

KIC 005898780

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})
005898780-01	OBS	No	1.732616	132.677394	15.7	9.309	10.8	9.5	2.91	8749	1.21	35412.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005898780-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

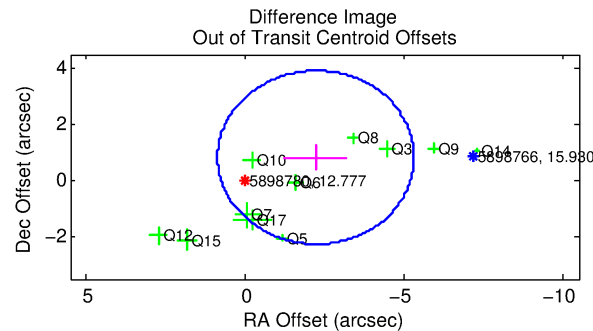
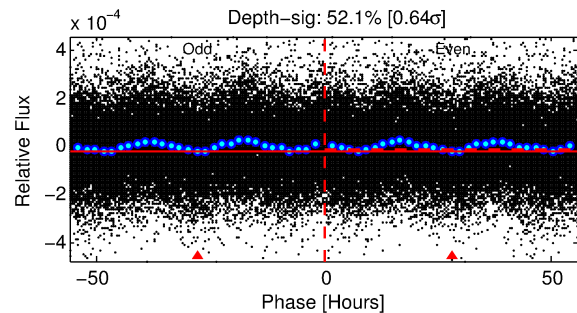
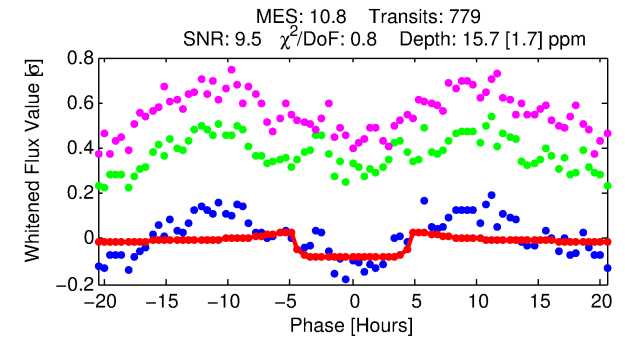
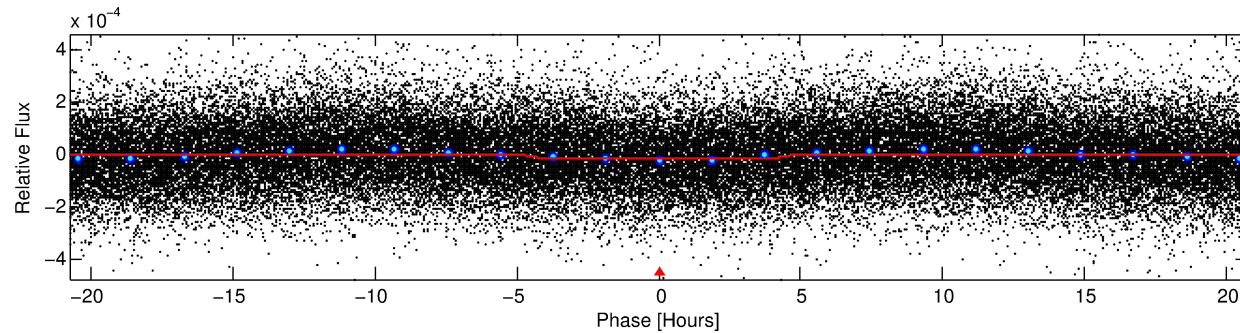
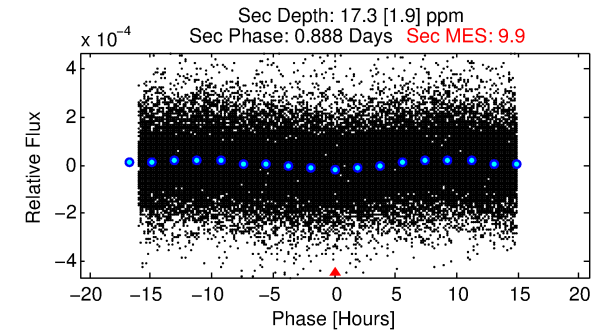
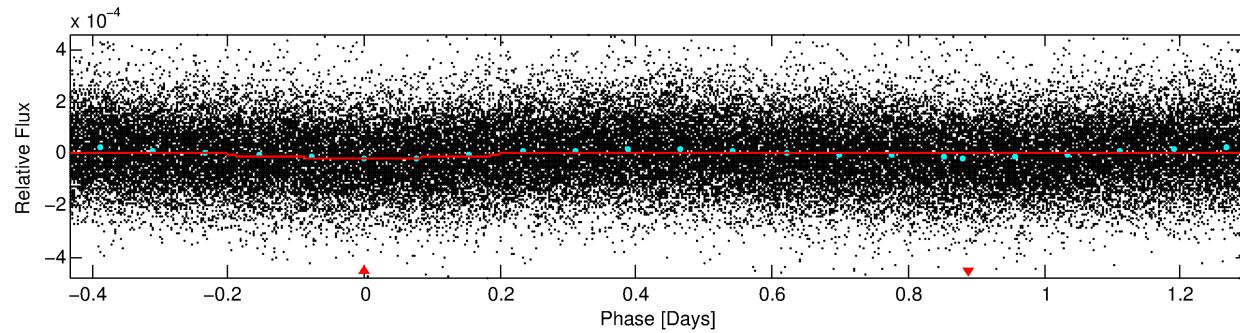
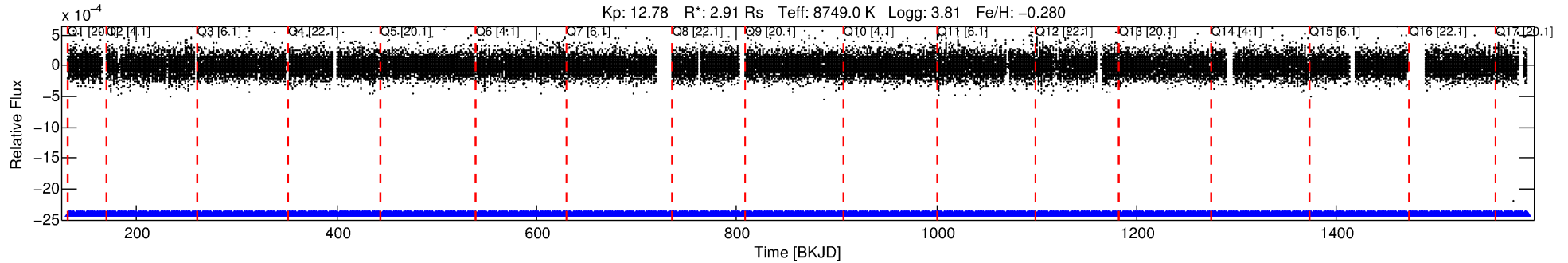
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005898780-01

No Significant Match Found

DV One-Page Summary

KIC: 5898780 Candidate: 1 of 1 Period: 1.733 d



DV Fit Results:

Period = 1.73262 [0.00002] d
Epoch = 132.6774 [0.0060] BKJD
Rp/R* = 0.0038 [0.0012]
a/R* = 1.41 [1.40]
b = 0.55 [2.52]
Seff = 35412.21 [25684.07]
Teq = 3498 [634] K
Rp = 1.21 [0.66] Re
a = 0.0354 [0.0155] AU
Ag = 8.18 [7.83] [0.92σ]
Teffp = 9147 [1533] K [3.41σ]

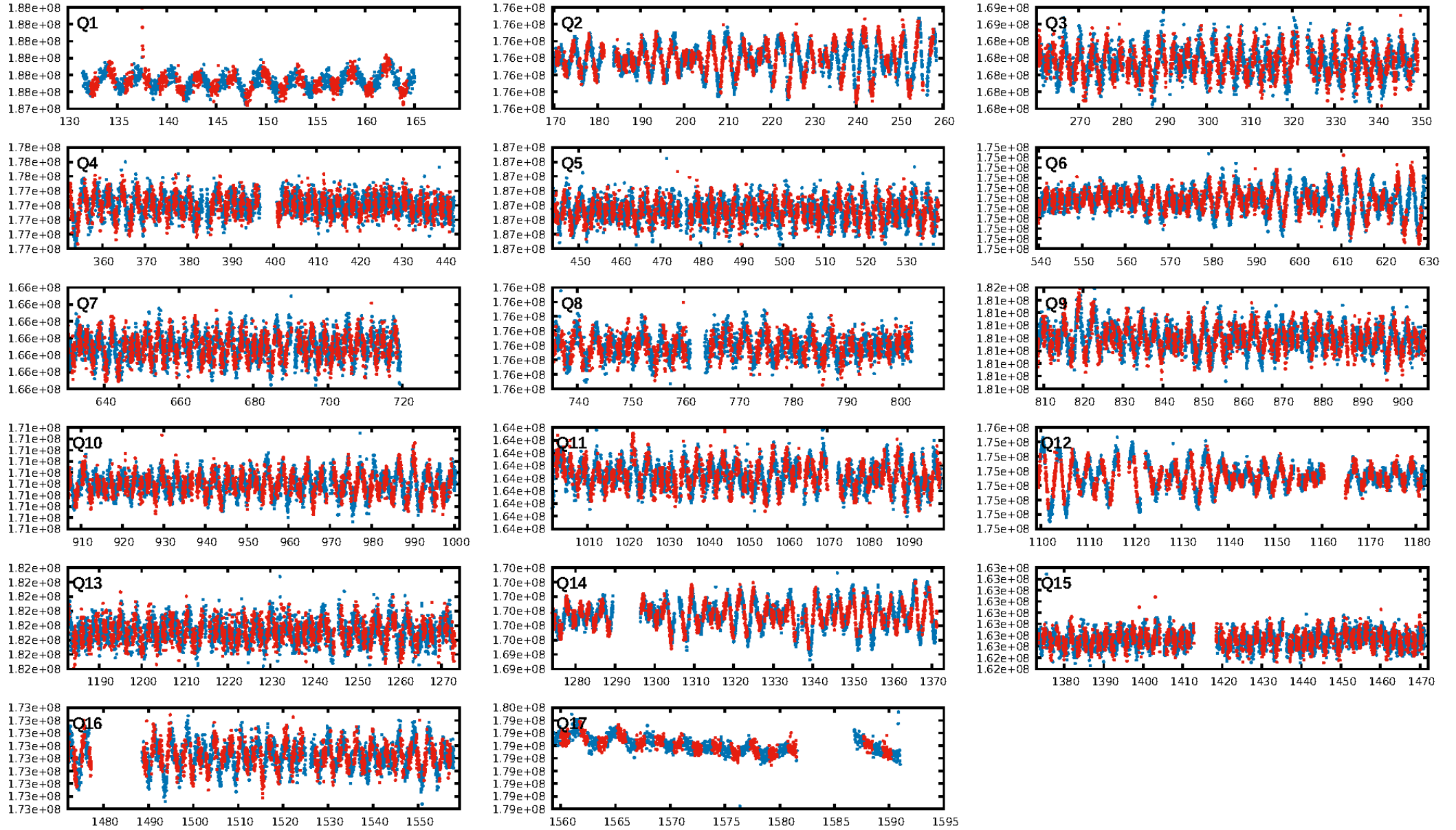
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.75e-15
RollingBand-fgt: 1.00 [745/745]
GhostDiagnostic-chr: 1.752
Centroid-sig: 33.2%
Centroid-so: 0.879 arcsec [0.61σ]
OotOffset-rm: 2.373 arcsec [2.31σ]
OotOffset-st: 3/3/2/3 [11]
KicOffset-rm: 2.479 arcsec [2.51σ]
KicOffset-st: 3/3/2/3 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

