

# KIC 011904719

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011904719-01	OBS	No	261.926963	210.396997	179.5	17.879	9.4	8.0	1.52	6313	2.18	4.76

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011904719-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—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.

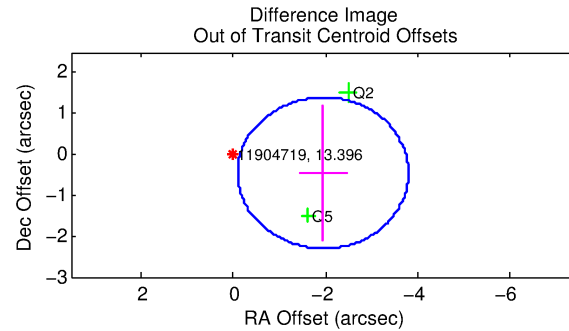
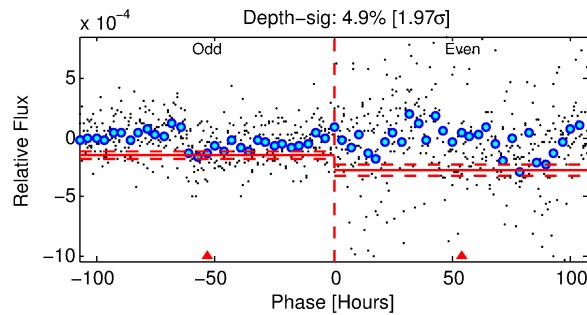
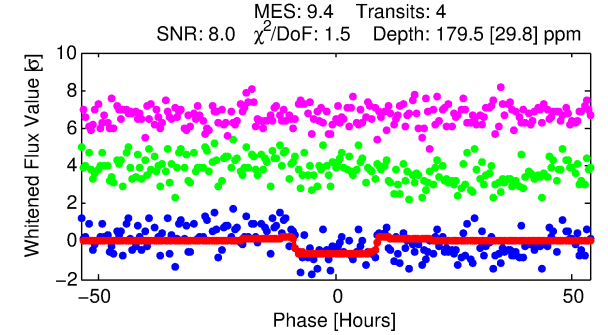
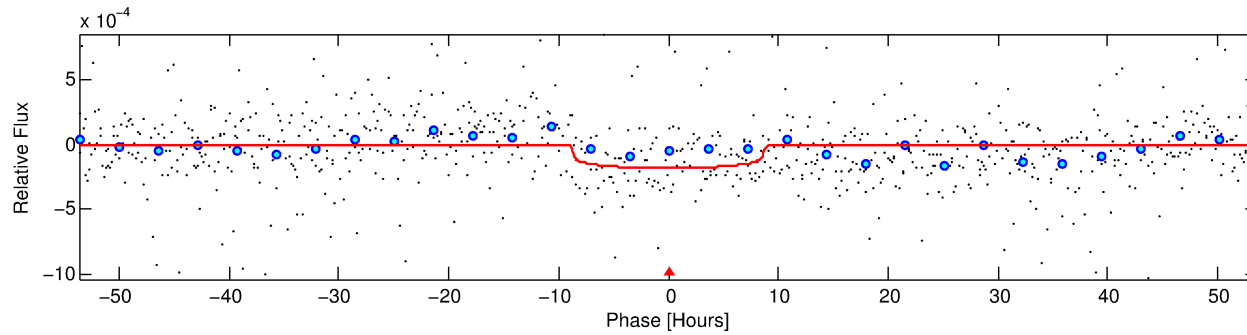
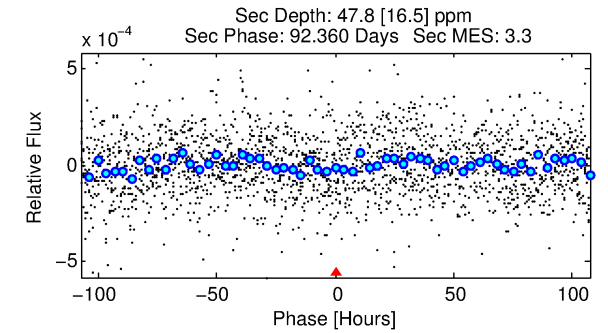
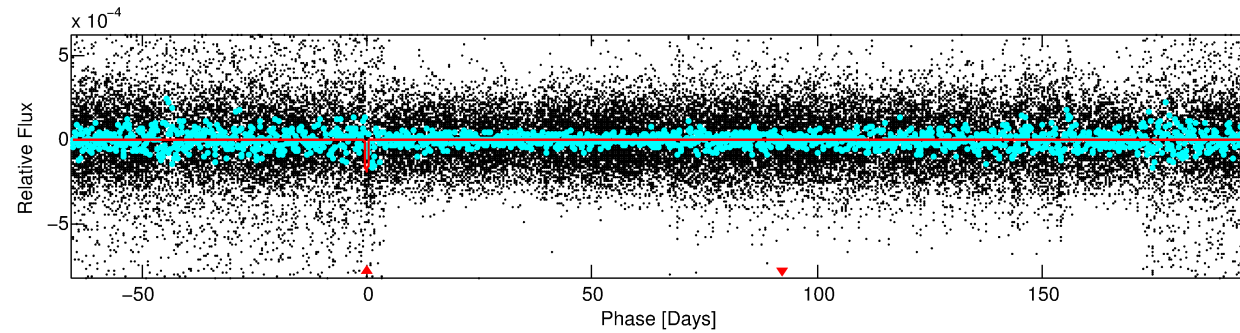
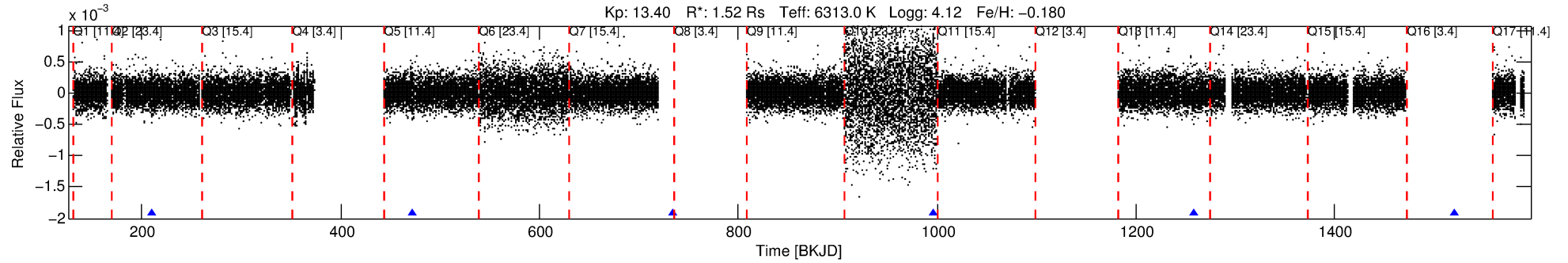
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011904719-01

No Significant Match Found

# DV One-Page Summary

KIC: 11904719 Candidate: 1 of 1 Period: 261.927 d



## DV Fit Results:

Period = 261.92696 [0.00917] d  
Epoch = 210.3970 [0.0216] BKJD  
Rp/R\* = 0.0131 [0.0055]  
a/R\* = 83.05 [179.95]  
b = 0.69 [1.65]  
Seff = 4.77 [2.24]  
Teff = 377 [44] K  
Rp = 2.18 [1.13] Re  
a = 0.8323 [0.2343] AU  
Ag = 3848.00 [3895.83] [0.99σ]  
Teffp = 4588 [1059] K [3.97σ]

