

# KIC 005096151

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005096151-01	OBS	No	601.120100	373.698925	1516.0	15.886	8.0	7.3	0.57	4265	2.75	0.07

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005096151-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—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.

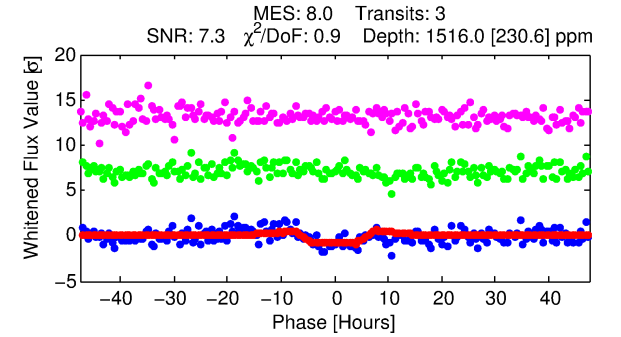
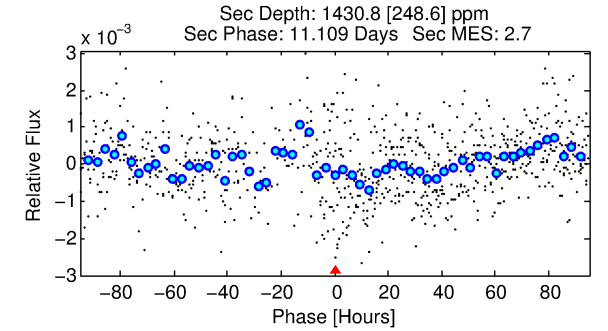
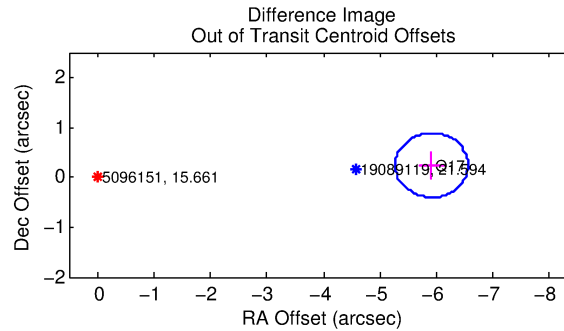
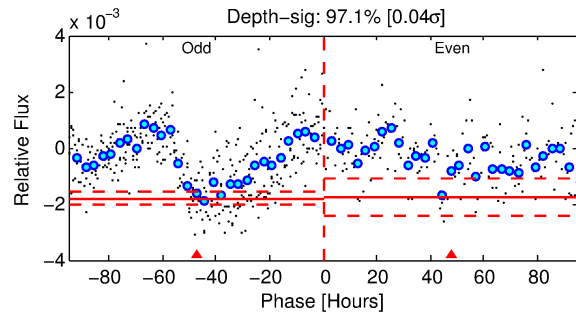
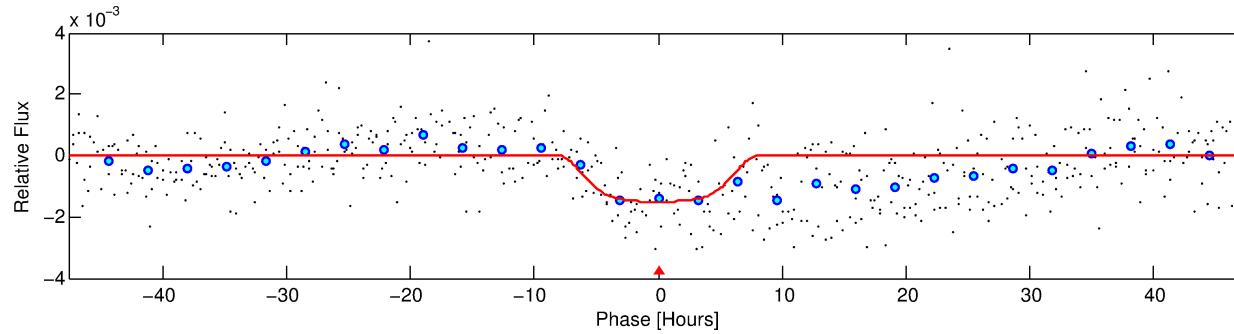
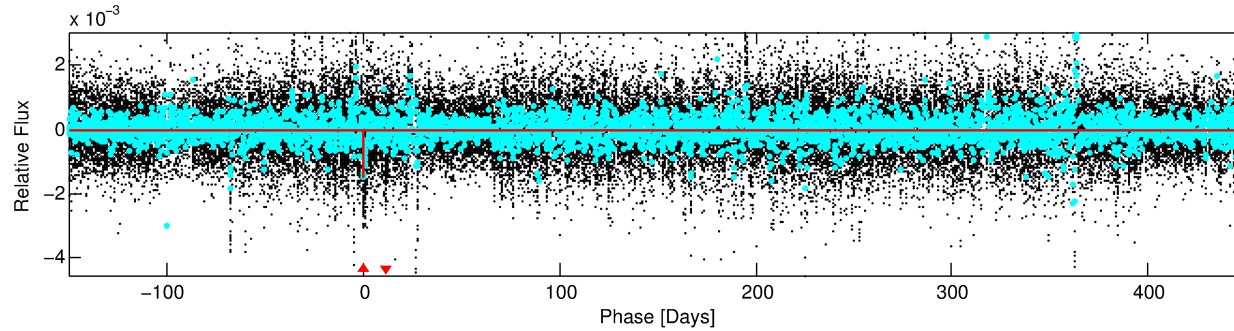
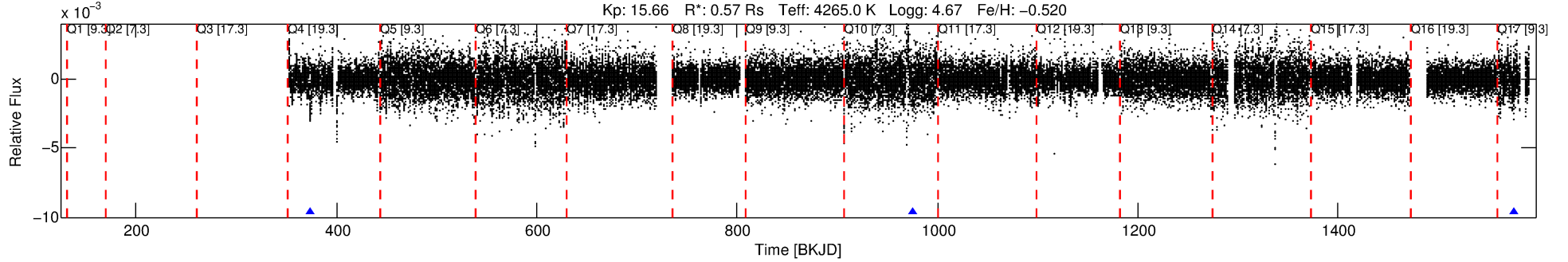
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005096151-01

No Significant Match Found

# DV One-Page Summary

KIC: 5096151 Candidate: 1 of 1 Period: 601.120 d



## DV Fit Results:

Period = 601.12010 [0.01864] d  
Epoch = 373.6989 [0.0221] BKJD  
Rp/R\* = 0.0444 [0.0046]  
a/R\* = 140.84 [31.99]  
b = 0.92 [0.04]  
Seff = 0.07 [0.01]  
Teq = 132 [7] K  
Rp = 2.75 [0.43] Re  
a = 1.1457 [0.1057] AU  
Ag = 136659.01 [40867.52] [3.34 $\sigma$ ]  
Teffp = 3935 [307] K [12.40 $\sigma$ ]

