

# KIC 006679295

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006679295-01	OBS	2862.01	24.575286	144.181156	1090.4	2.281	12.9	14.9	0.51	3678	1.85	2.36

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006679295-01	OBS	PC	0.99	0	0	0	0	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.

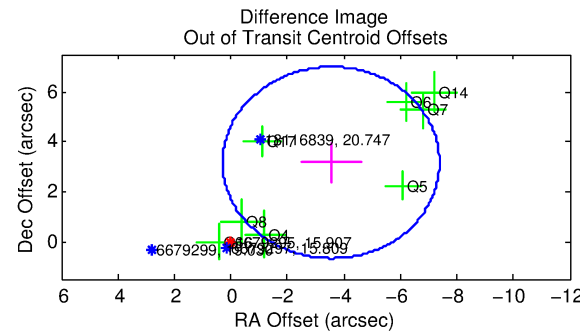
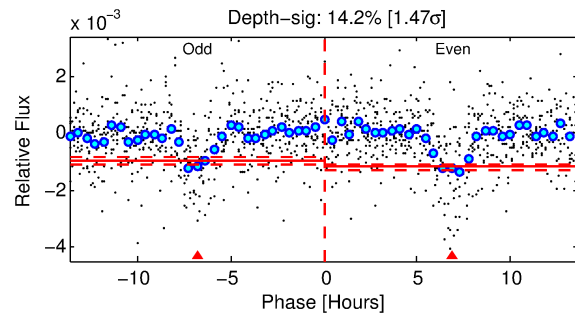
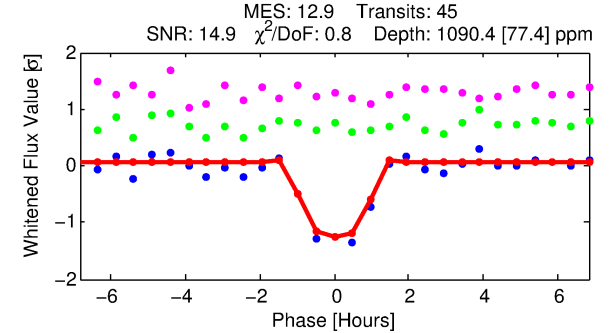
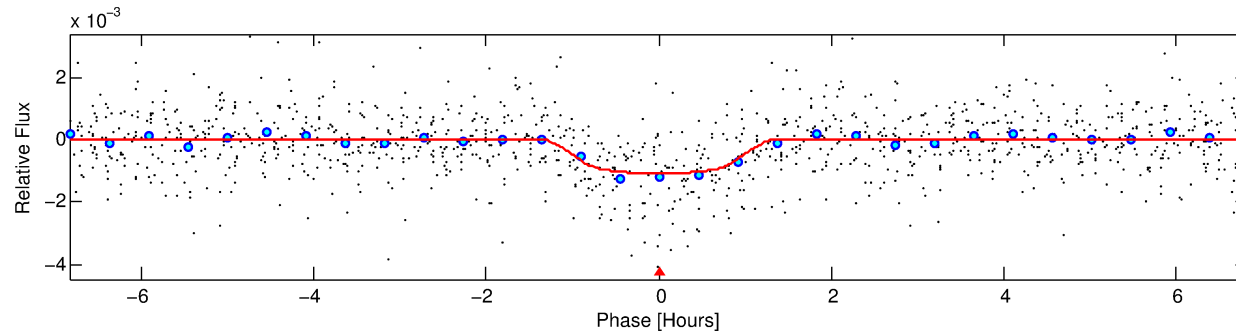
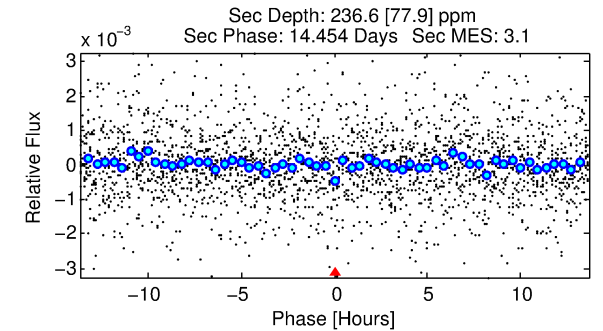
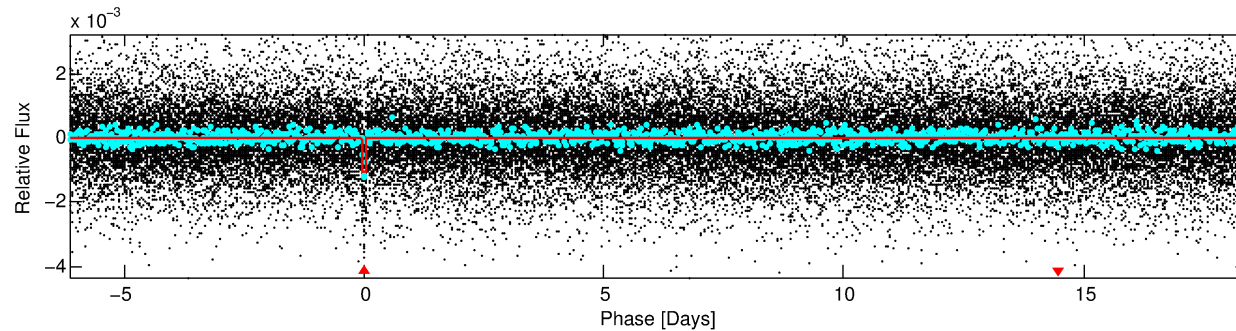
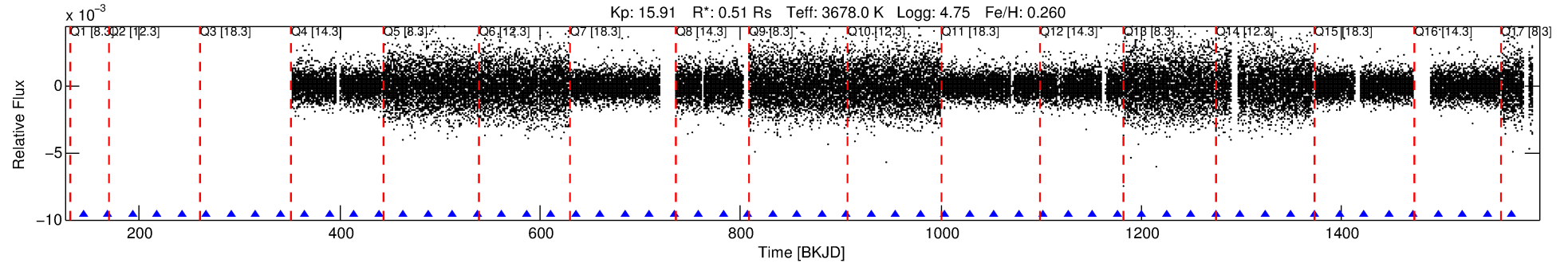
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006679295-01

No Significant Match Found

# DV One-Page Summary

KIC: 6679295 Candidate: 1 of 1 Period: 24.575 d  
KOI: K02862.01 Corr: 0.989



## DV Fit Results:

Period = 24.57529 [0.00013] d  
Epoch = 144.1812 [0.0049] BKJD  
Rp/R\* = 0.0330 [0.0235]  
a/R\* = 58.01 [156.00]  
b = 0.76 [1.56]  
Seff = 2.36 [0.26]  
Teq = 316 [9] K  
Rp = 1.85 [1.32] Re  
a = 0.1351 [0.0070] AU  
Ag = 696.76 [1017.08] [0.68σ]  
Teffp = 2509 [916] K [2.39σ]

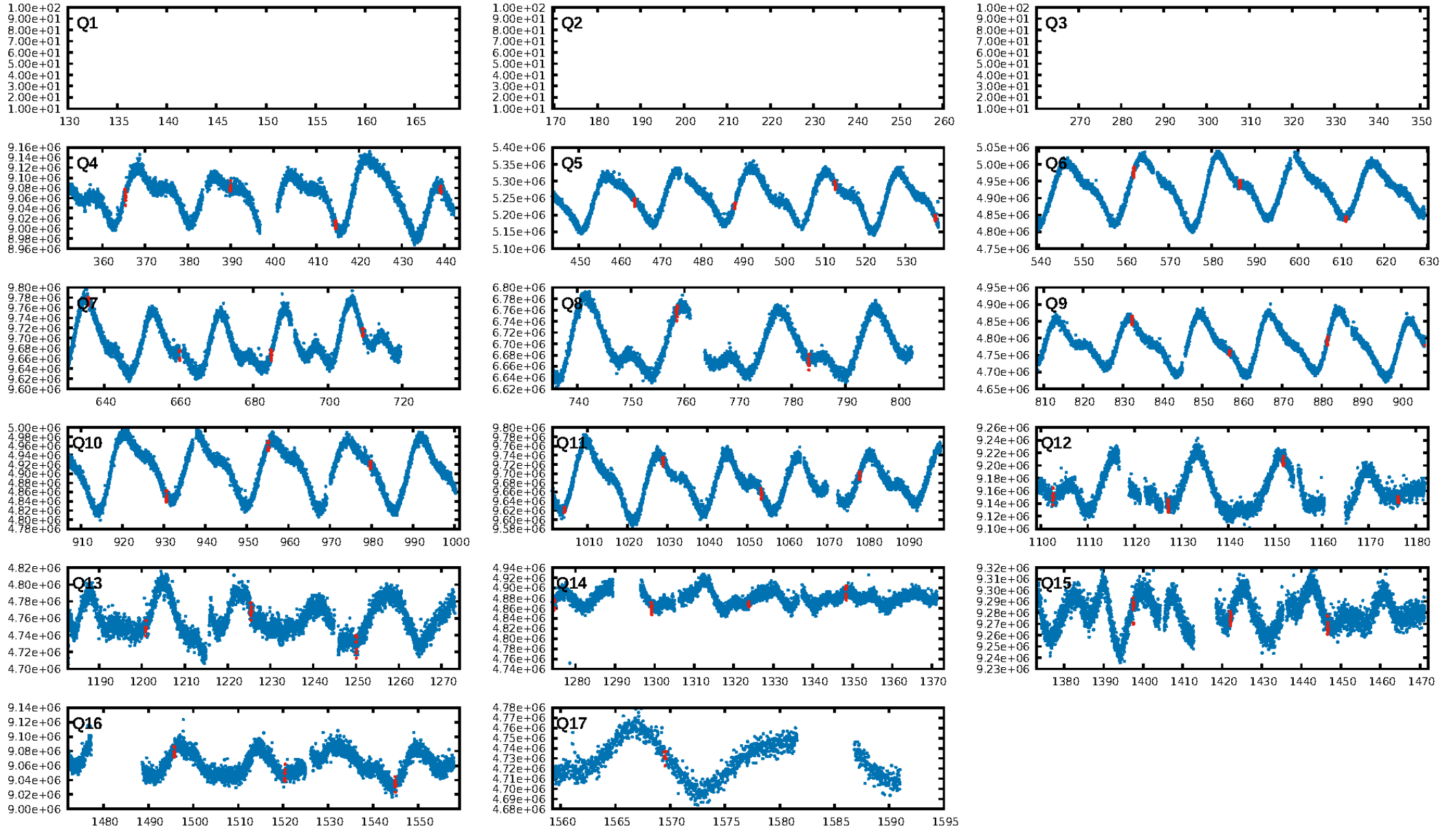
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 33.8%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 7.03e-37  
RollingBand-fgt: 1.00 [44/44]  
GhostDiagnostic-chr: 3.636  
Centroid-sig: 0.0%  
Centroid-so: 2.360 arcsec [3.40σ]  
OotOffset-rm: 4.753 arcsec [3.72σ]  
KicOffset-rm: 0.861 arcsec [1.08σ]  
OotOffset-st: 2/1/3/2 [8]  
KicOffset-st: 2/1/3/2 [8]  
DiffImageQuality-fgm: 0.62 [5/8]  
DiffImageOverlap-fno: 1.00 [14/14]

