

KIC 007128918

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})
007128918-01	OBS	6833.01	3.559395	133.599847	65825.7	3.998	4480.0	2556.4	0.75	5578	19.80	268.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007128918-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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.

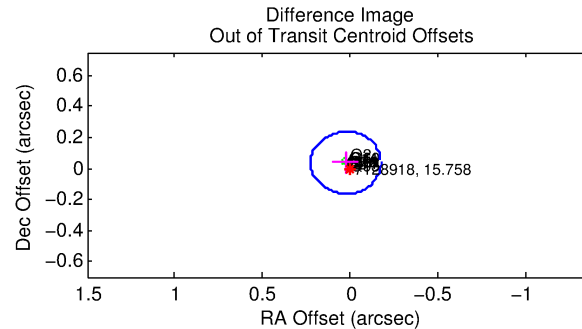
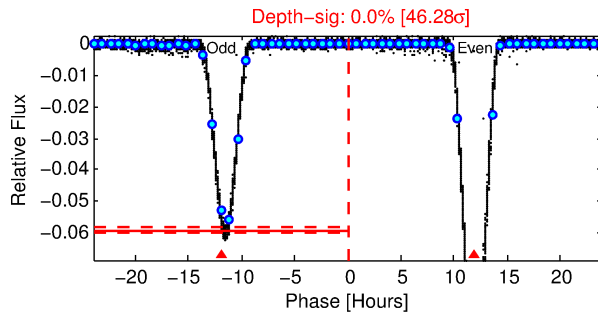
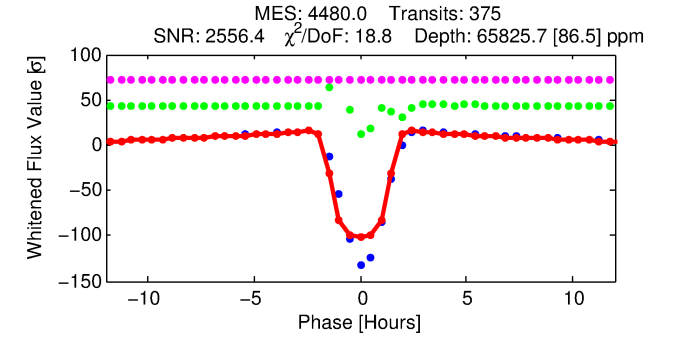
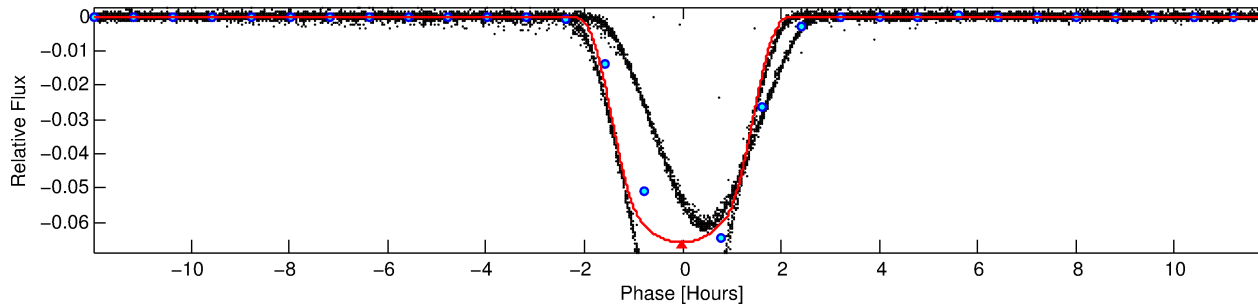
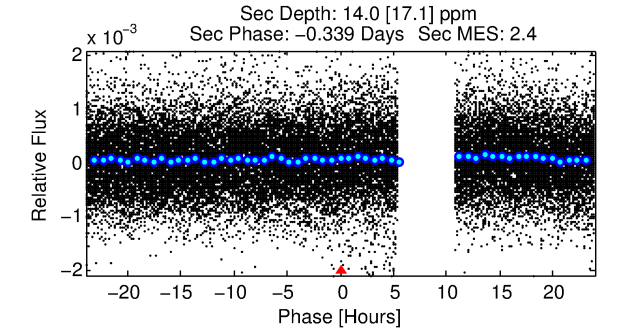
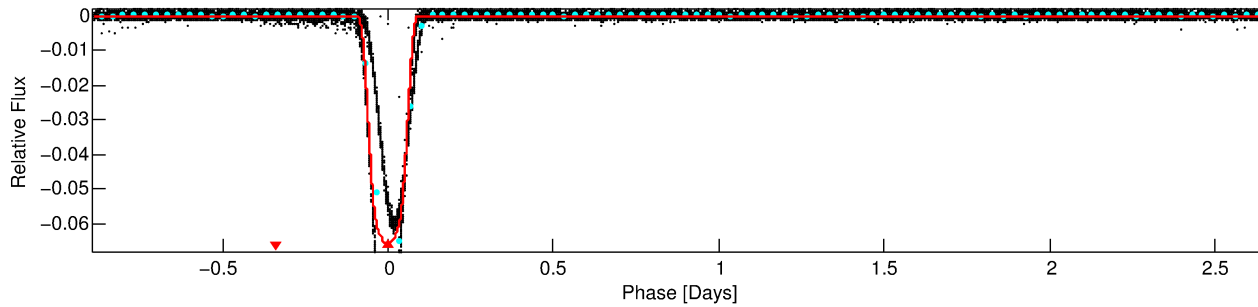
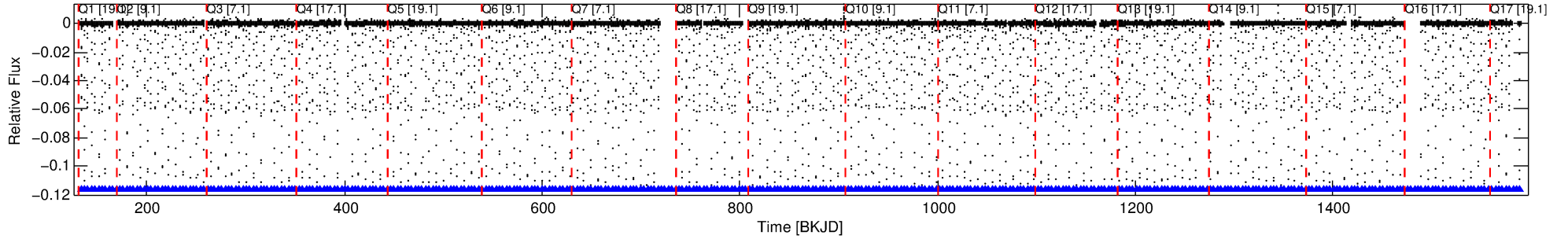
Ephemeris Match Information For 007128918-01

No Significant Match Found

DV One-Page Summary

KIC: 7128918 Candidate: 1 of 1 Period: 3.559 d
KOI: K06833 Corr: No Ephemeris Match

Kp: 15.76 R*: 0.75 Rs Teff: 5578.0 K Logg: 4.60 Fe/H: -0.400



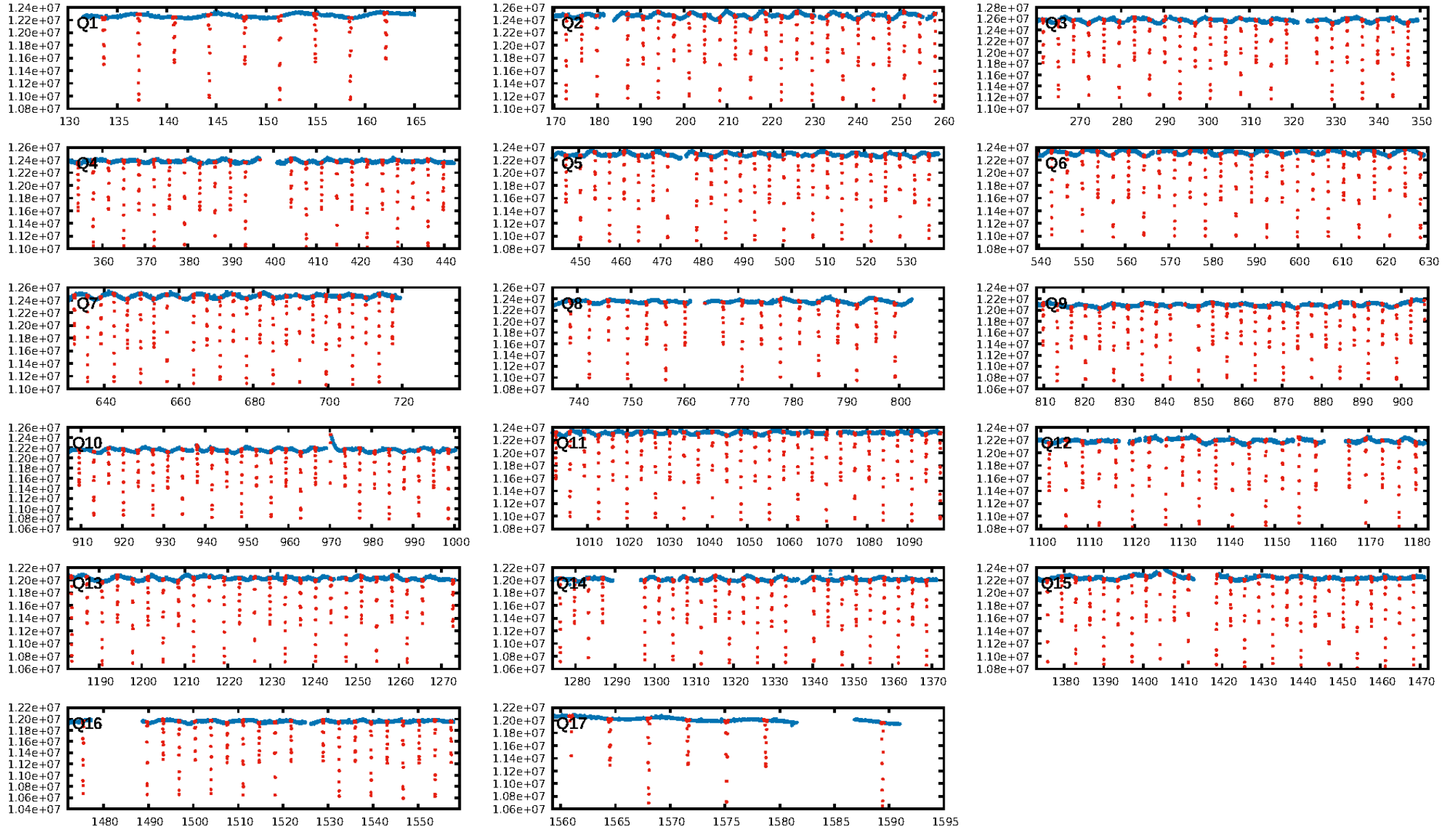
DV Fit Results:

Period = 3.55940 [0.00000] d
Epoch = 133.5998 [0.0001] BKJD
Rp/R* = 0.2407 [0.0003]
a/R* = 7.85 [0.03]
b = 0.47 [0.01]
Seff = 268.67 [68.77]
Teq = 1032 [66] K
Rp = 19.81 [3.86] Re
a = 0.0428 [0.0068] AU
Ag = 0.04 [0.04] [-21.57σ]
Teffp = 695 [213] K [-1.51σ]

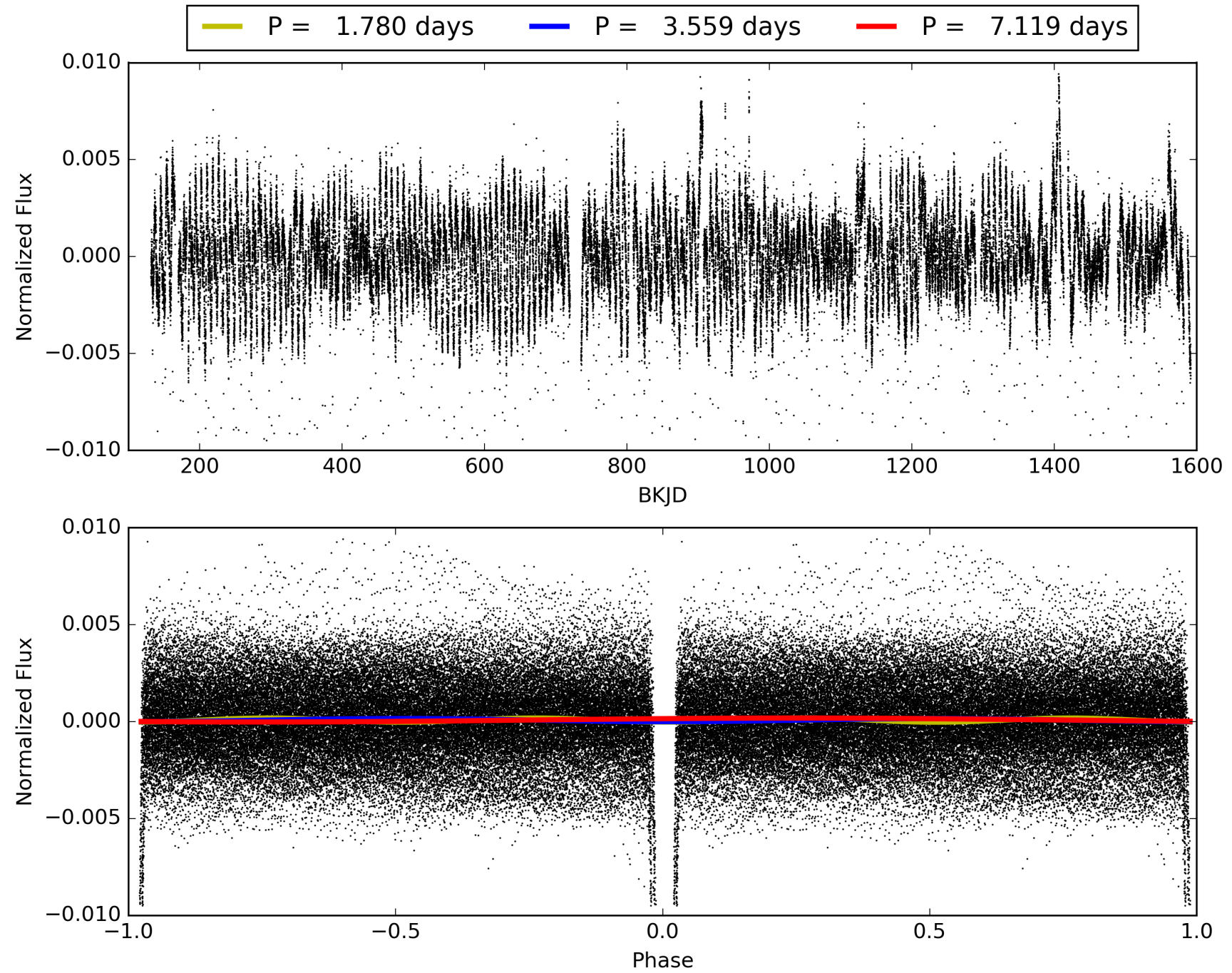
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [359/359]
GhostDiagnostic-chr: 3.431
Centroid-sig: 0.0%
Centroid-so: 0.119 arcsec [33.82σ]
OotOffset-rm: 0.046 arcsec [0.68σ]
KicOffset-rm: 0.034 arcsec [0.49σ]
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 007128918-01, PDC Light Curves

