

# KIC 007628549

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007628549-01	OBS	No	381.736674	448.980784	157.1	16.218	7.2	7.1	1.47	6287	2.00	2.79

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007628549-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

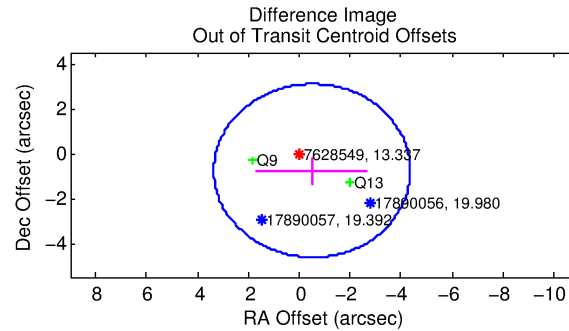
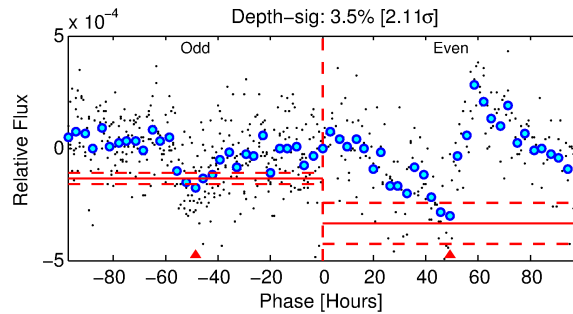
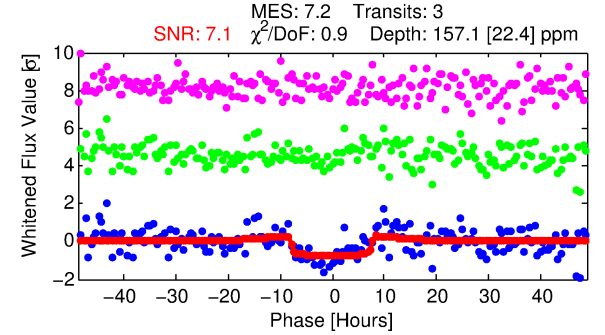
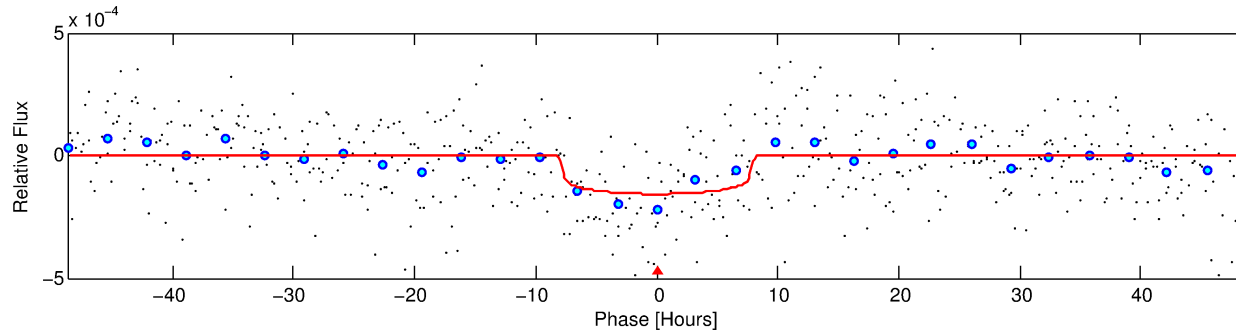
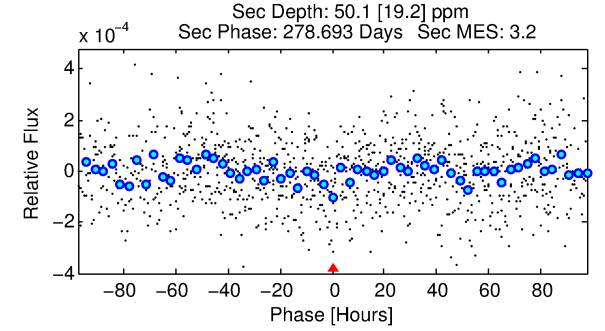
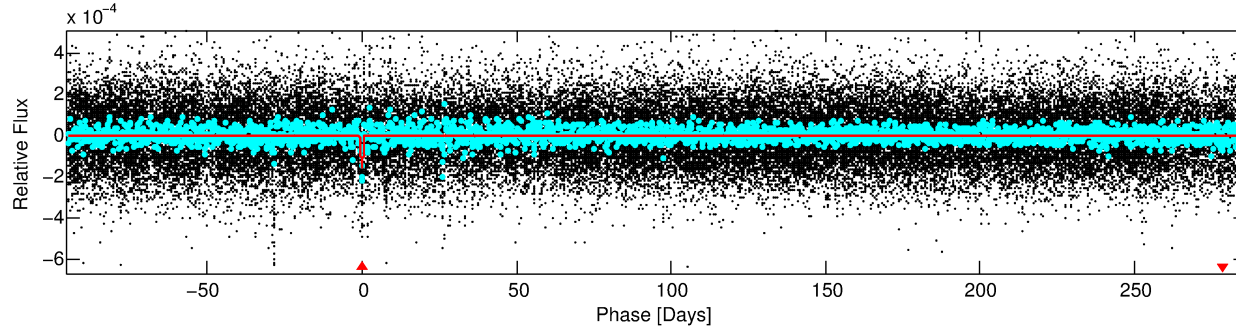
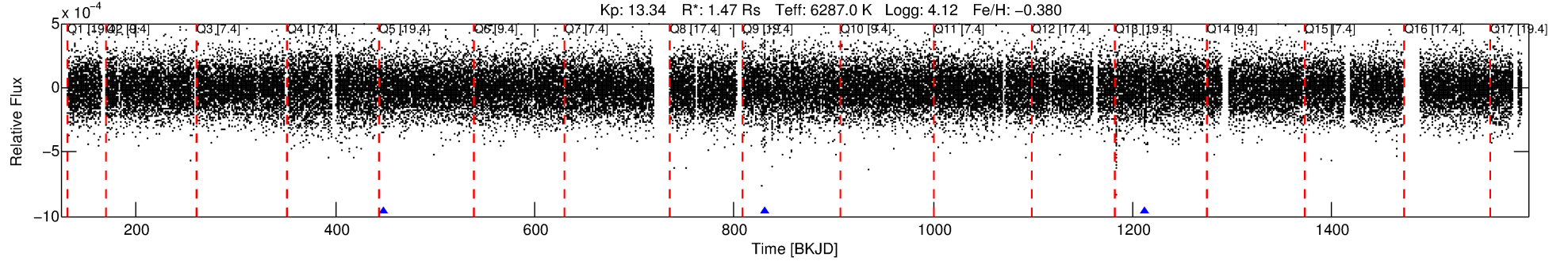
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007628549-01

No Significant Match Found

# DV One-Page Summary

KIC: 7628549 Candidate: 1 of 1 Period: 381.737 d



## DV Fit Results:

Period = 381.73667 [0.01589] d  
Epoch = 448.9808 [0.0198] BKJD  
Rp/R\* = 0.0125 [0.0035]  
a/R\* = 119.33 [173.06]  
b = 0.76 [0.79]  
Seff = 2.79 [1.14]  
Teq = 329 [34] K  
Rp = 2.00 [0.77] Re  
a = 1.0386 [0.2562] AU  
Ag = 7420.95 [5826.69] [1.27σ]  
Teffp = 4727 [818] K [5.37σ]

