

# KIC 007751259

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007751259-01	OBS	No	370.214531	311.335879	1574.8	27.901	7.6	9.1	1.09	6246	5.22	1.43

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007751259-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

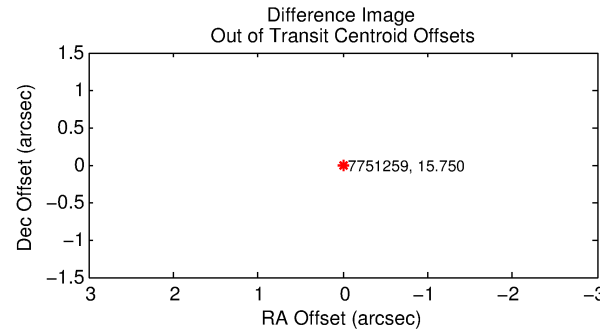
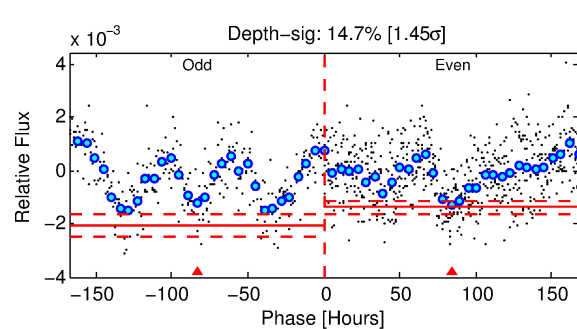
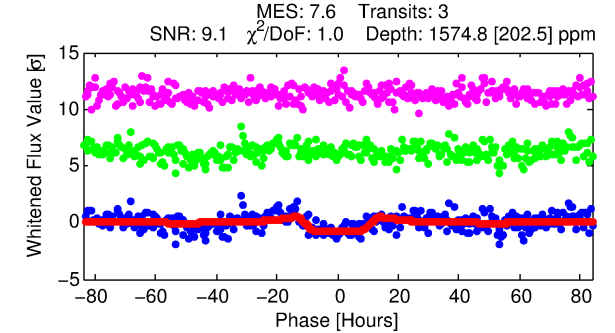
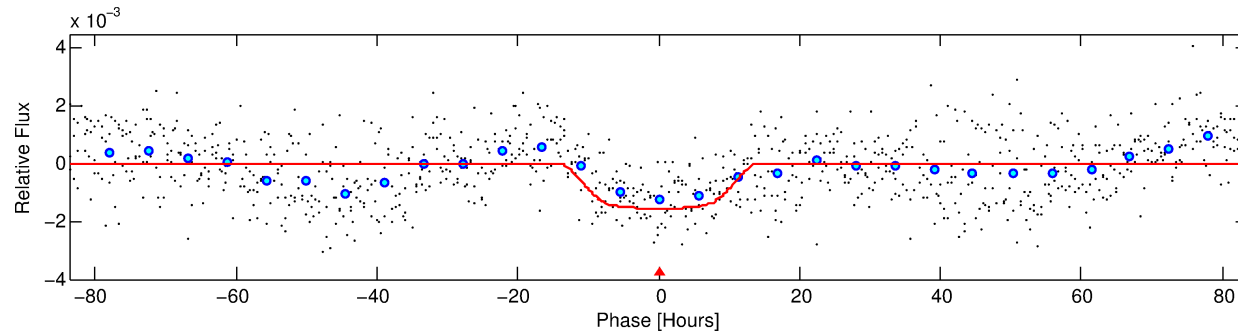
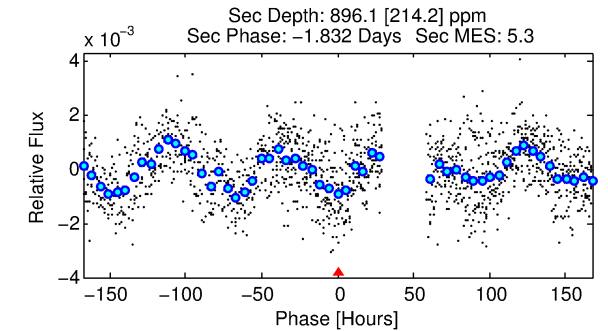
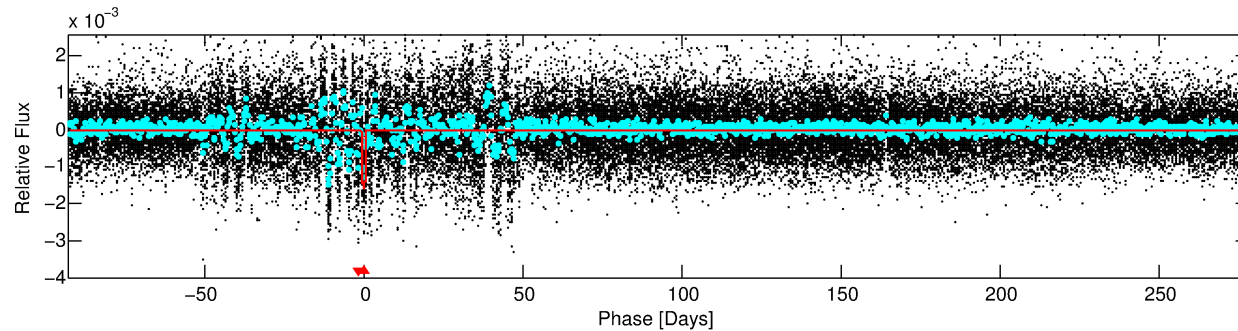
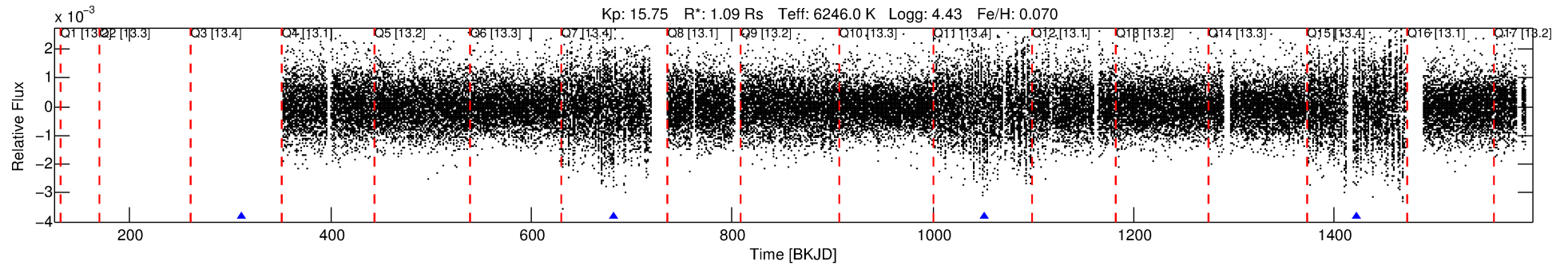
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007751259-01

No Significant Match Found

# DV One-Page Summary

KIC: 7751259 Candidate: 1 of 1 Period: 370.215 d



## DV Fit Results:

Period = 370.21453 [0.03056] d  
Epoch = 311.3359 [0.0622] BKJD  
Rp/R\* = 0.0438 [0.0035]  
a/R\* = 49.71 [8.74]  
b = 0.92 [0.03]  
Seff = 1.43 [0.57]  
Teq = 279 [28] K  
Rp = 5.22 [1.63] Re  
a = 1.0661 [0.2671] AU  
Ag = 20591.61 [9498.98] [2.17σ]  
Teffp = 5165 [430] K [11.34σ]

