

KIC 010681464

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})
010681464-01	OBS	No	0.687151	132.150273	33.7	2.866	14.8	9.2	2.23	9067	1.49	77115.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010681464-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_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.

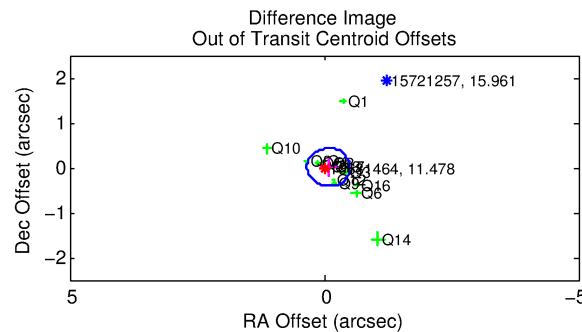
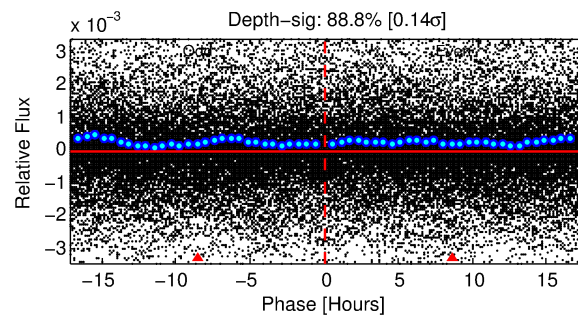
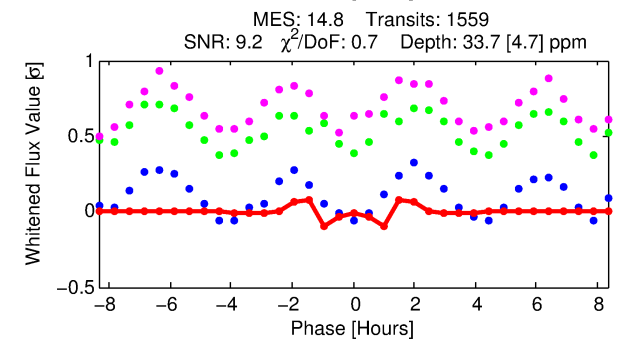
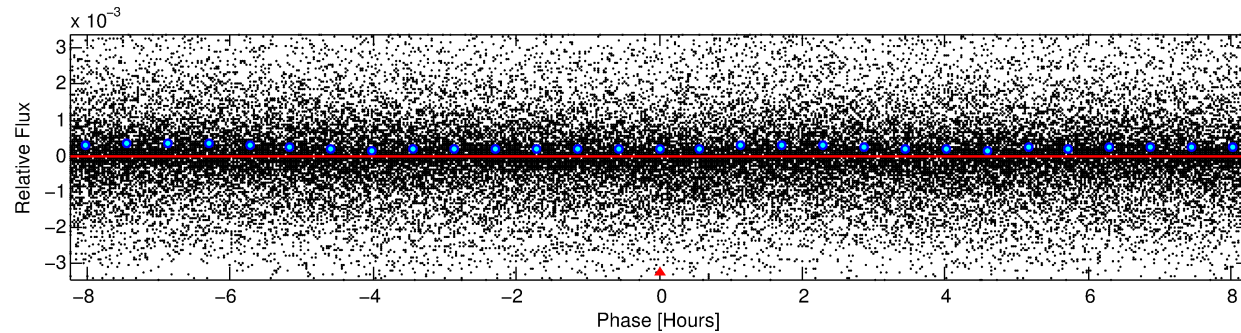
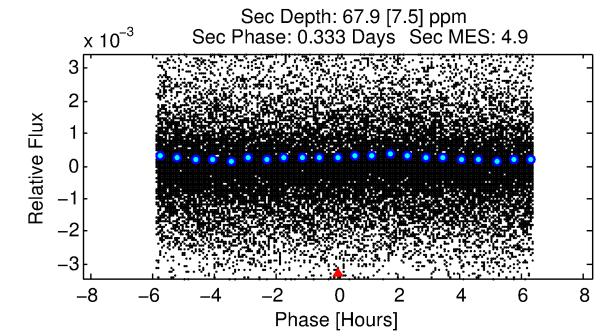
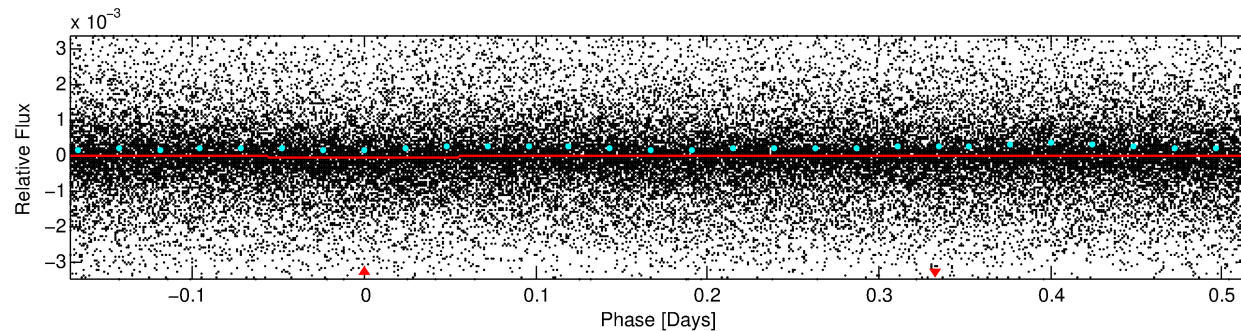
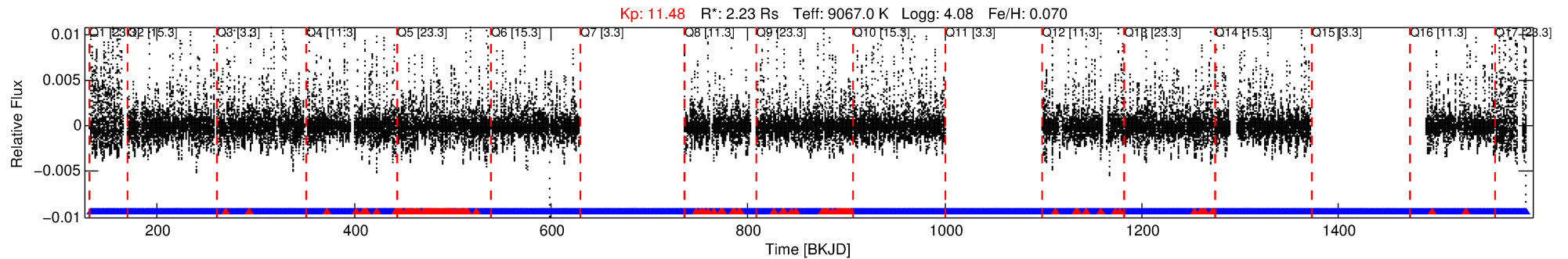
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010681464-01

No Significant Match Found

DV One-Page Summary

KIC: 10681464 Candidate: 1 of 1 Period: 0.687 d



DV Fit Results:

Period = 0.68715 [0.00001] d
Epoch = 132.1503 [0.0011] BKJD
Rp/R* = 0.0061 [0.0008]
a/R* = 1.25 [0.37]
b = 0.90 [0.18]
Seff = 77115.52 [29136.47]
Teq = 4249 [401] K
Rp = 1.49 [0.49] Re
a = 0.0198 [0.0046] AU
Ag = 6.55 [2.81] [1.98σ]
Teff = 10511 [932] K [6.17σ]

