

KIC 008311180

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})
008311180-01	OBS	No	0.804034	132.276269	20.2	2.454	9.4	10.3	2.17	6559	1.14	20251.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008311180-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

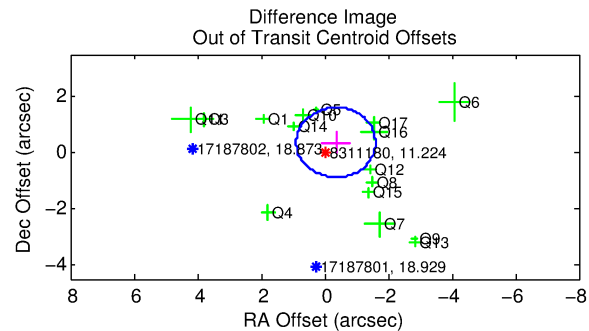
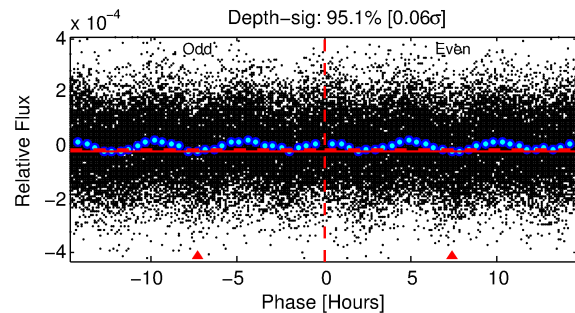
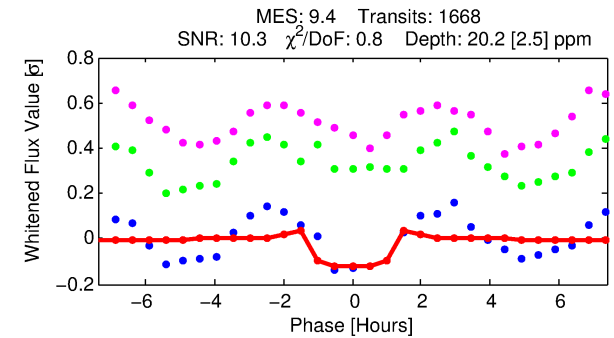
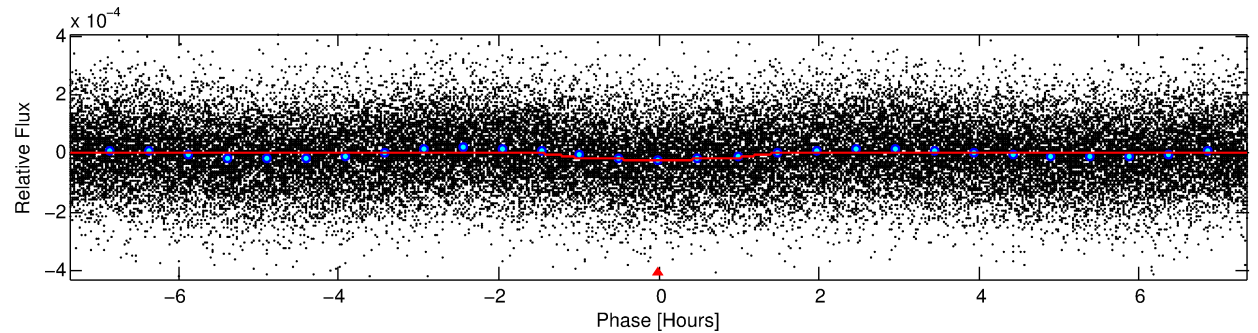
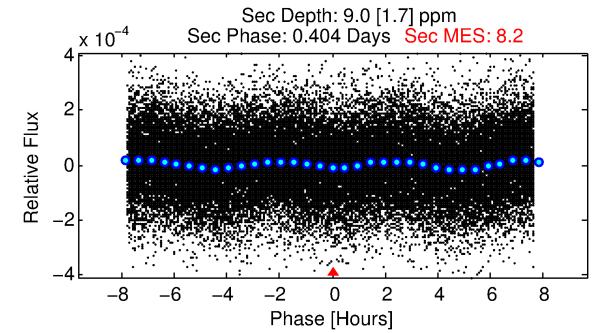
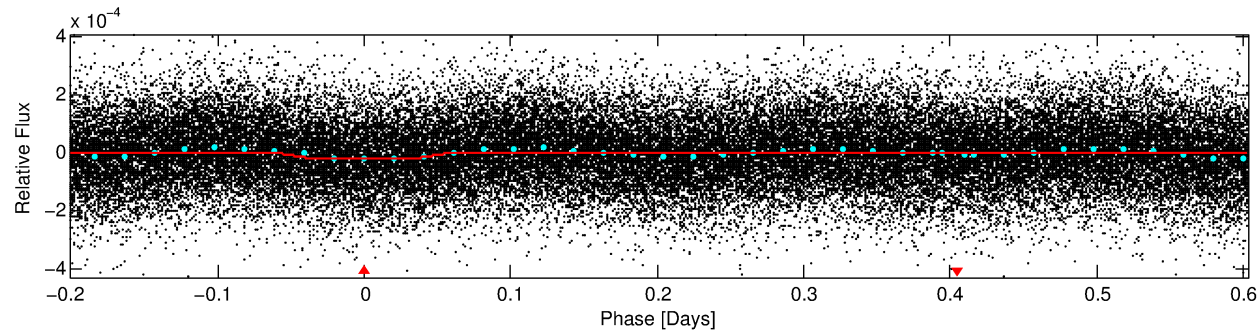
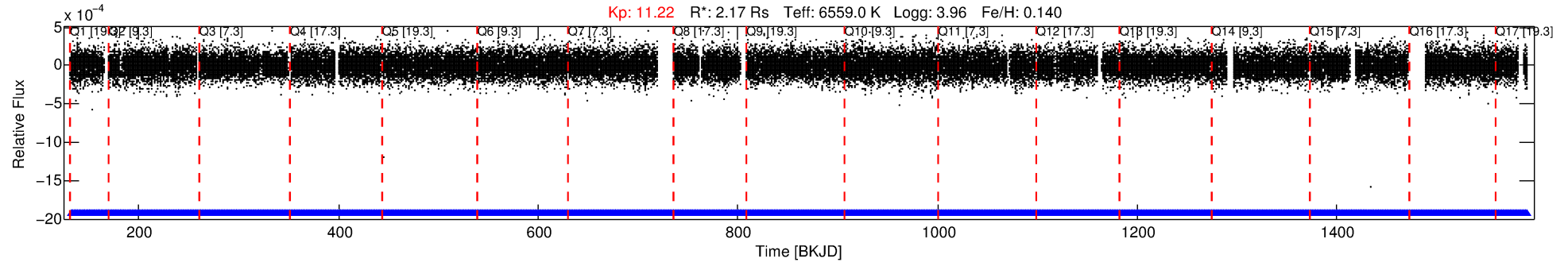
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008311180-01

No Significant Match Found

DV One-Page Summary

KIC: 8311180 Candidate: 1 of 1 Period: 0.804 d



DV Fit Results:

Period = 0.80403 [0.00001] d
Epoch = 132.2763 [0.0020] BKJD
Rp/R* = 0.0048 [0.0012]
a/R* = 1.46 [1.09]
b = 0.90 [0.30]
Seff = 20251.26 [11279.46]
Teq = 3042 [424] K
Rp = 1.14 [0.52] Re
a = 0.0196 [0.0068] AU
Ag = 1.47 [1.11] [0.42σ]
Teffp = 5179 [716] K [2.57σ]

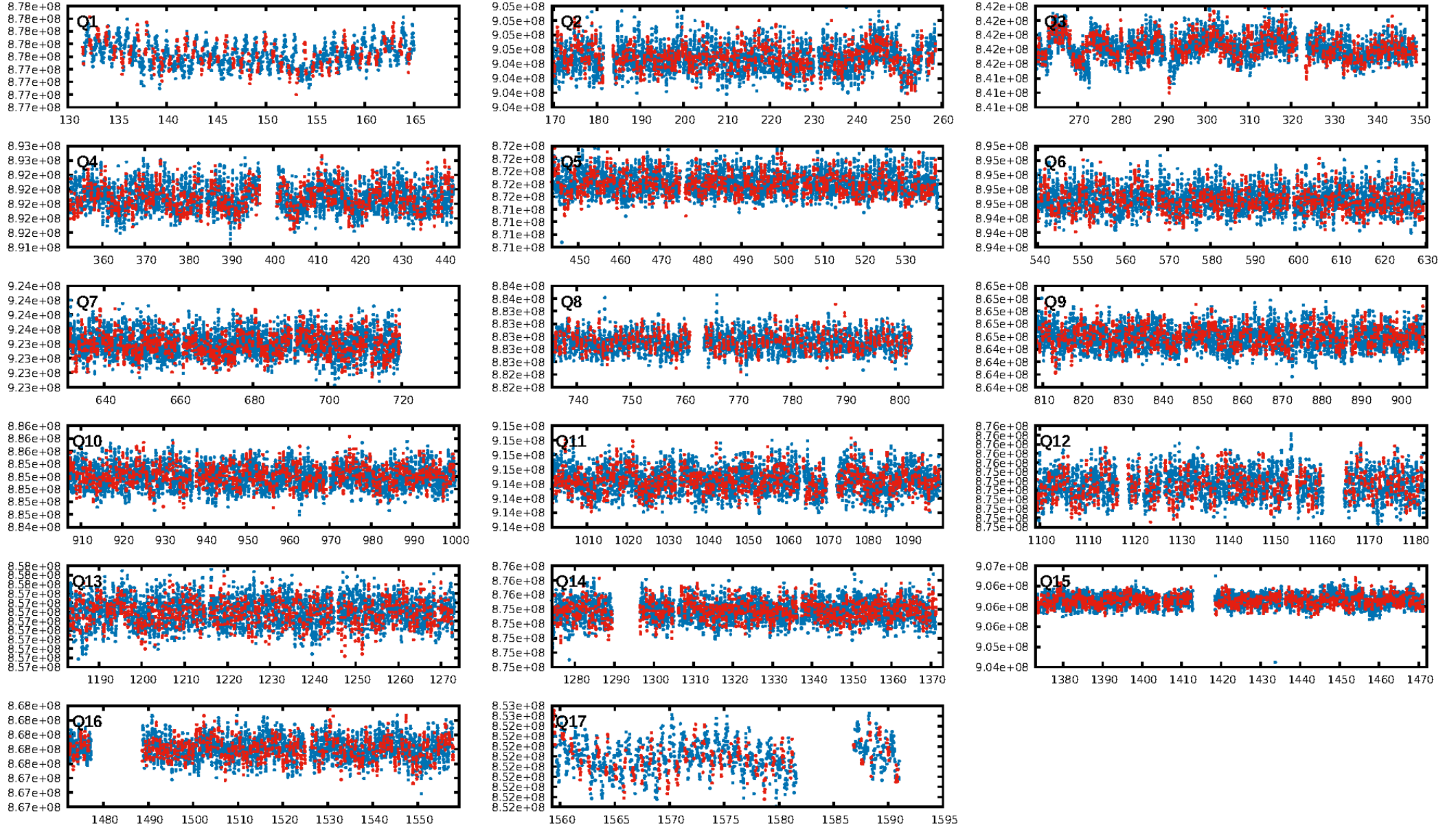
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.57e-18
RollingBand-fgt: 1.00 [1592/1592]
GhostDiagnostic-chr: 13.74
Centroid-sig: 0.0%
Centroid-so: 0.964 arcsec [2.55σ]
OotOffset-rm: 0.505 arcsec [1.22σ]
KicOffset-rm: 0.197 arcsec [0.39σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 1.00 [17/17]

