

# KIC 007900034

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007900034-01	OBS	No	369.590140	233.113634	384.2	22.496	7.3	7.4	0.83	5627	1.66	0.66

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007900034-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

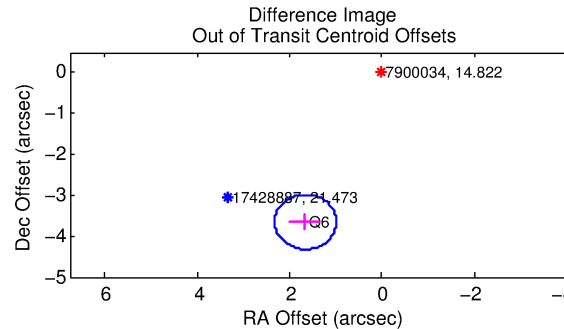
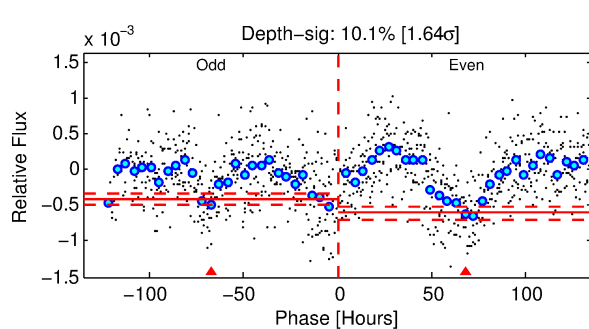
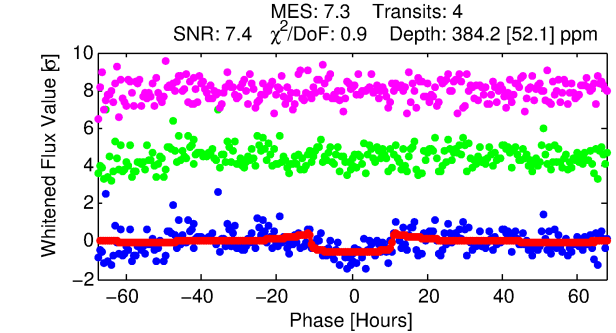
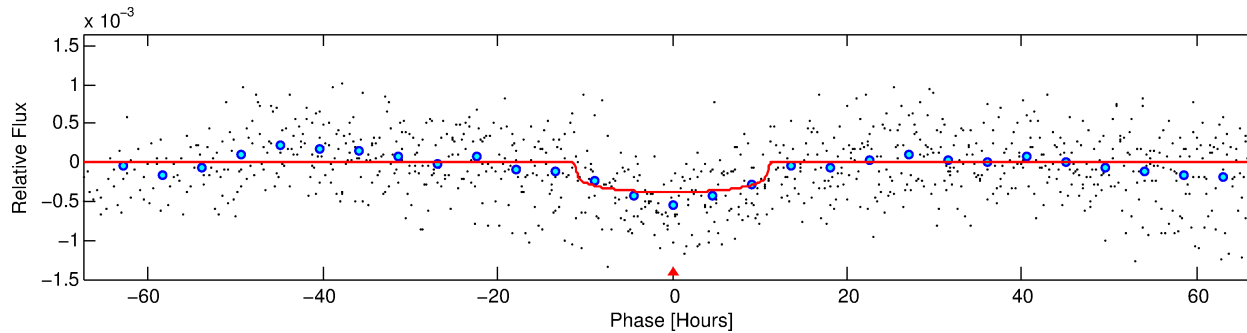
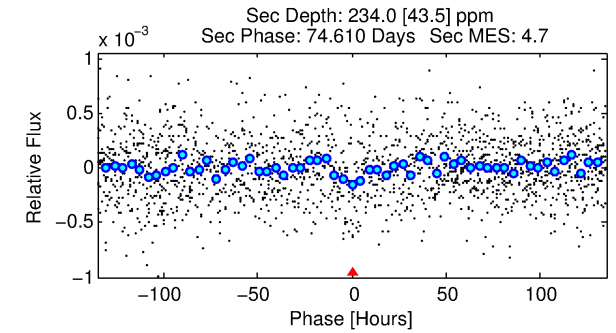
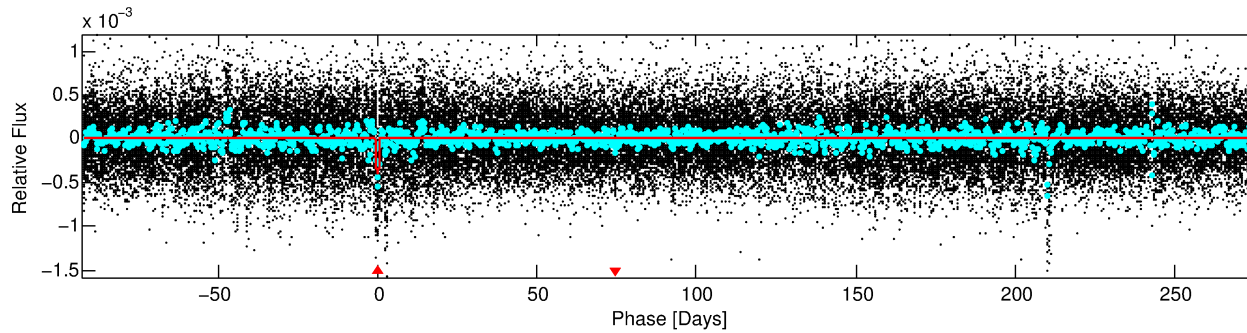
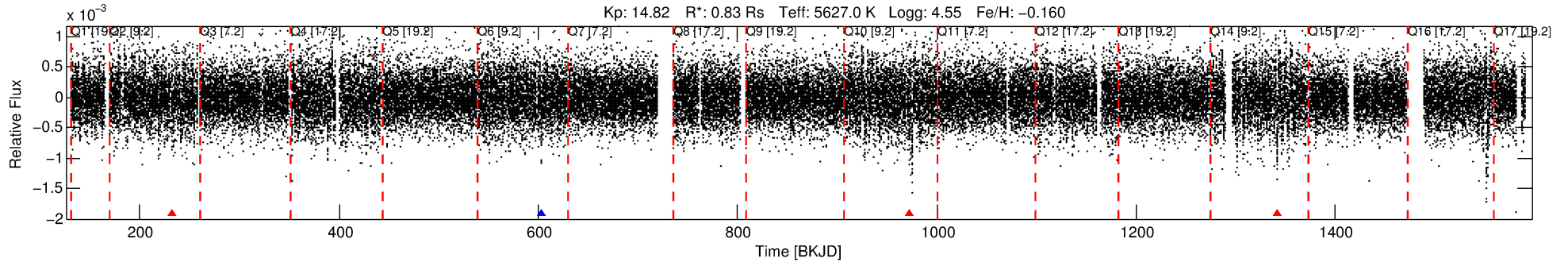
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007900034-01

No Significant Match Found

# DV One-Page Summary

KIC: 7900034 Candidate: 1 of 1 Period: 369.590 d



## DV Fit Results:

Period = 369.59014 [0.01227] d  
Epoch = 233.1136 [0.0221] BKJD  
Rp/R\* = 0.0182 [0.0091]  
a/R\* = 113.82 [241.35]  
b = 0.46 [3.62]  
Seff = 0.66 [0.22]  
Teq = 230 [19] K  
Rp = 1.66 [0.94] Re  
a = 0.9741 [0.2126] AU  
Ag = 44490.72 [47472.43] [0.94σ]  
Teffp = 5155 [1322] K [3.72σ]

