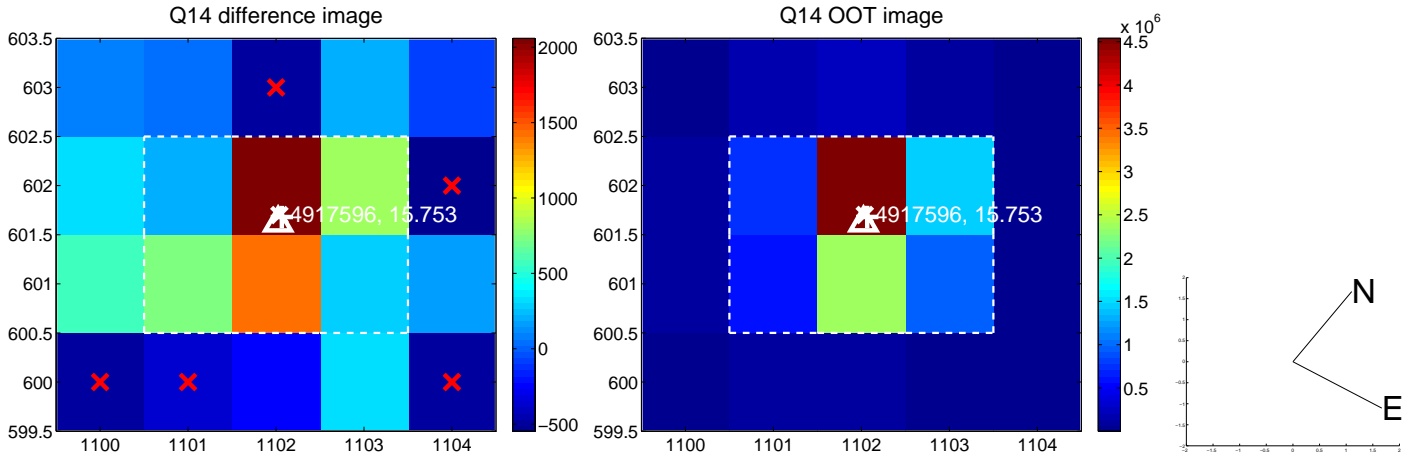
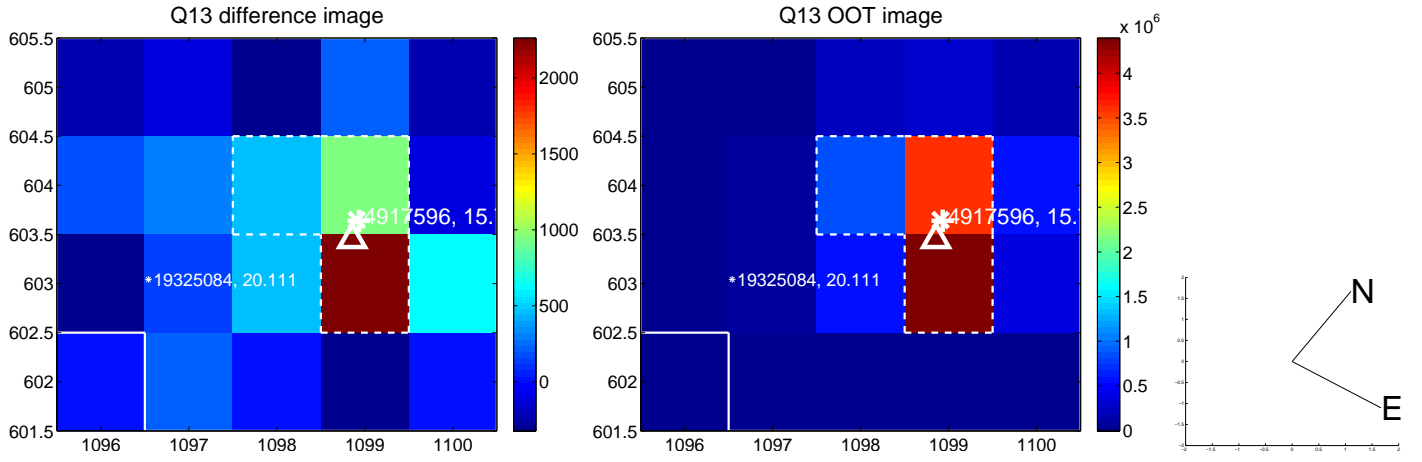
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



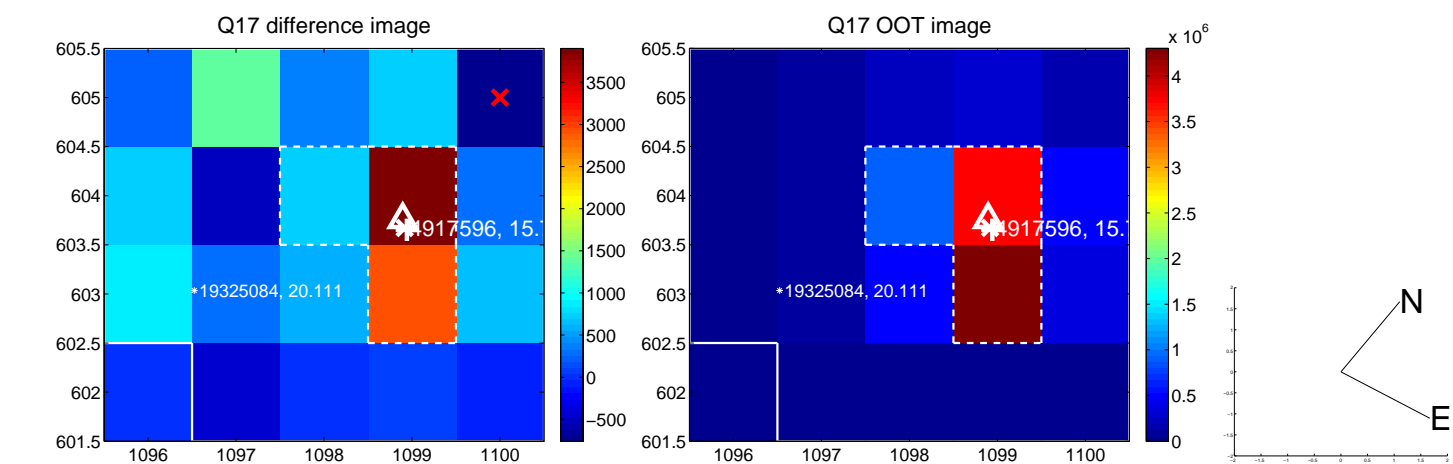
