

KIC 010164018

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})
010164018-01	OBS	7292.01	8.541203	131.618106	292.6	3.635	9.7	10.3	0.73	5602	1.35	81.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010164018-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

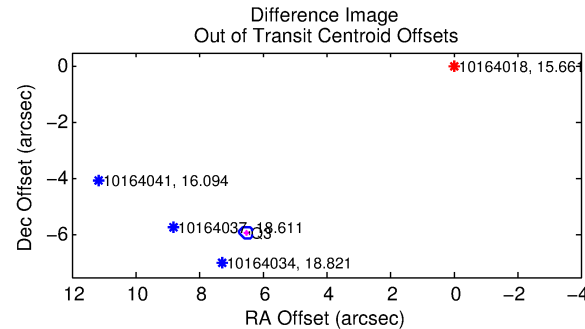
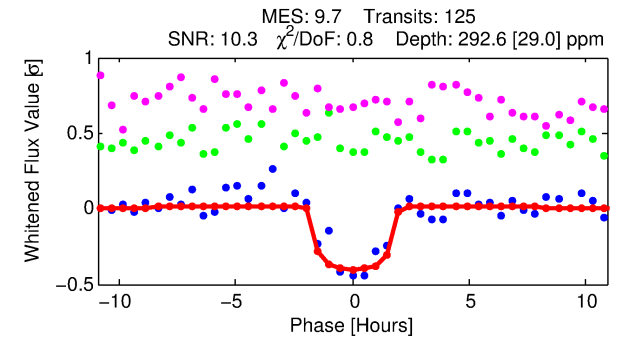
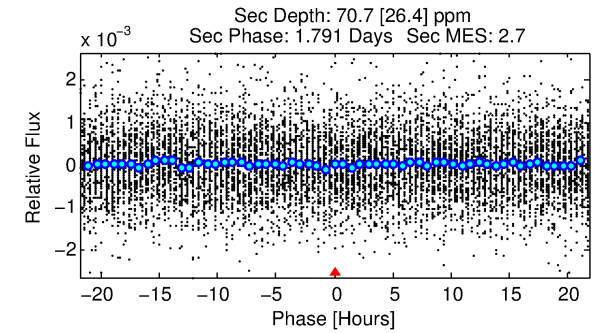
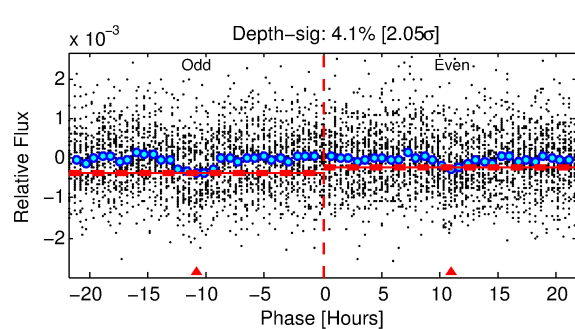
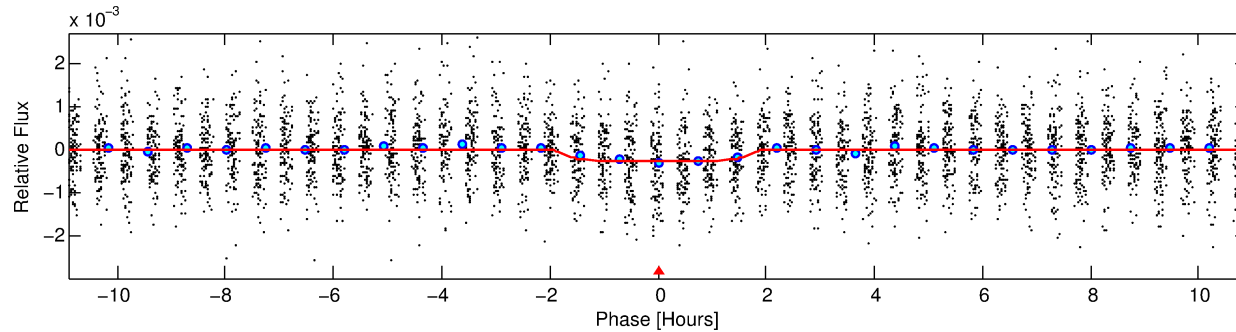
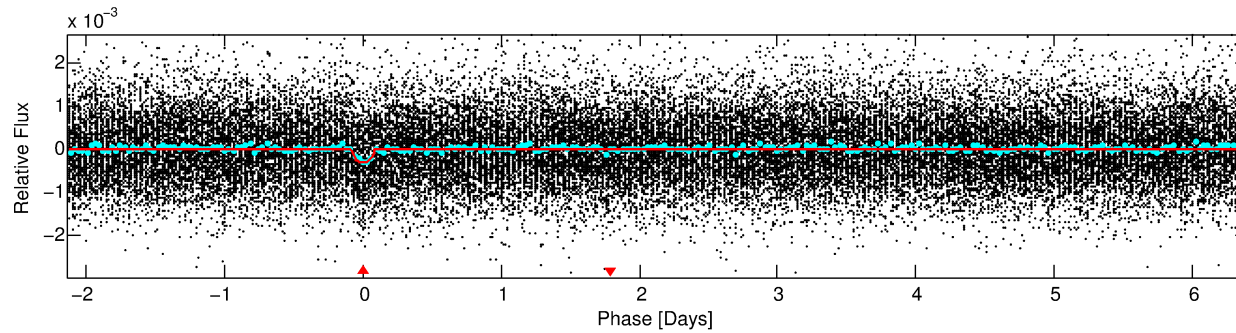
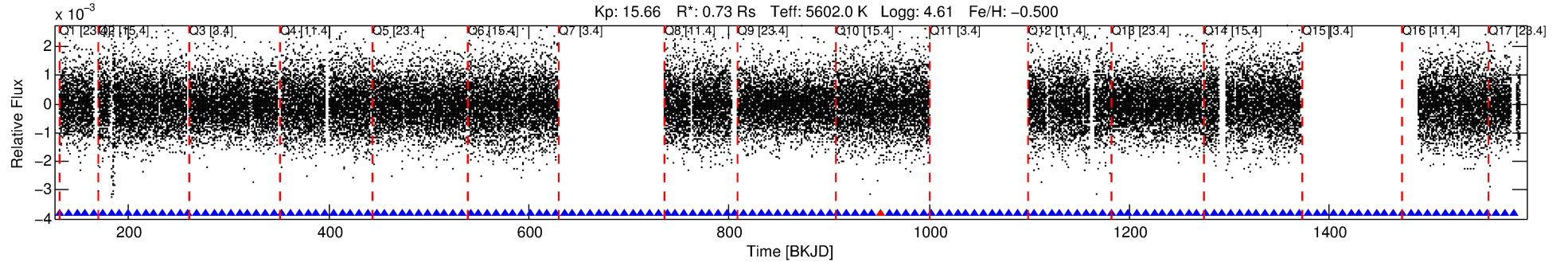
Ephemeris Match Information For 010164018-01

No Significant Match Found

DV One-Page Summary

KIC: 10164018 Candidate: 1 of 1 Period: 8.541 d

KOI: K07292.01 Corr: 0.935



DV Fit Results:

Period = 8.54120 [0.00007] d
Epoch = 131.6181 [0.0068] BKJD
Rp/R* = 0.0170 [0.0144]
a/R* = 12.54 [48.28]
b = 0.74 [2.39]
Seff = 81.77 [22.67]
Teff = 767 [53] K
Rp = 1.36 [1.19] Re
a = 0.0760 [0.0131] AU
Ag = 122.48 [215.33] [0.56 σ]
Teffp = 3944 [1720] K [1.85 σ]

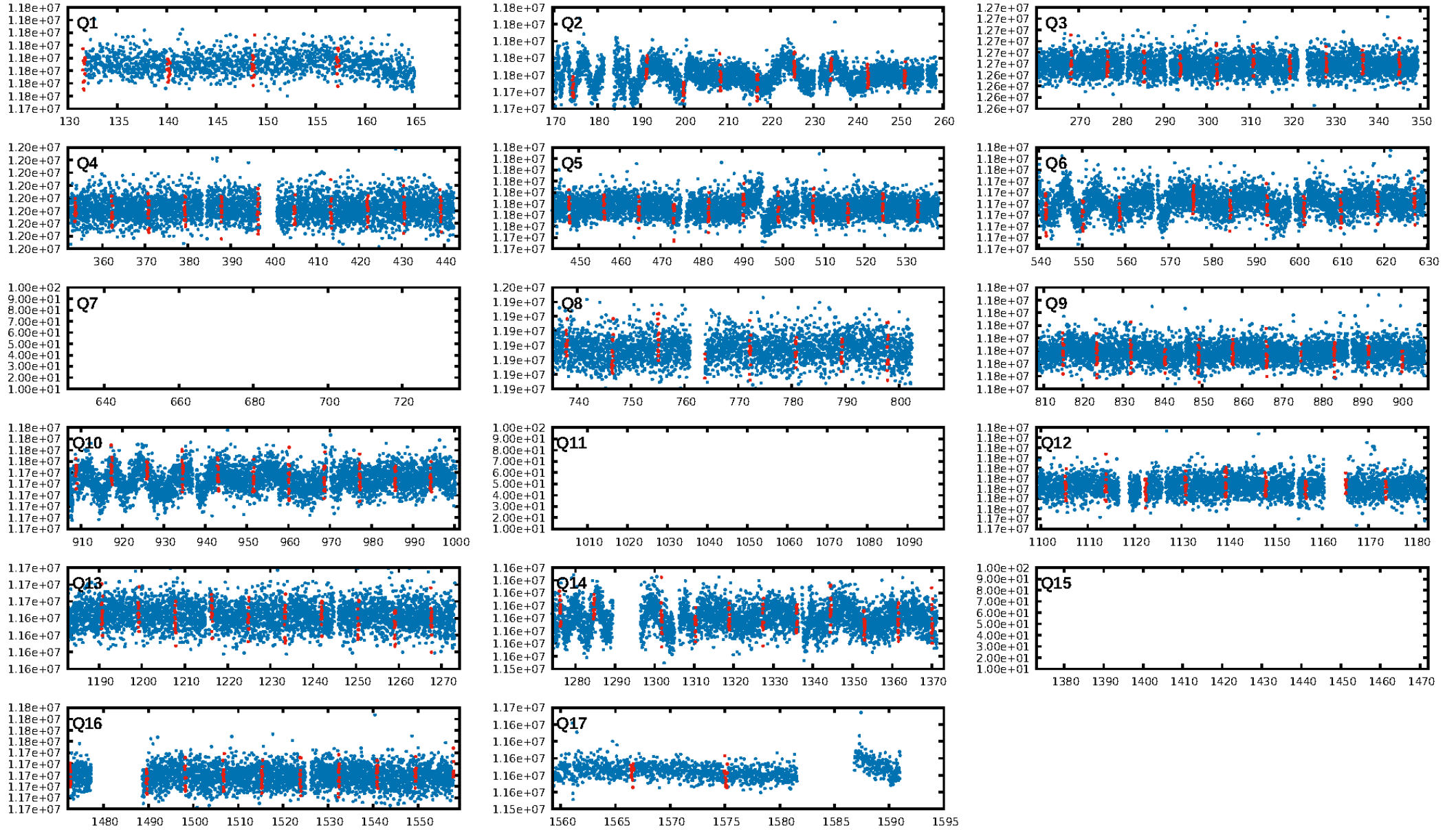
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 64.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.40e-22
RollingBand-fgt: 0.99 [118/119]
GhostDiagnostic-chr: -0.4458
Centroid-sig: 0.0%
Centroid-so: 100.671 arcsec [67.06 σ]
OotOffset-rm: 8.800 arcsec [119.57 σ]
KicOffset-rm: 8.840 arcsec [120.12 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [14/14]

