

# KIC 011804797

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011804797-01	OBS	No	513.554395	199.278463	264.7	18.708	8.8	8.9	0.88	5815	1.54	0.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011804797-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

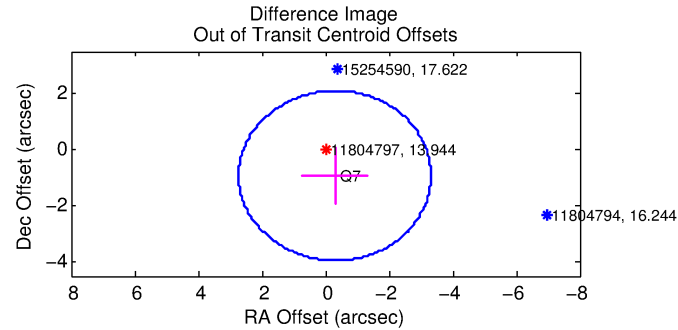
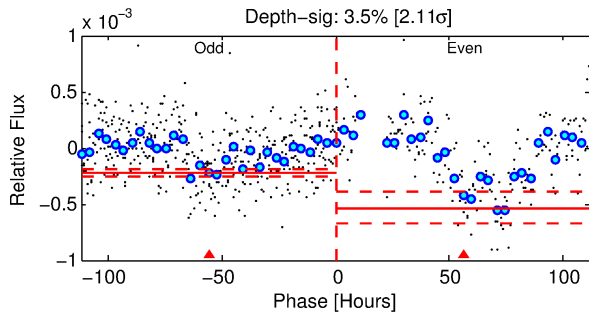
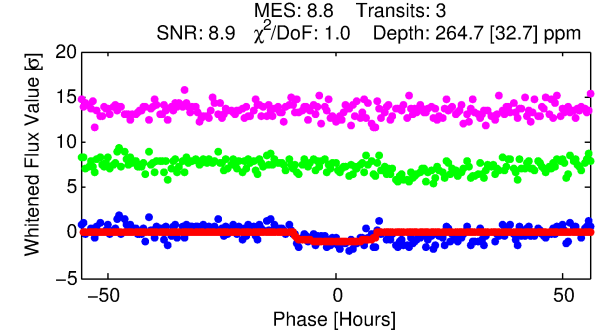
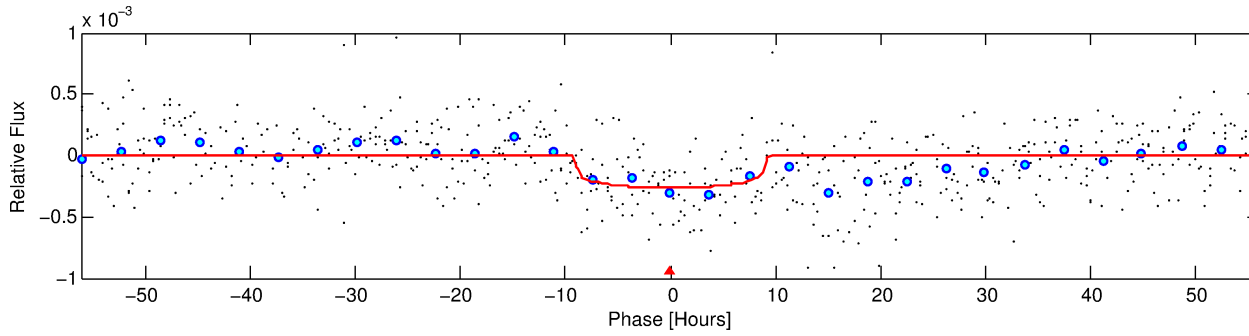
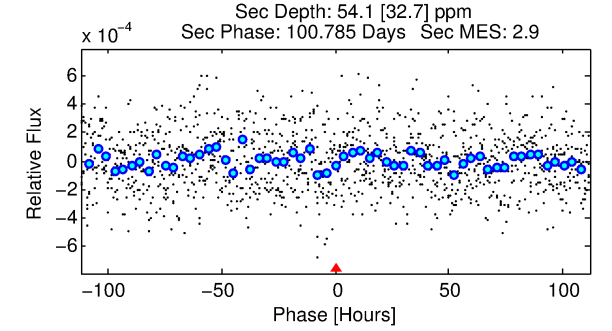
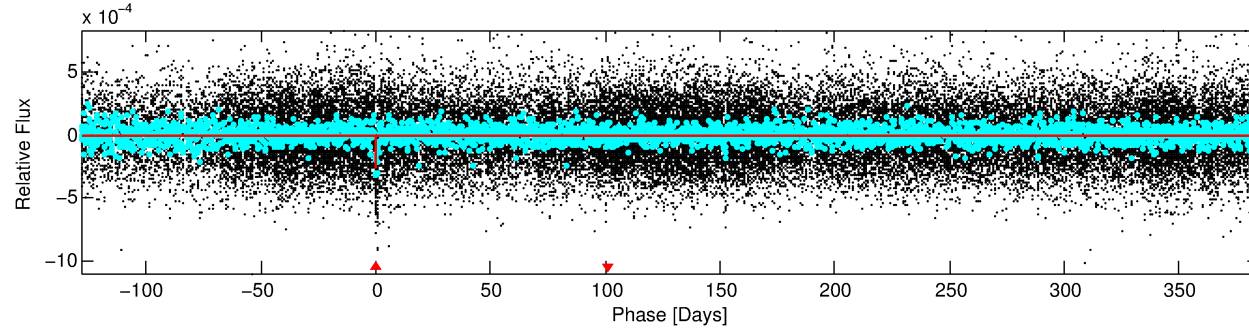
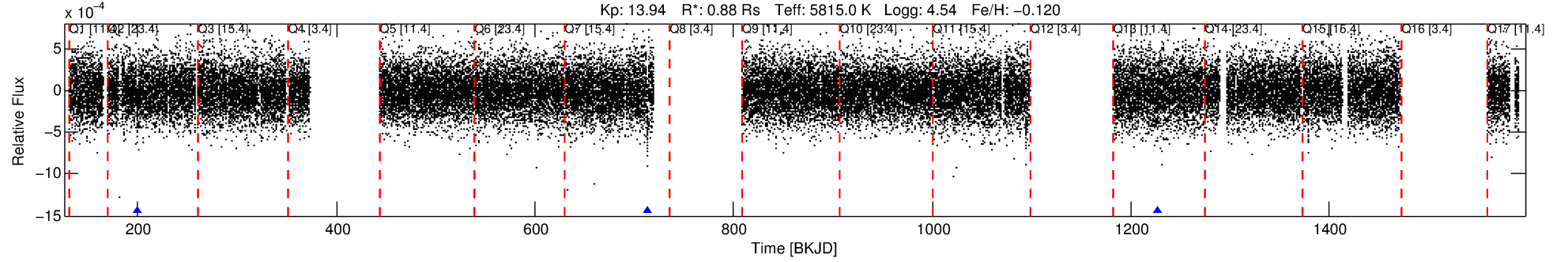
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011804797-01