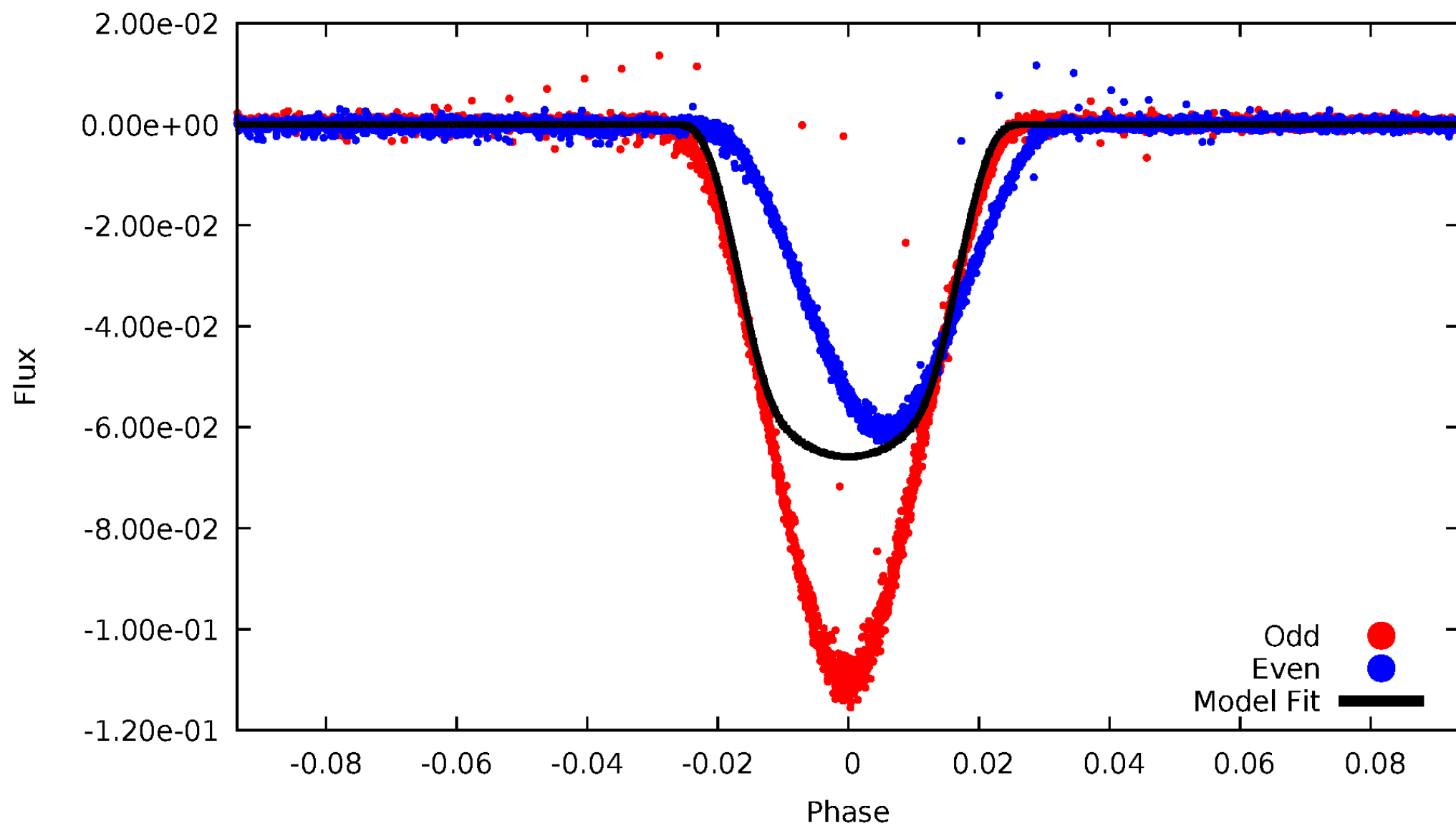


TCE 007128918-01



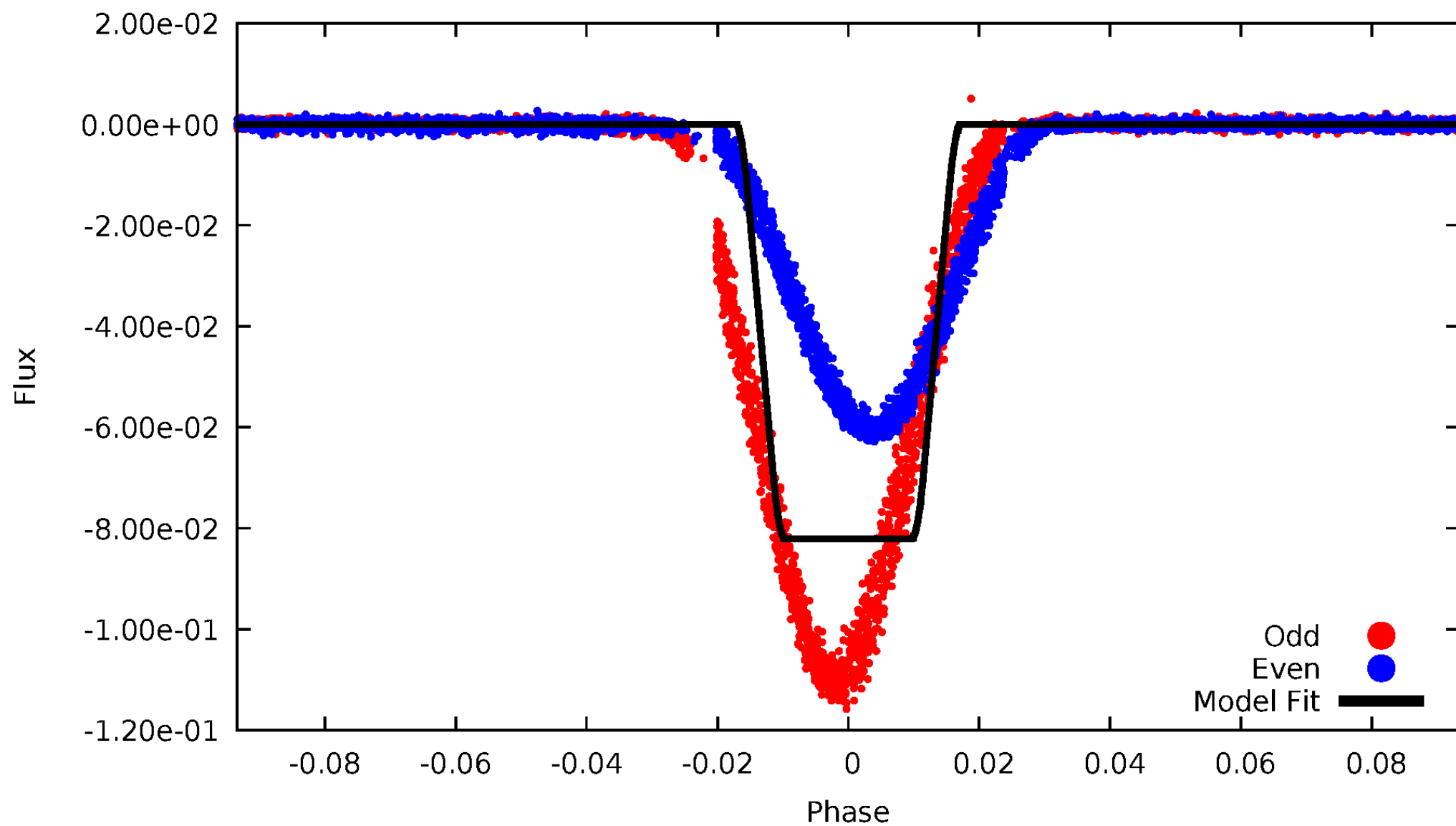
DV Odd/Even

TCE 007128918-01



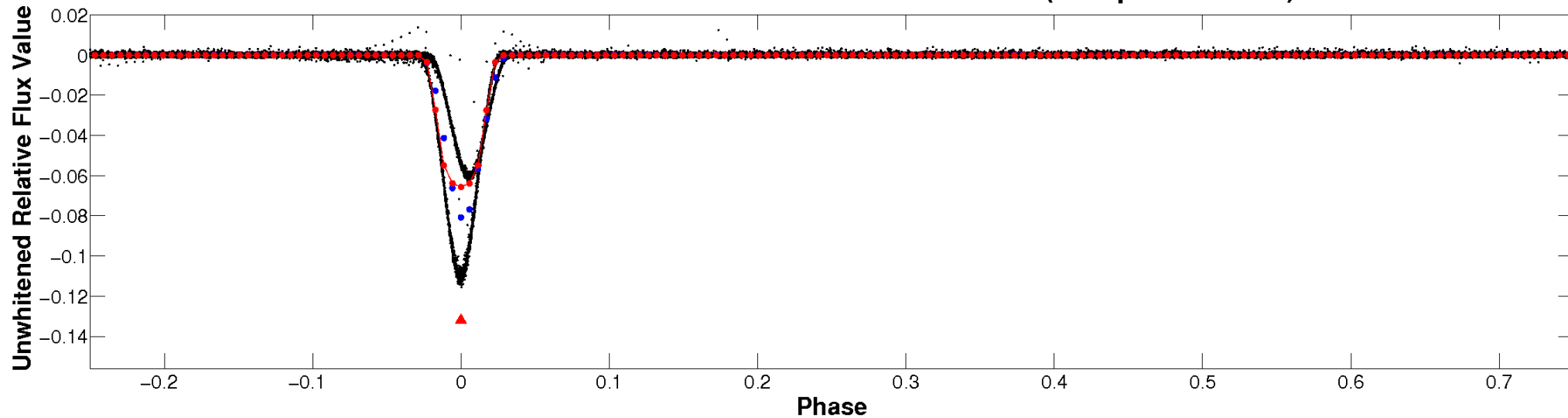
ALT Odd/Even

TCE 007128918-01

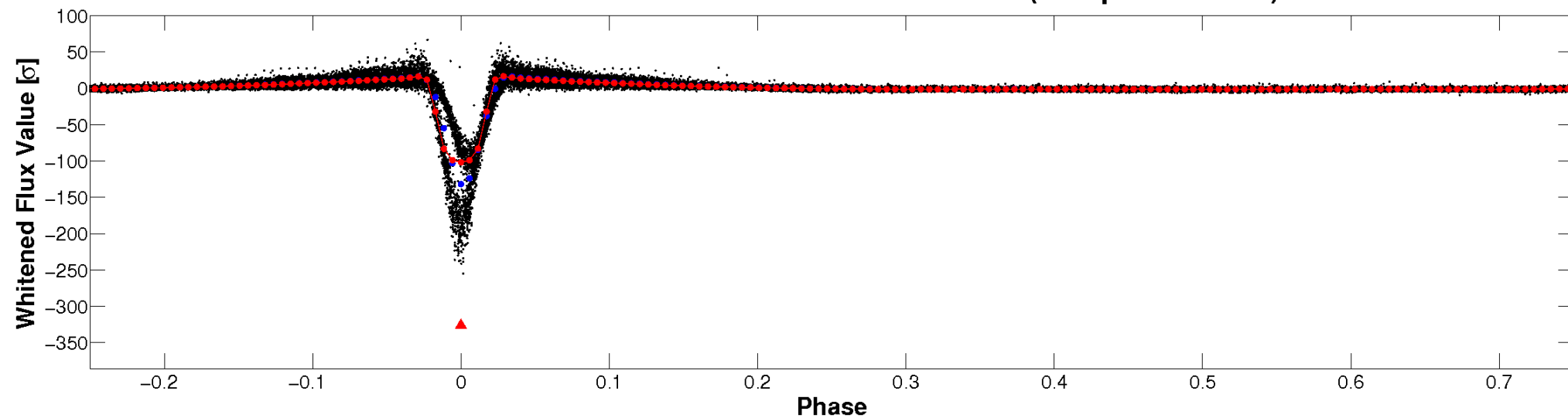


Non-Whitened Vs. Whitened Light Curve

