

# KIC 007935706

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007935706-01	OBS	No	438.579505	194.350881	116.9	22.485	7.6	8.8	1.65	5999	1.89	2.36

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007935706-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

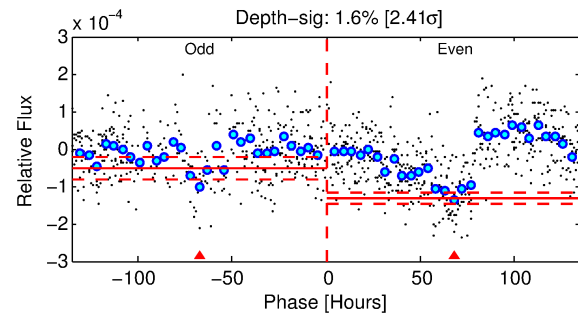
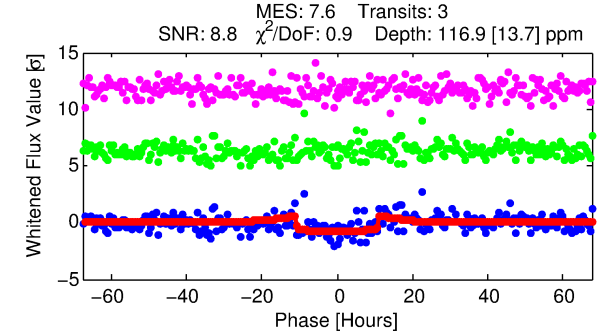
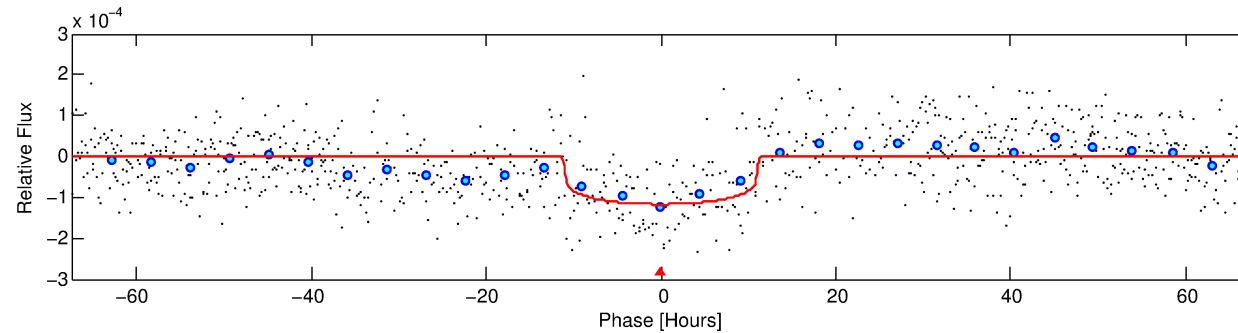
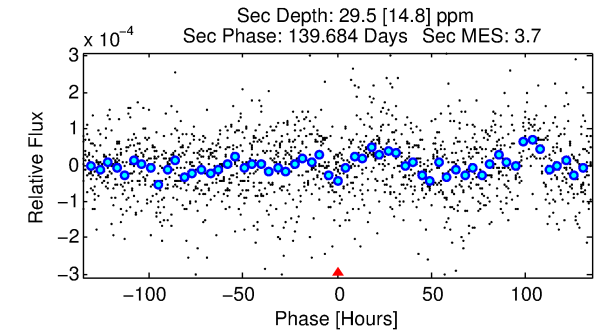
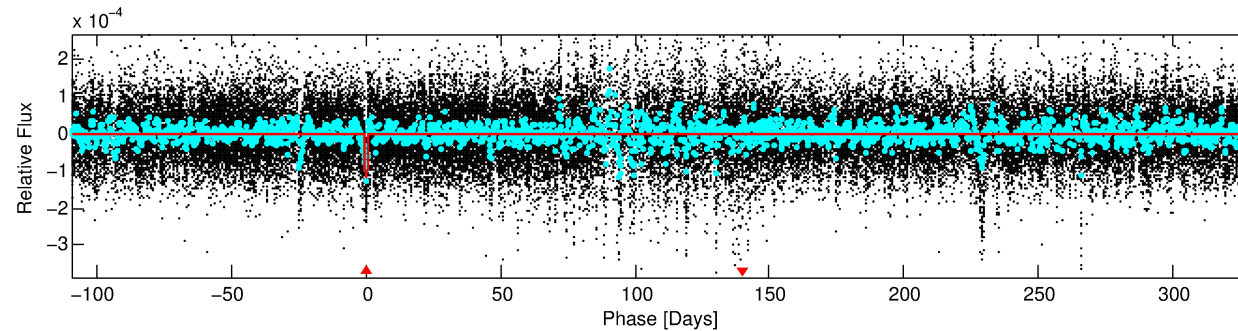
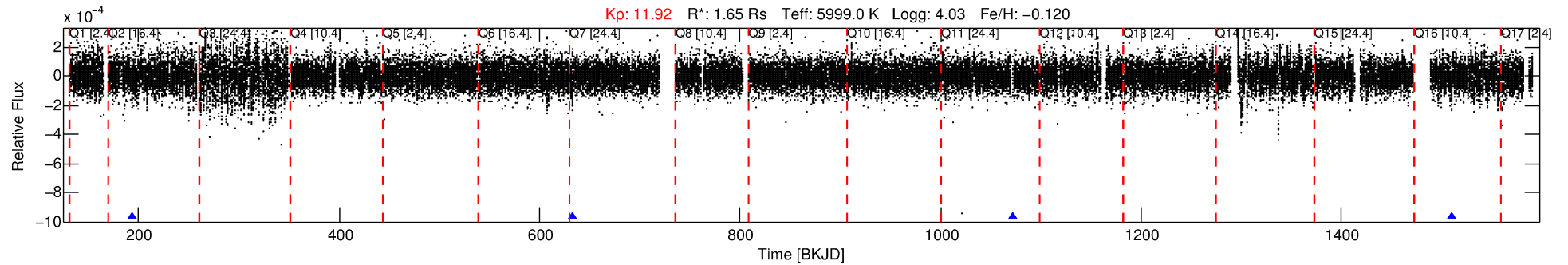
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007935706-01

No Significant Match Found

# DV One-Page Summary

KIC: 7935706 Candidate: 1 of 1 Period: 438.580 d



## DV Fit Results:

Period = 438.57951 [0.00739] d  
Epoch = 194.3509 [0.0147] BKJD  
Rp/R\* = 0.0105 [0.0024]  
a/R\* = 114.20 [122.49]  
b = 0.66 [0.93]  
Seff = 2.36 [1.07]  
Teq = 316 [36] K  
Rp = 1.89 [0.69] Re  
a = 1.1576 [0.3162] AU  
Ag = 6101.41 [4960.61] [1.23σ]  
Teffp = 4319 [748] K [5.35σ]

