

# KIC 011298298

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011298298-01	OBS	1802.01	5.248670	135.516671	605.7	2.104	94.7	98.9	1.01	5807	3.08	294.28

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011298298-01	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.

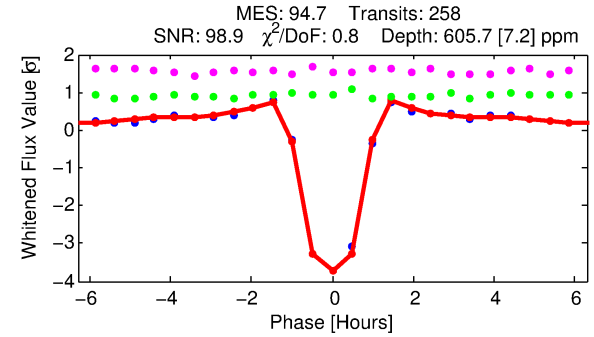
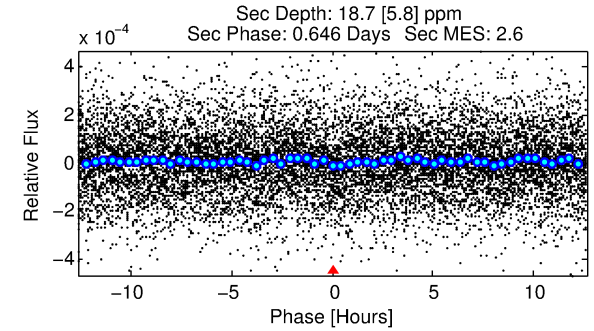
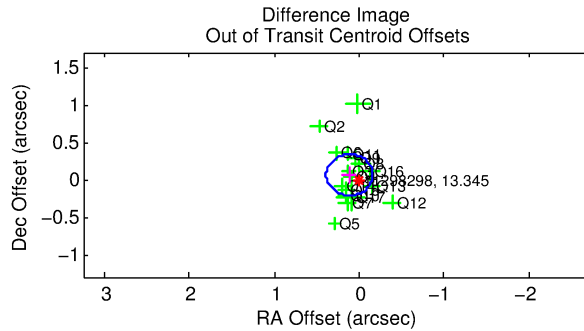
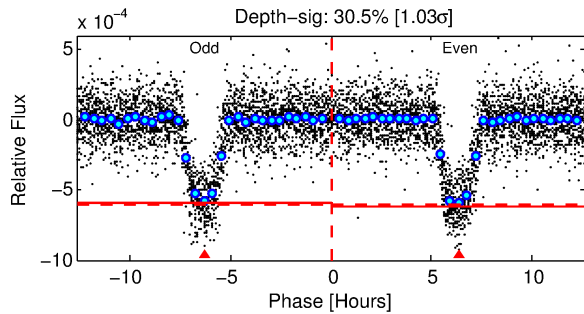
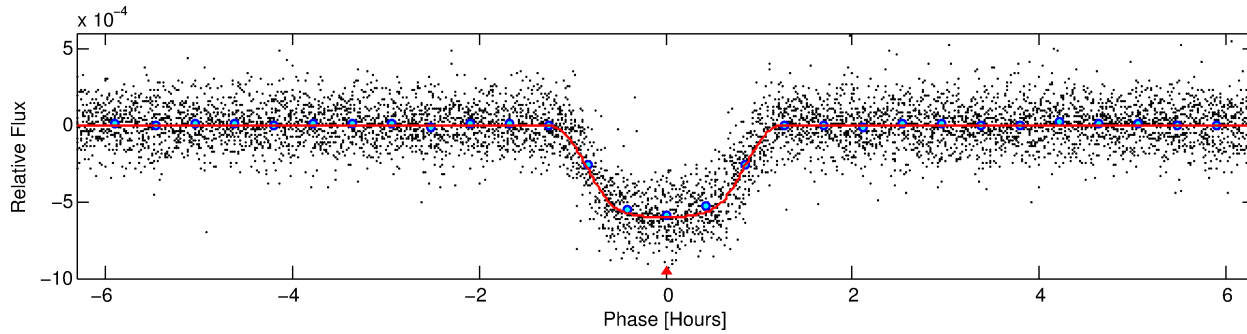
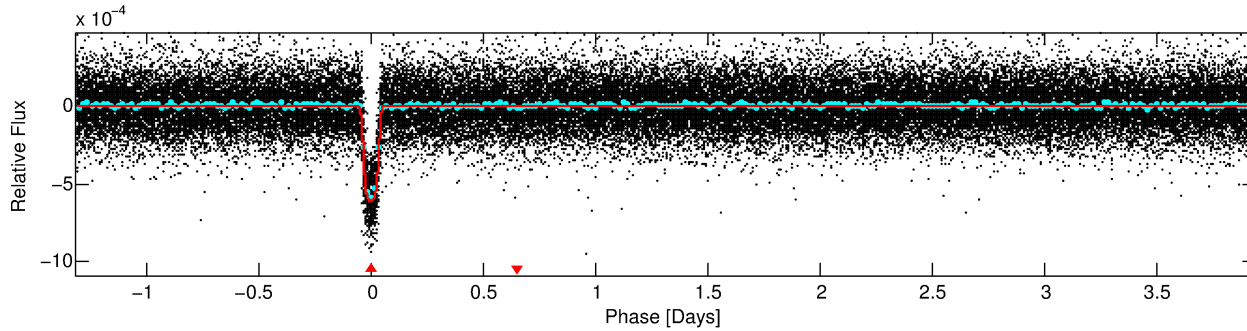
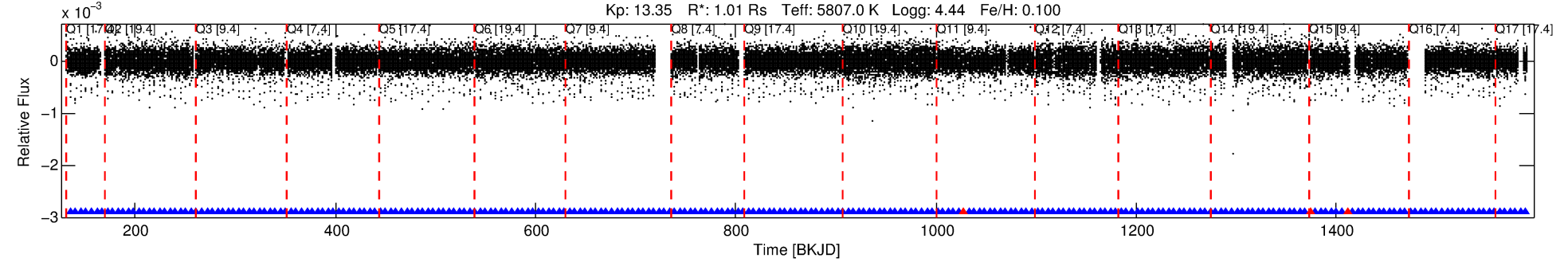
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011298298-01

