

KIC 008585472

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})
008585472-01	OBS	No	0.565819	131.947025	23.0	1.140	8.0	5.4	1.83	6723	1.03	28588.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008585472-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

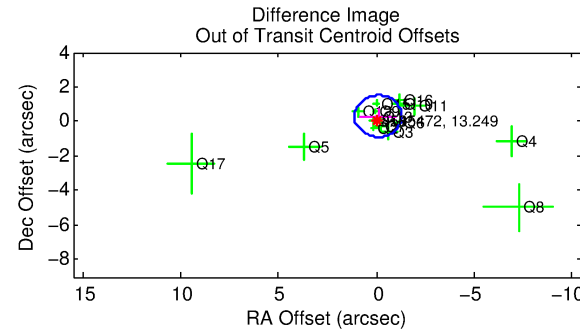
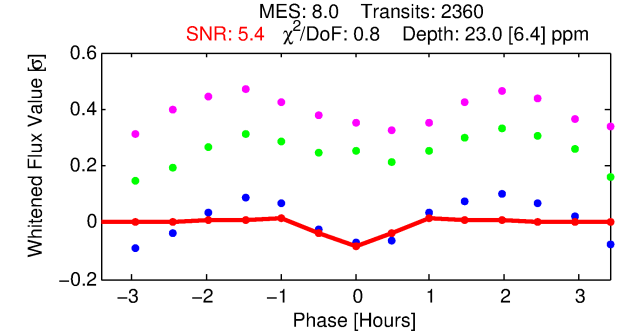
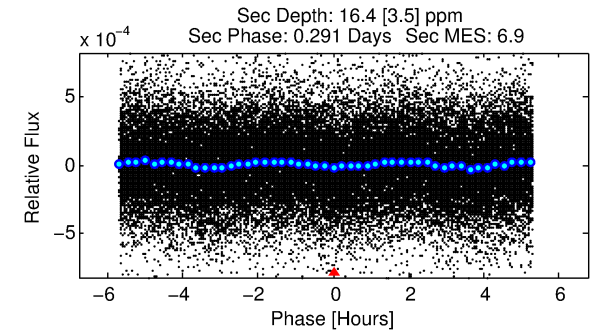
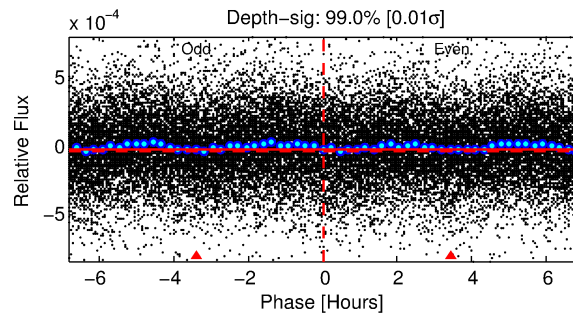
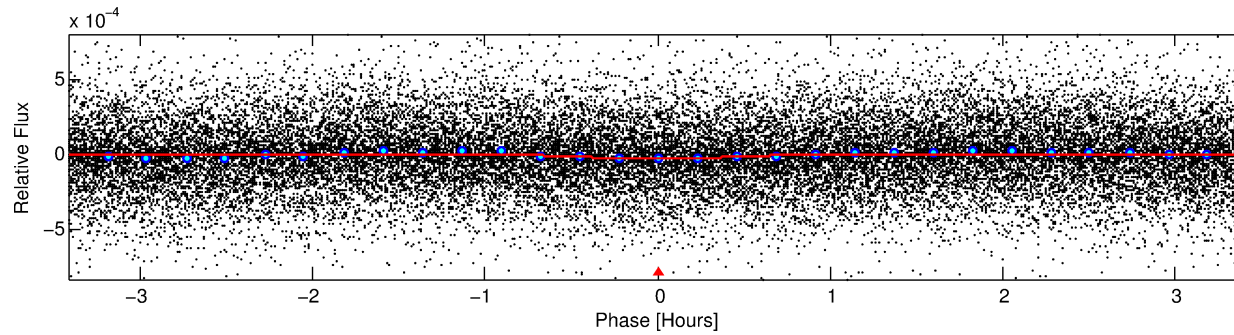
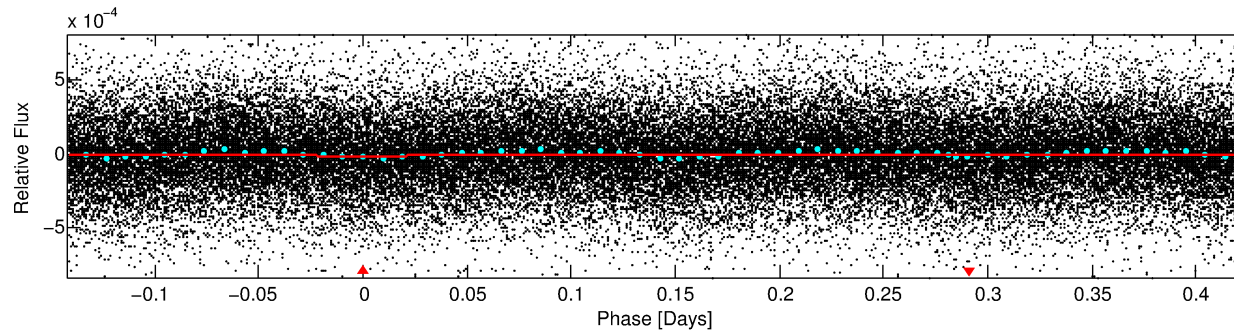
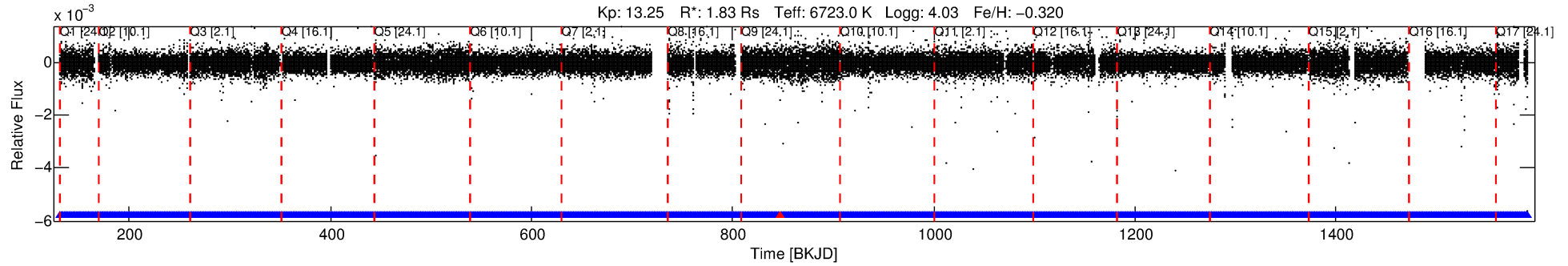
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008585472-01

No Significant Match Found

DV One-Page Summary

KIC: 8585472 Candidate: 1 of 1 Period: 0.566 d



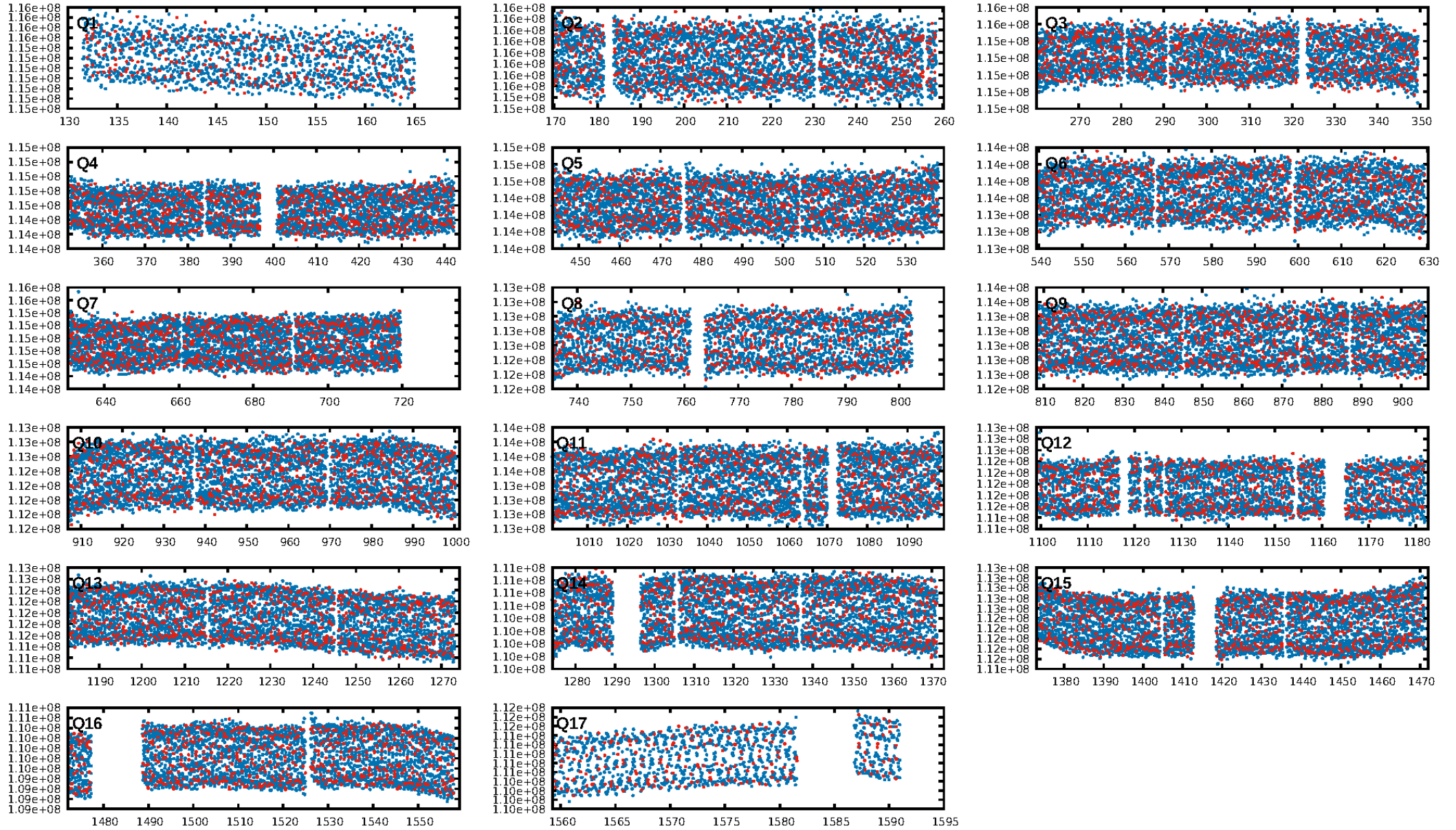
DV Fit Results:

Period = 0.56582 [0.00002] d
Epoch = 131.9470 [0.0030] BKJD
Rp/R* = 0.0051 [0.0018]
a/R* = 1.95 [2.85]
b = 0.90 [0.43]
Seff = 28588.66 [14912.67]
Teq = 3316 [432] K
Rp = 1.03 [0.50] Re
a = 0.0147 [0.0047] AU
Ag = 1.84 [1.65] [0.51 σ]
Teffp = 5974 [1124] K [2.21 σ]

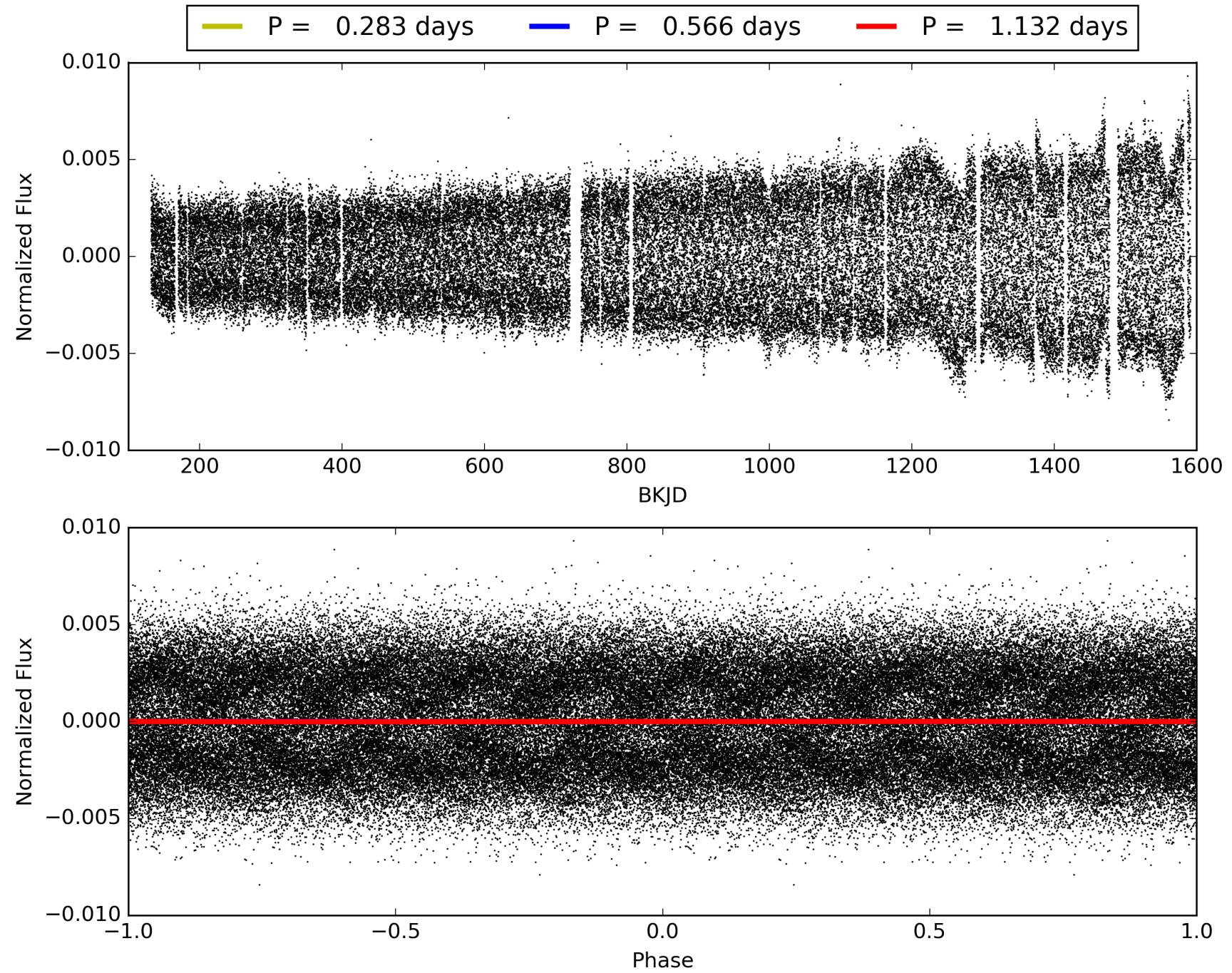
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.05e-13
RollingBand-fgt: 1.00 [2253/2254]
GhostDiagnostic-chr: -1.512
Centroid-sig: 0.1%
Centroid-so: 2.323 arcsec [1.81 σ]
OotOffset-rm: 0.326 arcsec [0.81 σ]
KicOffset-rm: 0.202 arcsec [0.50 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008585472-01, PDC Light Curves

