

# KIC 008260218

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008260218-01	OBS	1066.01	5.714818	132.130406	12326.1	3.177	529.8	510.3	0.84	5695	9.41	187.53

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008260218-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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

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

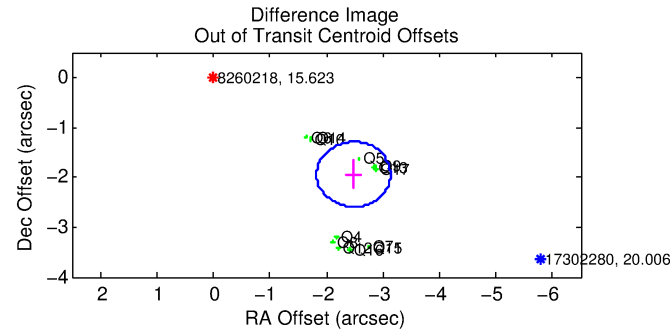
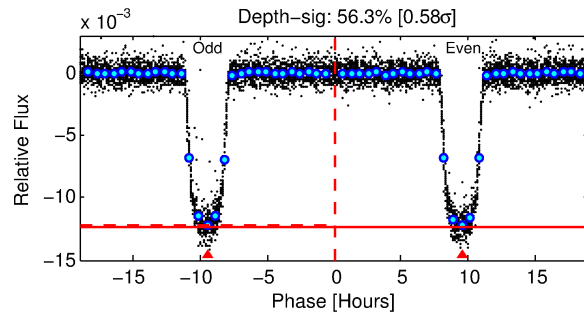
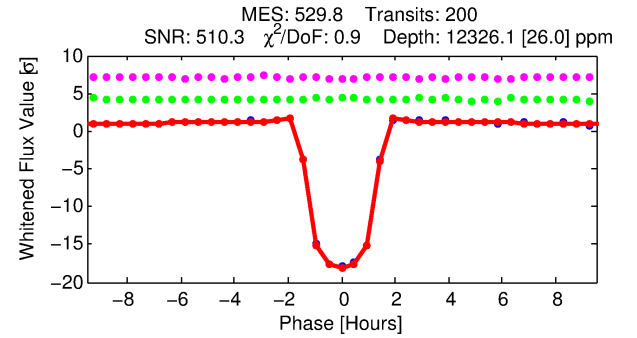
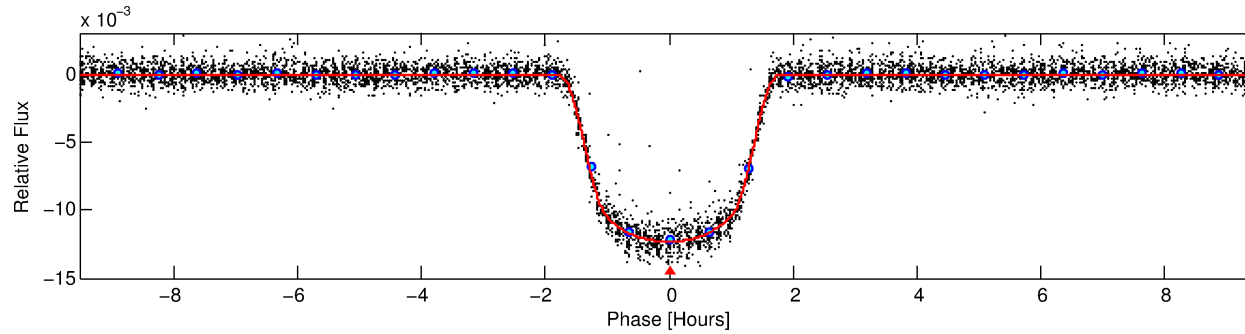
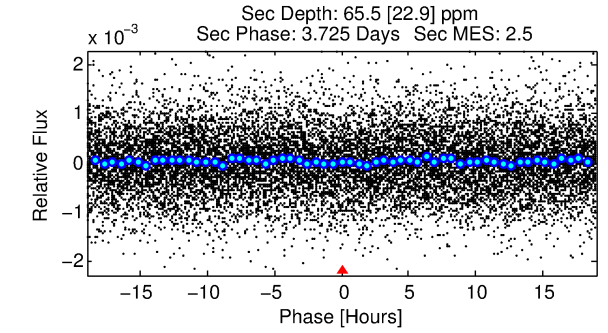
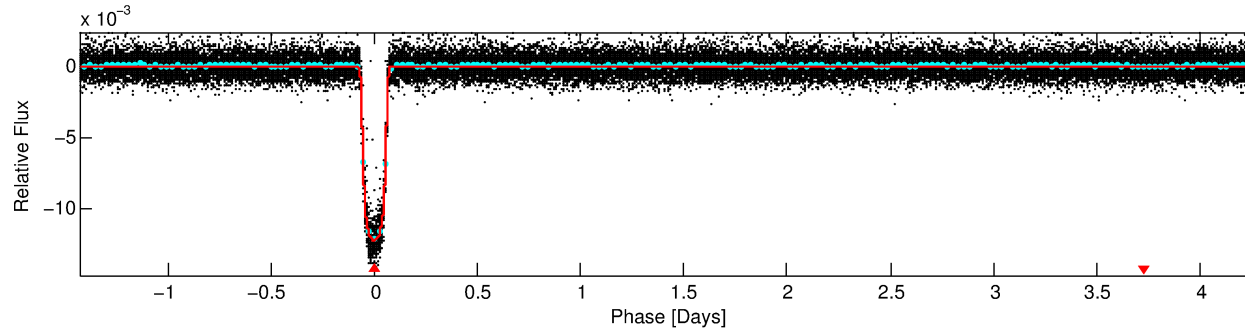
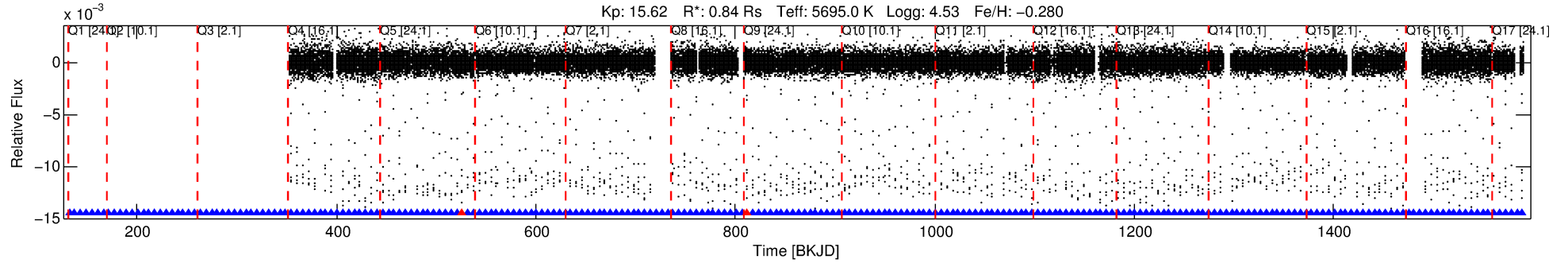
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008260218-01

No Significant Match Found

# DV One-Page Summary

KIC: 8260218 Candidate: 1 of 1 Period: 5.715 d  
KOI: K01066.01 Corr: 0.997



## DV Fit Results:

Period = 5.71482 [0.00000] d  
Epoch = 132.1304 [0.0001] BKJD  
Rp/R\* = 0.1024 [0.0008]  
a/R\* = 14.40 [0.49]  
b = 0.35 [0.09]  
Seff = 187.53 [64.85]  
Teq = 944 [82] K  
Rp = 9.41 [2.50] Re  
a = 0.0597 [0.0132] AU  
Ag = 1.45 [0.69] [0.65σ]  
Teffp = 1601 [150] K [3.85σ]

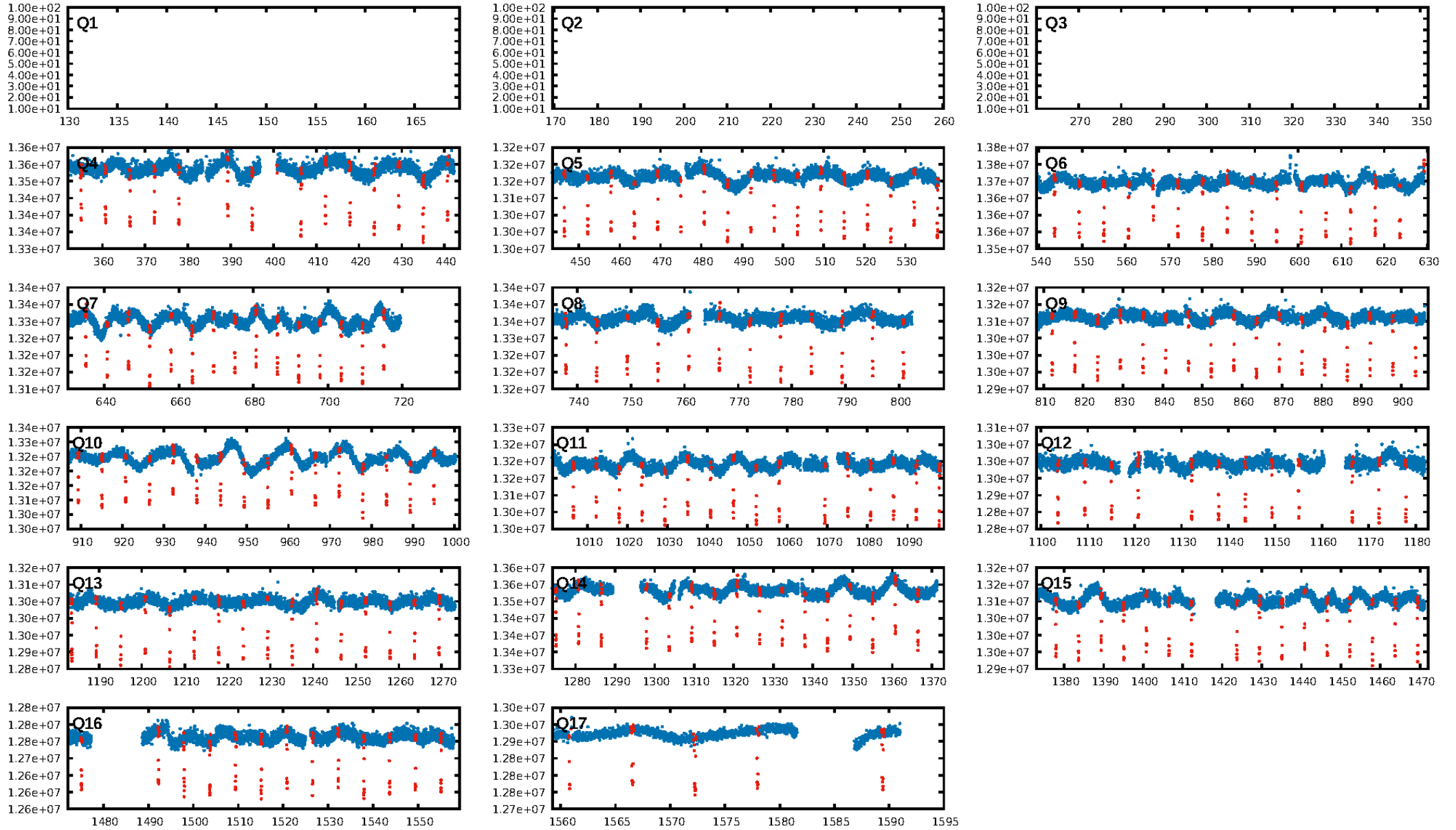
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [193/195]  
GhostDiagnostic-chr: 4.164  
Centroid-sig: 0.0%  
Centroid-so: 0.725 arcsec [34.88σ]  
OotOffset-rm: 3.150 arcsec [14.49σ]  
KicOffset-rm: 0.079 arcsec [1.15σ]  
OotOffset-st: 3/3/4/4 [14]  
KicOffset-st: 3/3/4/4 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