No Significant Match Found

# DV One-Page Summary

KIC: 11298298 Candidate: 1 of 1 Period: 5.249 d  
KOI: K01802.01 Corr: 0.935



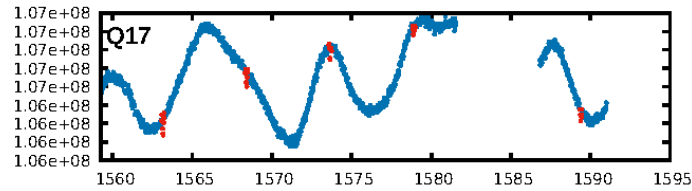
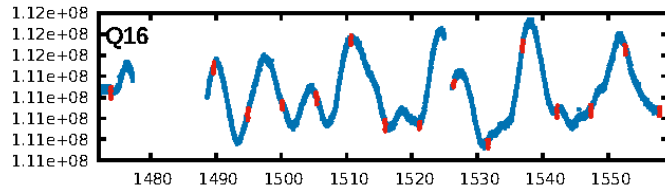
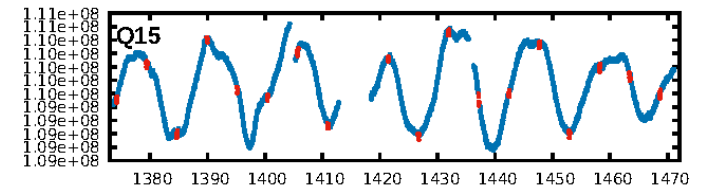
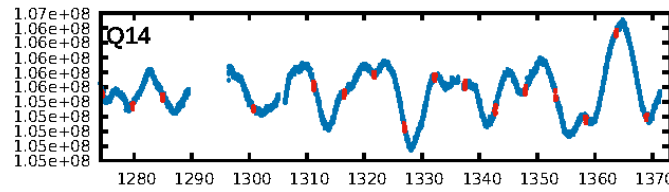
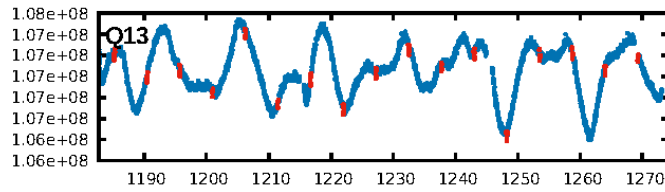
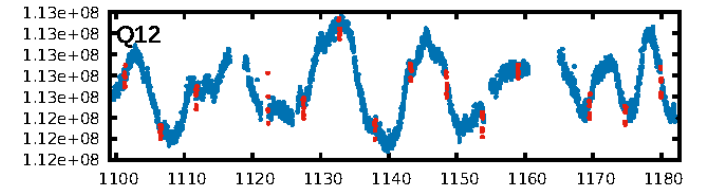
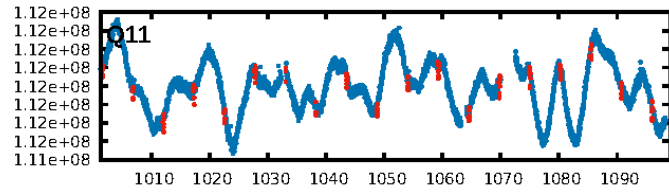
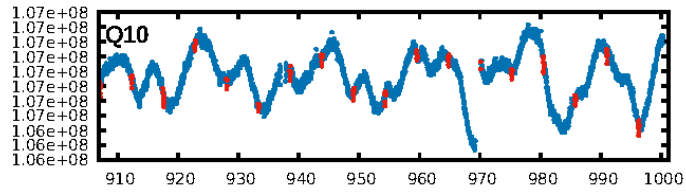
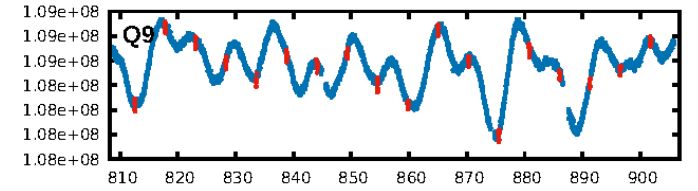
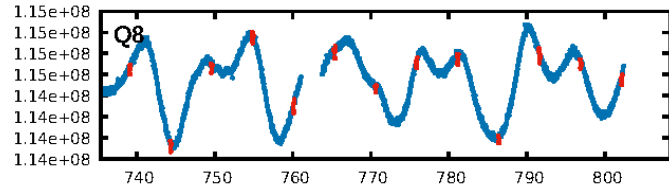
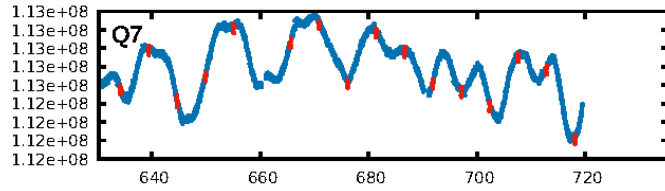
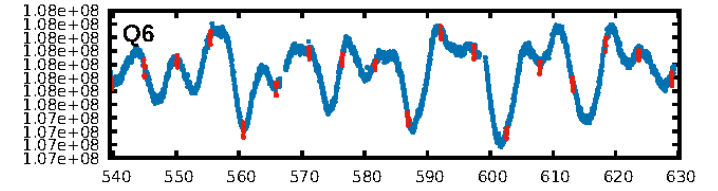
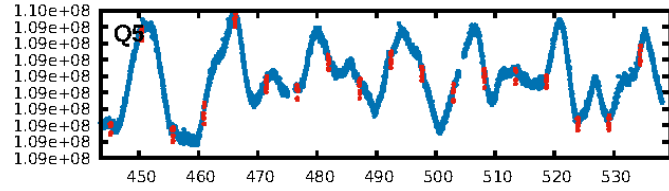
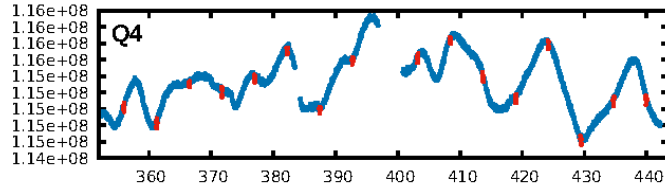
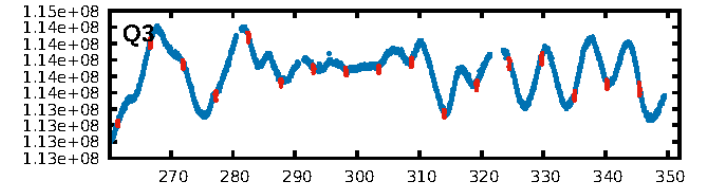
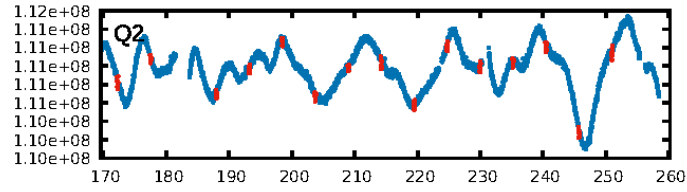
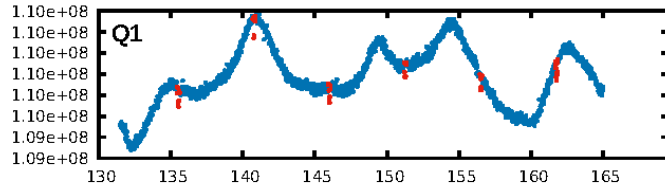
## DV Fit Results:

Period = 5.24867 [0.00000] d  
Epoch = 135.5167 [0.0004] BKJD  
Rp/R\* = 0.0279 [0.0006]  
a/R\* = 8.34 [0.75]  
b = 0.93 [0.01]  
Seff = 294.28 [63.49]  
Teq = 1056 [57] K  
Rp = 3.08 [0.47] Re  
a = 0.0595 [0.0081] AU  
Ag = 3.84 [1.45] [1.96 $\sigma$ ]  
Teffp = 2285 [182] K [6.43 $\sigma$ ]

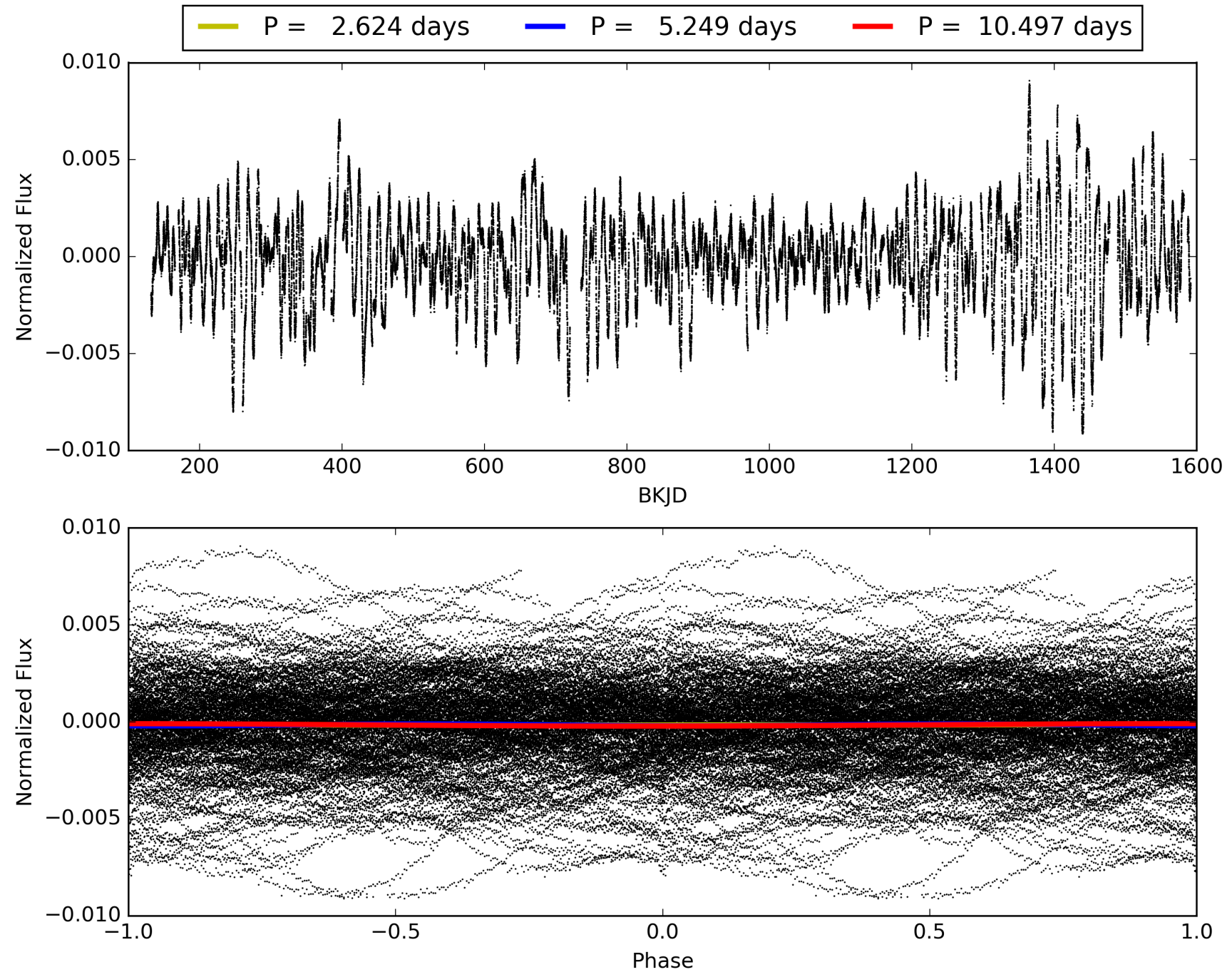
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [244/247]  
GhostDiagnostic-chr: 3.498  
Centroid-sig: 17.5%  
Centroid-so: 0.101 arcsec [1.08 $\sigma$ ]  
OotOffset-rm: 0.129 arcsec [1.41 $\sigma$ ]  
KicOffset-rm: 0.083 arcsec [0.97 $\sigma$ ]  
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 011298298-01, PDC Light Curves

