

KIC 002010191

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})
002010191-01	OBS	3999.01	3.435234	132.643808	129.9	3.056	10.0	10.9	1.74	5854	2.36	1470.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002010191-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL---CENT_UNRESOLVED_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.

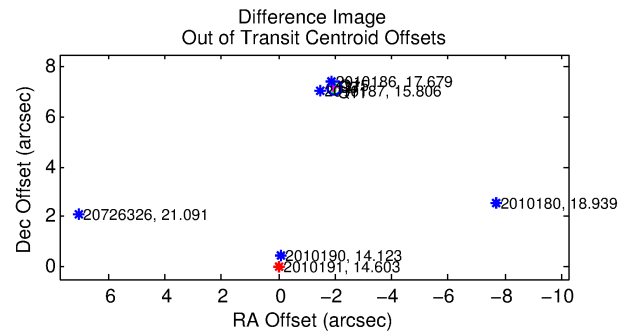
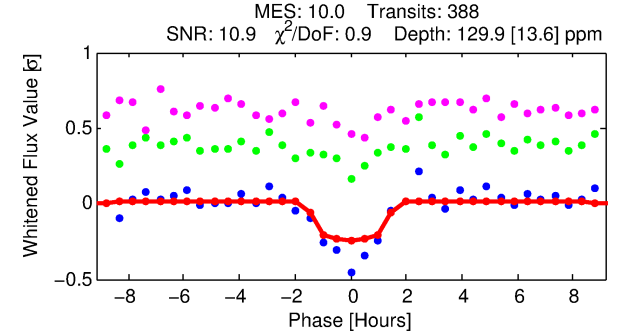
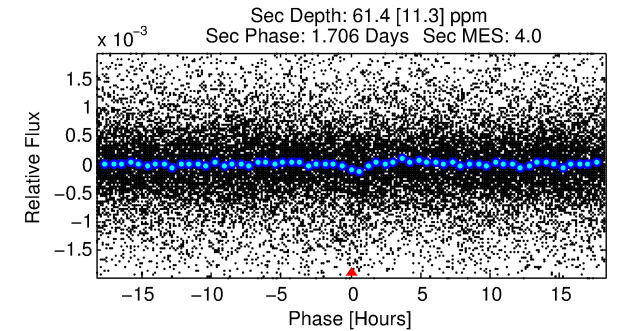
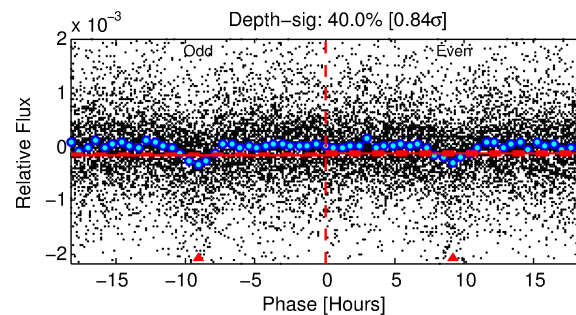
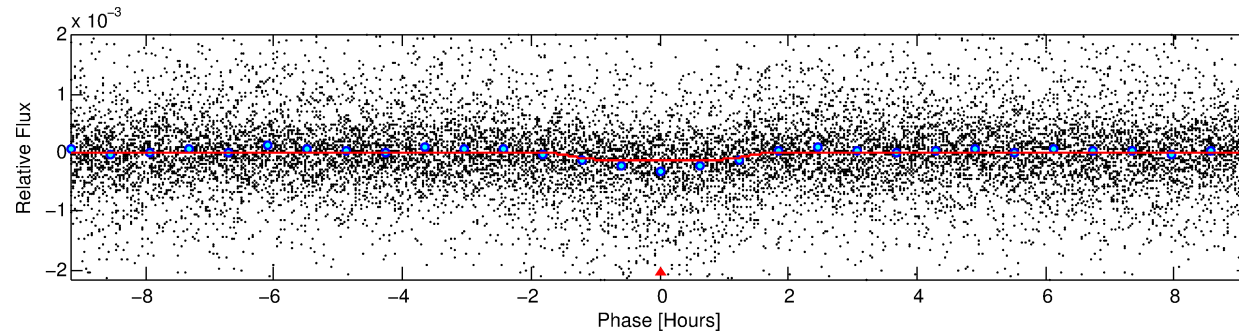
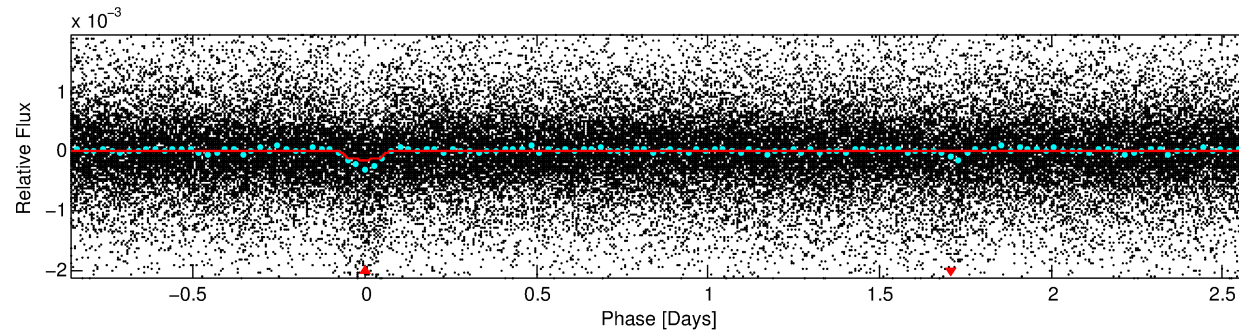
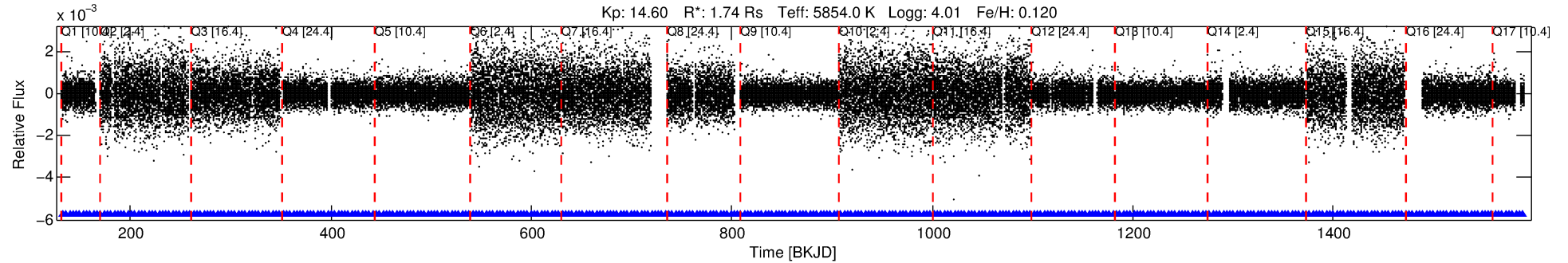
Ephemeris Match Information For 002010191-01

No Significant Match Found

DV One-Page Summary

KIC: 2010191 Candidate: 1 of 1 Period: 3.435 d
KOI: K03999.01 Corr: 0.835

Kp: 14.60 R*: 1.74 Rs Teff: 5854.0 K Logg: 4.01 Fe/H: 0.120



DV Fit Results:

Period = 3.43523 [0.00002] d
Epoch = 132.6438 [0.0046] BKJD
Rp/R* = 0.0124 [0.0073]
a/R* = 4.07 [11.03]
b = 0.90 [0.61]
Seff = 1470.49 [514.67]
Teq = 1579 [138] K
Rp = 2.36 [1.50] Re
a = 0.0466 [0.0102] AU
Ag = 13.16 [16.38] [0.74σ]
Teff = 4650 [1391] K [2.20σ]

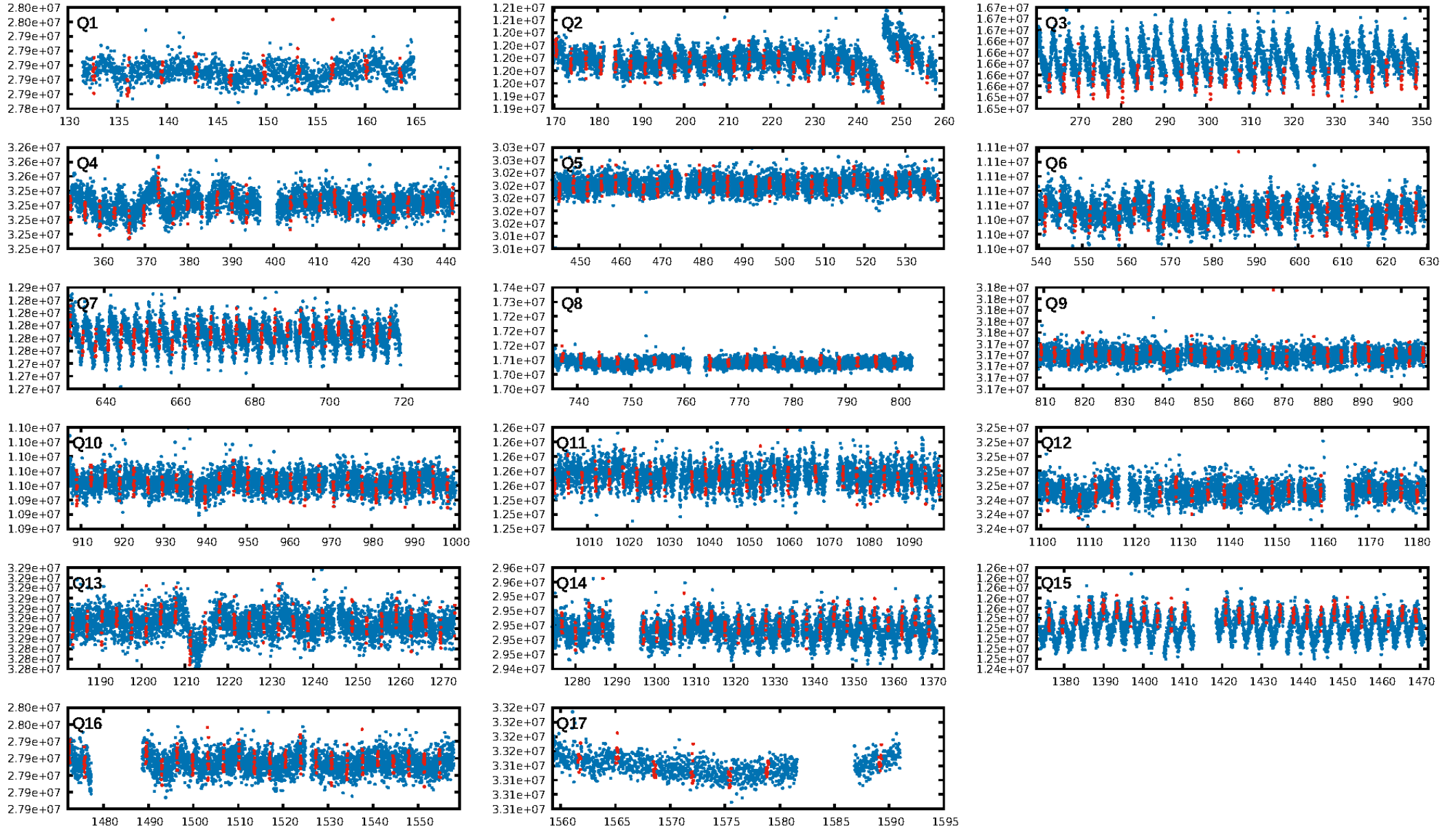
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.22e-23
RollingBand-fgt: 1.00 [371/371]
GhostDiagnostic-chr: -0.2794
Centroid-sig: 0.0%
Centroid-so: 18.295 arcsec [17.13σ]
OotOffset-rm: 7.420 arcsec [85.09σ]
KicOffset-rm: 7.492 arcsec [81.39σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