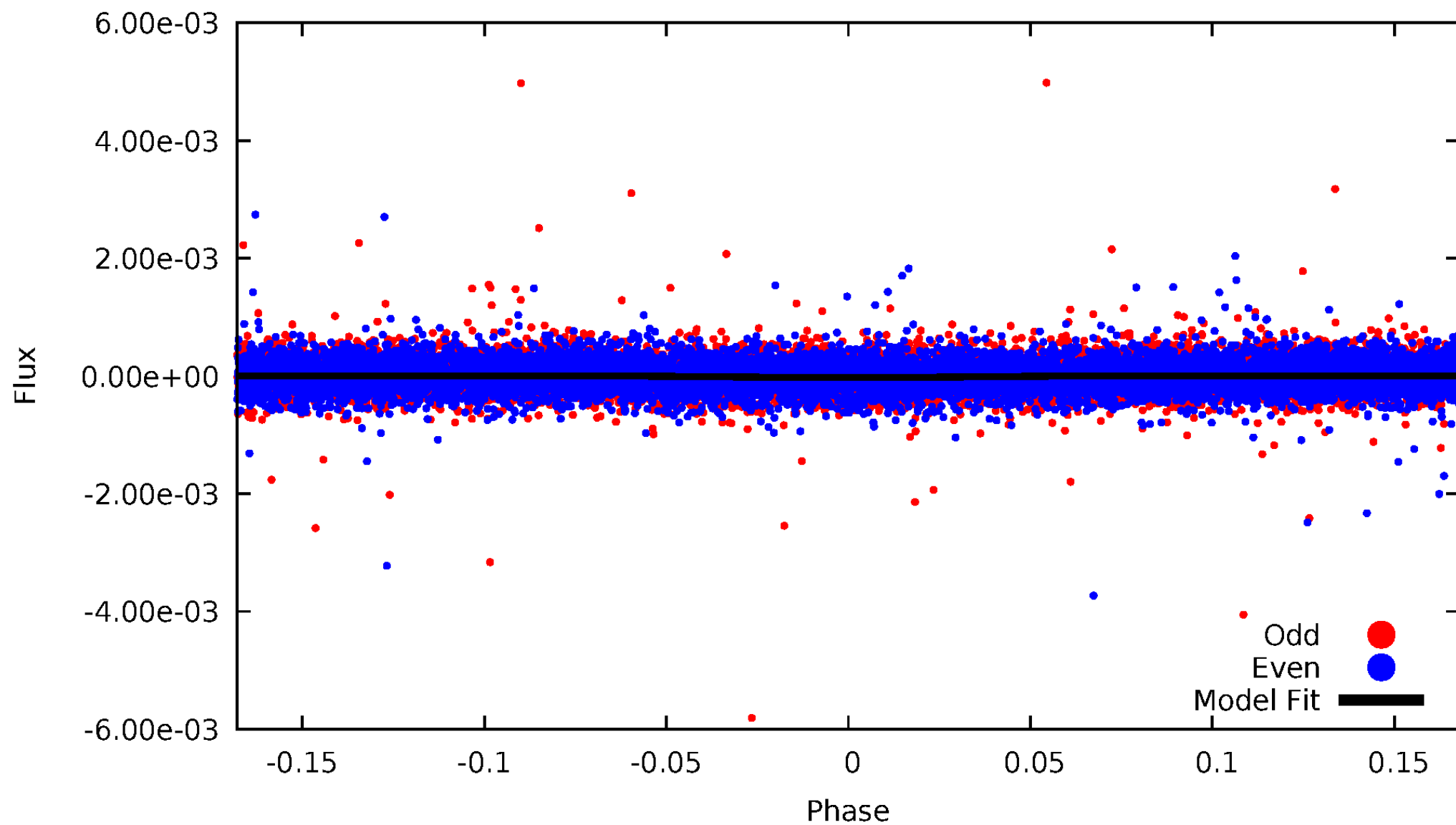


TCE 008585472-01



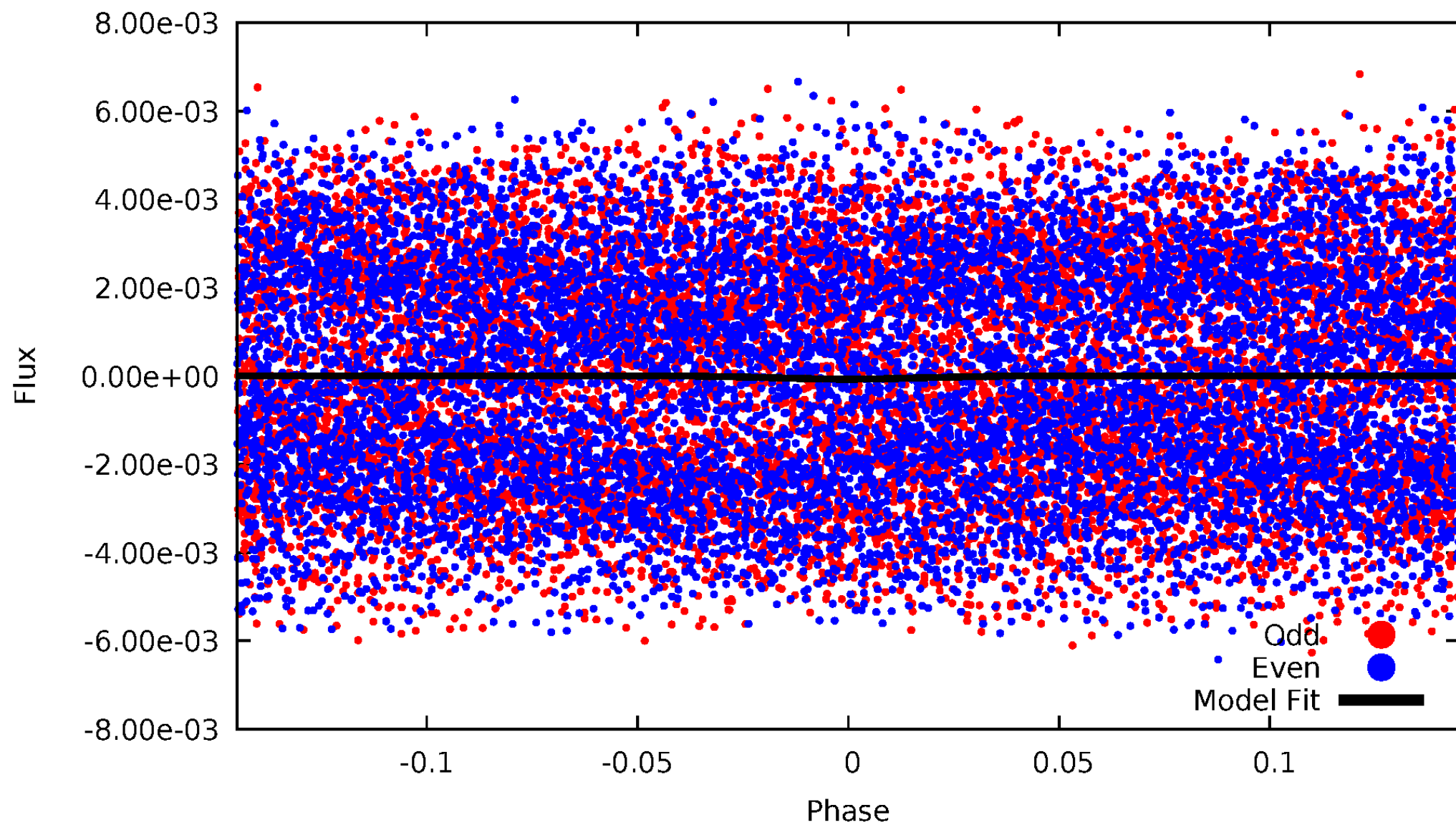
DV Odd/Even

TCE 008585472-01



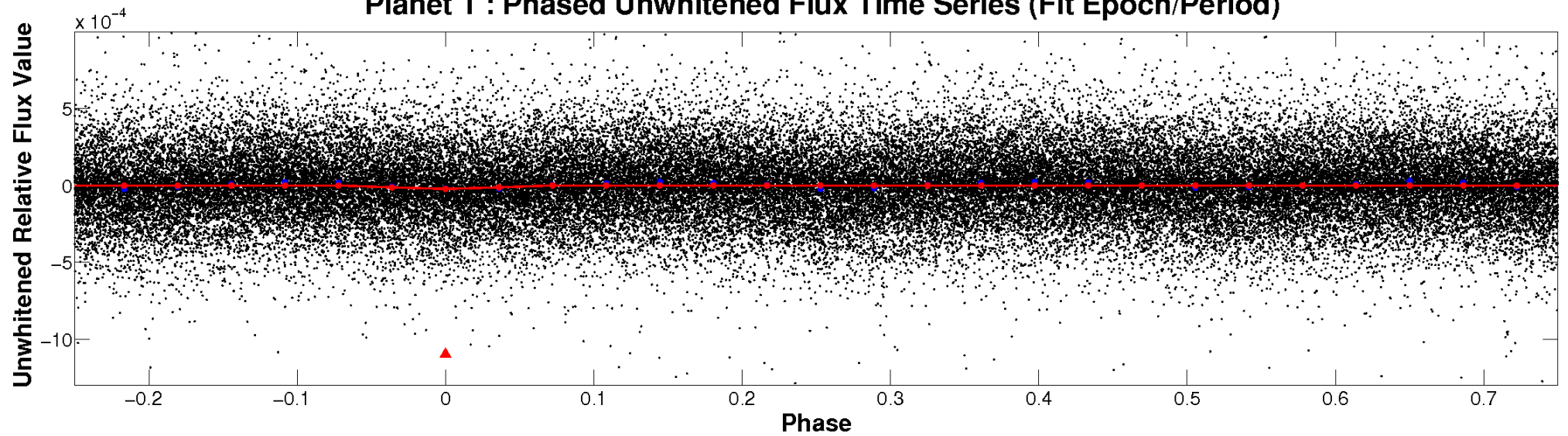
ALT Odd/Even

TCE 008585472-01

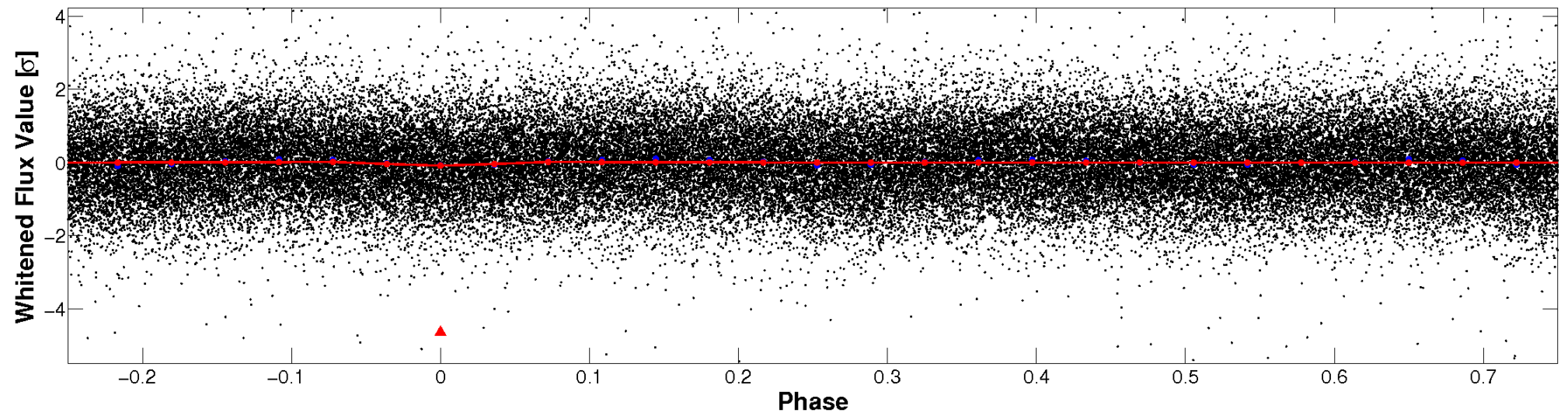


Non-Whitened Vs. Whitened Light Curve

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

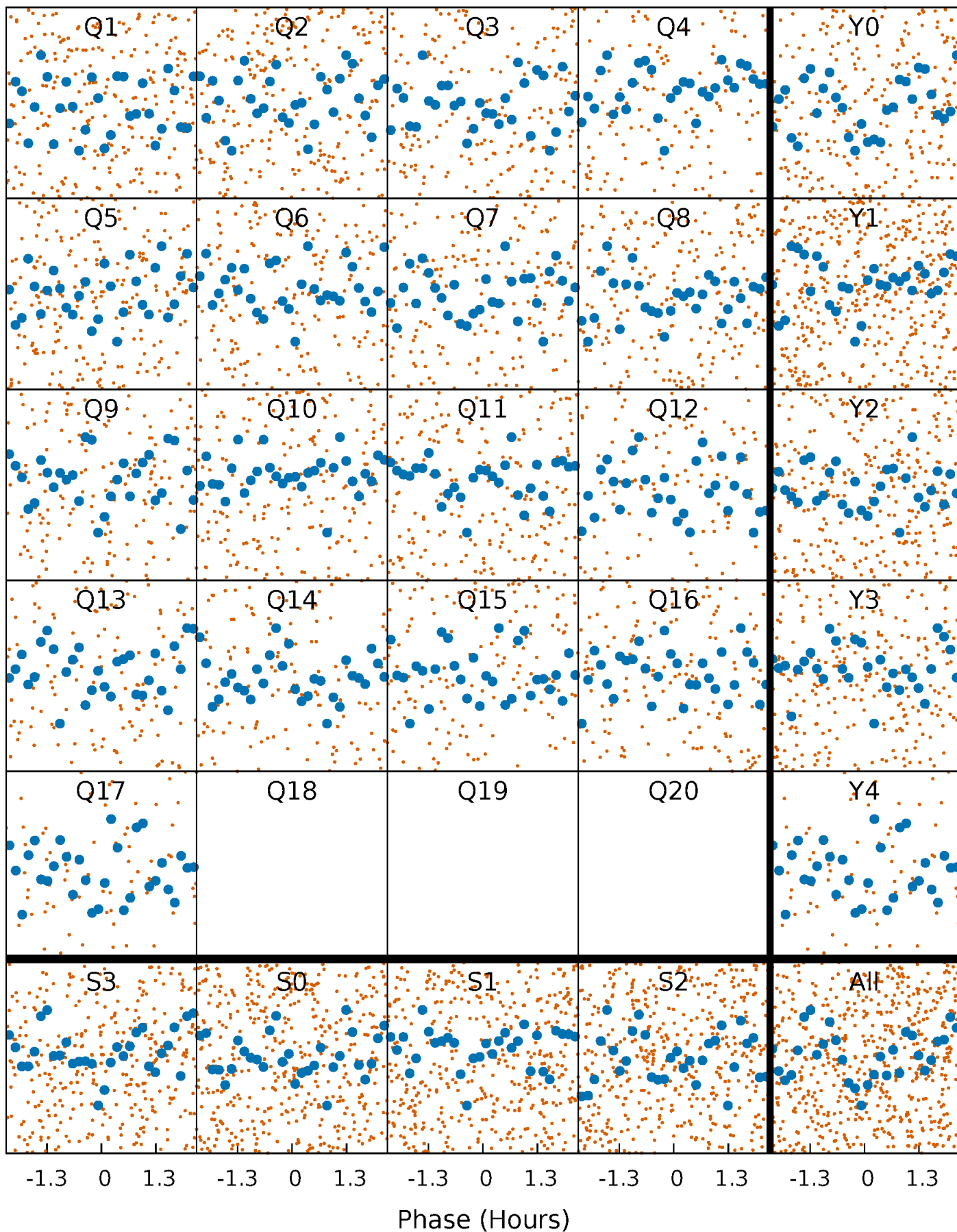


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