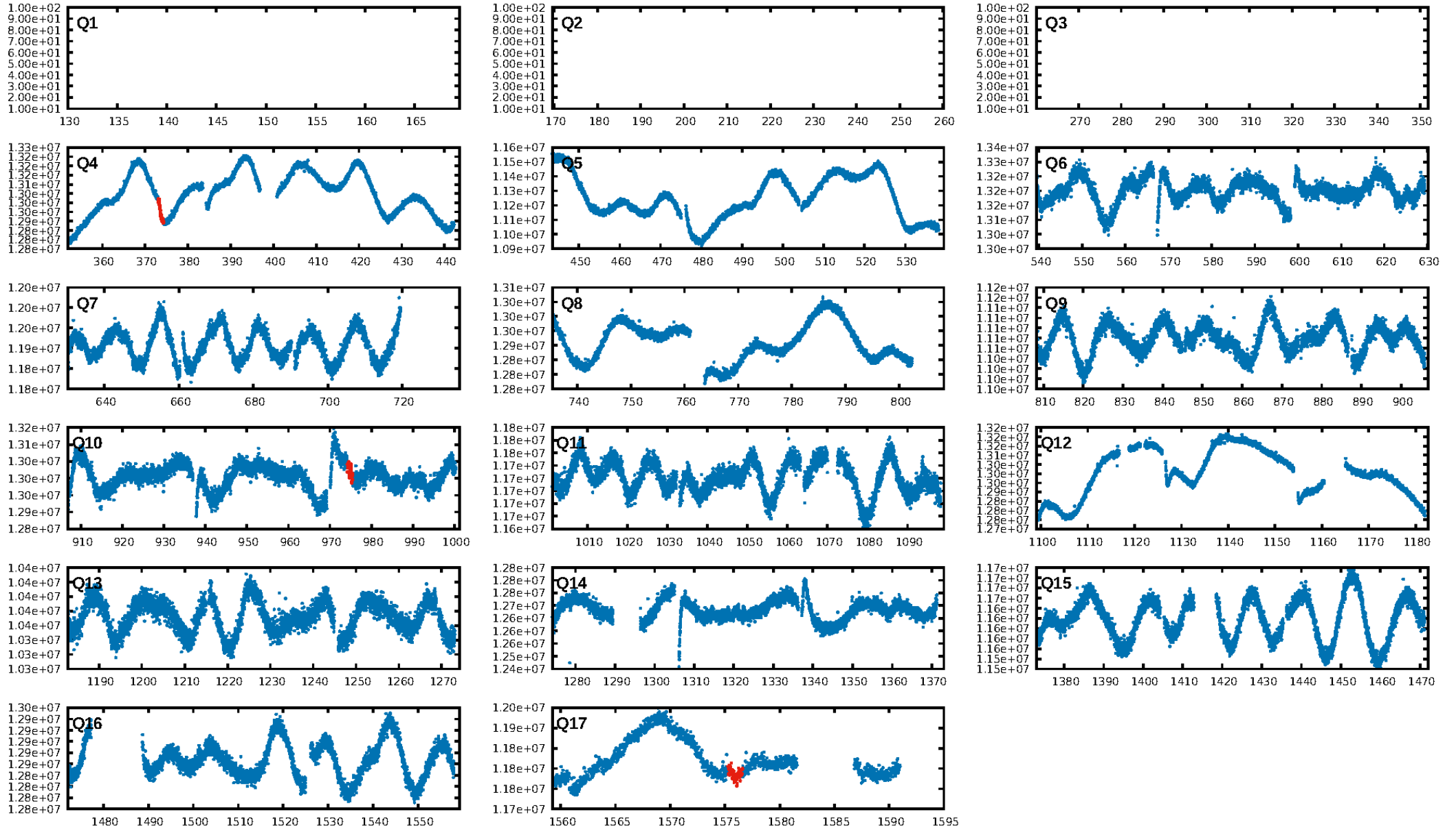
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 13.5%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 1.92e-07**  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: -0.6088  
Centroid-sig: 44.2%  
**Centroid-so: 3.575 arcsec [14.57 $\sigma$ ]**  
**OotOffset-rm: 5.916 arcsec [27.55 $\sigma$ ]**  
**KicOffset-rm: 1.530 arcsec [6.02 $\sigma$ ]**  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [2/2]

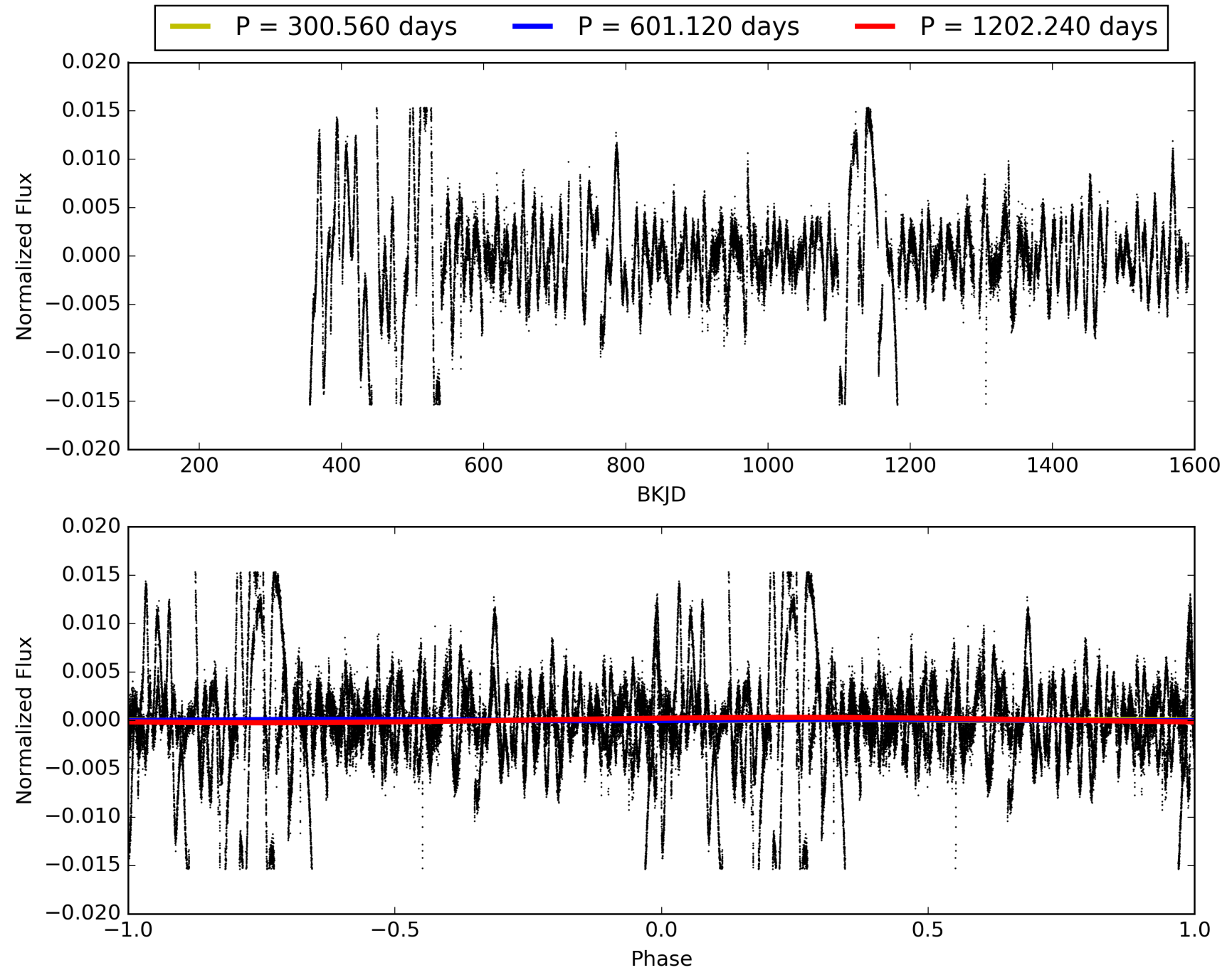
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:58:28 Z

