

KIC 009266431

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})
009266431-01	OBS	0704.01	18.396272	148.347918	688.4	2.986	57.6	59.3	0.80	5316	2.64	27.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009266431-01	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.

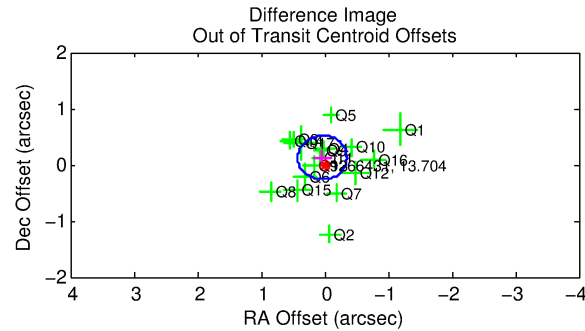
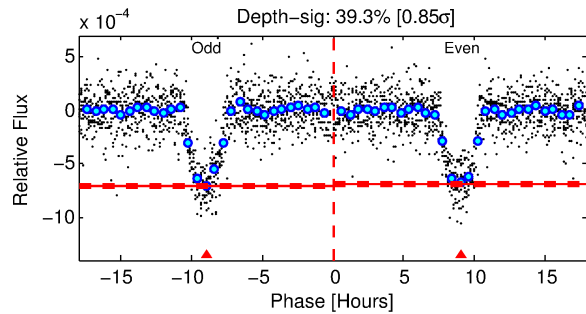
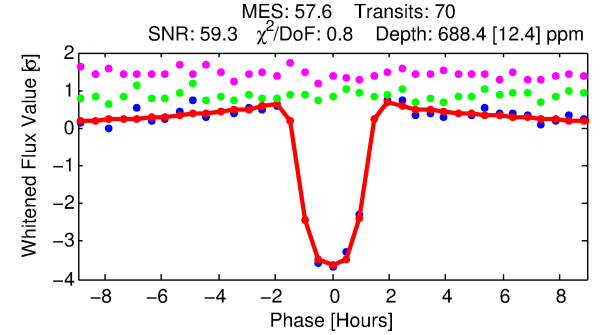
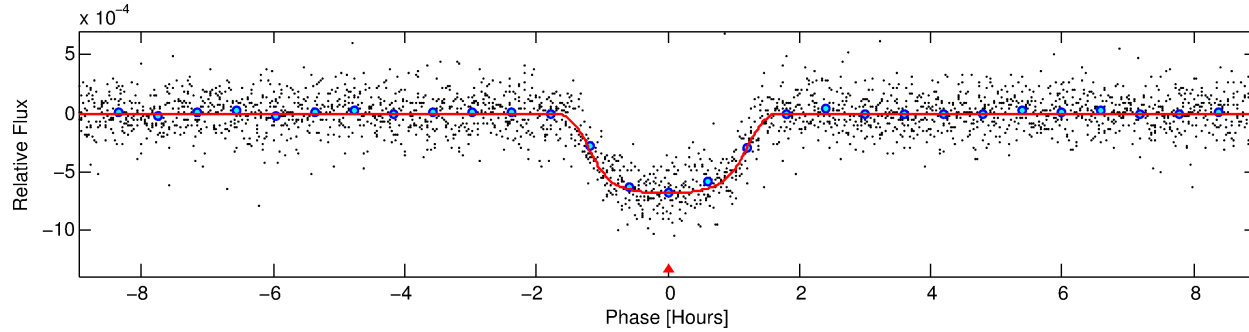
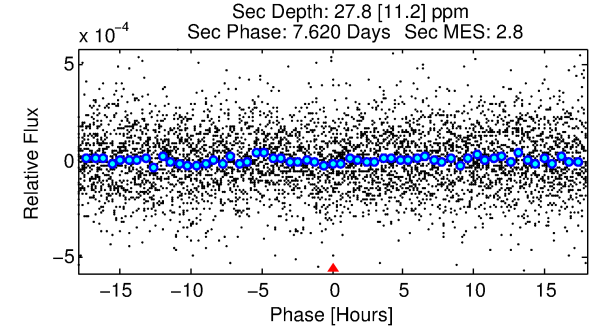
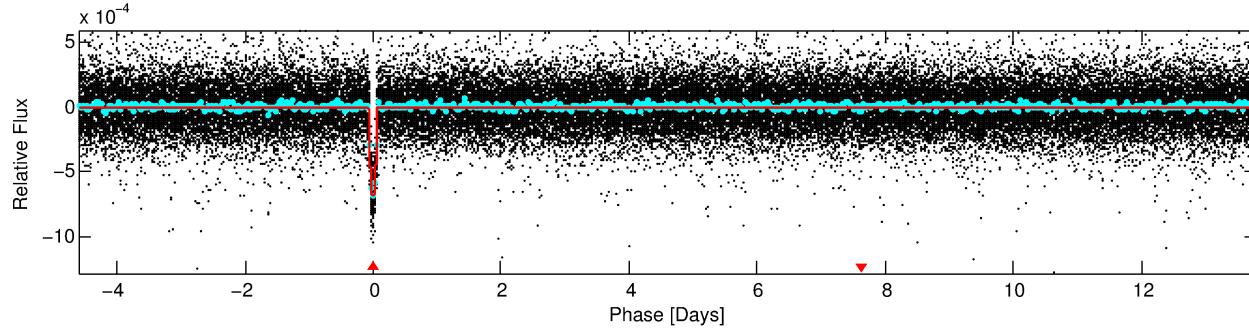
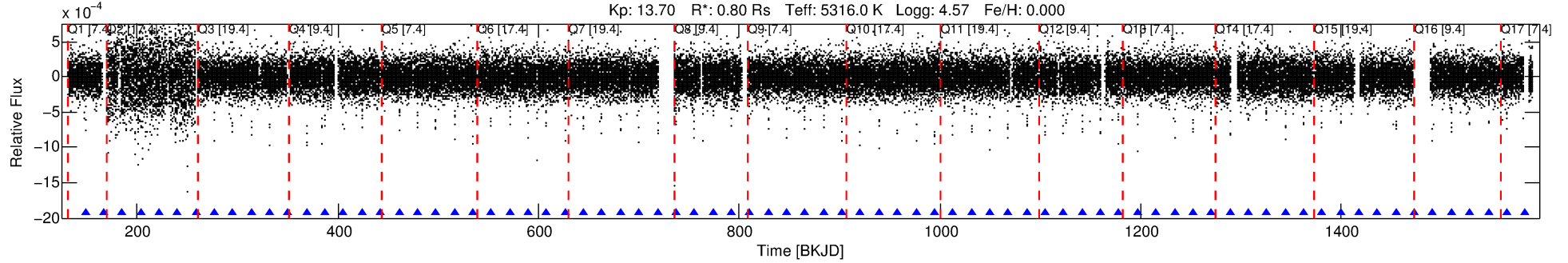
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009266431-01

No Significant Match Found

DV One-Page Summary

KIC: 9266431 Candidate: 1 of 1 Period: 18.396 d
KOI: K00704.01 Corr: 0.934



DV Fit Results:

Period = 18.39627 [0.00003] d
Epoch = 148.3479 [0.0011] BKJD
Rp/R* = 0.0301 [0.0008]
a/R* = 21.10 [2.15]
b = 0.93 [0.02]
Seff = 27.15 [4.34]
Teq = 582 [23] K
Rp = 2.64 [0.26] Re
a = 0.1305 [0.0116] AU
Ag = 37.36 [16.09] [2.26σ]
Teffp = 2225 [231] K [7.07σ]

