

KIC 004863836

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})
004863836-01	OBS	No	1.822074	131.908939	33.5	15.686	11.3	14.1	0.97	6531	0.56	1738.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004863836-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_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.

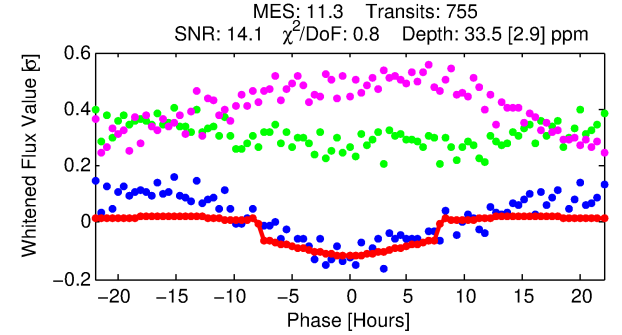
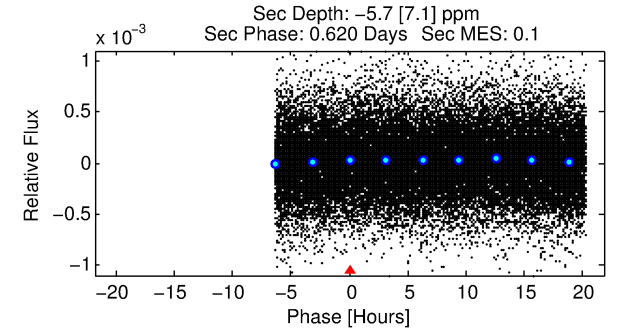
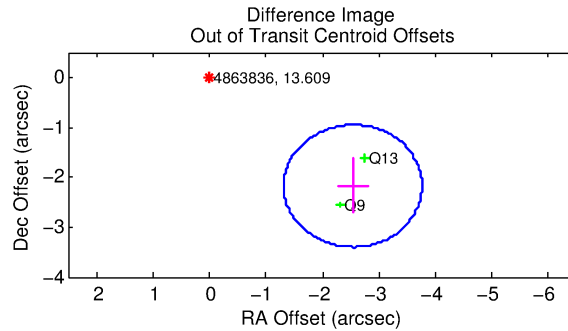
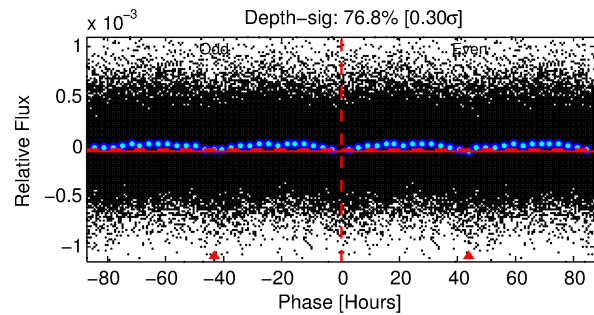
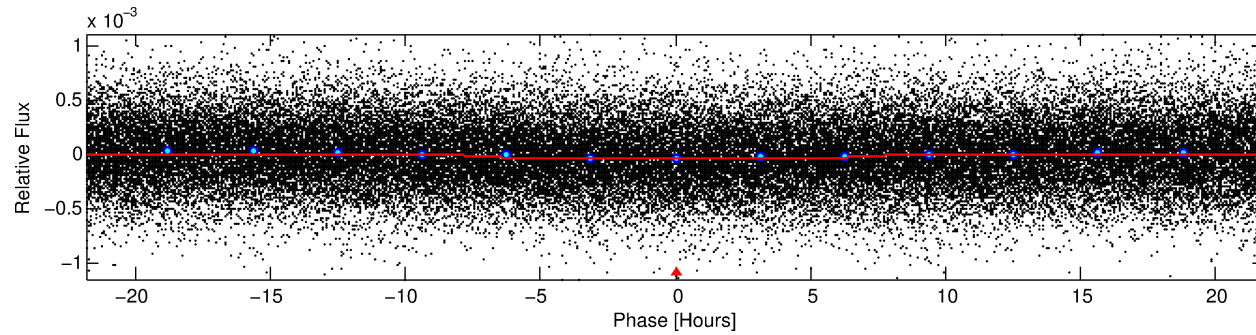
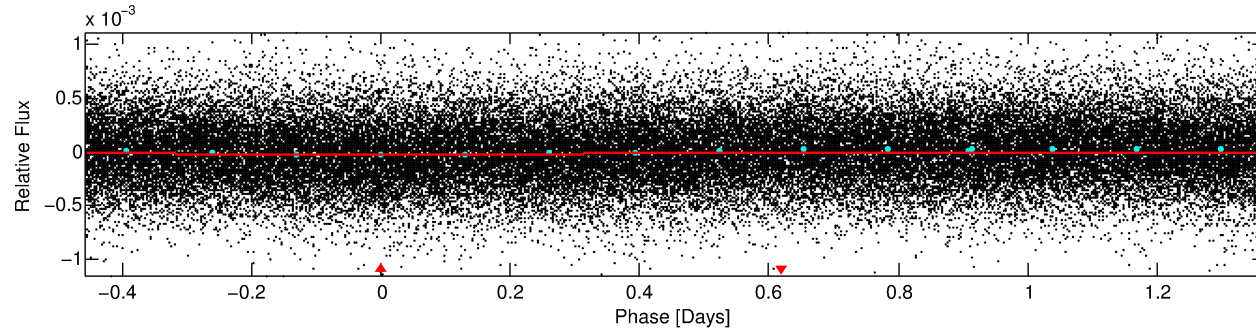
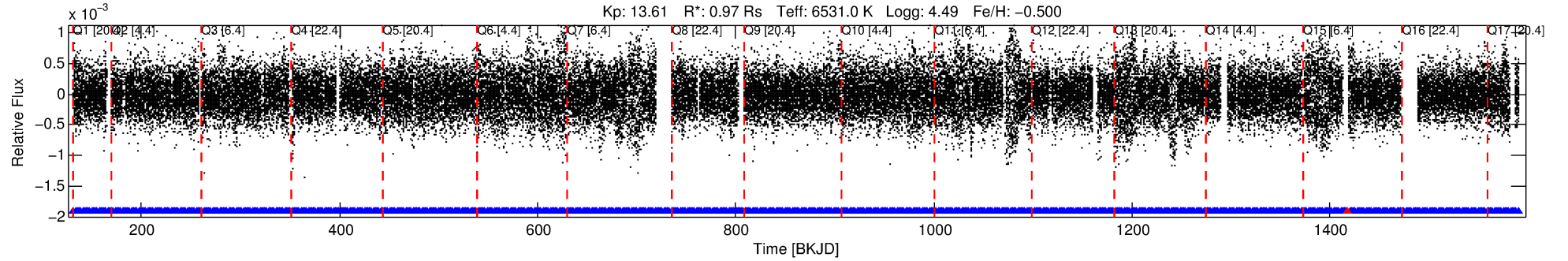
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004863836-01

No Significant Match Found

DV One-Page Summary

KIC: 4863836 Candidate: 1 of 1 Period: 1.822 d



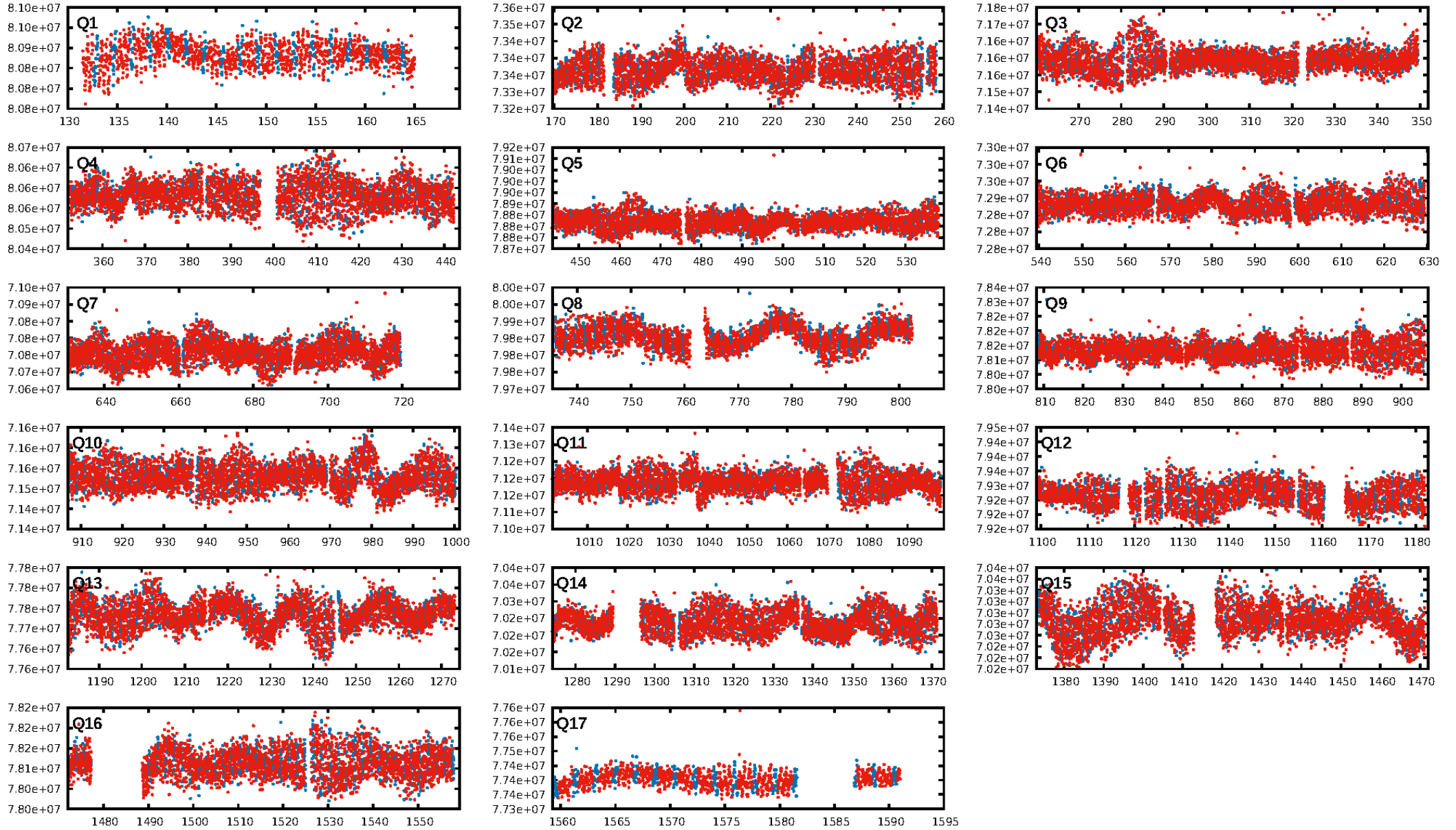
DV Fit Results:

Period = 1.82207 [0.00003] d
Epoch = 131.9089 [0.0074] BKJD
Rp/R* = 0.0053 [0.0007]
a/R* = 1.11 [0.15]
b = 0.00 [8065.35]
Seff = 1738.90 [715.69]
Teq = 1647 [169] K
Rp = 0.56 [0.20] Re
a = 0.0297 [0.0082] AU
Ag = N/A
Teffp = N/A

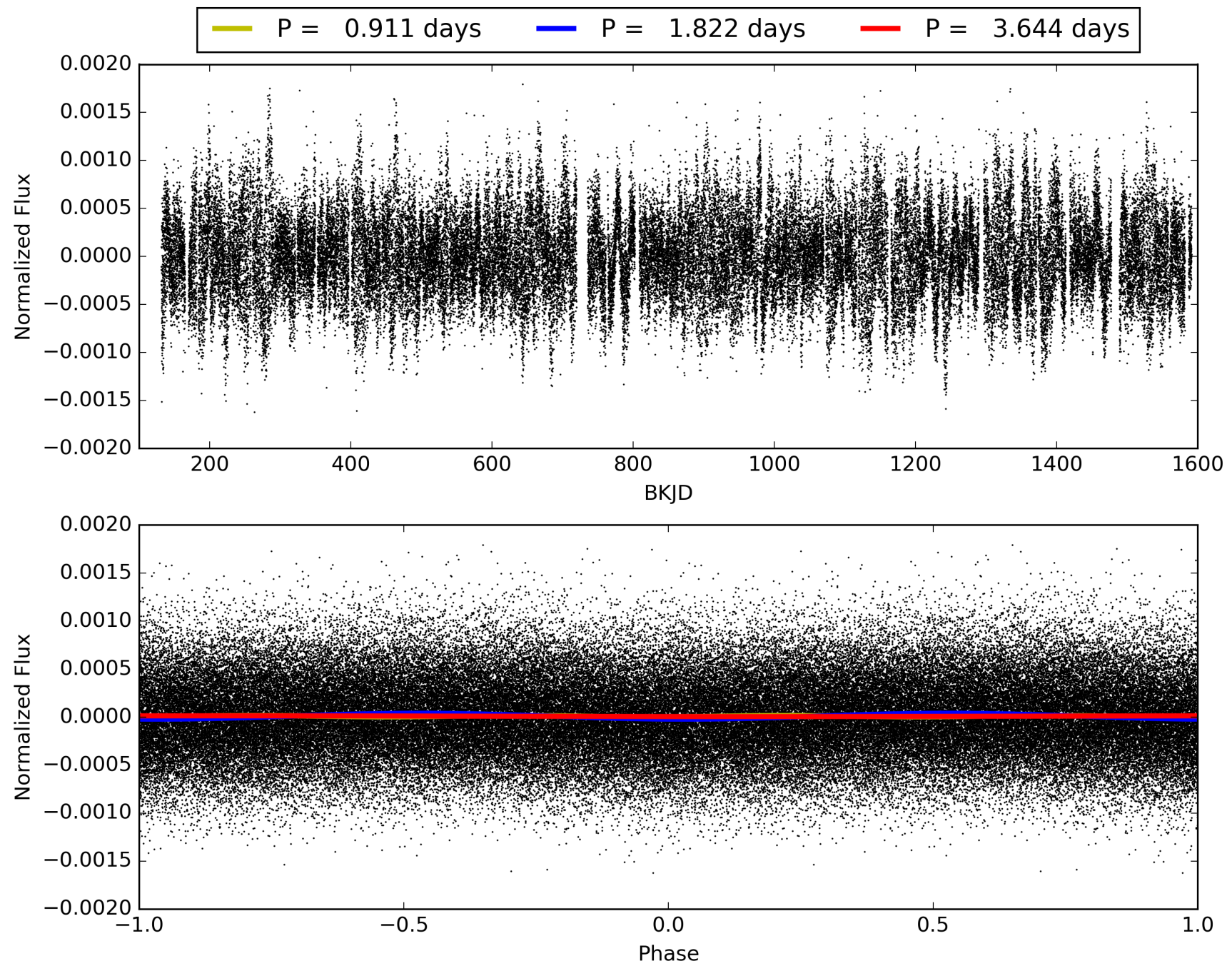
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [721/722]
GhostDiagnostic-chr: 3.202
Centroid-sig: 0.6%
Centroid-so: 1.032 arcsec [1.49 σ]
OotOffset-rm: 3.343 arcsec [8.20 σ]
KicOffset-rm: 3.276 arcsec [7.91 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004863836-01, PDC Light Curves

