

KIC 010546063

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})
010546063-01	OBS	7339.01	10.698235	140.677970	213.3	3.230	7.7	7.8	1.10	6277	1.76	169.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010546063-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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 010546063-01

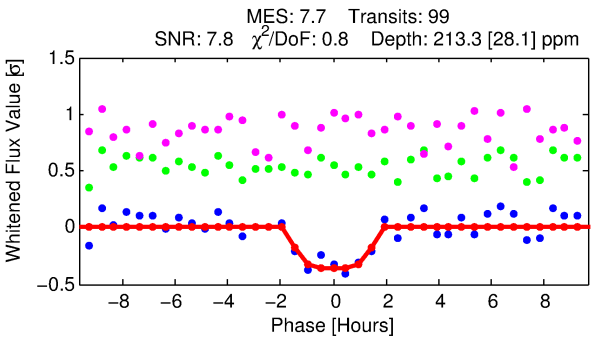
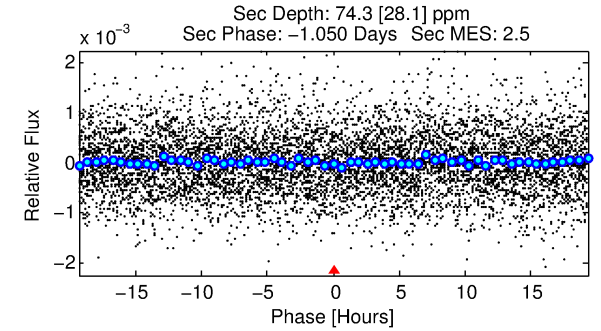
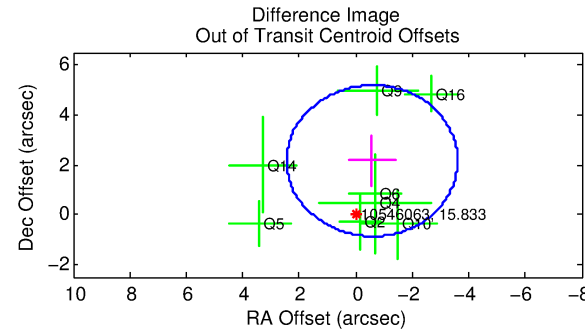
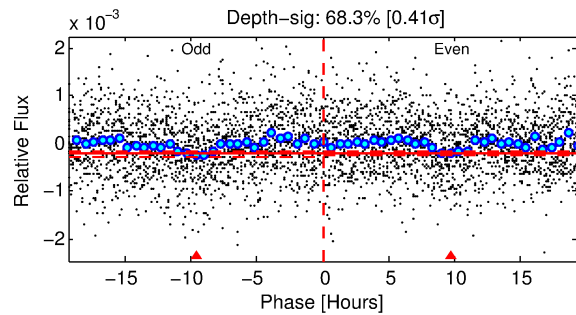
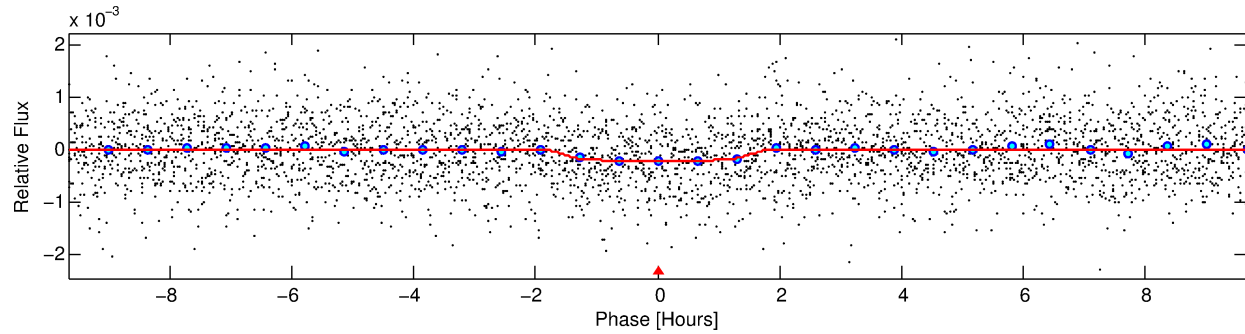
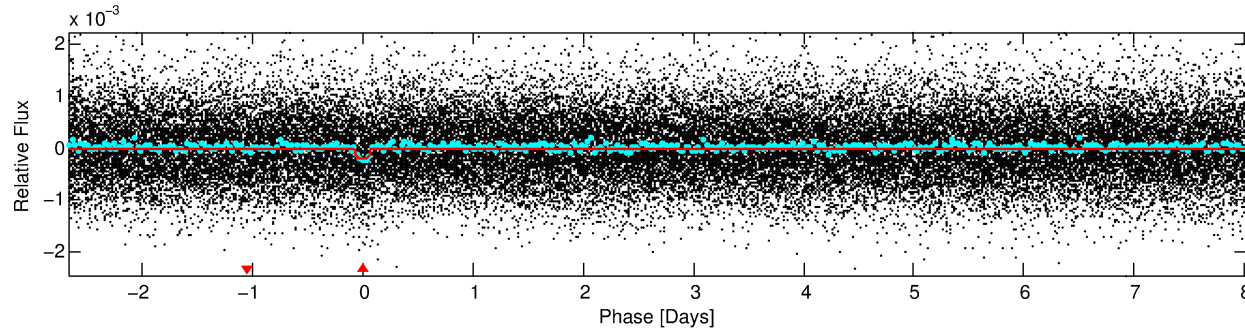
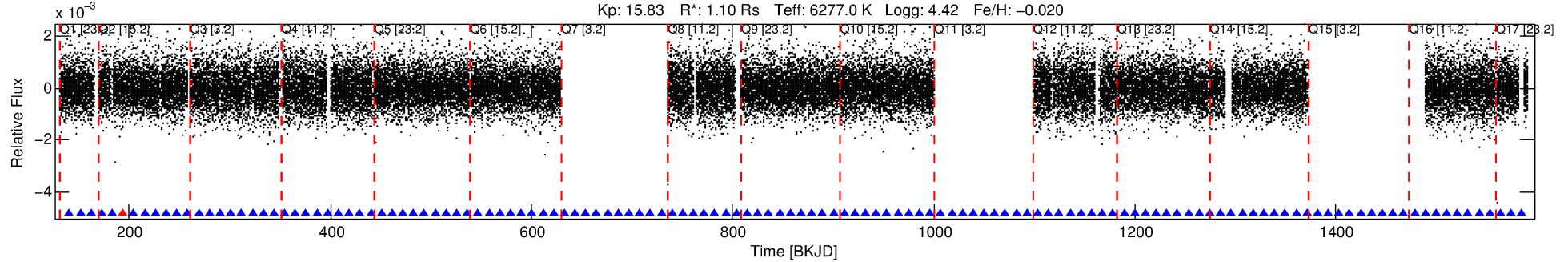
No Significant Match Found

DV One-Page Summary

KIC: 10546063 Candidate: 1 of 1 Period: 10.698 d

KOI: K07339.01 Corr: 0.961

Kp: 15.83 R*: 1.10 Rs Teff: 6277.0 K Logg: 4.42 Fe/H: -0.020



DV Fit Results:

Period = 10.69824 [0.00012] d
Epoch = 140.6780 [0.0088] BKJD
Rp/R* = 0.0147 [0.0163]
a/R* = 16.40 [93.47]
b = 0.78 [2.89]
Seff = 169.16 [62.32]
Teq = 920 [85] K
Rp = 1.76 [2.01] Re
a = 0.0995 [0.0234] AU
Ag = 130.74 [297.11] [0.44σ]
Teff = 4808 [2708] K [1.44σ]

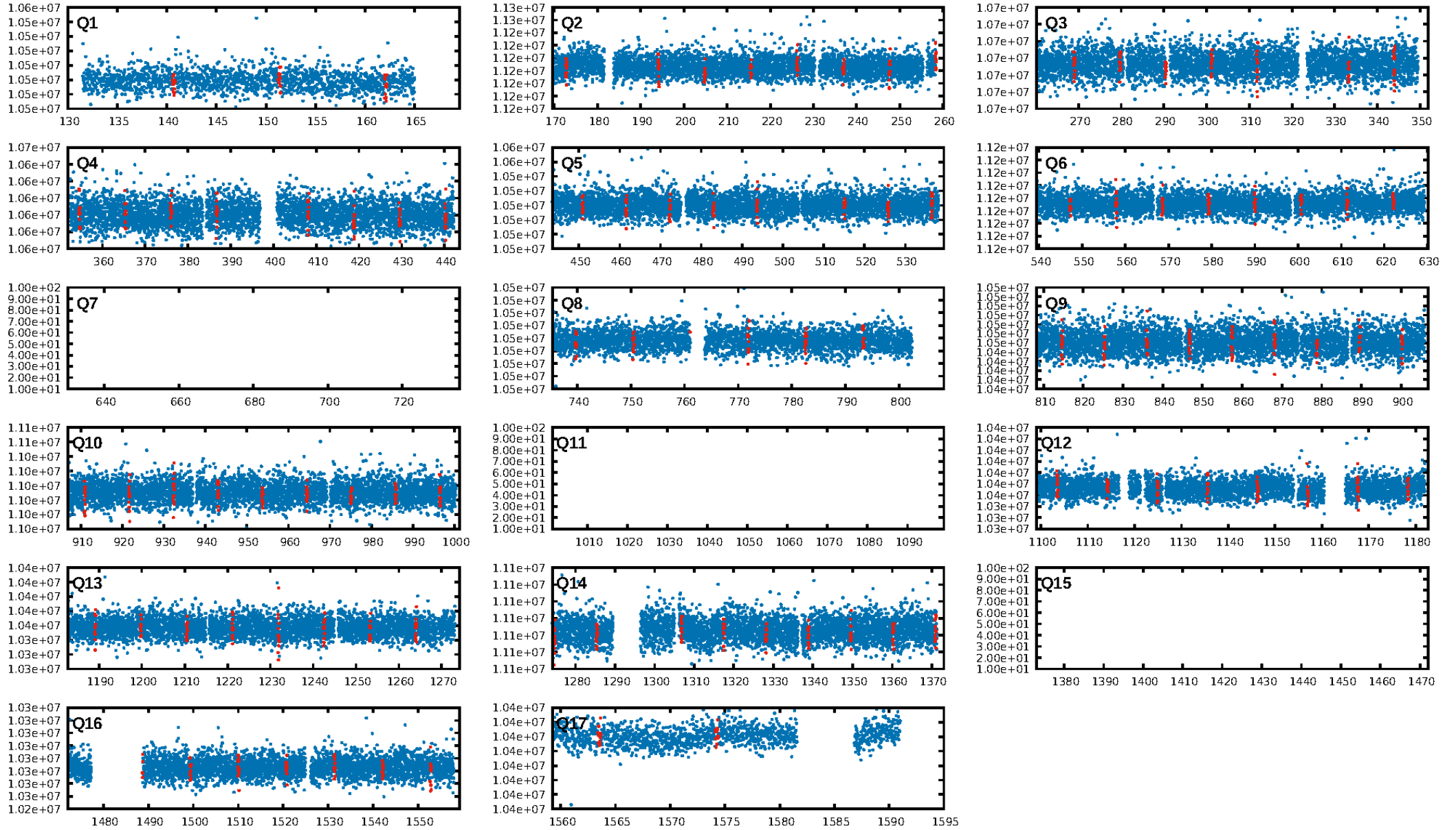
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.44e-15
RollingBand-fgt: 0.99 [93/94]
GhostDiagnostic-chr: 1.591
Centroid-sig: 0.0%
Centroid-so: 4.651 arcsec [2.11σ]
OotOffset-rm: 2.232 arcsec [2.21σ]
KicOffset-rm: 2.199 arcsec [2.22σ]
OotOffset-st: 4/0/2/2 [8]
KicOffset-st: 4/0/2/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [14/14]

