

KIC 005380812

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})
005380812-01	OBS	No	0.795027	132.288479	20.5	2.667	8.2	6.0	2.64	6801	1.39	32815.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005380812-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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 005380812-01

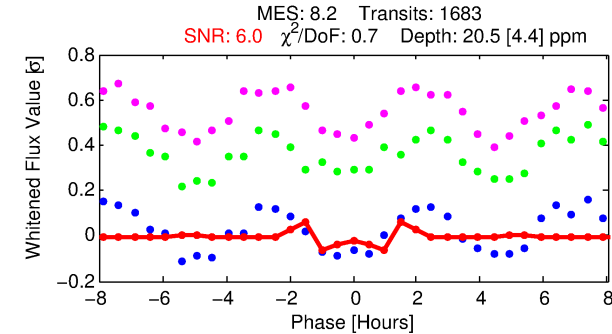
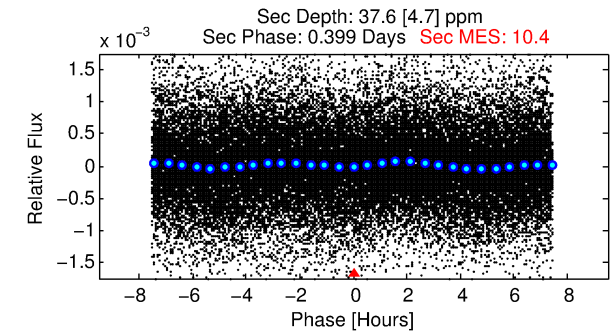
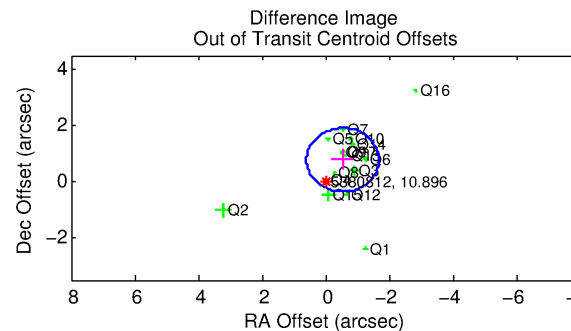
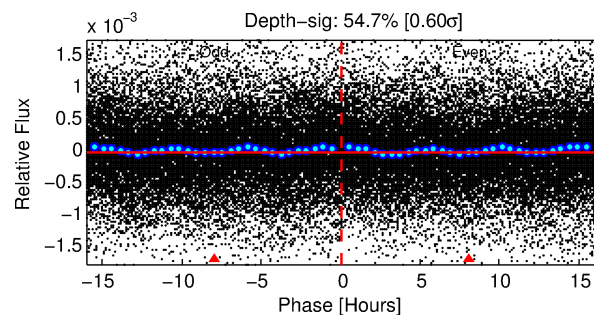
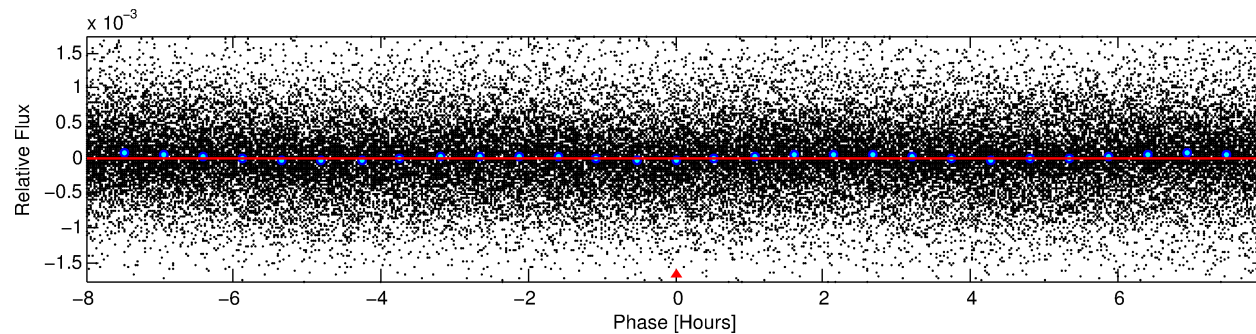
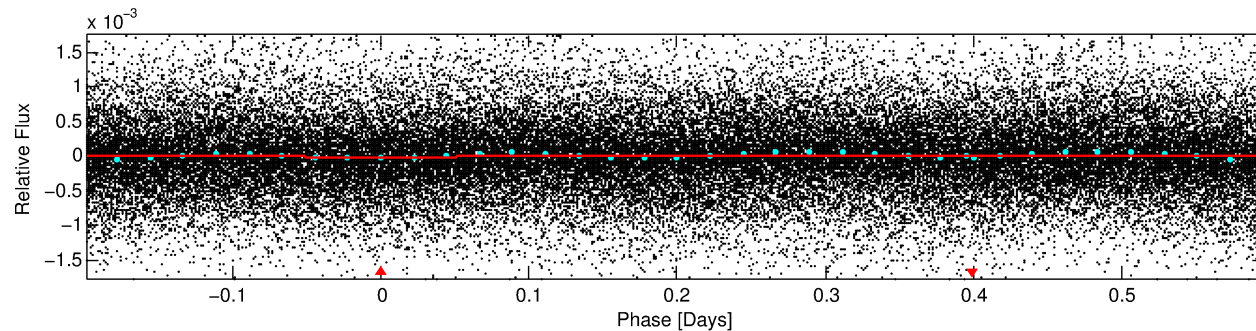
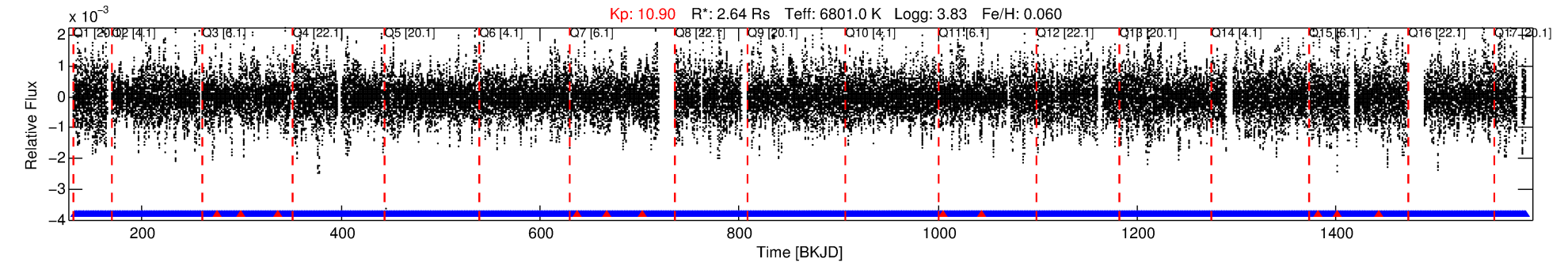
No Significant Match Found

DV One-Page Summary

KIC: 5380812 Candidate: 1 of 1 Period: 0.795 d

KOI: K06570 Corr: No Ephemeris Match

Kp: 10.90 R*: 2.64 Rs Teff: 6801.0 K Logg: 3.83 Fe/H: 0.060



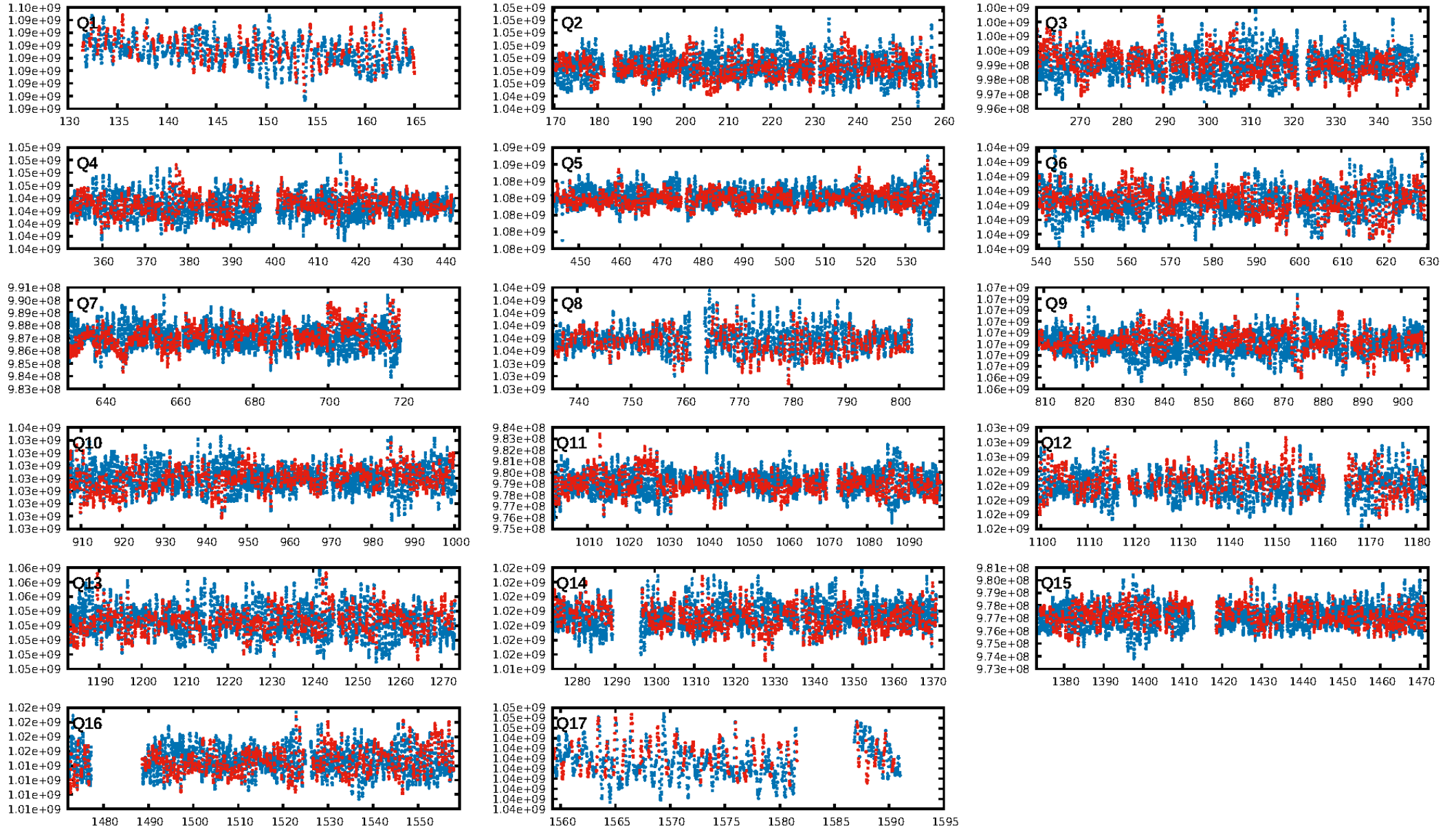
DV Fit Results:

Period = 0.79503 [0.00002] d
Epoch = 132.2885 [0.0018] BKJD
Rp/R* = 0.0048 [0.0010]
a/R* = 1.38 [0.72]
b = 0.90 [0.23]
Seff = 32815.80 [21706.56]
Teq = 3432 [568] K
Rp = 1.39 [0.66] Re
a = 0.0202 [0.0081] AU
Ag = 4.34 [3.39] [0.99σ]
Teffp = 7657 [913] K [3.93σ]

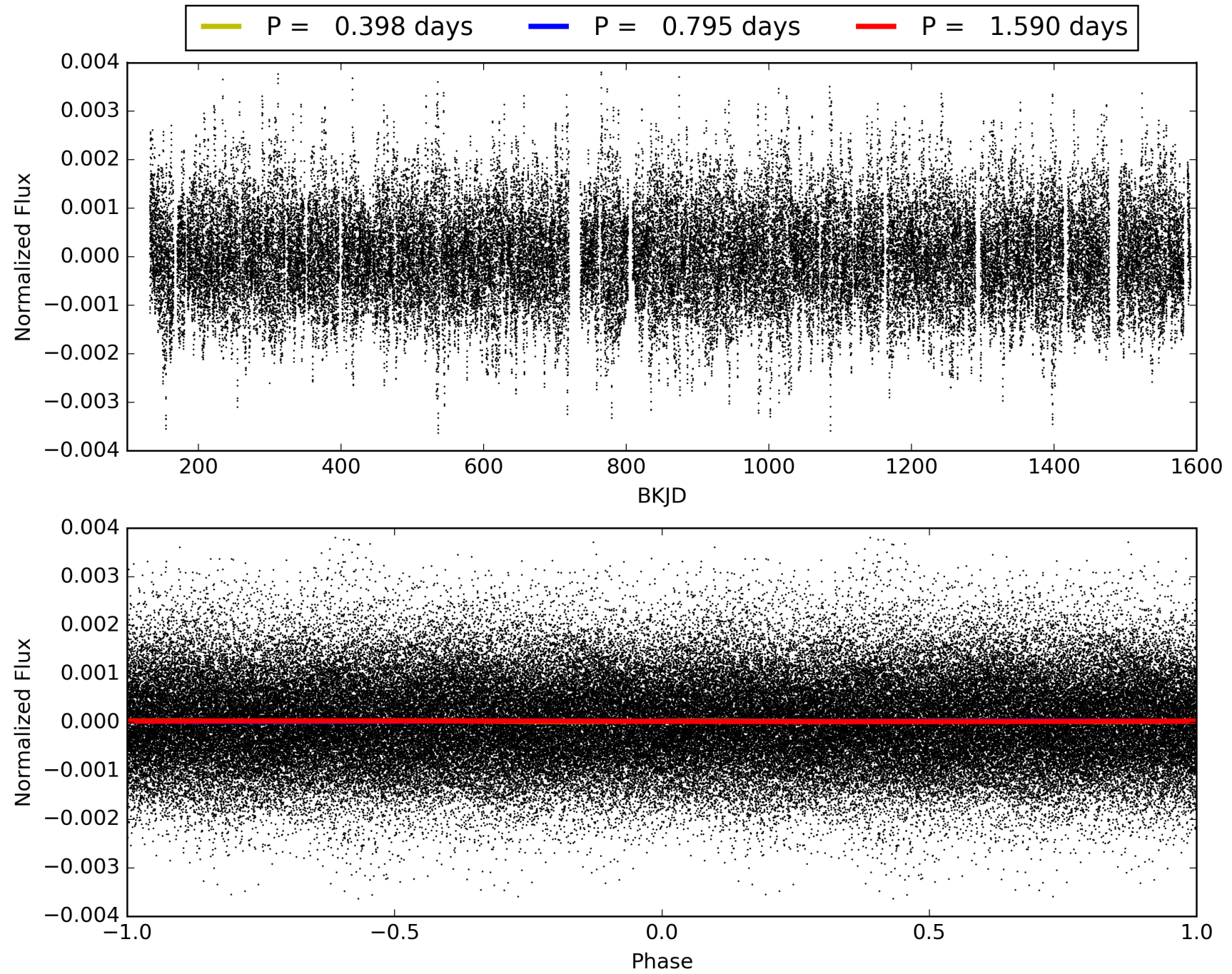
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.56e-17
RollingBand-fgt: 0.99 [1595/1606]
GhostDiagnostic-chr: -8.917
Centroid-sig: 28.4%
Centroid-so: 0.520 arcsec [0.85σ]
OotOffset-rm: 0.941 arcsec [2.49σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-rm: 1.259 arcsec [3.43σ]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005380812-01, PDC Light Curves

