

KIC 009007918

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})
009007918-01	OBS	7122.01	1.387207	132.846863	139642.9	3.526	19901.6	13835.6	1.89	7207	76.47	11150.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009007918-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_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 009007918-01

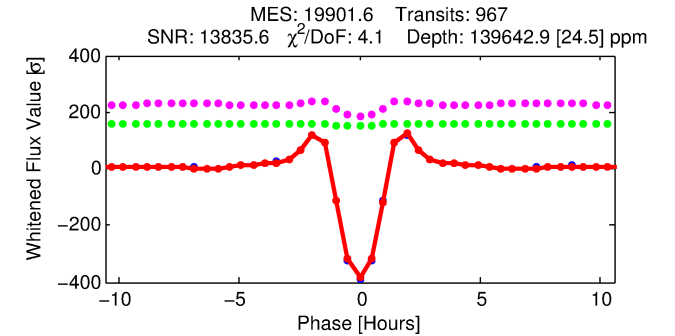
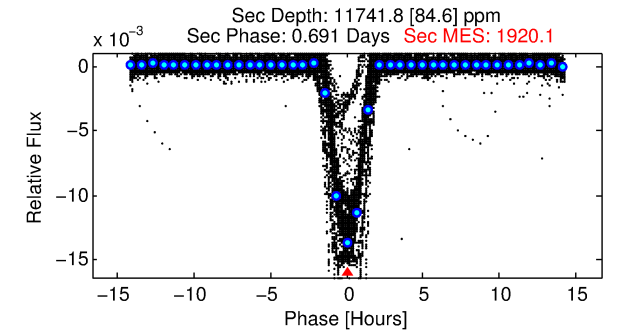
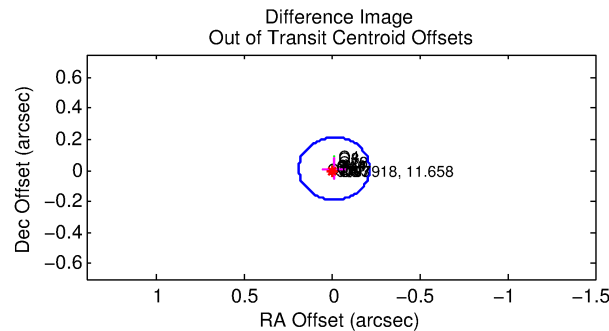
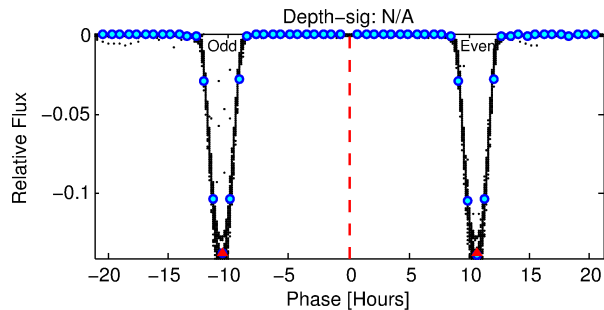
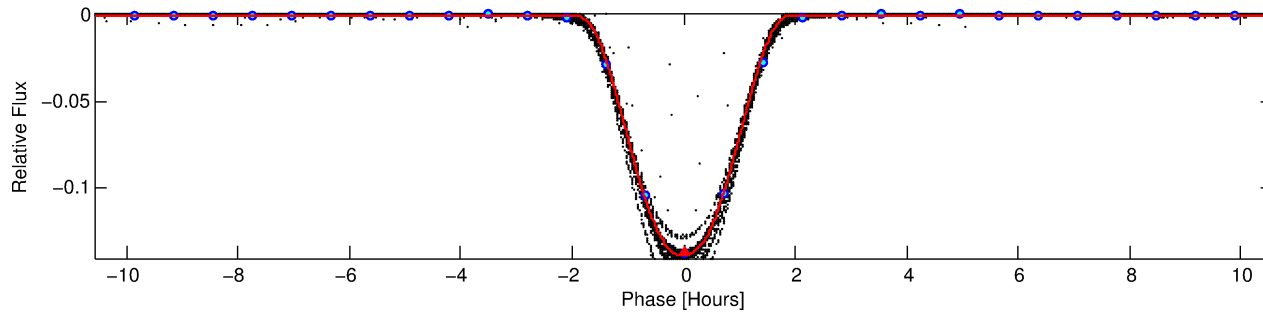
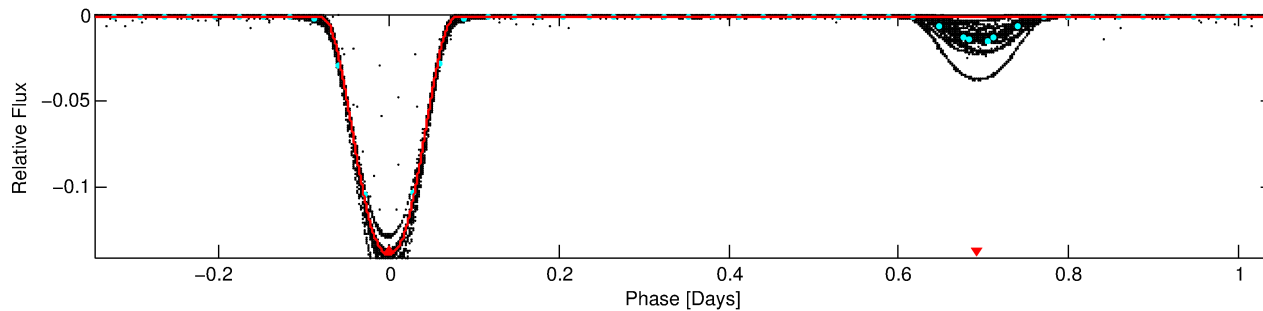
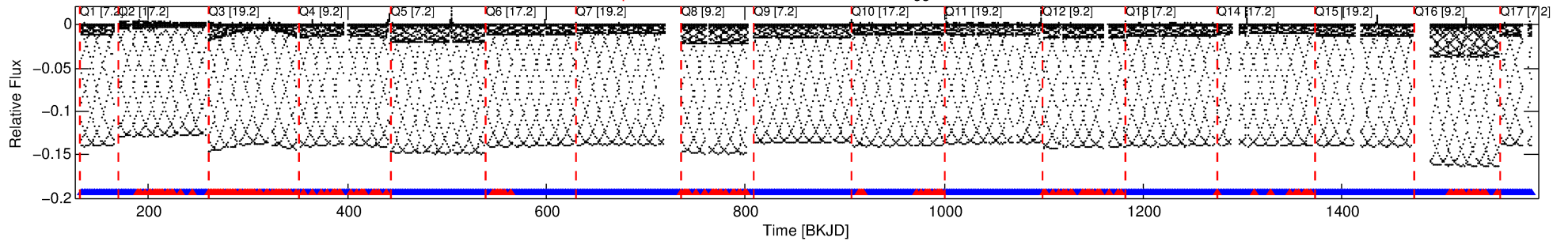
No Significant Match Found

DV One-Page Summary

KIC: 9007918 Candidate: 1 of 1 Period: 1.387 d

KOI: K07122.01 Corr: 0.961

Kp: 11.66 R*: 1.89 Rs Teff: 7207.0 K Logg: 4.06 Fe/H: -0.160



DV Fit Results:

Period = 1.38721 [0.00000] d
Epoch = 132.8469 [0.0000] BKJD
Rp/R* = 0.3700 [0.0001]
a/R* = 3.78 [0.00]
b = 0.63 [0.00]
Seff = 11150.92 [4420.07]
Teq = 2620 [260] K
Rp = 76.47 [23.26] Re
a = 0.0279 [0.0071] AU
Ag = 0.86 [0.31] [-0.45σ]
Teffp = 3900 [150] K [4.27σ]

