

# KIC 011308764

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011308764-01	OBS	No	548.852783	134.393853	58.8	21.209	7.8	4.9	0.88	5360	0.77	0.39

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011308764-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

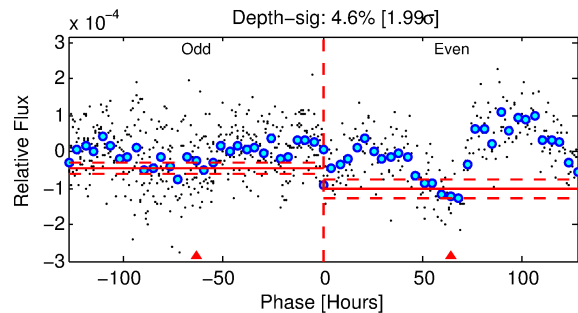
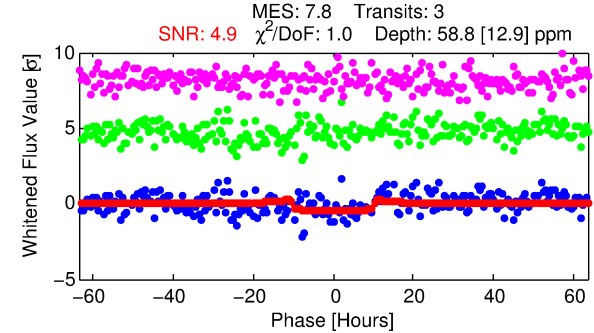
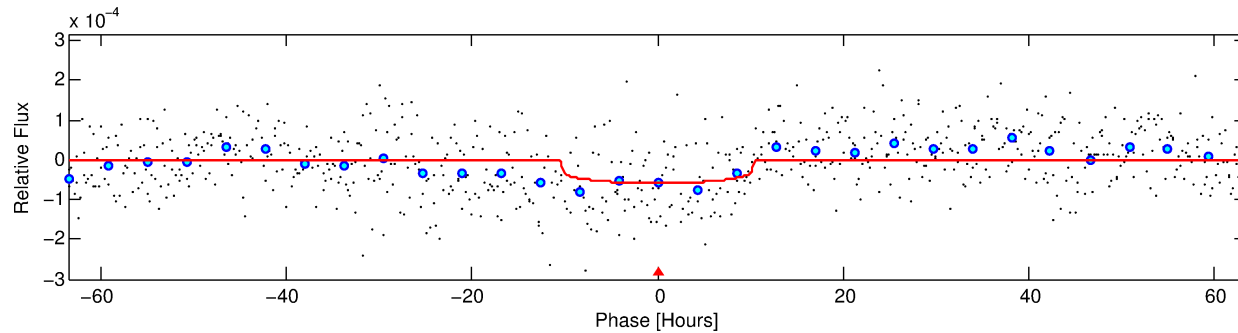
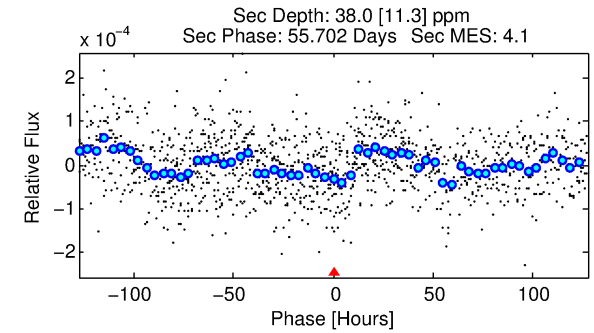
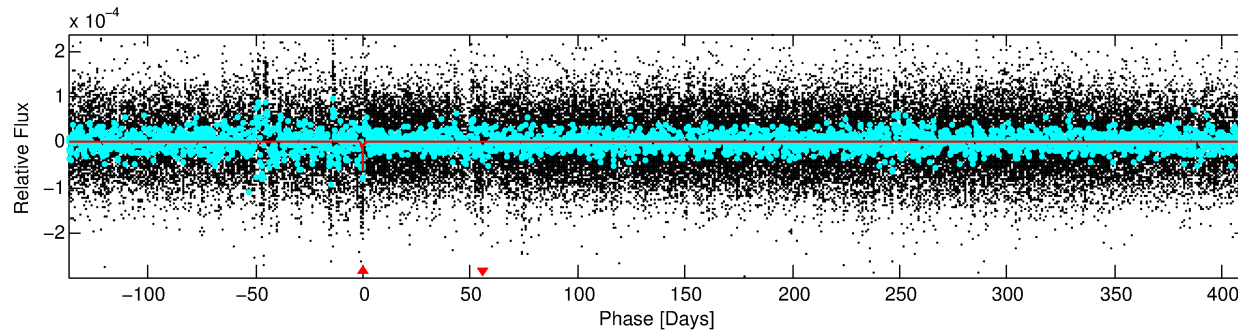
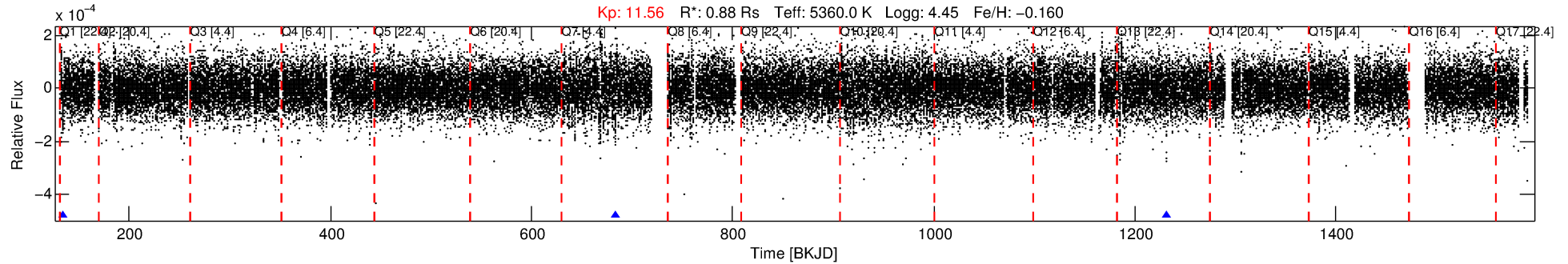
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011308764-01

No Significant Match Found

# DV One-Page Summary

KIC: 11308764 Candidate: 1 of 1 Period: 548.853 d



## DV Fit Results:

Period = 548.85278 [0.02967] d  
Epoch = 134.3939 [0.0300] BKJD  
Rp/R\* = 0.0080 [0.0027]  
a/R\* = 110.01 [146.57]  
b = 0.84 [0.47]  
Seff = 0.39 [0.10]  
Teq = 201 [12] K  
Rp = 0.77 [0.28] Re  
a = 1.2115 [0.1736] AU  
Ag = 52247.77 [40193.22] [1.30σ]  
Teffp = 4700 [875] K [5.14σ]