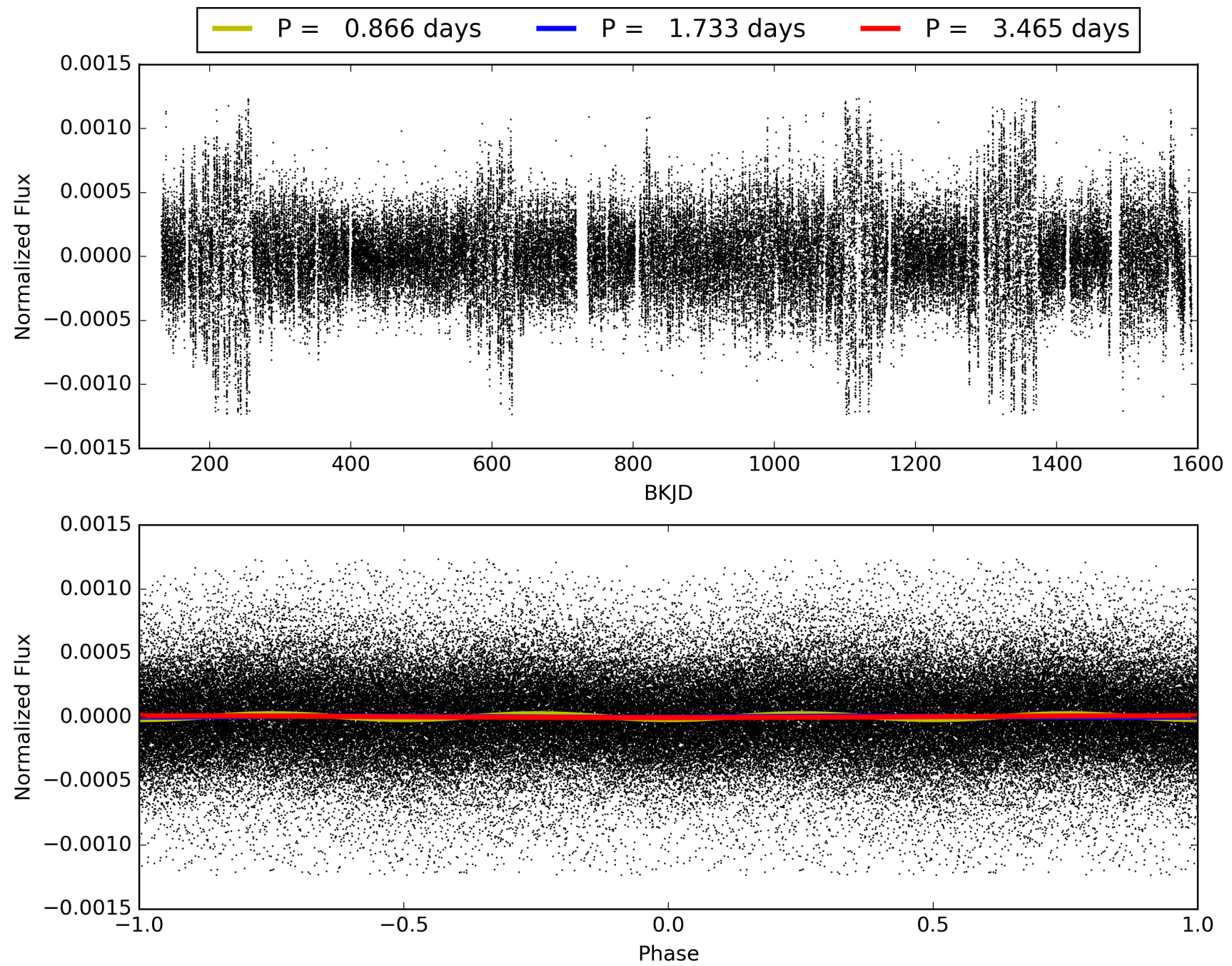
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:14:03 Z

