

# KIC 006891512

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006891512-01	OBS	5335.01	1.752562	132.722428	365377.9	6.208	36851.9	17867.8	1.79	5853	121.45	3928.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006891512-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_SATURATED

**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 006891512-01

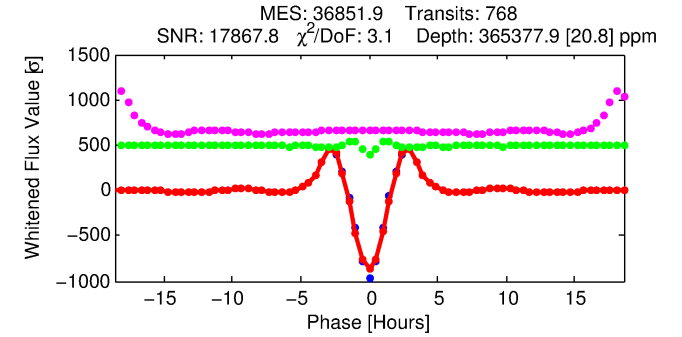
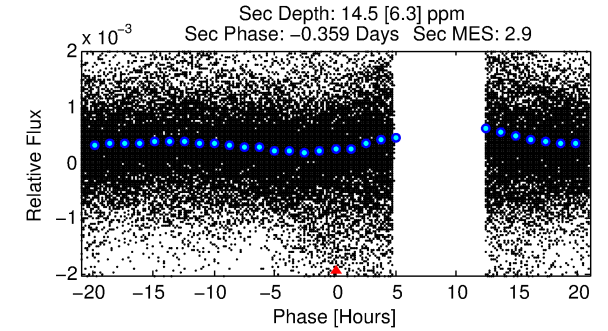
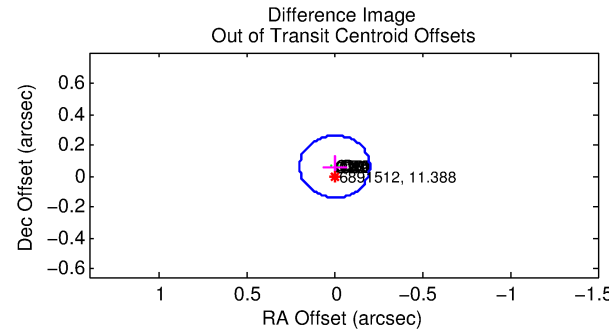
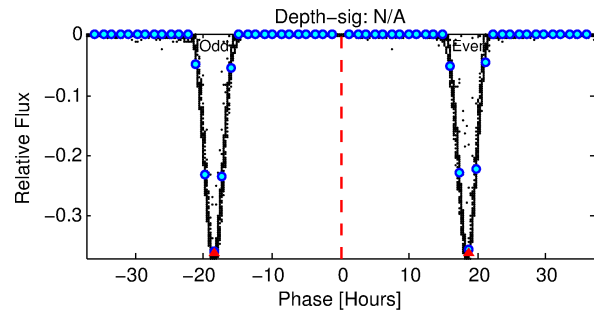
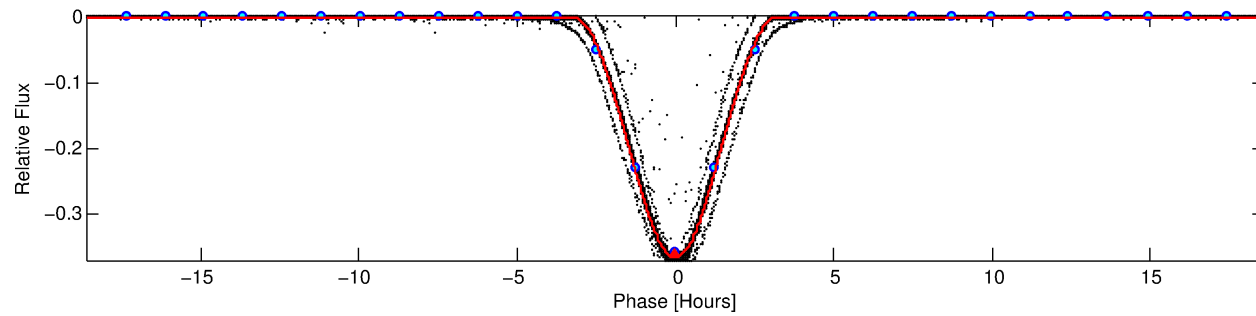
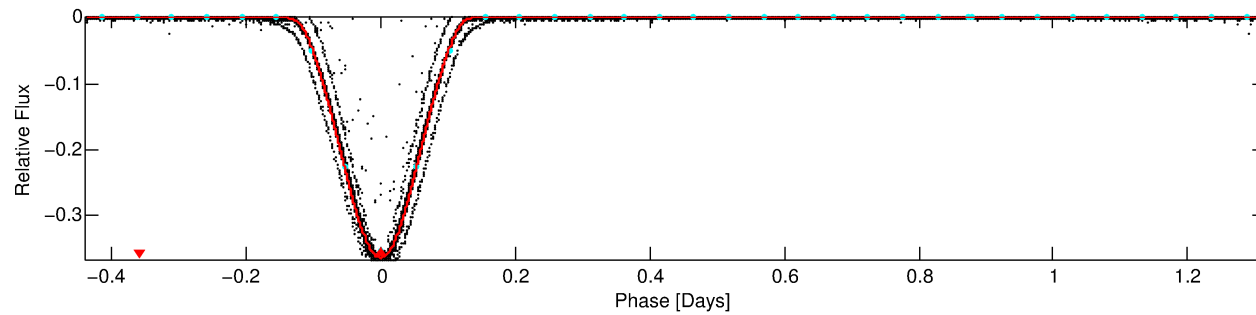
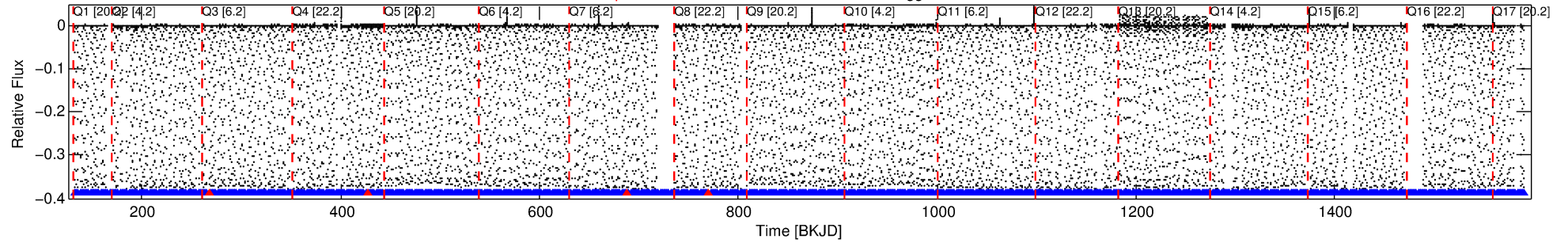
No Significant Match Found

# DV One-Page Summary

KIC: 6891512 Candidate: 1 of 1 Period: 1.753 d

KOI: K05335.01 Corr: 0.991

Kp: 11.39 R\*: 1.79 Rs Teff: 5853.0 K Logg: 3.97 Fe/H: -0.040



## DV Fit Results:

Period = 1.75256 [0.00000] d  
Epoch = 132.7224 [0.0000] BKJD  
Rp/R\* = 0.6200 [0.0004]  
a/R\* = 3.47 [0.00]  
b = 0.52 [0.00]  
Seff = 3928.44 [2819.05]  
Teff = 2019 [362] K  
Rp = 121.45 [53.93] Re  
a = 0.0294 [0.0129] AU  
Ag = 0.00 [0.00] [-2580.32σ]  
Teffp = 459 [51] K [-4.27σ]

