

# KIC 006119530

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006119530-01	OBS	No	368.359916	151.569385	505.3	17.223	8.2	6.1	0.93	6168	2.21	1.11

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119530-01	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.

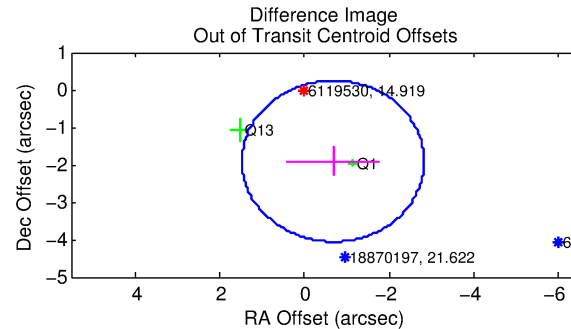
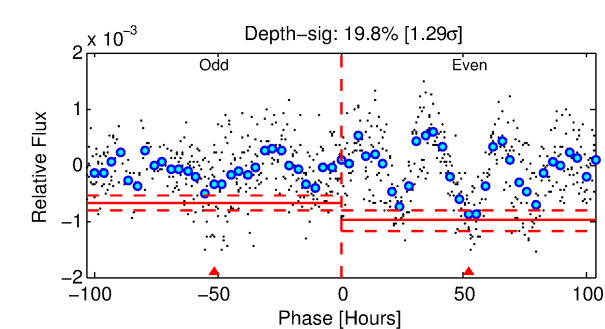
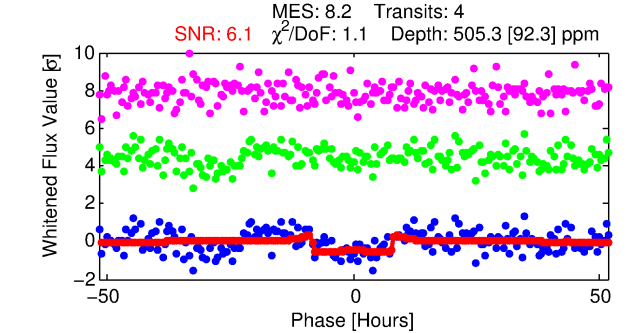
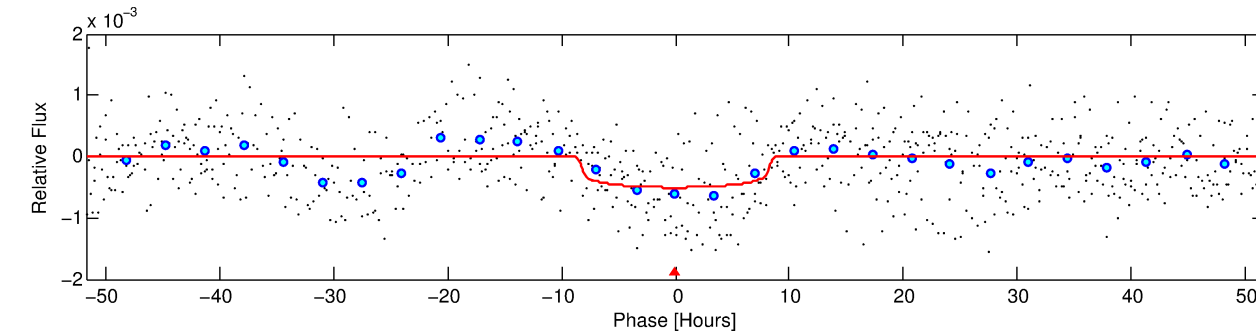
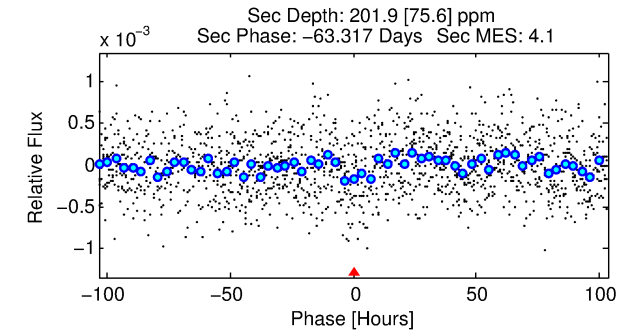
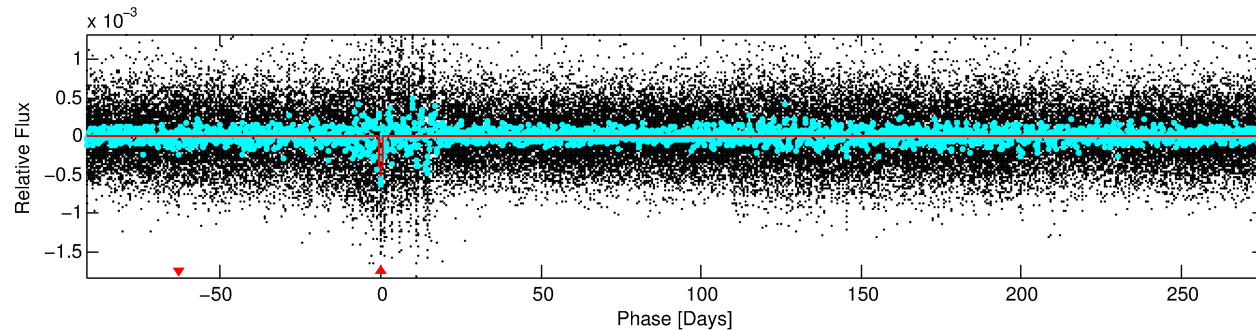
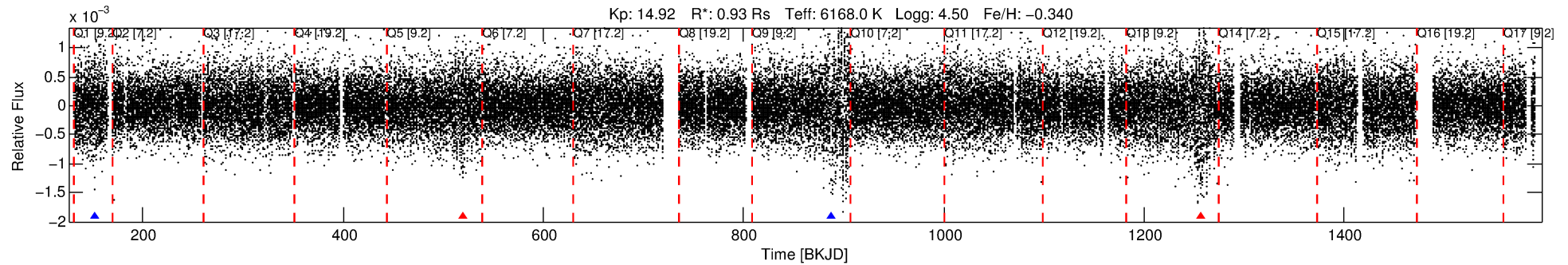
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006119530-01

No Significant Match Found

# DV One-Page Summary

KIC: 6119530 Candidate: 1 of 1 Period: 368.360 d



## DV Fit Results:

Period = 368.35992 [0.01053] d  
Epoch = 151.5694 [0.0201] BKJD  
Rp/R\* = 0.0218 [0.0059]  
a/R\* = 128.68 [164.84]  
b = 0.65 [1.14]  
Seff = 1.11 [0.46]  
Teq = 262 [27] K  
Rp = 2.21 [0.91] Re  
a = 1.0051 [0.2680] AU  
Ag = 23043.04 [17670.12] [1.30 $\sigma$ ]  
Teffp = 4983 [838] K [5.63 $\sigma$ ]

