

# KIC 006119877

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006119877-01	OBS	No	370.842834	265.141346	1388.3	25.513	8.0	7.2	0.73	4926	3.21	0.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119877-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS

**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.

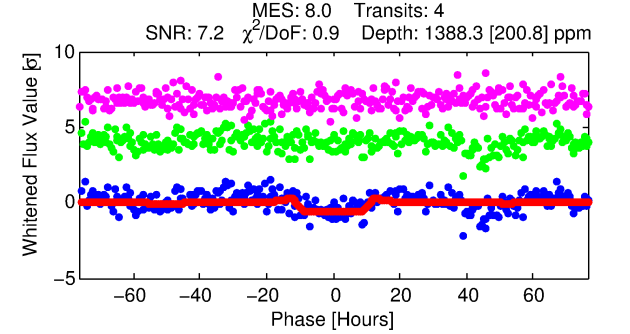
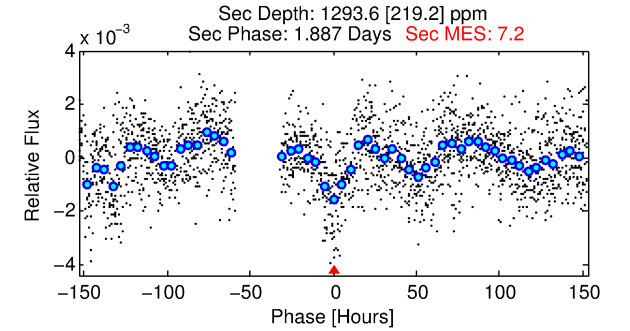
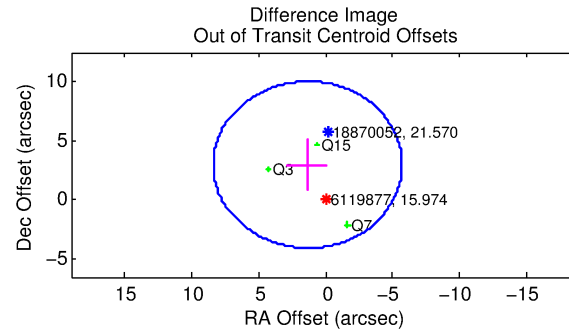
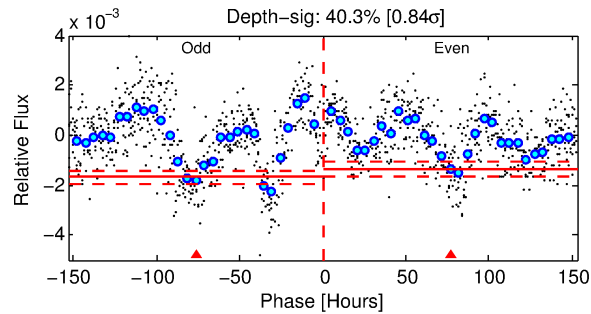
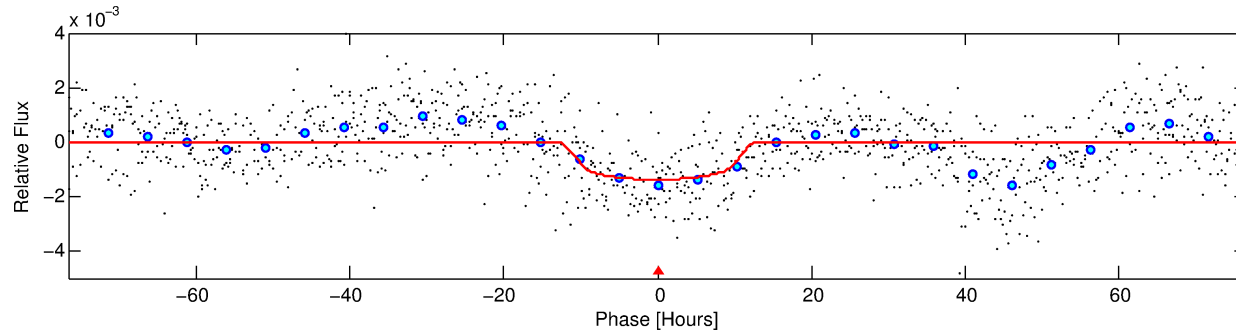
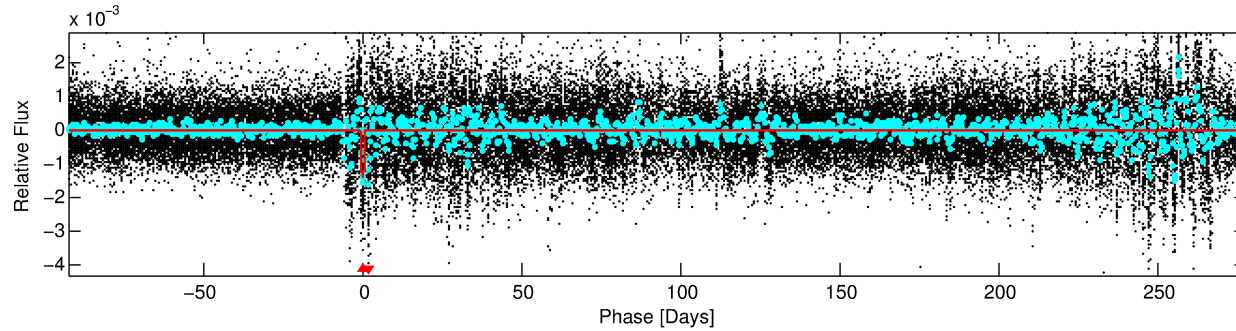
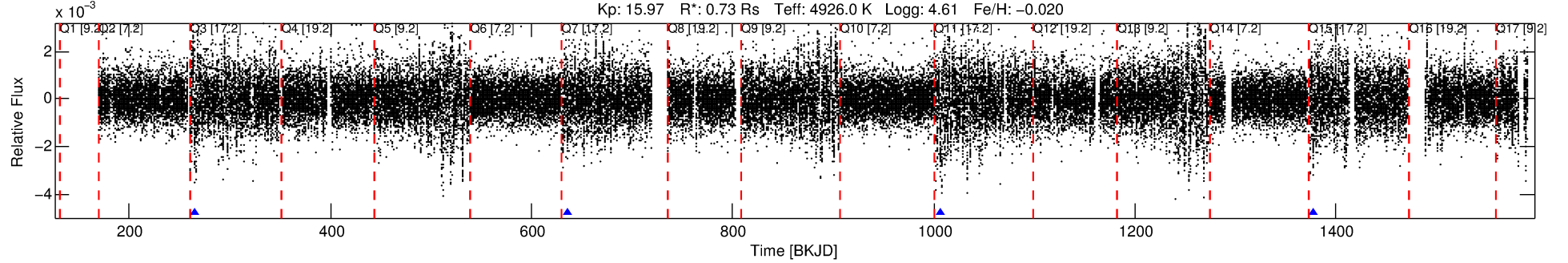
## Ephemeris Match Information For 006119877-01

No Significant Match Found

# DV One-Page Summary

KIC: 6119877 Candidate: 1 of 1 Period: 370.843 d  
KOI: K04134 Corr: No Ephemeris Match

Kp: 15.97 R\*: 0.73 Rs Teff: 4926.0 K Logg: 4.61 Fe/H: -0.020



## DV Fit Results:

Period = 370.84283 [0.02028] d  
Epoch = 265.1413 [0.0378] BKJD  
Rp/R\* = 0.0405 [0.0045]  
a/R\* = 62.77 [17.46]  
b = 0.87 [0.08]  
Seff = 0.32 [0.05]  
Teq = 192 [8] K  
Rp = 3.21 [0.49] Re  
a = 0.9321 [0.0791] AU  
Ag = 59955.74 [18213.94] [3.29σ]  
Teffp = 4640 [353] K [12.60σ]

