

KIC 002970836

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})
002970836-01	OBS	No	1.659485	132.439537	12.2	16.331	9.0	6.8	1.80	6337	0.63	5725.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002970836-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

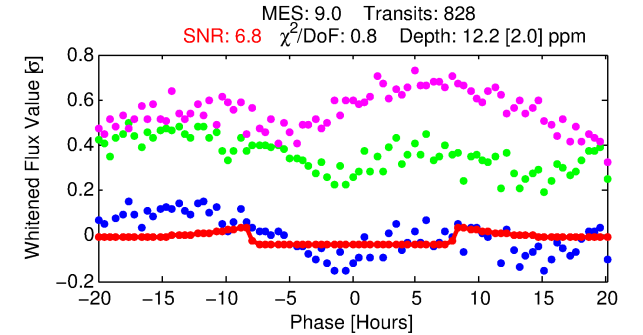
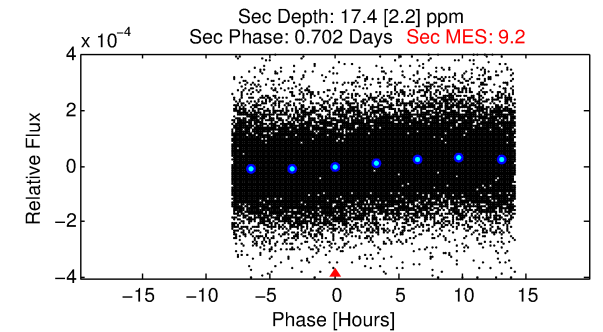
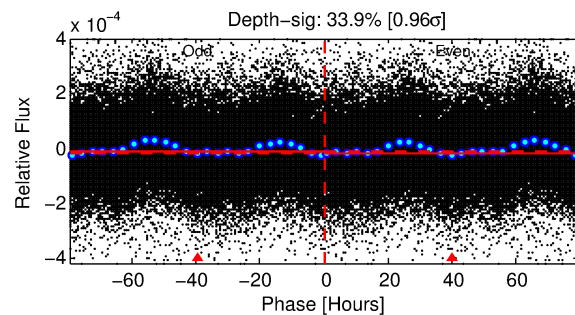
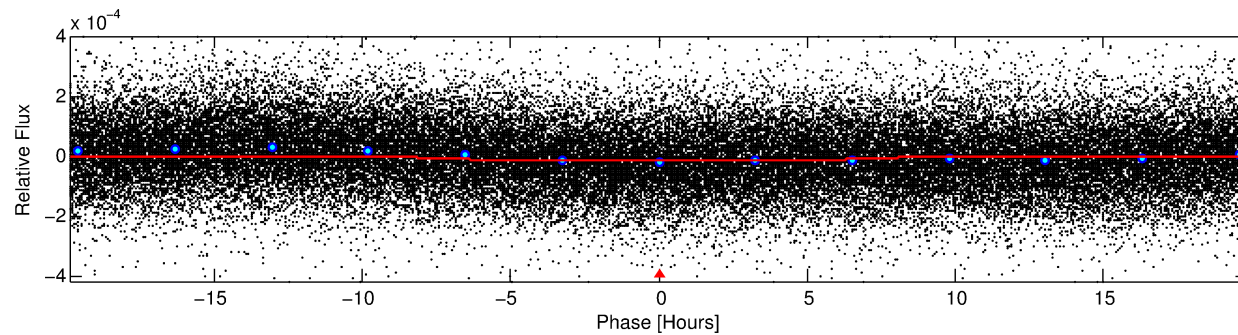
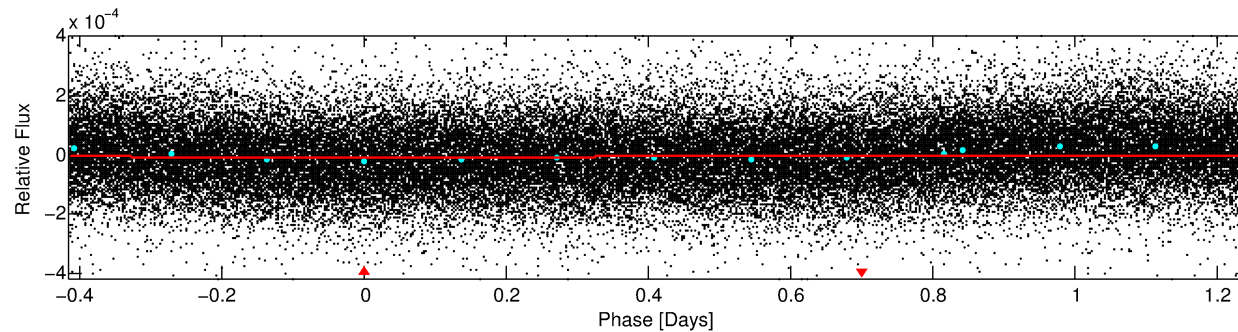
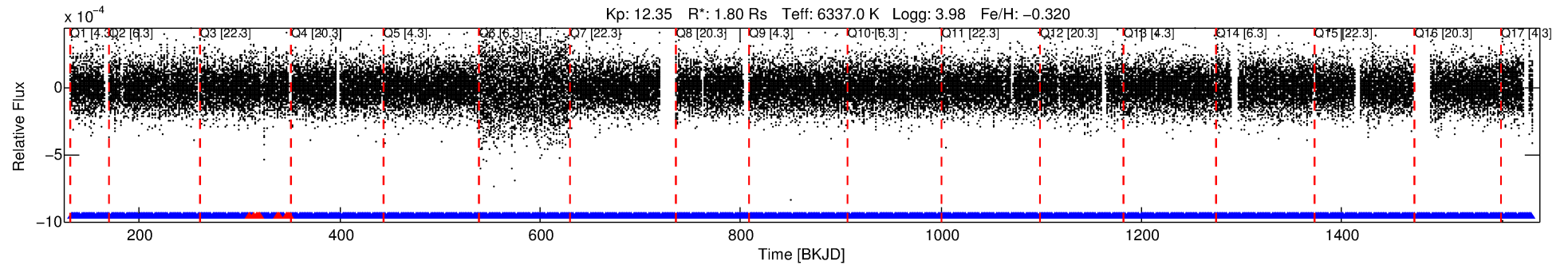
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002970836-01

No Significant Match Found

DV One-Page Summary

KIC: 2970836 Candidate: 1 of 1 Period: 1.659 d



DV Fit Results:

Period = 1.65949 [0.00003] d
Epoch = 132.4395 [0.0085] BKJD
Rp/R* = 0.0032 [0.0021]
a/R* = 1.04 [0.30]
b = 0.05 [67.08]
Seff = 5725.57 [2752.78]
Teq = 2218 [267] K
Rp = 0.63 [0.46] Re
a = 0.0286 [0.0084] AU
Ag = 19.64 [27.48] [0.68 σ]
Teffp = 7220 [2389] K [2.08 σ]

