

# KIC 007629518

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007629518-01	OBS	1495.01	15.594633	137.564637	835.5	5.123	41.8	44.0	0.93	5900	2.84	62.95

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007629518-01	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 007629518-01

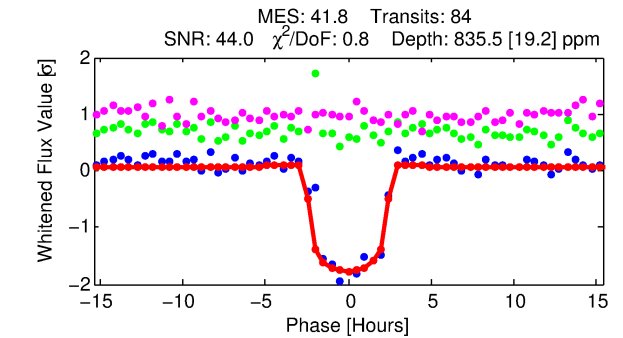
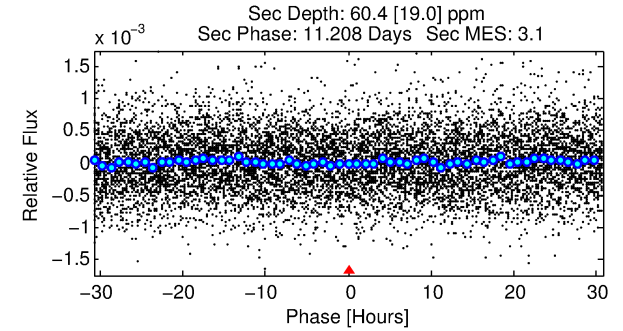
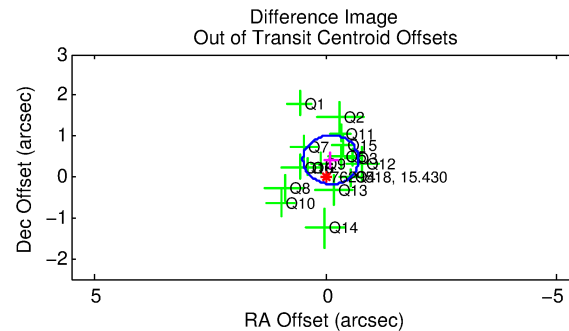
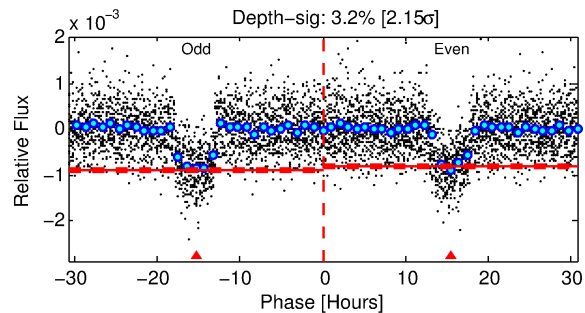
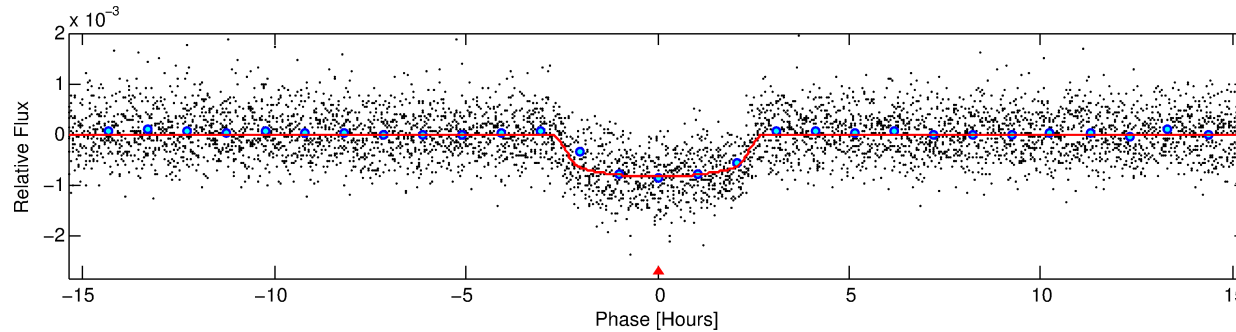
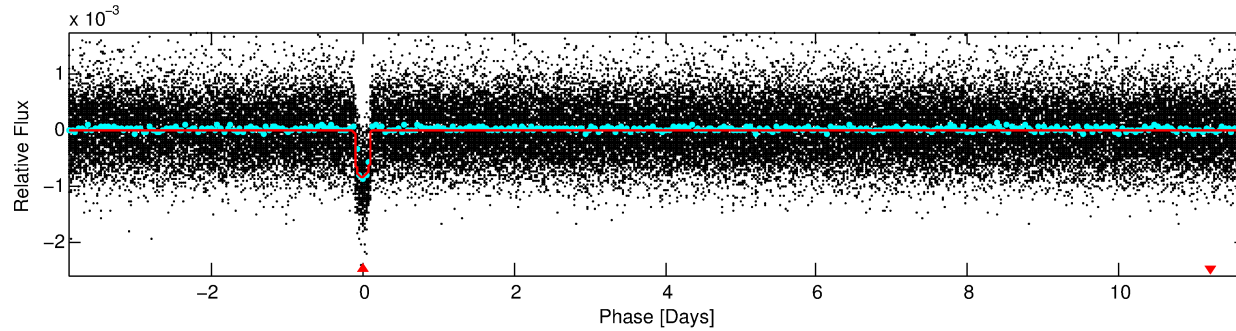
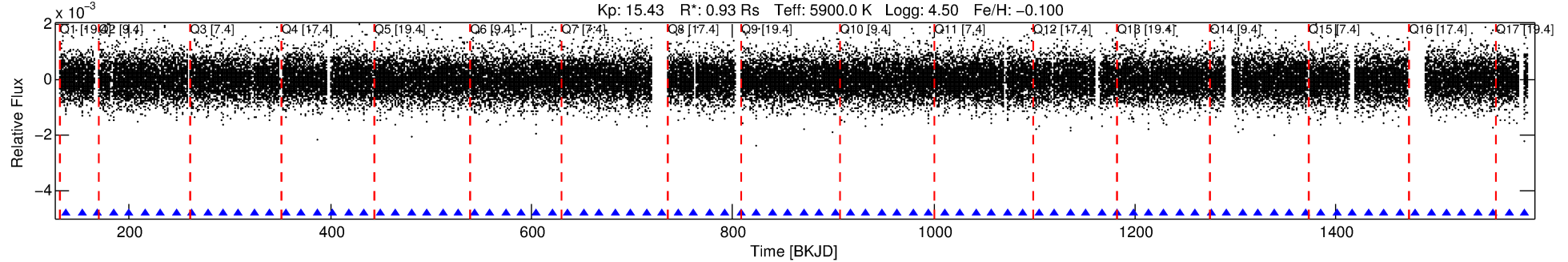
No Significant Match Found

# DV One-Page Summary

KIC: 7629518 Candidate: 1 of 1 Period: 15.595 d

KOI: K01495.01 Corr: 0.997

Kp: 15.43 R\*: 0.93 Rs Teff: 5900.0 K Logg: 4.50 Fe/H: -0.100



## DV Fit Results:

Period = 15.59463 [0.00005] d  
Epoch = 137.5646 [0.0024] BKJD  
Rp/R\* = 0.0280 [0.0055]  
a/R\* = 18.34 [16.60]  
b = 0.66 [0.78]  
Seff = 62.95 [25.53]  
Teq = 718 [73] K  
Rp = 2.84 [1.07] Re  
a = 0.1220 [0.0325] AU  
Ag = 61.46 [38.95] [1.55σ]  
Teffp = 3109 [405] K [5.81σ]

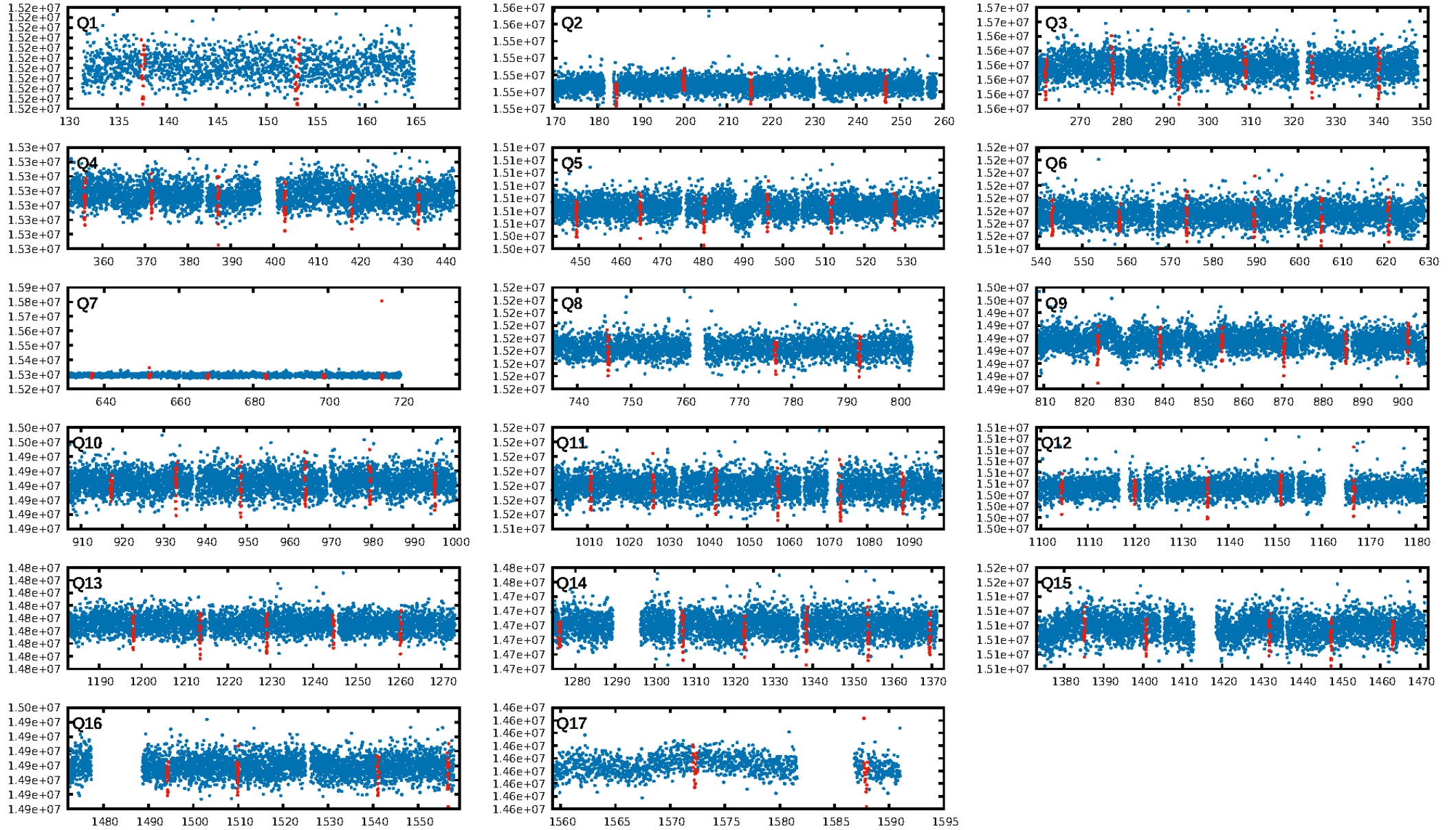
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 87.5%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [80/80]  
GhostDiagnostic-chr: 3.328  
Centroid-sig: 14.1%  
Centroid-so: 0.378 arcsec [1.49σ]  
OotOffset-rm: 0.433 arcsec [2.17σ]  
KicOffset-rm: 0.372 arcsec [2.00σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [17/17]

