

# KIC 005881201

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005881201-01	OBS	No	248.875221	347.217943	1320.4	6.051	12.0	5.3	0.91	5941	3.42	1.54

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005881201-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

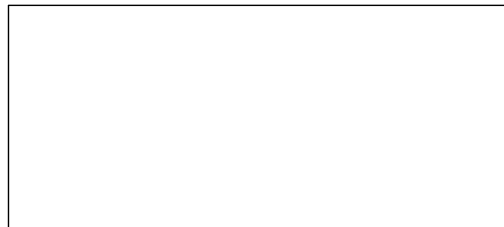
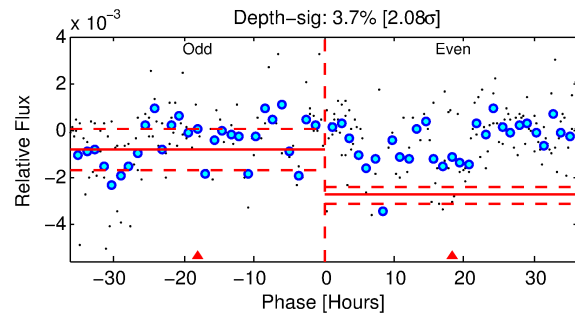
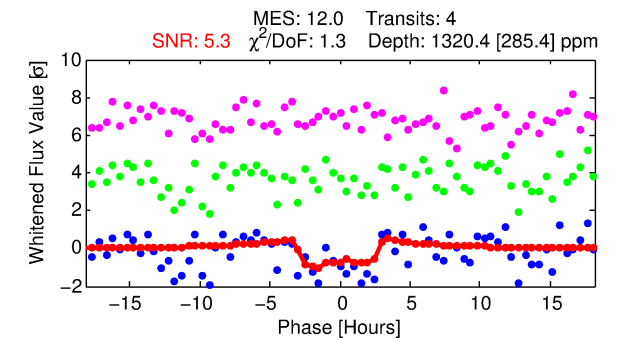
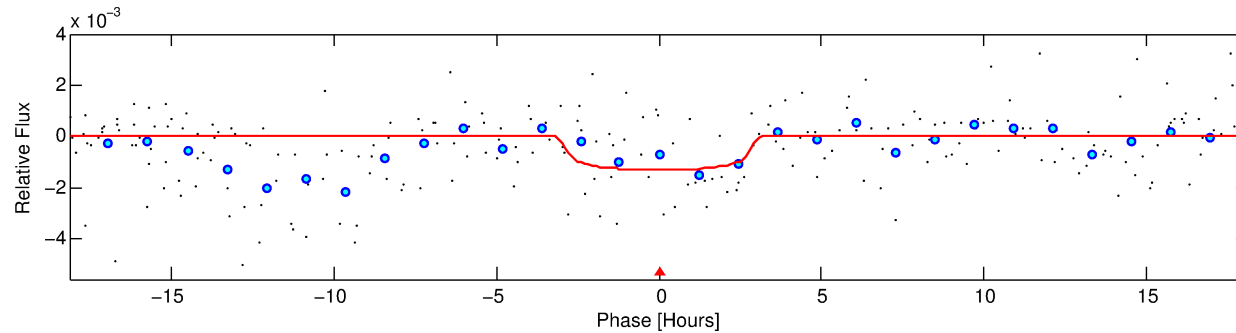
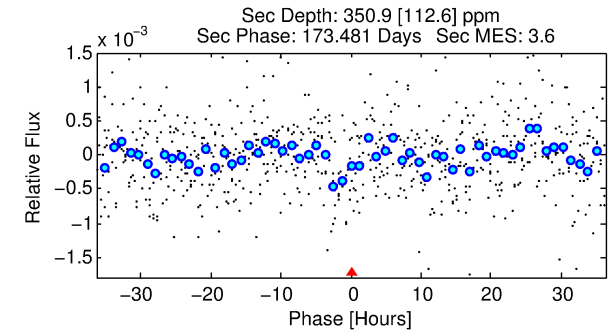
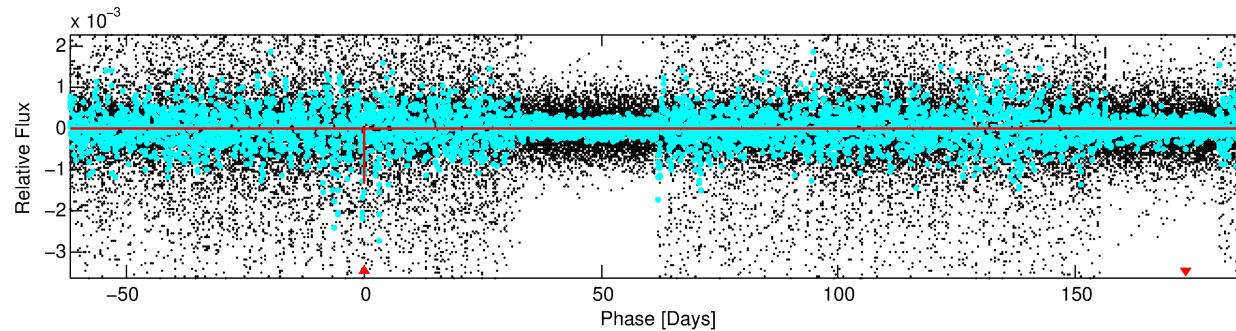
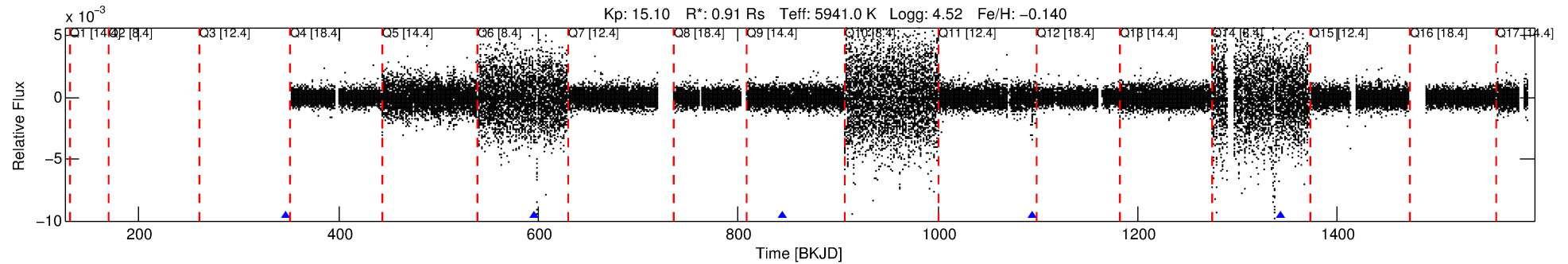
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005881201-01

No Significant Match Found

# DV One-Page Summary

KIC: 5881201 Candidate: 1 of 1 Period: 248.875 d



## DV Fit Results:

Period = 248.87522 [0.00963] d  
Epoch = 347.2179 [0.0269] BKJD  
Rp/R\* = 0.0344 [0.0355]  
a/R\* = 276.53 [1315.61]  
b = 0.54 [6.23]  
Seff = 1.54 [0.65]  
Teq = 284 [30] K  
Rp = 3.42 [3.68] Re  
a = 0.7745 [0.2060] AU  
Ag = 9912.44 [21068.70] [0.47σ]  
Teffp = 4385 [2294] K [1.79σ]

