

KIC 009971786

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})
009971786-01	OBS	No	2.762912	134.109171	26.2	33.155	8.3	10.5	3.42	7841	3.43	15601.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009971786-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

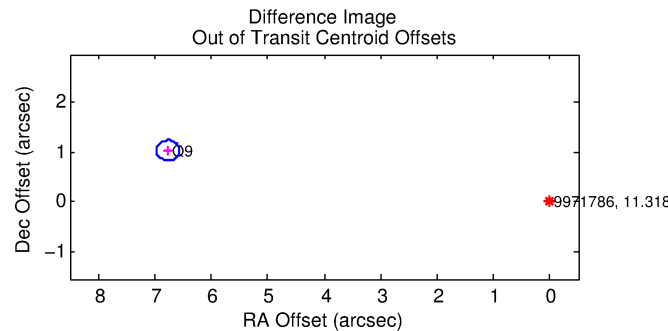
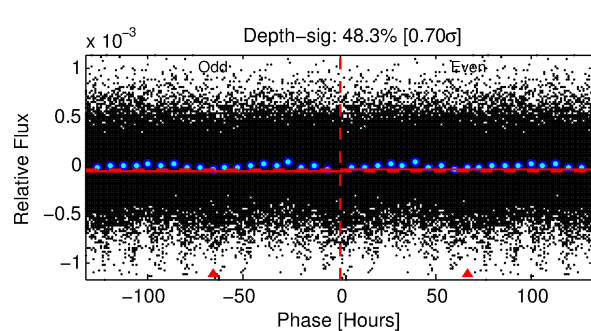
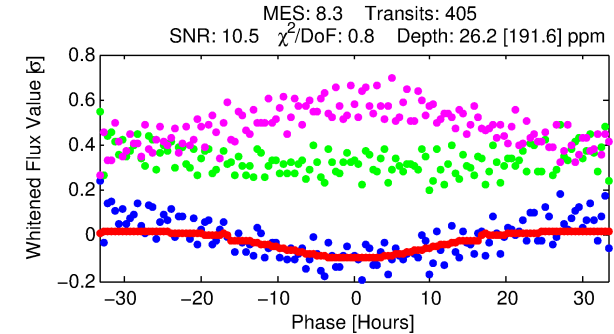
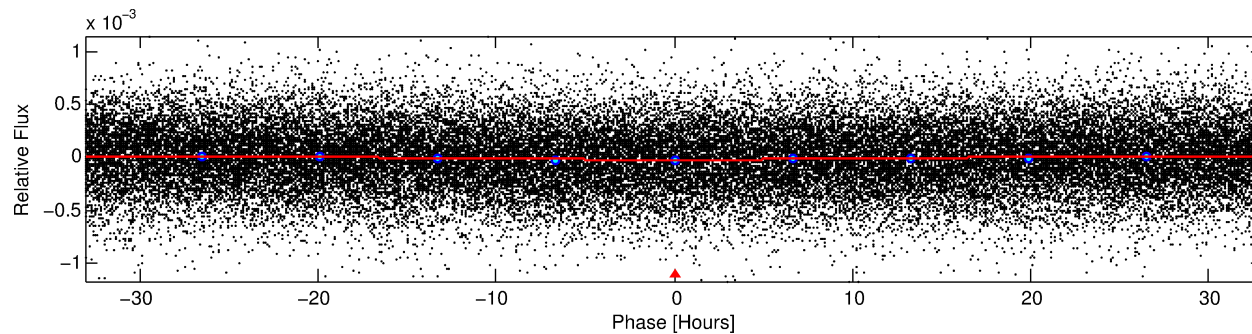
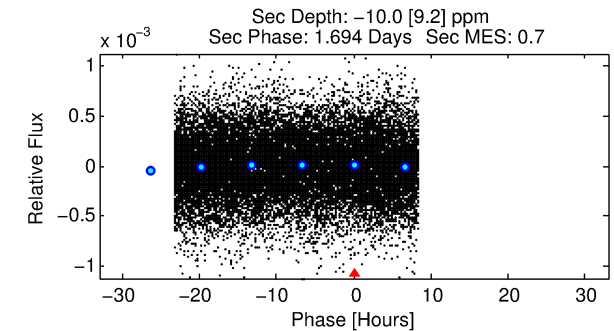
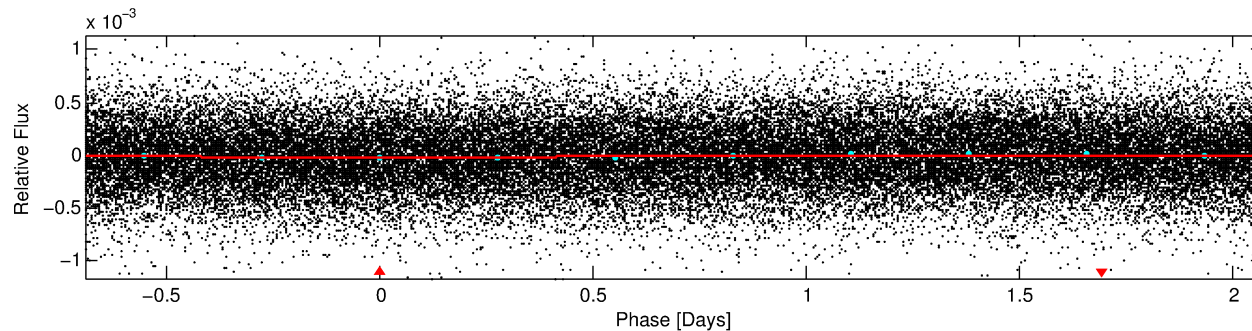
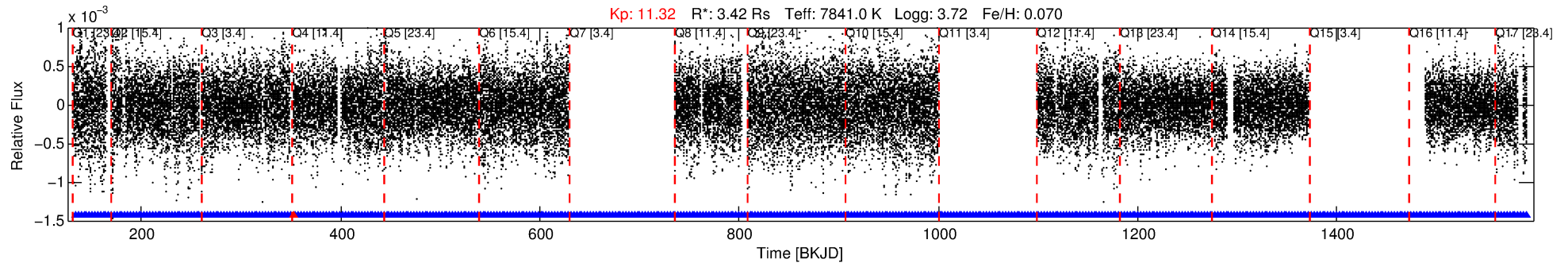
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009971786-01

No Significant Match Found

DV One-Page Summary

KIC: 9971786 Candidate: 1 of 1 Period: 2.763 d



DV Fit Results:

Period = 2.76291 [0.00037] d
Epoch = 134.1092 [0.1112] BKJD
Rp/R* = 0.0092 [0.1449]
a/R* = 1.01 [0.16]
b = 1.00 [0.23]
Seff = 15601.16 [11283.08]
Teq = 2850 [515] K
Rp = 3.43 [54.07] Re
a = 0.0504 [0.0226] AU
Ag = N/A
Teffp = N/A

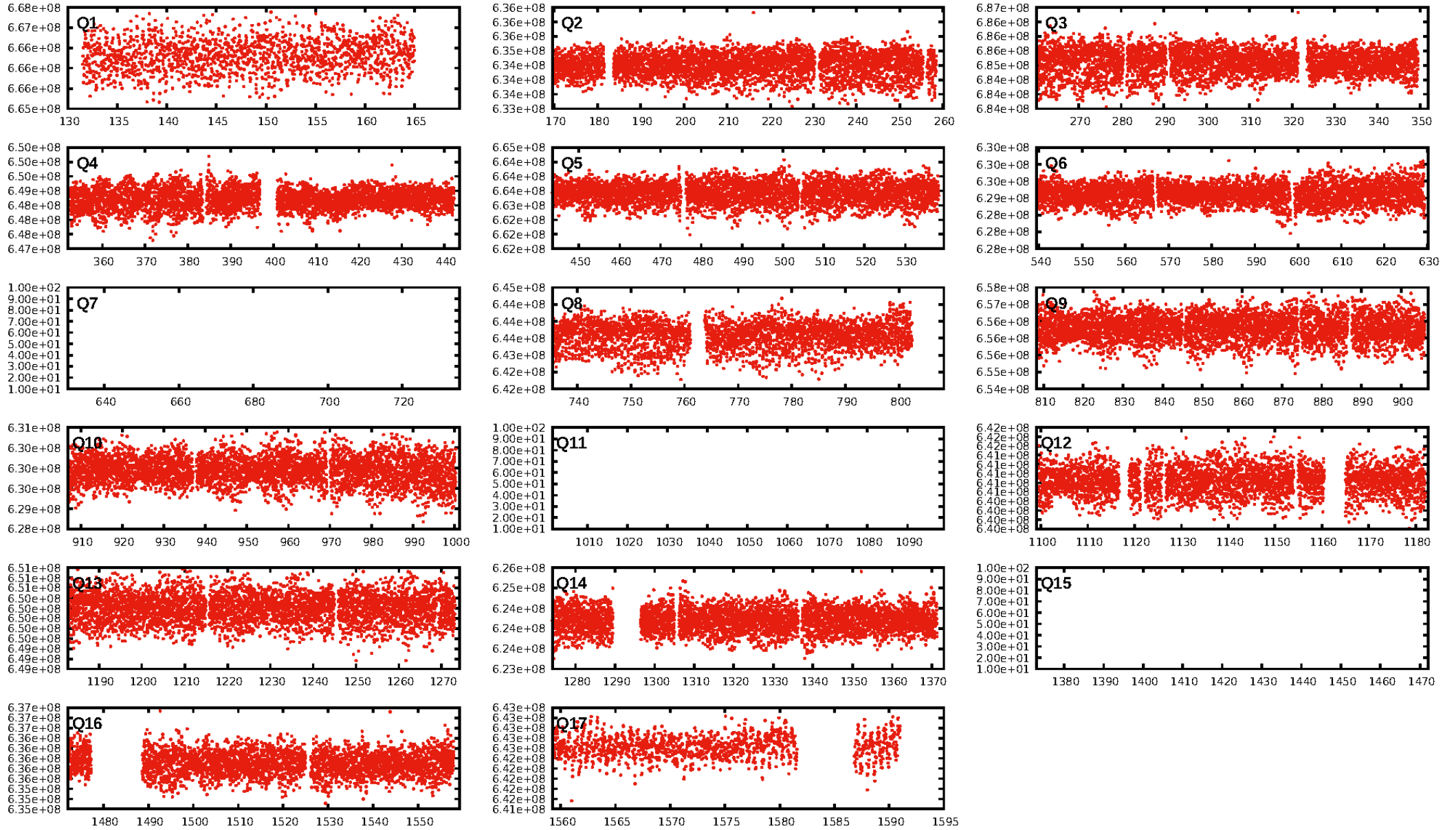
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [380/381]
GhostDiagnostic-chr: 3.654
Centroid-sig: 46.3%
Centroid-so: 0.277 arcsec [0.62σ]
OotOffset-rm: 6.849 arcsec [101.11σ]
KicOffset-rm: 6.786 arcsec [100.19σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [14/14]