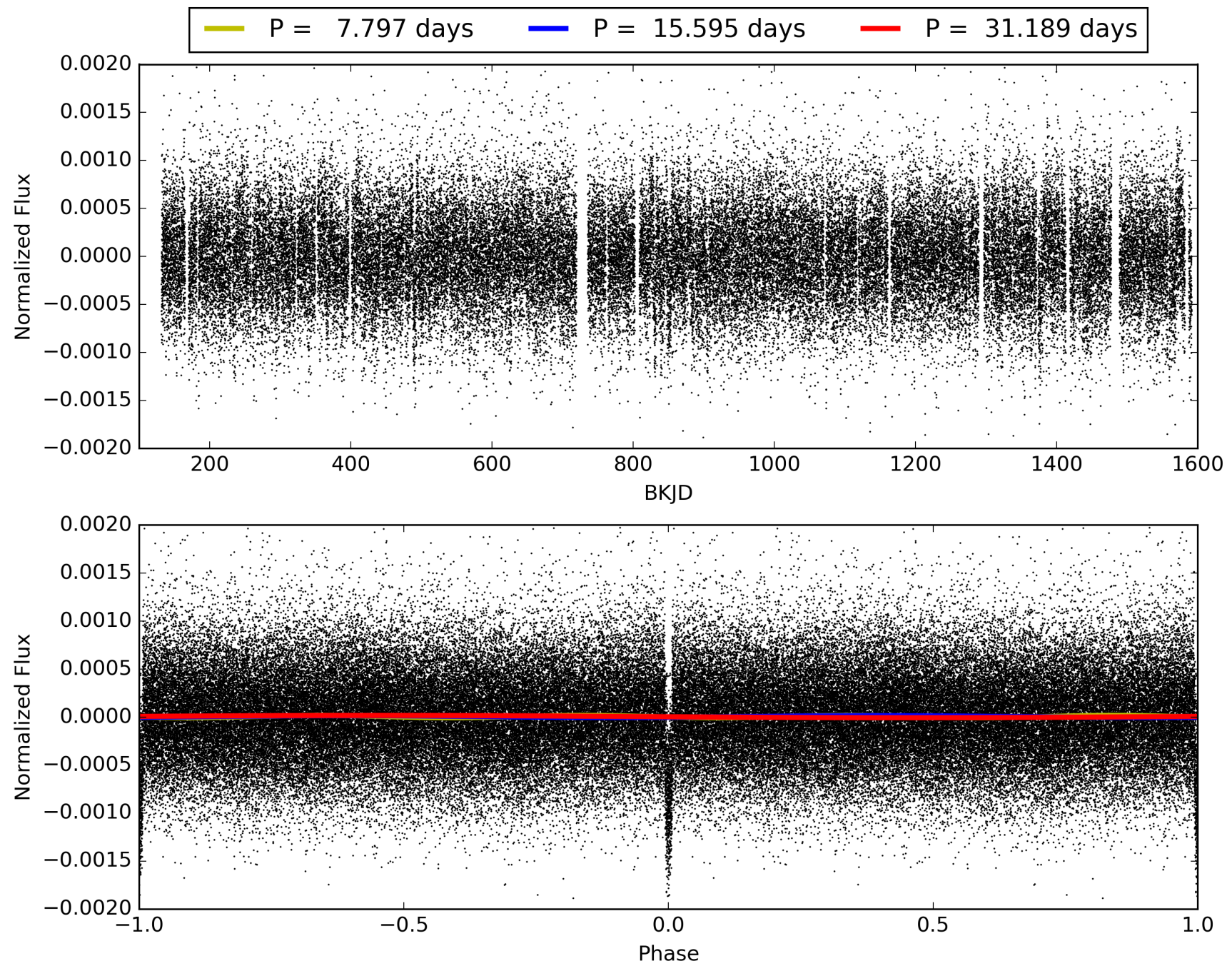
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:59:41 Z