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



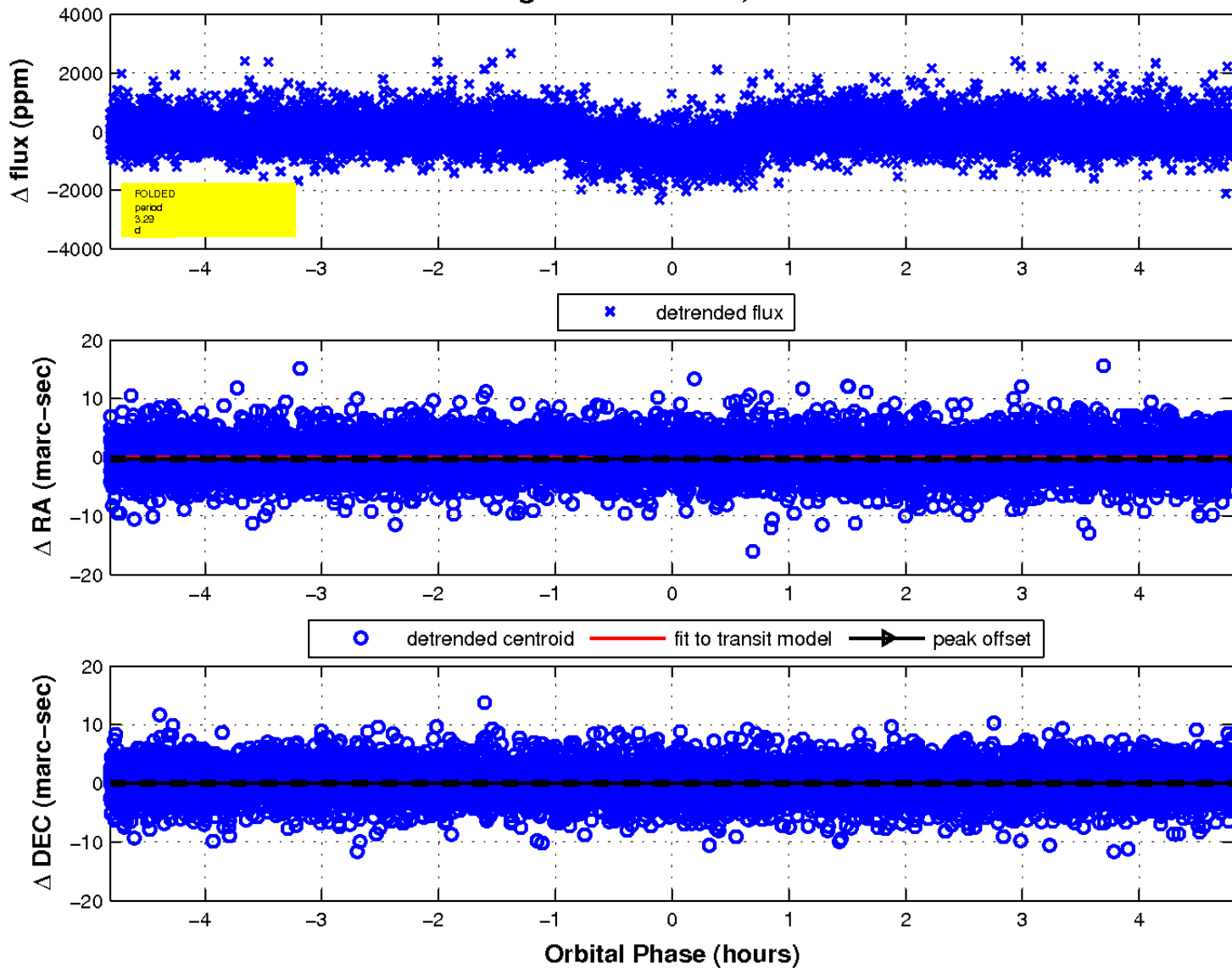
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