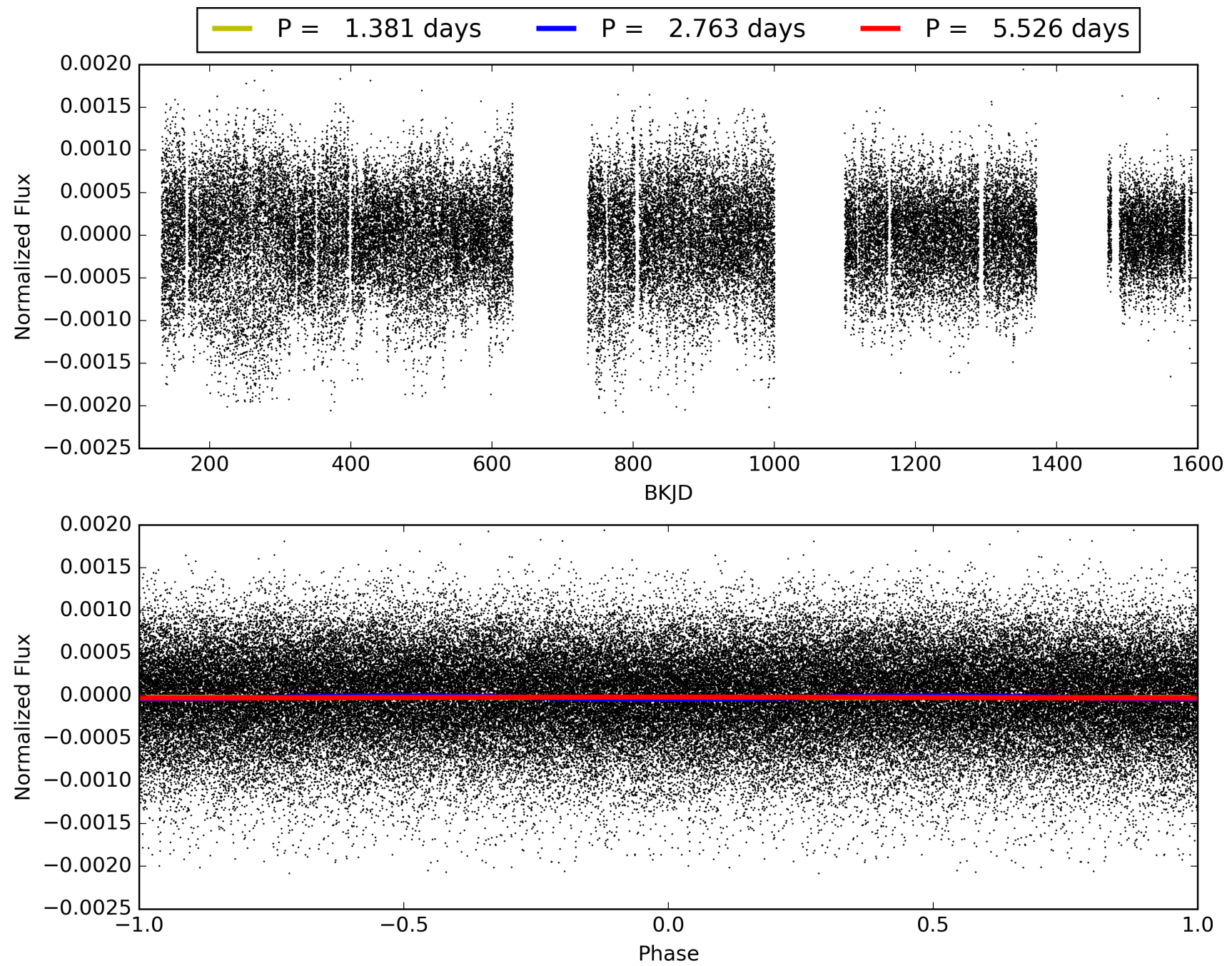
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:23:48 Z

