

KIC 005042785

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})
005042785-01	OBS	6507.01	1.674902	132.708776	135.9	20.099	13.5	15.4	2.65	7384	6.08	16613.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005042785-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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.

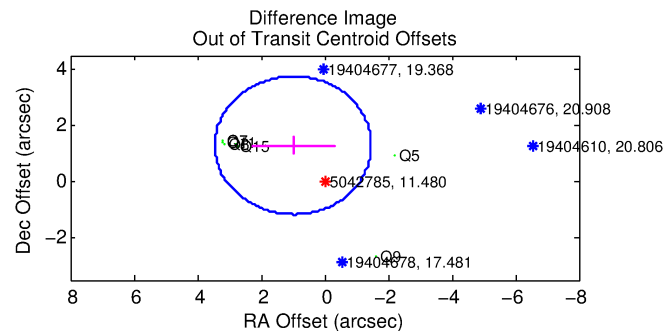
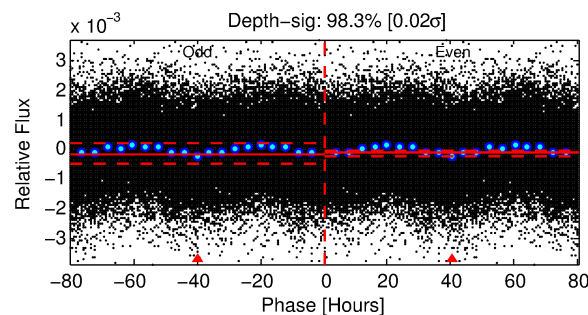
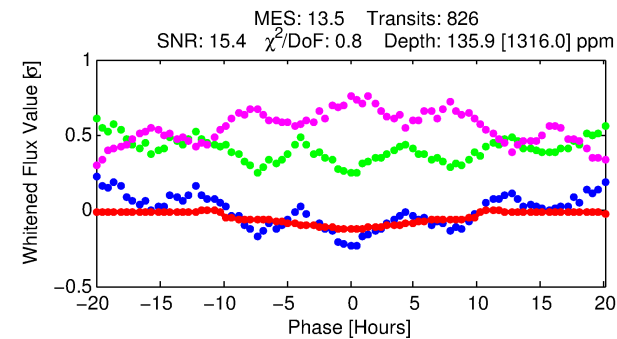
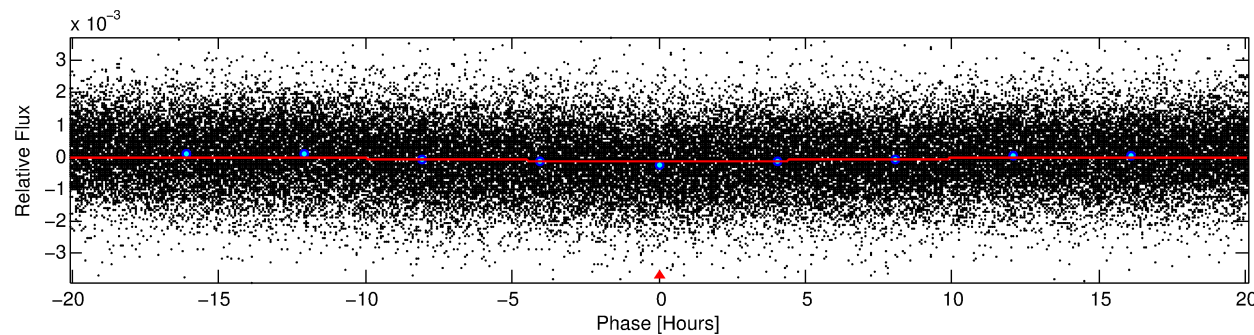
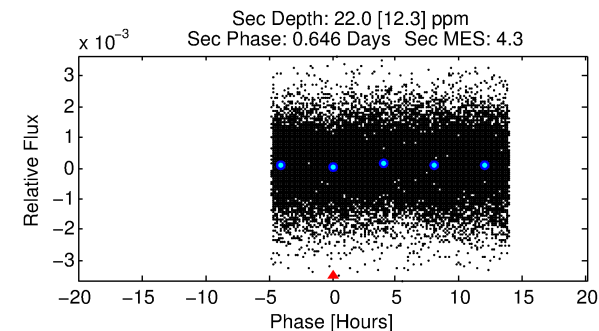
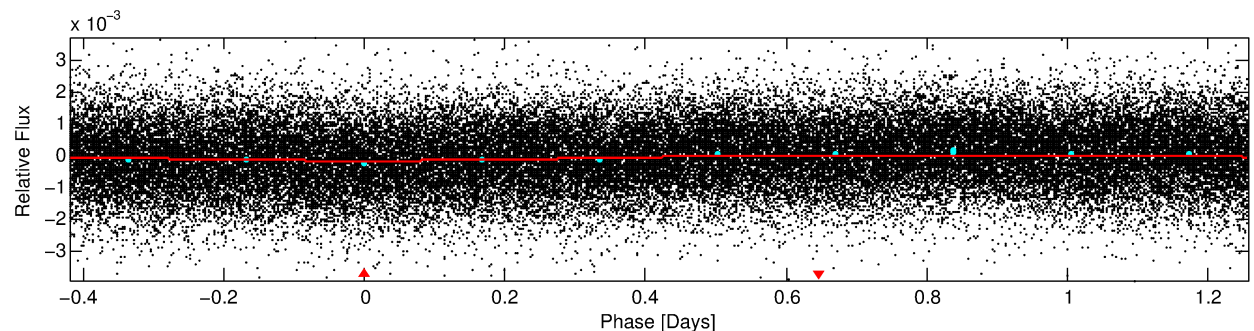
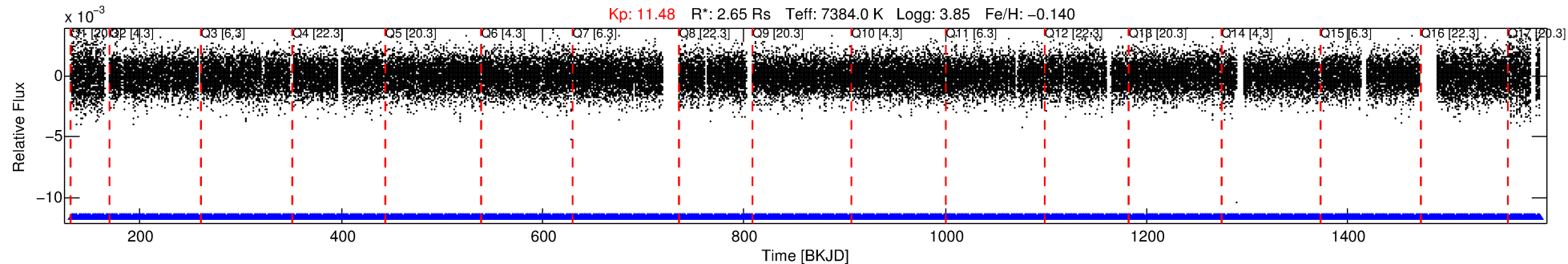
Ephemeris Match Information For 005042785-01

No Significant Match Found

DV One-Page Summary

KIC: 5042785 Candidate: 1 of 1 Period: 1.675 d
KOI: K06507 Corr: No Ephemeris Match

