

KIC 009958071

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})
009958071-01	OBS	No	2.734459	133.096324	8.8	24.955	10.9	9.4	1.81	9142	0.55	8624.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009958071-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_CROWDED

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

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

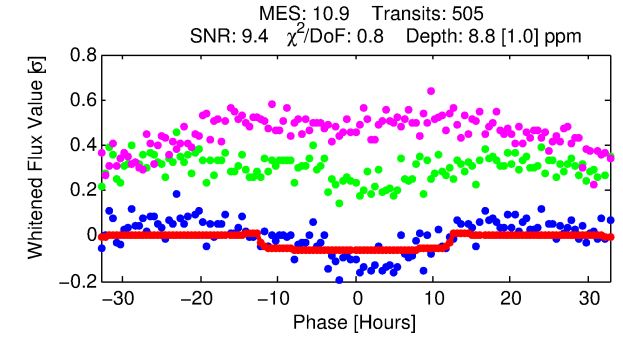
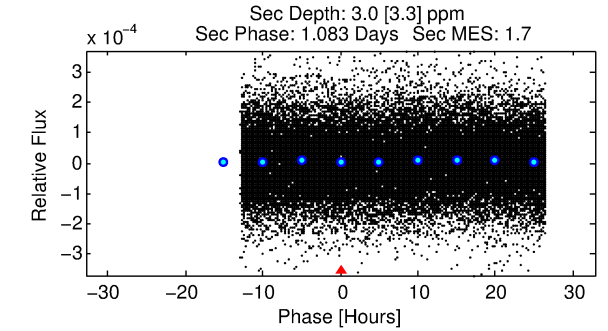
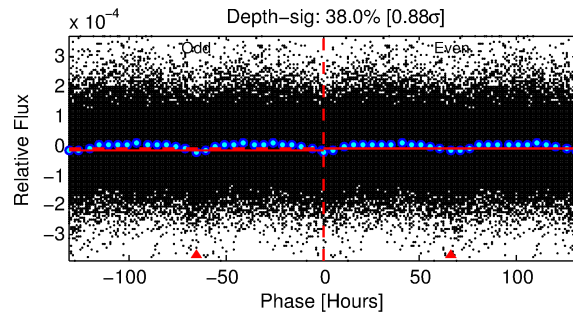
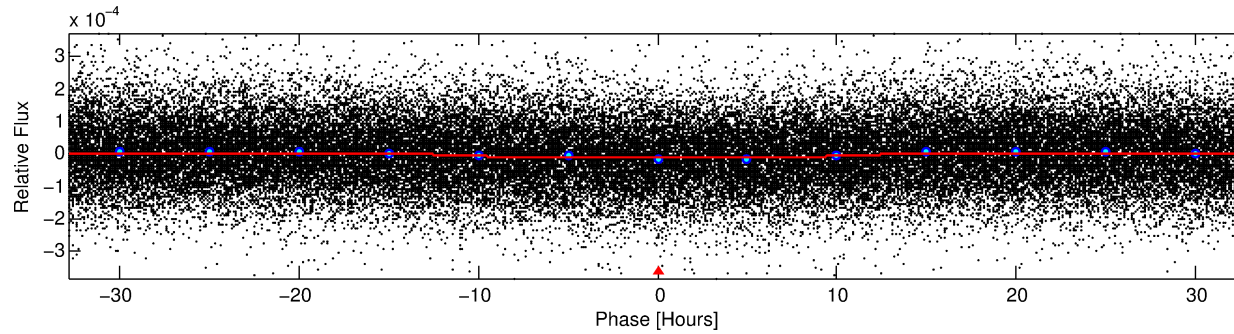
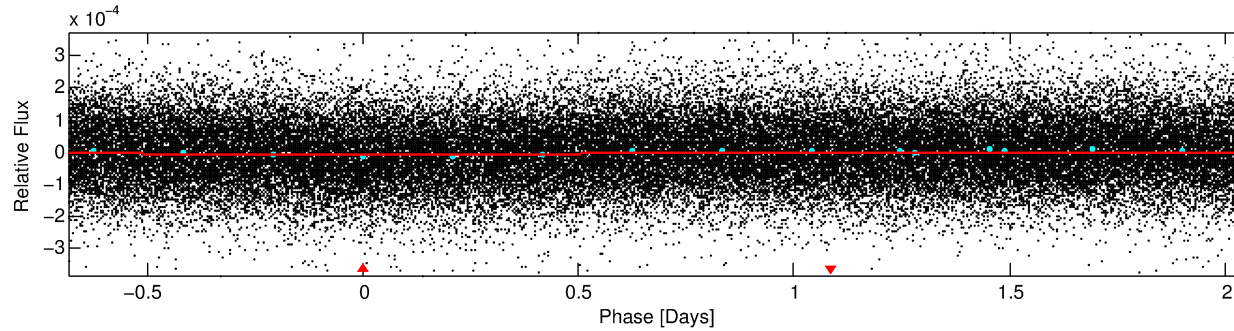
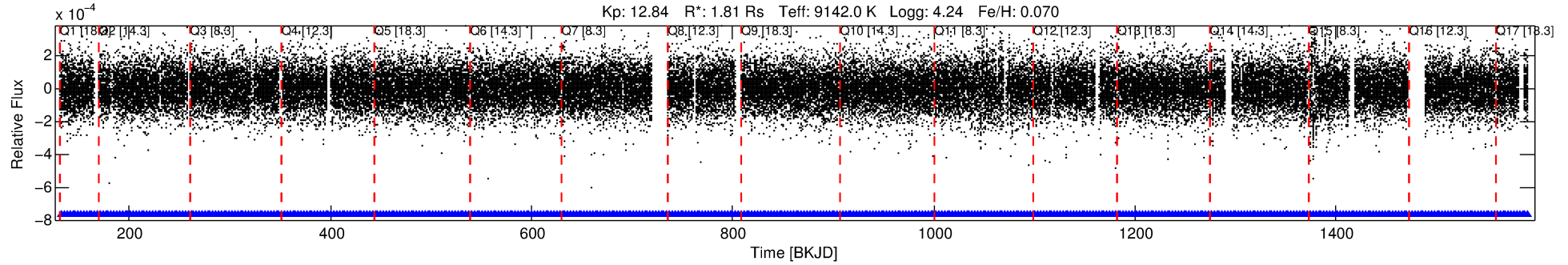
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009958071-01

No Significant Match Found

DV One-Page Summary

KIC: 9958071 Candidate: 1 of 1 Period: 2.734 d



DV Fit Results:

Period = 2.73446 [0.00007] d
Epoch = 133.0963 [0.0154] BKJD
Rp/R* = 0.0028 [0.0020]
a/R* = 1.08 [0.74]
b = 0.01 [329.95]
Seff = 8624.01 [3912.22]
Teq = 2457 [279] K
Rp = 0.55 [0.45] Re
a = 0.0487 [0.0143] AU
Ag = 13.32 [25.02] [0.49 σ]
Teffp = 7258 [3344] K [1.43 σ]

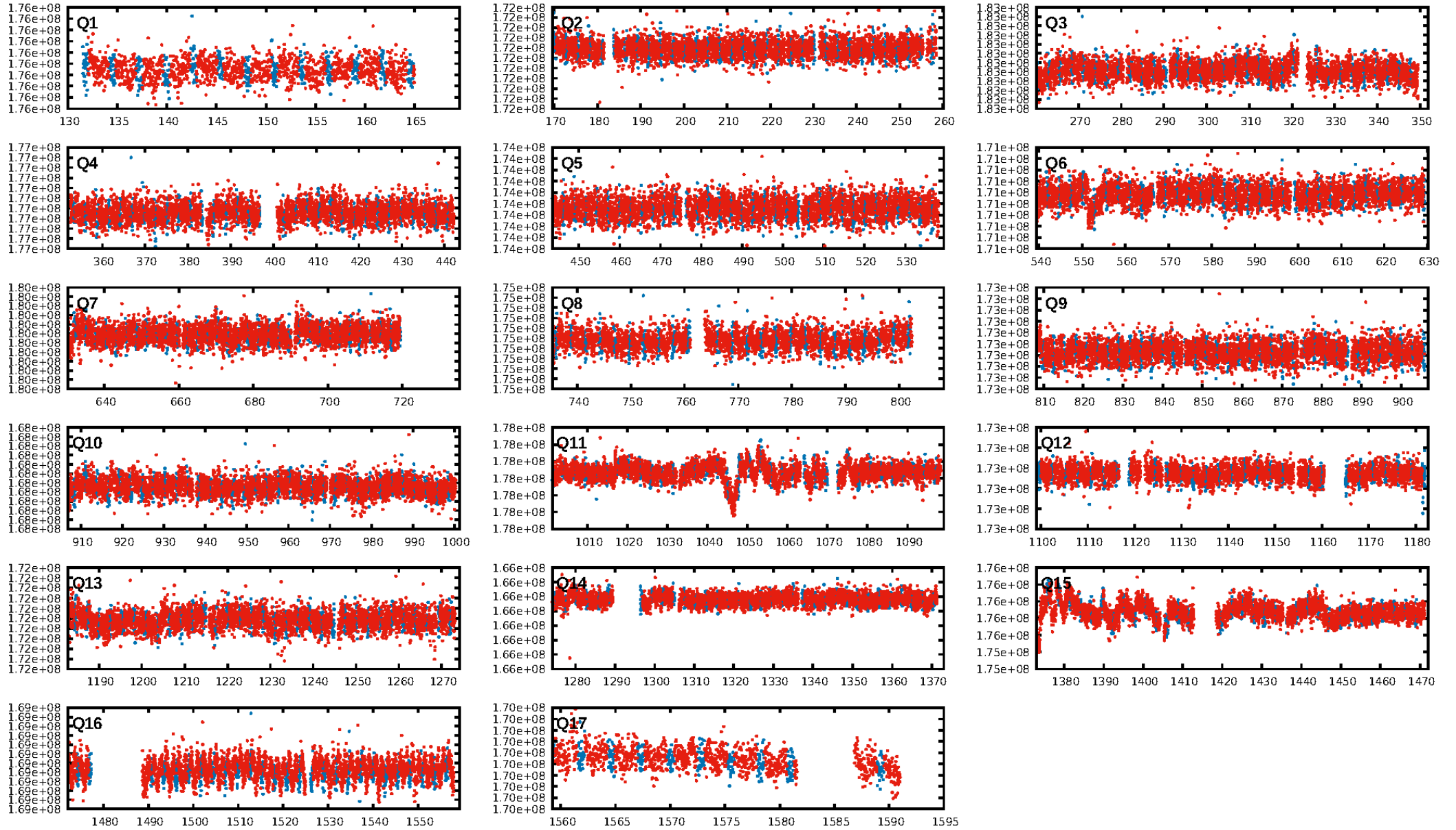
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [483/483]
GhostDiagnostic-chr: -1.9
Centroid-sig: 0.0%
Centroid-so: 11.216 arcsec [4.49 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

