

# KIC 008429341

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008429341-01	OBS	No	300.687402	246.789469	1097.3	24.746	7.2	7.8	1.31	6781	8.13	3.62

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008429341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

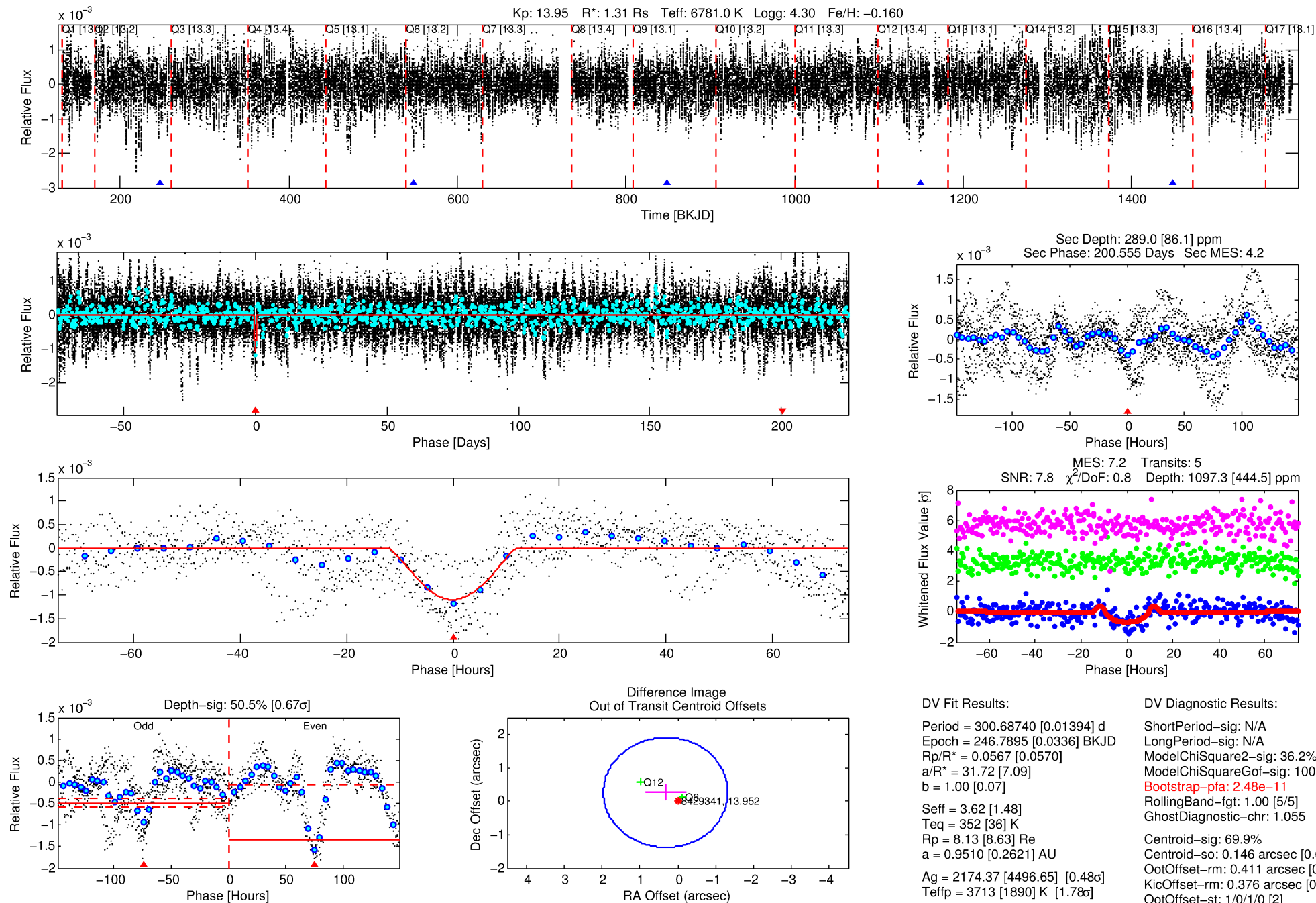
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008429341-01

No Significant Match Found

# DV One-Page Summary

KIC: 8429341 Candidate: 1 of 1 Period: 300.687 d



## DV Fit Results:

Period = 300.68740 [0.01394] d  
Epoch = 246.7895 [0.0336] BKJD  
Rp/R\* = 0.0567 [0.0570]  
a/R\* = 31.72 [7.09]  
b = 1.00 [0.07]  
Seff = 3.62 [1.48]  
Teff = 352 [36] K  
Rp = 8.13 [8.63] Re  
a = 0.9510 [0.2621] AU  
Ag = 2174.37 [4496.65] [0.48 $\sigma$ ]  
Teffp = 3713 [1890] K [1.78 $\sigma$ ]

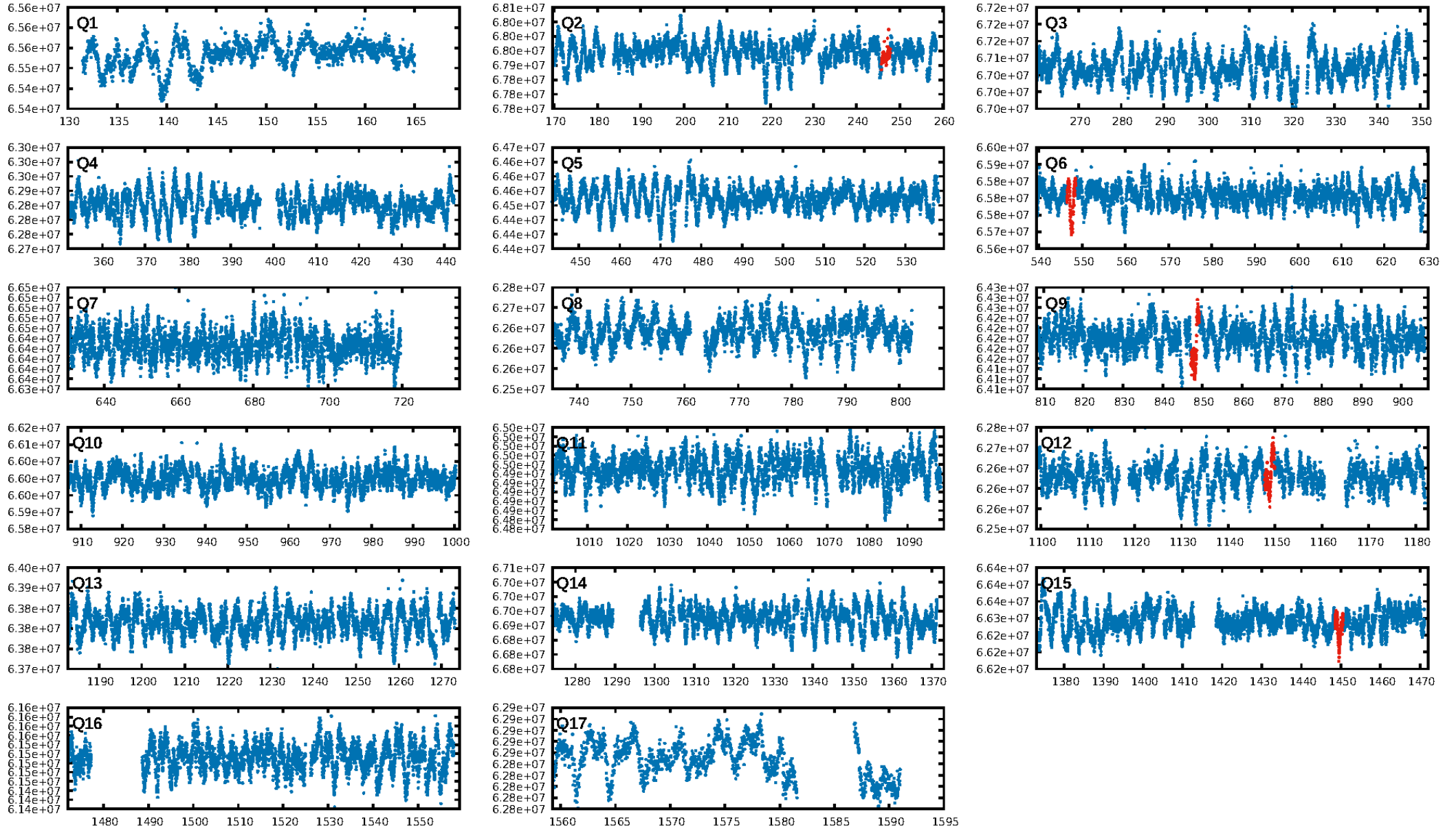
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 36.2%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 2.48e-11**  
RollingBand-fgt: 1.00 [5/5]  
GhostDiagnostic-chr: 1.055  
Centroid-sig: 69.9%  
Centroid-so: 0.146 arcsec [0.63 $\sigma$ ]  
OotOffset-rm: 0.411 arcsec [0.75 $\sigma$ ]  
KicOffset-rm: 0.376 arcsec [0.65 $\sigma$ ]  
OotOffset-st: 1/0/1/0 [2]  
KicOffset-st: 1/0/1/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