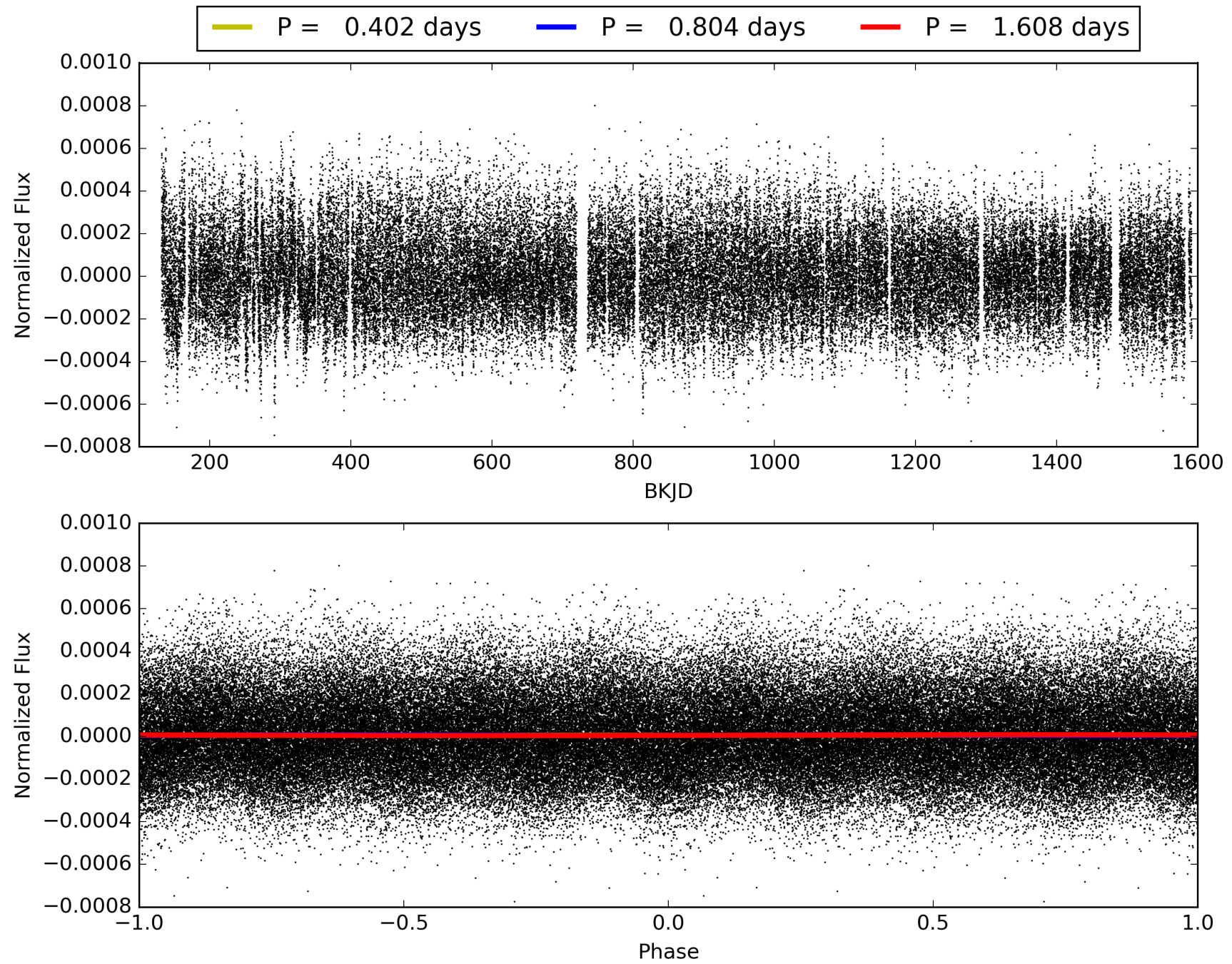
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:26:13 Z