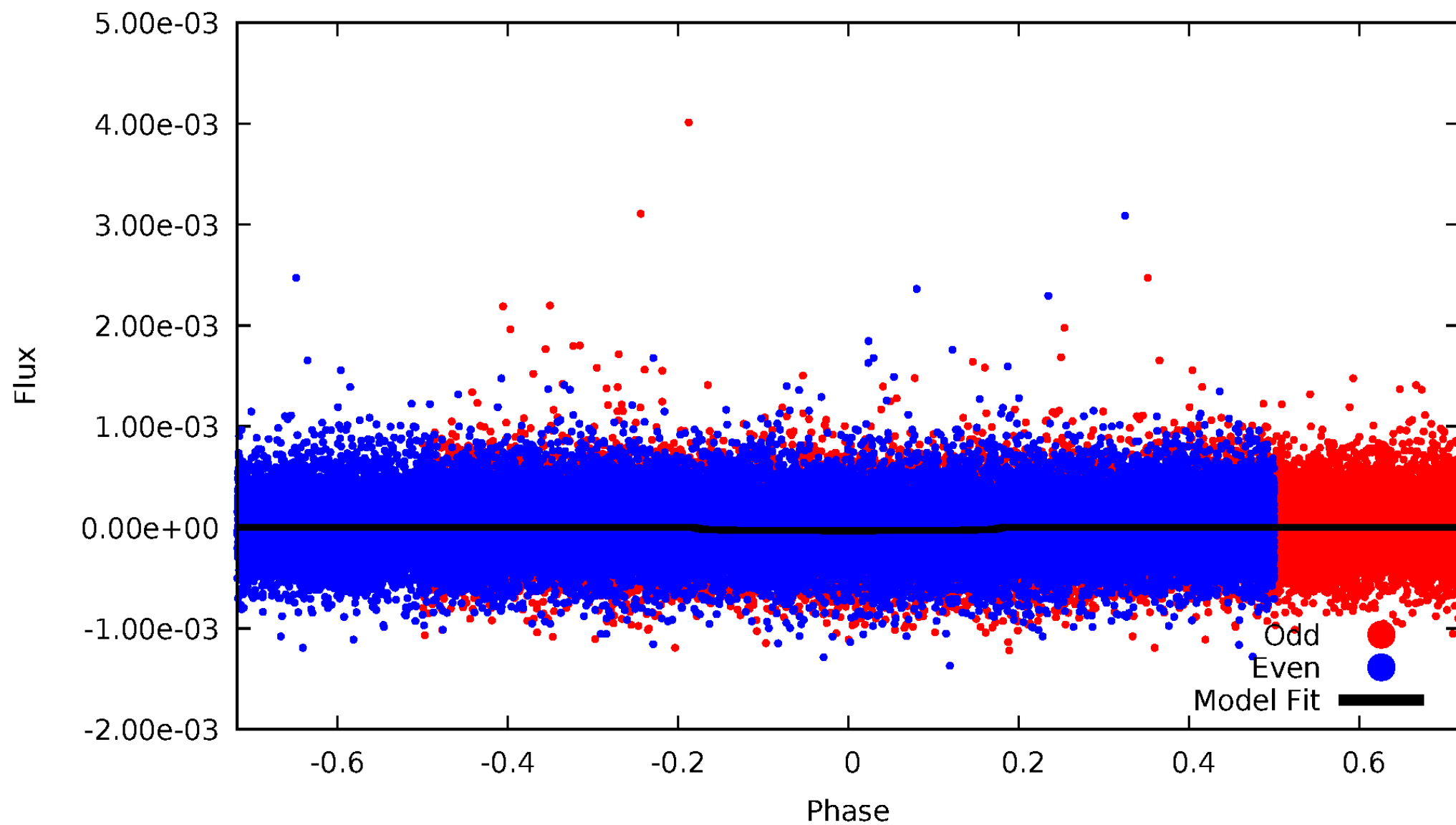


TCE 004863836-01



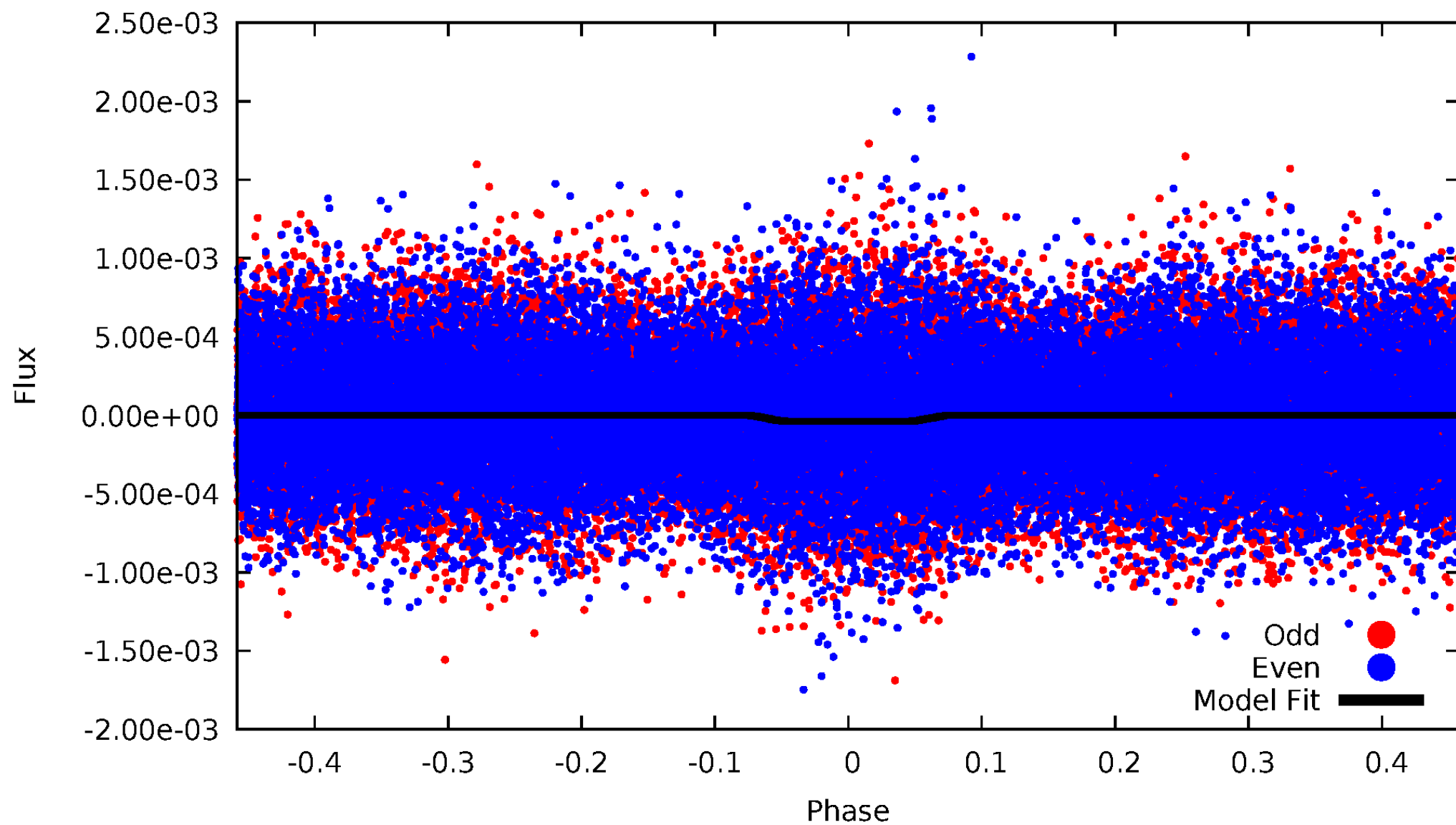
DV Odd/Even

TCE 004863836-01

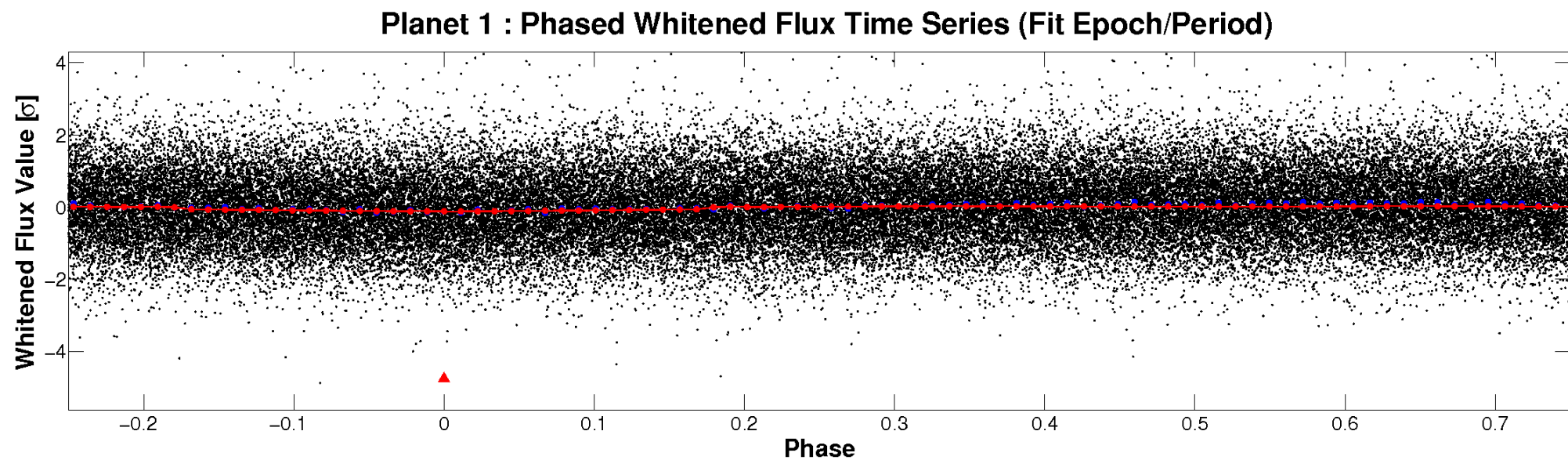
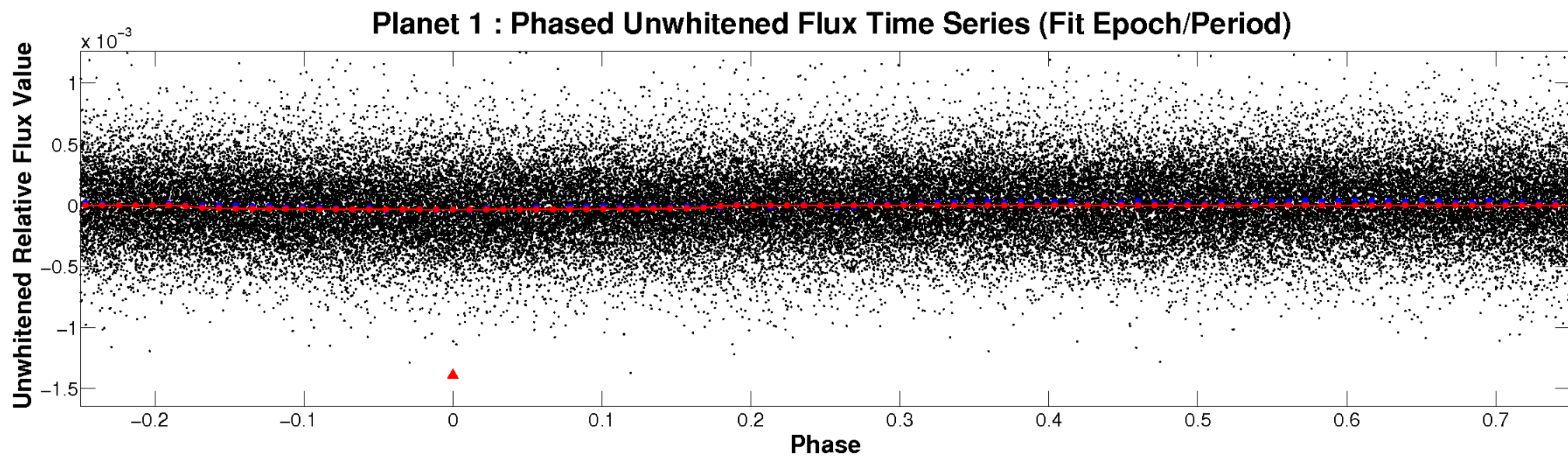