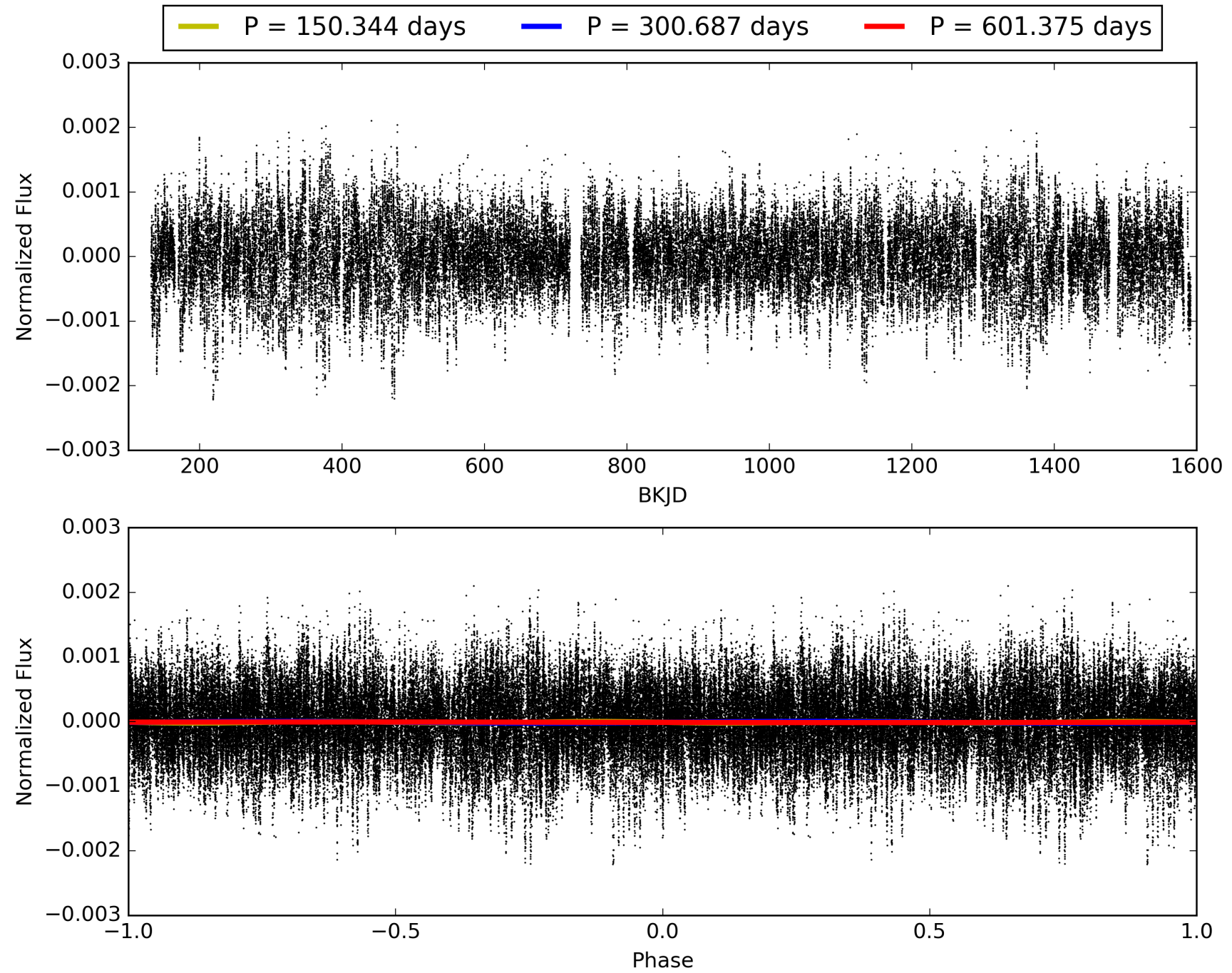
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:26:23 Z

