

KIC 005097868

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})
005097868-01	OBS	2435.01	6.802601	132.392930	214.9	2.870	12.4	13.3	0.82	5836	1.47	152.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005097868-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

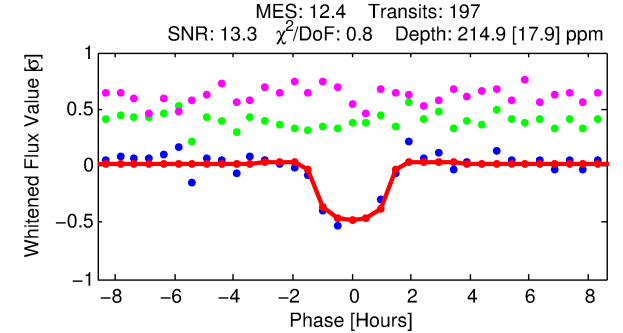
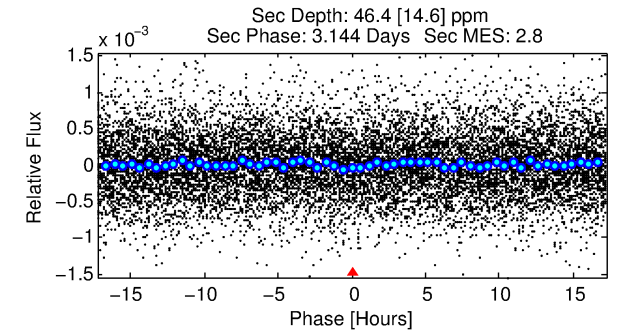
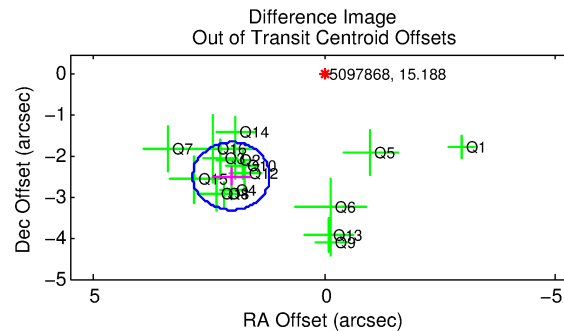
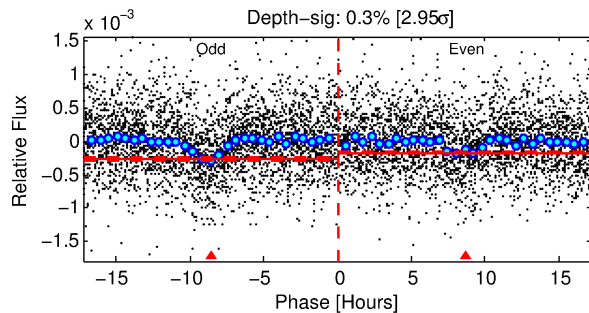
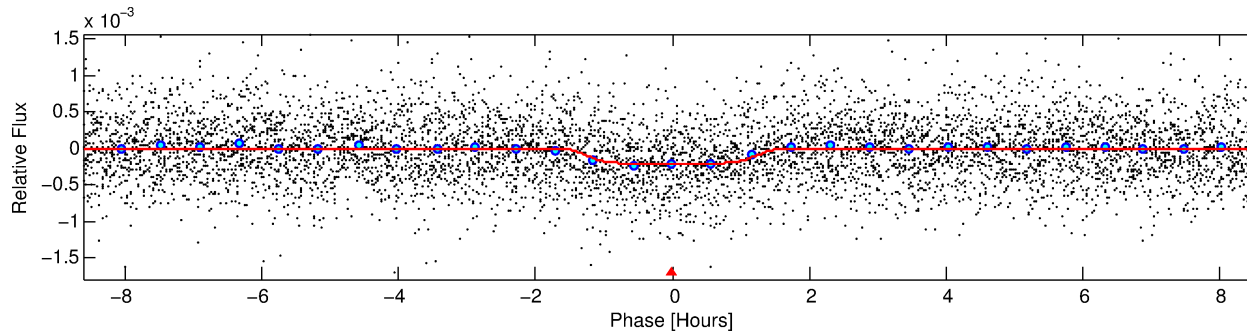
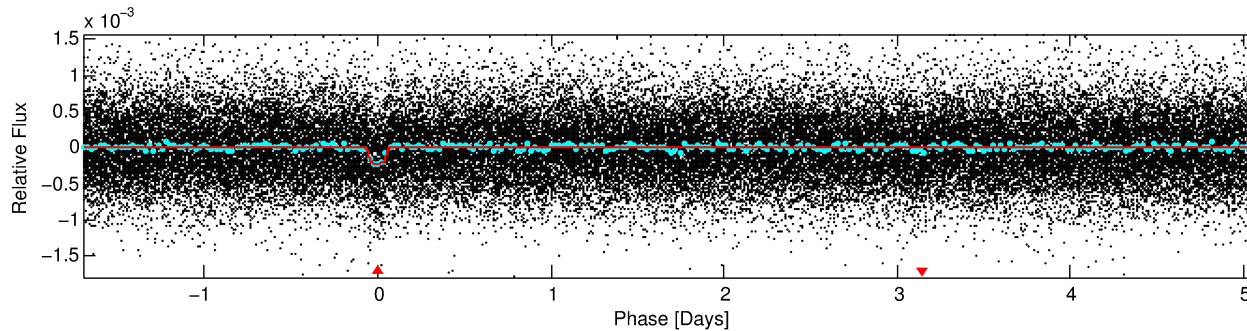
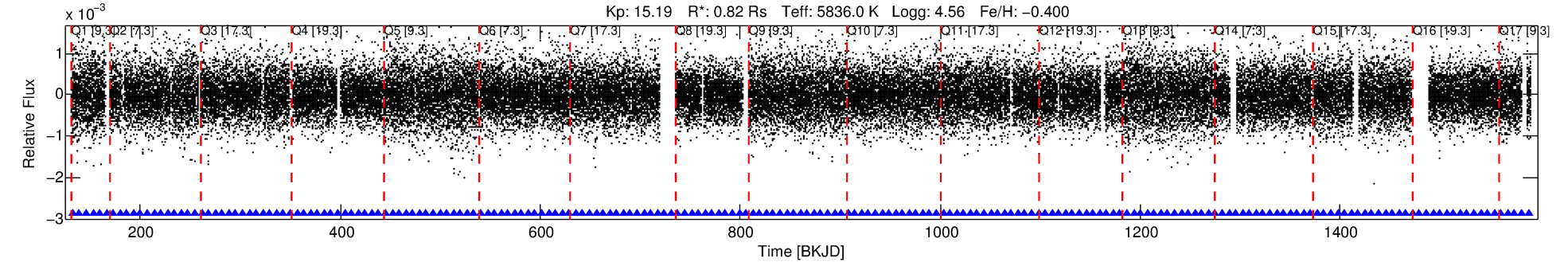
Ephemeris Match Information For 005097868-01

No Significant Match Found

DV One-Page Summary

KIC: 5097868 Candidate: 1 of 1 Period: 6.803 d
KOI: K02435.01 Corr: 0.921

Kp: 15.19 R*: 0.82 Rs Teff: 5836.0 K Logg: 4.56 Fe/H: -0.400



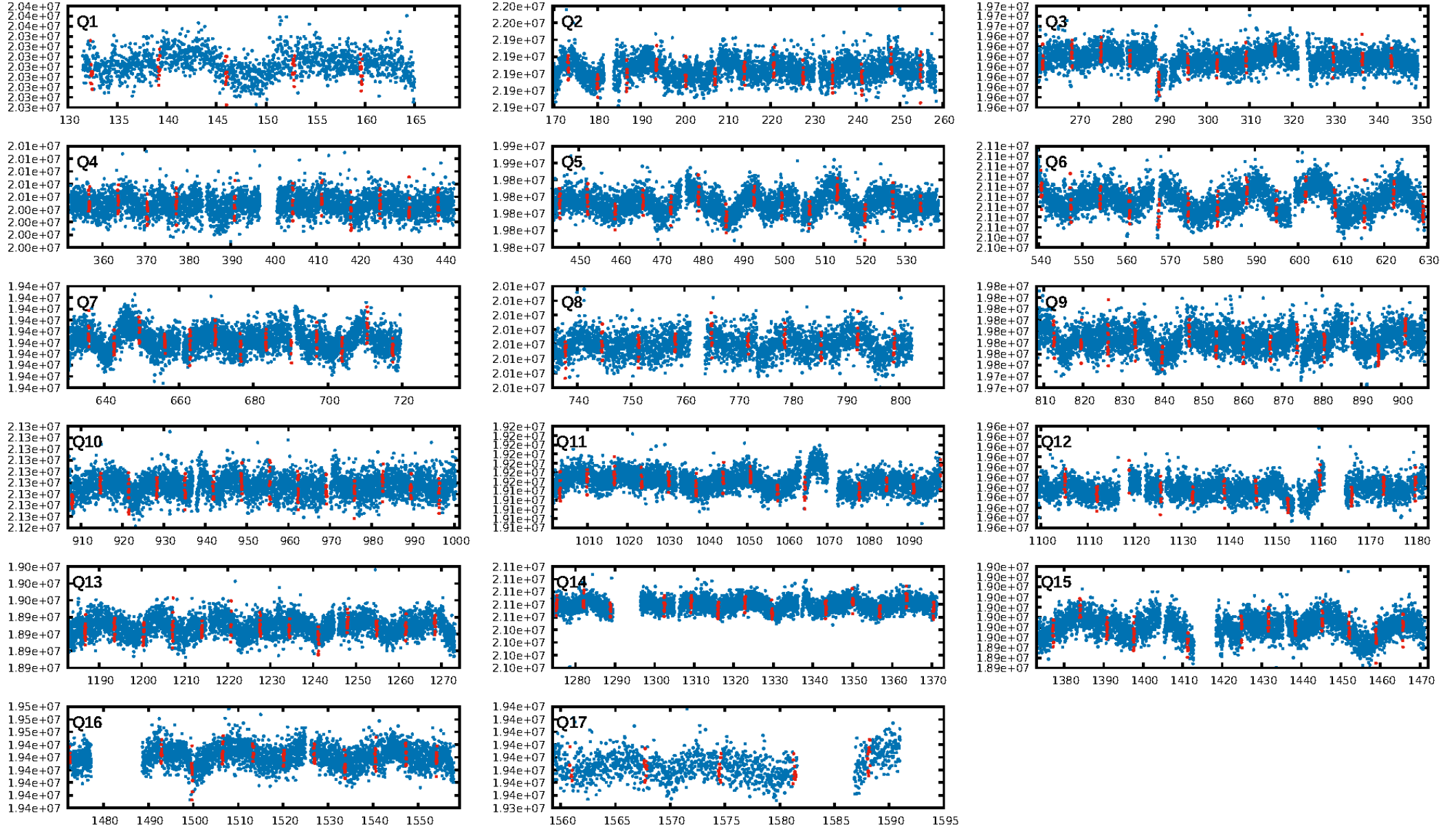
DV Fit Results:

Period = 6.80260 [0.00004] d
Epoch = 132.3929 [0.0042] BKJD
Rp/R* = 0.0165 [0.0037]
a/R* = 7.32 [8.21]
b = 0.93 [0.16]
Seff = 152.14 [54.42]
Teq = 896 [80] K
Rp = 1.47 [0.52] Re
a = 0.0674 [0.0156] AU
Ag = 53.92 [34.66] [1.53σ]
Teffp = 3752 [526] K [5.37σ]

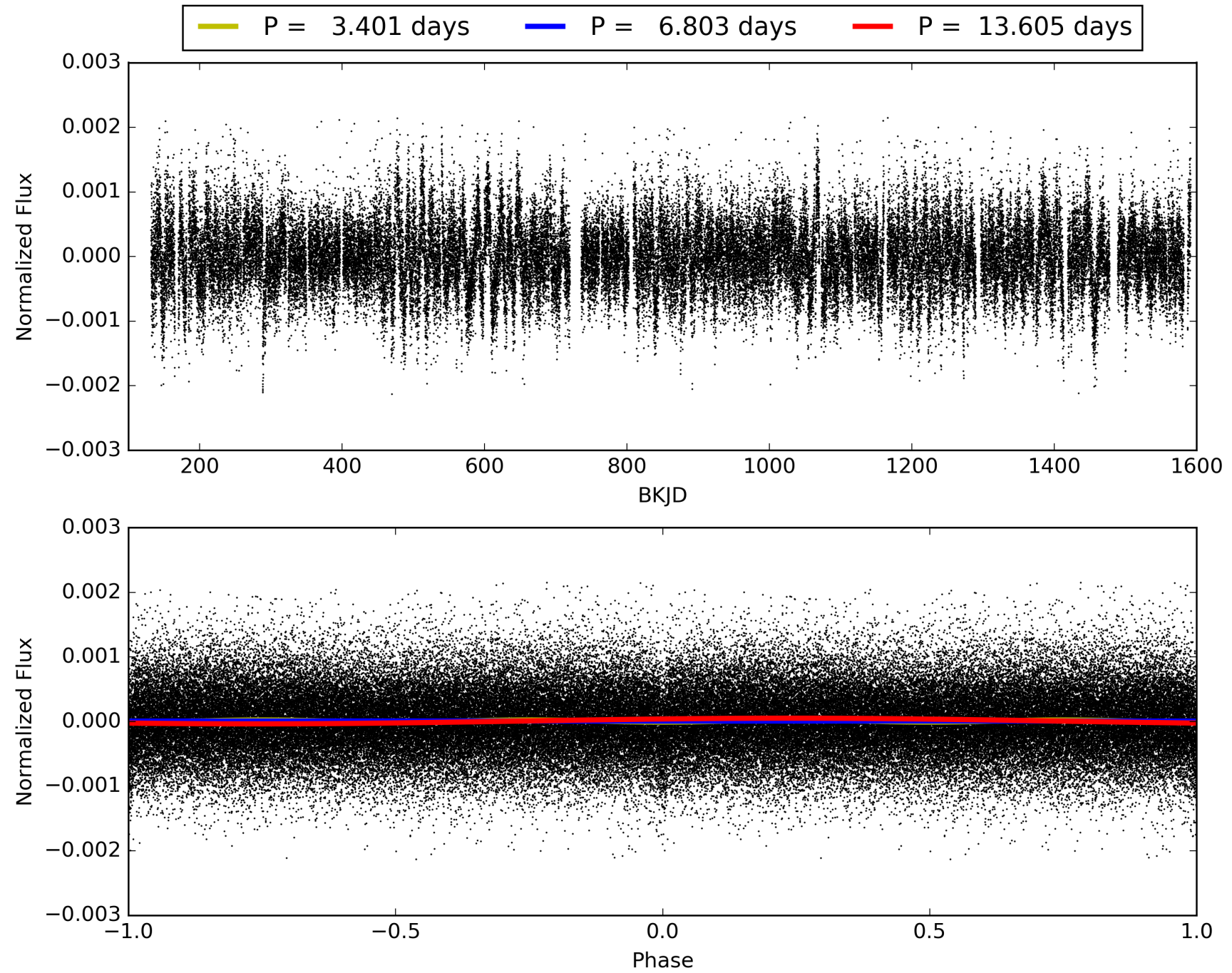
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.67e-34
RollingBand-fgt: 1.00 [187/187]
GhostDiagnostic-chr: 0.6236
Centroid-sig: 0.0%
Centroid-so: 2.831 arcsec [6.29σ]
OotOffset-rm: 3.194 arcsec [11.54σ]
KicOffset-rm: 4.040 arcsec [14.64σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005097868-01, PDC Light Curves