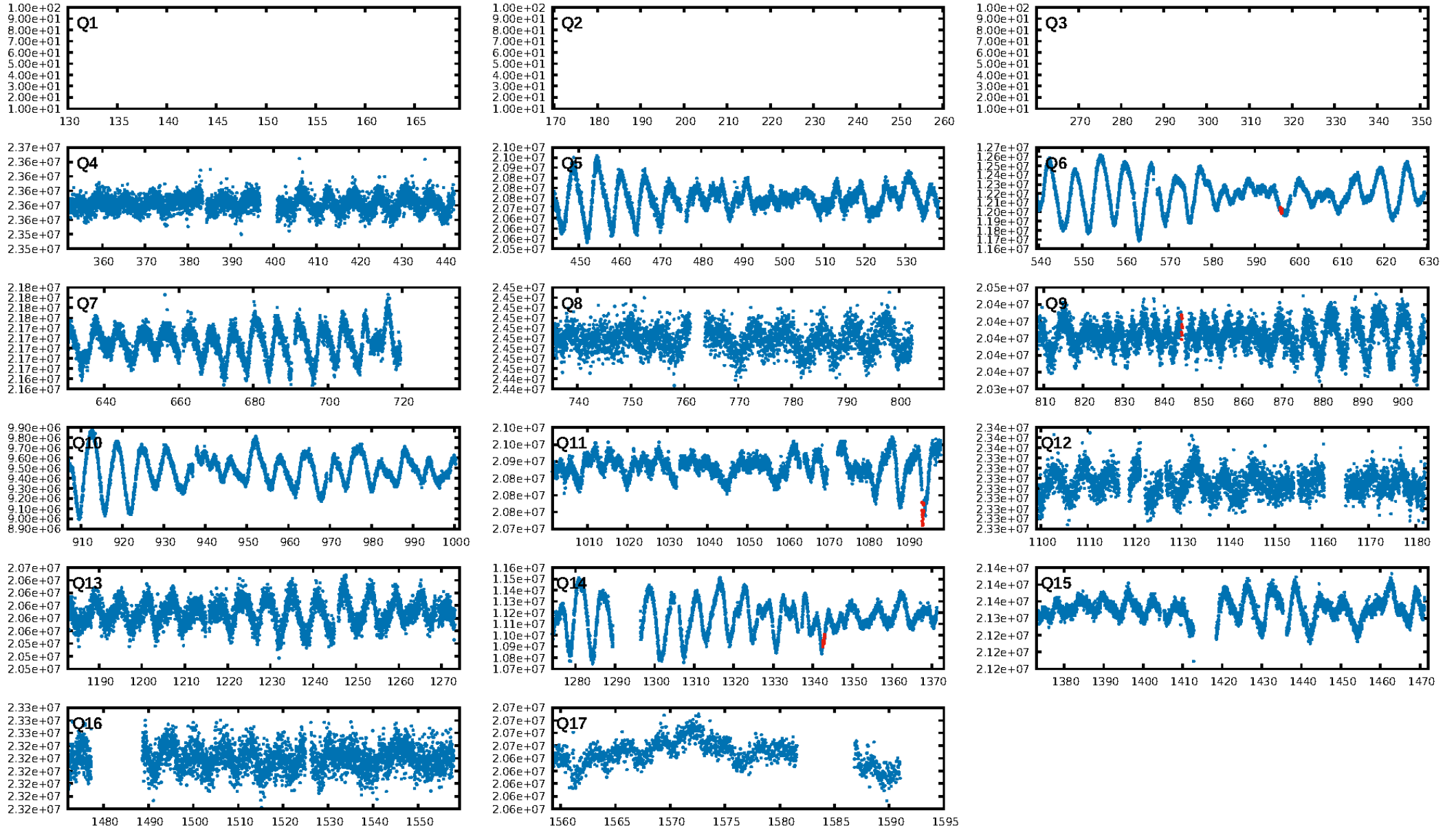
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 80.3%  
Bootstrap-pfa: 1.70e-13  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -3.58  
Centroid-sig: 66.3%  
Centroid-so: 3.913 arcsec [13.67σ]  
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]

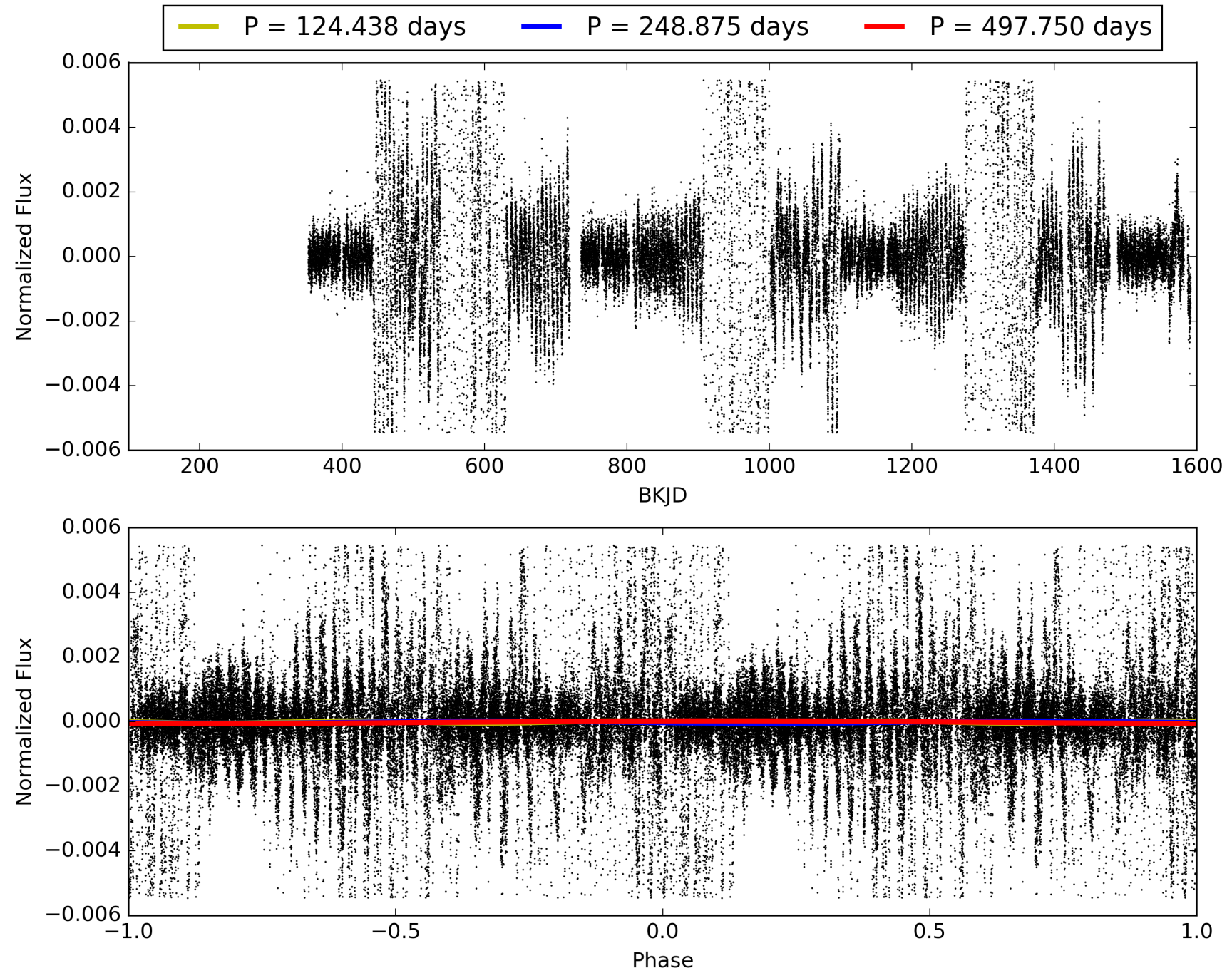
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:16:45 Z