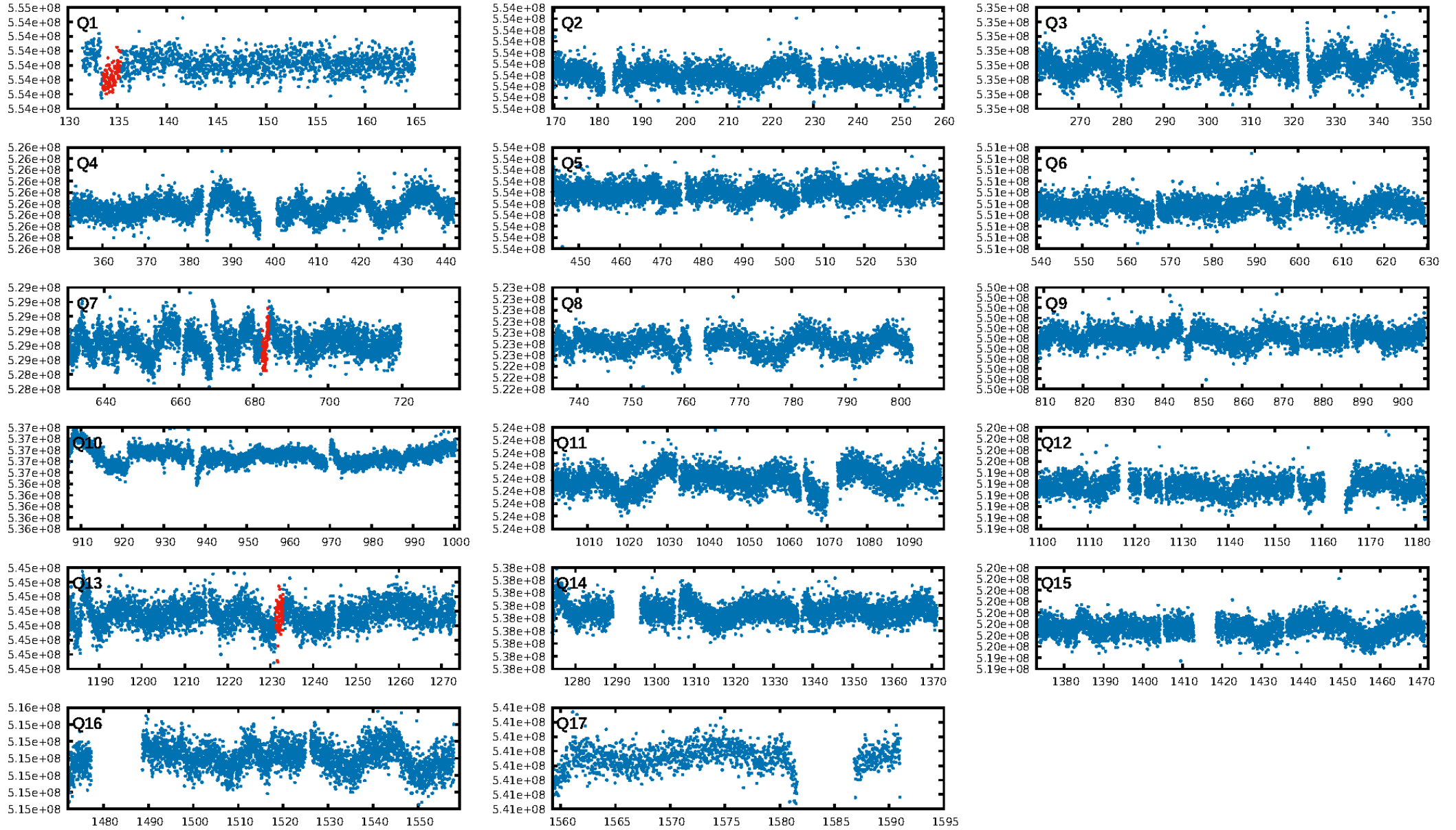
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 1.7%  
ModelChiSquareGof-sig: 99.4%  
Bootstrap-pfa: 9.77e-09  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: -5.85  
Centroid-sig: 0.3%  
Centroid-so: 6.205 arcsec [2.02σ]  
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 [2/2]

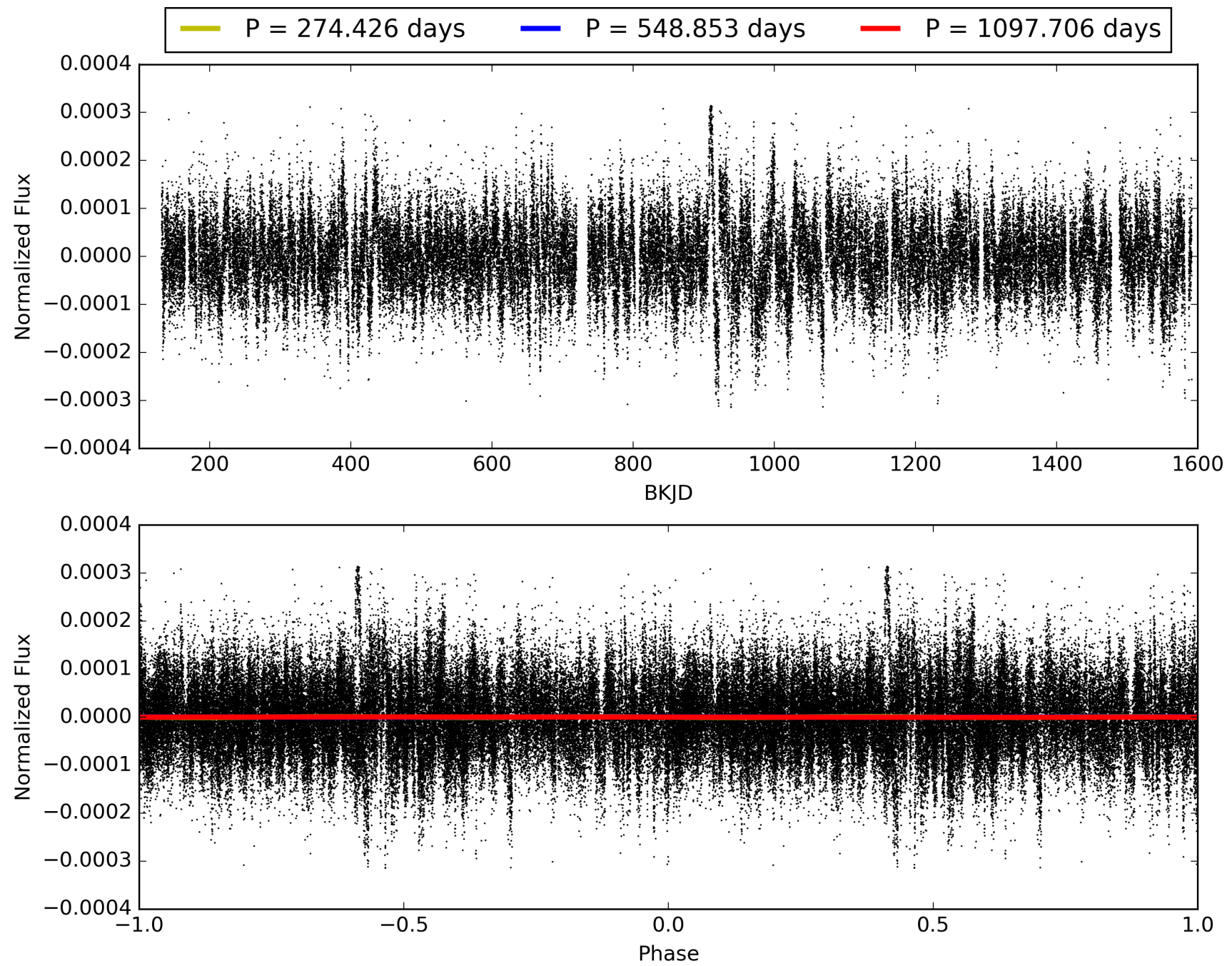
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:23:27 Z