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

# TCE 005096151-01, PDC Light Curves

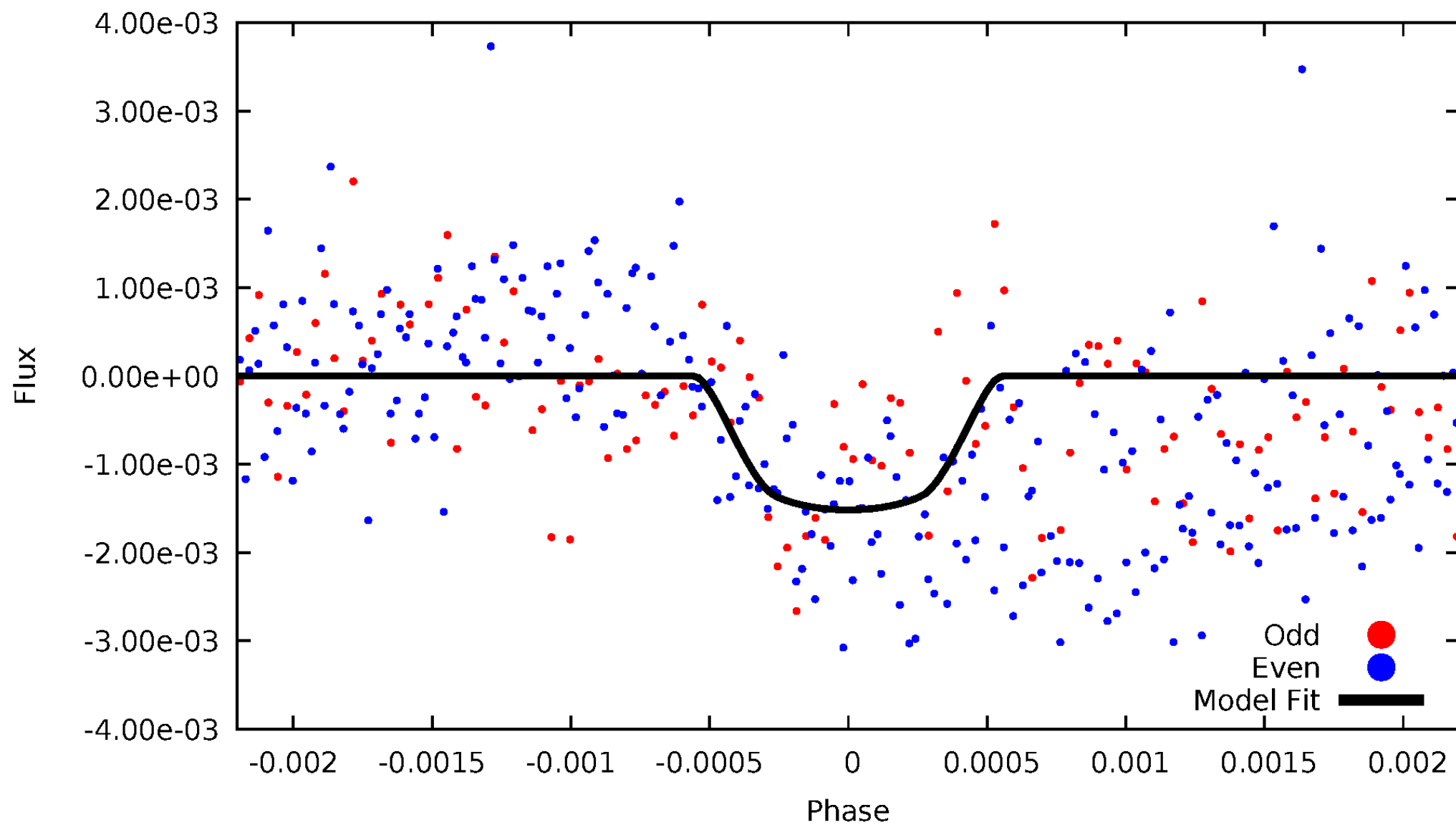