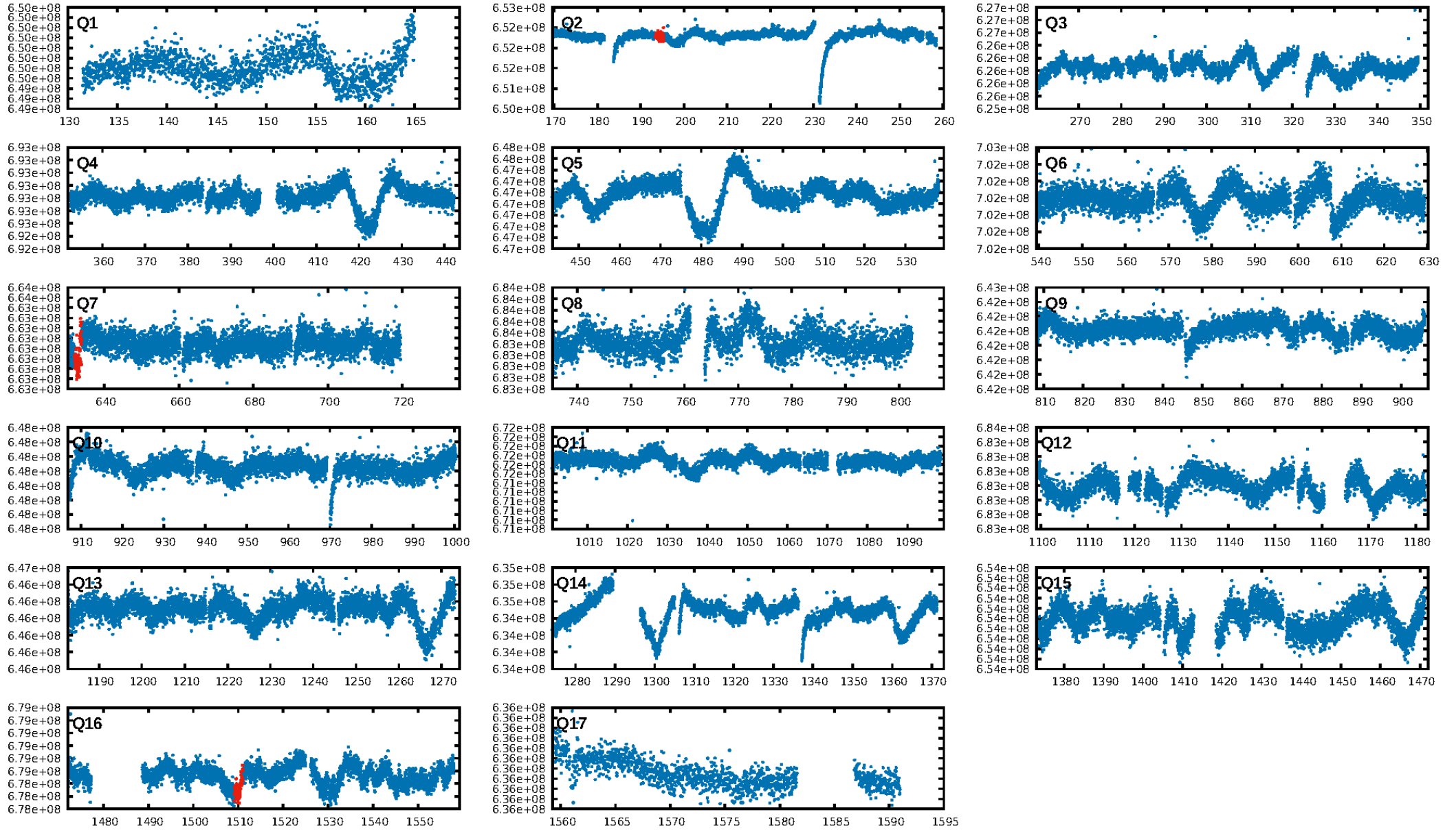
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 8.6%  
ModelChiSquareGof-sig: 99.7%  
Bootstrap-pfa: 4.28e-11  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 2.936  
Centroid-sig: 0.0%  
Centroid-so: 5.060 arcsec [3.18σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [1/1]

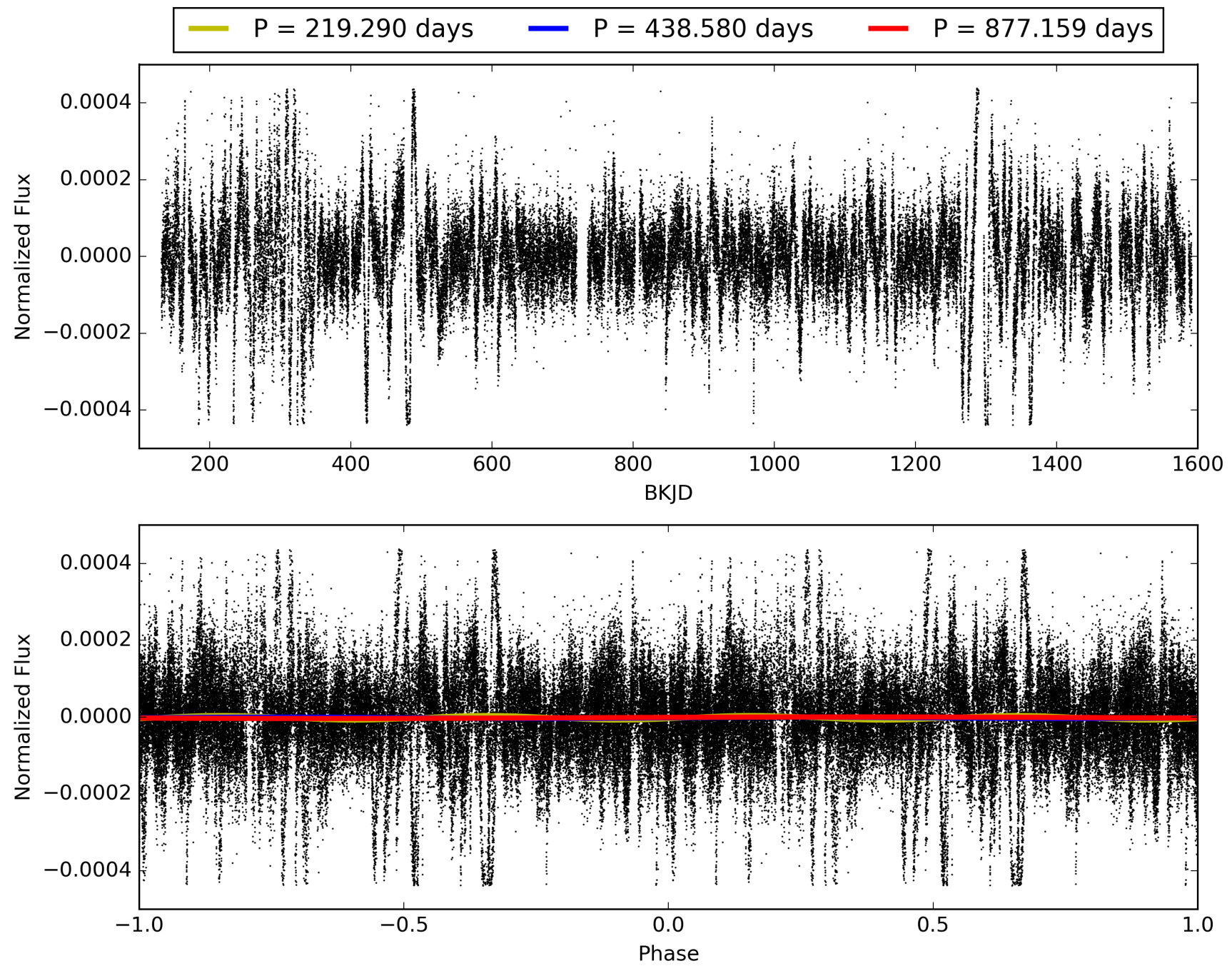
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:34:26 Z