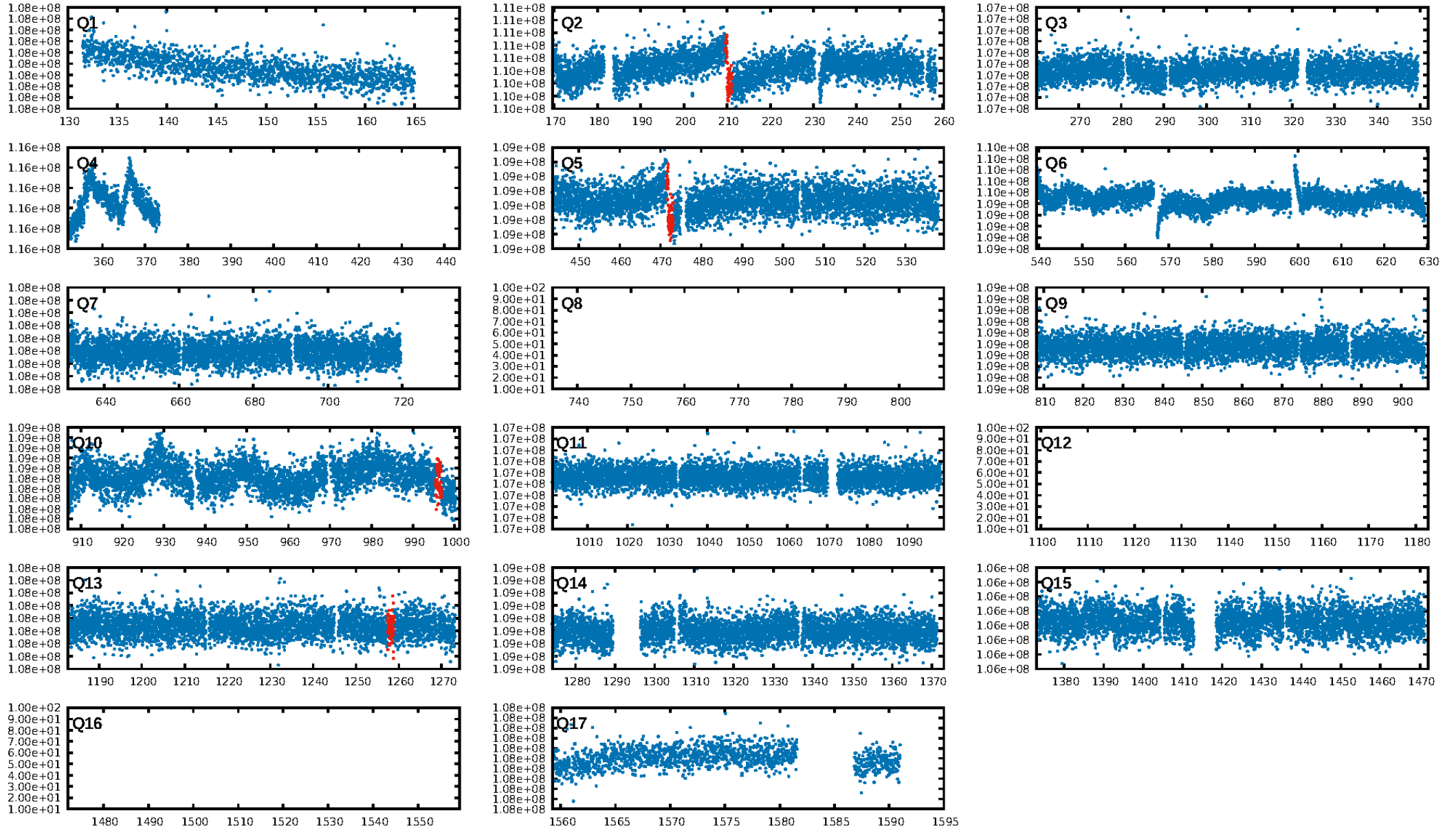
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 45.7%  
Bootstrap-pfa: 2.34e-17  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.56  
Centroid-sig: 1.9%  
Centroid-so: 2.254 arcsec [1.99σ]  
OotOffset-rm: 2.000 arcsec [3.25σ]  
KicOffset-rm: 1.959 arcsec [3.17σ]  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [4/4]

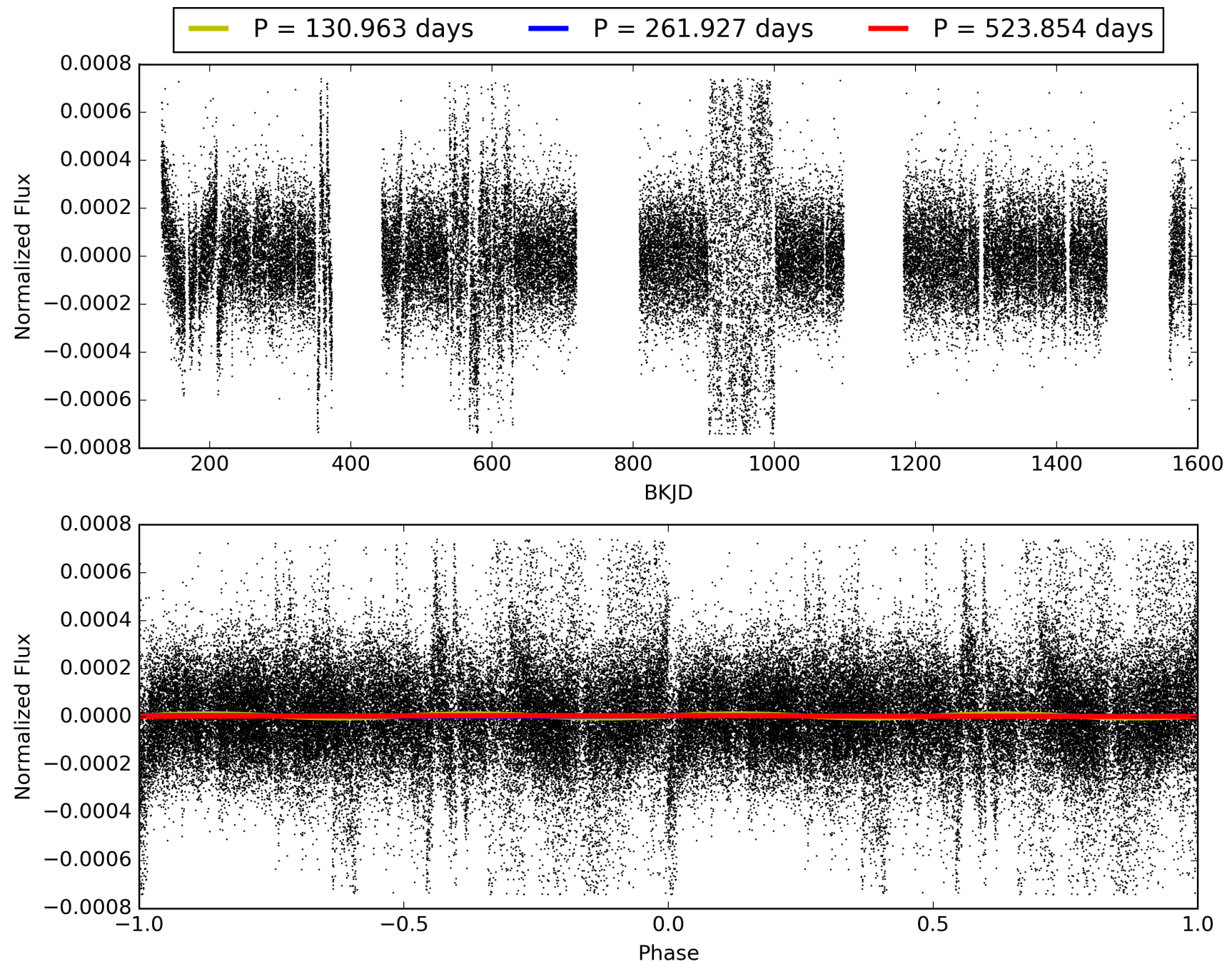
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:54:40 Z