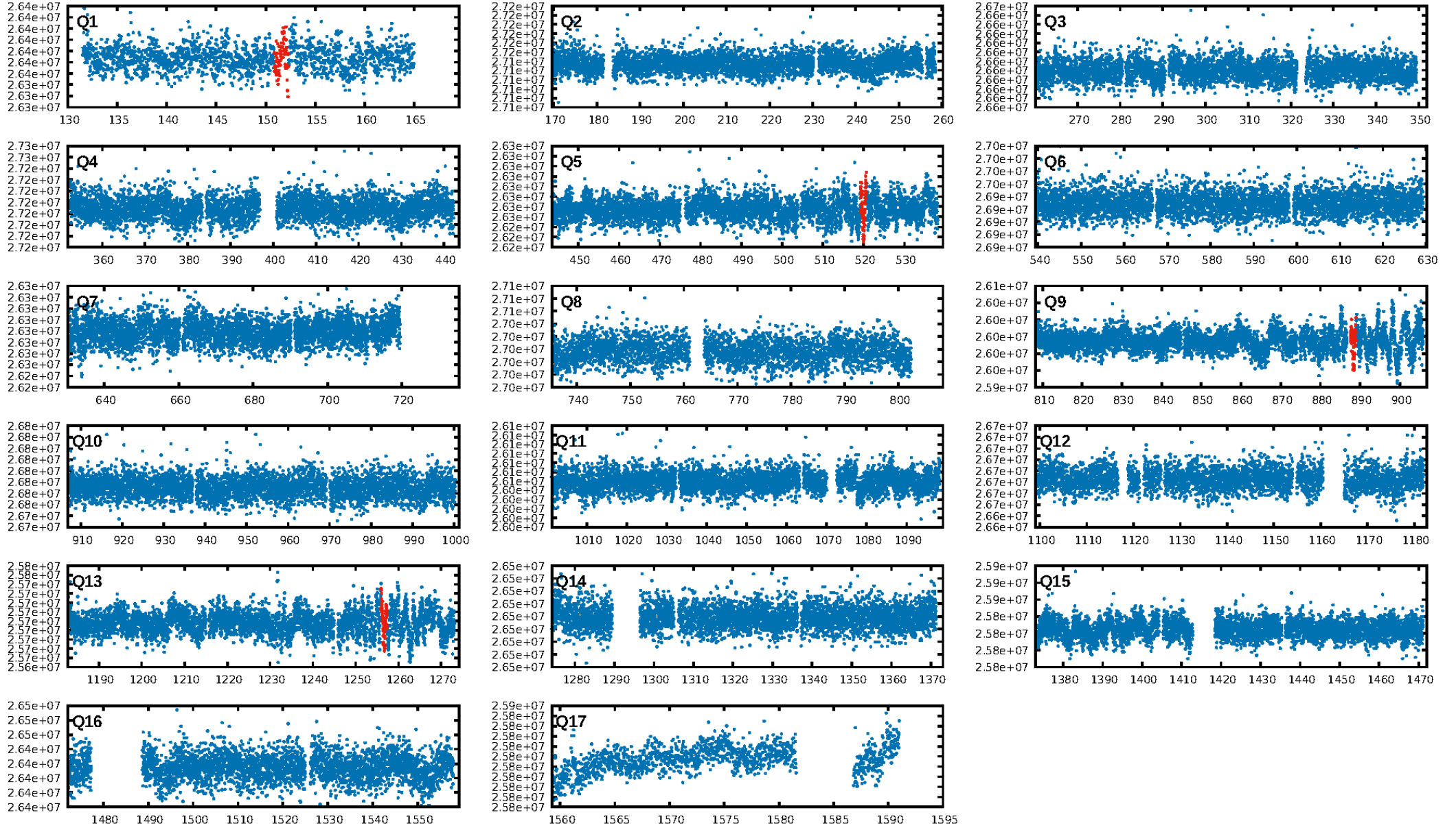
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.5%  
ModelChiSquareGof-sig: 90.8%  
Bootstrap-pfa: 1.37e-10  
RollingBand-fgt: 0.33 [1/3]  
GhostDiagnostic-chr: -7.78  
Centroid-sig: 0.3%  
Centroid-so: 5.346 arcsec [1.86 $\sigma$ ]  
OotOffset-rm: 2.025 arcsec [2.83 $\sigma$ ]  
KicOffset-rm: 2.023 arcsec [3.93 $\sigma$ ]  
OotOffset-st: 0/0/0/2 [2]  
KicOffset-st: 0/0/0/2 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [3/3]

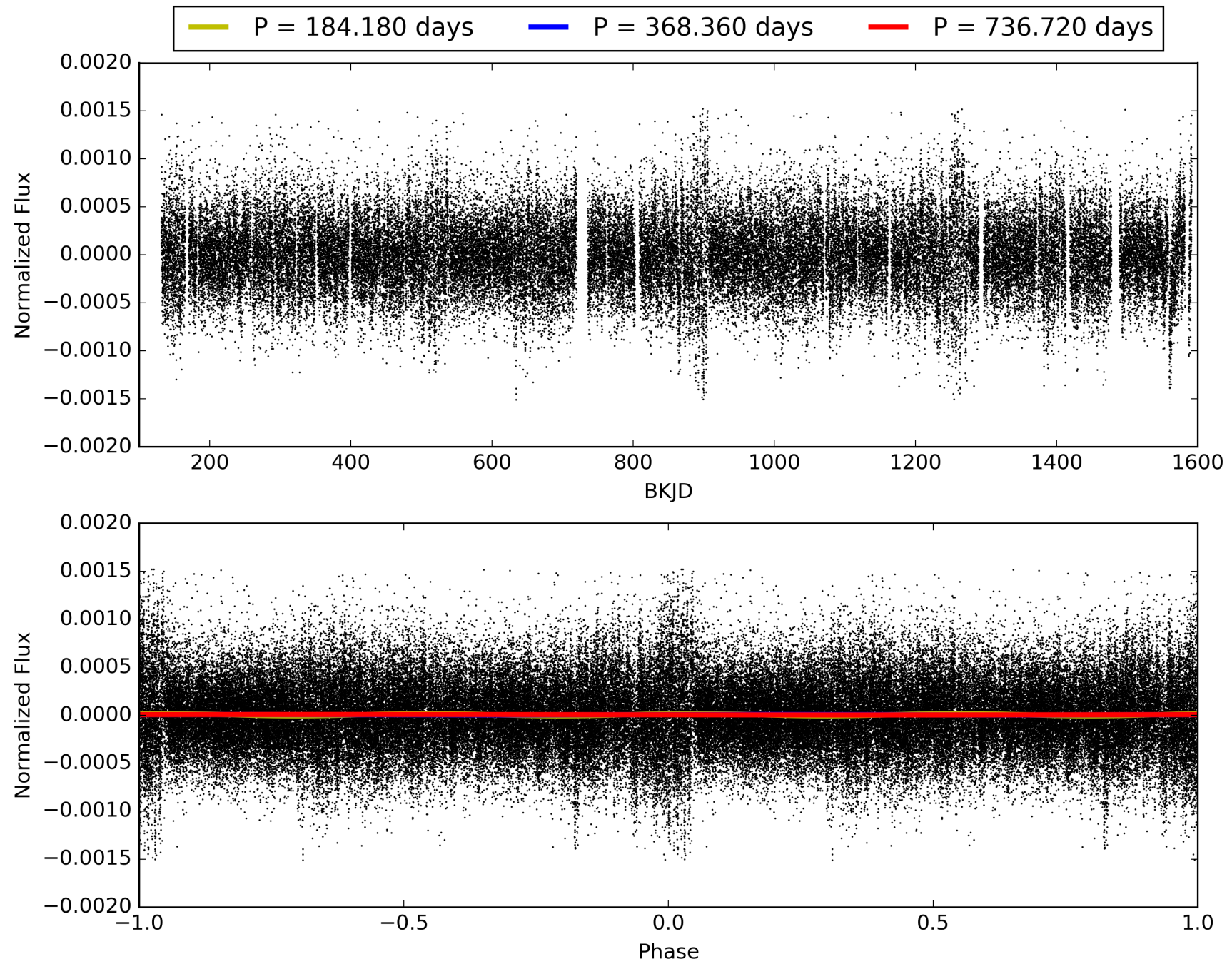
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:20:26 Z

