

# KIC 006936106

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006936106-01	OBS	No	0.527562	131.733507	8.5	2.115	7.5	2.9	0.89	5761	0.31	5090.54

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006936106-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

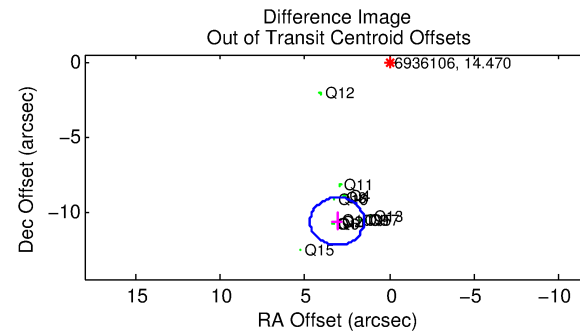
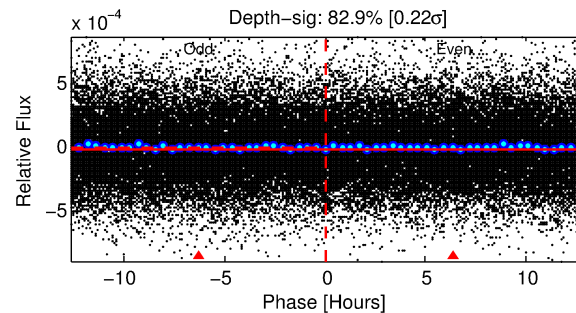
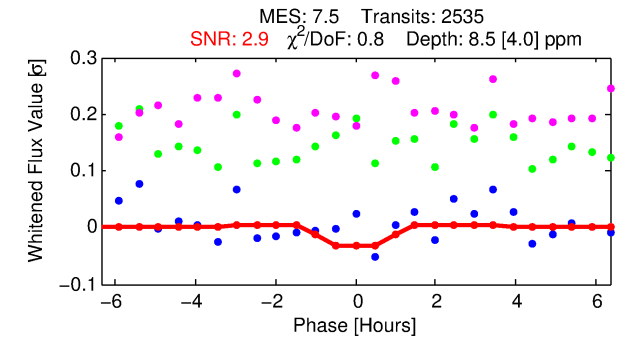
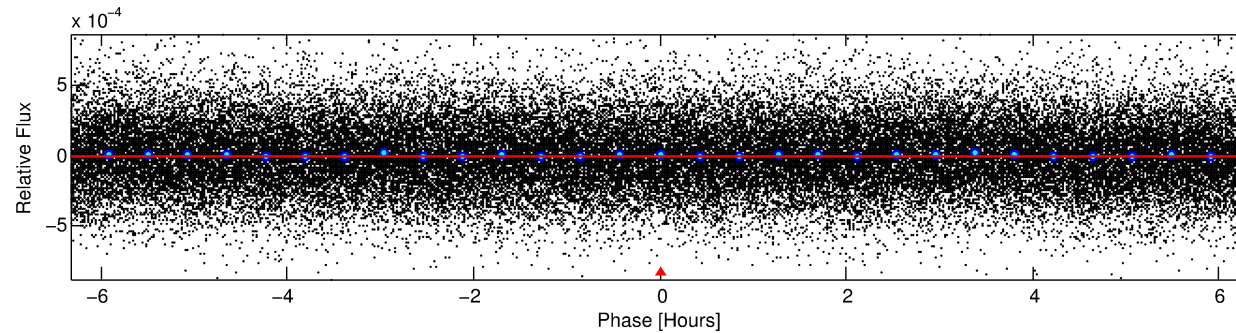
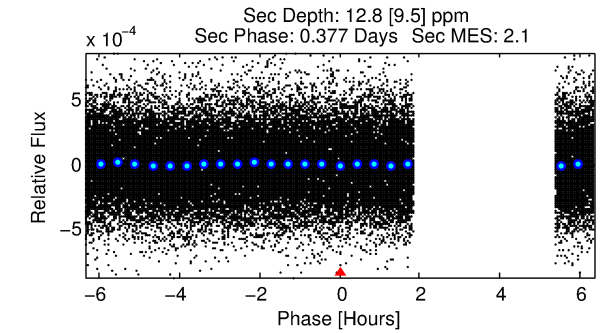
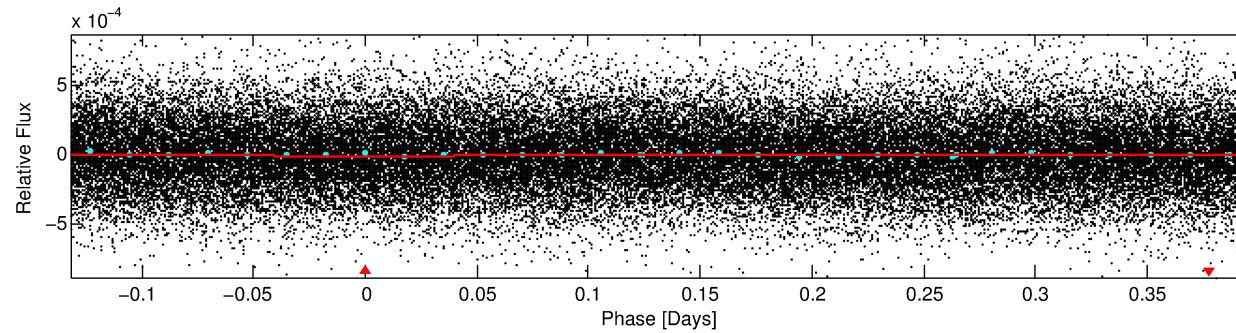
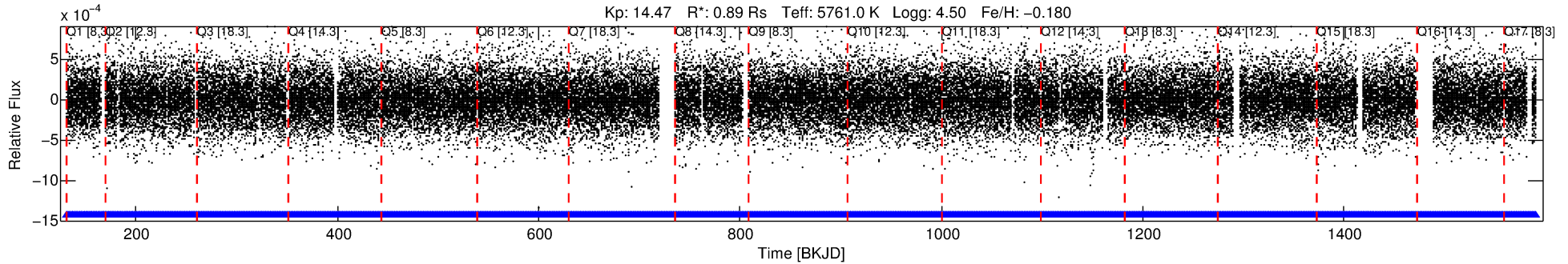
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006936106-01

No Significant Match Found

# DV One-Page Summary

KIC: 6936106 Candidate: 1 of 1 Period: 0.528 d



## DV Fit Results:

Period = 0.52756 [0.00004] d  
Epoch = 131.7335 [0.0092] BKJD  
Rp/R\* = 0.0032 [0.0024]  
a/R\* = 1.25 [1.58]  
b = 0.91 [0.71]  
Seff = 5090.54 [1825.33]  
Teq = 2154 [193] K  
Rp = 0.31 [0.25] Re  
a = 0.0124 [0.0029] AU  
Ag = 11.19 [19.19] [0.53σ]  
Teff = 6091 [2563] K [1.53σ]

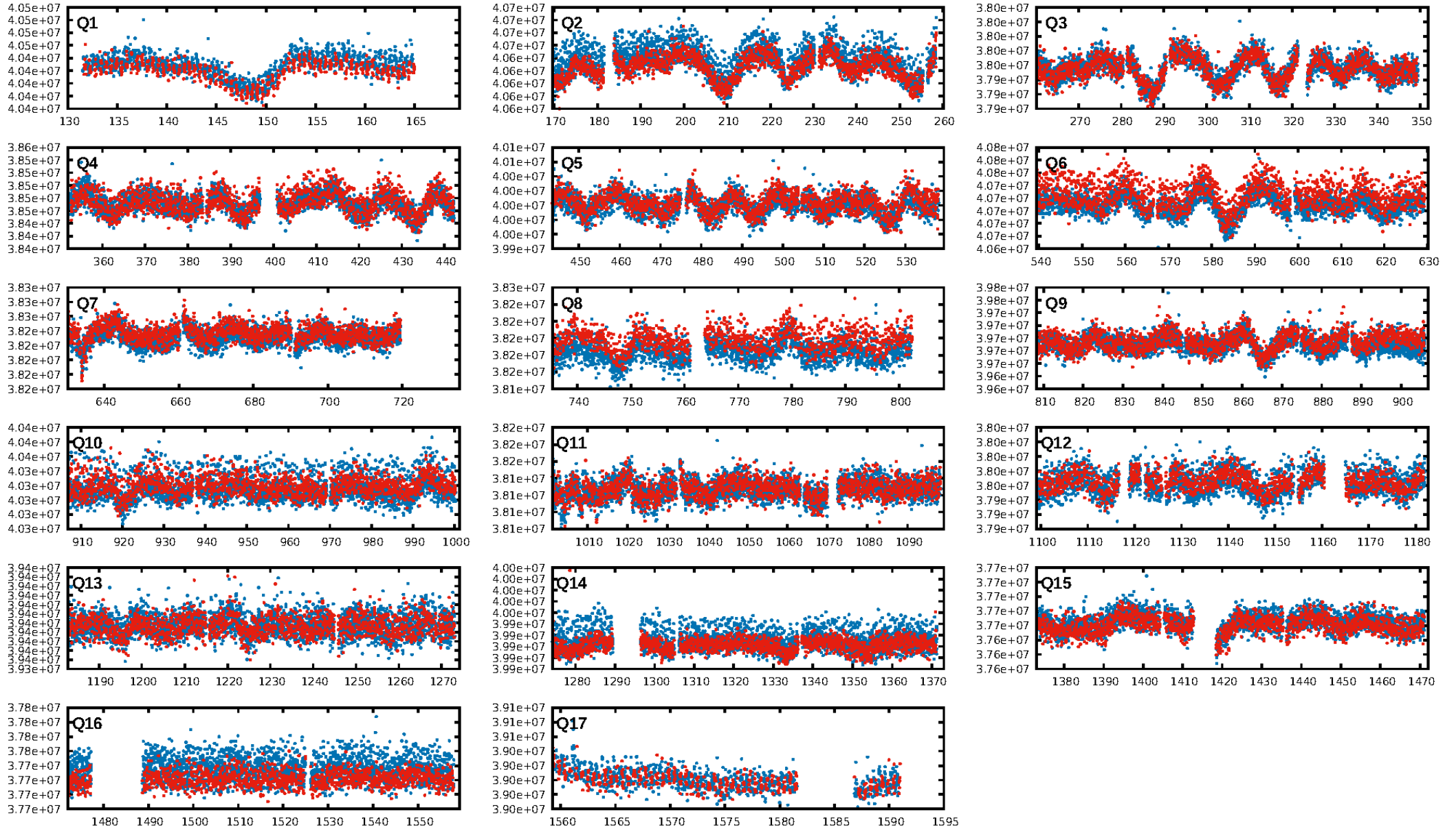
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.13e-13  
RollingBand-fgt: 1.00 [2421/2421]  
GhostDiagnostic-chr: -0.3251  
Centroid-sig: N/A  
Centroid-so: 30.559 arcsec [6.46σ]  
OotOffset-rm: 11.091 arcsec [20.90σ]  
KicOffset-rm: 11.159 arcsec [21.63σ]  
OotOffset-st: 4/2/4/5 [15]  
KicOffset-st: 4/2/4/5 [15]  
DiffImageQuality-fgm: 0.53 [8/15]  
DiffImageOverlap-fno: 1.00 [17/17]