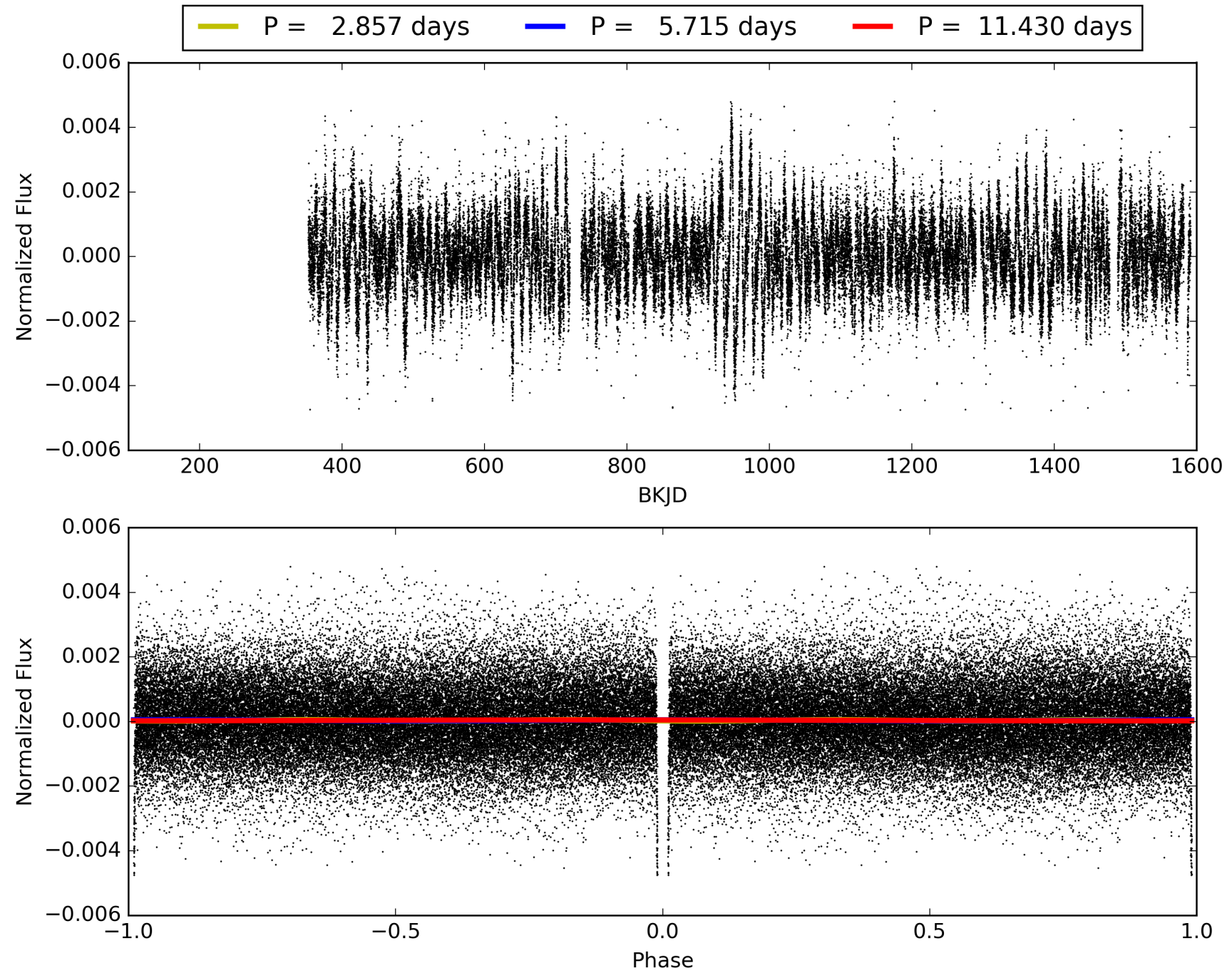
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:09:33 Z