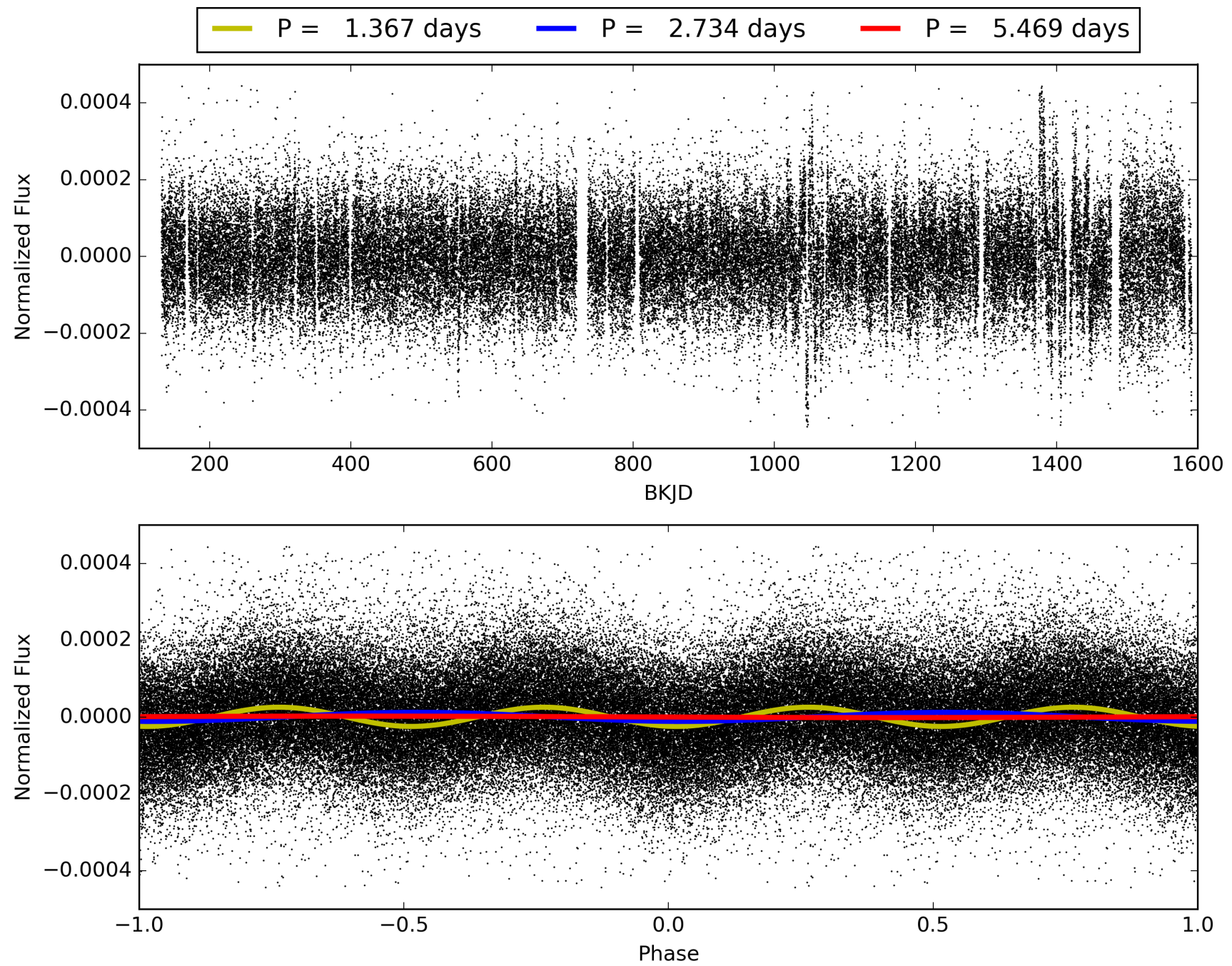
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:26:16 Z