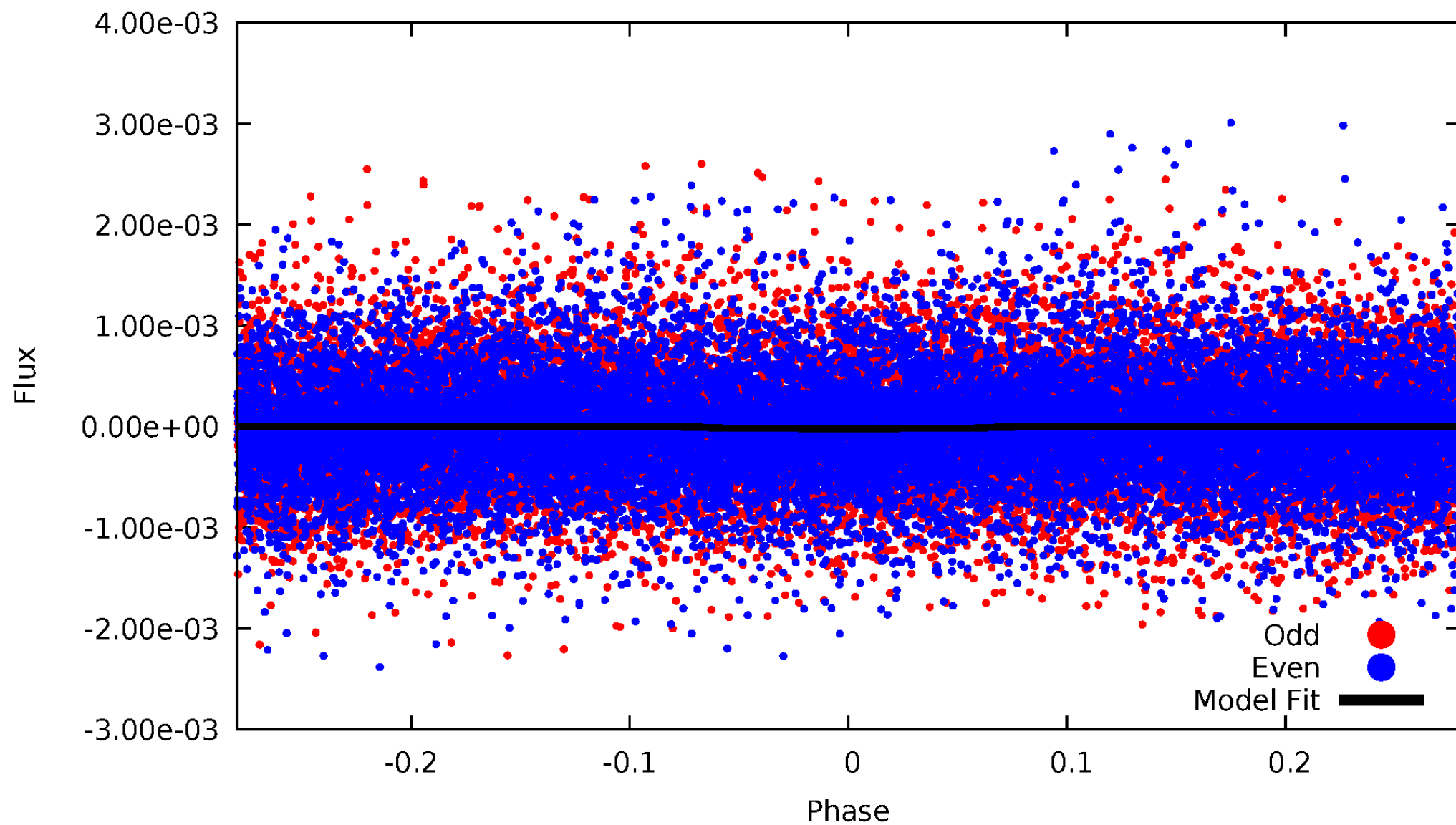


TCE 005380812-01



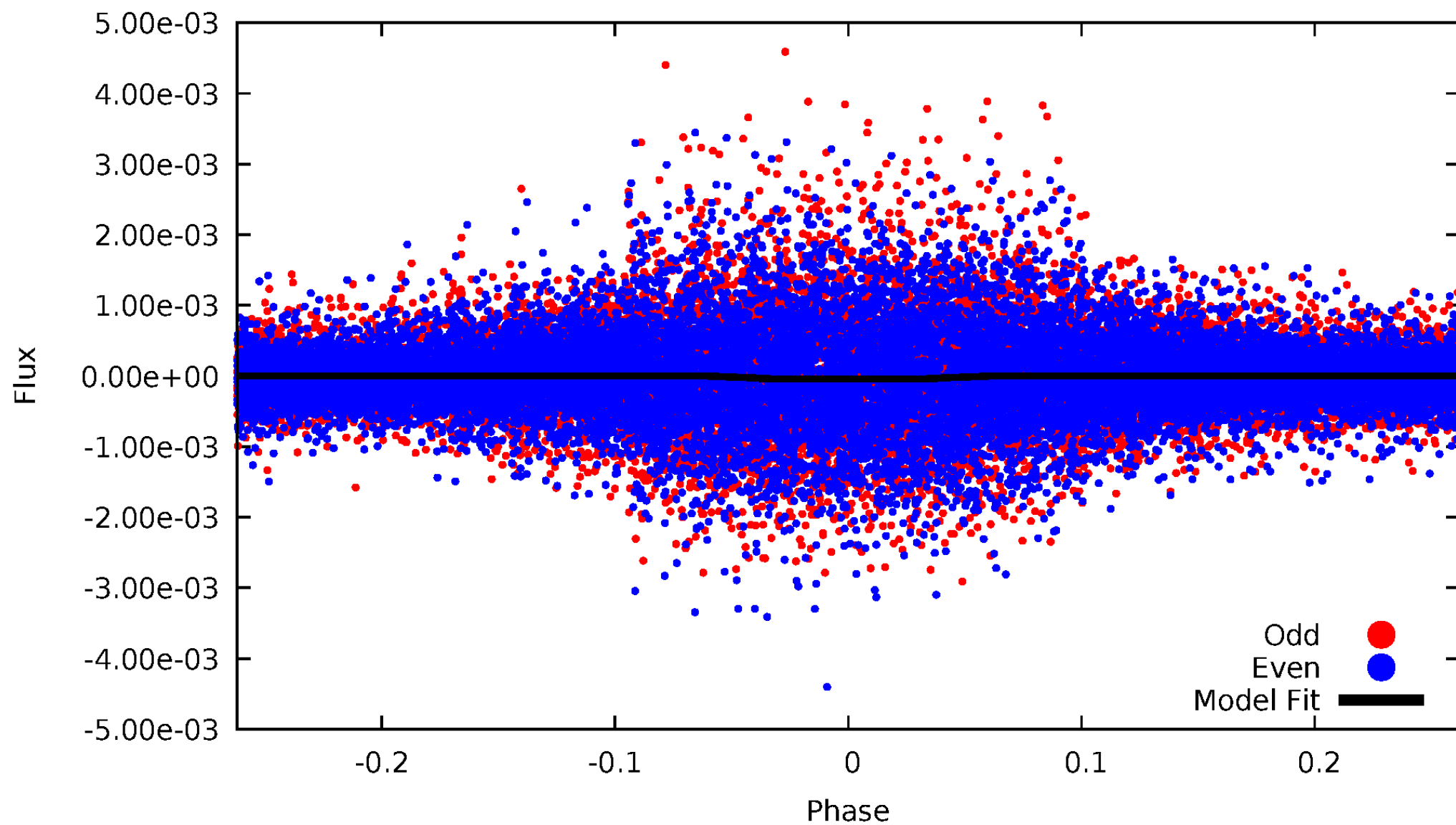
DV Odd/Even

TCE 005380812-01



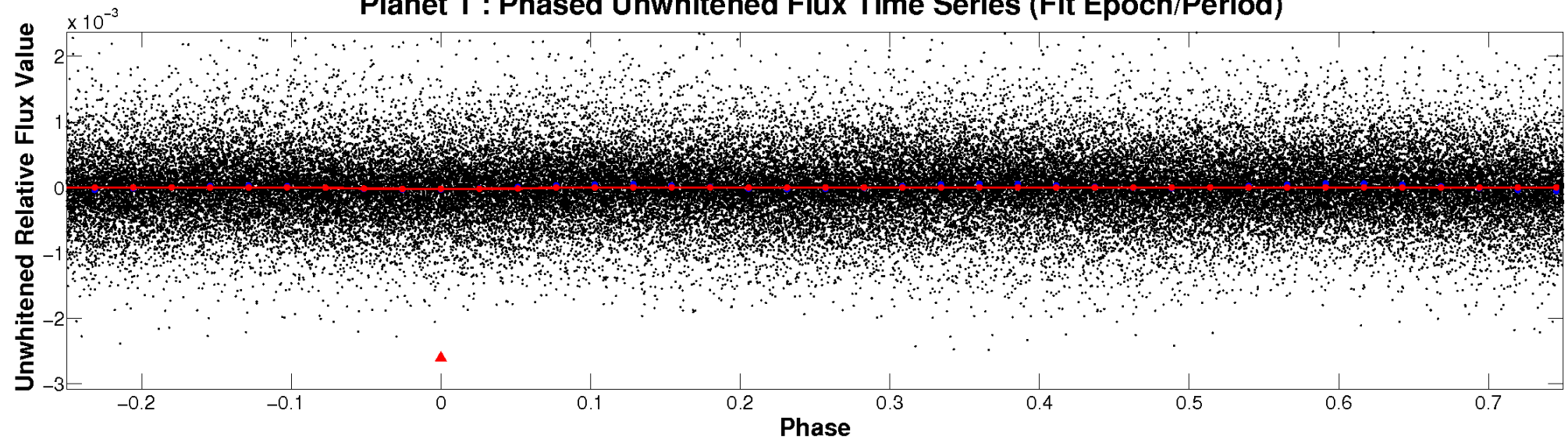
ALT Odd/Even

TCE 005380812-01

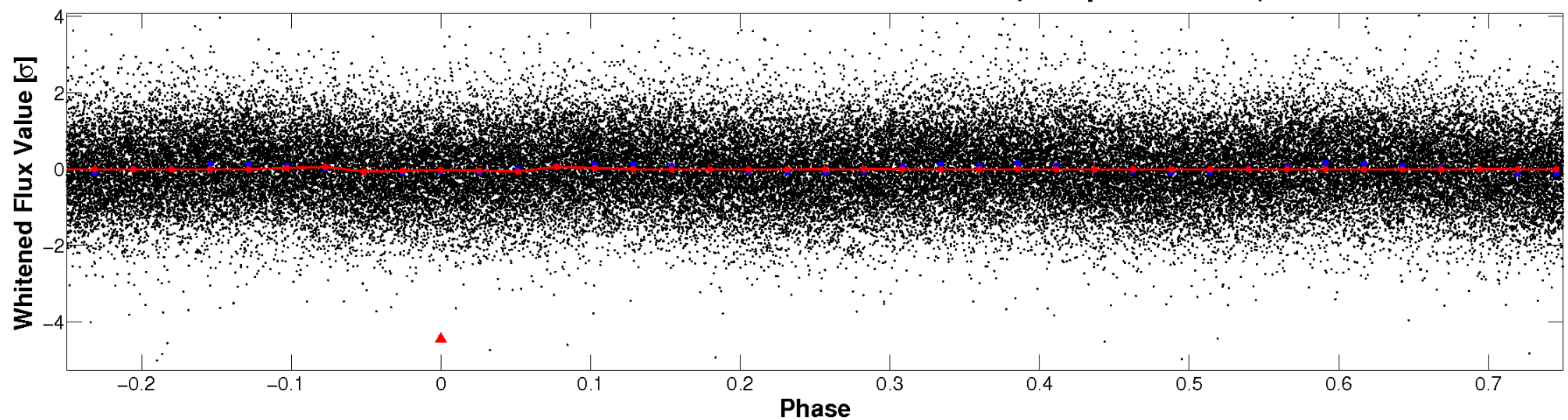


Non-Whitened Vs. Whitened Light Curve

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

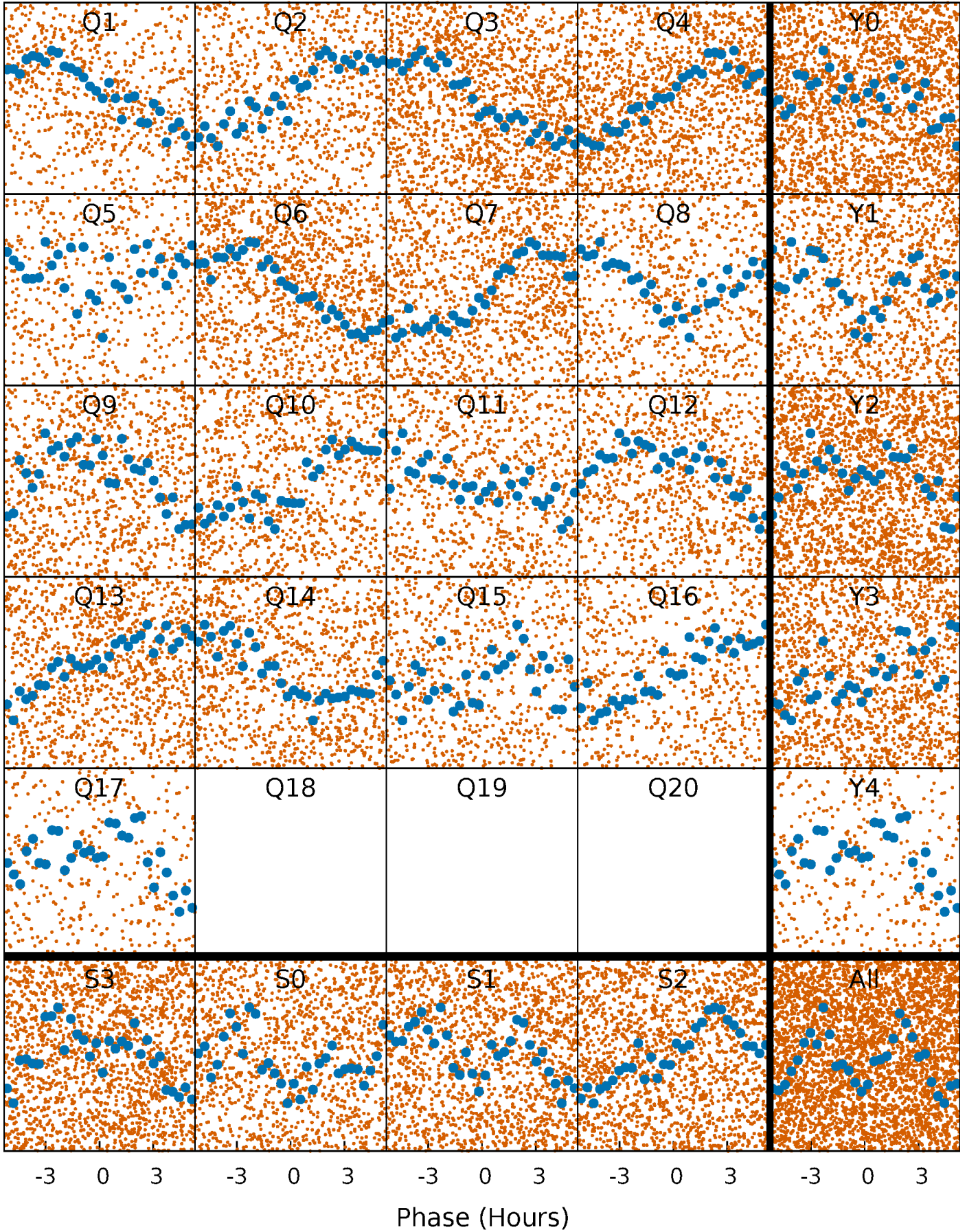


