

# KIC 006534956

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006534956-01	OBS	No	337.613941	250.996844	1205.7	4.426	19.1	11.9	1.05	6420	4.35	1.75

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006534956-01	OBS	FP	0.00	1	0	1	0	INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

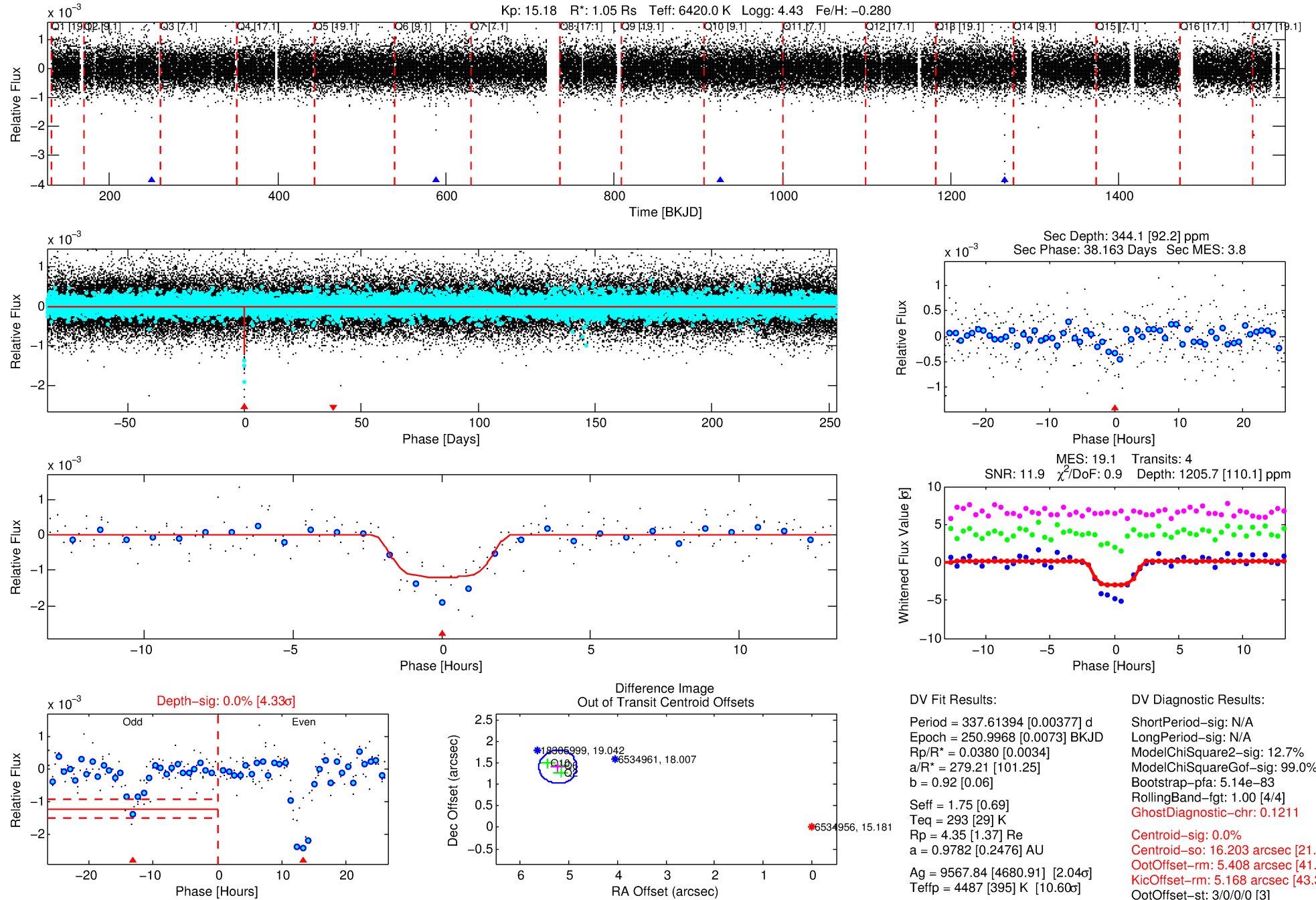
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006534956-01

No Significant Match Found

# DV One-Page Summary

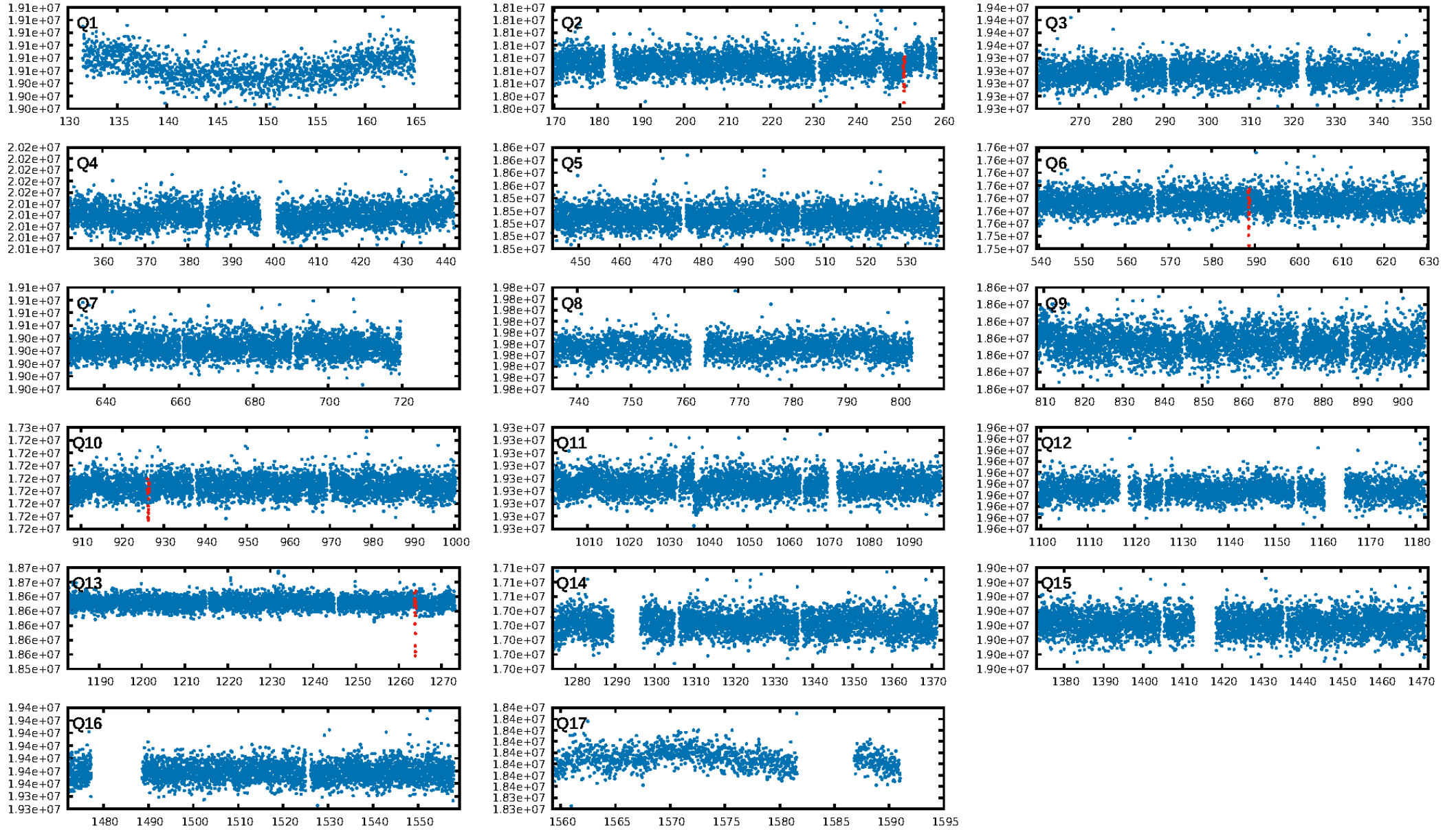
KIC: 6534956 Candidate: 1 of 1 Period: 337.614 d