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

TCE 009958071-01, PDC Light Curves

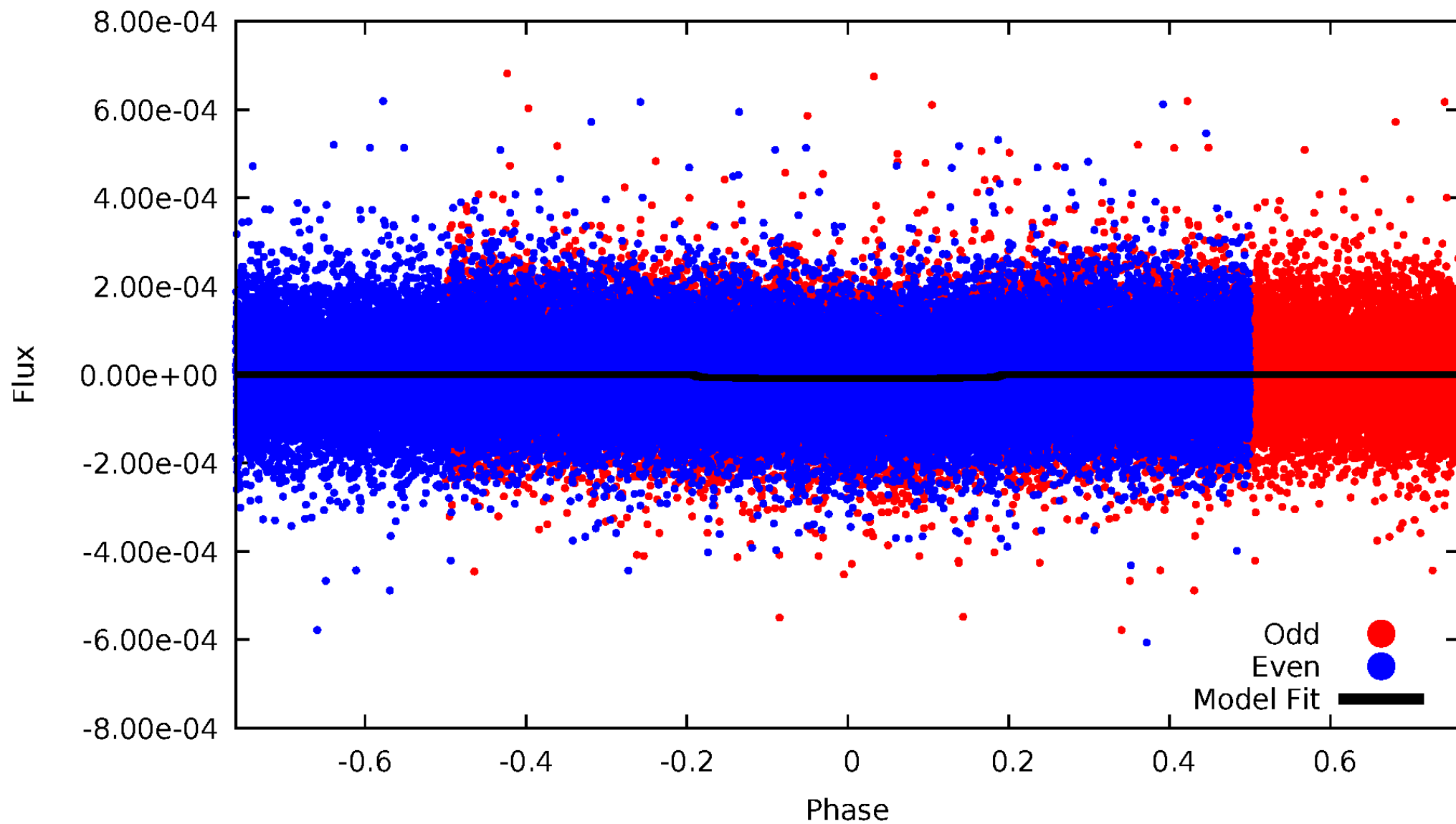


TCE 009958071-01



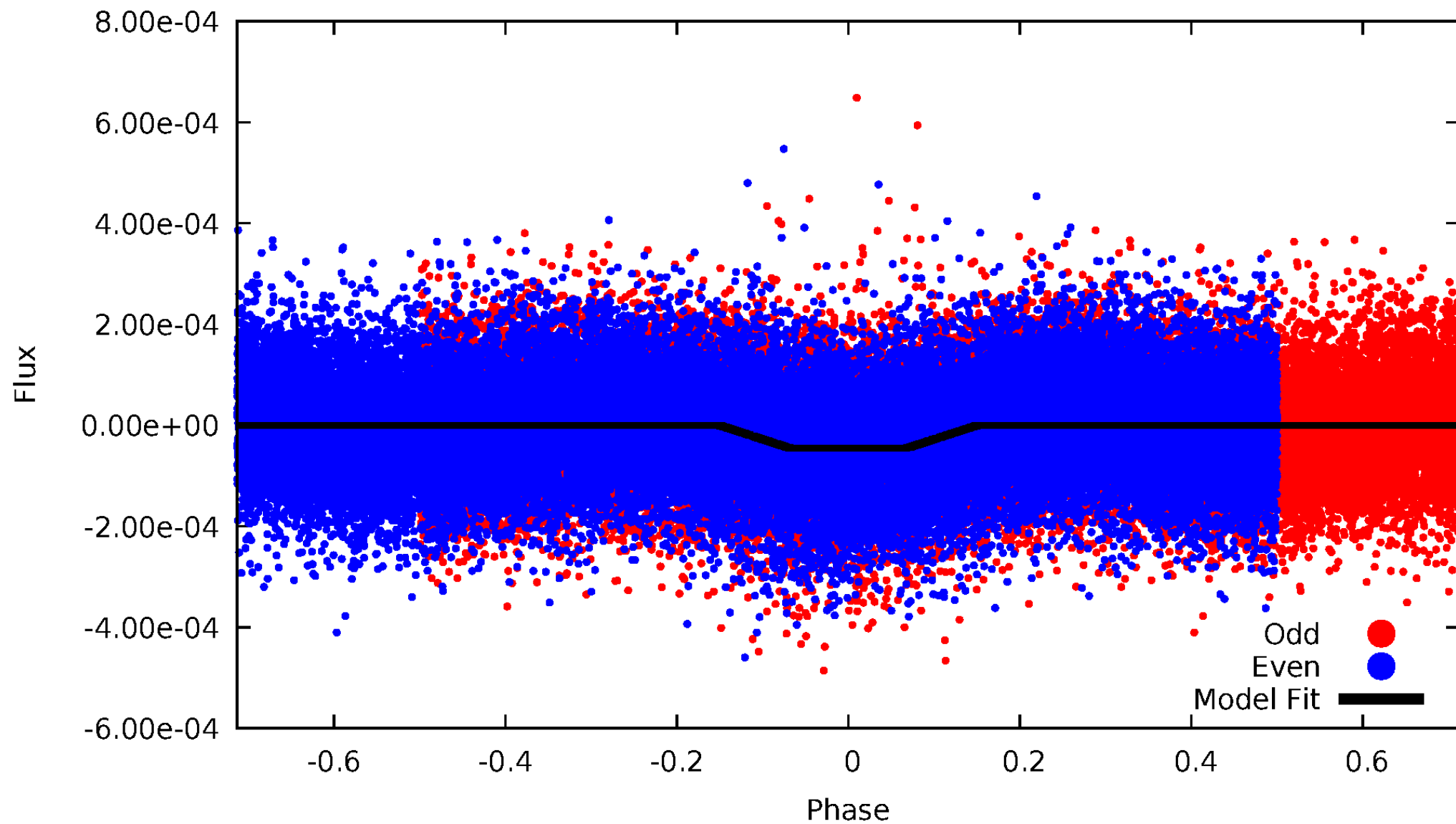
DV Odd/Even

TCE 009958071-01



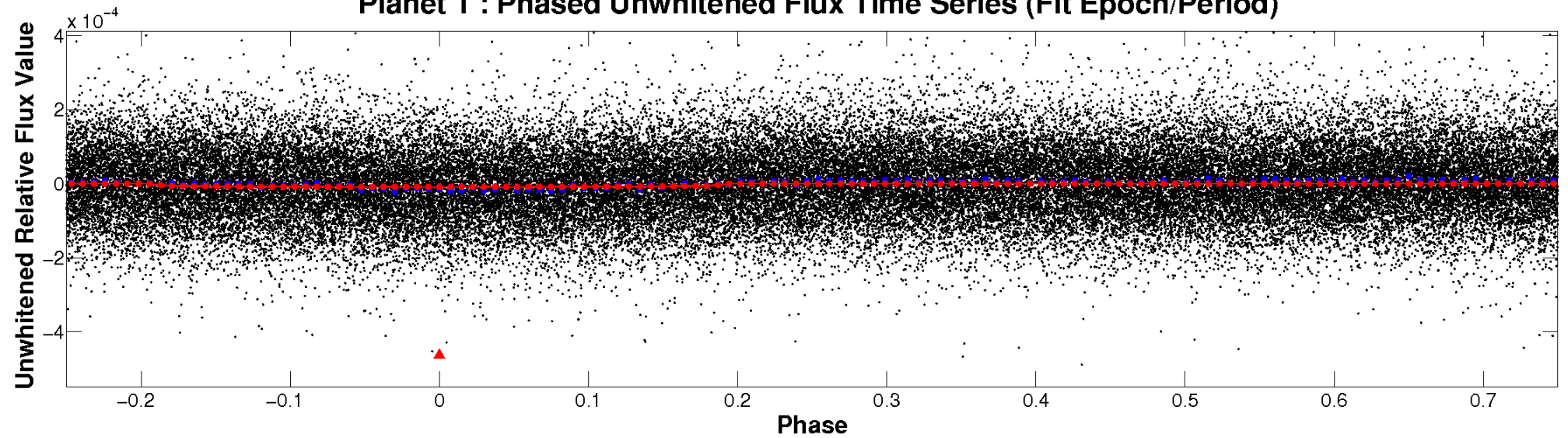
ALT Odd/Even

TCE 009958071-01

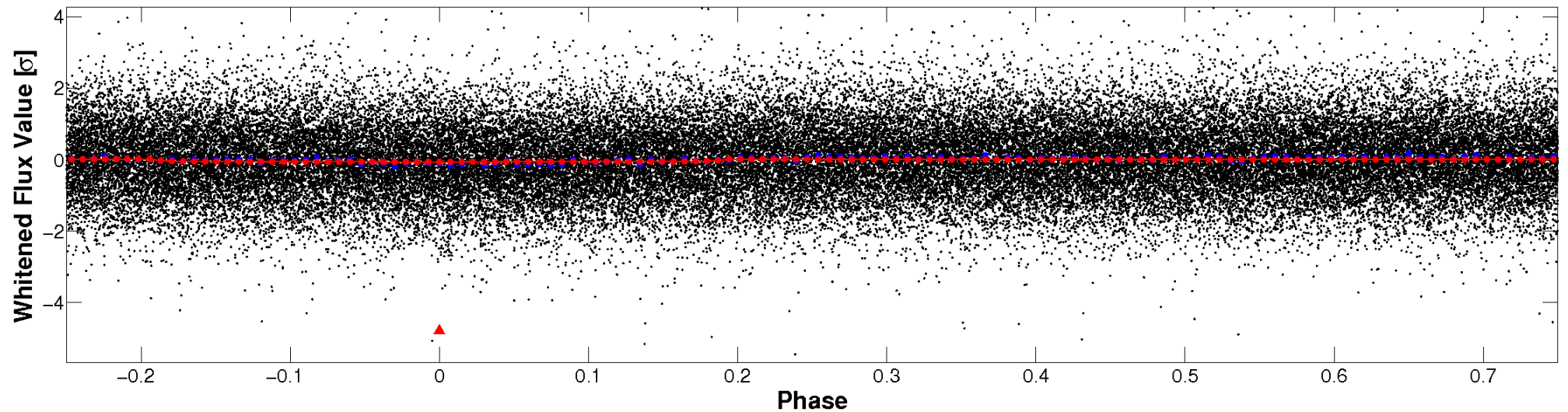


Non-Whitened Vs. Whitened Light Curve

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

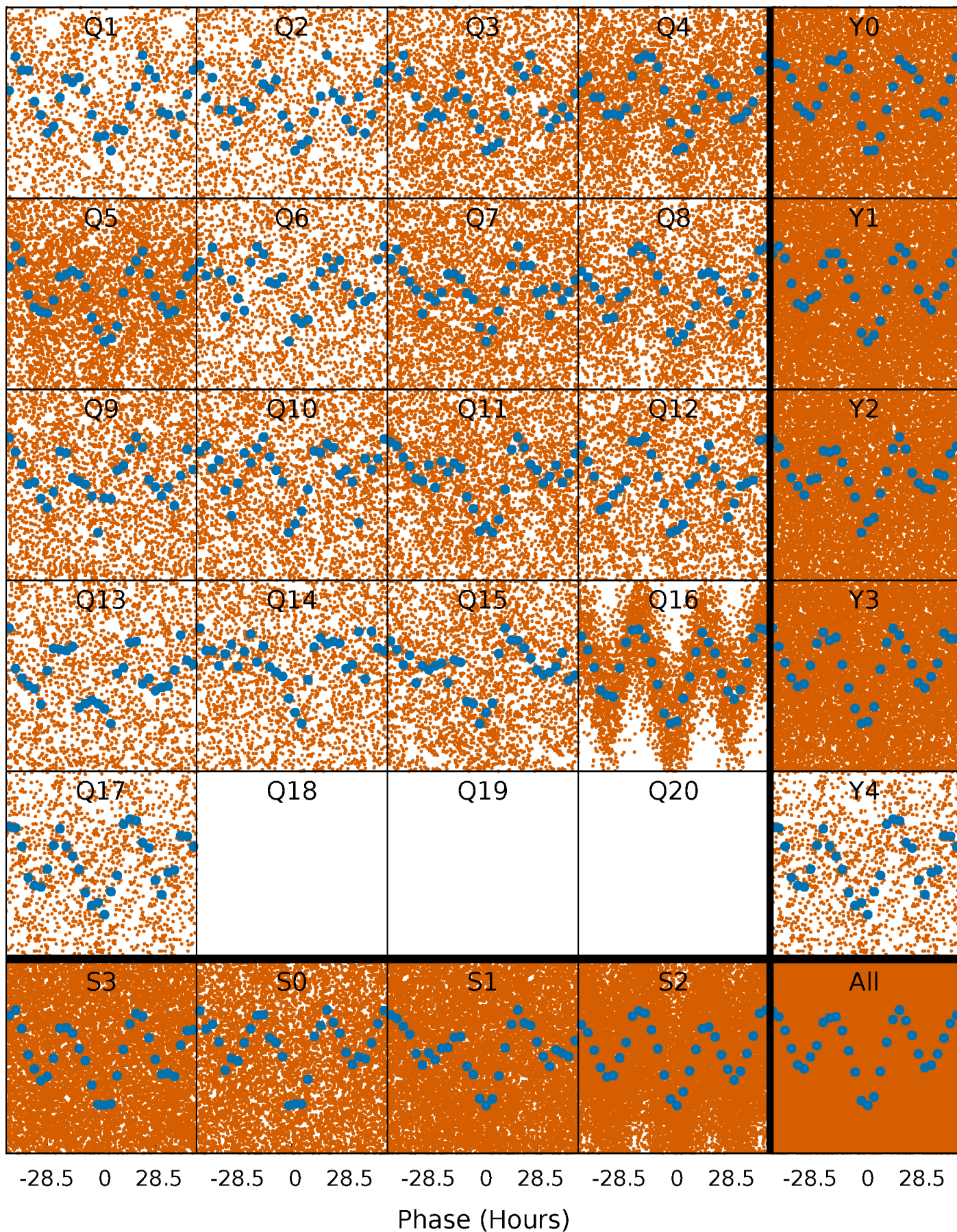


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



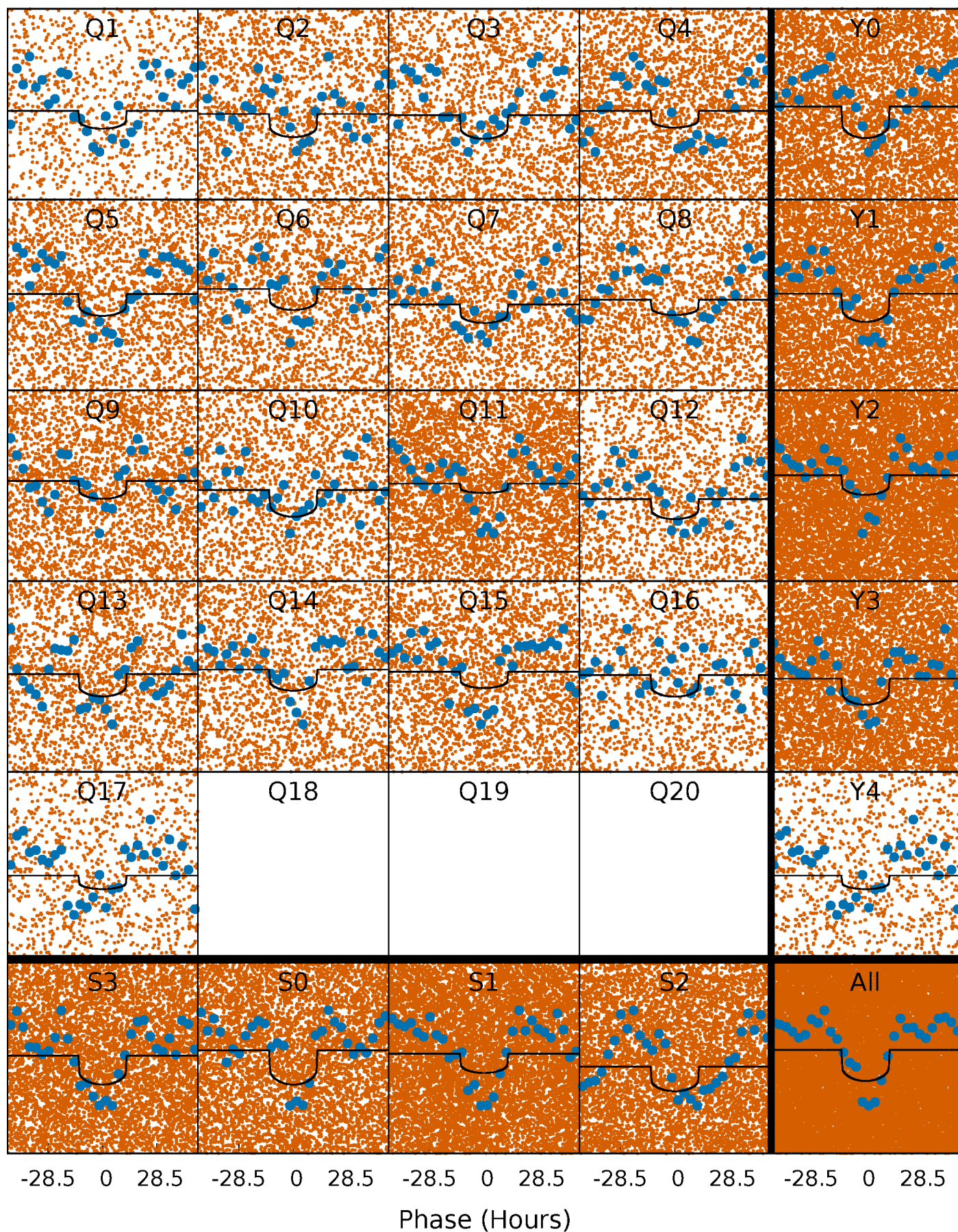
PDC Quarter-Phased Transit Curves

TCE 009958071-01 P= 2.734459 Days $T_0=133.096324$ (BKJD)