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

# TCE 007935706-01, PDC Light Curves

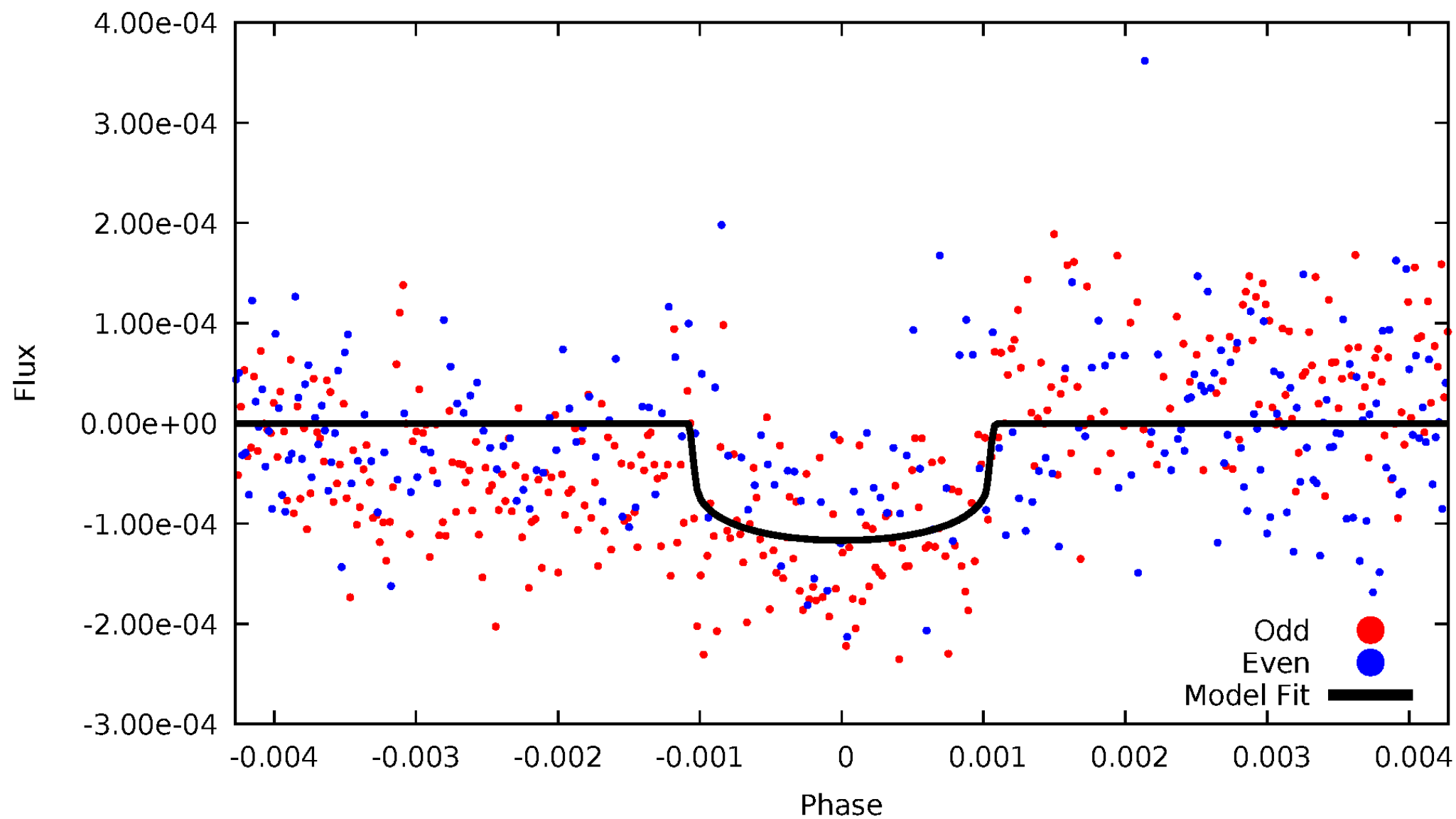


TCE 007935706-01



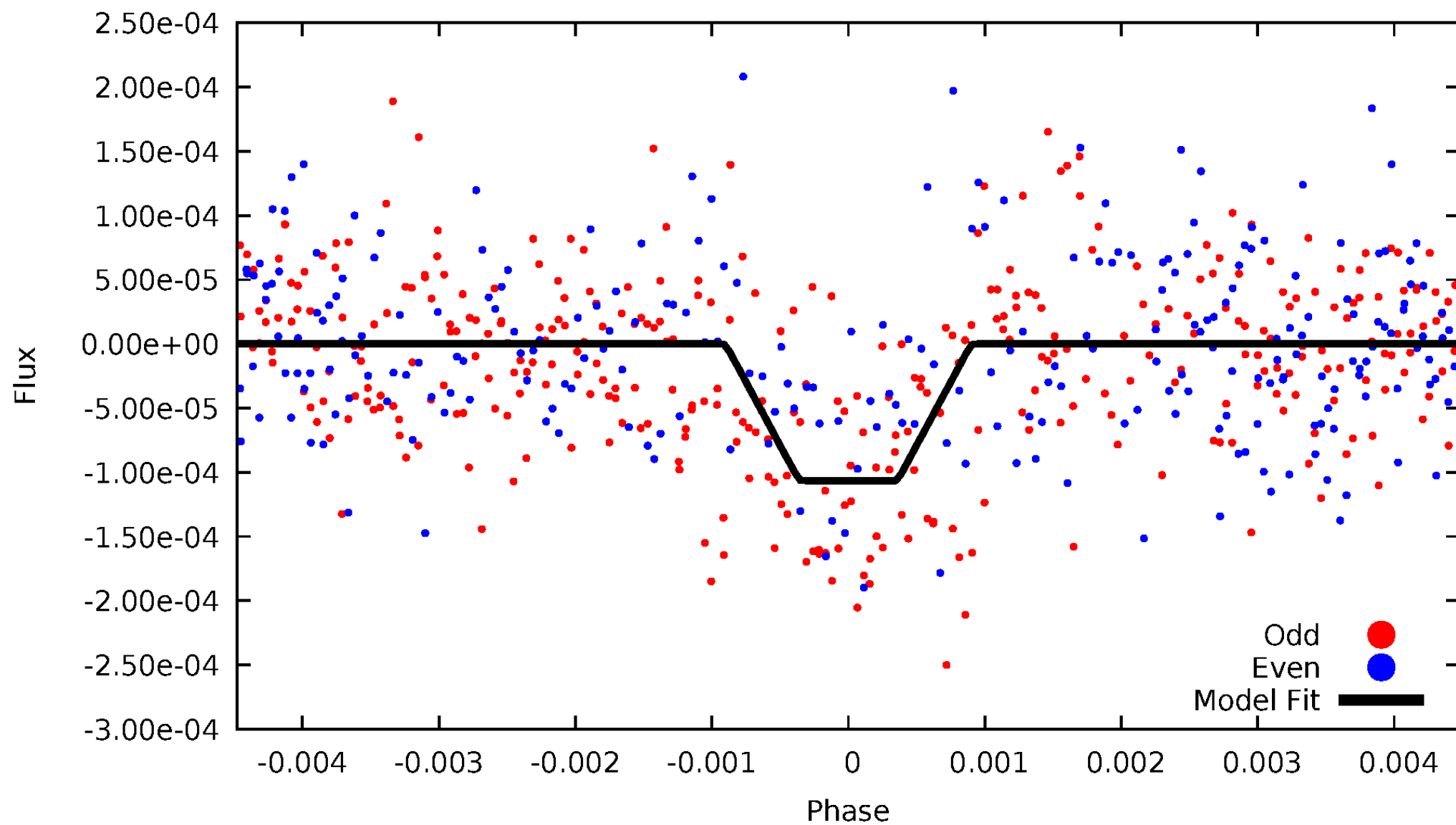
# DV Odd/Even

TCE 007935706-01



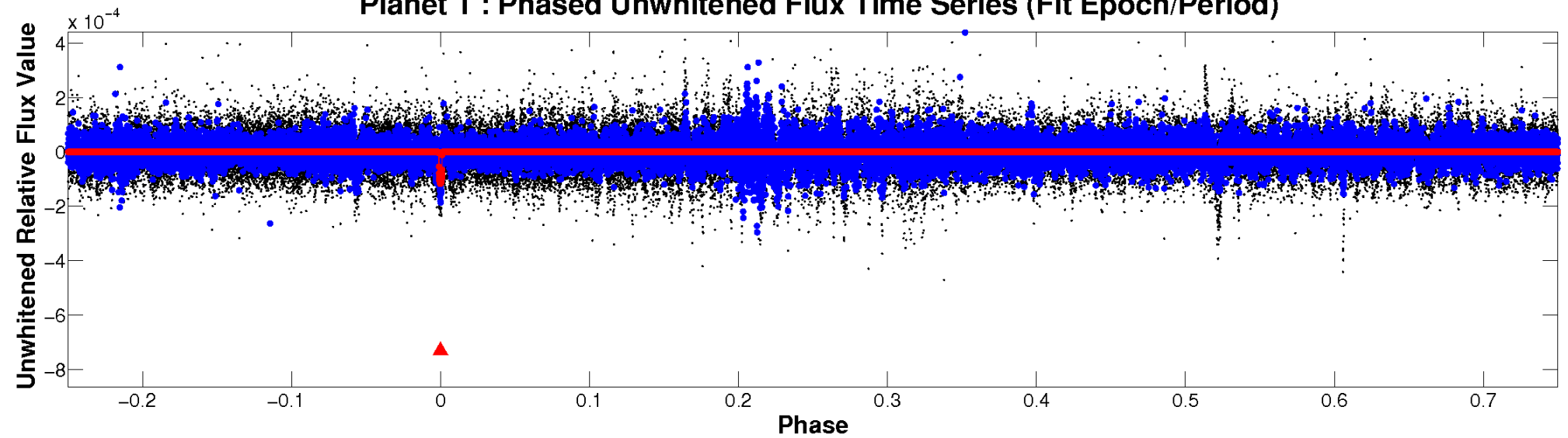
