

# KIC 006271512

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006271512-01	OBS	No	82.416436	206.737145	883.2	6.000	17.8	-1.0	2.69	7865	8.10	117.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006271512-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

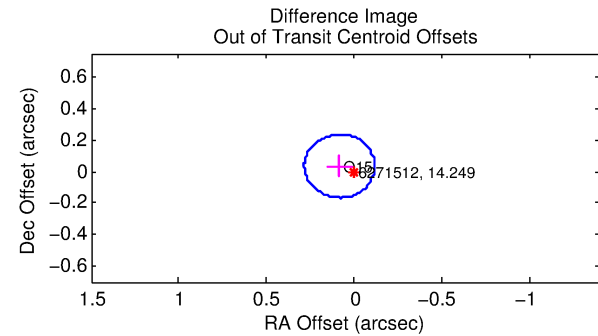
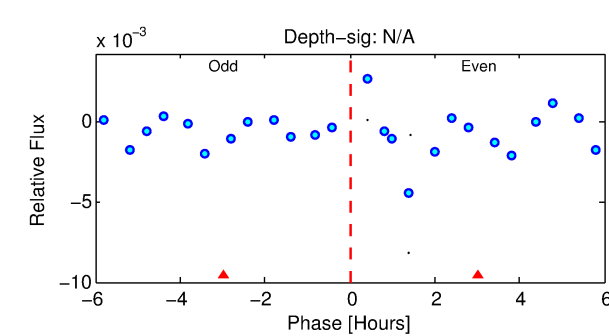
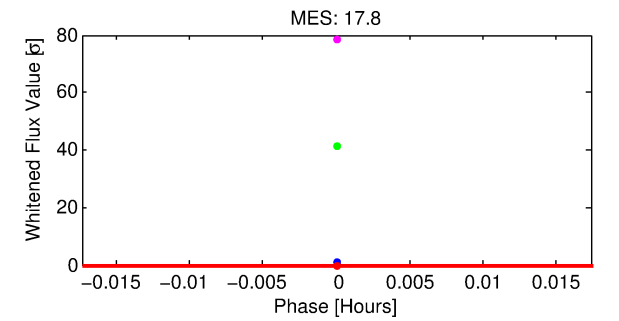
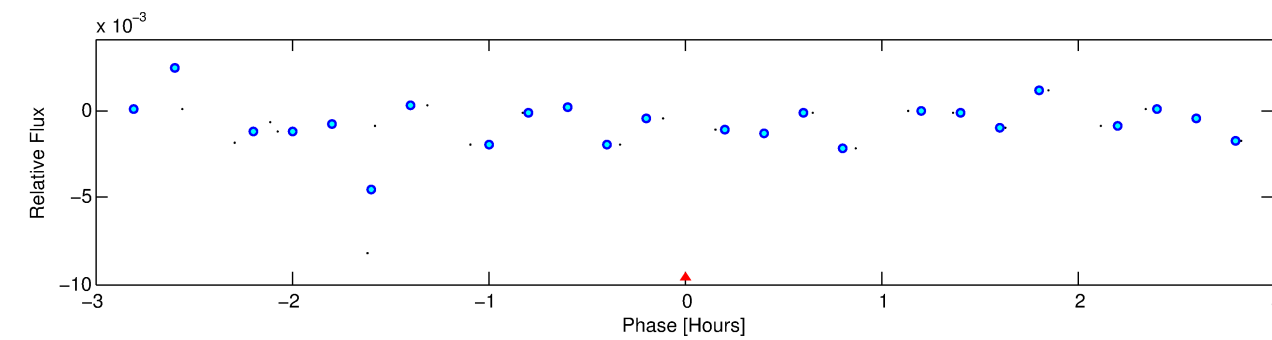
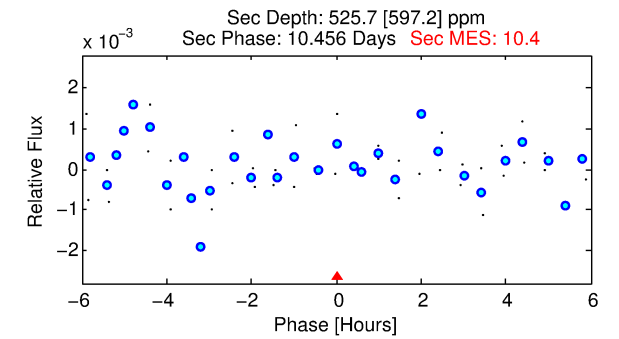
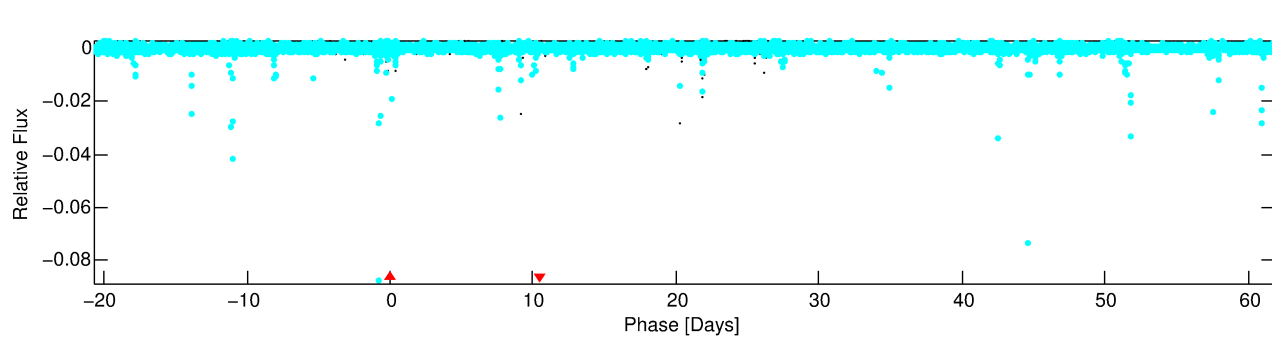
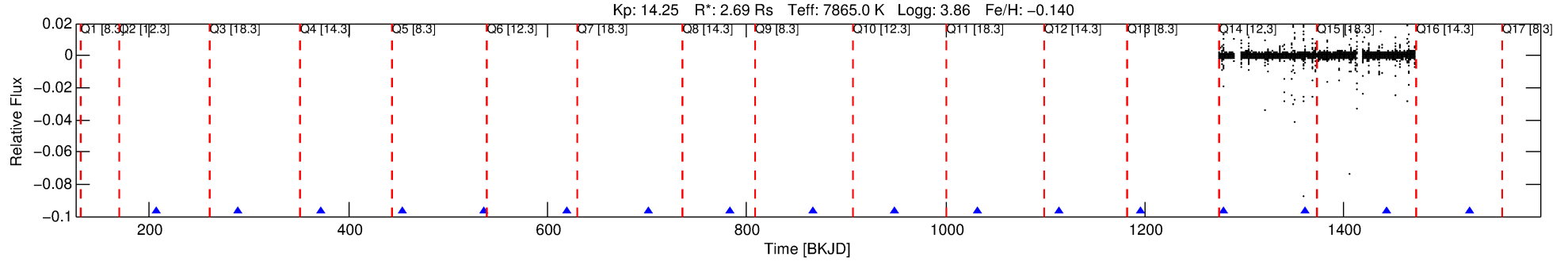
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006271512-01