ALT Odd/Even

TCE 004863836-01

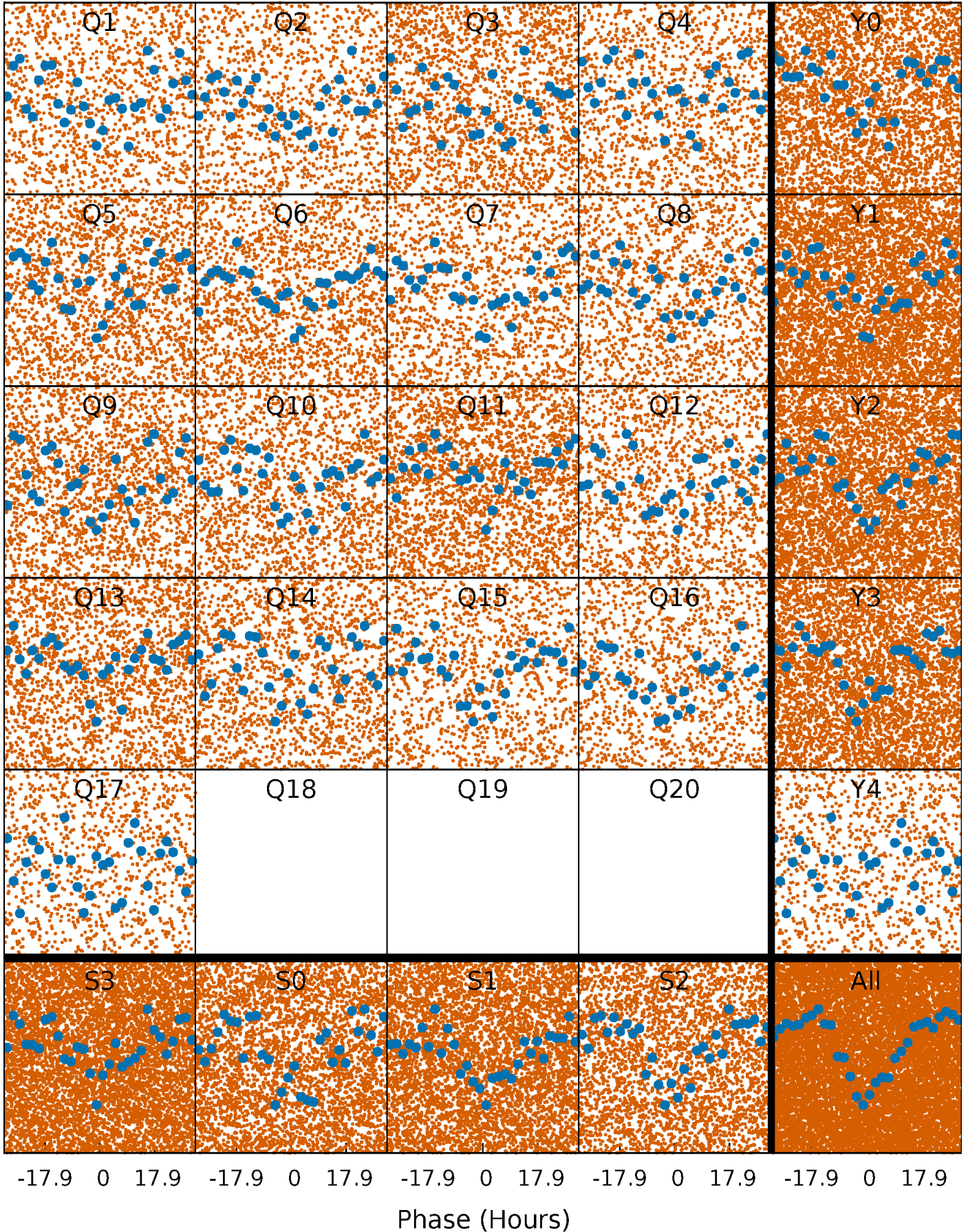


Non-Whitened Vs. Whitened Light Curve



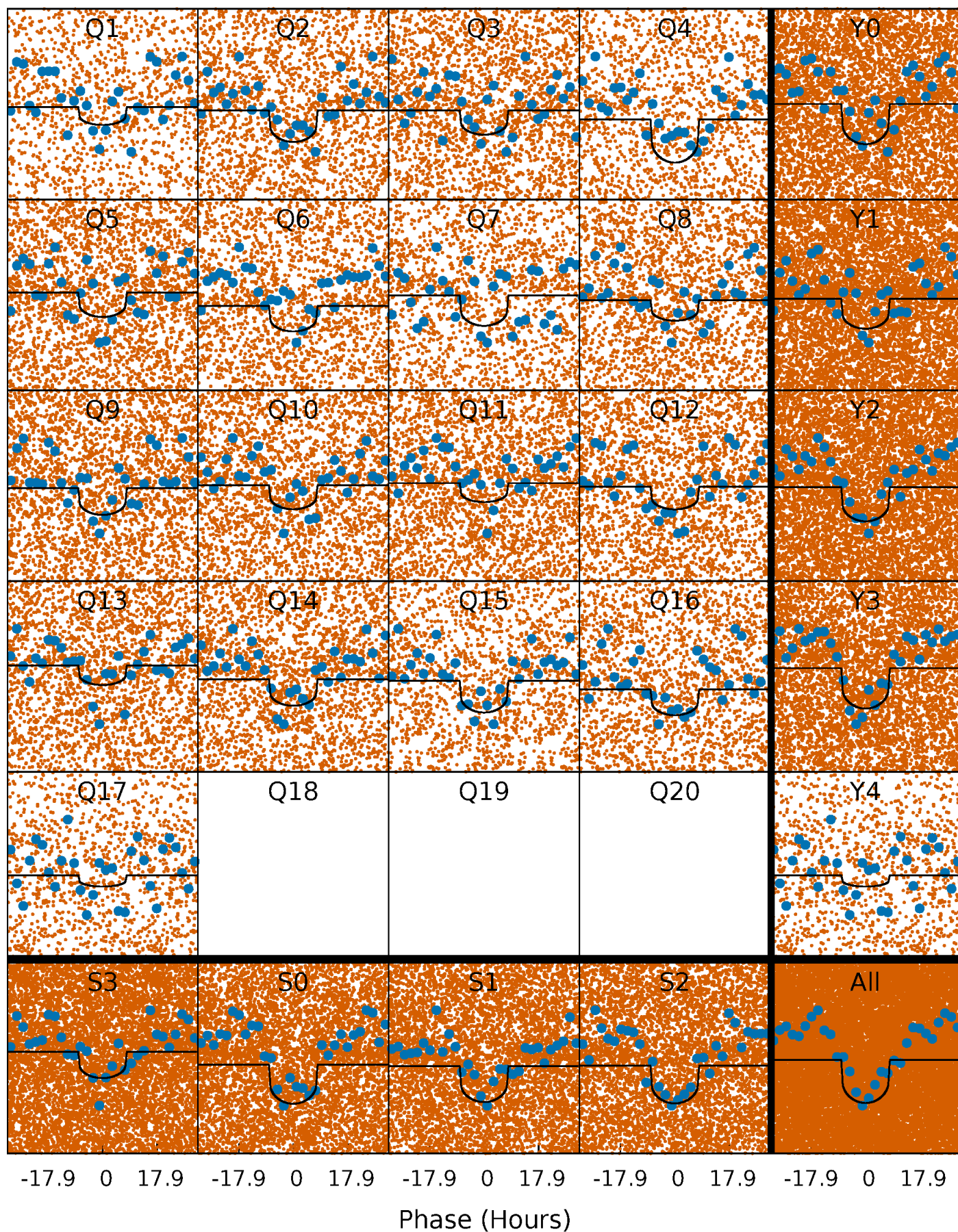
PDC Quarter-Phased Transit Curves

TCE 004863836-01 P= 1.822074 Days $T_0=131.908939$ (BKJD)



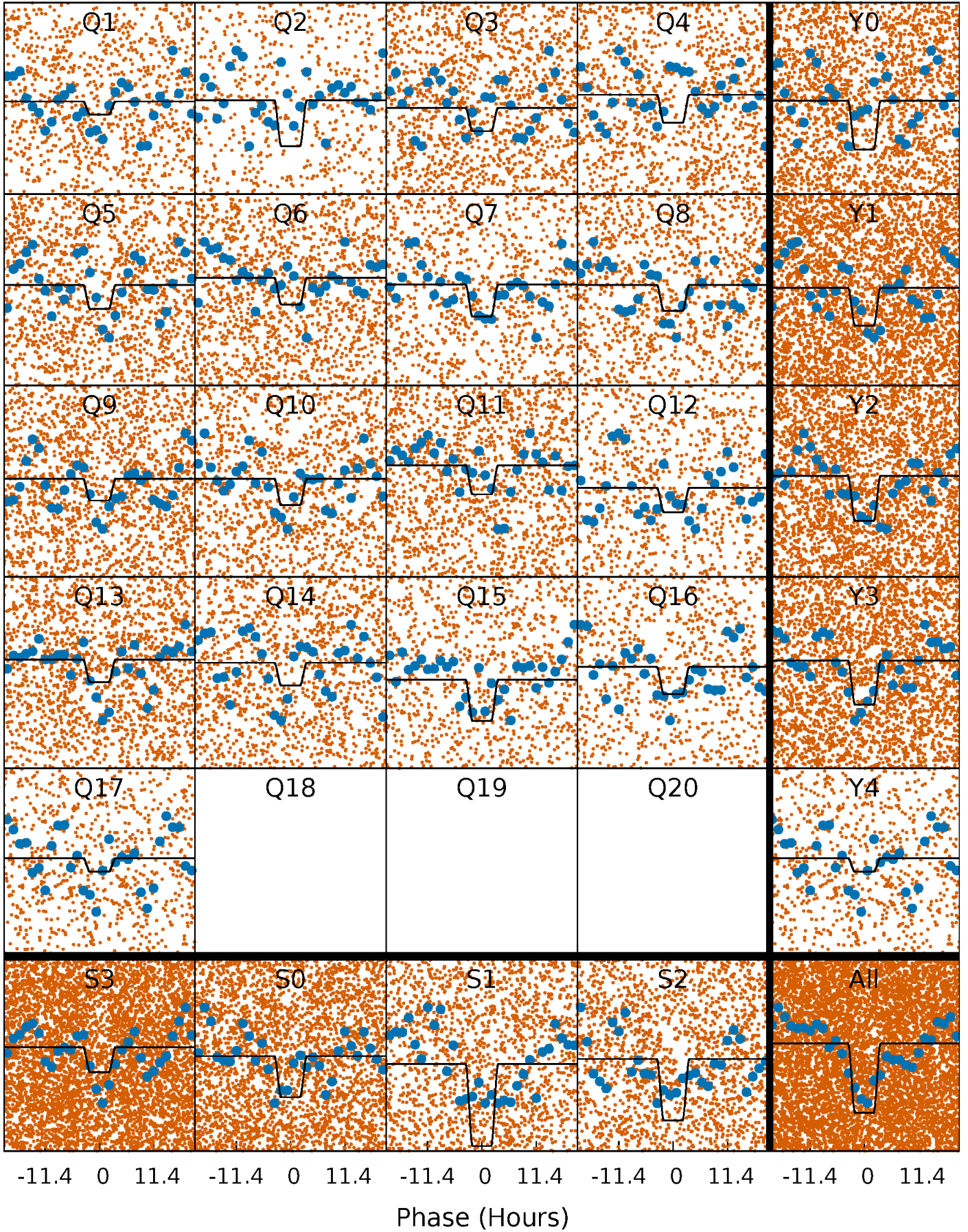
DV Quarter-Phased Transit Curves

TCE 004863836-01 P= 1.822074 Days $T_0=131.908939$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

