

# KIC 012061895

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
012061895-01	OBS	No	599.406240	296.853183	594.7	4.832	11.7	6.7	0.84	5862	2.25	0.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012061895-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

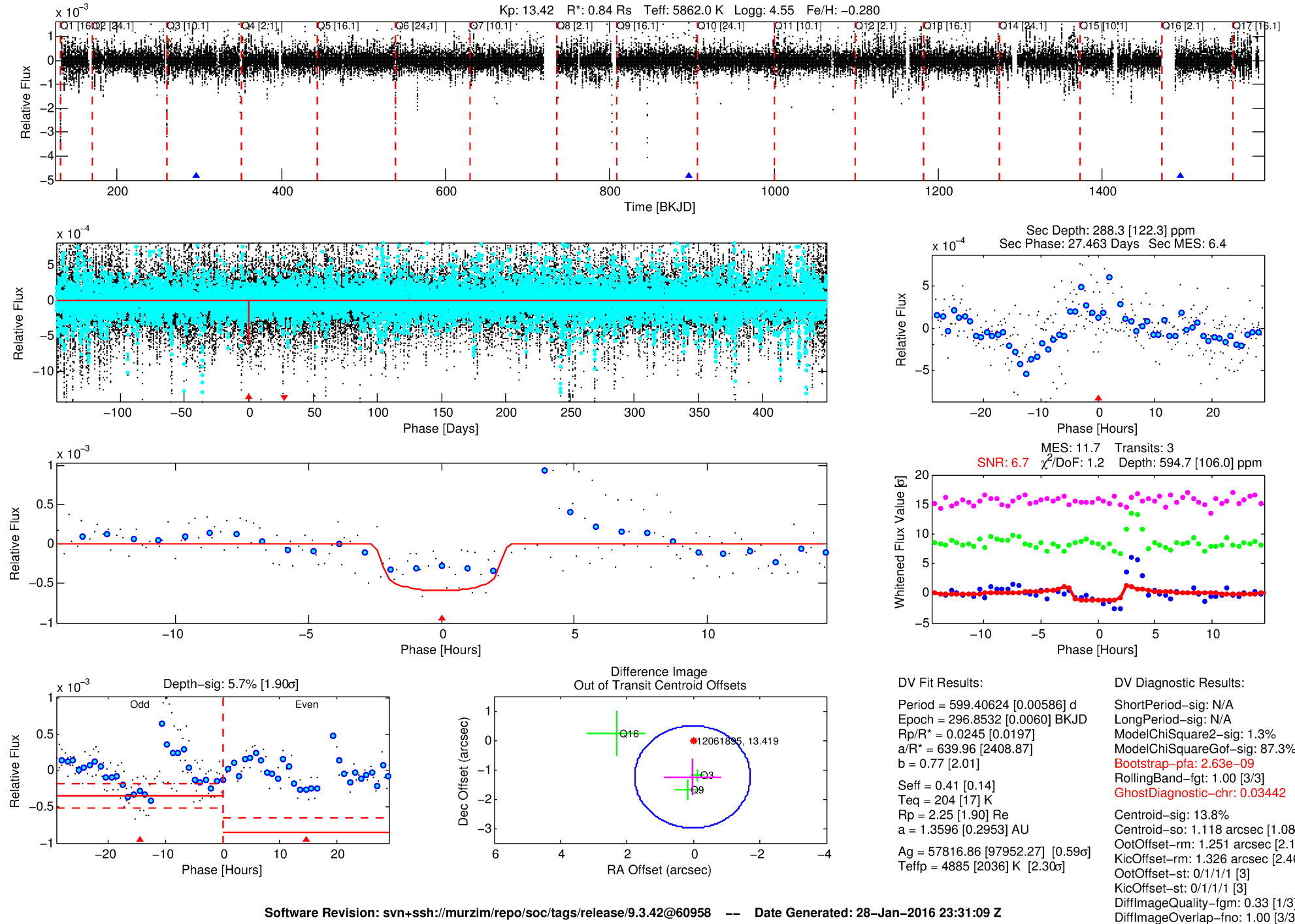
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 012061895-01

