

# KIC 005779615

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005779615-01	OBS	No	338.907608	148.250166	1616.5	2.809	11.1	6.1	0.53	3844	2.22	0.09

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005779615-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_KIC_POS

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

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

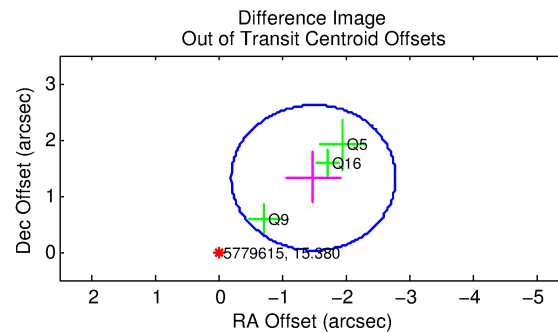
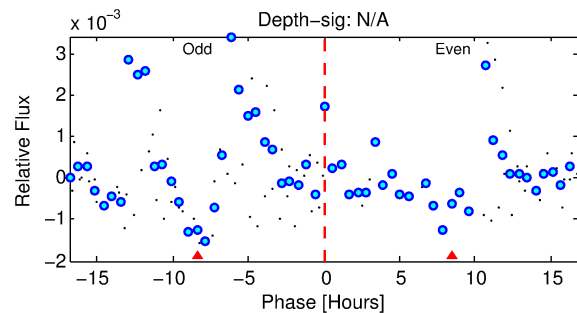
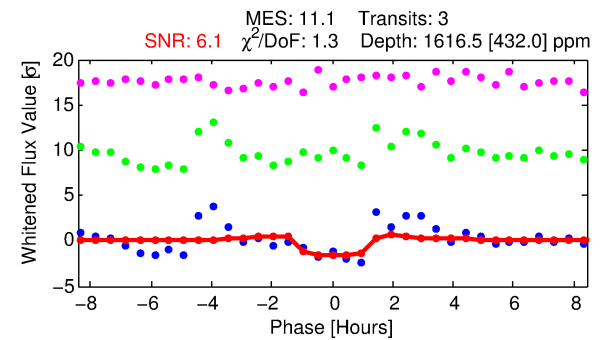
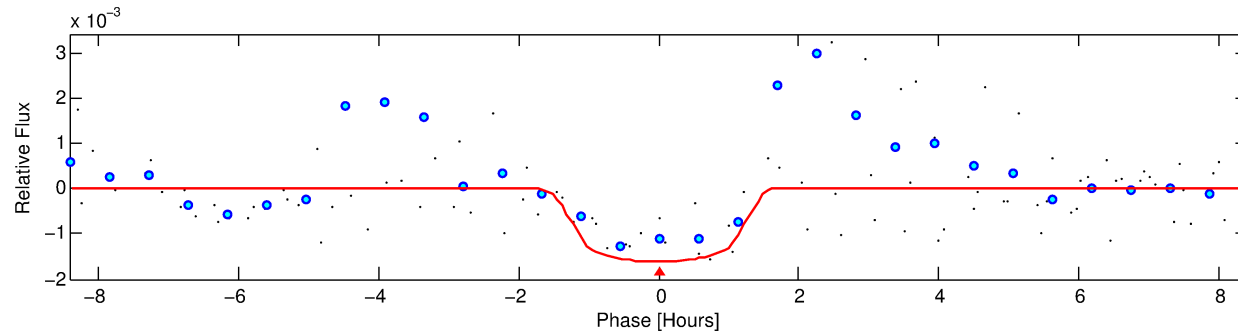
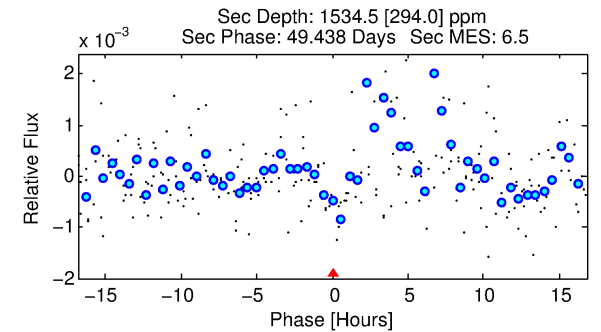
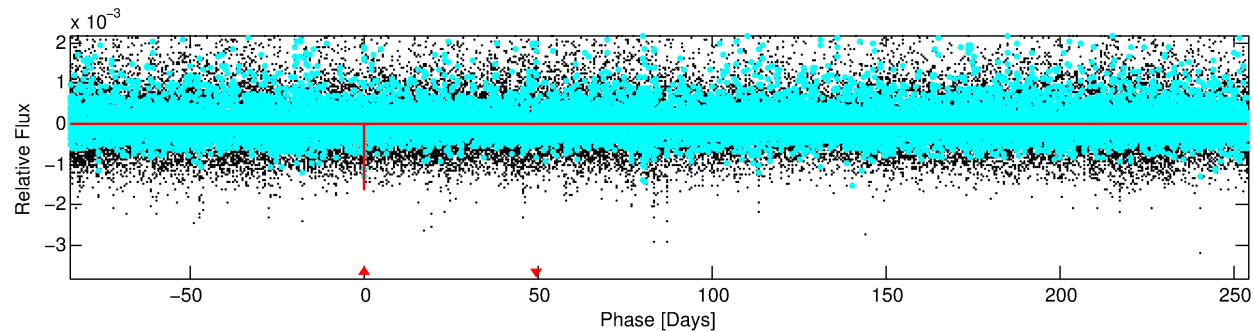
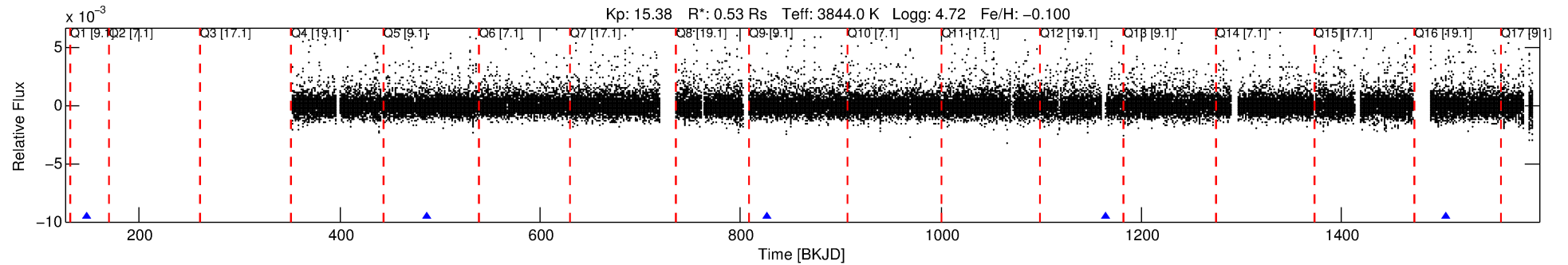
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005779615-01

No Significant Match Found

# DV One-Page Summary

KIC: 5779615 Candidate: 1 of 1 Period: 338.908 d



## DV Fit Results:

Period = 338.90761 [0.00530] d  
Epoch = 148.2502 [0.0158] BKJD  
Rp/R\* = 0.0387 [0.0618]  
a/R\* = 753.88 [5173.47]  
b = 0.64 [6.38]  
Seff = 0.09 [0.01]  
Teq = 140 [3] K  
Rp = 2.22 [3.55] Re  
a = 0.7704 [0.0360] AU  
Ag = 101602.44 [325137.23] [0.31σ]  
Teffp = 3868 [3095] K [1.20σ]

