

KIC 005978862

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})
005978862-01	OBS	No	3.068589	134.580327	13.8	21.785	12.2	12.2	1.47	6776	0.56	1984.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005978862-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS

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

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

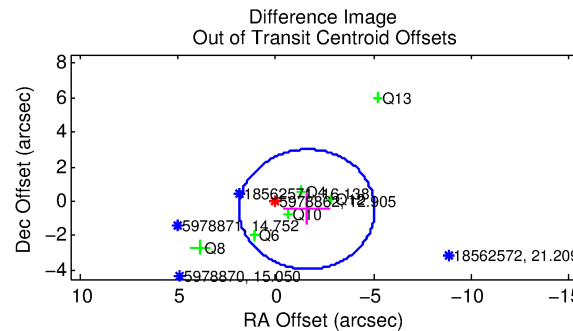
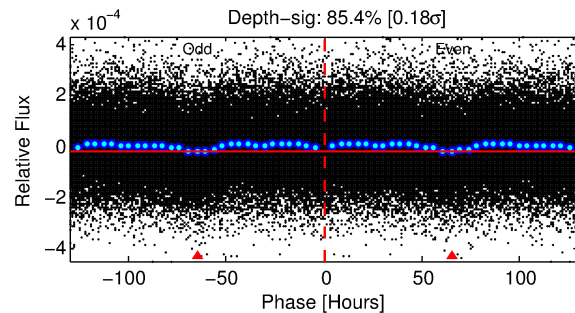
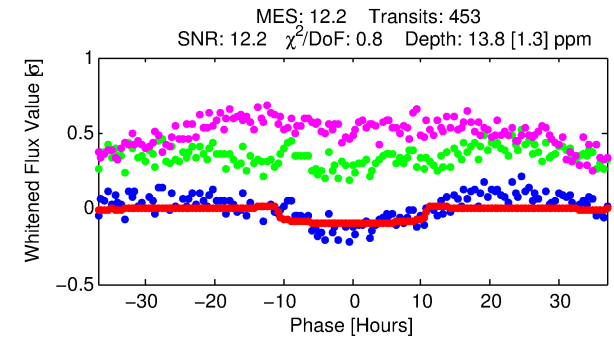
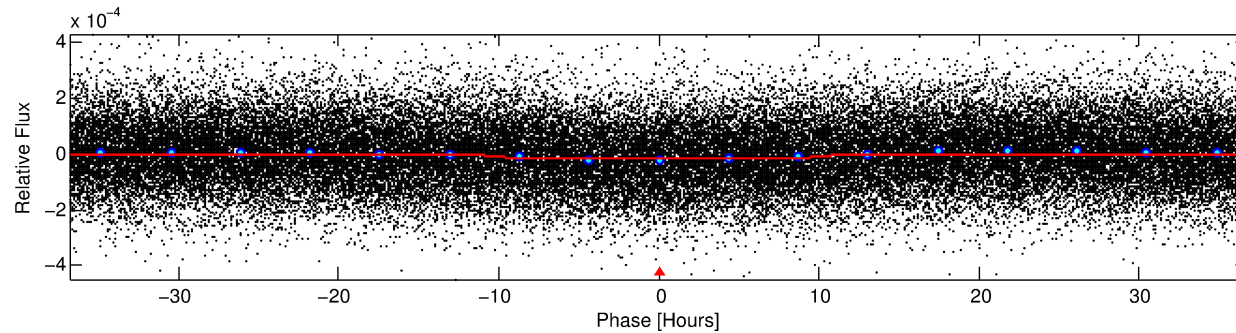
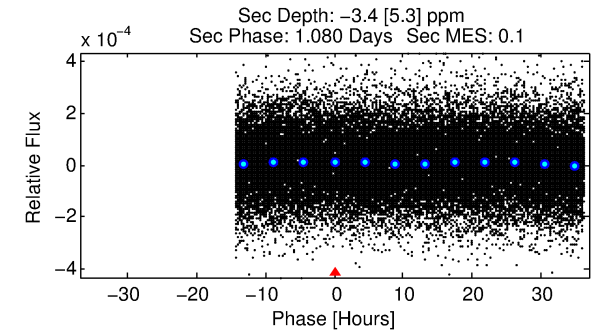
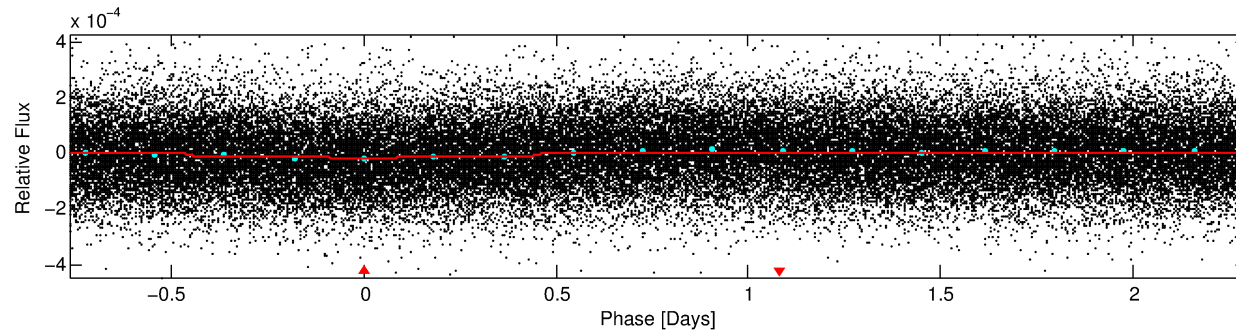
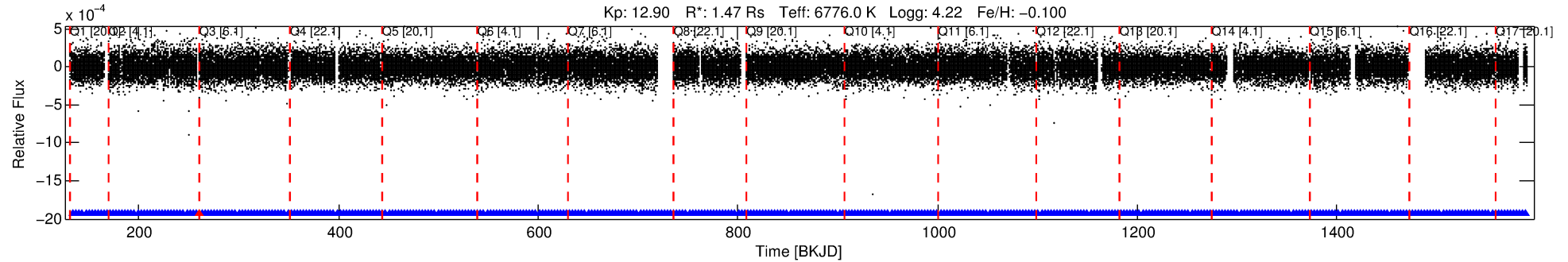
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005978862-01

No Significant Match Found

DV One-Page Summary

KIC: 5978862 Candidate: 1 of 1 Period: 3.069 d



DV Fit Results:

Period = 3.06859 [0.00006] d
Epoch = 134.5803 [0.0127] BKJD
Rp/R* = 0.0035 [0.0027]
a/R* = 1.22 [1.77]
b = 0.35 [10.82]
Seff = 1984.94 [778.76]
Teq = 1702 [167] K
Rp = 0.56 [0.47] Re
a = 0.0453 [0.0115] AU
Ag = N/A
Teffp = N/A

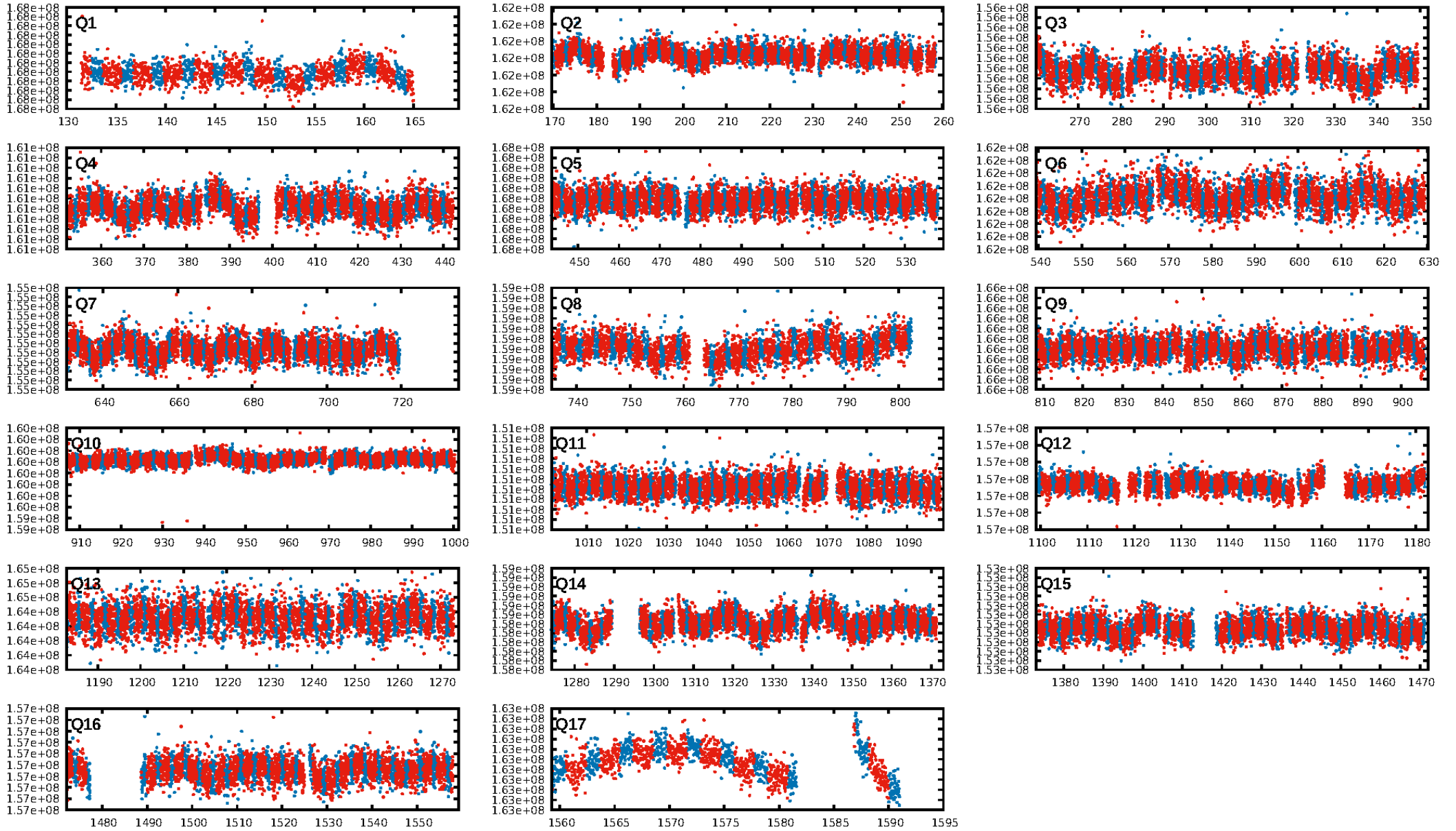
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [432/433]
GhostDiagnostic-chr: 1.276
Centroid-sig: 0.0%
Centroid-so: 2.851 arcsec [2.84σ]
OotOffset-rm: 1.672 arcsec [1.45σ]
KicOffset-rm: 1.553 arcsec [1.42σ]
OotOffset-st: 2/0/3/1 [6]
KicOffset-st: 2/0/3/1 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [17/17]