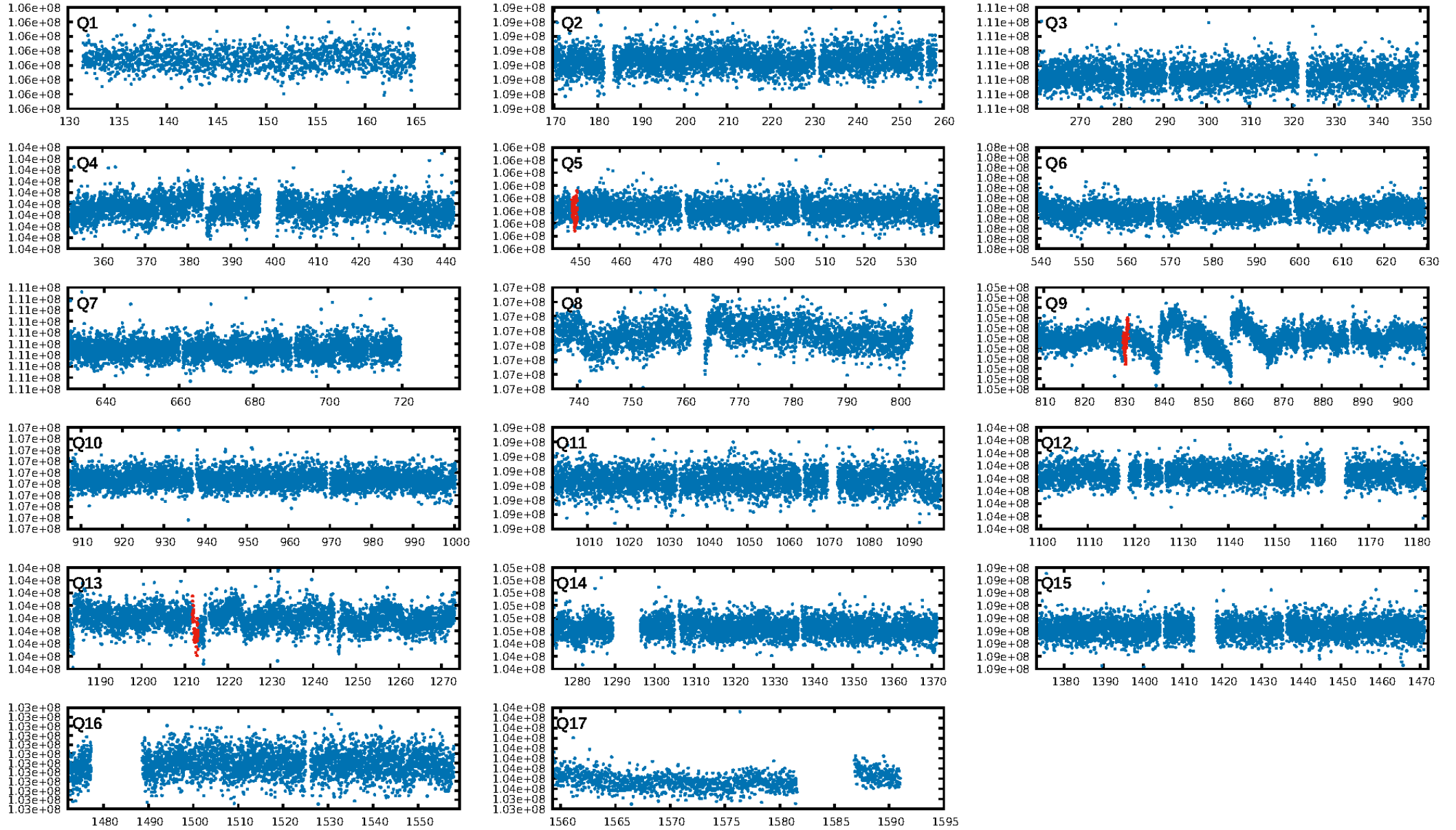
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 12.5%  
ModelChiSquareGof-sig: 99.7%  
**Bootstrap-pfa: 1.42e-08**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 7.259  
Centroid-sig: 20.1%  
Centroid-so: 1.559 arcsec [1.12σ]  
OotOffset-rm: 0.920 arcsec [0.72σ]  
KicOffset-rm: 1.141 arcsec [0.82σ]  
OotOffset-st: 0/0/0/2 [2]  
KicOffset-st: 0/0/0/2 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [3/3]

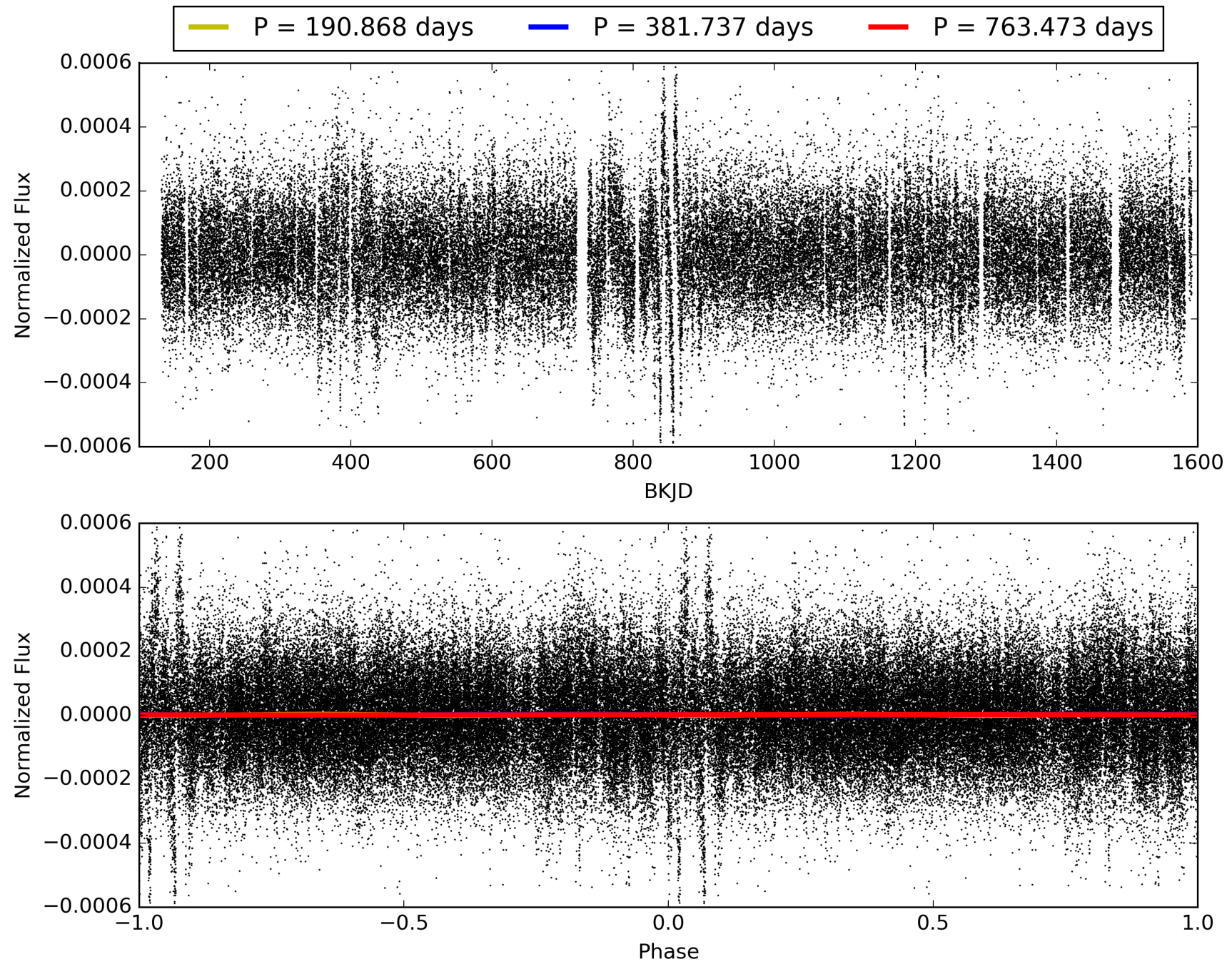
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:04:12 Z