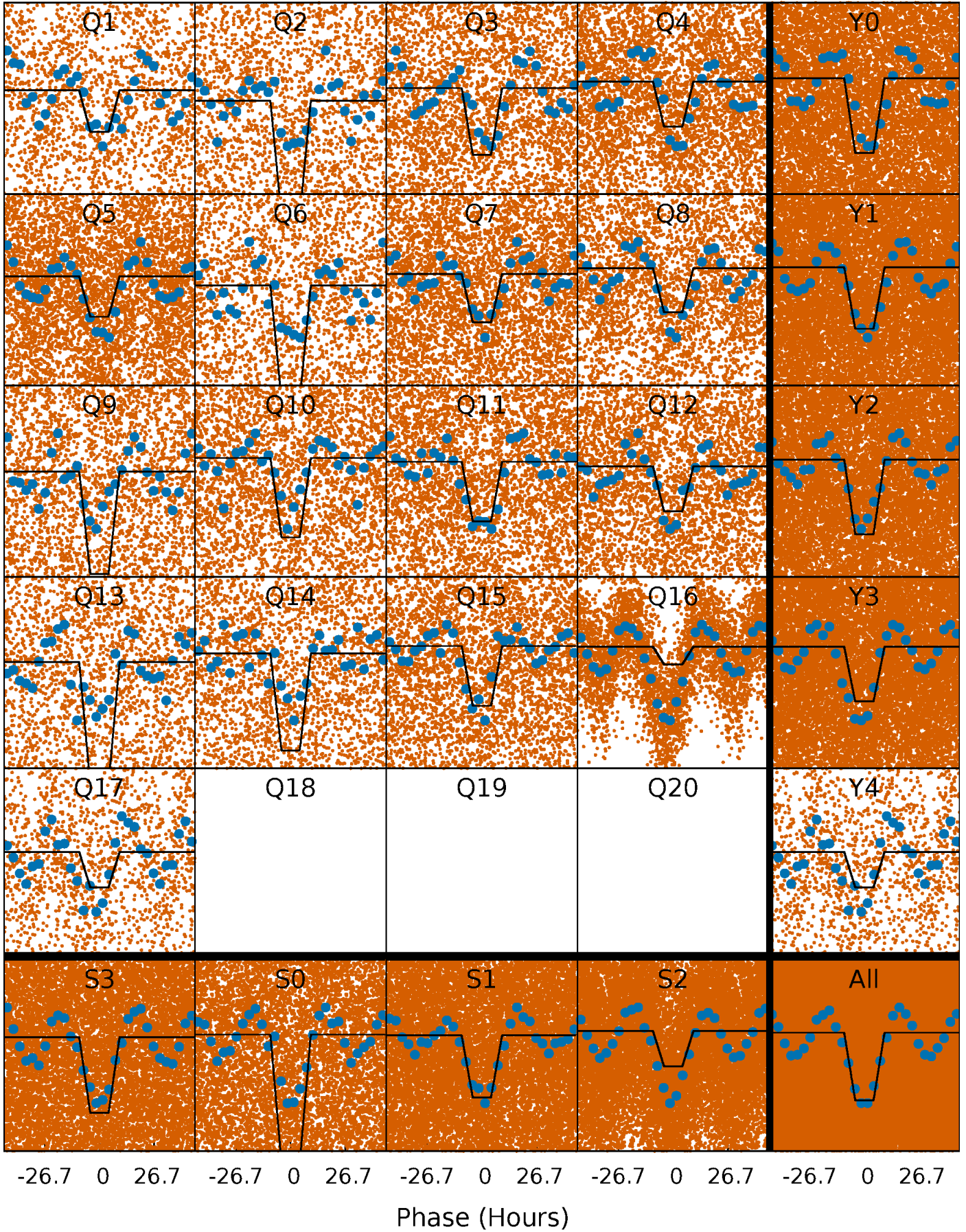
DV Quarter-Phased Transit Curves

TCE 009958071-01 P= 2.734459 Days $T_0=133.096324$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

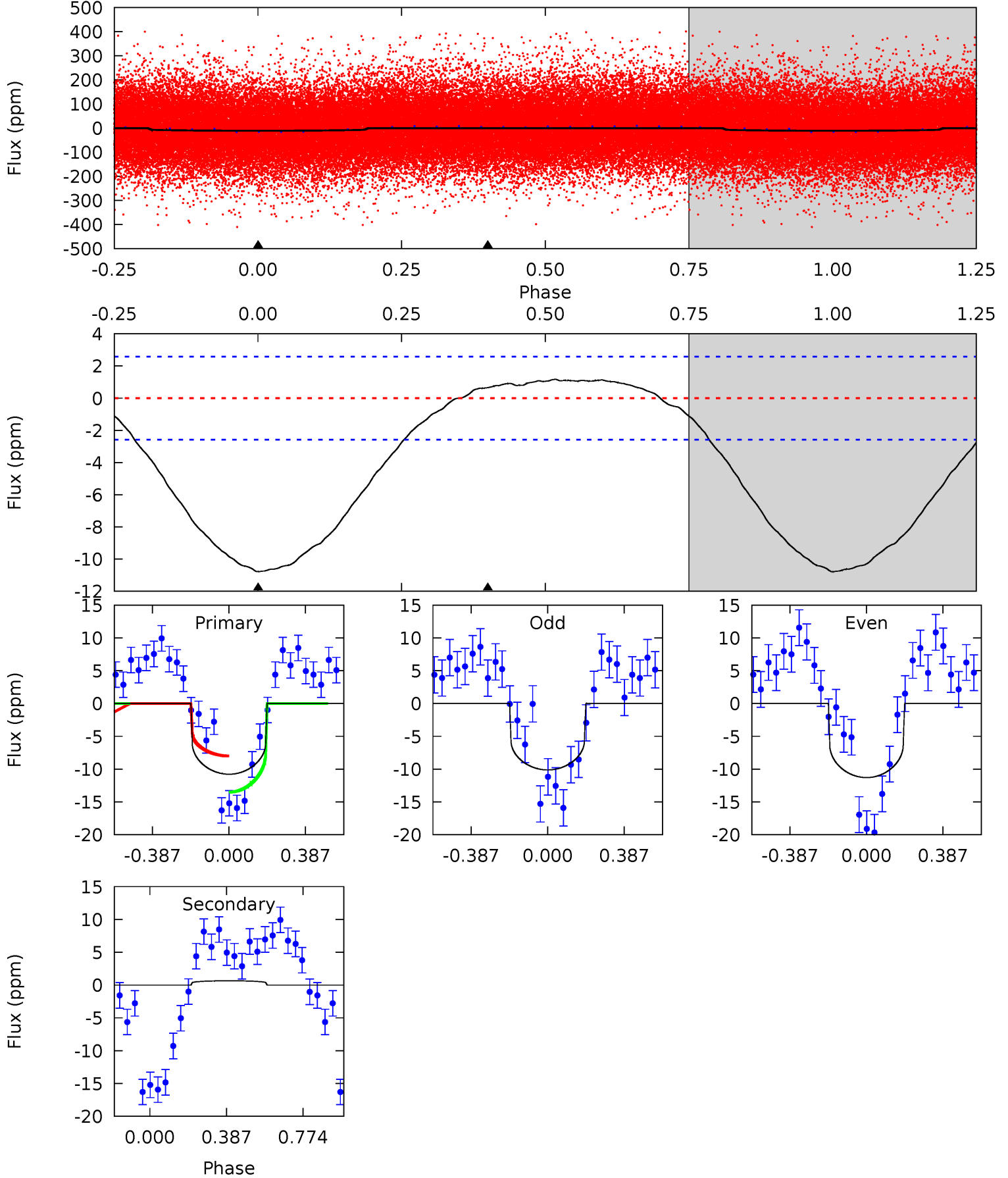
TCE 009958071-01 P= 2.734539 Days $T_0=133.133428$ (BKJD)



DV Model-Shift Uniqueness Test

009958071-01, P = 2.734459 Days, E = 130.361865 Days

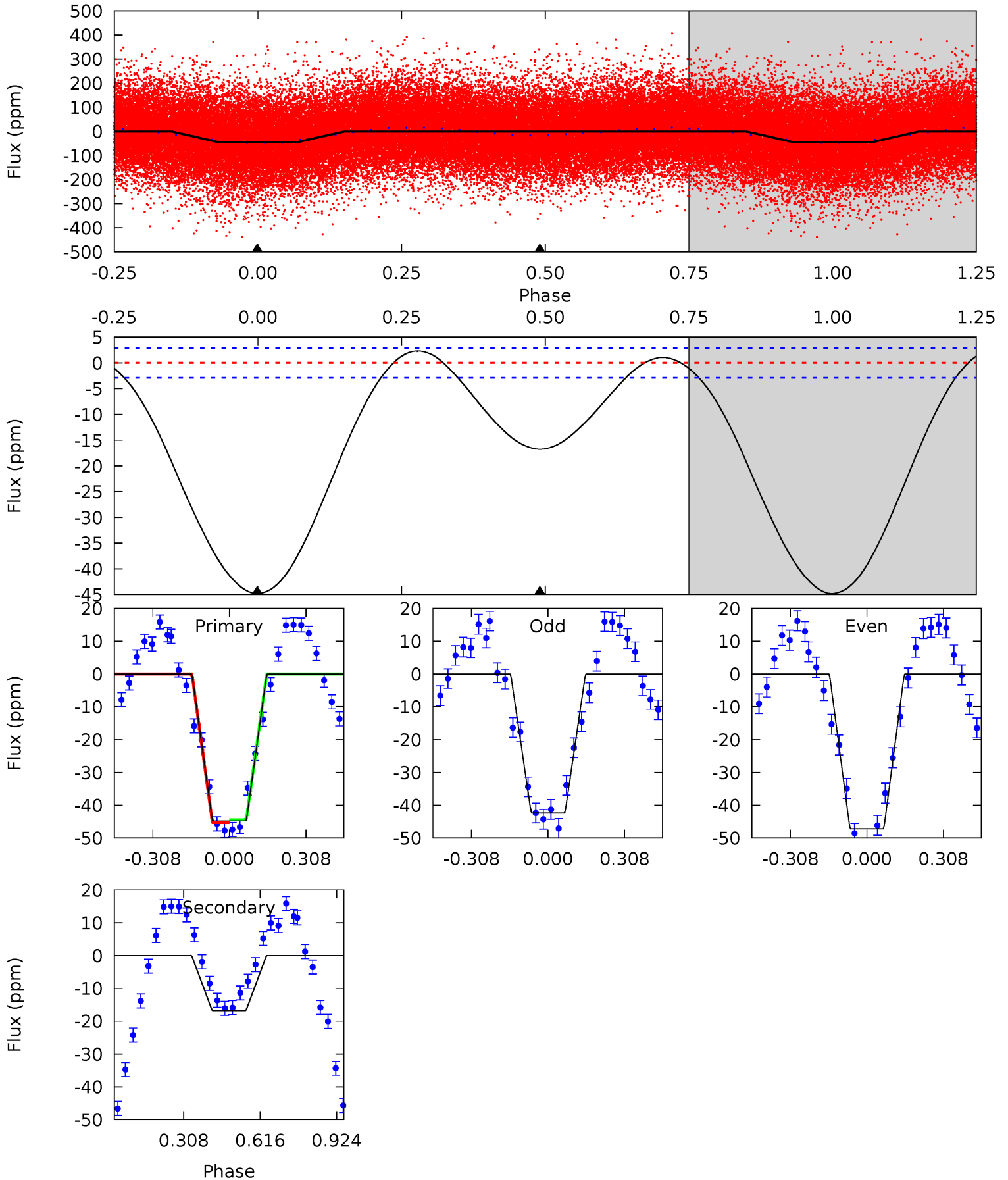
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	-1.09	0	0	4.27	0.87	0.94	17.8	17.8	-1.09	-1.09	0.98	1.19	0.10	4.47