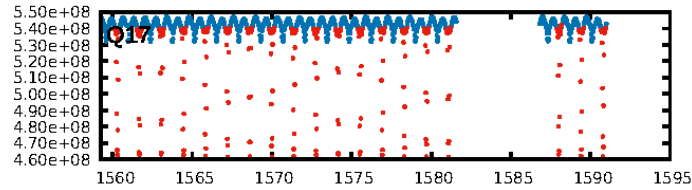
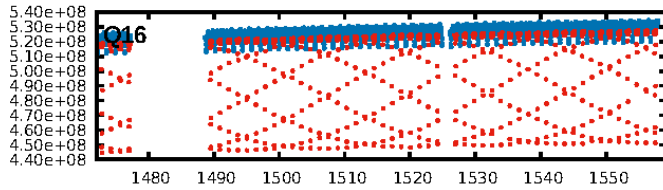
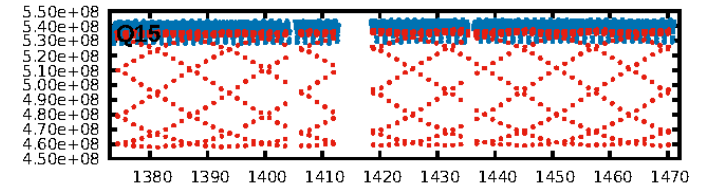
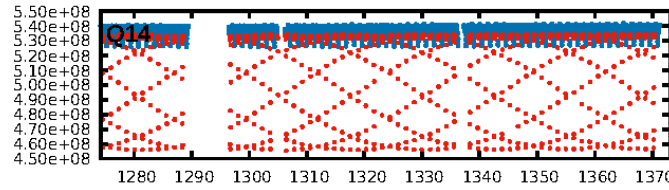
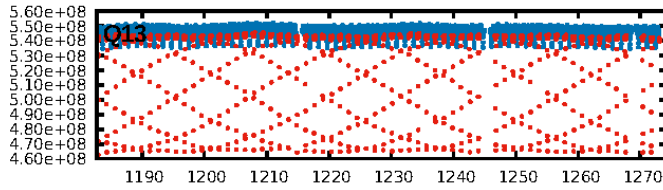
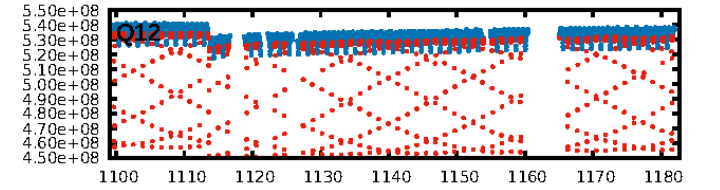
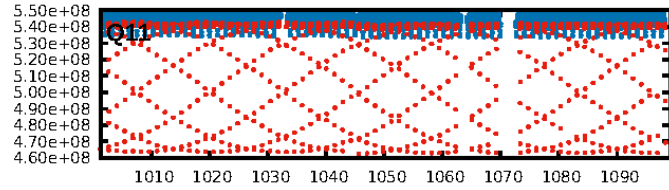
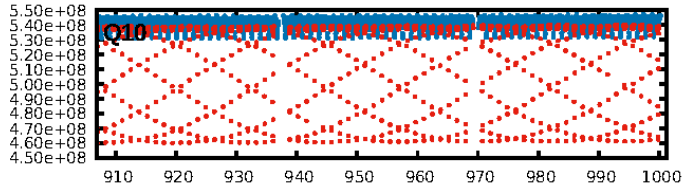
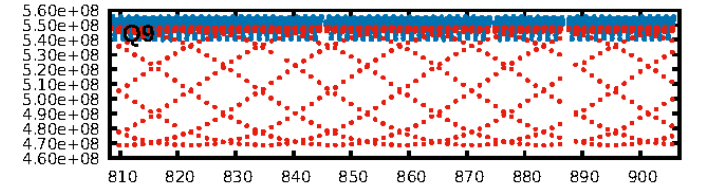
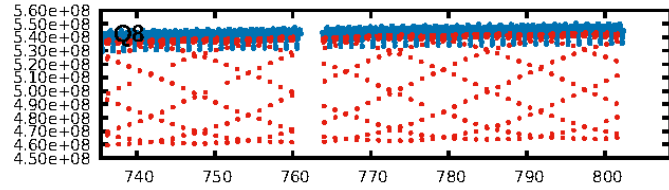
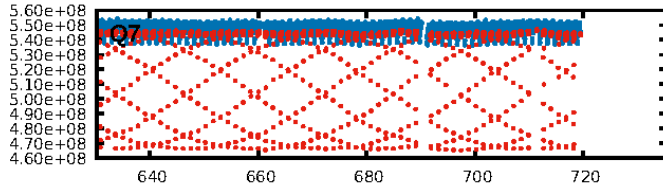
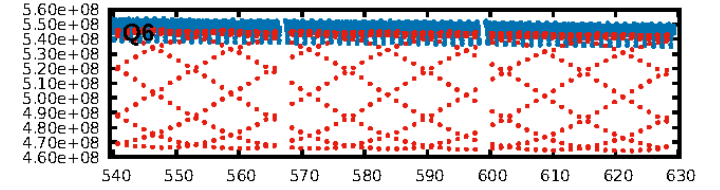
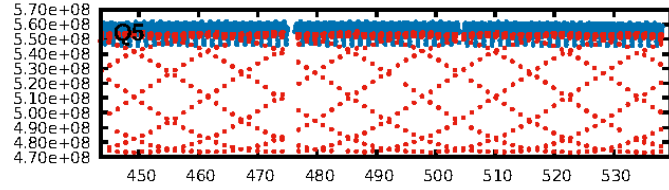
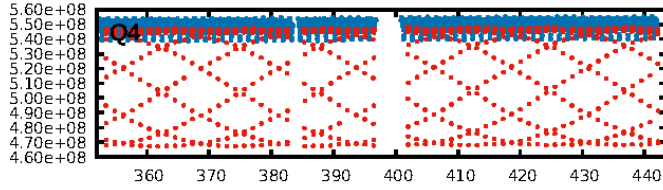
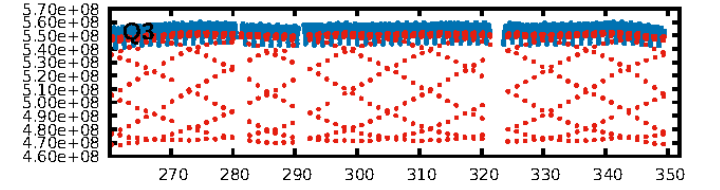
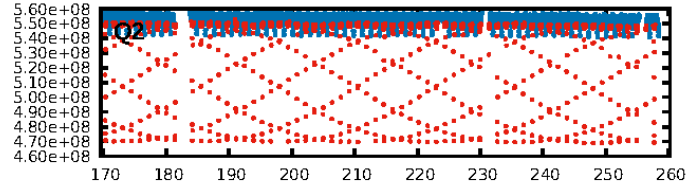
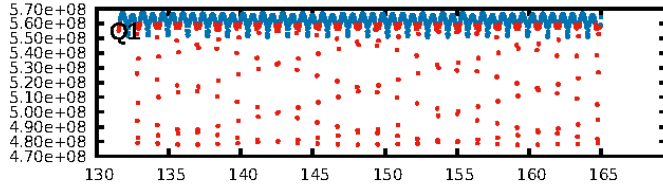
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.81 [751/923]
GhostDiagnostic-chr: 1.752
Centroid-sig: N/A
Centroid-so: 0.171 arcsec [1046.83σ]
OotOffset-rm: 0.017 arcsec [0.25σ]
KicOffset-rm: 0.196 arcsec [2.90σ]
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]

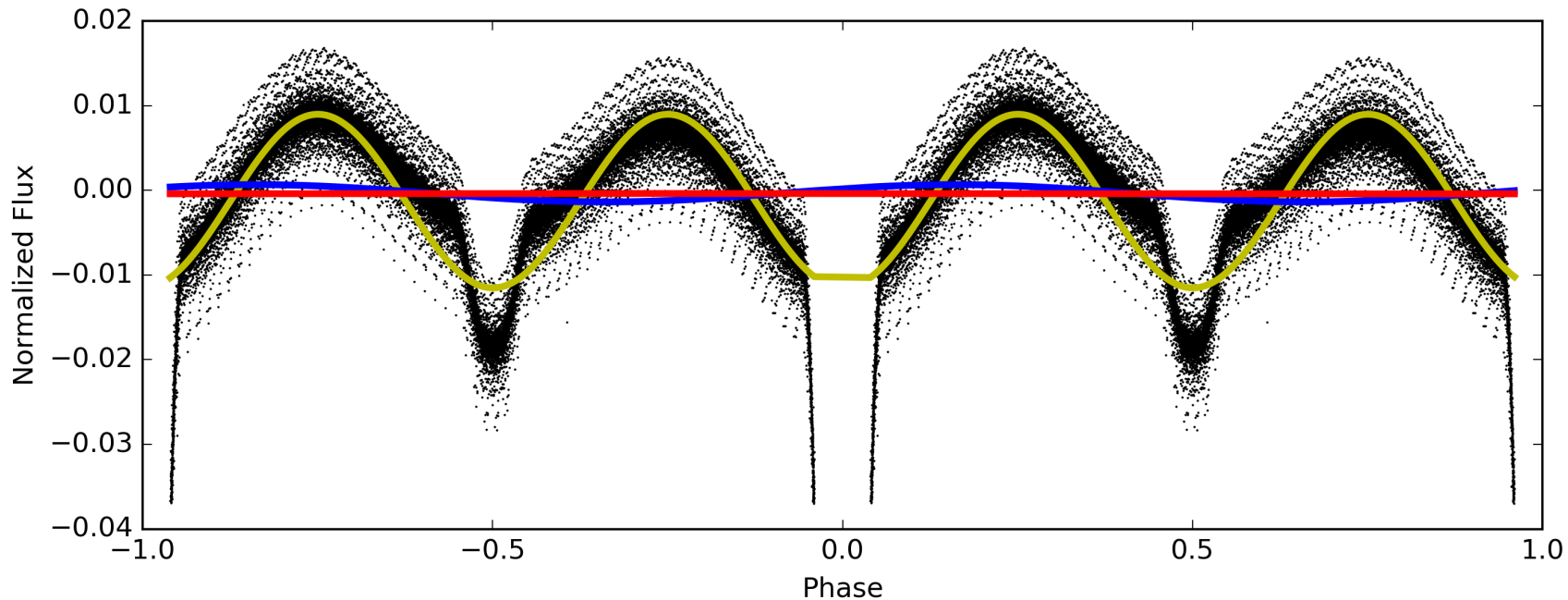
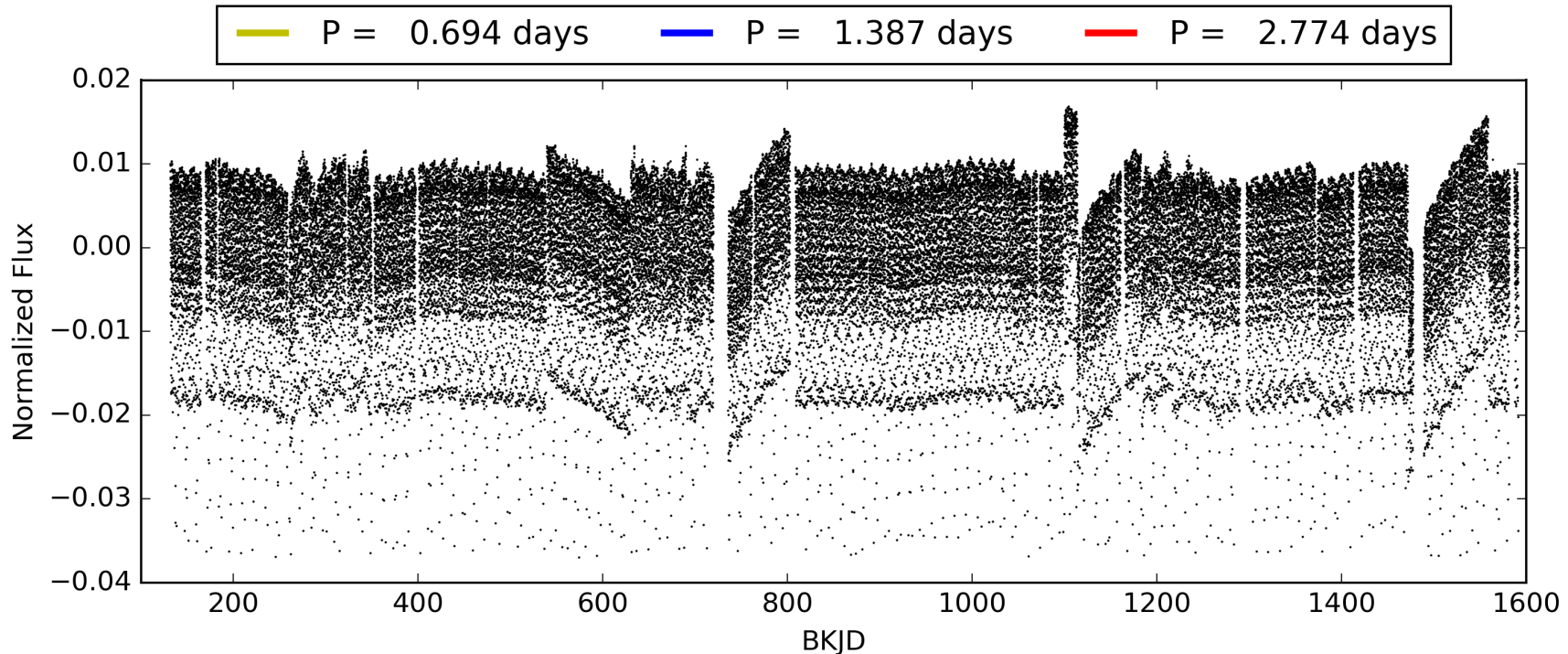
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:28:02 Z