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

TCE 008311180-01, PDC Light Curves

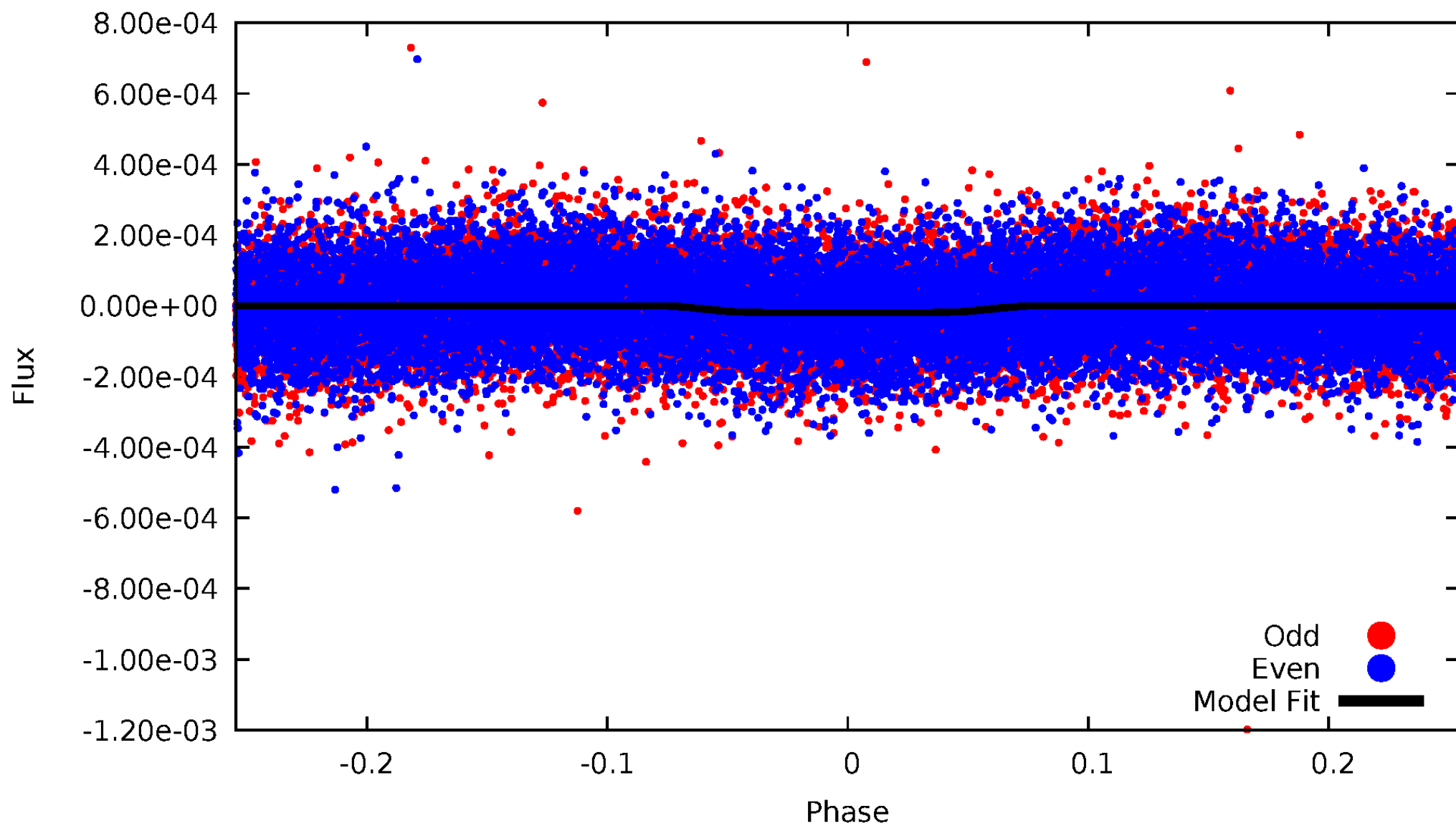


TCE 008311180-01



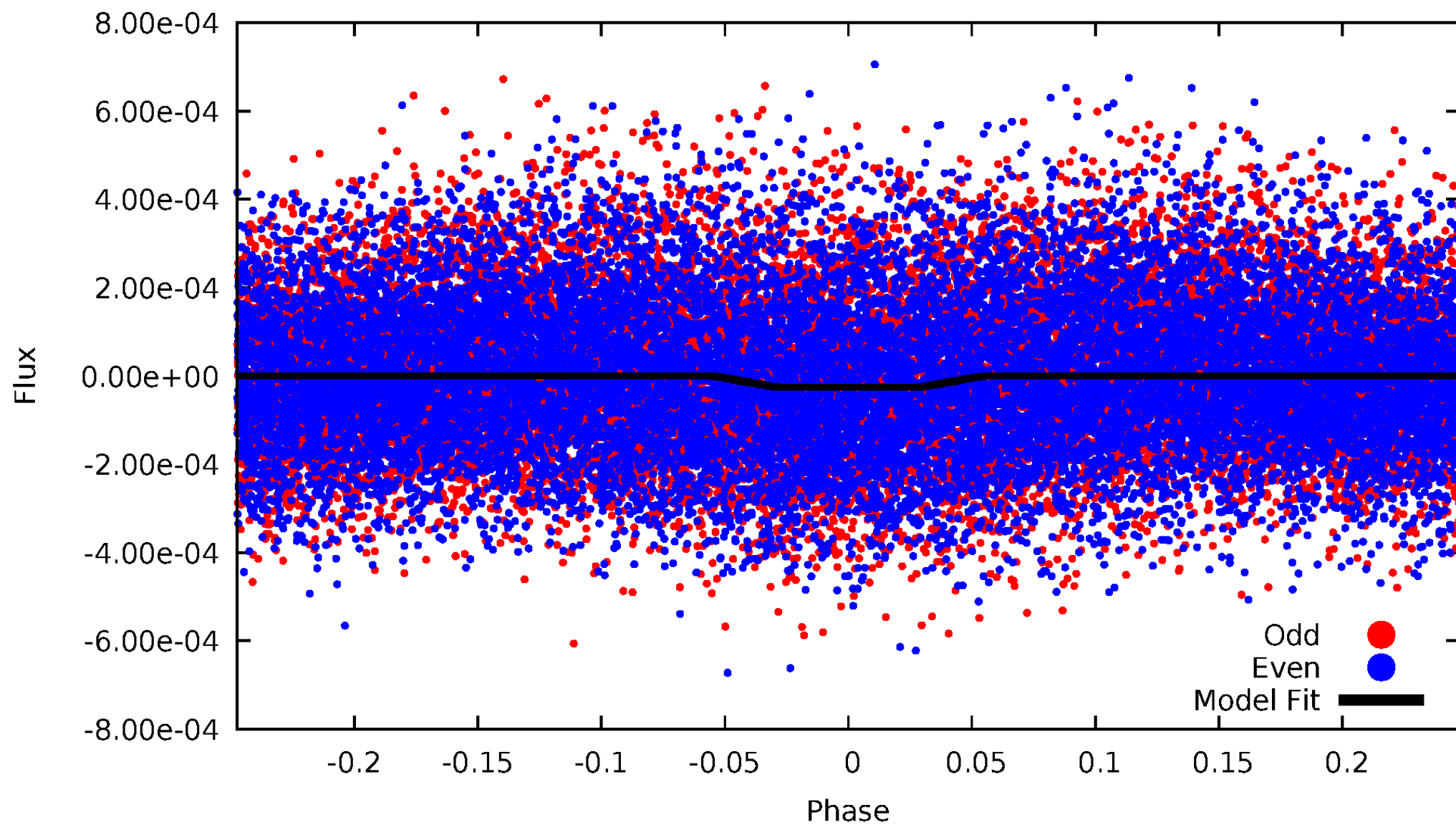
DV Odd/Even

TCE 008311180-01



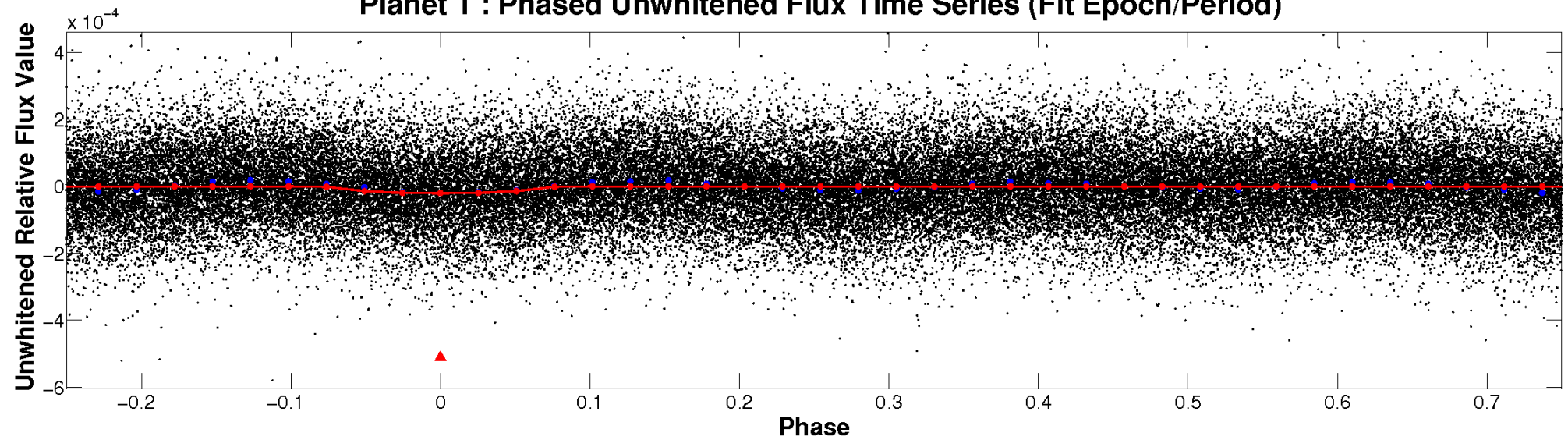
ALT Odd/Even

TCE 008311180-01

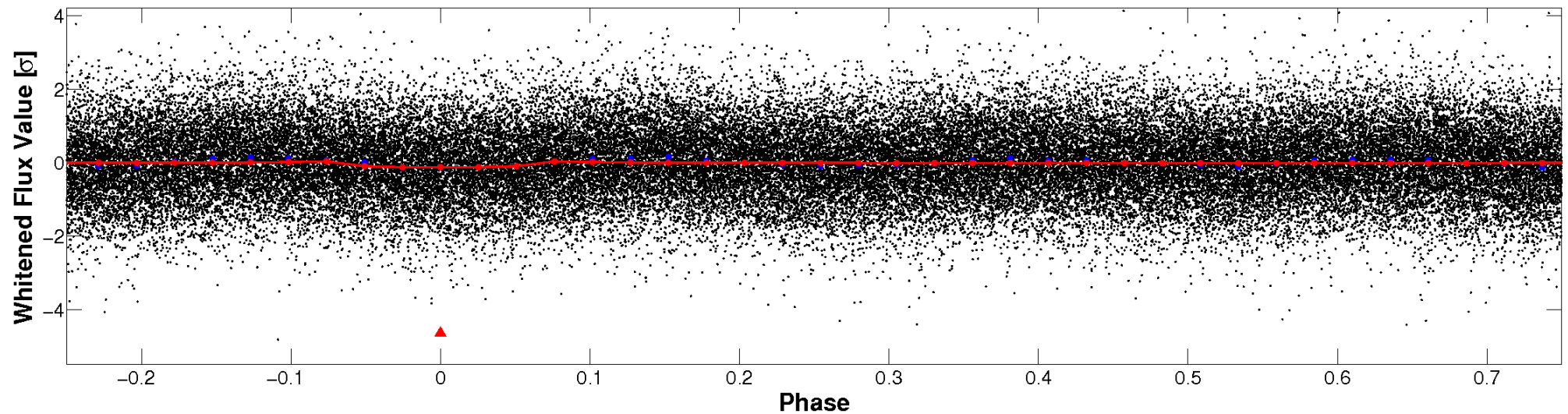


Non-Whitened Vs. Whitened Light Curve

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

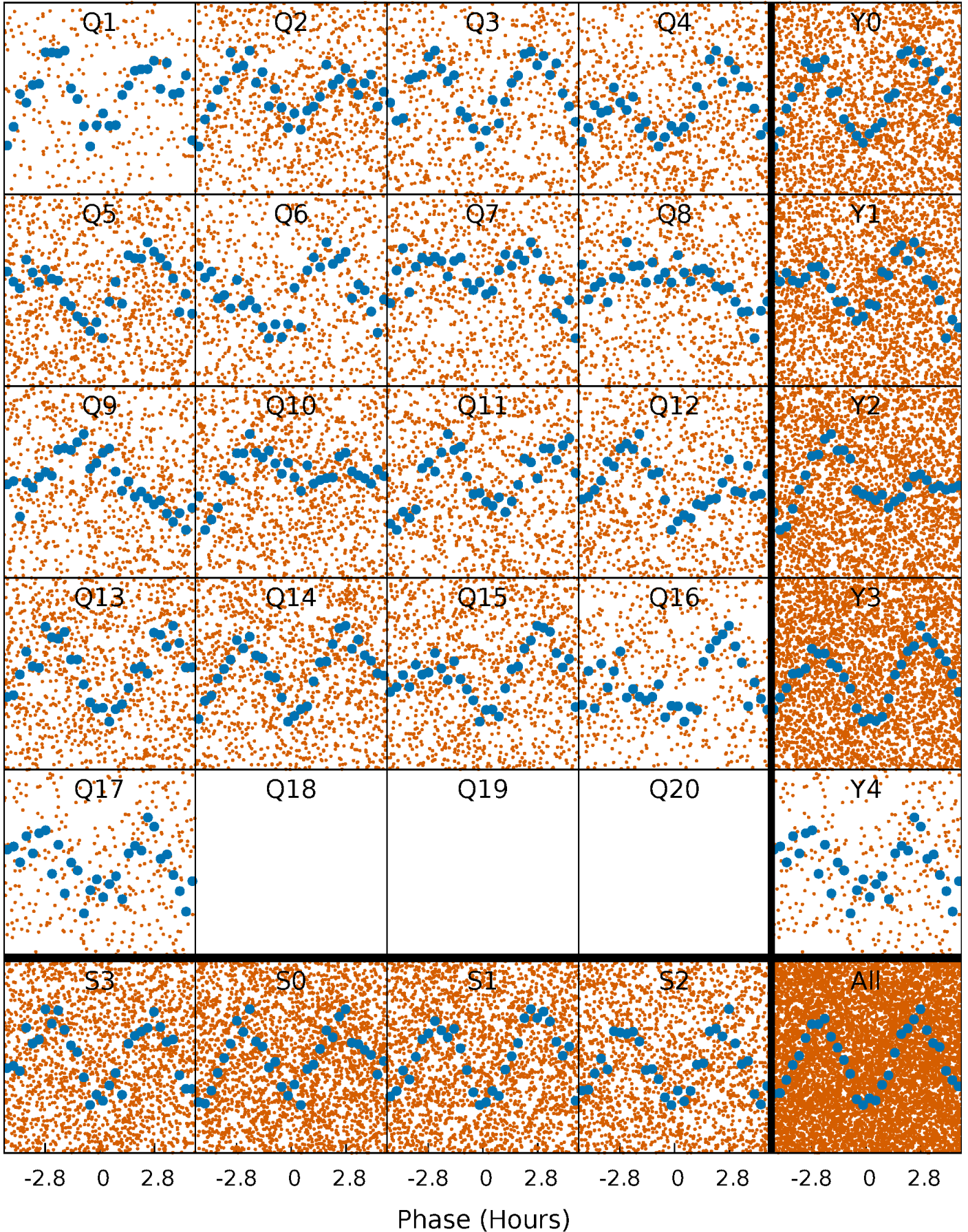