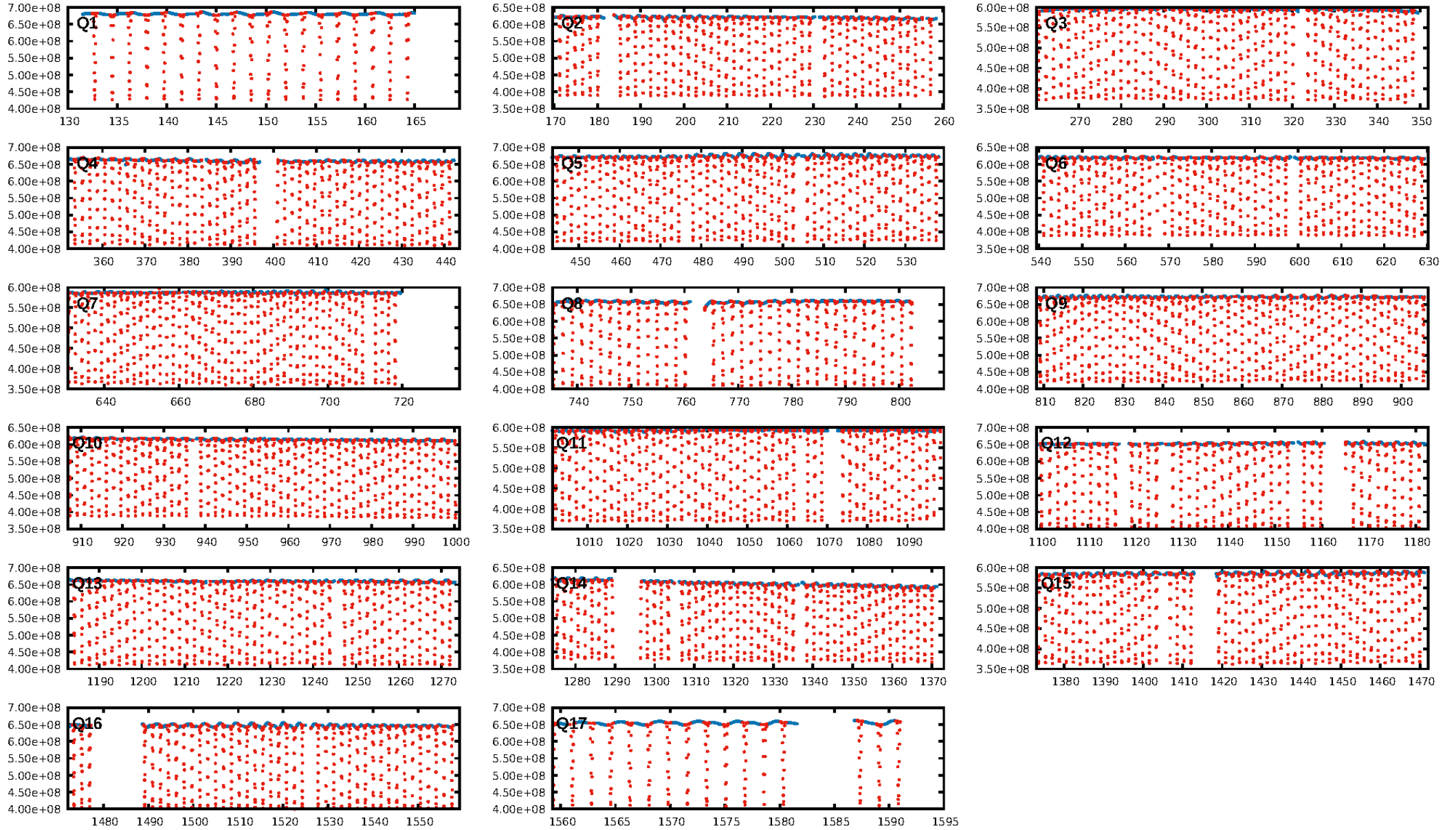
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [729/733]  
GhostDiagnostic-chr: 1.535  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.062 arcsec [0.93σ]  
KicOffset-rm: 0.055 arcsec [0.78σ]  
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]

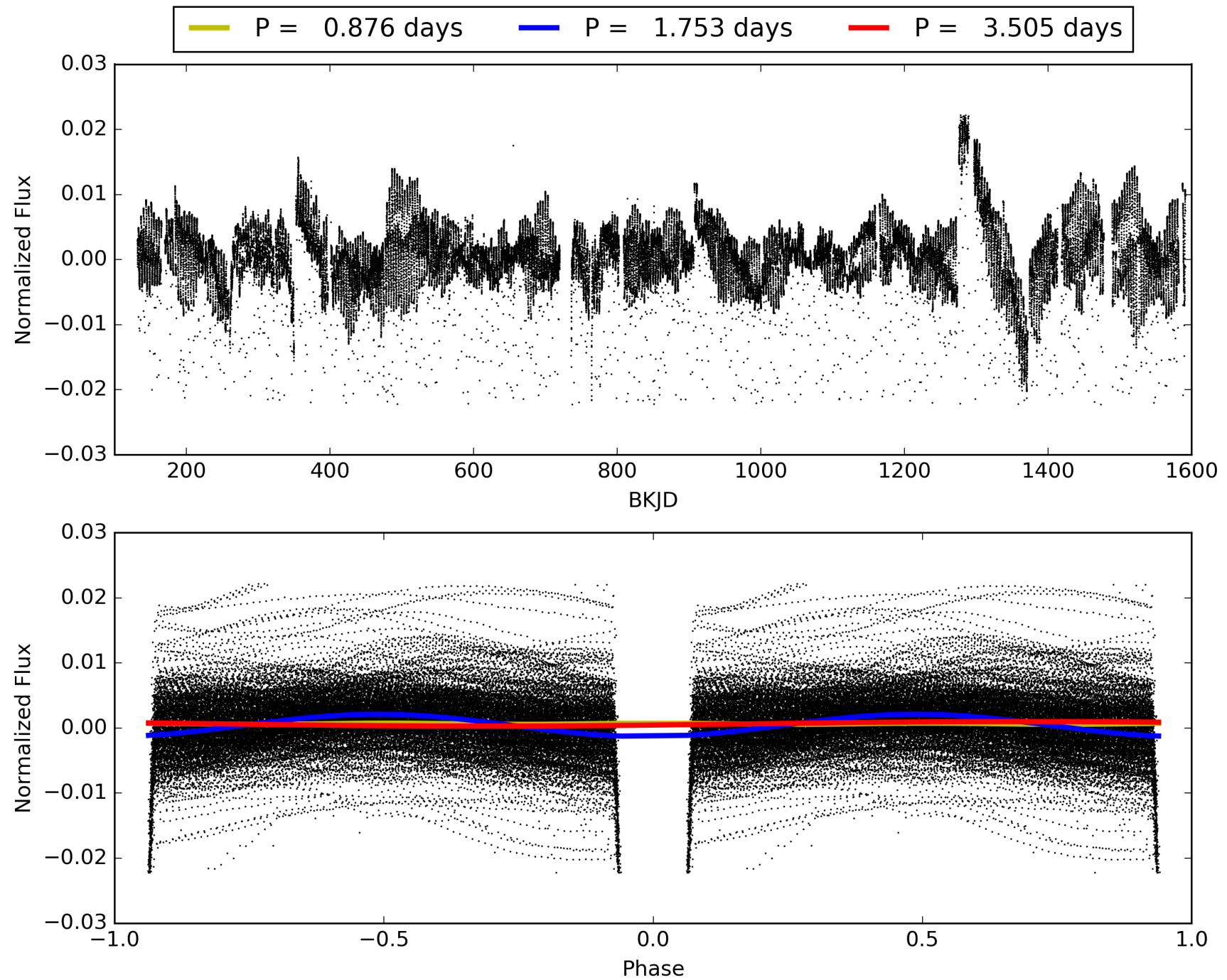
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:42:14 Z