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

TCE 009971786-01, PDC Light Curves

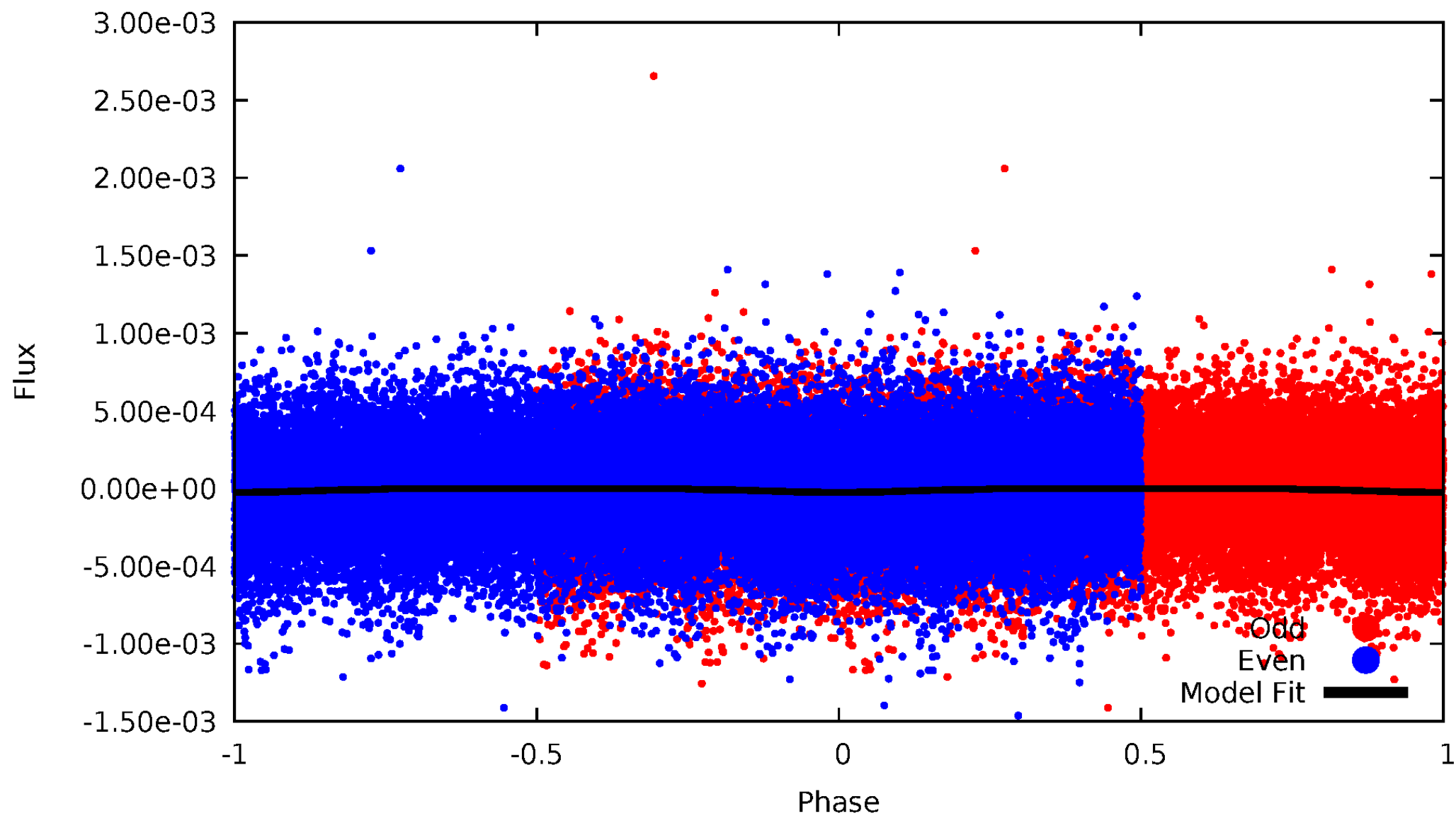


TCE 009971786-01



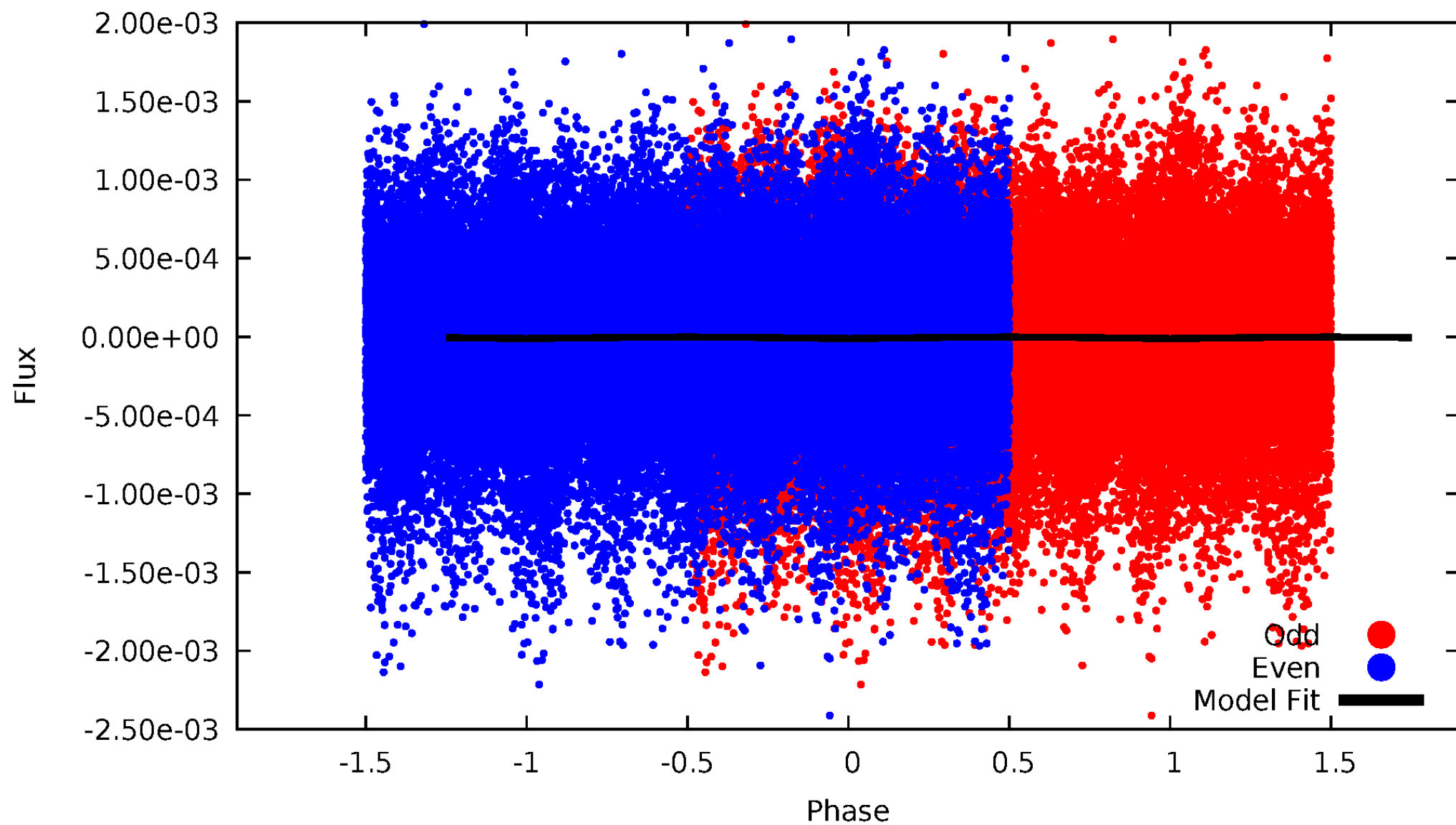
DV Odd/Even

TCE 009971786-01

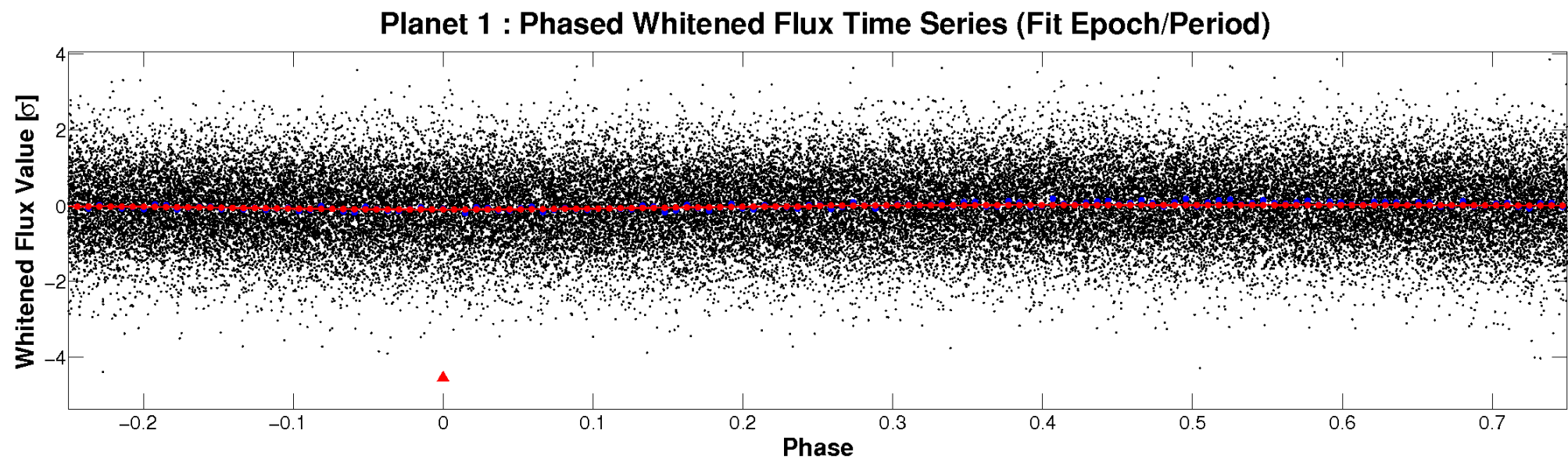
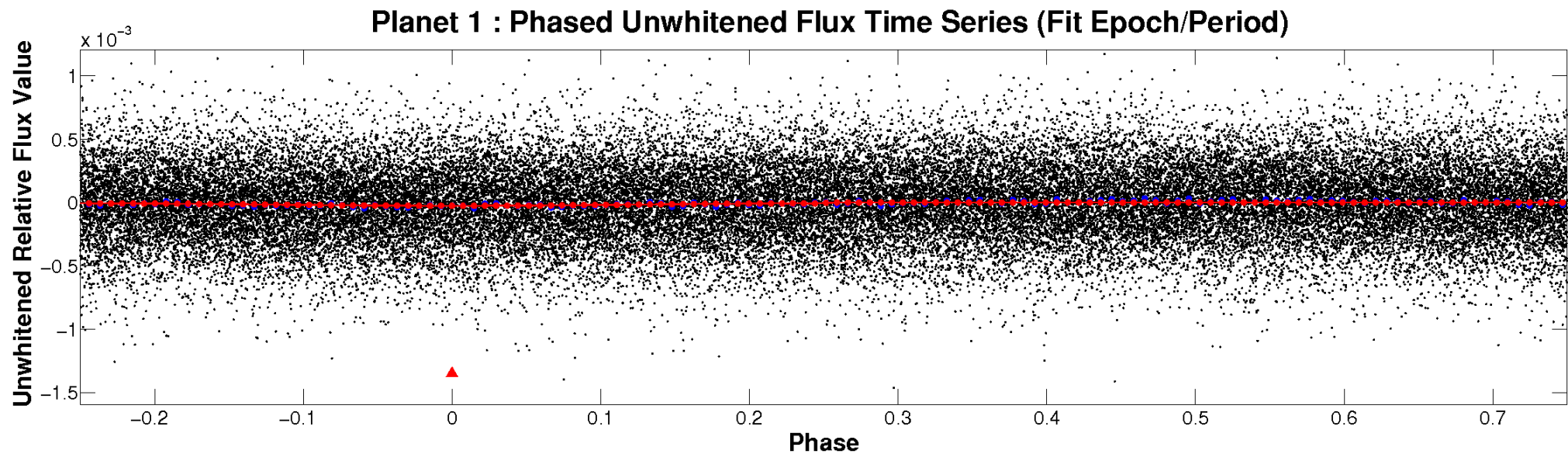


ALT Odd/Even

TCE 009971786-01

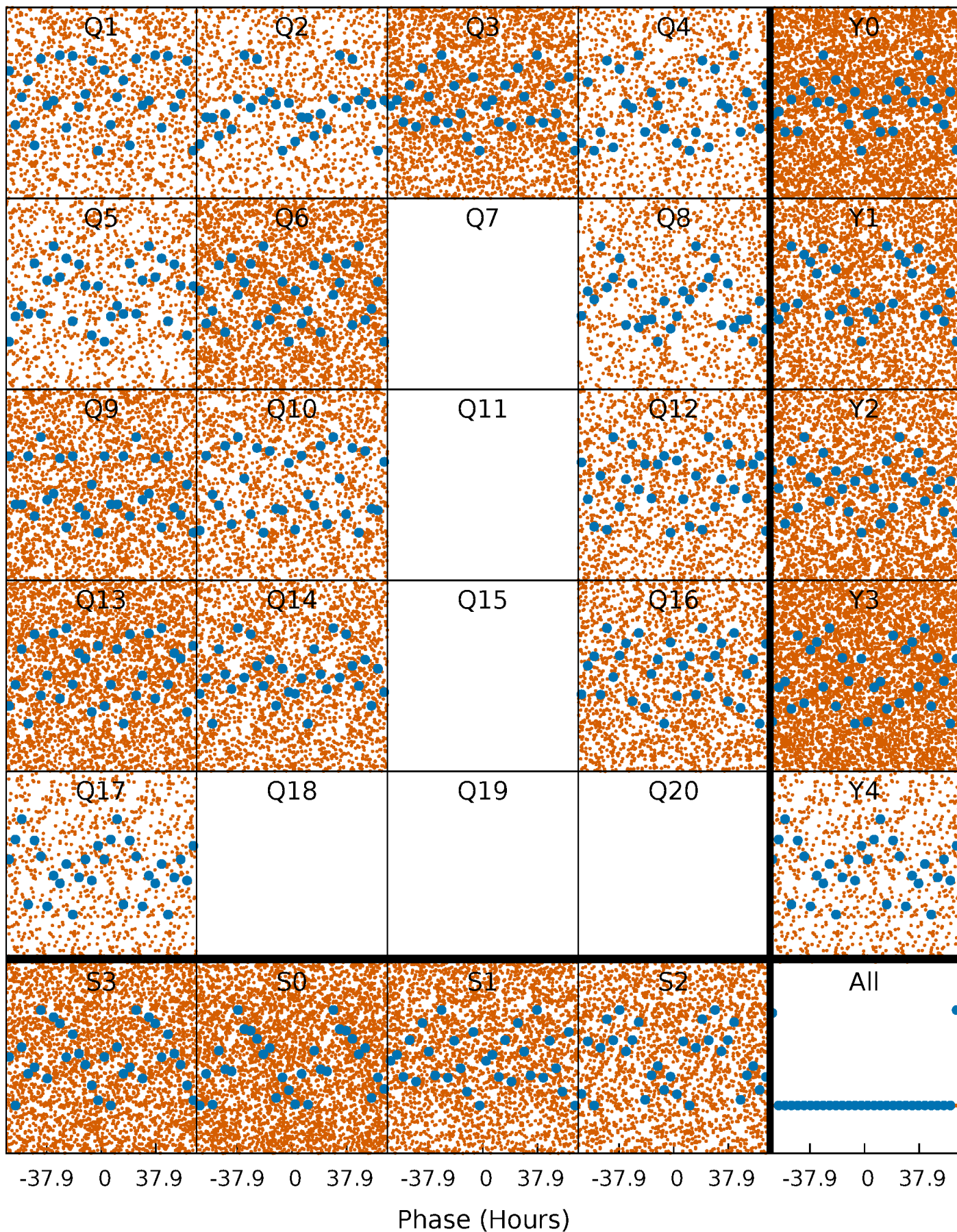


Non-Whitened Vs. Whitened Light Curve



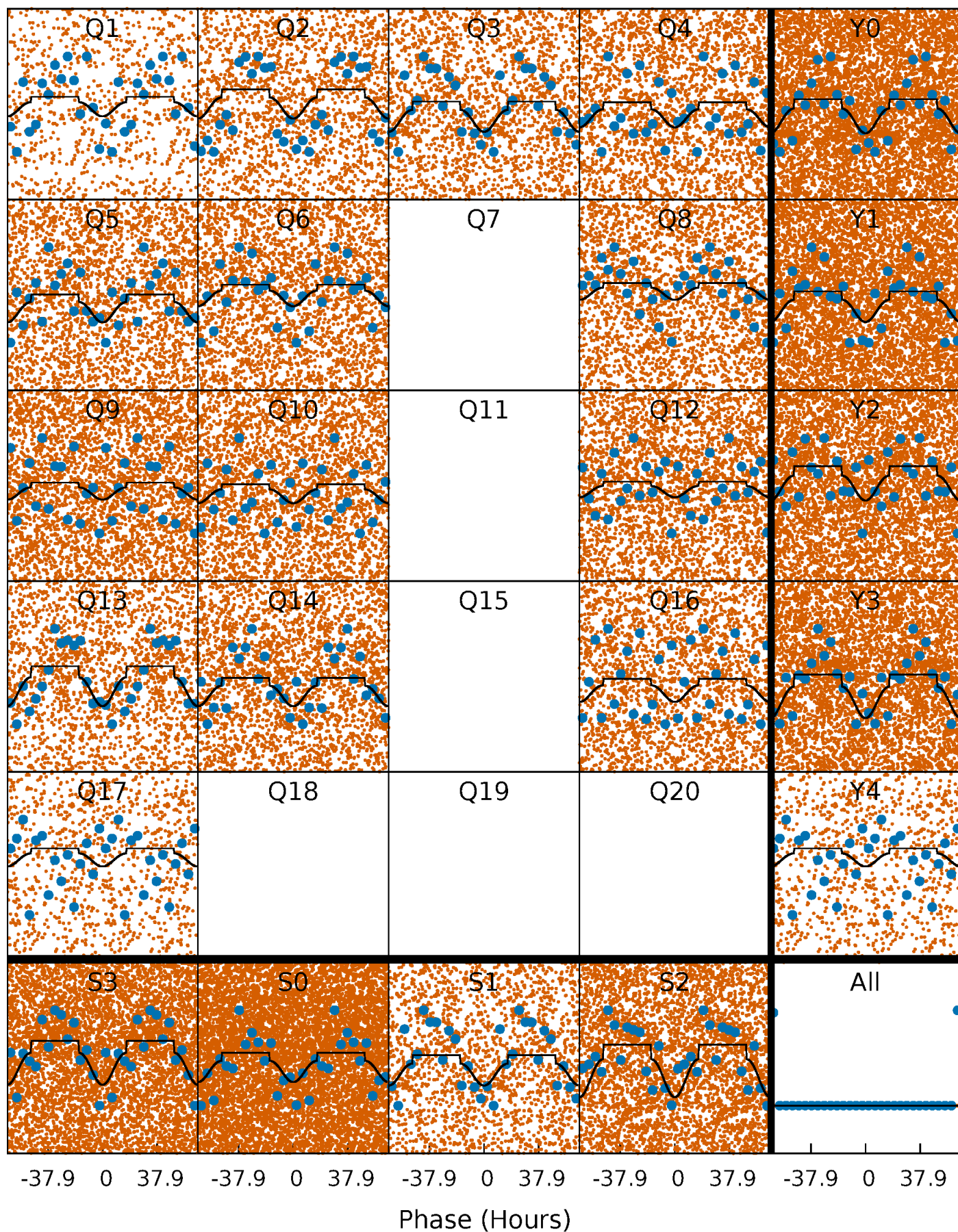
PDC Quarter-Phased Transit Curves

TCE 009971786-01 P= 2.762912 Days $T_0=134.109171$ (BKJD)



