

KIC 007259298

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})
007259298-01	OBS	2561.01	3.239426	133.980514	74.4	2.710	16.1	16.8	0.86	6075	0.84	512.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007259298-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

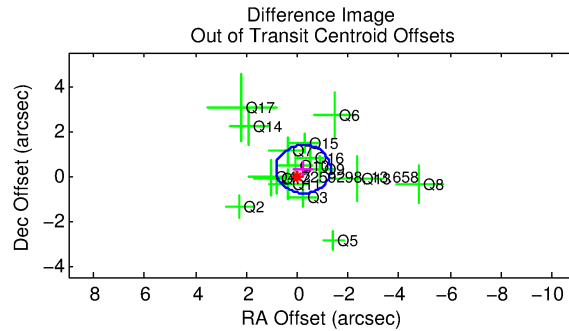
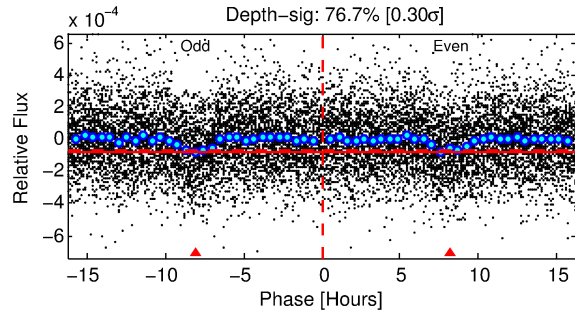
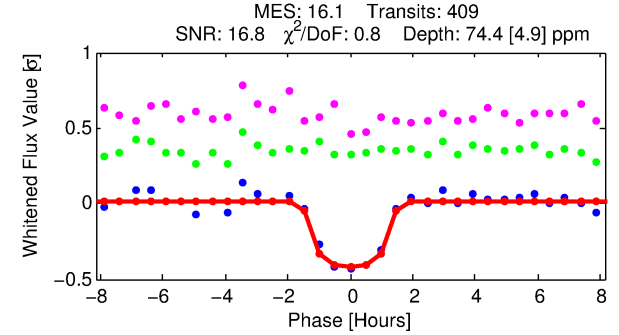
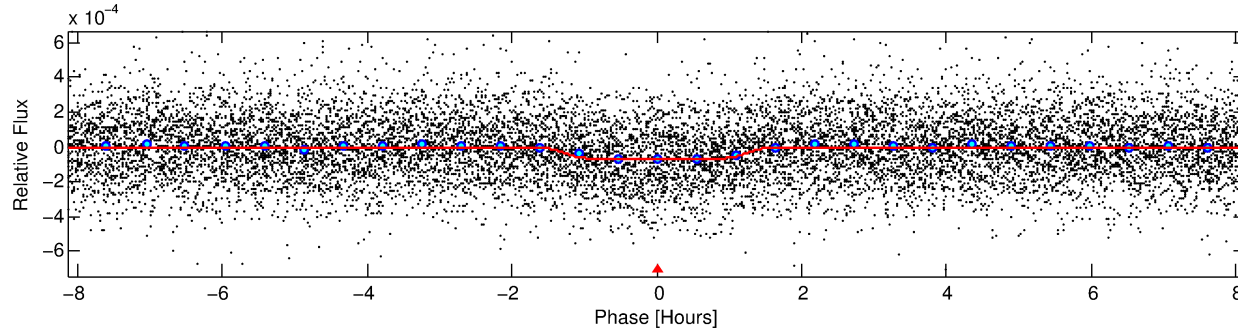
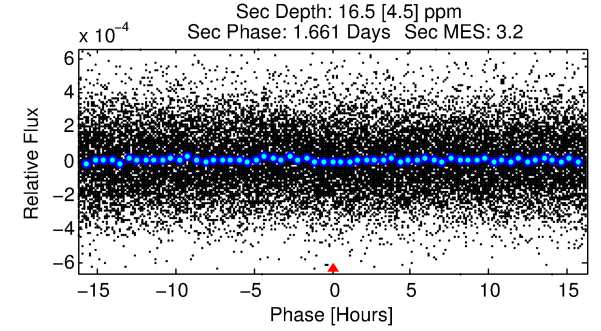
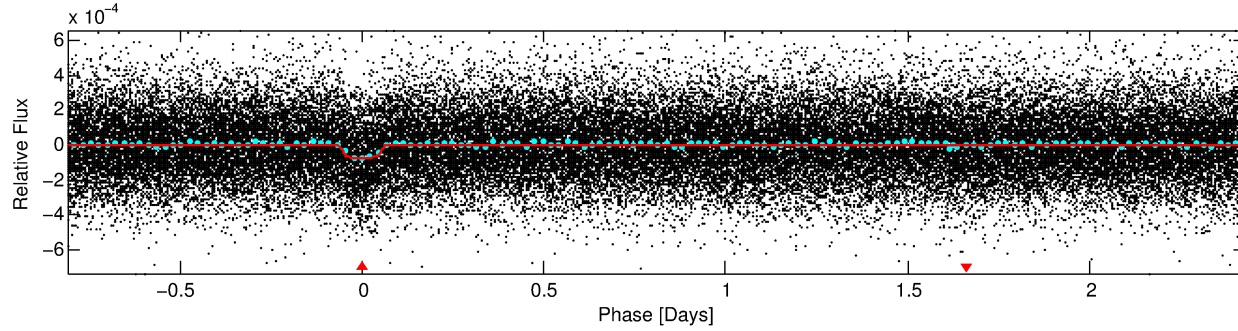
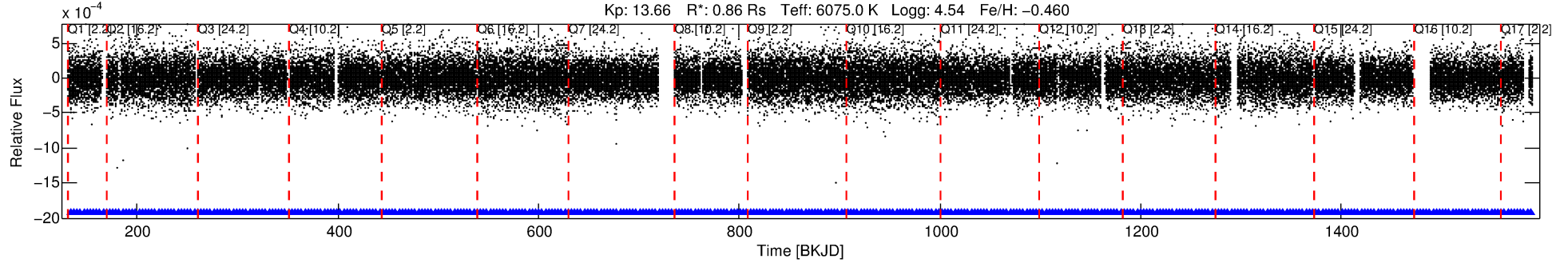
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007259298-01

No Significant Match Found

DV One-Page Summary

KIC: 7259298 Candidate: 1 of 1 Period: 3.239 d
KOI: K02561.01 Corr: 0.983



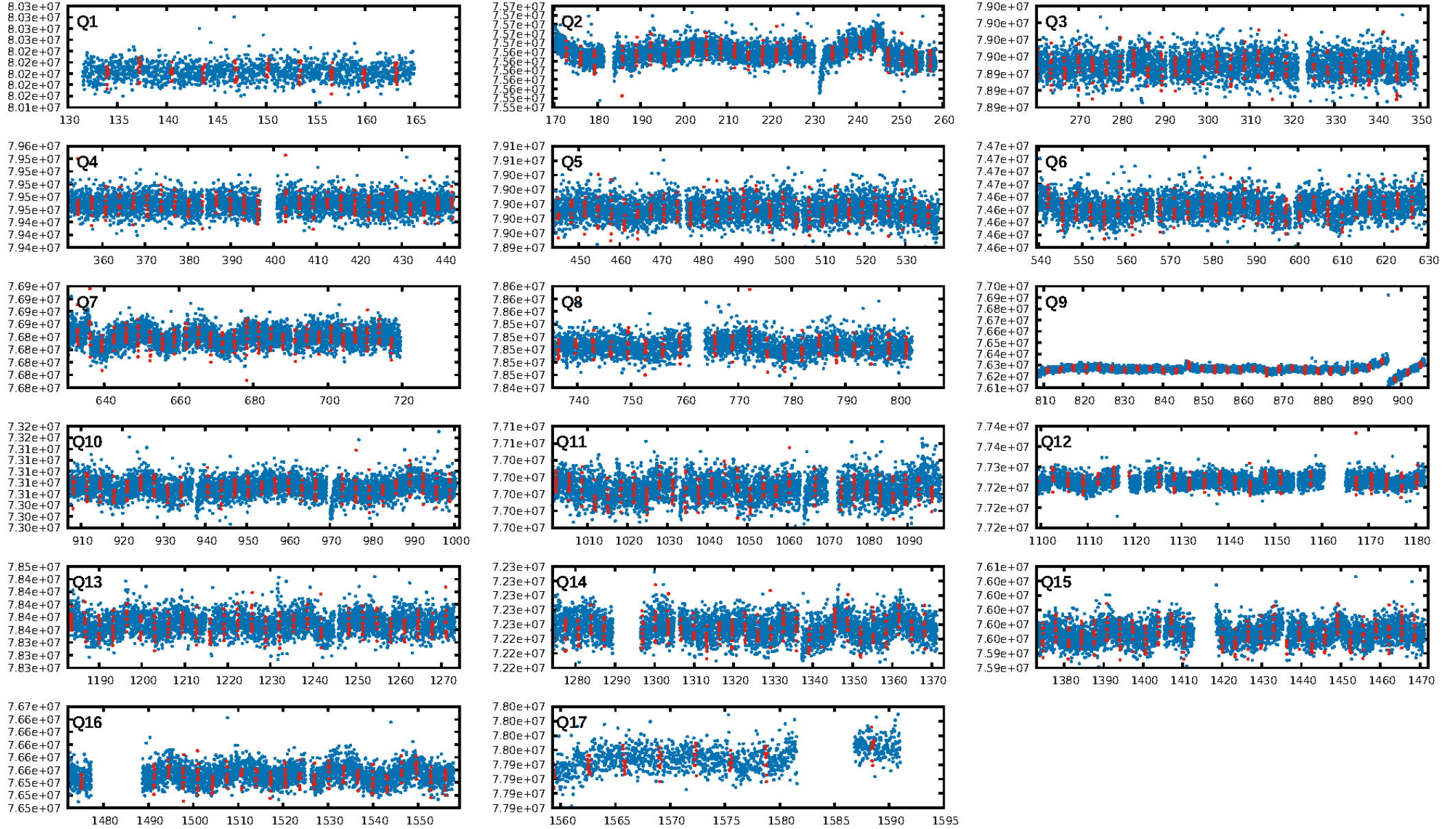
DV Fit Results:

Period = 3.23943 [0.00001] d
Epoch = 133.9805 [0.0026] BKJD
Rp/R* = 0.0090 [0.0028]
a/R* = 4.93 [7.86]
b = 0.86 [0.52]
Seff = 512.21 [196.03]
Teq = 1213 [116] K
Rp = 0.84 [0.35] Re
a = 0.0419 [0.0101] AU
Ag = 22.42 [17.25] [1.24σ]
Teffp = 4081 [702] K [4.03σ]

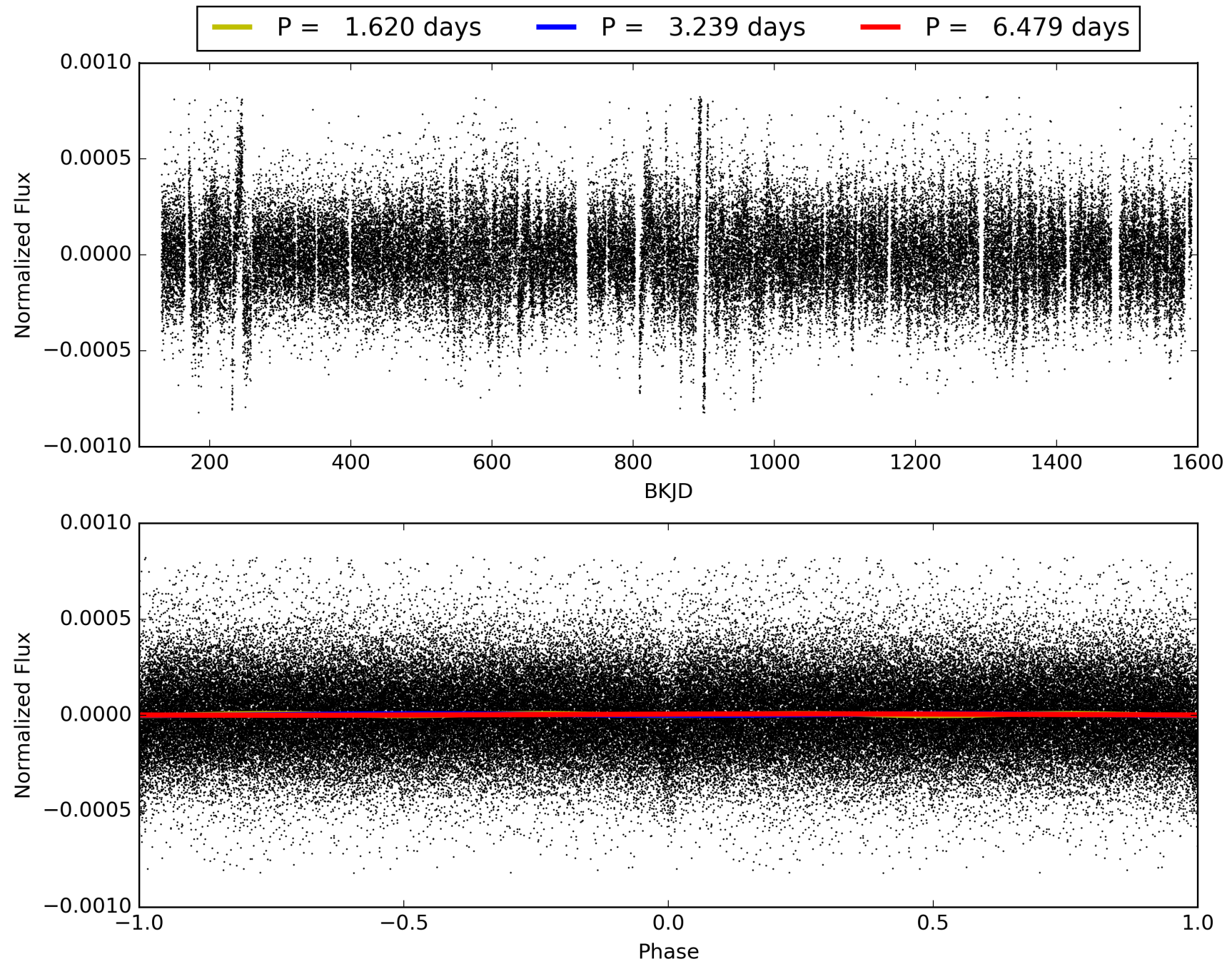
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.87e-57
RollingBand-fgt: 1.00 [391/391]
GhostDiagnostic-chr: 2.763
Centroid-sig: 0.0%
Centroid-so: 1.688 arcsec [1.99σ]
OotOffset-rm: 0.381 arcsec [1.07σ]
KicOffset-rm: 0.288 arcsec [0.64σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007259298-01, PDC Light Curves

