

KIC 009486646

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})
009486646-01	OBS	No	2.911368	133.650317	20.2	26.354	8.5	10.6	2.78	6420	1.25	5373.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009486646-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

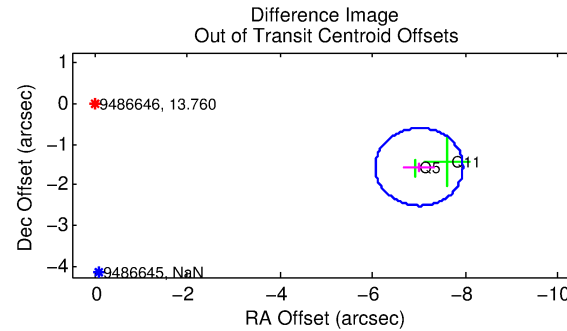
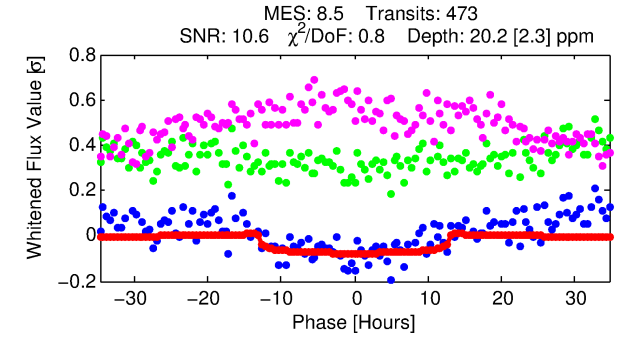
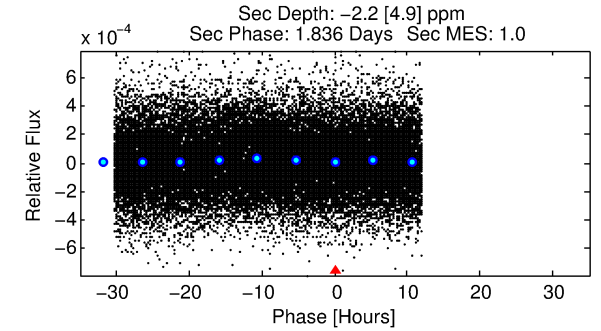
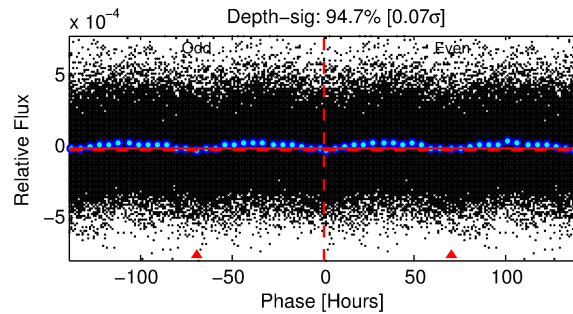
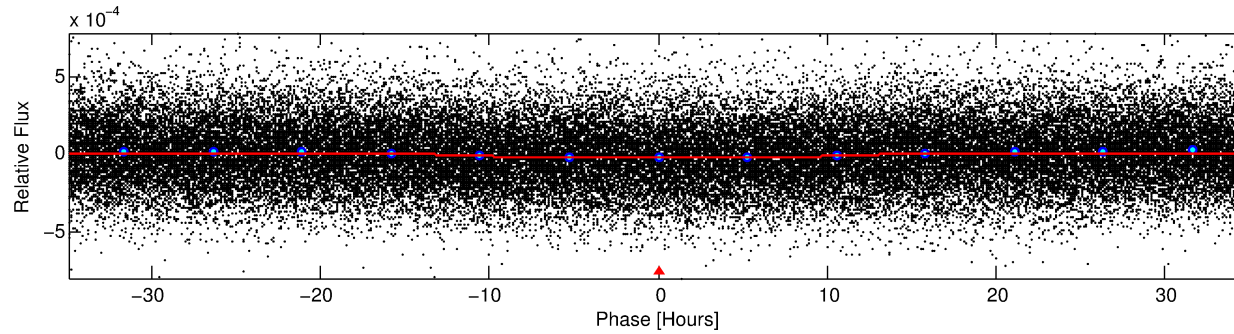
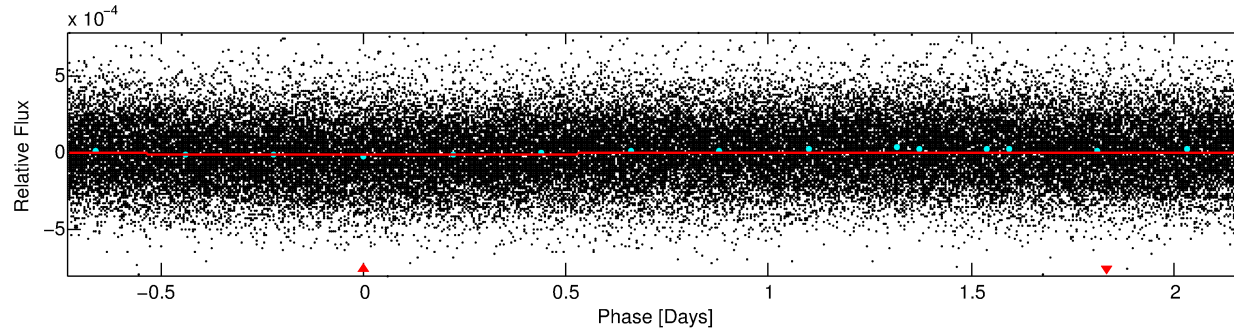
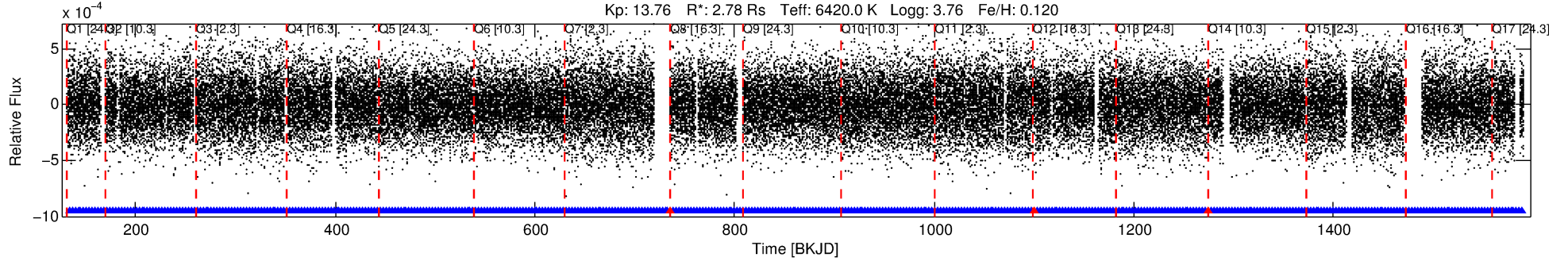
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009486646-01

No Significant Match Found

DV One-Page Summary

KIC: 9486646 Candidate: 1 of 1 Period: 2.911 d



DV Fit Results:

Period = 2.91137 [0.00008] d
Epoch = 133.6503 [0.0175] BKJD
Rp/R* = 0.0041 [0.0034]
a/R* = 1.08 [0.68]
b = 0.01 [530.79]
Seff = 5373.63 [4270.64]
Teq = 2183 [434] K
Rp = 1.25 [1.20] Re
a = 0.0468 [0.0225] AU
Ag = N/A
Teffp = N/A

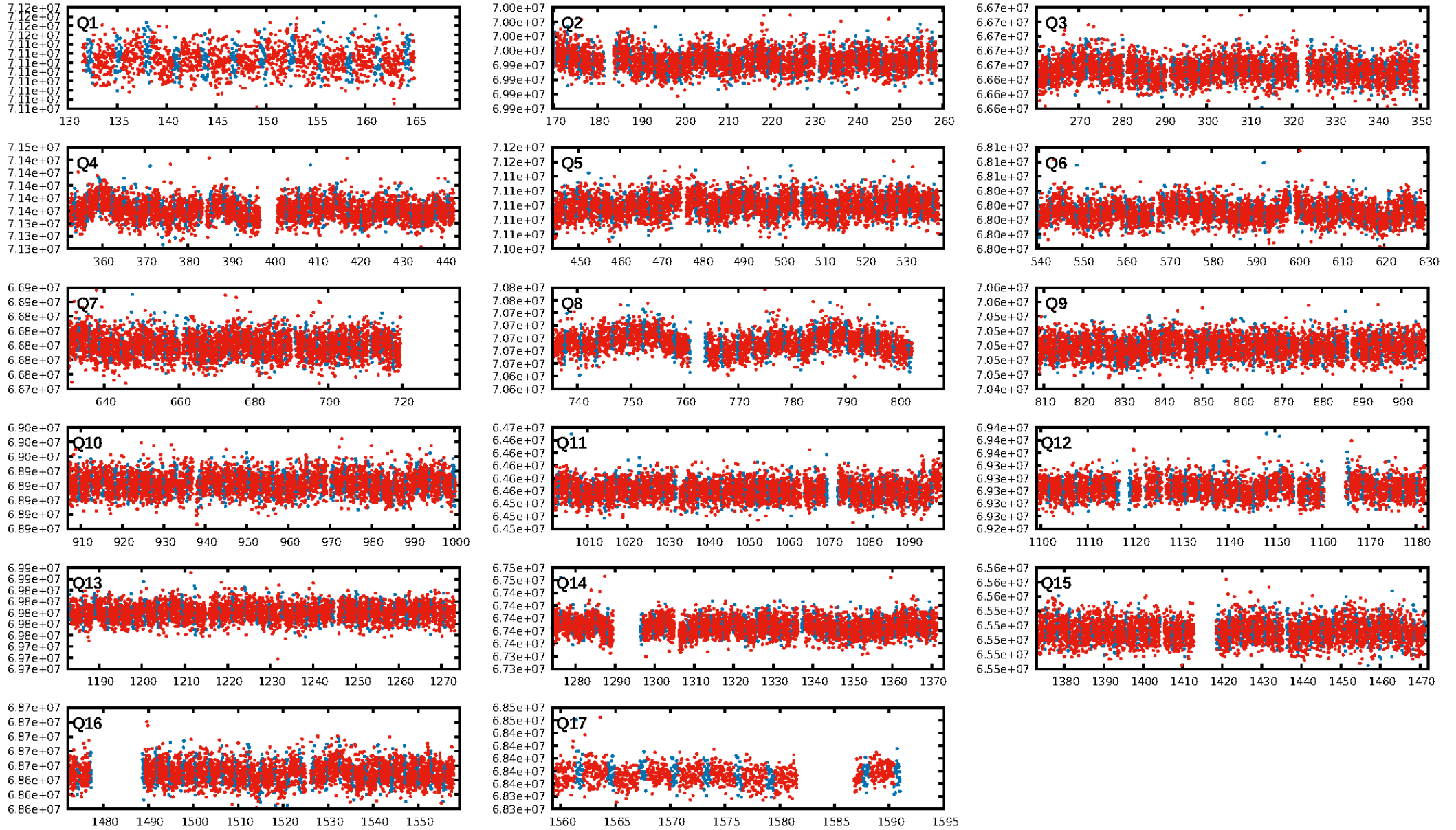
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [449/452]
GhostDiagnostic-chr: 2.022
Centroid-sig: 71.4%
Centroid-so: 0.808 arcsec [0.62 σ]
OotOffset-rm: 7.174 arcsec [22.63 σ]
KicOffset-rm: 7.226 arcsec [24.09 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [17/17]