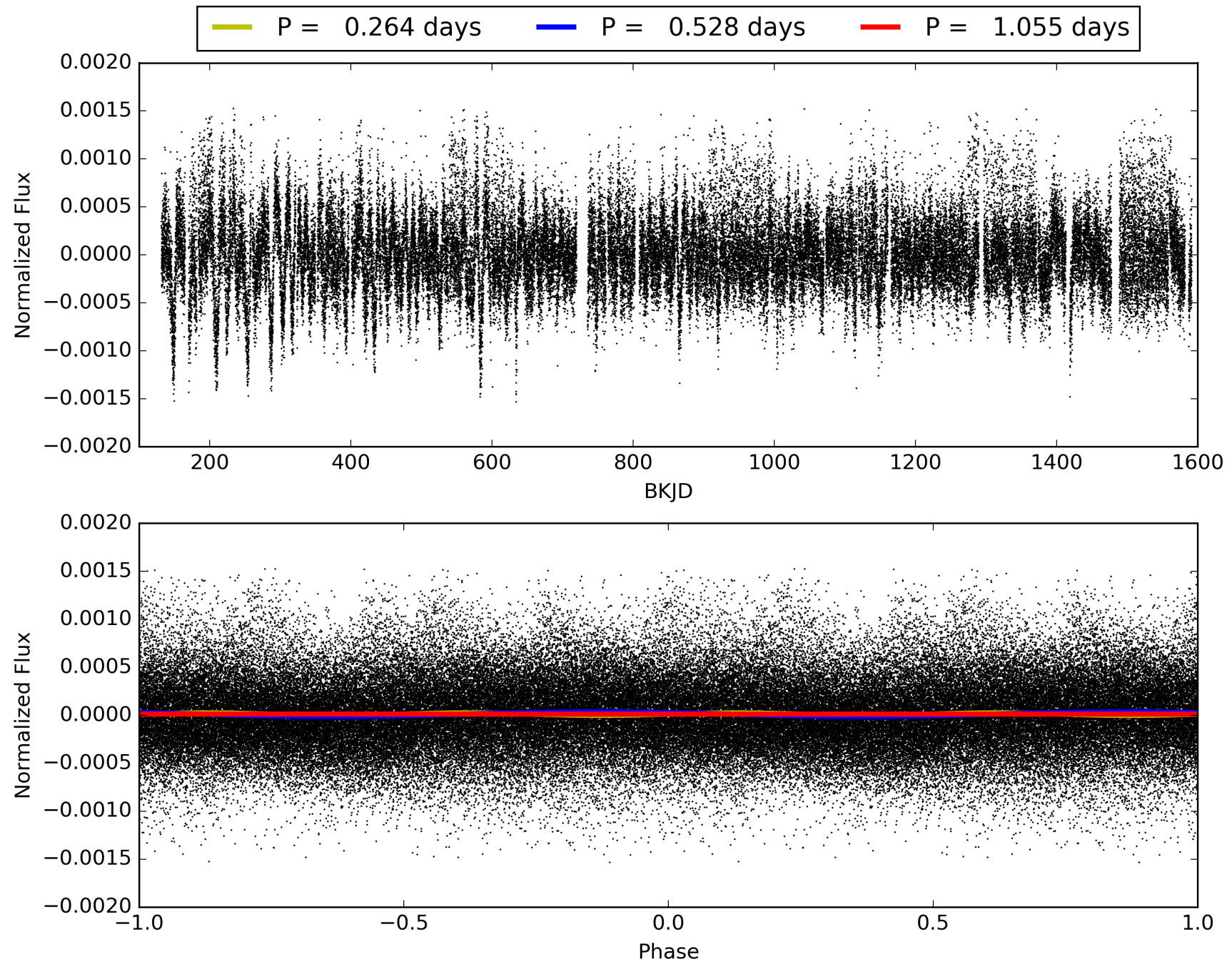
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:44:31 Z