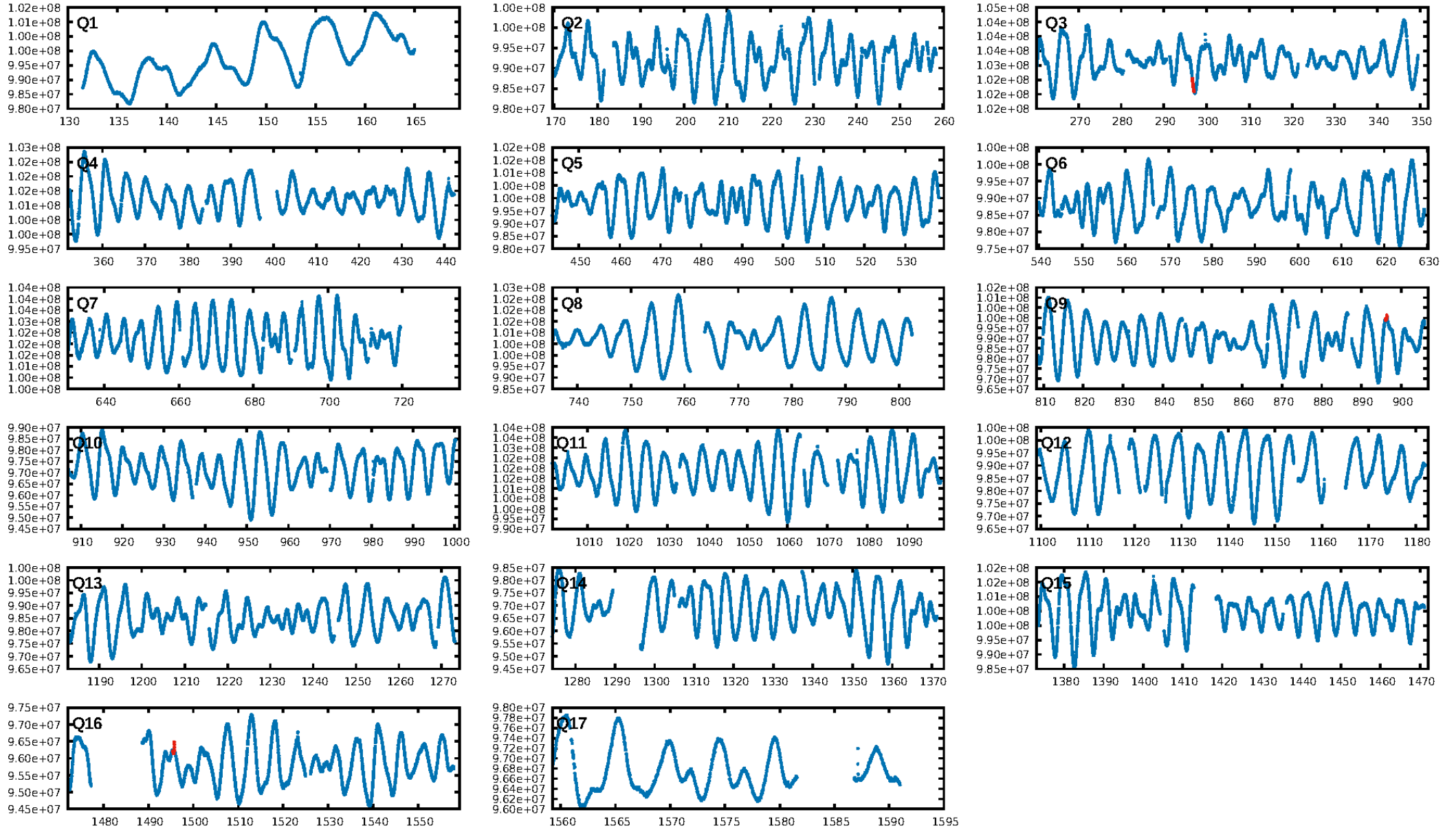
No Significant Match Found

# DV One-Page Summary

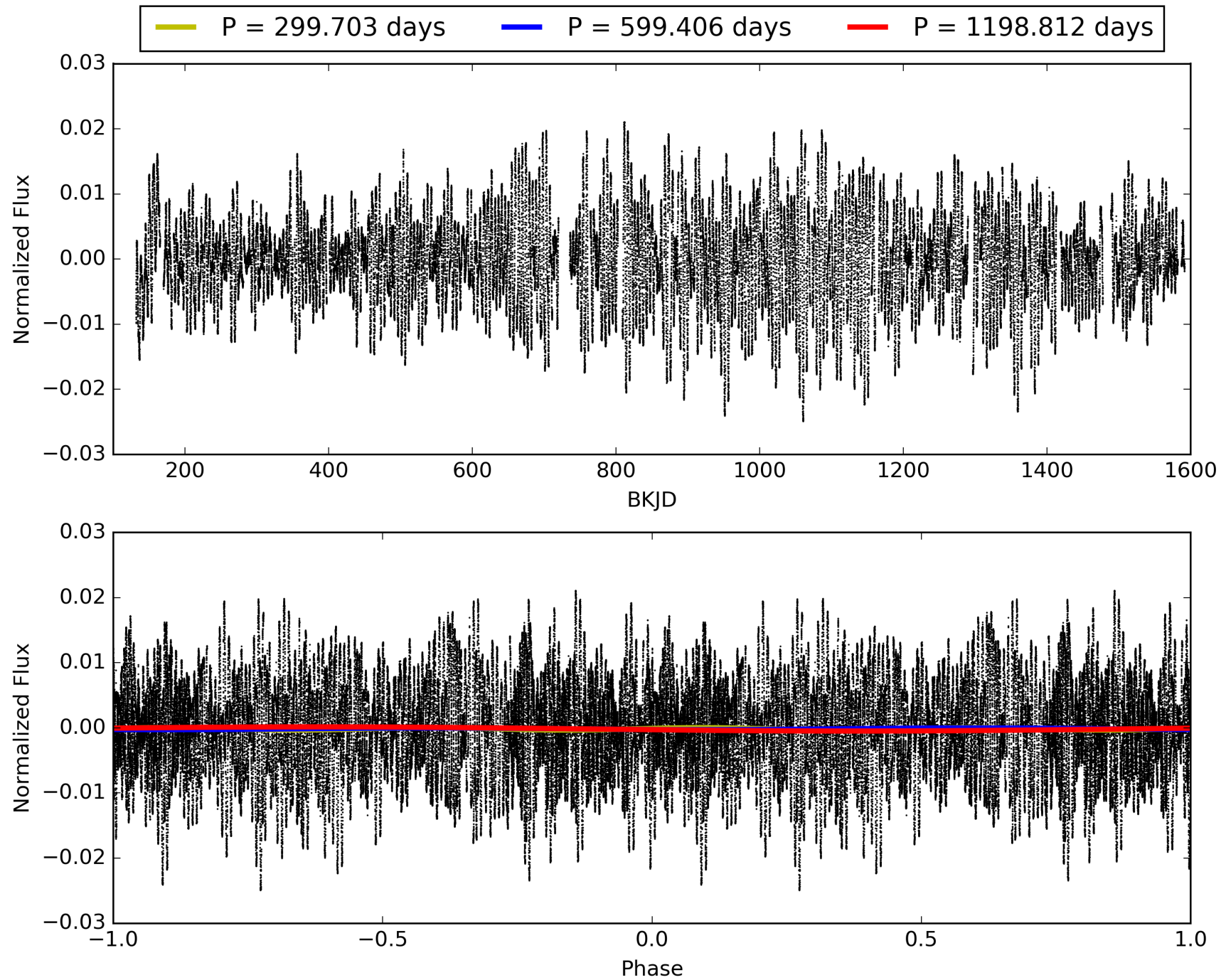
KIC: 12061895 Candidate: 1 of 1 Period: 599.406 d