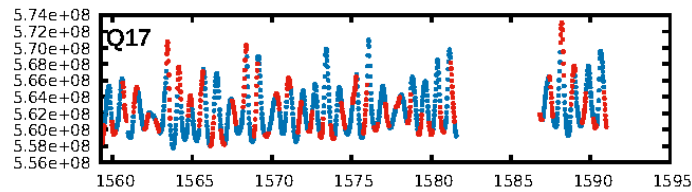
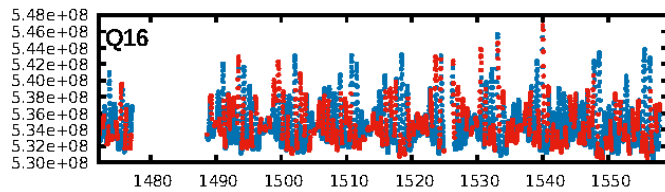
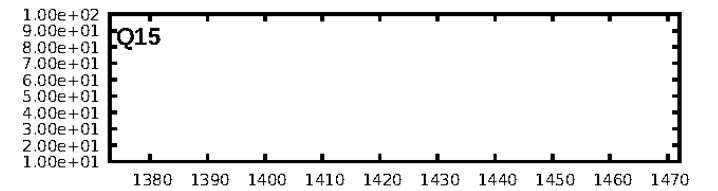
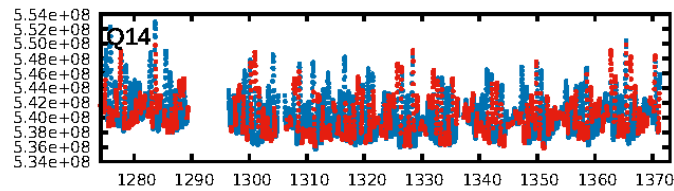
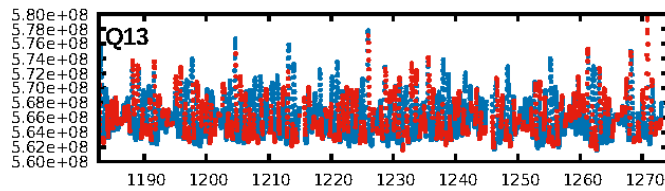
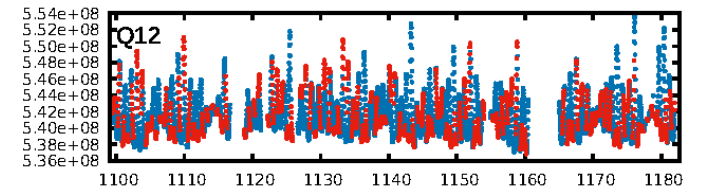
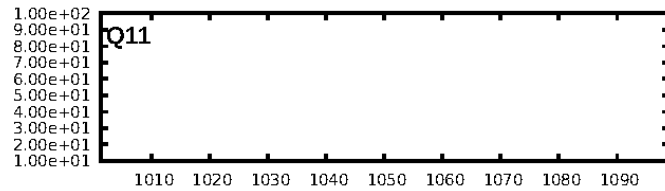
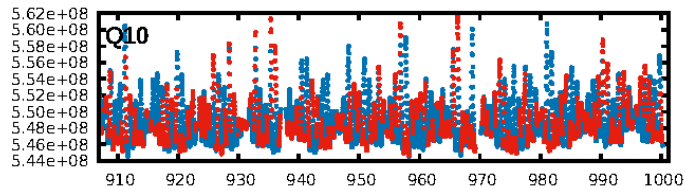
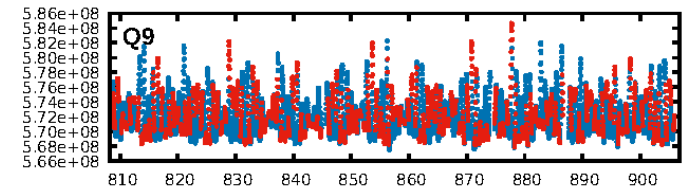
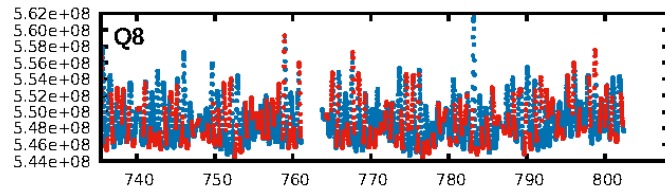
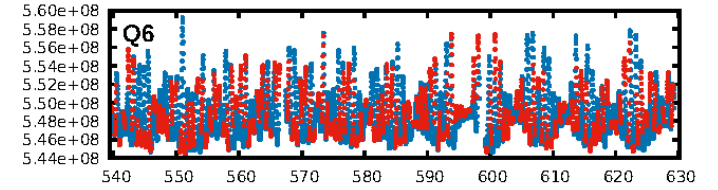
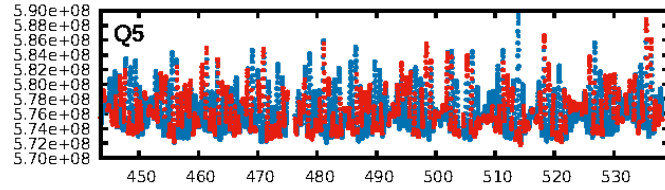
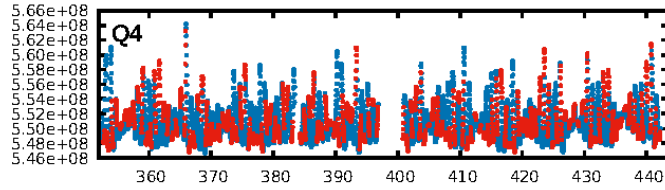
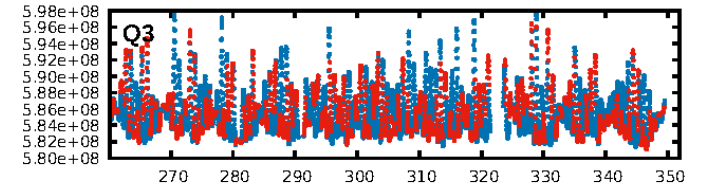
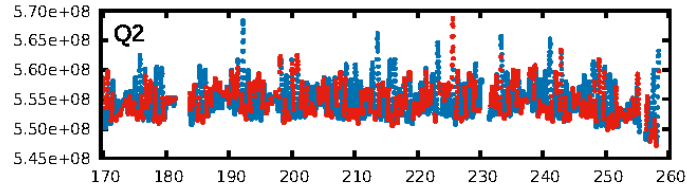
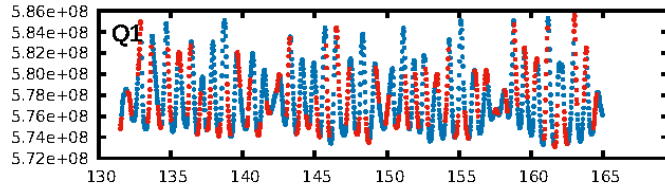
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.57e-43
RollingBand-fgt: 0.91 [1344/1470]
GhostDiagnostic-chr: -1.279
Centroid-sig: 59.6%
Centroid-so: 0.436 arcsec [1.28σ]
OotOffset-rm: 0.085 arcsec [0.60σ]
KicOffset-rm: 0.149 arcsec [0.76σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [14/14]

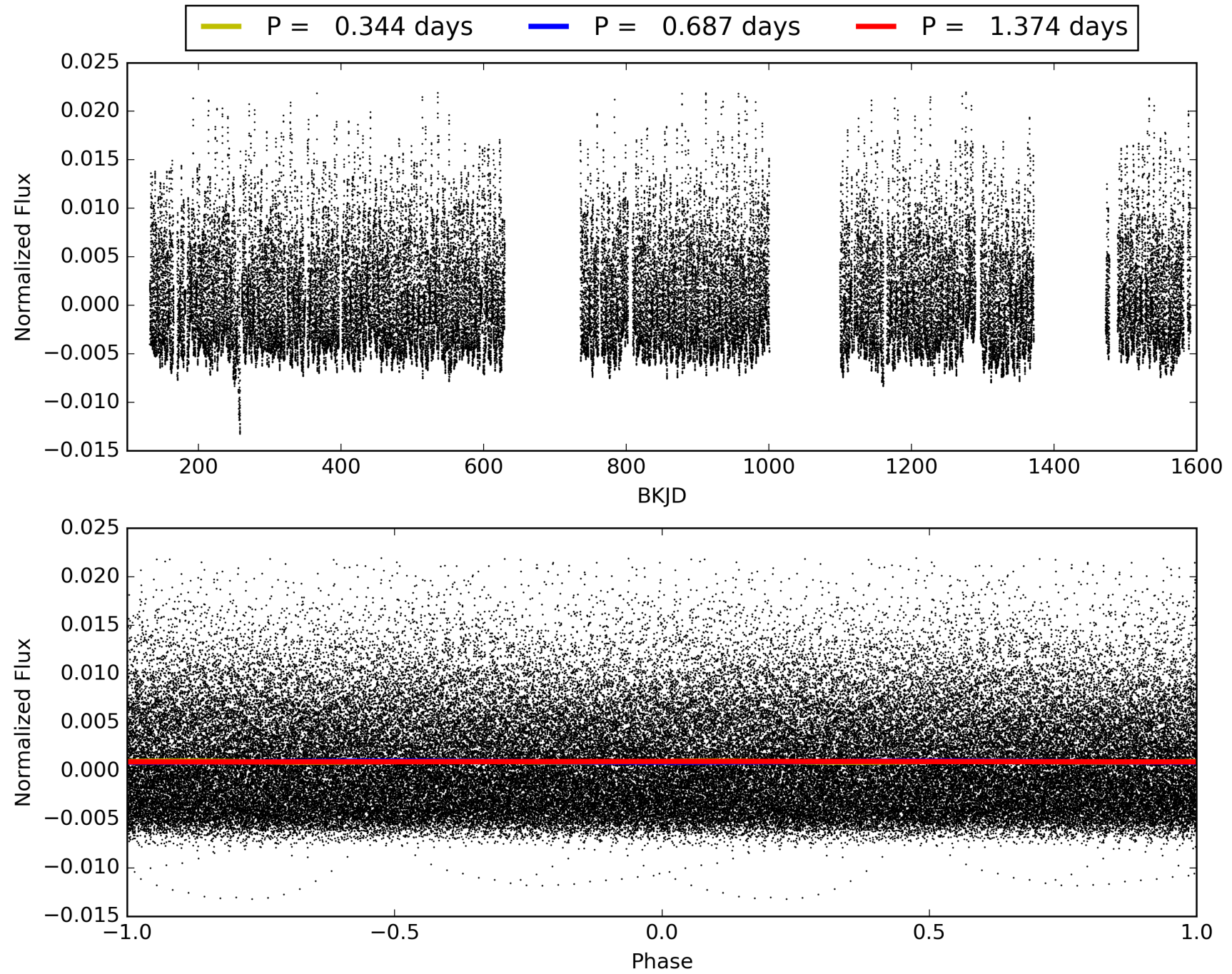
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:06:01 Z

