

KIC 007836096

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})
007836096-01	OBS	5435.01	15.996091	138.936189	470.2	1.673	9.0	9.9	0.78	4949	1.64	23.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007836096-01	OBS	PC	0.99	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.

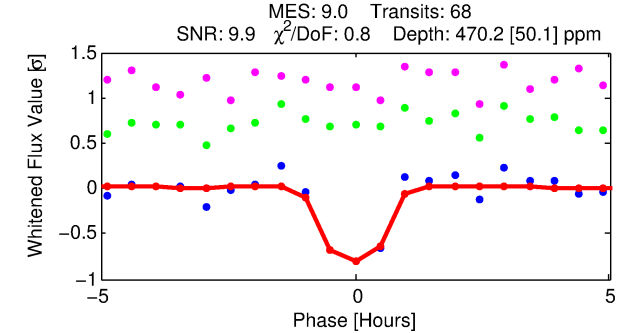
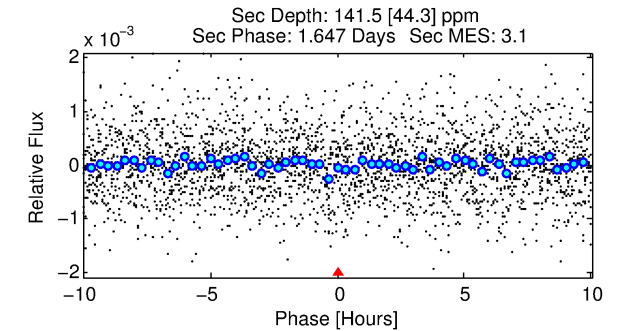
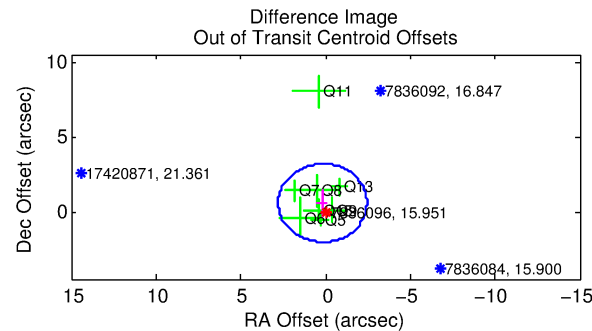
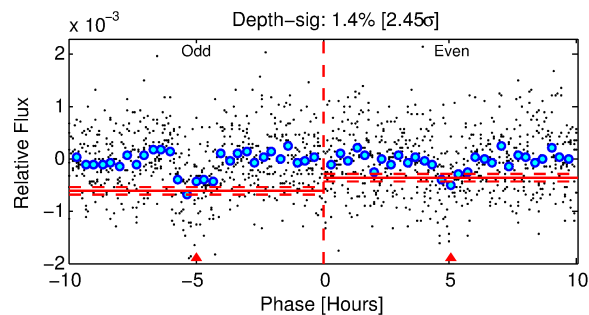
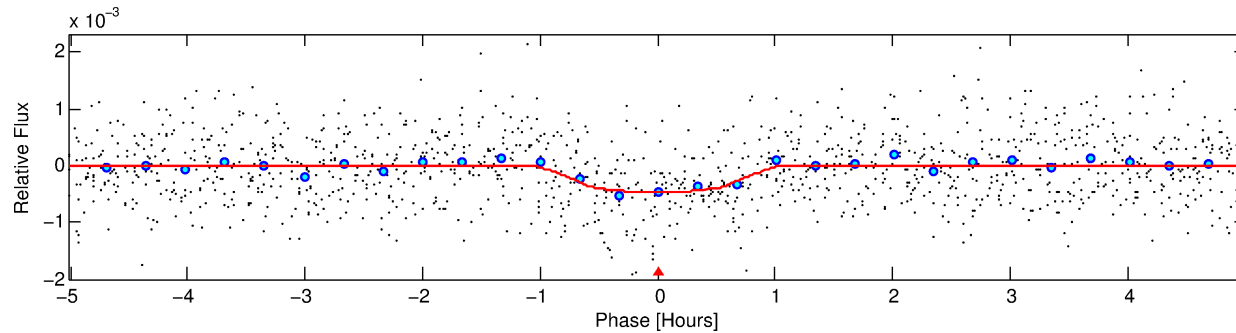
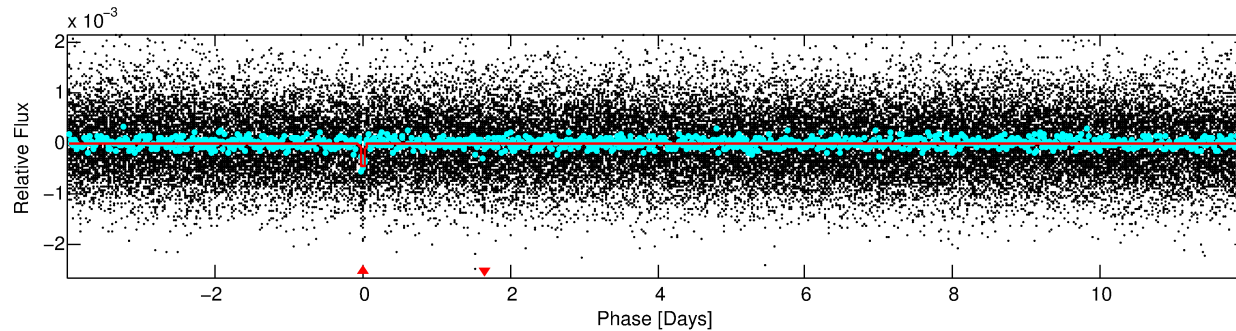
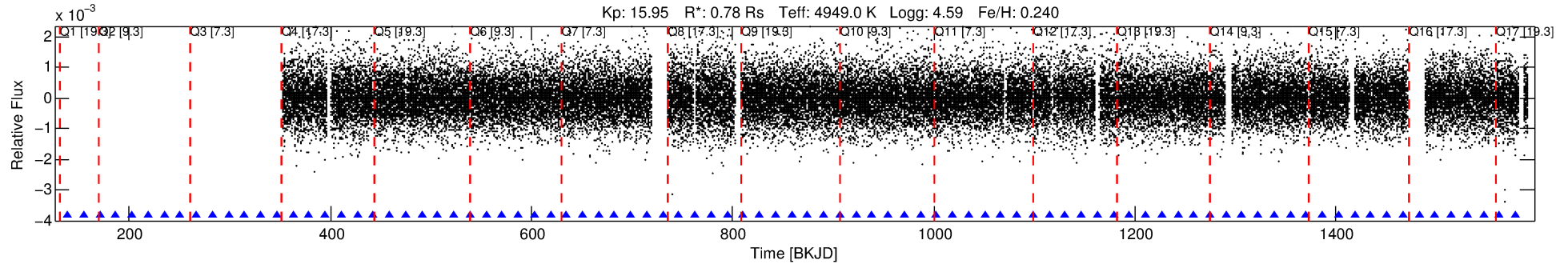
Ephemeris Match Information For 007836096-01

No Significant Match Found

DV One-Page Summary

KIC: 7836096 Candidate: 1 of 1 Period: 15.996 d

KOI: K05435.01 Corr: 0.973



DV Fit Results:

Period = 15.99609 [0.00011] d
Epoch = 138.9362 [0.0060] BKJD
Rp/R* = 0.0193 [0.0329]
a/R* = 73.21 [400.27]
b = 0.19 [28.82]
Seff = 23.36 [4.42]
Teq = 561 [27] K
Rp = 1.64 [2.80] Re
a = 0.1178 [0.0096] AU
Ag = 403.03 [1381.15] [0.29 σ]
Teffp = 3884 [3328] K [1.00 σ]

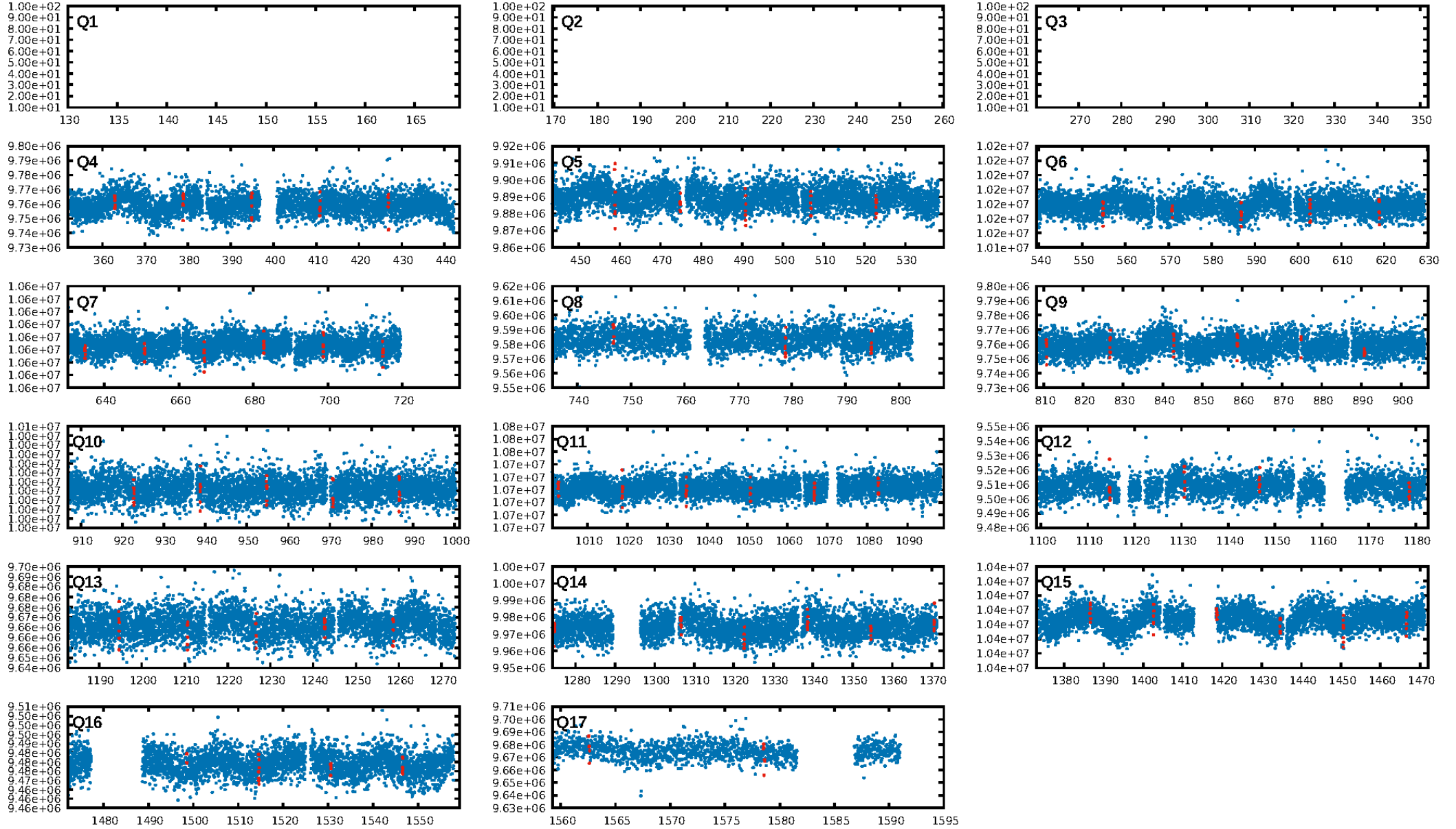
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.56e-18
RollingBand-fgt: 1.00 [66/66]
GhostDiagnostic-chr: -34
Centroid-sig: 83.1%
Centroid-so: 1.863 arcsec [1.91 σ]
OotOffset-rm: 0.602 arcsec [0.69 σ]
KicOffset-rm: 0.434 arcsec [0.92 σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [14/14]