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

# TCE 007628549-01, PDC Light Curves

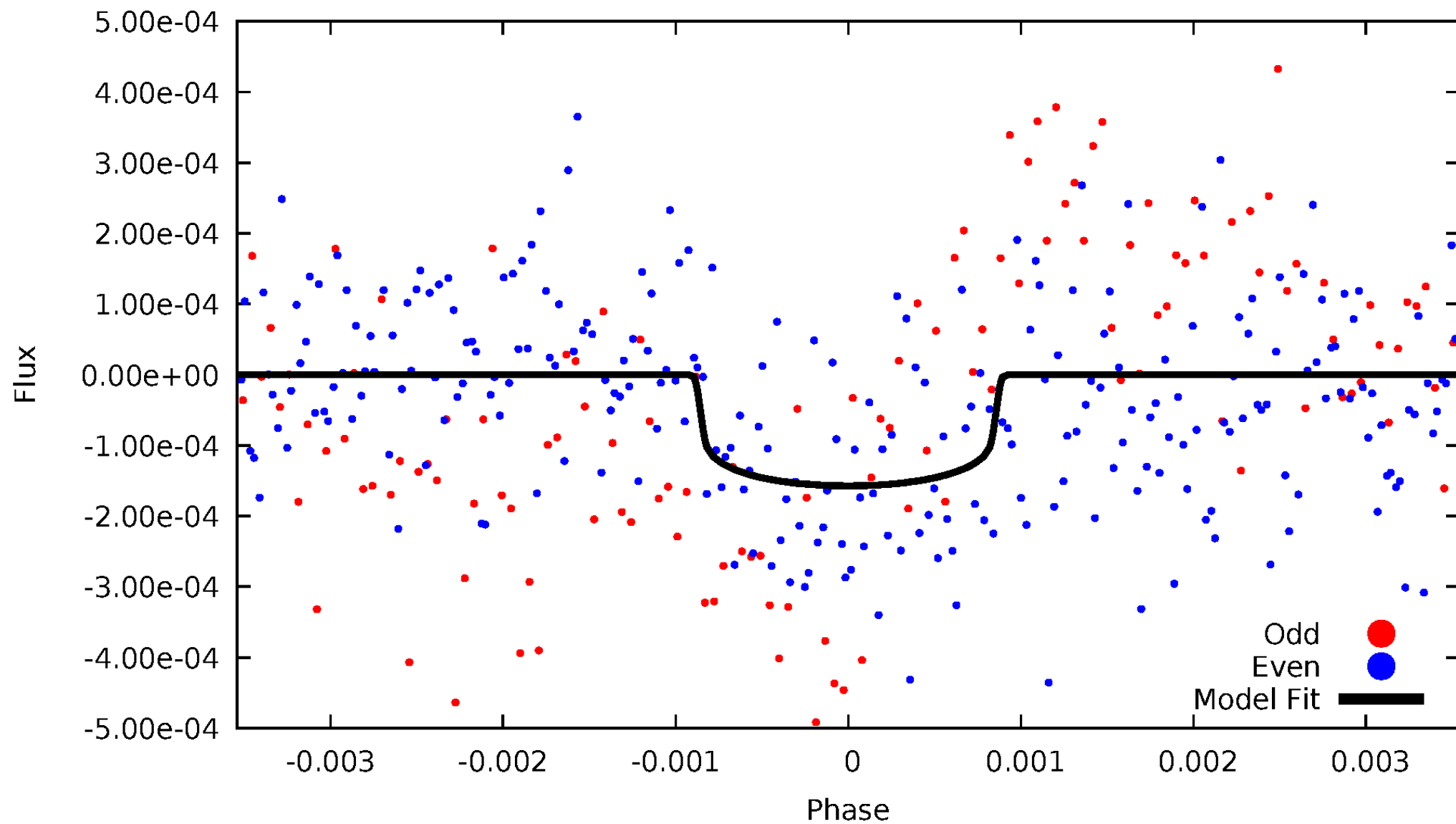


TCE 007628549-01



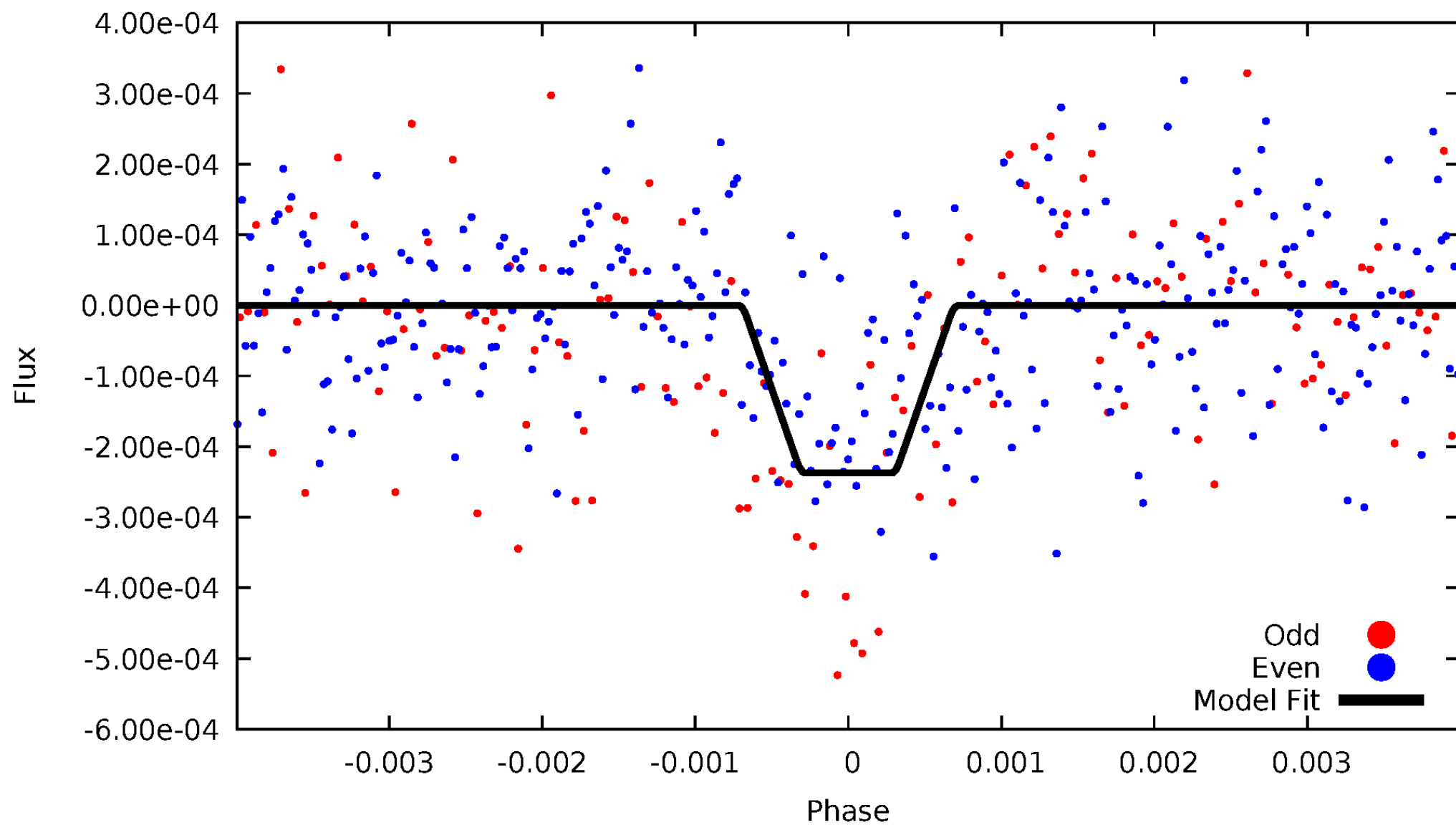
# DV Odd/Even

TCE 007628549-01



# ALT Odd/Even

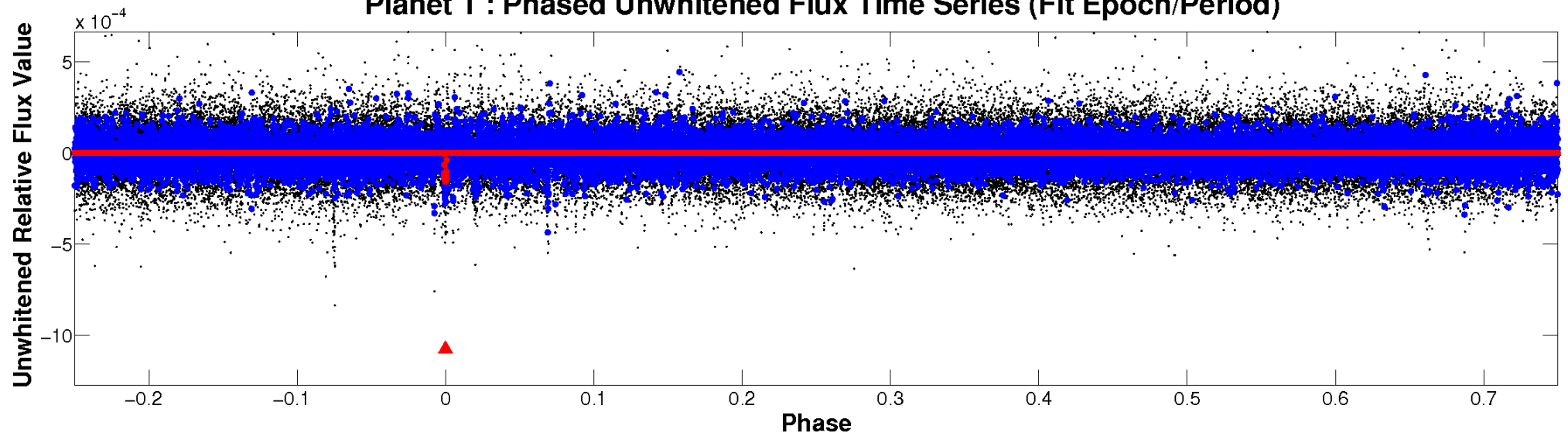
TCE 007628549-01



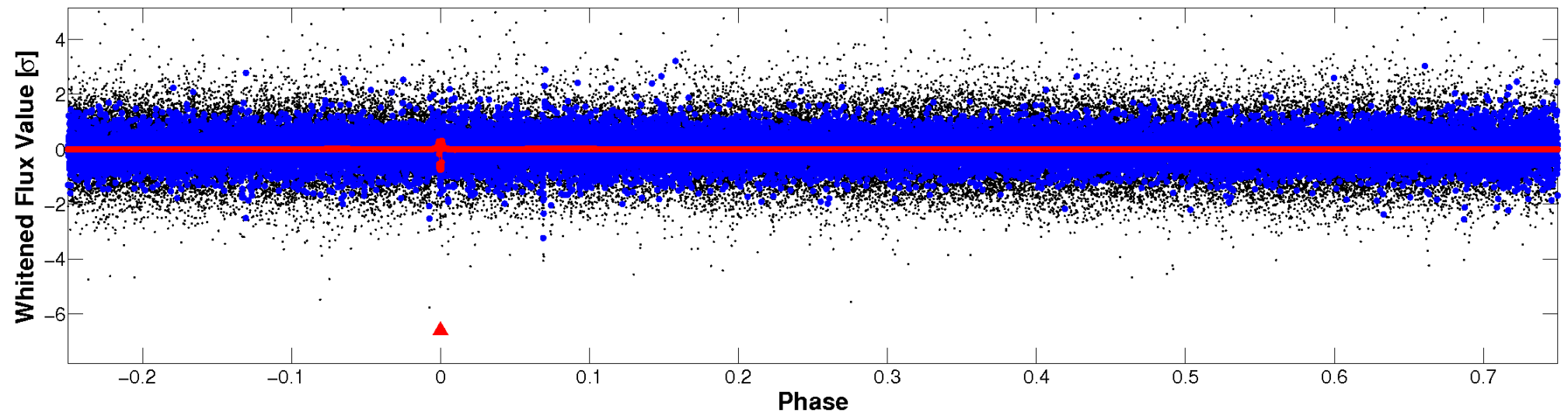