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

TCE 005898780-01, PDC Light Curves

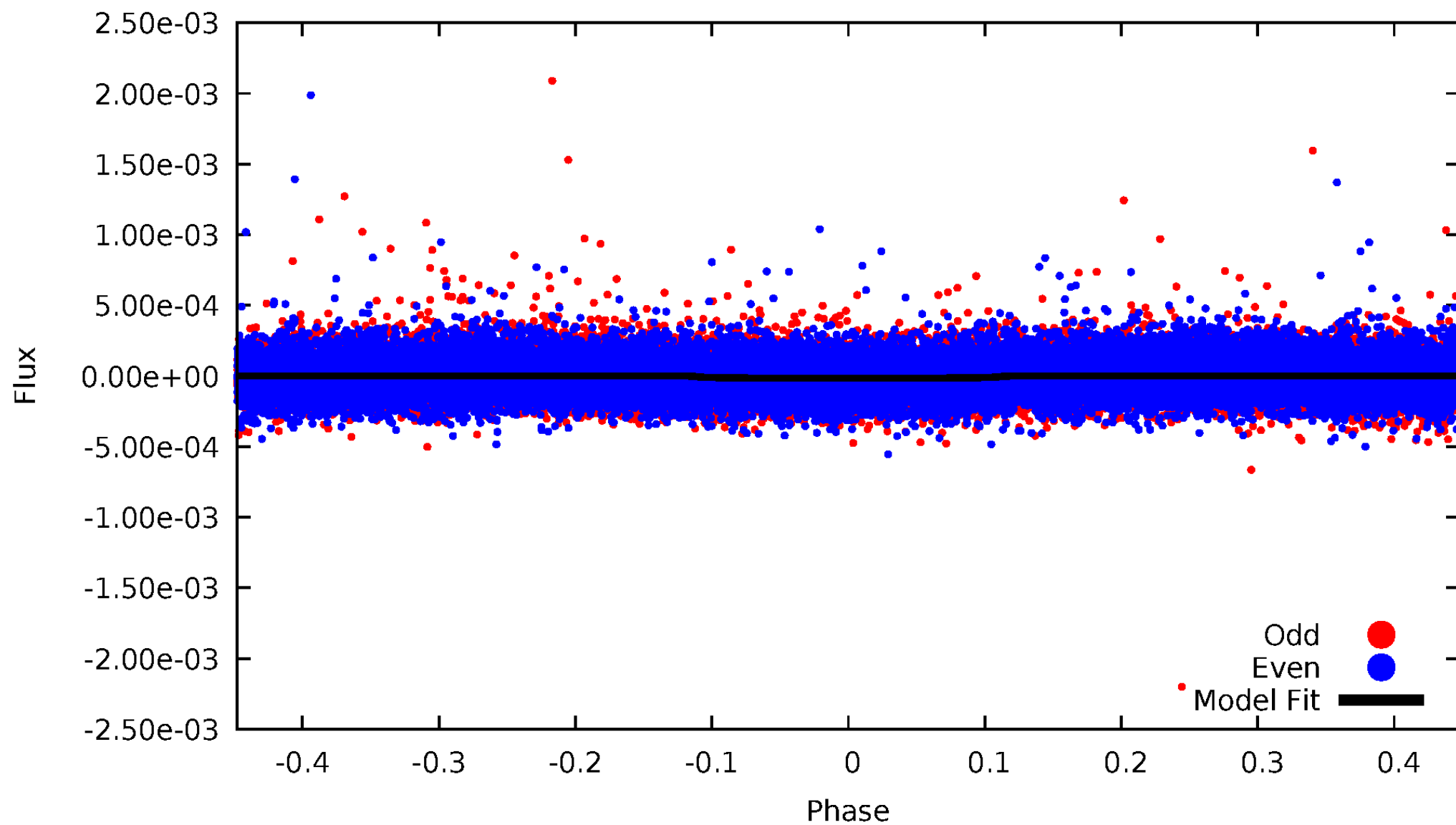


TCE 005898780-01



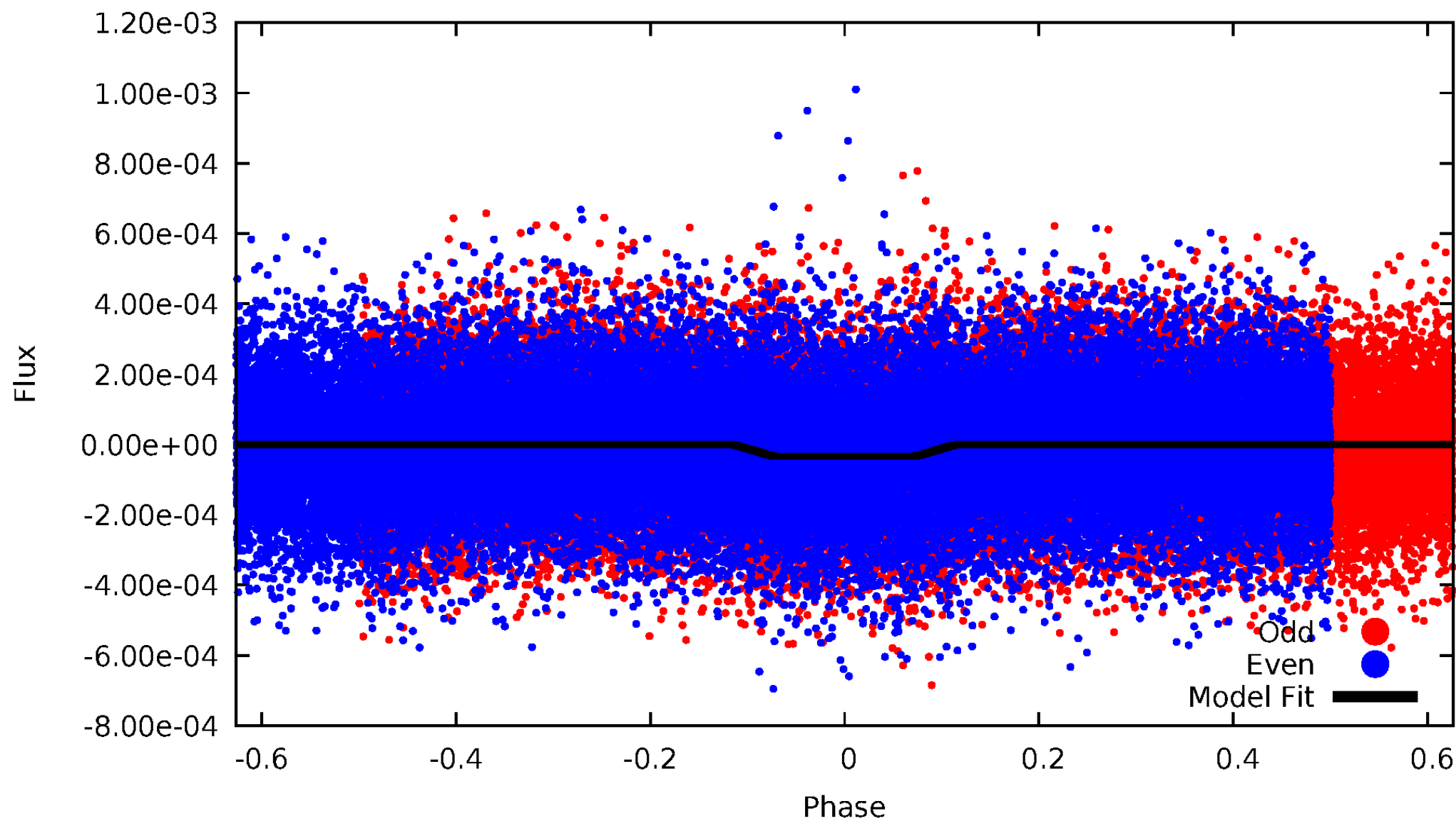
DV Odd/Even

TCE 005898780-01



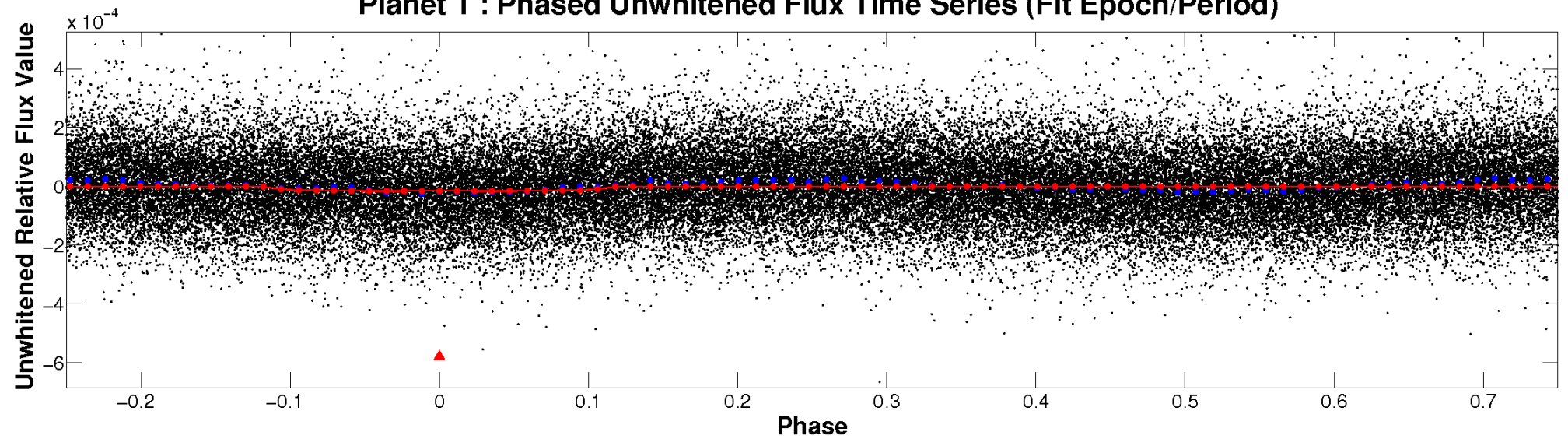
ALT Odd/Even

TCE 005898780-01

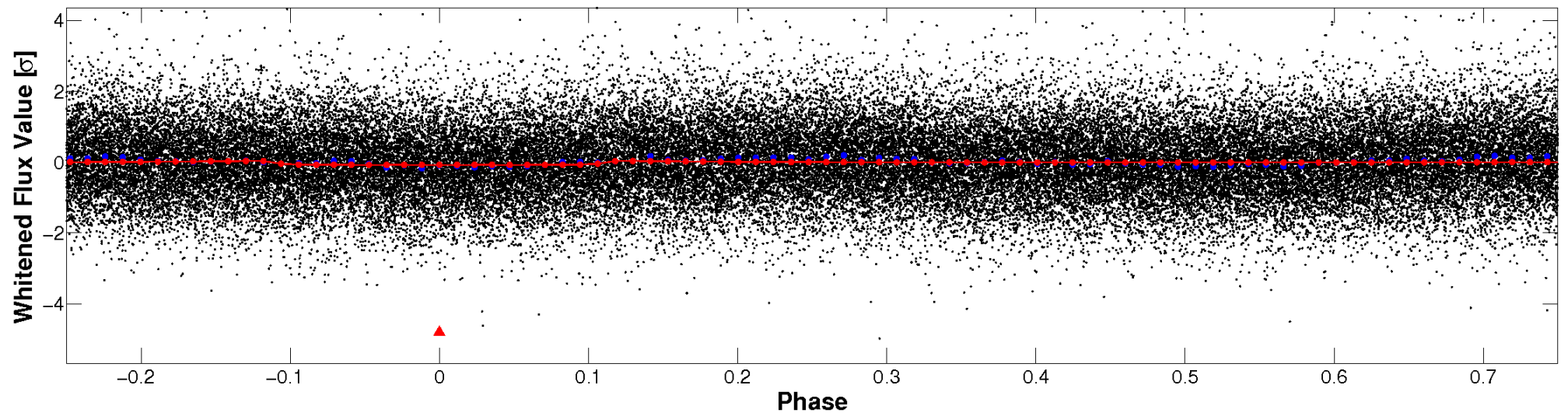


Non-Whitened Vs. Whitened Light Curve

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