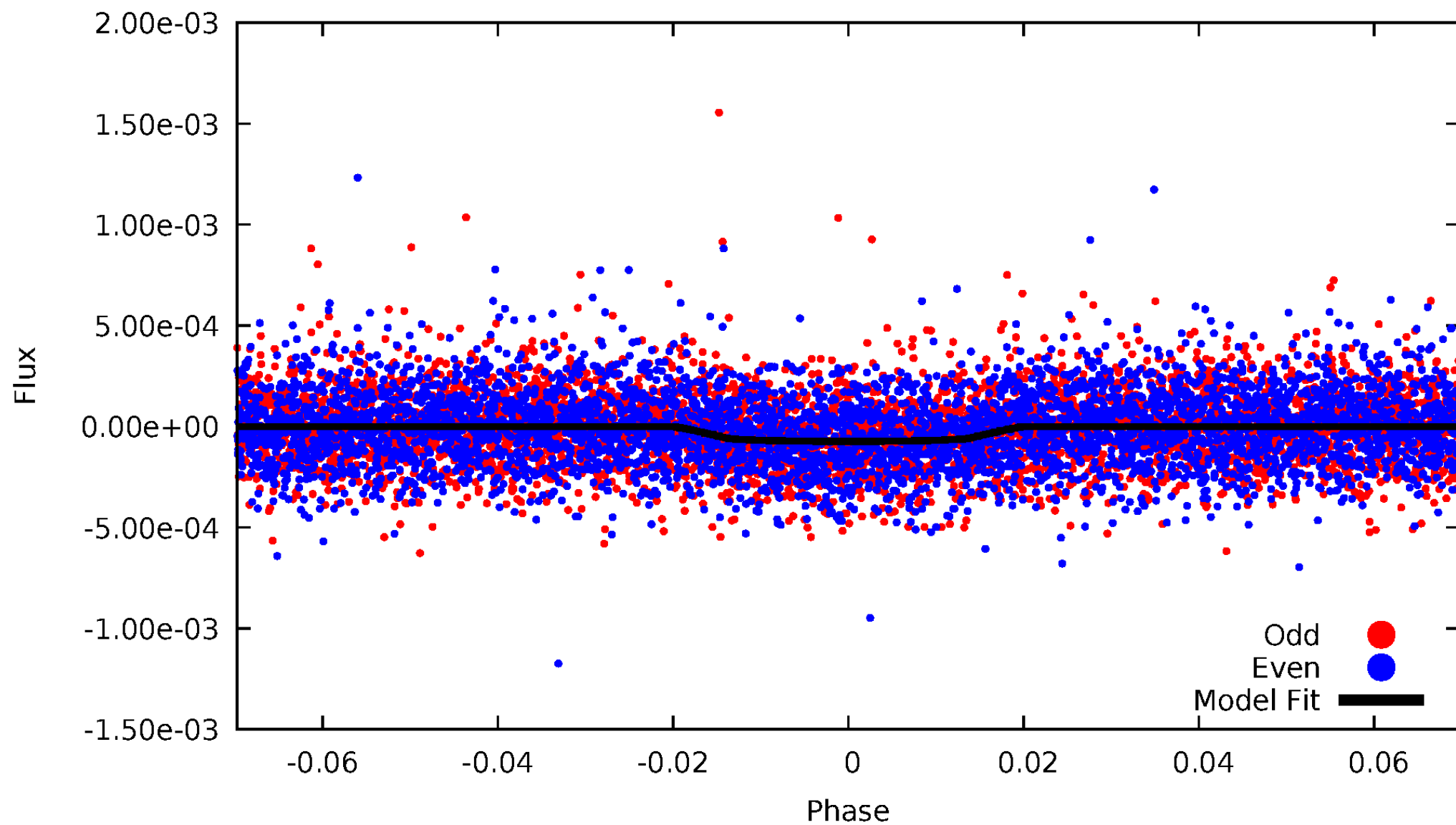


TCE 007259298-01



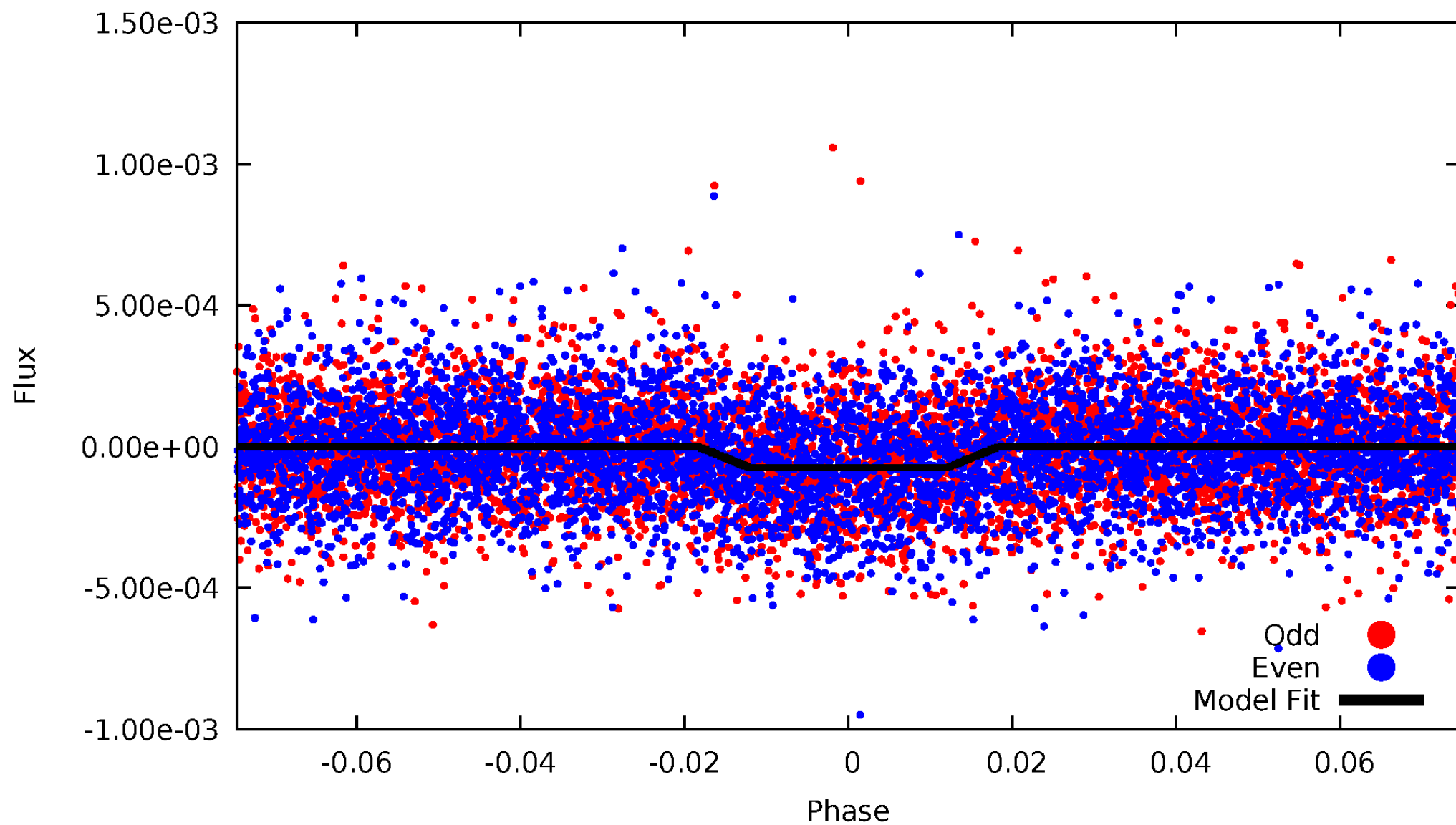
DV Odd/Even

TCE 007259298-01



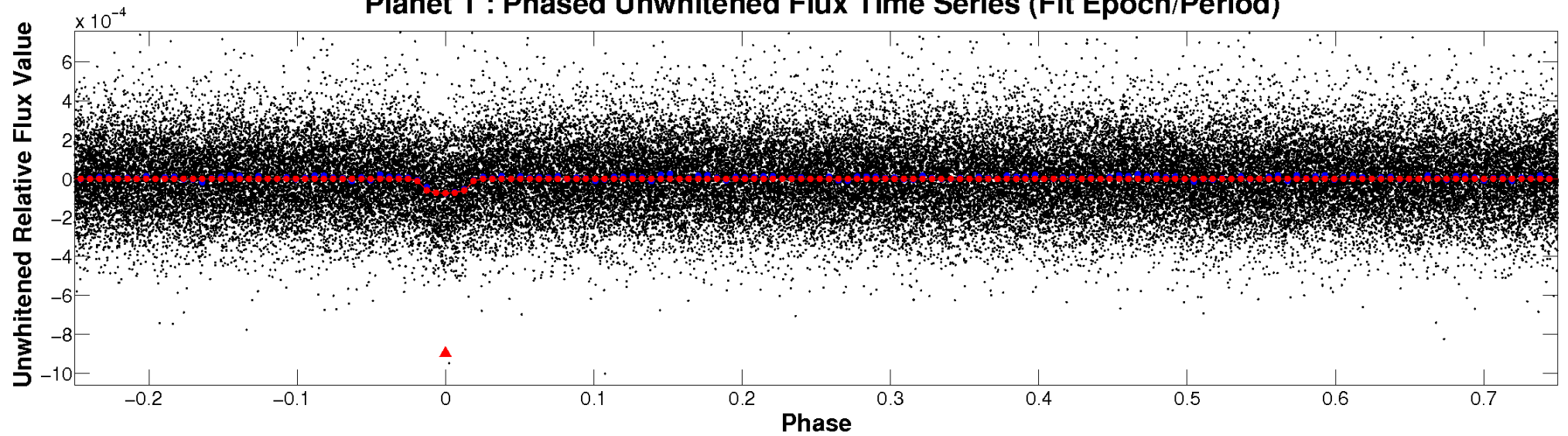
ALT Odd/Even

TCE 007259298-01

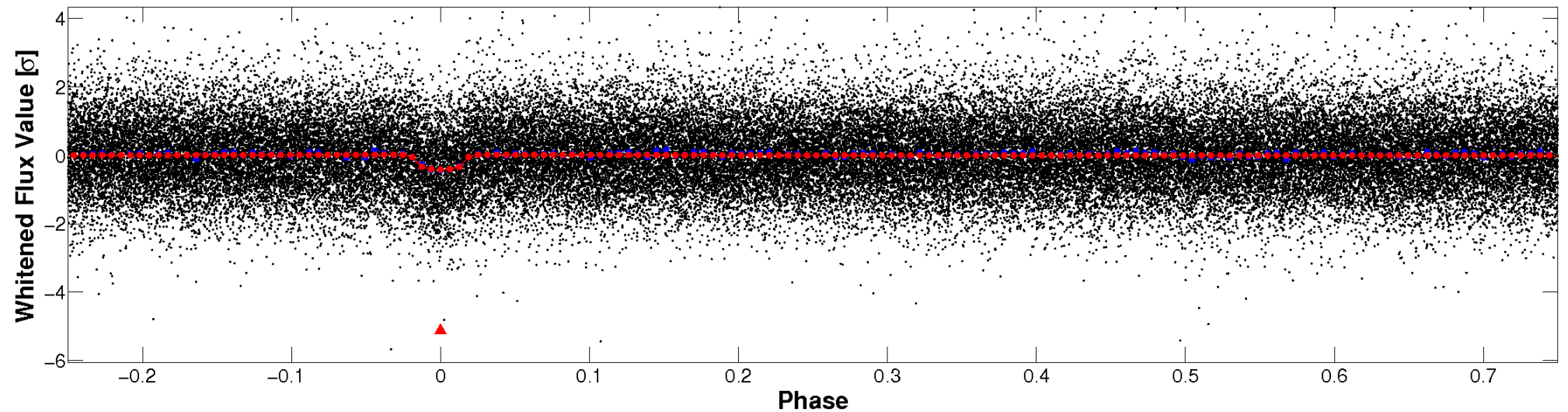


Non-Whitened Vs. Whitened Light Curve