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

# TCE 006891512-01, PDC Light Curves

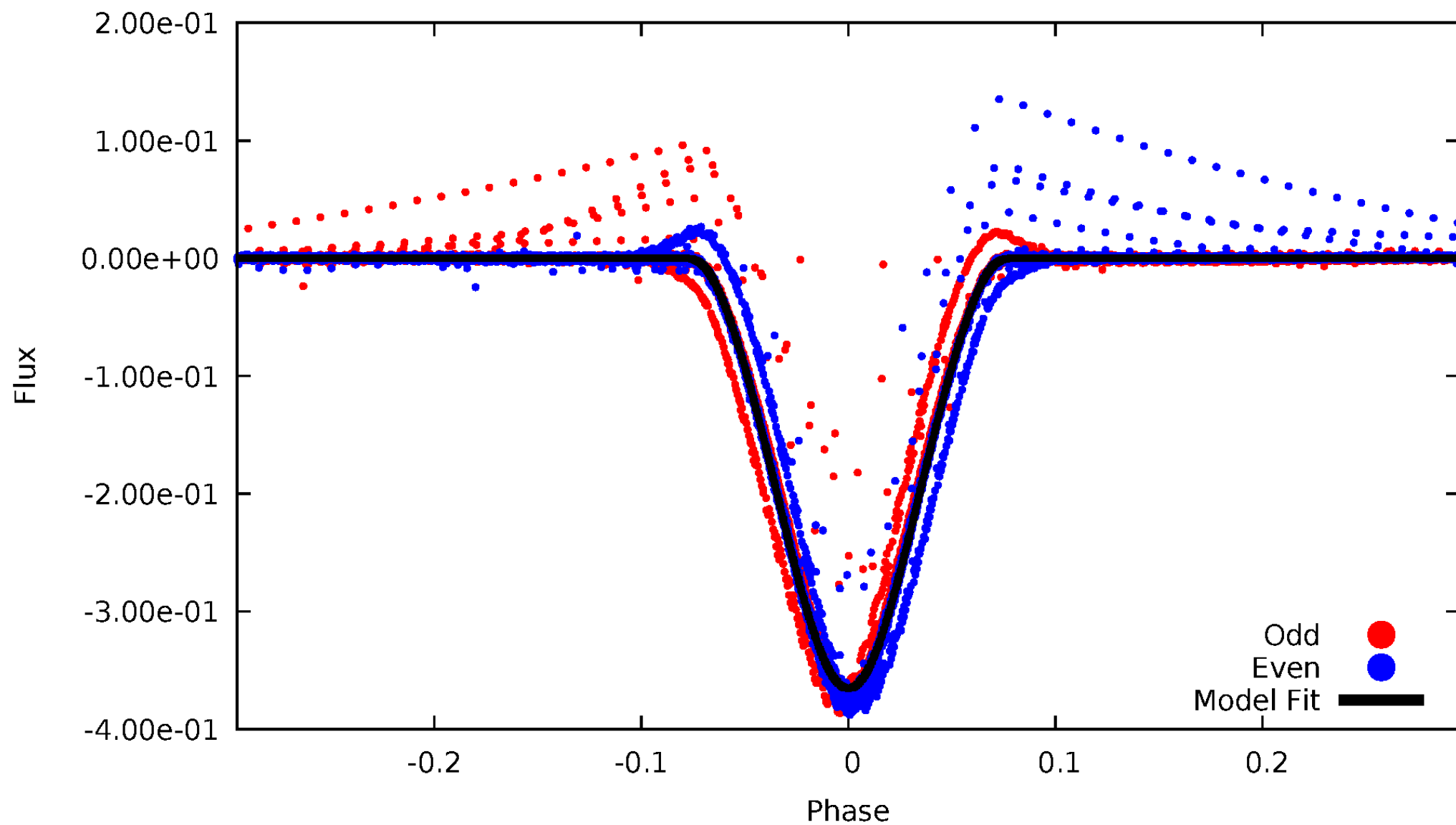


TCE 006891512-01



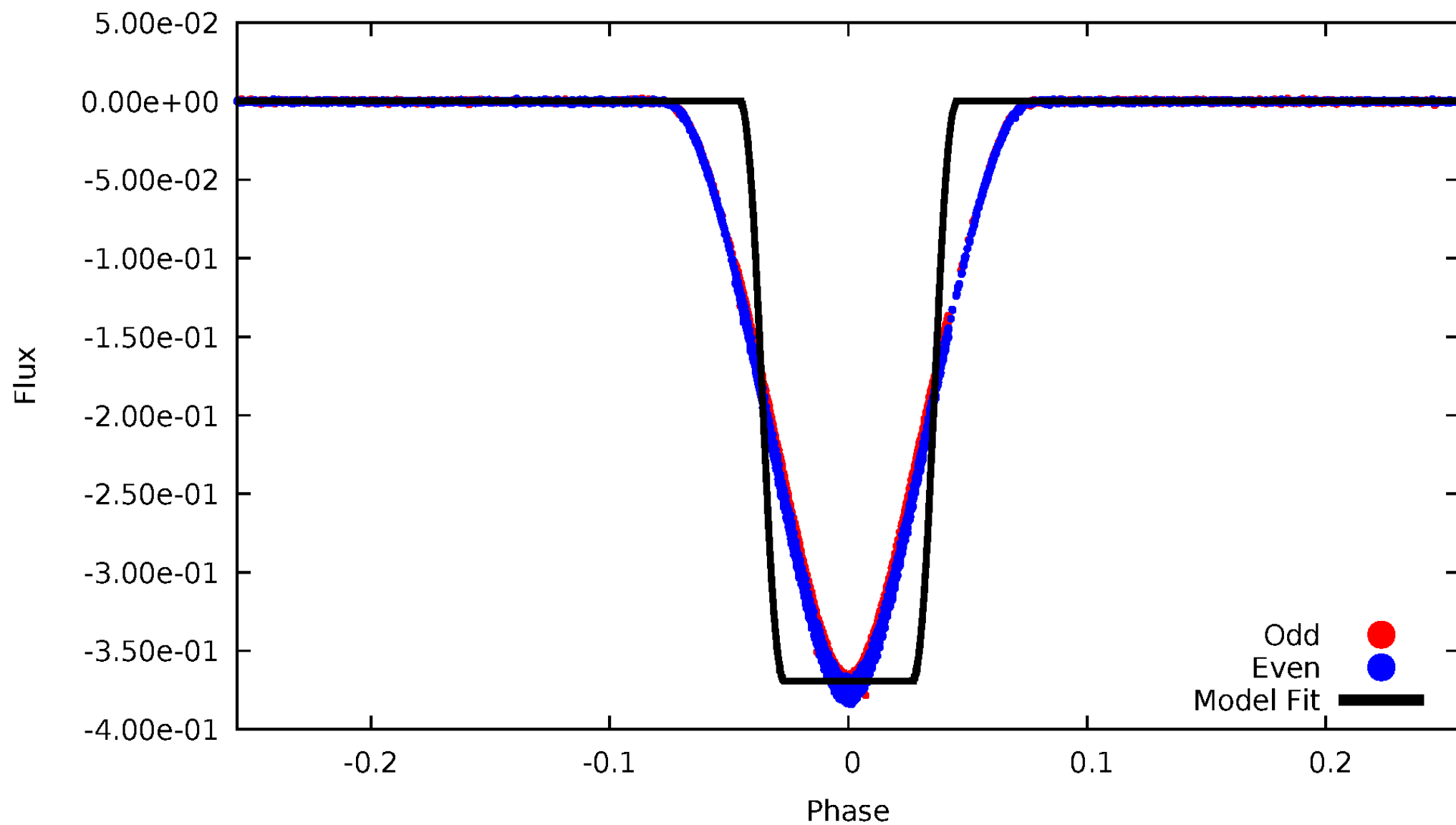
# DV Odd/Even

TCE 006891512-01



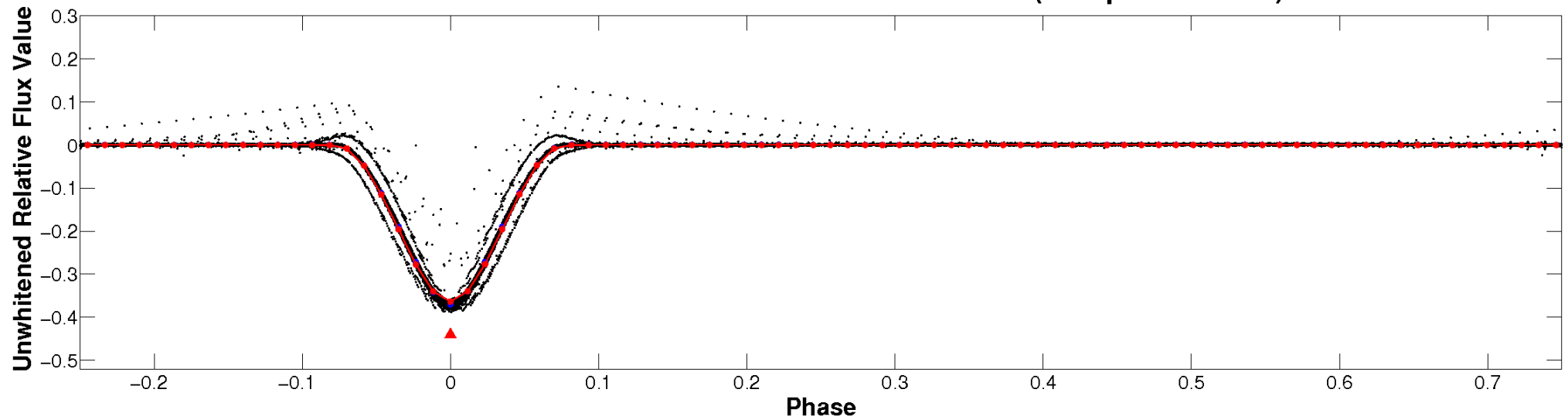
# ALT Odd/Even

TCE 006891512-01

