

# KIC 011350634

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R <sub>★</sub> (R <sub>☉</sub> )	T <sub>★</sub> (K)	R <sub>p</sub> (R <sub>⊕</sub> )	S <sub>p</sub> (S <sub>⊕</sub> )
011350634-01	OBS	8050.01	278.389981	299.534000	271.0	10.908	7.1	6.9	4.34	4951	8.45	10.95

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011350634-01	OBS	PC	0.25	0	0	0	0	NO_COMMENT

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

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

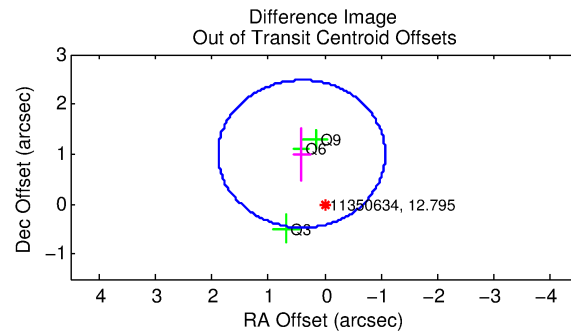
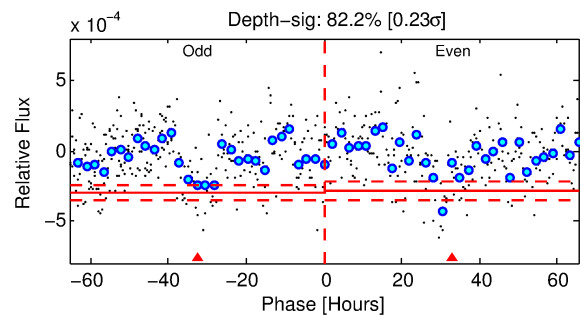
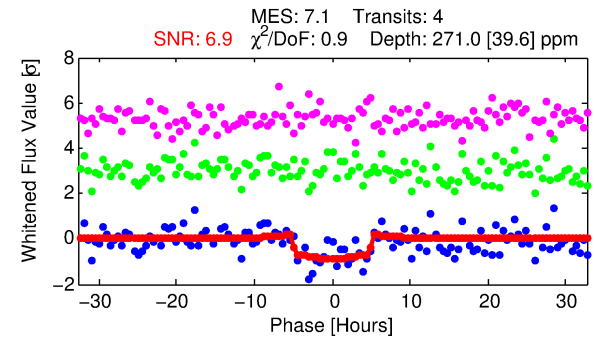
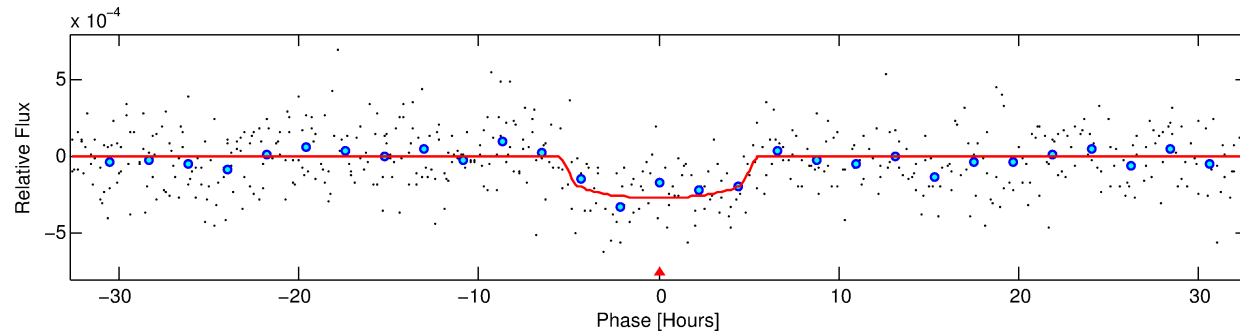
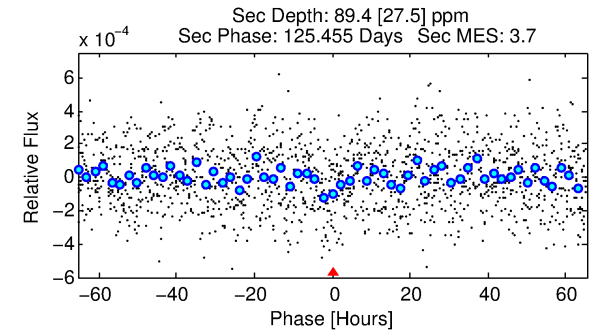
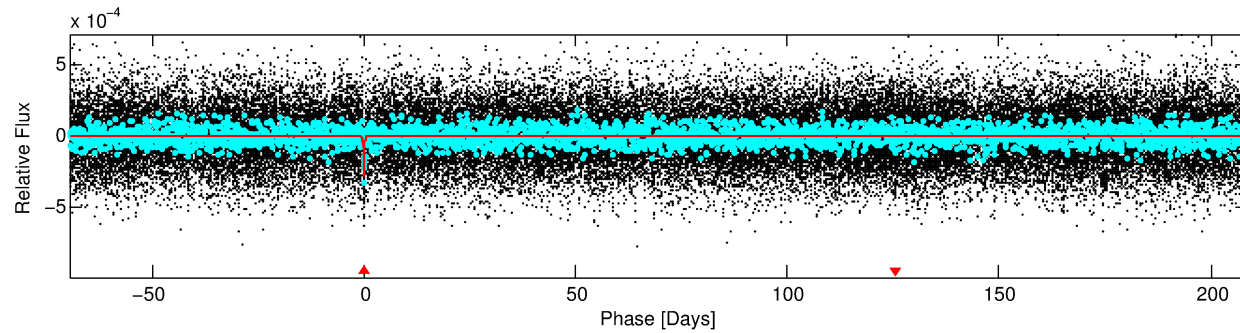
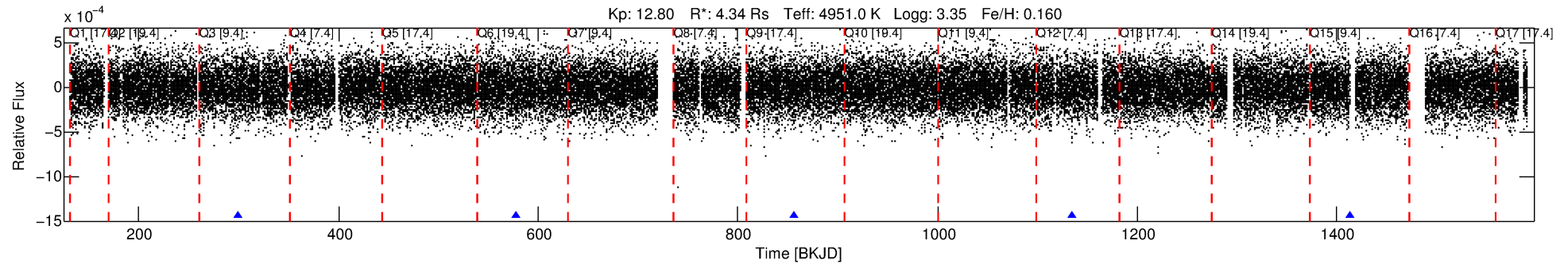
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011350634-01

No Significant Match Found

# DV One-Page Summary

KIC: 11350634 Candidate: 1 of 1 Period: 278.390 d



## DV Fit Results:

Period = 278.38998 [0.00891] d  
Epoch = 299.5340 [0.0180] BKJD  
Rp/R\* = 0.0178 [0.0036]  
a/R\* = 102.94 [74.45]  
b = 0.87 [0.20]  
Seff = 10.95 [3.30]  
Teq = 464 [35] K  
Rp = 8.45 [2.79] Re  
a = 0.9629 [0.2018] AU  
Ag = 639.05 [376.43] [1.69σ]  
Teffp = 3605 [465] K [6.74σ]