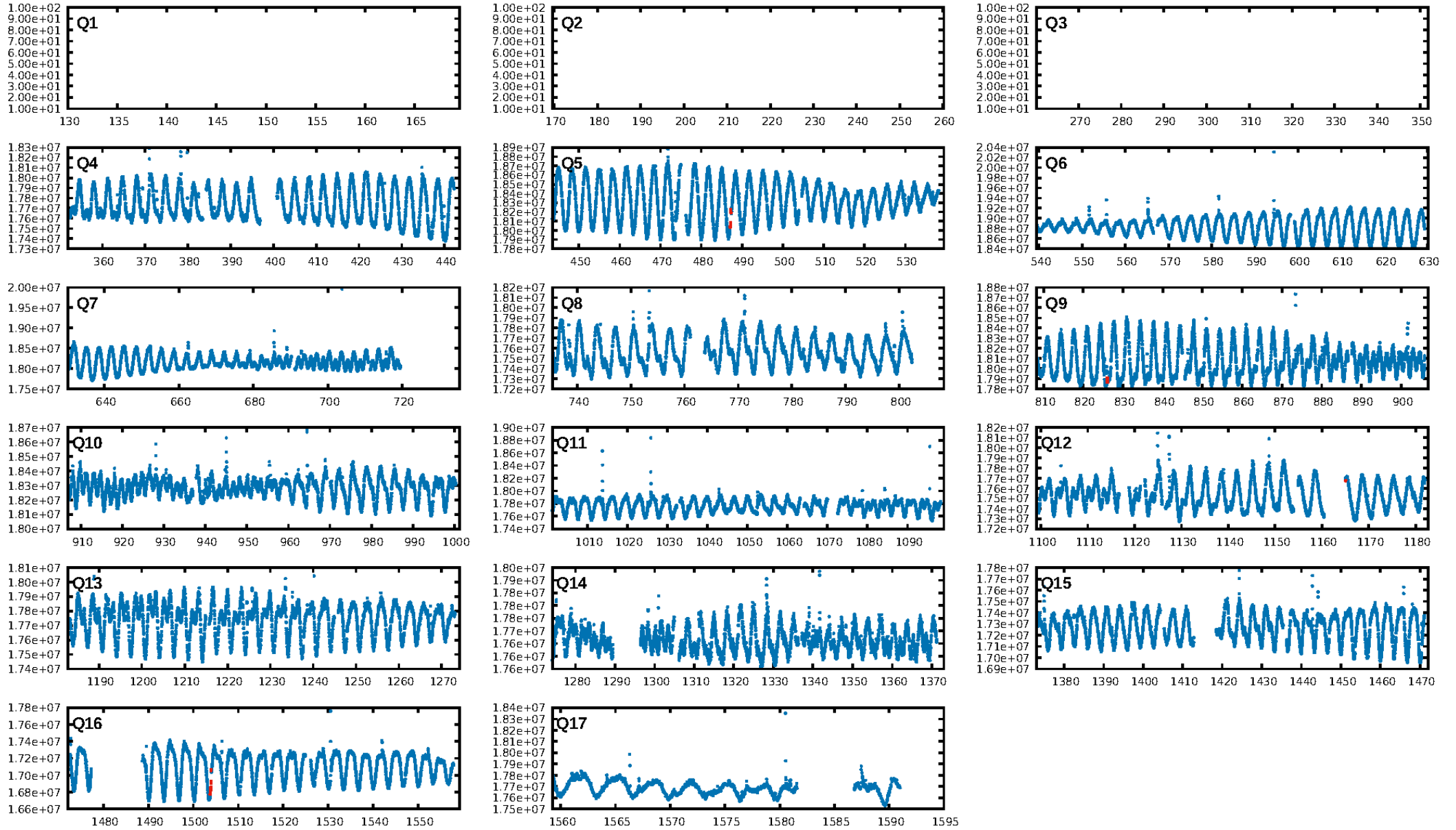
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 80.5%  
ModelChiSquareGof-sig: 98.7%  
**Bootstrap-pfa: 1.76e-11**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 1.311  
Centroid-sig: 0.7%  
Centroid-so: 0.654 arcsec [1.35σ]  
**OotOffset-rm: 1.995 arcsec [4.63σ]**  
KicOffset-st: 0/0/1/2 [3]  
KicOffset-st: 0/0/1/2 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

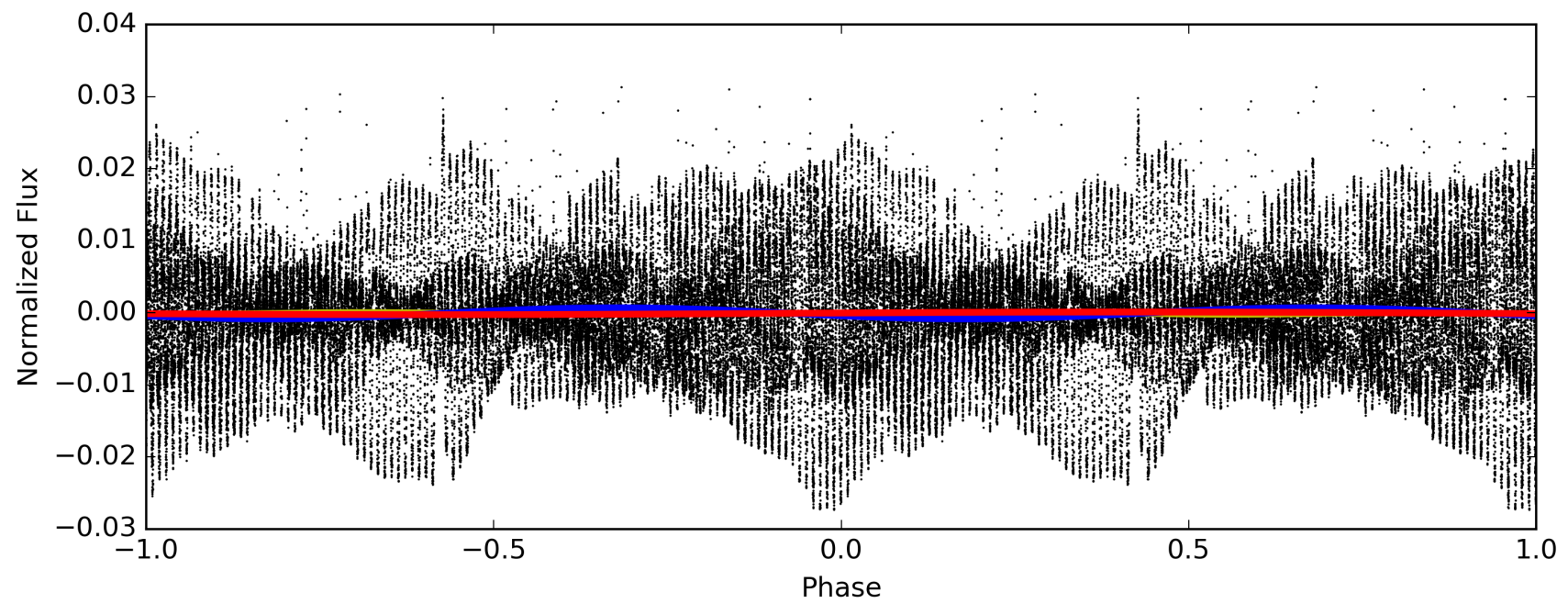
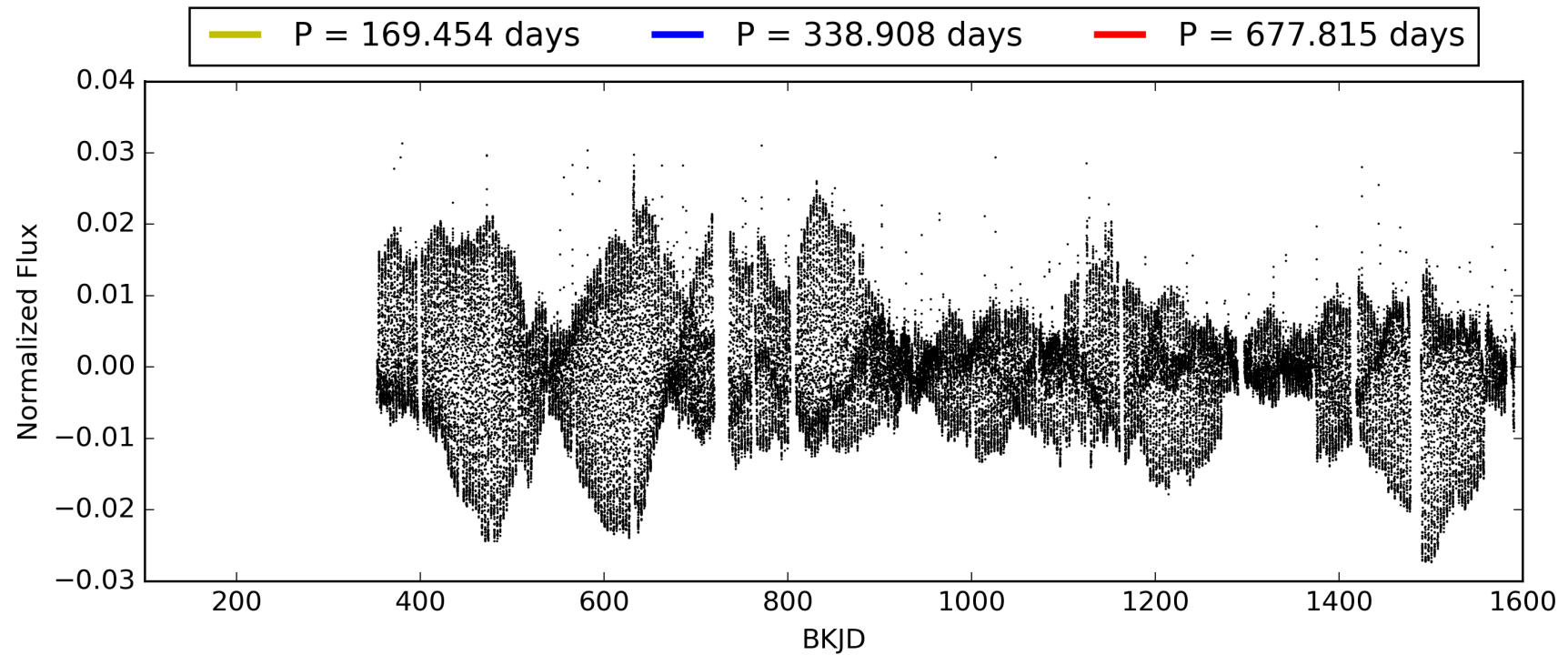
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:00:41 Z