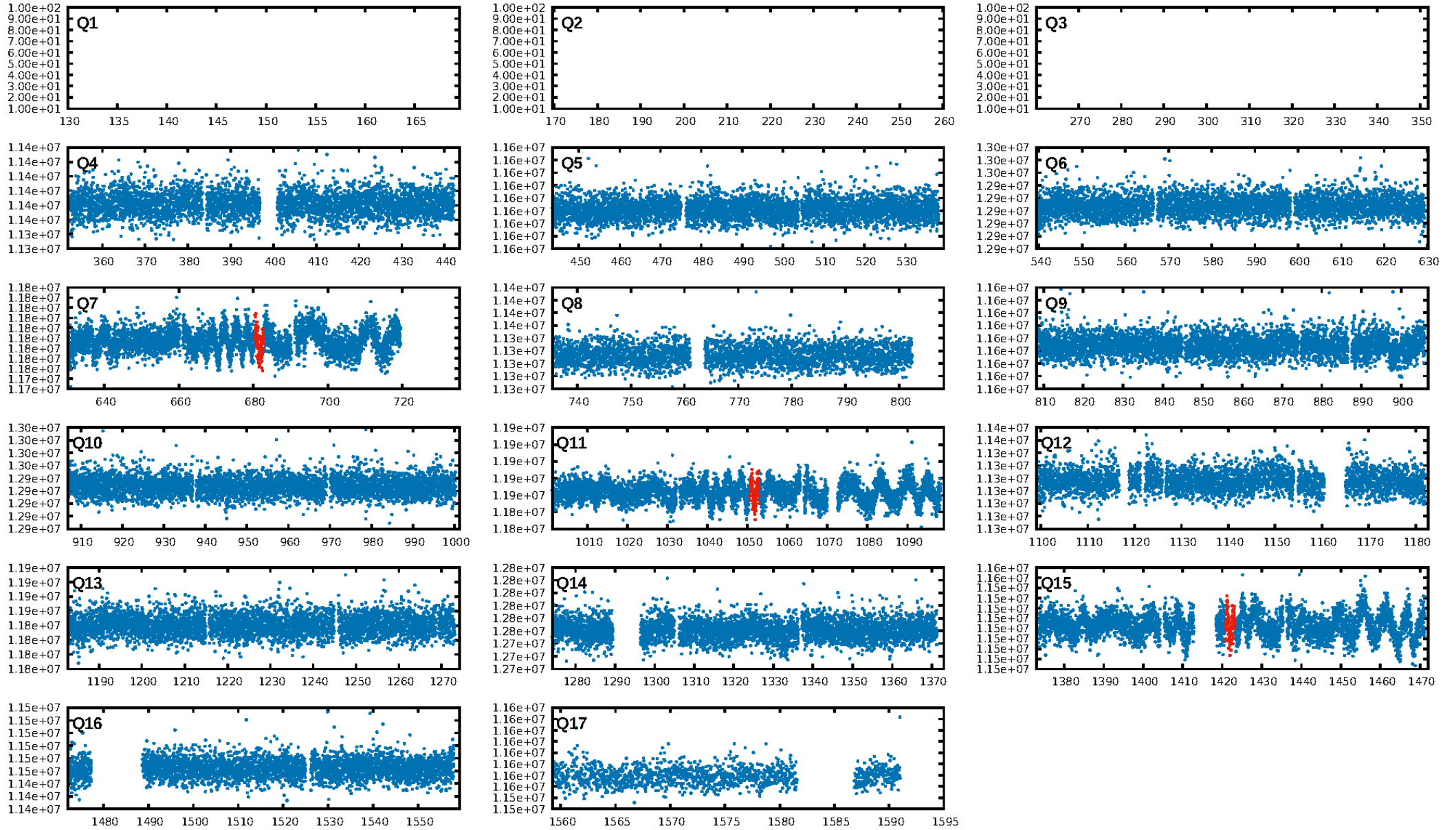
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 81.7%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 3.31e-09**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -2.427  
Centroid-sig: N/A  
Centroid-so: 1.942 arcsec [1.09σ]  
OotOffset-rm: N/A  
**KicOffset-rm: 8.598 arcsec [12.64σ]**  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/1/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [3/3]

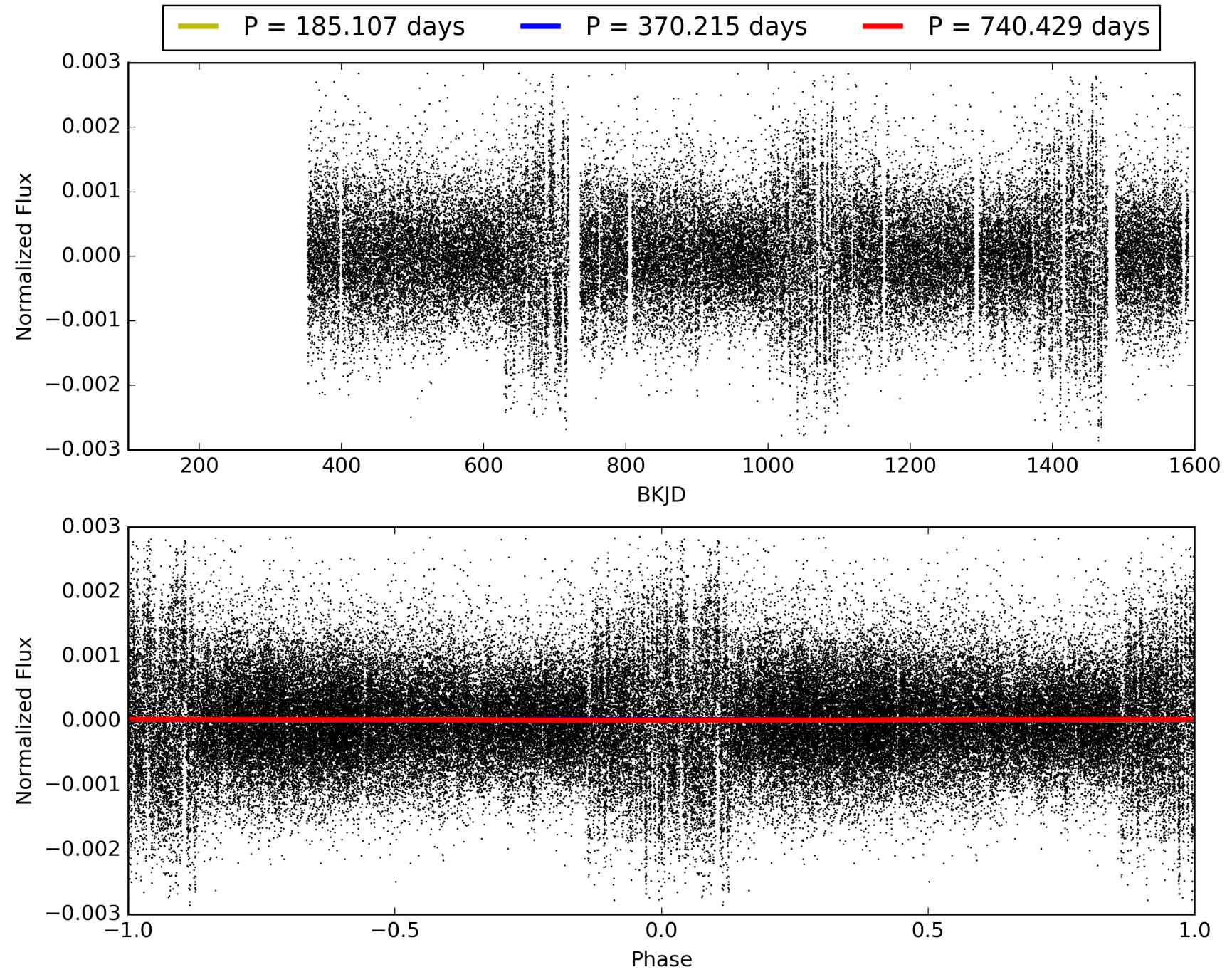
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:30:01 Z