# Non-Whitened Vs. Whitened Light Curve

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

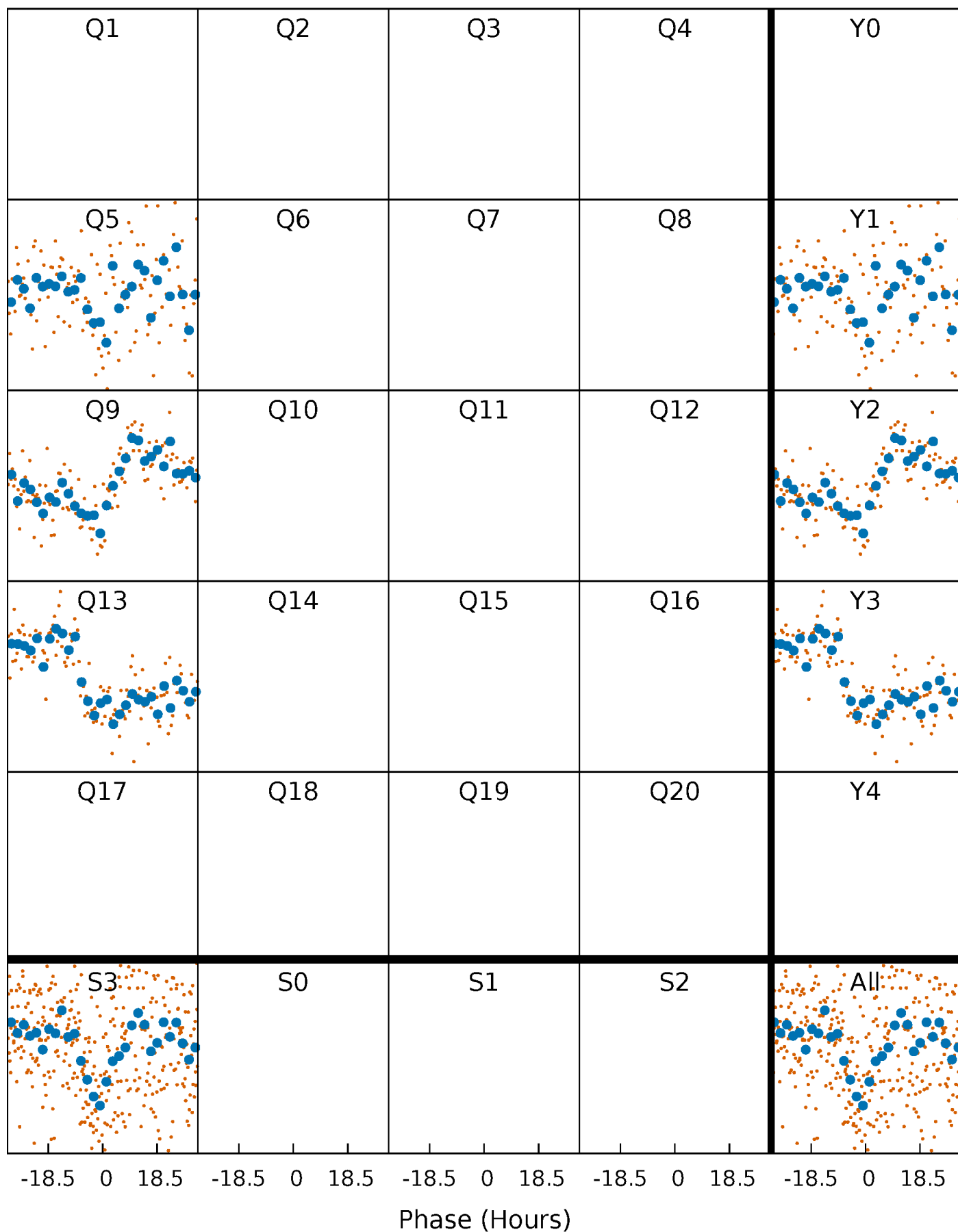


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

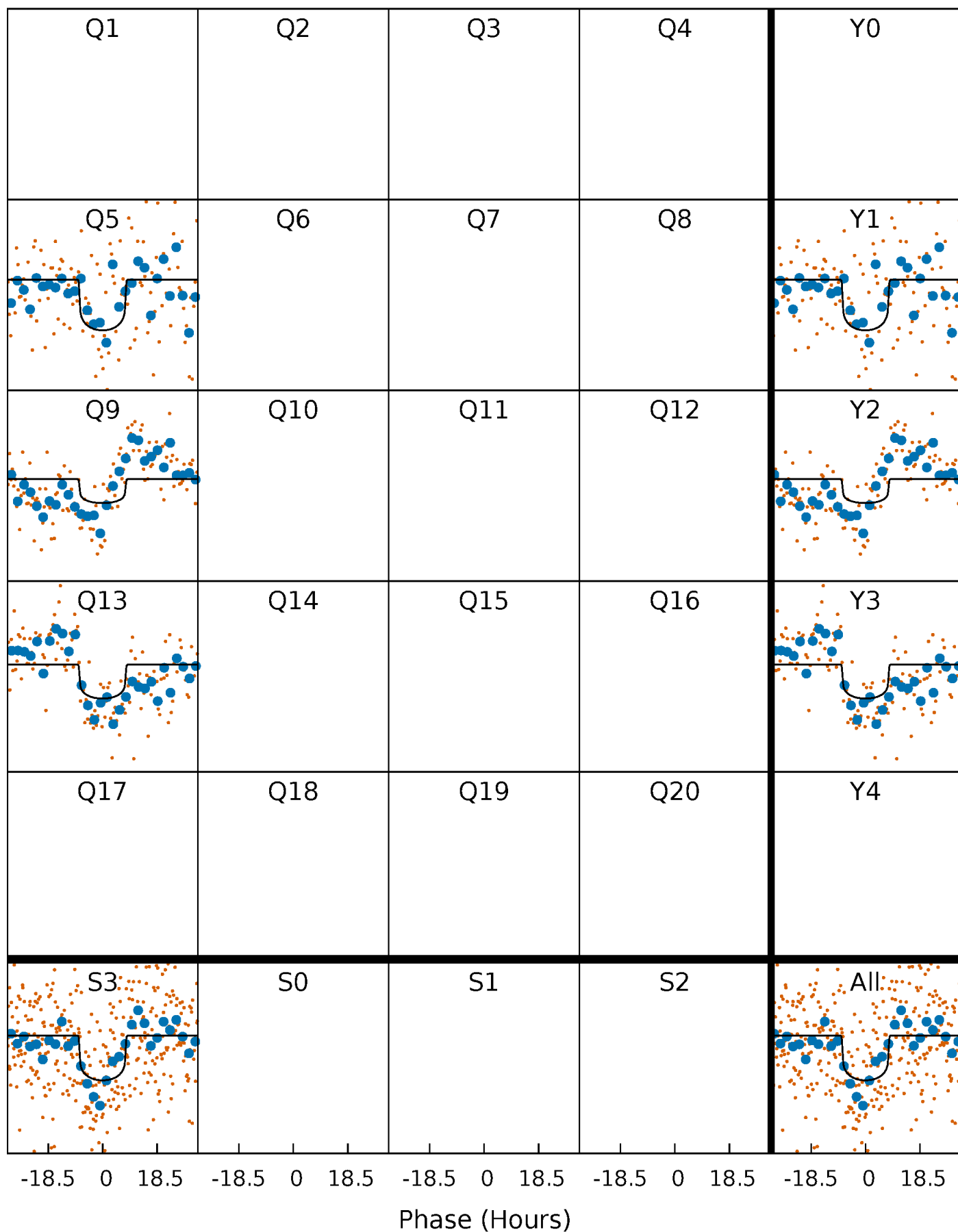
TCE 007628549-01     $P=381.736674$  Days     $T_0=448.980784$  (BKJD)