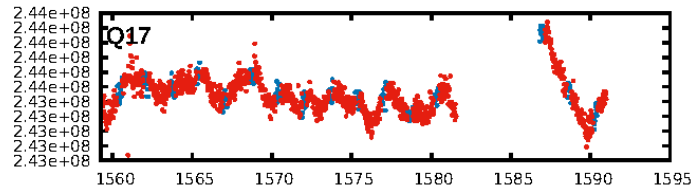
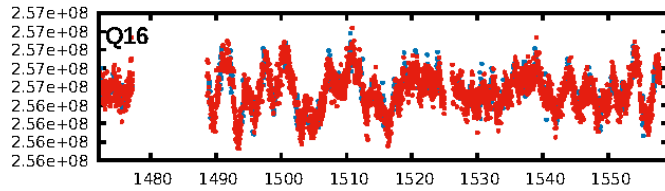
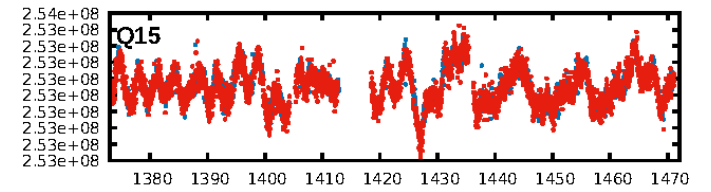
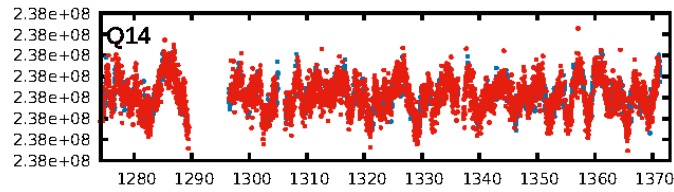
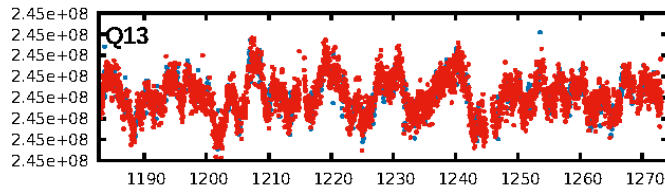
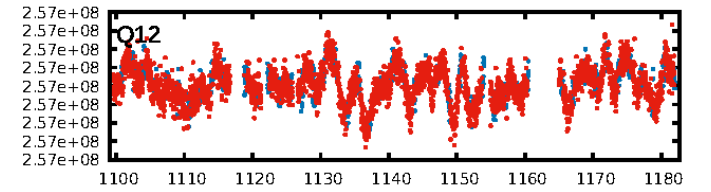
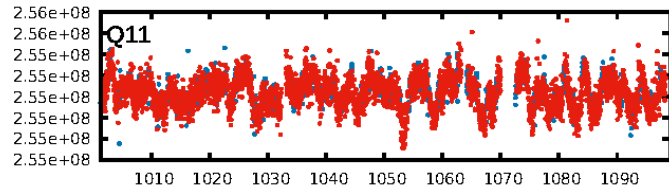
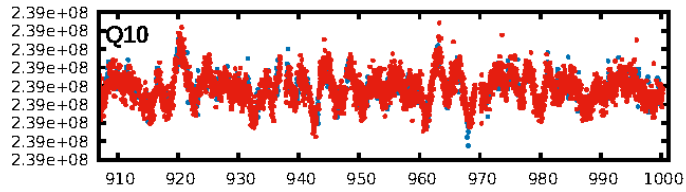
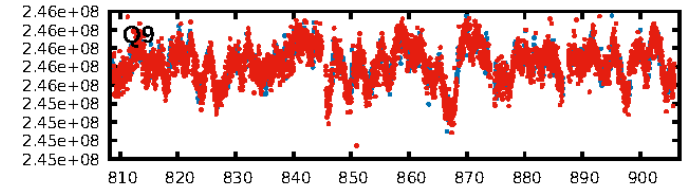
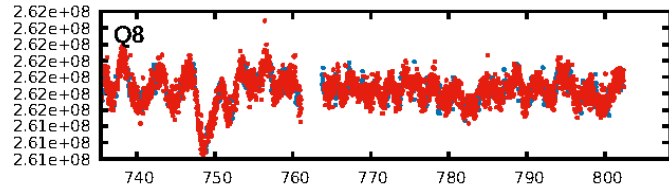
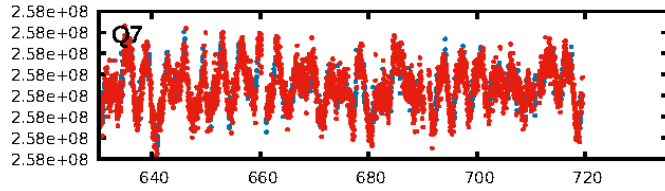
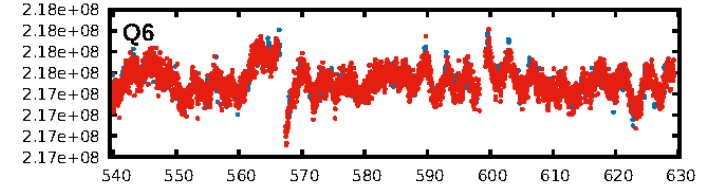
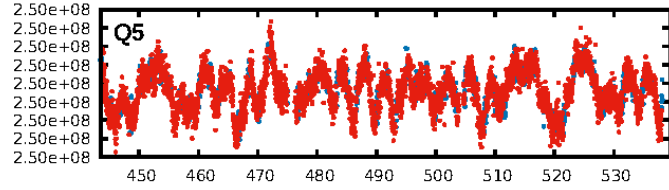
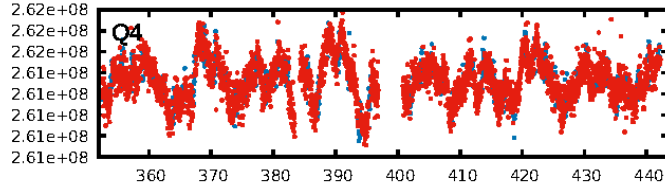
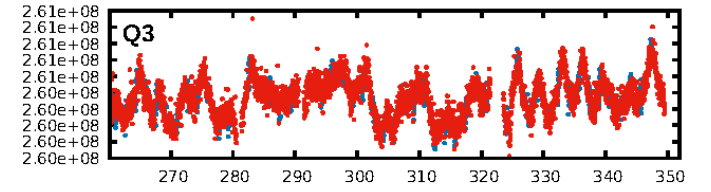
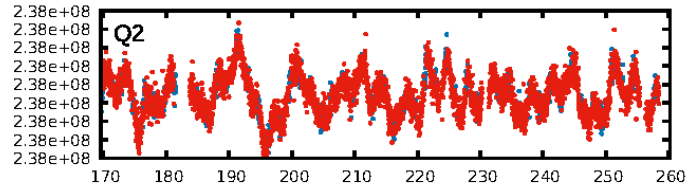
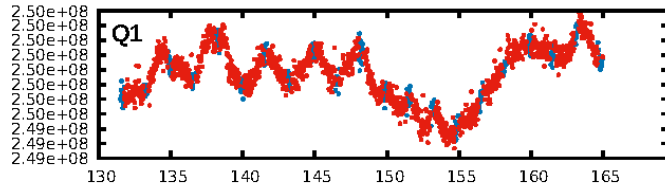
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [781/791]
GhostDiagnostic-chr: 1.951
Centroid-sig: 7.1%
Centroid-so: 1.182 arcsec [1.27 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]

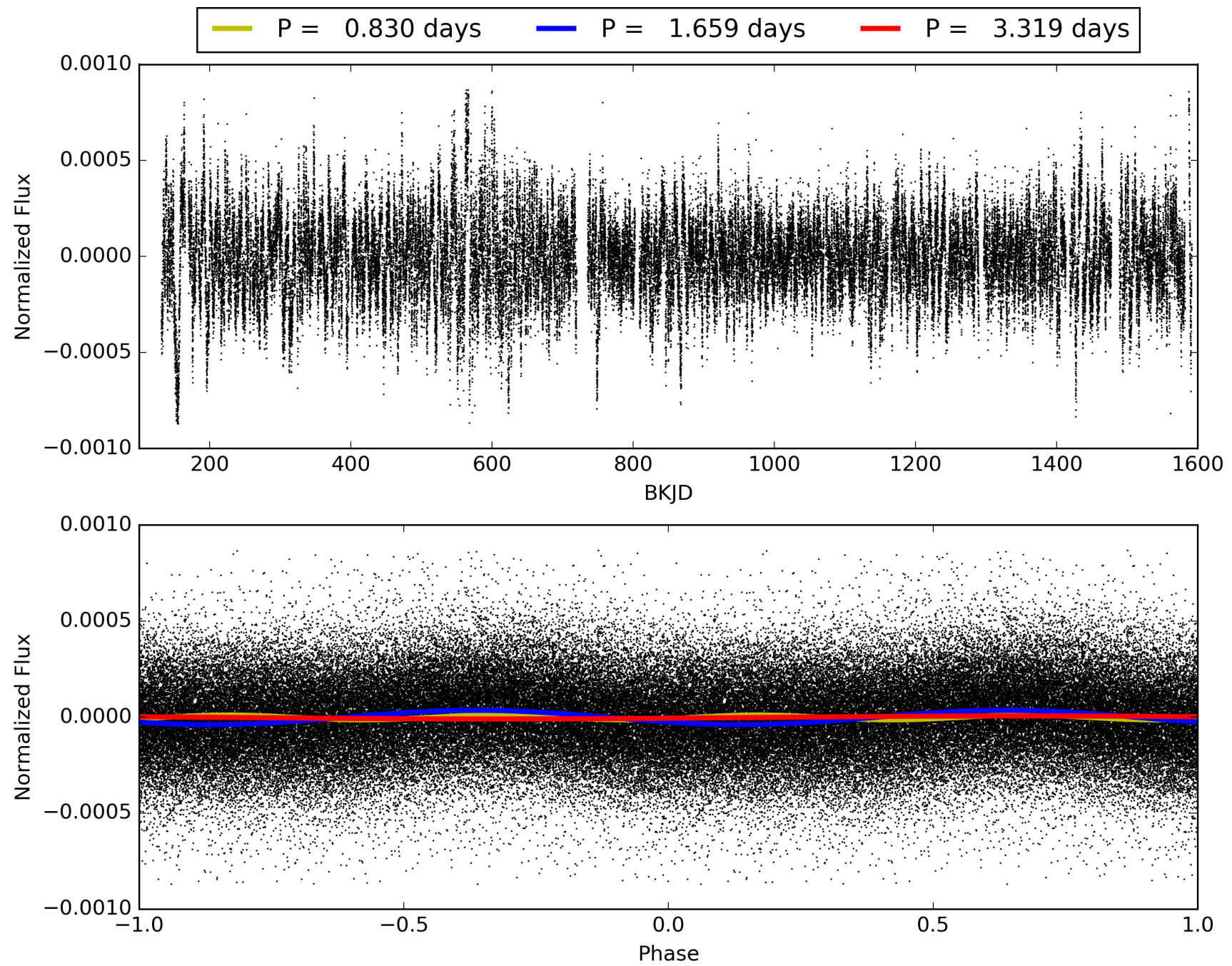
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:00 Z