Alt Model-Shift Uniqueness Test

009958071-01, P = 2.734539 Days, E = 130.398889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.9	25.0	0	0	4.32	1.02	2.19	66.9	66.9	25.0	25.0	3.63	1.22	0.05	0.61



Stellar Parameters For KIC 009958071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9142^{+292}_{-438}	$4.237^{+0.093}_{-0.217}$	$0.070^{+0.200}_{-0.650}$	$1.806^{+0.653}_{-0.351}$	$2.055^{+0.430}_{-0.430}$	$0.491^{+0.263}_{-0.273}$
	+3%/-5%	+2%/-5%	+286%/-929%	+36%/-19%	+21%/-21%	+53%/-56%
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 009958071-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 1	$0.62^{+0.44}_{-0.36}$	3499^{+269}_{-223}	-4544^{+1003}_{-2437}	$-1.753^{+1.580}_{-11.314}$
Alt.	-17 ± 1	$1.39^{+0.45}_{-0.42}$	3499^{+282}_{-227}	6643^{+1640}_{-837}	11^{+13}_{-5}

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

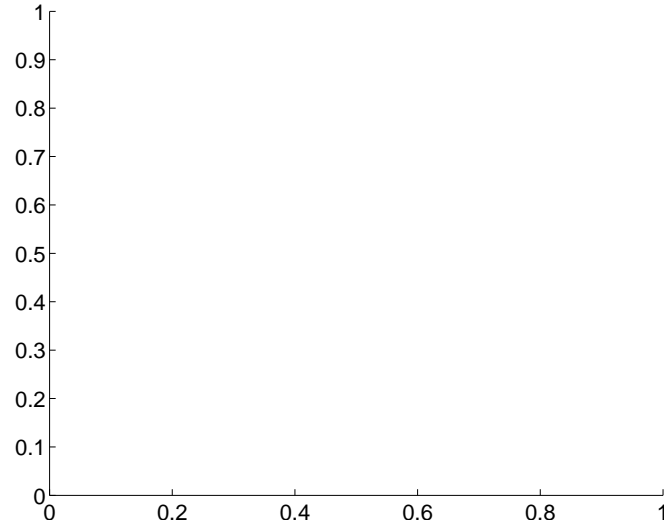
Supplemental centroid analysis for 009958071-01. Kepler magnitude: 12.84. Transit SNR 9.43

There are 0 quarters with good PRF difference image offsets

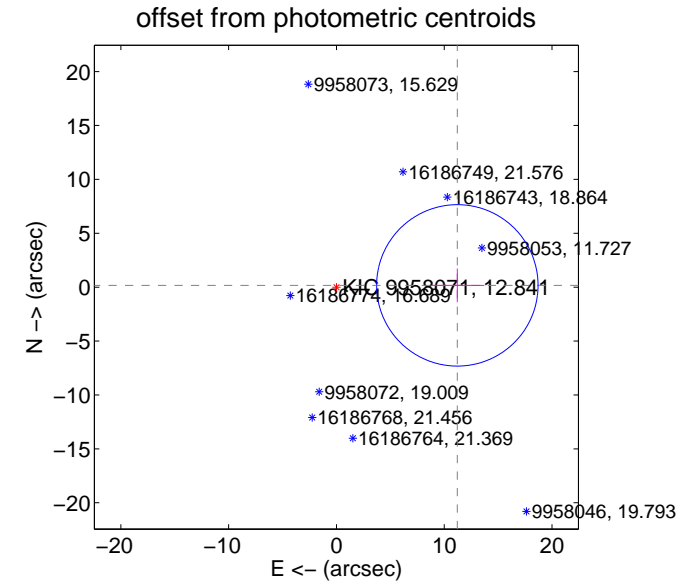
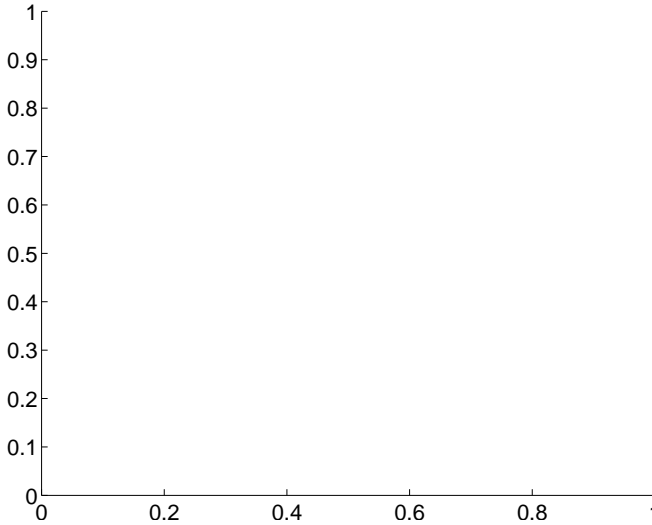
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	11.22 ± 2.50	4.49	-11.22 ± 2.50	0.17 ± 1.57

There is no PRF-fit offset from OOT-fit

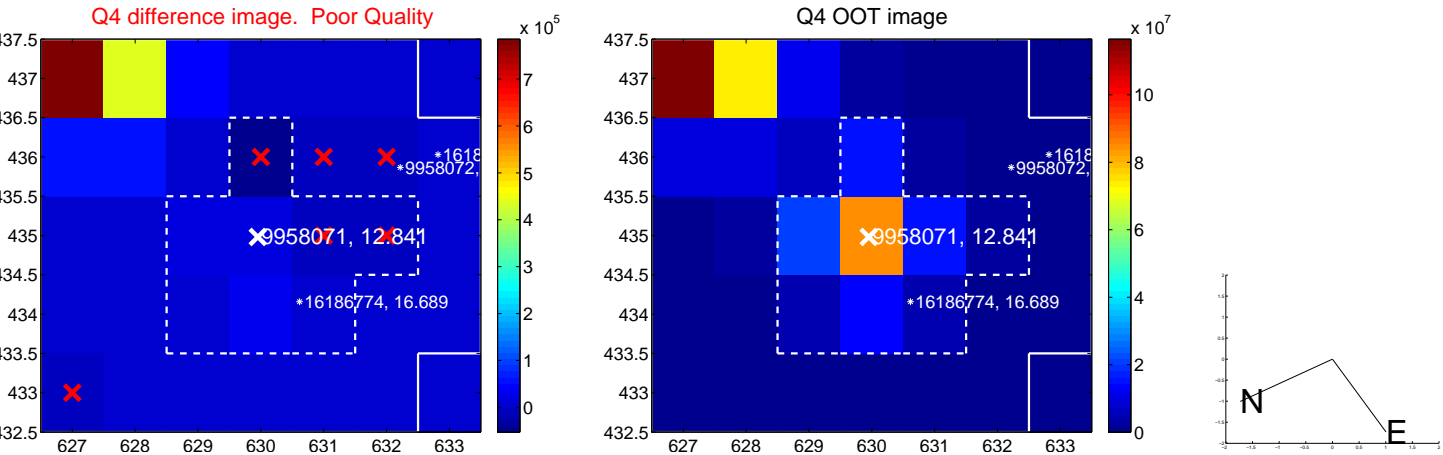
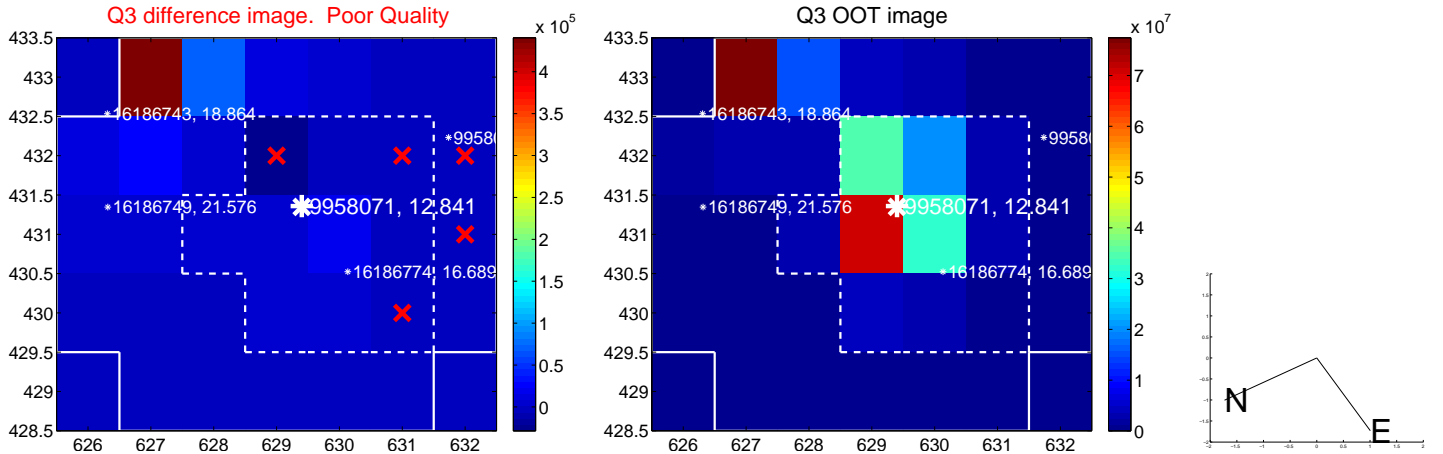
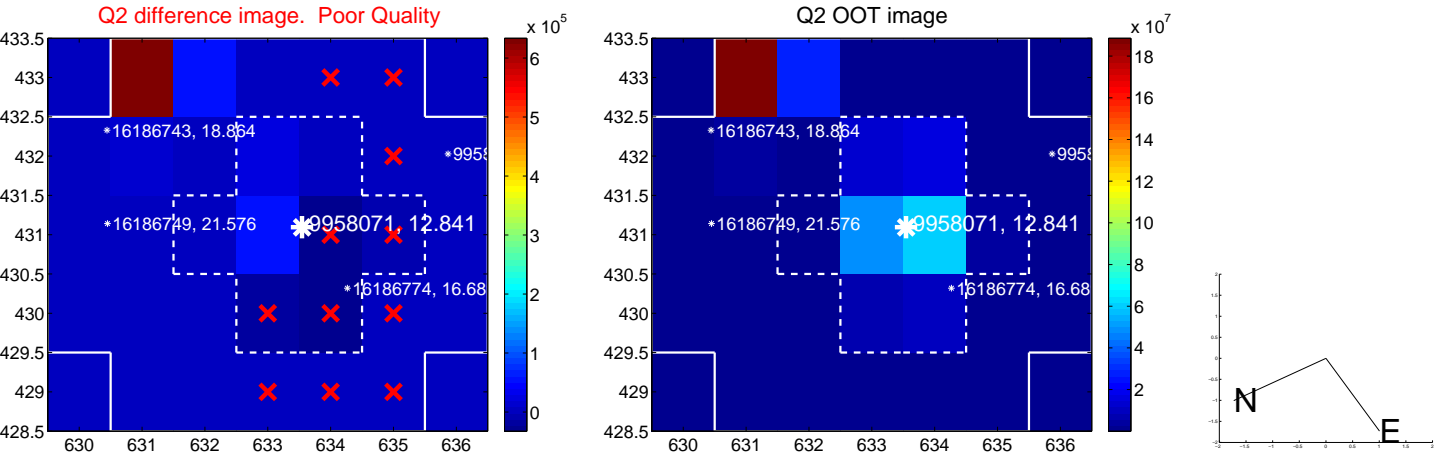
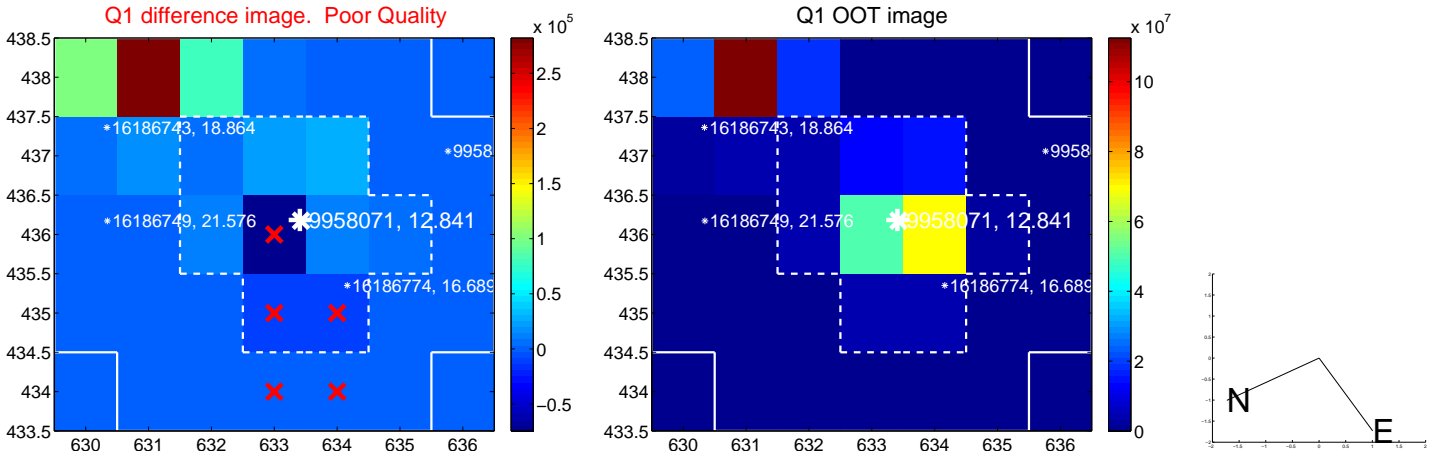