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

TCE 010681464-01, PDC Light Curves

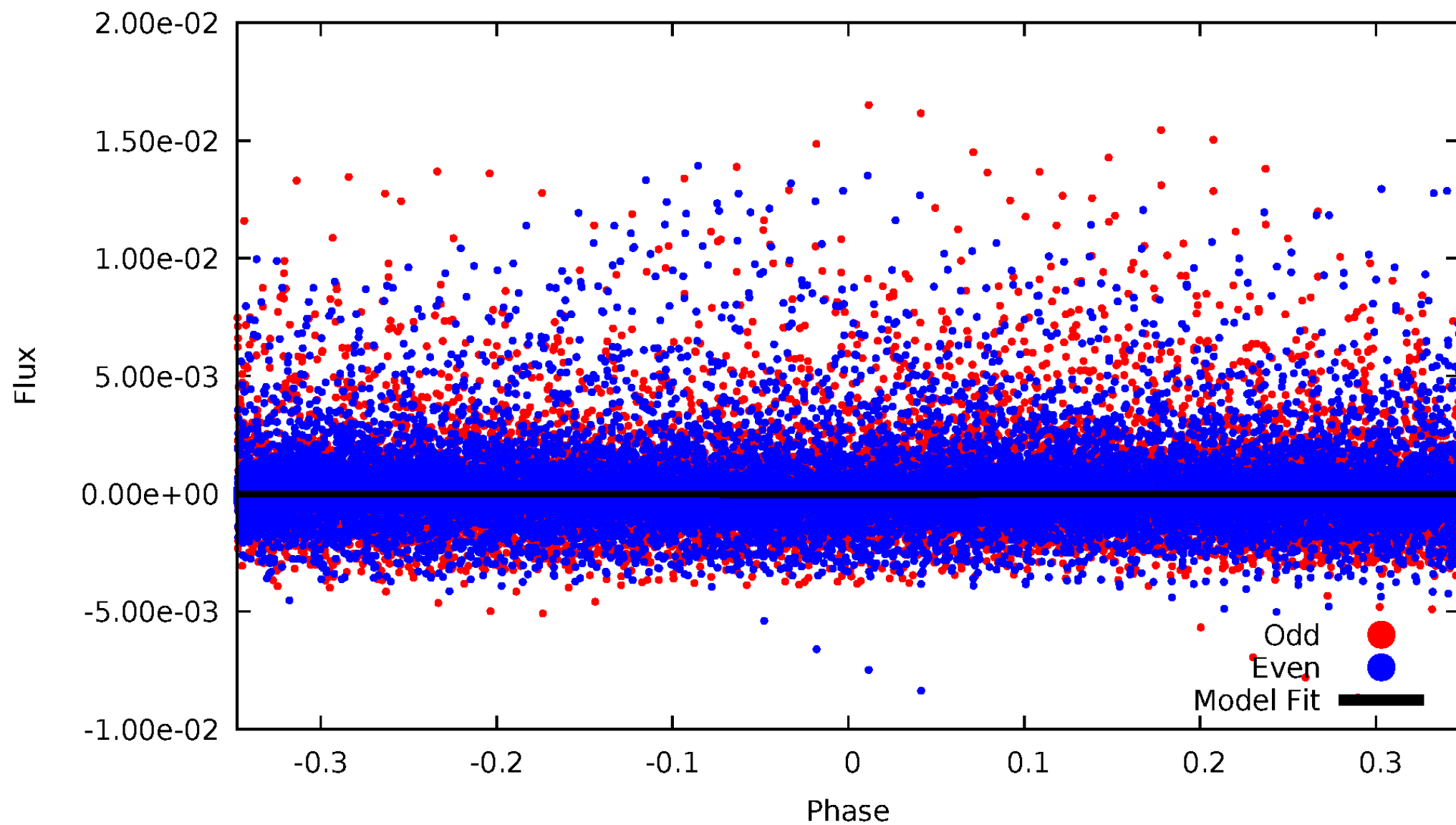


TCE 010681464-01



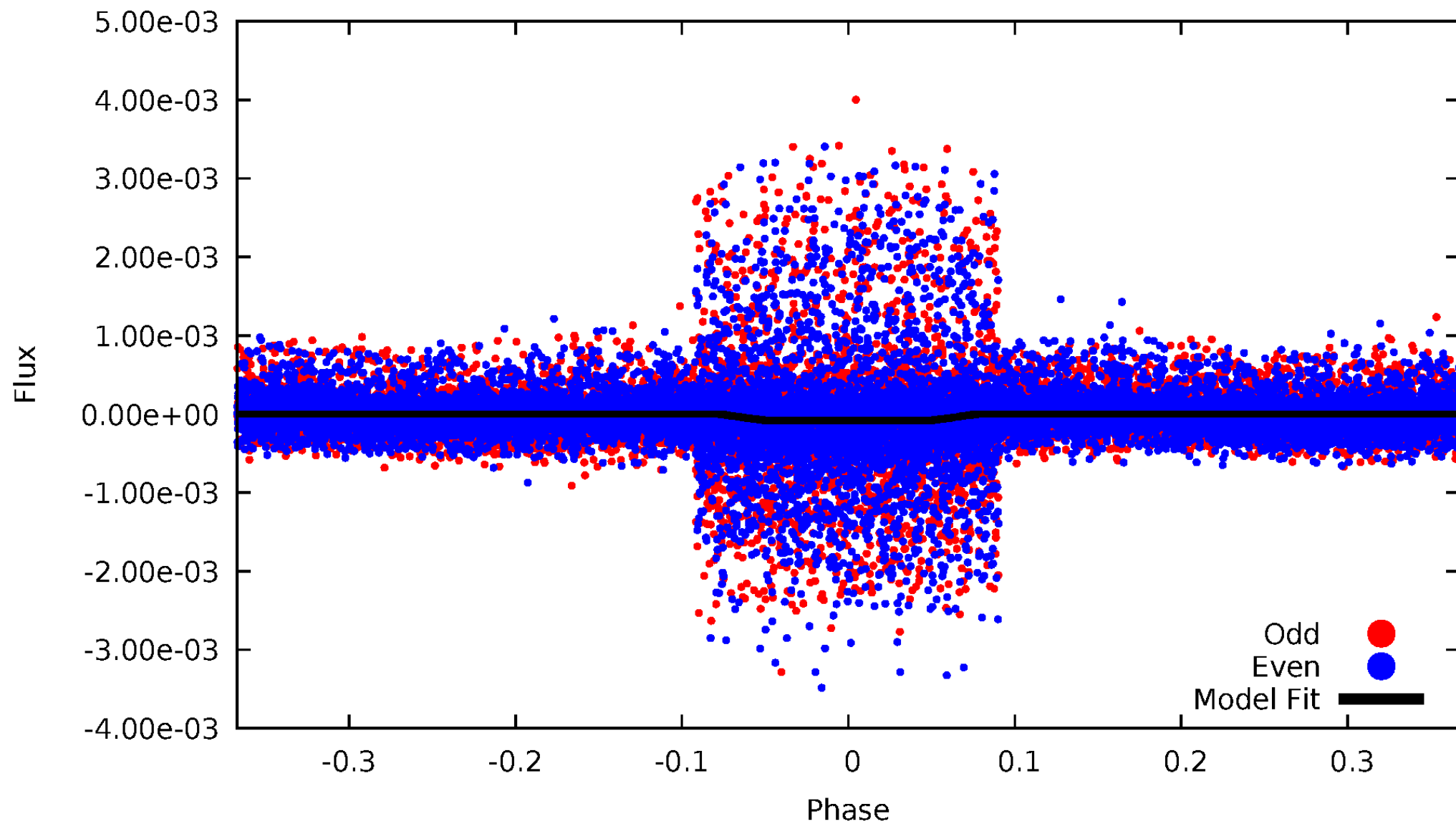
DV Odd/Even

TCE 010681464-01



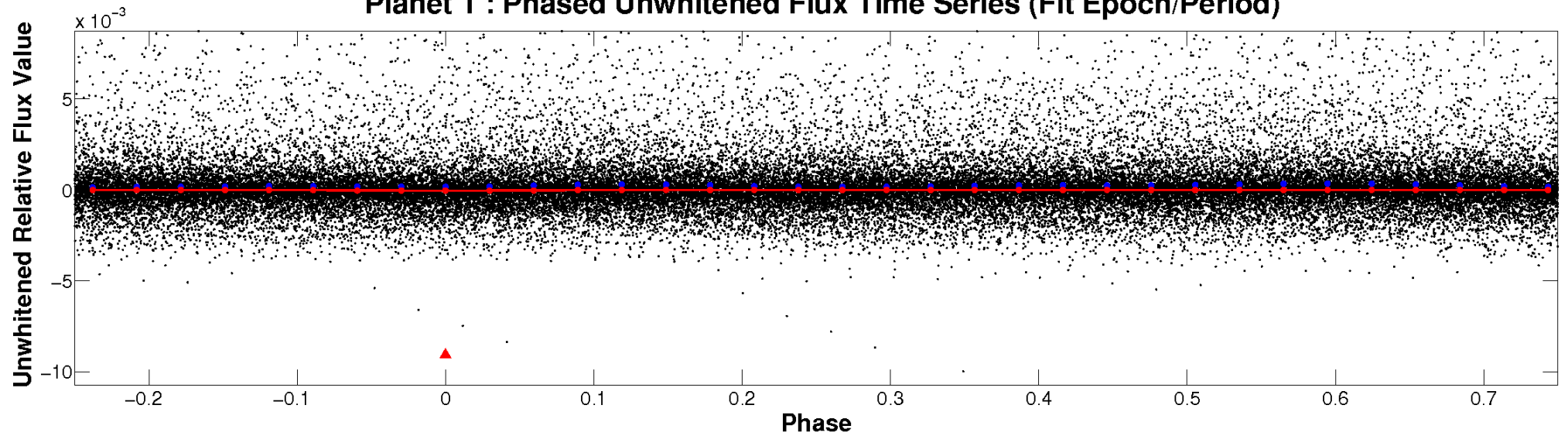
ALT Odd/Even

TCE 010681464-01

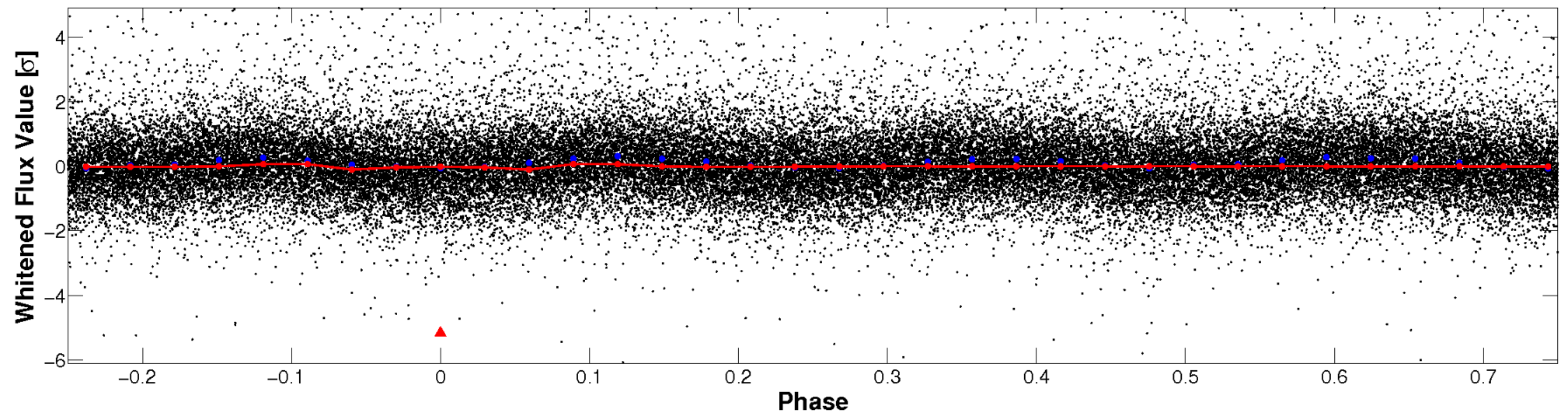