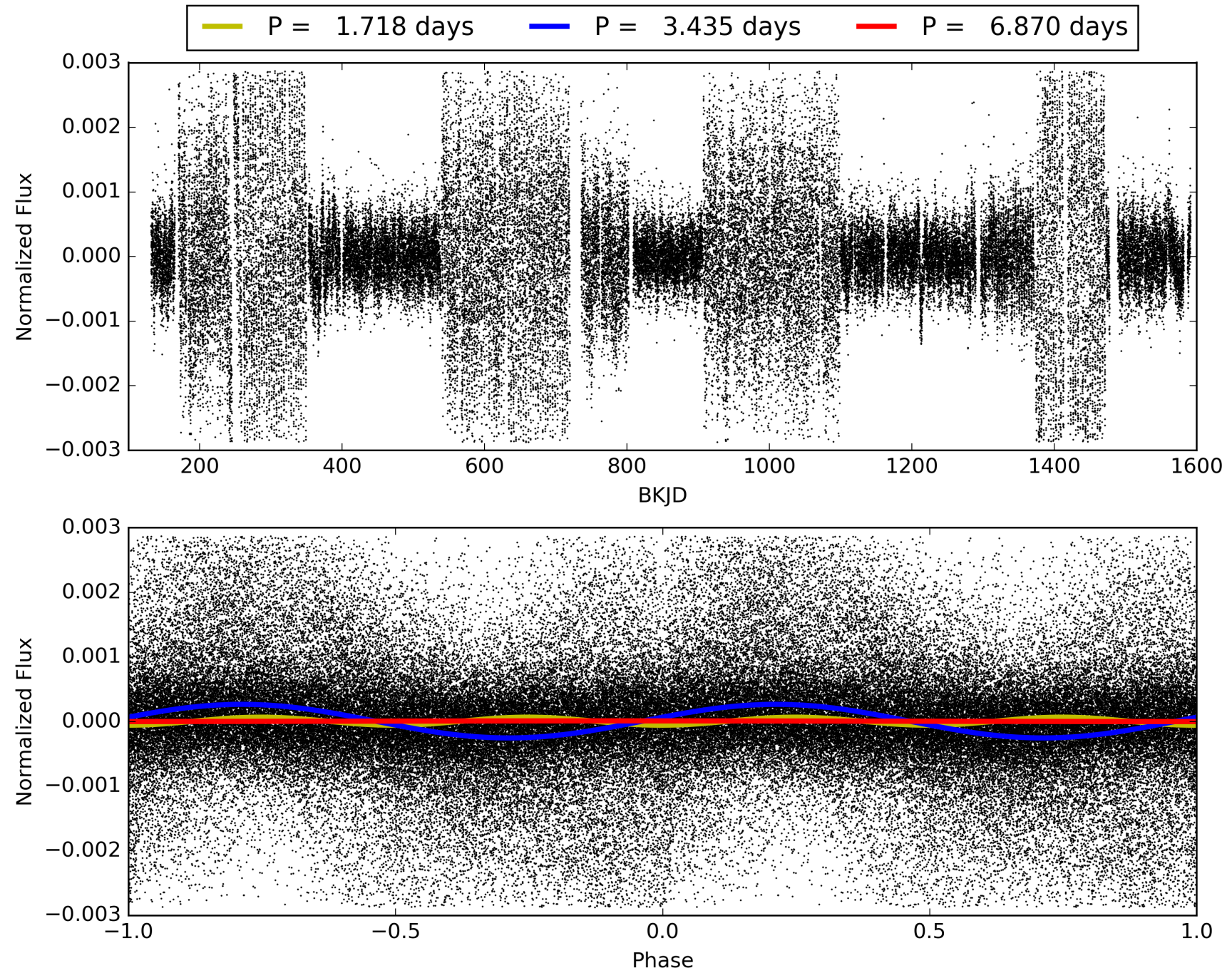
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:23:09 Z

