

KIC 009463183

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})
009463183-01	OBS	No	8.199510	137.380775	15.7	11.618	8.9	8.8	2.06	7348	0.95	1201.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009463183-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

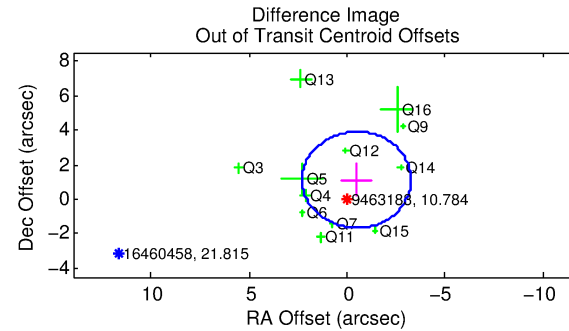
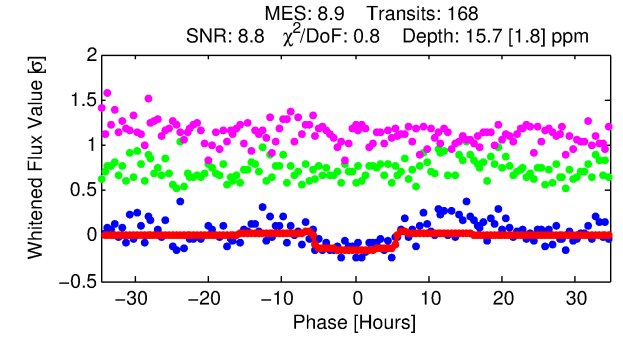
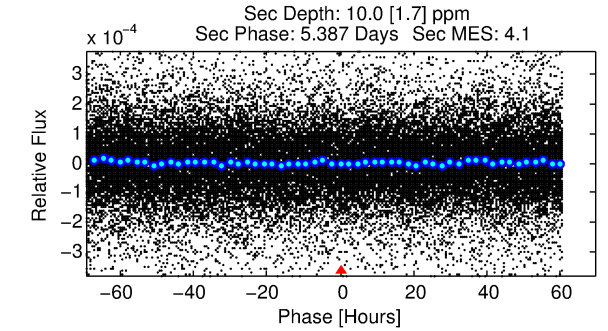
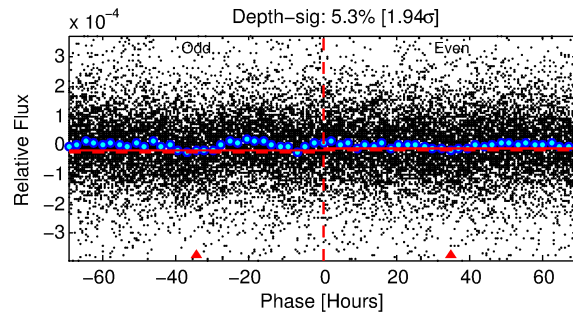
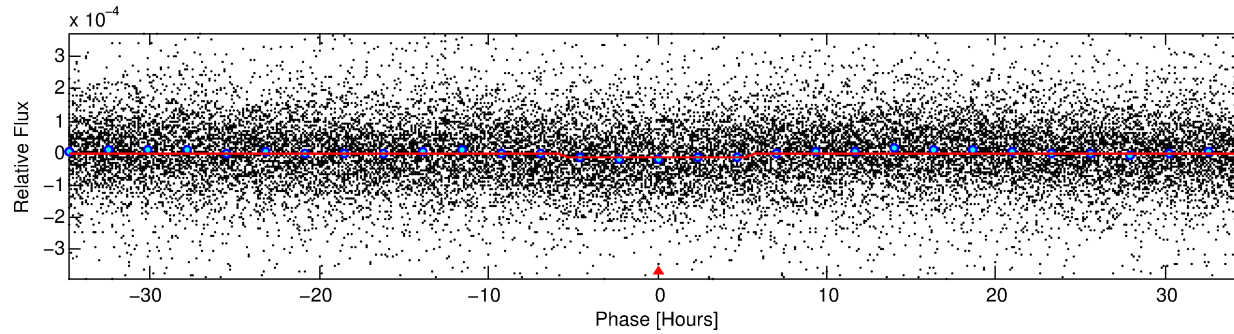
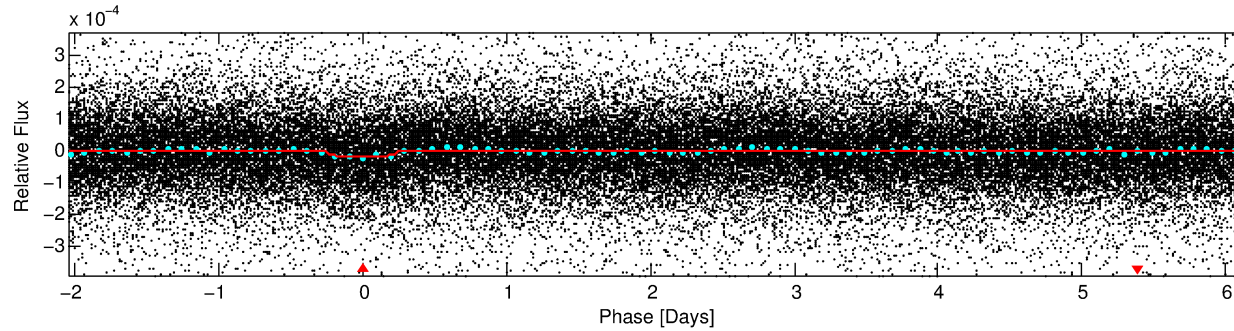
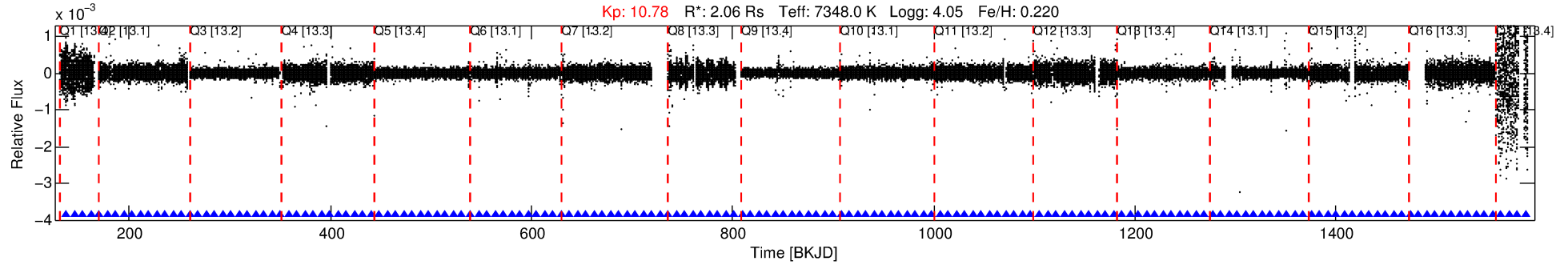
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009463183-01

No Significant Match Found

DV One-Page Summary

KIC: 9463183 Candidate: 1 of 1 Period: 8.200 d



DV Fit Results:

Period = 8.19951 [0.00017] d
Epoch = 137.3808 [0.0149] BKJD
 $R_p/R^* = 0.0042$ [0.0008]
 $a/R^* = 2.53$ [2.43]
 $b = 0.91$ [0.23]
 $\text{Seff} = 1201.61$ [444.10]
 $T_{\text{eq}} = 1501$ [139] K
 $R_p = 0.95$ [0.31] R_e
 $a = 0.0960$ [0.0210] AU
 $A_g = 56.67$ [29.30] [1.90 σ]
 $T_{\text{eff}} = 6369$ [720] K [6.64 σ]

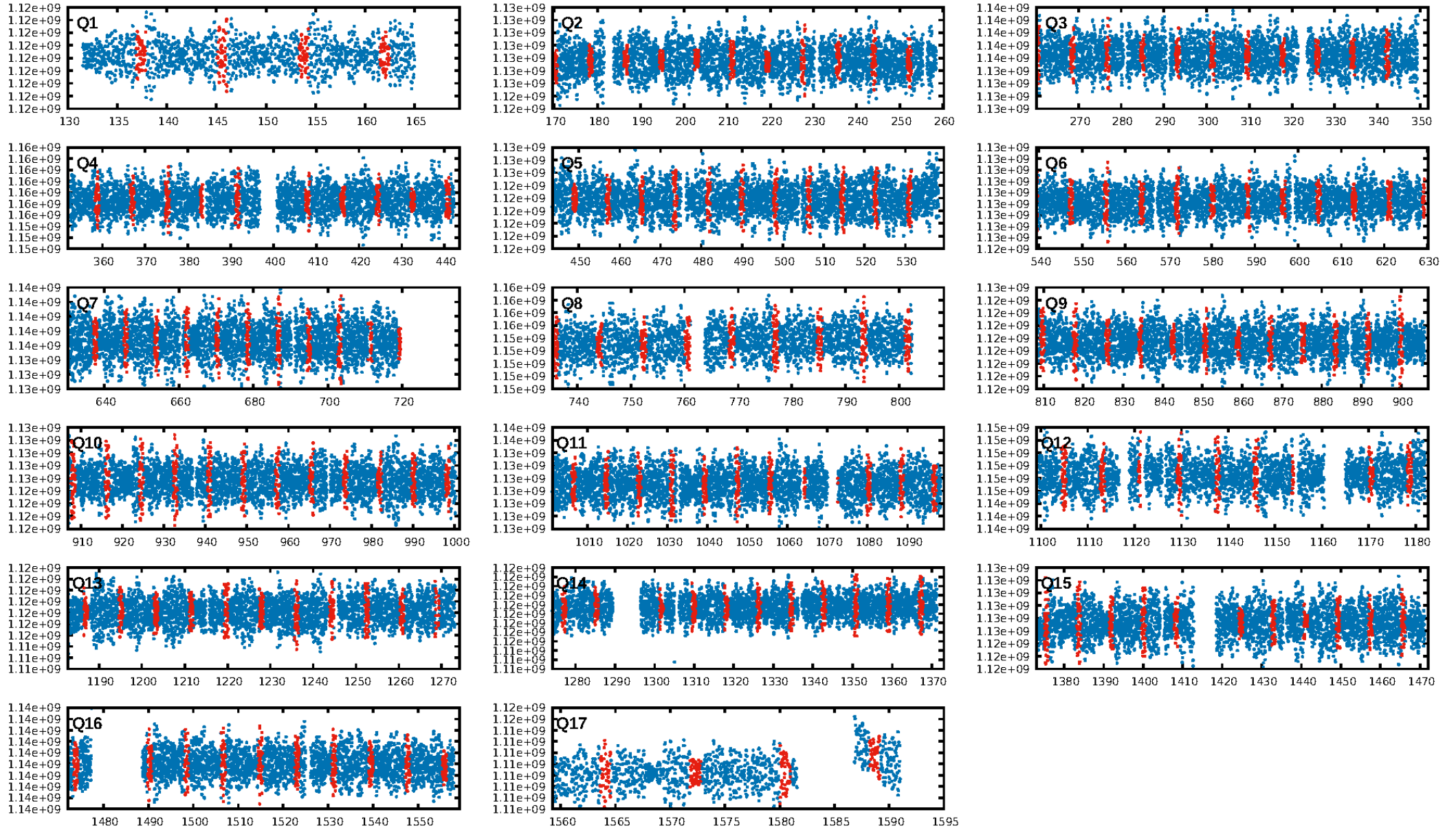
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.13e-16
RollingBand-fgt: 1.00 [160/160]
GhostDiagnostic-chr: 1.818
Centroid-sig: 12.4%
Centroid-so: 2.045 arcsec [1.59 σ]
OotOffset-rm: 1.215 arcsec [1.31 σ]
KicOffset-rm: 1.117 arcsec [1.32 σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

