

KIC 008801316

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})
008801316-01	OBS	2956.01	3.937988	135.223685	19.6	5.018	11.5	10.5	2.74	6277	1.47	3399.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008801316-01	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.

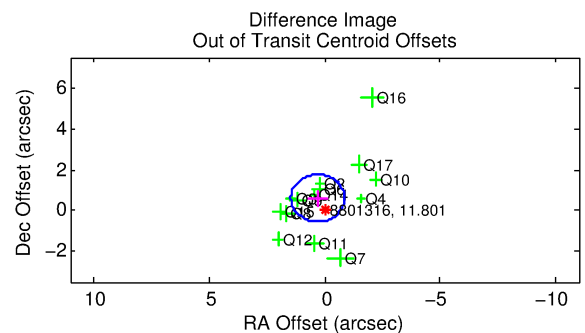
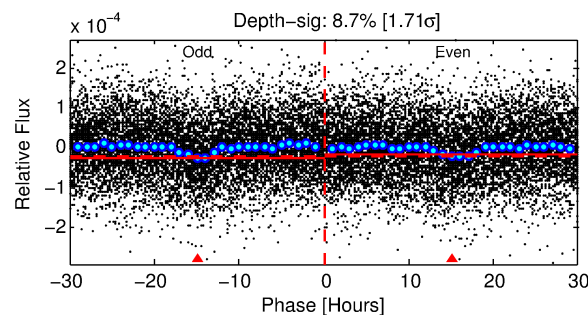
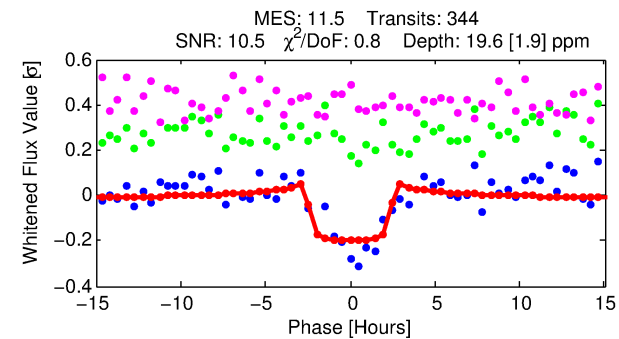
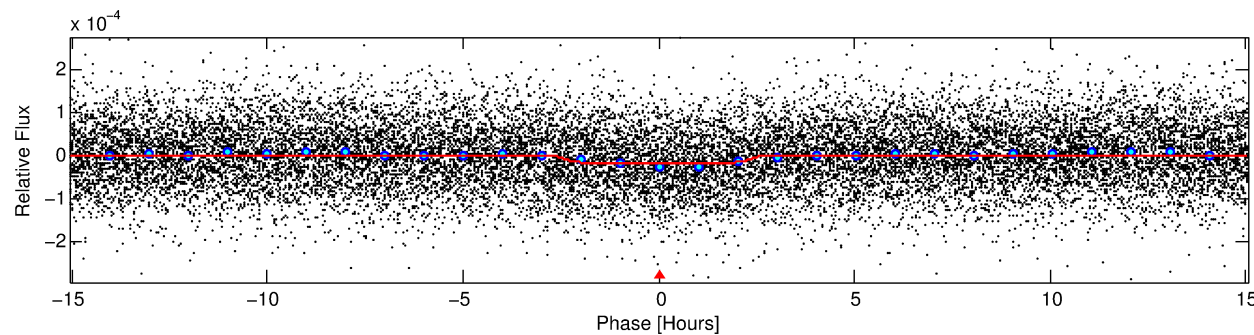
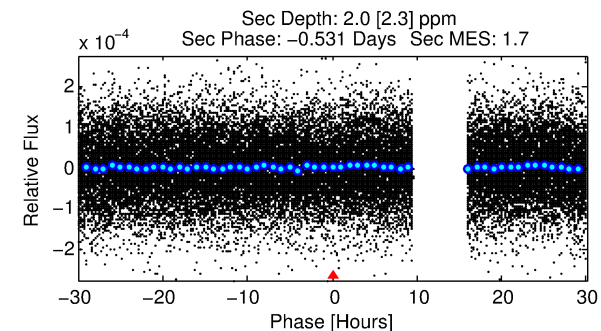
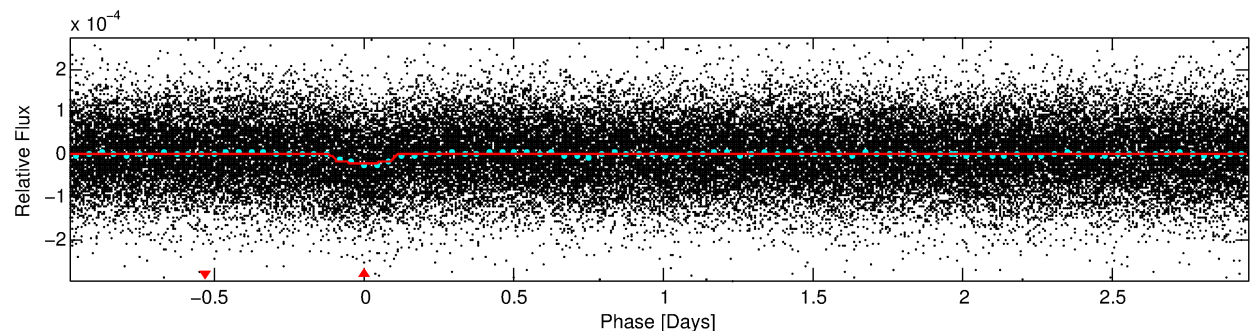
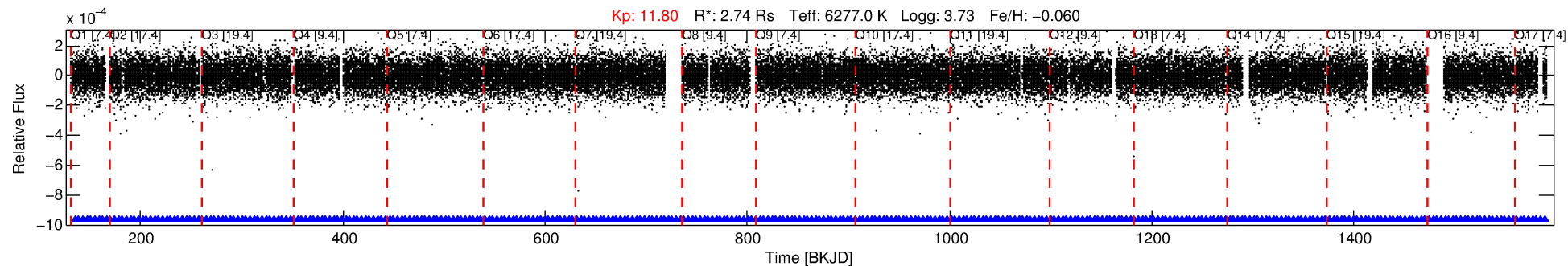
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008801316-01

No Significant Match Found

DV One-Page Summary

KIC: 8801316 Candidate: 1 of 1 Period: 3.938 d
KOI: K02956.01 Corr: 0.854



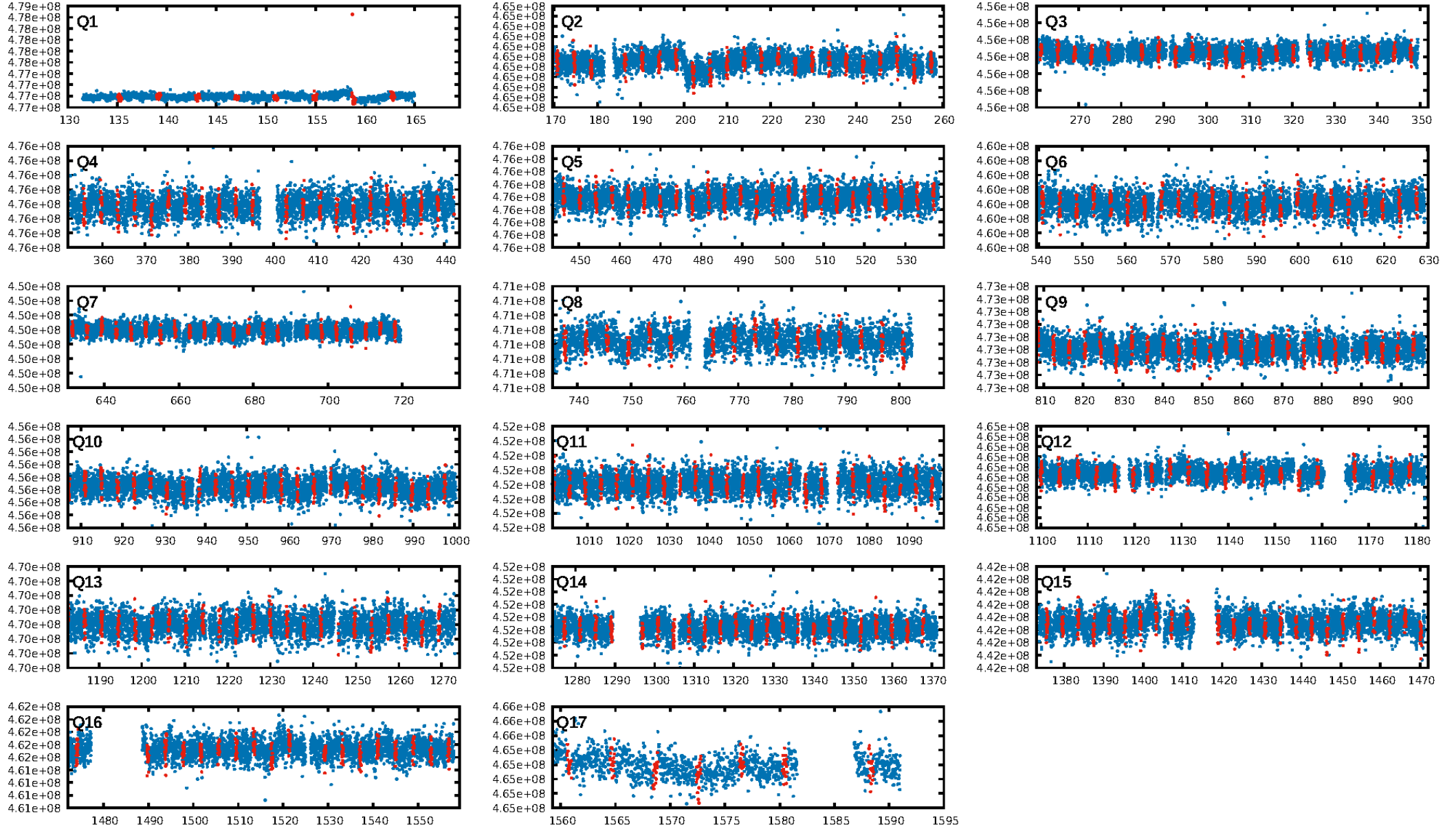
DV Fit Results:

Period = 3.93799 [0.00003] d
Epoch = 135.2237 [0.0051] BKJD
Rp/R* = 0.0049 [0.0011]
a/R* = 2.48 [2.65]
b = 0.93 [0.19]
Seff = 3399.98 [1327.00]
Teq = 1947 [190] K
Rp = 1.47 [0.52] Re
a = 0.0554 [0.0138] AU
Ag = 1.55 [2.04] [0.27σ]
Teffp = 3359 [1062] K [1.31σ]

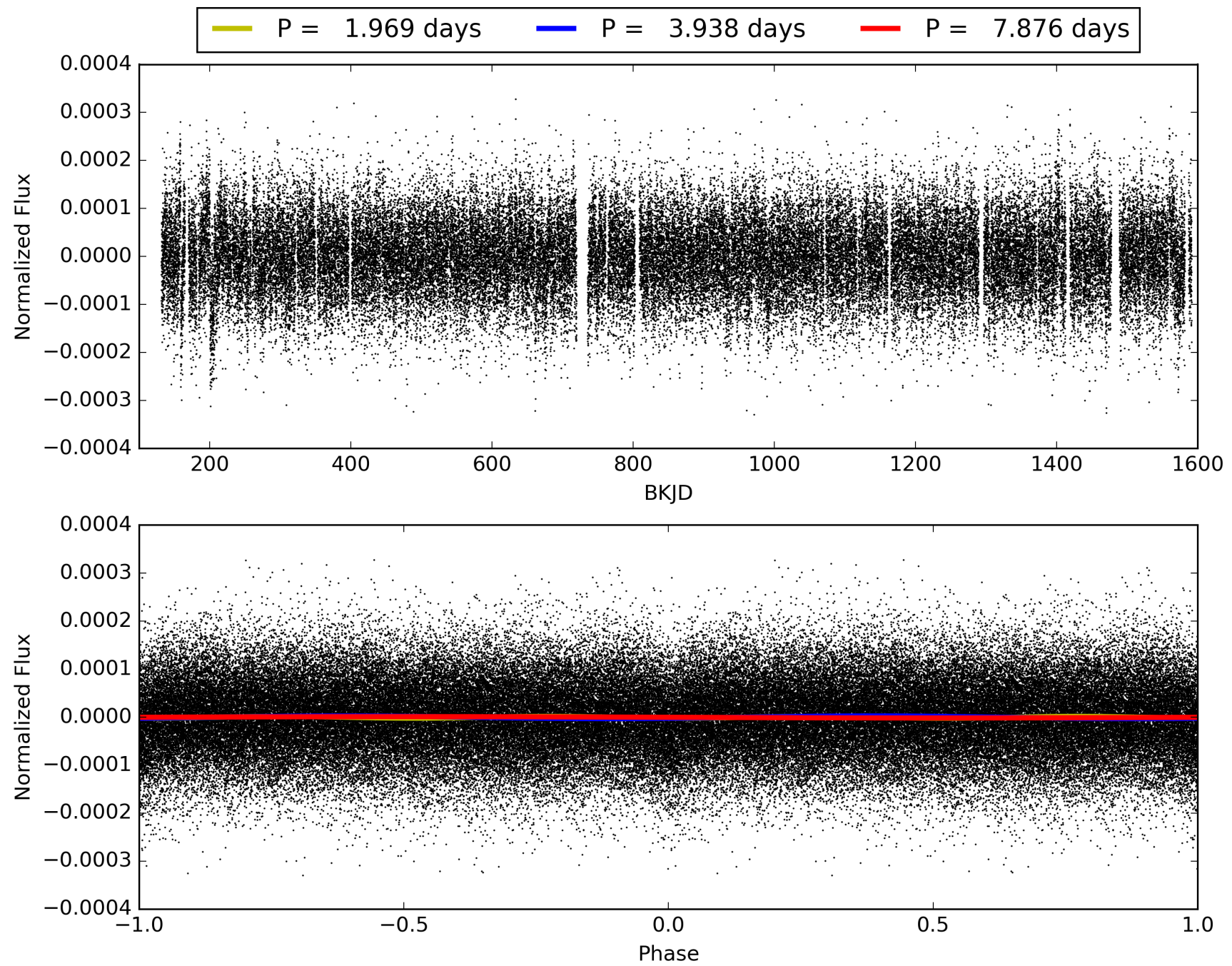
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.71e-27
RollingBand-fgt: 1.00 [329/329]
GhostDiagnostic-chr: 1.731
Centroid-sig: 19.0%
Centroid-so: 1.140 arcsec [1.36σ]
OotOffset-rm: 0.674 arcsec [1.75σ]
KicOffset-rm: 0.582 arcsec [1.49σ]
OotOffset-st: 4/4/4/2 [14]
KicOffset-st: 4/4/4/2 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008801316-01, PDC Light Curves