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

TCE 002970836-01, PDC Light Curves

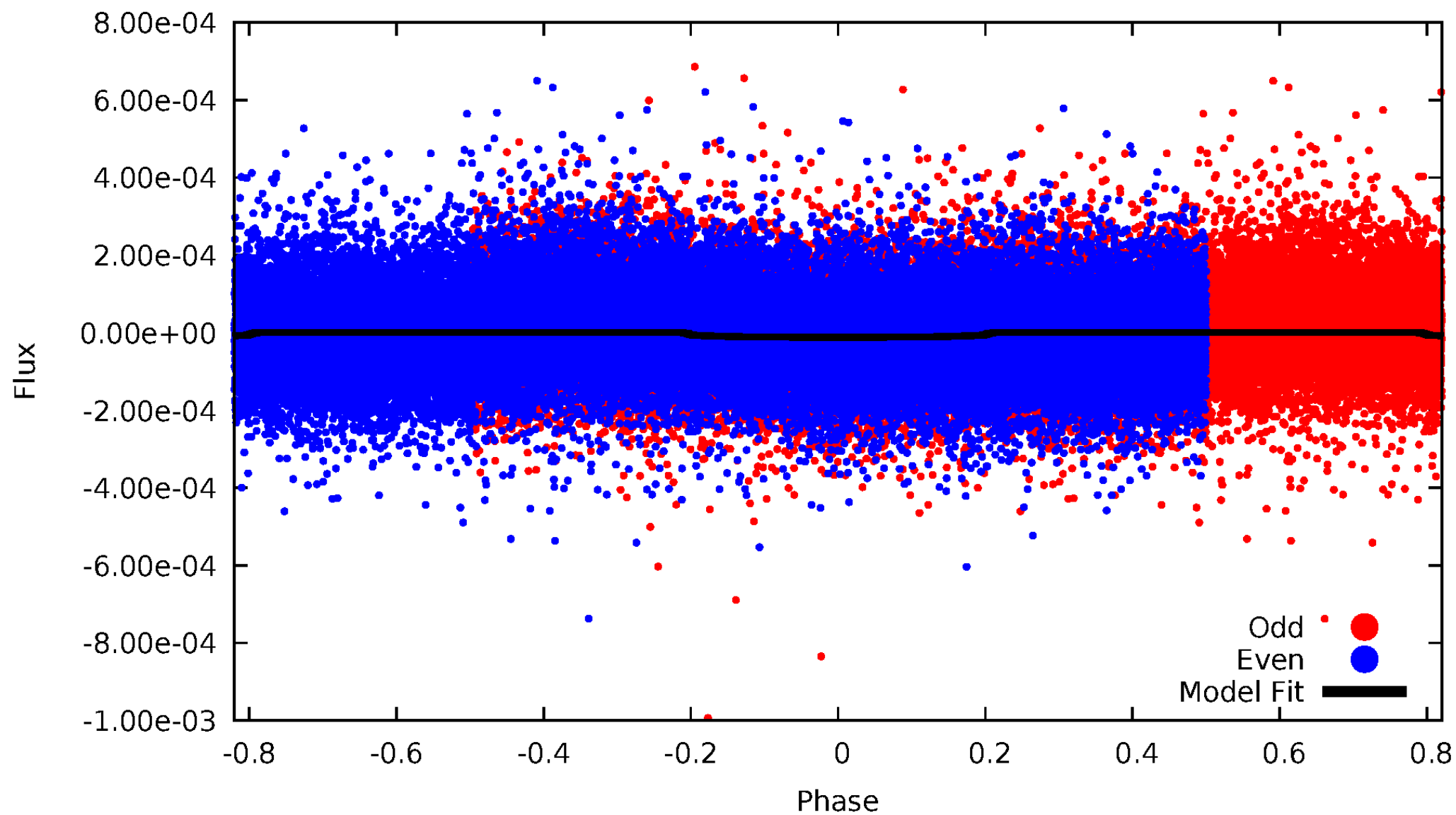


TCE 002970836-01



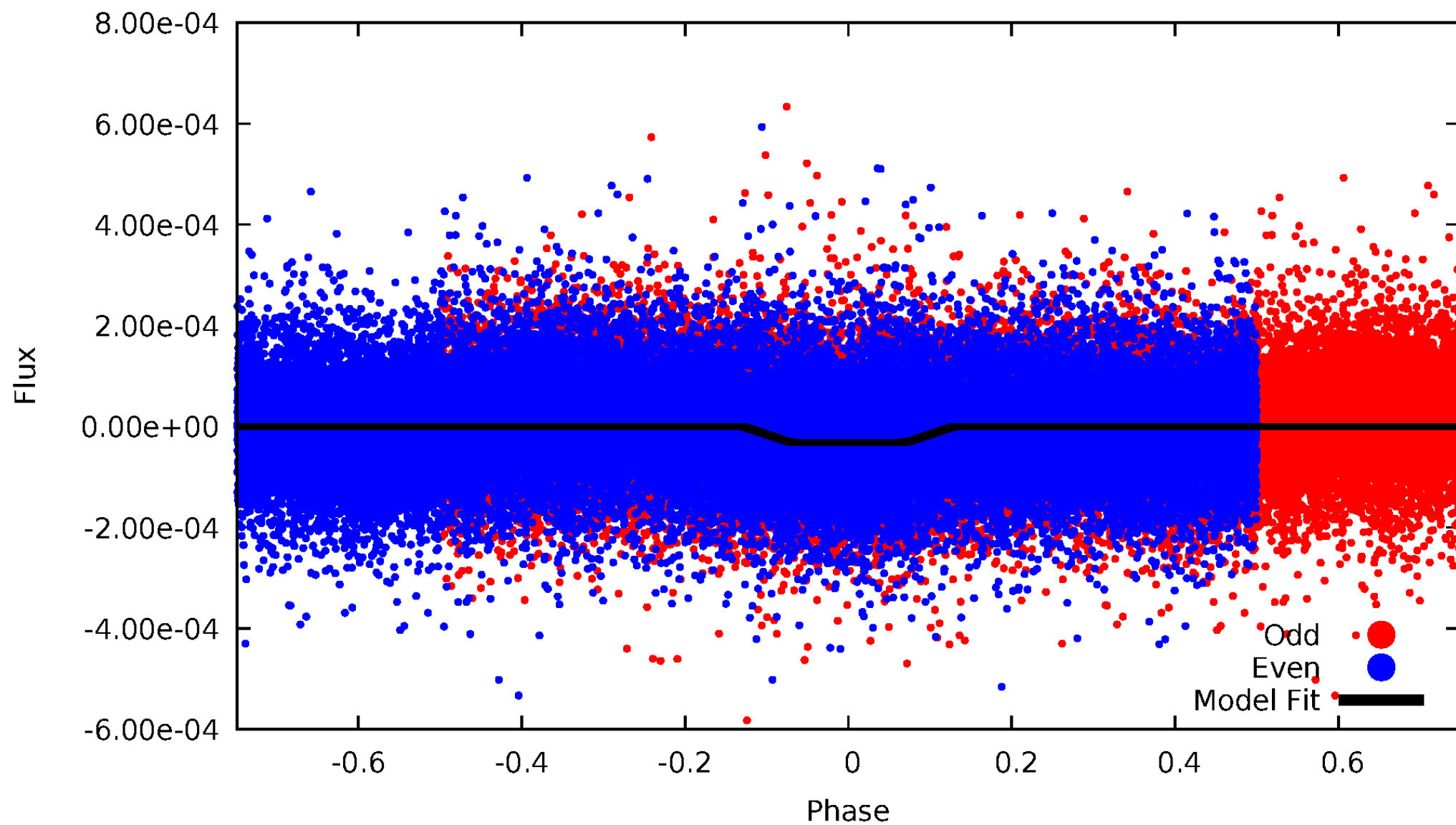
DV Odd/Even

TCE 002970836-01



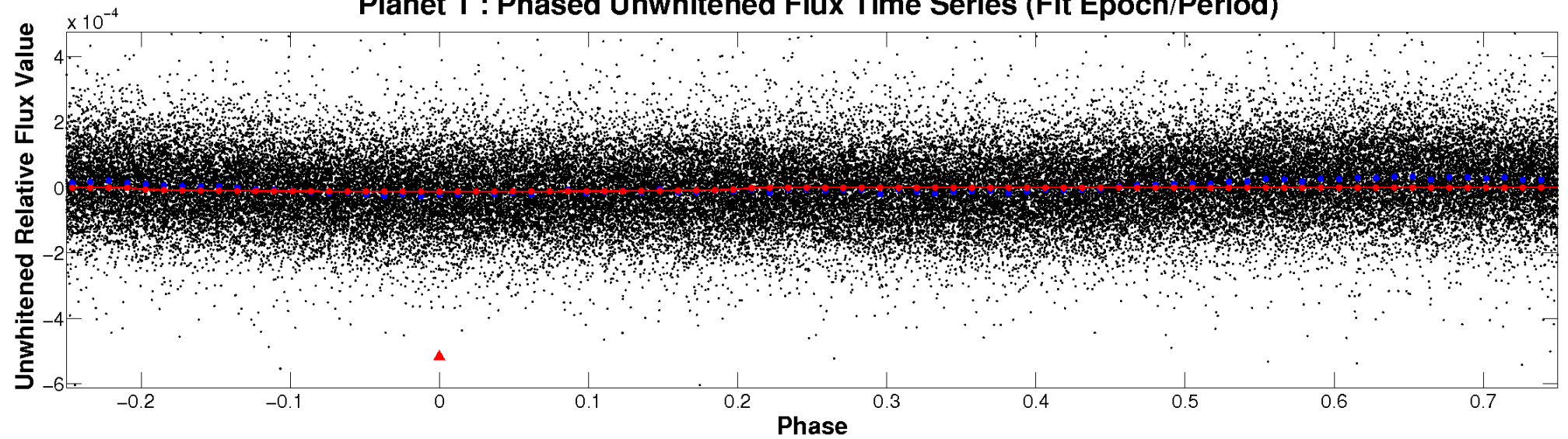
ALT Odd/Even

TCE 002970836-01

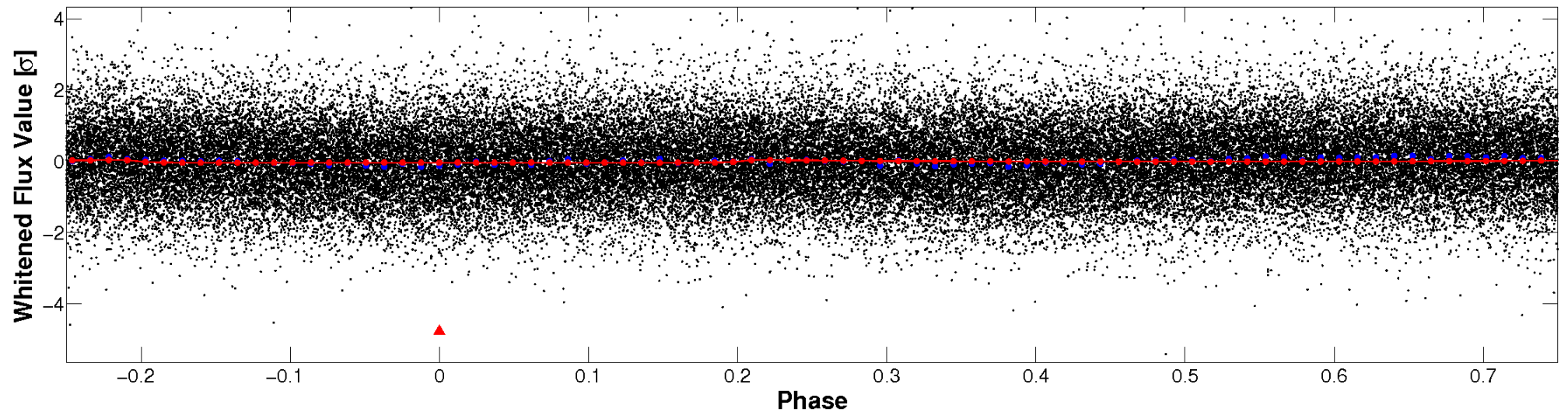