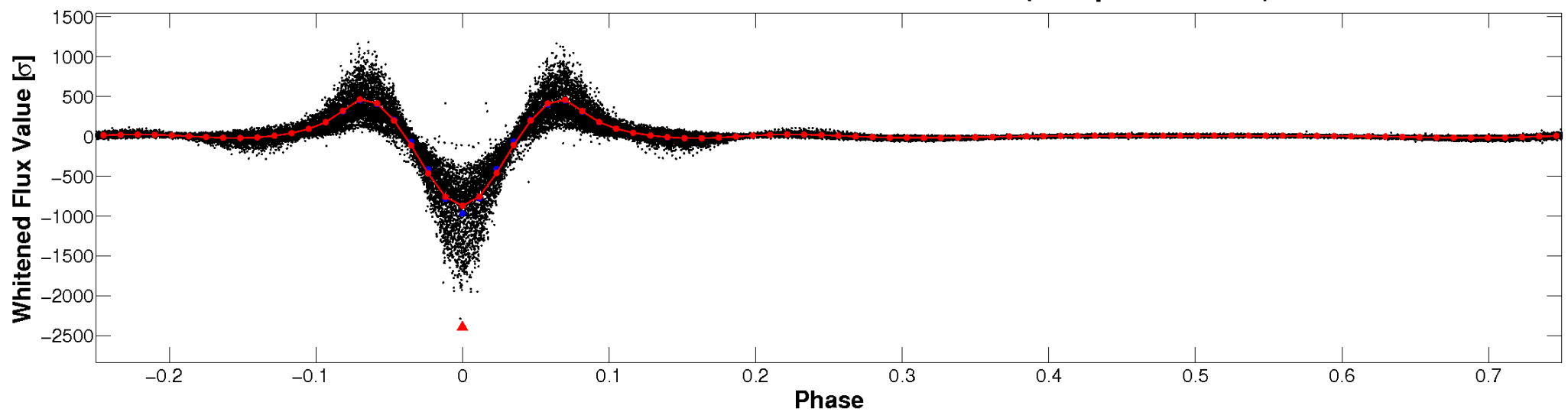


# Non-Whitened Vs. Whitened Light Curve

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

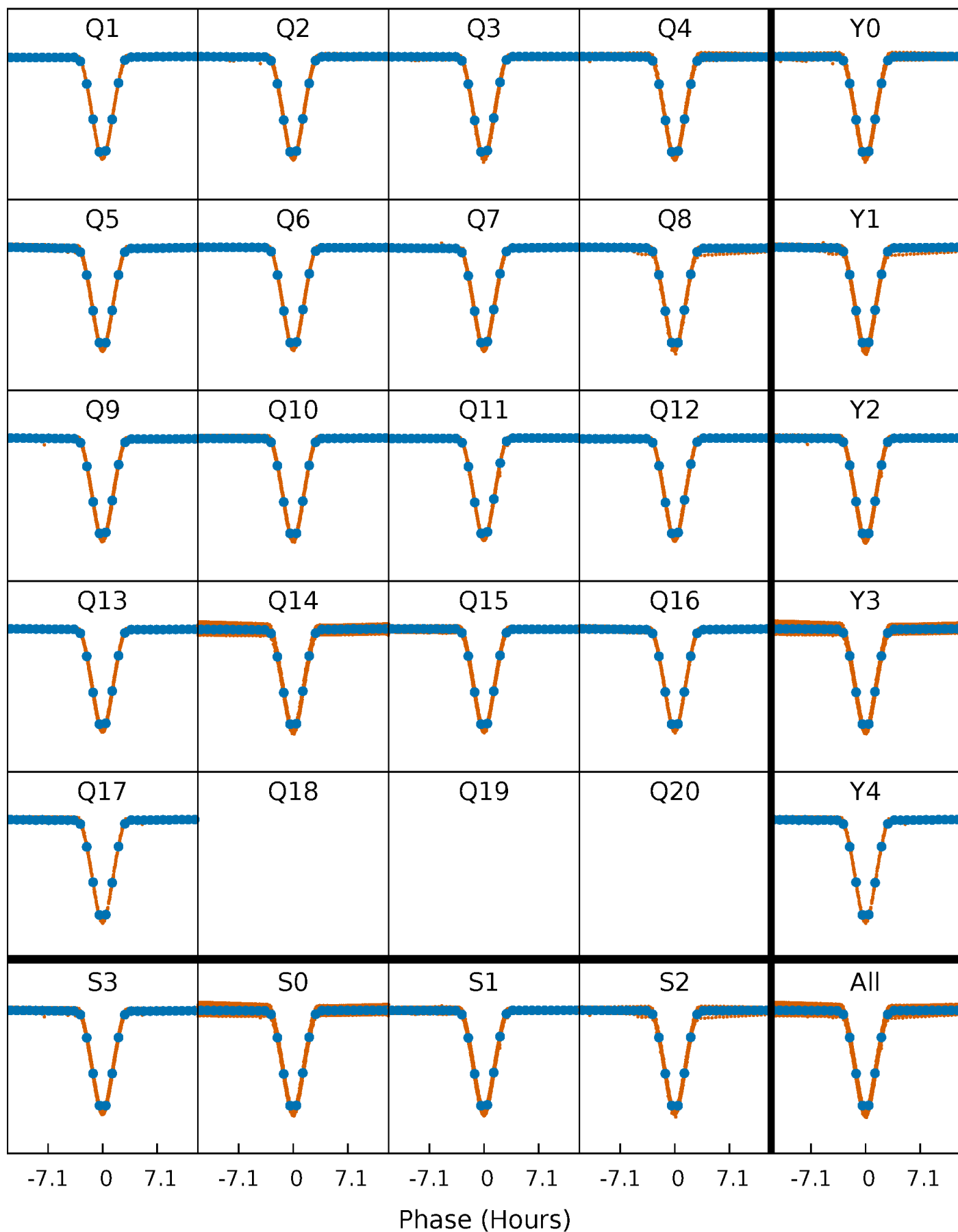


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

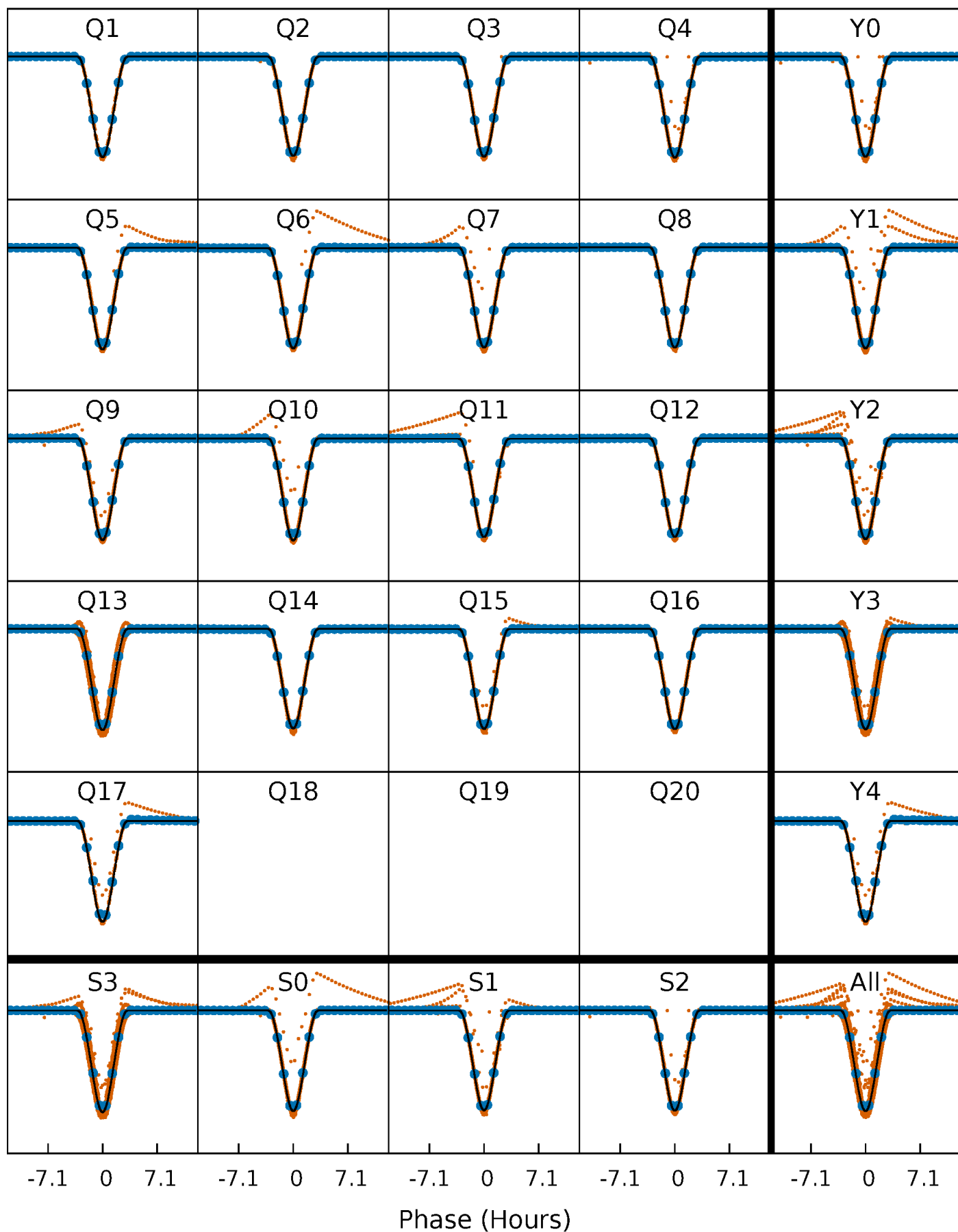
TCE 006891512-01 P= 1.752562 Days  $T_0=132.722428$  (BKJD)