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

# TCE 011904719-01, PDC Light Curves

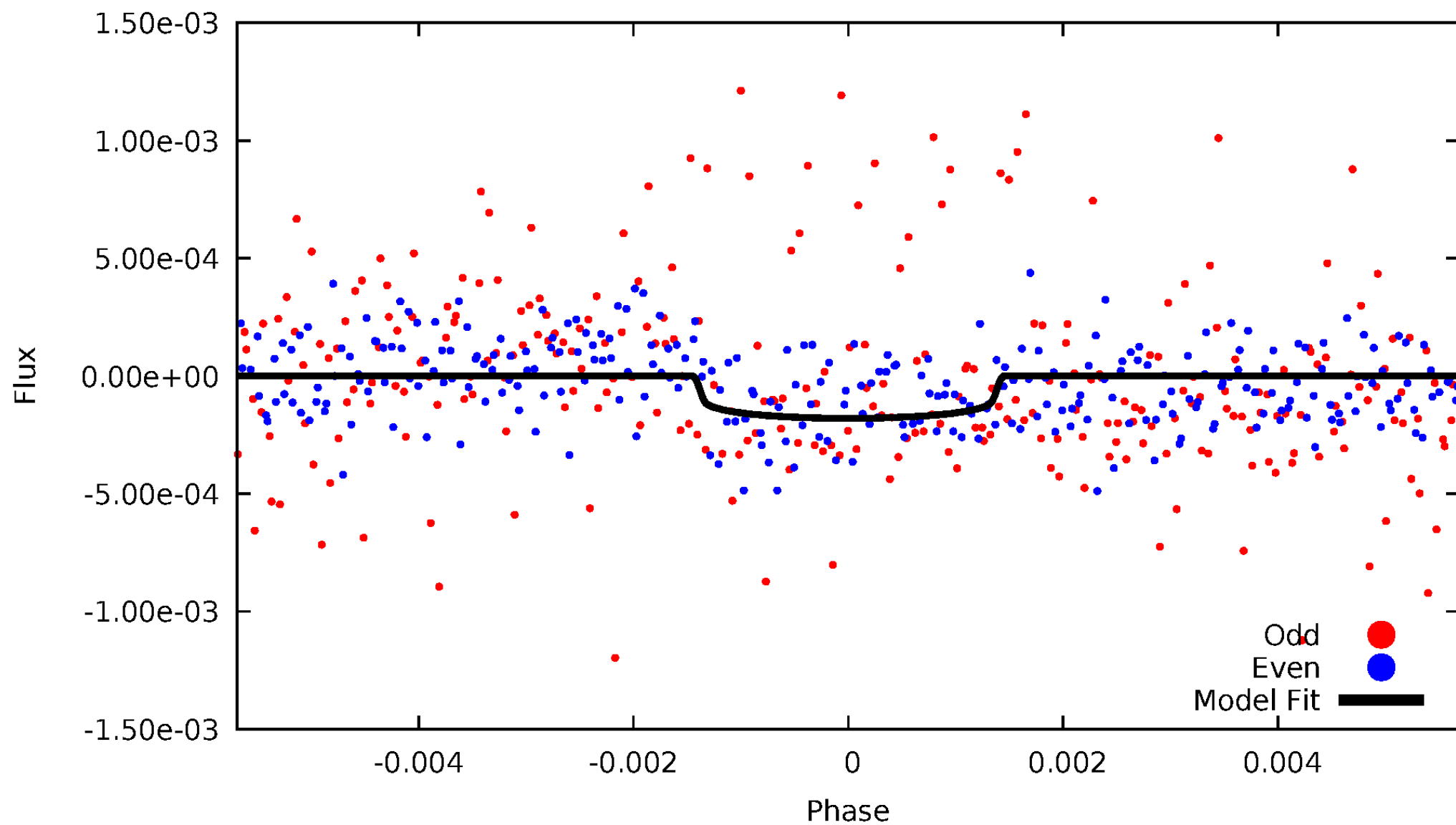


# TCE 011904719-01



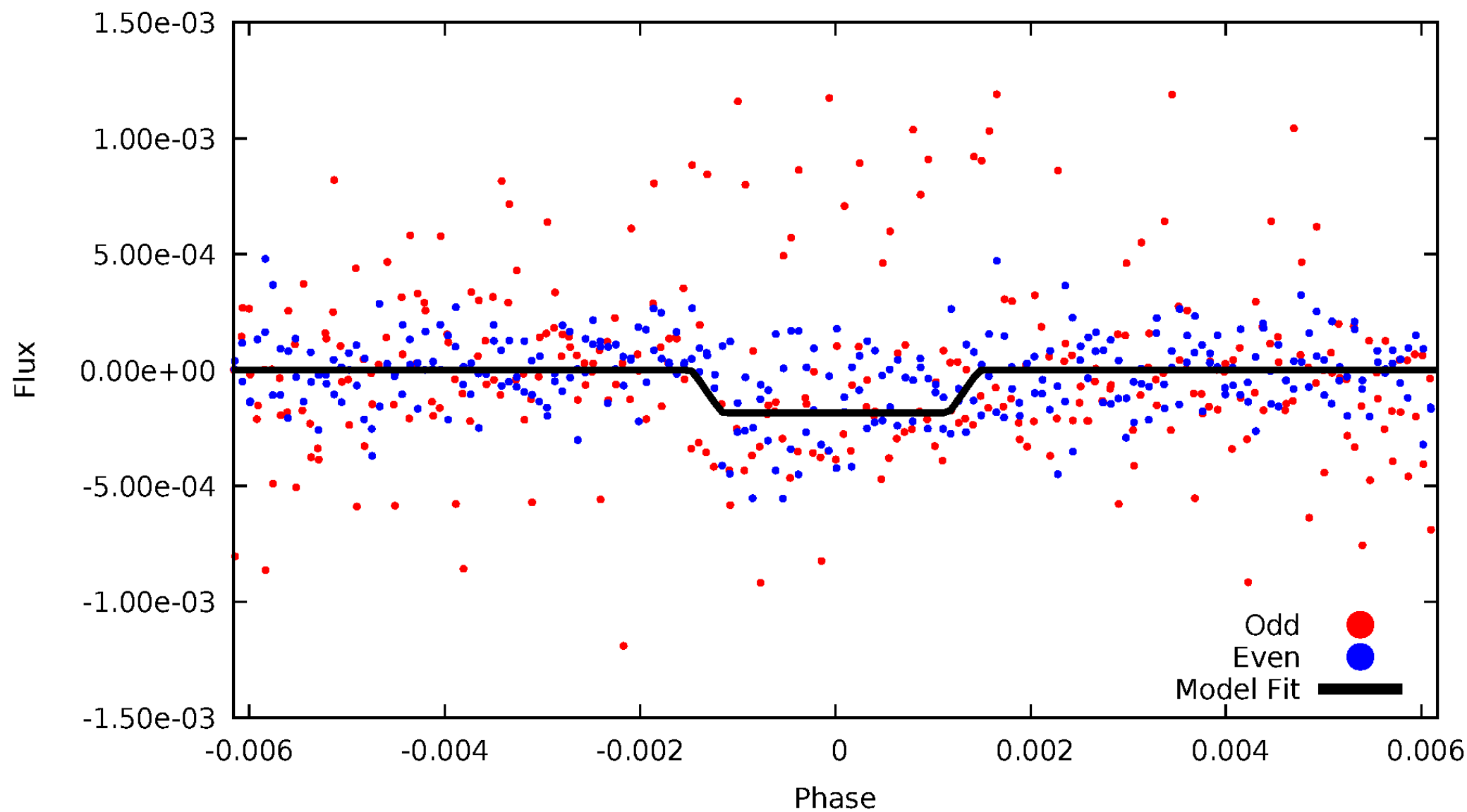
# DV Odd/Even

TCE 011904719-01



# ALT Odd/Even

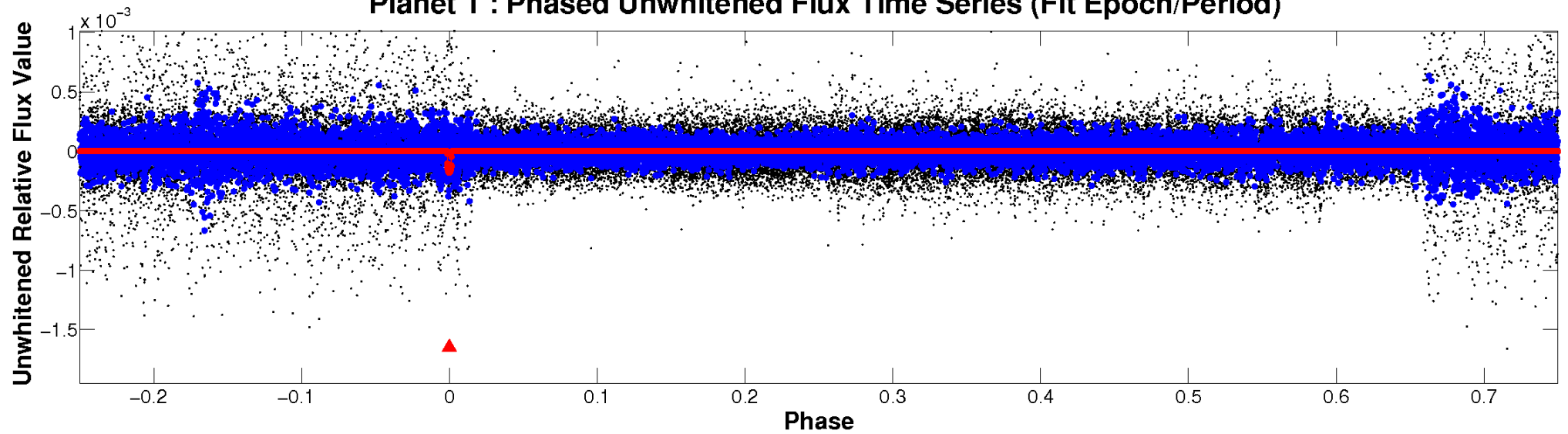
TCE 011904719-01