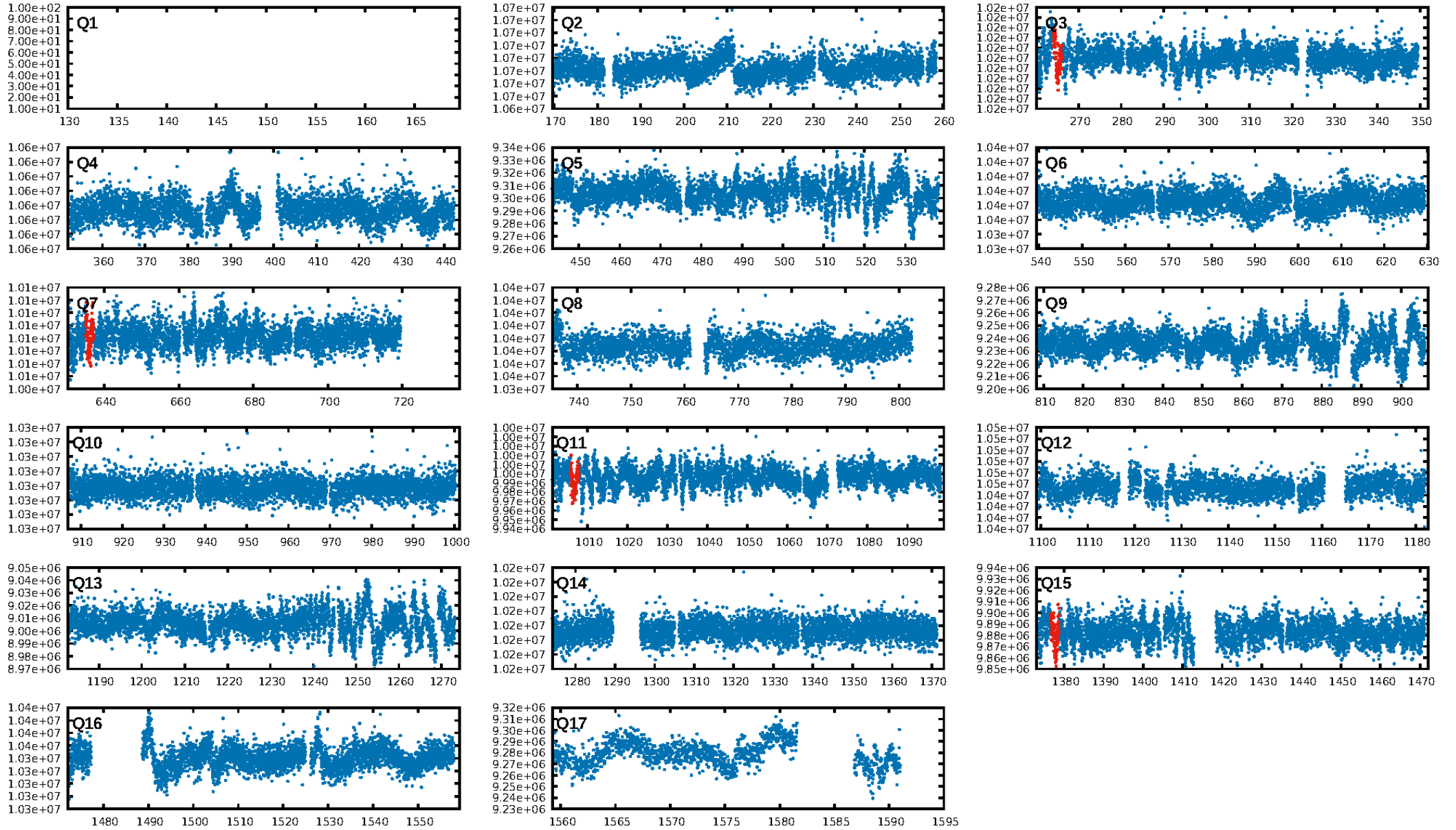
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 78.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 7.65e-10  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -1.401  
Centroid-sig: 70.2%  
Centroid-so: 1.239 arcsec [0.45σ]  
OotOffset-rm: 3.273 arcsec [1.39σ]  
KicOffset-rm: 3.402 arcsec [1.66σ]  
OotOffset-st: 0/3/0/0 [3]  
KicOffset-st: 0/3/0/0 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [3/3]

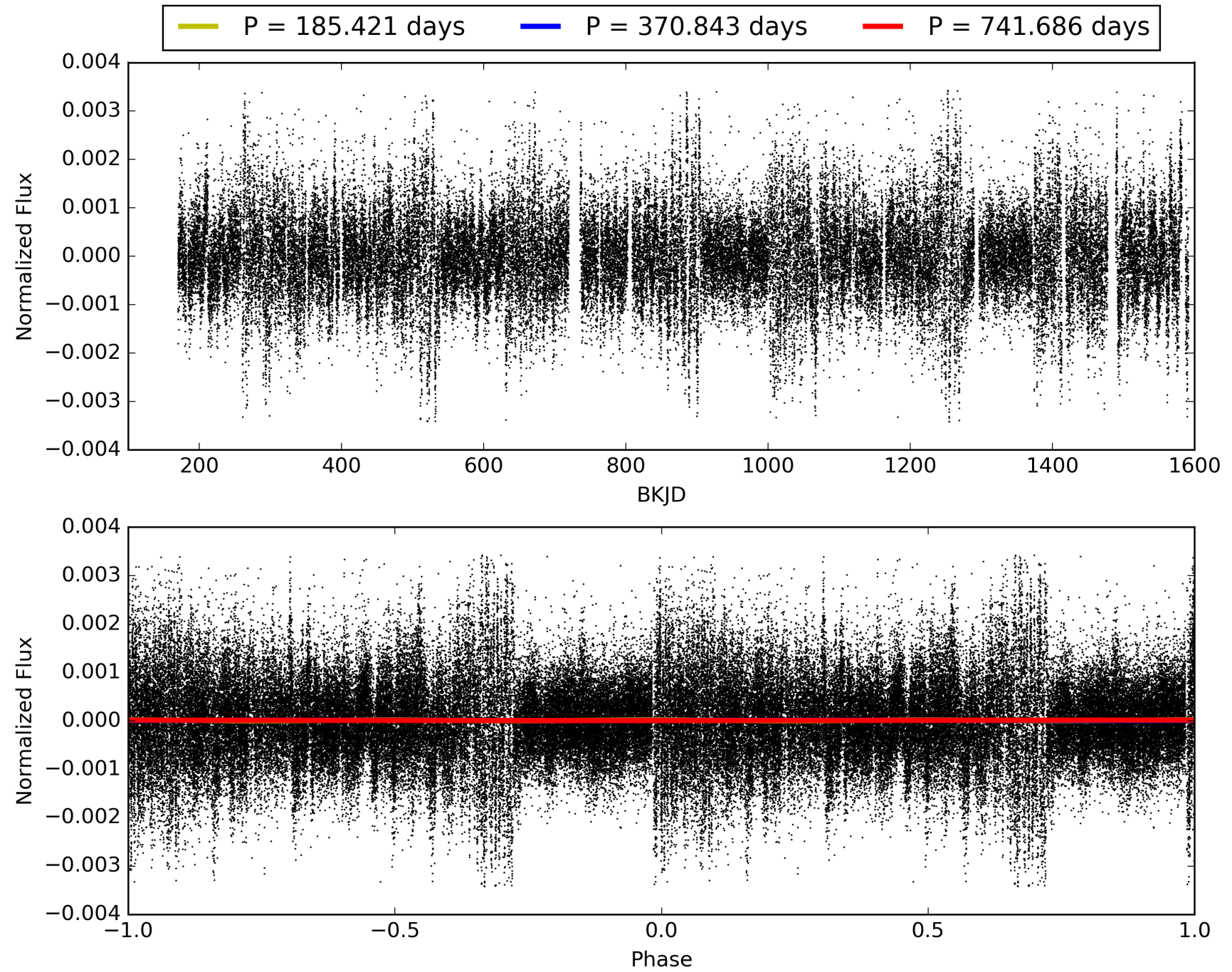
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:25:37 Z