Kp: 11.48 R*: 2.65 Rs Teff: 7384.0 K Logg: 3.85 Fe/H: -0.140



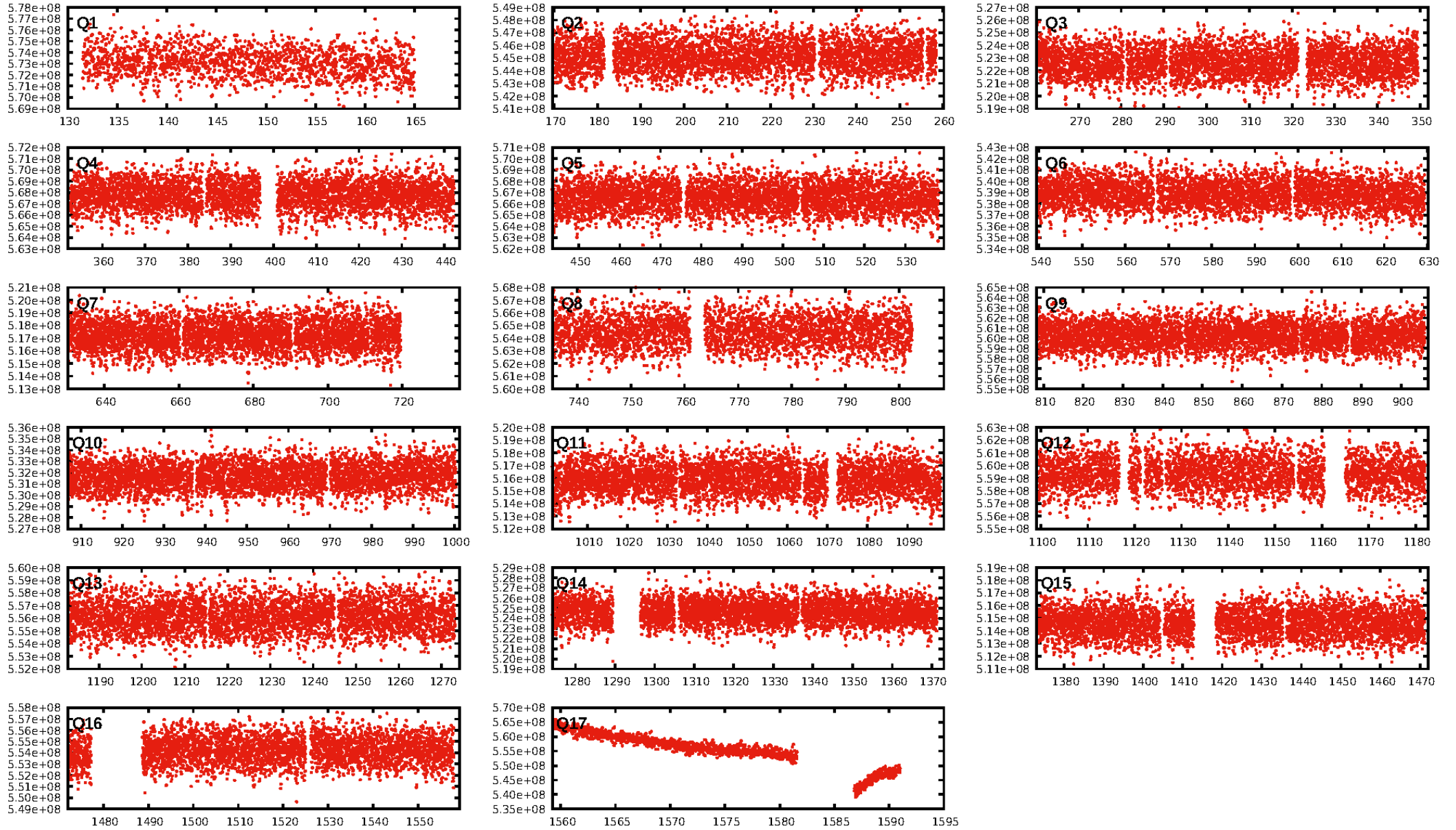
DV Fit Results:

Period = 1.67490 [0.00003] d
Epoch = 132.7088 [0.0089] BKJD
Rp/R* = 0.0210 [0.0686]
a/R* = 1.01 [0.08]
b = 1.00 [0.04]
Seff = 16613.78 [10376.65]
Teq = 2895 [452] K
Rp = 6.08 [19.97] Re
a = 0.0335 [0.0129] AU
Ag = 0.37 [2.42] [-0.26σ]
Teffp = 3485 [5702] K [0.10σ]

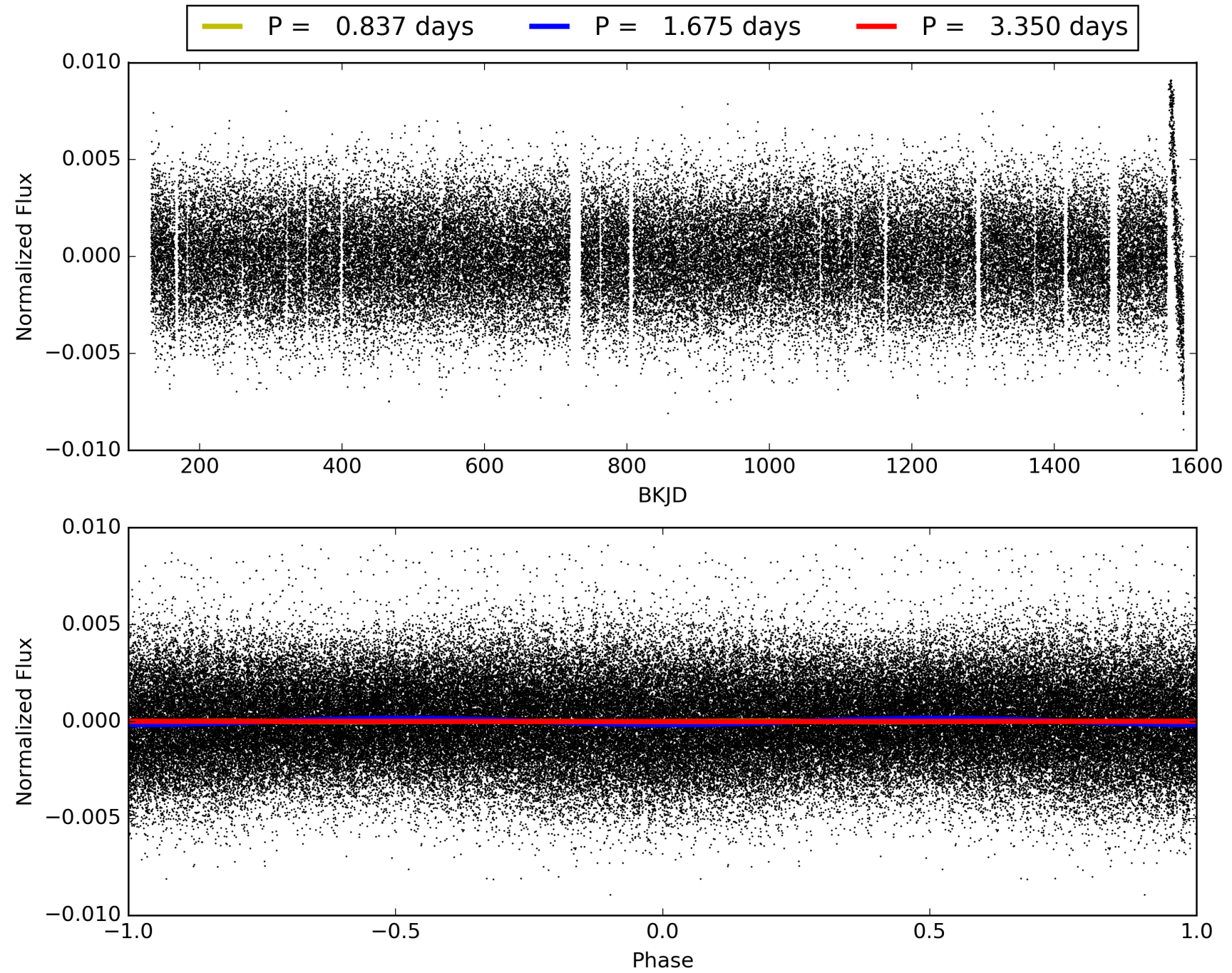
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [789/789]
GhostDiagnostic-chr: 2.291
Centroid-sig: N/A
Centroid-so: 0.040 arcsec [0.33σ]
OotOffset-rm: 1.628 arcsec [1.99σ]
KicOffset-rm: 1.549 arcsec [1.67σ]
OotOffset-st: 0/4/0/2 [6]
KicOffset-st: 0/4/0/2 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005042785-01, PDC Light Curves