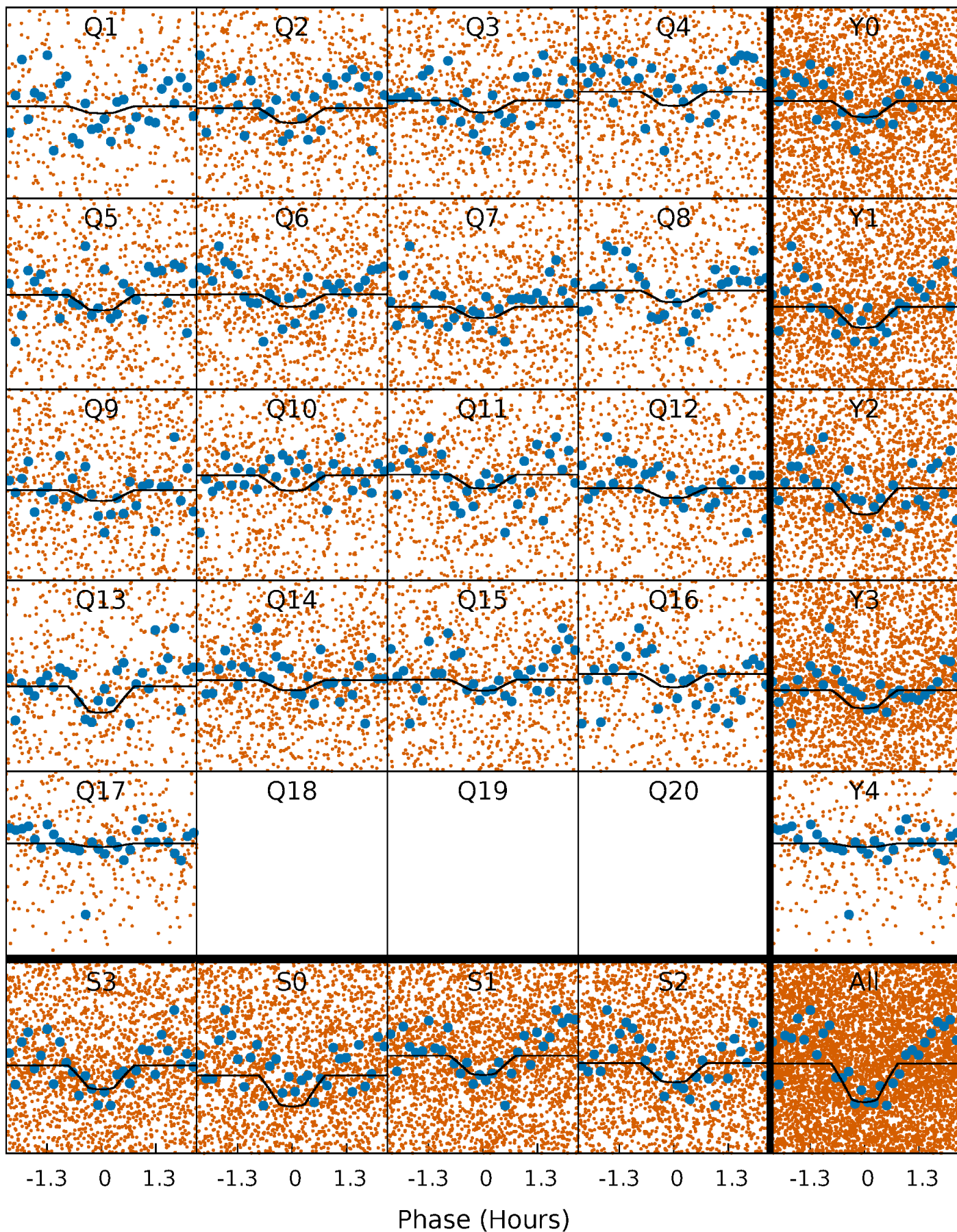
PDC Quarter-Phased Transit Curves

TCE 008585472-01 P= 0.565819 Days $T_0=131.947025$ (BKJD)



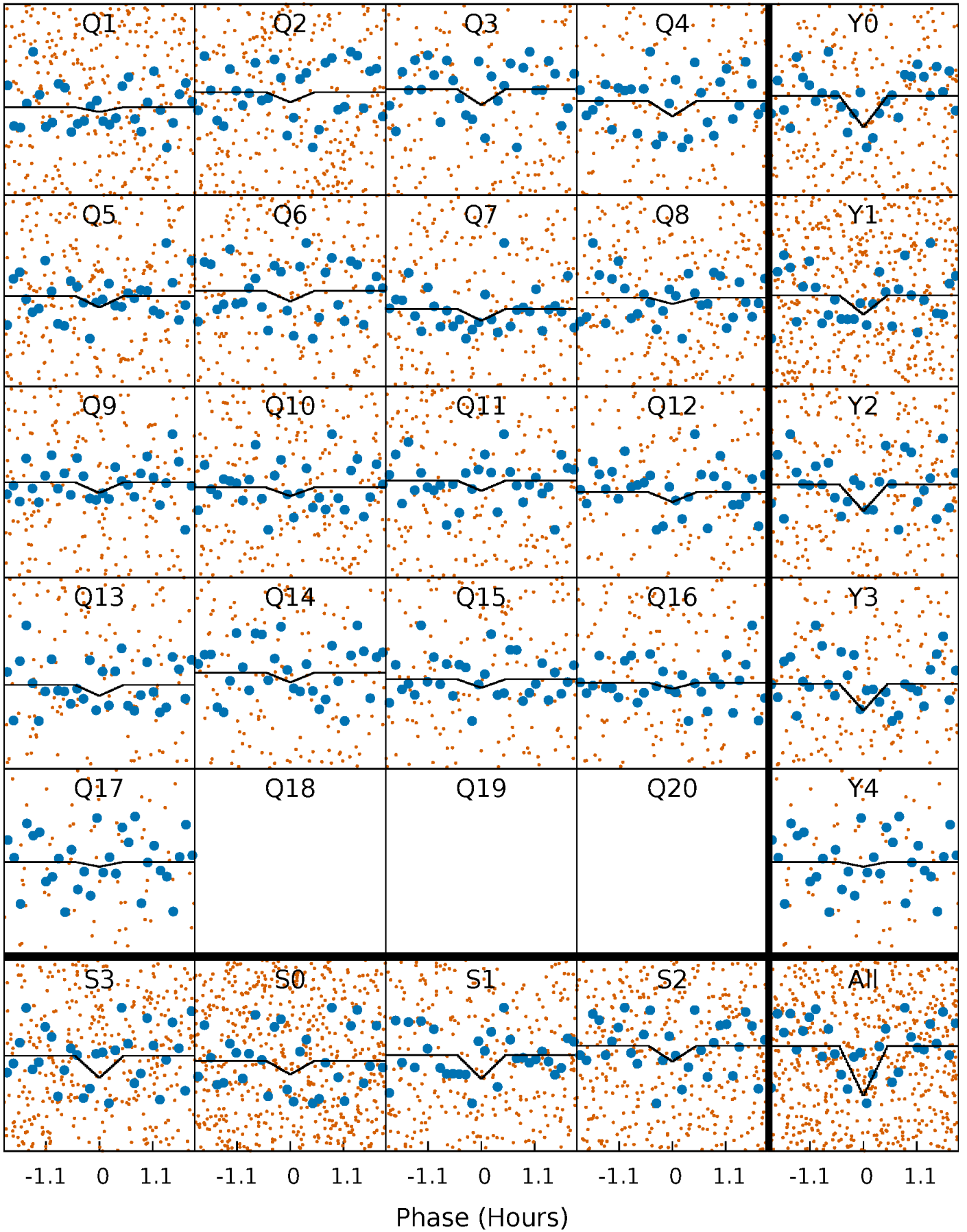
DV Quarter-Phased Transit Curves

TCE 008585472-01 P= 0.565819 Days $T_0=131.947025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

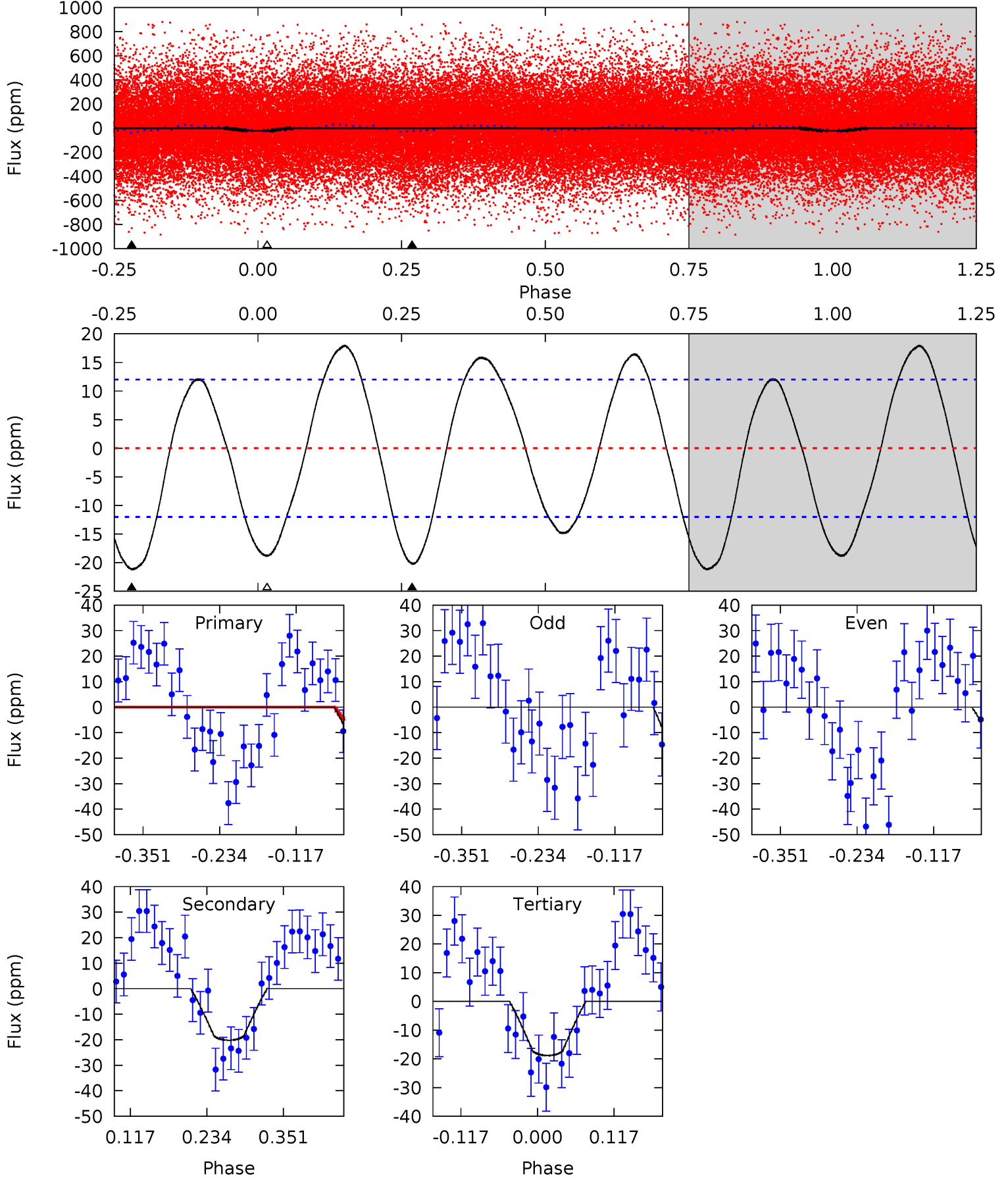
TCE 008585472-01 P= 0.565825 Days $T_0=131.943259$ (BKJD)