No Significant Match Found

# DV One-Page Summary

KIC: 6271512 Candidate: 1 of 1 Period: 82.416 d



## TPS TCE Results:

Period = 82.41644 d  
Epoch = 206.7371 BKJD

DV fit results are unavailable

## DV Diagnostic Results:

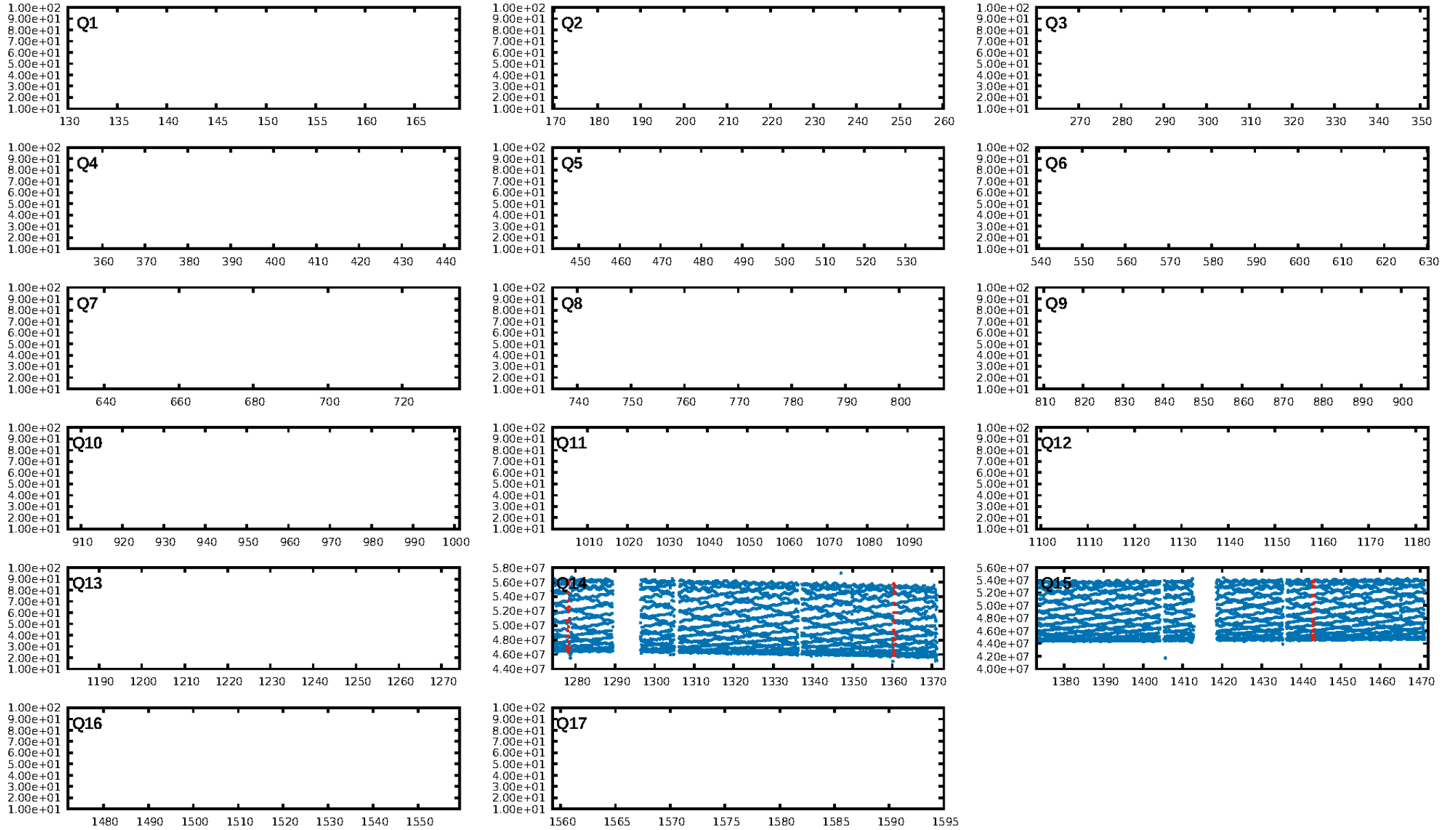
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 3.47e-12**  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: 0.6925

Centroid-sig: 11.4%  
**Centroid-so: 0.131 arcsec [5.42σ]**  
OotOffset-rm: 0.092 arcsec [1.37σ]  
KicOffset-rm: 0.084 arcsec [1.25σ]  
OotOffset-st: 0/1/0/0 [1]  
KicOffset-st: 0/1/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [1/1]

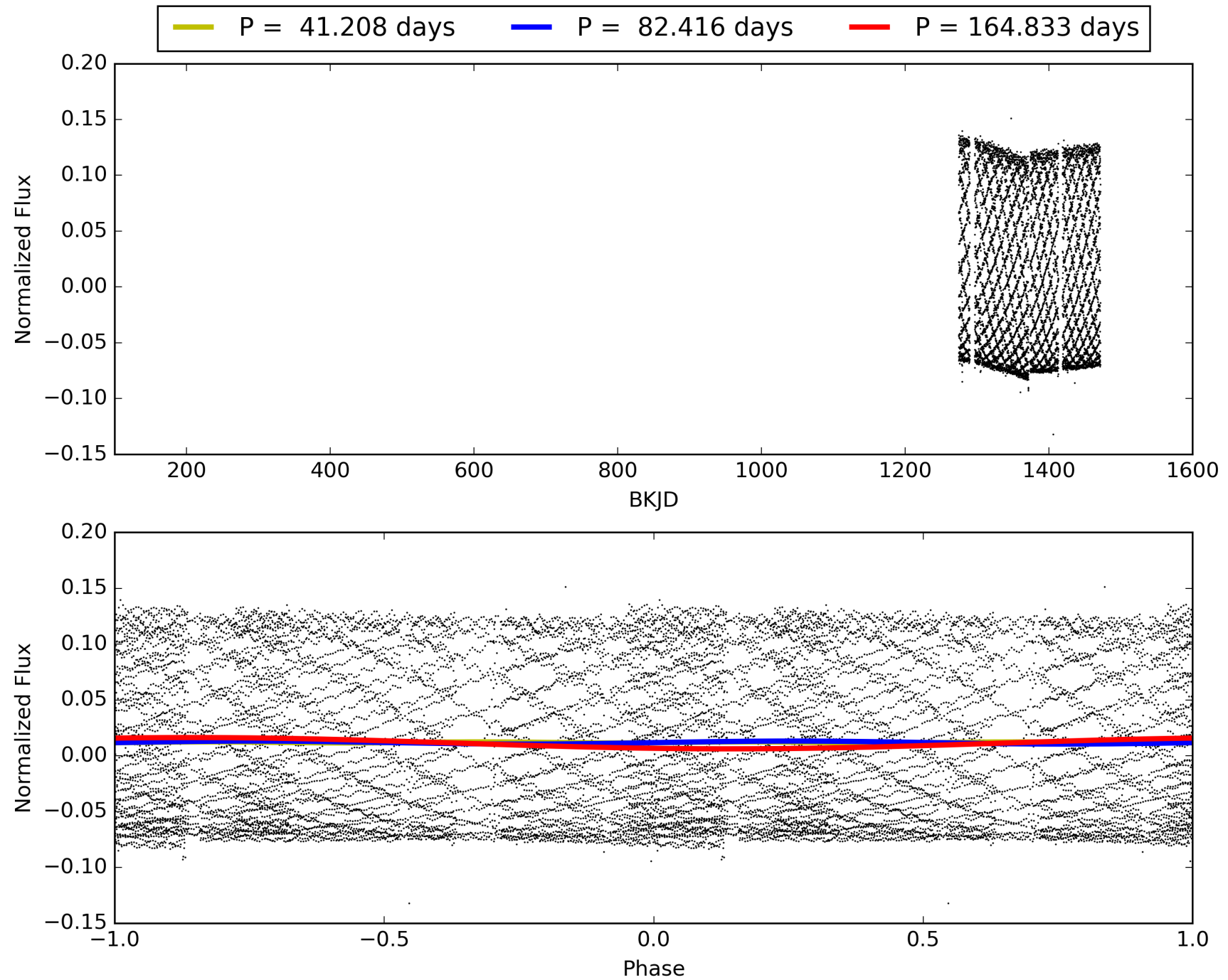
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:34:58 Z

