

KIC 004576280

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})
004576280-01	OBS	No	1.715171	132.230625	13.4	16.780	11.4	9.6	3.47	7717	1.28	30106.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004576280-01	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.

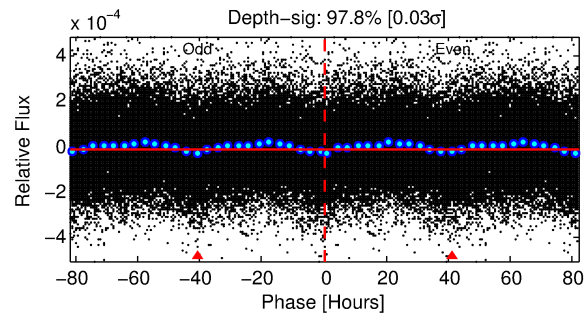
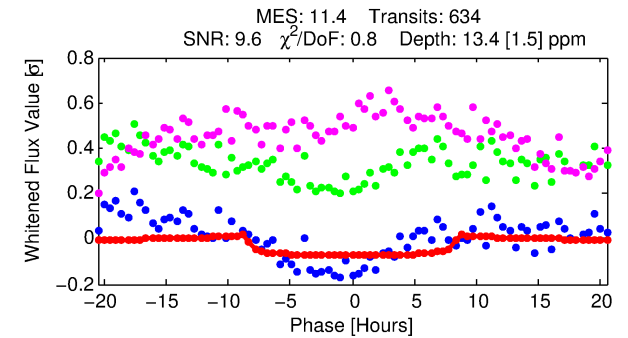
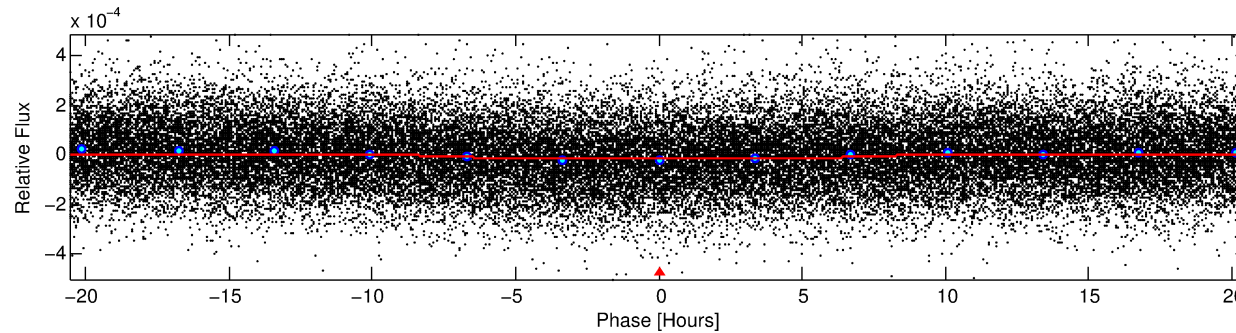
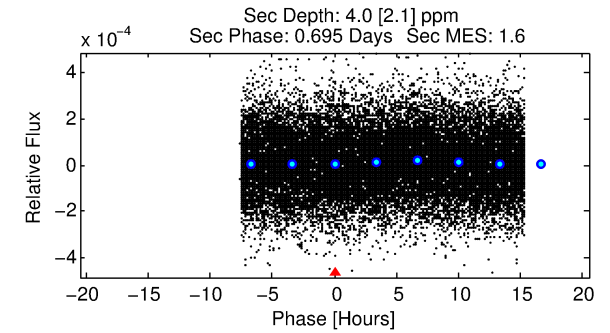
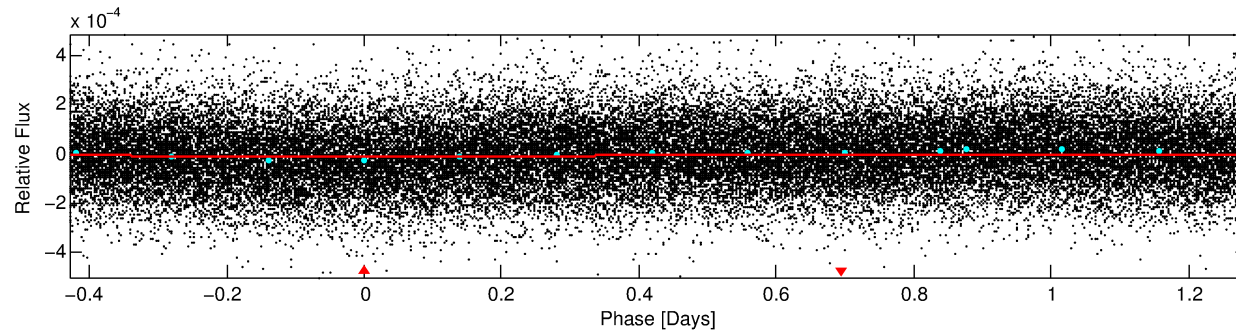
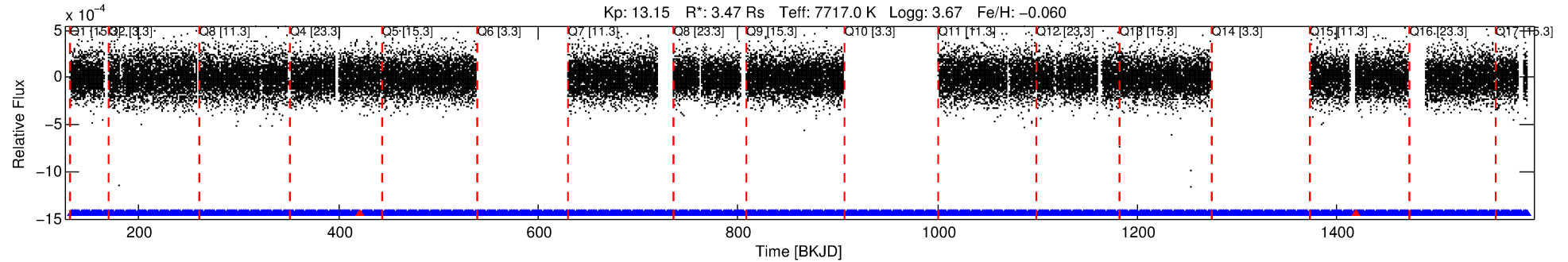
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004576280-01

No Significant Match Found

DV One-Page Summary

KIC: 4576280 Candidate: 1 of 1 Period: 1.715 d



DV Fit Results:

Period = 1.71517 [0.00004] d
Epoch = 132.2306 [0.0115] BKJD
Rp/R* = 0.0034 [0.0027]
a/R* = 1.05 [0.42]
b = 0.06 [72.61]
Seff = 30106.81 [24019.14]
Teq = 3359 [670] K
Rp = 1.28 [1.22] Re
a = 0.0357 [0.0172] AU
Ag = 1.70 [3.18] [0.22σ]
Teffp = 5926 [2541] K [0.98σ]

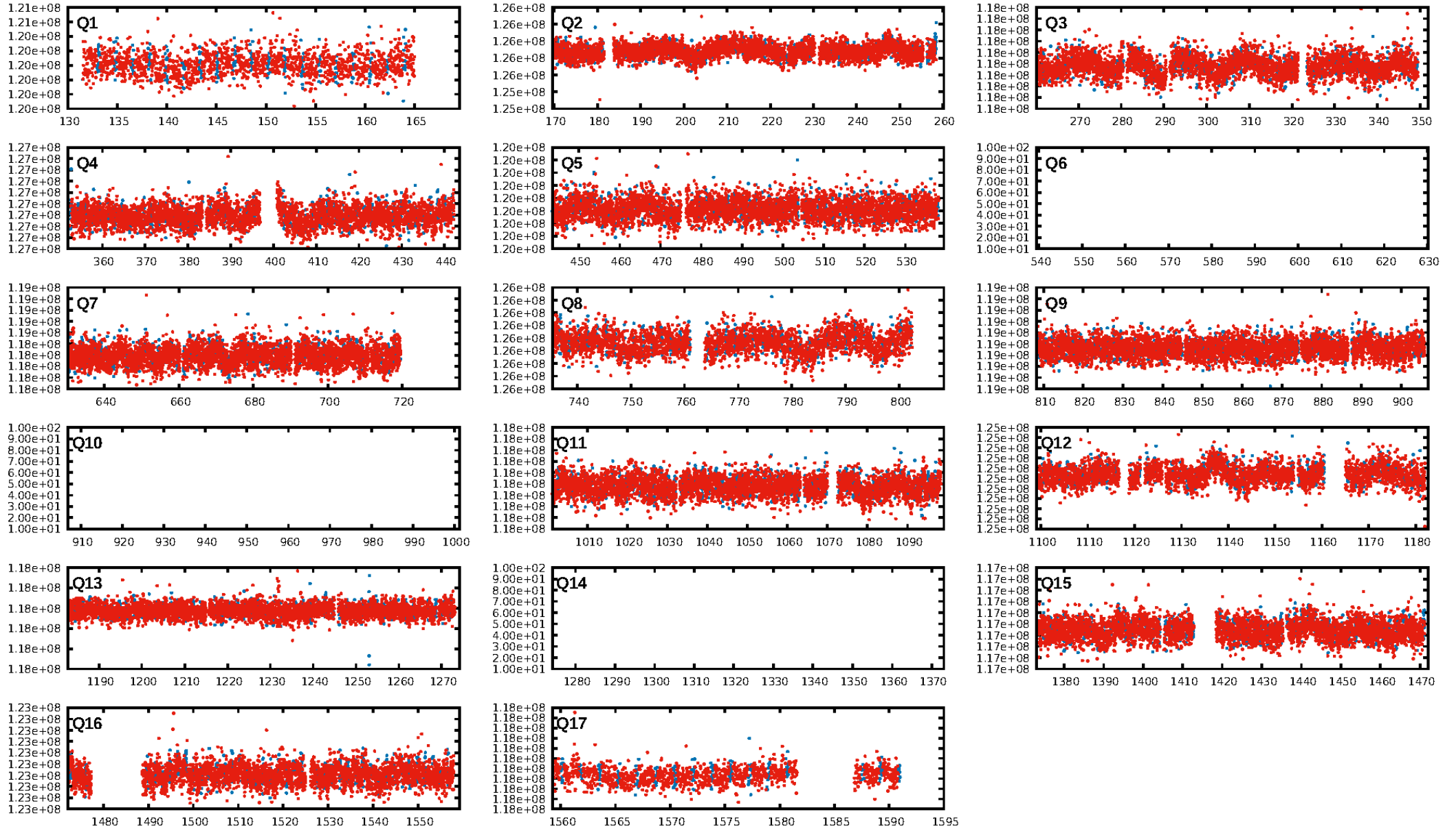
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [595/597]
GhostDiagnostic-chr: 8.501
Centroid-sig: 0.2%
Centroid-so: 3.668 arcsec [2.26σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