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

# TCE 006936106-01, PDC Light Curves



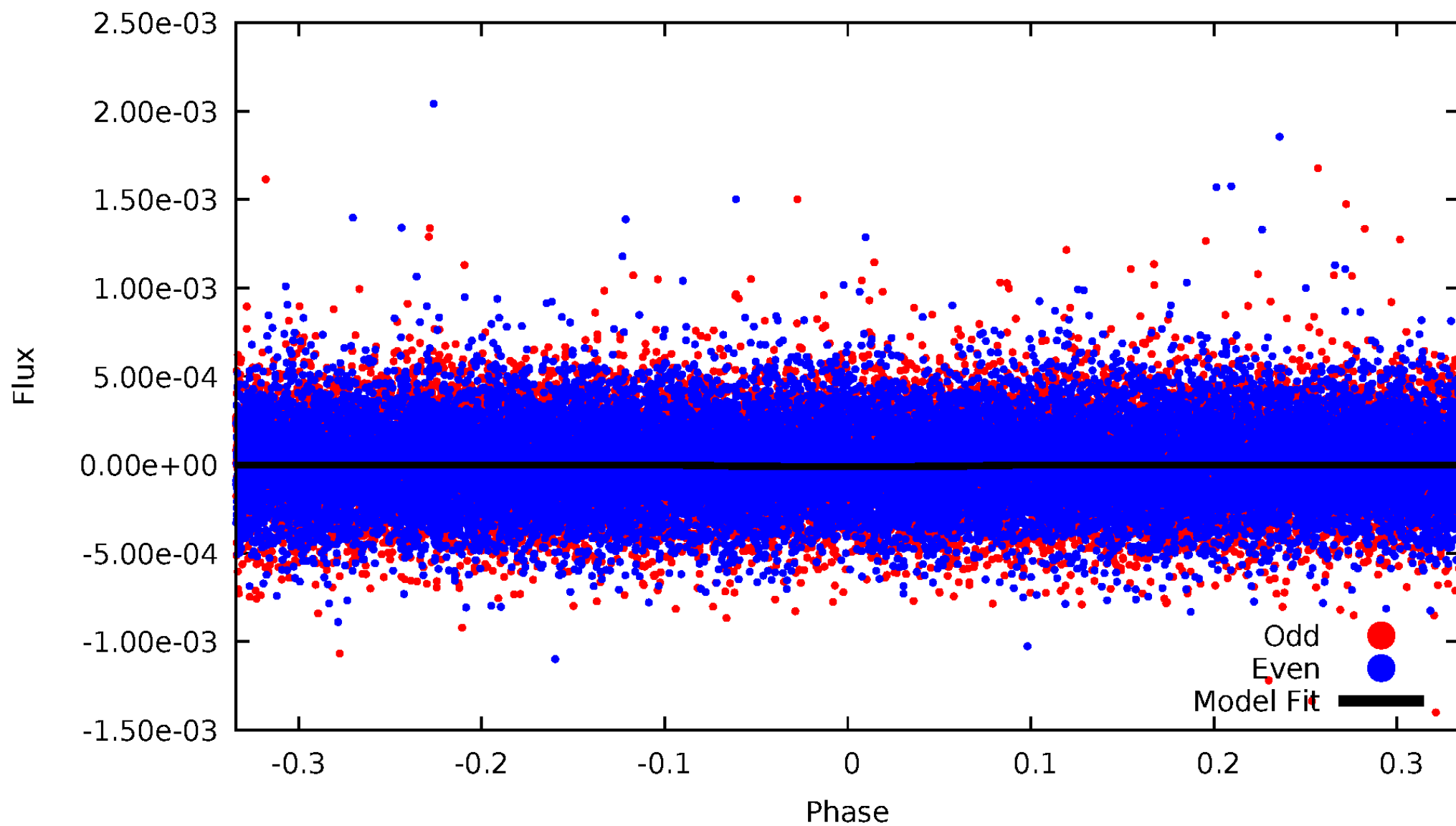
TCE 006936106-01





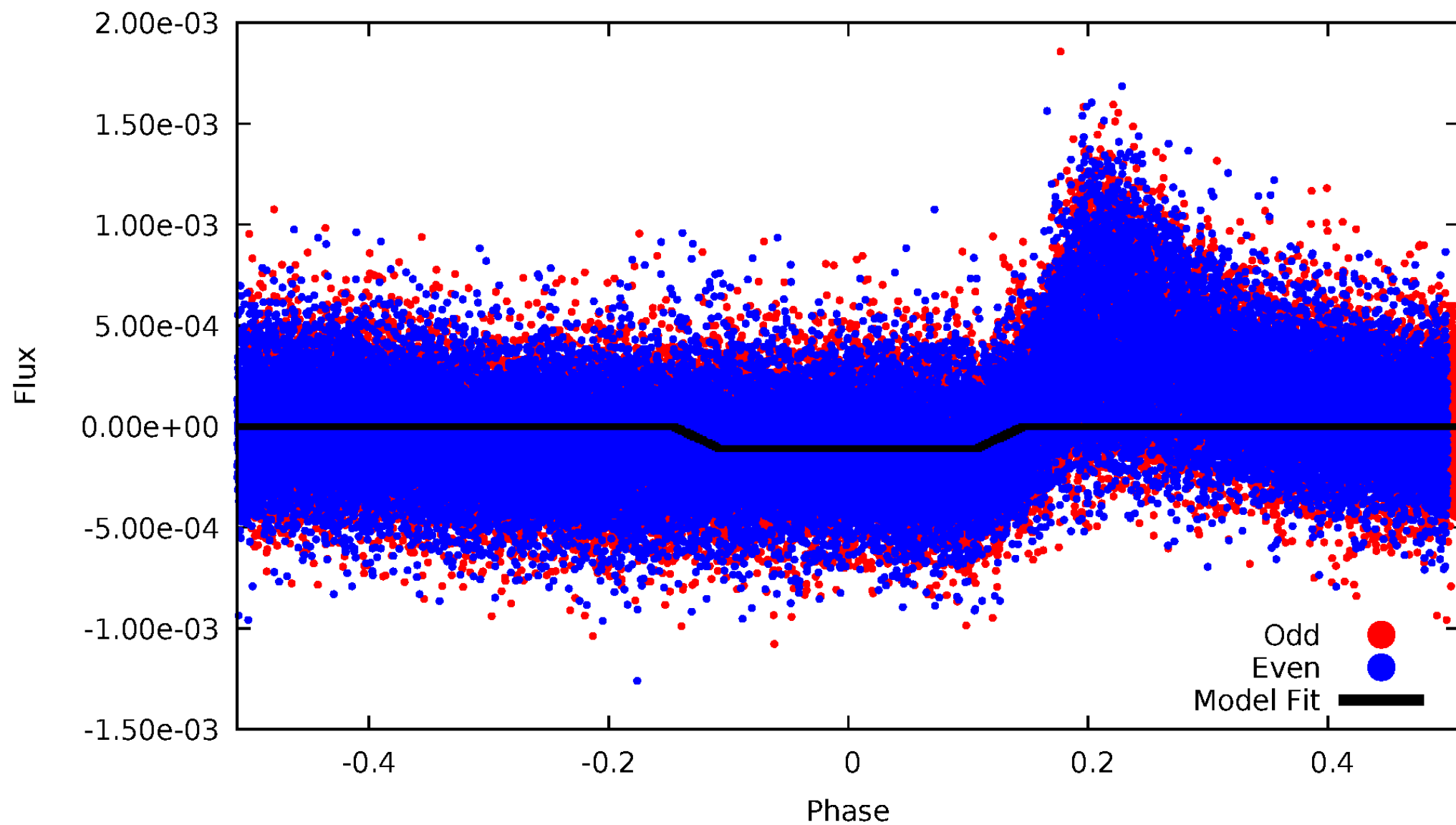
# DV Odd/Even

TCE 006936106-01



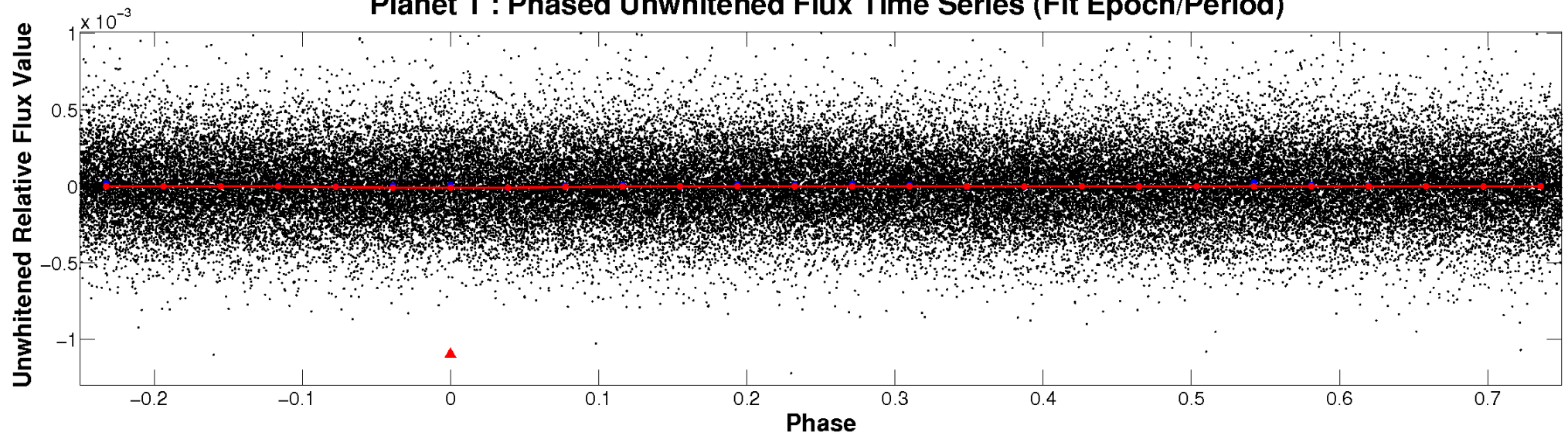
# ALT Odd/Even

TCE 006936106-01

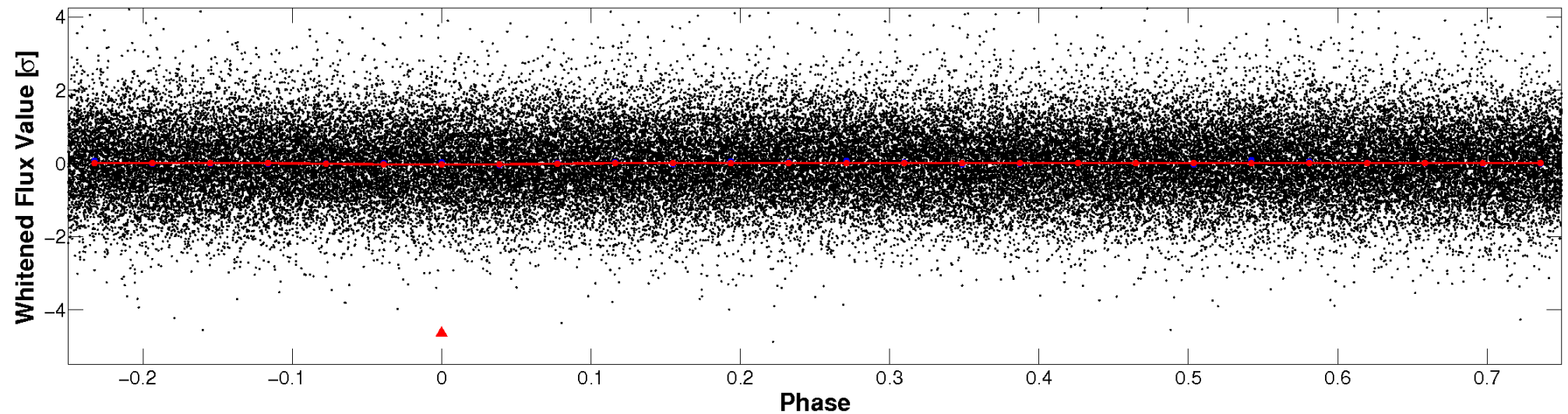


# Non-Whitened Vs. Whitened Light Curve

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