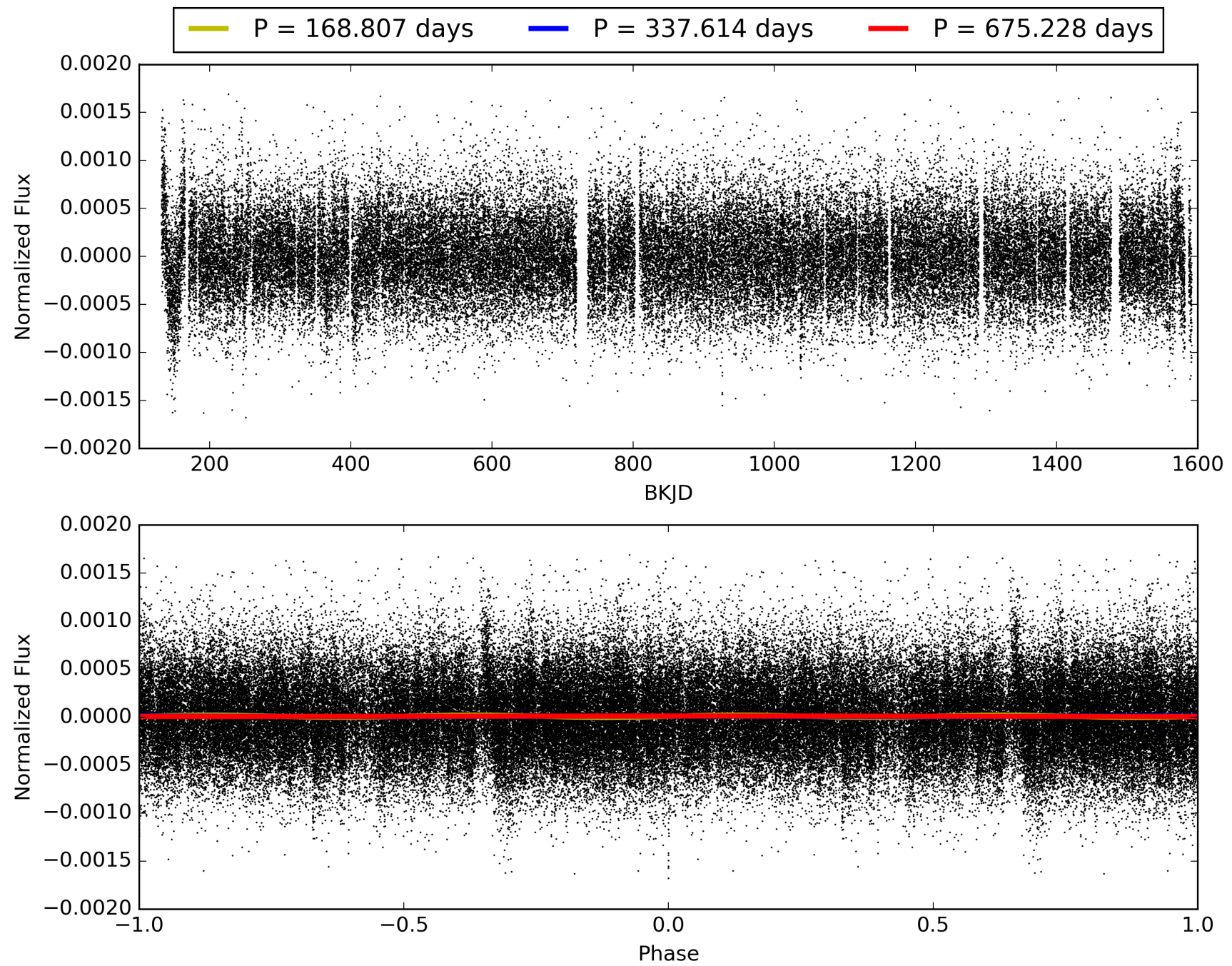
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:42:34 Z