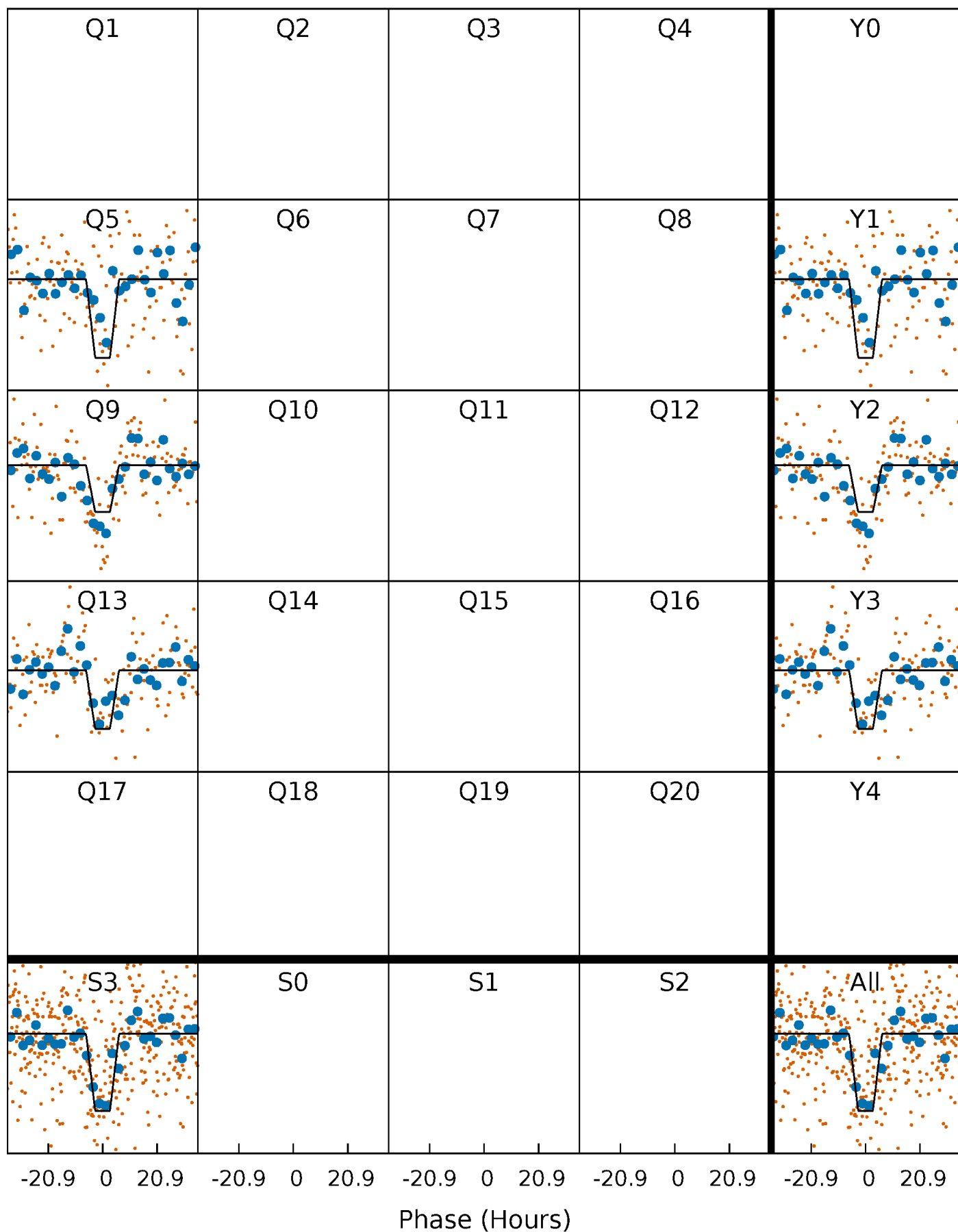
# DV Quarter-Phased Transit Curves

TCE 007628549-01 P=381.736674 Days  $T_0=448.980784$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

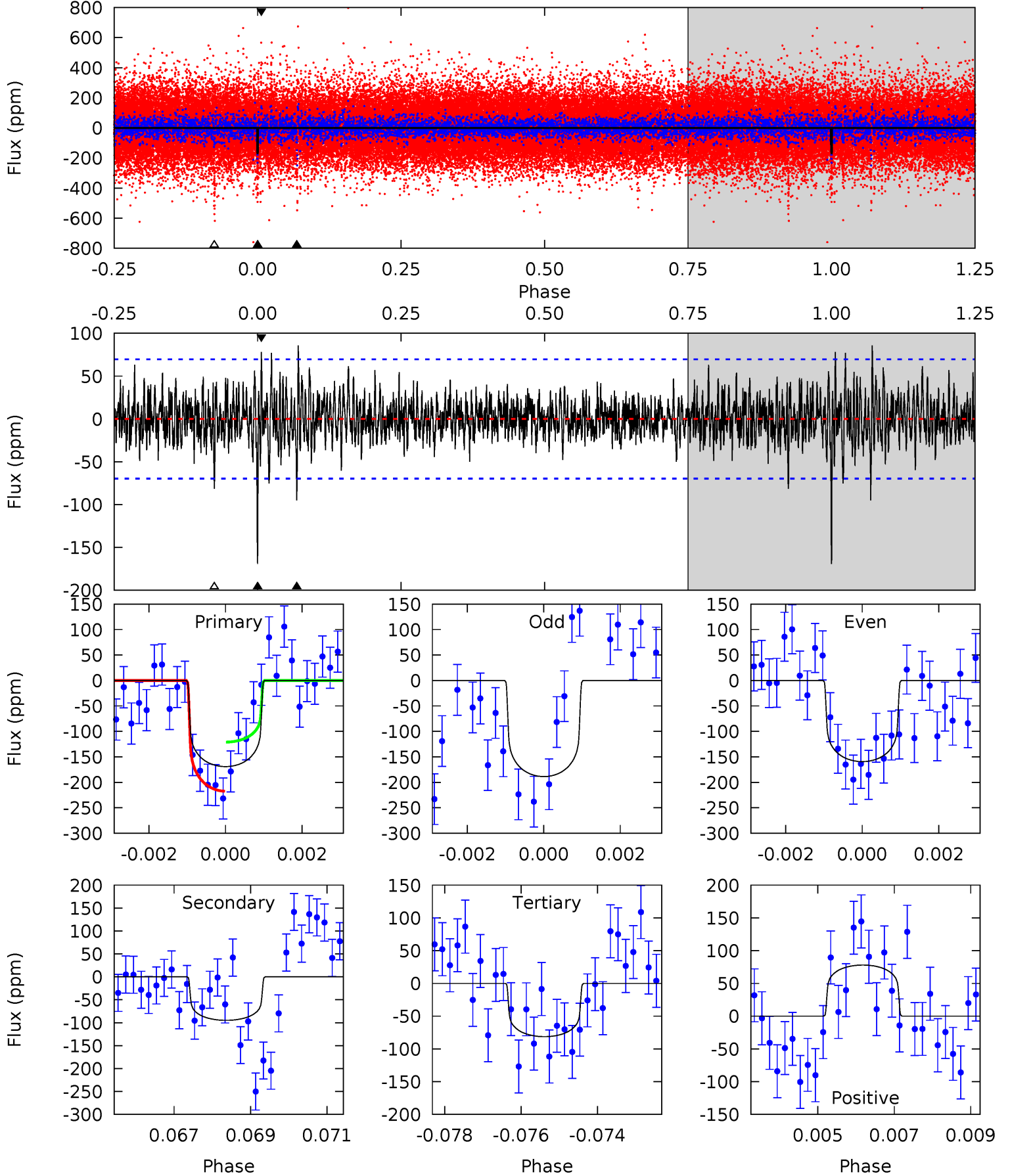
TCE 007628549-01 P=381.705712 Days  $T_0=448.966475$  (BKJD)