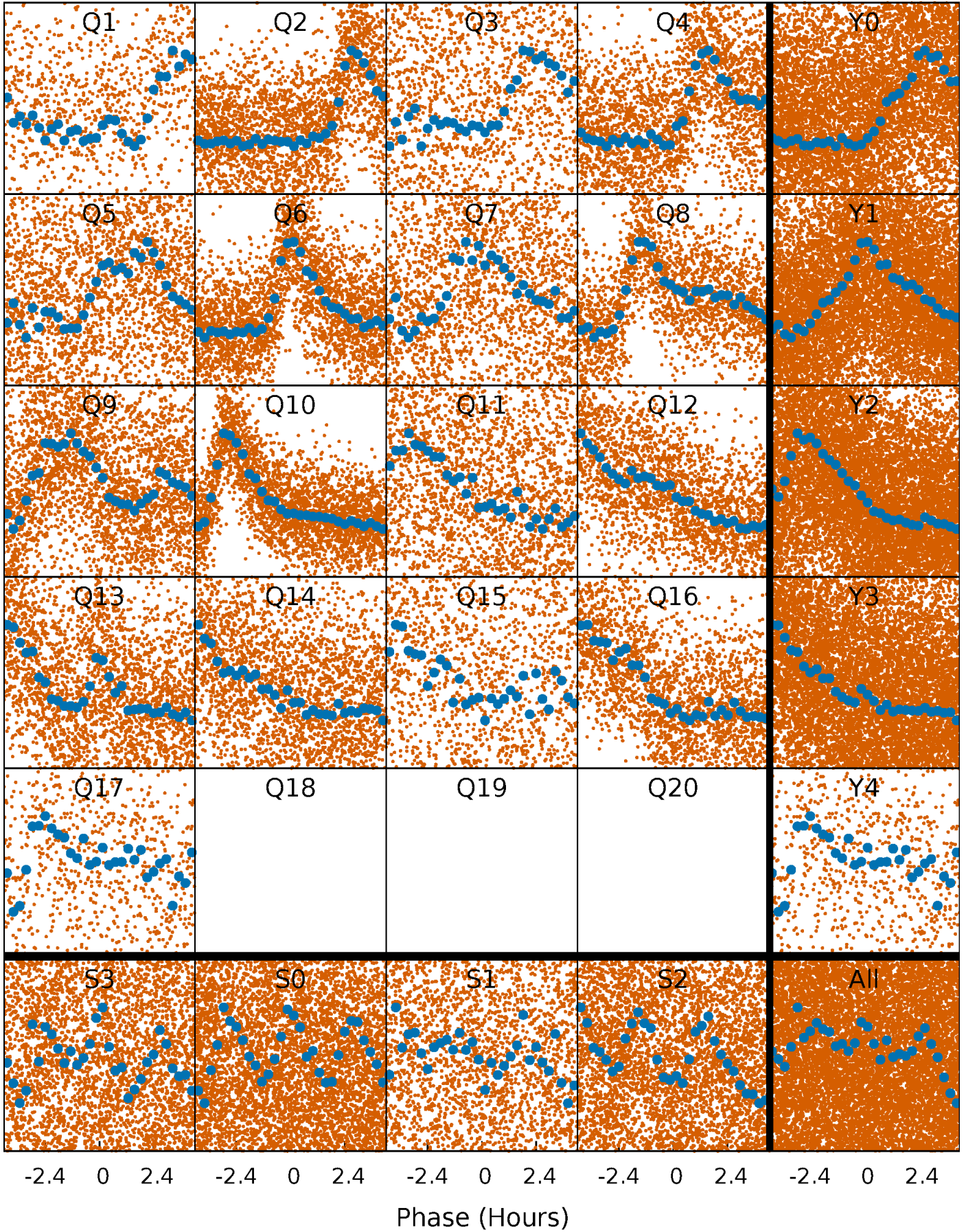


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

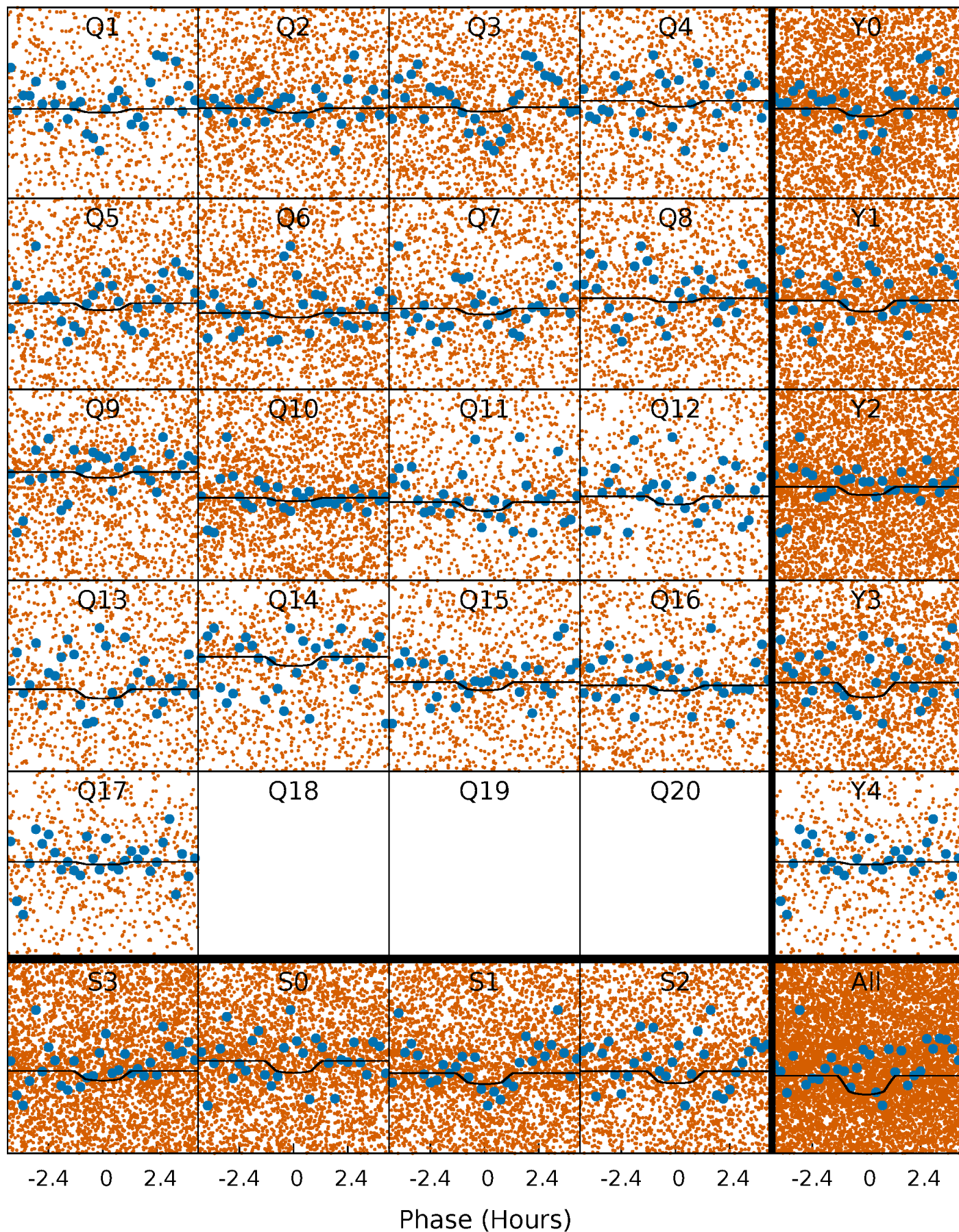
TCE 006936106-01 P= 0.527562 Days  $T_0=131.733507$  (BKJD)





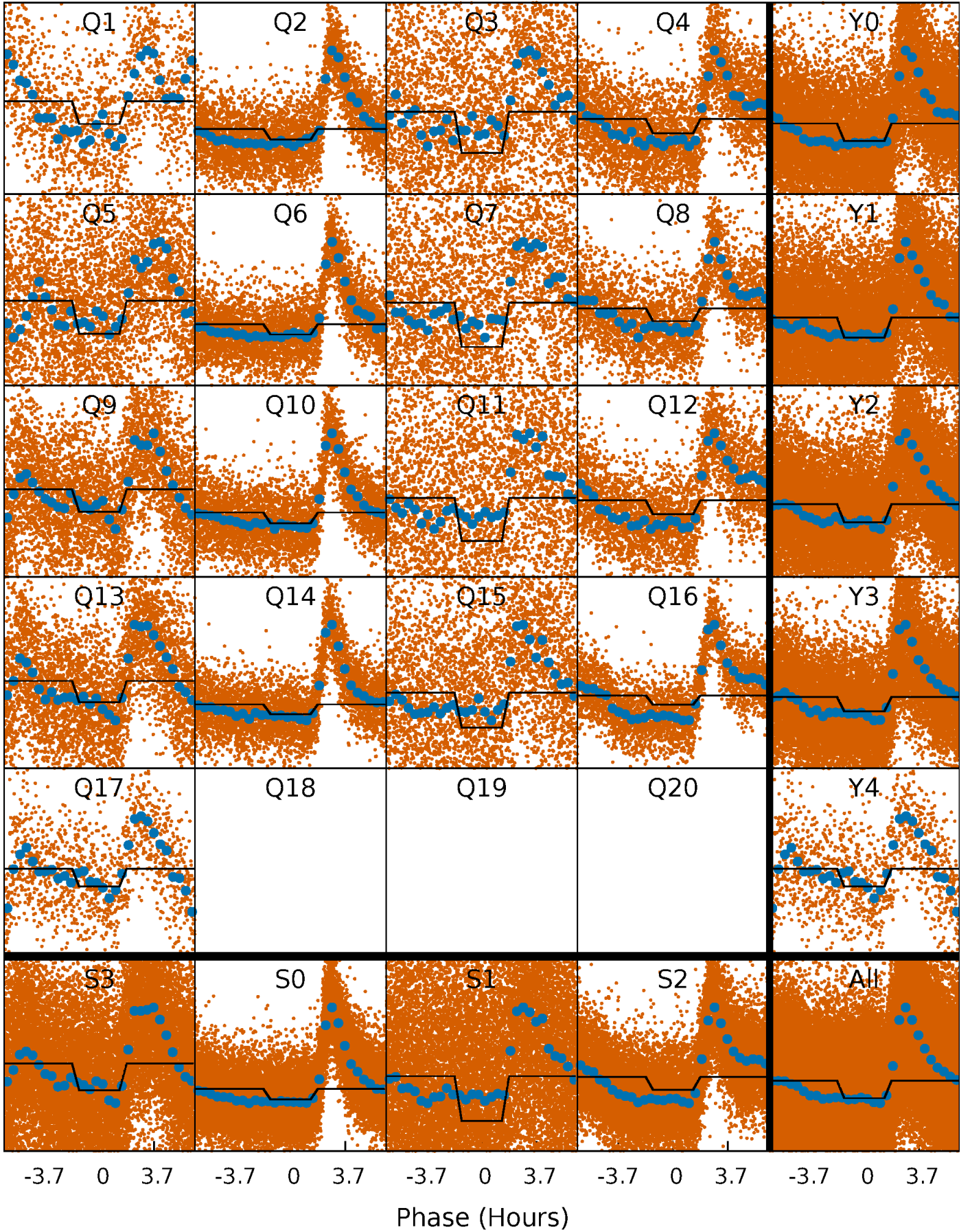
# DV Quarter-Phased Transit Curves

TCE 006936106-01 P= 0.527562 Days  $T_0=131.733507$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006936106-01 P= 0.527403 Days  $T_0=131.754121$  (BKJD)