# ALT Odd/Even

TCE 007935706-01

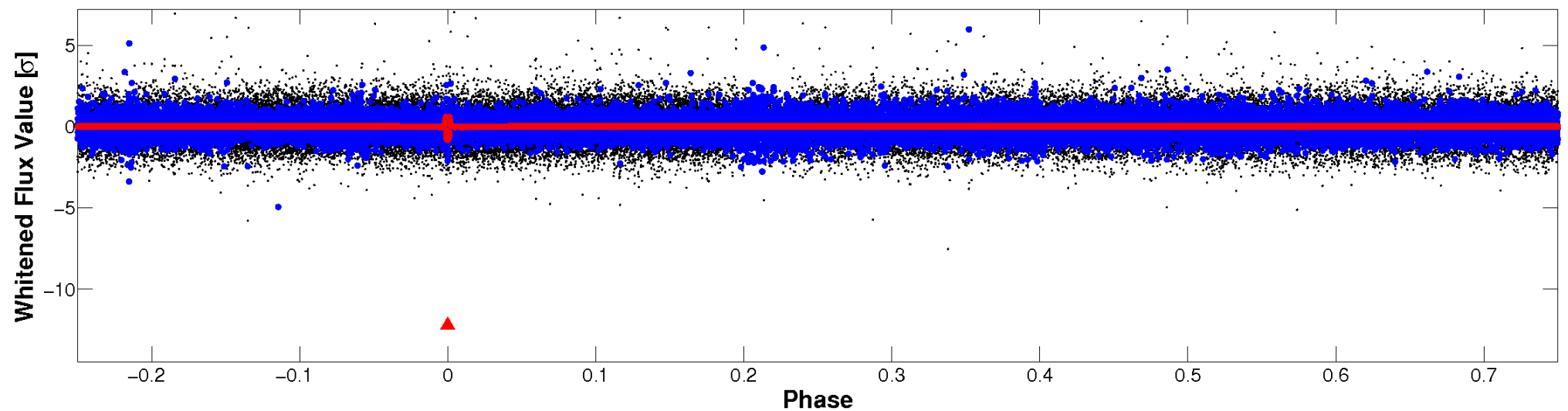


# Non-Whitened Vs. Whitened Light Curve

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



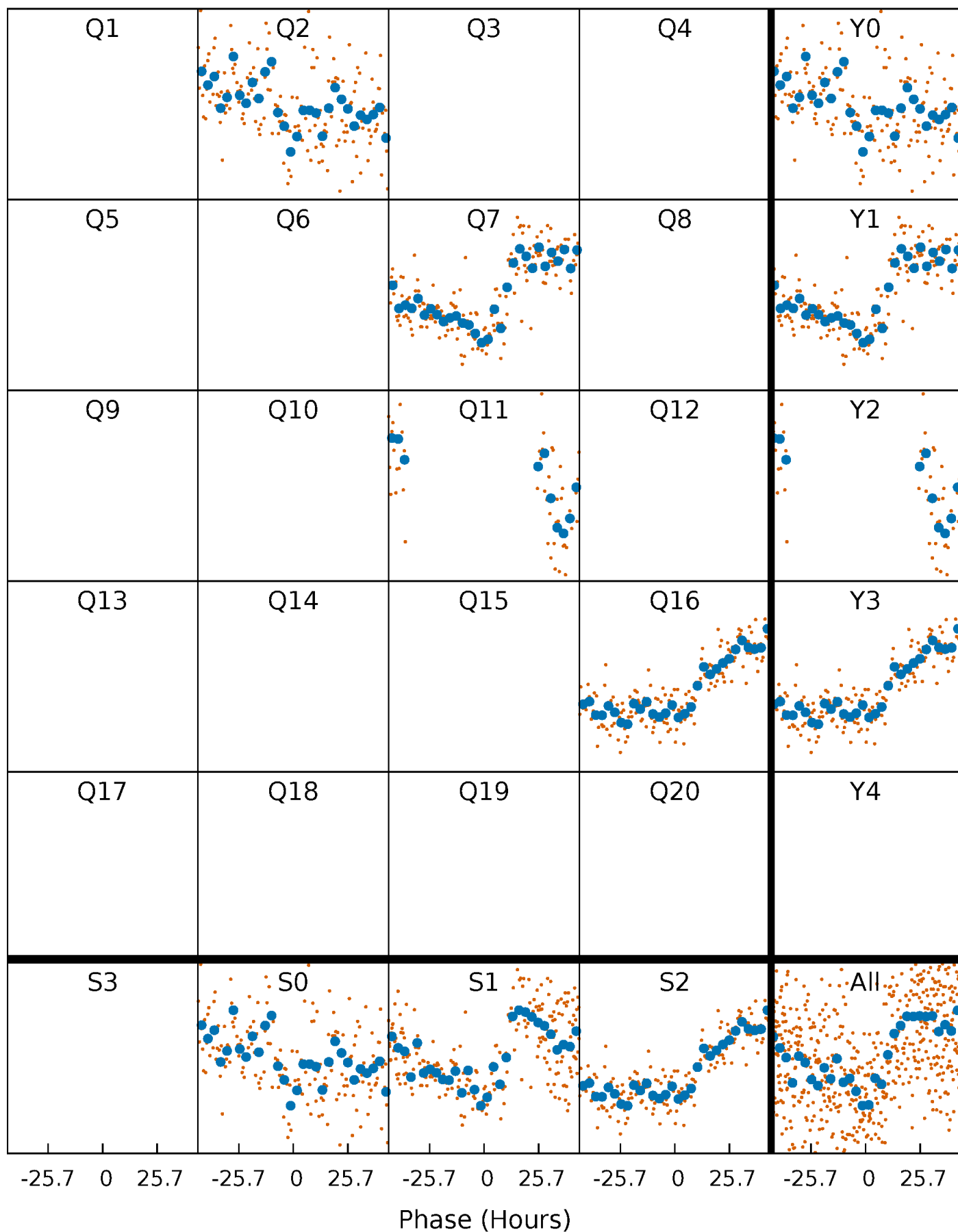
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

