

KIC 010019399

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})
010019399-01	OBS	1796.01	11.805714	133.050576	2027.4	2.047	274.7	269.8	1.89	6065	14.77	418.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010019399-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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

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

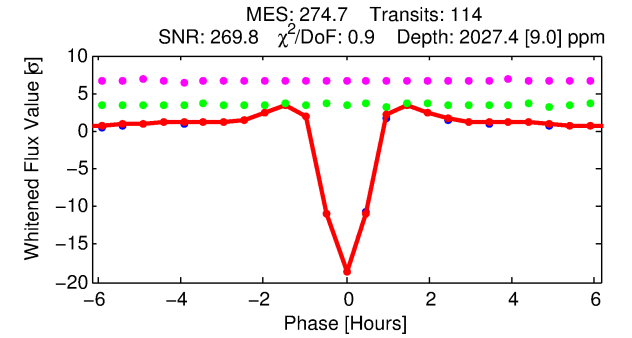
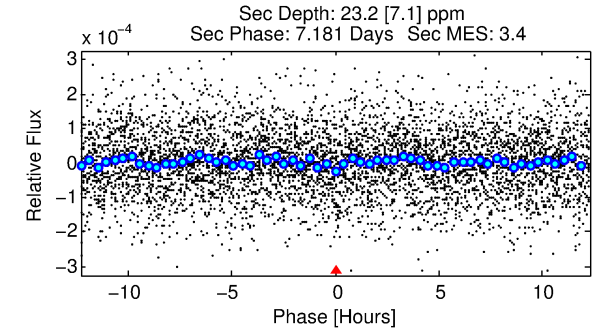
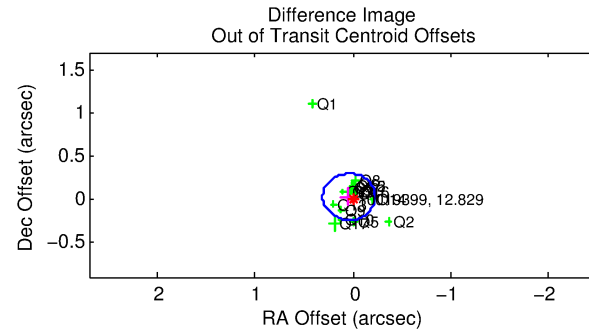
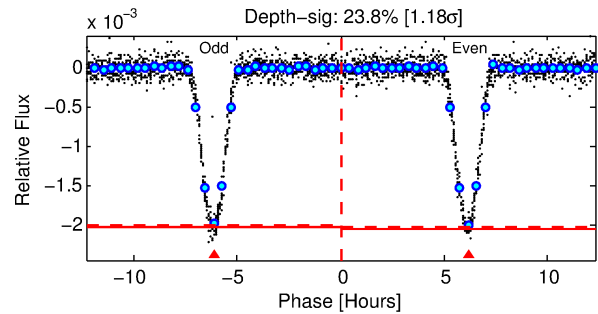
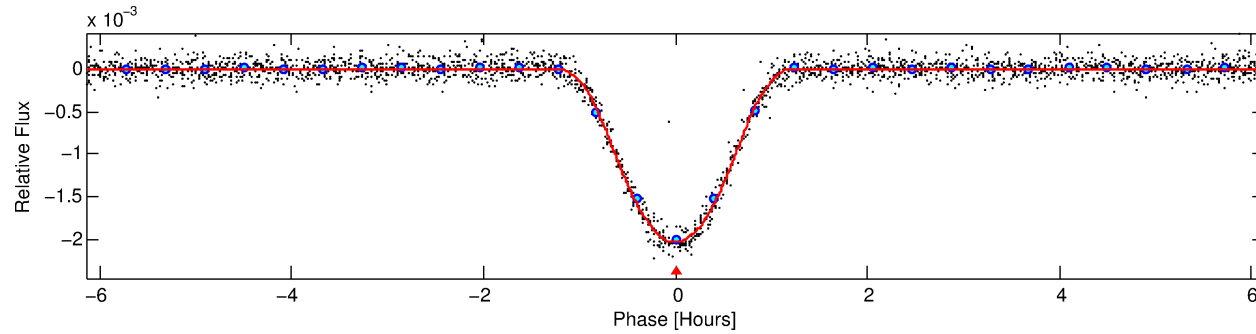
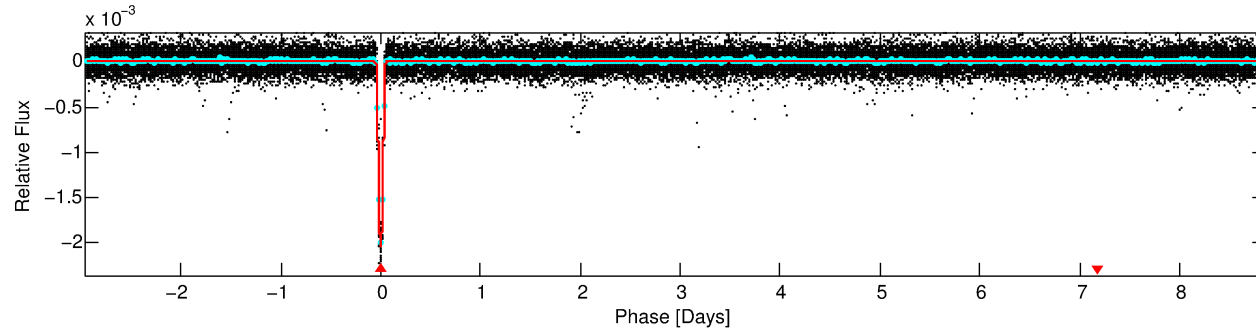
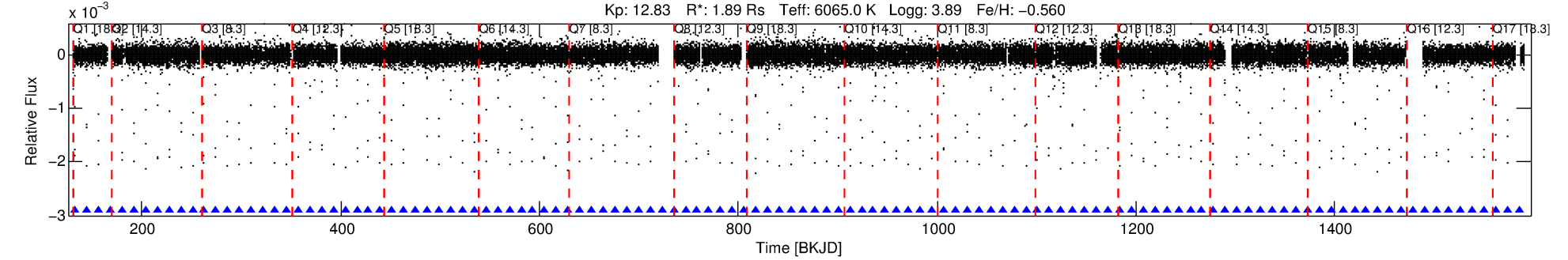
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010019399-01