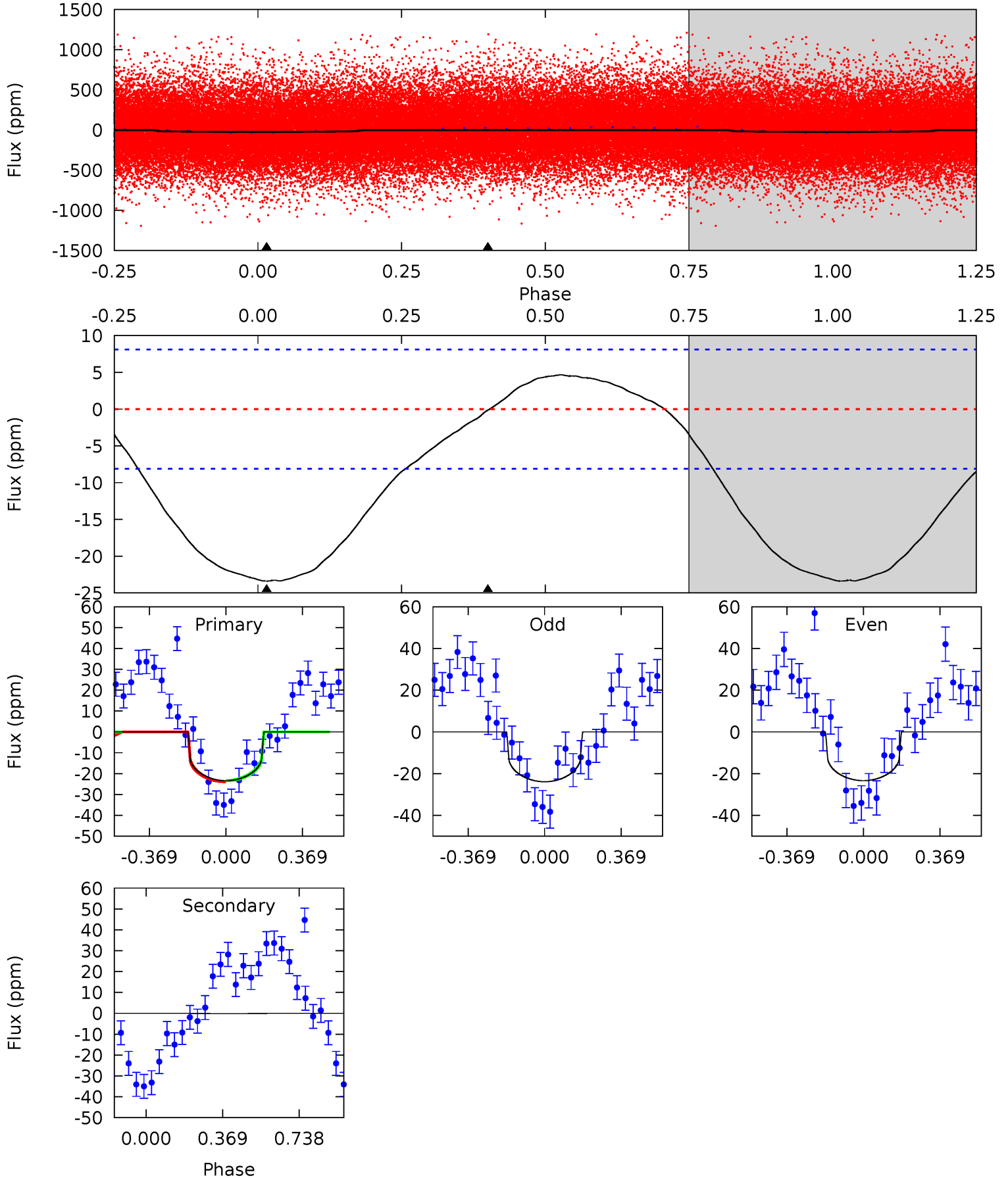
TCE 004863836-01 P= 1.821896 Days $T_0=131.905256$ (BKJD)



DV Model-Shift Uniqueness Test

004863836-01, P = 1.822074 Days, E = 130.086865 Days

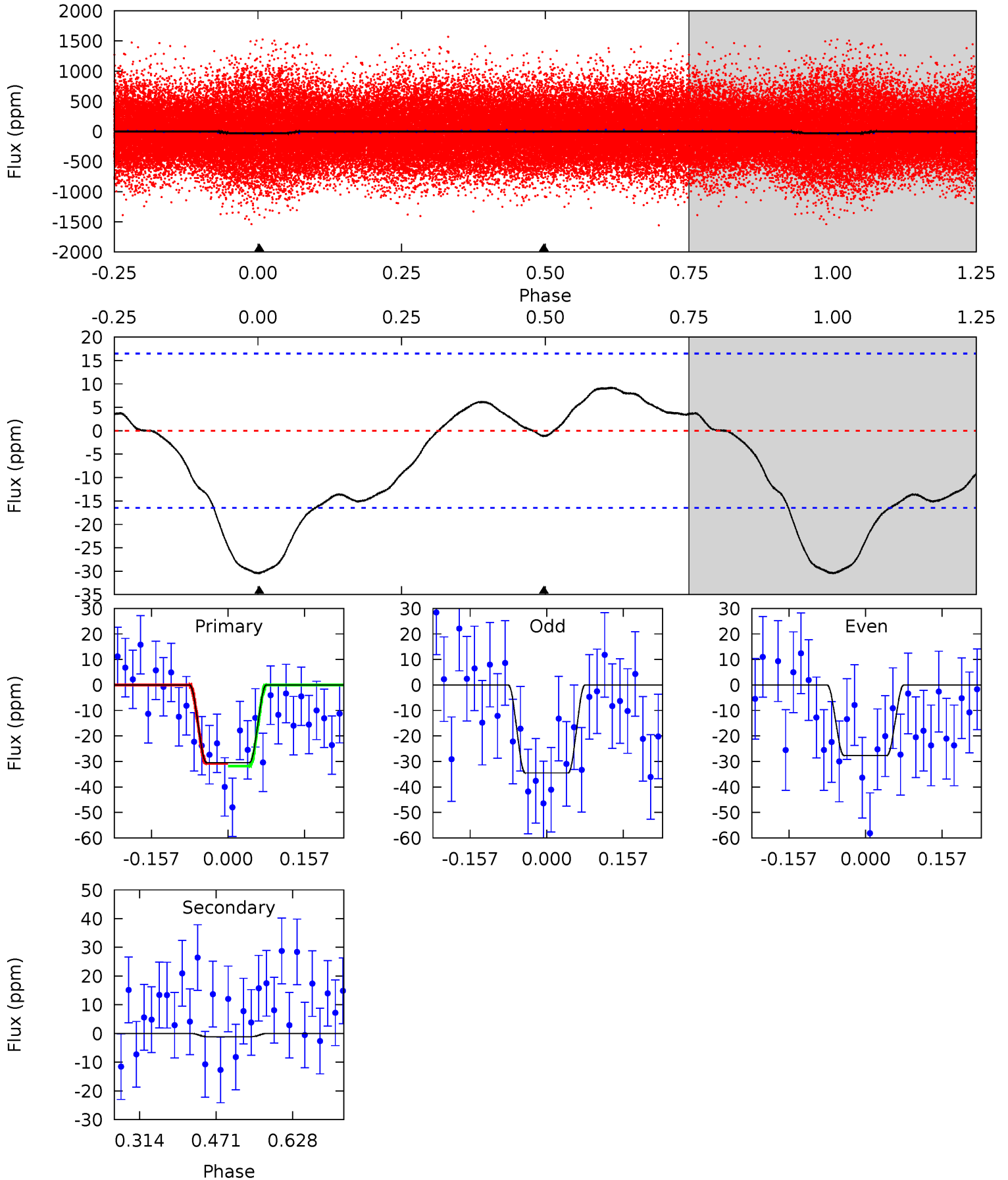
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	0.07	0	0	4.28	0.90	0.97	12.3	12.3	0.07	0.07	0.14	0.90	0.17	0.15



Alt Model-Shift Uniqueness Test

004863836-01, P = 1.821896 Days, E = 130.083360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.25	0.31	0	0	4.47	1.42	1.93	8.25	8.25	0.31	0.31	0.93	1.17	0.23	0.13



Stellar Parameters For KIC 004863836

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6531^{+147}_{-196}	$4.486^{+0.037}_{-0.212}$	$-0.500^{+0.300}_{-0.300}$	$0.969^{+0.322}_{-0.080}$	$1.057^{+0.150}_{-0.112}$	$1.635^{+0.333}_{-0.893}$
	+2%/-3%	+1%/-5%	+60%/-60%	+33%/-8%	+14%/-11%	+20%/-55%
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 004863836-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0 ± 2	$0.60^{+0.12}_{-0.10}$	2355^{+171}_{-105}	1999^{+1700}_{-5699}	$0.315^{+2.486}_{-2.546}$
Alt.	-1 ± 4	$0.69^{+0.13}_{-0.09}$	2349^{+188}_{-98}	3042^{+1065}_{-6871}	$0.982^{+3.715}_{-3.618}$

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

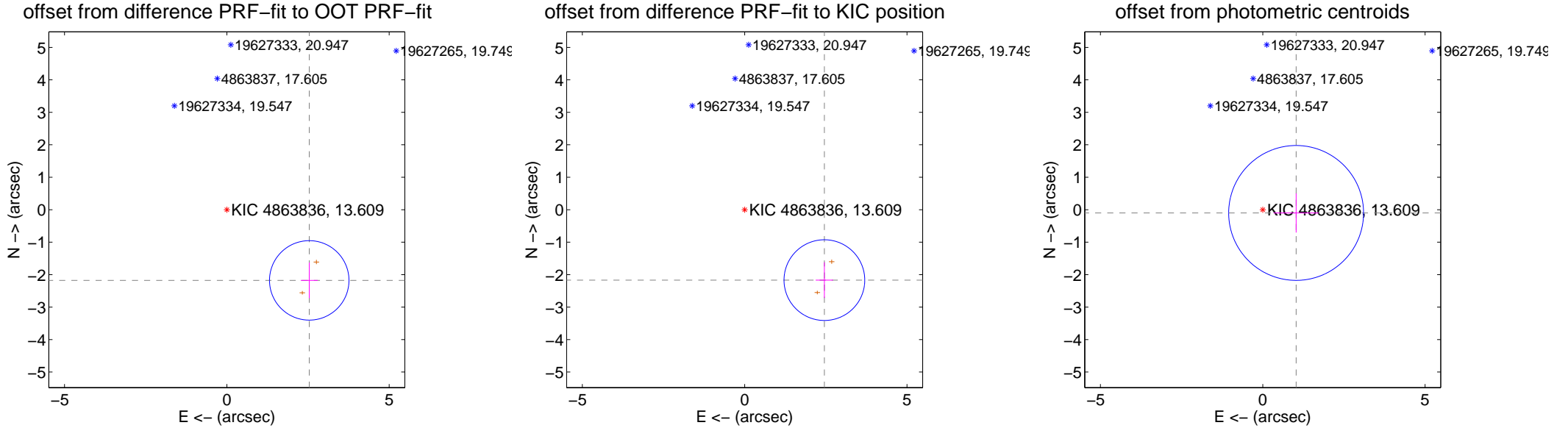
DV Centroid Data

Supplemental centroid analysis for 004863836-01. Kepler magnitude: 13.61. Transit SNR 14.14