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

# TCE 011308764-01, PDC Light Curves

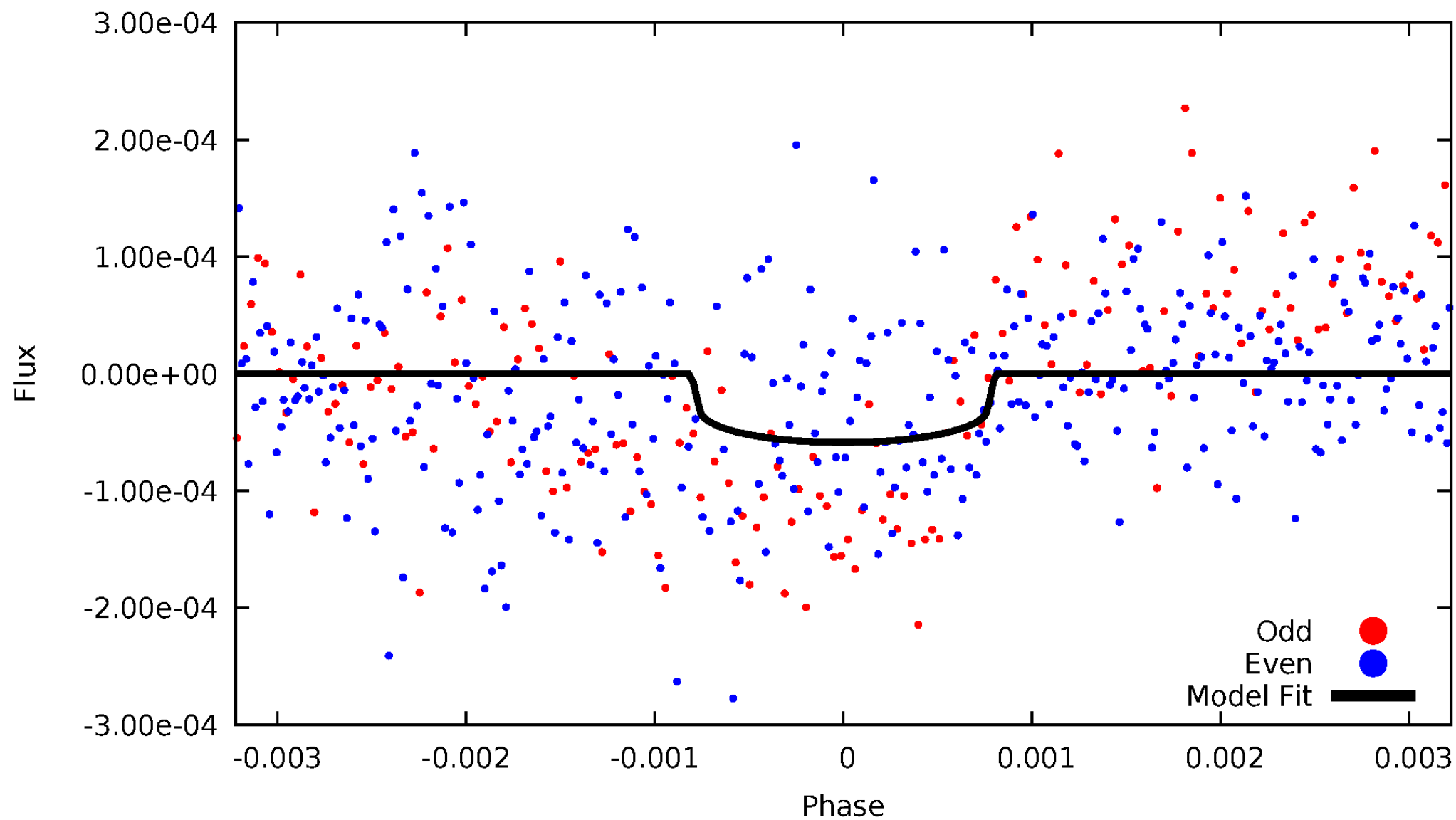


# TCE 011308764-01



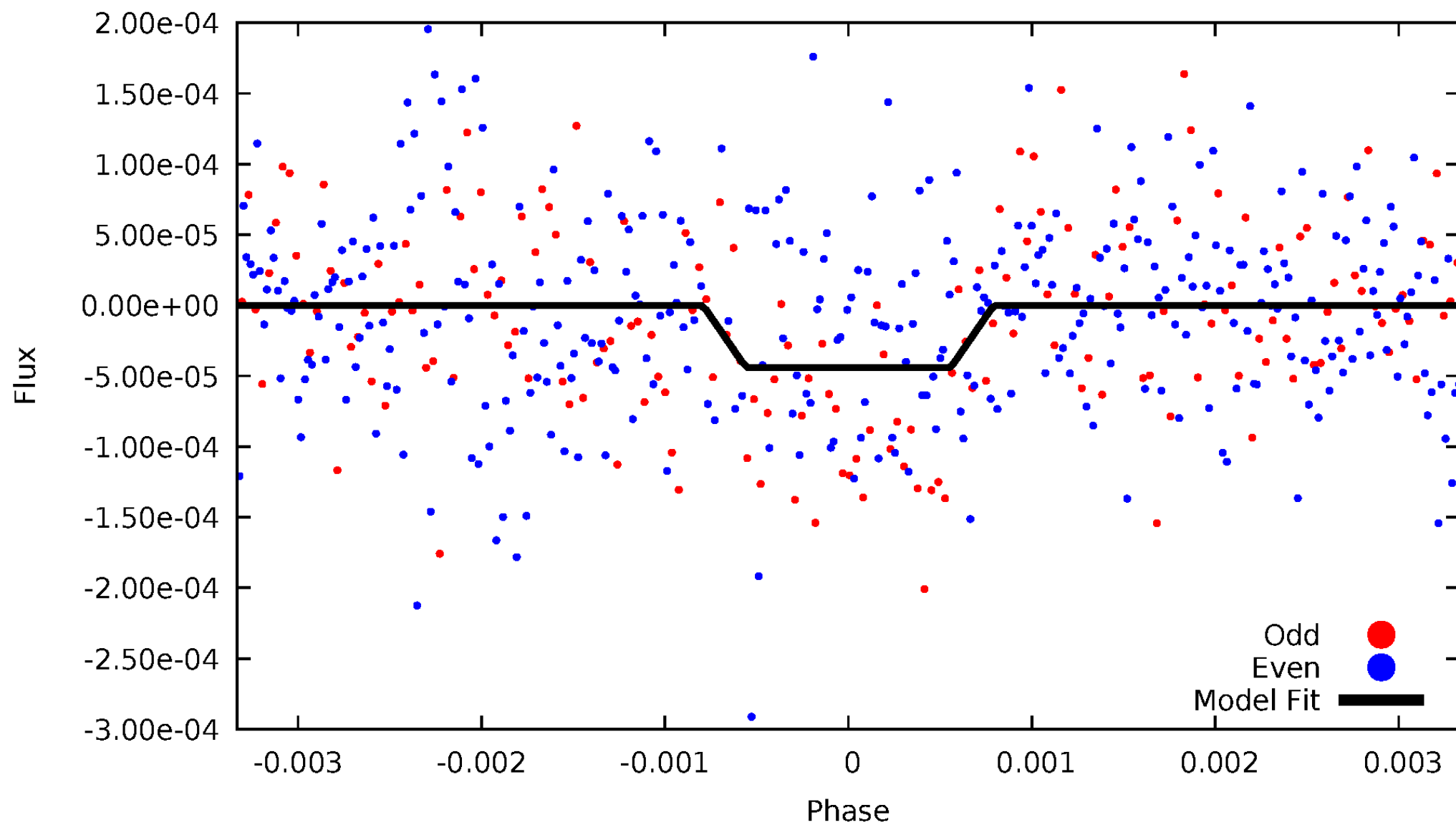
# DV Odd/Even

TCE 011308764-01



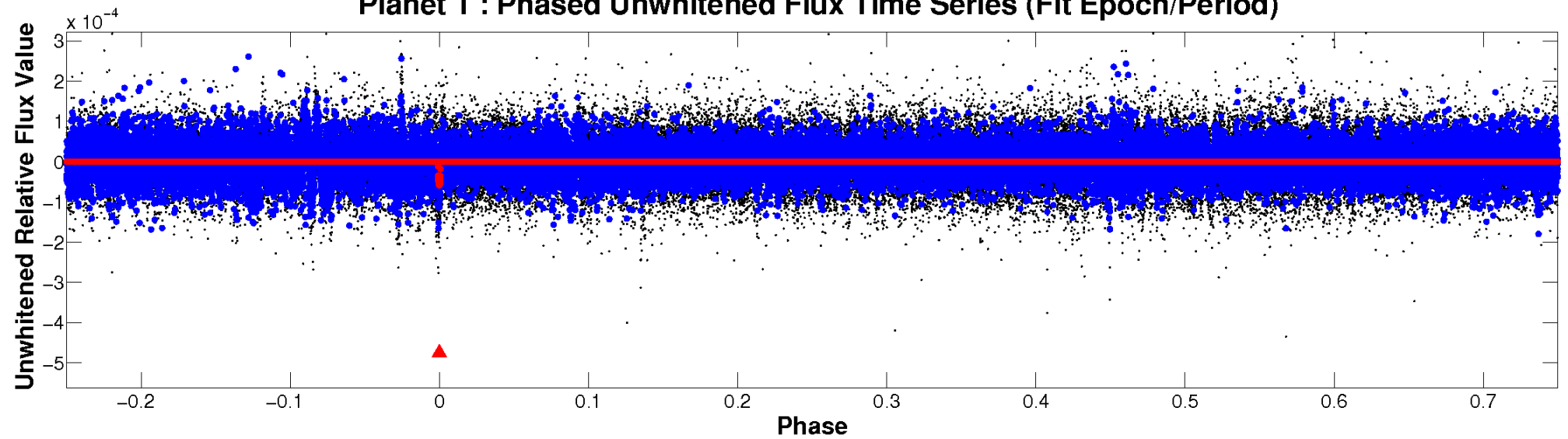
# ALT Odd/Even

TCE 011308764-01