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

# TCE 008260218-01, PDC Light Curves

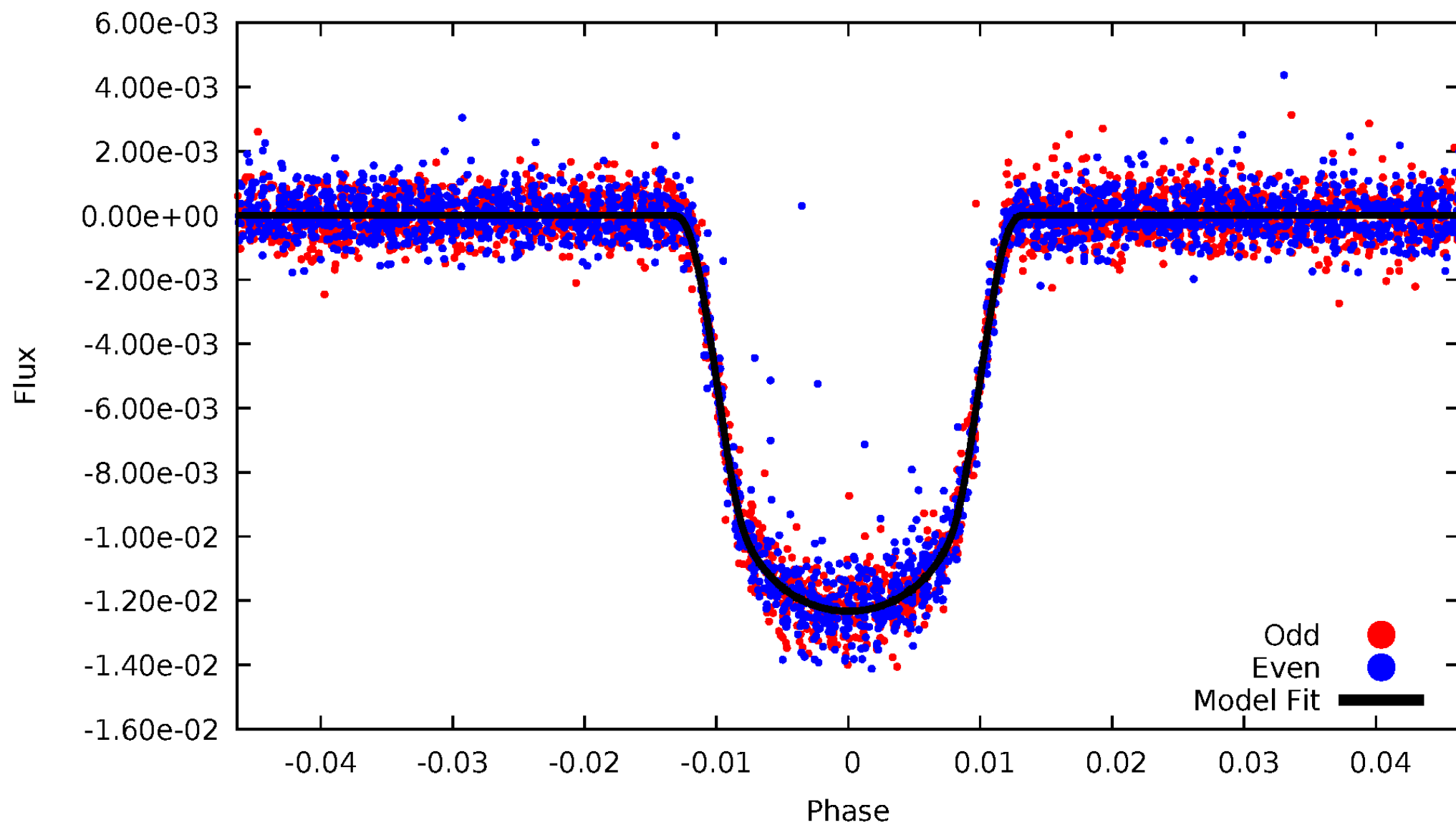


# TCE 008260218-01



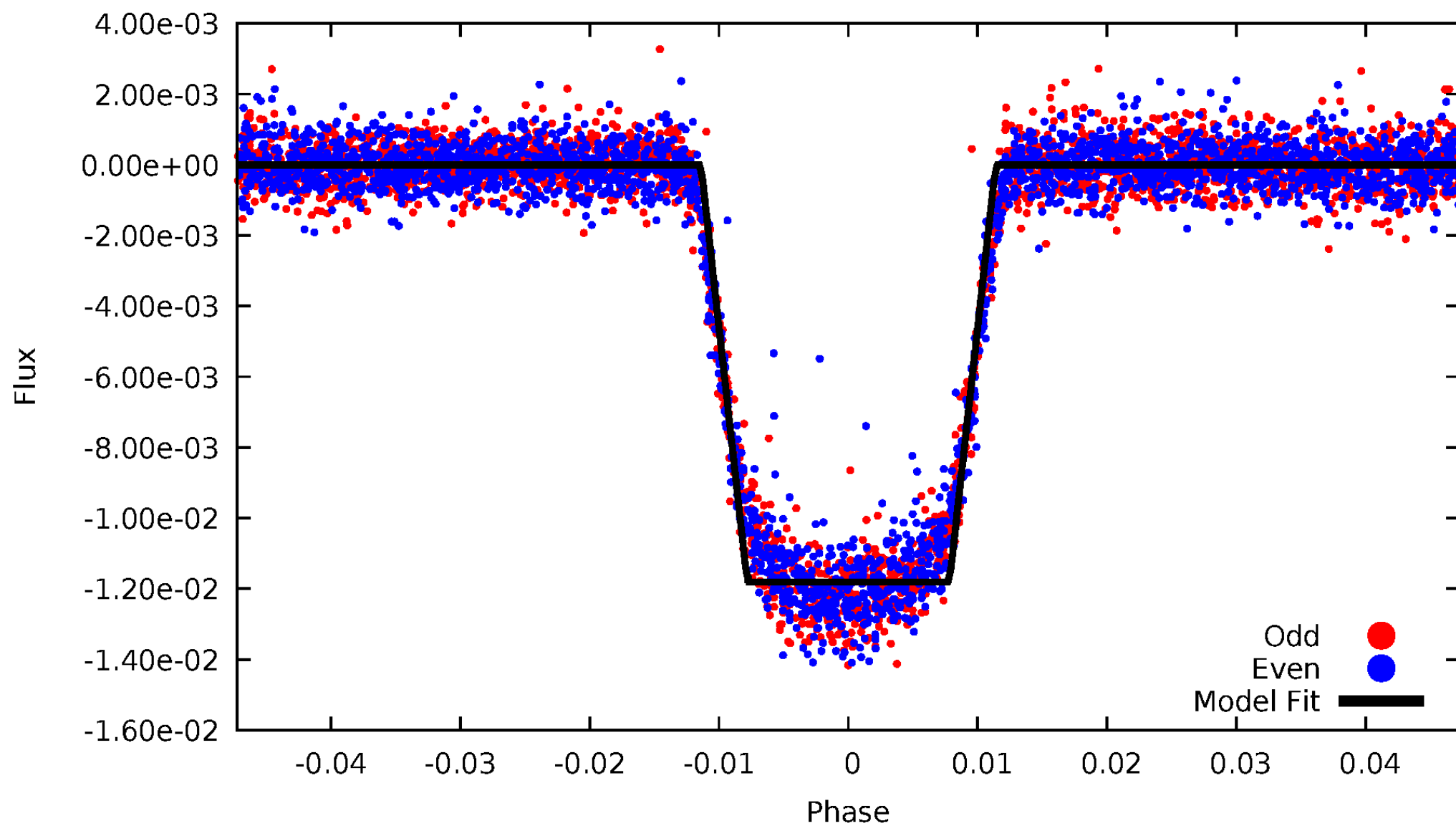
# DV Odd/Even

TCE 008260218-01



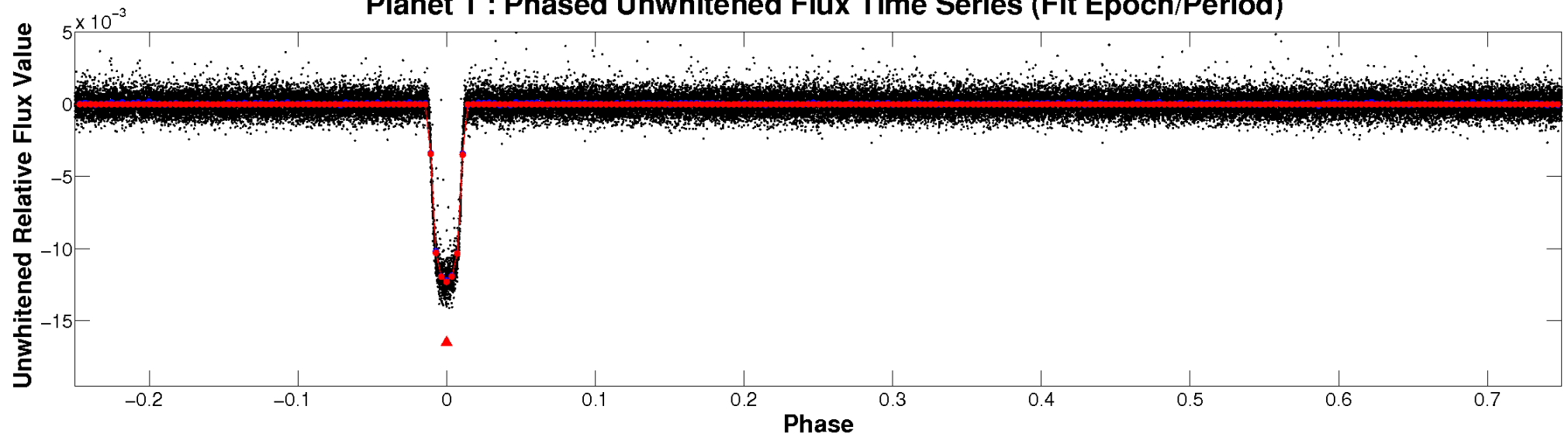
# ALT Odd/Even

TCE 008260218-01

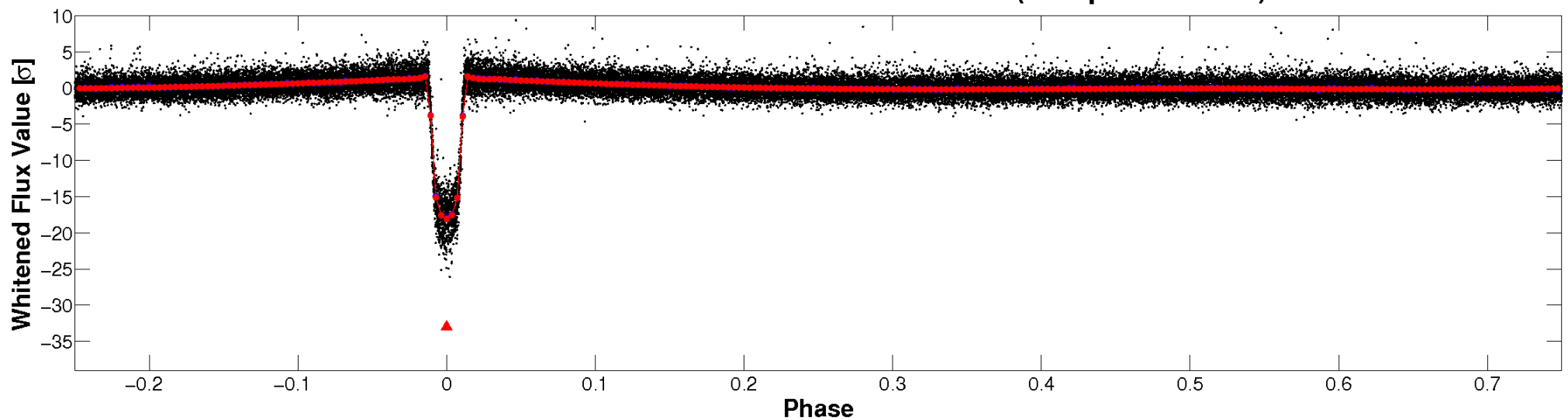


# Non-Whitened Vs. Whitened Light Curve

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