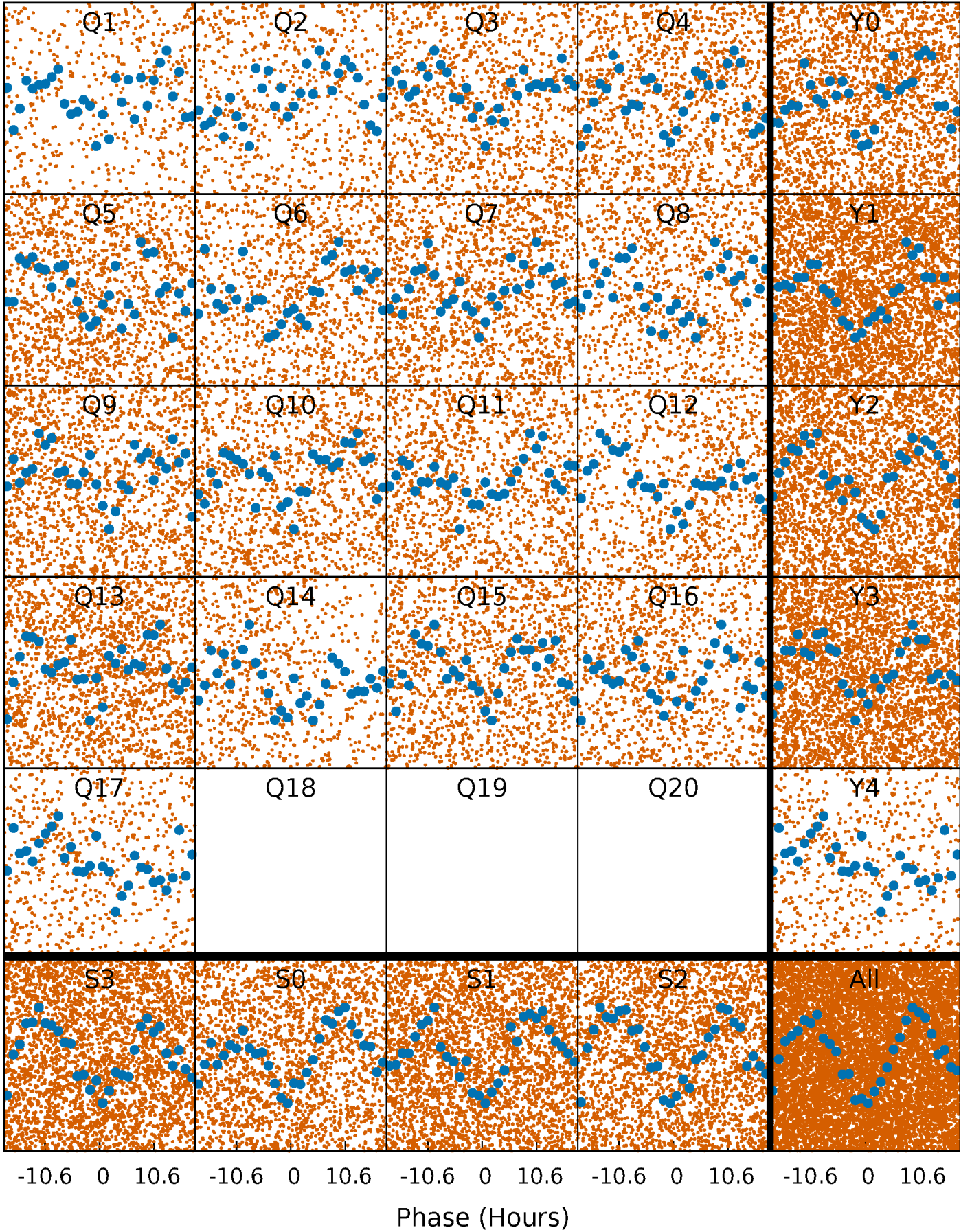


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



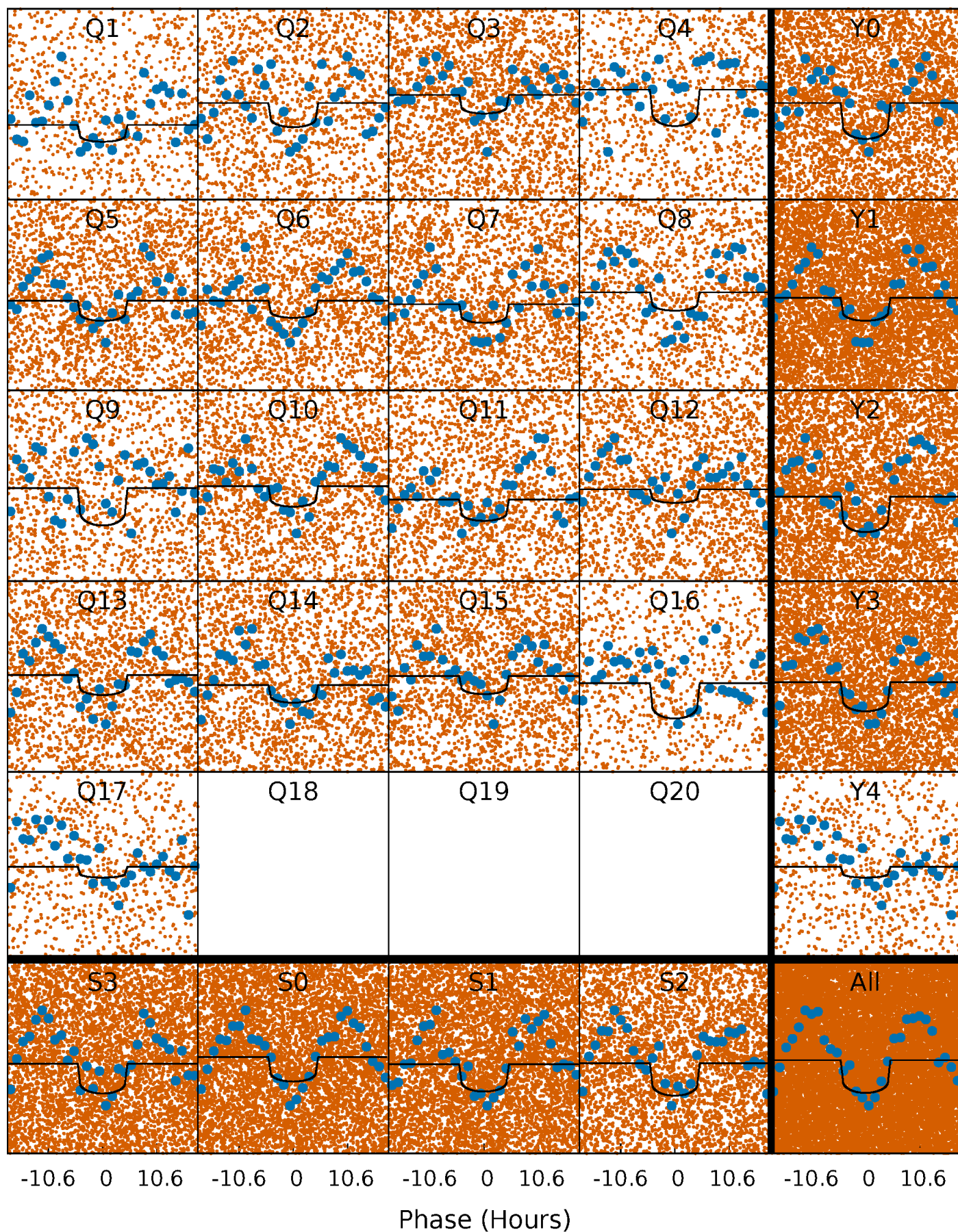
PDC Quarter-Phased Transit Curves

TCE 005898780-01 P= 1.732616 Days $T_0=132.677394$ (BKJD)



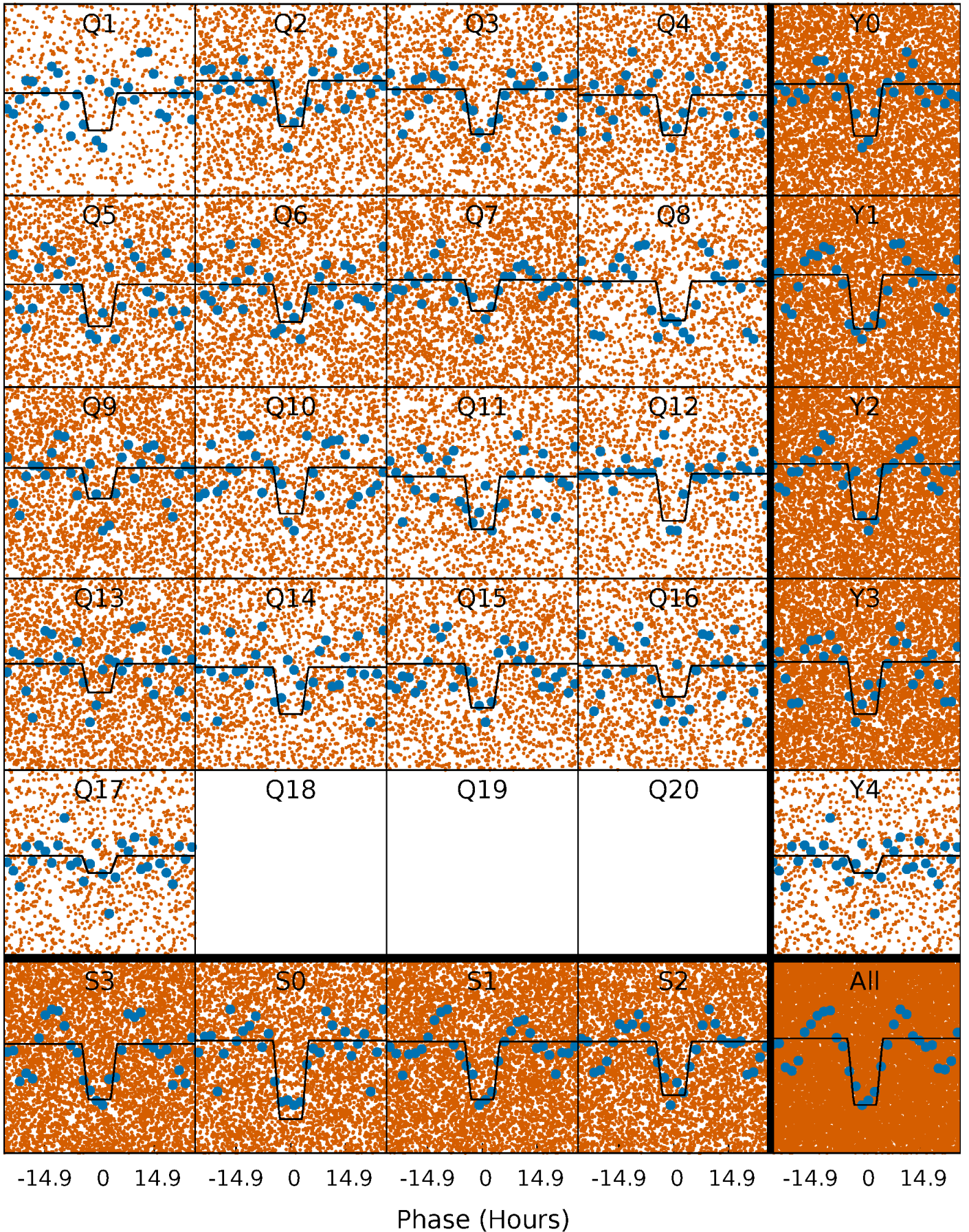
DV Quarter-Phased Transit Curves

TCE 005898780-01 P= 1.732616 Days $T_0=132.677394$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