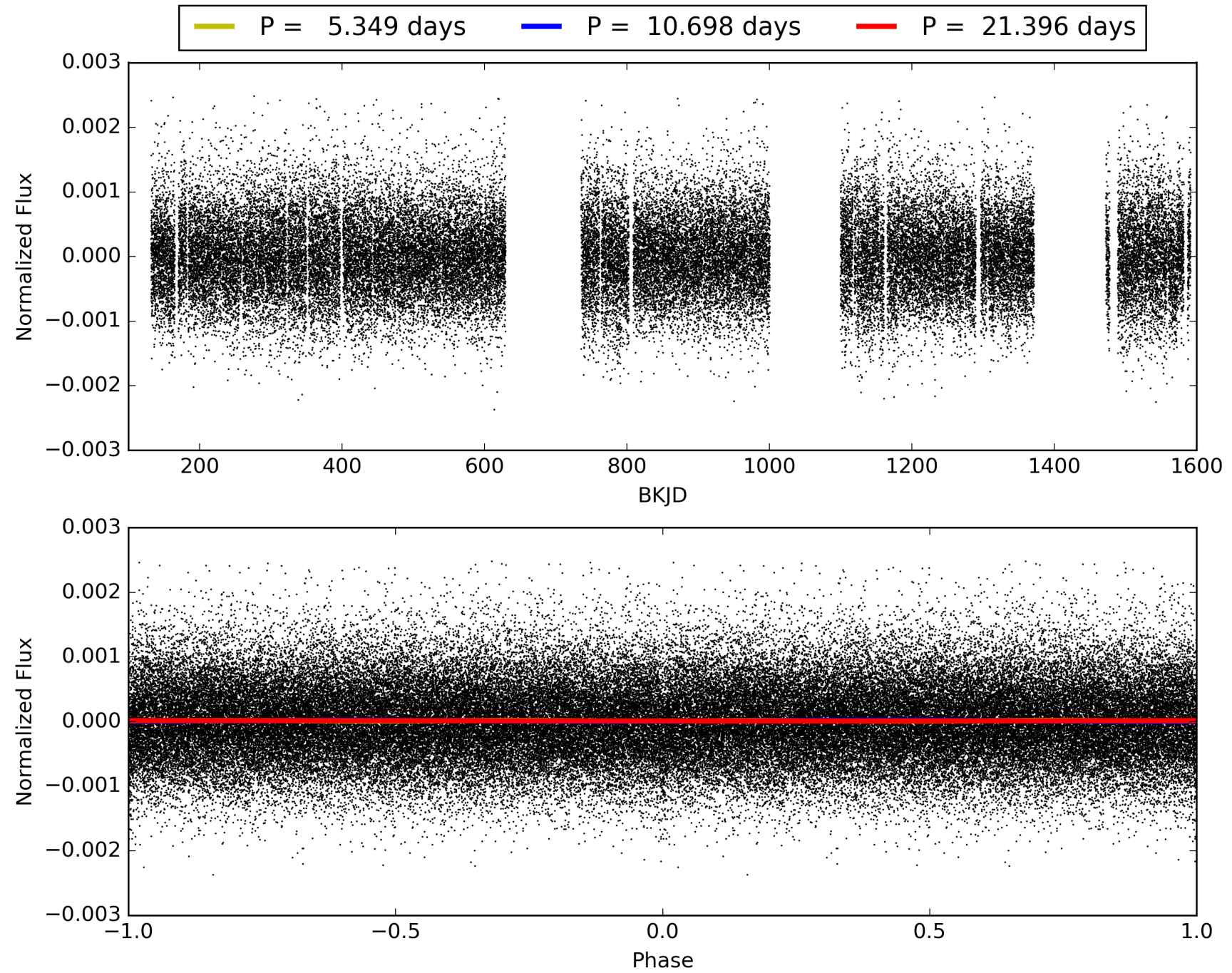
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:05:35 Z

