

# KIC 003967326

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003967326-01	OBS	2084.01	4.195778	135.175003	867.6	2.329	34.1	37.8	1.00	5229	3.54	284.18

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967326-01	OBS	PC	1.00	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.

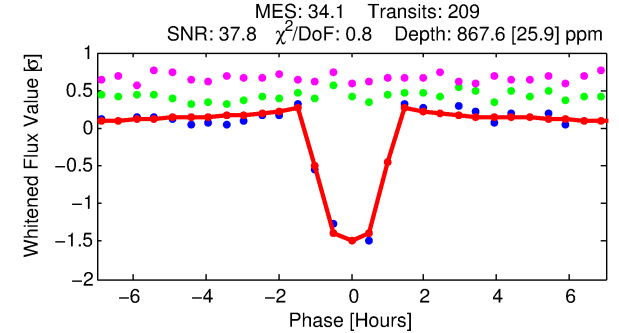
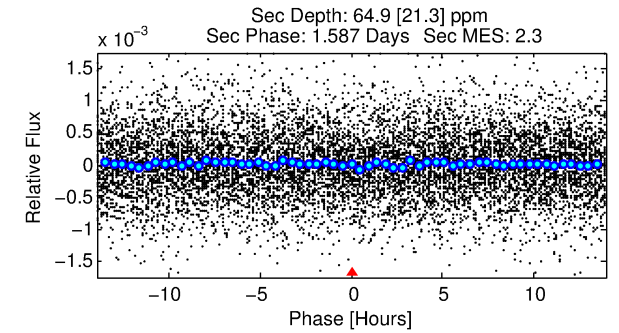
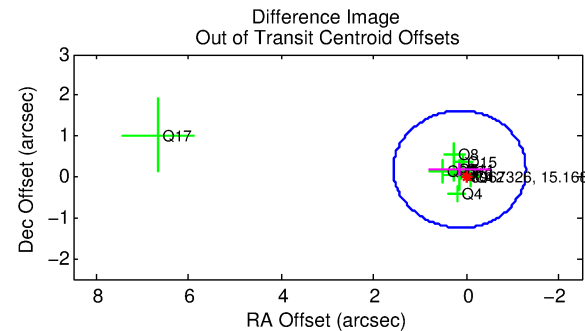
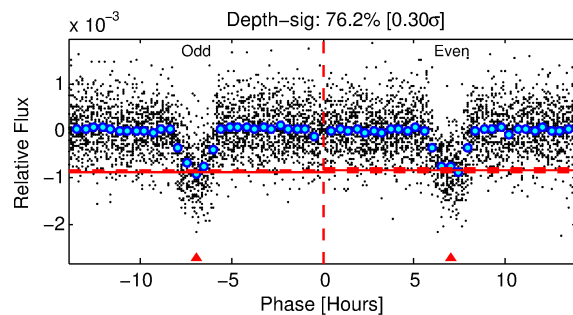
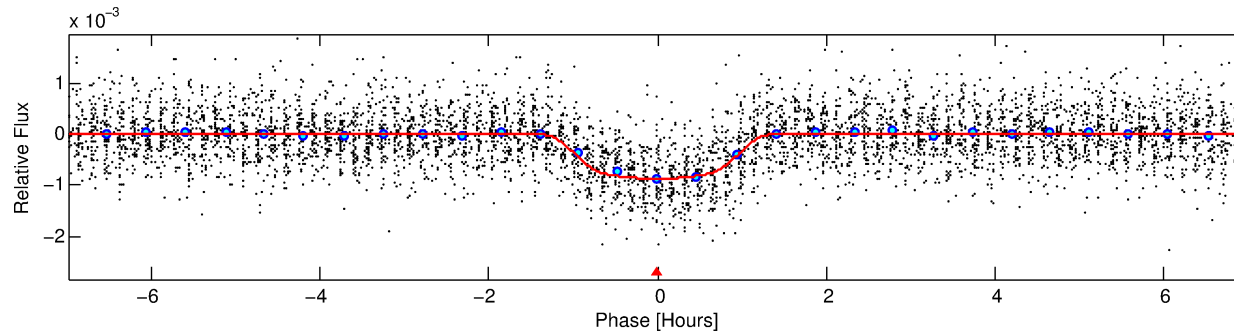
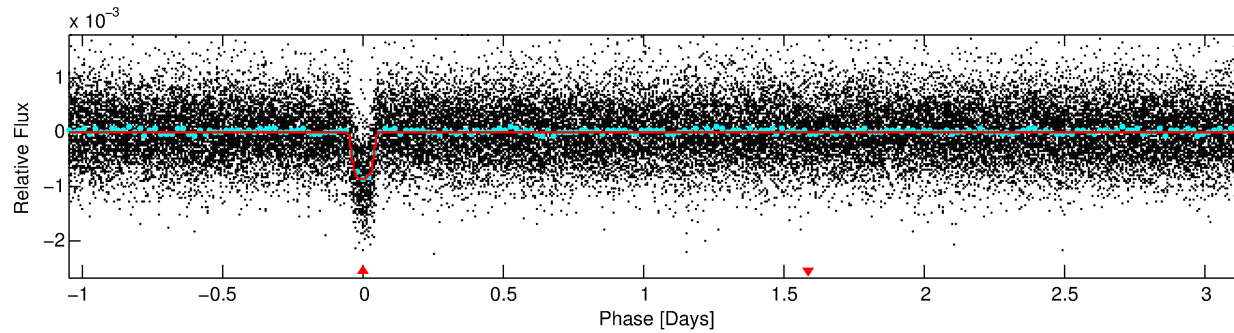
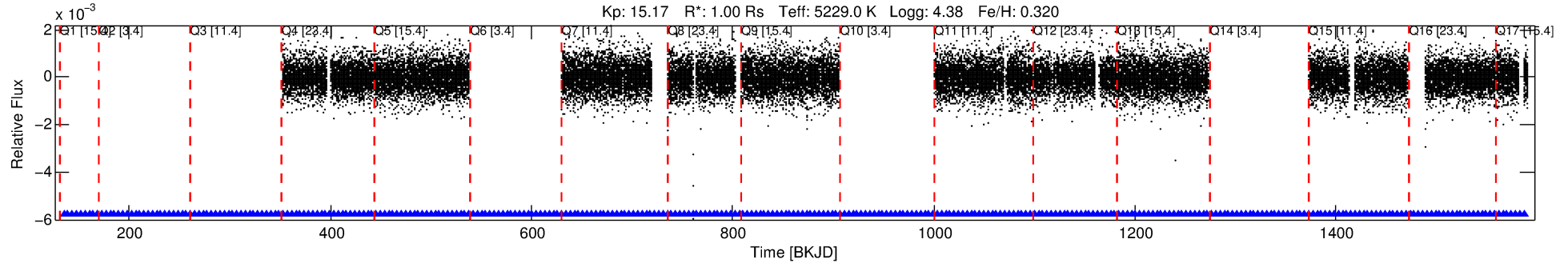
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003967326-01