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

# TCE 007751259-01, PDC Light Curves

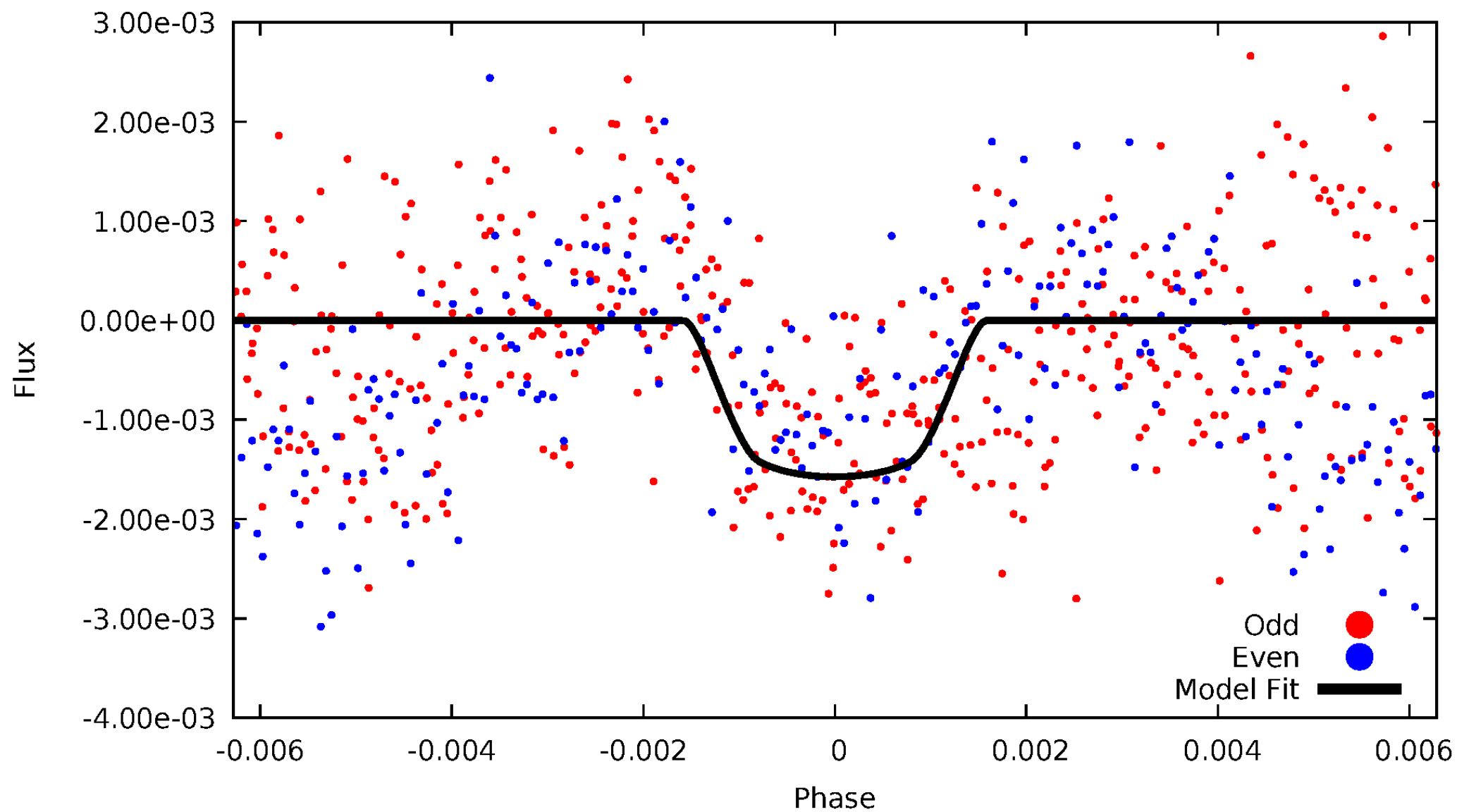


# TCE 007751259-01



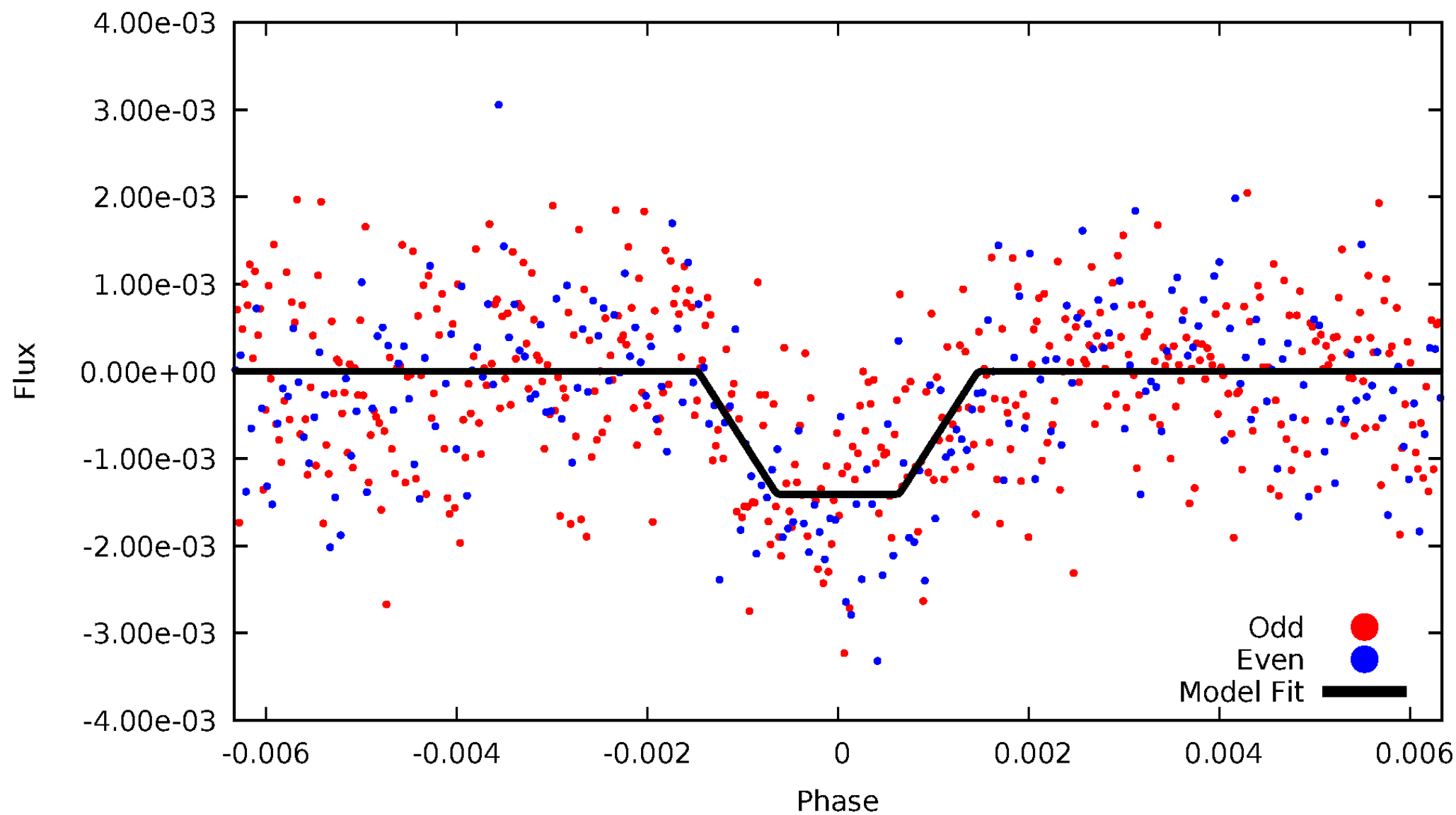
# DV Odd/Even

TCE 007751259-01



# ALT Odd/Even

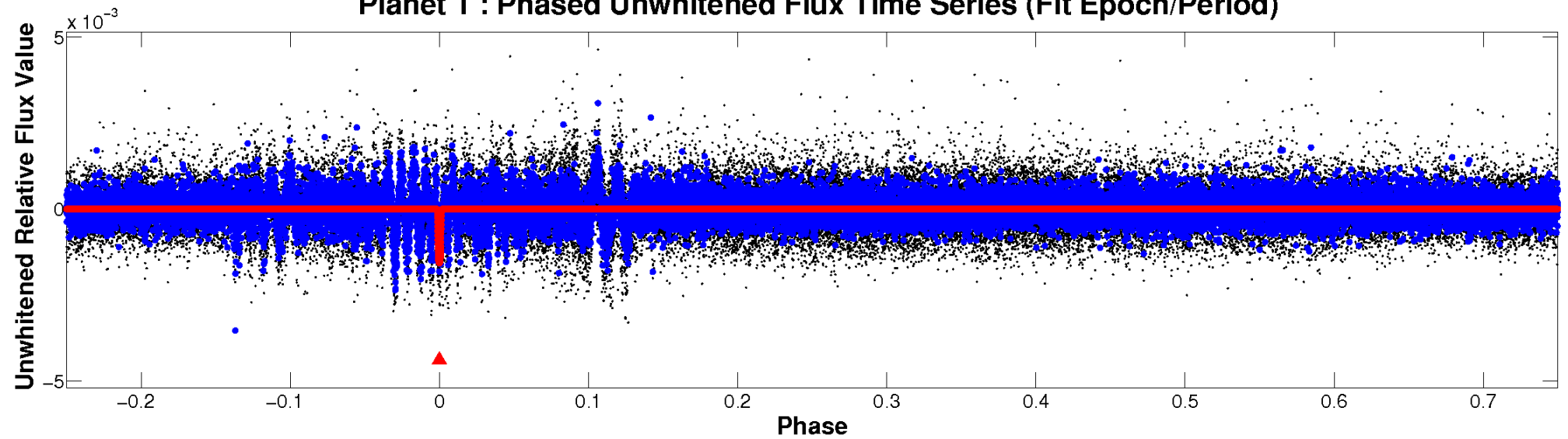
TCE 007751259-01