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

TCE 010546063-01, PDC Light Curves

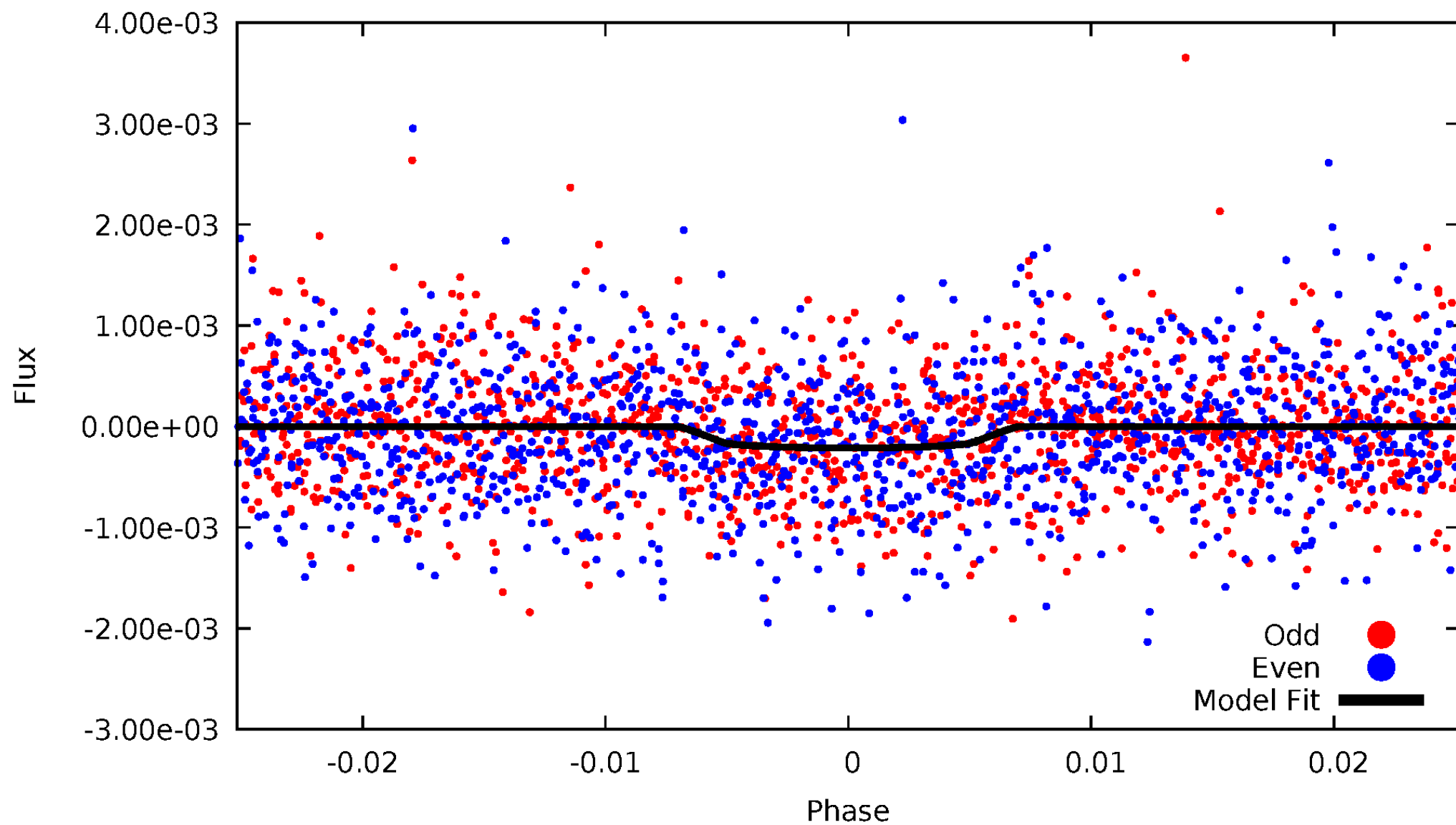


TCE 010546063-01



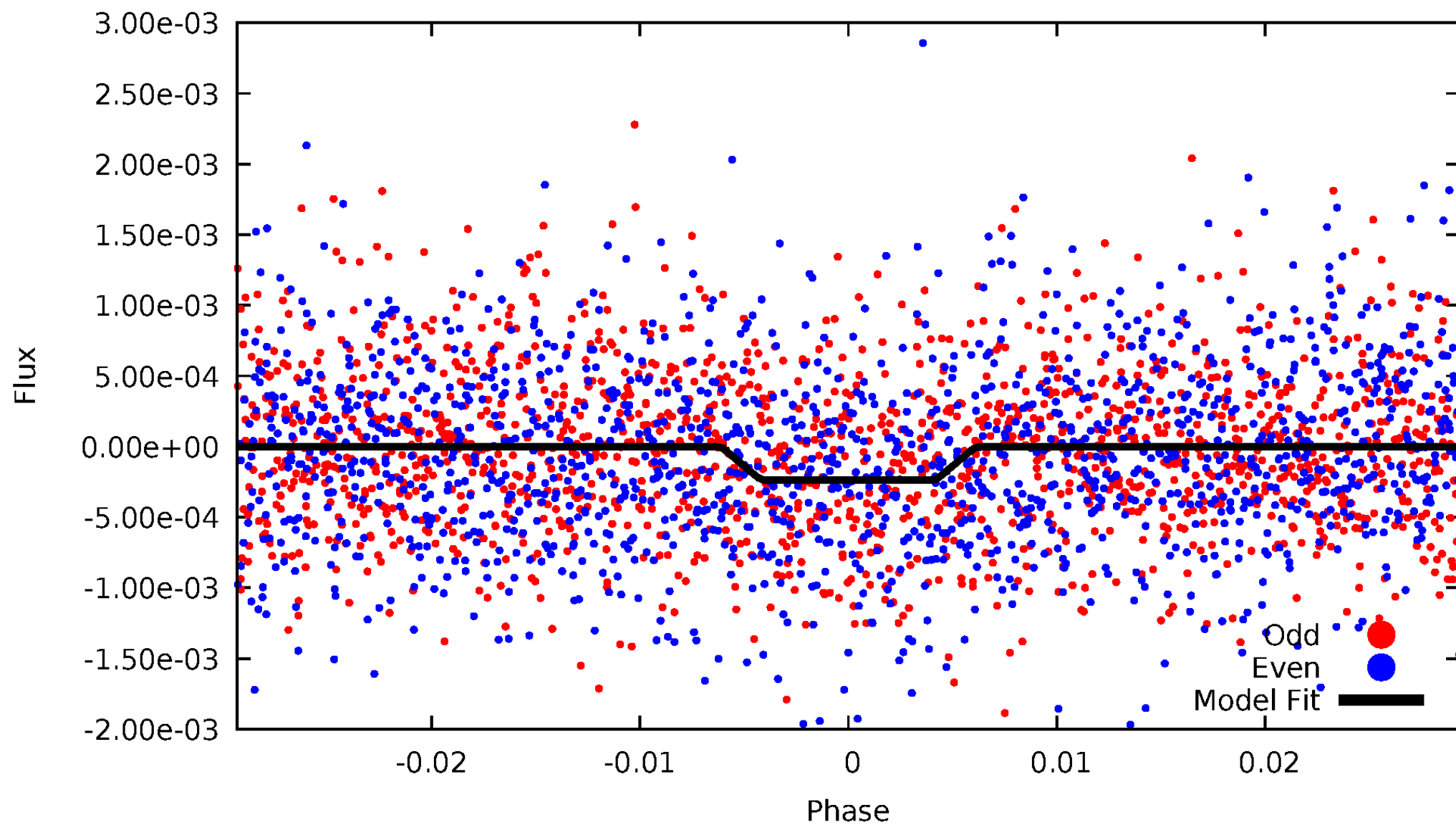
DV Odd/Even

TCE 010546063-01



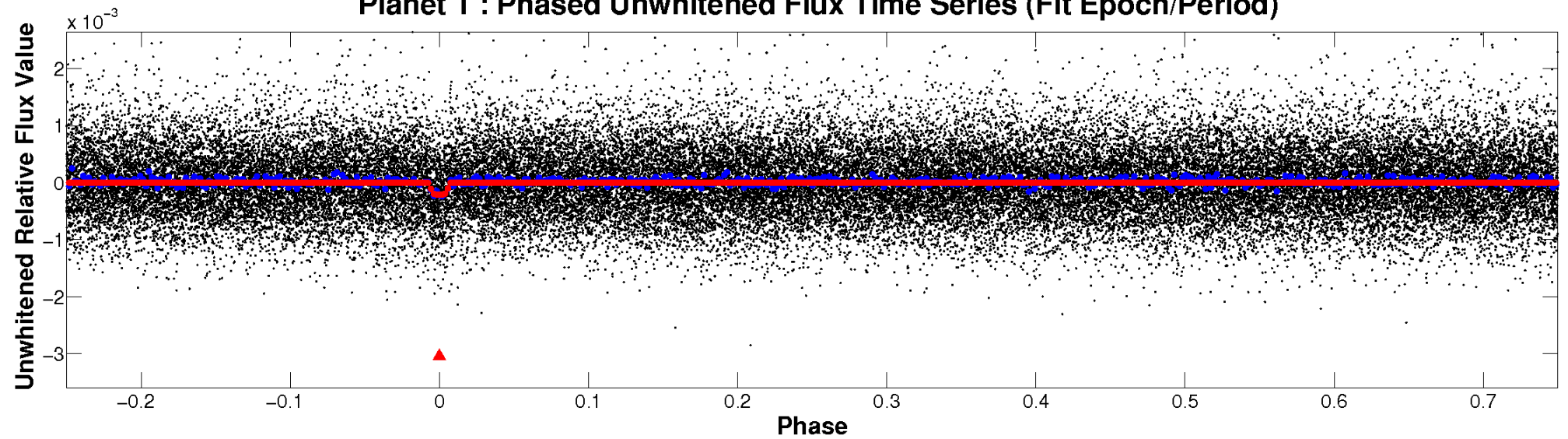
ALT Odd/Even

TCE 010546063-01

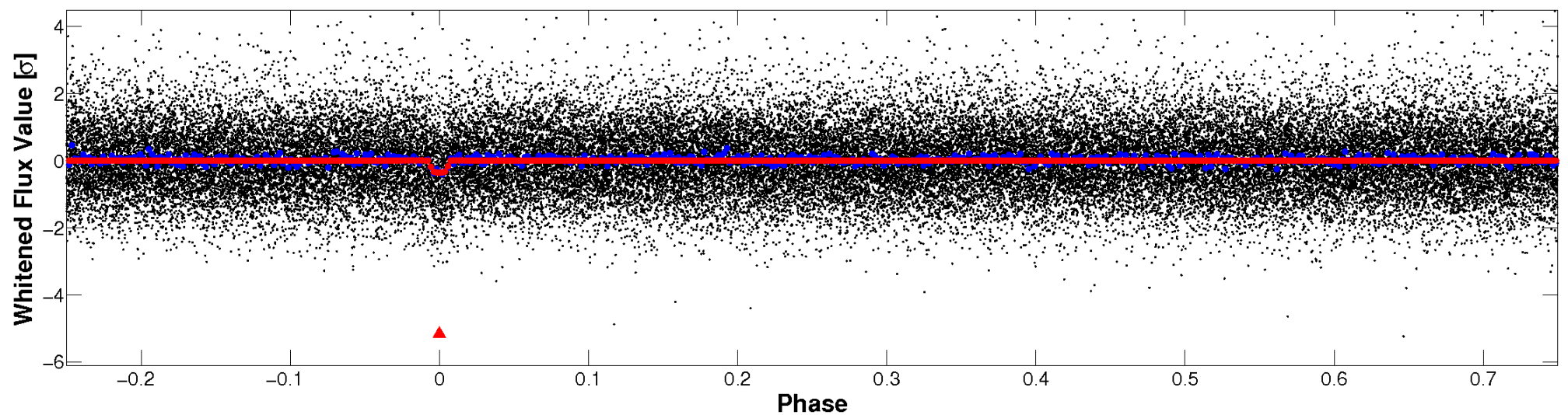


Non-Whitened Vs. Whitened Light Curve

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

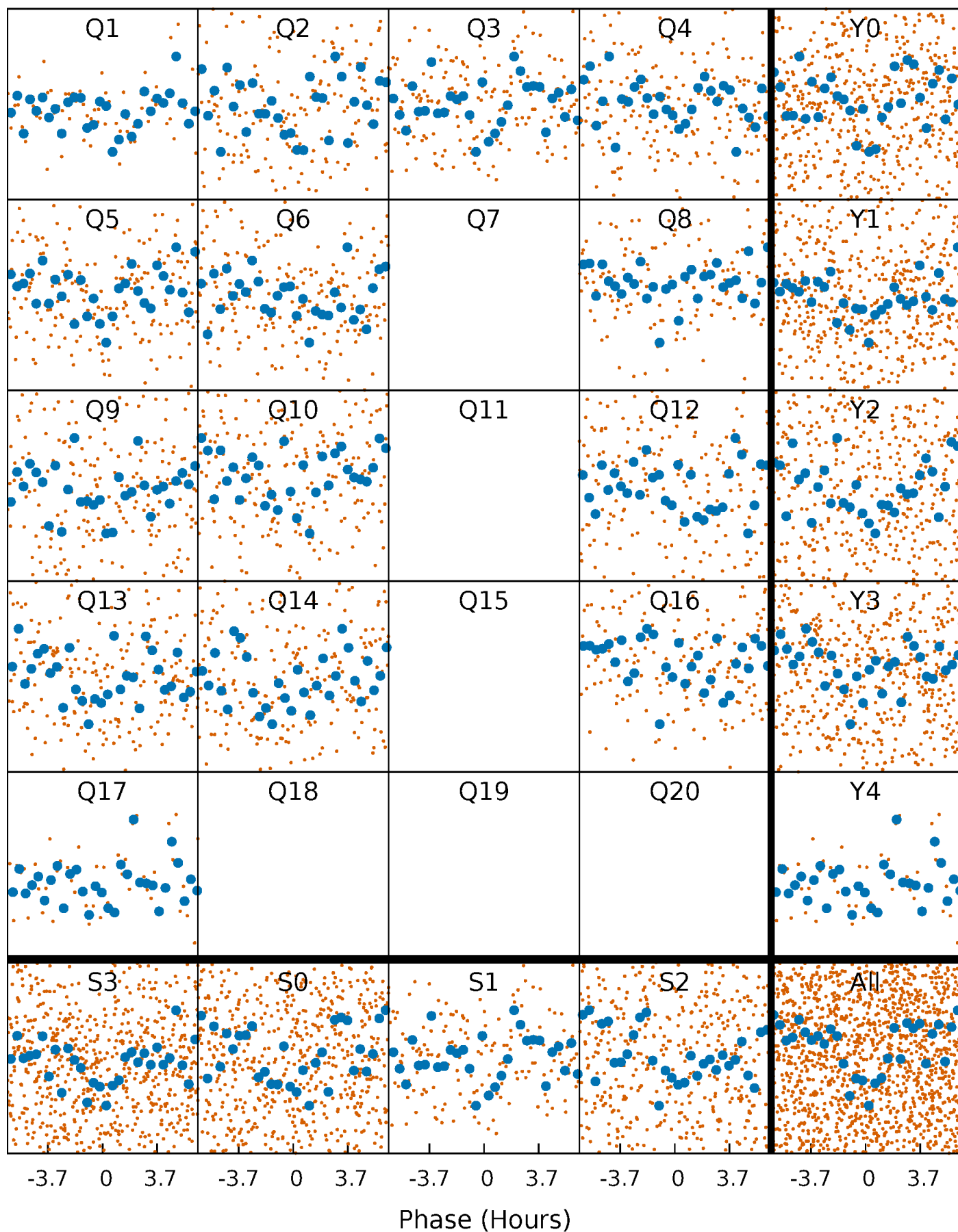


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



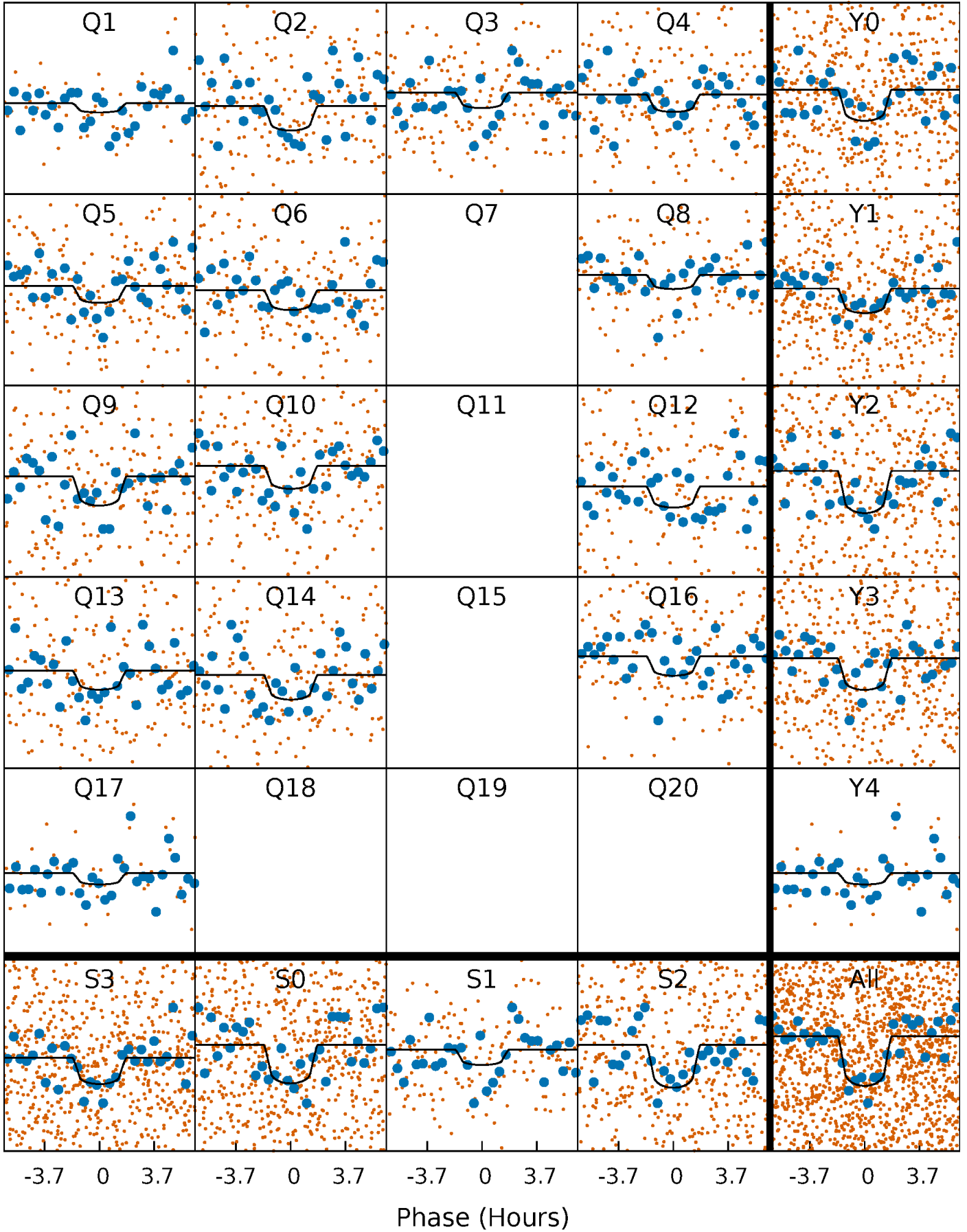
PDC Quarter-Phased Transit Curves

TCE 010546063-01 P= 10.698235 Days $T_0=140.677970$ (BKJD)