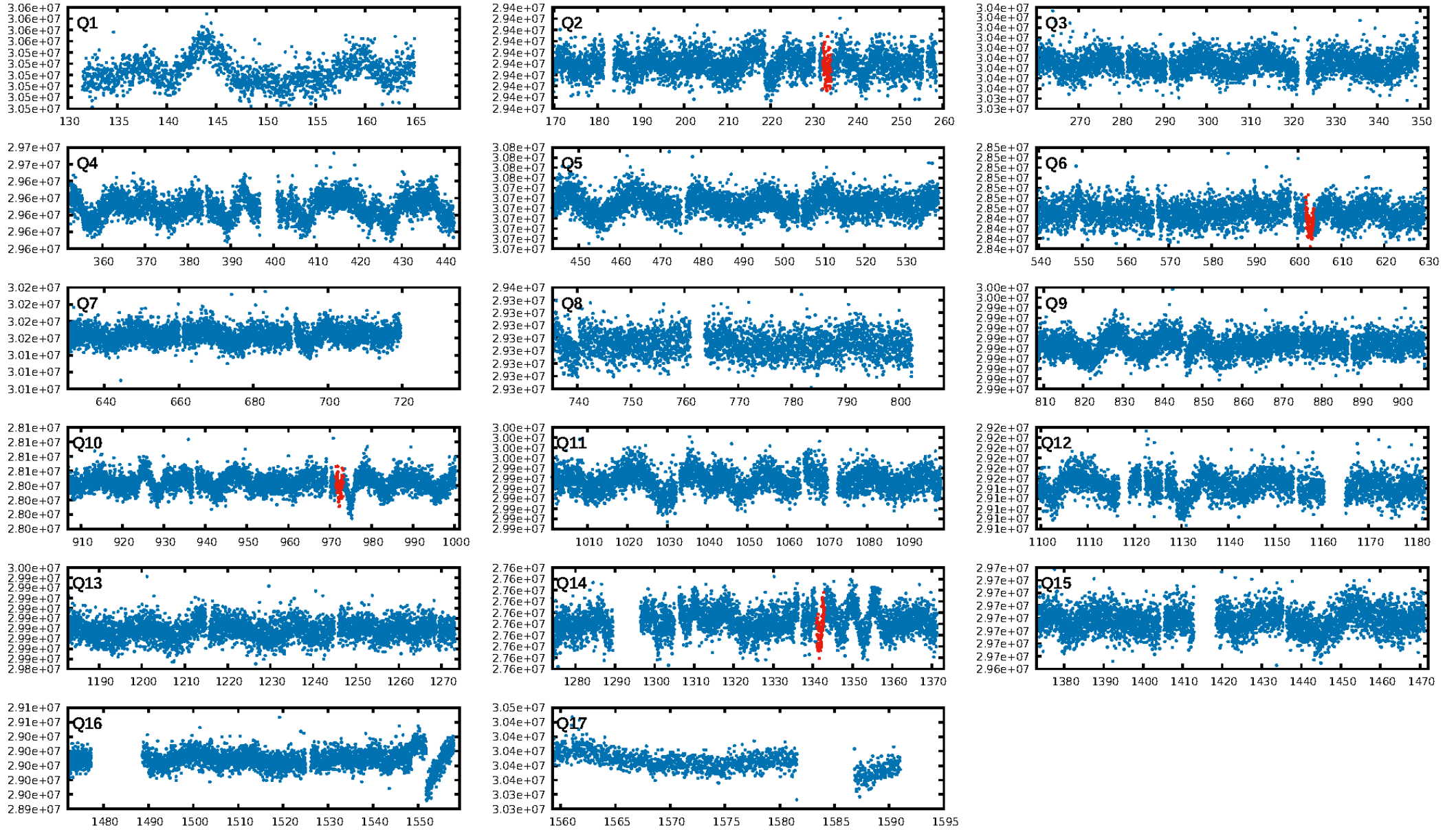
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 65.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 4.75e-09  
RollingBand-fgt: 0.25 [1/4]  
GhostDiagnostic-chr: 0.1538  
Centroid-sig: 0.2%  
Centroid-so: 7.225 arcsec [3.06σ]  
OotOffset-rm: 4.014 arcsec [17.99σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-rm: 4.035 arcsec [17.39σ]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [2/2]

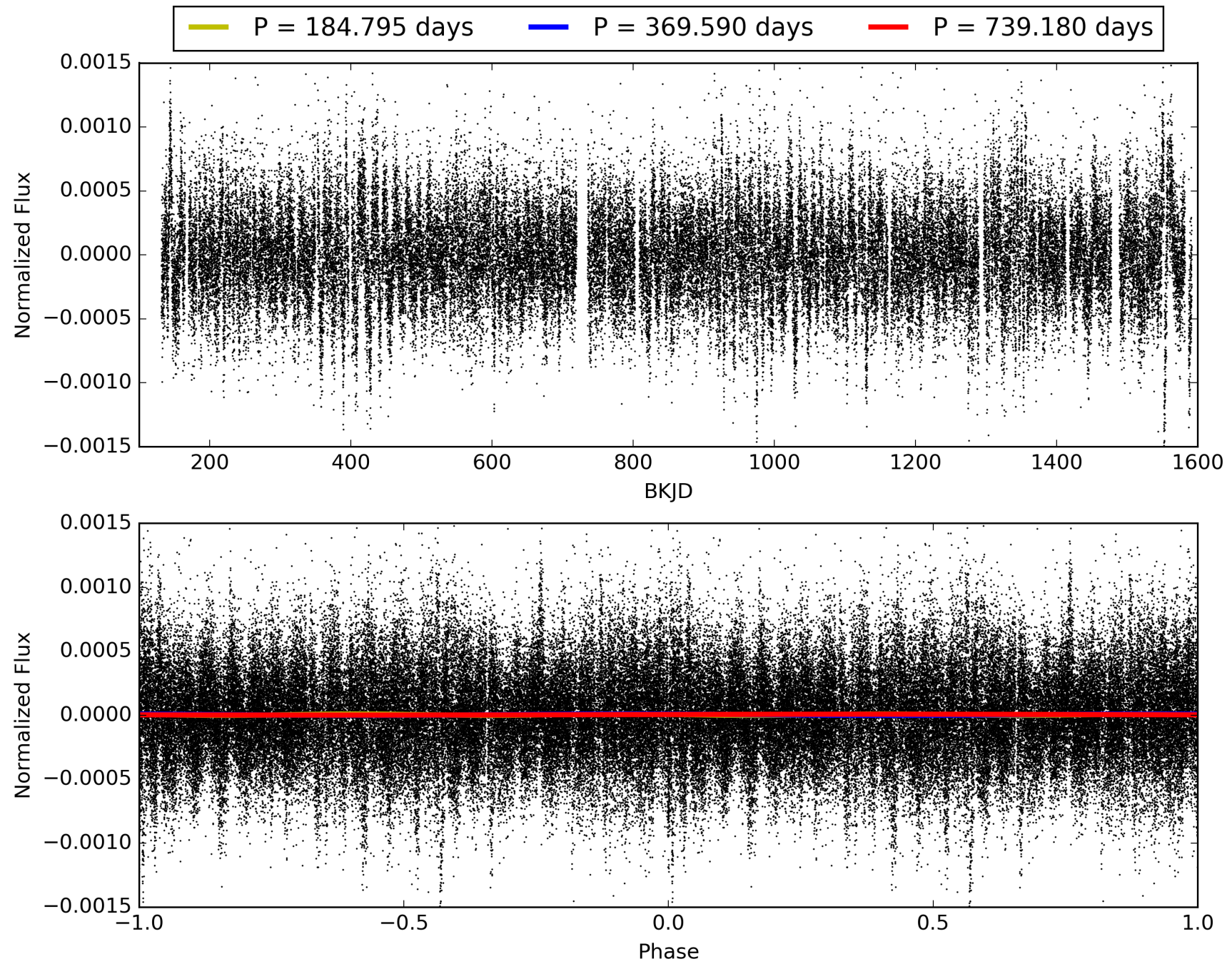
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:45:46 Z