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

# TCE 006271512-01, PDC Light Curves

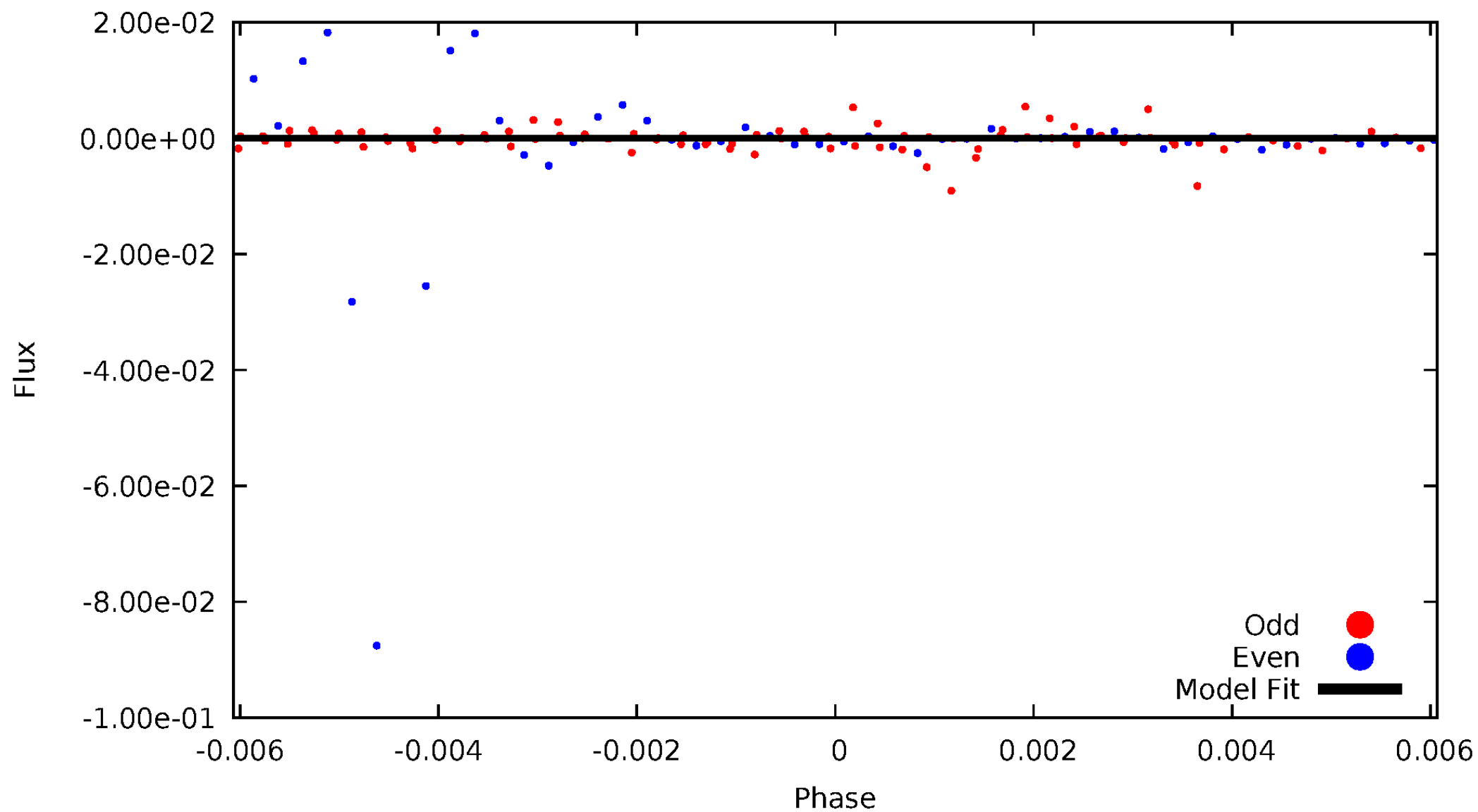


# TCE 006271512-01



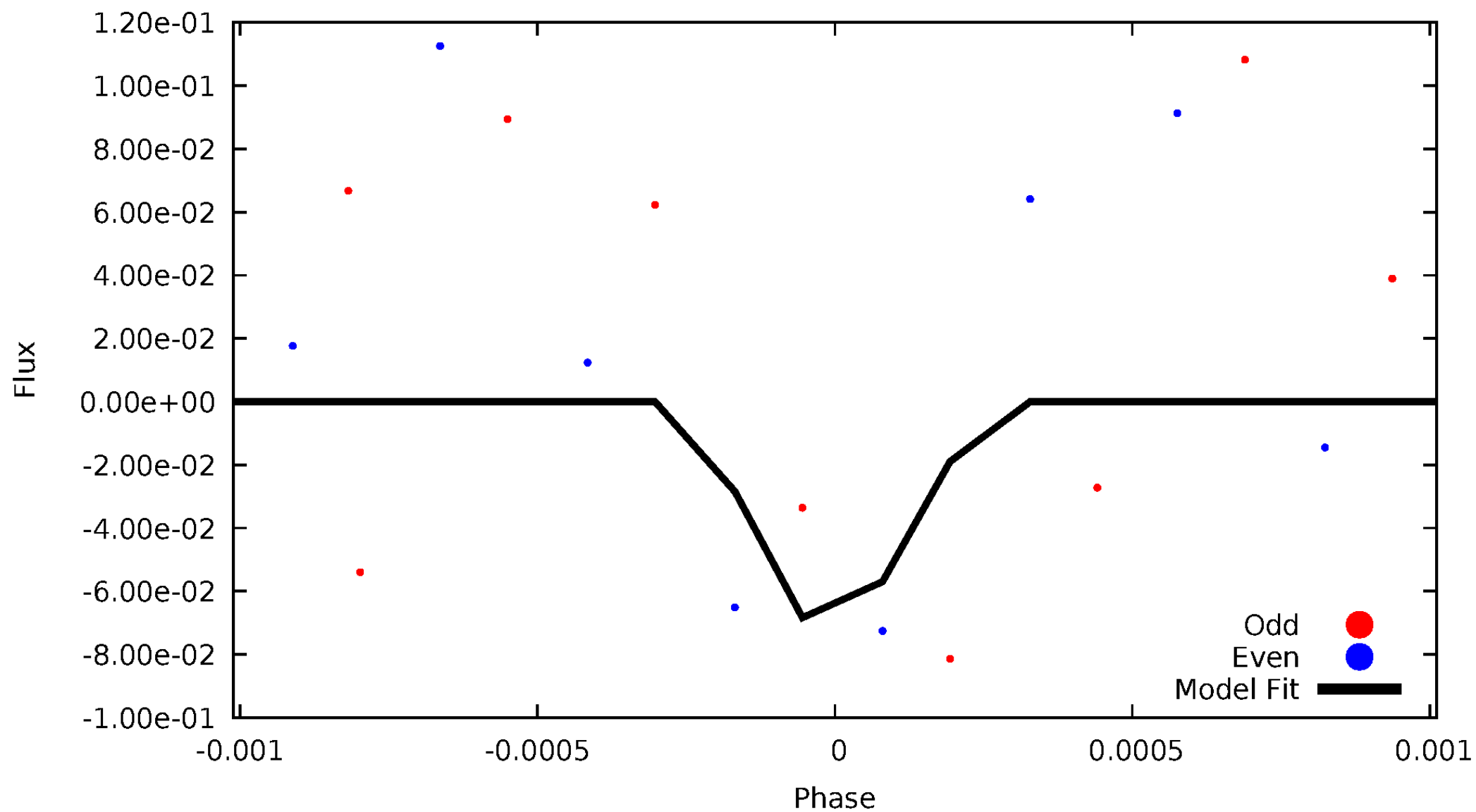
# DV Odd/Even

TCE 006271512-01



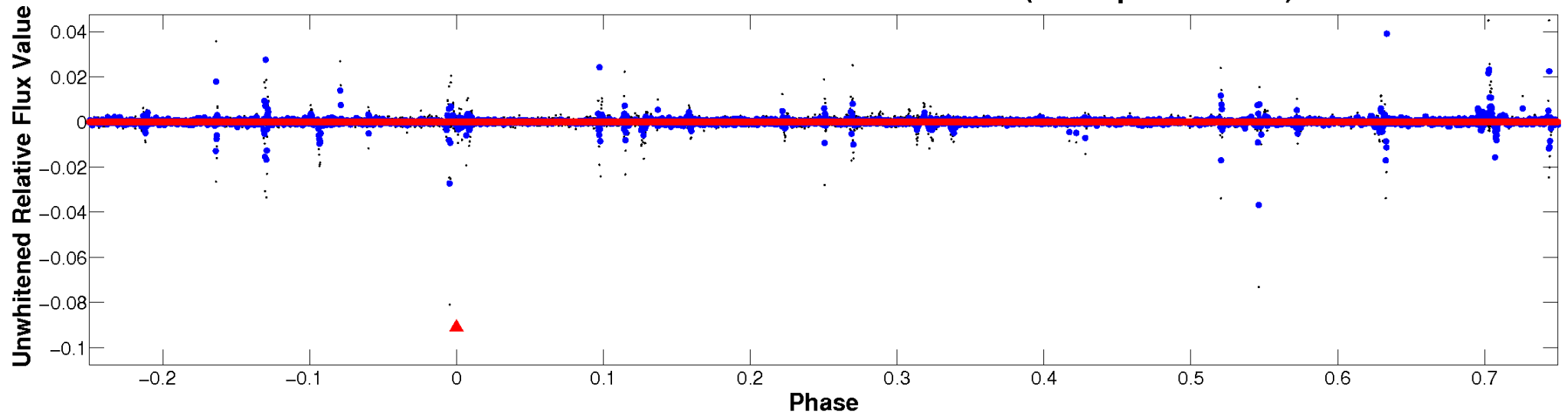
# ALT Odd/Even

TCE 006271512-01