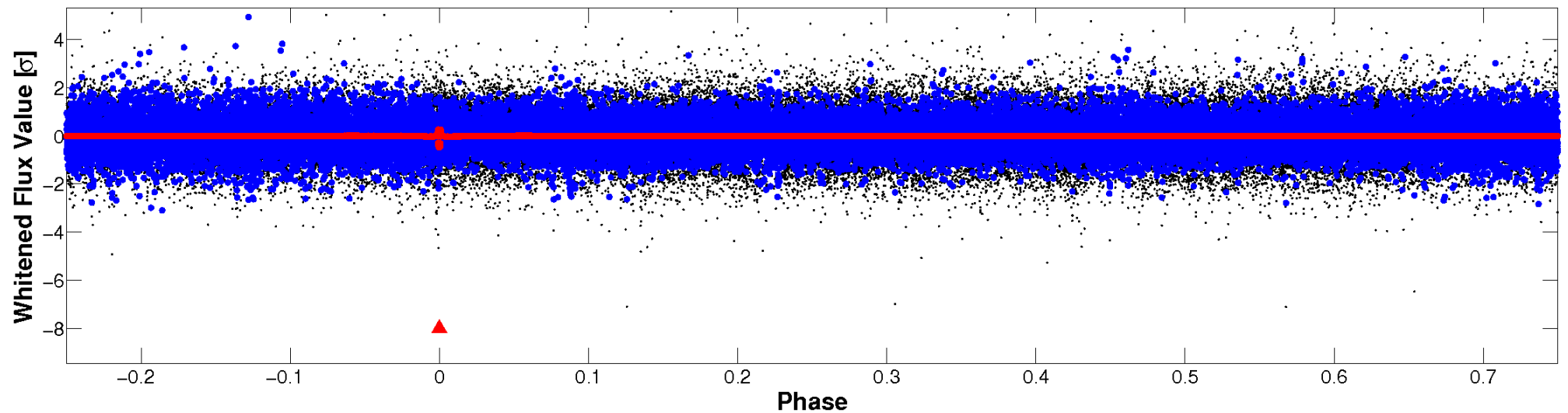


# Non-Whitened Vs. Whitened Light Curve

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



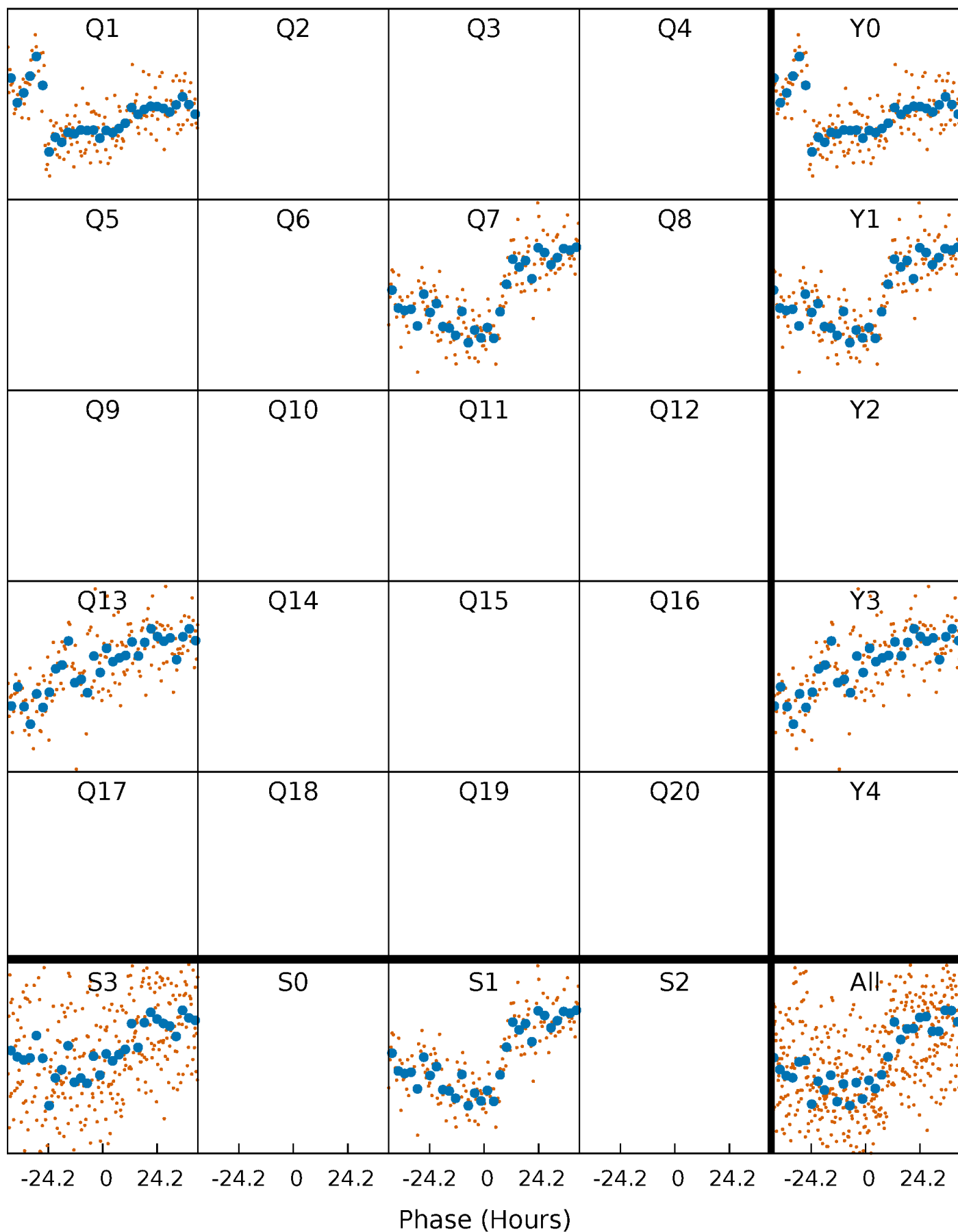
Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

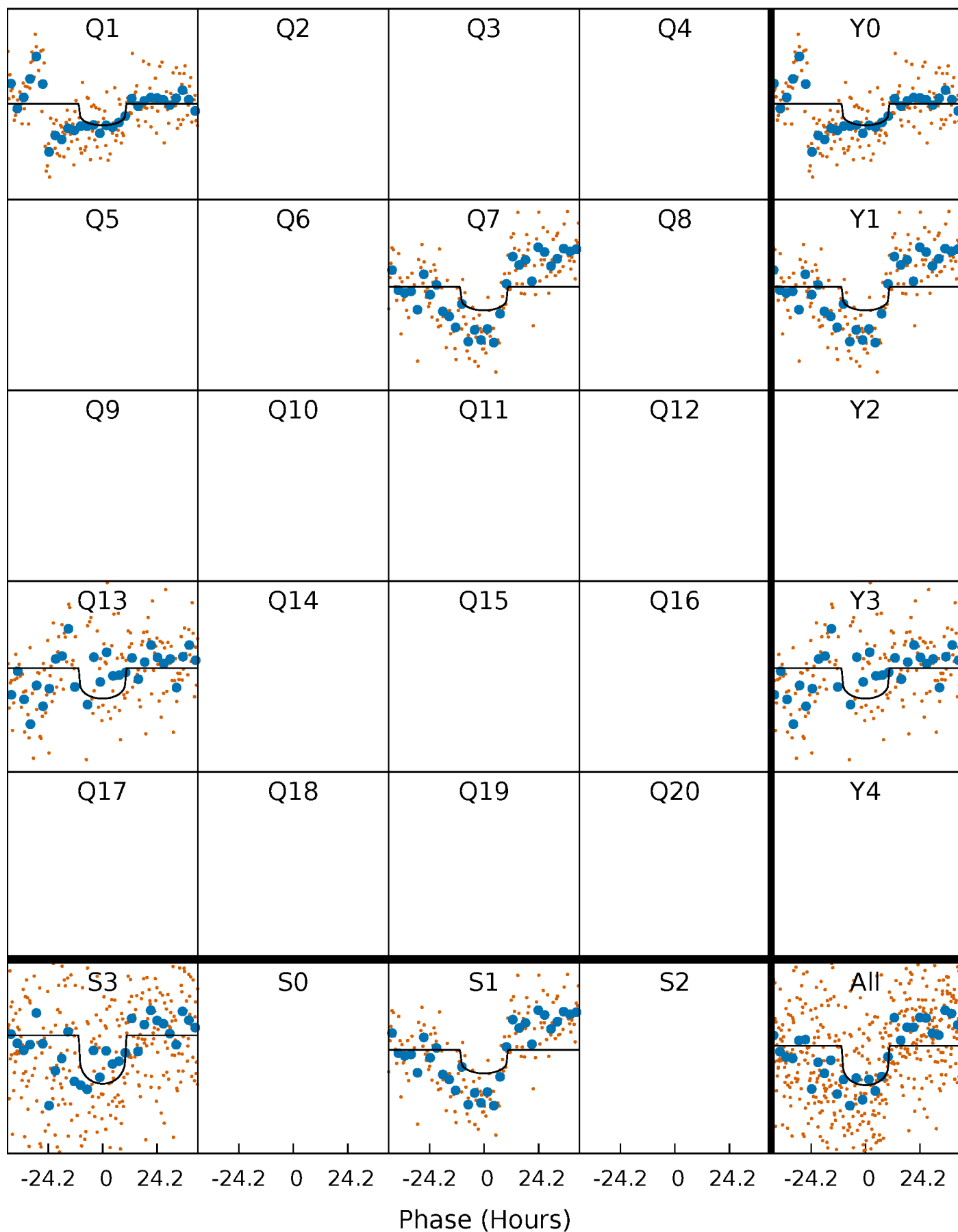
TCE 011308764-01 P=548.852783 Days  $T_0=134.393853$  (BKJD)