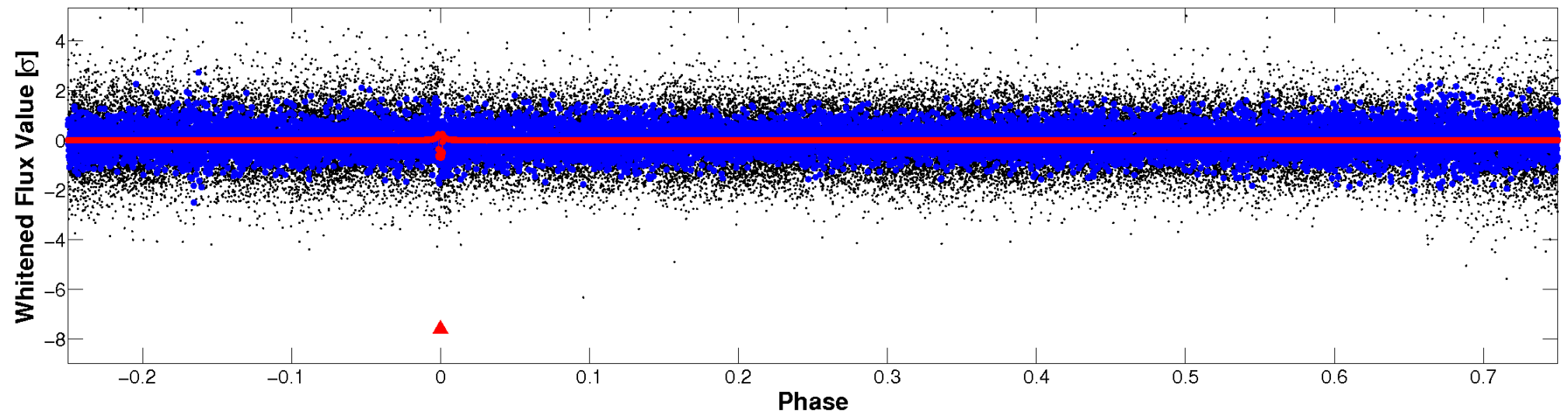


# Non-Whitened Vs. Whitened Light Curve

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

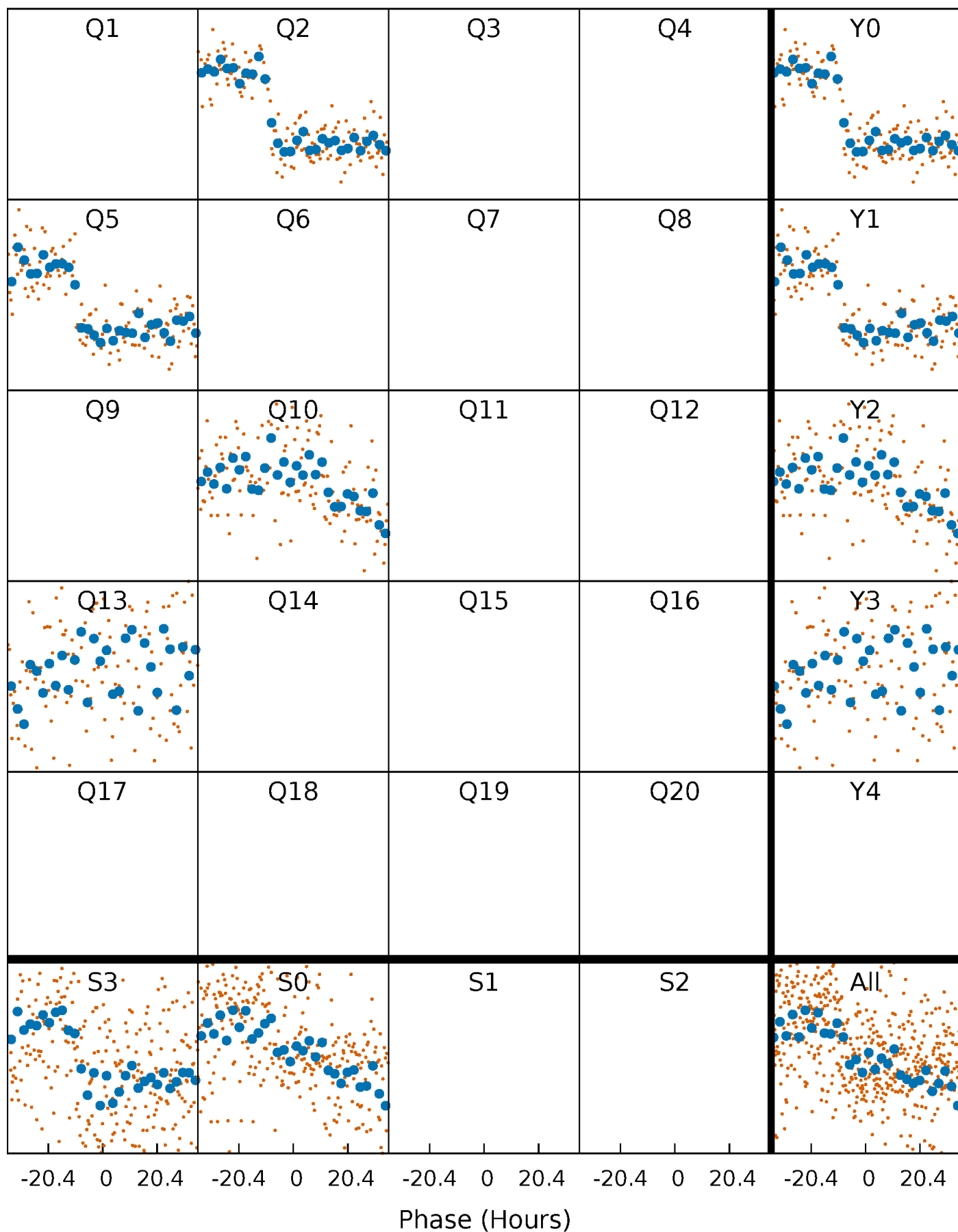


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

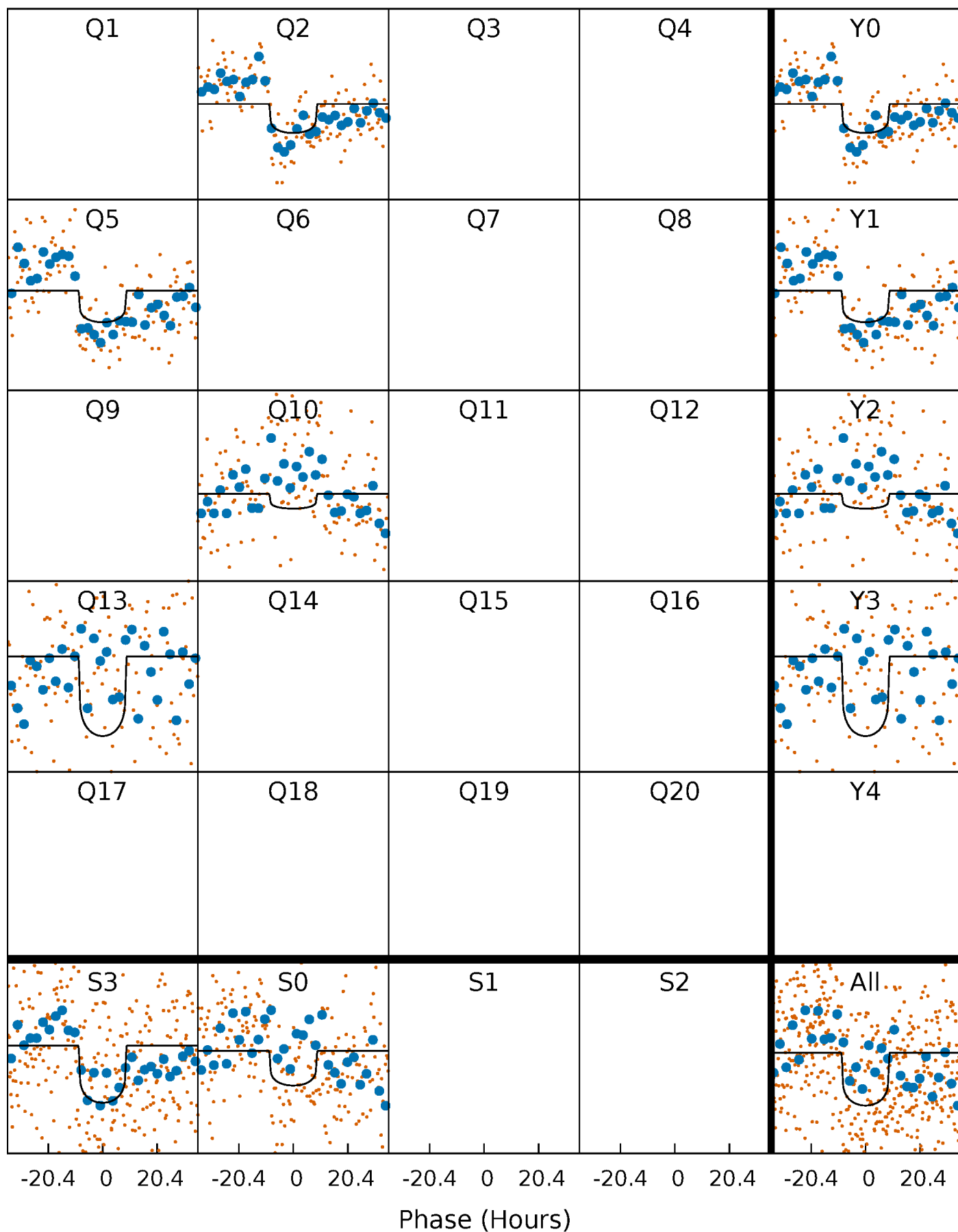
TCE 011904719-01 P=261.926963 Days  $T_0=210.396997$  (BKJD)