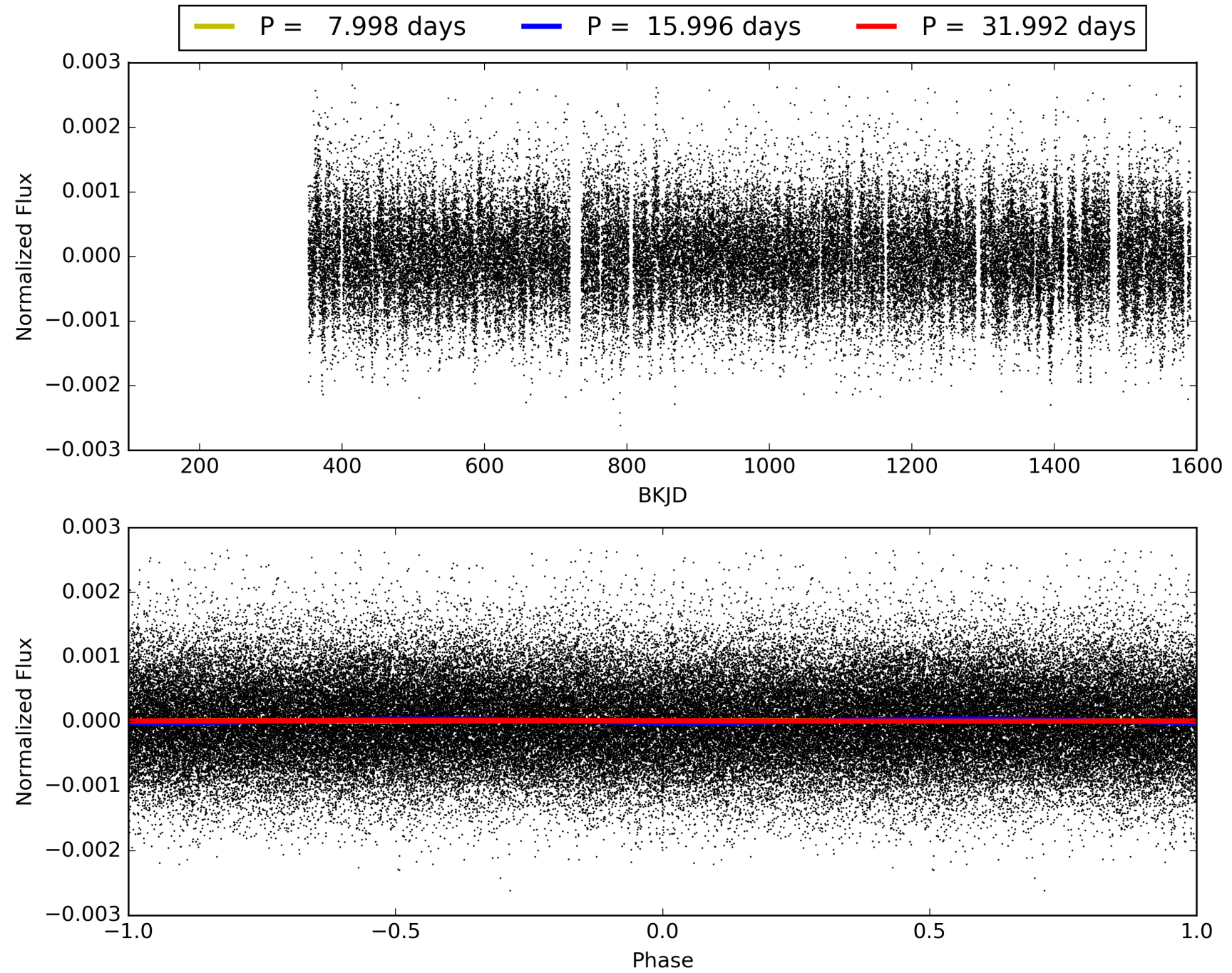
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:48:18 Z