DV Model-Shift Uniqueness Test

008585472-01, P = 0.565819 Days, E = 131.381206 Days

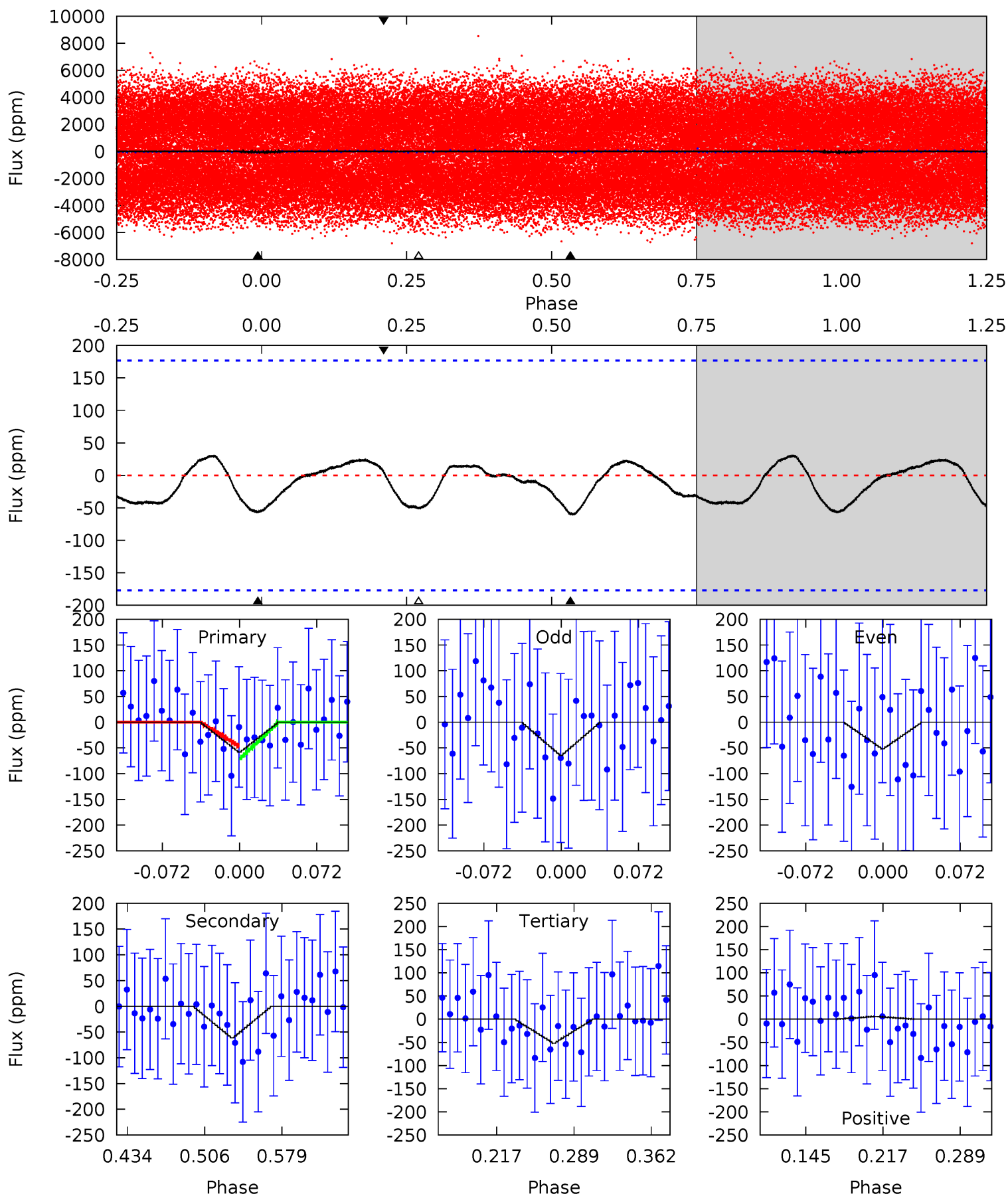
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.00	7.63	7.11	0	4.53	1.57	4.40	0.88	8.00	0.52	7.63	1.41	1.07	0.46	2.31



Alt Model-Shift Uniqueness Test

008585472-01, P = 0.565825 Days, E = 131.377434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.52	1.61	1.36	0.15	4.63	1.80	0.63	0.17	1.37	0.25	1.45	0.17	0.47	0.34	0.32



Stellar Parameters For KIC 008585472

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6723^{+189}_{-236}	$4.030^{+0.293}_{-0.158}$	$-0.320^{+0.250}_{-0.300}$	$1.832^{+0.503}_{-0.615}$	$1.316^{+0.183}_{-0.252}$	$0.302^{+0.596}_{-0.134}$
	+3%/-4%	+7%/-4%	+78%/-94%	+27%/-34%	+14%/-19%	+197%/-44%
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 008585472-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 3	$0.98^{+0.40}_{-0.37}$	4576^{+366}_{-424}	6024^{+1968}_{-956}	$2.470^{+3.701}_{-1.239}$
Alt.	-61 ± 38	$1.72^{+0.48}_{-0.46}$	4564^{+405}_{-412}	6019^{+1337}_{-1496}	$2.395^{+2.491}_{-1.613}$

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 $A_{obs} \gg 1.0$

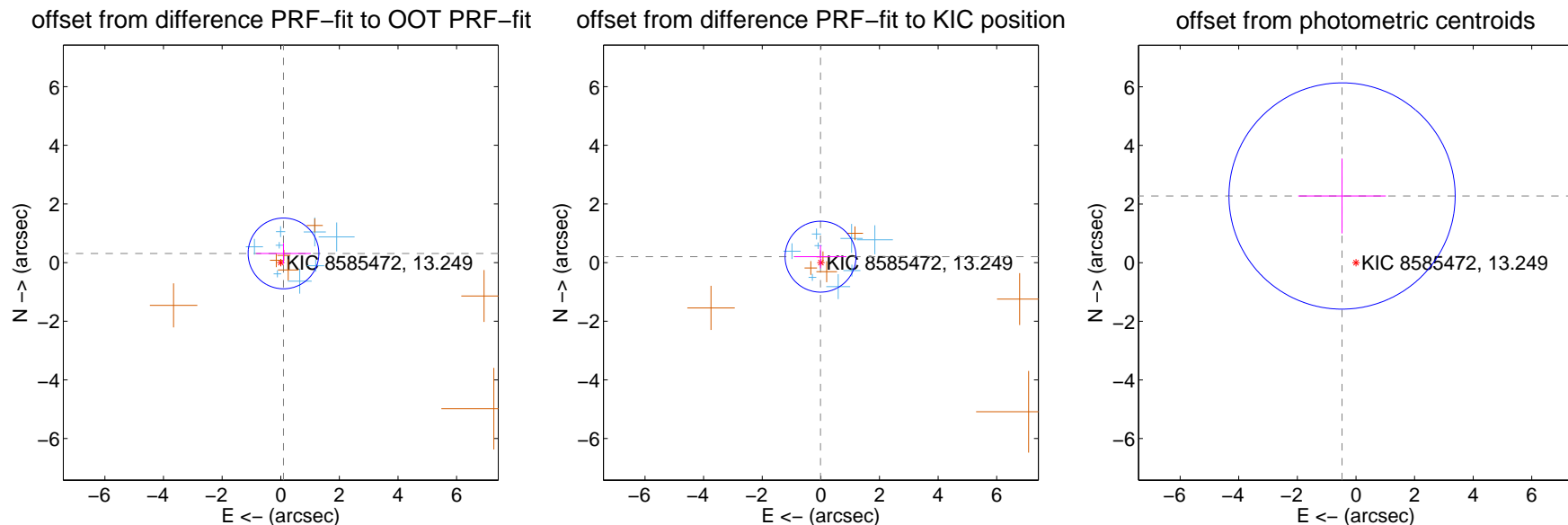
DV Centroid Data

Supplemental centroid analysis for 008585472-01. Kepler magnitude: 13.25. Transit SNR 5.43