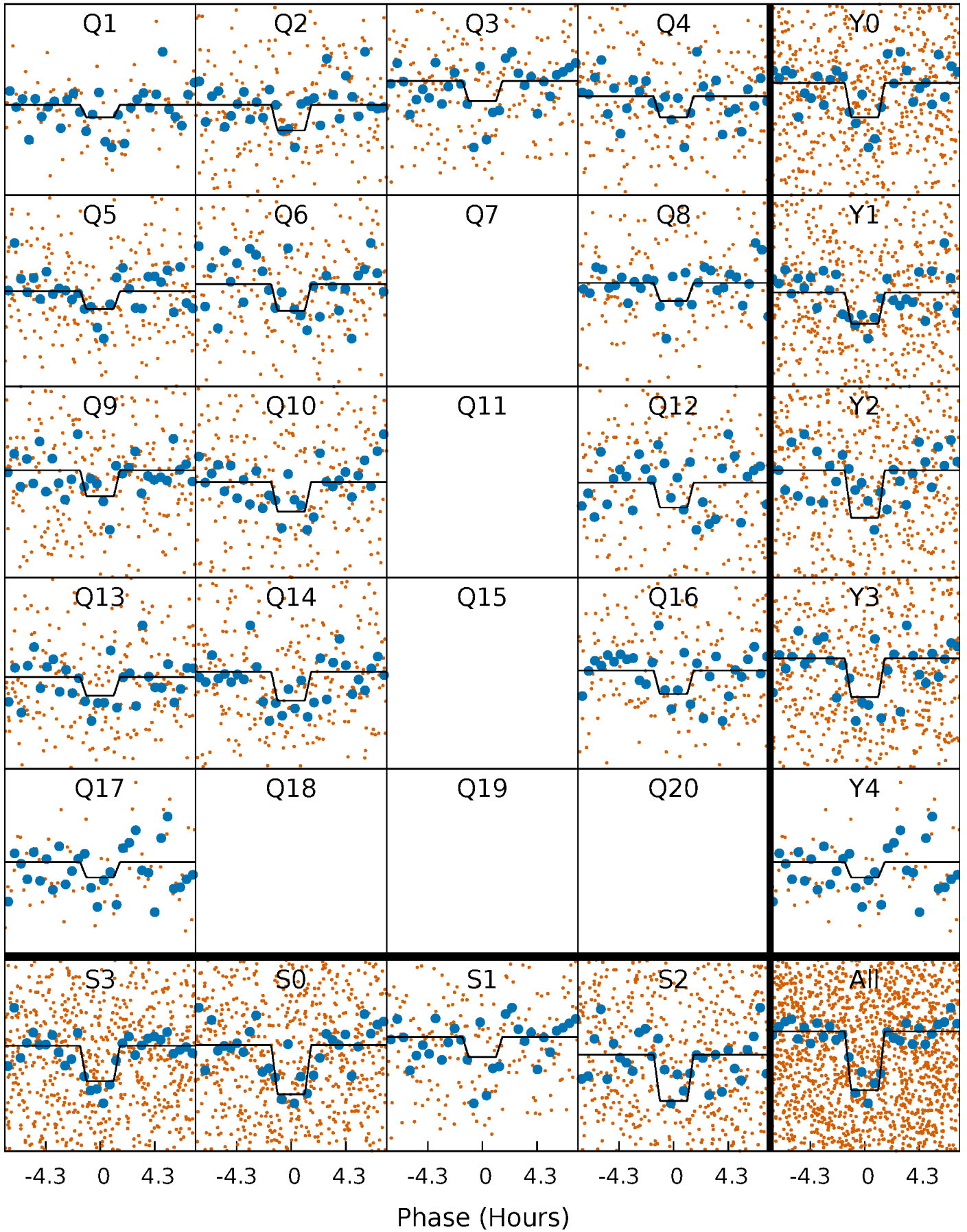
DV Quarter-Phased Transit Curves

TCE 010546063-01 P= 10.698235 Days $T_0=140.677970$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

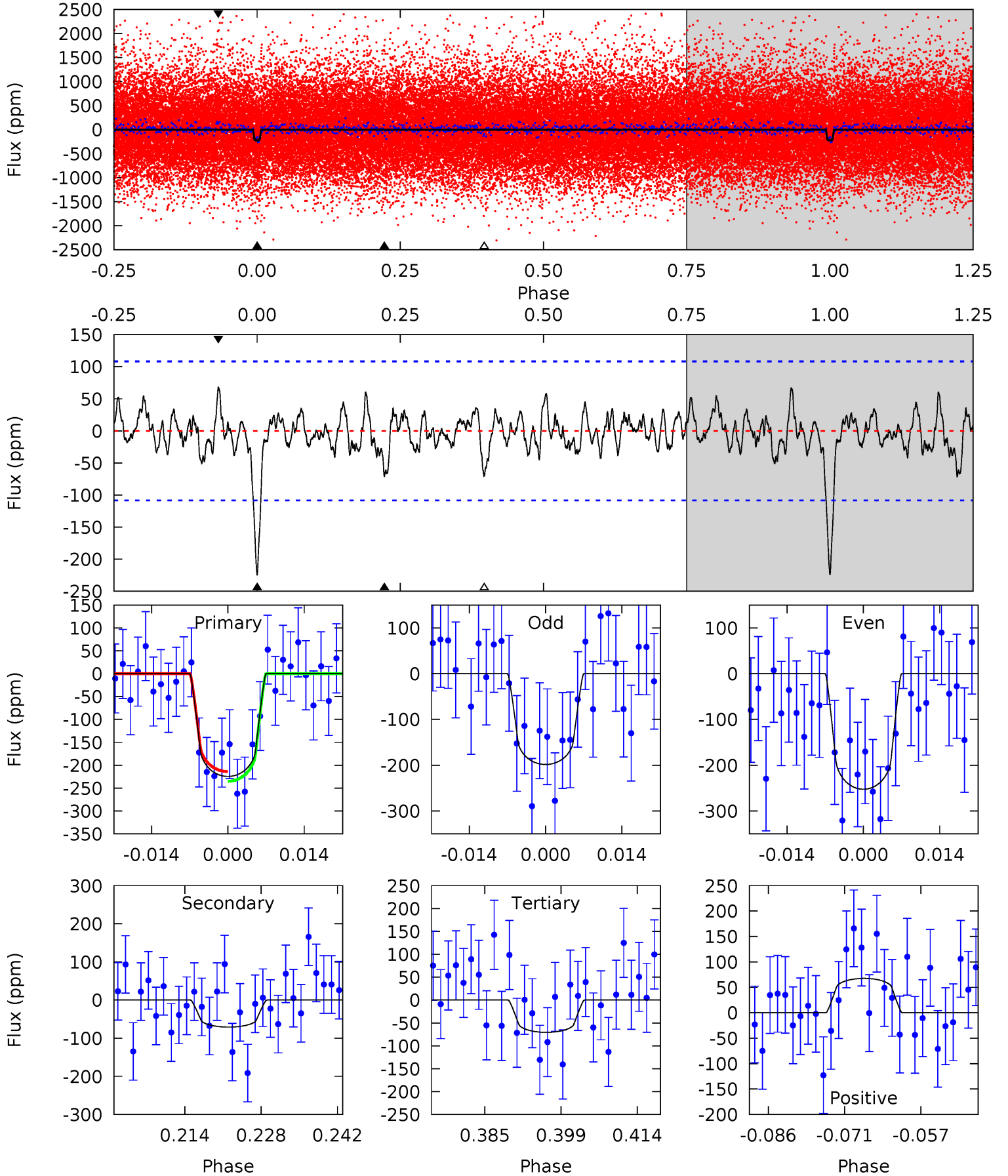
TCE 010546063-01 P= 10.698018 Days $T_0=140.685847$ (BKJD)



DV Model-Shift Uniqueness Test

010546063-01, $P = 10.698235$ Days, $E = 129.979735$ Days

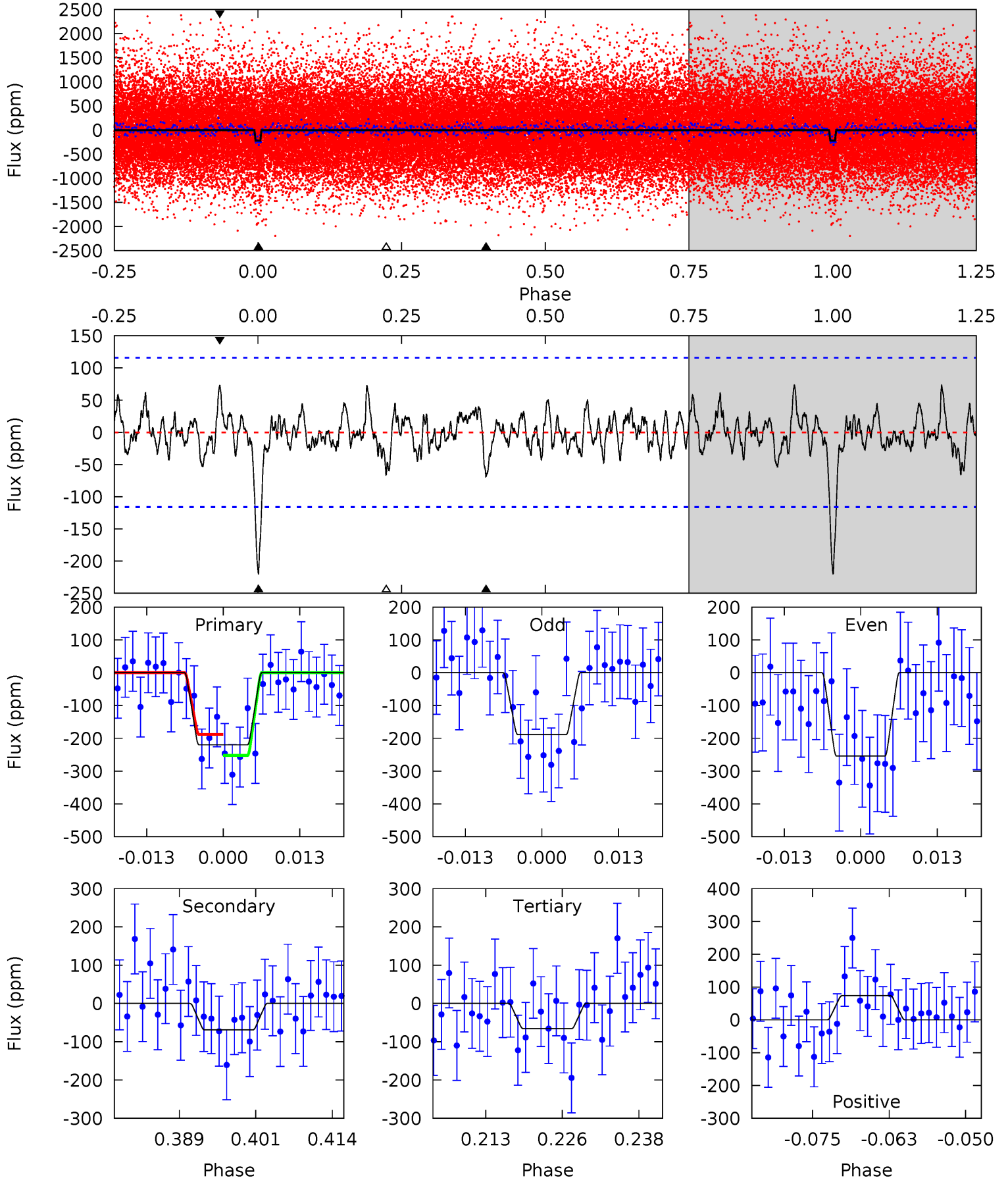
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.24	3.23	3.09	4.96	2.45	1.01	7.05	7.19	0.01	0.15	1.24	1.01	0.23	0.48