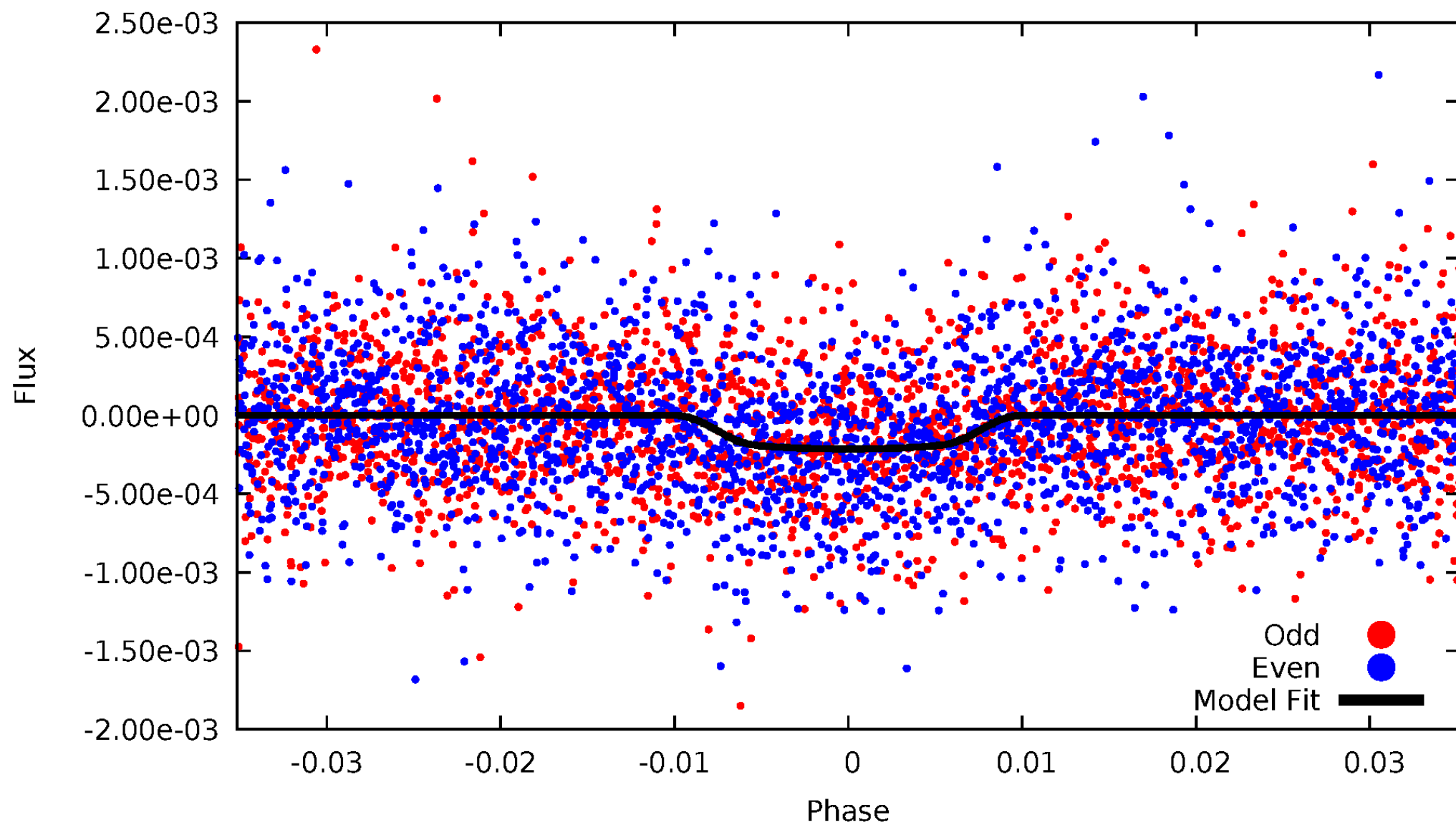


TCE 005097868-01



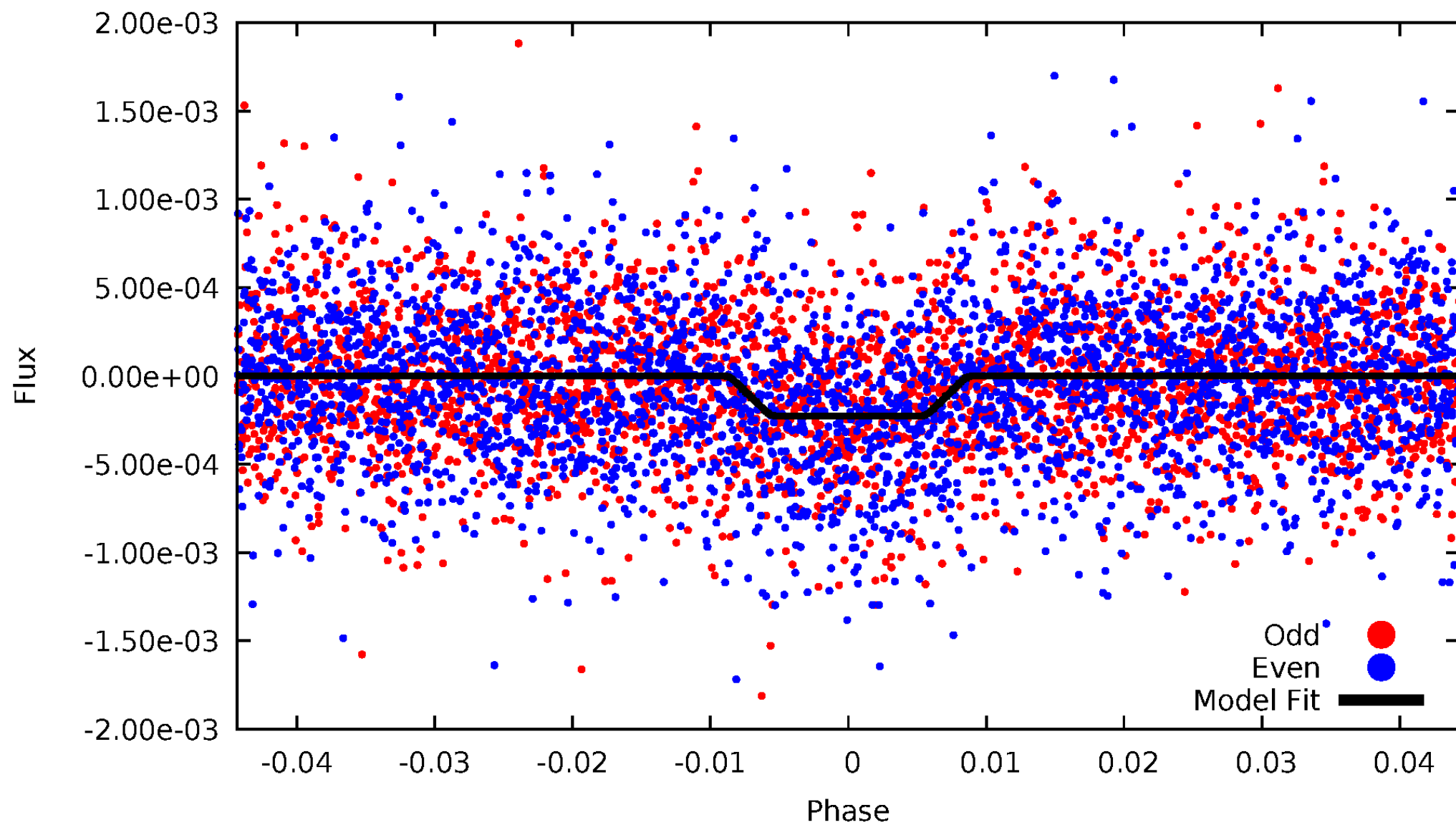
DV Odd/Even

TCE 005097868-01

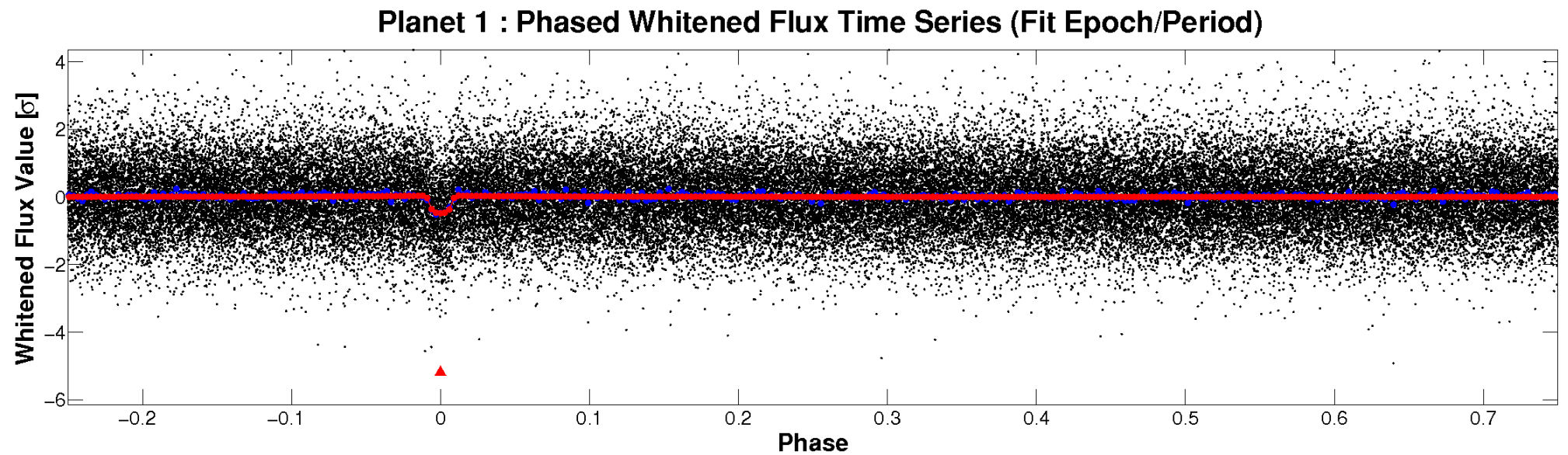
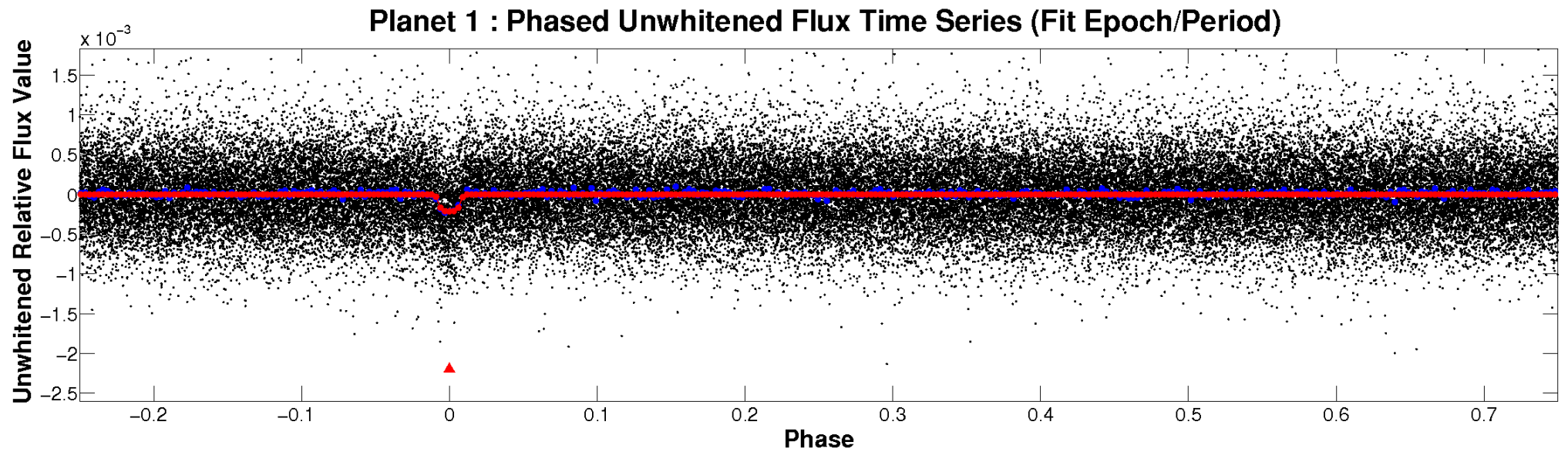