# TCE 005096151-01



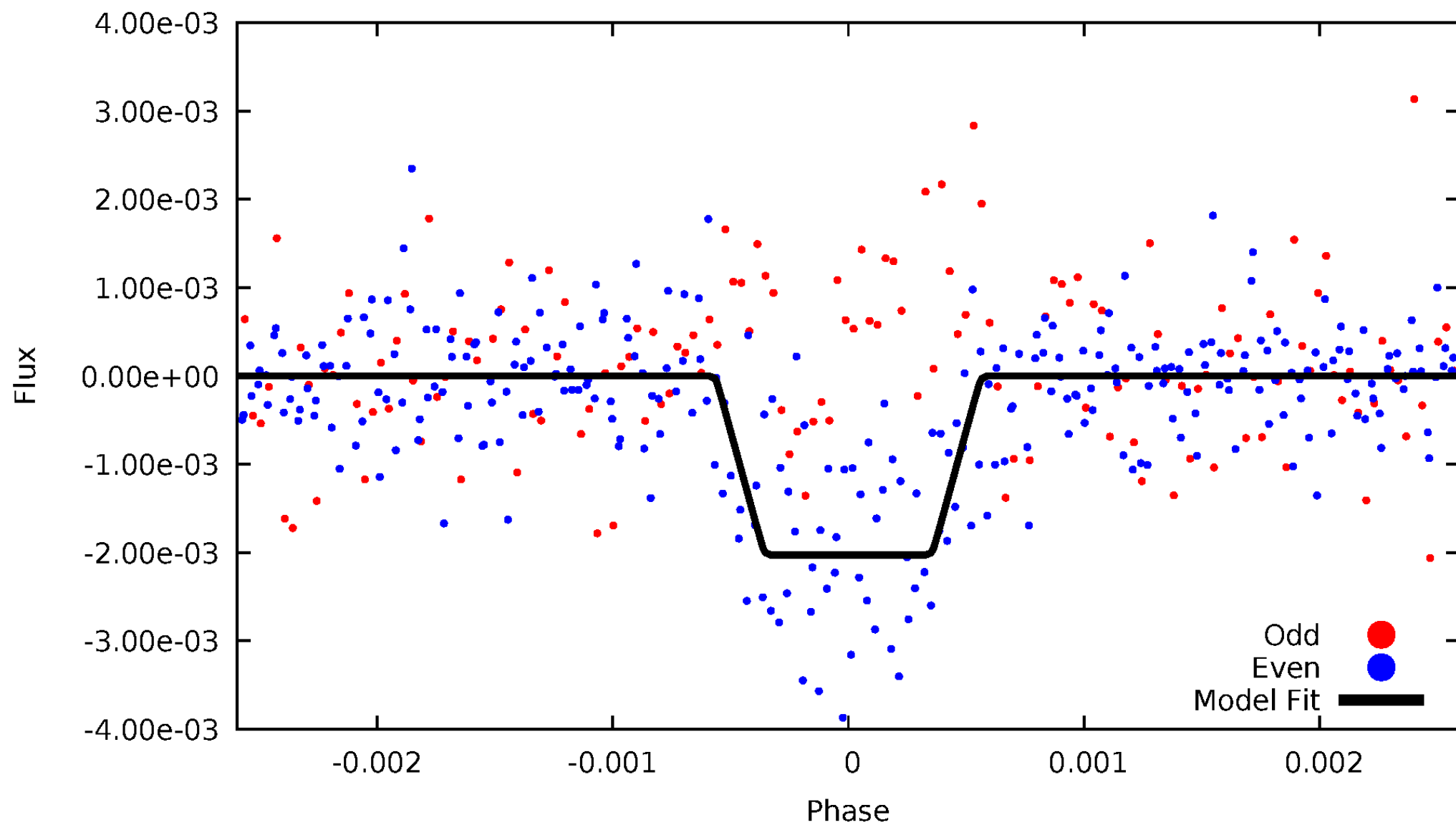
# DV Odd/Even

TCE 005096151-01

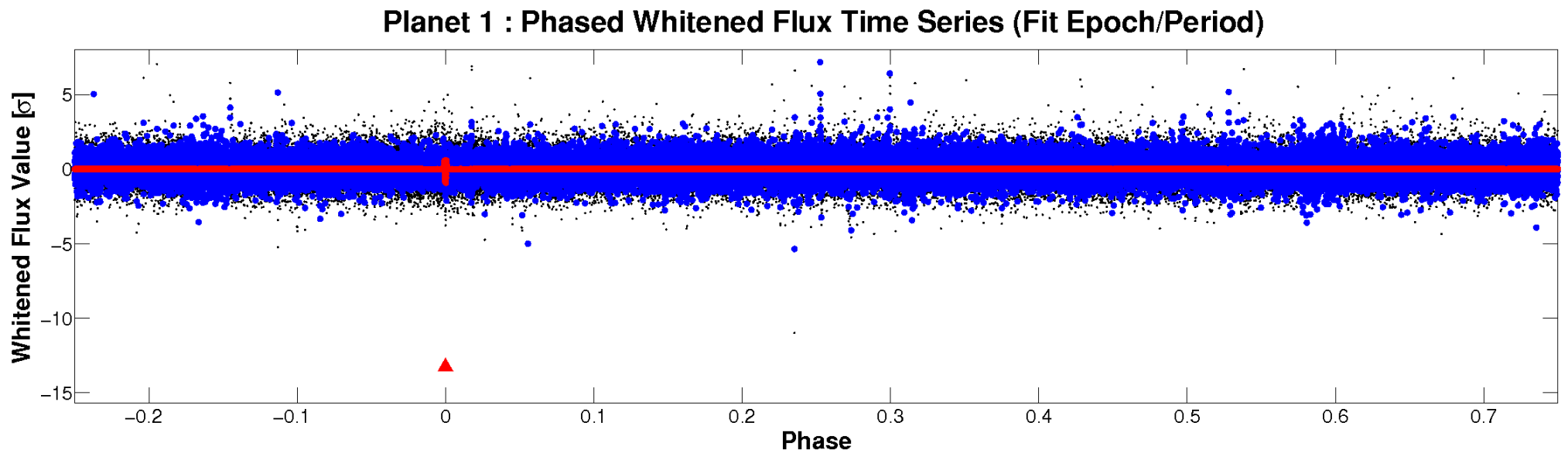
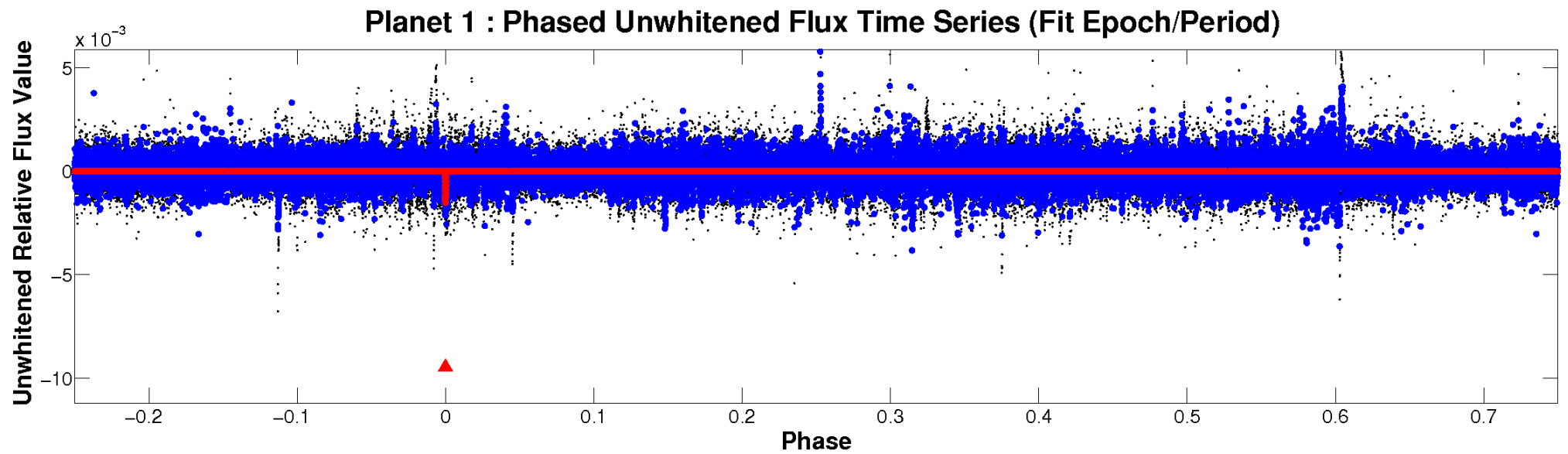