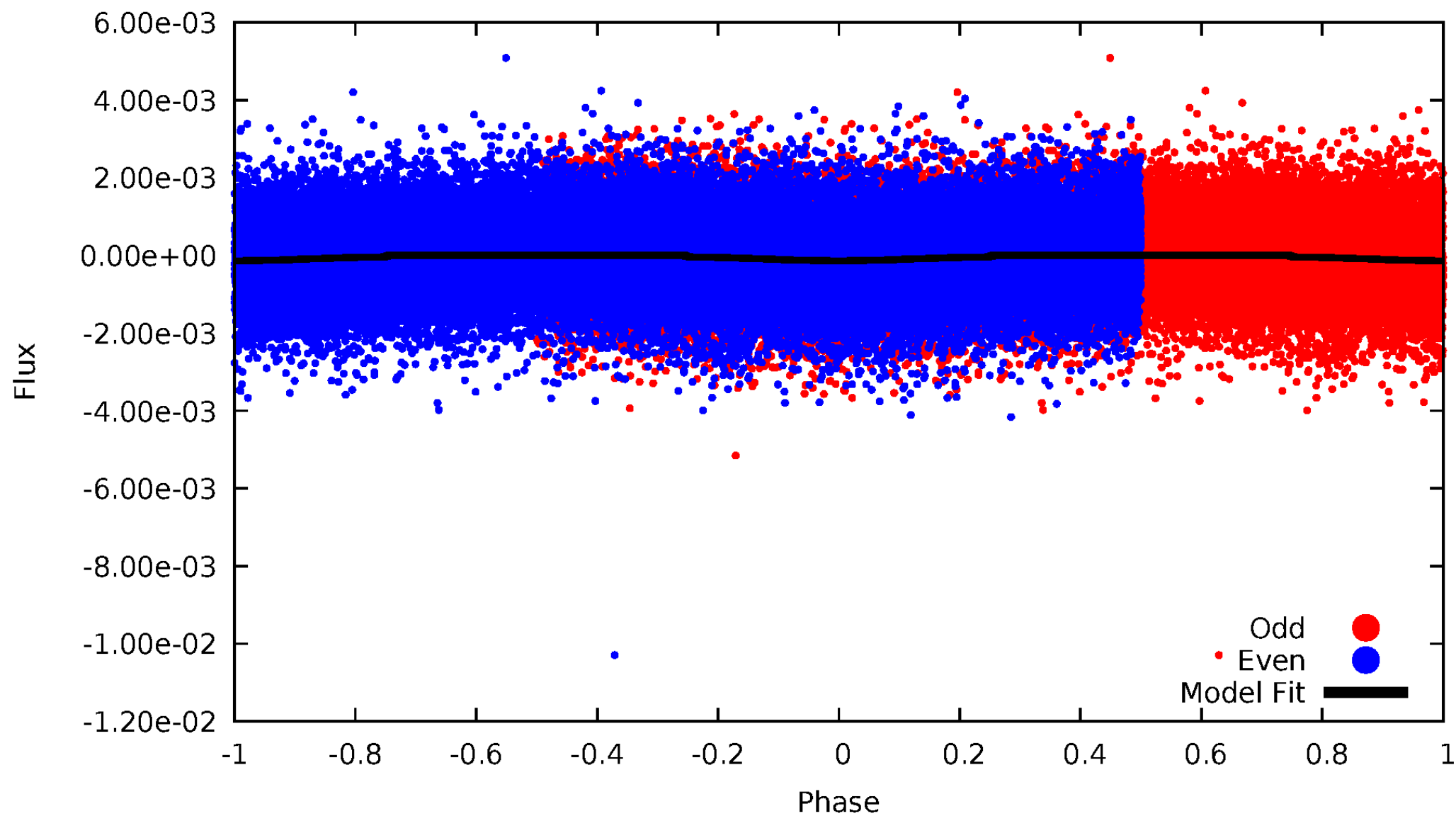


TCE 005042785-01



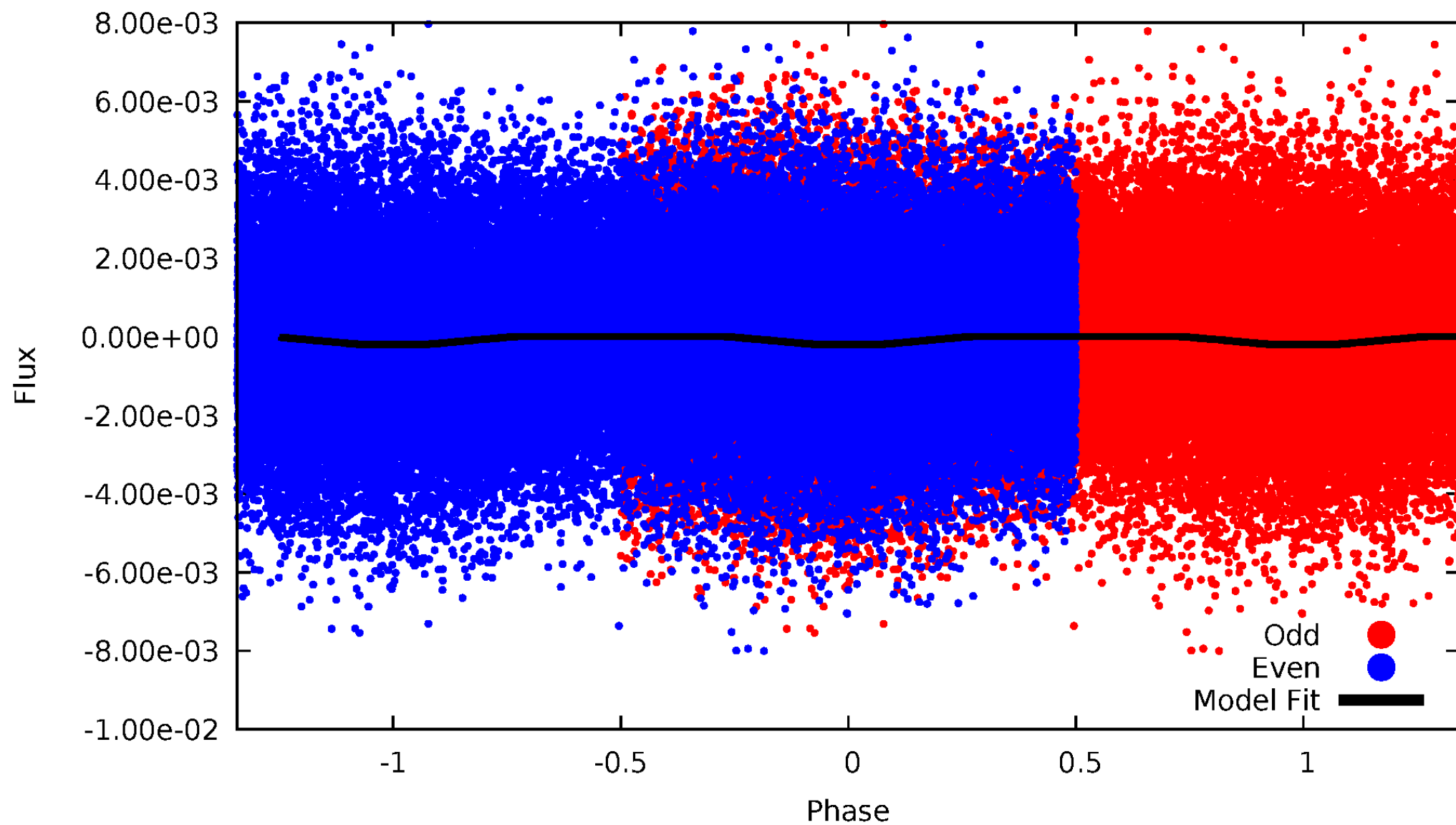
DV Odd/Even

TCE 005042785-01



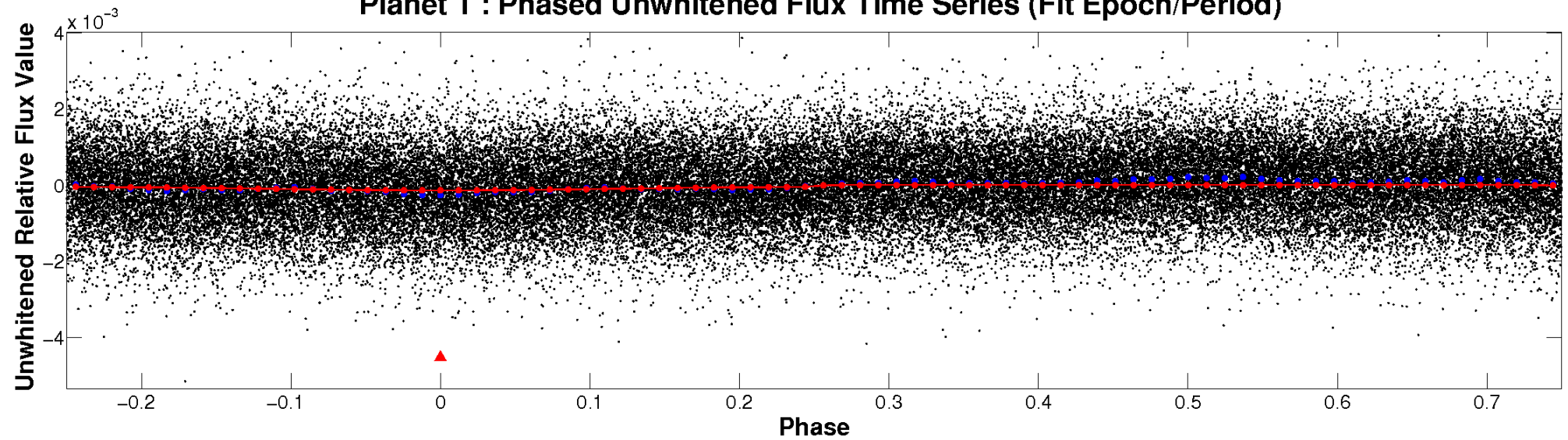
ALT Odd/Even

TCE 005042785-01

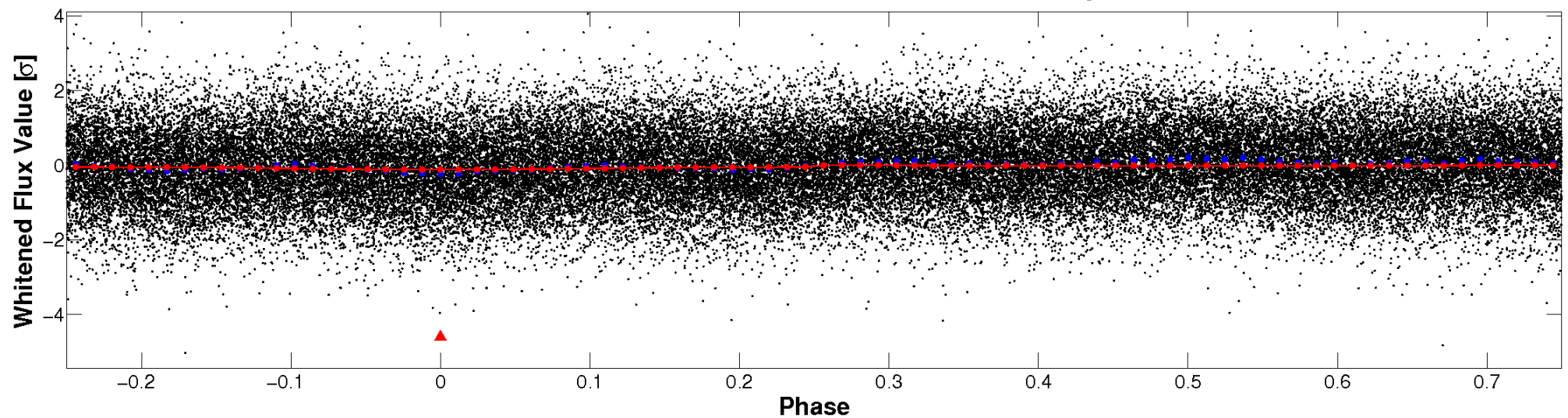


Non-Whitened Vs. Whitened Light Curve