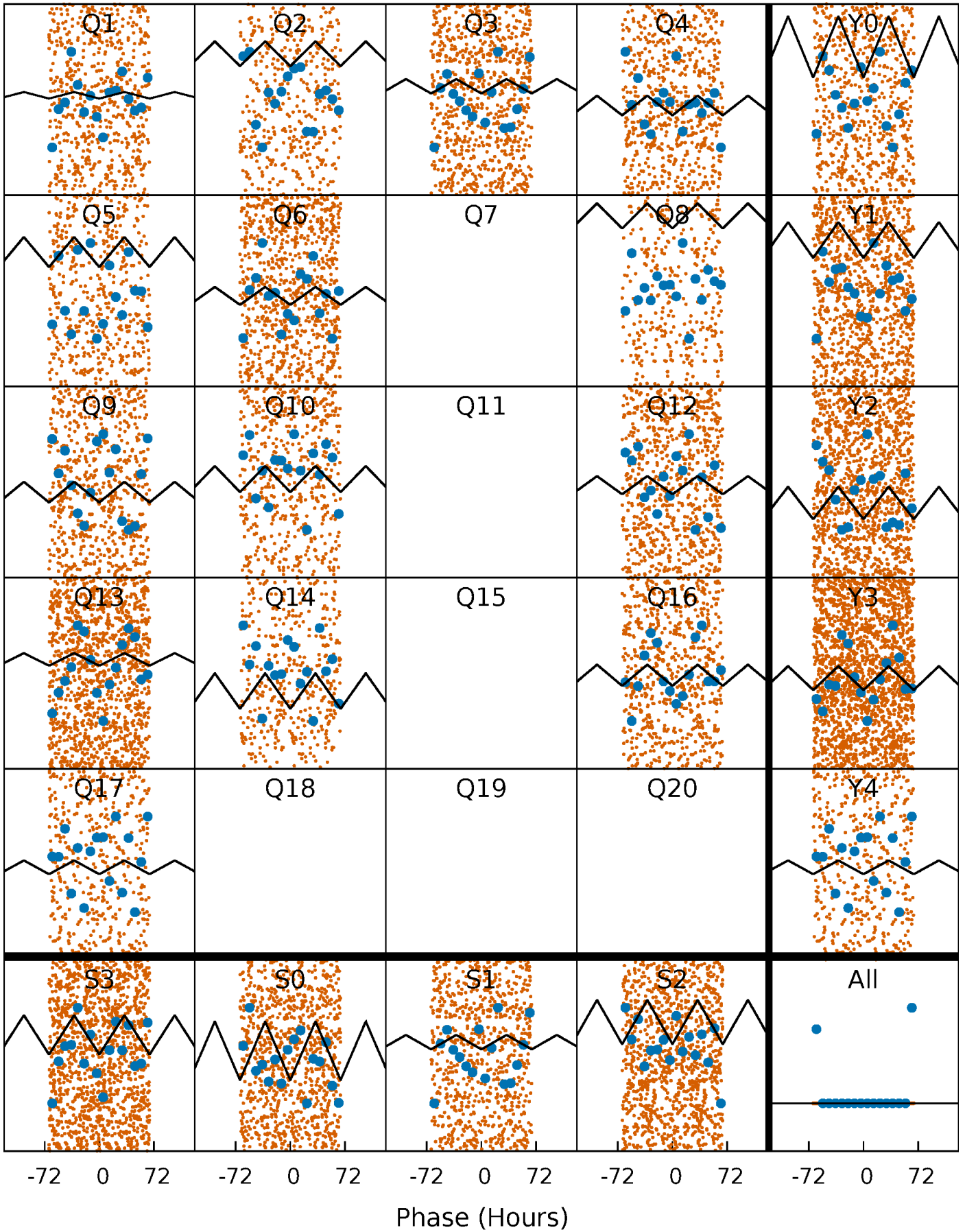
DV Quarter-Phased Transit Curves

TCE 009971786-01 P= 2.762912 Days $T_0=134.109171$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

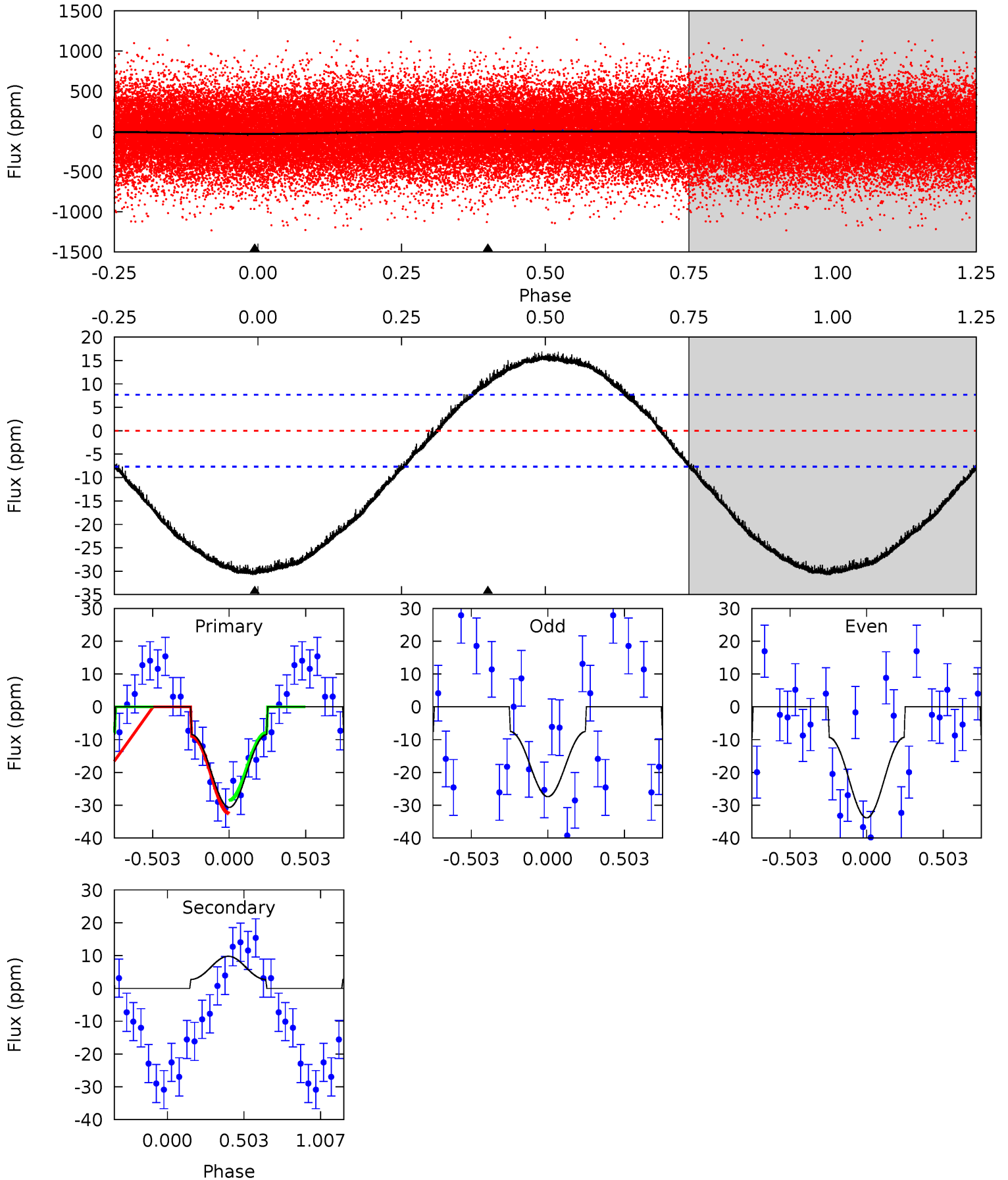
TCE 009971786-01 P= 2.763020 Days $T_0=134.040898$ (BKJD)