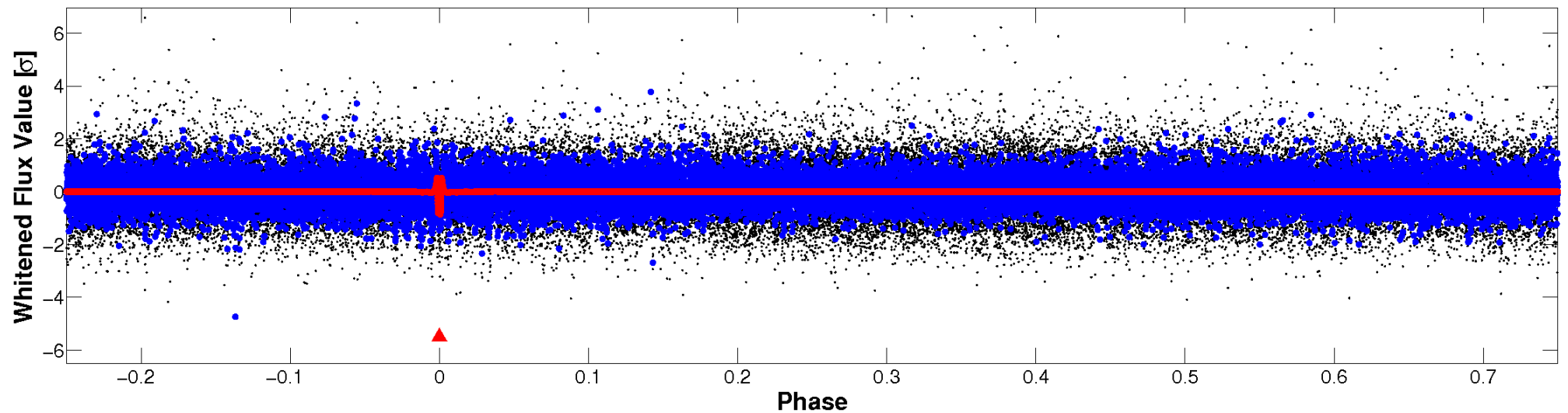


# Non-Whitened Vs. Whitened Light Curve

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

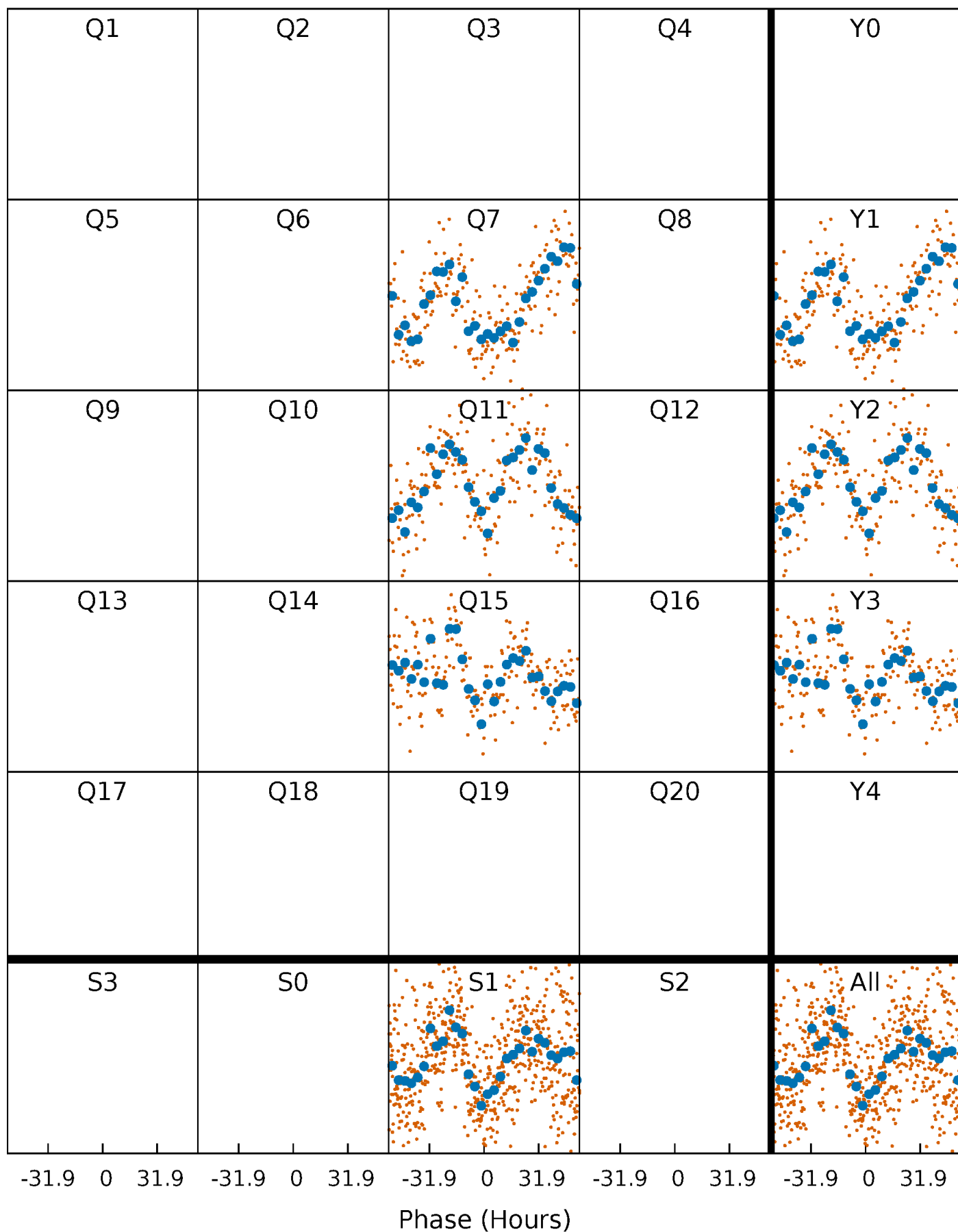


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

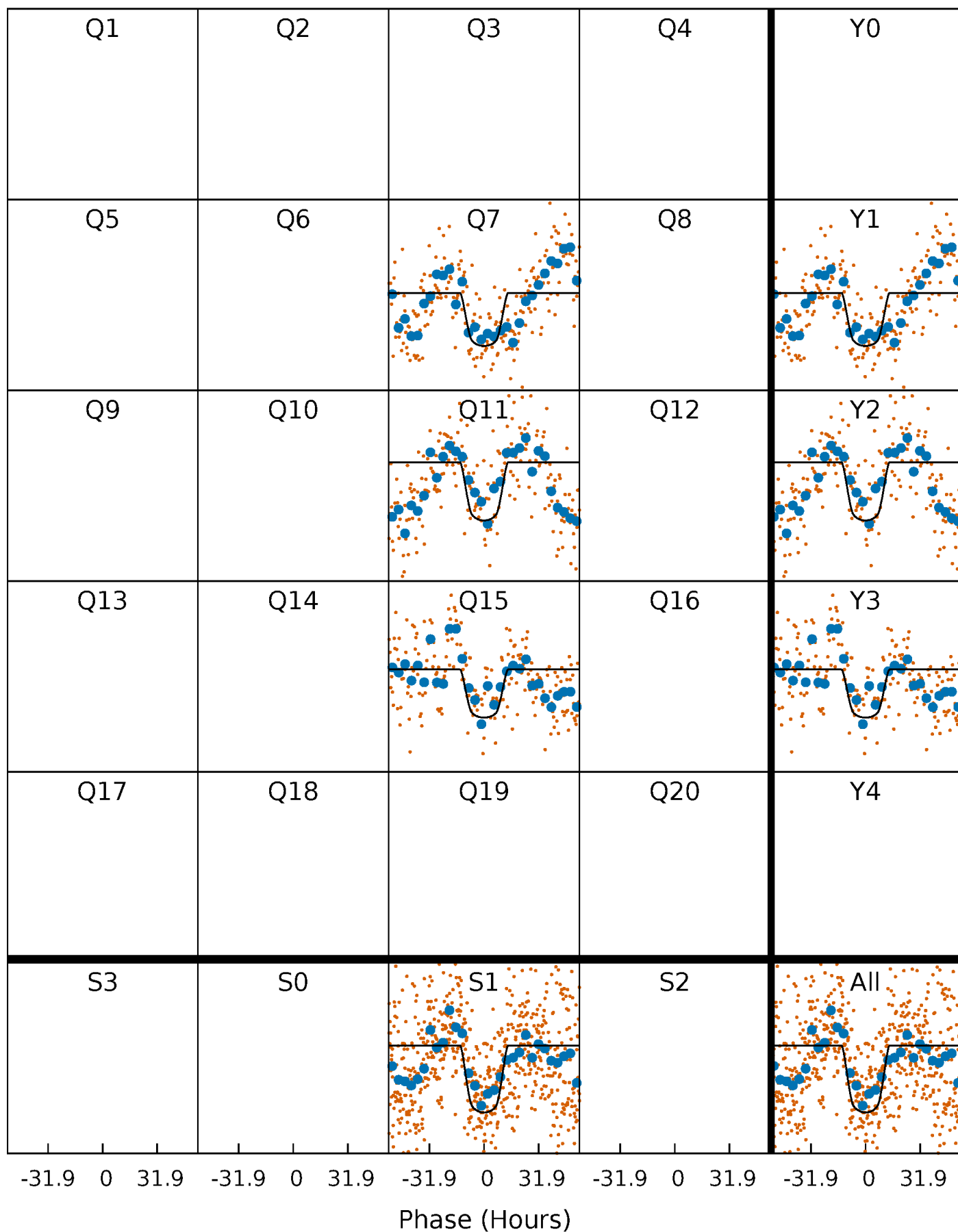
TCE 007751259-01 P=370.214531 Days  $T_0=311.335879$  (BKJD)