There are 8 quarters with good PRF difference image offsets

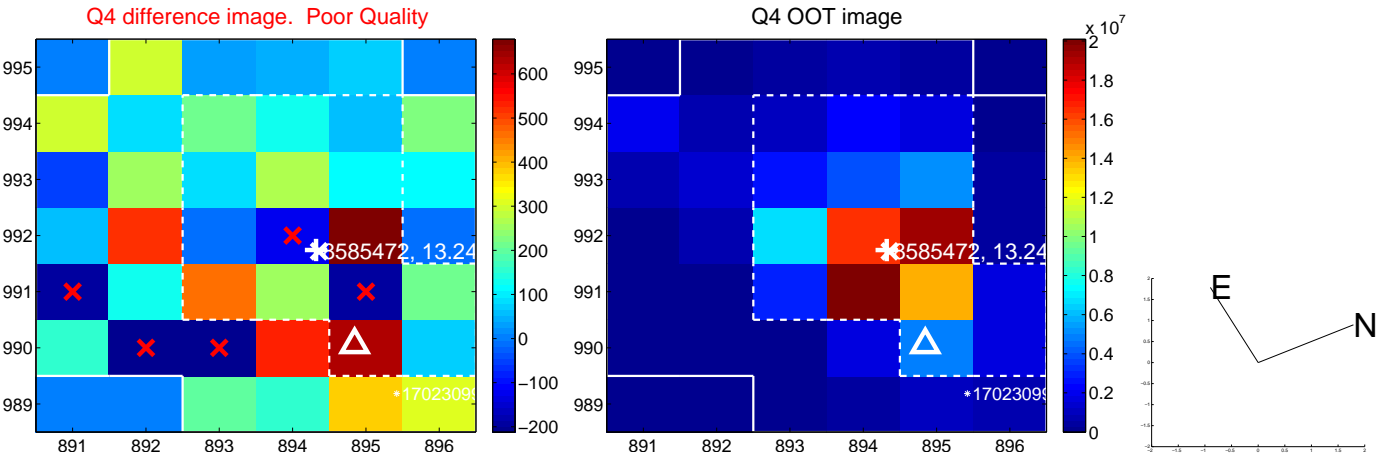
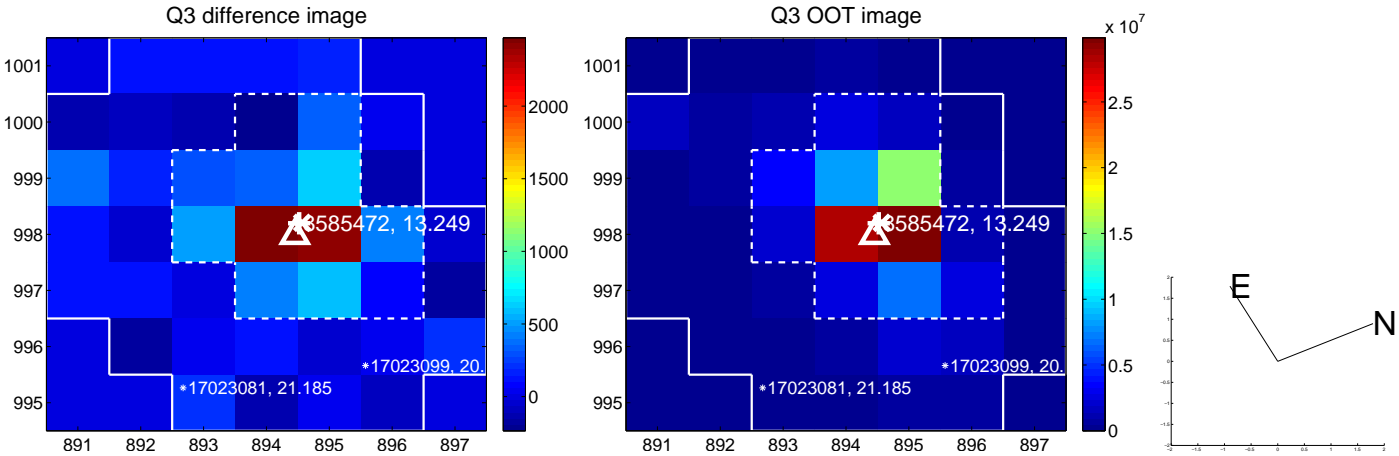
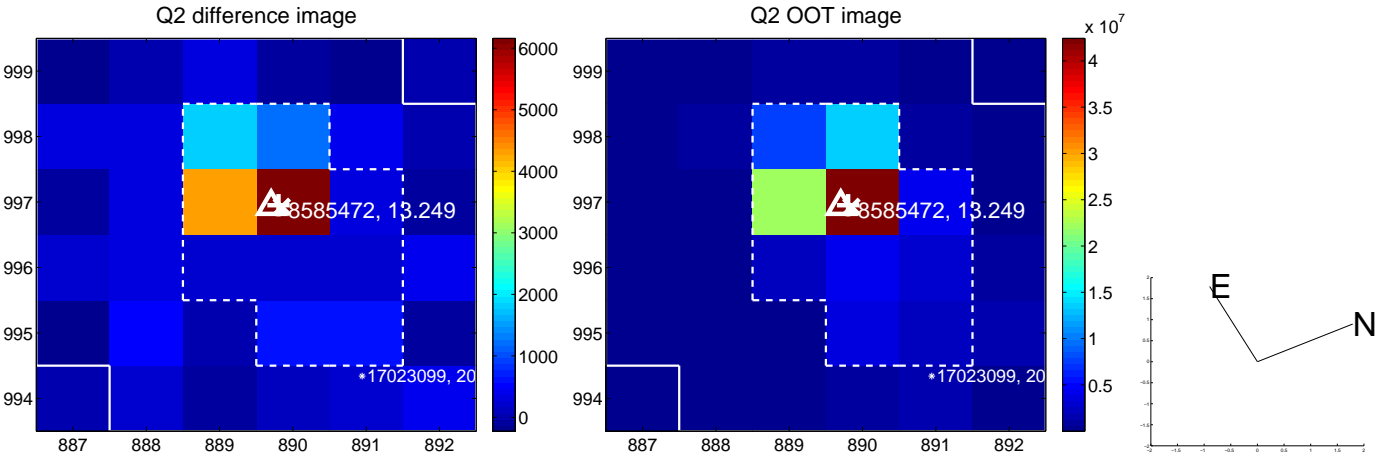
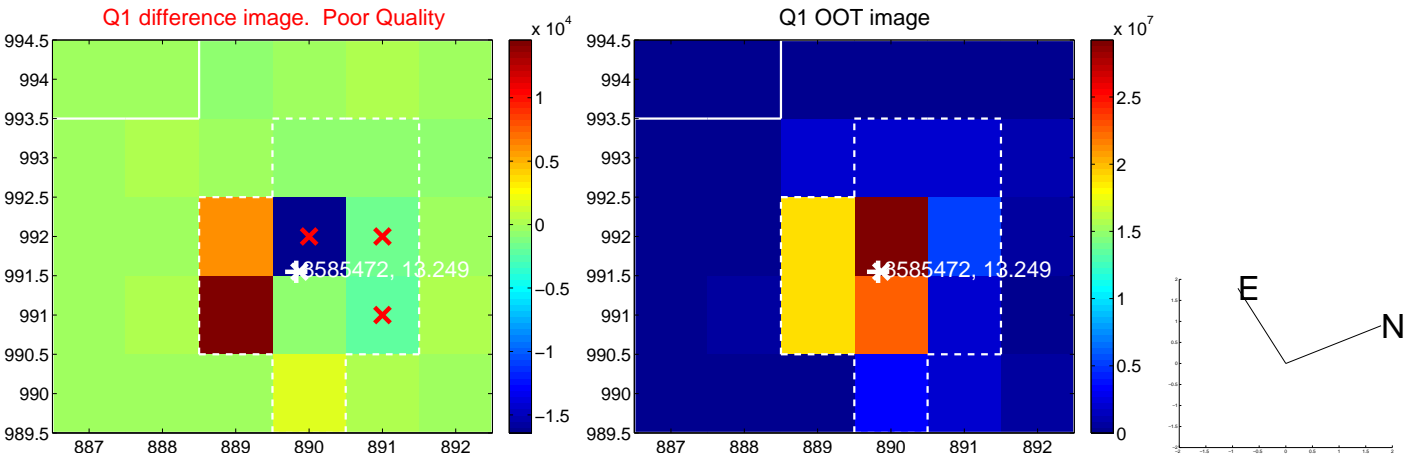
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.326 ± 0.402	0.81	-0.094 ± 0.933	0.312 ± 0.352
PRF-fit source offset from KIC position	0.202 ± 0.403	0.50	0.011 ± 0.886	0.201 ± 0.393
photometric centroid source offset	2.32 ± 1.29	1.81	0.47 ± 1.50	2.27 ± 1.28

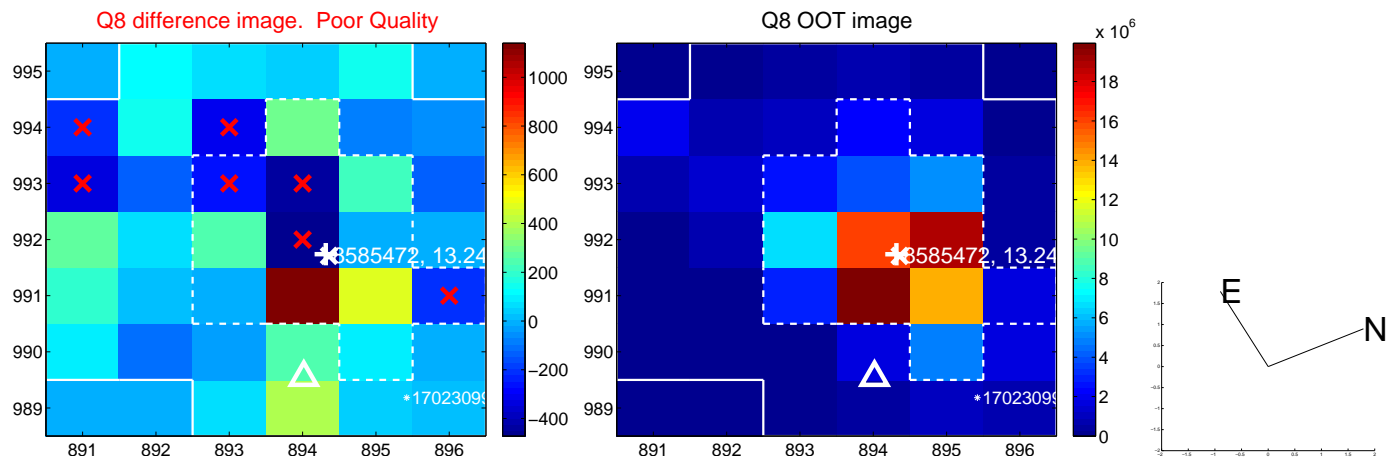
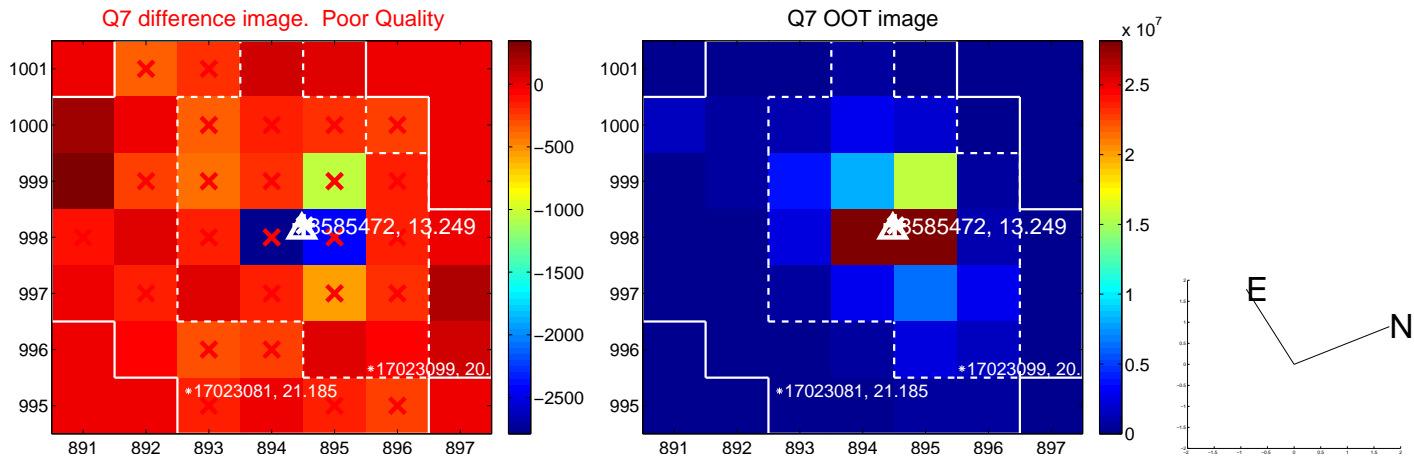
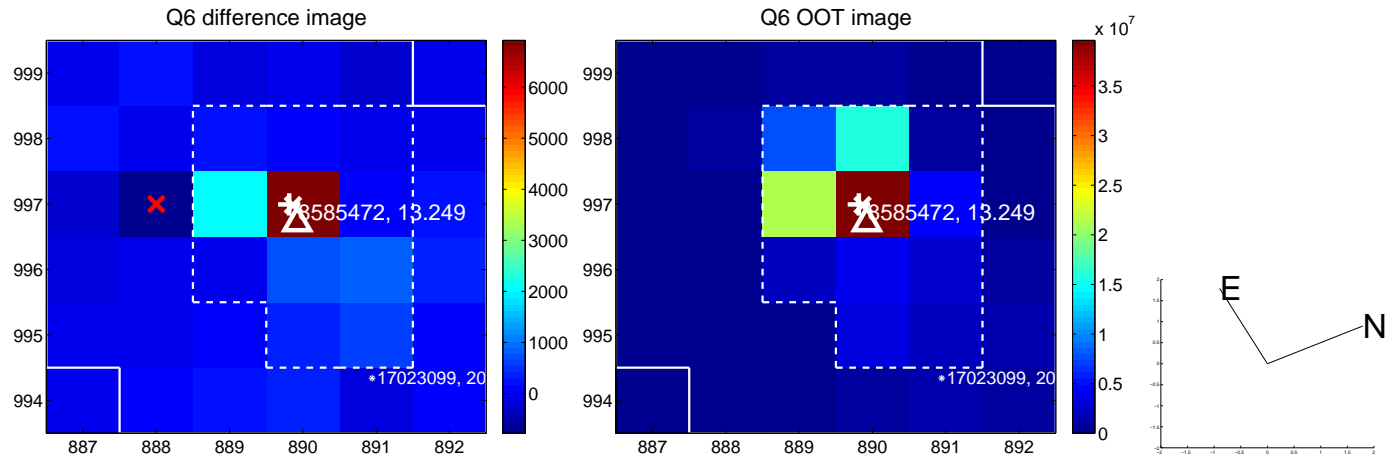
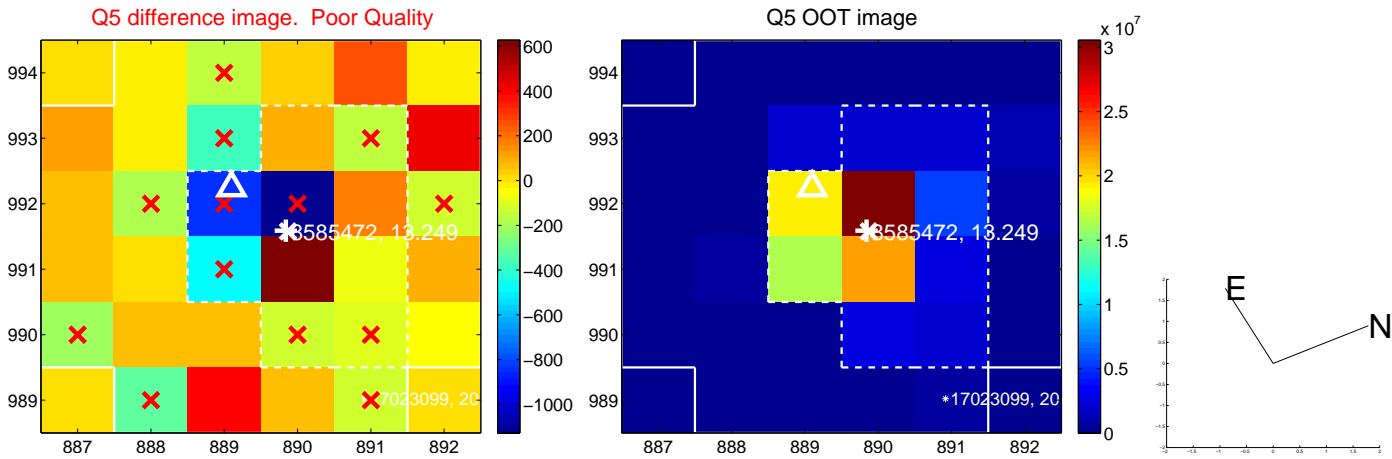