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

TCE 002010191-01, PDC Light Curves

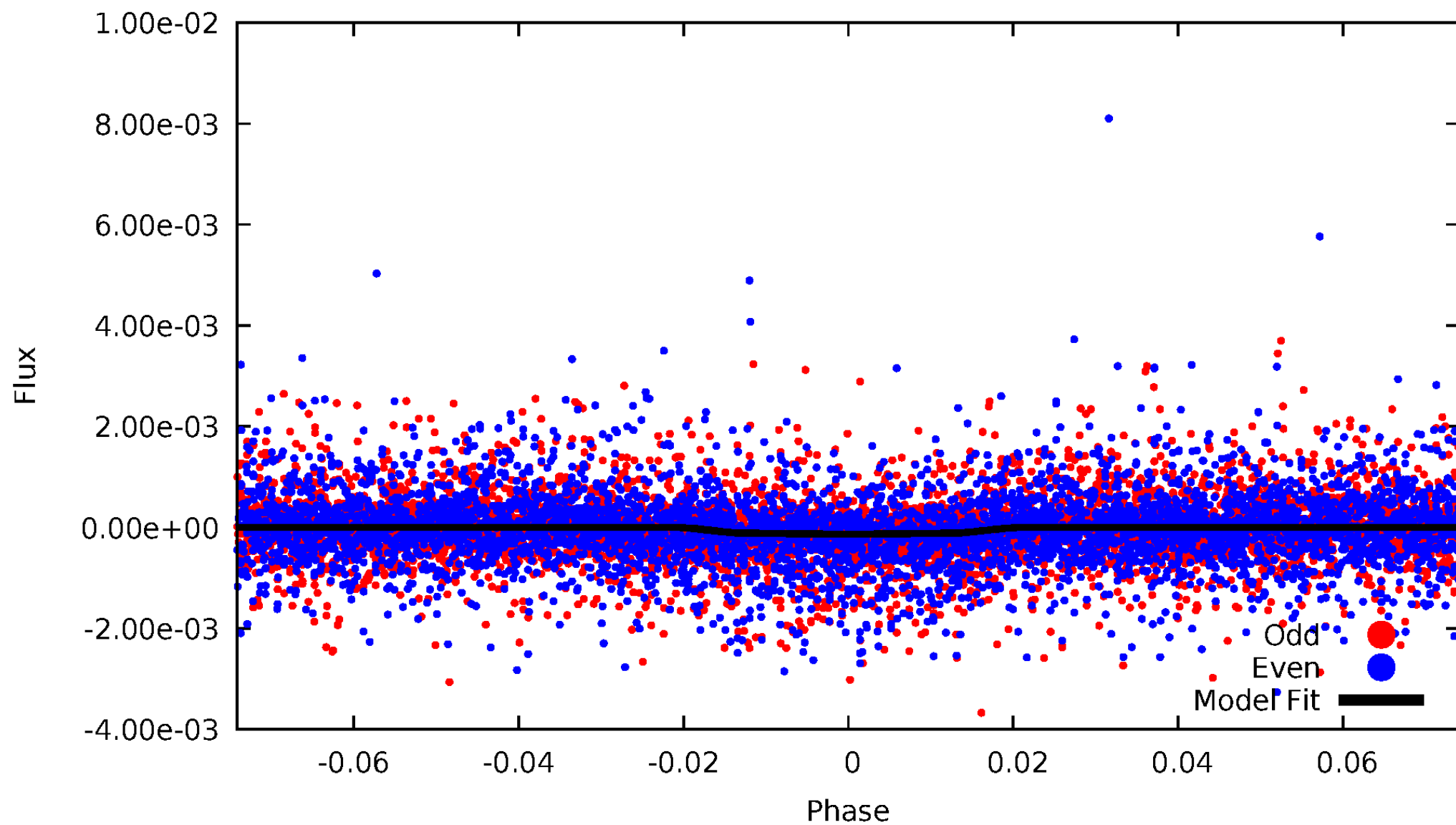


TCE 002010191-01



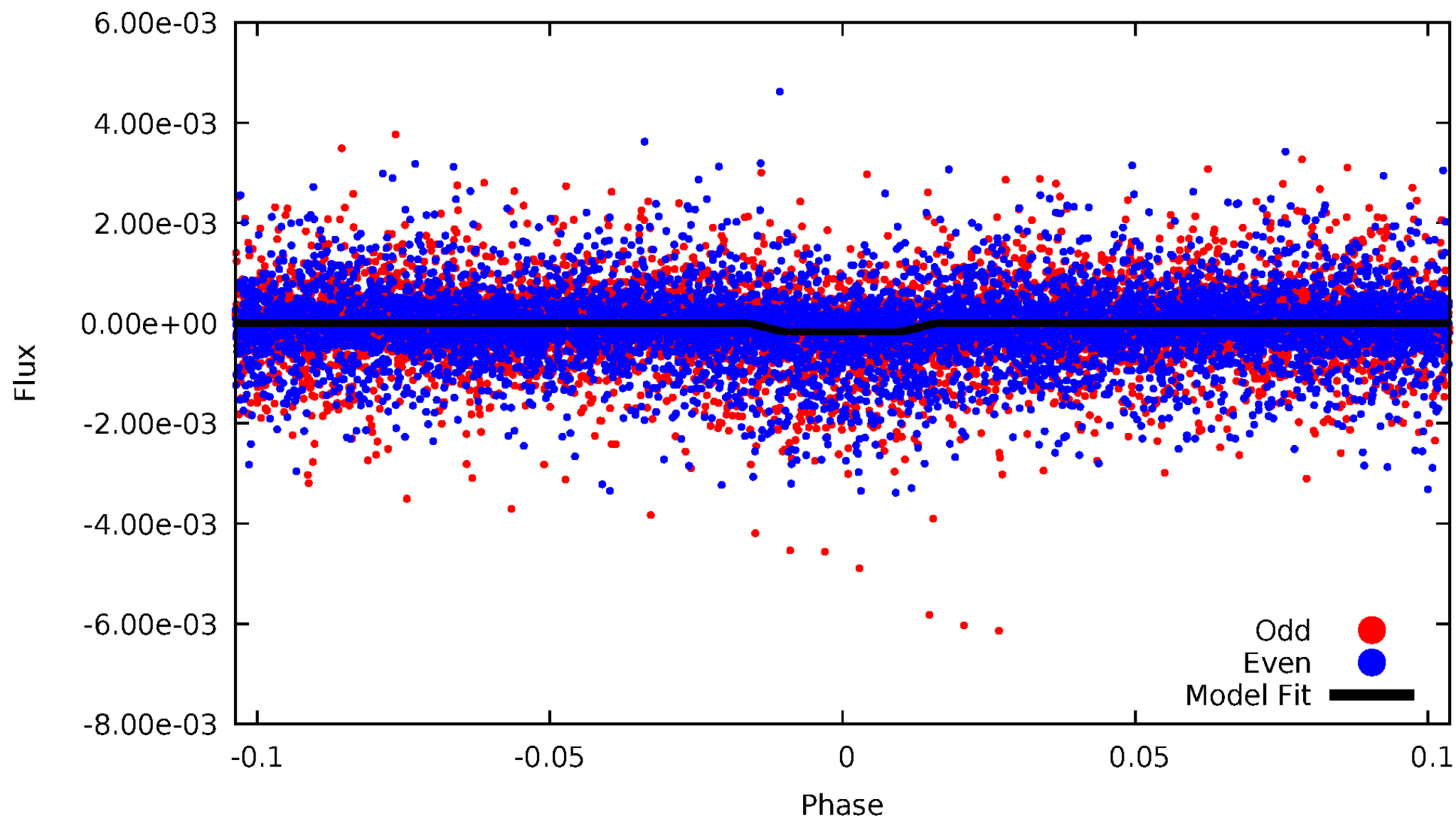
DV Odd/Even

TCE 002010191-01



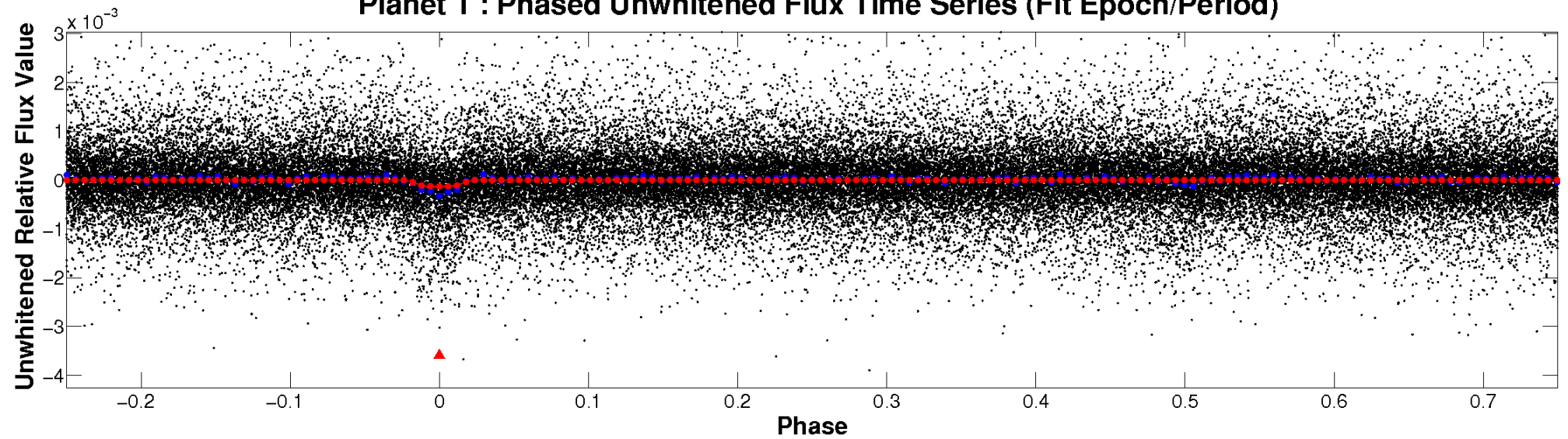
ALT Odd/Even

TCE 002010191-01

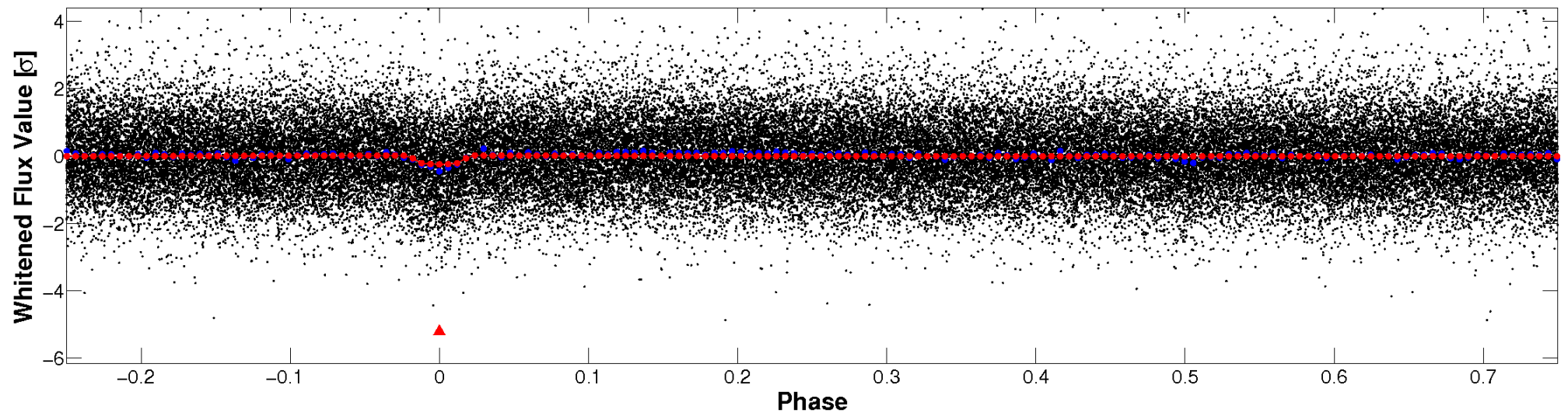


Non-Whitened Vs. Whitened Light Curve

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

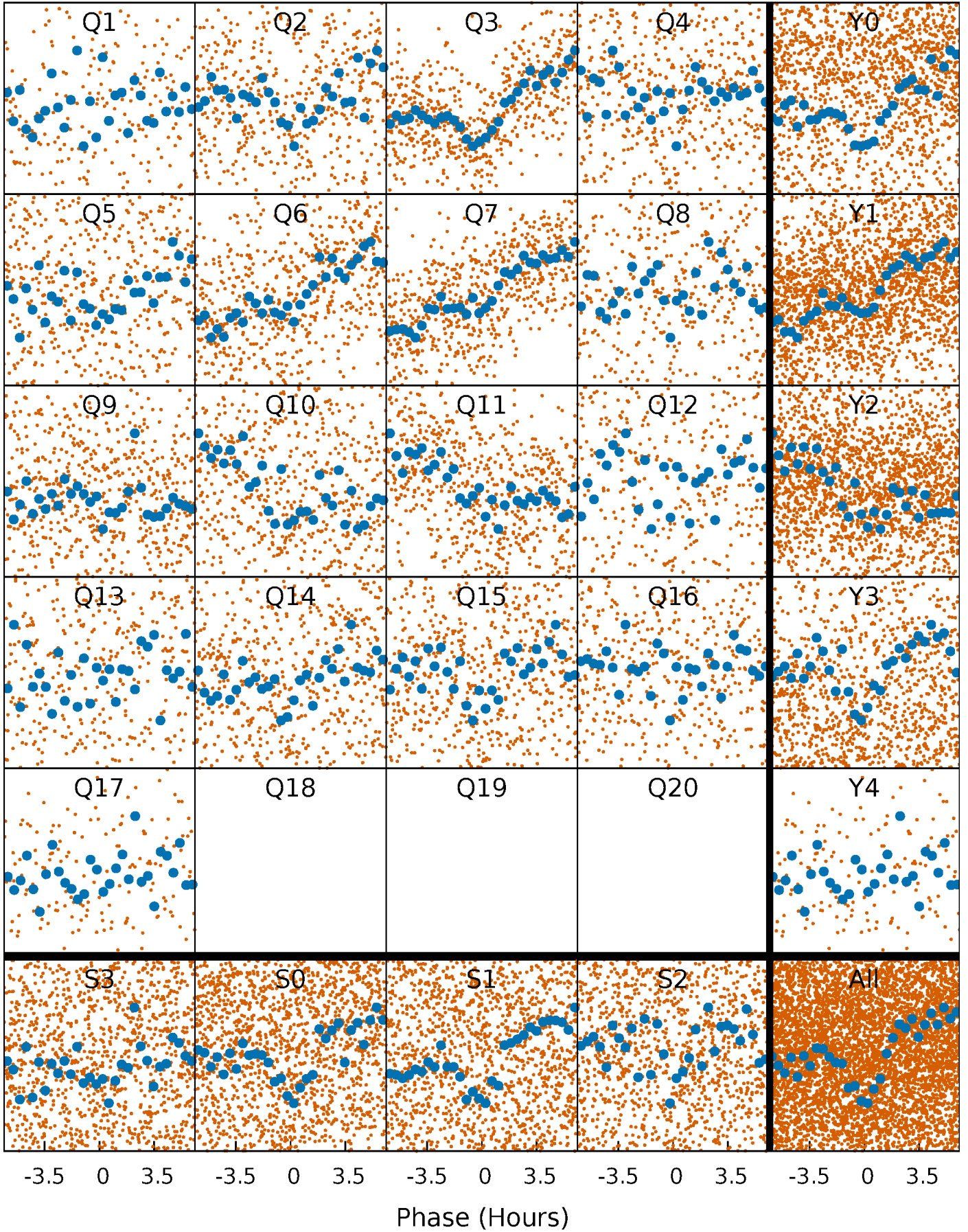


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



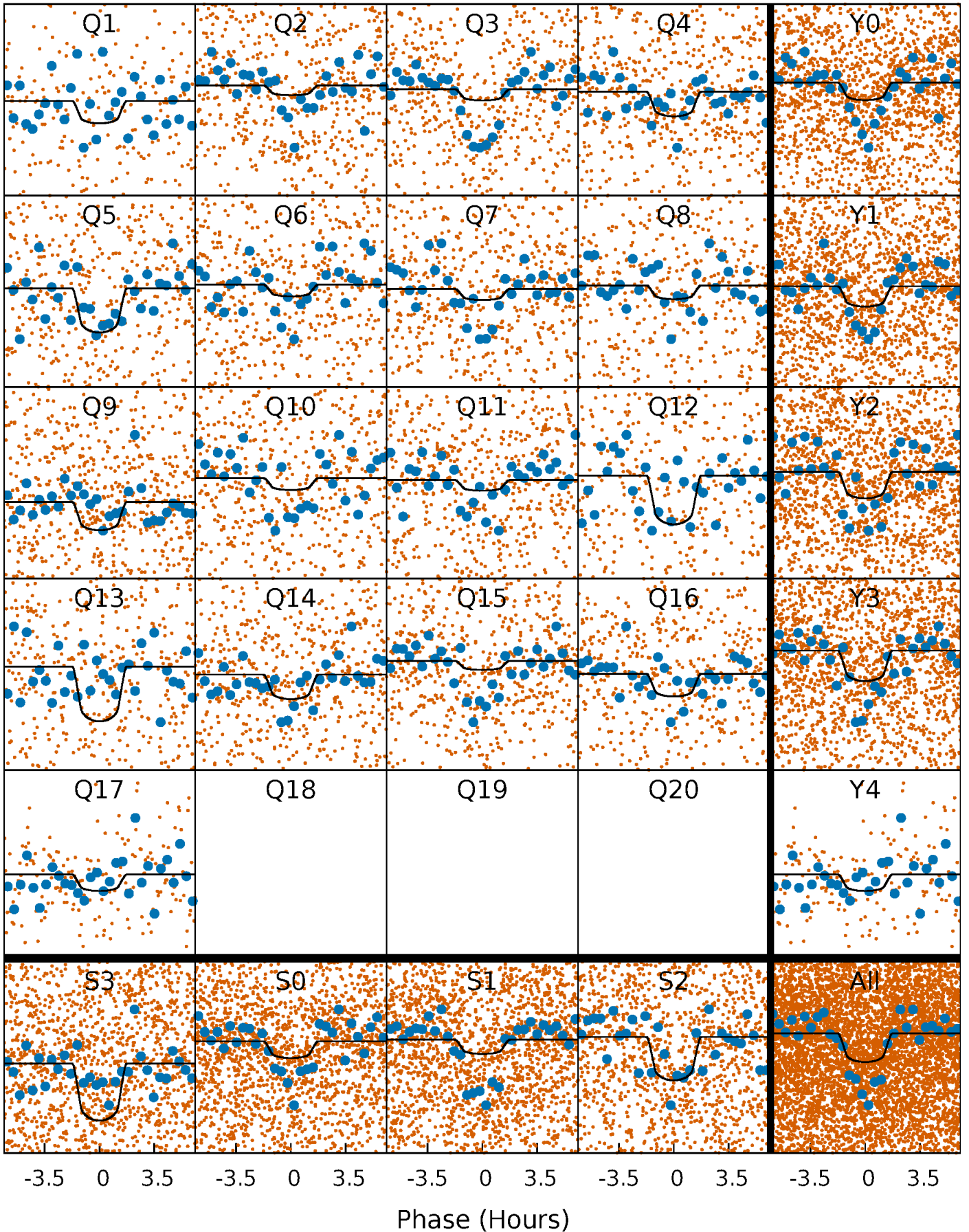
PDC Quarter-Phased Transit Curves

TCE 002010191-01 P= 3.435234 Days $T_0=132.643809$ (BKJD)