No Significant Match Found

# DV One-Page Summary

KIC: 11804797 Candidate: 1 of 1 Period: 513.554 d



## DV Fit Results:

Period = 513.55439 [0.02099] d  
Epoch = 199.2785 [0.0233] BKJD  
Rp/R\* = 0.0161 [0.0067]  
a/R\* = 146.87 [274.65]  
b = 0.74 [1.18]  
Seff = 0.51 [0.18]  
Teff = 215 [19] K  
Rp = 1.54 [0.76] Re  
a = 1.2438 [0.2821] AU  
Ag = 19376.74 [20940.17] [0.93σ]  
Teffp = 3929 [1014] K [3.66σ]

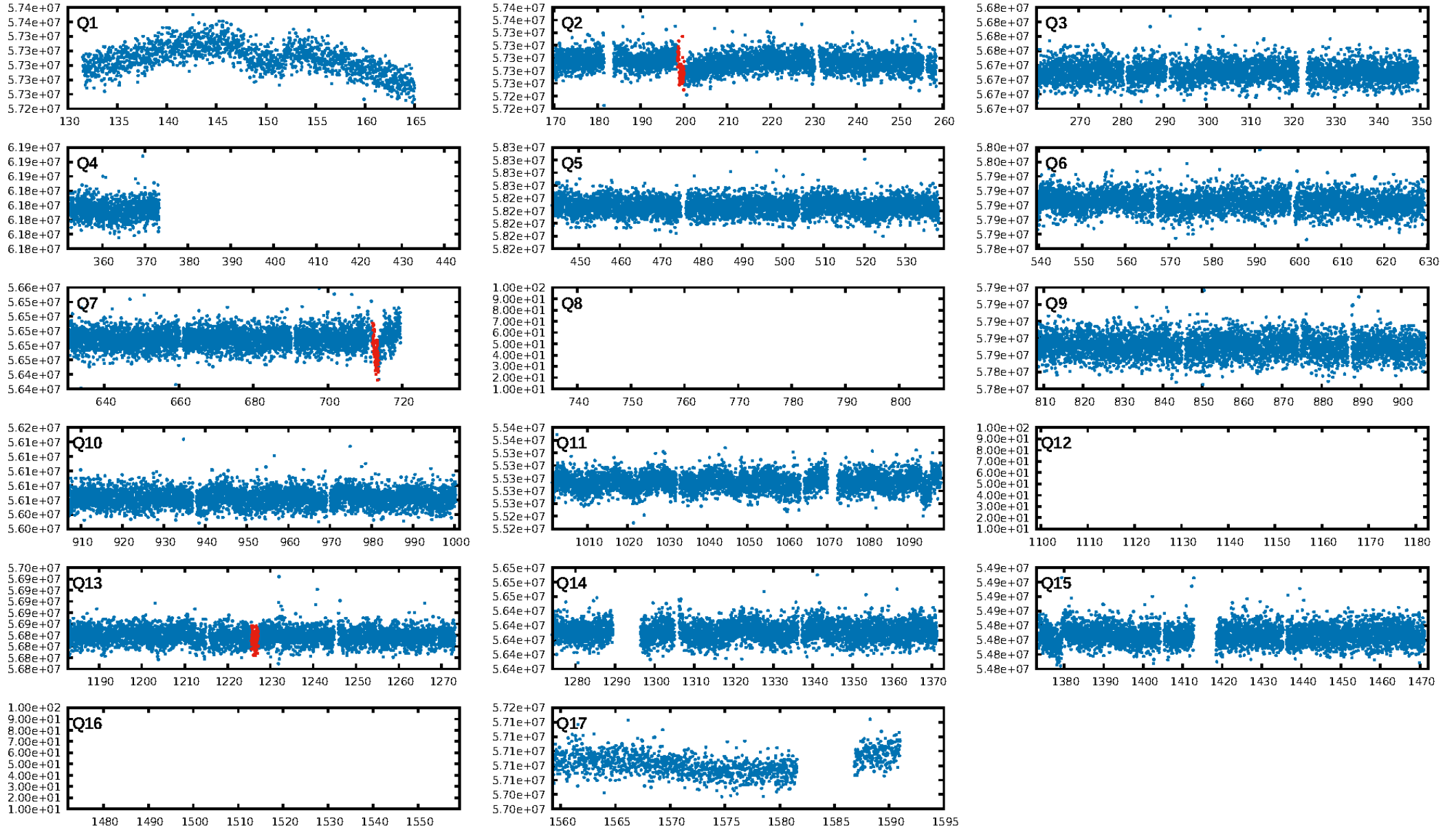
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.4%  
ModelChiSquareGof-sig: 99.9%  
Bootstrap-pfa: 3.98e-18  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -1.864  
Centroid-sig: 0.1%  
Centroid-so: 3.245 arcsec [2.18σ]  
OotOffset-rm: 0.977 arcsec [0.97σ]  
KicOffset-rm: 0.965 arcsec [0.96σ]  
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]

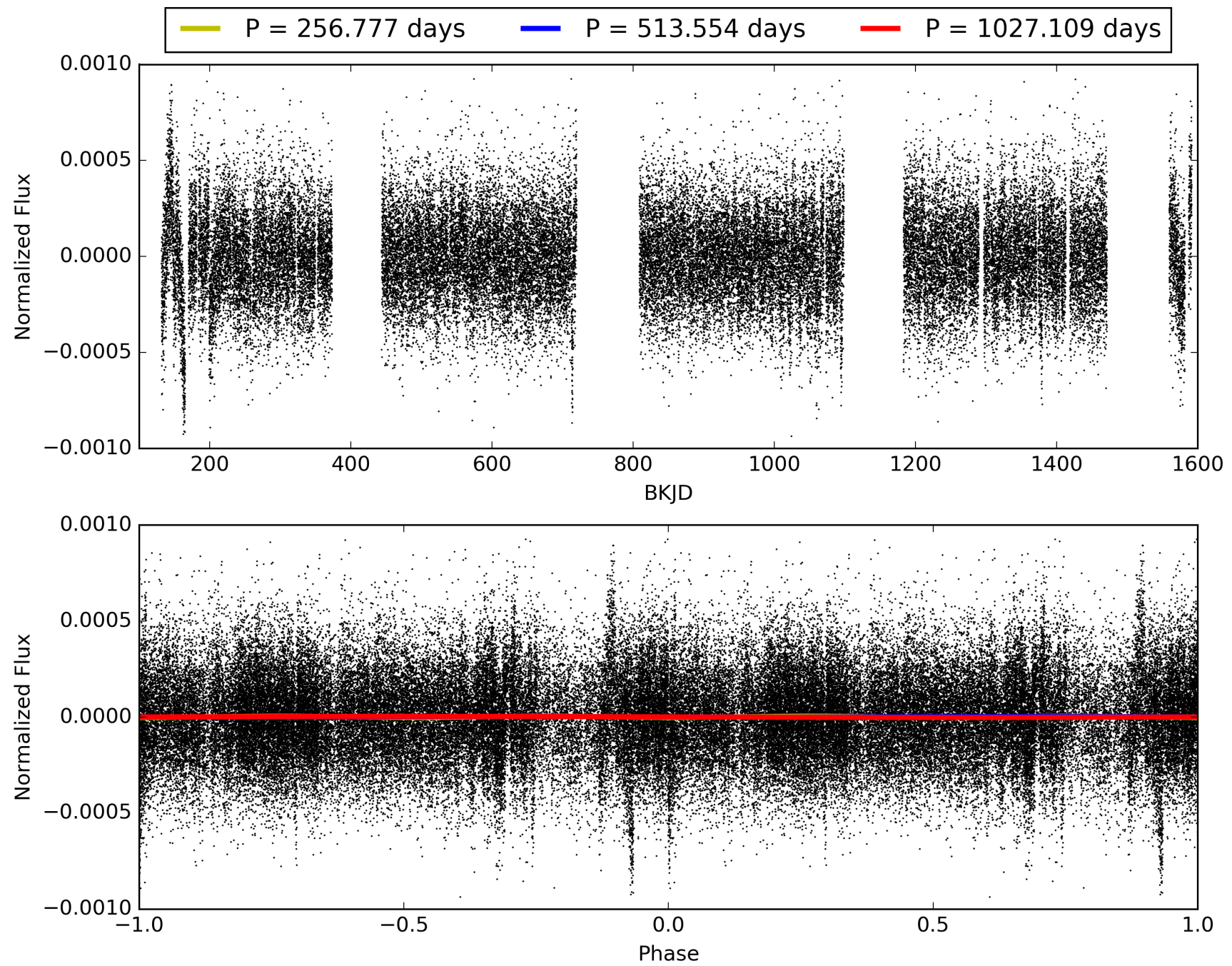
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:32:43 Z