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

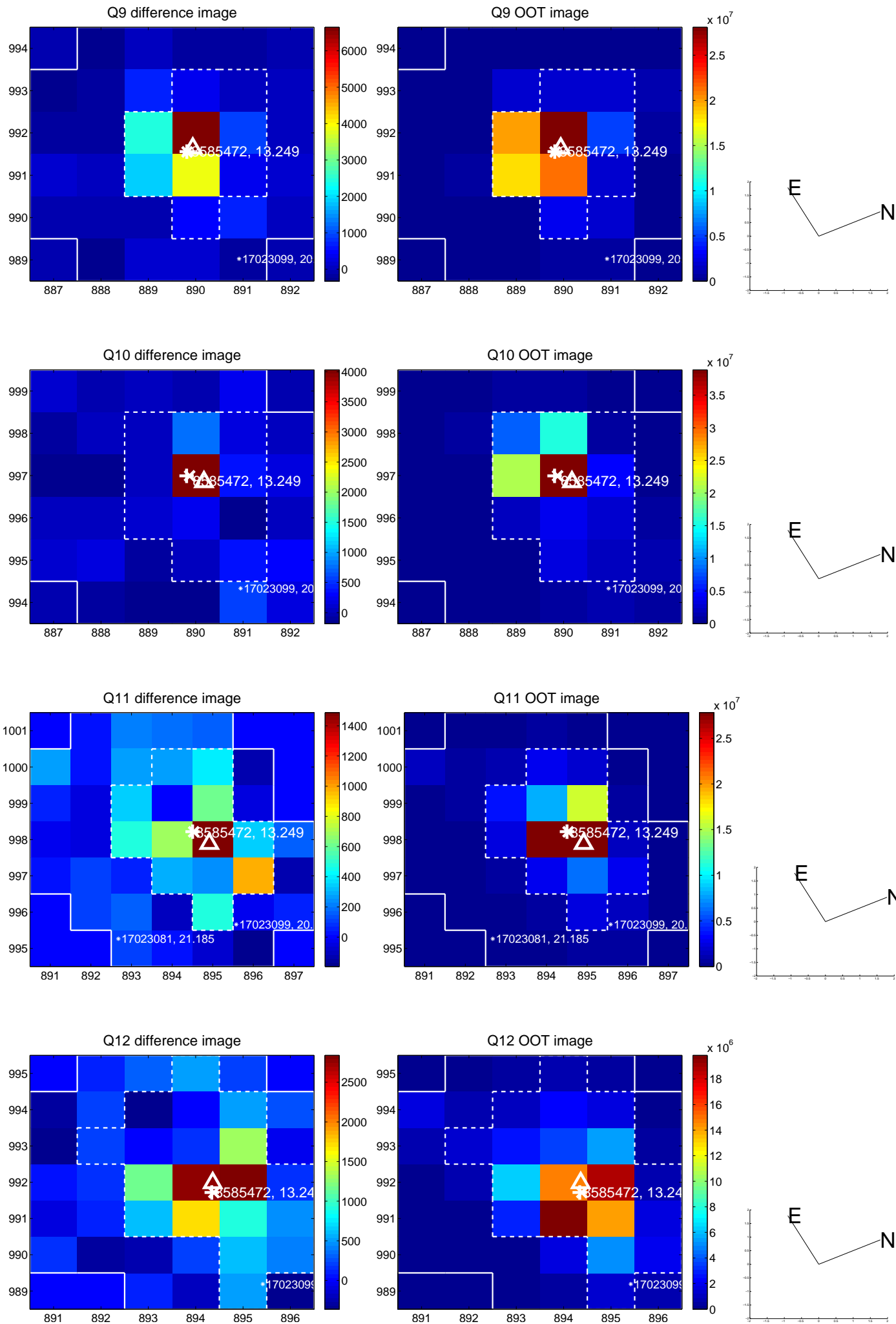
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