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

TCE 007836096-01, PDC Light Curves

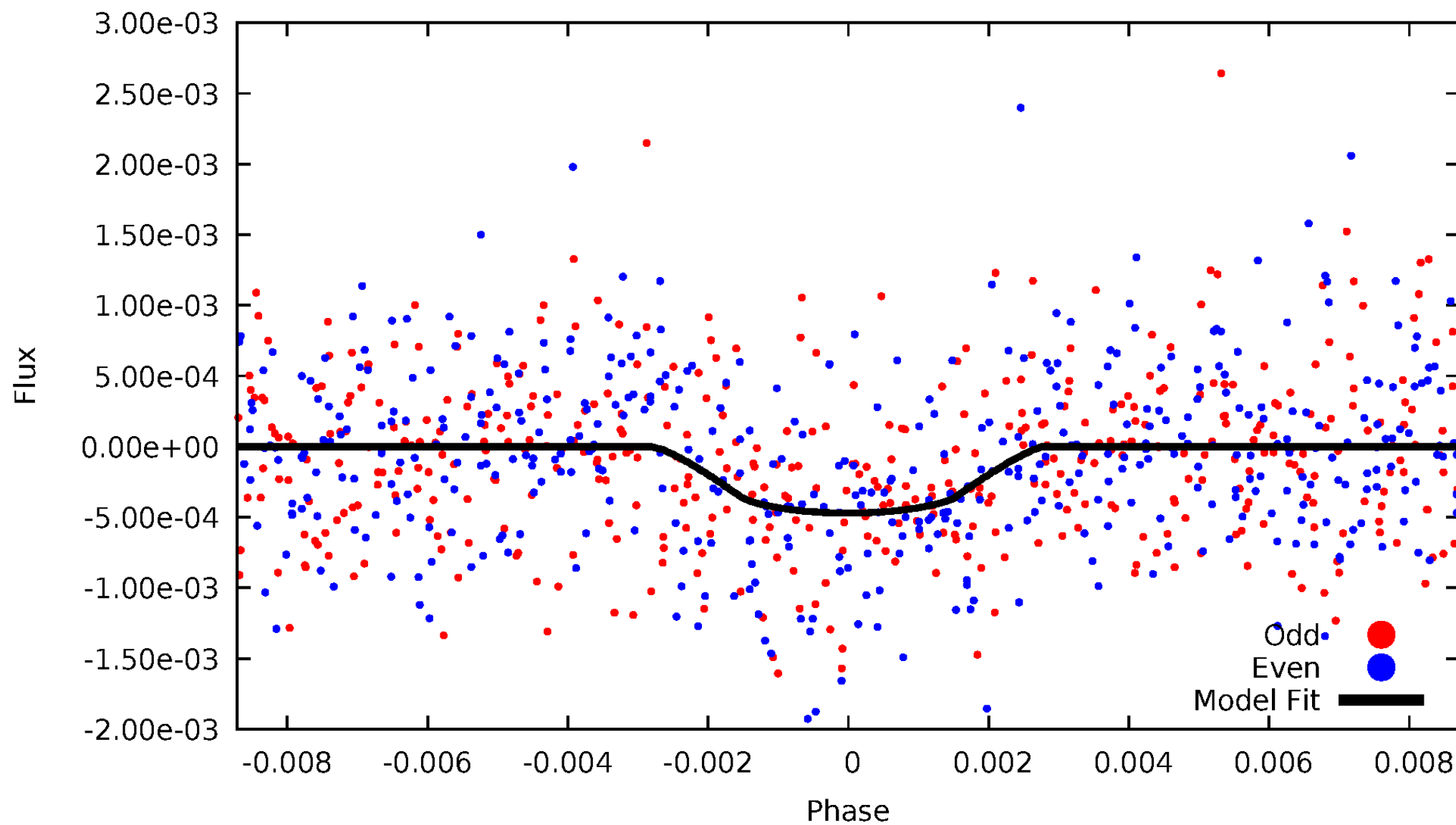


TCE 007836096-01



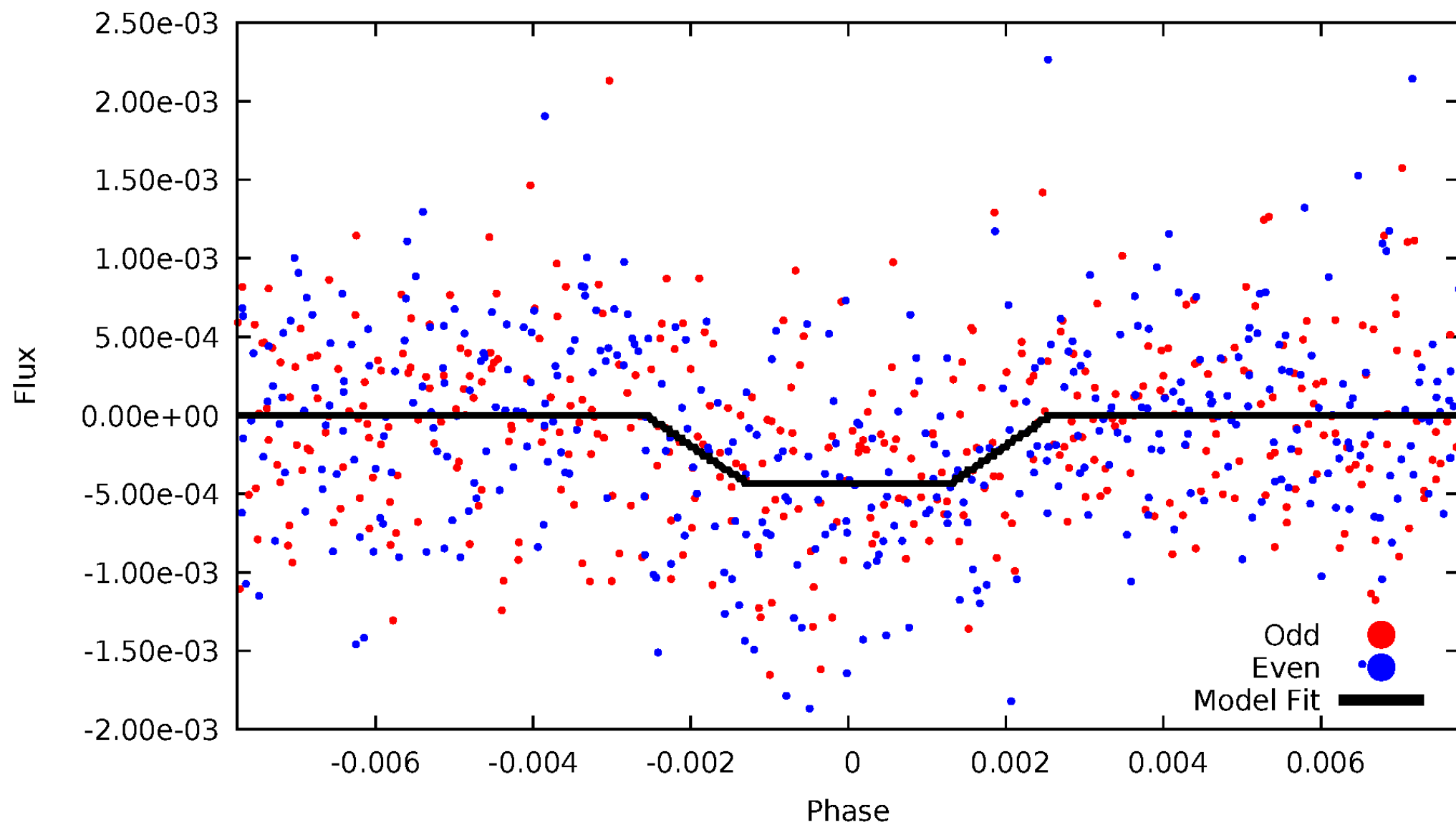
DV Odd/Even

TCE 007836096-01



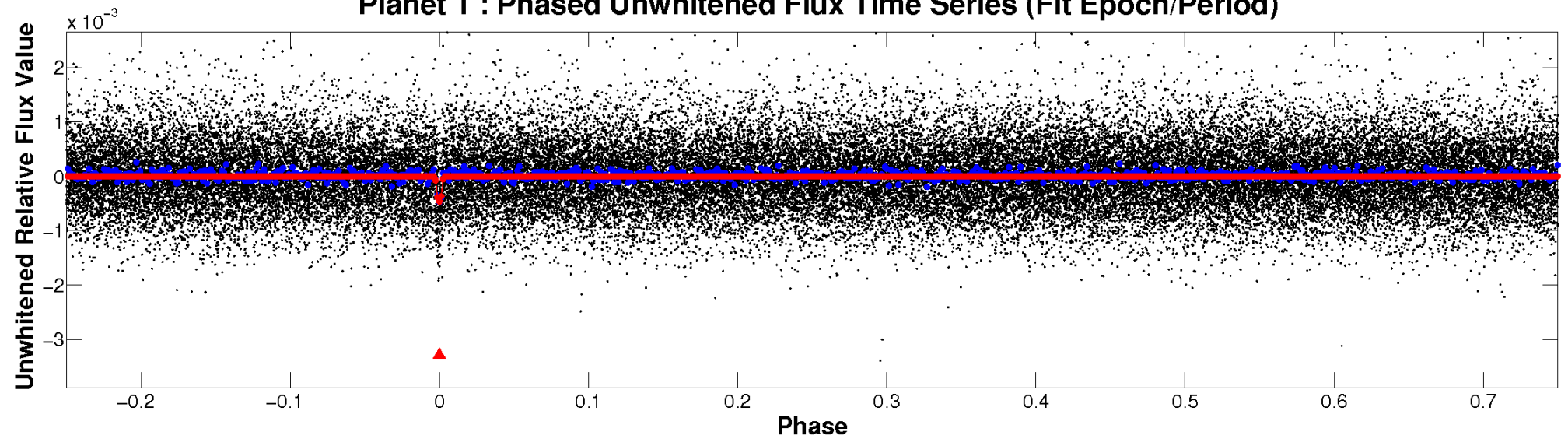
ALT Odd/Even

TCE 007836096-01

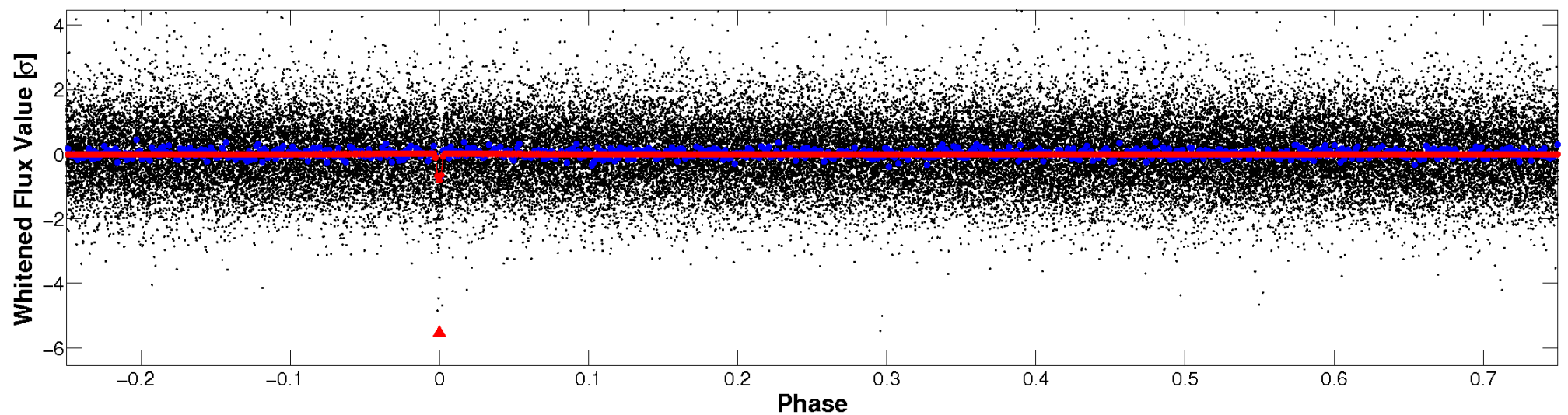


Non-Whitened Vs. Whitened Light Curve

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

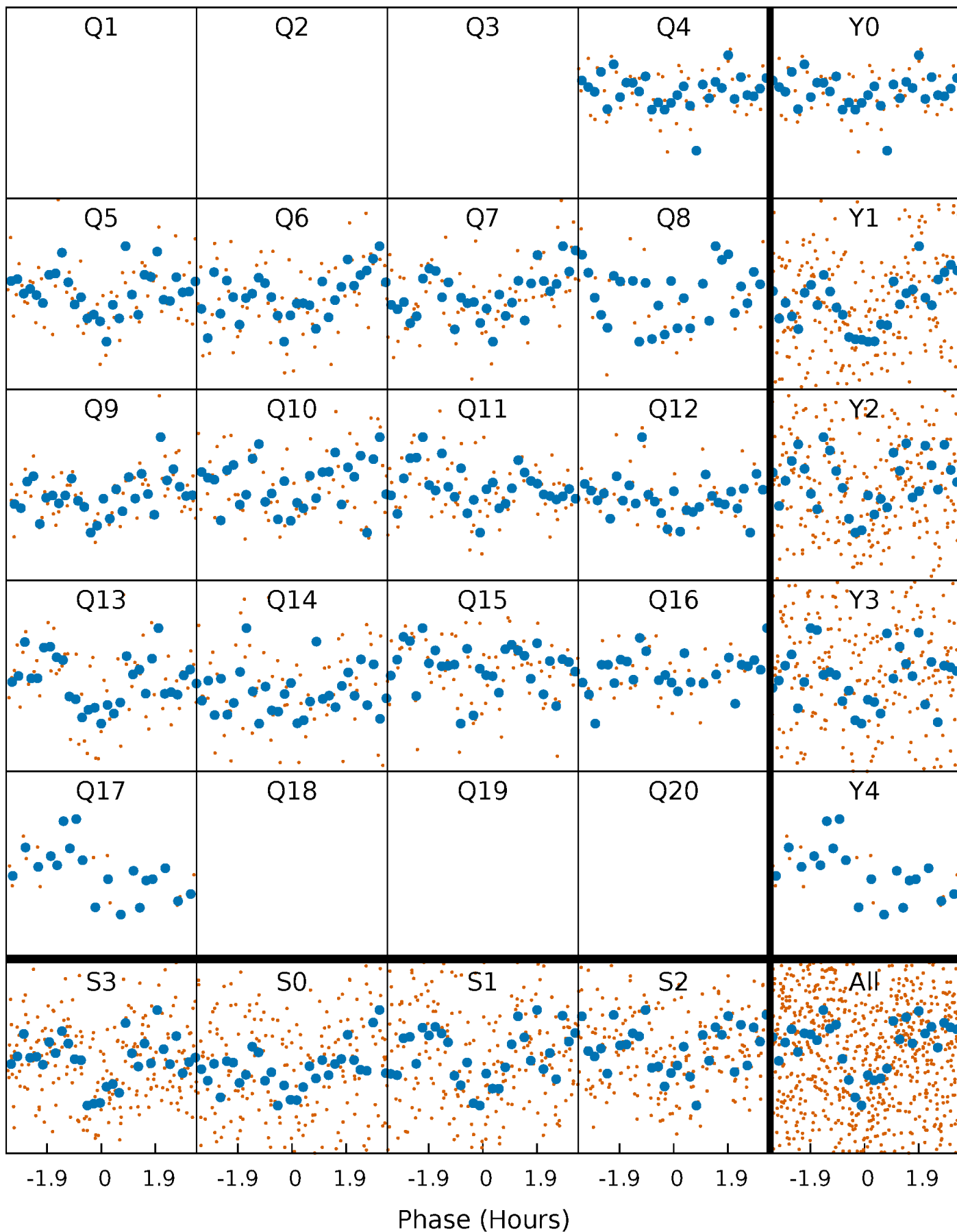


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



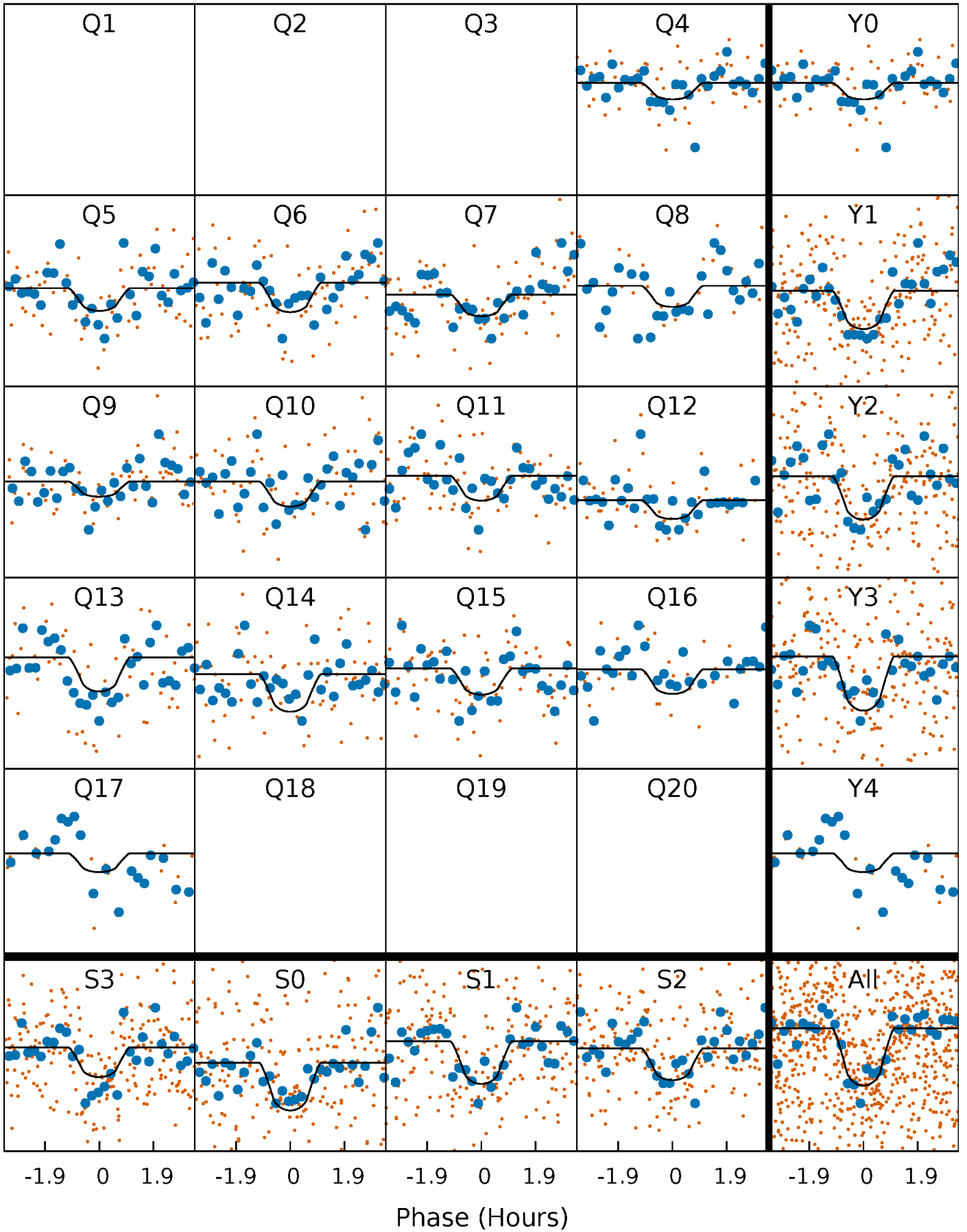
PDC Quarter-Phased Transit Curves

TCE 007836096-01 P= 15.996091 Days $T_0=138.936189$ (BKJD)