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

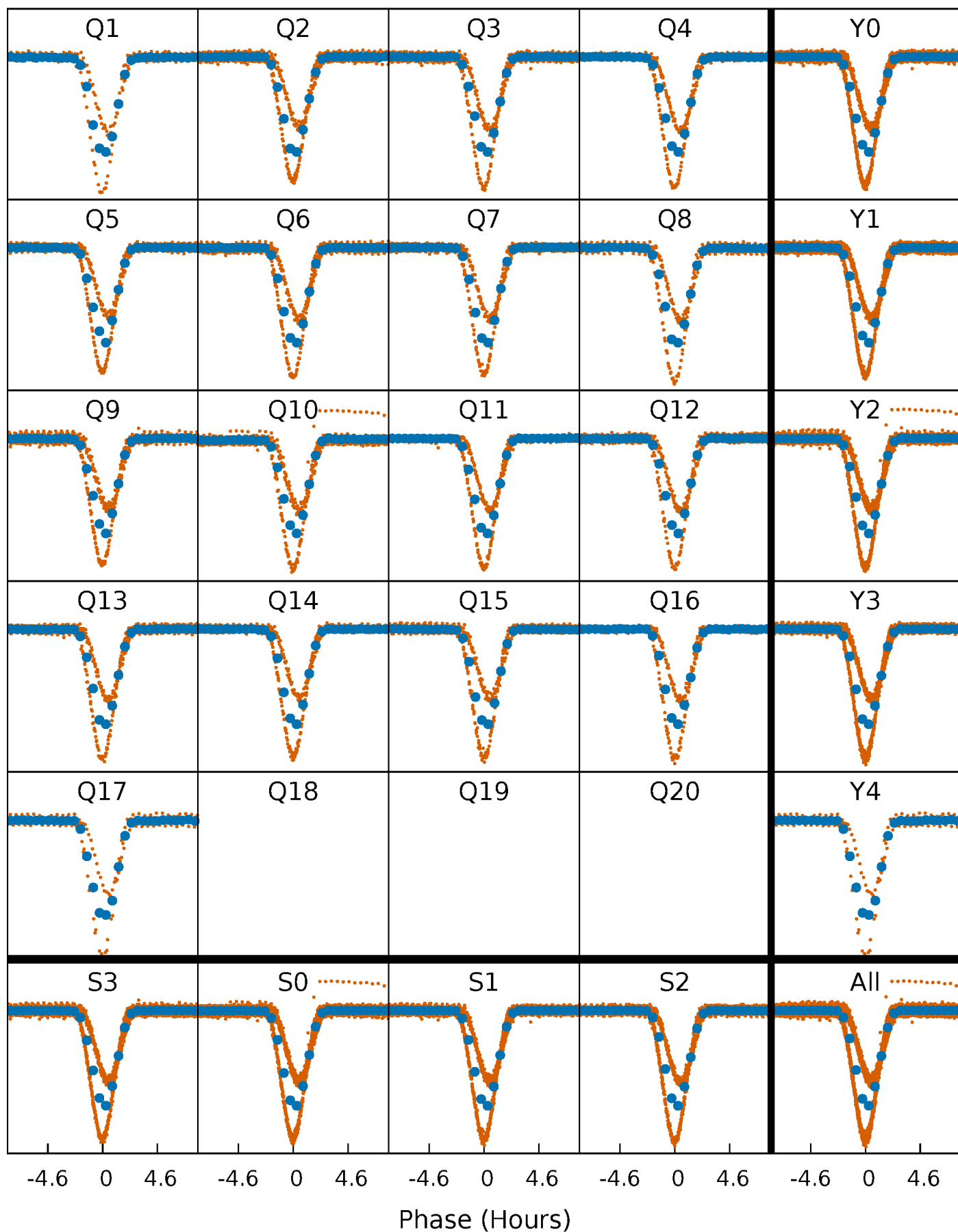


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



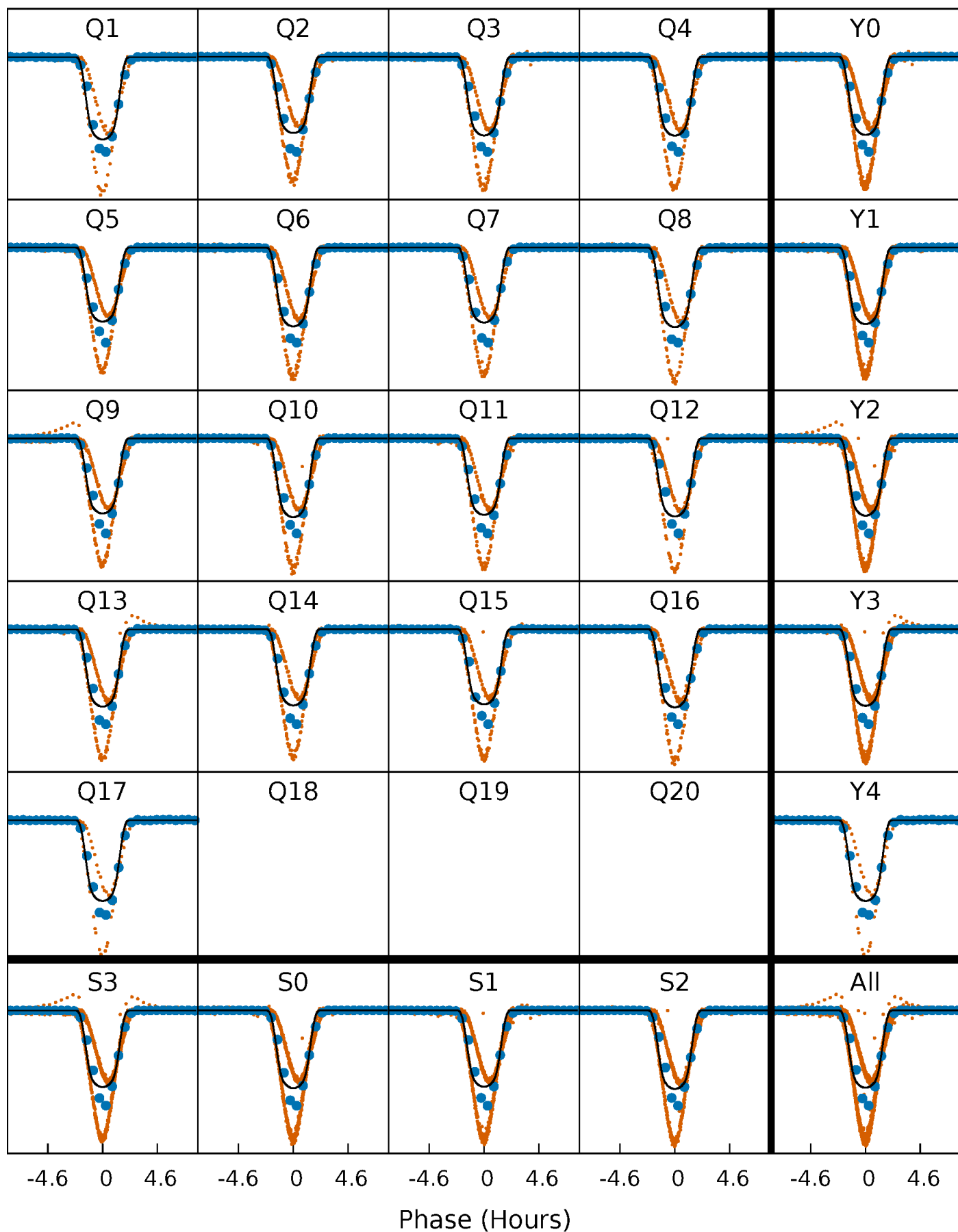
PDC Quarter-Phased Transit Curves

TCE 007128918-01 P= 3.559395 Days $T_0=133.599847$ (BKJD)