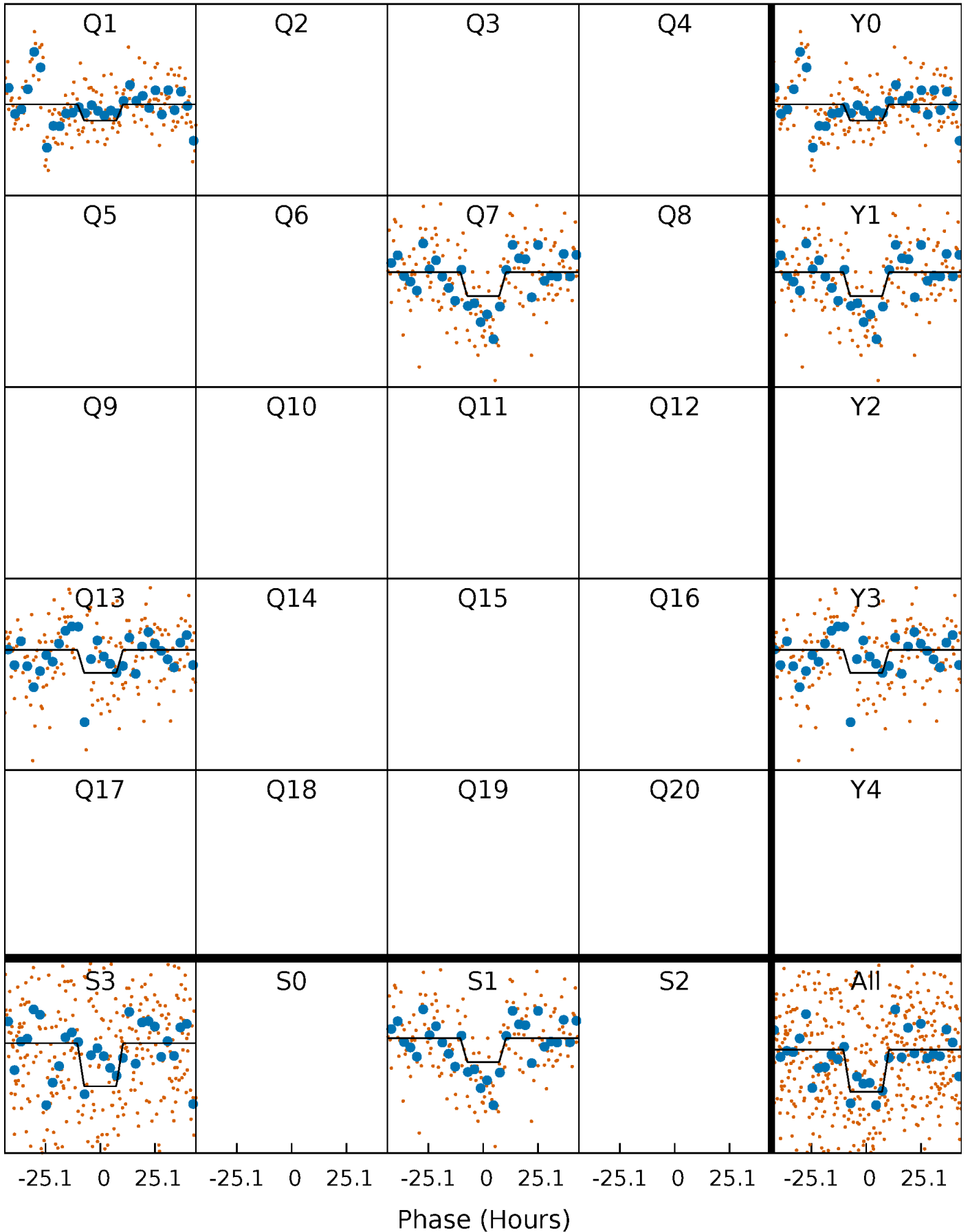
# DV Quarter-Phased Transit Curves

TCE 011308764-01 P=548.852783 Days  $T_0=134.393853$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

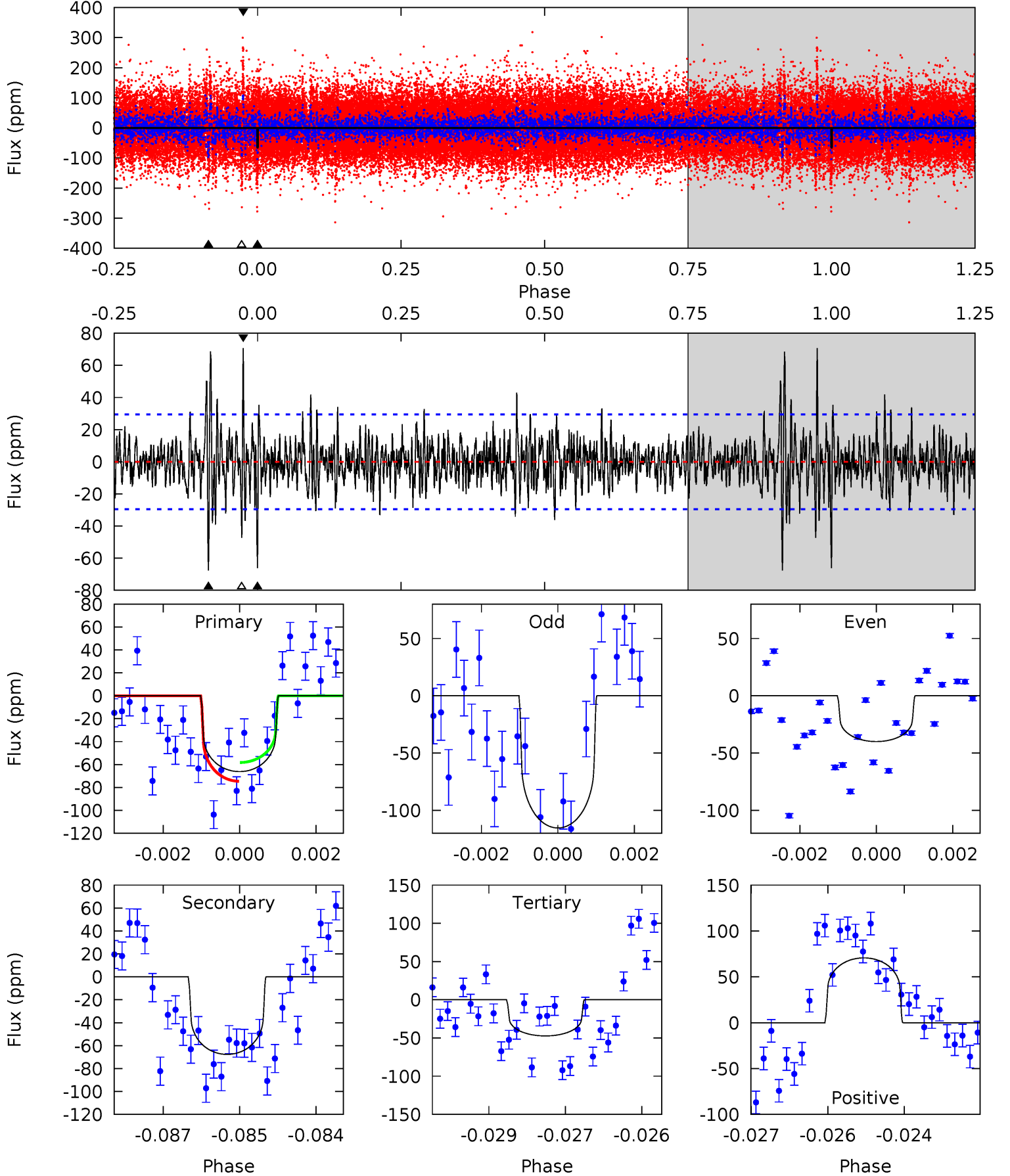
TCE 011308764-01 P=548.831799 Days  $T_0=134.404356$  (BKJD)