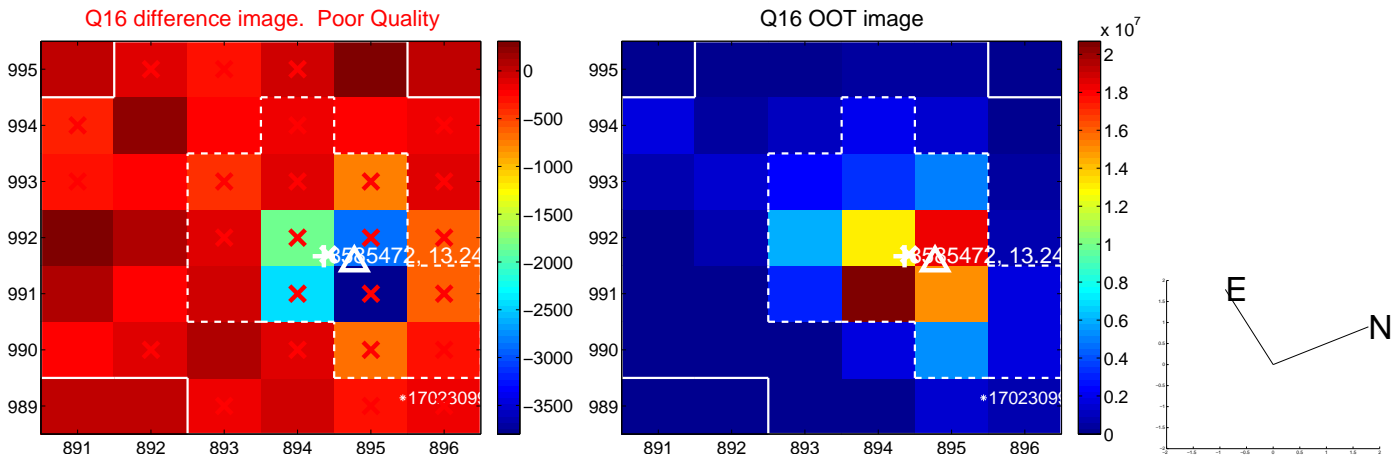
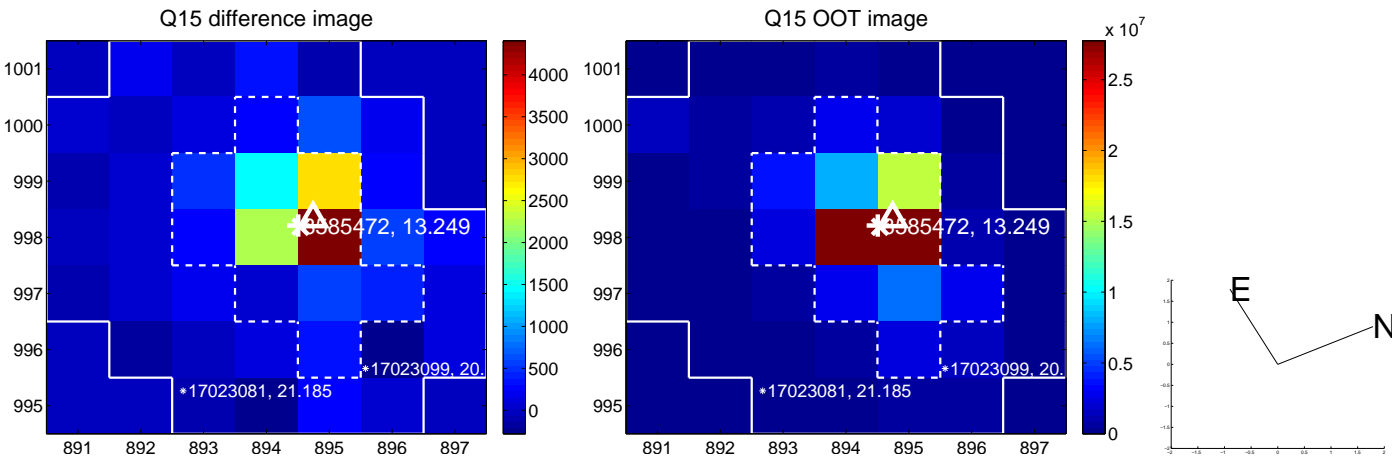
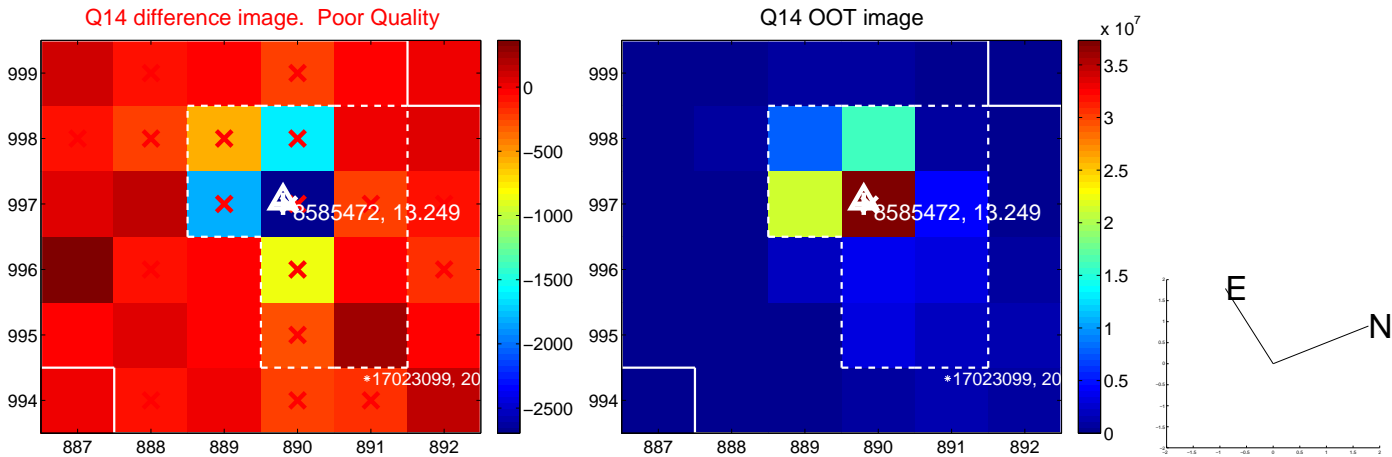
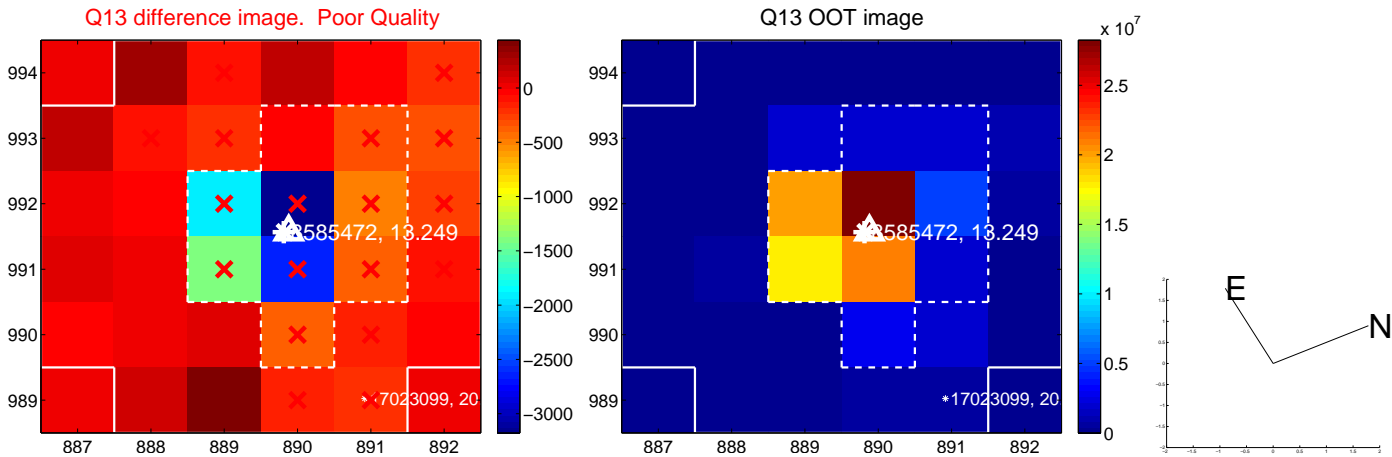
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



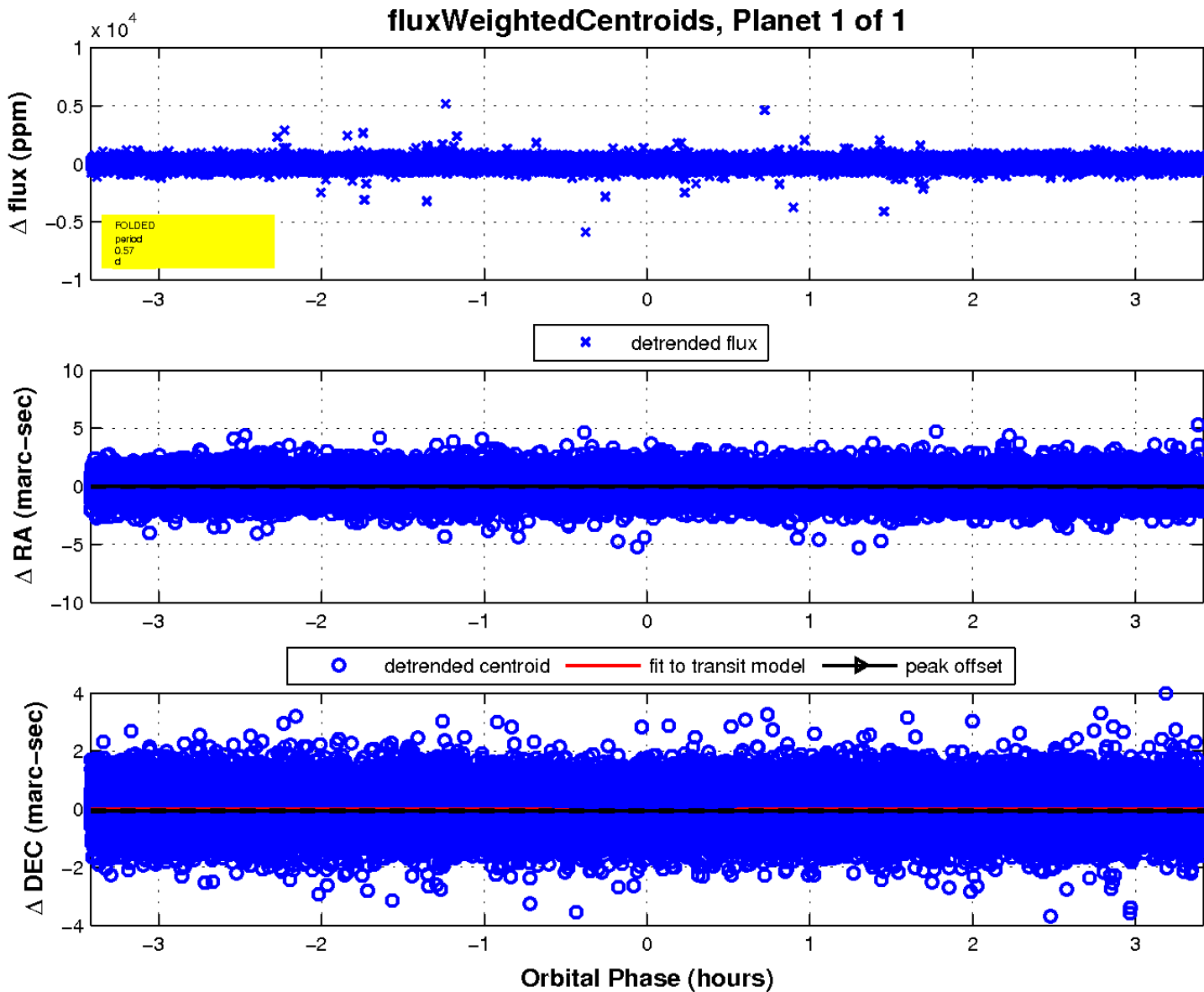
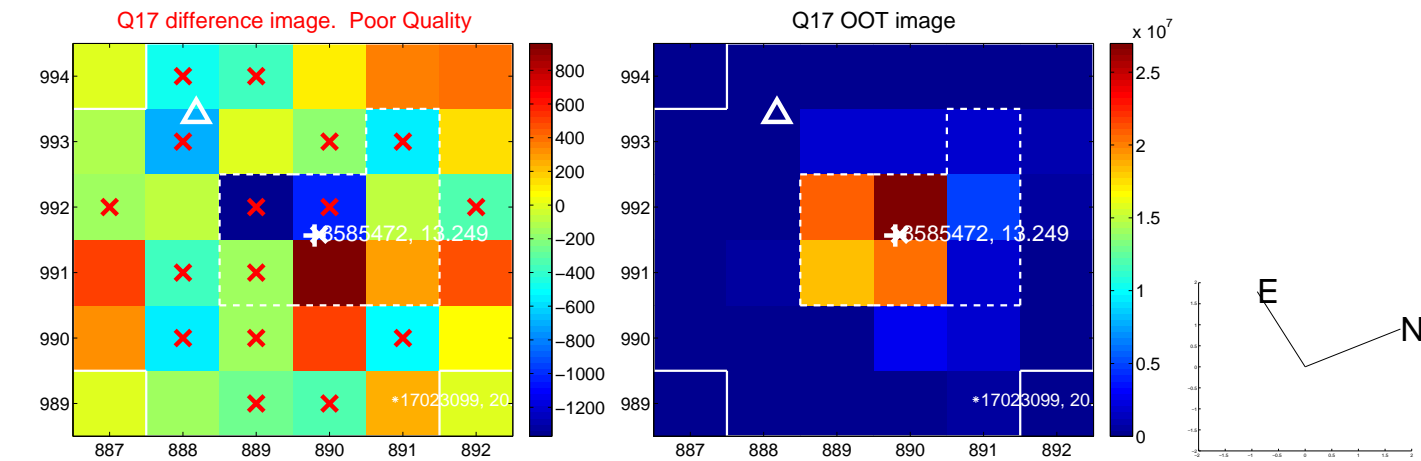
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