DV Model-Shift Uniqueness Test

009971786-01, P = 2.762912 Days, E = 131.346259 Days

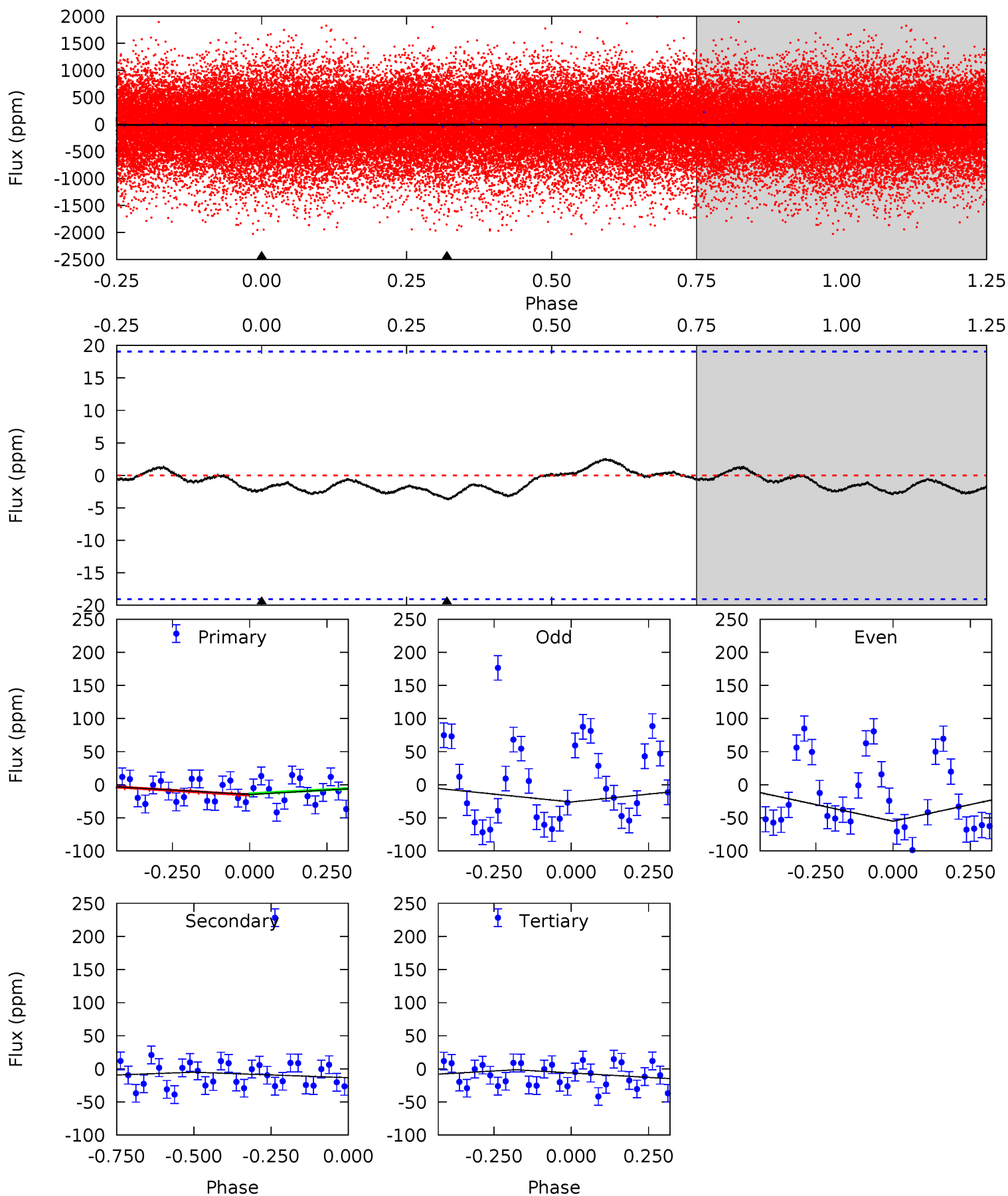
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	-5.37	0	0	4.21	0.67	2.32	16.8	16.8	-5.37	-5.37	1.78	1.19	0.36	1.05



Alt Model-Shift Uniqueness Test

009971786-01, P = 2.763020 Days, E = 131.277878 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.85	0.52	0.84	0	4.37	1.15	0.36	0.00	0.85	-0.32	0.52	0.84	1.10	0.41	0.29



Stellar Parameters For KIC 009971786

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7841^{+217}_{-326}	$3.719^{+0.408}_{-0.102}$	$0.070^{+0.250}_{-0.400}$	$3.419^{+0.824}_{-1.647}$	$2.235^{+0.278}_{-0.648}$	$0.079^{+0.300}_{-0.030}$
	+3%/-4%	+11%/-3%	+357%/-571%	+24%/-48%	+12%/-29%	+381%/-38%
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 009971786-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	10 ± 2	$33.82^{+37.57}_{-24.72}$	3833^{+310}_{-409}	-3619^{+252}_{-281}	$-0.011^{+0.009}_{-0.137}$
Alt.	-2 ± 4	$30.22^{+40.74}_{-20.91}$	3835^{+305}_{-466}	-3518^{+334}_{-209}	$0.002^{+0.026}_{-0.005}$

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

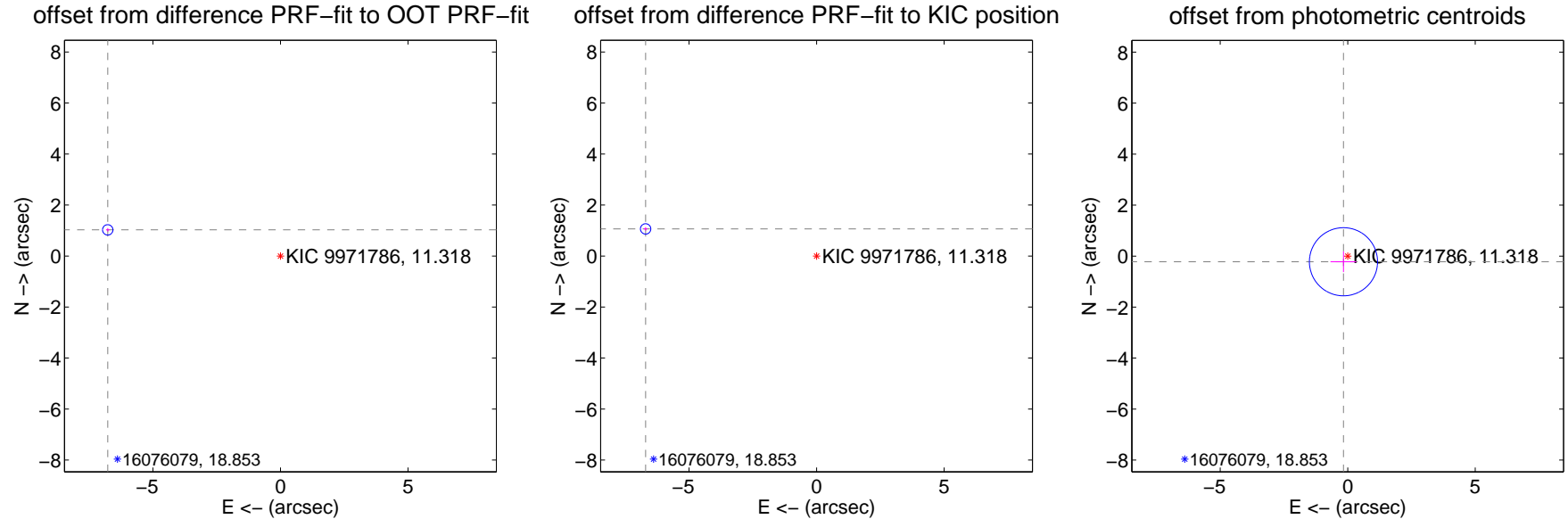
DV Centroid Data

Supplemental centroid analysis for 009971786-01. **Kepler magnitude: 11.32.** Transit SNR 10.48

There are 0 quarters with good PRF difference image offsets

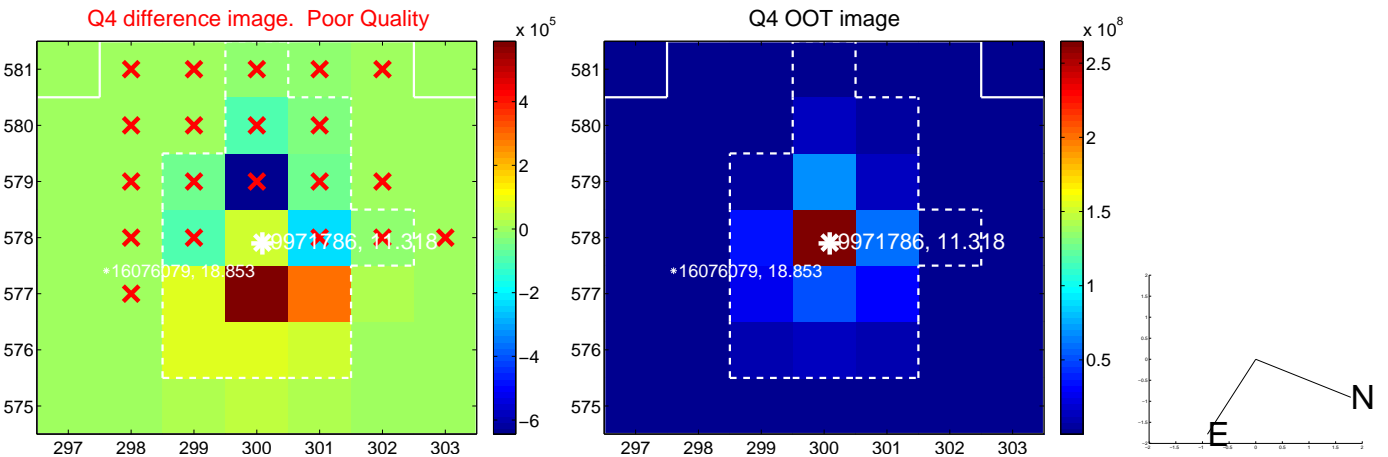
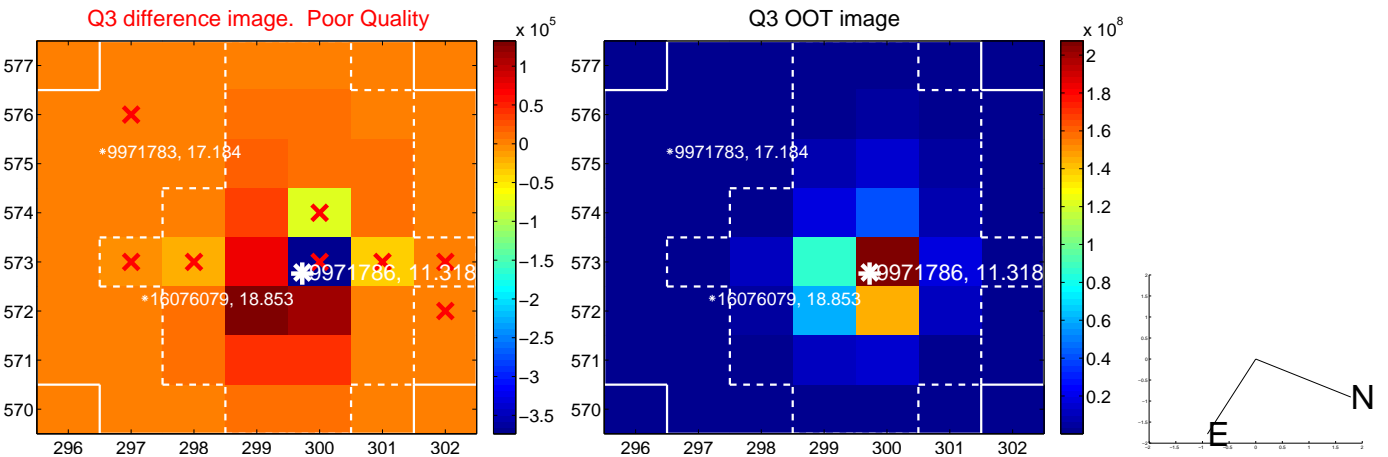
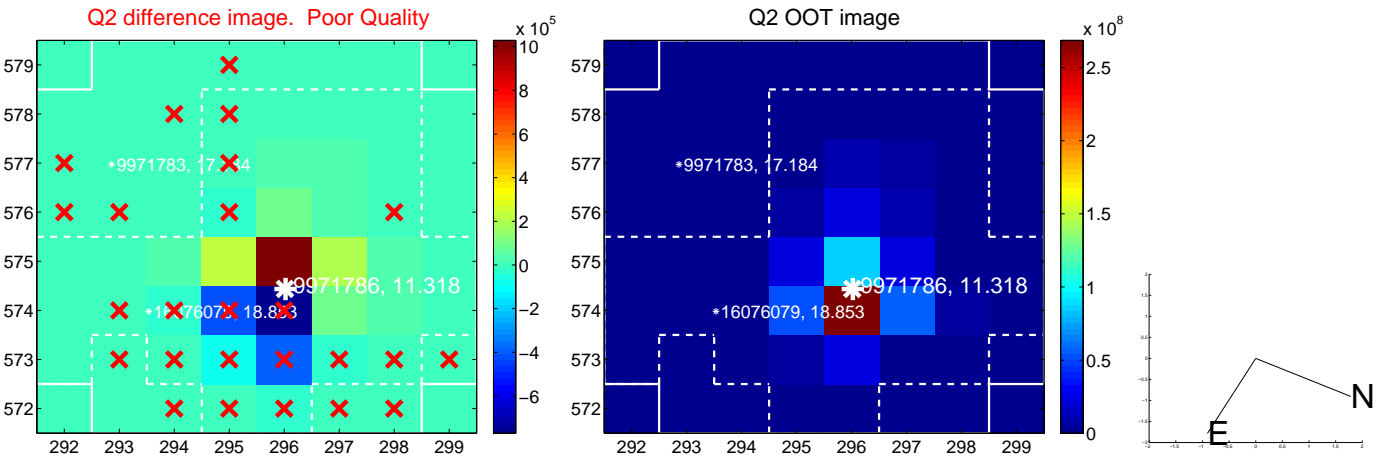
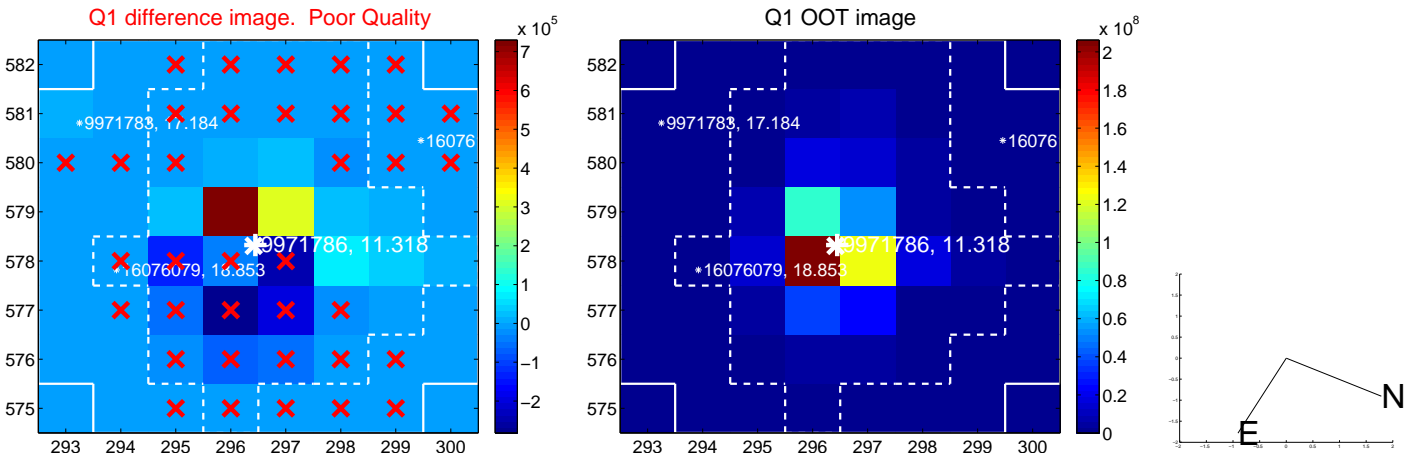
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.849 \pm 0.068	101.11	6.771 \pm 0.068	1.025 \pm 0.068
PRF-fit source offset from KIC position	6.786 \pm 0.068	100.19	6.702 \pm 0.068	1.064 \pm 0.068
photometric centroid source offset	0.28 \pm 0.45	0.62	0.17 \pm 0.51	-0.22 \pm 0.41