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

# TCE 006119530-01, PDC Light Curves

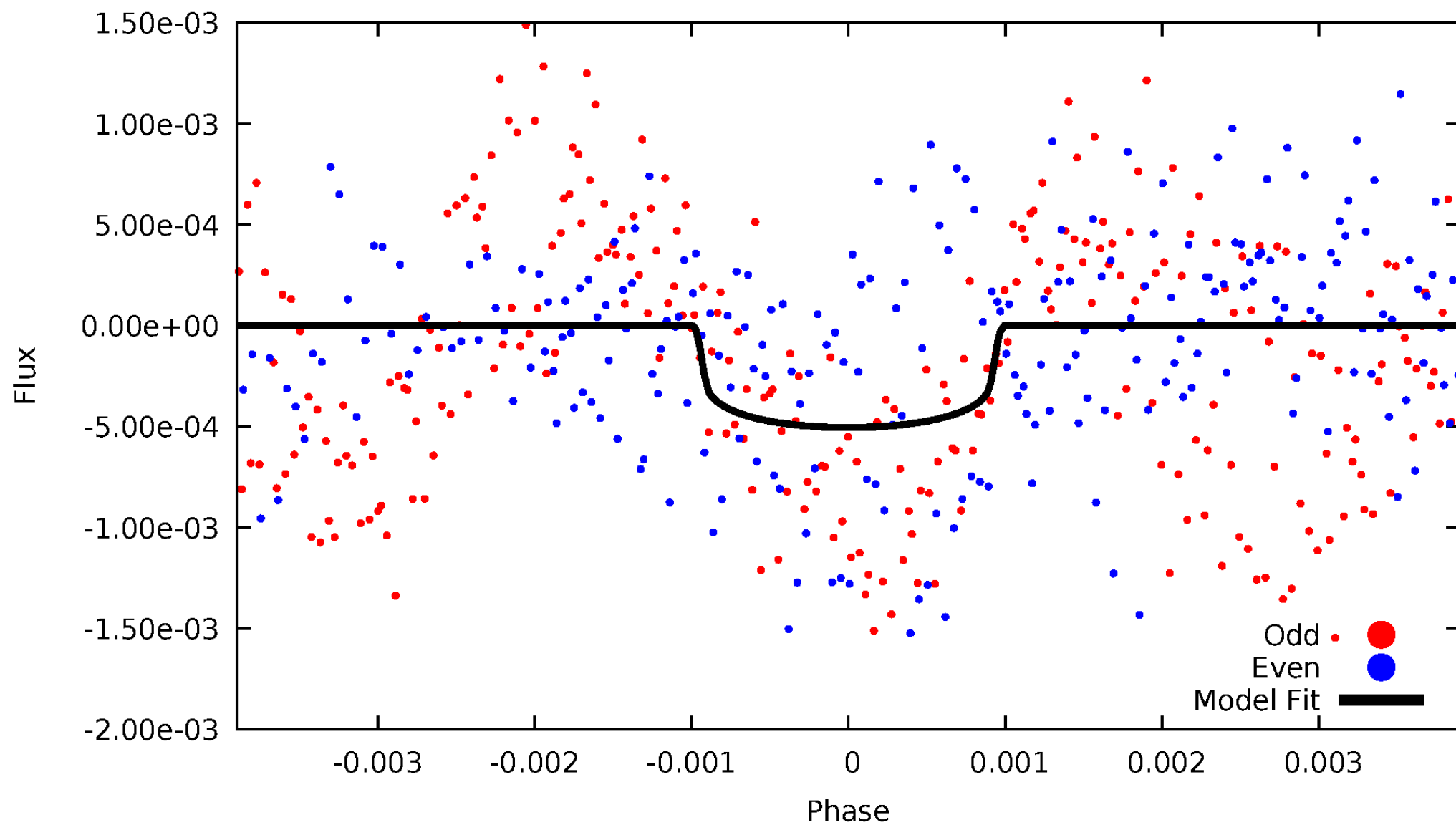


TCE 006119530-01