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

# TCE 008429341-01, PDC Light Curves

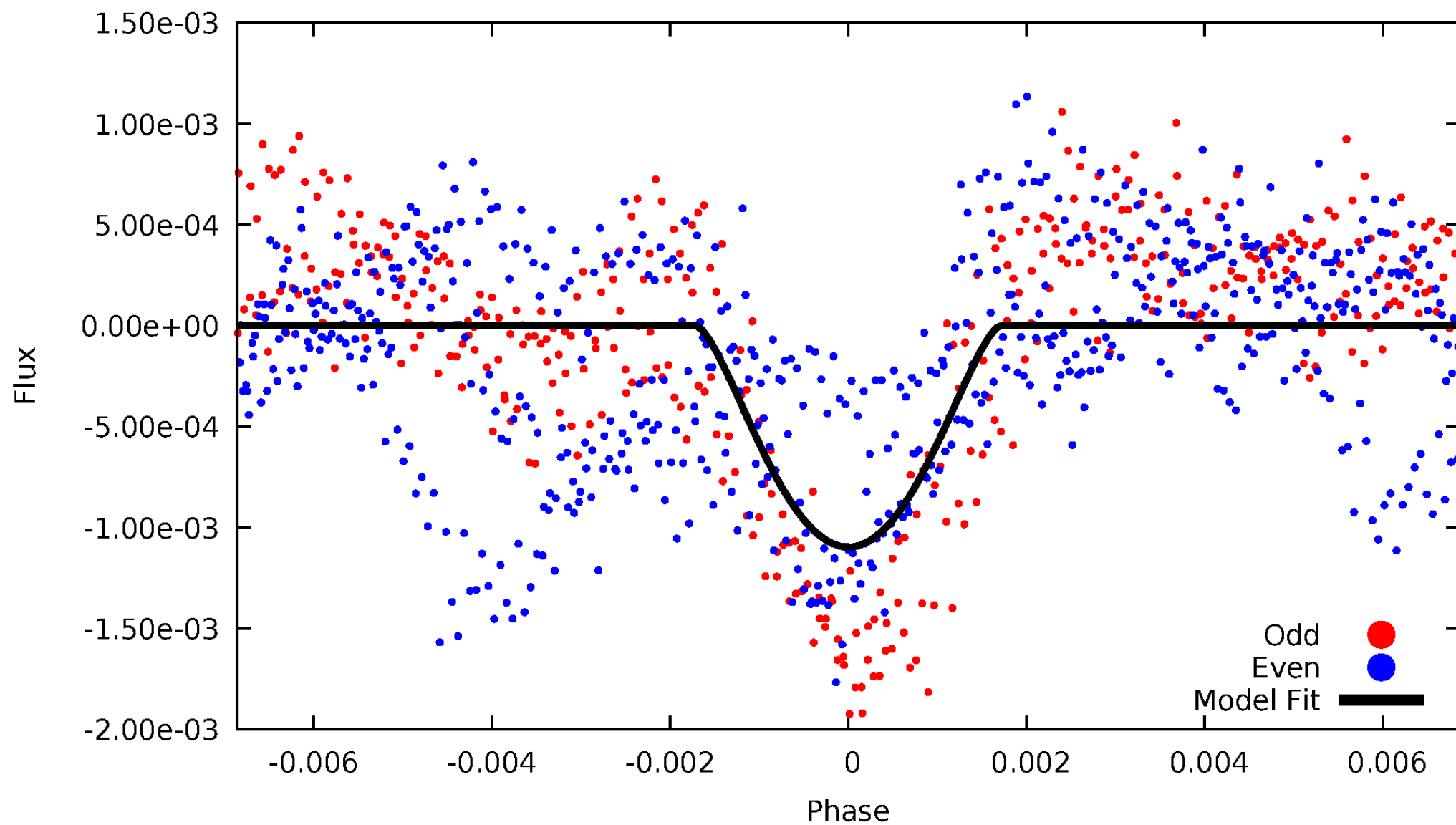


TCE 008429341-01



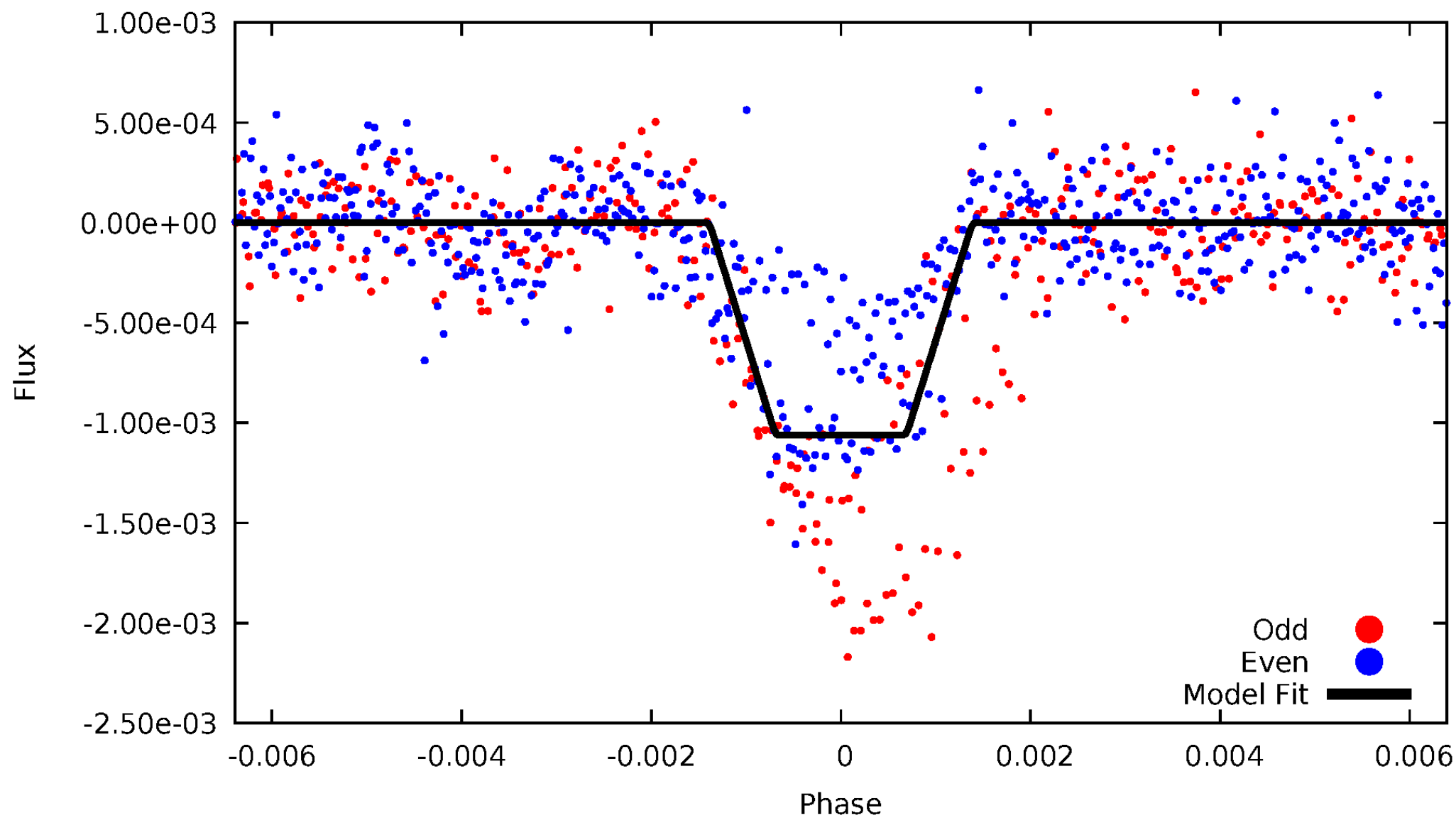
# DV Odd/Even

TCE 008429341-01



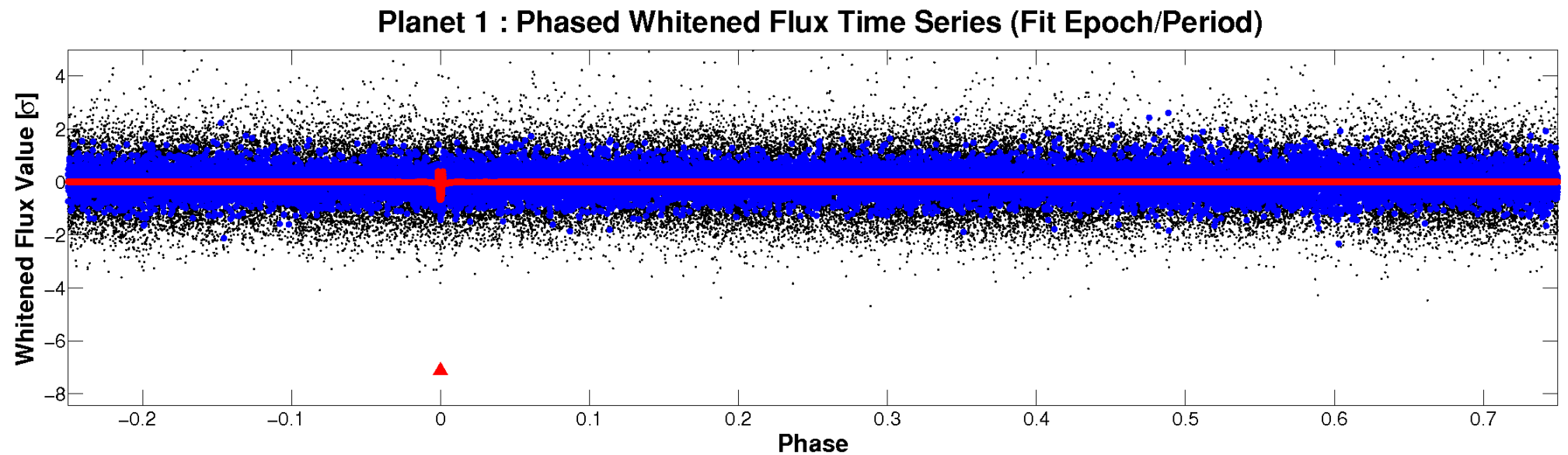
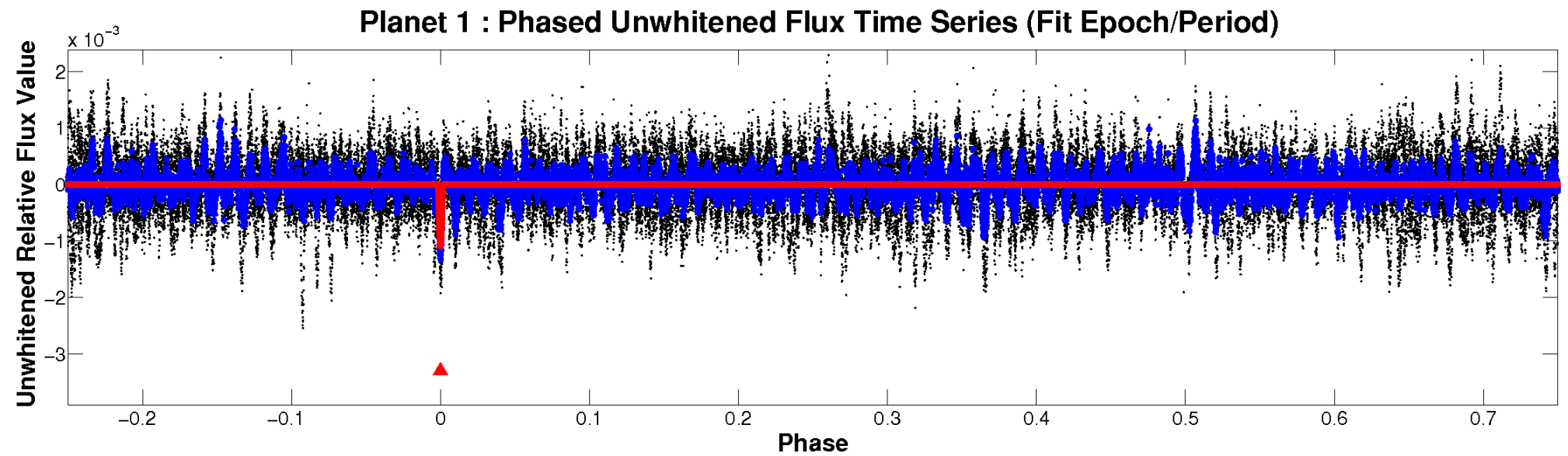
# ALT Odd/Even