# Non-Whitened Vs. Whitened Light Curve

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

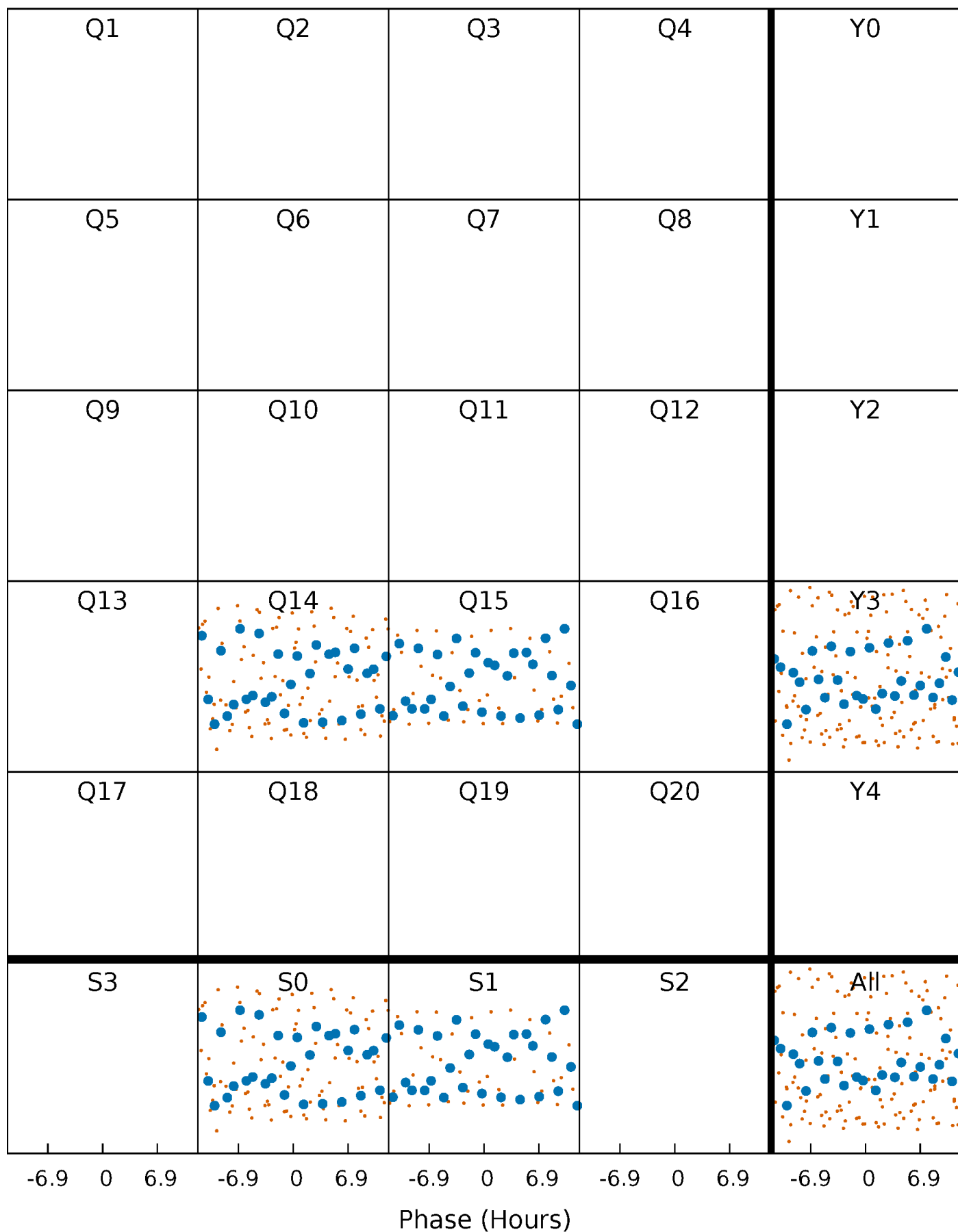


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

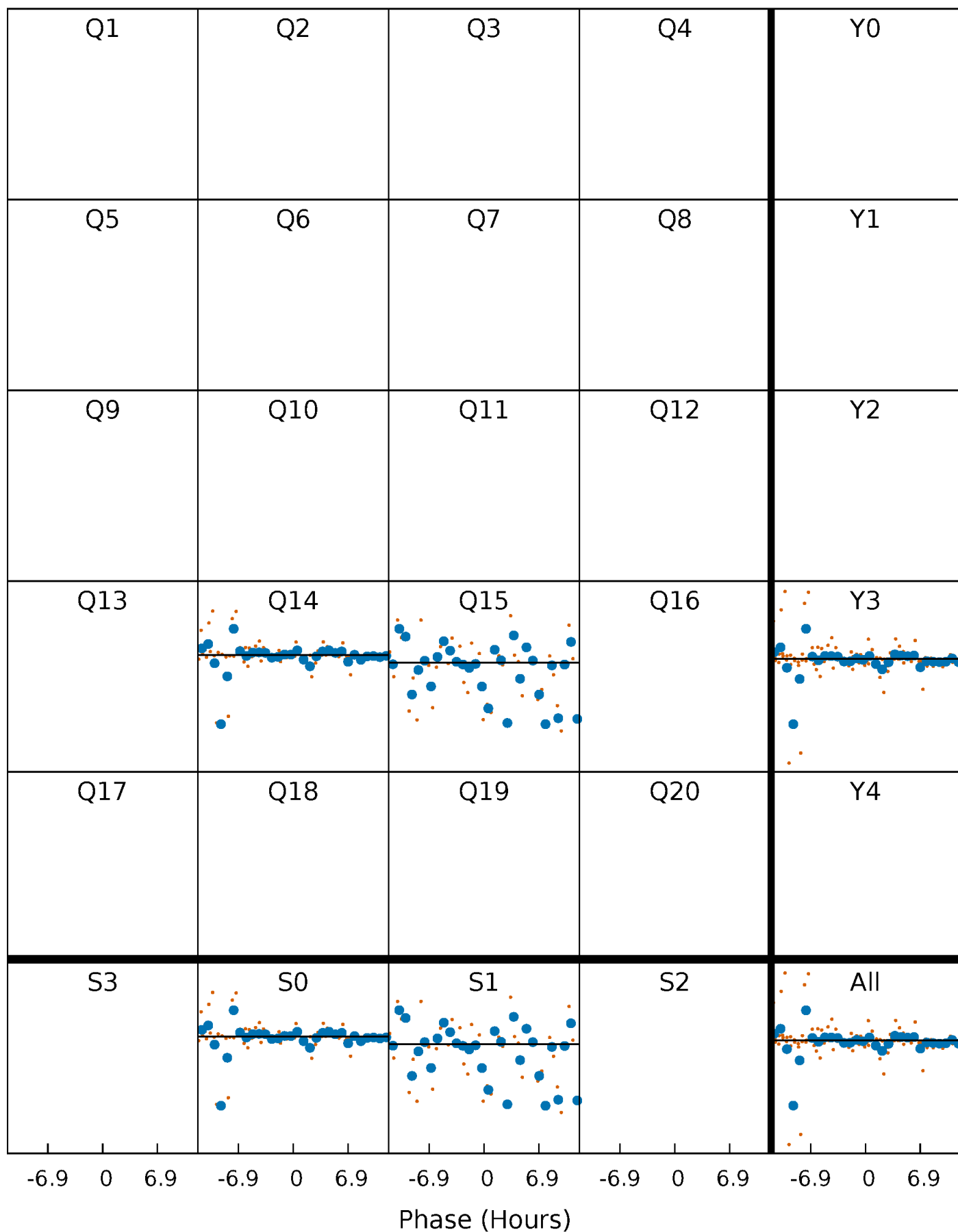
TCE 006271512-01 P= 82.416436 Days  $T_0=206.737145$  (BKJD)