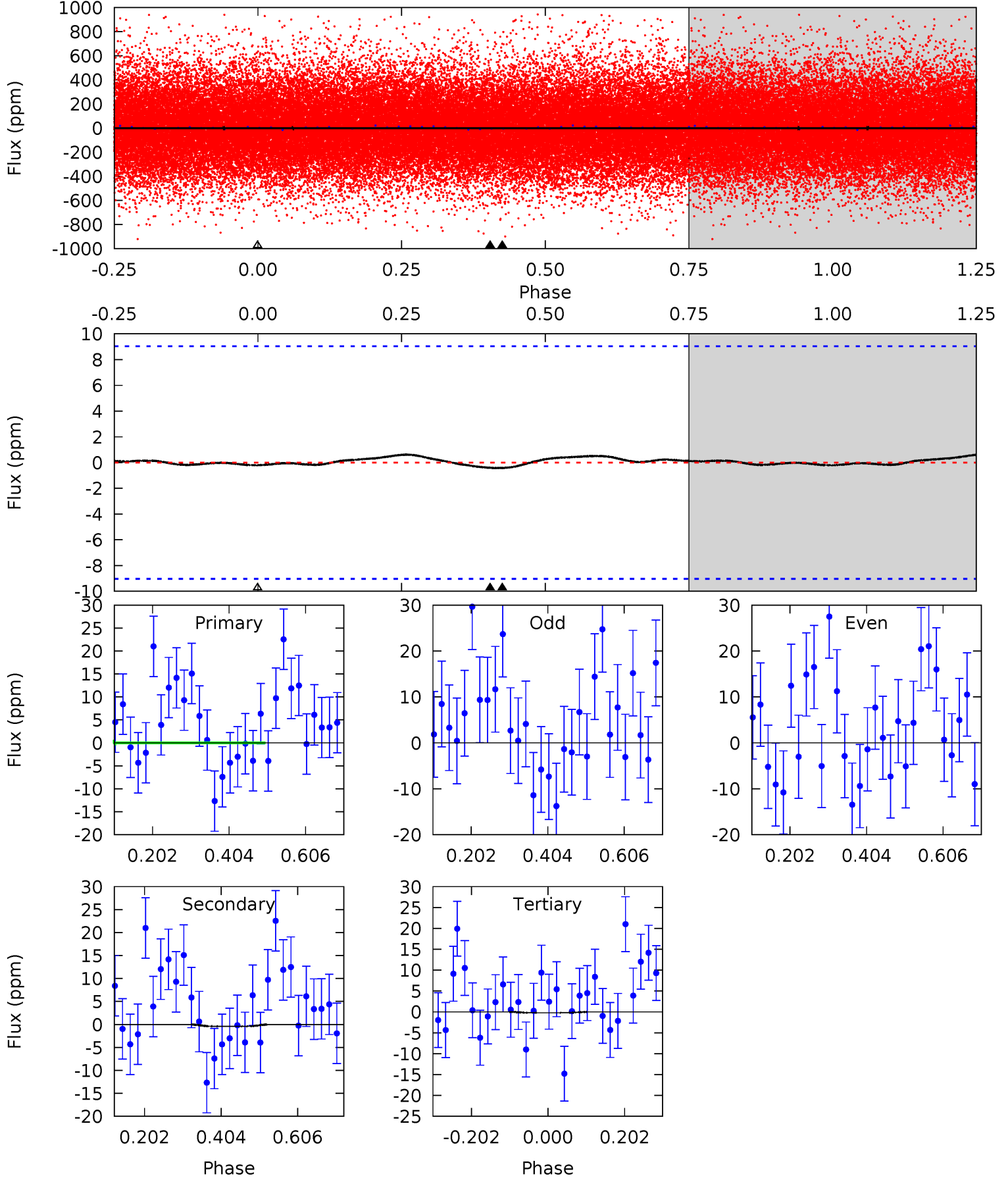




# DV Model-Shift Uniqueness Test

006936106-01, P = 0.527562 Days, E = 131.205945 Days

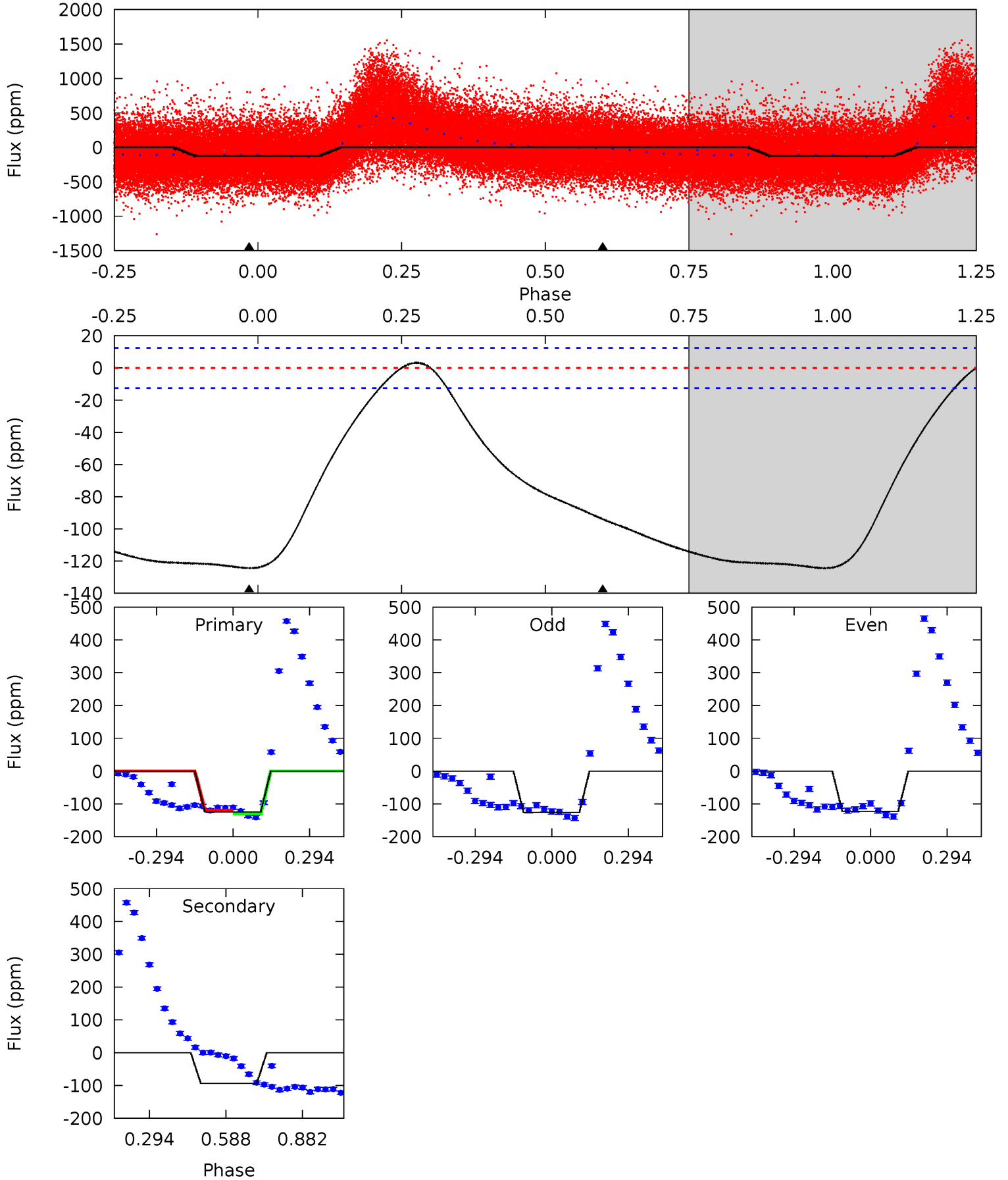
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.20	0.21	0.10	0	4.41	1.28	0.07	0.10	0.20	0.11	0.21	0.35	0.78	0.59	0.33



# Alt Model-Shift Uniqueness Test

006936106-01, P = 0.527403 Days, E = 131.226718 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
43.1	32.5	0	0	4.33	1.05	2.30	43.1	43.1	32.5	32.5	0.56	1.00	0.03	2.08





### Stellar Parameters For KIC 006936106

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5761^{+143}_{-158}$	$4.500^{+0.062}_{-0.188}$	$-0.180^{+0.300}_{-0.300}$	$0.892^{+0.244}_{-0.105}$	$0.918^{+0.109}_{-0.098}$	$1.822^{+0.470}_{-0.906}$
	+2%/-3%	+1%/-4%	+167%/-167%	+27%/-12%	+12%/-11%	+26%/-50%
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 006936106-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-0 \pm 2$	$0.37^{+0.25}_{-0.21}$	$3051^{+205}_{-138}$	$-2405^{+6796}_{-1596}$	$0.265^{+2.510}_{-1.269}$
Alt.	$-94 \pm 3$	$1.03^{+0.29}_{-0.26}$	$3054^{+201}_{-137}$	$5569^{+855}_{-575}$	$7.479^{+5.588}_{-2.924}$

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

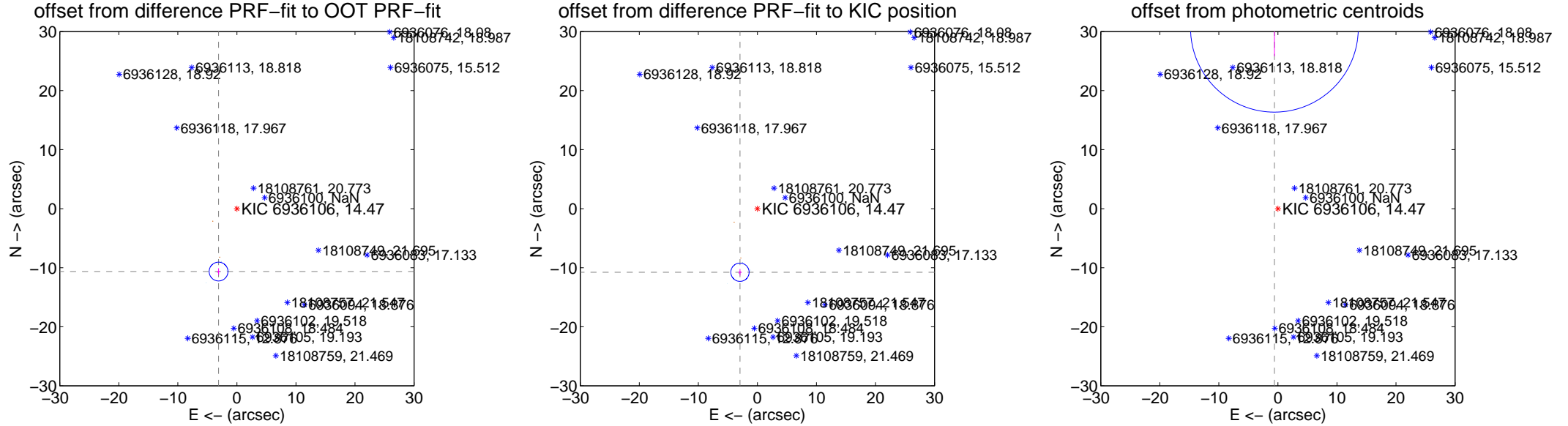
## DV Centroid Data

Supplemental centroid analysis for 006936106-01. Kepler magnitude: 14.47. Transit SNR 2.92