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

TCE 009007918-01, PDC Light Curves

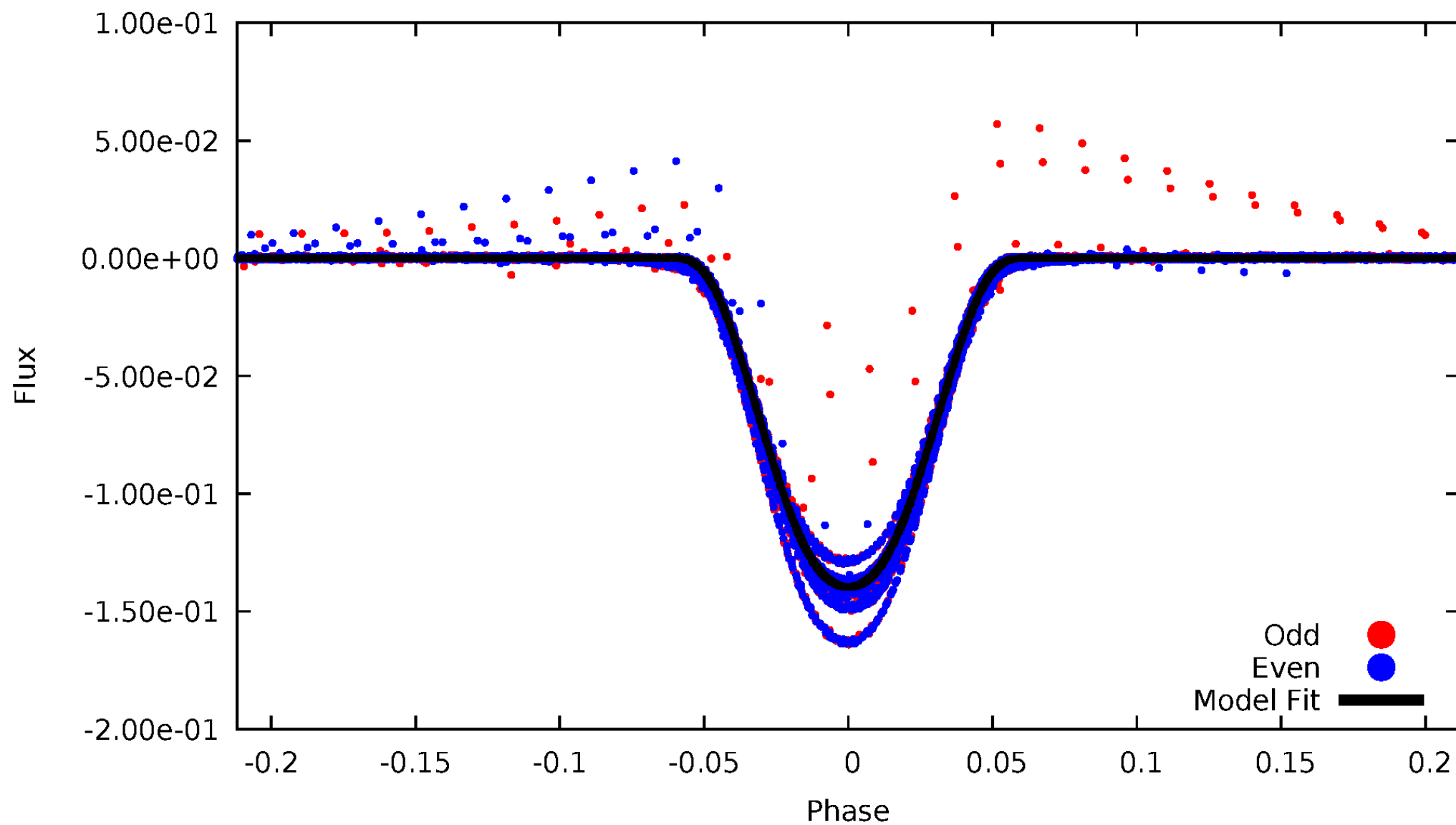


TCE 009007918-01



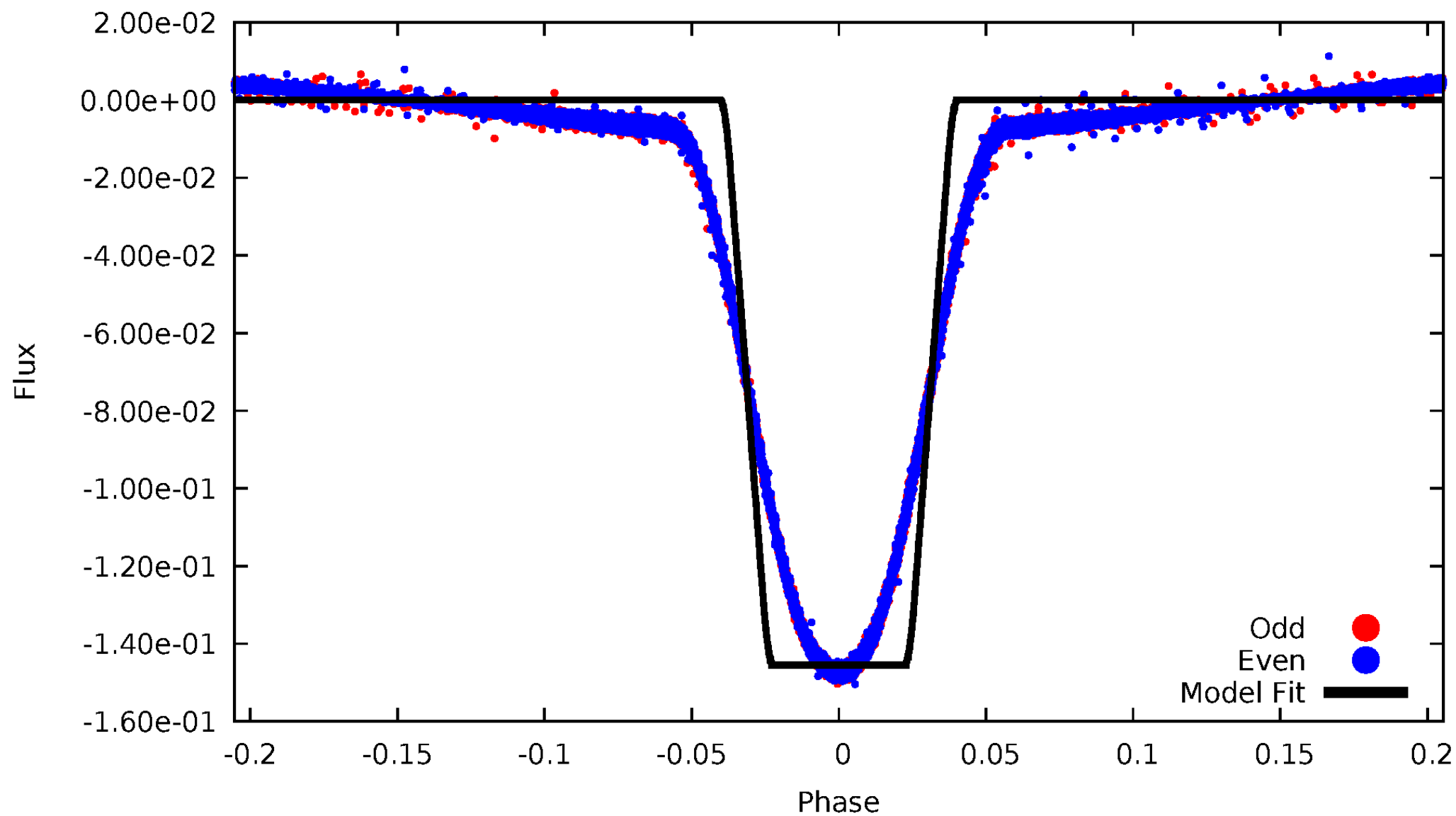
DV Odd/Even

TCE 009007918-01



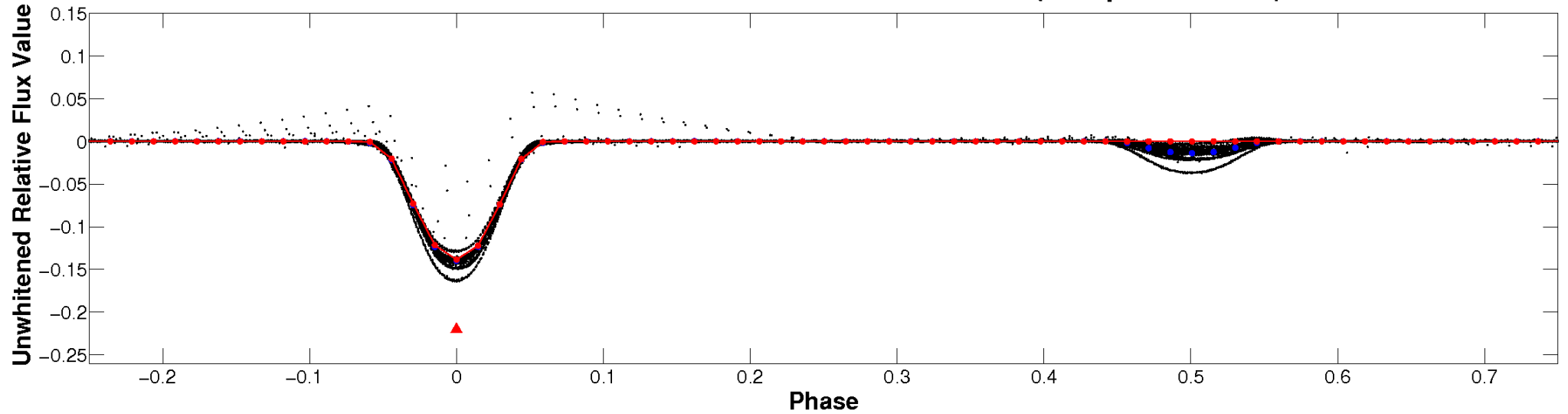
ALT Odd/Even

TCE 009007918-01

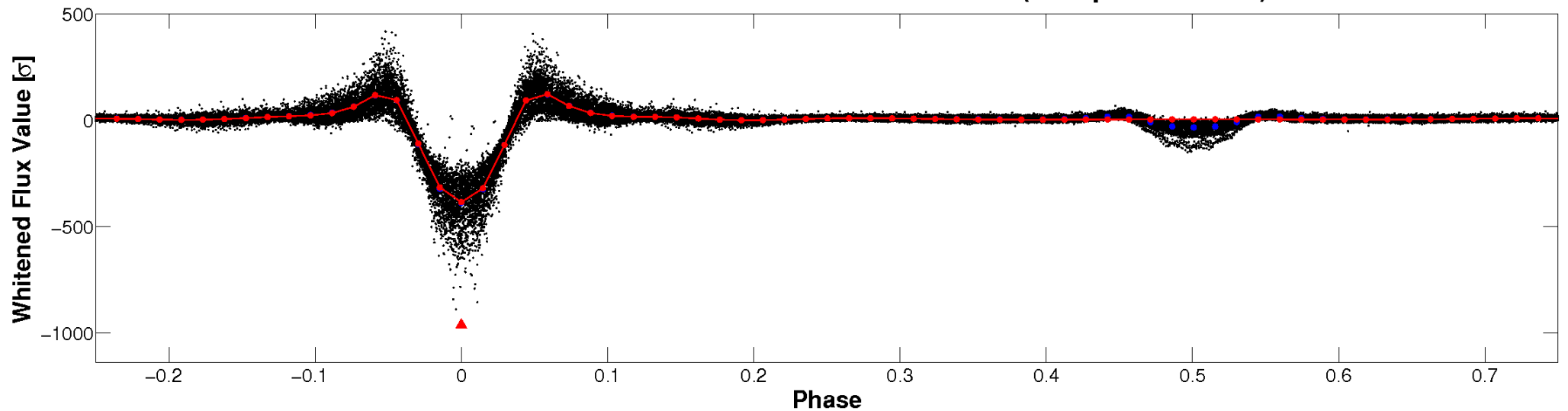