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



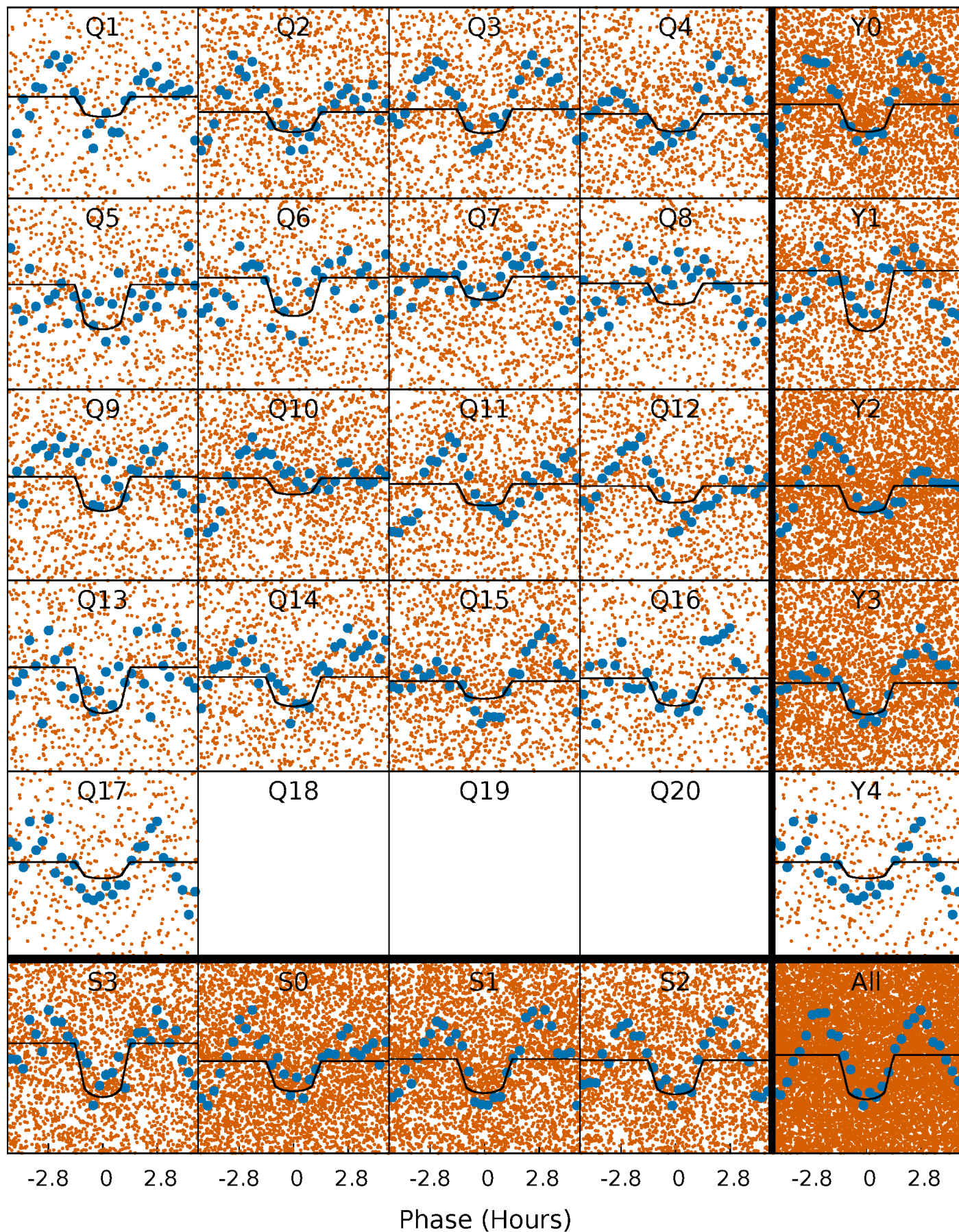
PDC Quarter-Phased Transit Curves

TCE 008311180-01 P= 0.804034 Days $T_0=132.276269$ (BKJD)



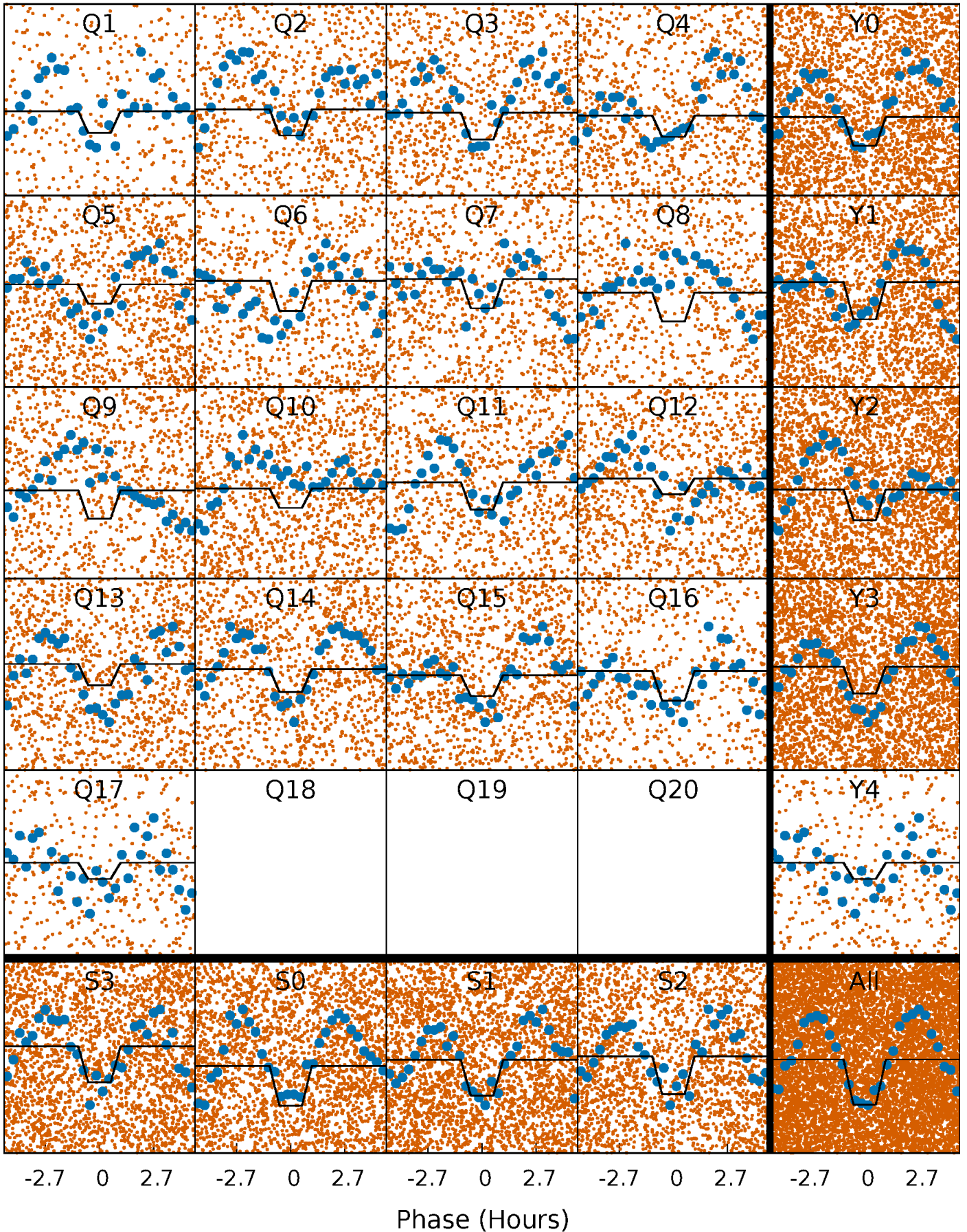
DV Quarter-Phased Transit Curves

TCE 008311180-01 P= 0.804034 Days $T_0=132.276269$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

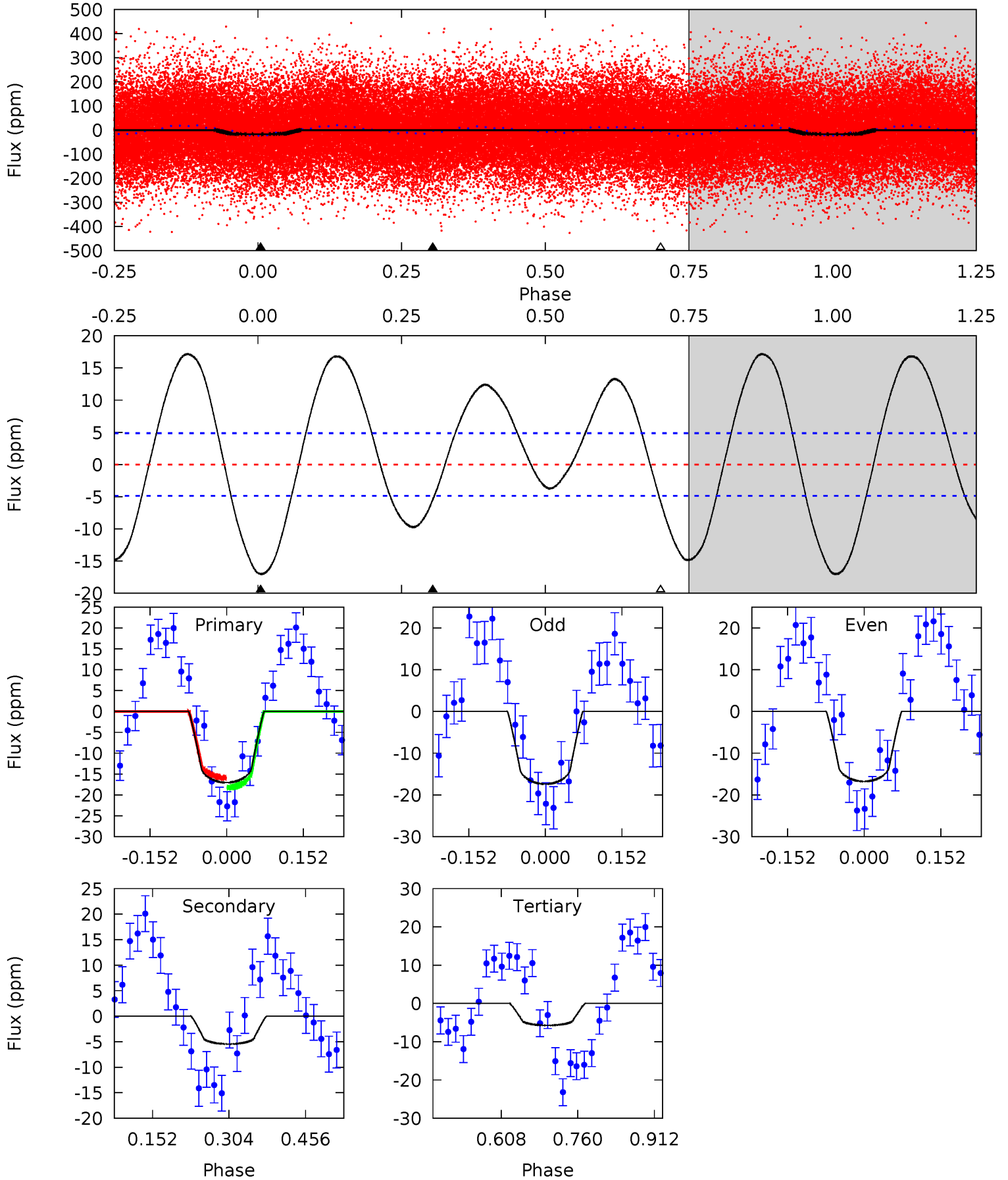
TCE 008311180-01 P= 0.804038 Days $T_0=132.275180$ (BKJD)