# DV Model-Shift Uniqueness Test

011308764-01, P = 548.852783 Days, E = 134.393853 Days

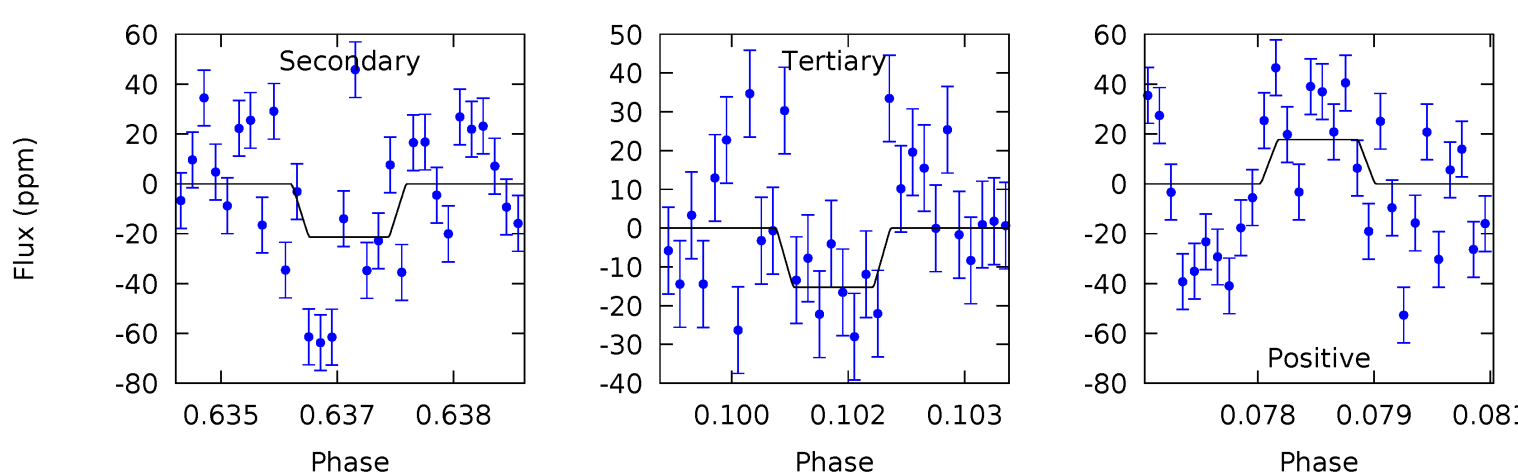
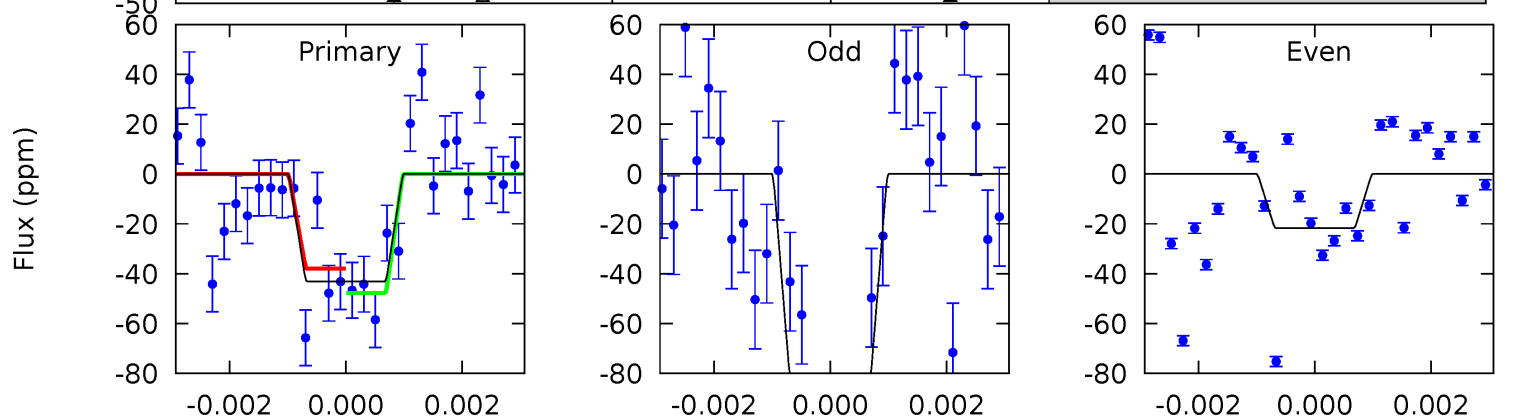
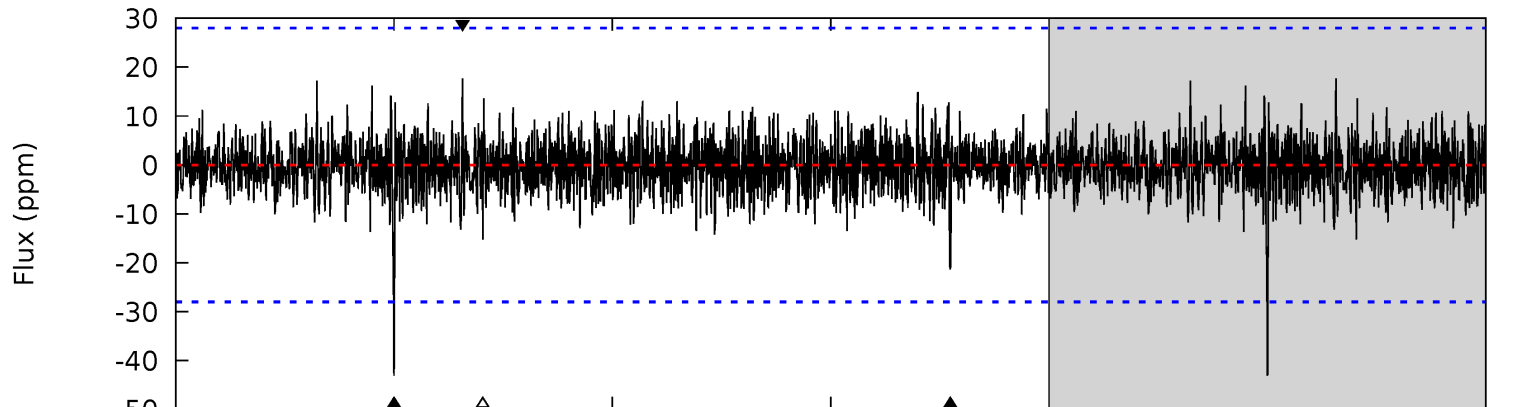
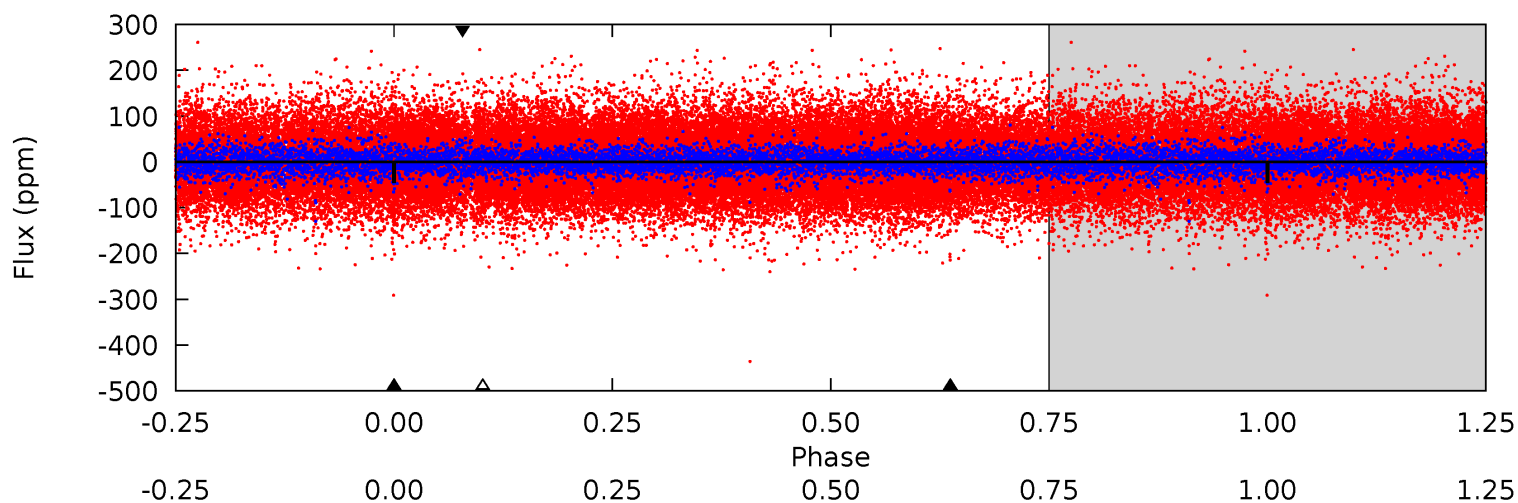
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	12.3	8.61	12.9	5.37	3.15	2.12	3.43	-0.81	3.70	-0.55	6.54	0.93	0.51	1.49