# DV Model-Shift Uniqueness Test

007628549-01, P = 381.736674 Days, E = 67.244110 Days

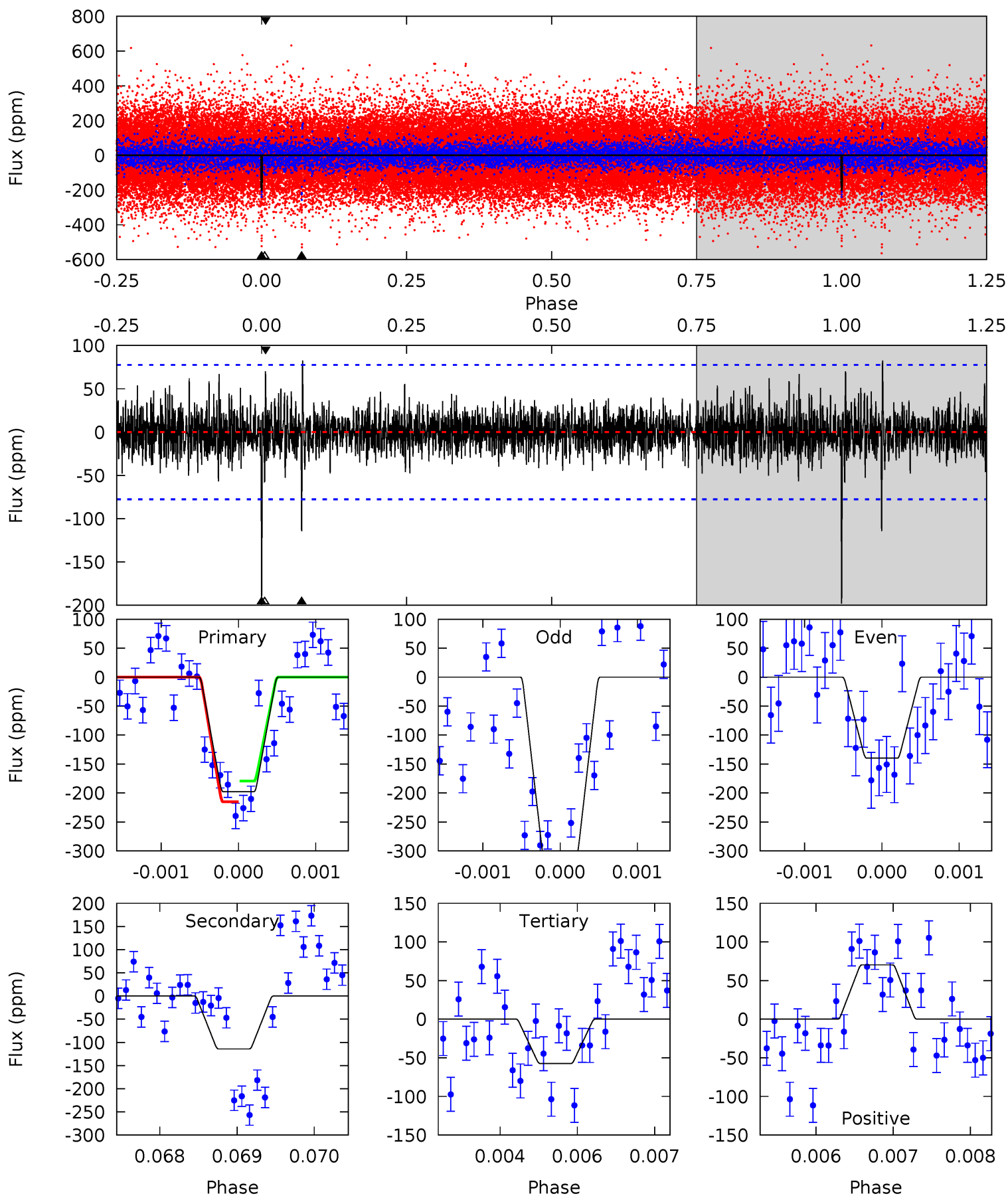
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	7.28	6.24	5.99	5.34	3.12	1.44	6.73	6.99	1.04	1.30	1.07	0.90	0.34	3.70



# Alt Model-Shift Uniqueness Test

007628549-01, P = 381.705712 Days, E = 67.260763 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
13.7	7.94	3.99	4.88	5.39	3.19	1.14	9.75	8.86	3.95	3.06	5.73	1.15	0.29	1.25



### Stellar Parameters For KIC 007628549

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6287^{+175}_{-194}$	$4.117^{+0.228}_{-0.123}$	$-0.380^{+0.300}_{-0.300}$	$1.465^{+0.313}_{-0.382}$	$1.025^{+0.177}_{-0.133}$	$0.459^{+0.590}_{-0.163}$
	+3%/-3%	+6%/-3%	+79%/-79%	+21%/-26%	+17%/-13%	+128%/-36%
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 007628549-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-95 \pm 13$	$1.94^{+0.64}_{-0.59}$	$455^{+31}_{-32}$	$5556^{+1058}_{-627}$	$14990^{+15547}_{-6662}$
Alt.	$-114 \pm 14$	$2.42^{+0.70}_{-0.62}$	$456^{+30}_{-33}$	$5303^{+682}_{-530}$	$11928^{+9549}_{-4831}$

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

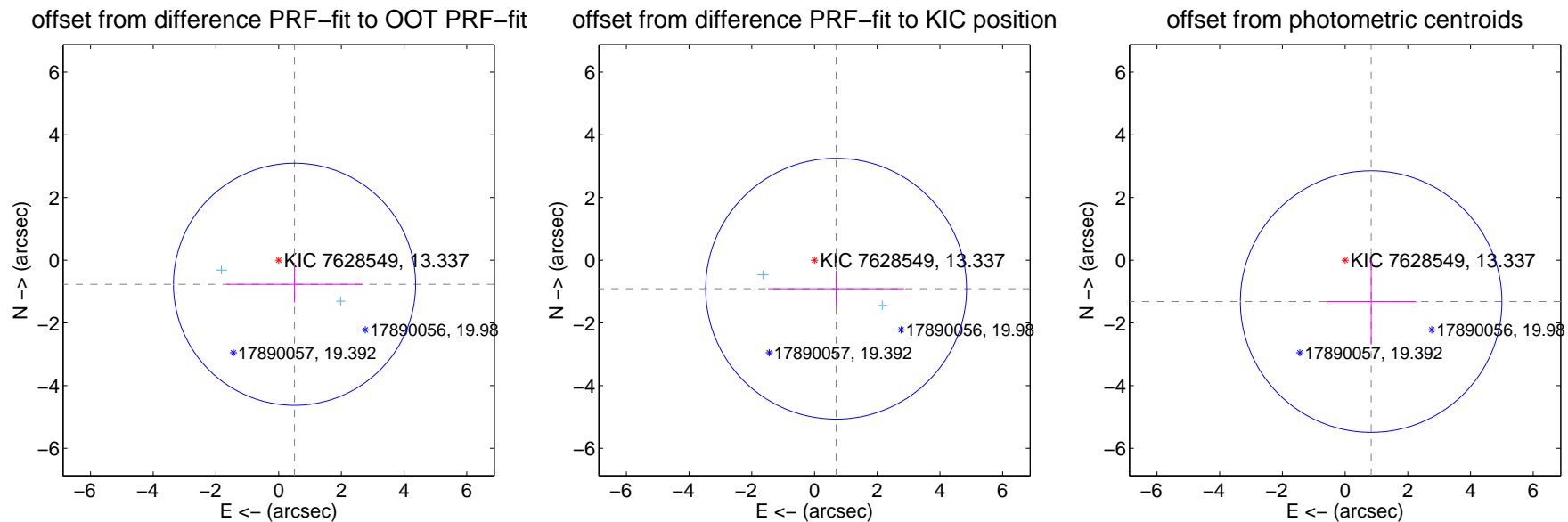
## DV Centroid Data

Supplemental centroid analysis for 007628549-01. Kepler magnitude: 13.34. Transit SNR 7.08

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.920 \pm 1.287$	0.72	$-0.506 \pm 2.167$	$-0.768 \pm 0.580$
PRF-fit source offset from KIC position	$1.141 \pm 1.387$	0.82	$-0.689 \pm 2.169$	$-0.910 \pm 0.571$
photometric centroid source offset	$1.56 \pm 1.39$	1.12	$-0.83 \pm 1.44$	$-1.32 \pm 1.37$



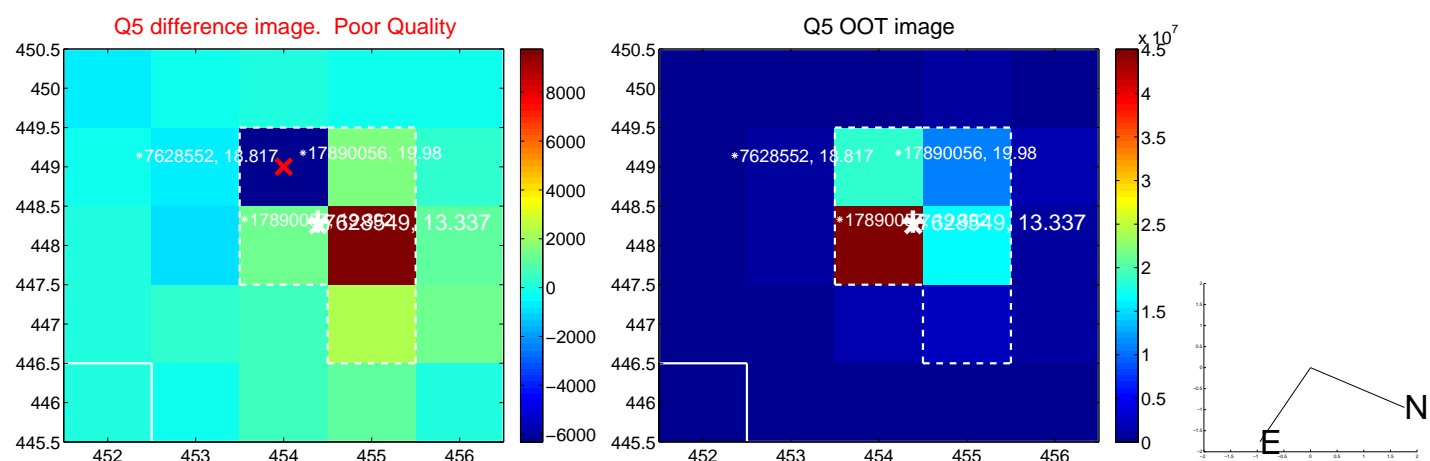
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