Non-Whitened Vs. Whitened Light Curve

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

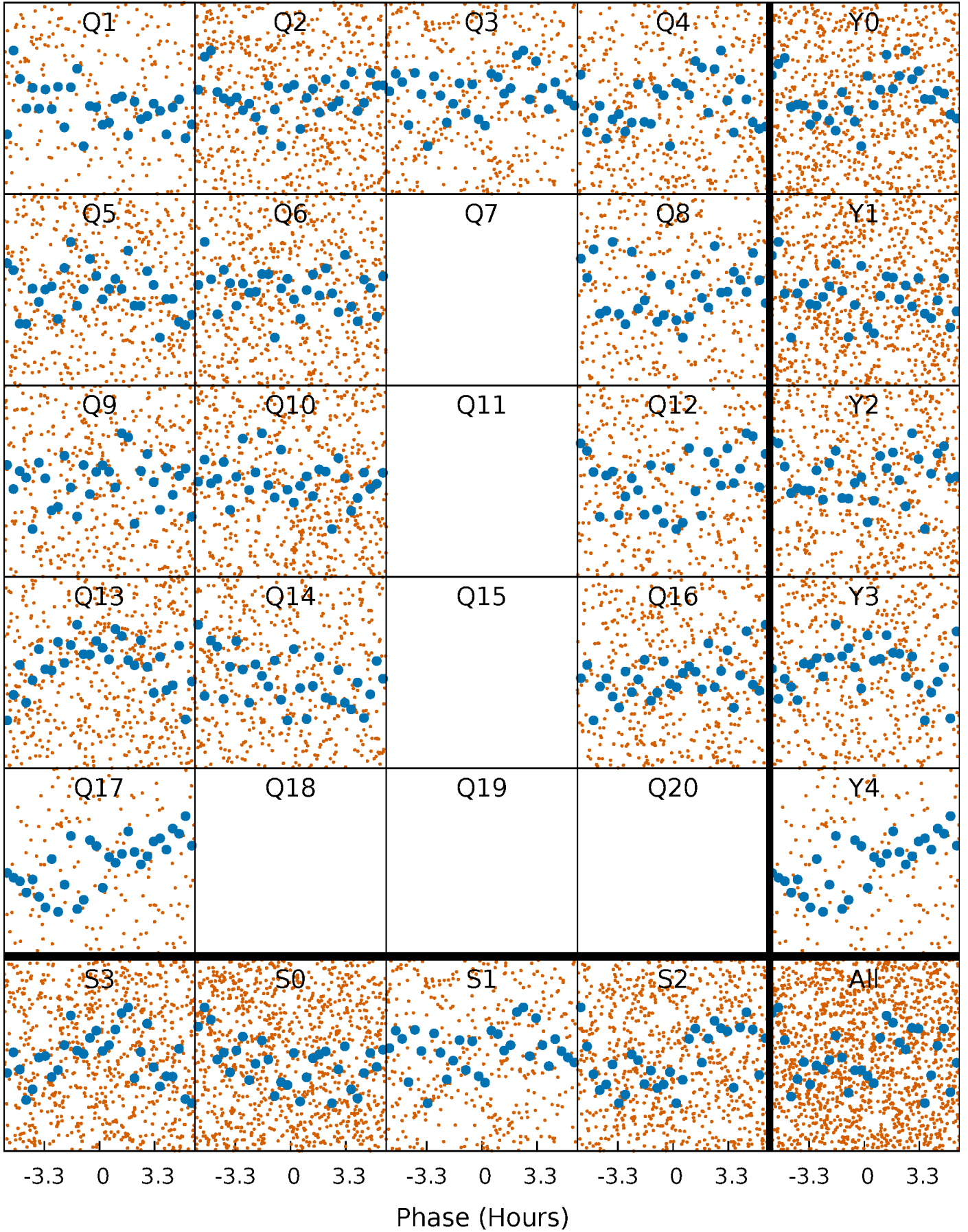


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



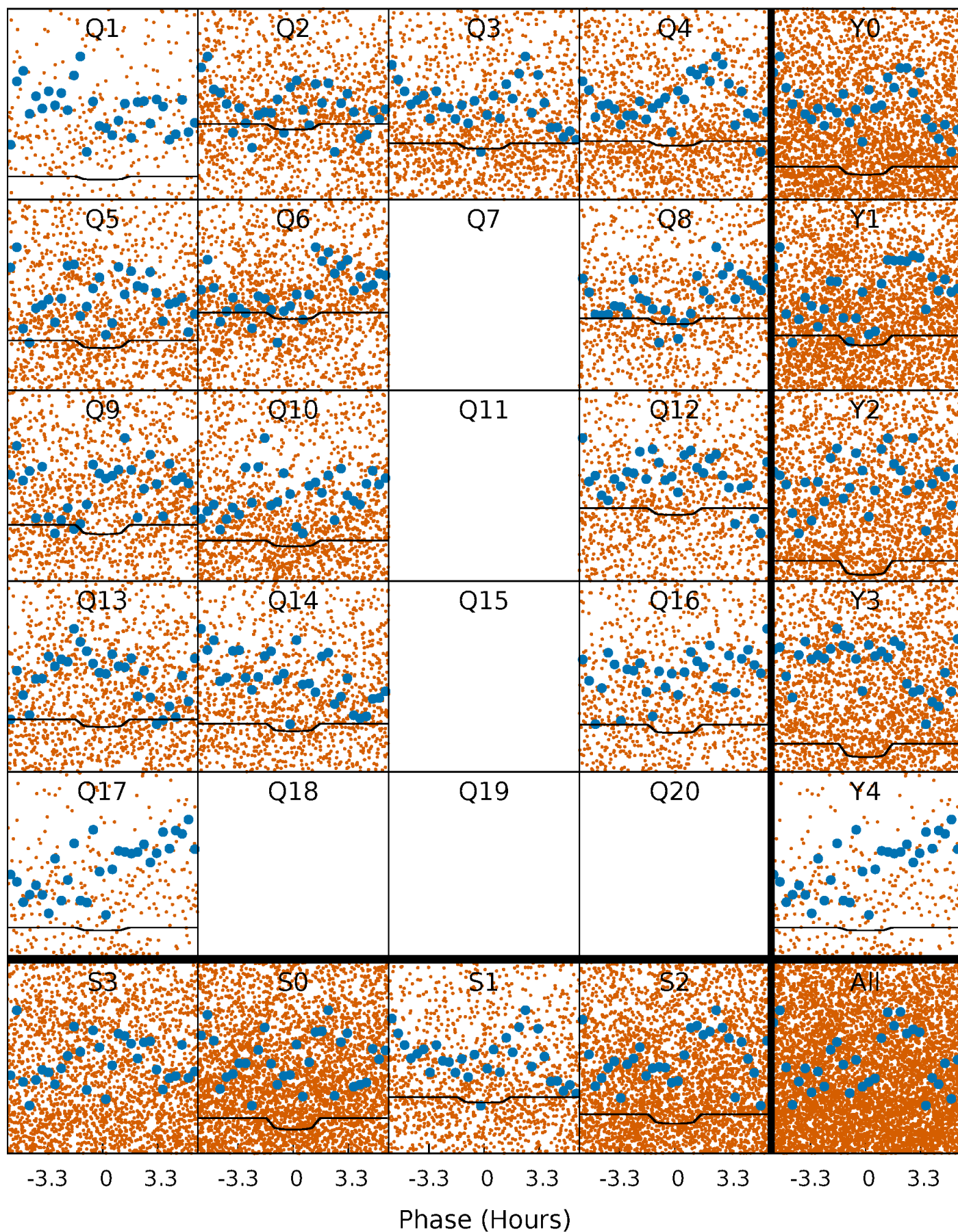
PDC Quarter-Phased Transit Curves

TCE 010681464-01 P= 0.687151 Days $T_0=132.150273$ (BKJD)