No Significant Match Found

DV One-Page Summary

KIC: 10019399 Candidate: 1 of 1 Period: 11.806 d
KOI: K01796.01 Corr: 0.997



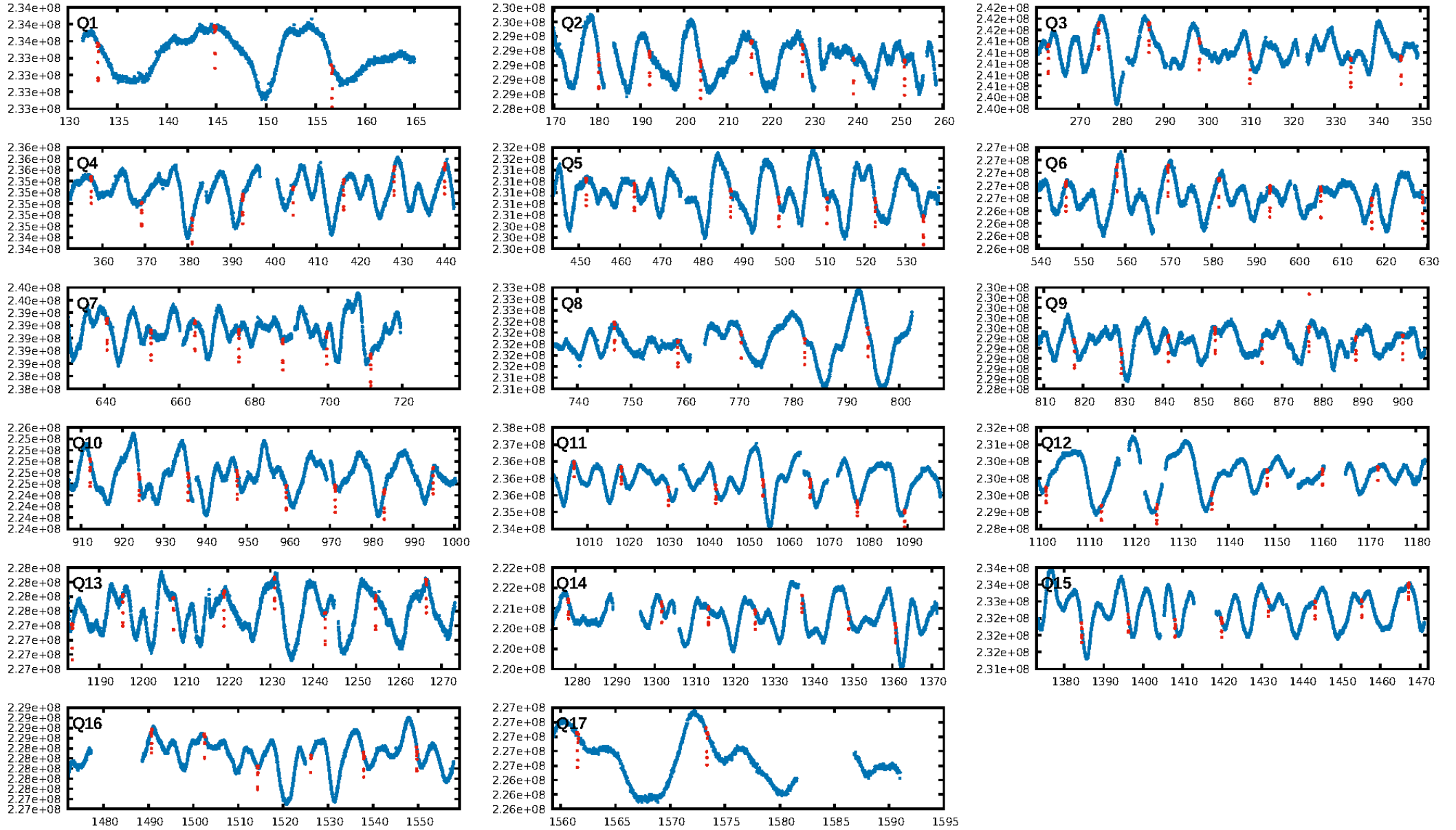
DV Fit Results:

Period = 11.80571 [0.00000] d
Epoch = 133.0506 [0.0002] BKJD
Rp/R* = 0.0716 [0.0099]
a/R* = 18.04 [0.64]
b = 0.99 [0.02]
Seff = 418.69 [390.51]
Teff = 1153 [269] K
Rp = 14.77 [7.63] Re
a = 0.1018 [0.0553] AU
Ag = 0.60 [0.61] [-0.65 σ]
Teffp = 1573 [171] K [1.31 σ]

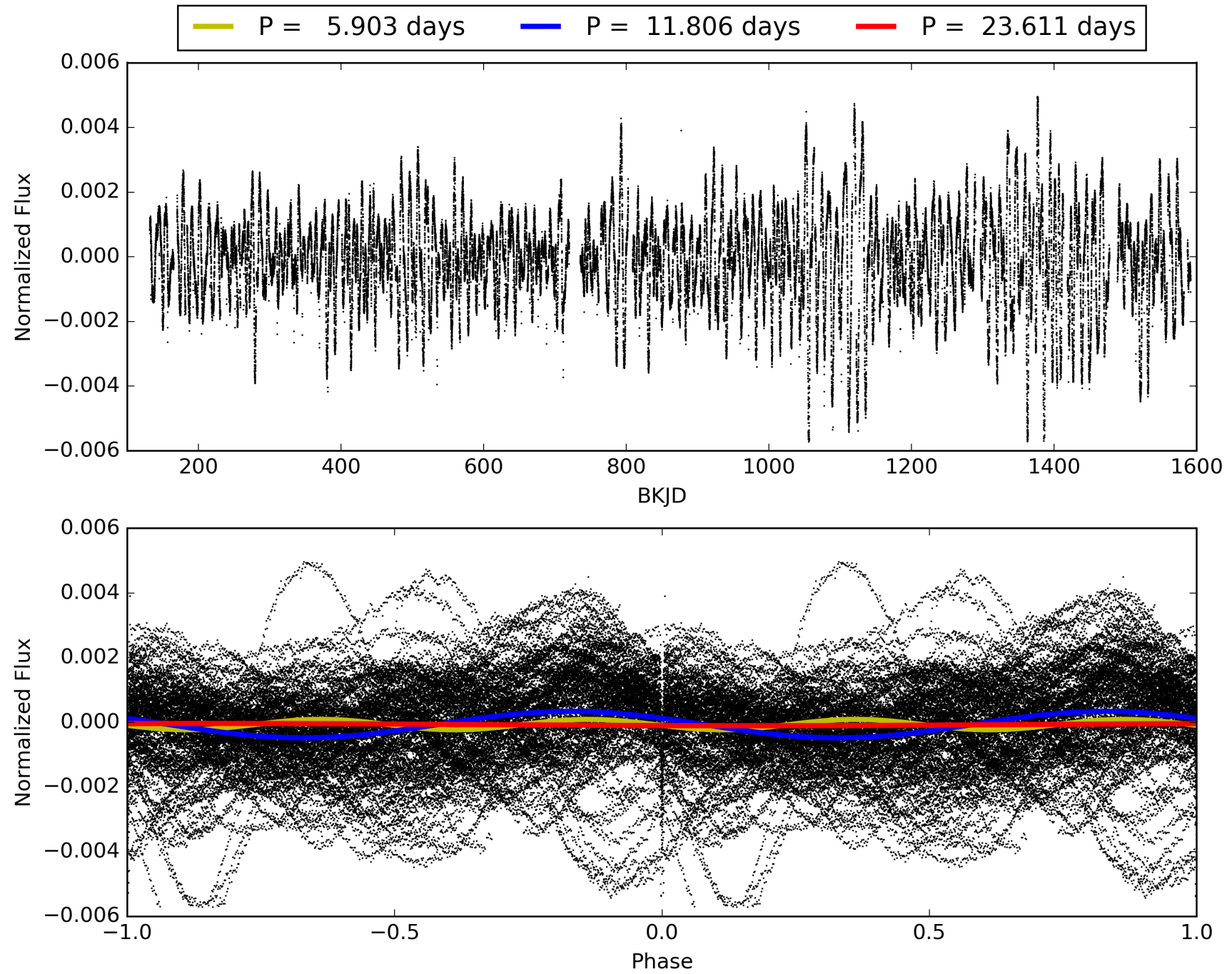
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [109/109]
GhostDiagnostic-chr: 6.006
Centroid-sig: 3.8%
Centroid-so: 0.139 arcsec [4.40 σ]
OotOffset-rm: 0.052 arcsec [0.58 σ]
KicOffset-rm: 0.040 arcsec [0.45 σ]
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]