ALT Odd/Even

TCE 005097868-01

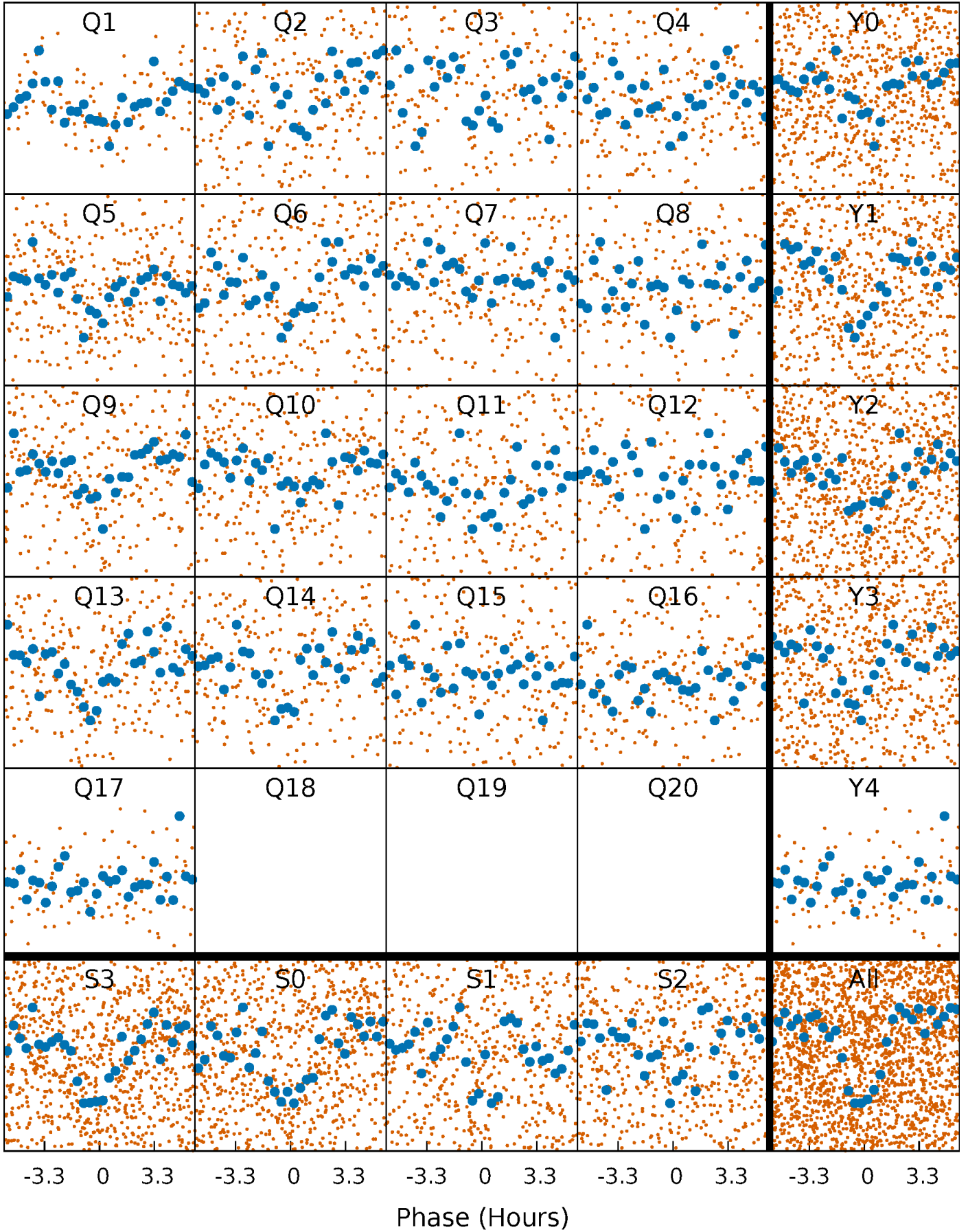


Non-Whitened Vs. Whitened Light Curve



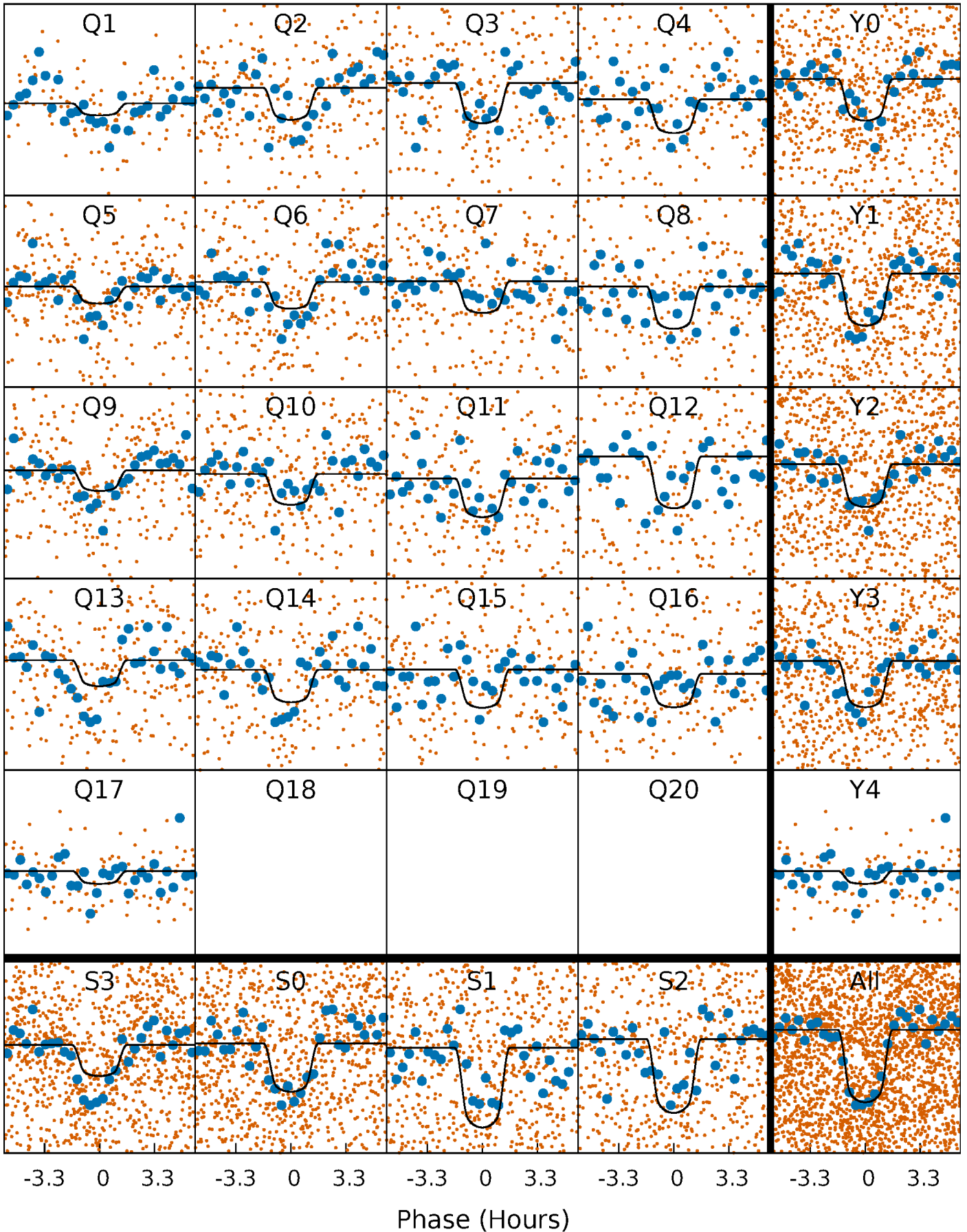
PDC Quarter-Phased Transit Curves

TCE 005097868-01 P= 6.802601 Days $T_0=132.392930$ (BKJD)



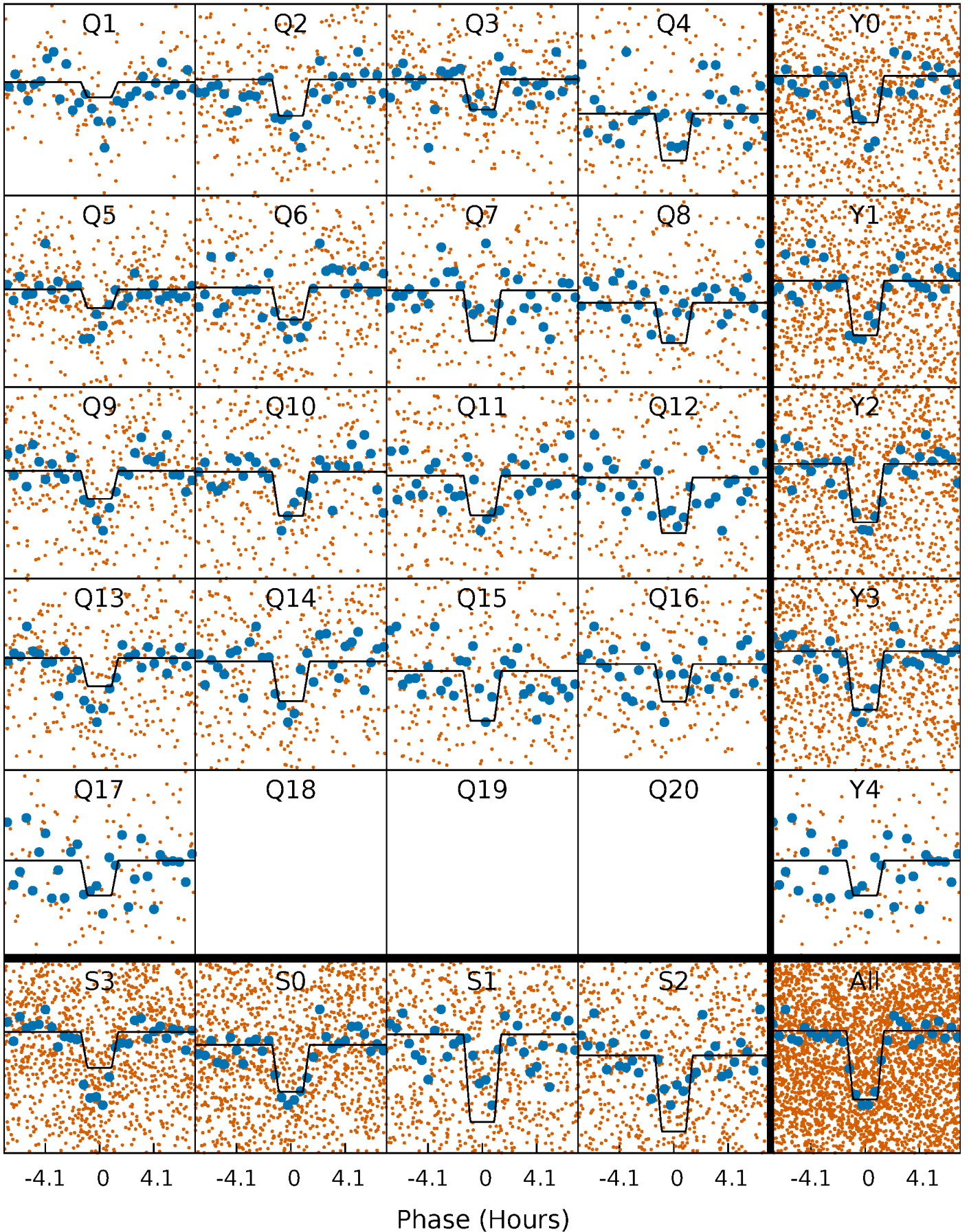
DV Quarter-Phased Transit Curves

TCE 005097868-01 P= 6.802601 Days $T_0=132.392930$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