# Alt Model-Shift Uniqueness Test

011308764-01,  $P = 548.831799$  Days,  $E = 134.404356$  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
8.26	4.10	2.92	3.40	5.37	3.15	0.85	5.34	4.86	1.18	0.70	5.63	1.61	0.29	0.94



### Stellar Parameters For KIC 011308764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5360^{+143}_{-143}$	$4.449^{+0.127}_{-0.115}$	$-0.160^{+0.300}_{-0.300}$	$0.876^{+0.138}_{-0.113}$	$0.787^{+0.110}_{-0.063}$	$1.650^{+0.814}_{-0.544}$
	+3%/-3%	+3%/-3%	+188%/-188%	+16%/-13%	+14%/-8%	+49%/-33%
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 011308764-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-68 \pm 5$	$0.76^{+0.29}_{-0.26}$	$280^{+14}_{-13}$	$5421^{+1321}_{-659}$	$97158^{+131992}_{-47368}$
Alt.	$-21 \pm 5$	$0.66^{+0.29}_{-0.27}$	$280^{+15}_{-12}$	$4504^{+1110}_{-564}$	$39842^{+75510}_{-20811}$

$T_{max}$  = 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

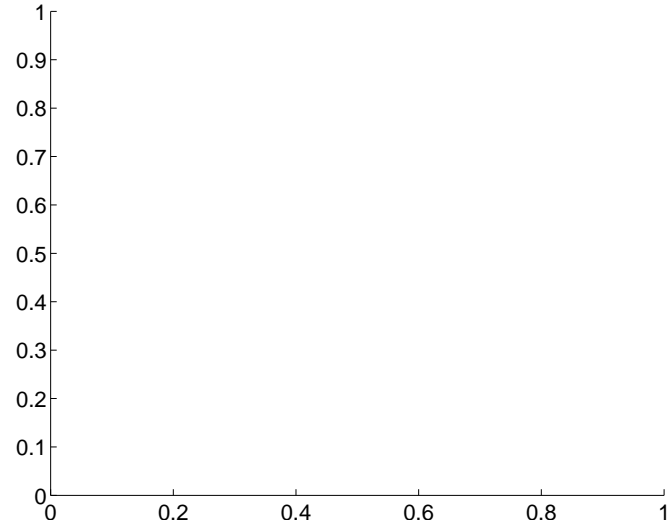
Supplemental centroid analysis for 011308764-01. **Kepler magnitude: 11.56.** Transit SNR 4.87

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

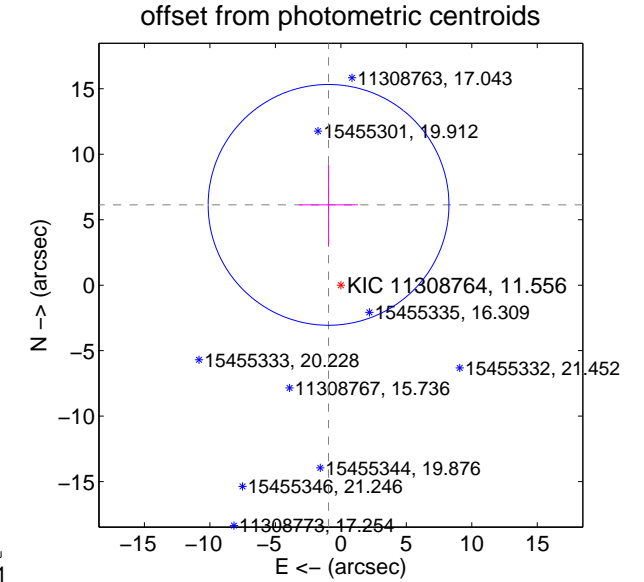
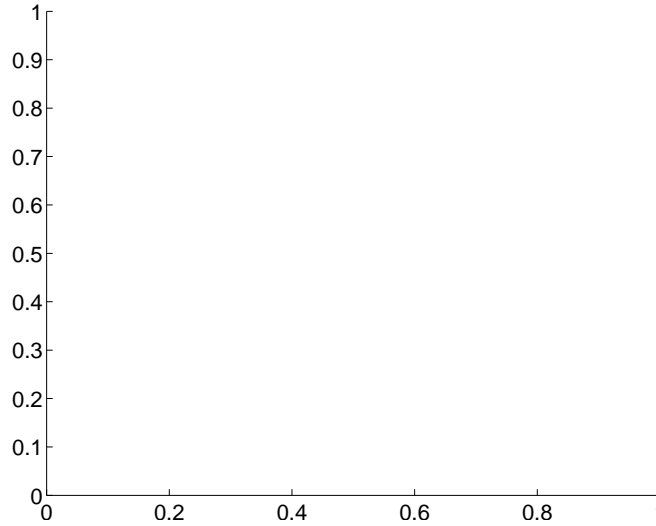
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$6.20 \pm 3.07$	2.02	$0.94 \pm 2.24$	$6.13 \pm 3.08$