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

# TCE 006119877-01, PDC Light Curves

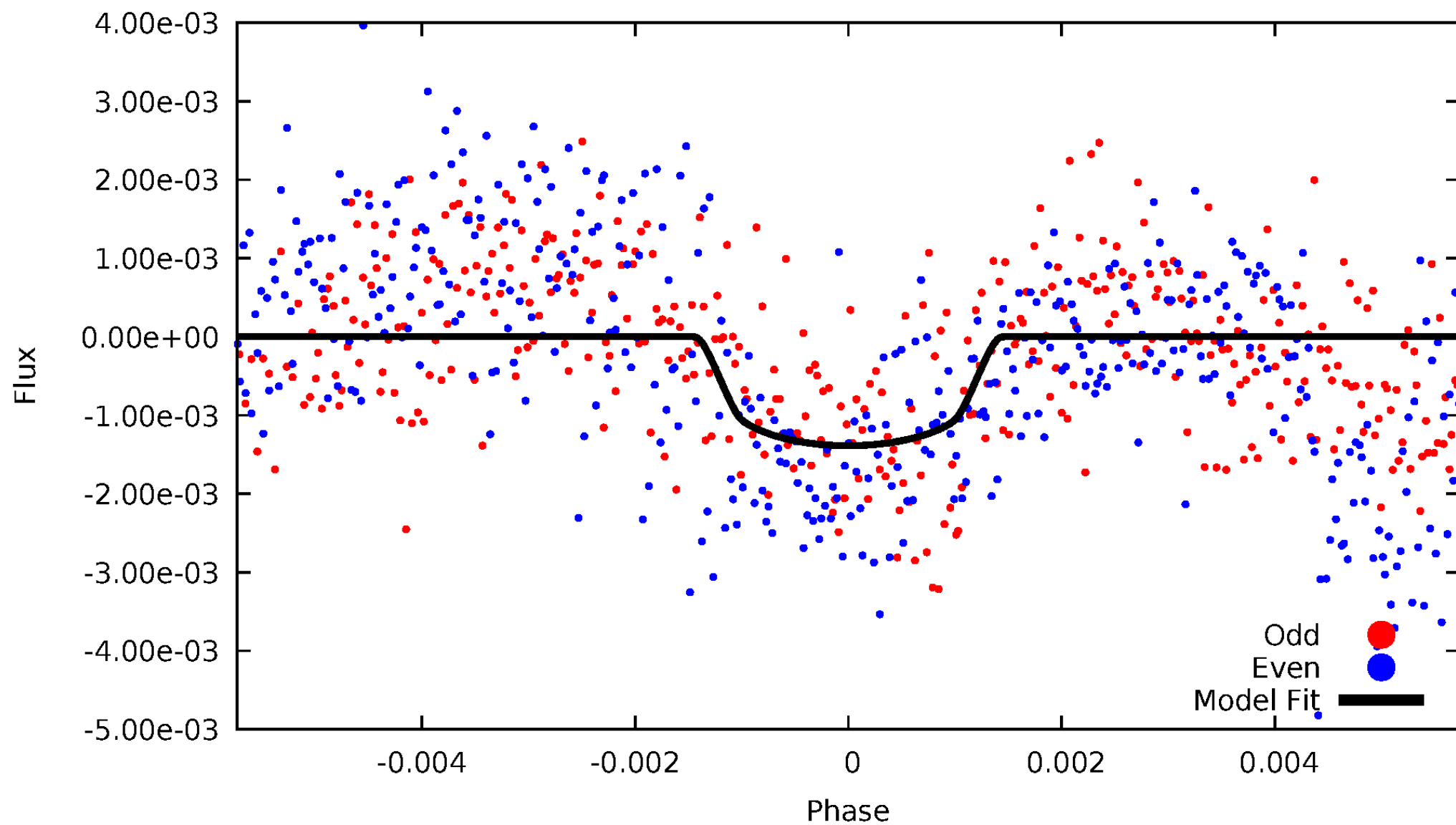


# TCE 006119877-01



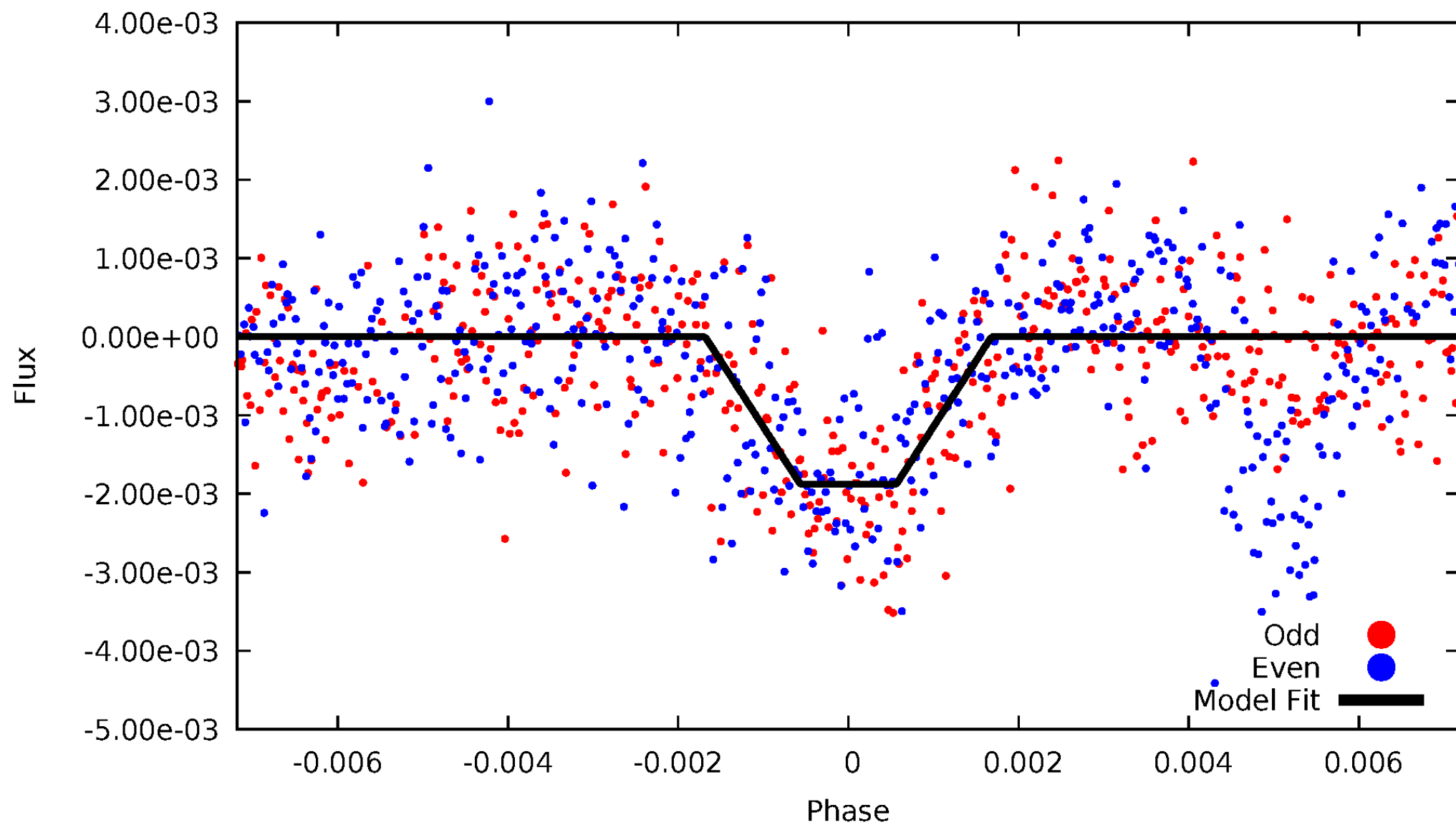
# DV Odd/Even

TCE 006119877-01



# ALT Odd/Even

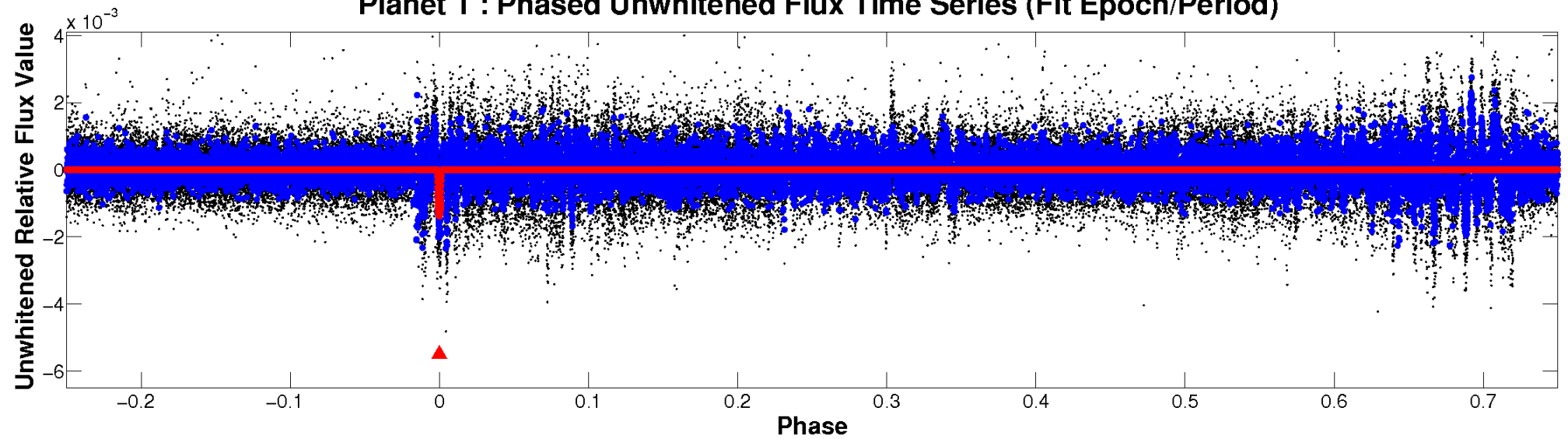
TCE 006119877-01