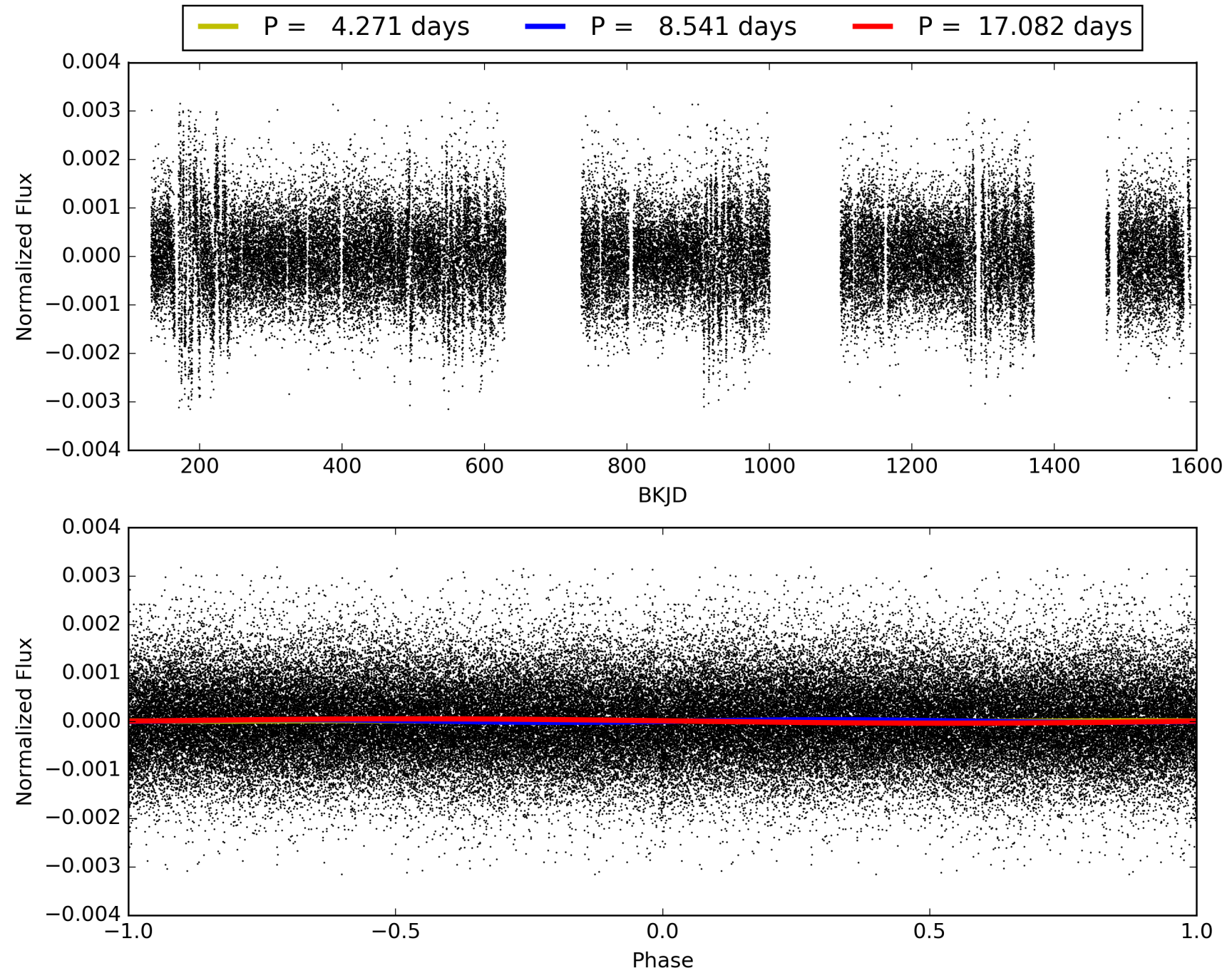
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:41:50 Z