No Significant Match Found

# DV One-Page Summary

KIC: 3967326 Candidate: 1 of 1 Period: 4.196 d  
KOI: K02084.01 Corr: 0.959



## DV Fit Results:

Period = 4.19578 [0.00001] d  
Epoch = 135.1750 [0.0010] BKJD  
Rp/R\* = 0.0323 [0.0034]  
a/R\* = 7.39 [2.93]  
b = 0.88 [0.10]  
Seff = 284.18 [127.93]  
Teq = 1047 [118] K  
Rp = 3.54 [1.21] Re  
a = 0.0488 [0.0139] AU  
Ag = 6.78 [3.93] [1.47 $\sigma$ ]  
Teffp = 2612 [271] K [5.30 $\sigma$ ]

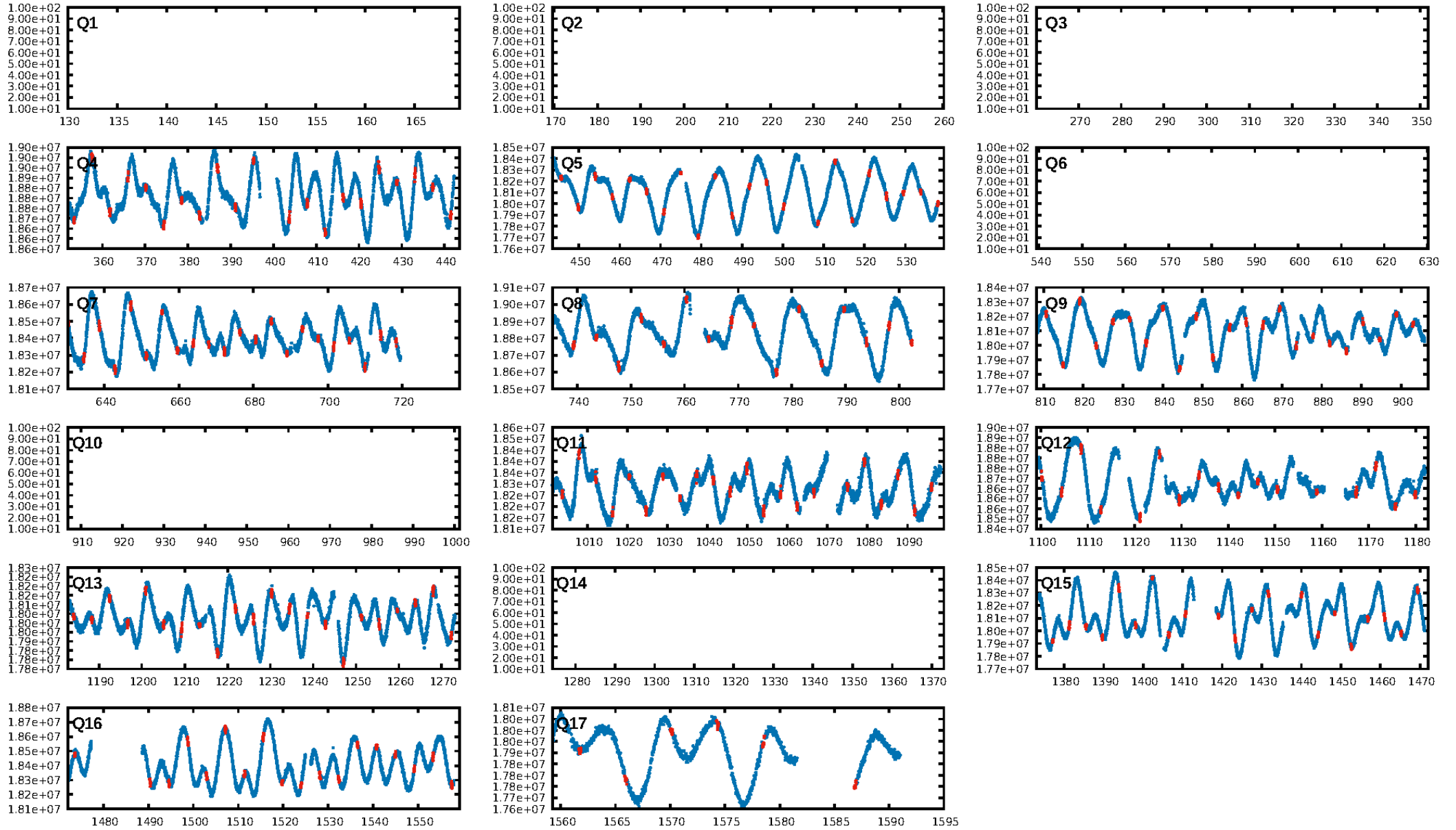
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.23e-240  
RollingBand-fgt: 1.00 [203/203]  
GhostDiagnostic-chr: 4.209  
Centroid-sig: 2.9%  
Centroid-so: 0.634 arcsec [2.07 $\sigma$ ]  
OotOffset-rm: 0.232 arcsec [0.49 $\sigma$ ]  
KicOffset-rm: 0.239 arcsec [0.51 $\sigma$ ]  
OotOffset-st: 0/3/4/4 [11]  
KicOffset-st: 0/3/4/4 [11]  
DiffImageQuality-fgm: 0.91 [10/11]  
DiffImageOverlap-fno: 1.00 [11/11]