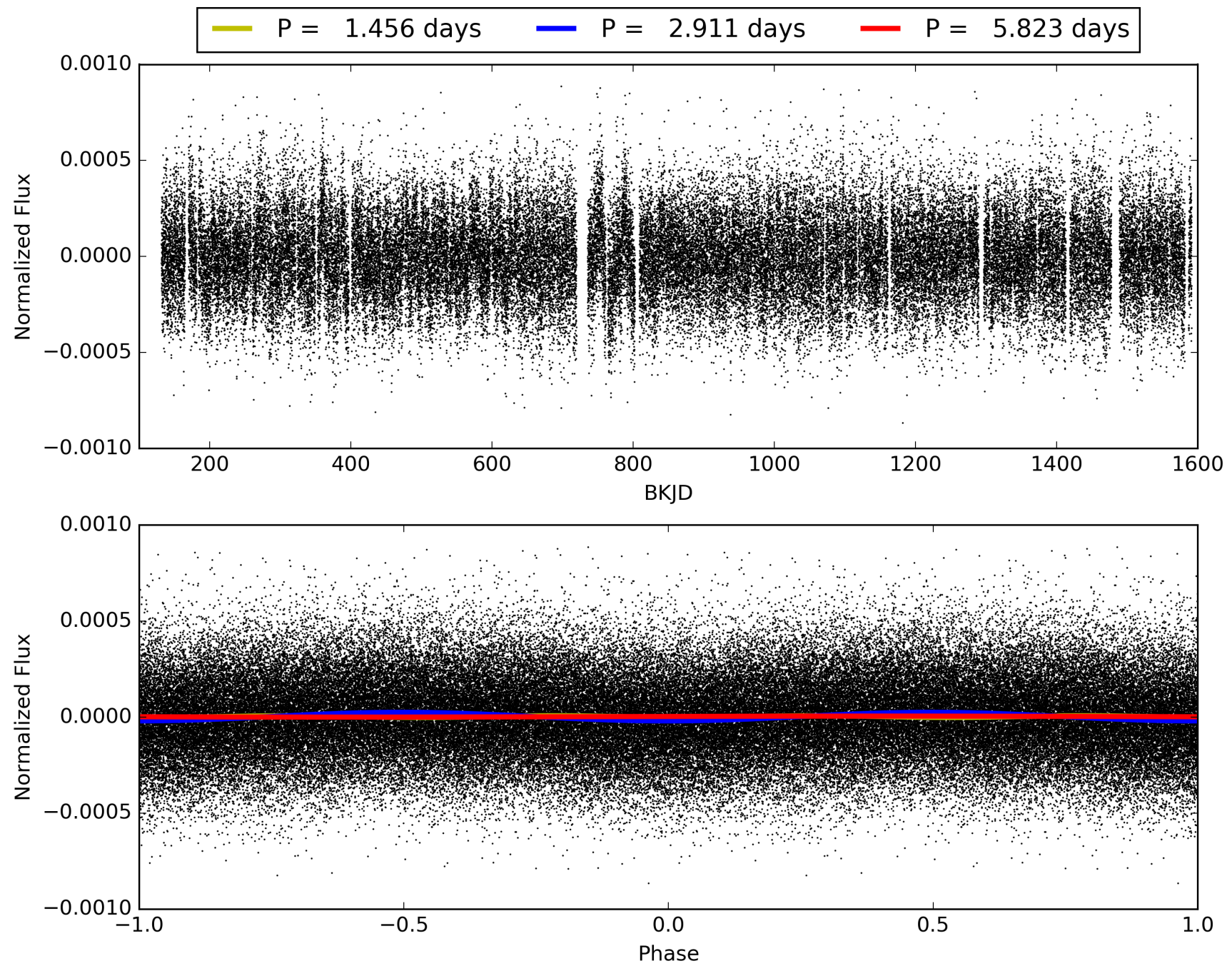
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:08:20 Z