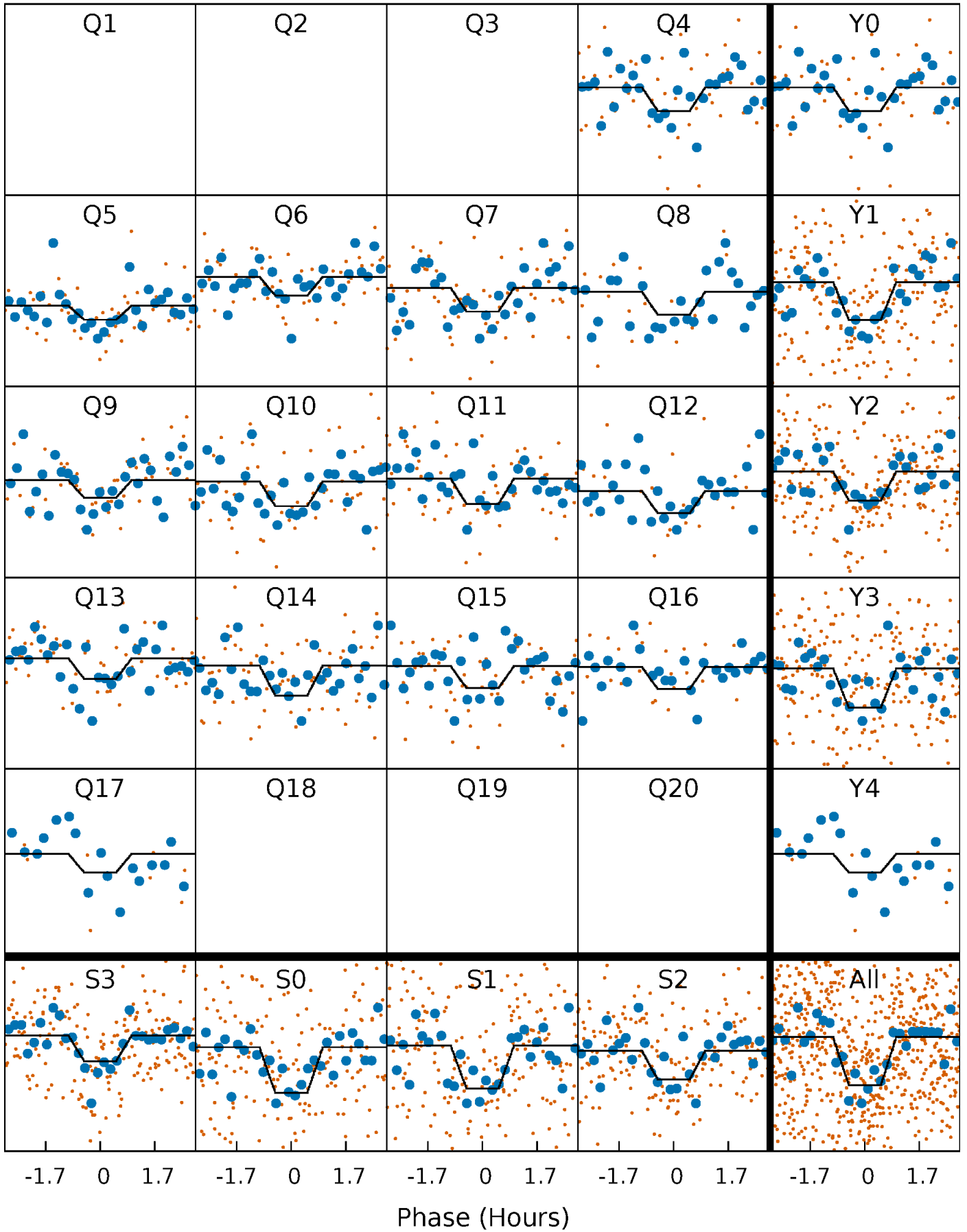
DV Quarter-Phased Transit Curves

TCE 007836096-01 P= 15.996091 Days $T_0=138.936189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

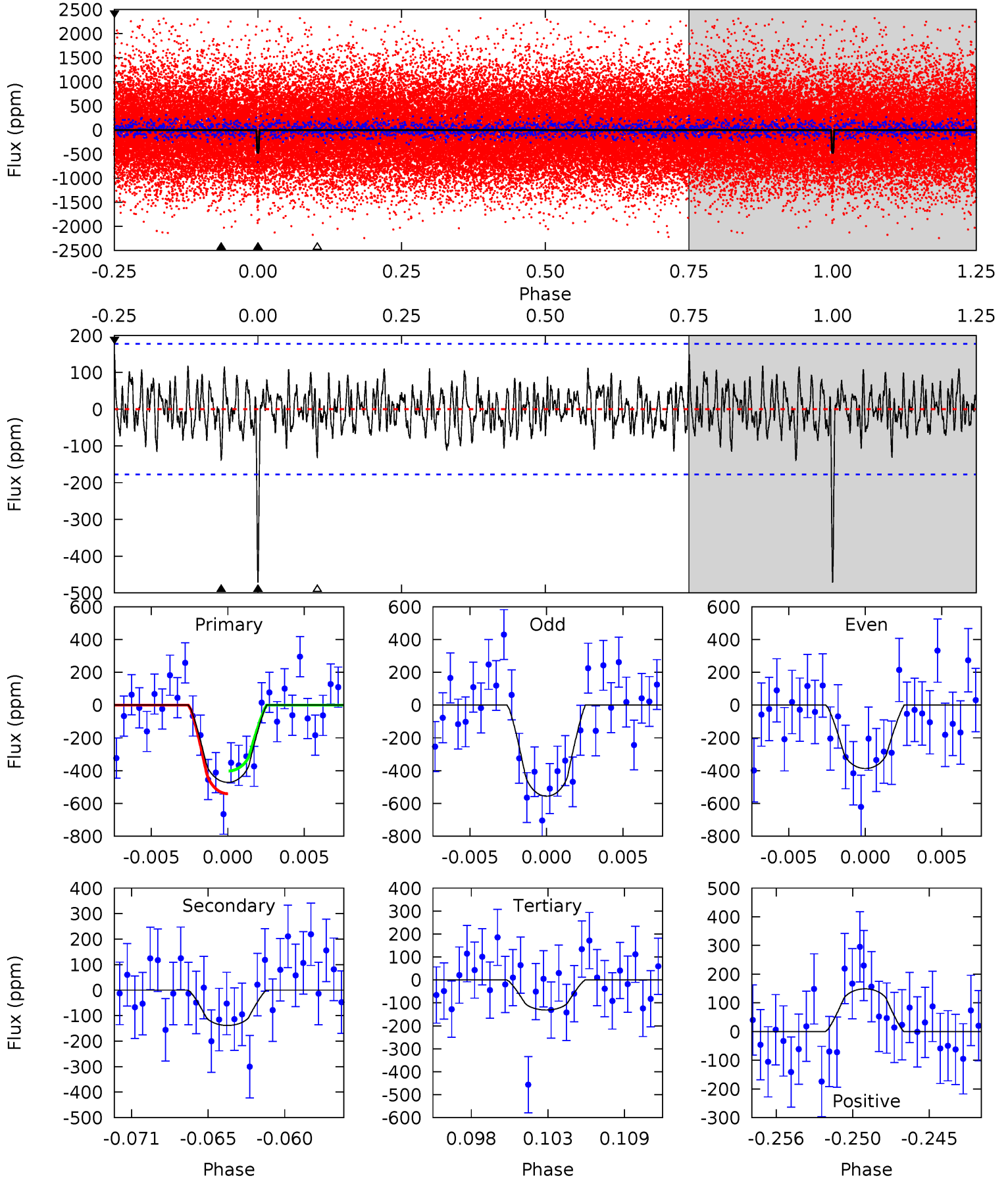
TCE 007836096-01 P= 15.996182 Days $T_0=138.933114$ (BKJD)



DV Model-Shift Uniqueness Test

007836096-01, $P = 15.996091$ Days, $E = 138.936189$ Days

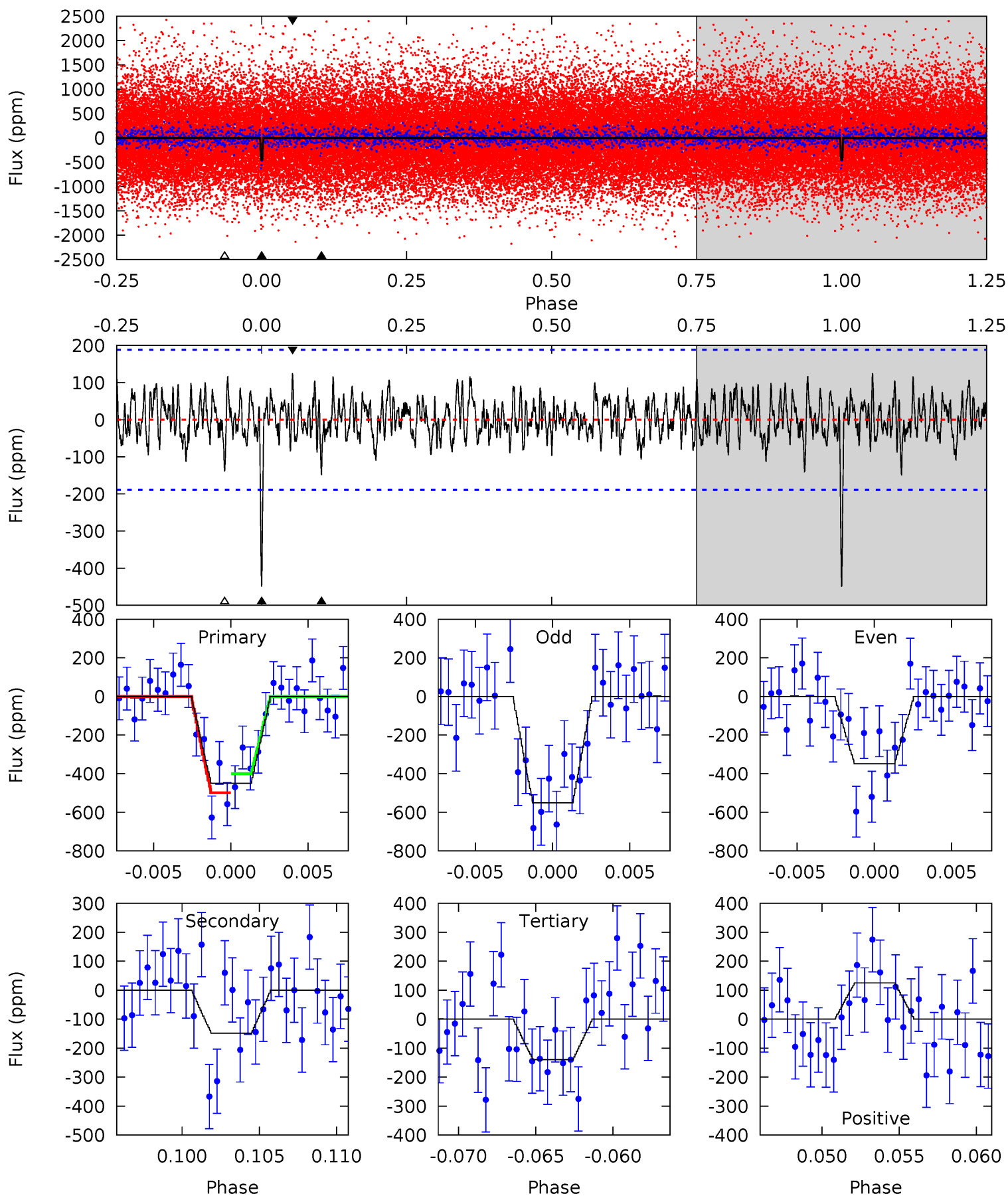
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	4.01	3.80	4.31	5.14	2.78	1.29	9.85	9.33	0.21	-0.30	2.45	0.94	0.24	2.01