Non-Whitened Vs. Whitened Light Curve

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

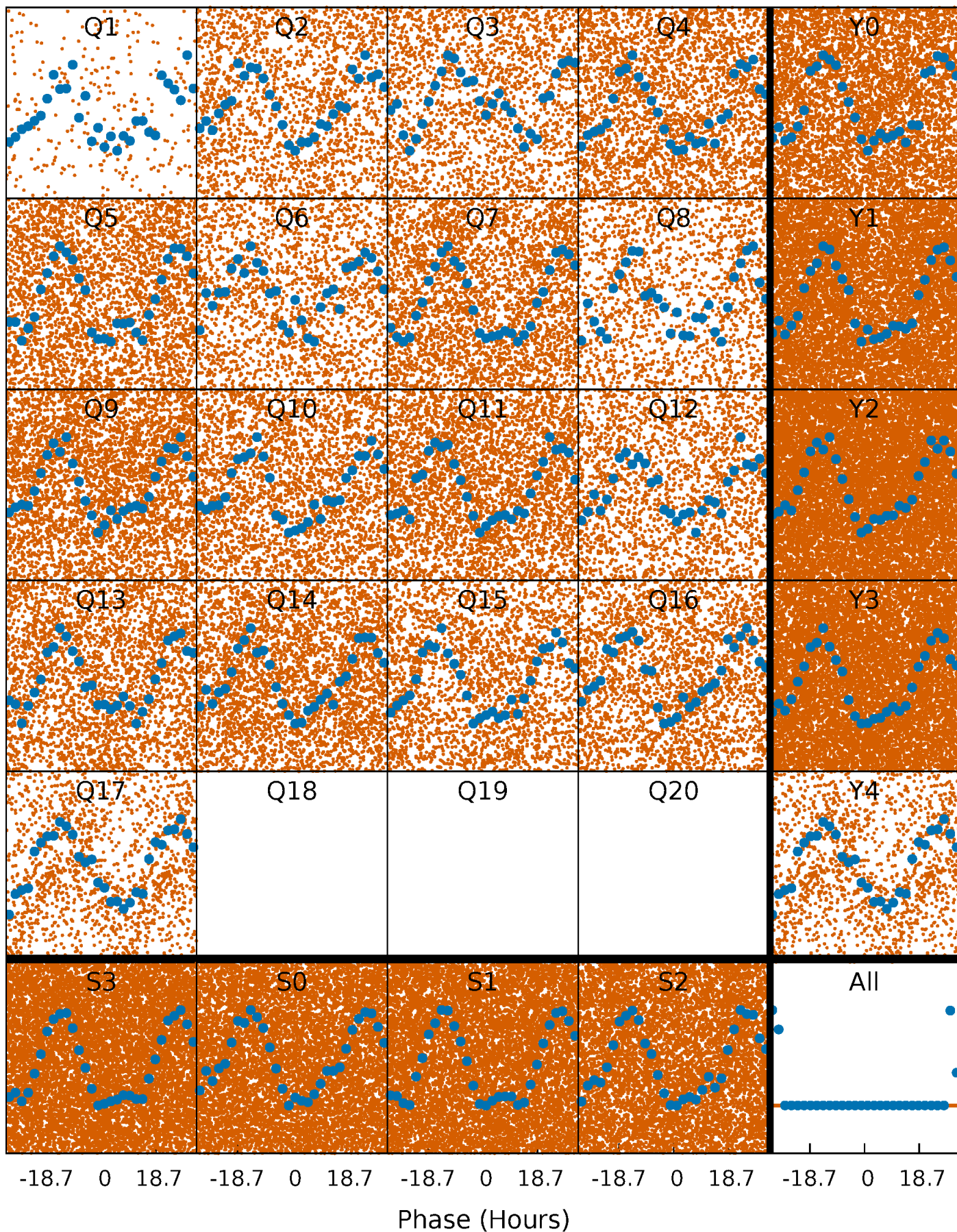


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



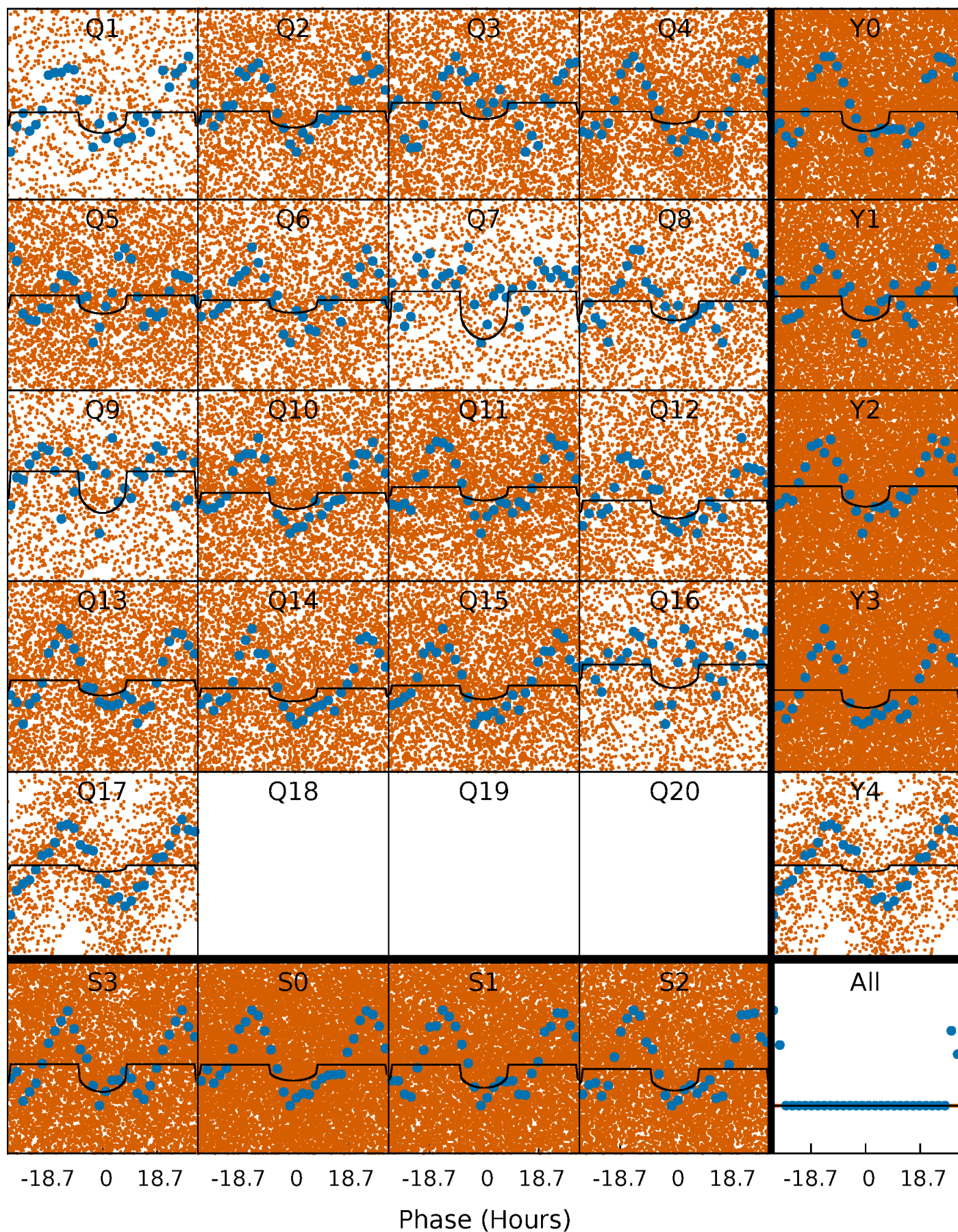
PDC Quarter-Phased Transit Curves

TCE 002970836-01 P= 1.659485 Days $T_0=132.439537$ (BKJD)