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

# TCE 011804797-01, PDC Light Curves

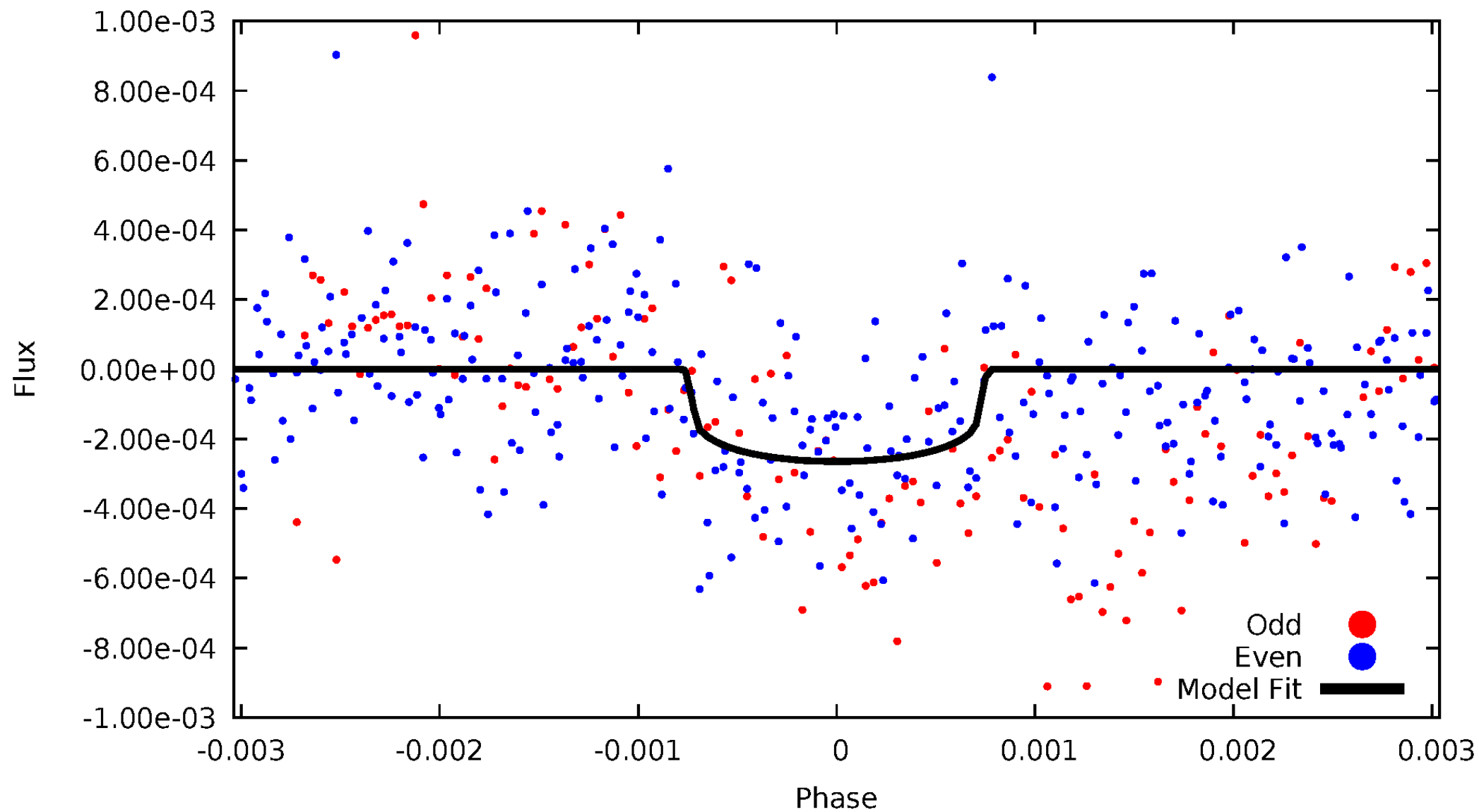


TCE 011804797-01