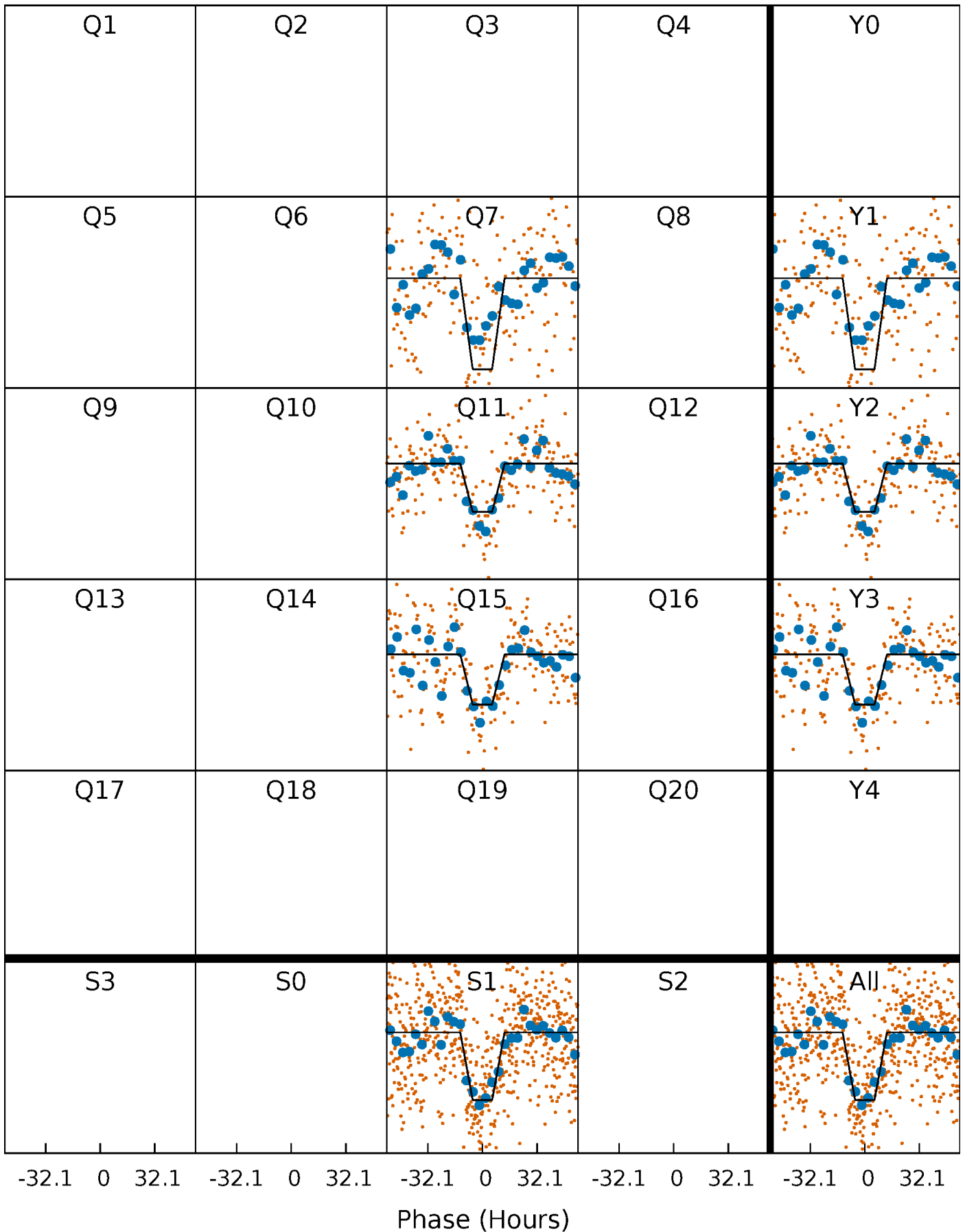
# DV Quarter-Phased Transit Curves

TCE 007751259-01 P=370.214531 Days  $T_0=311.335879$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

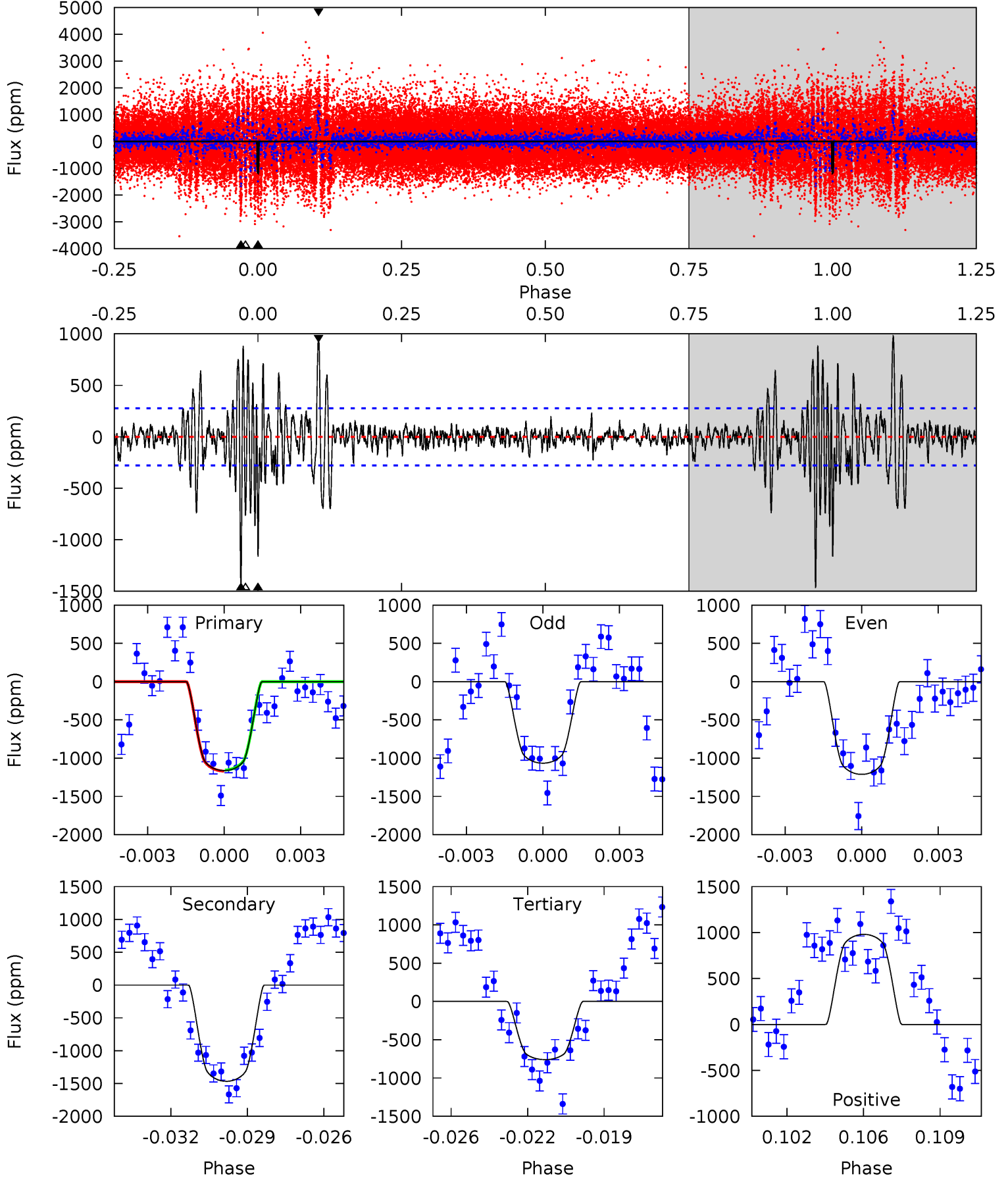
TCE 007751259-01 P=370.181184 Days  $T_0=311.387019$  (BKJD)