Alt Model-Shift Uniqueness Test

007836096-01, $P = 15.996182$ Days, $E = 138.933114$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	4.07	3.82	3.43	5.16	2.81	1.20	8.50	8.88	0.25	0.64	2.77	0.94	0.22	1.36



Stellar Parameters For KIC 007836096

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4949^{+177}_{-177}	$4.588^{+0.025}_{-0.070}$	$0.240^{+0.200}_{-0.300}$	$0.777^{+0.072}_{-0.059}$	$0.855^{+0.049}_{-0.077}$	$2.563^{+0.377}_{-0.577}$
	+4%/-4%	+1%/-2%	+83%/-125%	+9%/-8%	+6%/-9%	+15%/-23%
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 007836096-01 / KOI 5435.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-139 ± 35	$2.50^{+2.38}_{-1.63}$	791^{+35}_{-30}	3543^{+1751}_{-648}	166^{+1180}_{-123}
Alt.	-149 ± 37	$2.81^{+2.21}_{-1.89}$	792^{+31}_{-32}	3484^{+1685}_{-600}	147^{+1115}_{-104}

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 $A_{obs} \gg 1.0$

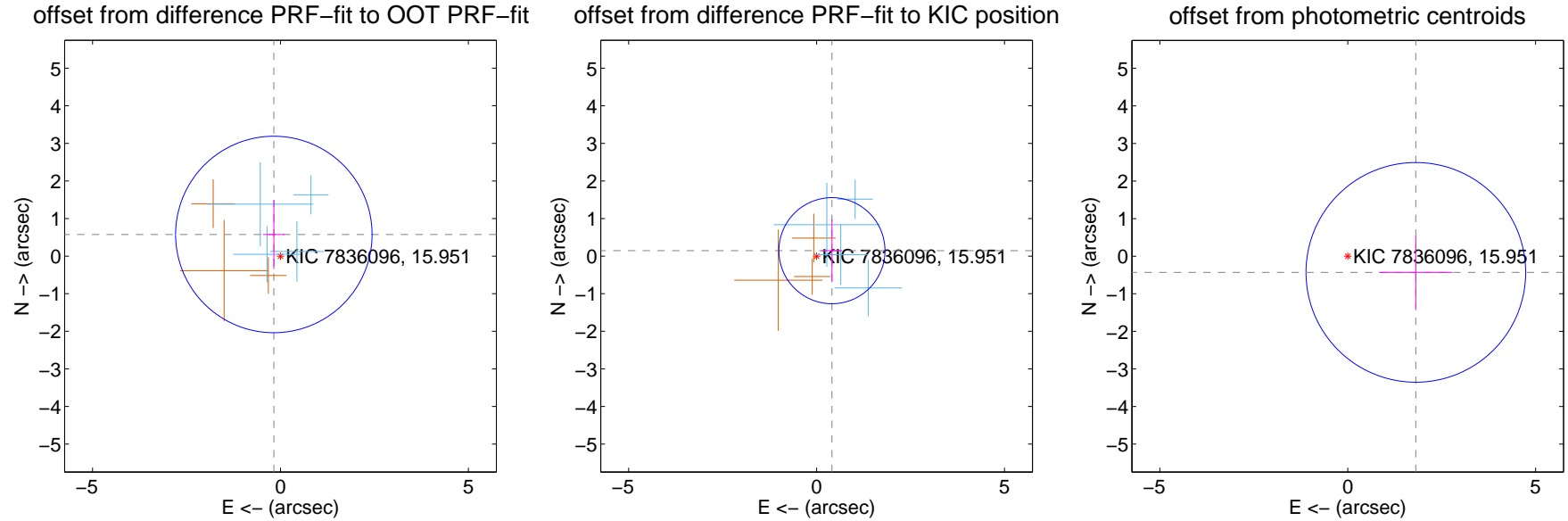
DV Centroid Data

Supplemental centroid analysis for 007836096-01. Kepler magnitude: 15.95. Transit SNR 9.93

There are 4 quarters with good PRF difference image offsets

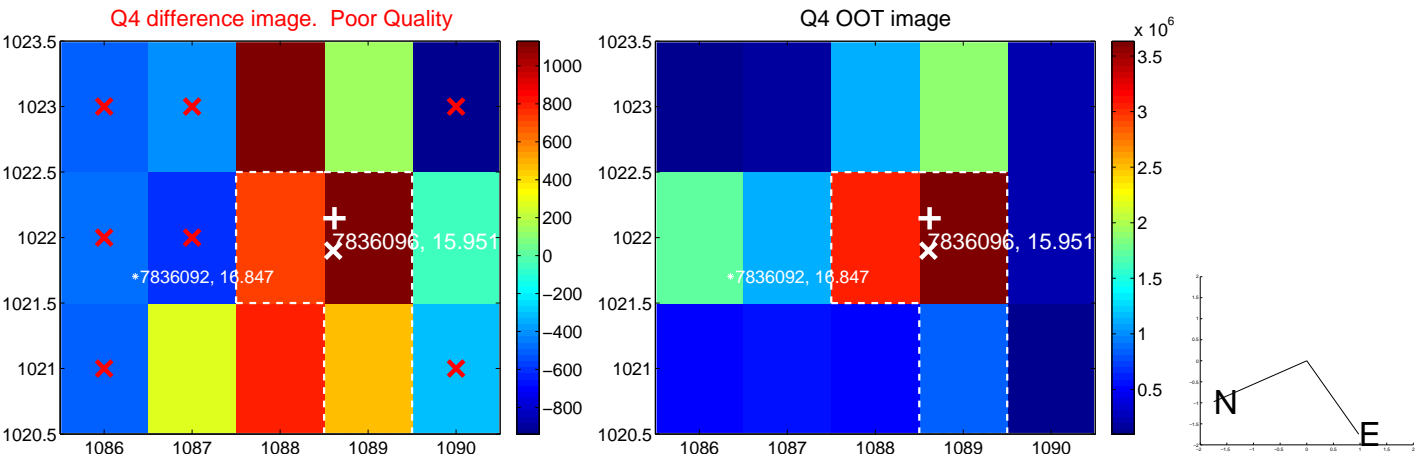
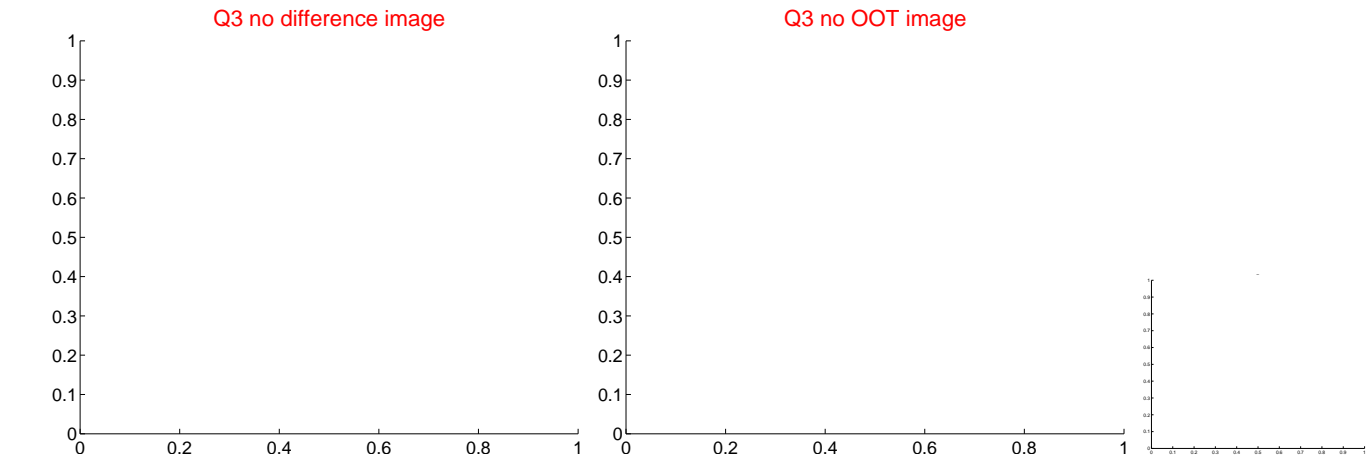
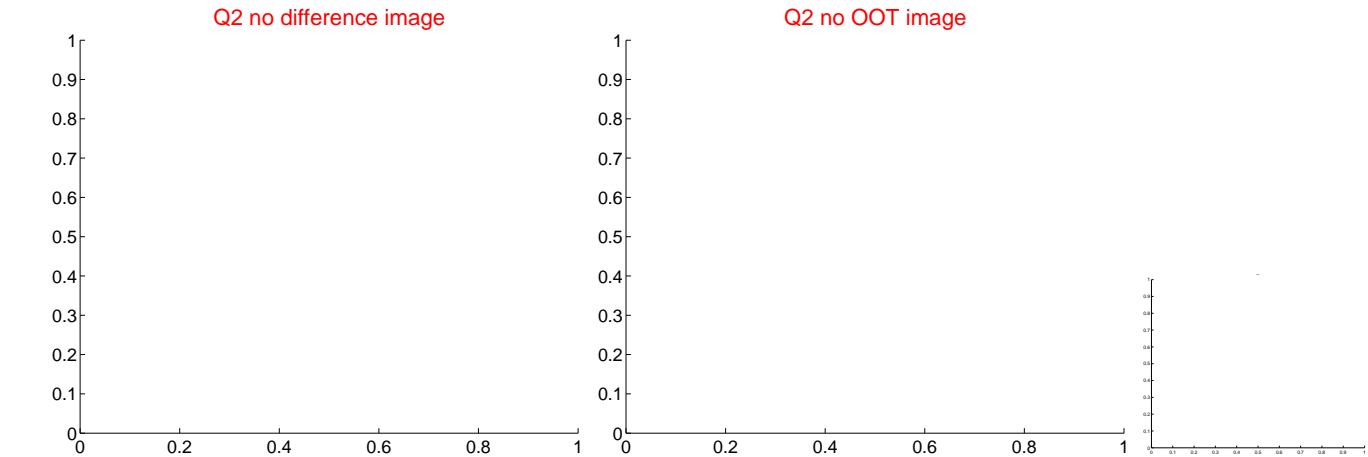
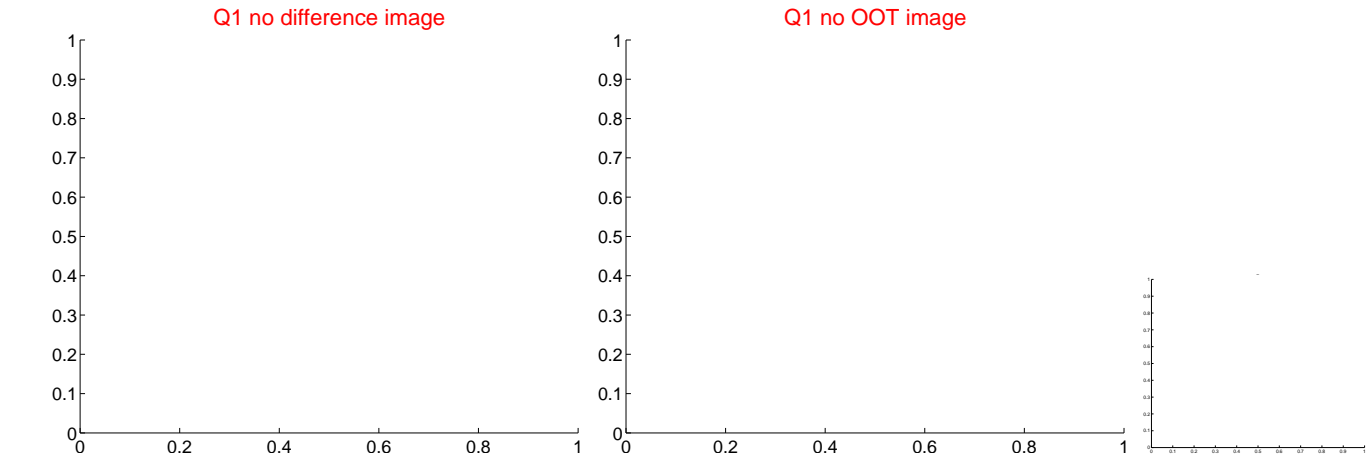
The direct PRF centroid is offset from the target star catalog position by about 1.95 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.602 ± 0.871	0.69	0.176 ± 0.286	0.576 ± 0.919
PRF-fit source offset from KIC position	0.434 ± 0.470	0.92	-0.409 ± 0.275	0.145 ± 0.837
photometric centroid source offset	1.86 ± 0.97	1.91	-1.81 ± 0.97	-0.43 ± 0.97