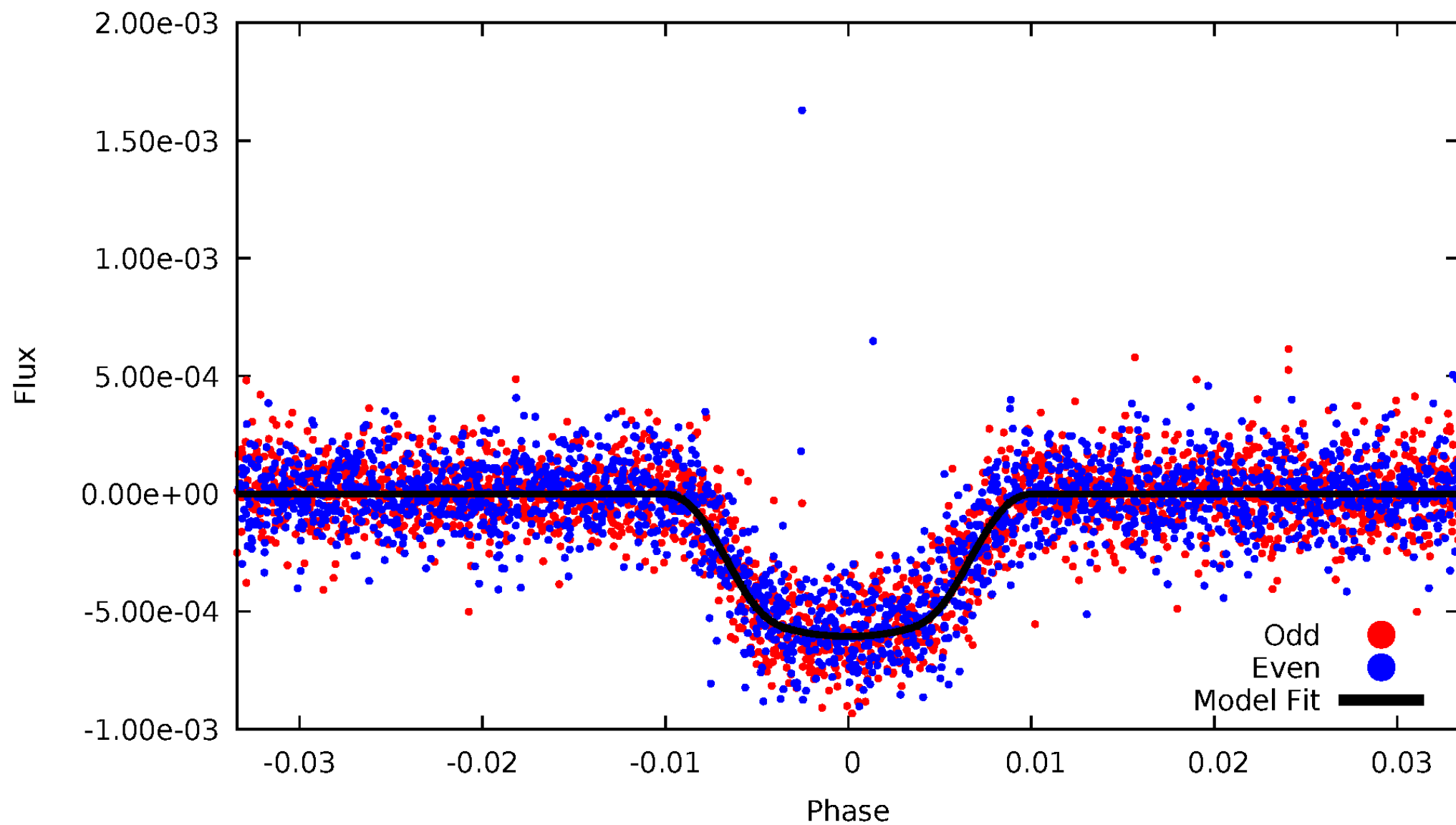


# TCE 011298298-01



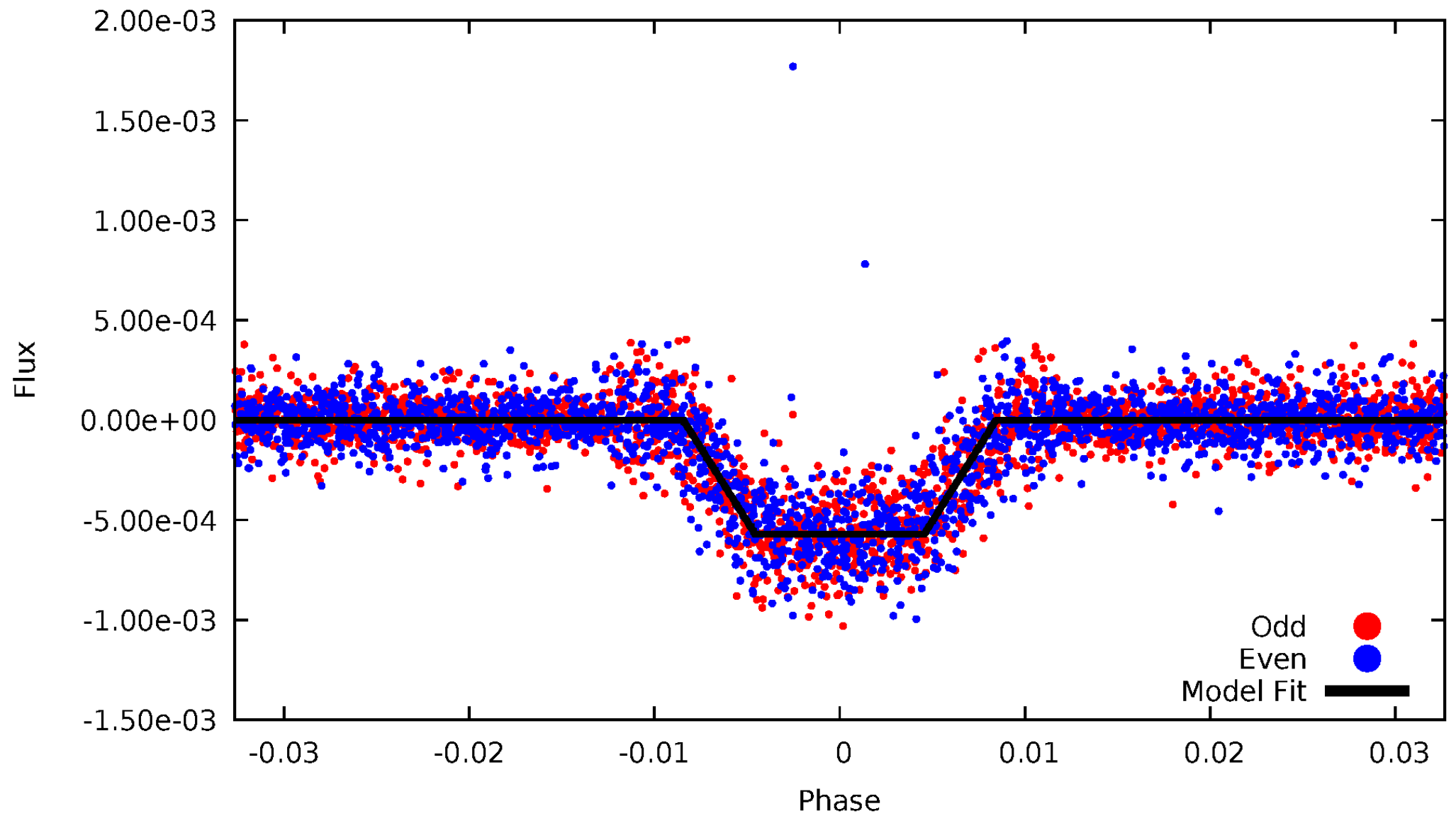
# DV Odd/Even

TCE 011298298-01



# ALT Odd/Even

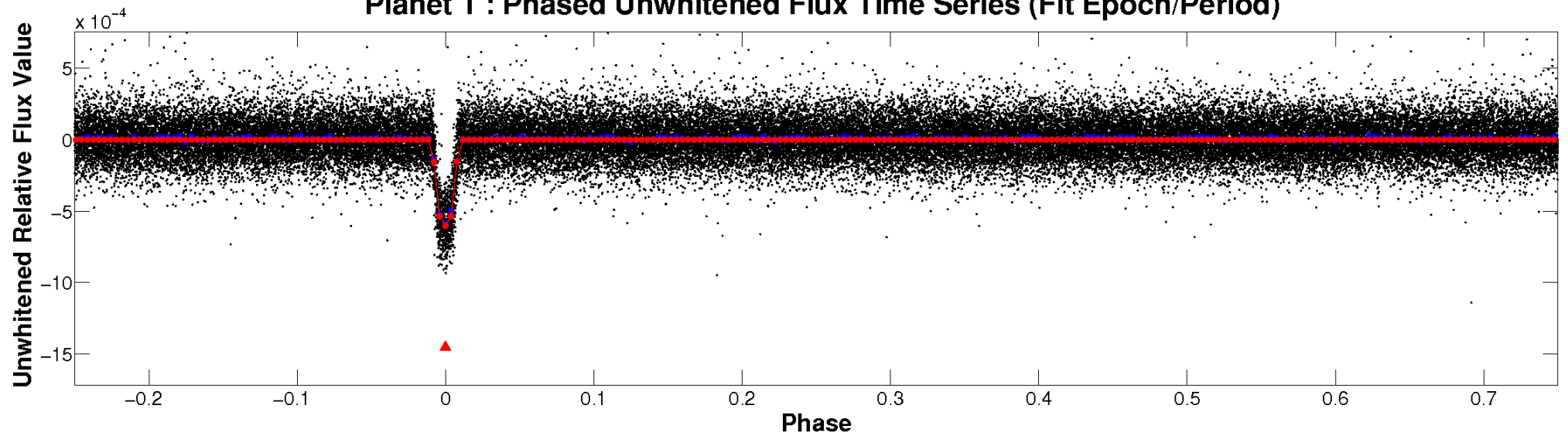
TCE 011298298-01



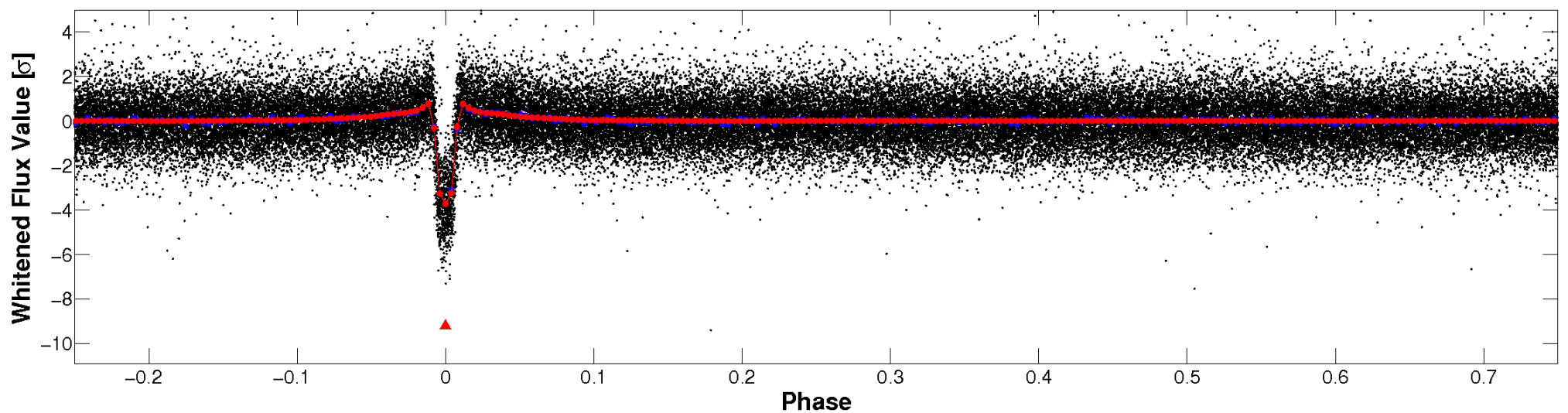