Non-Whitened Vs. Whitened Light Curve

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

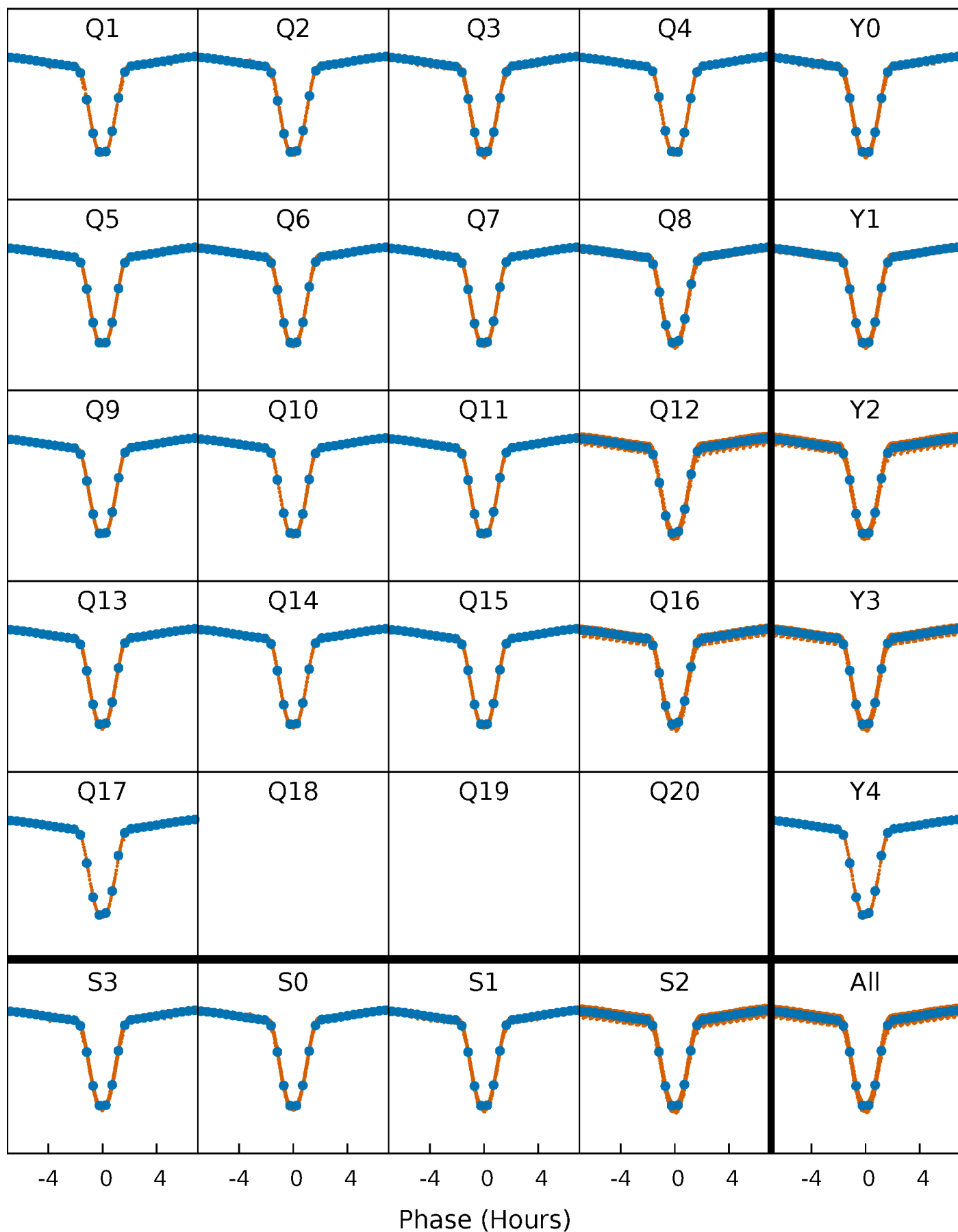


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



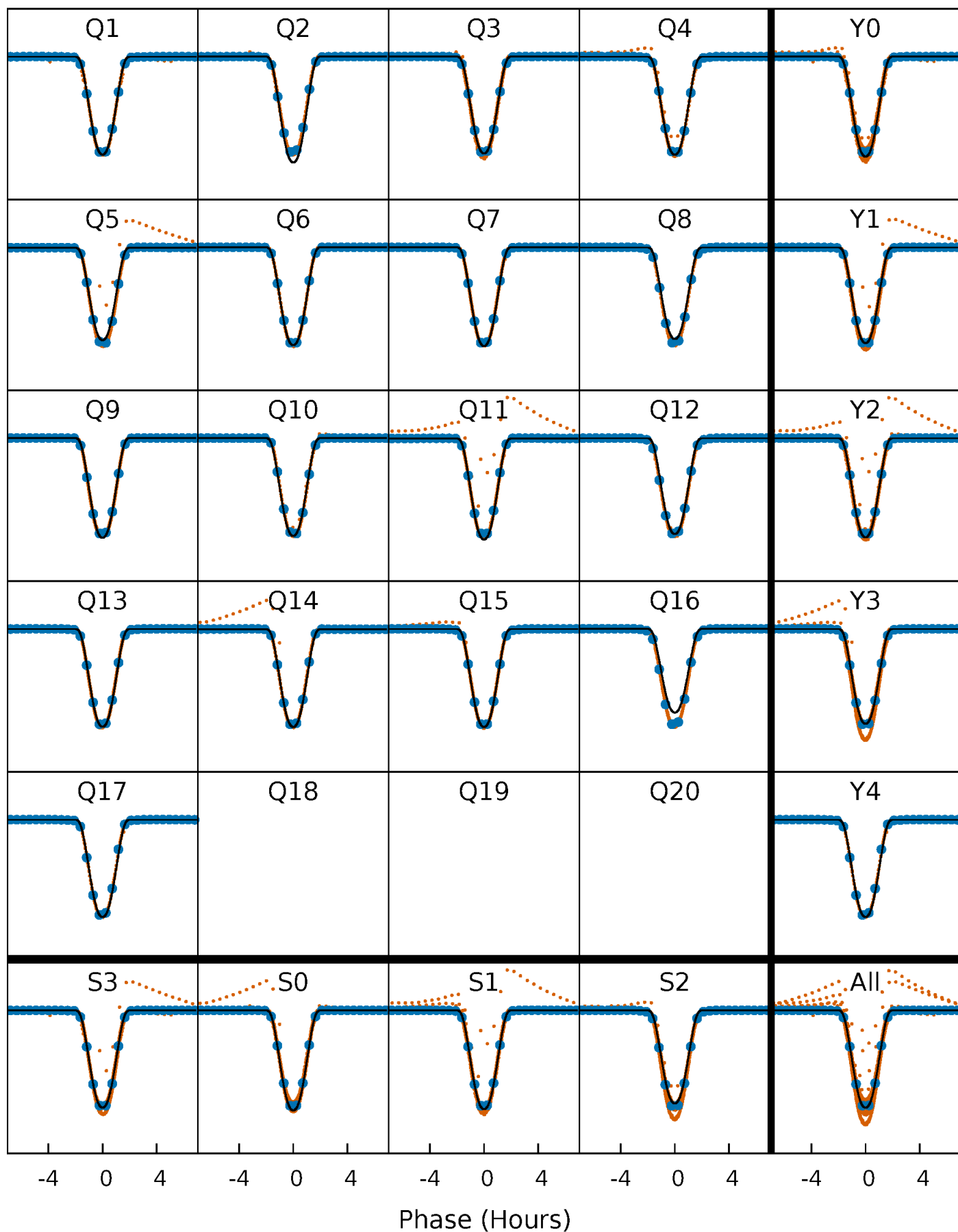
PDC Quarter-Phased Transit Curves

TCE 009007918-01 P= 1.387207 Days $T_0=132.846863$ (BKJD)