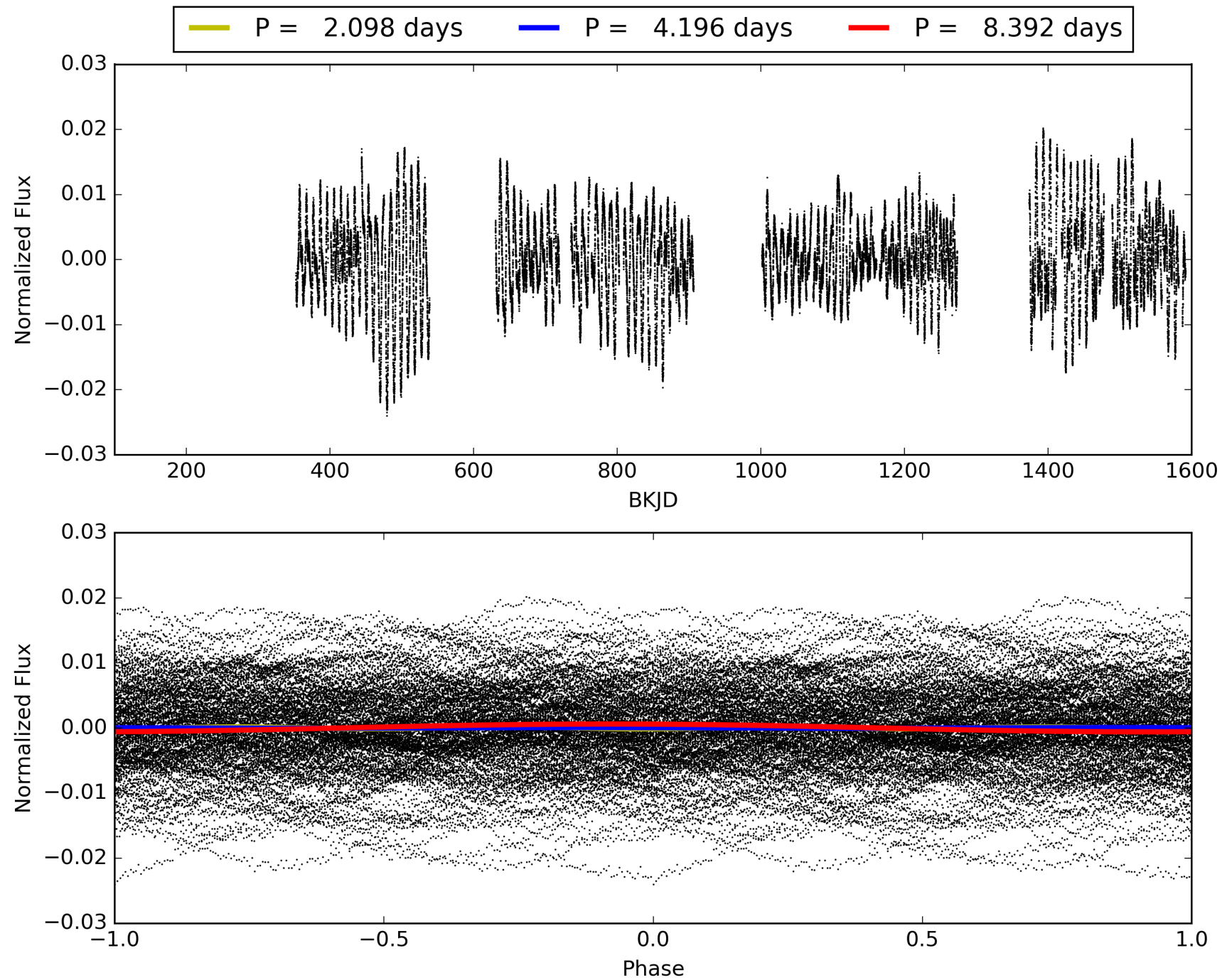
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:19:50 Z