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

# TCE 005779615-01, PDC Light Curves

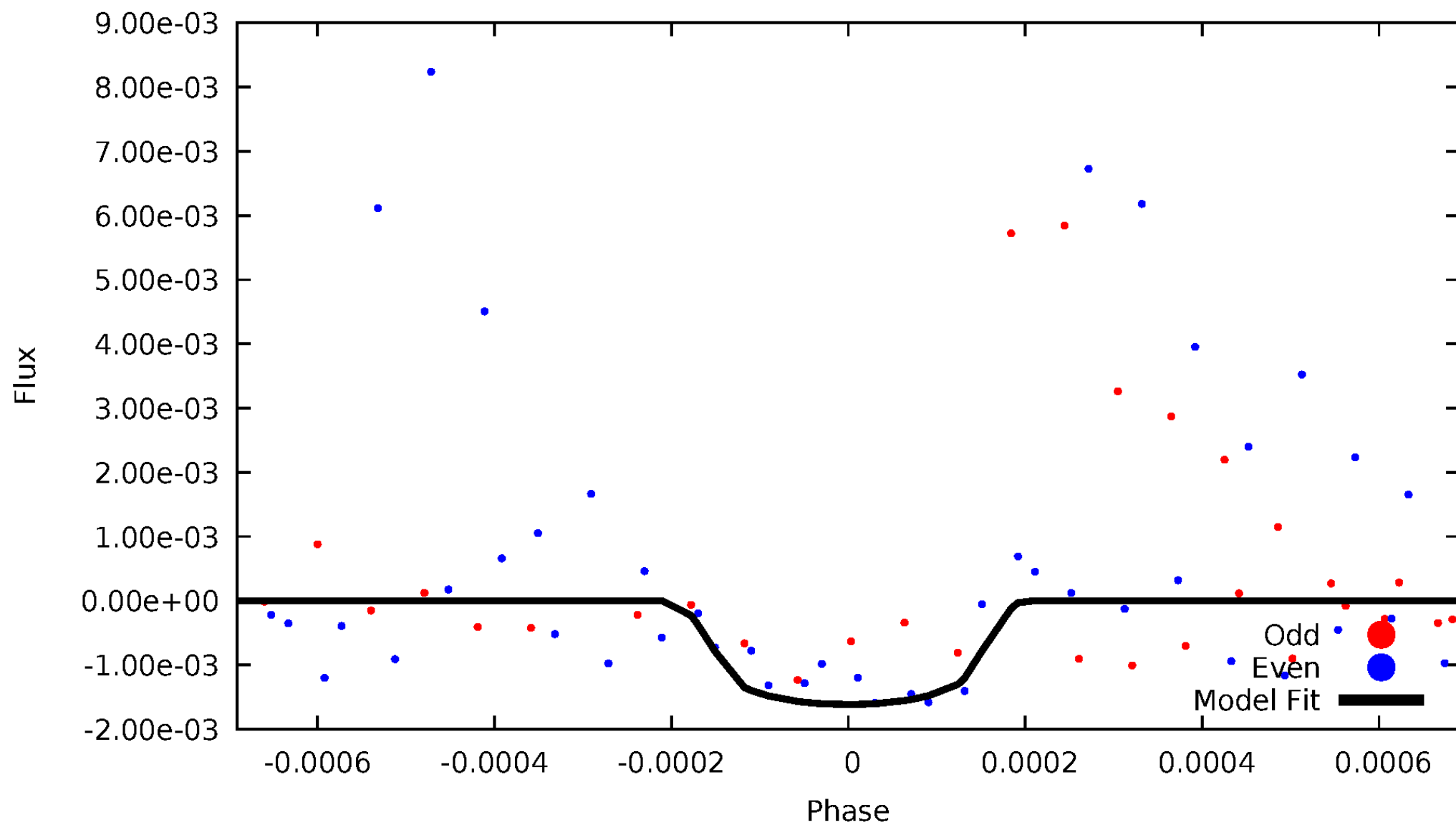


TCE 005779615-01



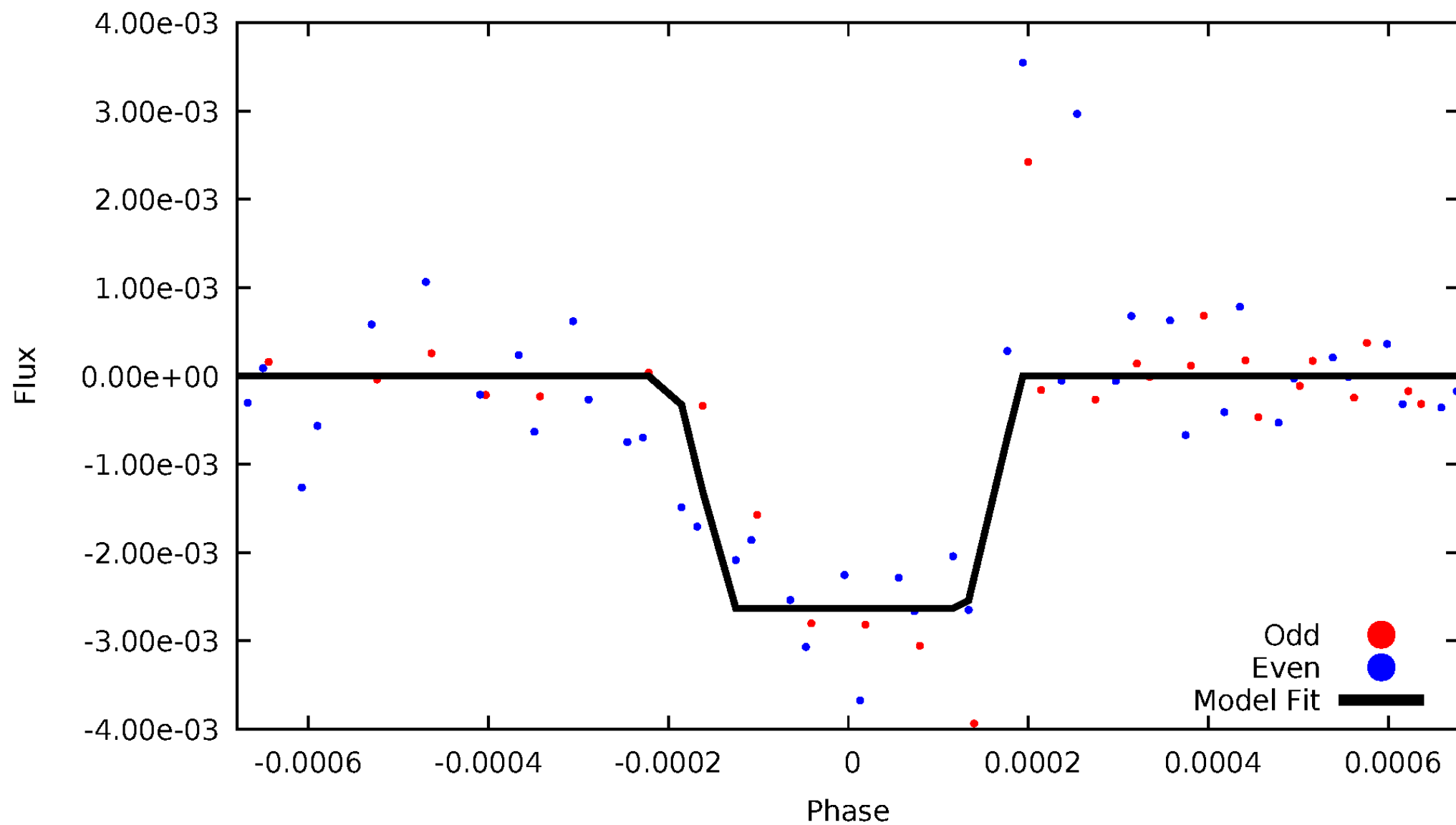
# DV Odd/Even

TCE 005779615-01



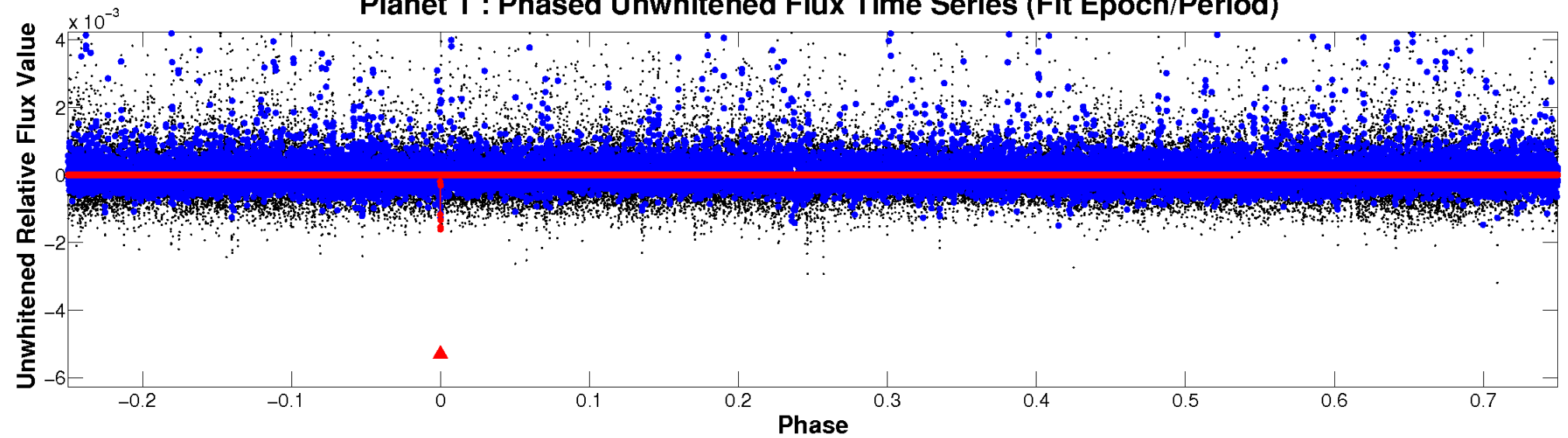