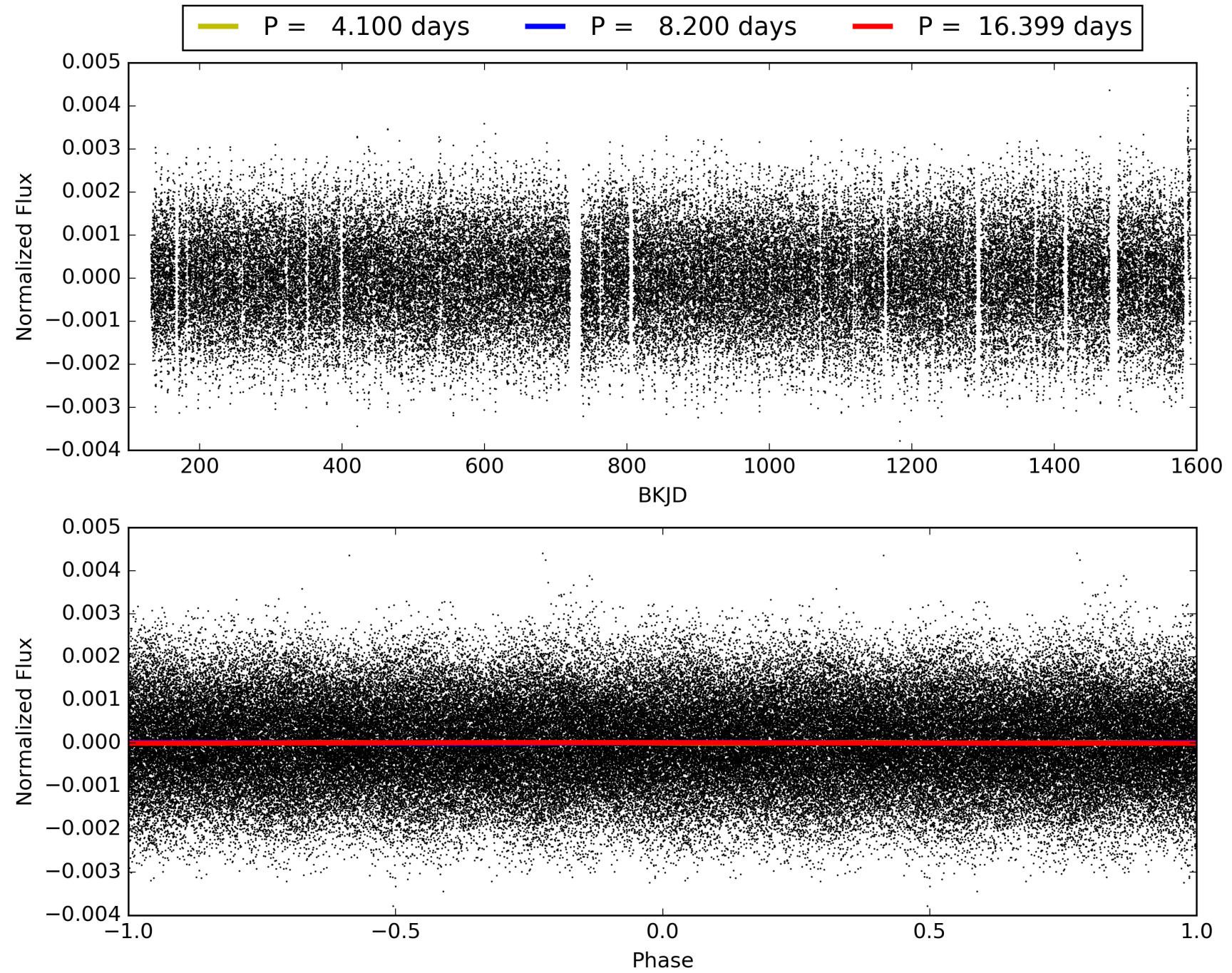
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:44:00 Z