# TCE 012061895-01, PDC Light Curves

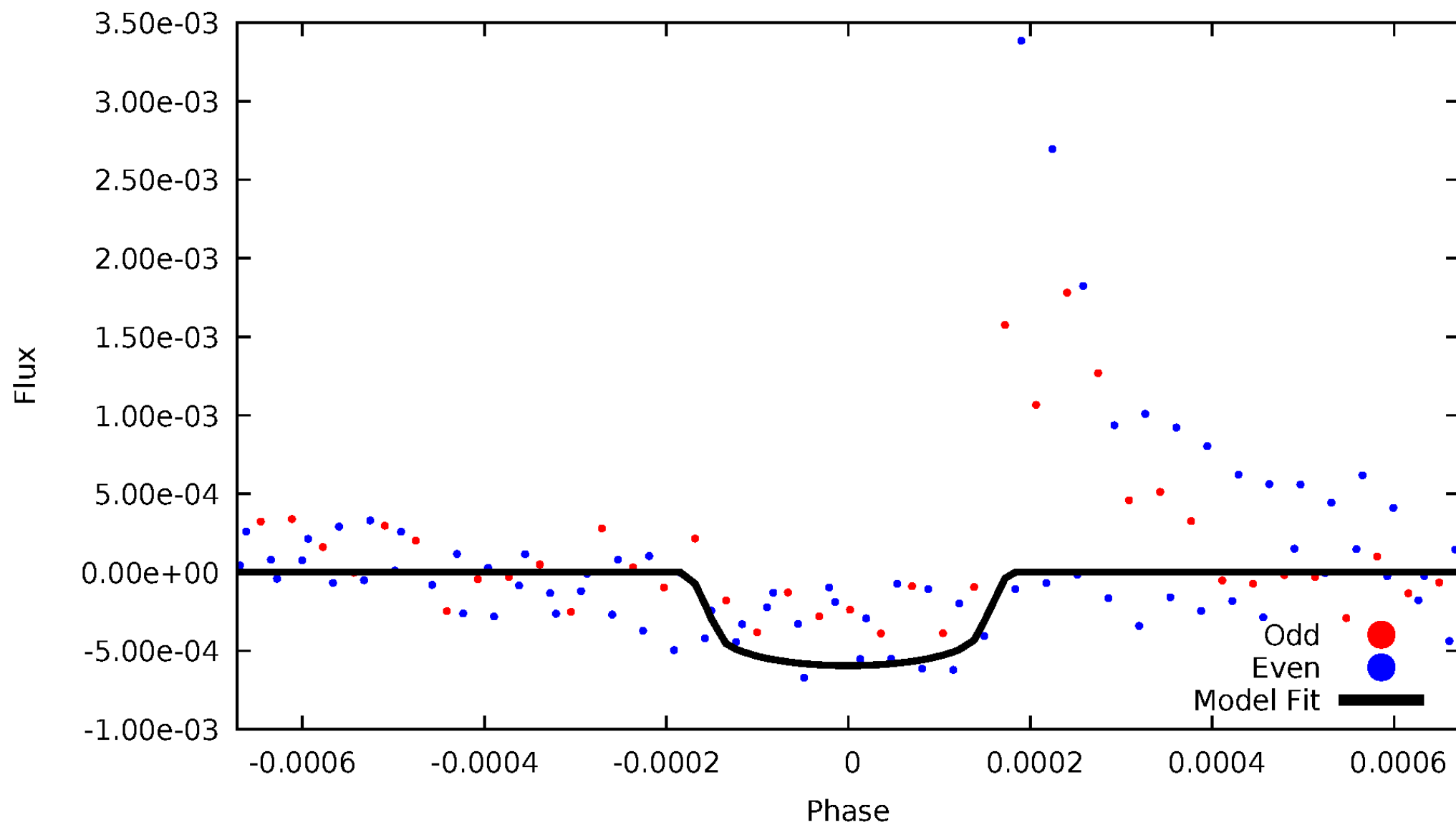


# TCE 012061895-01



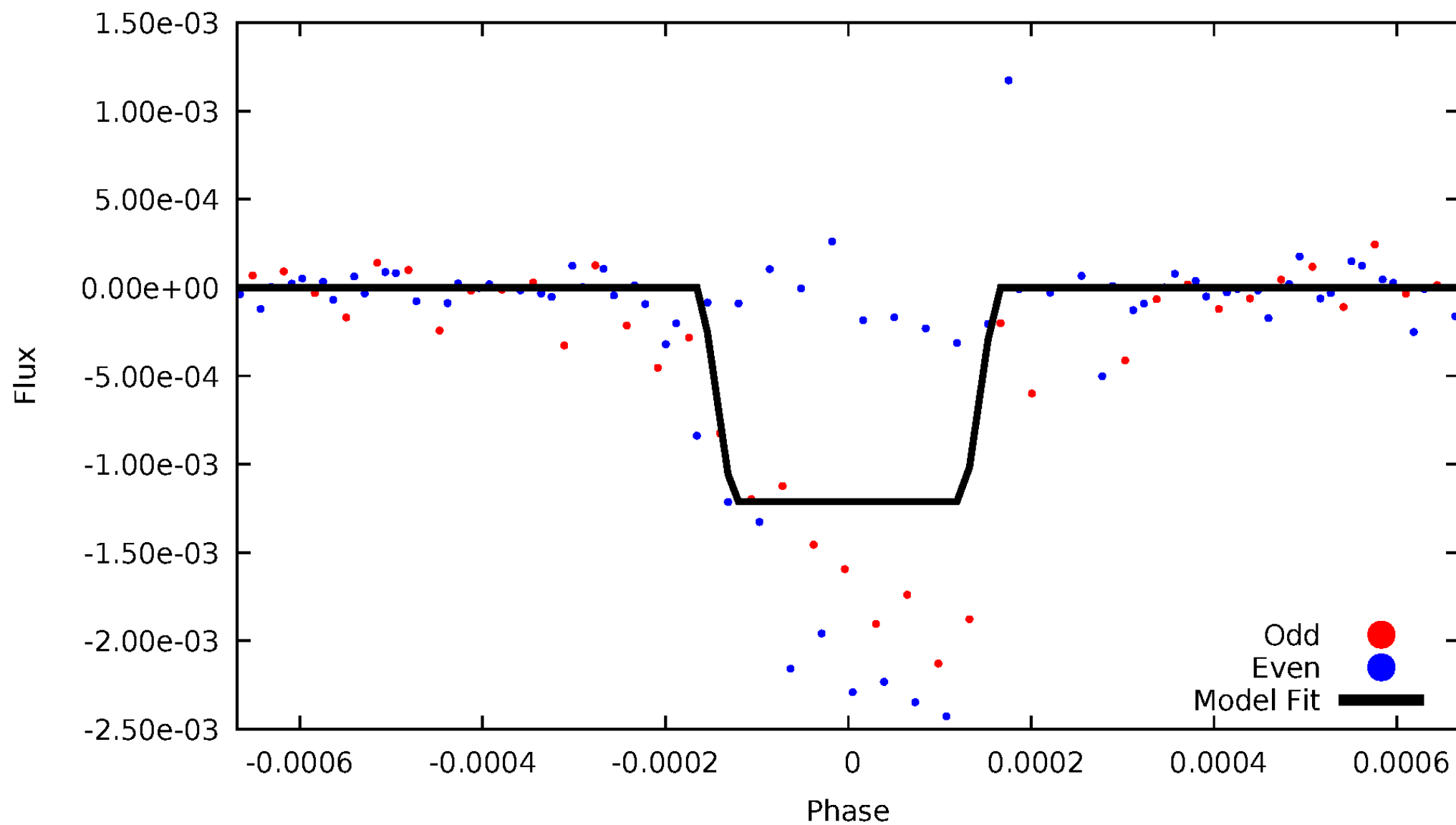
# DV Odd/Even

TCE 012061895-01



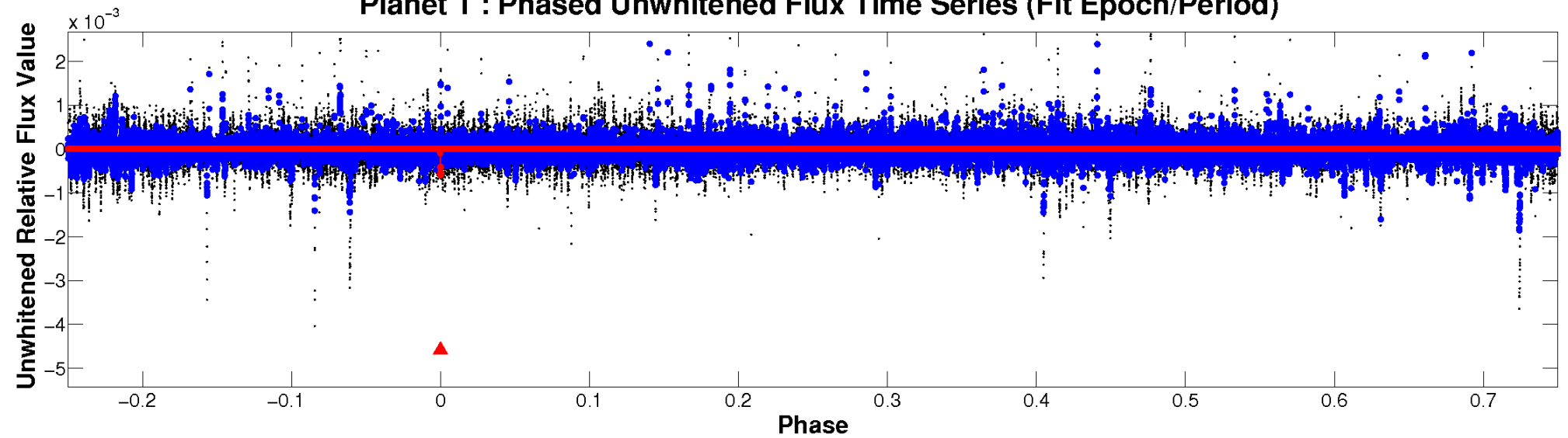
# ALT Odd/Even

TCE 012061895-01

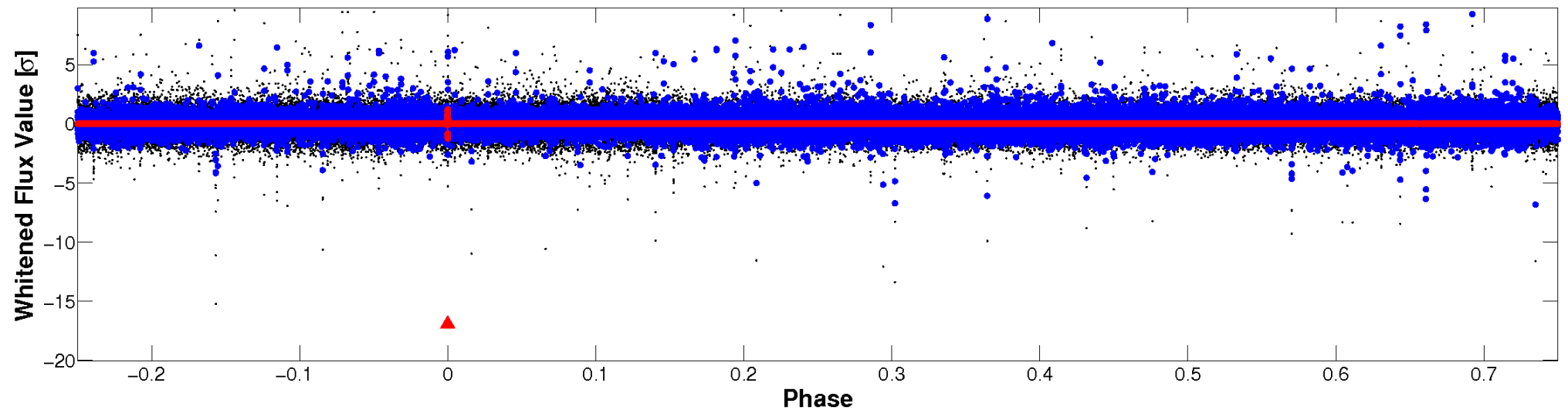