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

# TCE 007900034-01, PDC Light Curves

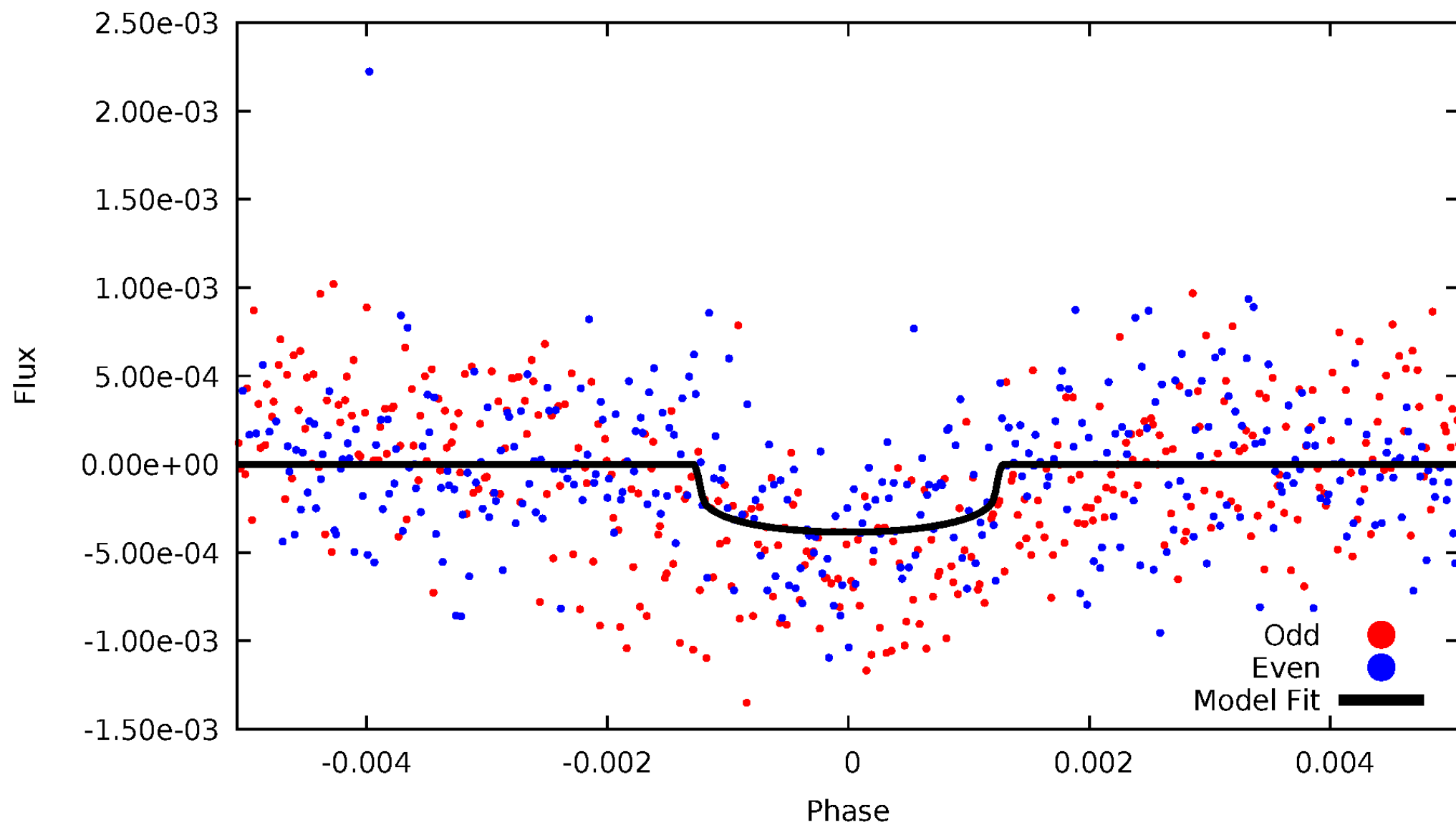


TCE 007900034-01



# DV Odd/Even

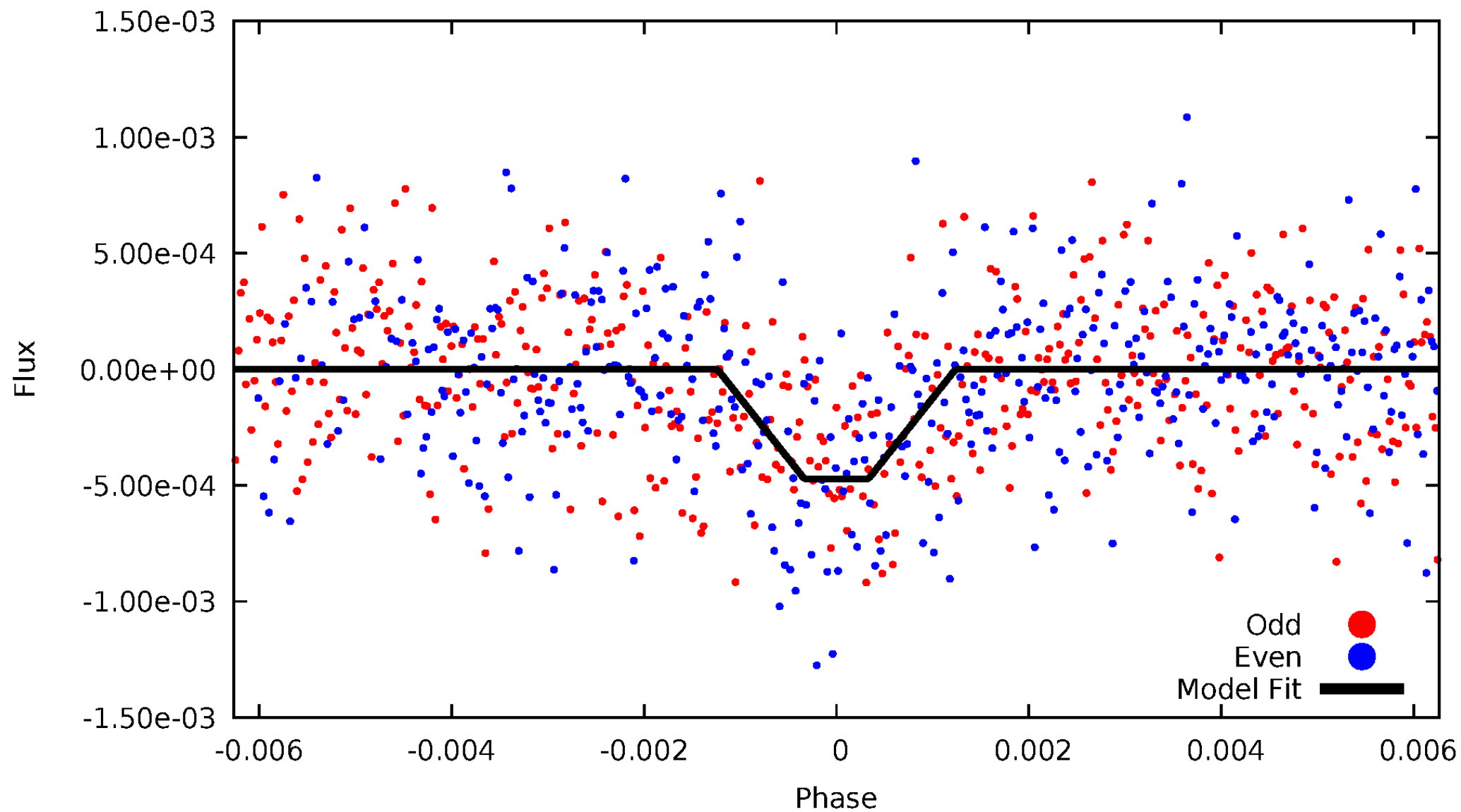
TCE 007900034-01





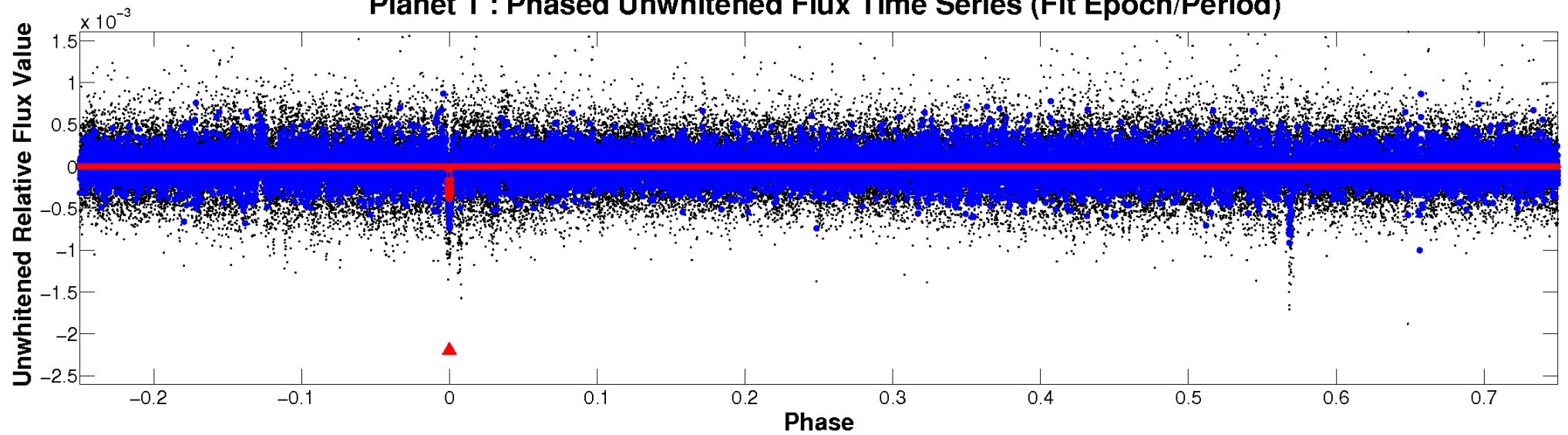