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

# TCE 007629518-01, PDC Light Curves

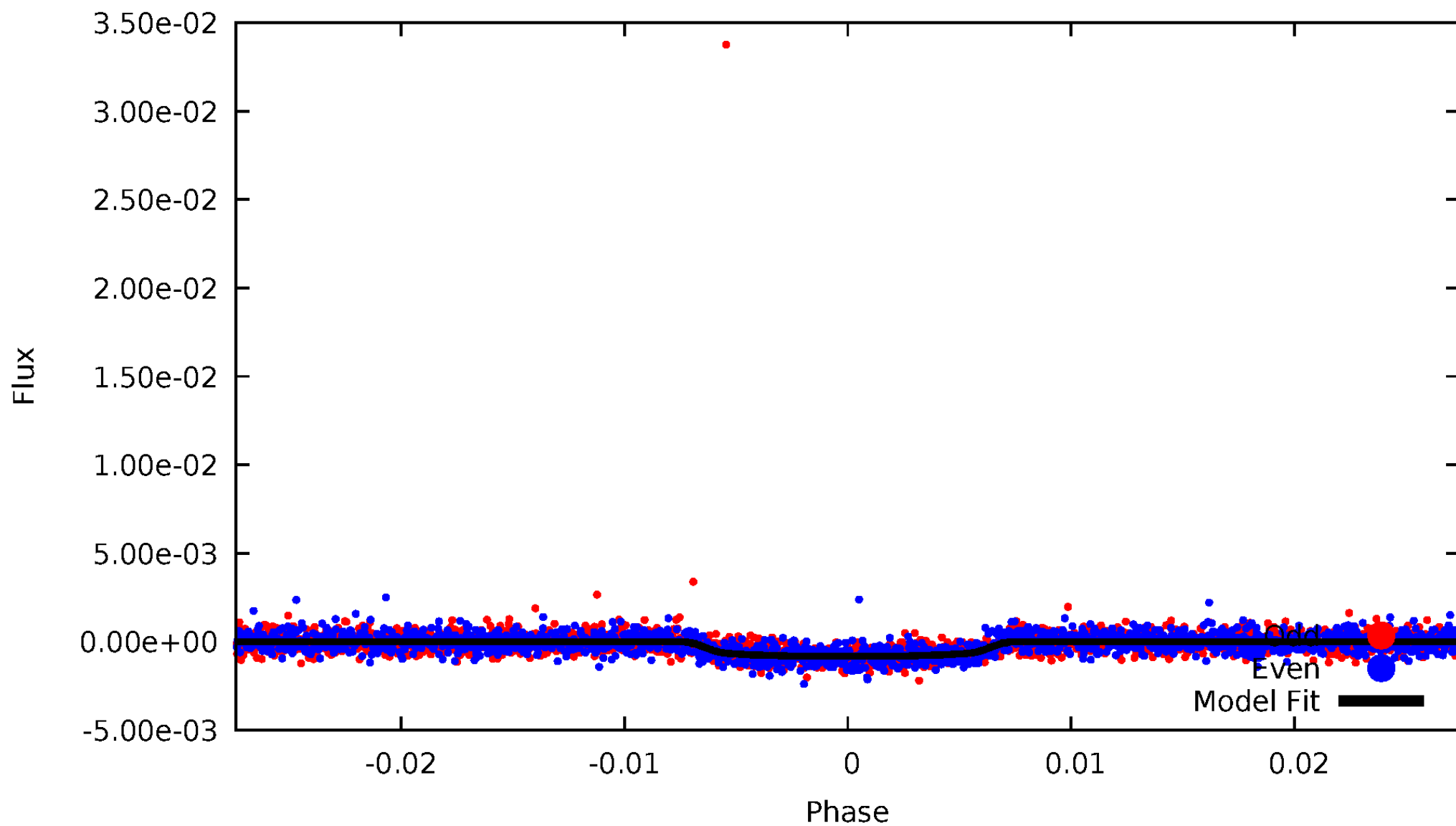


TCE 007629518-01



# DV Odd/Even

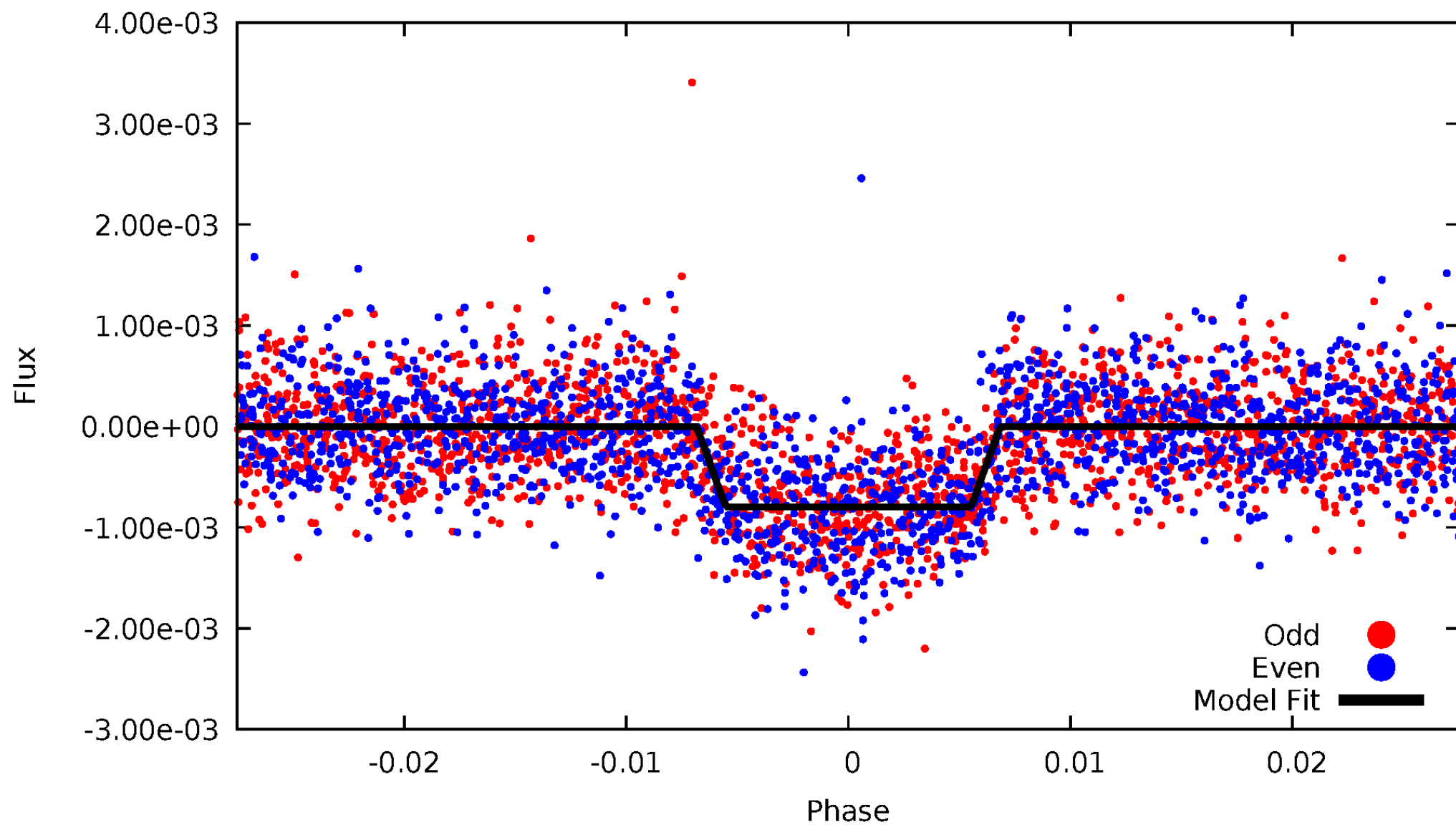
TCE 007629518-01





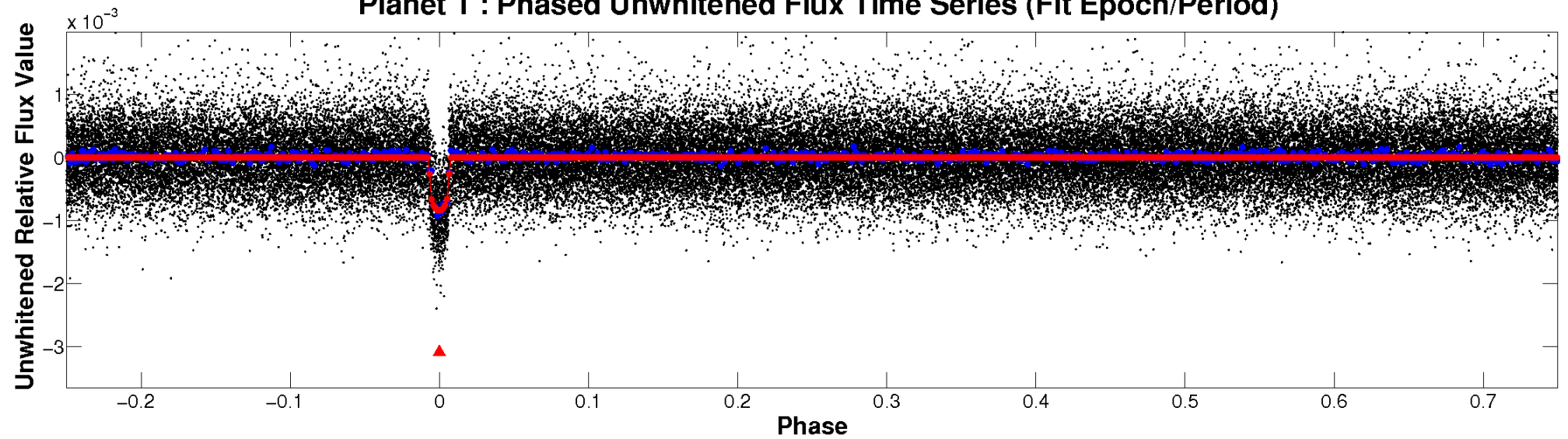
# ALT Odd/Even

TCE 007629518-01

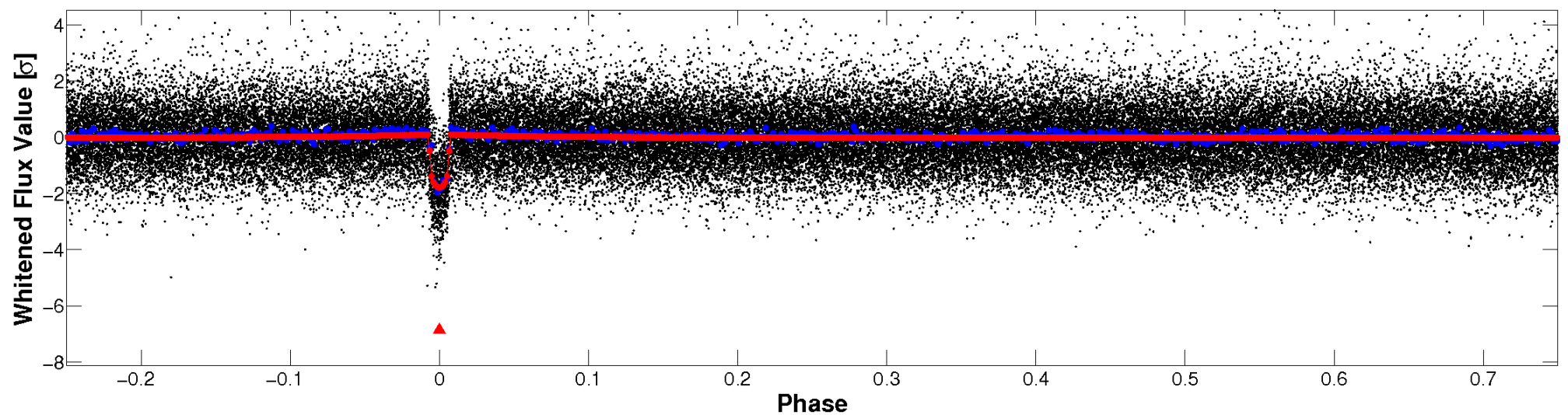


# Non-Whitened Vs. Whitened Light Curve

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