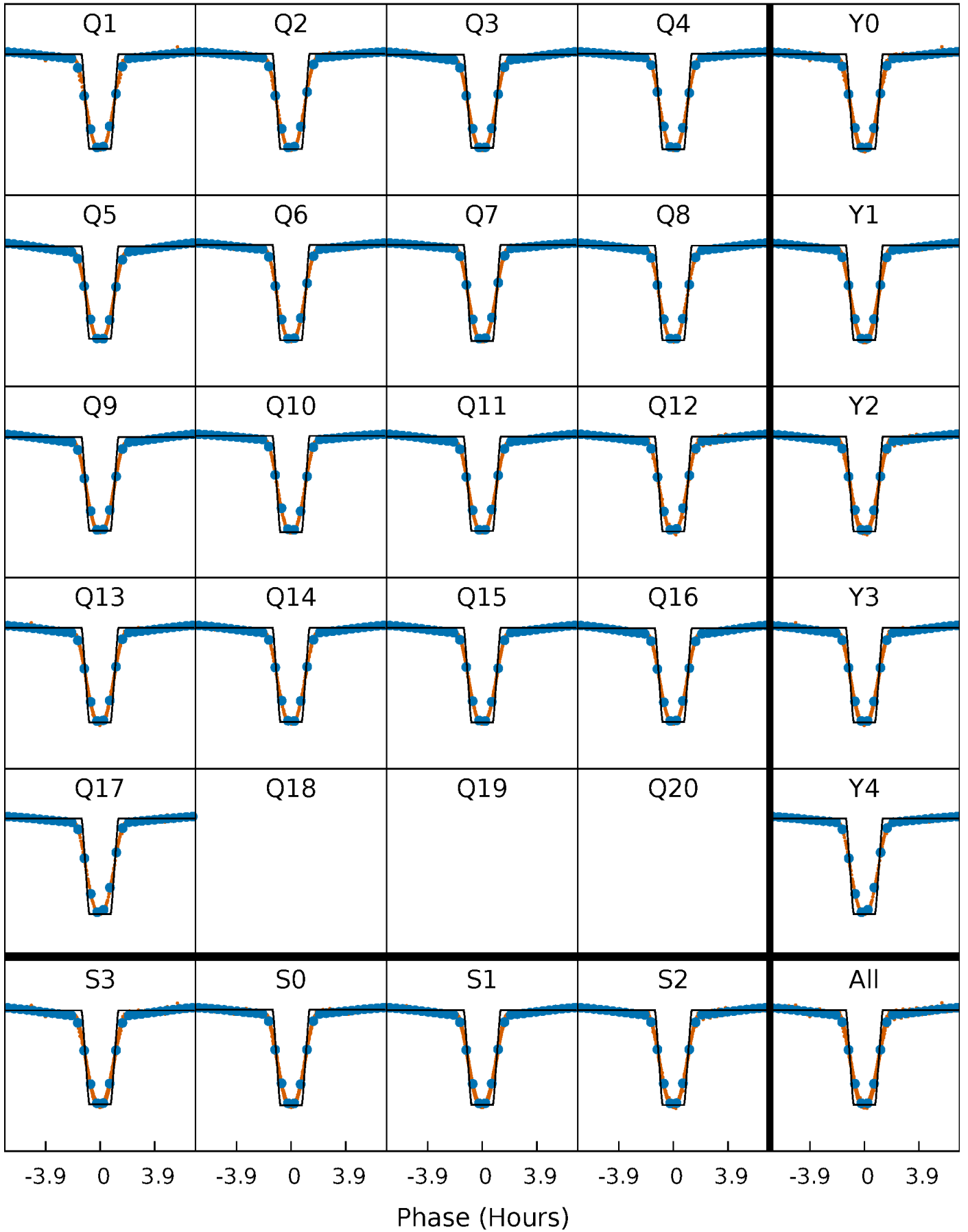
DV Quarter-Phased Transit Curves

TCE 009007918-01 P= 1.387207 Days $T_0=132.846863$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

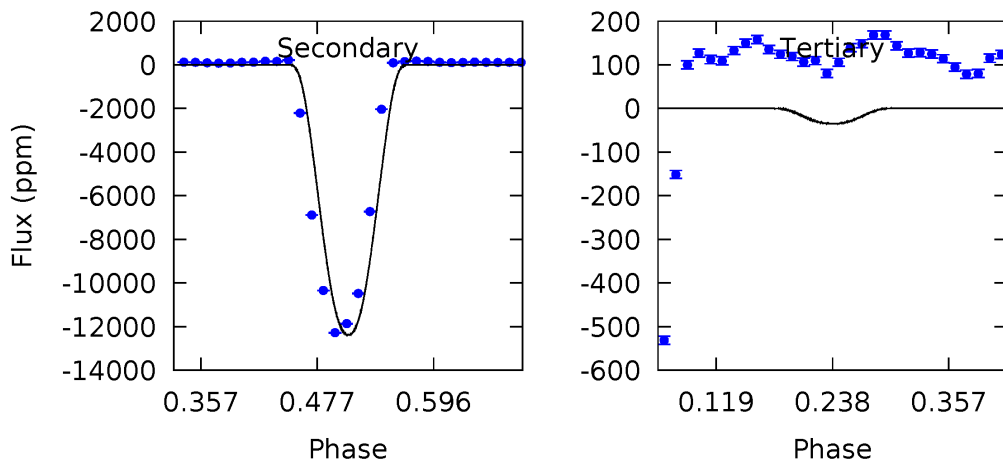
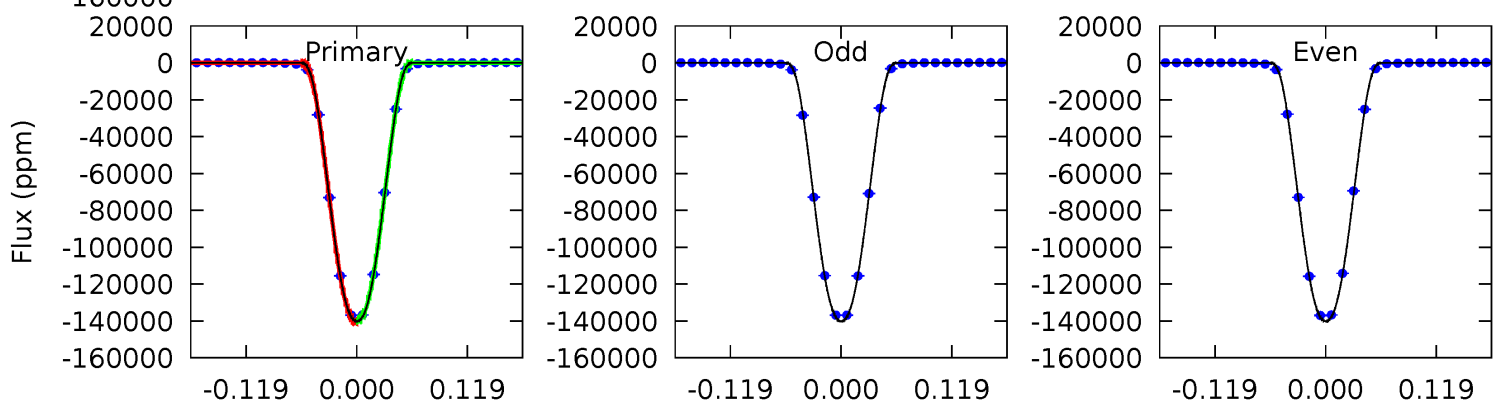
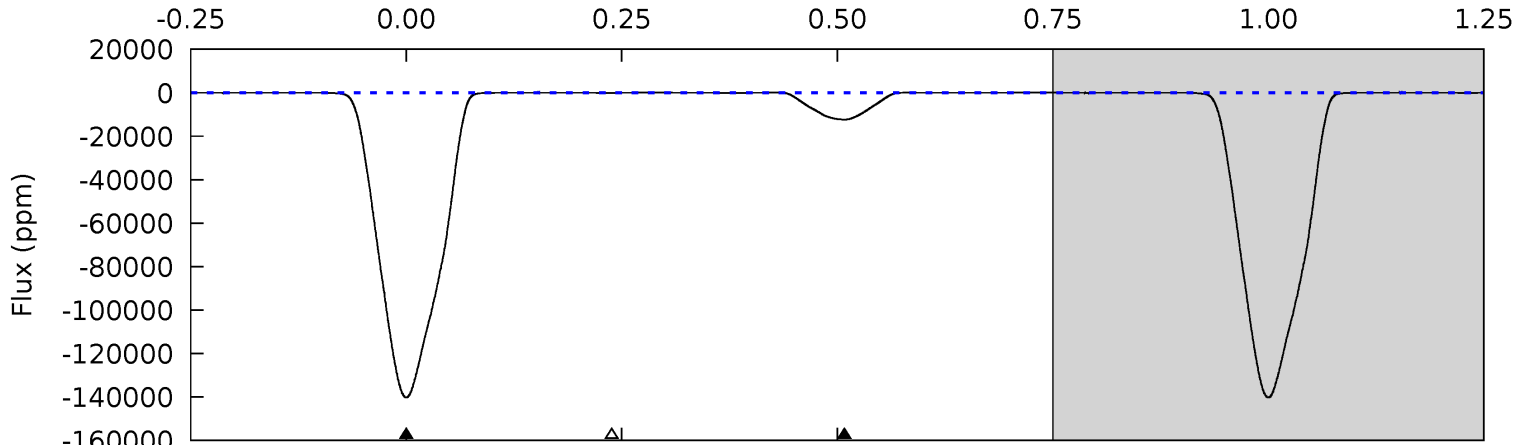
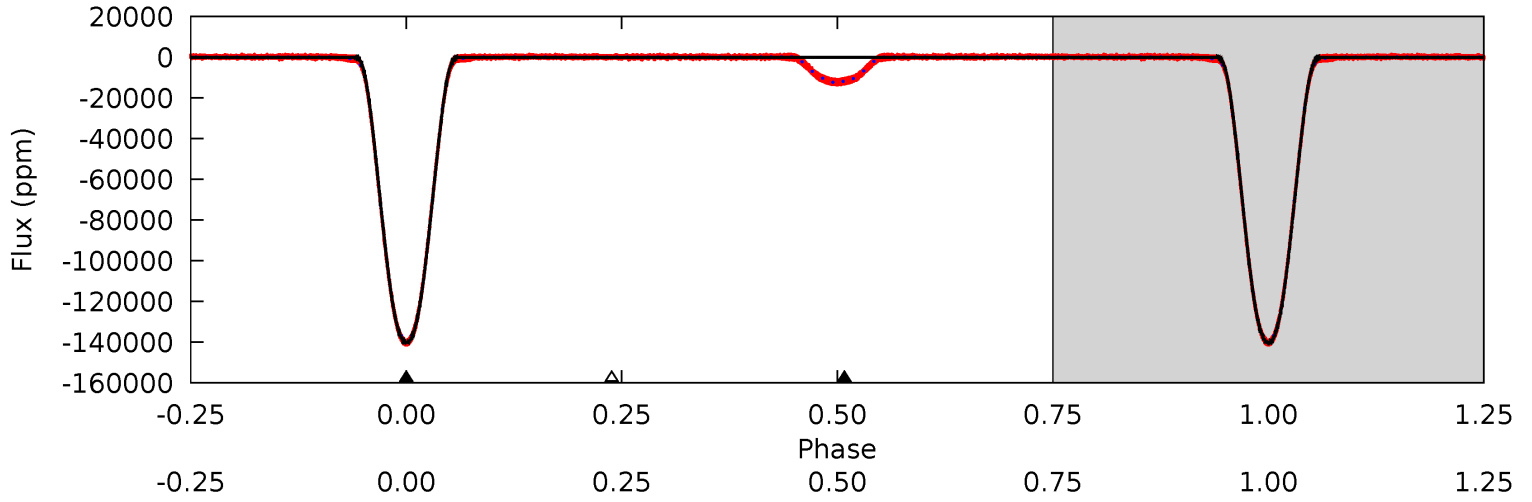
TCE 009007918-01 P= 1.387206 Days $T_0=132.847131$ (BKJD)