# ALT Odd/Even

TCE 007900034-01

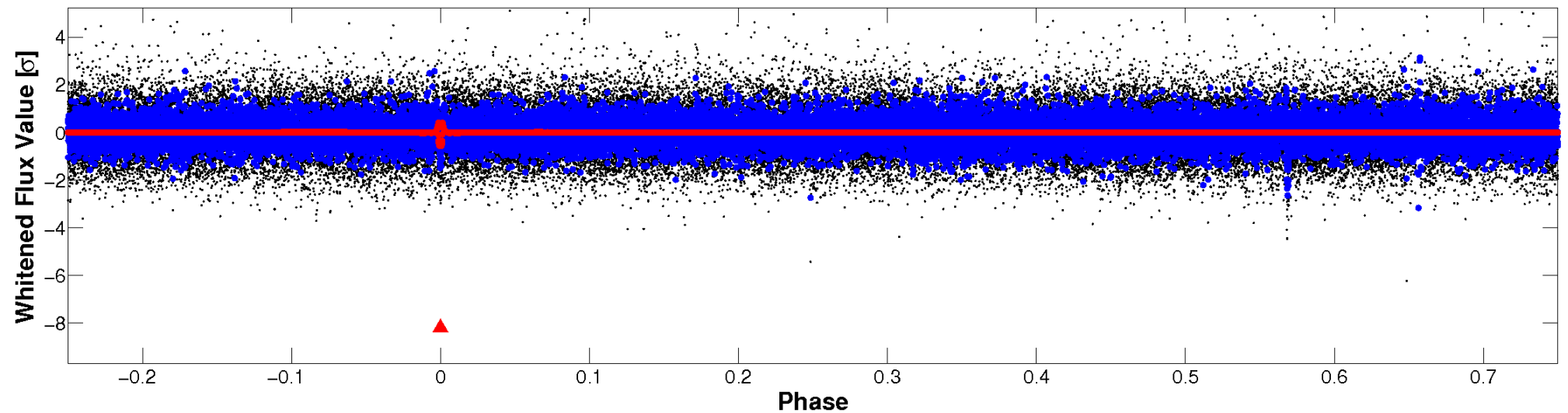


# Non-Whitened Vs. Whitened Light Curve

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

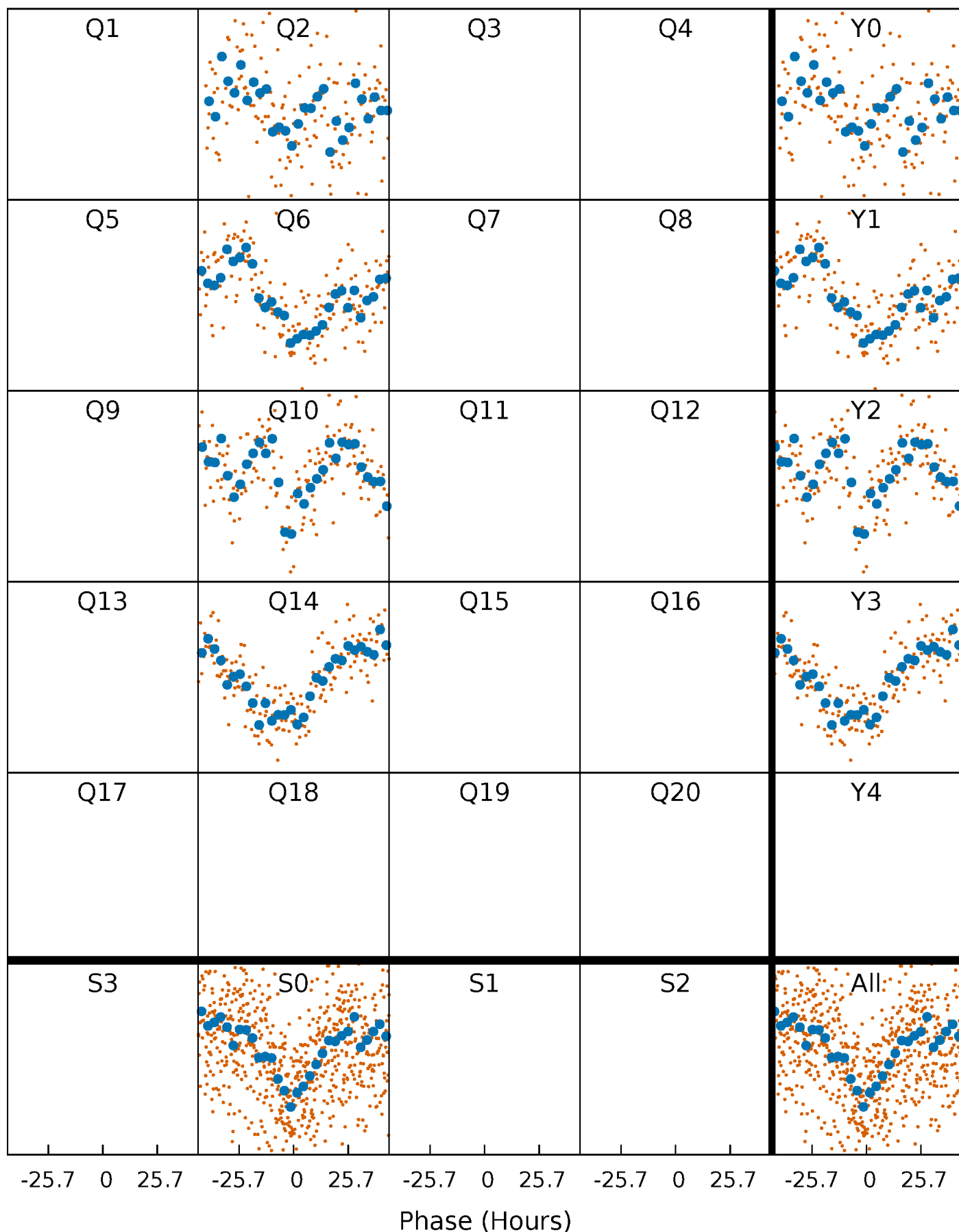


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