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



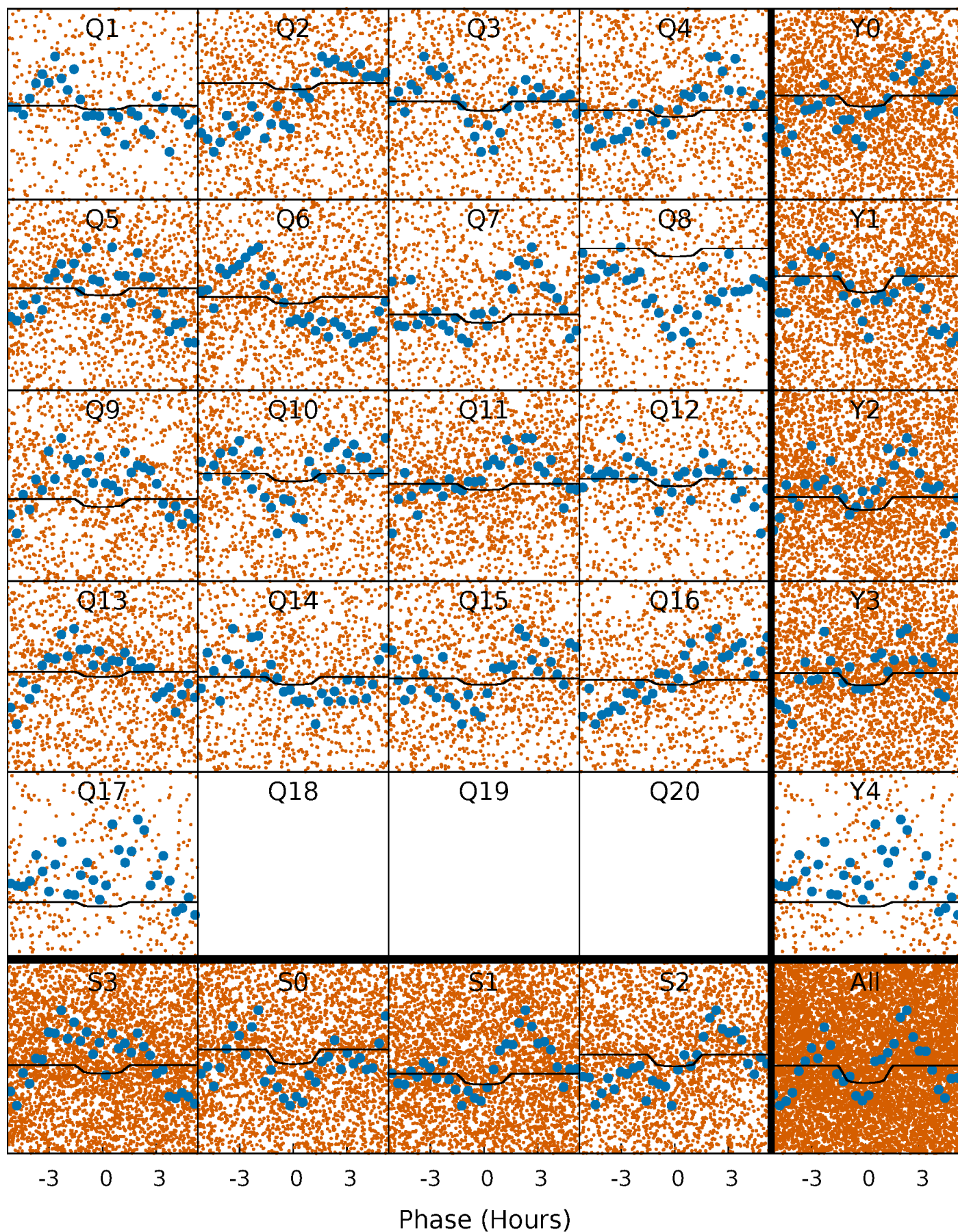
PDC Quarter-Phased Transit Curves

TCE 005380812-01 P= 0.795027 Days $T_0=132.288479$ (BKJD)



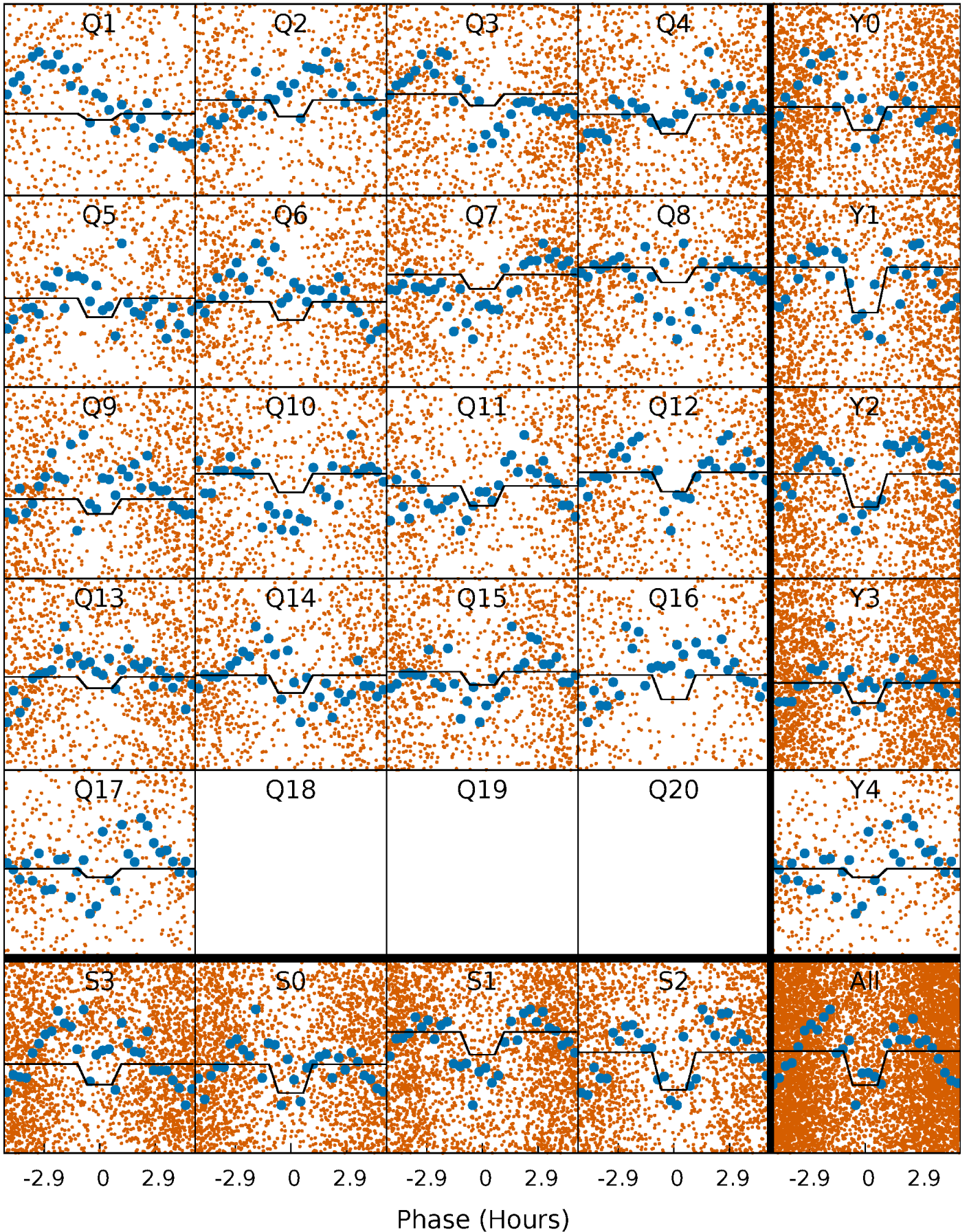
DV Quarter-Phased Transit Curves

TCE 005380812-01 P= 0.795027 Days $T_0=132.288479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