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

# TCE 003967326-01, PDC Light Curves

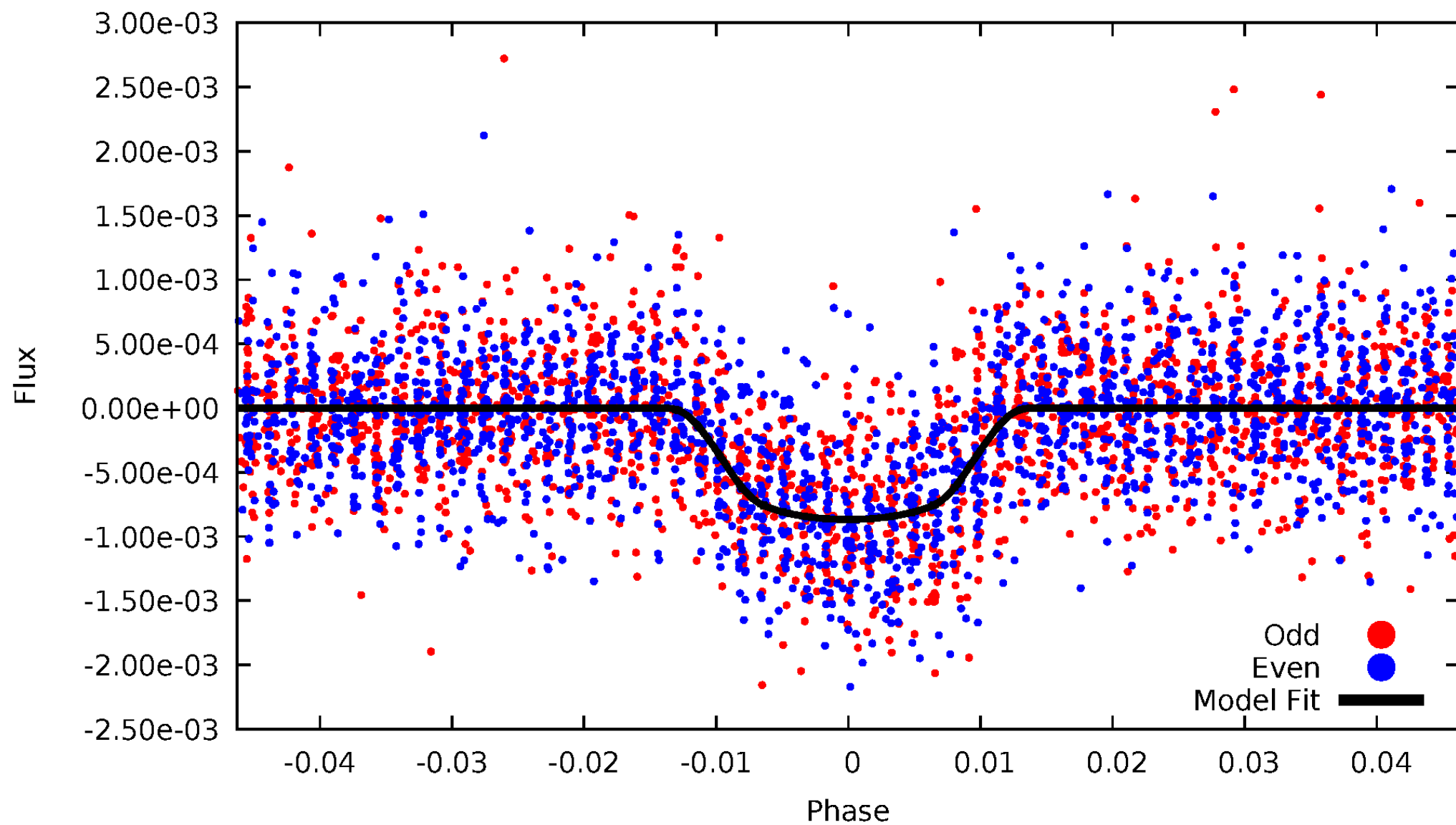


TCE 003967326-01



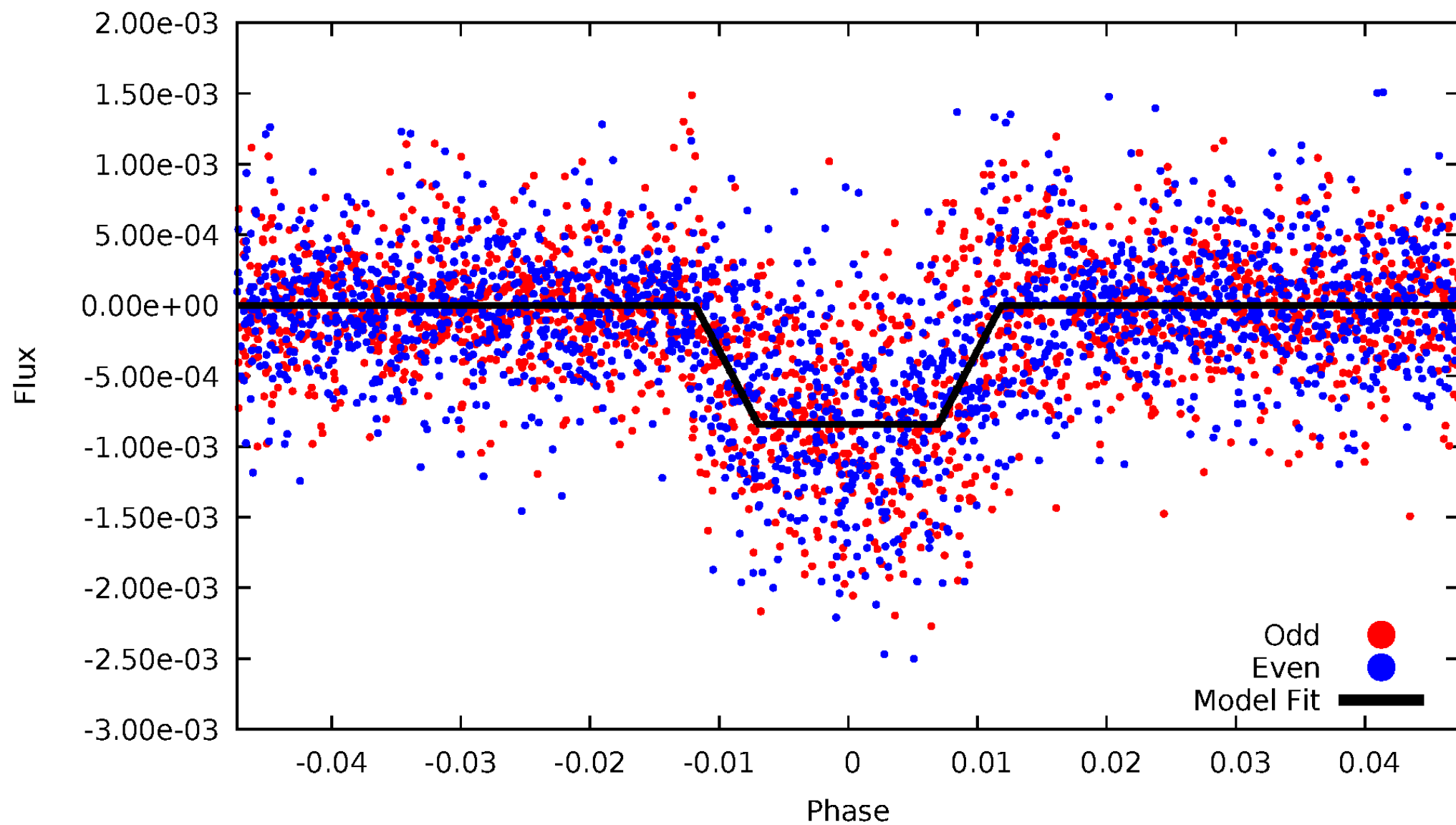
# DV Odd/Even

TCE 003967326-01