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

# TCE 005881201-01, PDC Light Curves

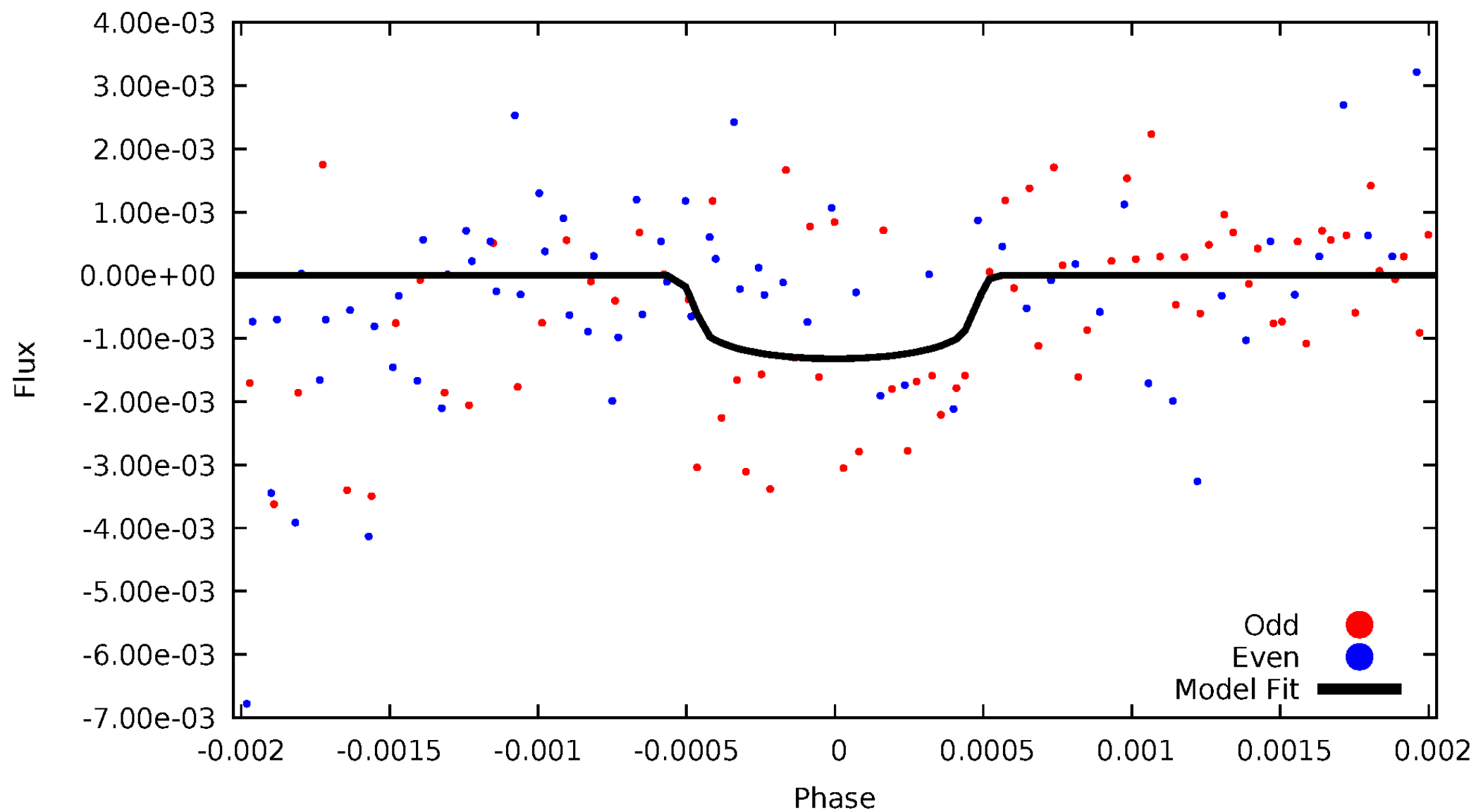


TCE 005881201-01



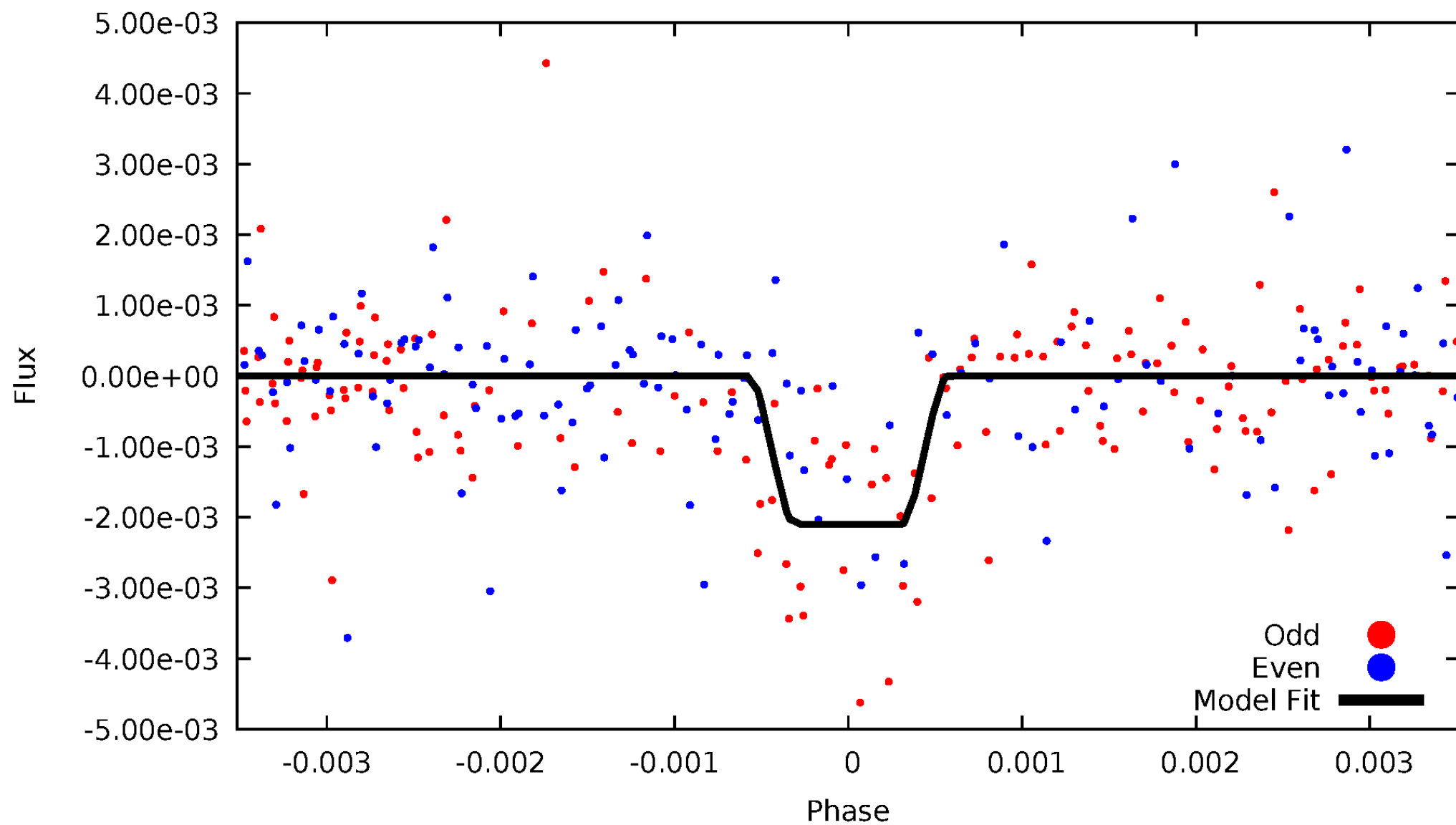
# DV Odd/Even

TCE 005881201-01



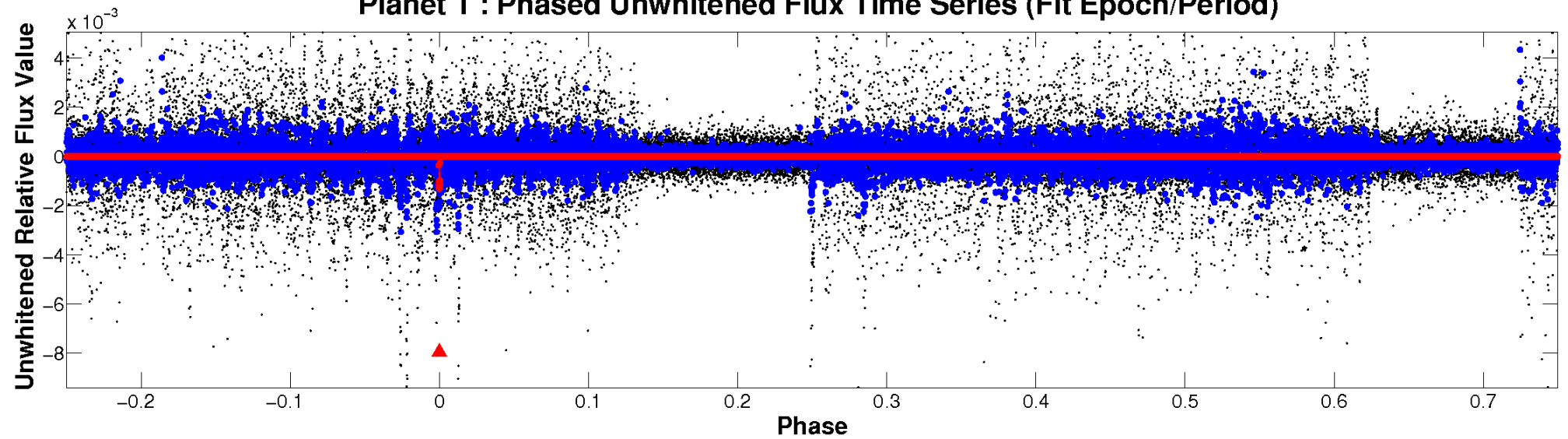
# ALT Odd/Even

TCE 005881201-01