DV Model-Shift Uniqueness Test

009007918-01, P = 1.387207 Days, E = 131.459656 Days

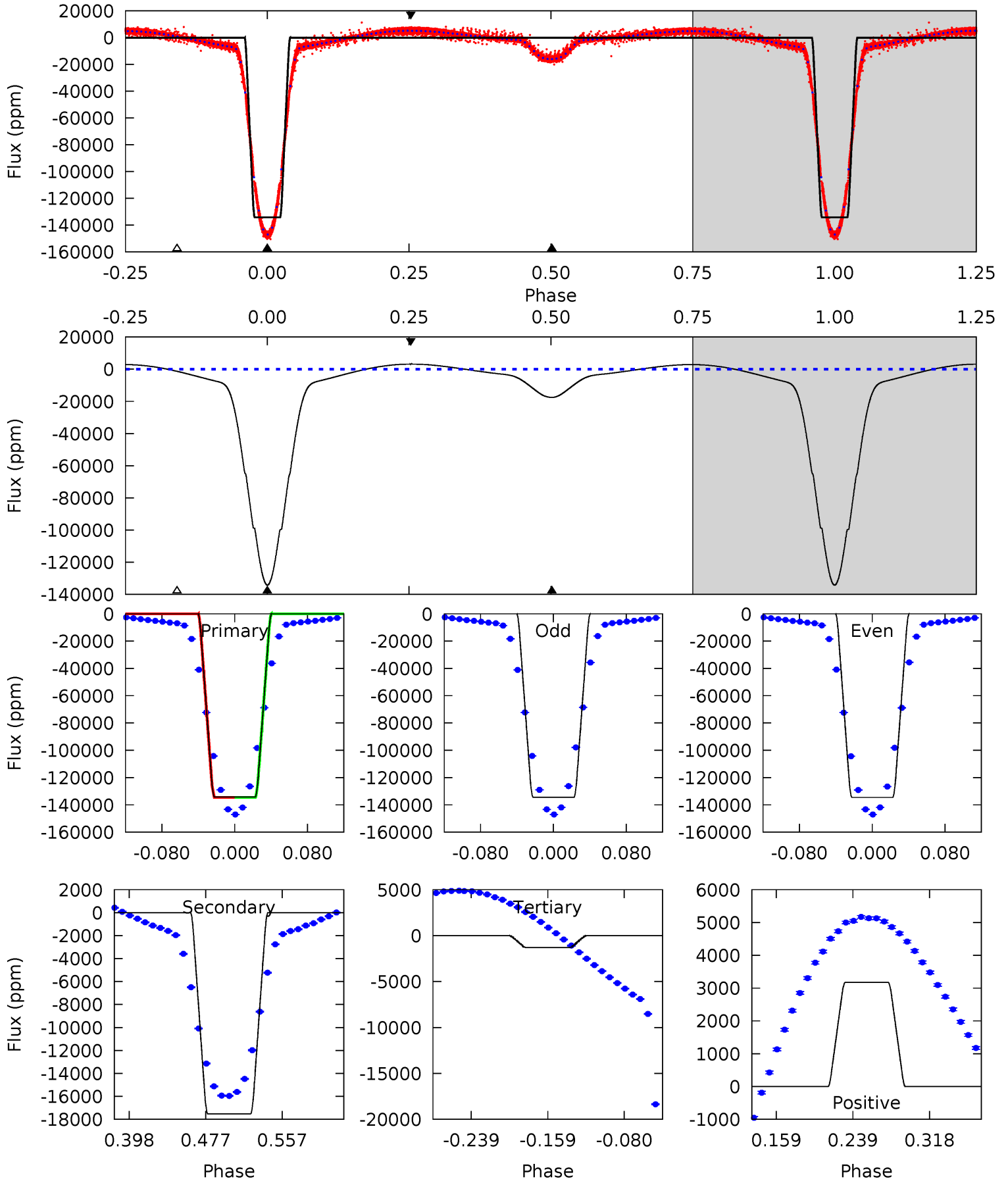
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29879	2640	7.48	0	4.53	1.56	5.92	29872	29879	2632	2640	1.97	1.01	0.00	79.9



Alt Model-Shift Uniqueness Test

009007918-01, P = 1.387206 Days, E = 131.459925 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2650	346.0	25.8	62.7	4.61	1.75	60.5	2624	2587	320.2	283.3	0.32	1.00	0.02	0.77



Stellar Parameters For KIC 009007918

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7207^{+201}_{-277}	$4.060^{+0.198}_{-0.162}$	$-0.160^{+0.250}_{-0.350}$	$1.894^{+0.576}_{-0.471}$	$1.499^{+0.221}_{-0.265}$	$0.311^{+0.349}_{-0.155}$
	+3%/-4%	+5%/-4%	+156%/-219%	+30%/-25%	+15%/-18%	+112%/-50%
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 009007918-01 / KOI 7122.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12388 ± 5	$75.79^{+12.70}_{-10.05}$	3644^{+273}_{-251}	3897^{+114}_{-135}	$0.932^{+0.262}_{-0.239}$
Alt.	-17525 ± 51	$78.35^{+11.96}_{-10.04}$	3633^{+293}_{-256}	4185^{+113}_{-117}	$1.241^{+0.344}_{-0.281}$

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

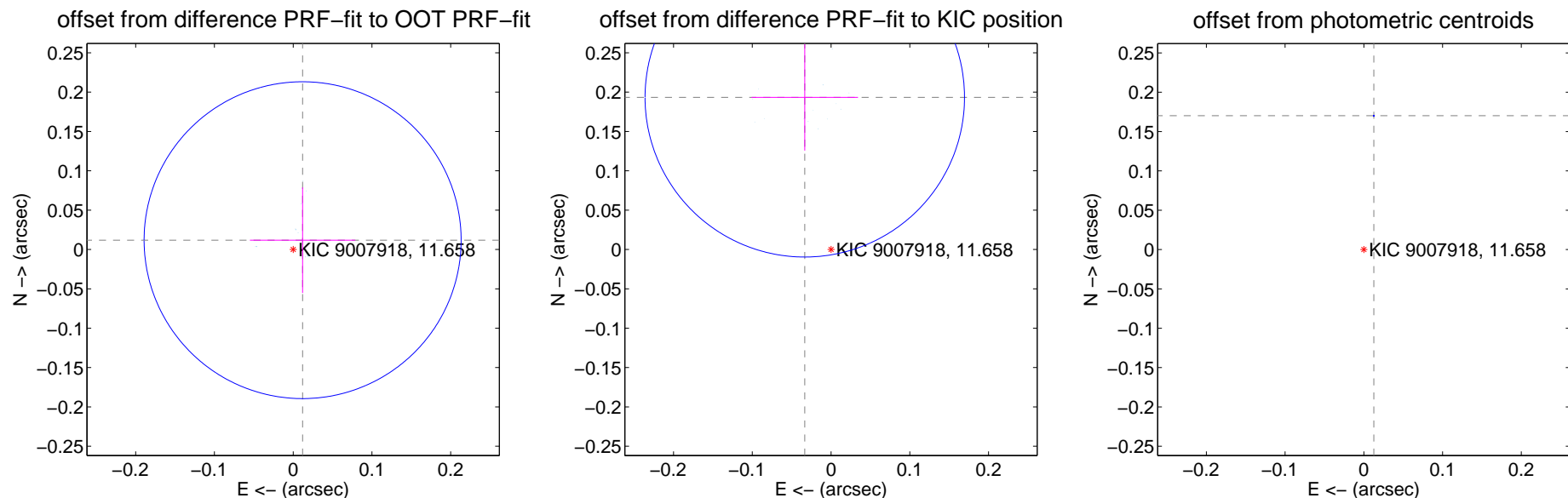
DV Centroid Data

Supplemental centroid analysis for 009007918-01. **Kepler magnitude: 11.66.** Transit SNR 13835.65