There are 0 quarters with good PRF difference image offsets

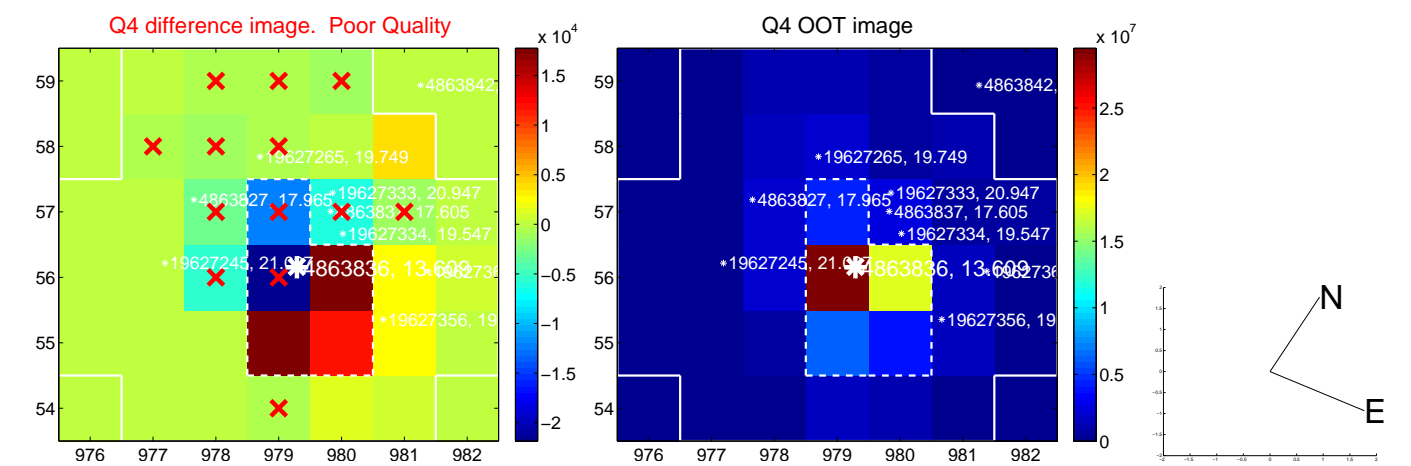
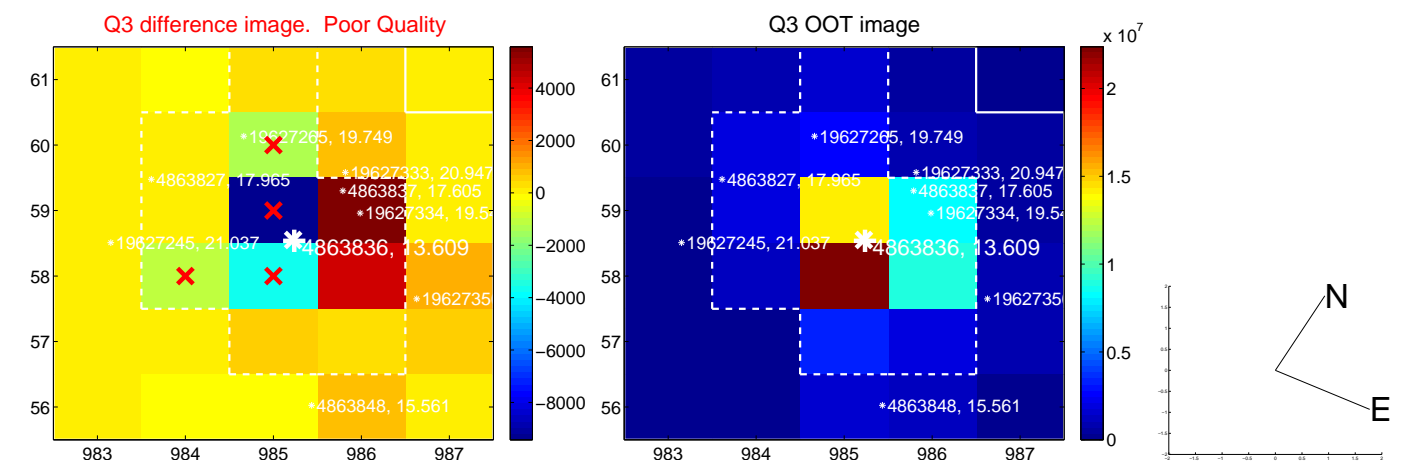
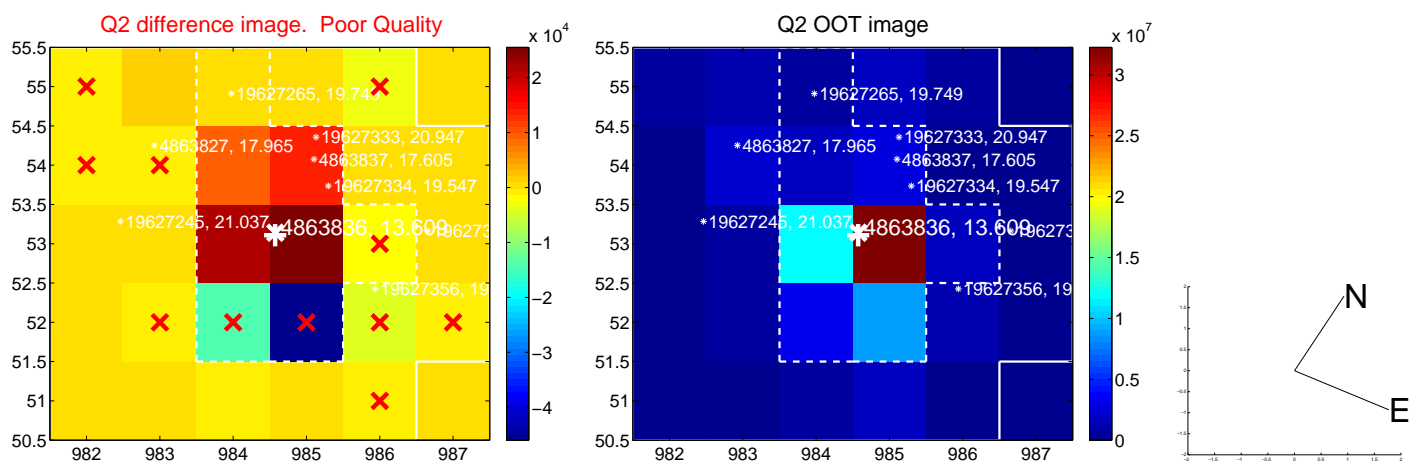
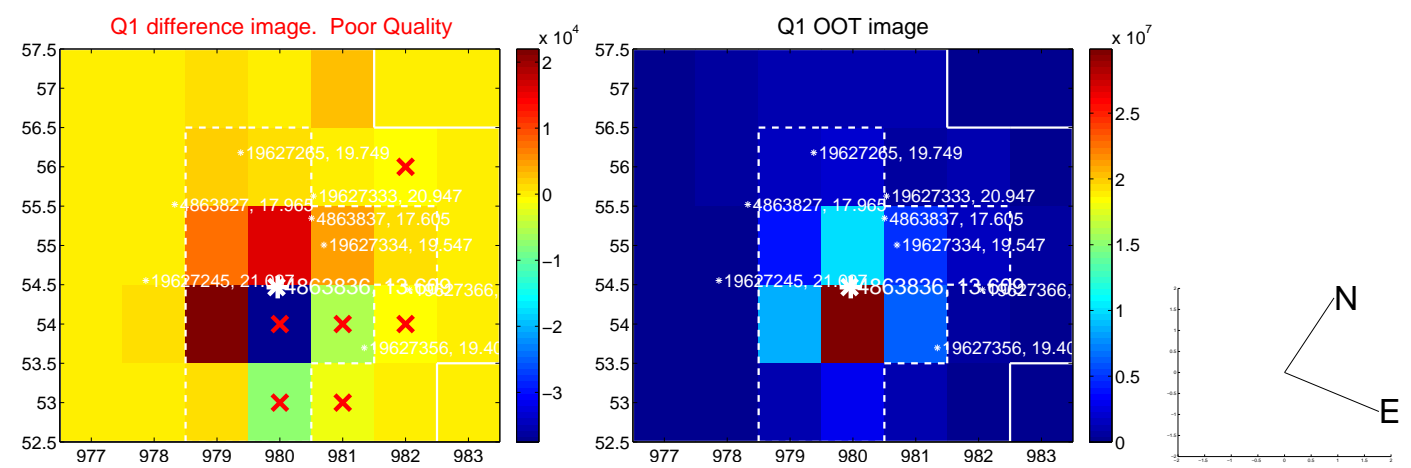
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.343 ± 0.408	8.20	-2.537 ± 0.261	-2.177 ± 0.547
PRF-fit source offset from KIC position	3.276 ± 0.414	7.91	-2.455 ± 0.266	-2.169 ± 0.548
photometric centroid source offset	1.03 ± 0.69	1.49	-1.03 ± 0.69	-0.10 ± 0.60