# Non-Whitened Vs. Whitened Light Curve

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

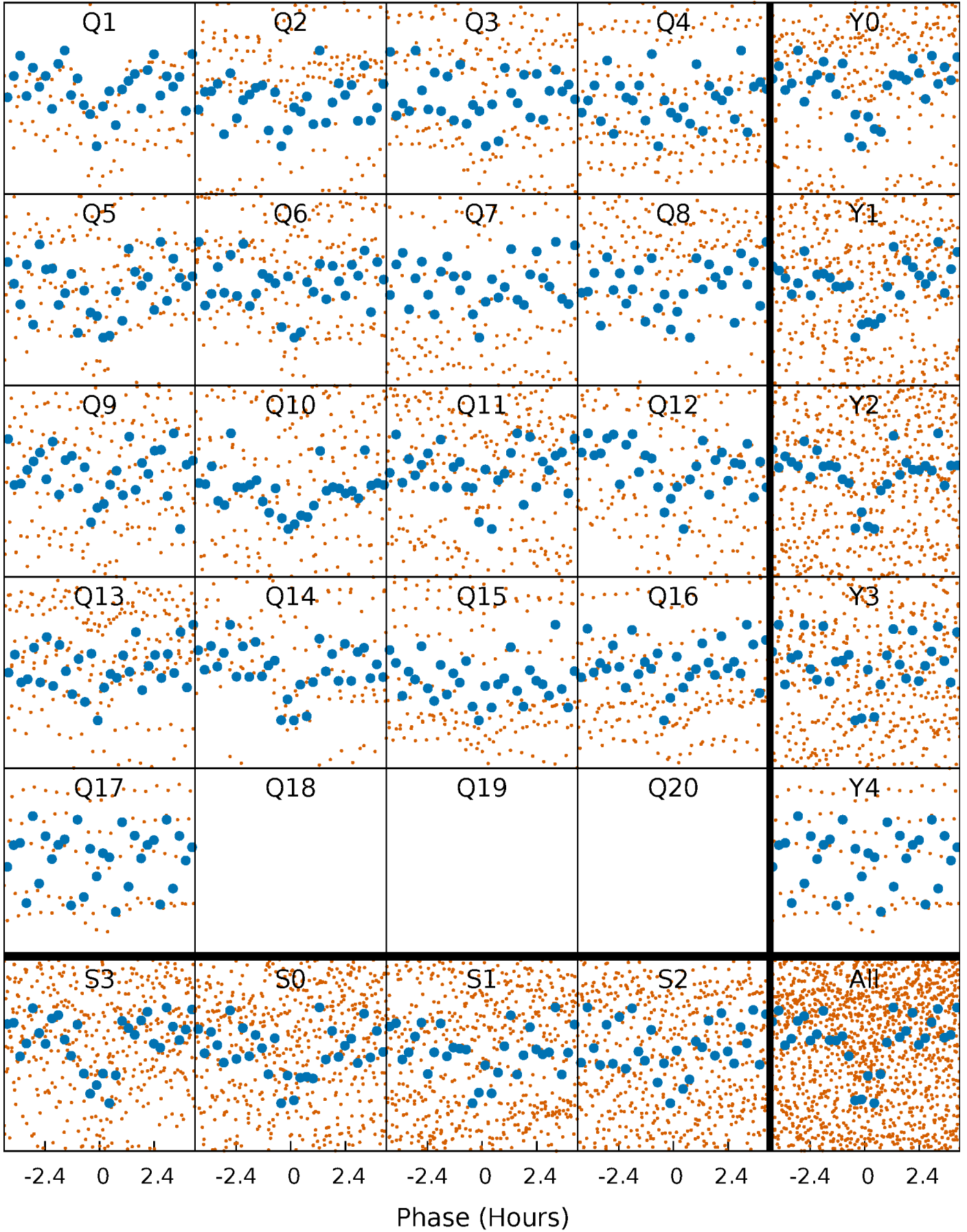


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

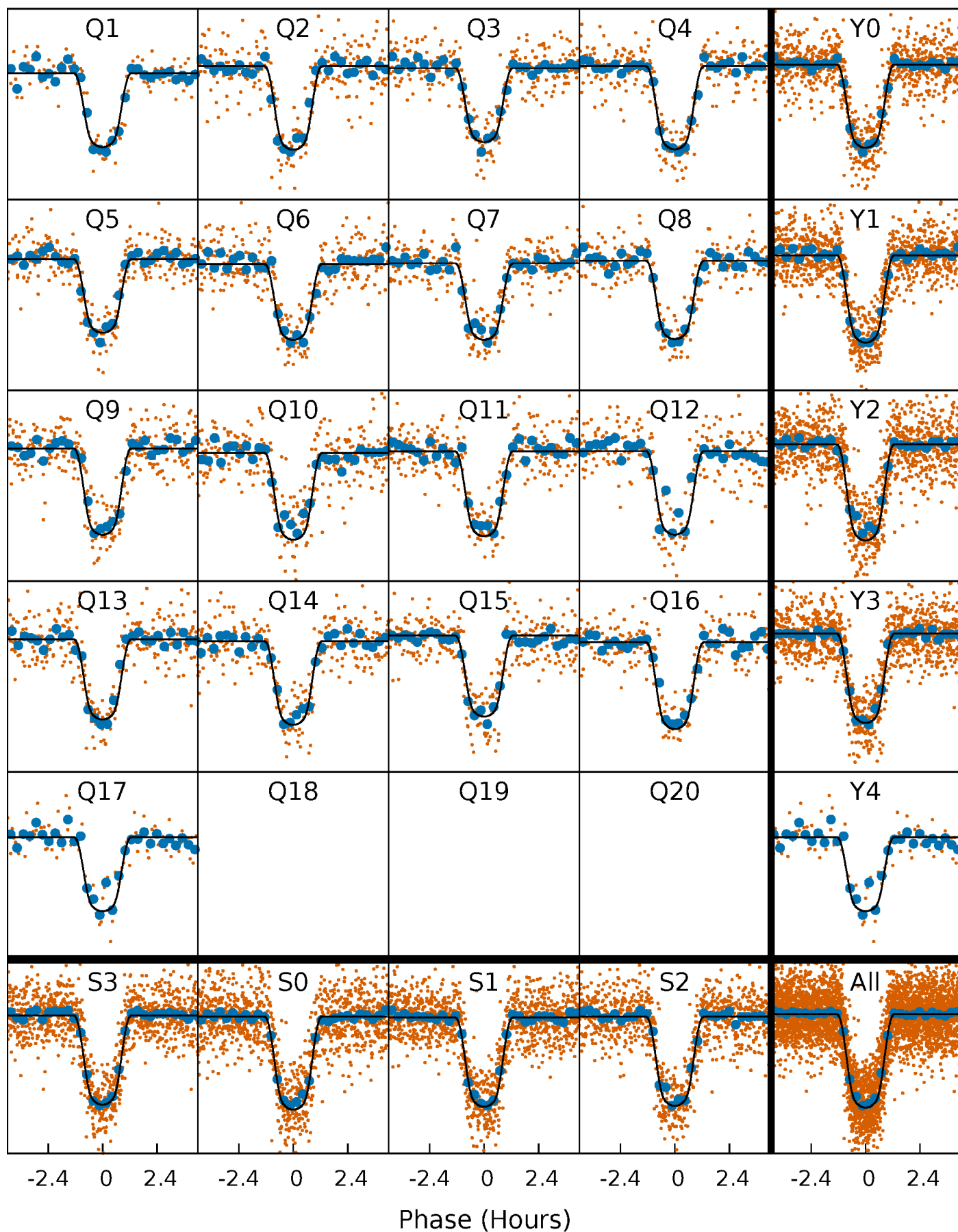
TCE 011298298-01   P= 5.248670 Days    $T_0=135.516671$  (BKJD)