TCE 010019399-01, PDC Light Curves

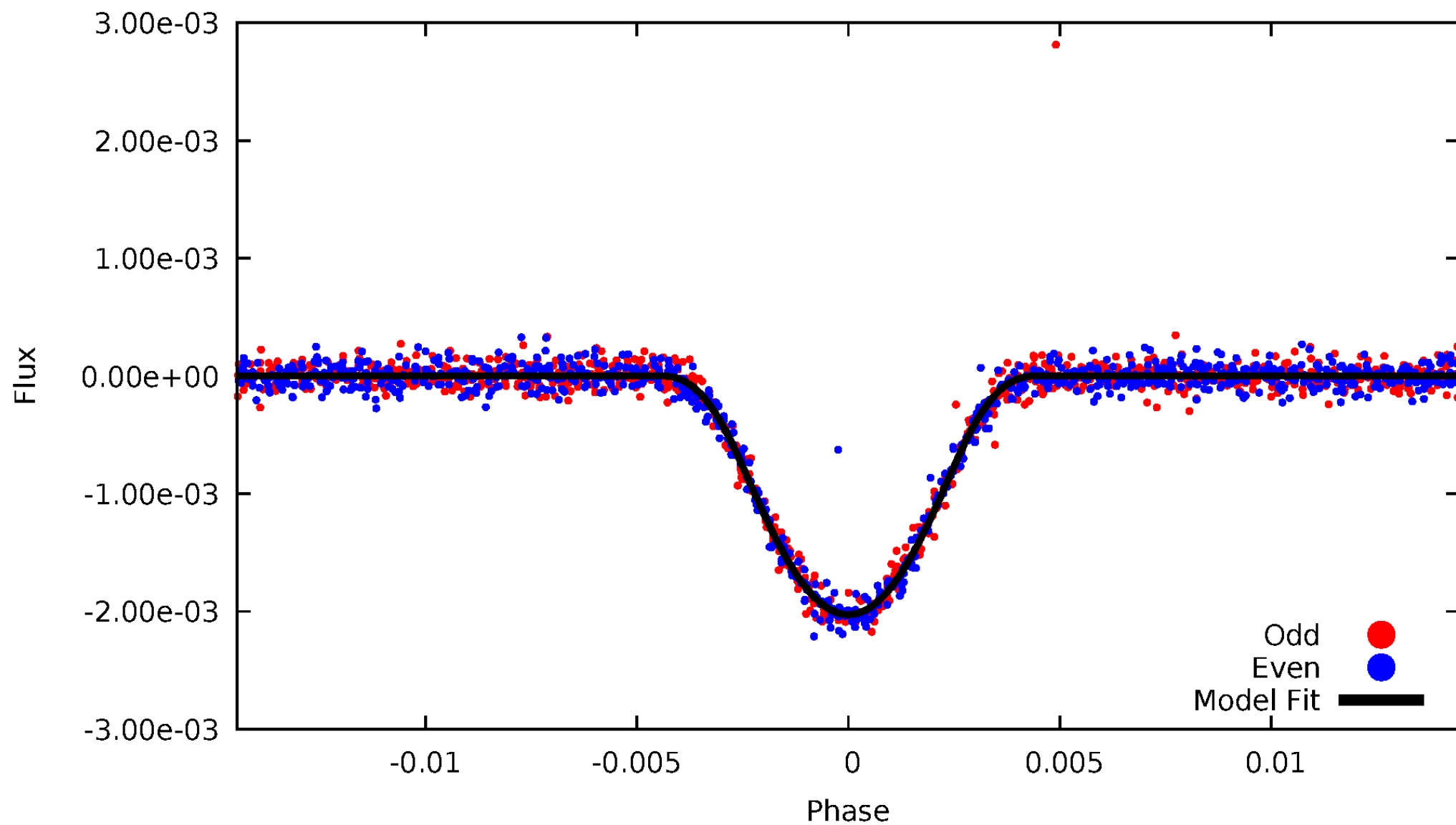


TCE 010019399-01



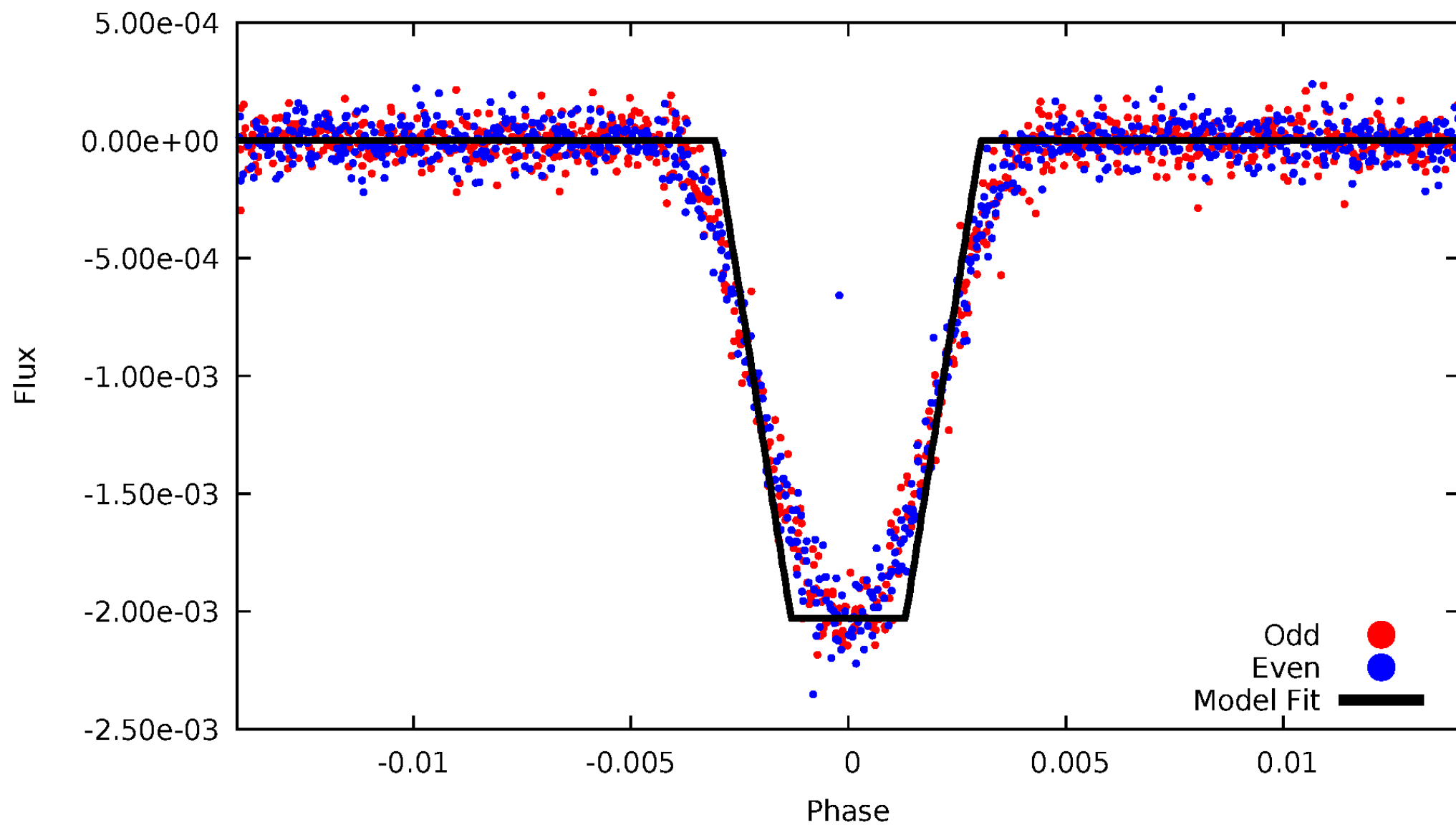
DV Odd/Even

TCE 010019399-01



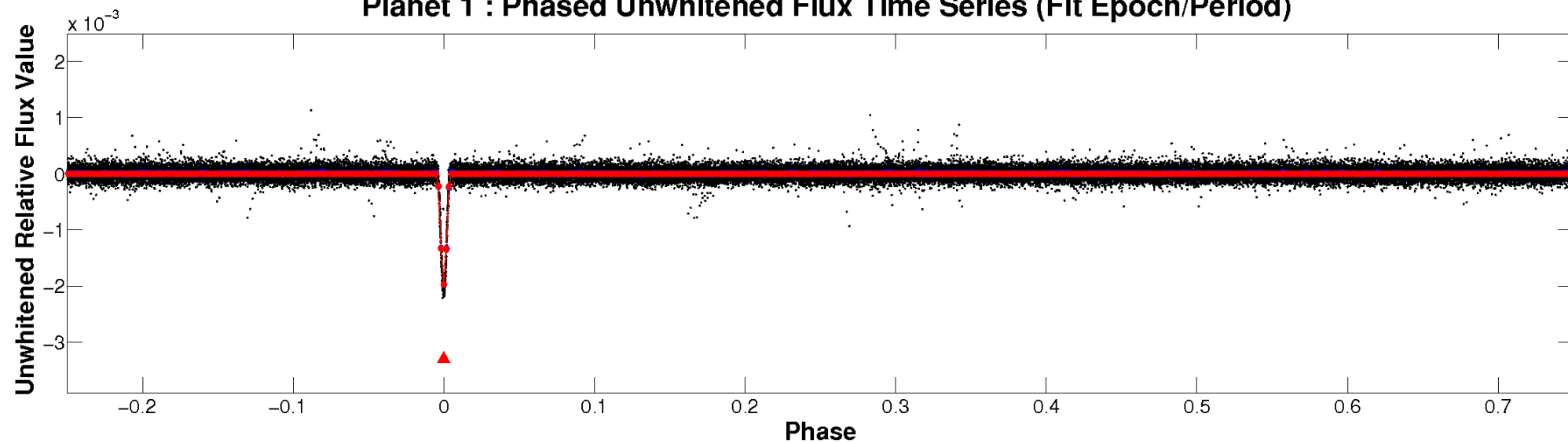
ALT Odd/Even

TCE 010019399-01

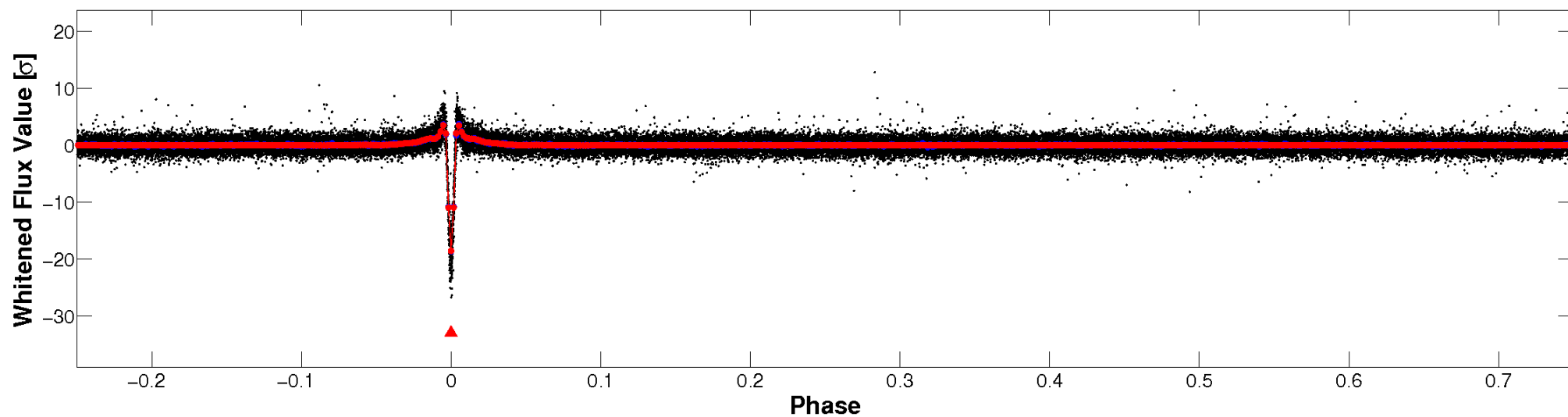


Non-Whitened Vs. Whitened Light Curve