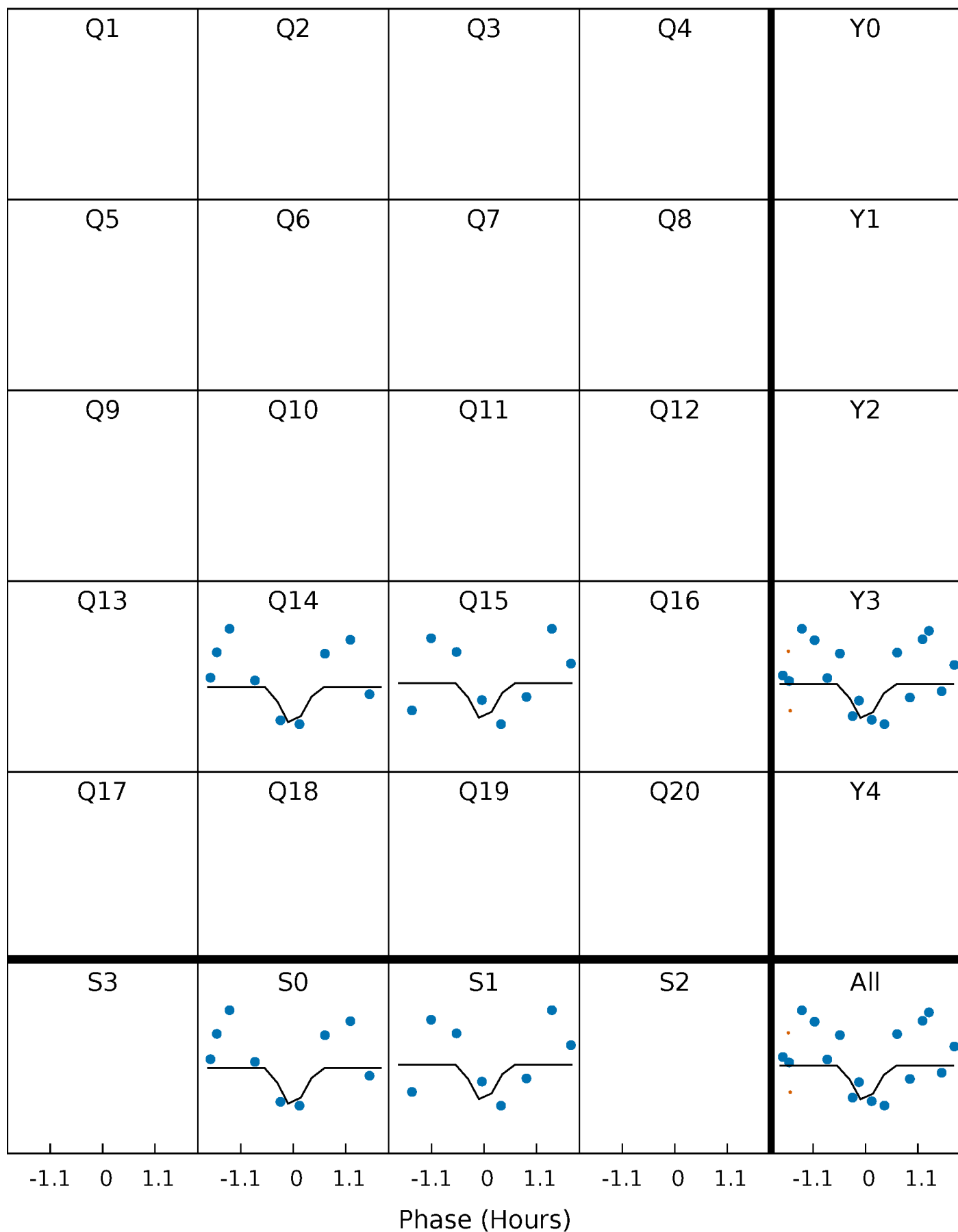
# DV Quarter-Phased Transit Curves

TCE 006271512-01 P= 82.416436 Days  $T_0=206.737145$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

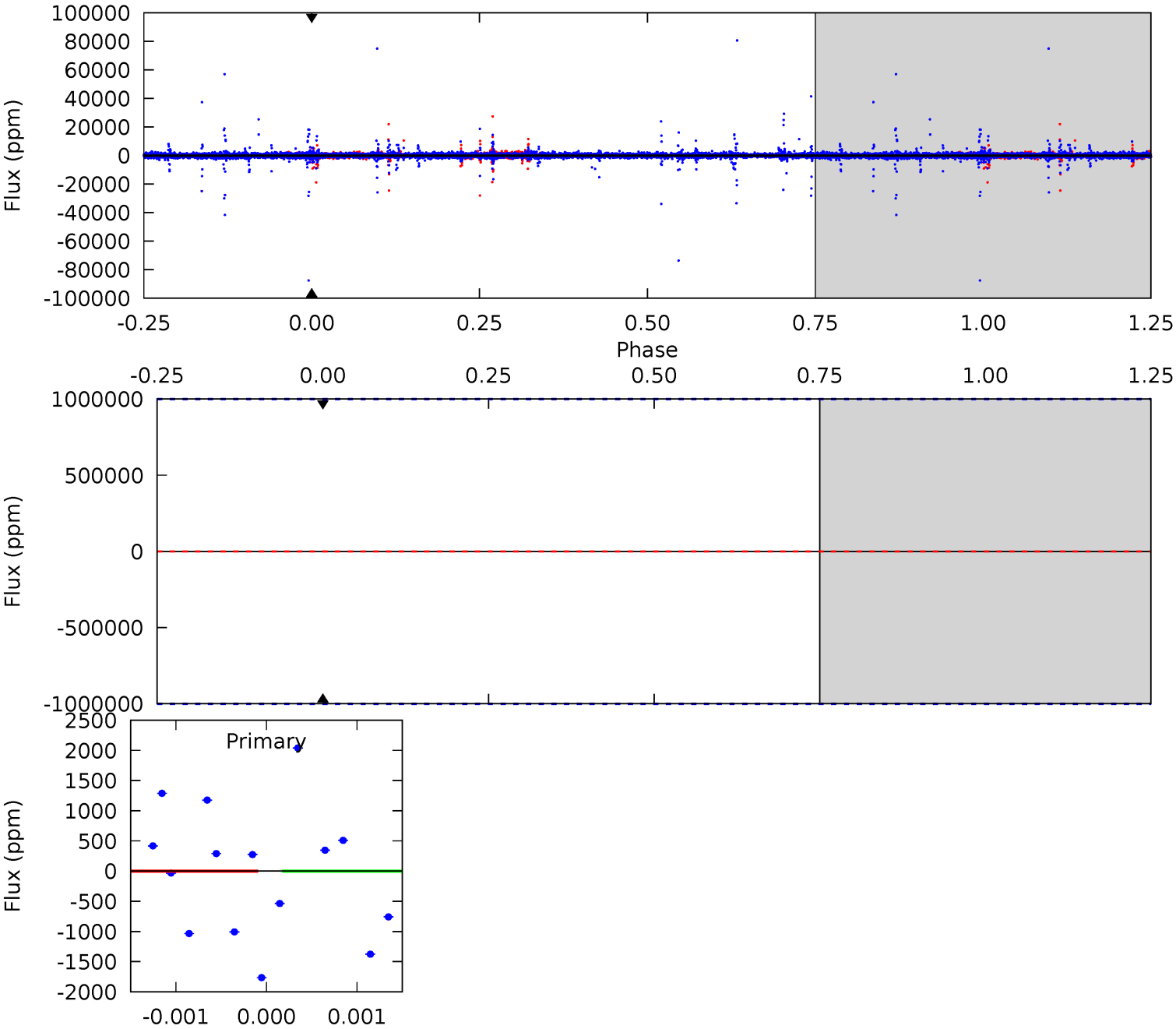
TCE 006271512-01 P= 82.416436 Days  $T_0=207.105486$  (BKJD)