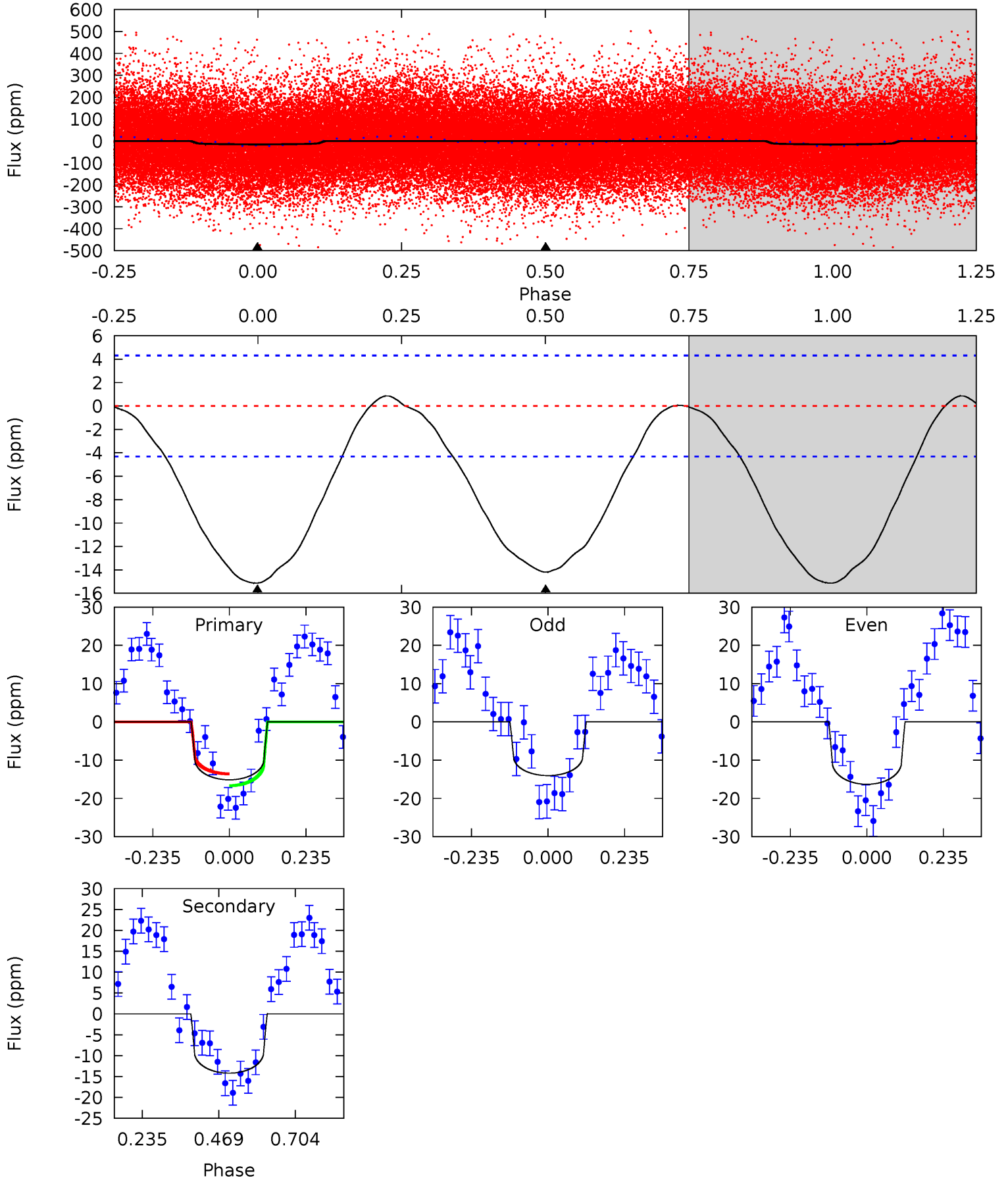
TCE 005898780-01 P= 1.732651 Days $T_0=132.679661$ (BKJD)



DV Model-Shift Uniqueness Test

005898780-01, P = 1.732616 Days, E = 130.944778 Days

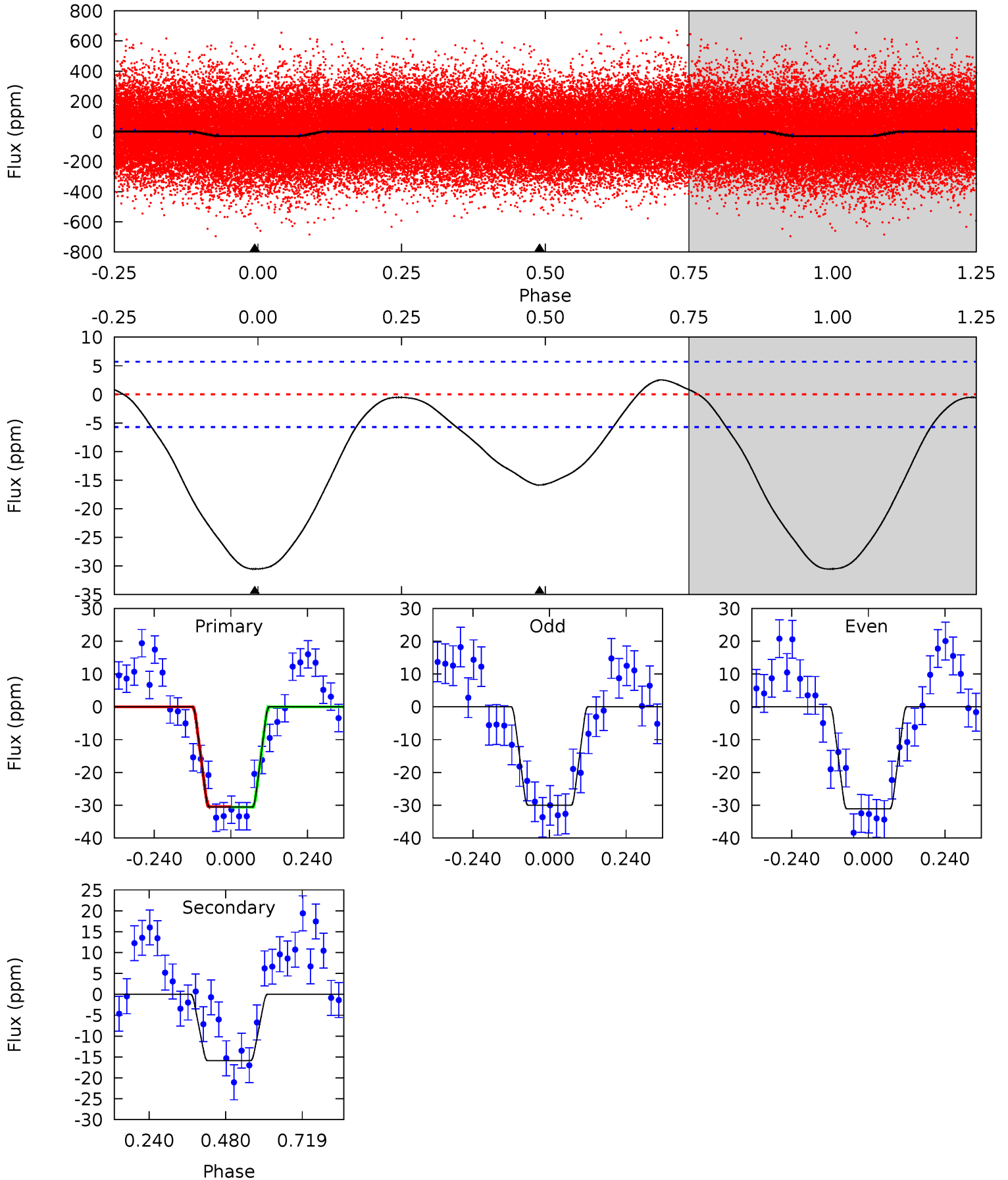
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	14.4	0	0	4.38	1.19	0.40	15.4	15.4	14.4	14.4	1.14	1.06	0.05	1.61



Alt Model-Shift Uniqueness Test

005898780-01, P = 1.732651 Days, E = 130.947010 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	12.2	0	0	4.38	1.18	0.80	23.4	23.4	12.2	12.2	0.42	1.10	0.08	0.08



Stellar Parameters For KIC 005898780

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8749^{+241}_{-379}	$3.806^{+0.416}_{-0.104}$	$-0.280^{+0.450}_{-0.350}$	$2.911^{+0.698}_{-1.297}$	$1.979^{+0.366}_{-0.447}$	$0.113^{+0.408}_{-0.045}$
	+3%/-4%	+11%/-3%	+161%/-125%	+24%/-45%	+18%/-23%	+361%/-40%
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 005898780-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 1	$1.08^{+0.46}_{-0.40}$	4710^{+402}_{-554}	8615^{+3009}_{-1471}	$8.570^{+12.469}_{-4.472}$
Alt.	-16 ± 1	$1.68^{+0.55}_{-0.49}$	4692^{+392}_{-482}	6756^{+1212}_{-747}	$3.826^{+3.631}_{-1.513}$