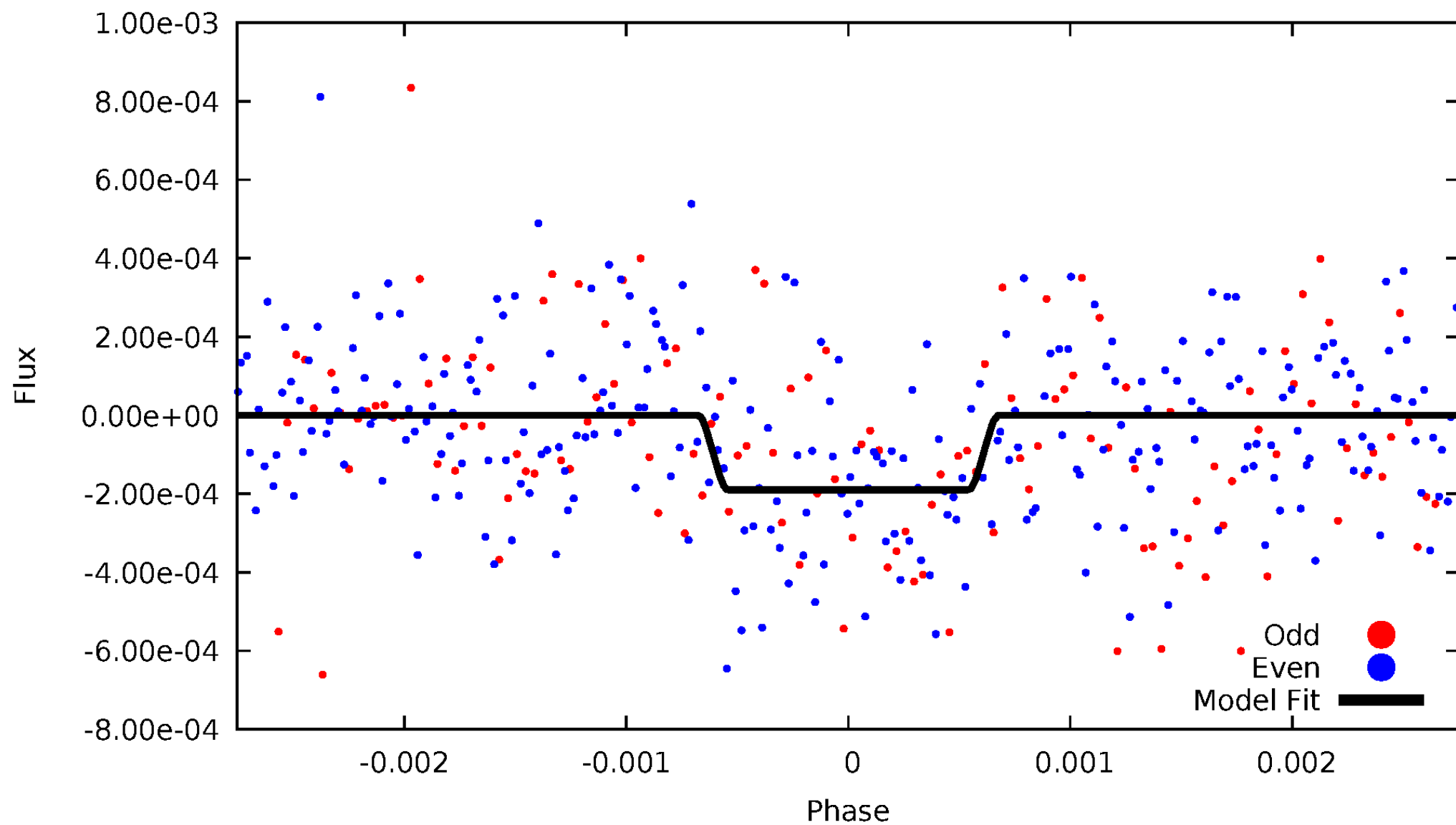
# DV Odd/Even

TCE 011804797-01

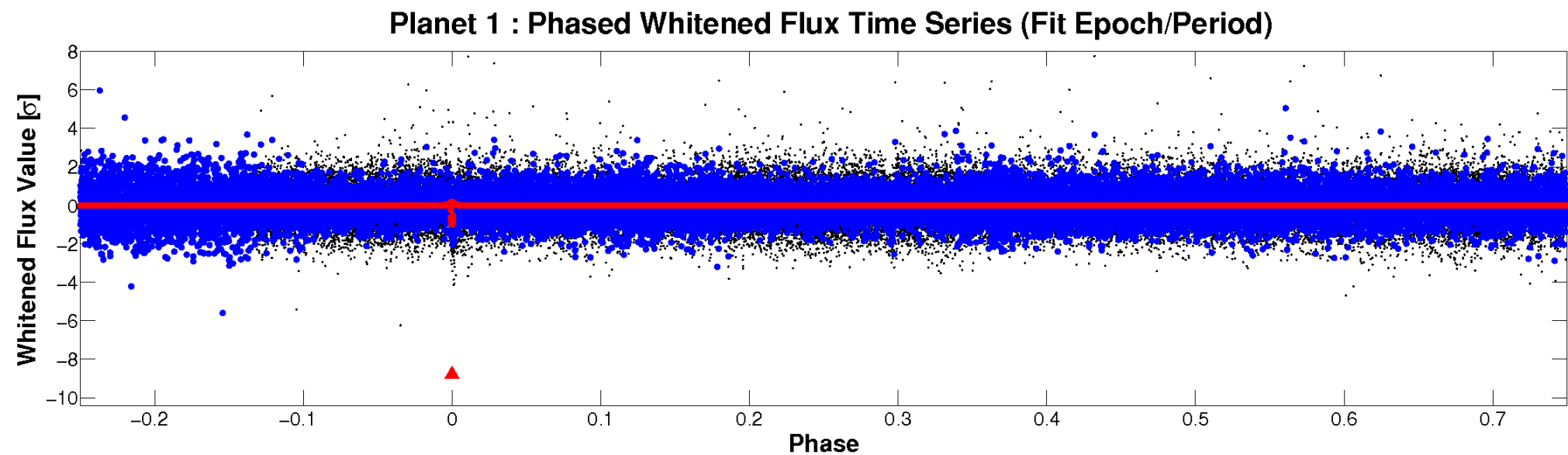
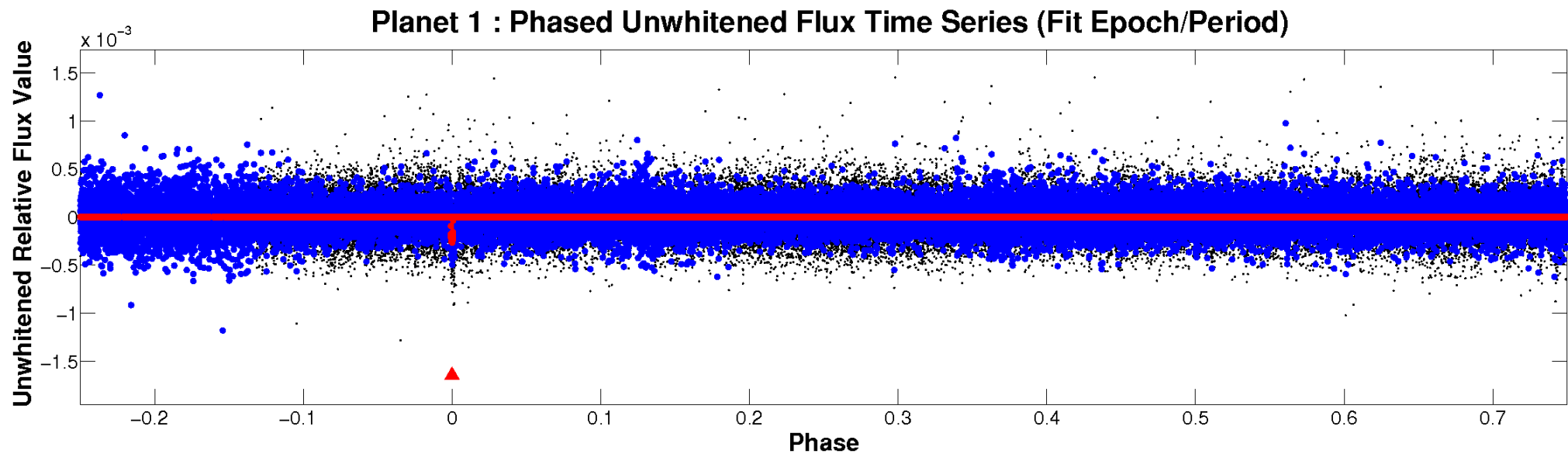