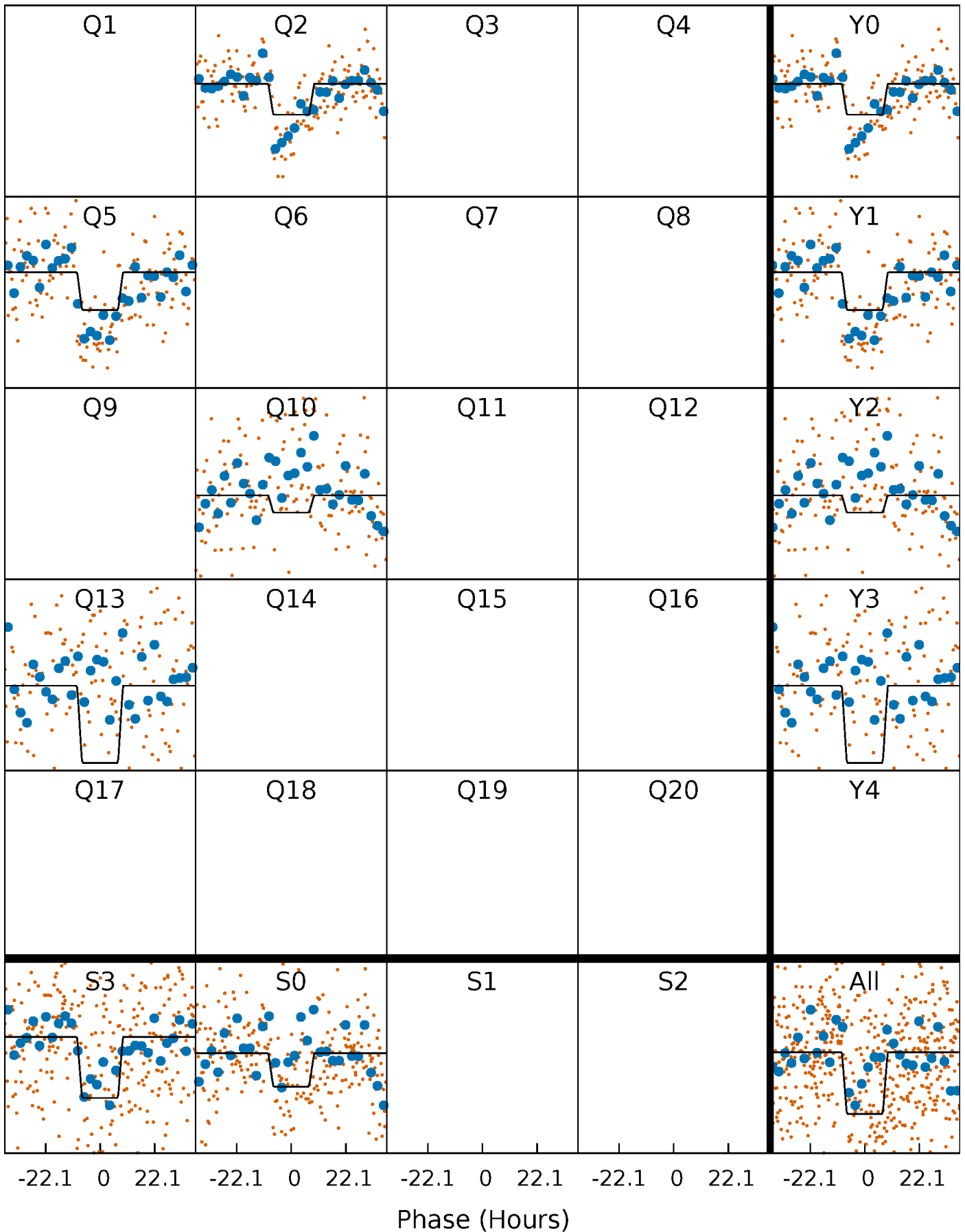
# DV Quarter-Phased Transit Curves

TCE 011904719-01 P=261.926963 Days  $T_0=210.396997$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

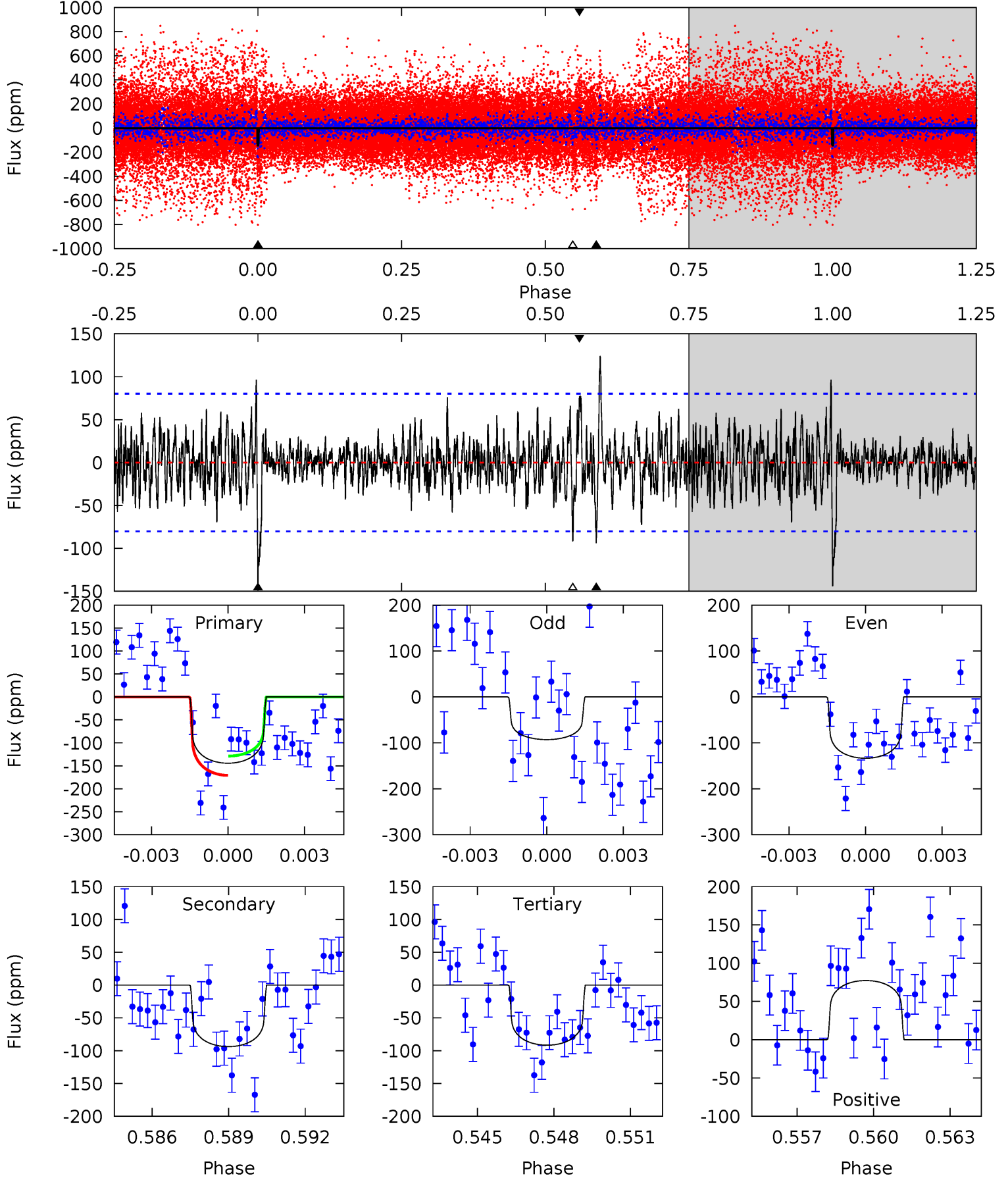
TCE 011904719-01 P=261.937806 Days  $T_0=210.364171$  (BKJD)



# DV Model-Shift Uniqueness Test

011904719-01, P = 261.926963 Days, E = 210.396997 Days

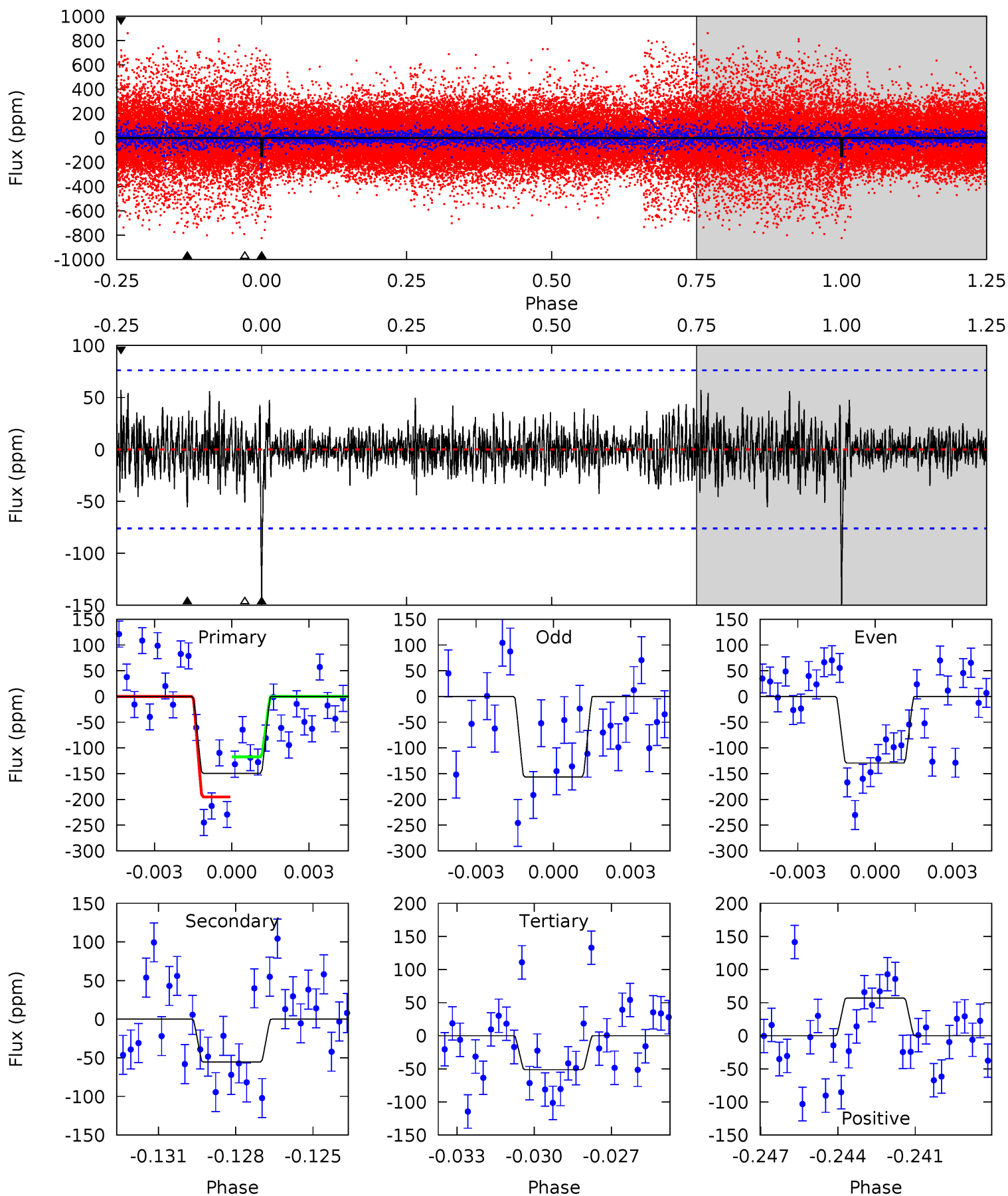
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.46	6.15	6.00	5.07	5.26	2.98	1.55	3.46	4.39	0.15	1.08	1.26	0.42	0.46	1.35