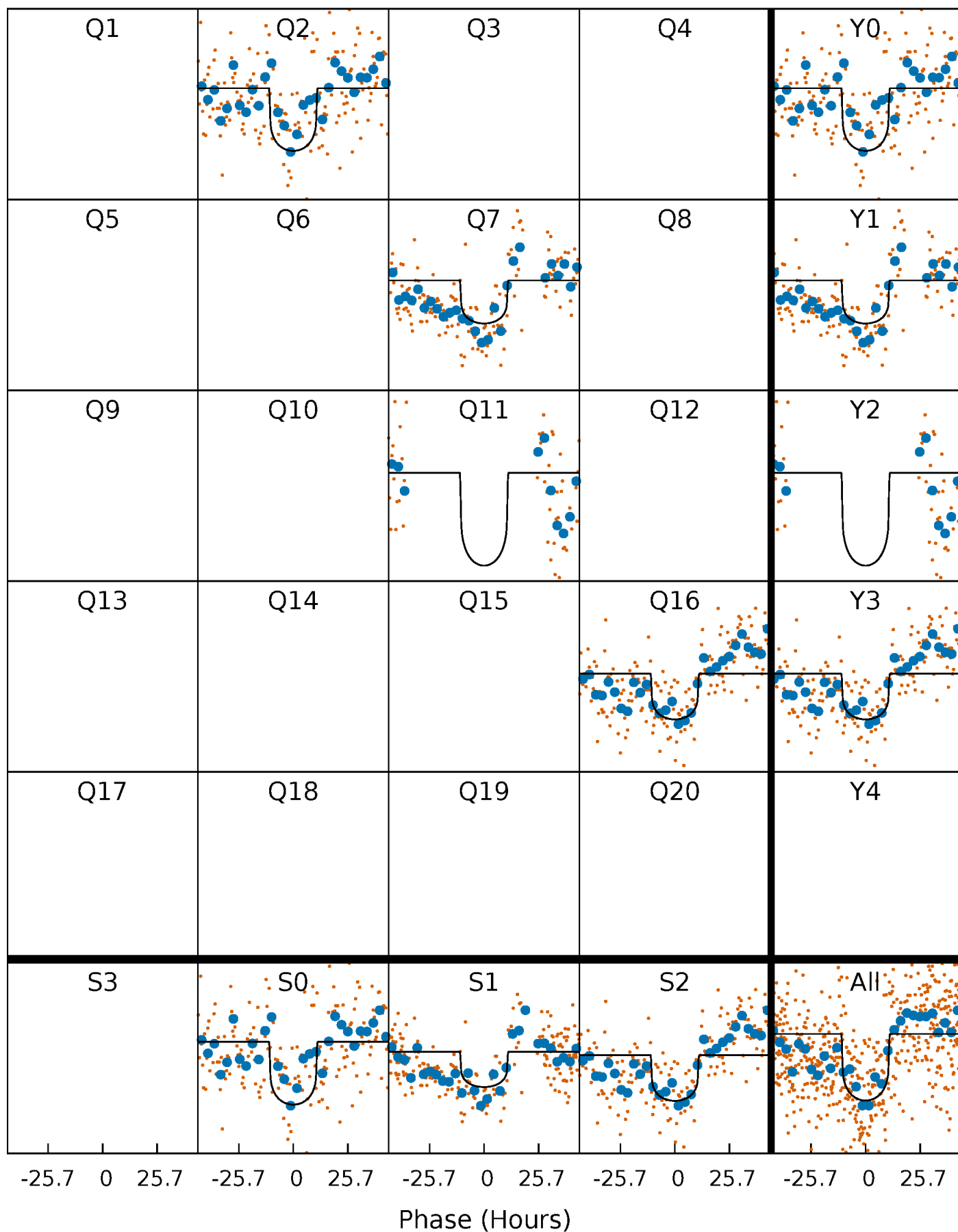
TCE 007935706-01 P=438.579505 Days  $T_0=194.350881$  (BKJD)