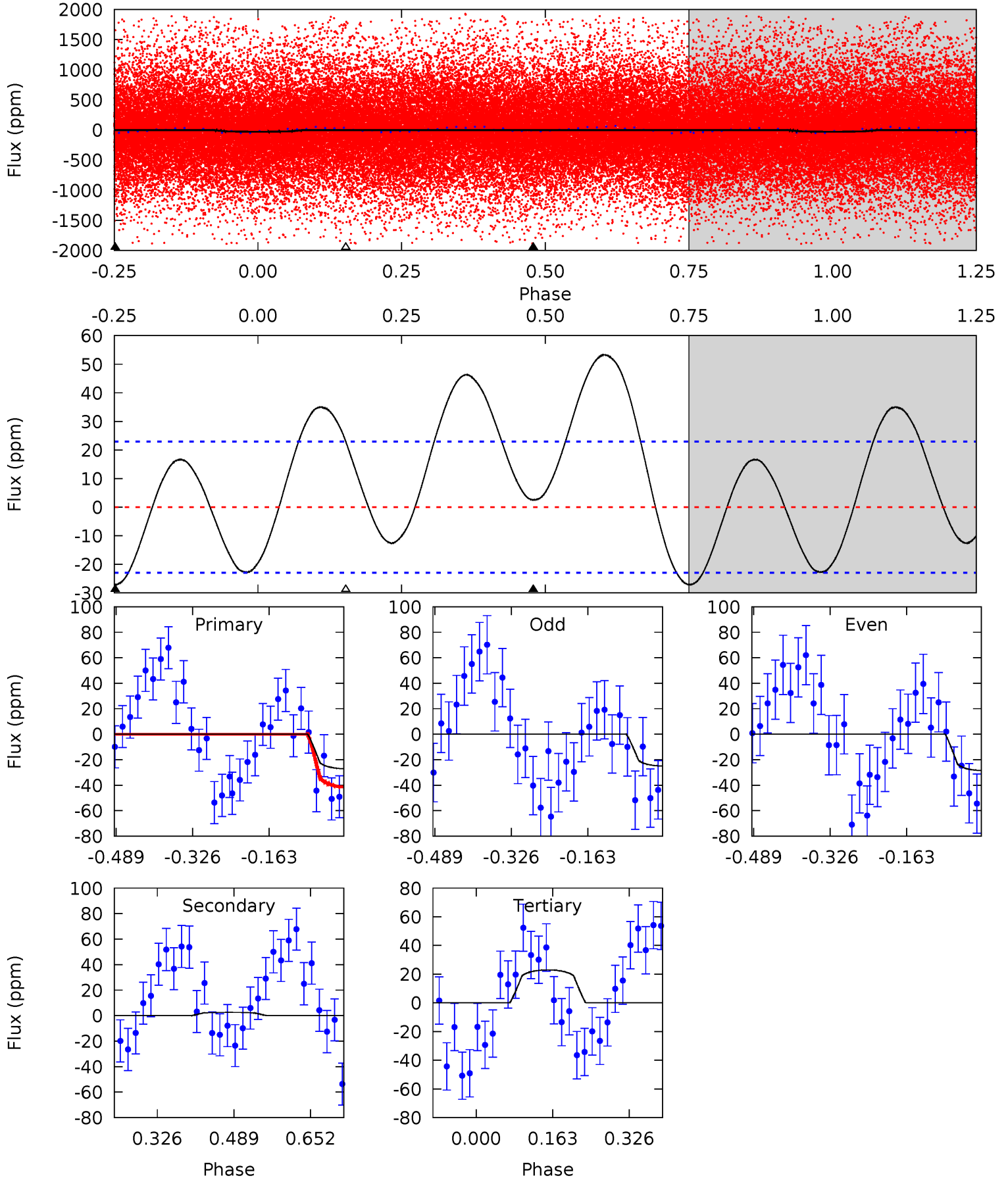
TCE 005380812-01 P= 0.795016 Days $T_0=132.285670$ (BKJD)



DV Model-Shift Uniqueness Test

005380812-01, P = 0.795027 Days, E = 131.493452 Days

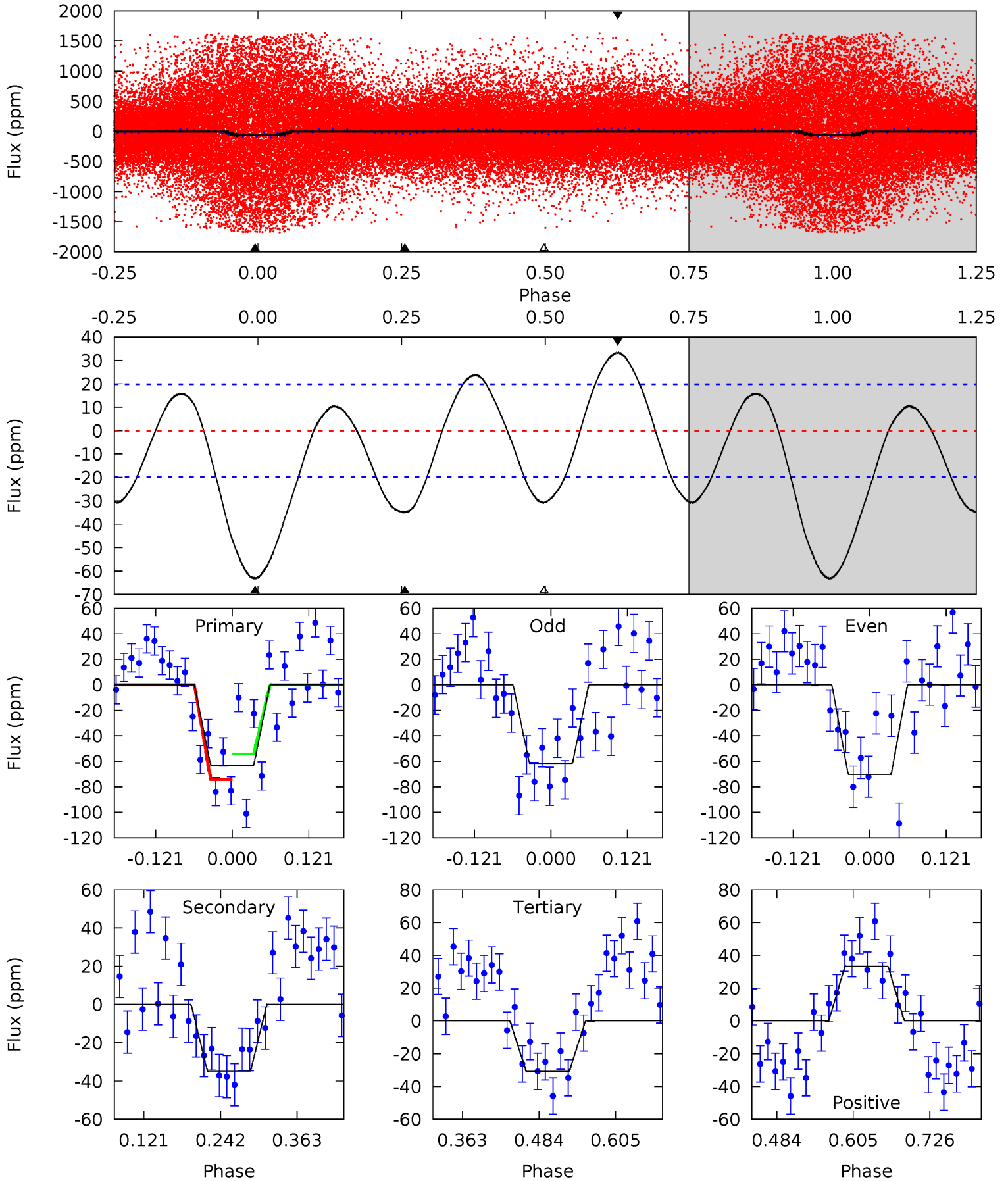
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.27	-0.49	-4.46	0	4.46	1.39	3.58	9.74	5.27	3.97	-0.49	0.34	0.69	0.66	2.89



Alt Model-Shift Uniqueness Test

005380812-01, P = 0.795016 Days, E = 131.490654 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	7.96	7.03	7.61	4.52	1.55	4.66	7.39	6.82	0.93	0.35	0.98	0.78	0.35	2.31



Stellar Parameters For KIC 005380812

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6801^{+189}_{-283}	$3.833^{+0.375}_{-0.125}$	$0.060^{+0.250}_{-0.300}$	$2.637^{+0.597}_{-1.108}$	$1.727^{+0.179}_{-0.419}$	$0.133^{+0.433}_{-0.051}$
	+3%/-4%	+10%/-3%	+417%/-500%	+23%/-42%	+10%/-24%	+326%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005380812-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	3 ± 5	$1.28^{+0.37}_{-0.38}$	4680^{+350}_{-499}	-4716^{+7430}_{-862}	$-0.326^{+0.649}_{-0.909}$
Alt.	-35 ± 4	$1.70^{+0.41}_{-0.42}$	4685^{+363}_{-464}	6411^{+786}_{-667}	$2.690^{+1.960}_{-0.947}$