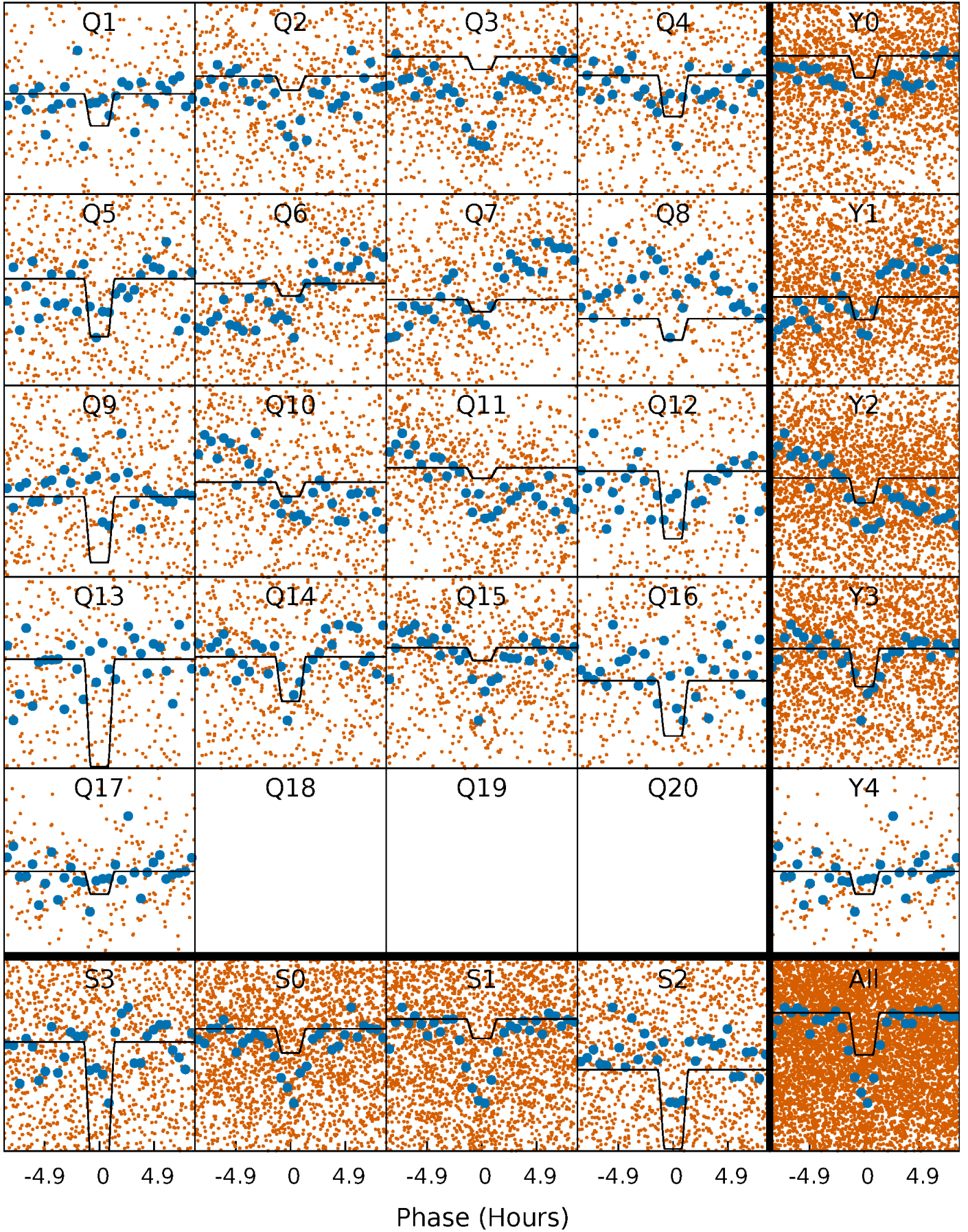
DV Quarter-Phased Transit Curves

TCE 002010191-01 P= 3.435234 Days $T_0=132.643809$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

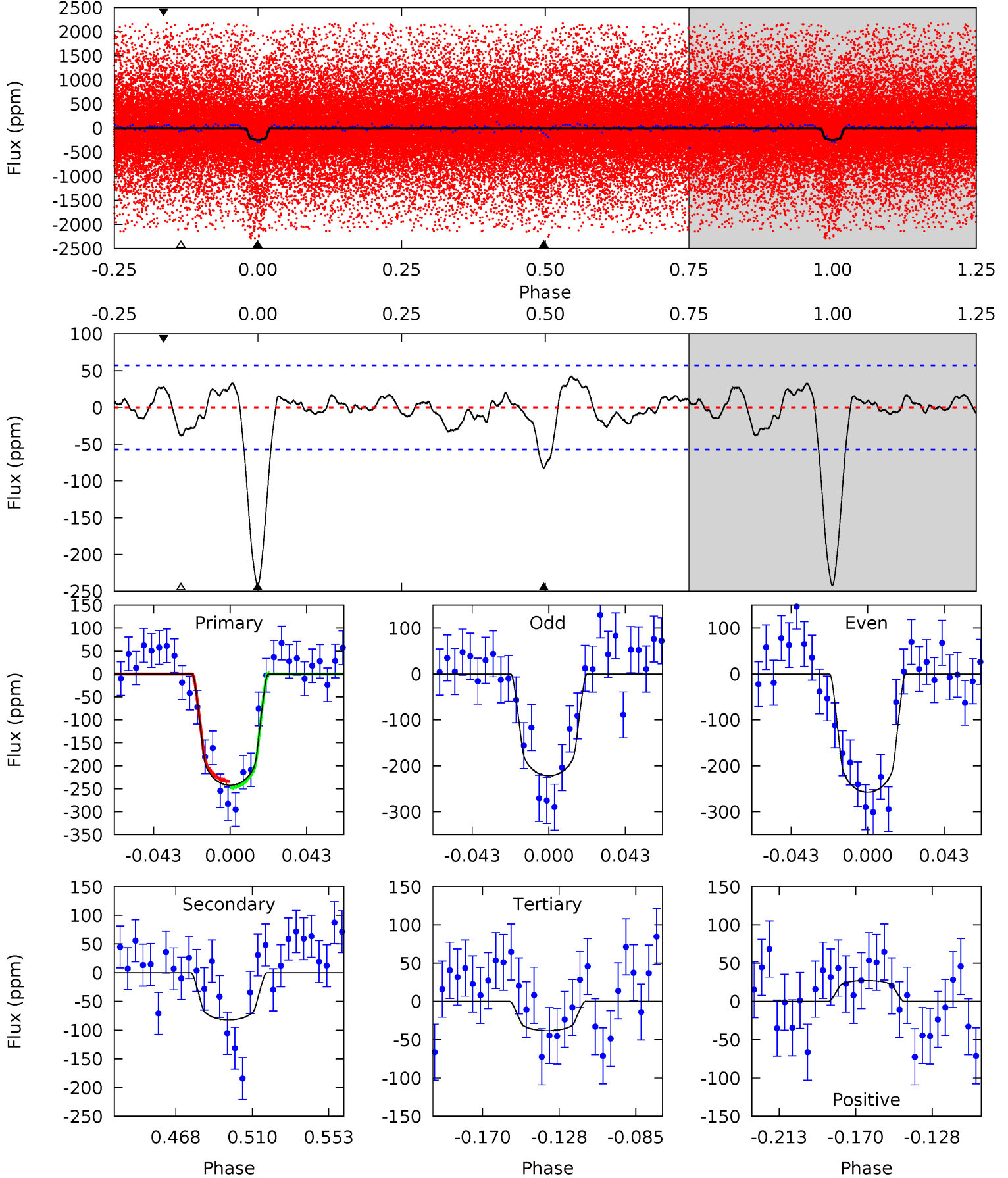
TCE 002010191-01 P= 3.435184 Days $T_0=132.653020$ (BKJD)



DV Model-Shift Uniqueness Test

002010191-01, P = 3.435234 Days, E = 129.208575 Days

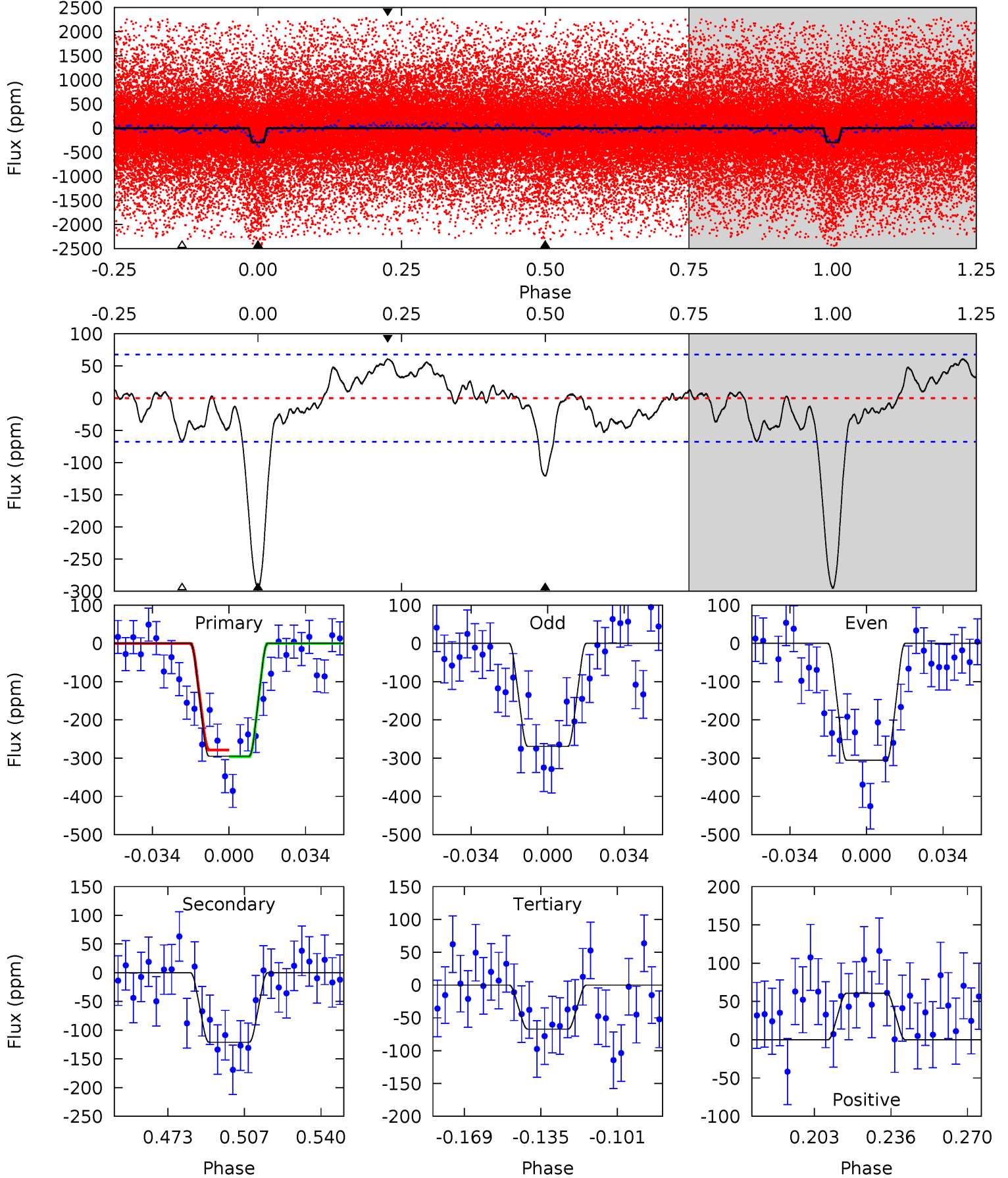
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	6.81	3.16	2.28	4.74	2.03	1.32	16.9	17.8	3.65	4.53	1.50	1.61	0.15	0.58