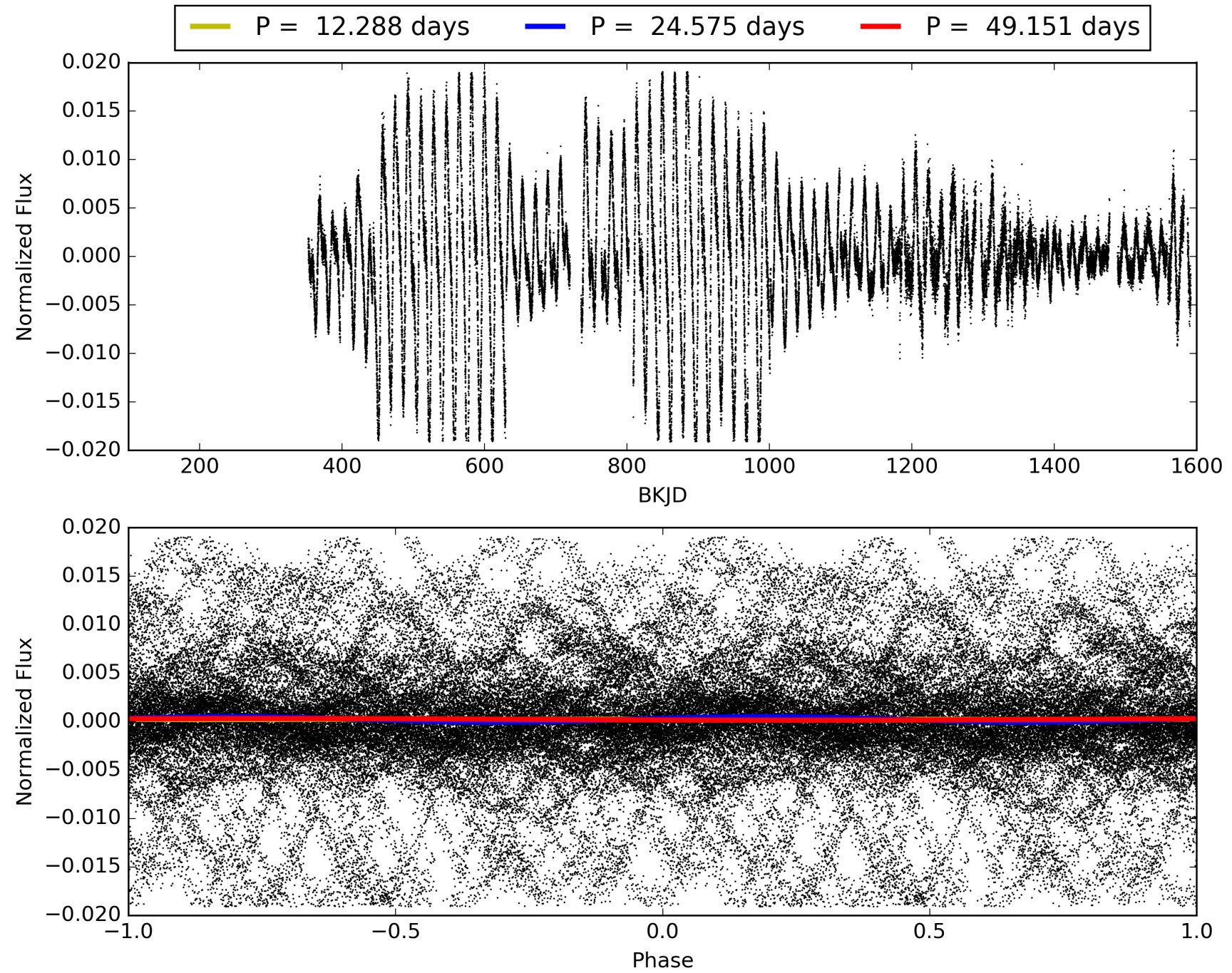
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:01:53 Z