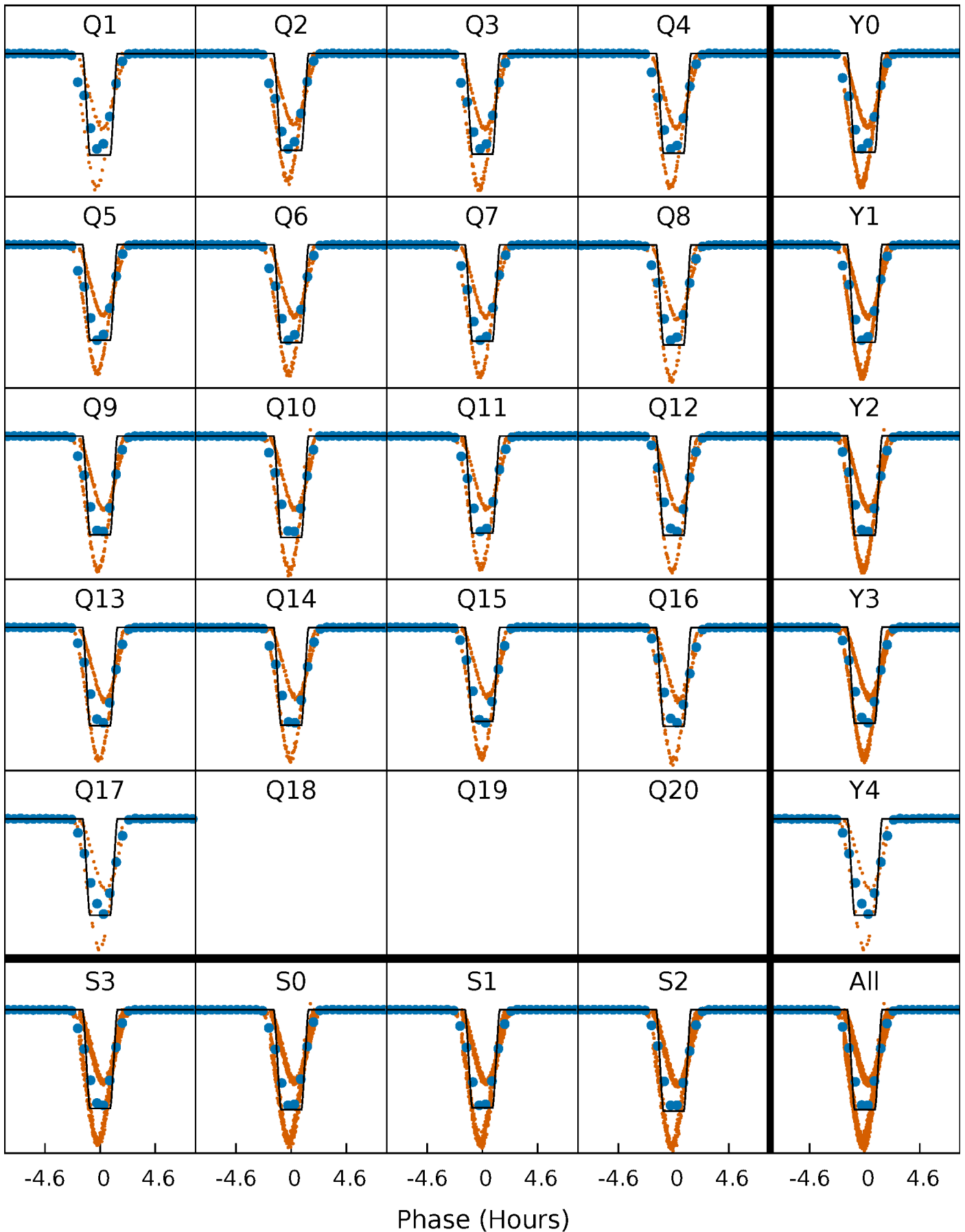
DV Quarter-Phased Transit Curves

TCE 007128918-01 P= 3.559395 Days $T_0=133.599847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

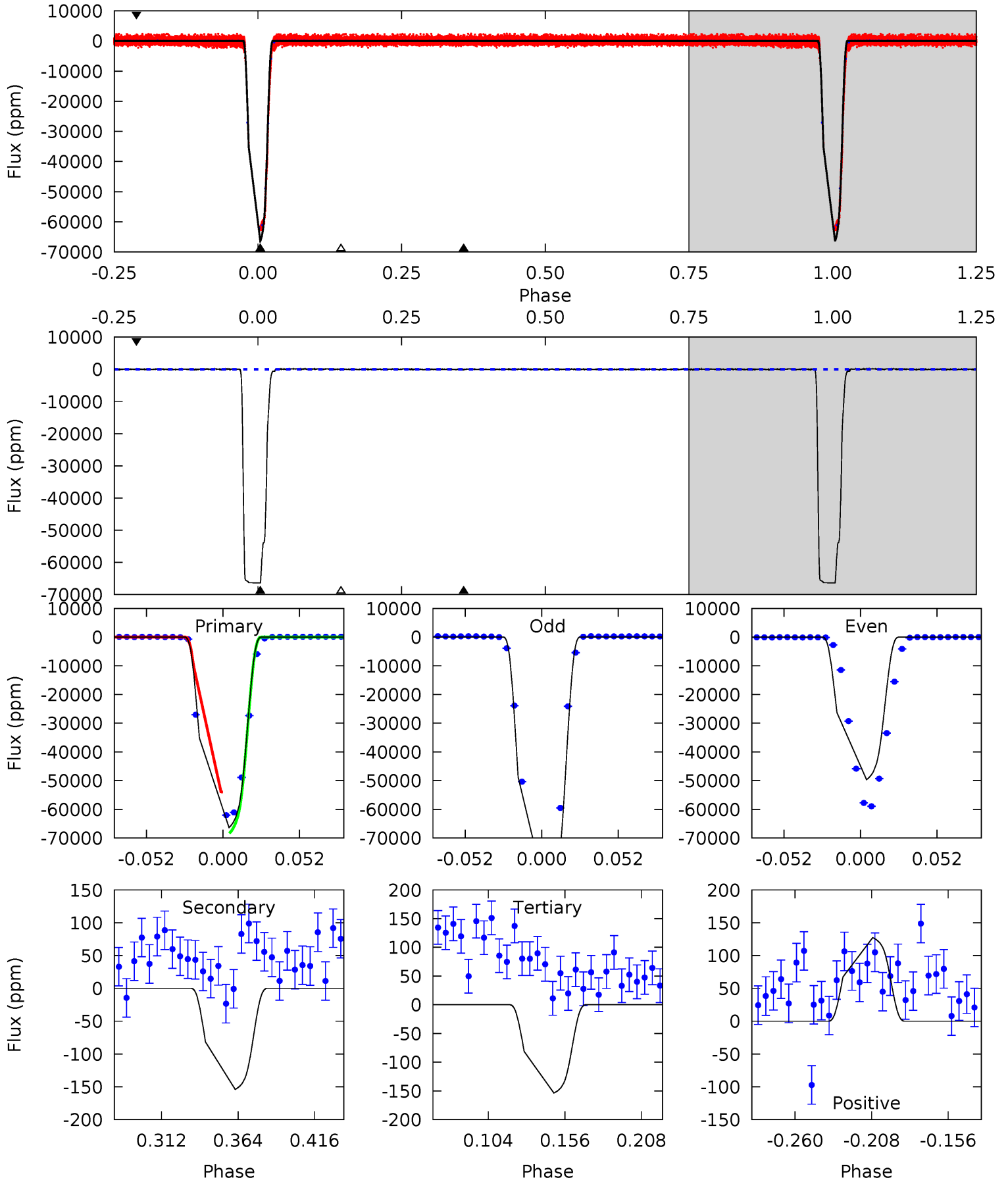
TCE 007128918-01 P= 3.559372 Days $T_0=133.610733$ (BKJD)



DV Model-Shift Uniqueness Test

007128918-01, P = 3.559395 Days, E = 130.040452 Days

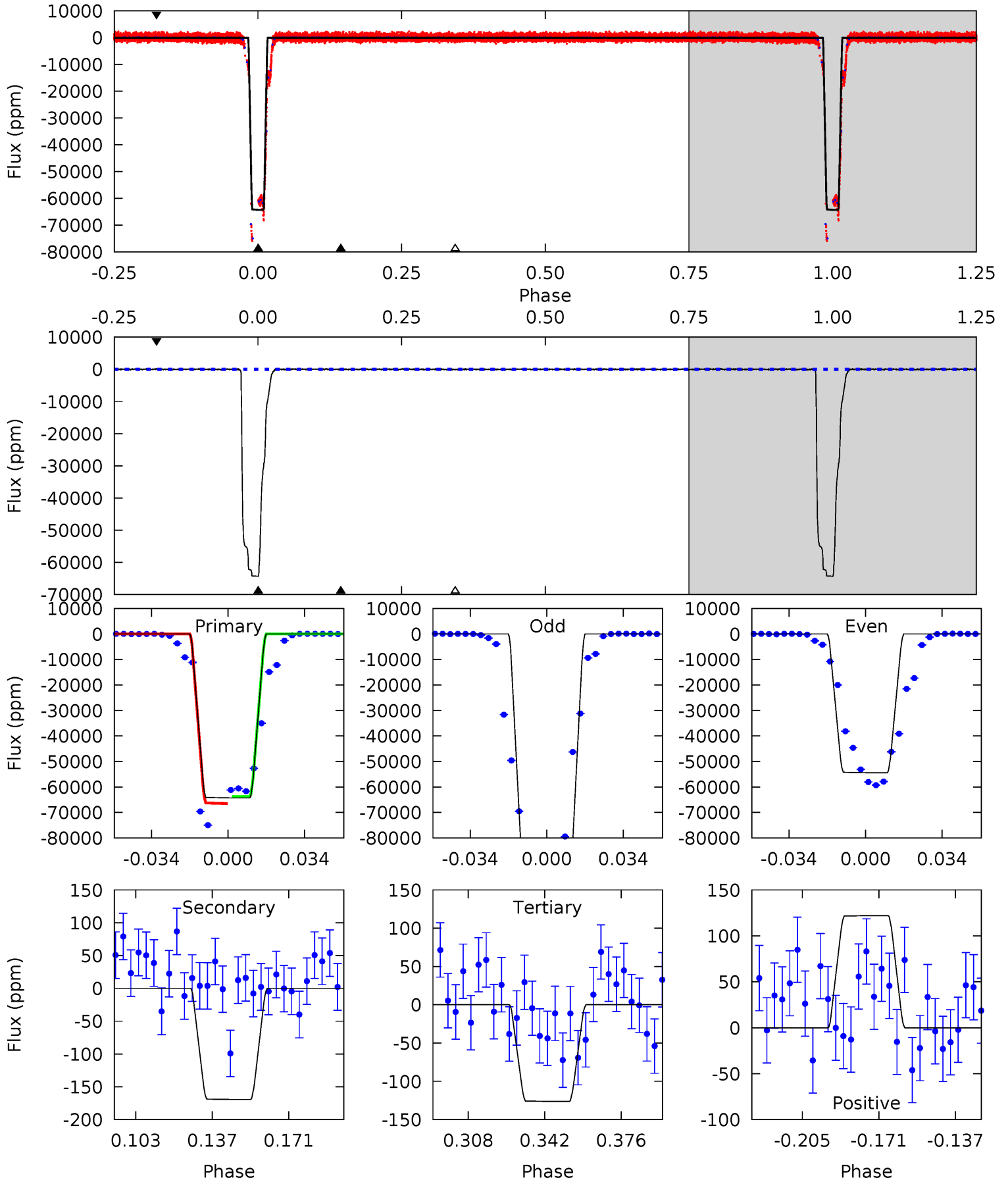
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2974	6.90	6.88	5.70	4.70	1.94	2.48	2967	2968	0.01	1.20	1868	1.28	0.00	279.2