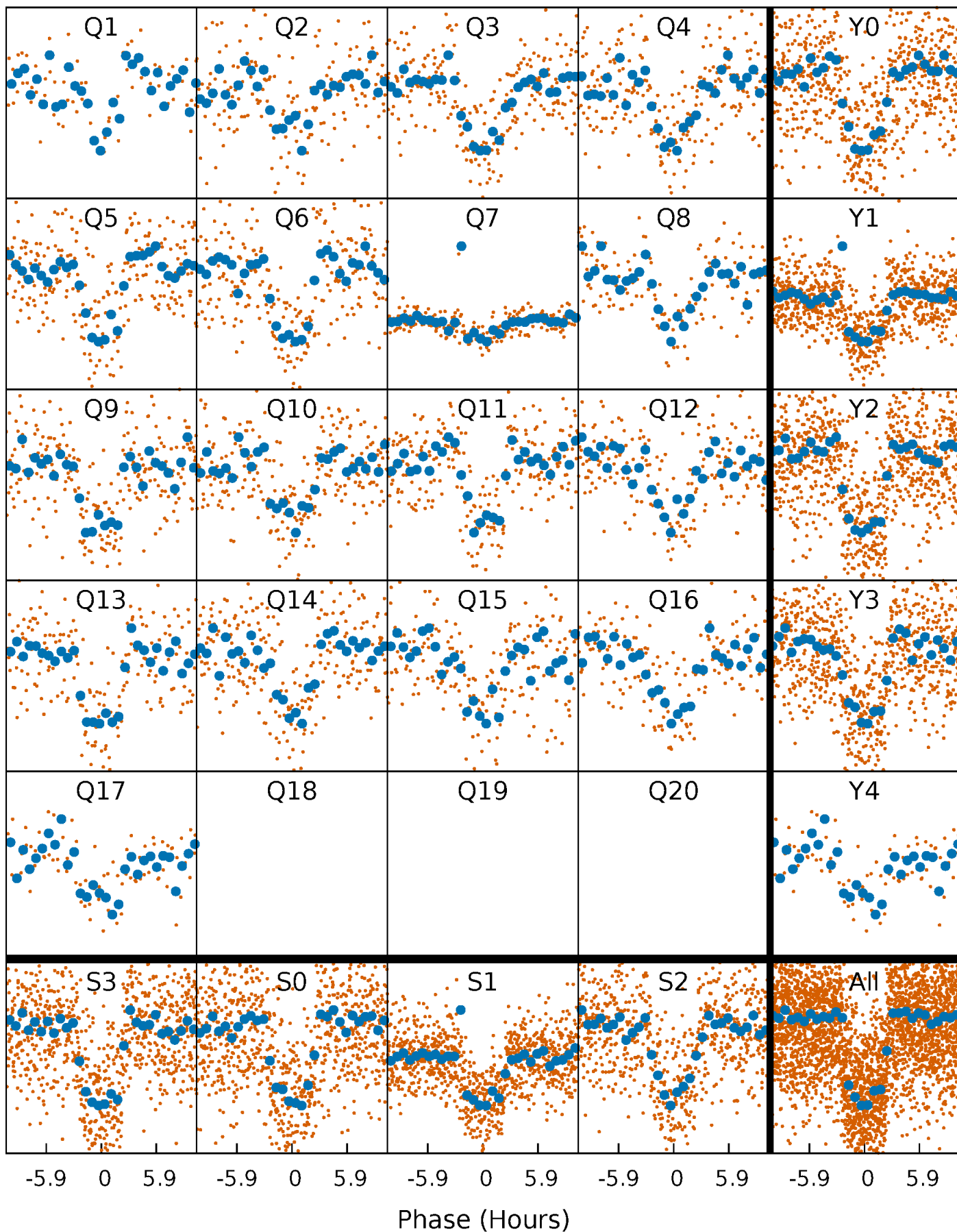


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

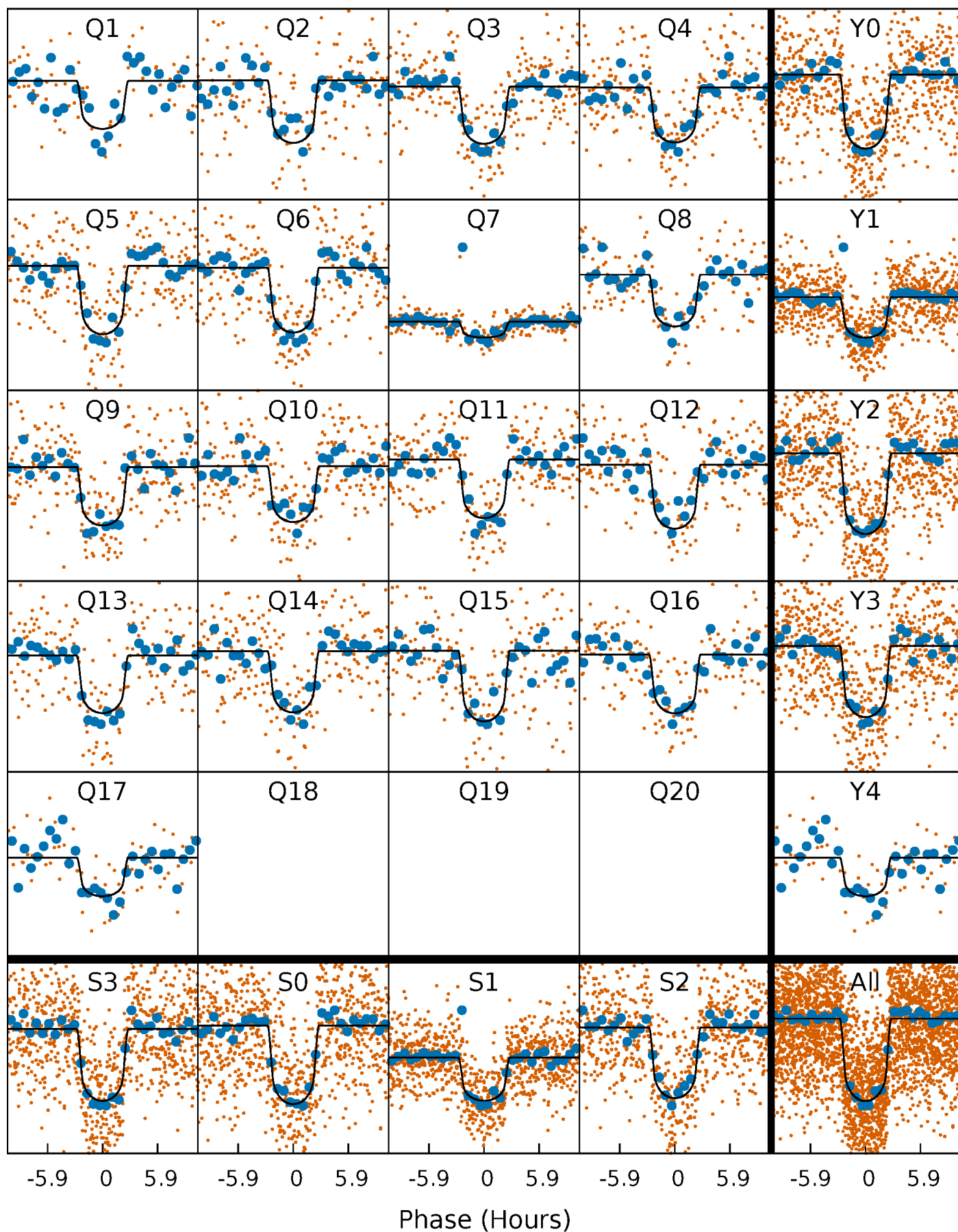
TCE 007629518-01 P= 15.594633 Days  $T_0=137.564637$  (BKJD)





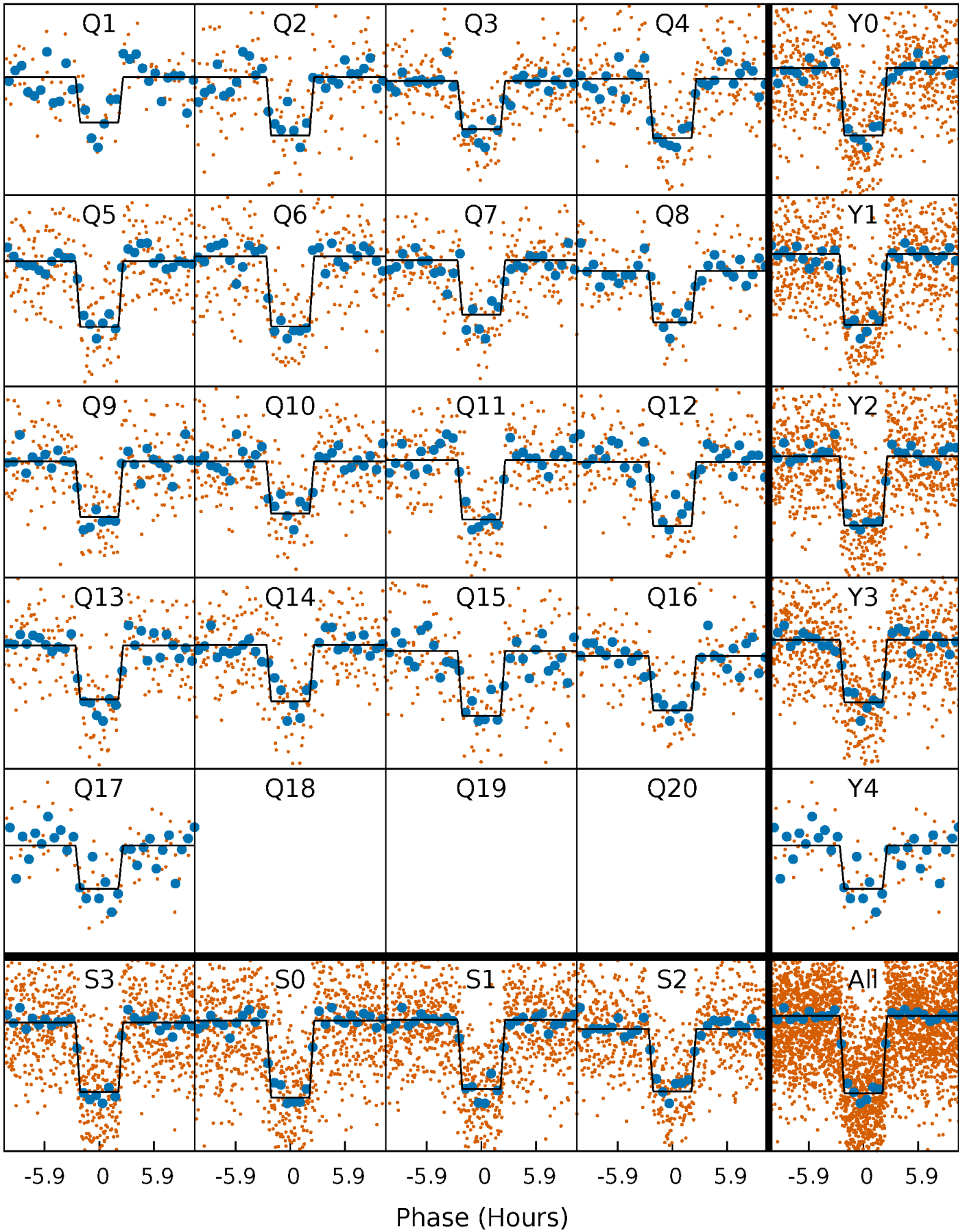
# DV Quarter-Phased Transit Curves

TCE 007629518-01 P= 15.594633 Days  $T_0=137.564637$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