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 $A_{obs} \gg 1.0$

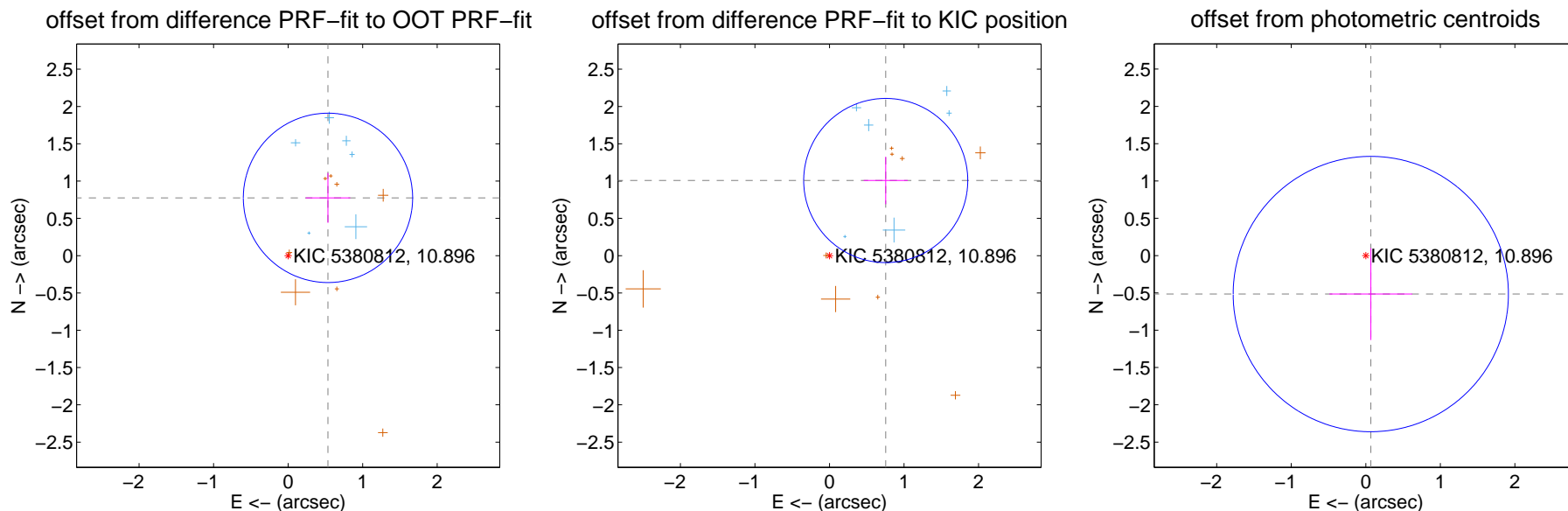
DV Centroid Data

Supplemental centroid analysis for 005380812-01. **Kepler magnitude: 10.90.** Transit SNR 5.96

There are 6 quarters with good PRF difference image offsets

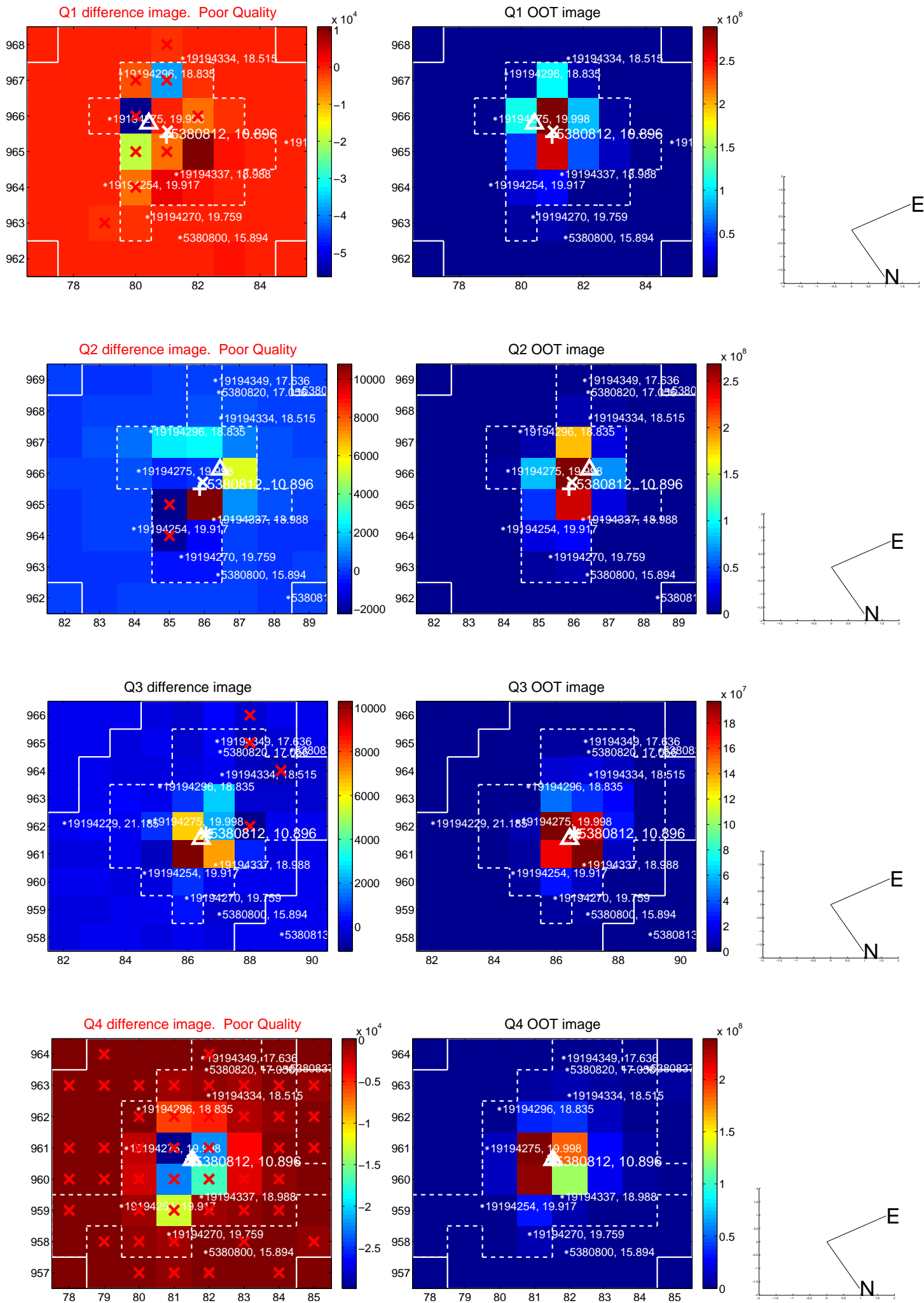
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.941 ± 0.378	2.49	-0.535 ± 0.299	0.775 ± 0.335
PRF-fit source offset from KIC position	1.259 ± 0.367	3.43	-0.754 ± 0.295	1.008 ± 0.317
photometric centroid source offset	0.52 ± 0.62	0.85	-0.07 ± 0.56	-0.52 ± 0.62