# ALT Odd/Even

TCE 011804797-01



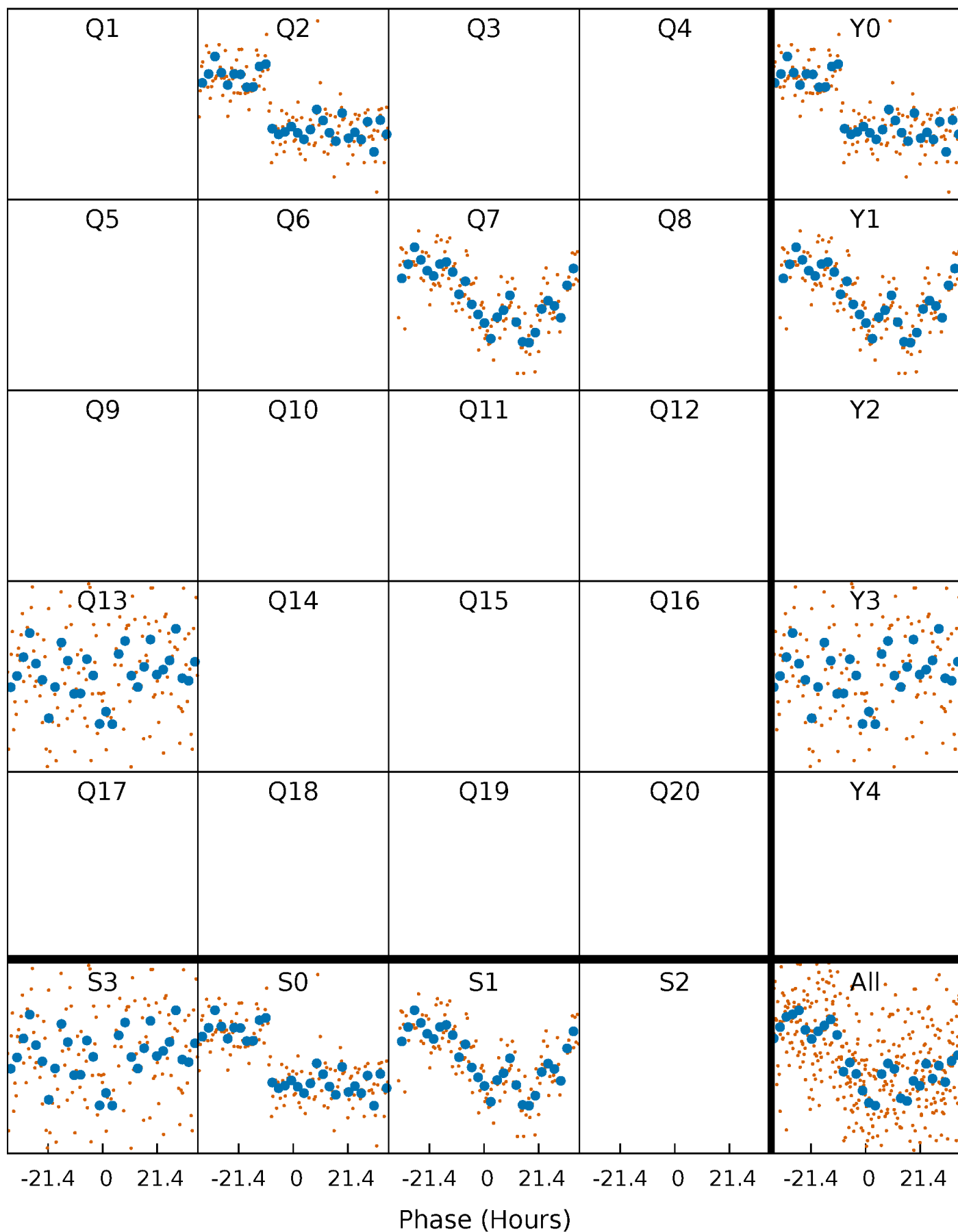
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

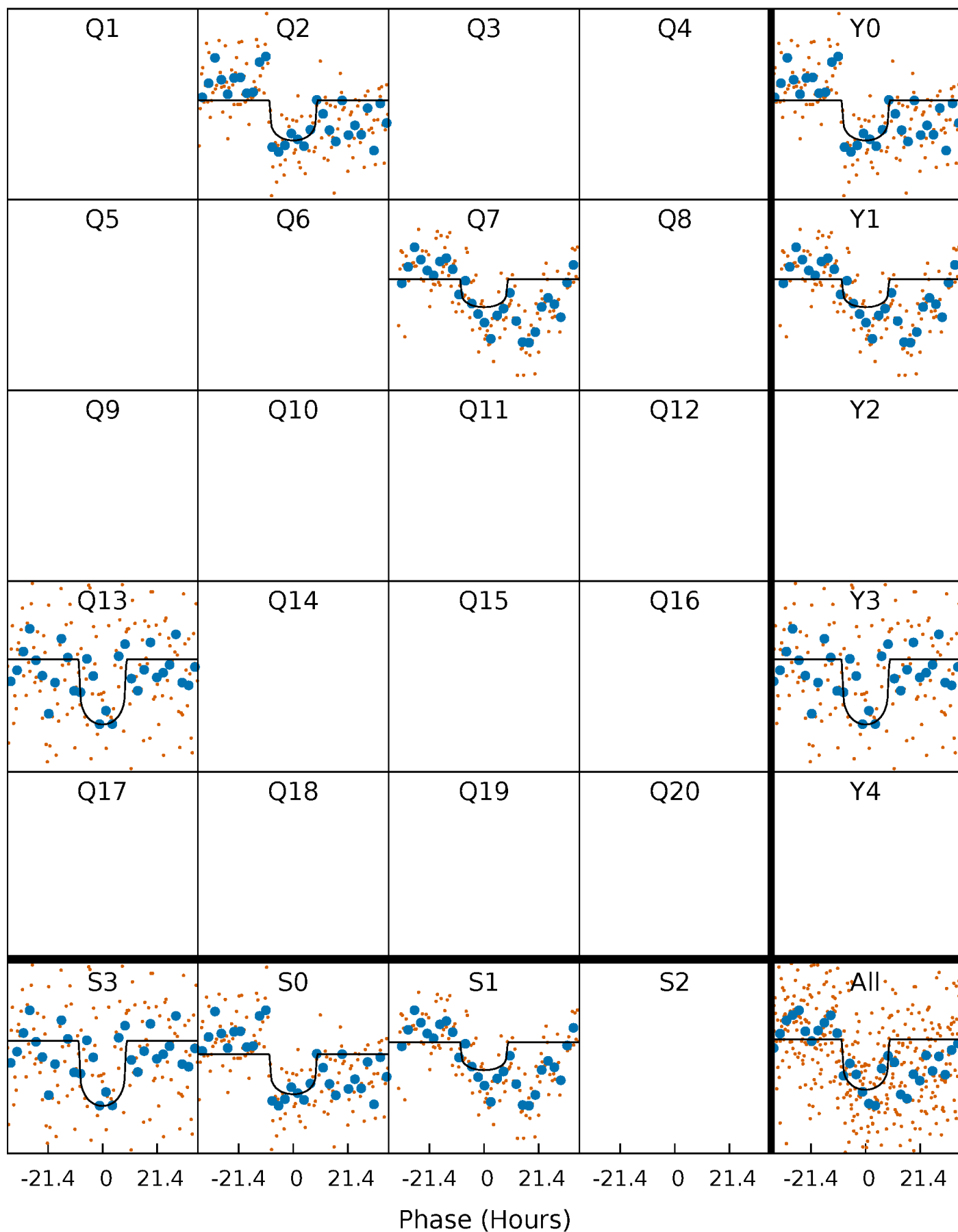
TCE 011804797-01 P=513.554395 Days  $T_0=199.278463$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 011804797-01 P=513.554395 Days  $T_0=199.278463$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