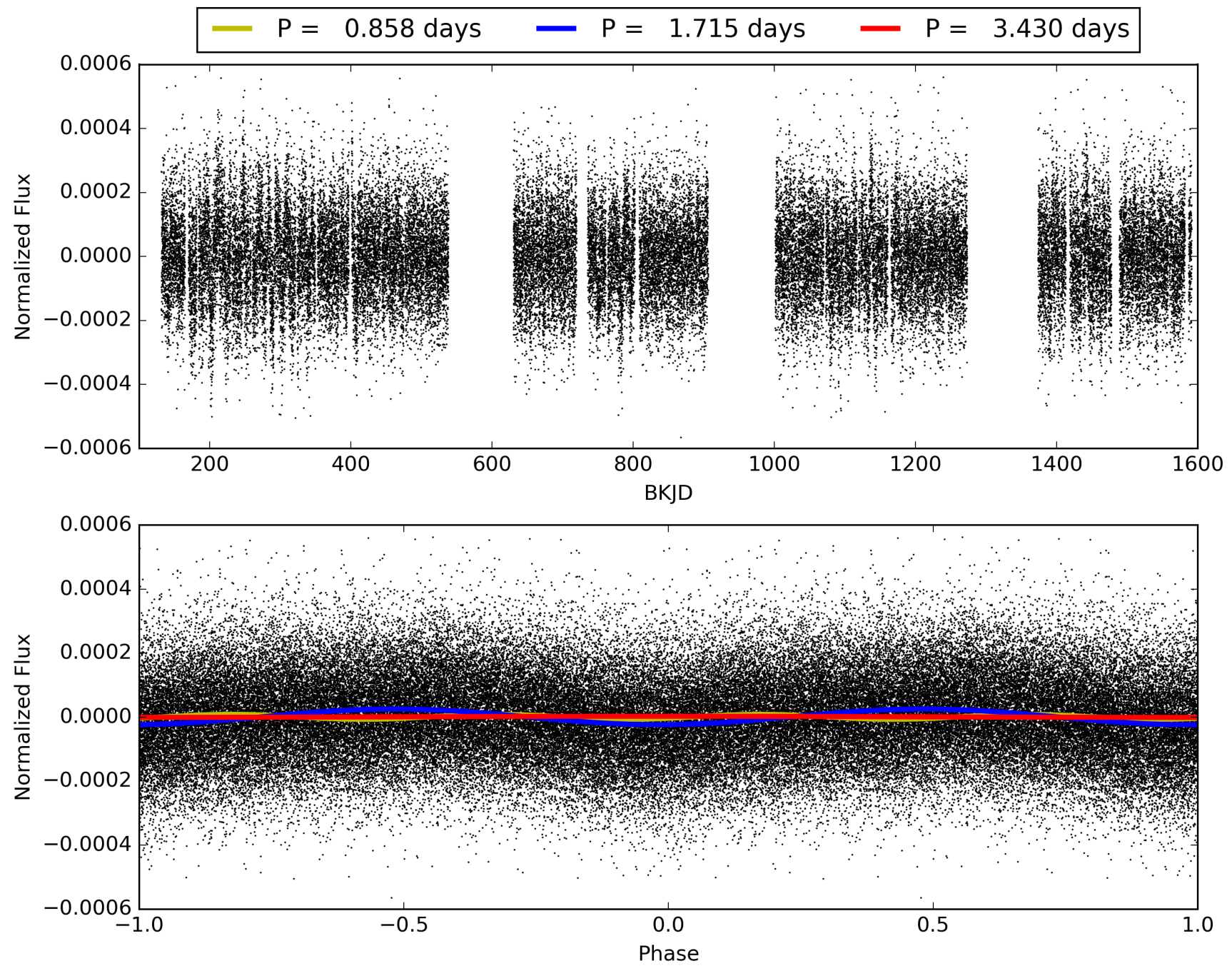
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:09:36 Z