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

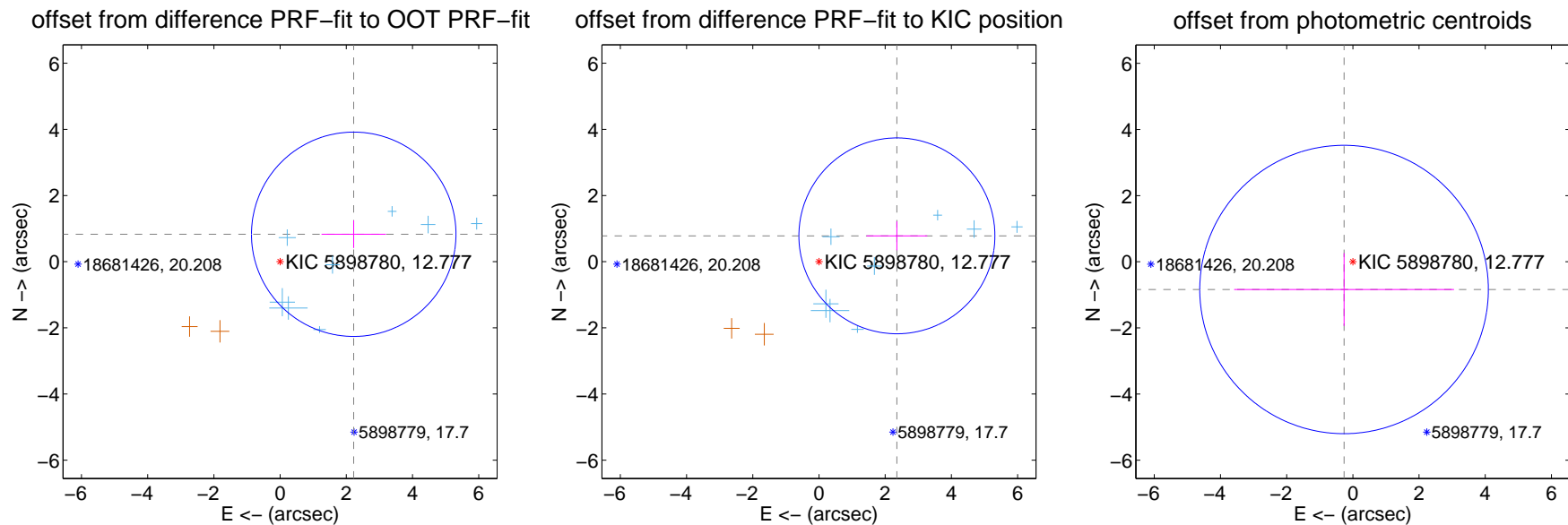
DV Centroid Data

Supplemental centroid analysis for 005898780-01. Kepler magnitude: 12.78. Transit SNR 9.46

There are 9 quarters with good PRF difference image offsets

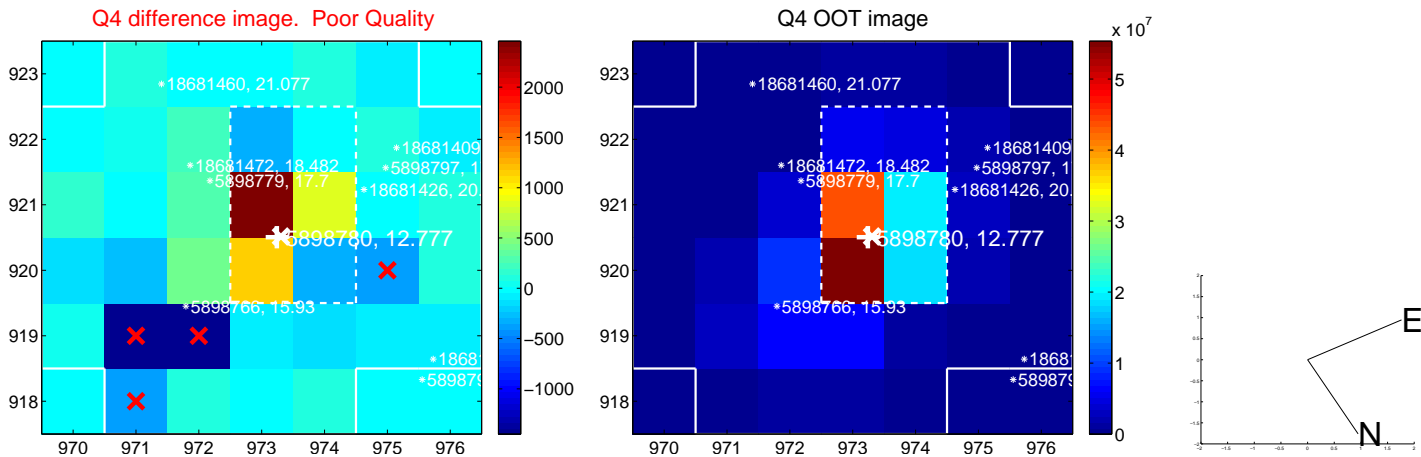
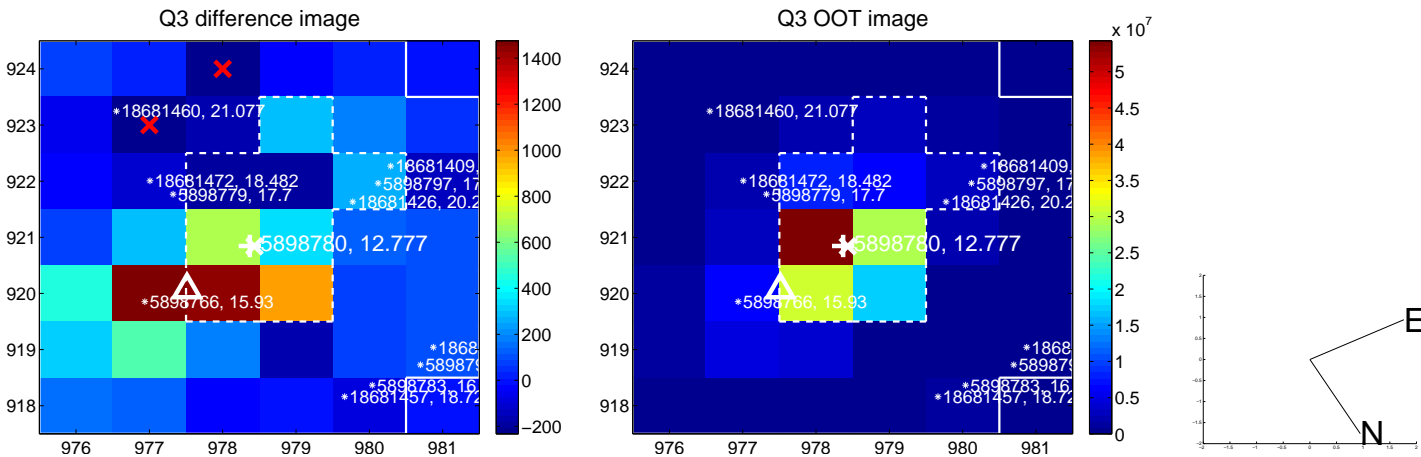
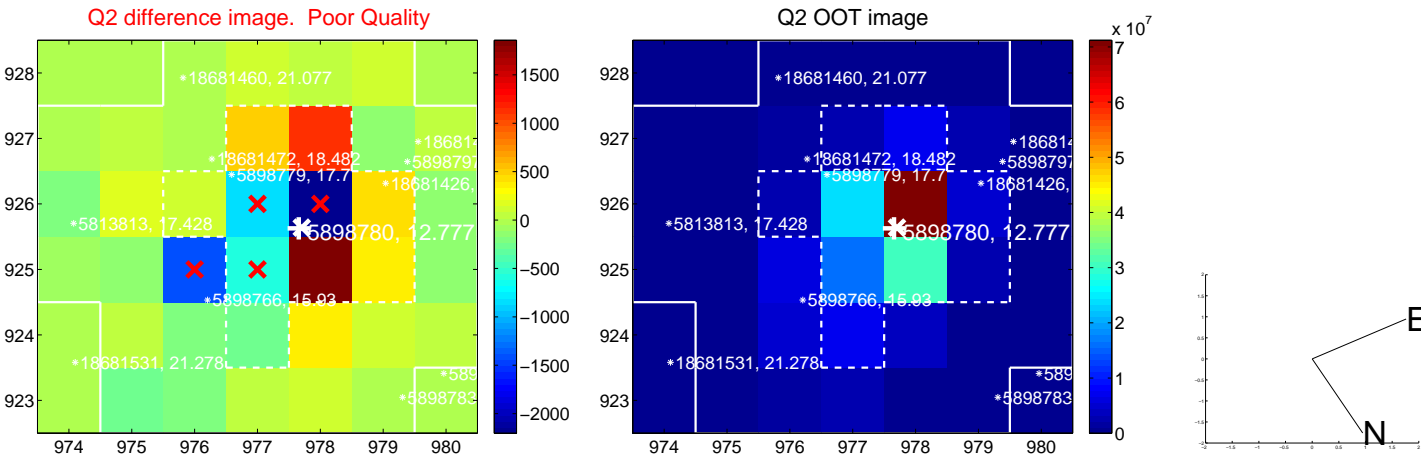
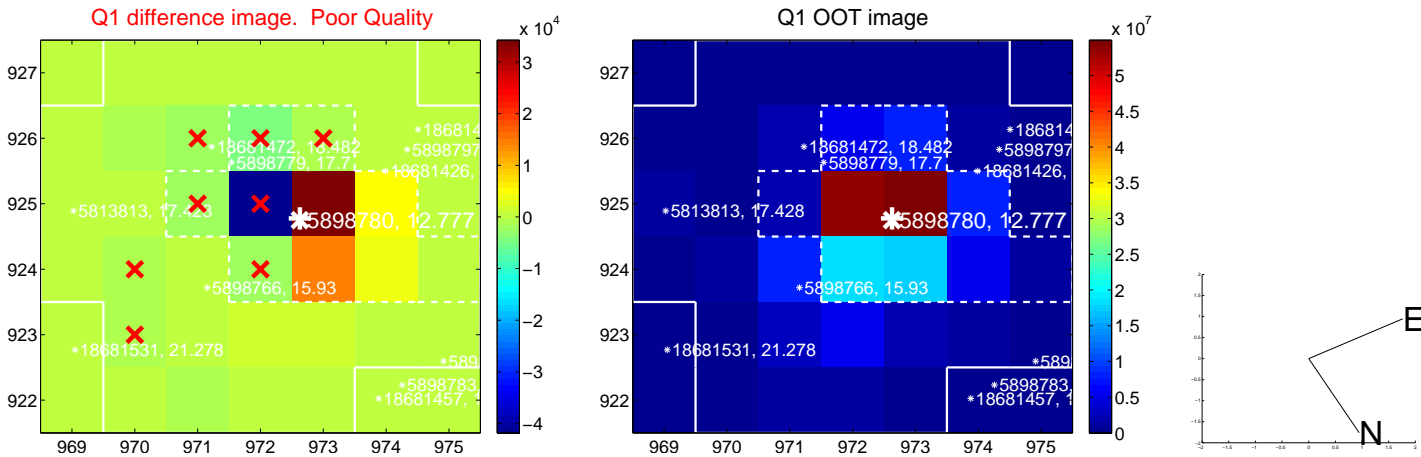
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.373 ± 1.029	2.31	-2.224 ± 0.972	0.829 ± 0.415
PRF-fit source offset from KIC position	2.479 ± 0.987	2.51	-2.353 ± 0.918	0.781 ± 0.437
photometric centroid source offset	0.88 ± 1.45	0.61	0.27 ± 3.32	-0.84 ± 1.10