DV Model-Shift Uniqueness Test

008311180-01, P = 0.804034 Days, E = 131.472235 Days

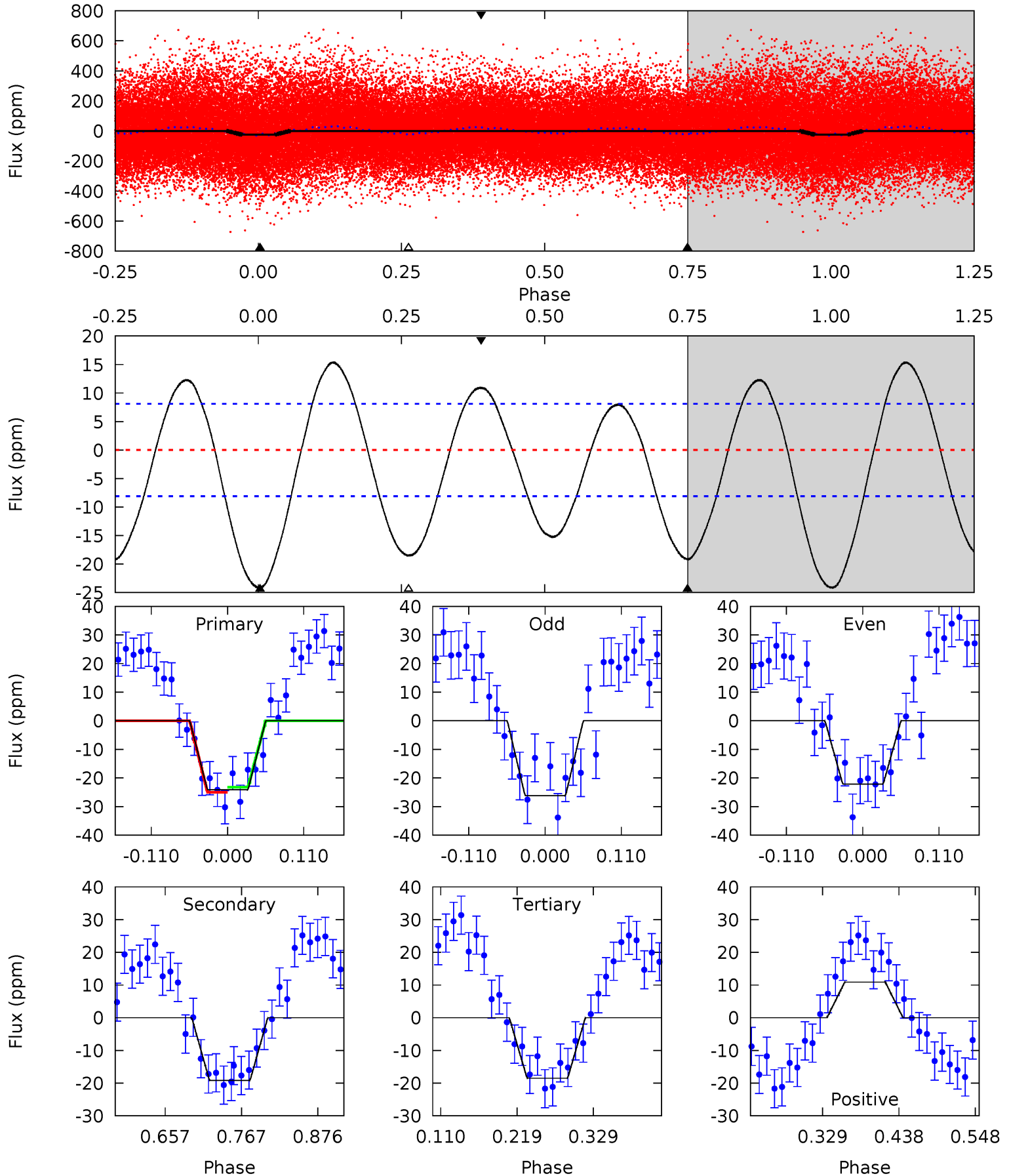
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	5.01	5.26	0	4.48	1.43	7.83	10.4	15.6	-0.25	5.01	0.29	1.18	0.50	1.10



Alt Model-Shift Uniqueness Test

008311180-01, P = 0.804038 Days, E = 131.471142 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	10.8	10.4	6.13	4.55	1.60	5.98	3.16	7.44	0.37	4.65	1.14	0.65	0.39	0.48



Stellar Parameters For KIC 008311180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6559^{+182}_{-251}	$3.958^{+0.306}_{-0.165}$	$0.140^{+0.200}_{-0.350}$	$2.167^{+0.627}_{-0.836}$	$1.553^{+0.207}_{-0.336}$	$0.215^{+0.469}_{-0.100}$
	+3%/-4%	+8%/-4%	+143%/-250%	+29%/-39%	+13%/-22%	+218%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008311180-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$1.08^{+0.40}_{-0.32}$	4187^{+332}_{-415}	4336^{+734}_{-677}	$0.964^{+0.948}_{-0.444}$
Alt.	-19 ± 2	$1.15^{+0.37}_{-0.34}$	4217^{+348}_{-388}	5944^{+1120}_{-709}	$3.073^{+3.096}_{-1.310}$

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 $A_{obs} \gg 1.0$

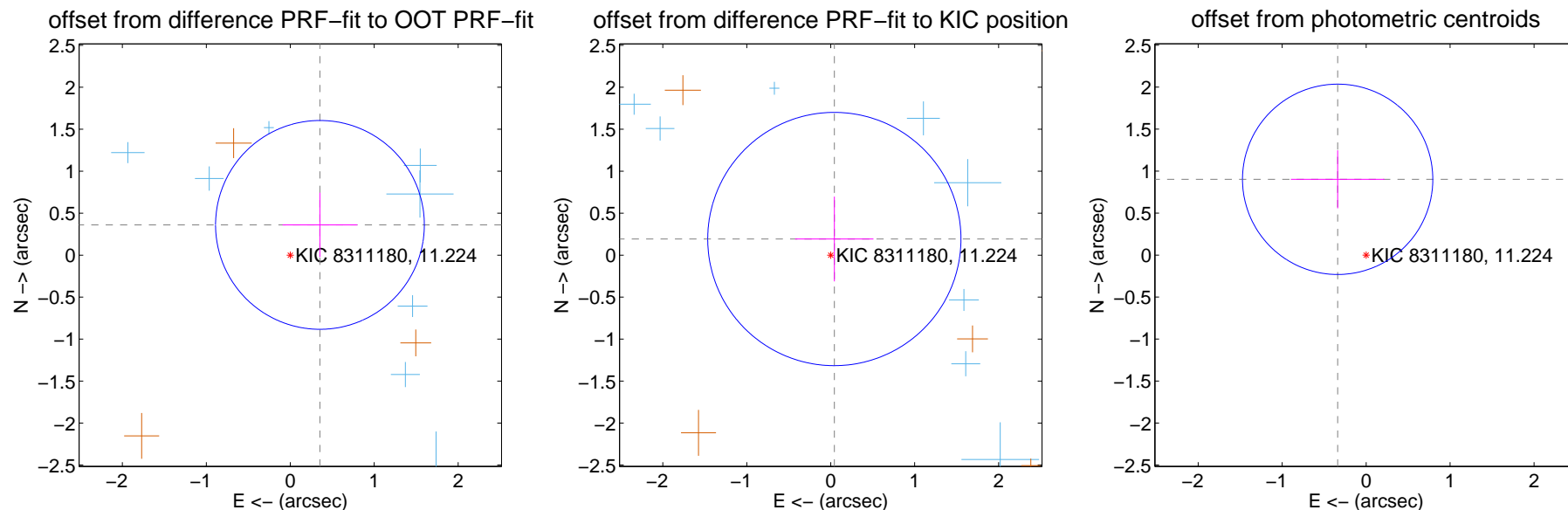
DV Centroid Data

Supplemental centroid analysis for 008311180-01. **Kepler magnitude: 11.22.** Transit SNR 10.34