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

TCE 009463183-01, PDC Light Curves

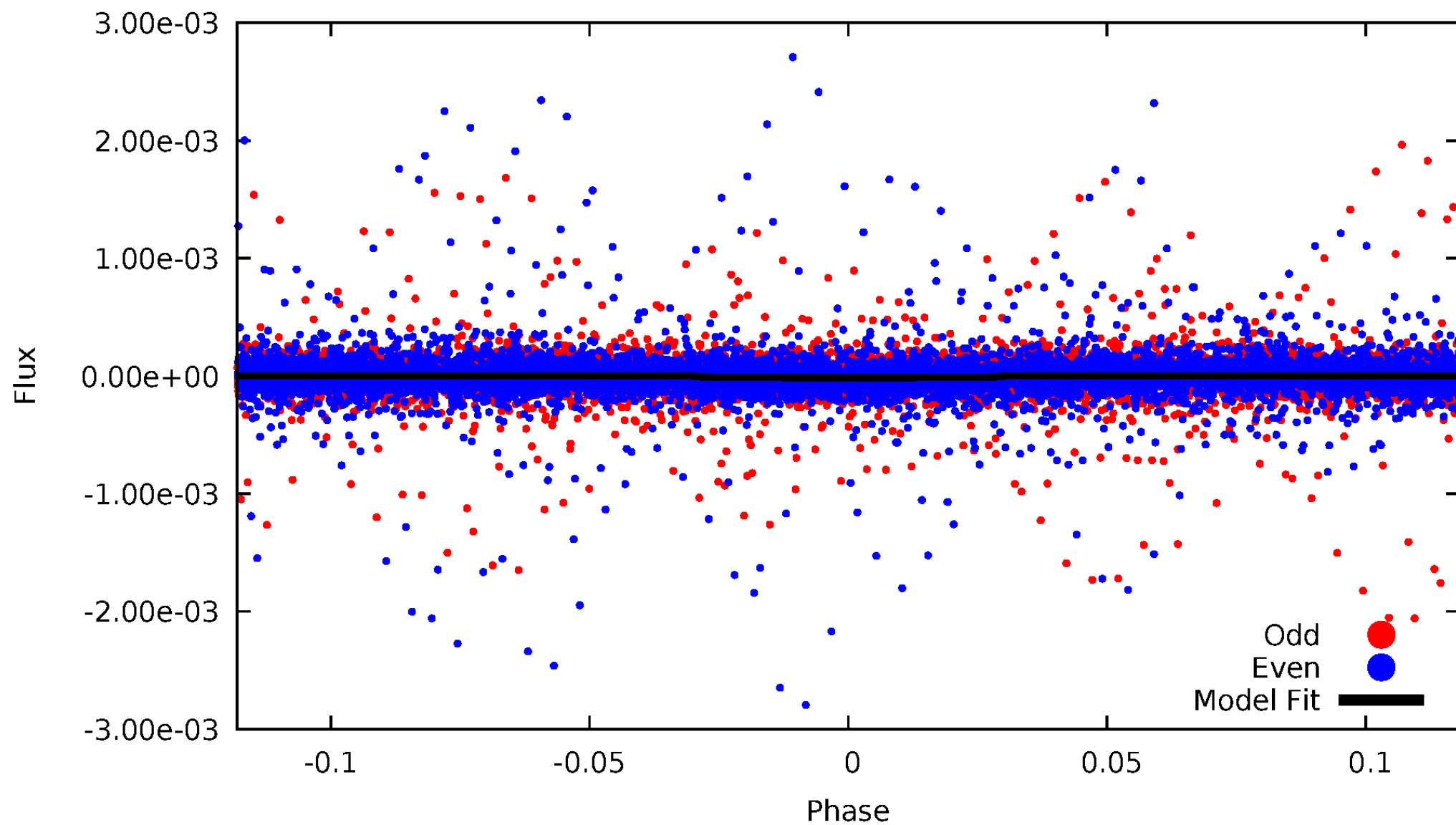


TCE 009463183-01



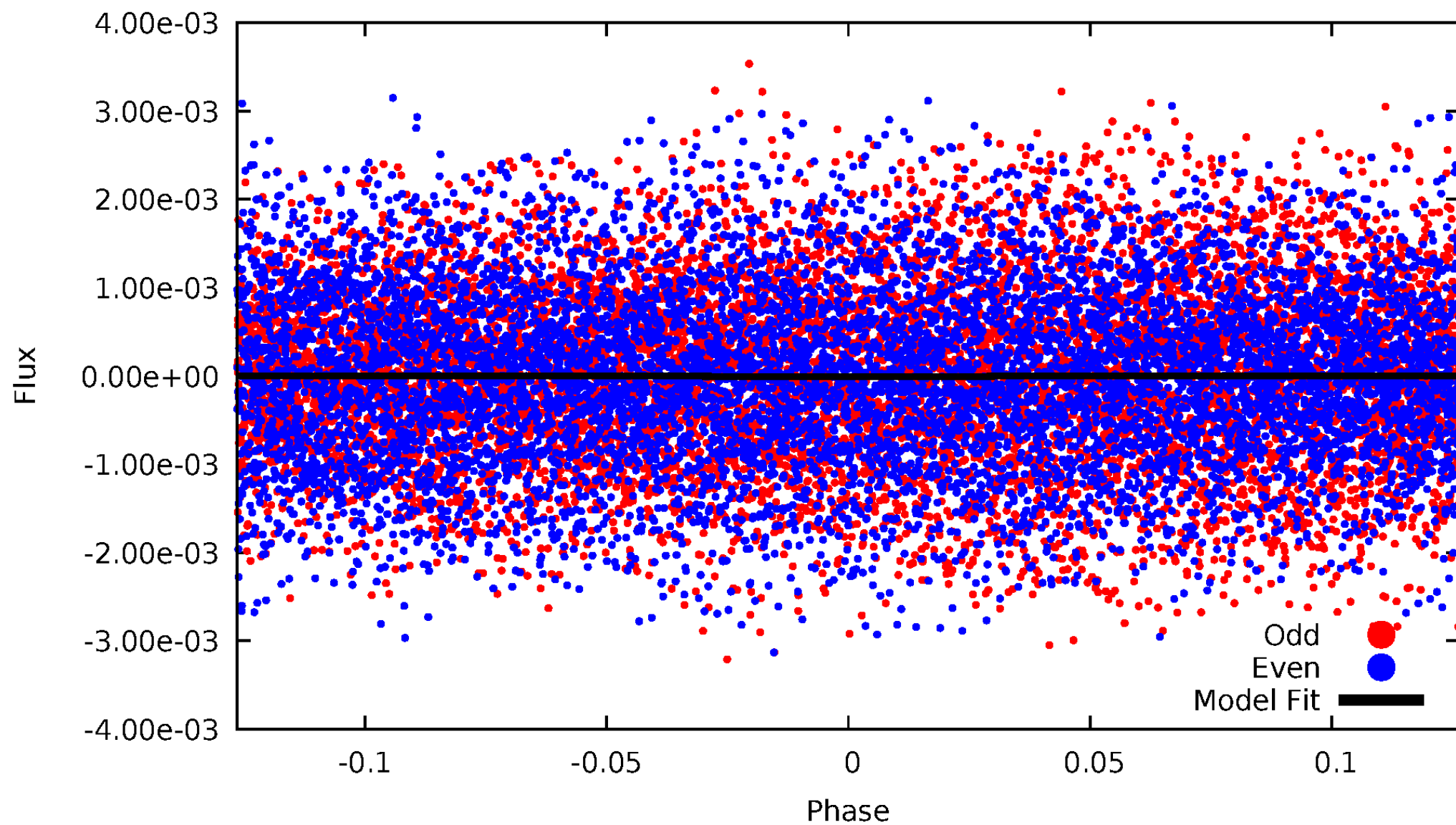
DV Odd/Even

TCE 009463183-01



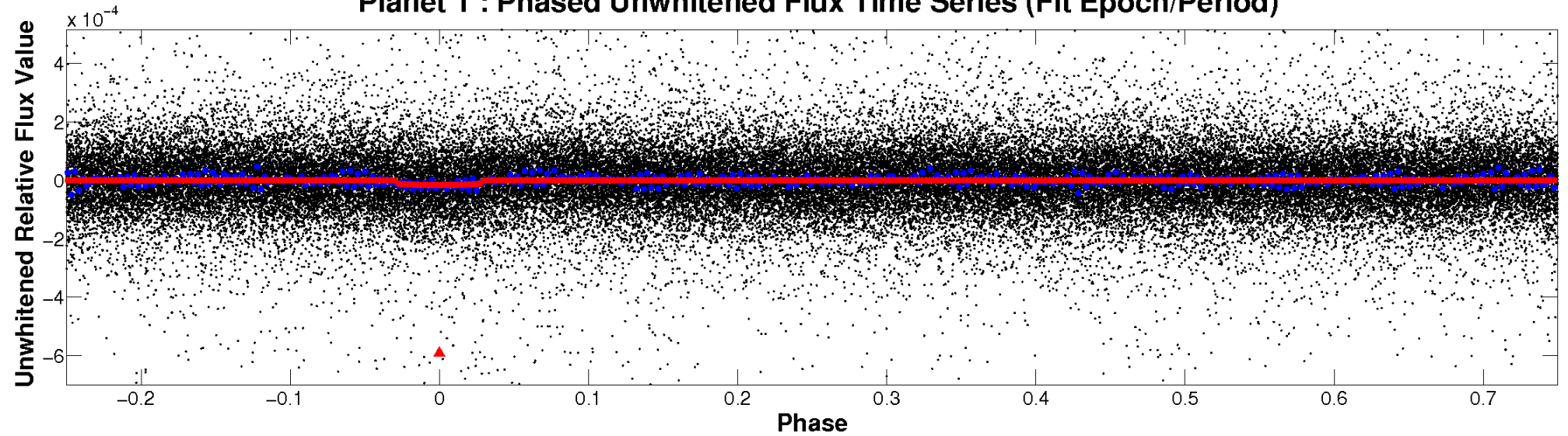
ALT Odd/Even

TCE 009463183-01

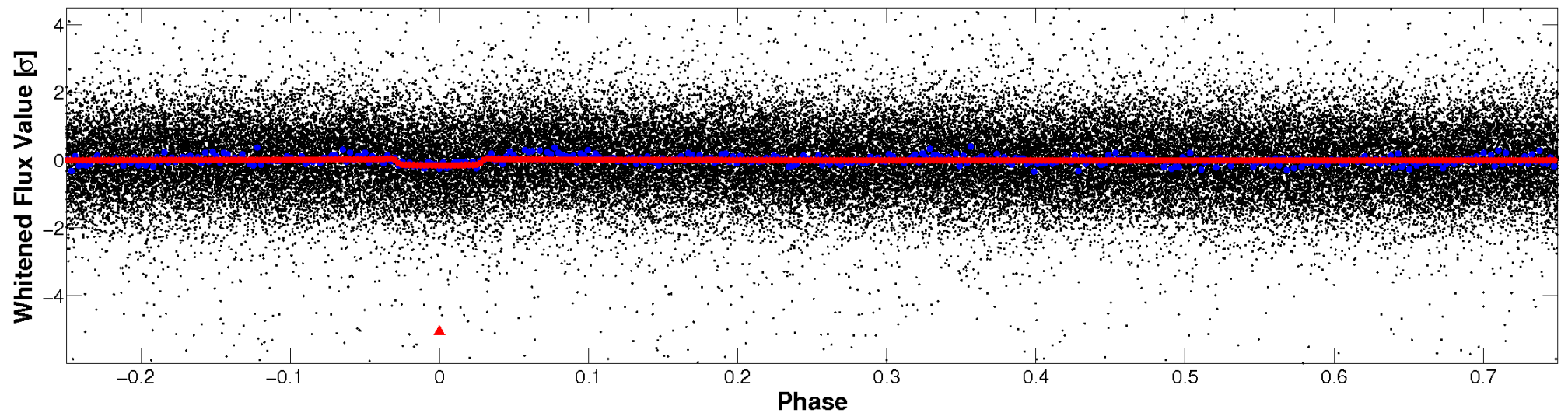


Non-Whitened Vs. Whitened Light Curve

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

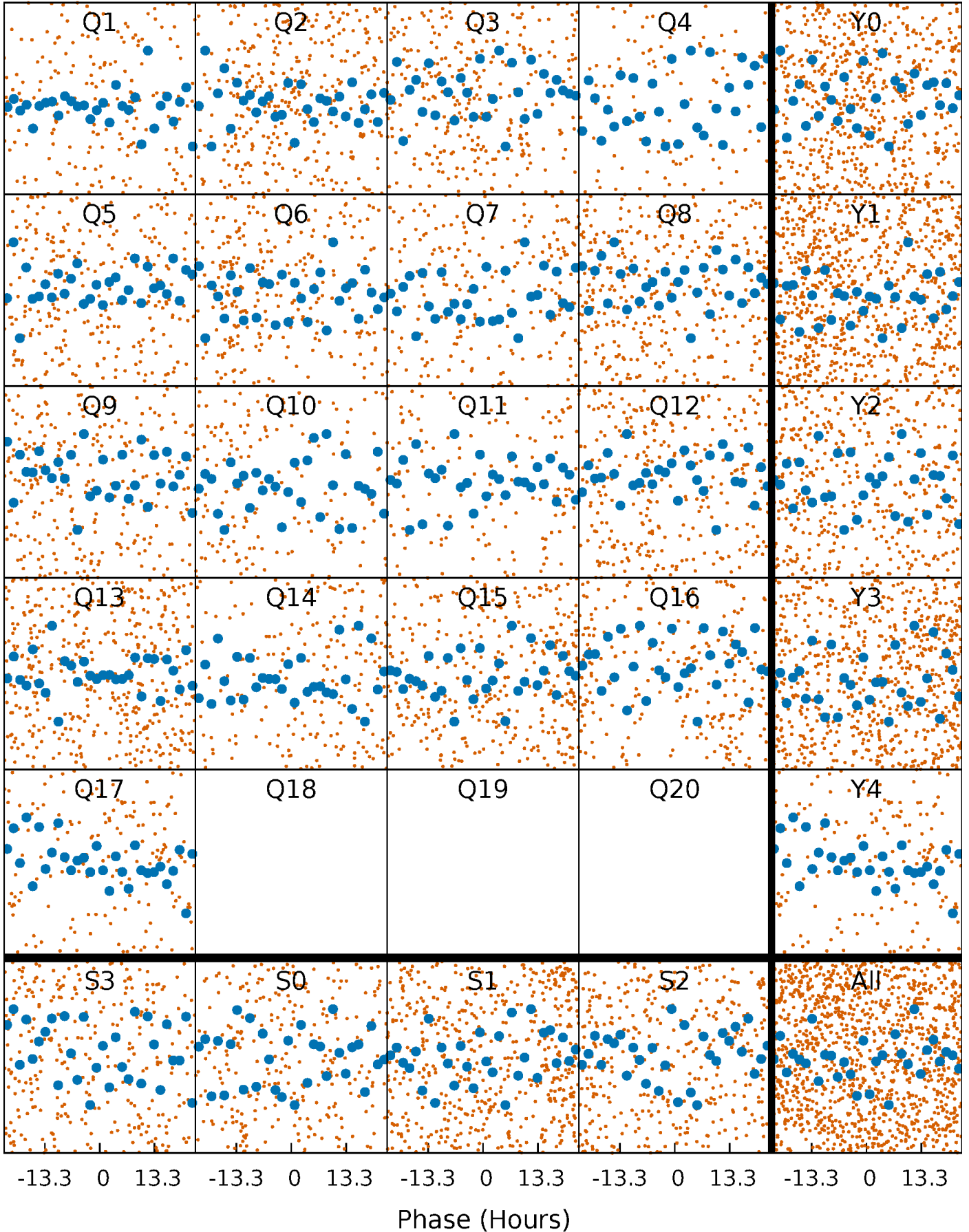


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



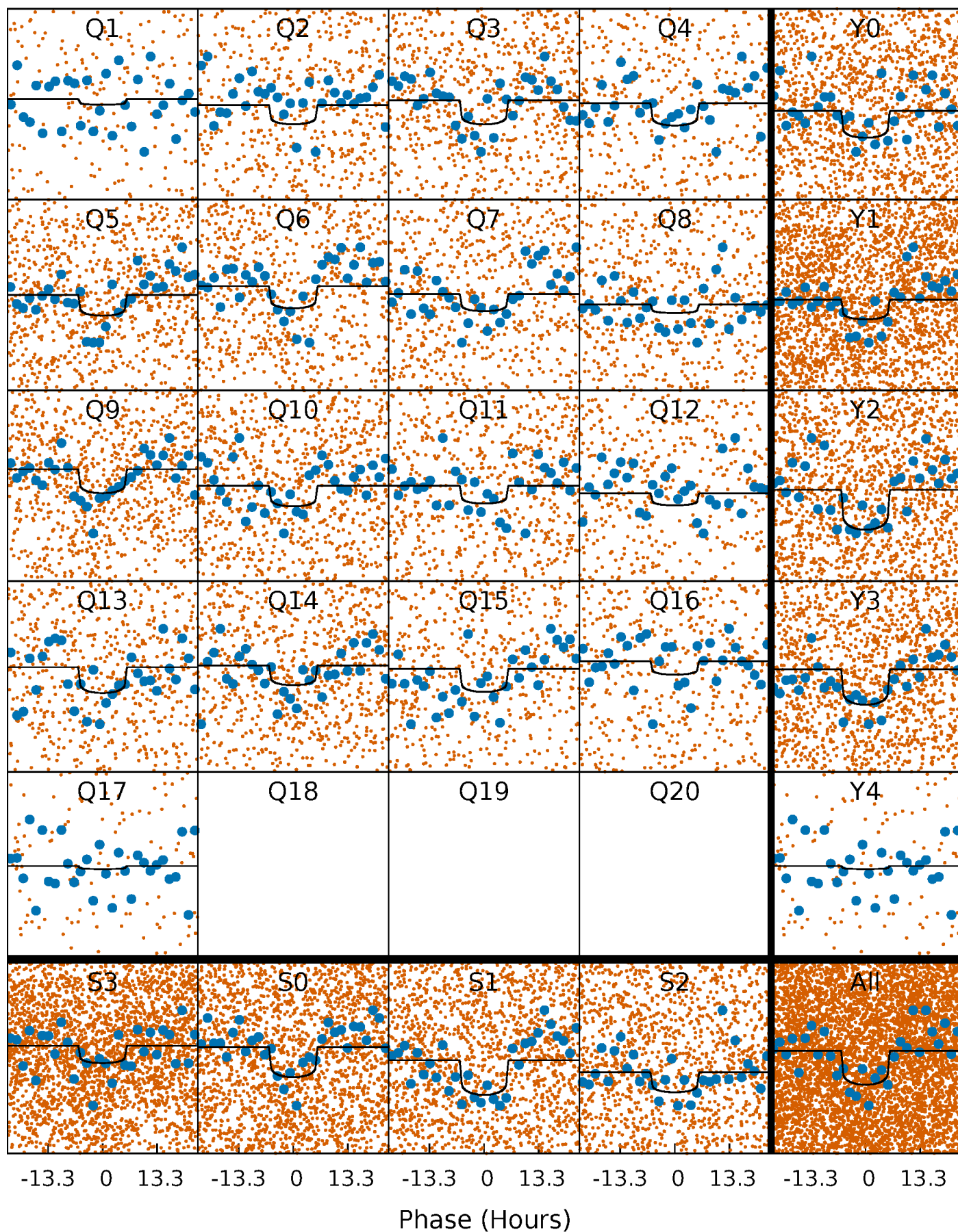
PDC Quarter-Phased Transit Curves

TCE 009463183-01 P= 8.199510 Days $T_0=137.380775$ (BKJD)