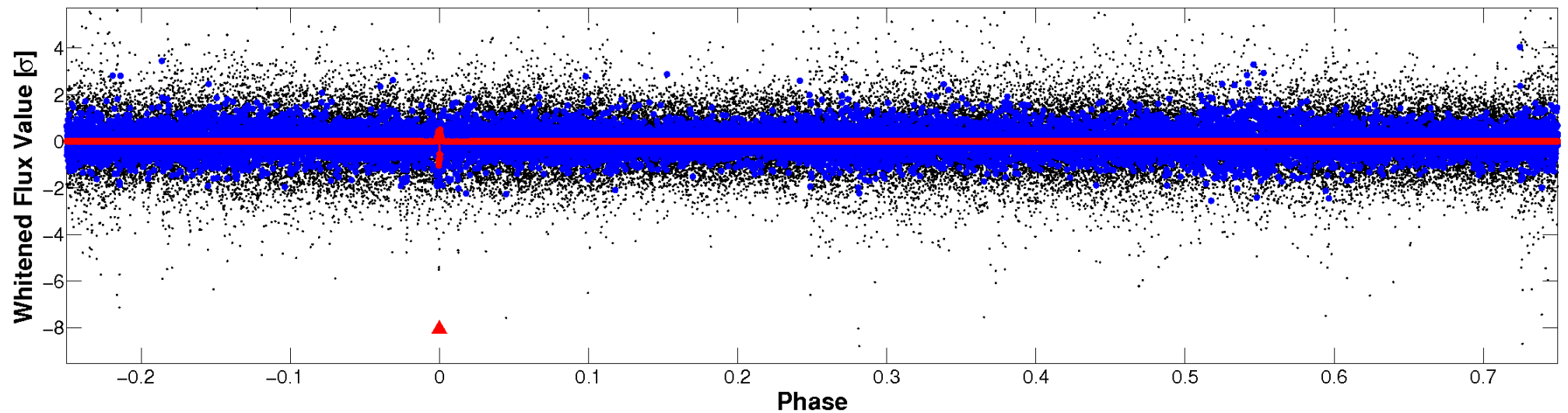


# Non-Whitened Vs. Whitened Light Curve

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



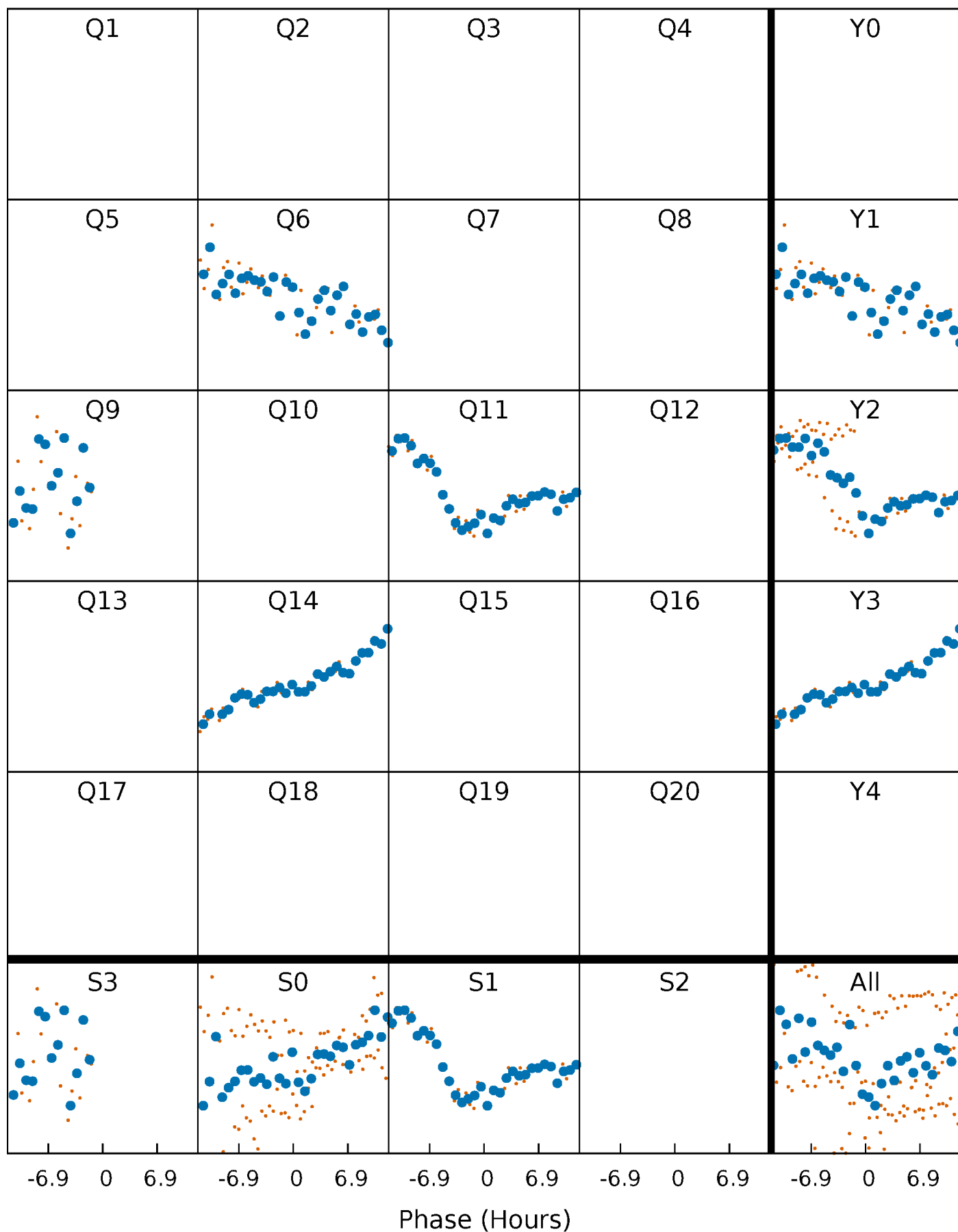
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

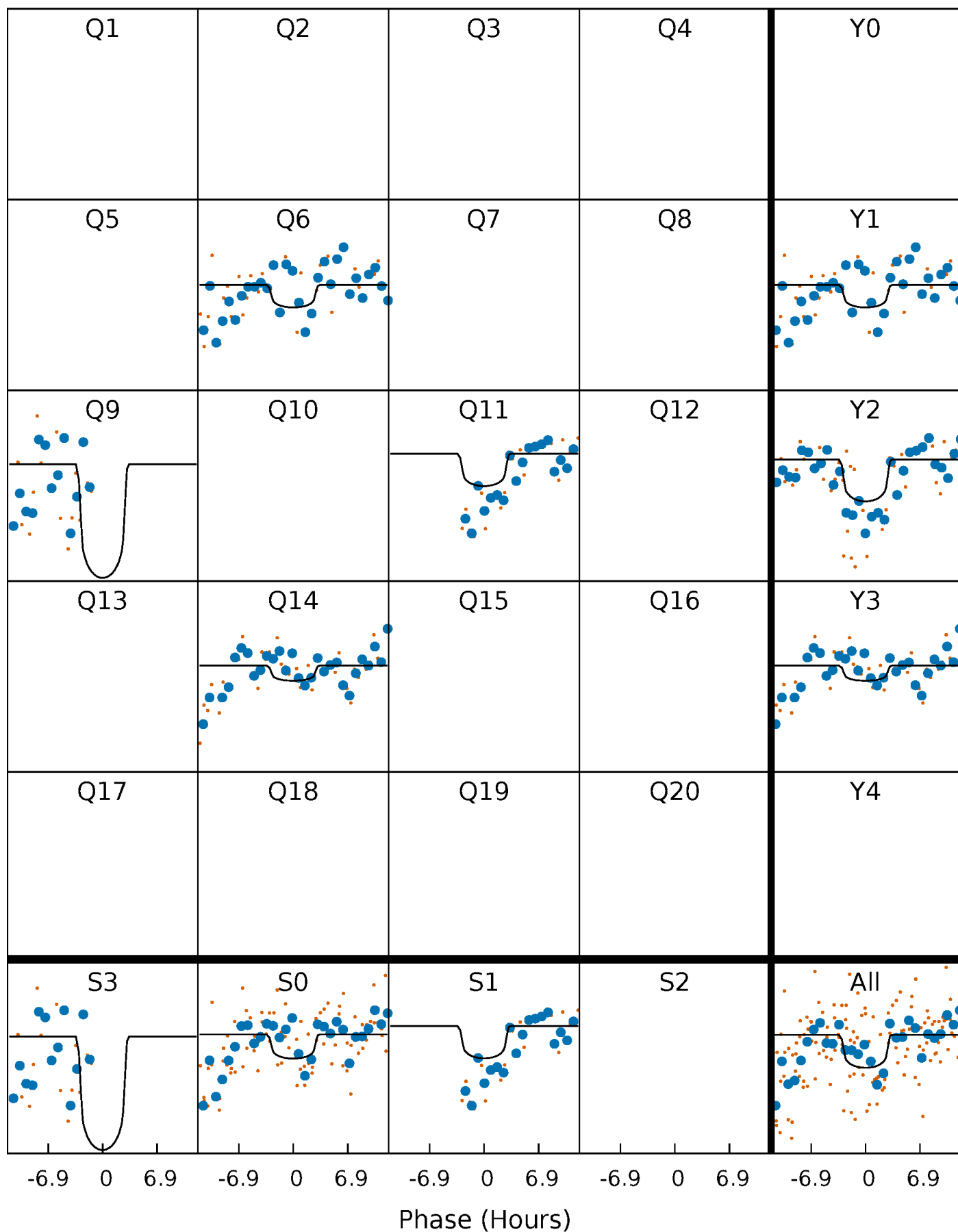
TCE 005881201-01 P=248.875221 Days  $T_0=347.217943$  (BKJD)