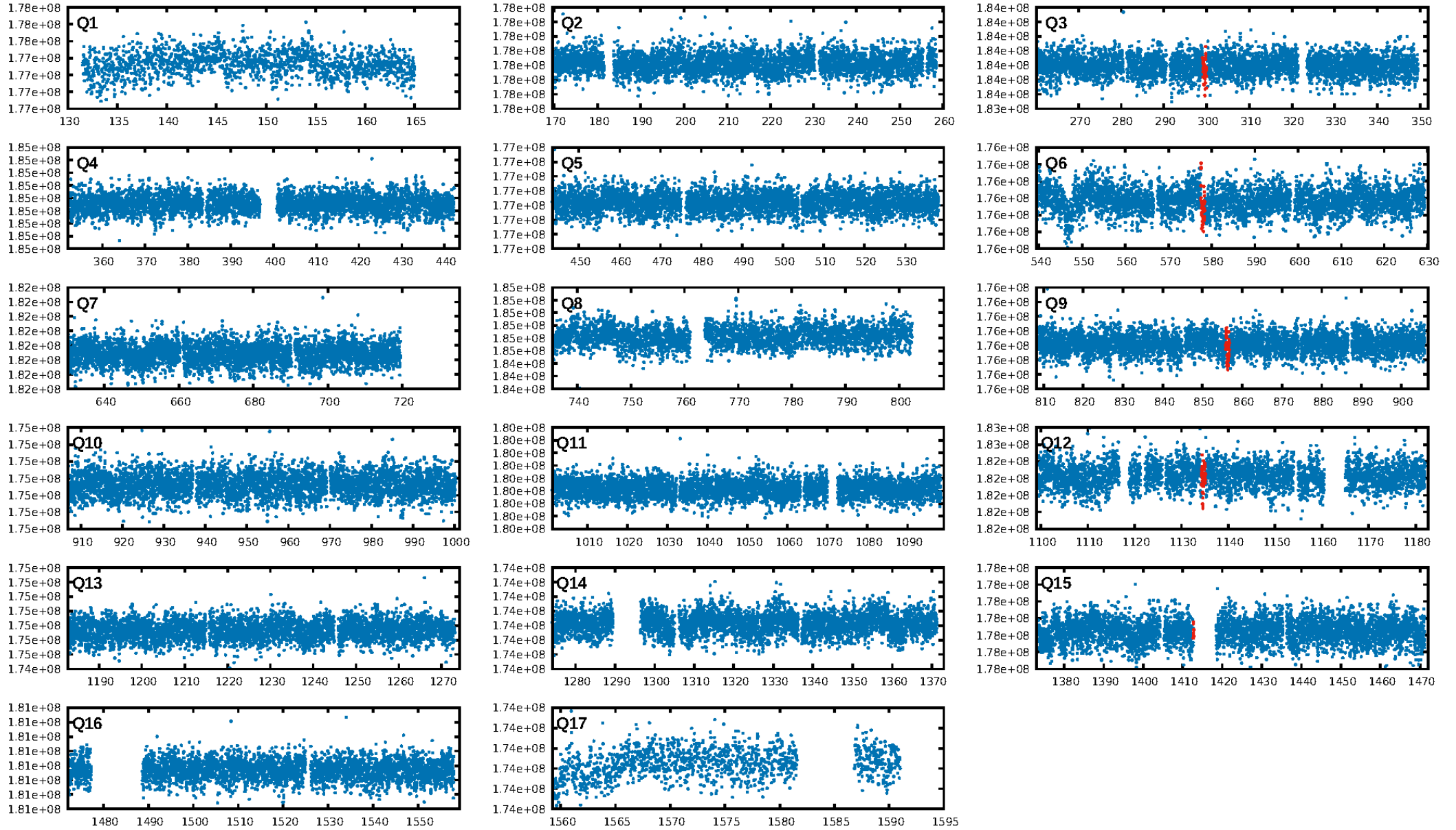
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 73.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.56e-13  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.15  
Centroid-sig: 74.3%  
Centroid-so: 0.356 arcsec [0.57σ]  
OotOffset-rm: 1.084 arcsec [2.20σ]  
KicOffset-rm: 1.238 arcsec [2.30σ]  
OotOffset-st: 1/1/0/1 [3]  
KicOffset-st: 1/1/0/1 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

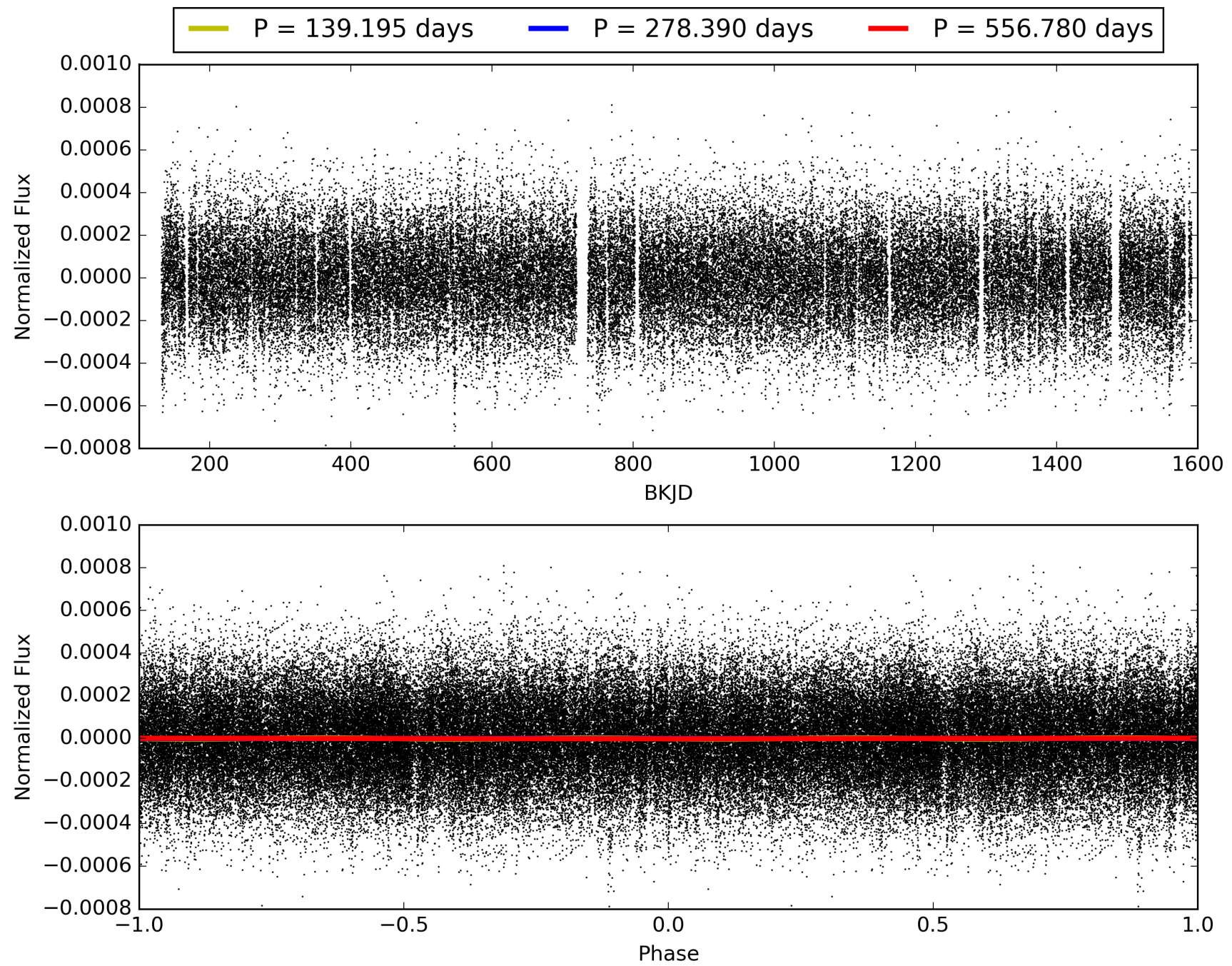
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:13:45 Z