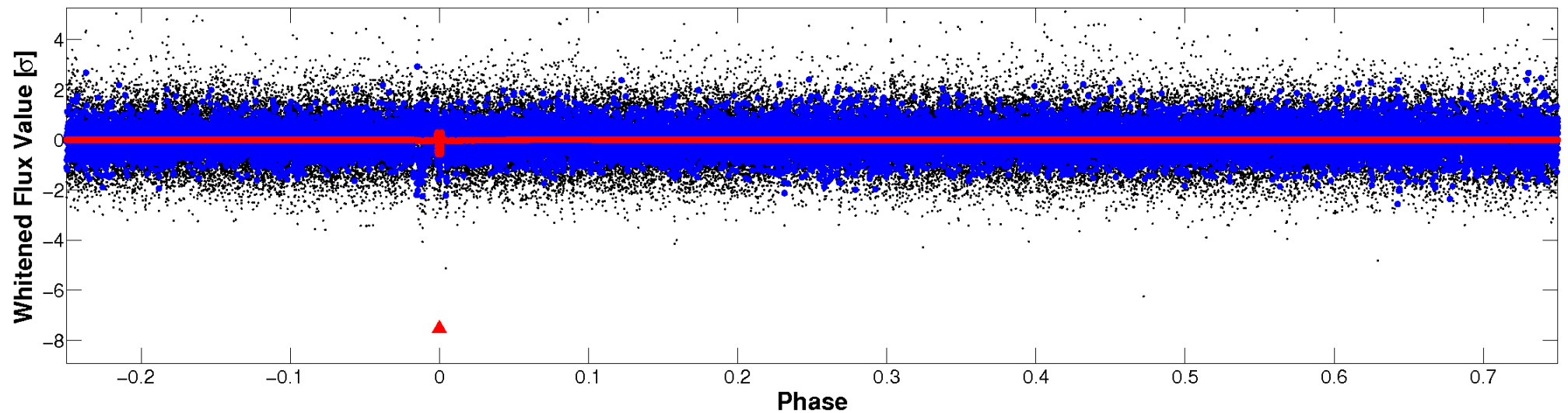


# Non-Whitened Vs. Whitened Light Curve

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

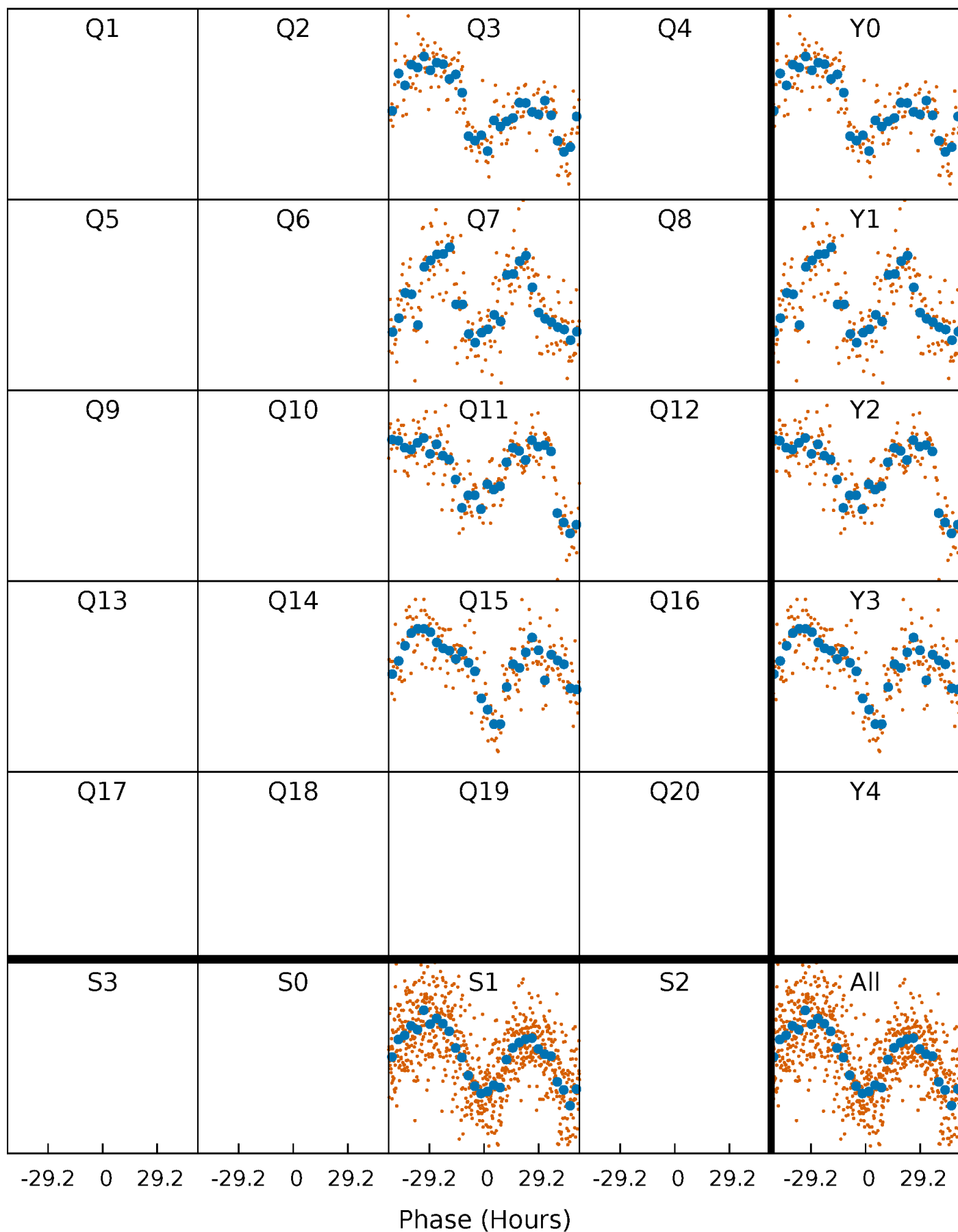


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

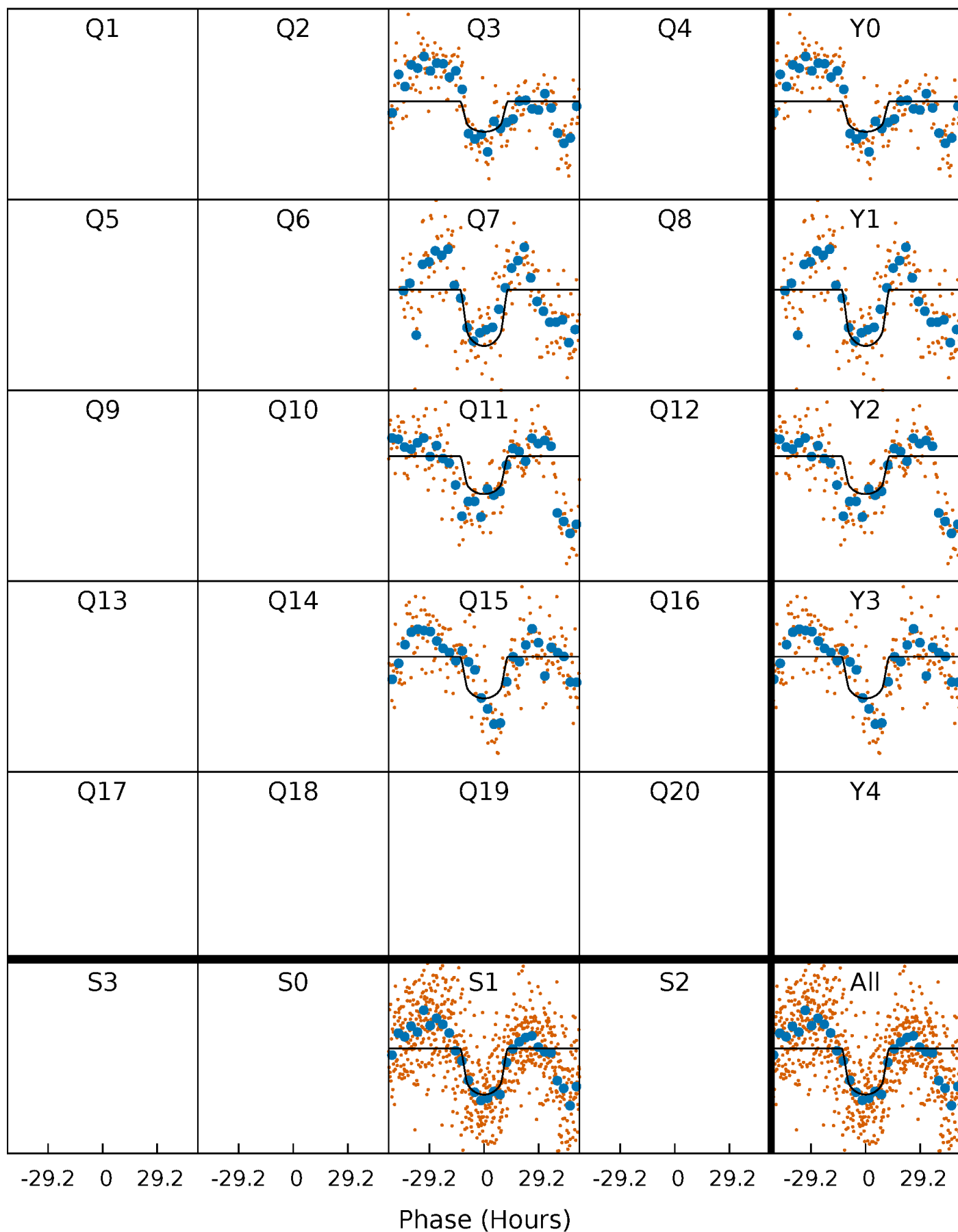
TCE 006119877-01 P=370.842834 Days  $T_0=265.141346$  (BKJD)