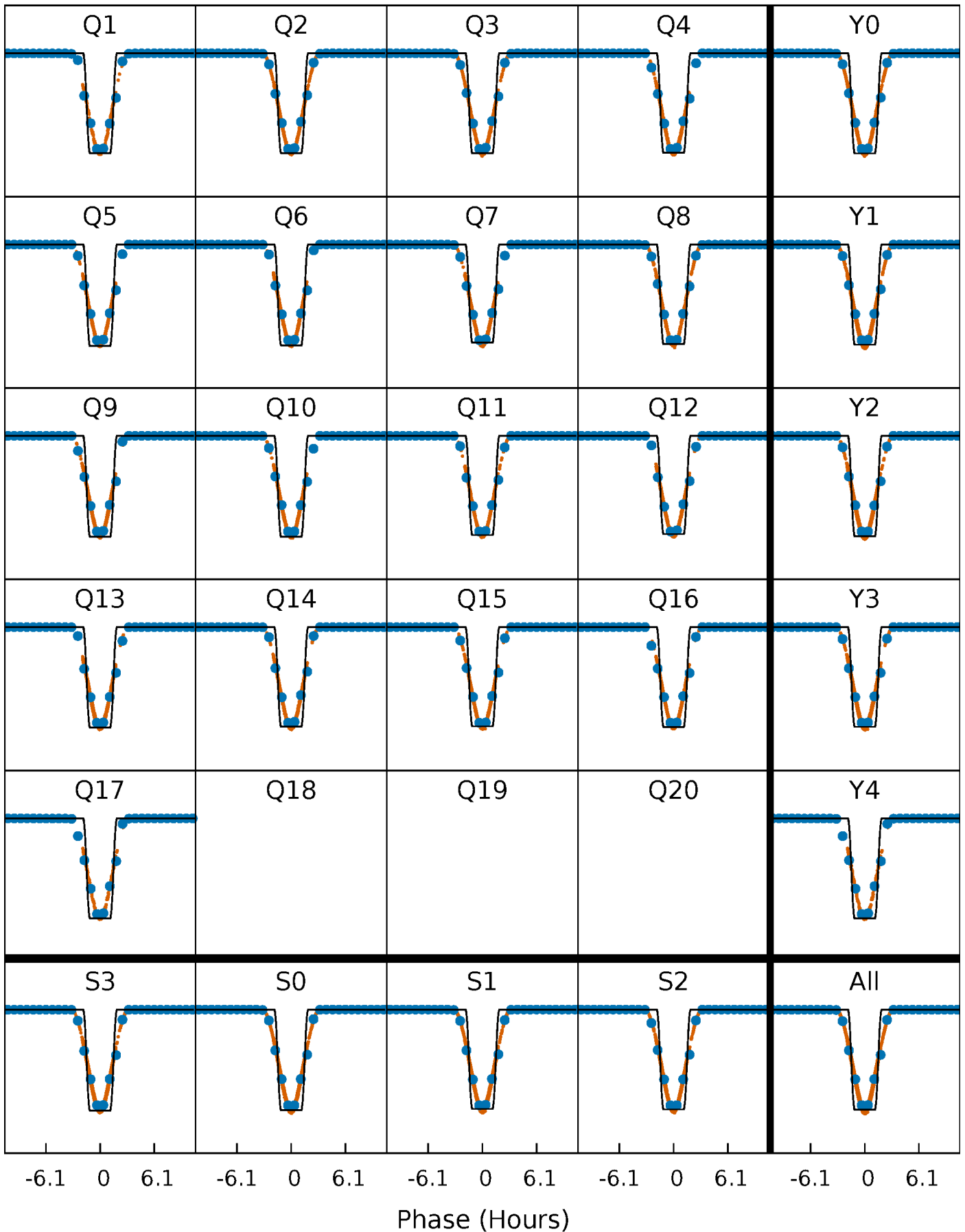
# DV Quarter-Phased Transit Curves

TCE 006891512-01 P= 1.752562 Days  $T_0=132.722428$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

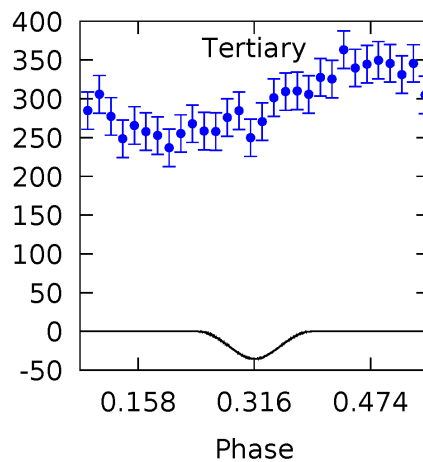
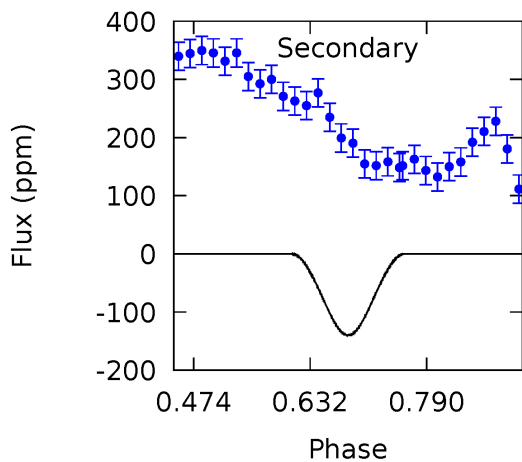
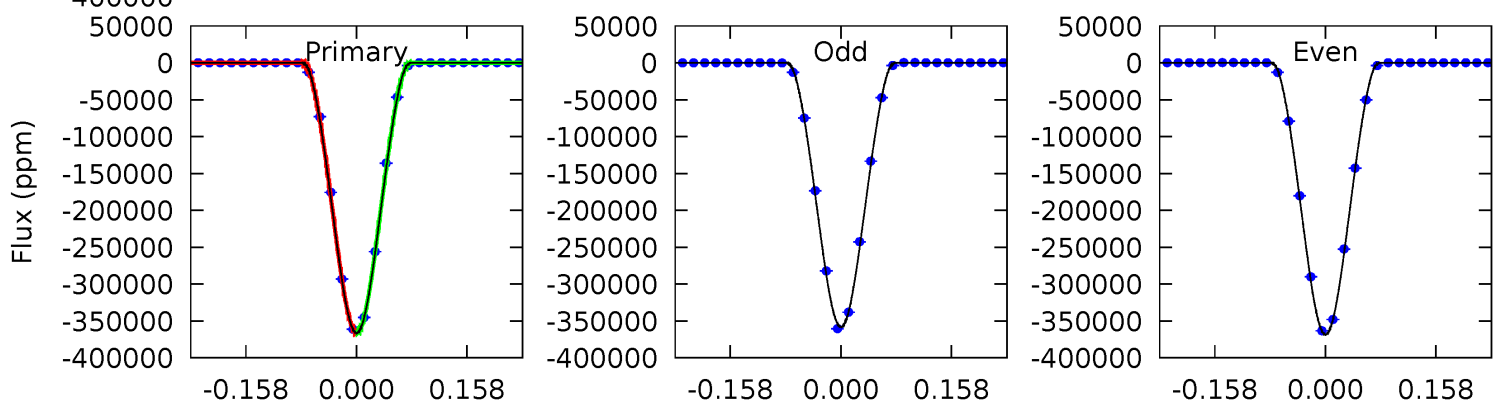
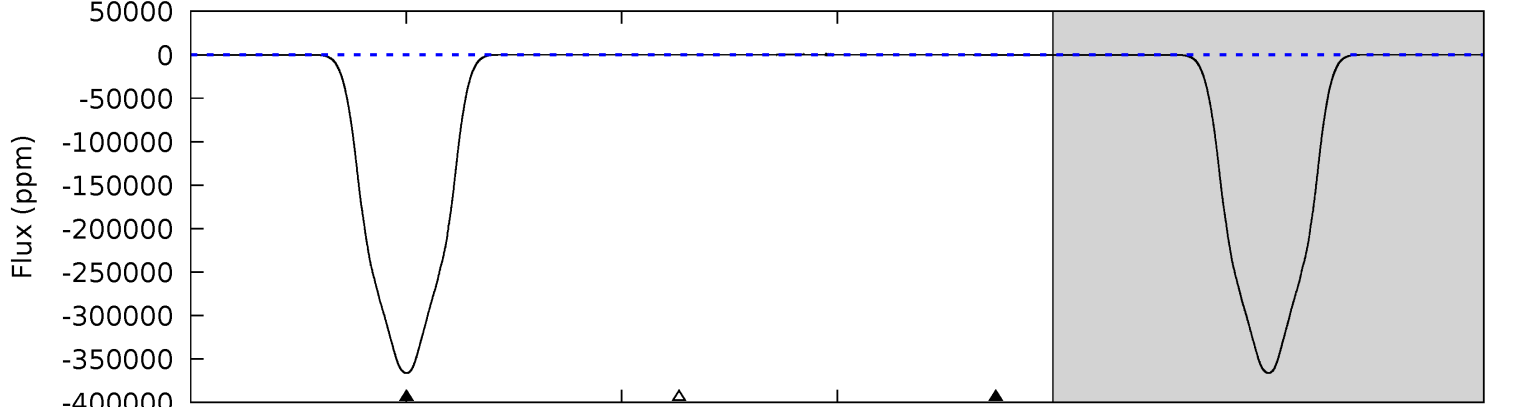
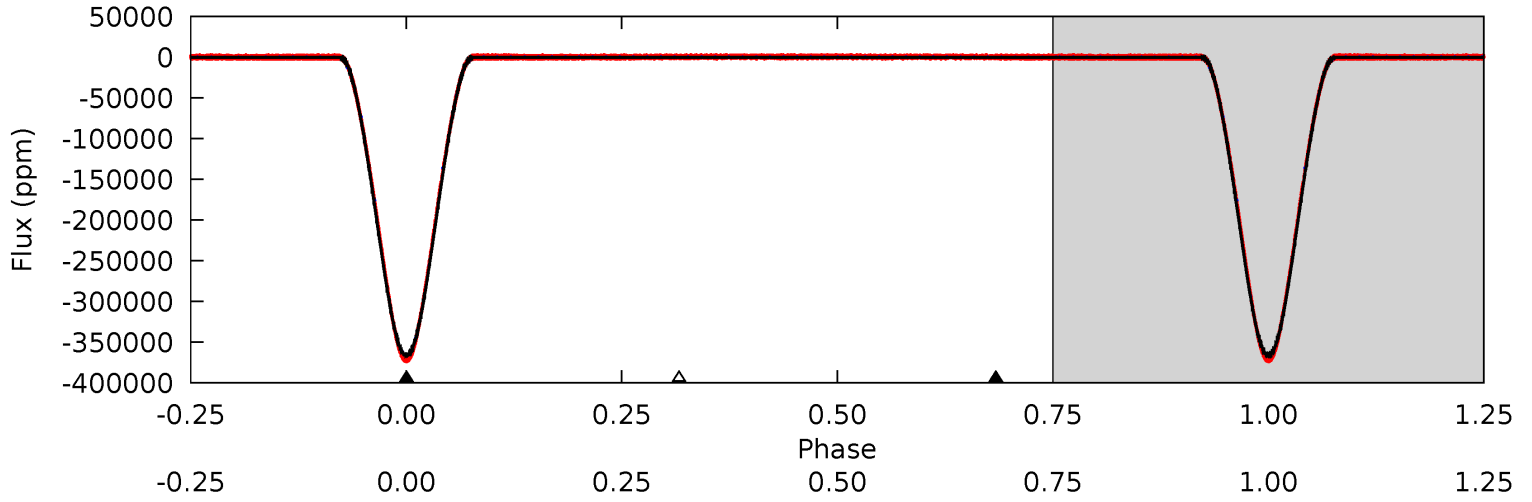
TCE 006891512-01 P= 1.752563 Days  $T_0=132.722249$  (BKJD)