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

# TCE 011350634-01, PDC Light Curves

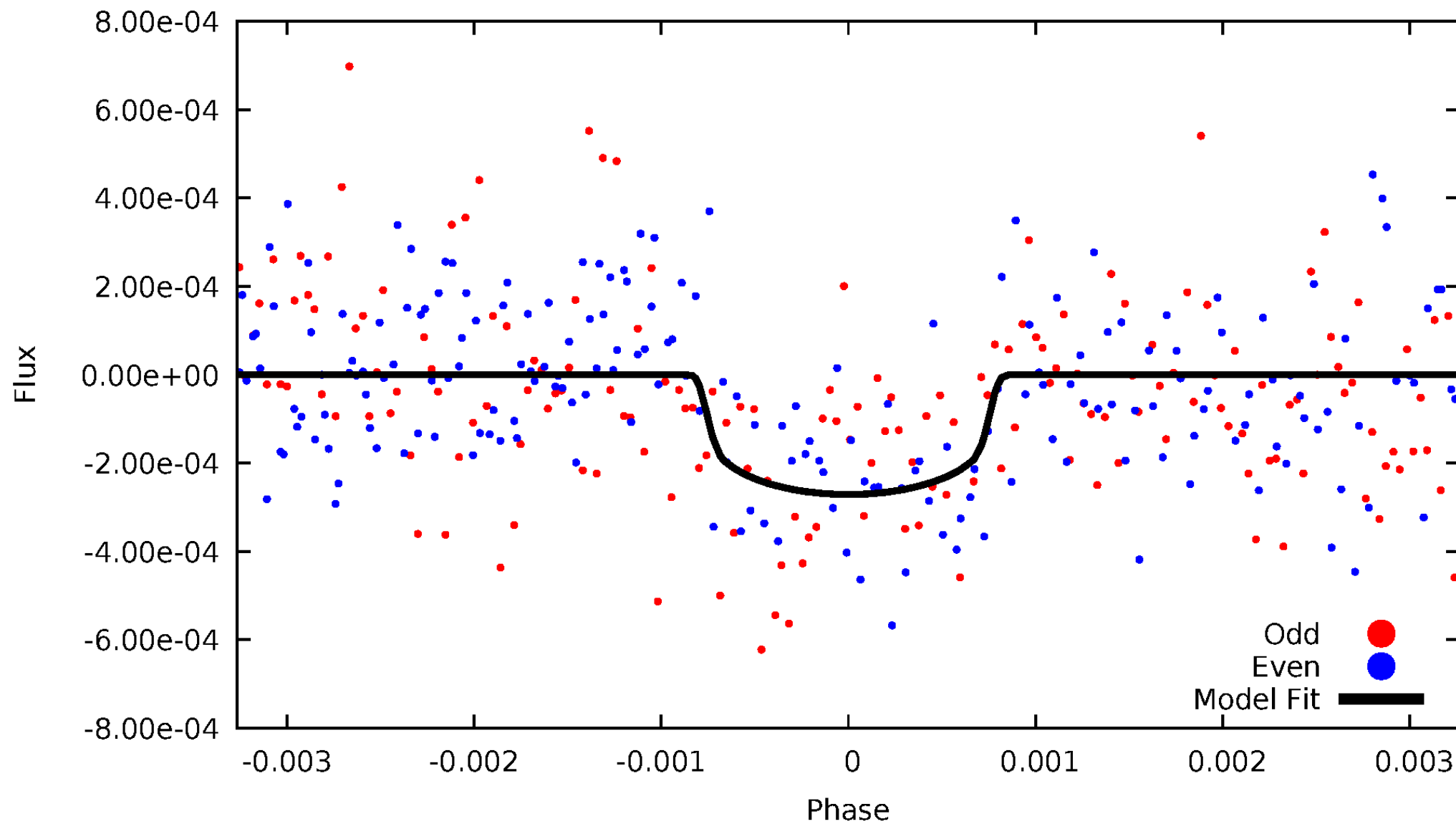


TCE 011350634-01



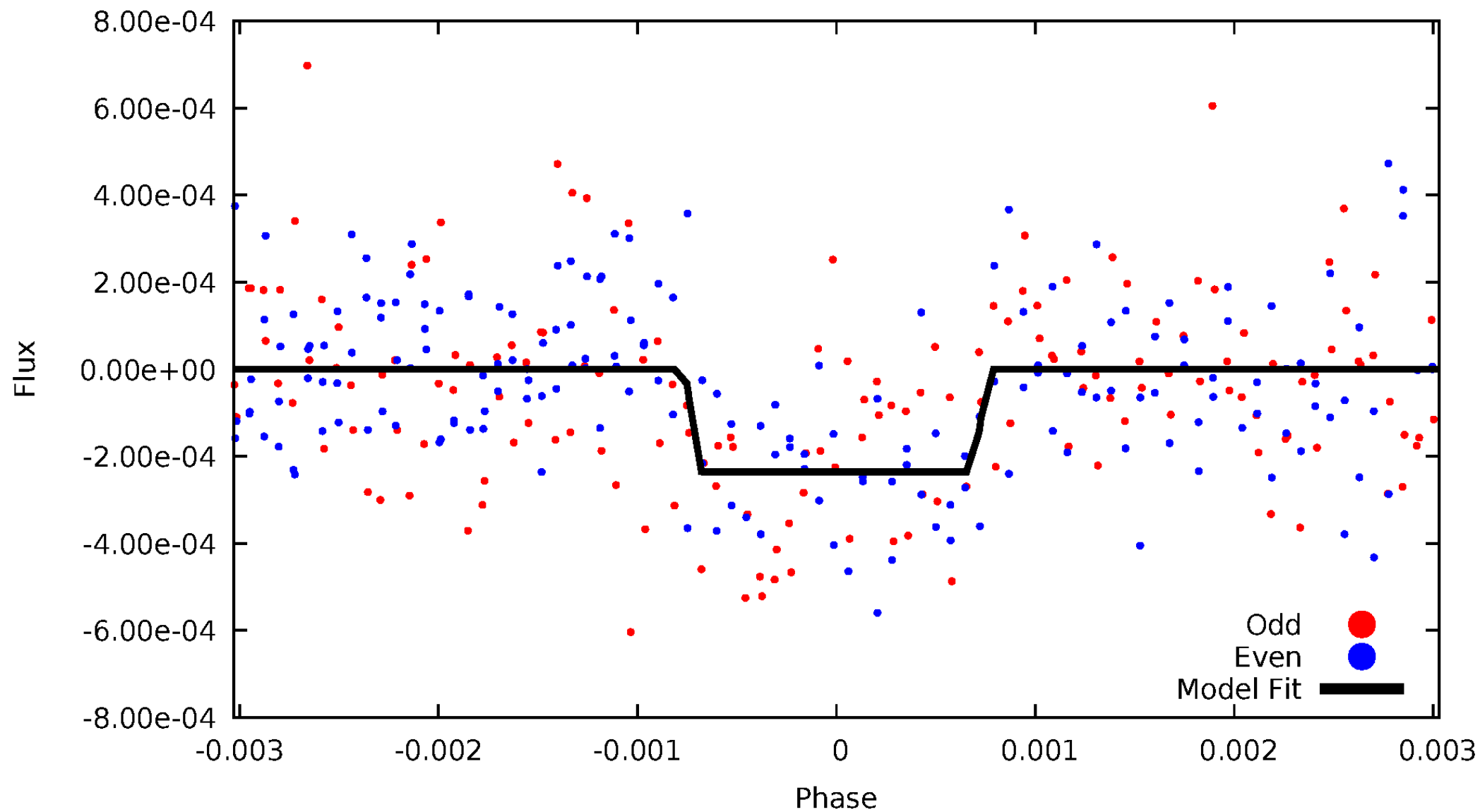
# DV Odd/Even

TCE 011350634-01



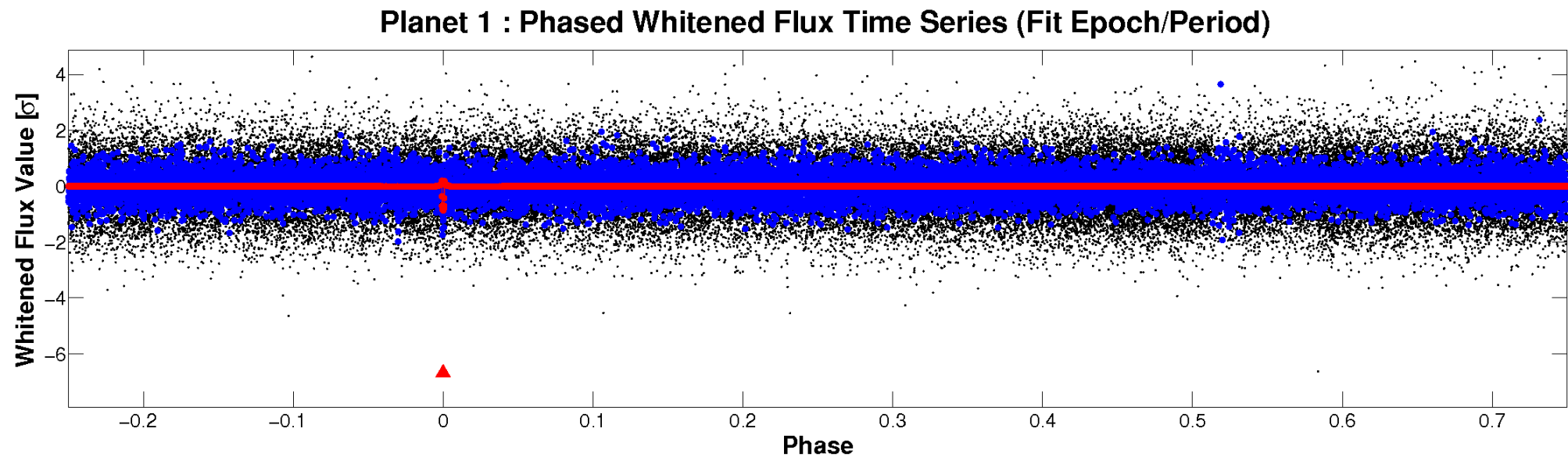
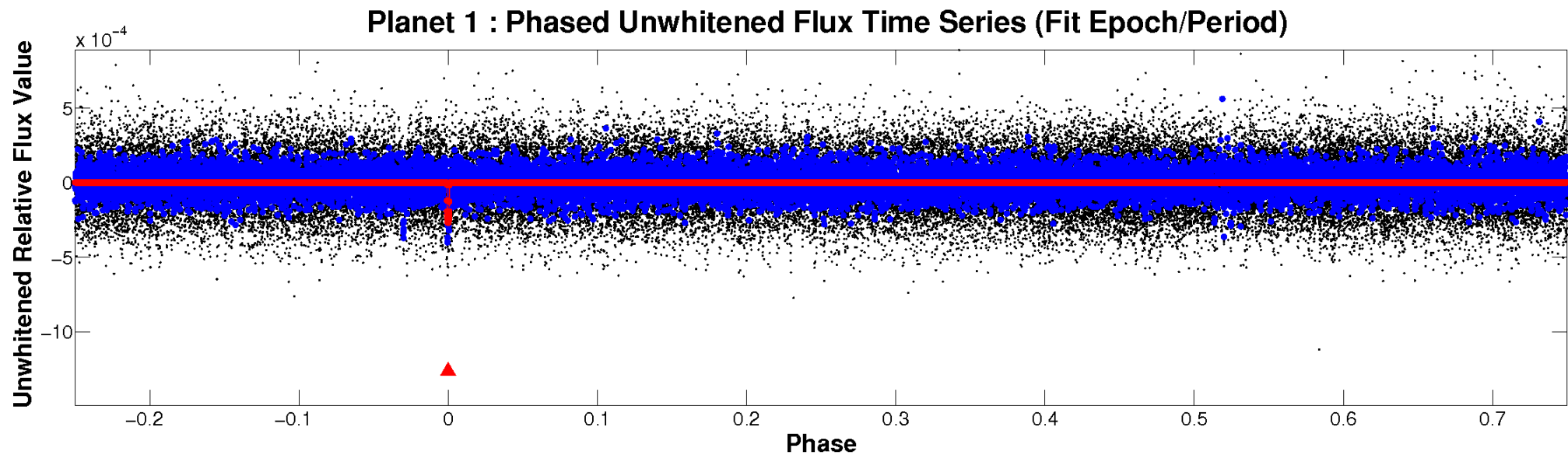
# ALT Odd/Even