There are 8 quarters with good PRF difference image offsets

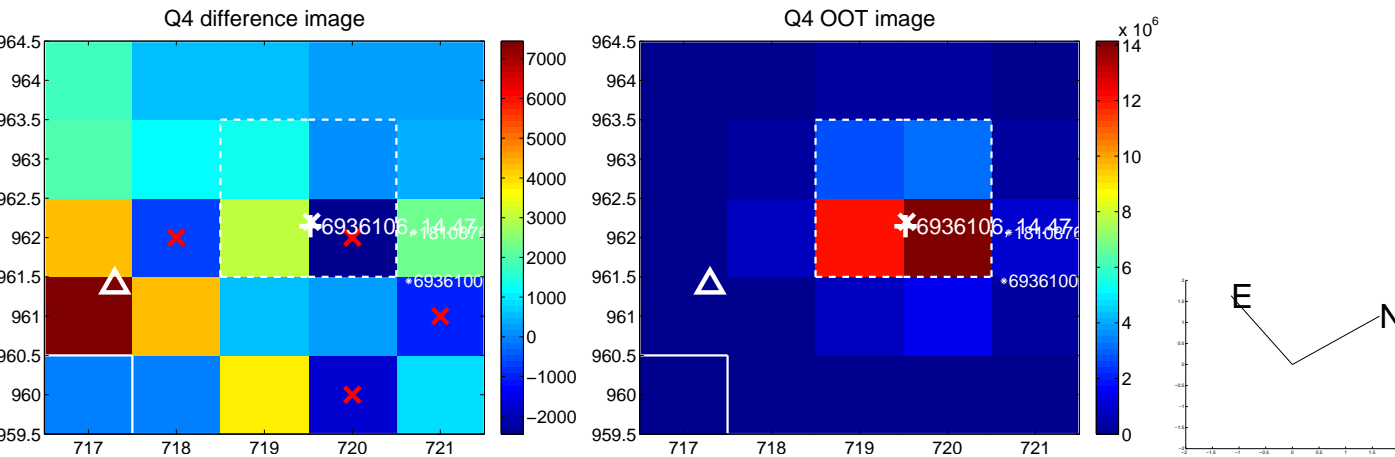
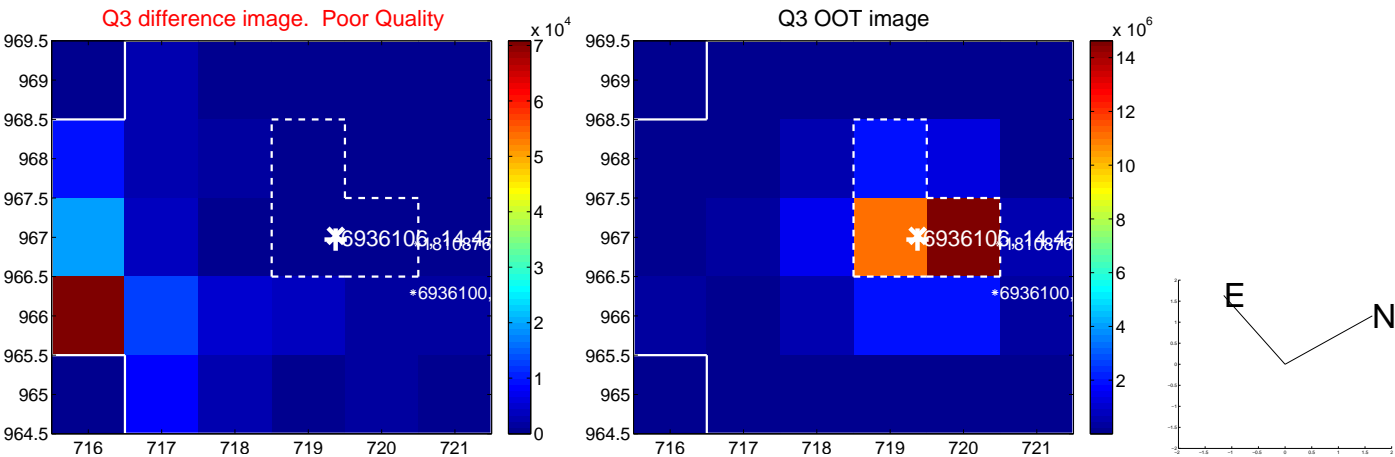
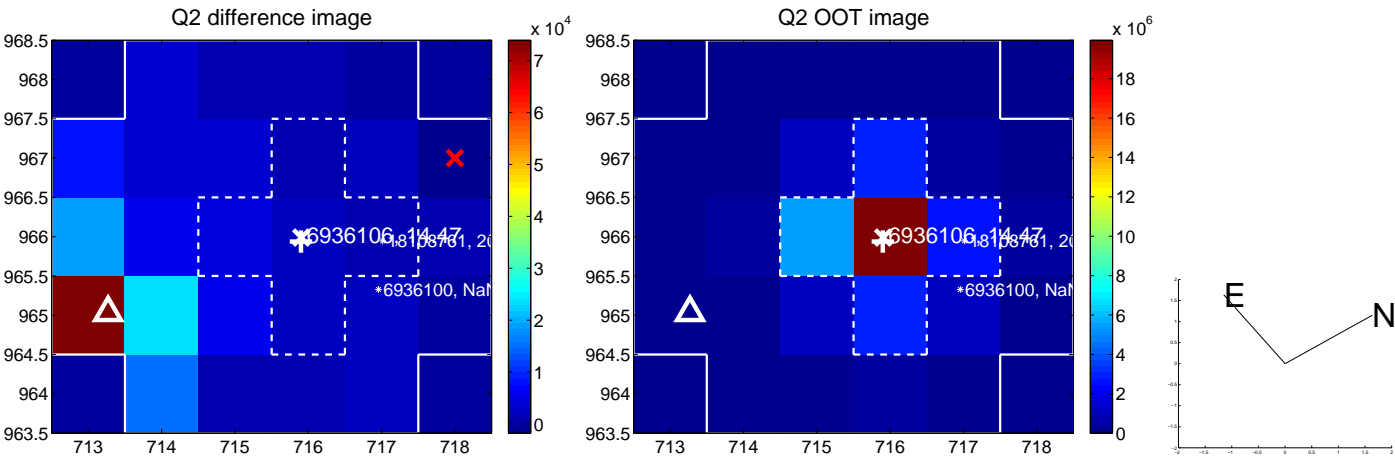
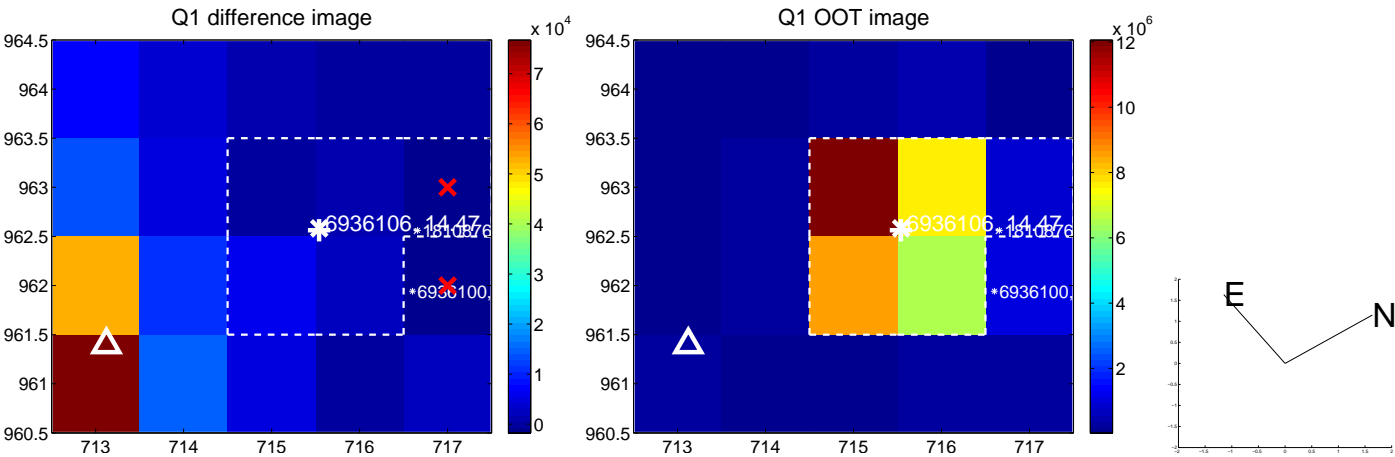
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>11.091 <math>\pm</math> 0.531</b>	<b>20.90</b>	$3.104 \pm 0.278$	$-10.648 \pm 0.560$
PRF-fit source offset from KIC position	<b>11.159 <math>\pm</math> 0.516</b>	<b>21.63</b>	$2.950 \pm 0.284$	$-10.762 \pm 0.541$
photometric centroid source offset	<b>30.56 <math>\pm</math> 4.73</b>	<b>6.46</b>	$0.59 \pm 4.02$	$30.55 \pm 4.73$