There are 9 quarters with good PRF difference image offsets

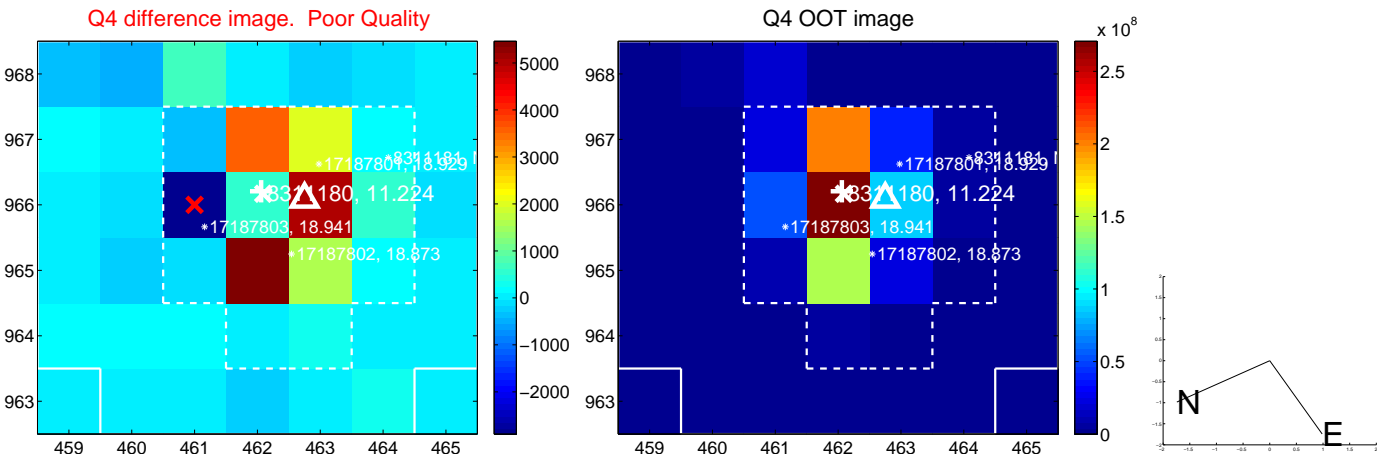
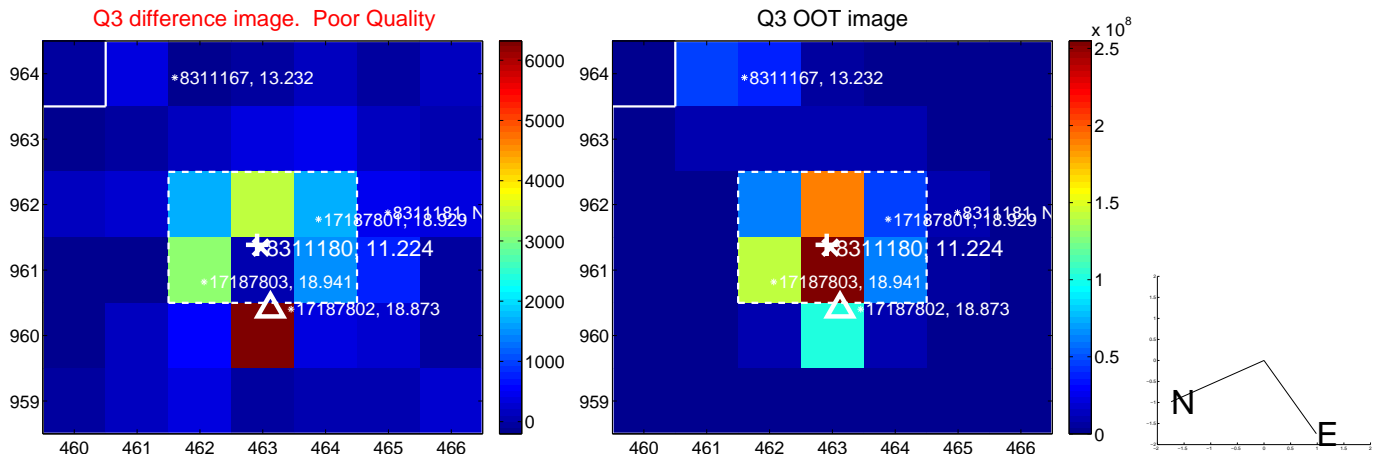
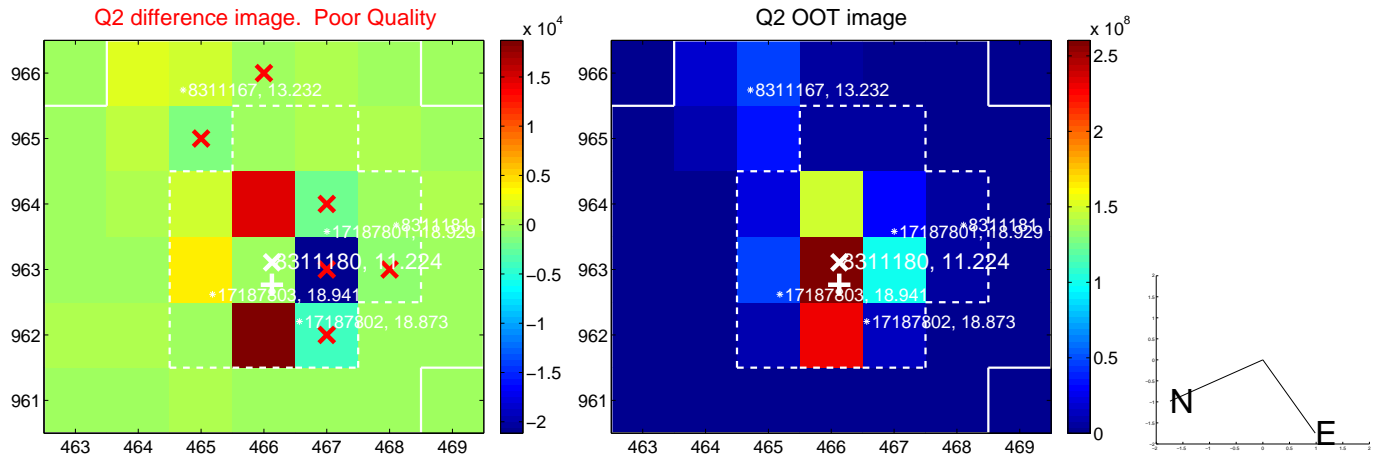
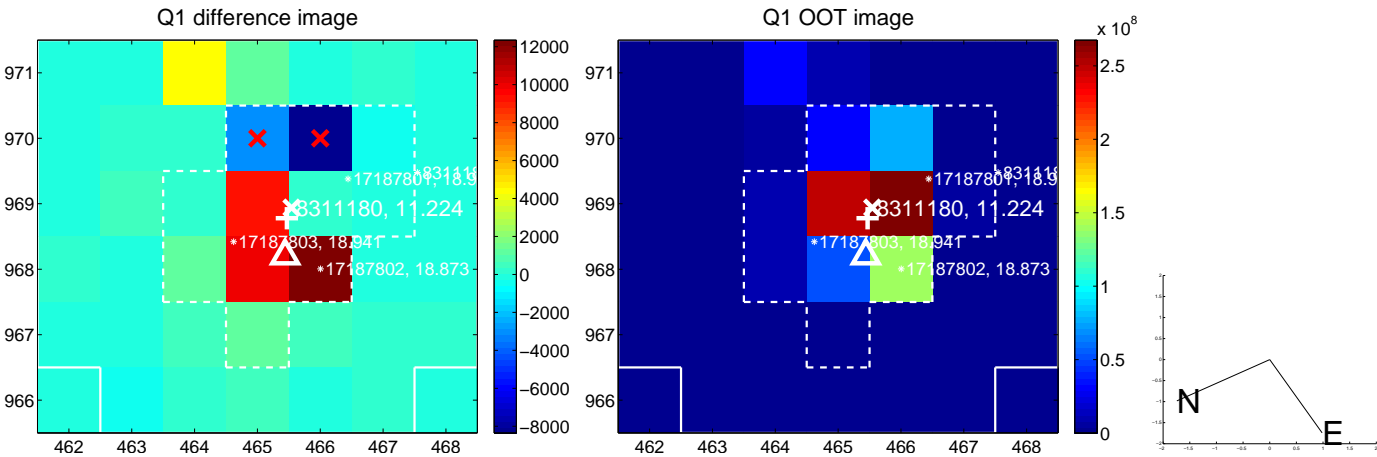
The direct PRF centroid is offset from the target star catalog position by about 0.72 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.505 ± 0.415	1.22	-0.354 ± 0.445	0.360 ± 0.383
PRF-fit source offset from KIC position	0.197 ± 0.503	0.39	-0.043 ± 0.466	0.192 ± 0.505
photometric centroid source offset	0.96 ± 0.38	2.55	0.34 ± 0.56	0.90 ± 0.35