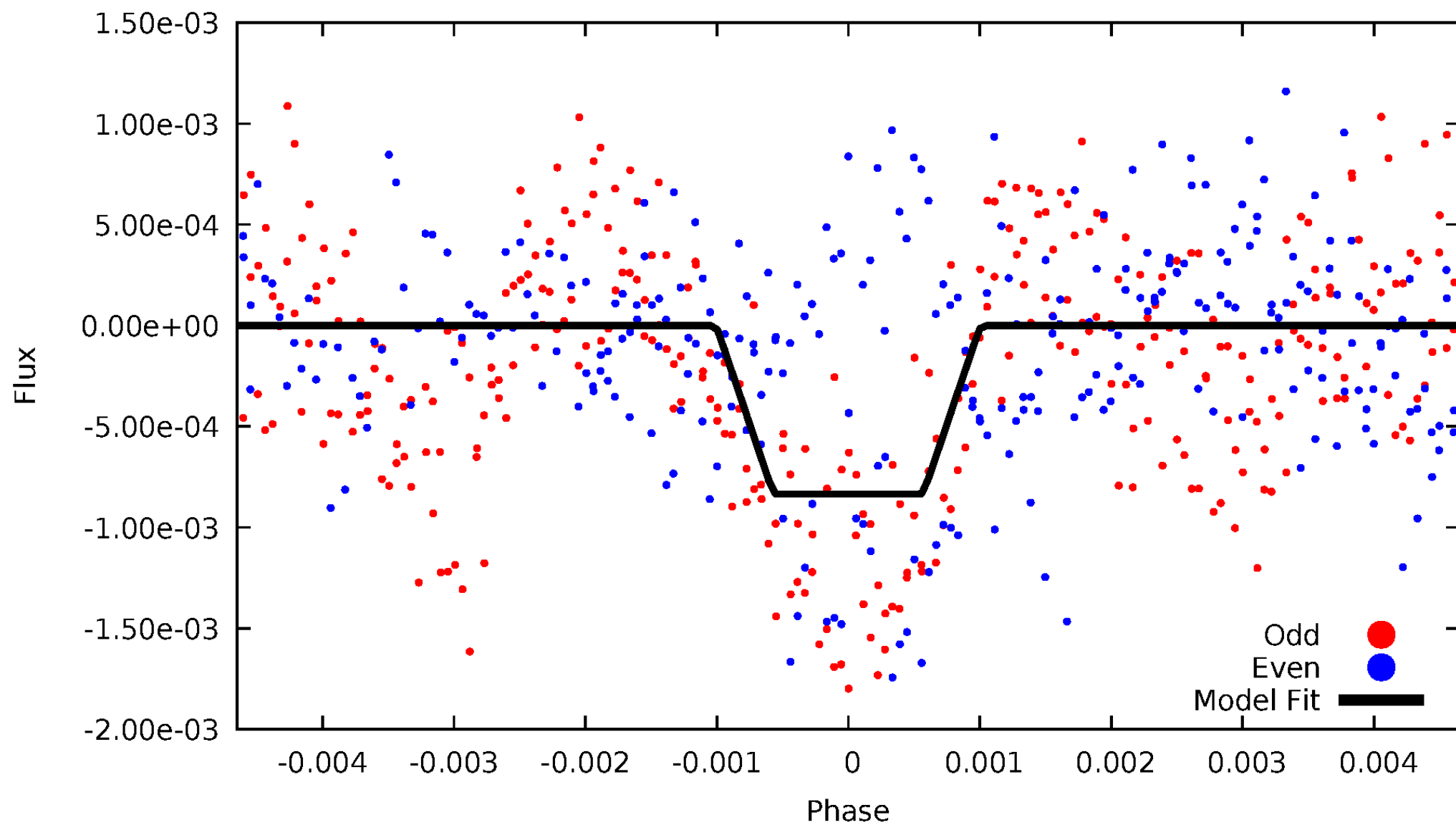
# DV Odd/Even

TCE 006119530-01



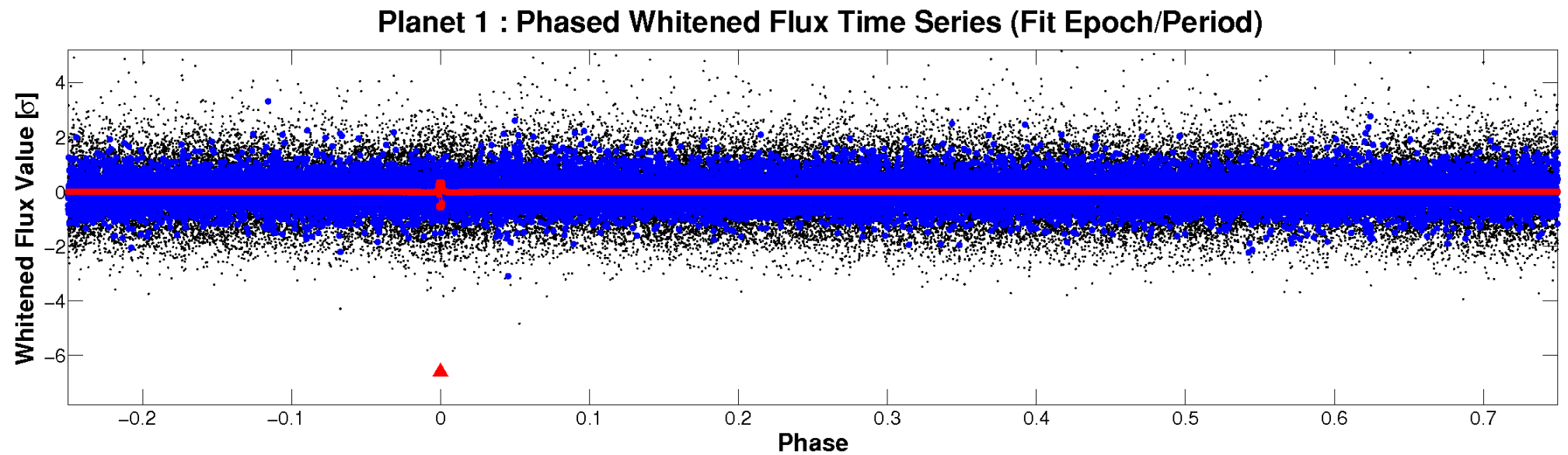
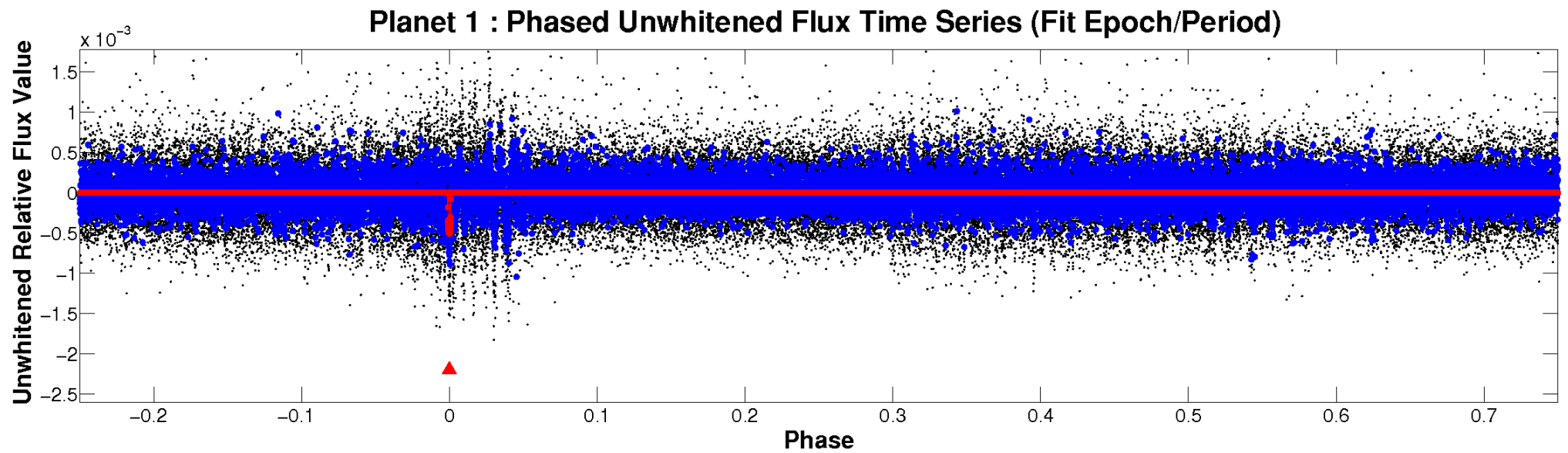
# ALT Odd/Even