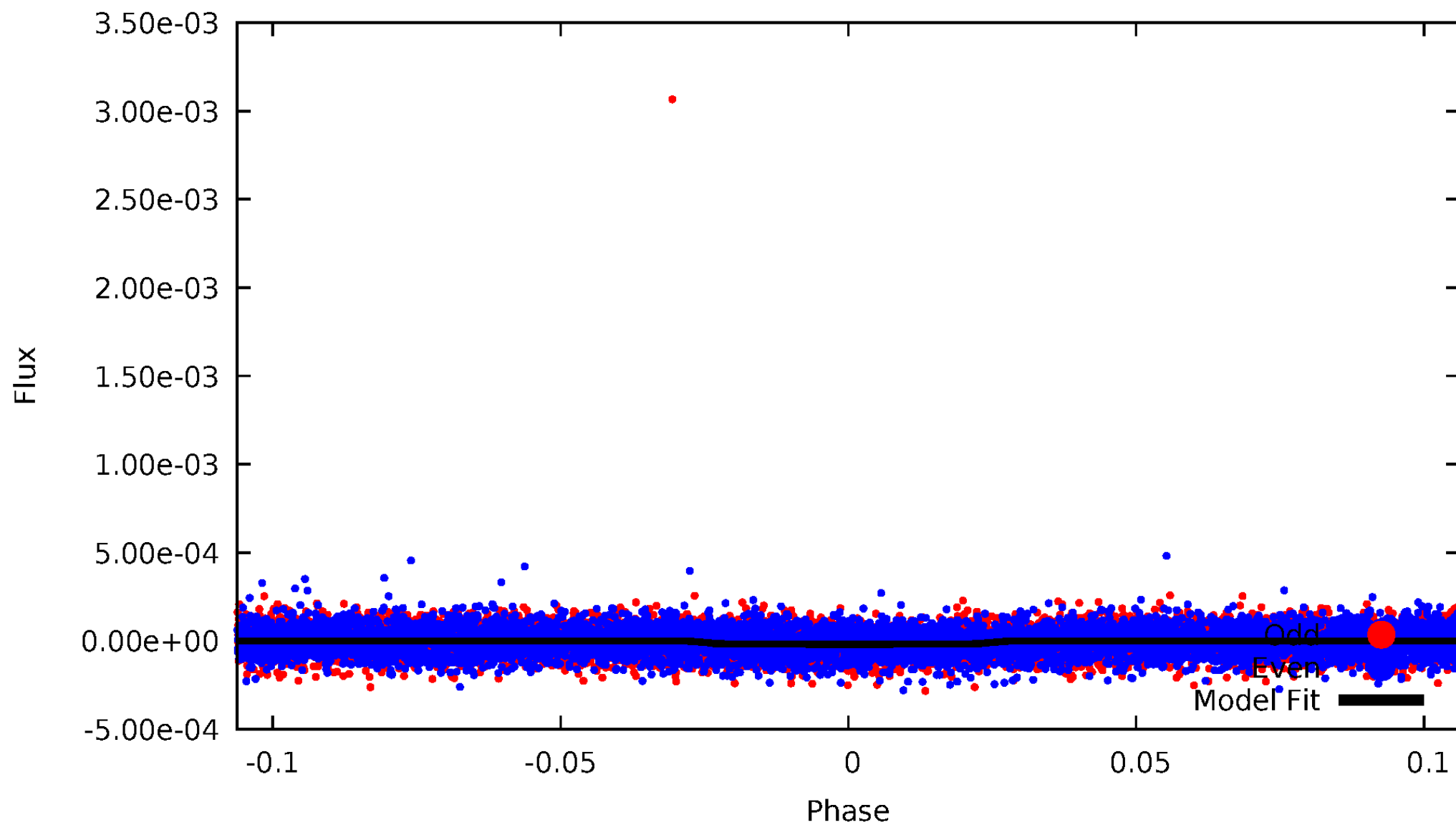


TCE 008801316-01



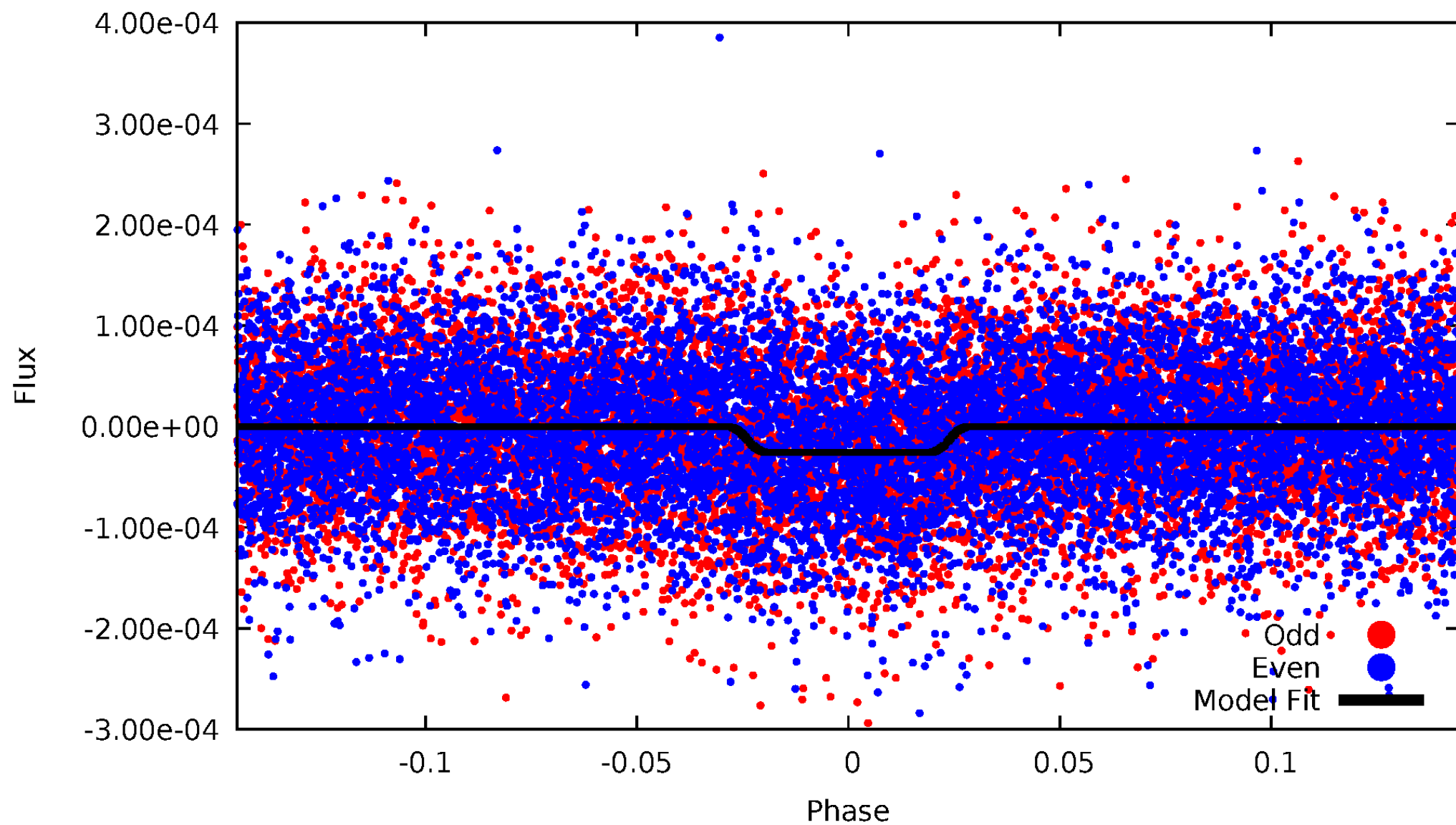
DV Odd/Even

TCE 008801316-01



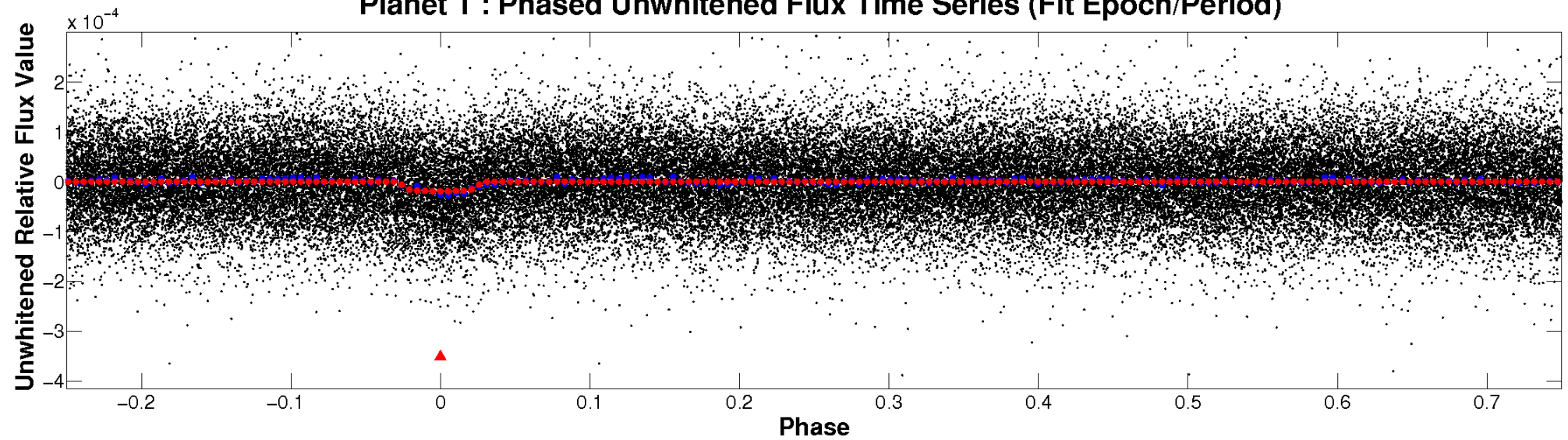
ALT Odd/Even

TCE 008801316-01

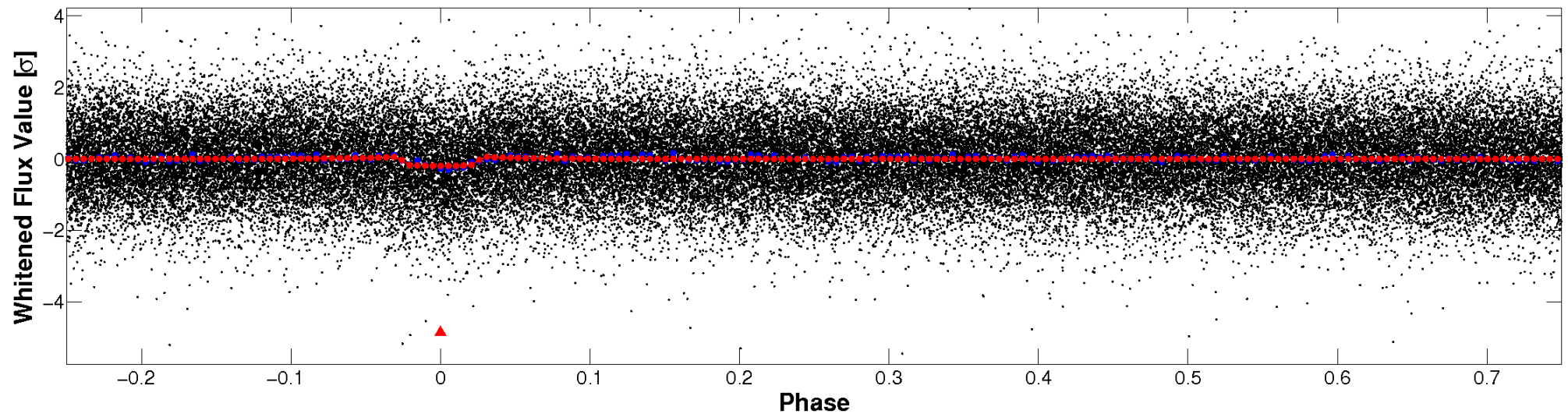


Non-Whitened Vs. Whitened Light Curve

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

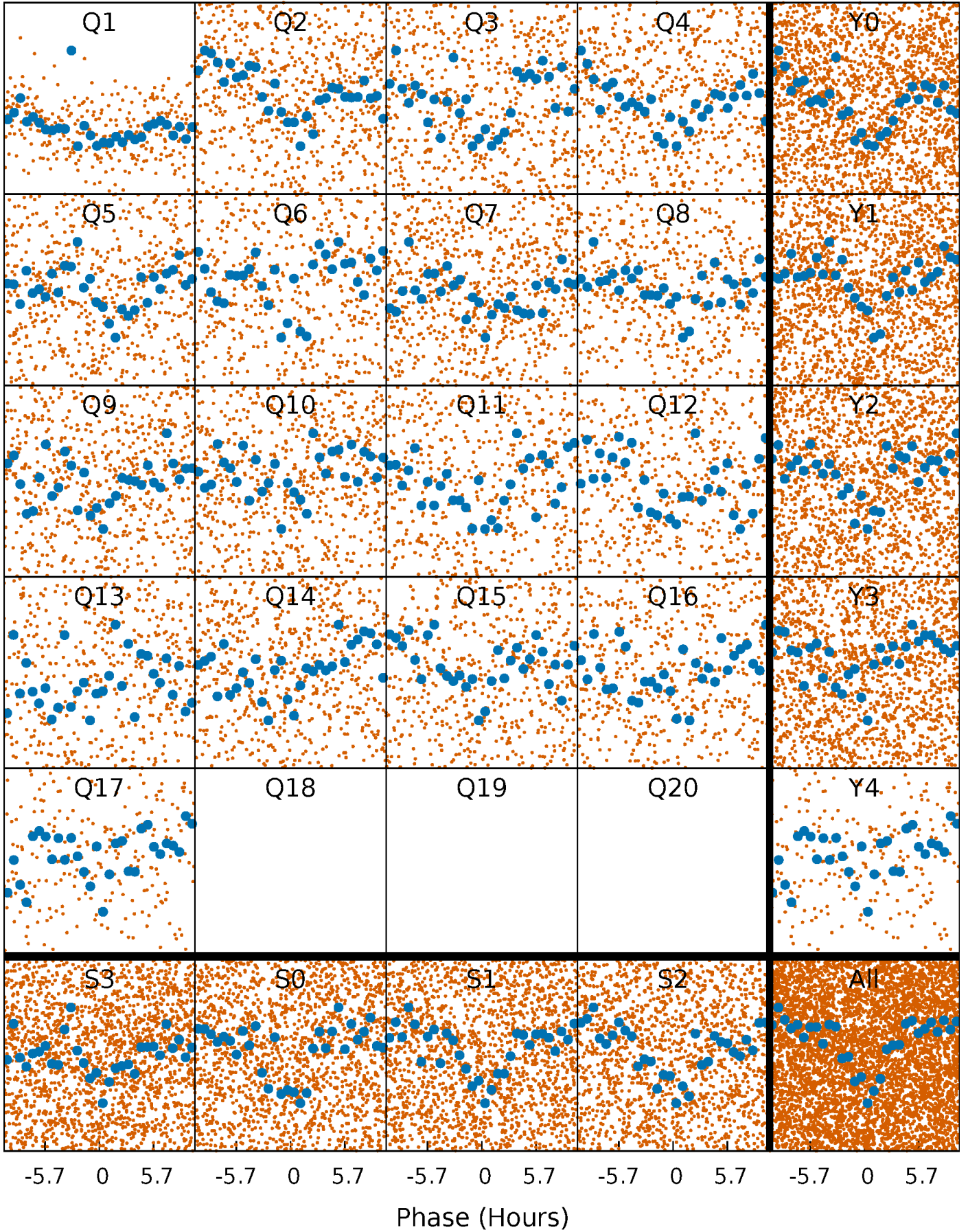