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

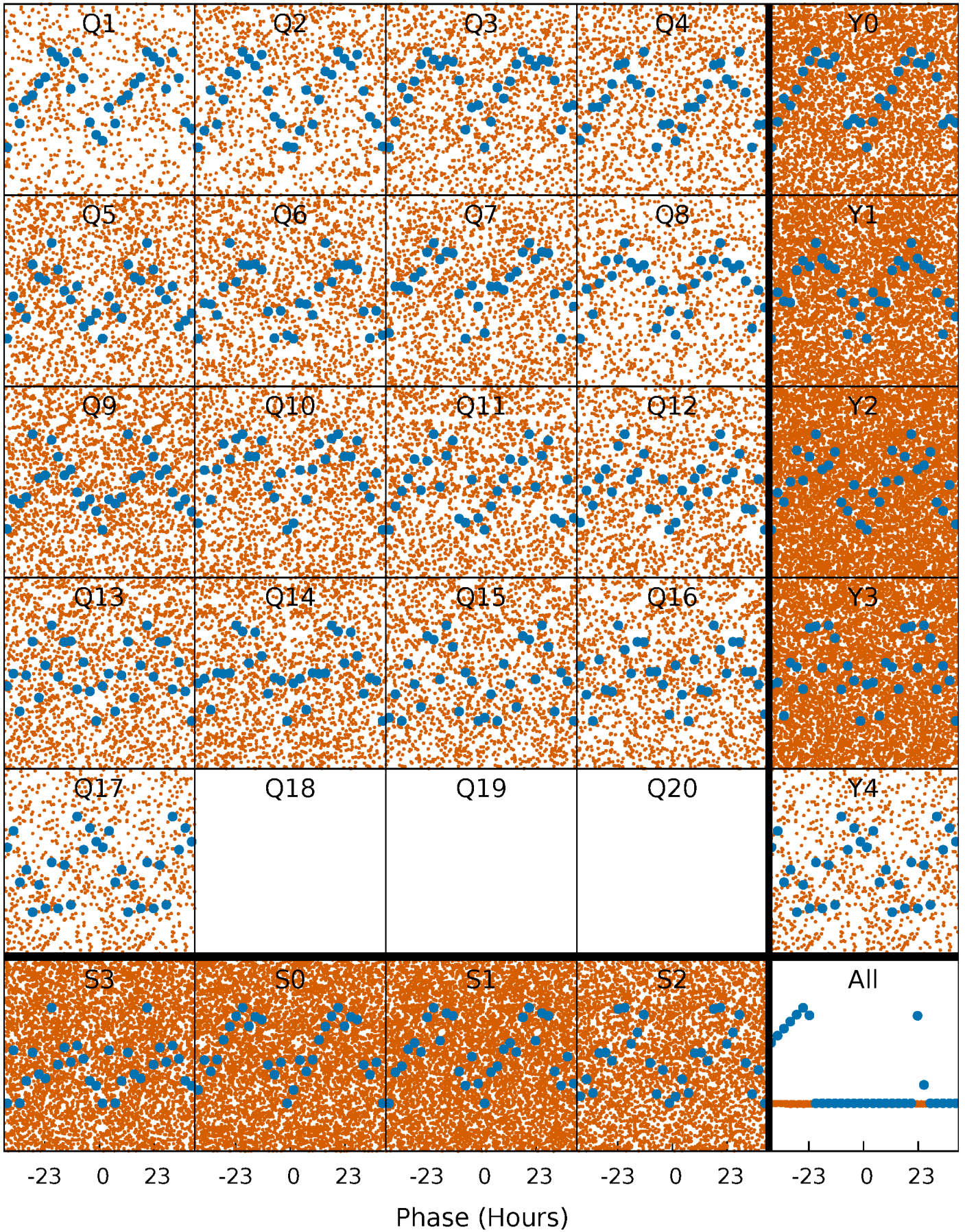


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



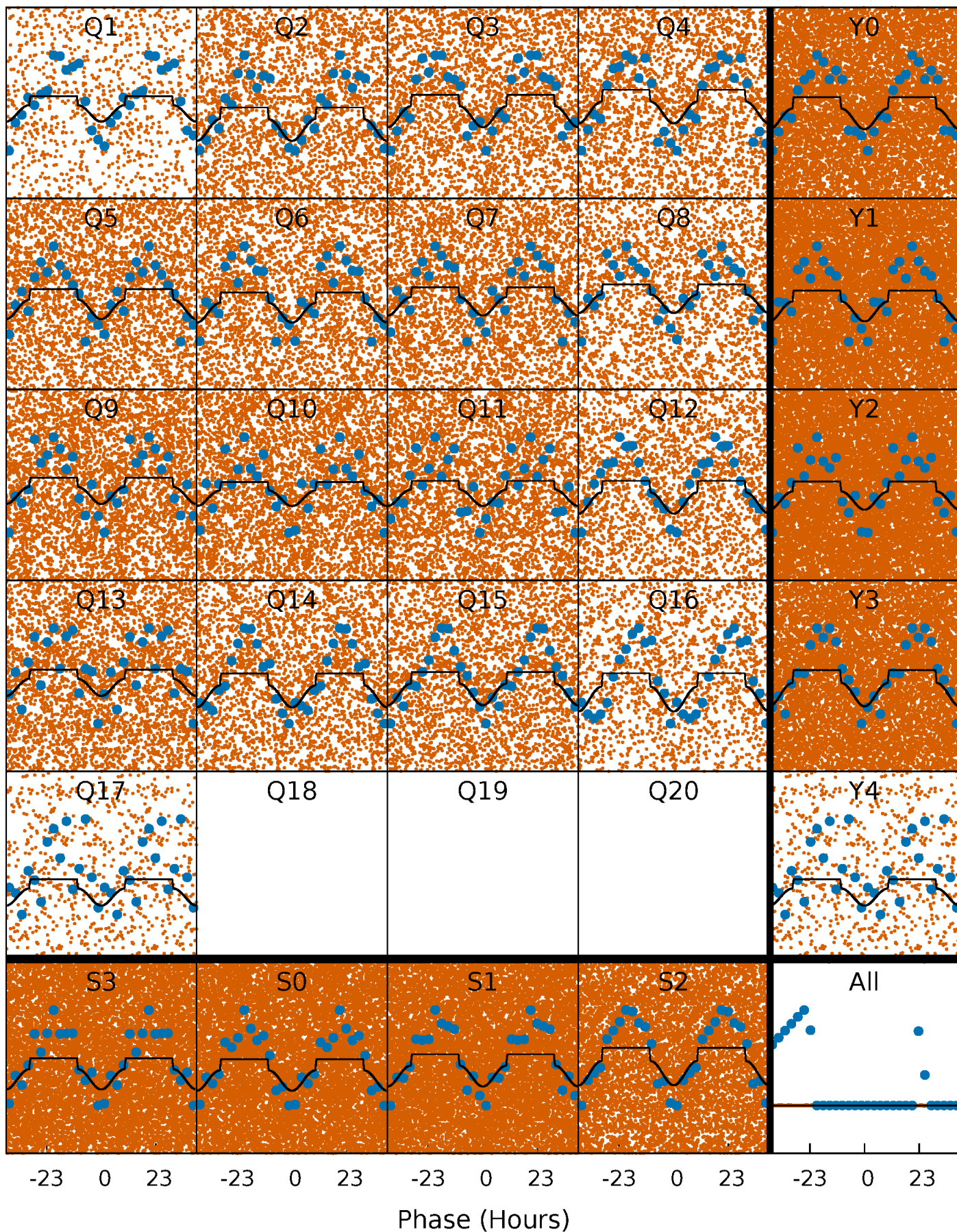
PDC Quarter-Phased Transit Curves

TCE 005042785-01 P= 1.674902 Days $T_0=132.708776$ (BKJD)