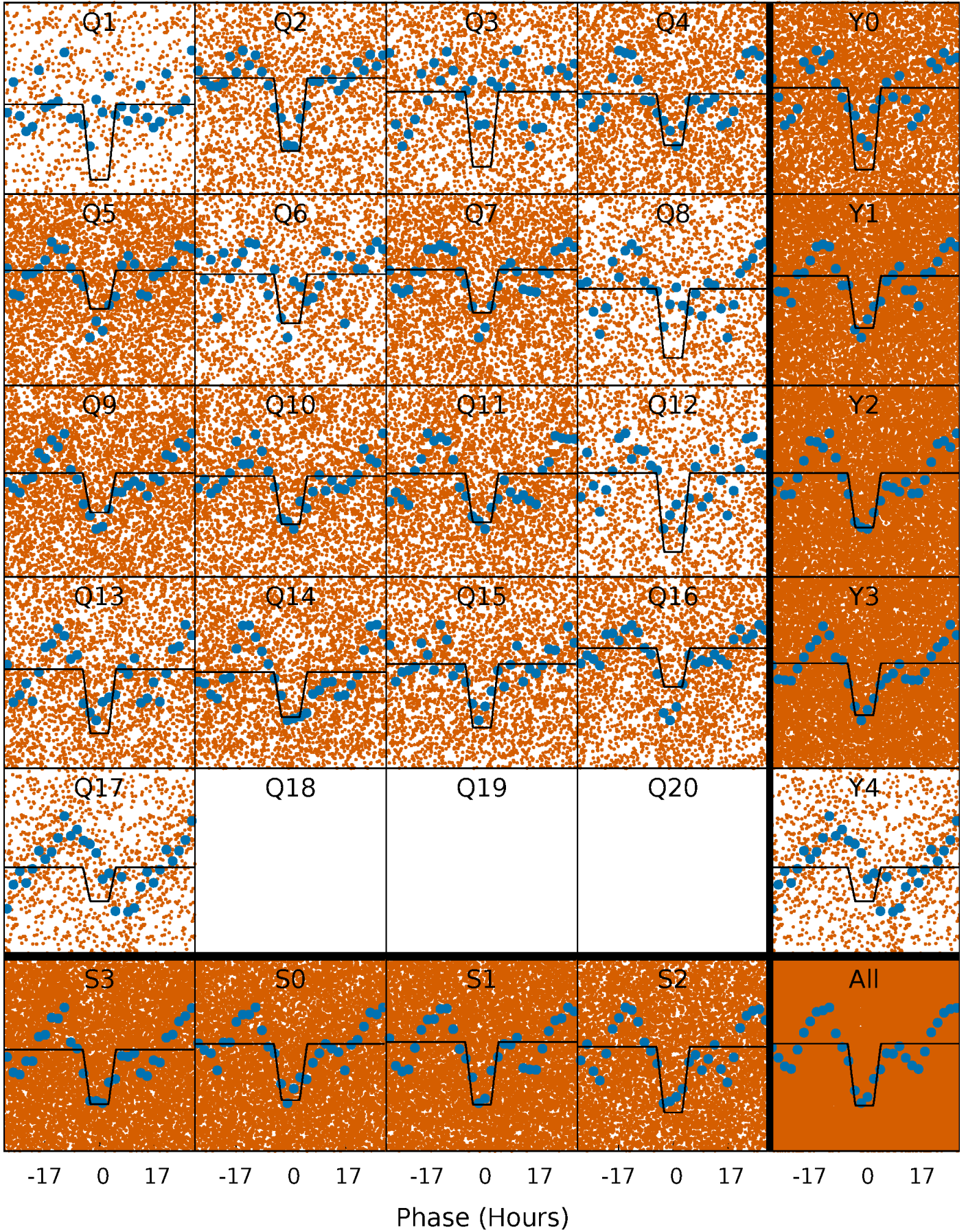
DV Quarter-Phased Transit Curves

TCE 002970836-01 P= 1.659485 Days $T_0=132.439537$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

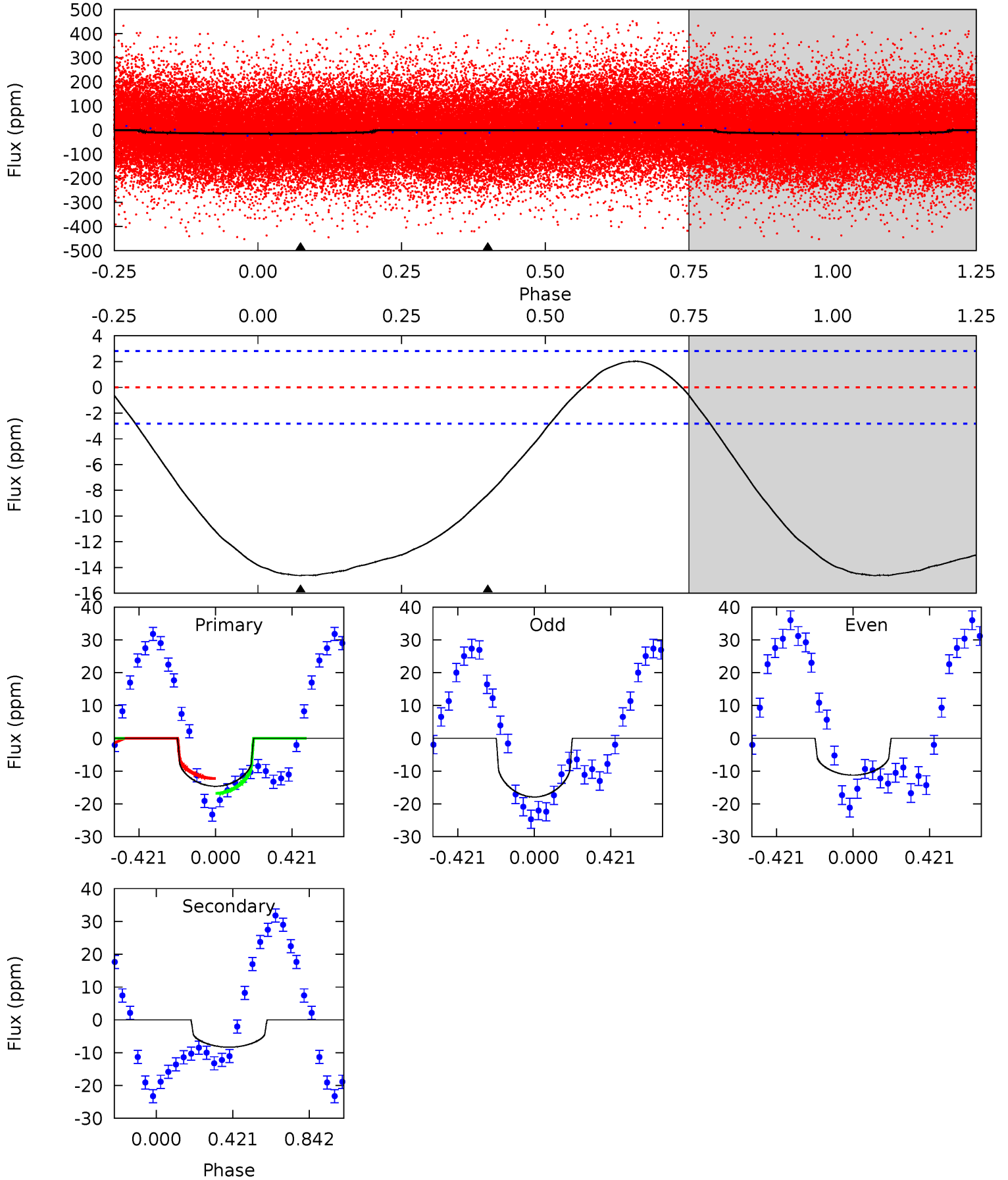
TCE 002970836-01 P= 1.659381 Days $T_0=132.442965$ (BKJD)