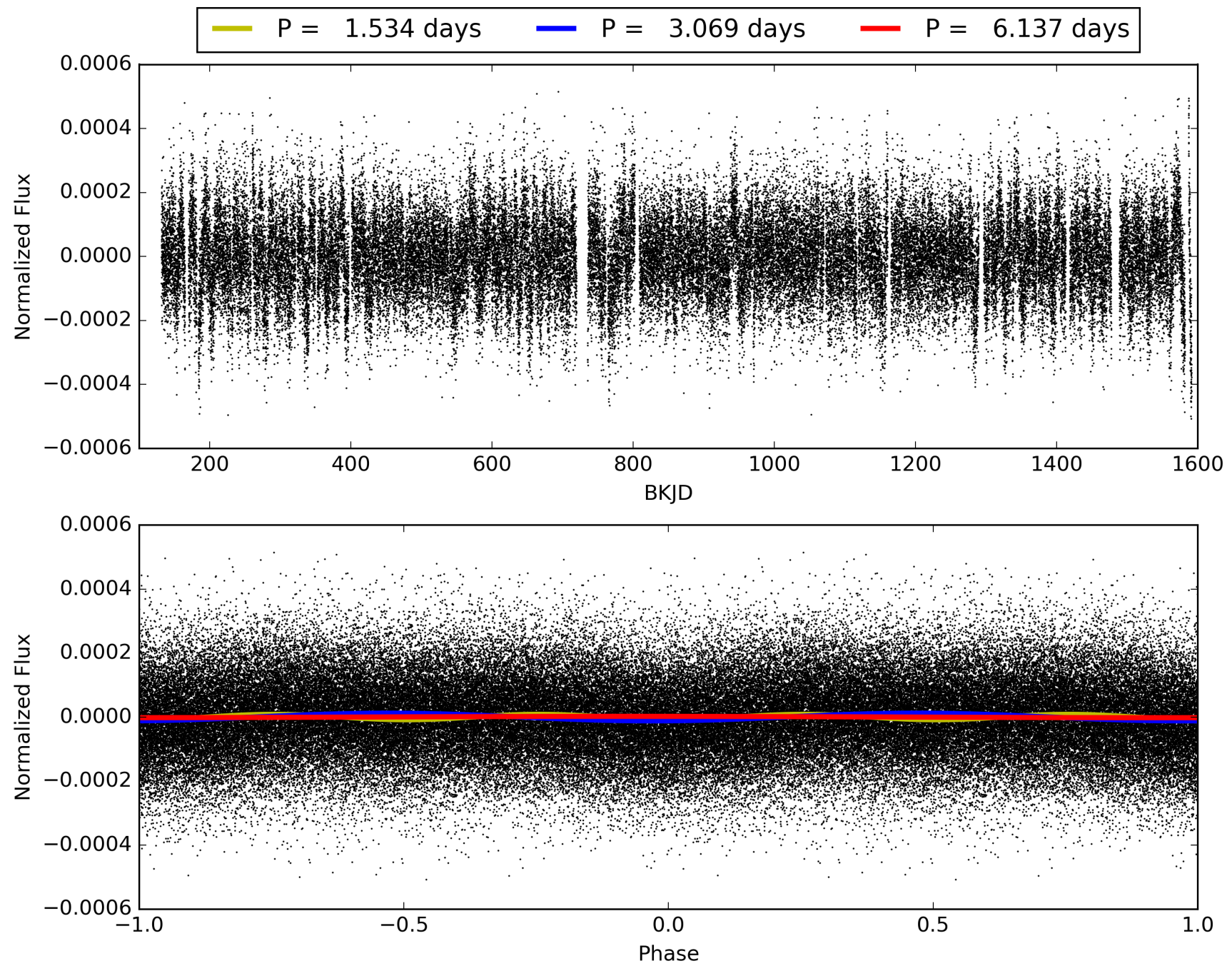
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:16:57 Z