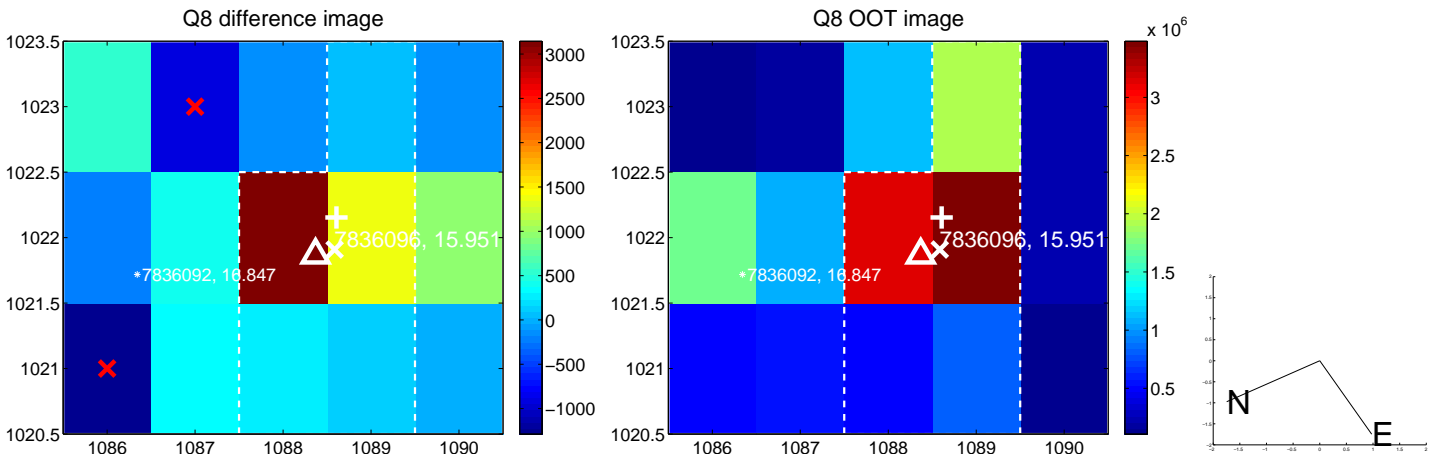
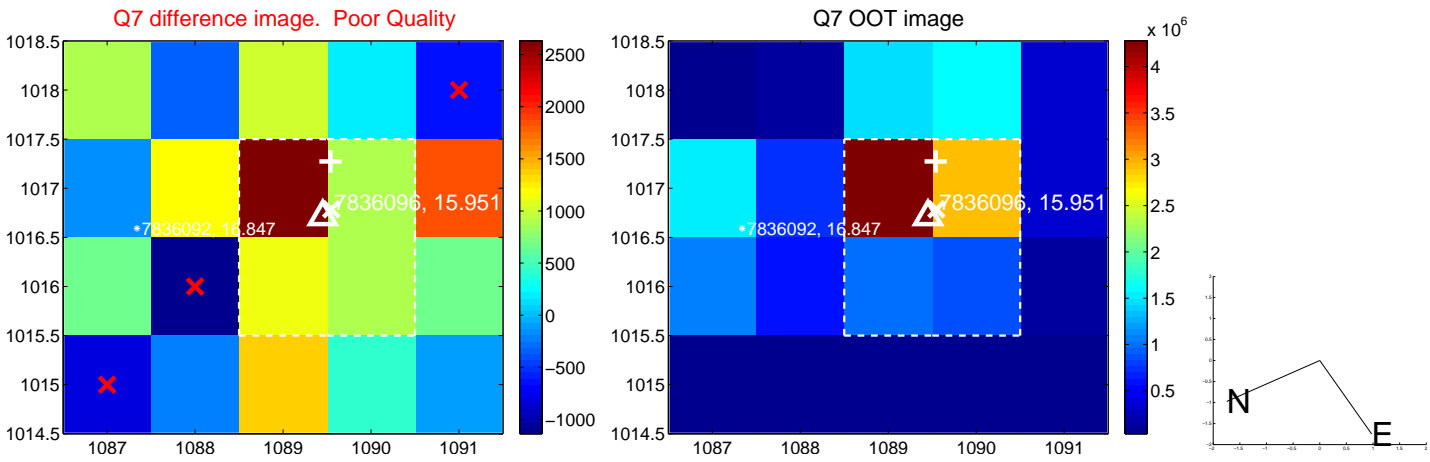
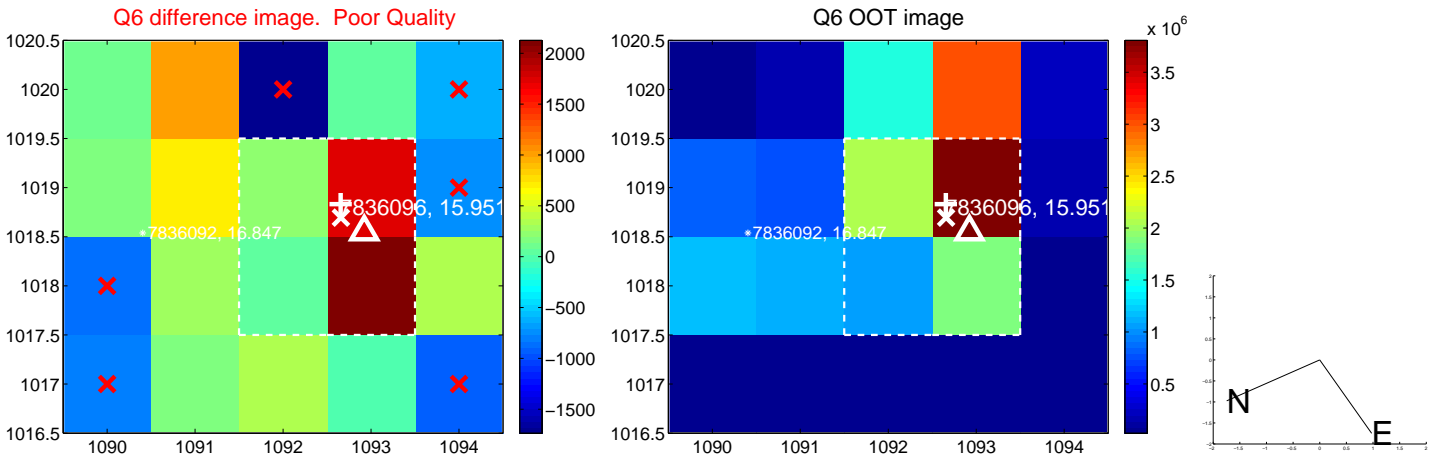
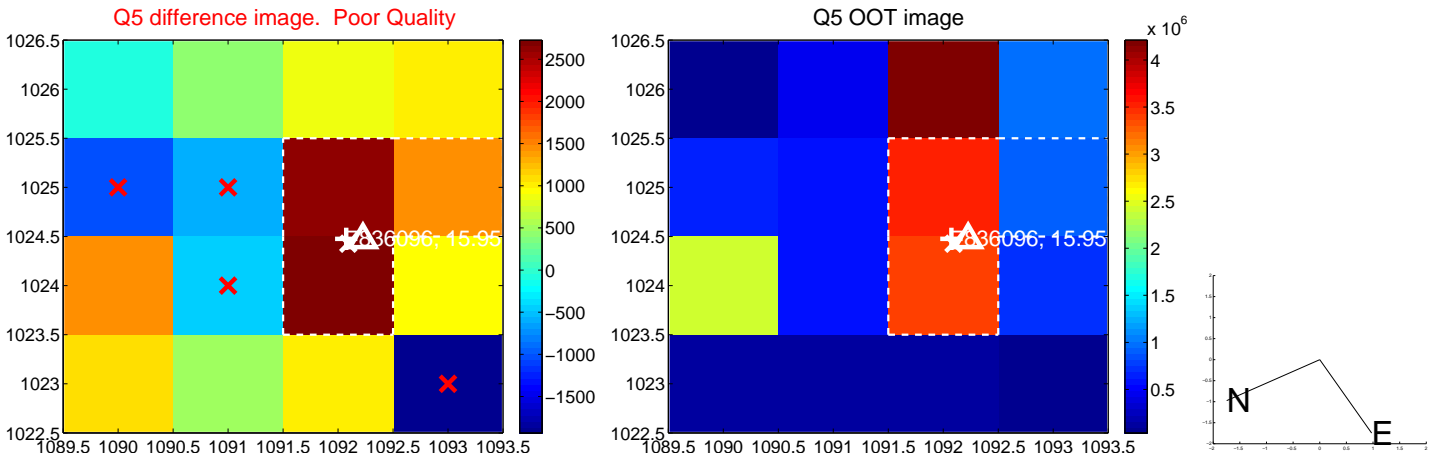