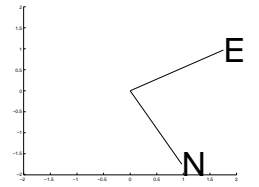
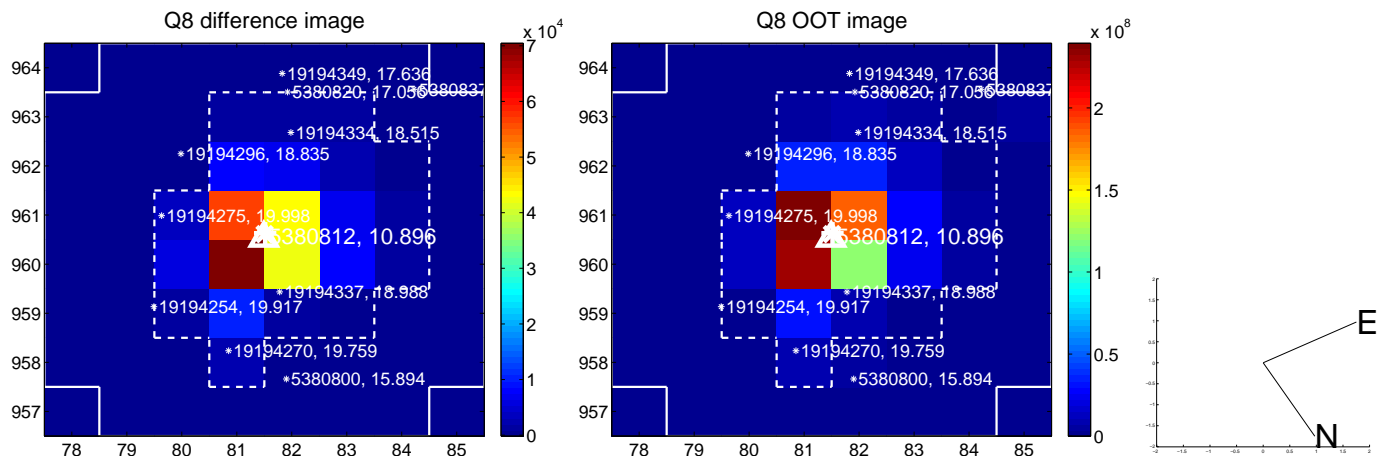
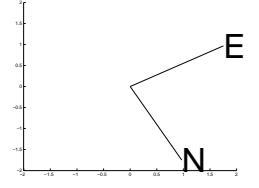
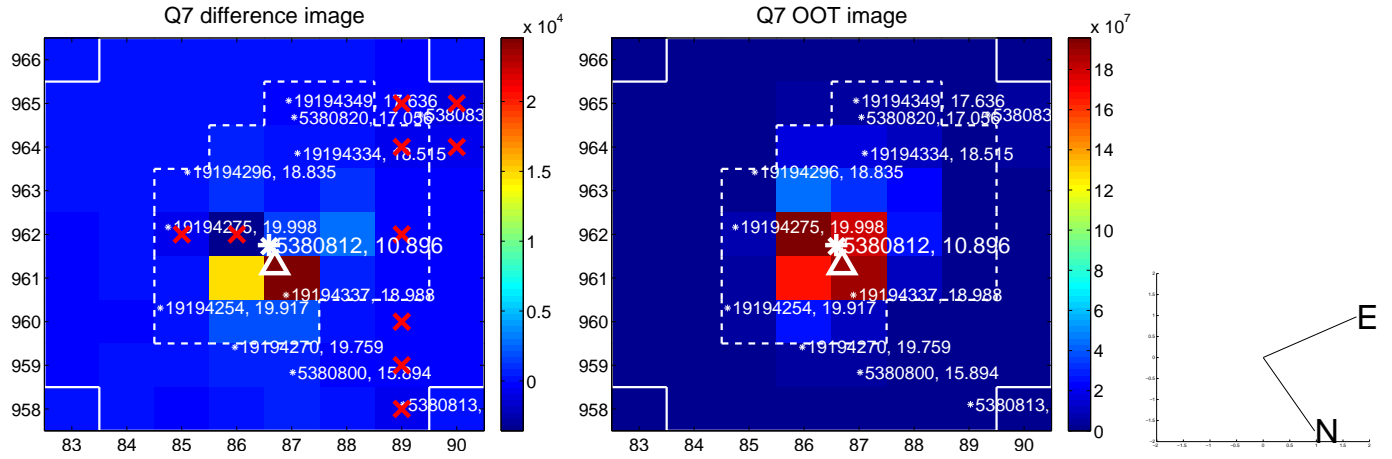
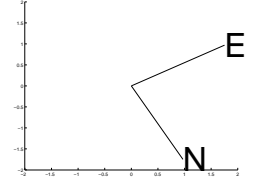
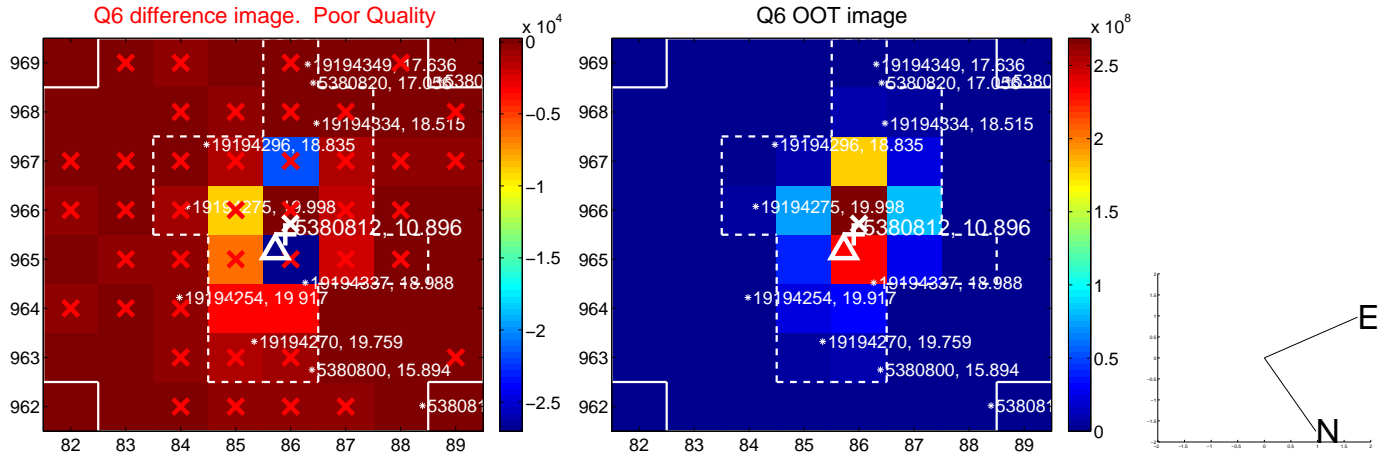
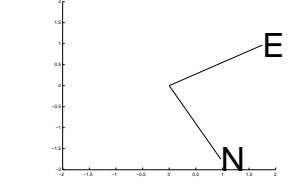
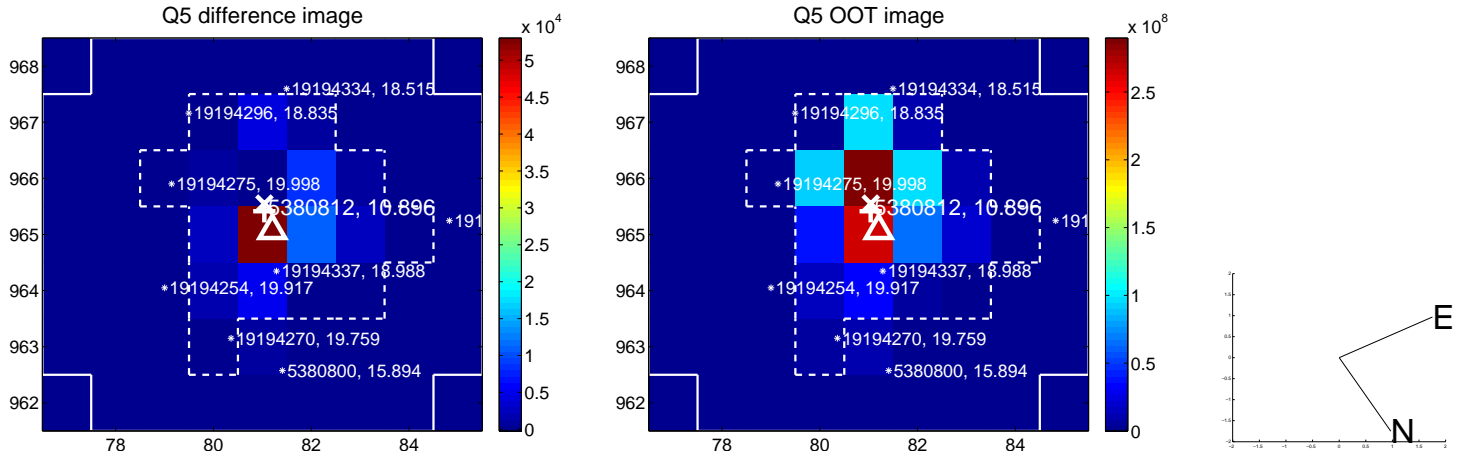


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

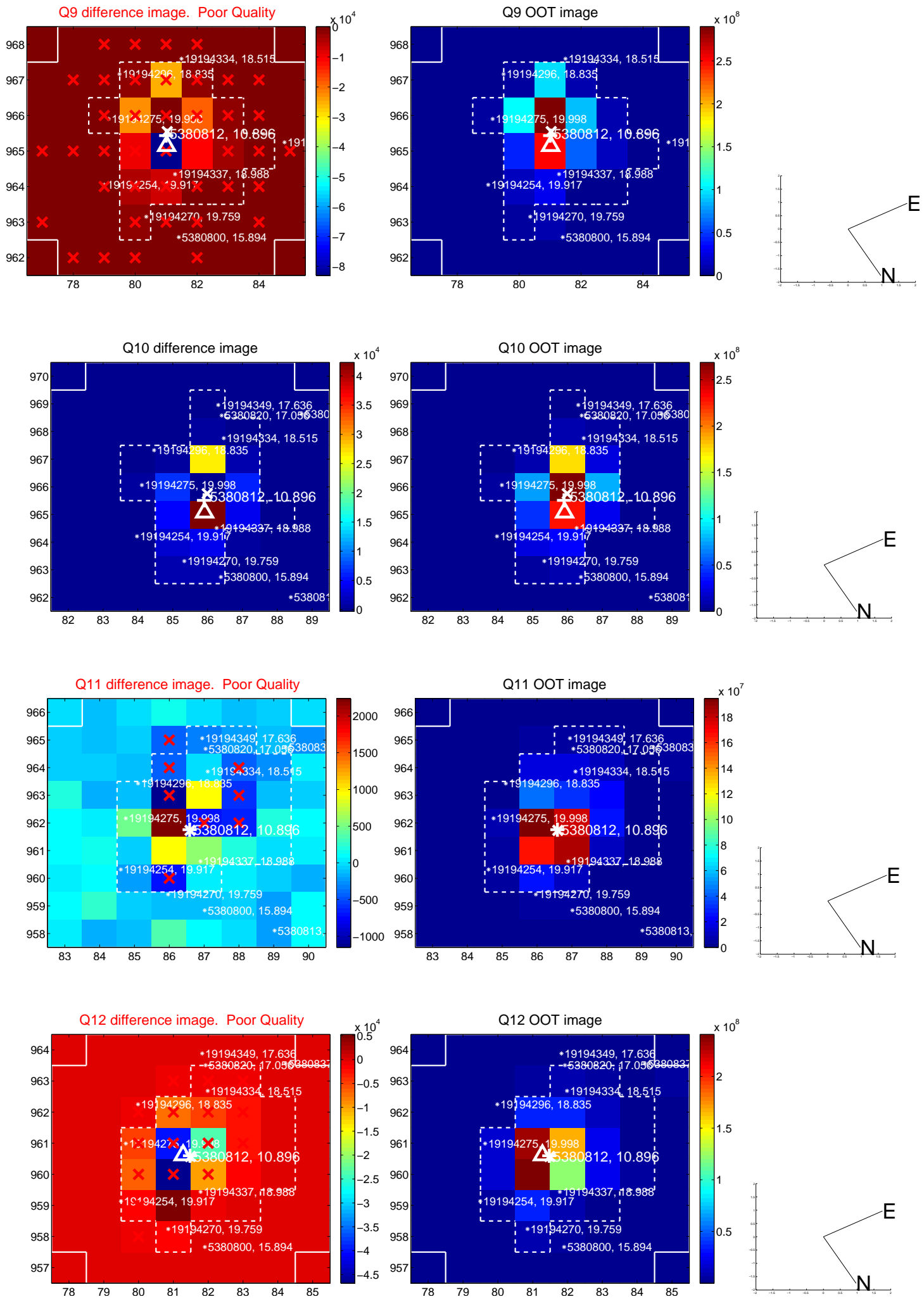
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