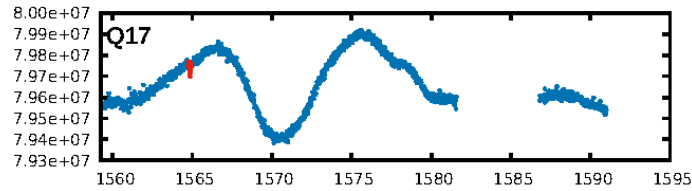
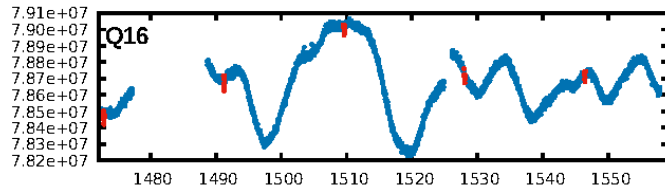
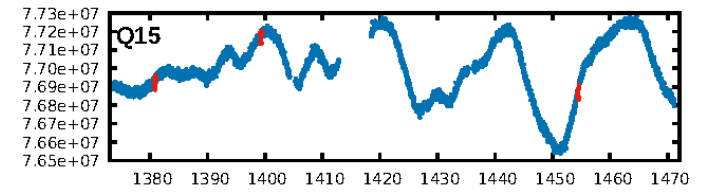
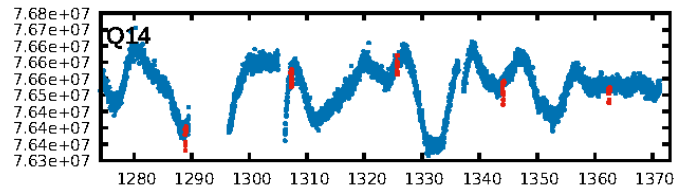
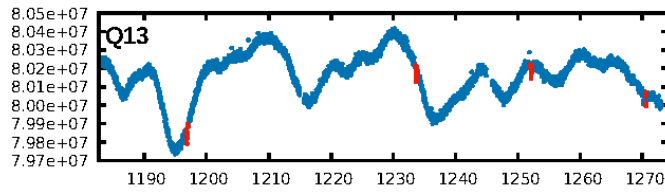
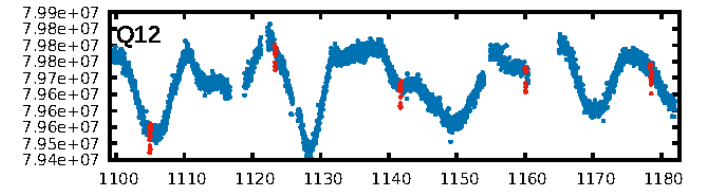
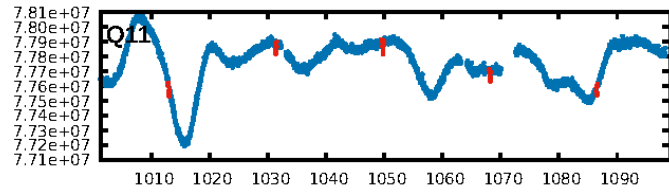
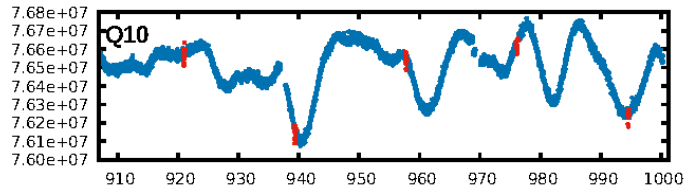
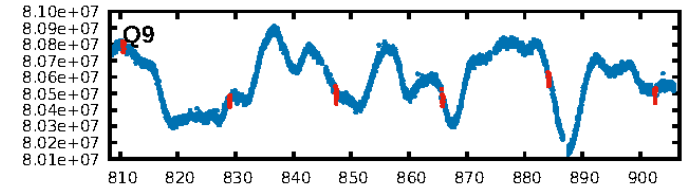
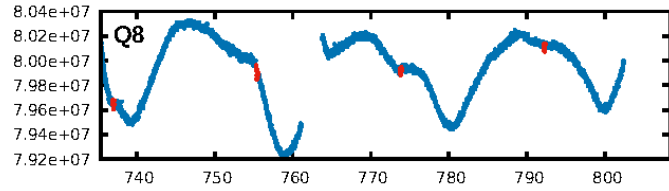
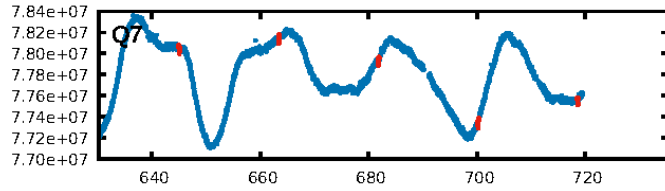
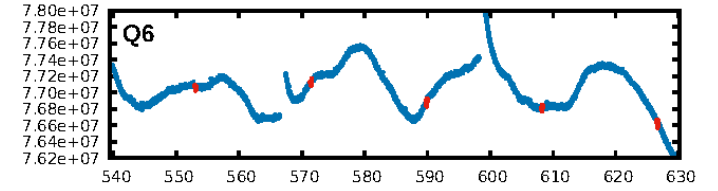
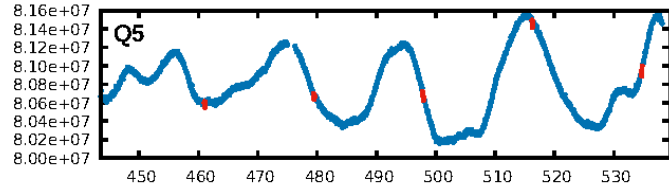
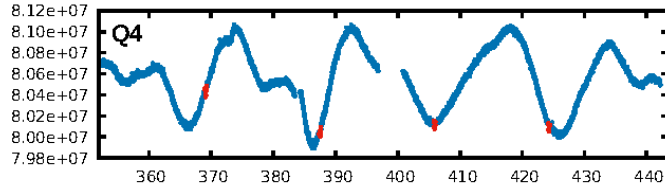
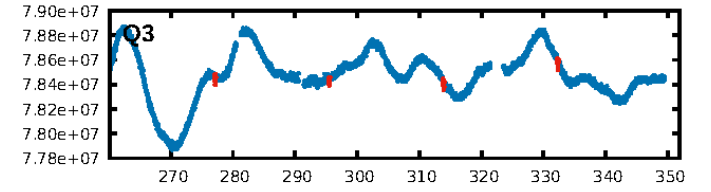
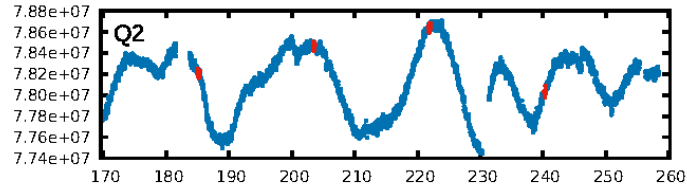
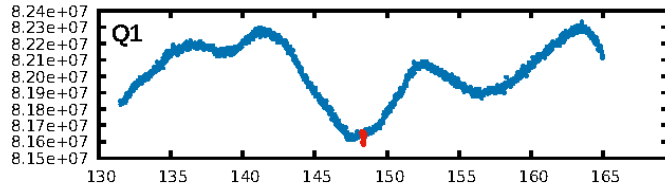
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [68/68]
GhostDiagnostic-chr: 6.021
Centroid-sig: 0.0%
Centroid-so: 0.421 arcsec [2.48σ]
OotOffset-rm: 0.131 arcsec [1.00σ]
KicOffset-rm: 0.267 arcsec [1.75σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

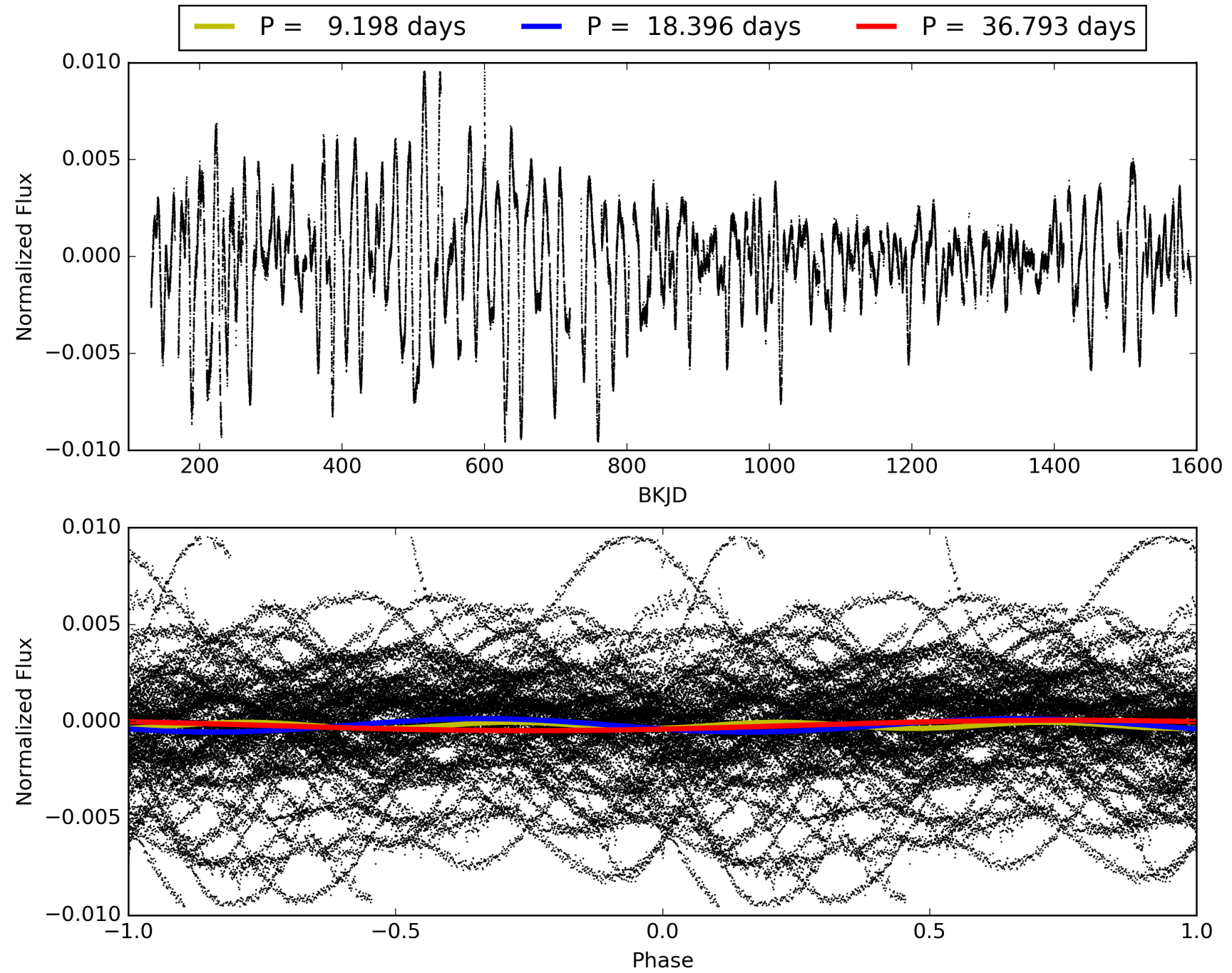
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:47:57 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009266431-01, PDC Light Curves