There is no PRF-fit offset from KIC

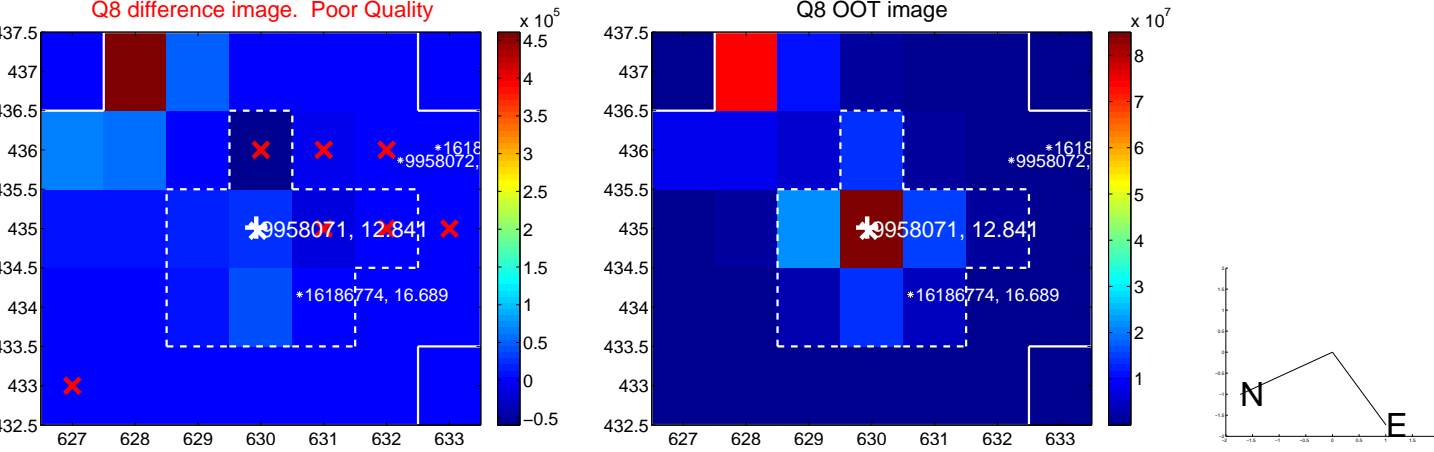
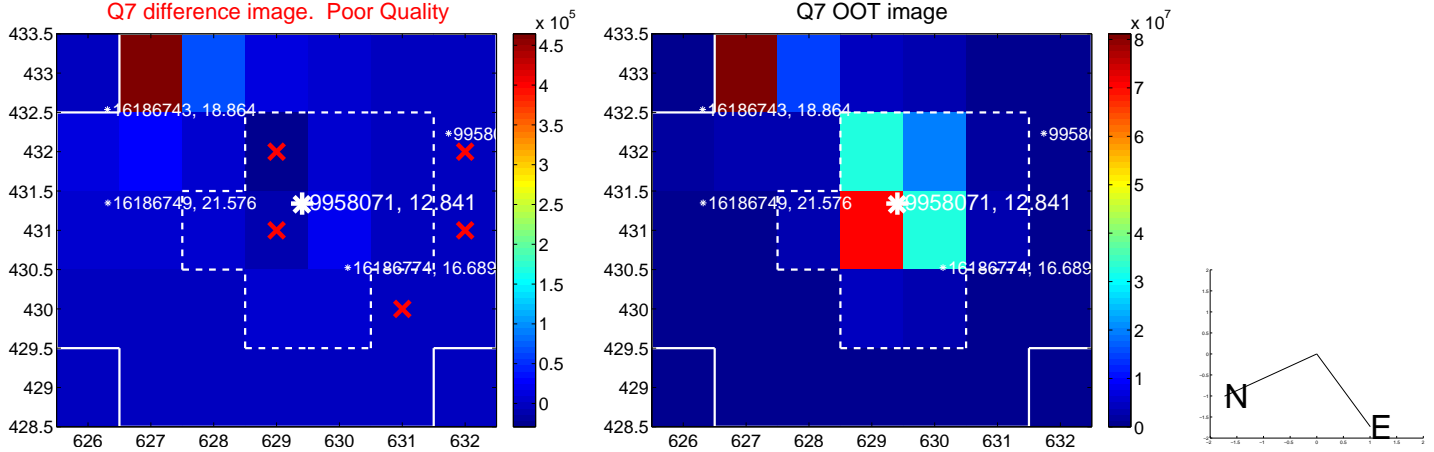
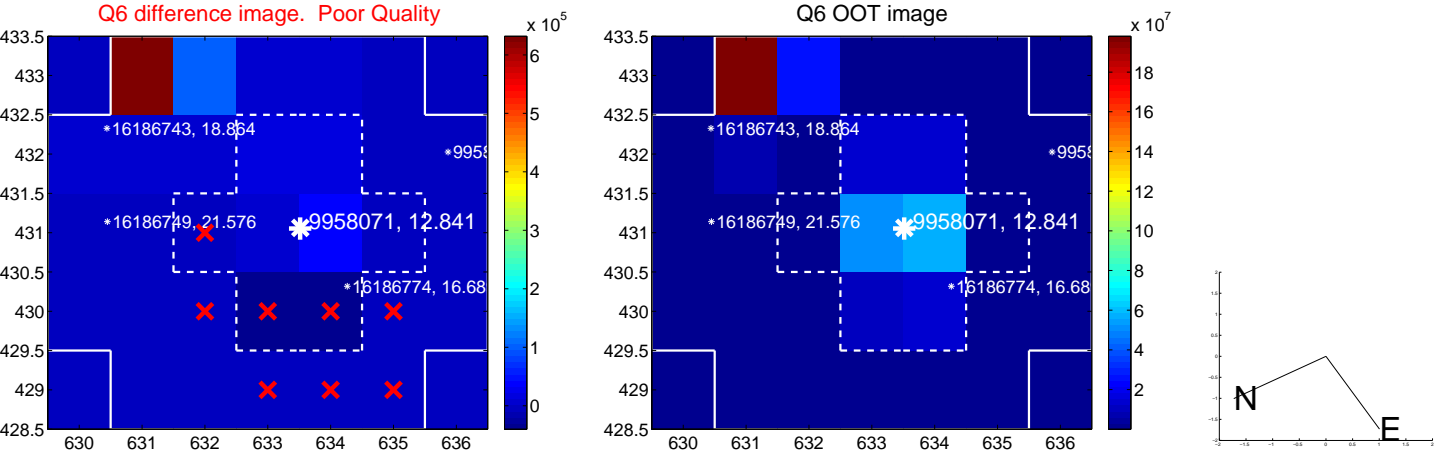
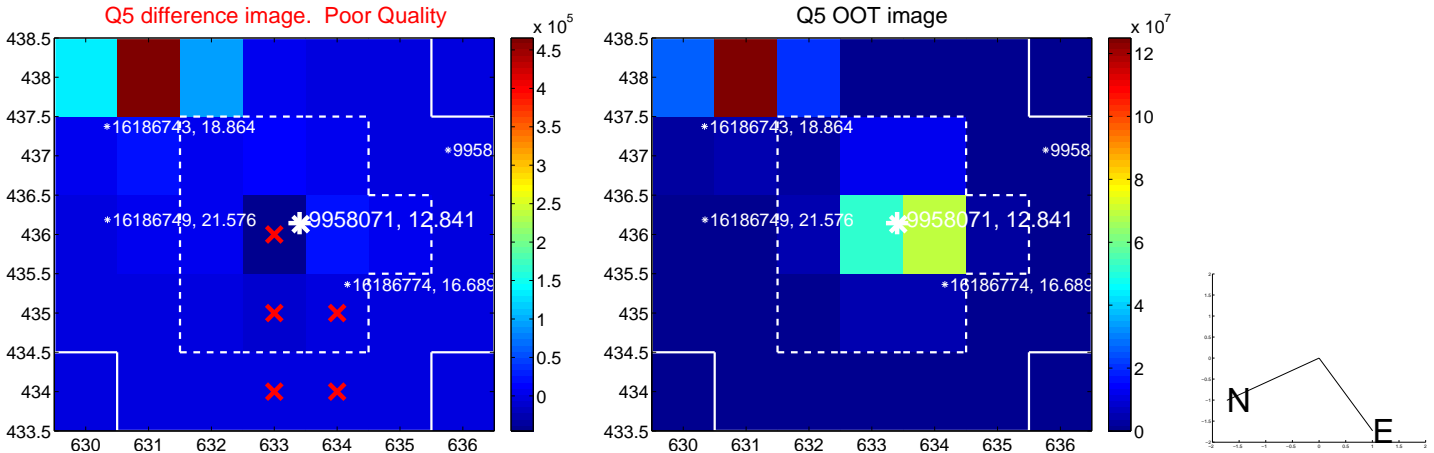