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



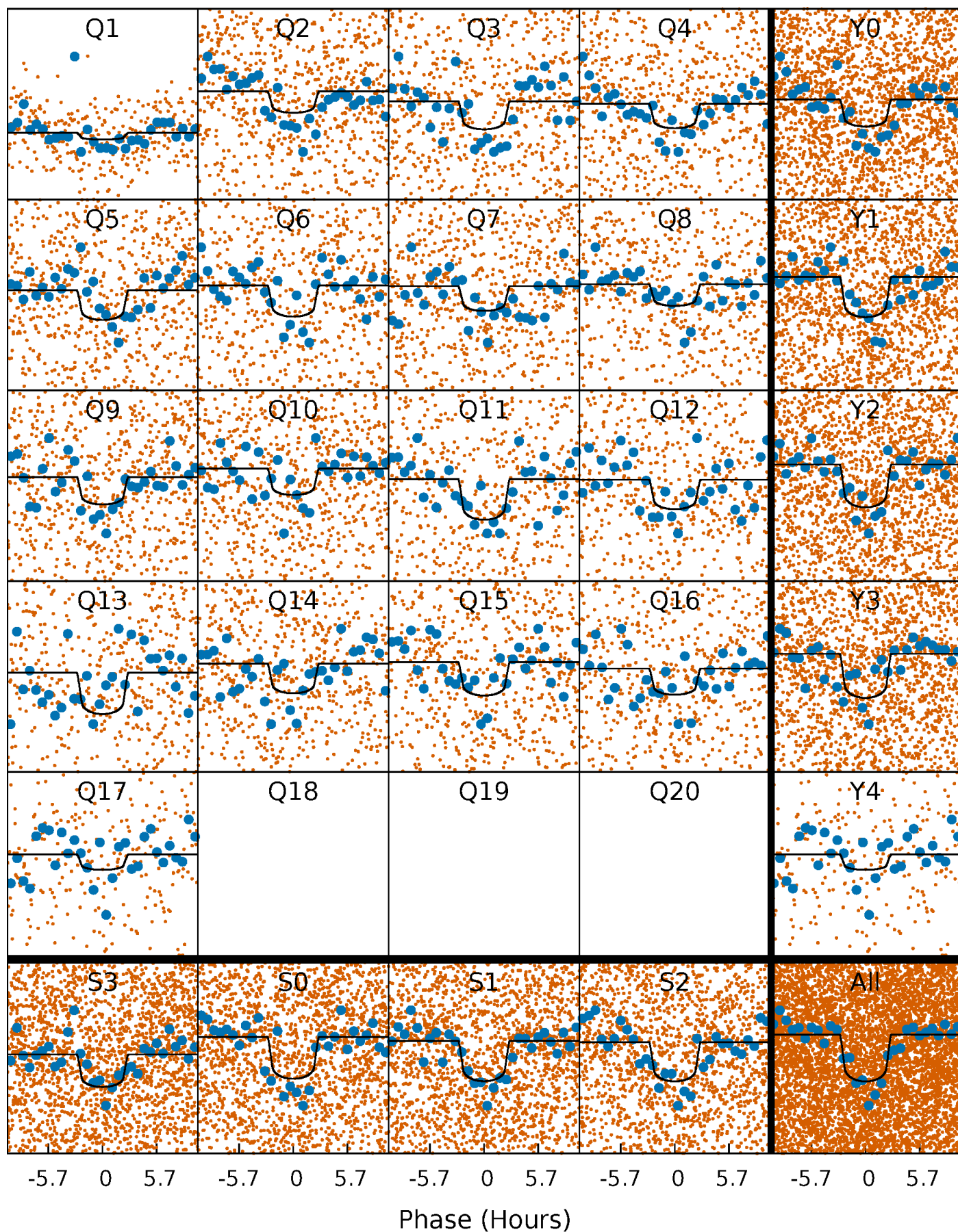
PDC Quarter-Phased Transit Curves

TCE 008801316-01 P= 3.937988 Days $T_0=135.223685$ (BKJD)



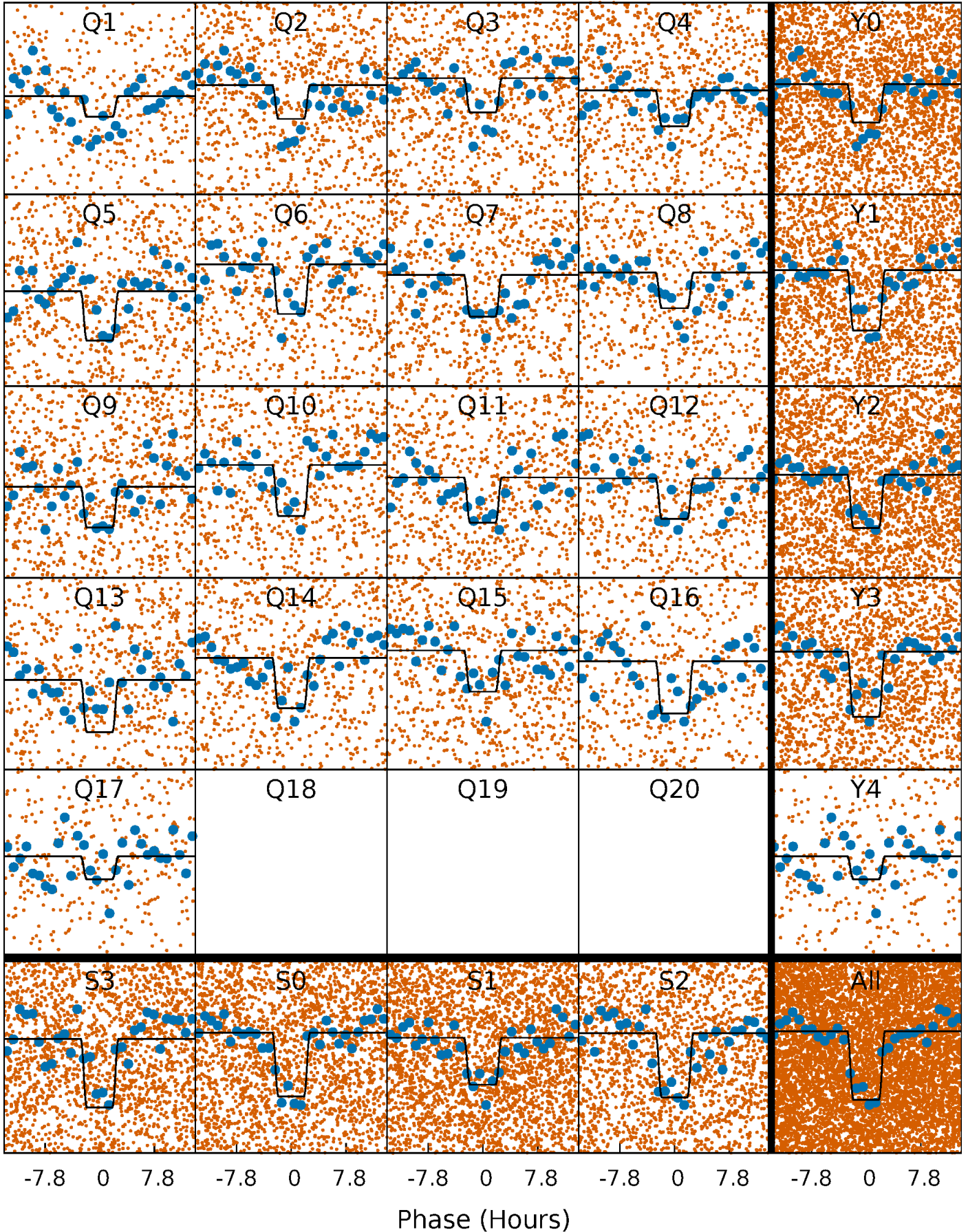
DV Quarter-Phased Transit Curves

TCE 008801316-01 P= 3.937988 Days $T_0=135.223685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