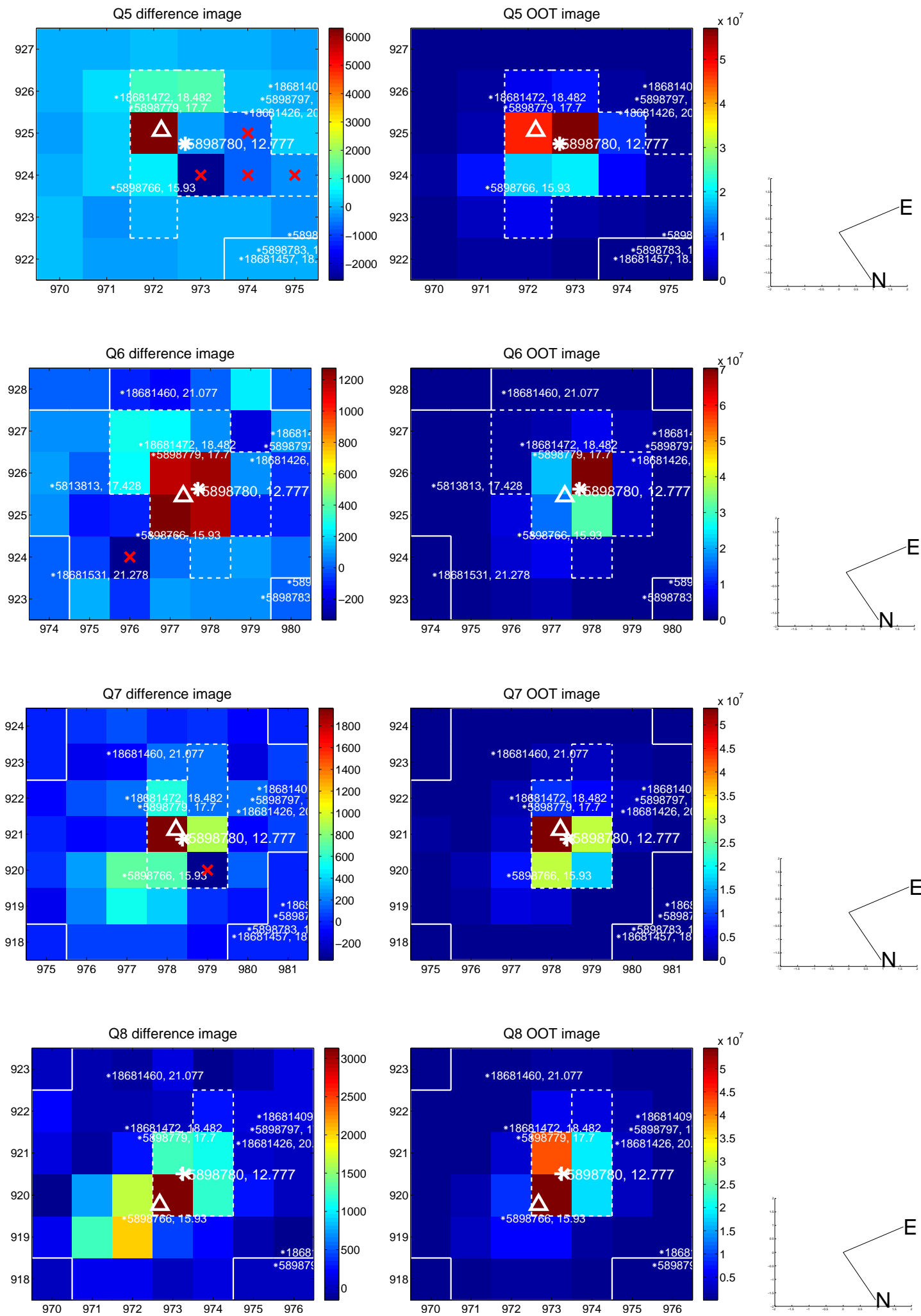


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

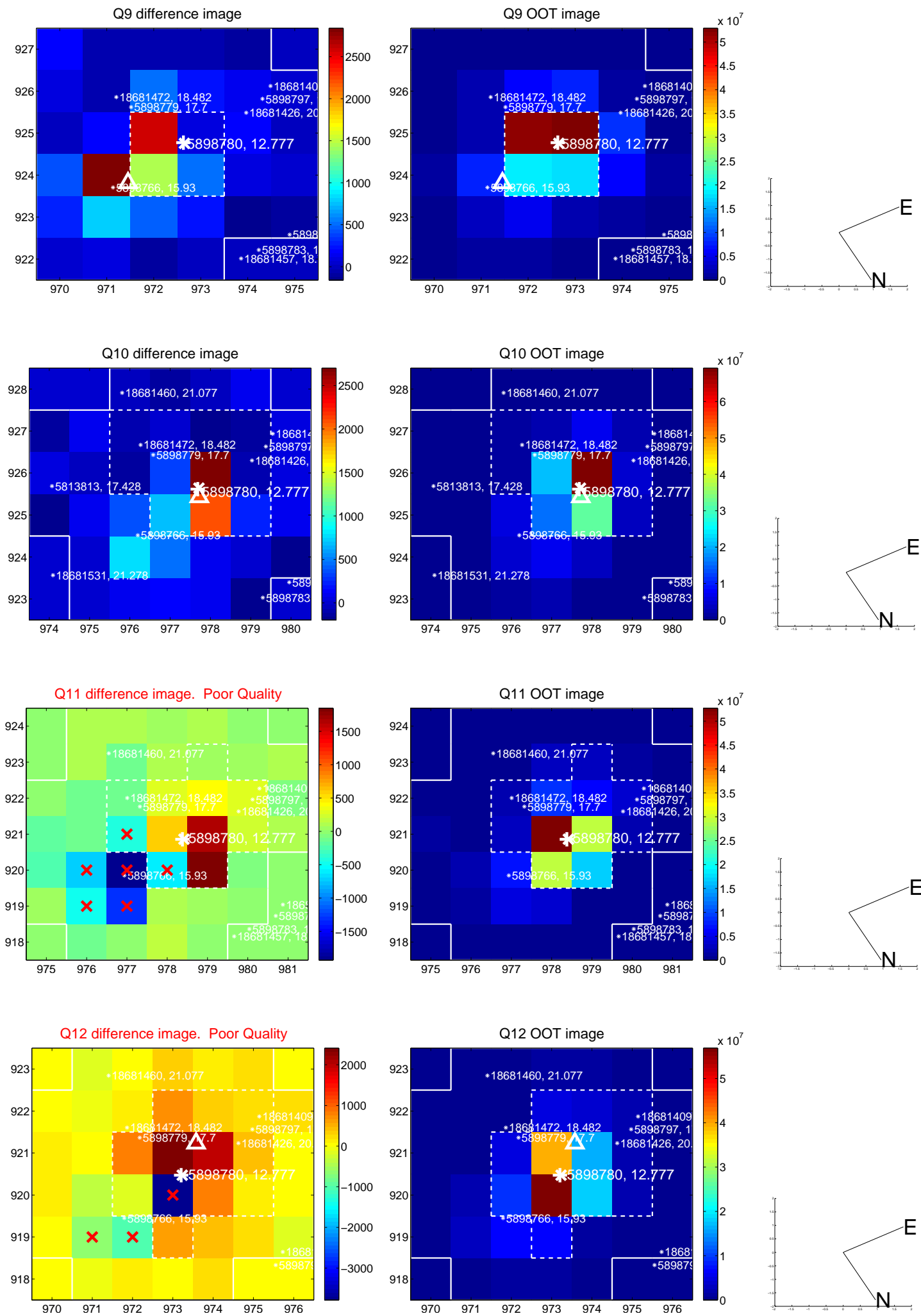
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