DV Model-Shift Uniqueness Test

002970836-01, P = 1.659485 Days, E = 130.780052 Days

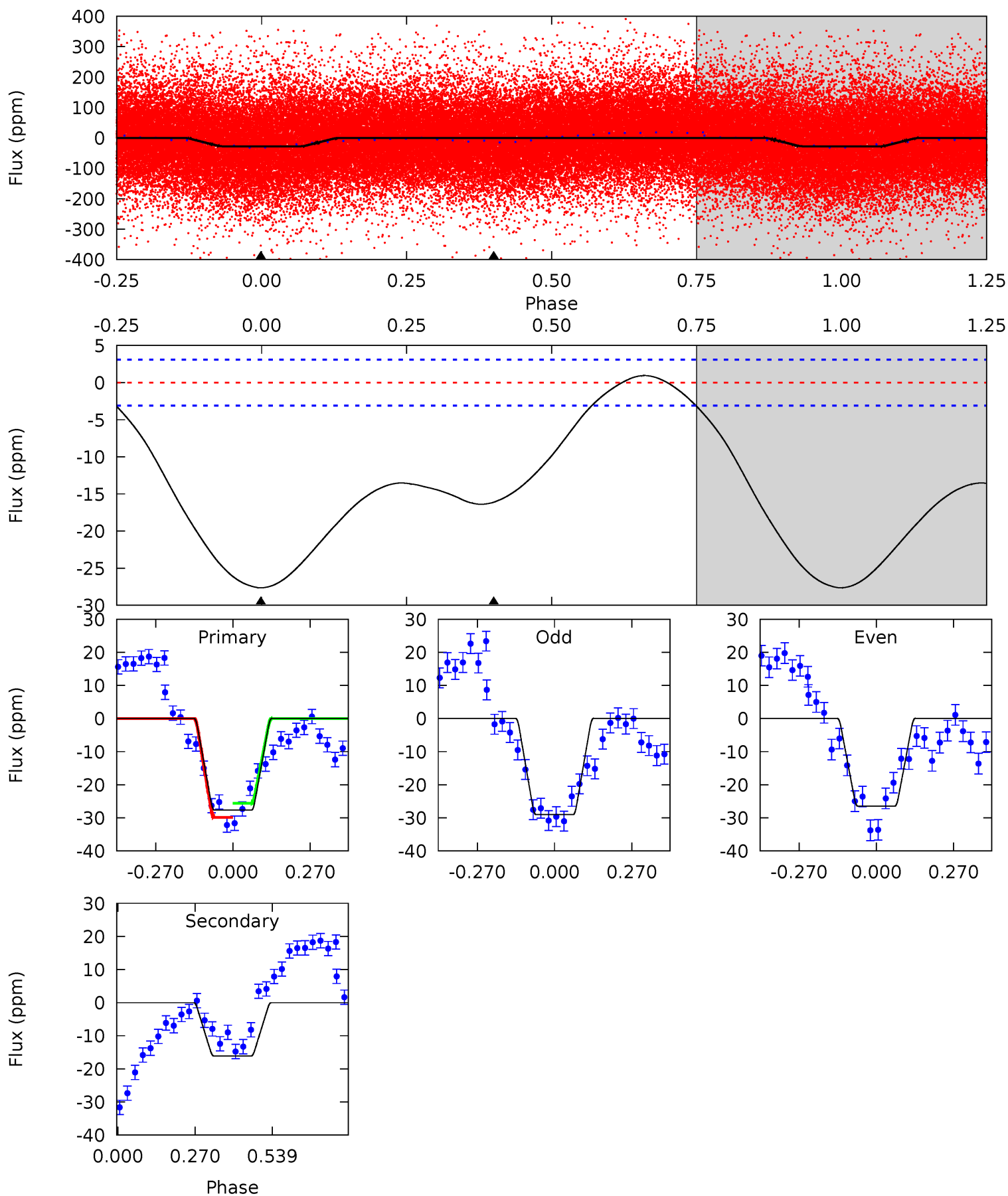
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	12.6	0	0	4.25	0.80	2.05	22.1	22.1	12.6	12.6	5.07	0.94	0.12	3.60



Alt Model-Shift Uniqueness Test

002970836-01, P = 1.659381 Days, E = 130.783584 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.8	22.6	0	0	4.35	1.10	1.80	38.8	38.8	22.6	22.6	1.81	0.99	0.03	2.95



Stellar Parameters For KIC 002970836

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6337^{+161}_{-178}	$3.981^{+0.273}_{-0.117}$	$-0.320^{+0.300}_{-0.300}$	$1.799^{+0.373}_{-0.559}$	$1.130^{+0.193}_{-0.176}$	$0.273^{+0.471}_{-0.094}$
	+3%/-3%	+7%/-3%	+94%/-94%	+21%/-31%	+17%/-16%	+172%/-35%
Source	PHO1	FLK73	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 002970836-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$0.65^{+0.41}_{-0.36}$	3050^{+204}_{-243}	5847^{+3175}_{-1216}	$9.002^{+36.495}_{-5.572}$
Alt.	-16 ± 1	$1.04^{+0.50}_{-0.41}$	3039^{+197}_{-252}	5308^{+1528}_{-762}	$6.651^{+11.074}_{-3.495}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

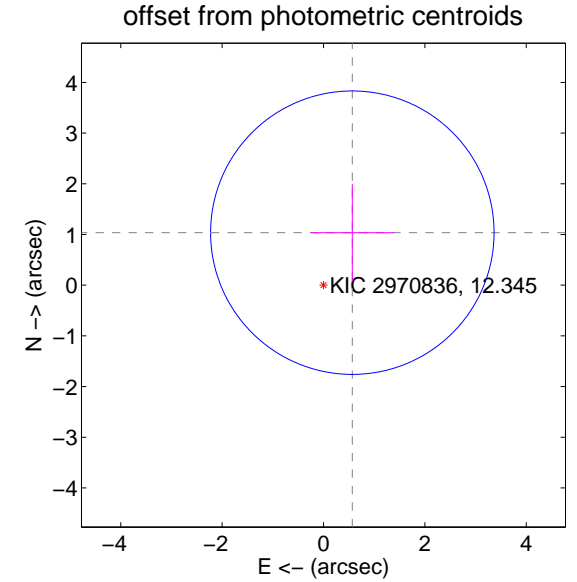
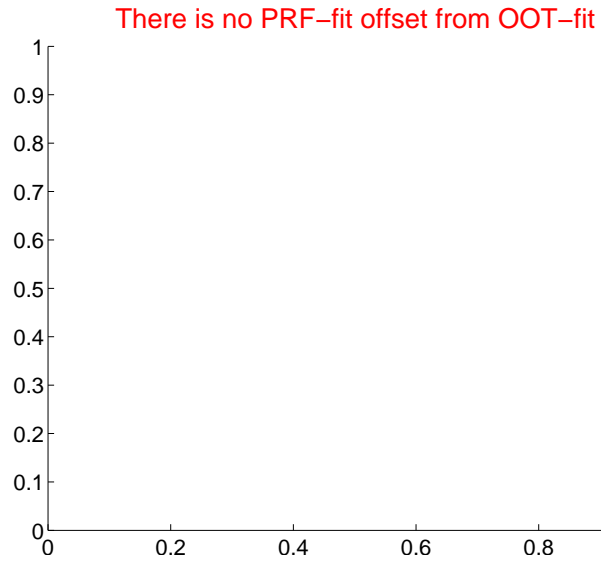
DV Centroid Data

Supplemental centroid analysis for 002970836-01. Kepler magnitude: 12.35. Transit SNR 6.84

There are 0 quarters with good PRF difference image offsets

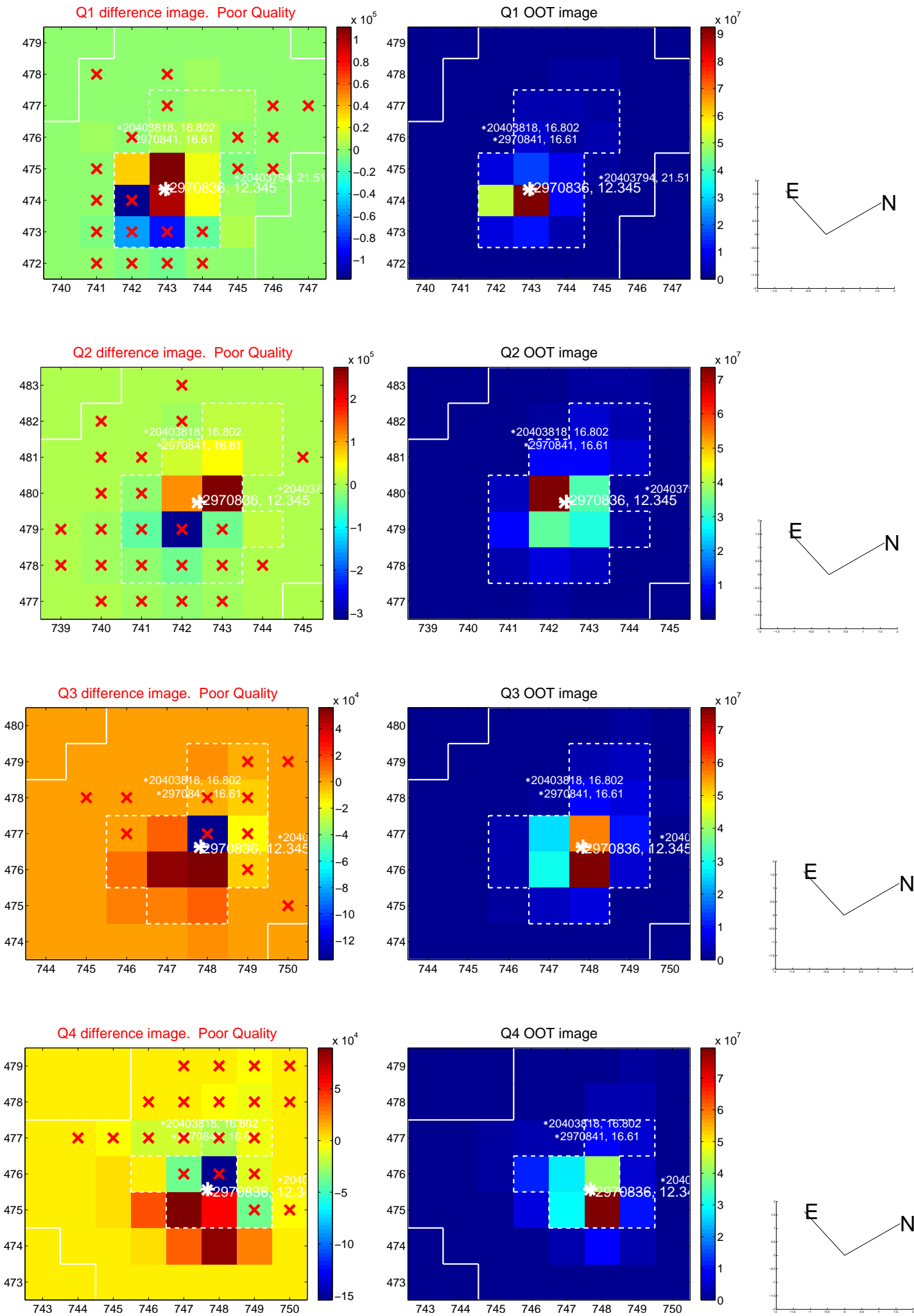
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.18 ± 0.93	1.27	-0.57 ± 0.82	1.04 ± 0.96