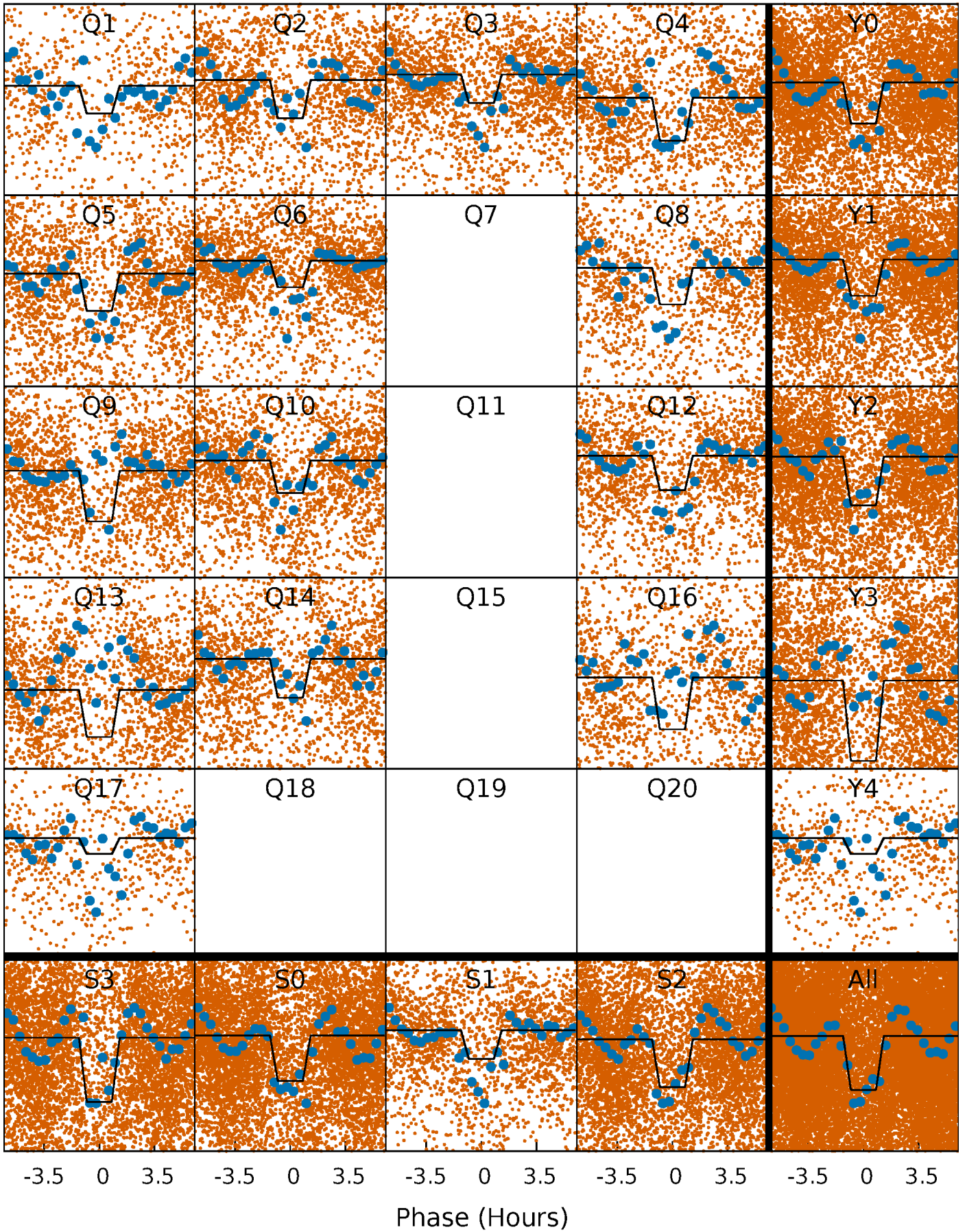
DV Quarter-Phased Transit Curves

TCE 010681464-01 P= 0.687151 Days $T_0=132.150273$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

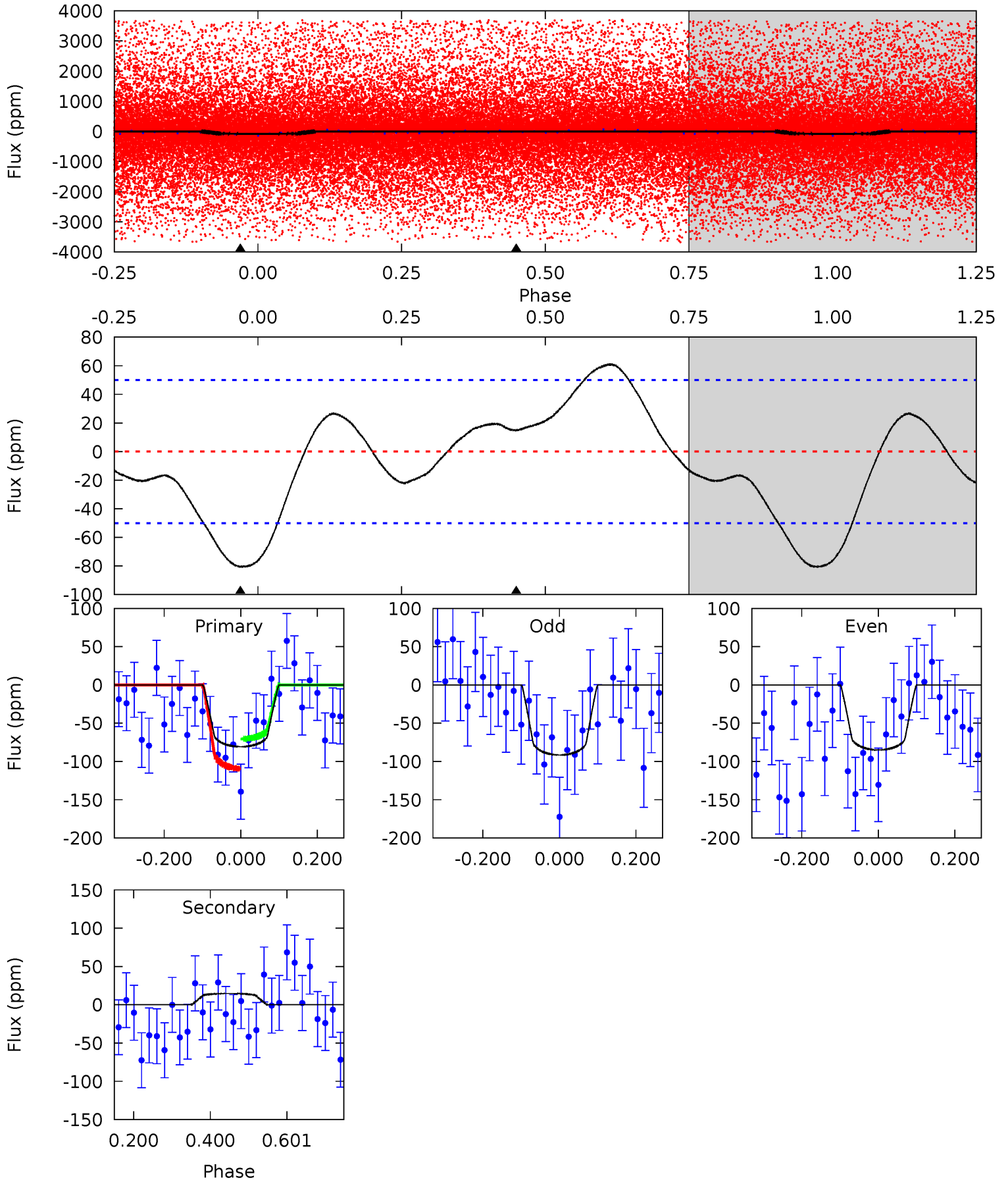
TCE 010681464-01 P= 0.687143 Days $T_0=132.145663$ (BKJD)