Alt Model-Shift Uniqueness Test

007128918-01, P = 3.559372 Days, E = 130.051361 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1870	4.92	3.67	3.55	4.79	2.12	1.22	1866	1866	1.25	1.37	1017	1.27	0.00	0



Stellar Parameters For KIC 007128918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5578^{+169}_{-152}	$4.601^{+0.040}_{-0.120}$	$-0.400^{+0.300}_{-0.300}$	$0.754^{+0.147}_{-0.063}$	$0.843^{+0.080}_{-0.097}$	$2.771^{+0.459}_{-0.963}$
	+3%/-3%	+1%/-3%	+75%/-75%	+19%/-8%	+9%/-12%	+17%/-35%
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 007128918-01 / KOI 6833.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-154 ± 22	$20.20^{+1.97}_{-1.19}$	1466^{+72}_{-55}	1865^{+127}_{-462}	$0.371^{+0.072}_{-0.069}$
Alt.	-169 ± 34	$24.18^{+2.44}_{-1.50}$	1470^{+72}_{-61}	-1654^{+3458}_{-269}	$0.281^{+0.072}_{-0.069}$

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 $A_{\text{obs}} \gg 1.0$

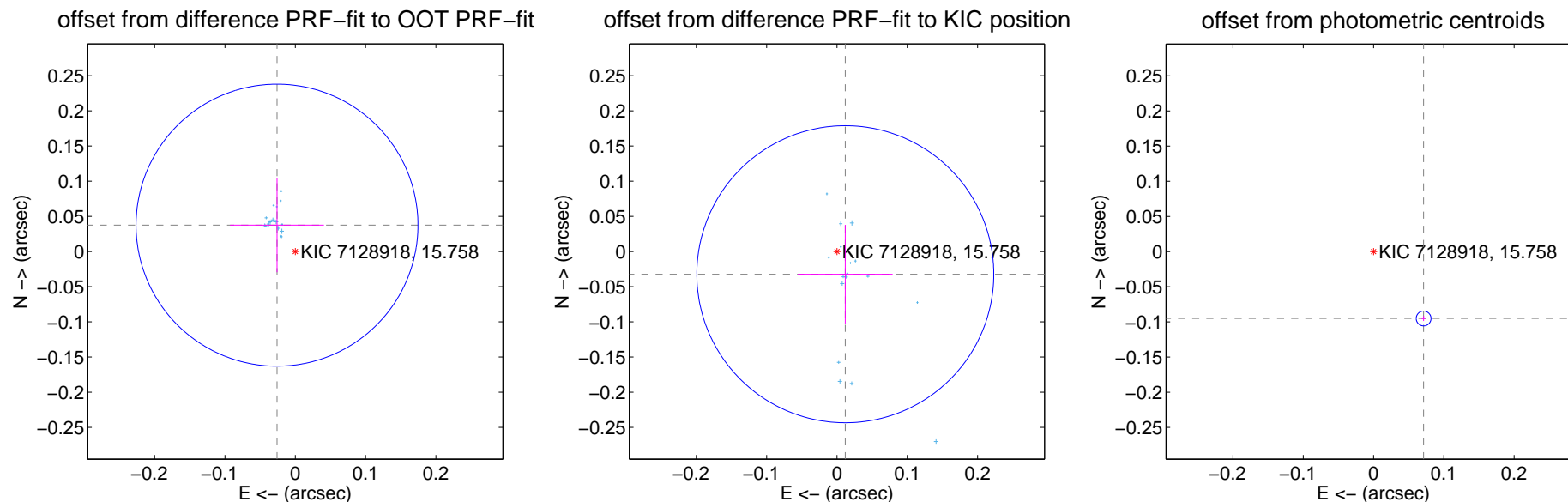
DV Centroid Data

Supplemental centroid analysis for 007128918-01. Kepler magnitude: 15.76. Transit SNR 2556.40

There are 17 quarters with good PRF difference image offsets

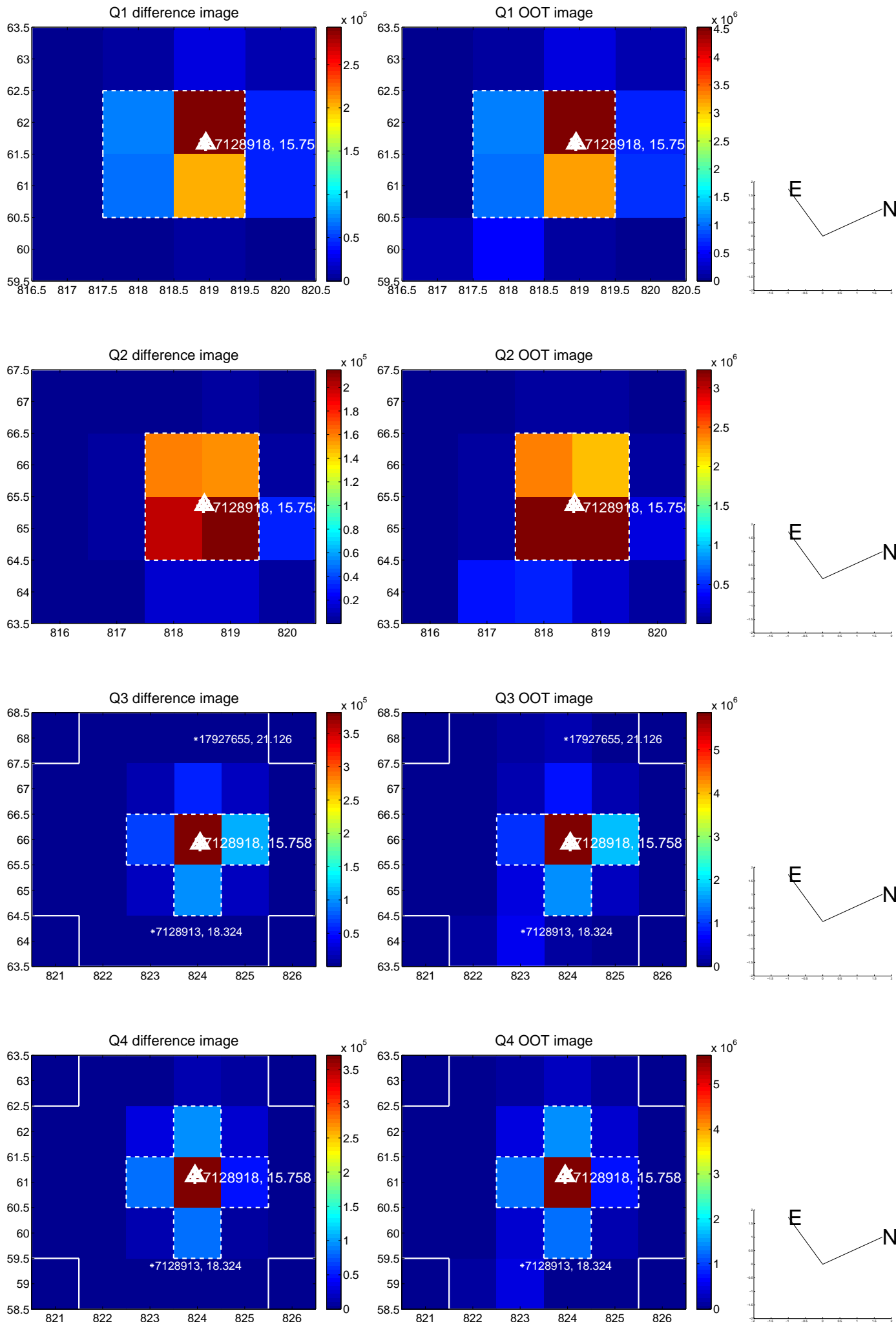
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.067	0.68	0.026 ± 0.067	0.037 ± 0.067
PRF-fit source offset from KIC position	0.034 ± 0.070	0.49	-0.012 ± 0.067	-0.032 ± 0.070
photometric centroid source offset	0.12 ± 0.00	33.82	-0.07 ± 0.00	-0.10 ± 0.00