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

TCE 010164018-01, PDC Light Curves

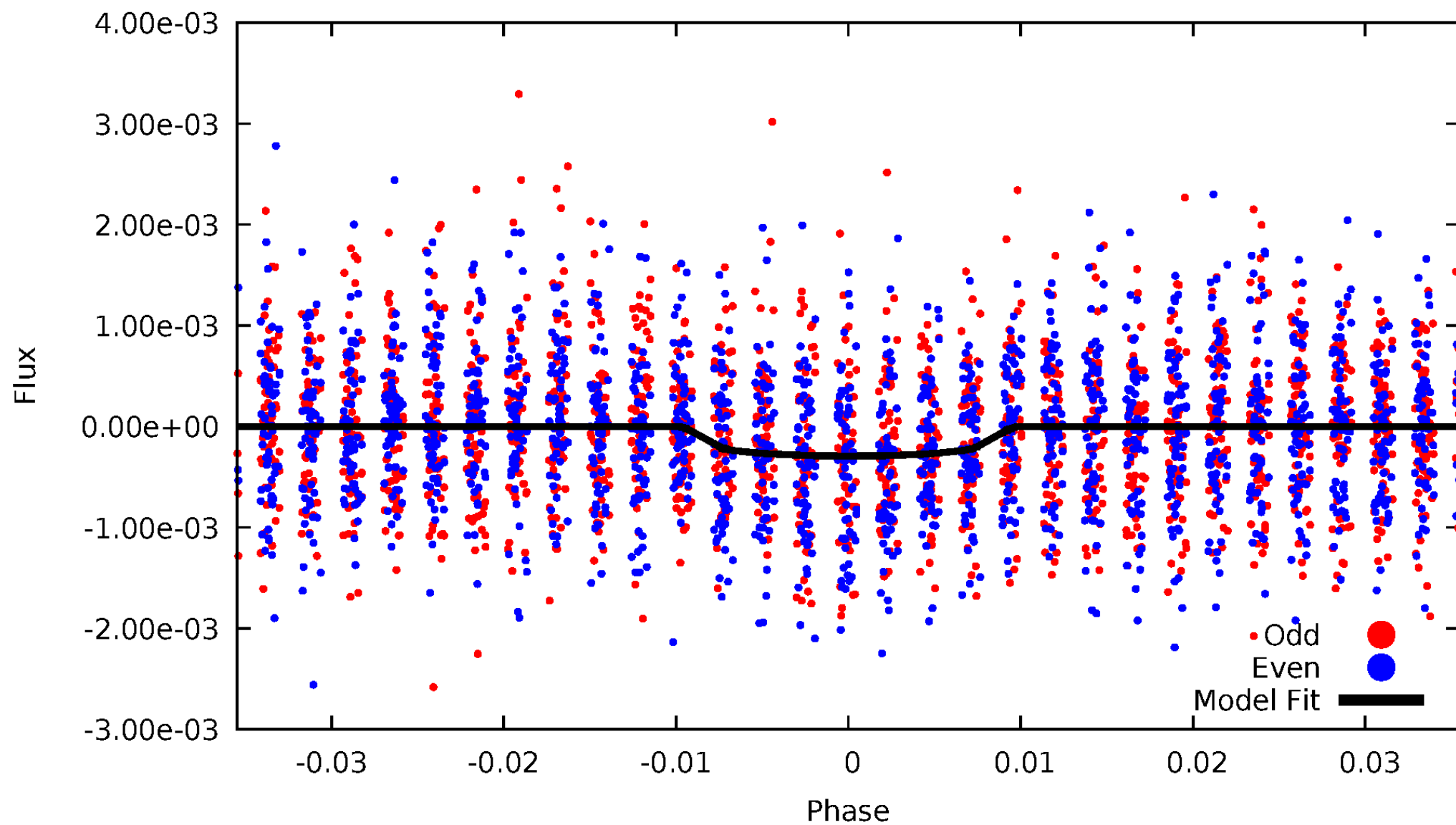


TCE 010164018-01



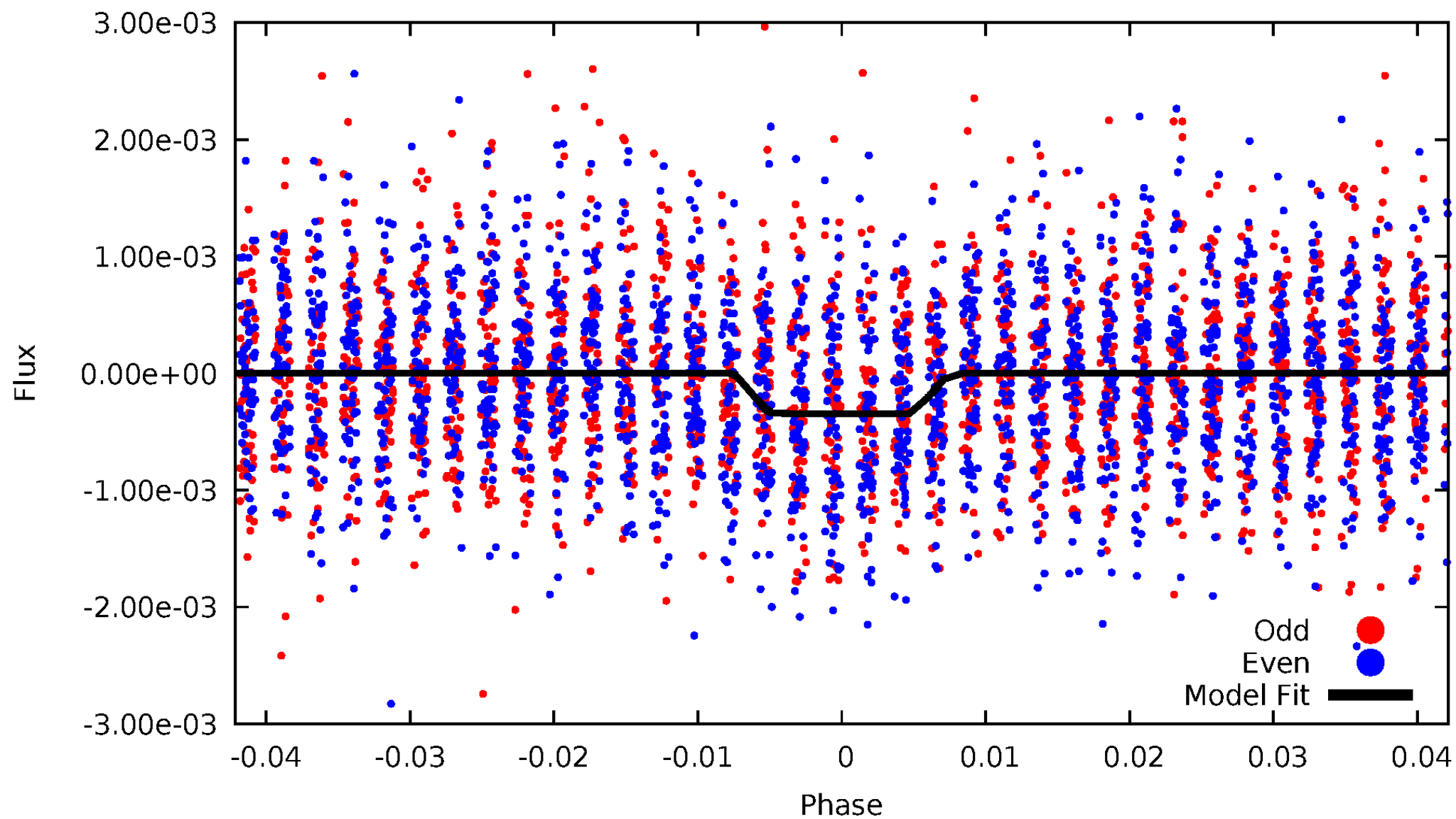
DV Odd/Even

TCE 010164018-01



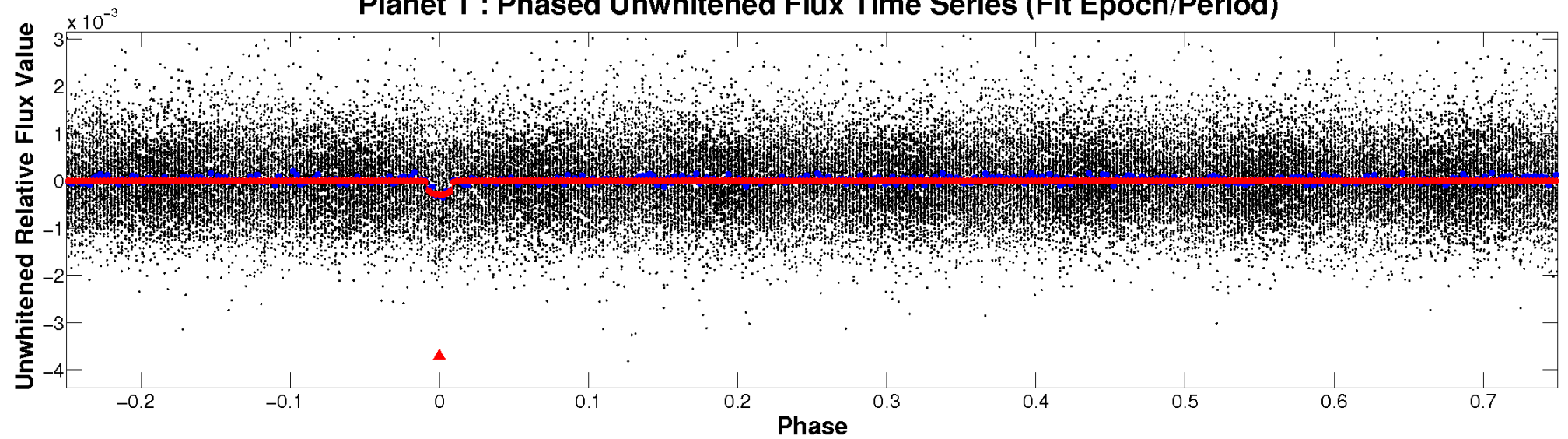
ALT Odd/Even

TCE 010164018-01

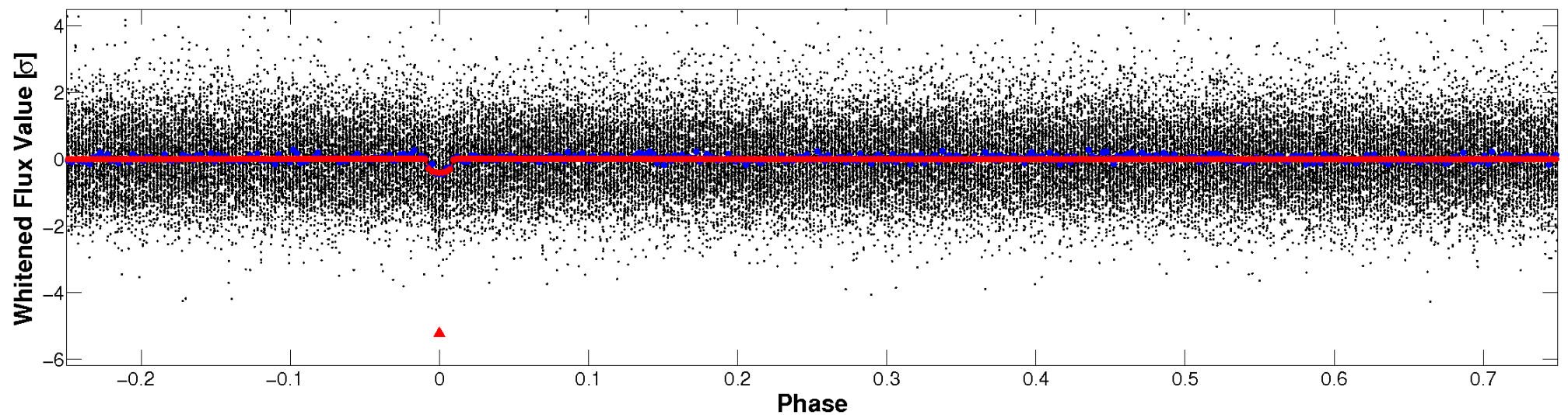


Non-Whitened Vs. Whitened Light Curve

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

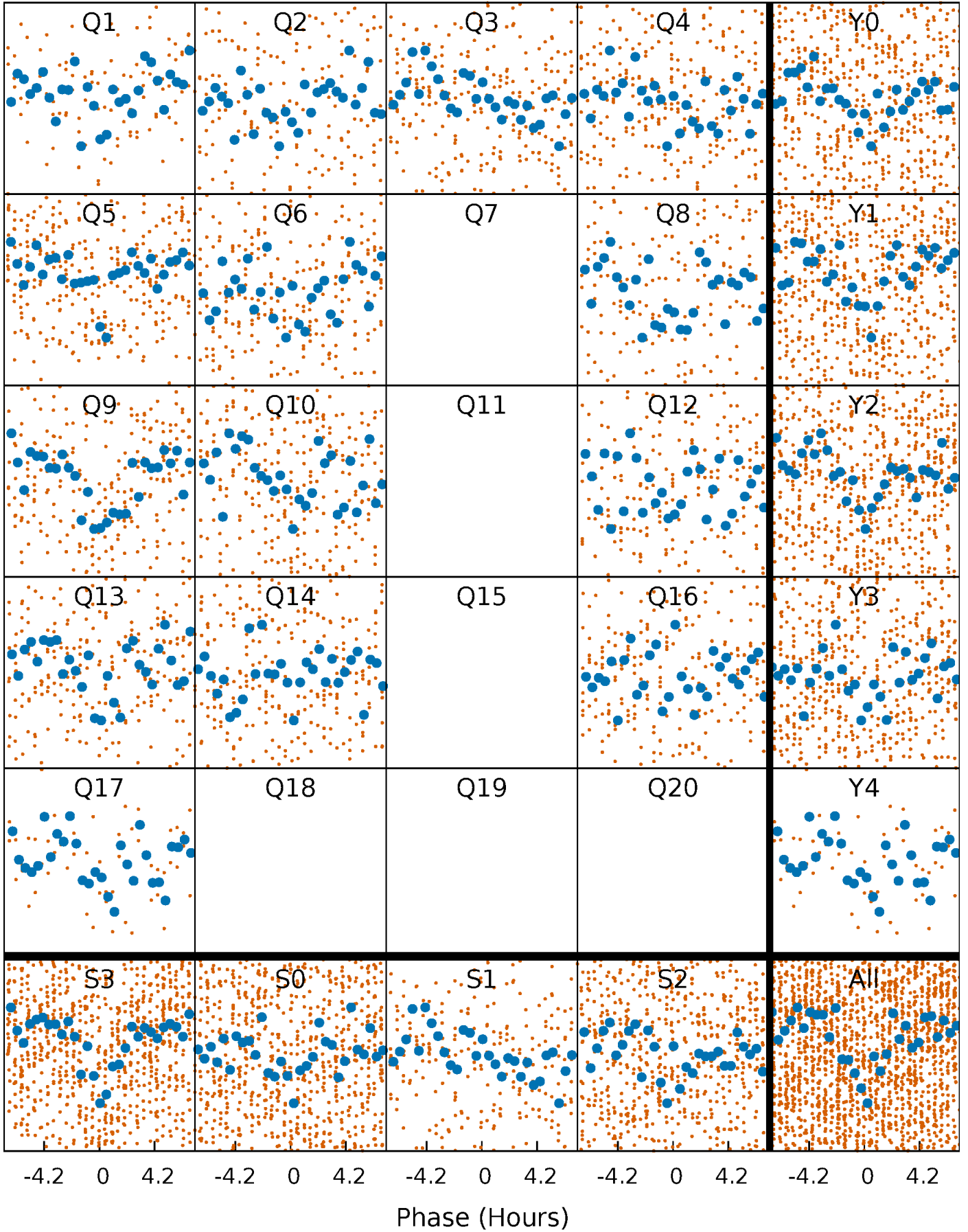