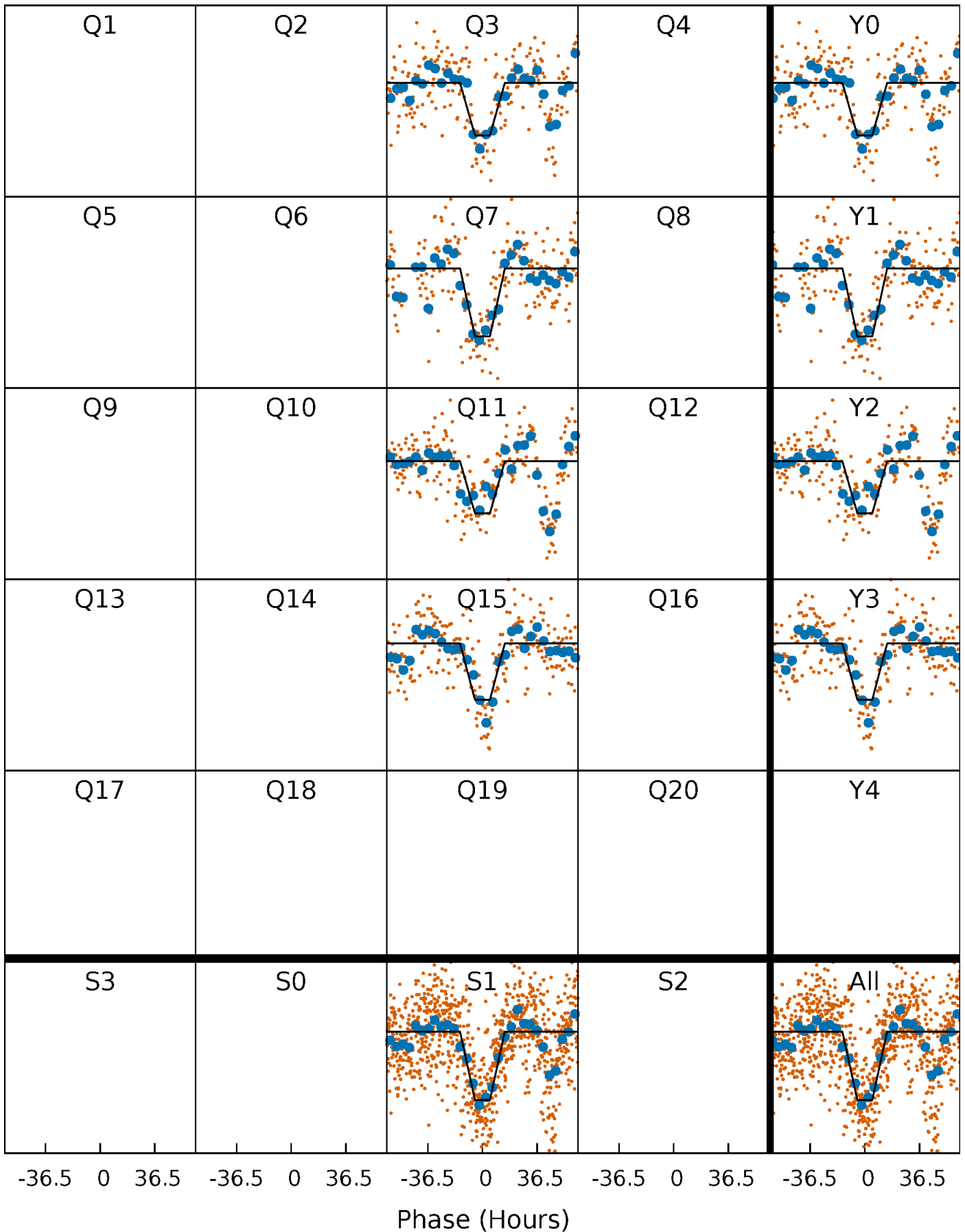
# DV Quarter-Phased Transit Curves

TCE 006119877-01 P=370.842834 Days  $T_0=265.141346$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

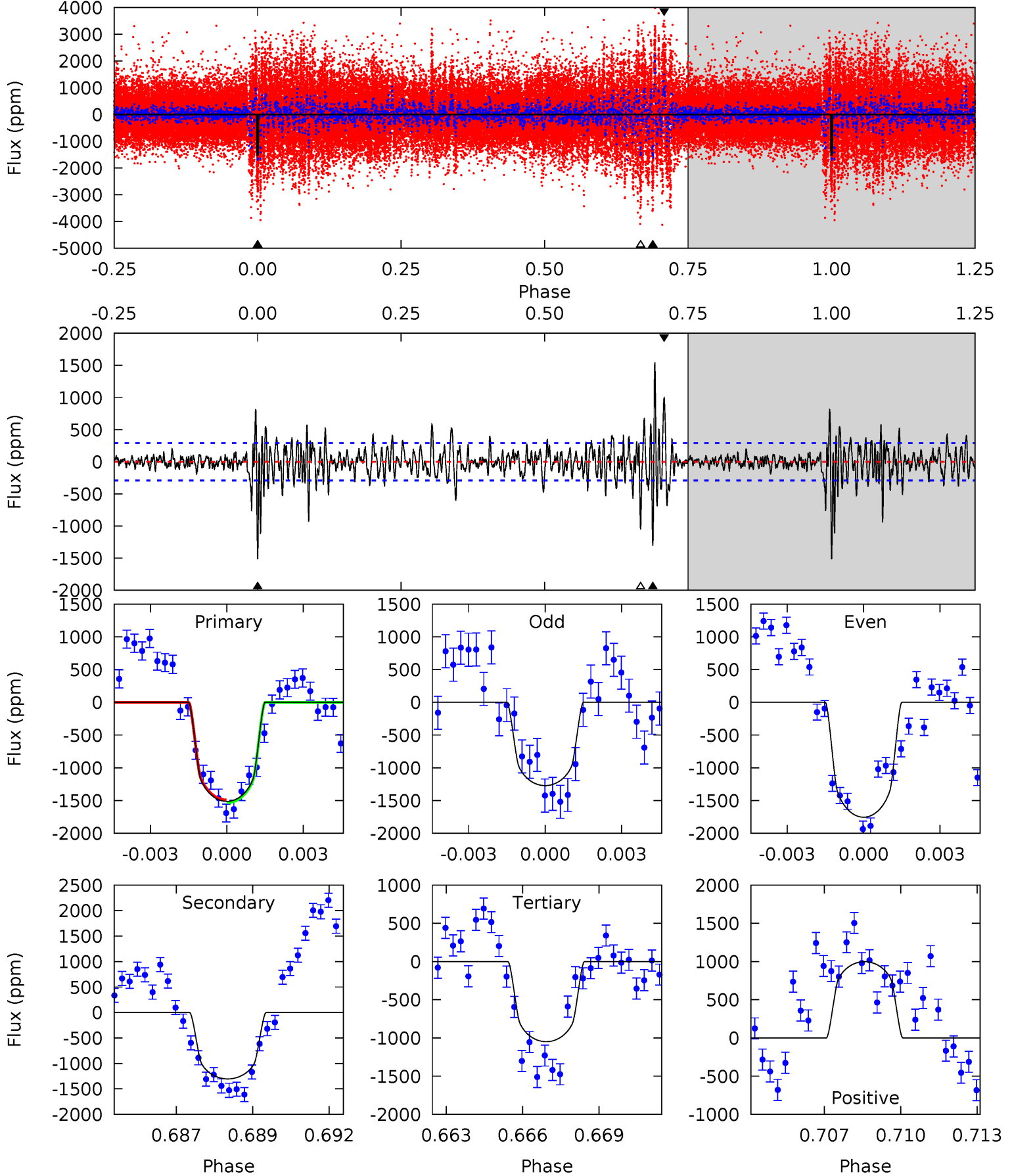
TCE 006119877-01 P=370.923604 Days  $T_0=265.017893$  (BKJD)