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

TCE 005978862-01, PDC Light Curves

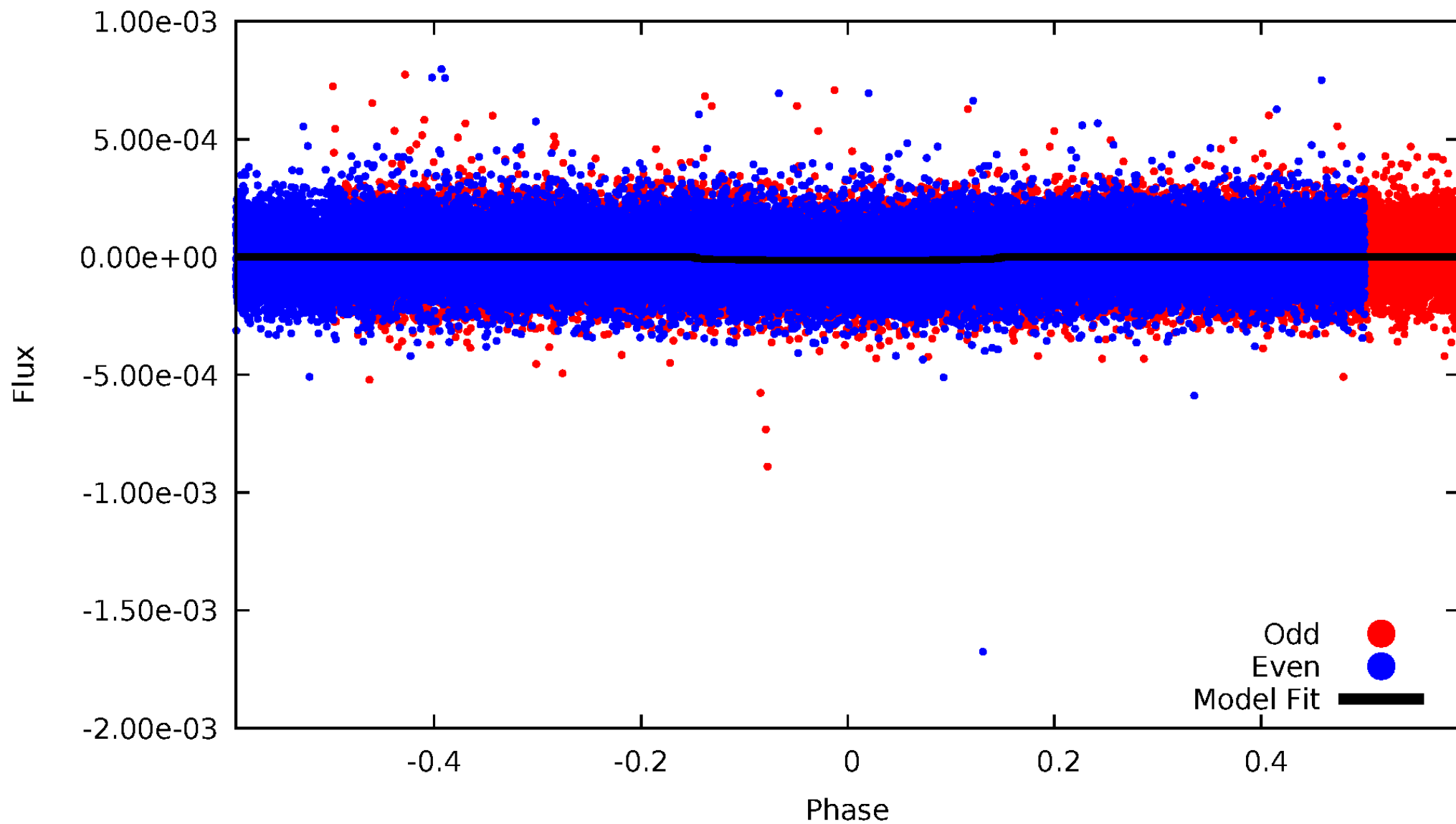


TCE 005978862-01



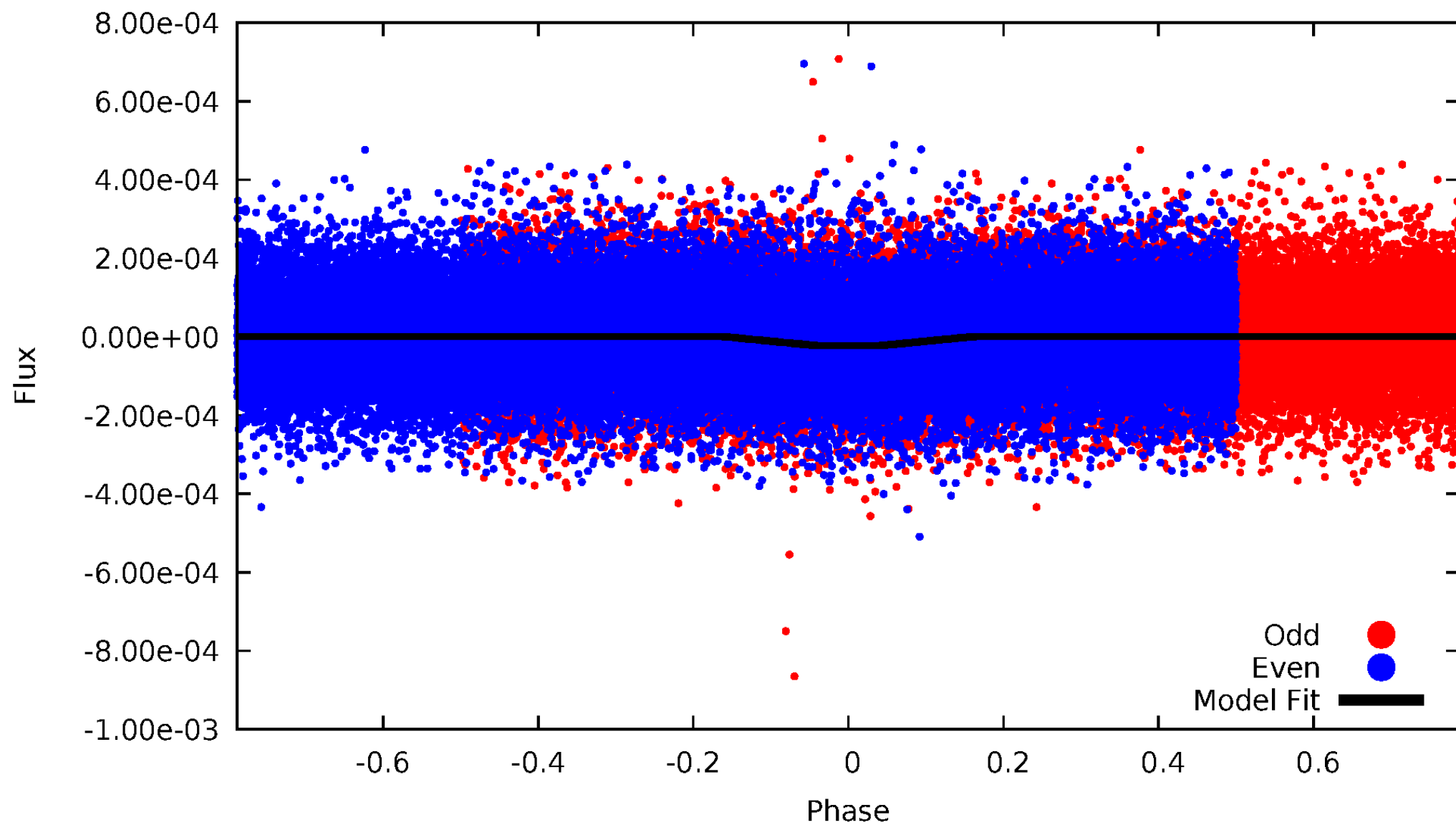
DV Odd/Even

TCE 005978862-01



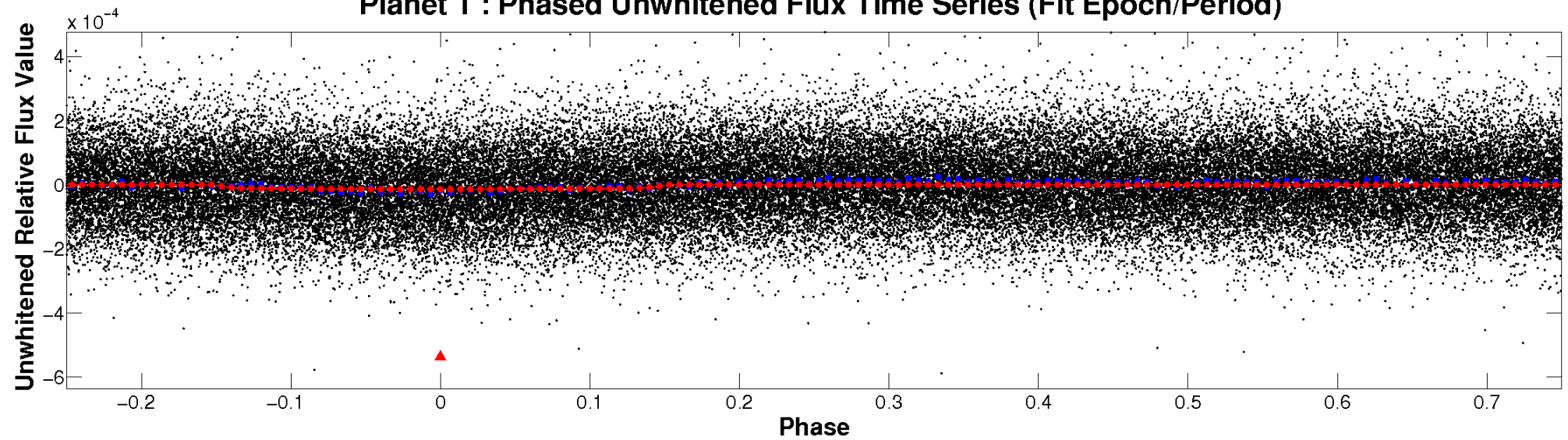
ALT Odd/Even

TCE 005978862-01

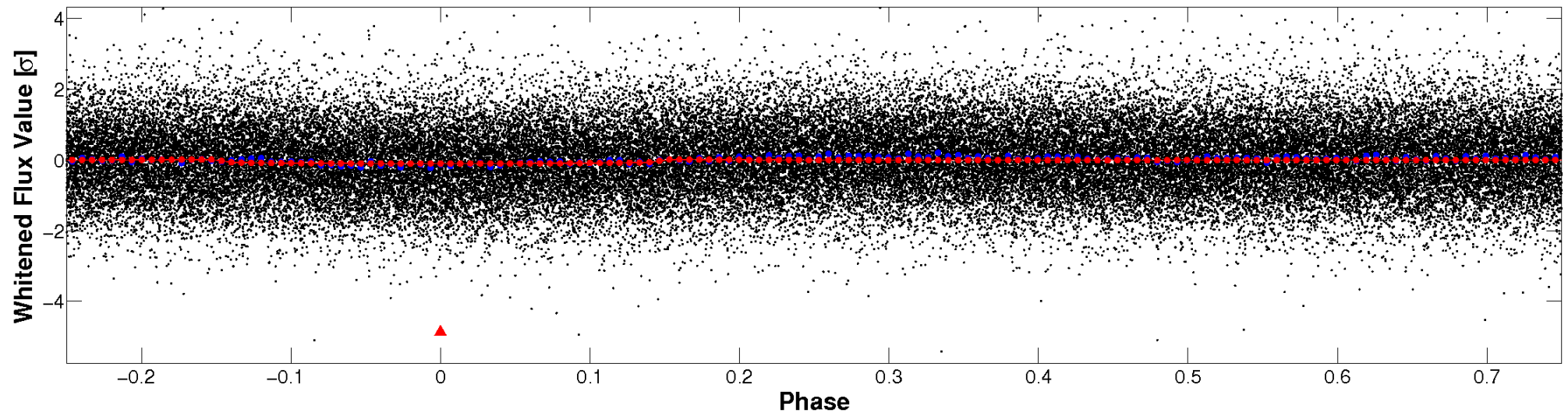


Non-Whitened Vs. Whitened Light Curve

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

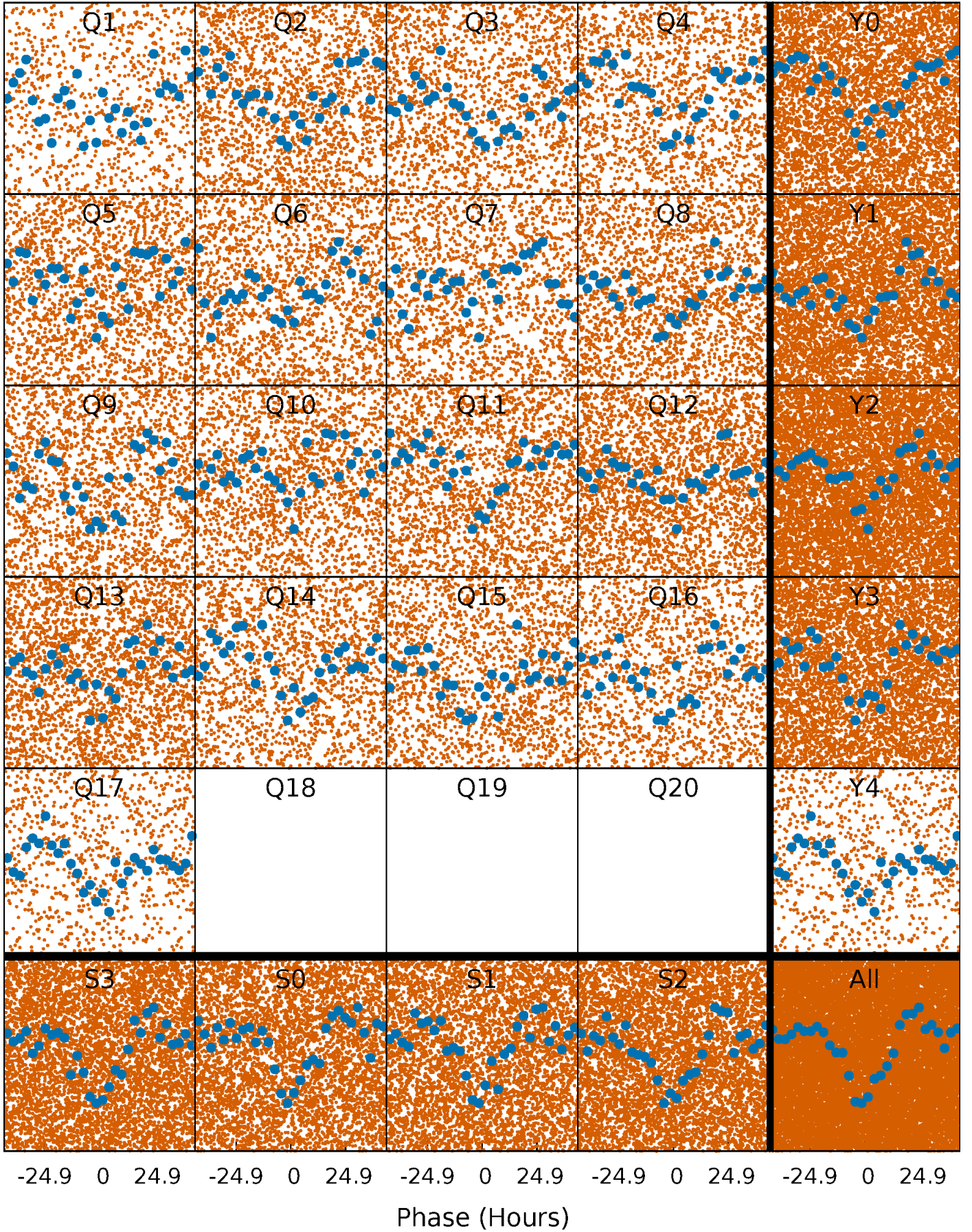


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



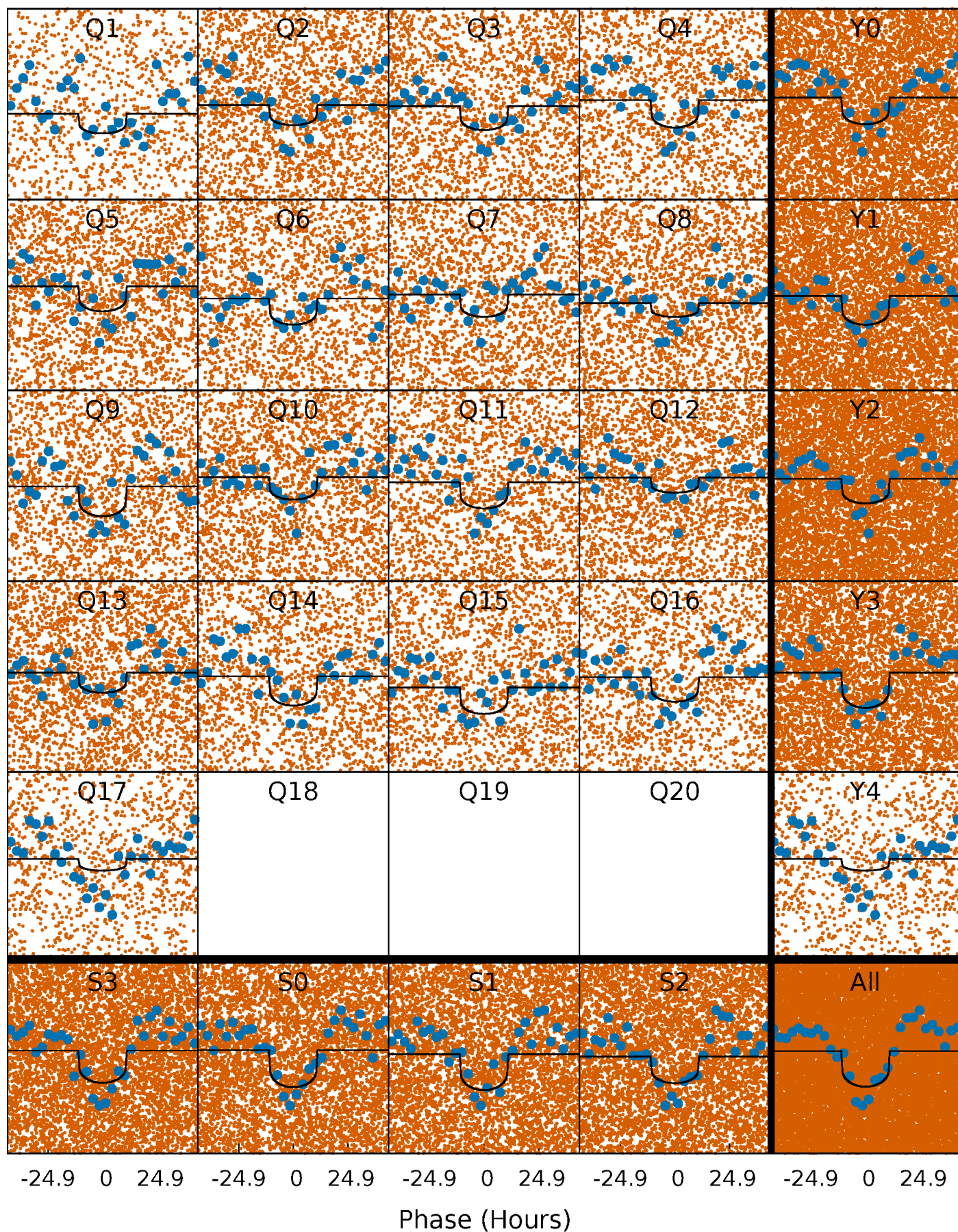
PDC Quarter-Phased Transit Curves

TCE 005978862-01 P= 3.068589 Days $T_0=134.580327$ (BKJD)