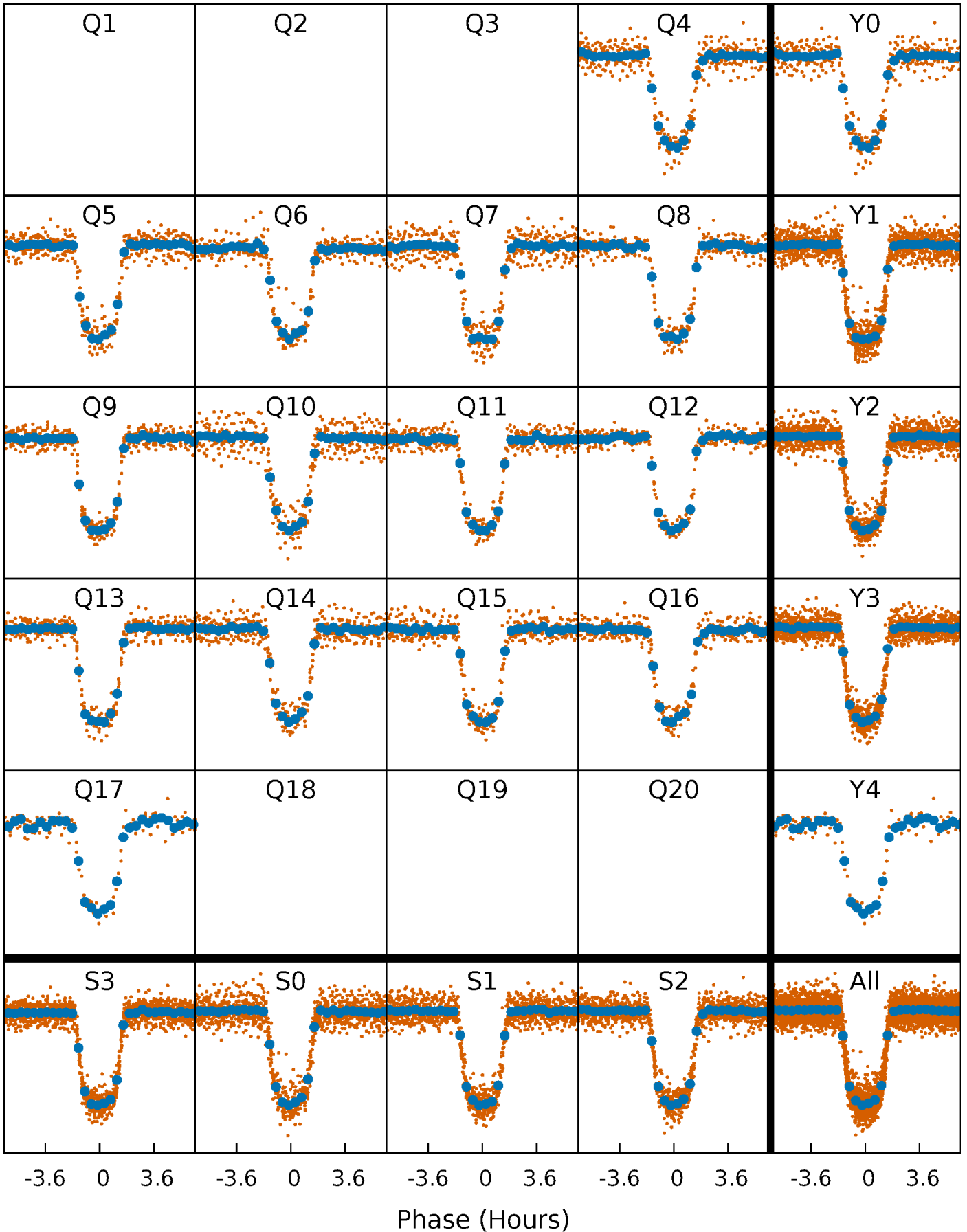
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

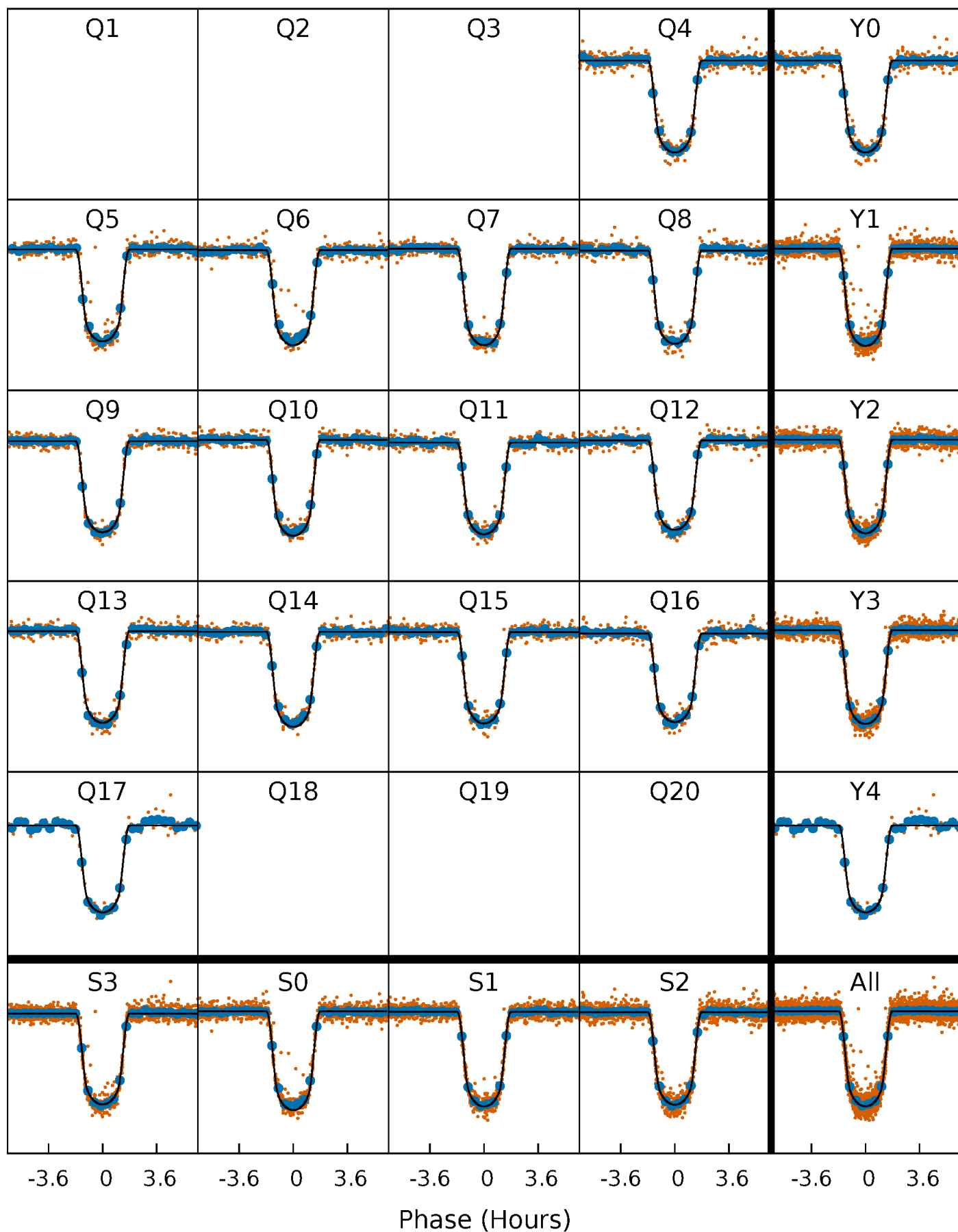
TCE 008260218-01 P= 5.714818 Days  $T_0=132.130406$  (BKJD)





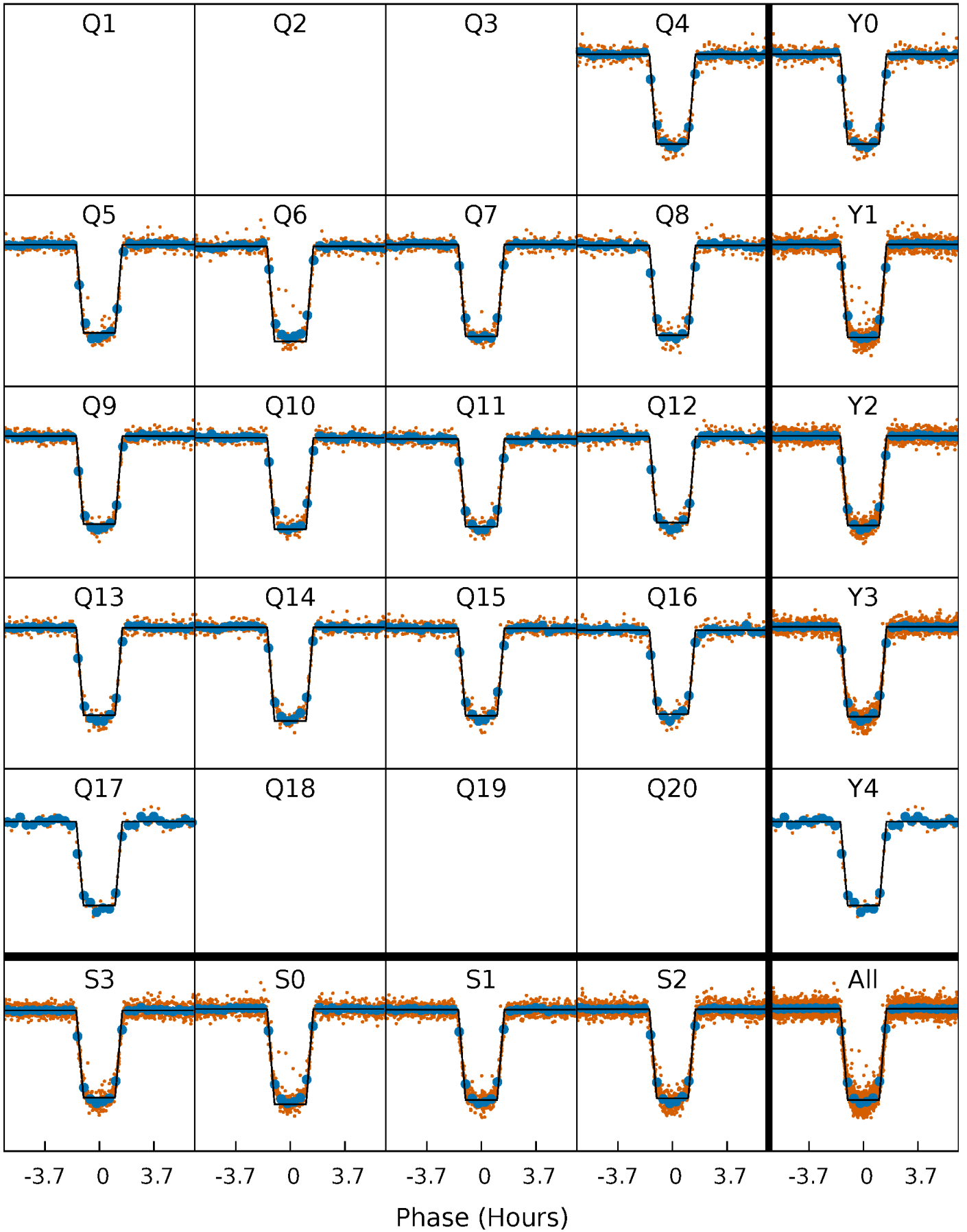
# DV Quarter-Phased Transit Curves

TCE 008260218-01 P= 5.714818 Days  $T_0=132.130406$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