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

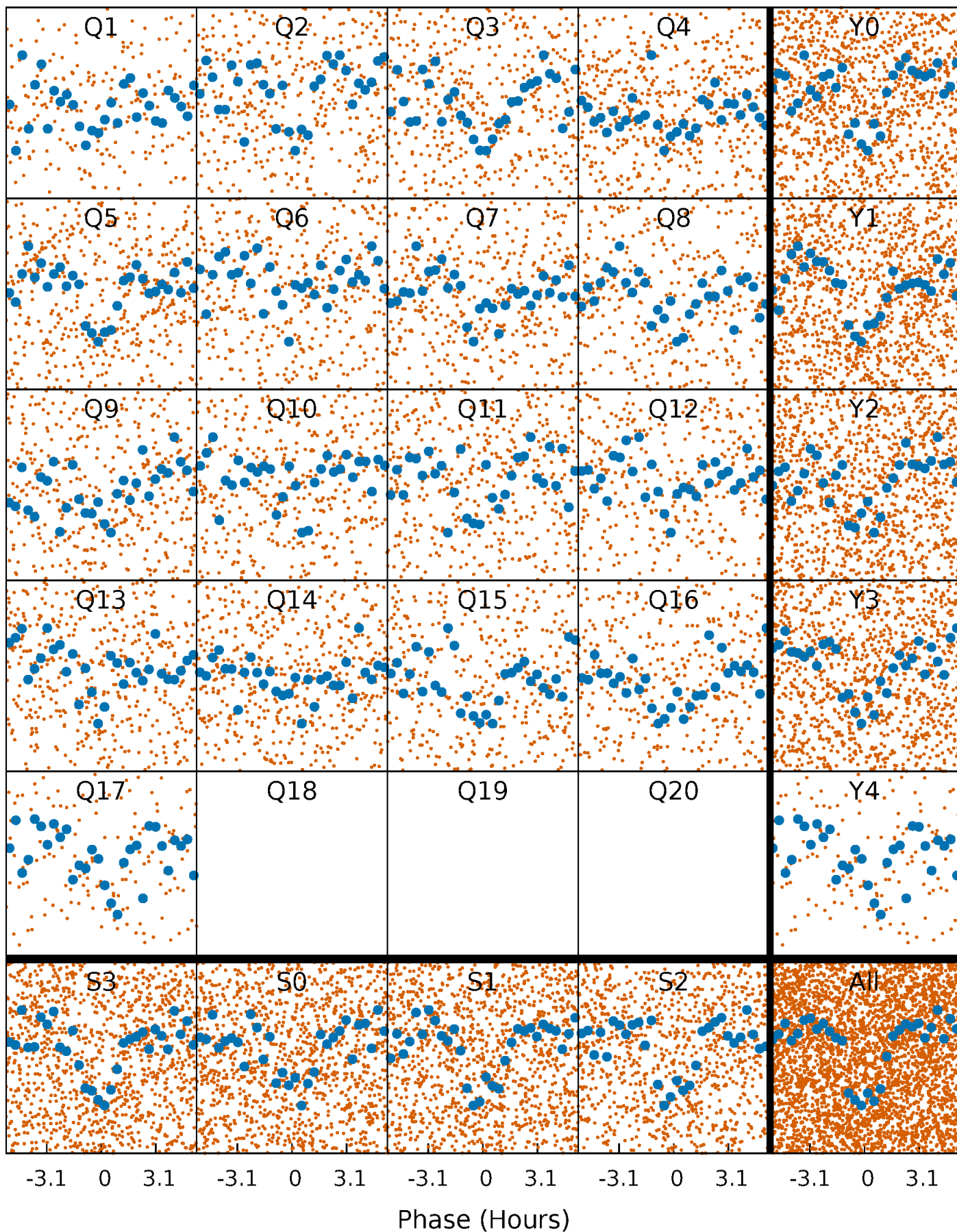


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



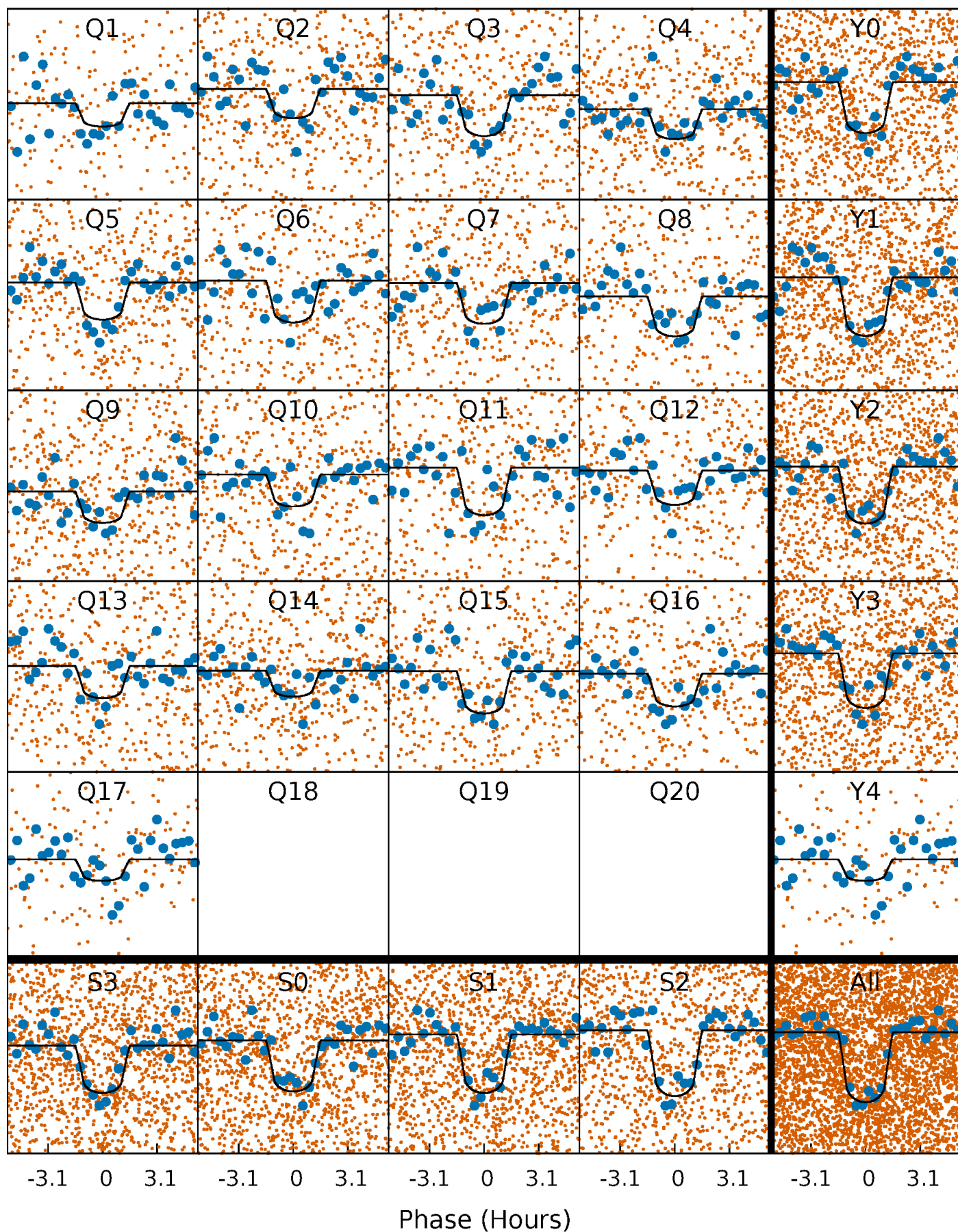
PDC Quarter-Phased Transit Curves

TCE 007259298-01 P= 3.239426 Days $T_0=133.980514$ (BKJD)