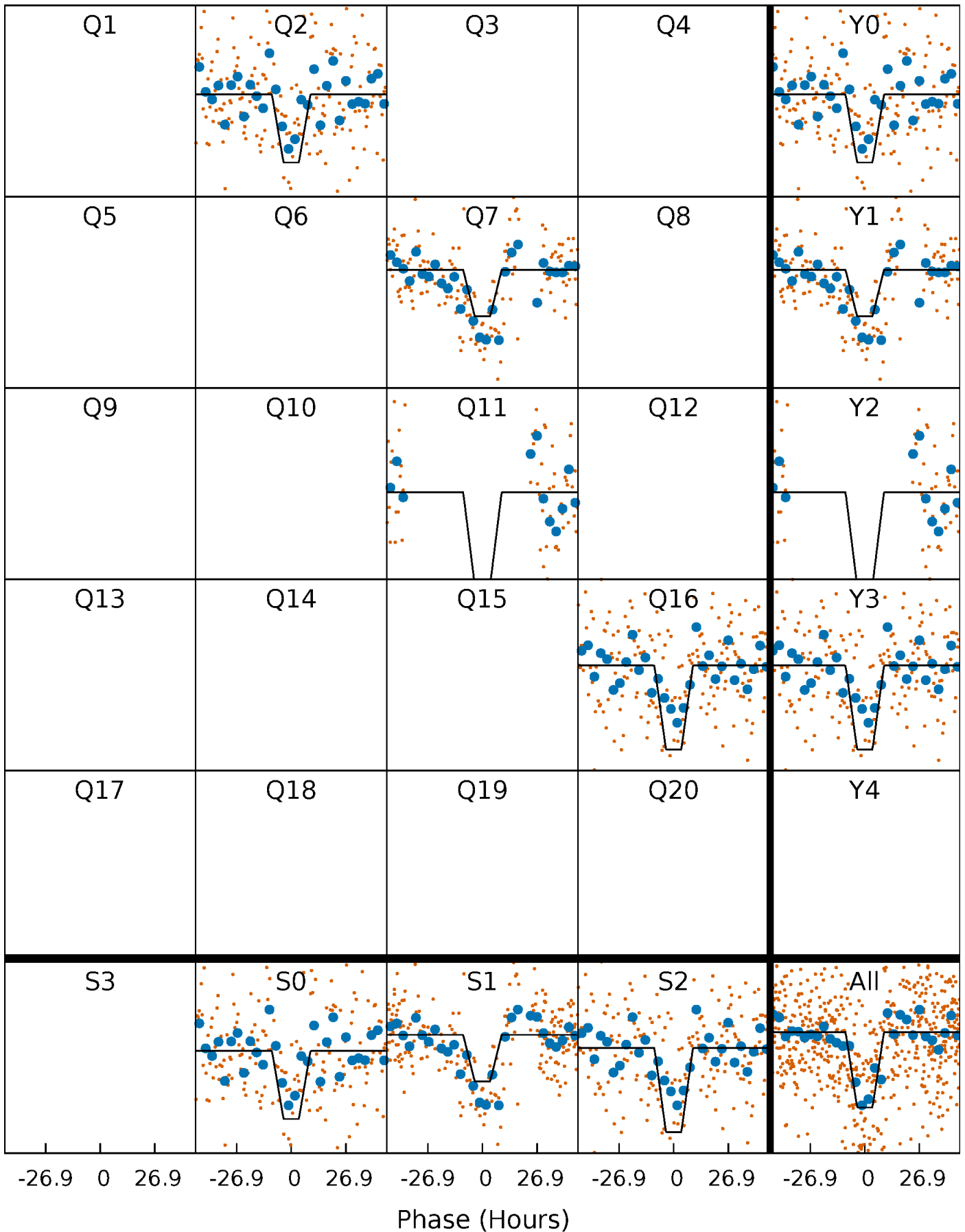
# DV Quarter-Phased Transit Curves

TCE 007935706-01 P=438.579505 Days  $T_0=194.350881$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

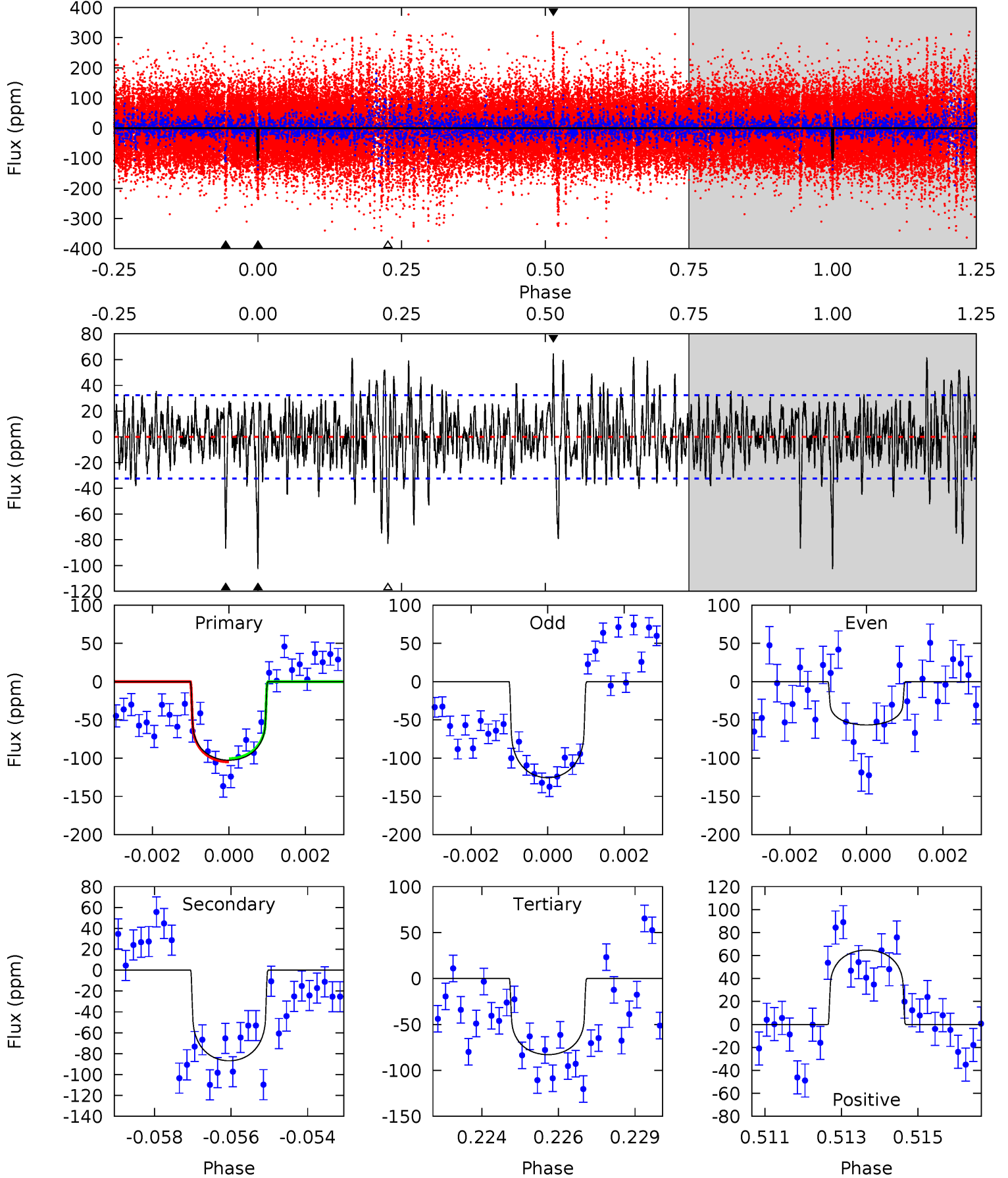
TCE 007935706-01 P=438.626799 Days  $T_0=194.317603$  (BKJD)