TCE 006119530-01



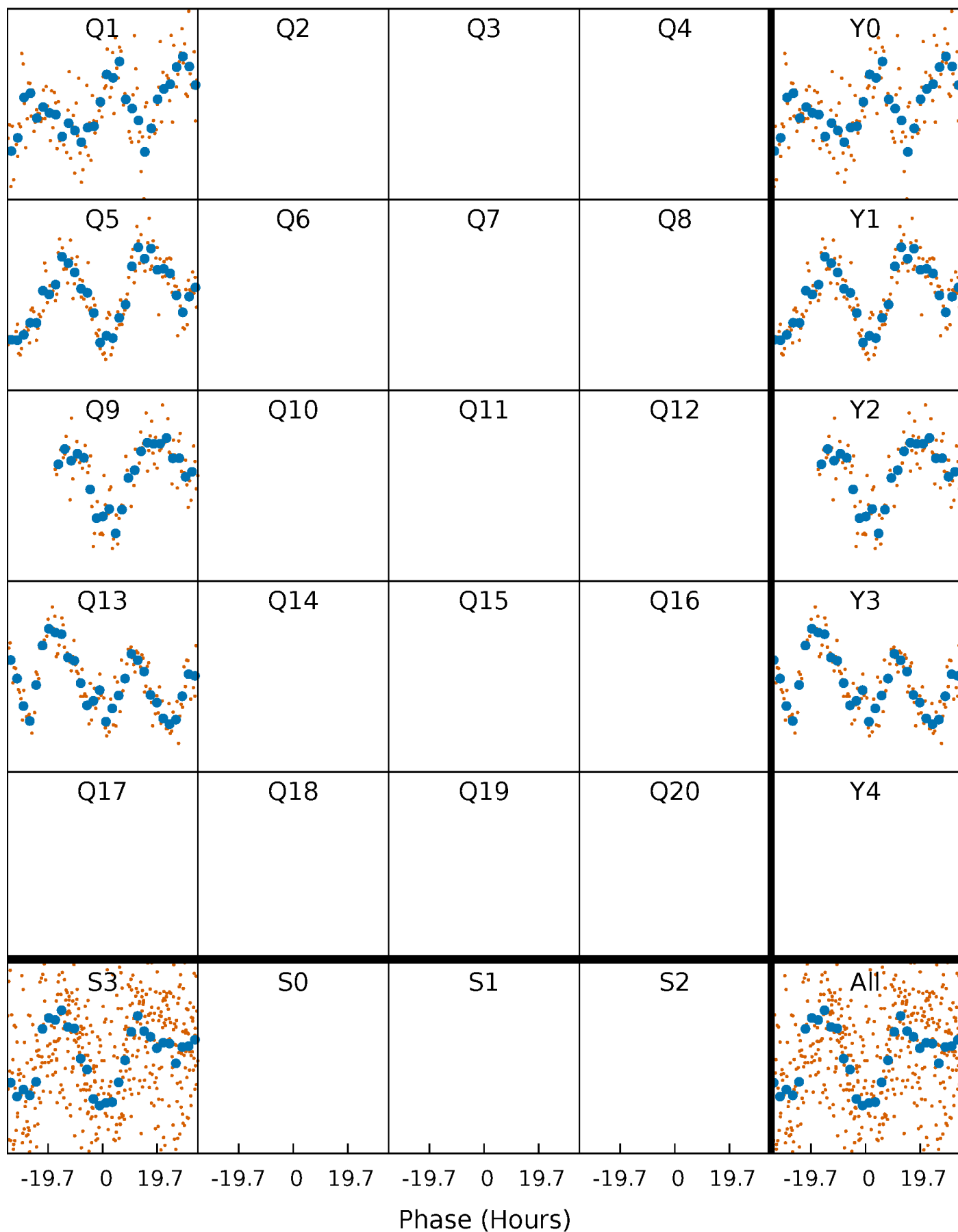


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

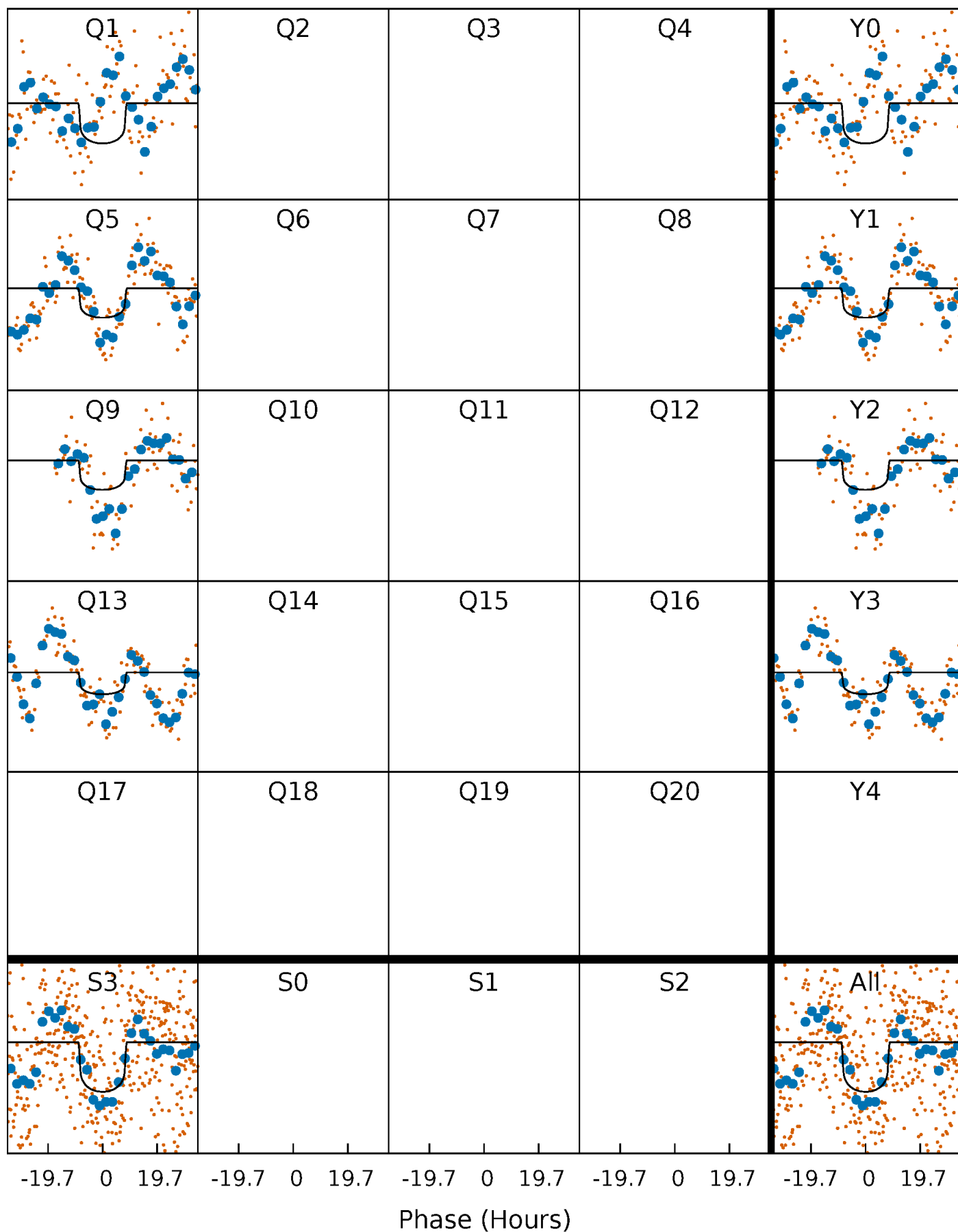
TCE 006119530-01 P=368.359916 Days  $T_0=151.569385$  (BKJD)