# Alt Model-Shift Uniqueness Test

011904719-01, P = 261.937806 Days, E = 210.364171 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
10.3	3.83	3.53	3.94	5.25	2.97	0.98	6.80	6.39	0.30	-0.11	0.88	0.55	0.28	0



### Stellar Parameters For KIC 011904719

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6313^{+181}_{-250}$	$4.122^{+0.258}_{-0.172}$	$-0.180^{+0.250}_{-0.300}$	$1.523^{+0.411}_{-0.457}$	$1.119^{+0.174}_{-0.174}$	$0.446^{+0.671}_{-0.201}$
	+3%/-4%	+6%/-4%	+139%/-167%	+27%/-30%	+16%/-16%	+151%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 011904719-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-94 \pm 15$	$2.11^{+1.00}_{-0.91}$	$521^{+42}_{-39}$	$5420^{+1820}_{-724}$	$7654^{+17118}_{-4043}$
Alt.	$-55 \pm 14$	$2.21^{+1.03}_{-0.91}$	$522^{+39}_{-45}$	$4741^{+1164}_{-617}$	$4181^{+8174}_{-2252}$

$T_{\text{max}}$  = 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

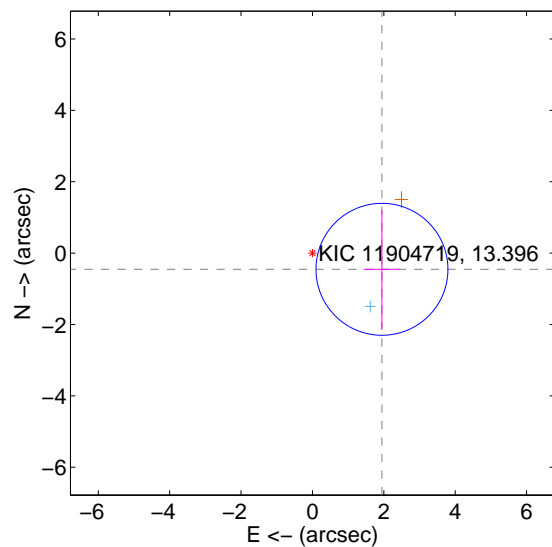
Supplemental centroid analysis for 011904719-01. Kepler magnitude: 13.40. Transit SNR 8.03

There are 1 quarters with good PRF difference image offsets

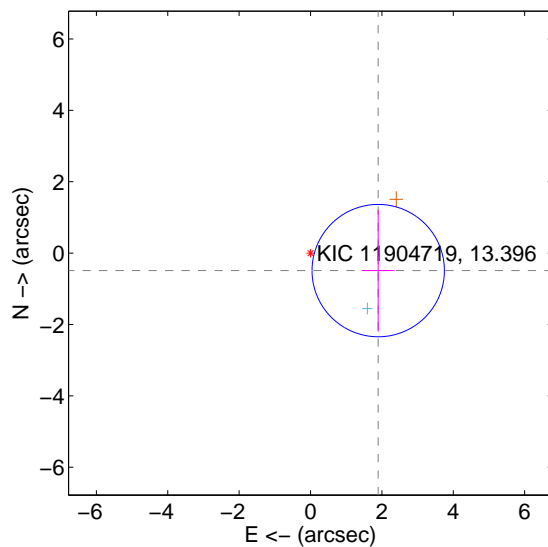
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.000 \pm 0.616$	3.25	$-1.948 \pm 0.499$	$-0.454 \pm 1.668$
PRF-fit source offset from KIC position	$1.959 \pm 0.618$	3.17	$-1.897 \pm 0.462$	$-0.490 \pm 1.705$
photometric centroid source offset	$2.25 \pm 1.13$	1.99	$-2.08 \pm 1.11$	$-0.87 \pm 1.27$

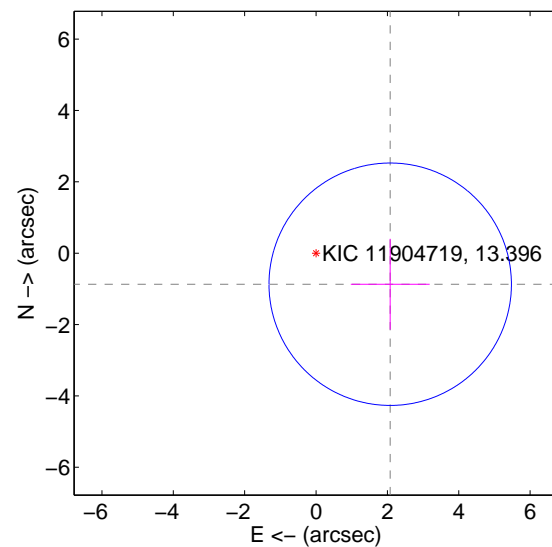
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