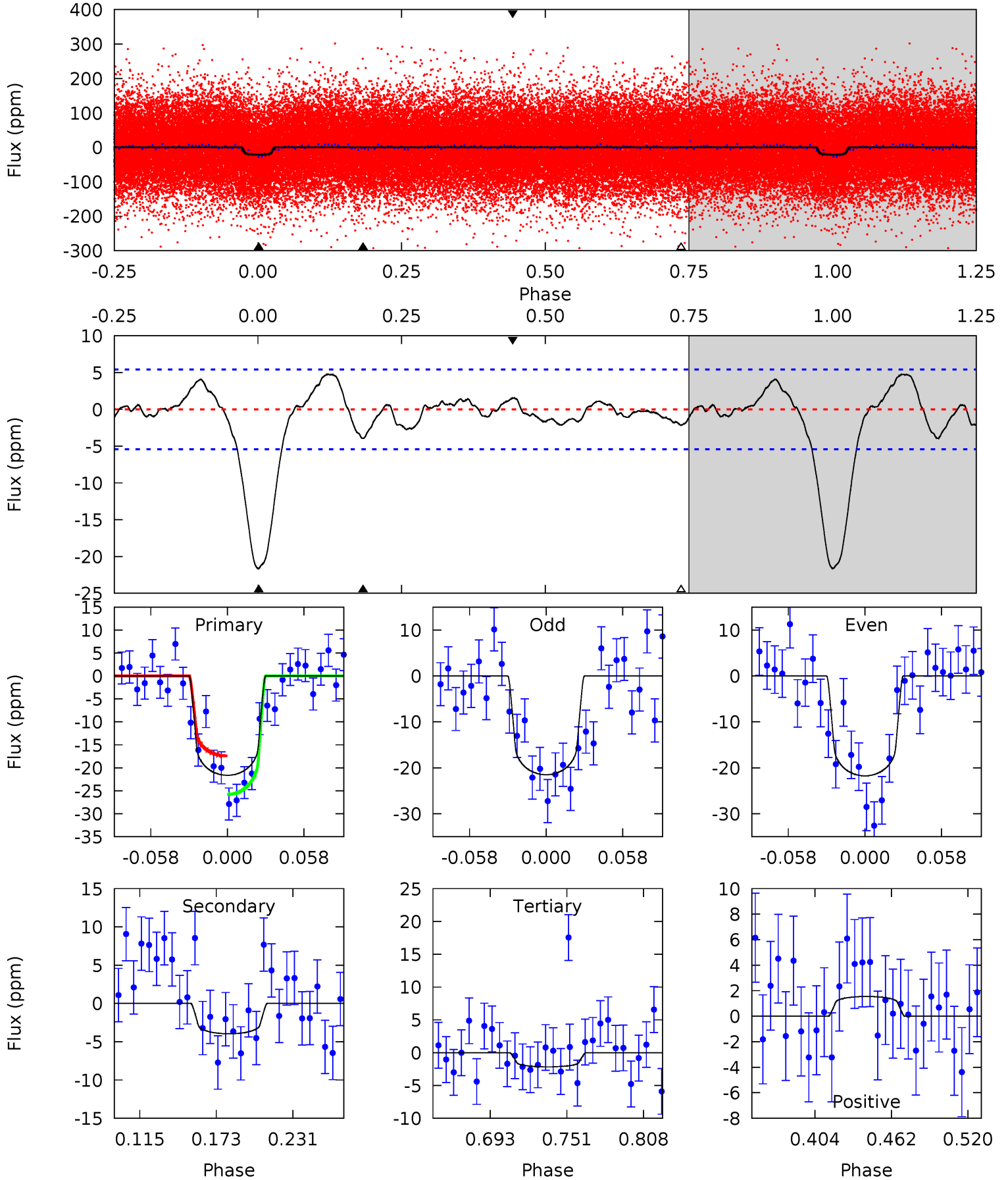
TCE 008801316-01 P= 3.937761 Days $T_0=135.268082$ (BKJD)



DV Model-Shift Uniqueness Test

008801316-01, P = 3.937988 Days, E = 131.285697 Days

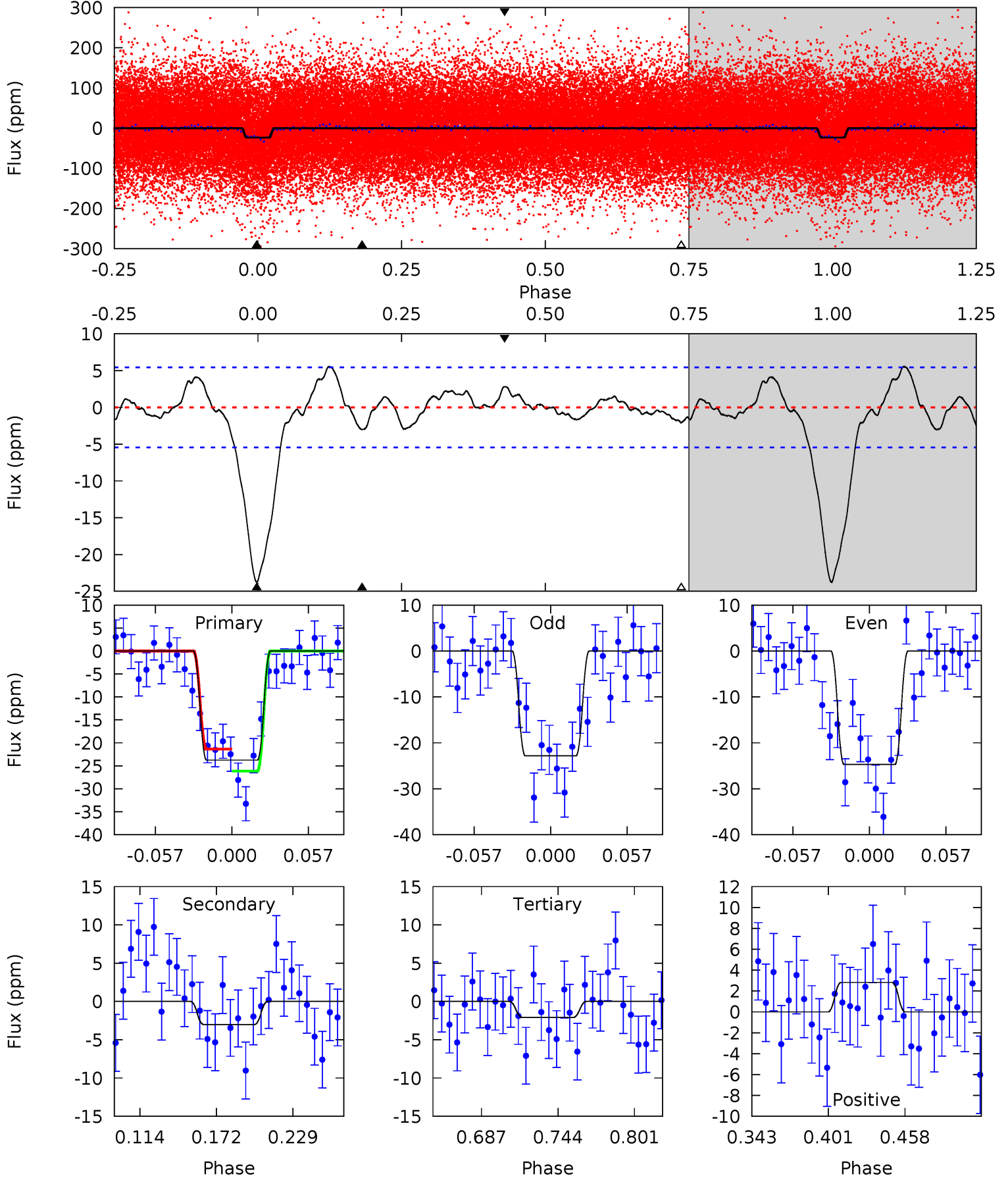
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	3.42	1.87	1.33	4.68	1.90	1.31	16.8	17.3	1.55	2.08	0.10	1.03	0.18	3.63



Alt Model-Shift Uniqueness Test

008801316-01, P = 3.937761 Days, E = 131.330321 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	2.59	1.80	2.43	4.68	1.90	1.36	18.7	18.0	0.79	0.16	0.82	1.02	0.19	2.06



Stellar Parameters For KIC 008801316

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6277^{+126}_{-113}	$3.728^{+0.218}_{-0.073}$	$-0.060^{+0.150}_{-0.100}$	$2.741^{+0.324}_{-0.757}$	$1.465^{+0.182}_{-0.223}$	$0.100^{+0.130}_{-0.024}$
	+2%/-2%	+6%/-2%	+250%/-167%	+12%/-28%	+12%/-15%	+130%/-24%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008801316-01 / KOI 2956.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$1.39^{+0.35}_{-0.36}$	2683^{+122}_{-169}	4192^{+540}_{-425}	$3.498^{+2.976}_{-1.507}$
Alt.	-3 ± 1	$1.48^{+0.35}_{-0.39}$	2693^{+113}_{-172}	3872^{+525}_{-433}	$2.298^{+2.165}_{-1.067}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