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

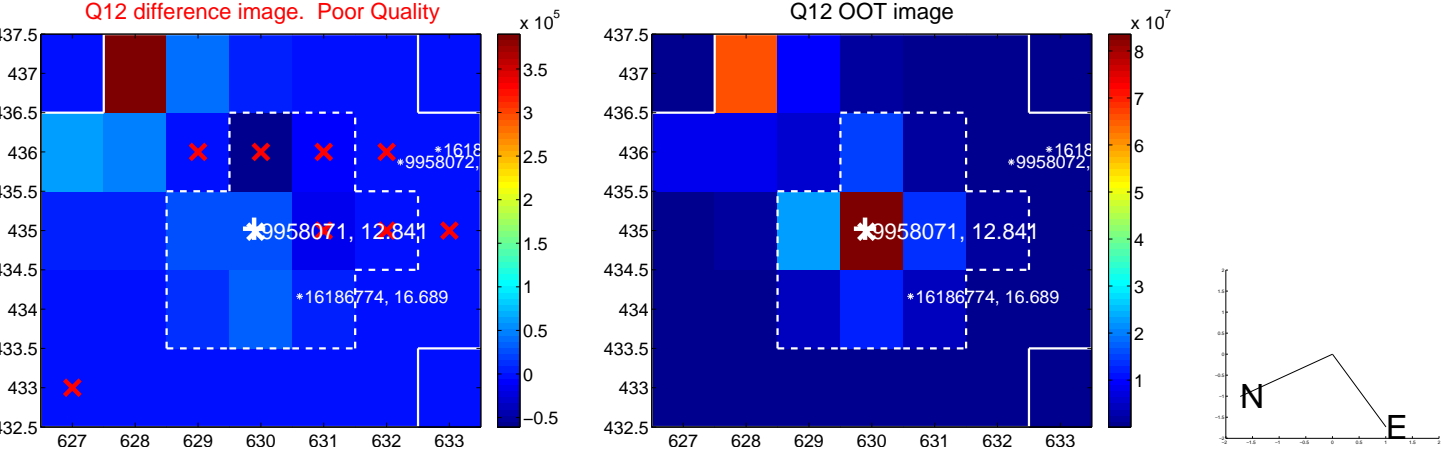
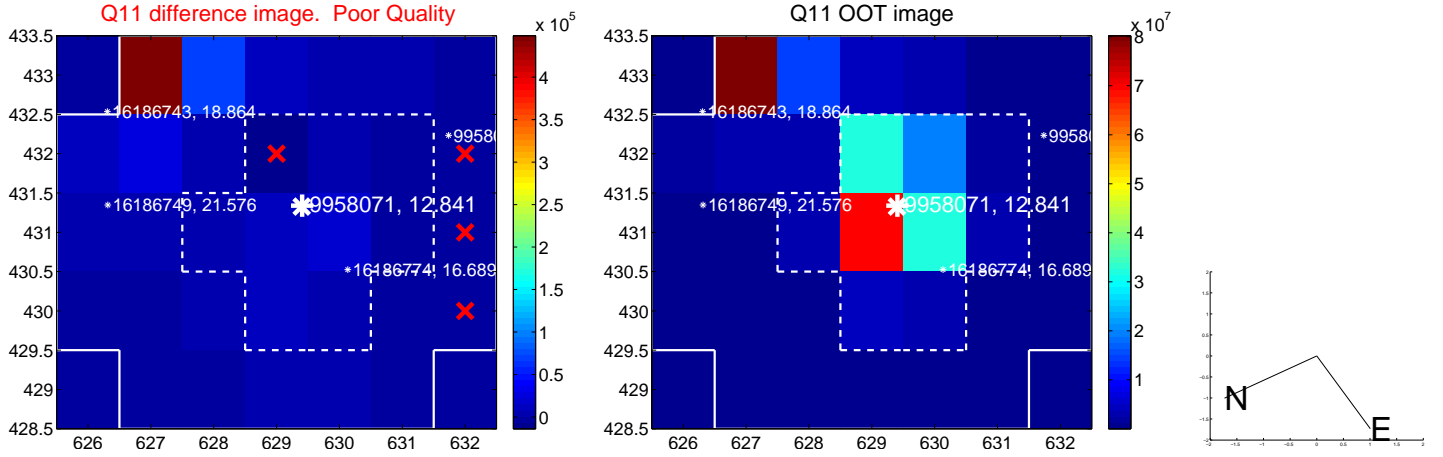
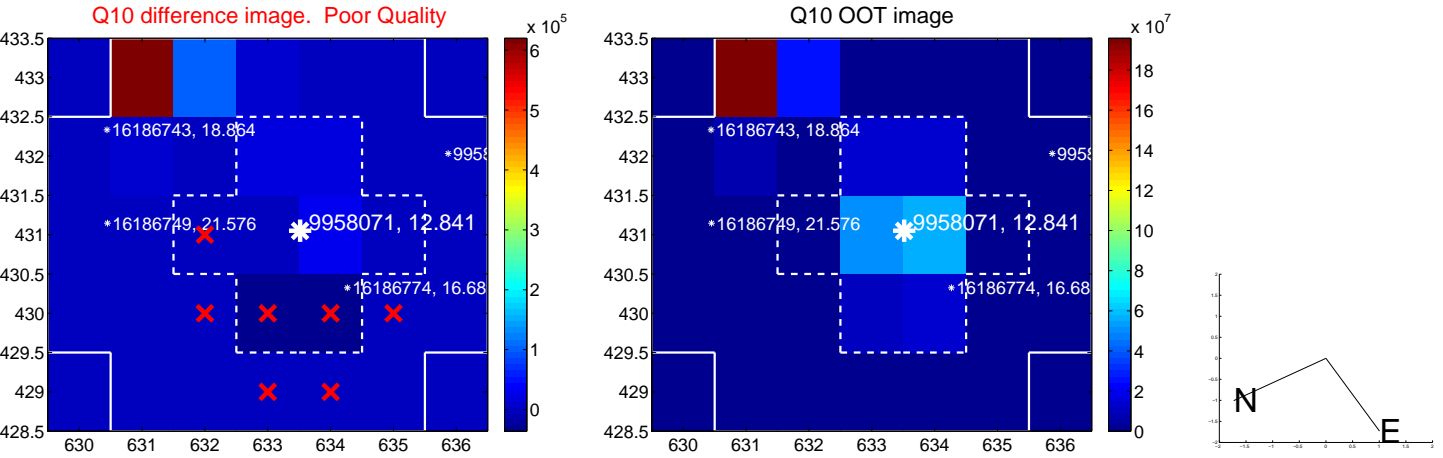
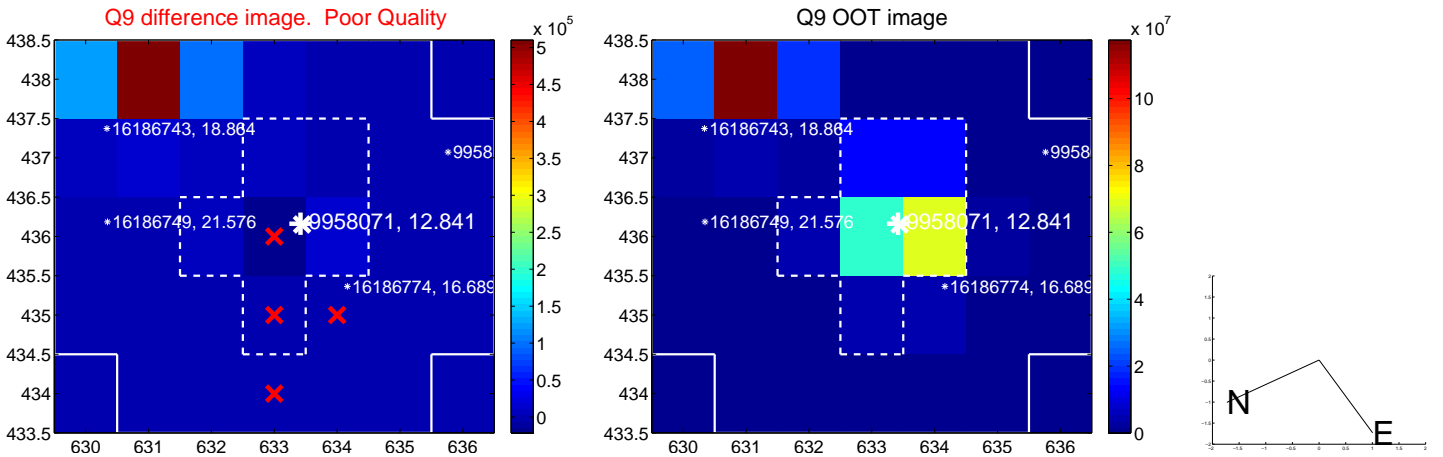
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