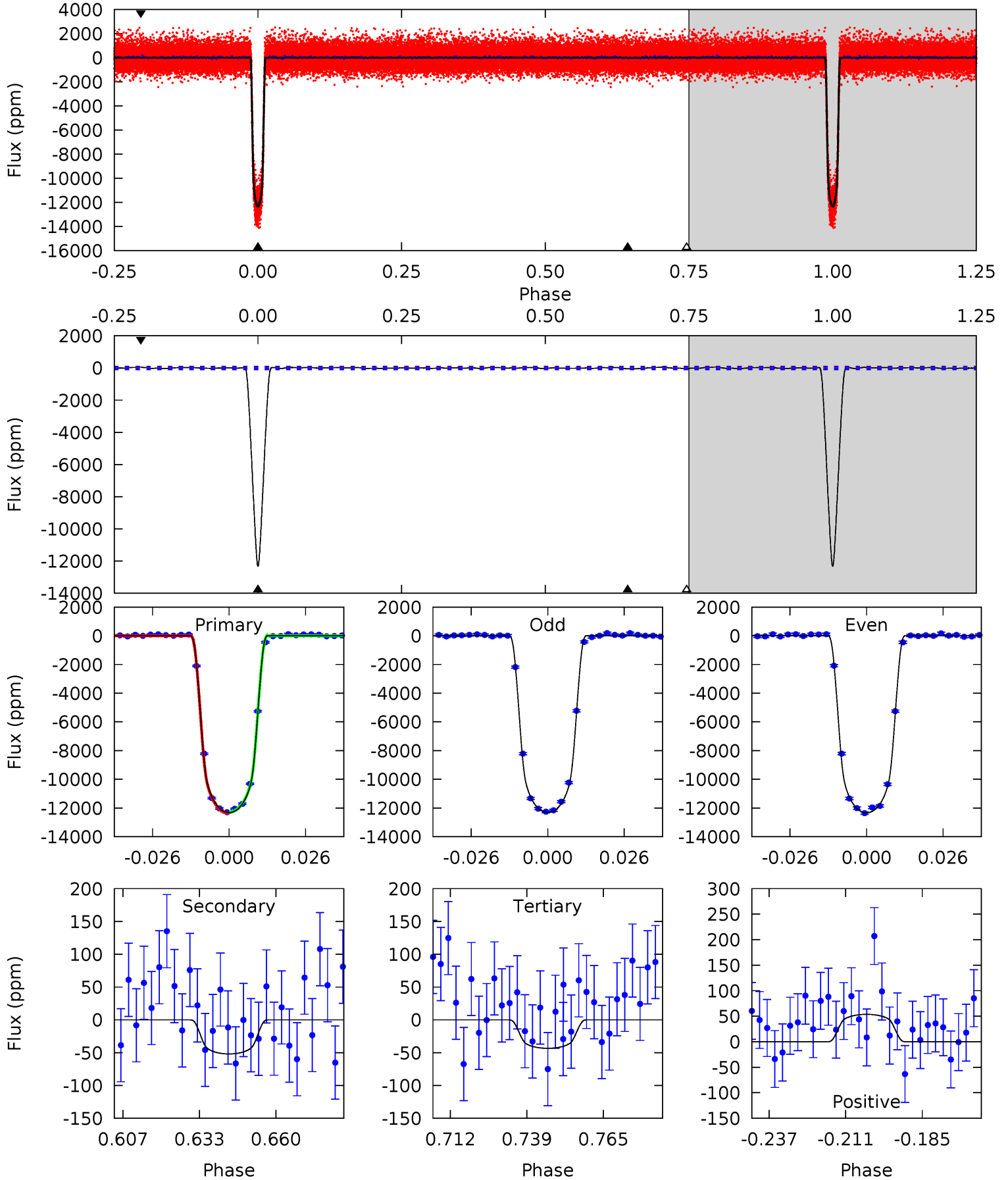
TCE 008260218-01 P= 5.714828 Days  $T_0=132.128918$  (BKJD)



# DV Model-Shift Uniqueness Test

008260218-01, P = 5.714818 Days, E = 132.130406 Days

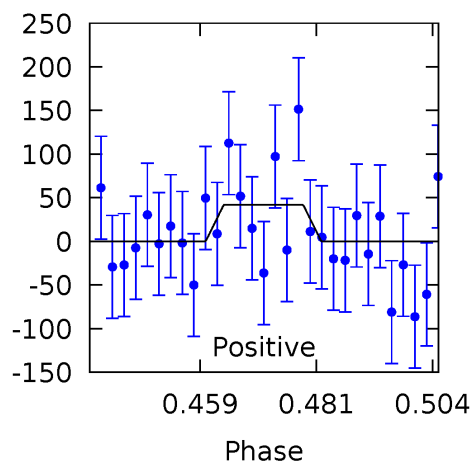
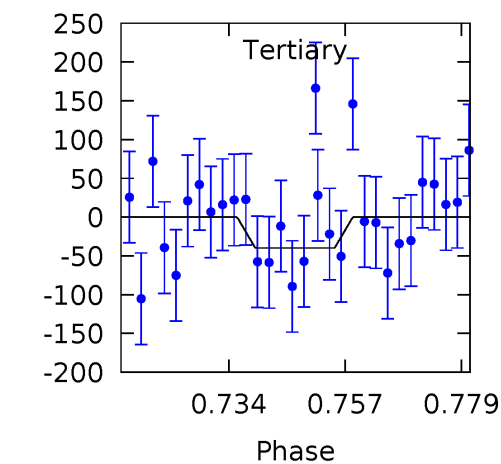
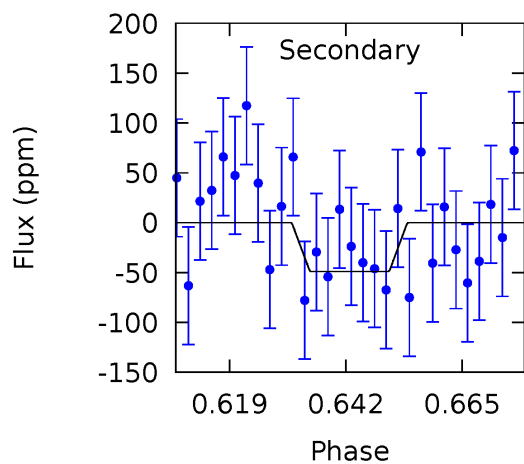
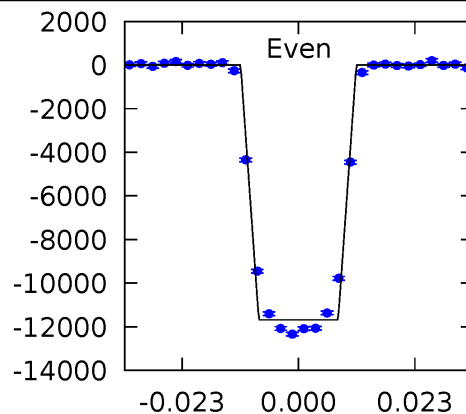
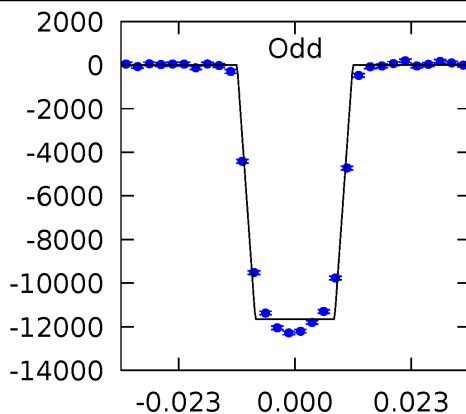
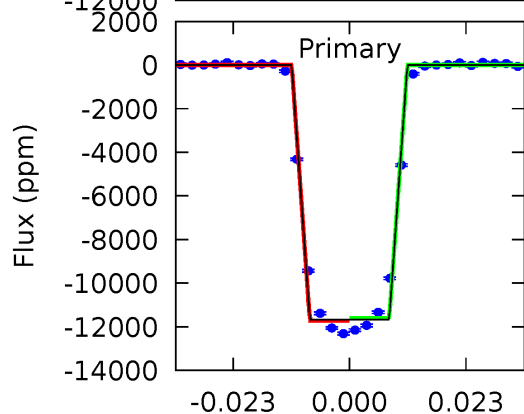
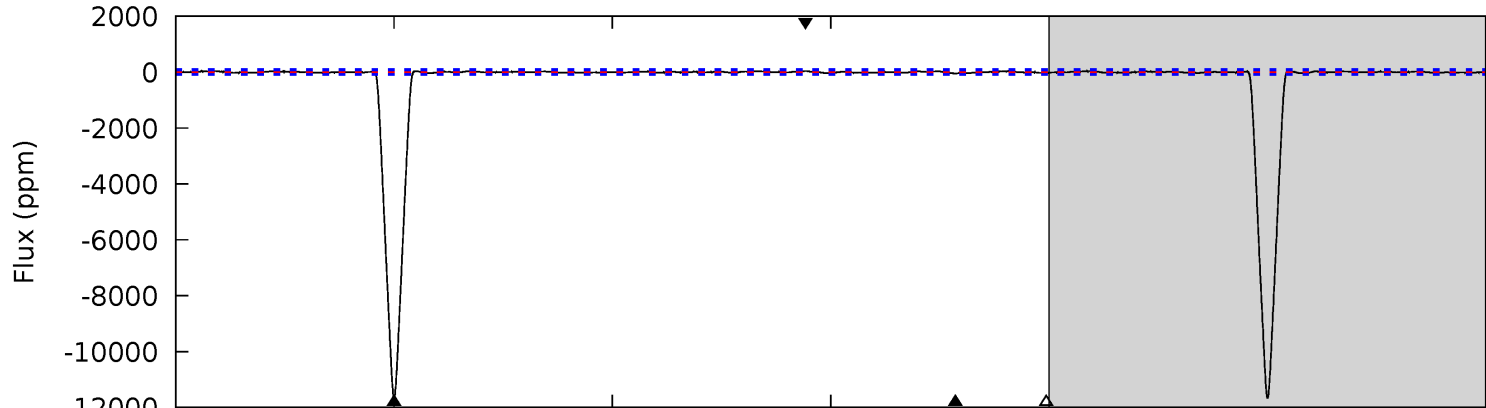
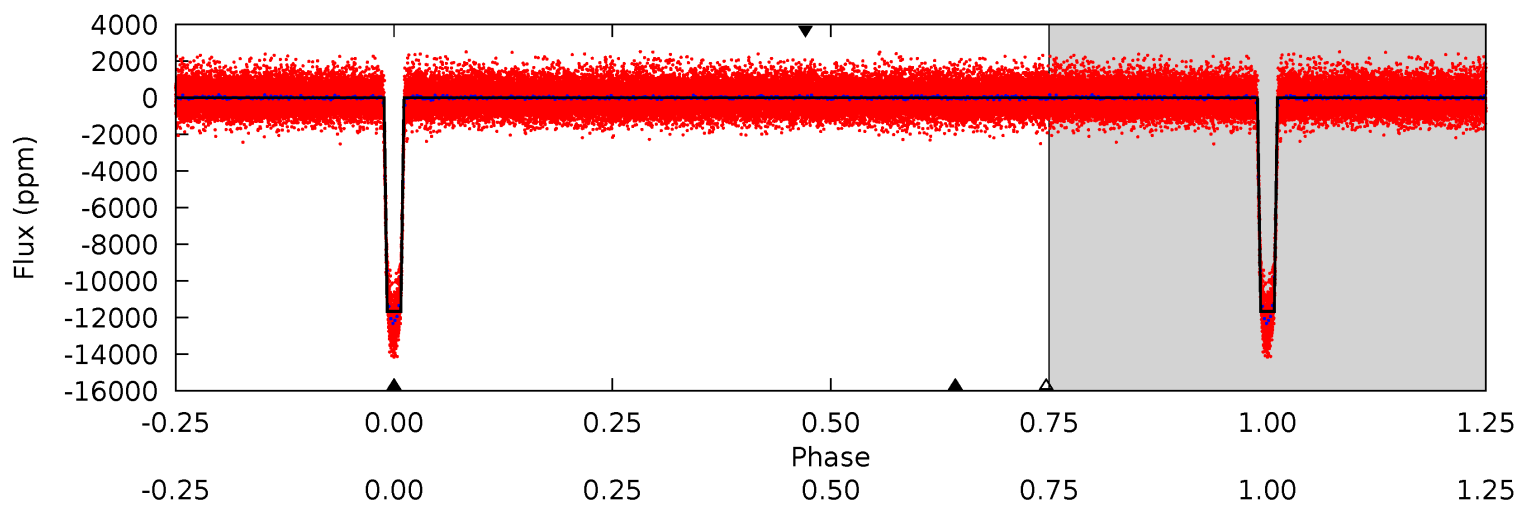
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
761.3	3.21	2.68	3.31	4.84	2.22	1.18	758.6	758.0	0.53	-0.10	0.50	0.99	0.00	2.57