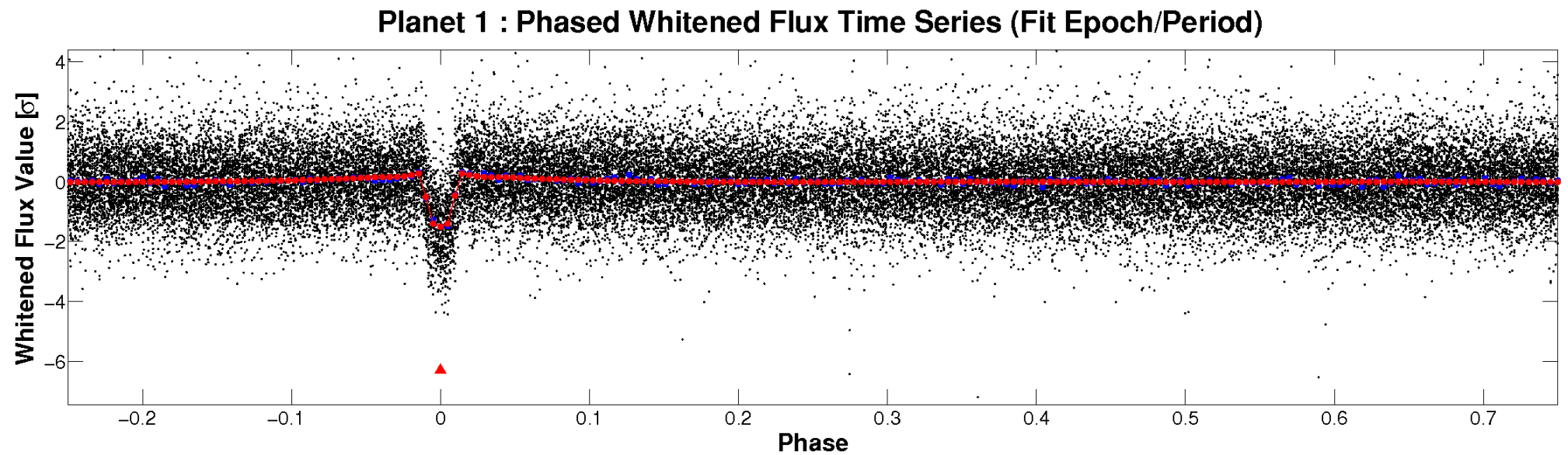
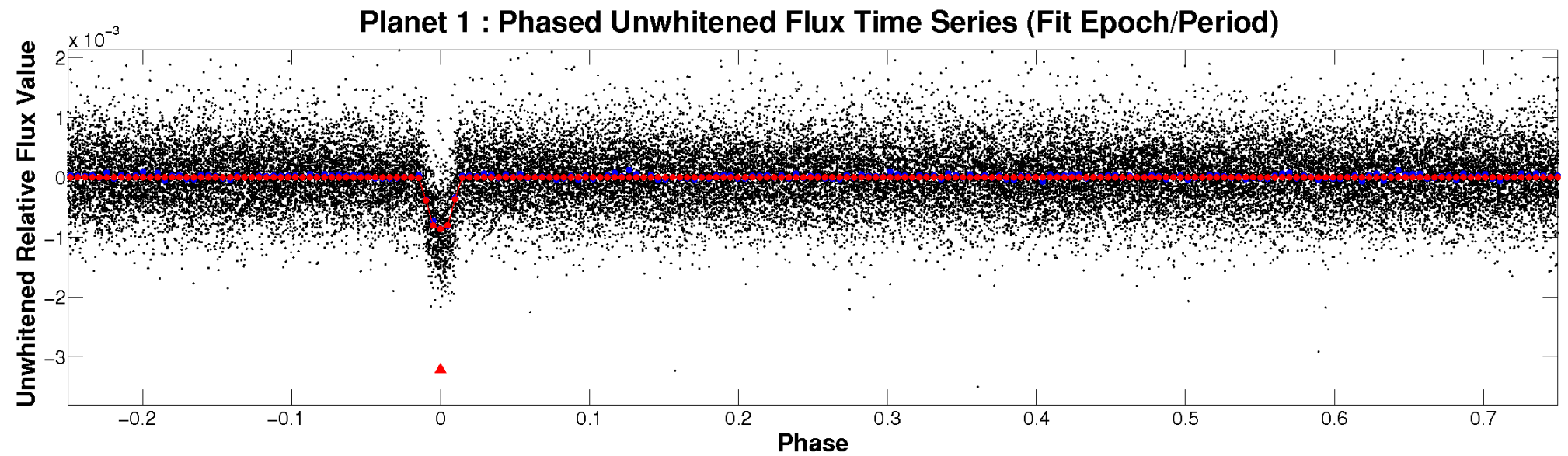
# ALT Odd/Even