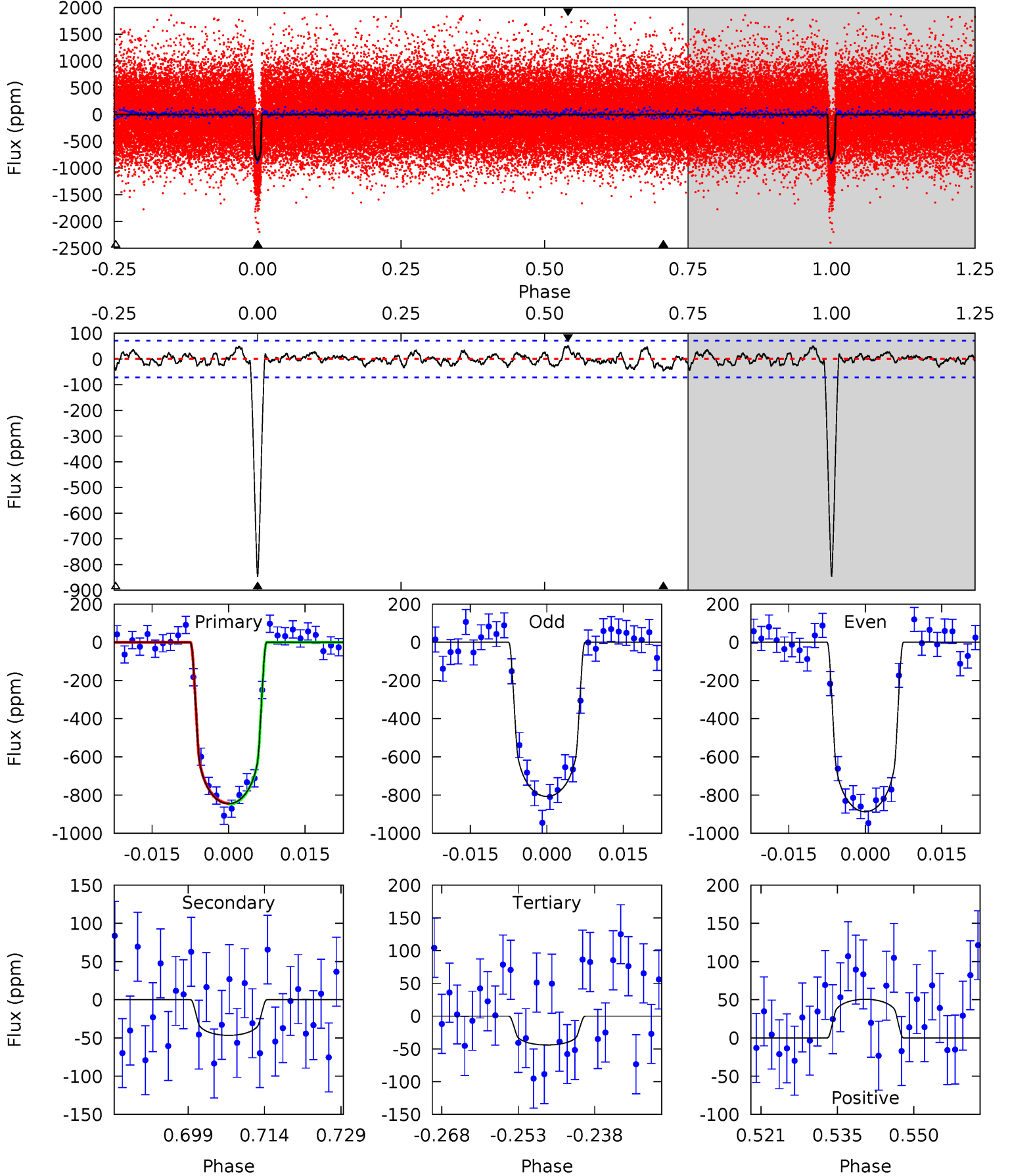
TCE 007629518-01 P= 15.594536 Days  $T_0=137.569776$  (BKJD)



# DV Model-Shift Uniqueness Test

007629518-01,  $P = 15.594633$  Days,  $E = 121.970004$  Days

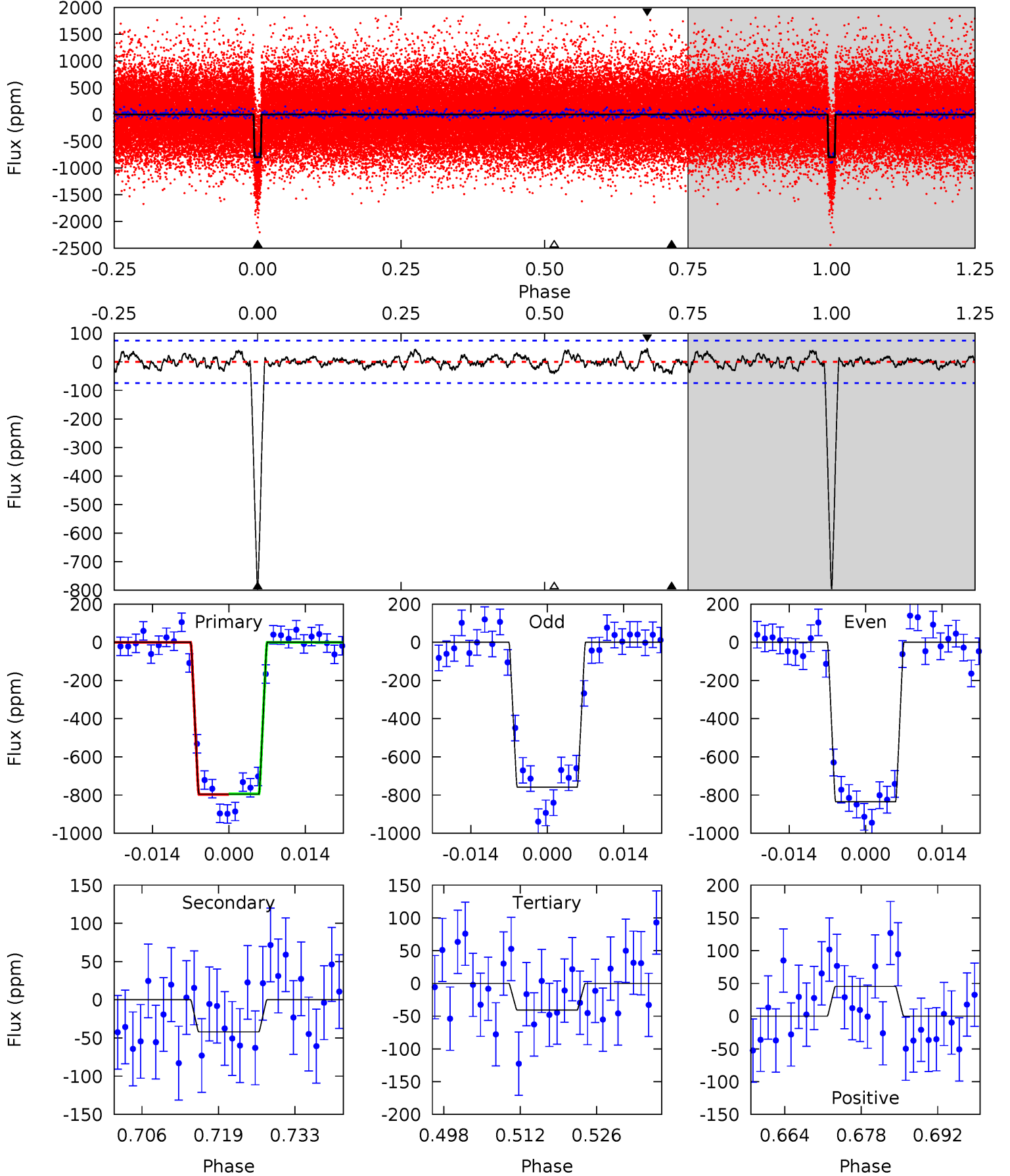
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.2	3.21	3.04	3.49	4.95	2.44	1.18	55.2	54.7	0.17	-0.28	2.75	0.94	0.06	0.16



# Alt Model-Shift Uniqueness Test

007629518-01,  $P = 15.594536$  Days,  $E = 121.975240$  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
53.1	2.80	2.72	3.03	4.96	2.46	1.08	50.4	50.1	0.08	-0.23	2.55	1.01	0.05	0.09



### Stellar Parameters For KIC 007629518

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5900^{+176}_{-193}$	$4.500^{+0.052}_{-0.208}$	$-0.100^{+0.250}_{-0.300}$	$0.929^{+0.297}_{-0.099}$	$0.995^{+0.127}_{-0.127}$	$1.751^{+0.489}_{-0.913}$
	+3%/-3%	+1%/-5%	+250%/-300%	+32%/-11%	+13%/-13%	+28%/-52%
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 007629518-01 / KOI 1495.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-47 \pm 15$	$2.98^{+0.68}_{-0.71}$	$1025^{+74}_{-50}$	$3405^{+320}_{-271}$	$41^{+36}_{-18}$
Alt.	$-42 \pm 15$	$2.96^{+0.81}_{-0.63}$	$1025^{+77}_{-49}$	$3335^{+303}_{-291}$	$36^{+28}_{-17}$

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



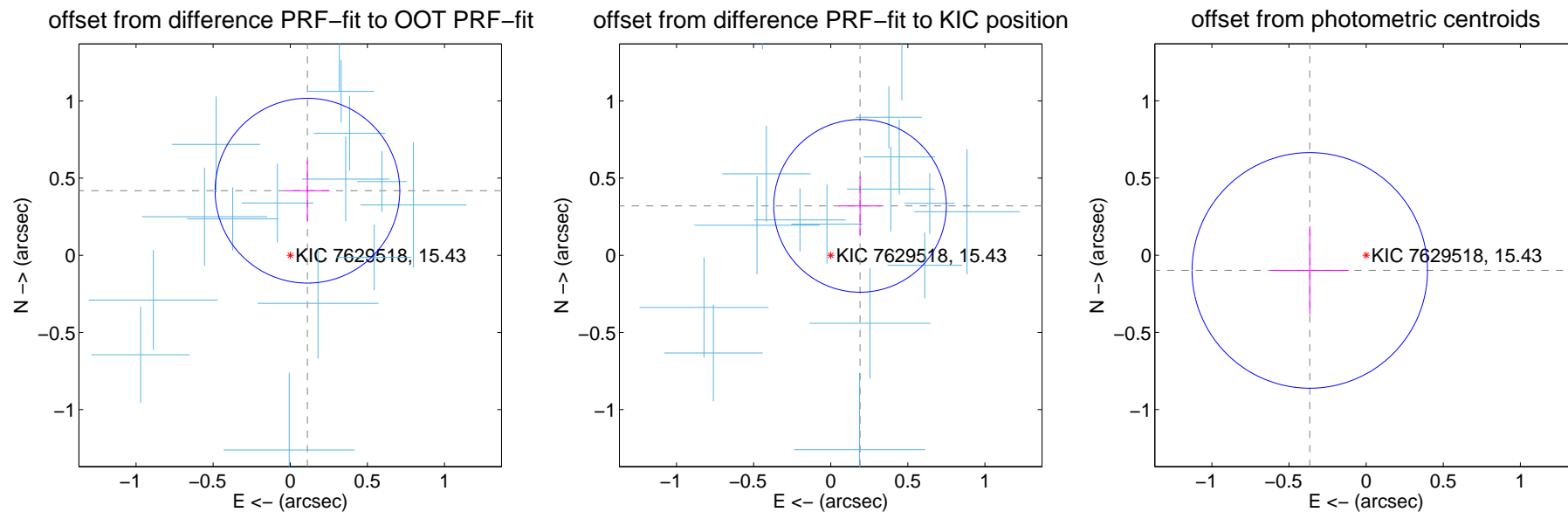
## DV Centroid Data

Supplemental centroid analysis for 007629518-01. Kepler magnitude: 15.43. Transit SNR 44.03