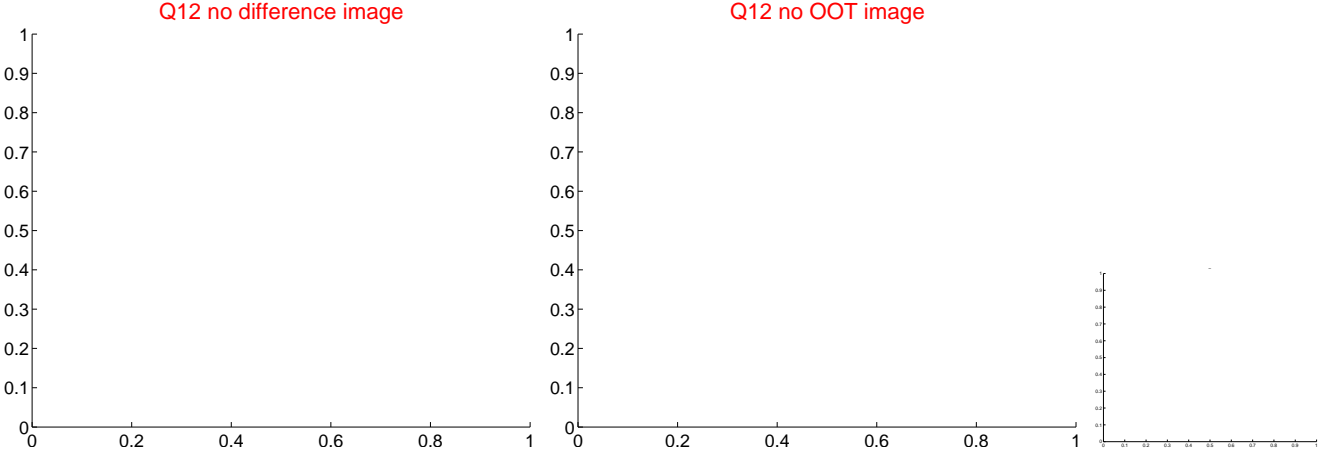
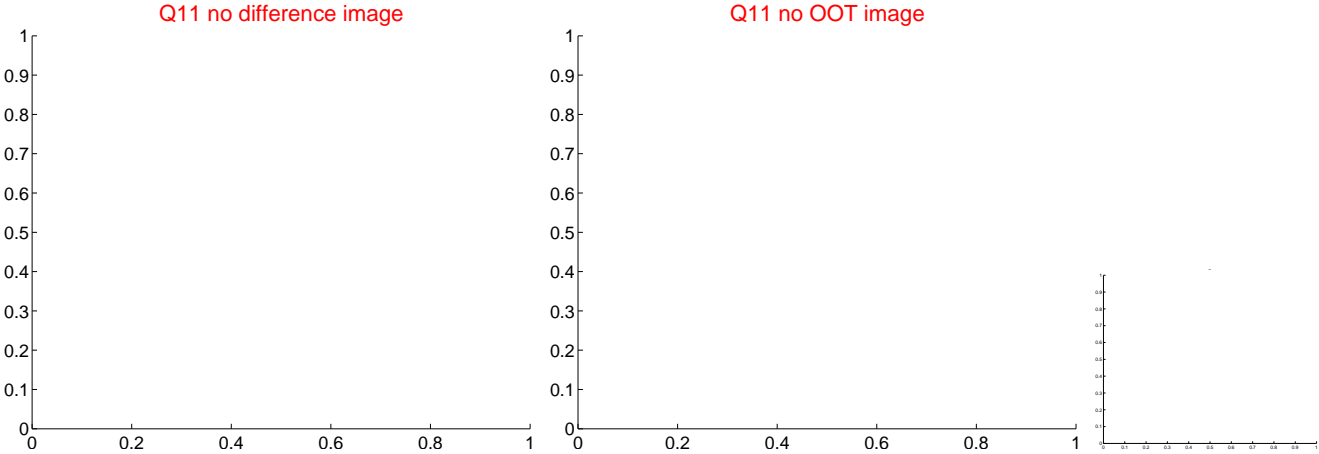
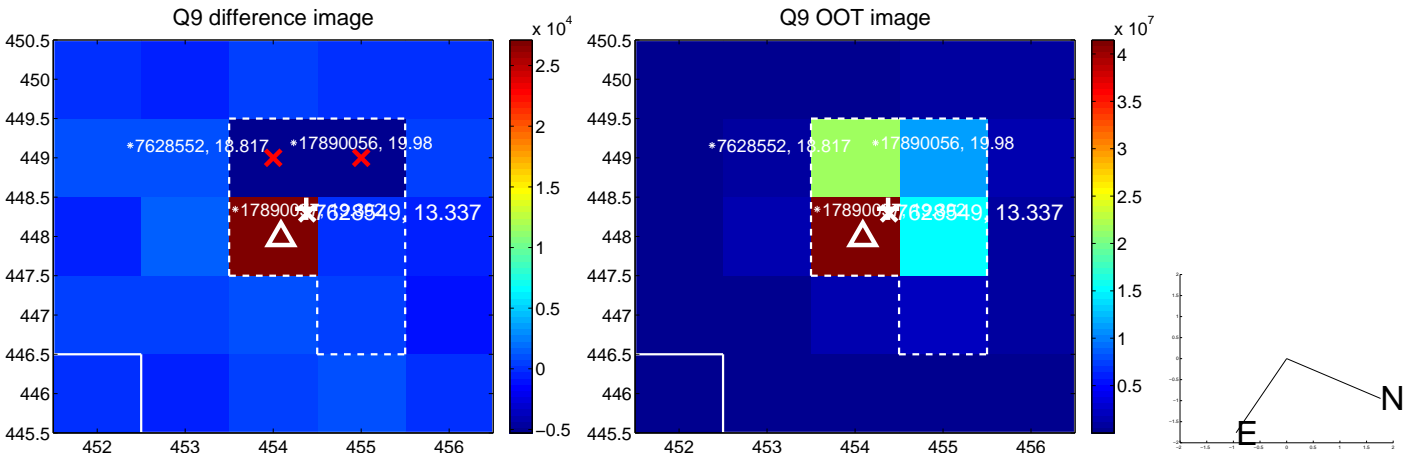
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