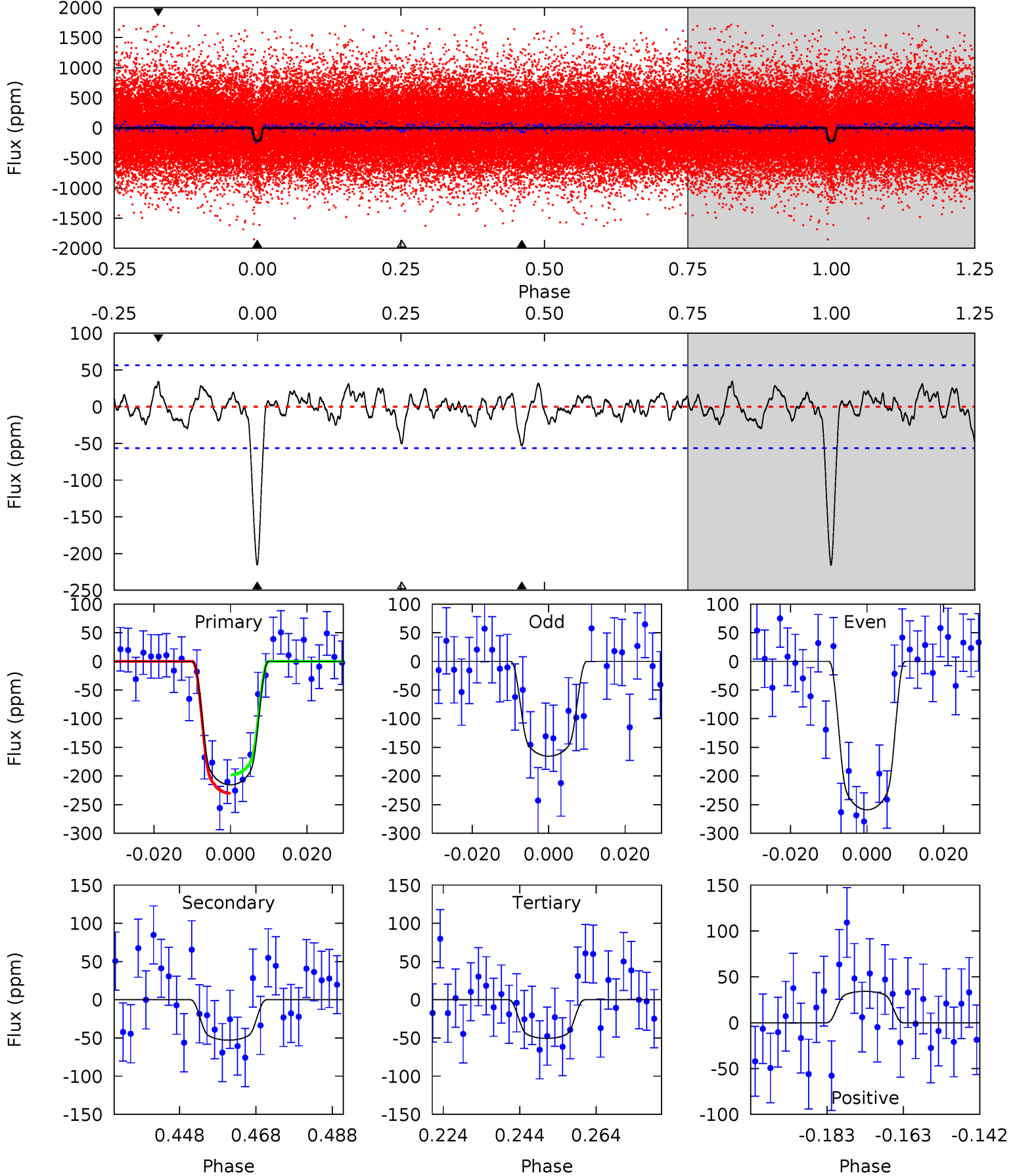
TCE 005097868-01 P= 6.802477 Days $T_0=132.400592$ (BKJD)



DV Model-Shift Uniqueness Test

005097868-01, P = 6.802601 Days, E = 125.590329 Days

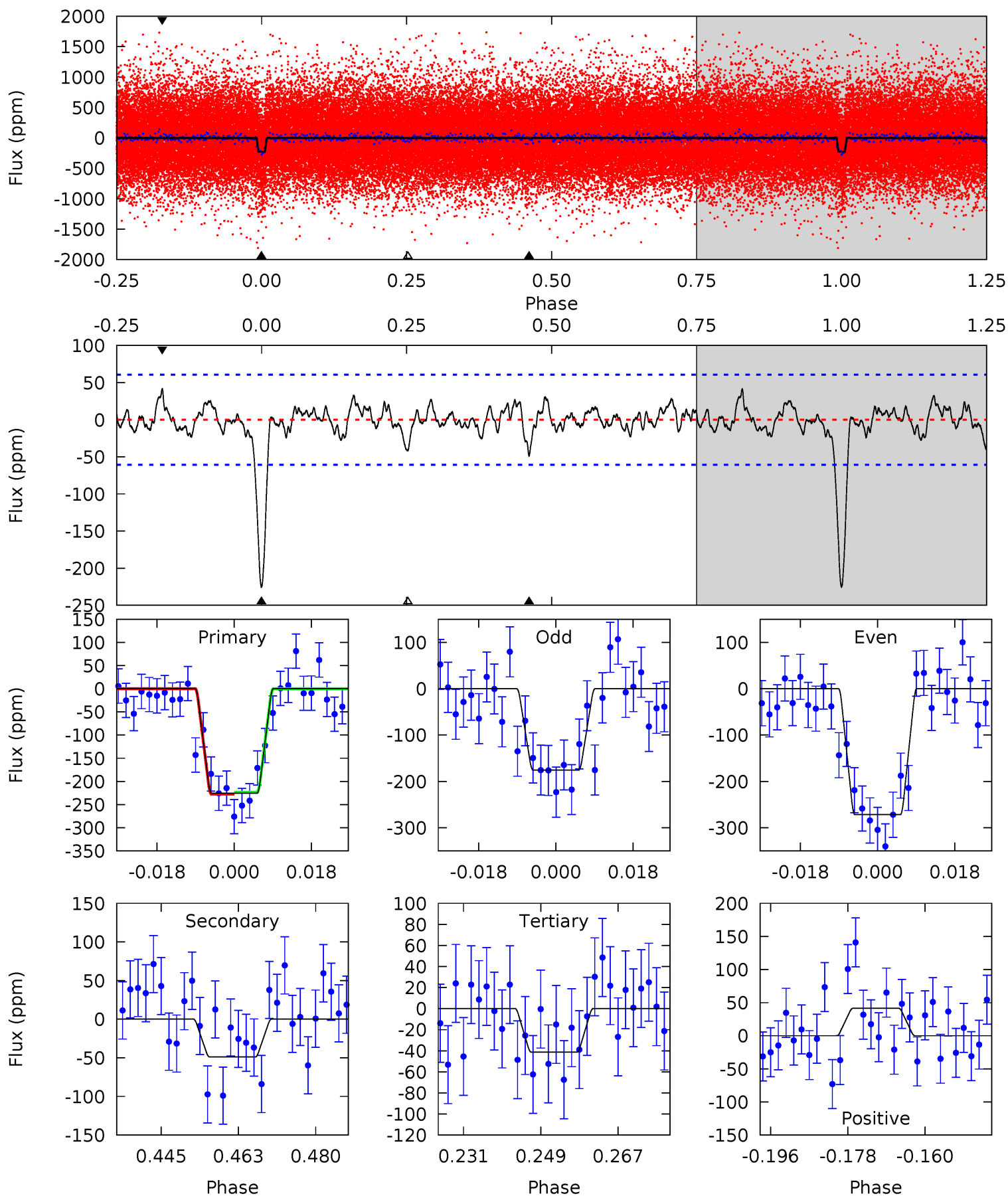
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	4.58	4.38	2.96	4.89	2.32	1.15	14.3	15.7	0.19	1.62	4.07	1.03	0.14	1.40



Alt Model-Shift Uniqueness Test

005097868-01, P = 6.802477 Days, E = 125.598115 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	3.96	3.34	3.35	4.91	2.37	1.05	14.9	14.9	0.62	0.61	3.90	0.99	0.16	0.17



Stellar Parameters For KIC 005097868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5836^{+158}_{-175}	$4.561^{+0.046}_{-0.184}$	$-0.400^{+0.300}_{-0.300}$	$0.816^{+0.225}_{-0.070}$	$0.884^{+0.099}_{-0.099}$	$2.292^{+0.429}_{-1.142}$
	+3%/-3%	+1%/-4%	+75%/-75%	+28%/-9%	+11%/-11%	+19%/-50%
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 005097868-01 / KOI 2435.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-53 ± 12	$1.52^{+0.42}_{-0.34}$	1278^{+80}_{-61}	4144^{+442}_{-365}	55^{+42}_{-23}
Alt.	-49 ± 12	$1.39^{+0.42}_{-0.35}$	1279^{+70}_{-57}	4214^{+524}_{-395}	60^{+55}_{-26}

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 $A_{obs} \gg 1.0$

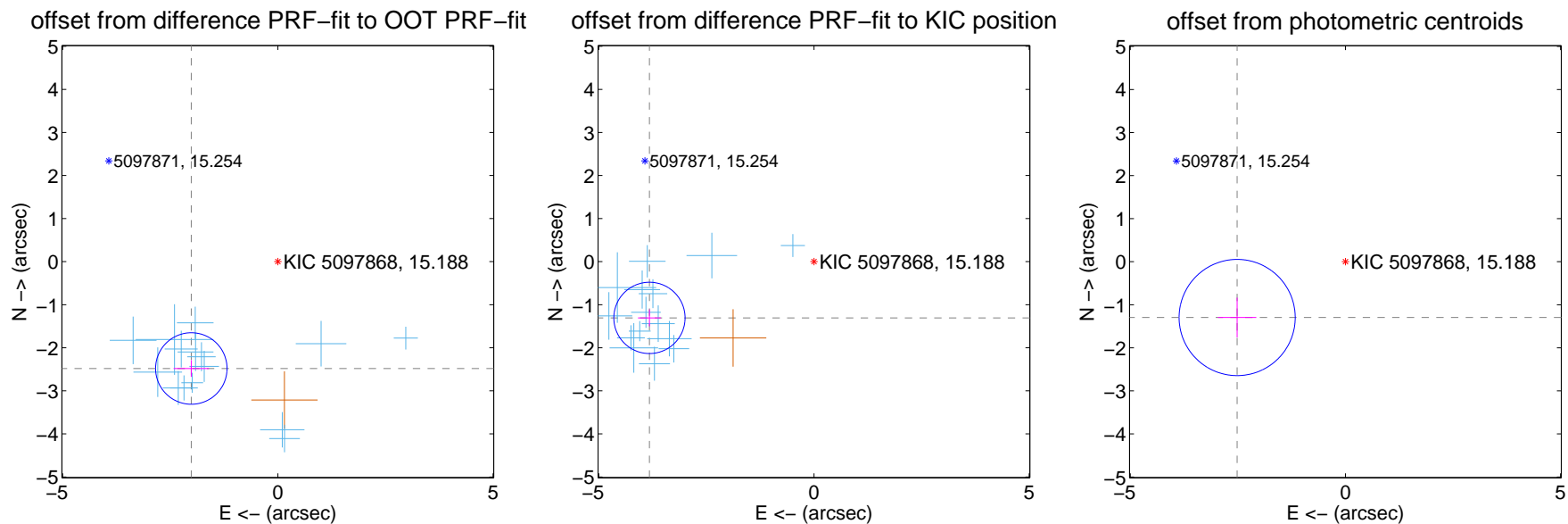
DV Centroid Data

Supplemental centroid analysis for 005097868-01. Kepler magnitude: 15.19. Transit SNR 13.33