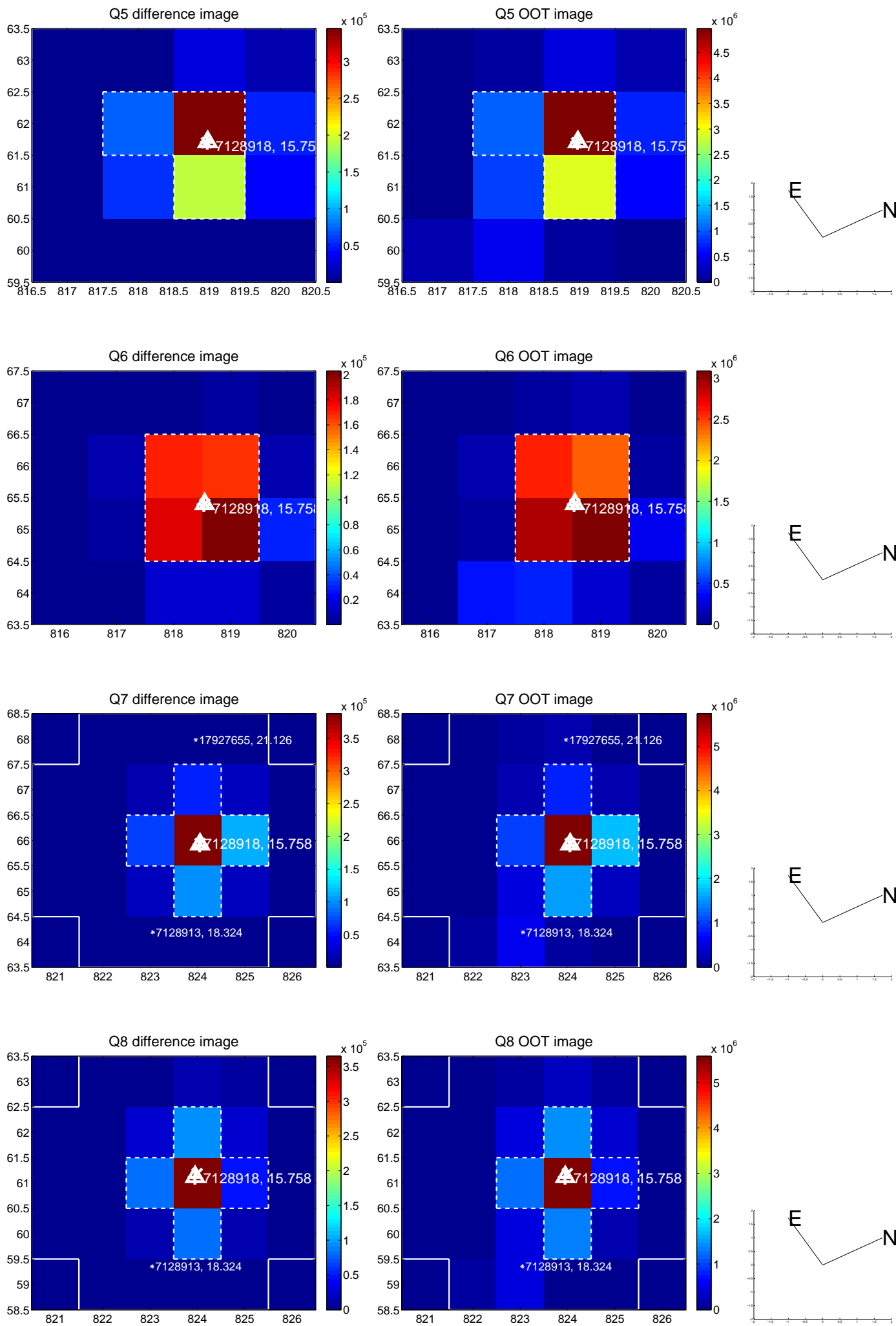


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

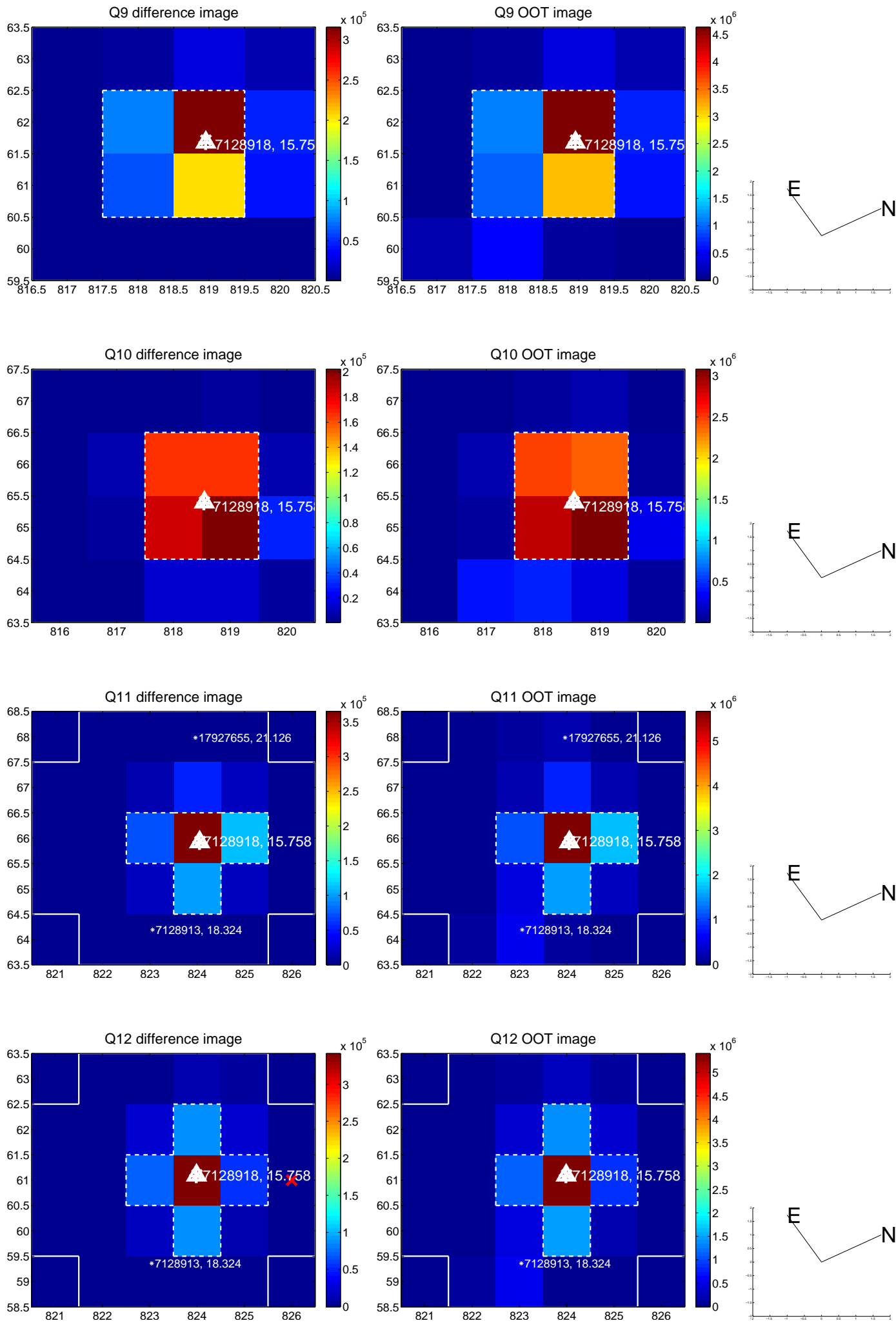
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