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

TCE 009486646-01, PDC Light Curves

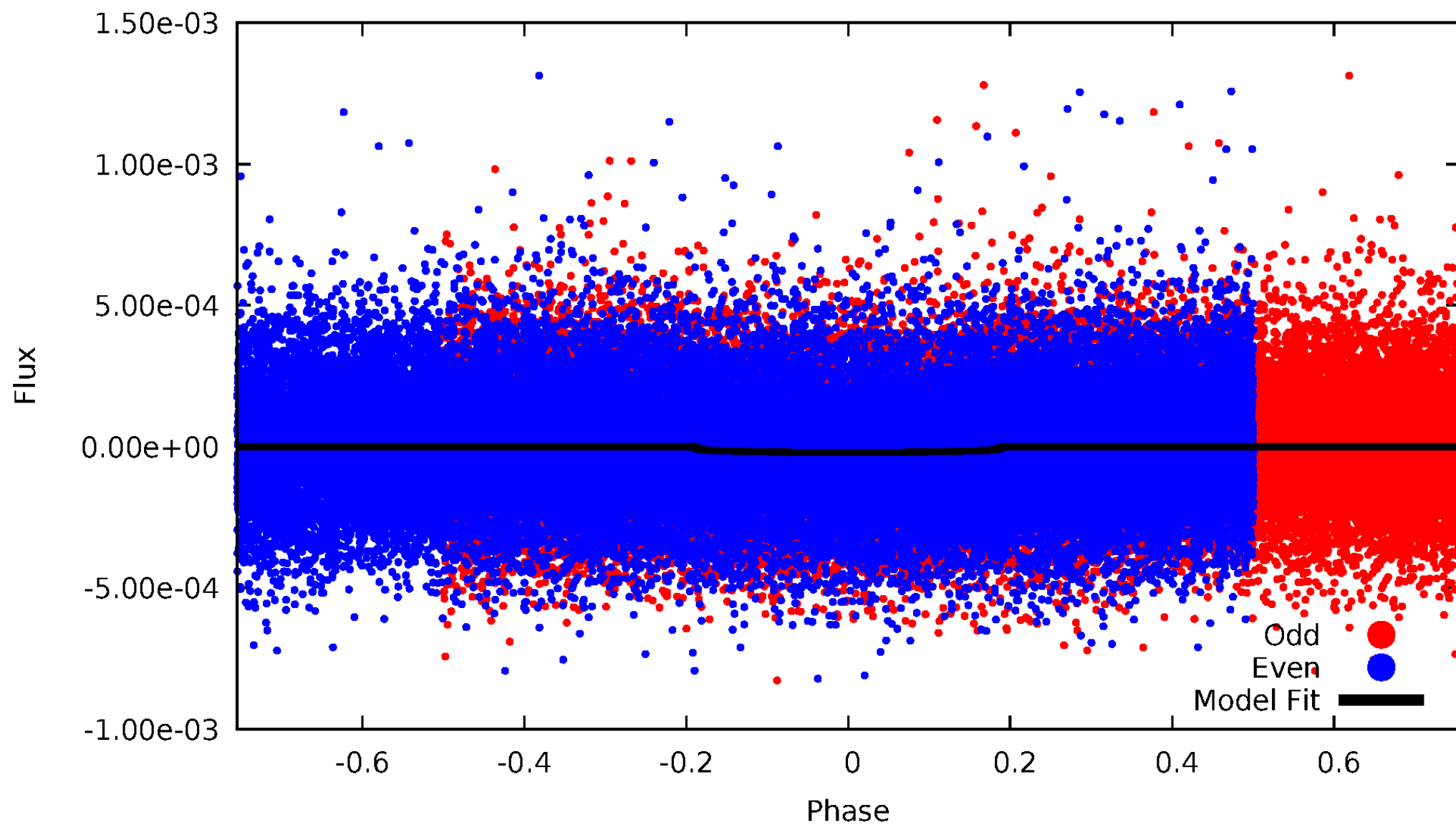


TCE 009486646-01



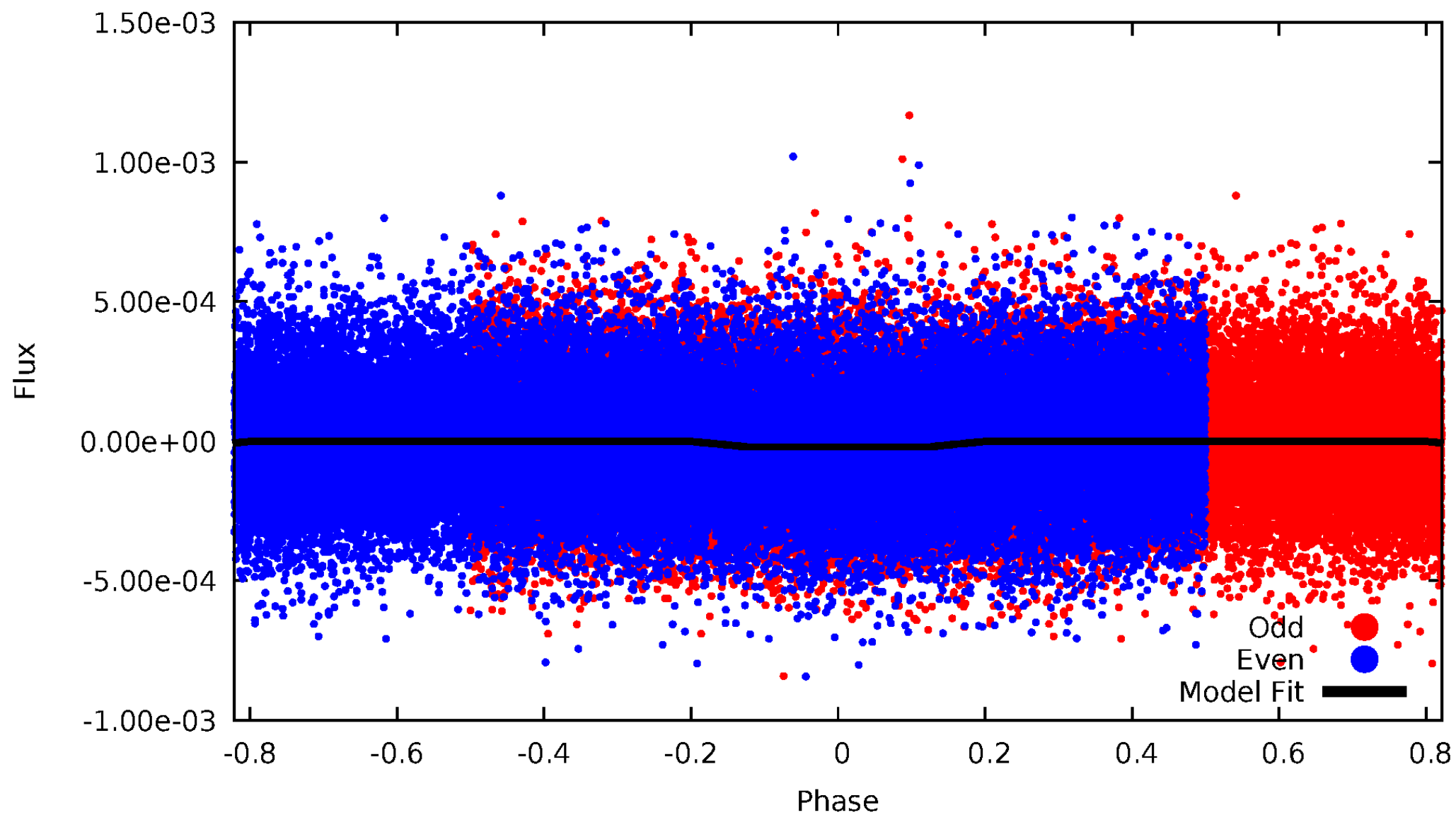
DV Odd/Even

TCE 009486646-01



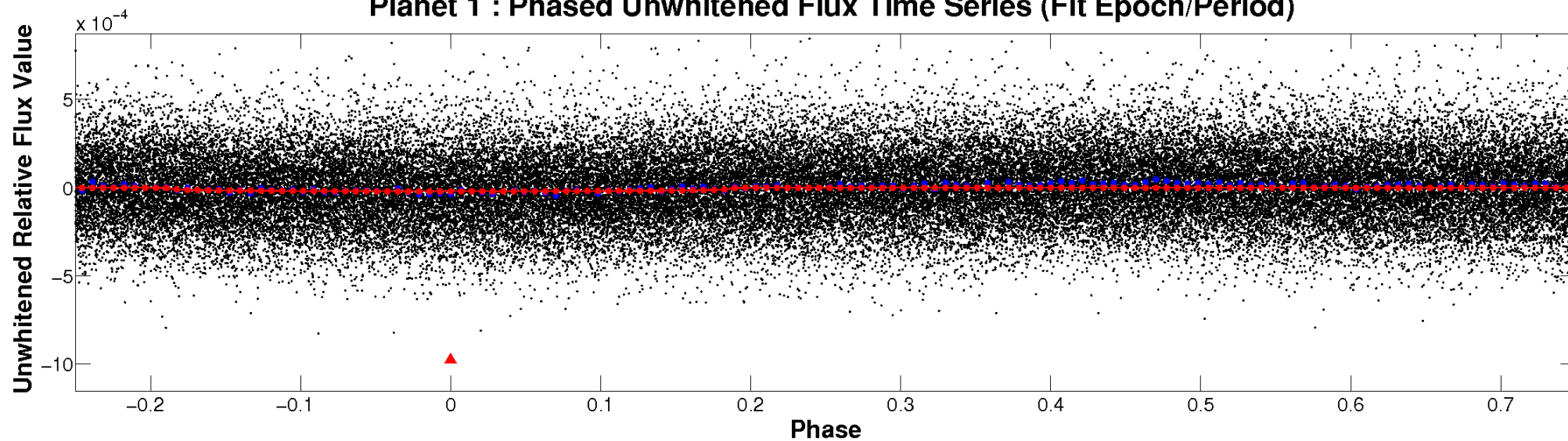
ALT Odd/Even

TCE 009486646-01

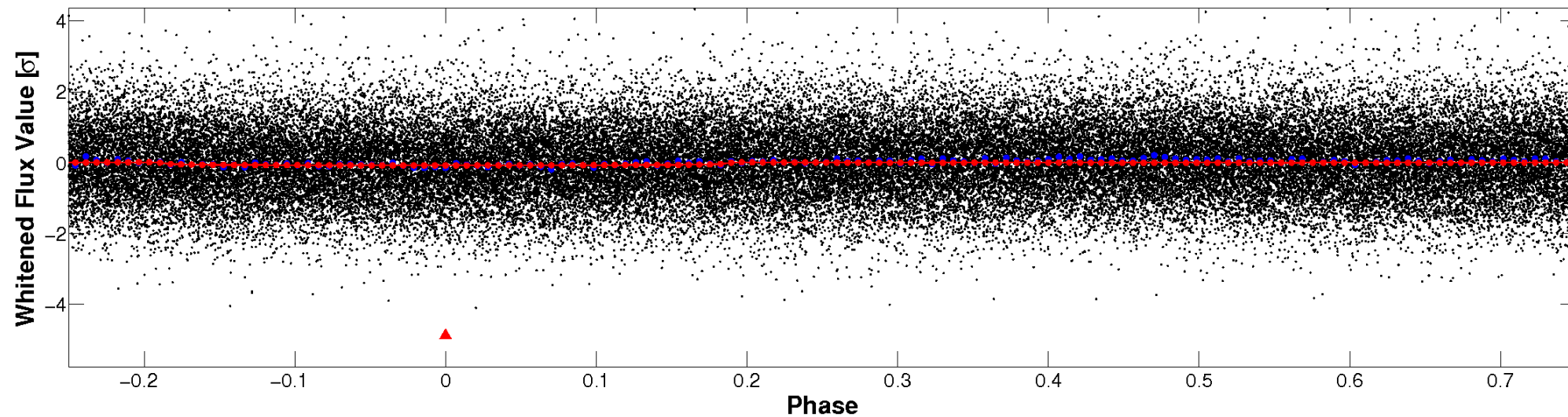


Non-Whitened Vs. Whitened Light Curve

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

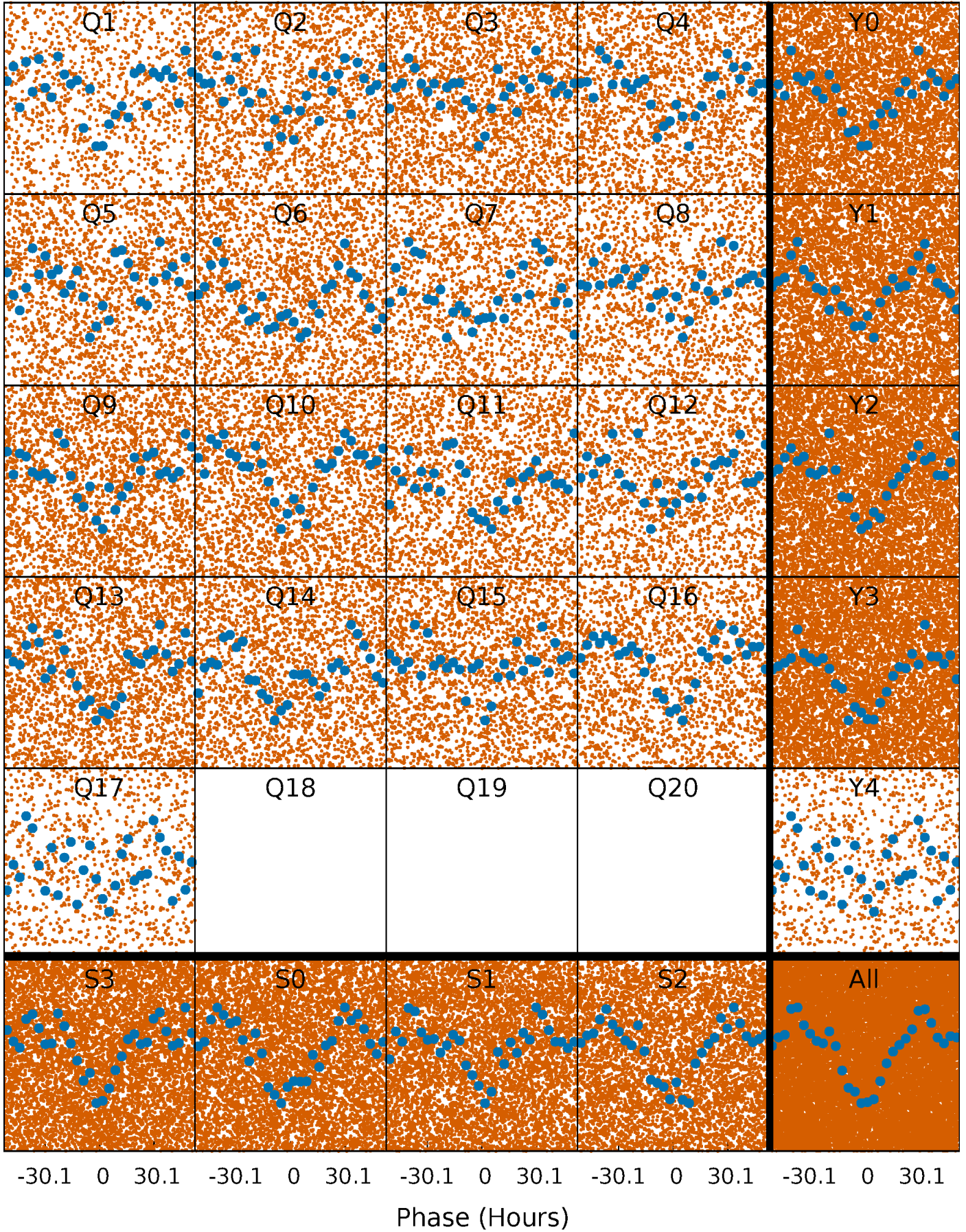


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



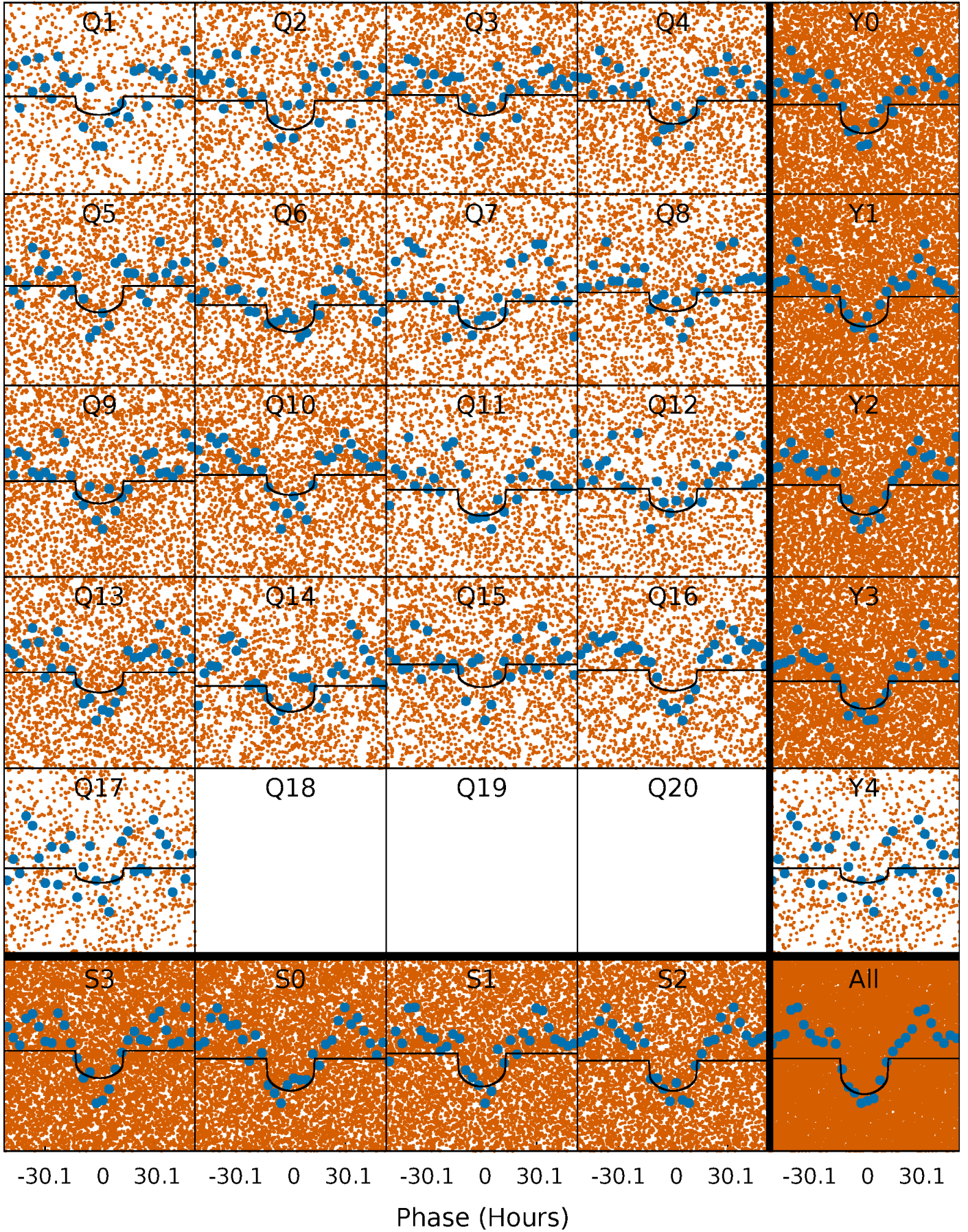
PDC Quarter-Phased Transit Curves

TCE 009486646-01 P= 2.911368 Days $T_0=133.650317$ (BKJD)