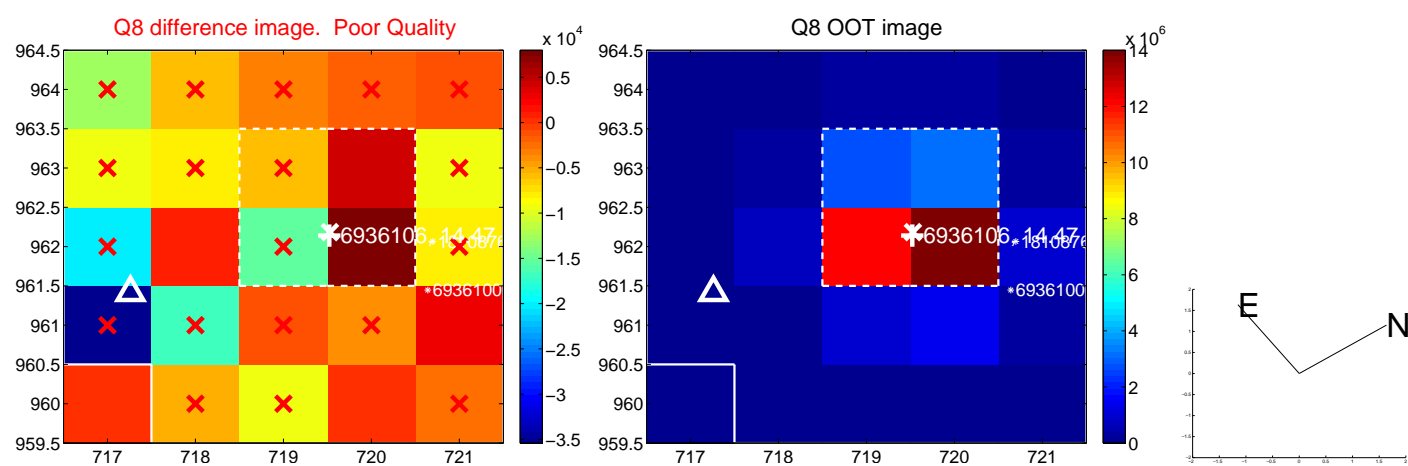
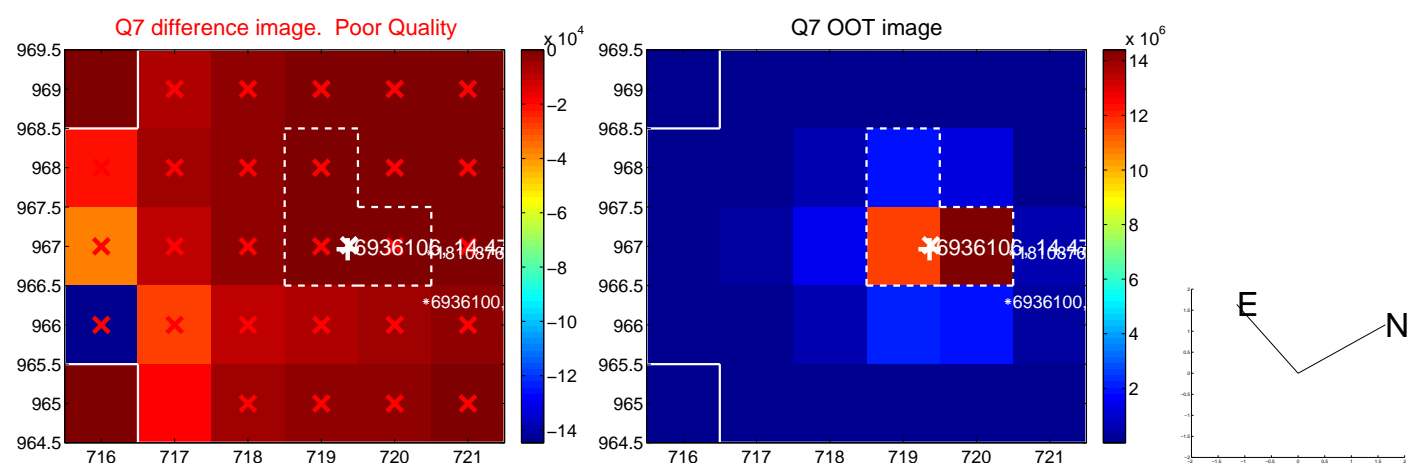
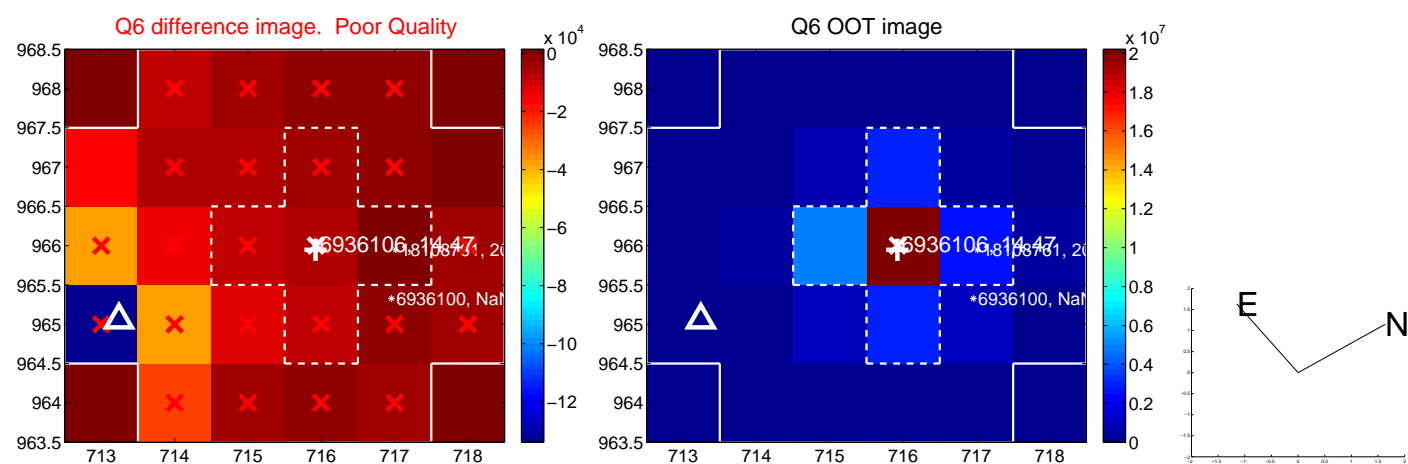
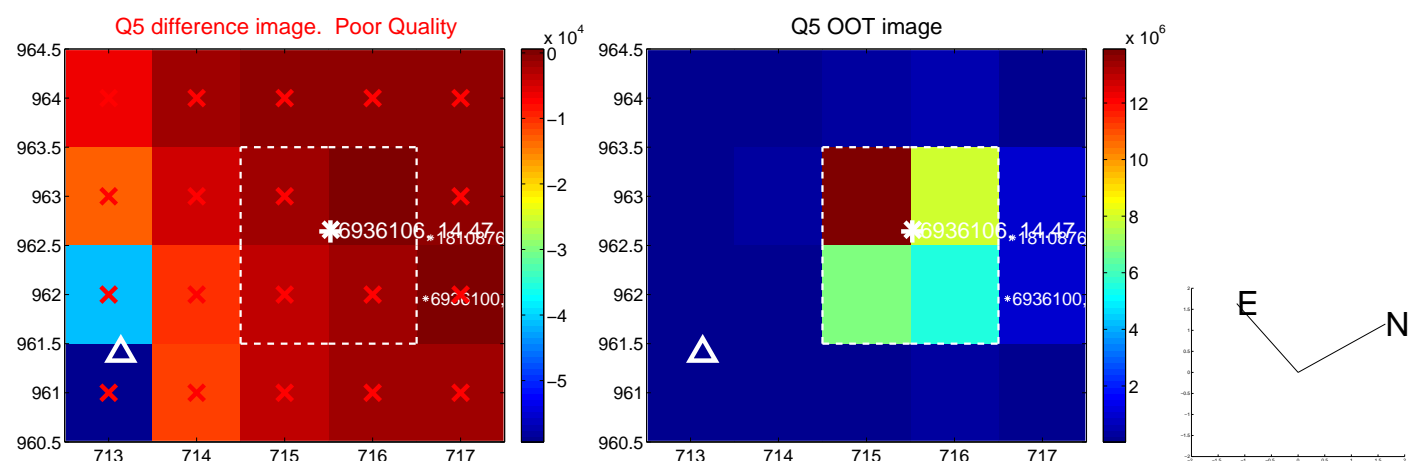