# ALT Odd/Even

TCE 005779615-01

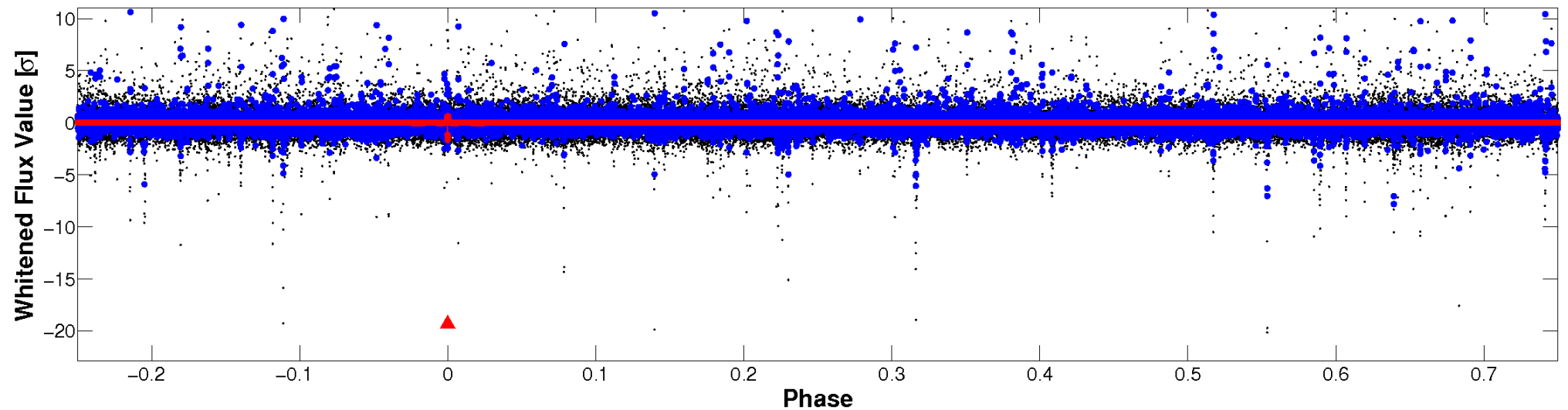


# Non-Whitened Vs. Whitened Light Curve

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

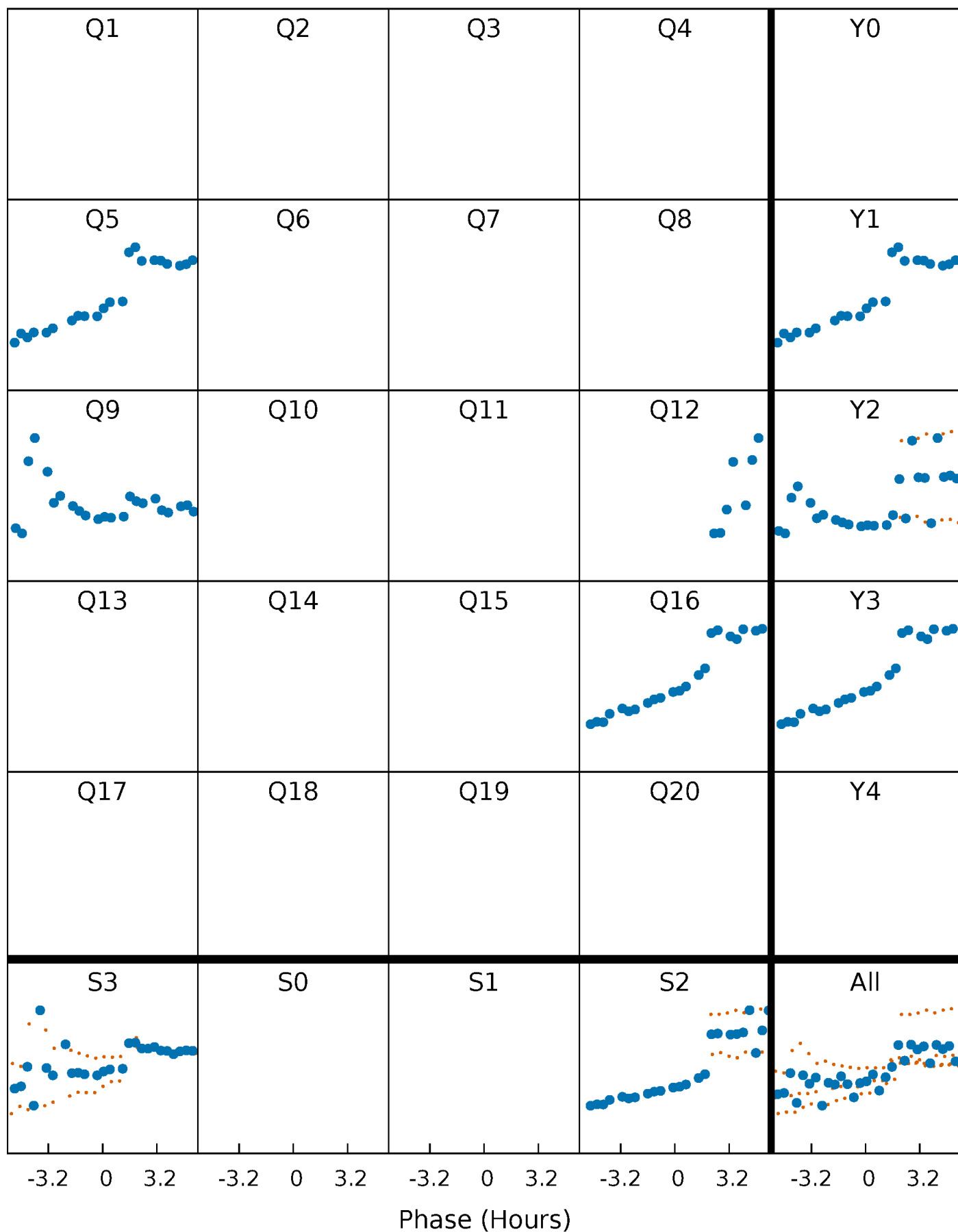


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