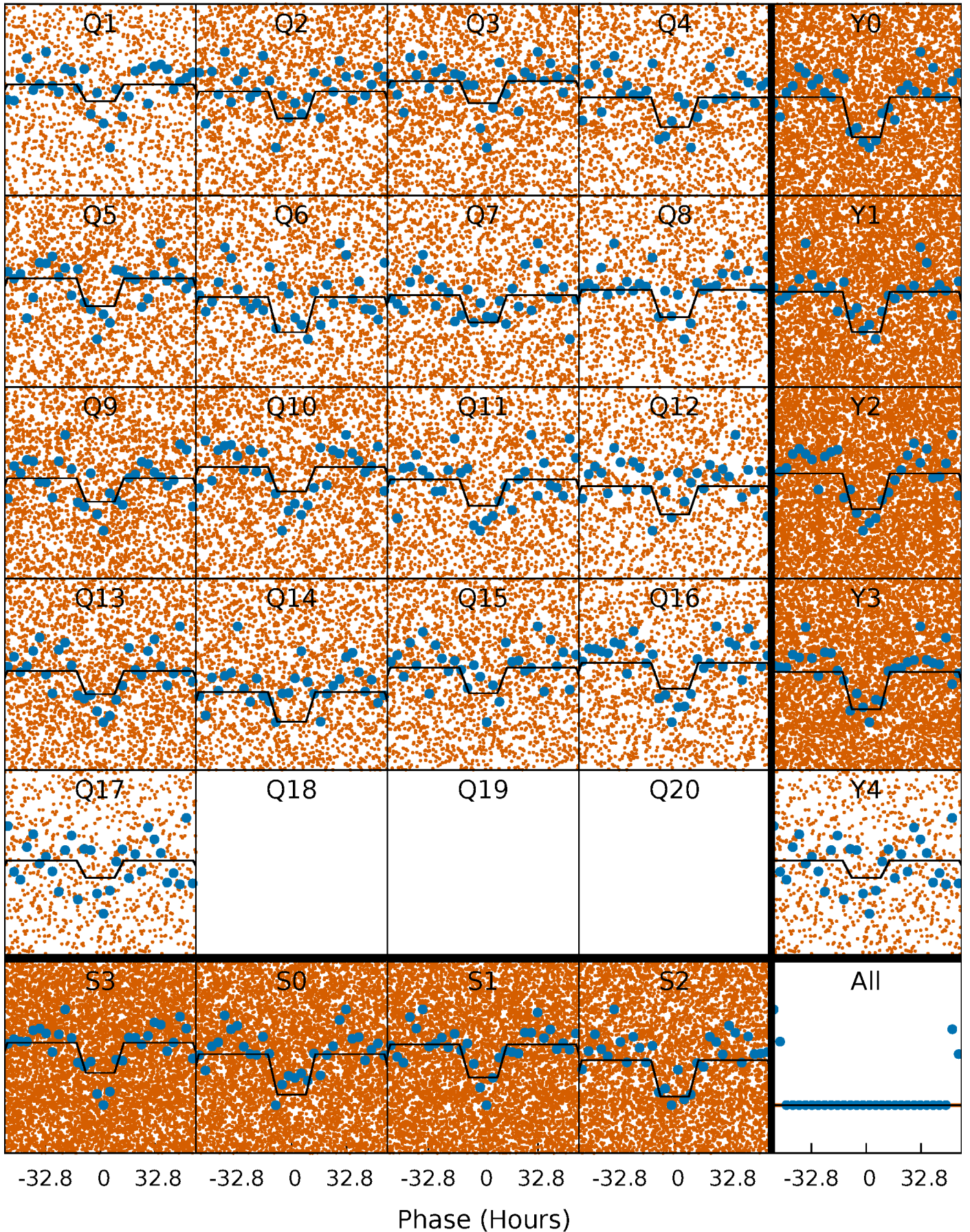
DV Quarter-Phased Transit Curves

TCE 009486646-01 P= 2.911368 Days $T_0=133.650317$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

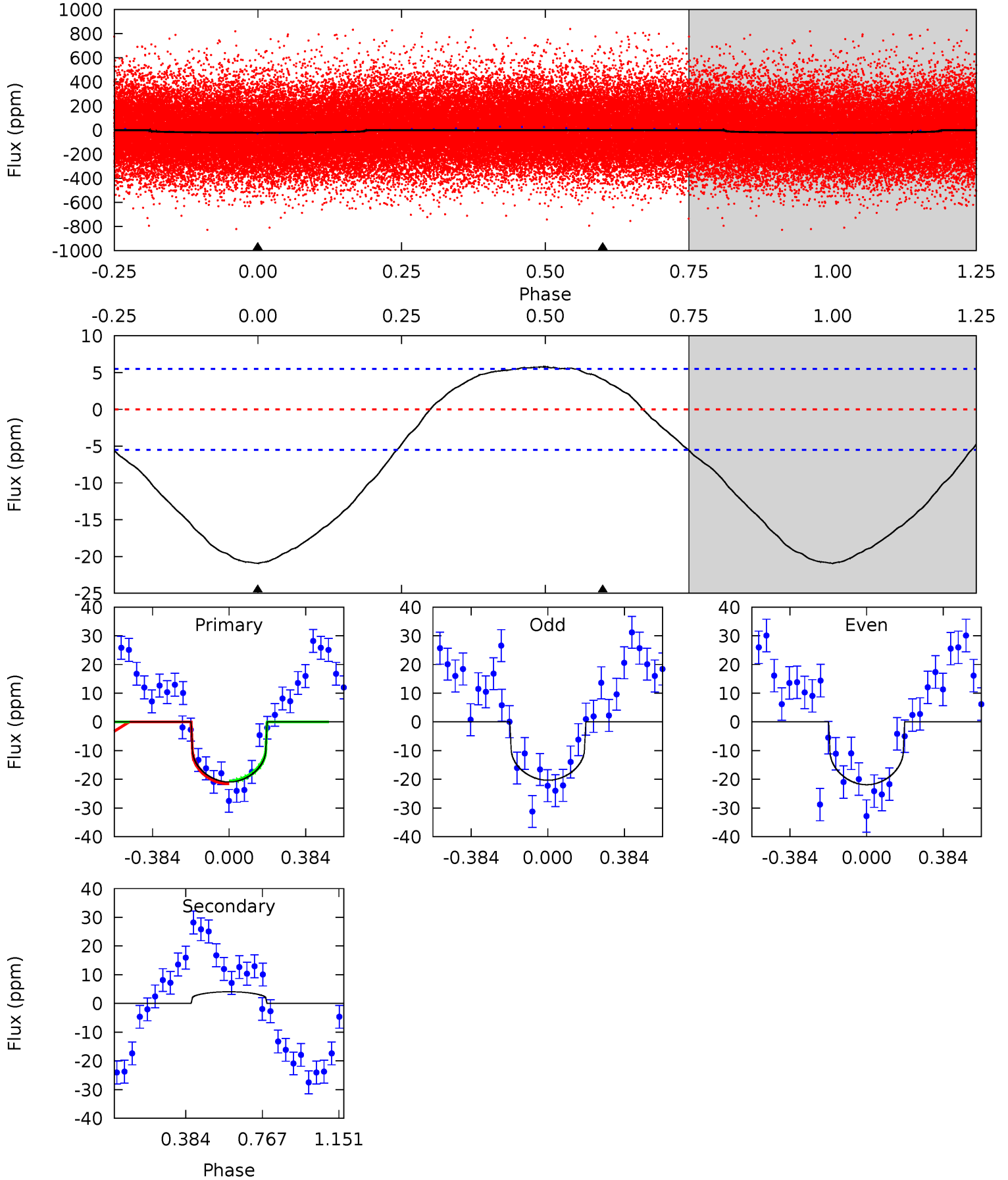
TCE 009486646-01 P= 2.911678 Days $T_0=133.556305$ (BKJD)



DV Model-Shift Uniqueness Test

009486646-01, P = 2.911368 Days, E = 130.738949 Days

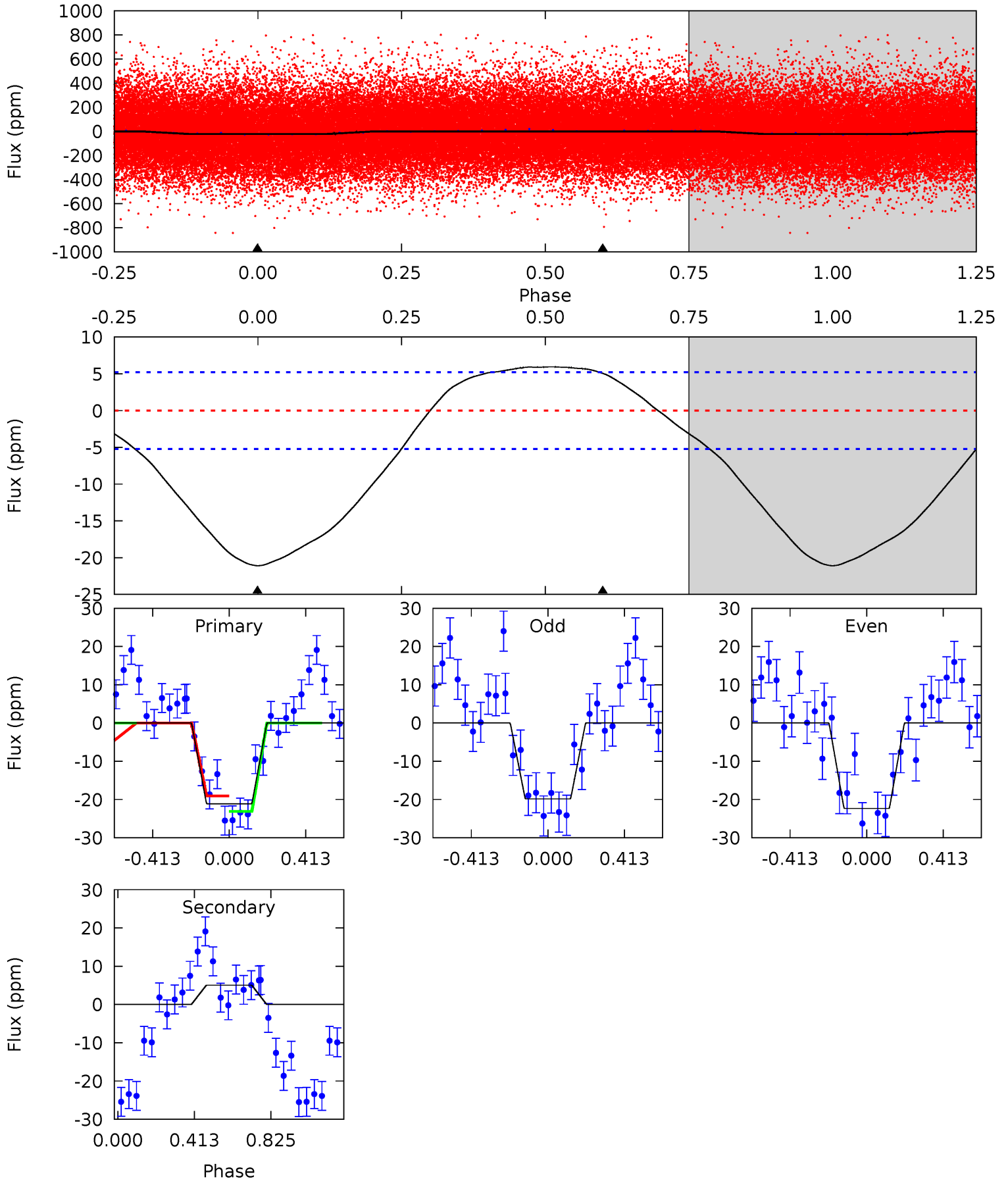
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	-3.17	0	0	4.27	0.87	1.87	16.3	16.3	-3.17	-3.17	0.61	0.96	0.22	0.35