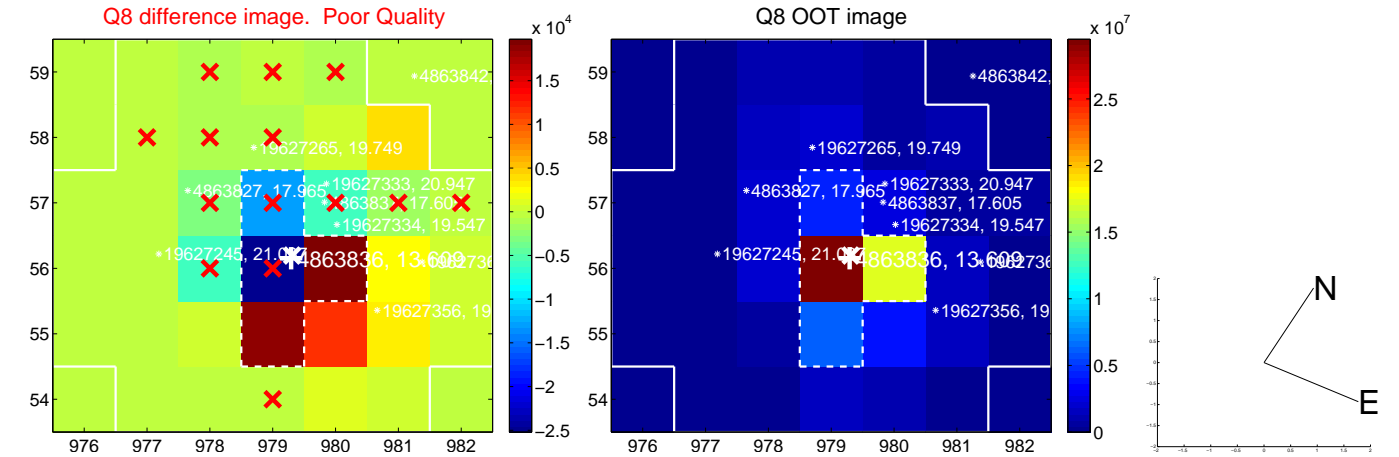
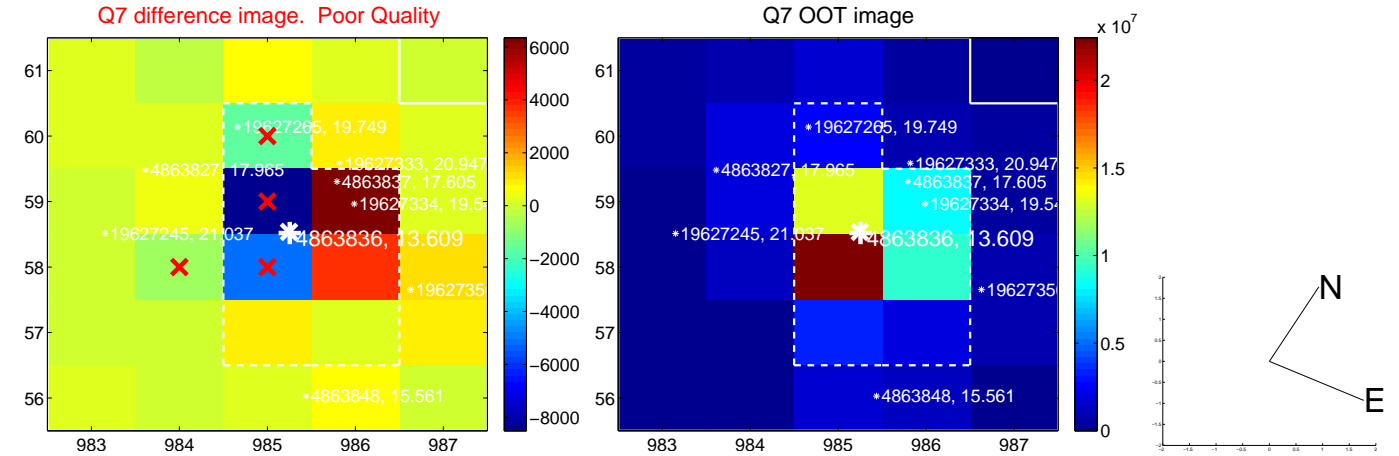
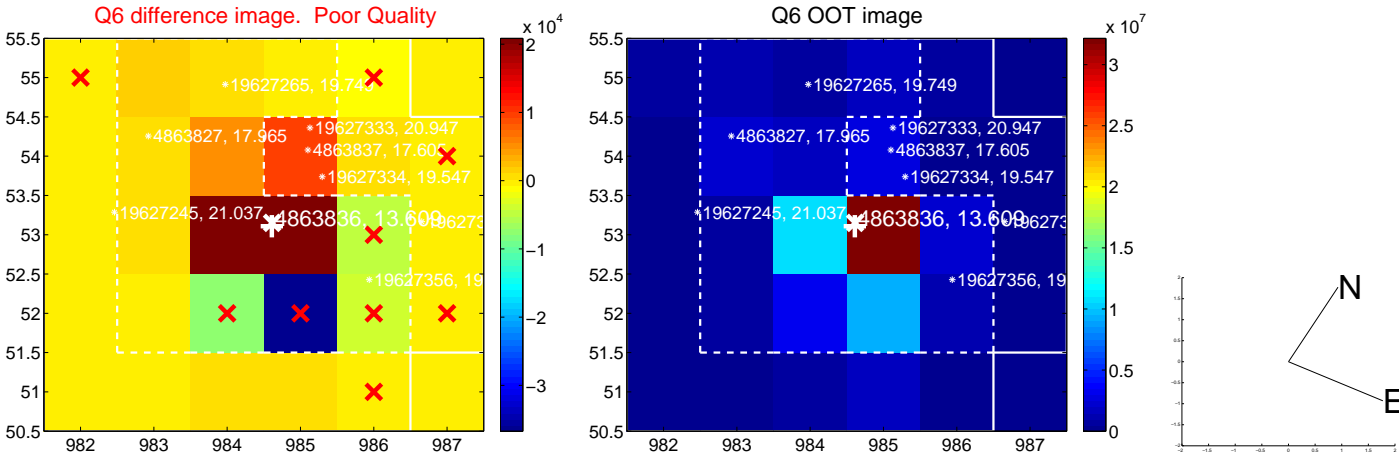
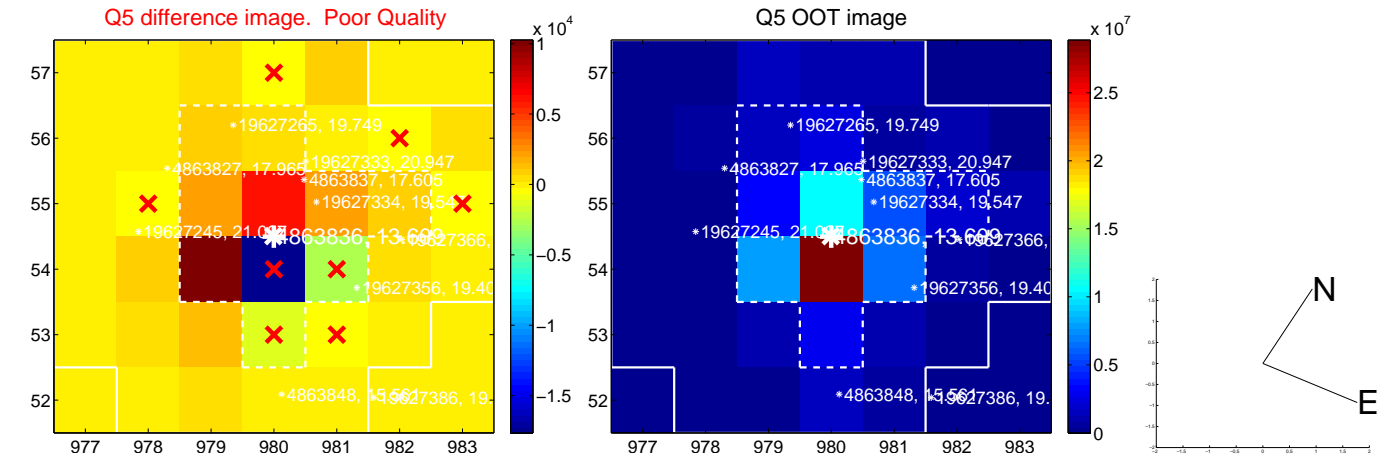