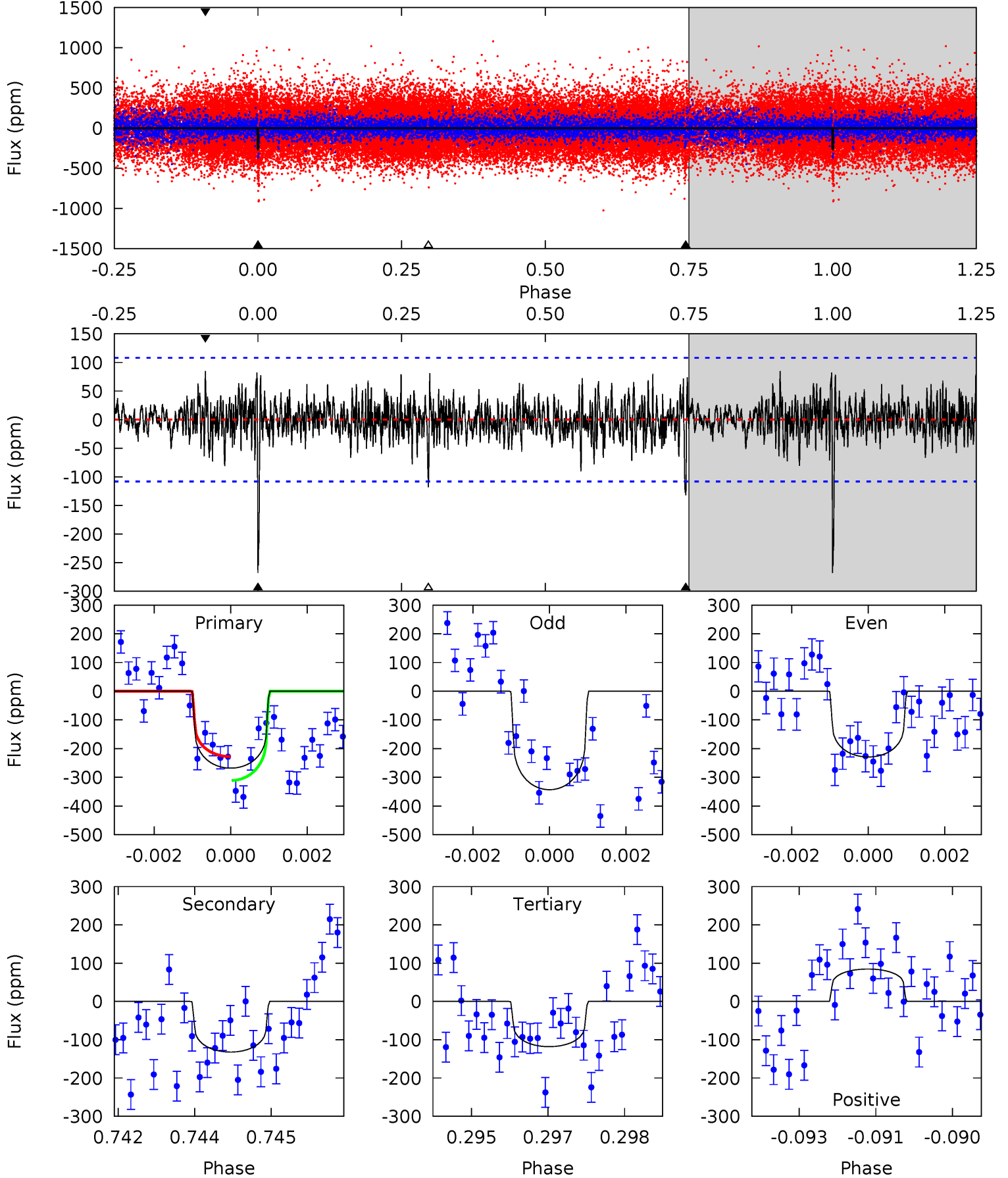
TCE 011804797-01 P=513.549852 Days  $T_0=199.205416$  (BKJD)



# DV Model-Shift Uniqueness Test

011804797-01,  $P = 513.554395$  Days,  $E = 199.278463$  Days

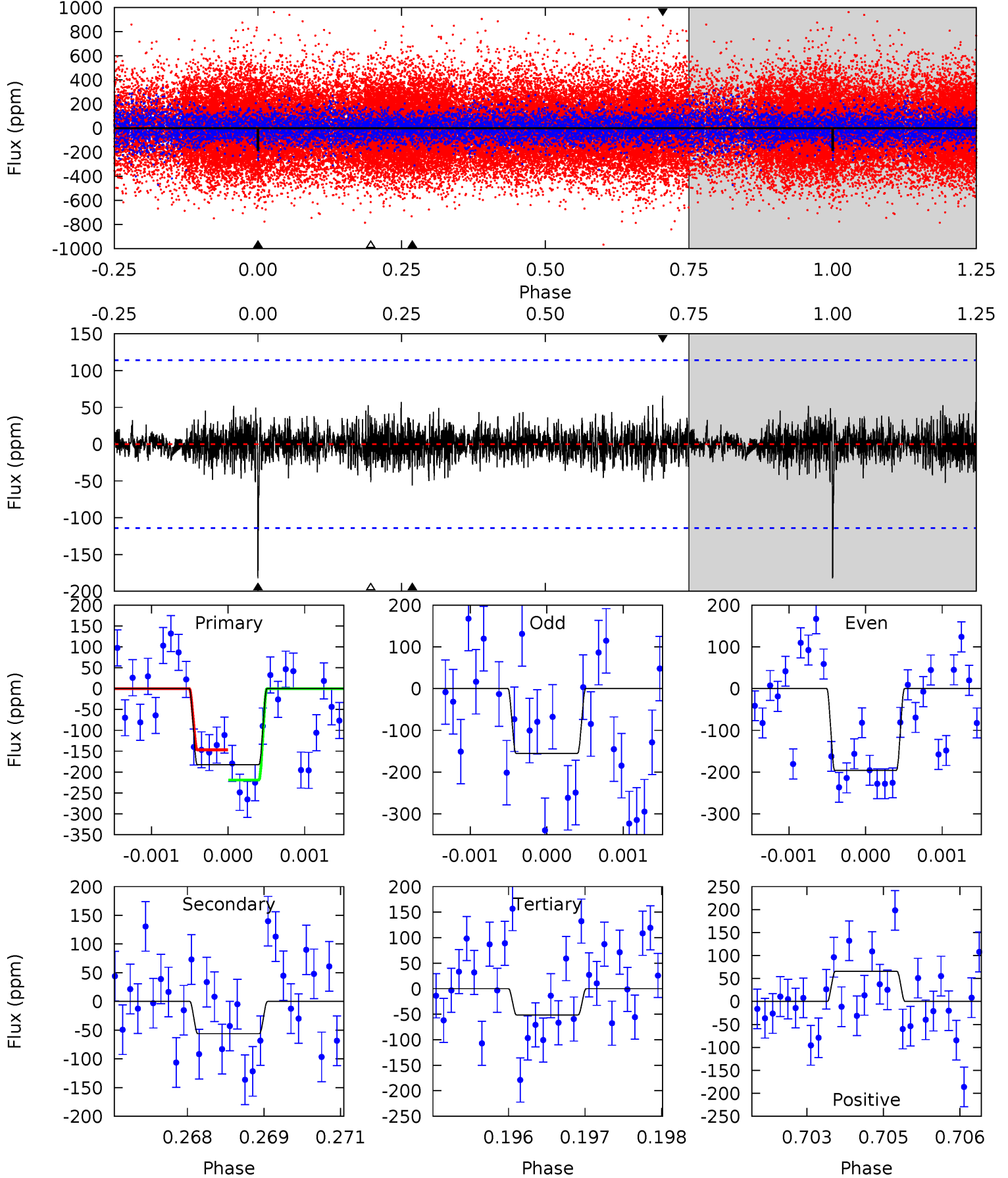
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	6.57	5.87	4.21	5.38	3.17	1.31	7.46	9.12	0.70	2.36	2.73	0.87	0.24	2.07