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

# TCE 006679295-01, PDC Light Curves

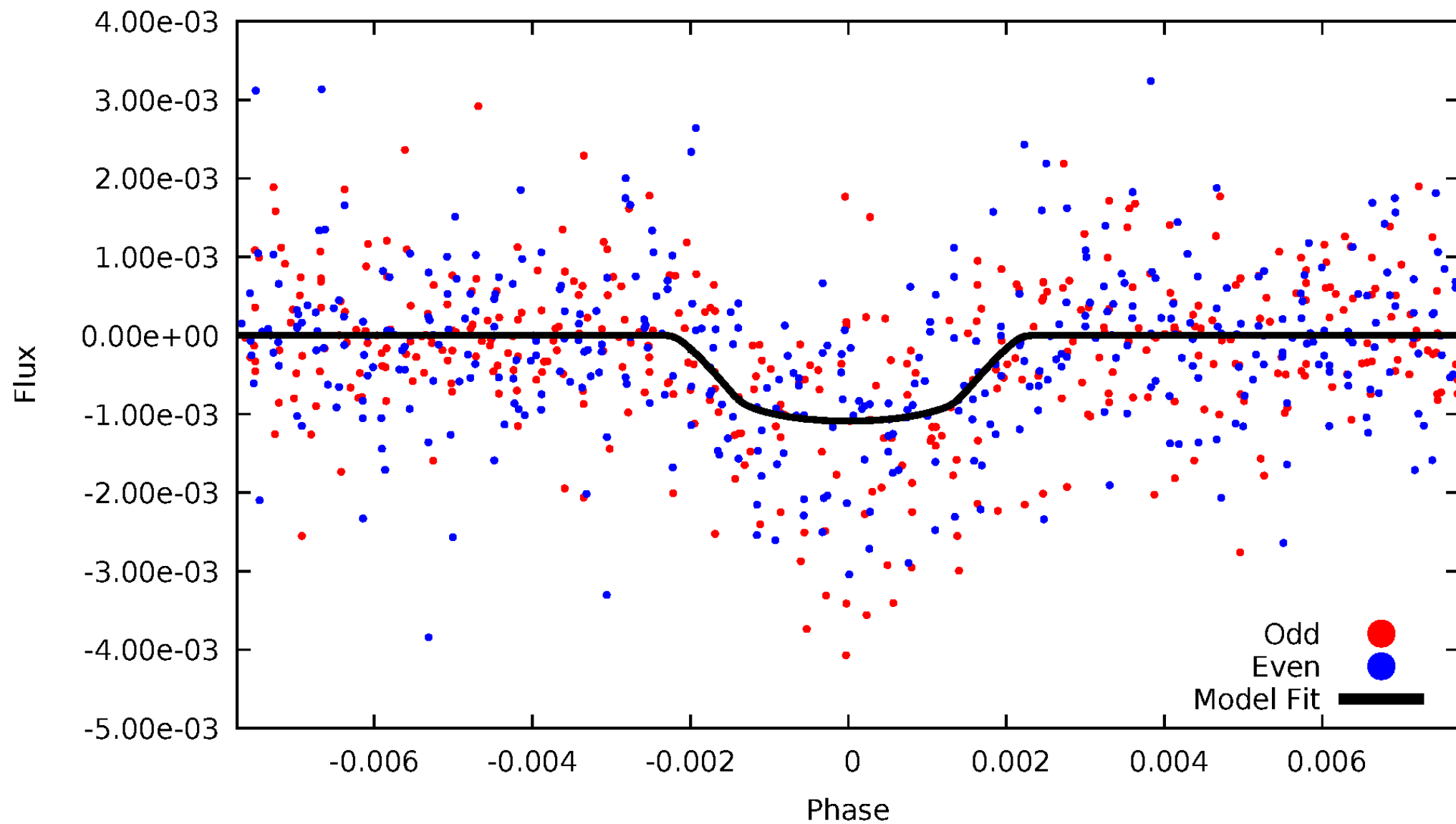


TCE 006679295-01



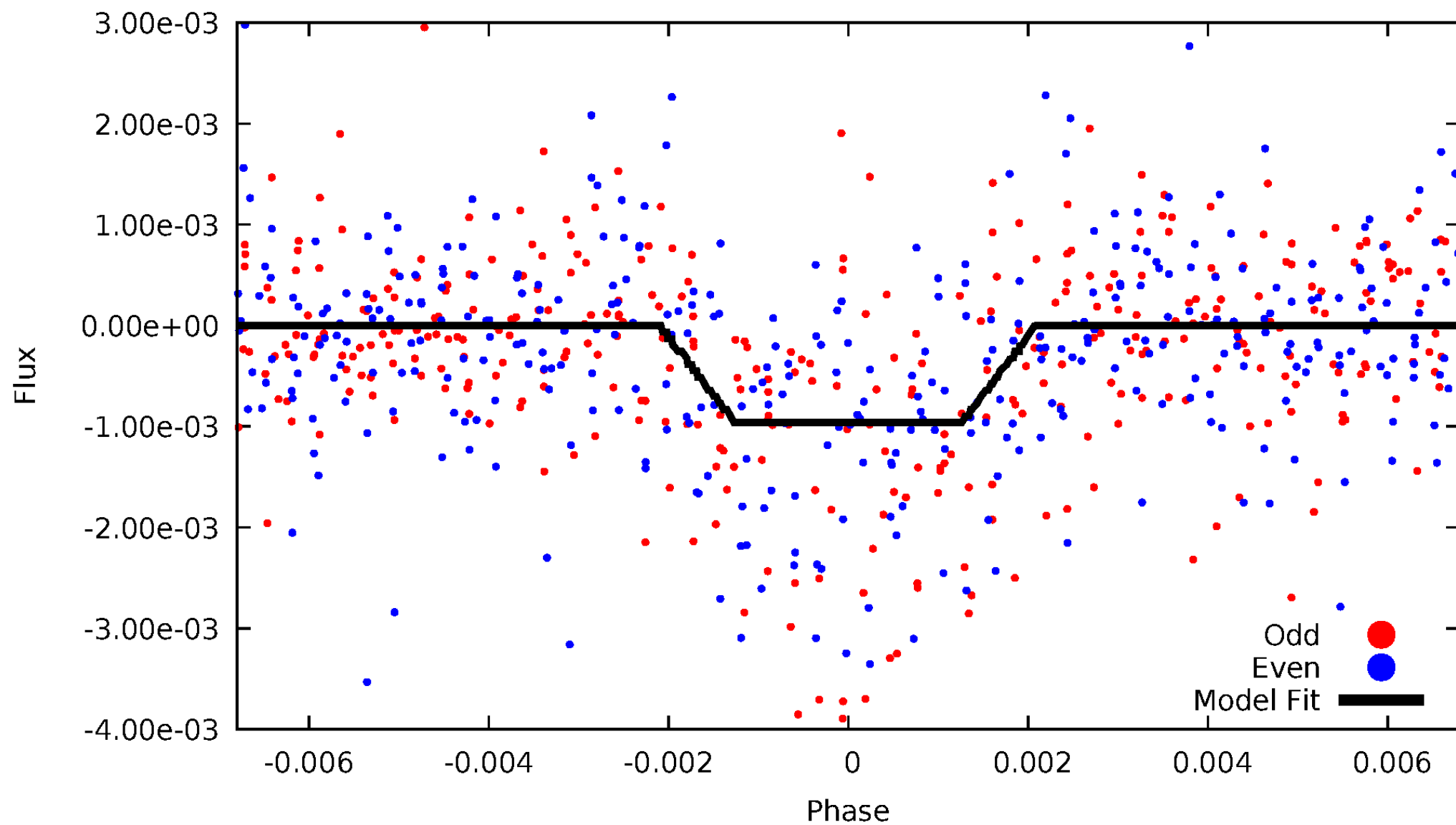
# DV Odd/Even

TCE 006679295-01



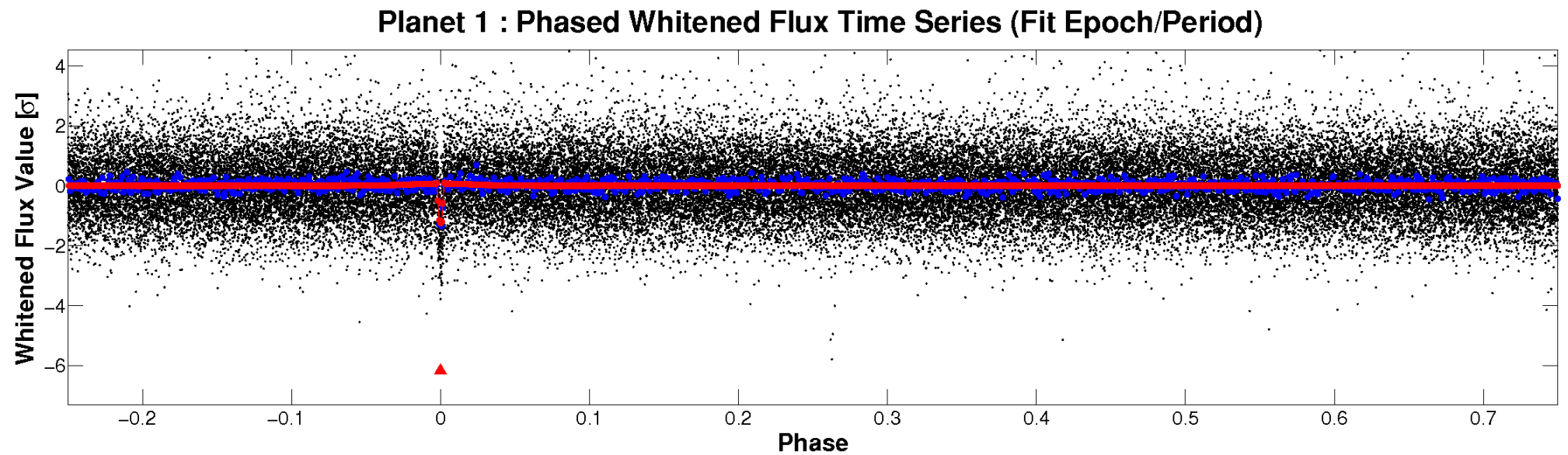
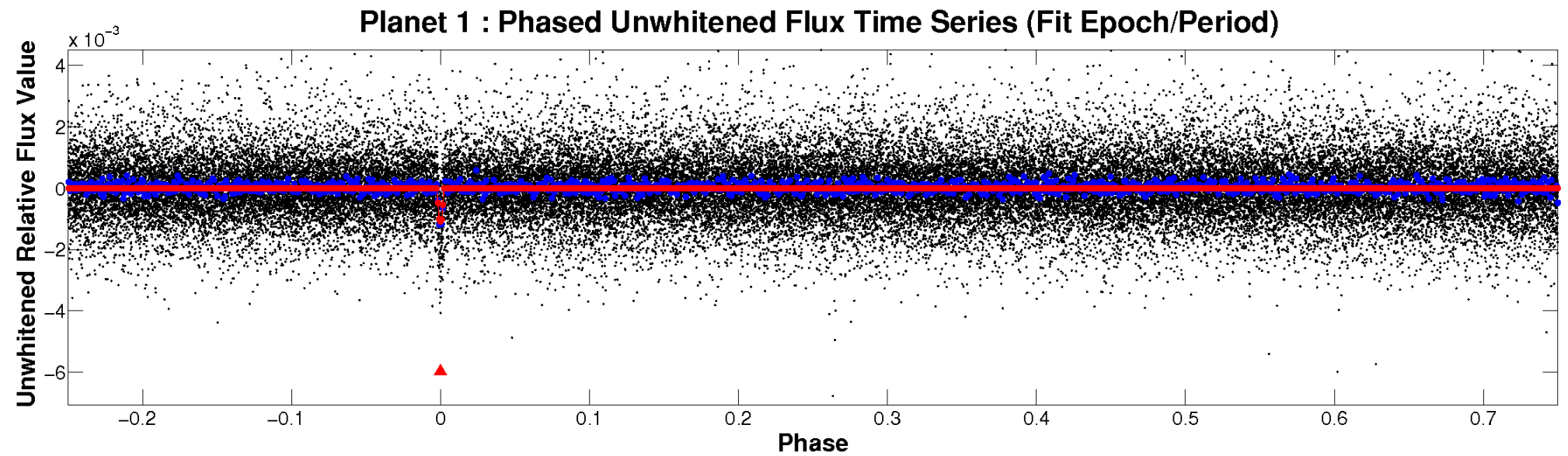
# ALT Odd/Even