# DV Model-Shift Uniqueness Test

006119877-01, P = 370.842834 Days, E = 265.141346 Days

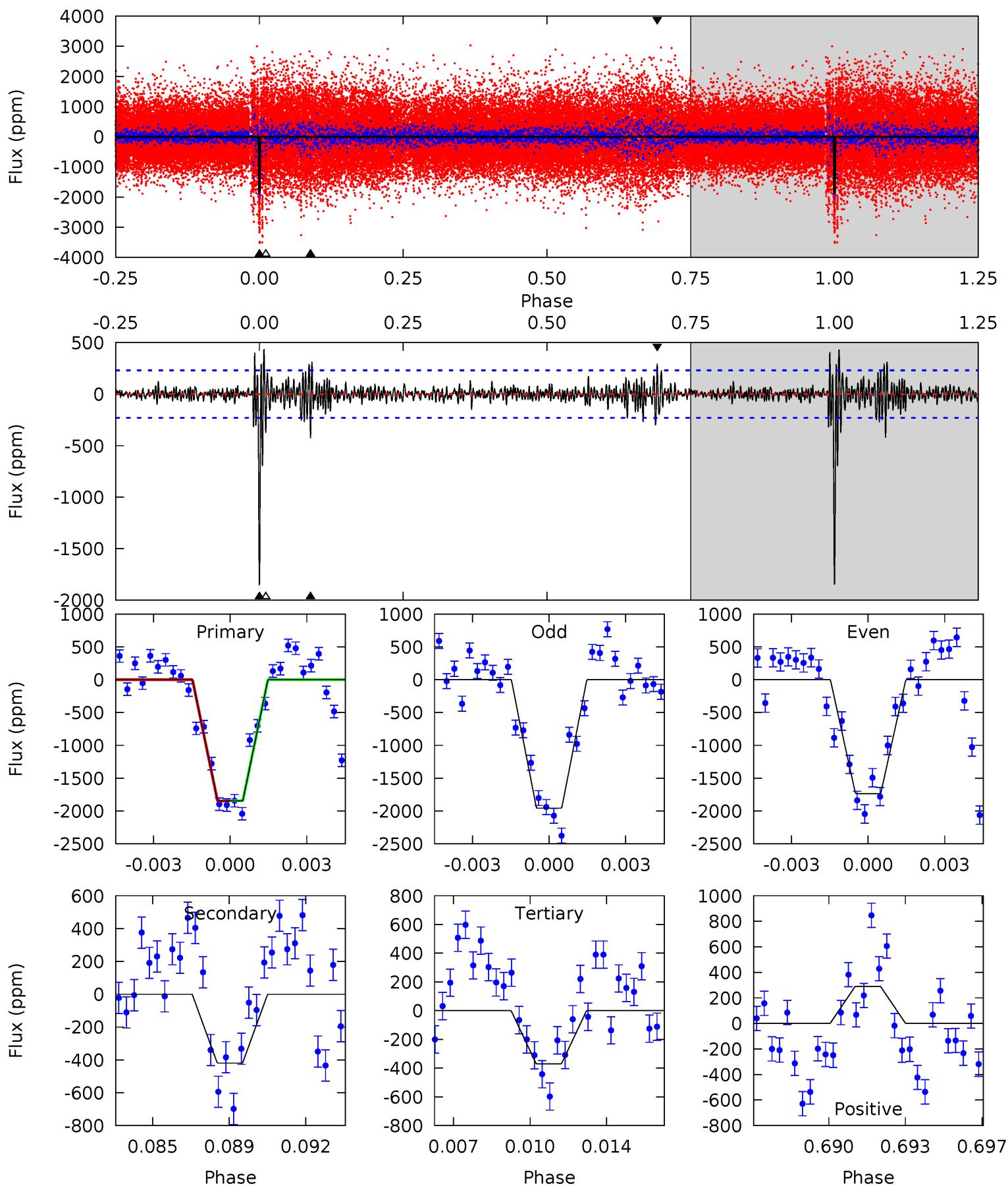
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	23.6	19.0	18.1	5.26	2.98	3.77	8.42	9.33	4.62	5.53	4.37	0.95	0.51	0.39



# Alt Model-Shift Uniqueness Test

006119877-01, P = 370.923604 Days, E = 265.017893 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
41.9	9.52	8.39	6.59	5.23	2.93	1.59	33.5	35.3	1.12	2.92	2.52	0.95	0.19	0.07



### Stellar Parameters For KIC 006119877

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4926^{+148}_{-133}$	$4.611^{+0.027}_{-0.063}$	$-0.020^{+0.300}_{-0.300}$	$0.726^{+0.076}_{-0.051}$	$0.795^{+0.055}_{-0.083}$	$2.931^{+0.433}_{-0.662}$
	+3%/-3%	+1%/-1%	+1500%/-1500%	+10%/-7%	+7%/-10%	+15%/-23%
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 006119877-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1303 \pm 55$	$3.28^{+0.42}_{-0.39}$	$271^{+10}_{-9}$	$4707^{+275}_{-240}$	$57899^{+15633}_{-12139}$
Alt.	$-420 \pm 44$	$3.47^{+0.41}_{-0.37}$	$270^{+10}_{-8}$	$3733^{+179}_{-151}$	$16333^{+4854}_{-3254}$

$T_{\text{max}}$  = 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

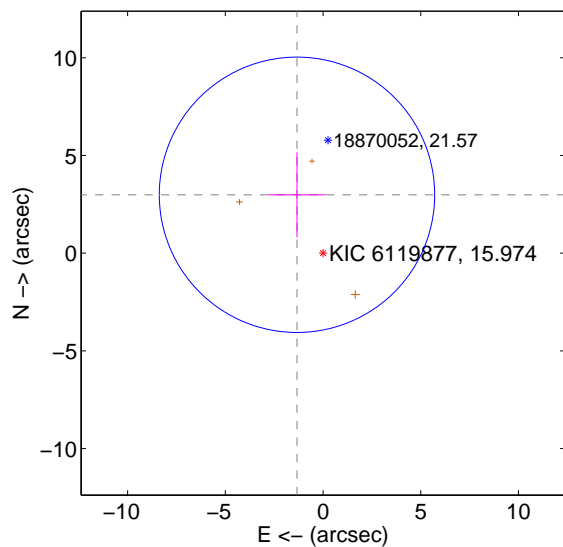
Supplemental centroid analysis for 006119877-01. Kepler magnitude: 15.97. Transit SNR 7.19

There are 0 quarters with good PRF difference image offsets

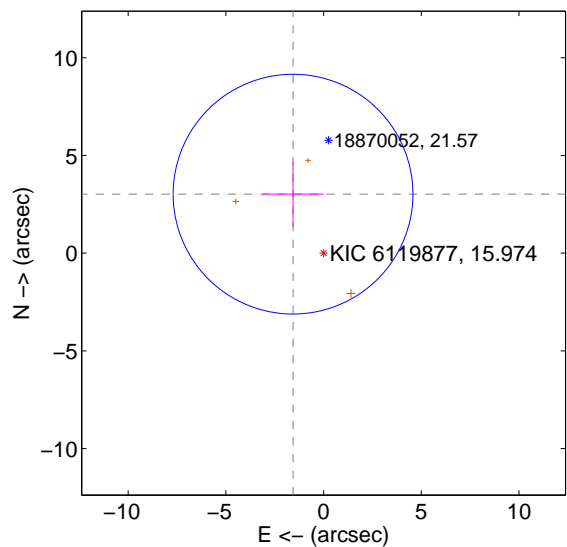
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.273 \pm 2.349$	1.39	$1.334 \pm 1.468$	$2.989 \pm 2.180$
PRF-fit source offset from KIC position	$3.402 \pm 2.045$	1.66	$1.564 \pm 1.570$	$3.022 \pm 1.671$
photometric centroid source offset	$1.24 \pm 2.77$	0.45	$-1.23 \pm 2.78$	$0.15 \pm 1.88$