# Non-Whitened Vs. Whitened Light Curve

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

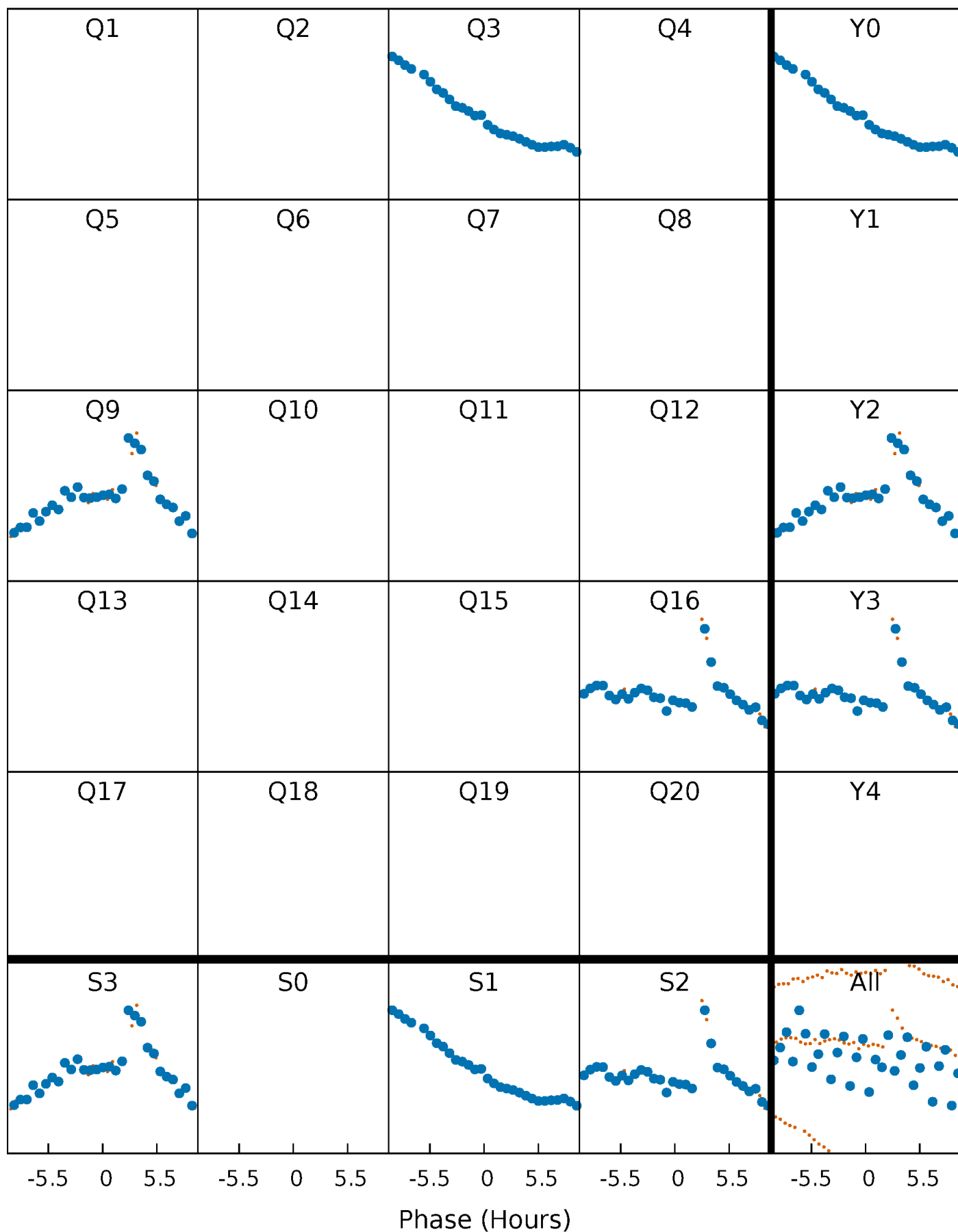


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

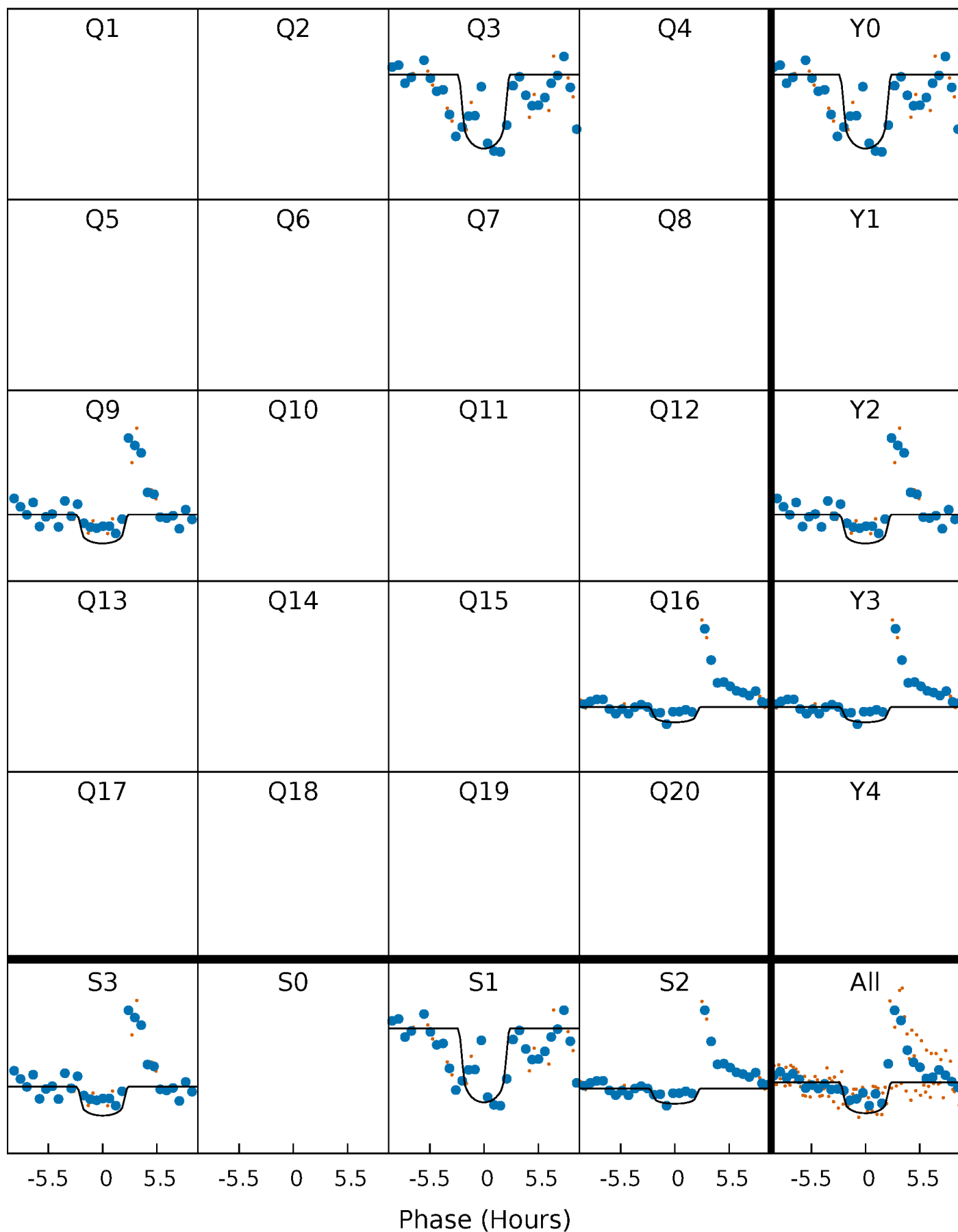
TCE 012061895-01 P=599.406240 Days  $T_0=296.853183$  (BKJD)