Alt Model-Shift Uniqueness Test

009486646-01, P = 2.911678 Days, E = 130.644627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	-4.12	0	0	4.26	0.82	2.21	17.2	17.2	-4.12	-4.12	1.02	1.05	0.22	1.63



Stellar Parameters For KIC 009486646

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6420^{+179}_{-224}	$3.757^{+0.464}_{-0.116}$	$0.120^{+0.250}_{-0.300}$	$2.780^{+0.578}_{-1.350}$	$1.610^{+0.189}_{-0.410}$	$0.105^{+0.538}_{-0.040}$
	+3%/-3%	+12%/-3%	+208%/-250%	+21%/-49%	+12%/-25%	+510%/-38%
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 009486646-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	4 ± 1	$1.22^{+0.95}_{-0.72}$	2970^{+226}_{-353}	-4502^{+670}_{-2155}	$-3.054^{+2.096}_{-15.793}$
Alt.	5 ± 1	$1.27^{+1.06}_{-0.77}$	2988^{+203}_{-362}	-4708^{+837}_{-2434}	$-3.548^{+2.484}_{-20.335}$

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 $A_{\text{obs}} \gg 1.0$

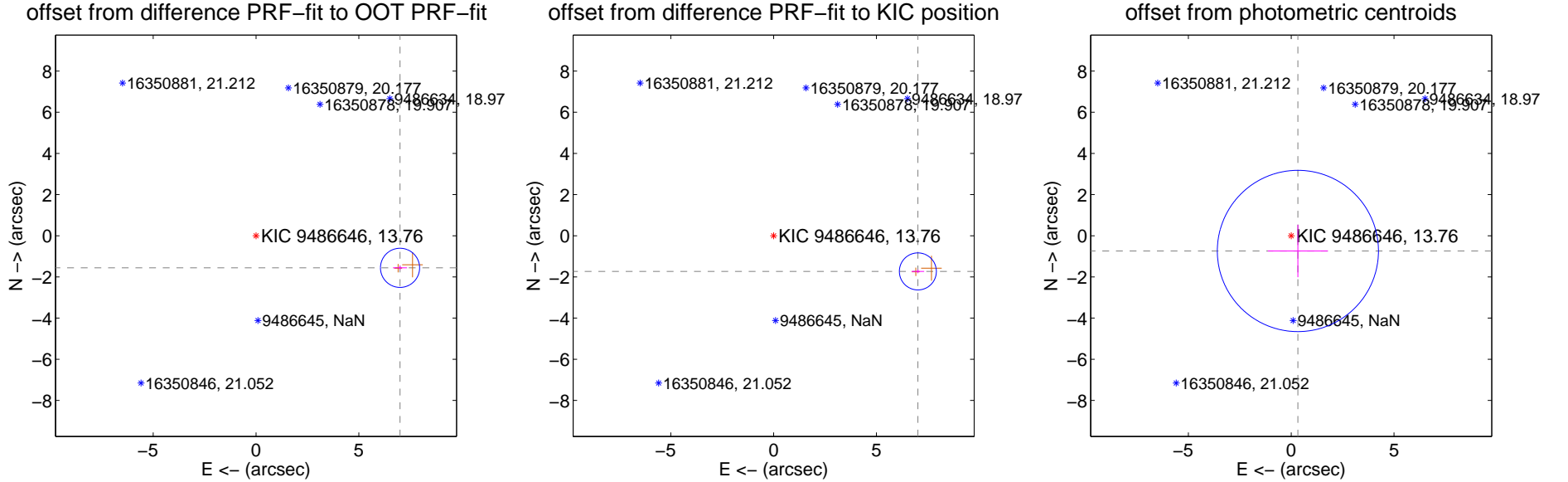
DV Centroid Data

Supplemental centroid analysis for 009486646-01. Kepler magnitude: 13.76. Transit SNR 10.61

There are 0 quarters with good PRF difference image offsets

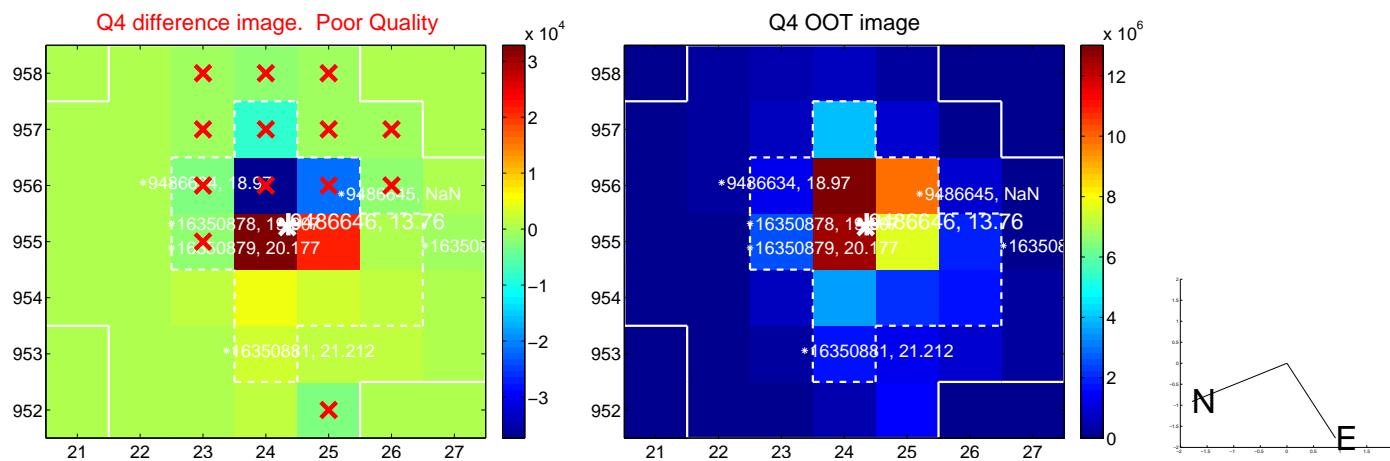
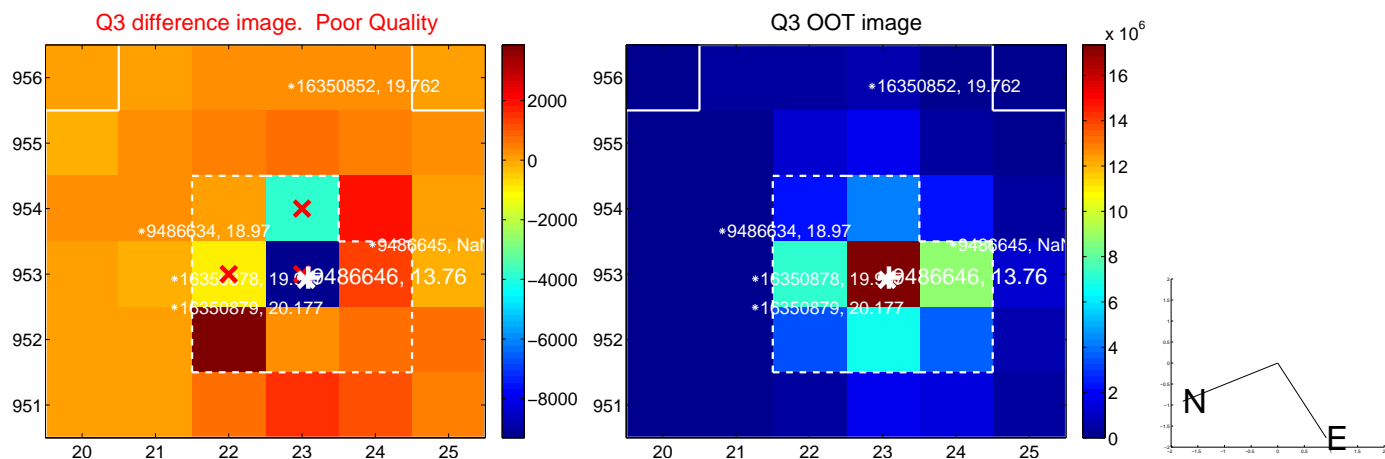
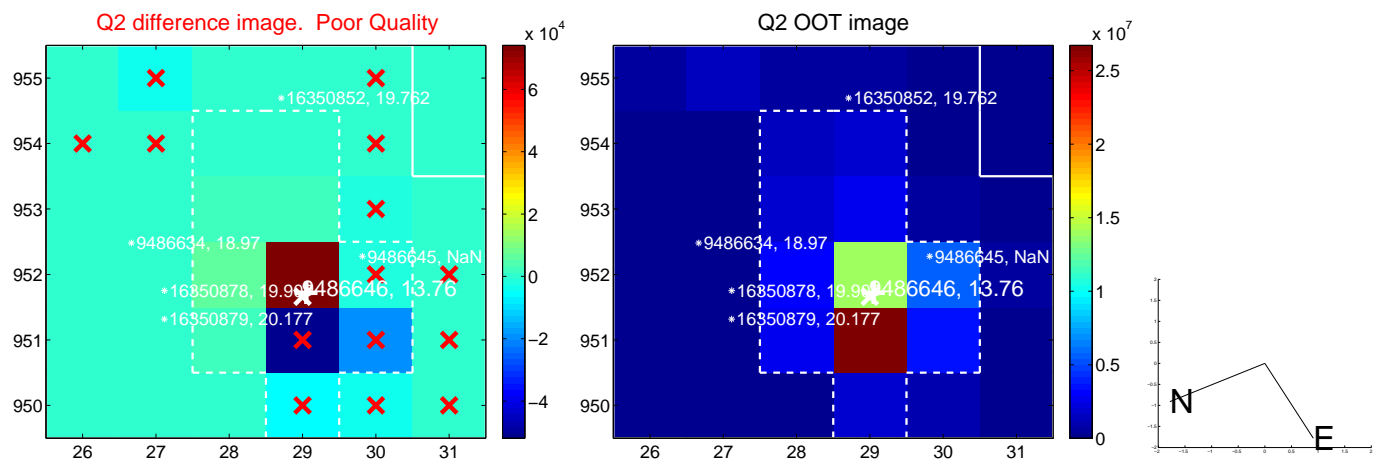
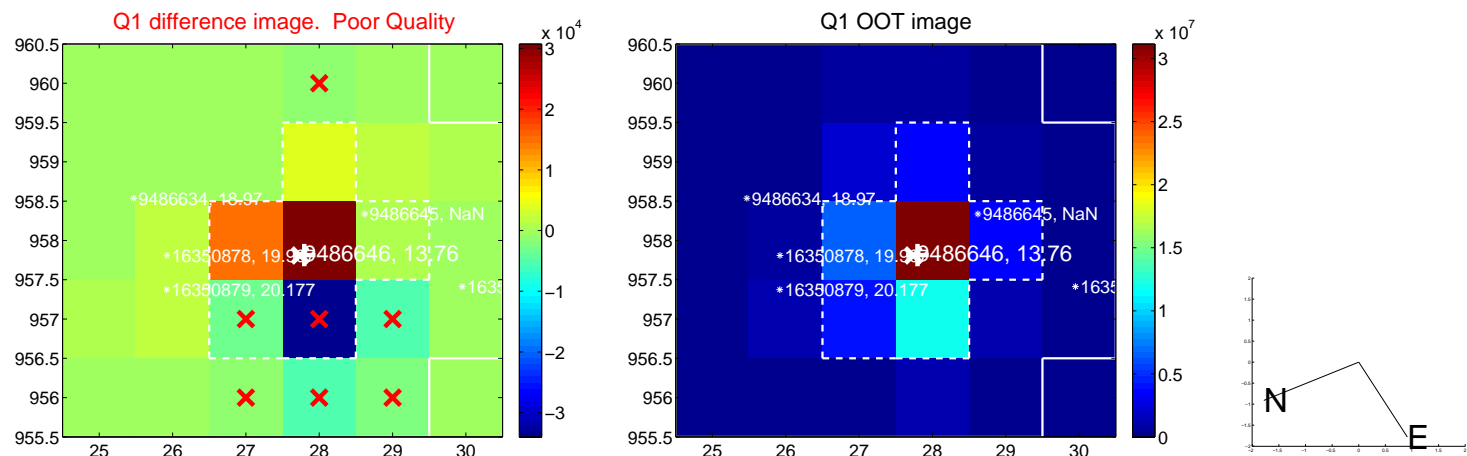
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.174 ± 0.317	22.63	-7.003 ± 0.342	-1.559 ± 0.104
PRF-fit source offset from KIC position	7.226 ± 0.300	24.09	-7.015 ± 0.308	-1.732 ± 0.090
photometric centroid source offset	0.81 ± 1.31	0.62	-0.33 ± 1.46	-0.74 ± 1.27