TCE 008429341-01



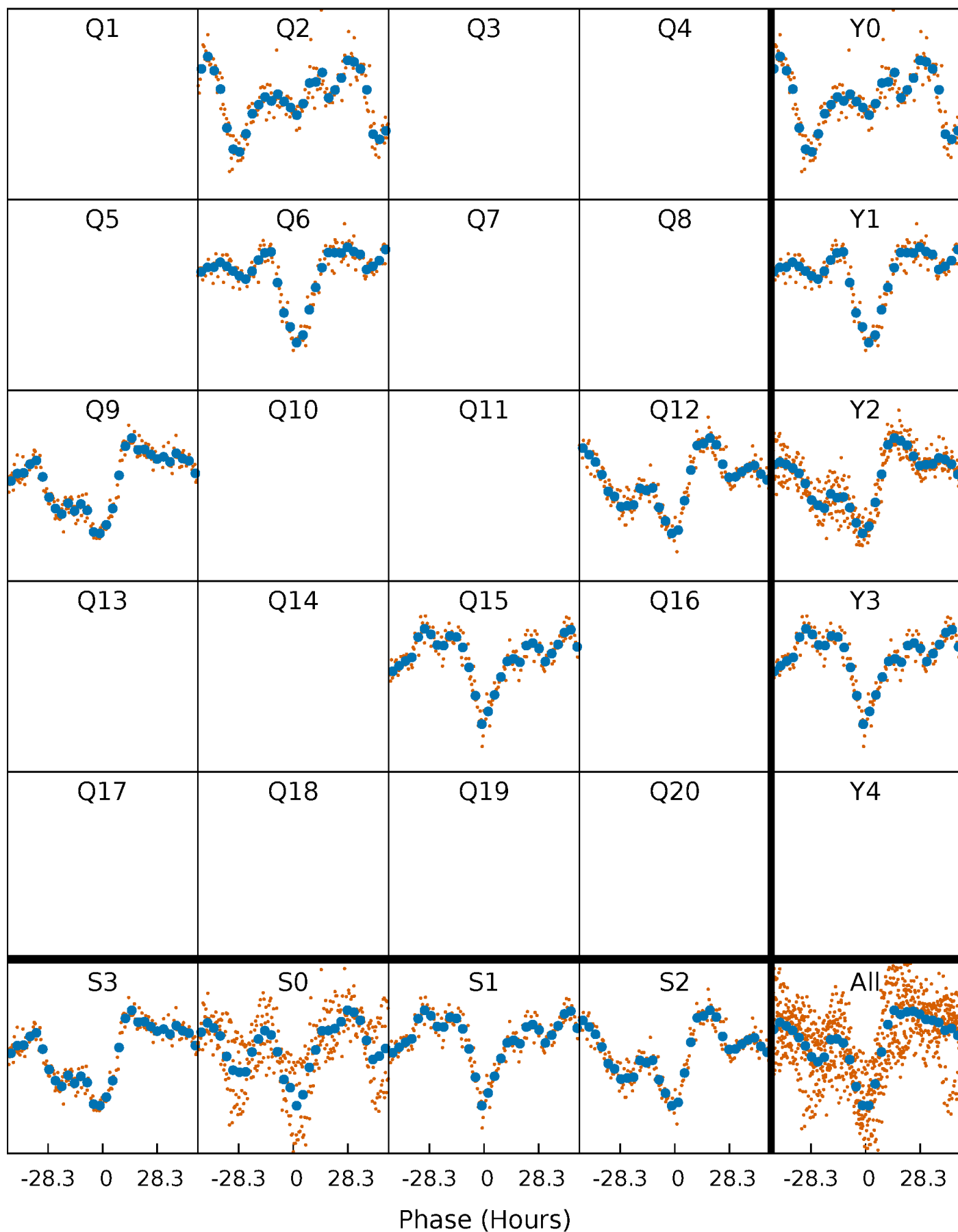


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

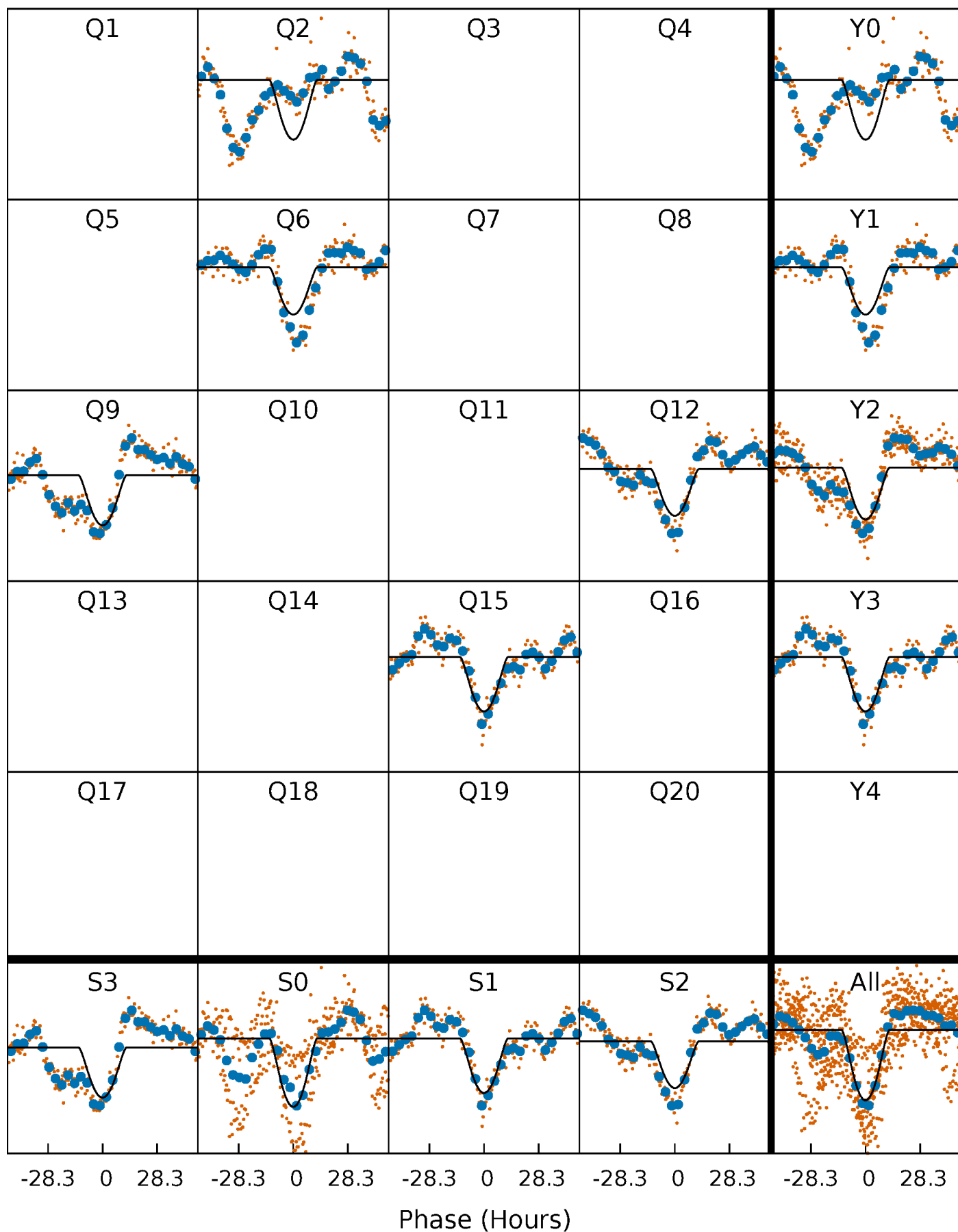
TCE 008429341-01 P=300.687402 Days  $T_0=246.789469$  (BKJD)