TCE 006679295-01



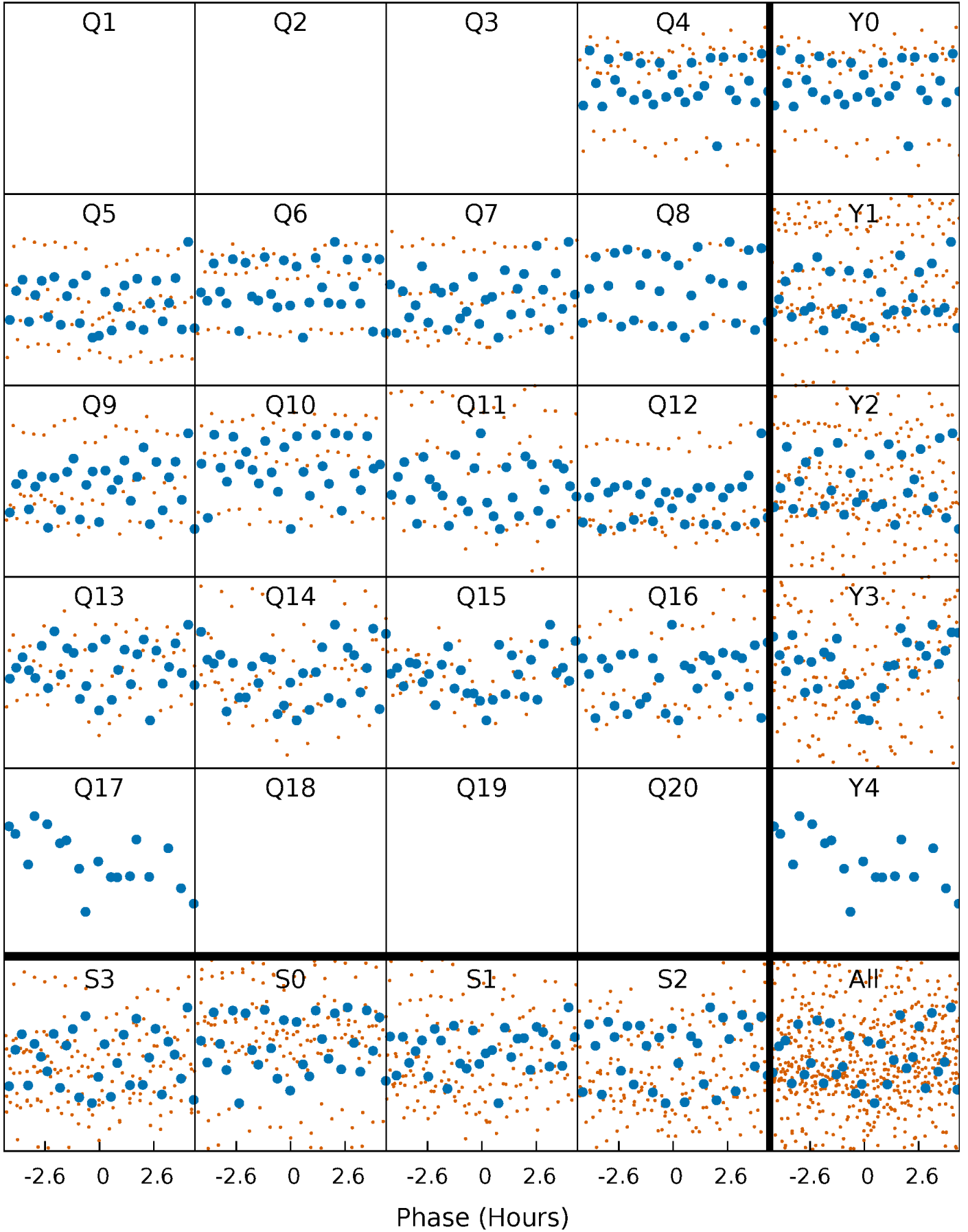


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

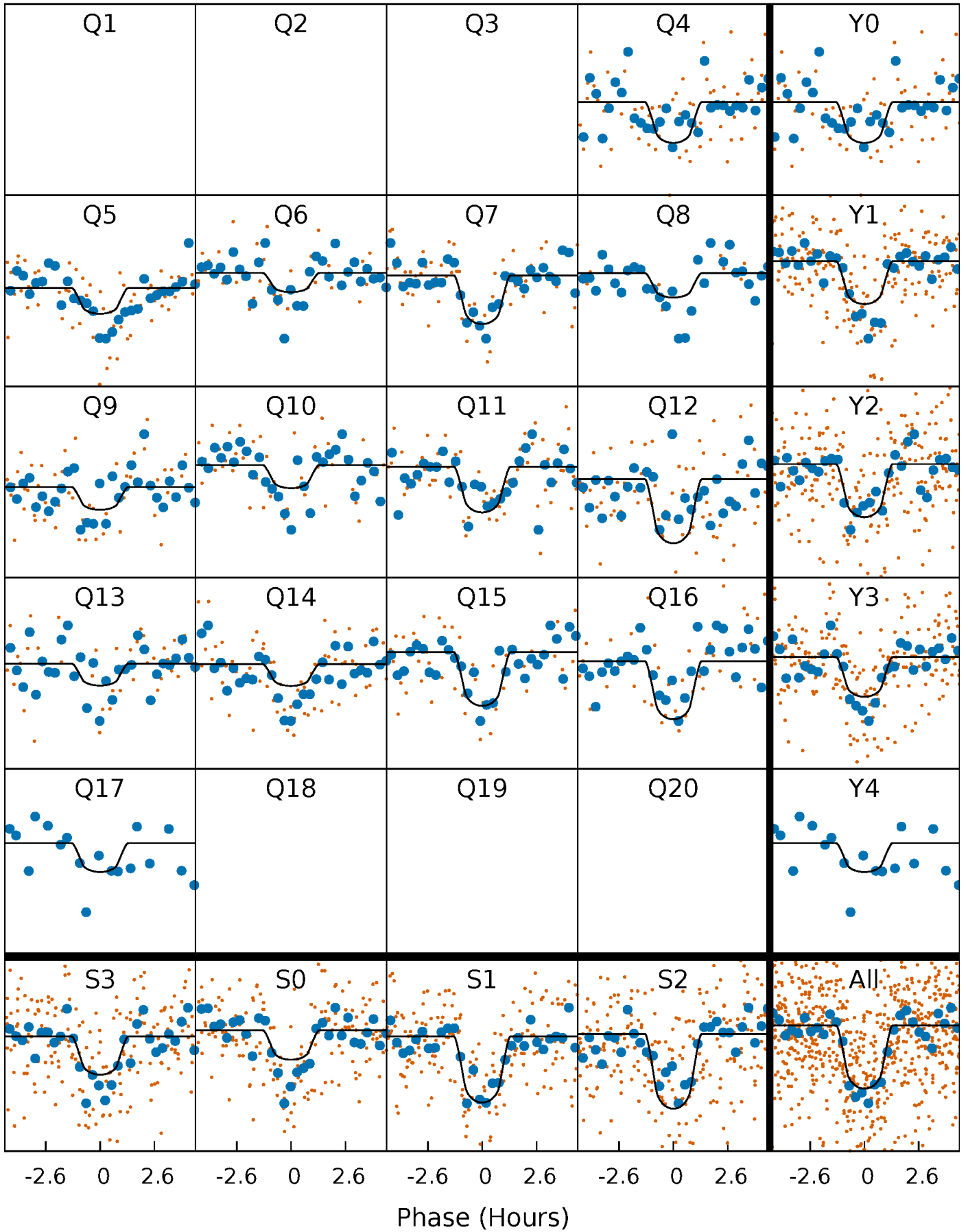
TCE 006679295-01   P= 24.575286 Days    $T_0=144.181156$  (BKJD)





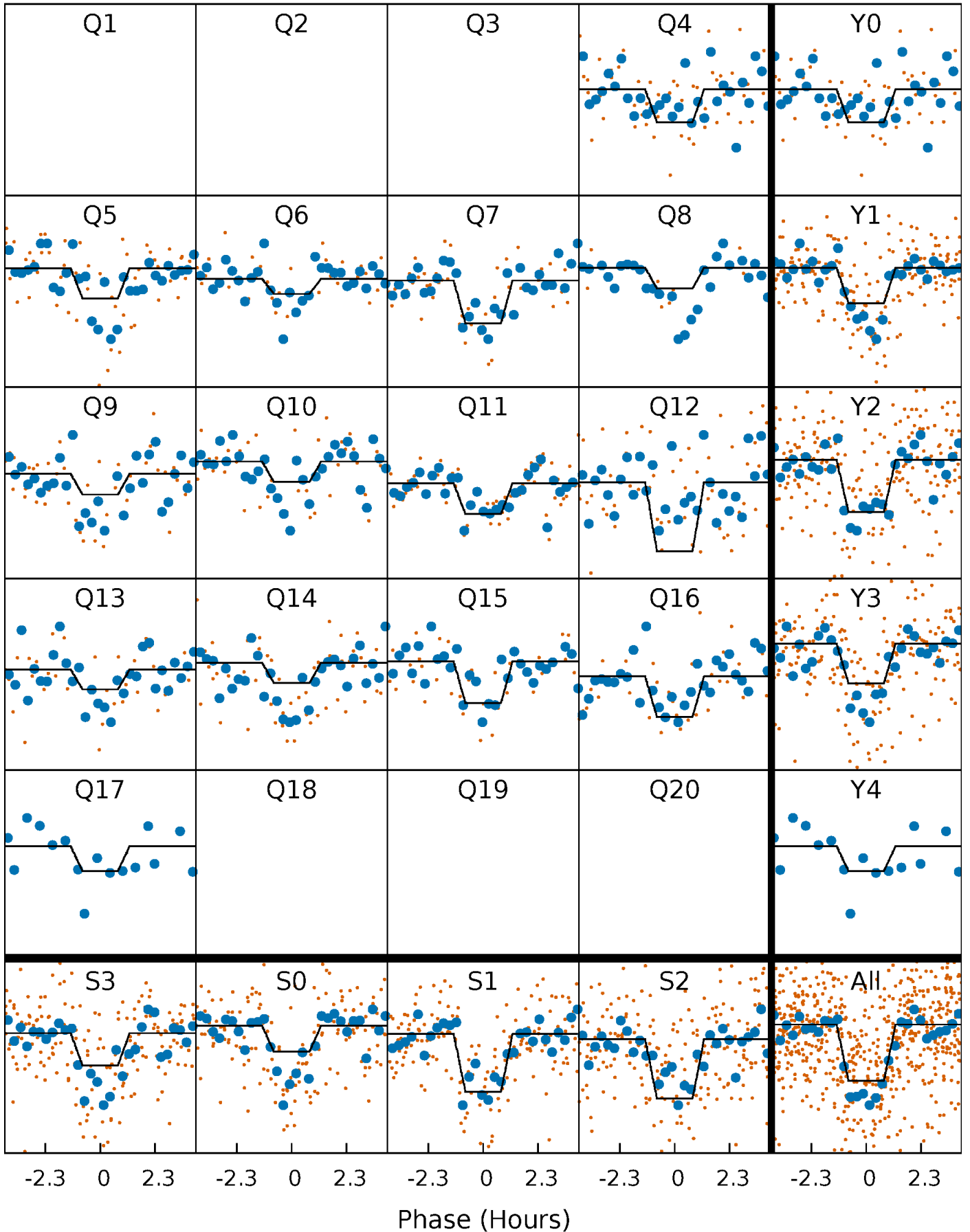
# DV Quarter-Phased Transit Curves

TCE 006679295-01 P= 24.575286 Days  $T_0=144.181156$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

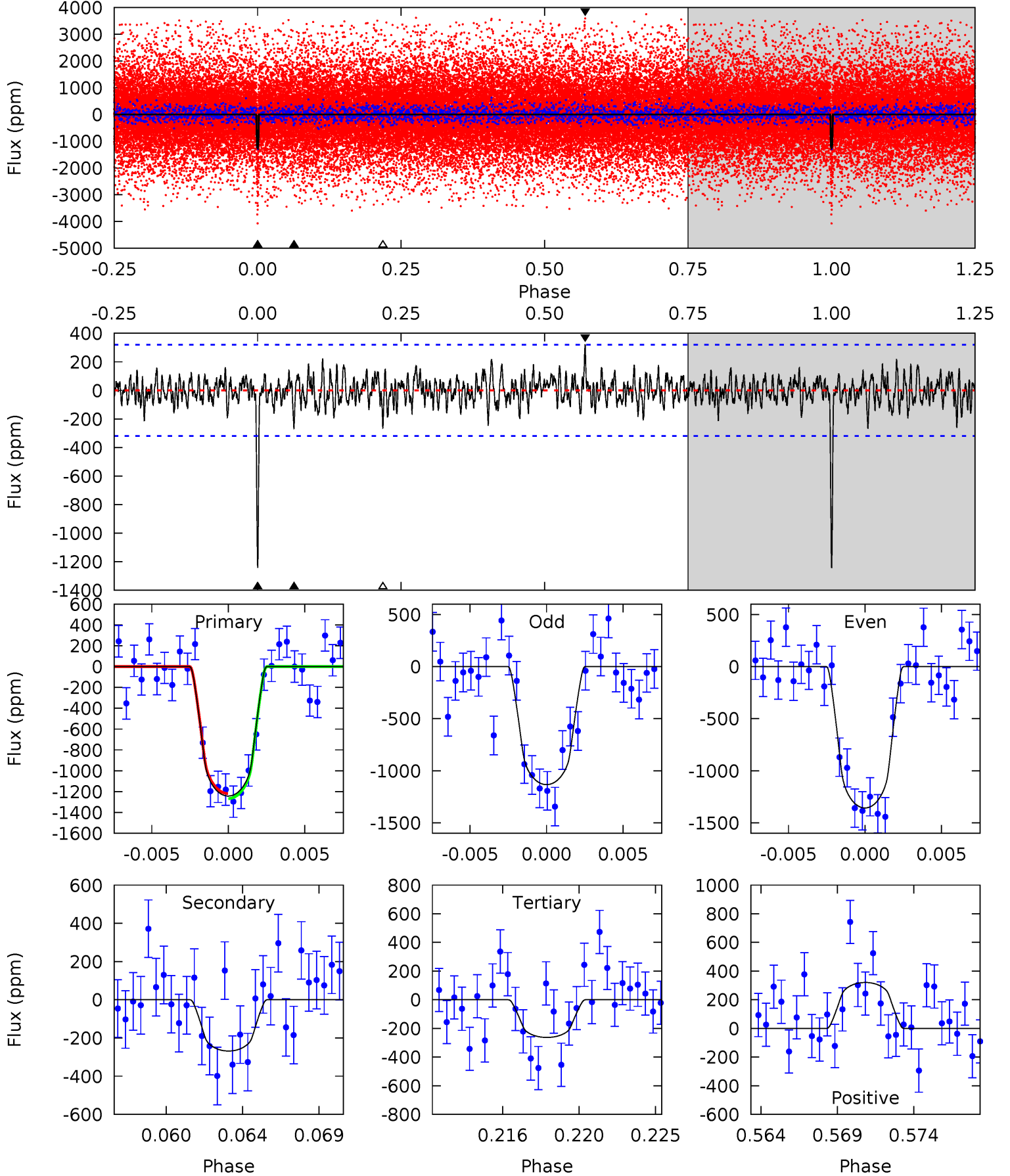
TCE 006679295-01 P= 24.575293 Days  $T_0=144.181796$  (BKJD)