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

TCE 004576280-01, PDC Light Curves

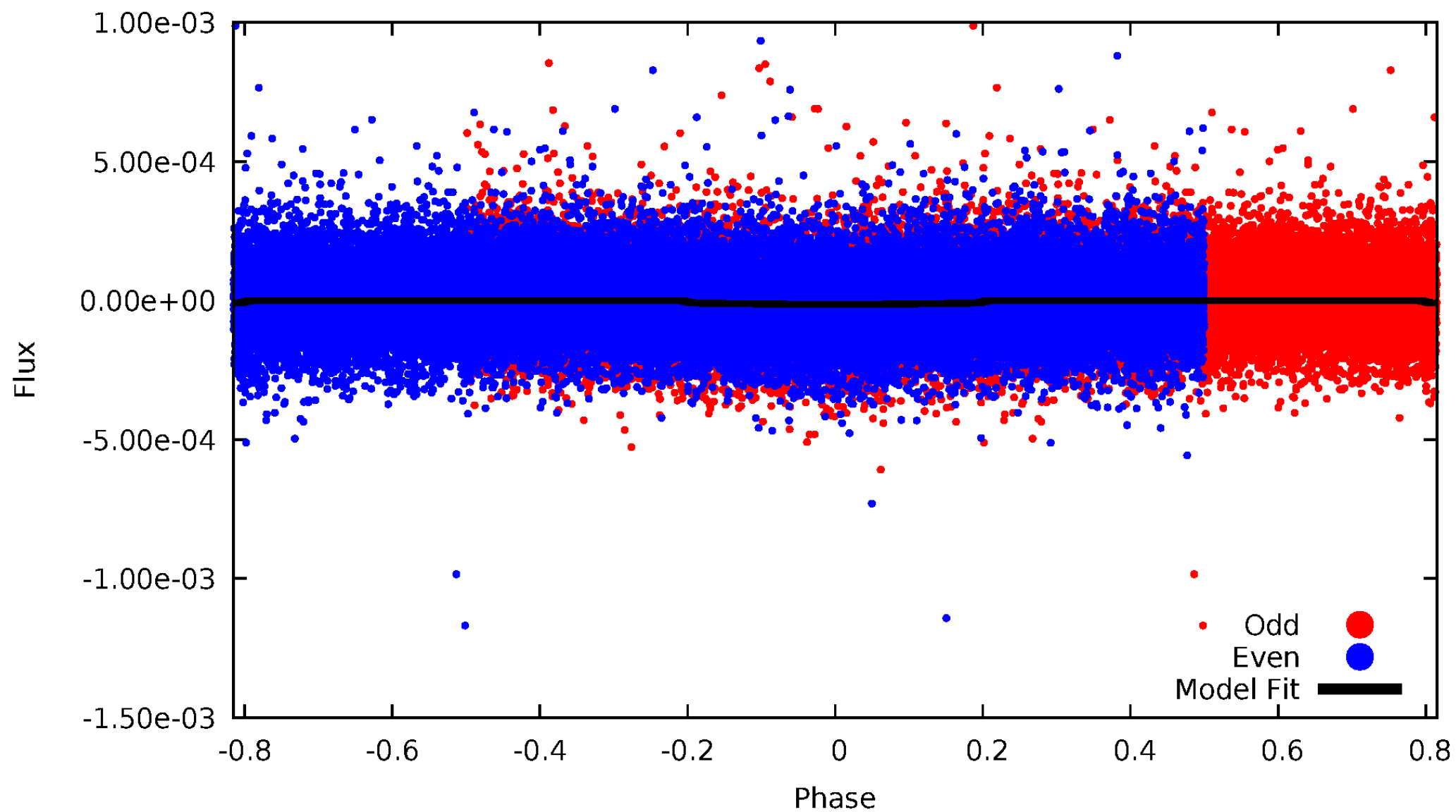


TCE 004576280-01



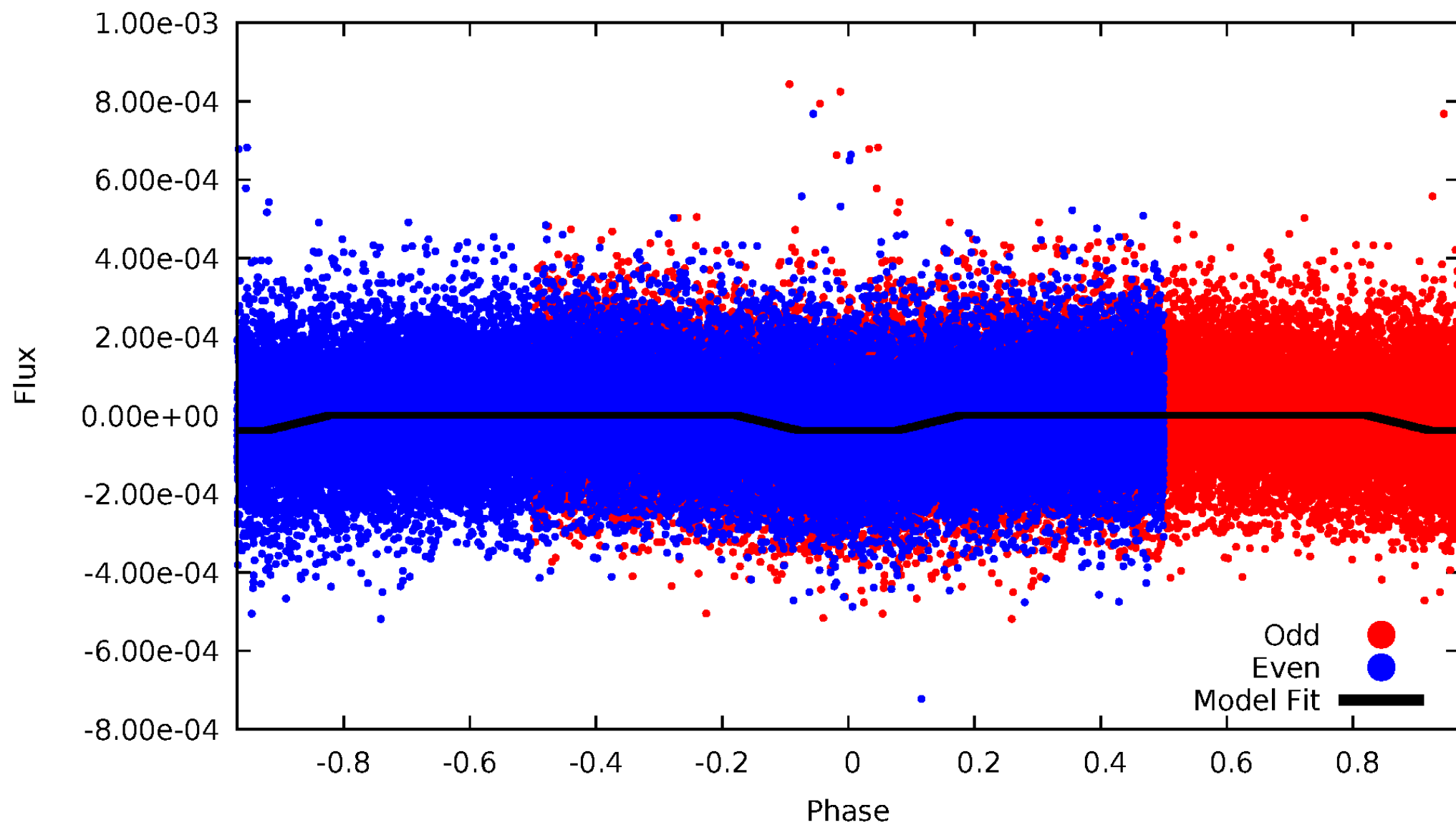
DV Odd/Even

TCE 004576280-01



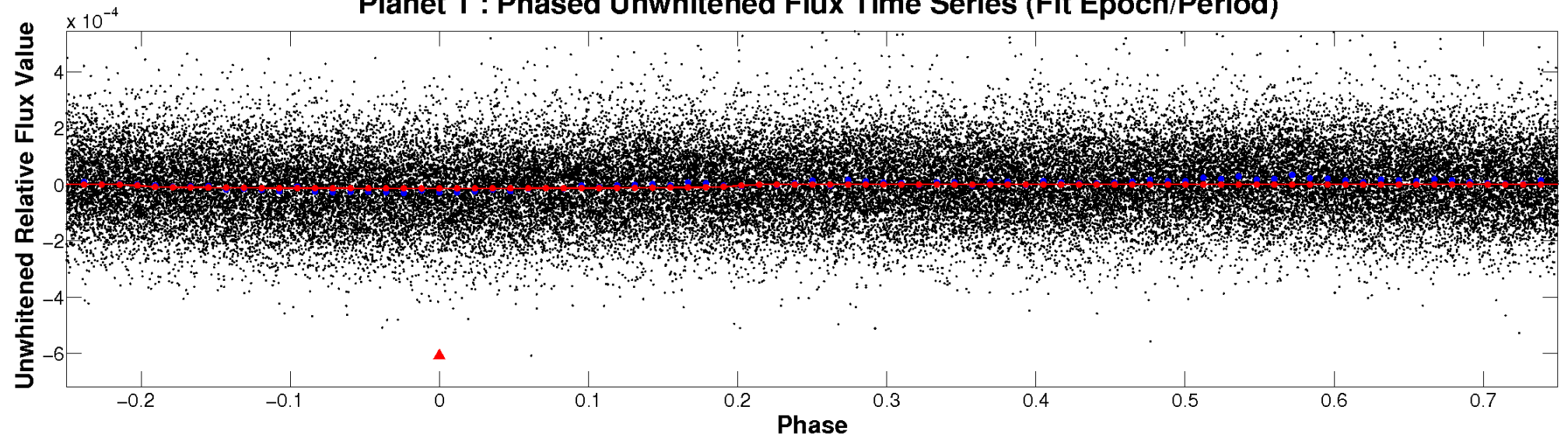
ALT Odd/Even

TCE 004576280-01

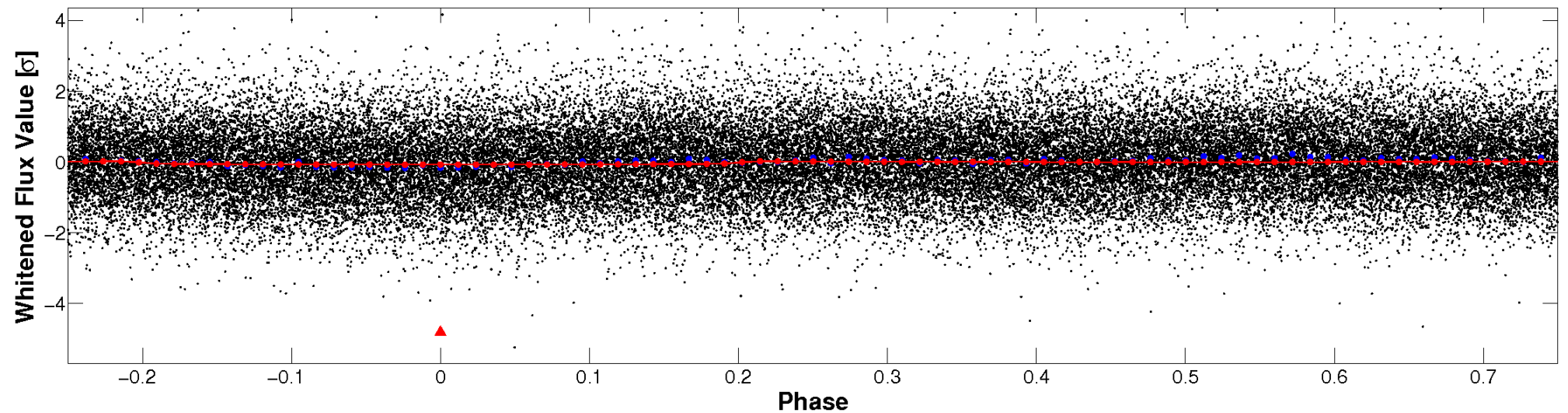


Non-Whitened Vs. Whitened Light Curve

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