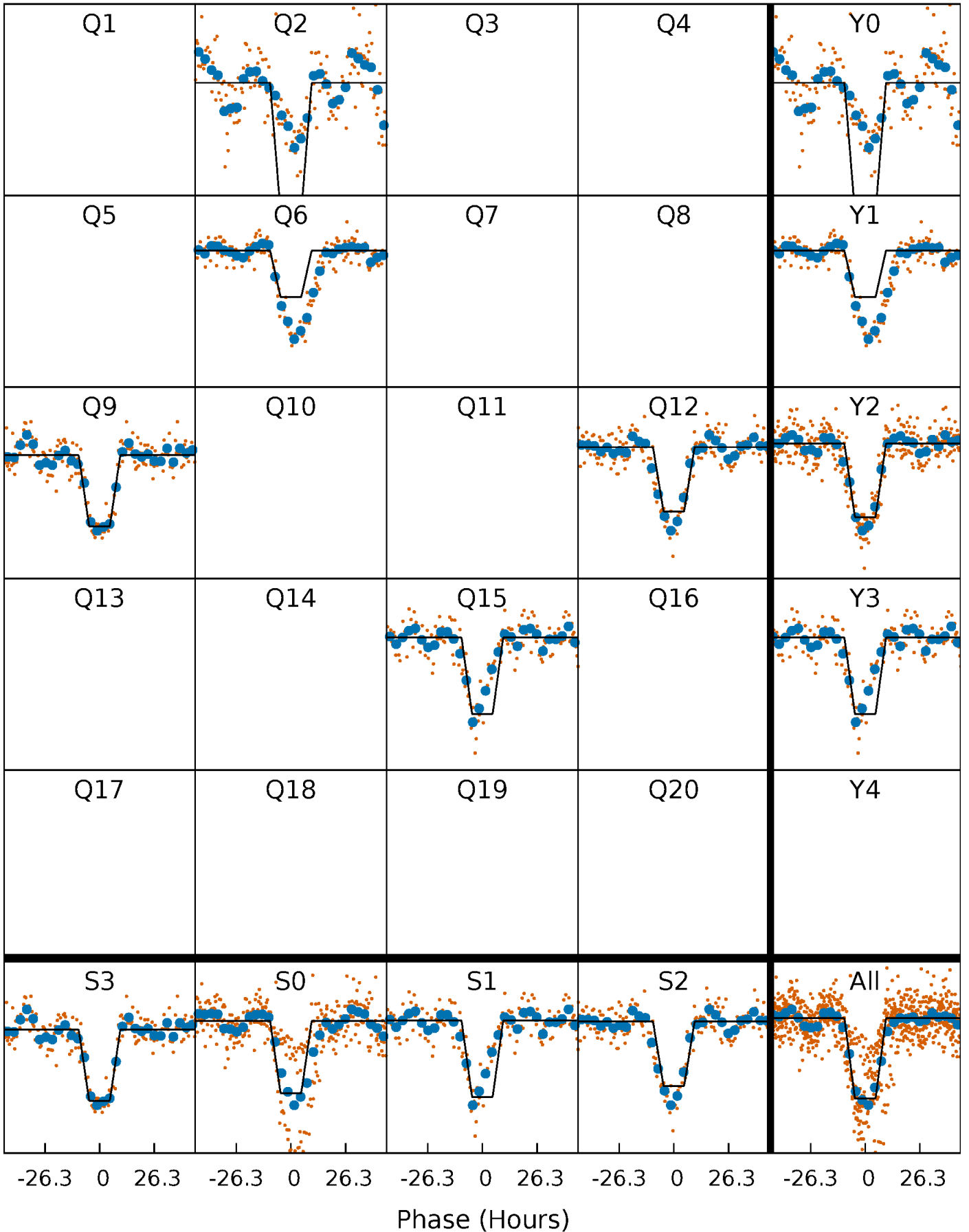
# DV Quarter-Phased Transit Curves

TCE 008429341-01 P=300.687402 Days  $T_0=246.789469$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

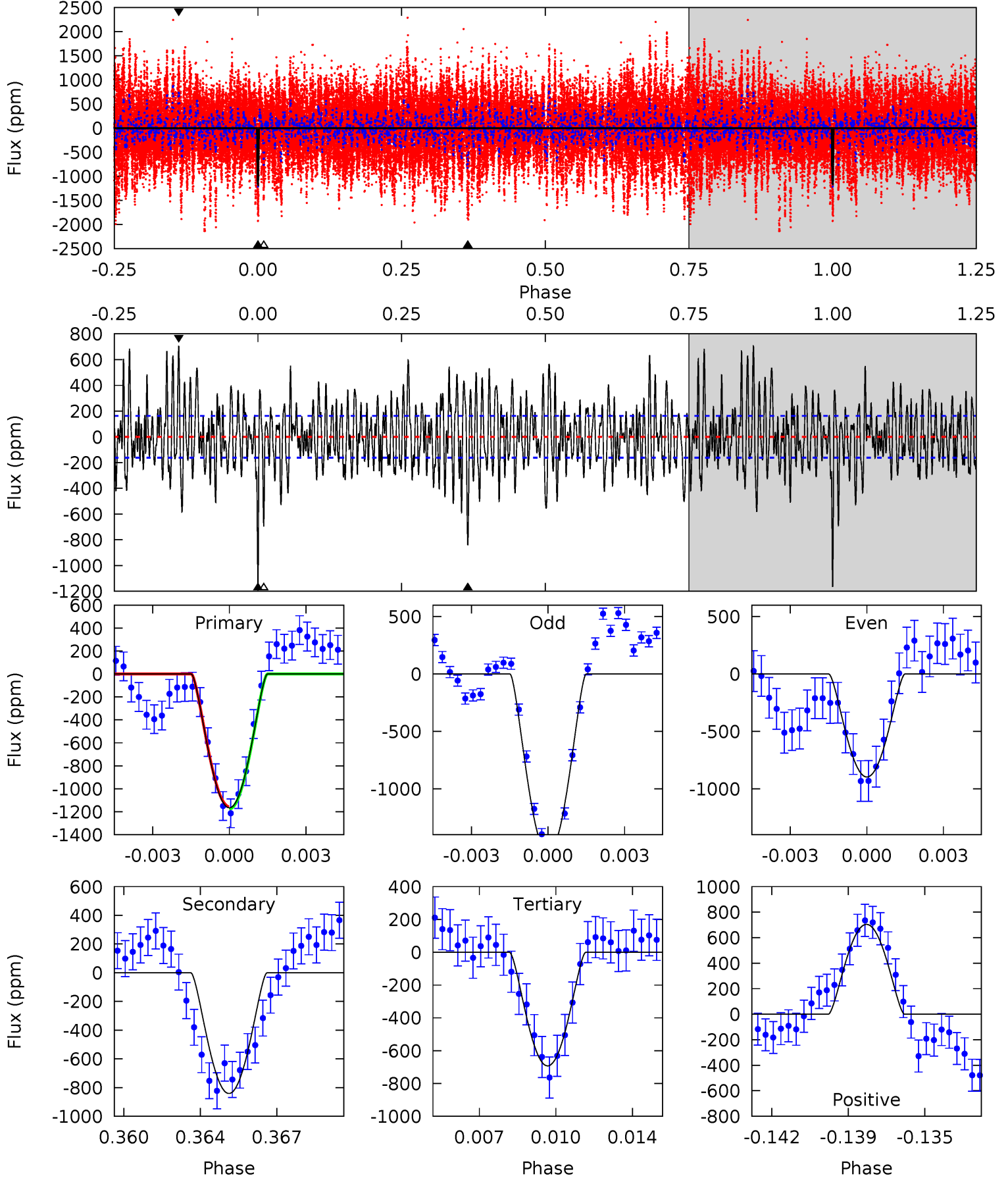
TCE 008429341-01 P=300.727514 Days  $T_0=246.731297$  (BKJD)