TCE 011350634-01



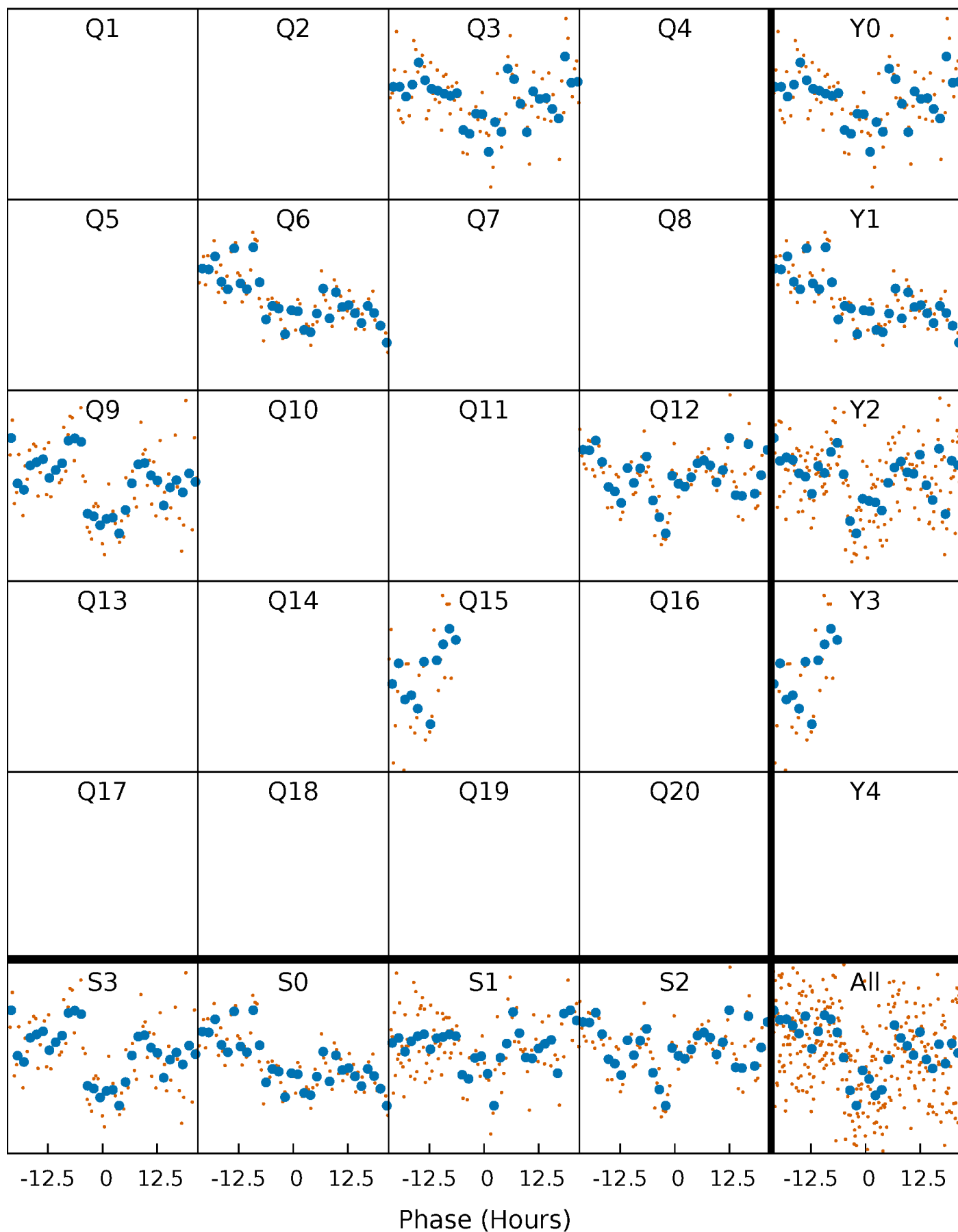


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

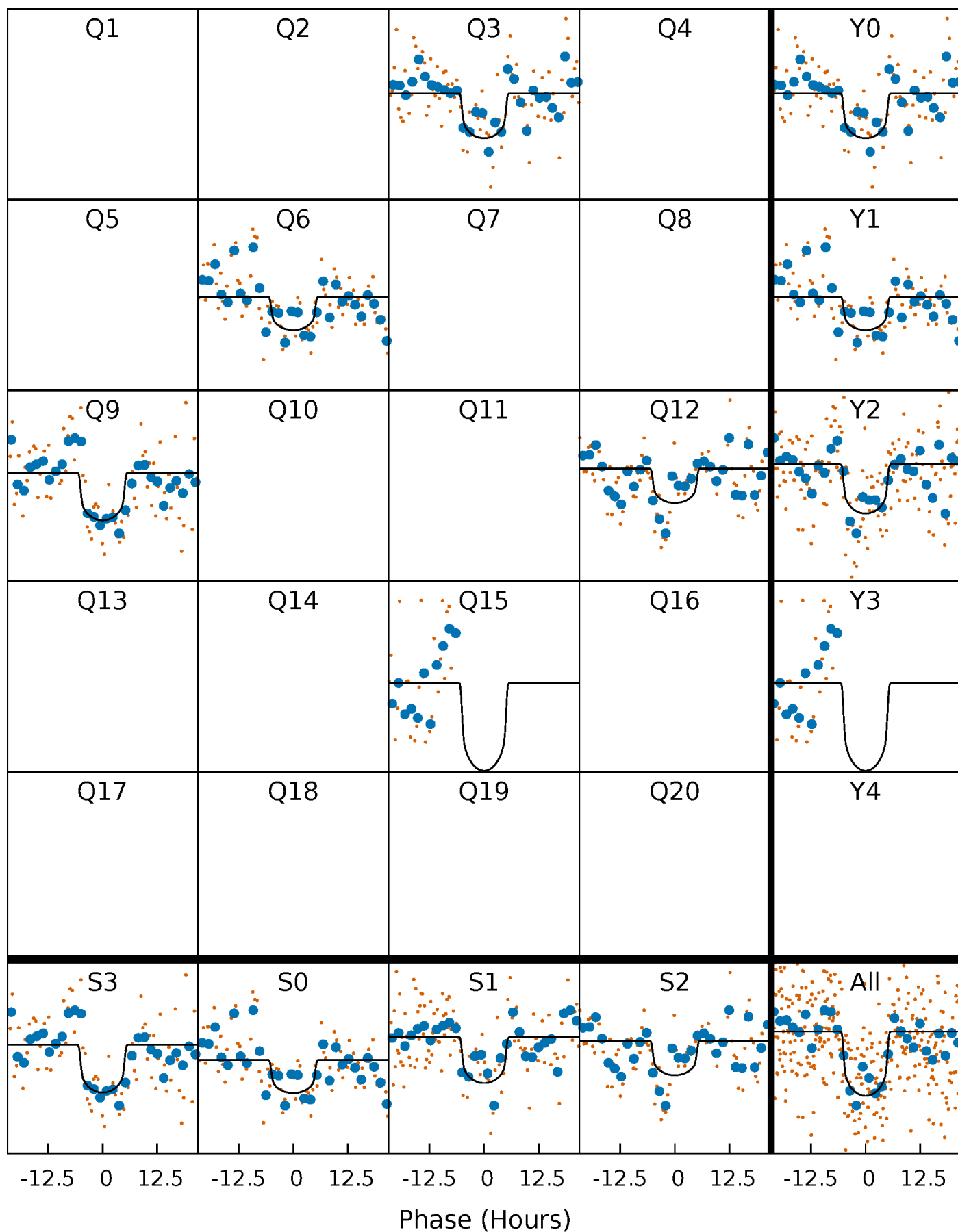
TCE 011350634-01 P=278.389981 Days  $T_0=299.534000$  (BKJD)





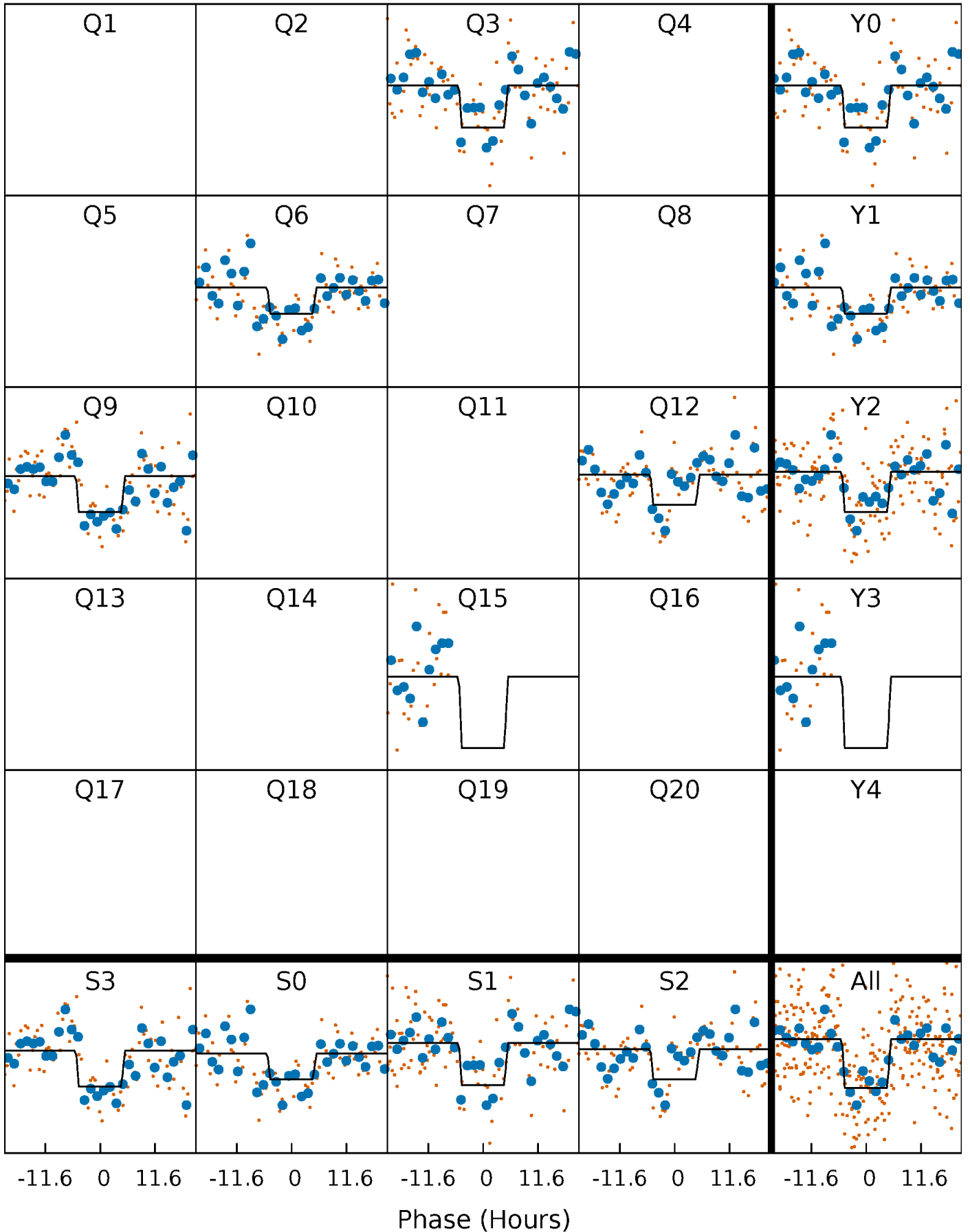
# DV Quarter-Phased Transit Curves

TCE 011350634-01 P=278.389981 Days  $T_0=299.534000$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