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

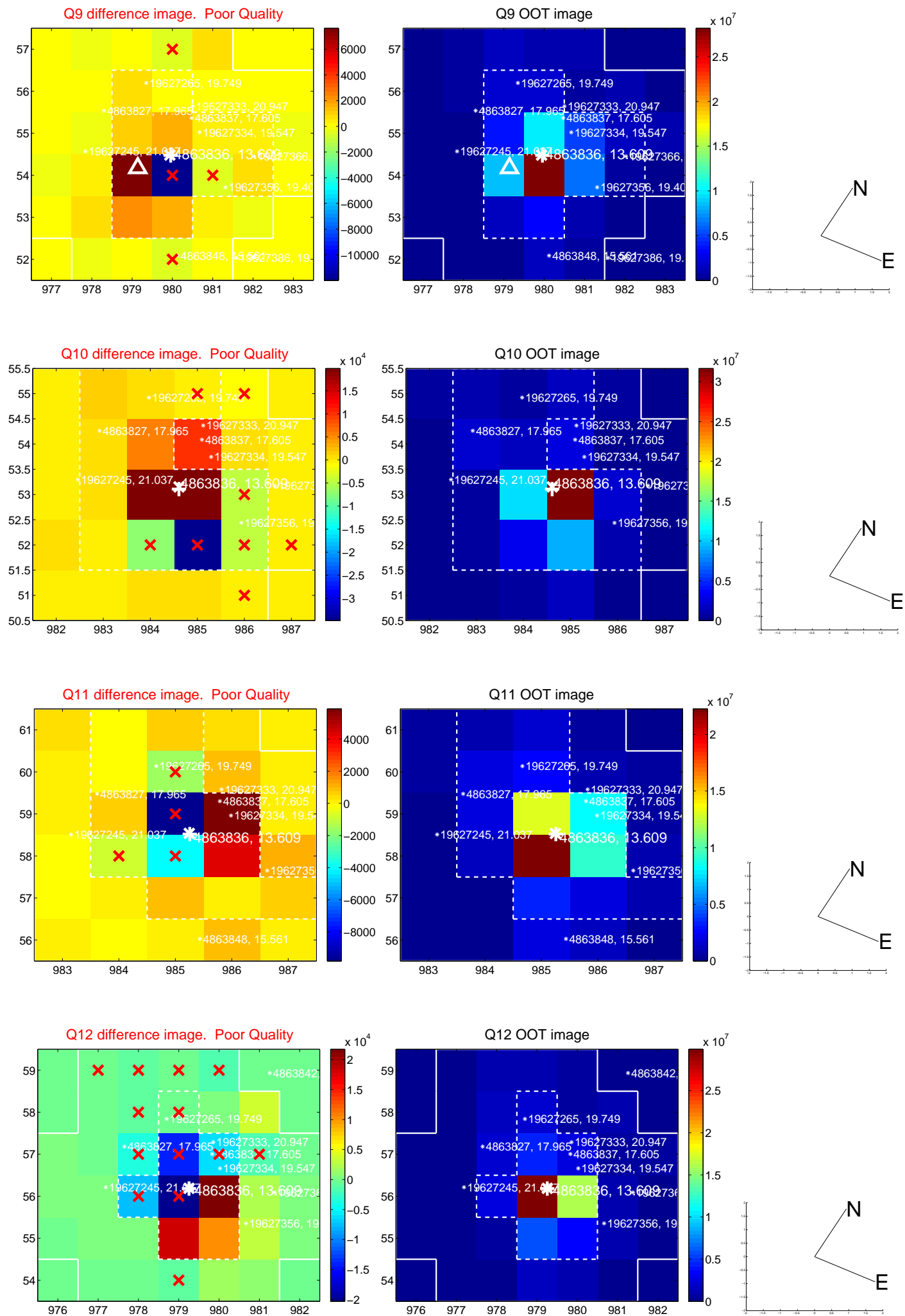
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



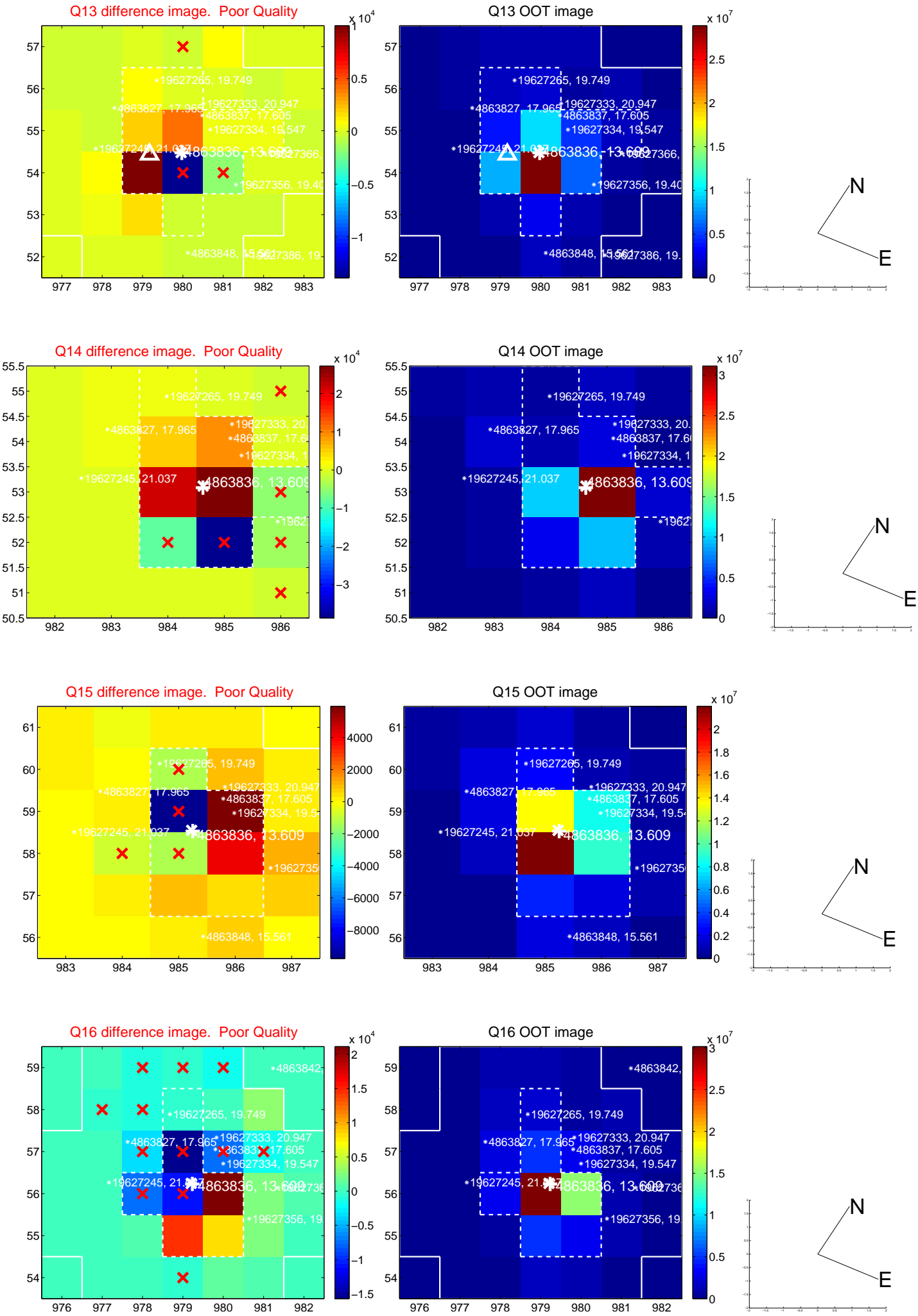
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



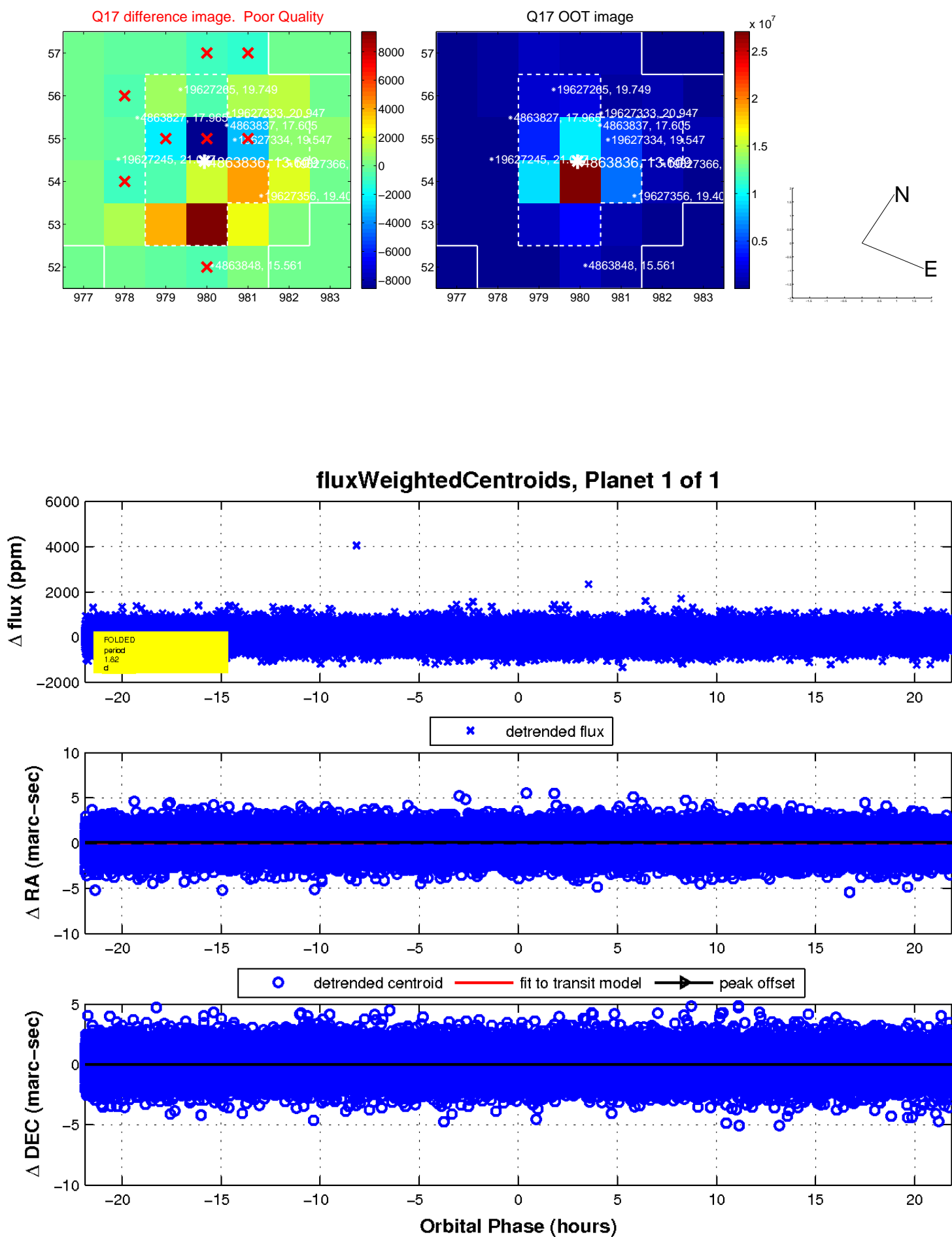
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UKIRT Image

Declination