# DV Model-Shift Uniqueness Test

007751259-01, P = 370.214531 Days, E = 311.335879 Days

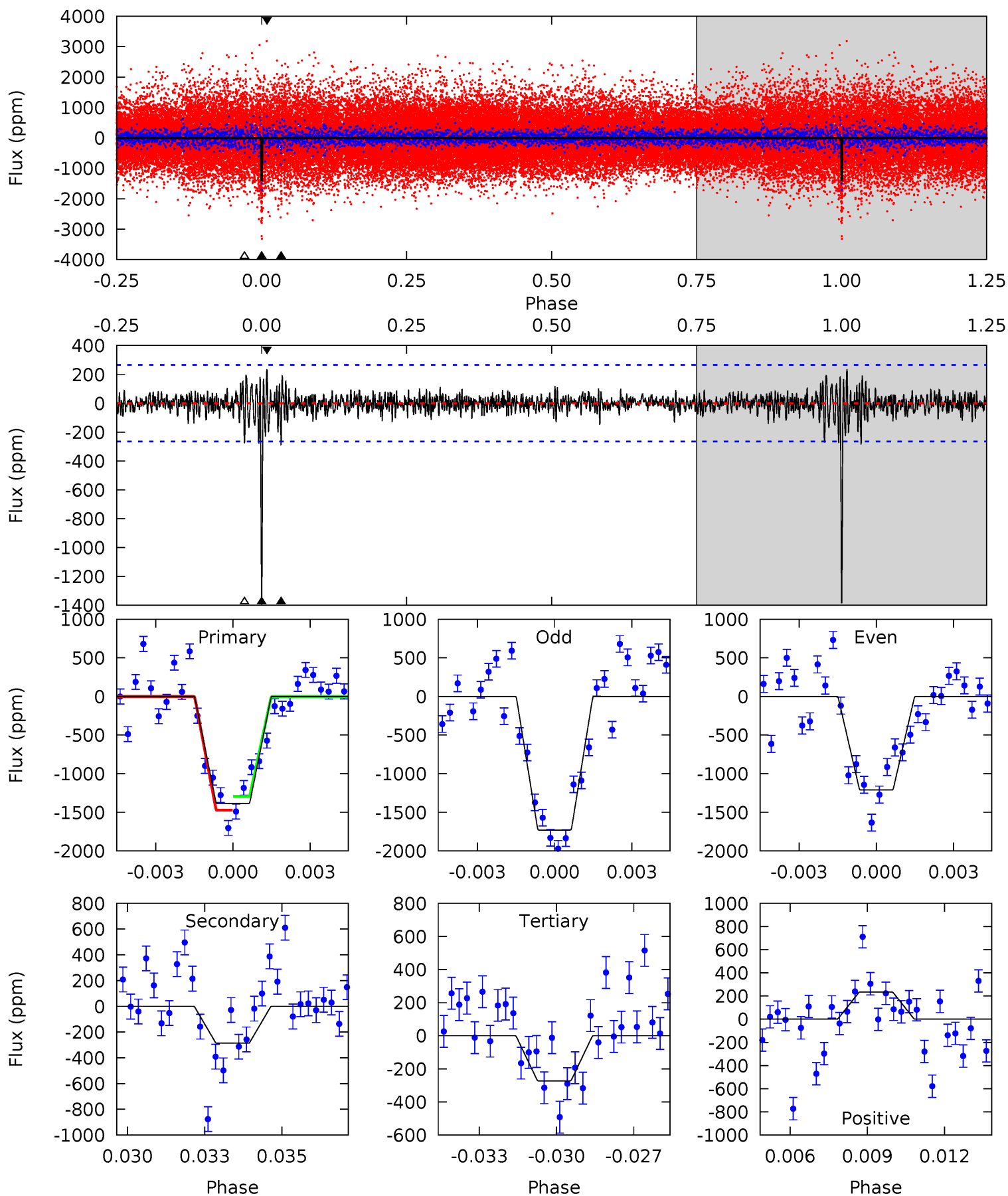
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	27.7	14.3	18.5	5.24	2.95	3.18	7.59	3.43	13.3	9.17	1.31	1.09	0.40	0.12



# Alt Model-Shift Uniqueness Test

007751259-01, P = 370.181184 Days, E = 311.387019 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
27.4	5.65	5.39	4.63	5.26	2.97	0.95	22.0	22.8	0.26	1.02	4.89	0.86	0.14	1.77



### Stellar Parameters For KIC 007751259

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6246^{+196}_{-261}$	$4.433^{+0.052}_{-0.195}$	$0.070^{+0.250}_{-0.350}$	$1.092^{+0.329}_{-0.141}$	$1.180^{+0.135}_{-0.169}$	$1.276^{+0.353}_{-0.666}$
	+3%/-4%	+1%/-4%	+357%/-500%	+30%/-13%	+11%/-14%	+28%/-52%
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 007751259-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1467 \pm 53$	$5.36^{+0.92}_{-0.62}$	$398^{+26}_{-21}$	$5842^{+301}_{-299}$	$31186^{+7314}_{-8086}$
Alt.	$-286 \pm 51$	$4.60^{+0.78}_{-0.56}$	$397^{+27}_{-21}$	$4384^{+252}_{-224}$	$8074^{+2786}_{-2305}$

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

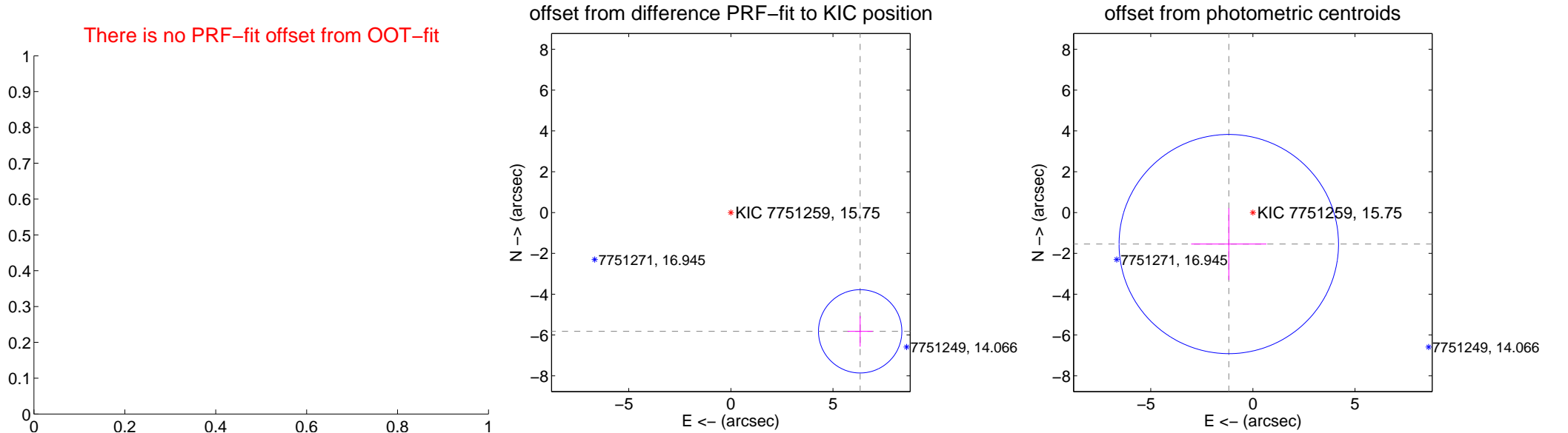
## DV Centroid Data

Supplemental centroid analysis for 007751259-01. Kepler magnitude: 15.75. Transit SNR 9.06

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	$8.598 \pm 0.680$	12.64	$-6.328 \pm 0.615$	$-5.821 \pm 0.750$
photometric centroid source offset	$1.94 \pm 1.79$	1.09	$1.18 \pm 1.84$	$-1.54 \pm 1.76$