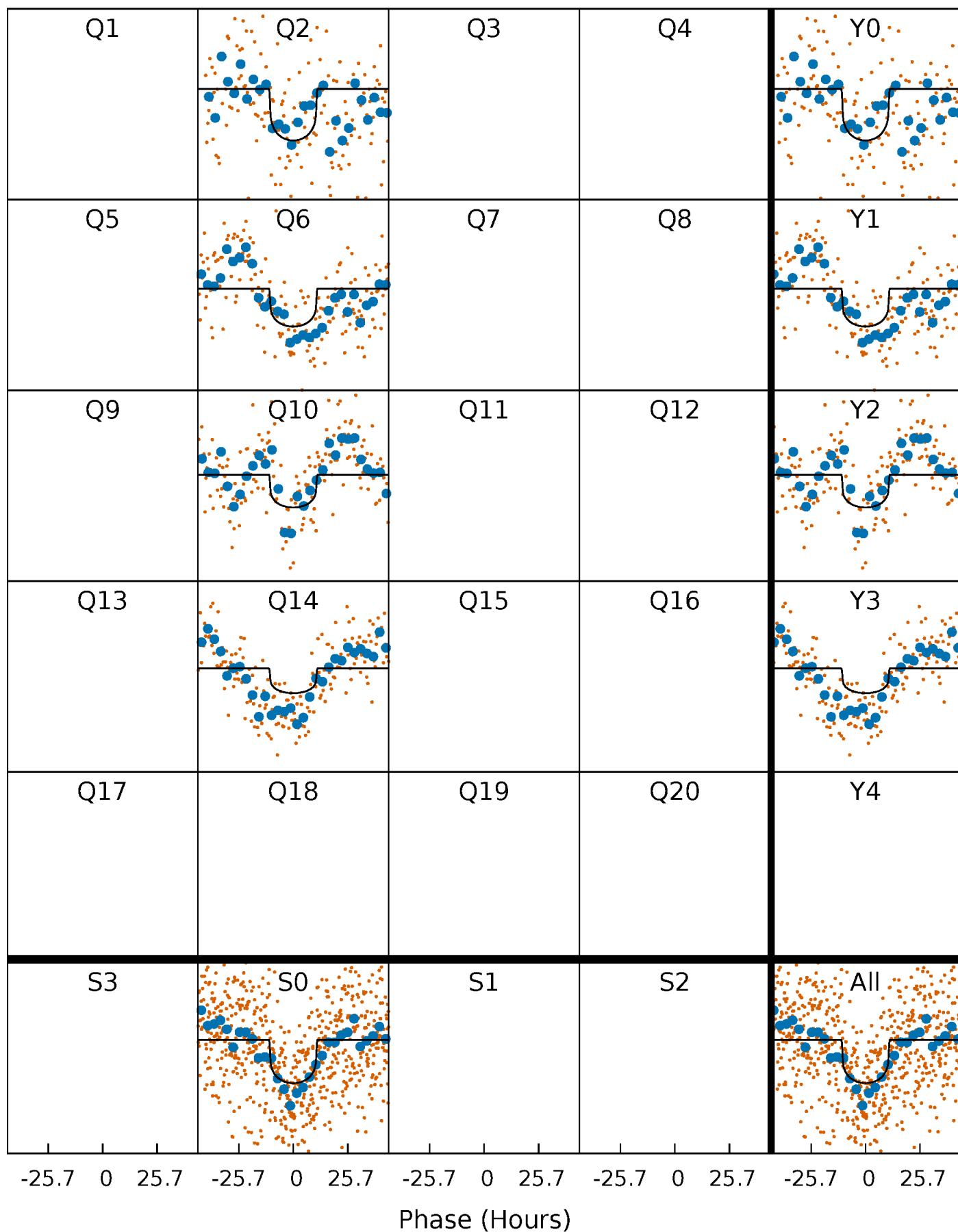
TCE 007900034-01 P=369.590140 Days  $T_0=233.113634$  (BKJD)





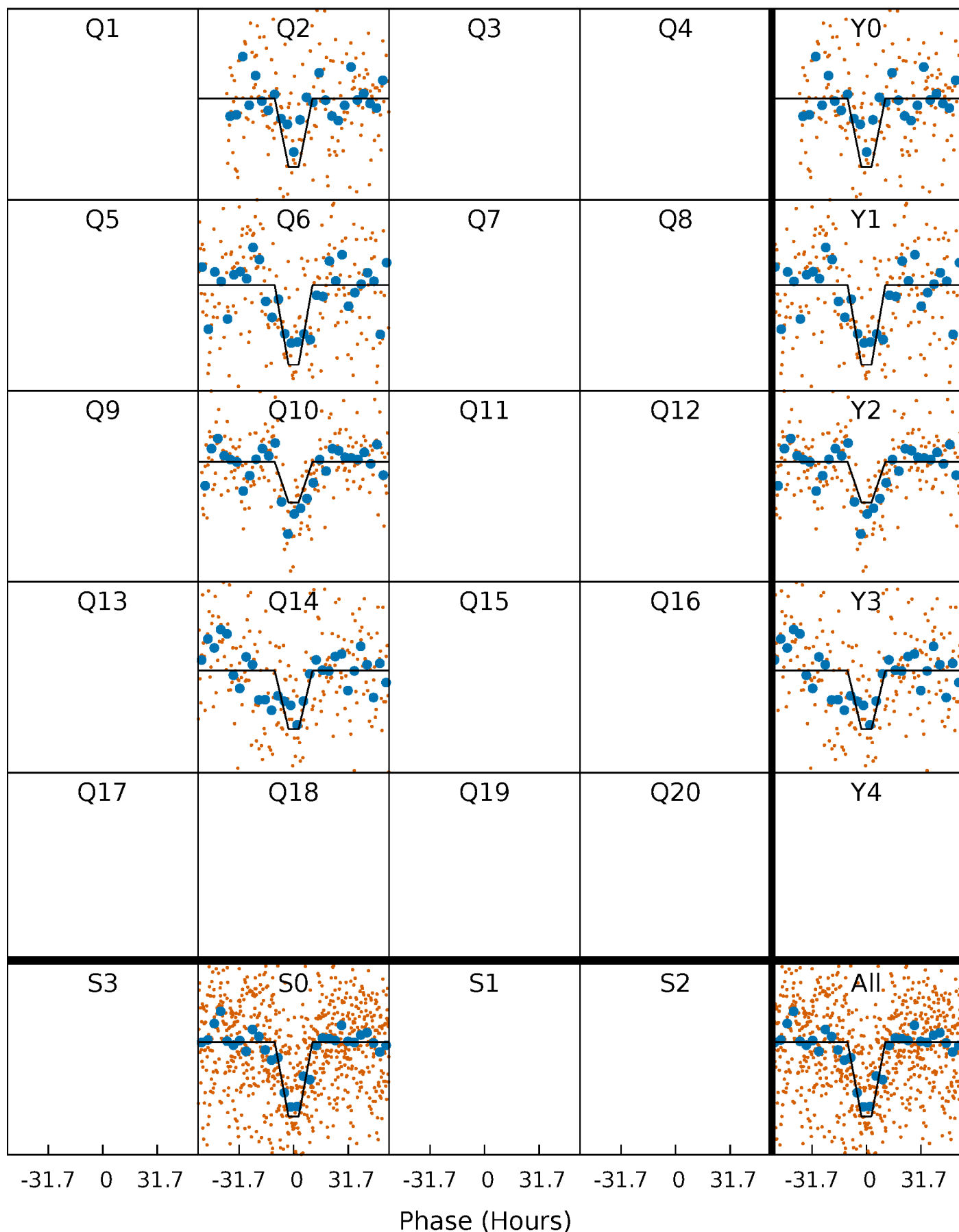
# DV Quarter-Phased Transit Curves

TCE 007900034-01 P=369.590140 Days  $T_0=233.113634$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