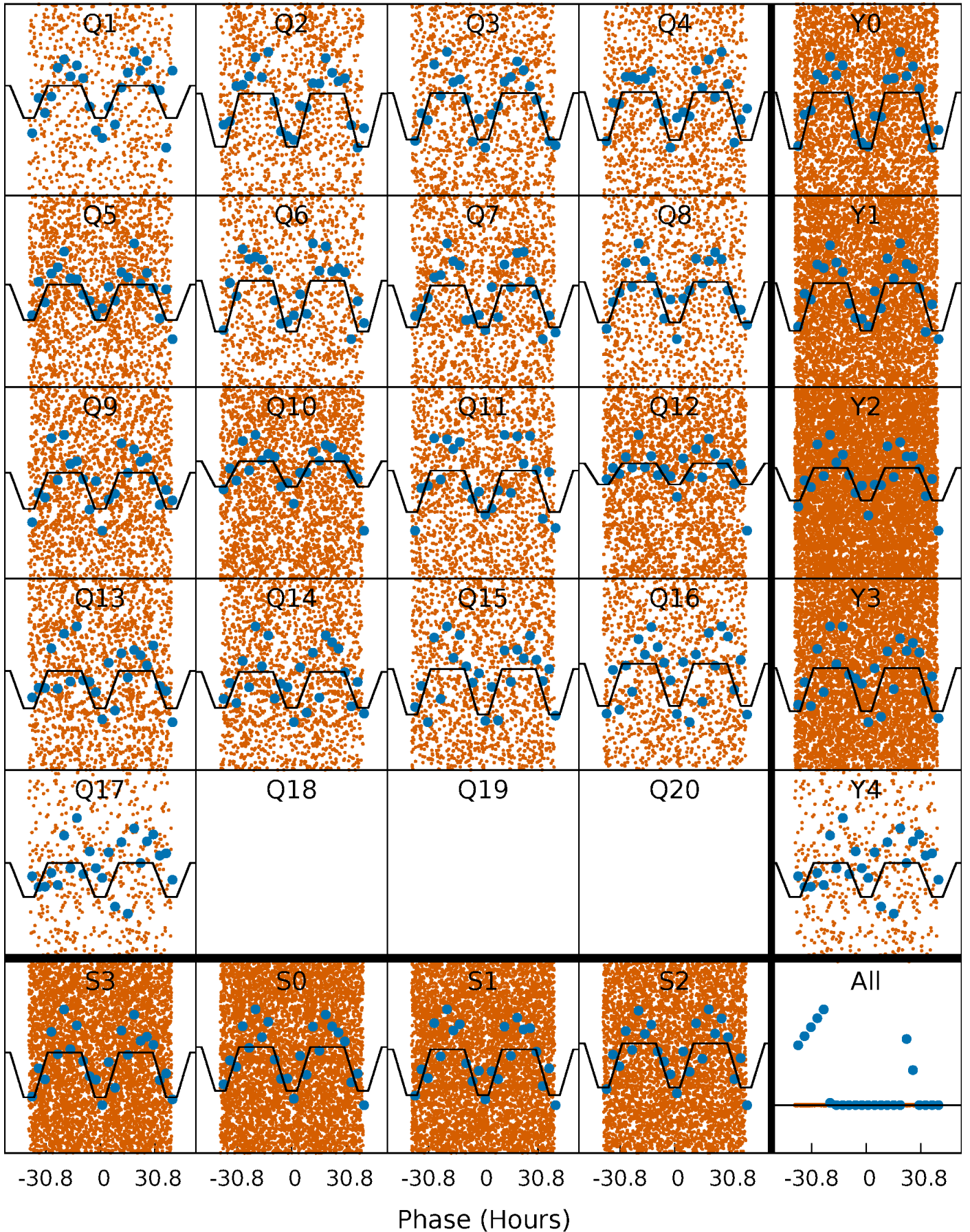
DV Quarter-Phased Transit Curves

TCE 005042785-01 P= 1.674902 Days $T_0=132.708776$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

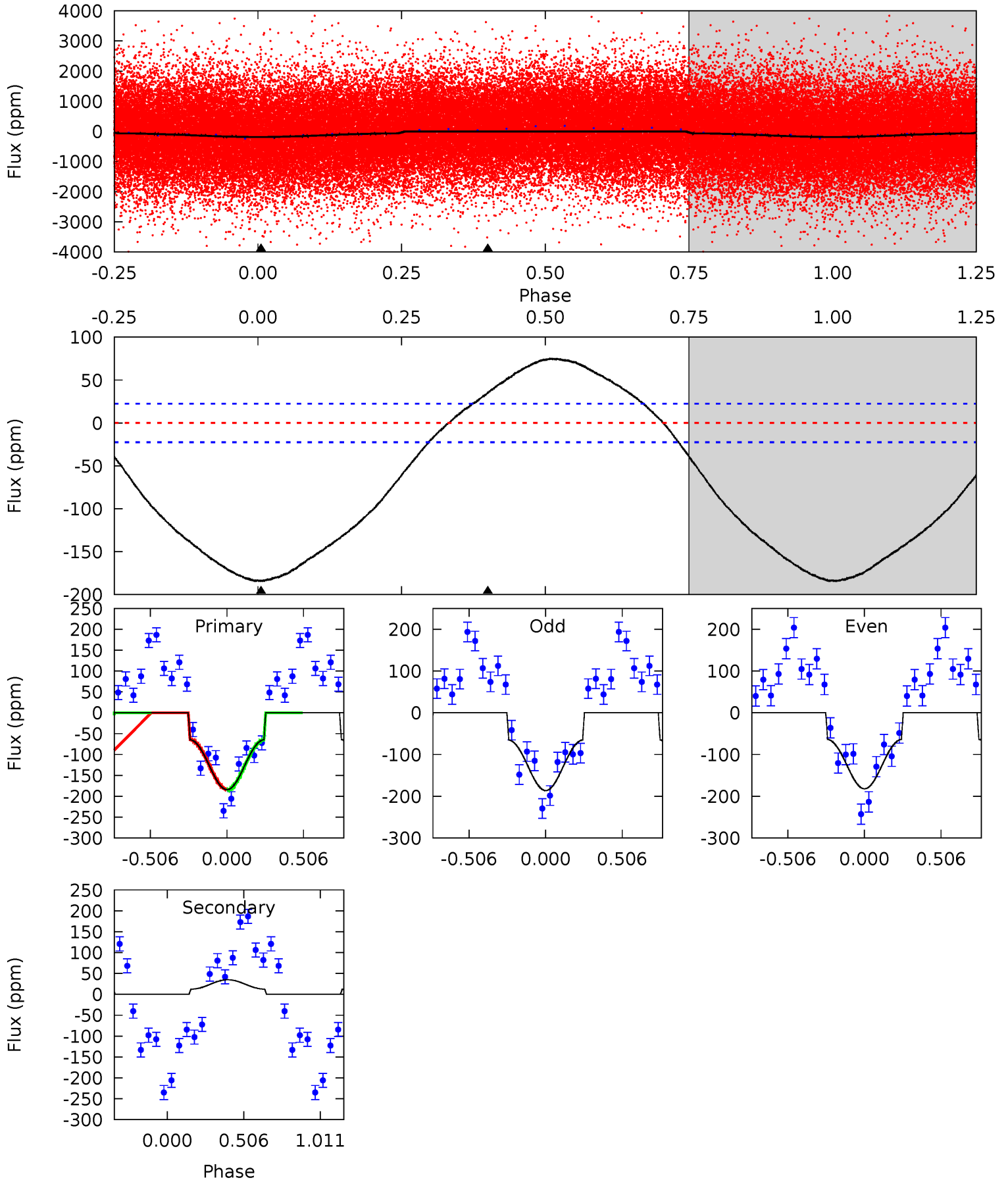
TCE 005042785-01 P= 1.674721 Days $T_0=132.783281$ (BKJD)