TCE 003967326-01



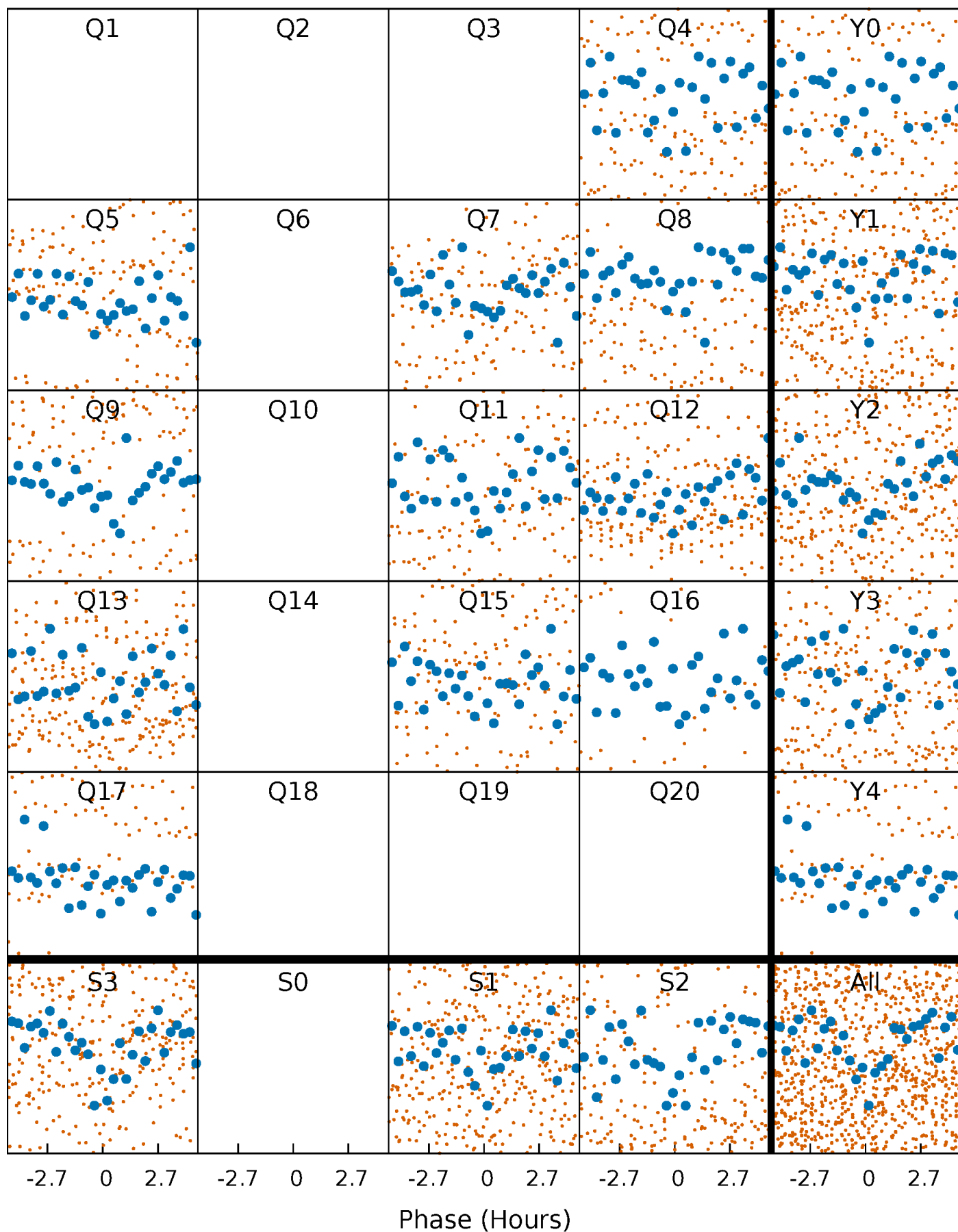


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