Alt Model-Shift Uniqueness Test

010546063-01, P = 10.698018 Days, E = 129.987829 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.46	2.97	2.83	3.16	4.98	2.50	0.97	6.63	6.29	0.14	-0.20	1.41	1.03	0.25	1.38



Stellar Parameters For KIC 010546063

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6277^{+174}_{-239}	$4.417^{+0.060}_{-0.180}$	$-0.020^{+0.250}_{-0.300}$	$1.097^{+0.313}_{-0.134}$	$1.148^{+0.145}_{-0.159}$	$1.223^{+0.400}_{-0.591}$
	+3%/-4%	+1%/-4%	+1250%/-1500%	+29%/-12%	+13%/-14%	+33%/-48%
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 010546063-01 / KOI 7339.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-71 ± 22	$2.26^{+1.80}_{-1.48}$	1306^{+85}_{-68}	4455^{+2801}_{-895}	73^{+604}_{-53}
Alt.	-69 ± 23	$2.48^{+1.87}_{-1.61}$	1312^{+93}_{-70}	4285^{+2407}_{-830}	59^{+370}_{-42}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

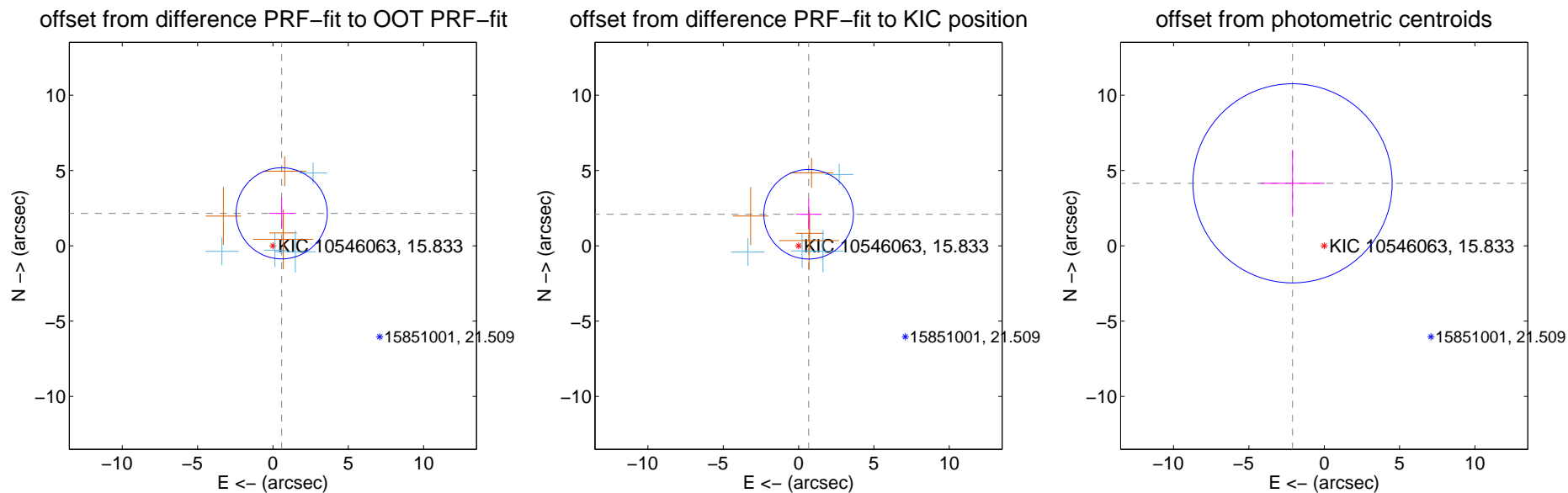
DV Centroid Data

Supplemental centroid analysis for 010546063-01. Kepler magnitude: 15.83. Transit SNR 7.75

There are 4 quarters with good PRF difference image offsets

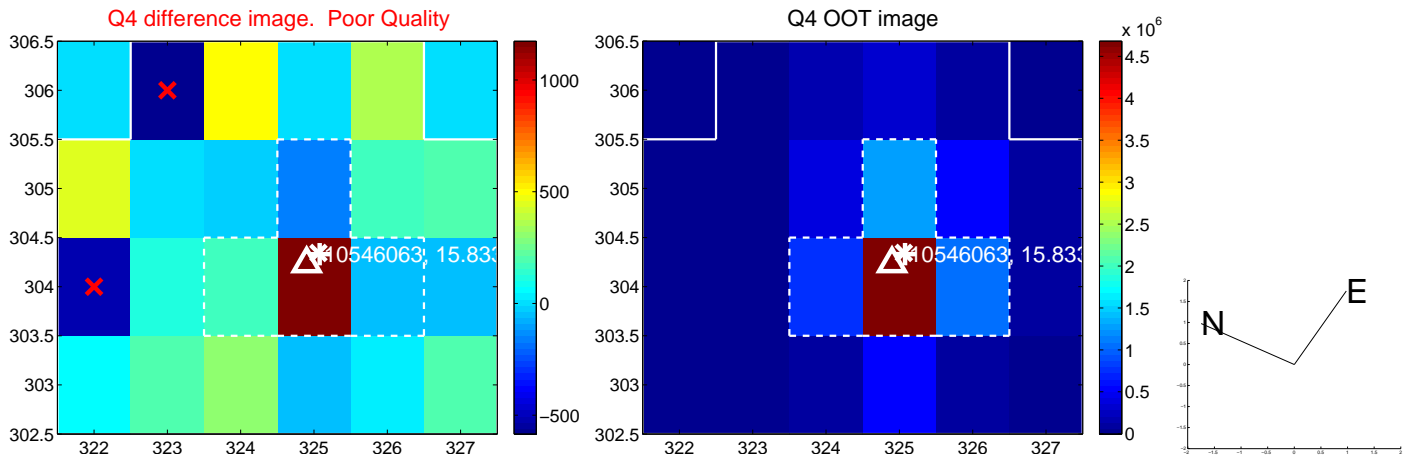
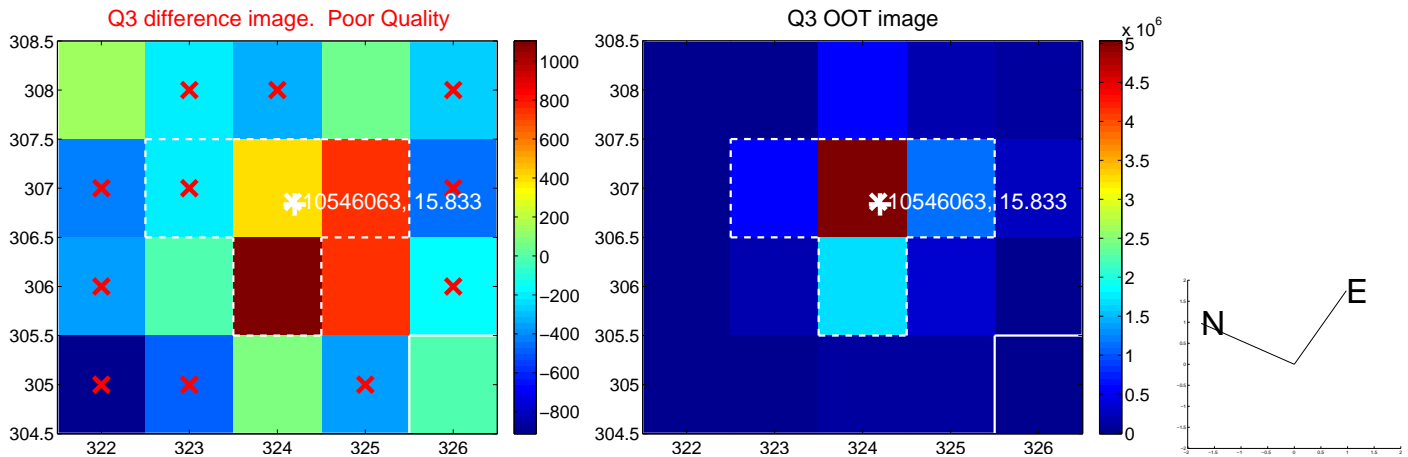
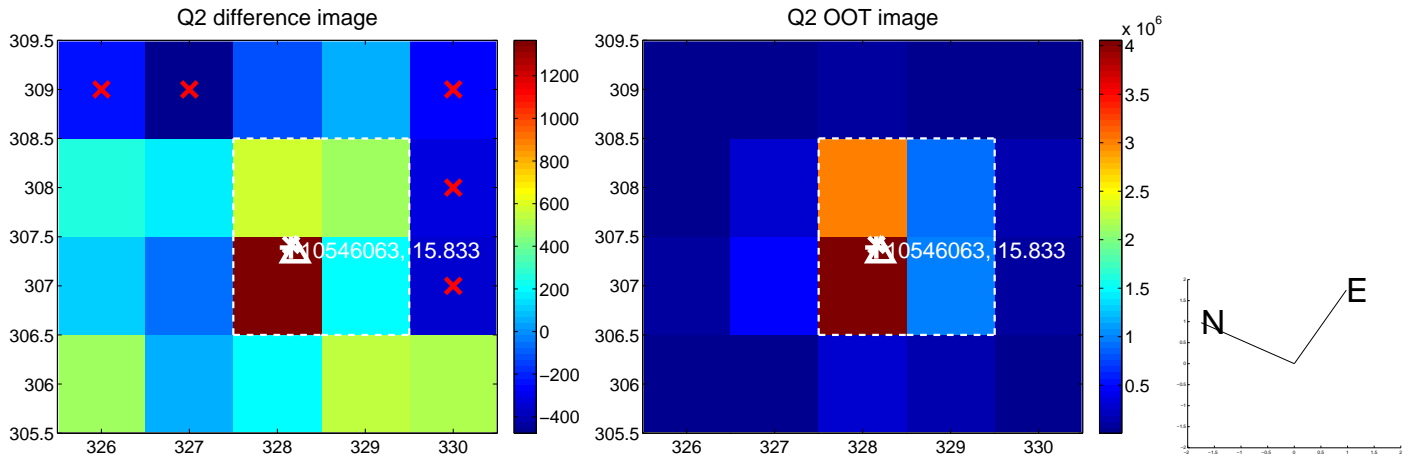
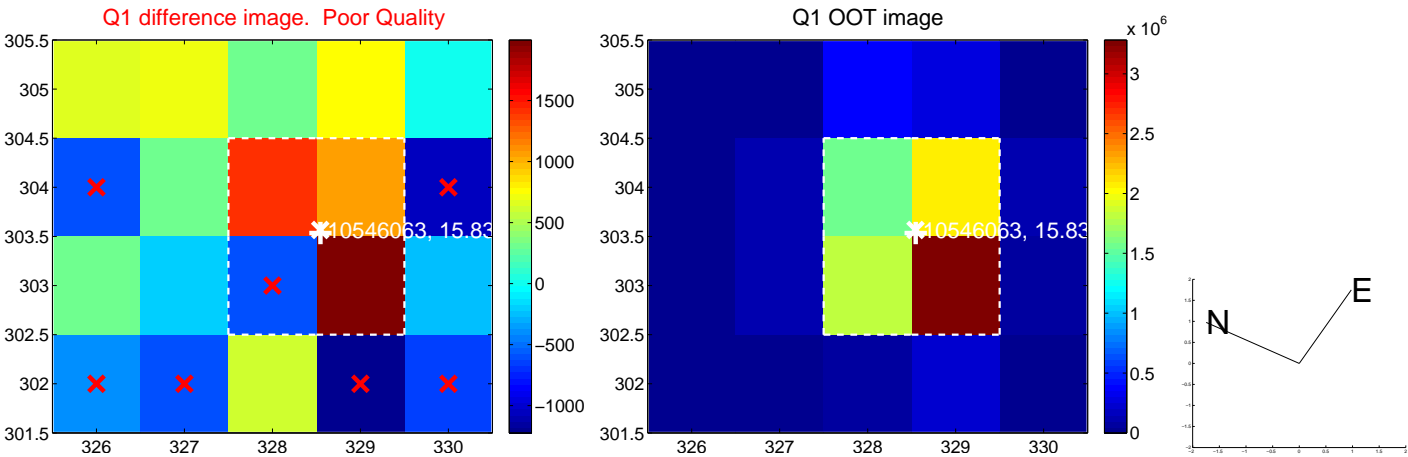
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.232 ± 1.009	2.21	-0.581 ± 0.846	2.155 ± 1.019
PRF-fit source offset from KIC position	2.199 ± 0.991	2.22	-0.667 ± 0.832	2.095 ± 1.006
photometric centroid source offset	4.65 ± 2.20	2.11	2.10 ± 2.13	4.15 ± 2.22