DV Model-Shift Uniqueness Test

005042785-01, P = 1.674902 Days, E = 131.033874 Days

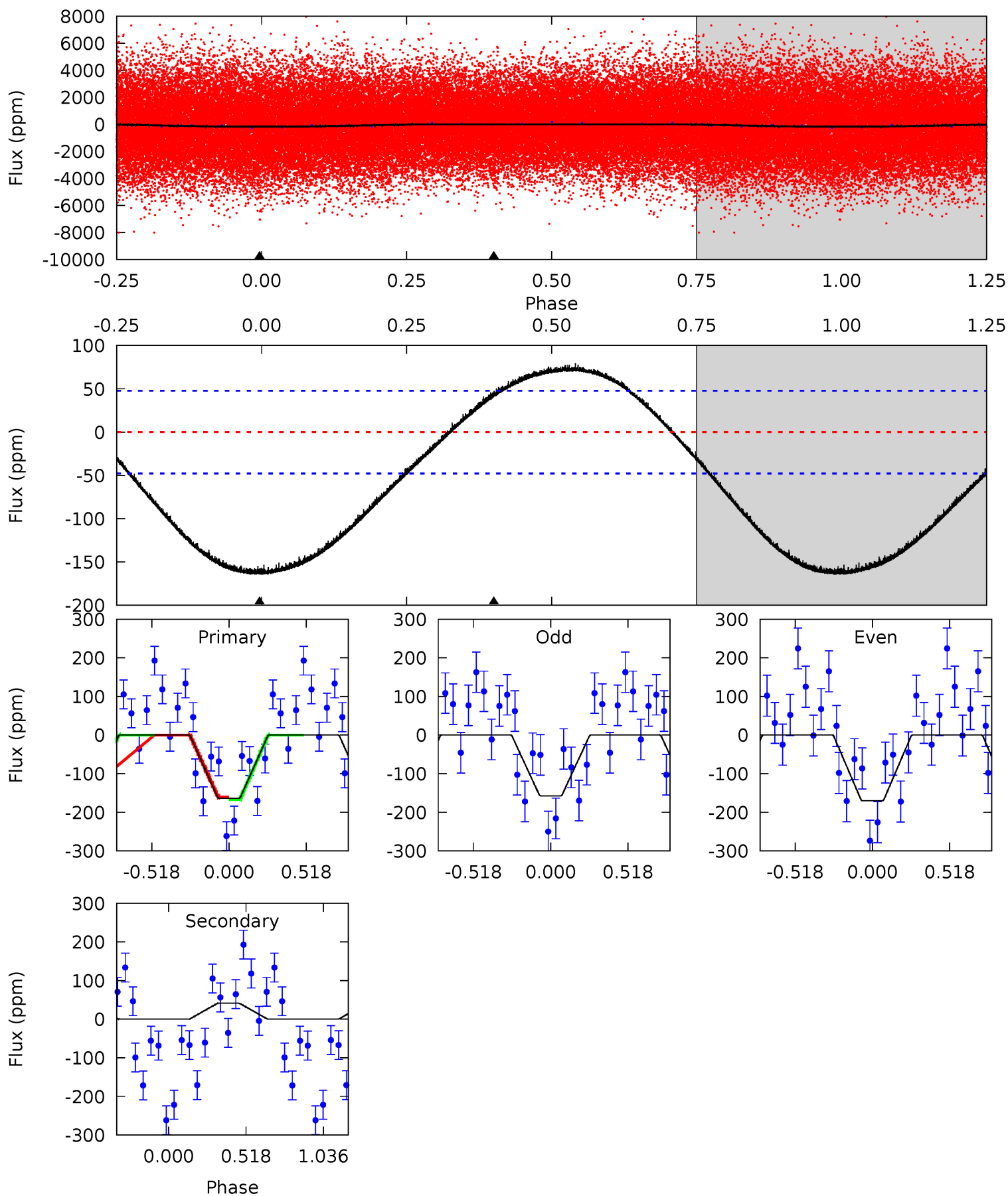
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.5	-6.54	0	0	4.21	0.67	4.27	34.5	34.5	-6.54	-6.54	0.40	0.95	0.29	0.22



Alt Model-Shift Uniqueness Test

005042785-01, P = 1.674721 Days, E = 131.108560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	-3.63	0	0	4.21	0.65	1.88	14.4	14.4	-3.63	-3.63	0.56	1.36	0.33	0.29



Stellar Parameters For KIC 005042785

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7384^{+205}_{-333}	$3.845^{+0.345}_{-0.115}$	$-0.140^{+0.250}_{-0.350}$	$2.646^{+0.472}_{-1.102}$	$1.788^{+0.183}_{-0.457}$	$0.136^{+0.390}_{-0.046}$
	+3%/-5%	+9%/-3%	+179%/-250%	+18%/-42%	+10%/-26%	+287%/-34%
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 005042785-01 / KOI 6507.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	35 ± 5	$14.55^{+15.20}_{-10.45}$	3959^{+293}_{-399}	-3874^{+277}_{-1018}	$-0.099^{+0.075}_{-1.218}$
Alt.	41 ± 11	$13.50^{+16.64}_{-9.71}$	3956^{+292}_{-411}	-3898^{+286}_{-1304}	$-0.135^{+0.108}_{-1.662}$

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

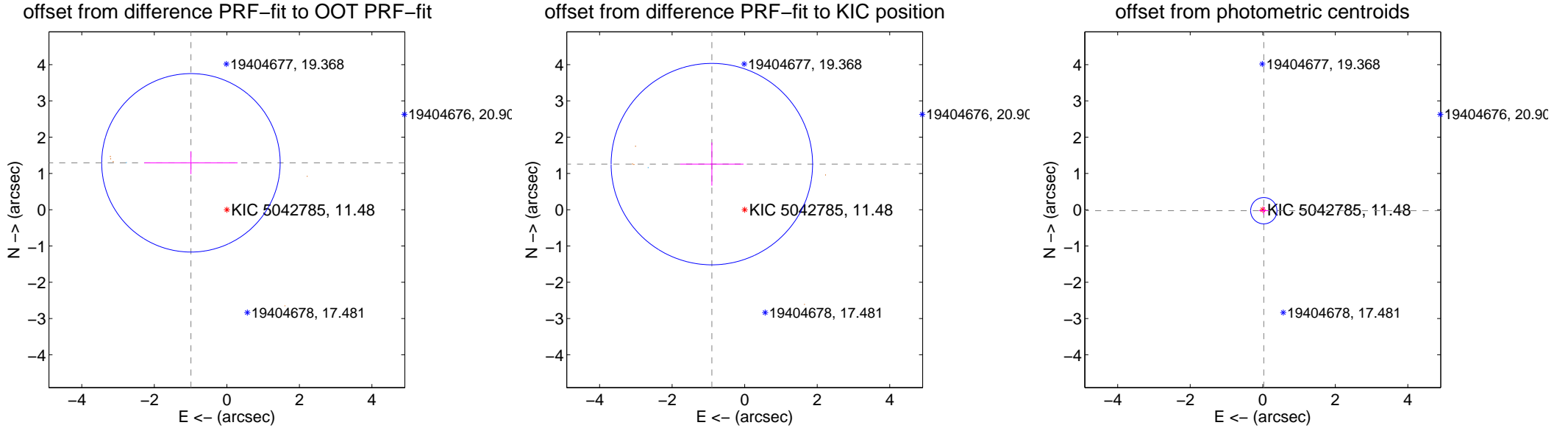
DV Centroid Data

Supplemental centroid analysis for 005042785-01. **Kepler magnitude: 11.48.** Transit SNR 15.43

There are 1 quarters with good PRF difference image offsets

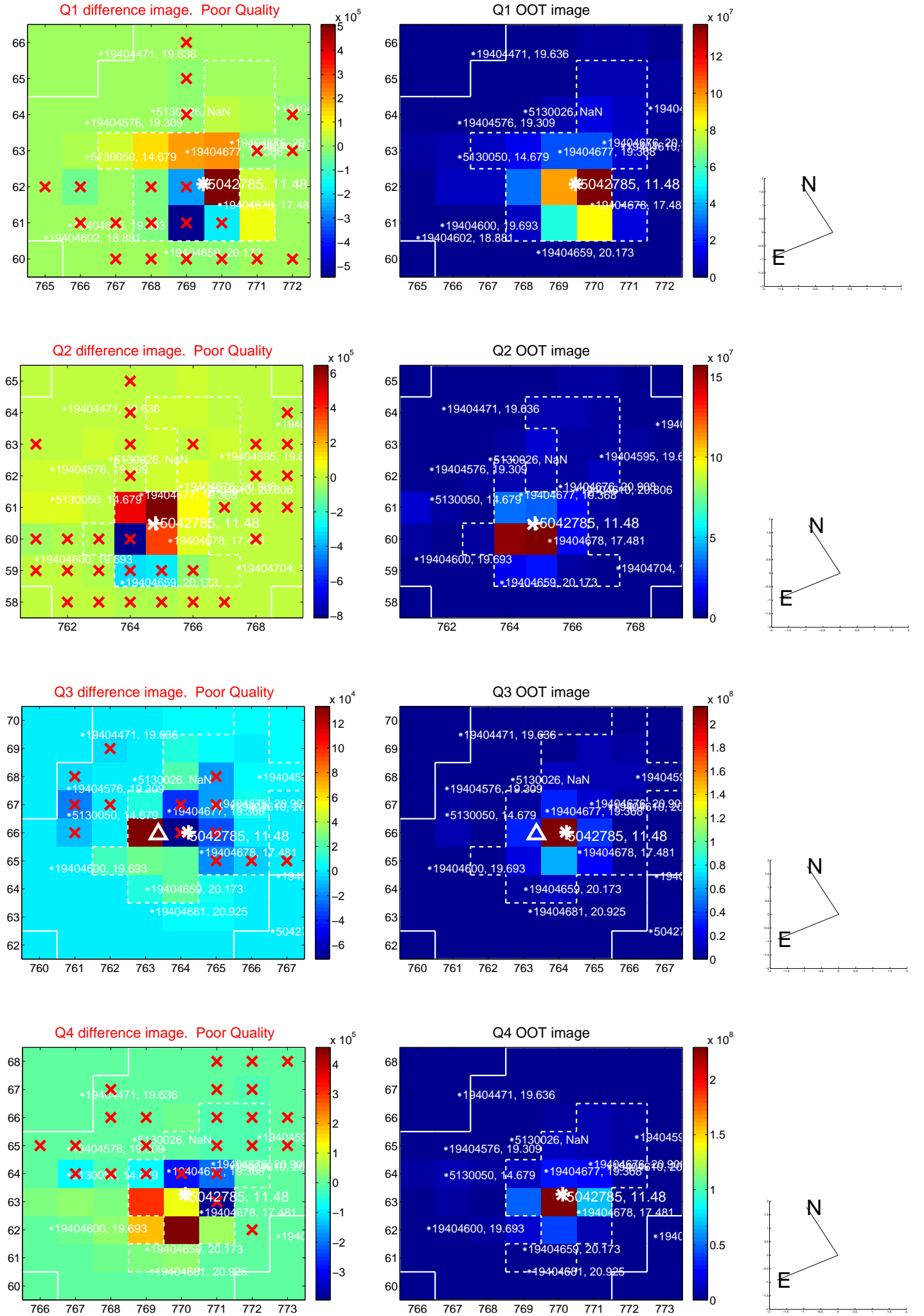
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.628 ± 0.820	1.99	0.990 ± 1.285	1.293 ± 0.312
PRF-fit source offset from KIC position	1.549 ± 0.926	1.67	0.905 ± 0.874	1.257 ± 0.593
photometric centroid source offset	0.04 ± 0.12	0.33	-0.03 ± 0.13	-0.03 ± 0.11