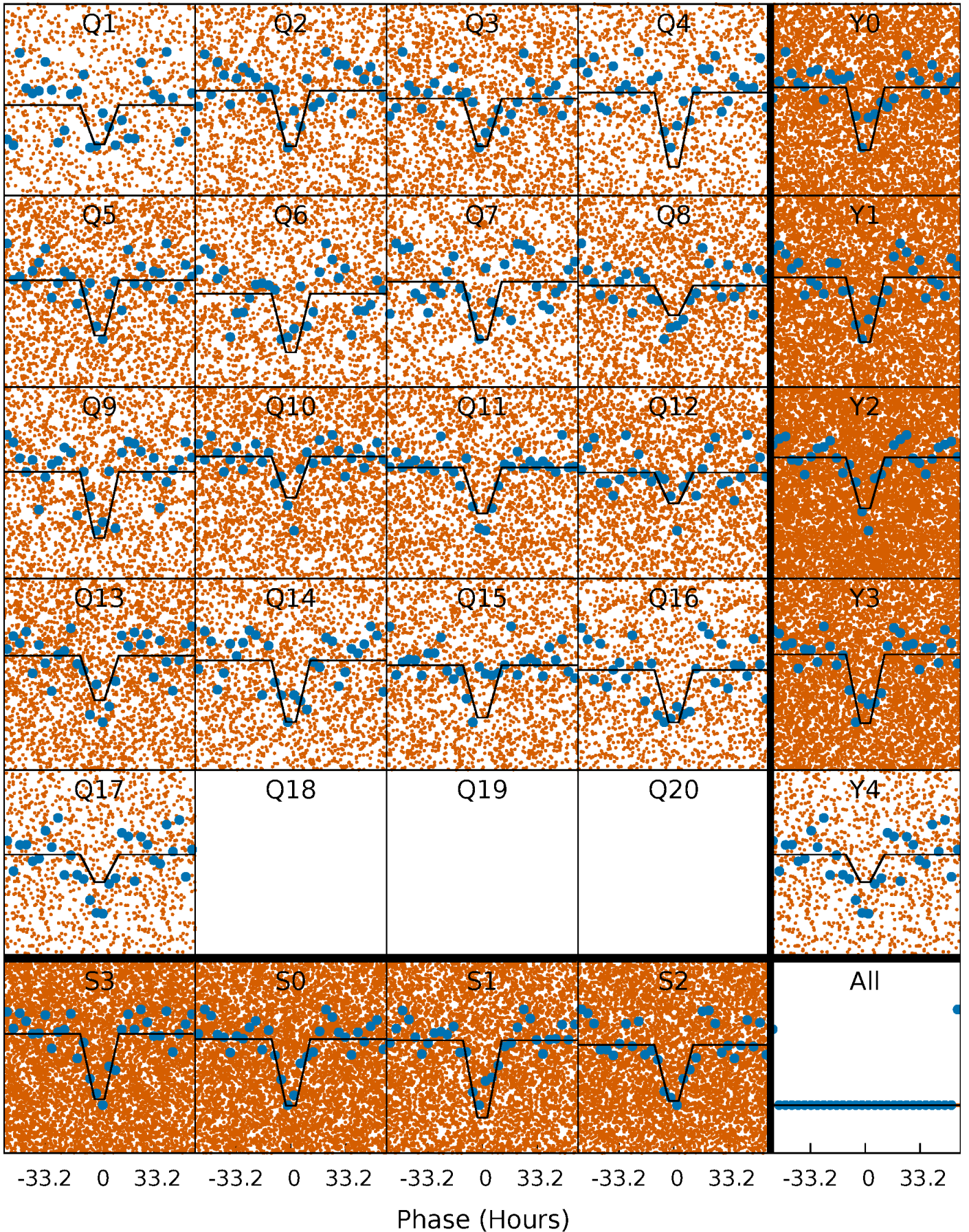
DV Quarter-Phased Transit Curves

TCE 005978862-01 P= 3.068589 Days $T_0=134.580327$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

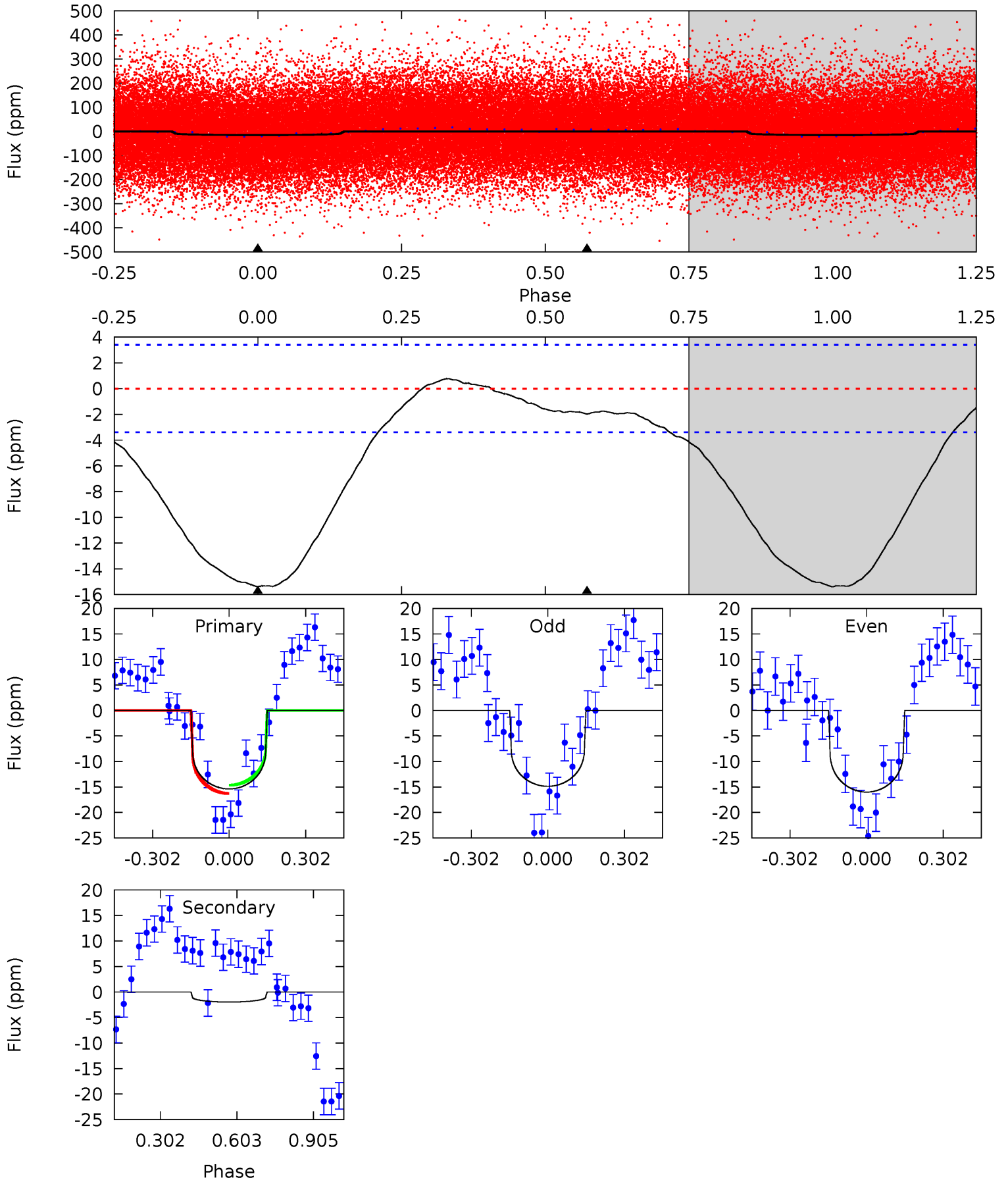
TCE 005978862-01 P= 3.068694 Days $T_0=134.551267$ (BKJD)



DV Model-Shift Uniqueness Test

005978862-01, P = 3.068589 Days, E = 131.511738 Days

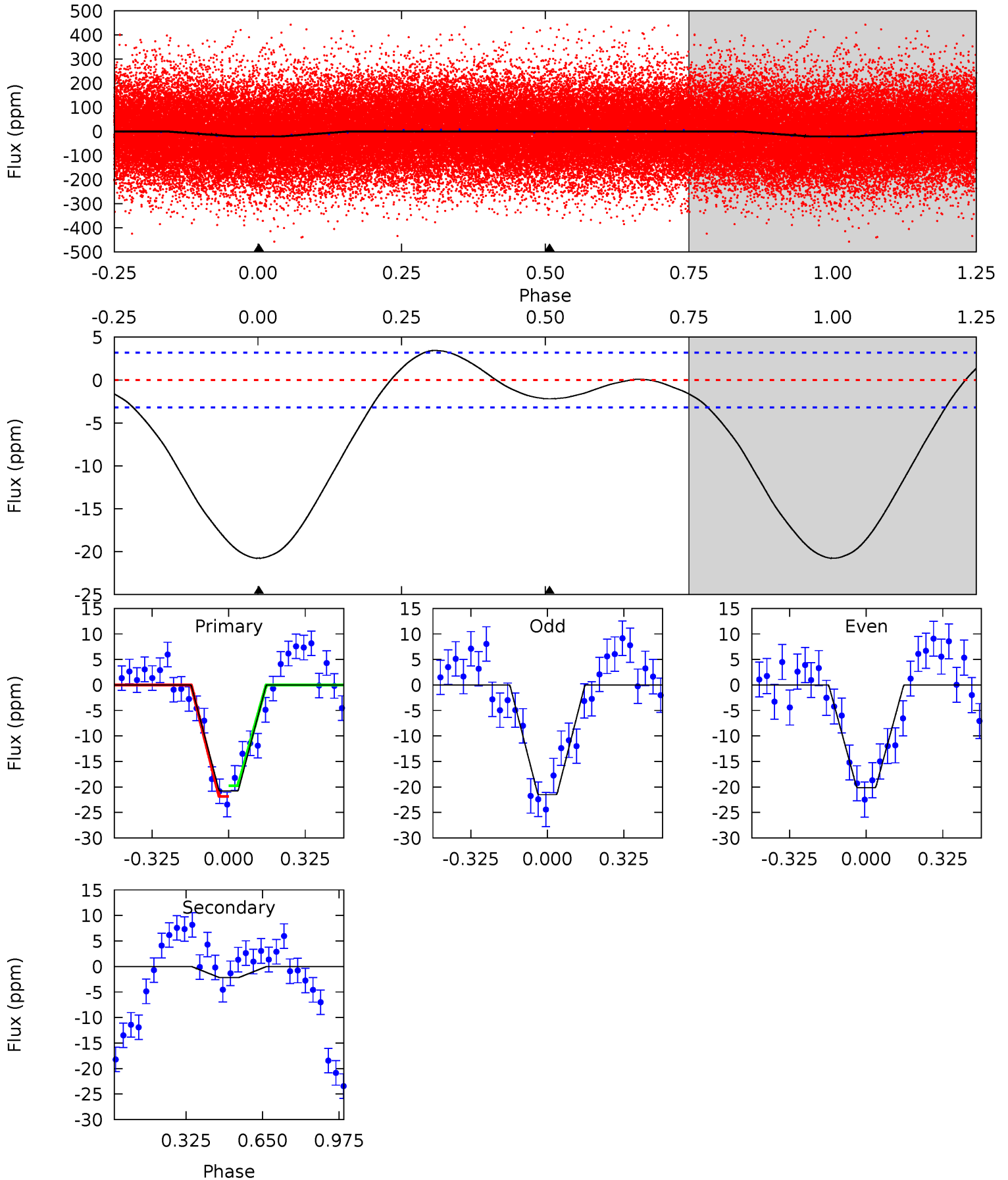
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	2.51	0	0	4.33	1.03	1.14	19.6	19.6	2.51	2.51	0.72	1.00	0.05	1.03