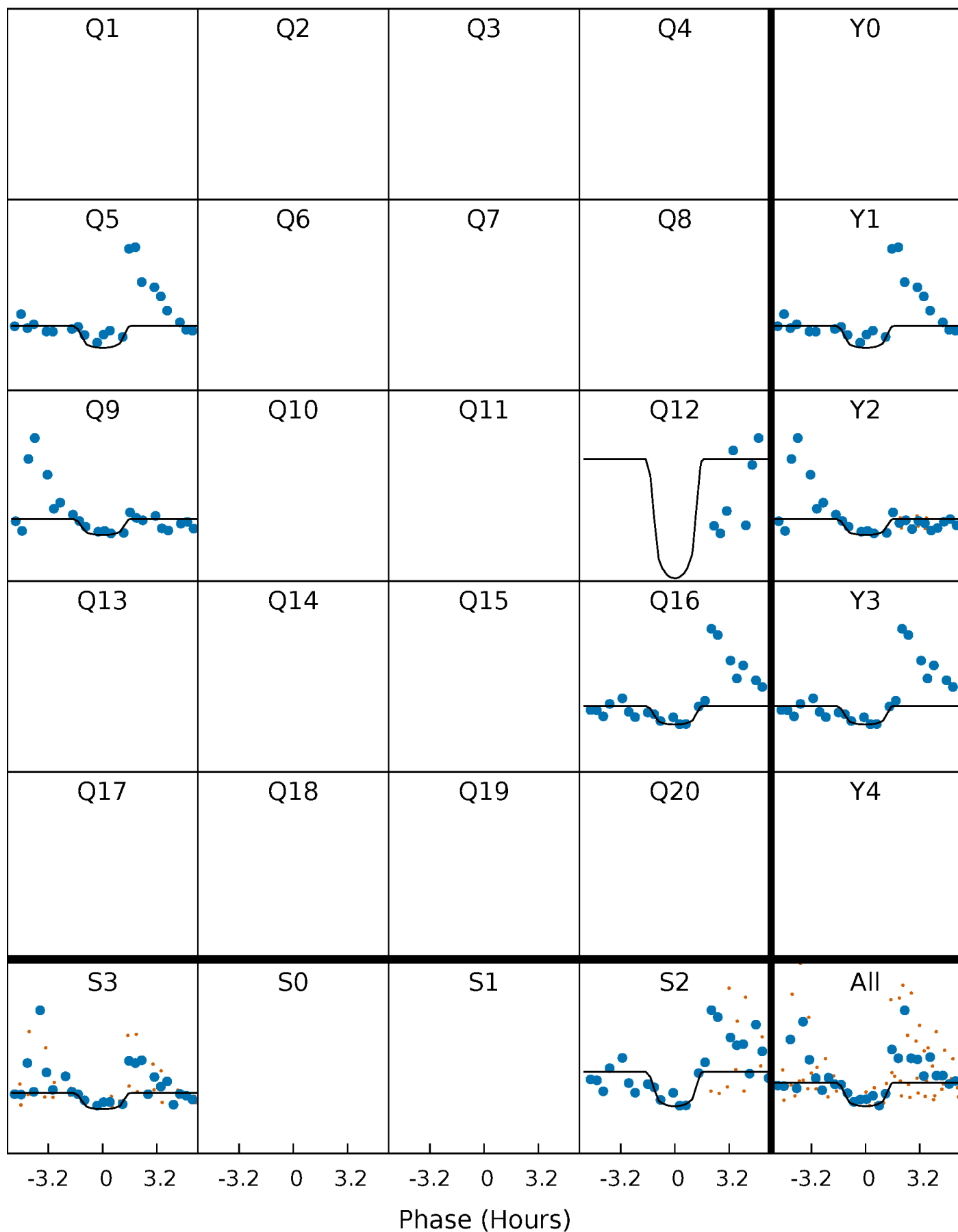
TCE 005779615-01 P=338.907608 Days  $T_0=148.250166$  (BKJD)





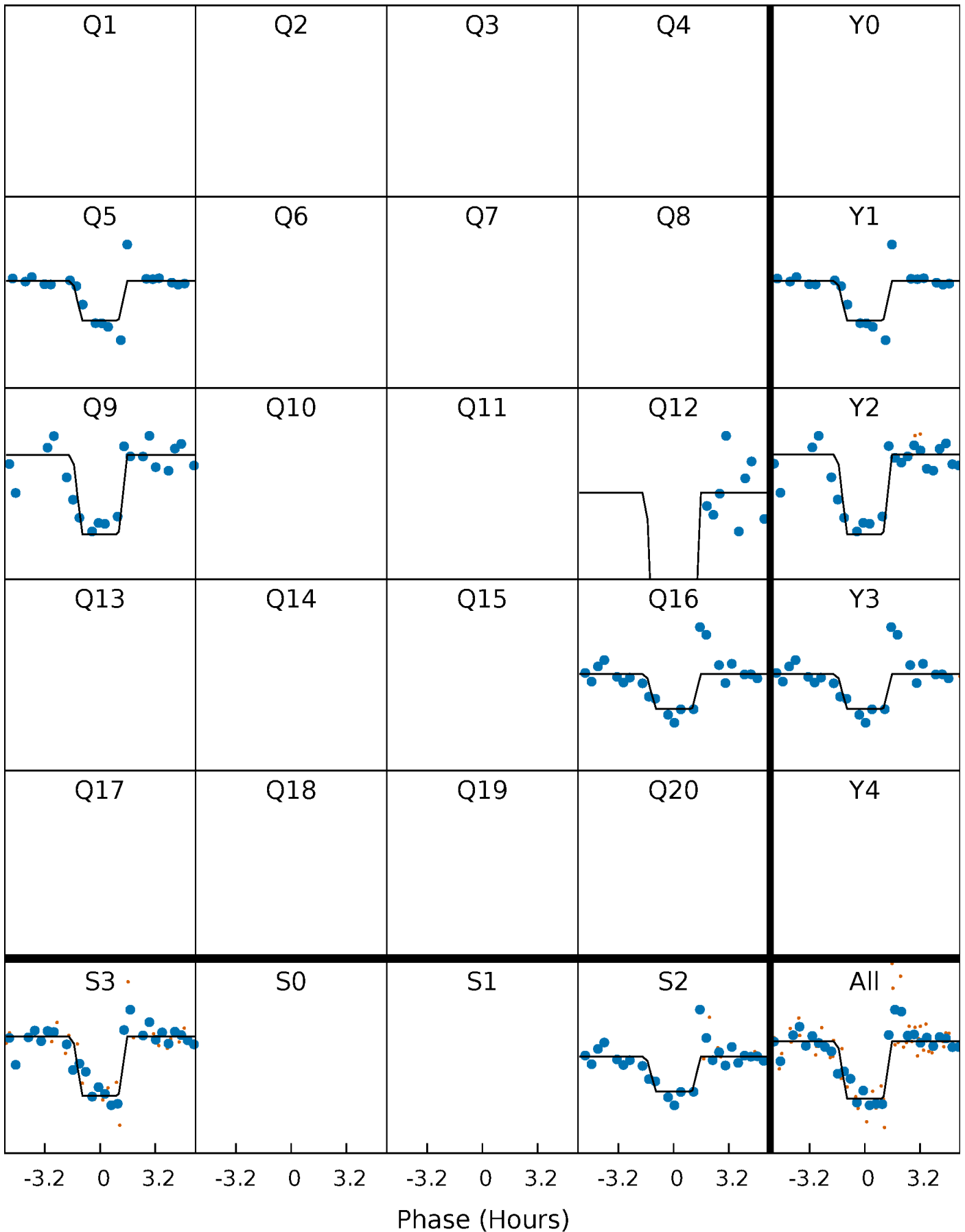
# DV Quarter-Phased Transit Curves

TCE 005779615-01 P=338.907608 Days  $T_0=148.250166$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