There are 17 quarters with good PRF difference image offsets

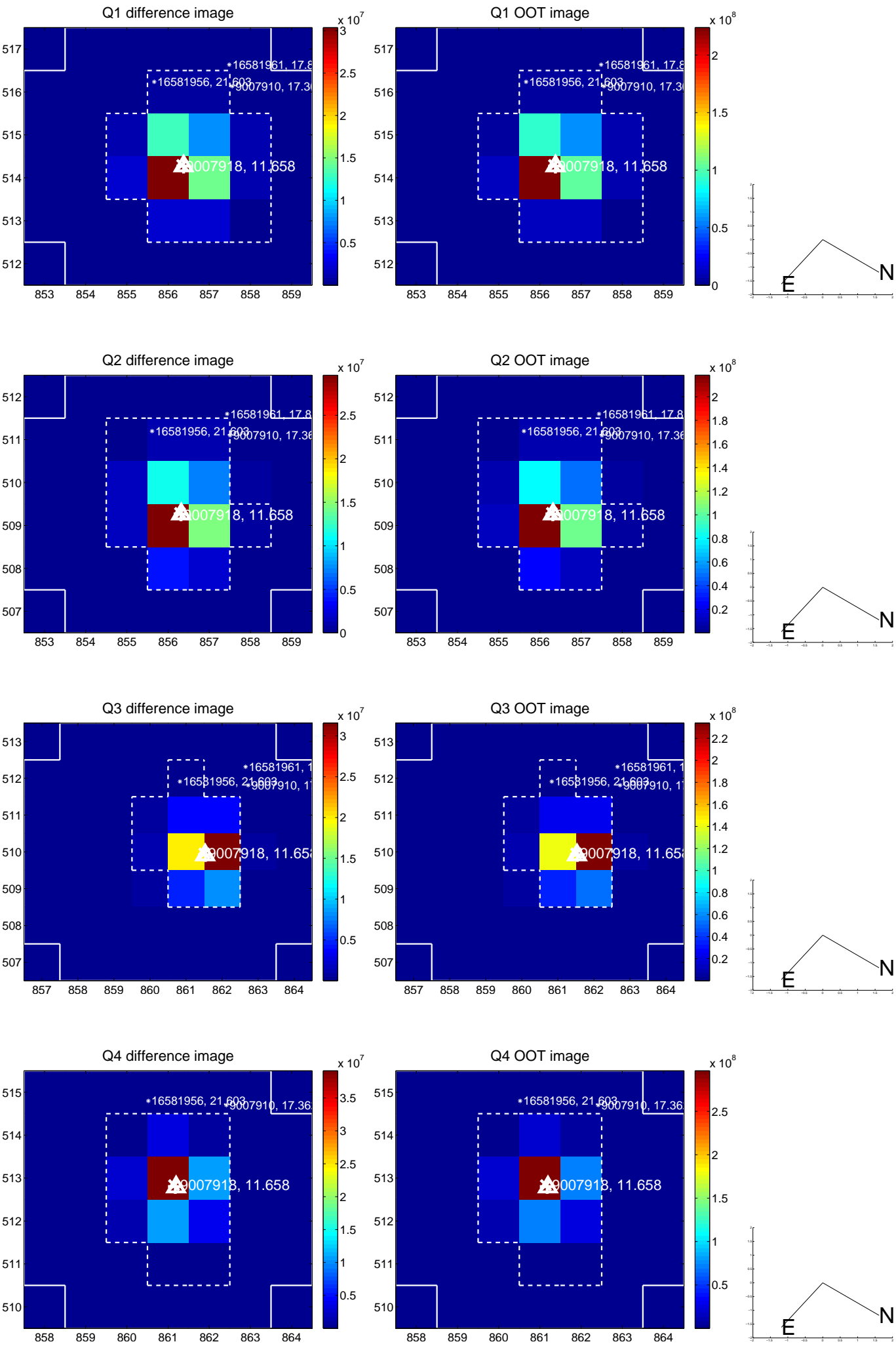
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.067	0.25	-0.012 ± 0.067	0.012 ± 0.067
PRF-fit source offset from KIC position	0.196 ± 0.068	2.90	0.033 ± 0.068	0.193 ± 0.068
photometric centroid source offset	0.17 ± 0.00	1046.83	-0.01 ± 0.00	0.17 ± 0.00

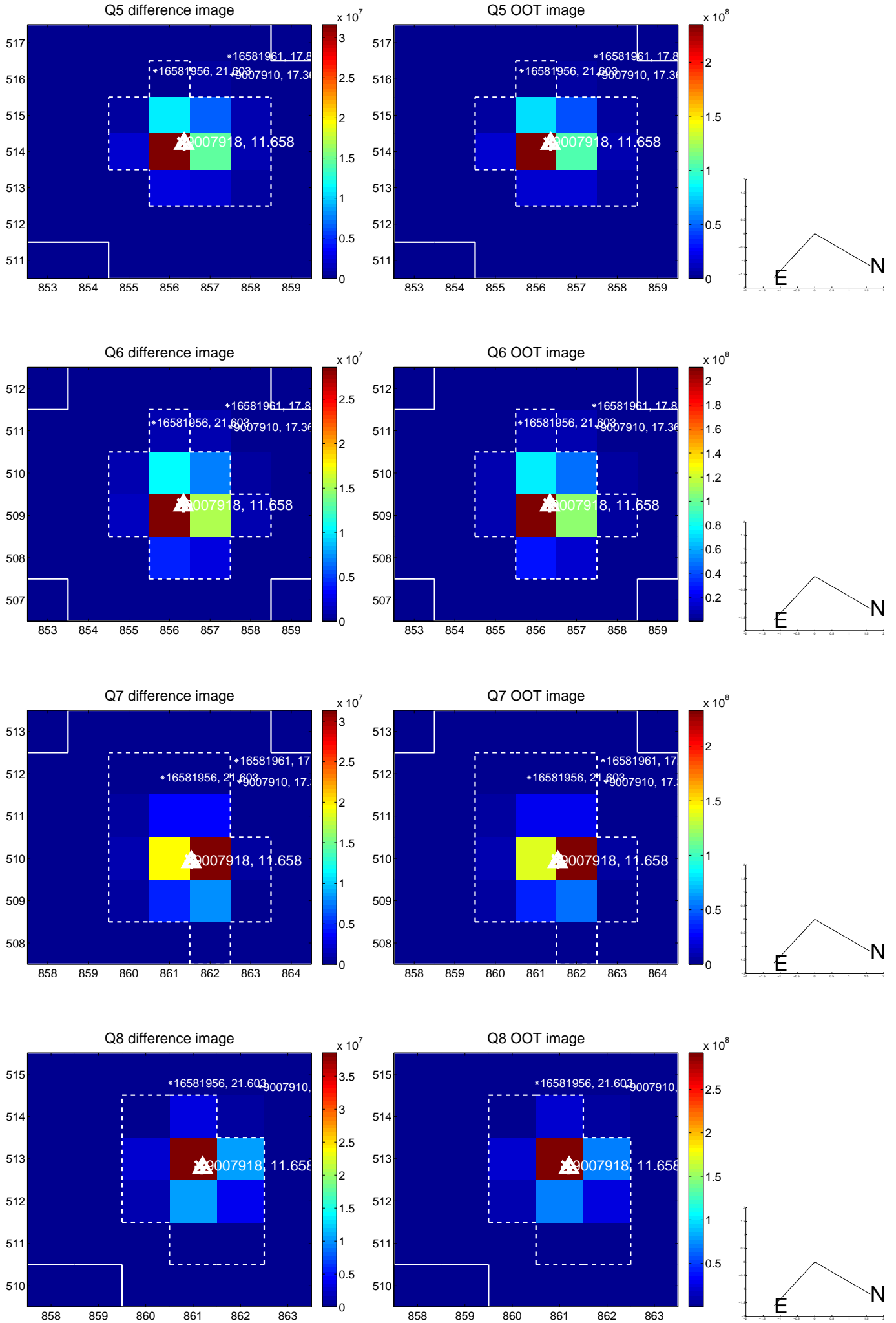


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

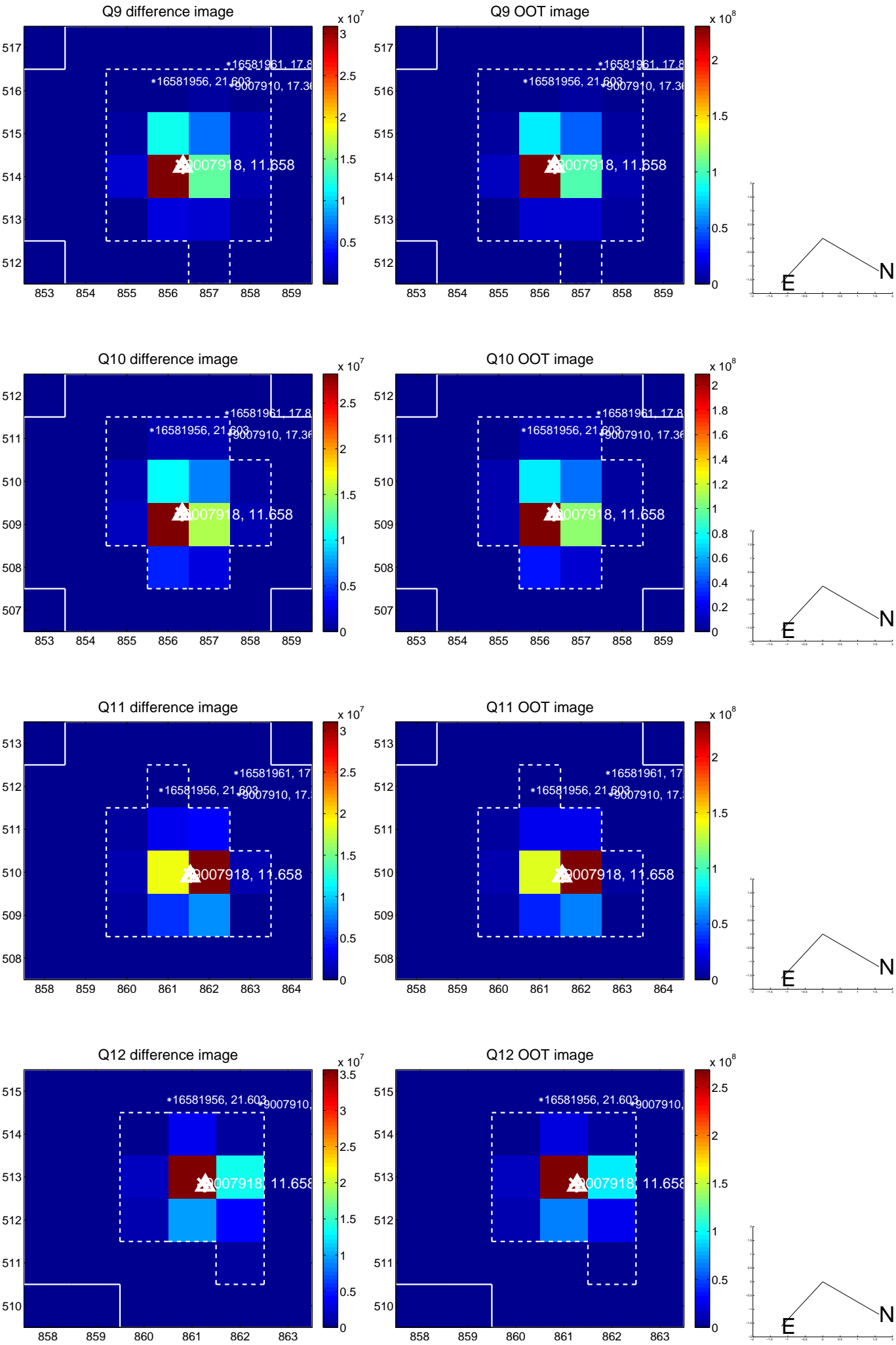
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