Alt Model-Shift Uniqueness Test

005978862-01, P = 3.068694 Days, E = 131.482573 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	2.96	0	0	4.31	0.98	2.52	28.1	28.1	2.96	2.96	0.92	1.07	0.14	1.38



Stellar Parameters For KIC 005978862

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6776^{+182}_{-263}	$4.224^{+0.128}_{-0.192}$	$-0.100^{+0.250}_{-0.300}$	$1.470^{+0.457}_{-0.266}$	$1.326^{+0.204}_{-0.204}$	$0.588^{+0.364}_{-0.300}$
	+3%/-4%	+3%/-5%	+250%/-300%	+31%/-18%	+15%/-15%	+62%/-51%
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 005978862-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2±1	$0.63^{+0.44}_{-0.38}$	2395^{+198}_{-154}	4222^{+2076}_{-771}	$5.028^{+25.714}_{-3.369}$
Alt.	-2±1	$0.81^{+0.44}_{-0.39}$	2391^{+185}_{-155}	3920^{+1230}_{-624}	$3.760^{+10.823}_{-2.373}$

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

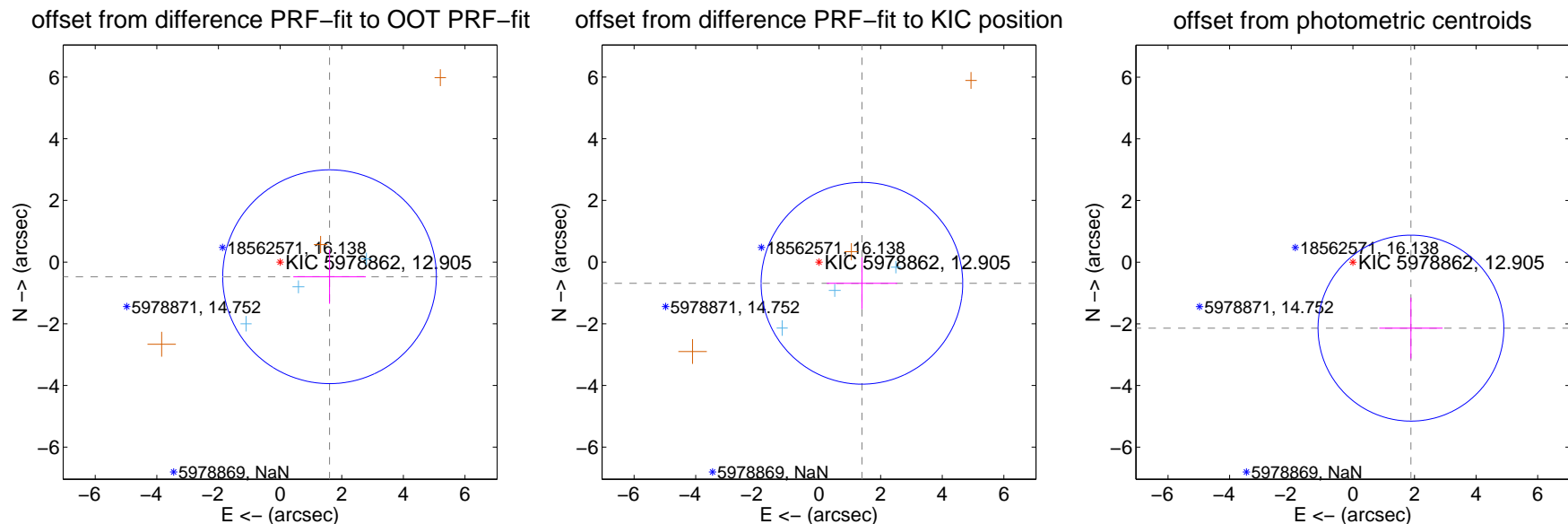
DV Centroid Data

Supplemental centroid analysis for 005978862-01. Kepler magnitude: 12.90. Transit SNR 12.25

There are 3 quarters with good PRF difference image offsets

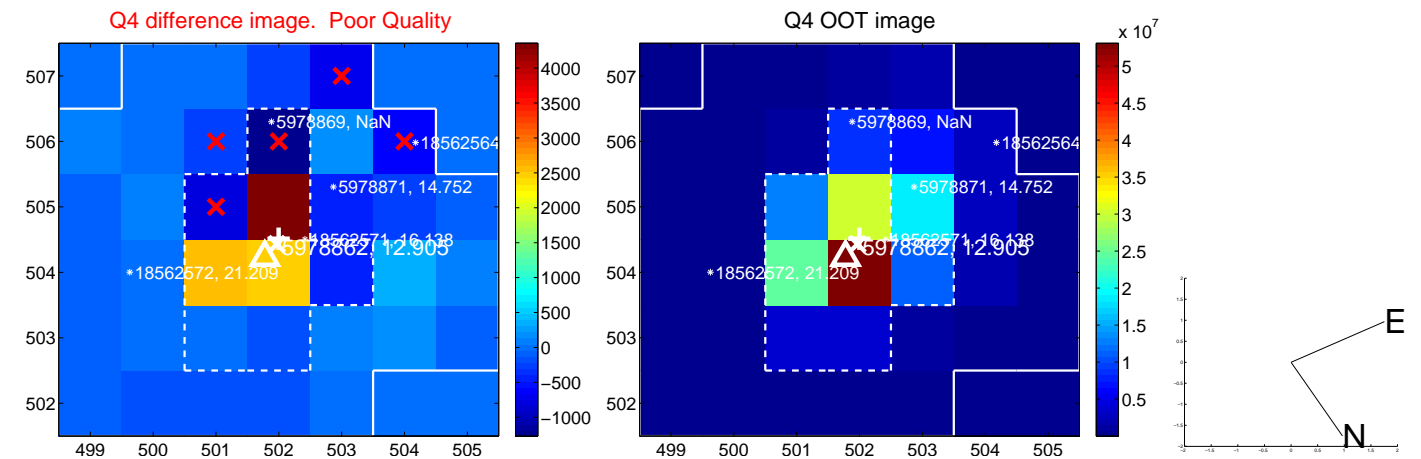
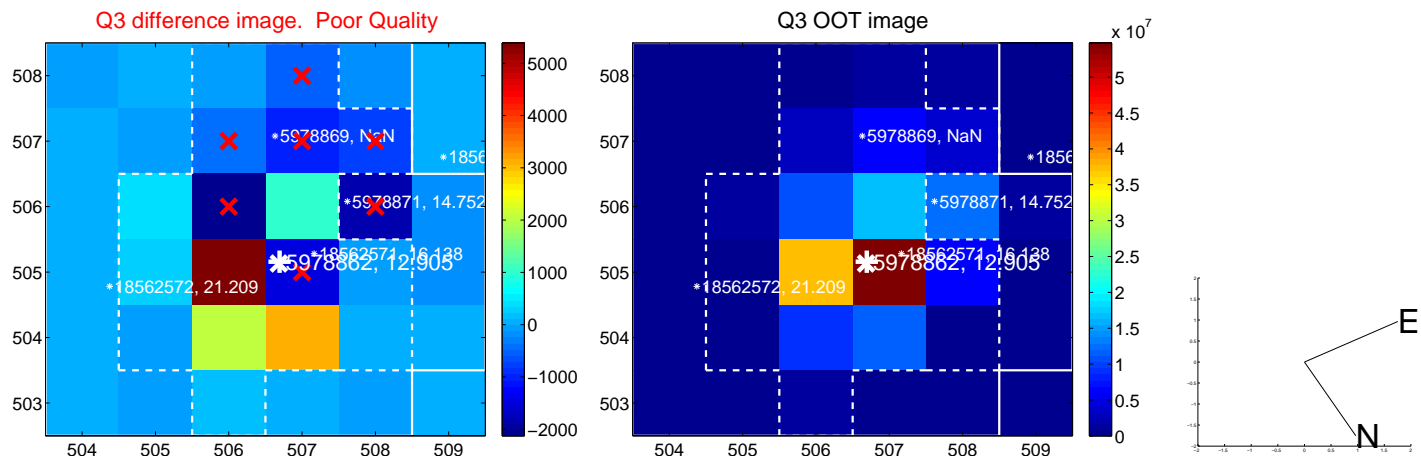
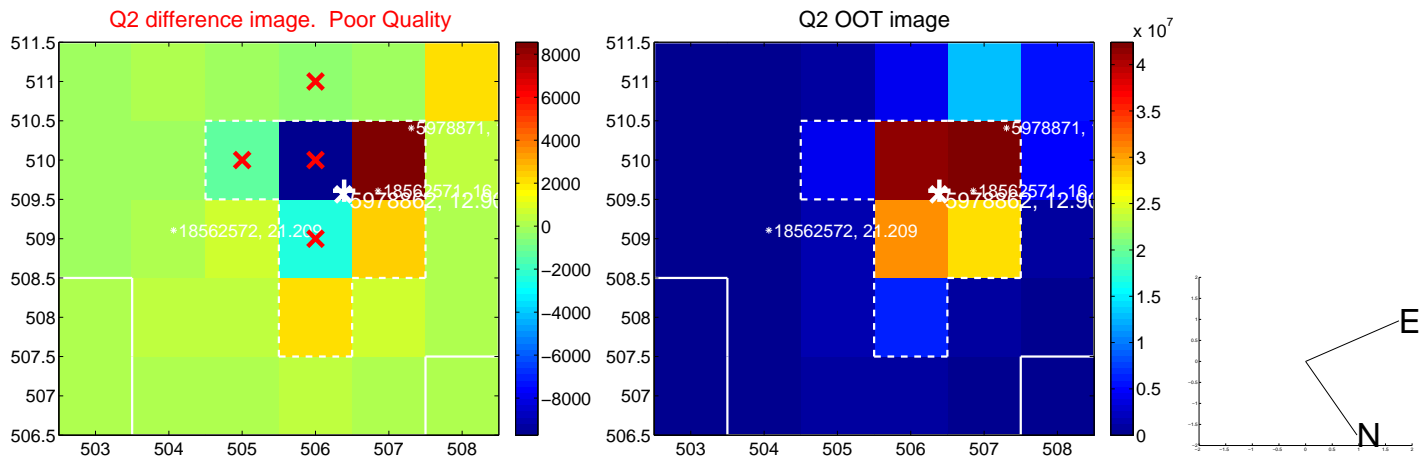
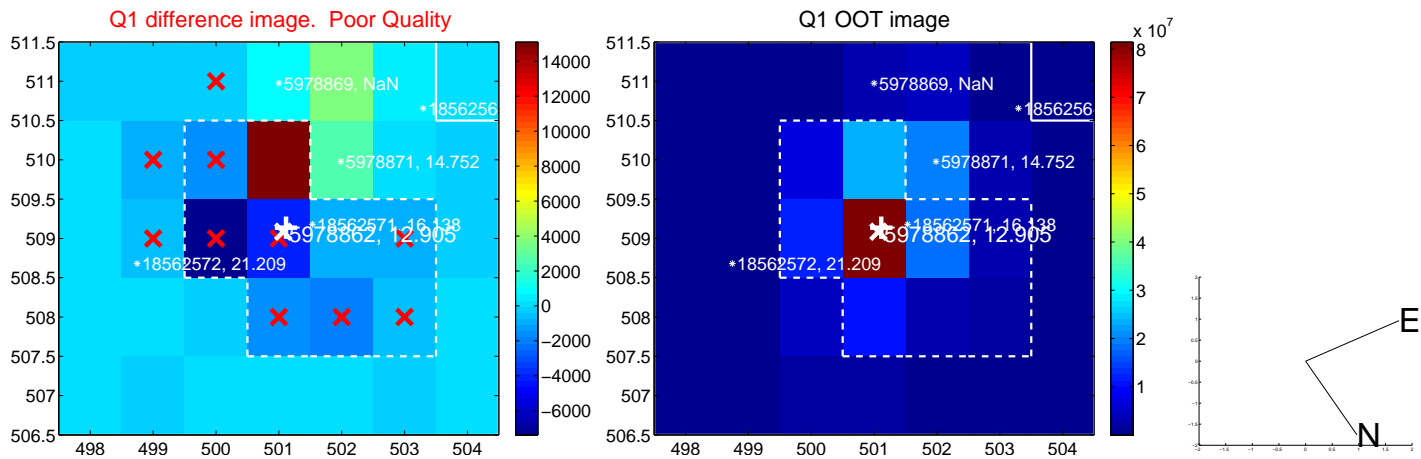
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.672 ± 1.155	1.45	-1.604 ± 1.177	-0.474 ± 0.876
PRF-fit source offset from KIC position	1.553 ± 1.090	1.42	-1.393 ± 1.142	-0.687 ± 0.842
photometric centroid source offset	2.85 ± 1.01	2.84	-1.89 ± 1.03	-2.14 ± 0.99