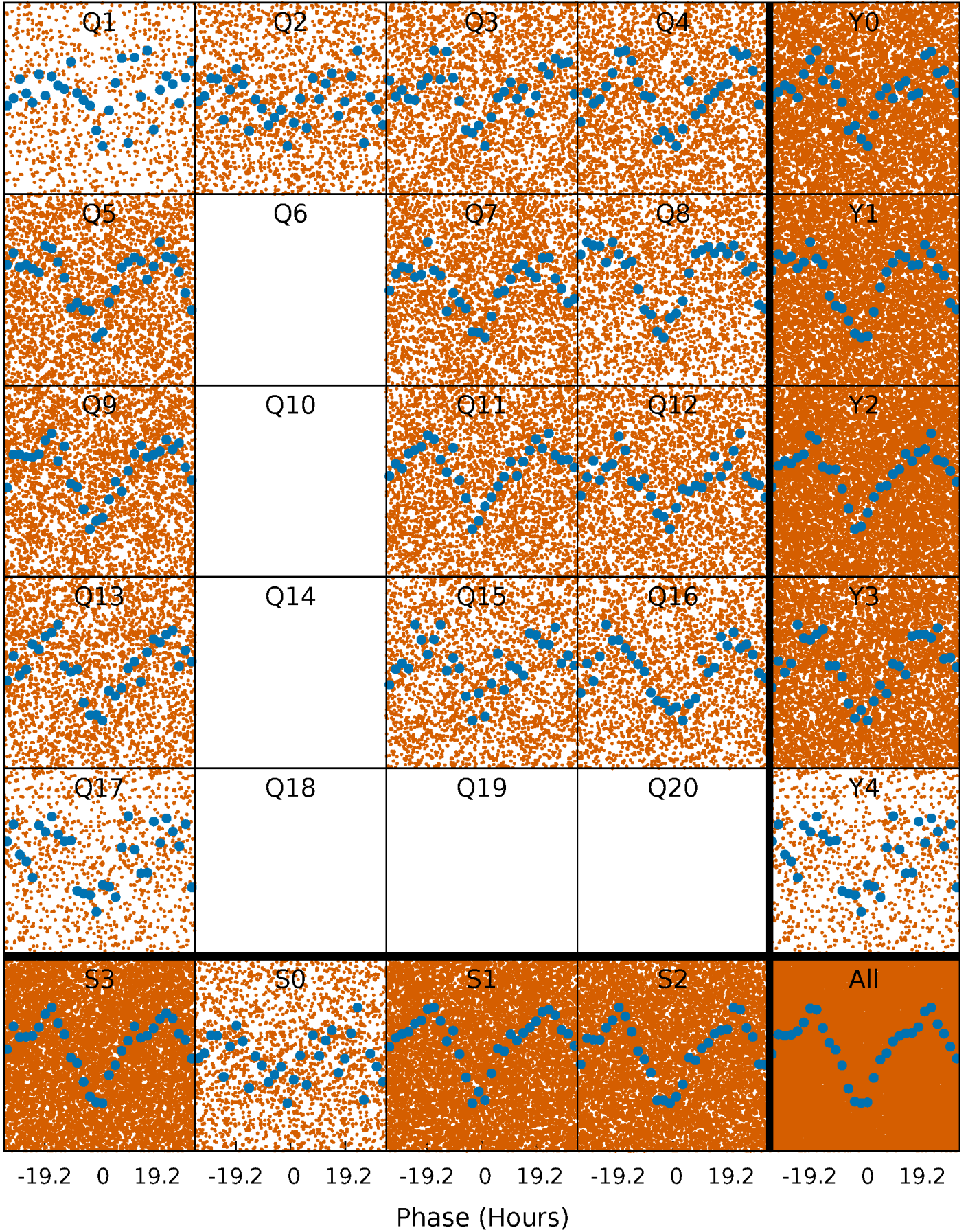


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



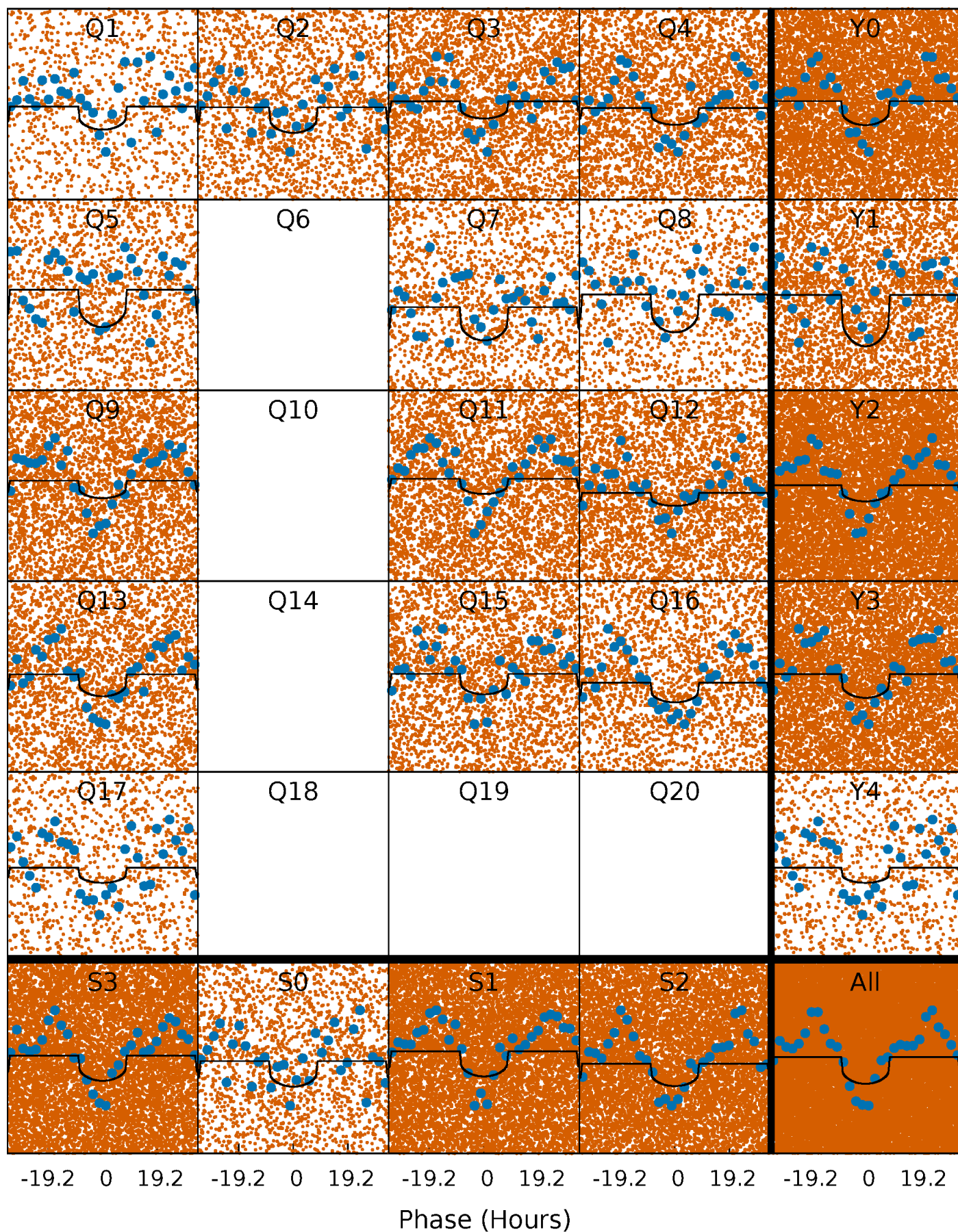
PDC Quarter-Phased Transit Curves

TCE 004576280-01 P= 1.715171 Days $T_0=132.230625$ (BKJD)



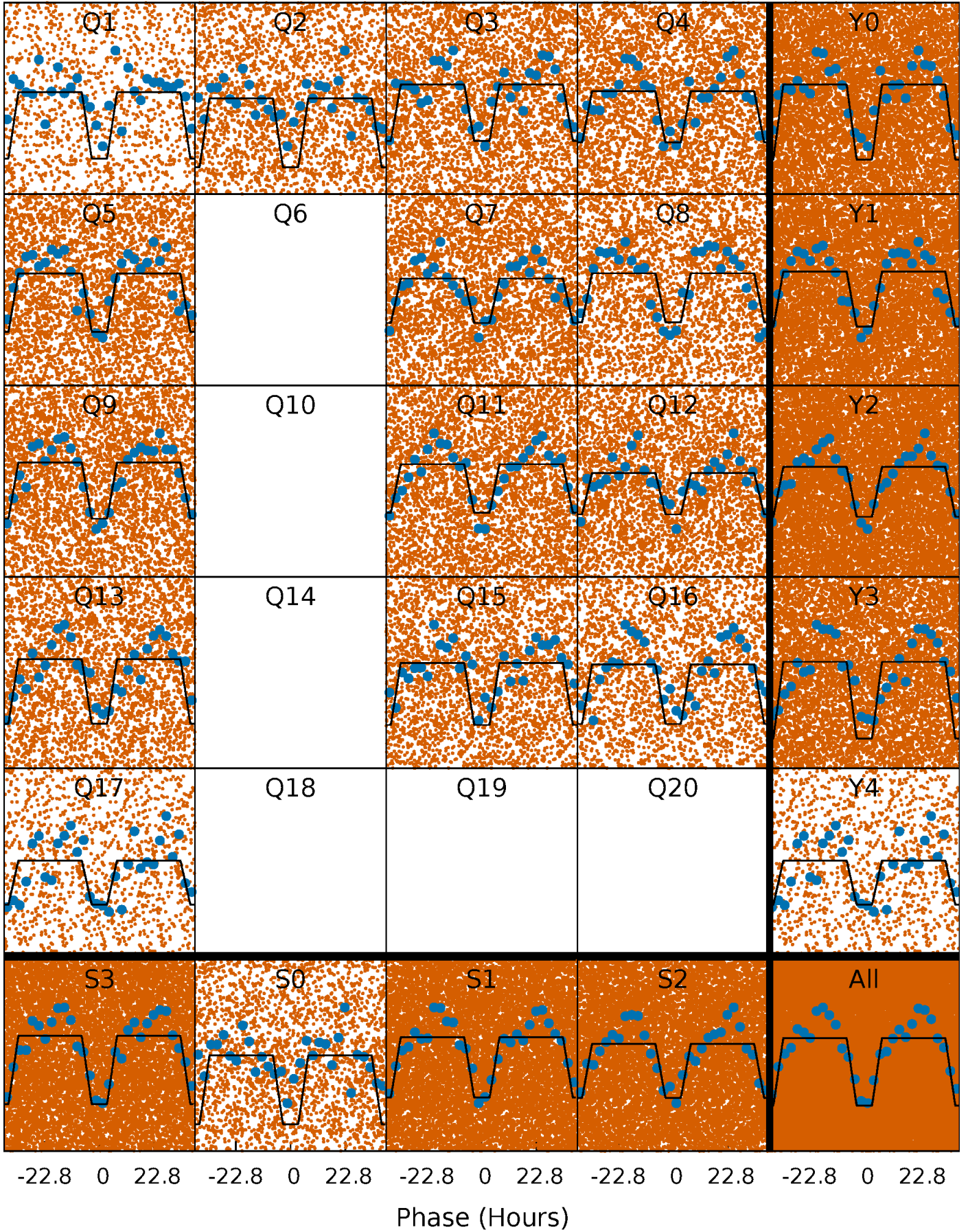
DV Quarter-Phased Transit Curves

TCE 004576280-01 P= 1.715171 Days $T_0=132.230625$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