# DV Model-Shift Uniqueness Test

007935706-01, P = 438.579505 Days, E = 194.350881 Days

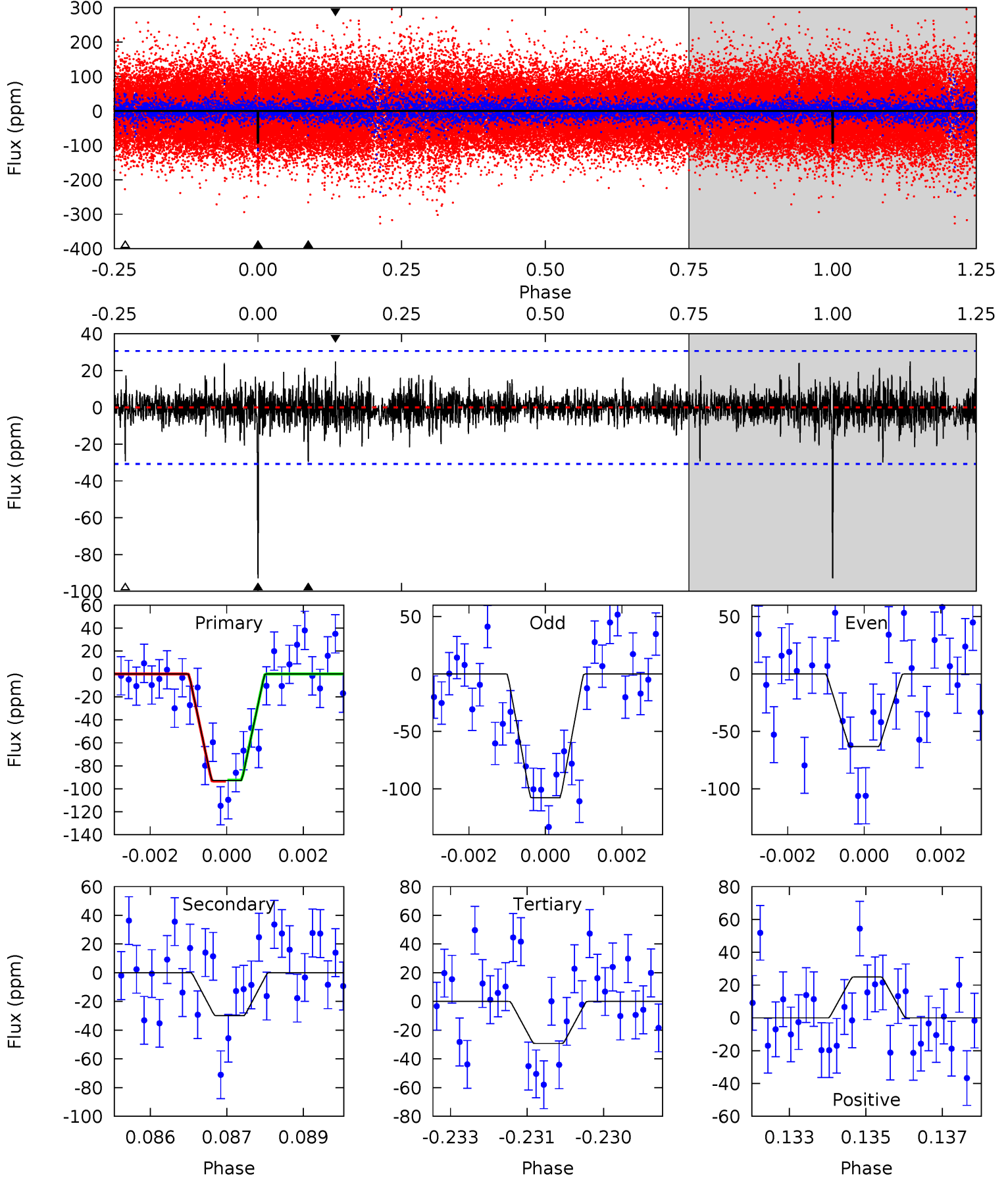
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	14.2	13.6	10.6	5.31	3.07	3.06	3.24	6.22	0.64	3.62	5.29	0.93	0.39	0.35



# Alt Model-Shift Uniqueness Test

007935706-01,  $P = 438.626799$  Days,  $E = 194.317603$  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
16.2	5.20	5.09	4.33	5.34	3.12	0.97	11.1	11.8	0.11	0.87	3.55	1.46	0.21	0.09



### Stellar Parameters For KIC 007935706

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5999^{+164}_{-164}$	$4.034^{+0.259}_{-0.111}$	$-0.120^{+0.300}_{-0.300}$	$1.651^{+0.337}_{-0.464}$	$1.075^{+0.172}_{-0.154}$	$0.336^{+0.514}_{-0.118}$
	+3%/-3%	+6%/-3%	+250%/-250%	+20%/-28%	+16%/-14%	+153%/-35%
Source	PHO1	FLK73	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 007935706-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-87 \pm 6$	$1.83^{+0.57}_{-0.47}$	$436^{+28}_{-33}$	$5640^{+809}_{-538}$	$19074^{+16085}_{-7587}$
Alt.	$-30 \pm 6$	$1.81^{+0.54}_{-0.49}$	$436^{+28}_{-36}$	$4517^{+592}_{-392}$	$6921^{+6038}_{-3093}$

$T_{\text{max}}$  = 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

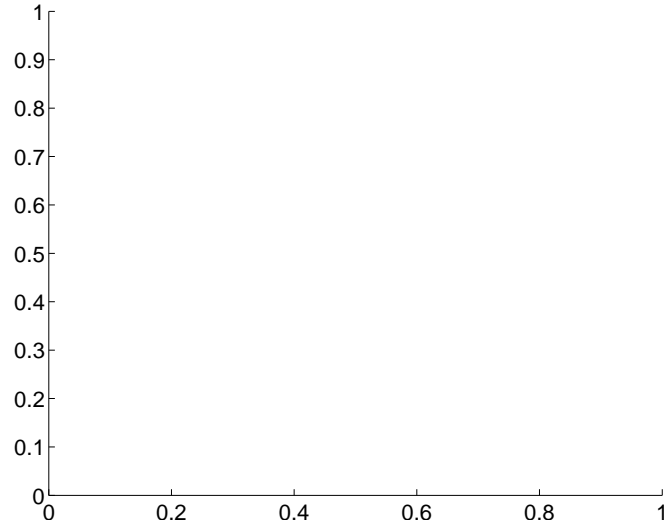
Supplemental centroid analysis for 007935706-01. **Kepler magnitude: 11.92.** Transit SNR 8.82

**There are 0 quarters with good PRF difference image offsets**

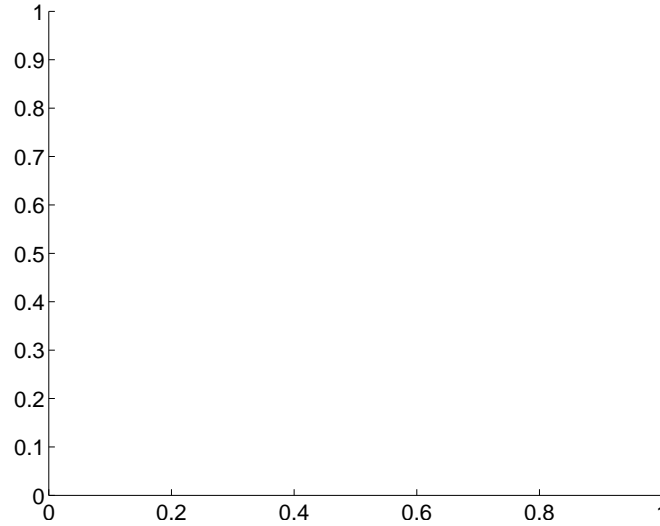
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	<b>5.06 <math>\pm</math> 1.59</b>	<b>3.18</b>	-4.13 $\pm$ 1.73	-2.92 $\pm$ 1.26

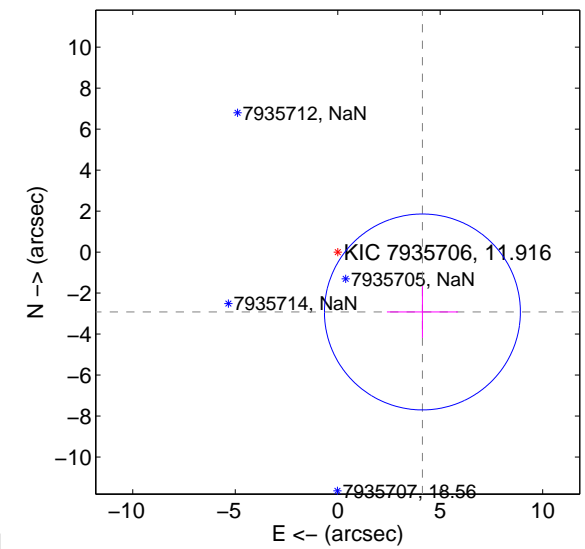
**There is no PRF-fit offset from OOT-fit**