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

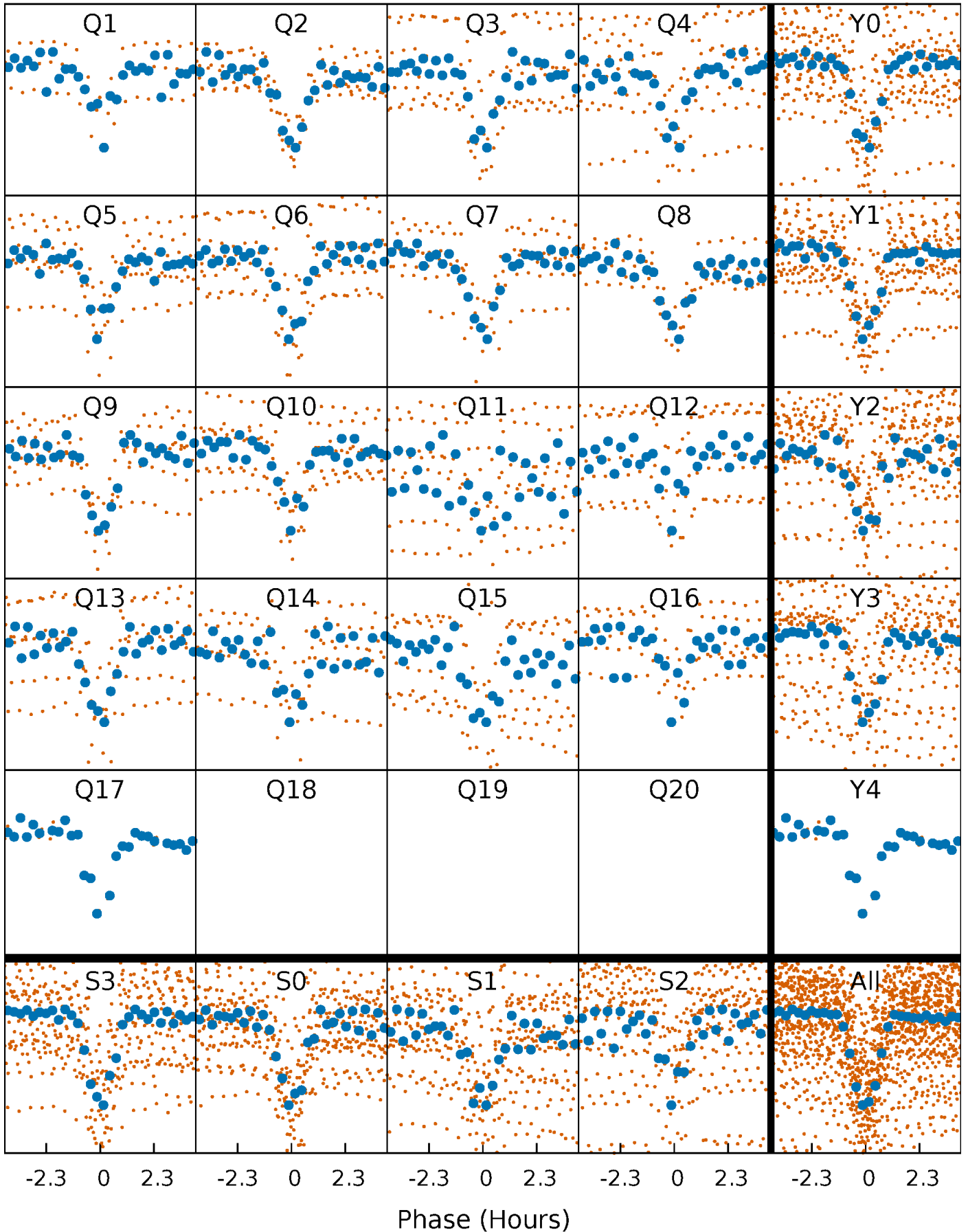


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



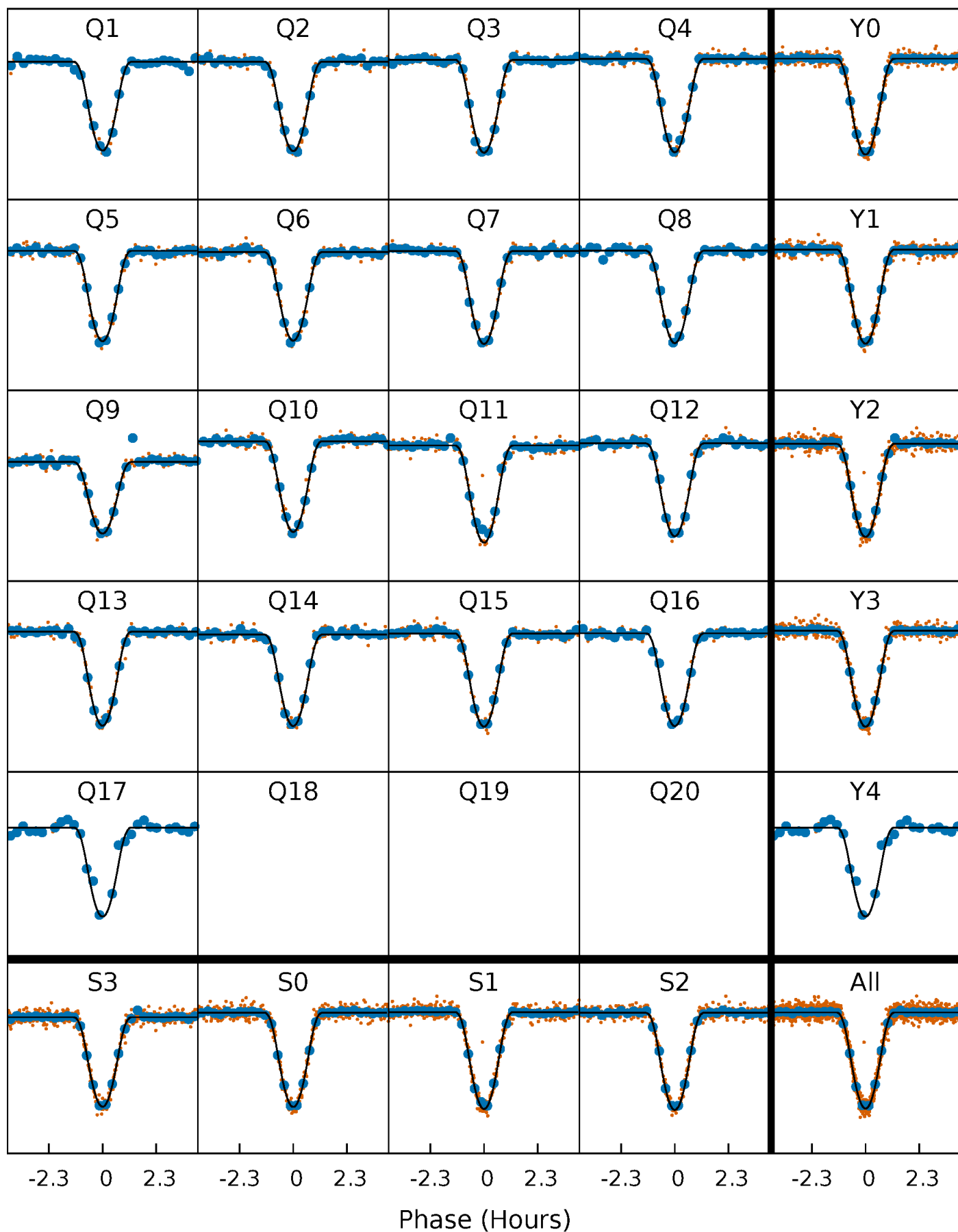
PDC Quarter-Phased Transit Curves

TCE 010019399-01 P= 11.805714 Days $T_0=133.050576$ (BKJD)