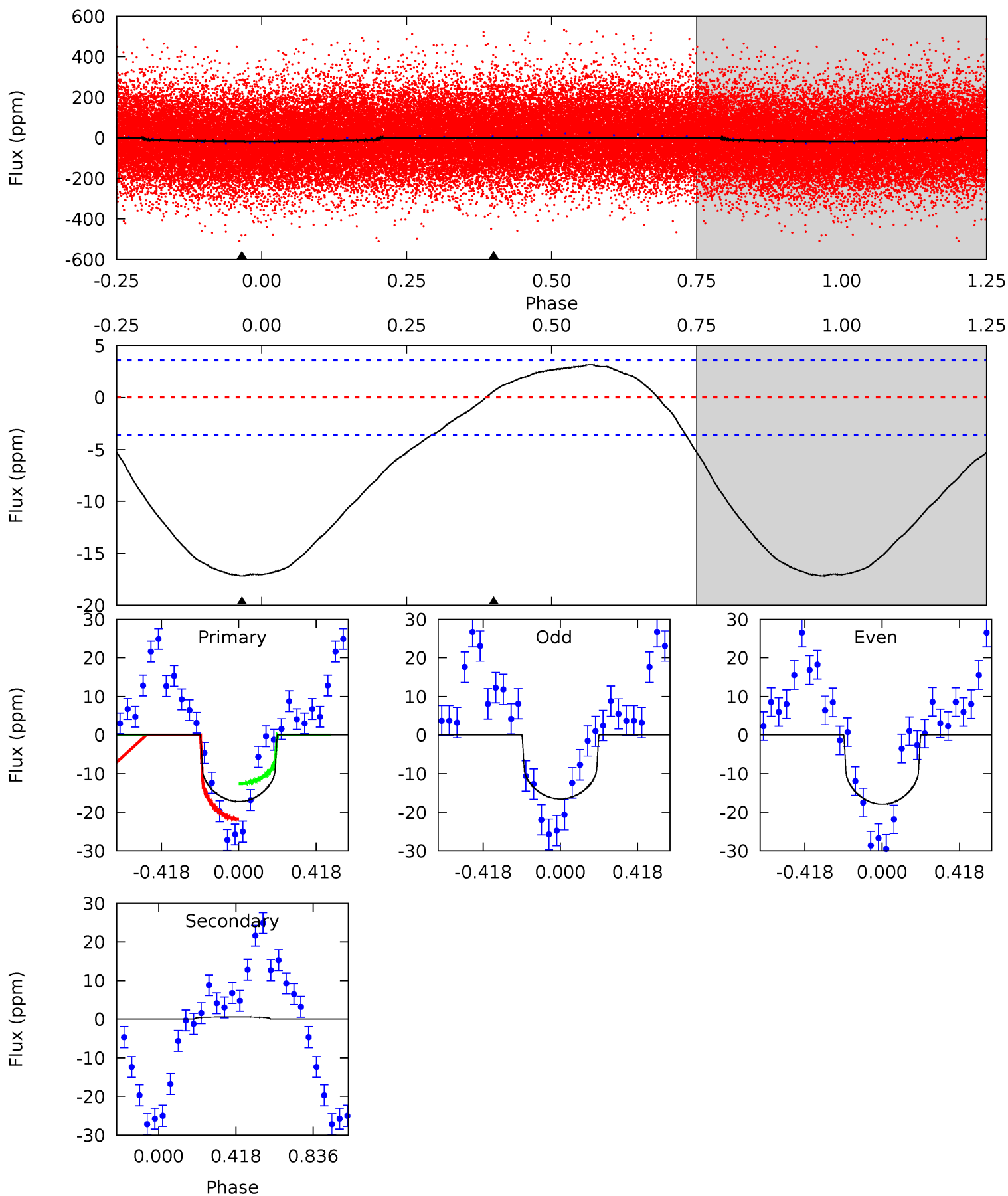
TCE 004576280-01 P= 1.714945 Days $T_0=132.255092$ (BKJD)



DV Model-Shift Uniqueness Test

004576280-01, P = 1.715171 Days, E = 130.515454 Days

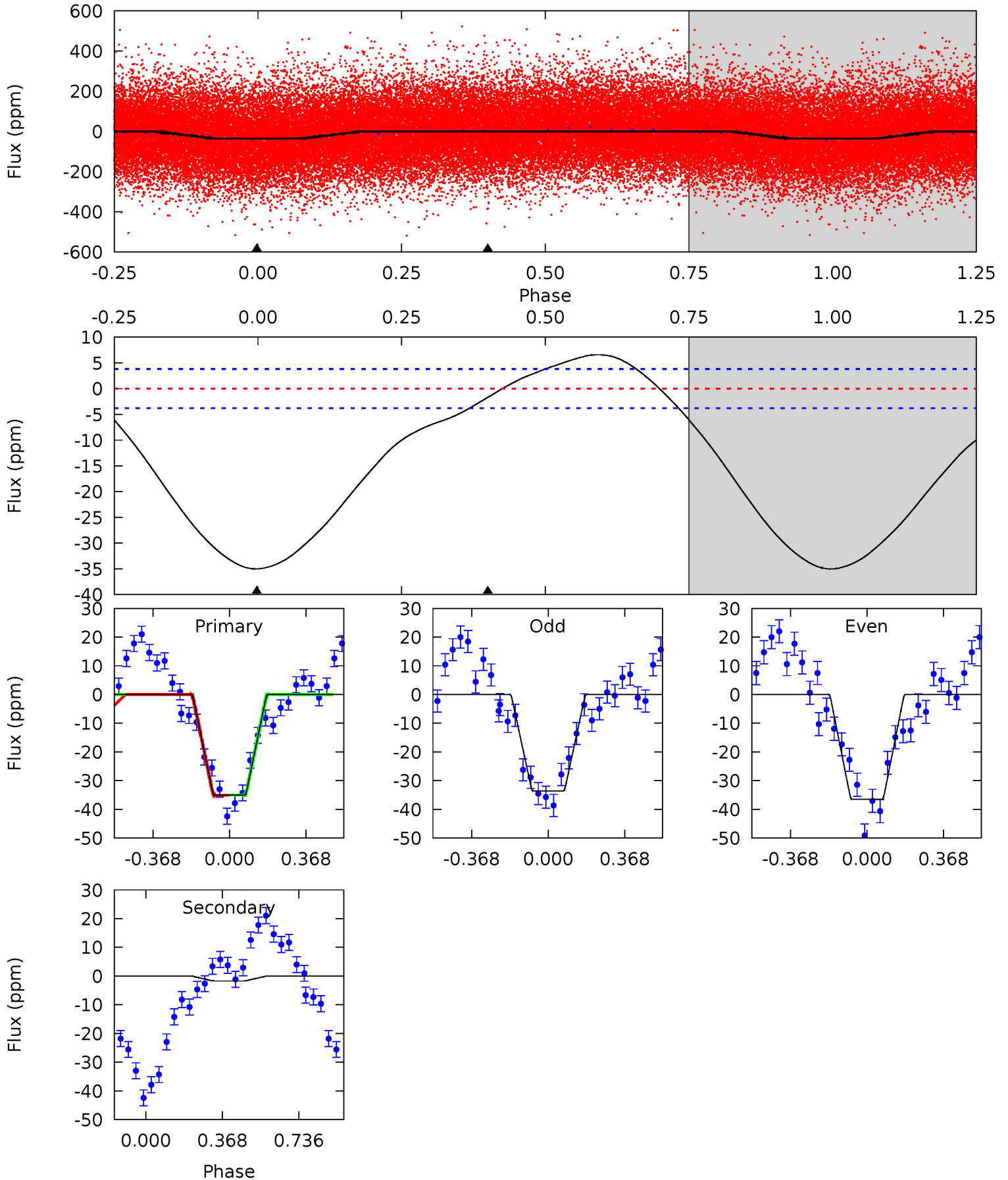
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	-0.71	0	0	4.25	0.81	2.10	20.4	20.4	-0.71	-0.71	0.81	1.12	0.16	5.43



Alt Model-Shift Uniqueness Test

004576280-01, P = 1.714945 Days, E = 130.540147 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.3	1.90	0	0	4.28	0.90	3.46	39.3	39.3	1.90	1.90	1.62	1.03	0.16	0.05



Stellar Parameters For KIC 004576280

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7717^{+213}_{-347}	$3.670^{+0.459}_{-0.081}$	$-0.060^{+0.200}_{-0.350}$	$3.472^{+0.570}_{-1.709}$	$2.059^{+0.279}_{-0.557}$	$0.069^{+0.298}_{-0.019}$
	+3%/-4%	+13%/-2%	+333%/-583%	+16%/-49%	+14%/-27%	+430%/-27%
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 004576280-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 1	$1.24^{+1.02}_{-0.77}$	4496^{+343}_{-555}	-4317^{+758}_{-1239}	$-0.183^{+0.262}_{-1.384}$
Alt.	-2 ± 1	$2.07^{+1.19}_{-0.95}$	4500^{+335}_{-485}	-2922^{+7283}_{-882}	$0.252^{+0.656}_{-0.169}$