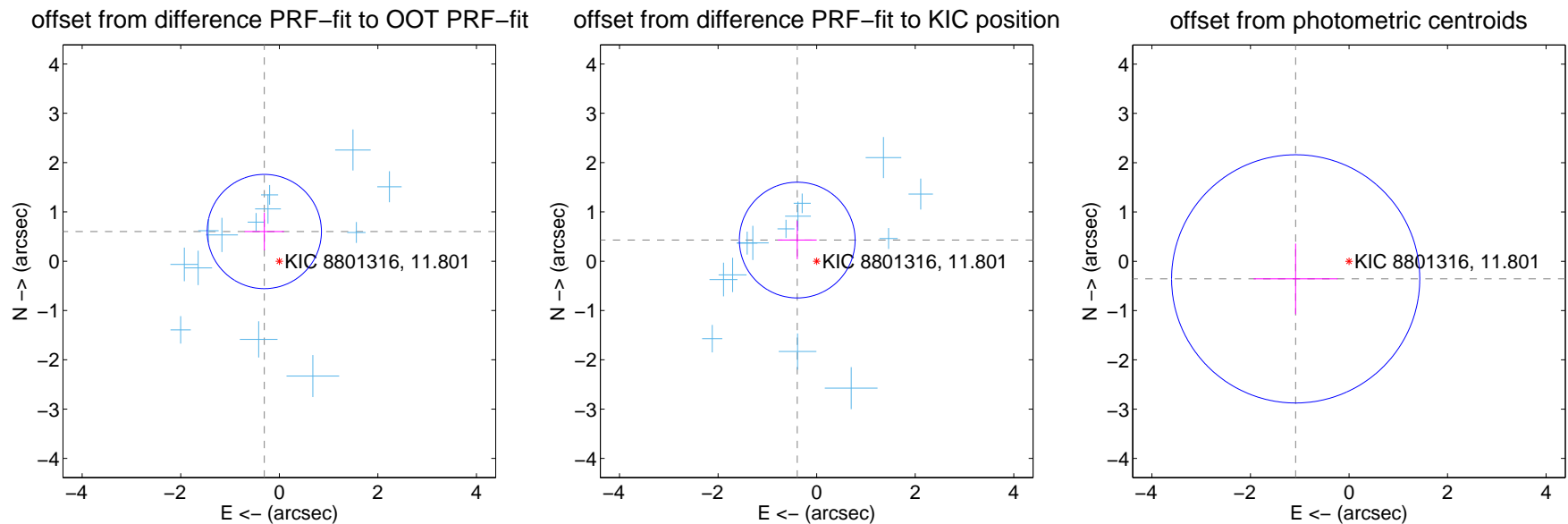
DV Centroid Data

Supplemental centroid analysis for 008801316-01. **Kepler magnitude: 11.80.** Transit SNR 10.48

There are 13 quarters with good PRF difference image offsets

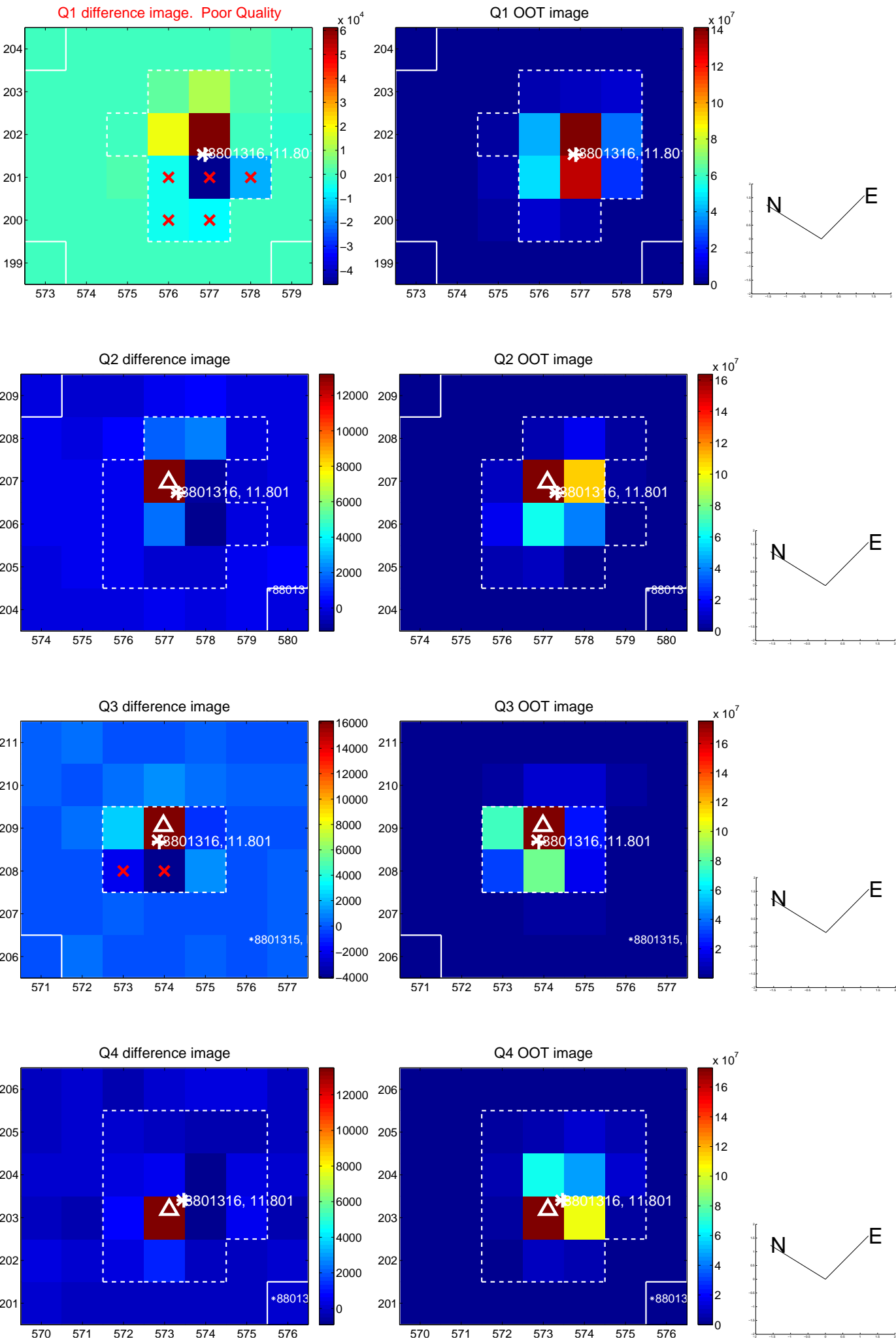
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.674 ± 0.386	1.75	0.304 ± 0.401	0.602 ± 0.383
PRF-fit source offset from KIC position	0.582 ± 0.391	1.49	0.394 ± 0.394	0.429 ± 0.389
photometric centroid source offset	1.14 ± 0.84	1.36	1.08 ± 0.85	-0.36 ± 0.72