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

# TCE 006534956-01, PDC Light Curves

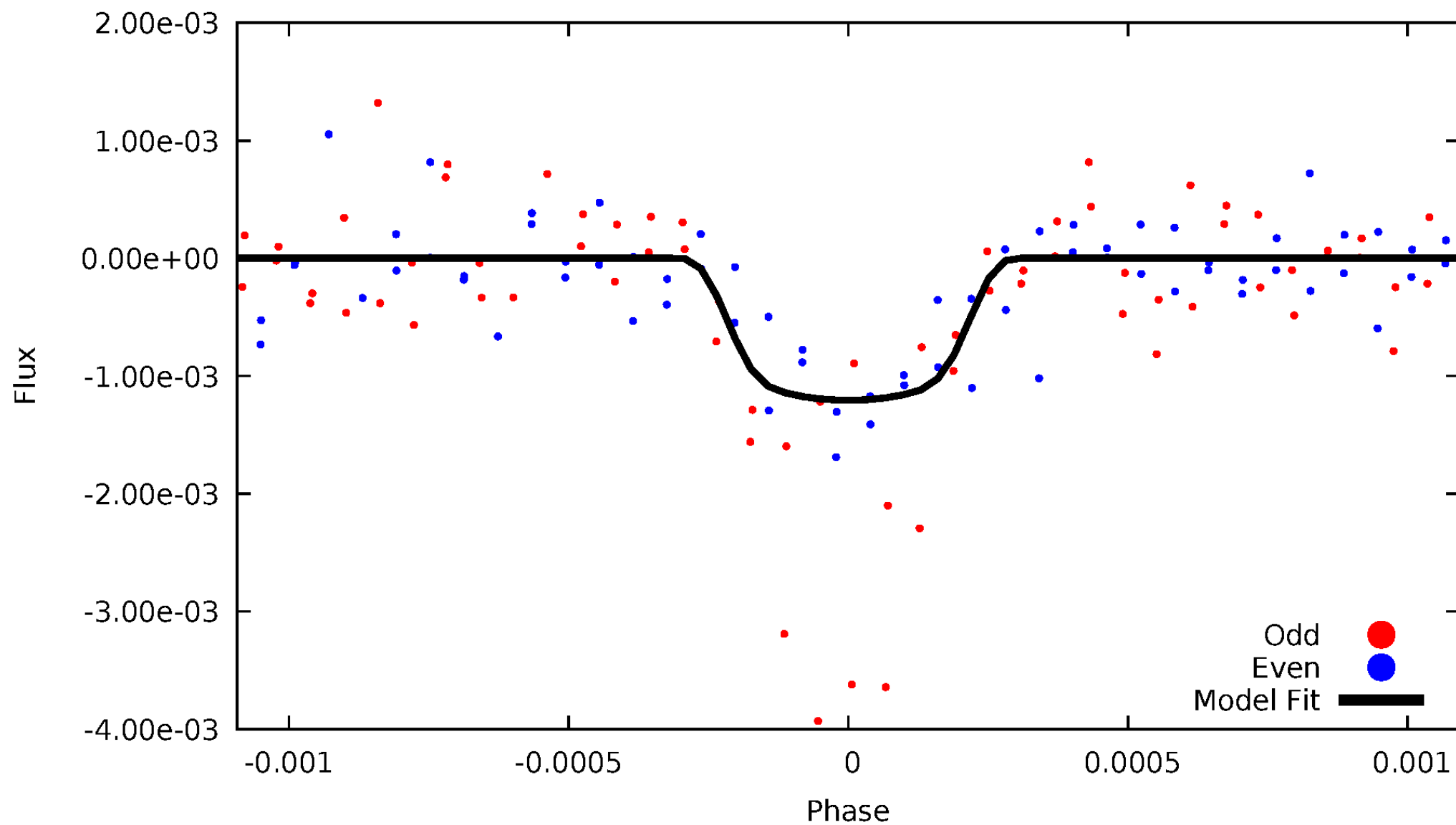


TCE 006534956-01



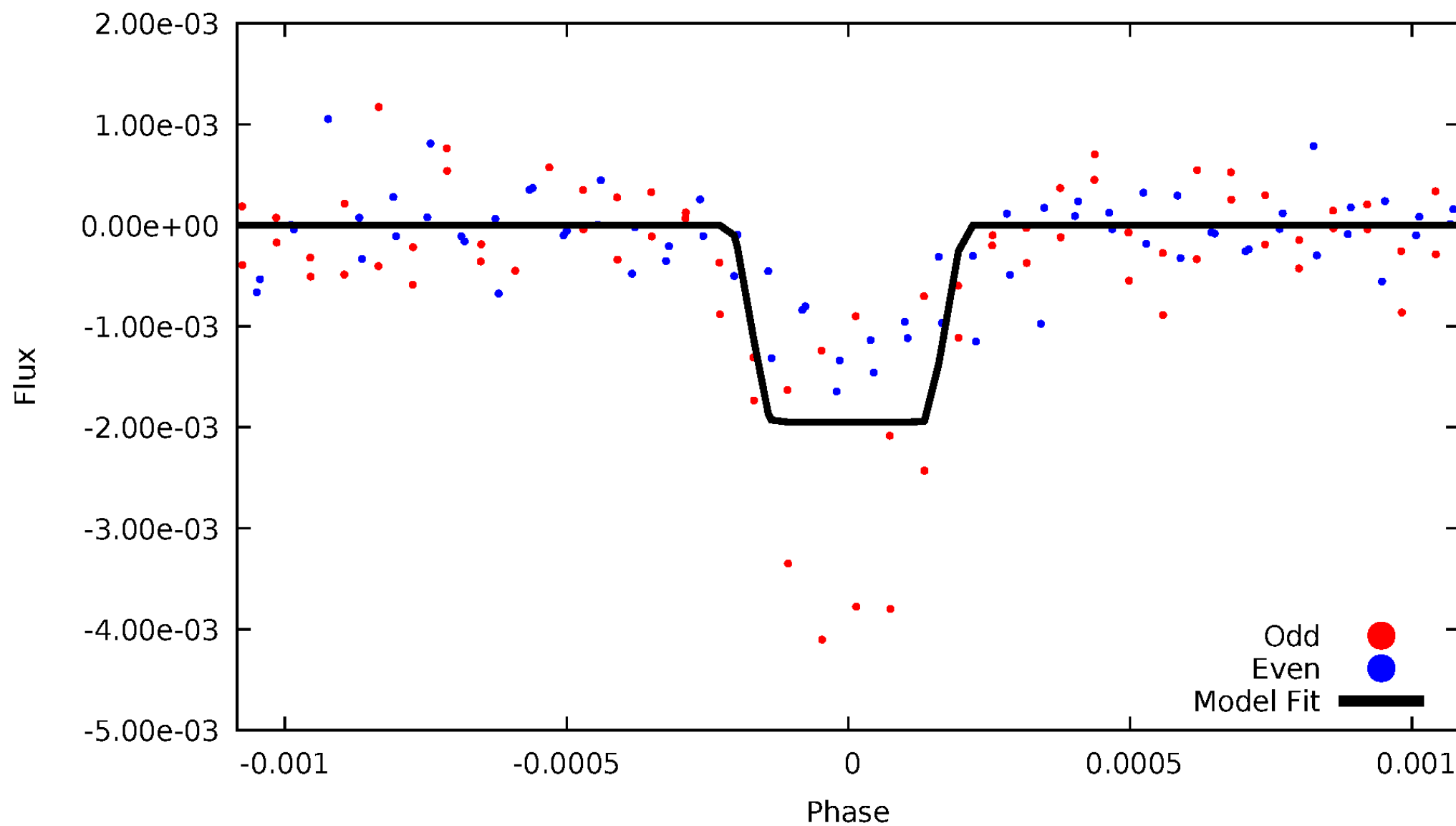
# DV Odd/Even

TCE 006534956-01



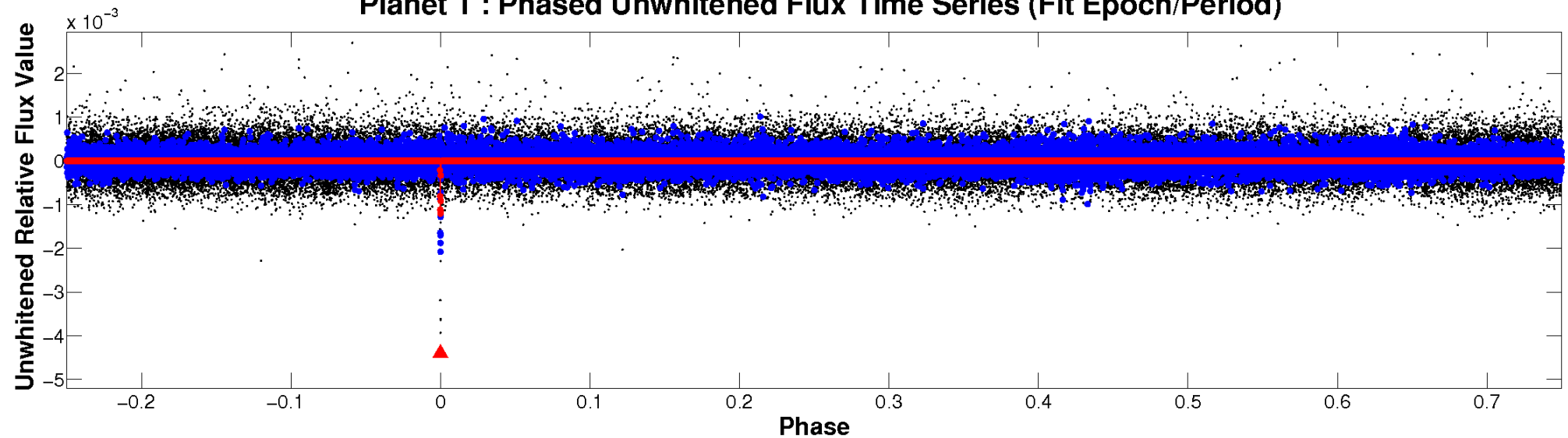
# ALT Odd/Even

TCE 006534956-01

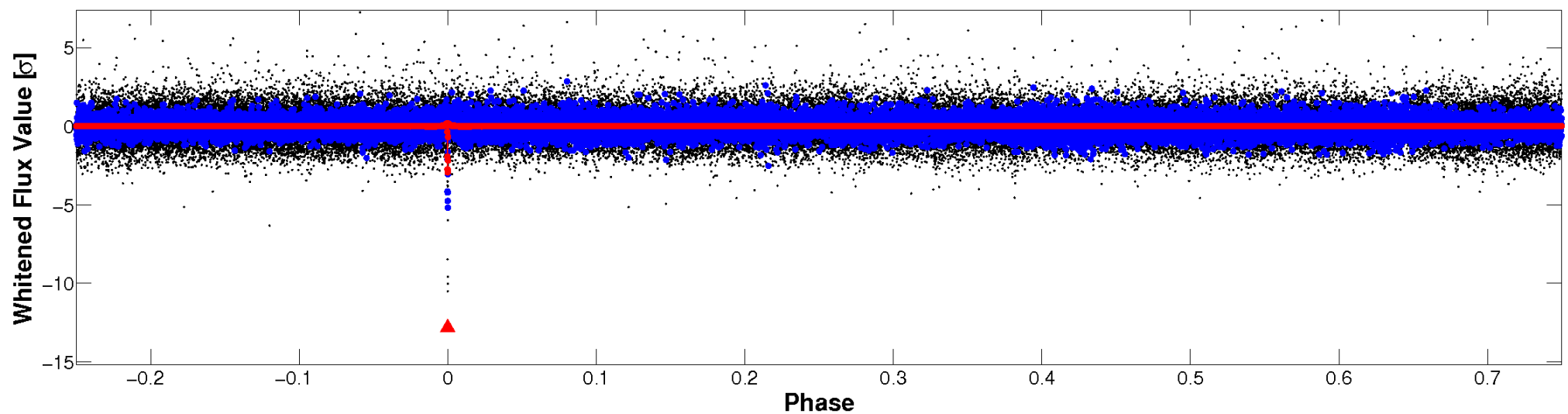


# Non-Whitened Vs. Whitened Light Curve

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



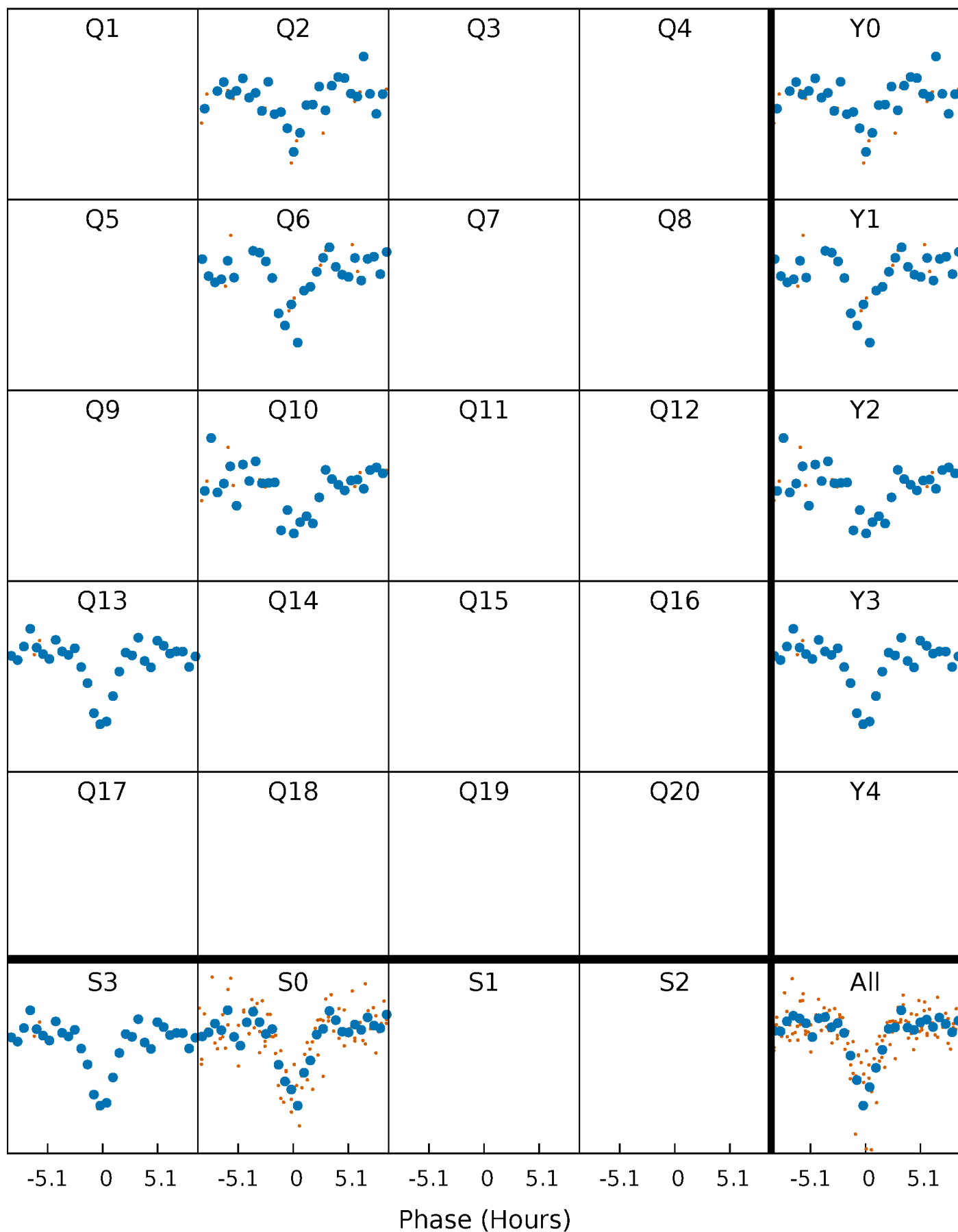
Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