# DV Model-Shift Uniqueness Test

008429341-01, P = 300.687402 Days, E = 246.789469 Days

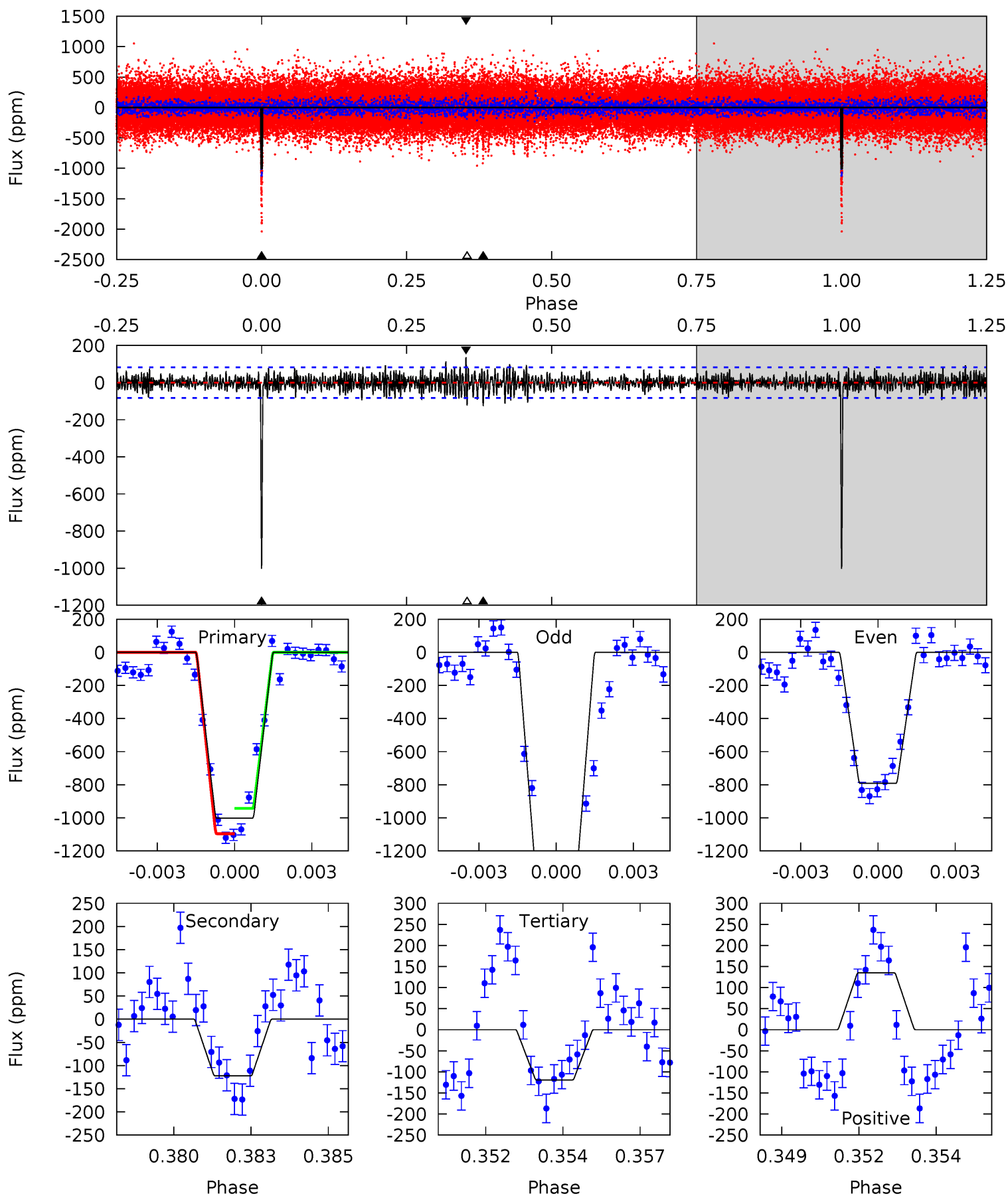
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.4	27.0	22.2	22.6	5.23	2.92	7.12	15.2	14.8	4.76	4.38	10.6	0.96	0.38	0.30



# Alt Model-Shift Uniqueness Test

008429341-01, P = 300.727514 Days, E = 246.731297 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
64.1	7.81	7.62	8.63	5.26	2.99	1.96	56.5	55.5	0.19	-0.82	21.9	0.98	0.12	4.82



### Stellar Parameters For KIC 008429341

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6781^{+189}_{-236}$	$4.304^{+0.087}_{-0.203}$	$-0.160^{+0.250}_{-0.300}$	$1.314^{+0.448}_{-0.192}$	$1.275^{+0.190}_{-0.190}$	$0.792^{+0.300}_{-0.416}$
	+3%/-3%	+2%/-5%	+156%/-188%	+34%/-15%	+15%/-15%	+38%/-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 008429341-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-841 \pm 31$	$10.06^{+8.08}_{-6.51}$	$498^{+37}_{-27}$	$4593^{+3311}_{-869}$	$4084^{+30095}_{-2821}$
Alt.	$-122 \pm 16$	$8.27^{+7.12}_{-5.88}$	$498^{+36}_{-27}$	$3520^{+2069}_{-604}$	$909^{+9633}_{-659}$

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

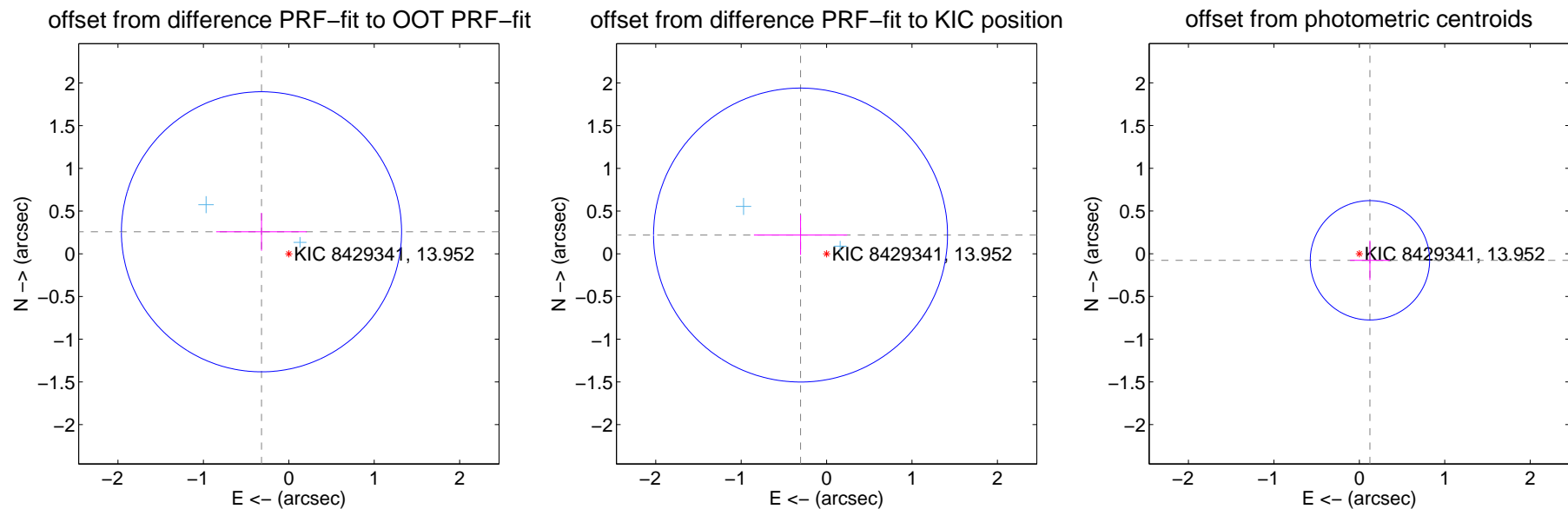
## DV Centroid Data

Supplemental centroid analysis for 008429341-01. Kepler magnitude: 13.95. Transit SNR 7.79