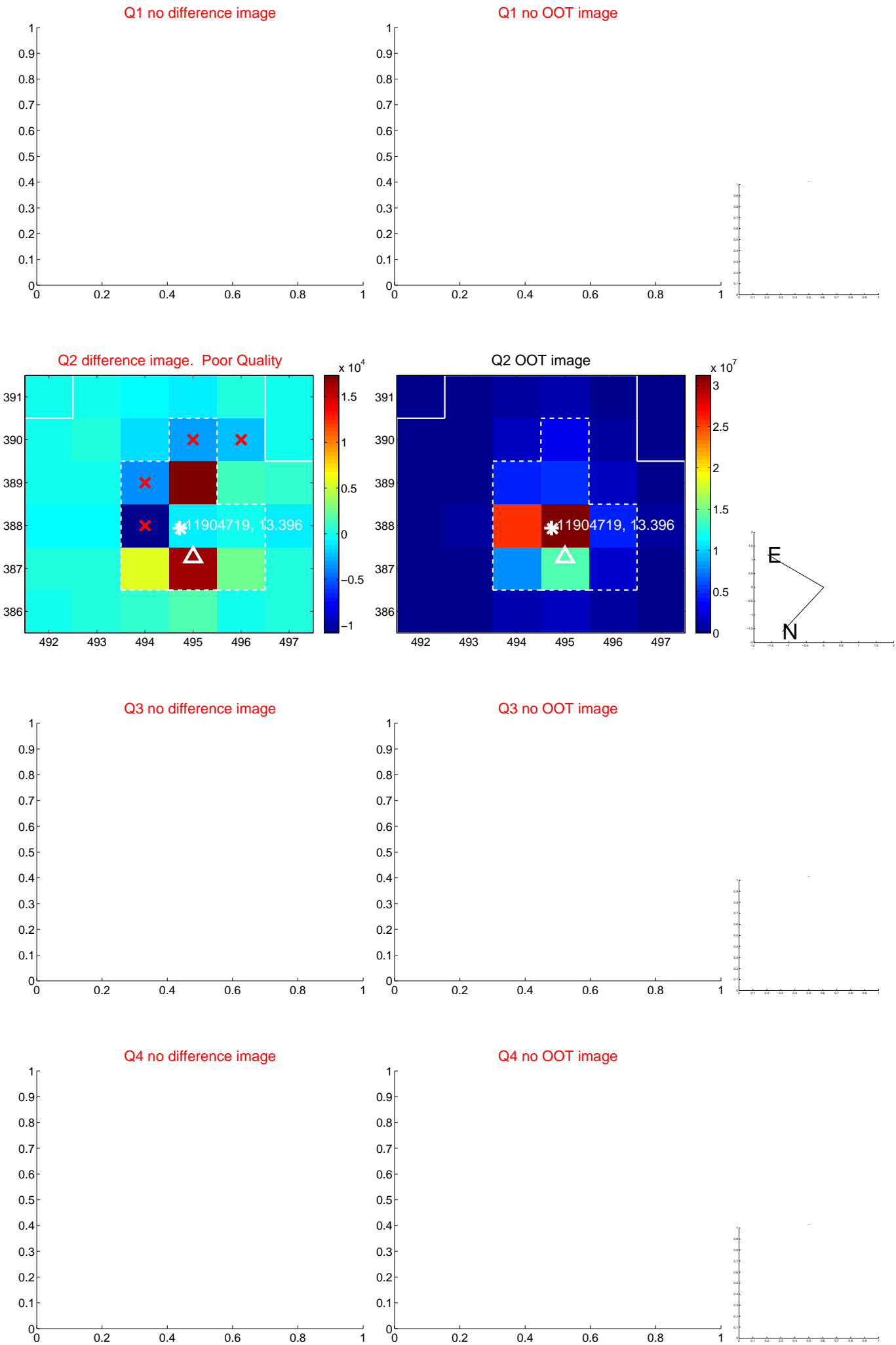


offset from photometric centroids



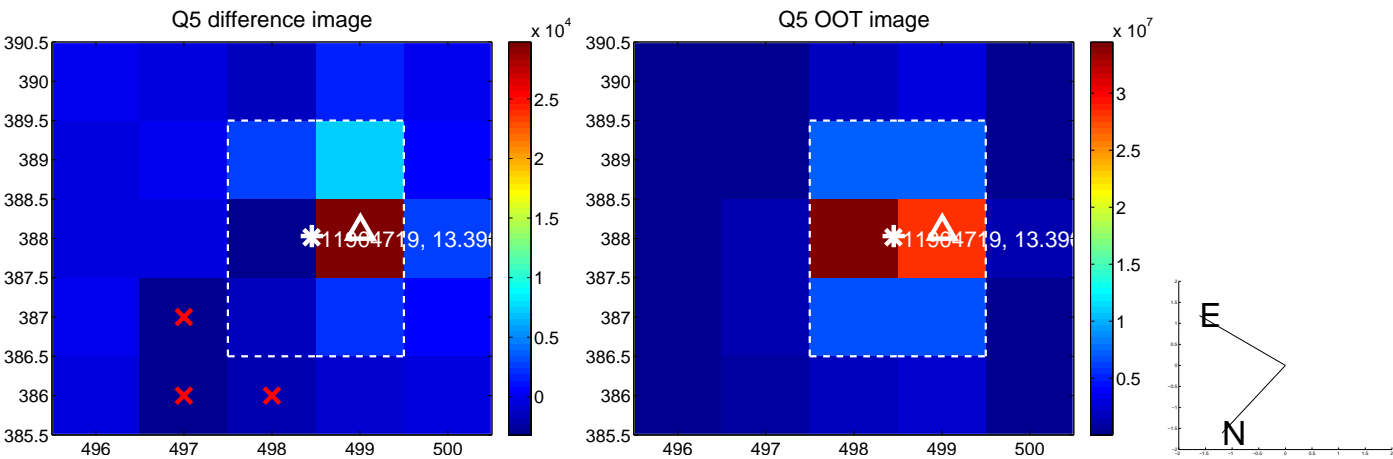
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