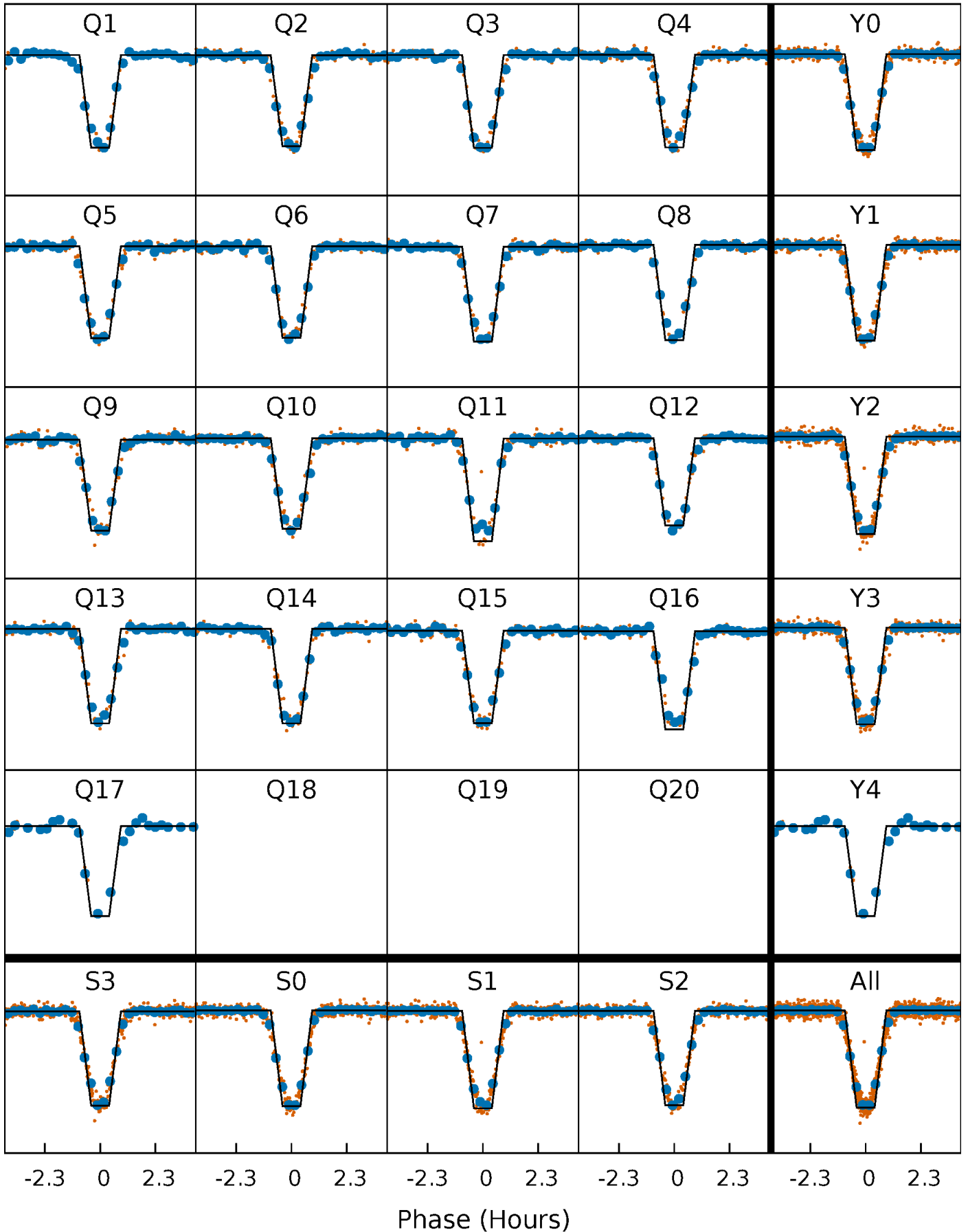
DV Quarter-Phased Transit Curves

TCE 010019399-01 P= 11.805714 Days $T_0=133.050576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

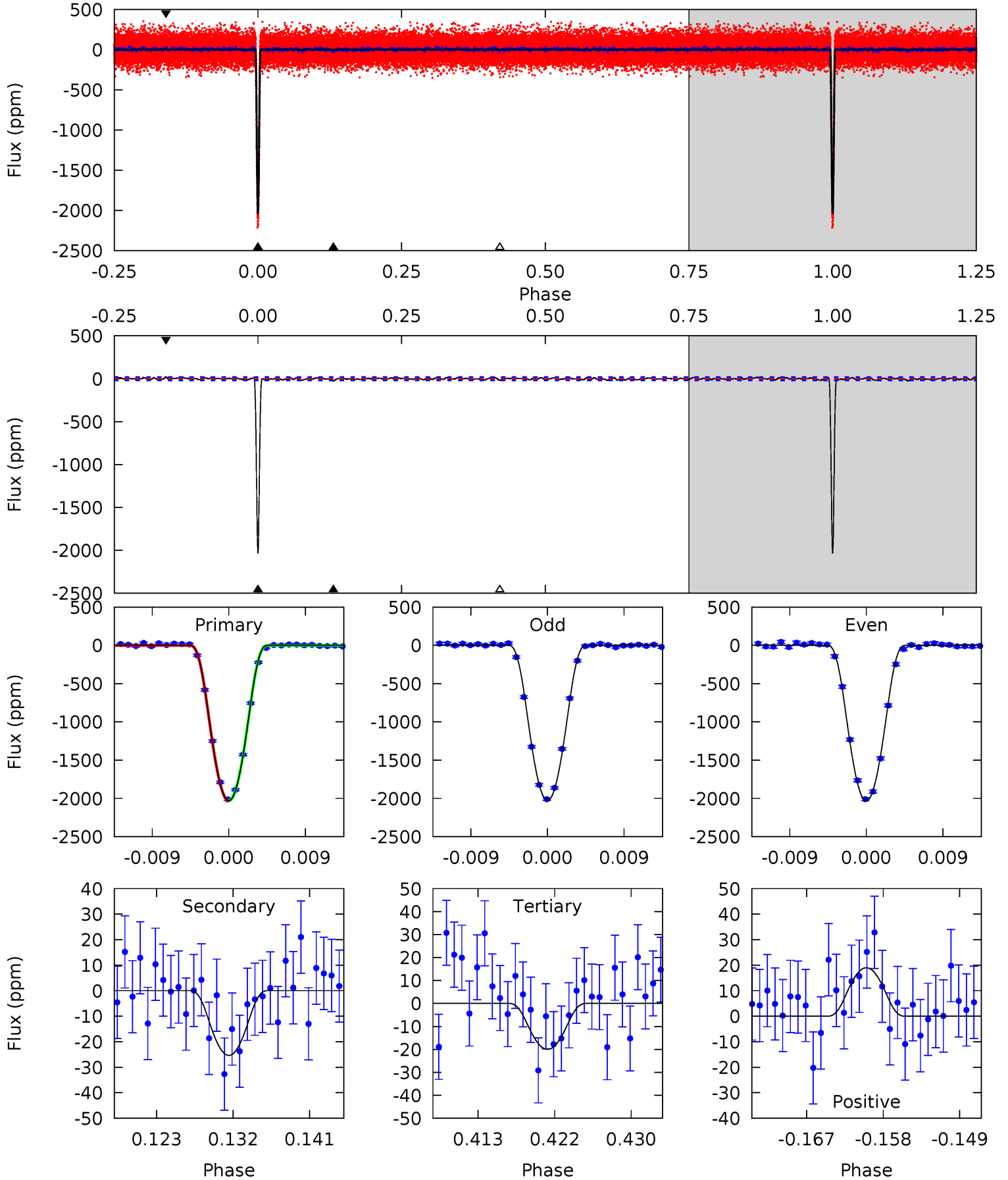
TCE 010019399-01 P= 11.805700 Days $T_0=133.051365$ (BKJD)