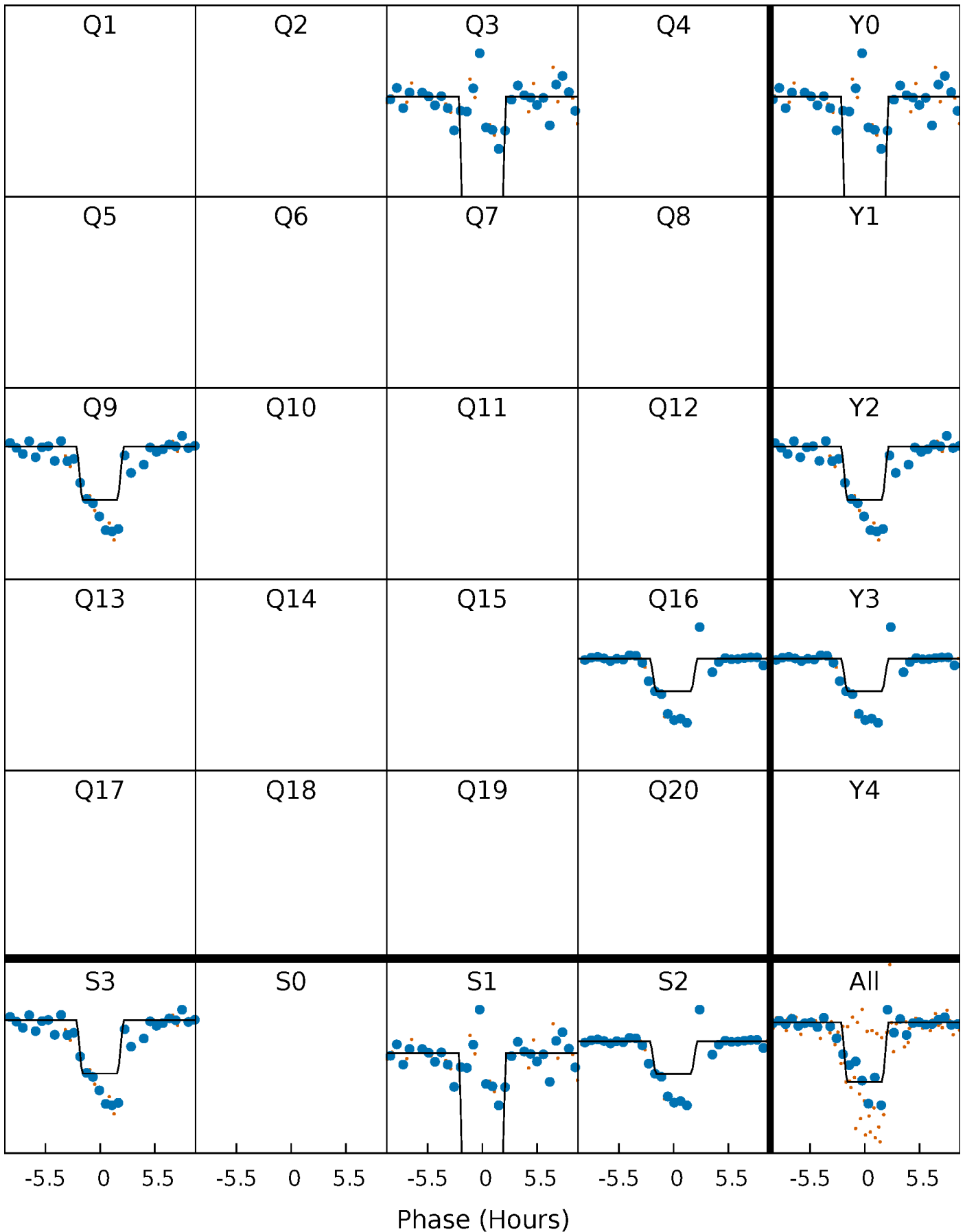
# DV Quarter-Phased Transit Curves

TCE 012061895-01 P=599.406240 Days  $T_0=296.853183$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

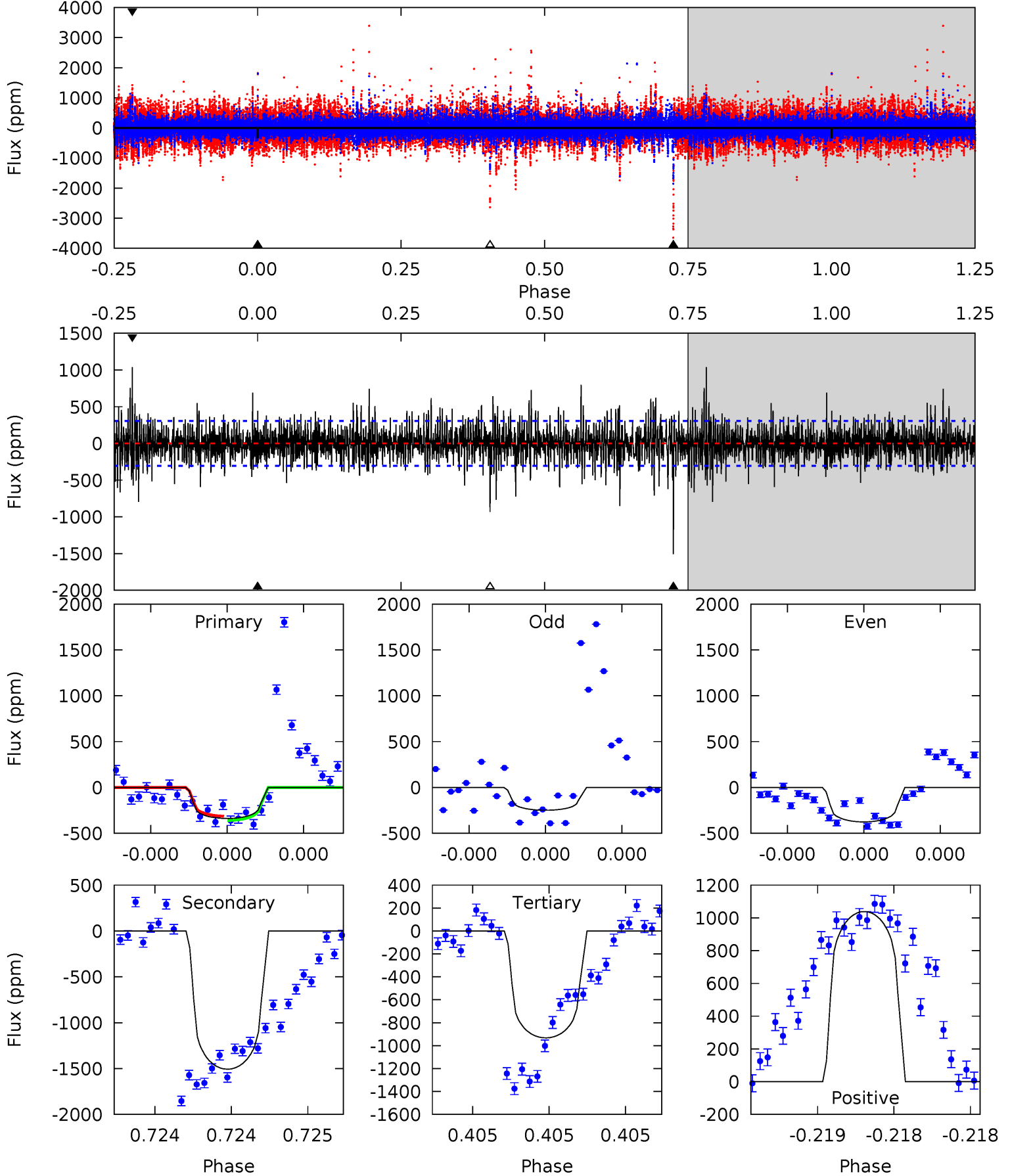
TCE 012061895-01 P=599.411671 Days  $T_0=296.851171$  (BKJD)



# DV Model-Shift Uniqueness Test

012061895-01, P = 599.406240 Days, E = 296.853183 Days

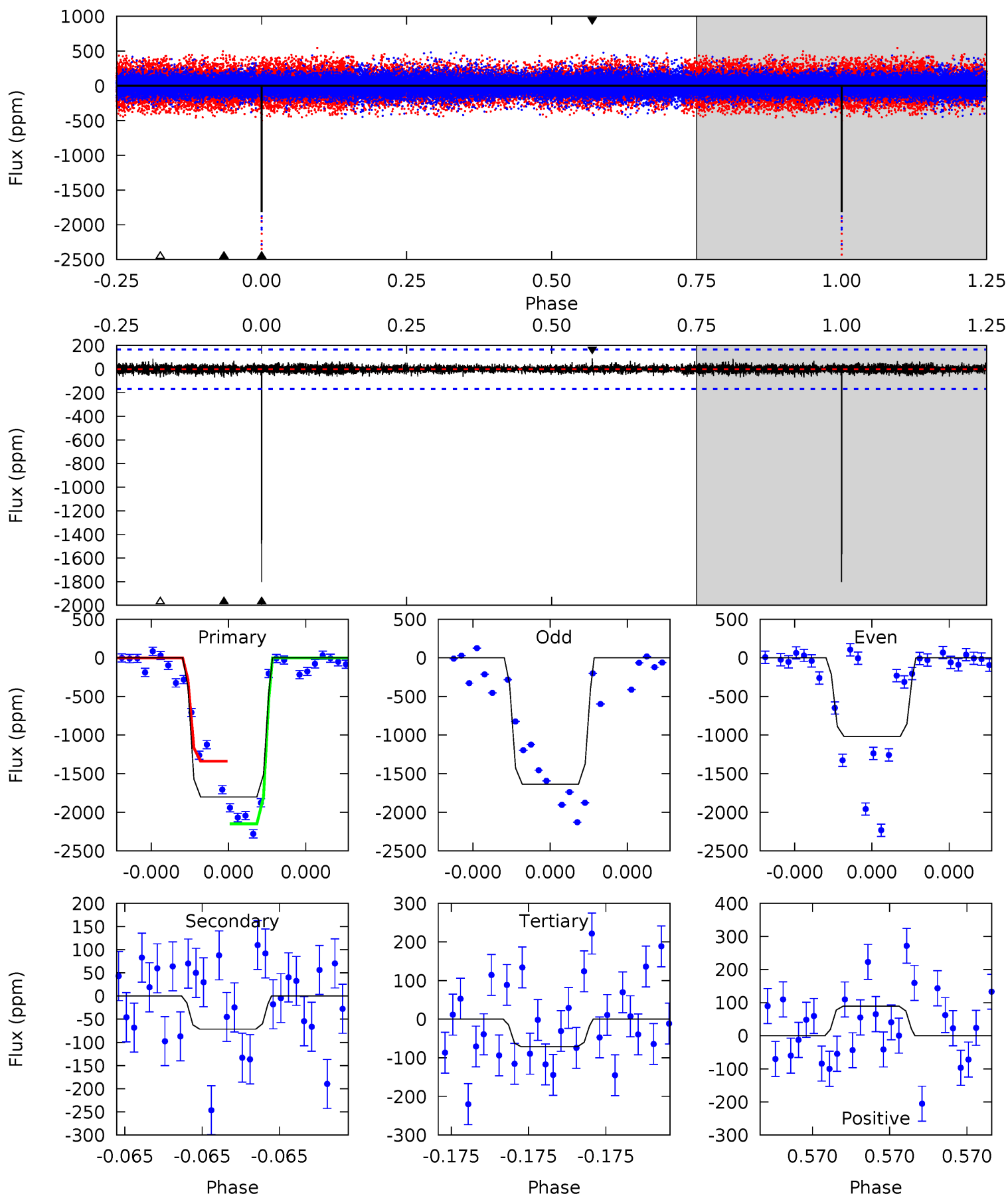
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.23	27.7	17.2	19.1	5.64	3.58	3.06	-10.9	-12.9	10.6	8.62	1.01	1.22	0.41	0.44