DV Model-Shift Uniqueness Test

010681464-01, P = 0.687151 Days, E = 131.463122 Days

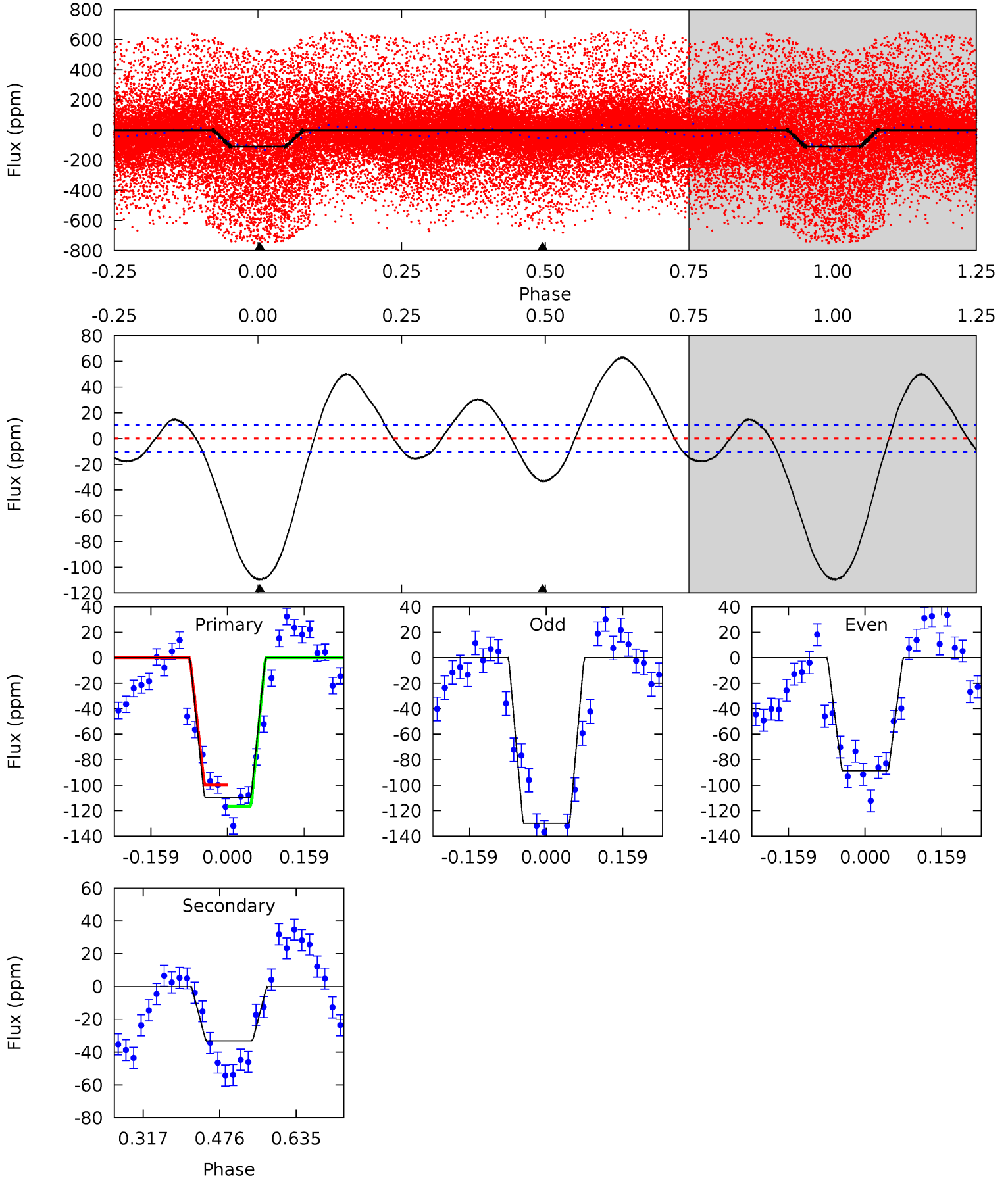
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.12	-1.30	0	0	4.42	1.28	1.63	7.12	7.12	-1.30	-1.30	0.30	-10.7	0.43	1.72



Alt Model-Shift Uniqueness Test

010681464-01, P = 0.687143 Days, E = 131.458520 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.0	14.2	0	0	4.47	1.41	9.20	47.0	47.0	14.2	14.2	8.98	0.63	0.36	3.67



Stellar Parameters For KIC 010681464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9067^{+251}_{-466}	$4.080^{+0.160}_{-0.160}$	$0.070^{+0.200}_{-0.650}$	$2.232^{+0.671}_{-0.604}$	$2.183^{+0.372}_{-0.605}$	$0.276^{+0.259}_{-0.133}$
	+3%/-5%	+4%/-4%	+286%/-929%	+30%/-27%	+17%/-28%	+94%/-48%
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 010681464-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	15 ± 11	$1.47^{+0.36}_{-0.28}$	5900^{+449}_{-463}	-7070^{+1683}_{-1398}	$-1.339^{+1.065}_{-1.408}$
Alt.	-33 ± 2	$2.26^{+0.44}_{-0.45}$	5916^{+444}_{-445}	6306^{+532}_{-454}	$1.388^{+0.606}_{-0.397}$

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 $A_{obs} \gg 1.0$

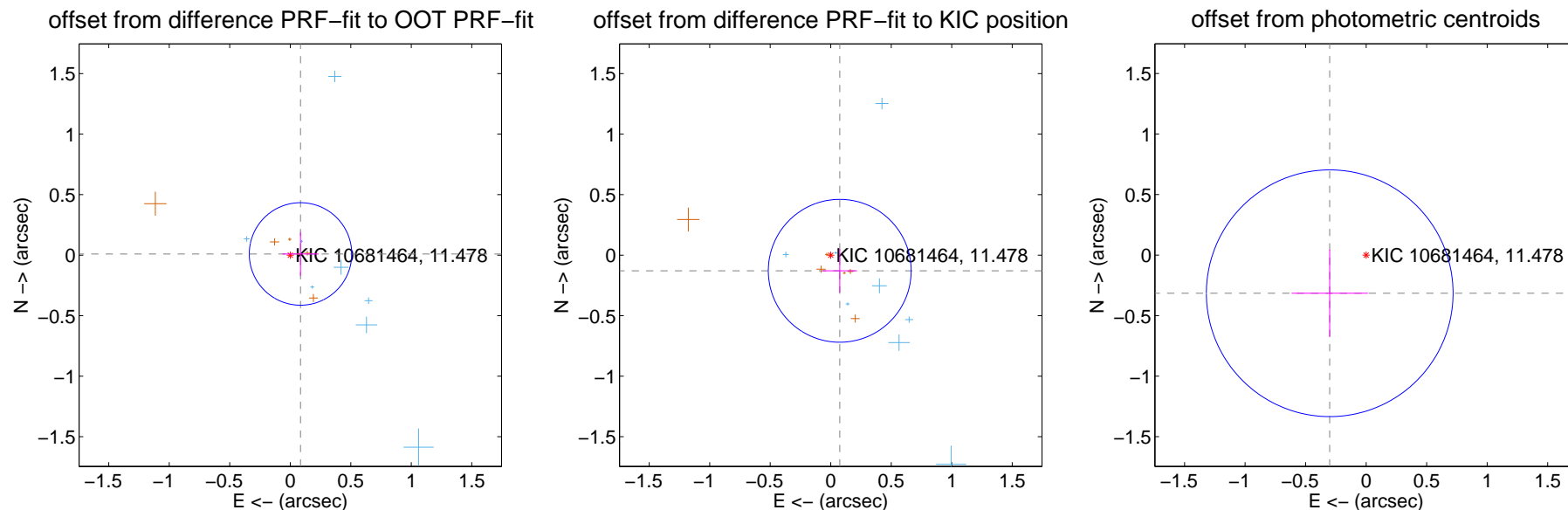
DV Centroid Data

Supplemental centroid analysis for 010681464-01. **Kepler magnitude: 11.48.** Transit SNR 9.16

There are 8 quarters with good PRF difference image offsets

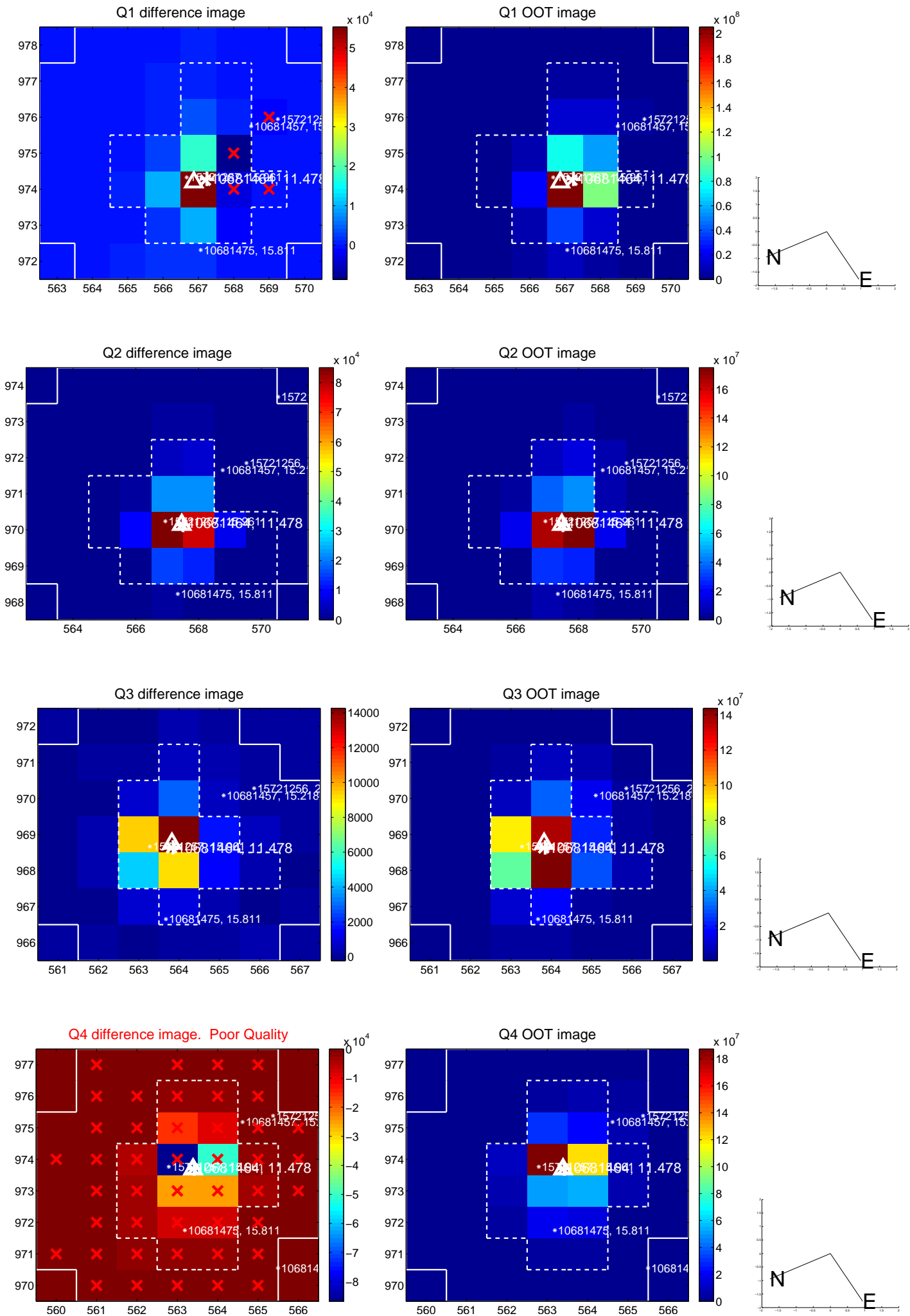
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.085 ± 0.141	0.60	-0.085 ± 0.150	0.010 ± 0.180
PRF-fit source offset from KIC position	0.149 ± 0.197	0.76	-0.075 ± 0.143	-0.129 ± 0.180
photometric centroid source offset	0.44 ± 0.34	1.28	0.30 ± 0.32	-0.32 ± 0.36