DV Model-Shift Uniqueness Test

010019399-01, $P = 11.805714$ Days, $E = 121.244862$ Days

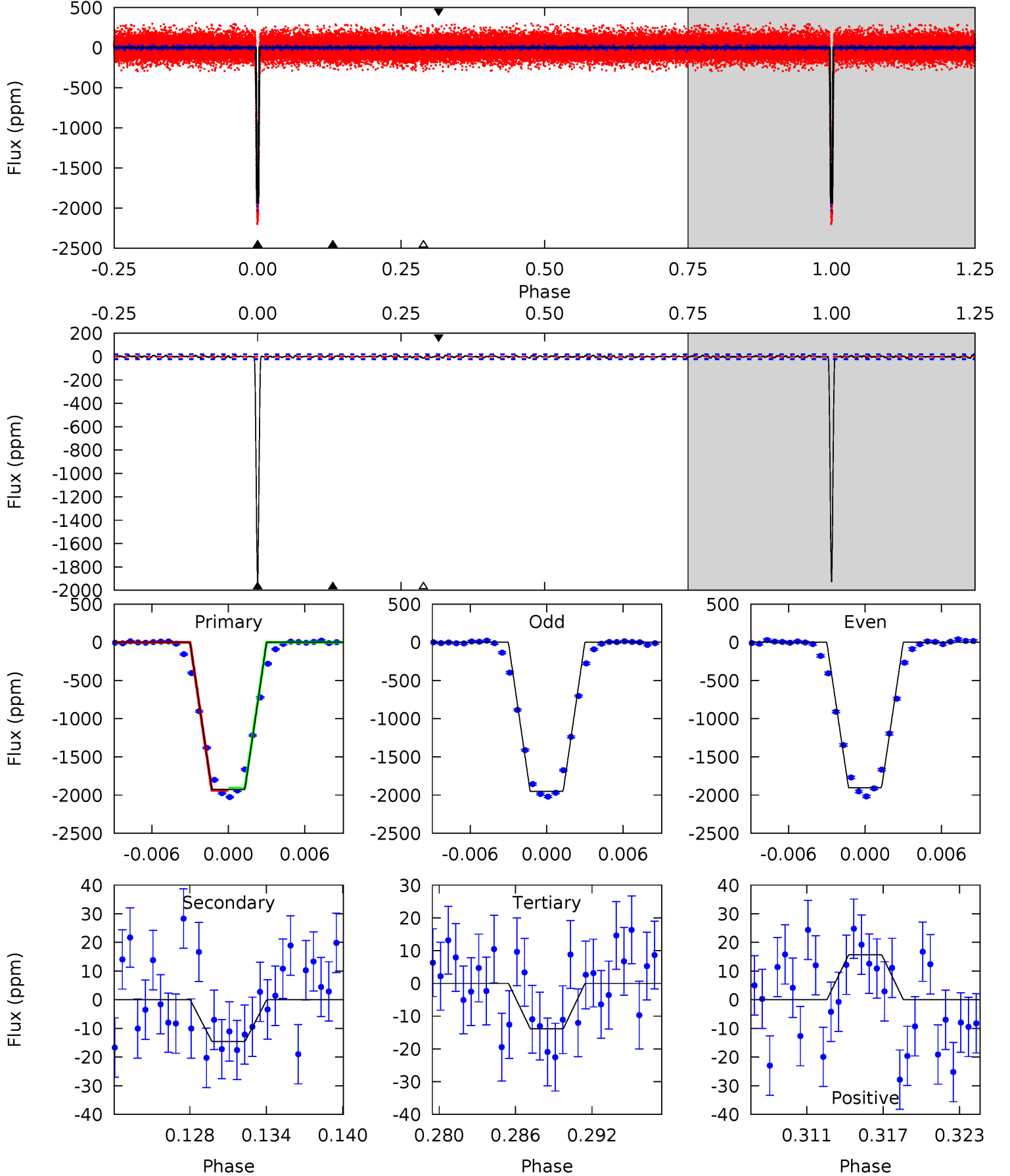
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
547.5	6.84	5.39	5.12	5.05	2.62	1.81	542.2	542.4	1.45	1.72	0.76	1.00	0.01	0.35



Alt Model-Shift Uniqueness Test

010019399-01, P = 11.805700 Days, E = 121.245665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
475.0	3.59	3.41	3.87	5.12	2.74	1.18	471.6	471.1	0.17	-0.29	5.73	1.00	0.01	3.09



Stellar Parameters For KIC 010019399

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+218}_{-200}	$3.888^{+0.560}_{-0.140}$	$-0.560^{+0.300}_{-0.300}$	$1.891^{+0.507}_{-0.942}$	$1.006^{+0.138}_{-0.184}$	$0.210^{+1.334}_{-0.096}$
	+4%/-3%	+14%/-4%	+54%/-54%	+27%/-50%	+14%/-18%	+636%/-46%
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 010019399-01 / KOI 1796.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 4	$13.59^{+3.55}_{-3.75}$	1567^{+136}_{-207}	2331^{+152}_{-182}	$0.771^{+0.675}_{-0.287}$
Alt.	-15 ± 4	$8.68^{+2.74}_{-2.69}$	1576^{+142}_{-204}	2476^{+248}_{-229}	$1.102^{+1.213}_{-0.526}$

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 $A_{obs} \gg 1.0$

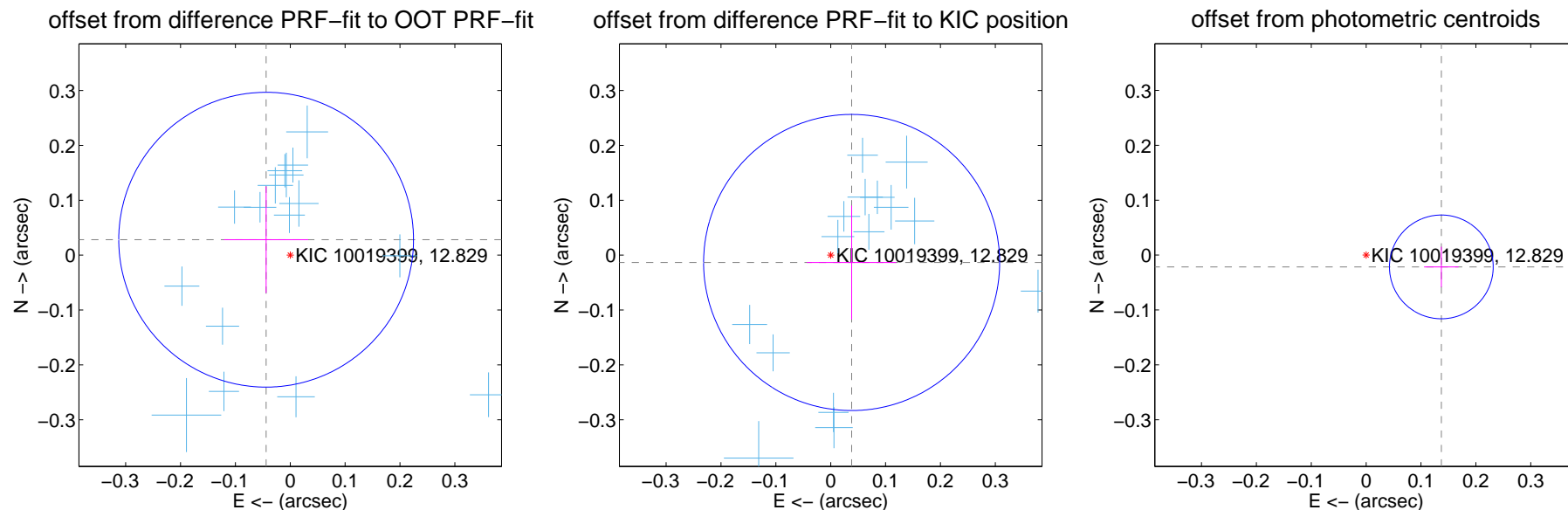
DV Centroid Data

Supplemental centroid analysis for 010019399-01. Kepler magnitude: 12.83. Transit SNR 269.76