# ALT Odd/Even

TCE 005096151-01

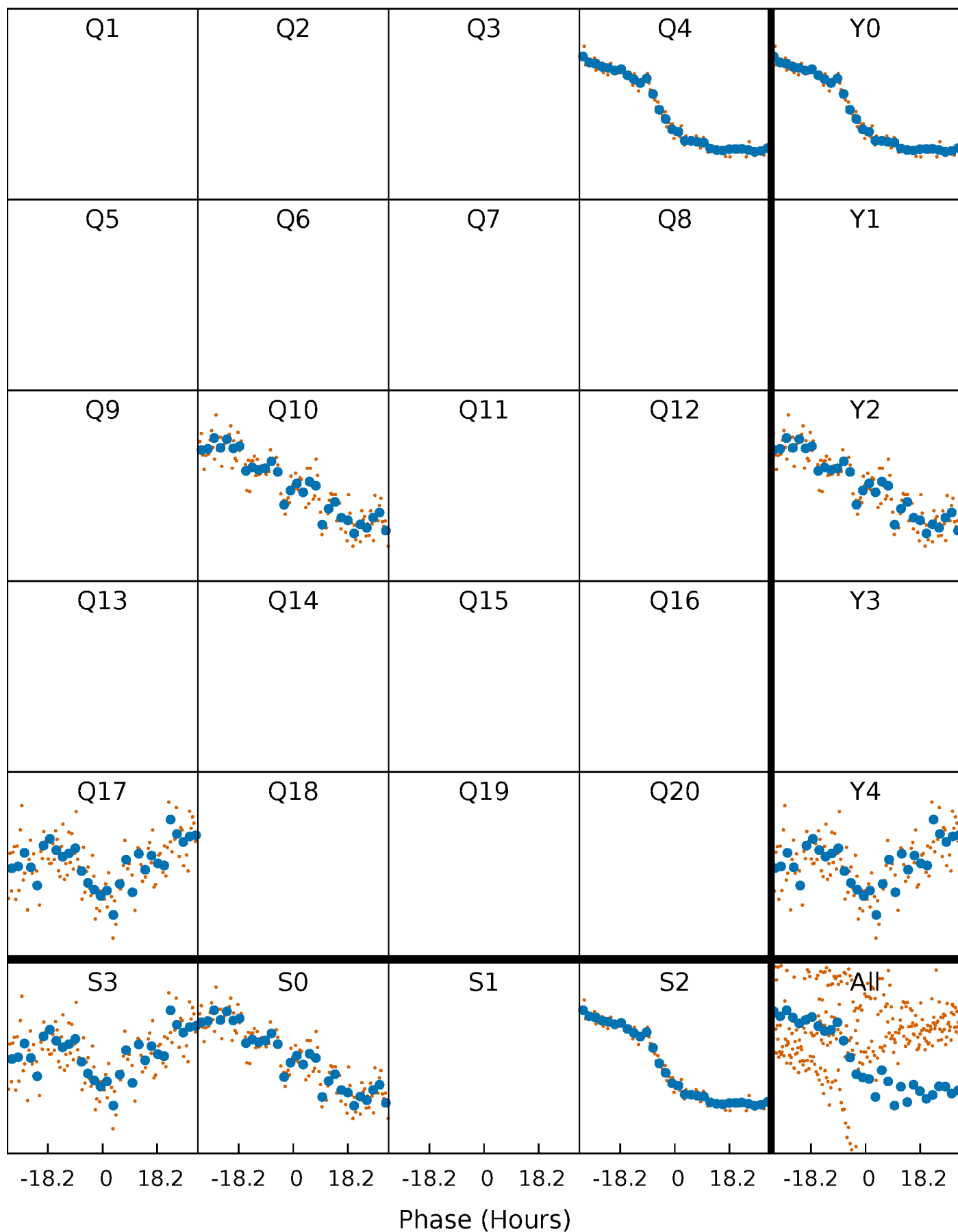


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

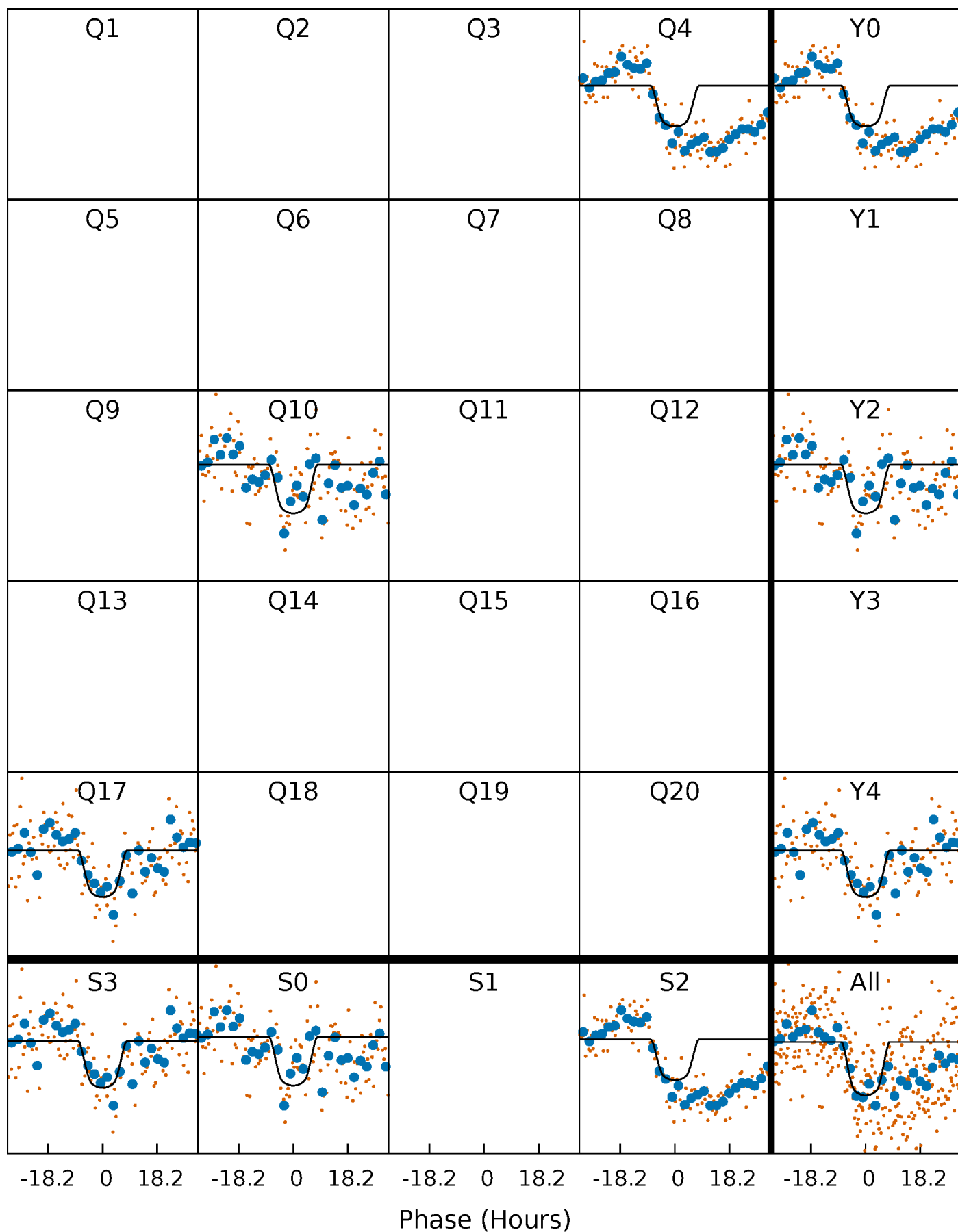
TCE 005096151-01 P=601.120100 Days  $T_0=373.698925$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 005096151-01 P=601.120100 Days  $T_0=373.698925$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

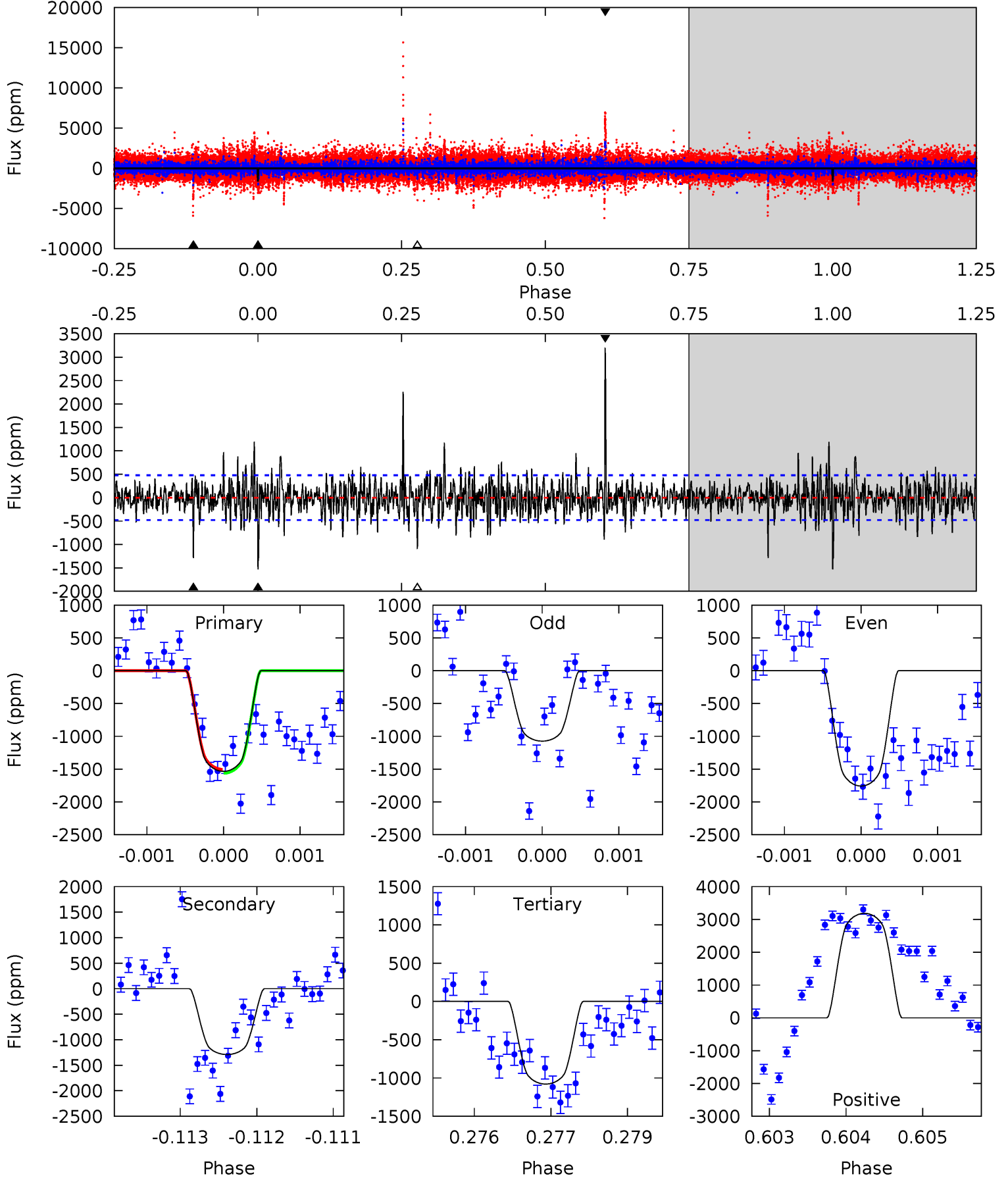
TCE 005096151-01 P=601.114468 Days  $T_0=373.701842$  (BKJD)