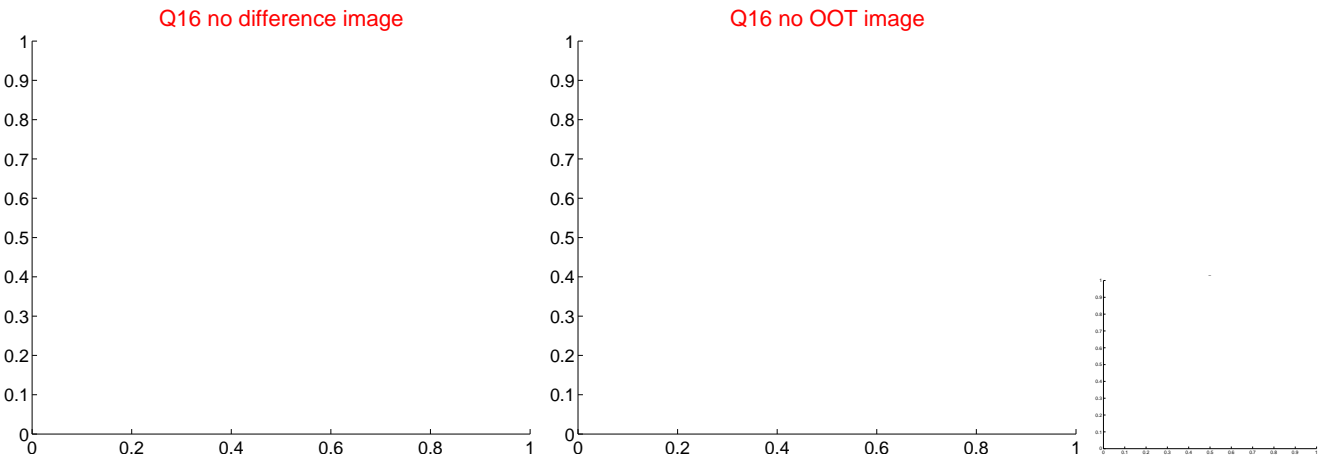
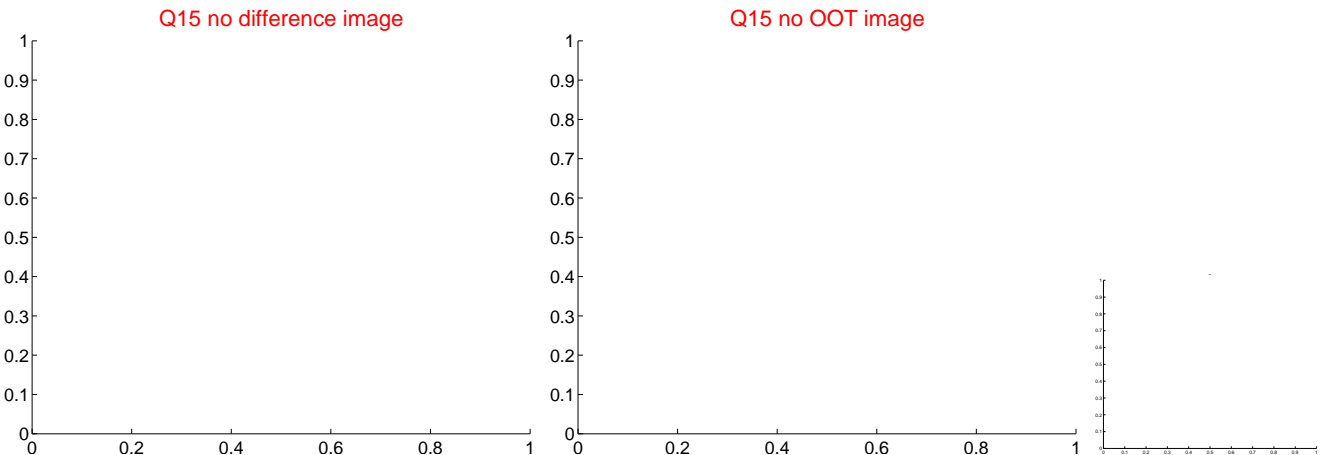
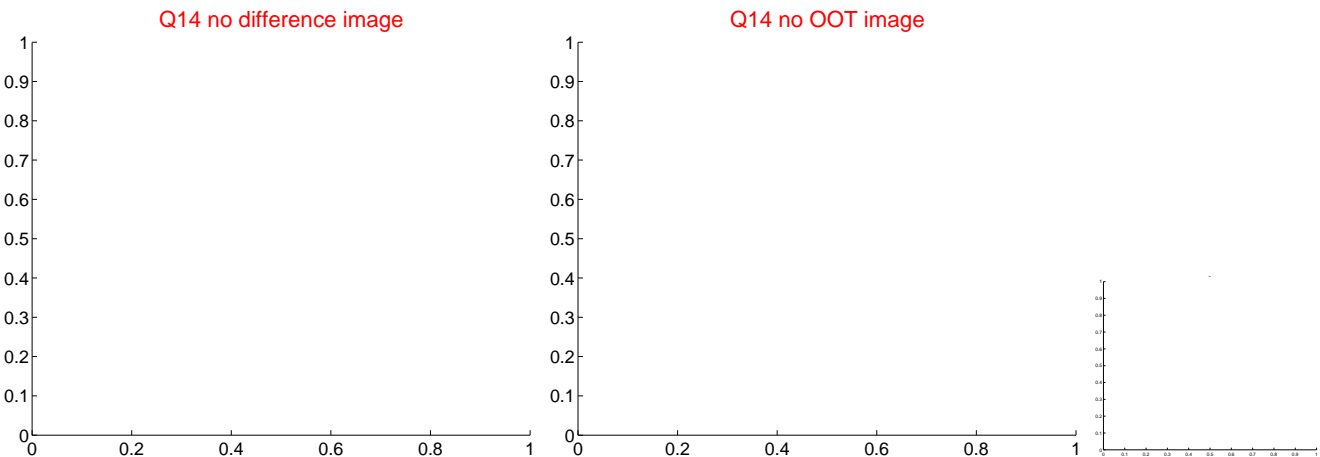
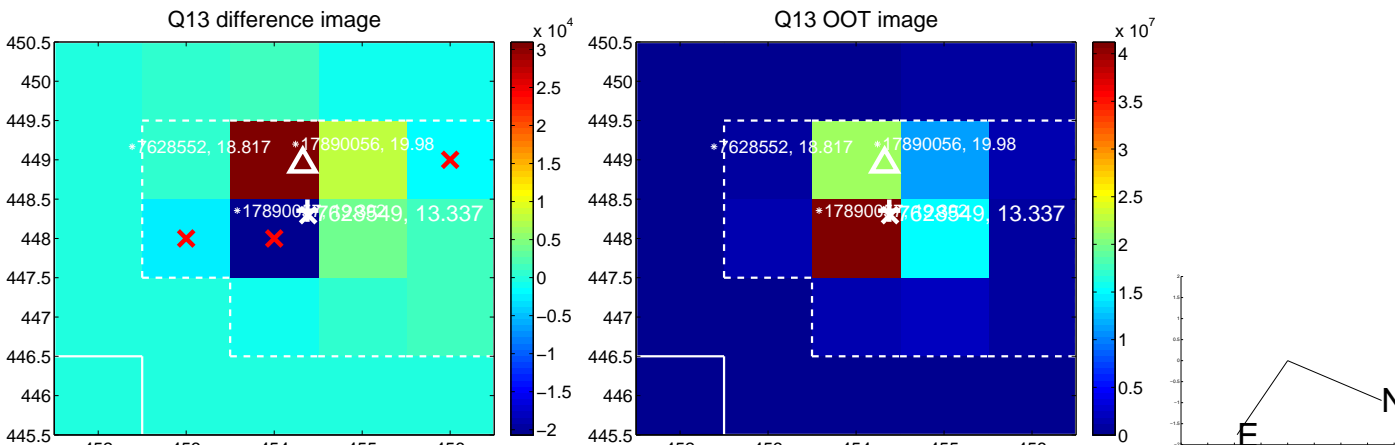
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



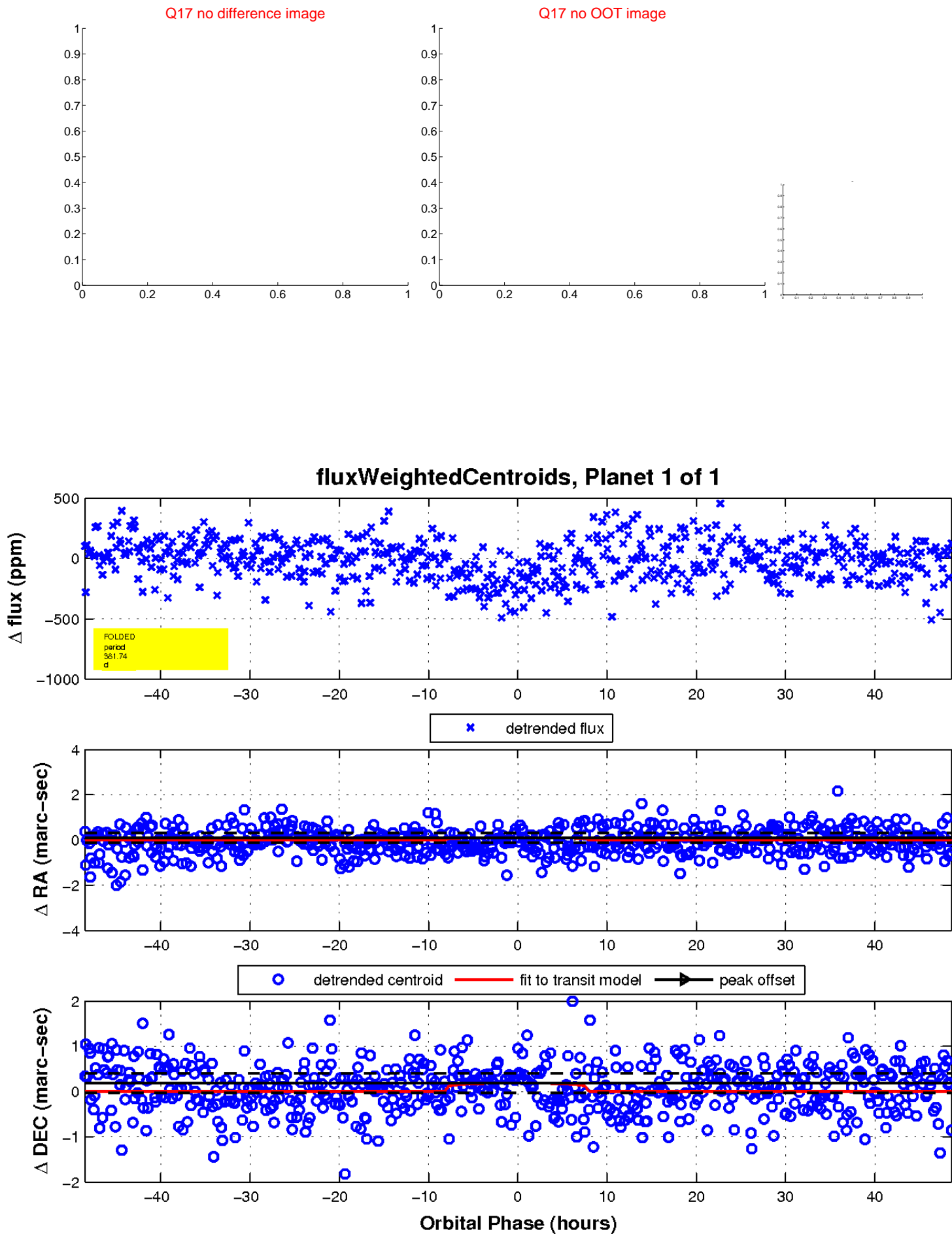
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