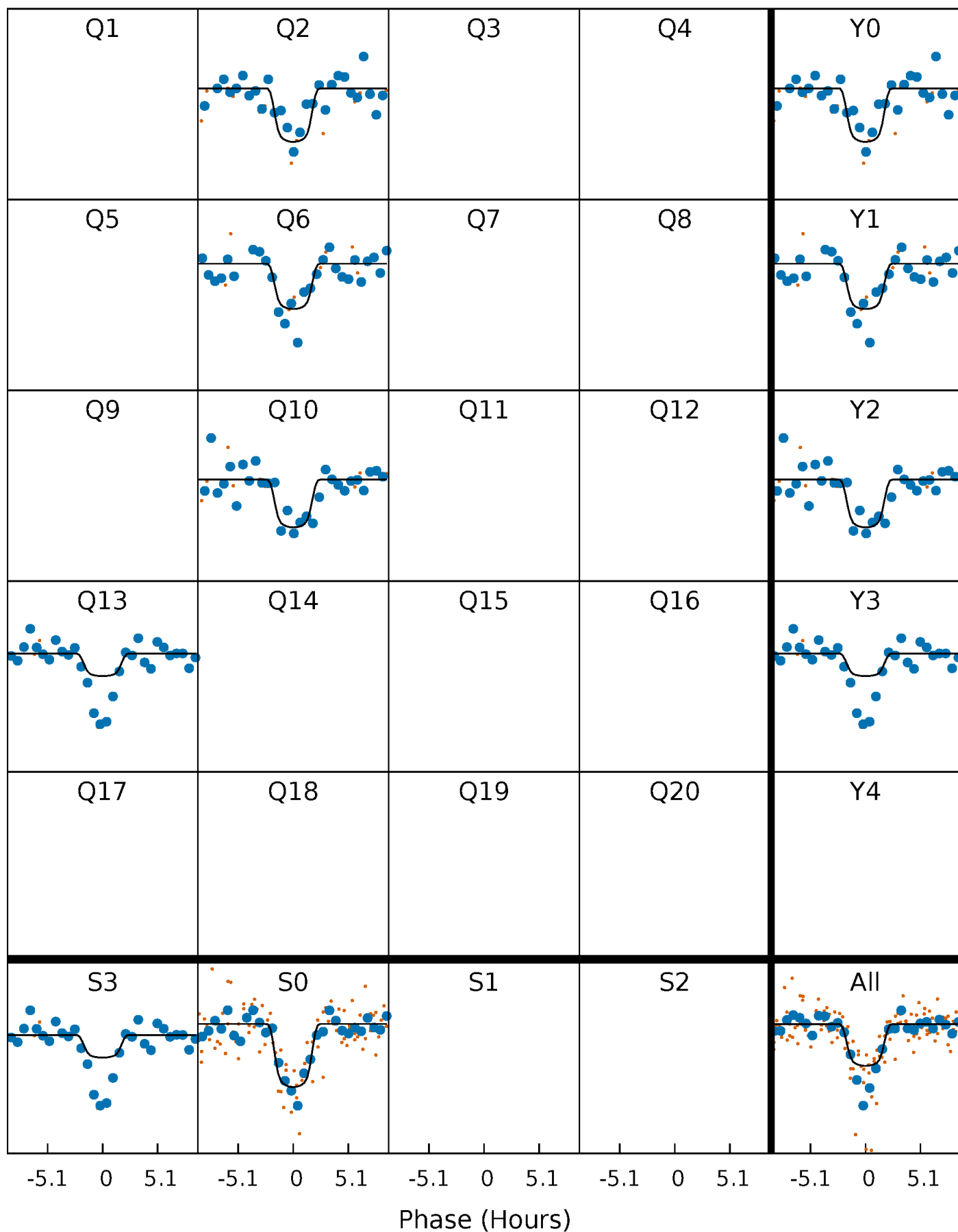
TCE 006534956-01 P=337.613941 Days  $T_0=250.996844$  (BKJD)





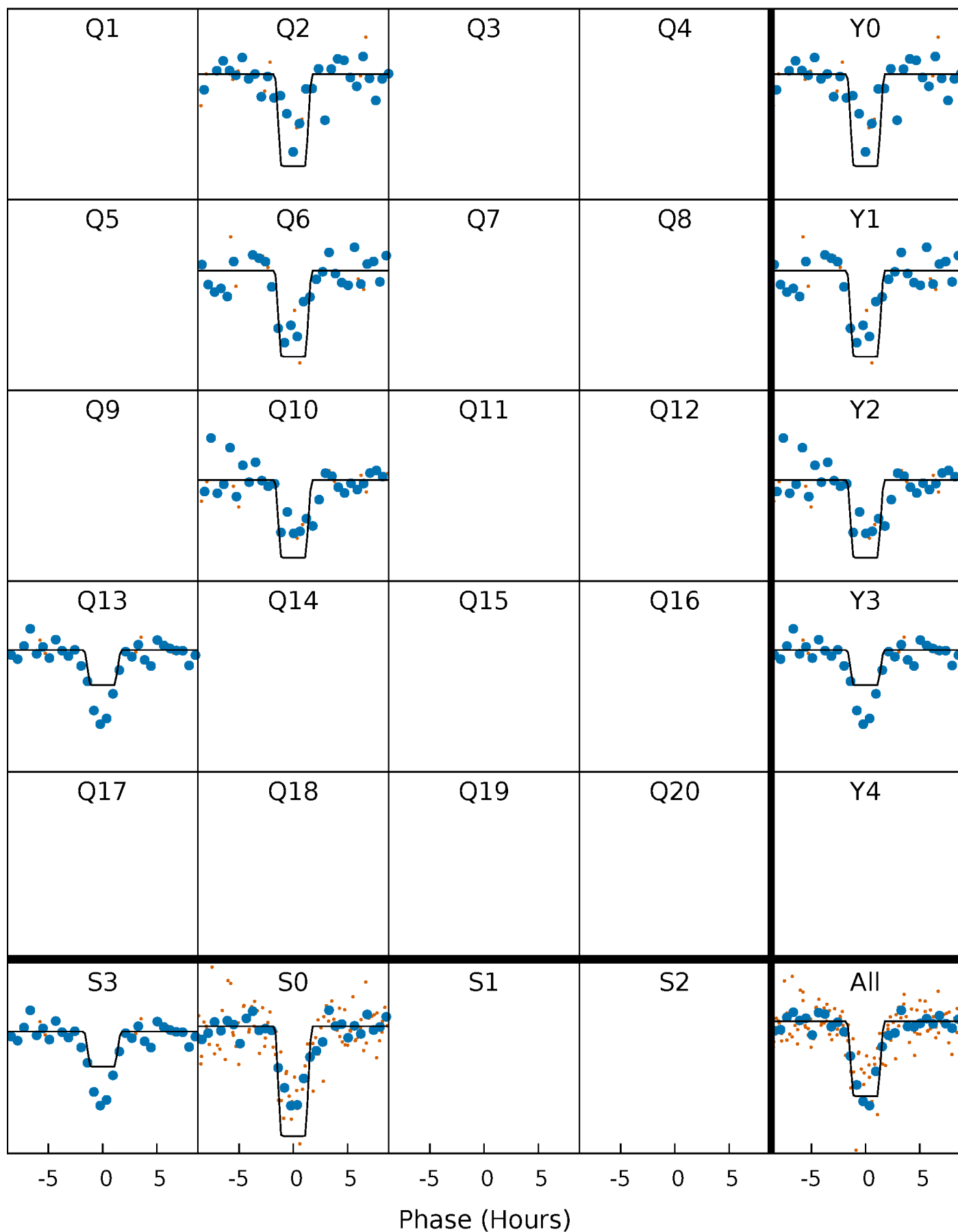
# DV Quarter-Phased Transit Curves

TCE 006534956-01     $P=337.613941$  Days     $T_0=250.996844$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