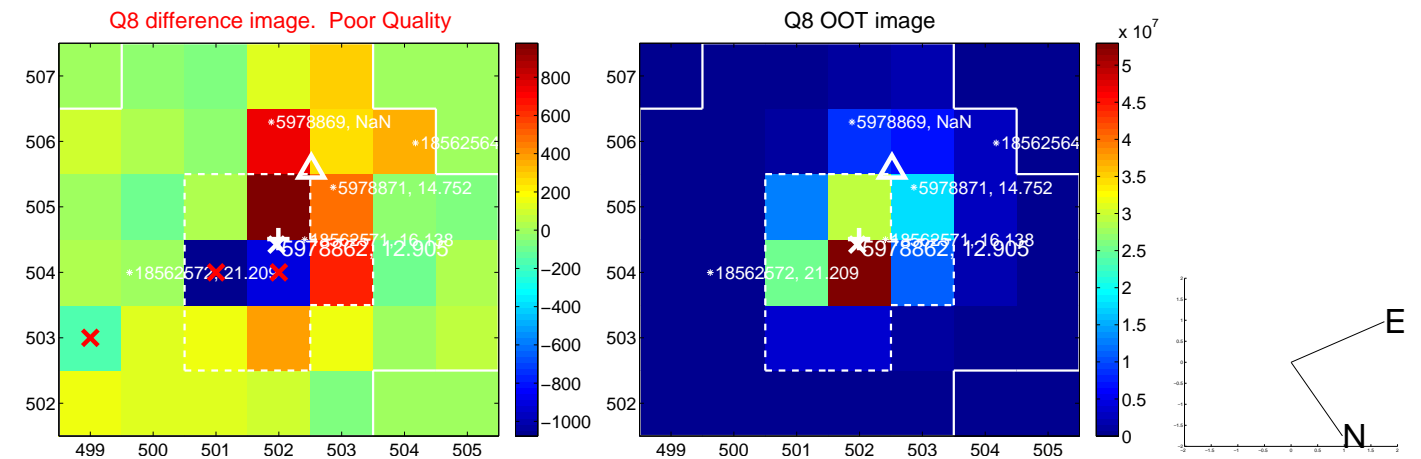
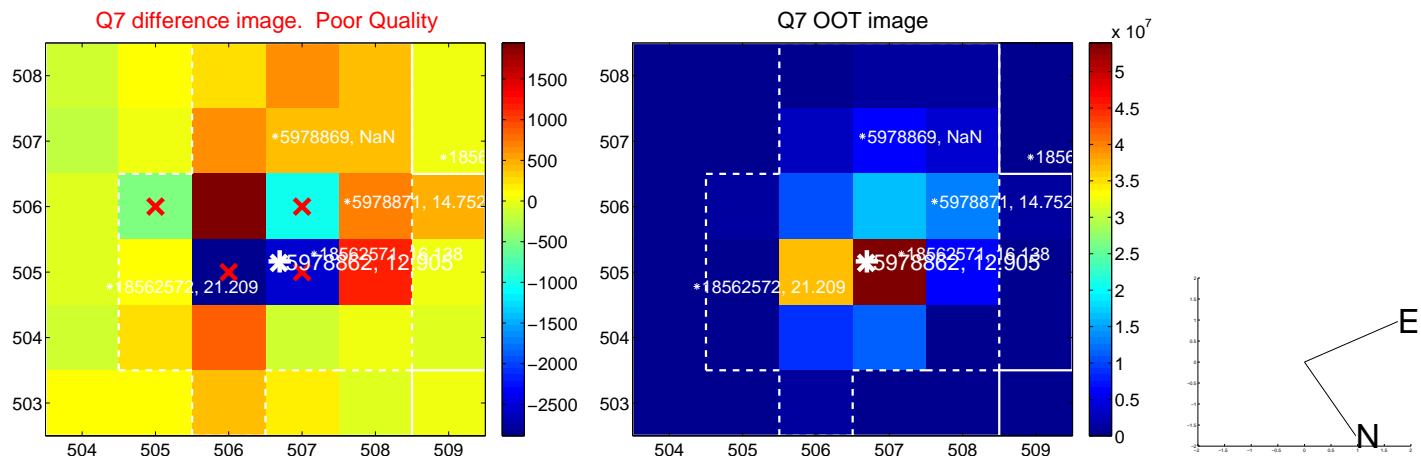
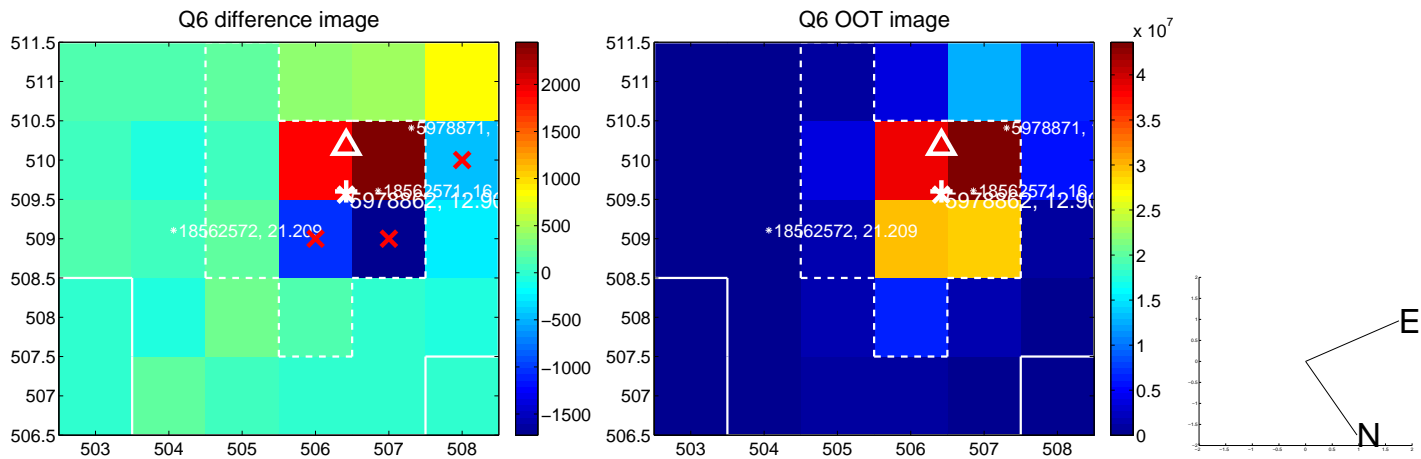
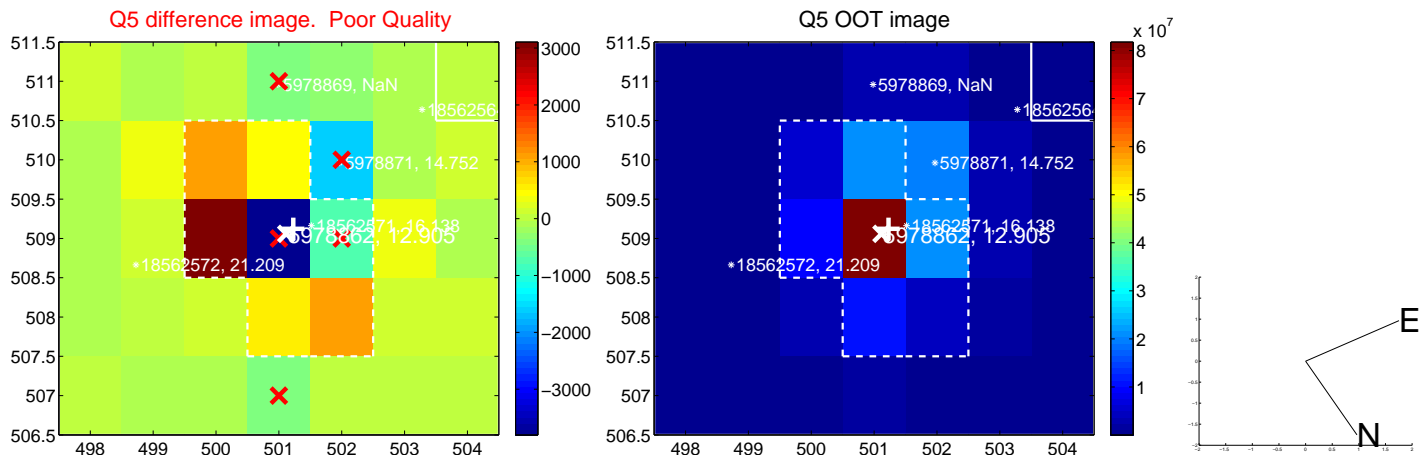