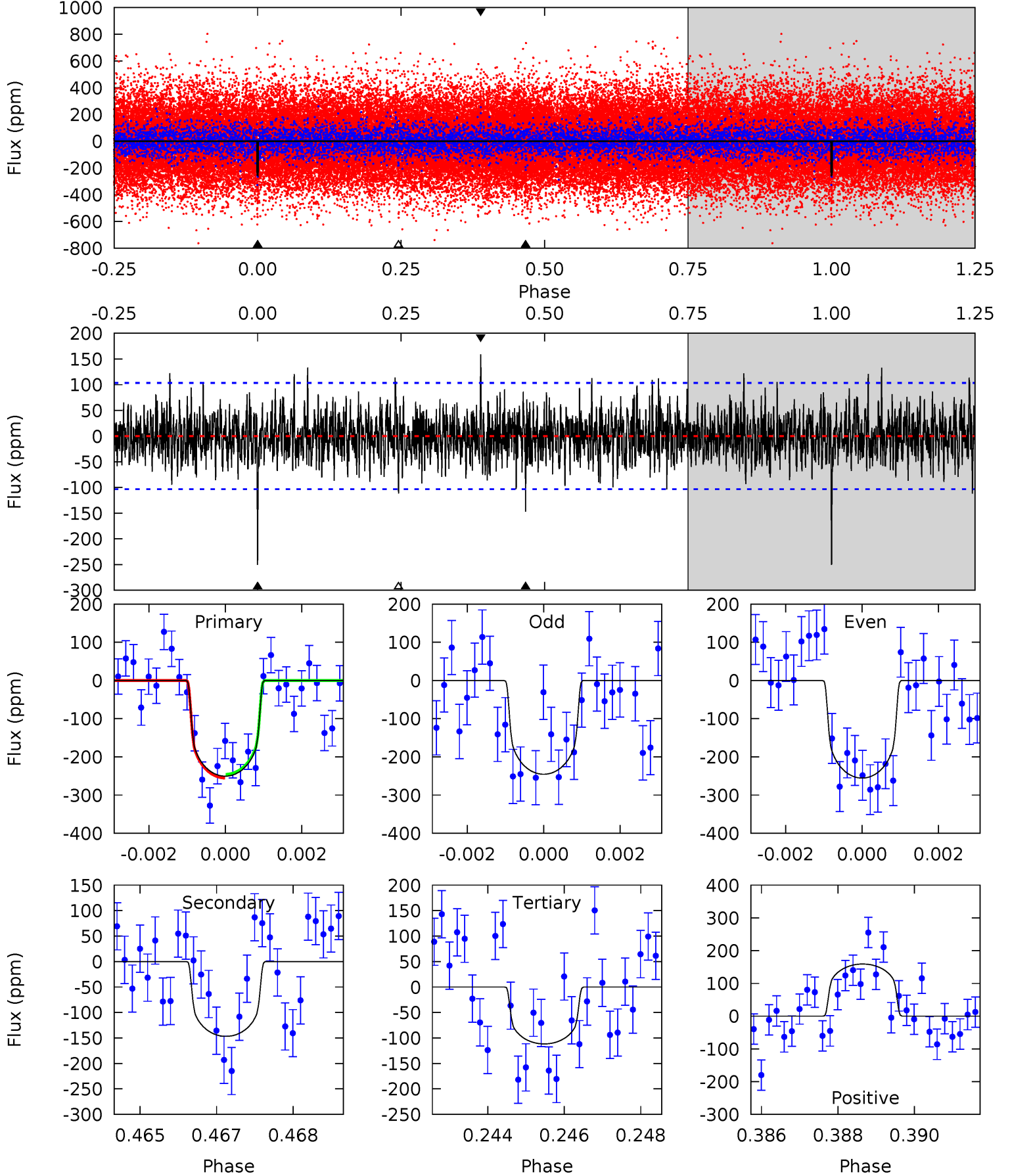
TCE 011350634-01 P=278.386821 Days  $T_0=299.541659$  (BKJD)



# DV Model-Shift Uniqueness Test

011350634-01,  $P = 278.389981$  Days,  $E = 21.144019$  Days

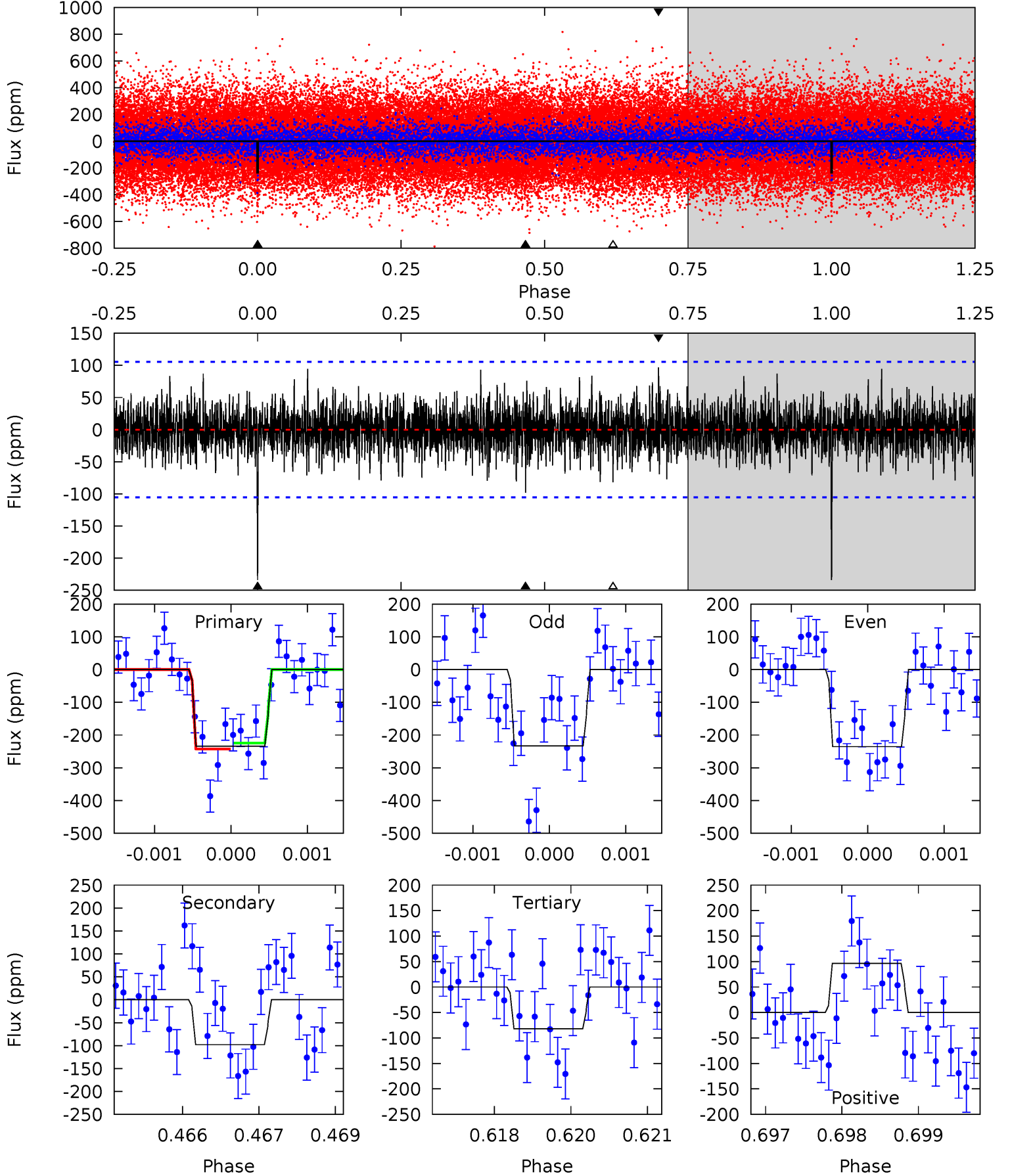
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	7.61	5.79	8.25	5.36	3.14	1.77	7.20	4.74	1.82	-0.64	0.26	1.02	0.39	0.26



# Alt Model-Shift Uniqueness Test

011350634-01,  $P = 278.386821$  Days,  $E = 21.154838$  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
12.0	5.00	4.18	4.93	5.38	3.18	1.27	7.77	7.02	0.81	0.07	0.06	0.99	0.29	0.46



### Stellar Parameters For KIC 011350634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4951^{+51}_{-88}$	$3.349^{+0.154}_{-0.112}$	$0.160^{+0.100}_{-0.200}$	$4.342^{+0.657}_{-1.127}$	$1.537^{+0.187}_{-0.406}$	$0.026^{+0.024}_{-0.009}$
	+1%/-2%	+5%/-3%	+62%/-125%	+15%/-26%	+12%/-26%	+90%/-35%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 011350634-01 / KOI 8050.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-147 \pm 19$	$8.19^{+2.15}_{-1.96}$	$644^{+28}_{-36}$	$4240^{+414}_{-297}$	$1095^{+740}_{-387}$
Alt.	$-98 \pm 20$	$7.18^{+2.11}_{-2.03}$	$648^{+28}_{-35}$	$4168^{+524}_{-369}$	$970^{+903}_{-403}$

$T_{max}$  = 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

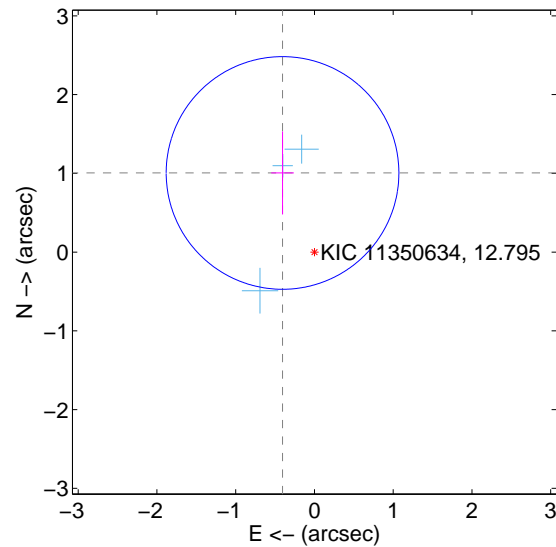
Supplemental centroid analysis for 011350634-01. Kepler magnitude: 12.79. Transit SNR 6.90