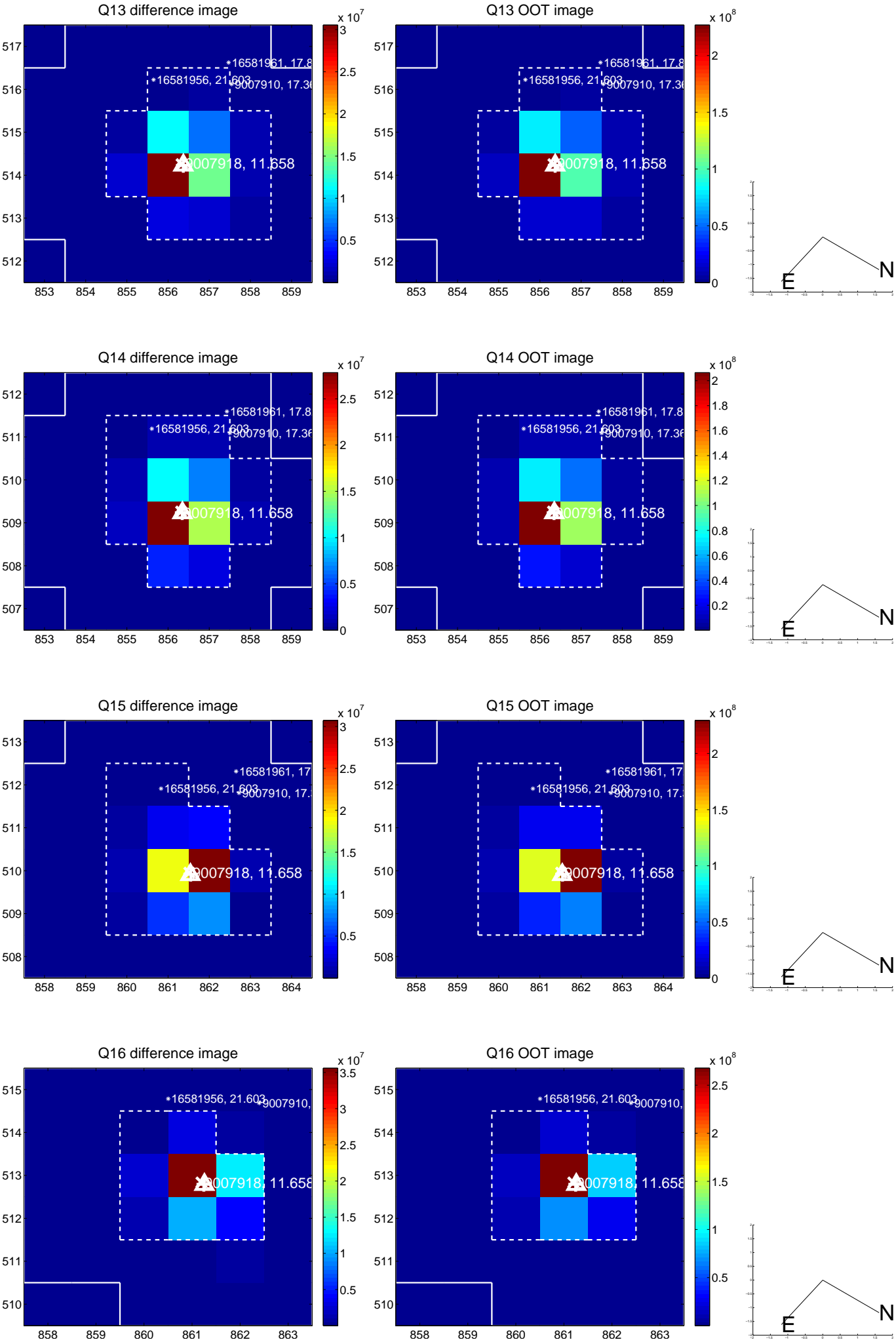
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



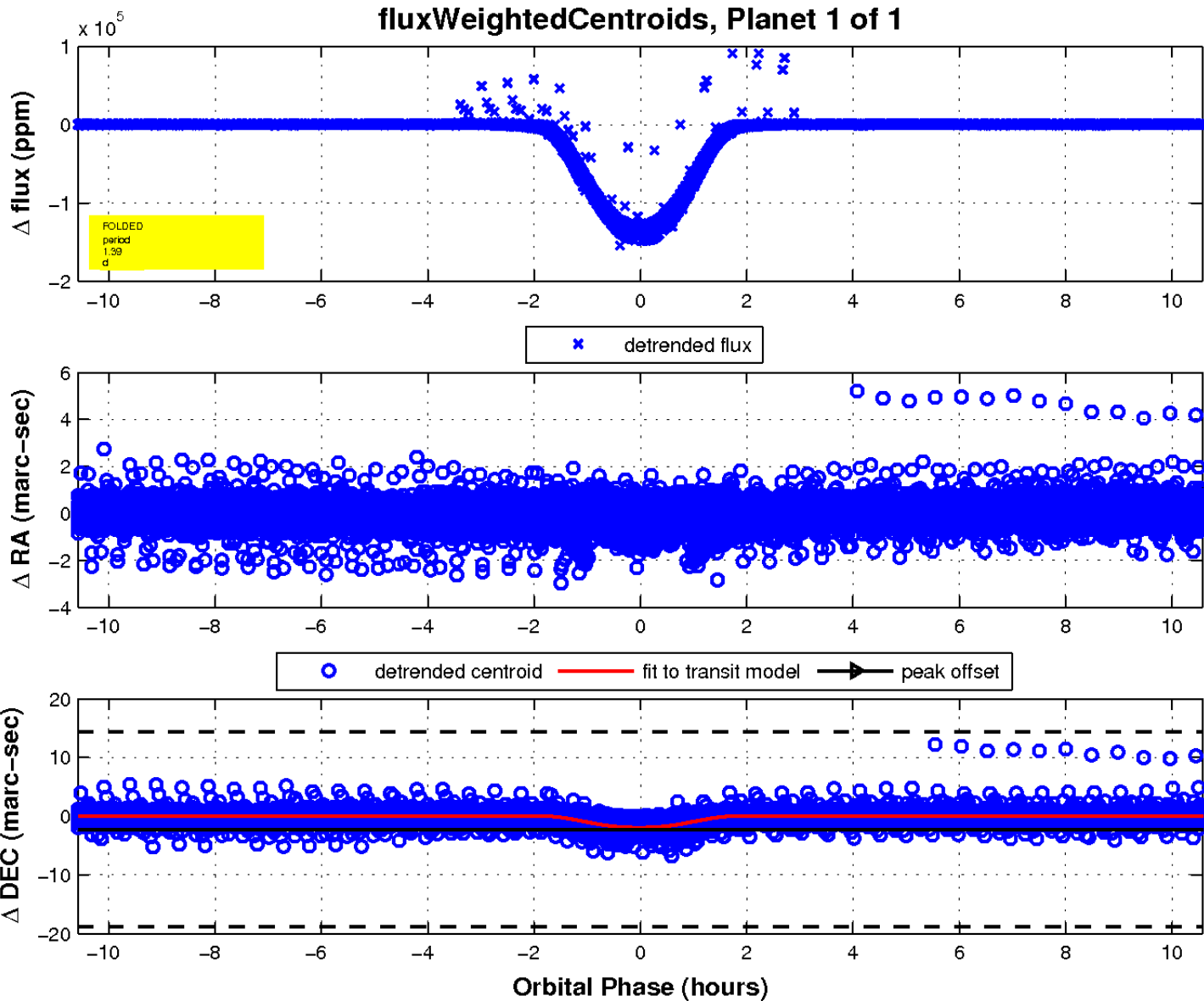
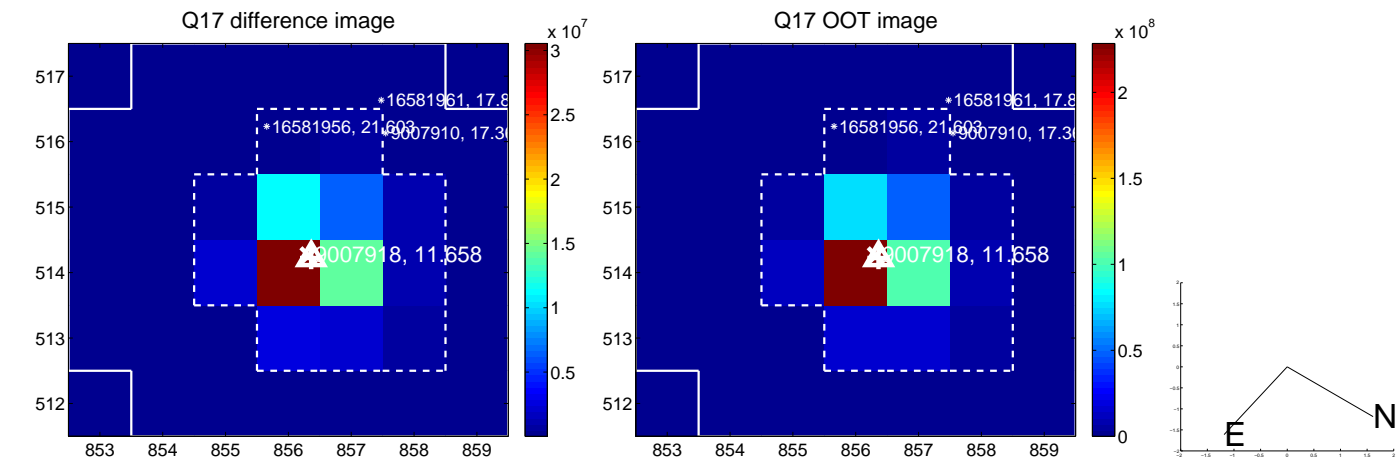
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