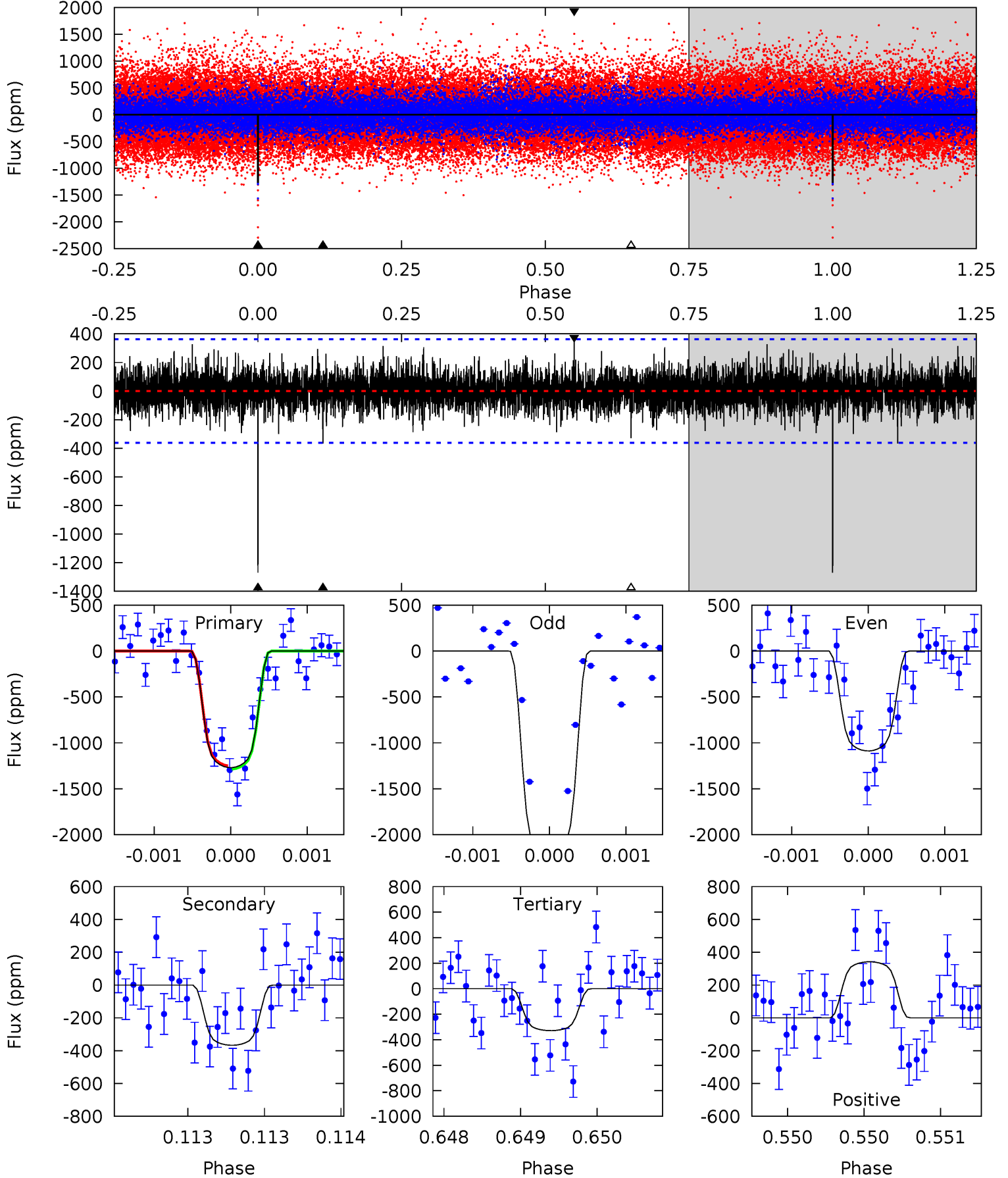
TCE 006534956-01 P=337.613180 Days  $T_0=250.996546$  (BKJD)



# DV Model-Shift Uniqueness Test

006534956-01, P = 337.613941 Days, E = 250.996844 Days

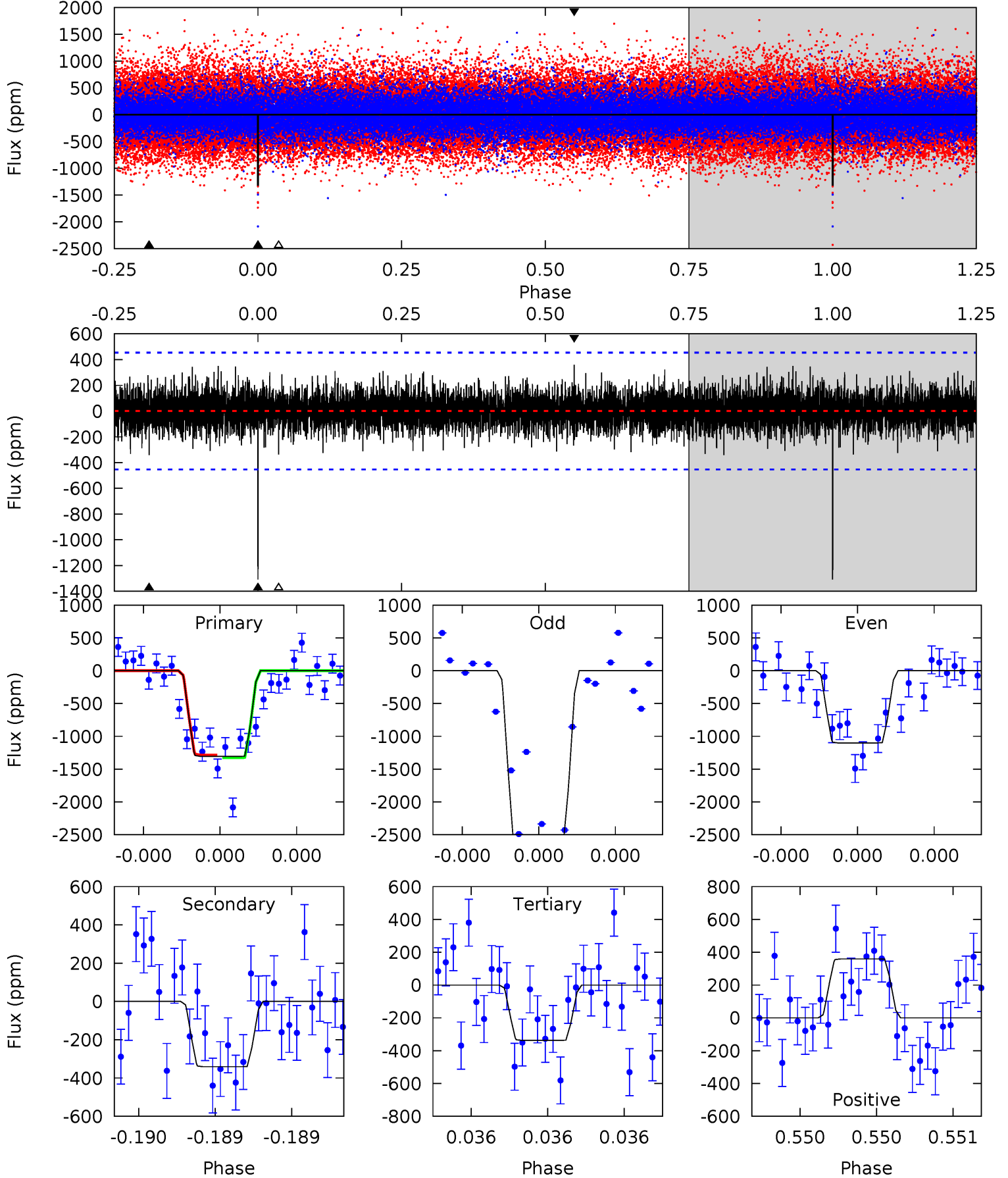
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	5.63	5.04	5.24	5.55	3.44	1.30	14.4	14.2	0.59	0.39	9.32	1.31	0.21	0.27



# Alt Model-Shift Uniqueness Test

006534956-01, P = 337.613180 Days, E = 250.996546 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
16.2	4.21	4.17	4.44	5.60	3.53	1.11	12.0	11.7	0.05	-0.23	9.94	1.35	0.22	0.26



### Stellar Parameters For KIC 006534956

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6420^{+177}_{-222}$	$4.435^{+0.062}_{-0.200}$	$-0.280^{+0.250}_{-0.300}$	$1.050^{+0.317}_{-0.127}$	$1.094^{+0.142}_{-0.142}$	$1.329^{+0.360}_{-0.687}$
	+3%/-3%	+1%/-5%	+89%/-107%	+30%/-12%	+13%/-13%	+27%/-52%
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 006534956-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-367 \pm 65$	$4.52^{+0.76}_{-0.58}$	$416^{+32}_{-20}$	$4685^{+282}_{-257}$	$9283^{+3385}_{-2808}$
Alt.	$-341 \pm 81$	$5.25^{+0.84}_{-0.64}$	$418^{+30}_{-22}$	$4330^{+292}_{-270}$	$6186^{+2665}_{-1999}$

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

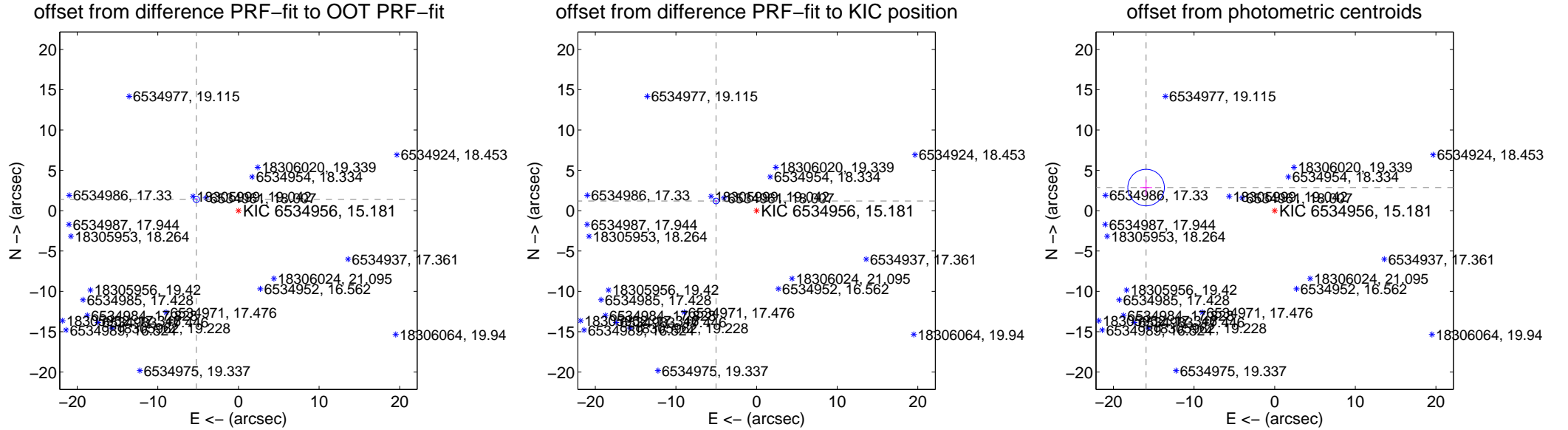
## DV Centroid Data

Supplemental centroid analysis for 006534956-01. Kepler magnitude: 15.18. Transit SNR 11.91