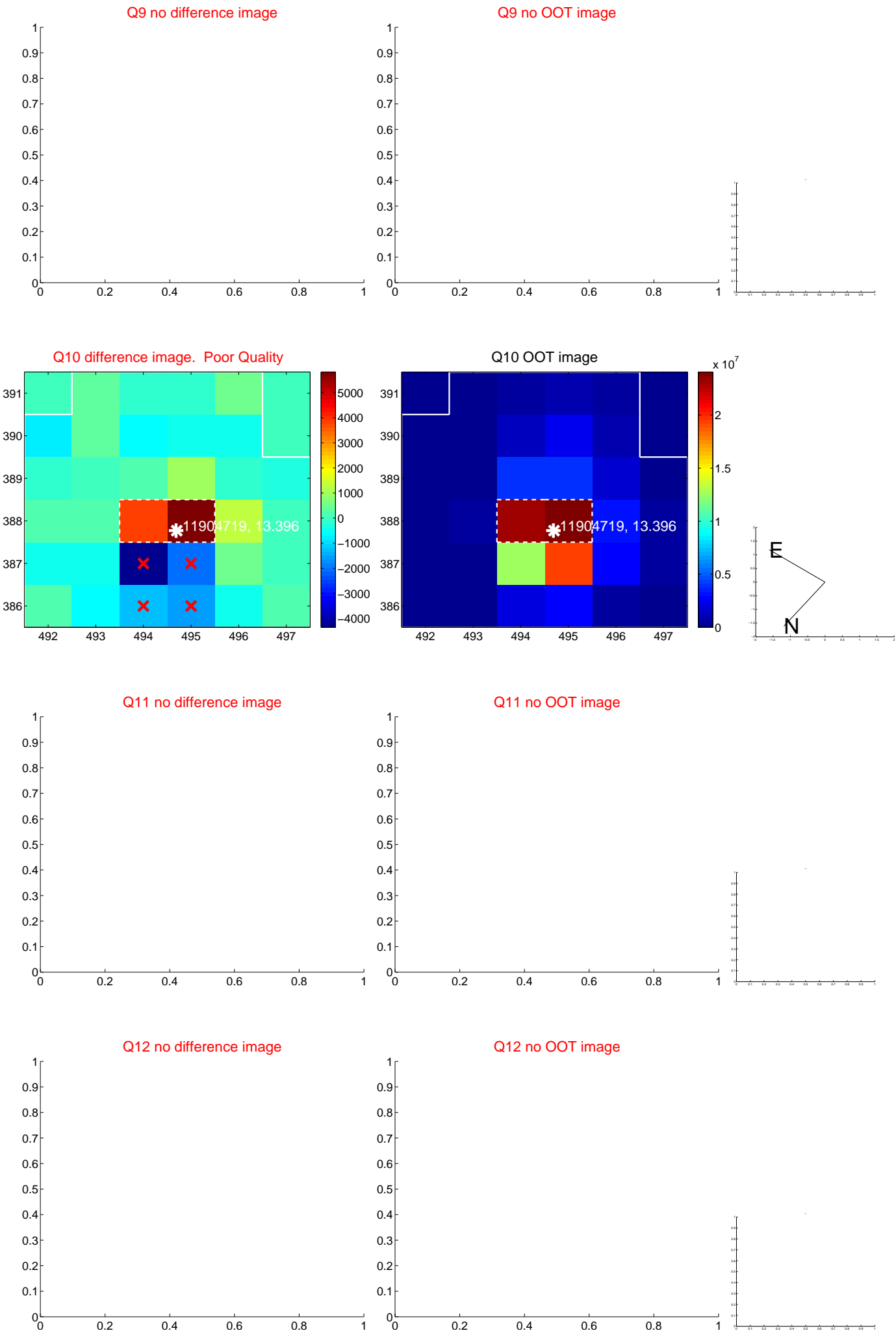




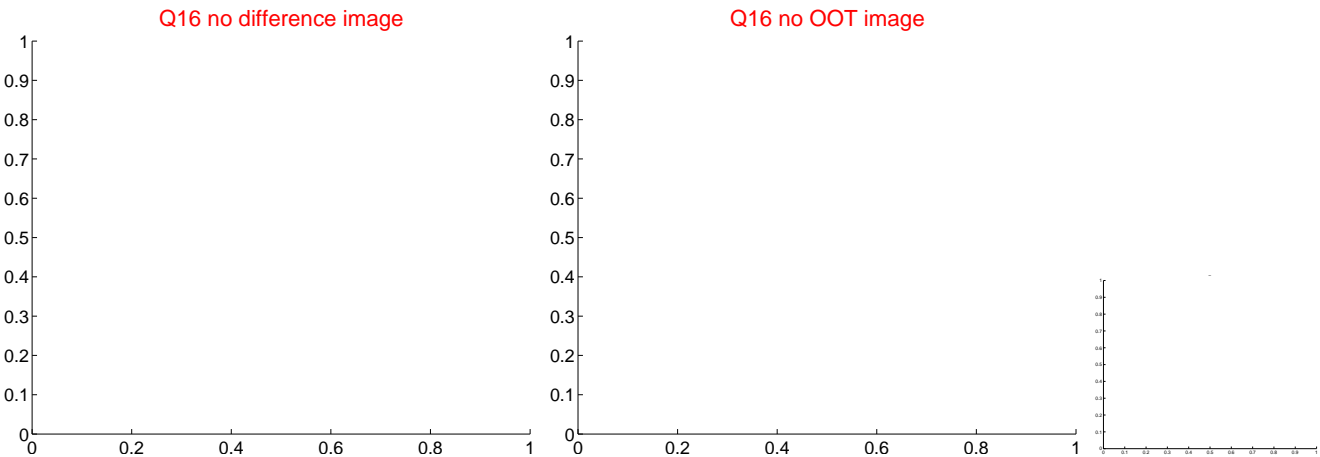
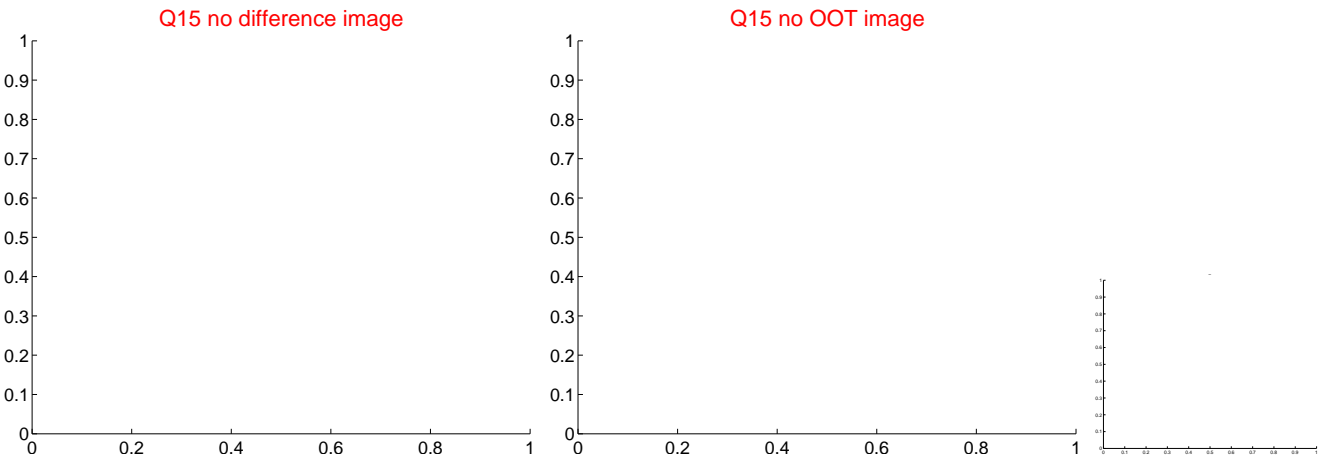
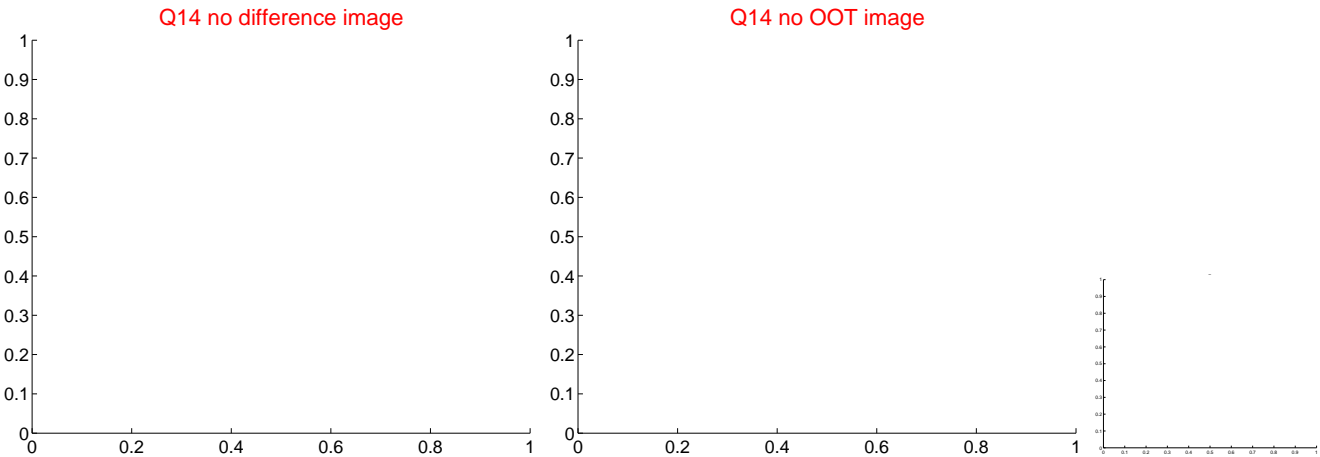
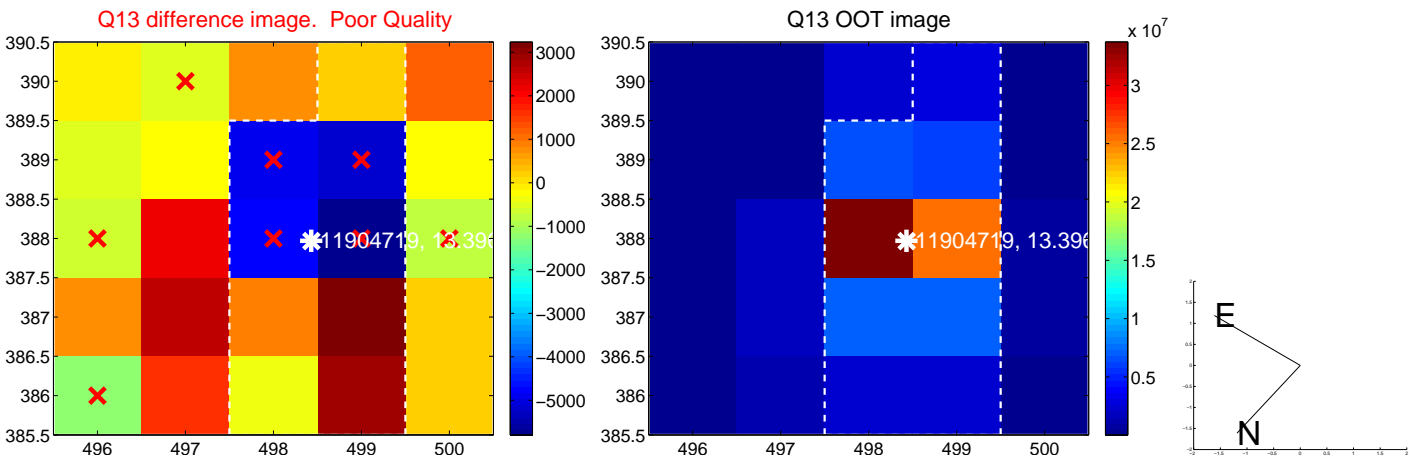
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



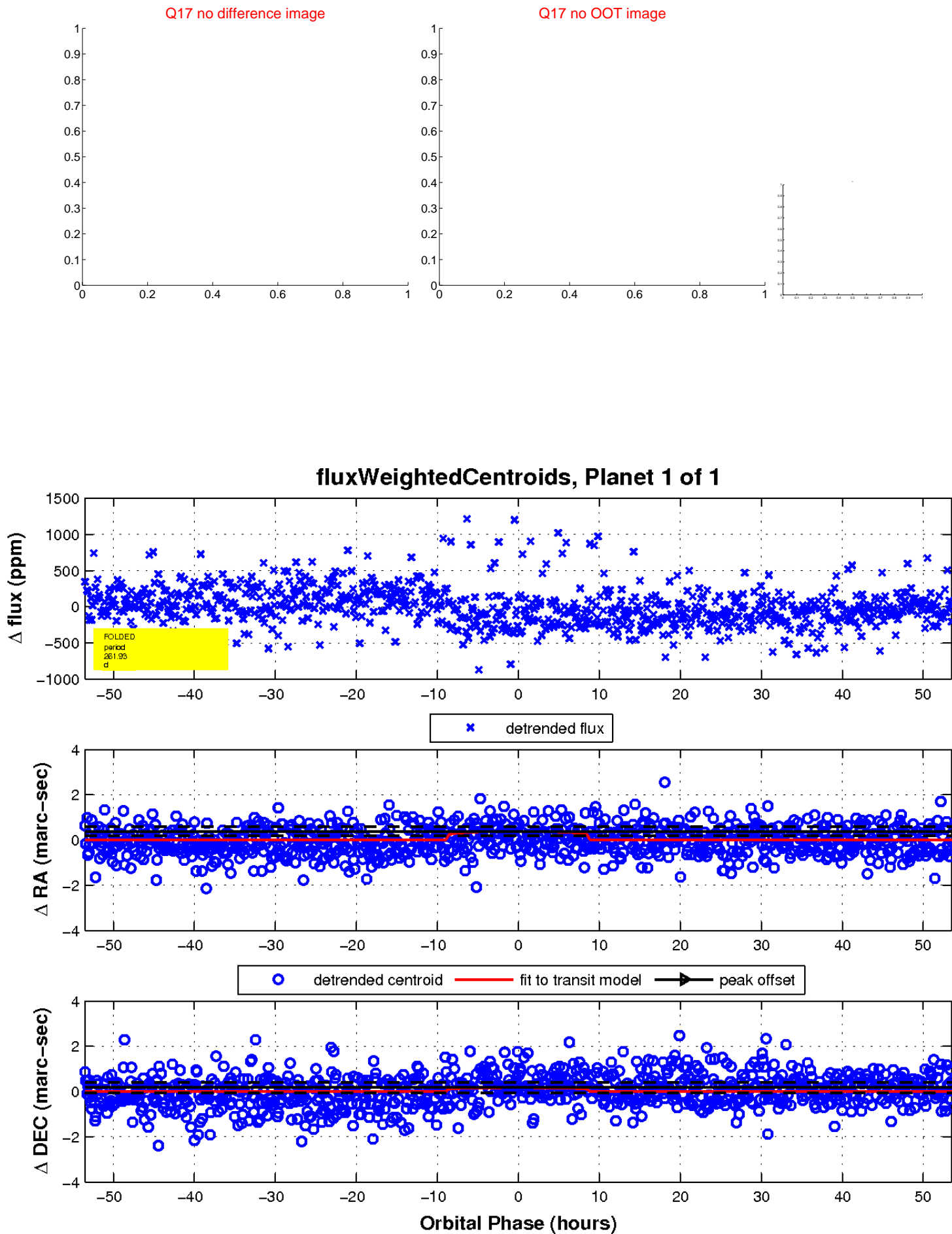
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: 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.



UKIRT Image

Declination