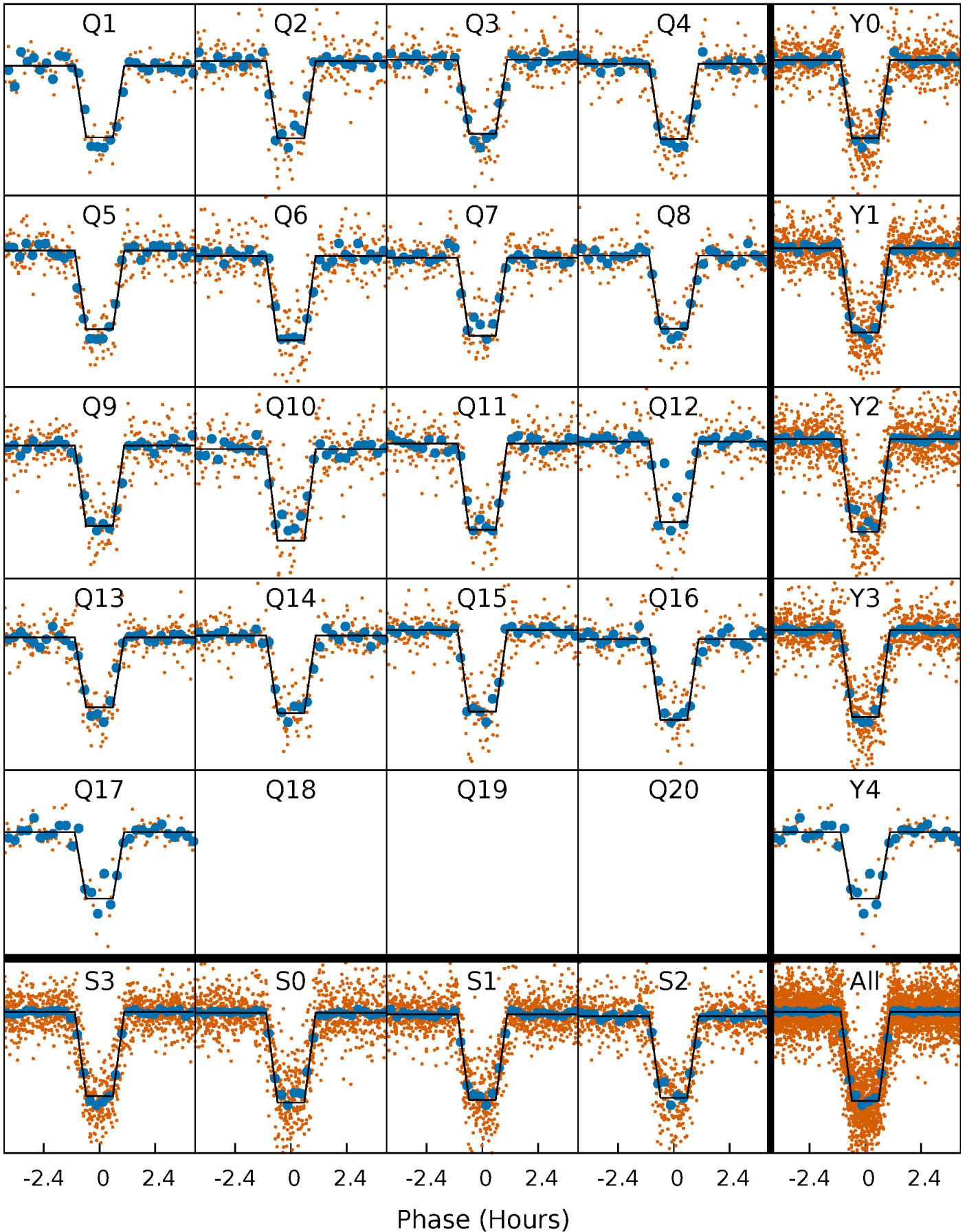
# DV Quarter-Phased Transit Curves

TCE 011298298-01 P= 5.248670 Days  $T_0=135.516671$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

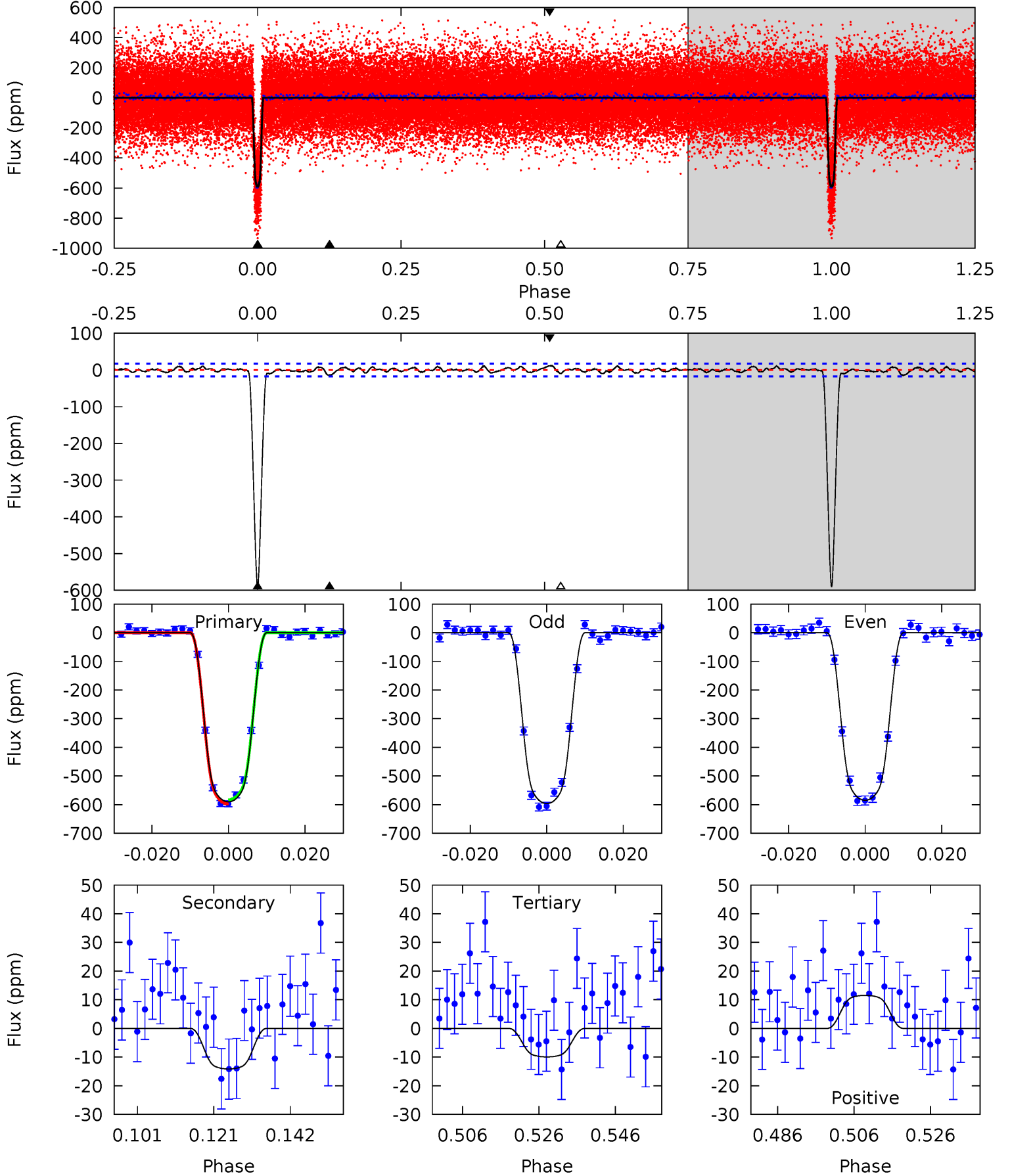
TCE 011298298-01 P= 5.248668 Days  $T_0=135.517002$  (BKJD)