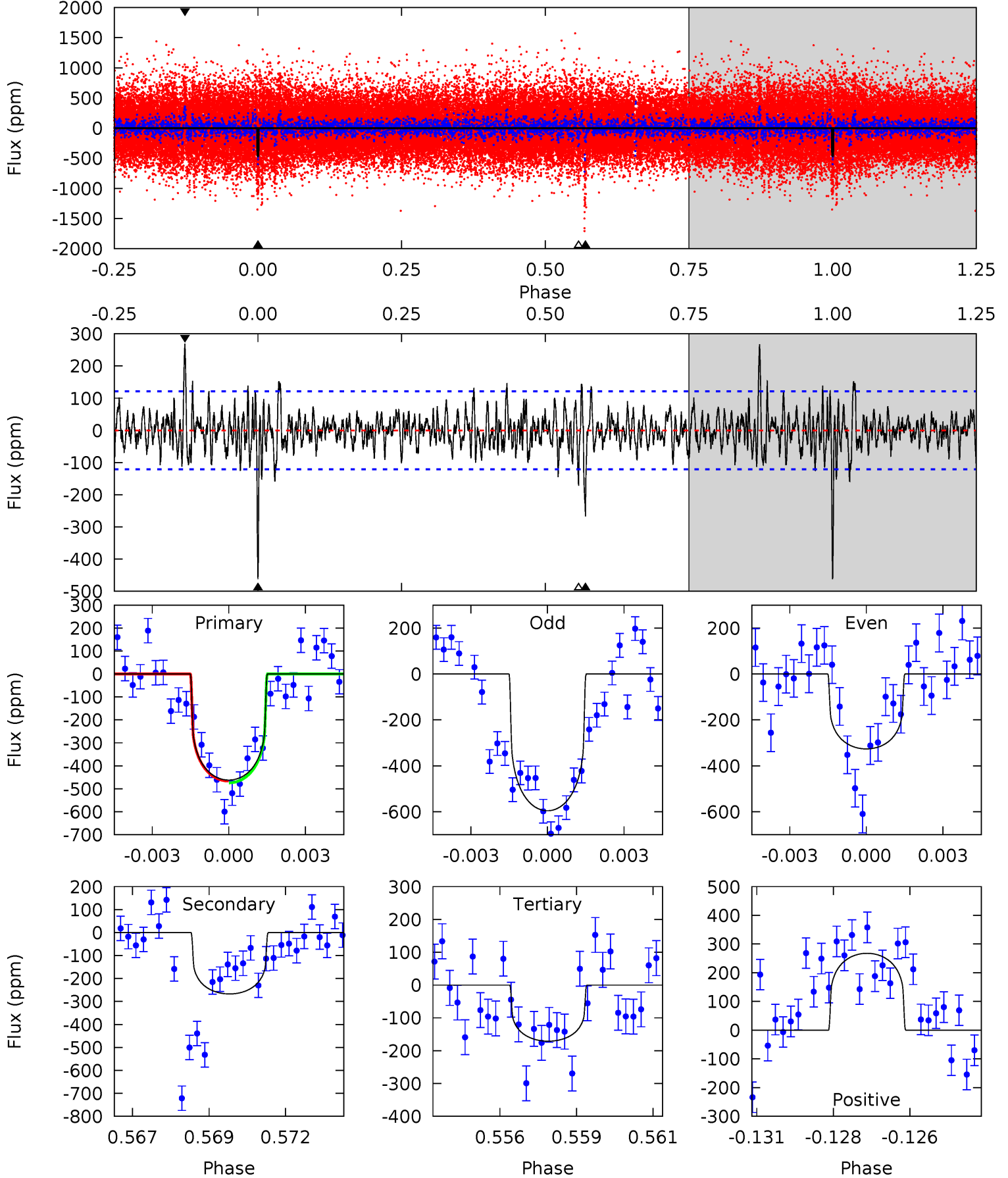
TCE 007900034-01 P=369.649912 Days  $T_0=233.010073$  (BKJD)



# DV Model-Shift Uniqueness Test

007900034-01, P = 369.590140 Days, E = 233.113634 Days

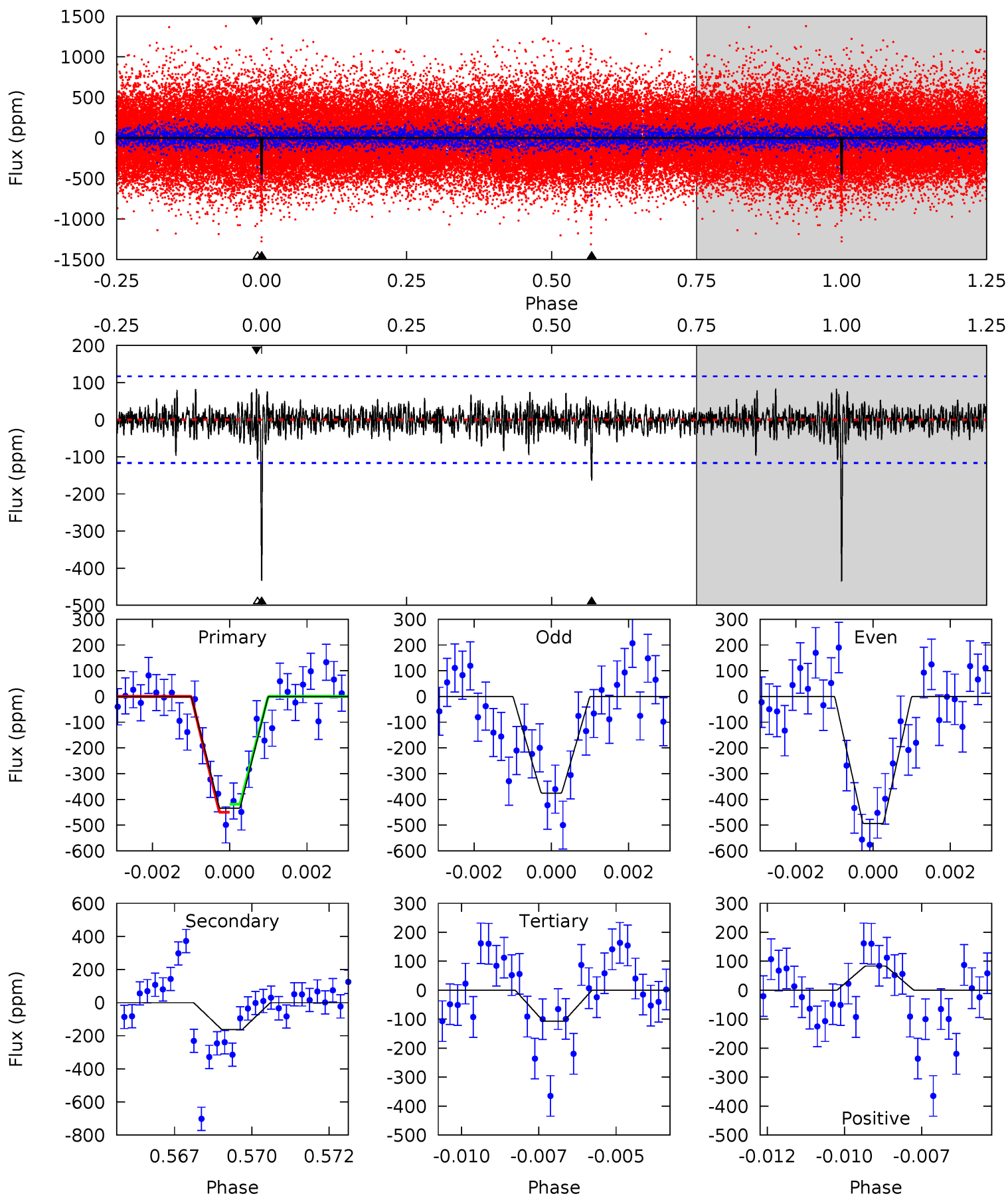
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	11.7	7.46	11.7	5.28	3.02	2.07	12.7	8.47	4.19	-0.02	5.88	1.12	0.37	0.17



# Alt Model-Shift Uniqueness Test

007900034-01, P = 369.649912 Days, E = 233.010073 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
19.7	7.36	4.86	3.77	5.29	3.02	1.07	14.8	15.9	2.51	3.59	2.67	1.15	0.16	0.72



### Stellar Parameters For KIC 007900034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5627^{+152}_{-152}$	$4.552^{+0.042}_{-0.168}$	$-0.160^{+0.300}_{-0.300}$	$0.833^{+0.220}_{-0.073}$	$0.902^{+0.095}_{-0.095}$	$2.200^{+0.499}_{-1.062}$
	+3%/-3%	+1%/-4%	+188%/-188%	+26%/-9%	+11%/-11%	+23%/-48%
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 007900034-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-267 \pm 23$	$1.73^{+0.93}_{-0.79}$	$327^{+19}_{-13}$	$5323^{+2077}_{-813}$	$45253^{+120390}_{-25782}$
Alt.	$-163 \pm 22$	$2.04^{+0.90}_{-0.82}$	$327^{+20}_{-14}$	$4495^{+1036}_{-586}$	$19818^{+34581}_{-10317}$