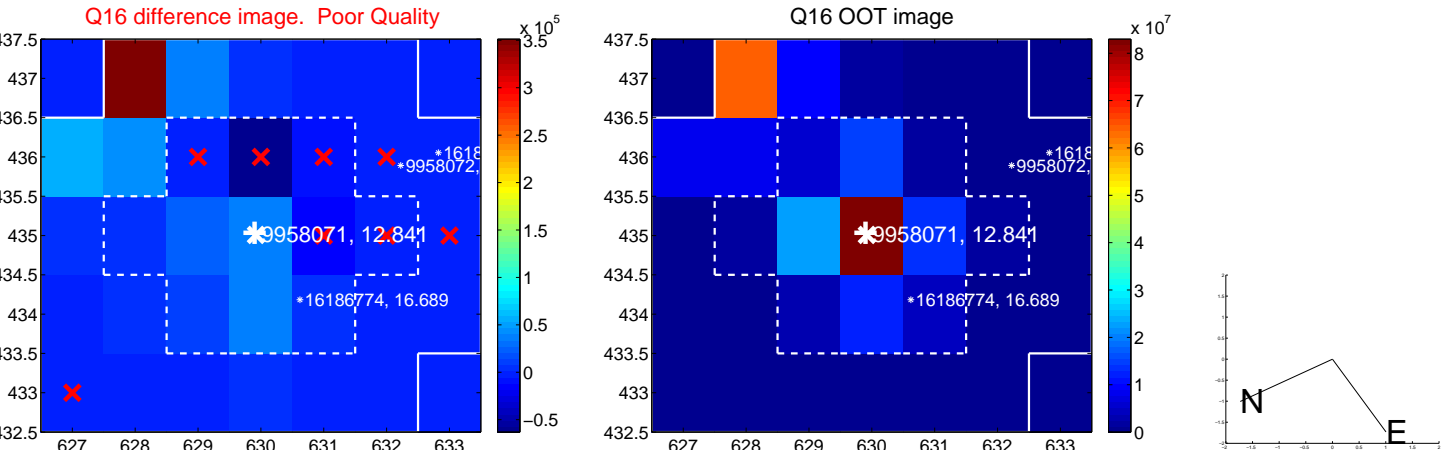
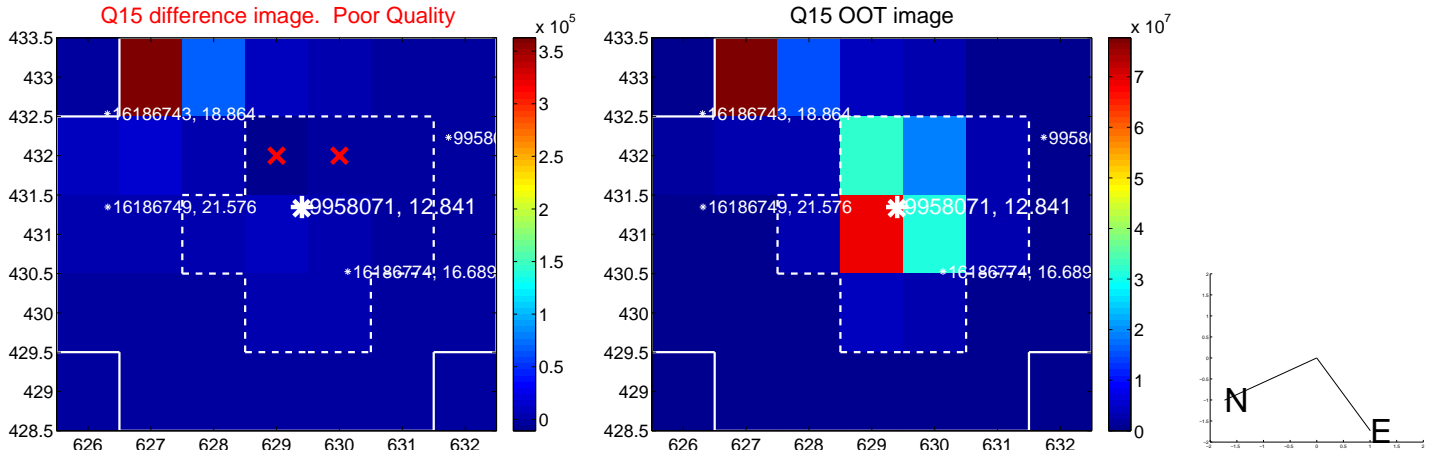
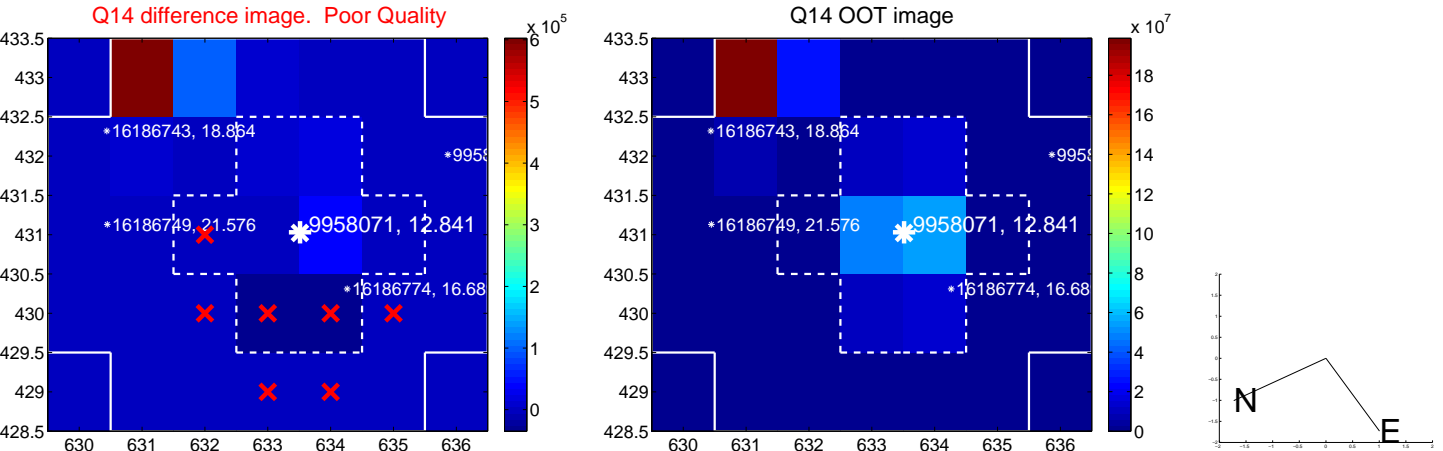
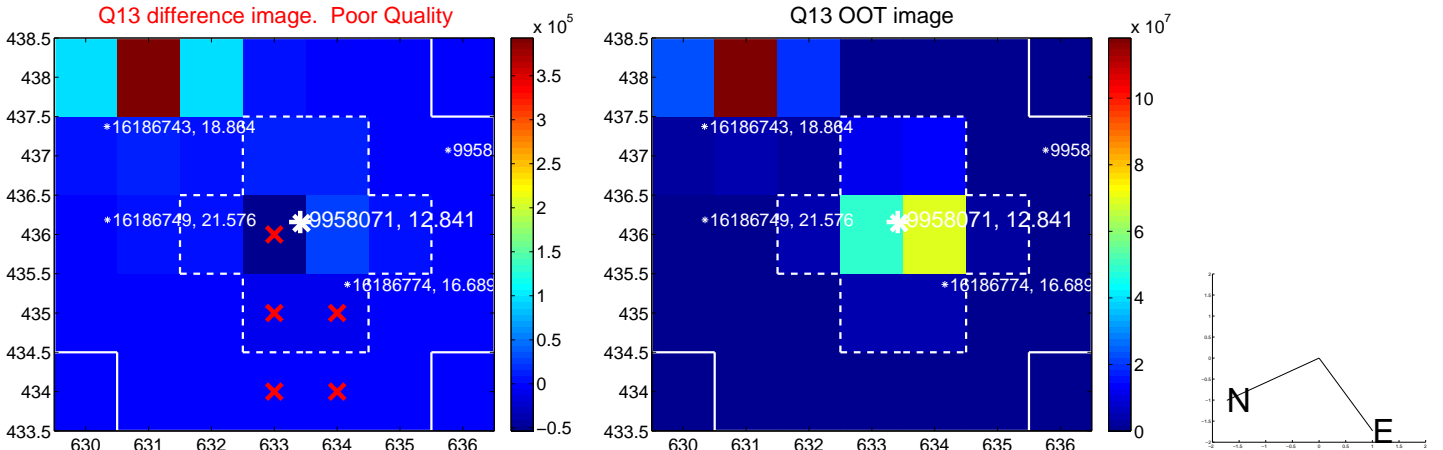
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



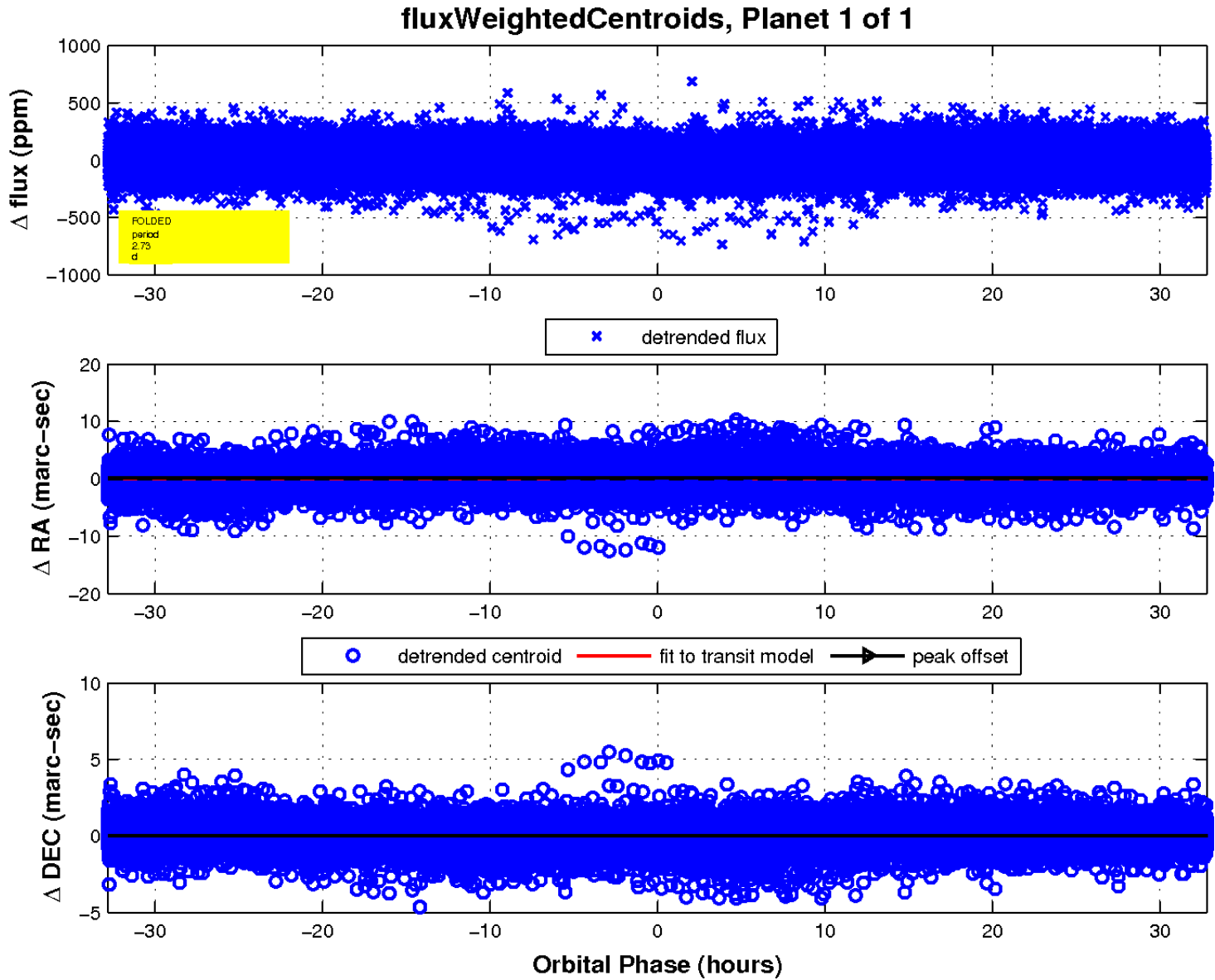
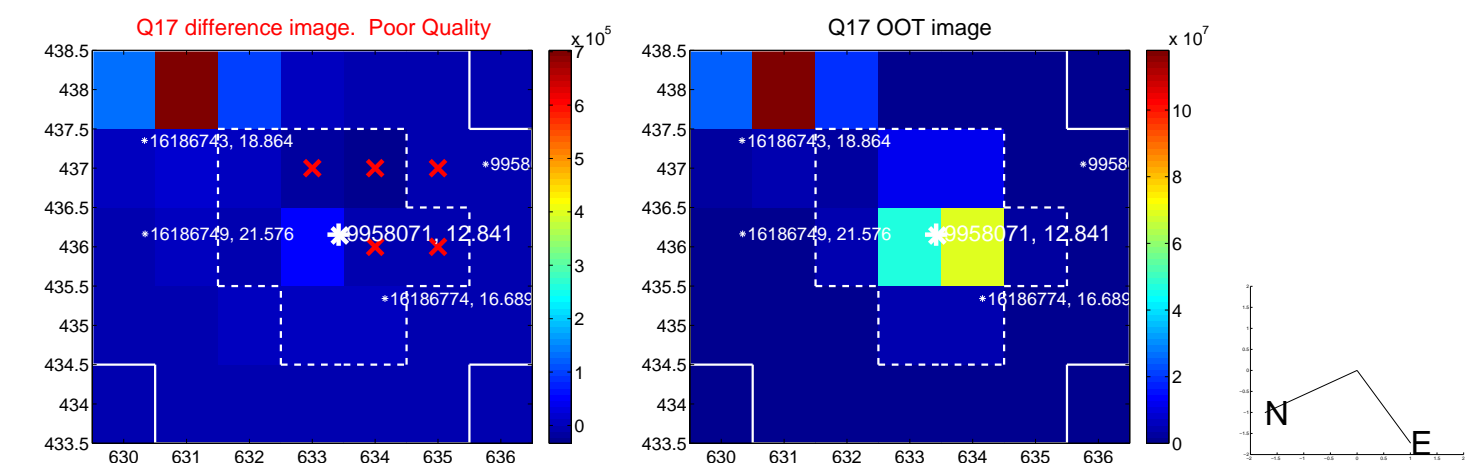
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