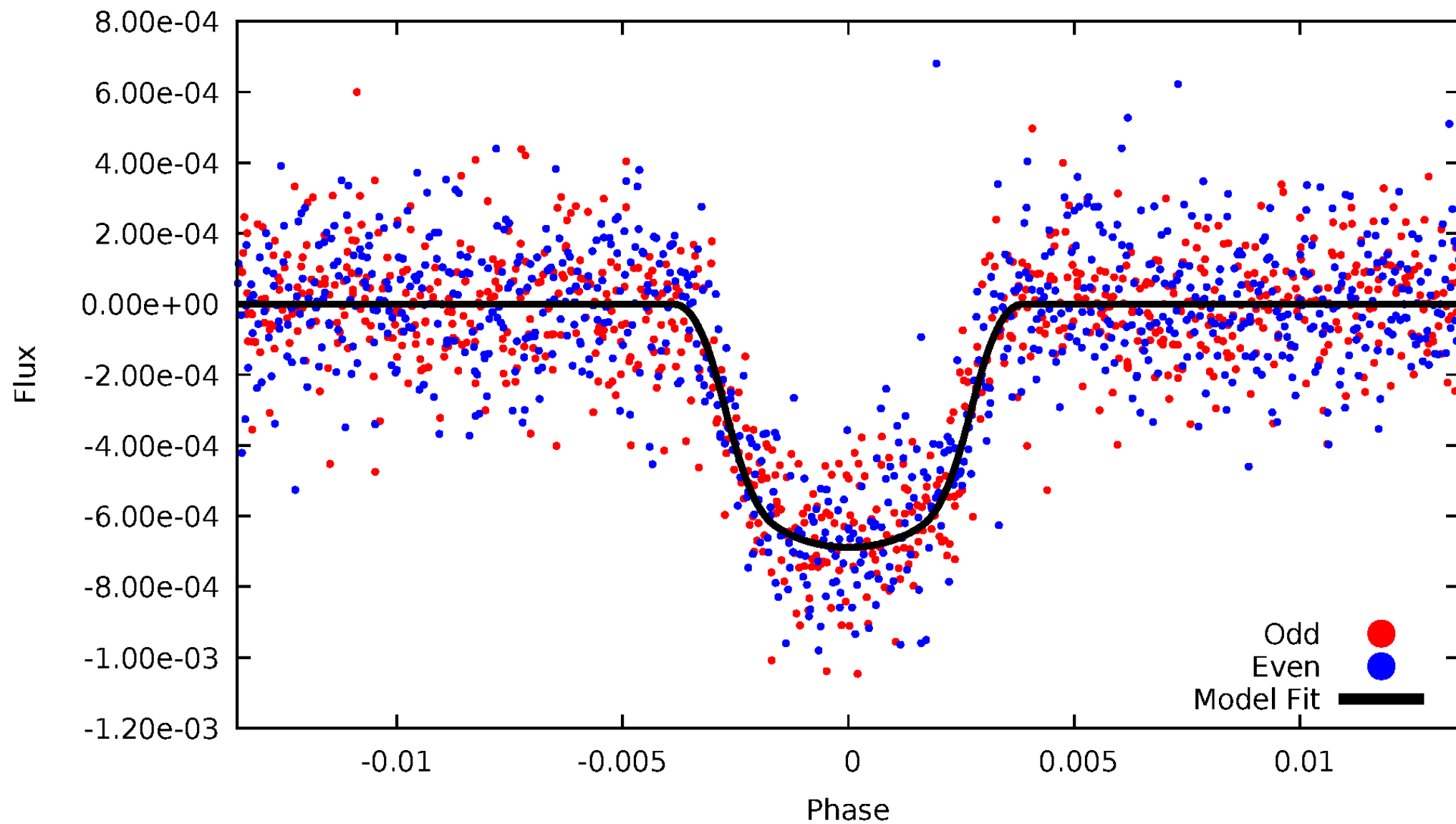


TCE 009266431-01



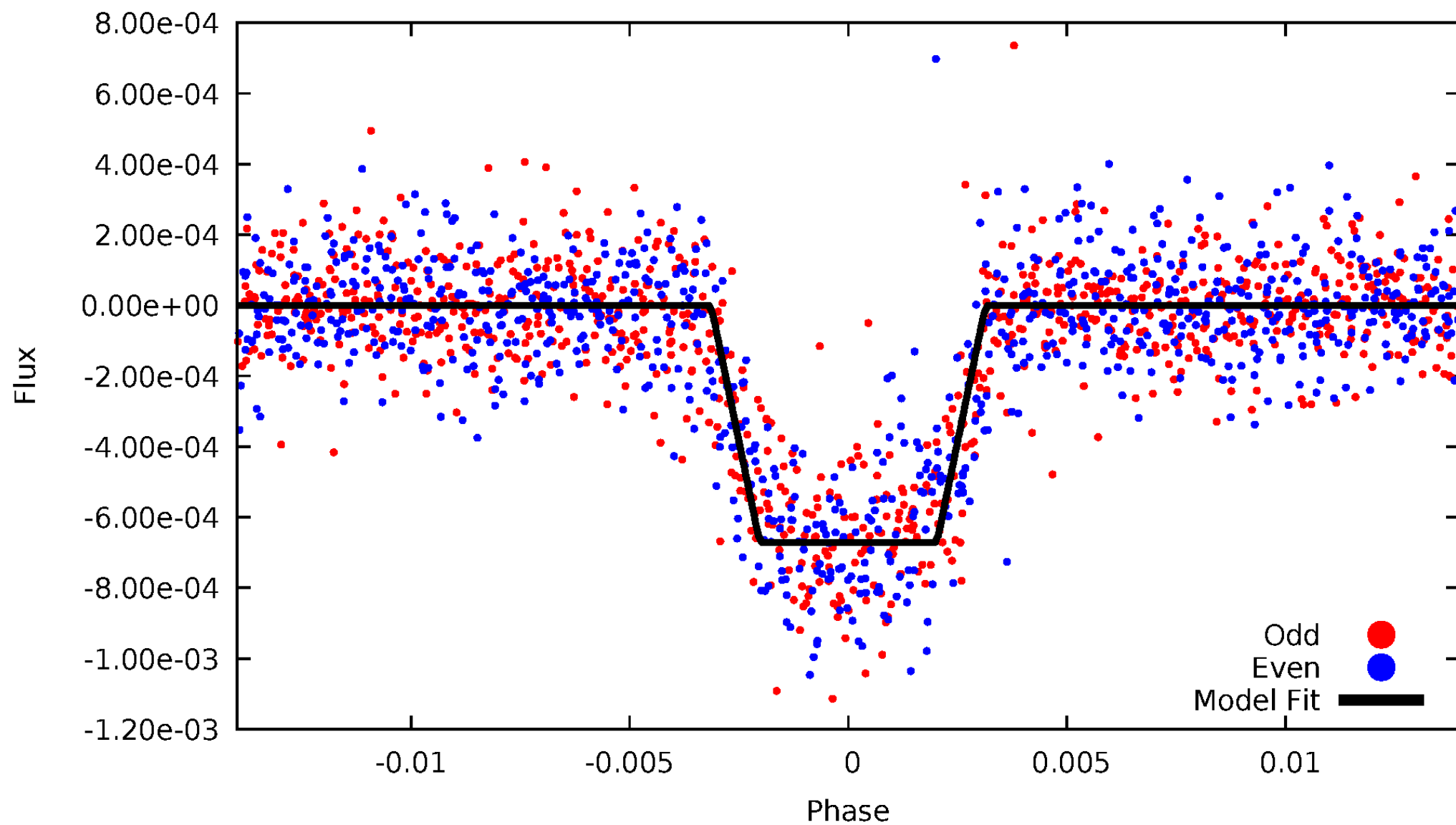
DV Odd/Even

TCE 009266431-01



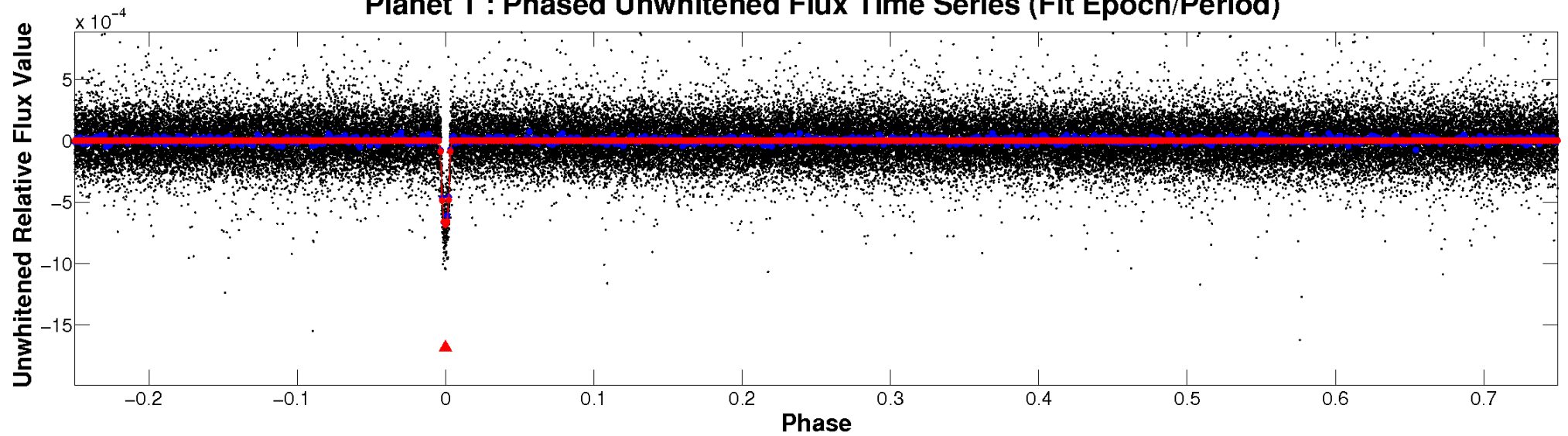
ALT Odd/Even

TCE 009266431-01

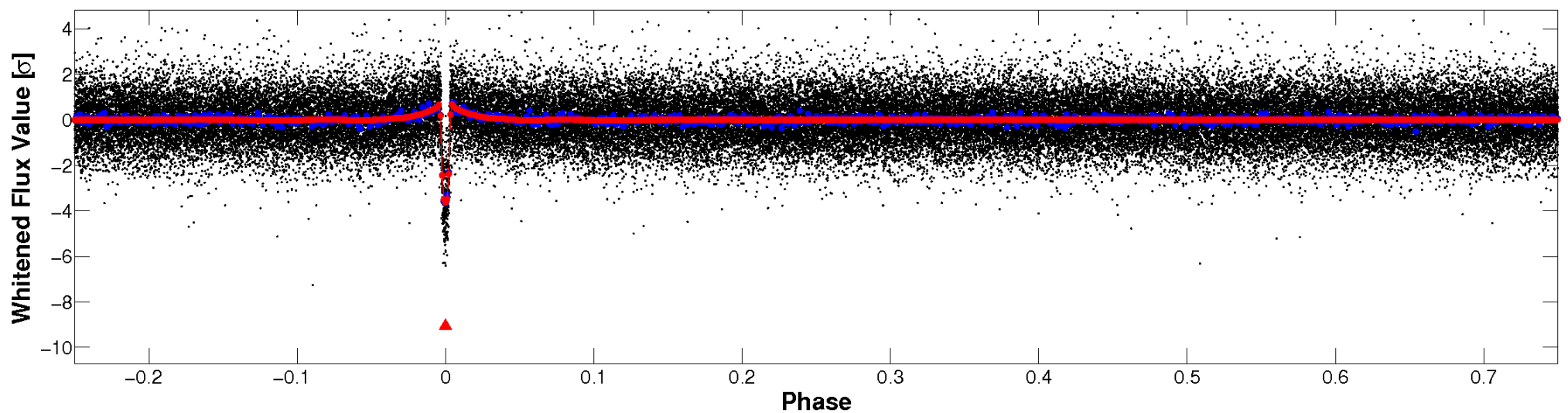


Non-Whitened Vs. Whitened Light Curve