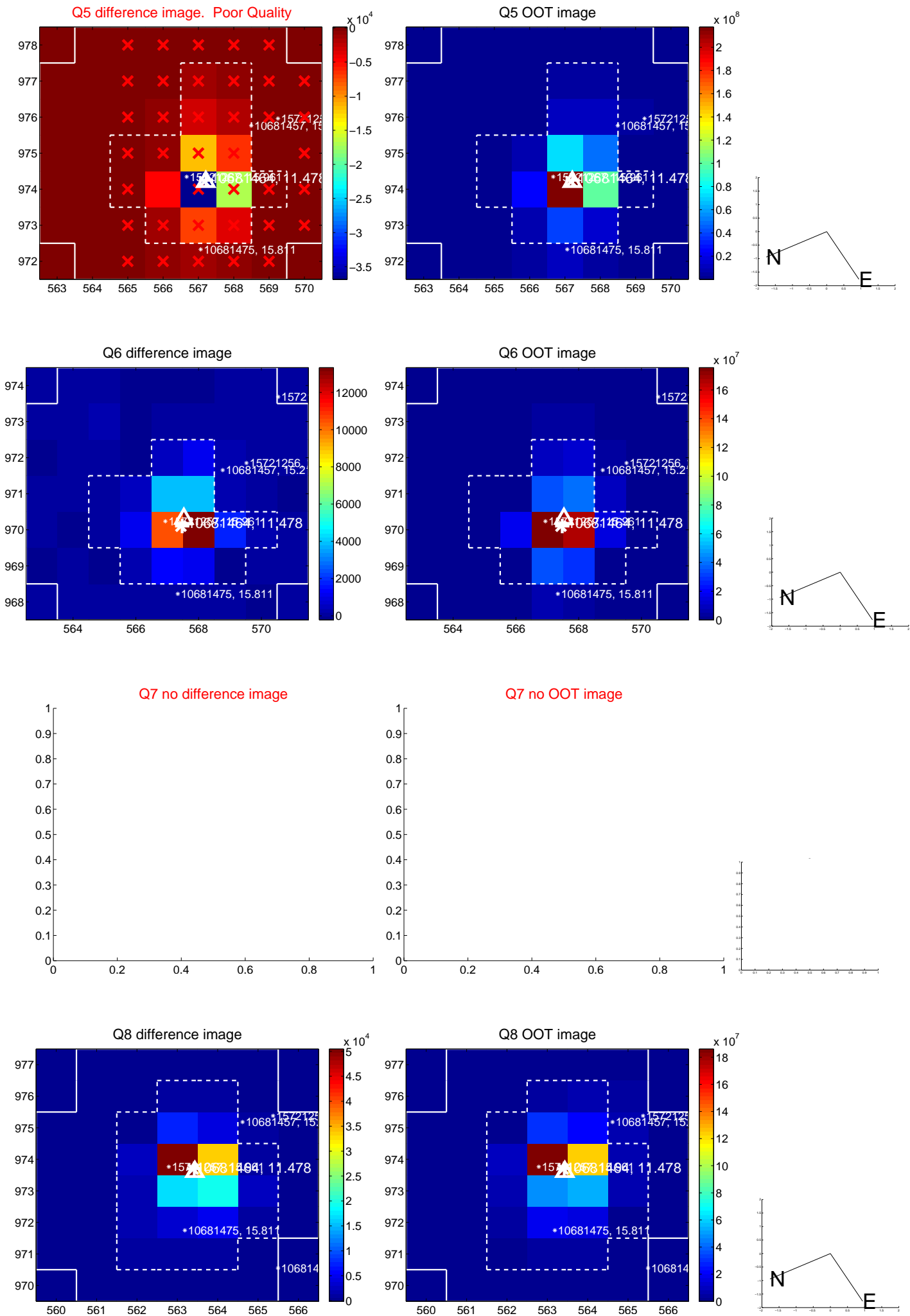


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

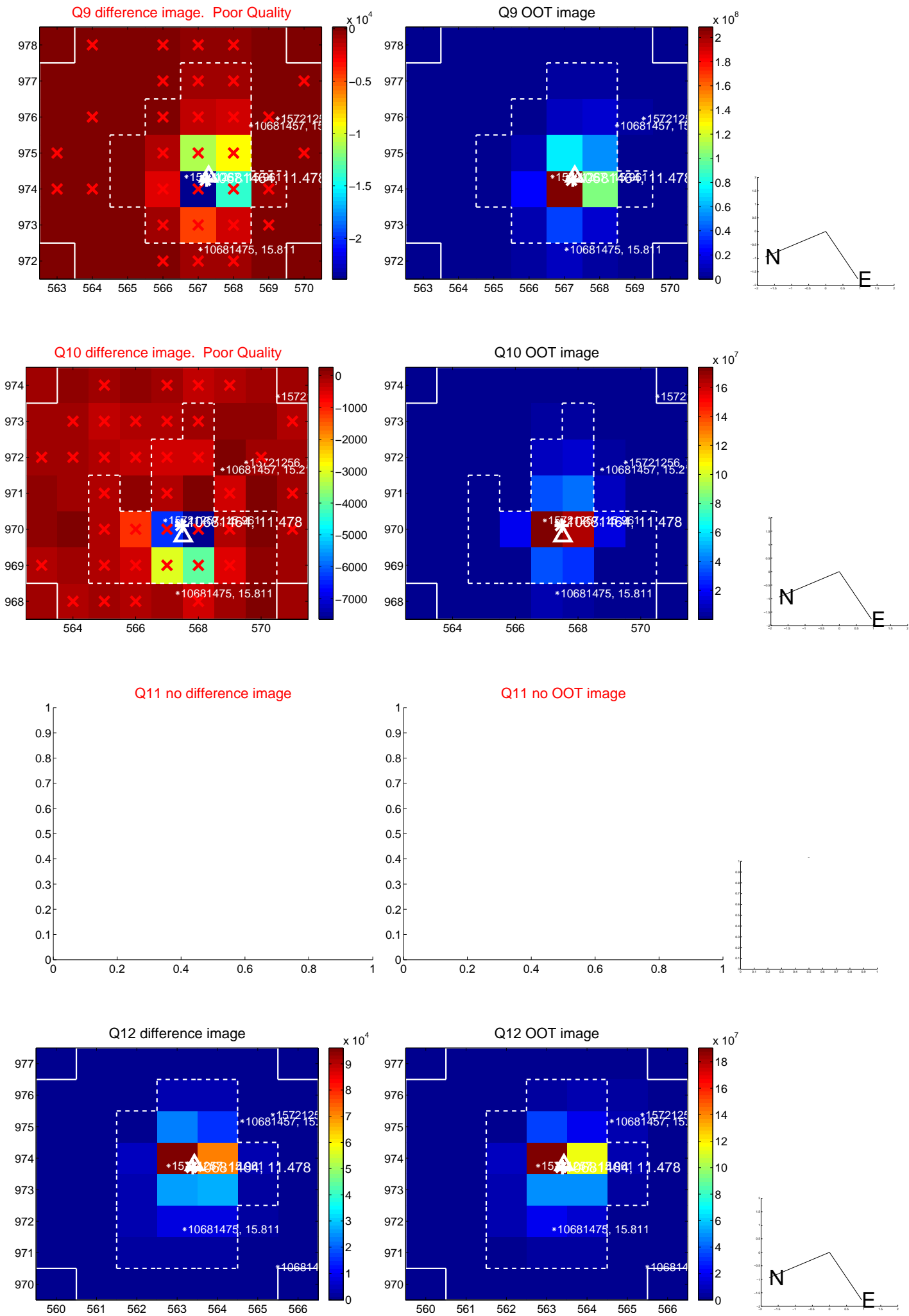
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