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.408 \pm 0.130$	41.74	$5.222 \pm 0.131$	$1.407 \pm 0.103$
PRF-fit source offset from KIC position	$5.168 \pm 0.119$	43.38	$5.027 \pm 0.120$	$1.199 \pm 0.100$
photometric centroid source offset	$16.20 \pm 0.76$	21.45	$15.95 \pm 0.75$	$2.87 \pm 0.99$



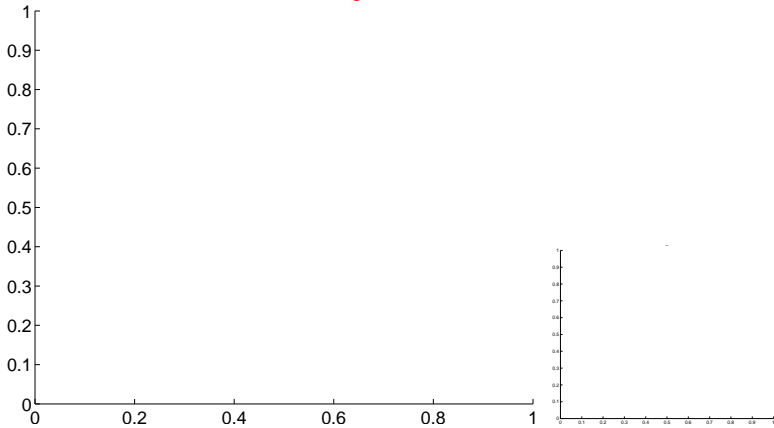
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

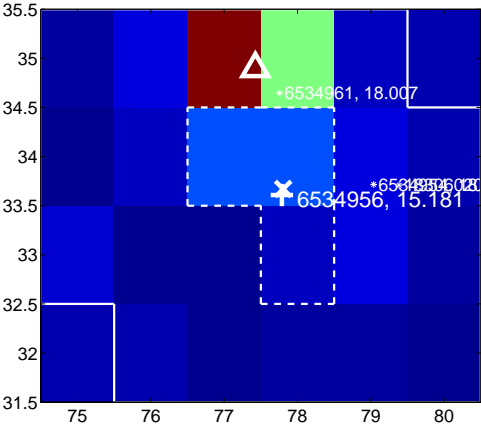
Q1 no difference image



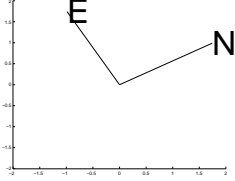
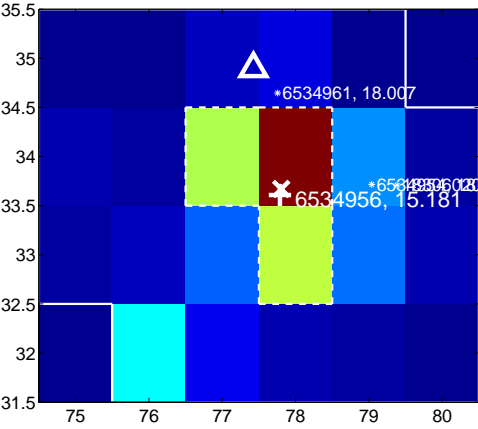
Q1 no OOT image



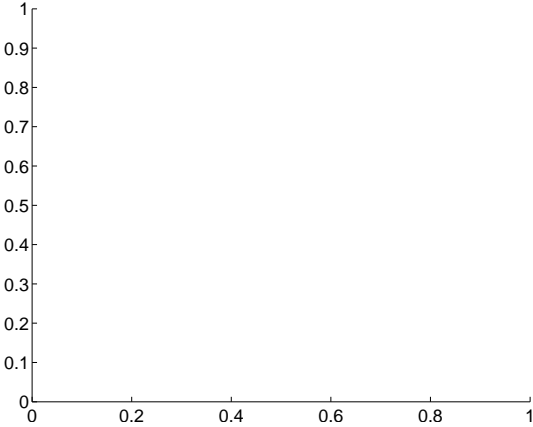
Q2 difference image



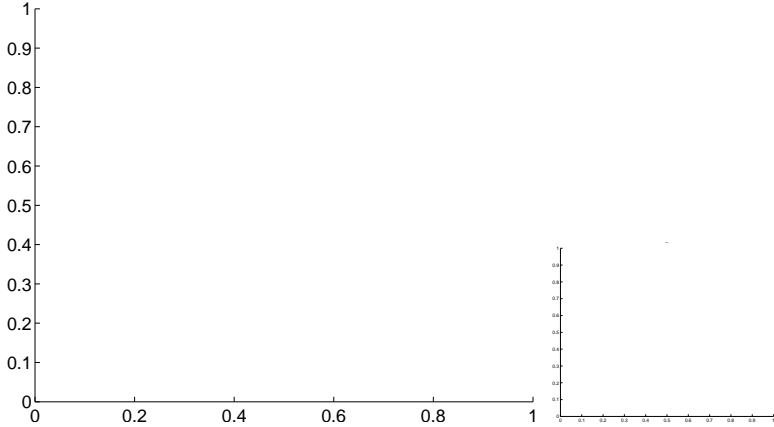
Q2 OOT image



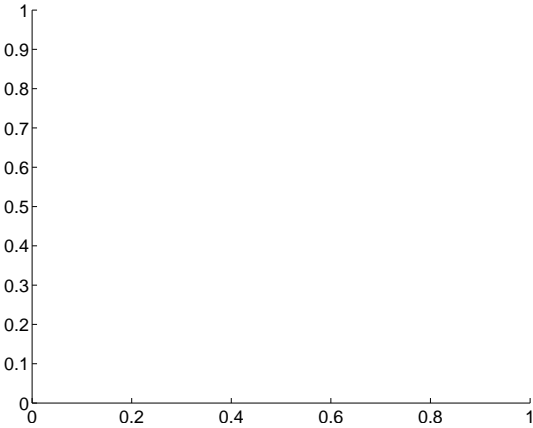
Q3 no difference image



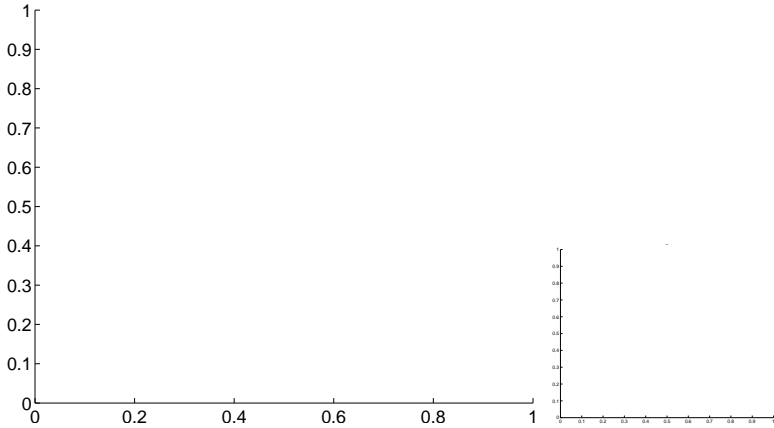
Q3 no OOT image



Q4 no difference image



Q4 no OOT image





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

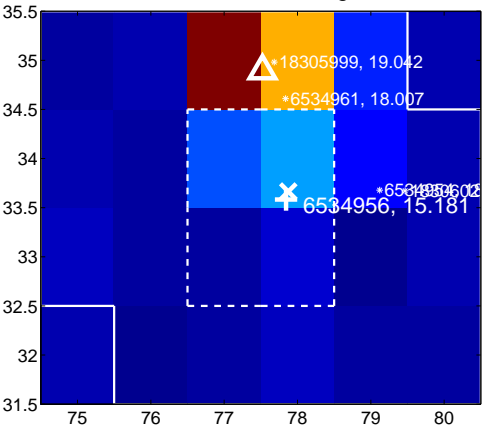
Q5 no difference image



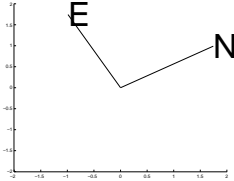
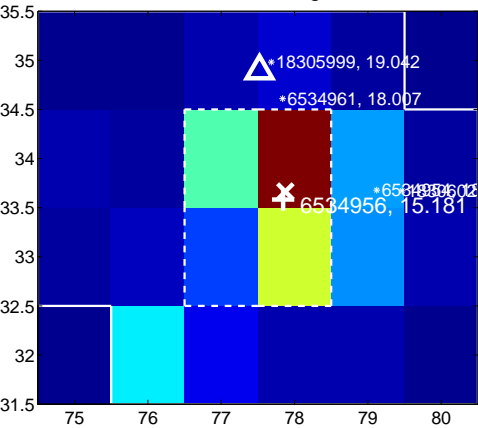
Q5 no OOT image