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

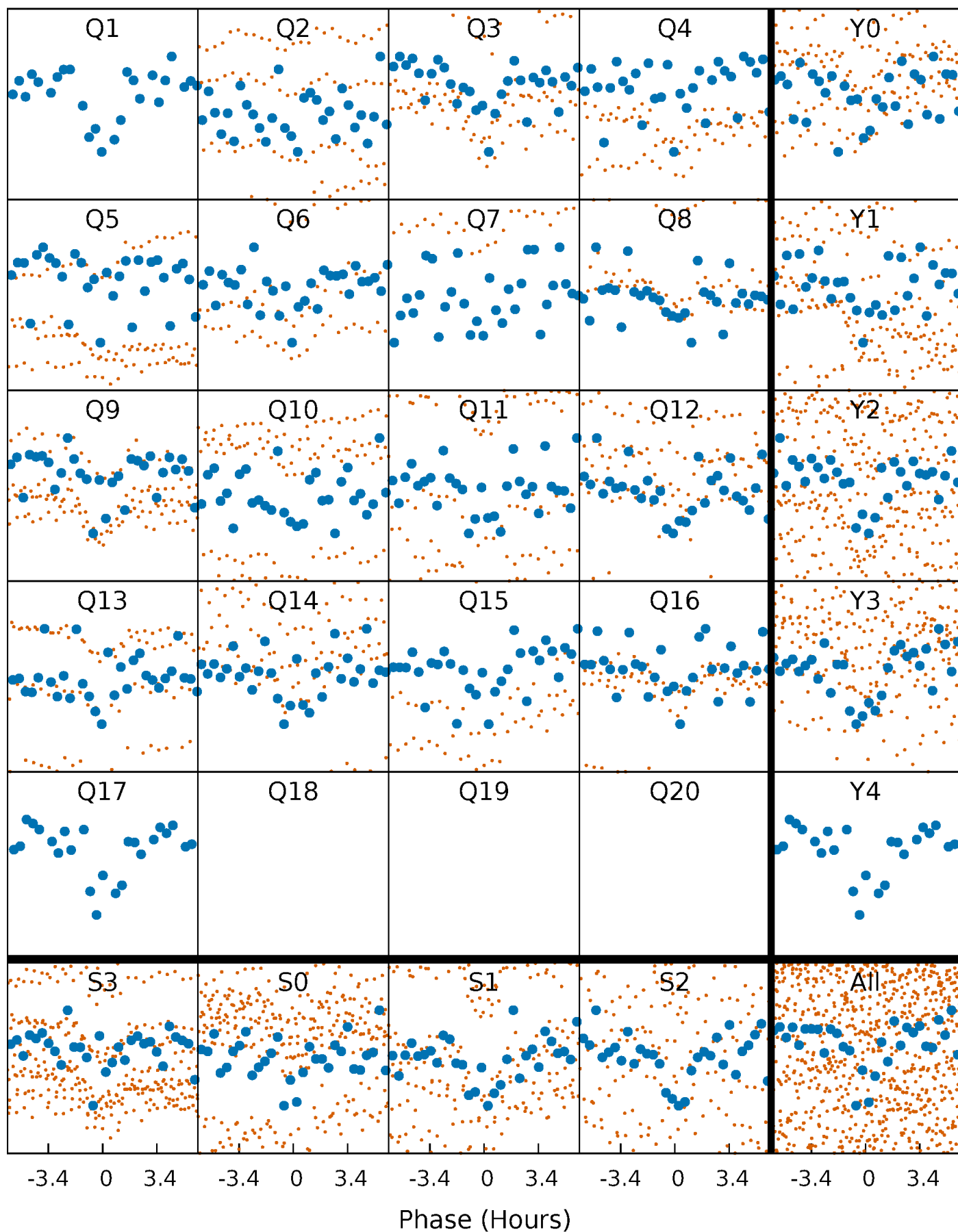


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



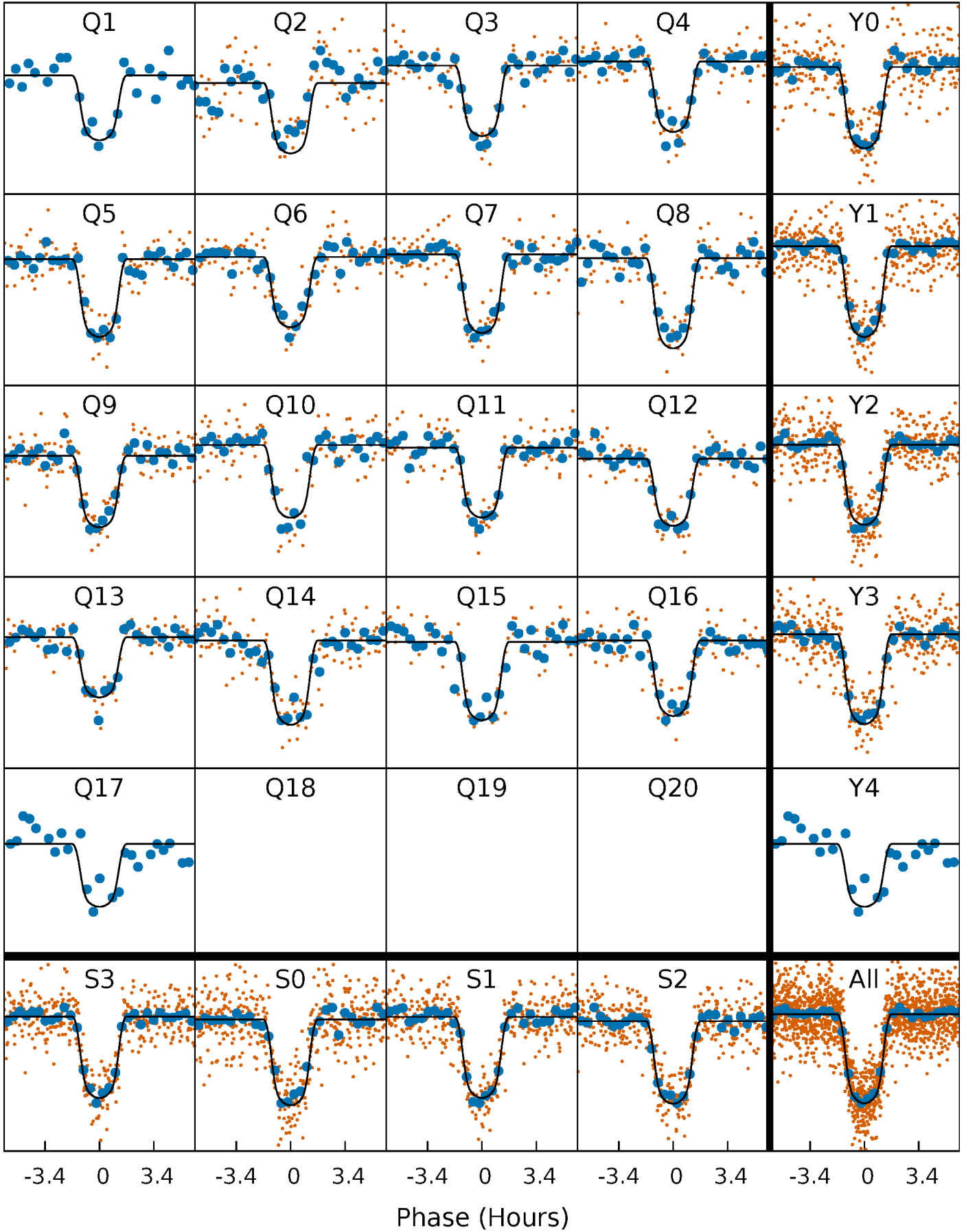
PDC Quarter-Phased Transit Curves

TCE 009266431-01 P= 18.396272 Days $T_0=148.347918$ (BKJD)