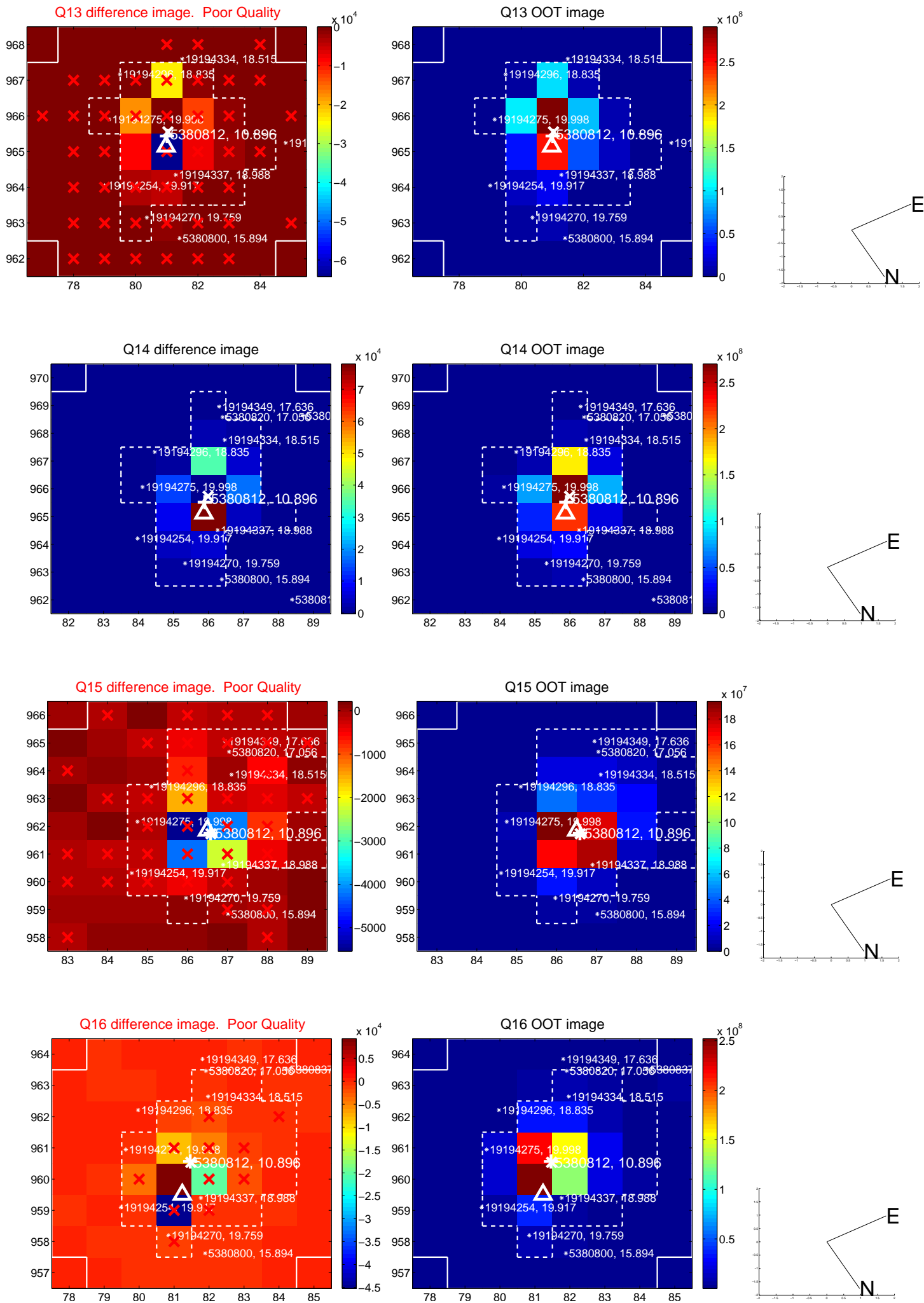
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



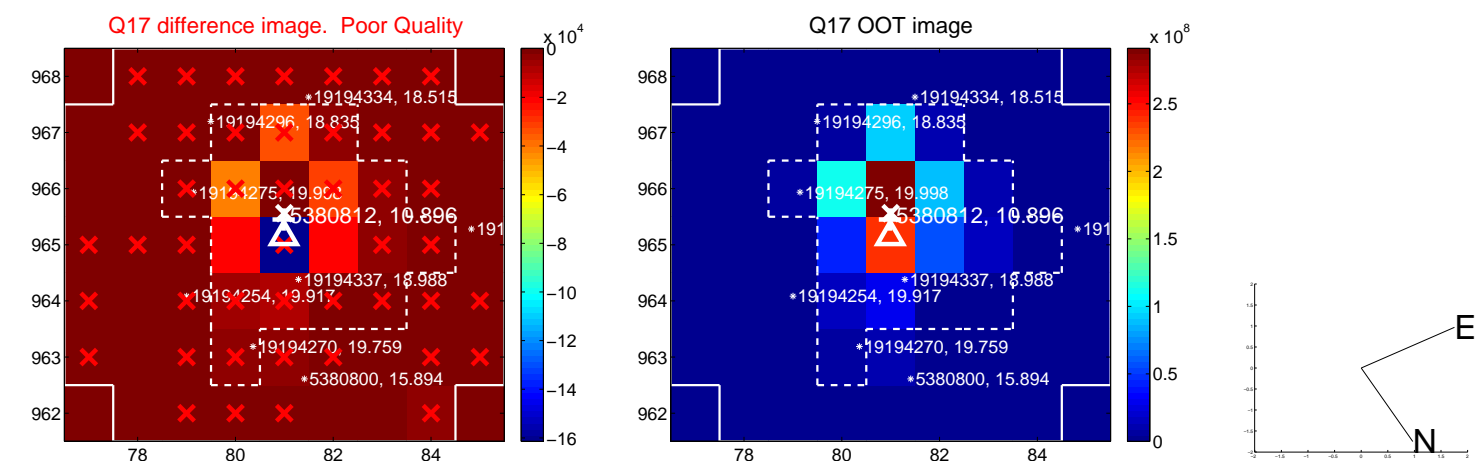
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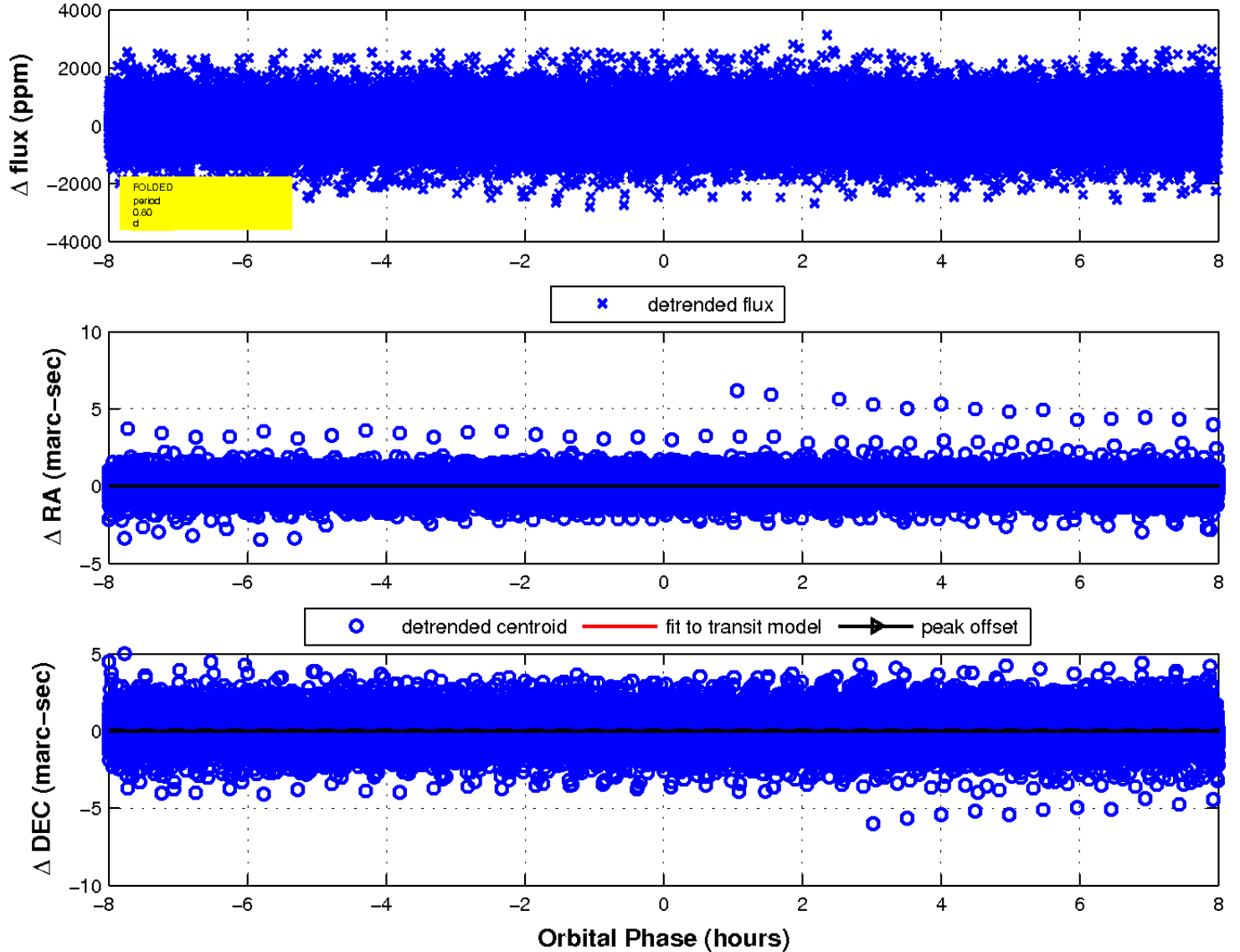
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