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.411 \pm 0.547$	0.75	$0.320 \pm 0.531$	$0.258 \pm 0.221$
PRF-fit source offset from KIC position	$0.376 \pm 0.574$	0.65	$0.305 \pm 0.545$	$0.219 \pm 0.233$
photometric centroid source offset	$0.15 \pm 0.23$	0.63	$-0.12 \pm 0.23$	$-0.08 \pm 0.23$



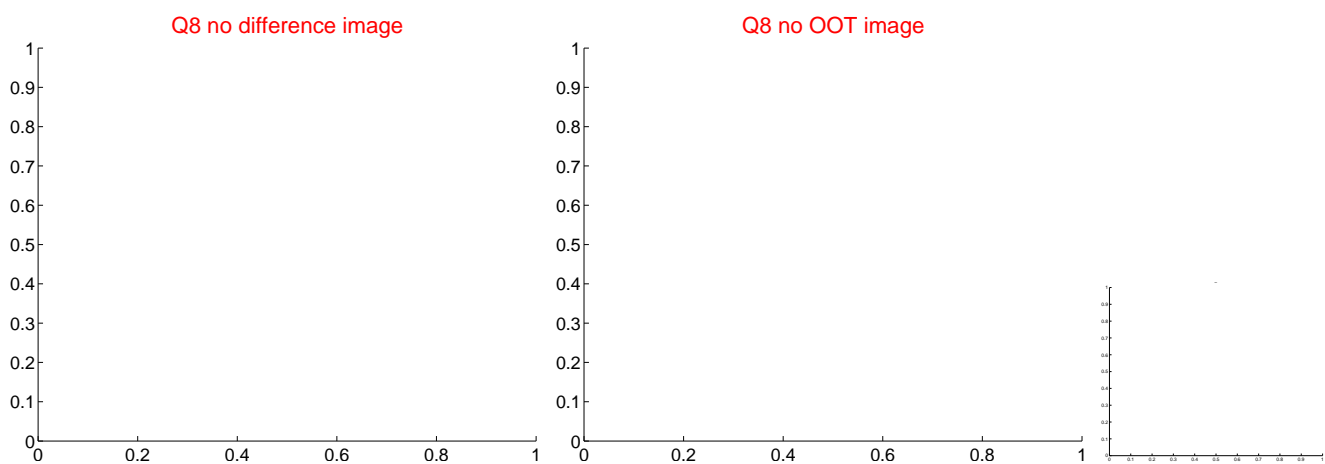
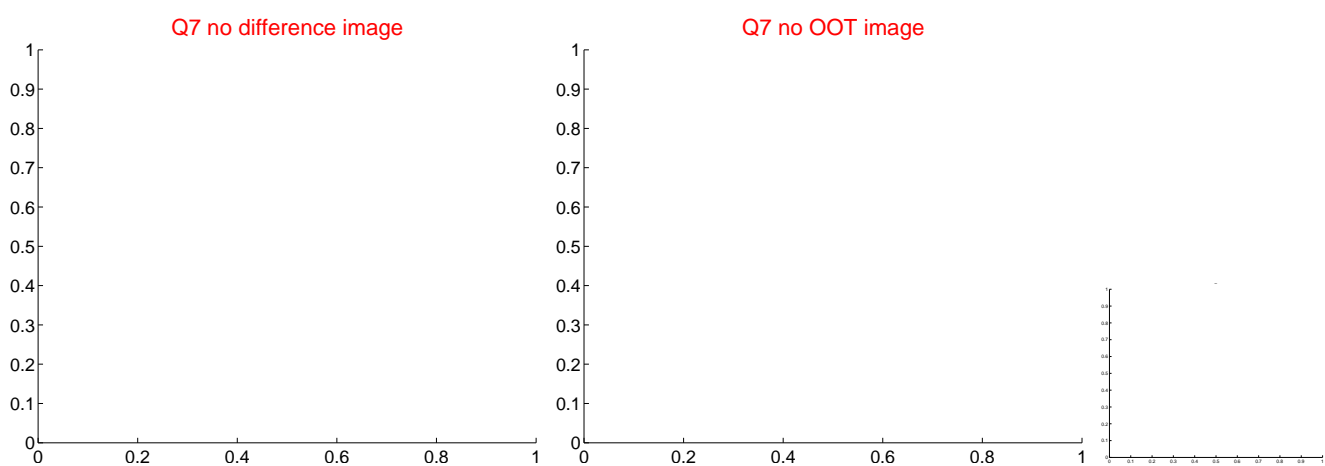
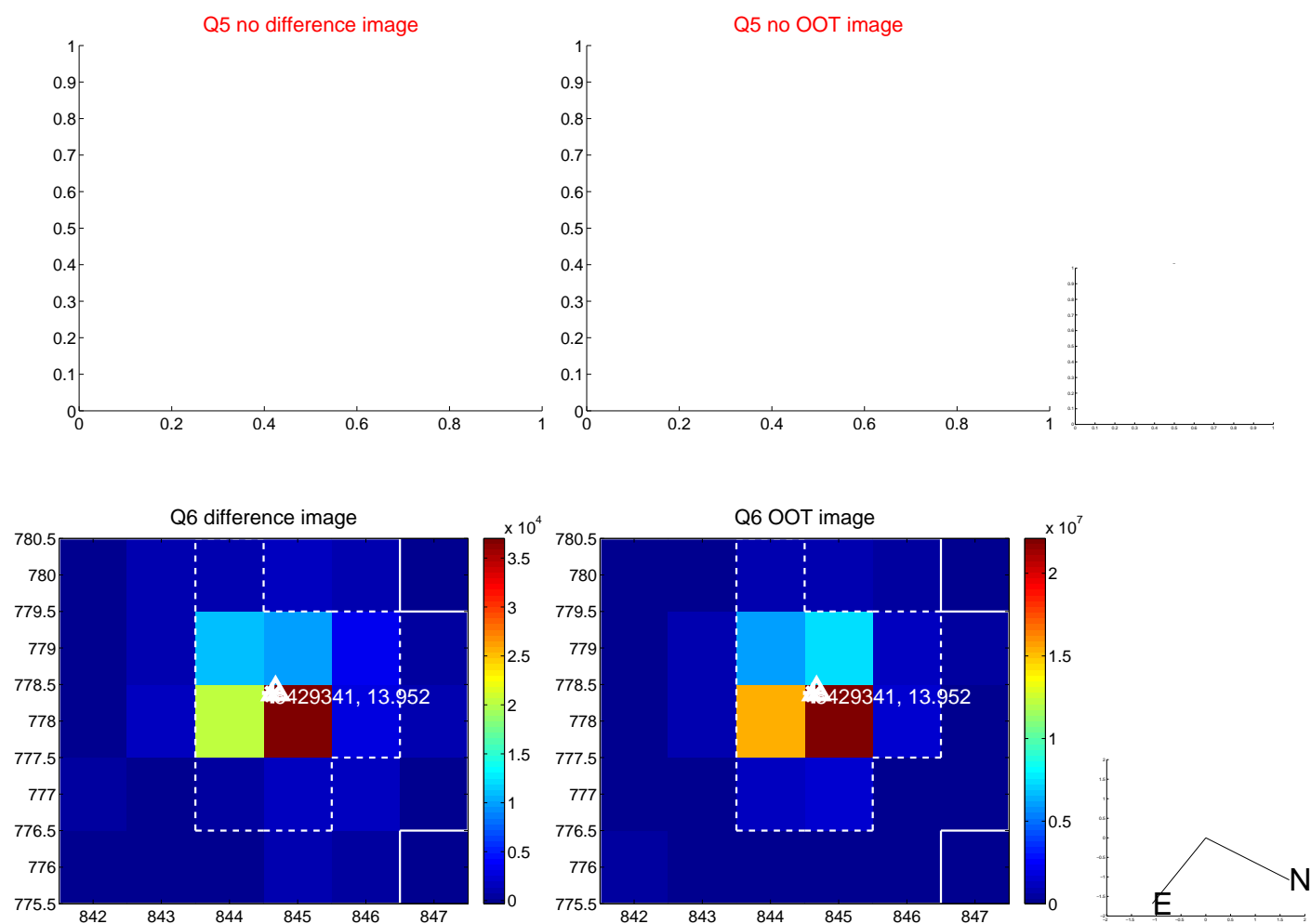
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