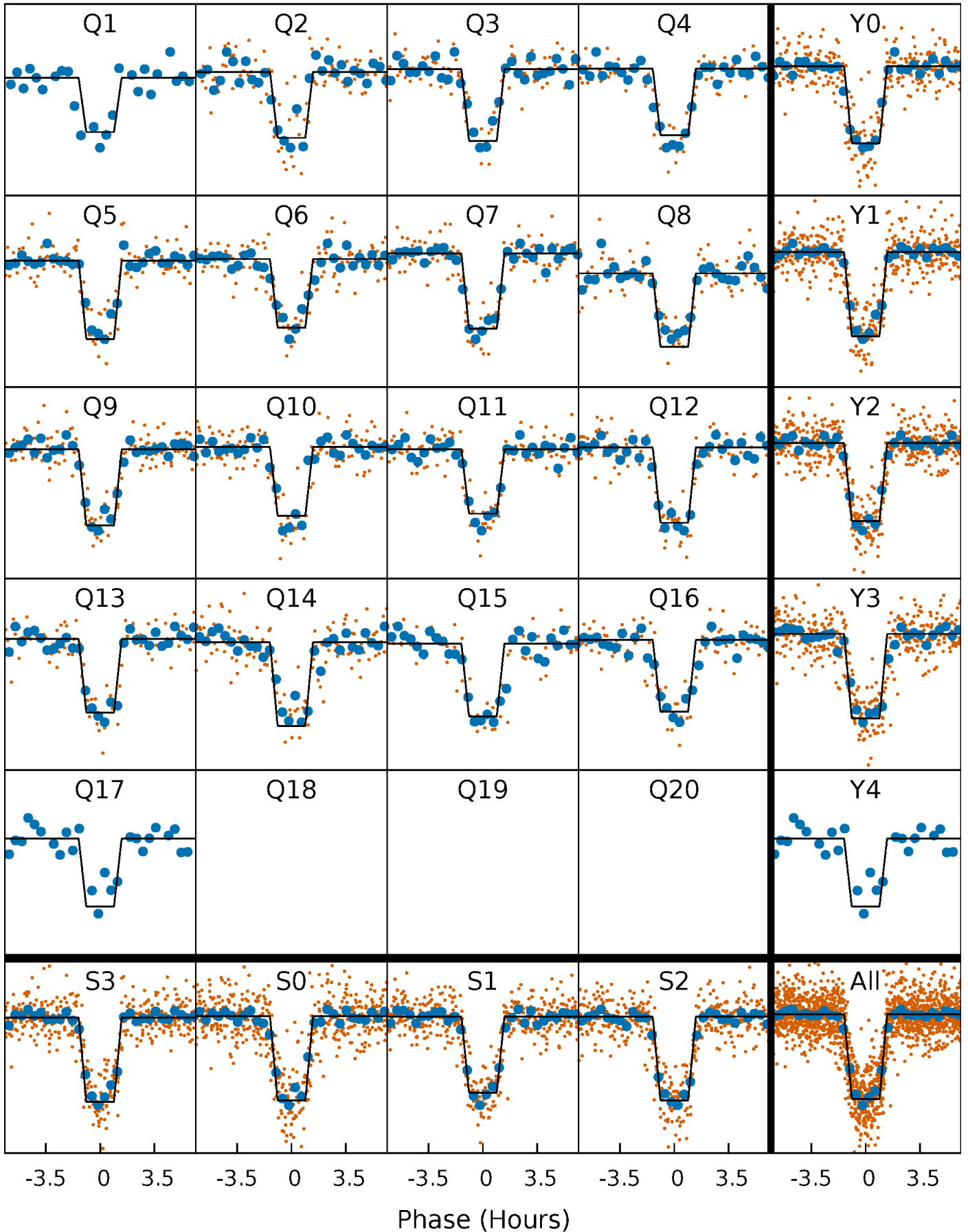
DV Quarter-Phased Transit Curves

TCE 009266431-01 P= 18.396272 Days $T_0=148.347918$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

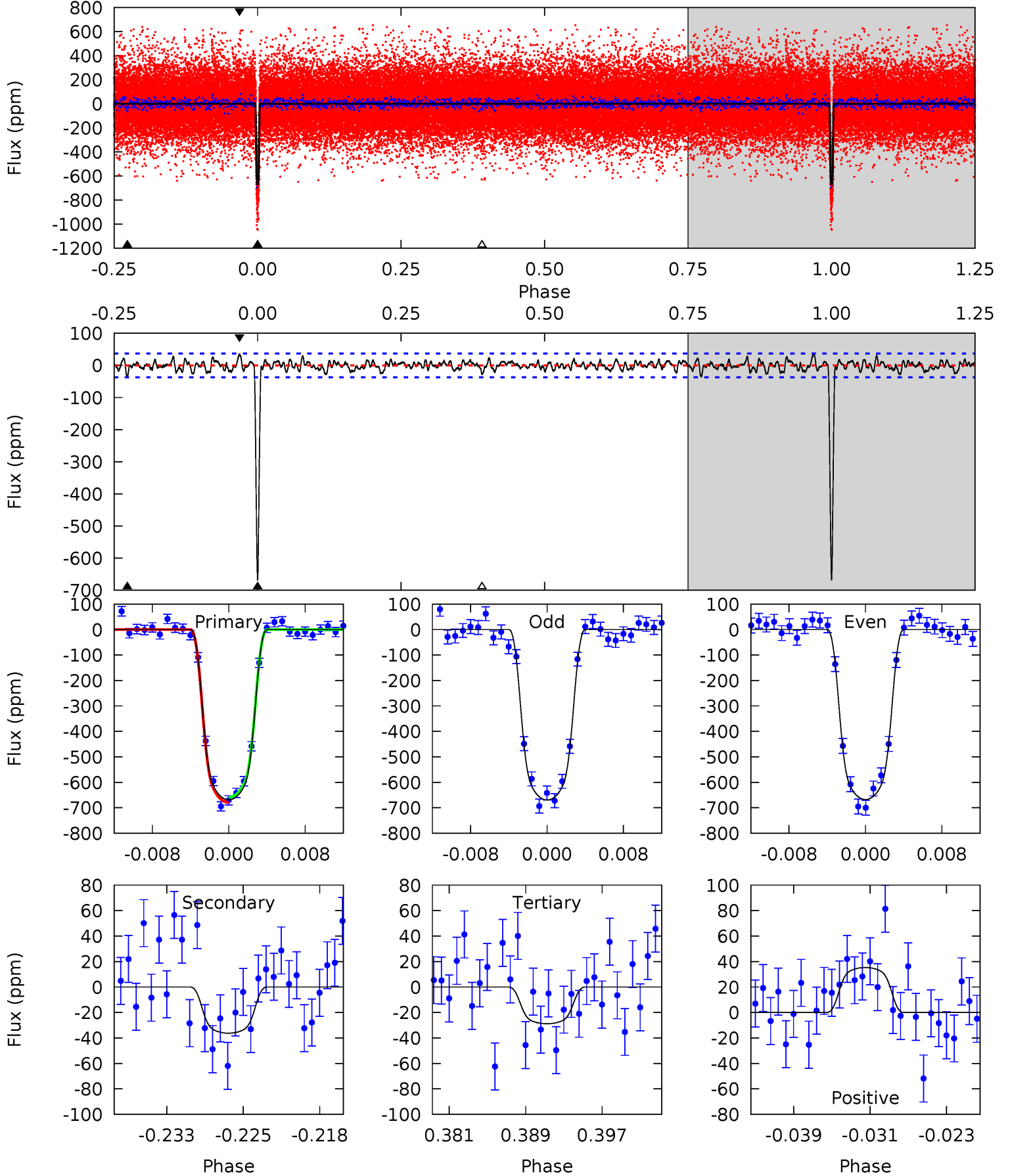
TCE 009266431-01 P= 18.396103 Days $T_0=148.354028$ (BKJD)