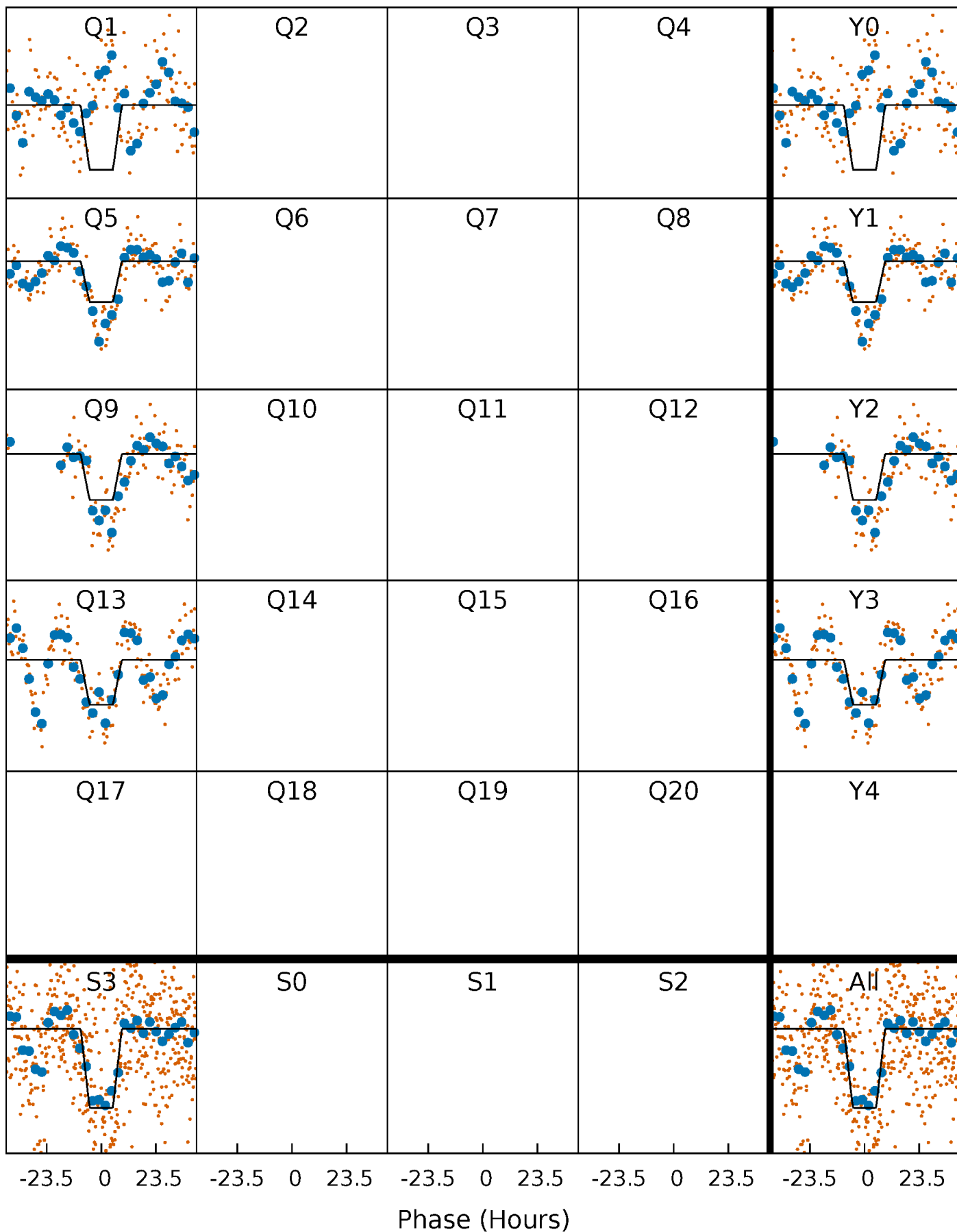
# DV Quarter-Phased Transit Curves

TCE 006119530-01 P=368.359916 Days  $T_0=151.569385$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

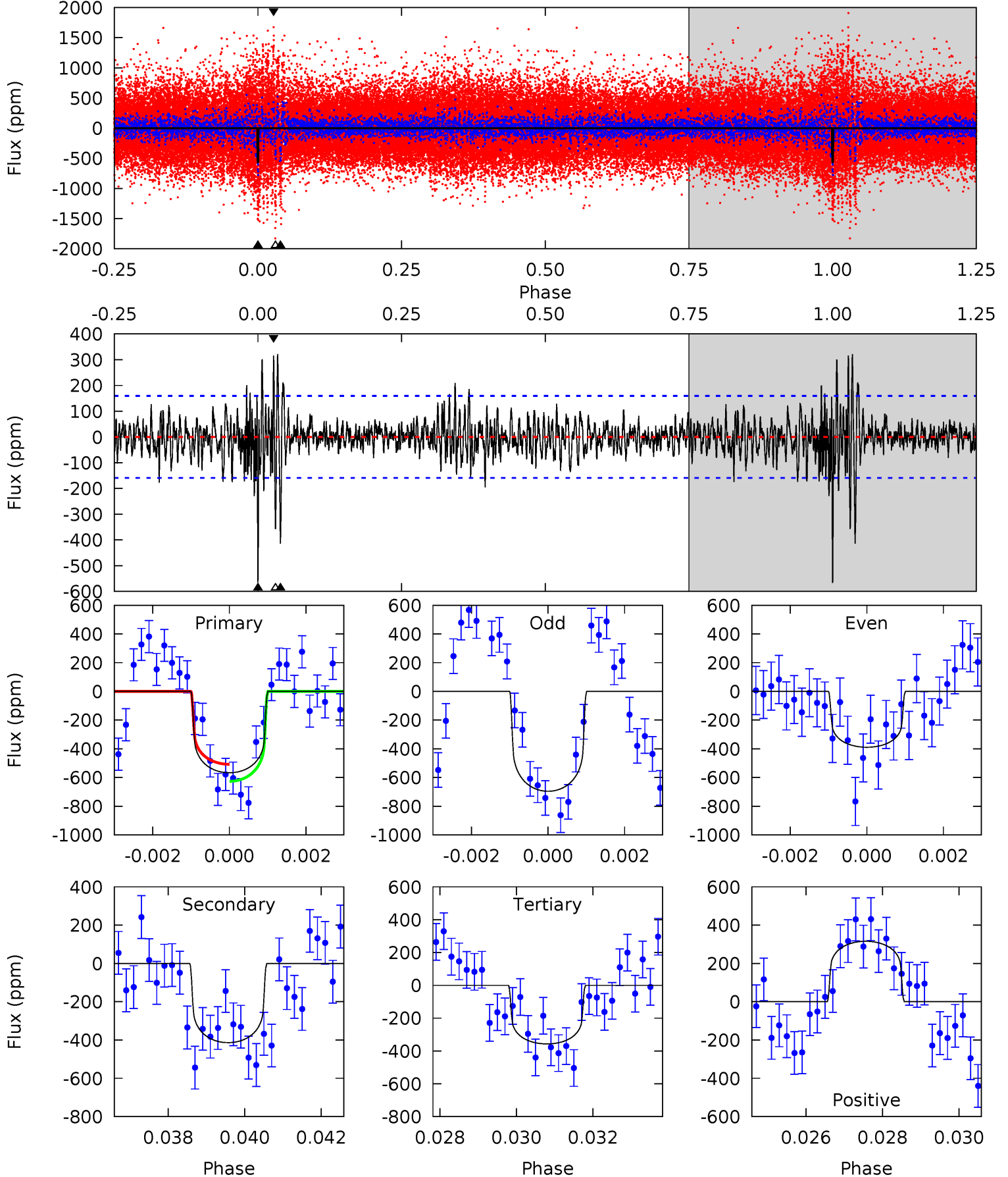
TCE 006119530-01 P=368.335352 Days  $T_0=151.640434$  (BKJD)



# DV Model-Shift Uniqueness Test

006119530-01, P = 368.359916 Days, E = 151.569385 Days

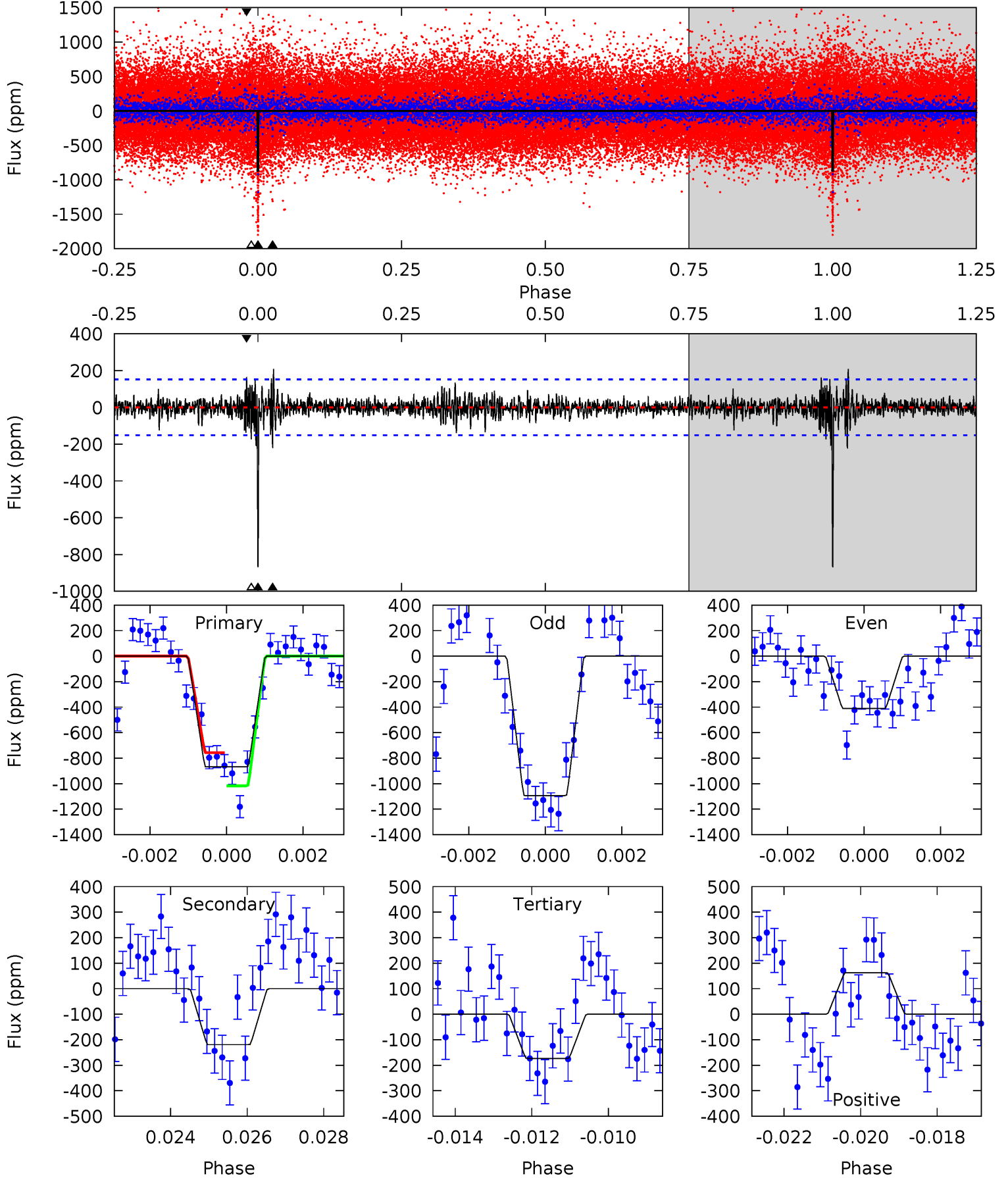
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	13.9	12.0	10.6	5.33	3.09	1.98	7.03	8.42	1.89	3.28	5.16	0.78	0.36	1.99