# Alt Model-Shift Uniqueness Test

011804797-01, P = 513.549852 Days, E = 199.205416 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
8.63	2.65	2.43	3.11	5.40	3.21	0.72	6.19	5.52	0.22	-0.46	0.94	1.18	0.27	1.70



### Stellar Parameters For KIC 011804797

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5815^{+140}_{-157}$	$4.540^{+0.033}_{-0.187}$	$-0.120^{+0.300}_{-0.300}$	$0.877^{+0.231}_{-0.077}$	$0.973^{+0.104}_{-0.127}$	$2.032^{+0.461}_{-0.927}$
	+2%/-3%	+1%/-4%	+250%/-250%	+26%/-9%	+11%/-13%	+23%/-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 011804797-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-132 \pm 20$	$1.62^{+0.68}_{-0.70}$	$309^{+18}_{-13}$	$5001^{+1414}_{-626}$	$42242^{+84296}_{-21623}$
Alt.	$-56 \pm 21$	$1.36^{+0.72}_{-0.57}$	$308^{+20}_{-12}$	$4442^{+1169}_{-700}$	$23211^{+49313}_{-14133}$

$T_{max}$  = 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

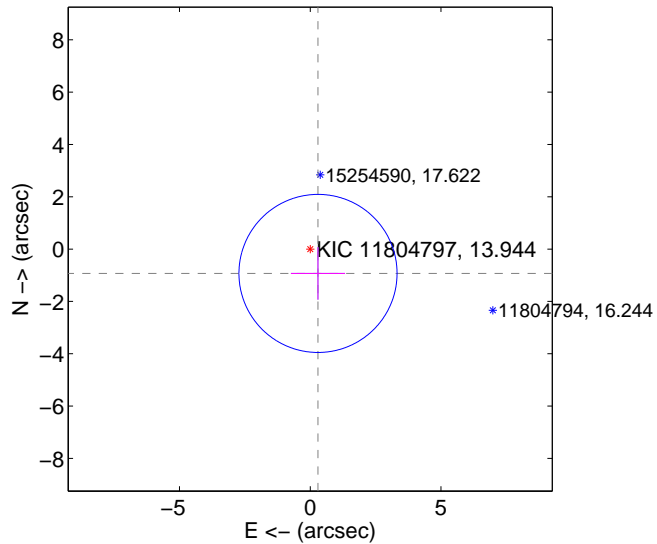
Supplemental centroid analysis for 011804797-01. Kepler magnitude: 13.94. Transit SNR 8.86

There are 1 quarters with good PRF difference image offsets

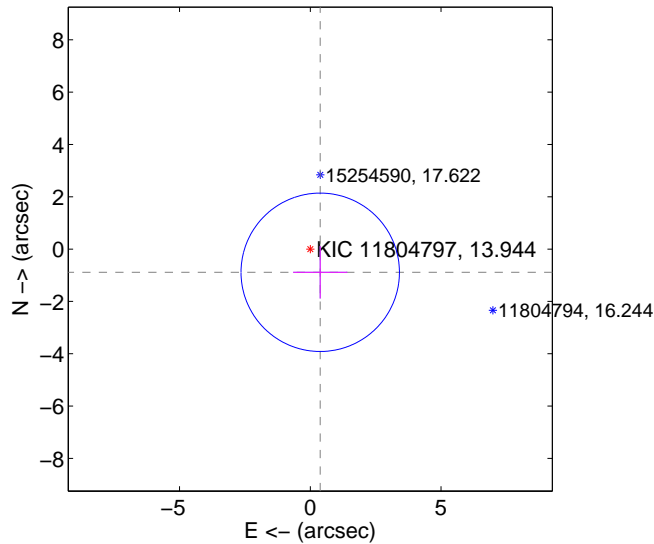
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.977 \pm 1.007$	0.97	$-0.297 \pm 1.035$	$-0.930 \pm 1.004$
PRF-fit source offset from KIC position	$0.965 \pm 1.009$	0.96	$-0.380 \pm 1.035$	$-0.887 \pm 1.004$
photometric centroid source offset	$3.25 \pm 1.49$	2.18	$-2.01 \pm 1.35$	$2.55 \pm 1.57$

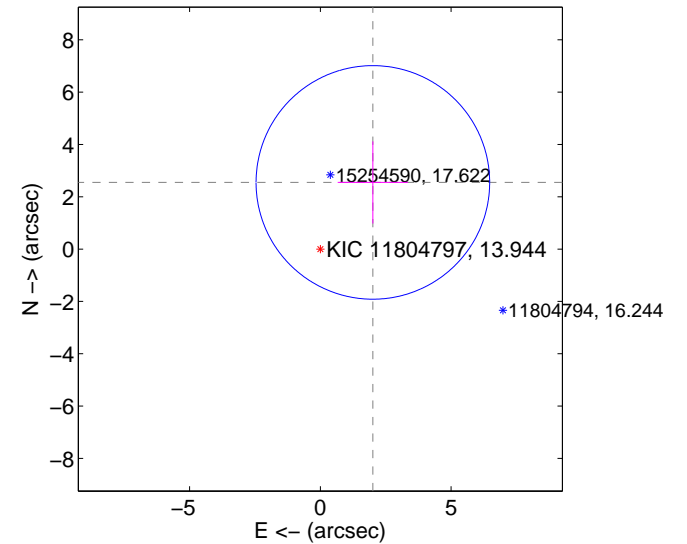
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