# DV Model-Shift Uniqueness Test

006271512-01, P = 82.416436 Days, E = 206.737145 Days

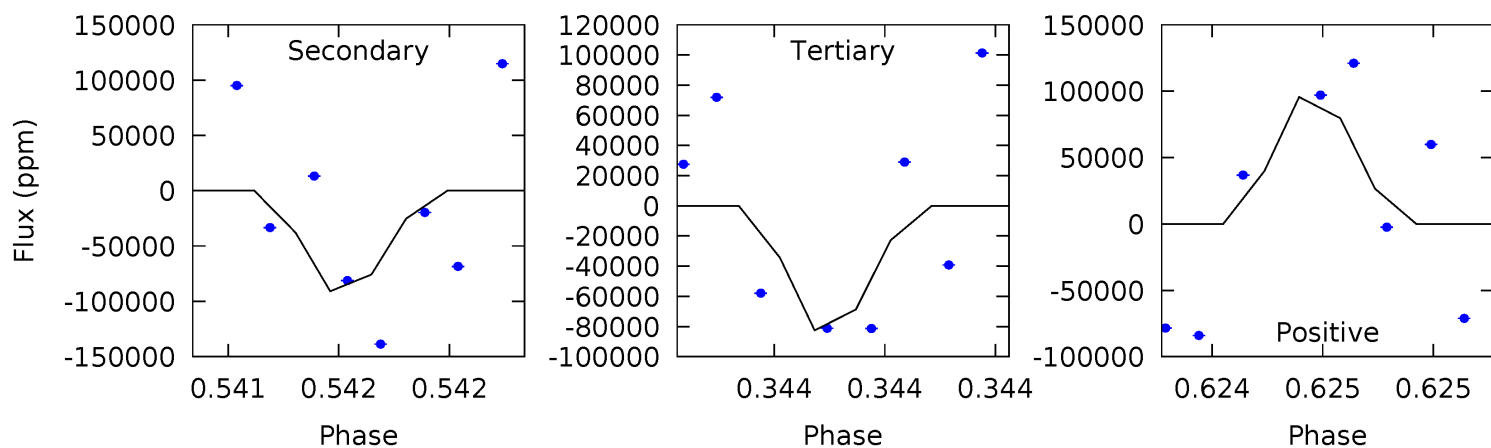
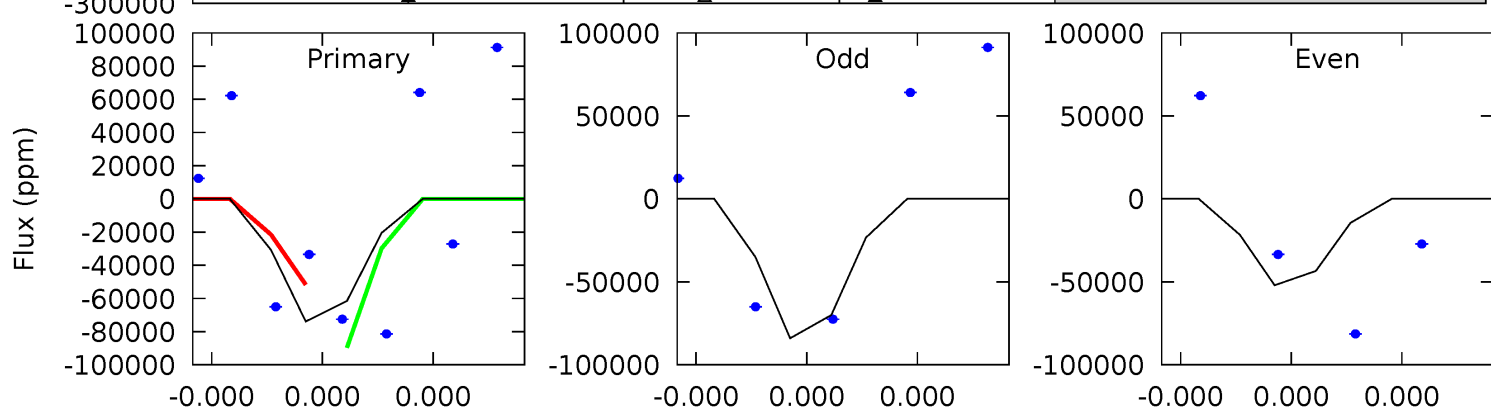
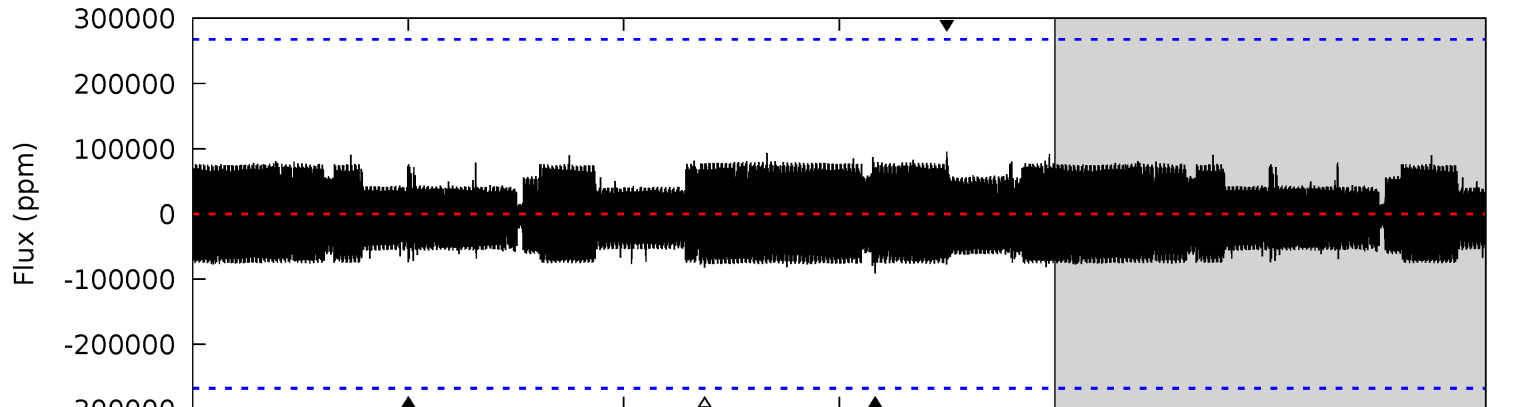
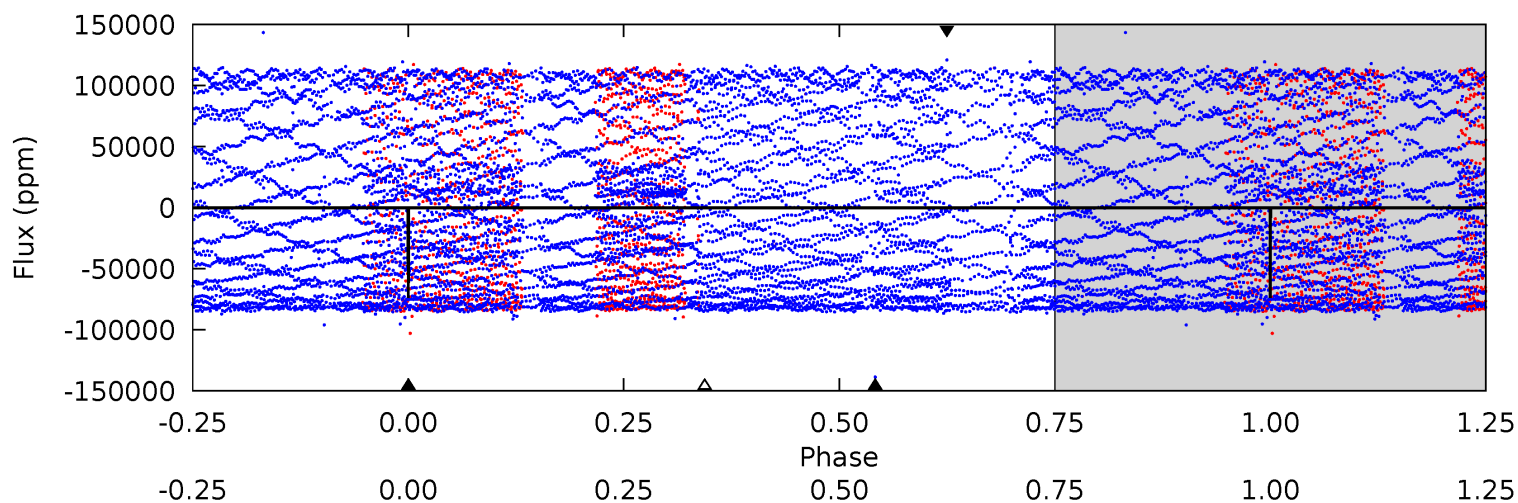
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