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



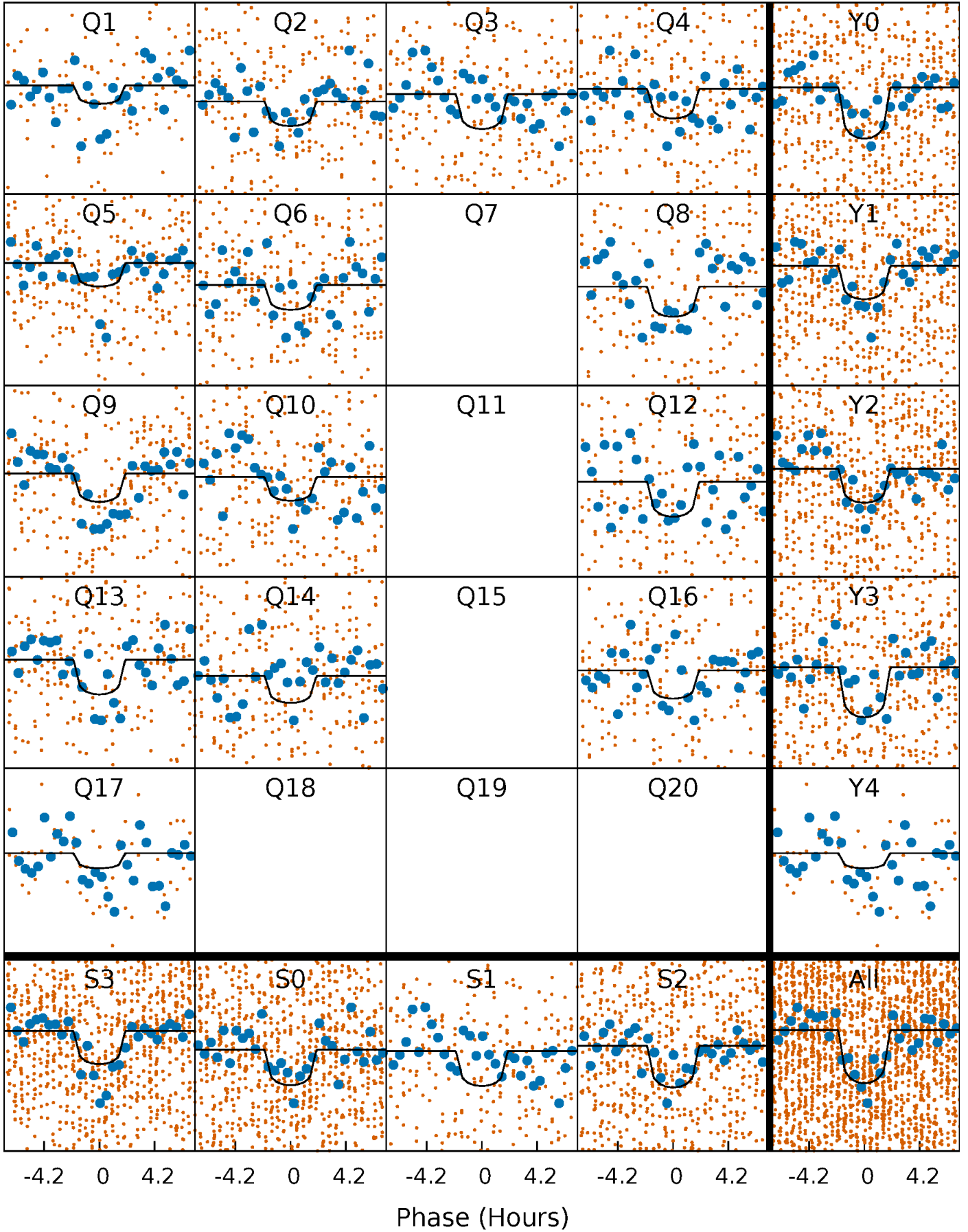
PDC Quarter-Phased Transit Curves

TCE 010164018-01 P= 8.541203 Days $T_0=131.618106$ (BKJD)



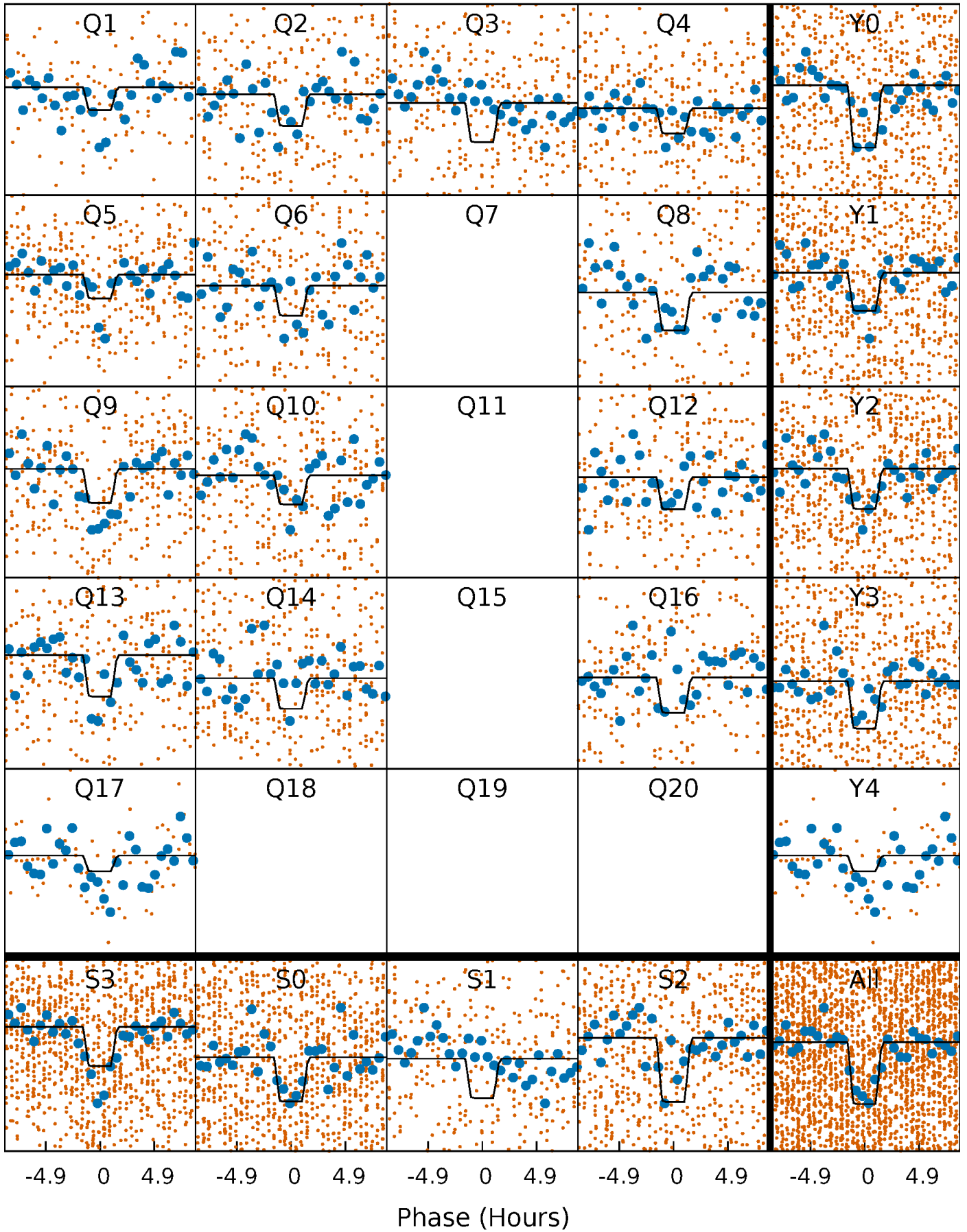
DV Quarter-Phased Transit Curves

TCE 010164018-01 P= 8.541203 Days $T_0=131.618106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

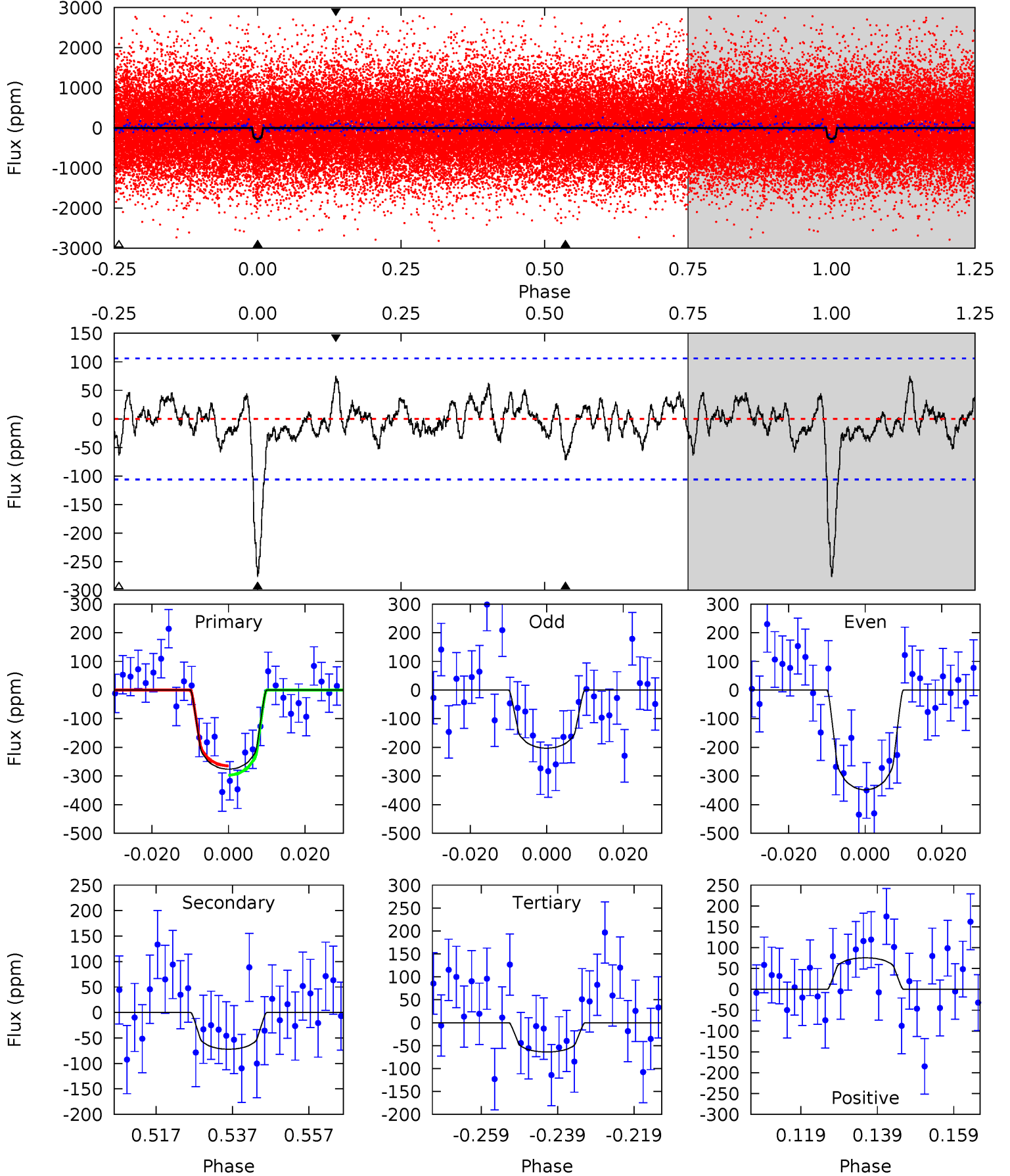
TCE 010164018-01 P= 8.541273 Days $T_0=131.616668$ (BKJD)