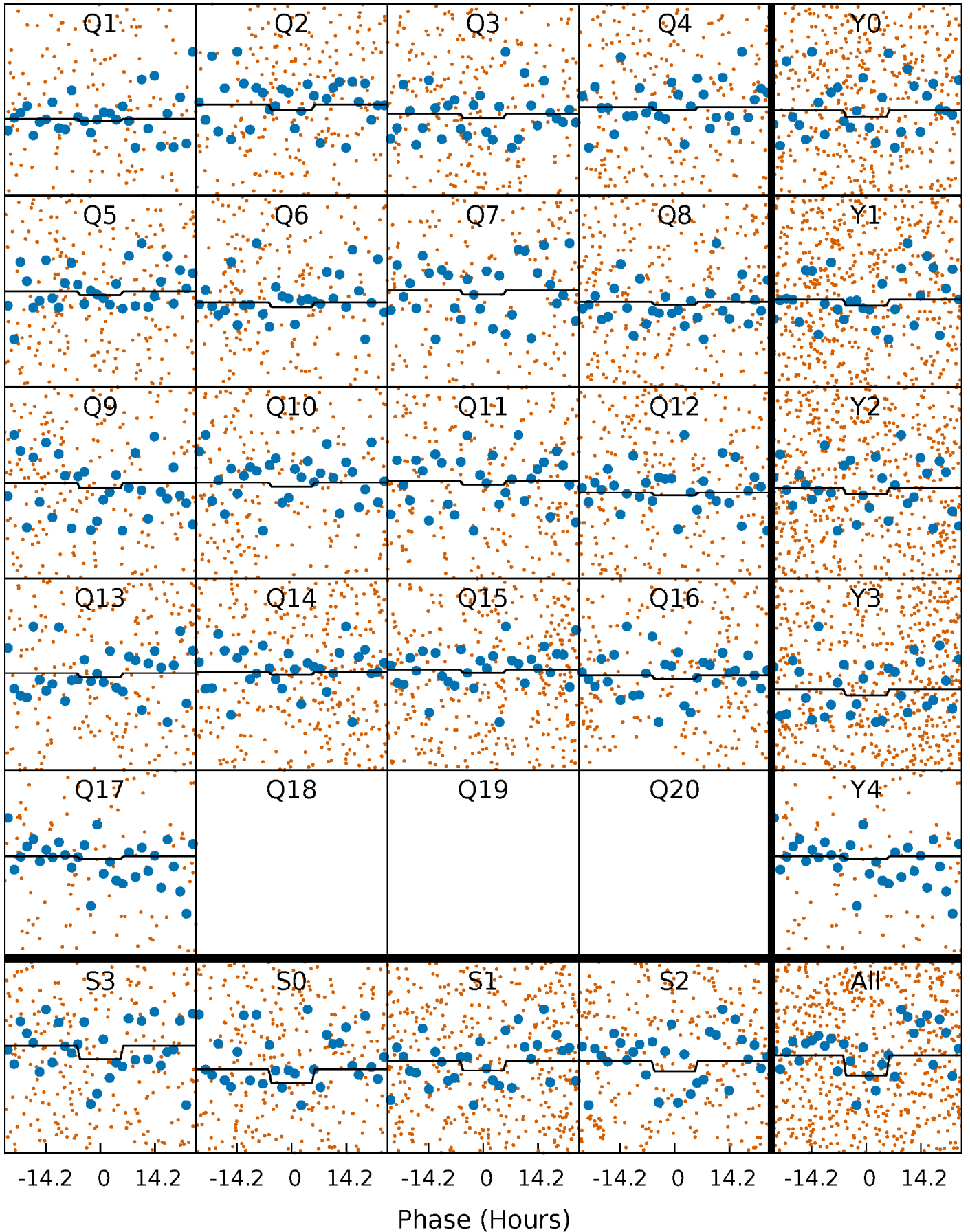
DV Quarter-Phased Transit Curves

TCE 009463183-01 P= 8.199510 Days $T_0=137.380775$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

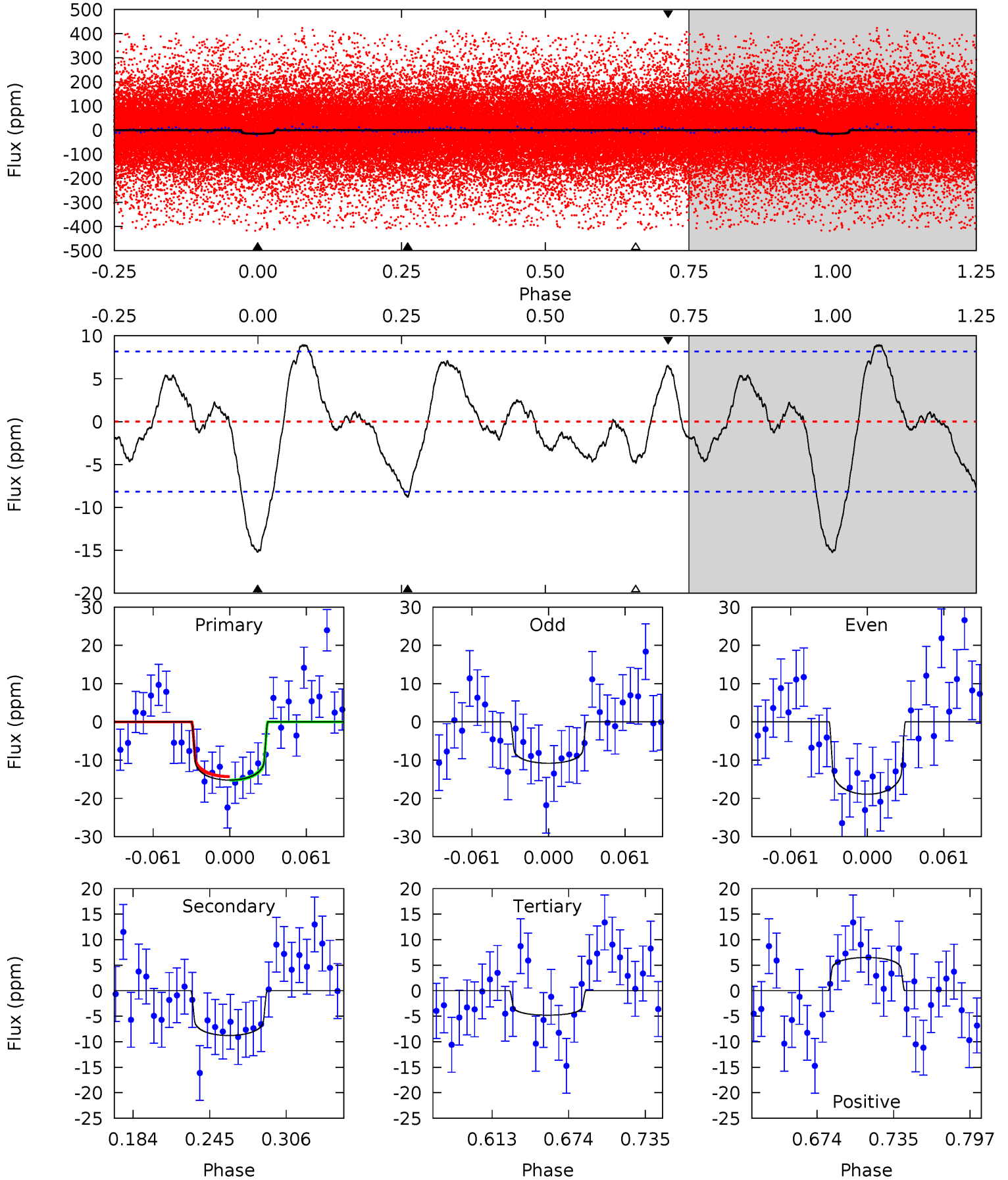
TCE 009463183-01 P= 8.199578 Days $T_0=137.379646$ (BKJD)