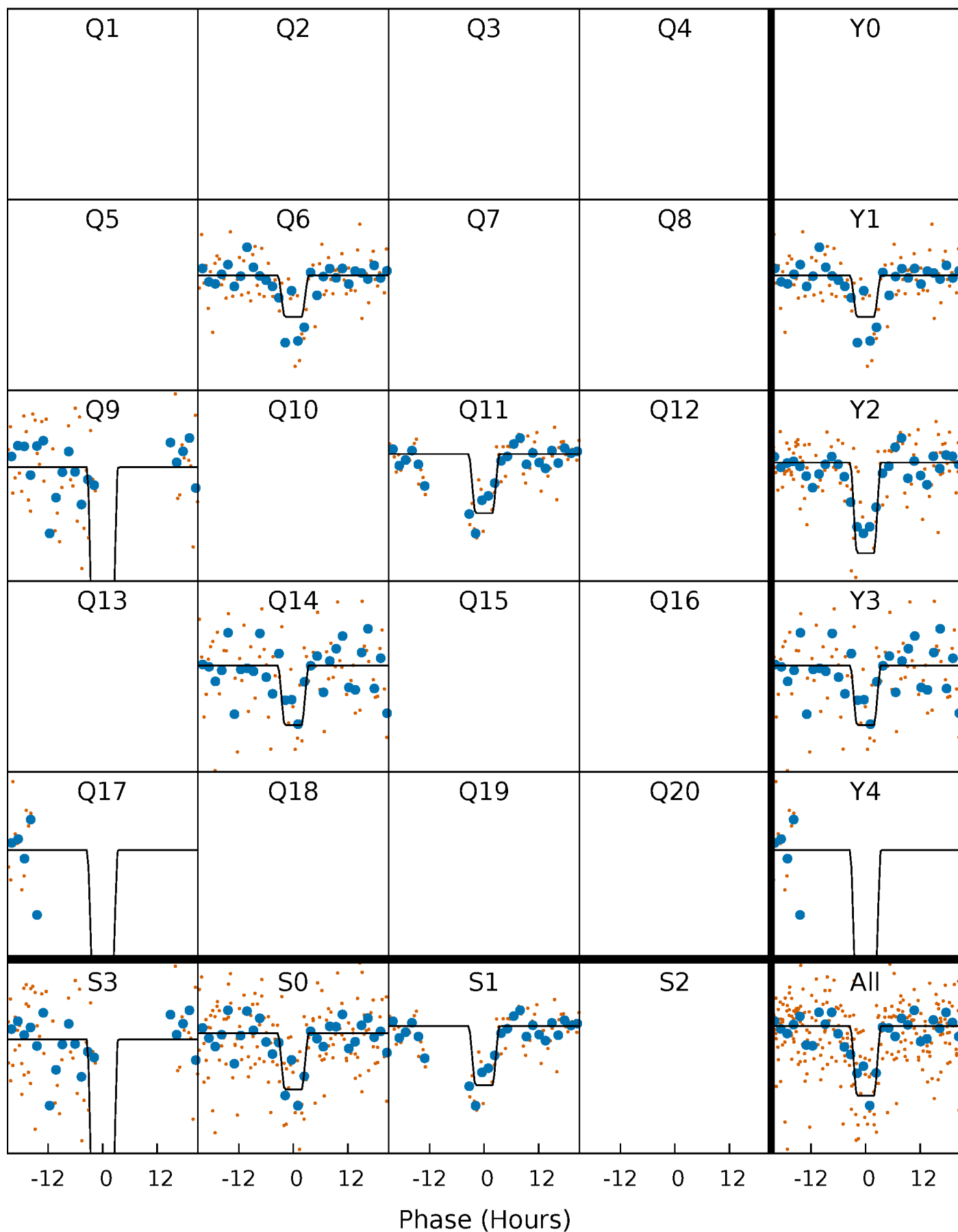
# DV Quarter-Phased Transit Curves

TCE 005881201-01 P=248.875221 Days  $T_0=347.217943$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

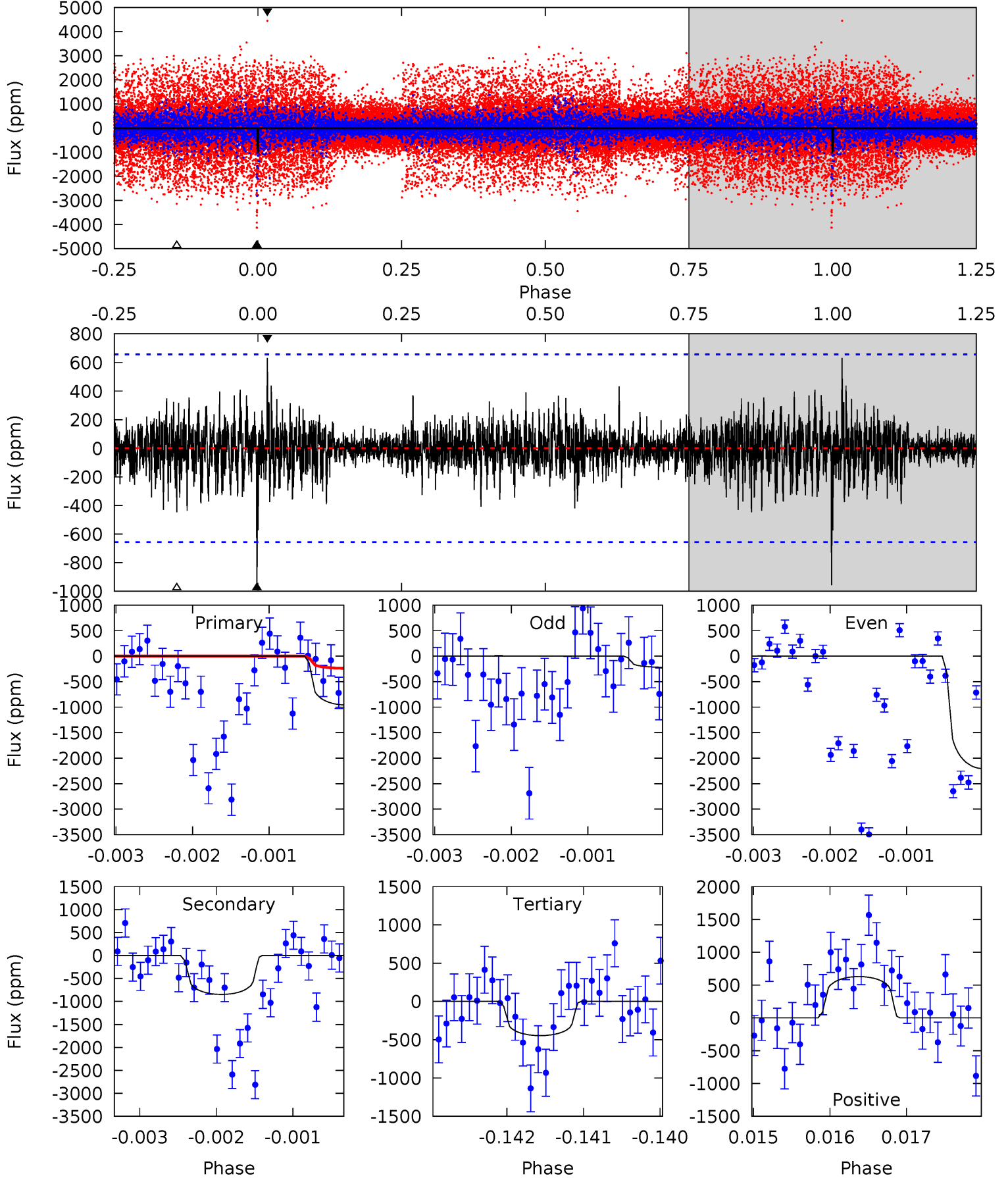
TCE 005881201-01 P=248.880761 Days  $T_0=347.215525$  (BKJD)