There are 16 quarters with good PRF difference image offsets

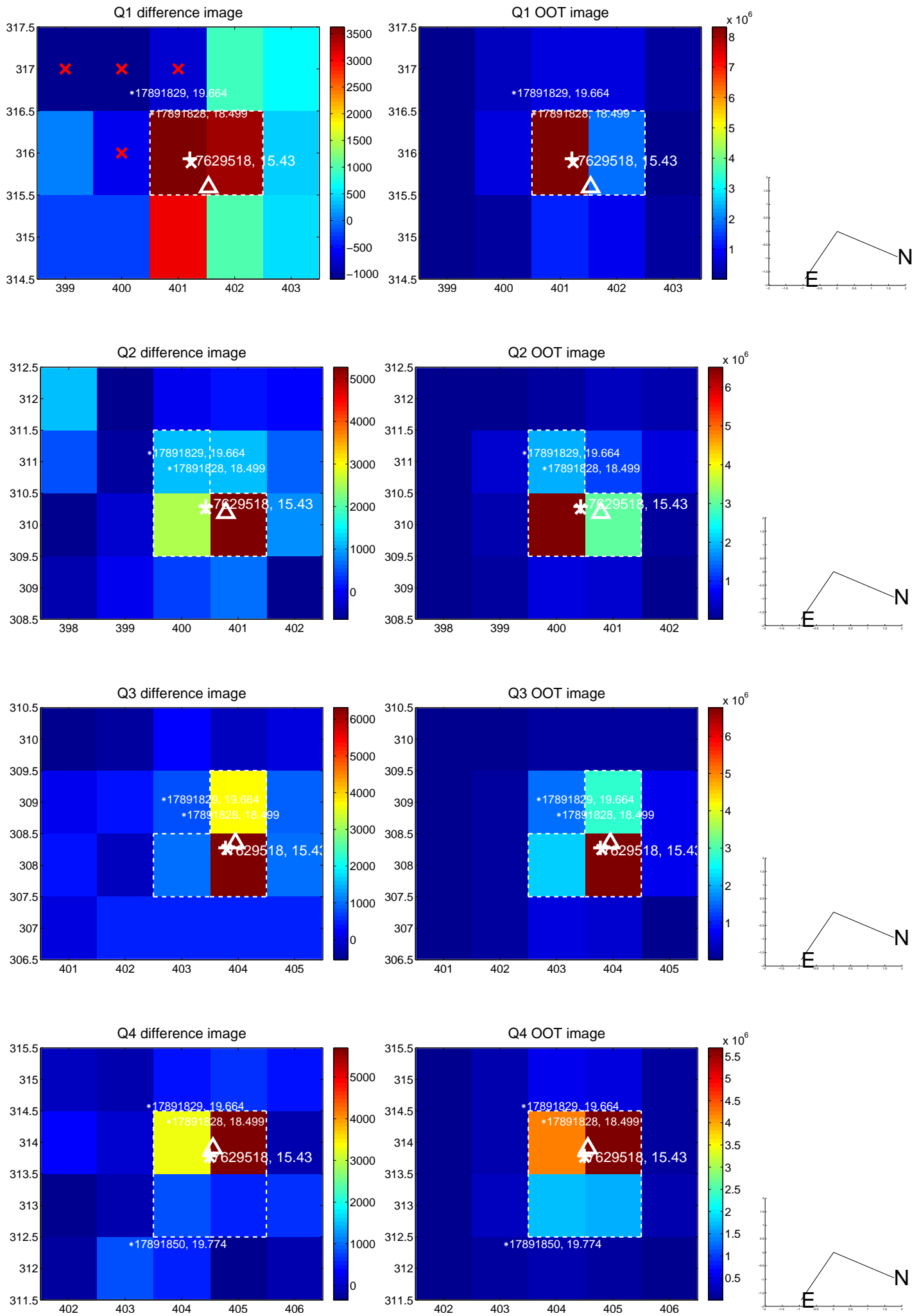
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.433 \pm 0.200$	2.17	$-0.111 \pm 0.144$	$0.418 \pm 0.195$
PRF-fit source offset from KIC position	$0.372 \pm 0.186$	2.00	$-0.190 \pm 0.140$	$0.320 \pm 0.190$
photometric centroid source offset	$0.38 \pm 0.25$	1.49	$0.37 \pm 0.25$	$-0.10 \pm 0.29$

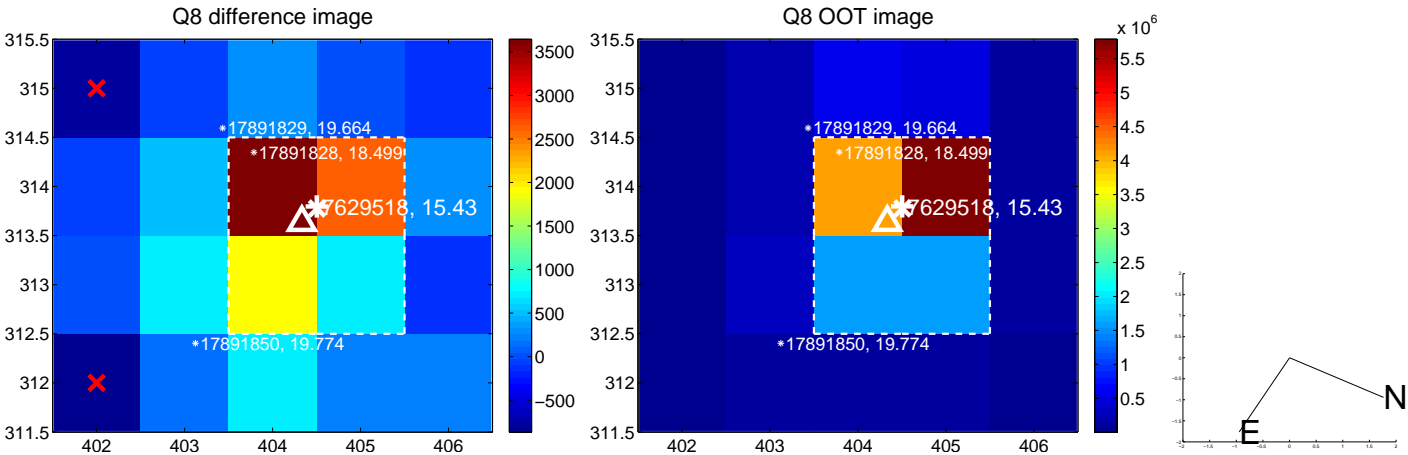
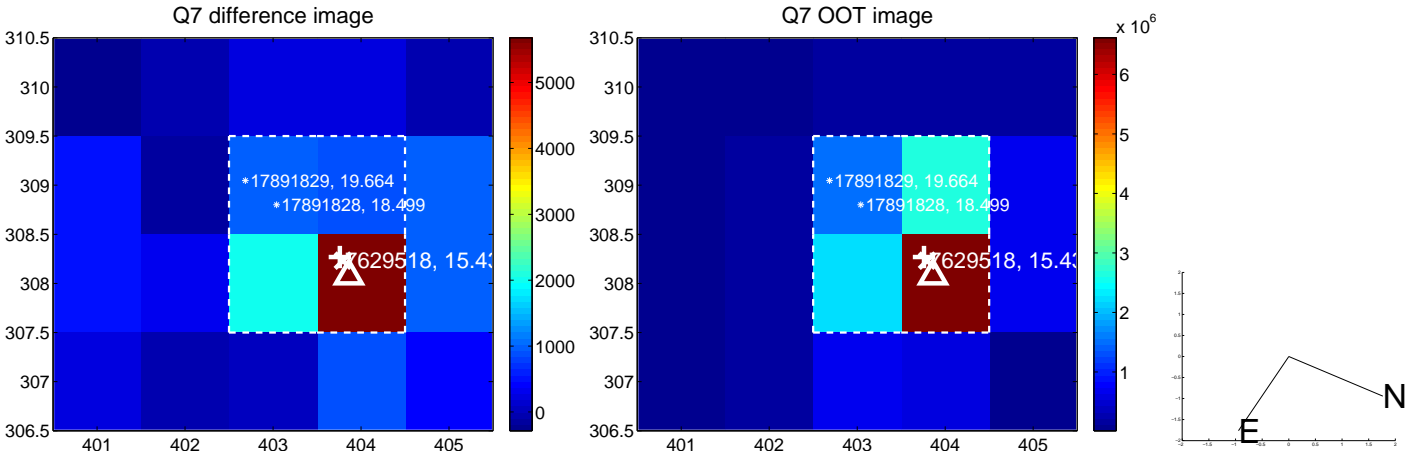
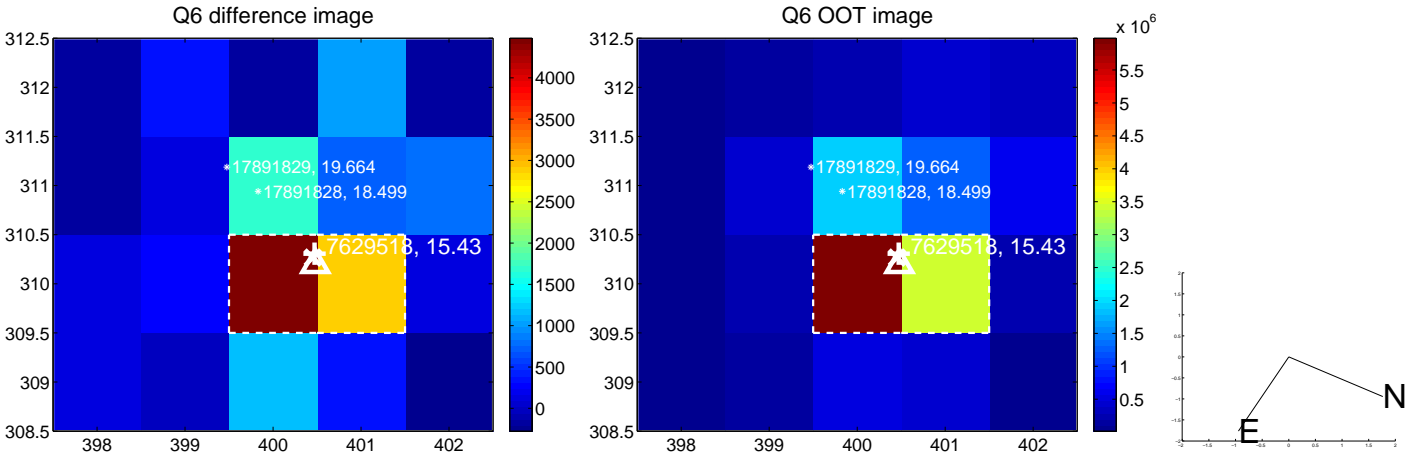
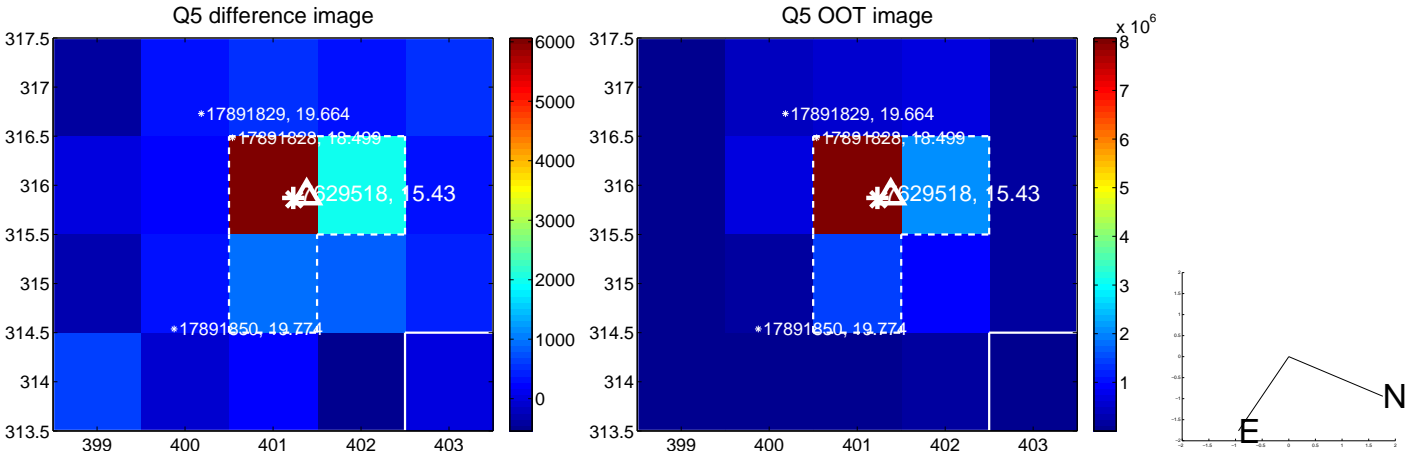