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

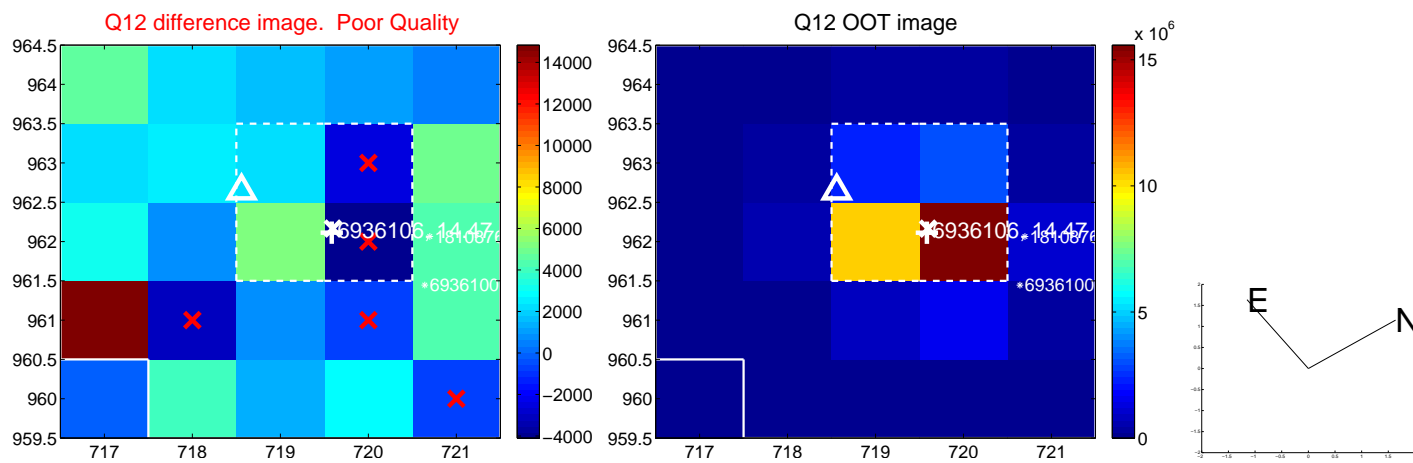
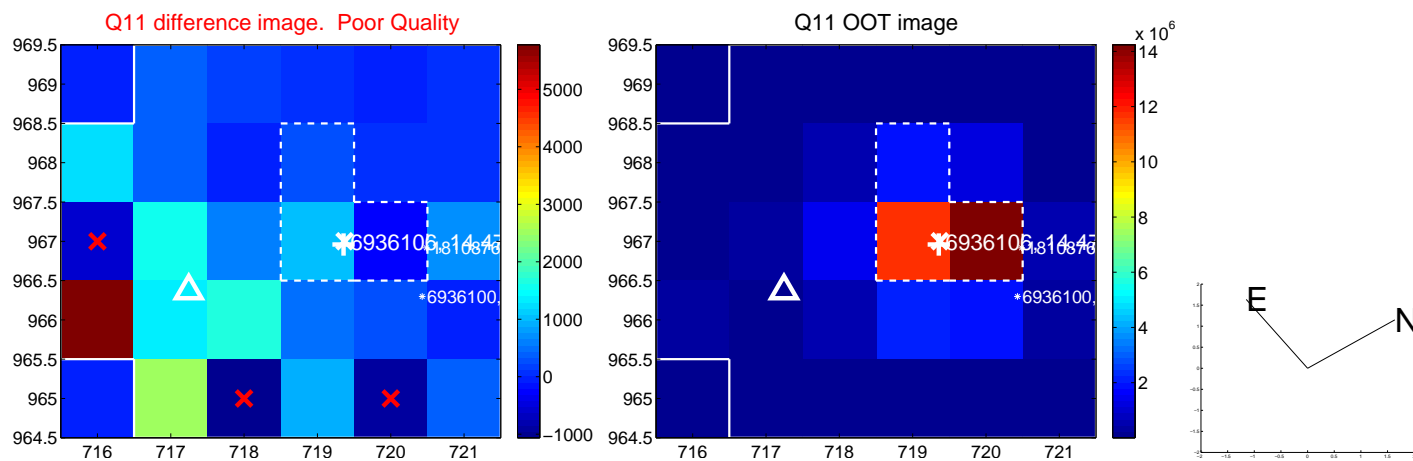
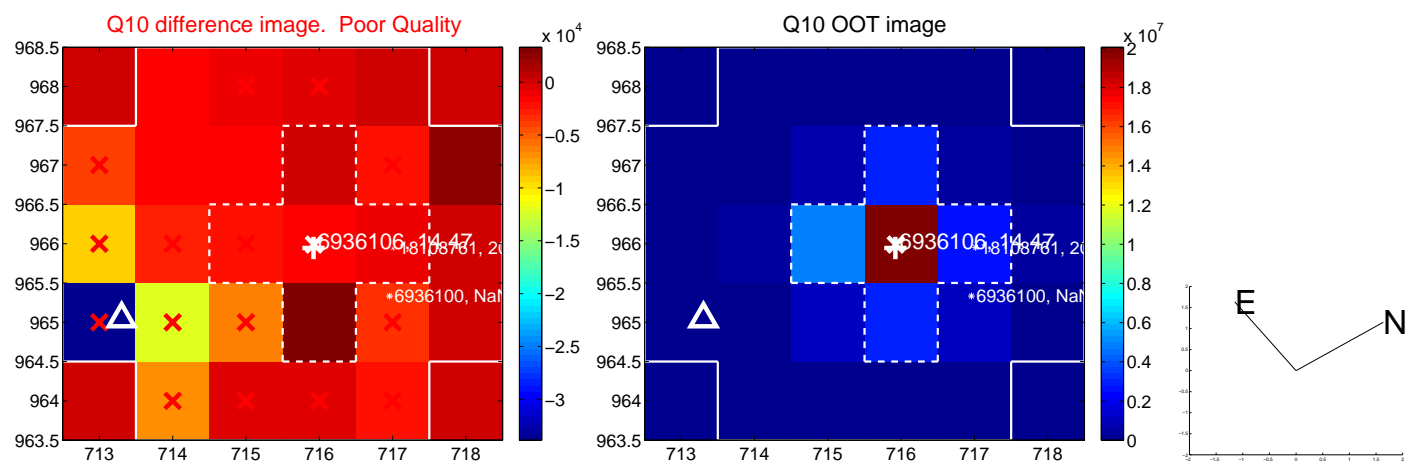
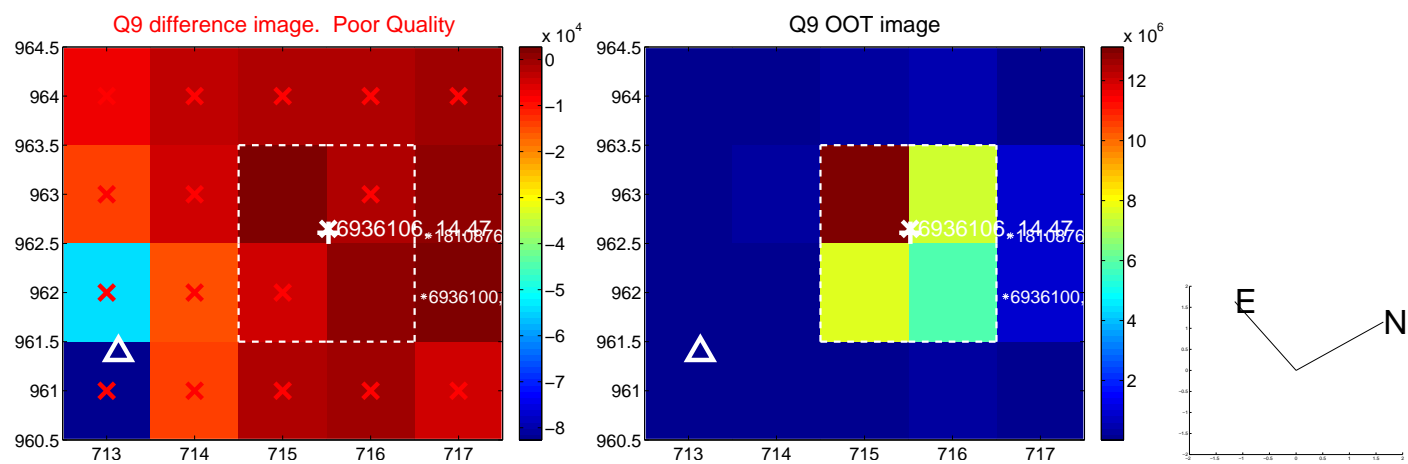


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



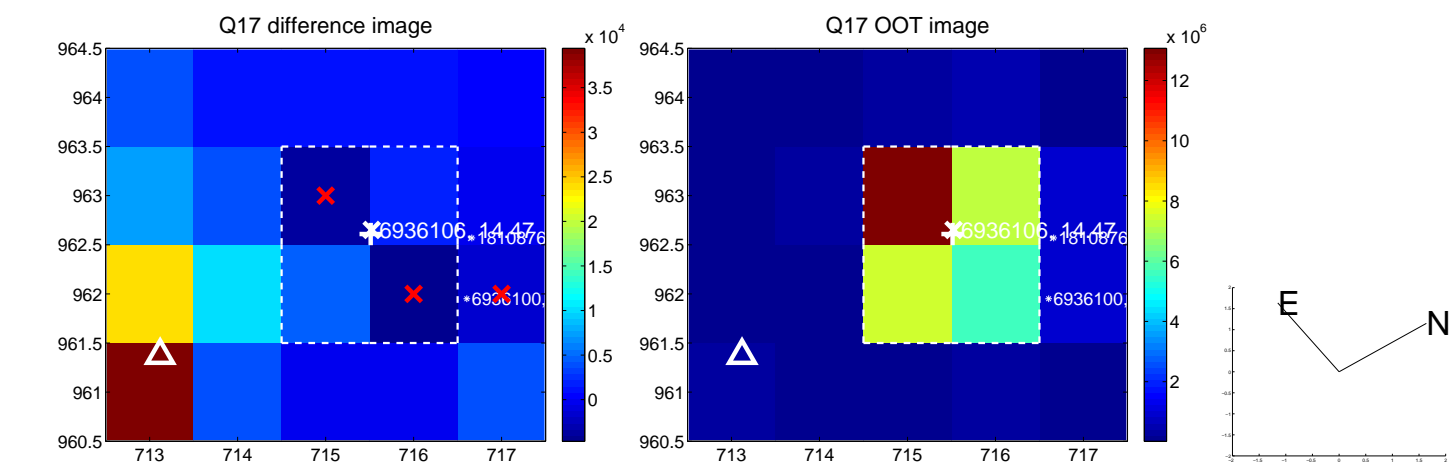


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

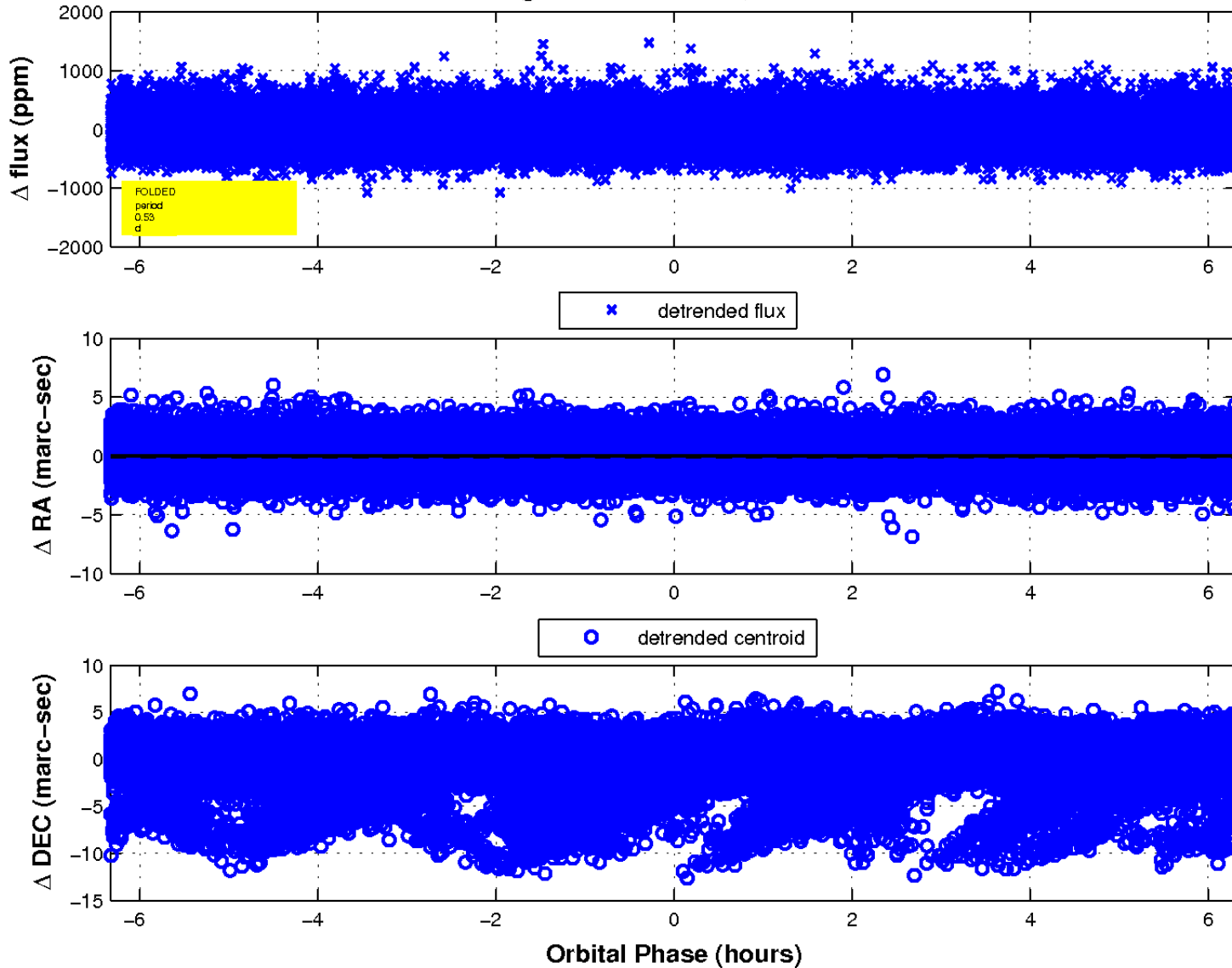




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