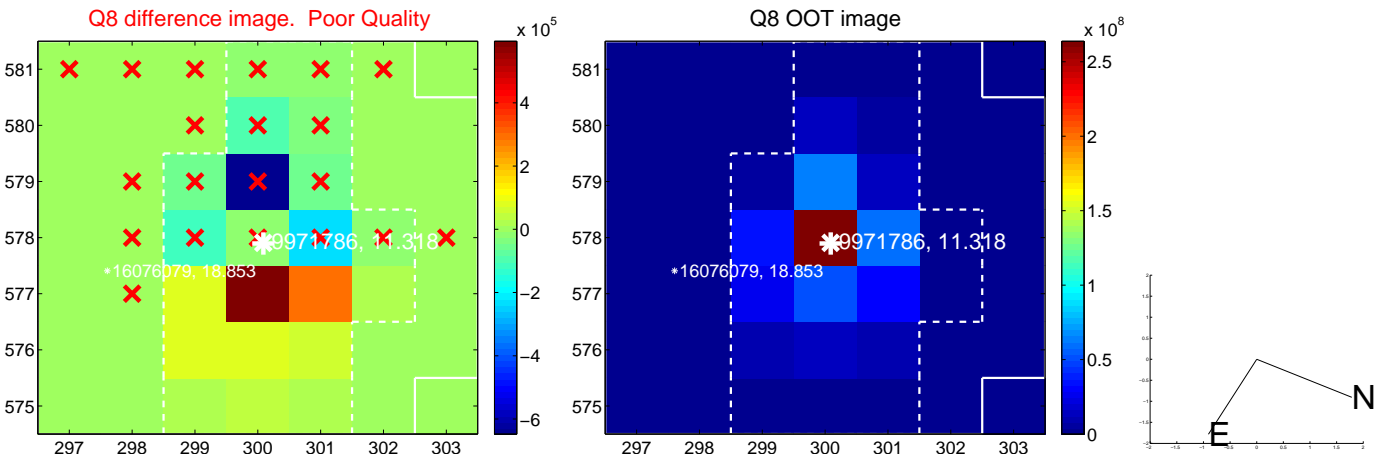
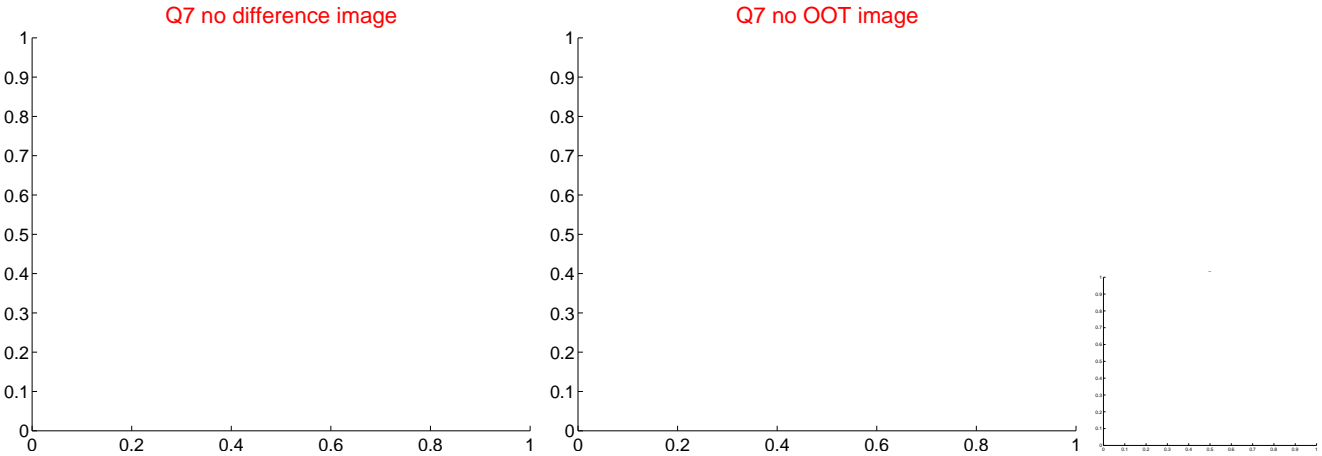
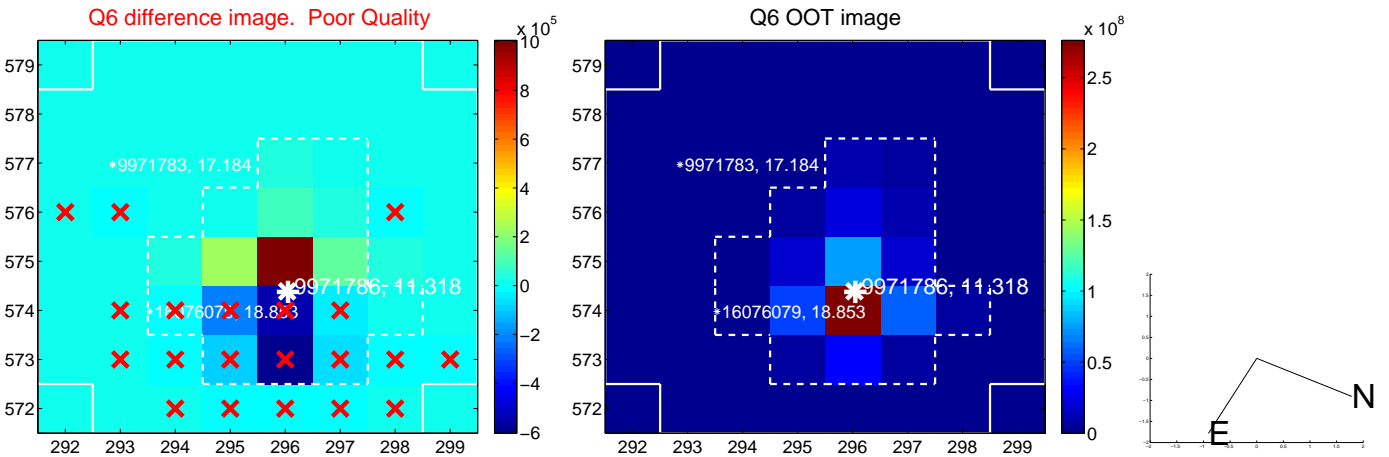
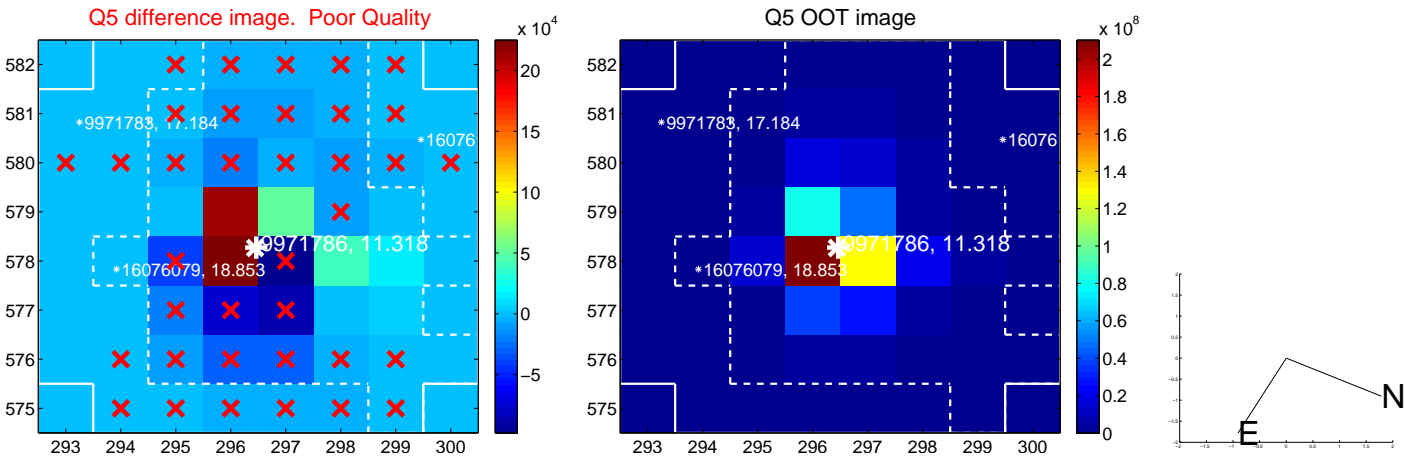