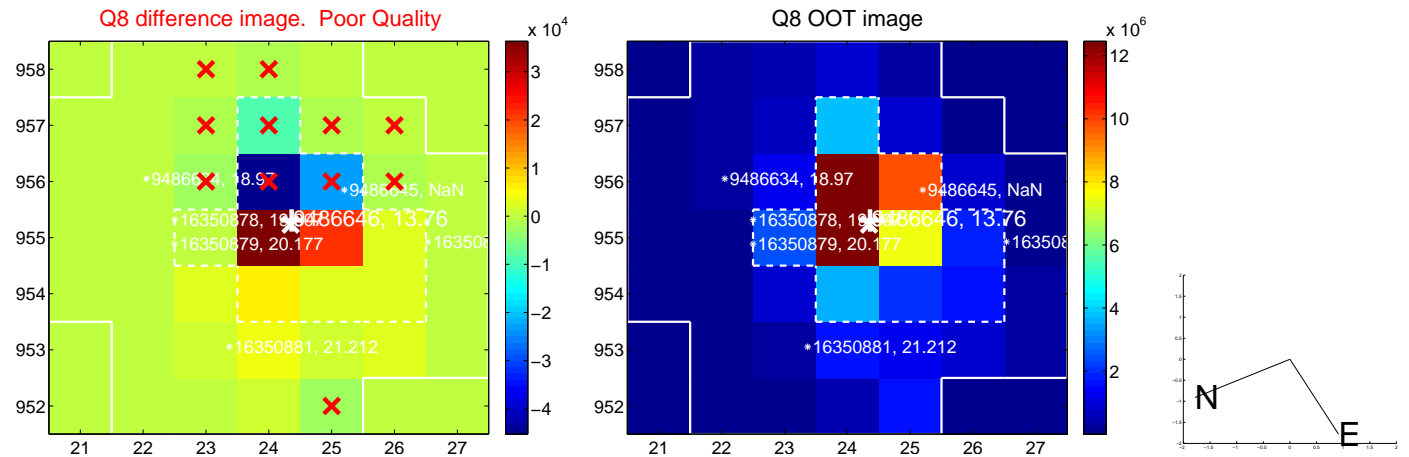
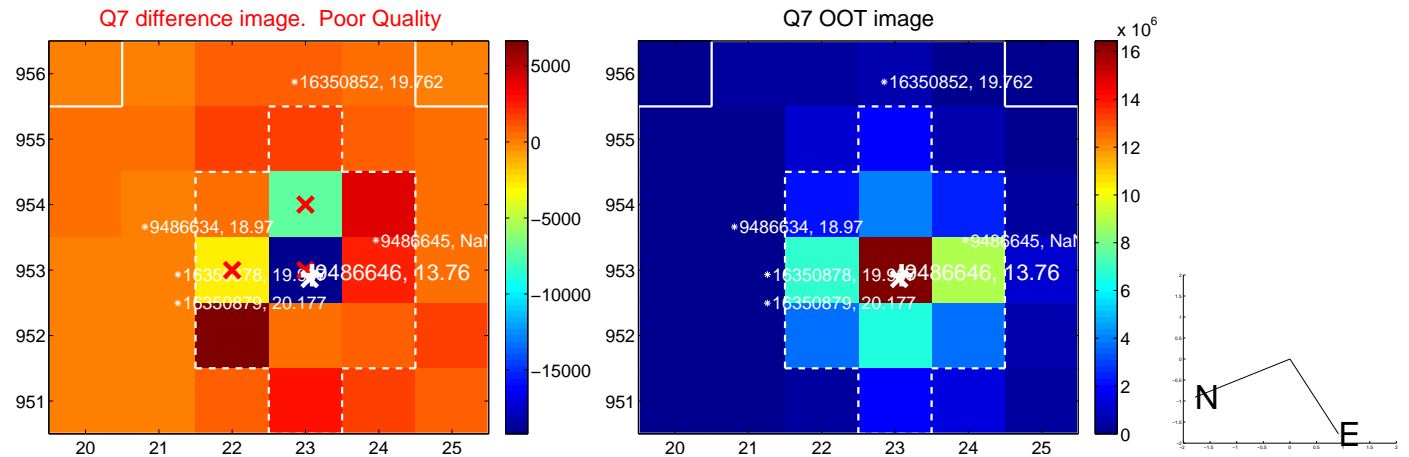
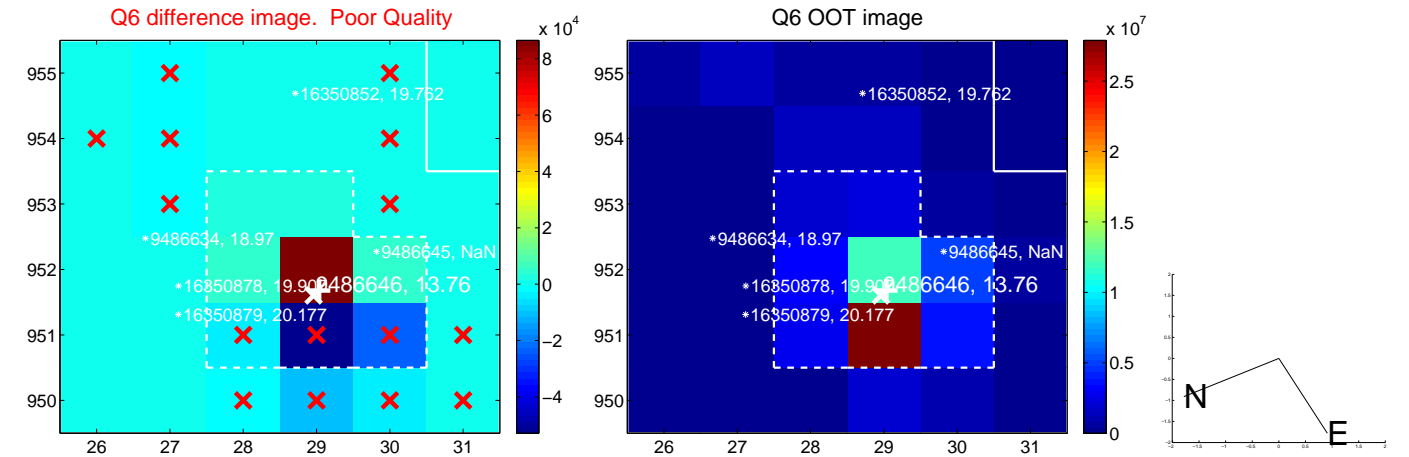
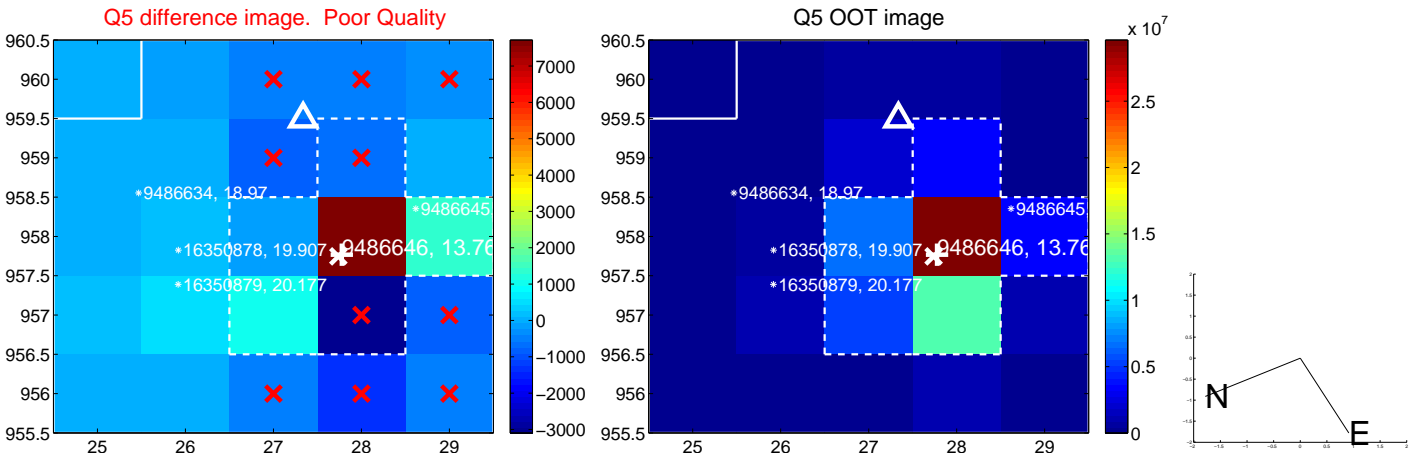