# DV Model-Shift Uniqueness Test

005096151-01, P = 601.120100 Days, E = 373.698925 Days

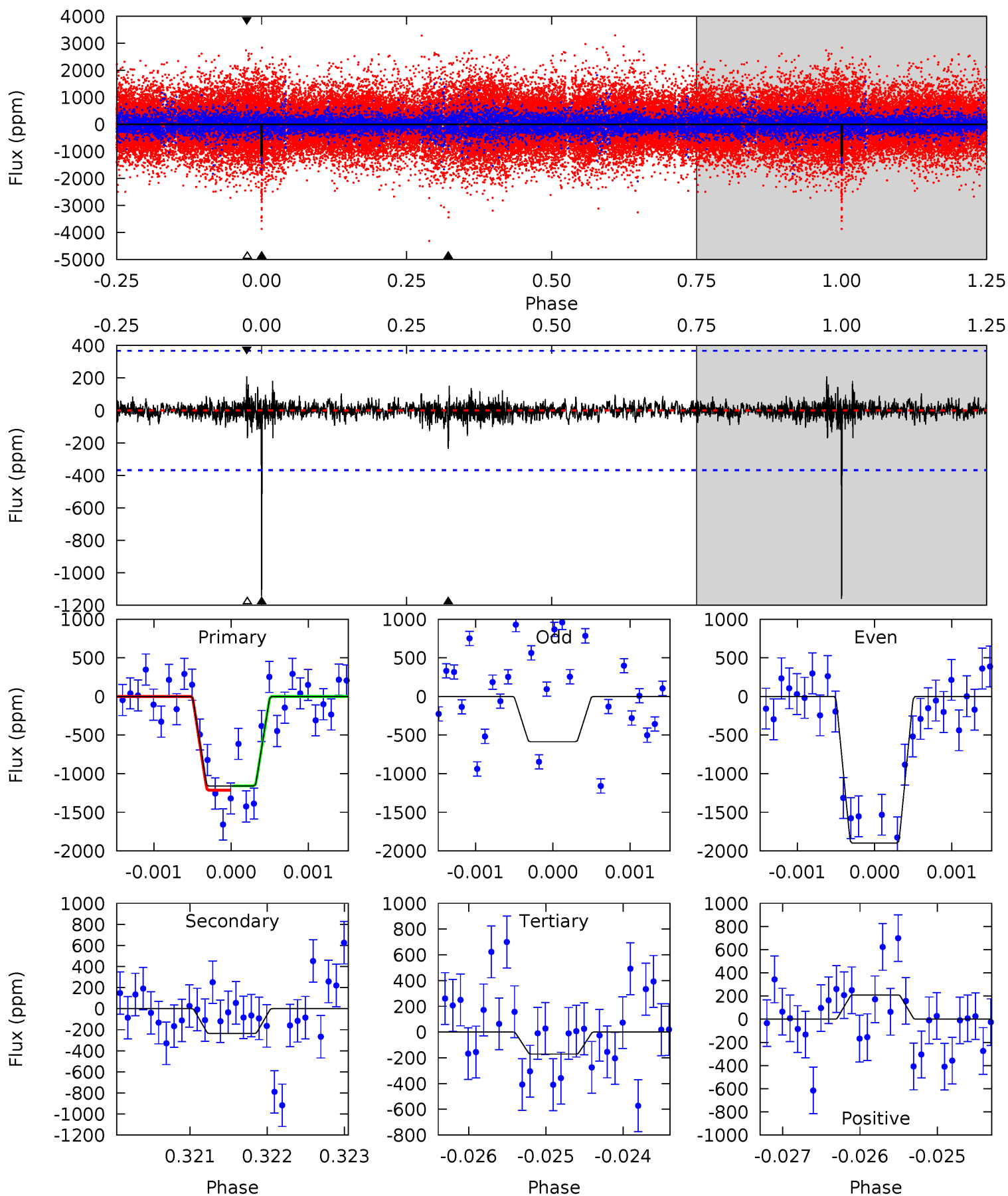
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	14.6	12.2	36.1	5.43	3.25	3.40	5.16	-18.7	2.40	-21.5	3.69	1.08	0.67	0.34



# Alt Model-Shift Uniqueness Test

005096151-01, P = 601.114468 Days, E = 373.701842 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
17.1	3.48	2.53	3.08	5.43	3.26	0.48	14.6	14.1	0.95	0.39	9.28	0.96	0.15	0.43



### Stellar Parameters For KIC 005096151

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4265^{+149}_{-164}$	$4.675^{+0.065}_{-0.030}$	$-0.520^{+0.300}_{-0.300}$	$0.567^{+0.048}_{-0.066}$	$0.555^{+0.061}_{-0.051}$	$4.287^{+1.320}_{-0.576}$
	+3%/-4%	+1%/-1%	+58%/-58%	+8%/-12%	+11%/-9%	+31%/-13%
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 005096151-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1290 \pm 88$	$2.73^{+0.32}_{-0.35}$	$183^{+8}_{-8}$	$3941^{+241}_{-210}$	$126661^{+39432}_{-24515}$
Alt.	$-235 \pm 68$	$2.76^{+0.32}_{-0.31}$	$184^{+8}_{-8}$	$3005^{+178}_{-169}$	$22429^{+8744}_{-7345}$

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

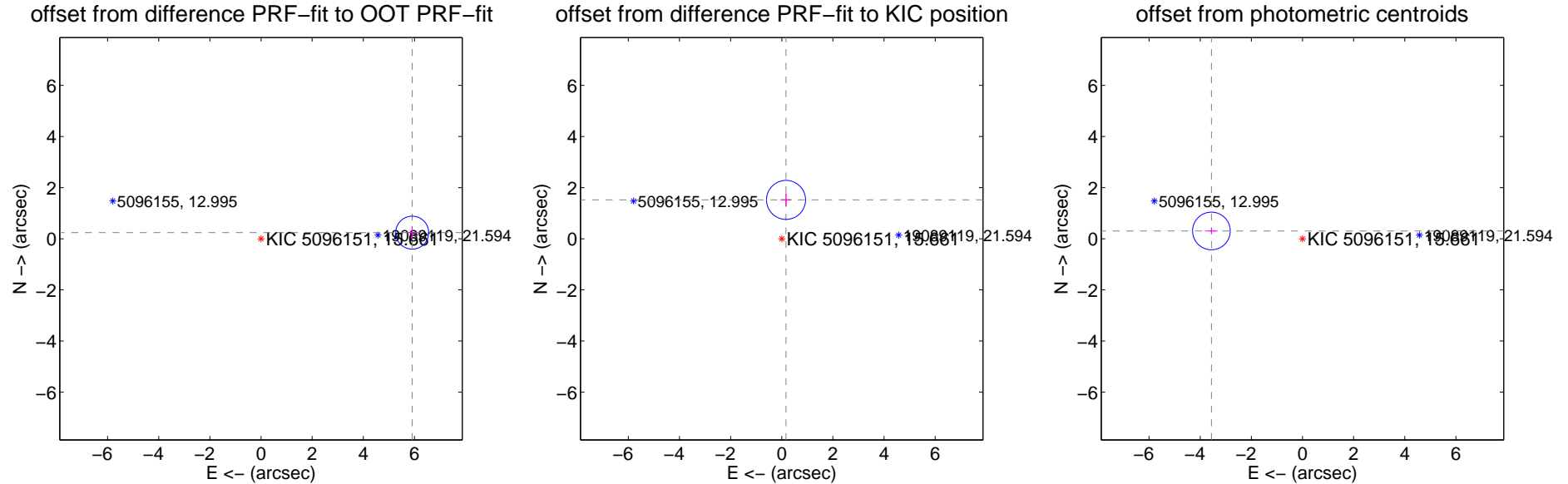
## DV Centroid Data

Supplemental centroid analysis for 005096151-01. Kepler magnitude: 15.66. Transit SNR 7.29