Alt Model-Shift Uniqueness Test

002010191-01, P = 3.435184 Days, E = 129.217836 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.8	8.55	4.74	4.28	4.79	2.12	2.06	16.1	16.5	3.80	4.26	1.29	1.87	0.17	0.62



Stellar Parameters For KIC 002010191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5854^{+79}_{-79}	$4.014^{+0.202}_{-0.081}$	$0.120^{+0.150}_{-0.150}$	$1.742^{+0.267}_{-0.400}$	$1.143^{+0.131}_{-0.107}$	$0.305^{+0.332}_{-0.083}$
	+1%/-1%	+5%/-2%	+125%/-125%	+15%/-23%	+11%/-9%	+109%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 002010191-01 / KOI 3999.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-82 ± 12	$2.38^{+1.38}_{-1.24}$	2188^{+94}_{-123}	4966^{+2317}_{-831}	17^{+57}_{-10}
Alt.	-121 ± 14	$2.39^{+1.57}_{-1.26}$	2191^{+94}_{-125}	5398^{+2533}_{-953}	25^{+90}_{-16}

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 $A_{obs} \gg 1.0$

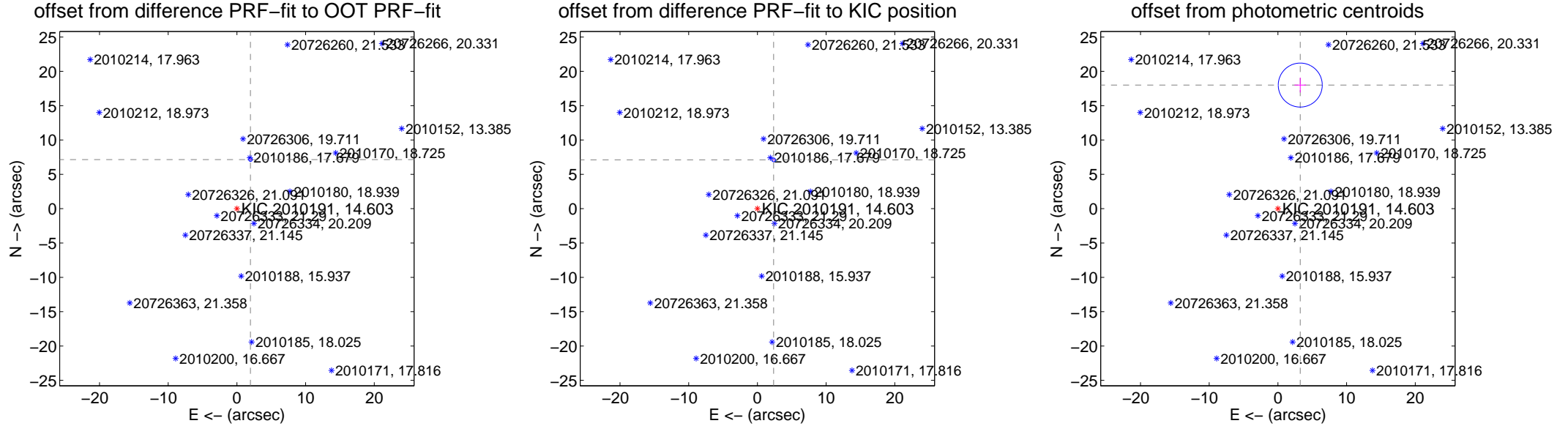
DV Centroid Data

Supplemental centroid analysis for 002010191-01. Kepler magnitude: 14.60. Transit SNR 10.90

There are 4 quarters with good PRF difference image offsets

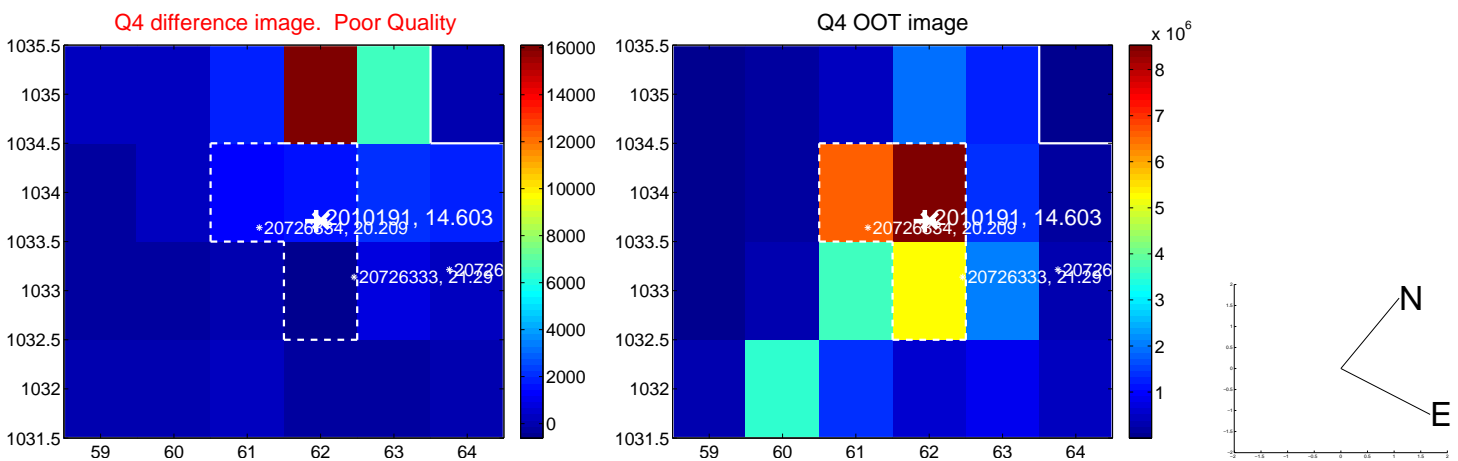
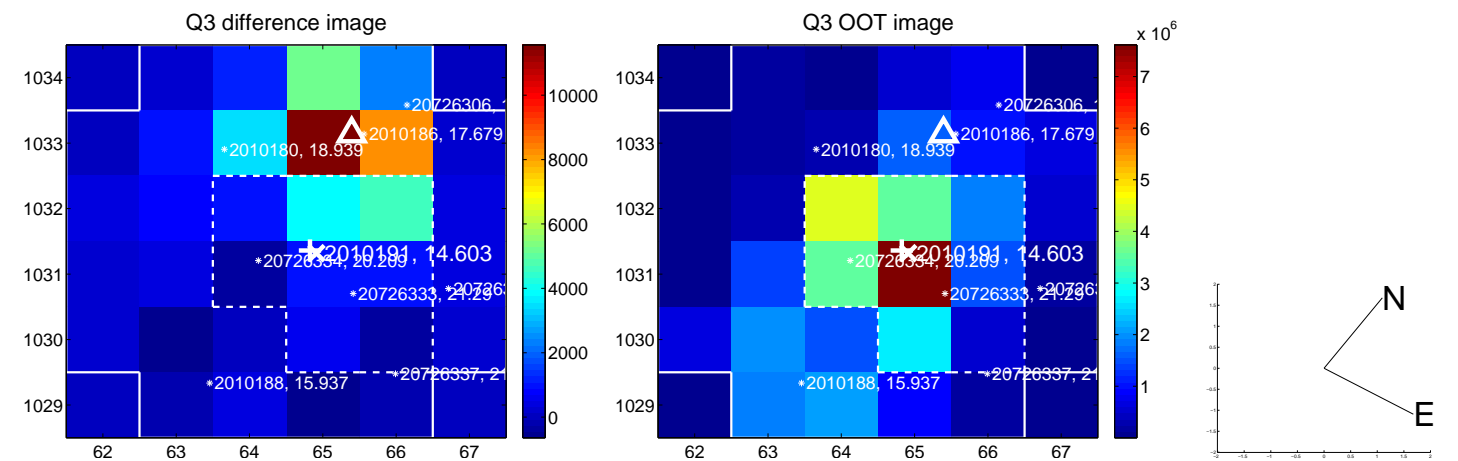
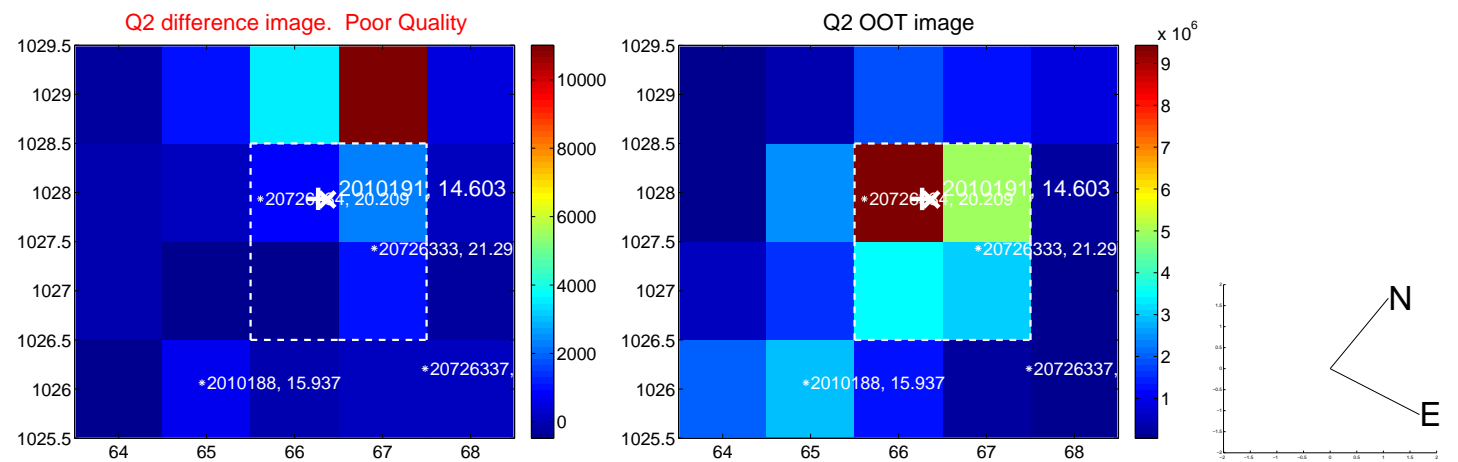
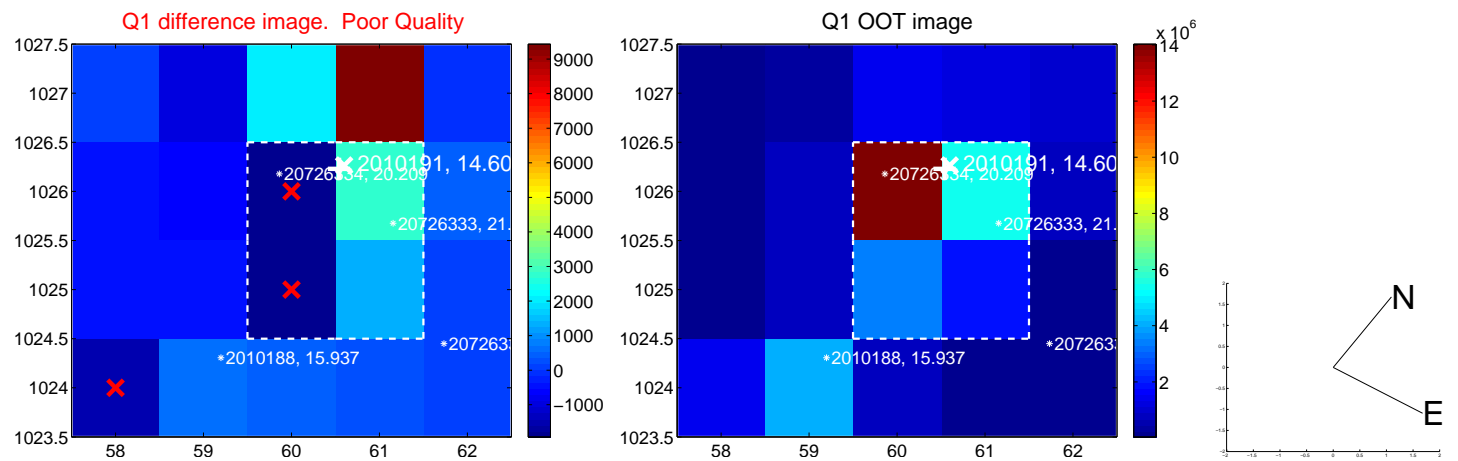
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.420 \pm 0.087	85.09	-1.976 \pm 0.068	7.152 \pm 0.088
PRF-fit source offset from KIC position	7.492 \pm 0.092	81.39	-2.361 \pm 0.114	7.110 \pm 0.089
photometric centroid source offset	18.29 \pm 1.07	17.13	-3.26 \pm 0.84	18.00 \pm 1.07