DV Model-Shift Uniqueness Test

010164018-01, P = 8.541203 Days, E = 123.076903 Days

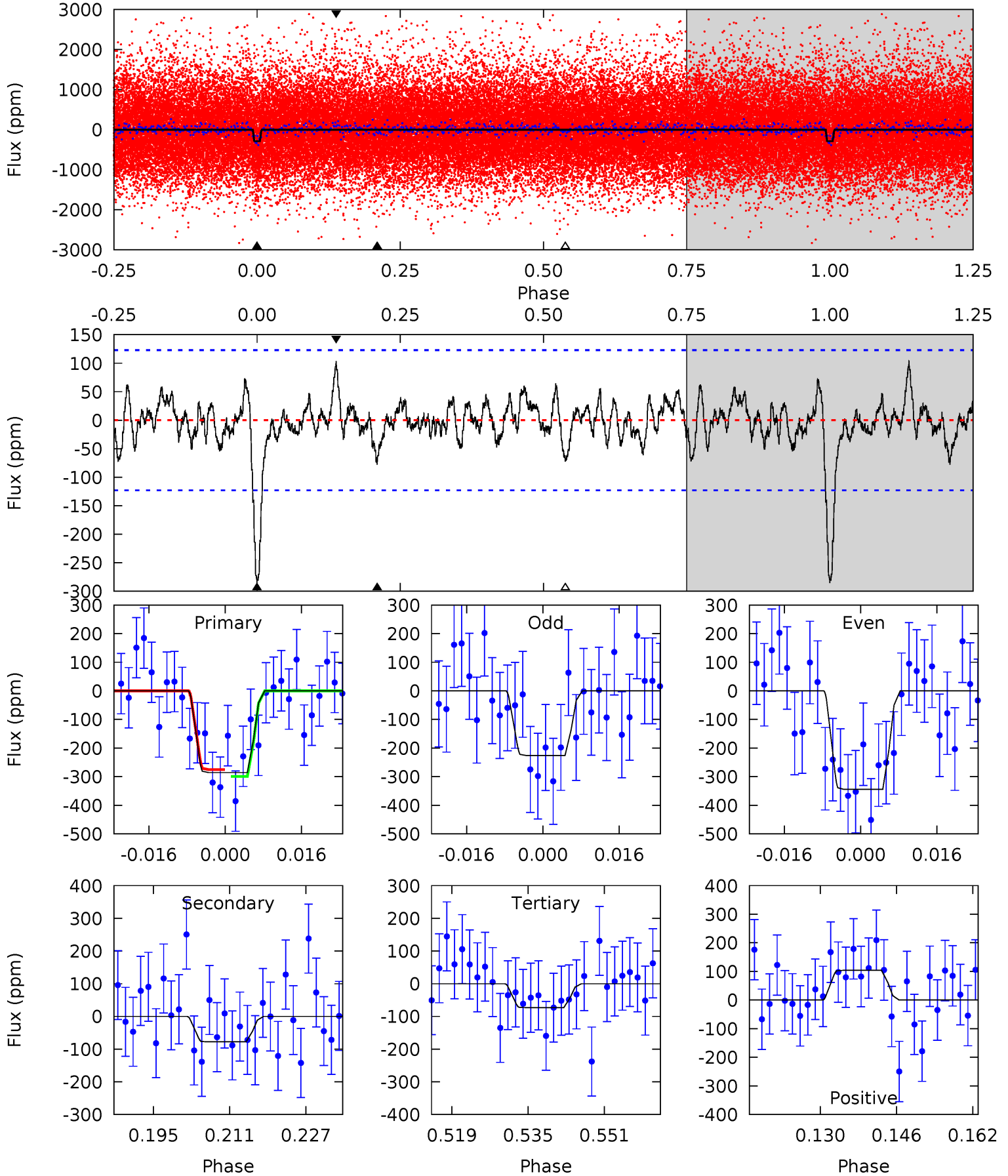
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	3.33	2.95	3.50	4.89	2.33	1.08	9.82	9.27	0.38	-0.17	3.36	1.08	0.21	0.75



Alt Model-Shift Uniqueness Test

010164018-01, P = 8.541273 Days, E = 123.075395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	3.12	2.93	4.16	4.93	2.40	1.08	8.53	7.29	0.19	-1.04	2.38	1.02	0.27	0.47



Stellar Parameters For KIC 010164018

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5602^{+168}_{-168}	$4.614^{+0.032}_{-0.136}$	$-0.500^{+0.300}_{-0.300}$	$0.732^{+0.151}_{-0.050}$	$0.832^{+0.079}_{-0.097}$	$2.994^{+0.408}_{-1.195}$
	+3%/-3%	+1%/-3%	+60%/-60%	+21%/-7%	+9%/-12%	+14%/-40%
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 010164018-01 / KOI 7292.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-72 ± 22	$1.64^{+1.19}_{-1.02}$	1095^{+54}_{-48}	3981^{+1942}_{-689}	84^{+520}_{-57}
Alt.	-78 ± 25	$1.75^{+1.19}_{-0.98}$	1093^{+58}_{-45}	3962^{+1669}_{-685}	78^{+373}_{-53}

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 $A_{obs} \gg 1.0$

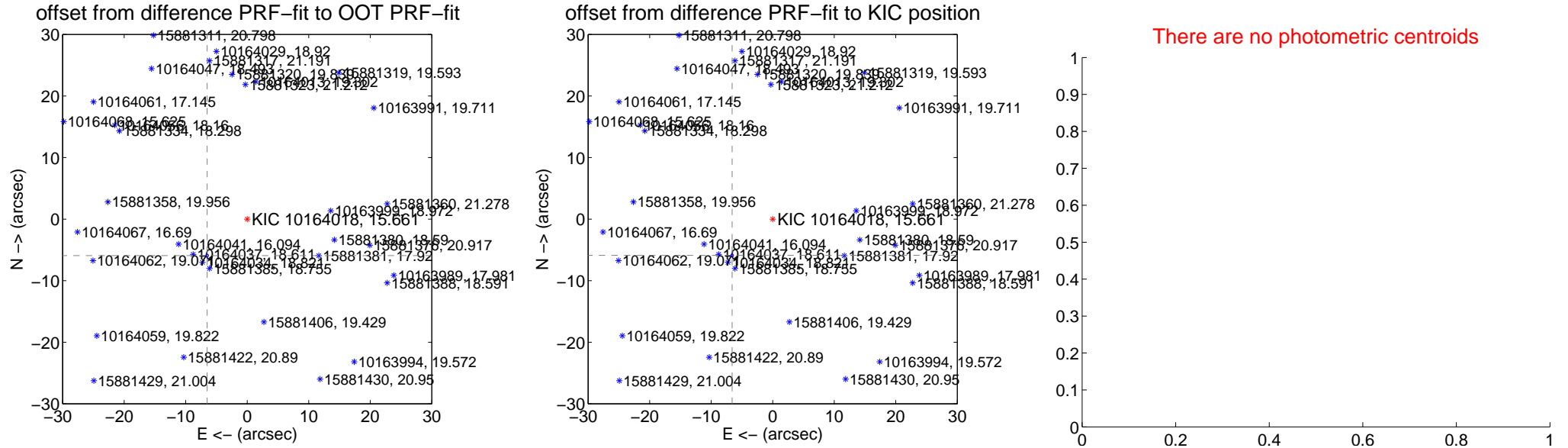
DV Centroid Data

Supplemental centroid analysis for 010164018-01. Kepler magnitude: 15.66. Transit SNR 10.35

There are 1 quarters with good PRF difference image offsets

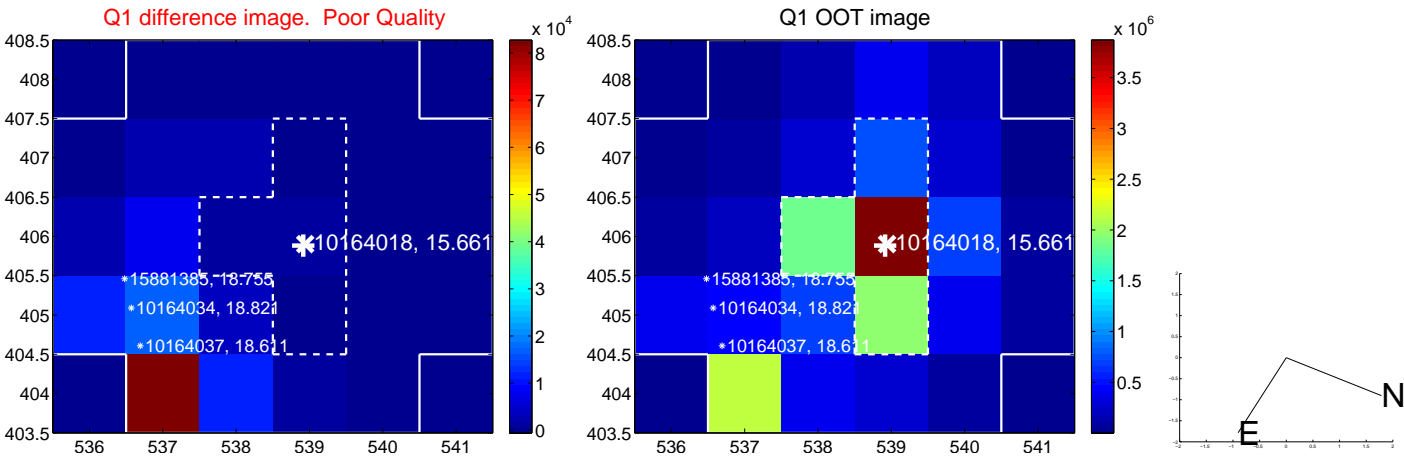
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.800 ± 0.074	119.57	6.509 ± 0.074	-5.922 ± 0.073
PRF-fit source offset from KIC position	8.840 ± 0.074	120.12	6.591 ± 0.074	-5.890 ± 0.073
photometric centroid source offset	—	—	—	—