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.89 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.916 \pm 0.215$	27.55	$-5.911 \pm 0.215$	$0.239 \pm 0.255$
PRF-fit source offset from KIC position	$1.530 \pm 0.254$	6.02	$-0.167 \pm 0.215$	$1.521 \pm 0.255$
photometric centroid source offset	$3.57 \pm 0.25$	14.57	$3.56 \pm 0.25$	$0.31 \pm 0.13$



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.

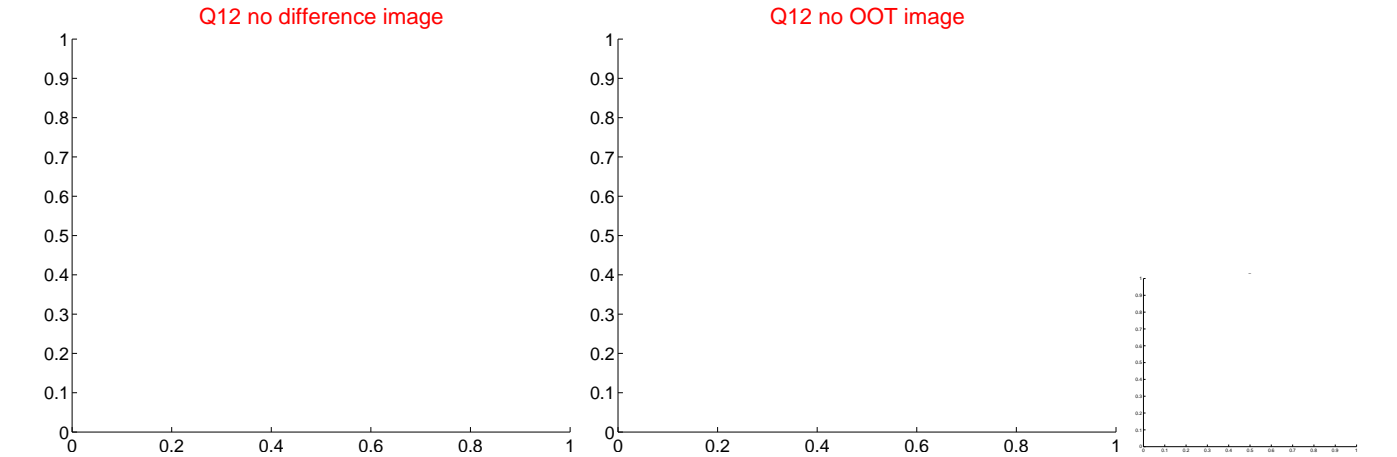
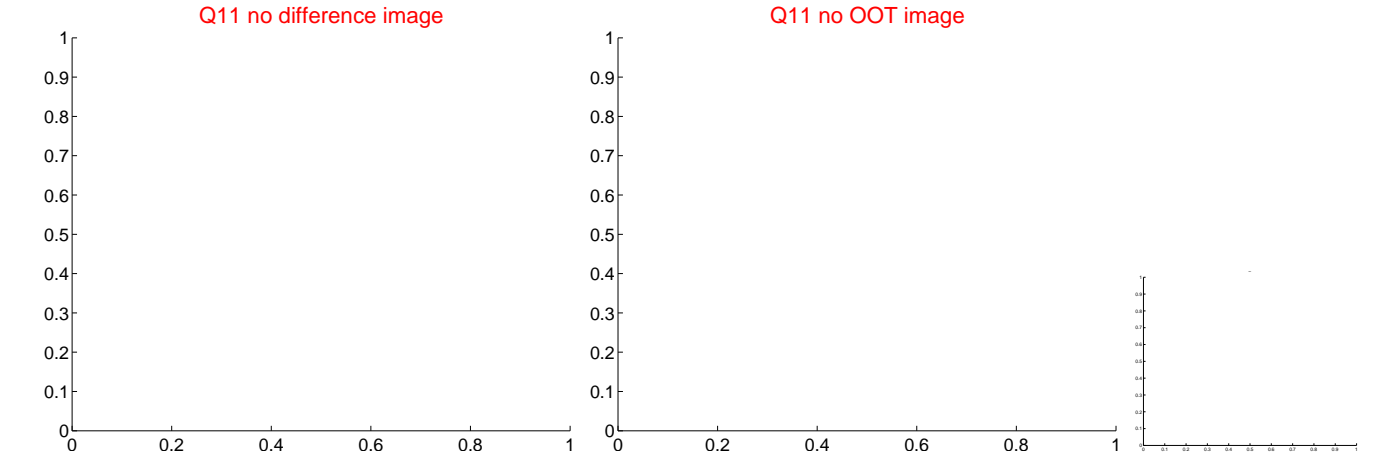
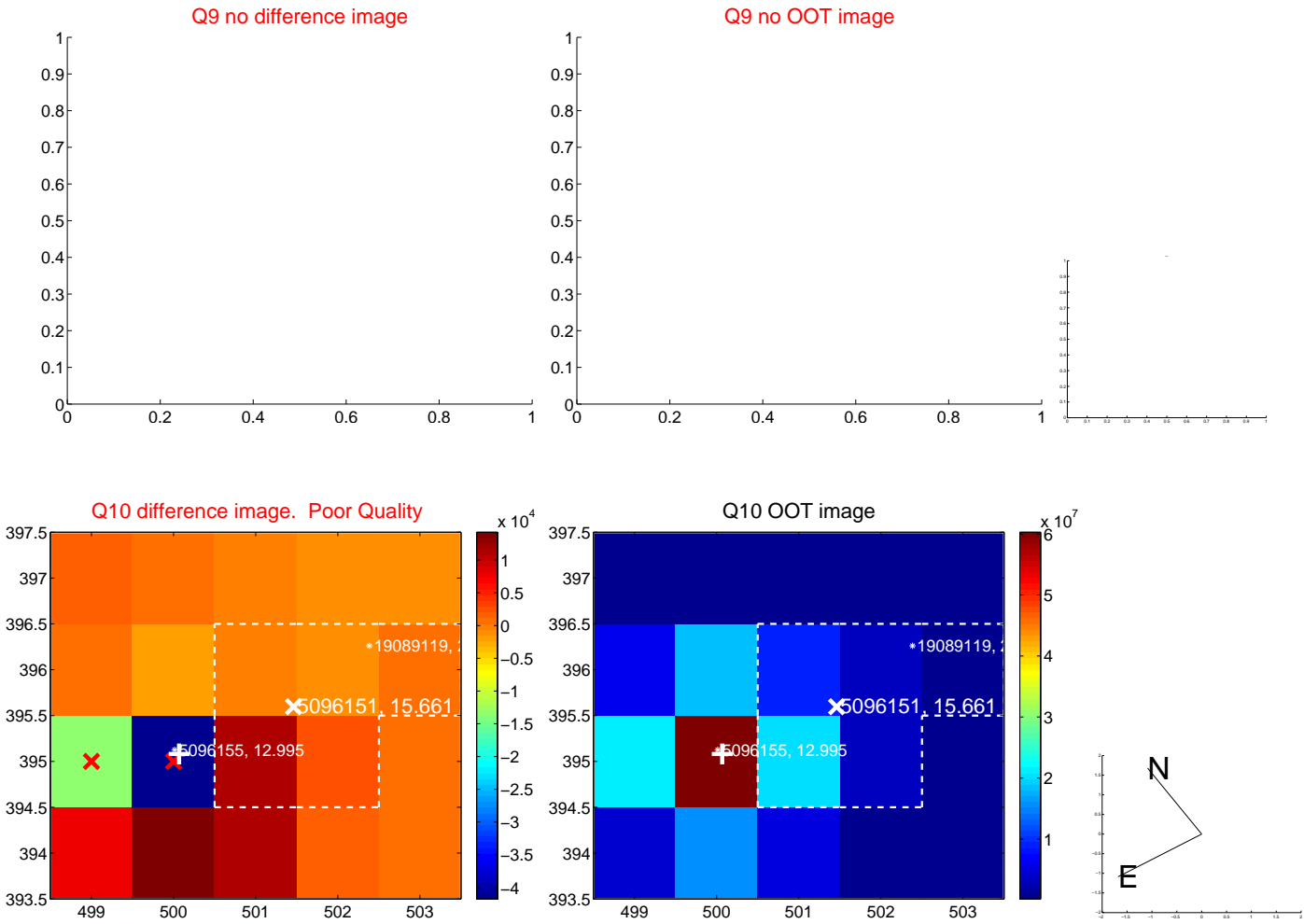