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

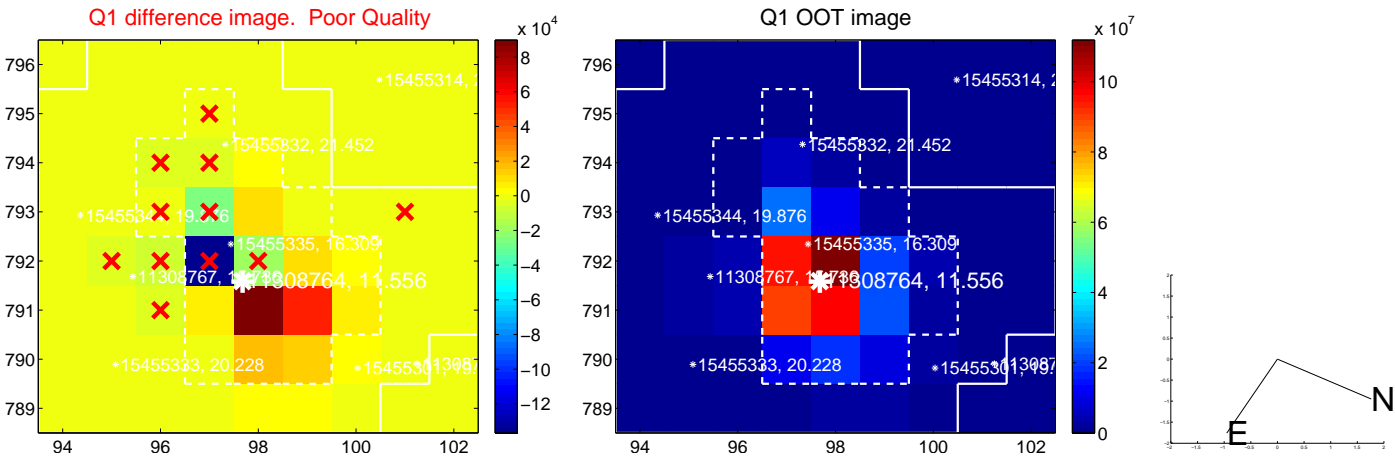


**There is no PRF-fit offset from KIC**



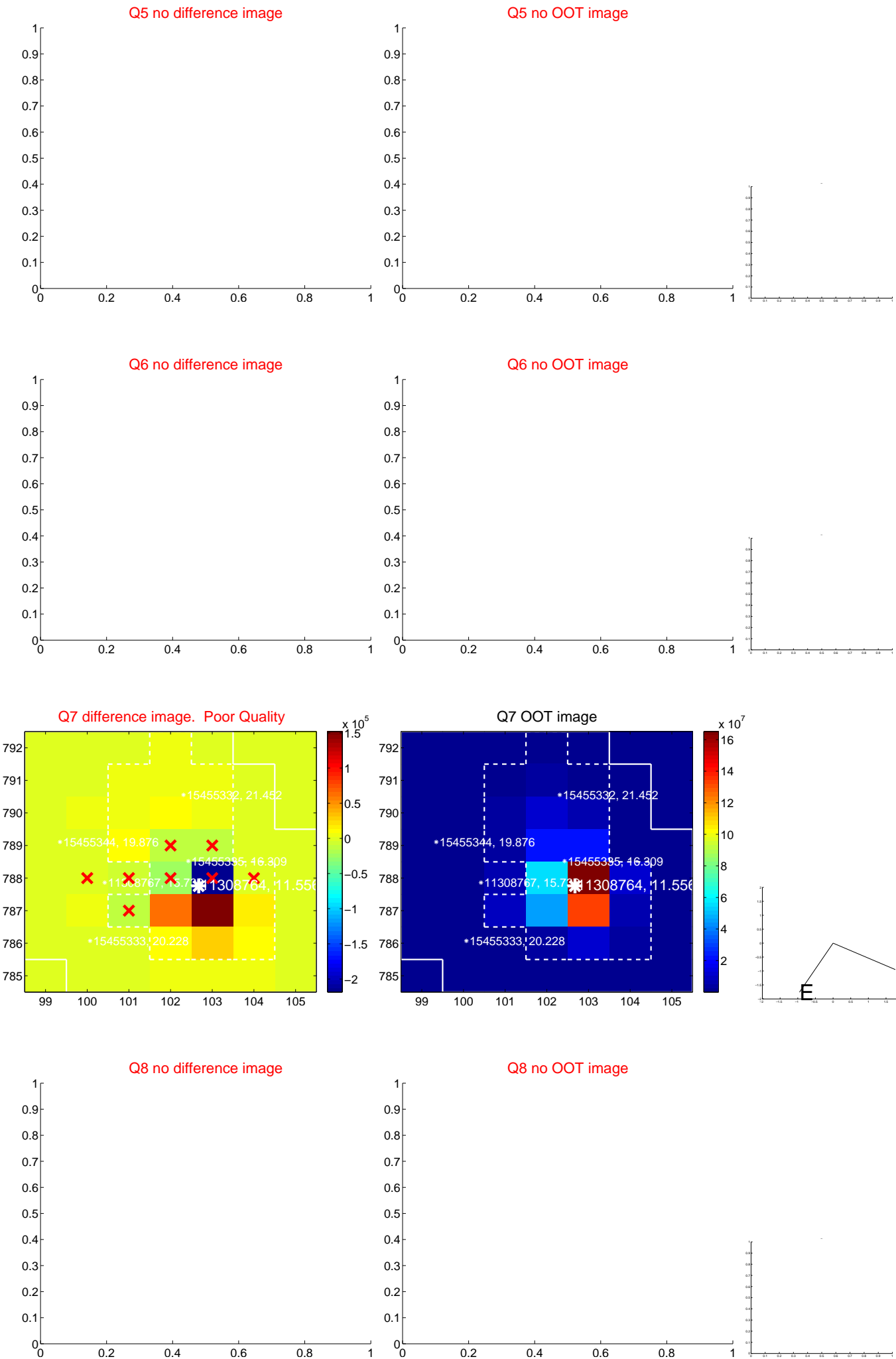
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



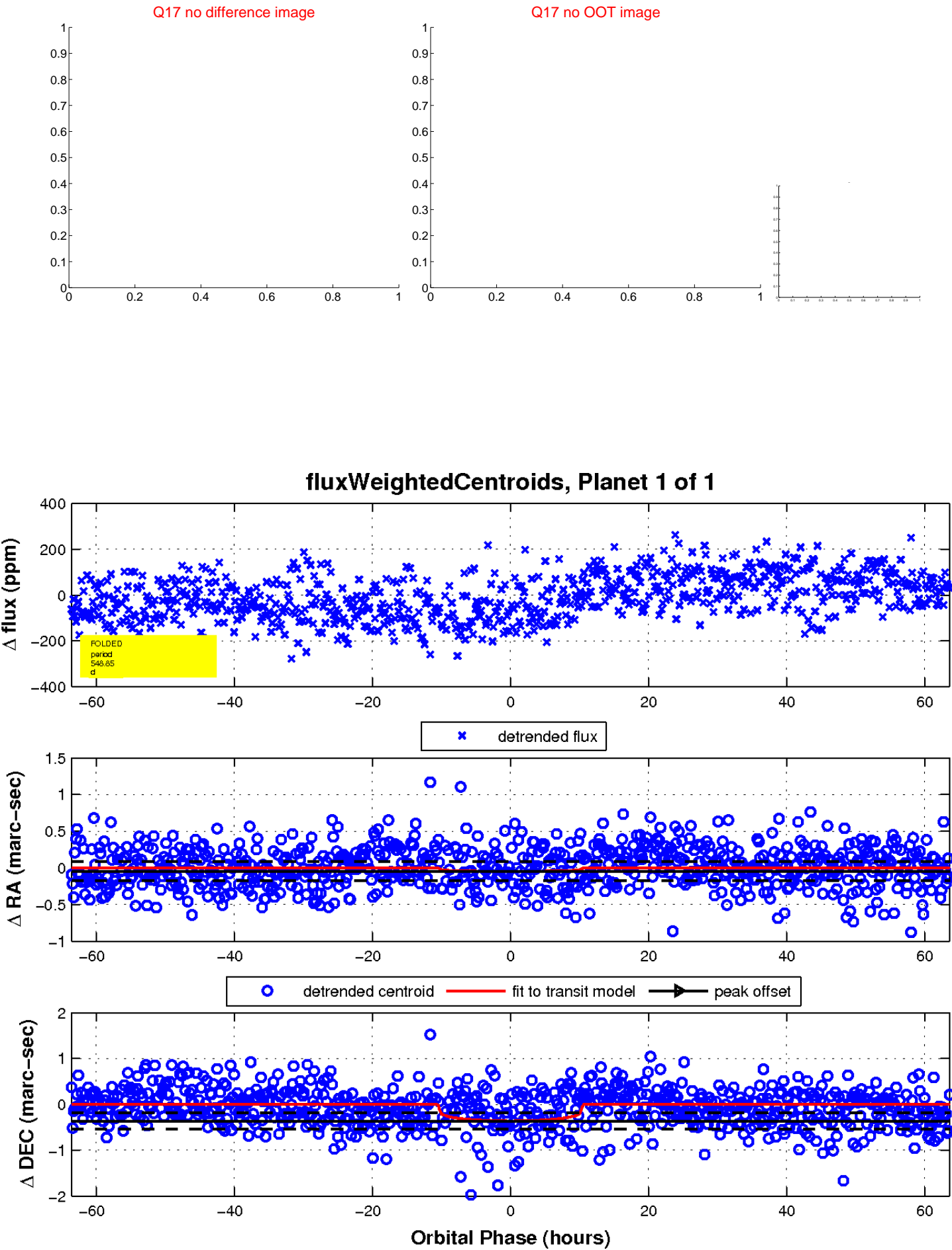
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