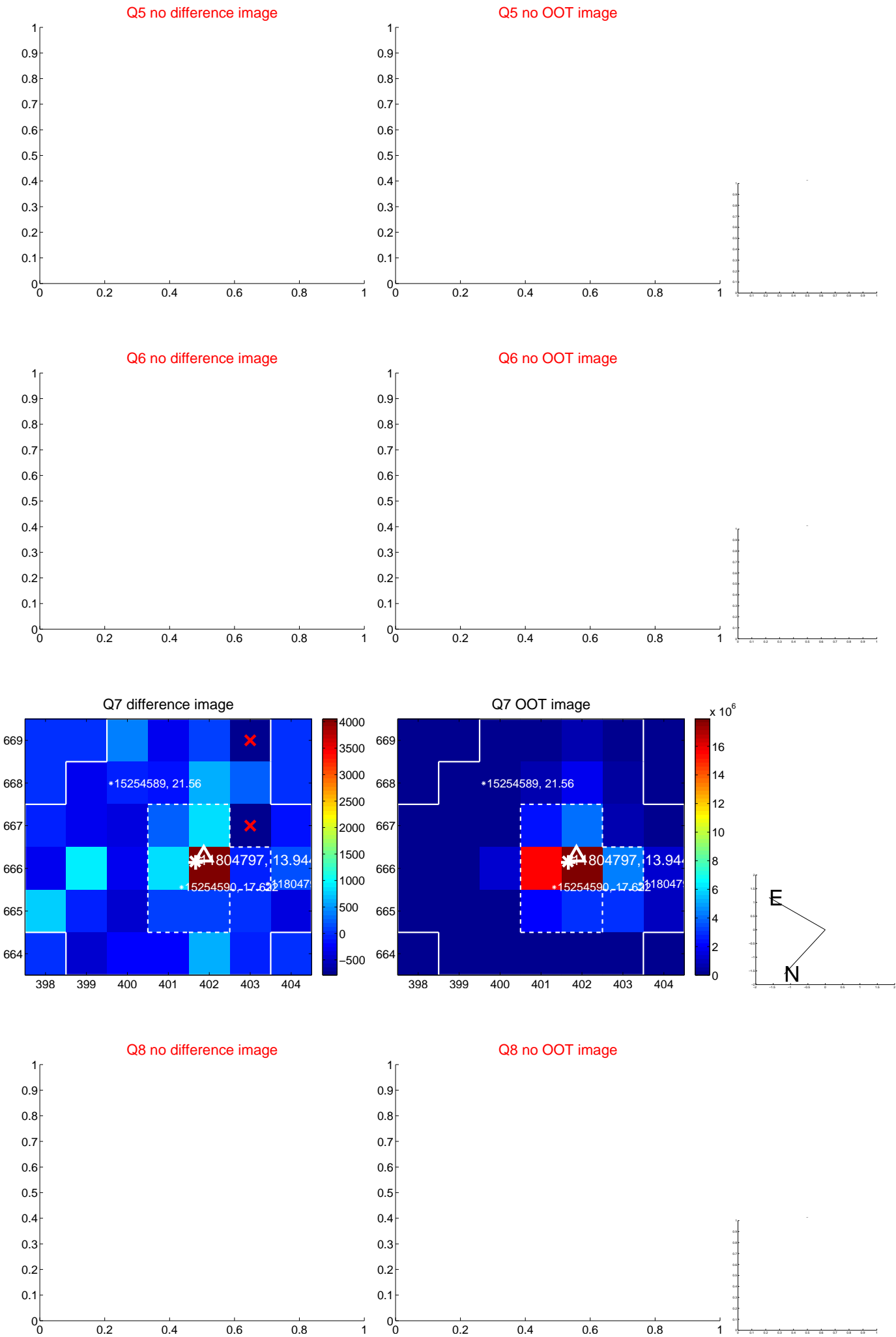
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



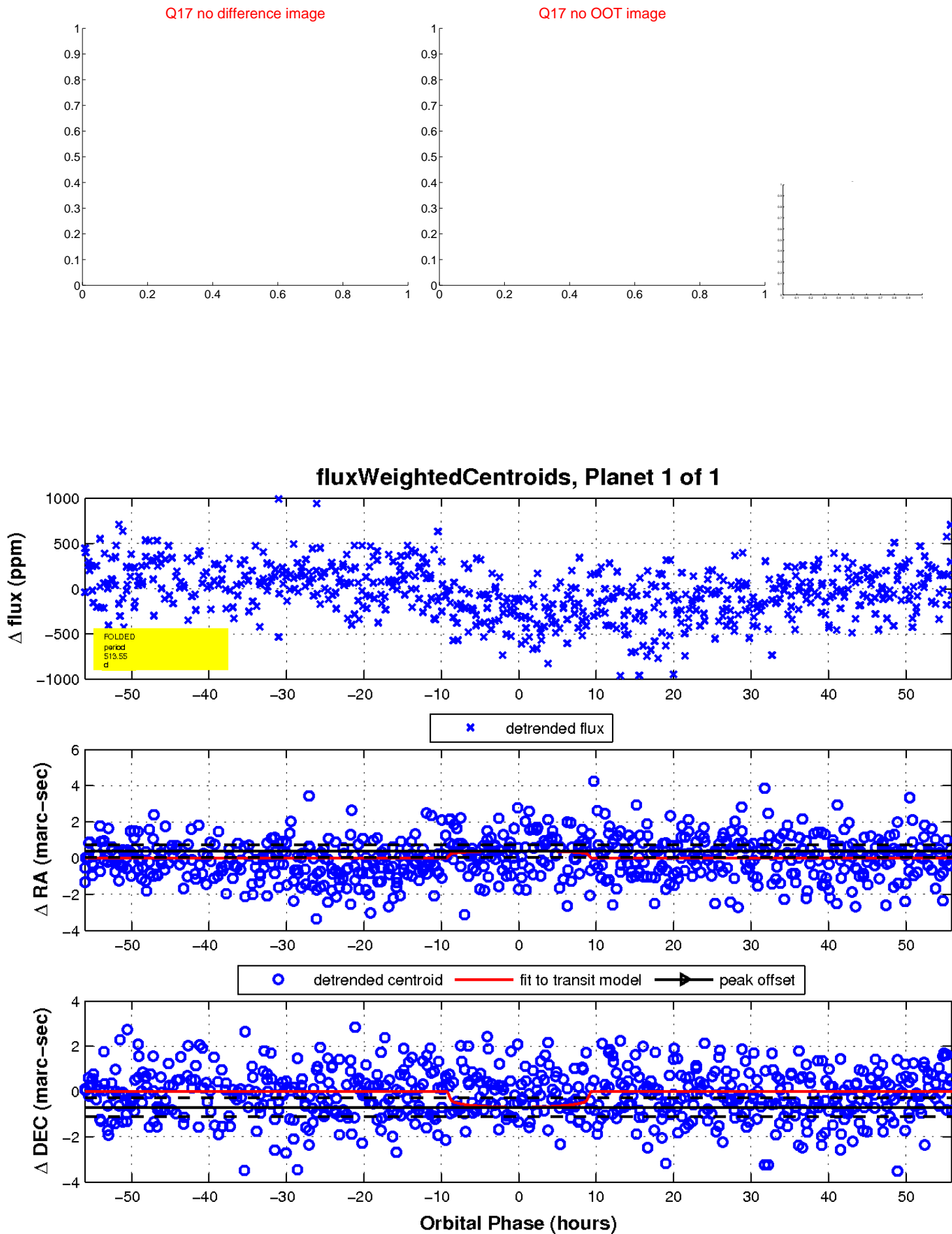
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