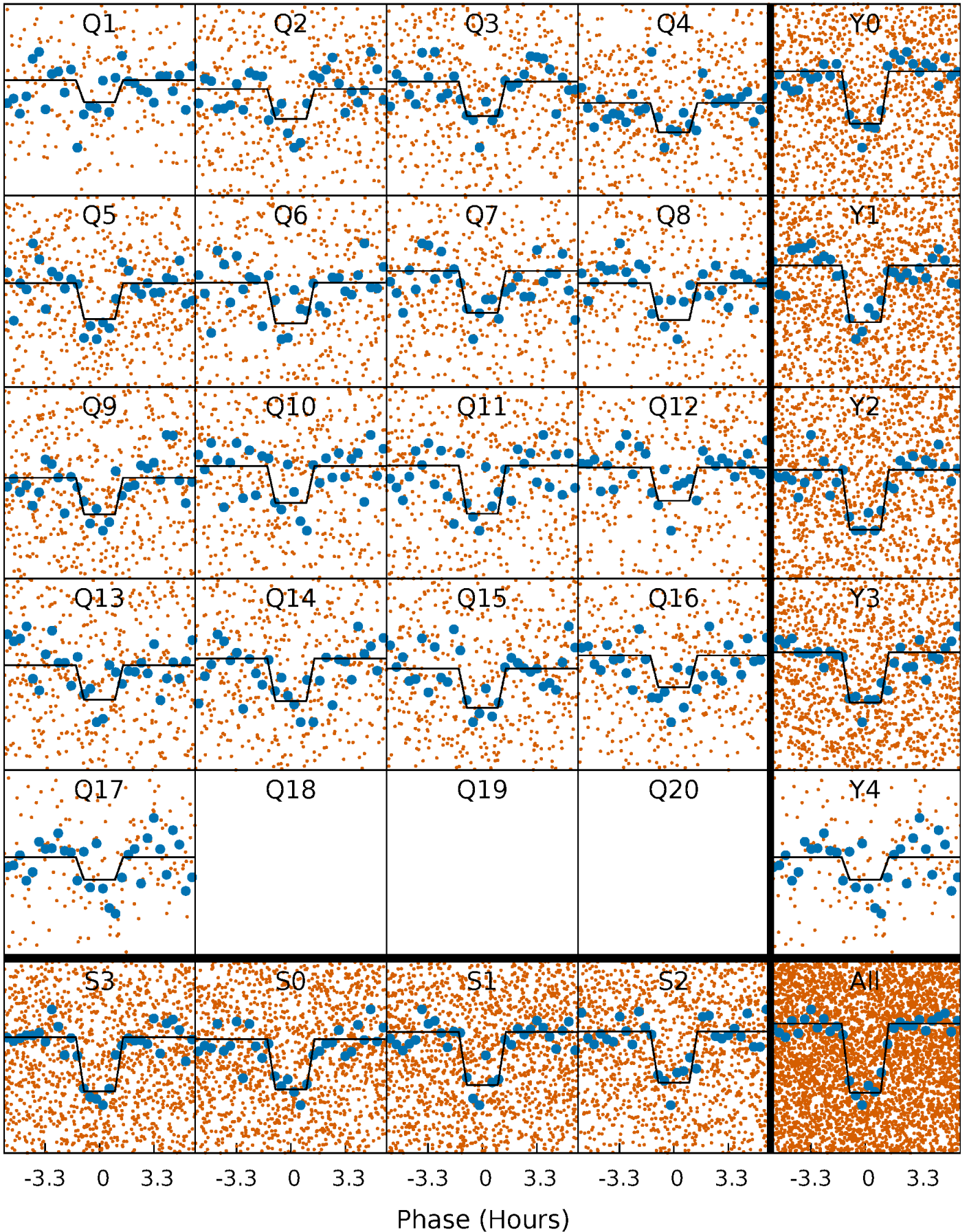
DV Quarter-Phased Transit Curves

TCE 007259298-01 P= 3.239426 Days $T_0=133.980514$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

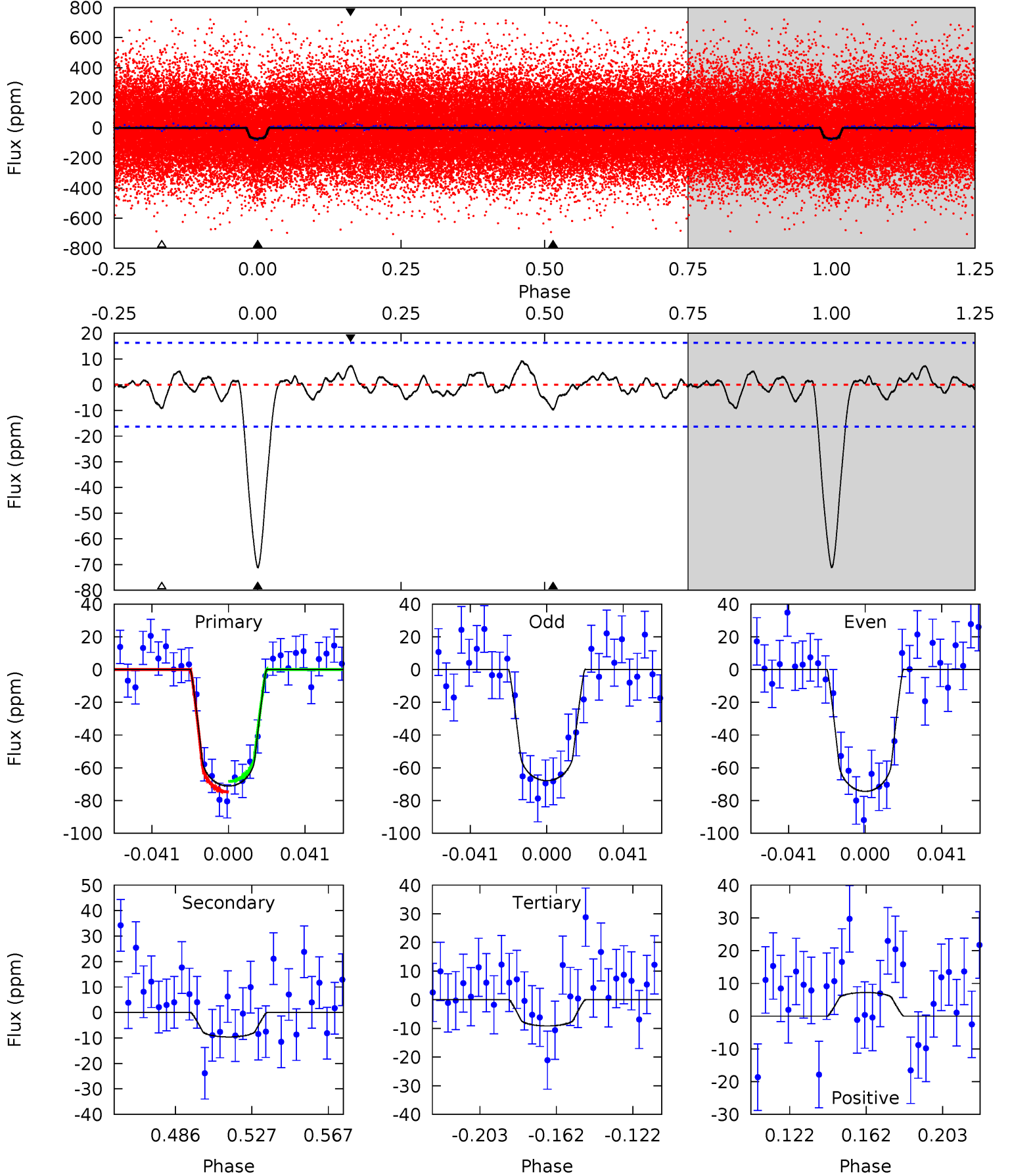
TCE 007259298-01 P= 3.239390 Days $T_0=133.989970$ (BKJD)