# Alt Model-Shift Uniqueness Test

006119530-01, P = 368.335352 Days, E = 151.640434 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
30.5	7.70	6.08	5.71	5.33	3.09	1.20	24.4	24.8	1.62	1.99	12.3	0.74	0.19	0



### Stellar Parameters For KIC 006119530

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6168^{+169}_{-206}$	$4.501^{+0.054}_{-0.216}$	$-0.340^{+0.300}_{-0.300}$	$0.929^{+0.291}_{-0.097}$	$0.997^{+0.134}_{-0.134}$	$1.752^{+0.391}_{-0.977}$
	+3%/-3%	+1%/-5%	+88%/-88%	+31%/-10%	+13%/-13%	+22%/-56%
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 006119530-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-414 \pm 30$	$2.30^{+0.74}_{-0.64}$	$373^{+28}_{-17}$	$5986^{+1027}_{-636}$	$42077^{+39320}_{-17299}$
Alt.	$-219 \pm 28$	$3.02^{+0.85}_{-0.68}$	$374^{+28}_{-19}$	$4586^{+489}_{-350}$	$12936^{+8756}_{-4972}$

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

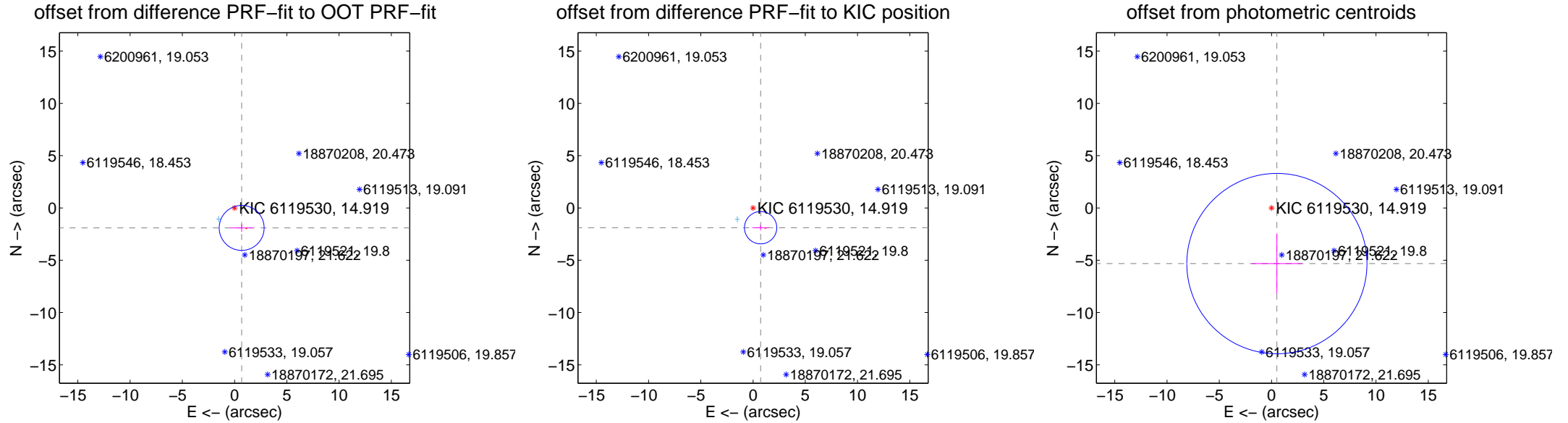
## DV Centroid Data

Supplemental centroid analysis for 006119530-01. Kepler magnitude: 14.92. Transit SNR 6.11

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

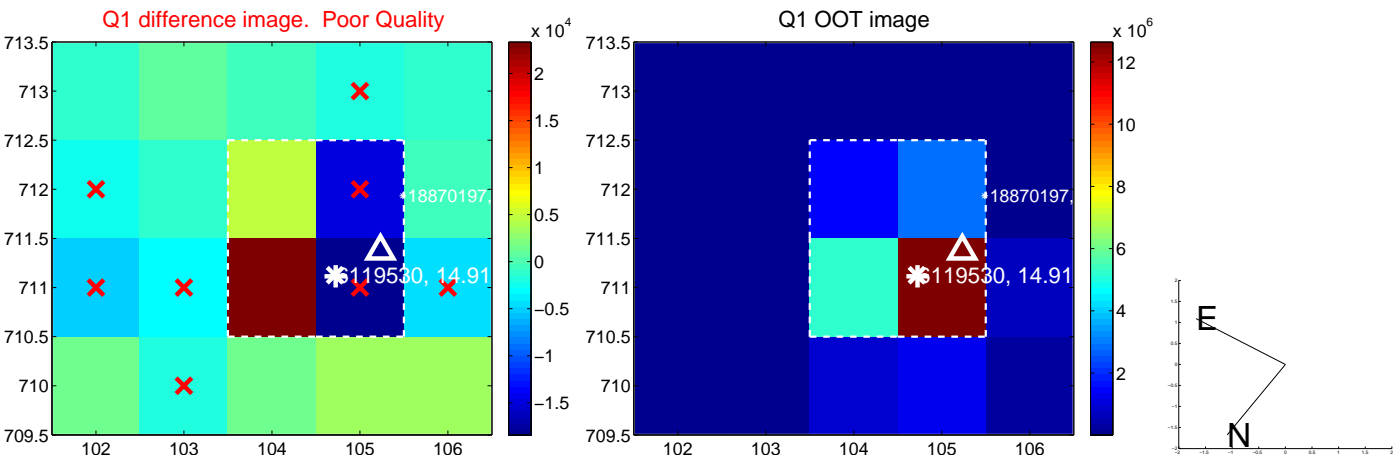
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.025 \pm 0.717$	2.83	$-0.679 \pm 1.090$	$-1.908 \pm 0.376$
PRF-fit source offset from KIC position	<b><math>2.023 \pm 0.515</math></b>	<b>3.93</b>	$-0.724 \pm 0.780$	$-1.889 \pm 0.258$
photometric centroid source offset	$5.35 \pm 2.87$	1.86	$-0.51 \pm 2.42$	$-5.32 \pm 2.88$