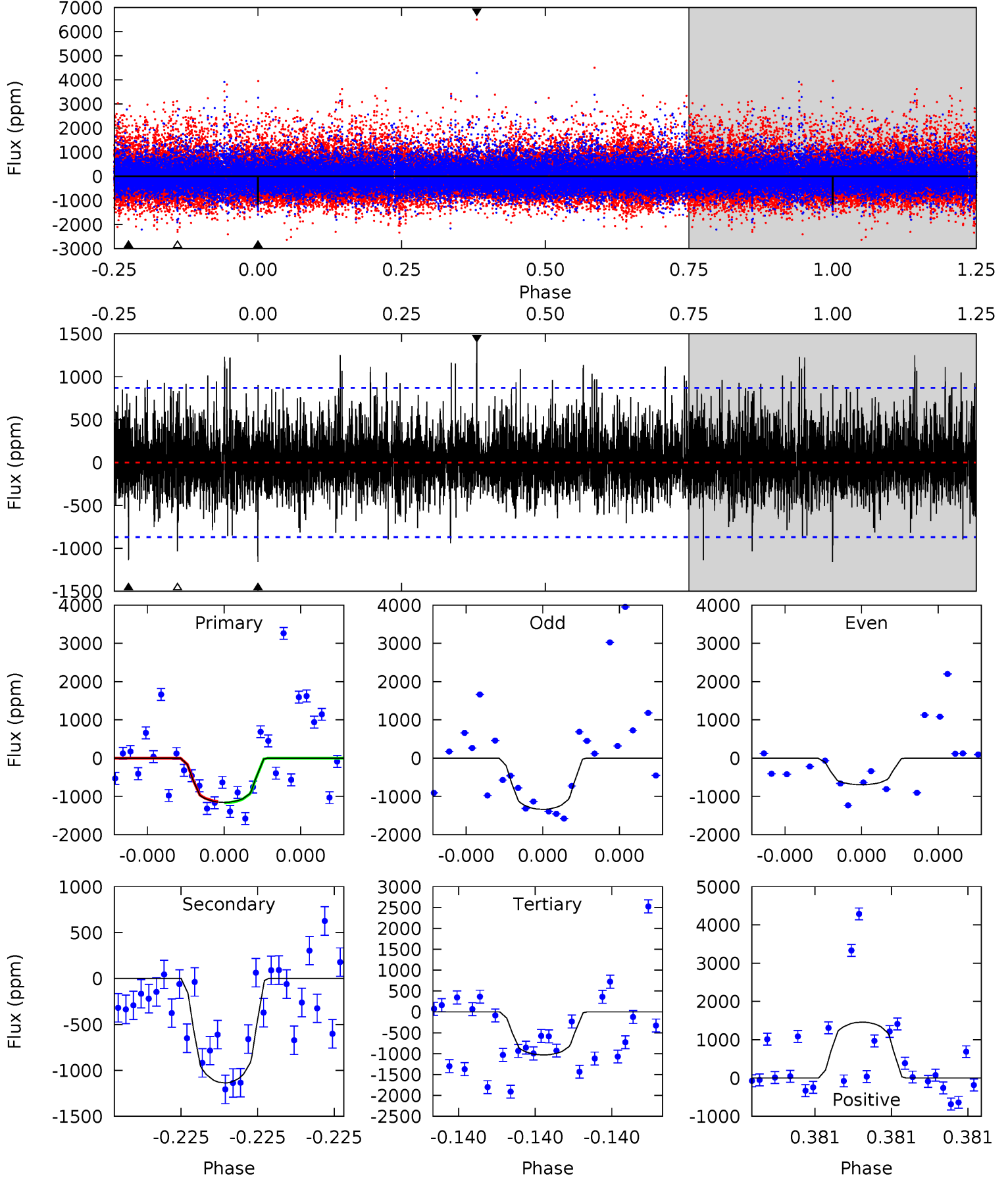
TCE 005779615-01 P=338.918181 Days  $T_0=148.234158$  (BKJD)



# DV Model-Shift Uniqueness Test

005779615-01, P = 338.907608 Days, E = 148.250166 Days

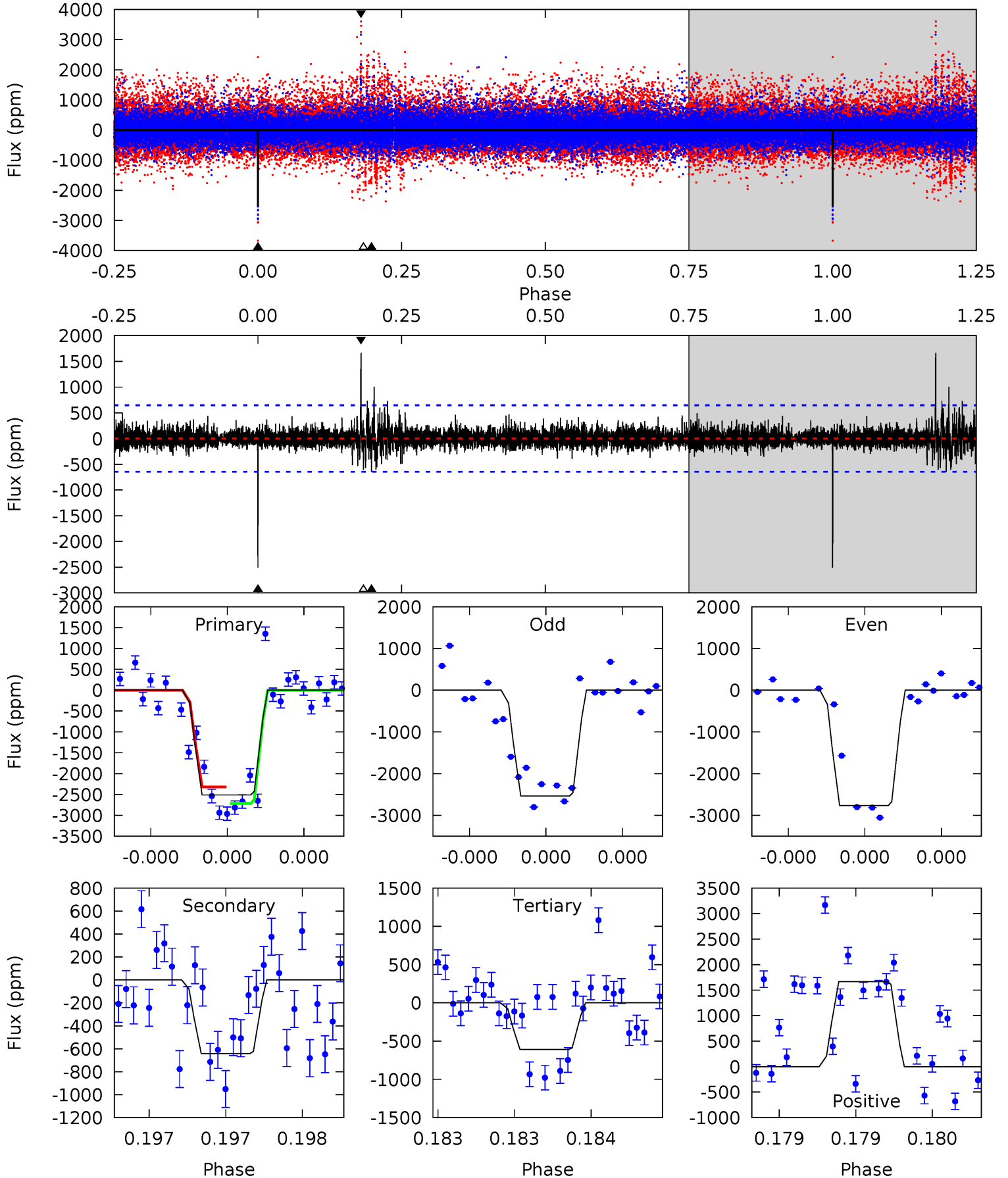
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	7.35	6.67	9.45	5.63	3.56	1.63	0.81	-1.97	0.68	-2.10	1.68	0.85	0.56	0.10