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

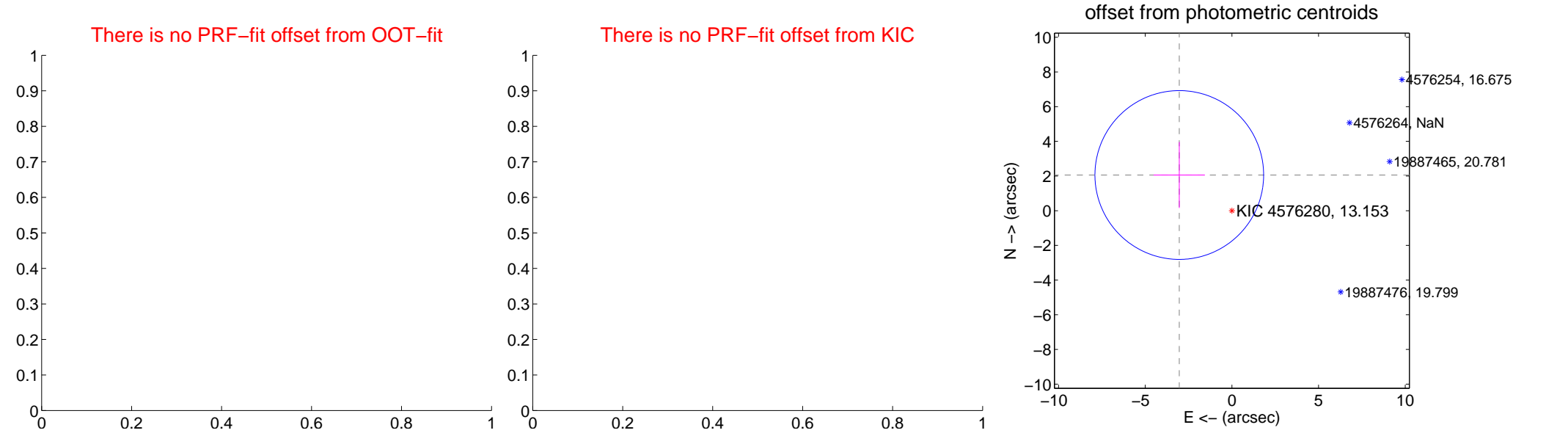
DV Centroid Data

Supplemental centroid analysis for 004576280-01. Kepler magnitude: 13.15. Transit SNR 9.64

There are 0 quarters with good PRF difference image offsets

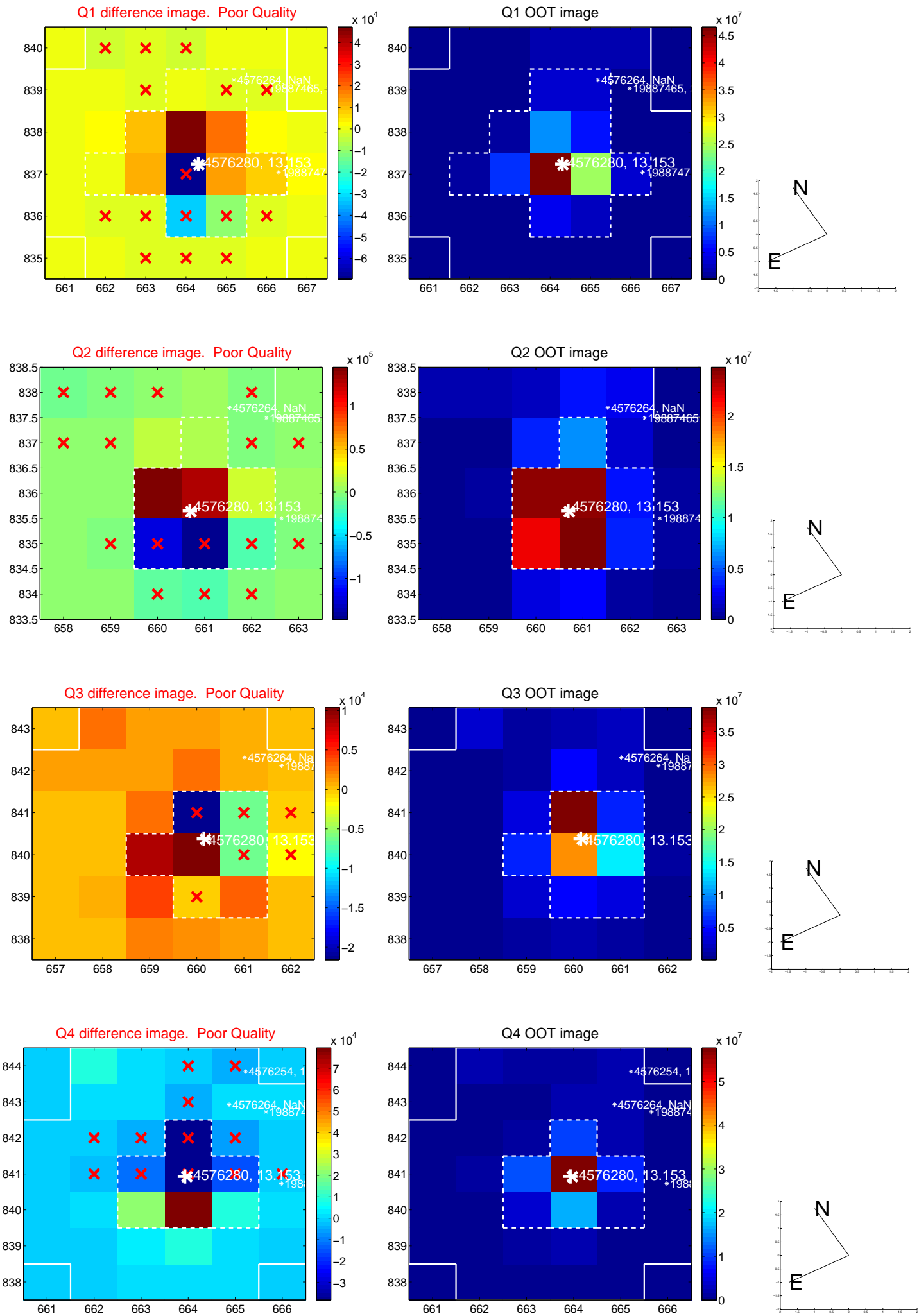
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	3.67 ± 1.62	2.26	3.04 ± 1.48	2.06 ± 1.90