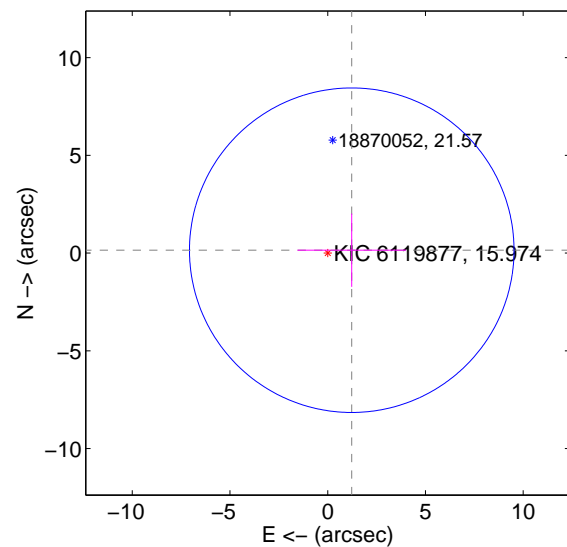
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



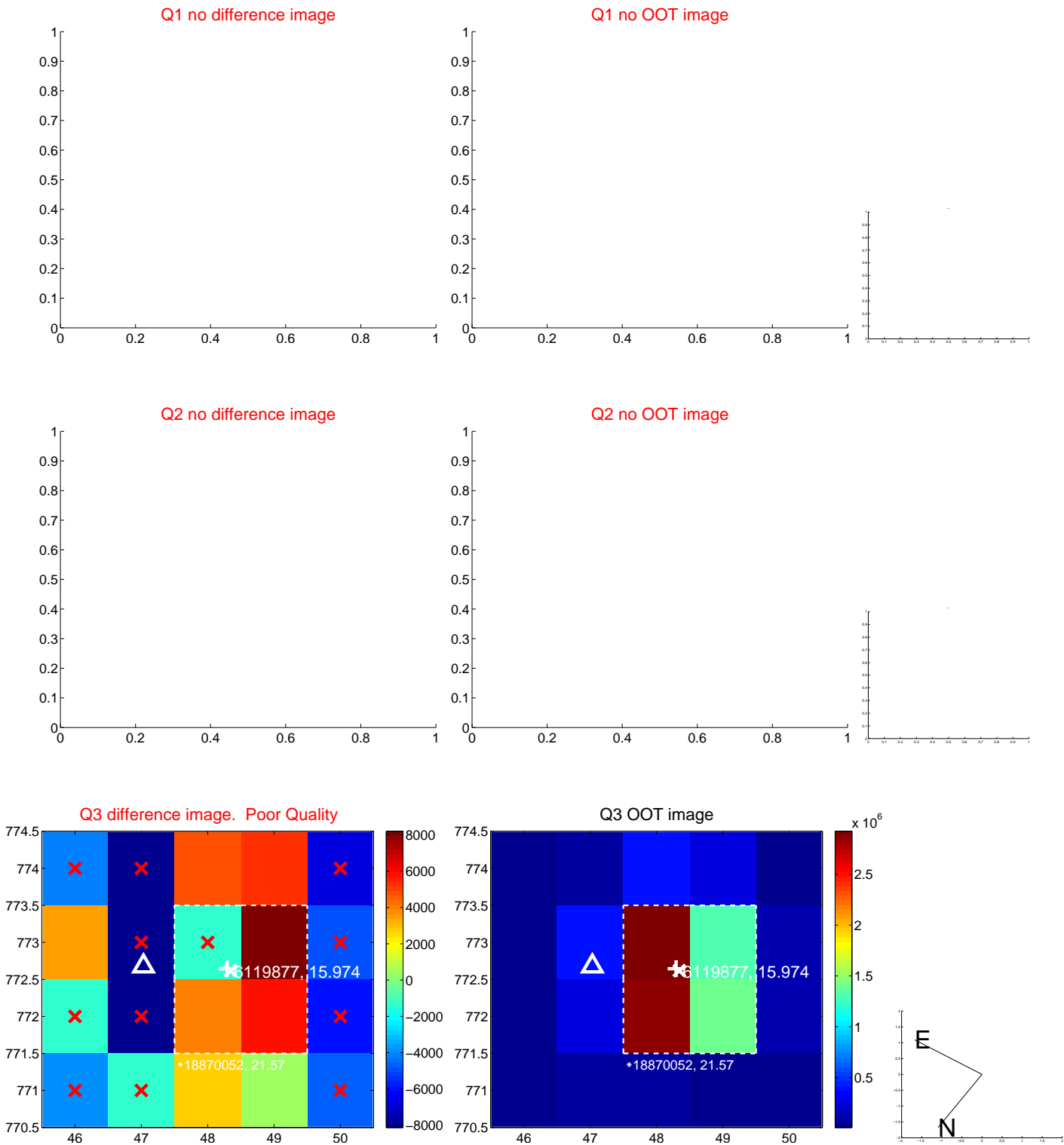
offset from photometric centroids



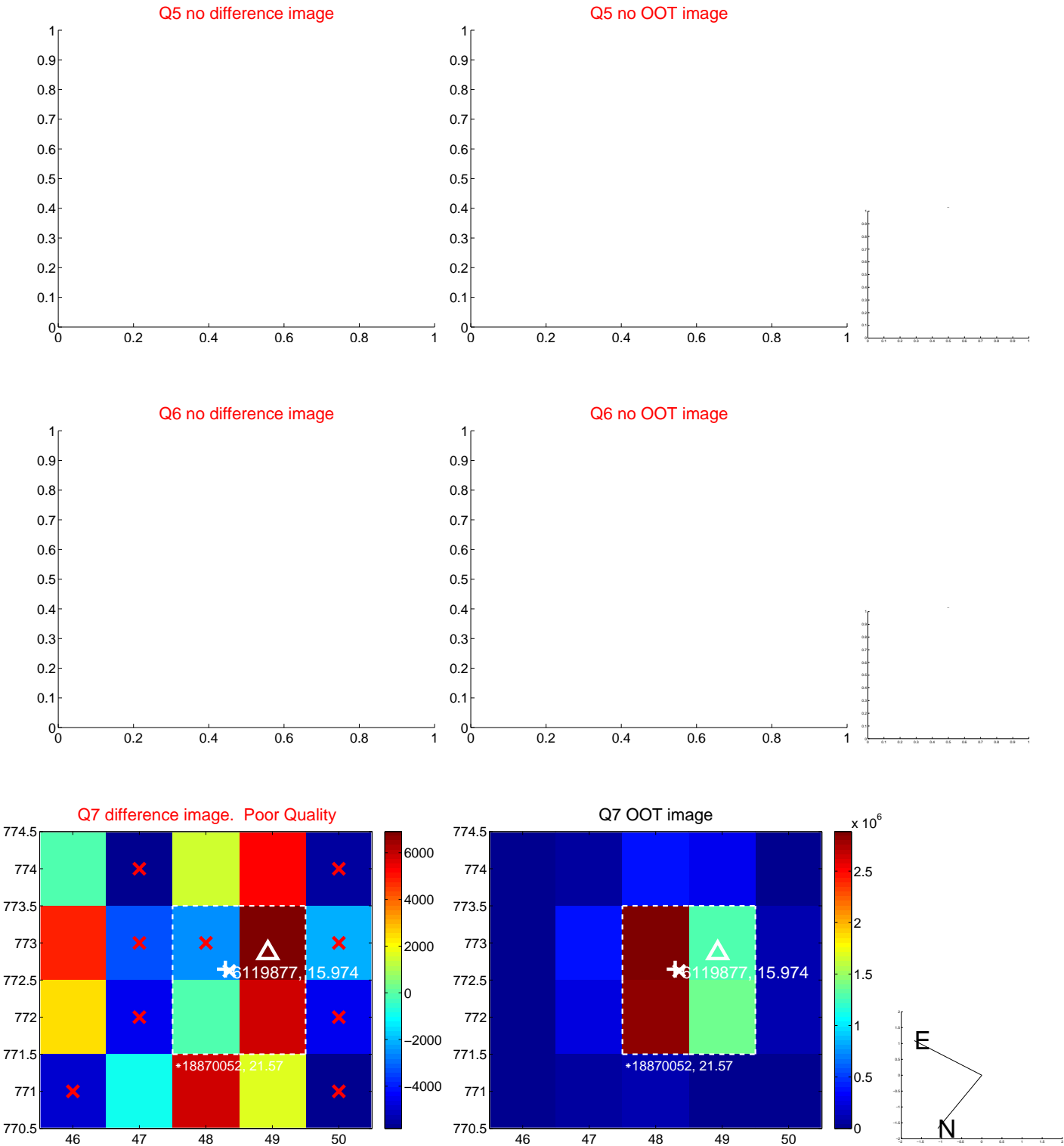
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