There are 3 quarters with good PRF difference image offsets

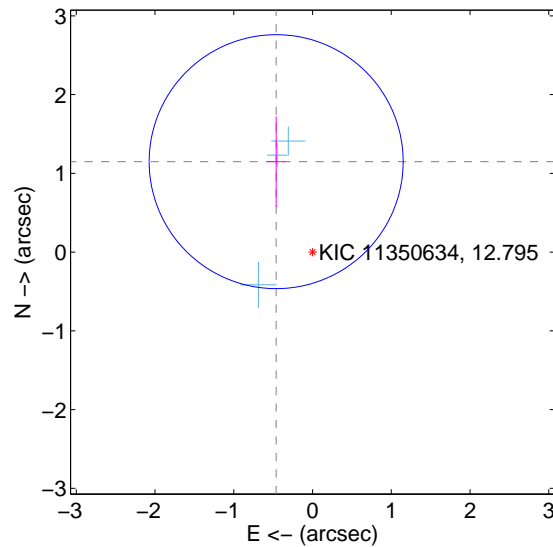
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.084 \pm 0.492$	2.20	$0.405 \pm 0.144$	$1.005 \pm 0.528$
PRF-fit source offset from KIC position	$1.238 \pm 0.537$	2.30	$0.462 \pm 0.116$	$1.148 \pm 0.577$
photometric centroid source offset	$0.36 \pm 0.62$	0.57	$0.12 \pm 0.57$	$0.34 \pm 0.63$

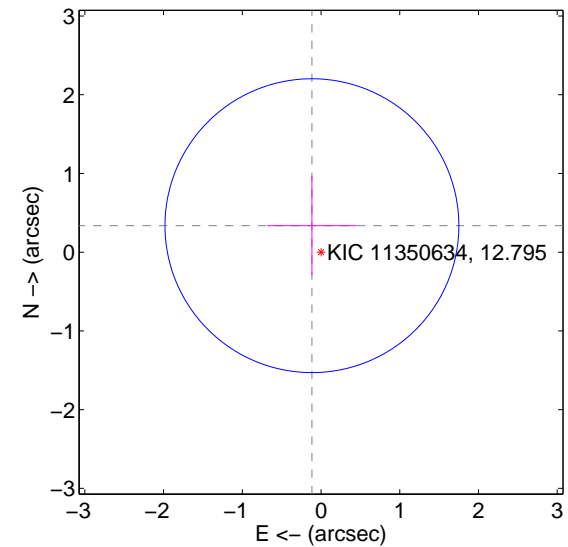
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