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

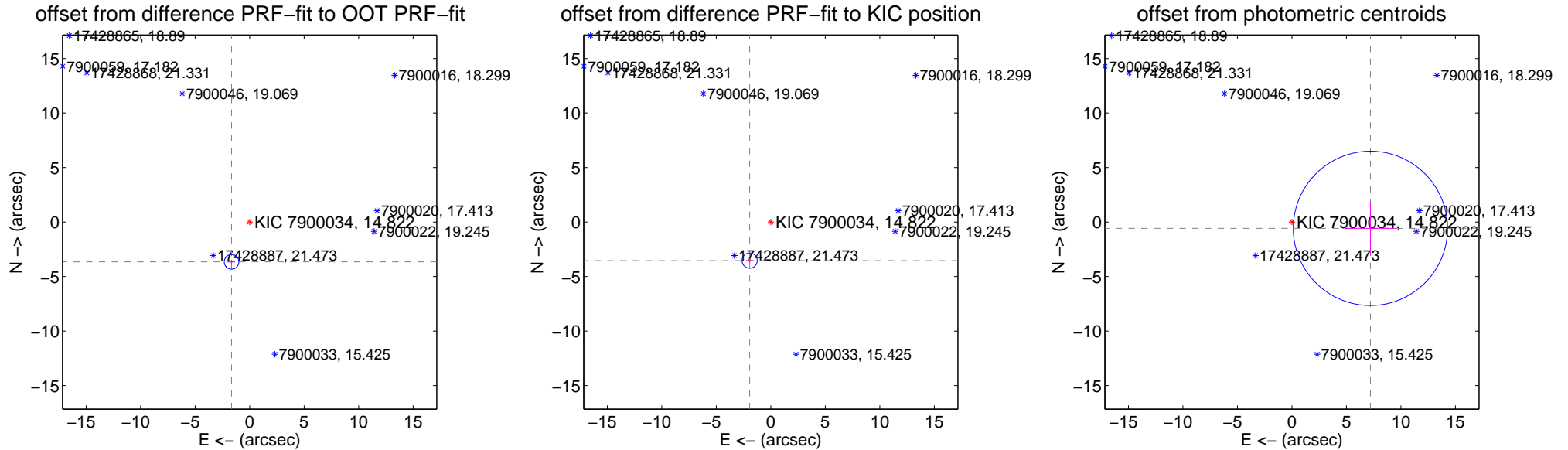
## DV Centroid Data

Supplemental centroid analysis for 007900034-01. Kepler magnitude: 14.82. Transit SNR 7.42

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.014 \pm 0.223$	17.99	$1.660 \pm 0.325$	$-3.654 \pm 0.196$
PRF-fit source offset from KIC position	$4.035 \pm 0.232$	17.39	$1.939 \pm 0.325$	$-3.539 \pm 0.196$
photometric centroid source offset	$7.23 \pm 2.36$	3.06	$-7.20 \pm 2.36$	$-0.58 \pm 2.41$



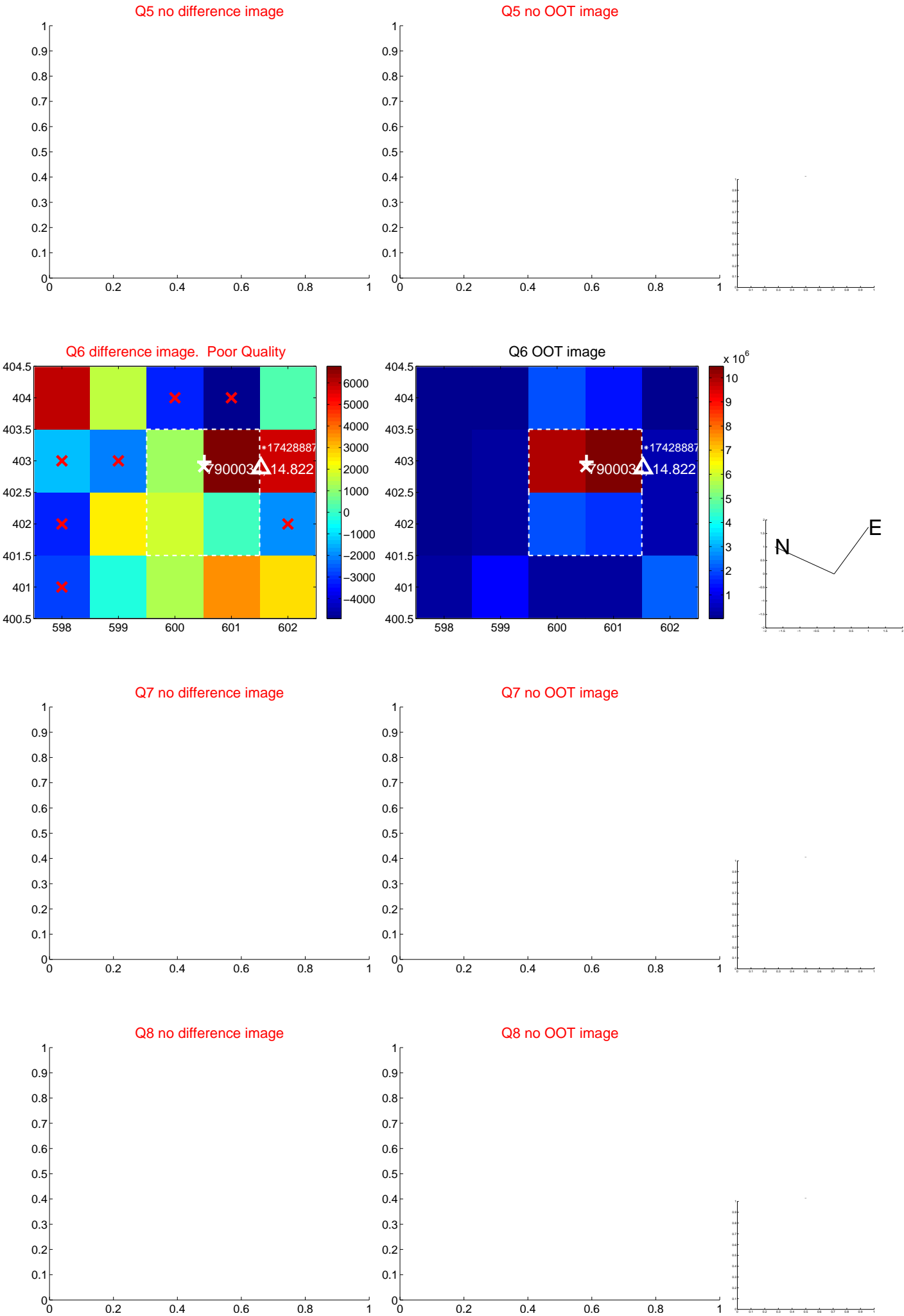
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