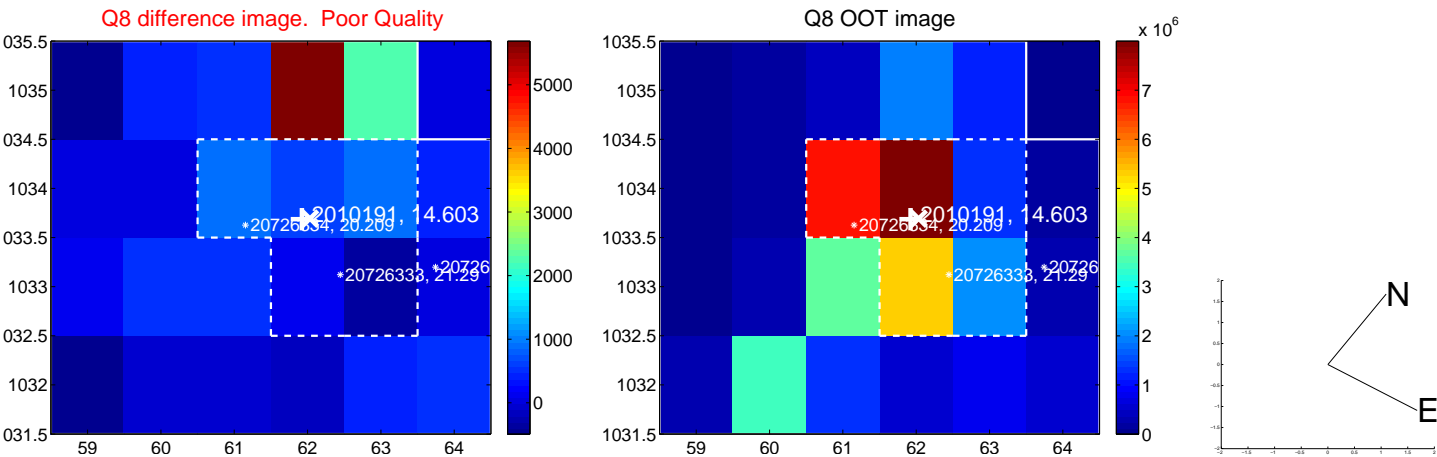
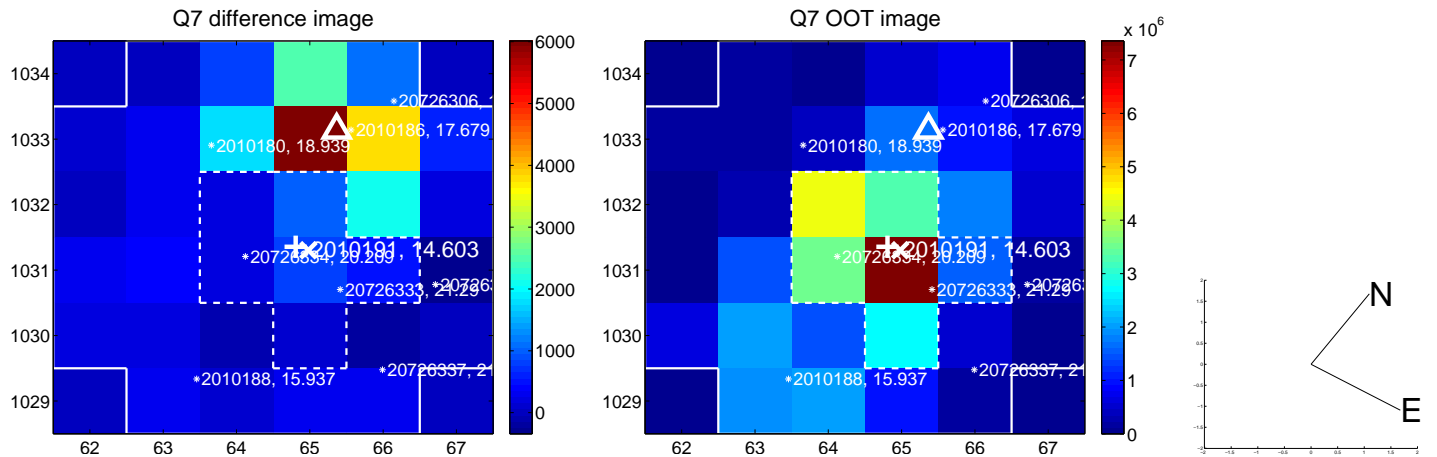
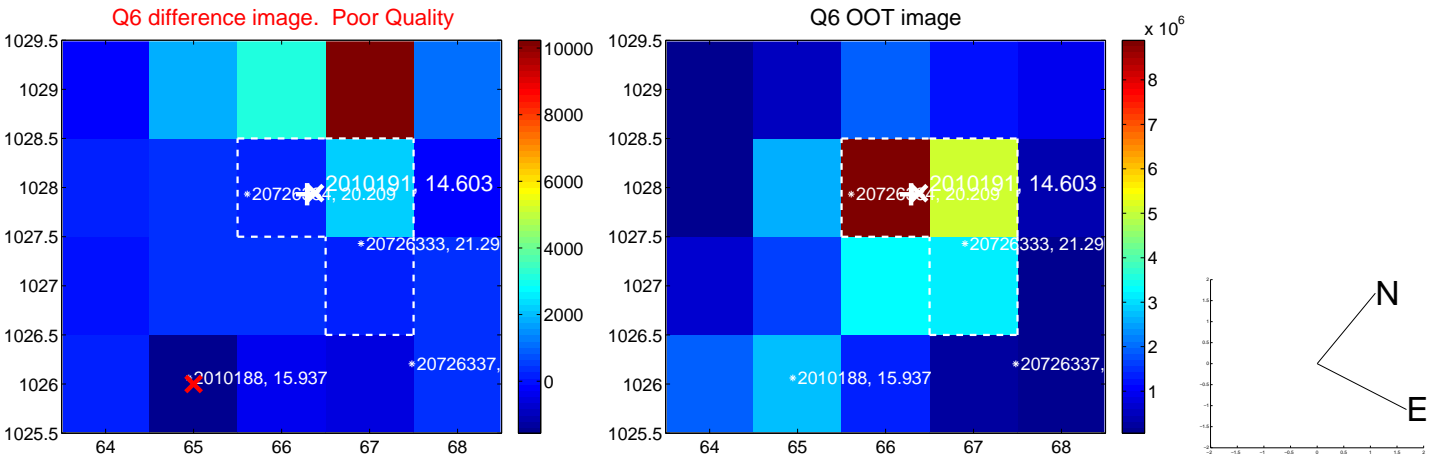
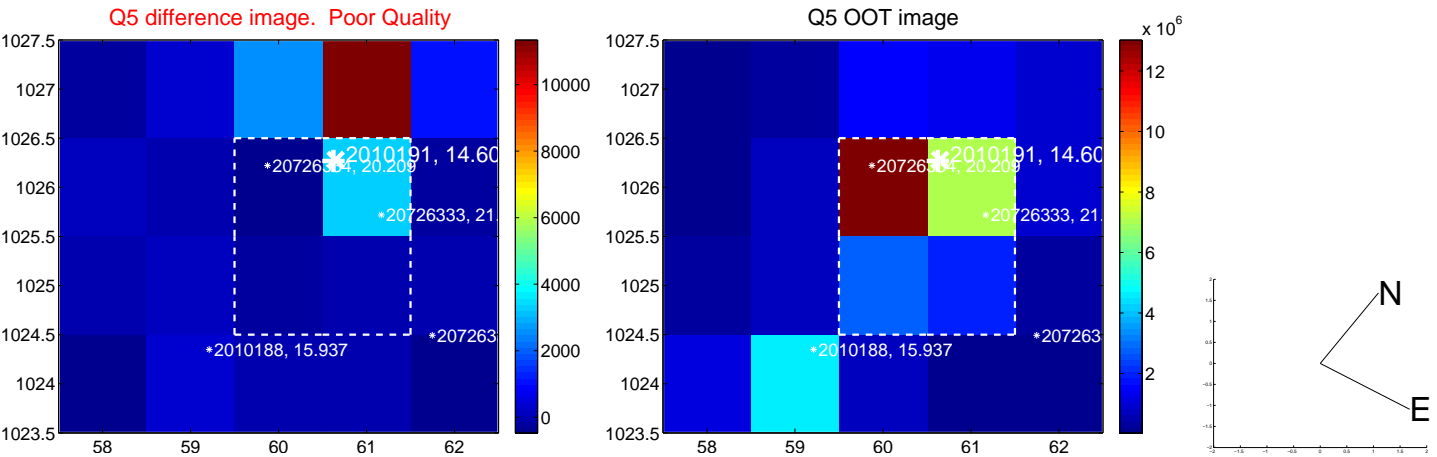