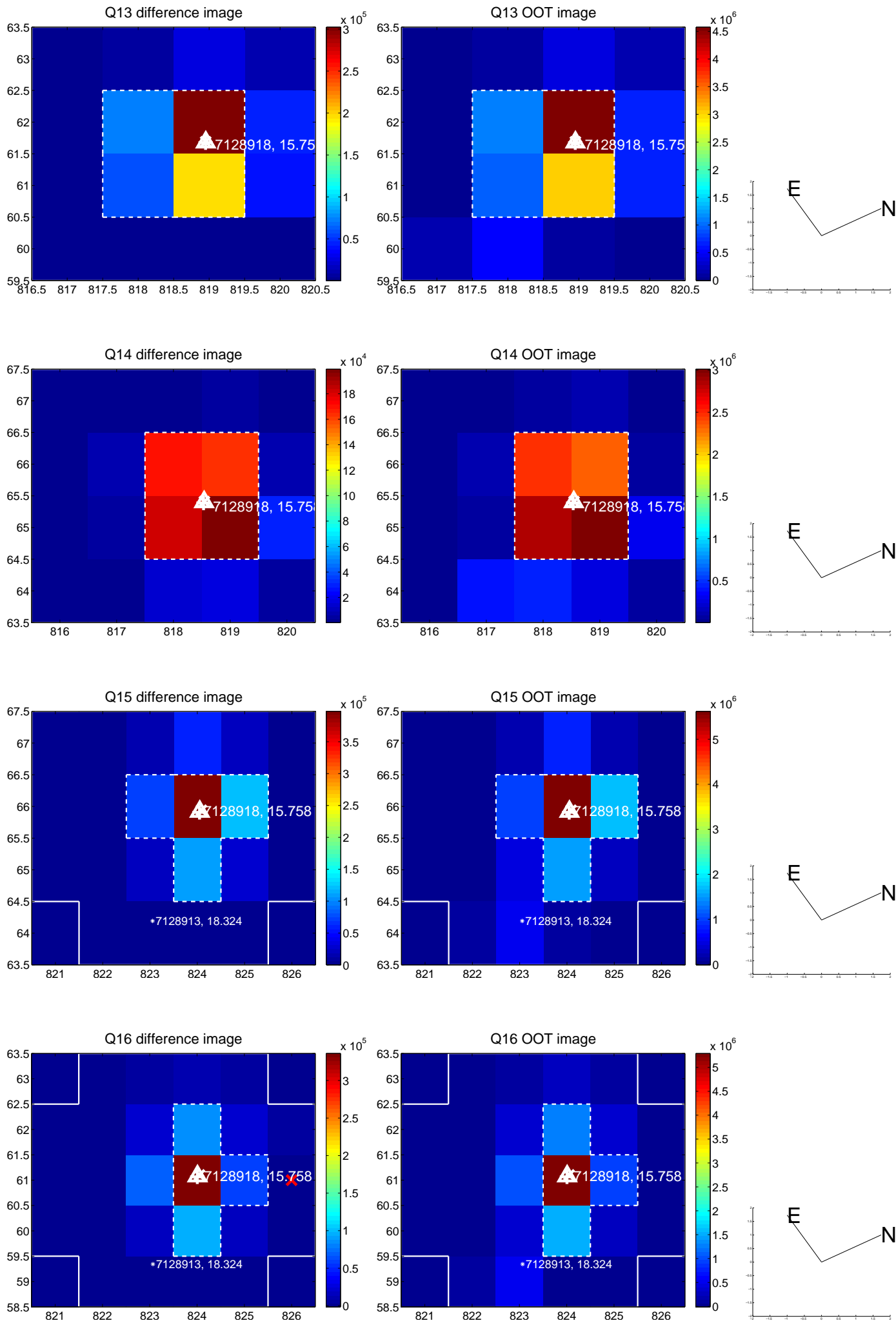
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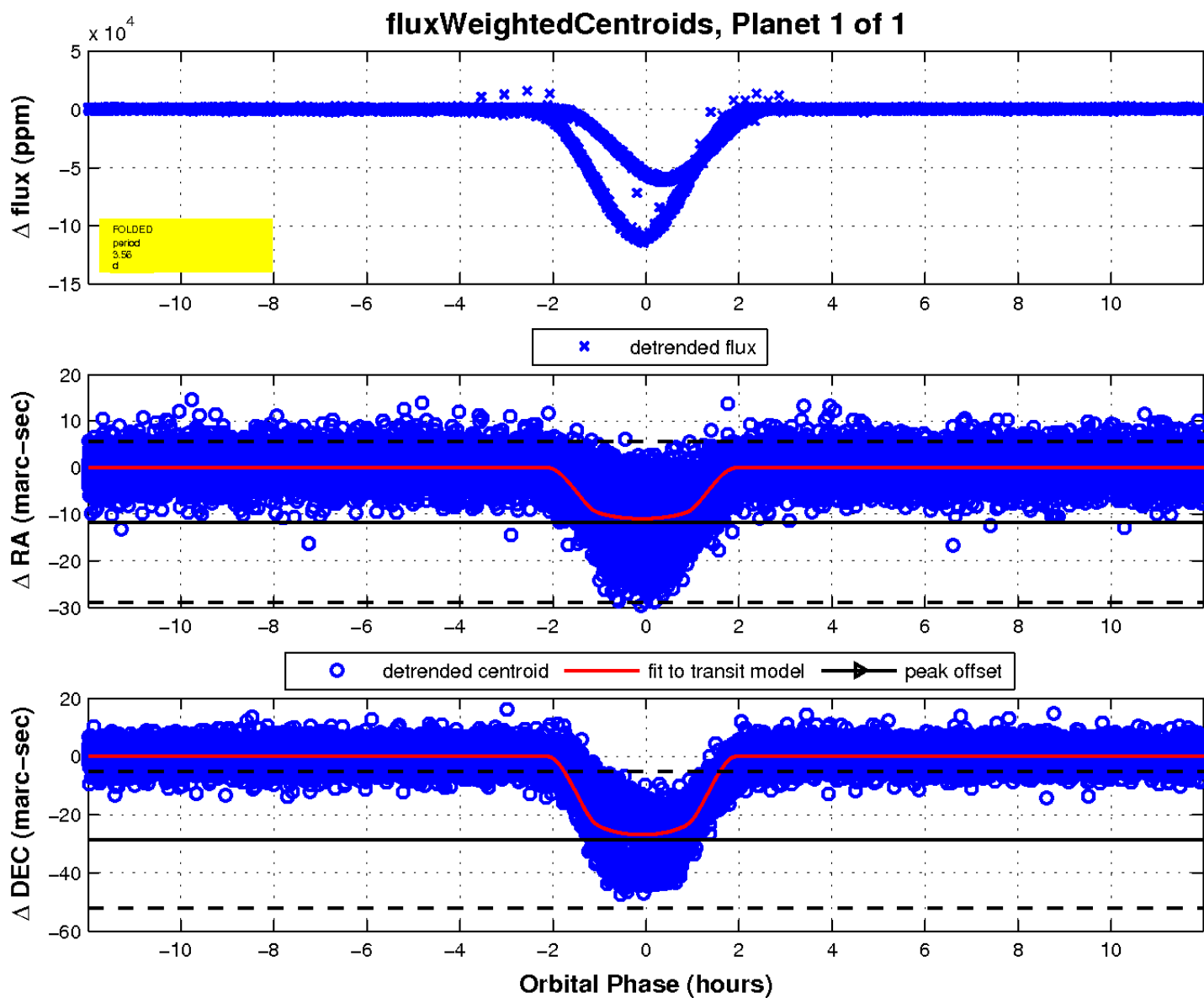
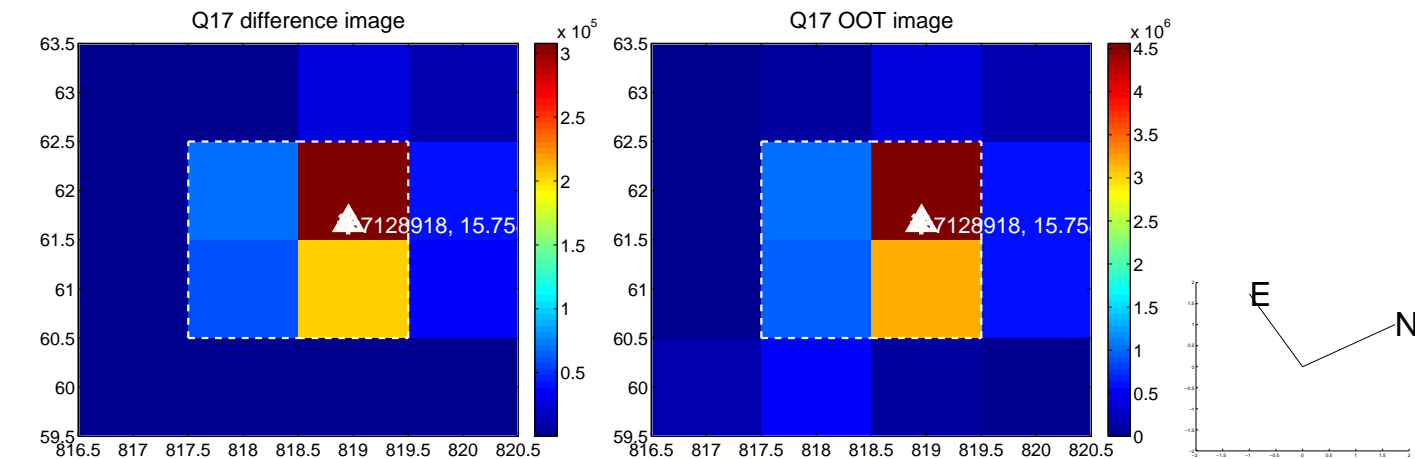
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UKIRT Image

Declination