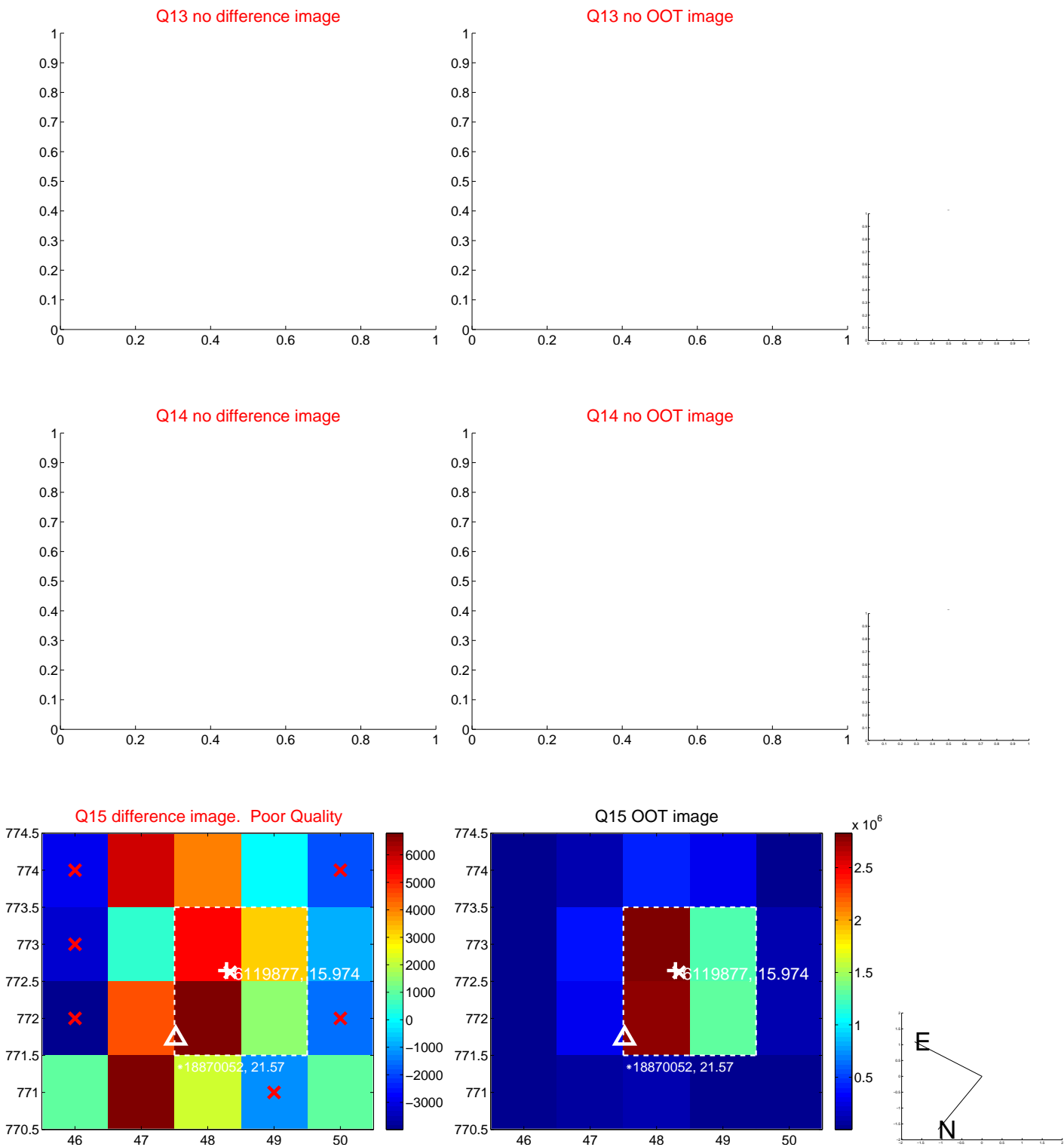
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



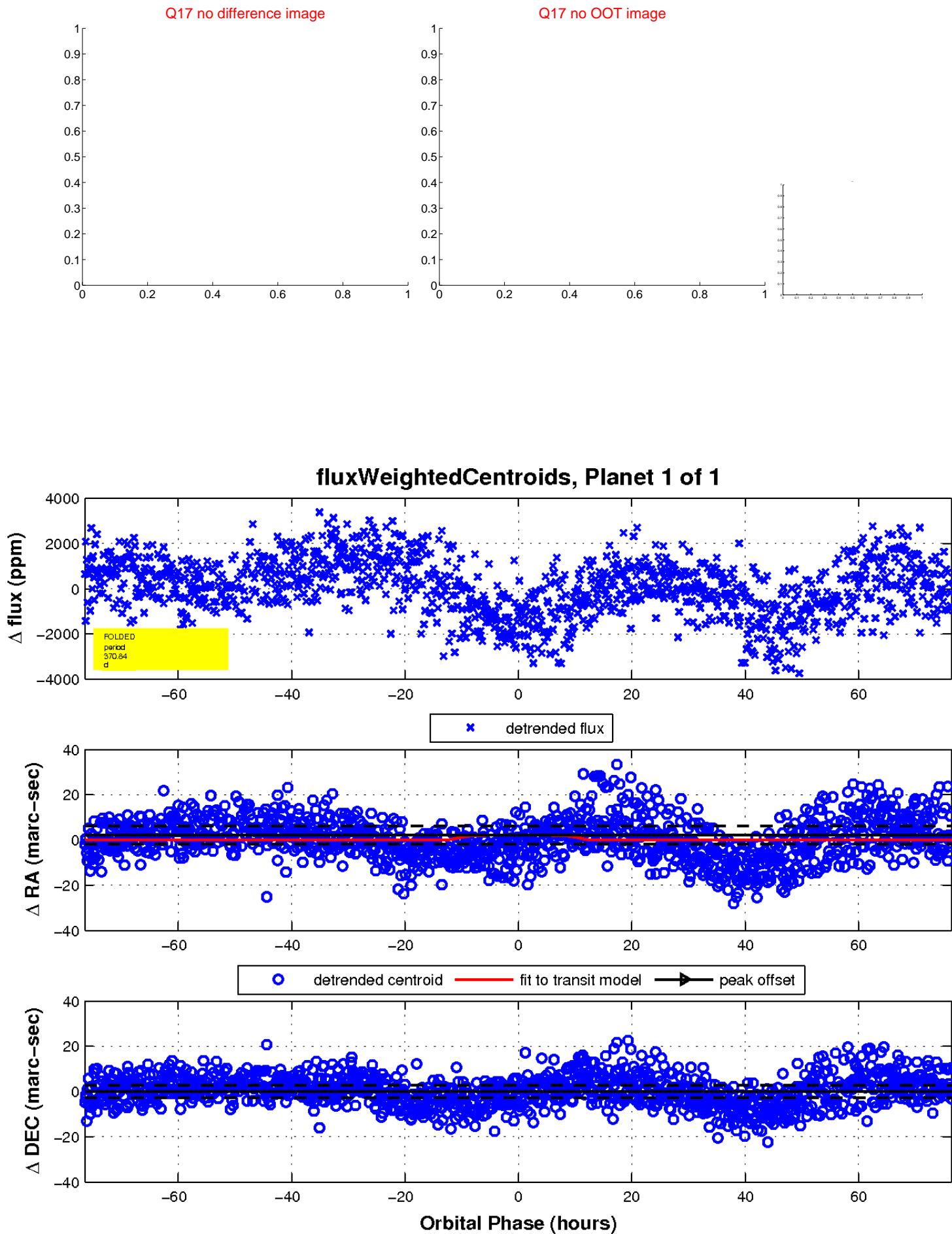
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



UKIRT Image

Declination