There are 17 quarters with good PRF difference image offsets

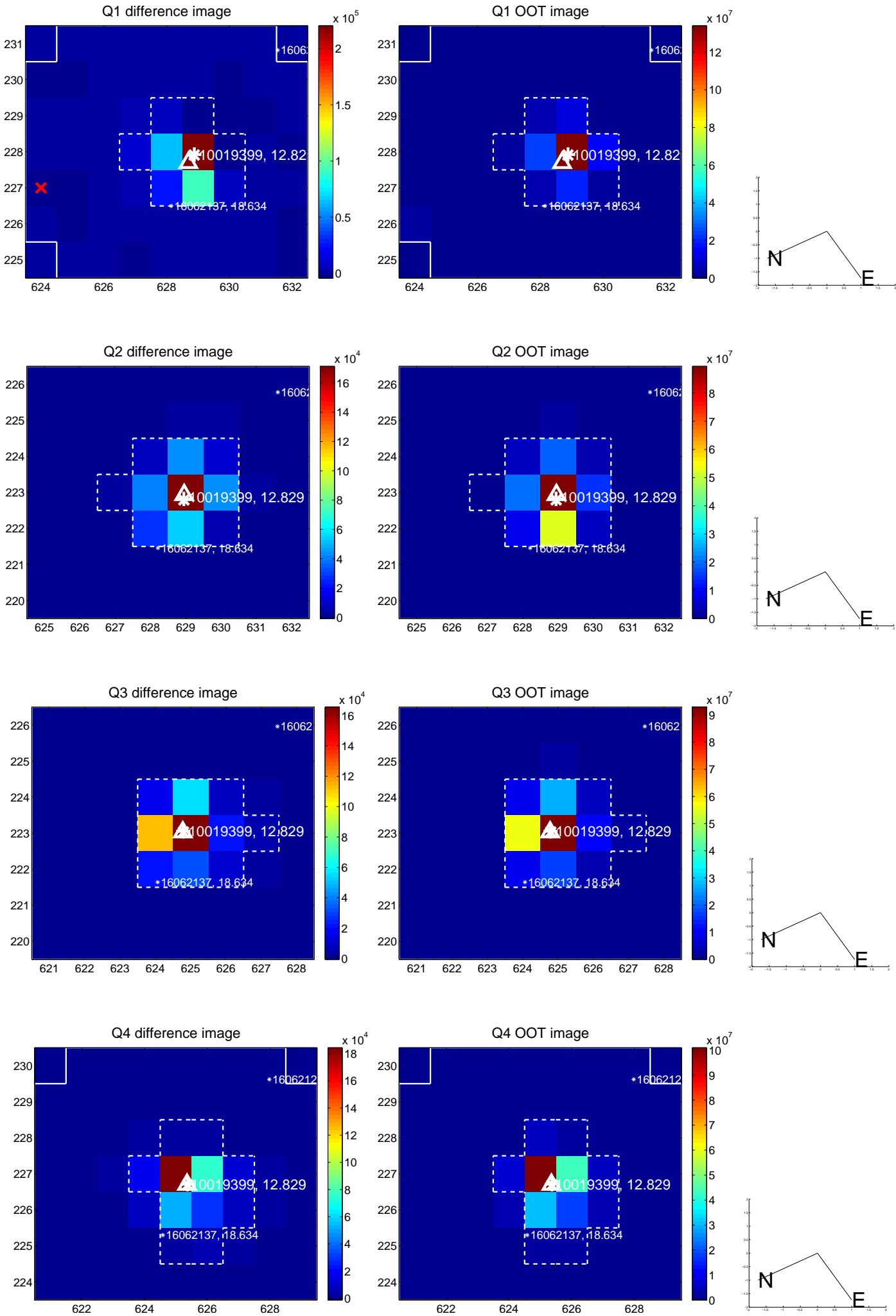
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.052 ± 0.090	0.58	0.044 ± 0.077	0.028 ± 0.097
PRF-fit source offset from KIC position	0.040 ± 0.090	0.45	-0.038 ± 0.081	-0.013 ± 0.104
photometric centroid source offset	0.14 ± 0.03	4.40	-0.14 ± 0.03	-0.02 ± 0.04

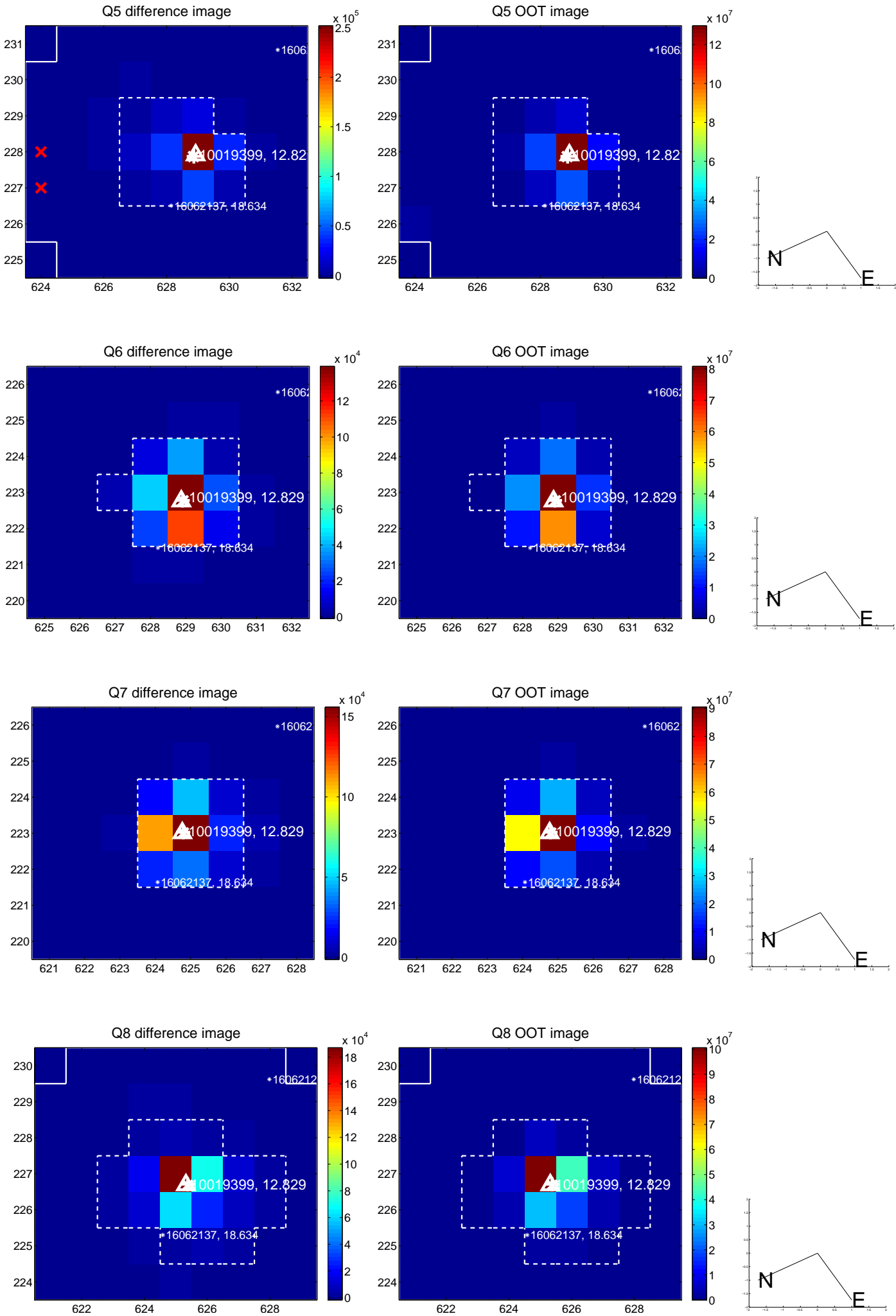


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

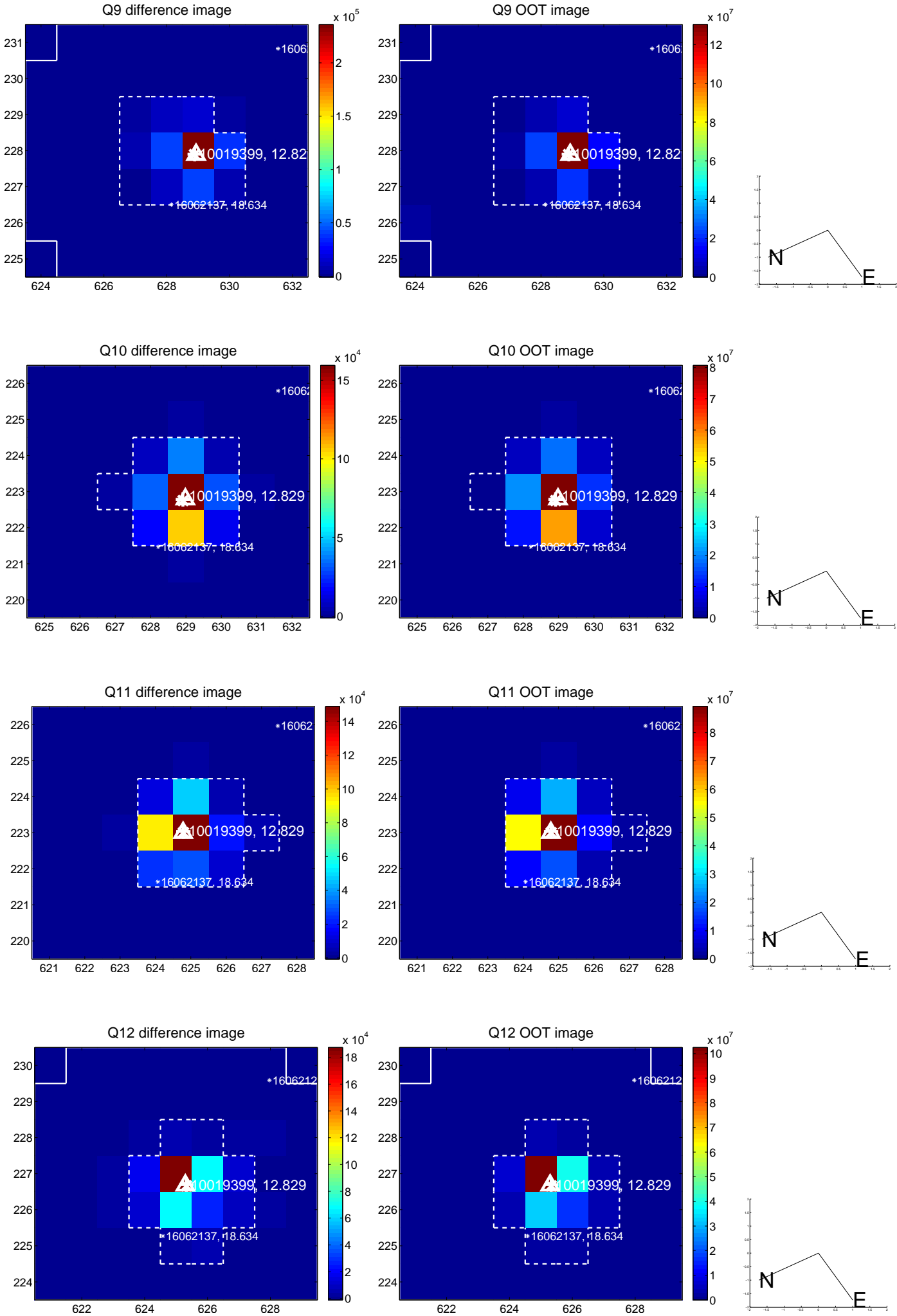
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