DV Model-Shift Uniqueness Test

009463183-01, P = 8.199510 Days, E = 129.181265 Days

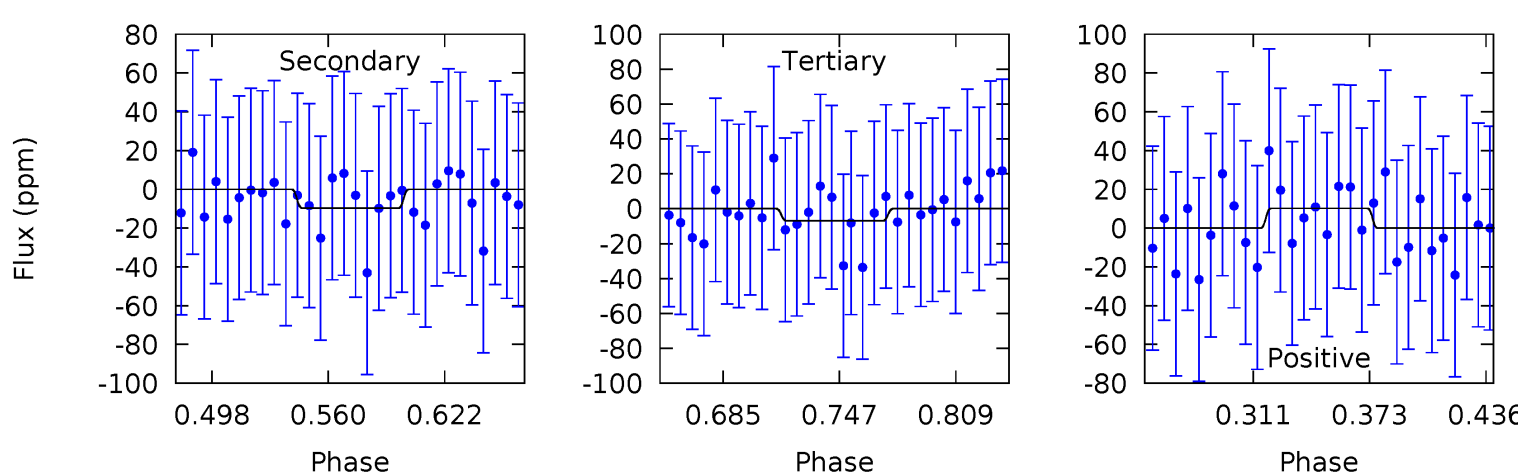
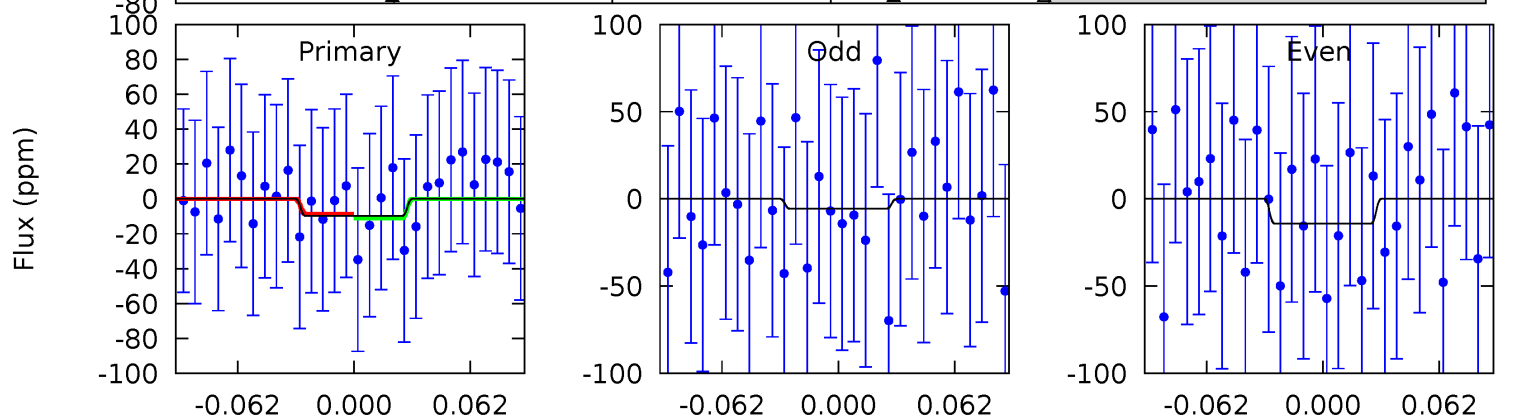
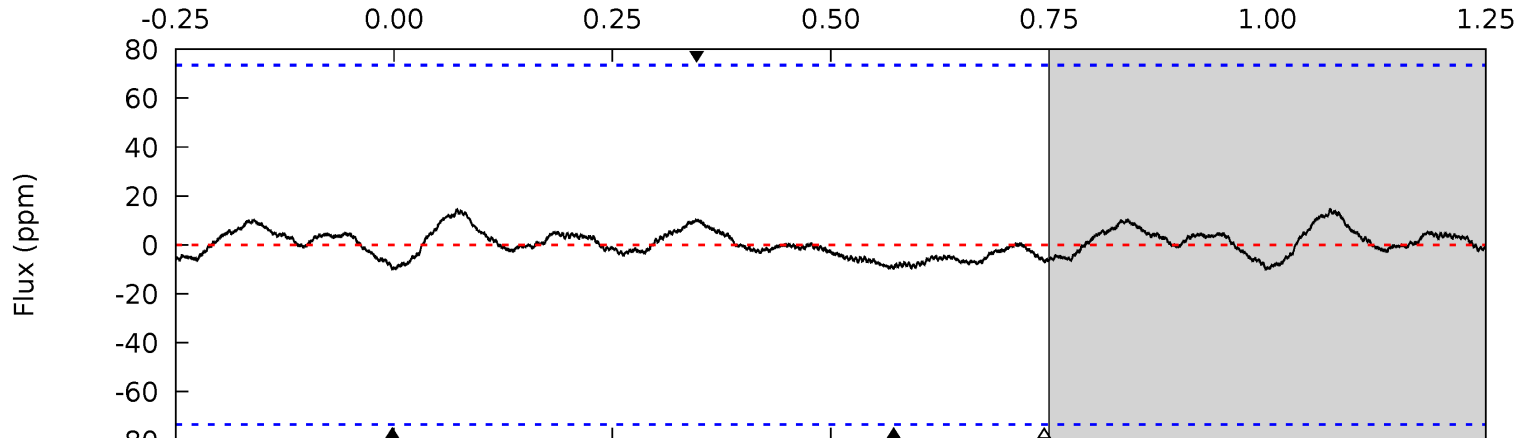
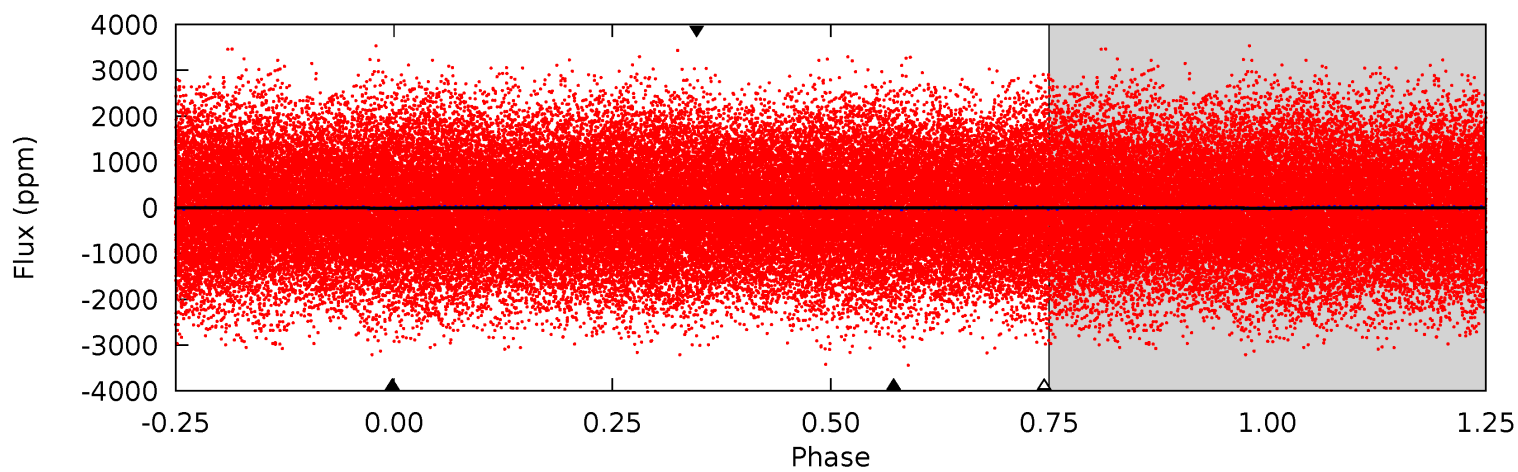
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.69	5.01	2.74	3.71	4.67	1.87	1.90	5.95	4.98	2.27	1.30	2.34	0.87	0.37	0.28



Alt Model-Shift Uniqueness Test

009463183-01, P = 8.199578 Days, E = 129.180068 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.62	0.61	0.44	0.65	4.66	1.86	0.30	0.18	-0.02	0.17	-0.03	0.27	1.41	0.60	0.08



Stellar Parameters For KIC 009463183

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7348^{+206}_{-353}	$4.055^{+0.140}_{-0.171}$	$0.220^{+0.150}_{-0.350}$	$2.060^{+0.542}_{-0.443}$	$1.755^{+0.197}_{-0.271}$	$0.283^{+0.207}_{-0.140}$
	+3%/-5%	+3%/-4%	+68%/-159%	+26%/-22%	+11%/-15%	+73%/-49%
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 009463183-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 2	$0.95^{+0.22}_{-0.20}$	2103^{+145}_{-141}	6053^{+804}_{-589}	50^{+31}_{-19}
Alt.	-10 ± 16	$0.72^{+0.22}_{-0.18}$	2091^{+154}_{-141}	7208^{+3154}_{-13291}	88^{+198}_{-144}

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 $A_{obs} \gg 1.0$

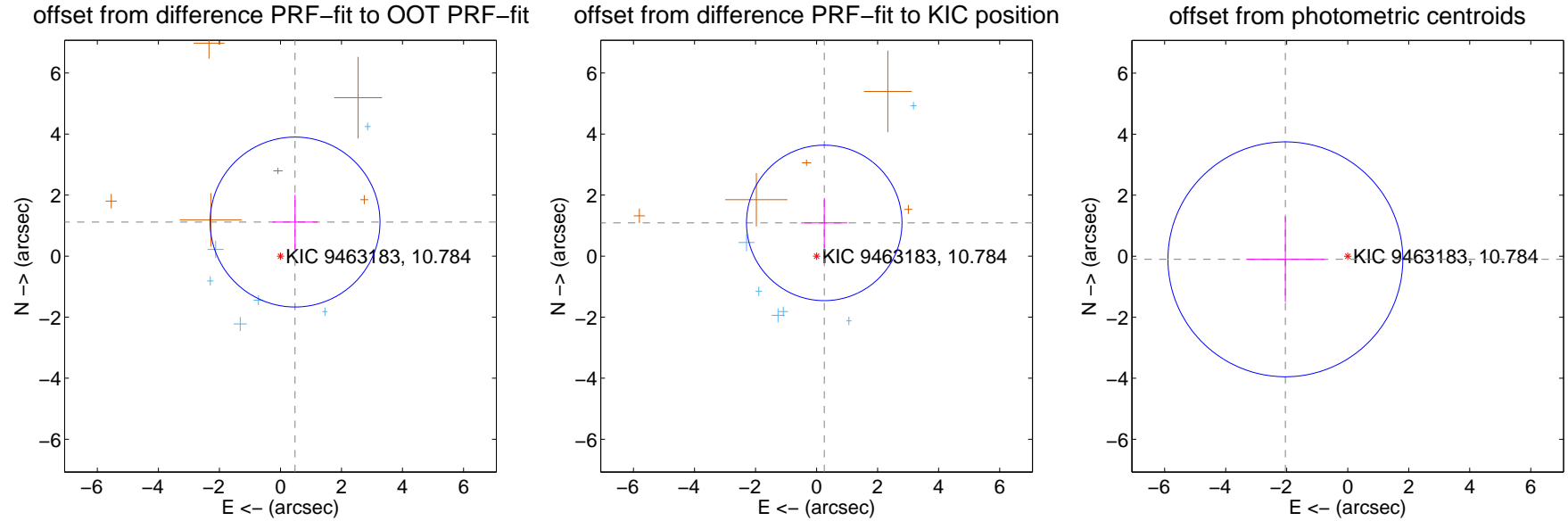
DV Centroid Data

Supplemental centroid analysis for 009463183-01. **Kepler magnitude: 10.78.** Transit SNR 8.83