There are 15 quarters with good PRF difference image offsets

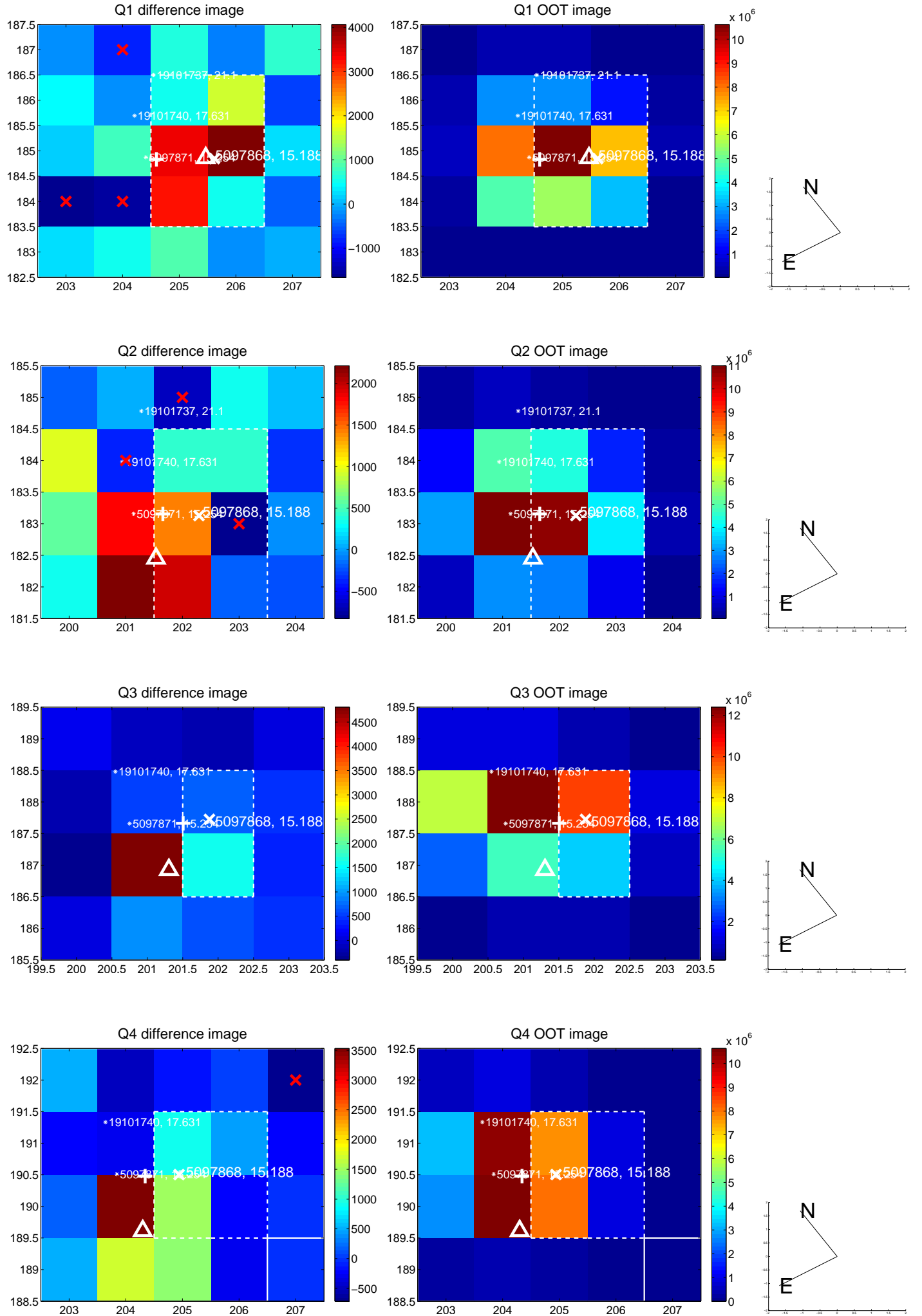
The OOT PRF centroid is offset from the target star catalog position by about 2.48 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.194 ± 0.277	11.54	2.011 ± 0.413	-2.481 ± 0.193
PRF-fit source offset from KIC position	4.040 ± 0.276	14.64	3.823 ± 0.266	-1.306 ± 0.197
photometric centroid source offset	2.83 ± 0.45	6.29	2.52 ± 0.45	-1.30 ± 0.46

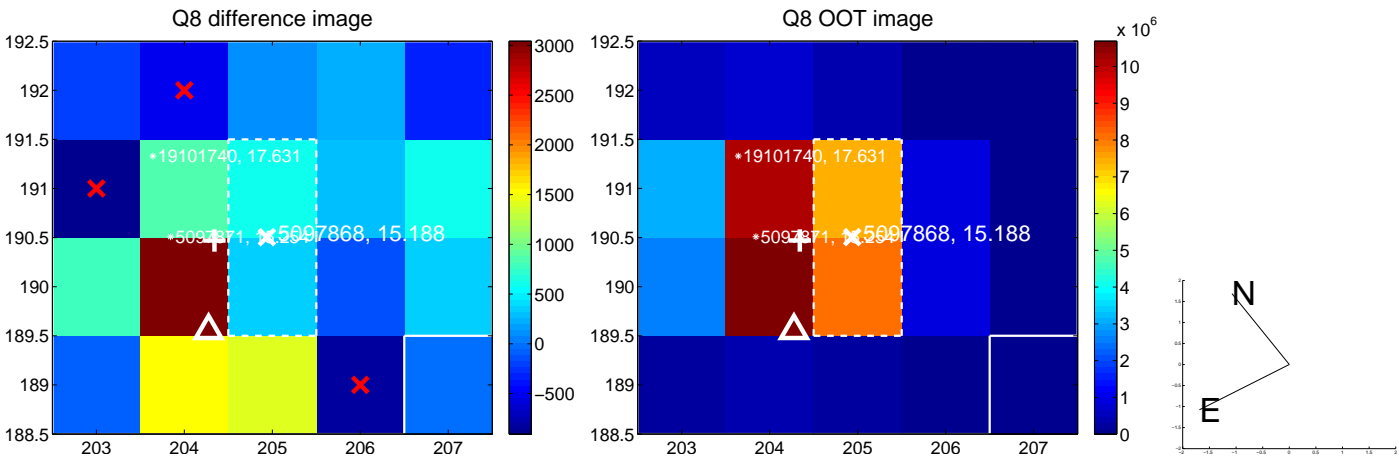
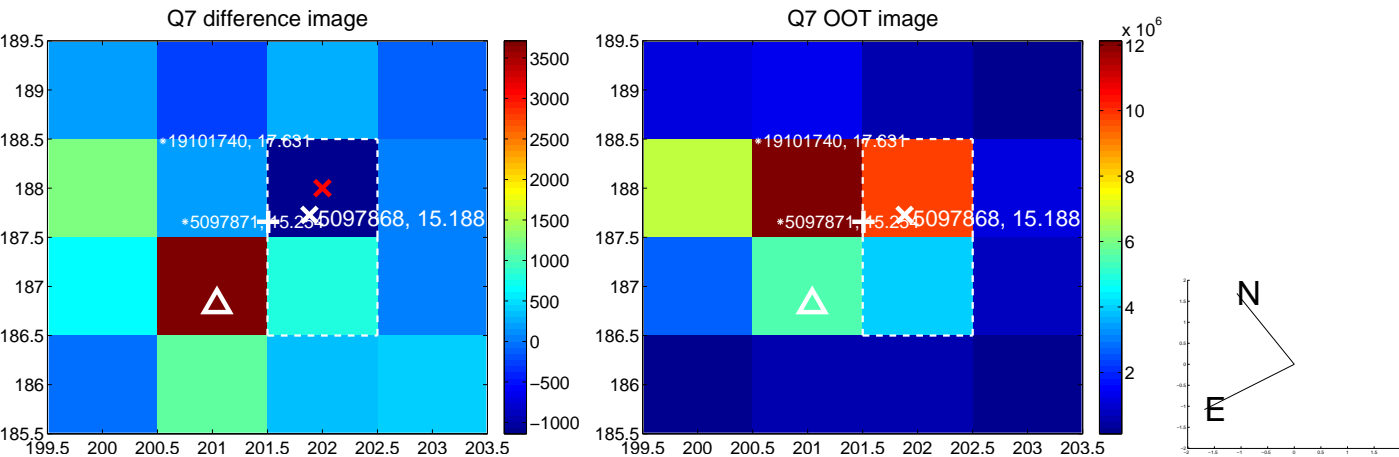
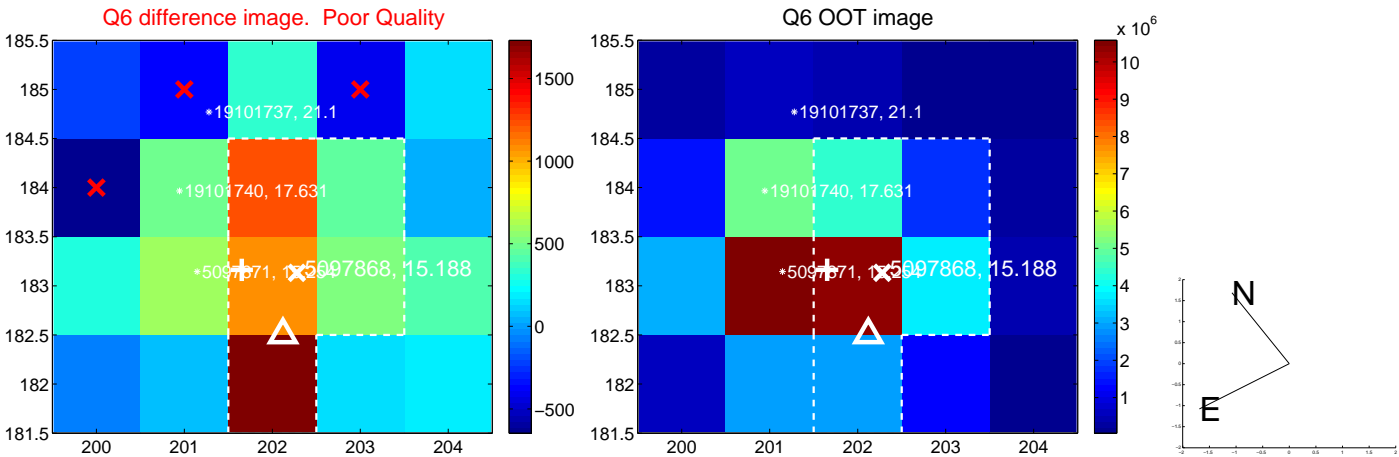
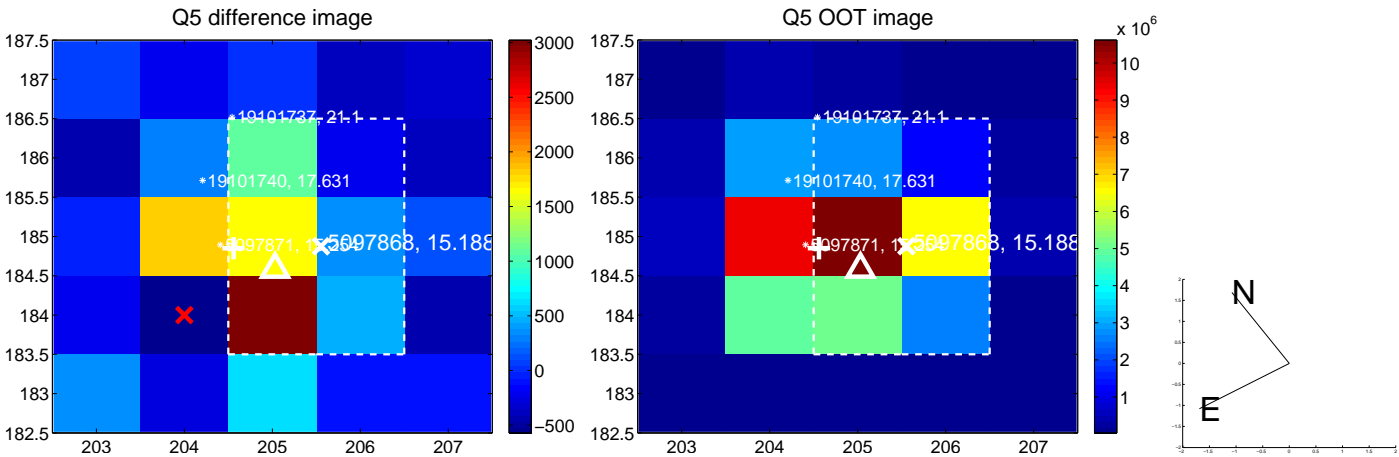