006271512-01, P = 82.416436 Days, E = 207.105486 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
1.55	1.91	1.74	2.01	5.63	3.57	0.88	-0.18	-0.46	0.18	-0.10	0.39	1.00	0.51	0.40



### Stellar Parameters For KIC 006271512

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7865^{+216}_{-325}$	$3.860^{+0.315}_{-0.105}$	$-0.140^{+0.200}_{-0.350}$	$2.695^{+0.359}_{-1.078}$	$1.921^{+0.082}_{-0.467}$	$0.138^{+0.352}_{-0.037}$
	+3%/-4%	+8%/-3%	+143%/-250%	+13%/-40%	+4%/-24%	+254%/-27%
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 006271512-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$21.20^{+21.06}_{-14.79}$	$1152^{+71}_{-108}$	$-5621^{+48446}_{-35292}$	$-445.547^{+48033.375}_{-48338.396}$
Alt.	$-90878 \pm 47524$	$76.98^{+31.41}_{-27.59}$	$1152^{+71}_{-113}$	$8119^{+3496}_{-1986}$	$1732^{+3246}_{-1112}$

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

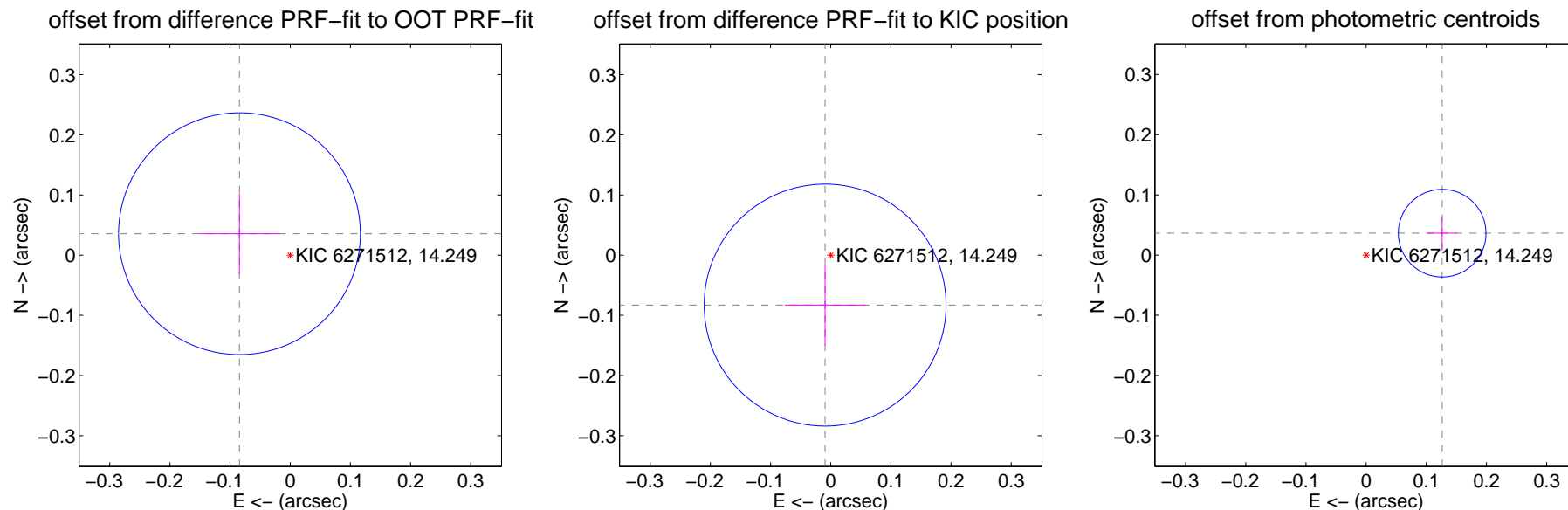
## DV Centroid Data

Supplemental centroid analysis for 006271512-01. Kepler magnitude: 14.25. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.092 \pm 0.067$	1.37	$0.084 \pm 0.067$	$0.036 \pm 0.067$
PRF-fit source offset from KIC position	$0.084 \pm 0.067$	1.25	$0.009 \pm 0.067$	$-0.083 \pm 0.067$
photometric centroid source offset	$0.13 \pm 0.02$	5.42	$-0.13 \pm 0.02$	$0.04 \pm 0.03$



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.