# Alt Model-Shift Uniqueness Test

008260218-01, P = 5.714828 Days, E = 132.128918 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
673.9	2.83	2.30	2.43	4.86	2.27	0.95	671.6	671.5	0.53	0.40	0.74	1.00	0.00	3.37



### Stellar Parameters For KIC 008260218

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5695^{+189}_{-189}$	$4.526^{+0.058}_{-0.173}$	$-0.280^{+0.300}_{-0.300}$	$0.842^{+0.224}_{-0.090}$	$0.869^{+0.100}_{-0.090}$	$2.048^{+0.507}_{-0.950}$
	+3%/-3%	+1%/-4%	+107%/-107%	+27%/-11%	+12%/-10%	+25%/-46%
Source	KIC0	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 008260218-01 / KOI 1066.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-52 \pm 16$	$9.68^{+1.32}_{-0.75}$	$1348^{+84}_{-72}$	$2301^{+109}_{-157}$	$1.018^{+0.424}_{-0.342}$
Alt.	$-49 \pm 17$	$10.25^{+1.32}_{-0.77}$	$1341^{+85}_{-64}$	$2237^{+121}_{-169}$	$0.887^{+0.361}_{-0.323}$

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

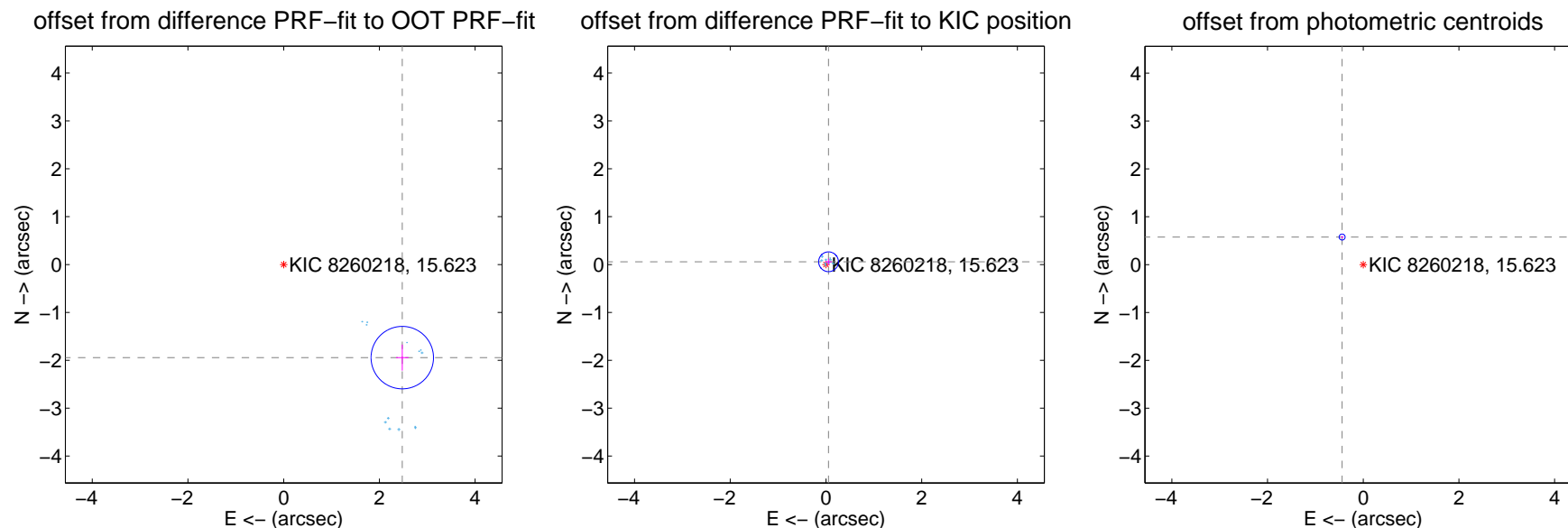
## DV Centroid Data

Supplemental centroid analysis for 008260218-01. Kepler magnitude: 15.62. Transit SNR 510.33

There are 14 quarters with good PRF difference image offsets

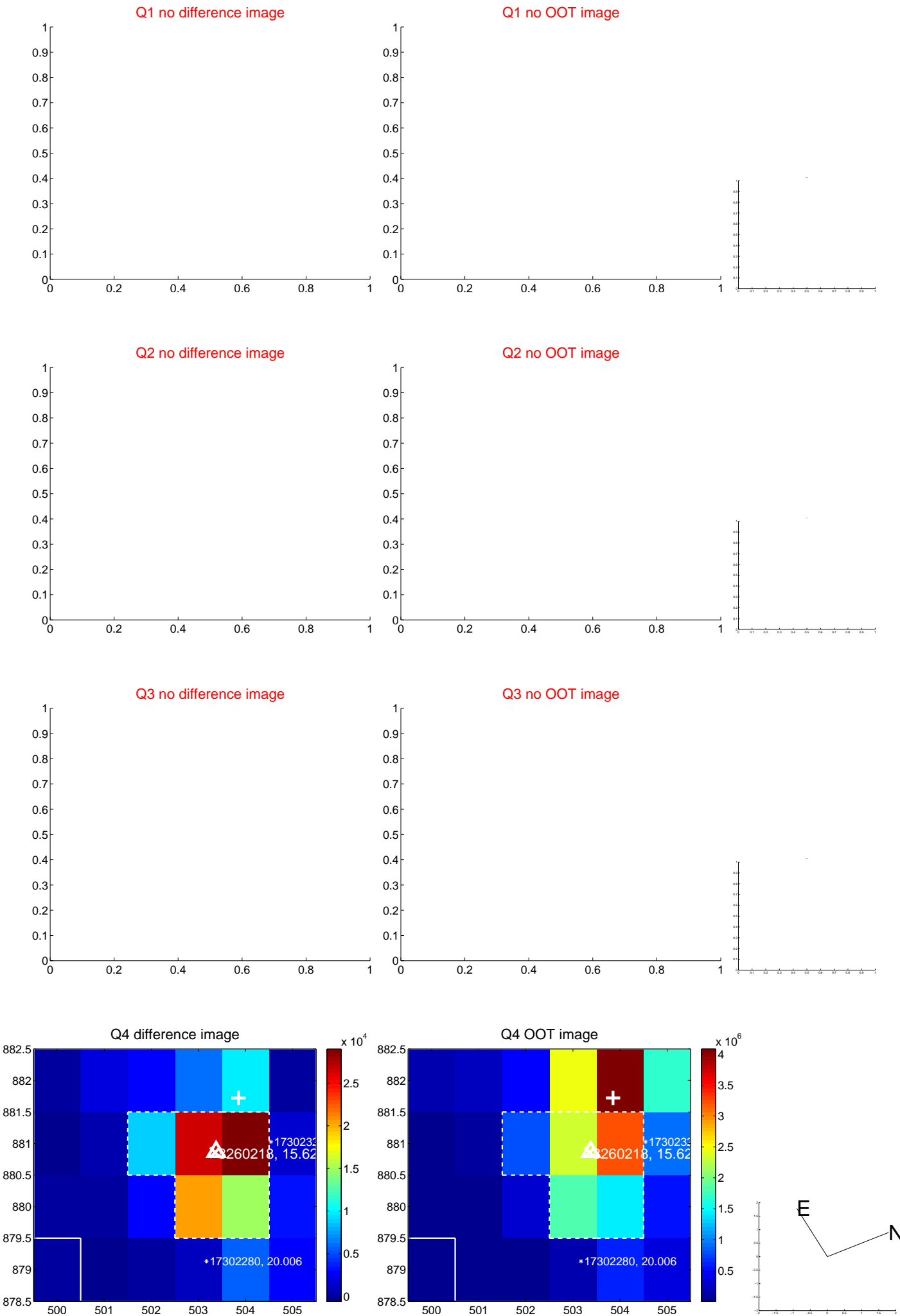
The OOT PRF centroid is offset from the target star catalog position by about 3.40 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.150 \pm 0.217$	14.49	$-2.478 \pm 0.131$	$-1.944 \pm 0.272$
PRF-fit source offset from KIC position	$0.079 \pm 0.069$	1.15	$-0.054 \pm 0.070$	$0.058 \pm 0.068$
photometric centroid source offset	$0.73 \pm 0.02$	34.88	$0.44 \pm 0.02$	$0.58 \pm 0.02$



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.