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

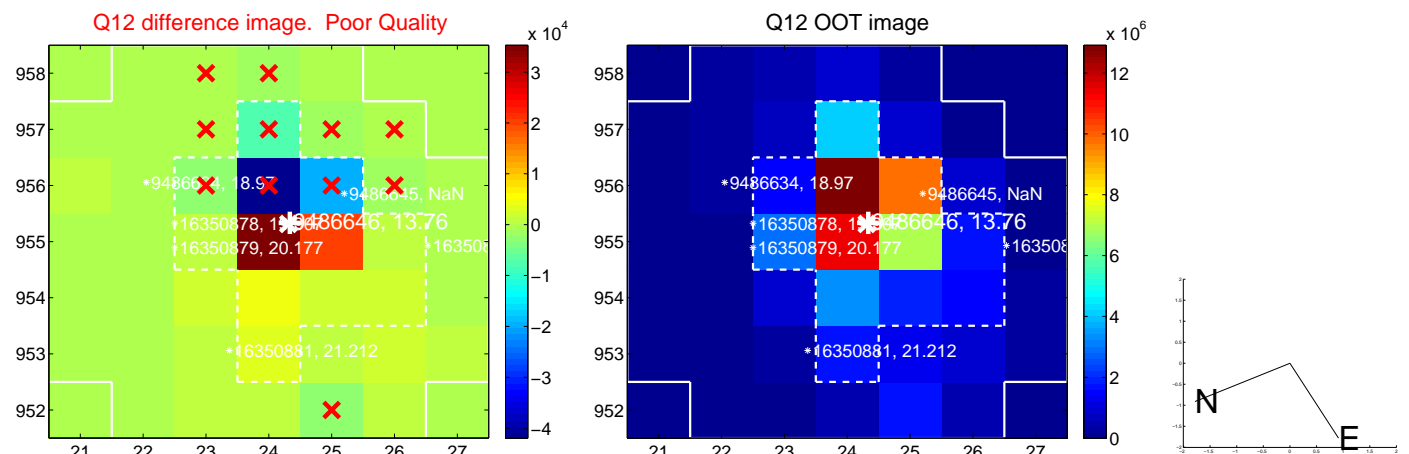
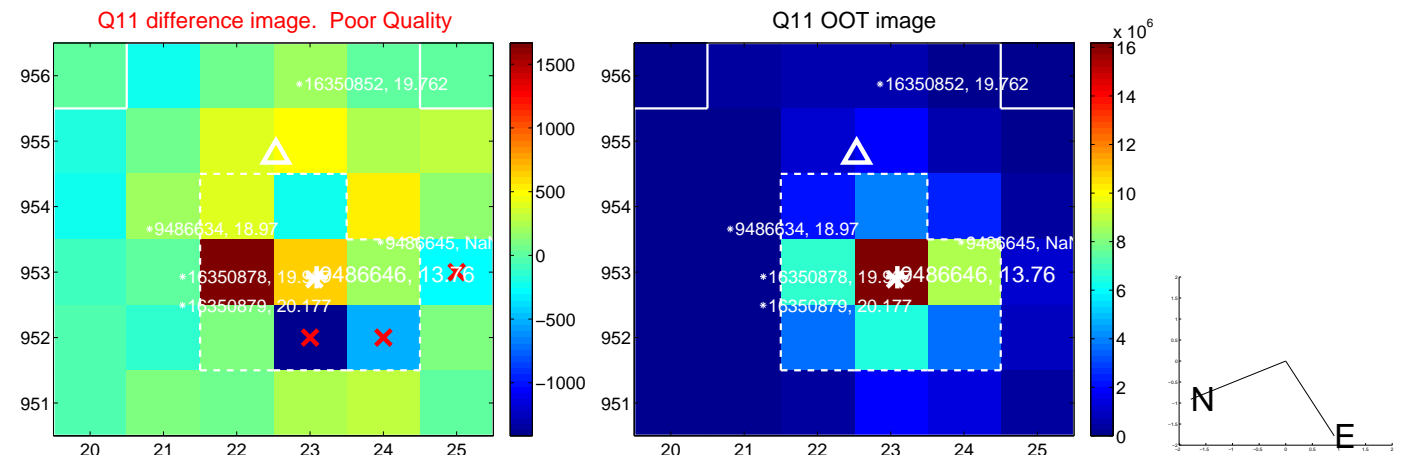
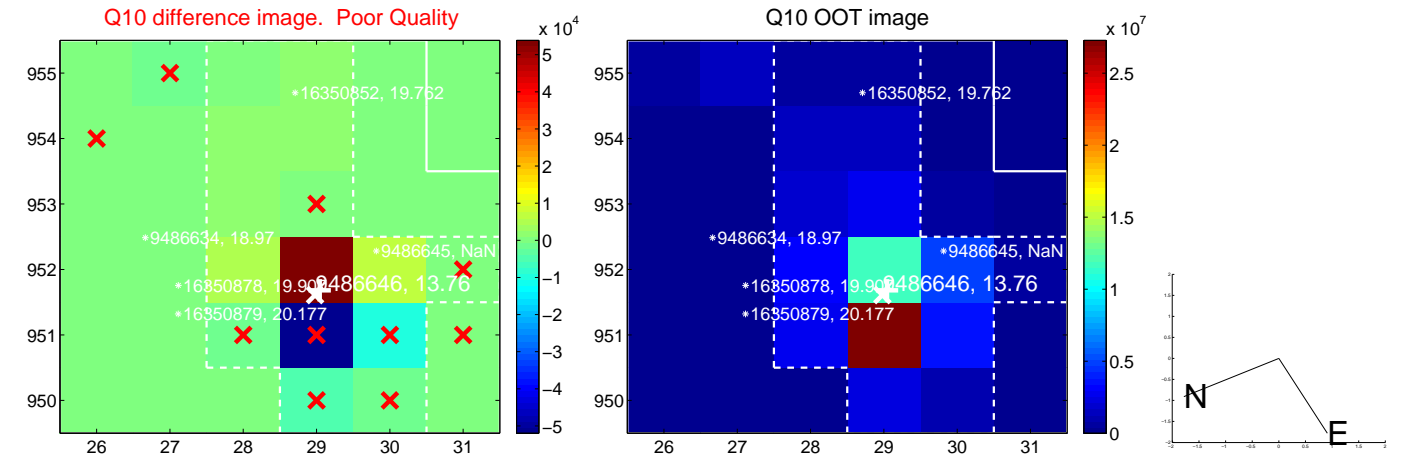
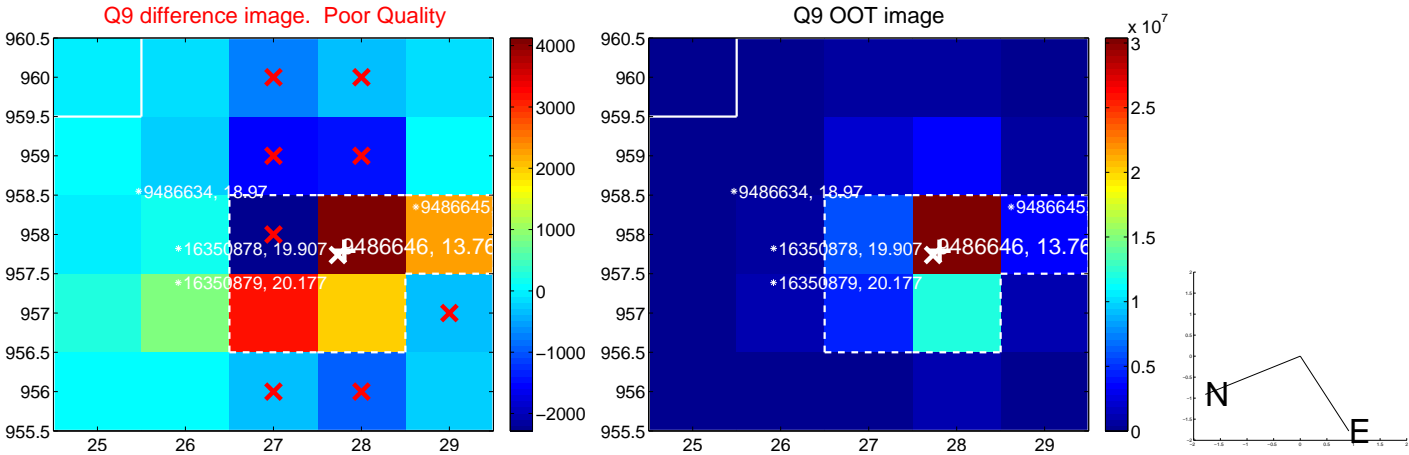
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