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

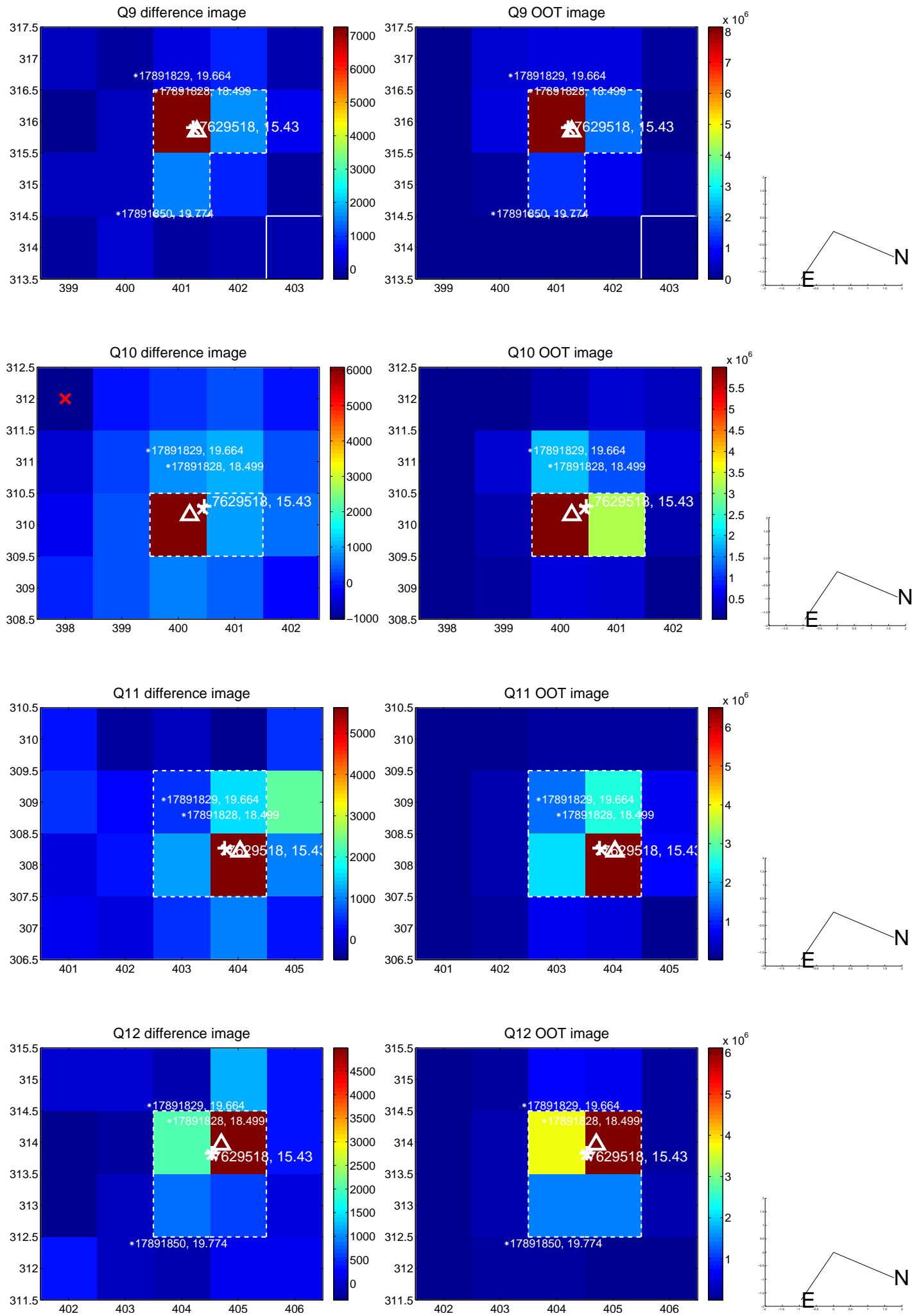
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