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

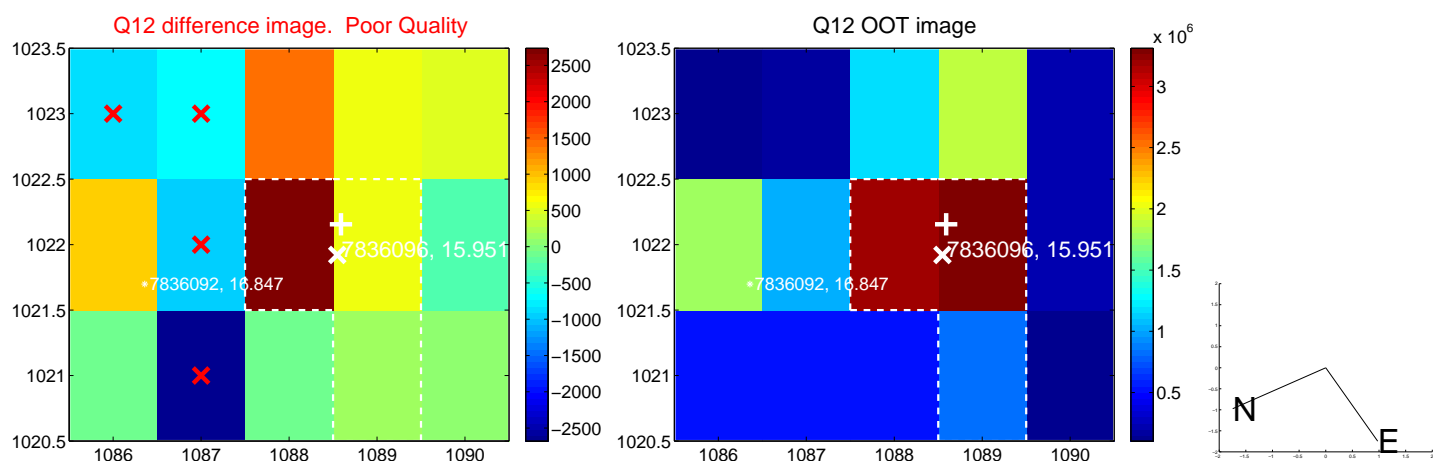
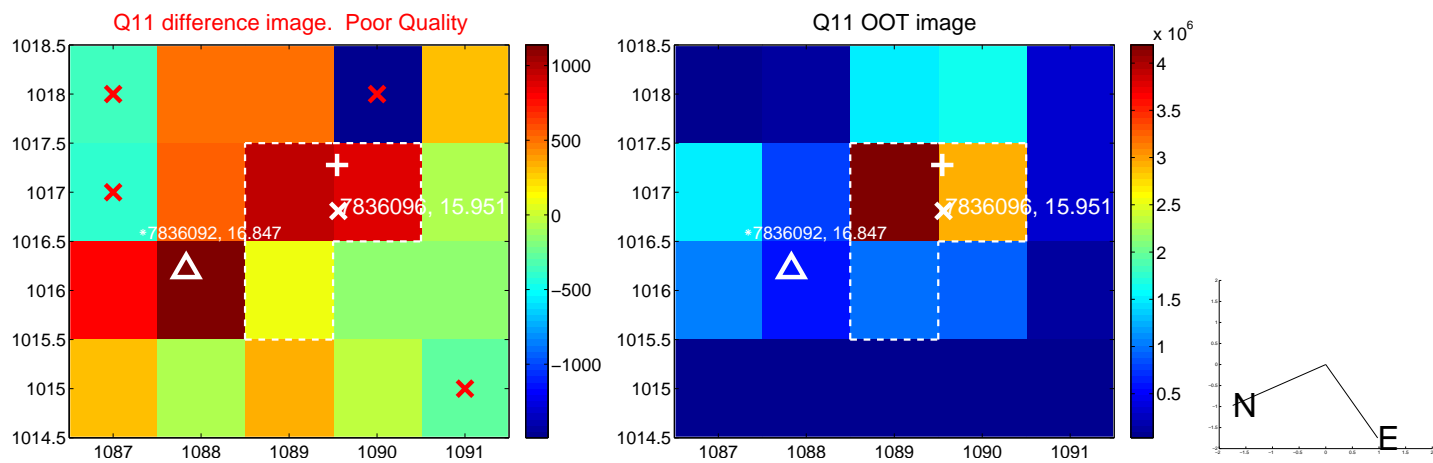
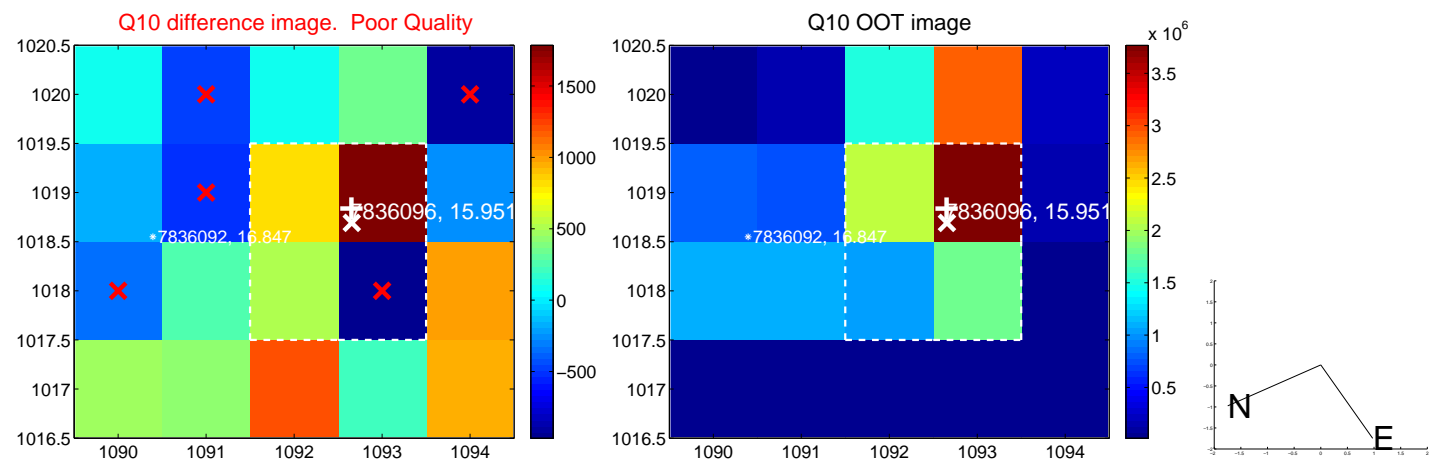
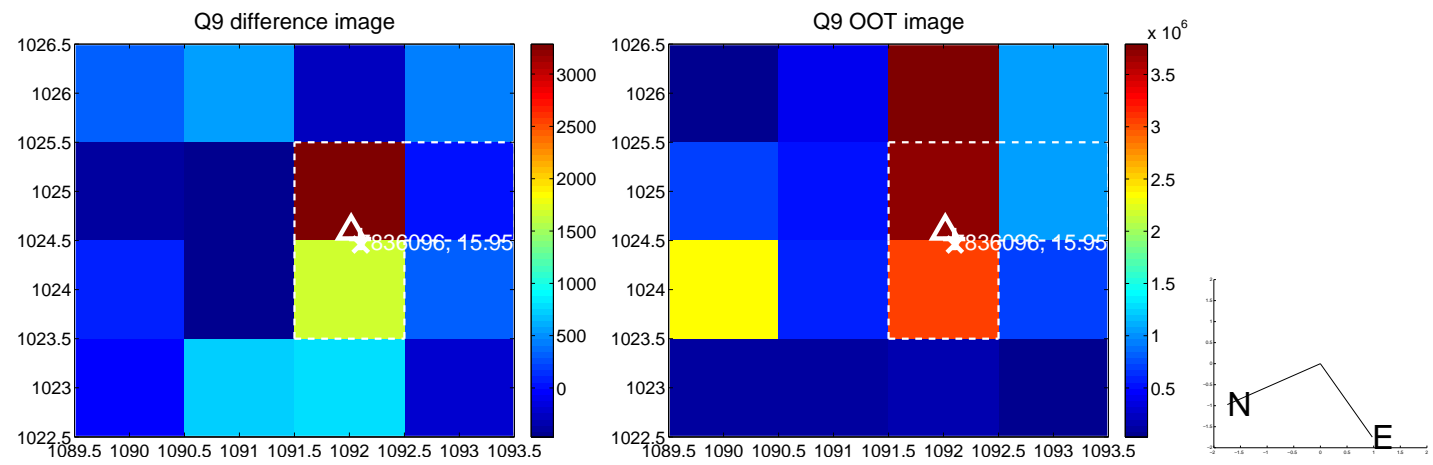
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