# Alt Model-Shift Uniqueness Test

012061895-01, P = 599.411671 Days, E = 296.851171 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
61.2	2.43	2.42	3.02	5.67	3.62	0.53	58.7	58.1	0.00	-0.59	12.2	0.77	0.05	13.2



### Stellar Parameters For KIC 012061895

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5862^{+131}_{-160}$	$4.555^{+0.032}_{-0.179}$	$-0.280^{+0.300}_{-0.300}$	$0.844^{+0.213}_{-0.071}$	$0.935^{+0.099}_{-0.110}$	$2.192^{+0.388}_{-1.007}$
	+2%/-3%	+1%/-4%	+107%/-107%	+25%/-8%	+11%/-12%	+18%/-46%
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 012061895-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1507 \pm 54$	$2.76^{+1.89}_{-1.71}$	$292^{+17}_{-12}$	$6940^{+6634}_{-1574}$	$198103^{+1160699}_{-127859}$
Alt.	$-71 \pm 29$	$3.53^{+1.90}_{-1.82}$	$291^{+16}_{-12}$	$3323^{+972}_{-420}$	$5297^{+18538}_{-3232}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming A=0.3)

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

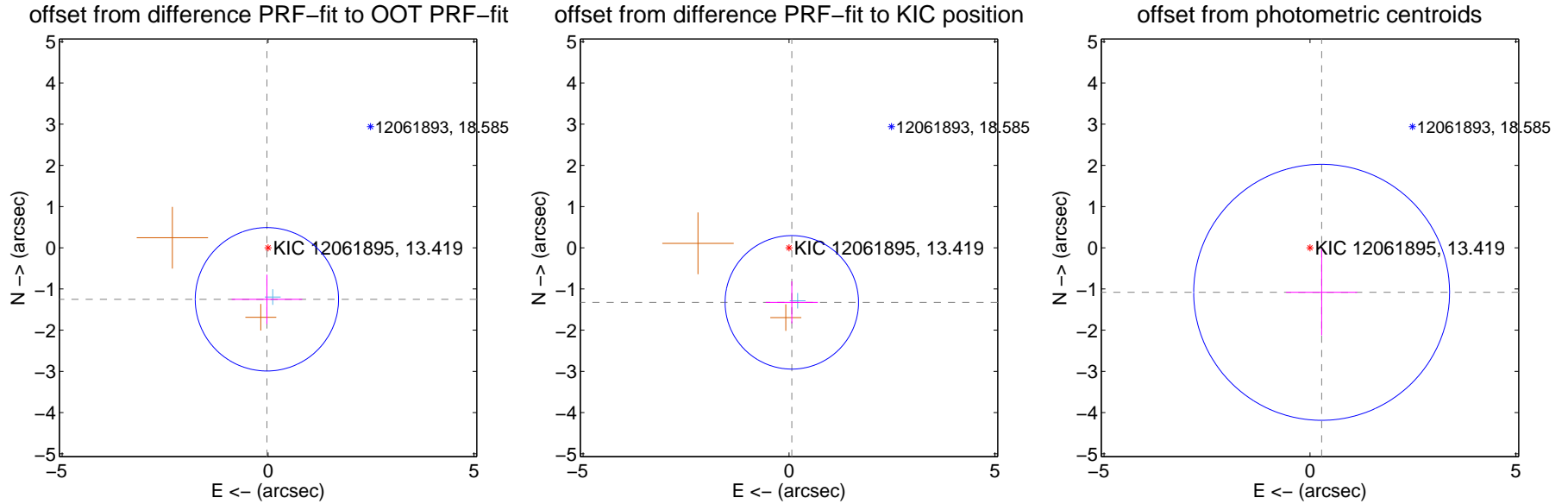
## DV Centroid Data

Supplemental centroid analysis for 012061895-01. Kepler magnitude: 13.42. Transit SNR 6.74

There are 1 quarters with good PRF difference image offsets

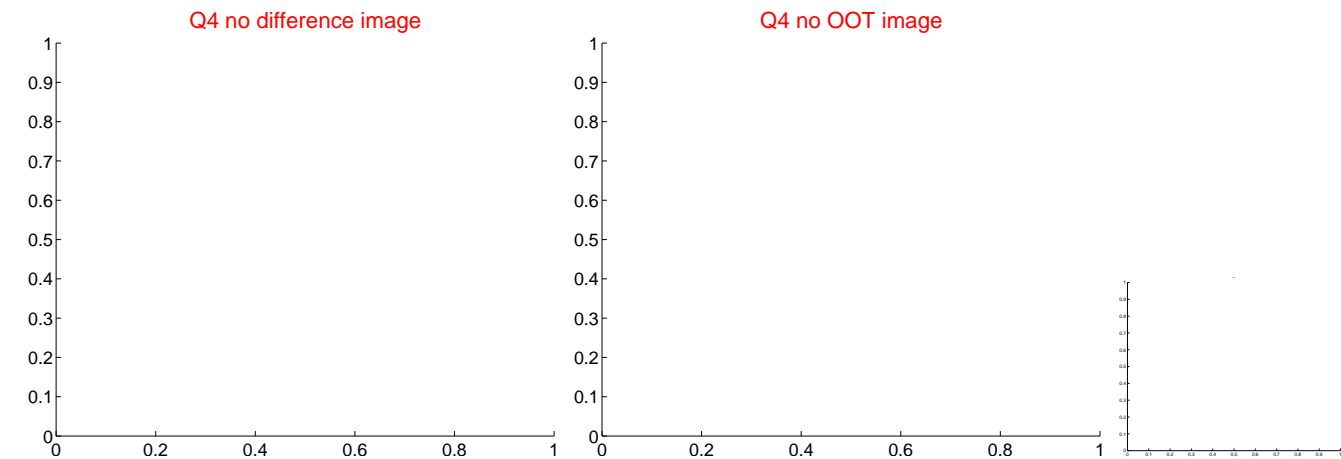
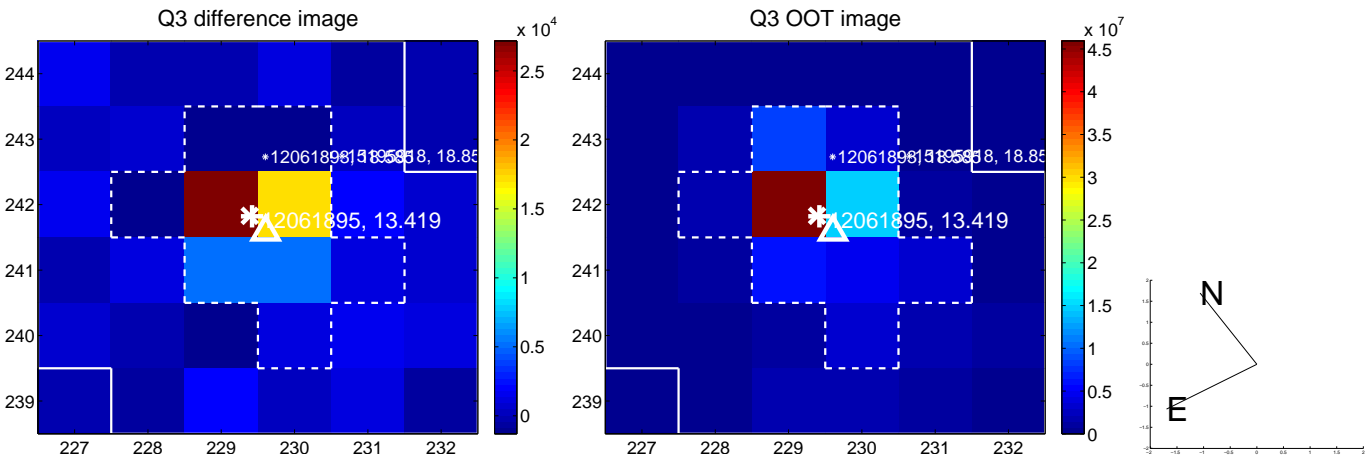
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.251 \pm 0.580$	2.16	$0.028 \pm 0.856$	$-1.251 \pm 0.599$
PRF-fit source offset from KIC position	$1.326 \pm 0.540$	2.46	$-0.068 \pm 0.634$	$-1.325 \pm 0.509$
photometric centroid source offset	$1.12 \pm 1.04$	1.08	$-0.28 \pm 0.86$	$-1.08 \pm 1.05$