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

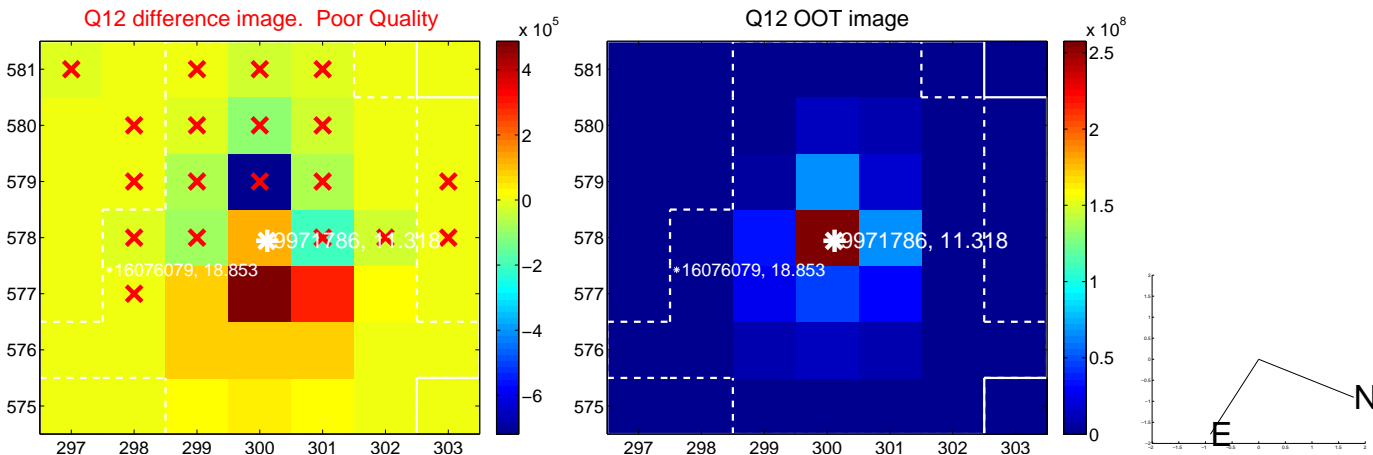
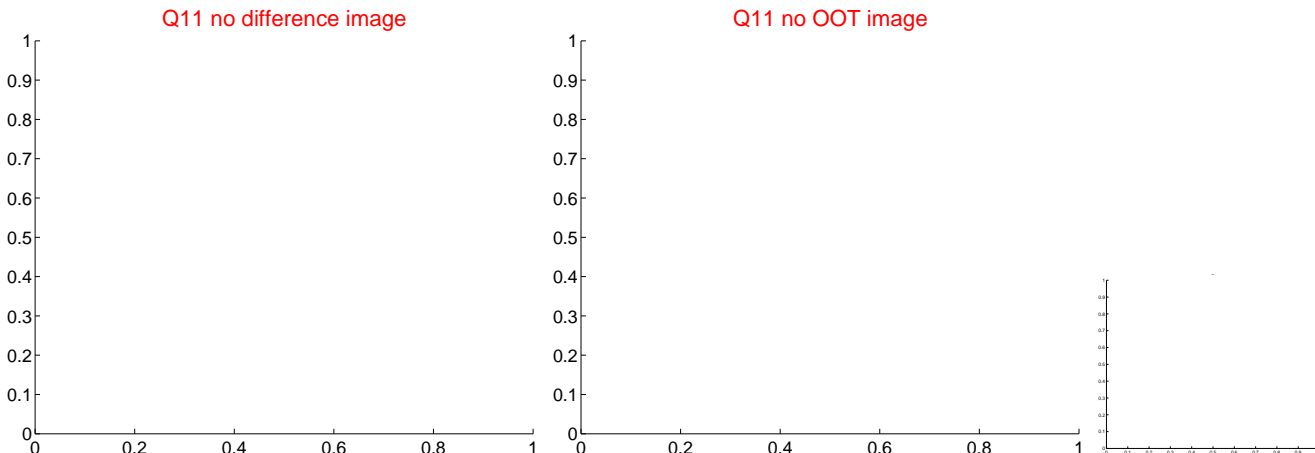
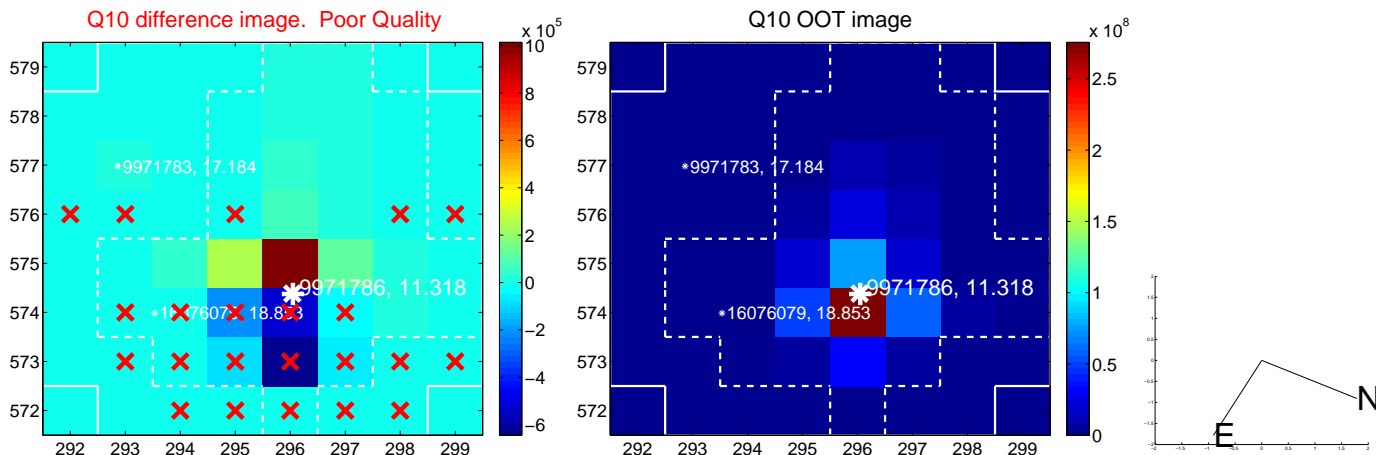
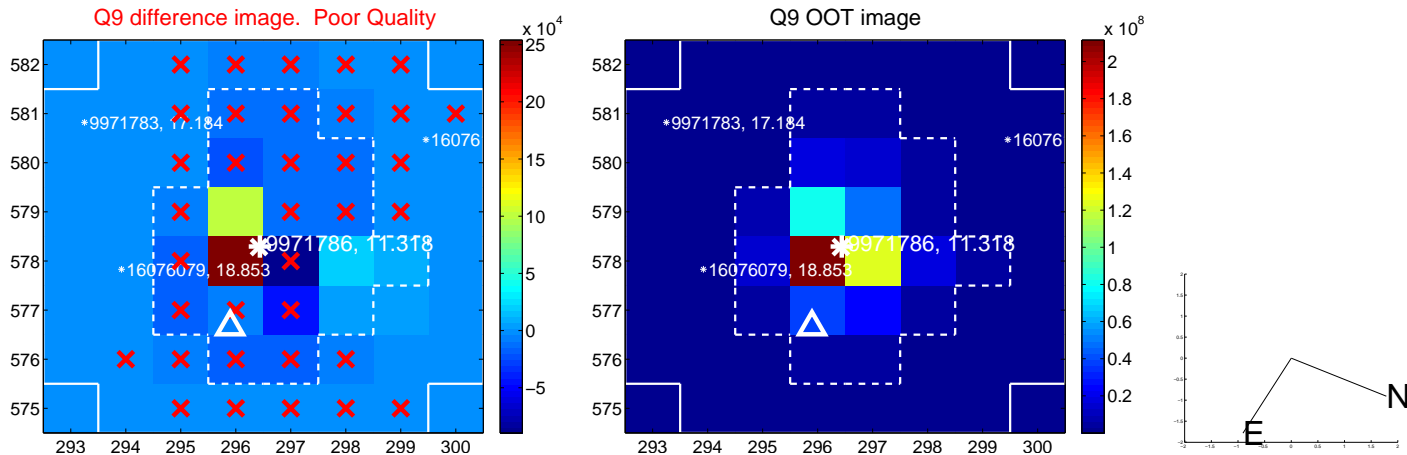
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