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





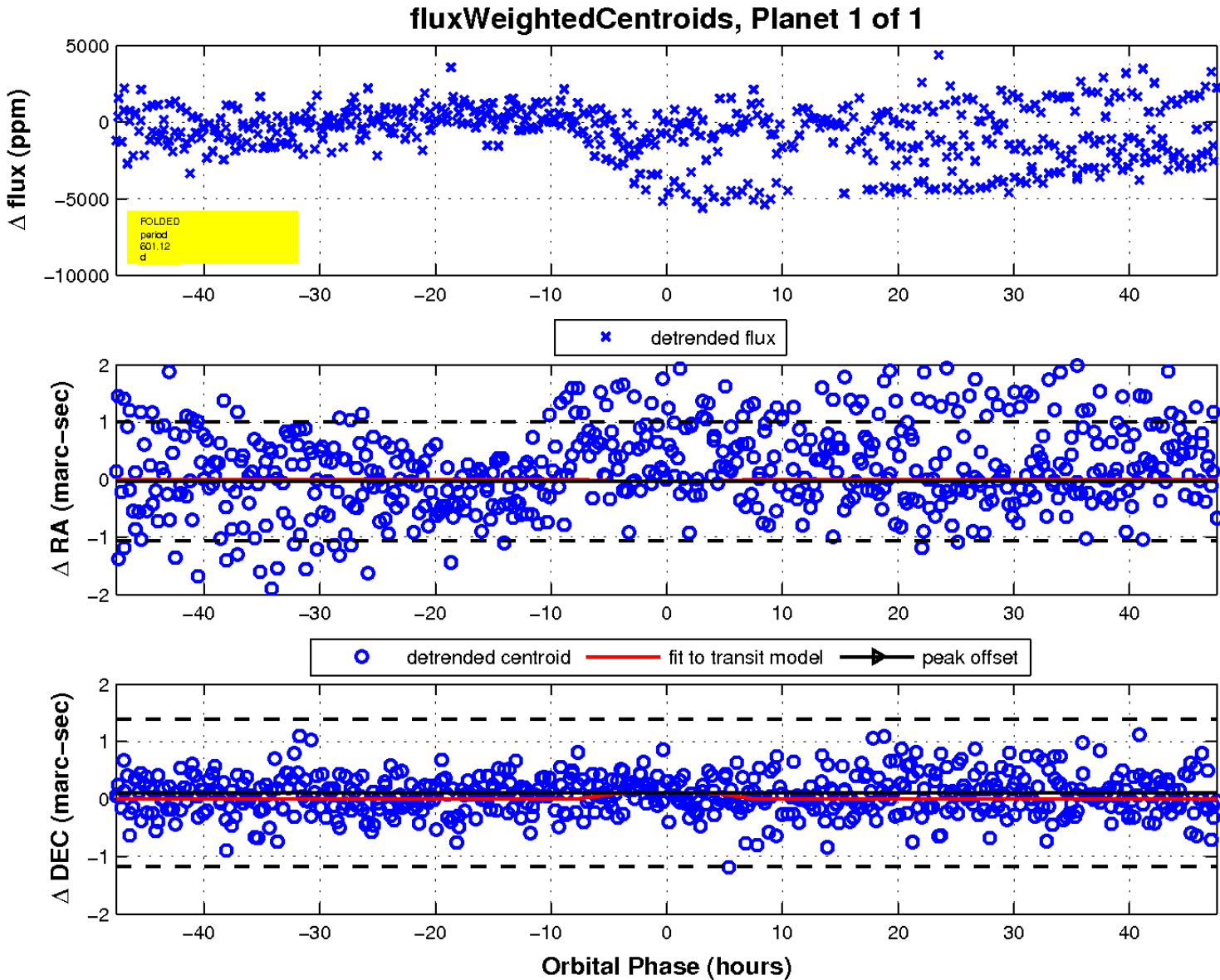
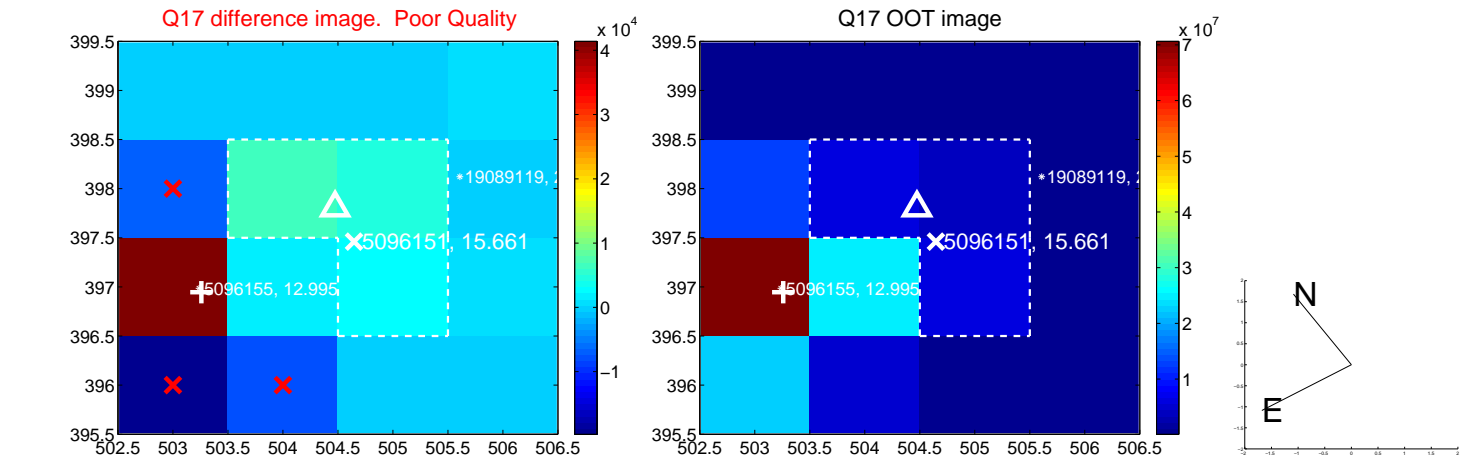
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UKIRT Image

Declination