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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

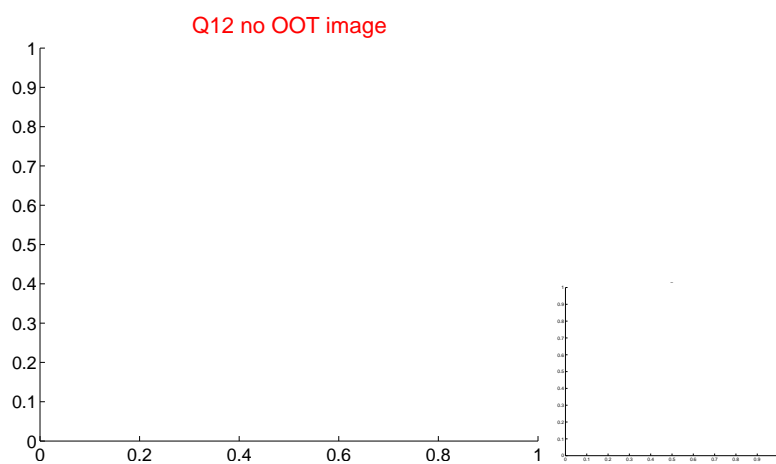
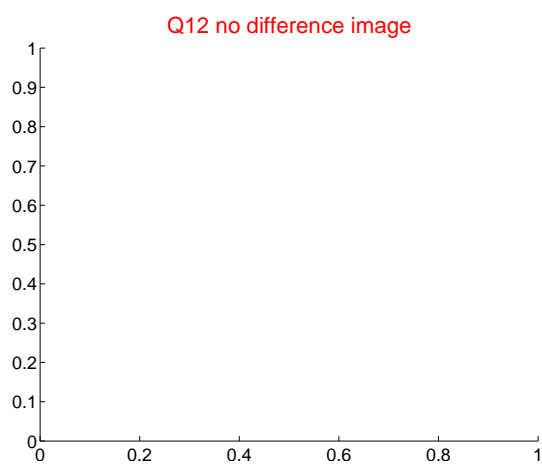
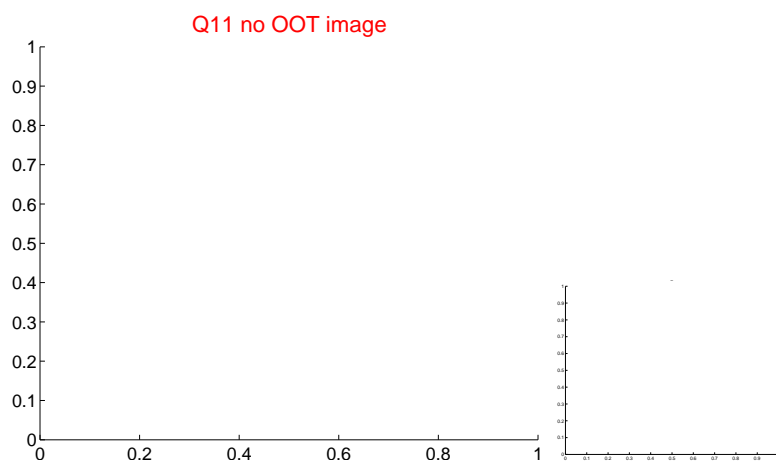
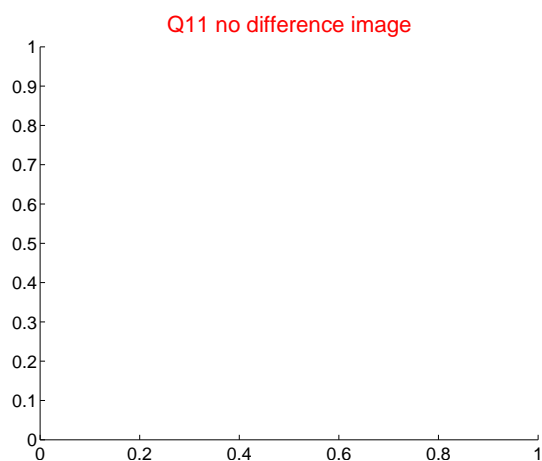
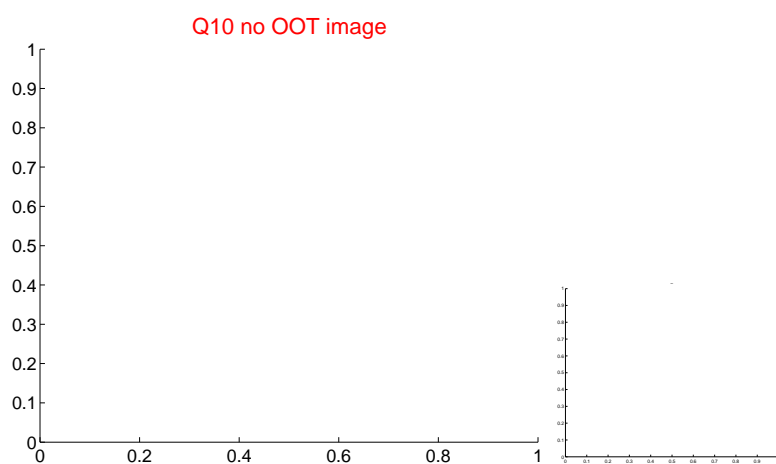
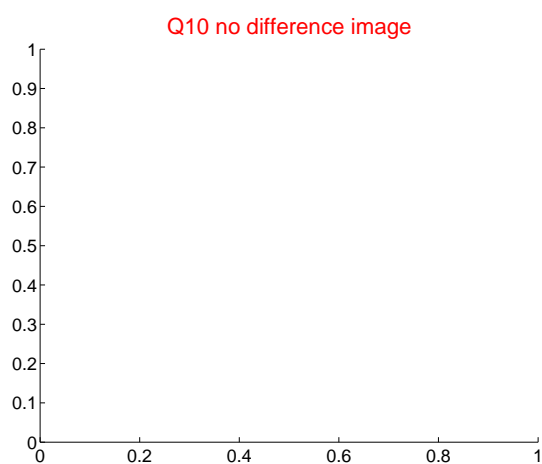
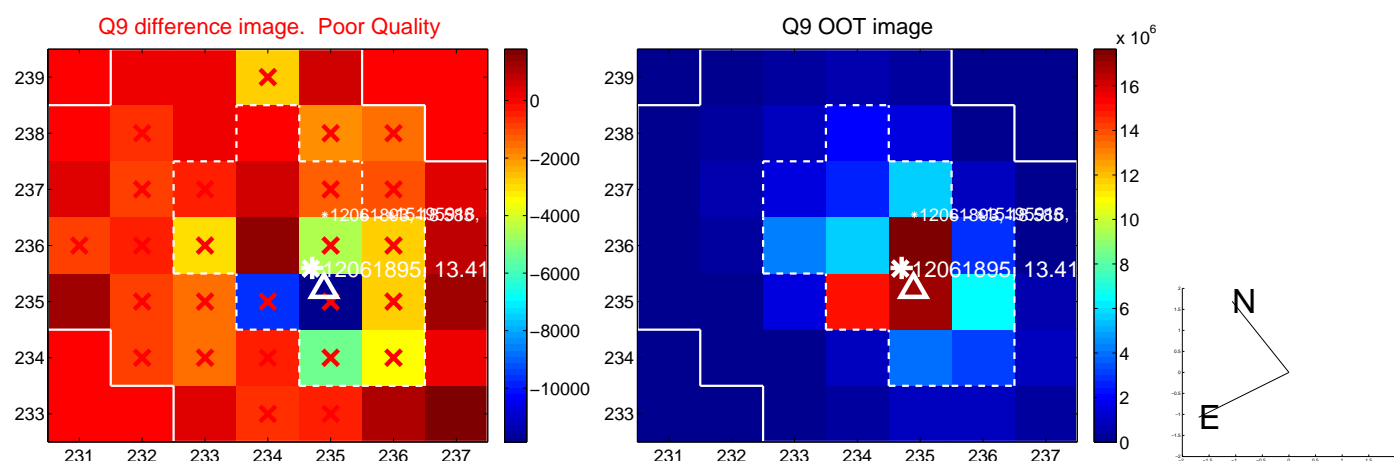