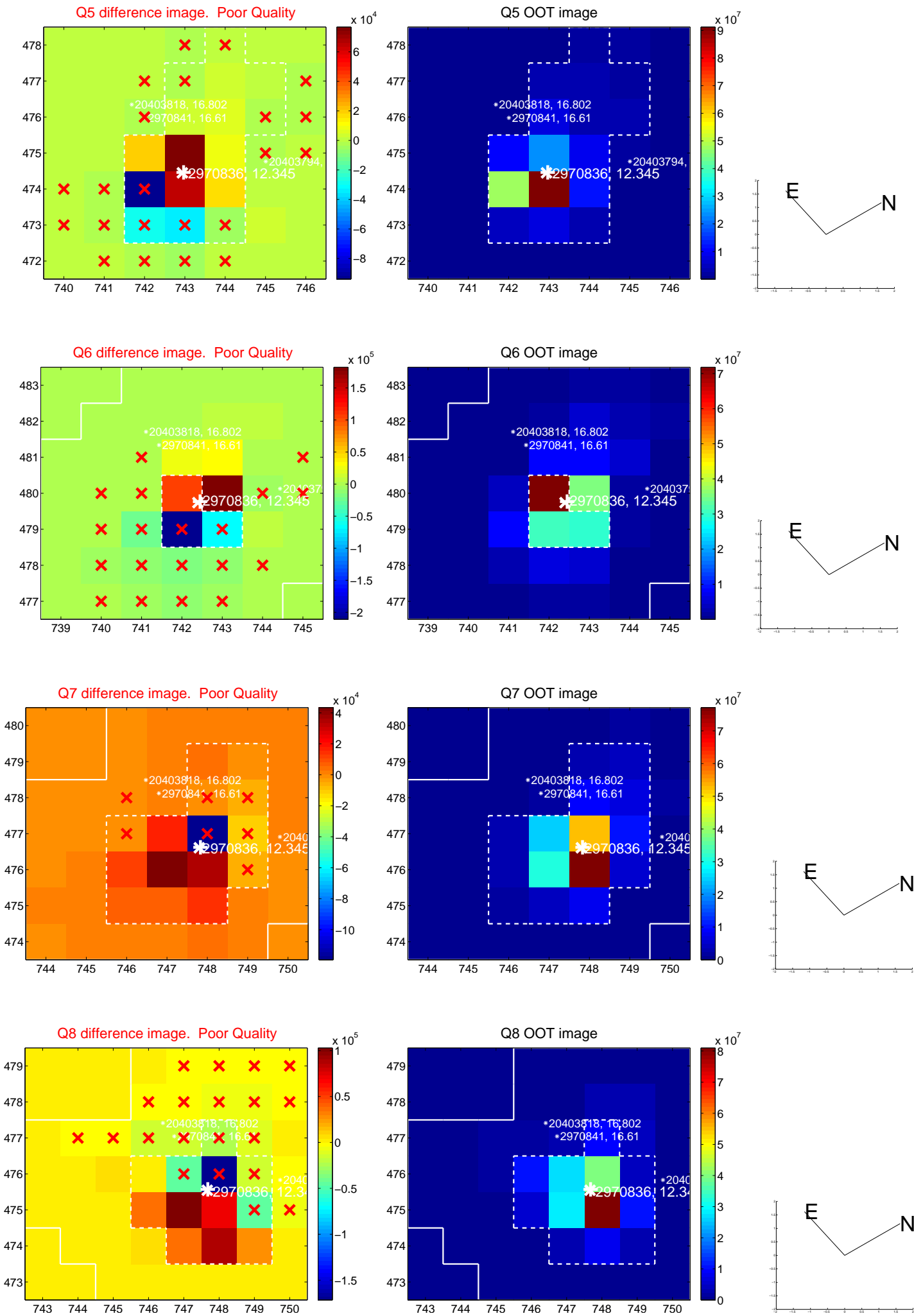


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

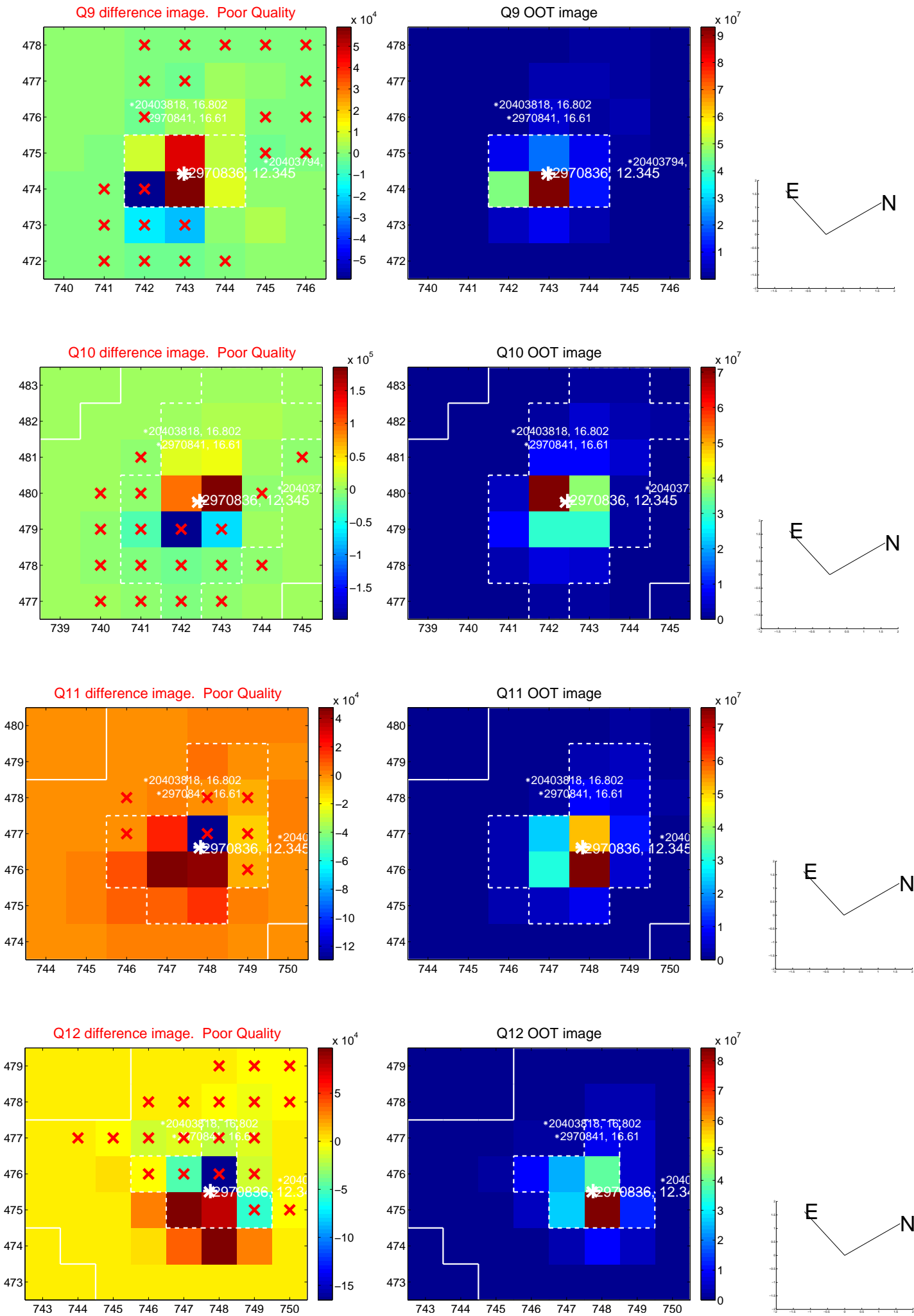
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