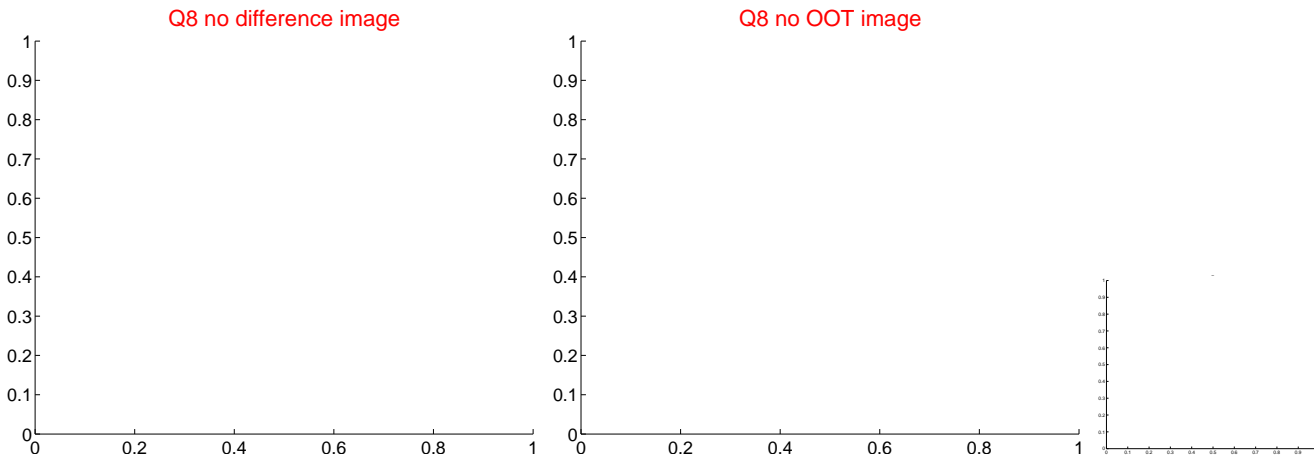
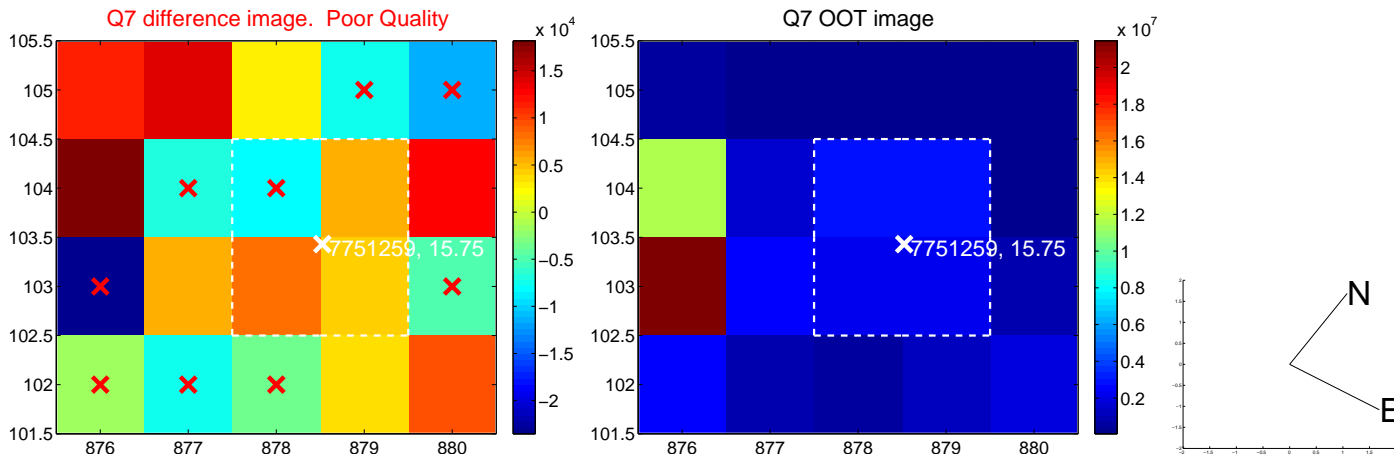
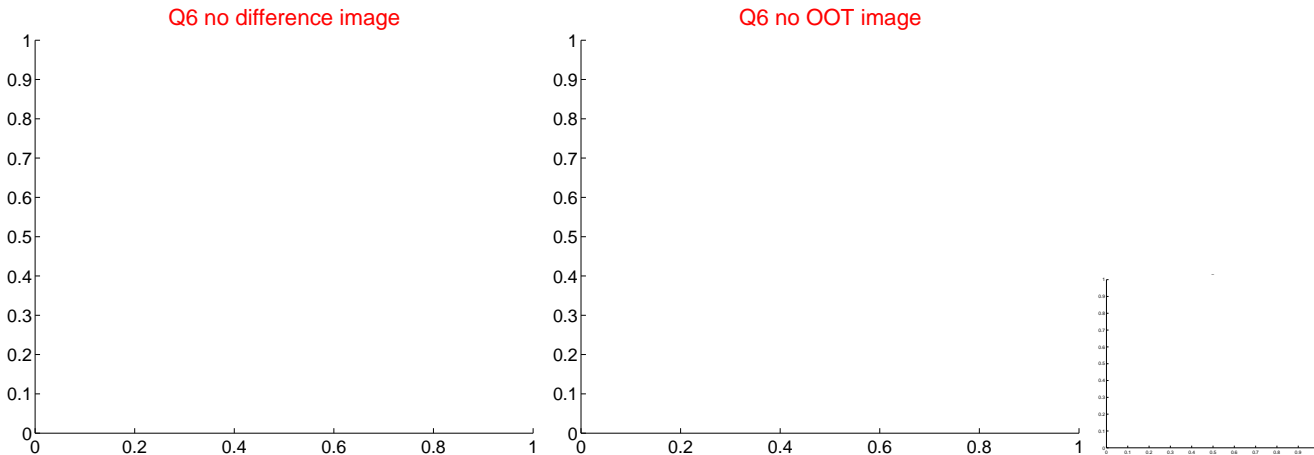
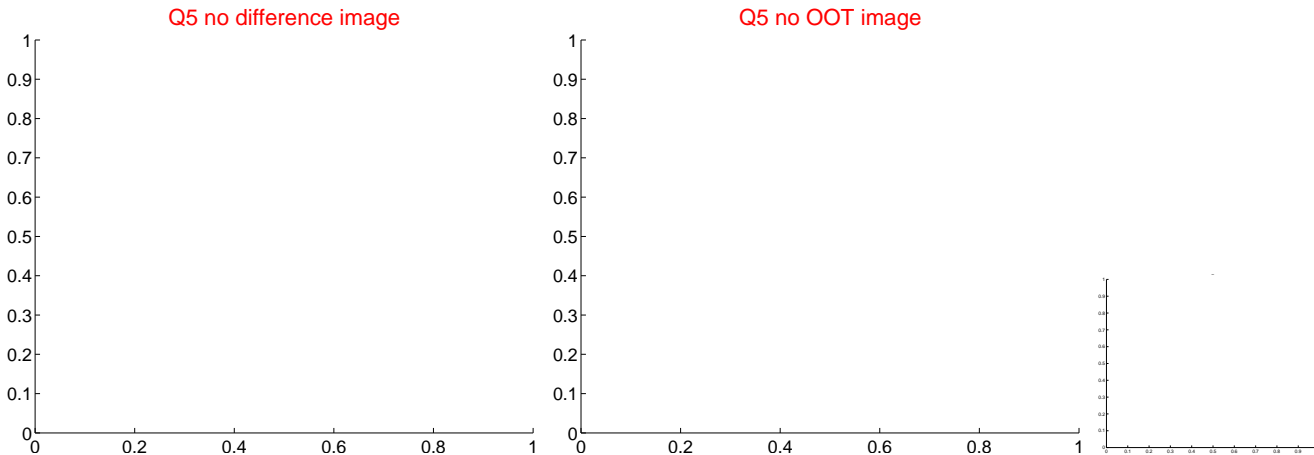




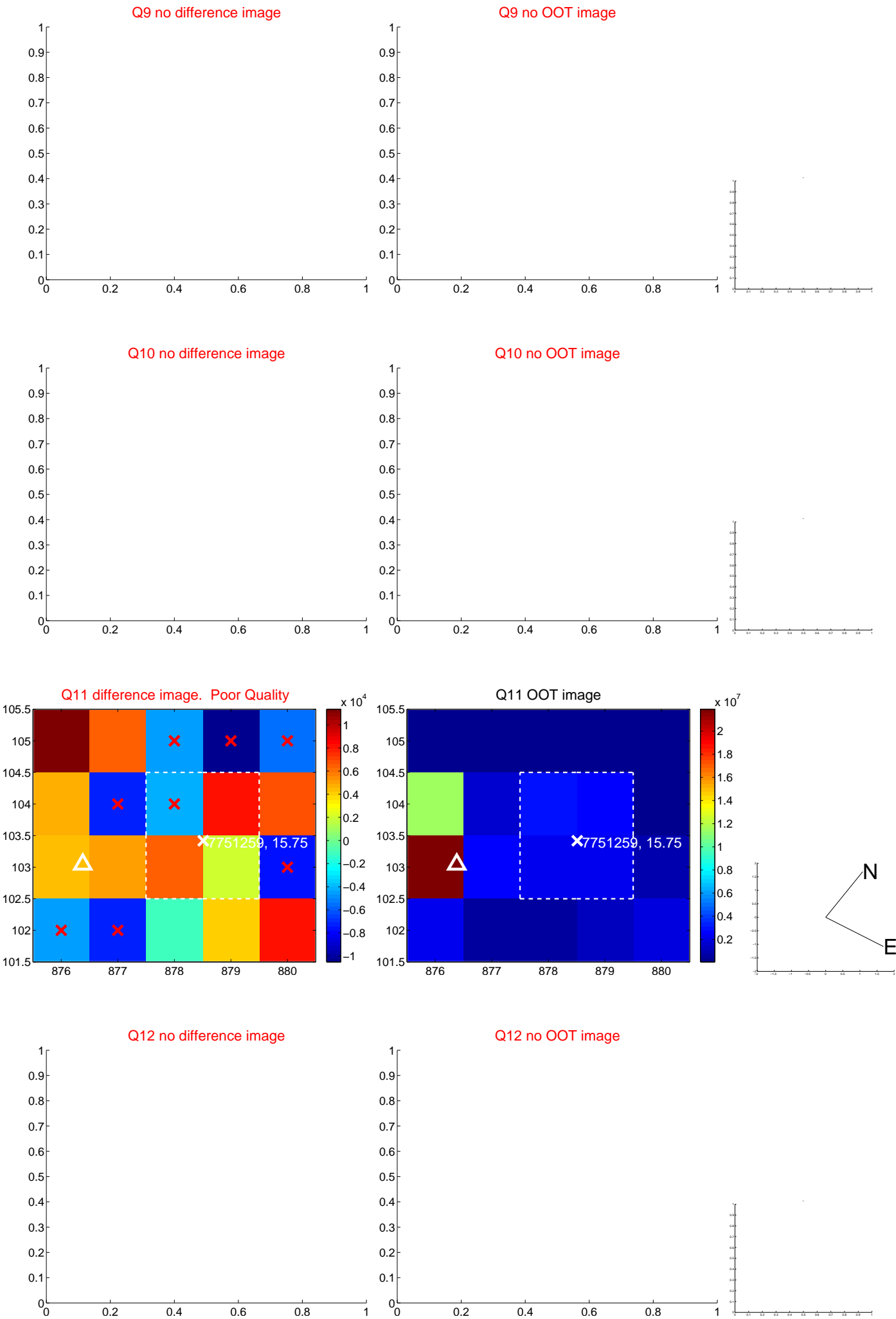
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