# DV Model-Shift Uniqueness Test

006891512-01, P = 1.752562 Days, E = 130.969866 Days

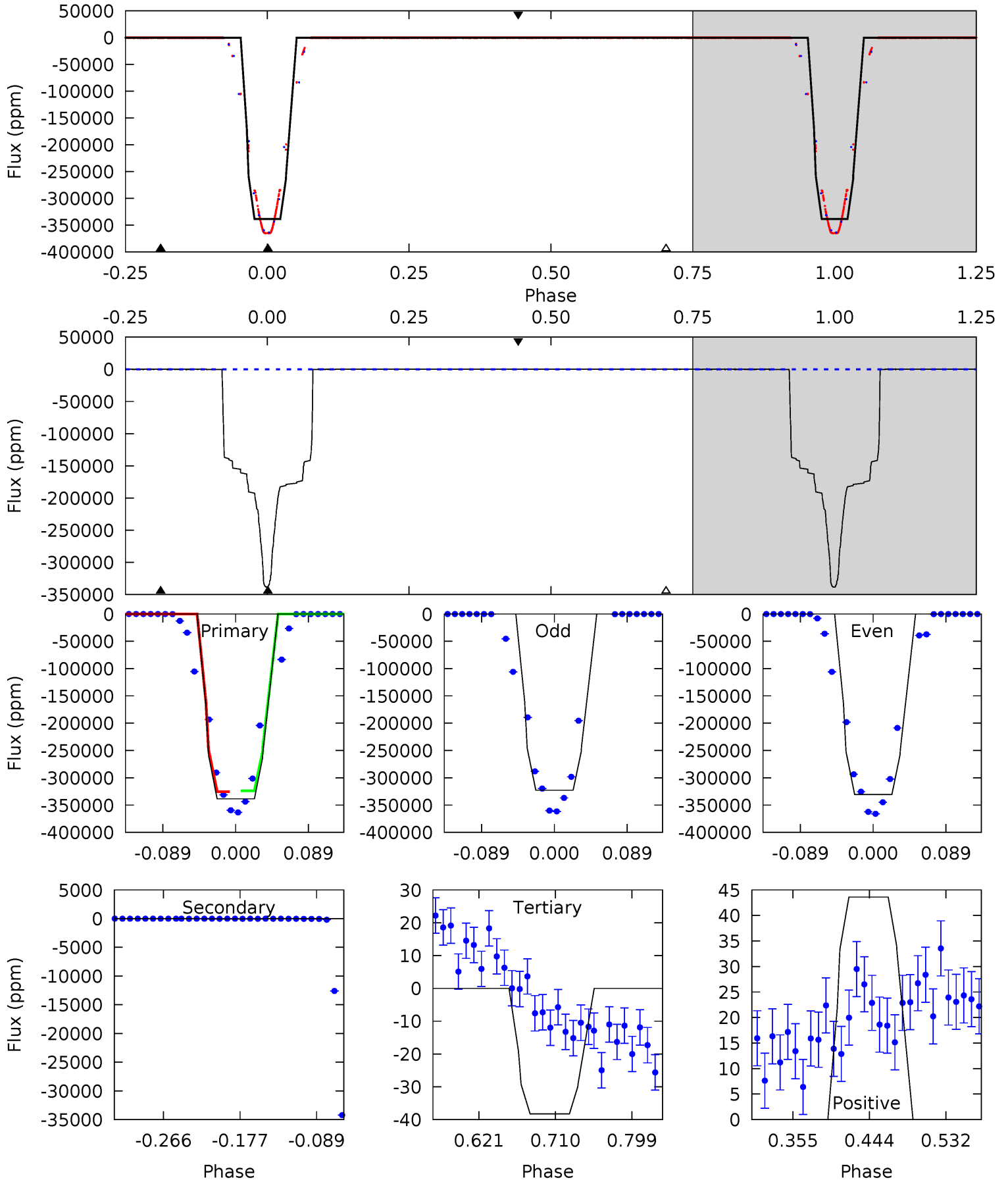
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37375	14.3	3.61	0	4.47	1.41	5.24	37372	37375	10.7	14.3	579.2	0.99	0.00	0



# Alt Model-Shift Uniqueness Test

006891512-01, P = 1.752563 Days, E = 130.969686 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
37276	4.77	4.22	4.80	4.59	1.70	1.85	37271	37271	0.56	-0.03	517.0	1.00	0.00	0



### Stellar Parameters For KIC 006891512

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5853^{+140}_{-158}$	$3.971^{+0.420}_{-0.140}$	$-0.040^{+0.300}_{-0.300}$	$1.795^{+0.398}_{-0.797}$	$1.101^{+0.140}_{-0.187}$	$0.268^{+0.975}_{-0.108}$
	+2%/-3%	+11%/-4%	+750%/-750%	+22%/-44%	+13%/-17%	+364%/-40%
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 006891512-01 / KOI 5335.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-140 \pm 10$	$119.23^{+17.31}_{-27.05}$	$2767^{+209}_{-323}$	$-2947^{+196}_{-127}$	$0.005^{+0.003}_{-0.001}$
Alt.	$-43 \pm 9$	$116.53^{+15.56}_{-25.98}$	$2773^{+196}_{-293}$	$-2956^{+175}_{-119}$	$0.002^{+0.001}_{-0.000}$

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

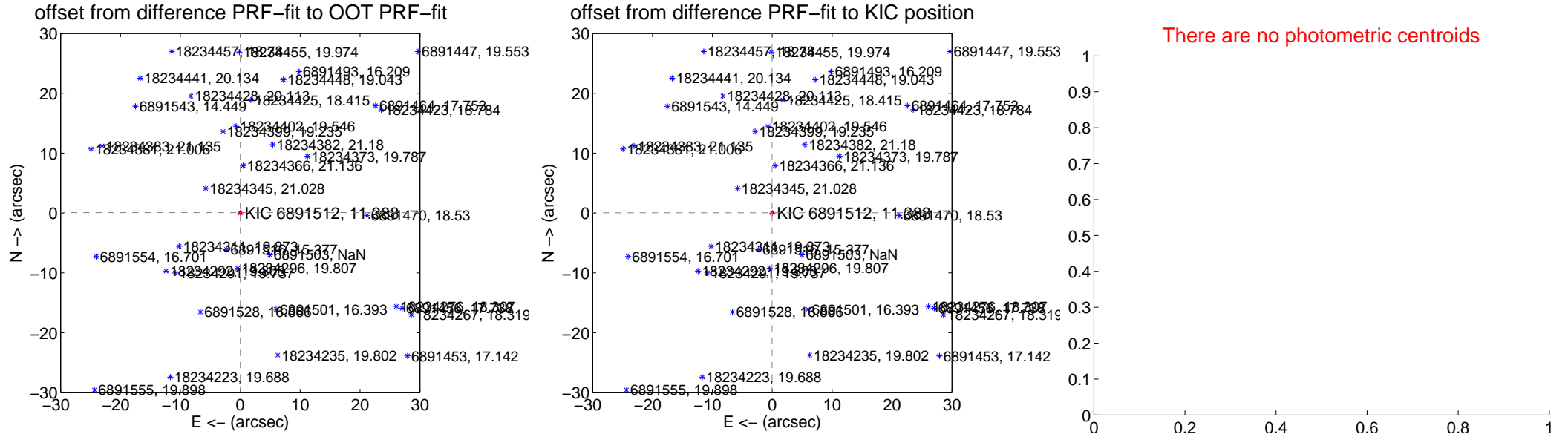
## DV Centroid Data

Supplemental centroid analysis for 006891512-01. **Kepler magnitude: 11.39.** Transit SNR 17867.77