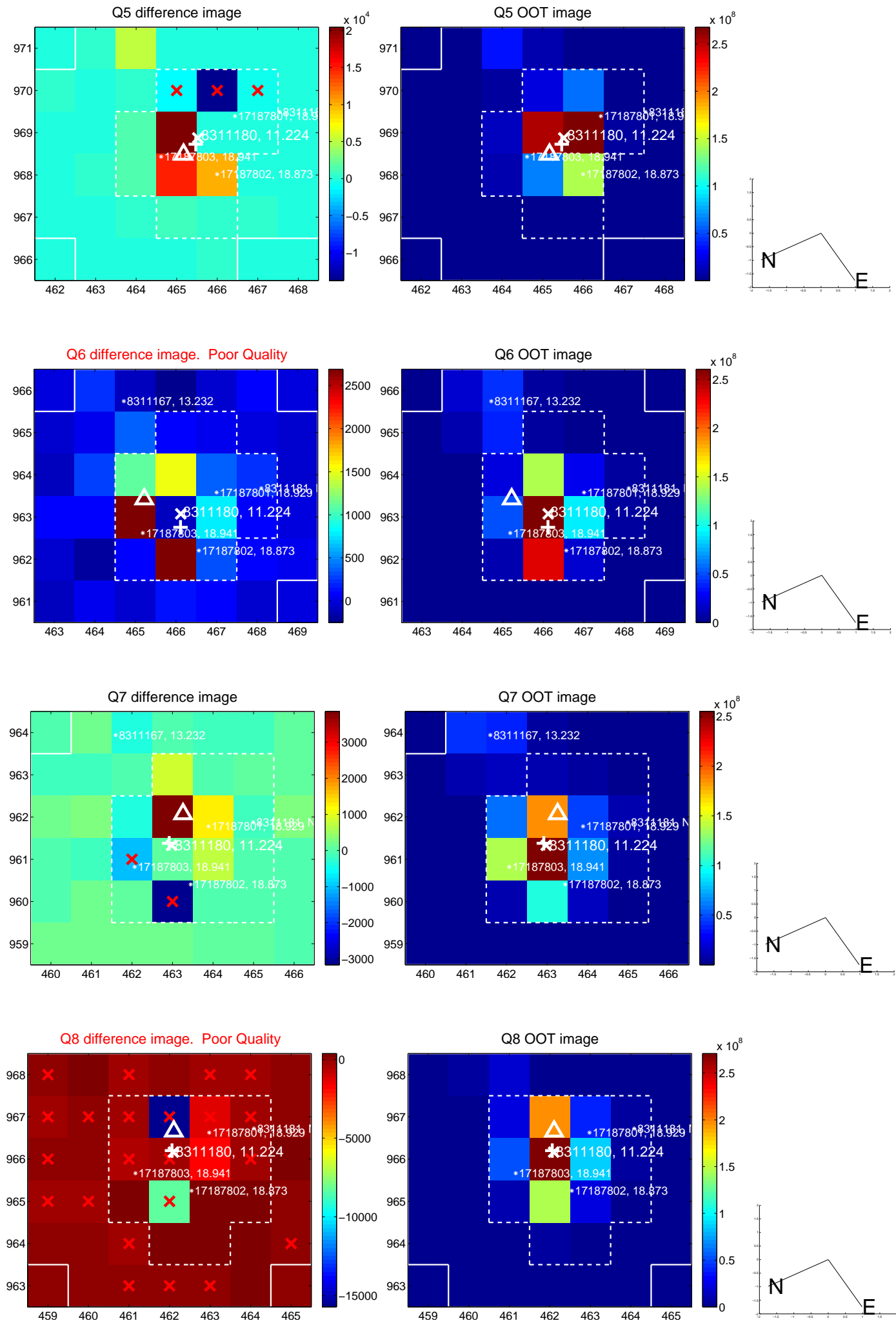


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

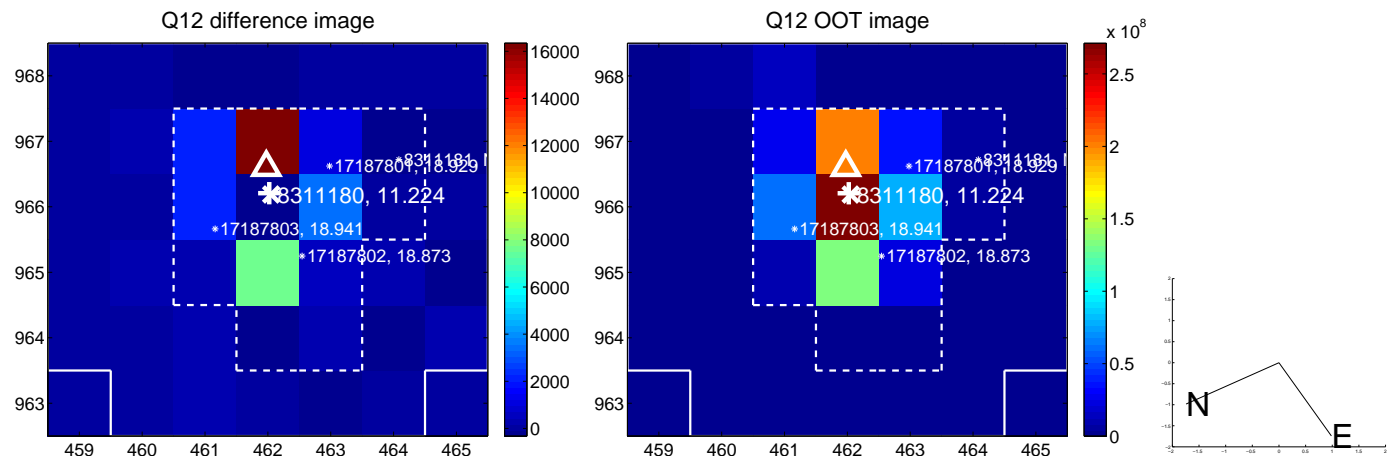
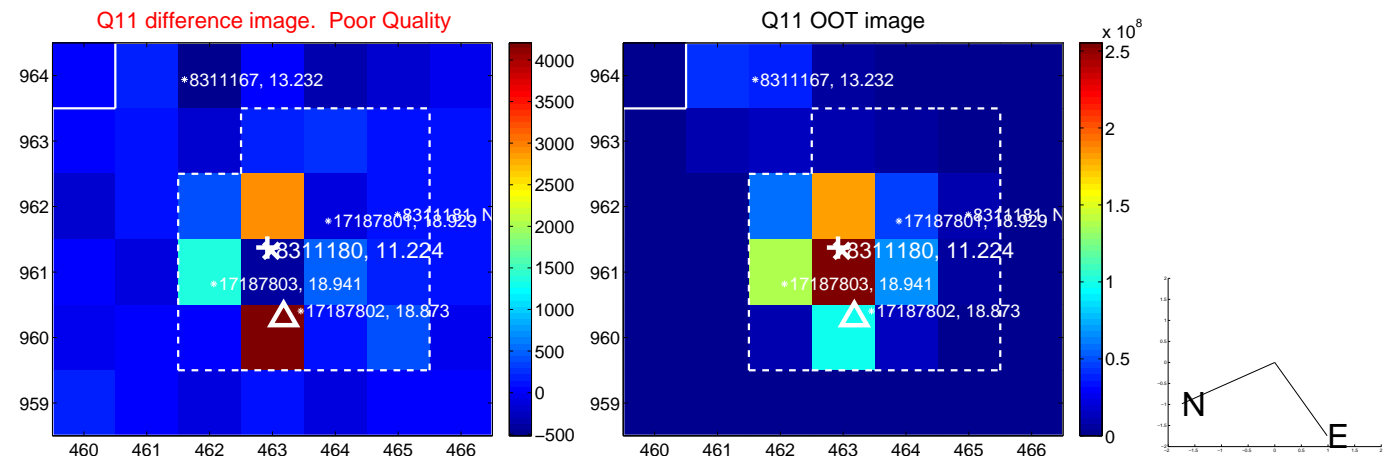
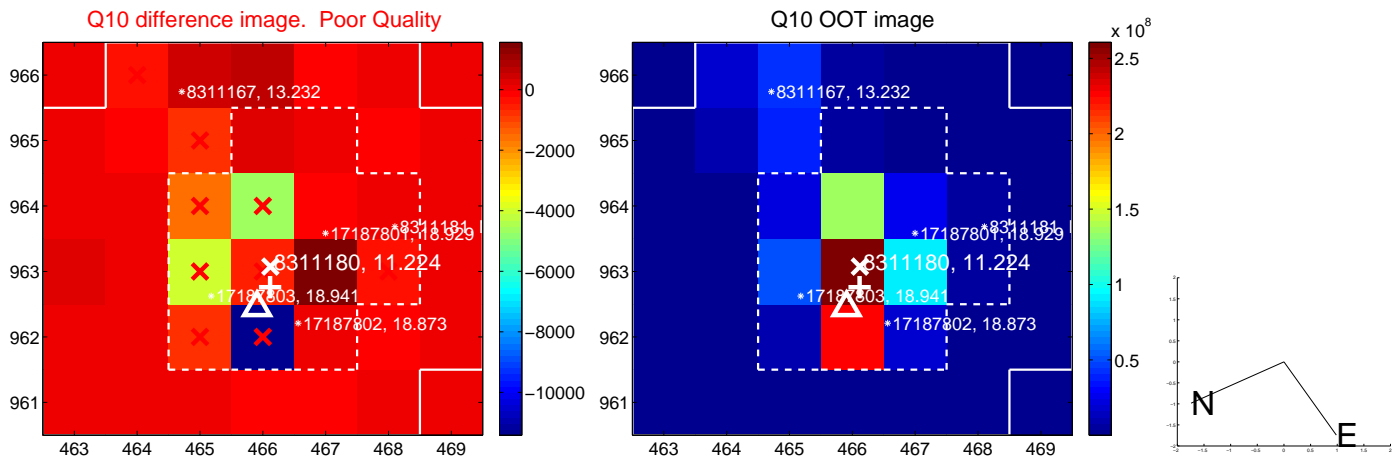
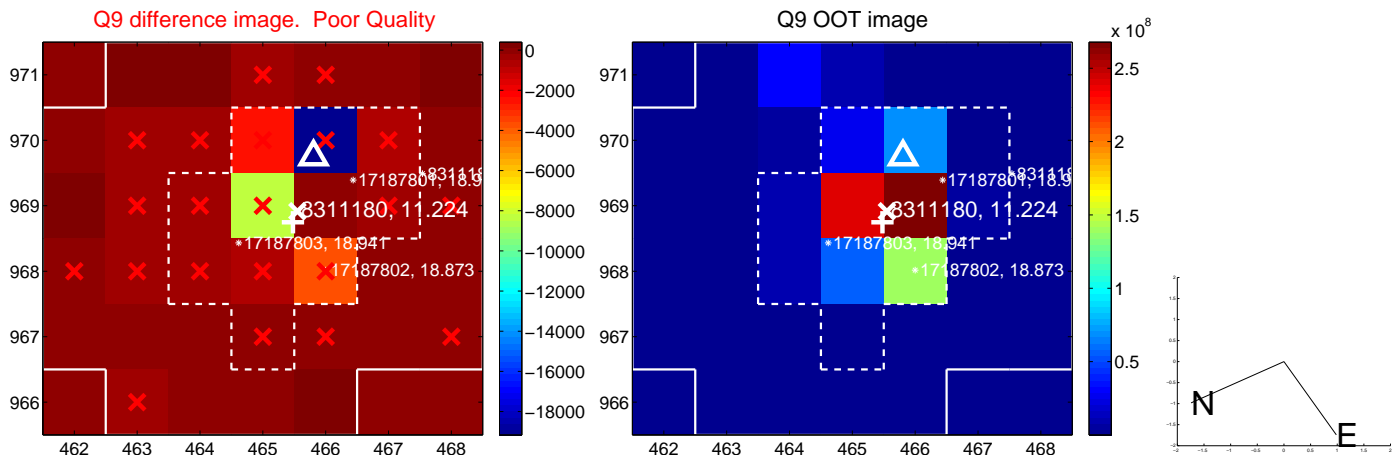
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