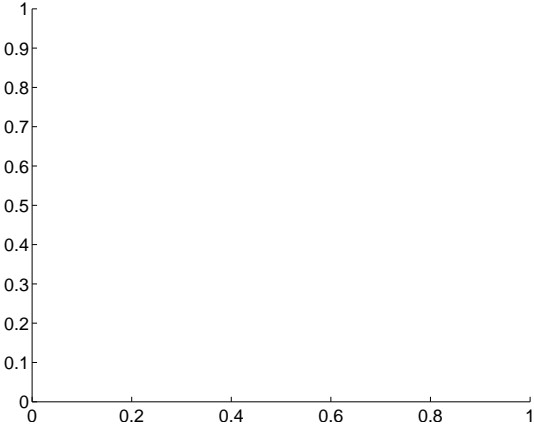
Q6 difference image



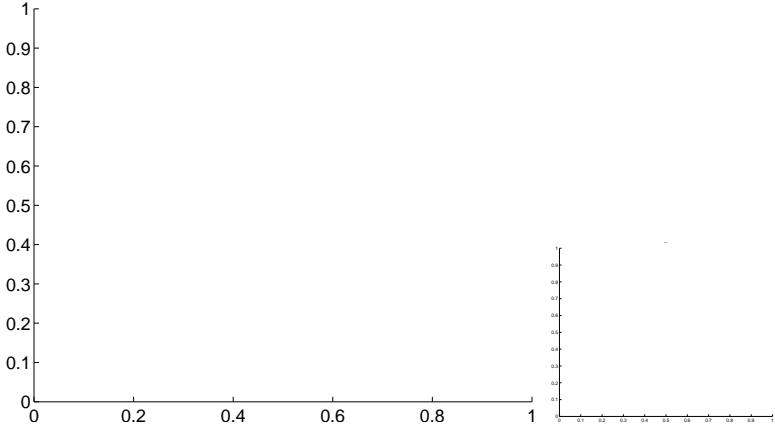
Q6 OOT image



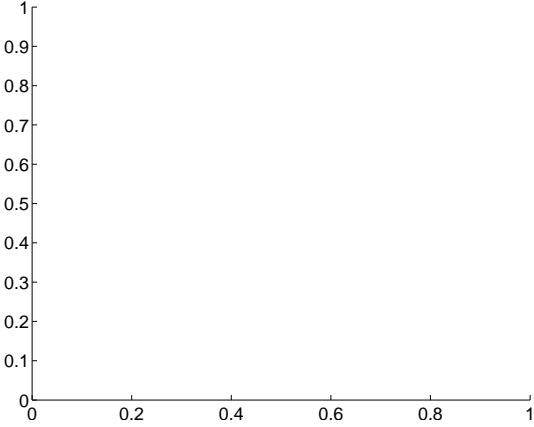
Q7 no difference image



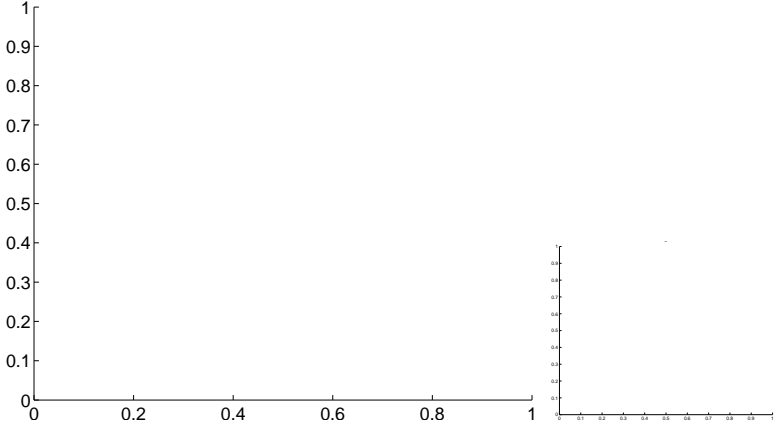
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

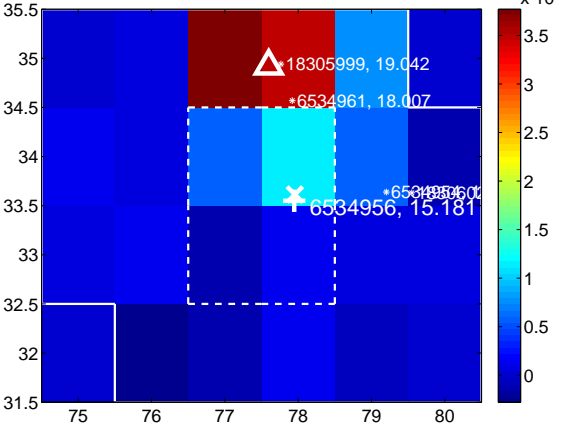
Q9 no difference image



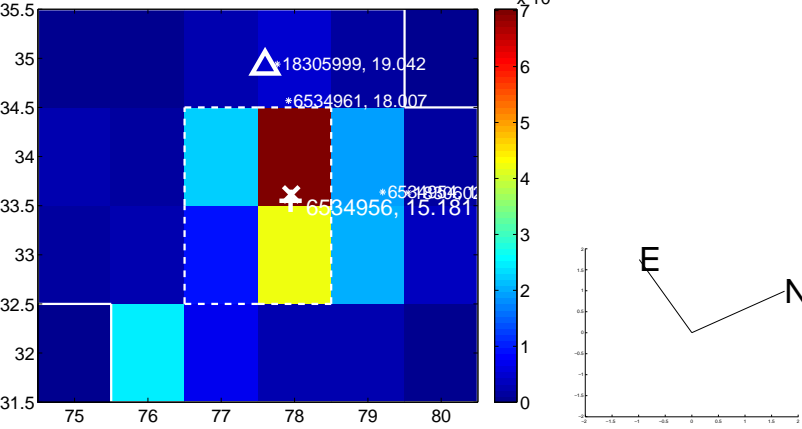
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