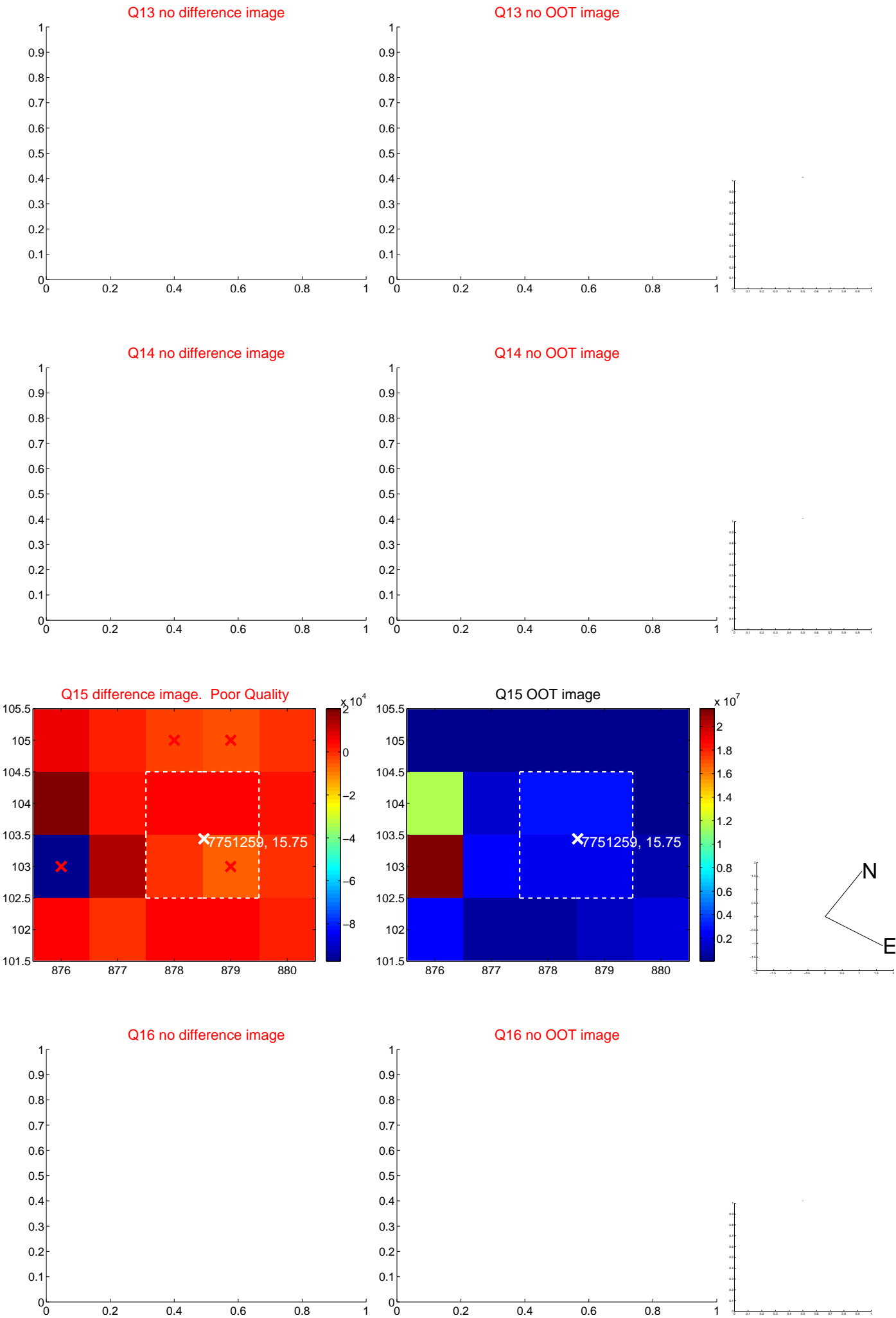
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



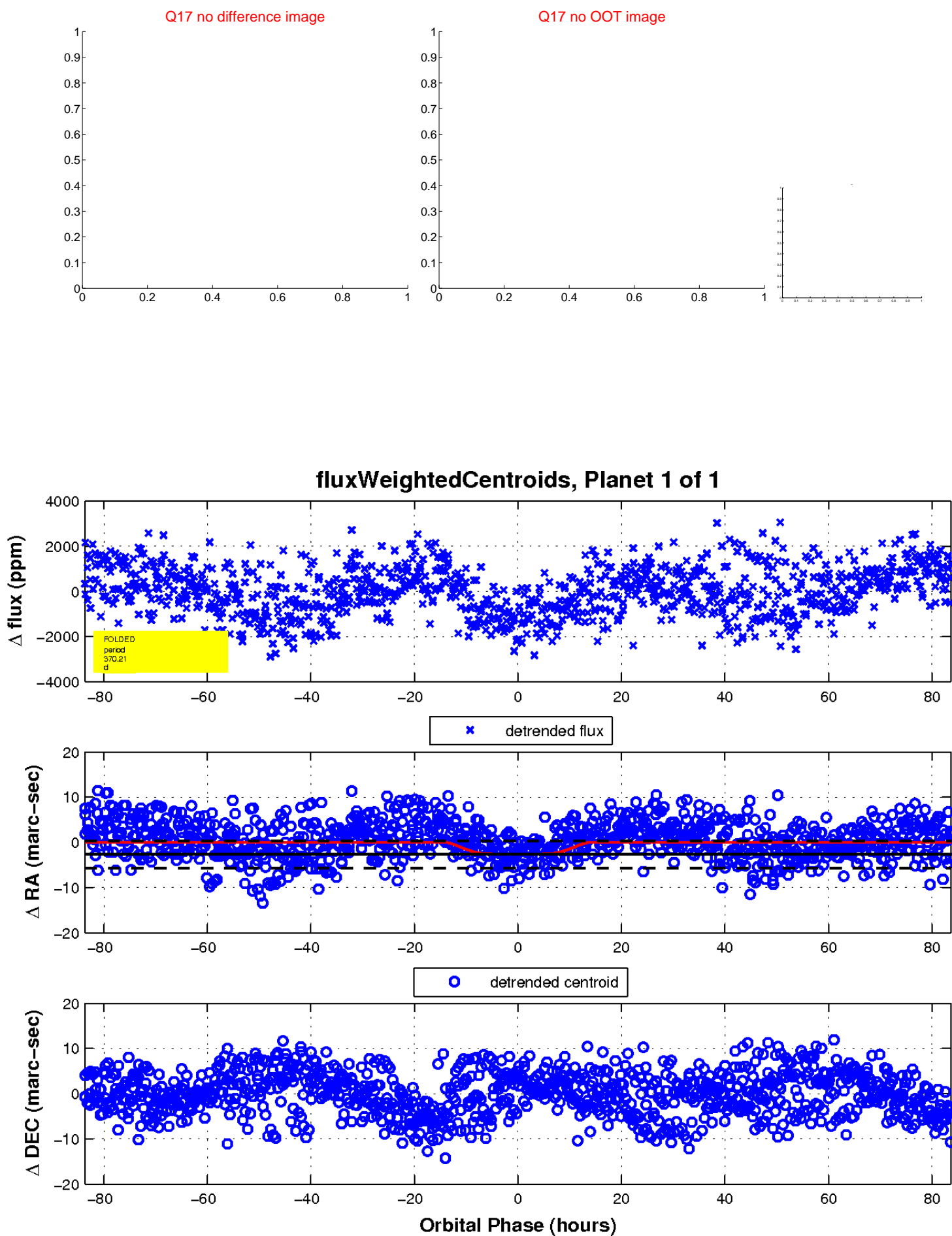
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: 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