DV Model-Shift Uniqueness Test

009266431-01, $P = 18.396272$ Days, $E = 129.951646$ Days

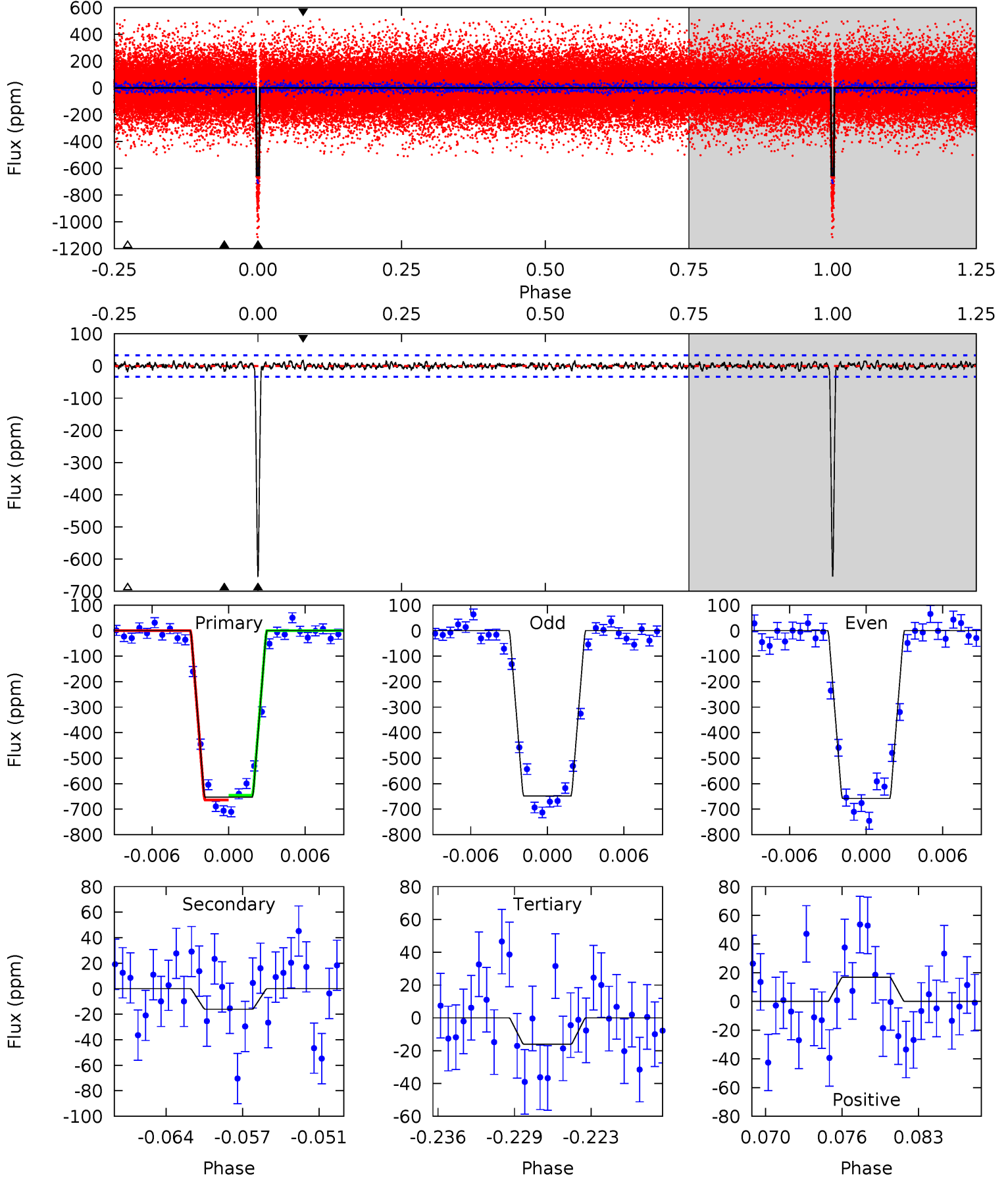
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
91.8	4.98	3.96	4.85	5.07	2.66	1.42	87.9	87.0	1.03	0.13	0.11	0.98	0.05	1.44



Alt Model-Shift Uniqueness Test

009266431-01, P = 18.396103 Days, E = 129.957925 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.5	2.45	2.45	2.58	5.11	2.73	0.82	97.1	97.0	0.01	-0.12	0.74	0.99	0.03	1.40



Stellar Parameters For KIC 009266431

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5316^{+106}_{-106}	$4.570^{+0.020}_{-0.080}$	$0.000^{+0.150}_{-0.150}$	$0.804^{+0.077}_{-0.038}$	$0.876^{+0.037}_{-0.063}$	$2.374^{+0.229}_{-0.573}$
	+2%/-2%	+0%/-2%	+inf%/-inf%	+10%/-5%	+4%/-7%	+10%/-24%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 009266431-01 / KOI 0704.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 7	$2.67^{+0.15}_{-0.11}$	823^{+23}_{-21}	3017^{+95}_{-100}	46^{+11}_{-10}
Alt.	-16 ± 7	$2.31^{+0.14}_{-0.12}$	823^{+23}_{-21}	2801^{+154}_{-183}	27^{+12}_{-11}

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 $A_{obs} \gg 1.0$

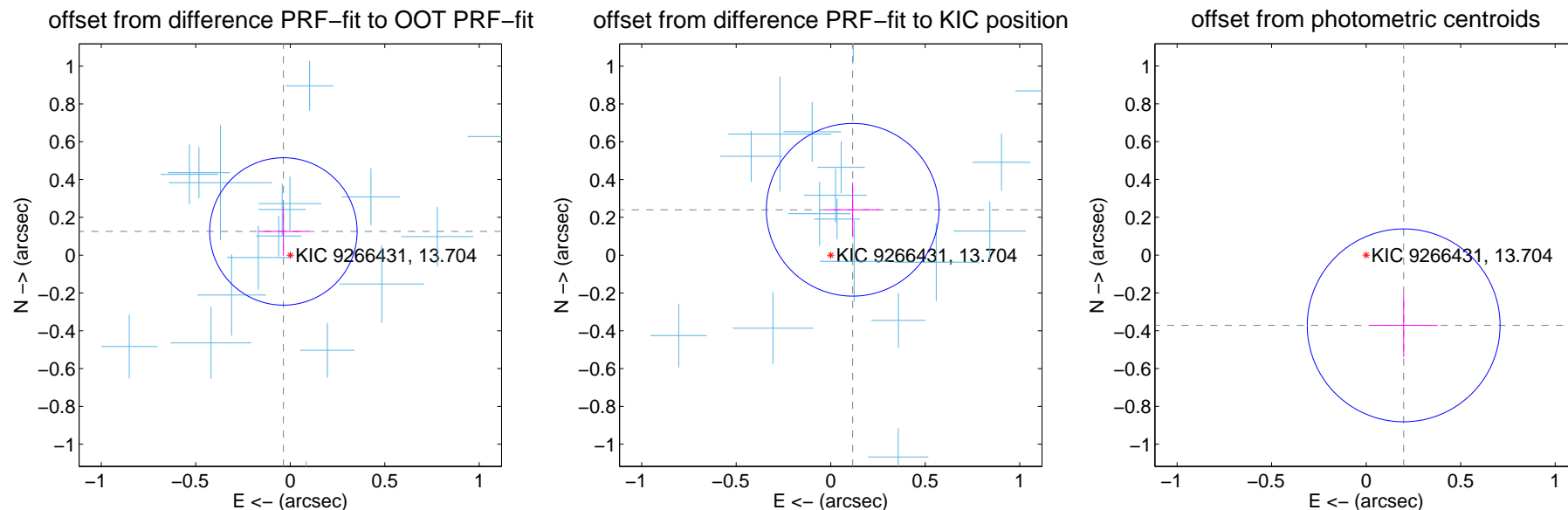
DV Centroid Data

Supplemental centroid analysis for 009266431-01. Kepler magnitude: 13.70. Transit SNR 59.28

There are 17 quarters with good PRF difference image offsets

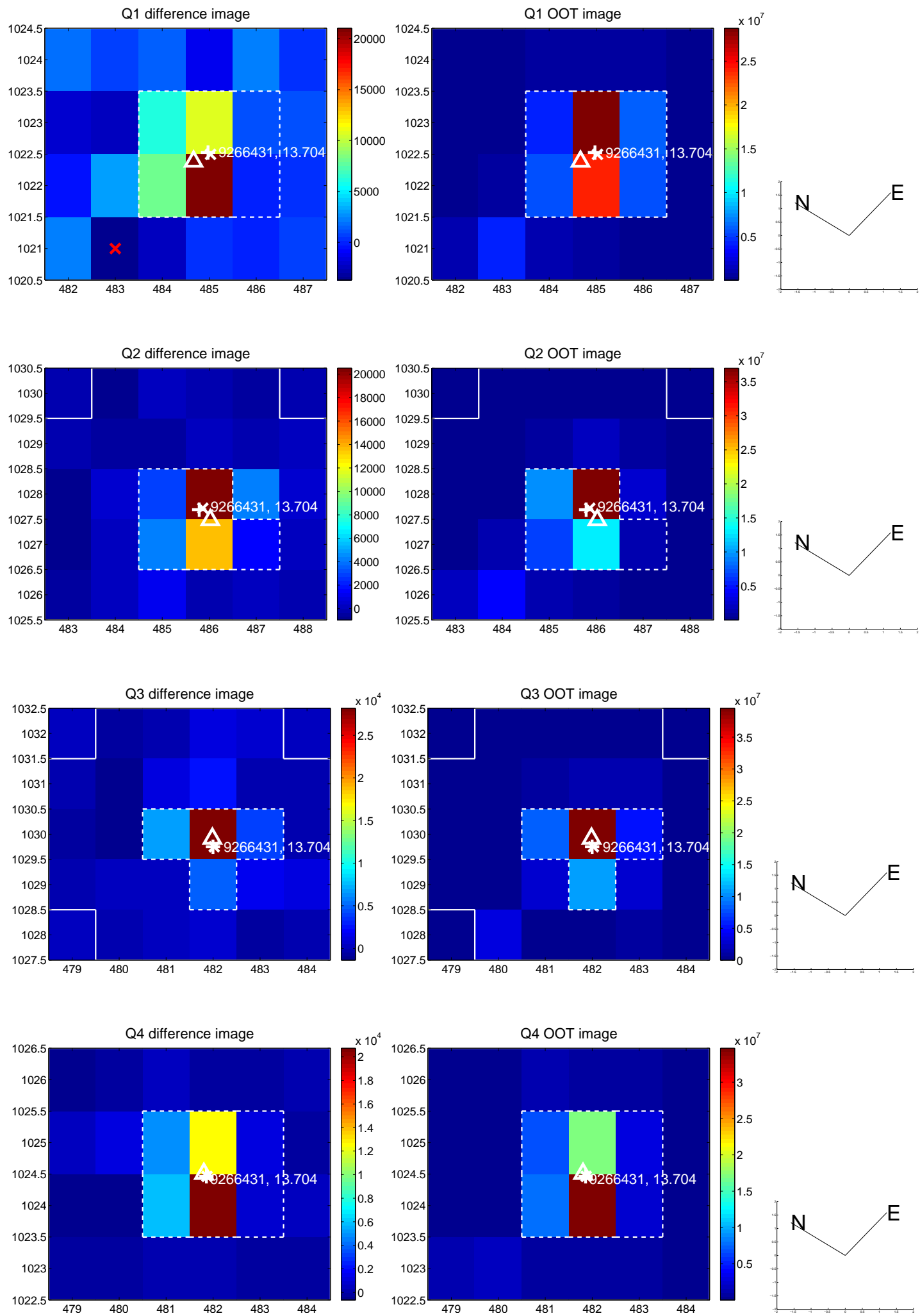
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.131 ± 0.130	1.00	0.036 ± 0.132	0.125 ± 0.130
PRF-fit source offset from KIC position	0.267 ± 0.152	1.75	-0.116 ± 0.142	0.240 ± 0.144
photometric centroid source offset	0.42 ± 0.17	2.48	-0.20 ± 0.18	-0.37 ± 0.17