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

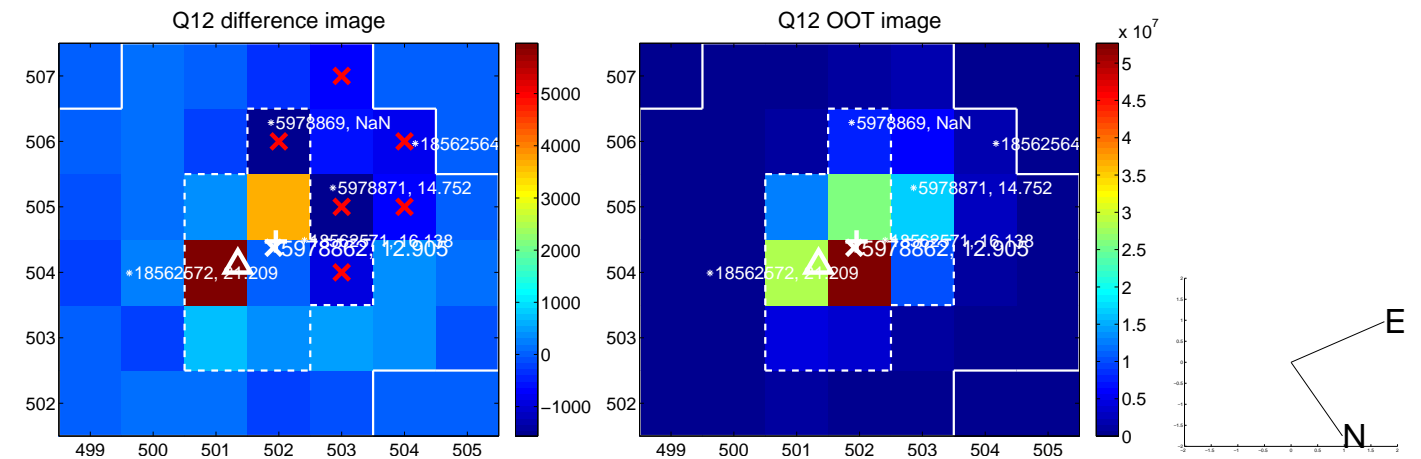
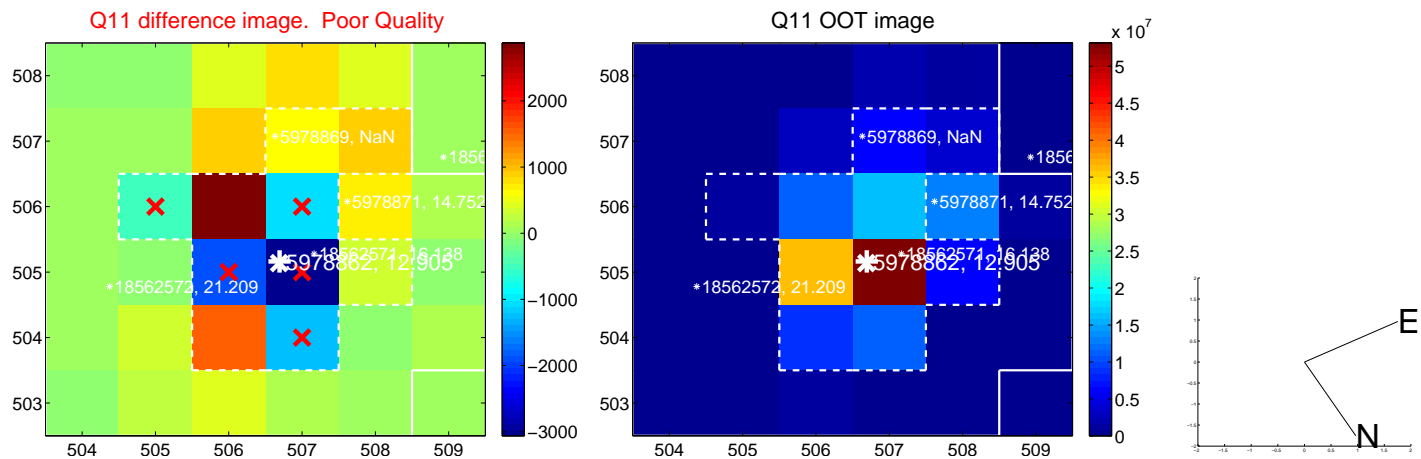
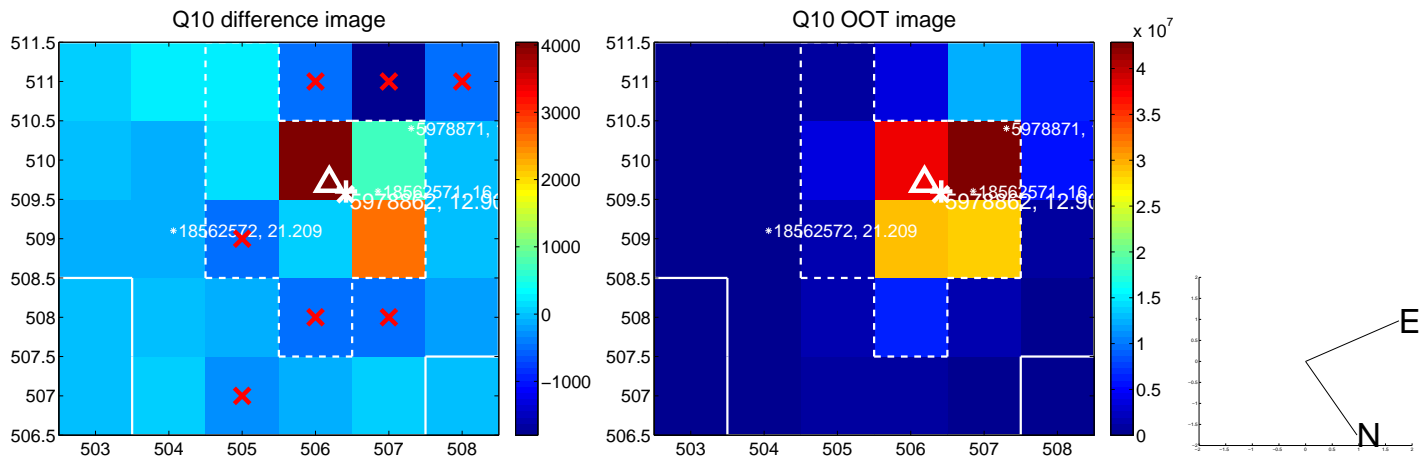
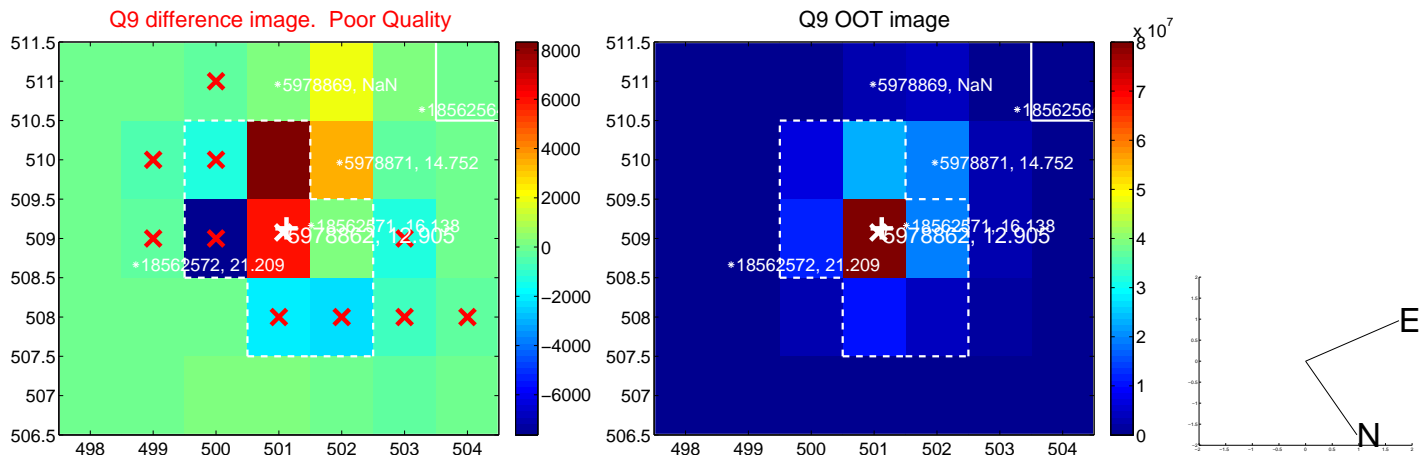
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