There are 6 quarters with good PRF difference image offsets

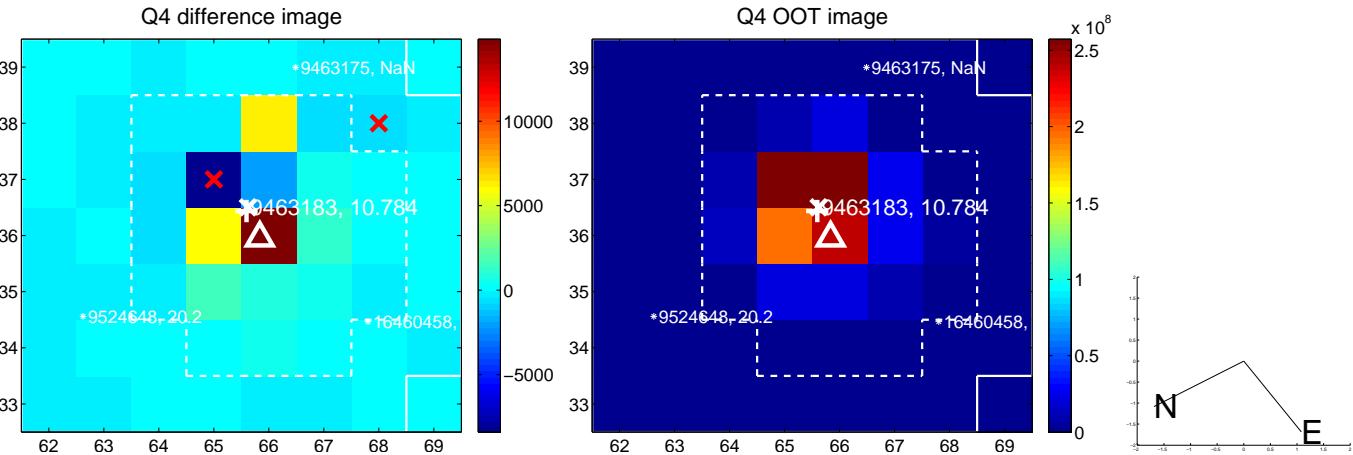
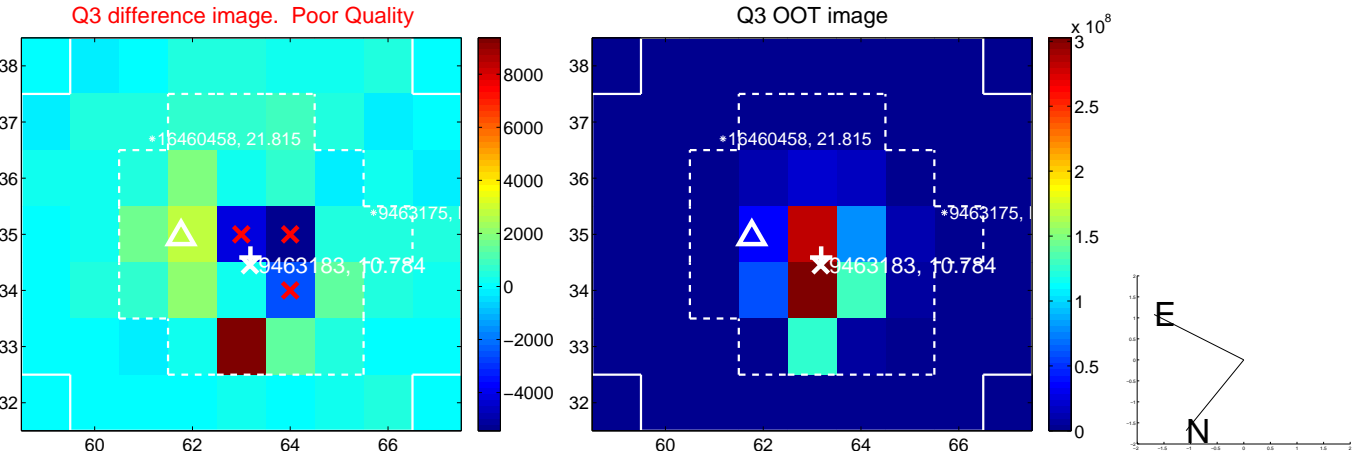
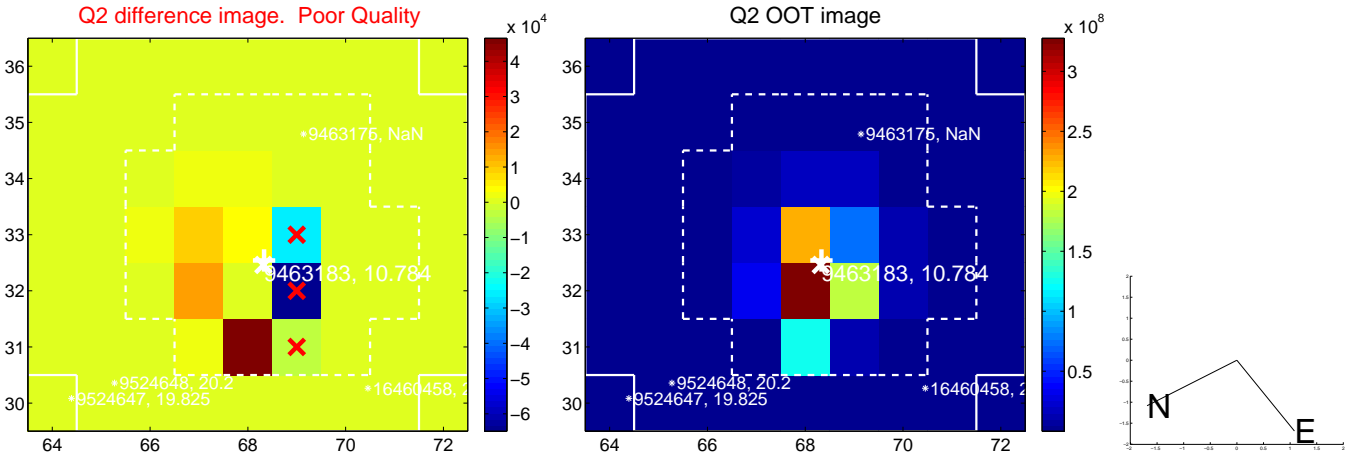
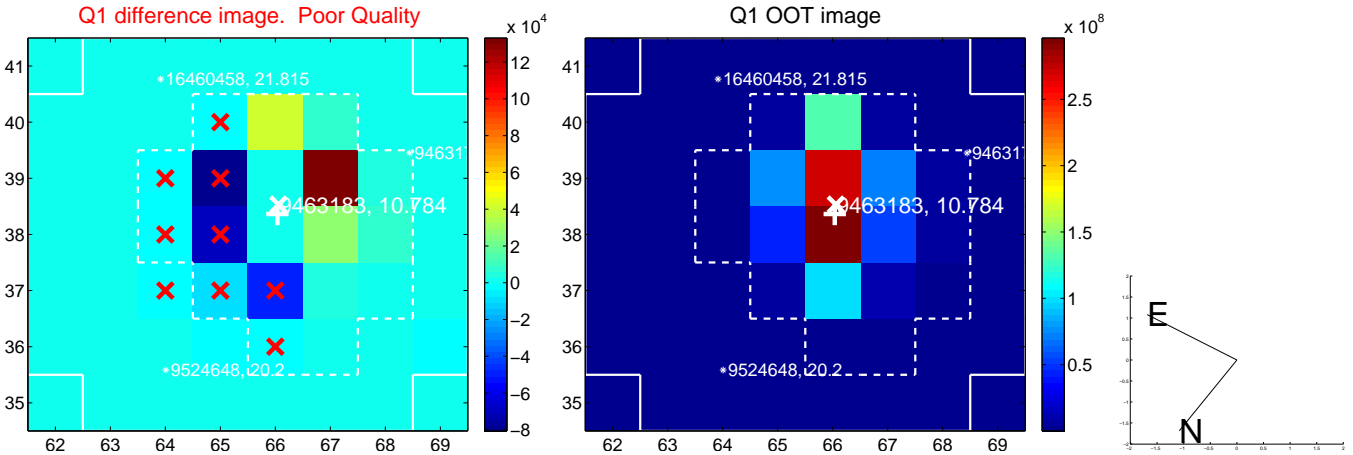
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.215 ± 0.928	1.31	-0.478 ± 0.737	1.117 ± 0.892
PRF-fit source offset from KIC position	1.117 ± 0.849	1.32	-0.252 ± 0.756	1.089 ± 0.817
photometric centroid source offset	2.05 ± 1.28	1.59	2.04 ± 1.28	-0.10 ± 1.40