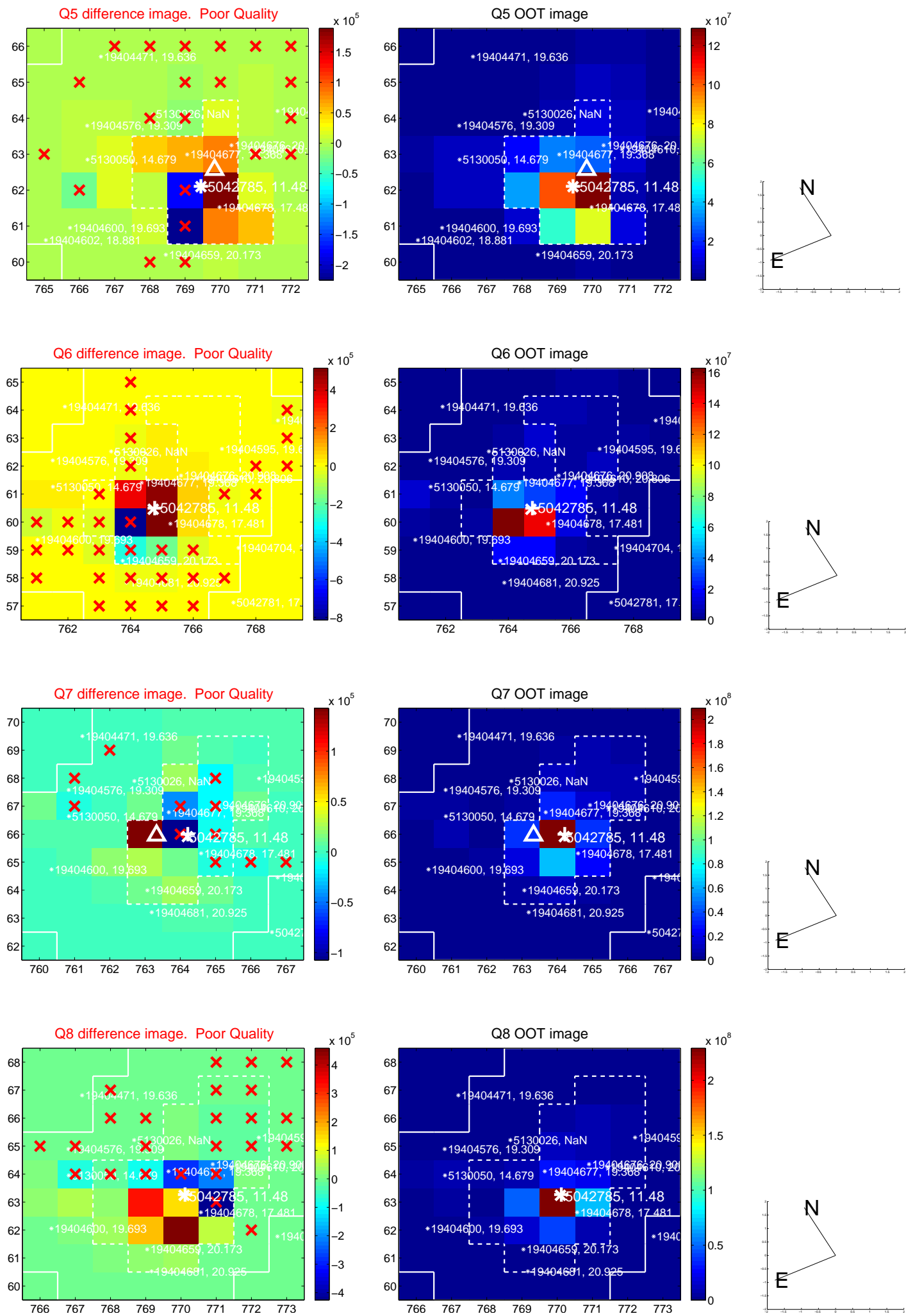


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

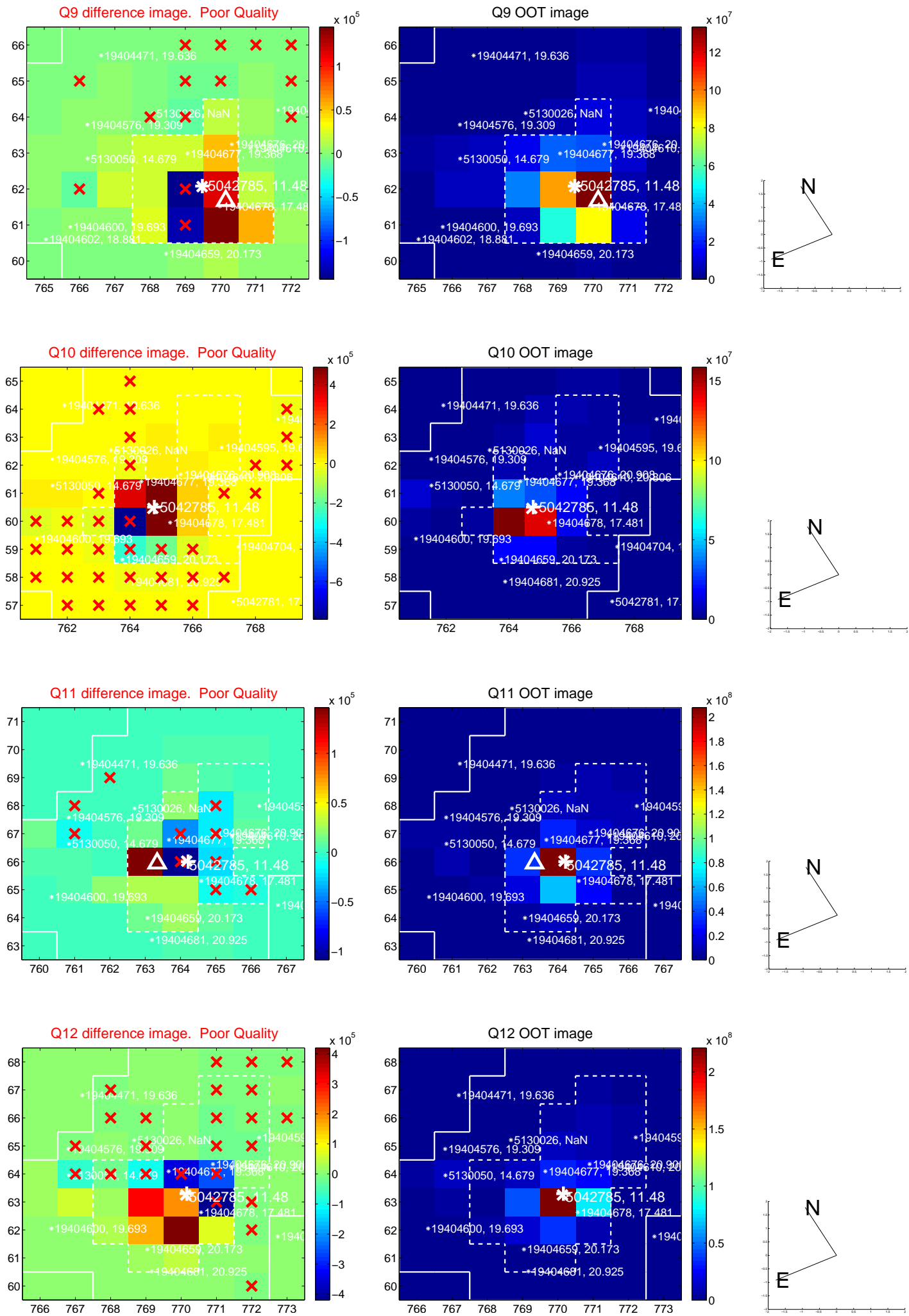
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