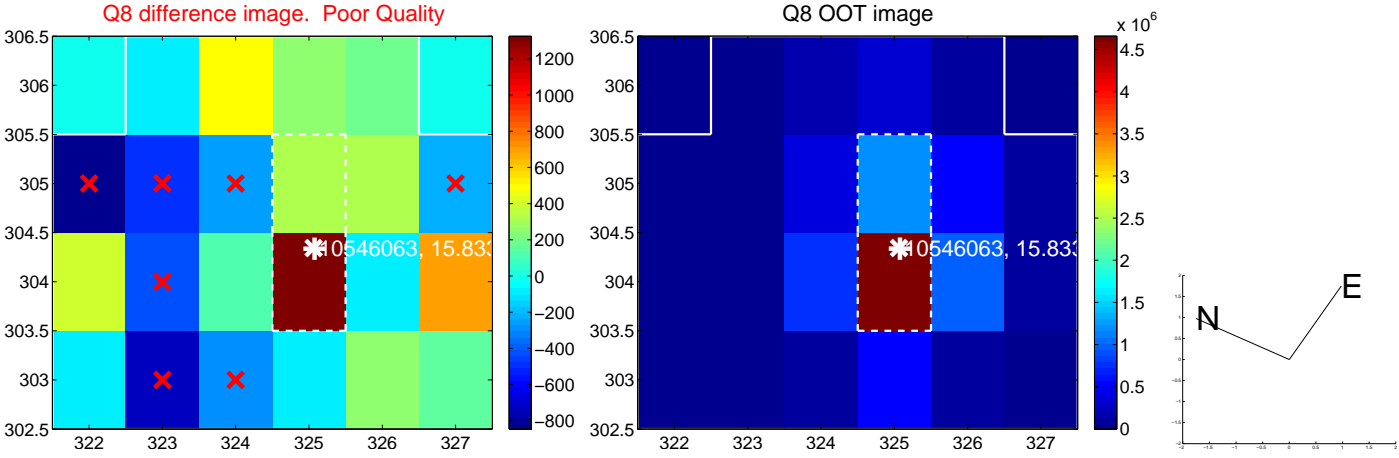
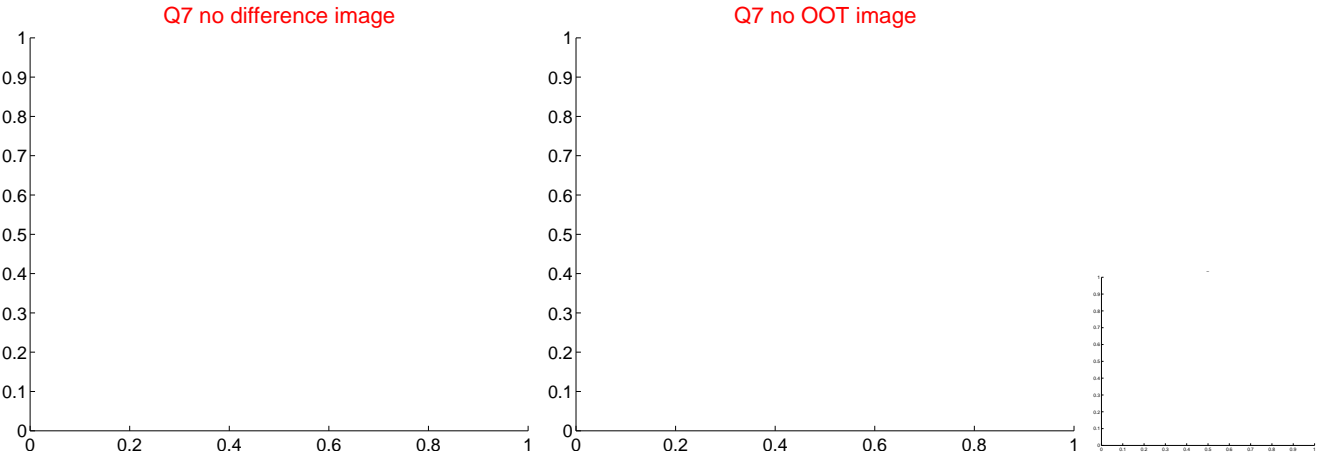
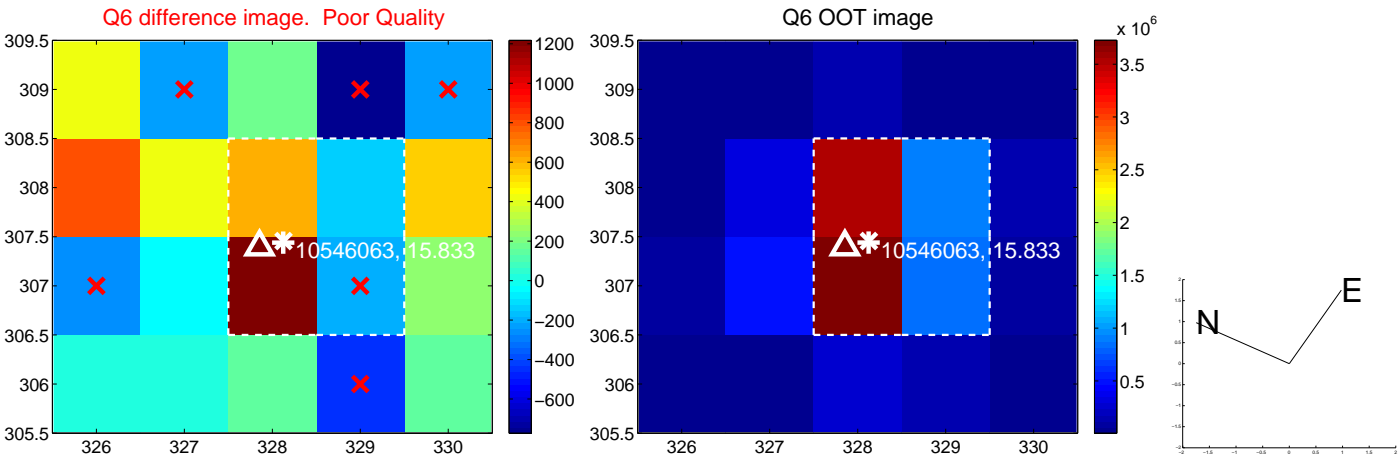
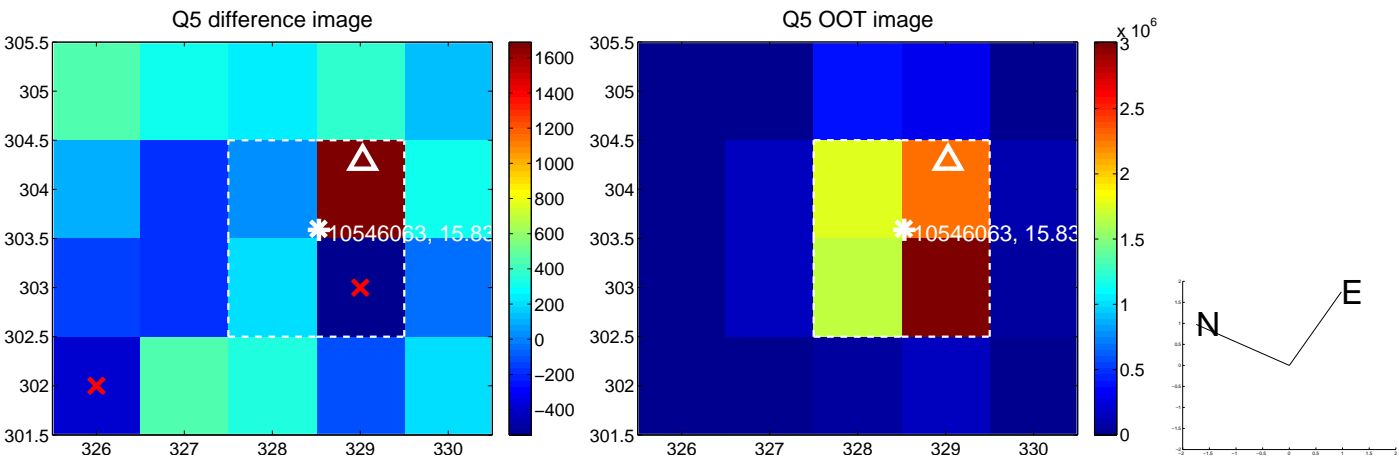