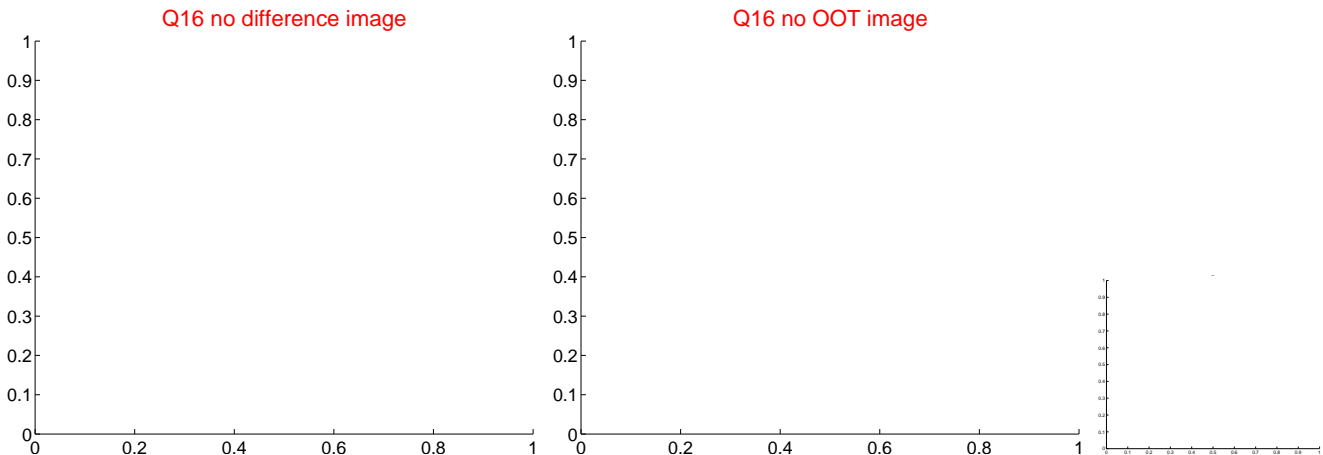
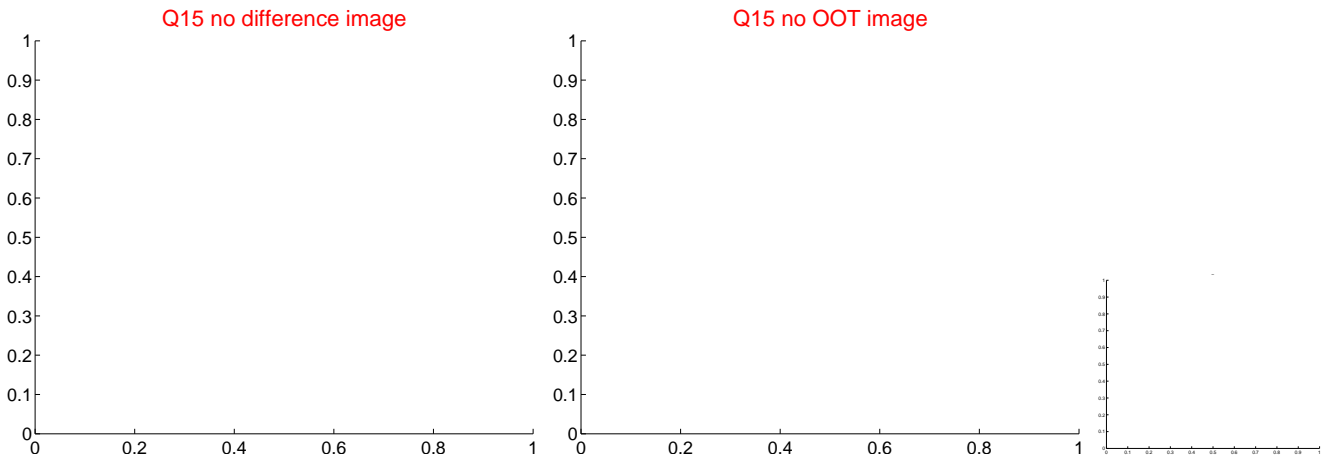
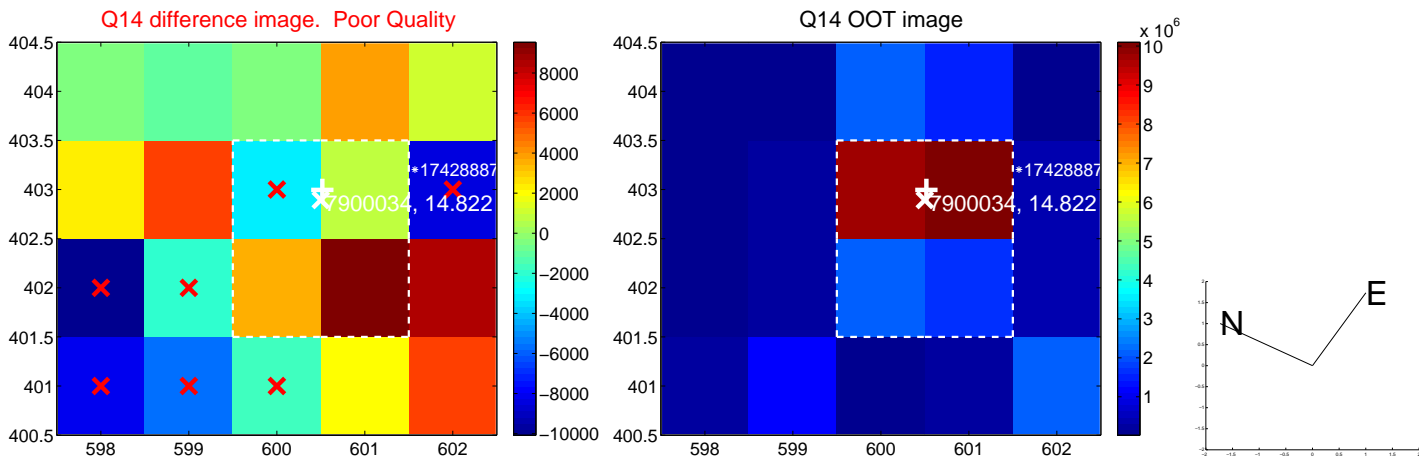
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



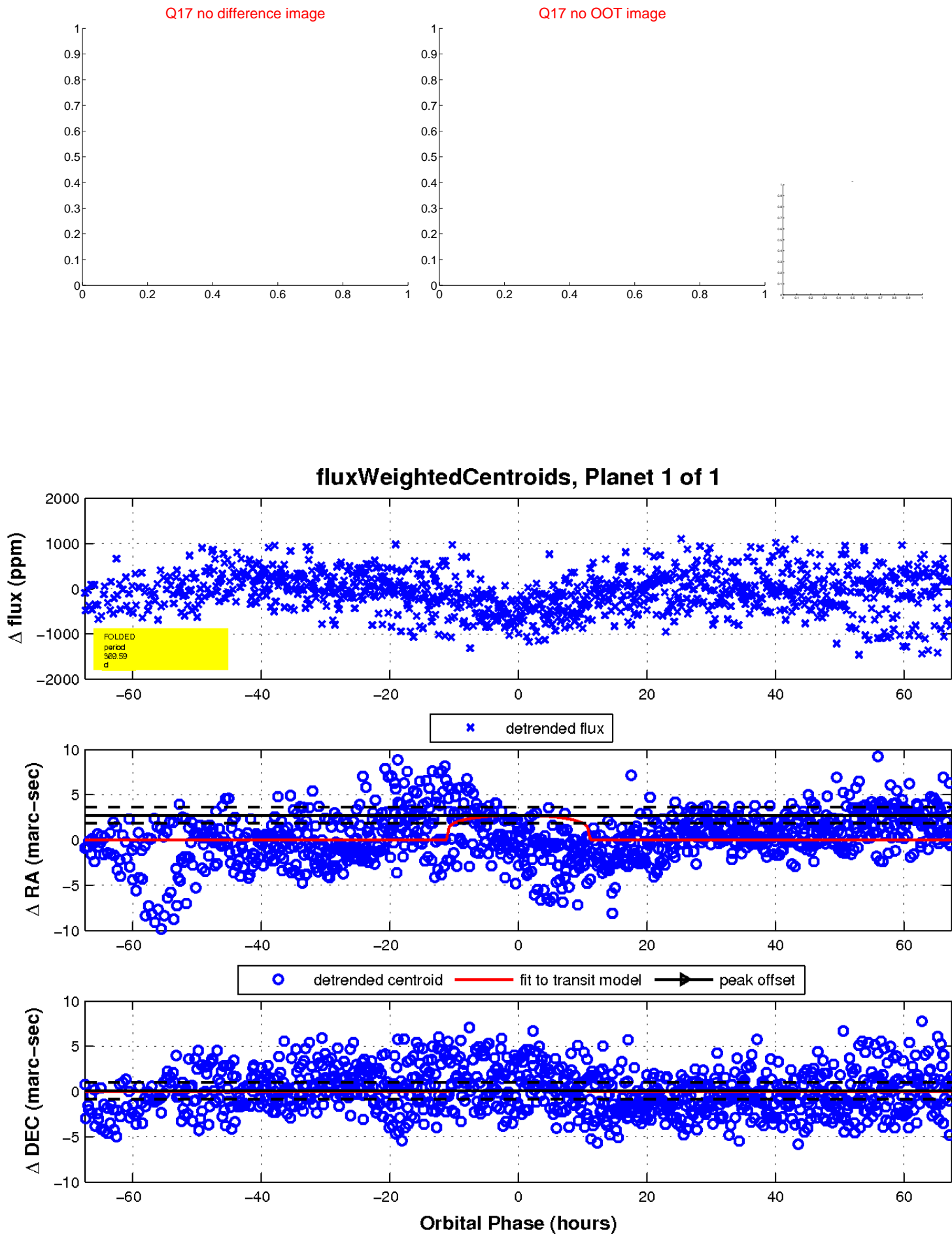
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