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

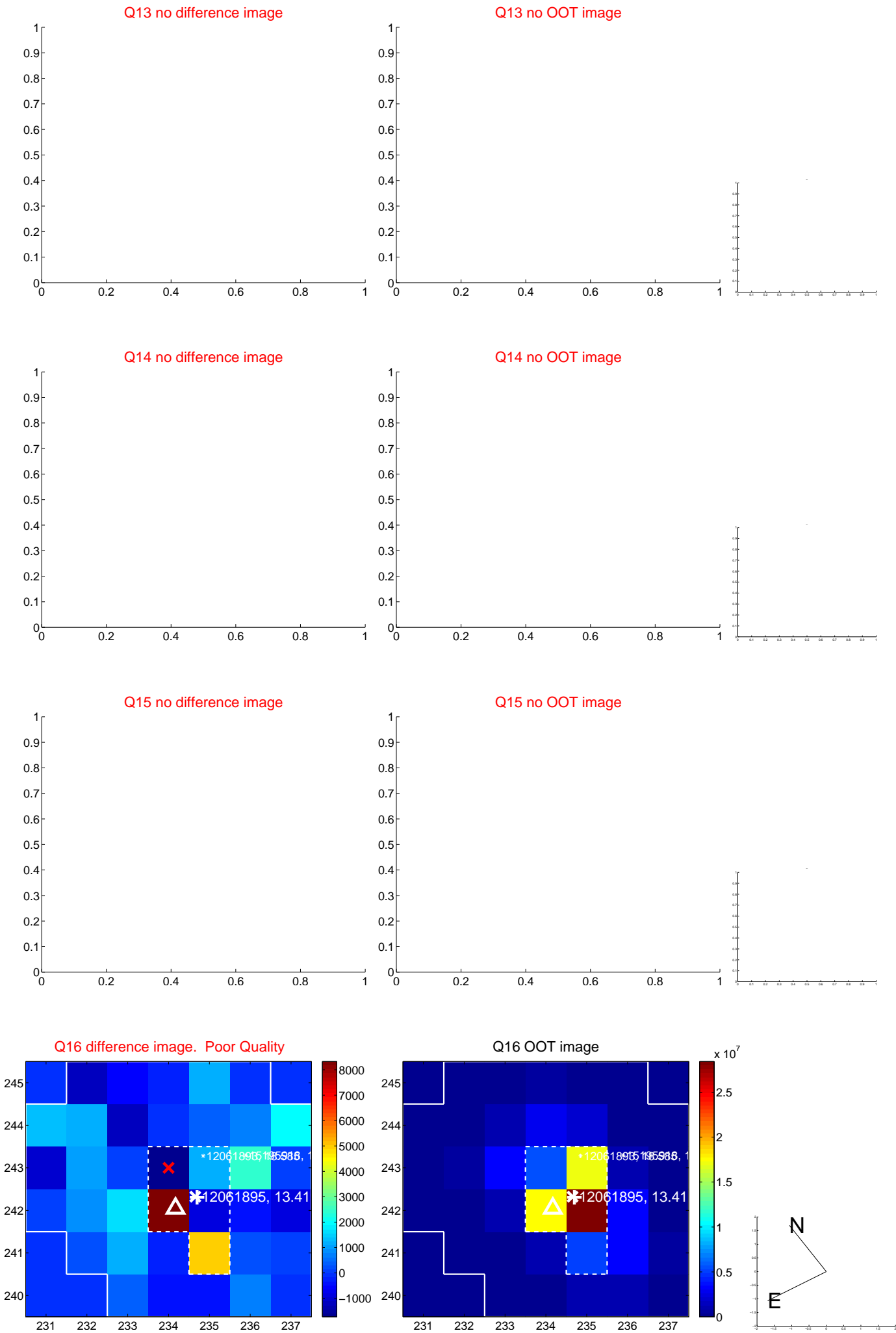




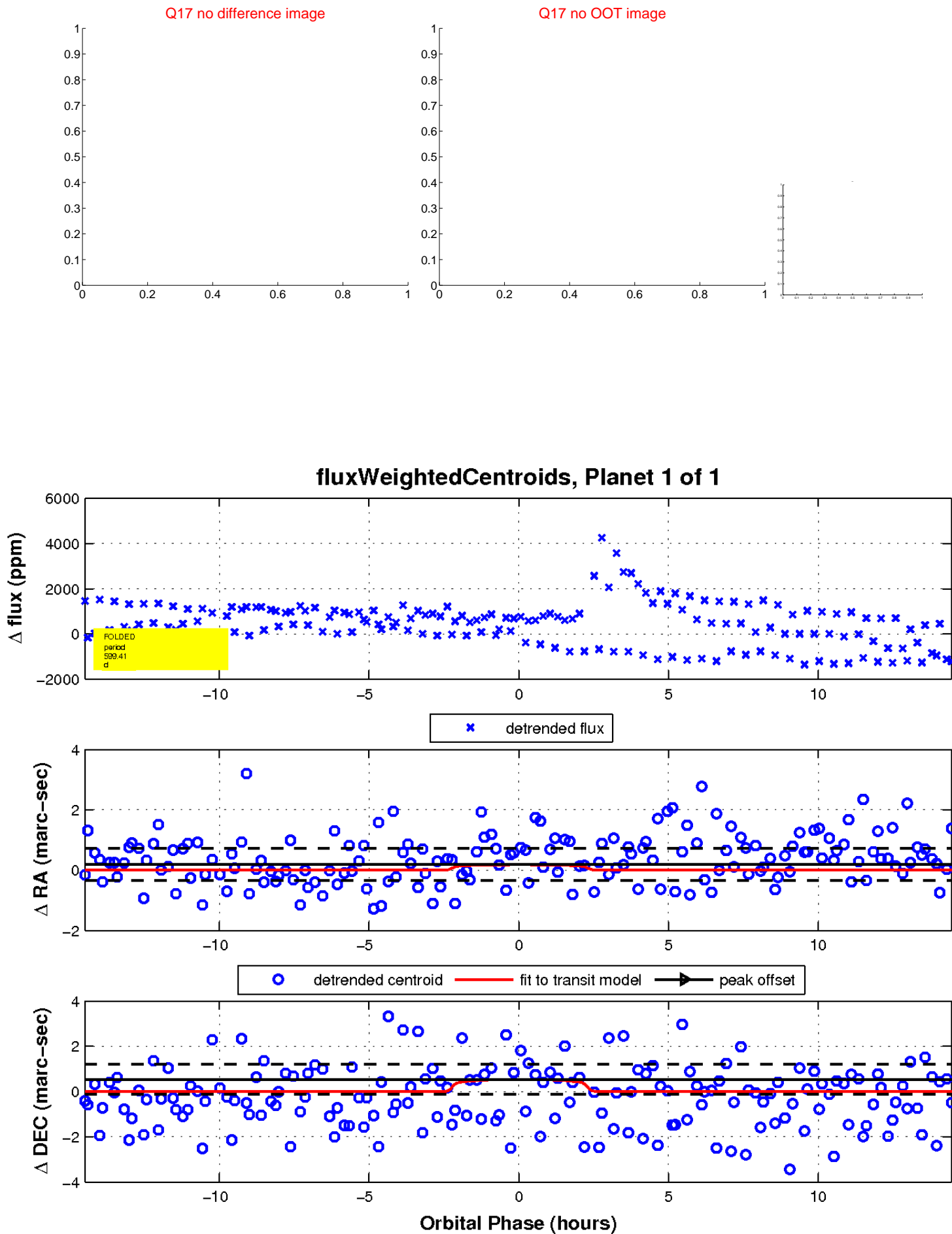
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



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



UKIRT Image

Declination