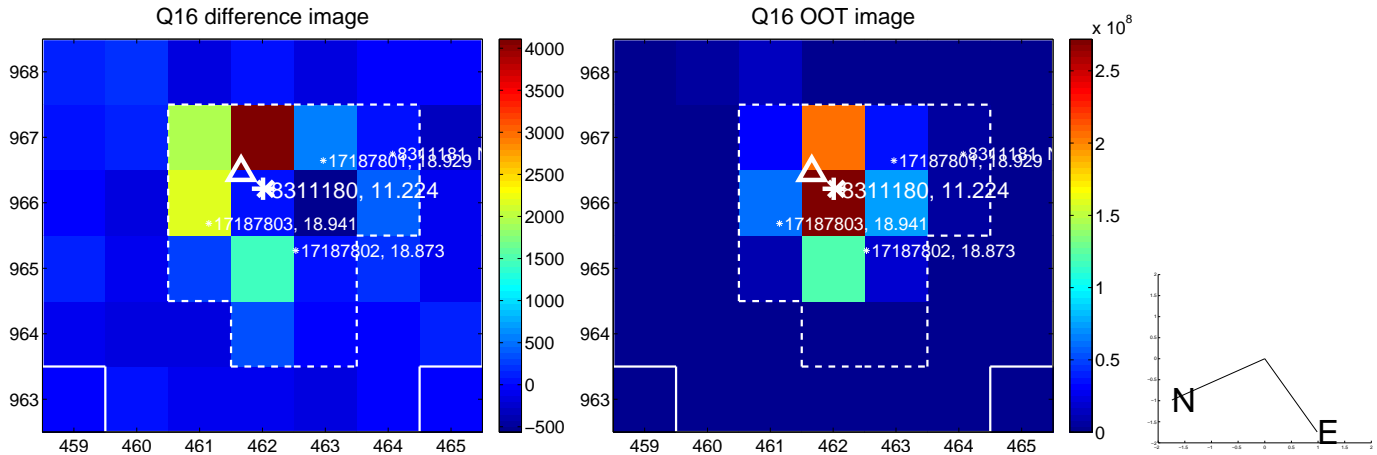
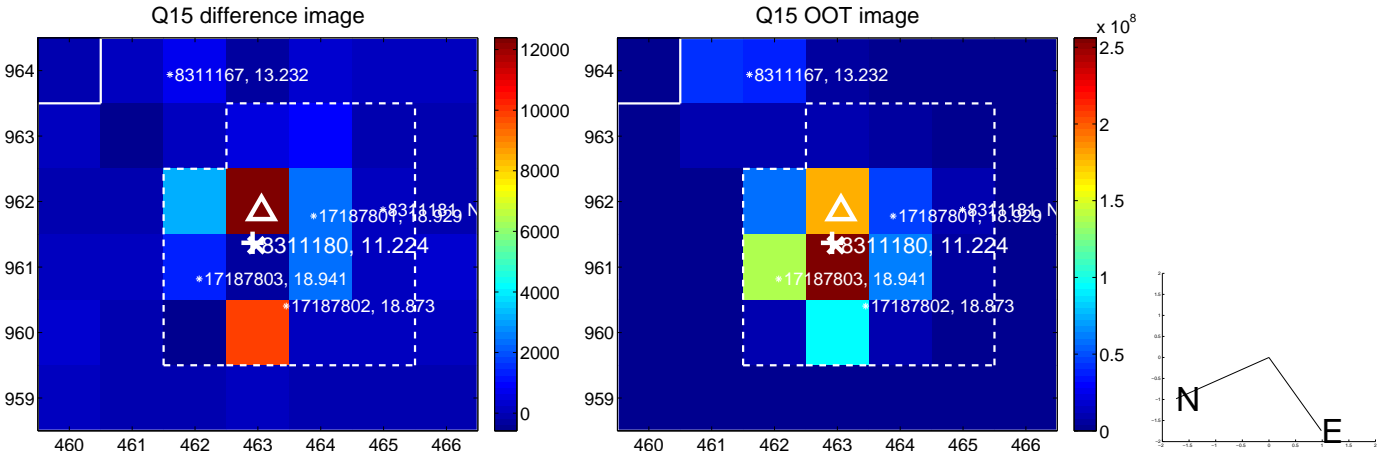
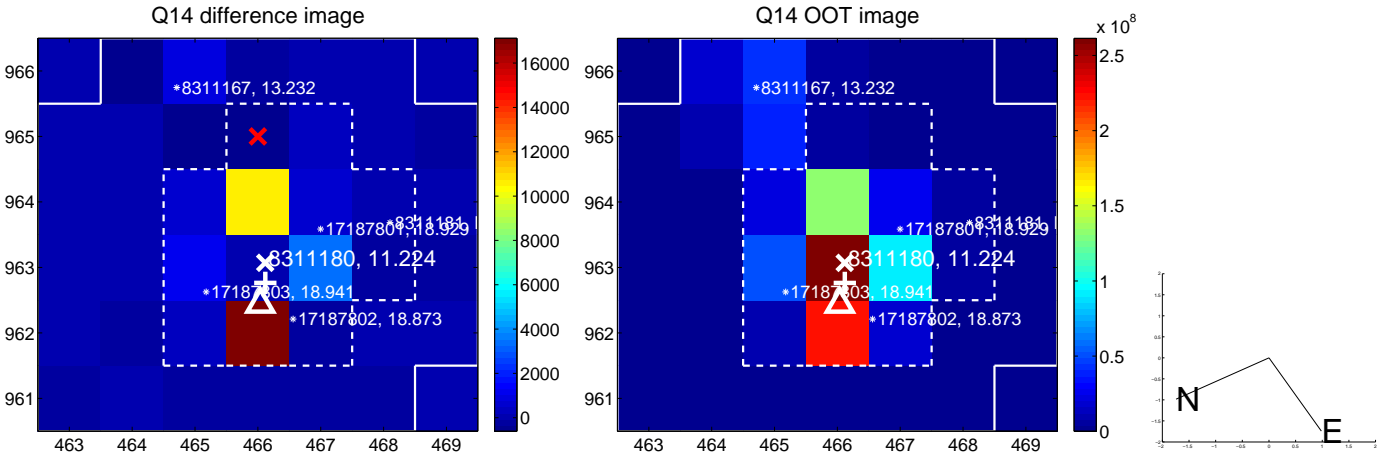
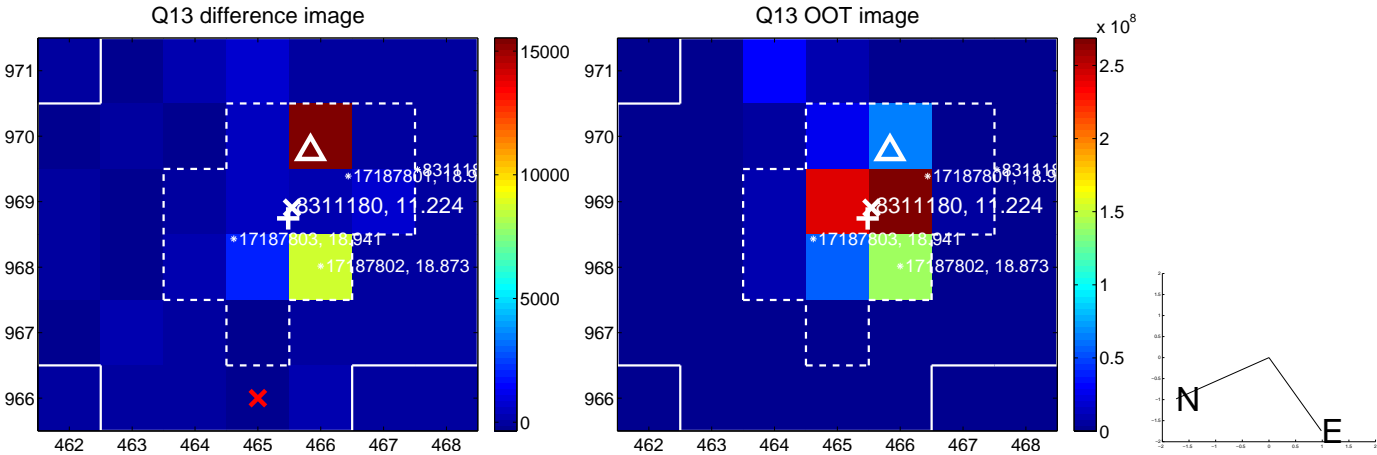
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



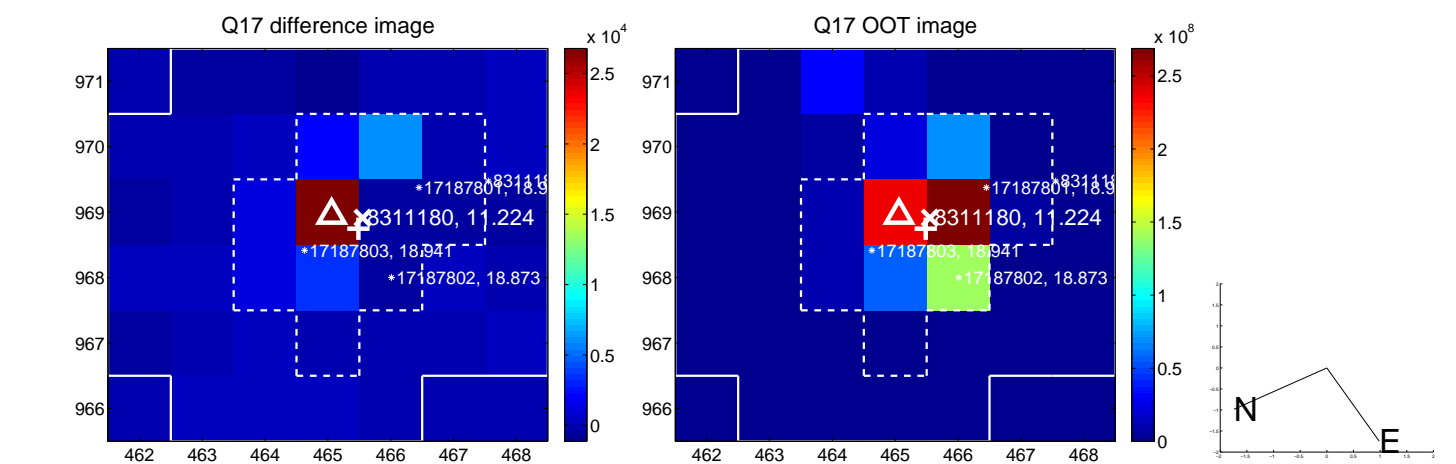
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



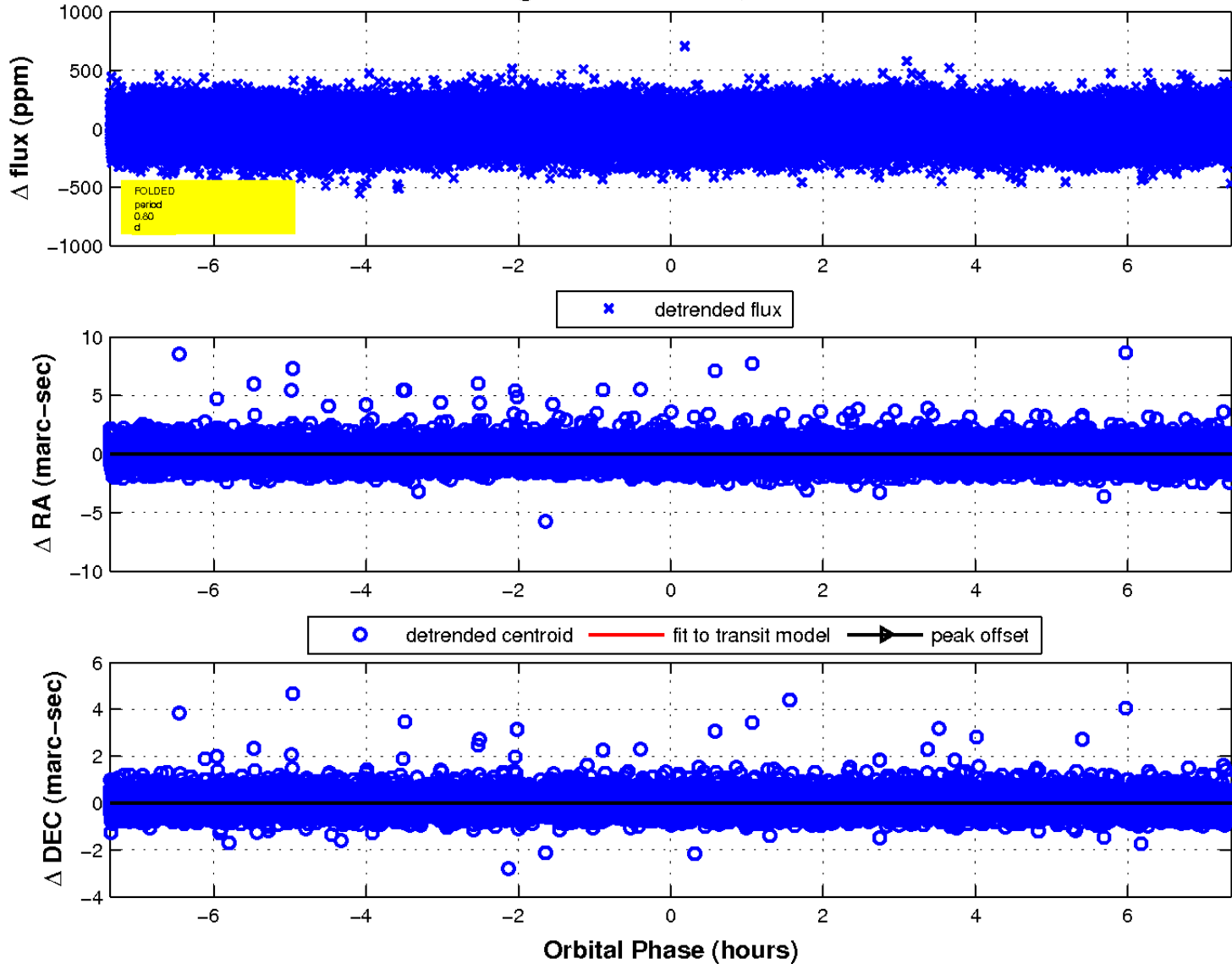
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