# DV Model-Shift Uniqueness Test

005881201-01, P = 248.875221 Days, E = 347.217943 Days

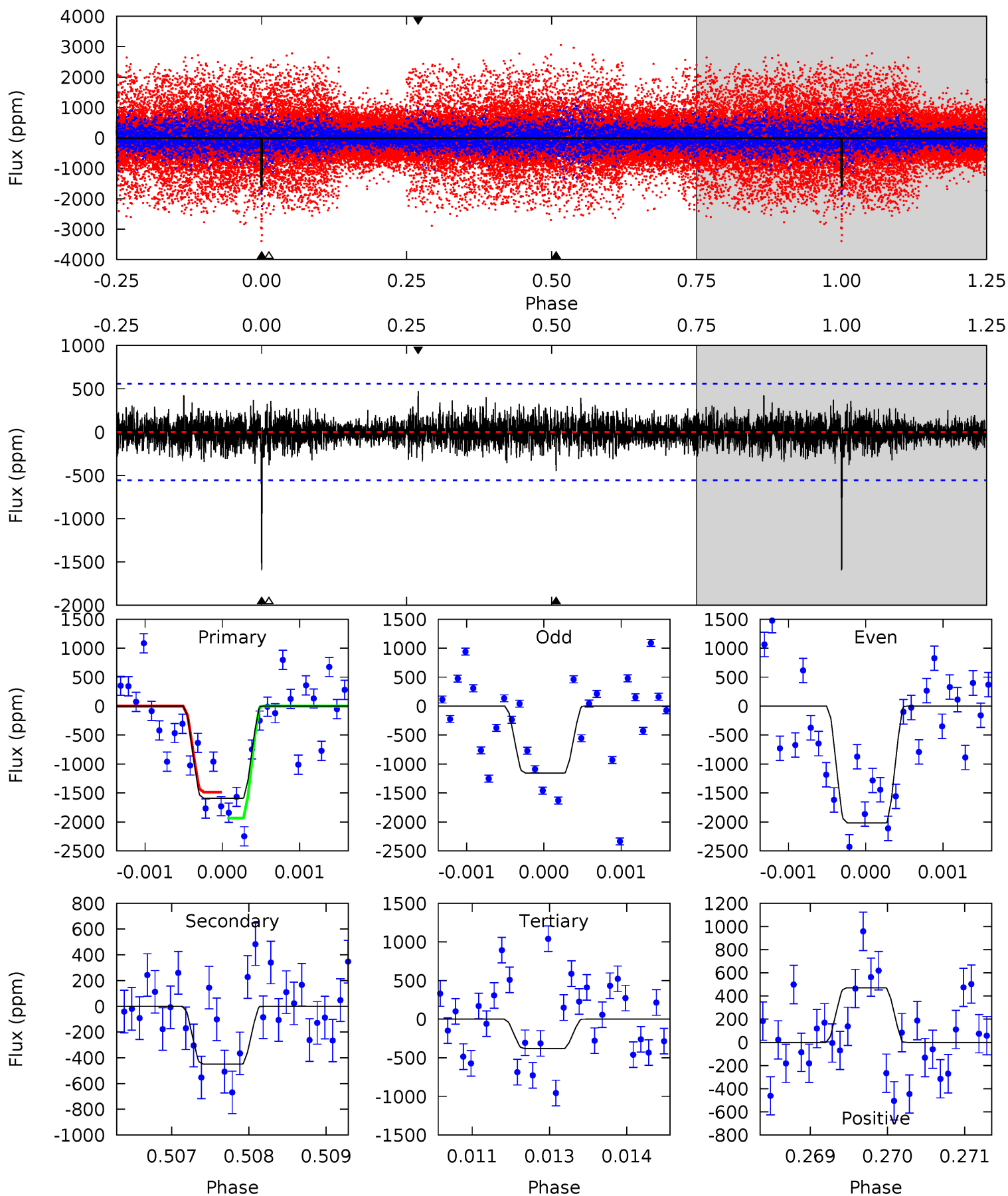
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	7.04	3.71	5.23	5.44	3.27	0.89	4.24	2.72	3.33	1.81	7.42	2.01	0.40	7.27



# Alt Model-Shift Uniqueness Test

005881201-01, P = 248.880761 Days, E = 347.215525 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
15.5	4.37	3.70	4.59	5.43	3.25	1.01	11.8	10.9	0.66	-0.22	4.19	0.90	0.23	2.23



### Stellar Parameters For KIC 005881201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5941^{+187}_{-208}$	$4.519^{+0.039}_{-0.221}$	$-0.140^{+0.300}_{-0.300}$	$0.911^{+0.280}_{-0.093}$	$1.001^{+0.122}_{-0.134}$	$1.865^{+0.404}_{-1.020}$
	+3%/-4%	+1%/-5%	+214%/-214%	+31%/-10%	+12%/-13%	+22%/-55%
Source	KIC0	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 005881201-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-847 \pm 120$	$4.44^{+3.37}_{-2.79}$	$408^{+30}_{-21}$	$5002^{+3441}_{-974}$	$13990^{+90483}_{-9558}$
Alt.	$-448 \pm 103$	$5.34^{+3.59}_{-3.19}$	$409^{+32}_{-21}$	$4124^{+1927}_{-665}$	$5102^{+25761}_{-3294}$

$T_{max}$  = 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

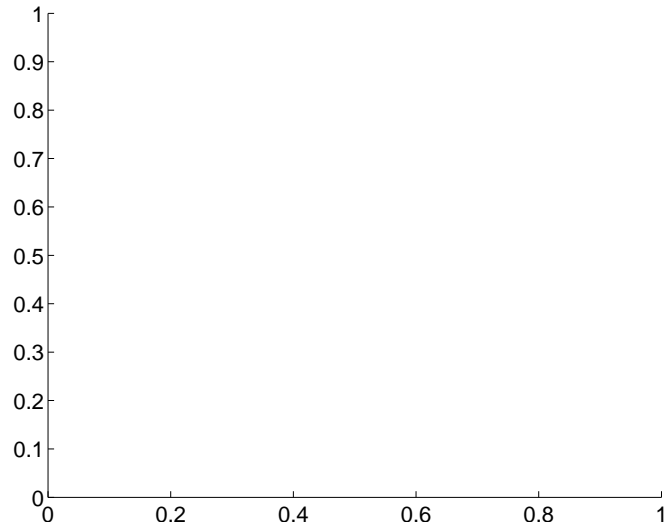
Supplemental centroid analysis for 005881201-01. Kepler magnitude: 15.10. Transit SNR 5.30

There are 0 quarters with good PRF difference image offsets

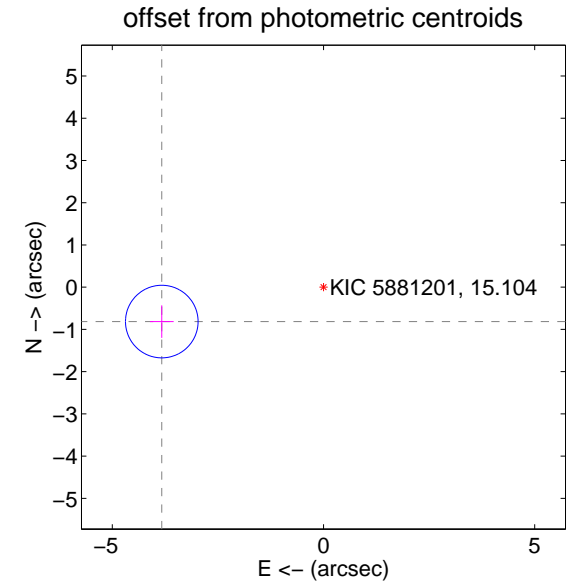
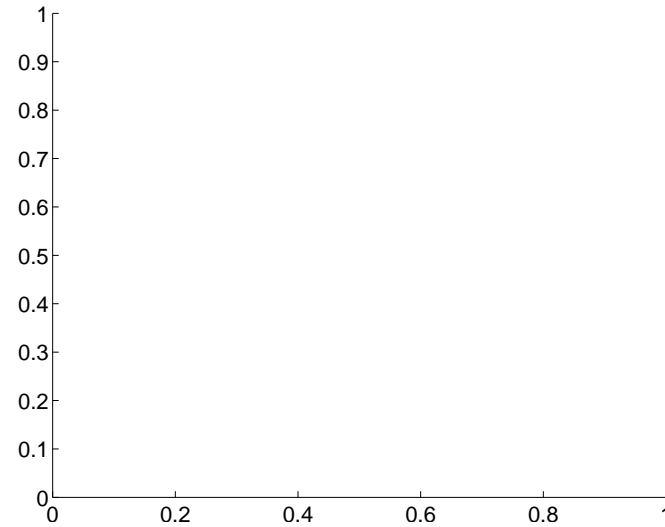
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$3.91 \pm 0.29$	$13.67$	$3.83 \pm 0.28$	$-0.81 \pm 0.38$