DV Model-Shift Uniqueness Test

007259298-01, P = 3.239426 Days, E = 130.741088 Days

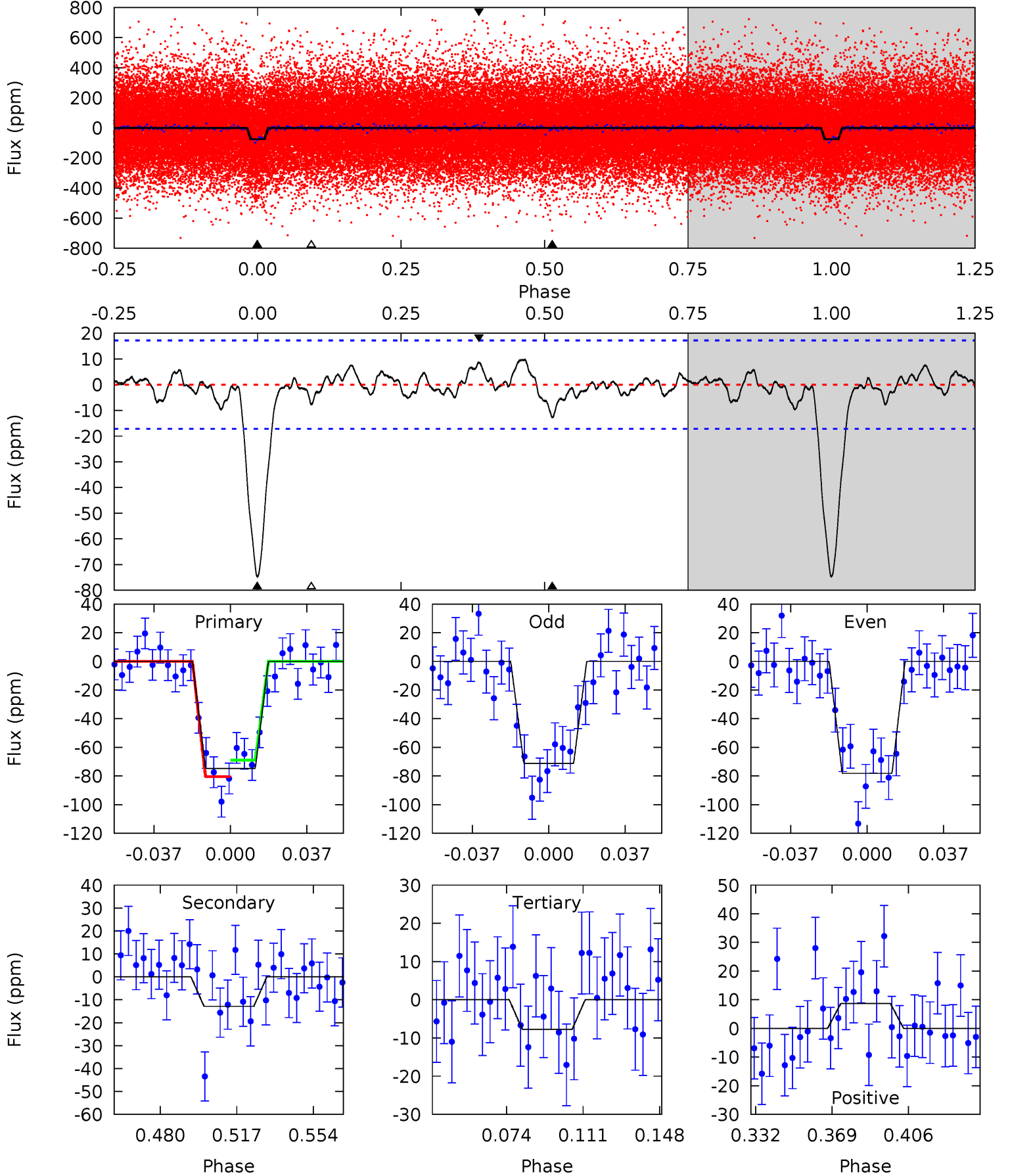
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	2.80	2.66	2.10	4.75	2.05	0.93	18.1	18.6	0.14	0.70	0.95	0.93	0.11	0.93



Alt Model-Shift Uniqueness Test

007259298-01, P = 3.239390 Days, E = 130.750580 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.57	2.15	2.41	4.77	2.09	0.98	18.6	18.3	1.42	1.16	0.97	0.97	0.12	1.59



Stellar Parameters For KIC 007259298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+163}_{-181}	$4.541^{+0.036}_{-0.204}$	$-0.460^{+0.300}_{-0.300}$	$0.858^{+0.238}_{-0.079}$	$0.934^{+0.097}_{-0.108}$	$2.082^{+0.416}_{-1.084}$
	+3%/-3%	+1%/-4%	+65%/-65%	+28%/-9%	+10%/-12%	+20%/-52%
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 007259298-01 / KOI 2561.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 3	$0.89^{+0.31}_{-0.29}$	1743^{+115}_{-82}	3870^{+706}_{-424}	11^{+15}_{-6}
Alt.	-13 ± 4	$0.86^{+0.29}_{-0.30}$	1742^{+115}_{-82}	4172^{+695}_{-485}	16^{+21}_{-8}

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 $A_{obs} \gg 1.0$

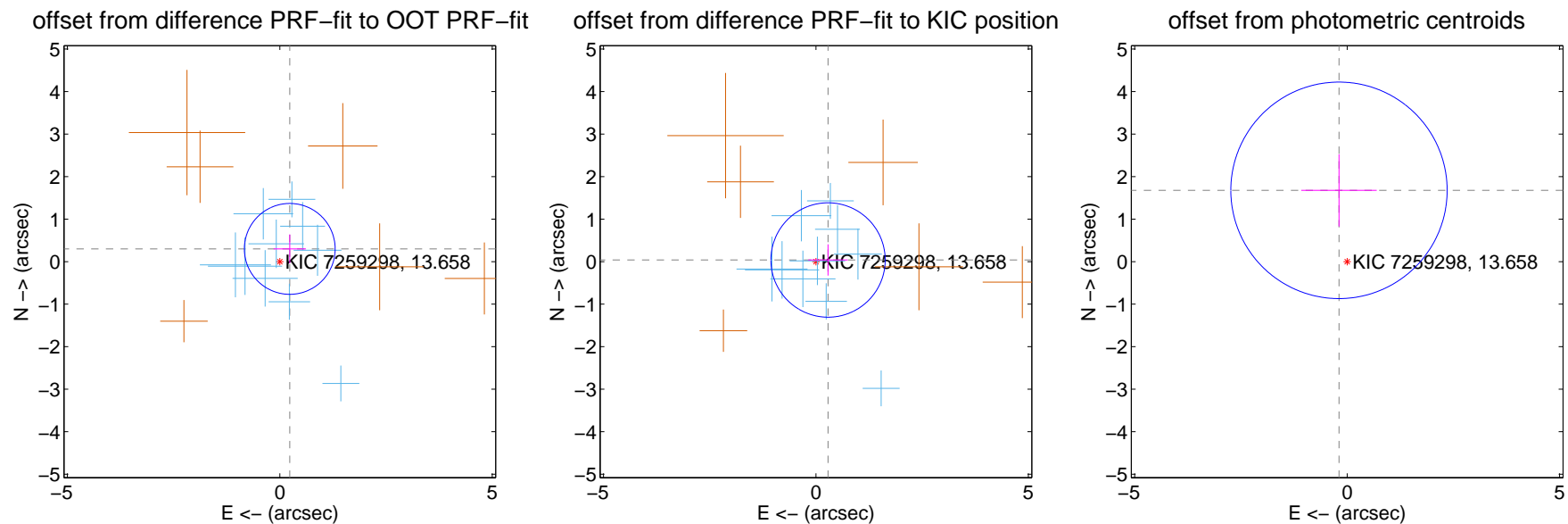
DV Centroid Data

Supplemental centroid analysis for 007259298-01. Kepler magnitude: 13.66. Transit SNR 16.77

There are 10 quarters with good PRF difference image offsets

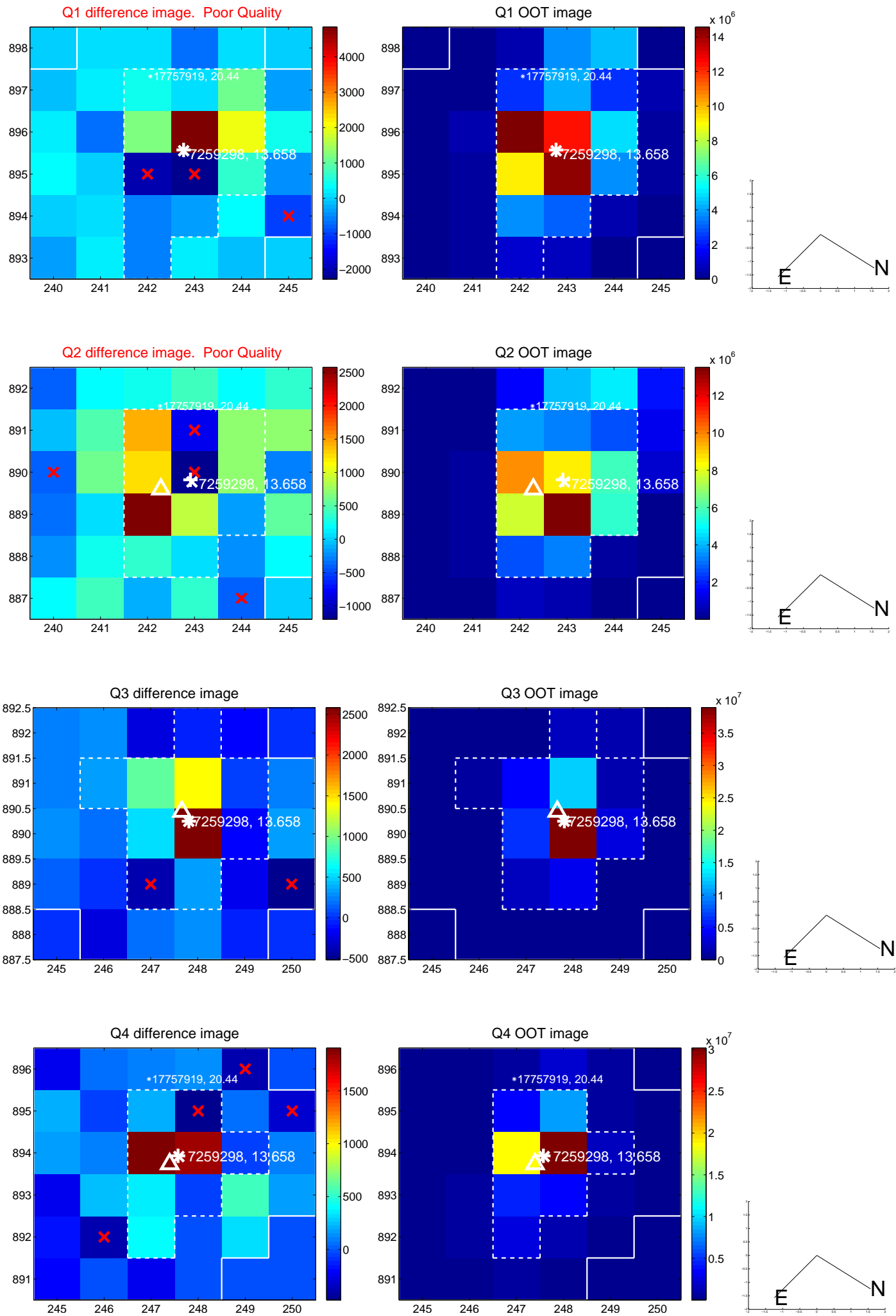
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.381 ± 0.356	1.07	-0.234 ± 0.380	0.300 ± 0.341
PRF-fit source offset from KIC position	0.288 ± 0.449	0.64	-0.285 ± 0.464	0.039 ± 0.368
photometric centroid source offset	1.69 ± 0.85	1.99	0.19 ± 0.89	1.68 ± 0.85