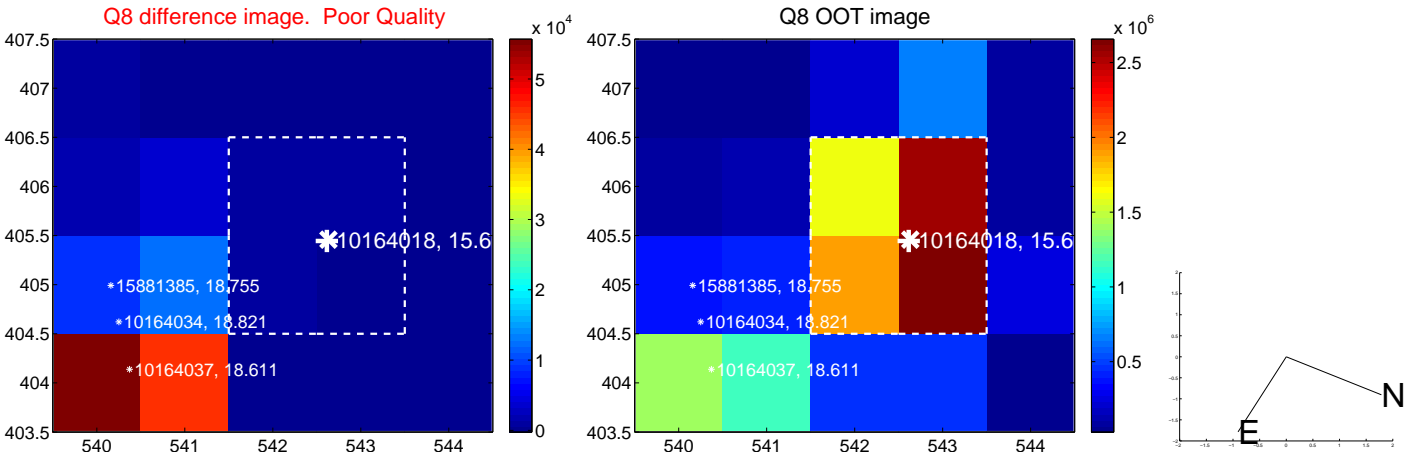
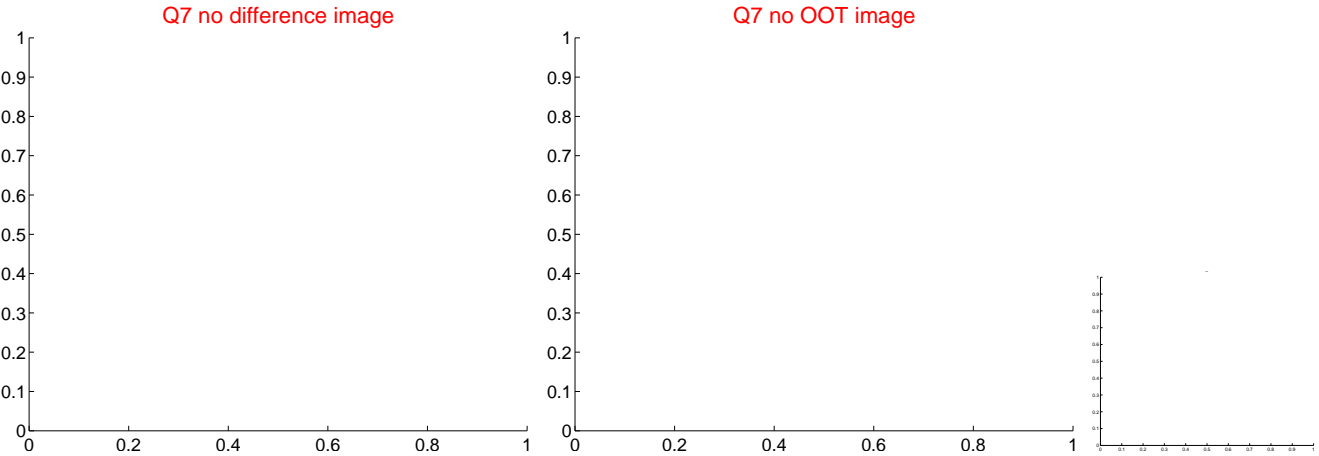
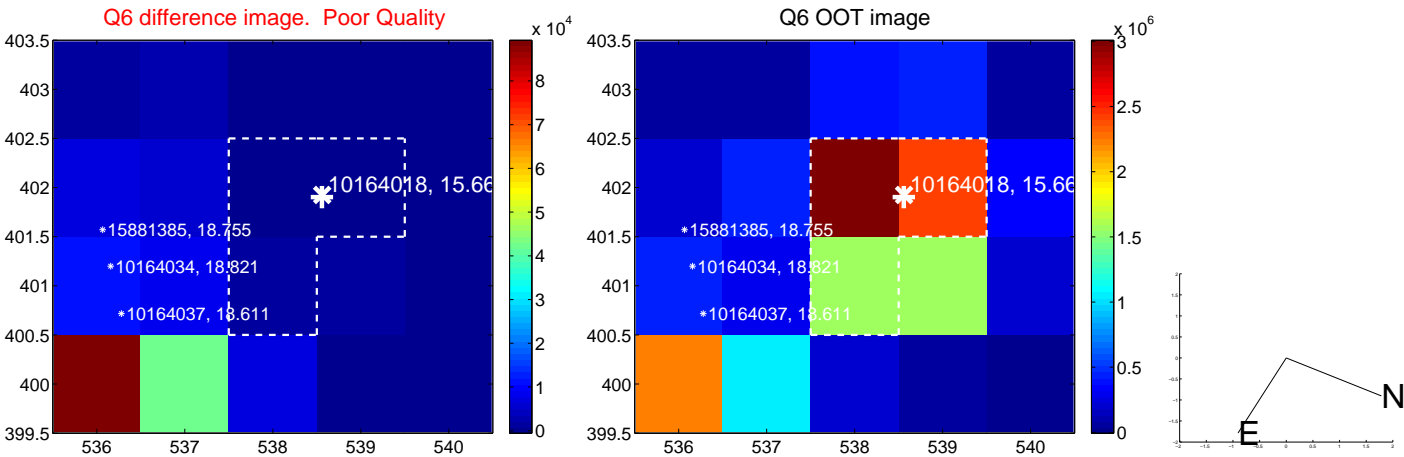
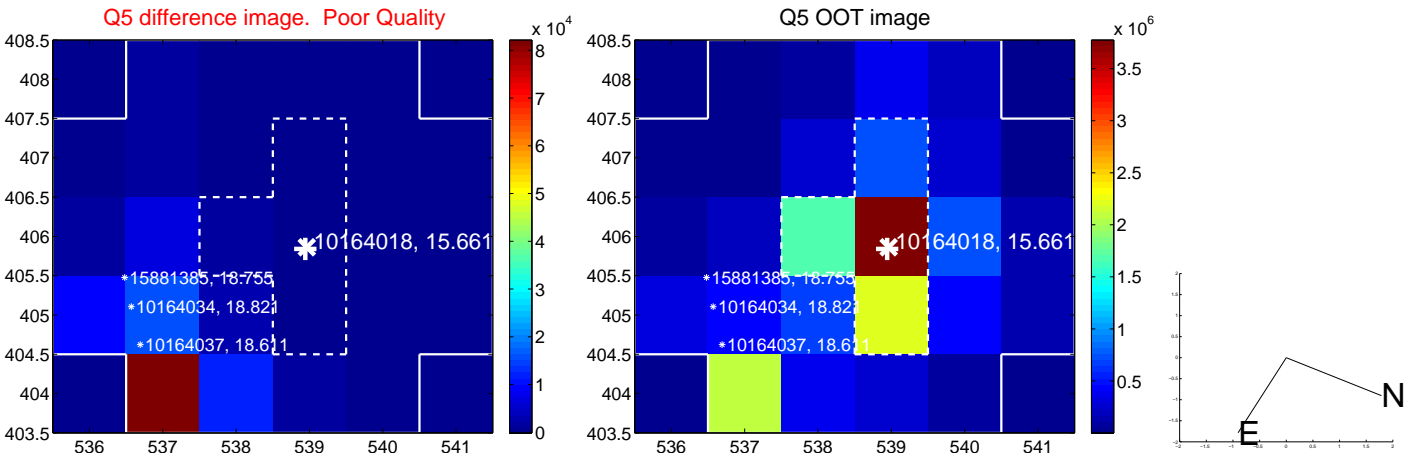