# DV Model-Shift Uniqueness Test

011298298-01, P = 5.248670 Days, E = 130.268001 Days

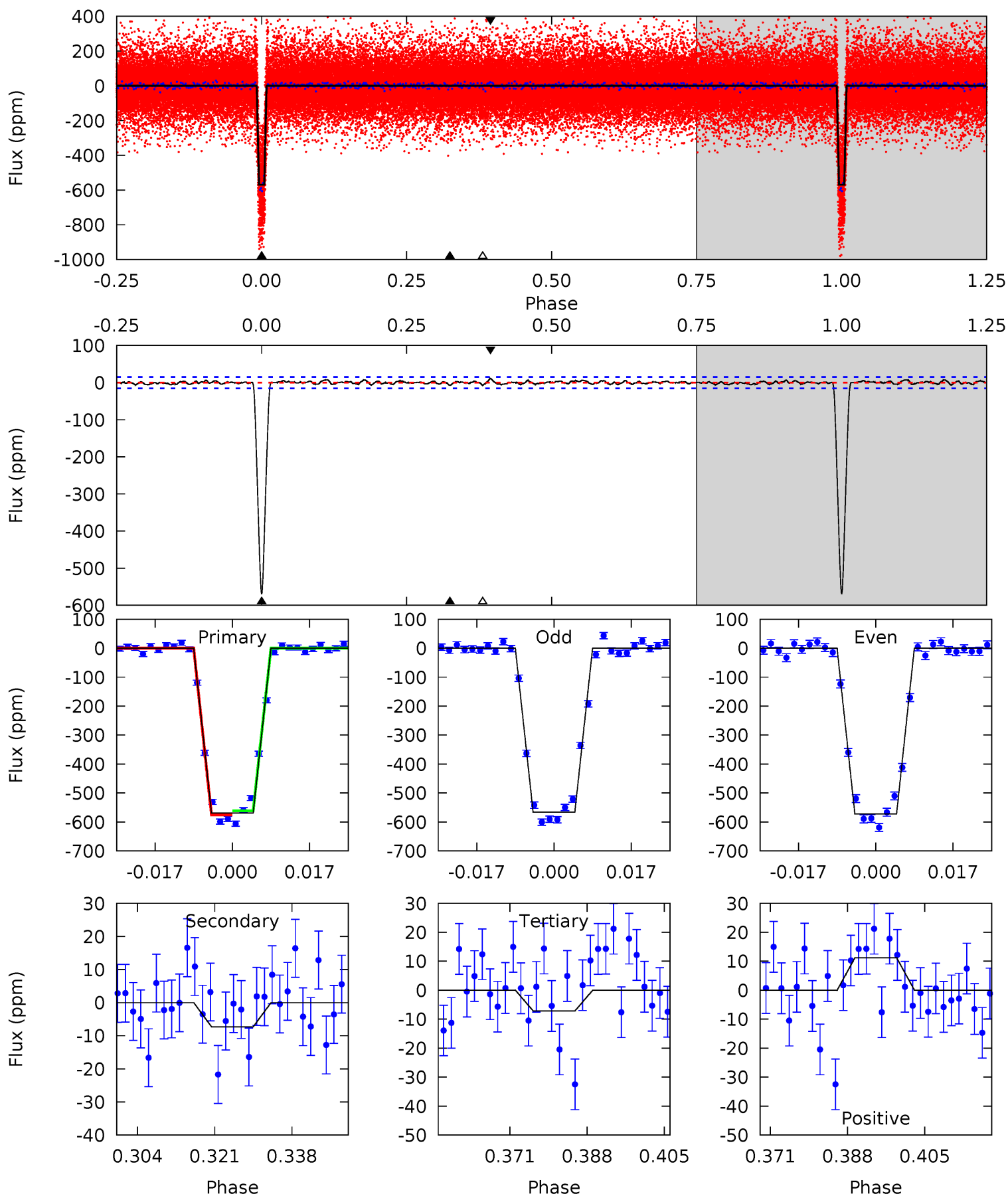
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
165.8	3.98	2.79	3.24	4.89	2.32	1.20	163.0	162.5	1.18	0.74	1.61	0.97	0.02	1.97



# Alt Model-Shift Uniqueness Test

011298298-01, P = 5.248668 Days, E = 130.268334 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
183.0	2.35	2.30	3.61	4.92	2.39	0.94	180.7	179.4	0.04	-1.26	1.03	0.98	0.02	2.29



### Stellar Parameters For KIC 011298298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5807^{+78}_{-78}$	$4.437^{+0.051}_{-0.119}$	$0.100^{+0.150}_{-0.150}$	$1.012^{+0.154}_{-0.071}$	$1.021^{+0.063}_{-0.063}$	$1.389^{+0.276}_{-0.480}$
	+1%/-1%	+1%/-3%	+150%/-150%	+15%/-7%	+6%/-6%	+20%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

### Secondary Eclipse Parameters for KIC 011298298-01 / KOI 1802.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-14 \pm 4$	$3.14^{+0.27}_{-0.18}$	$1489^{+65}_{-43}$	$2812^{+99}_{-118}$	$2.768^{+0.805}_{-0.763}$
Alt.	$-7 \pm 3$	$2.67^{+0.25}_{-0.13}$	$1487^{+57}_{-39}$	$2652^{+167}_{-251}$	$1.912^{+0.944}_{-0.903}$

$T_{max}$  = 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  $A_{obs} \gg 1.0$

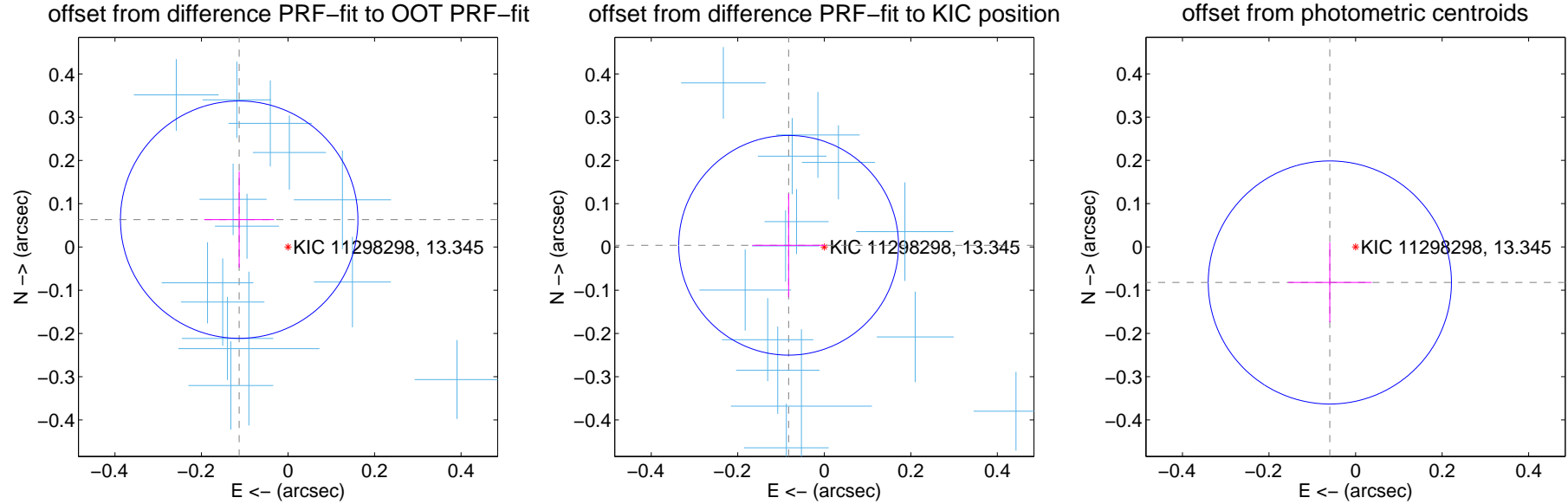
## DV Centroid Data

Supplemental centroid analysis for 011298298-01. Kepler magnitude: 13.35. Transit SNR 98.86

There are 17 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

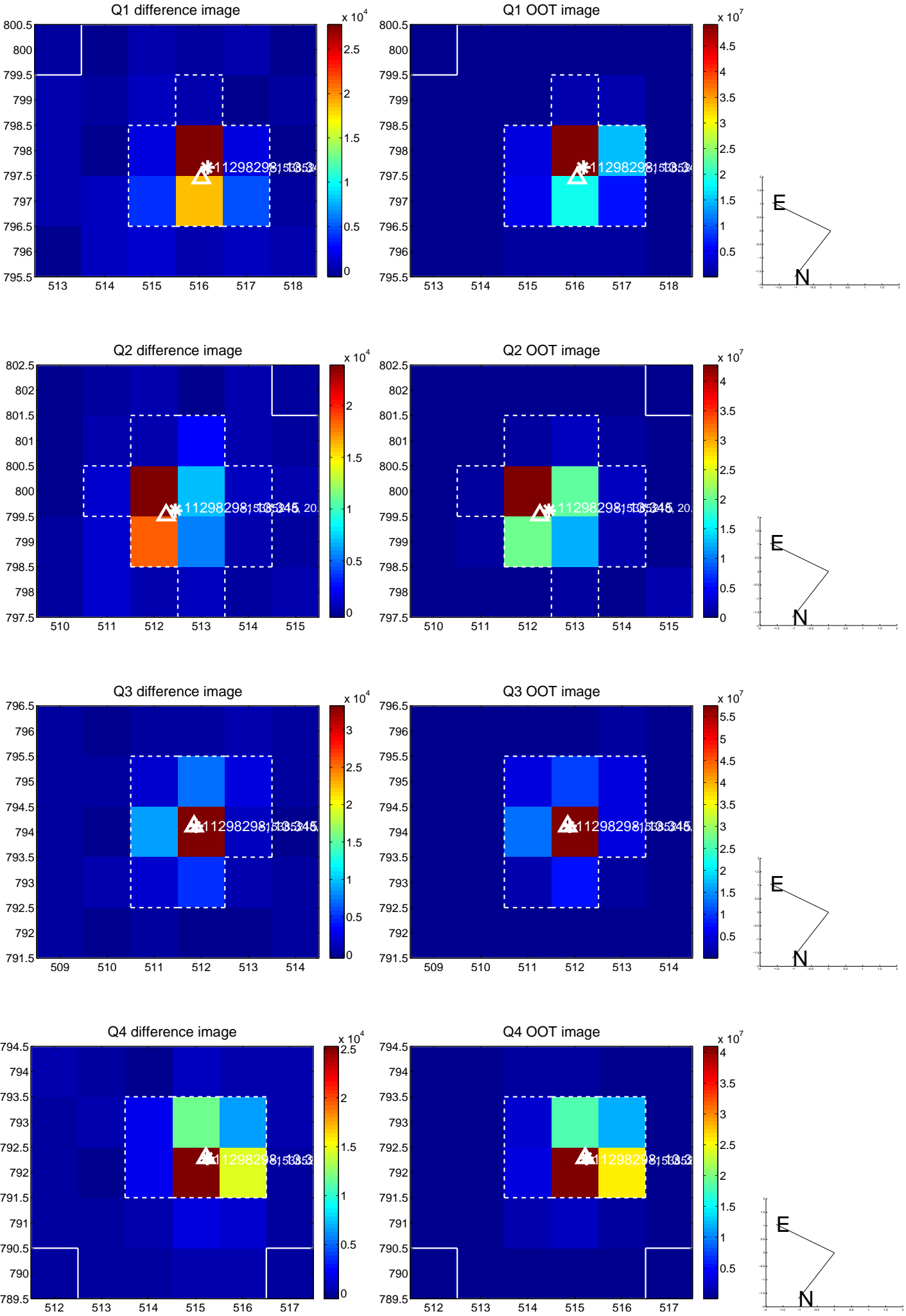
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.129 \pm 0.091$	1.41	$0.113 \pm 0.081$	$0.063 \pm 0.111$
PRF-fit source offset from KIC position	$0.083 \pm 0.085$	0.97	$0.082 \pm 0.084$	$0.004 \pm 0.119$
photometric centroid source offset	$0.10 \pm 0.09$	1.08	$0.06 \pm 0.10$	$-0.08 \pm 0.09$