# DV Model-Shift Uniqueness Test

006679295-01,  $P = 24.575286$  Days,  $E = 144.181156$  Days

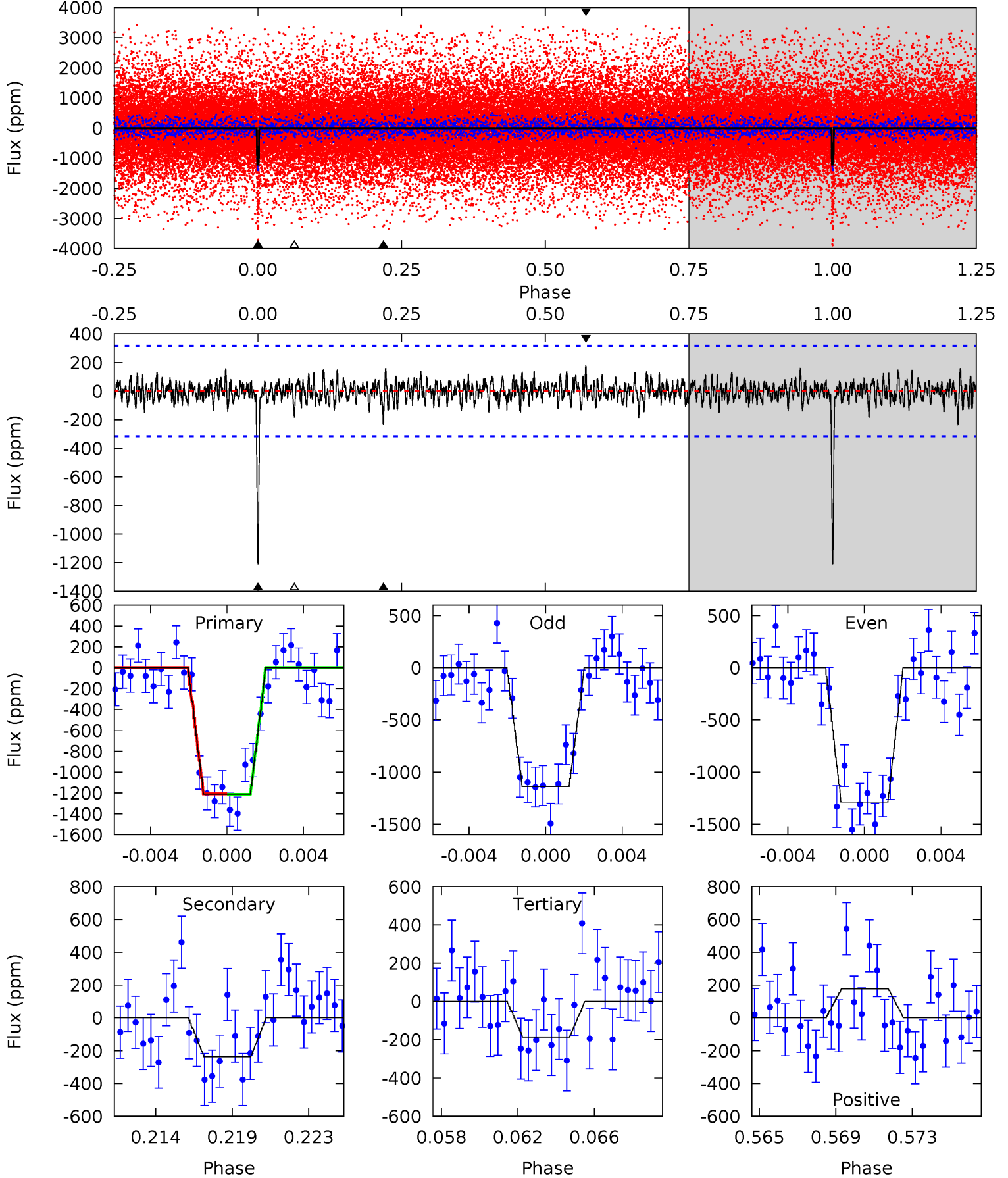
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	4.35	4.26	5.19	5.17	2.83	1.24	15.9	14.9	0.09	-0.85	1.83	1.12	0.21	0.39



# Alt Model-Shift Uniqueness Test

006679295-01,  $P = 24.575293$  Days,  $E = 144.181796$  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
19.9	3.88	3.05	2.90	5.19	2.87	0.89	16.8	17.0	0.83	0.99	1.24	1.23	0.13	0.03



### Stellar Parameters For KIC 006679295

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3678^{+73}_{-80}$	$4.755^{+0.028}_{-0.032}$	$0.260^{+0.150}_{-0.150}$	$0.512^{+0.029}_{-0.035}$	$0.545^{+0.024}_{-0.041}$	$5.709^{+0.841}_{-0.664}$
	+2%/-2%	+1%/-1%	+58%/-58%	+6%/-7%	+4%/-8%	+15%/-12%
Source	SPE70	PHO2	SPE70	DSEP		

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

### Secondary Eclipse Parameters for KIC 006679295-01 / KOI 2862.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-268 \pm 62$	$2.02^{+1.27}_{-1.12}$	$441^{+11}_{-11}$	$2883^{+834}_{-354}$	$637^{+2728}_{-402}$
Alt.	$-237 \pm 61$	$1.85^{+1.17}_{-1.11}$	$442^{+11}_{-11}$	$2898^{+902}_{-352}$	$673^{+3316}_{-429}$

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

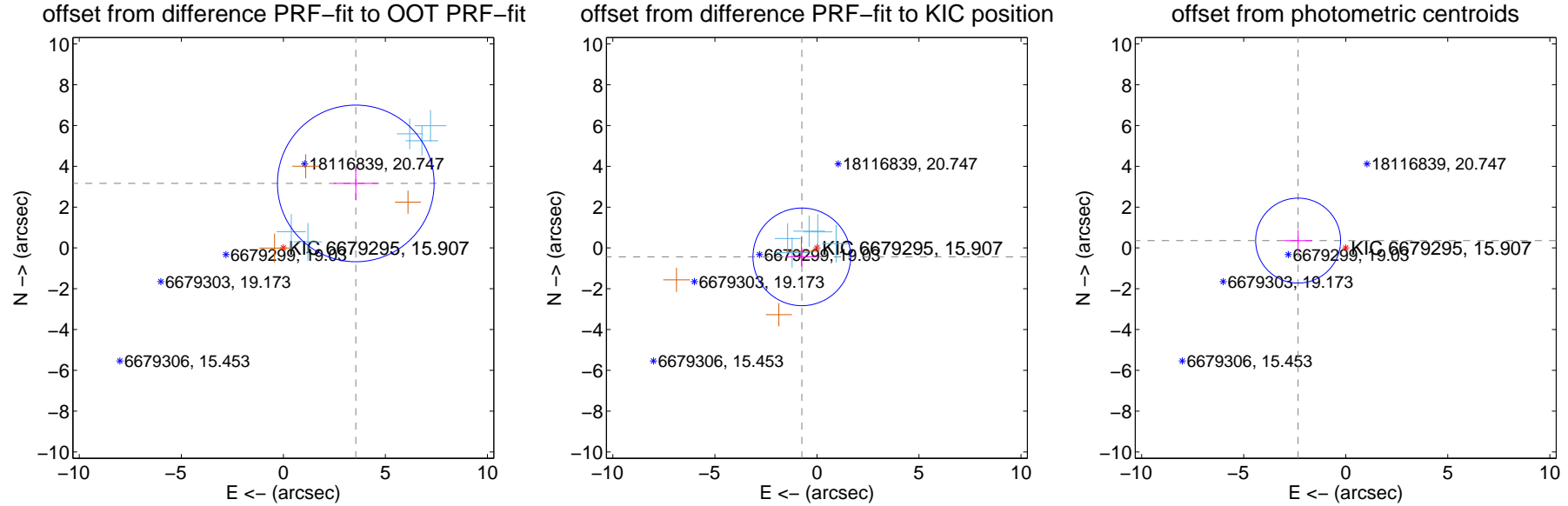
## DV Centroid Data

Supplemental centroid analysis for 006679295-01. Kepler magnitude: 15.91. Transit SNR 14.89

There are 5 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.73 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	$4.753 \pm 1.279$	$3.72$	$-3.548 \pm 1.075$	$3.162 \pm 0.810$
PRF-fit source offset from KIC position	$0.861 \pm 0.798$	$1.08$	$0.741 \pm 0.743$	$-0.437 \pm 0.470$
photometric centroid source offset	$2.36 \pm 0.69$	$3.40$	$2.33 \pm 0.70$	$0.36 \pm 0.51$



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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