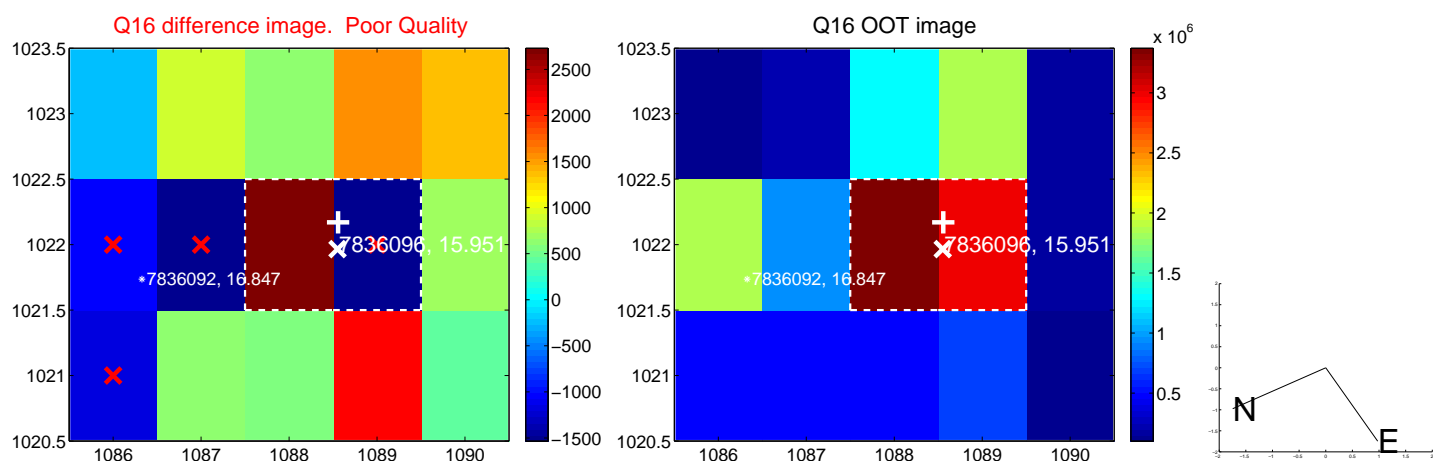
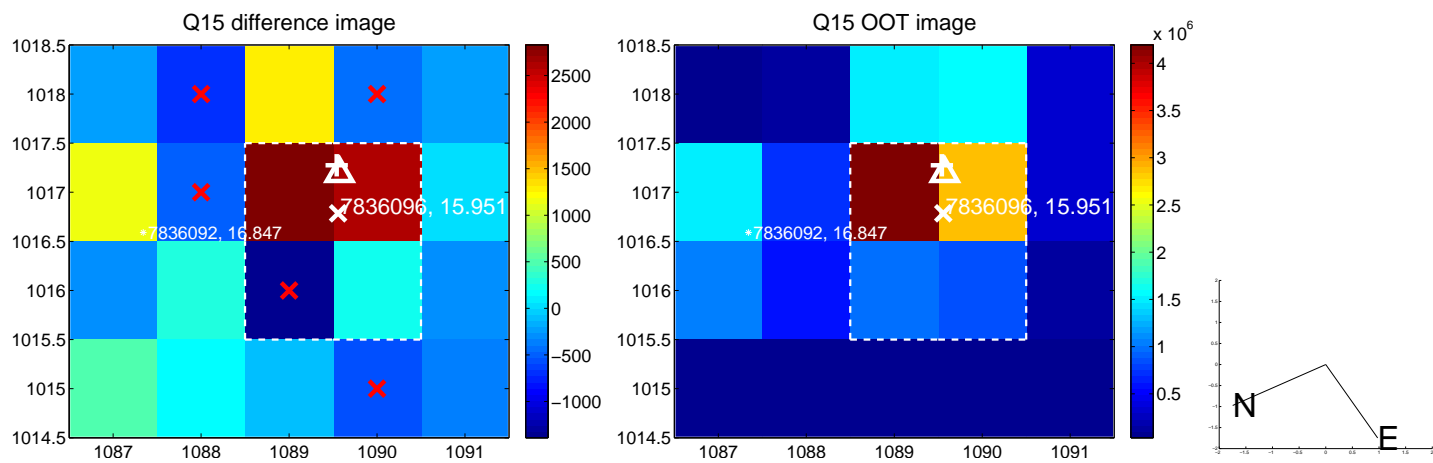
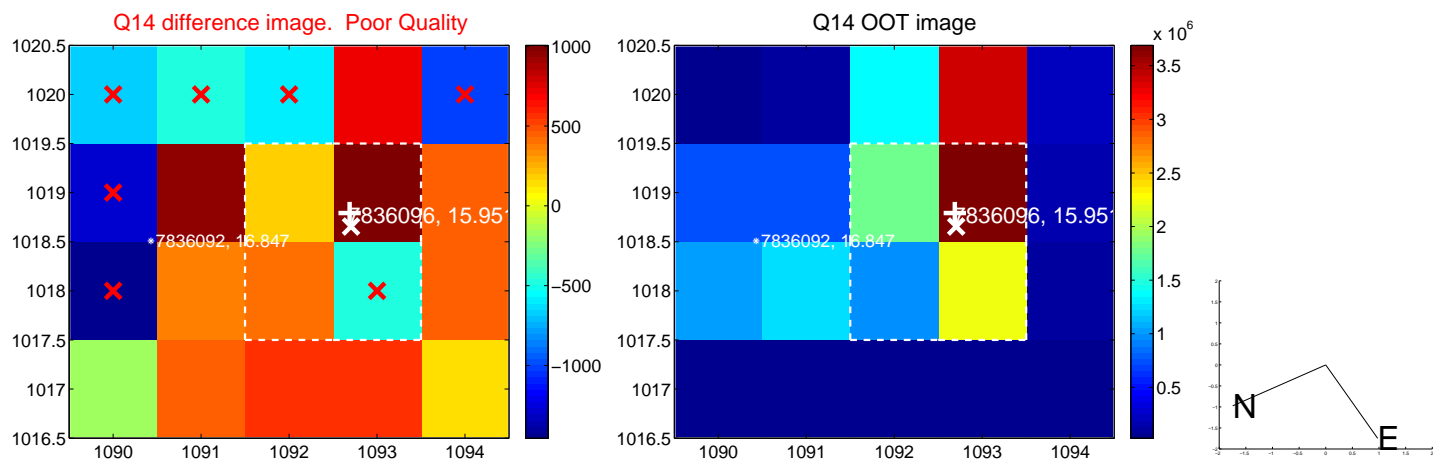
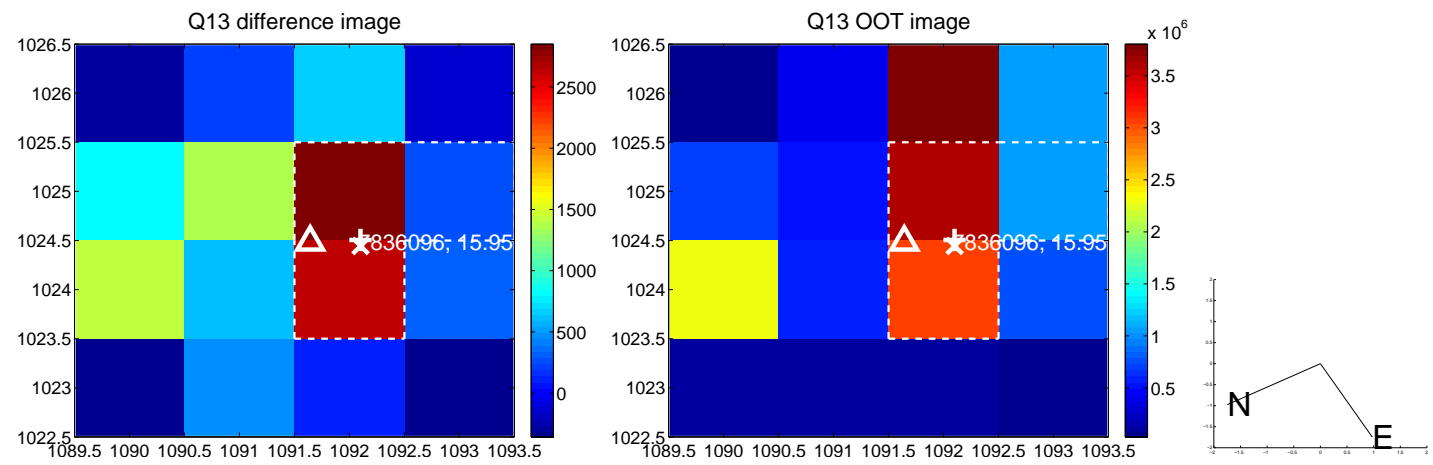
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



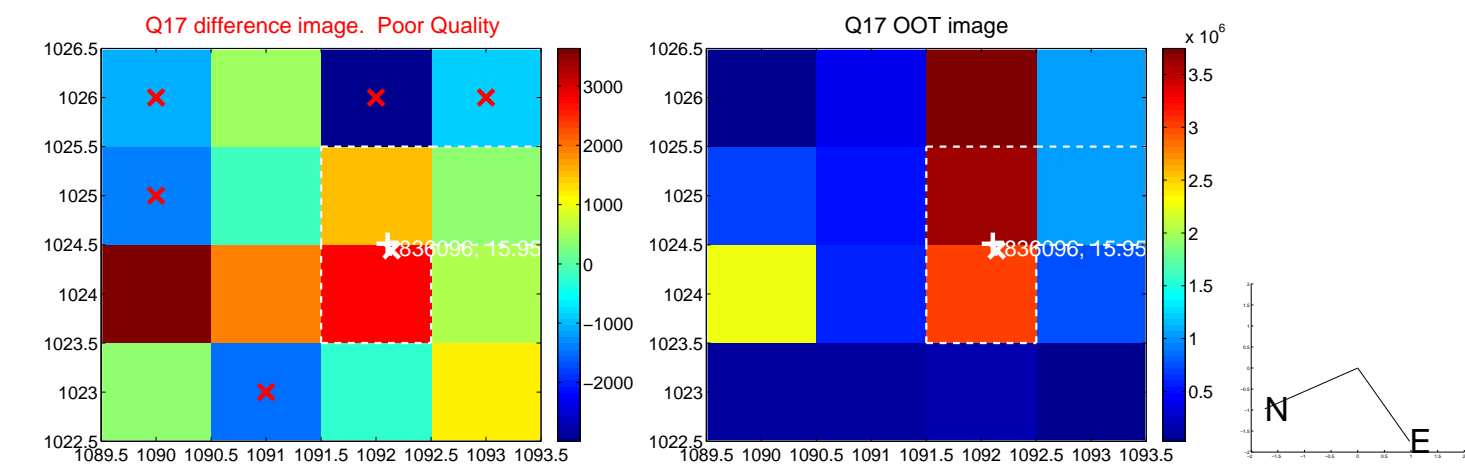
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



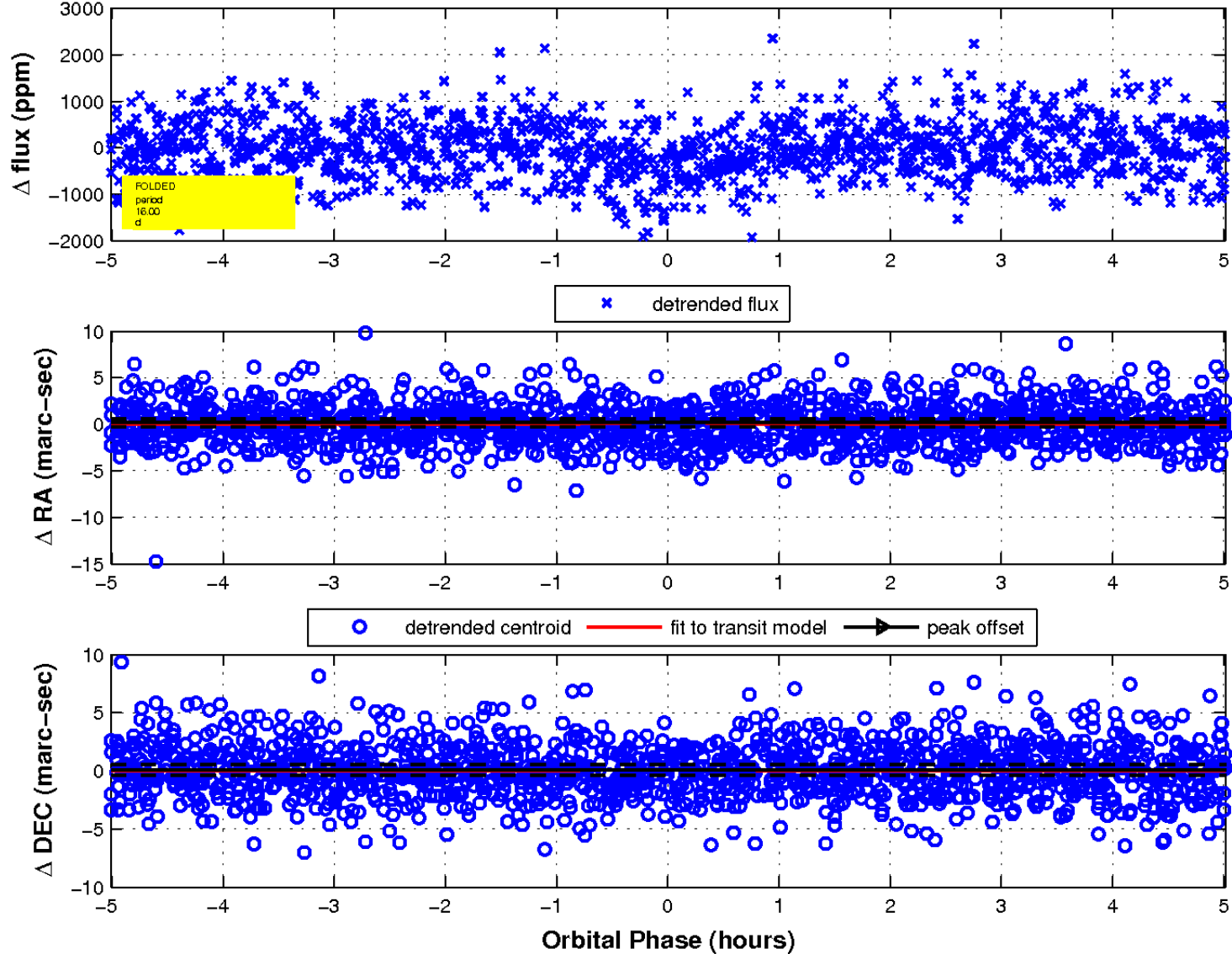
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