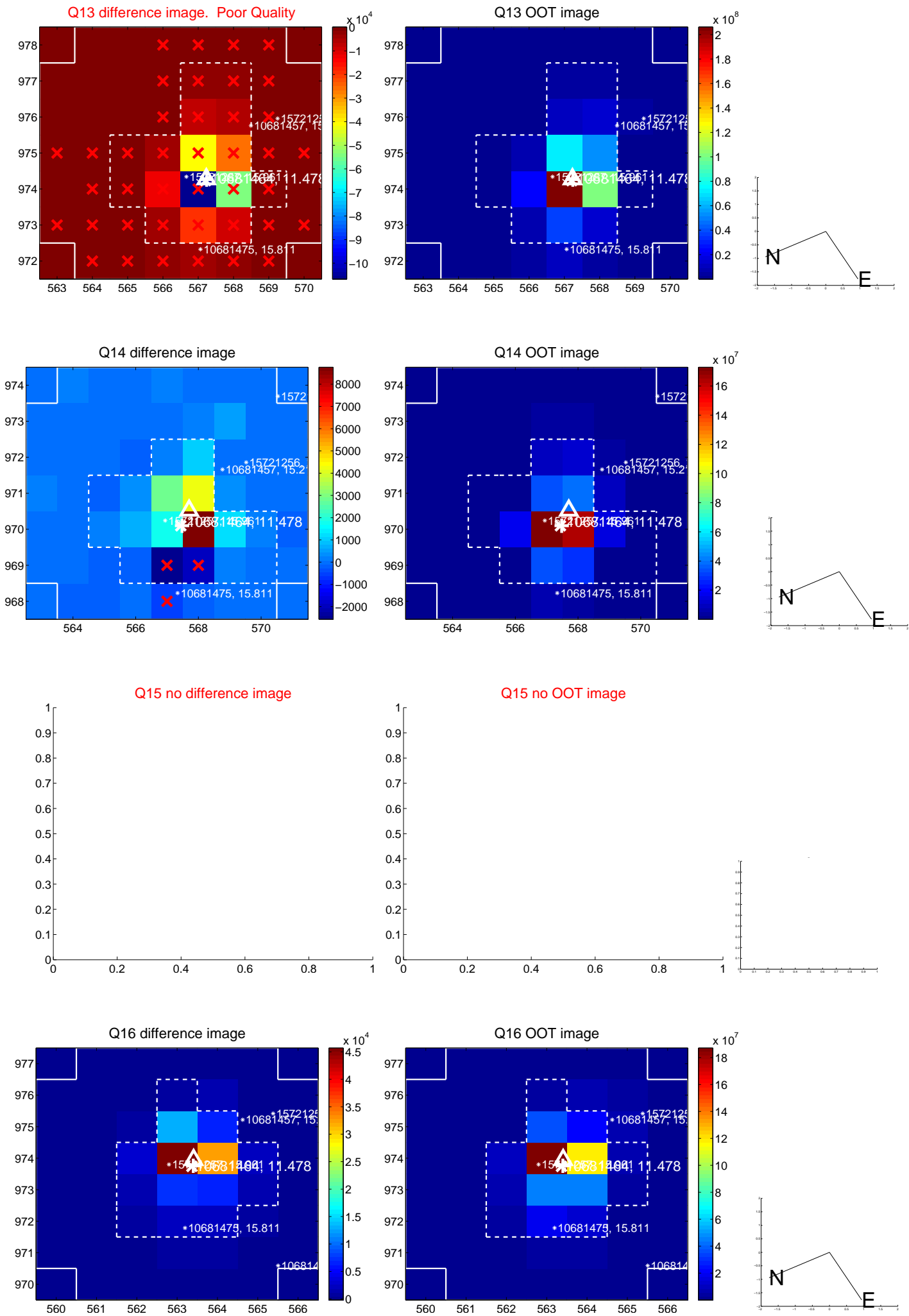
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



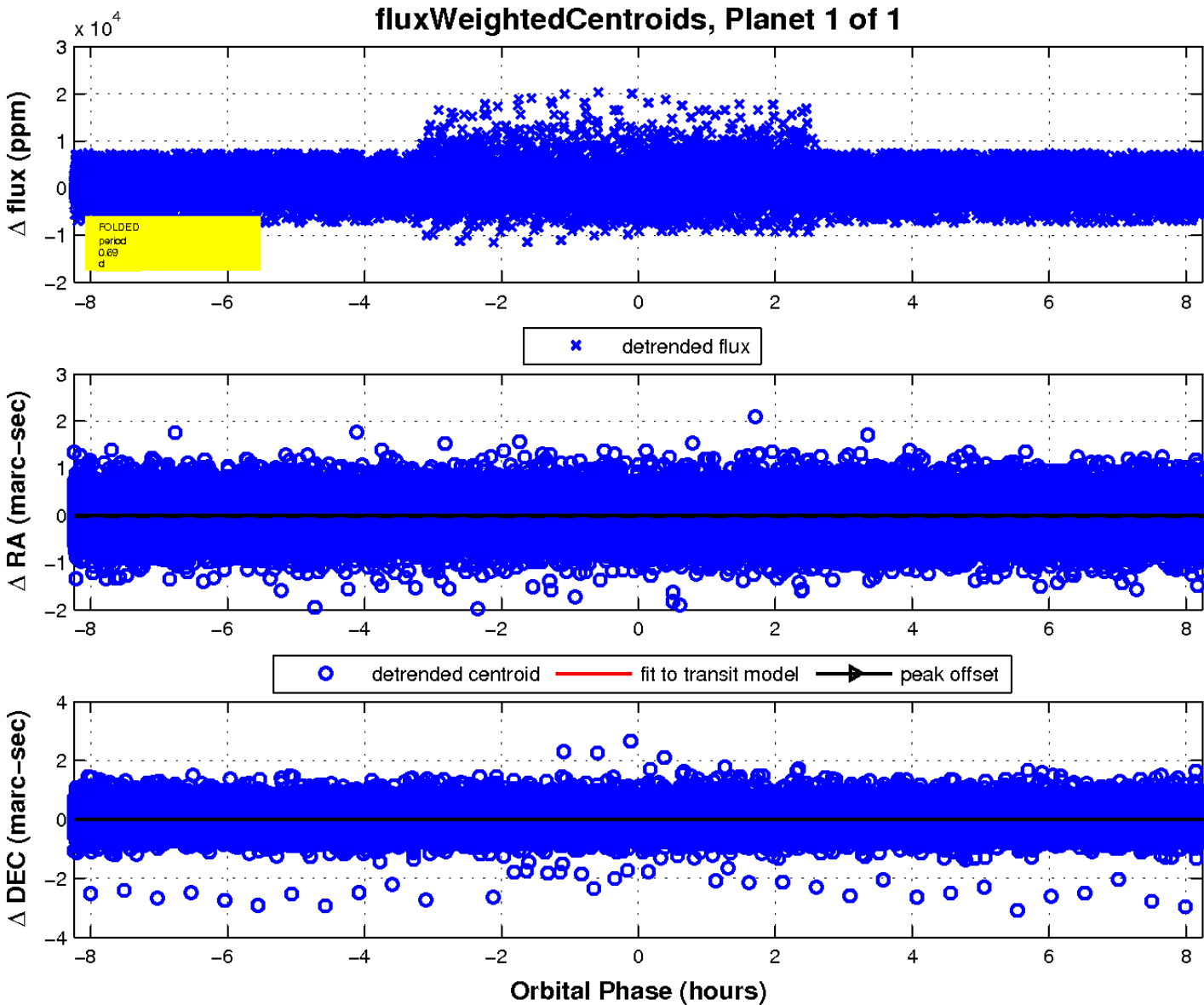
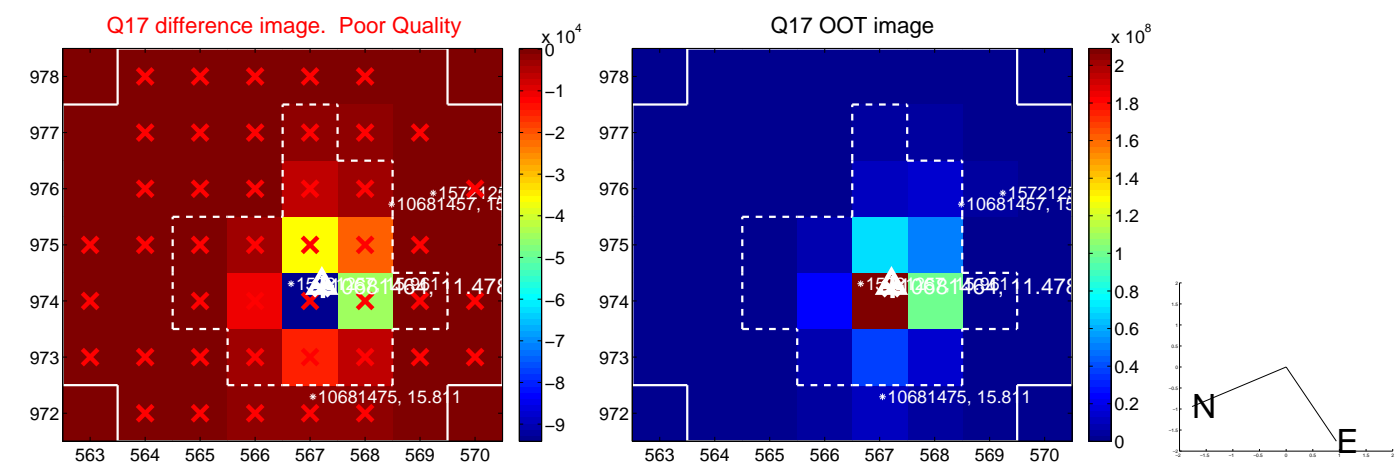
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