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

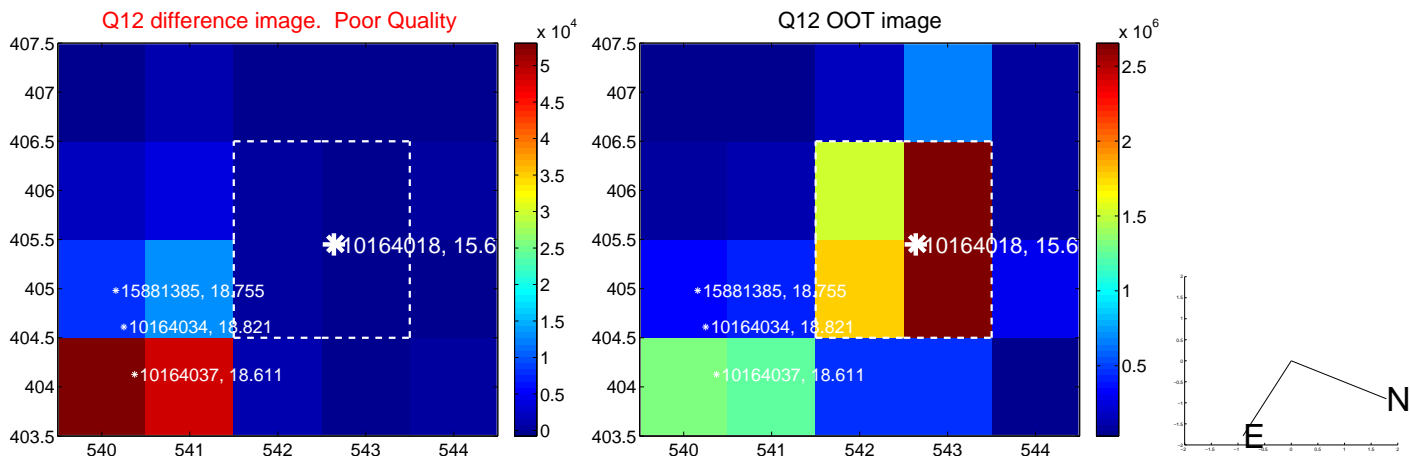
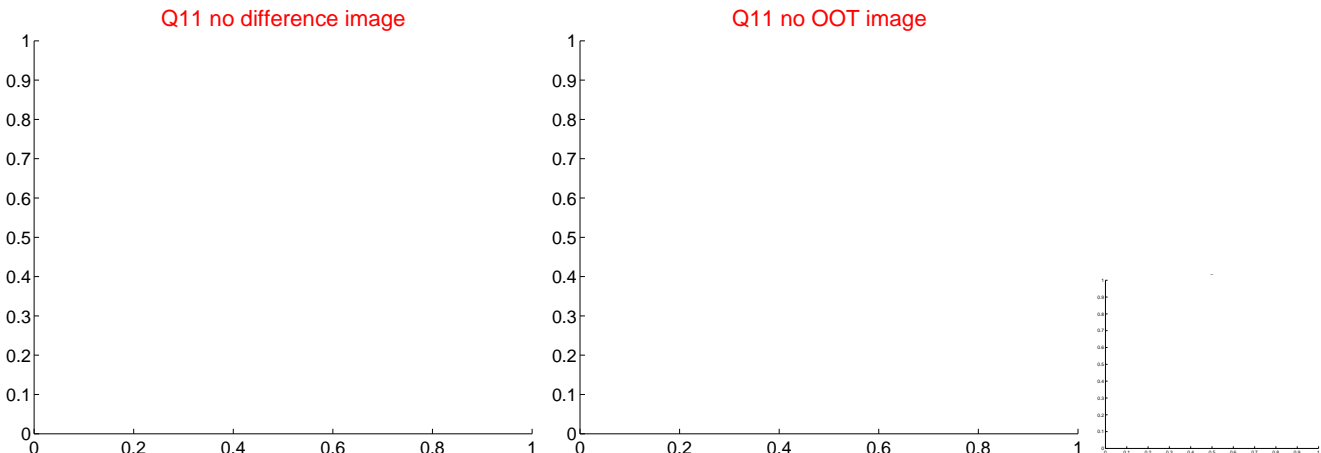
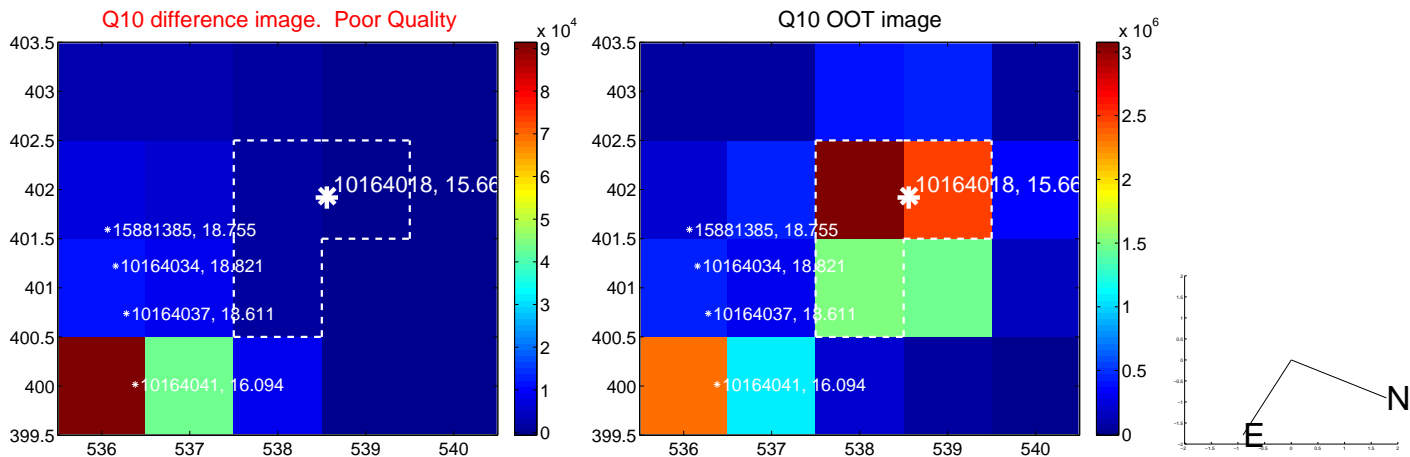
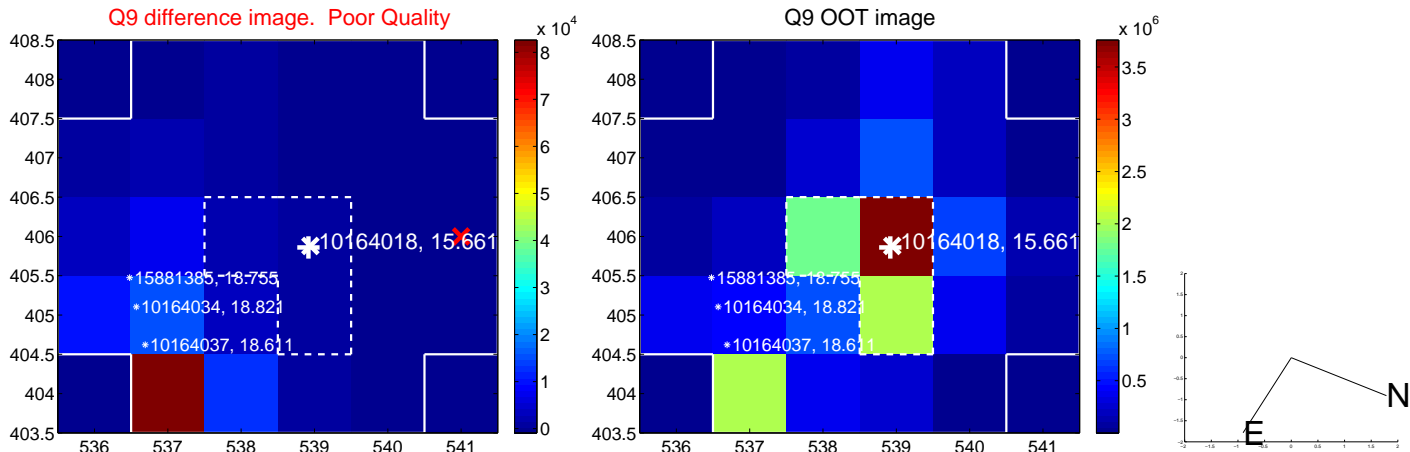
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