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

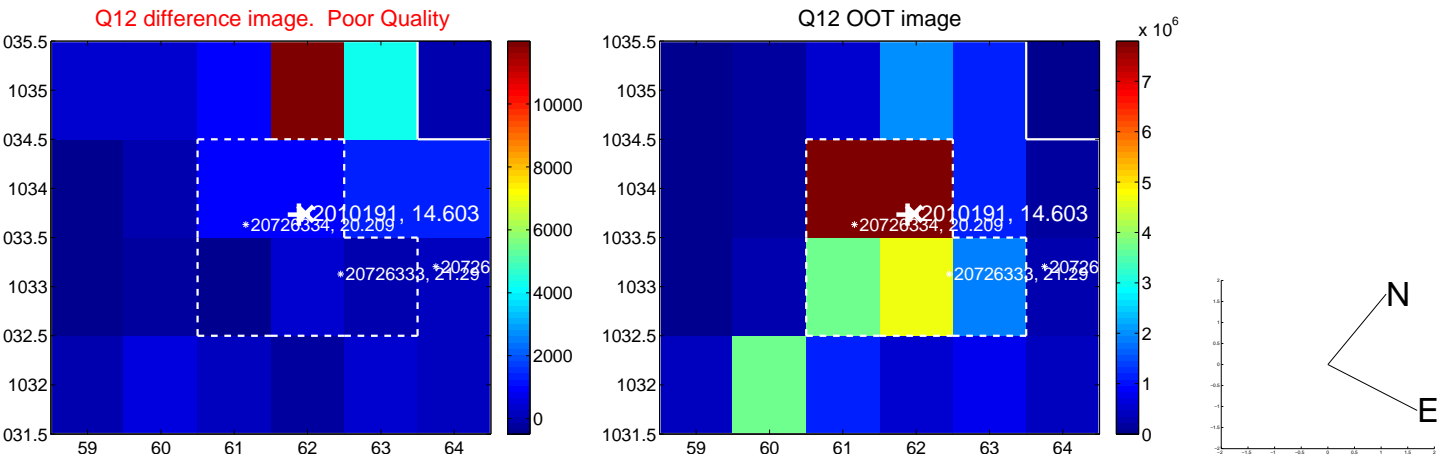
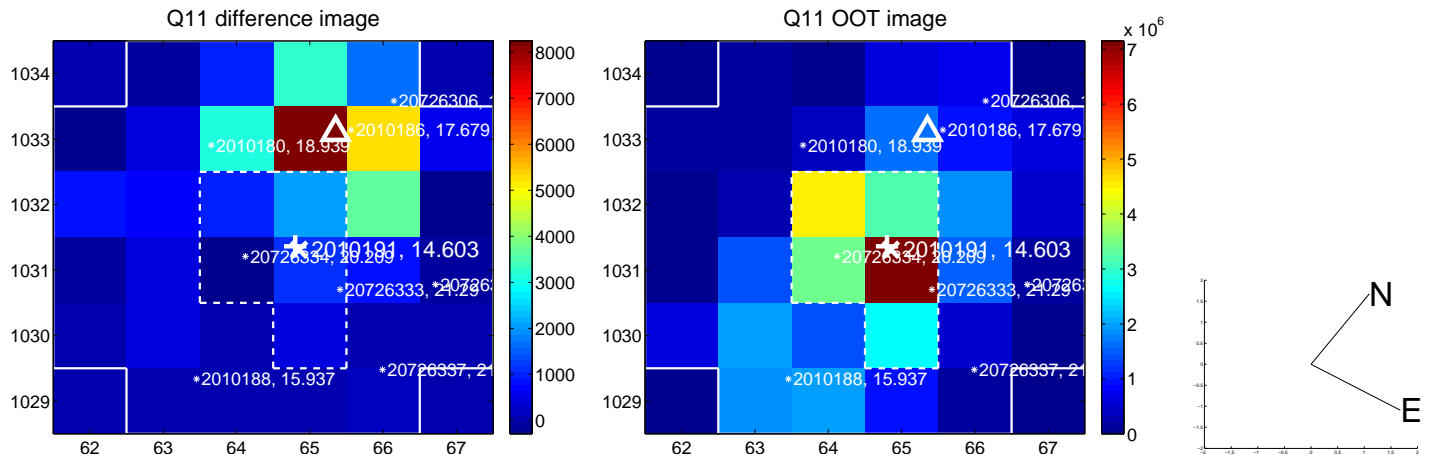
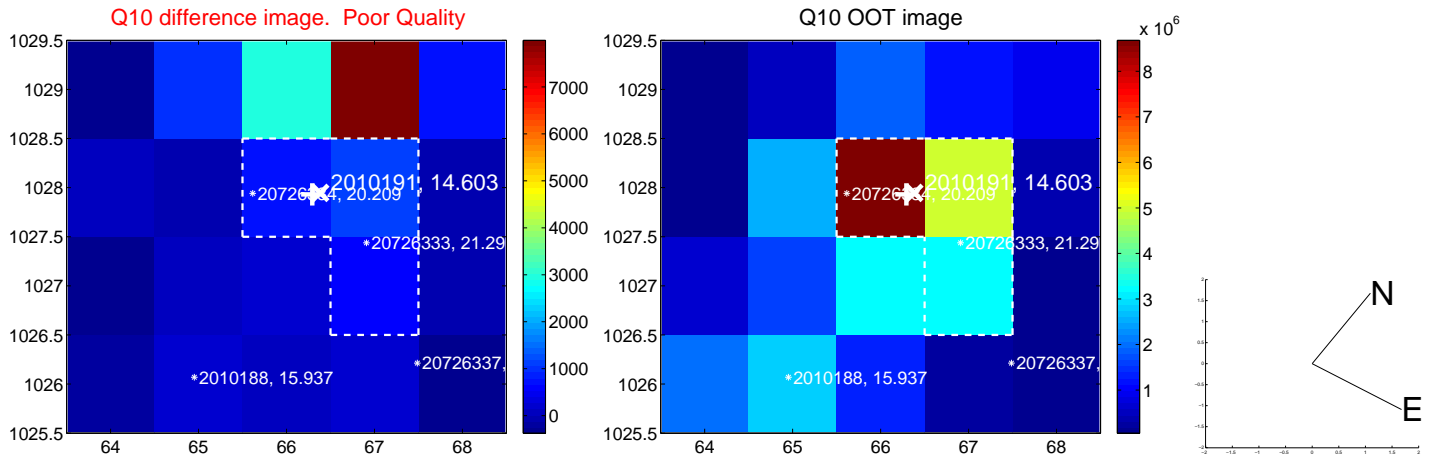
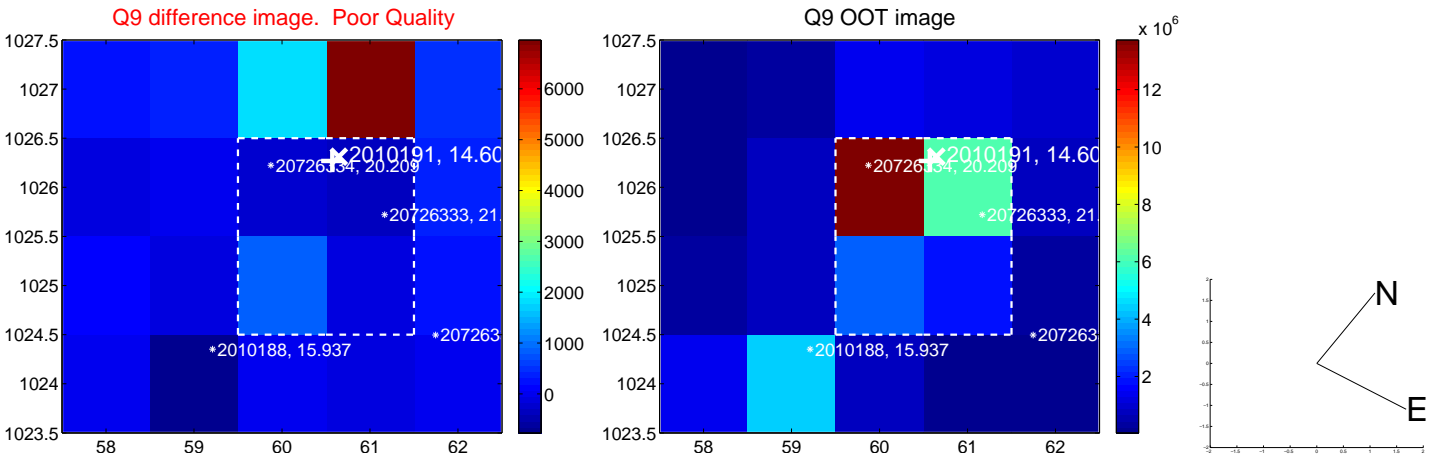
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