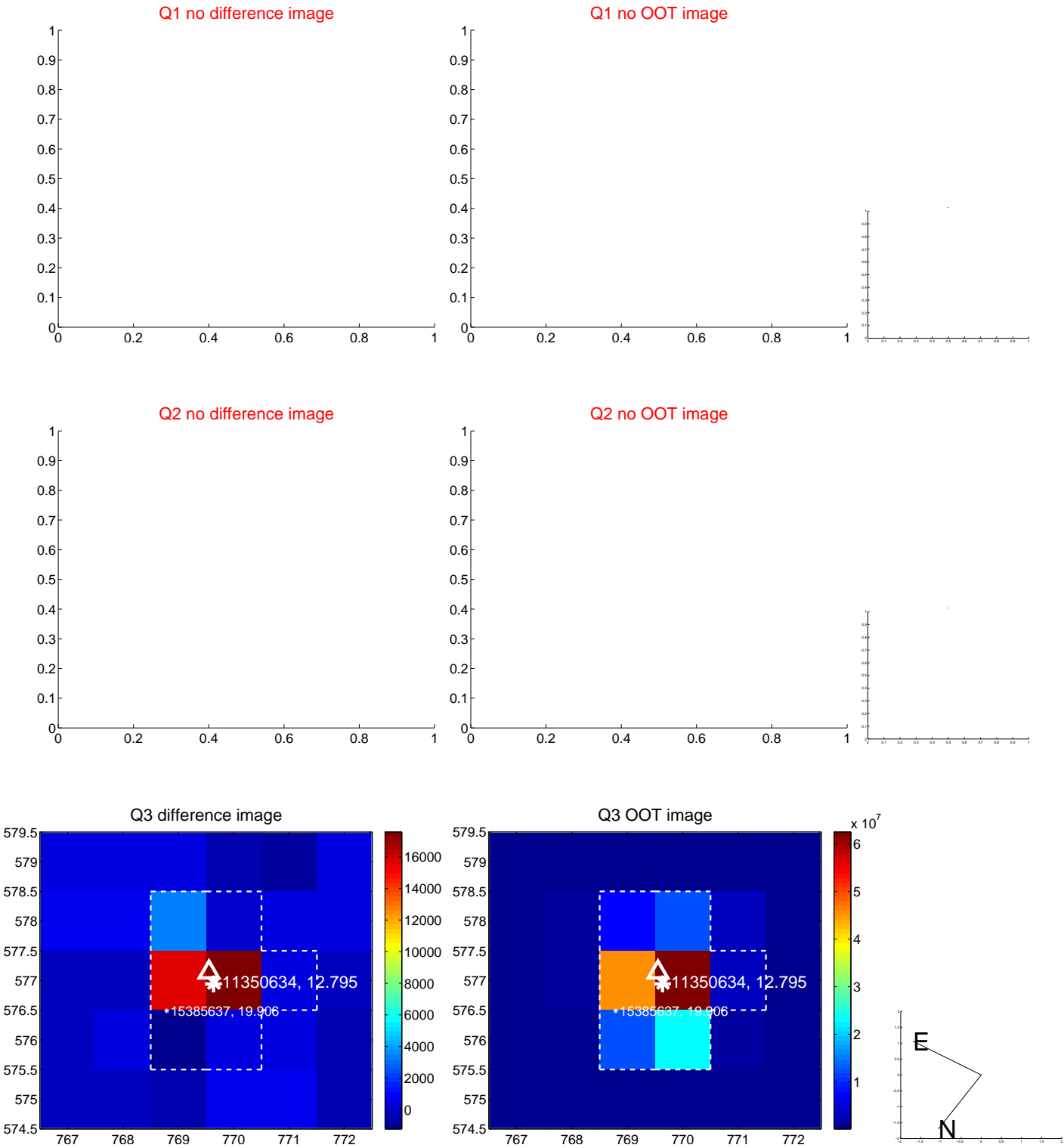
offset from photometric centroids



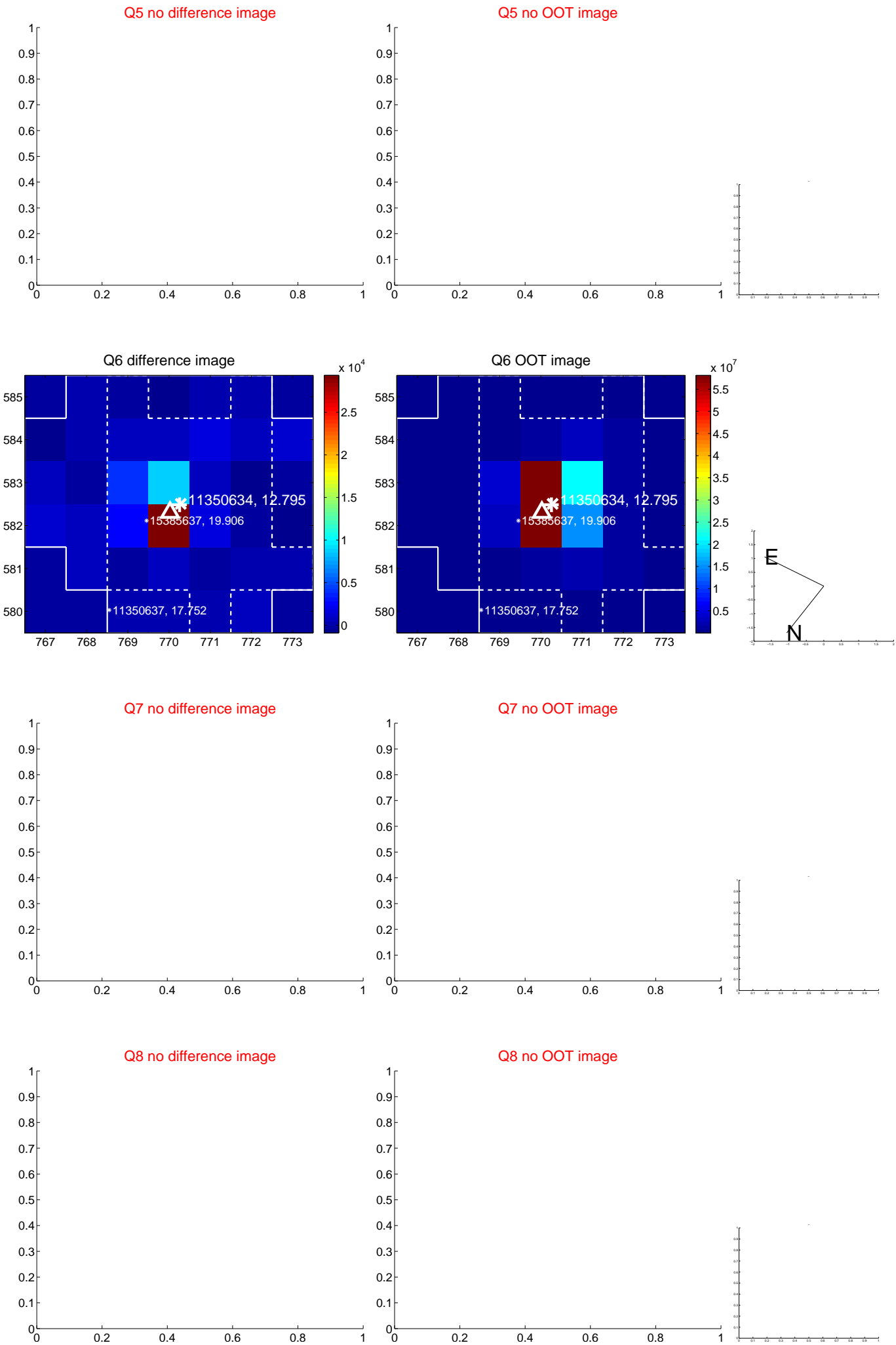
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