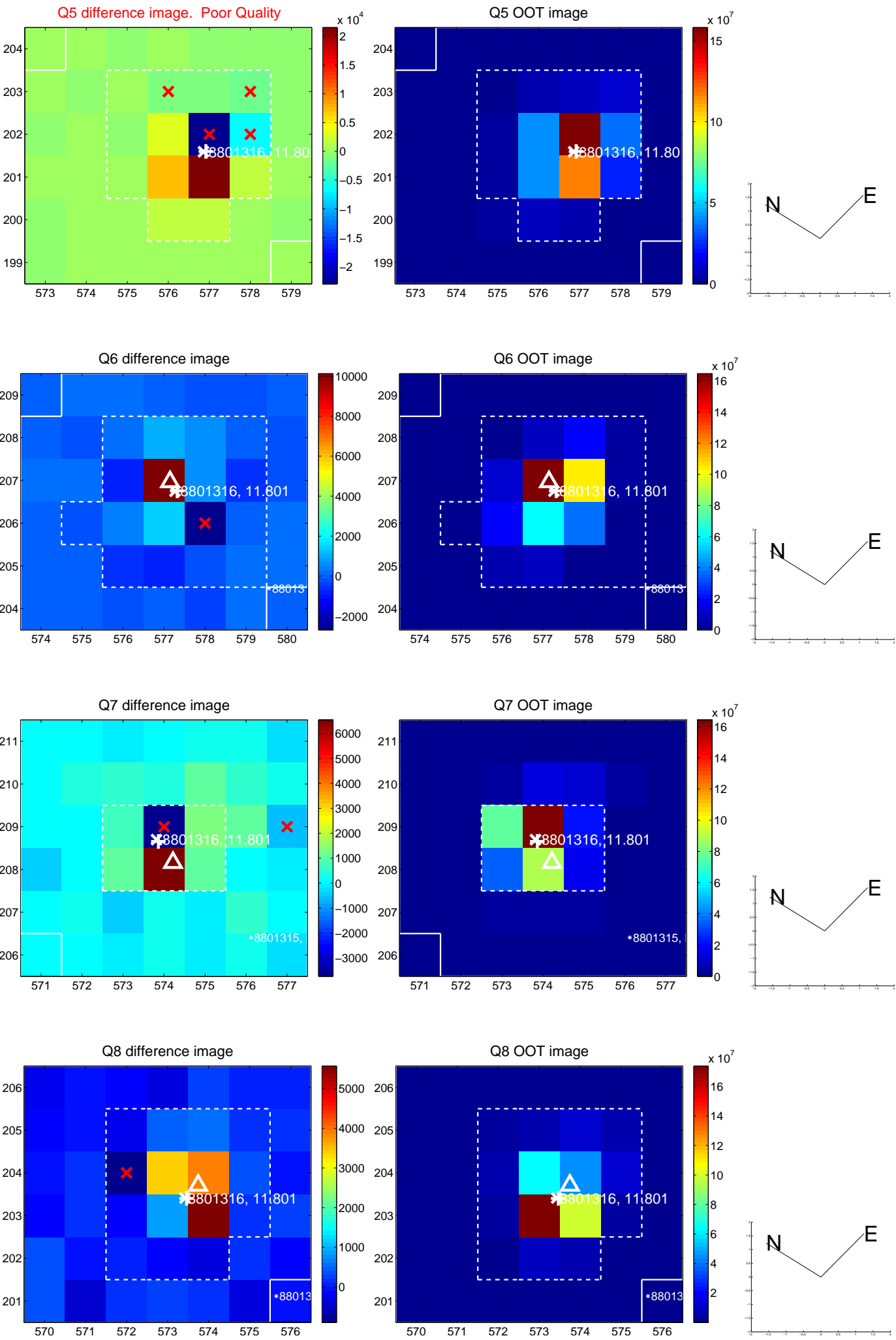


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

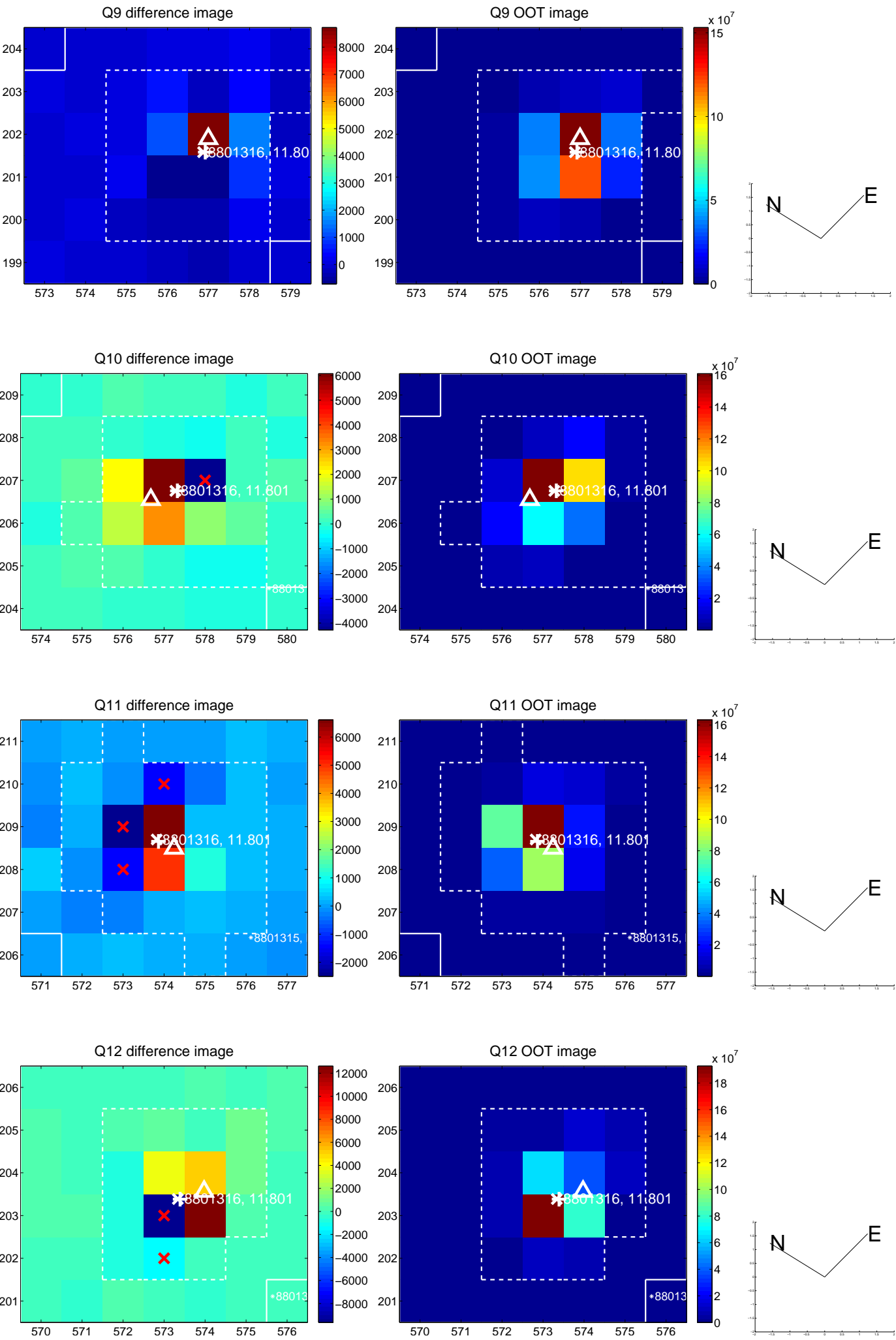
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



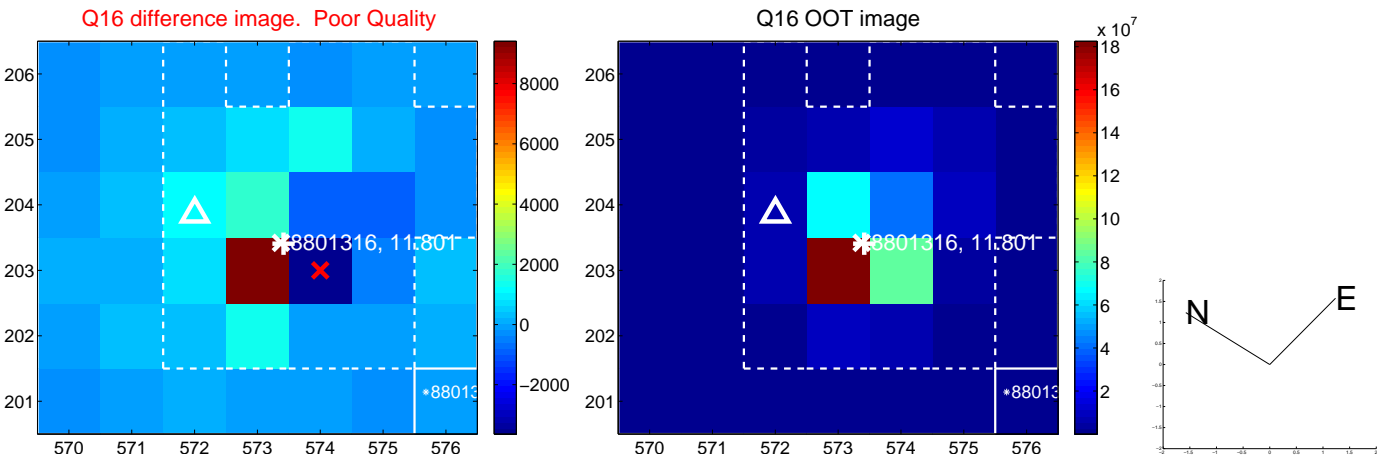
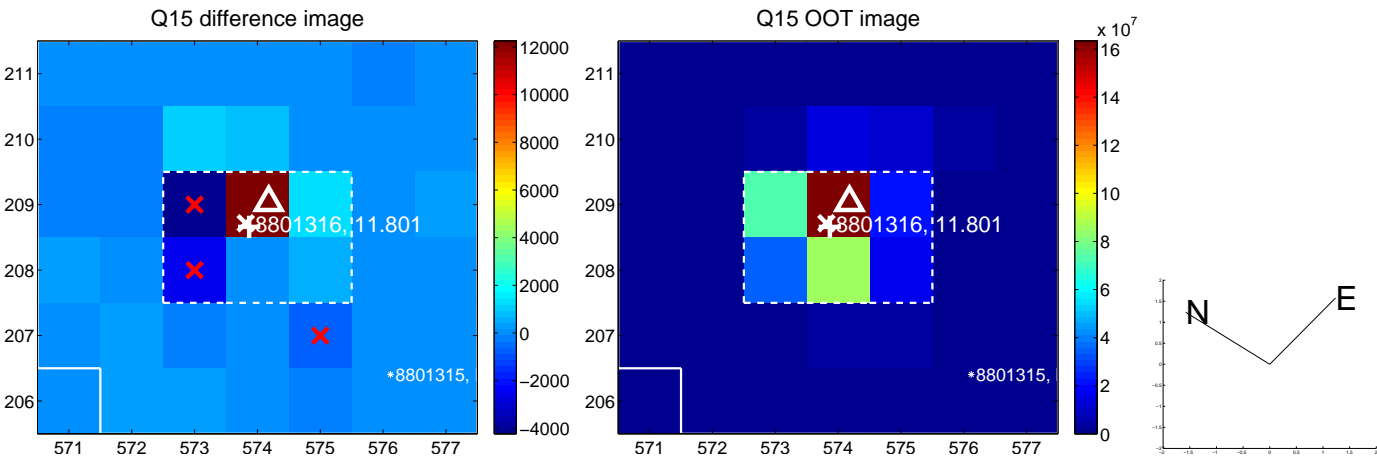
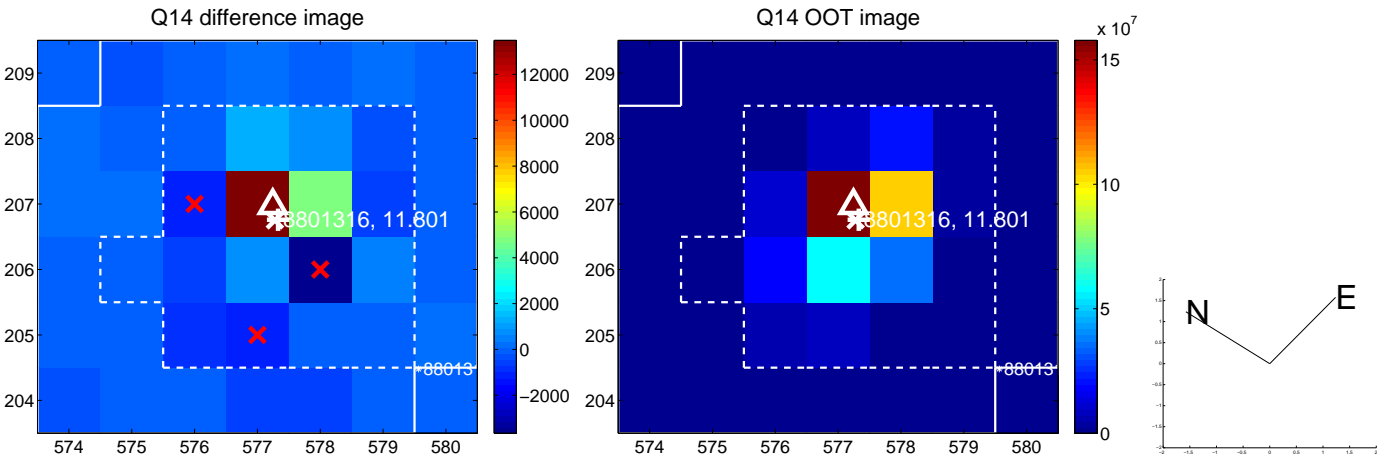
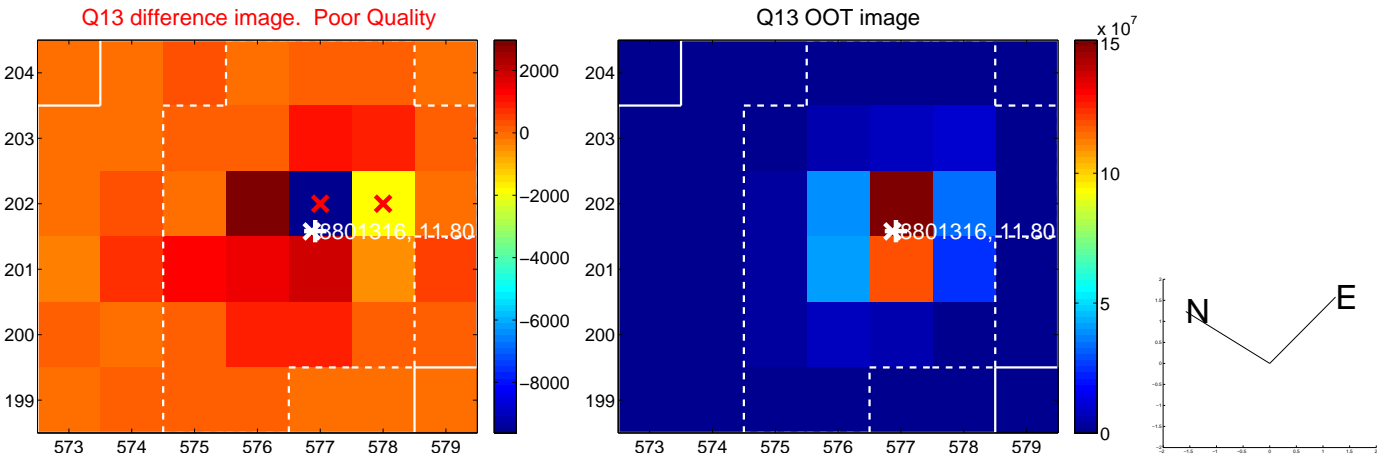
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