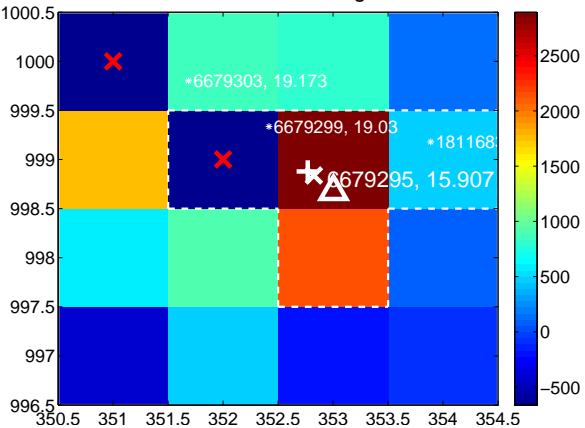
Q3 no difference image



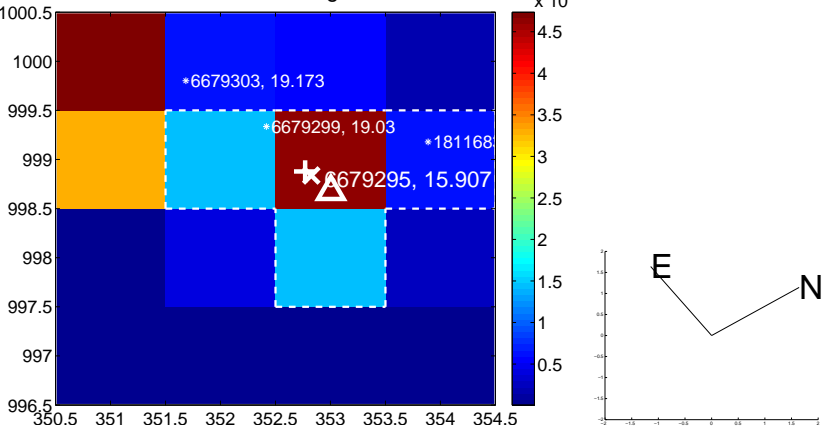
Q3 no OOT image



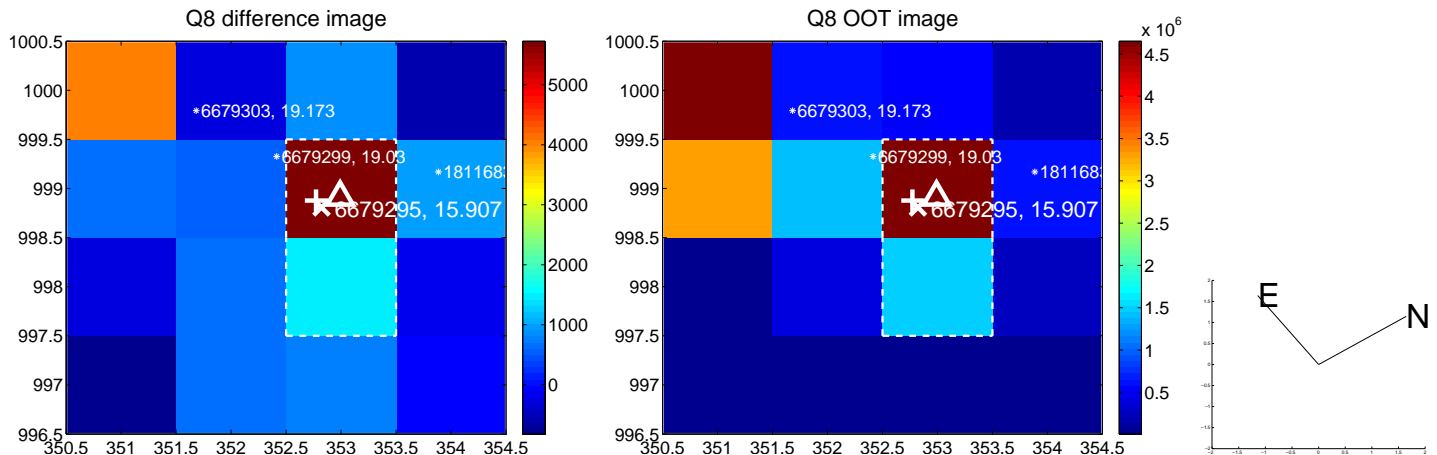
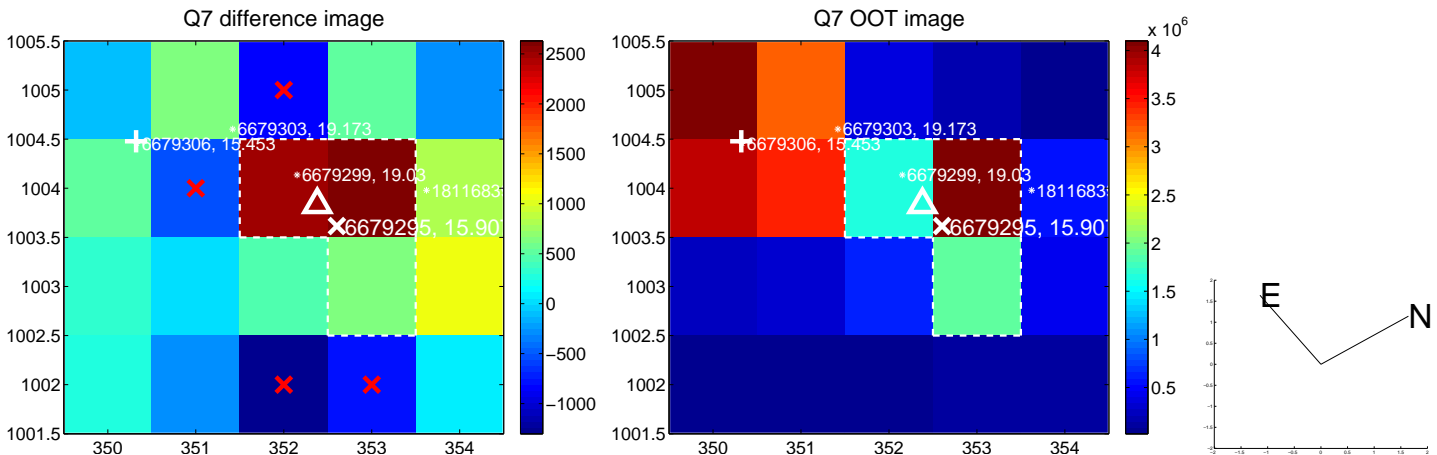
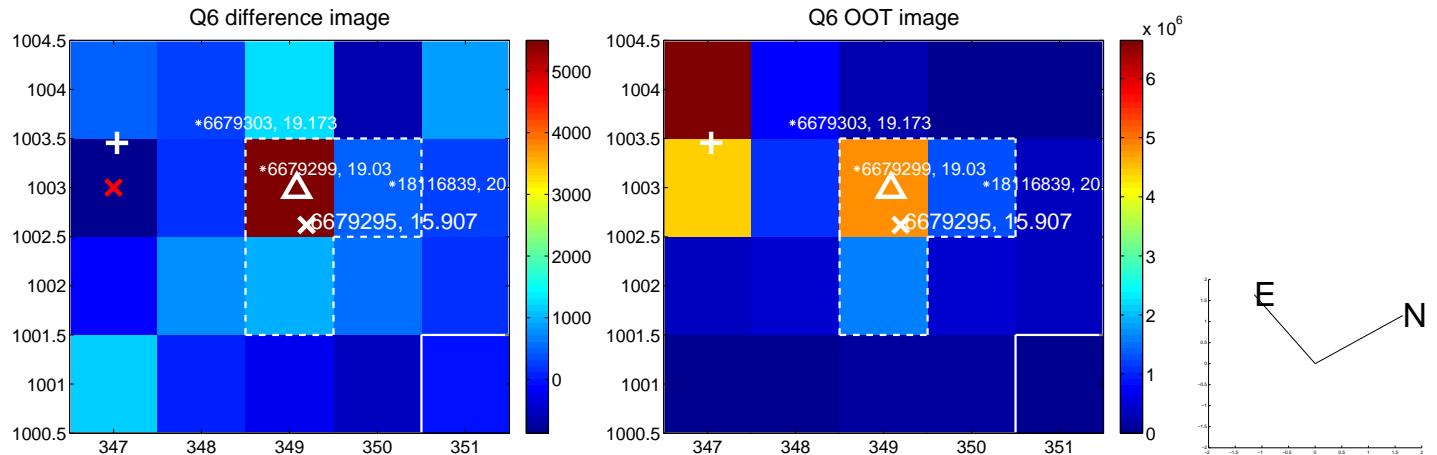
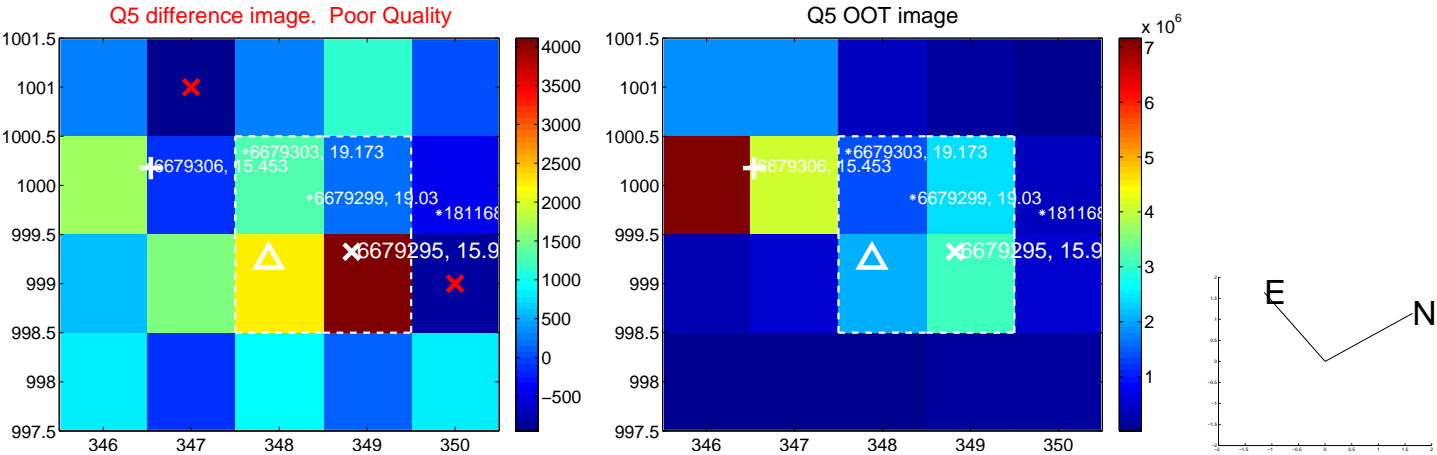
Q4 difference image