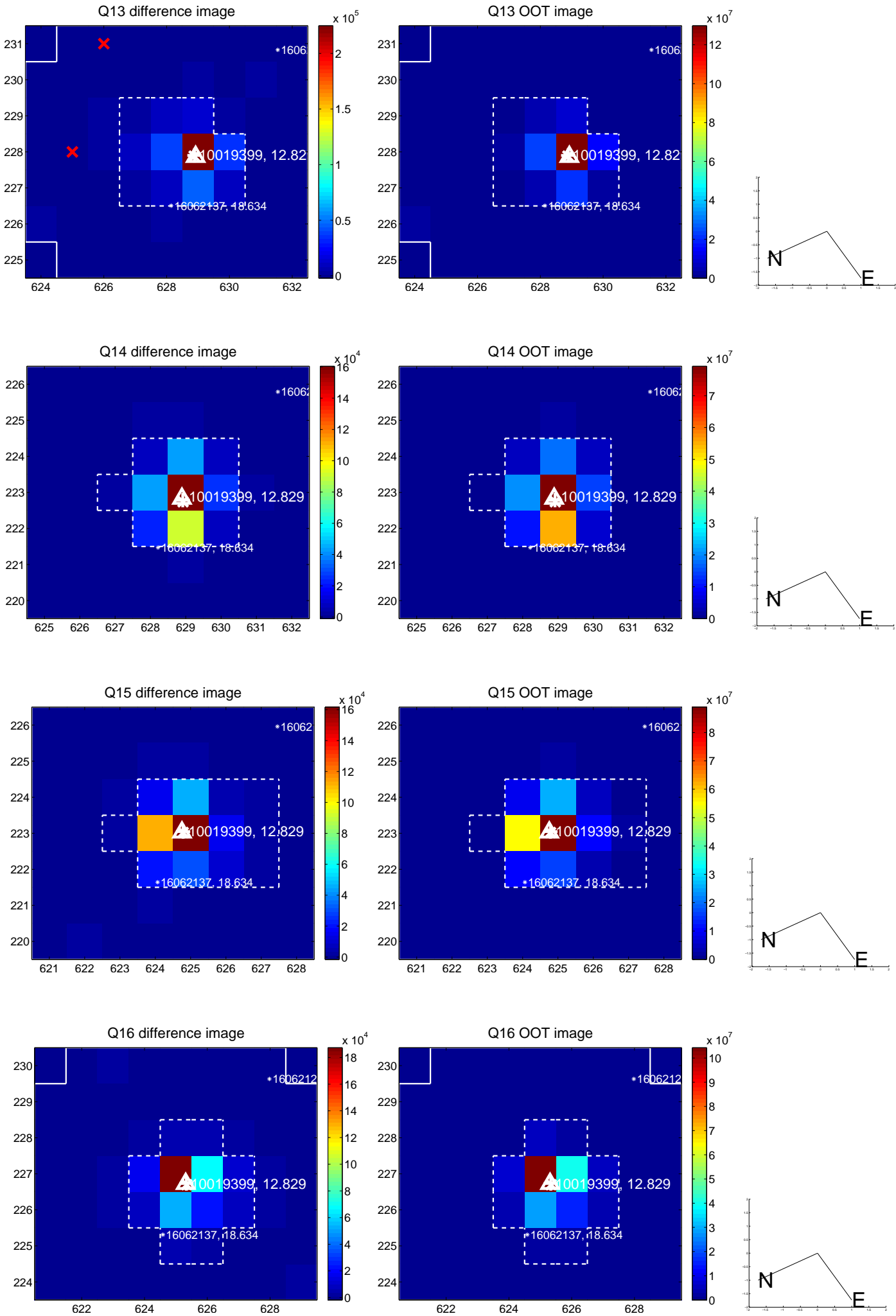
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



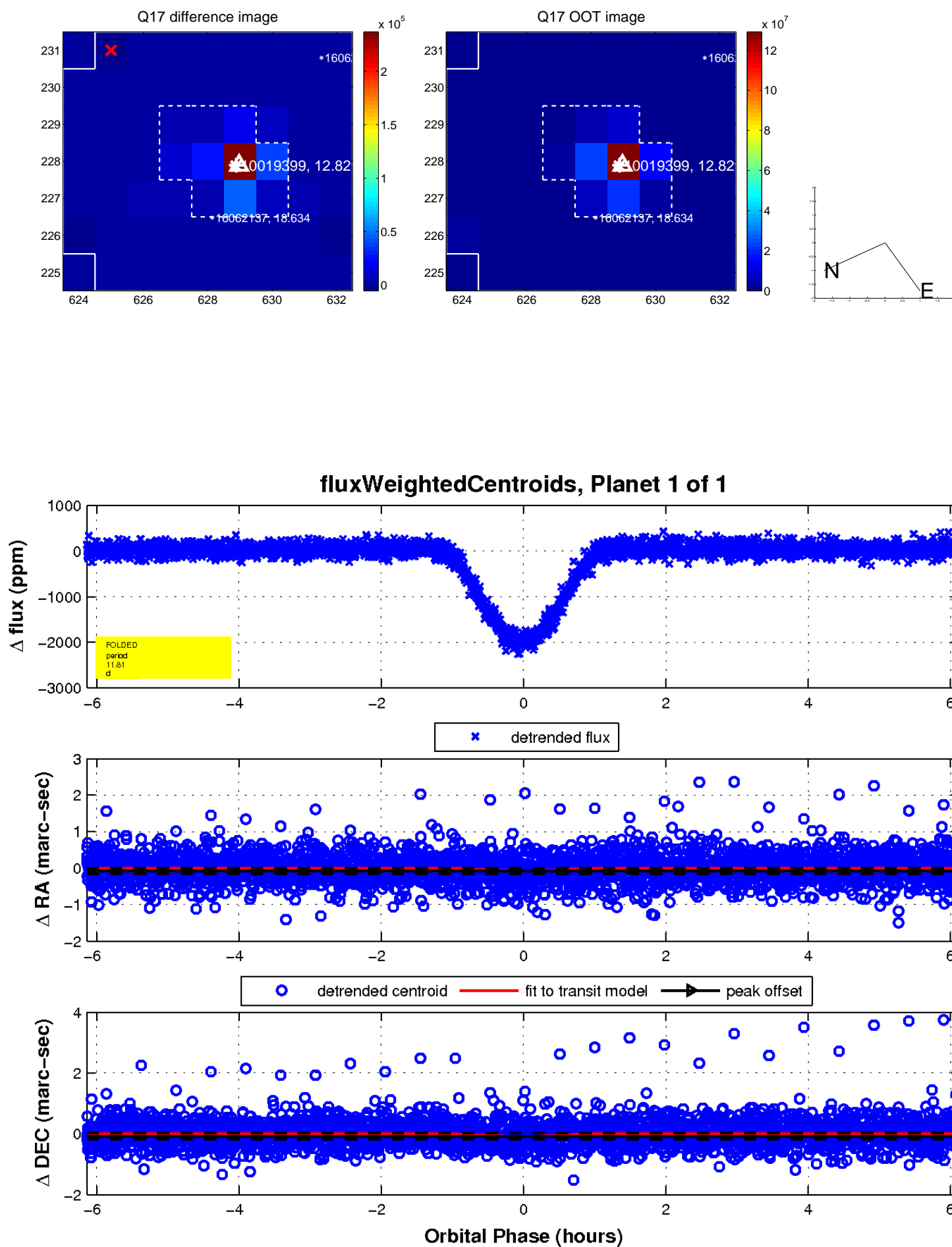
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