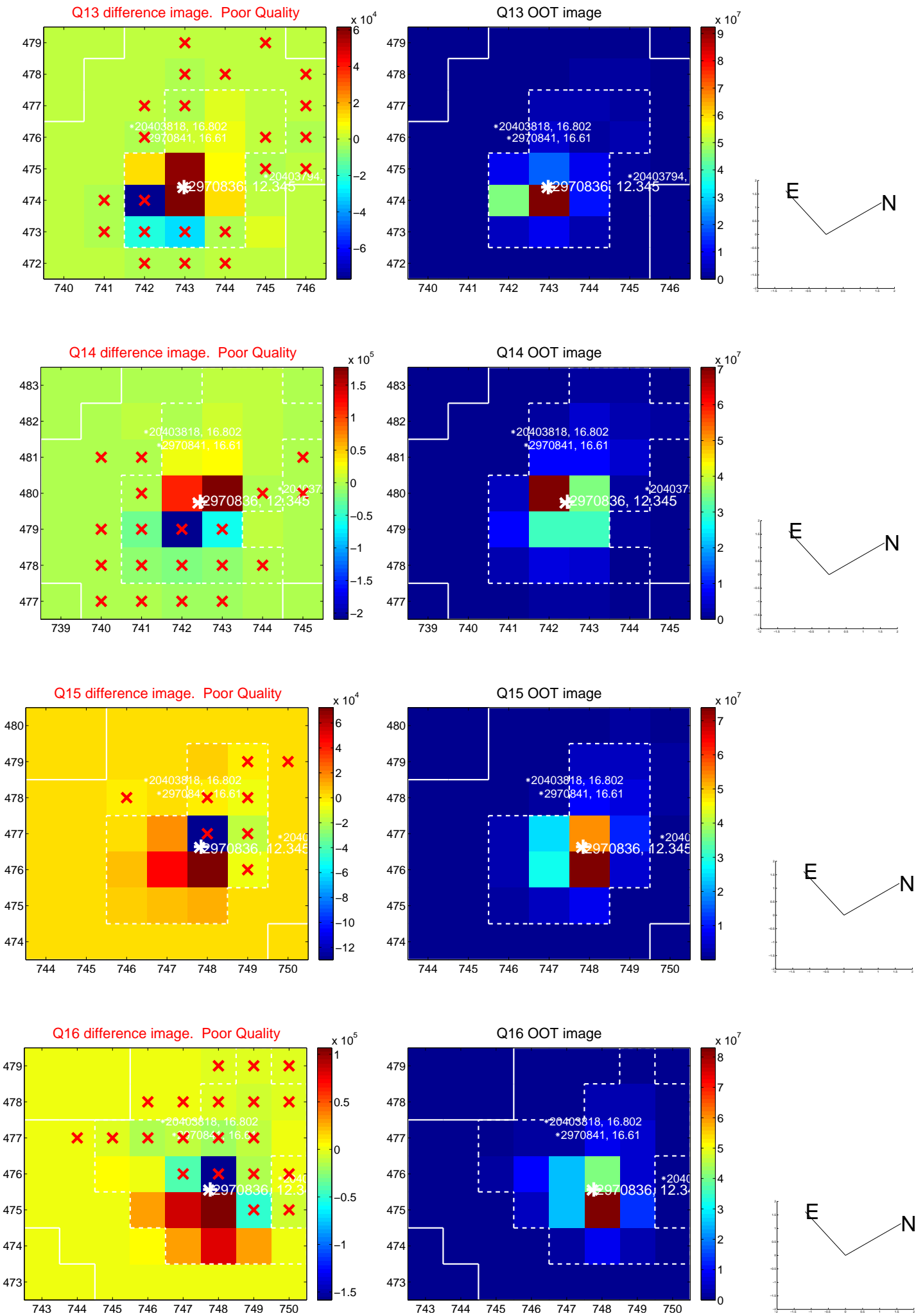
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



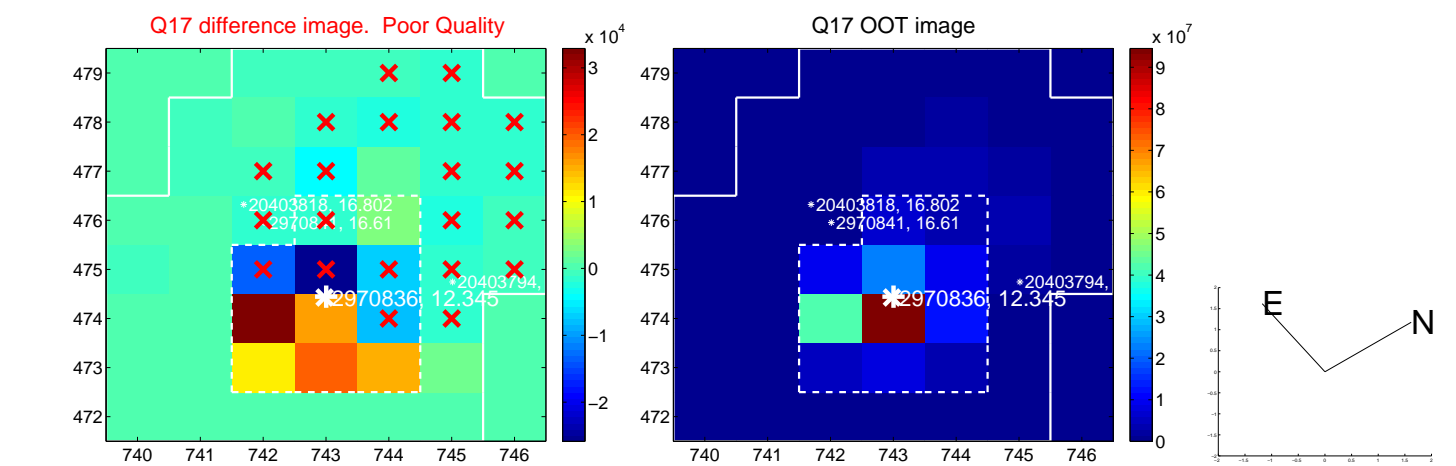
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



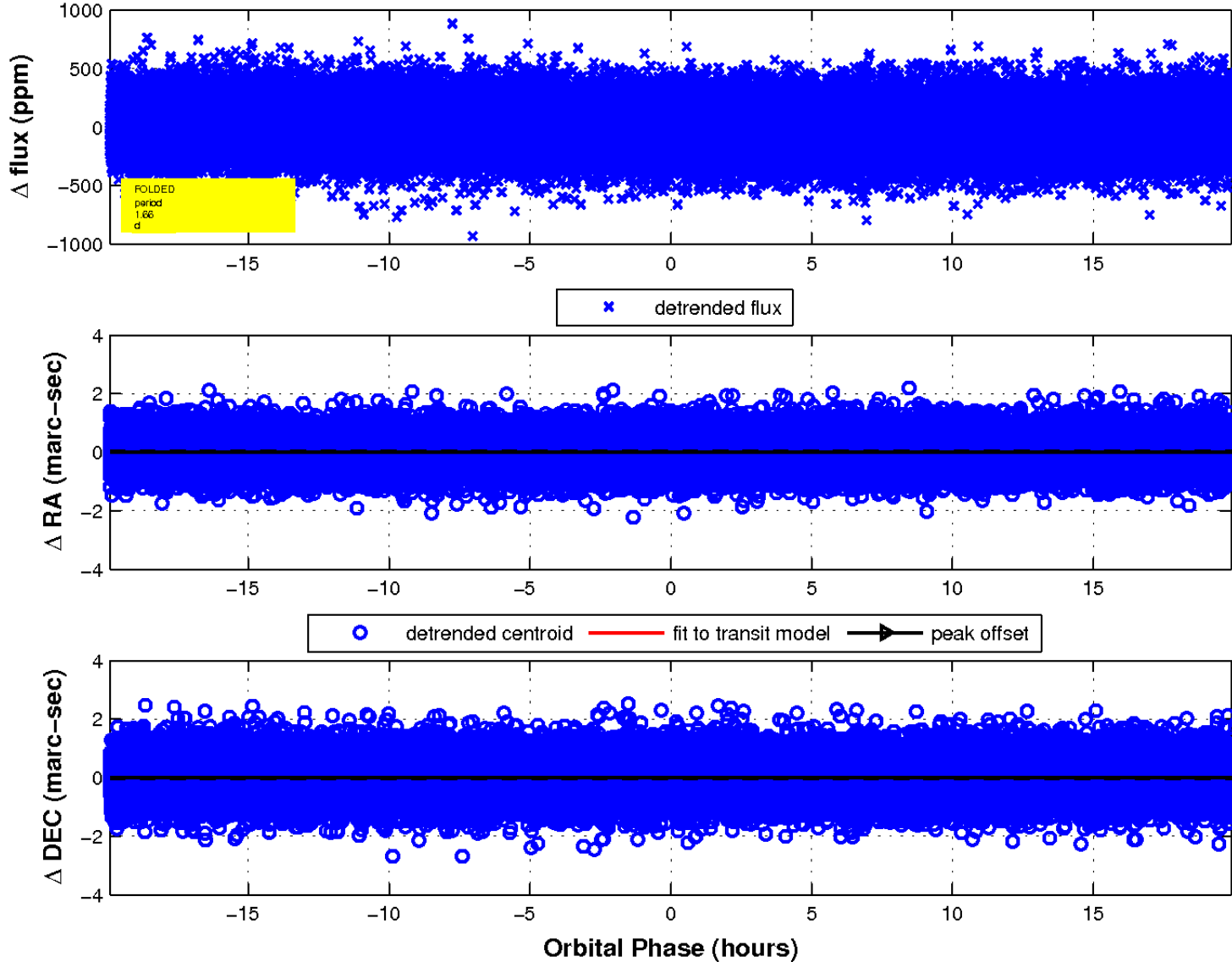
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