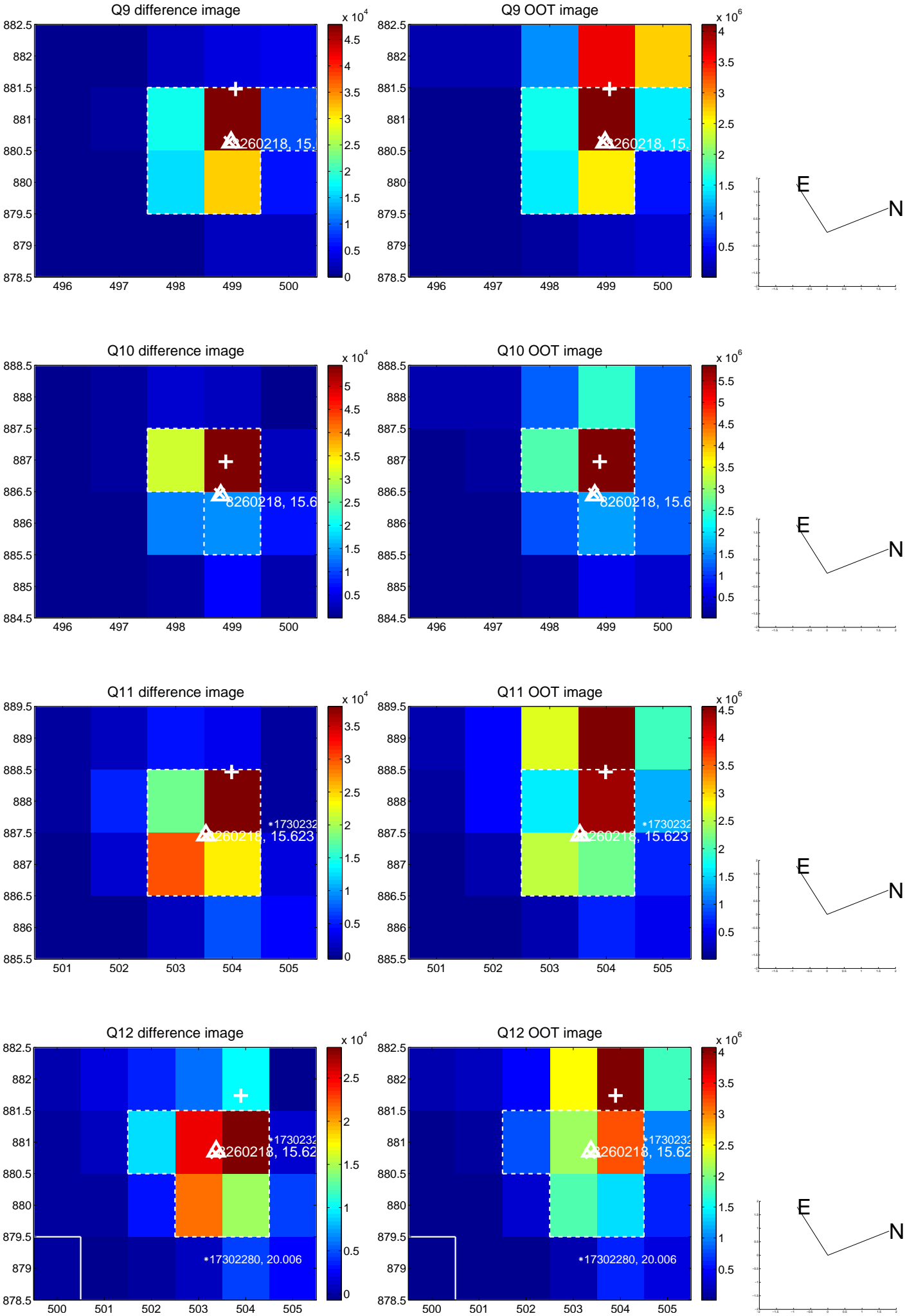
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



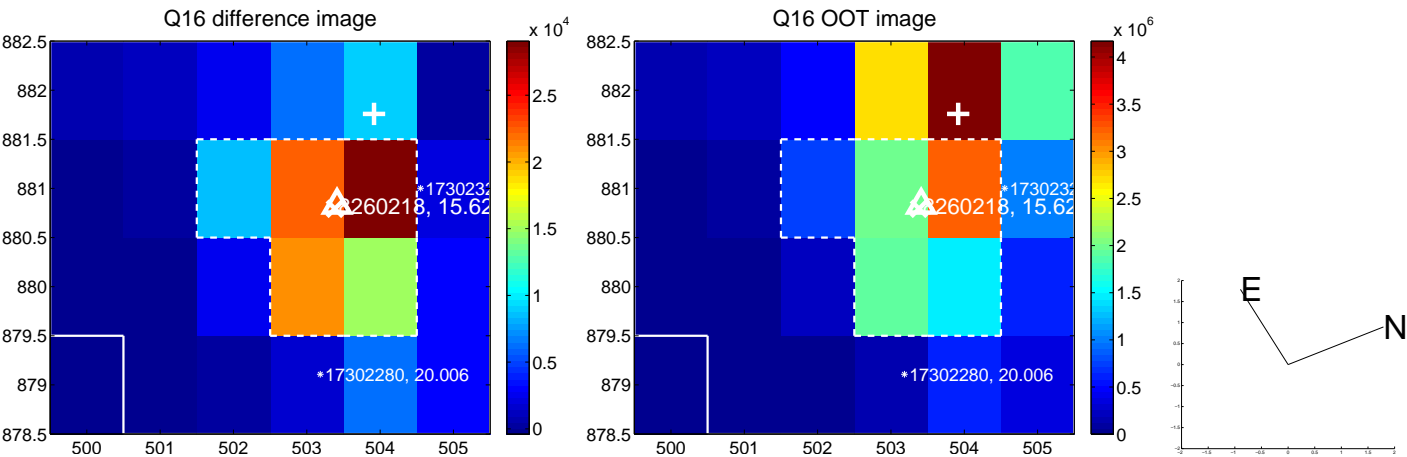
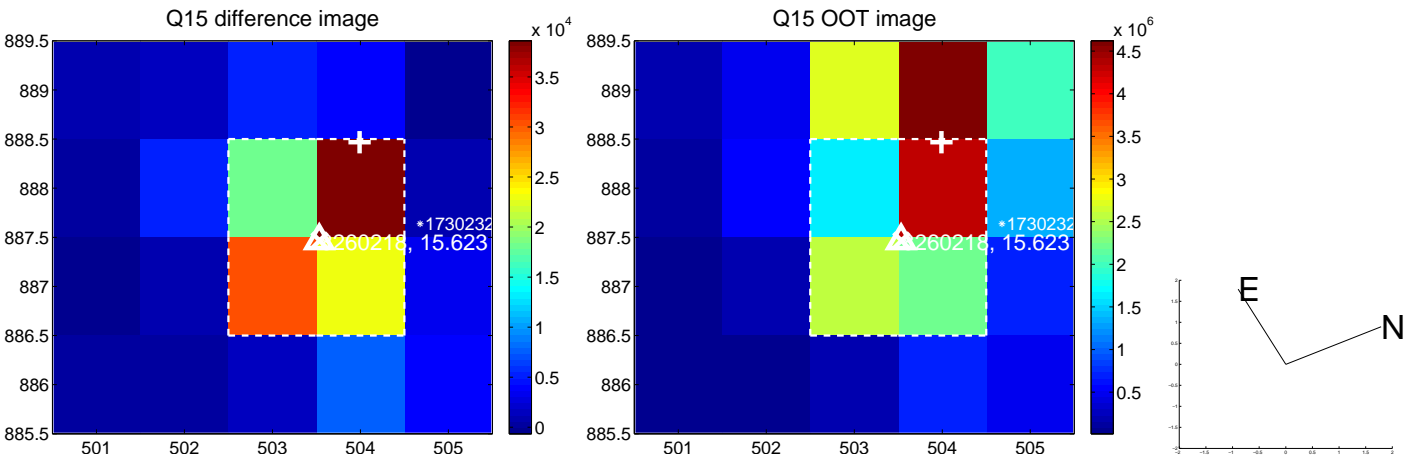
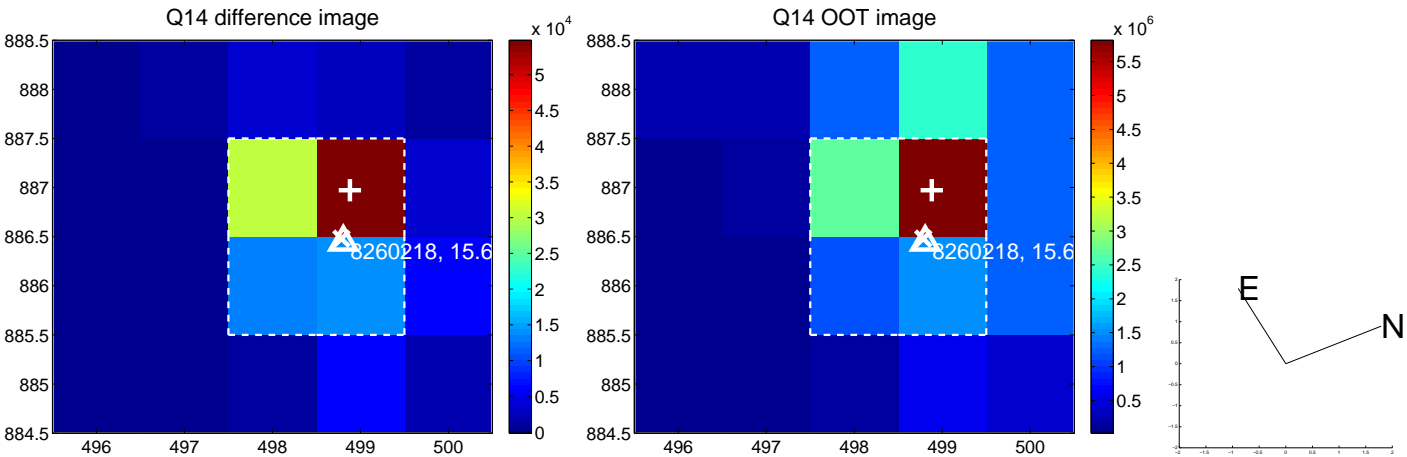
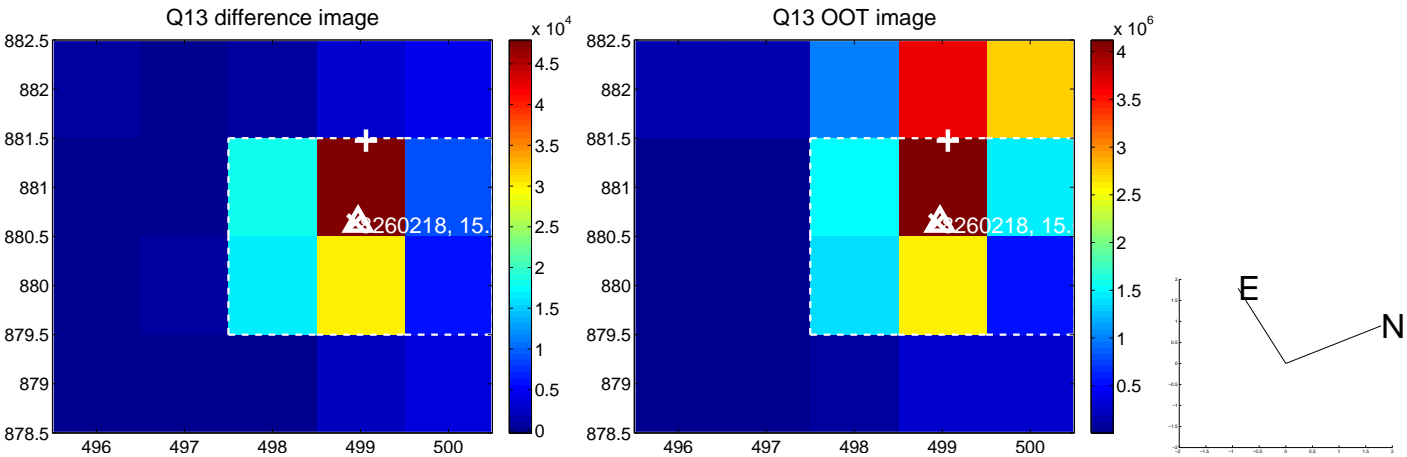