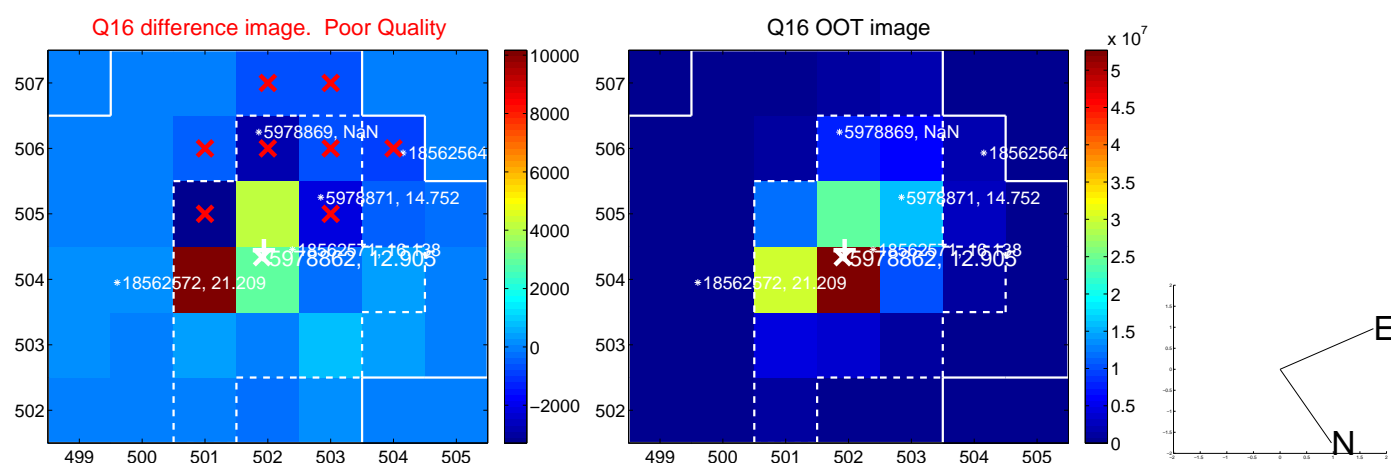
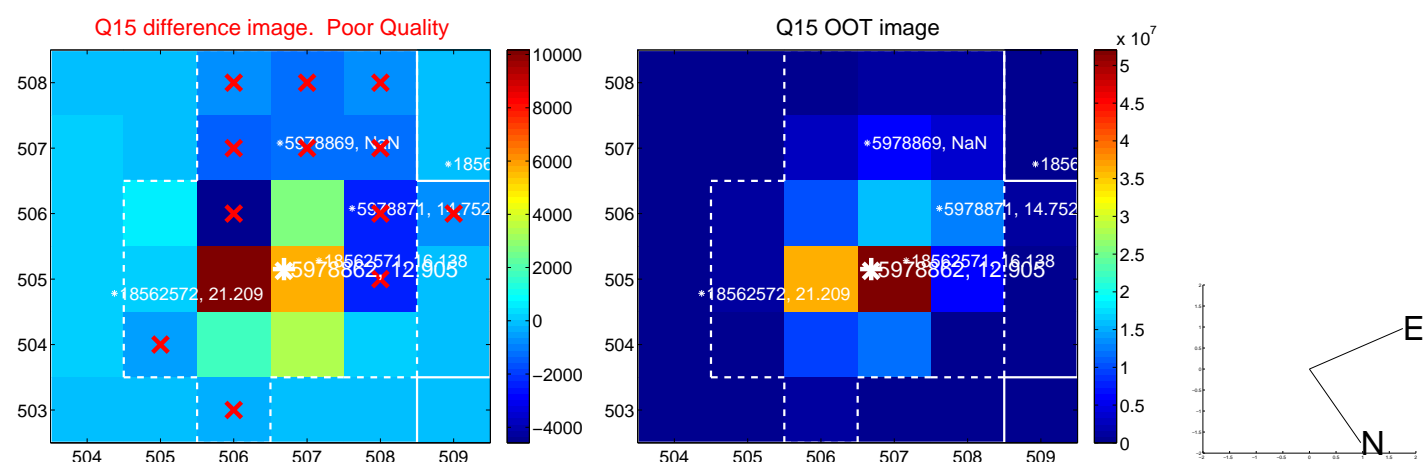
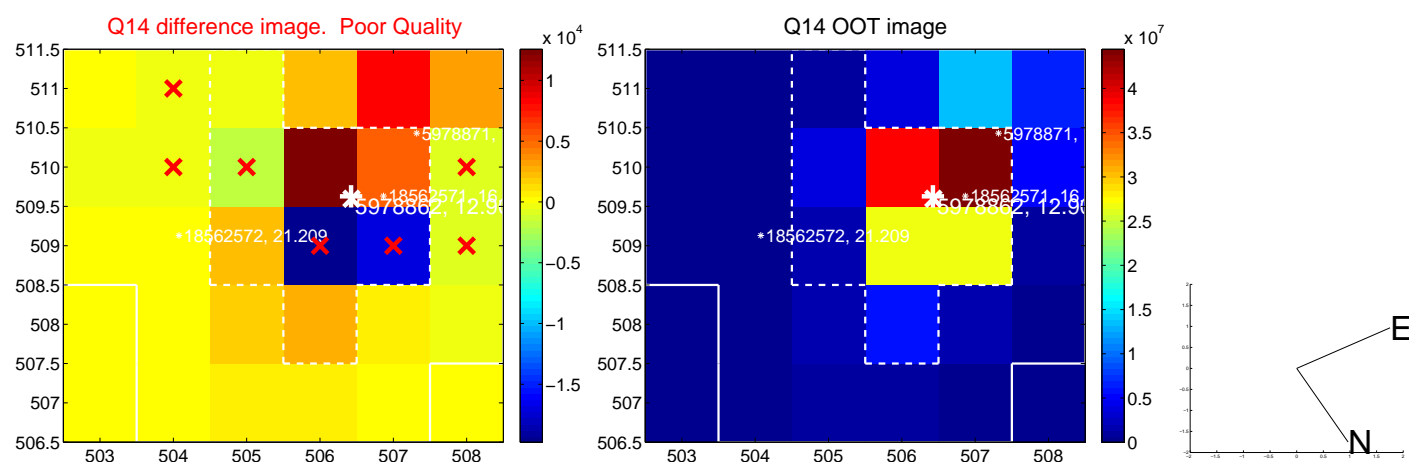
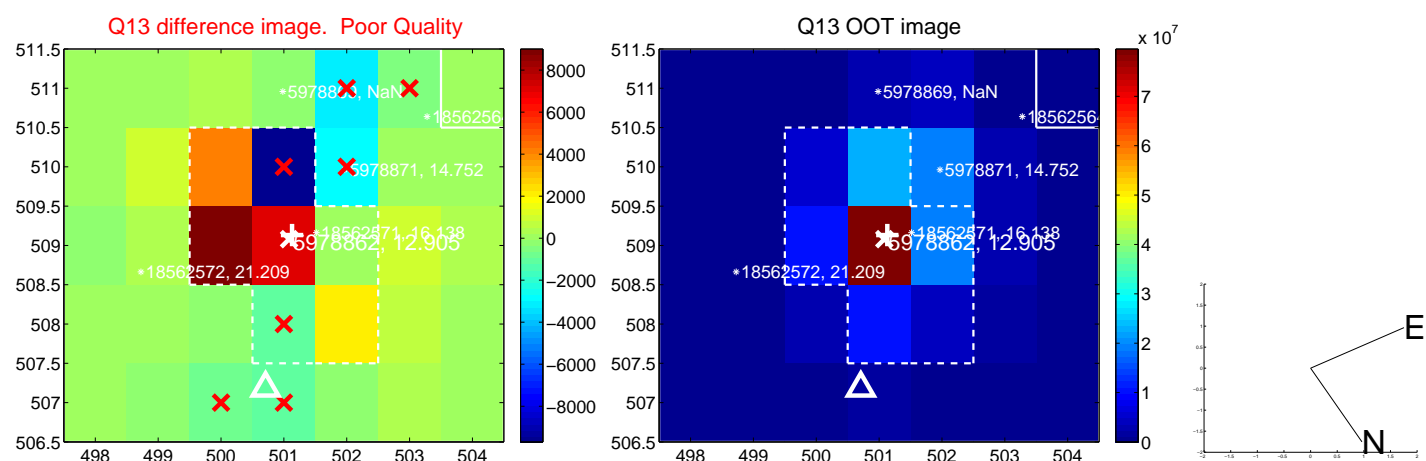
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



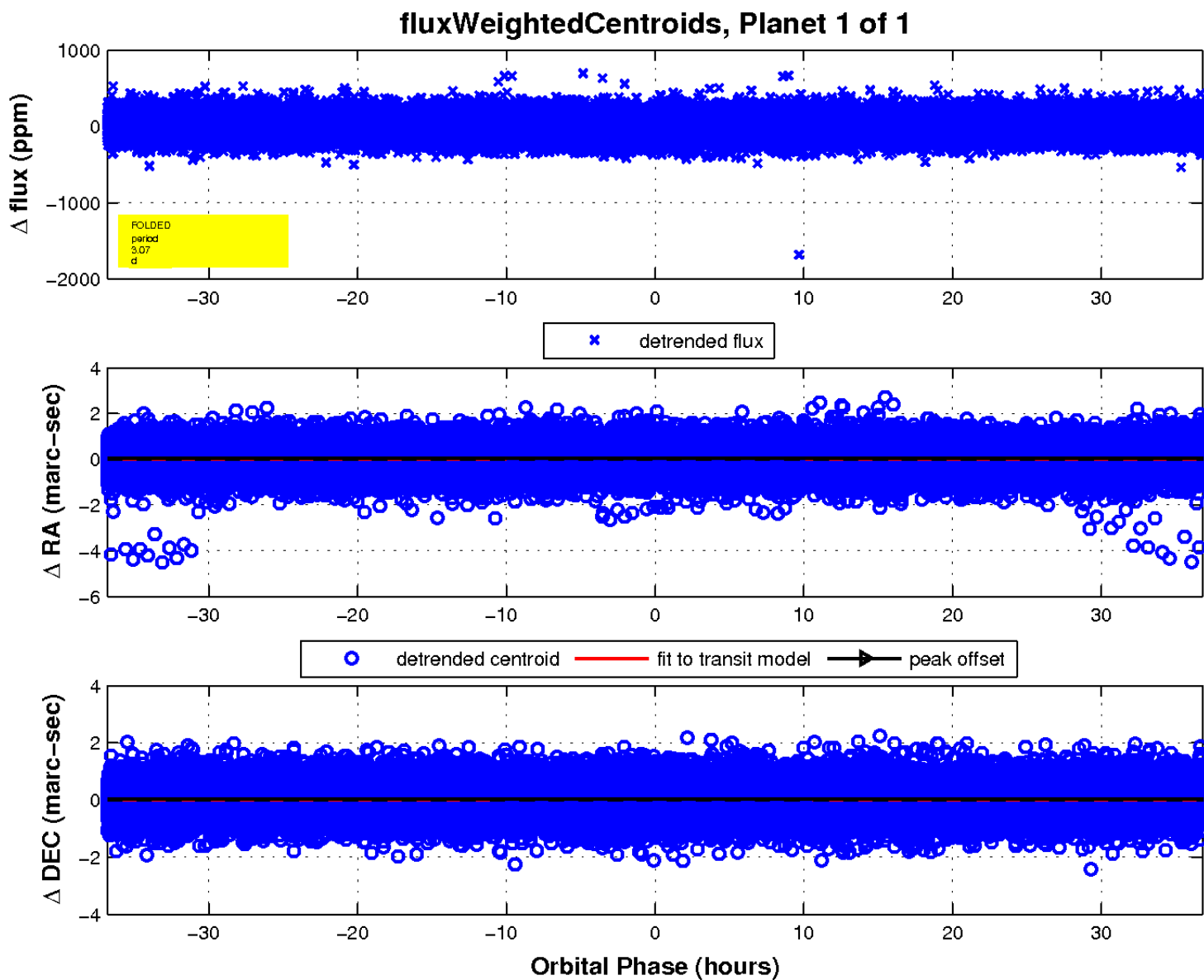
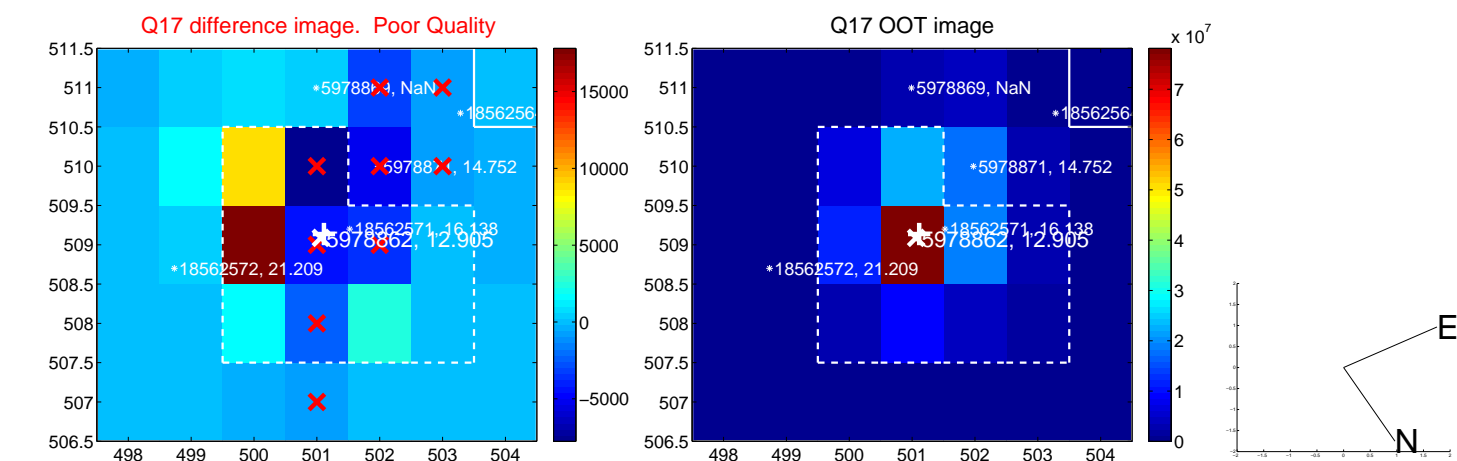
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