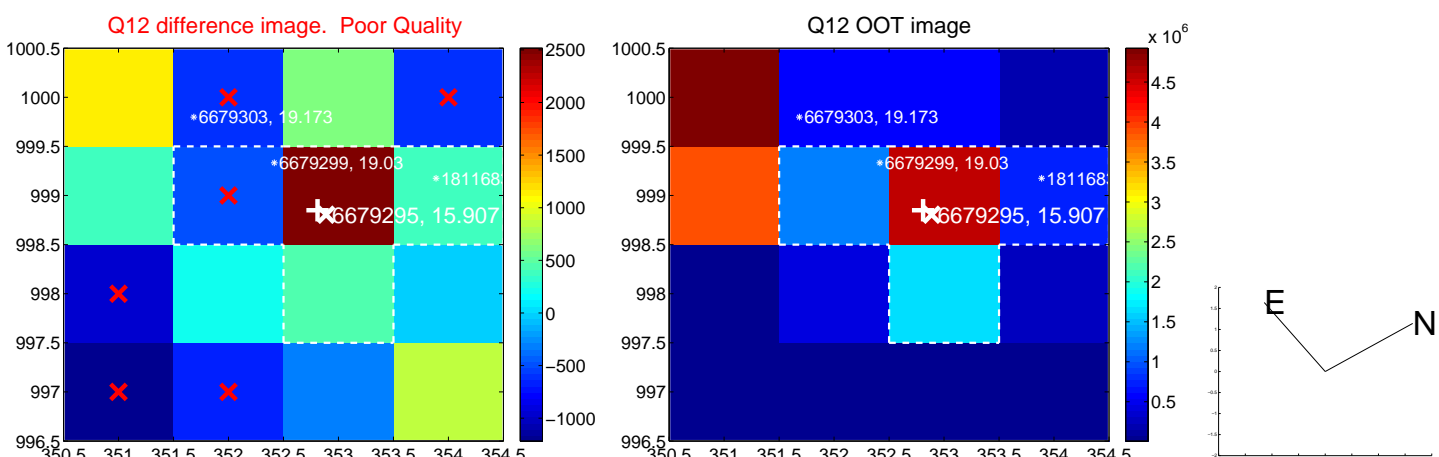
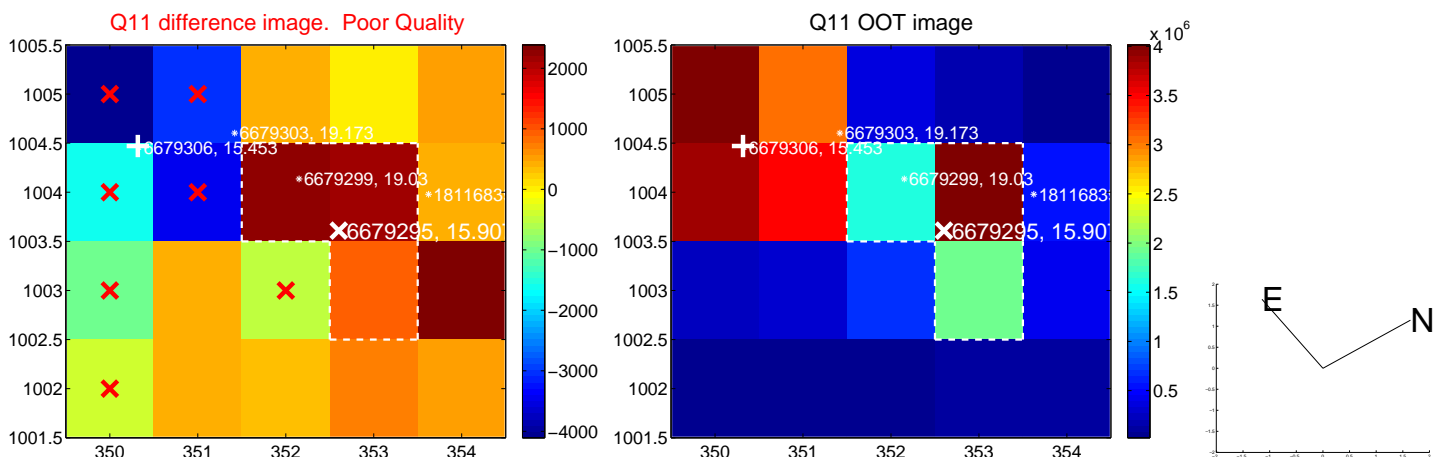
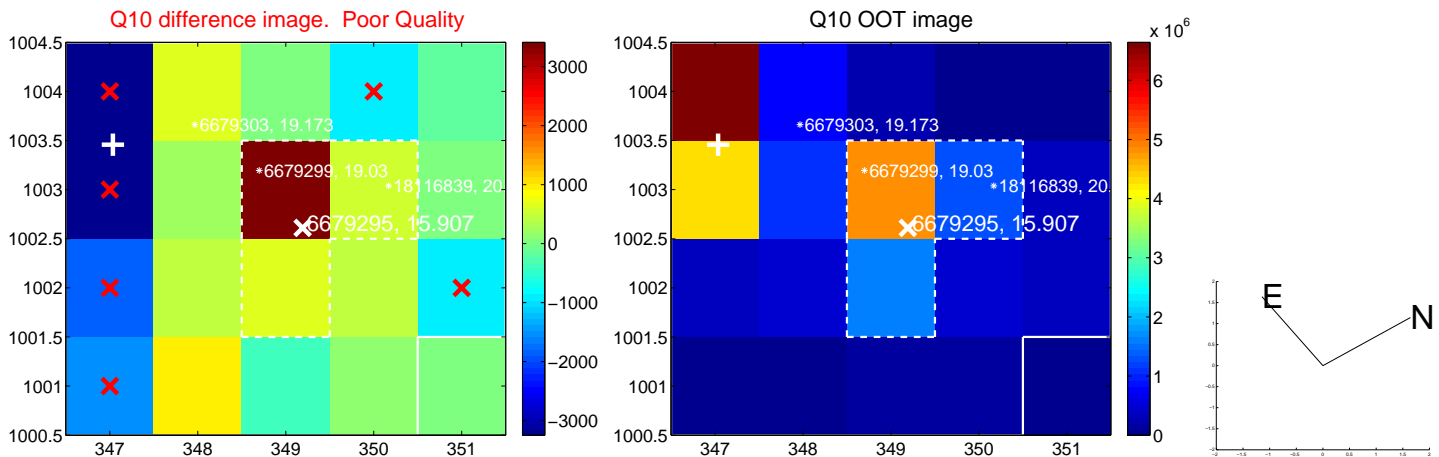
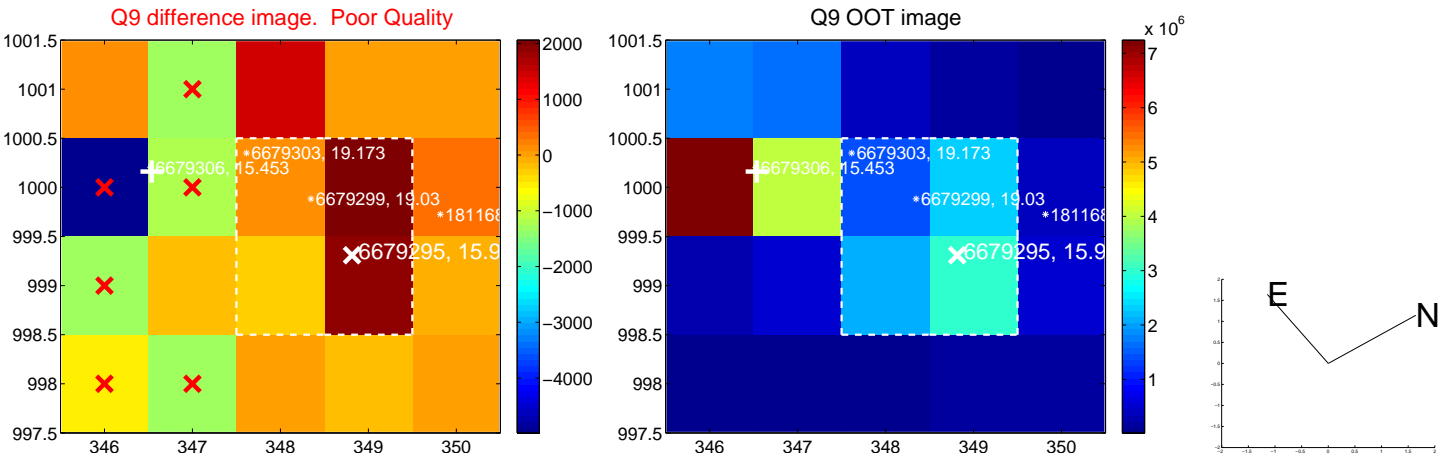
Q4 OOT image