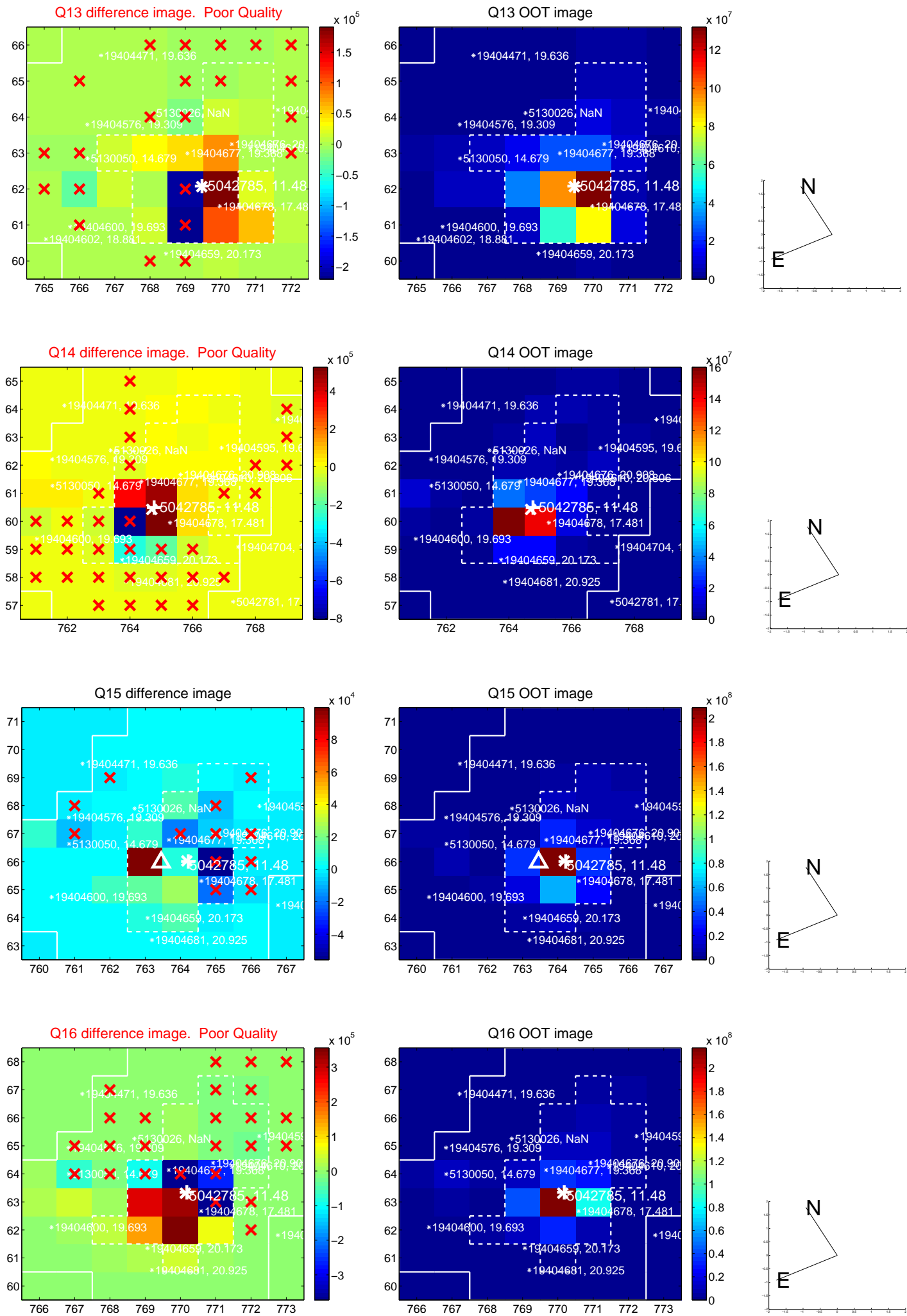
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



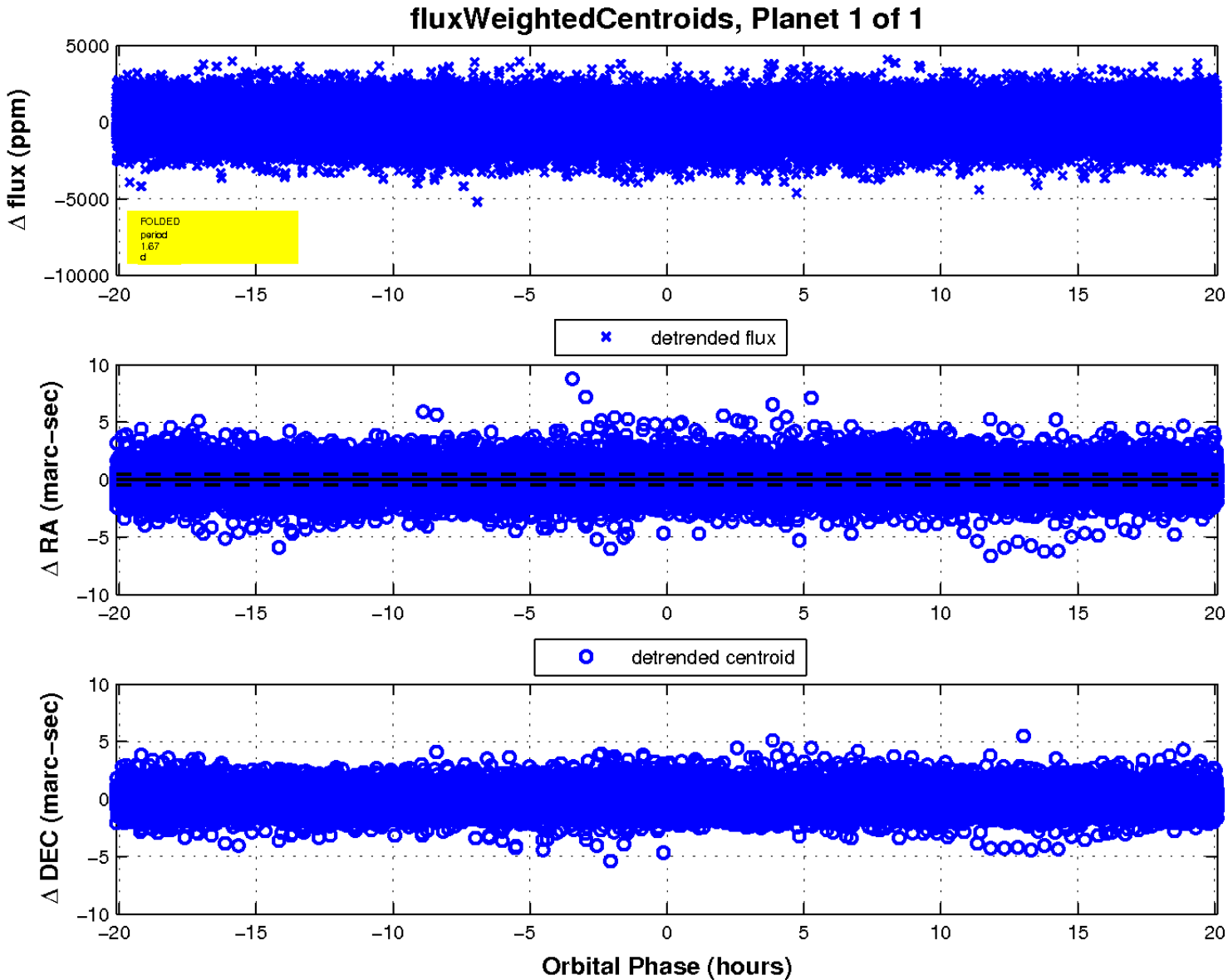
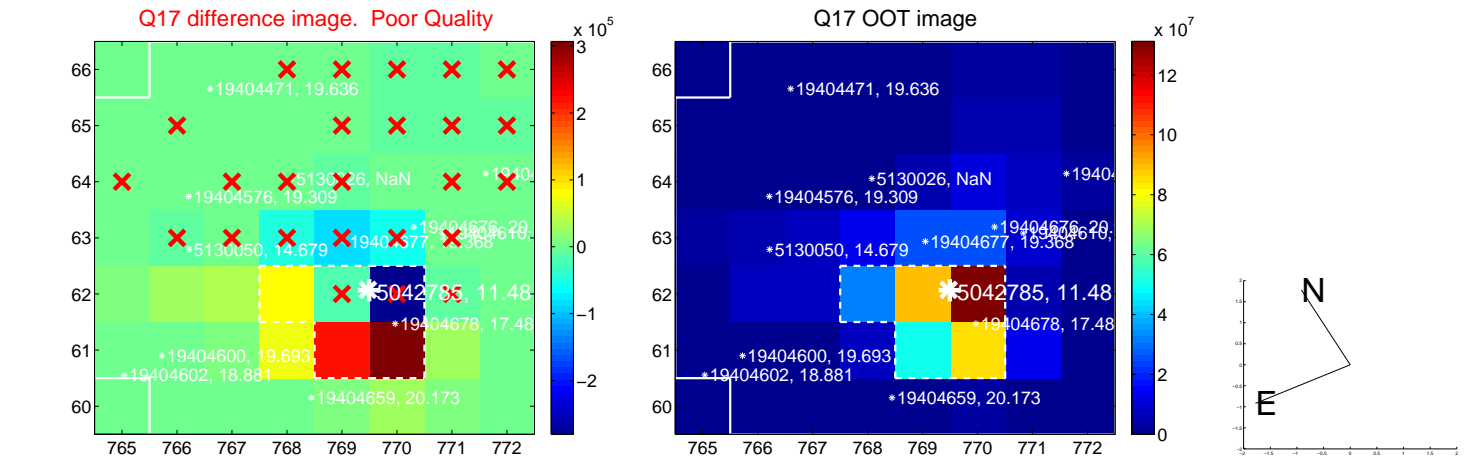
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