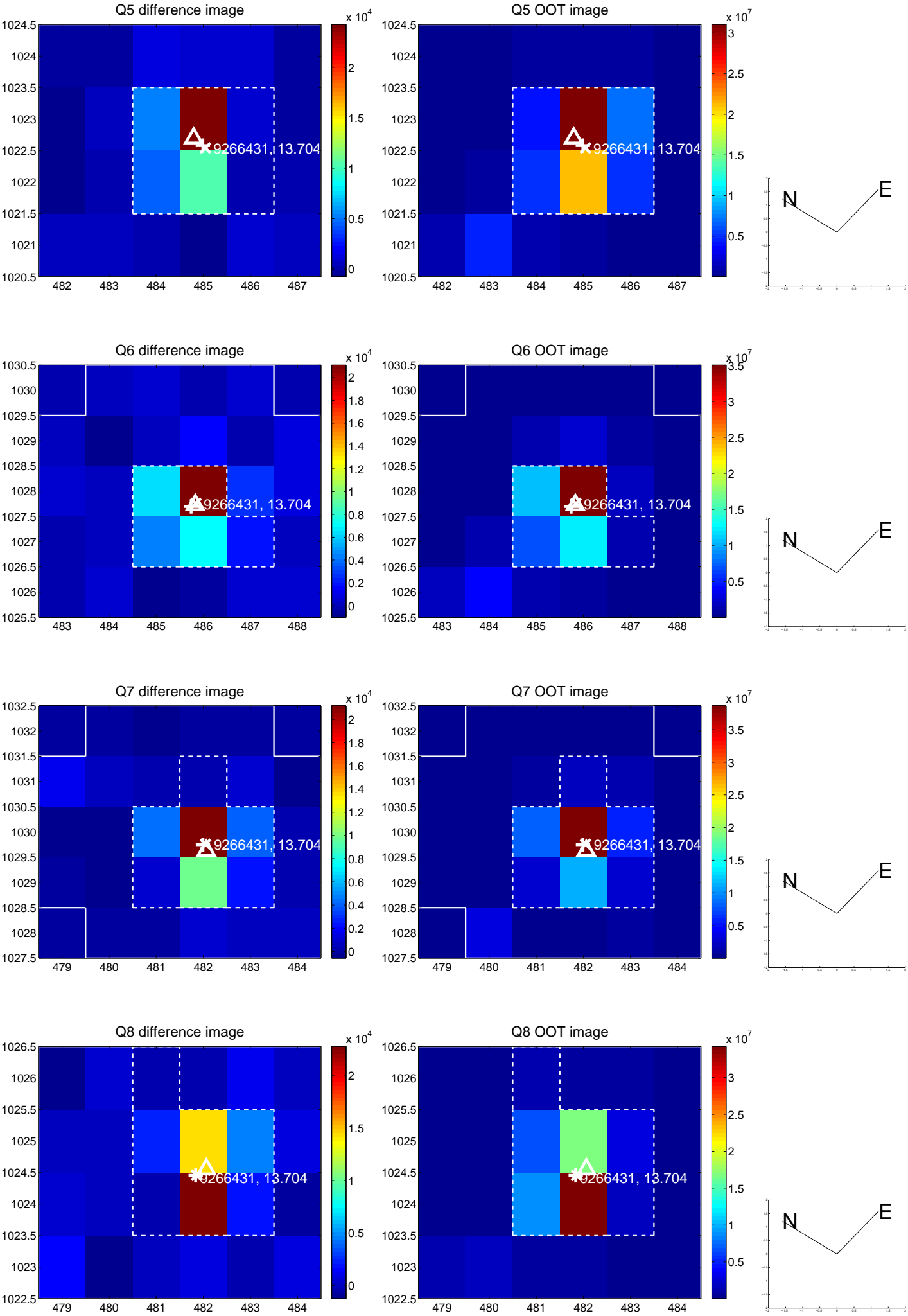


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

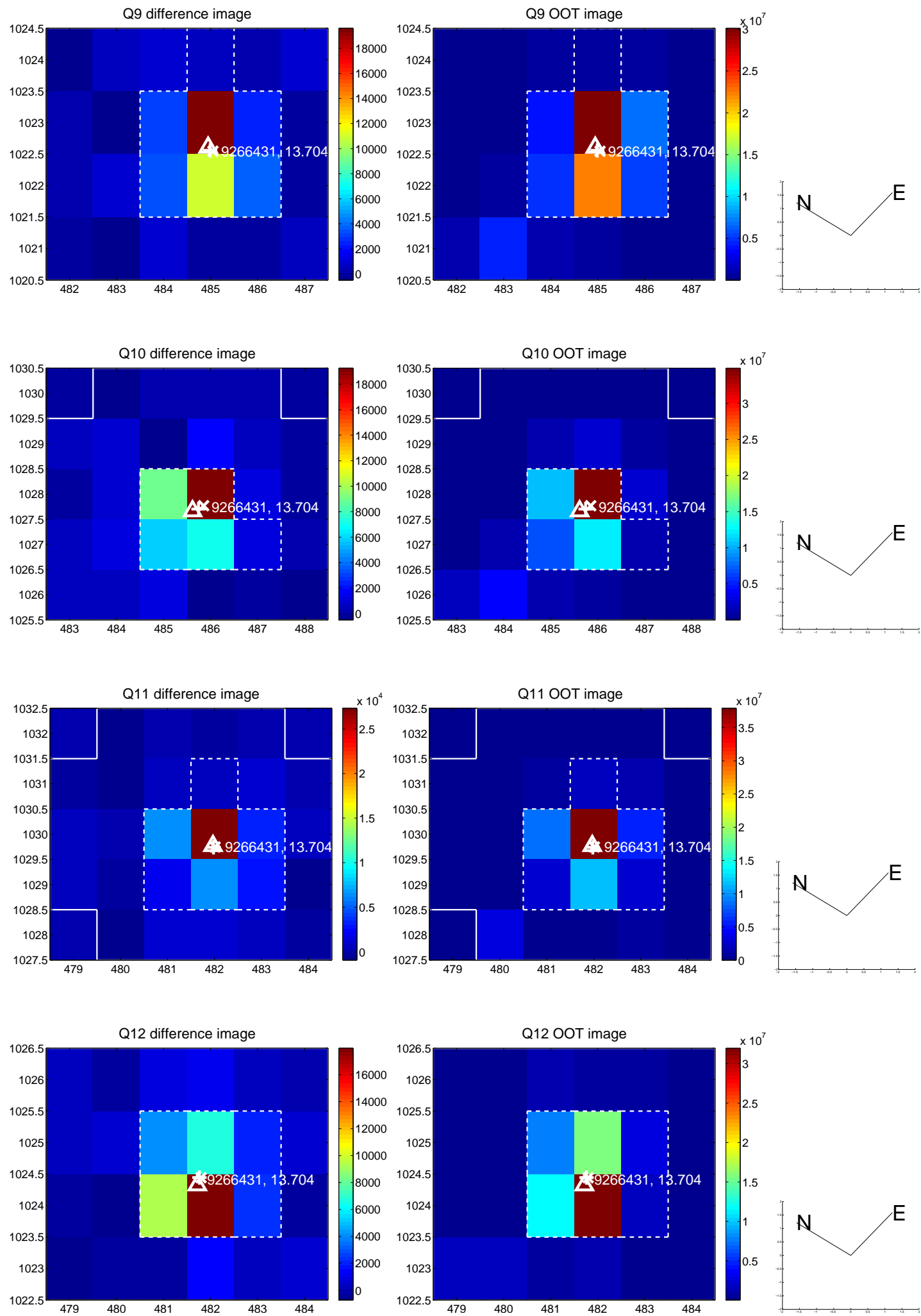
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