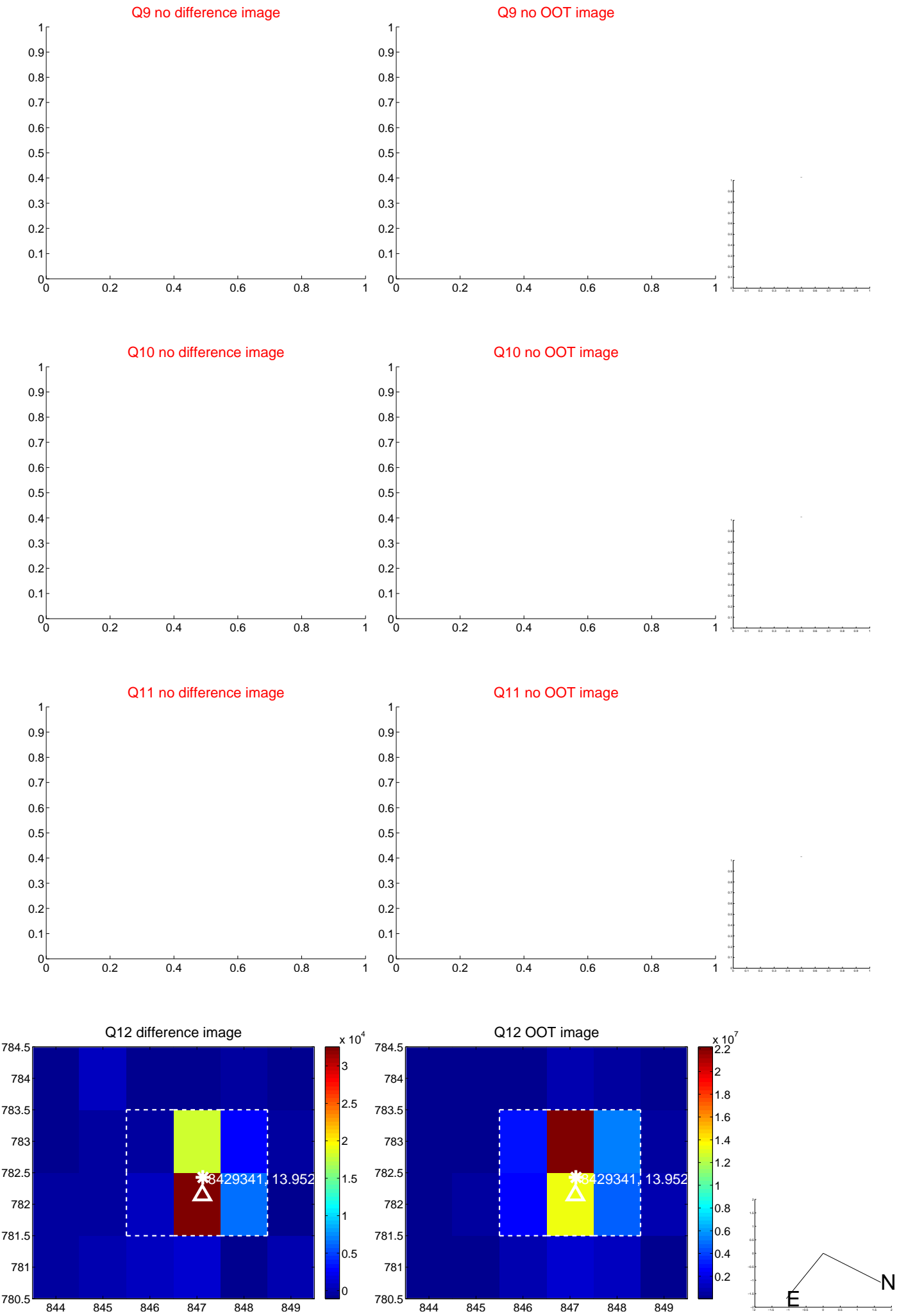
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



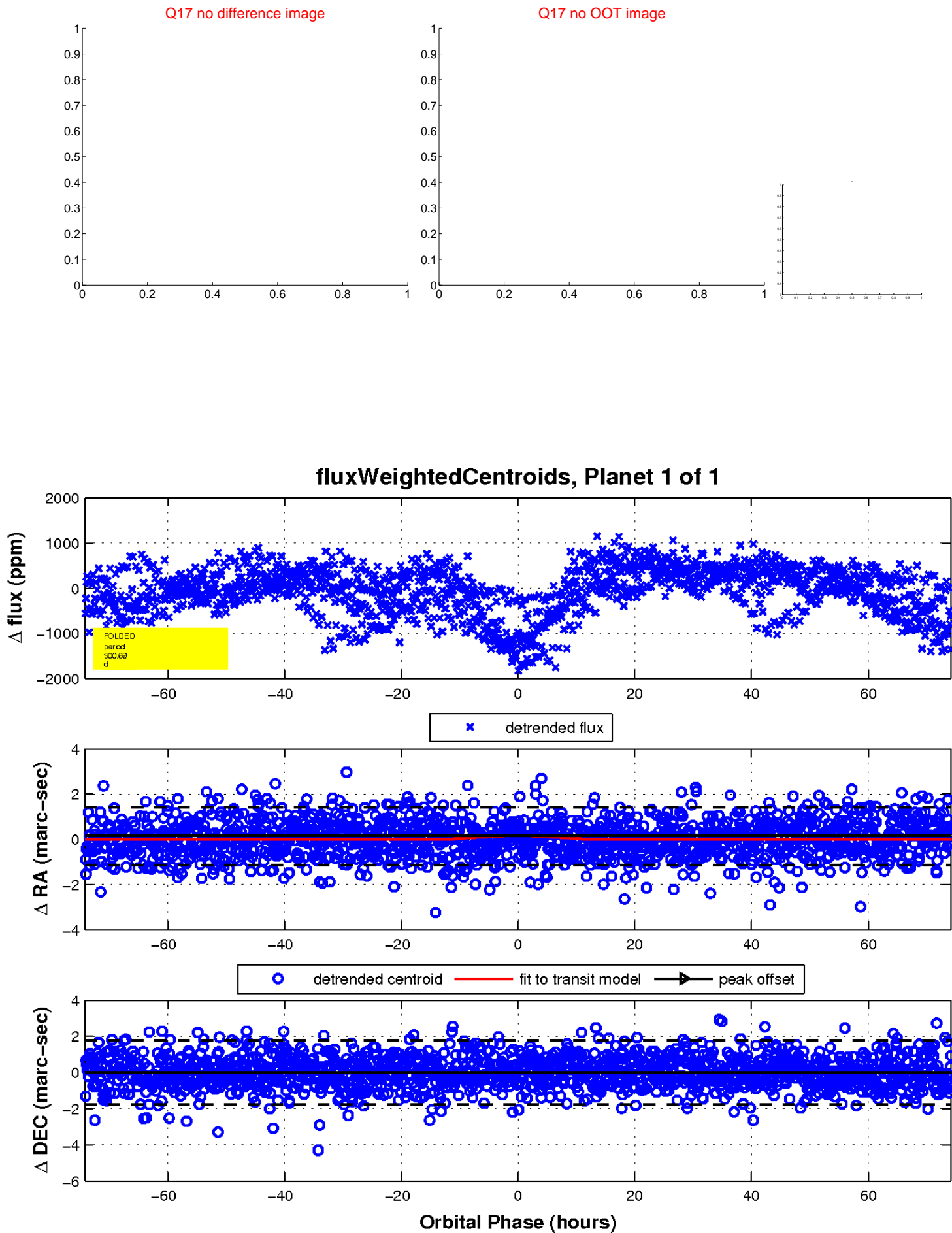
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