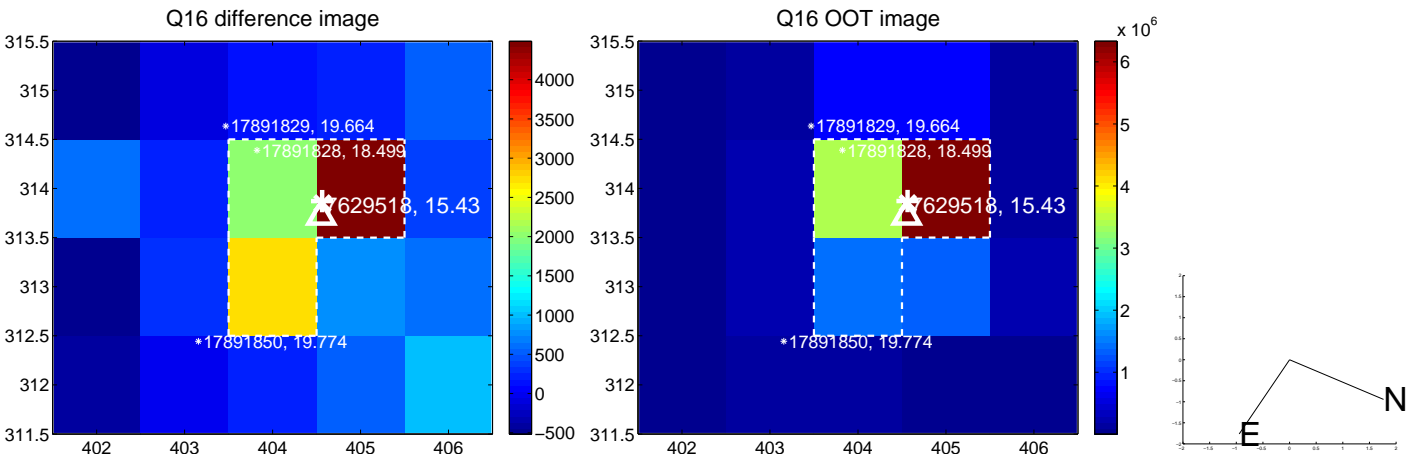
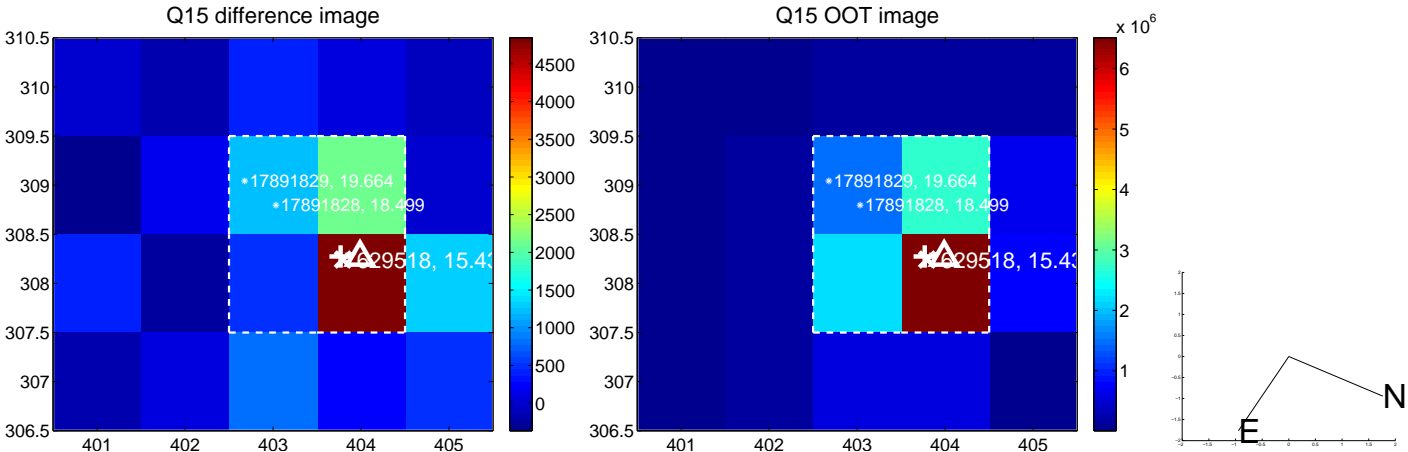
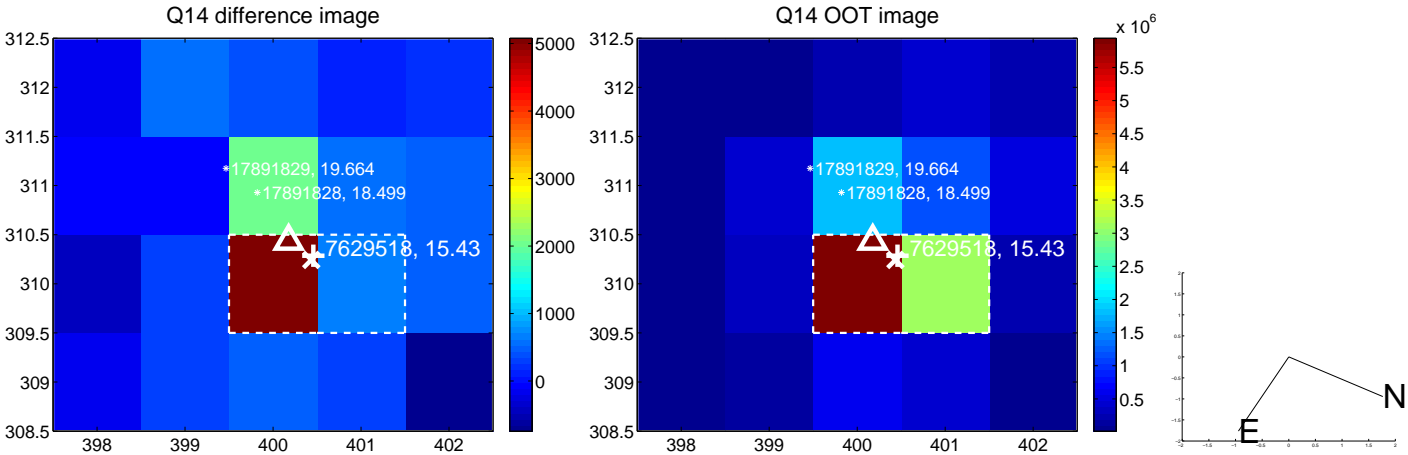
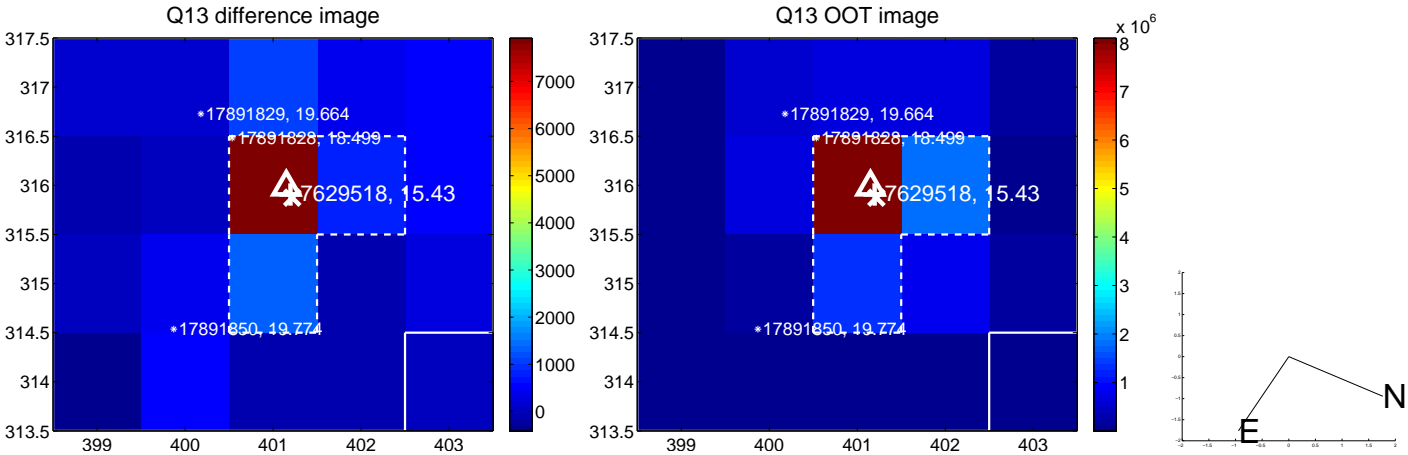
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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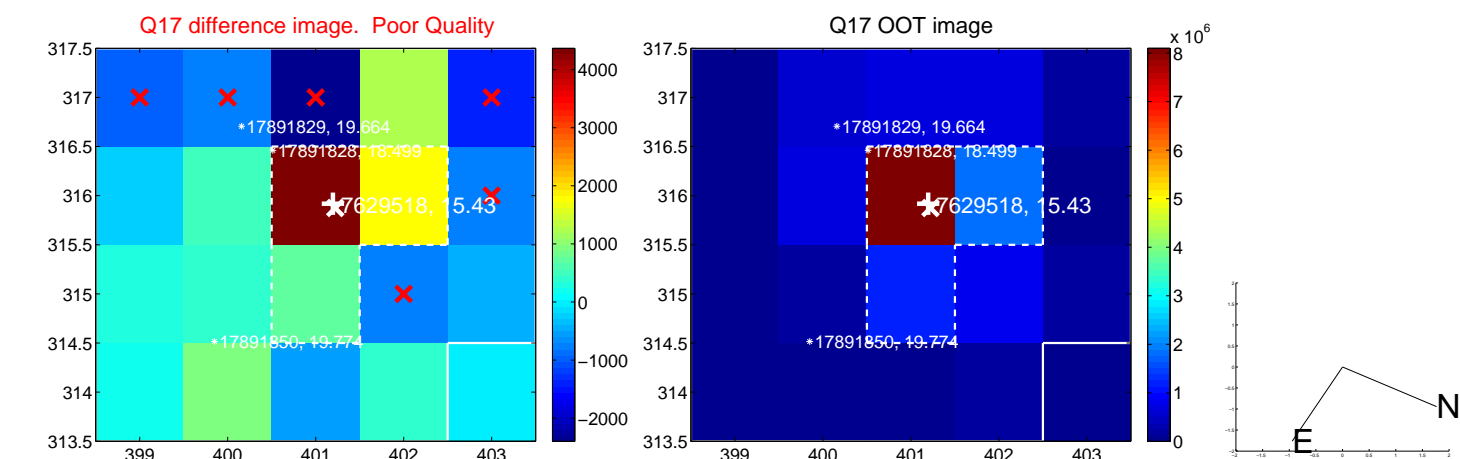


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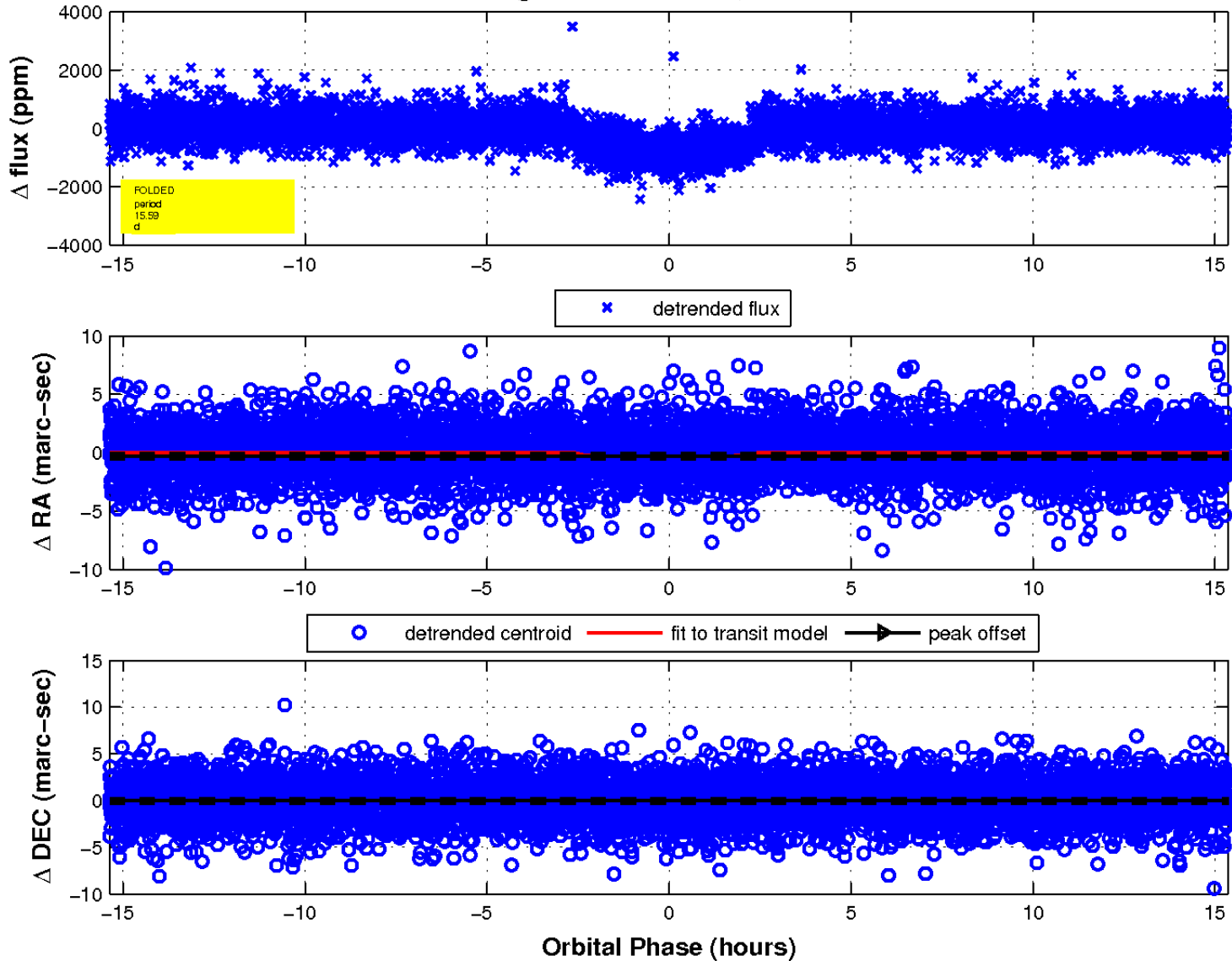




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