There are 17 quarters with good PRF difference image offsets

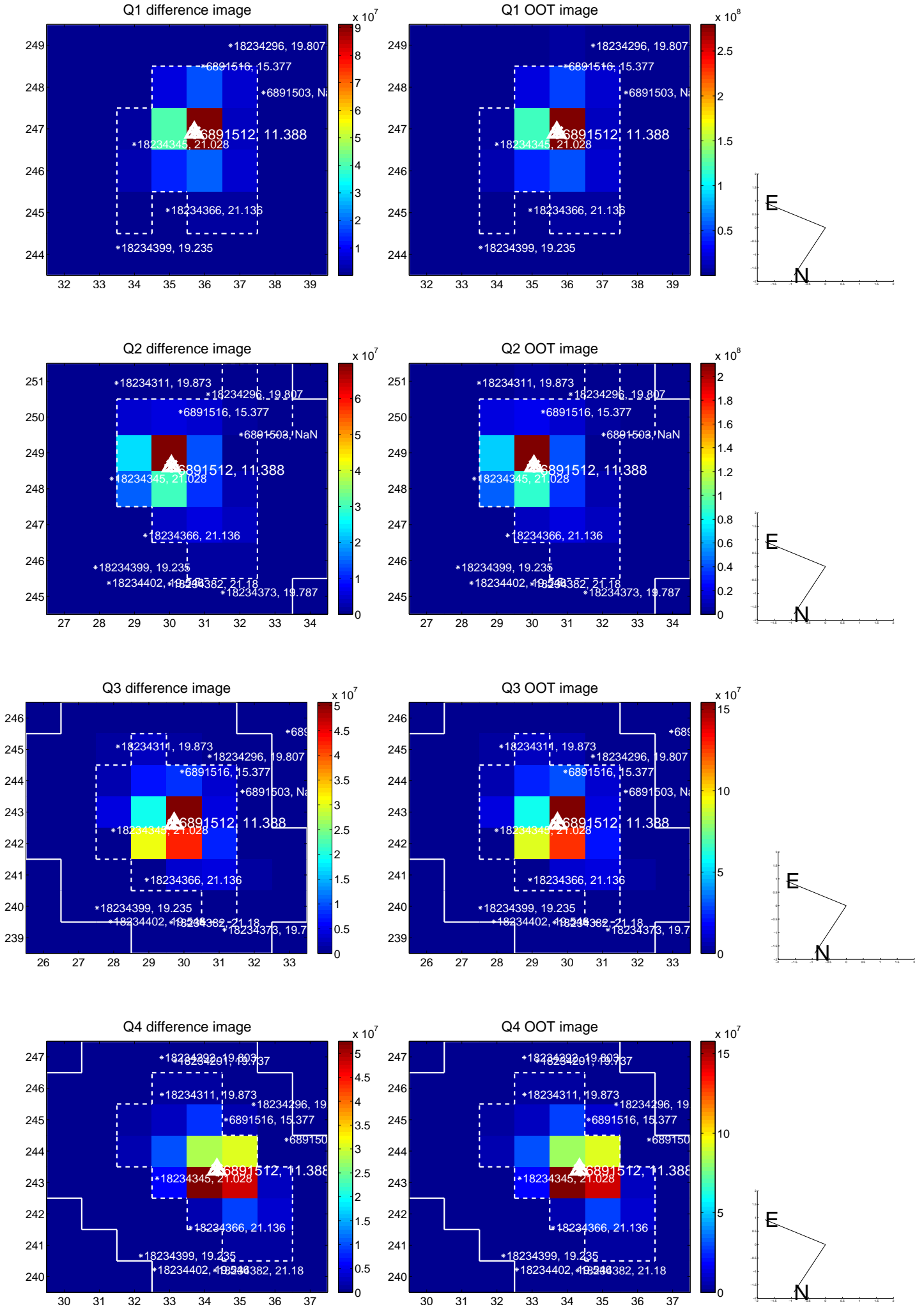
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.062 \pm 0.067$	0.93	$-0.000 \pm 0.067$	$0.062 \pm 0.067$
PRF-fit source offset from KIC position	$0.055 \pm 0.070$	0.78	$0.035 \pm 0.068$	$0.042 \pm 0.070$
photometric centroid source offset	—	—	—	—