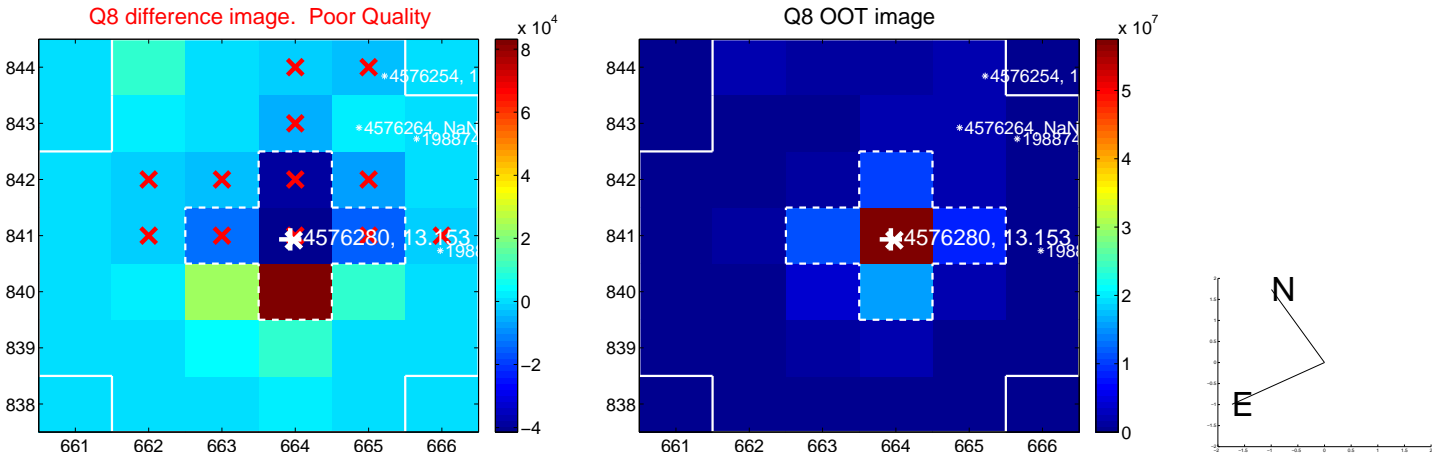
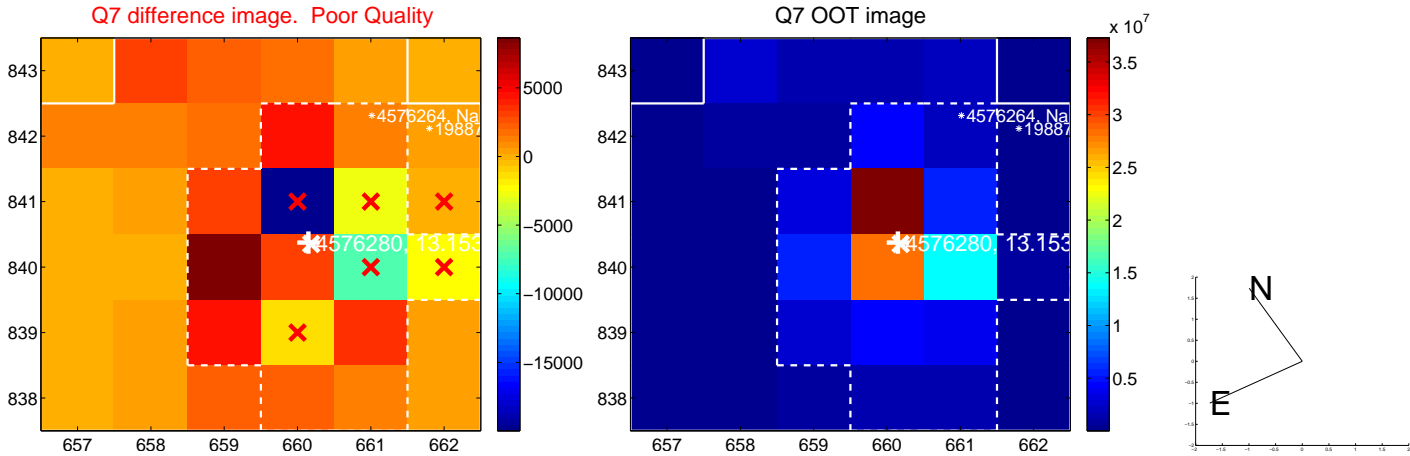
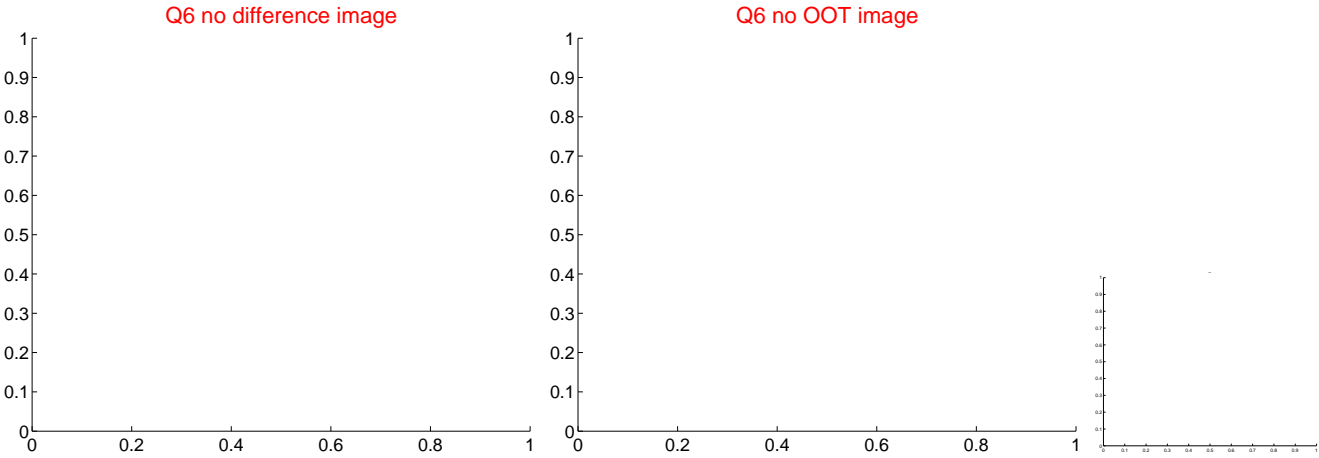
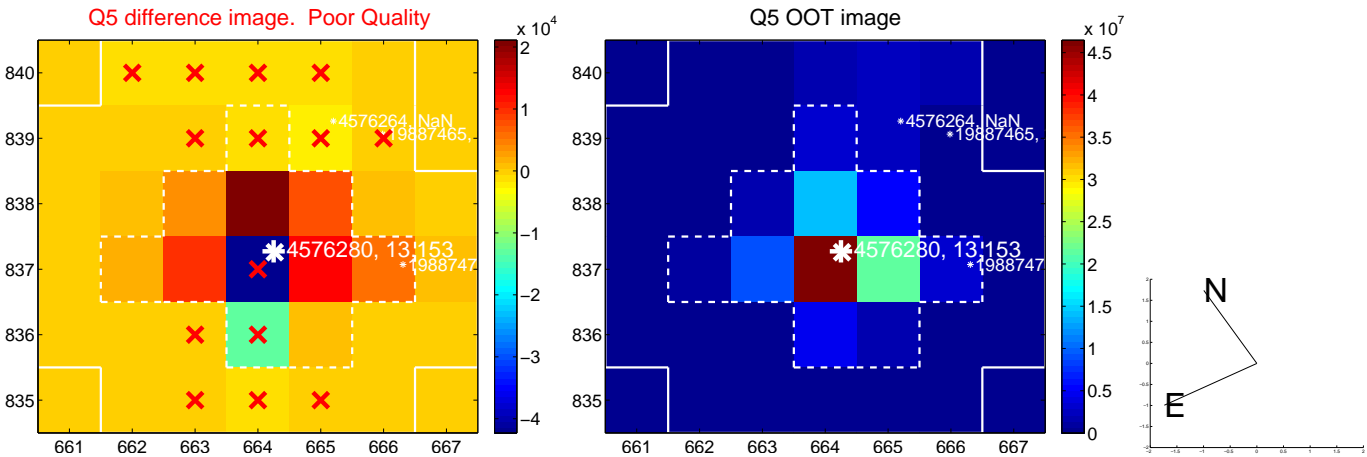


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

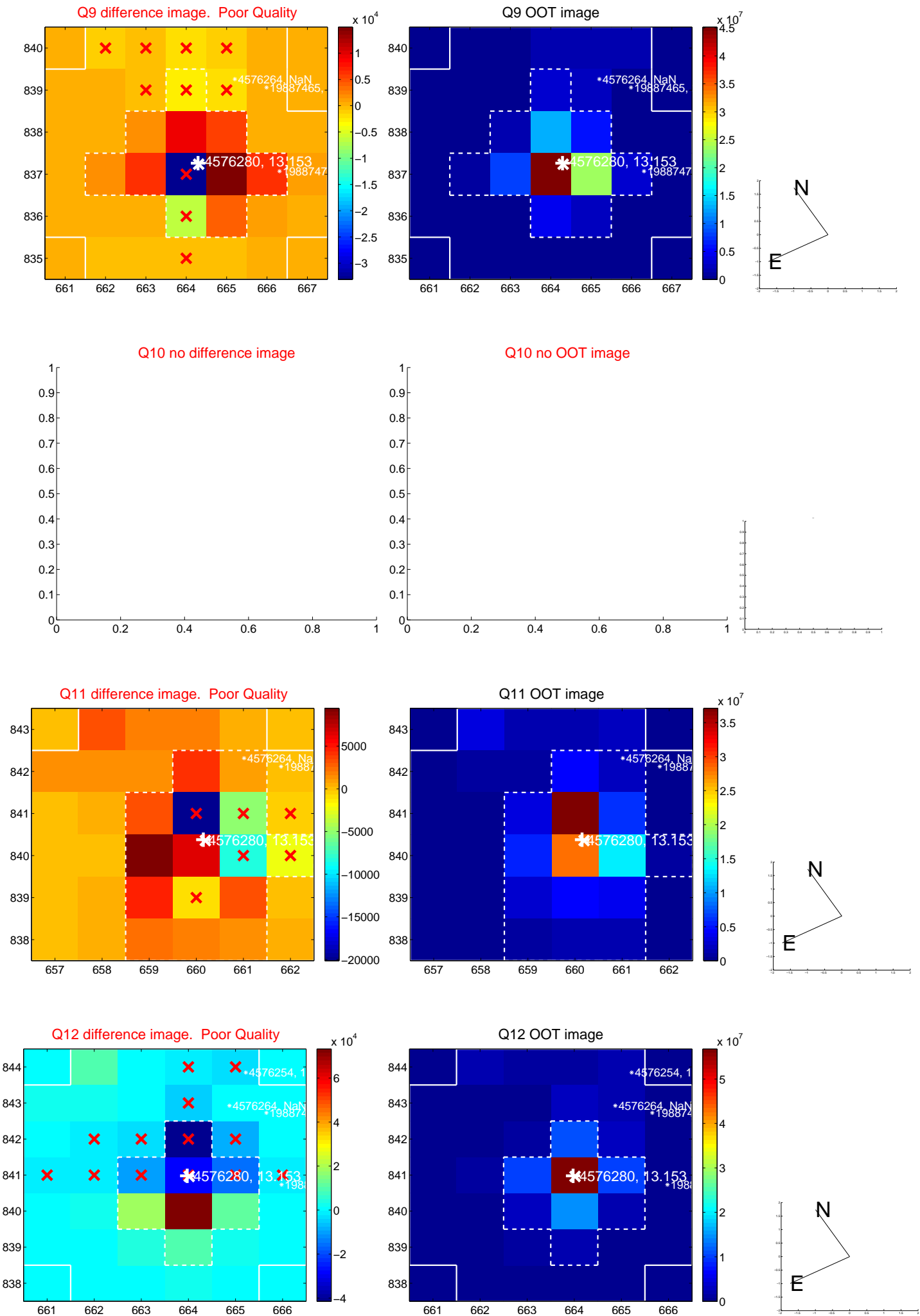
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