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

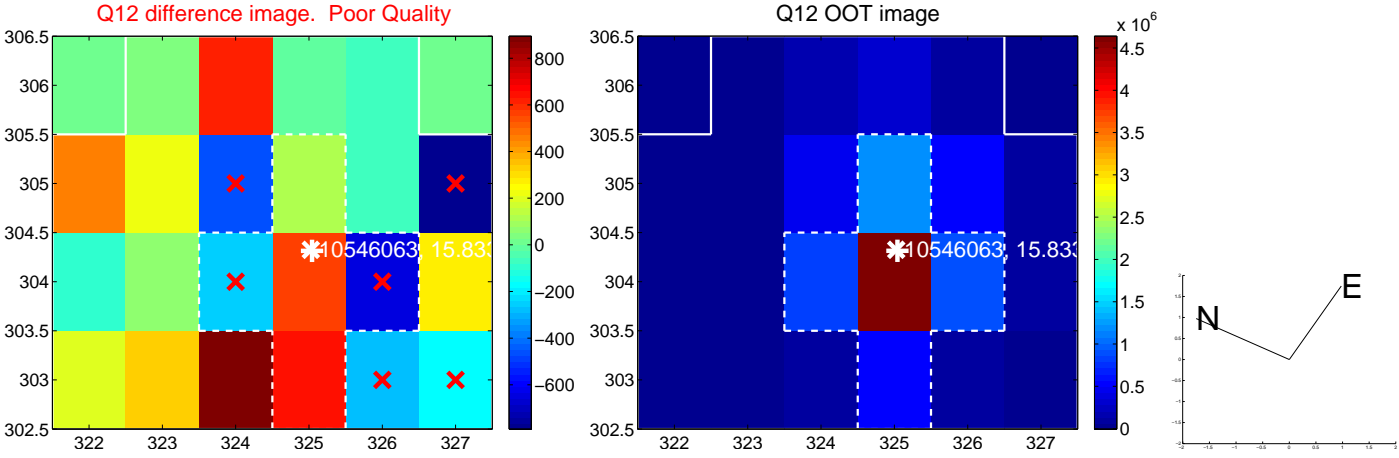
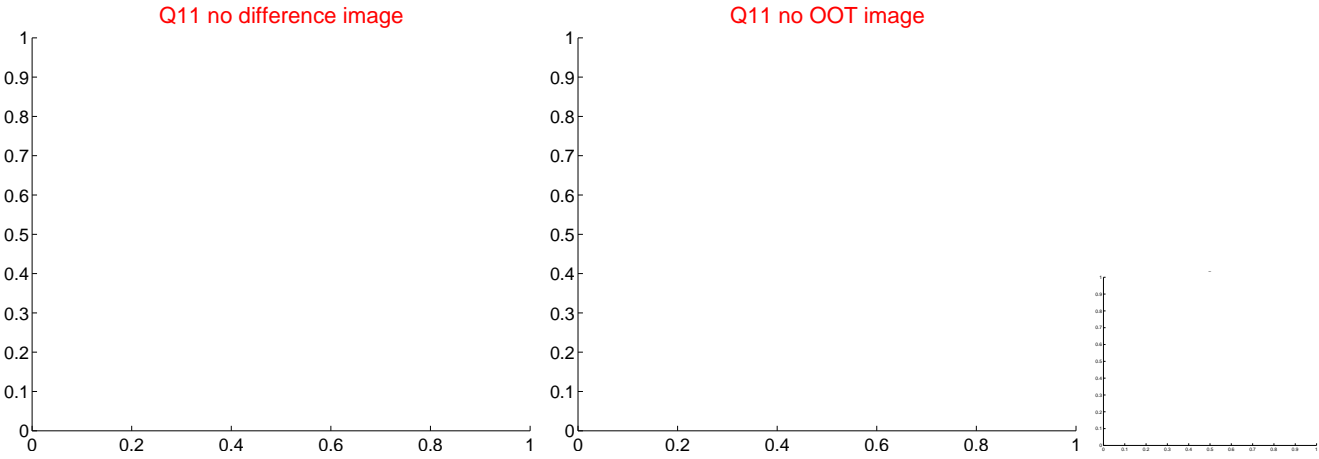
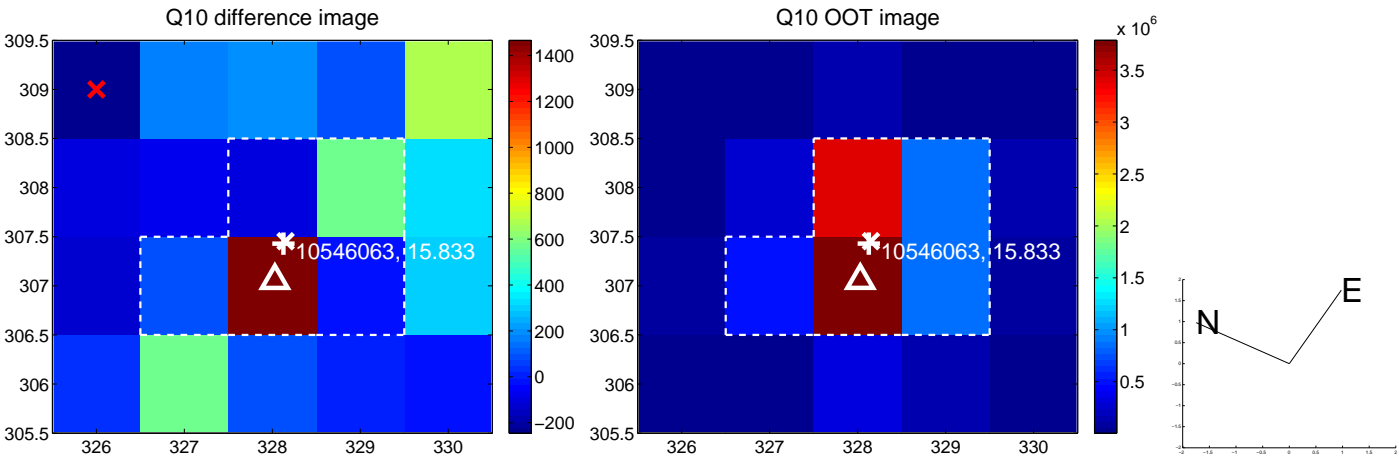
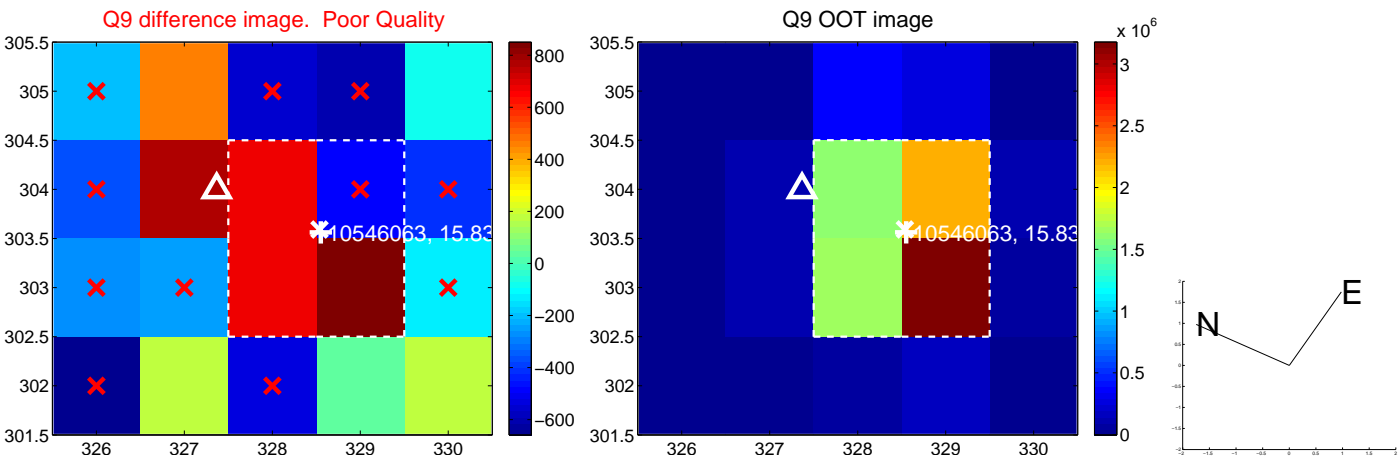
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