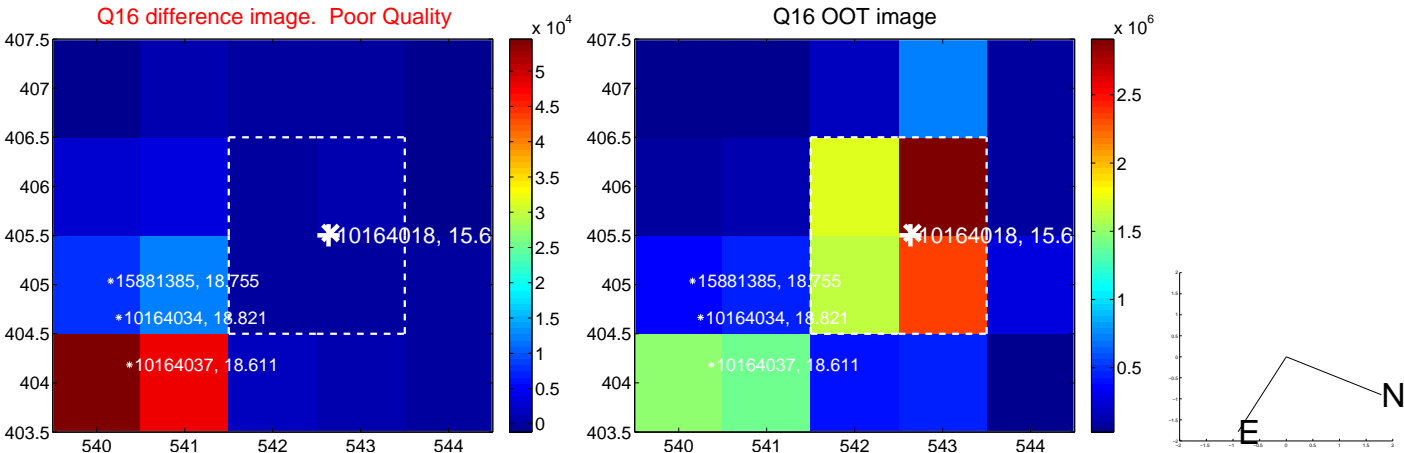
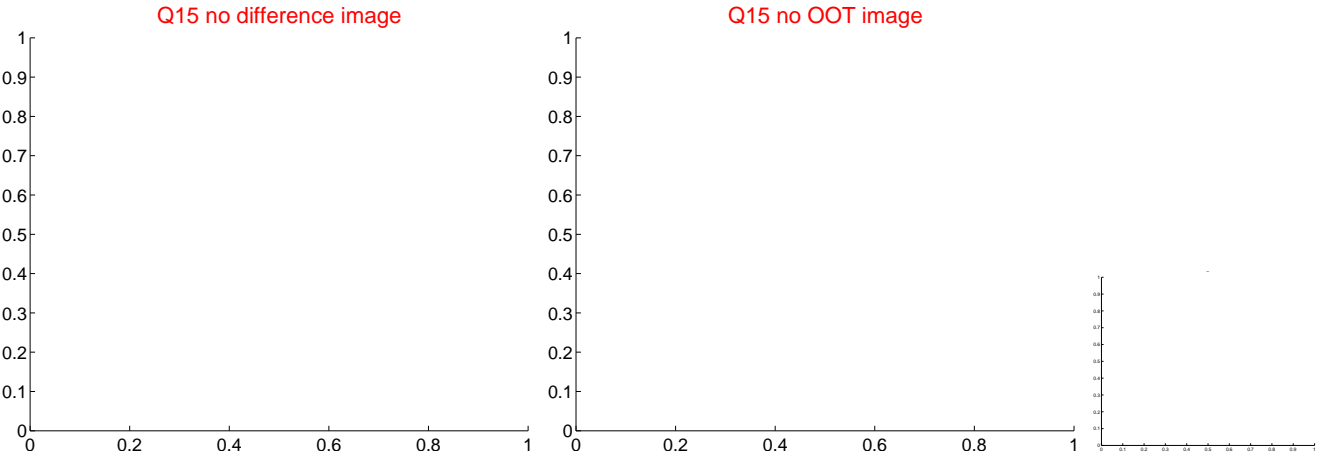
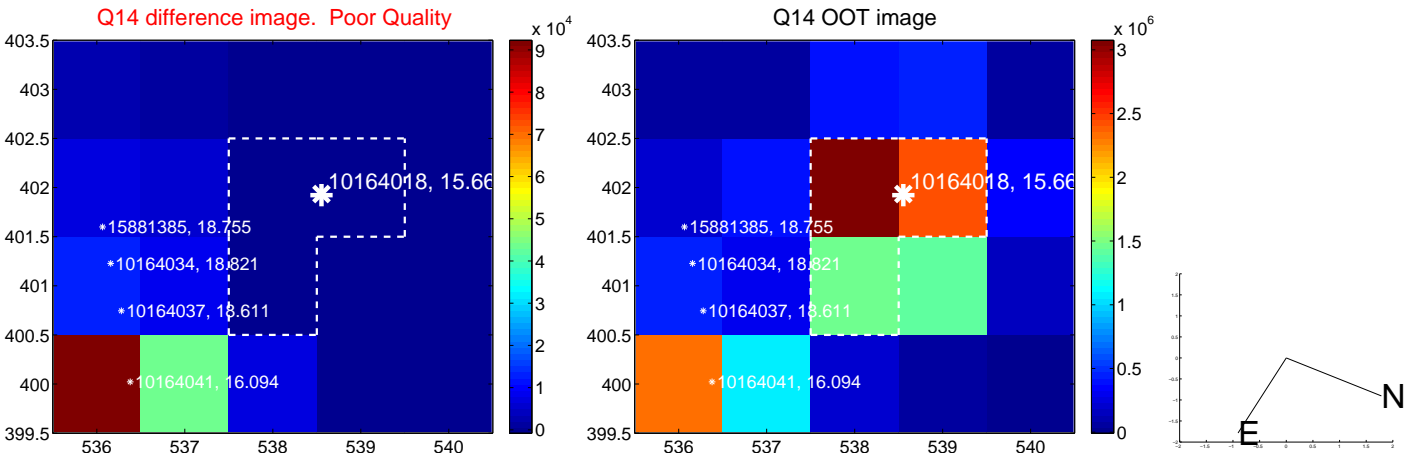
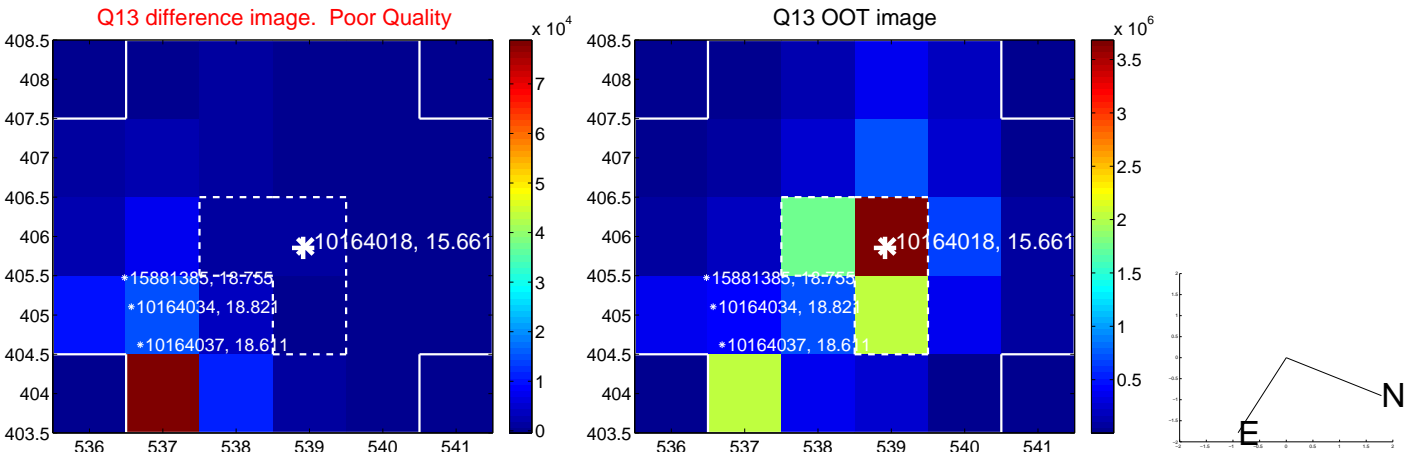
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



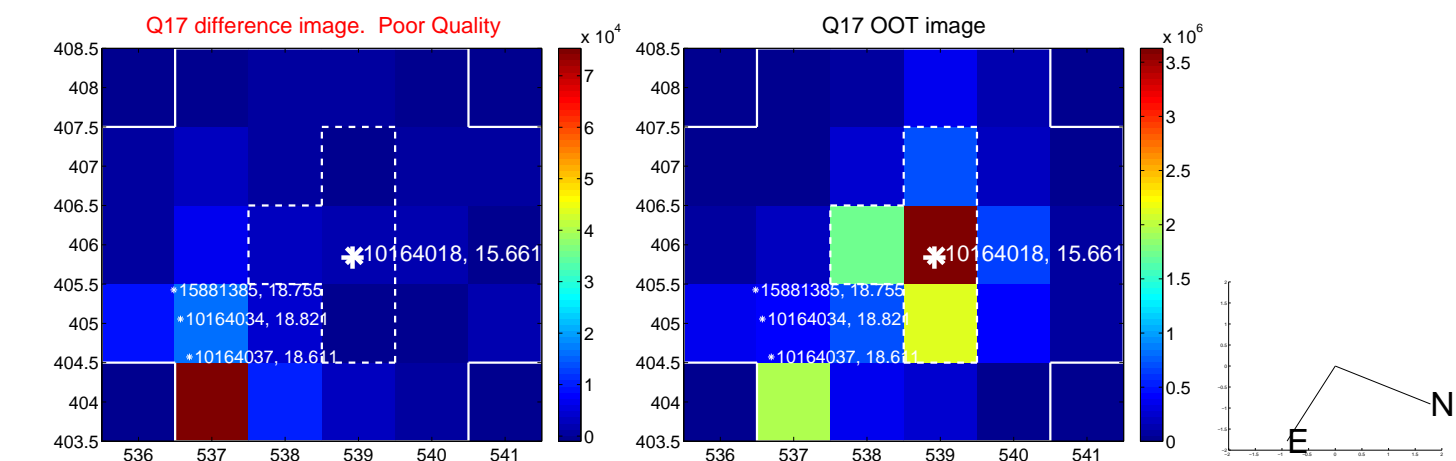
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



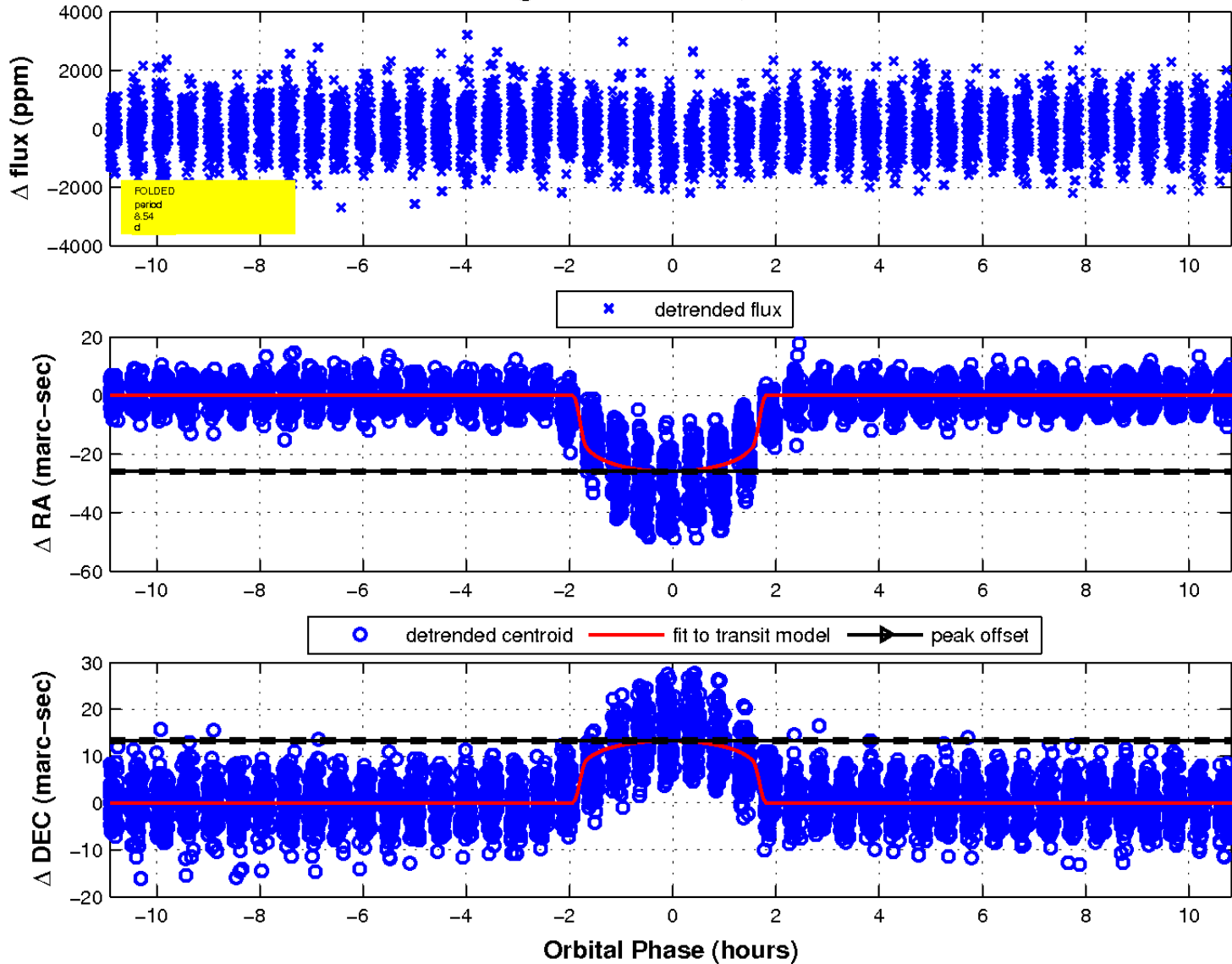
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