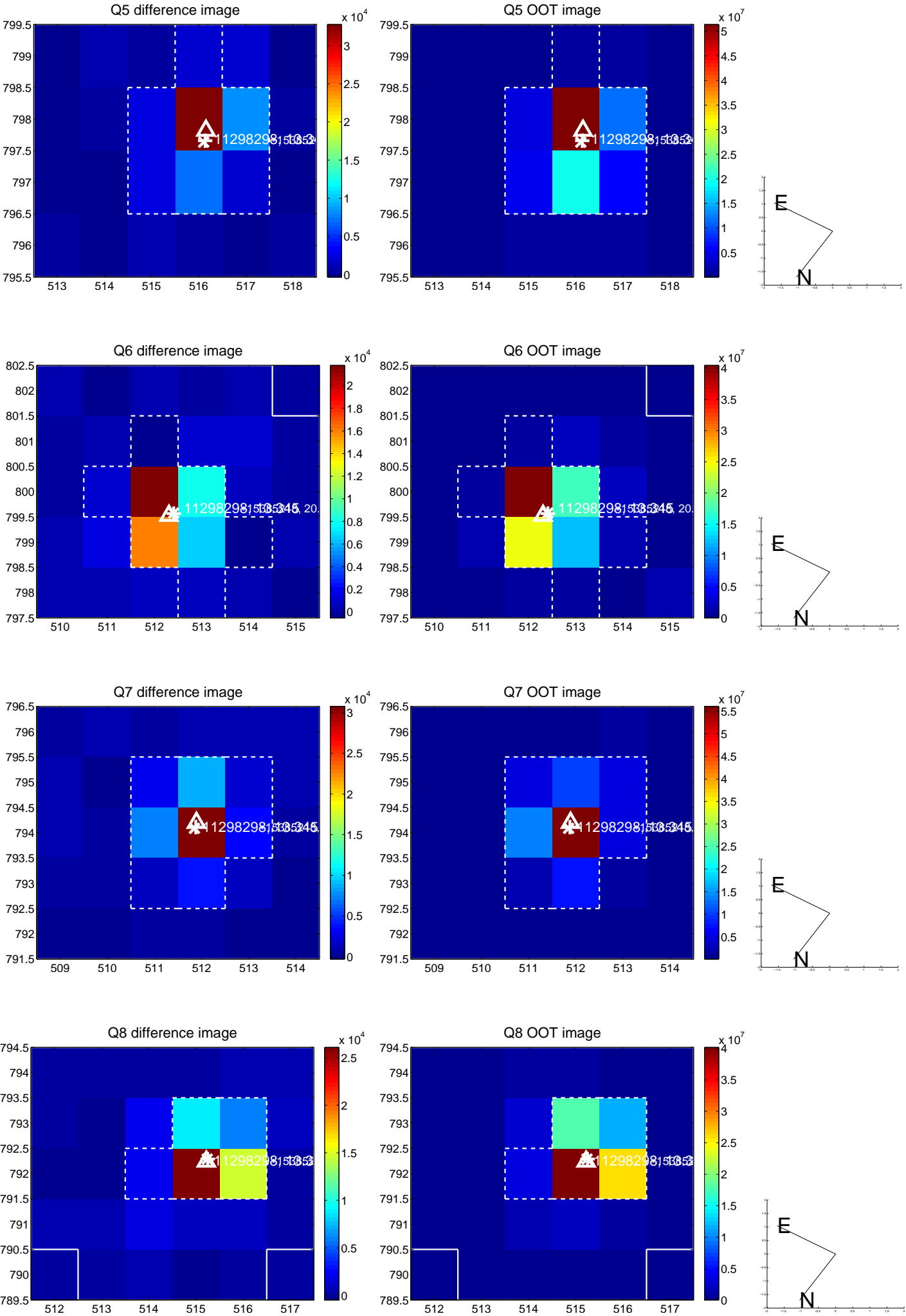
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



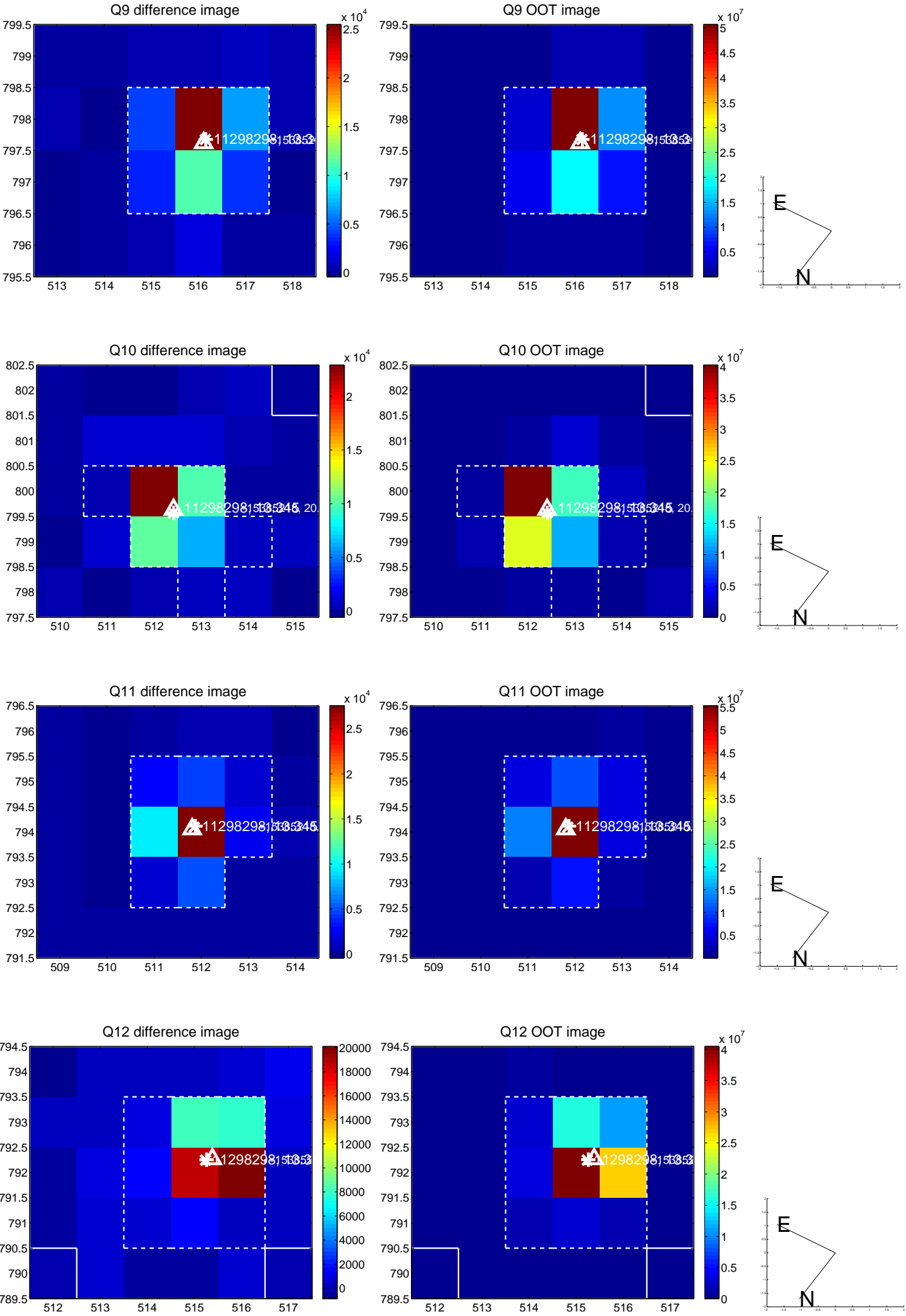
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