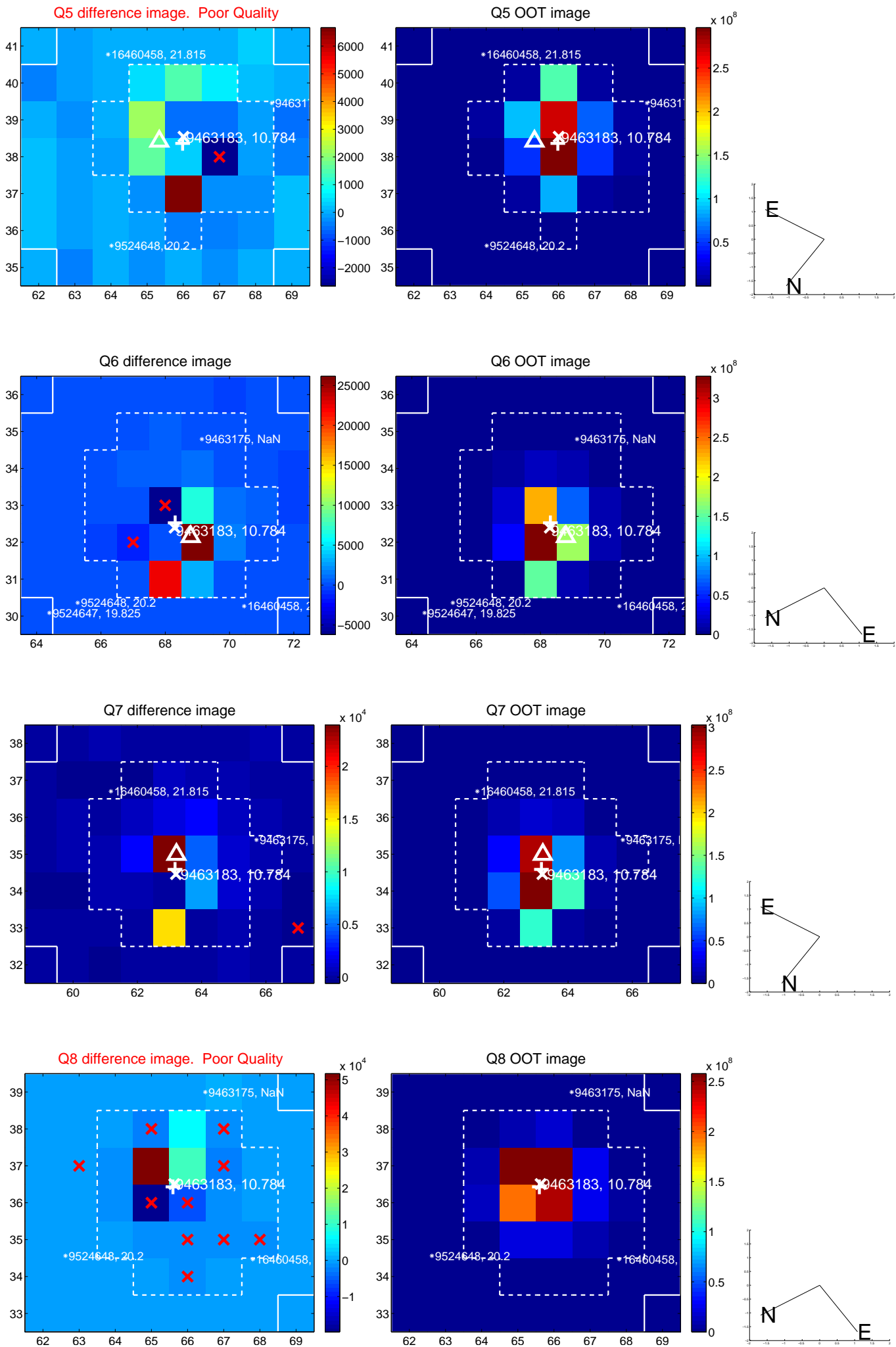


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

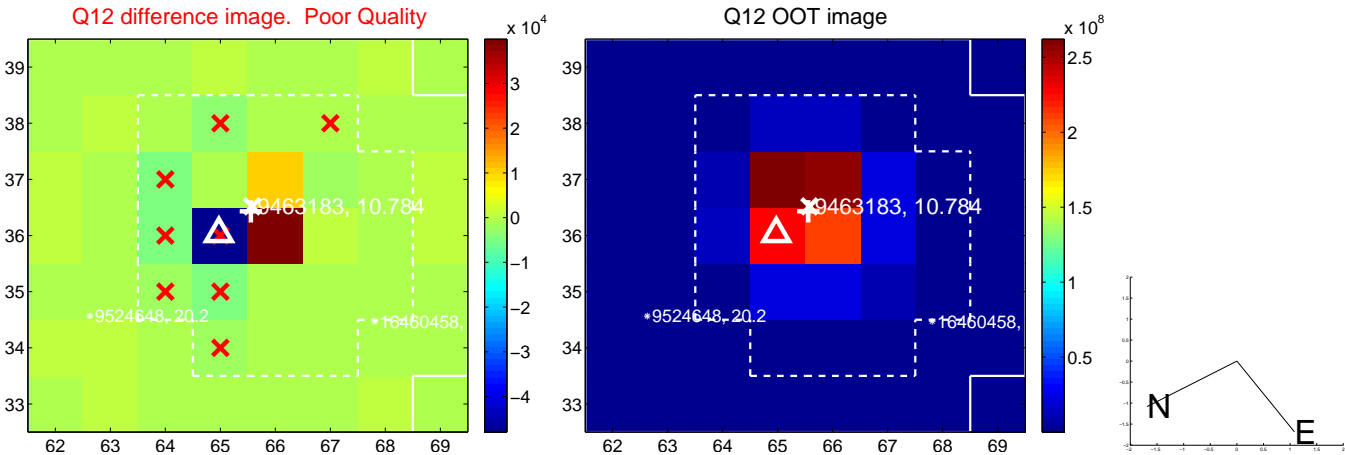
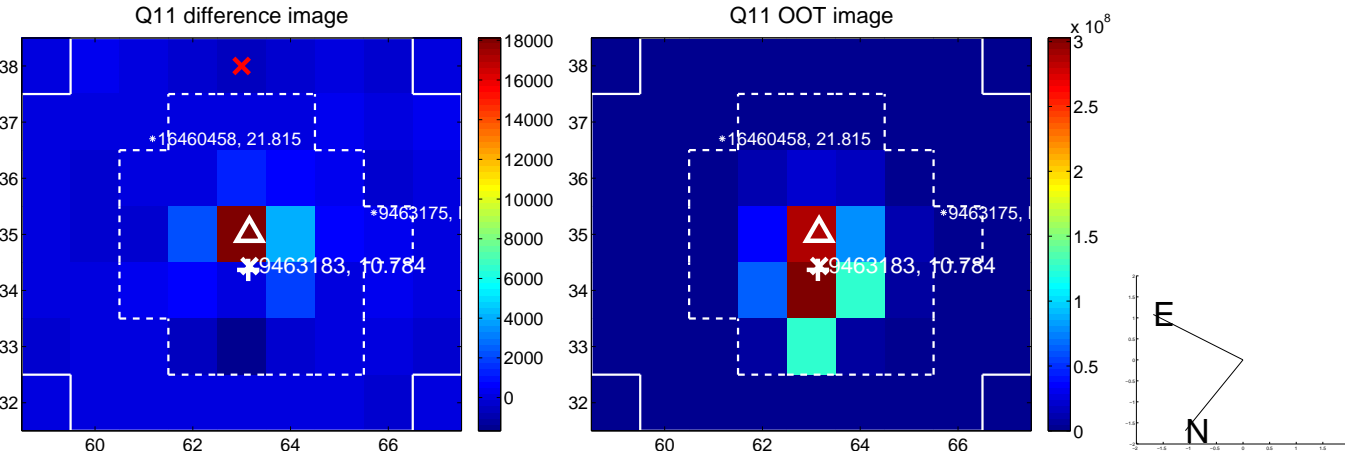
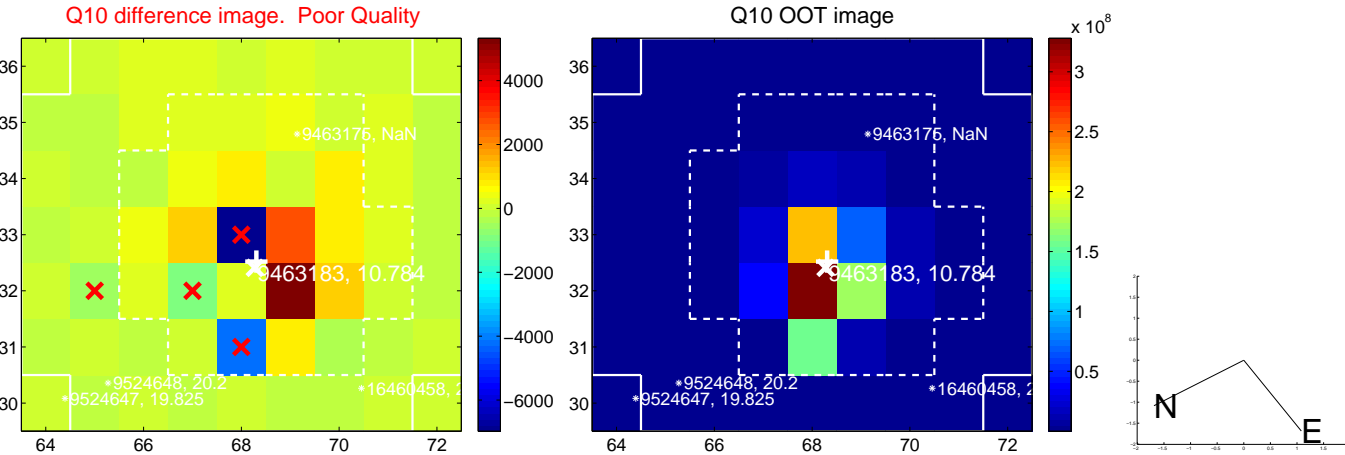
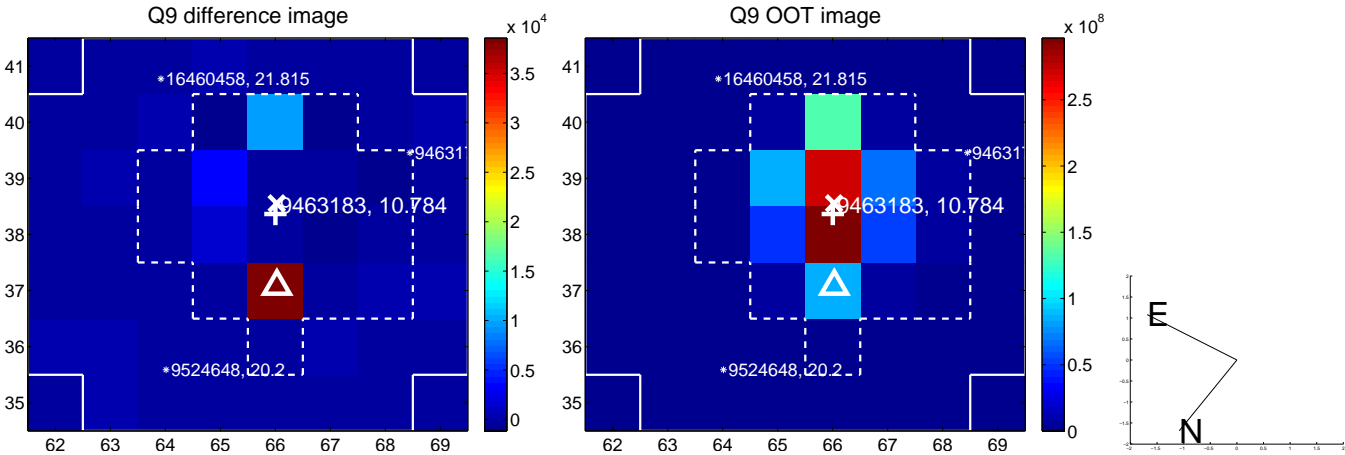
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