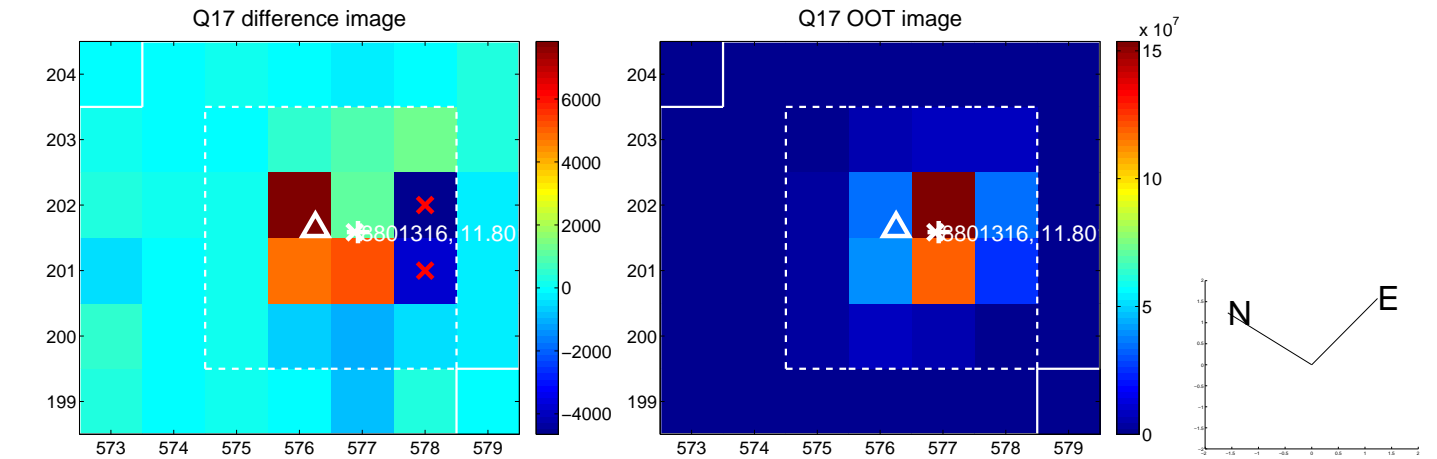
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



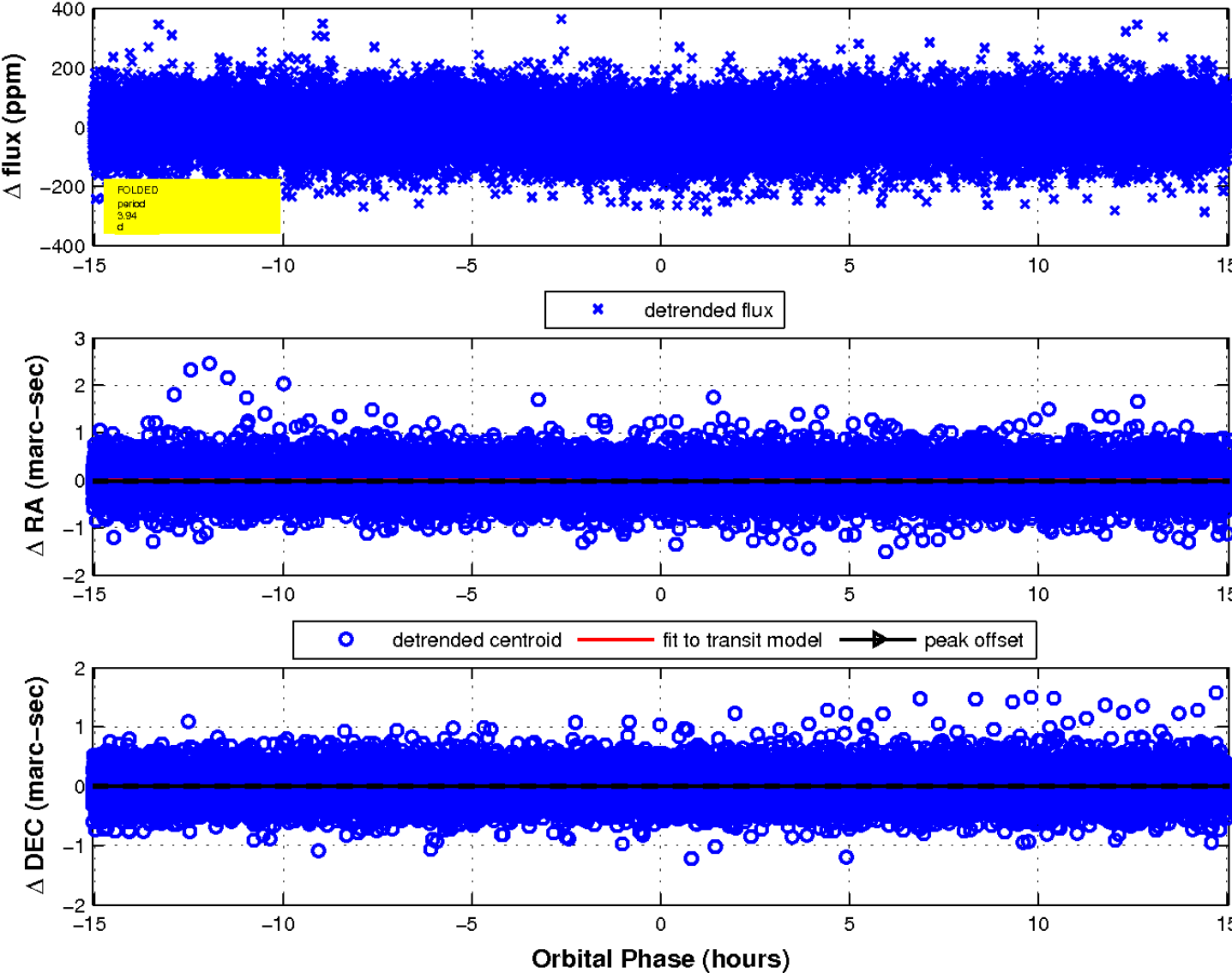
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