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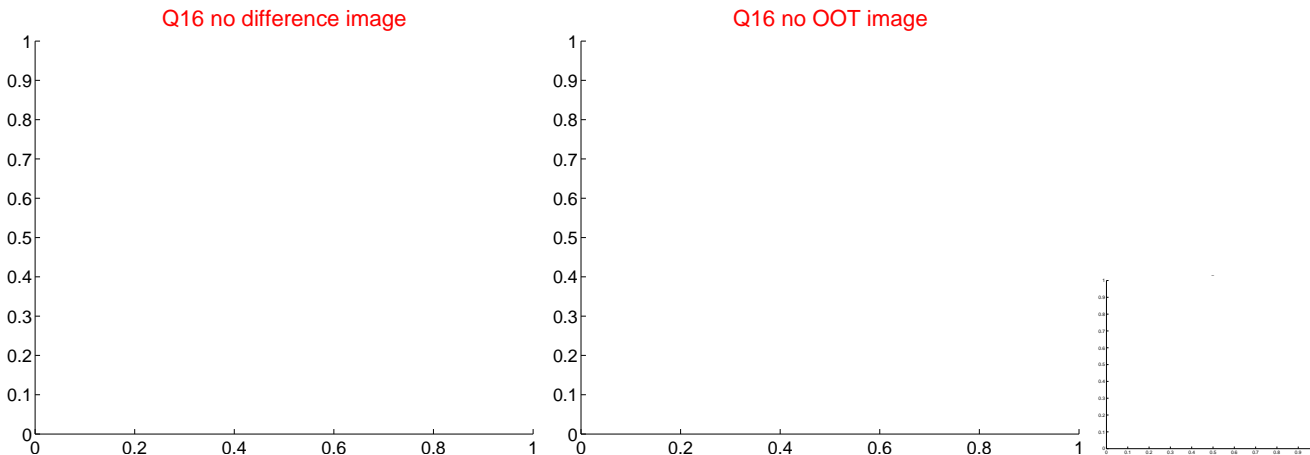
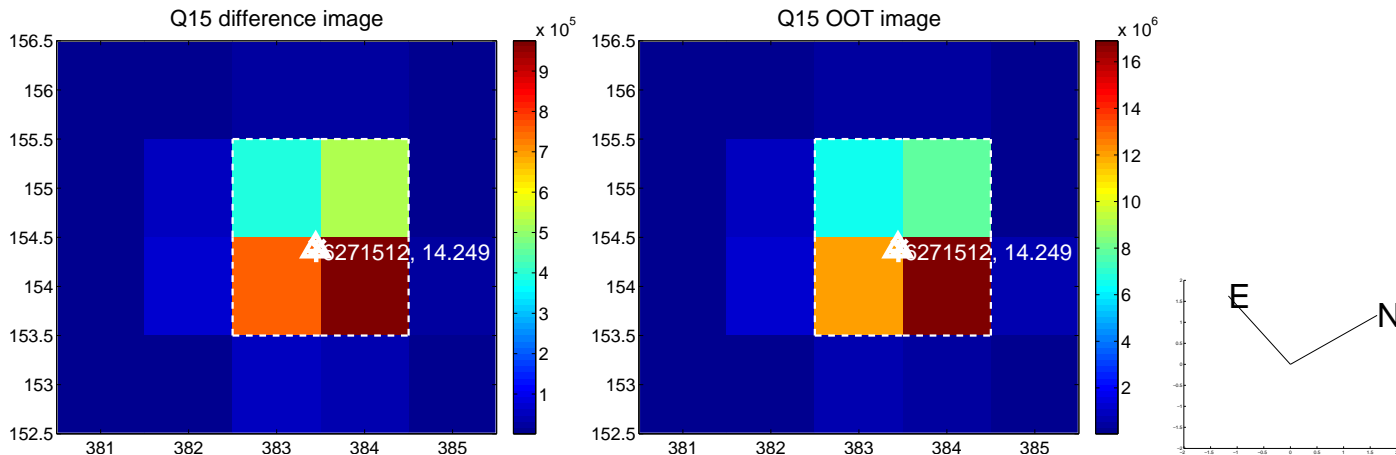
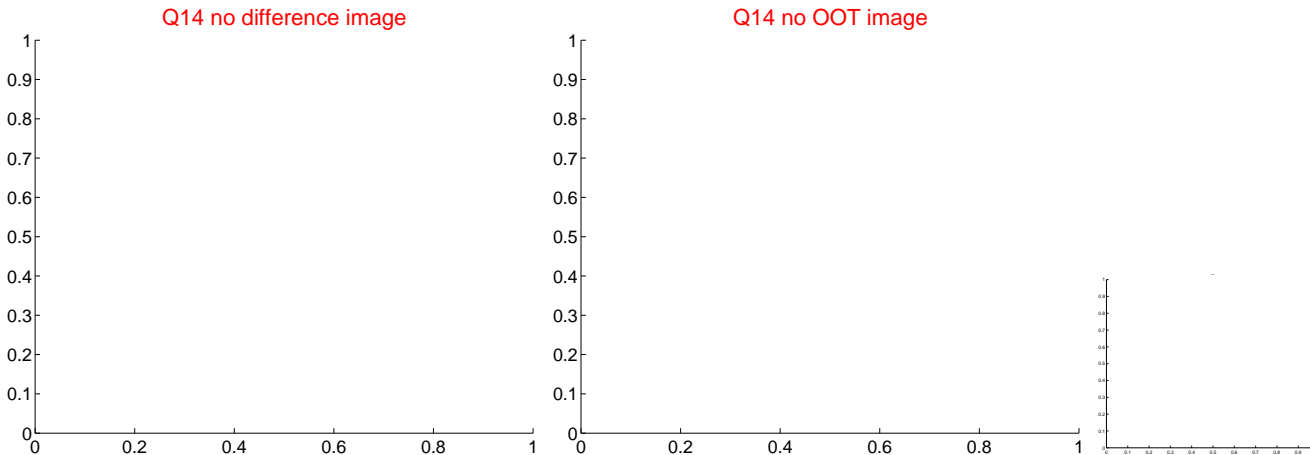
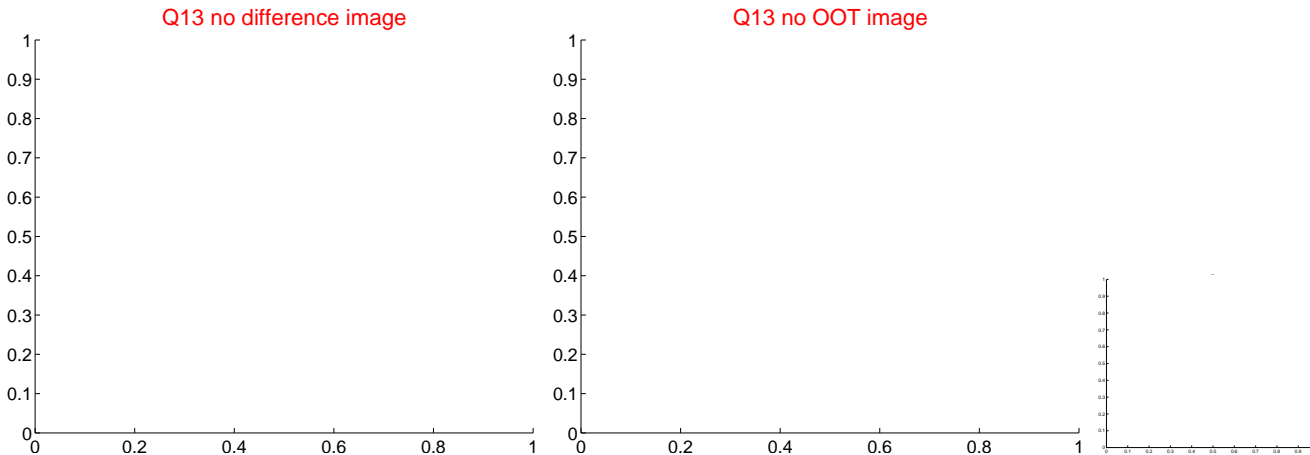




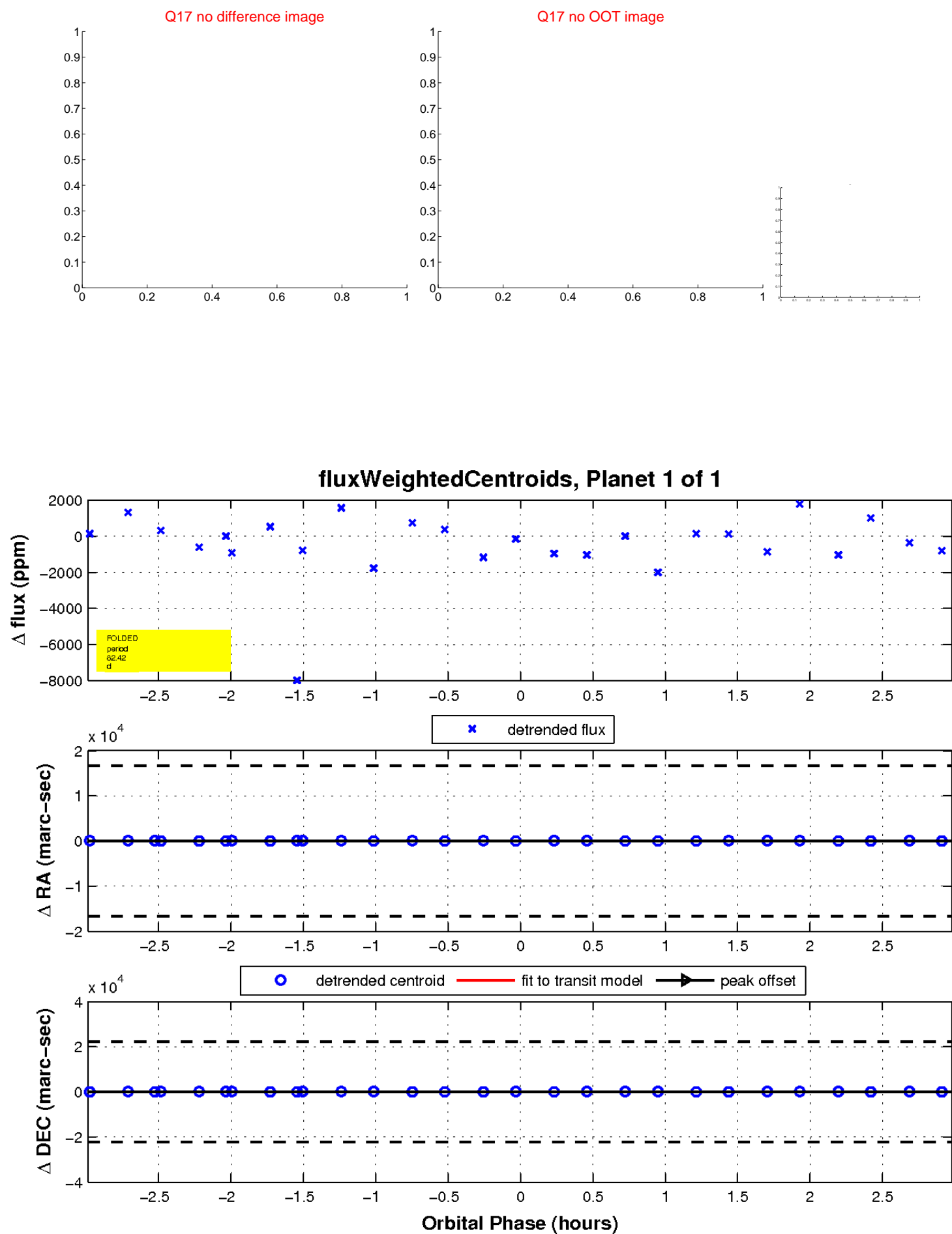
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UKIRT Image

Declination