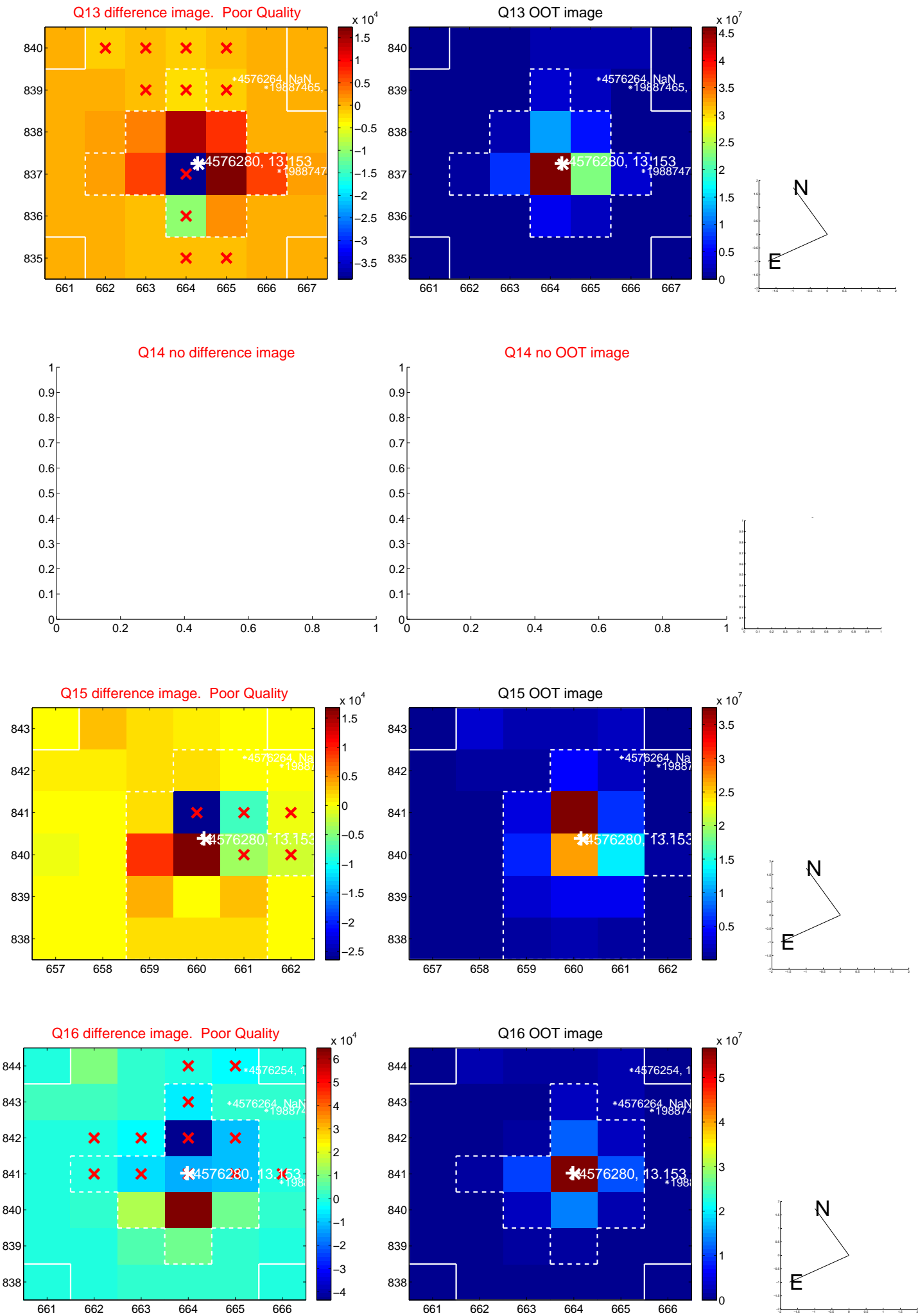
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



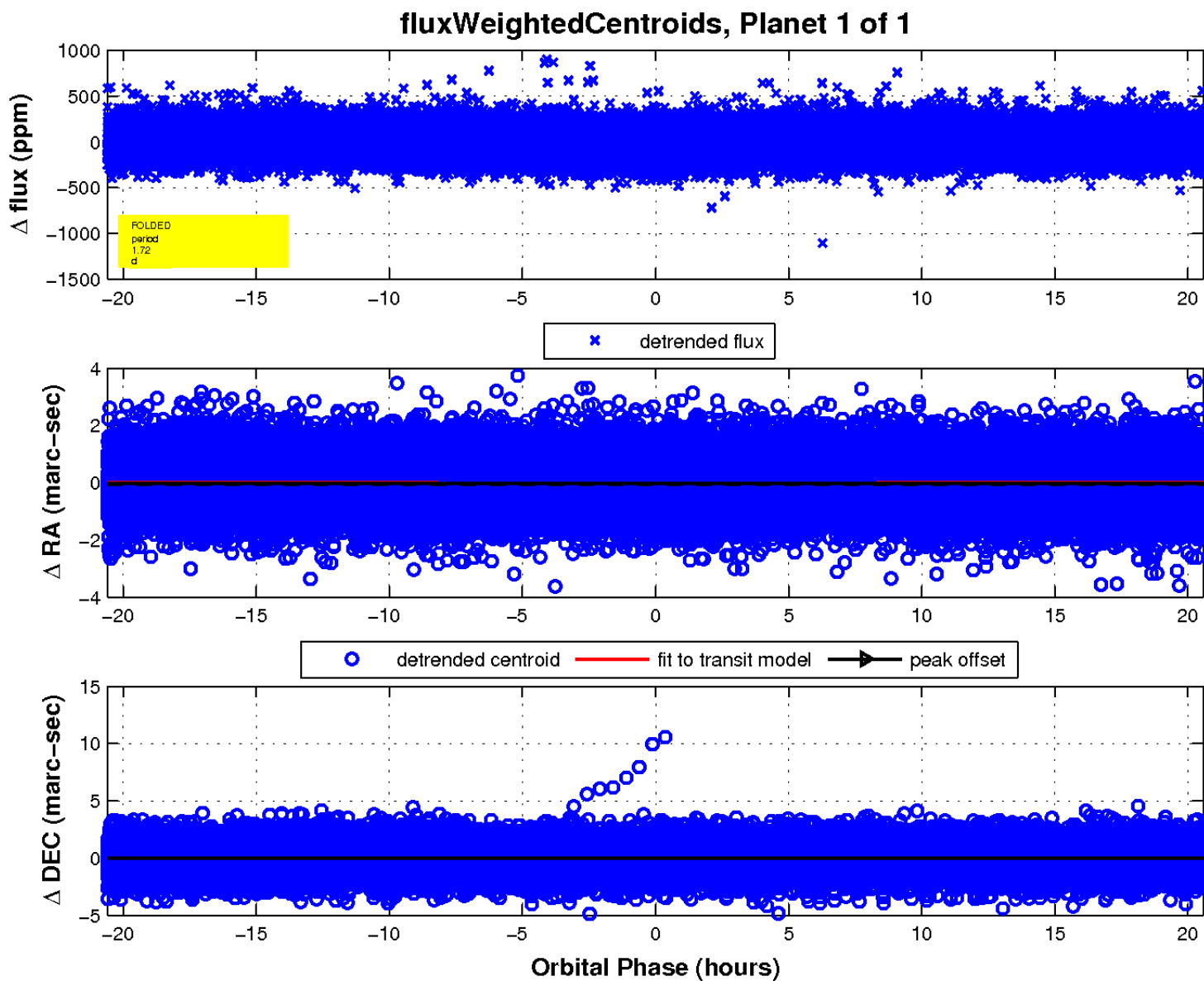
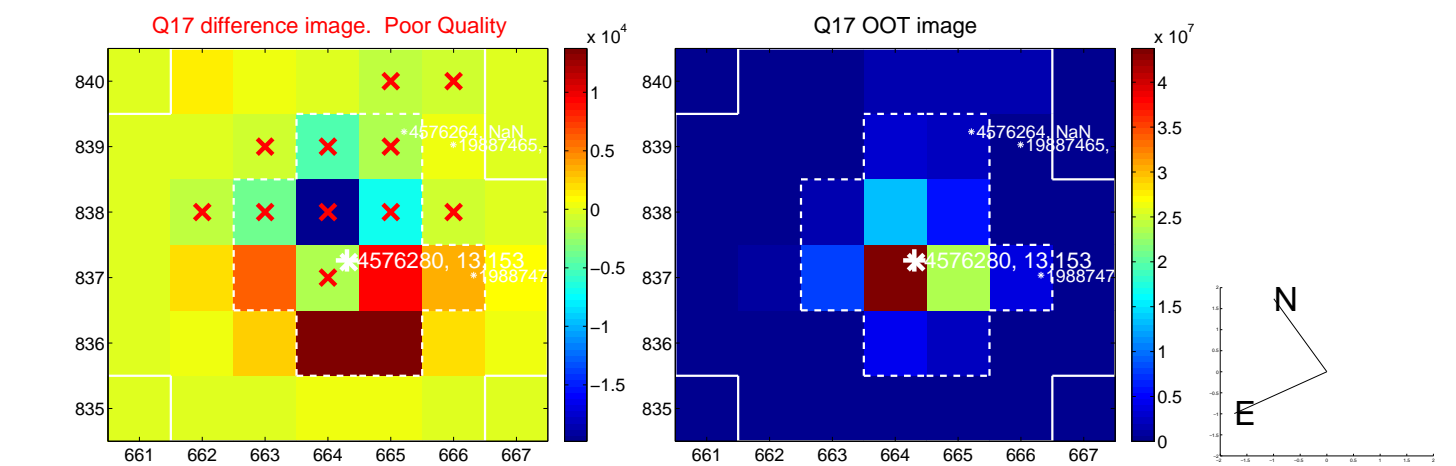
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