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



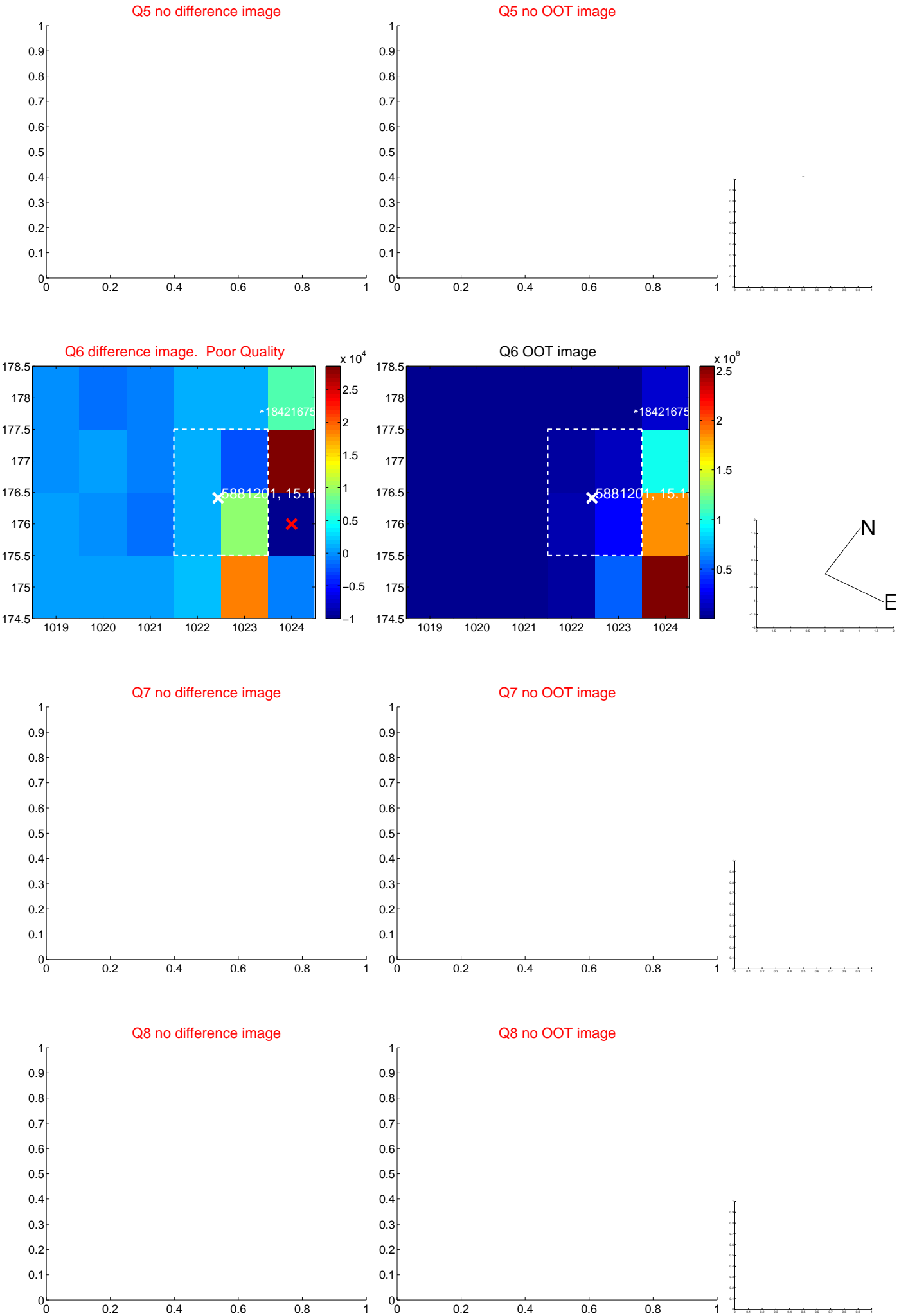
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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