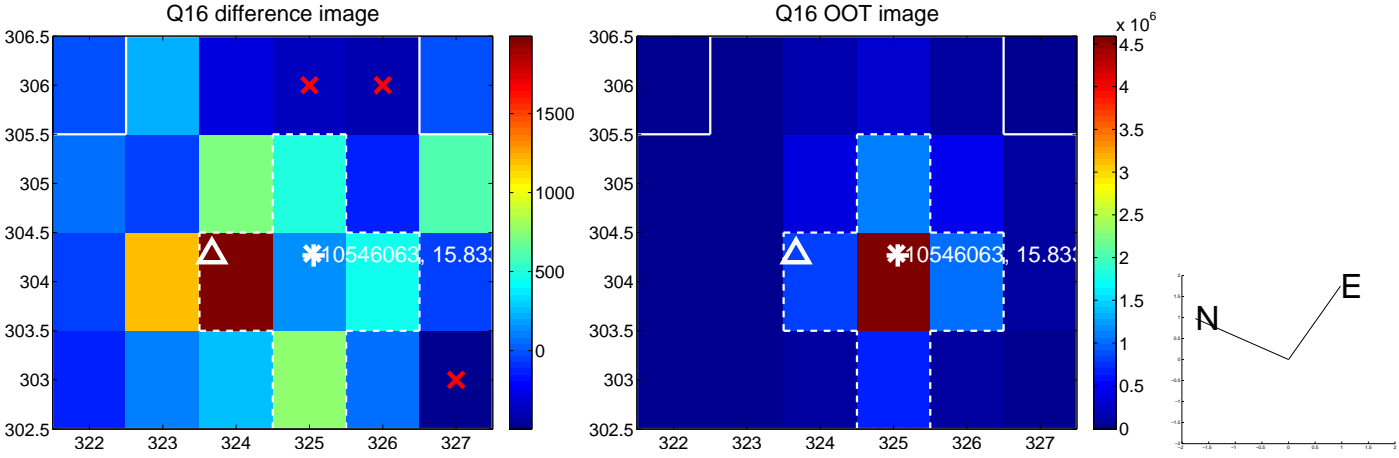
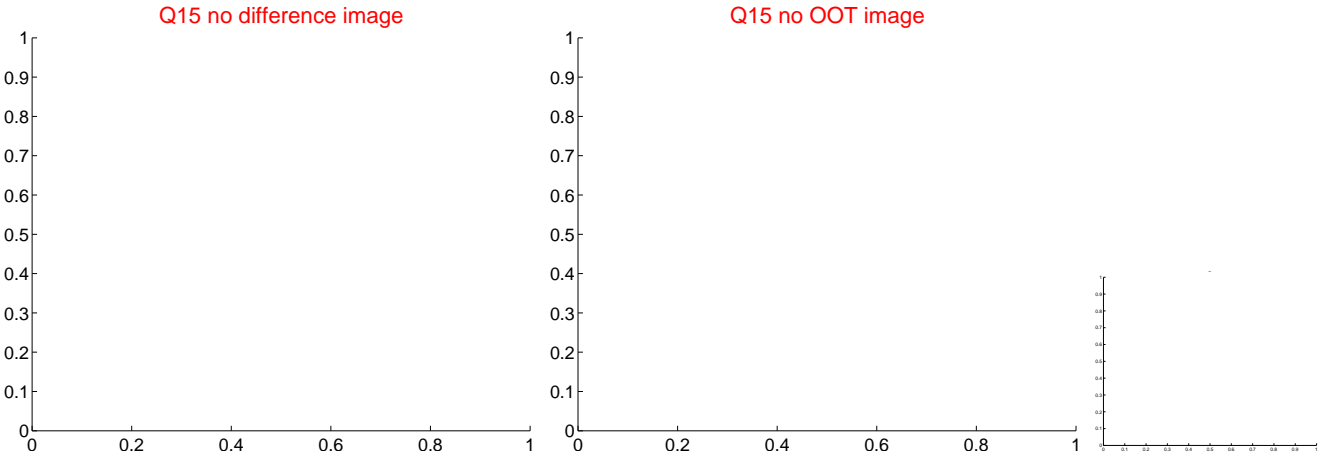
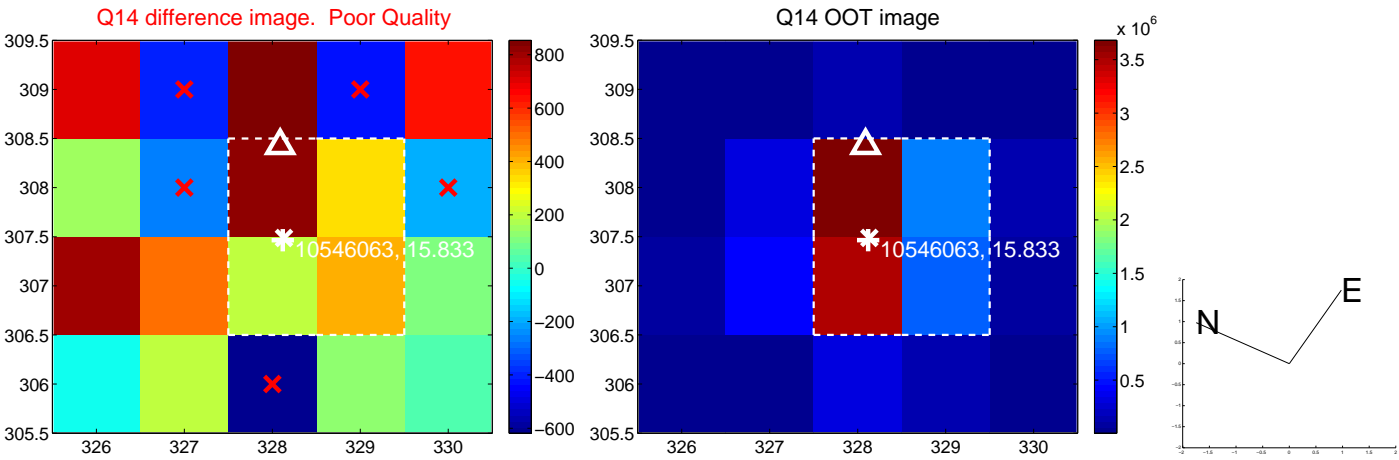
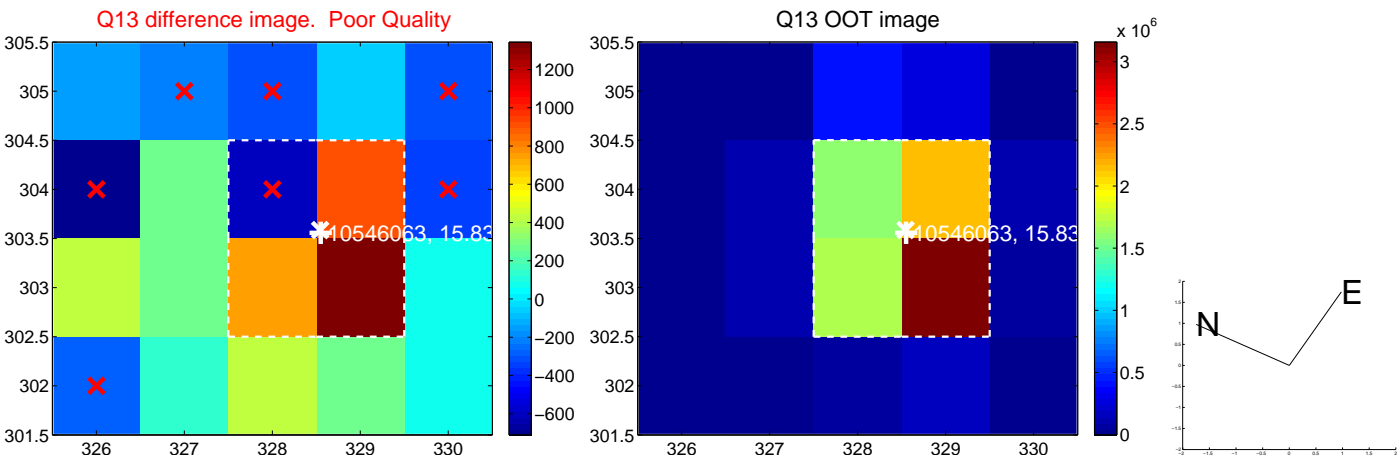
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



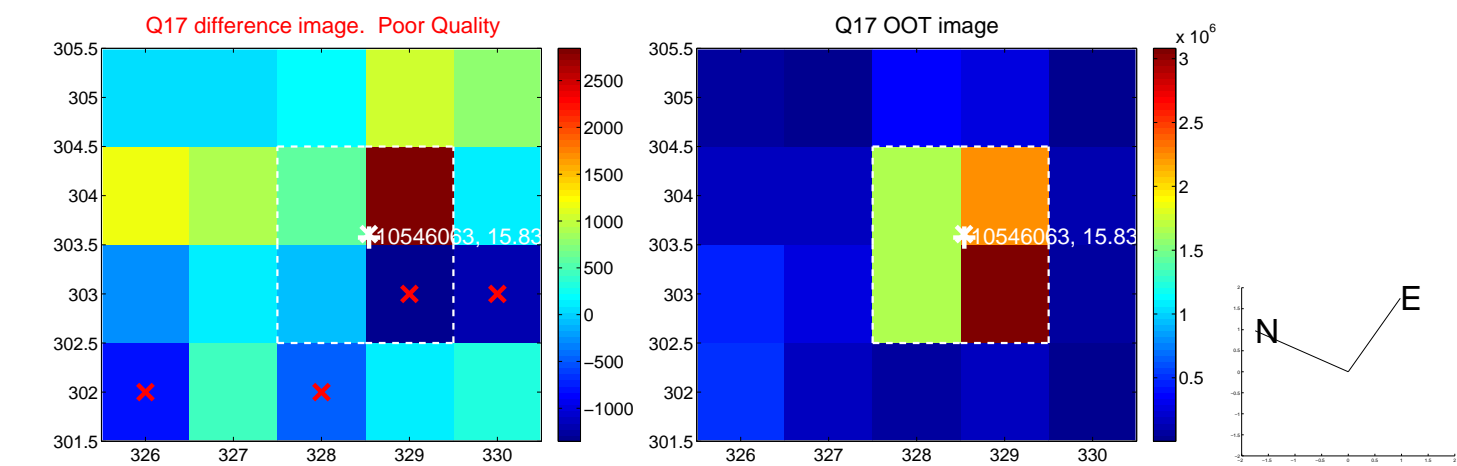
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



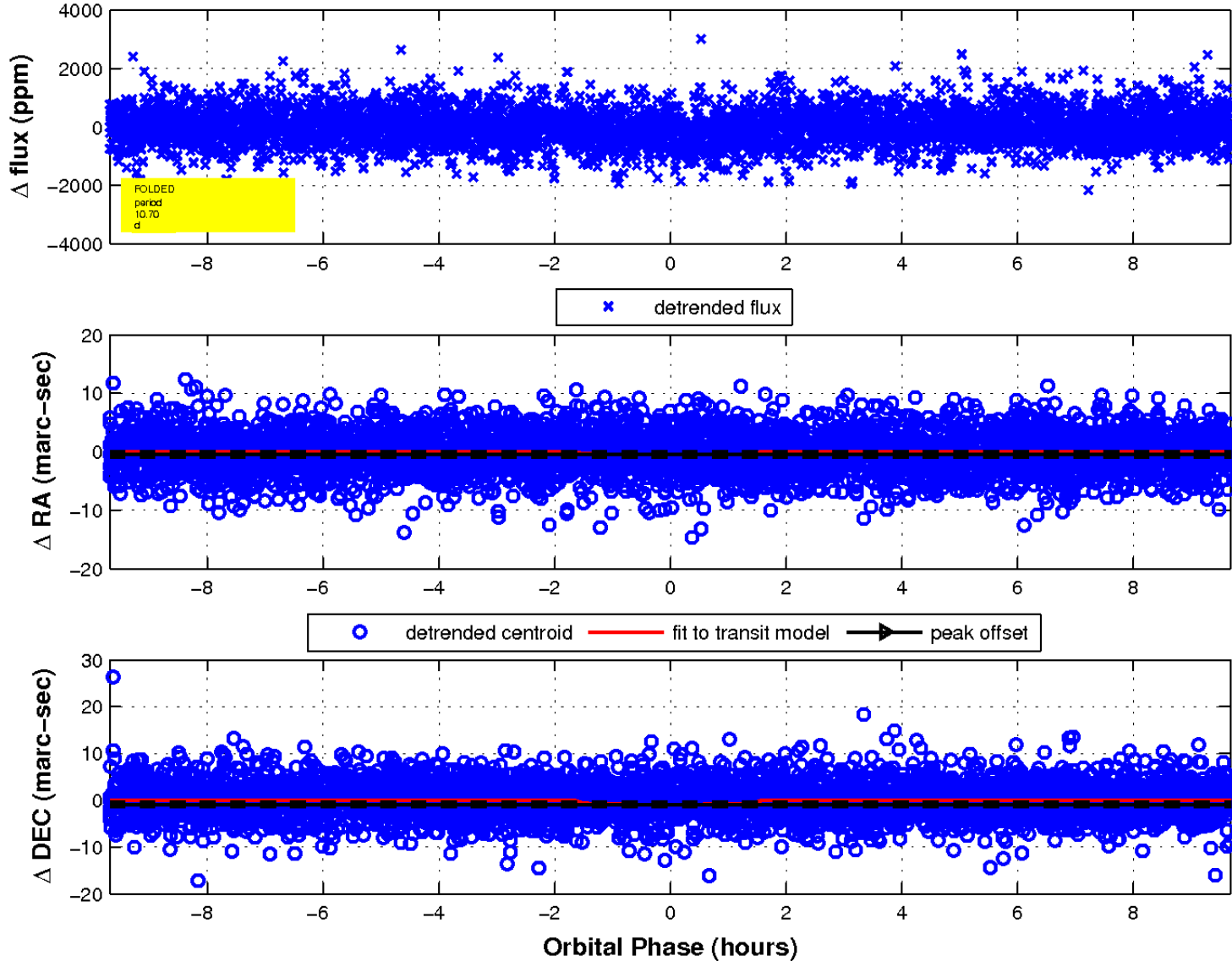
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