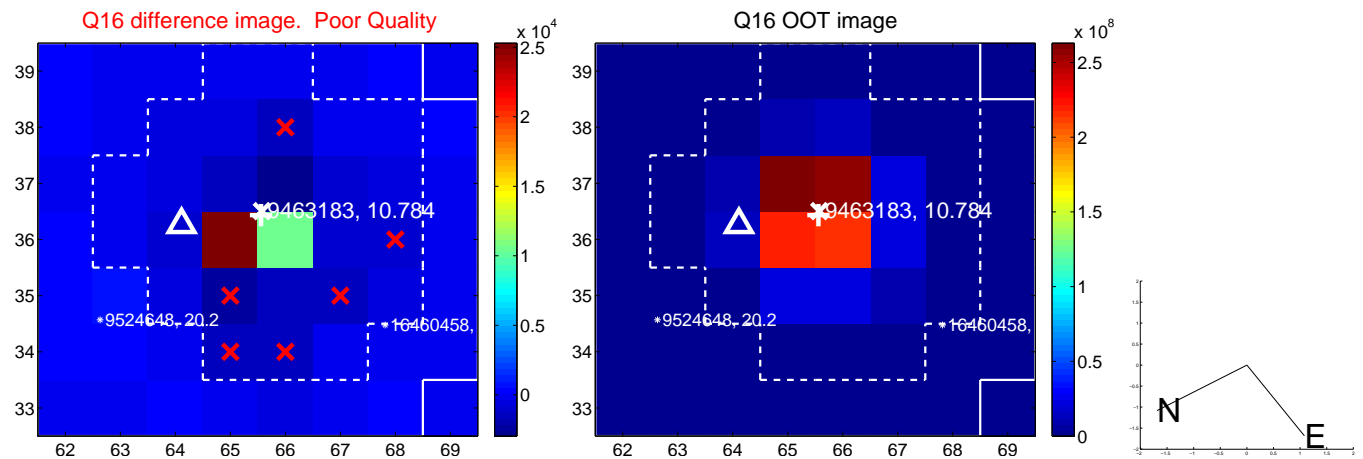
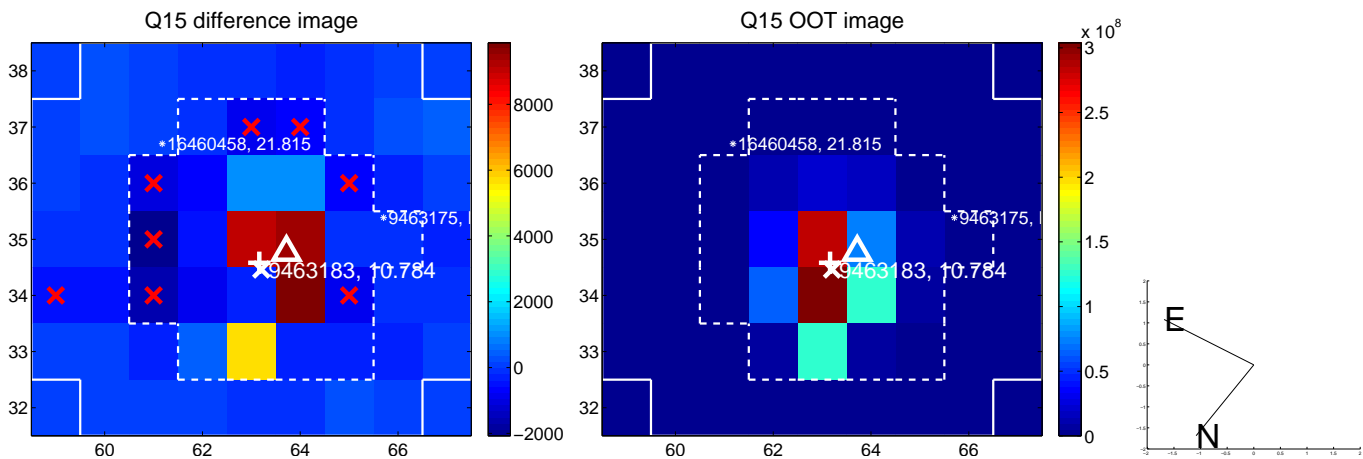
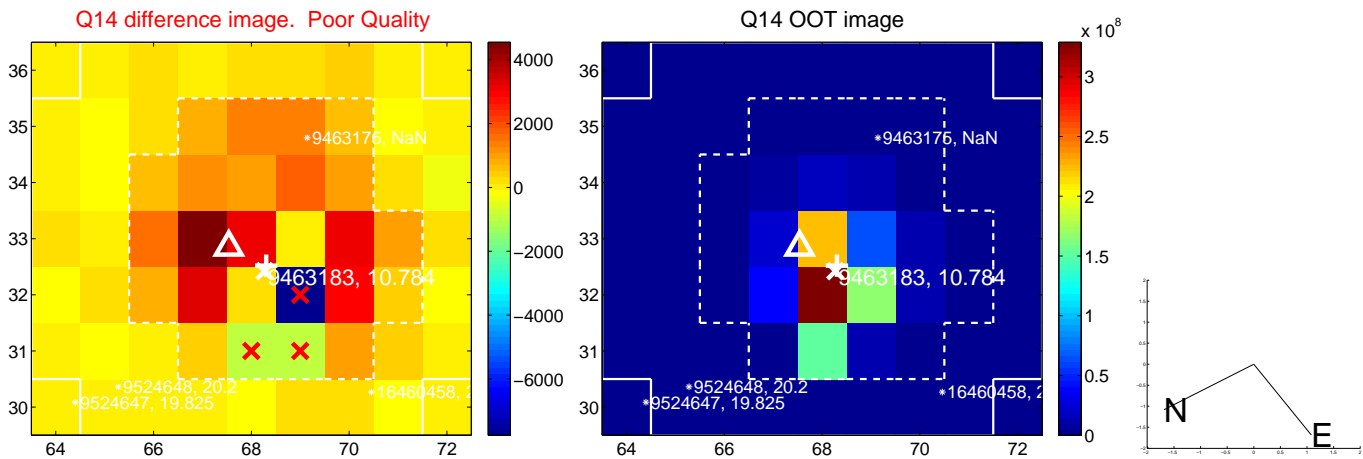
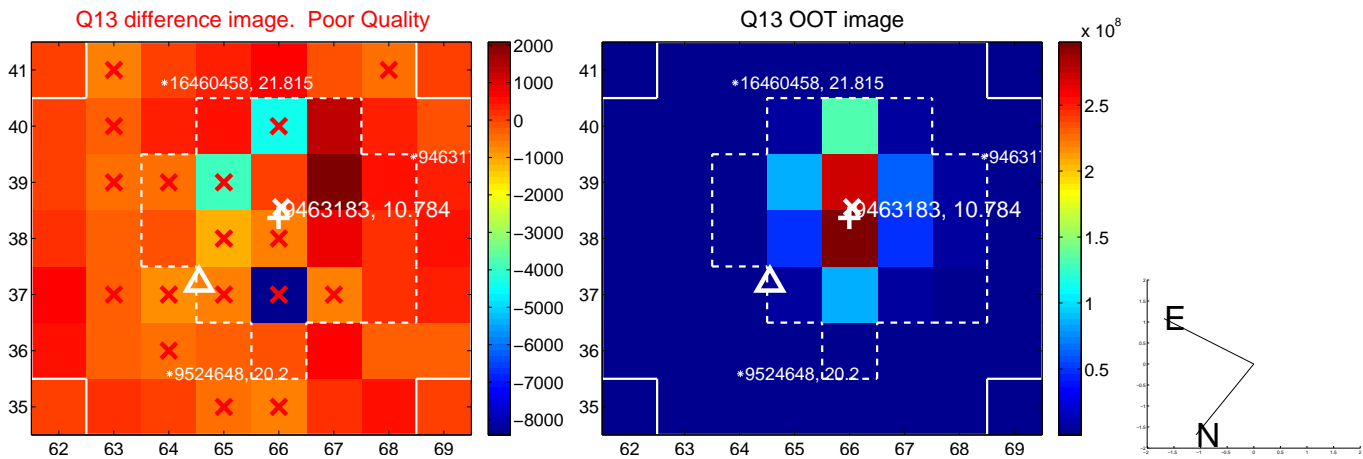
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



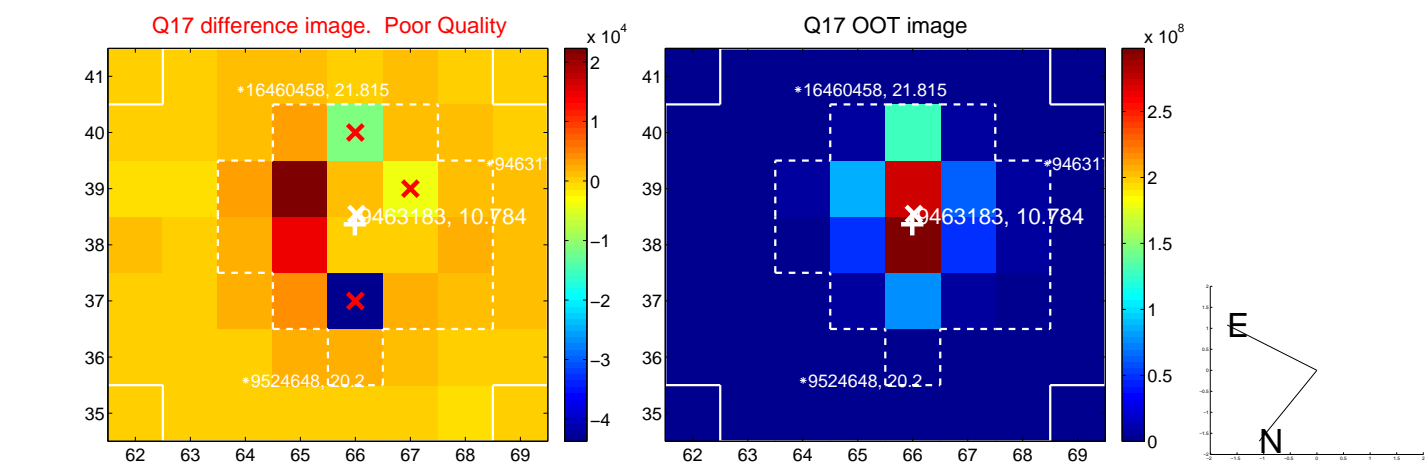
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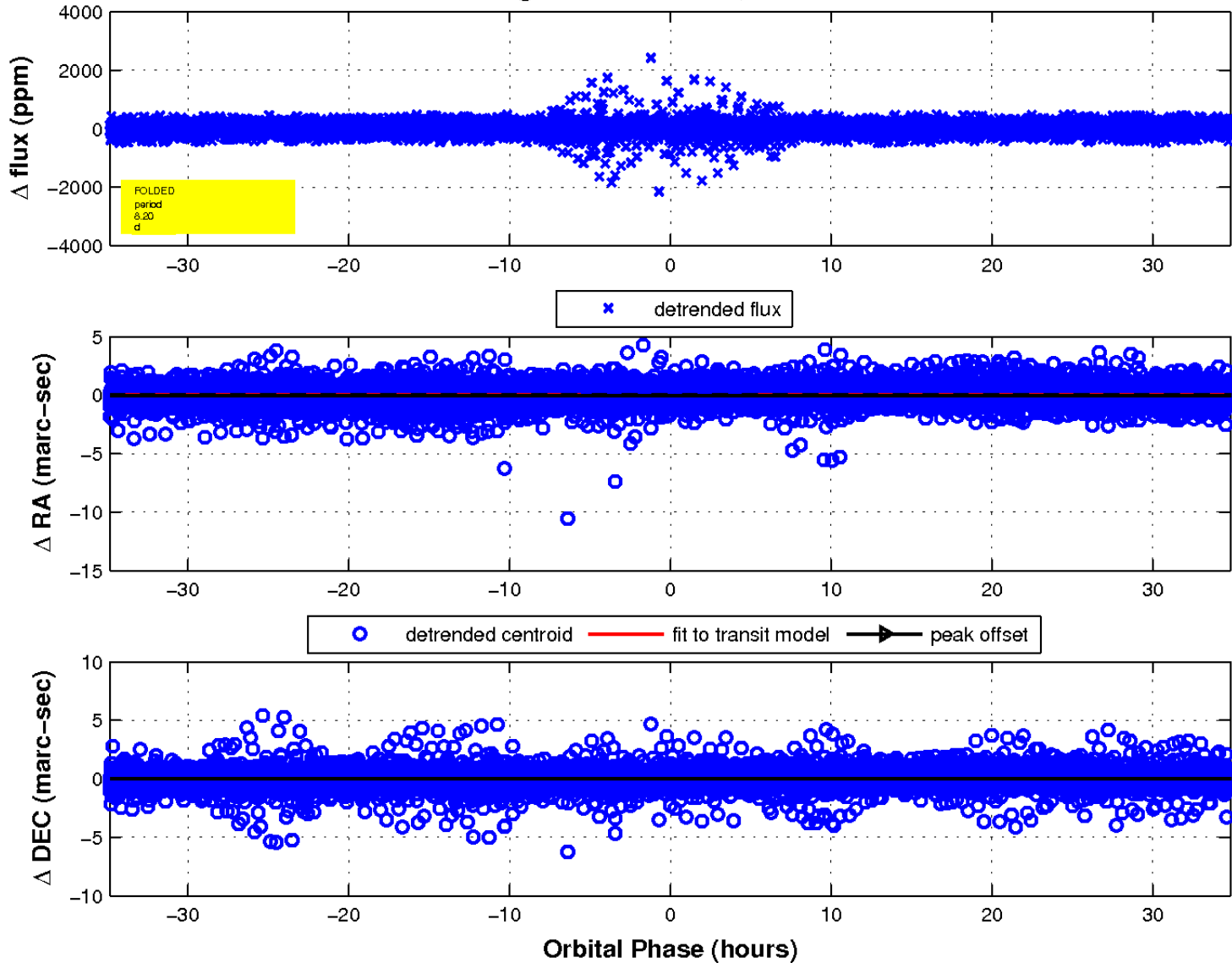
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