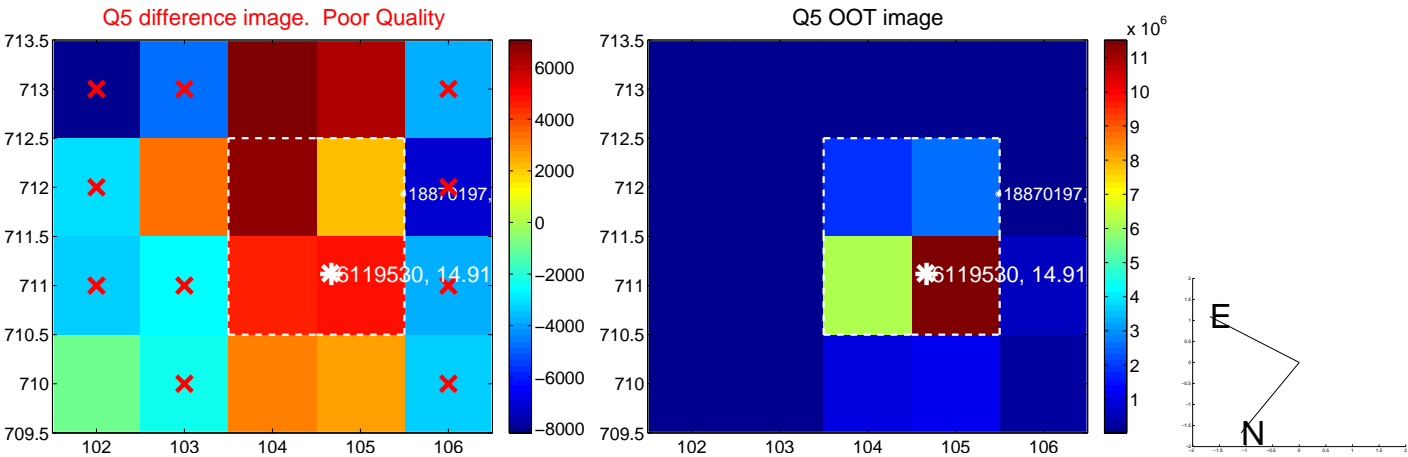
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



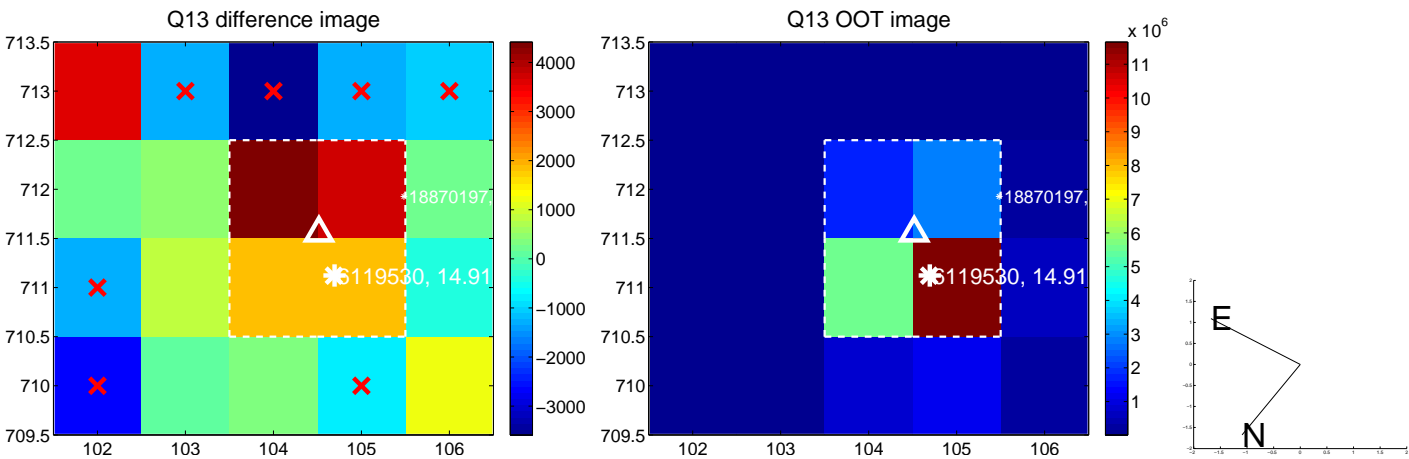
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



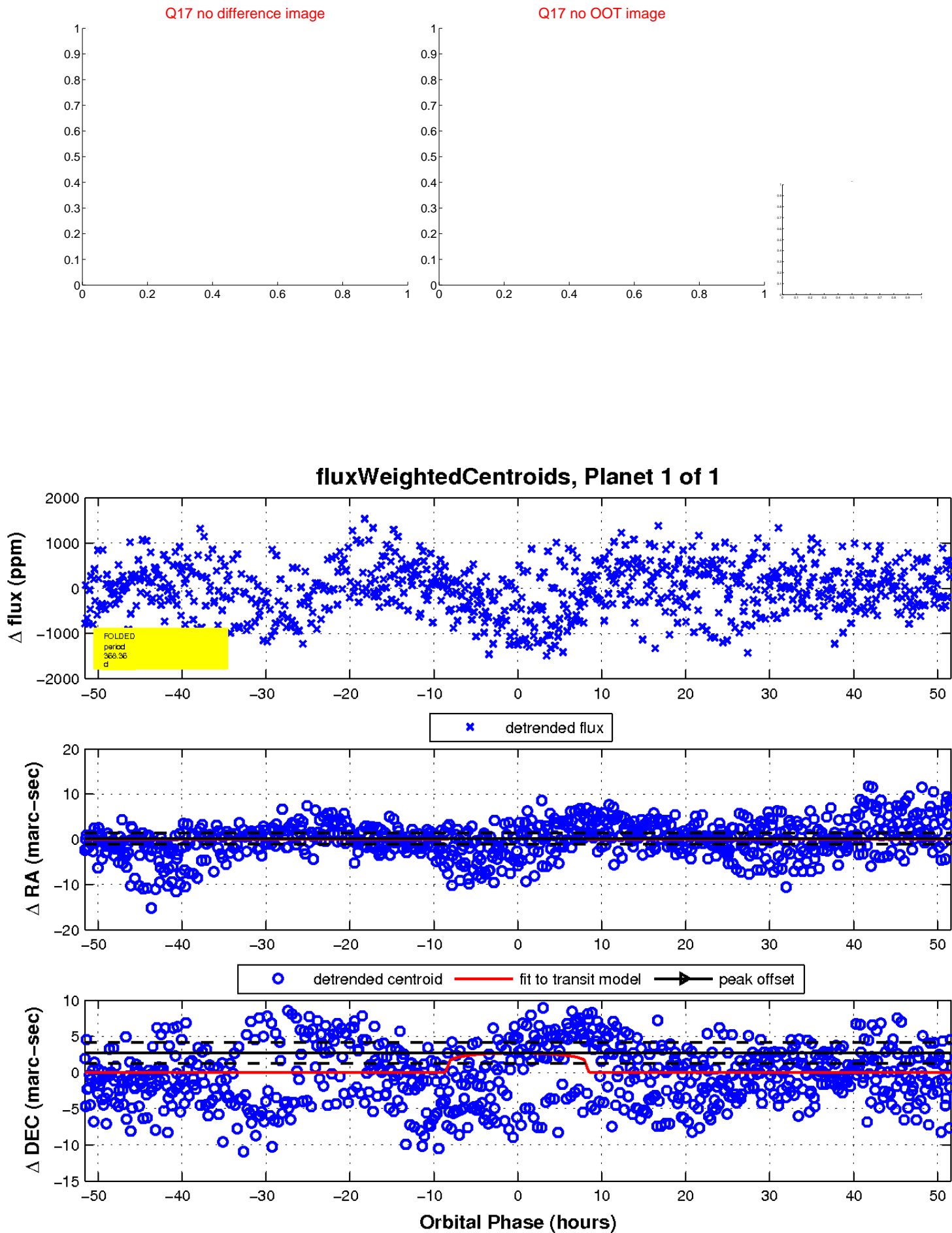
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