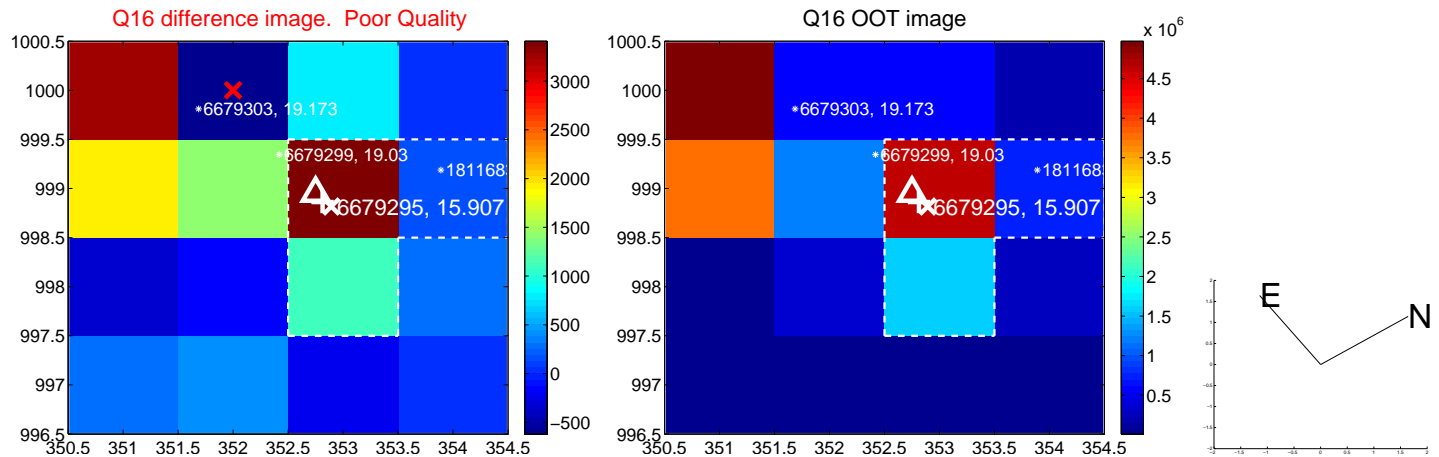
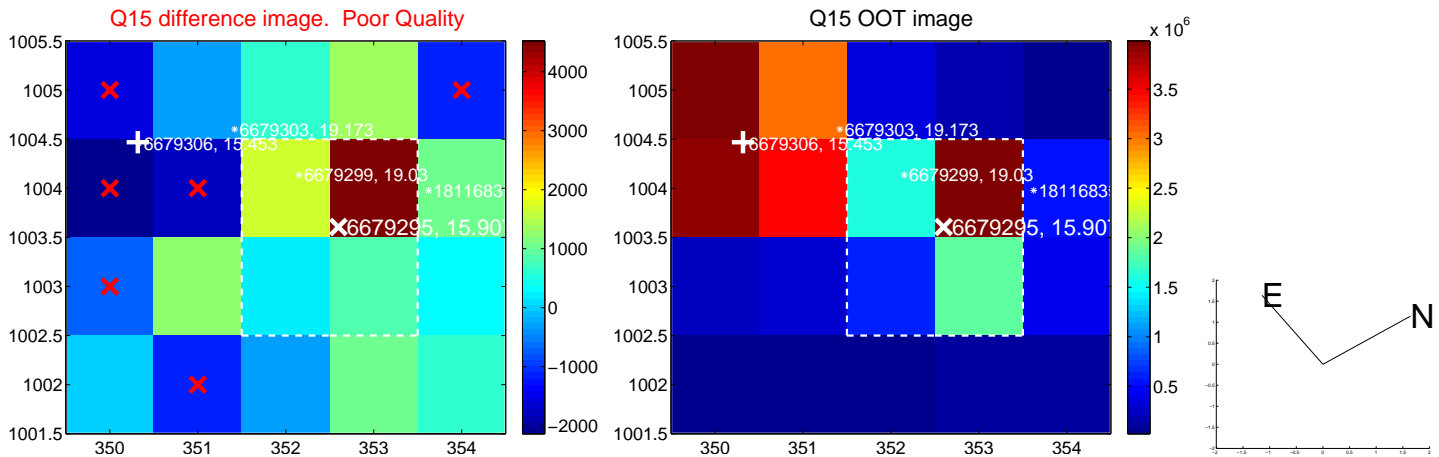
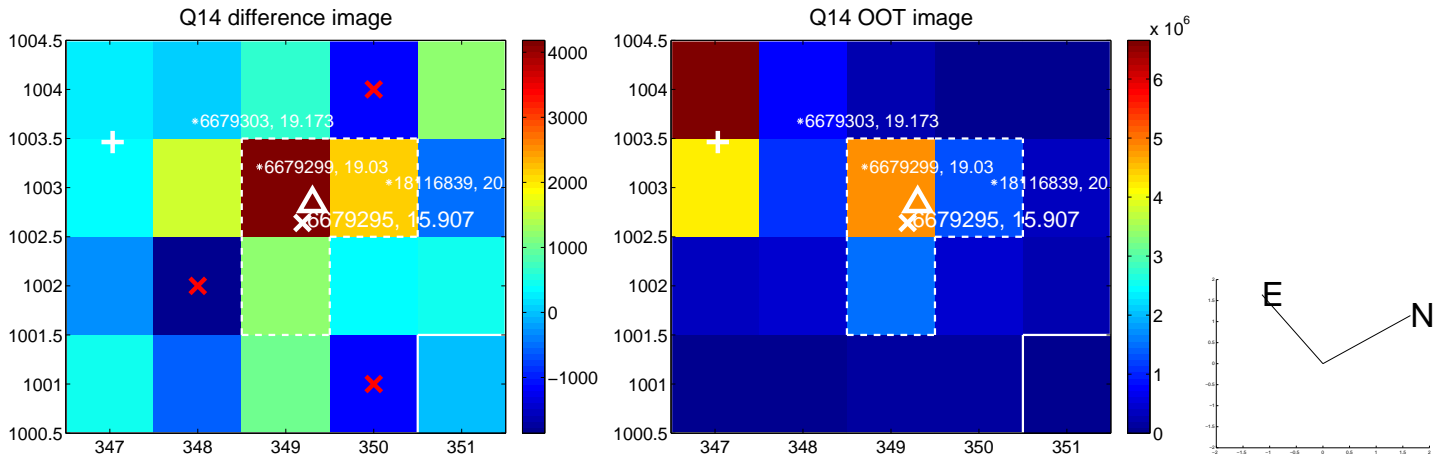
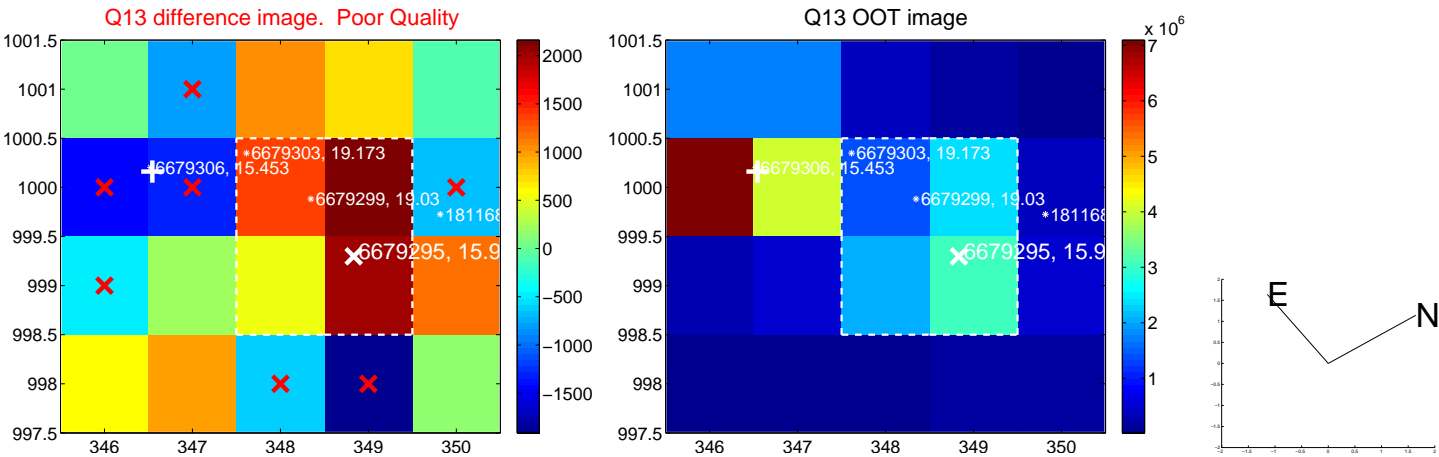
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



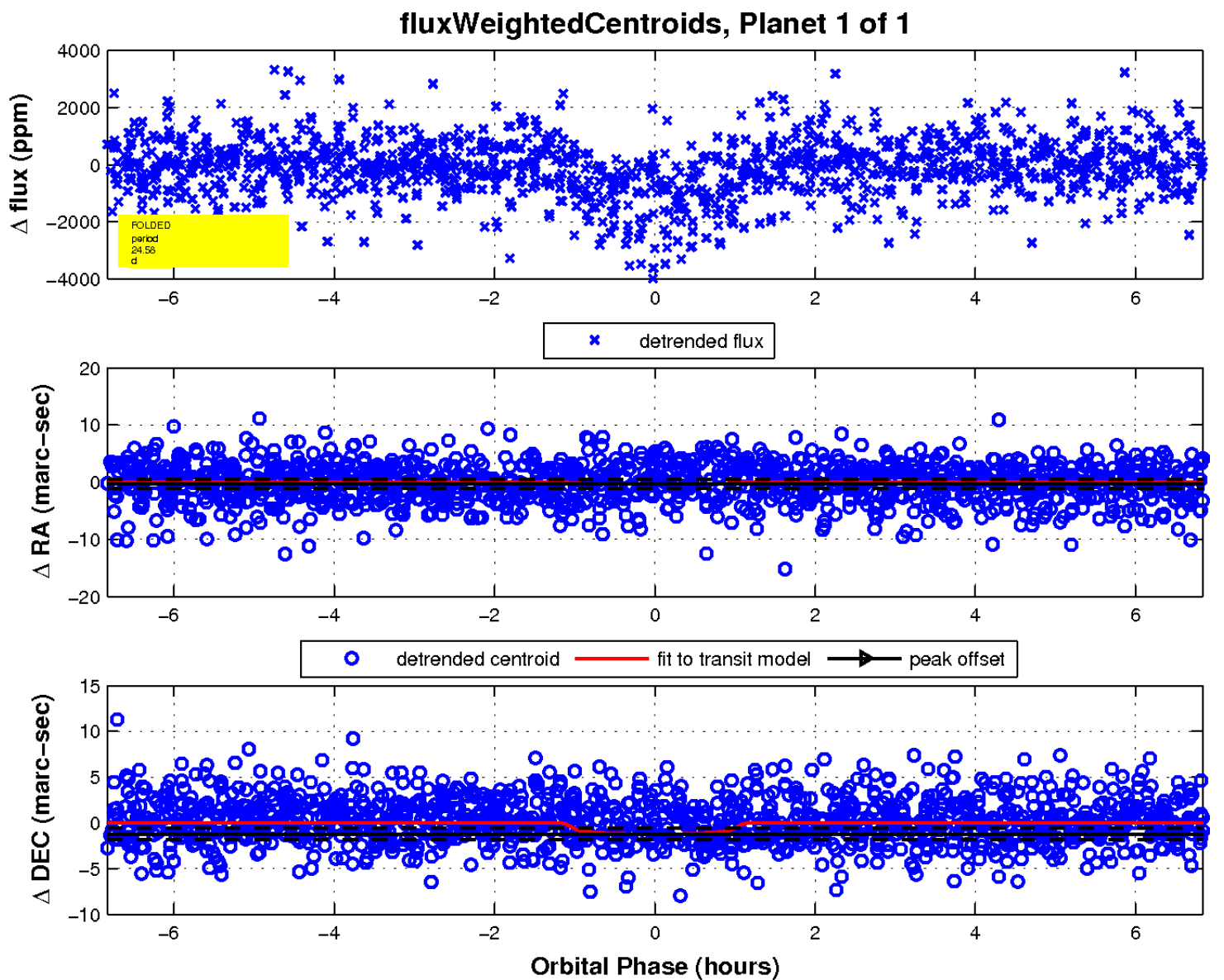
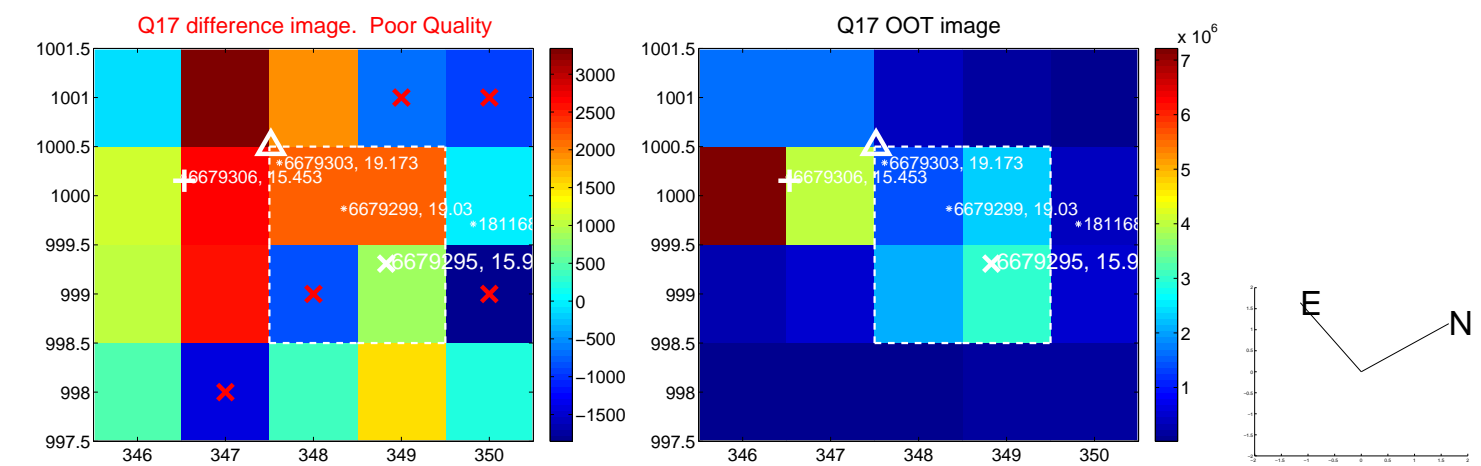
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