# Alt Model-Shift Uniqueness Test

005779615-01, P = 338.918181 Days, E = 148.234158 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	5.60	5.31	14.5	5.62	3.55	1.03	16.5	7.35	0.29	-8.91	0.78	0.94	0.40	1.73



### Stellar Parameters For KIC 005779615

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$3844^{+69}_{-69}$	$4.721^{+0.033}_{-0.018}$	$-0.100^{+0.100}_{-0.100}$	$0.526^{+0.023}_{-0.031}$	$0.531^{+0.027}_{-0.027}$	$5.130^{+0.757}_{-0.396}$
	+2%/-2%	+1%/-0%	+100%/-100%	+4%/-6%	+5%/-5%	+15%/-8%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005779615-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1137 \pm 155$	$3.47^{+2.73}_{-2.33}$	$195^{+4}_{-4}$	$3190^{+1480}_{-474}$	$30630^{+262217}_{-21033}$
Alt.	$-643 \pm 115$	$3.92^{+3.07}_{-2.56}$	$195^{+4}_{-4}$	$2844^{+1100}_{-396}$	$13433^{+100338}_{-9293}$

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

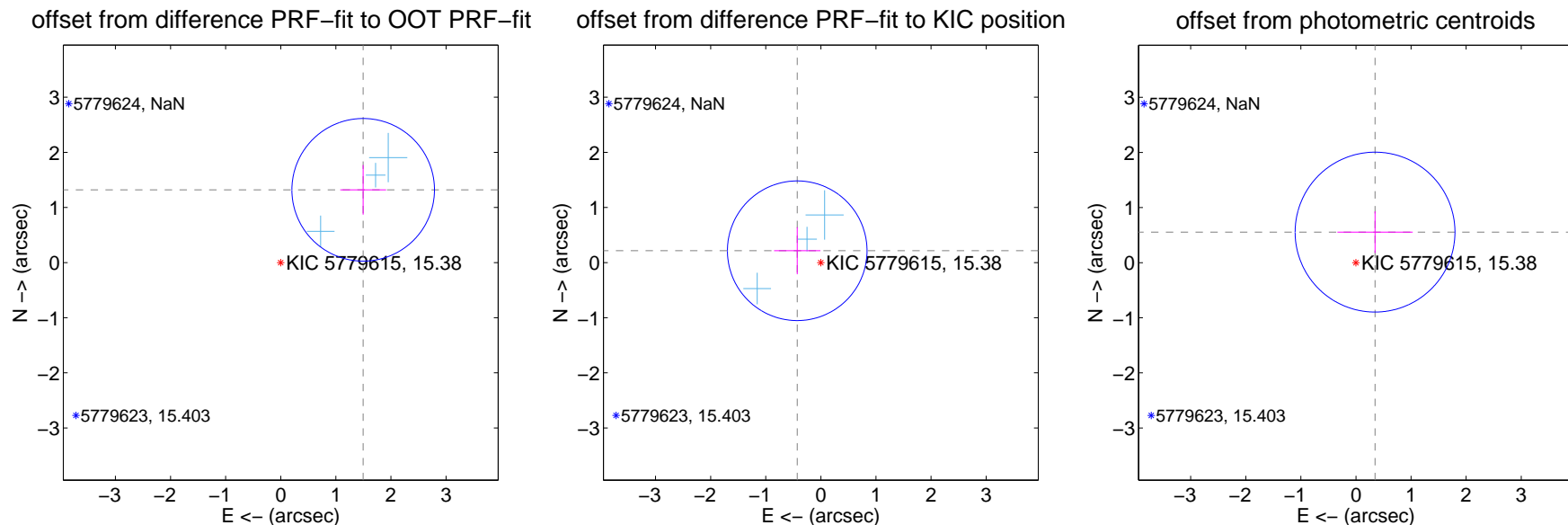
## DV Centroid Data

Supplemental centroid analysis for 005779615-01. Kepler magnitude: 15.38. Transit SNR 6.10

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.29 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.995 \pm 0.431$	$4.63$	$-1.496 \pm 0.416$	$1.320 \pm 0.450$
PRF-fit source offset from KIC position	$0.480 \pm 0.422$	1.14	$0.429 \pm 0.421$	$0.215 \pm 0.428$
photometric centroid source offset	$0.65 \pm 0.48$	1.35	$-0.35 \pm 0.68$	$0.55 \pm 0.38$