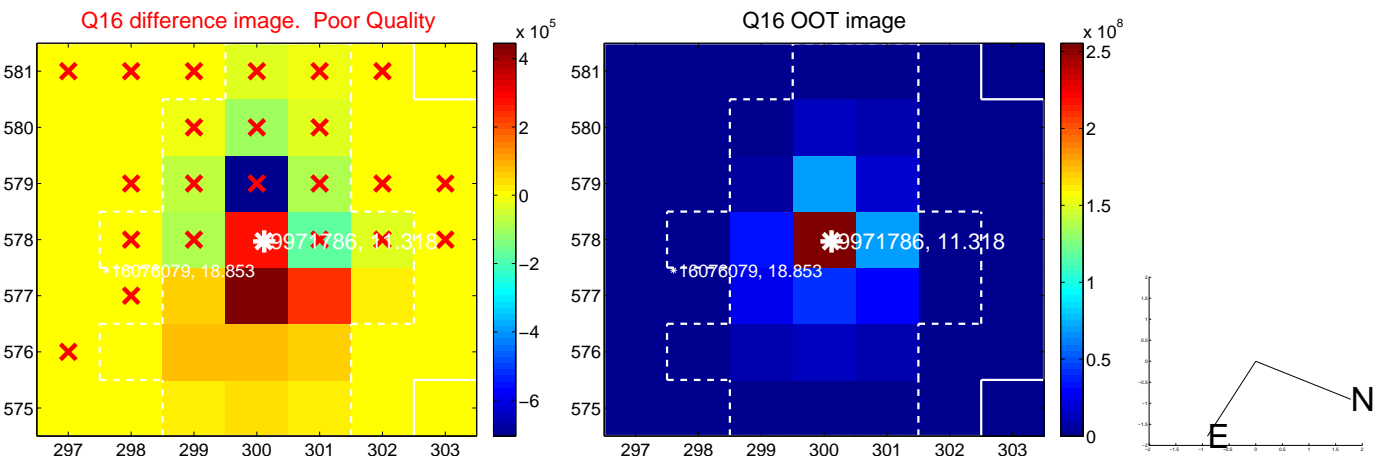
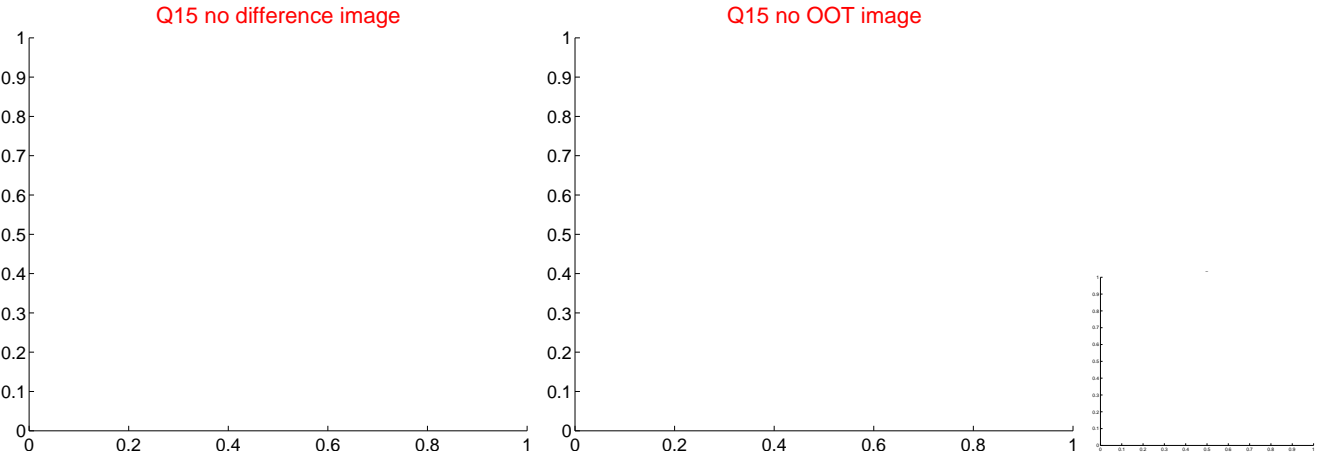
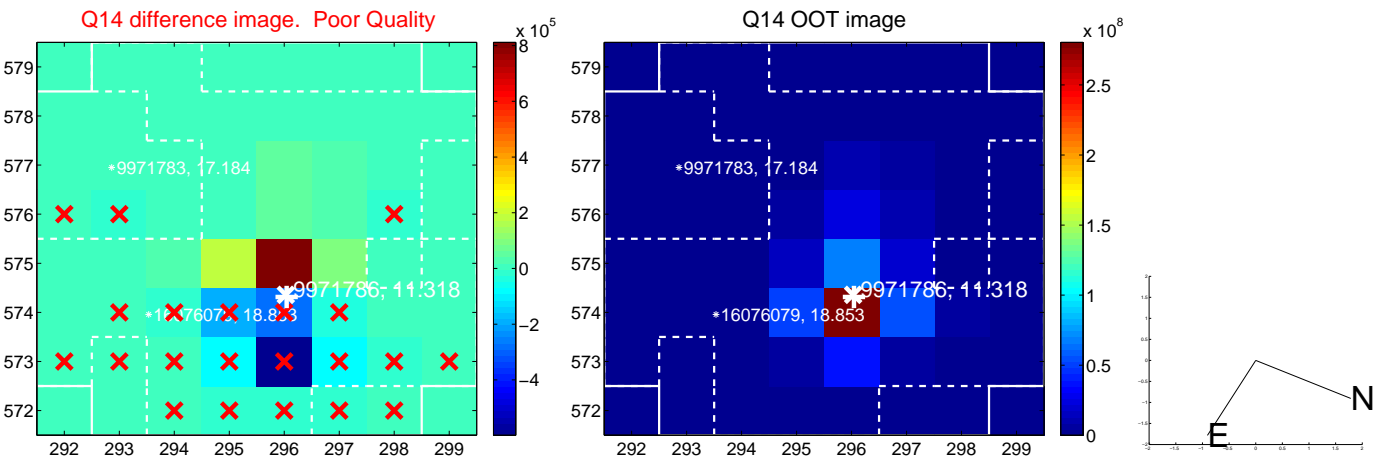
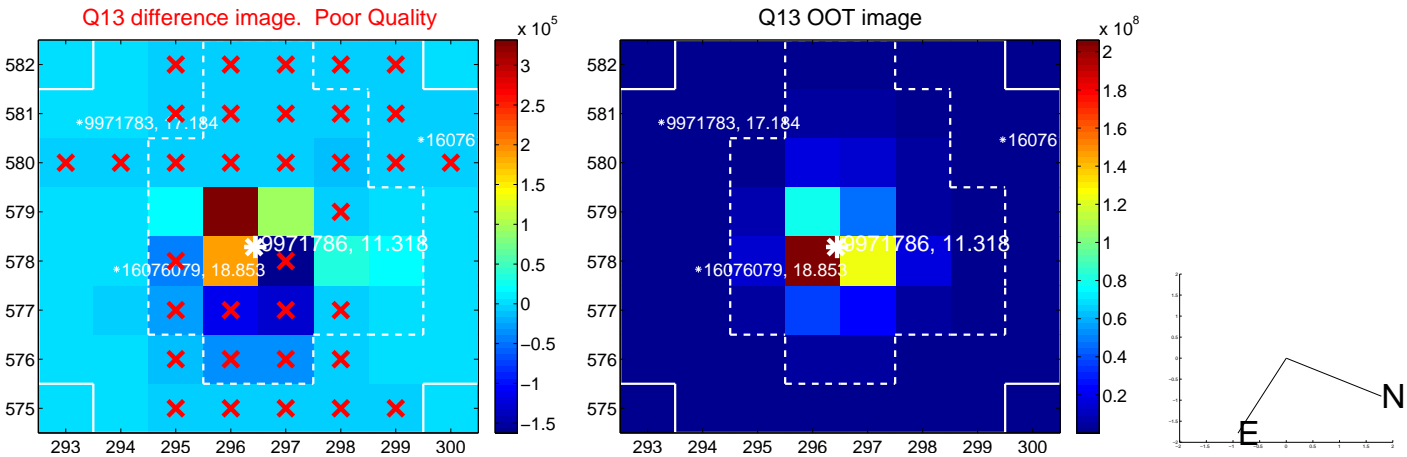
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



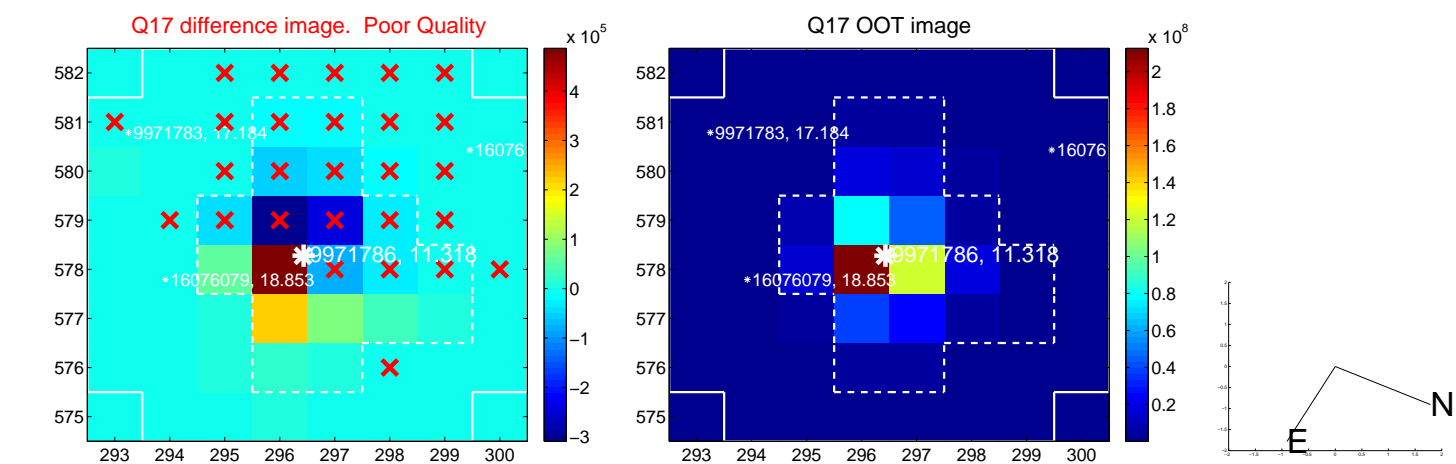
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



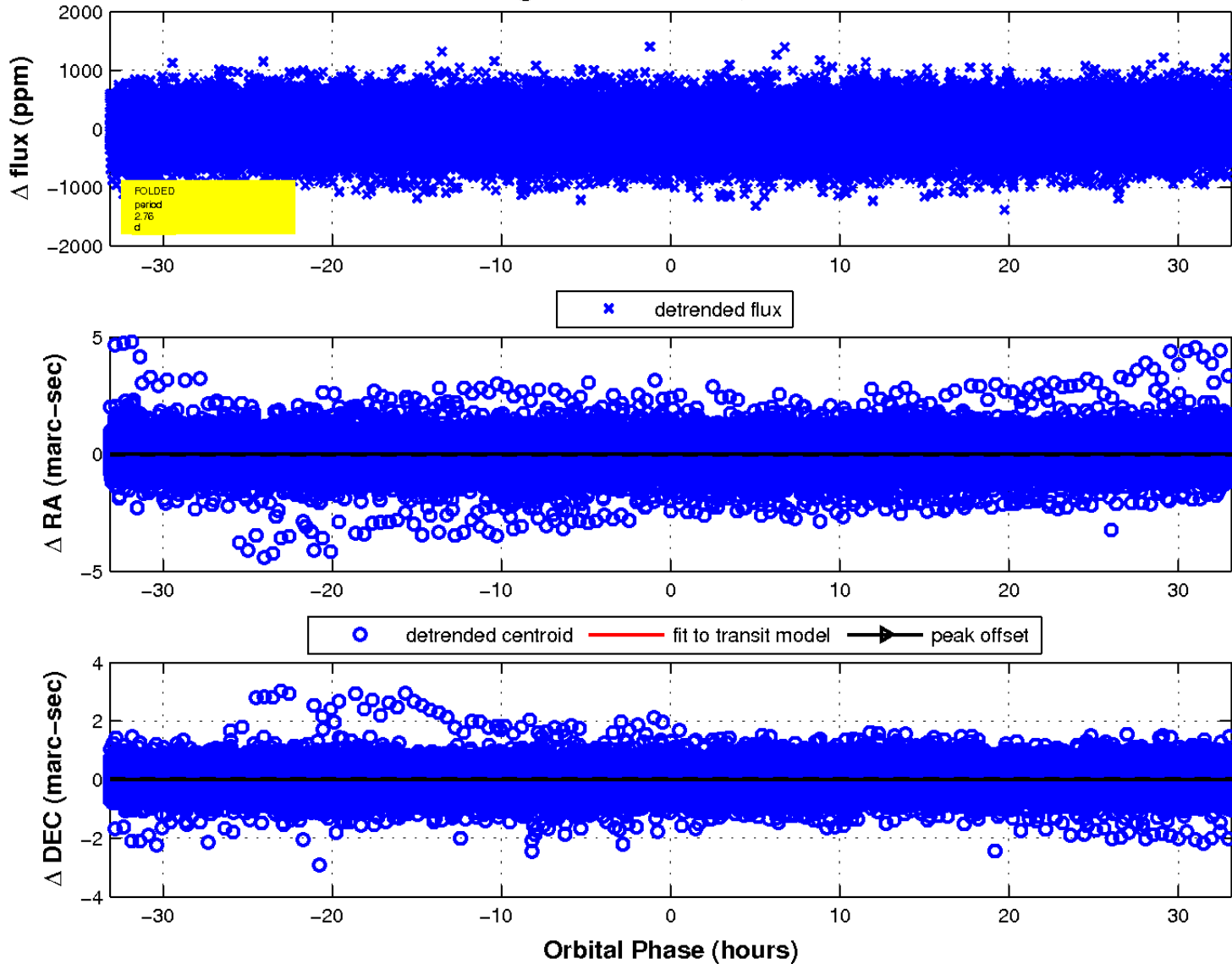
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