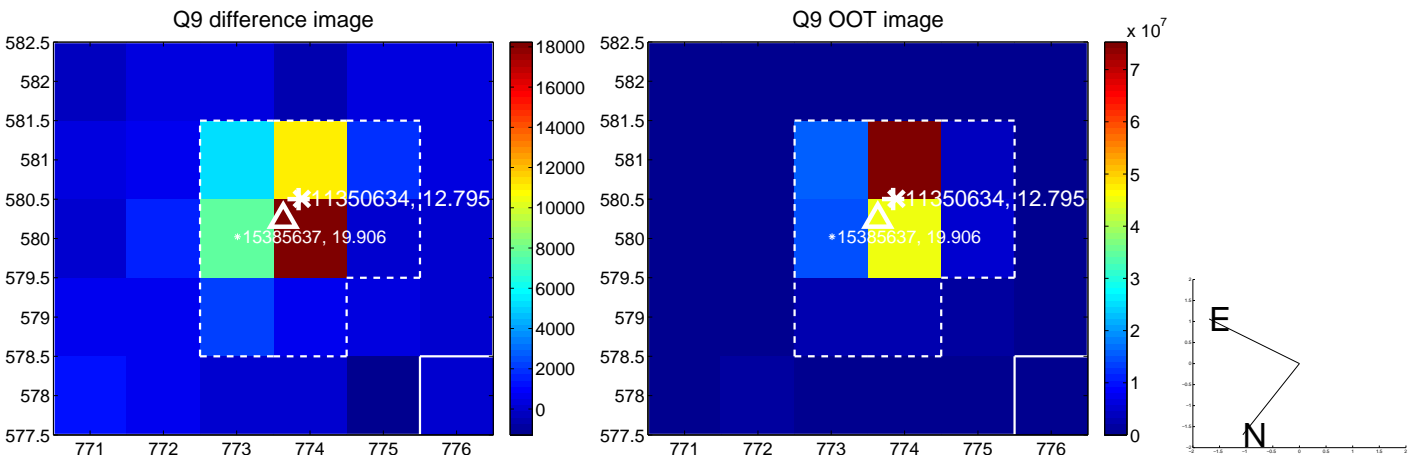
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



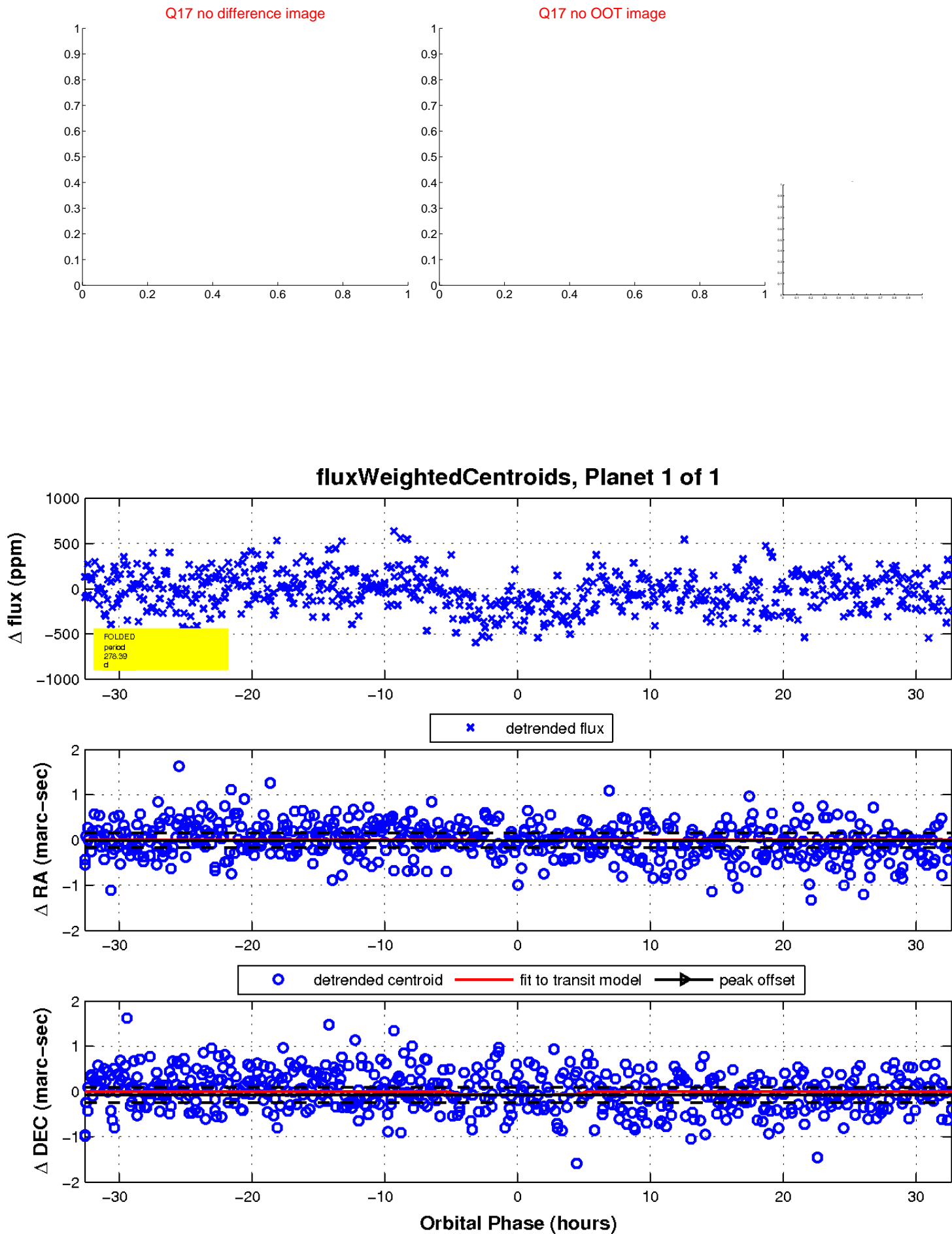
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