**There is no PRF-fit offset from KIC**

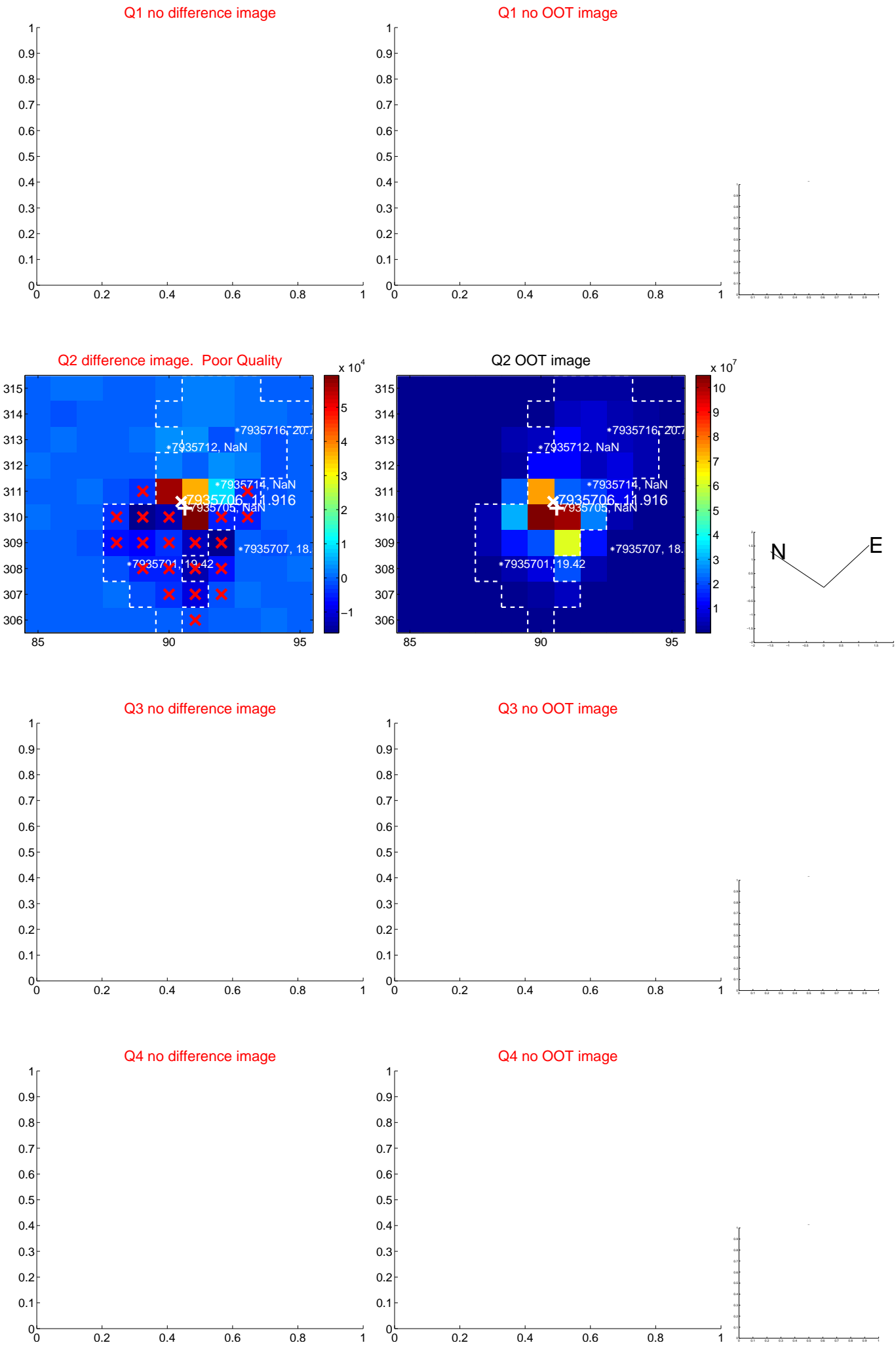


offset from photometric centroids



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.



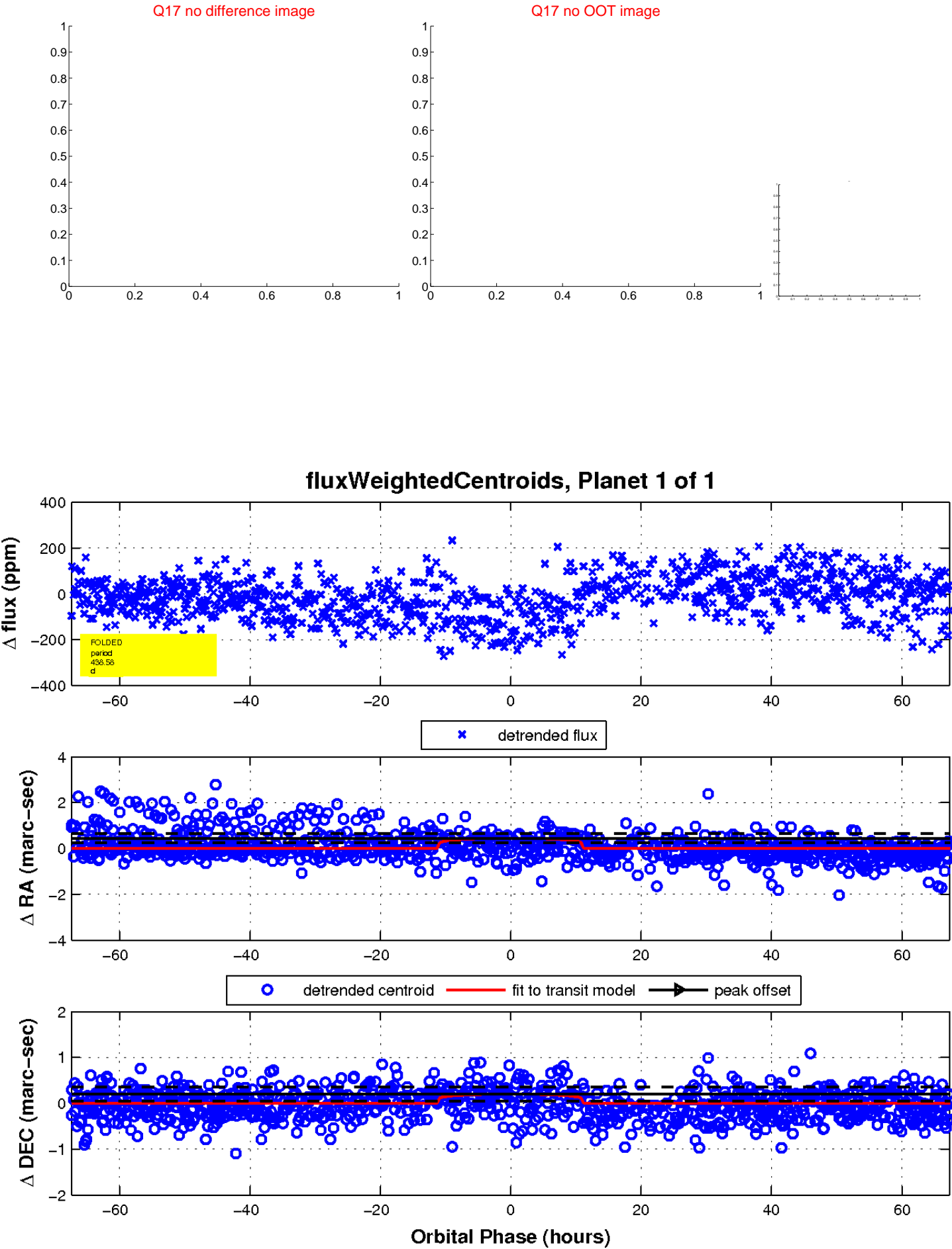
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