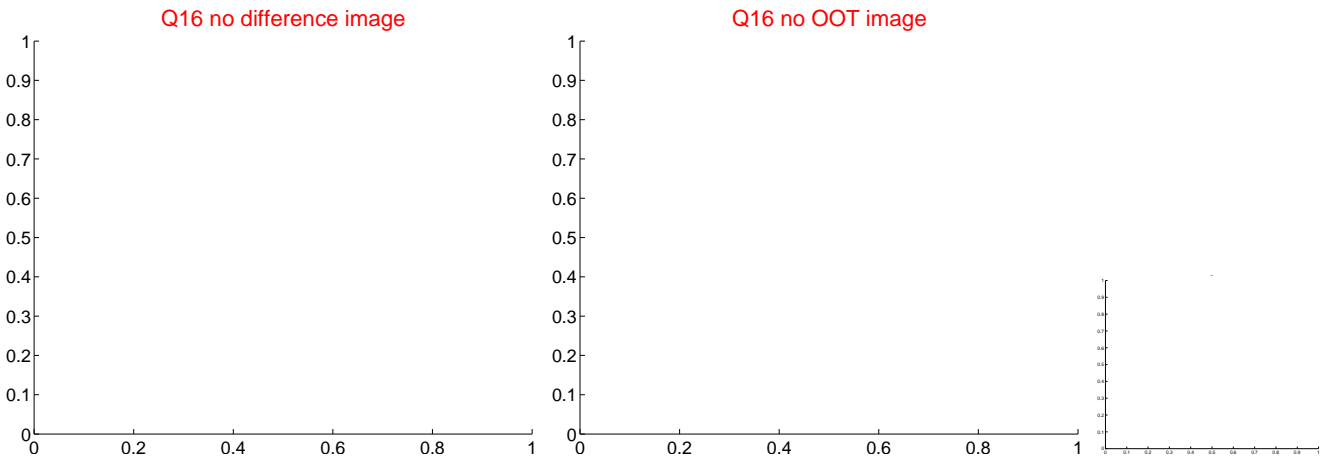
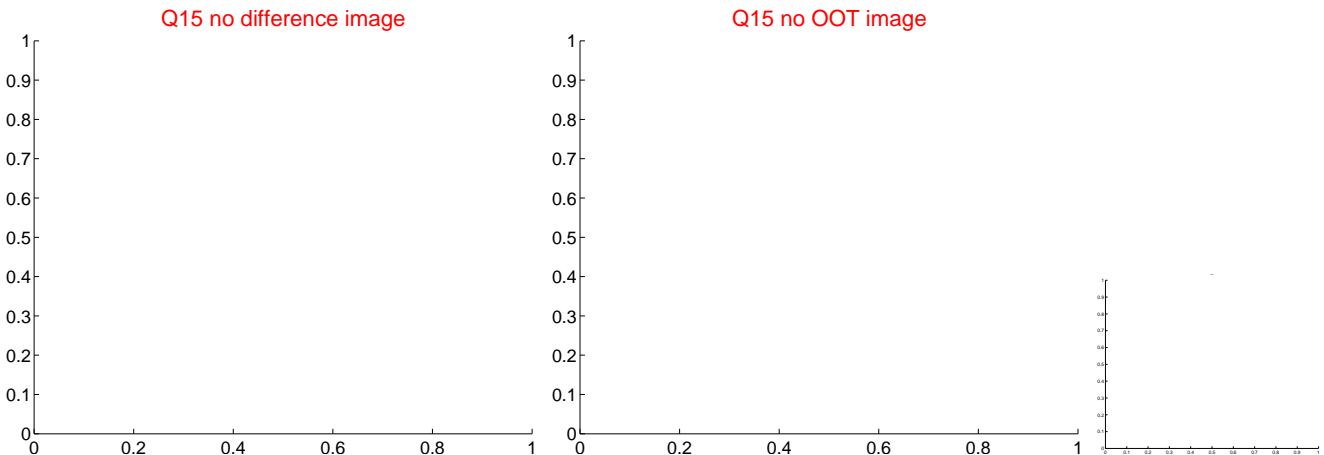
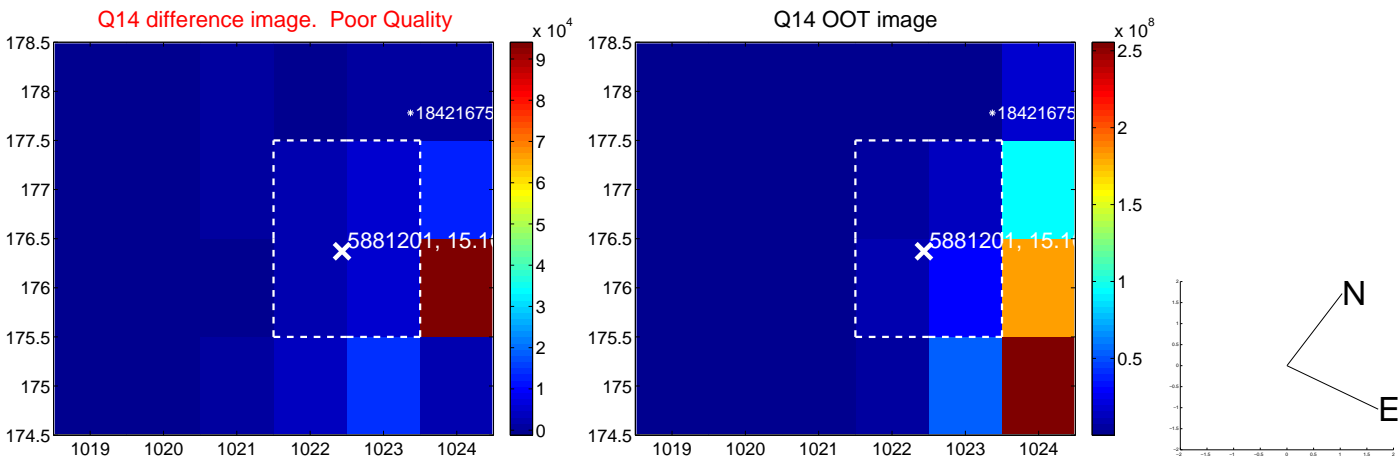
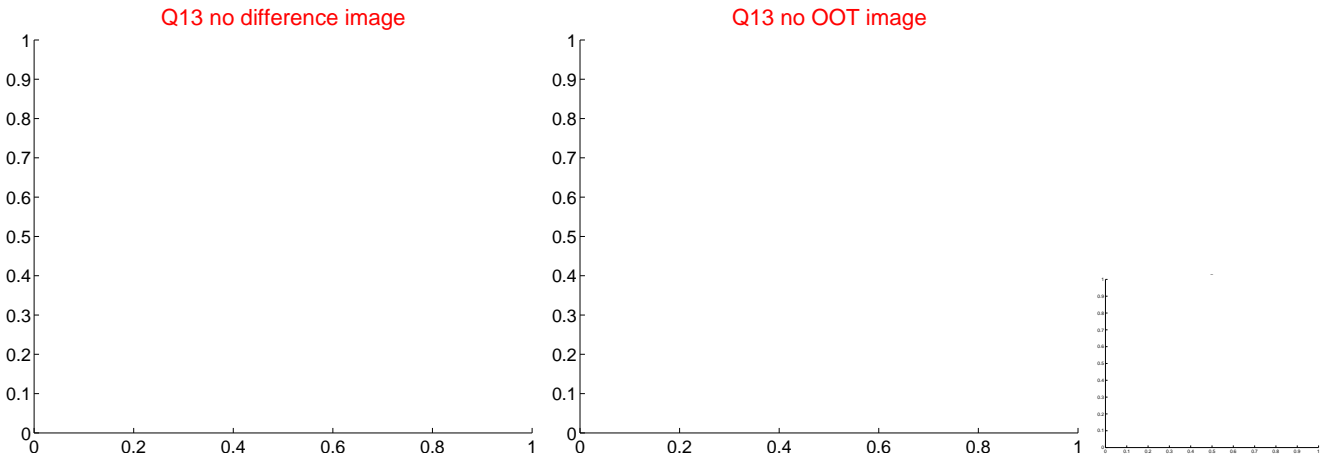
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



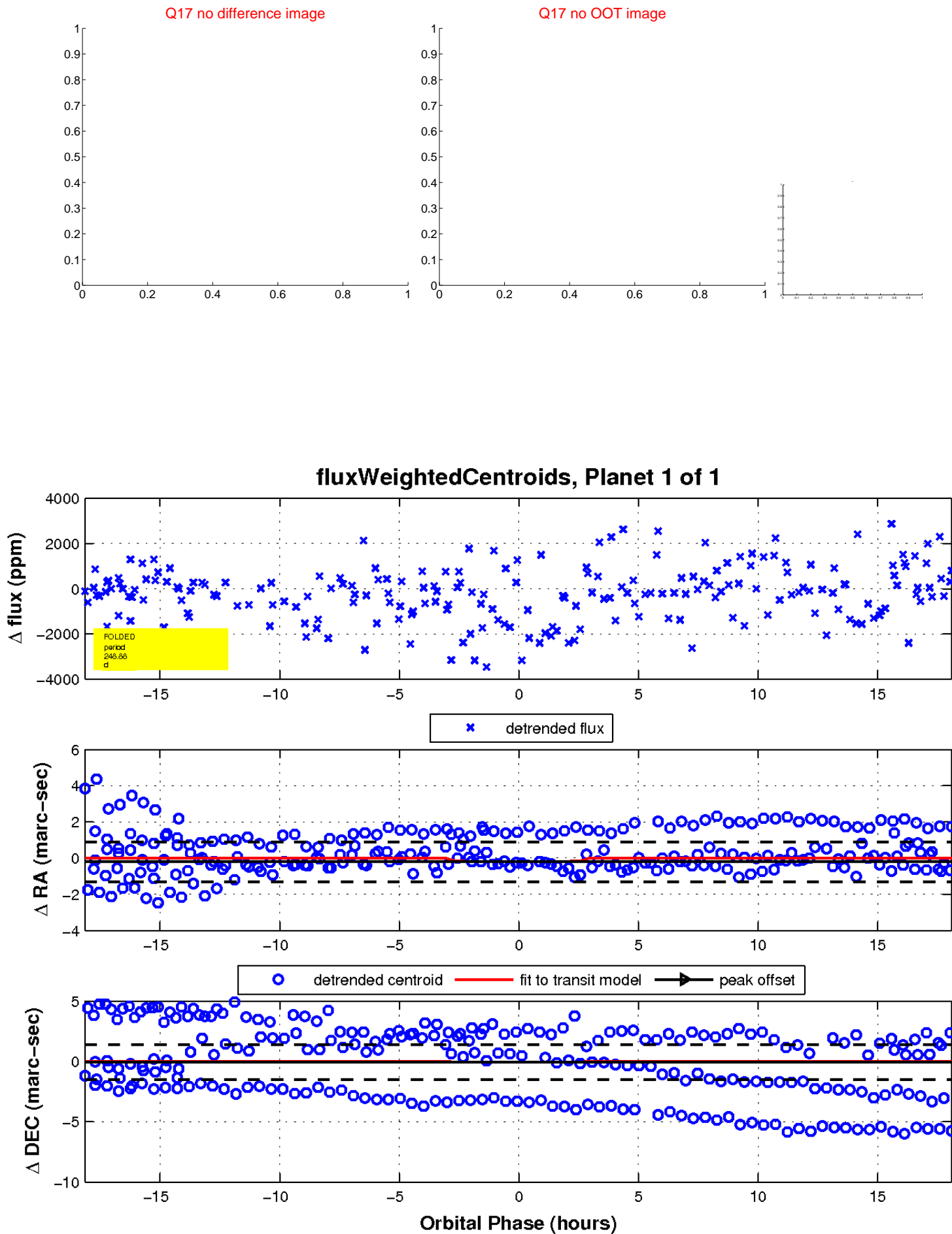
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