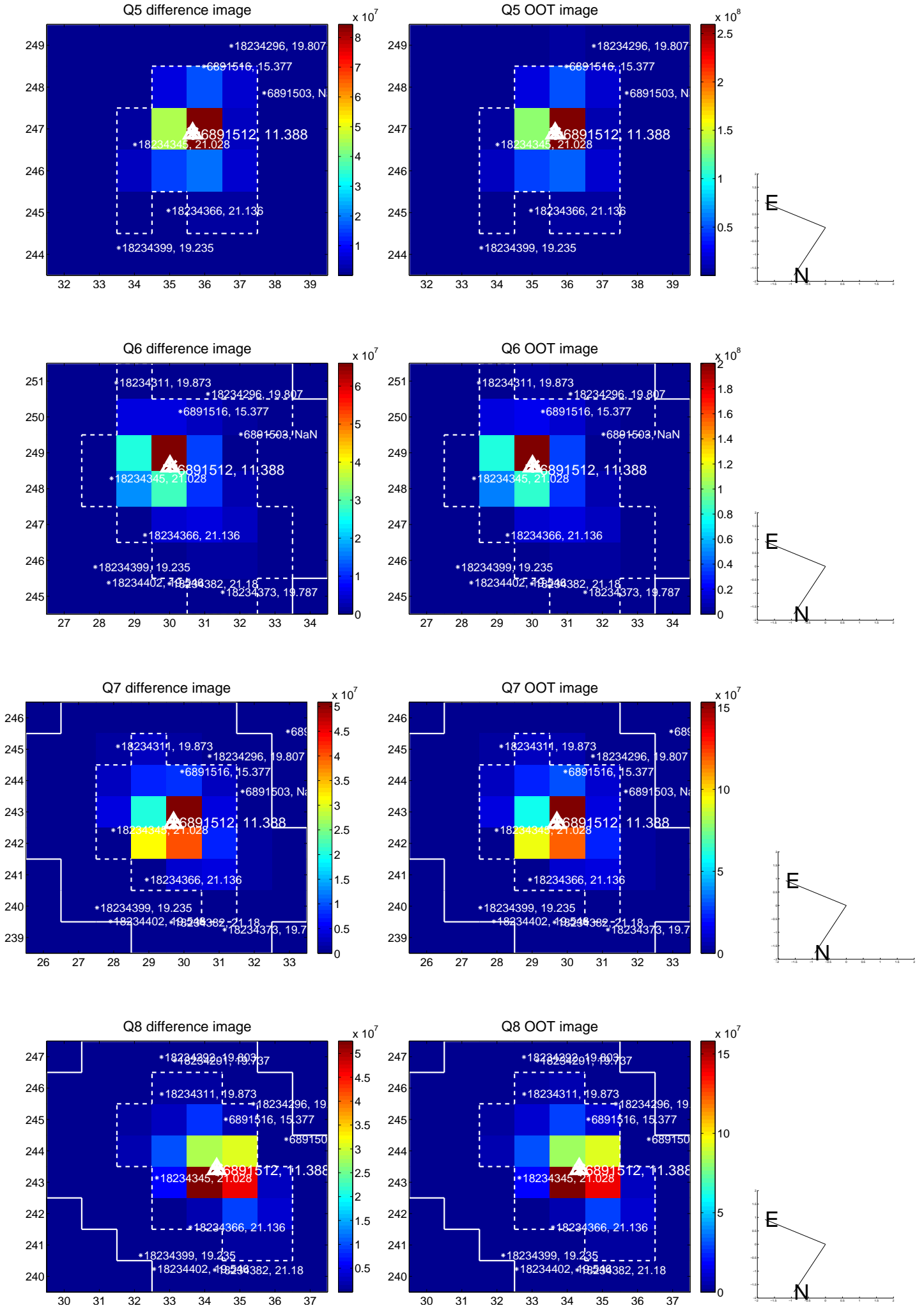


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

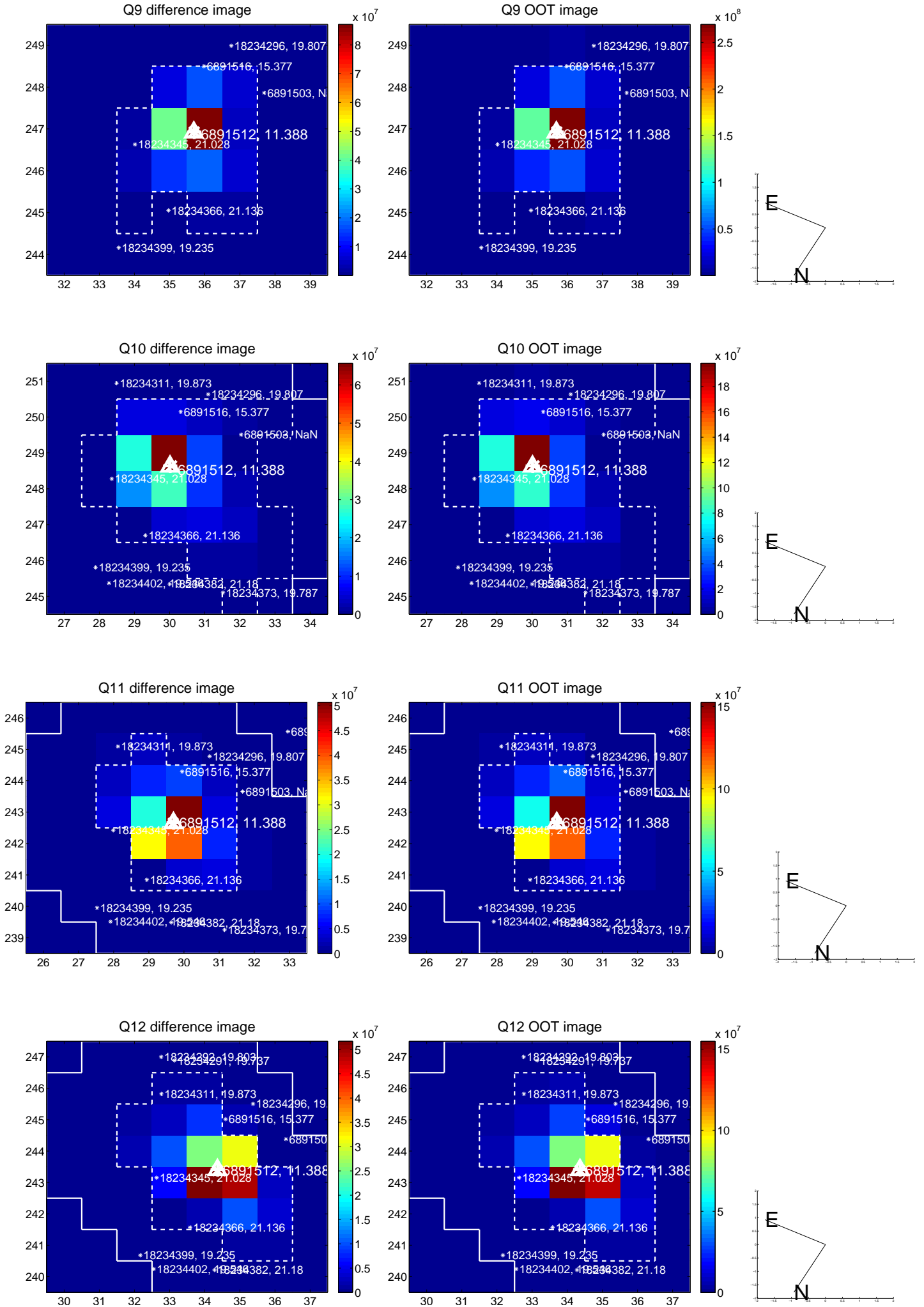


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

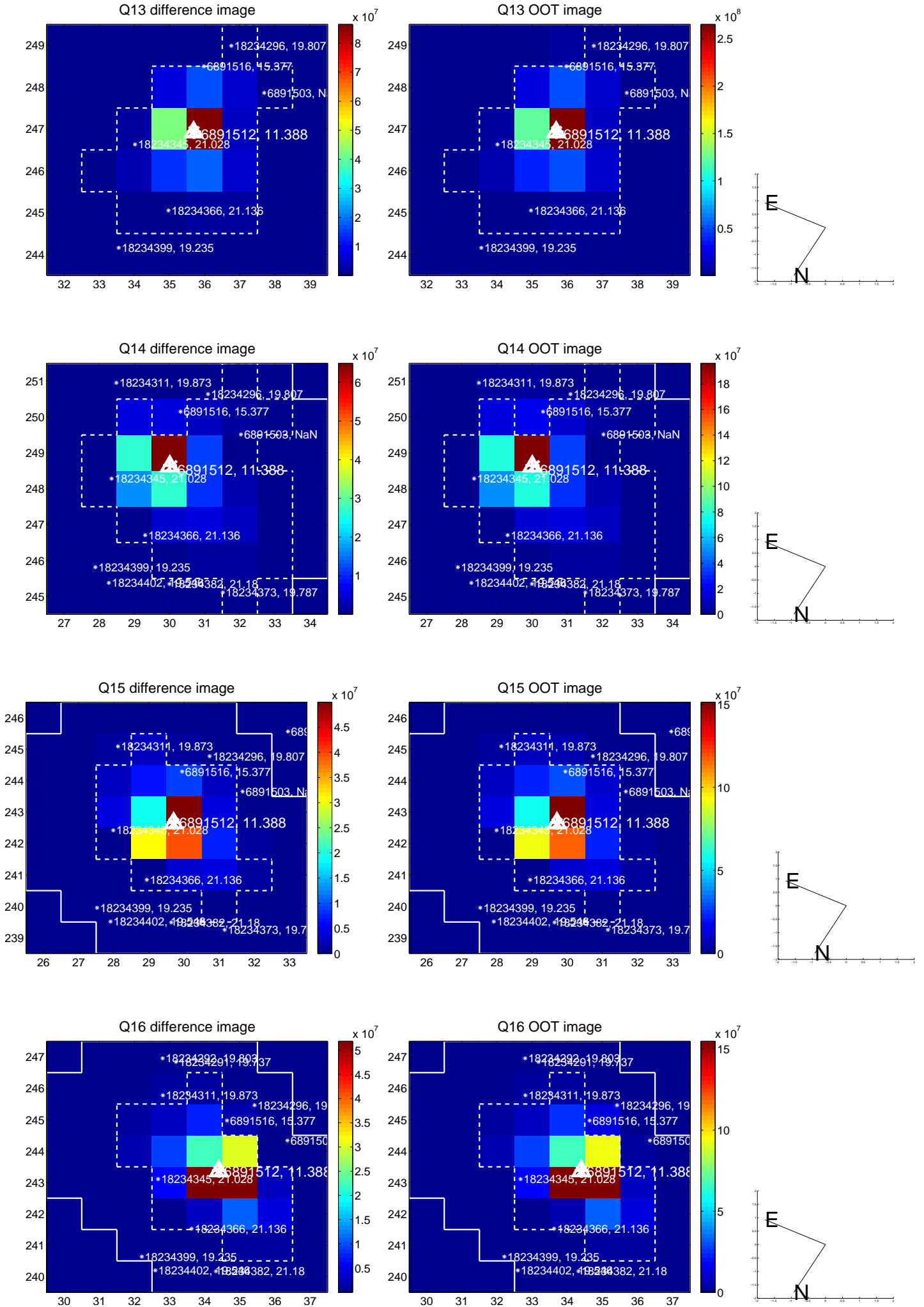




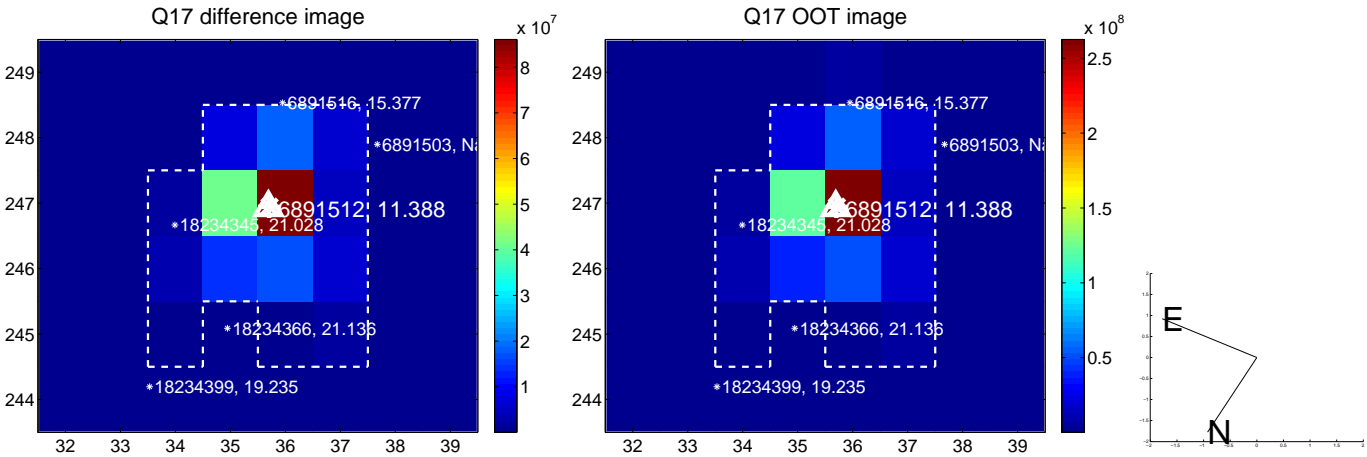
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