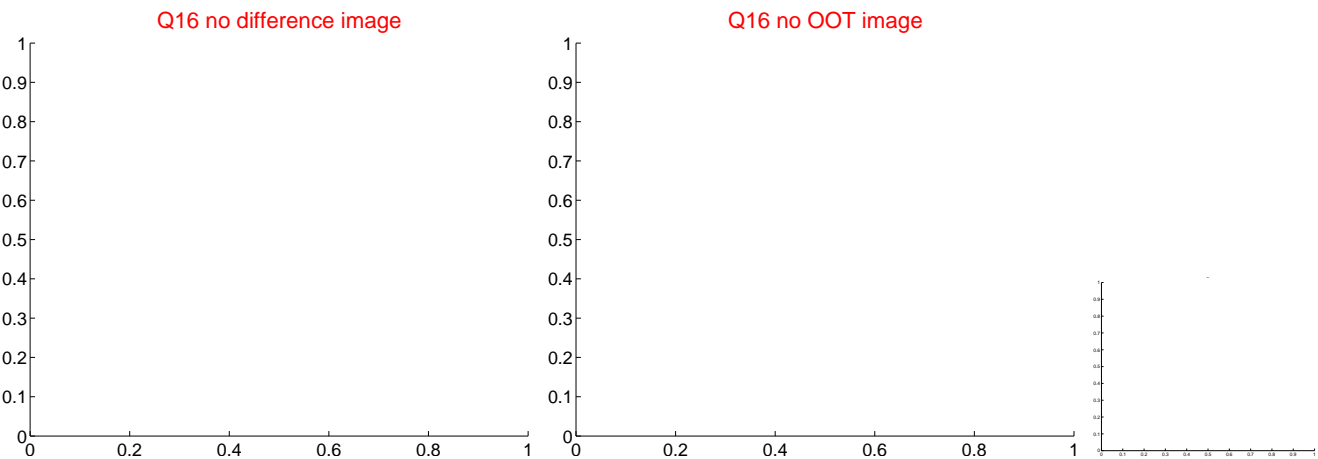
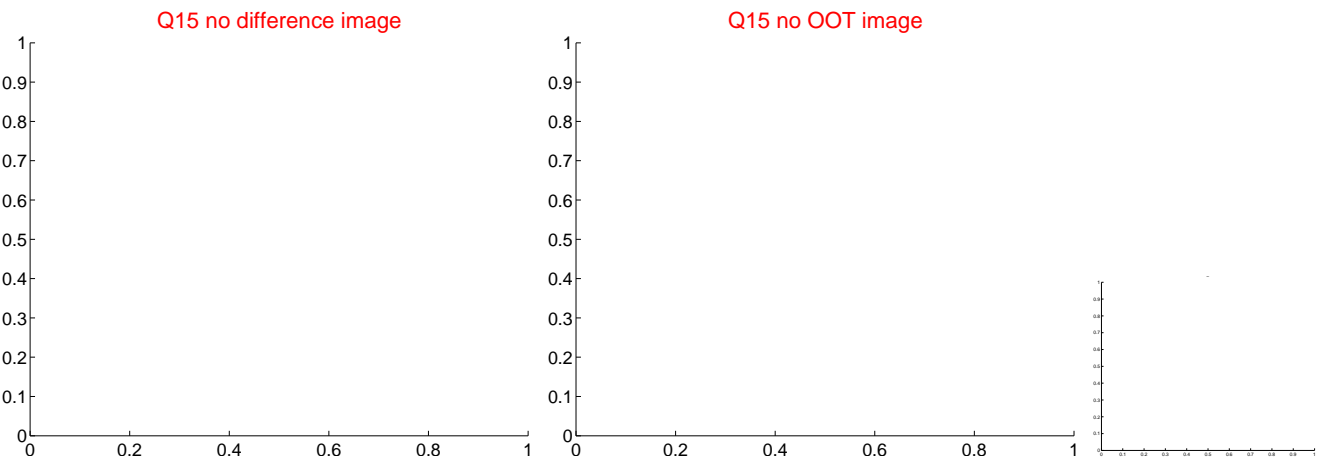
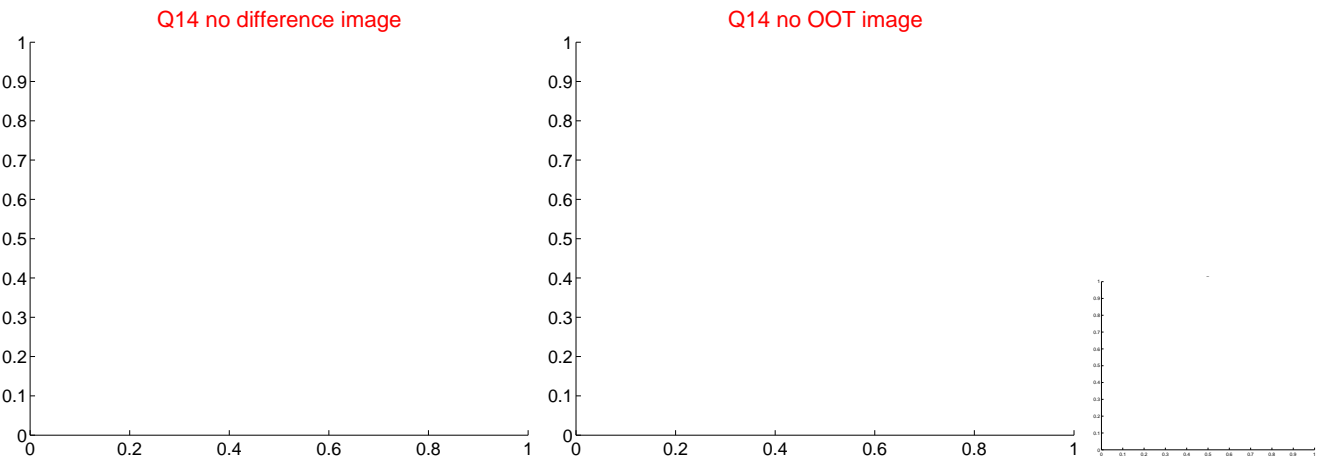
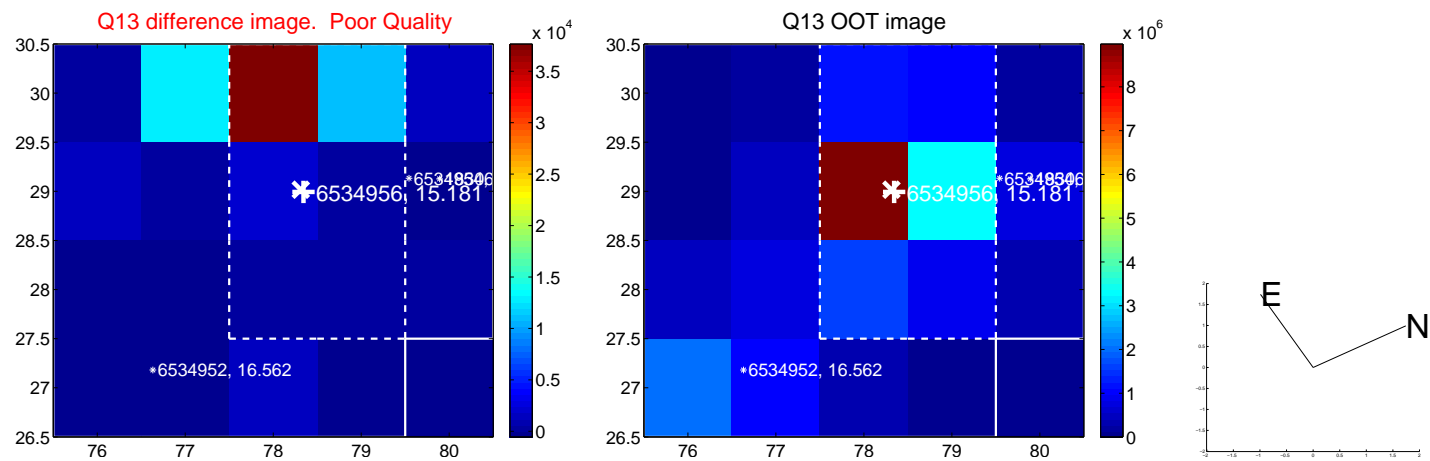
Q12 no difference image



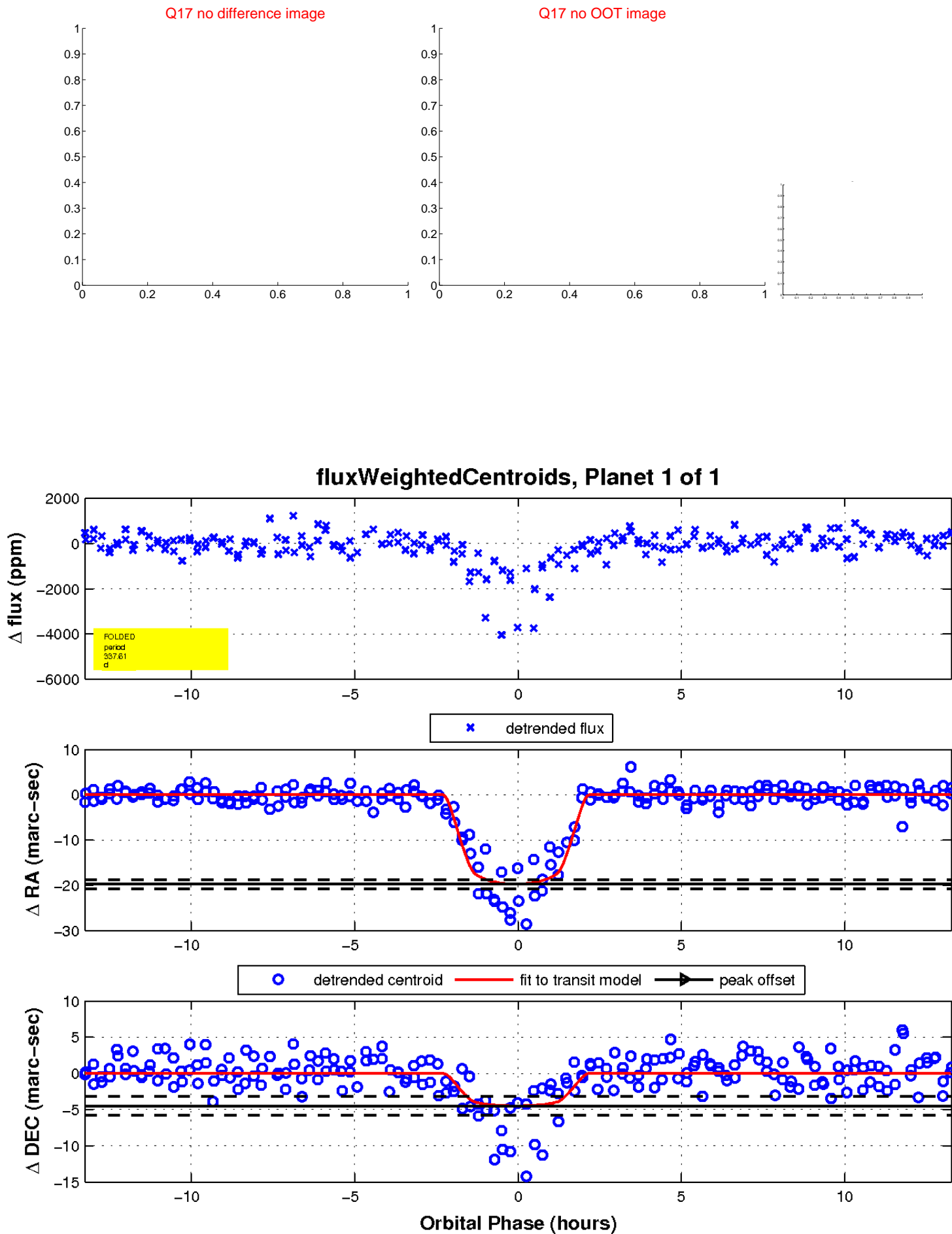
Q12 no OOT image



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

Declination