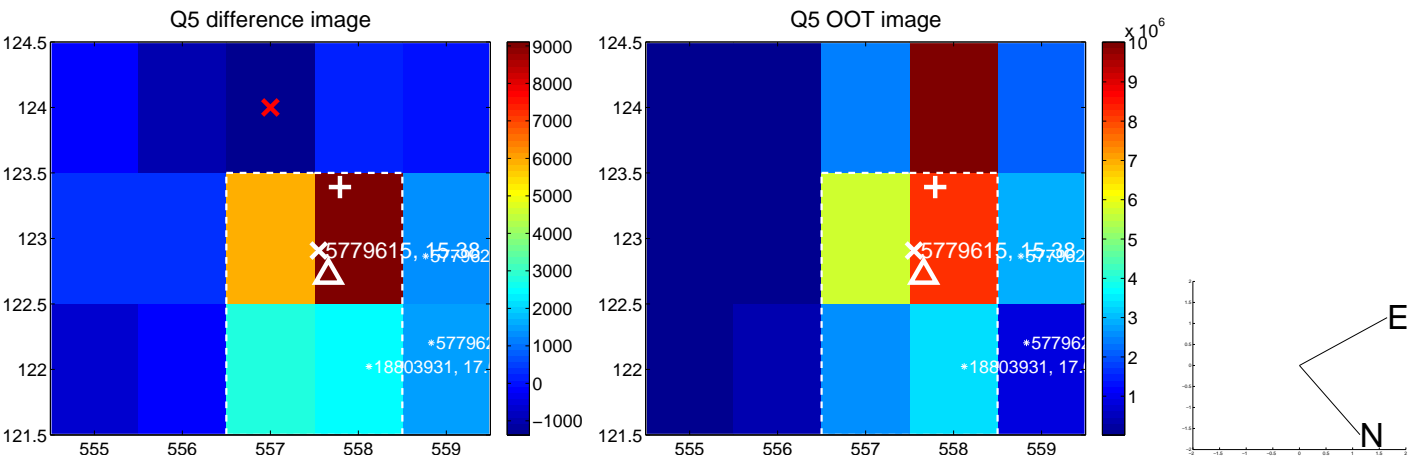


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

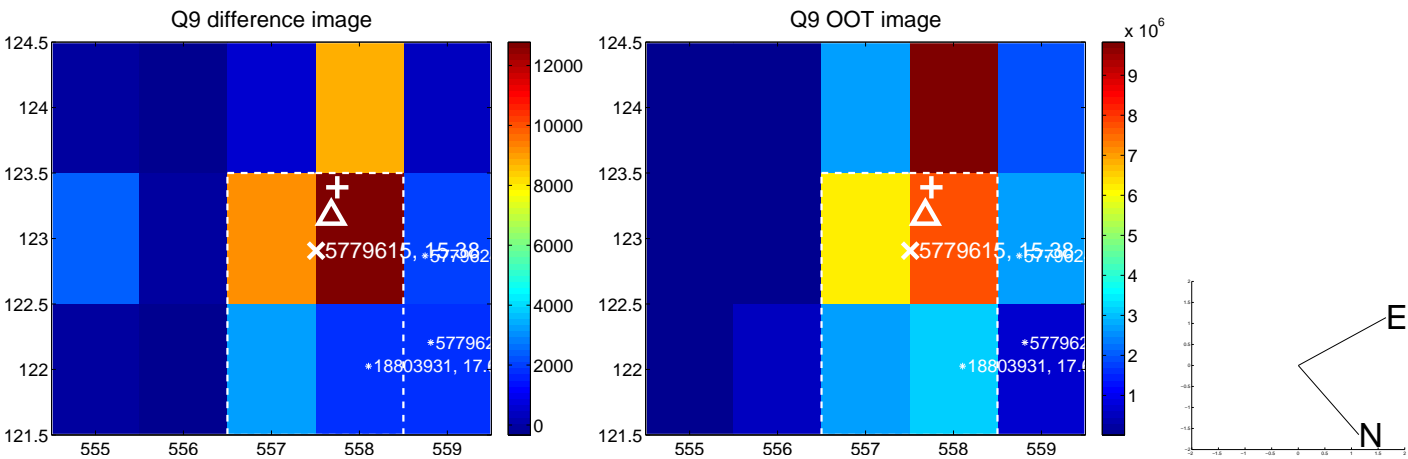


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

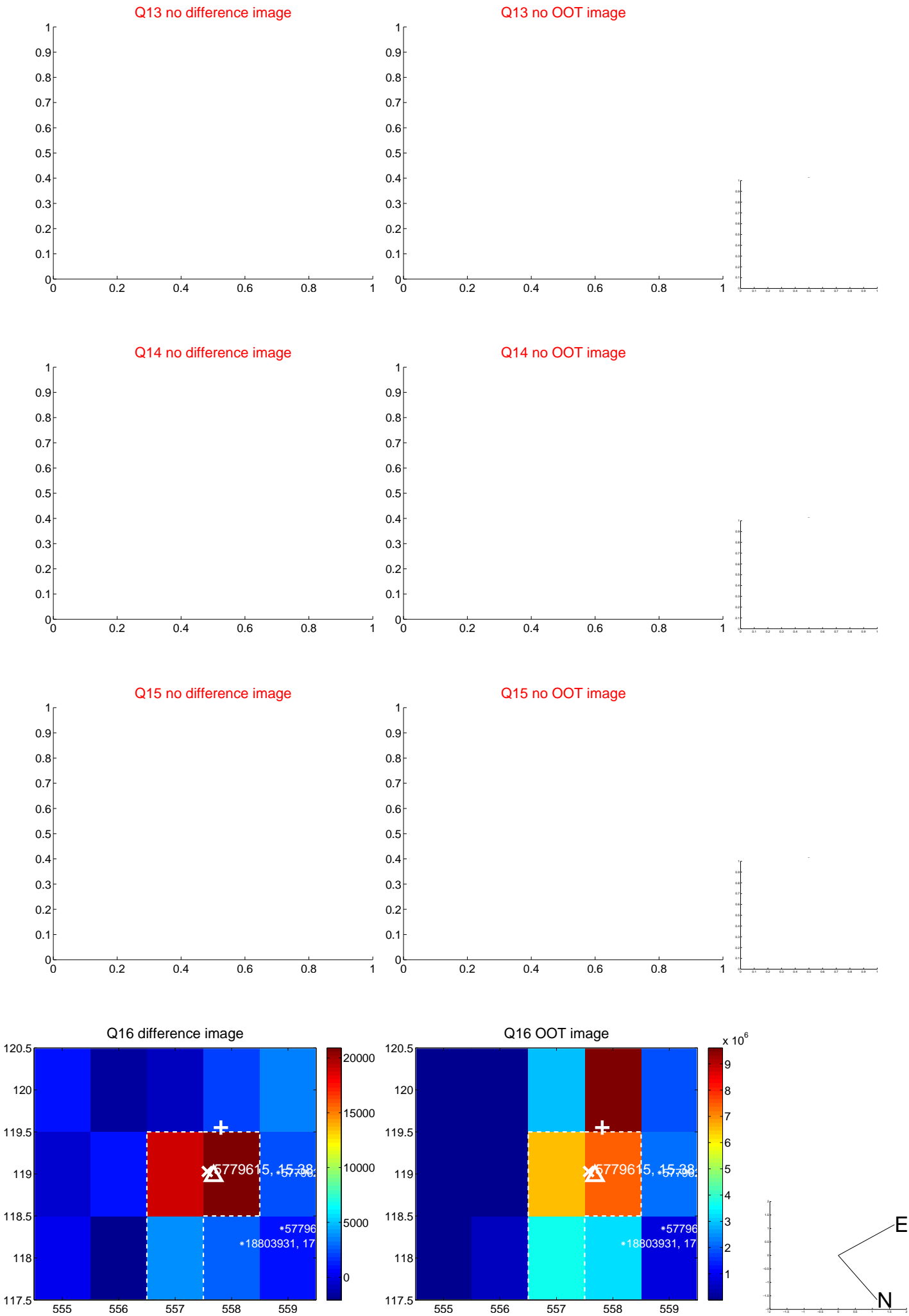




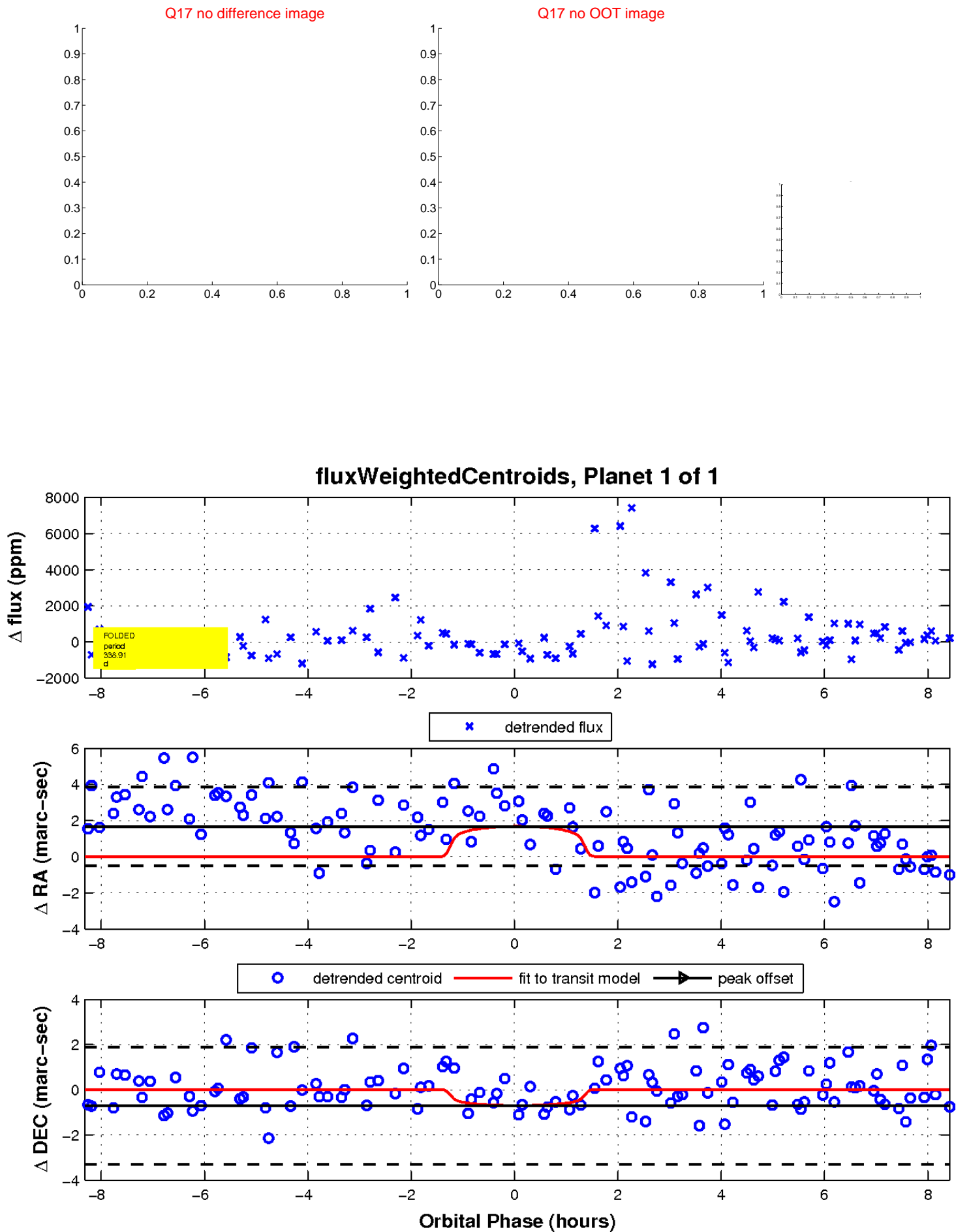
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: 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