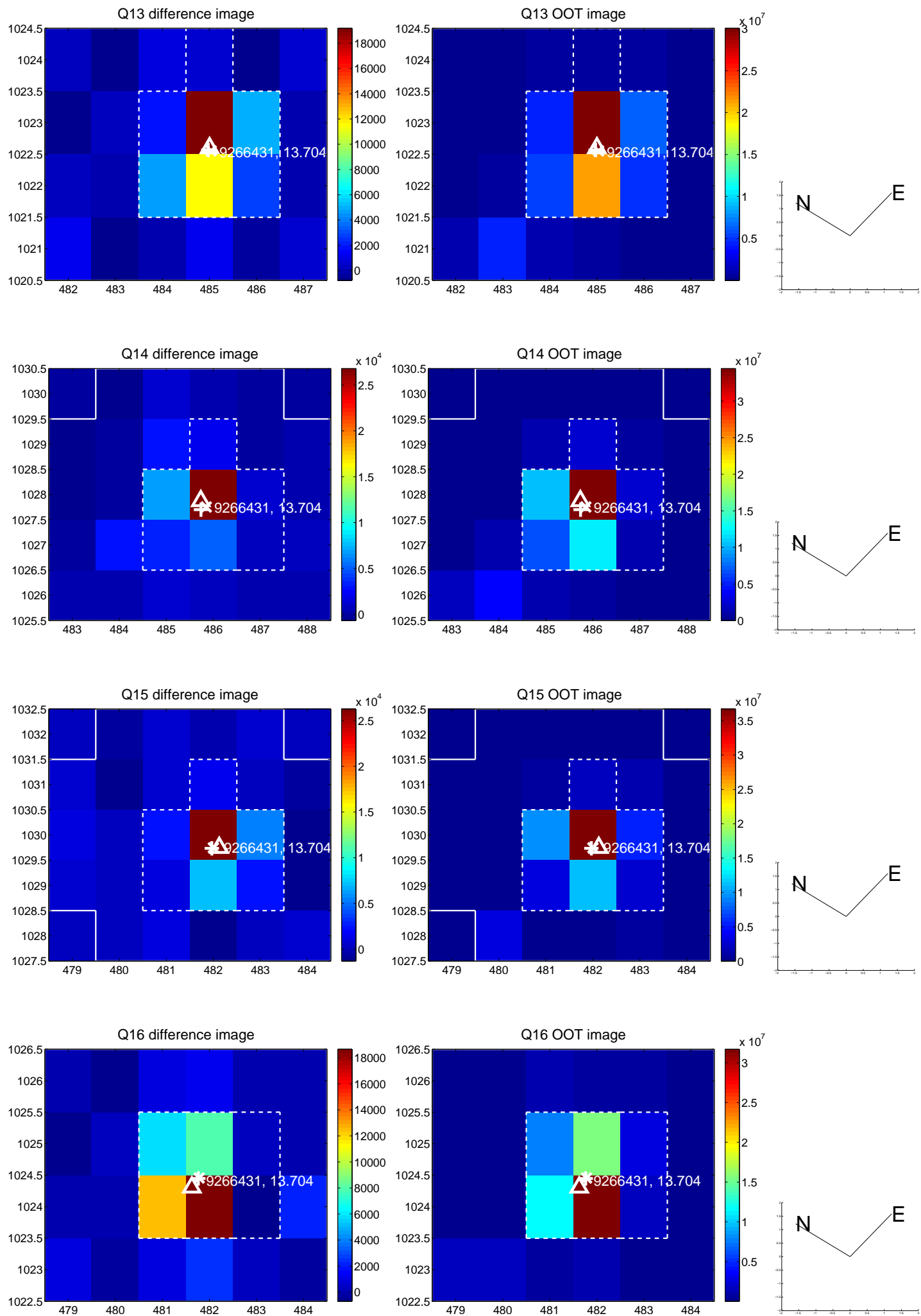
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



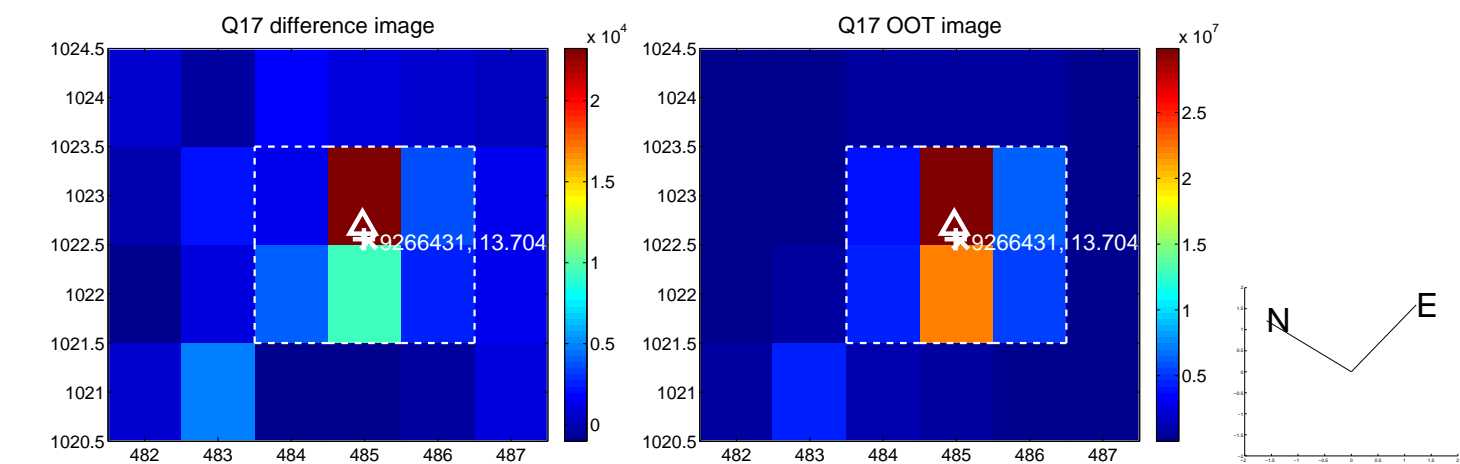
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



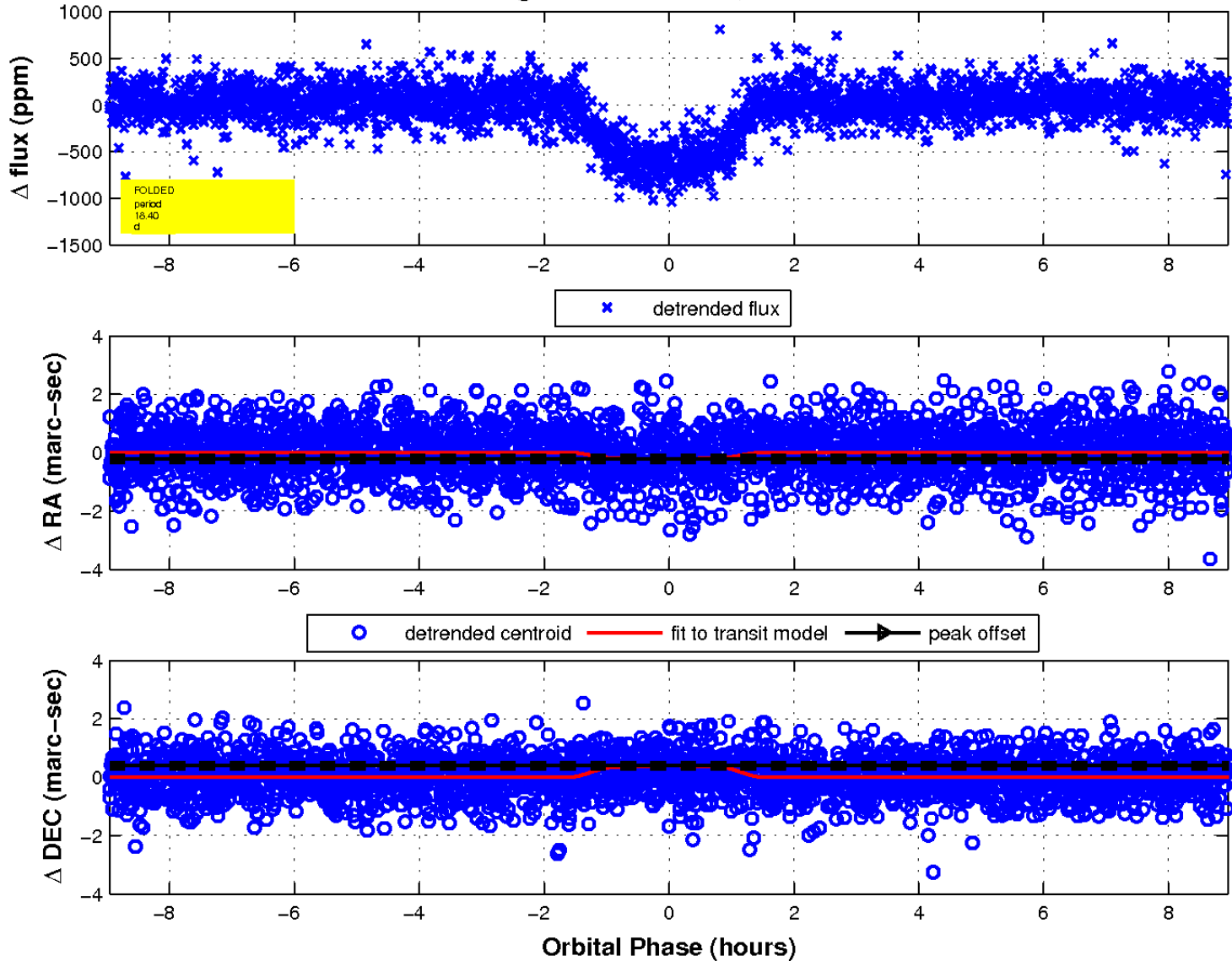
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