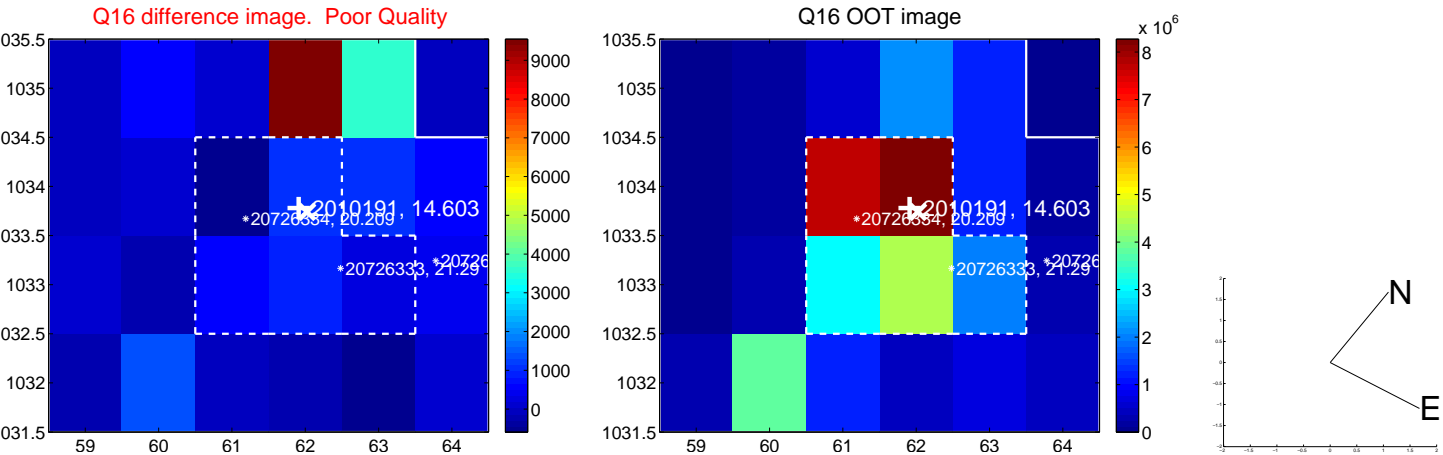
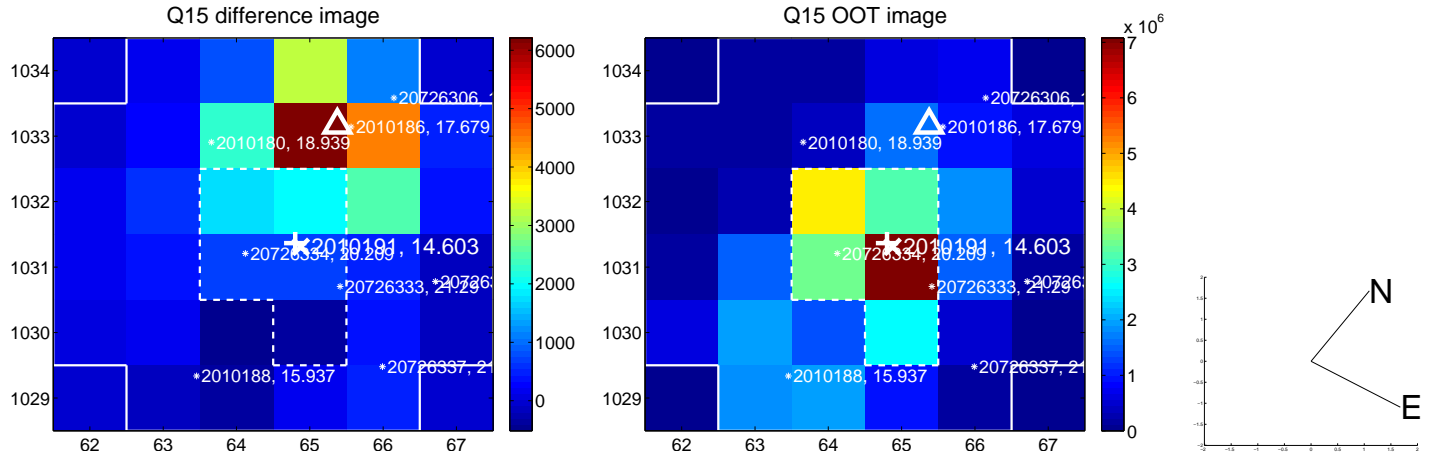
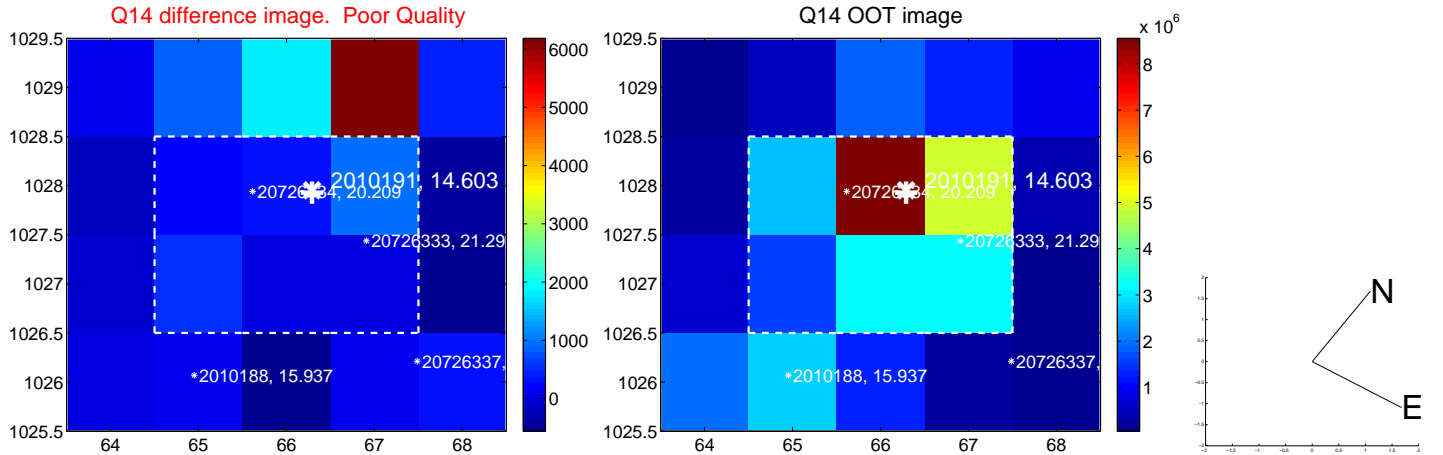
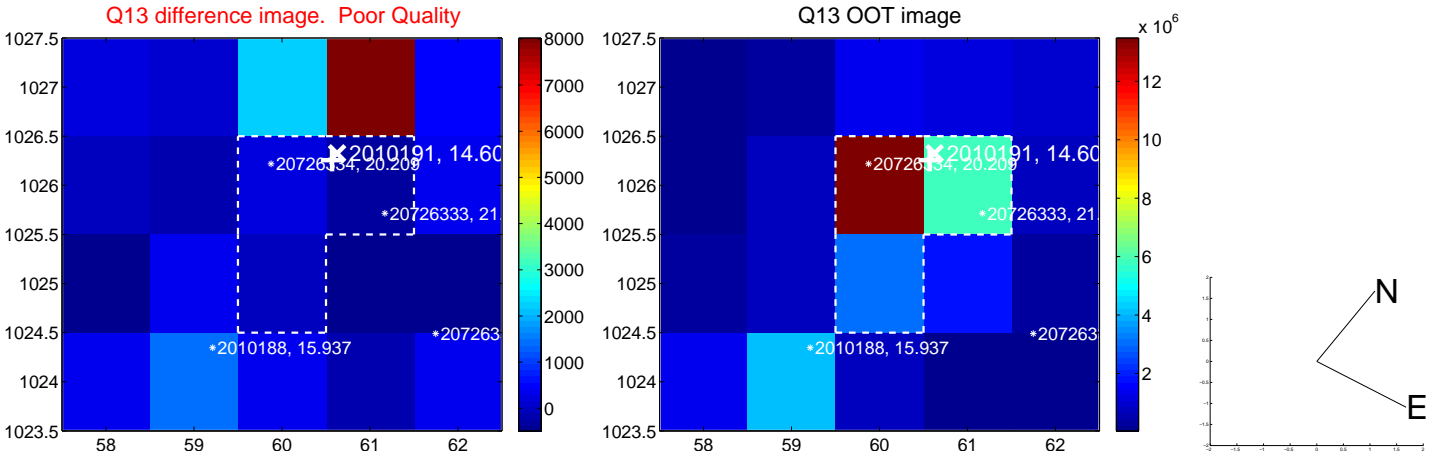
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



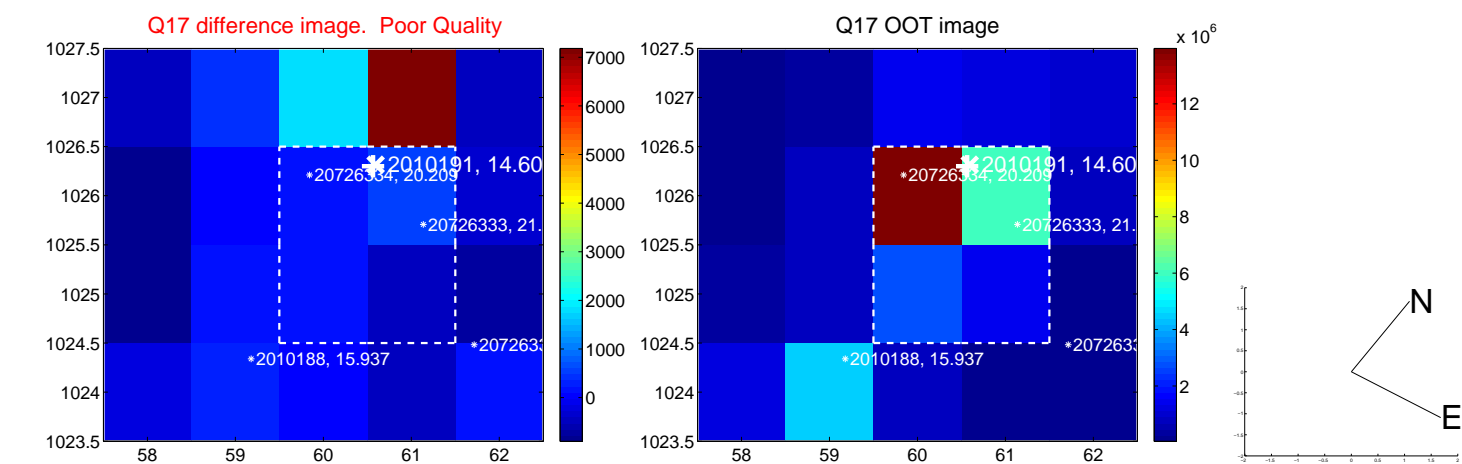
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



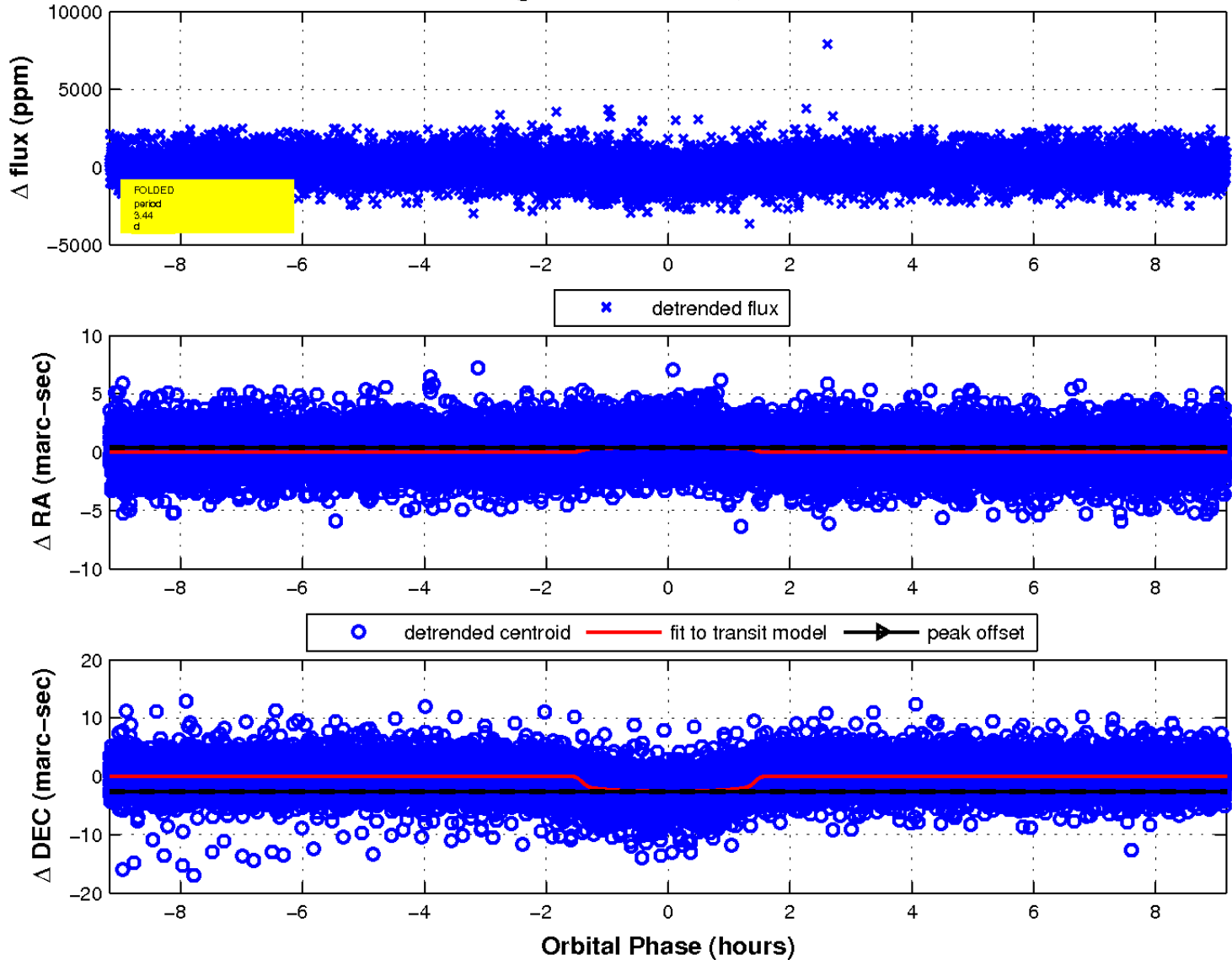
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