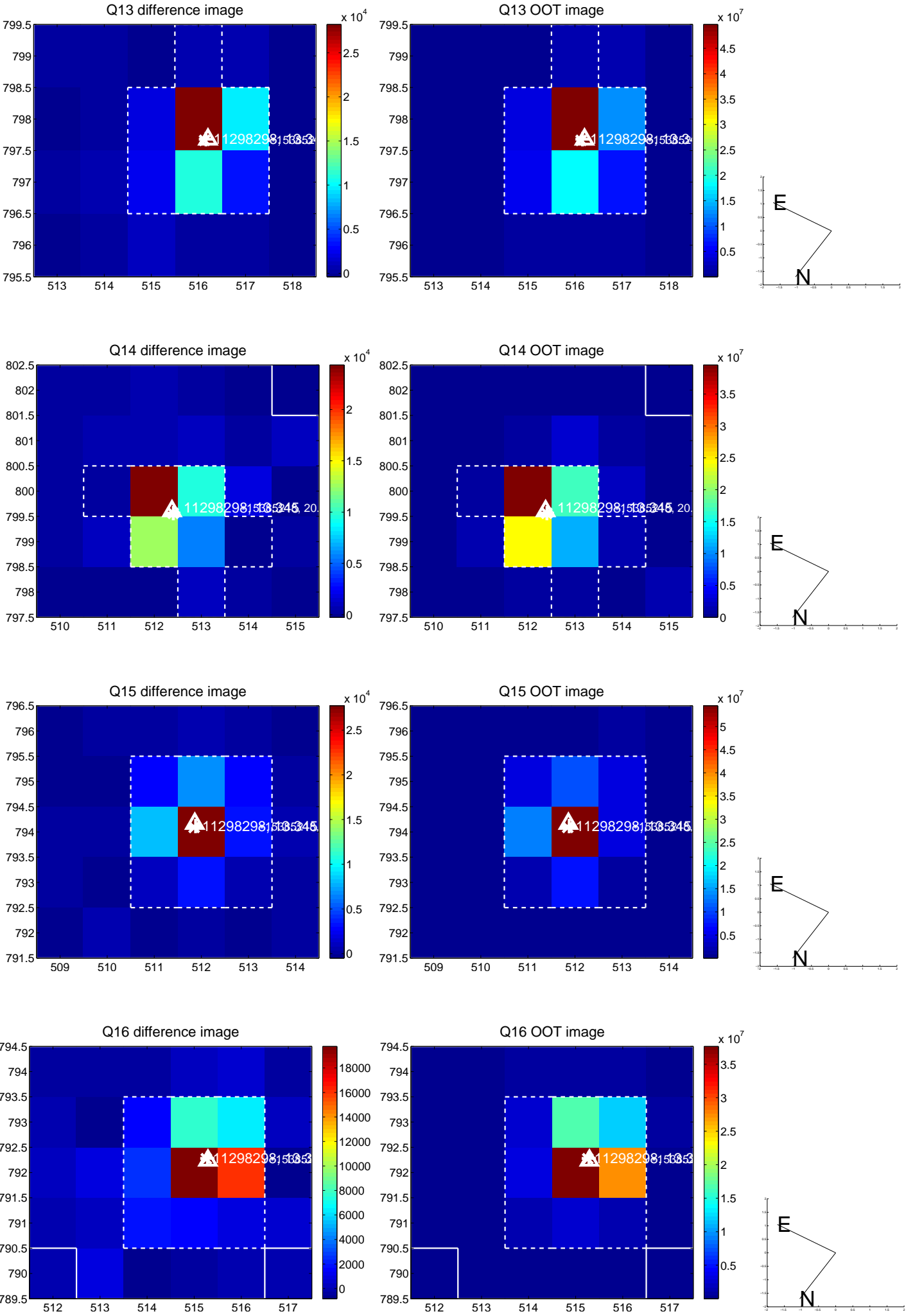
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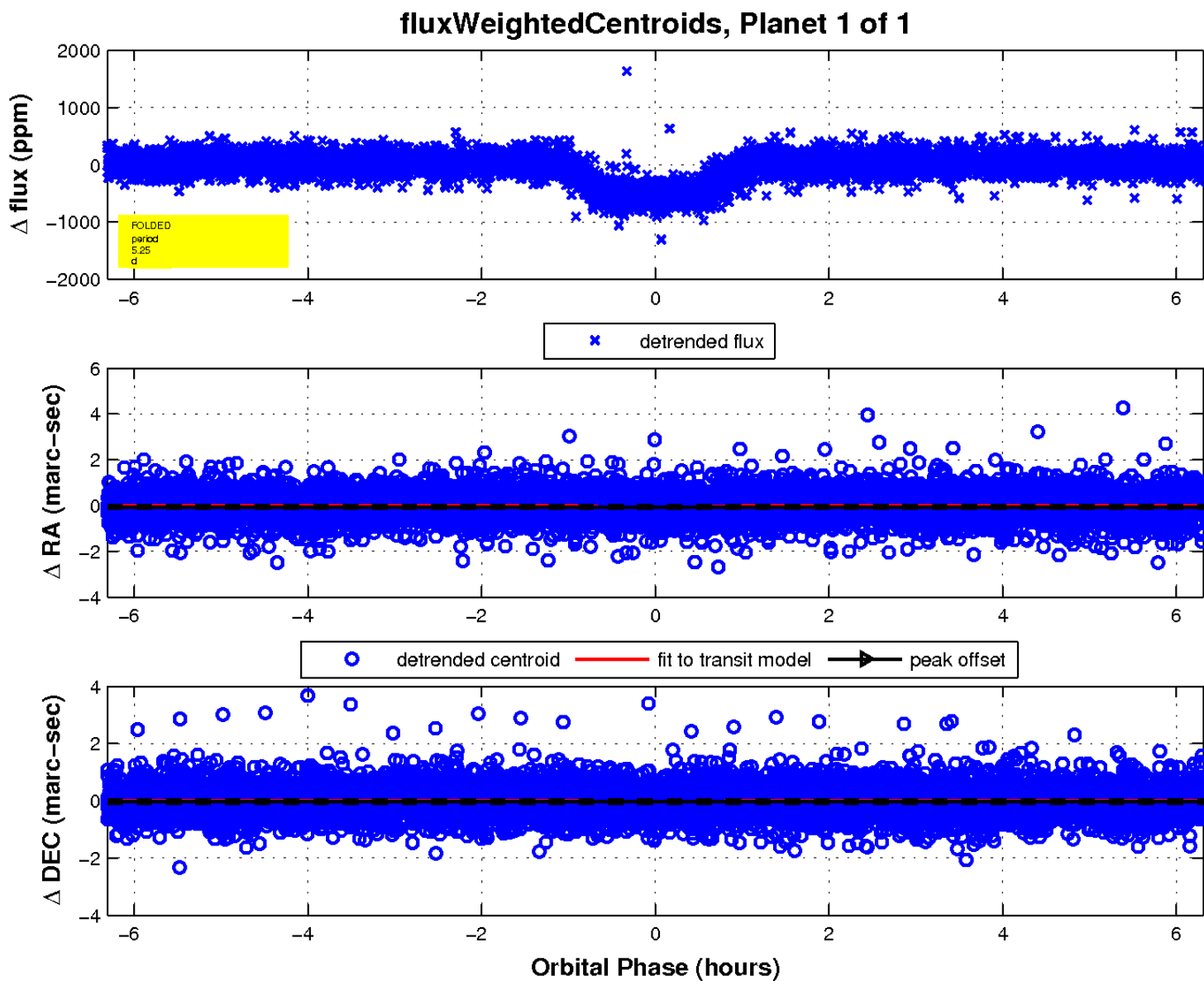
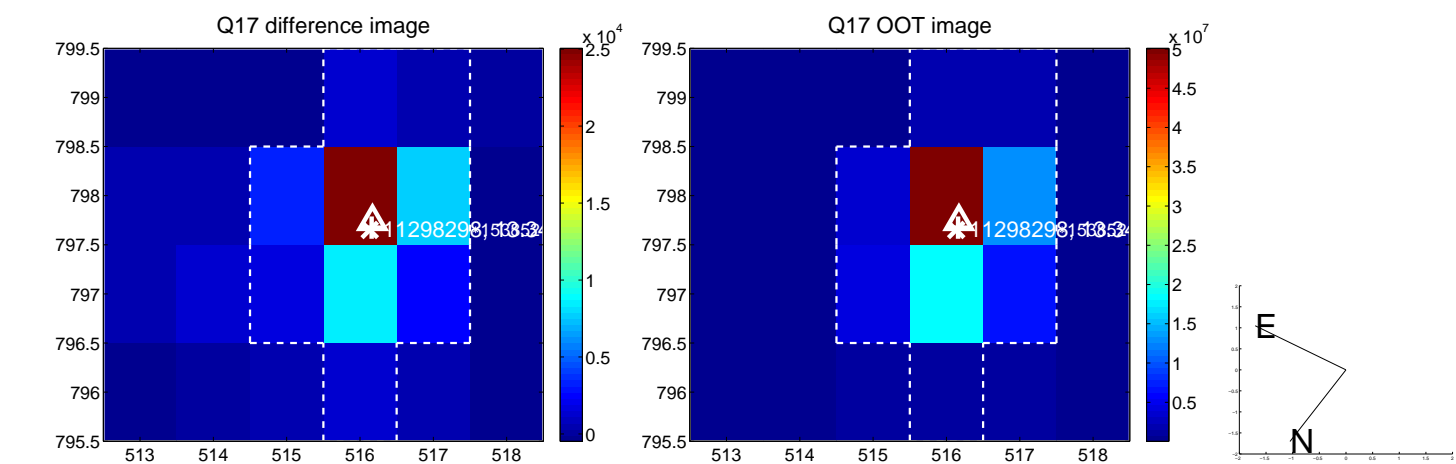
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