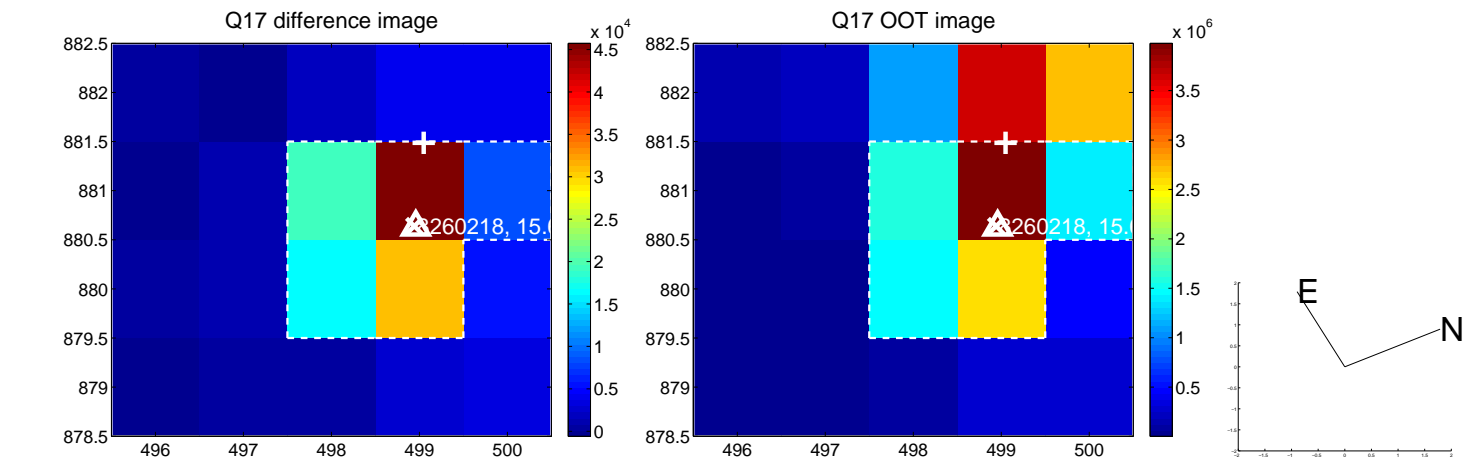
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



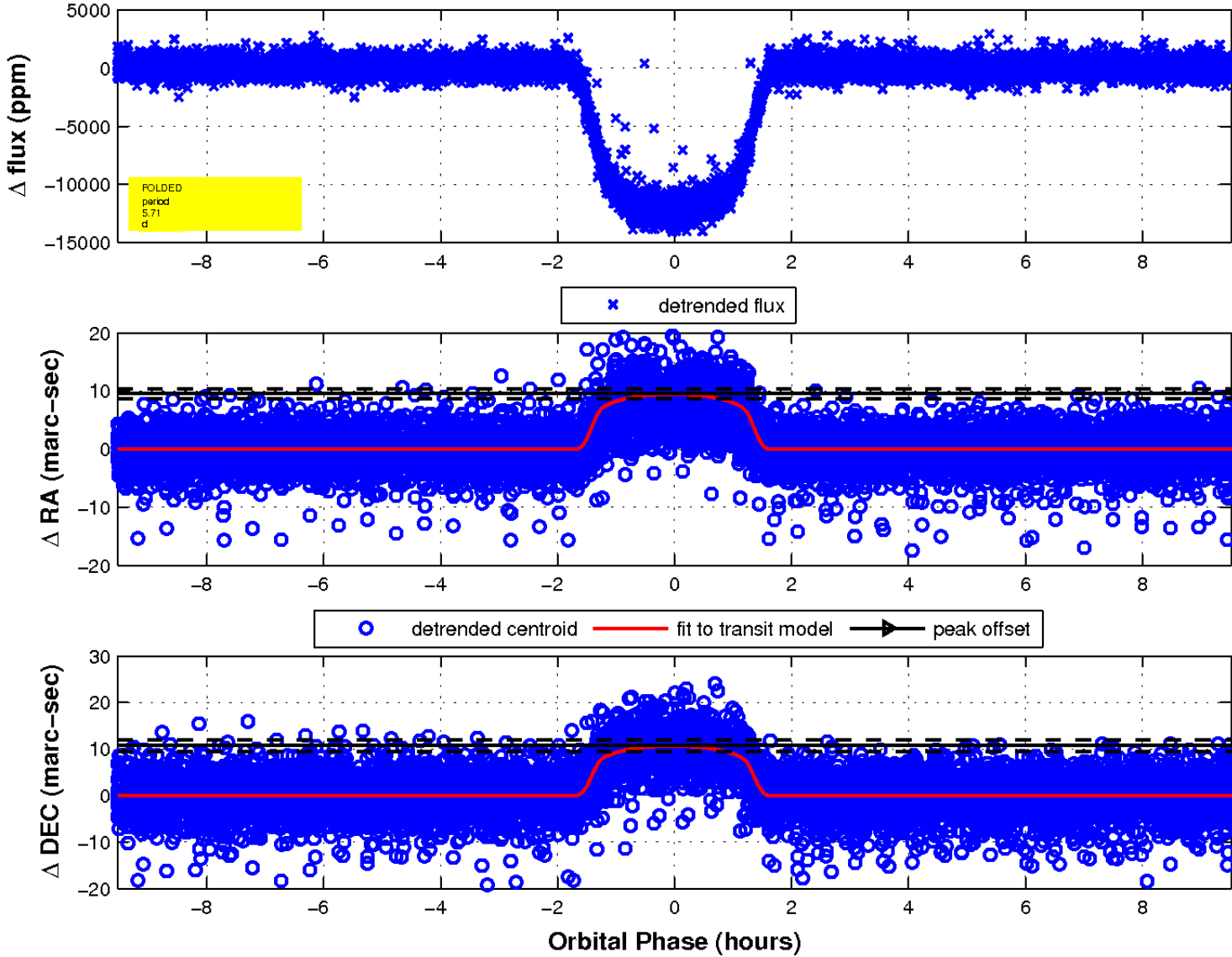
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