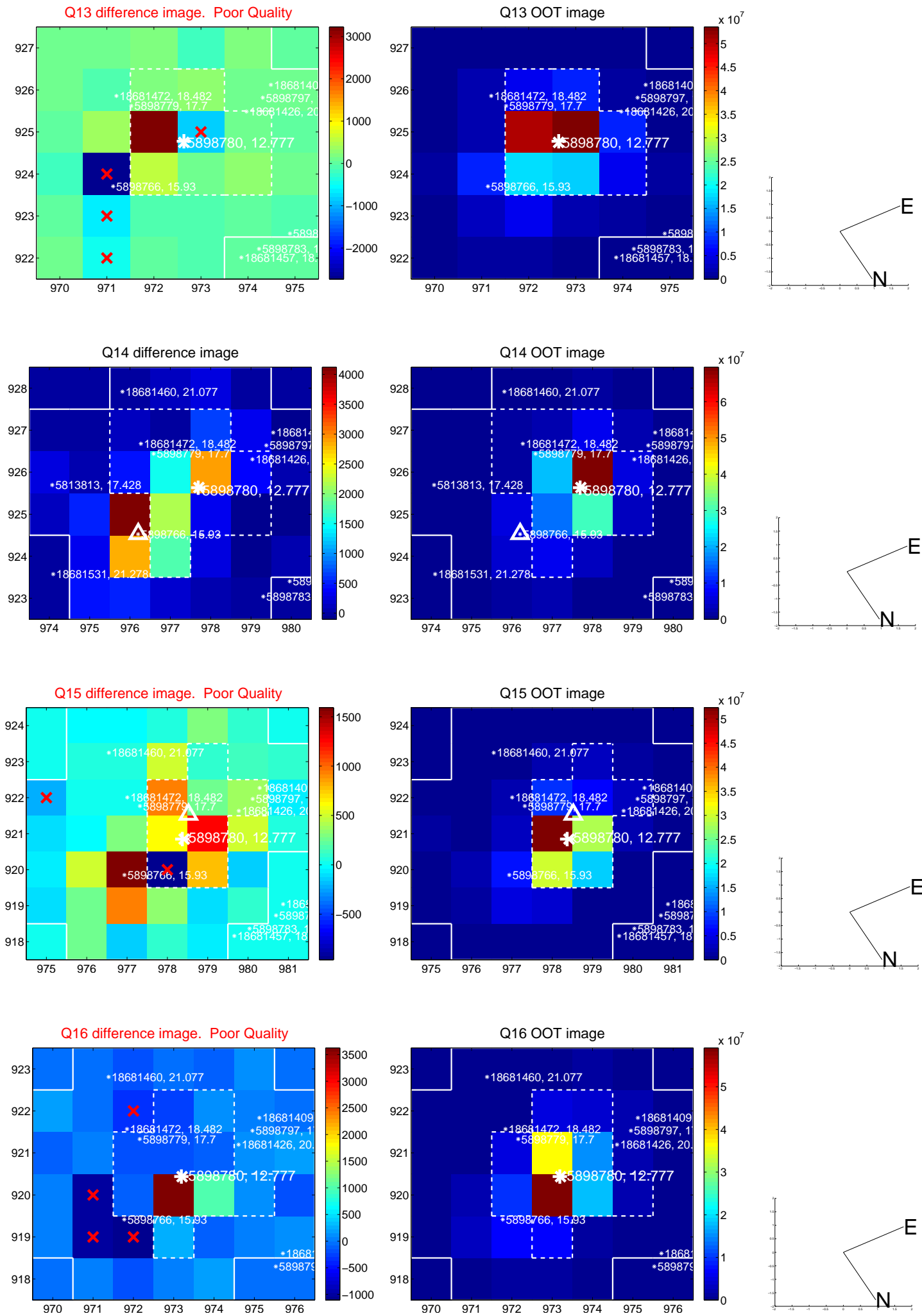
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



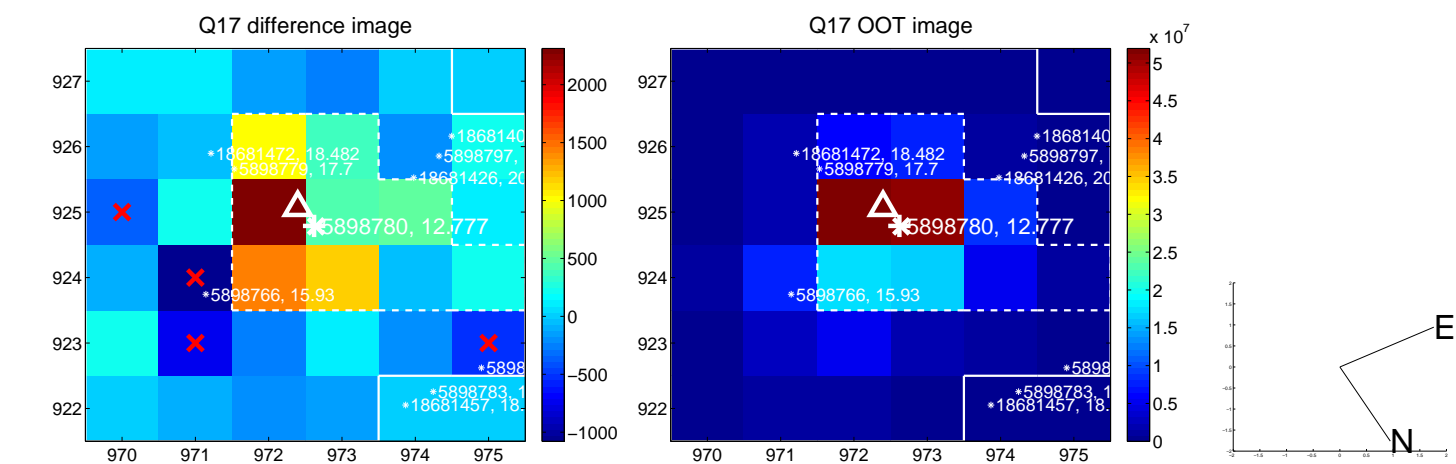
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



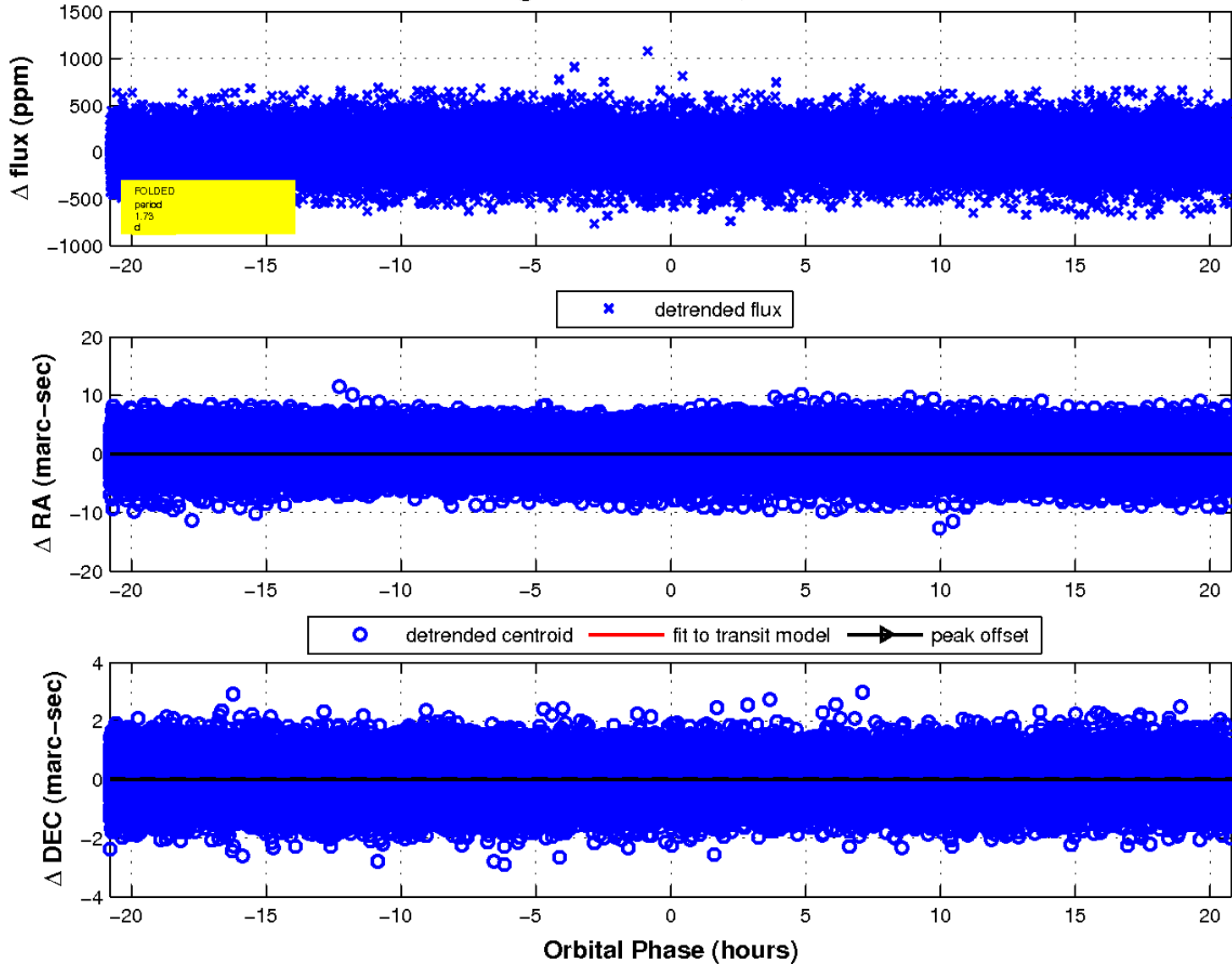
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