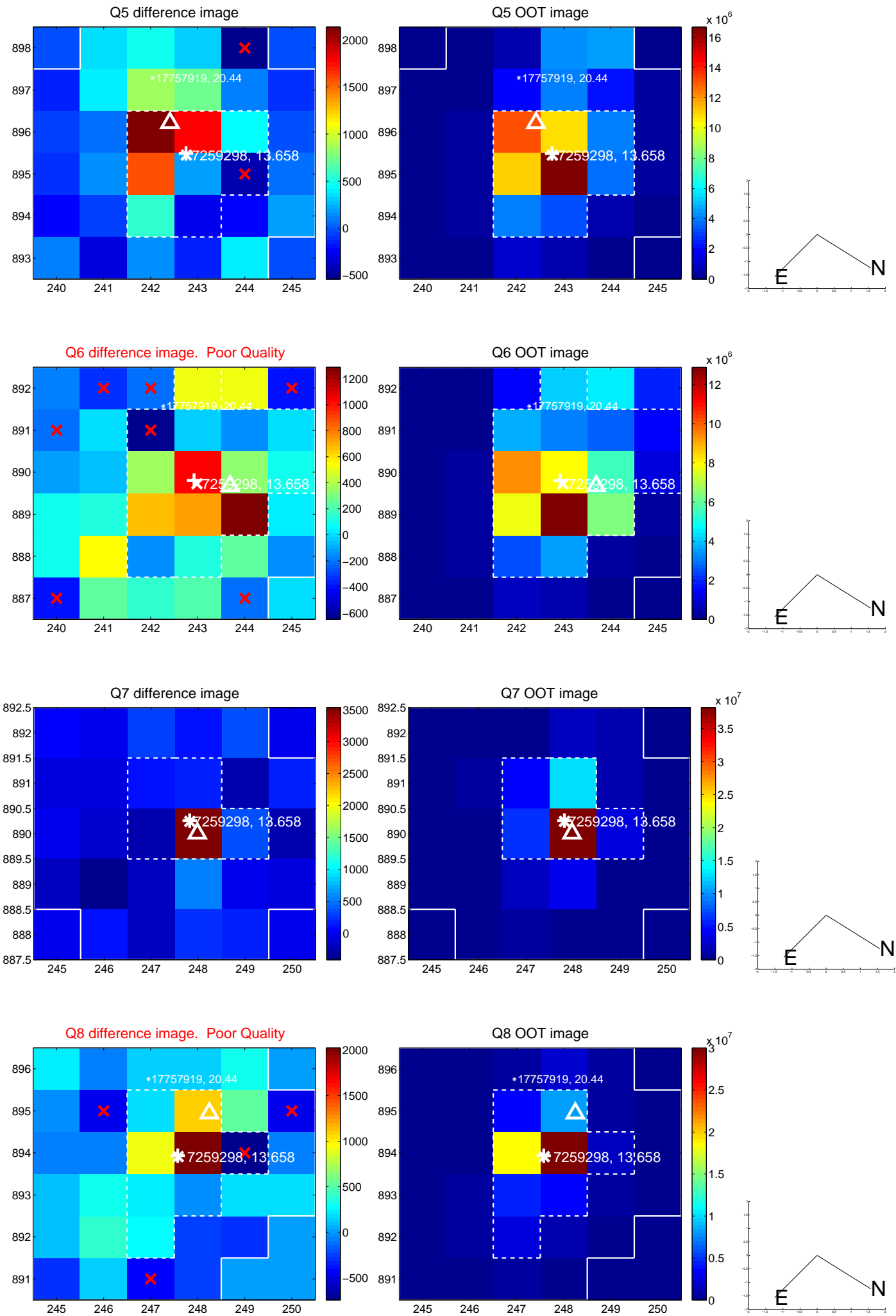


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

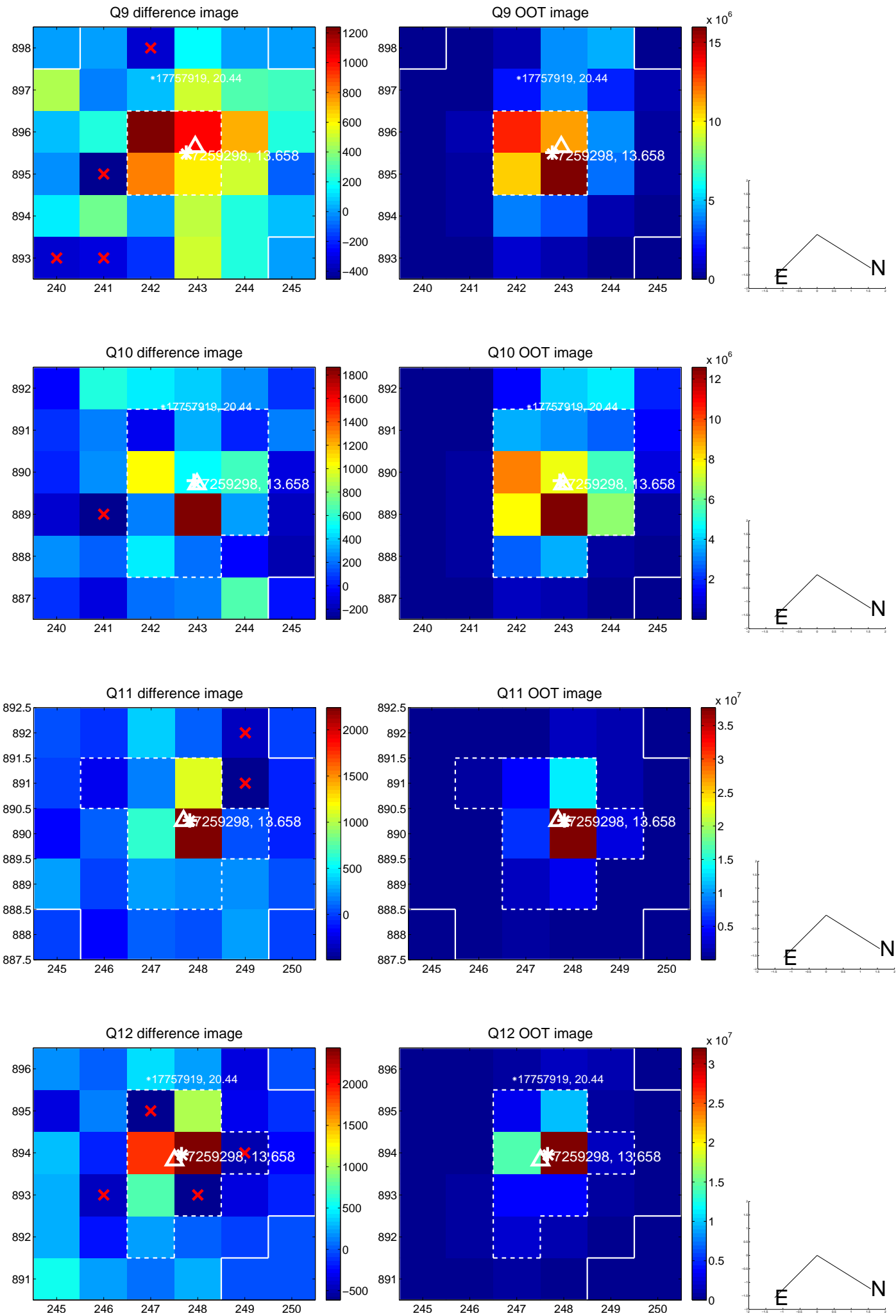
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