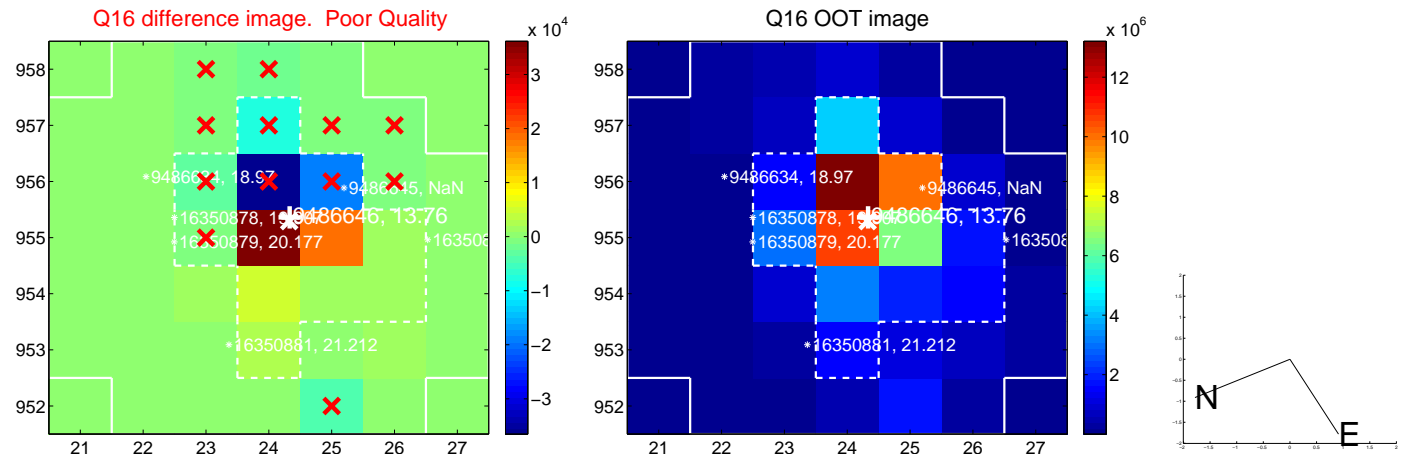
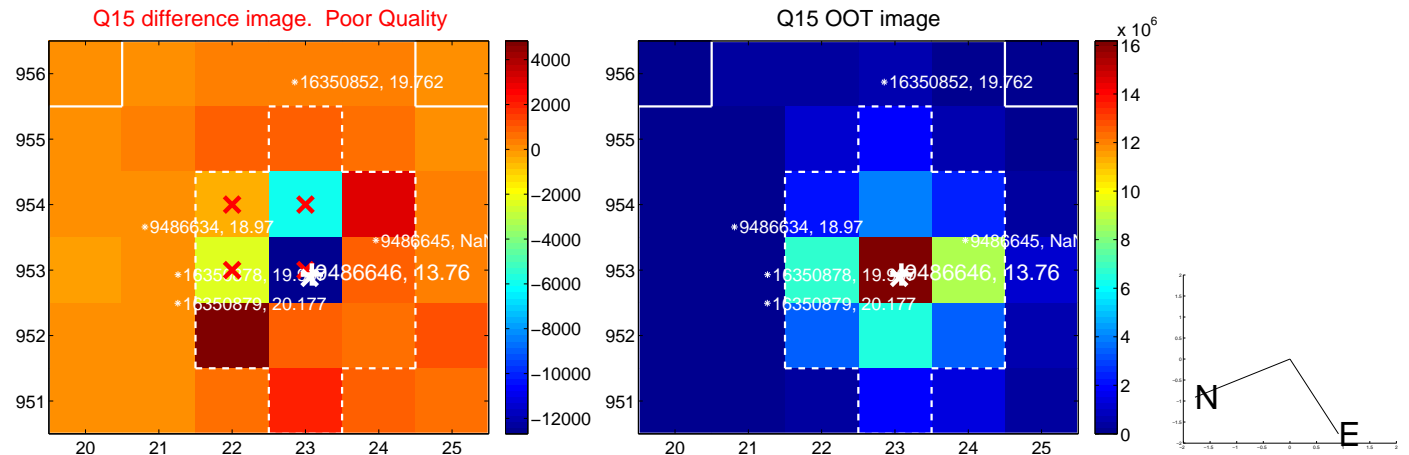
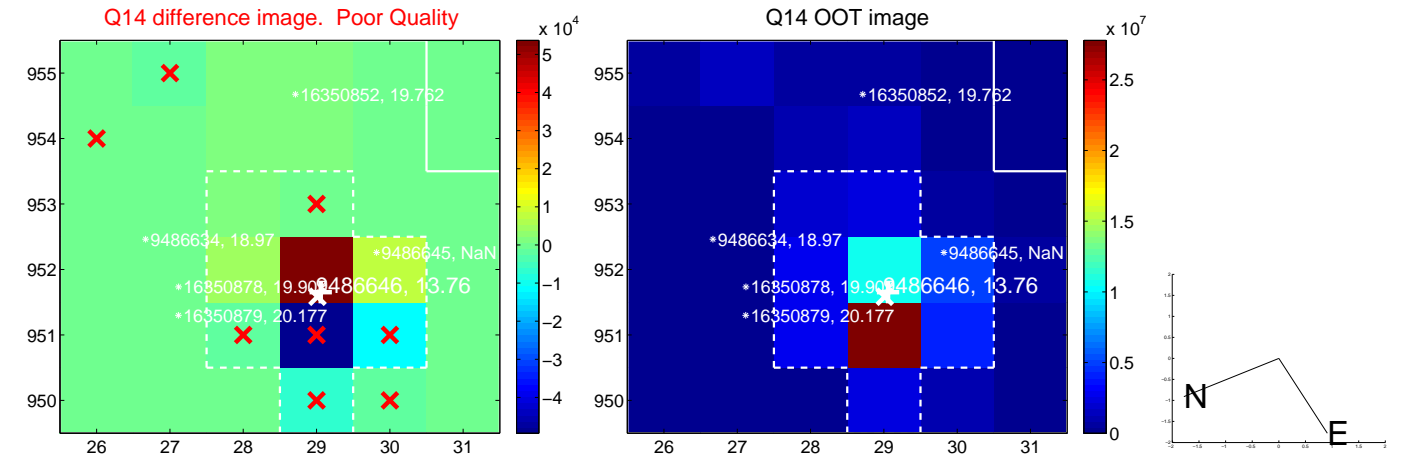
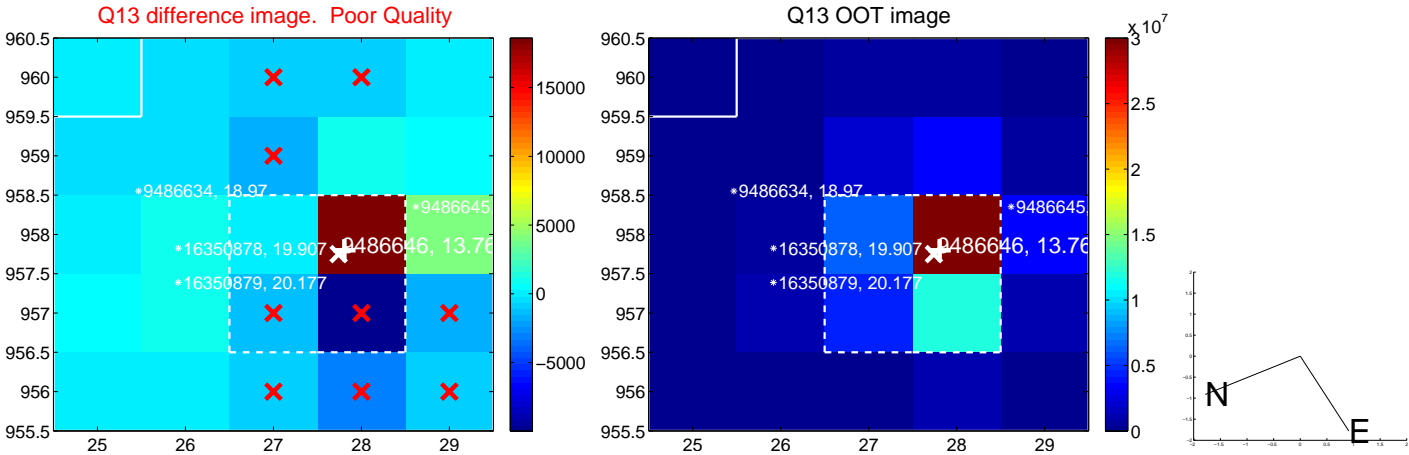
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



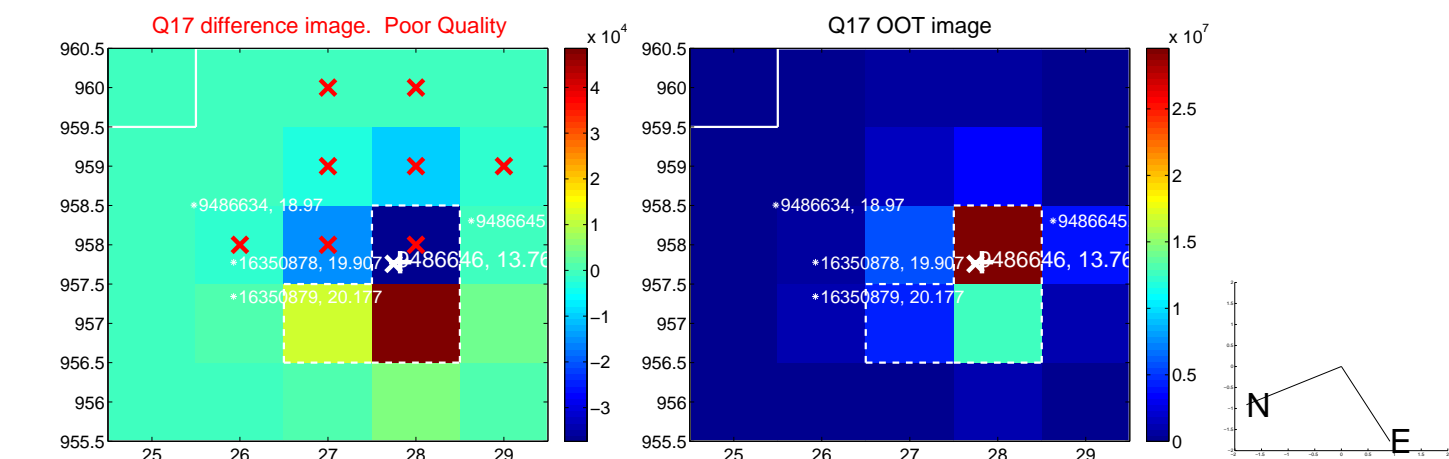
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



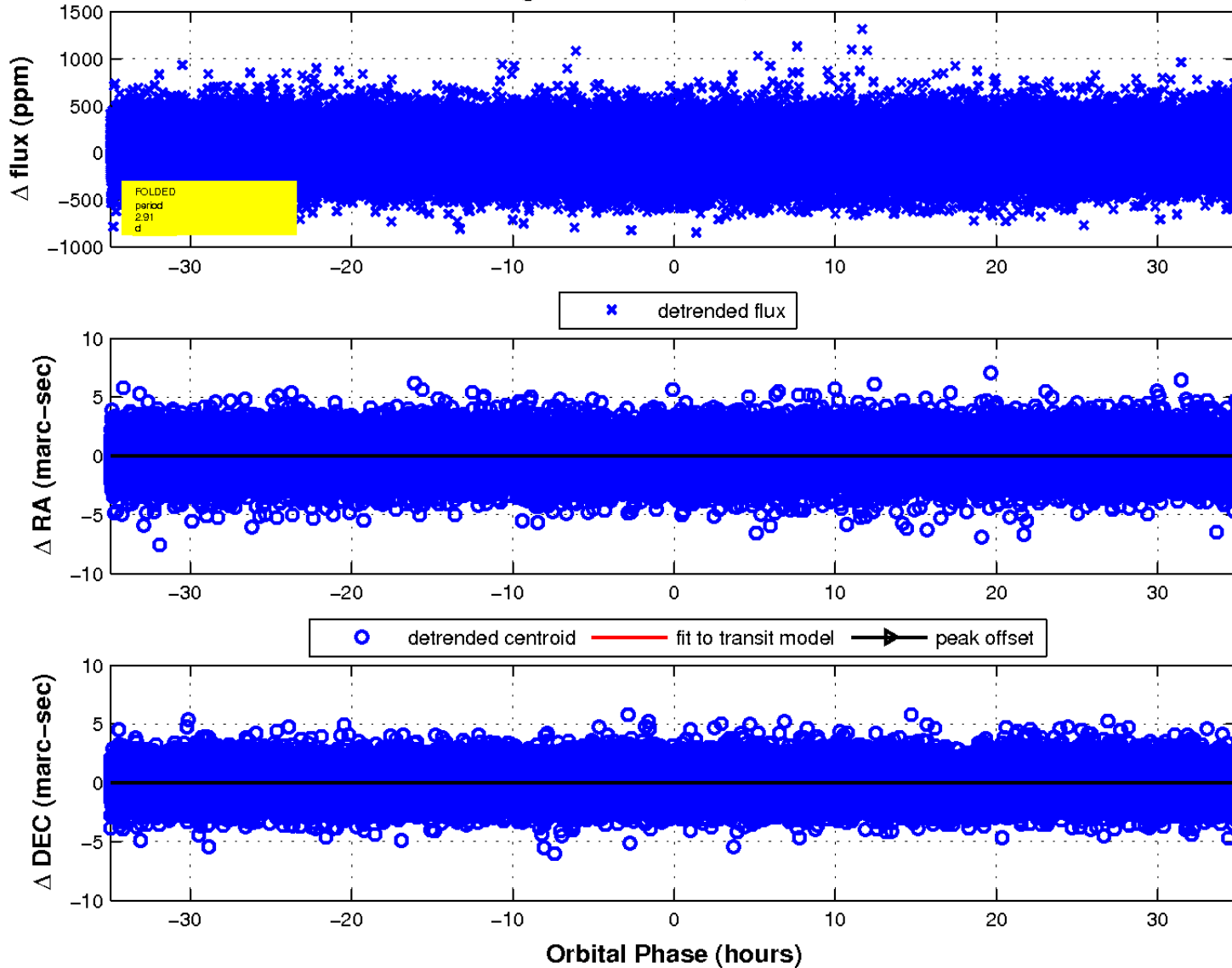
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