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

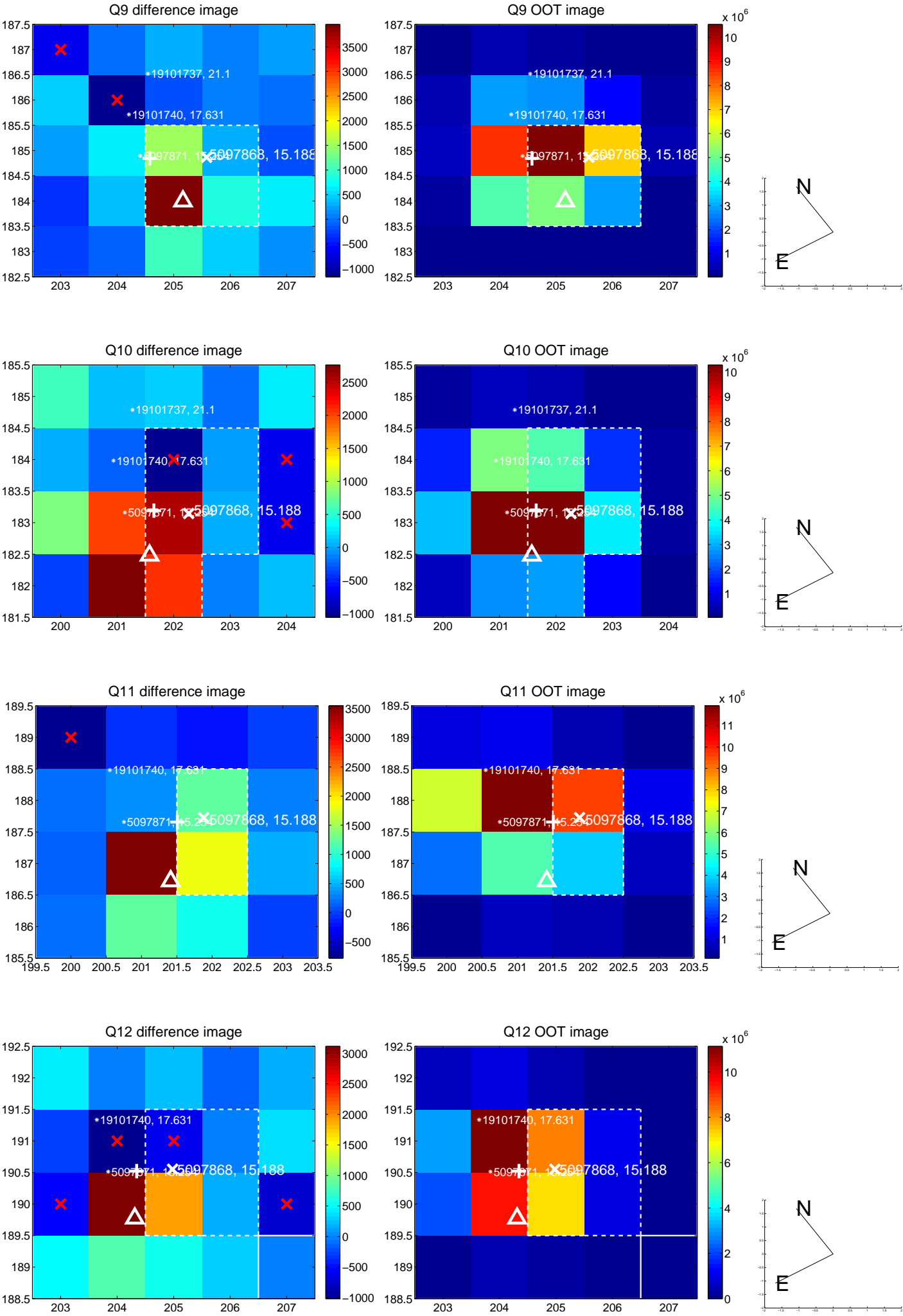
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