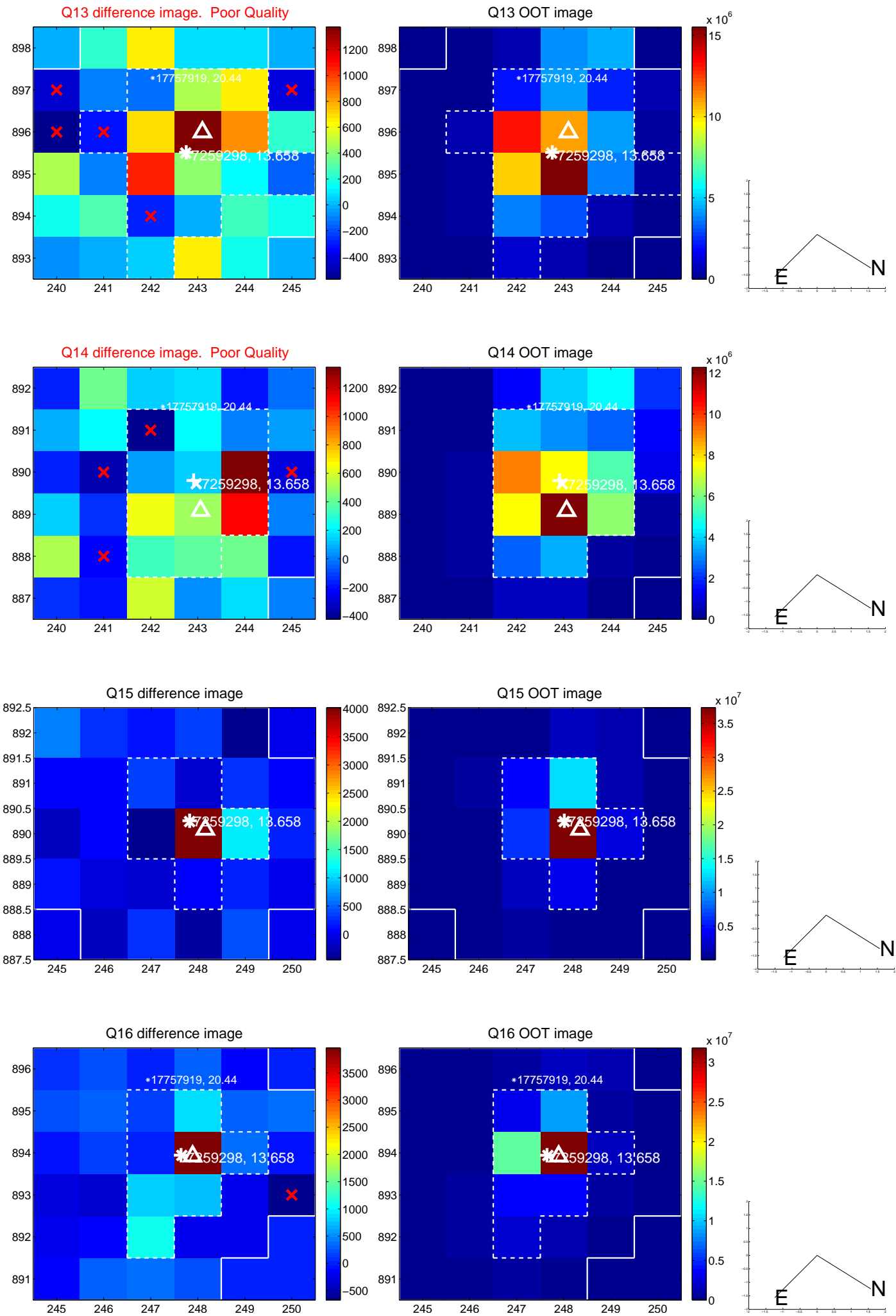
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



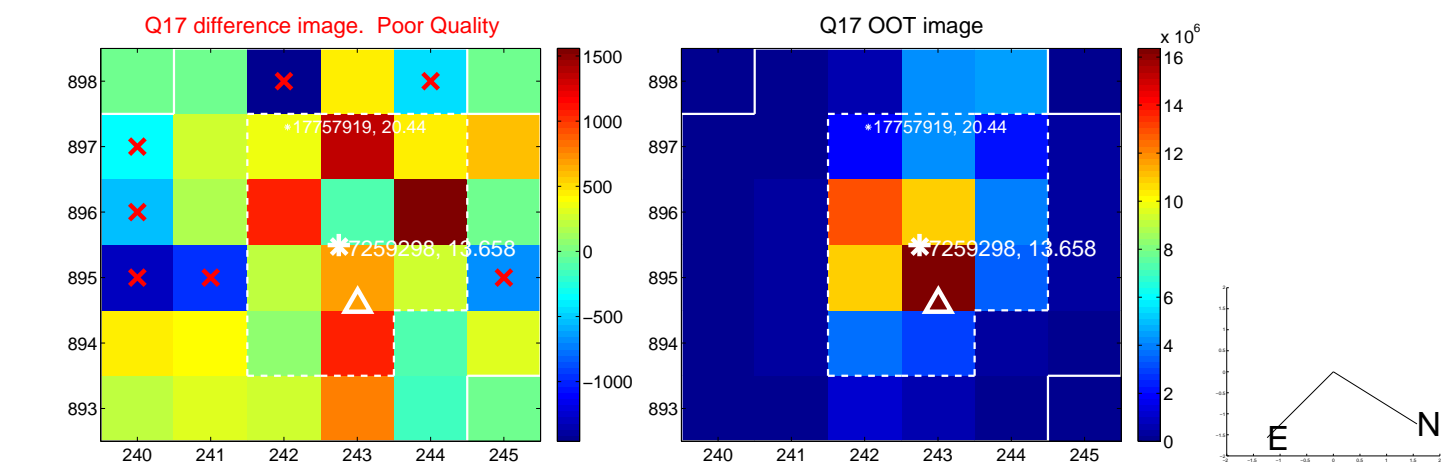
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



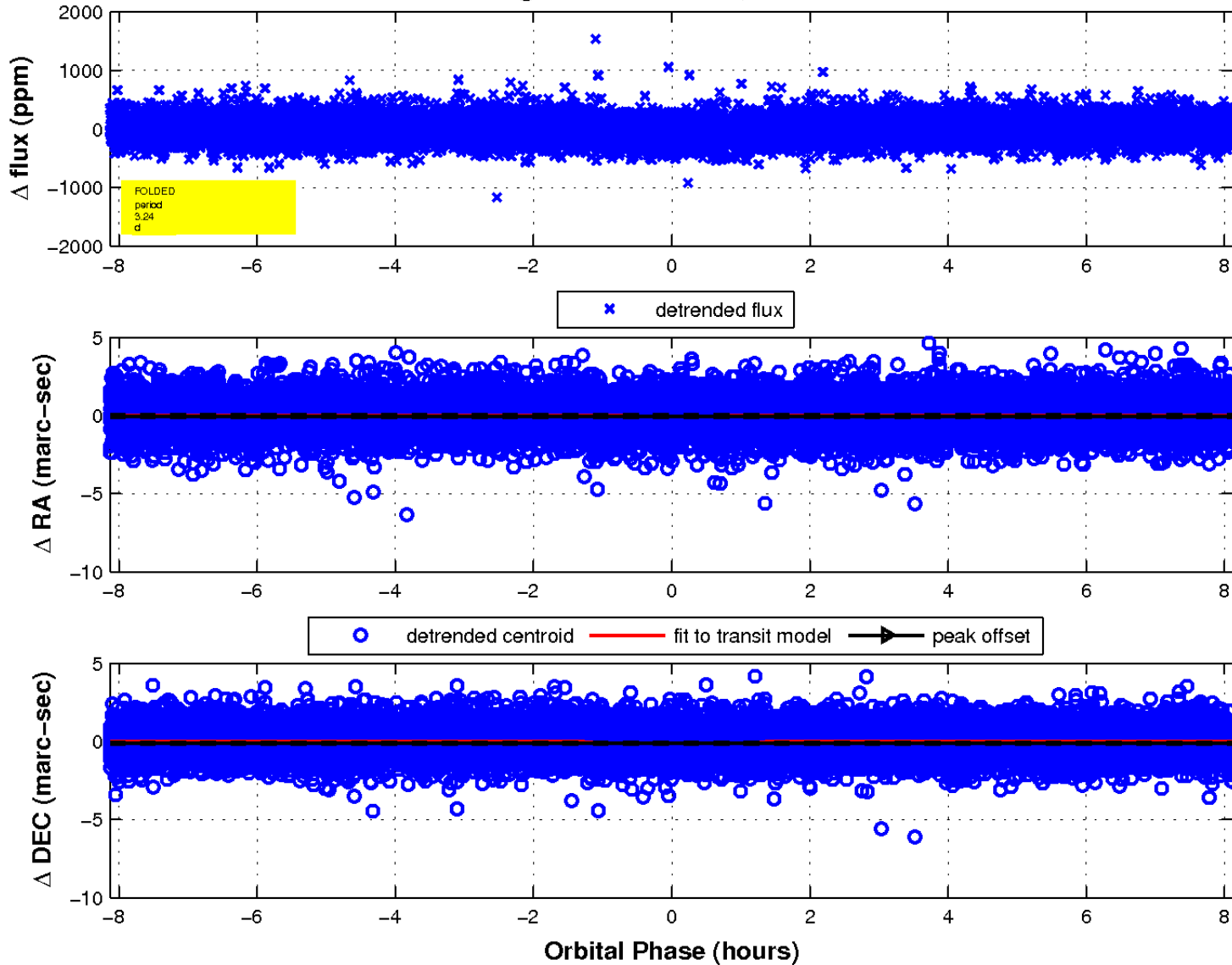
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