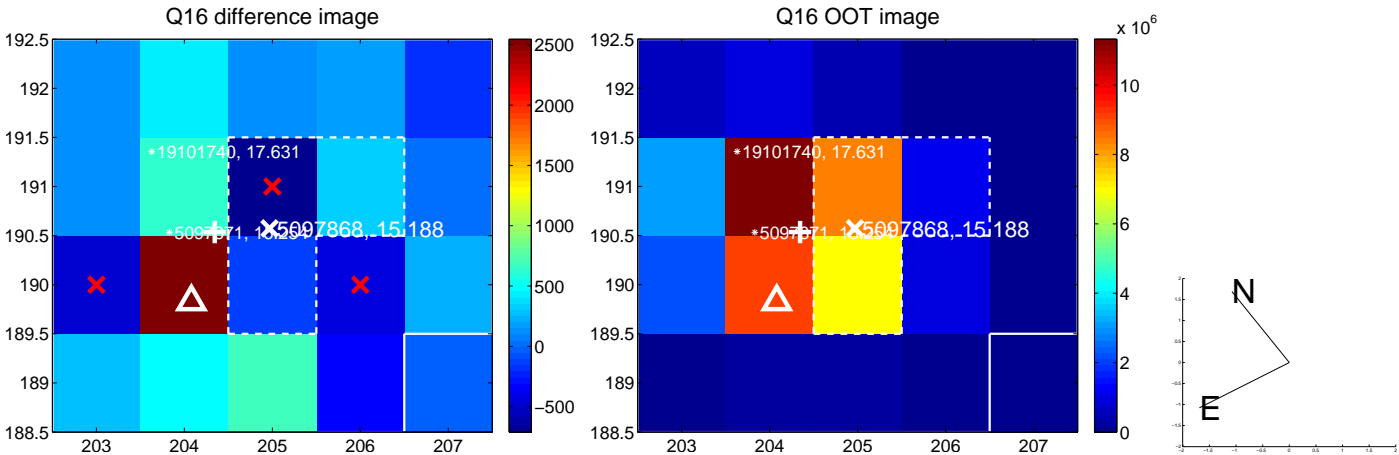
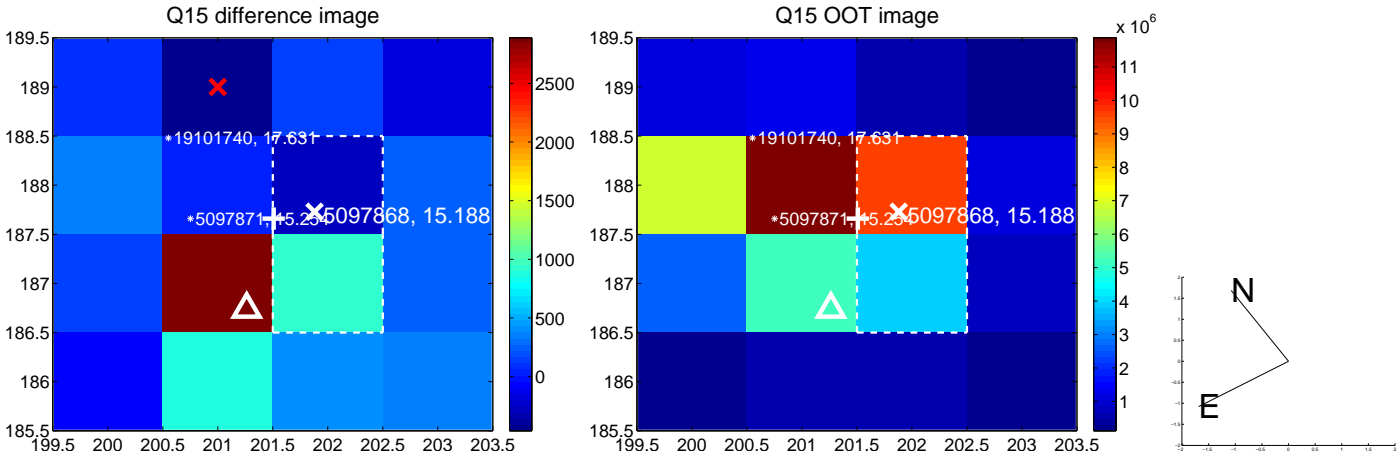
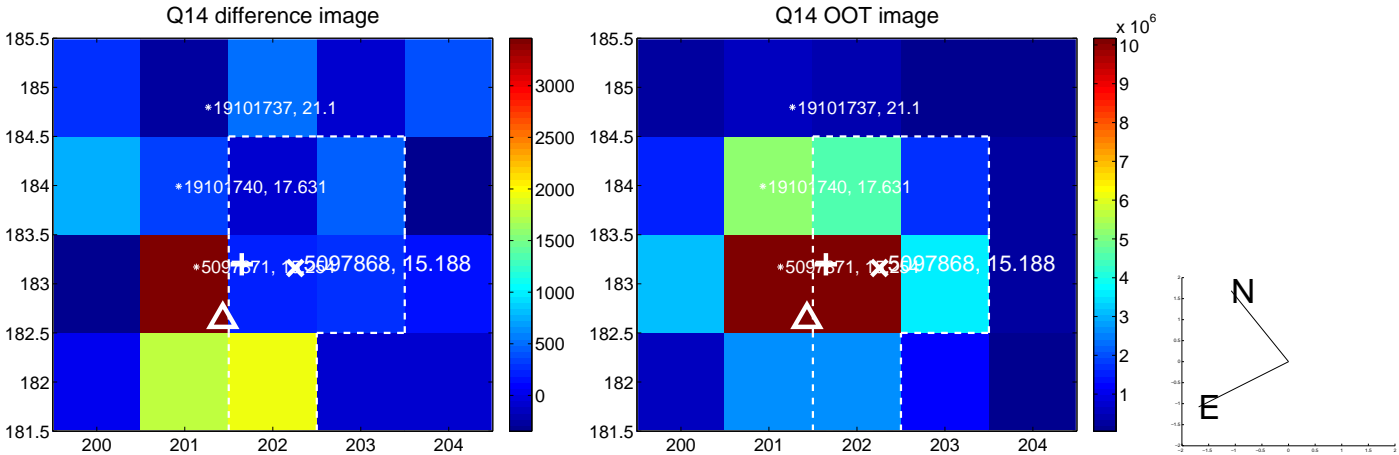
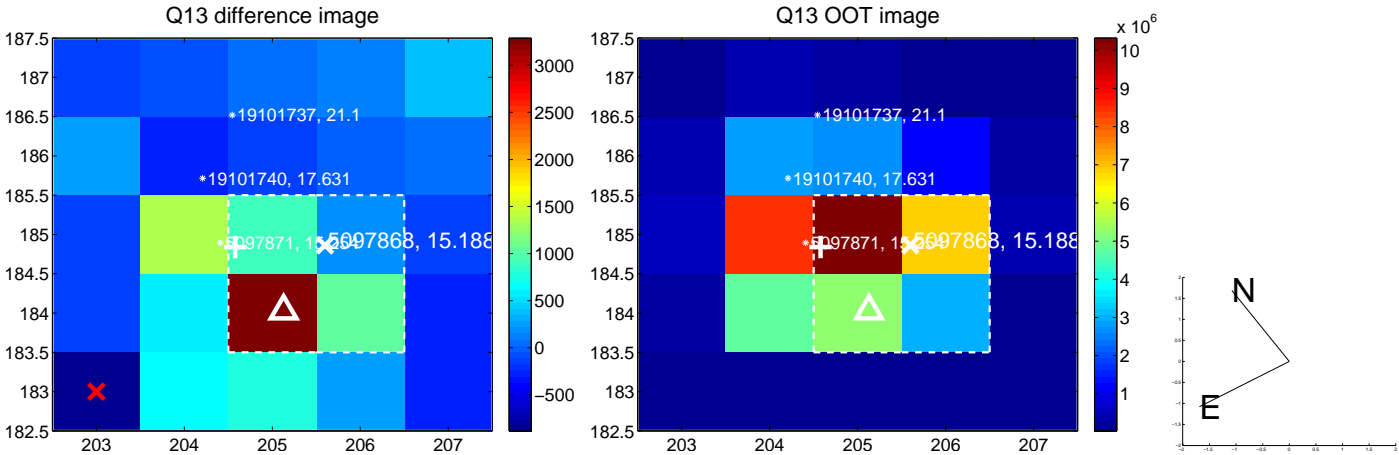
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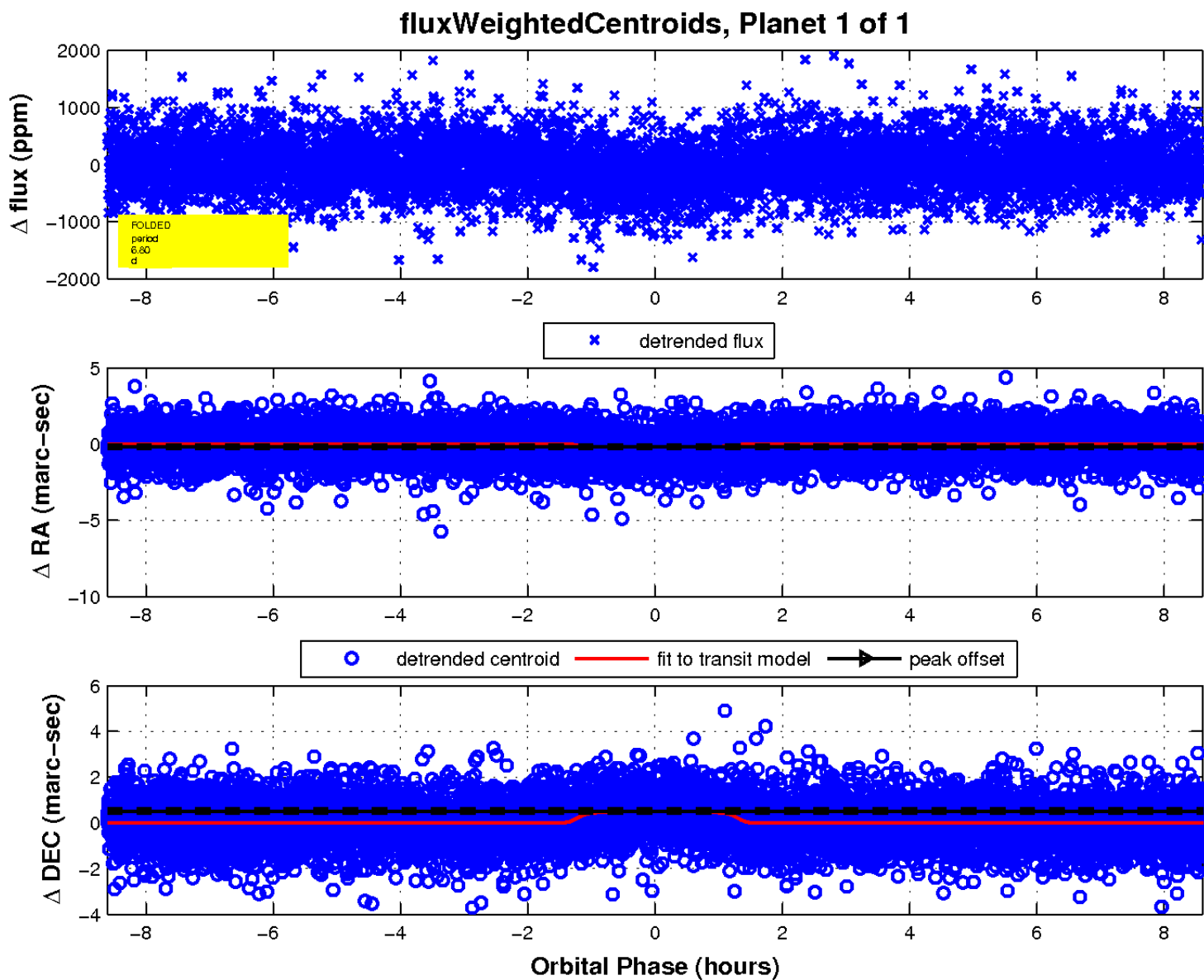
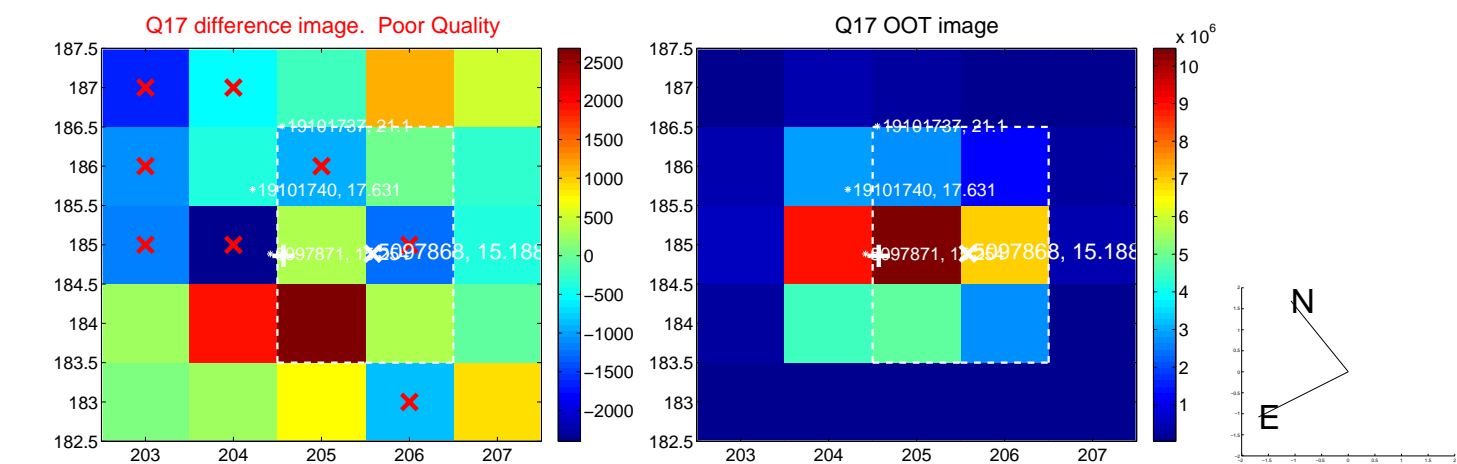
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UKIRT Image

Declination