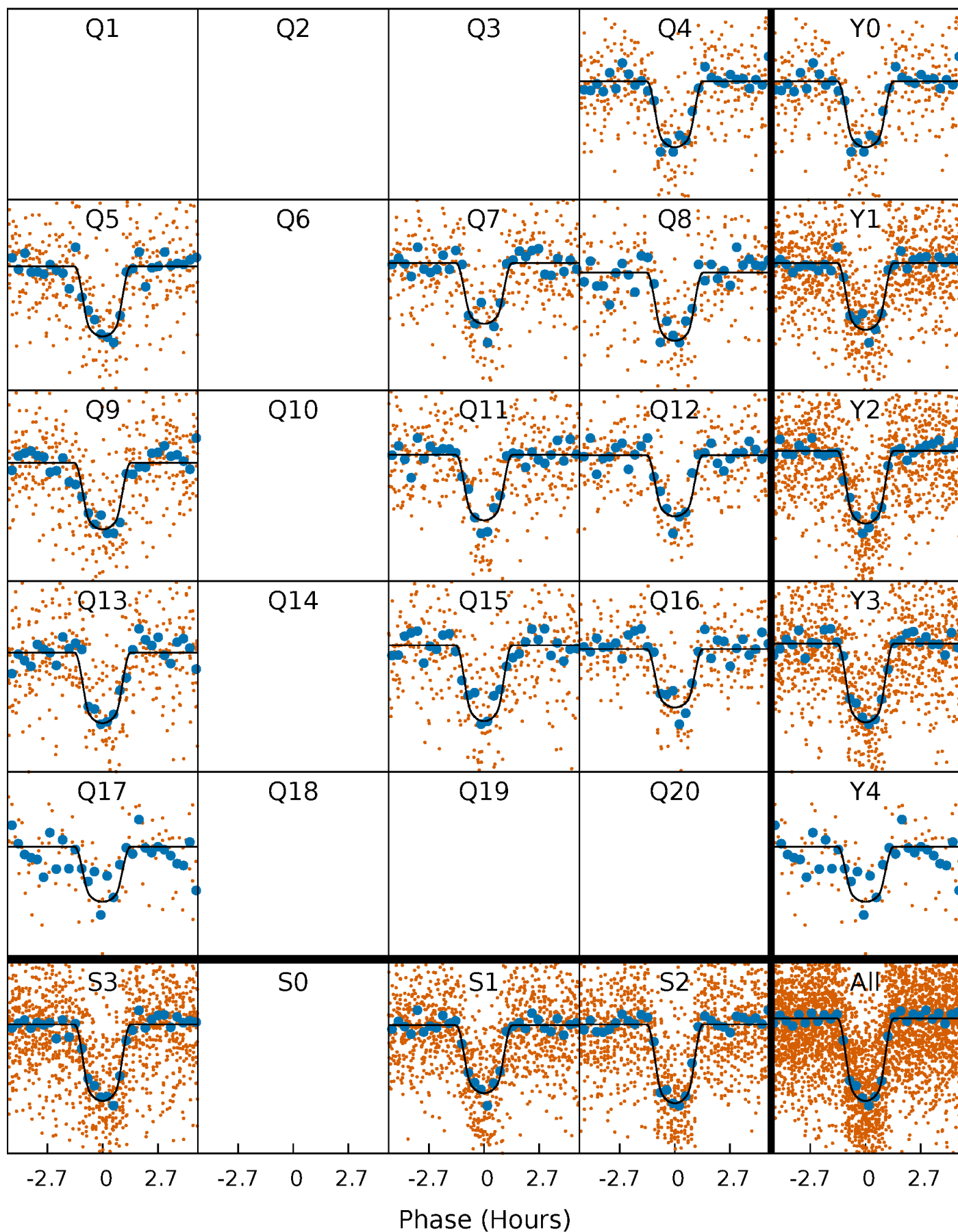
TCE 003967326-01 P= 4.195778 Days  $T_0=135.175003$  (BKJD)





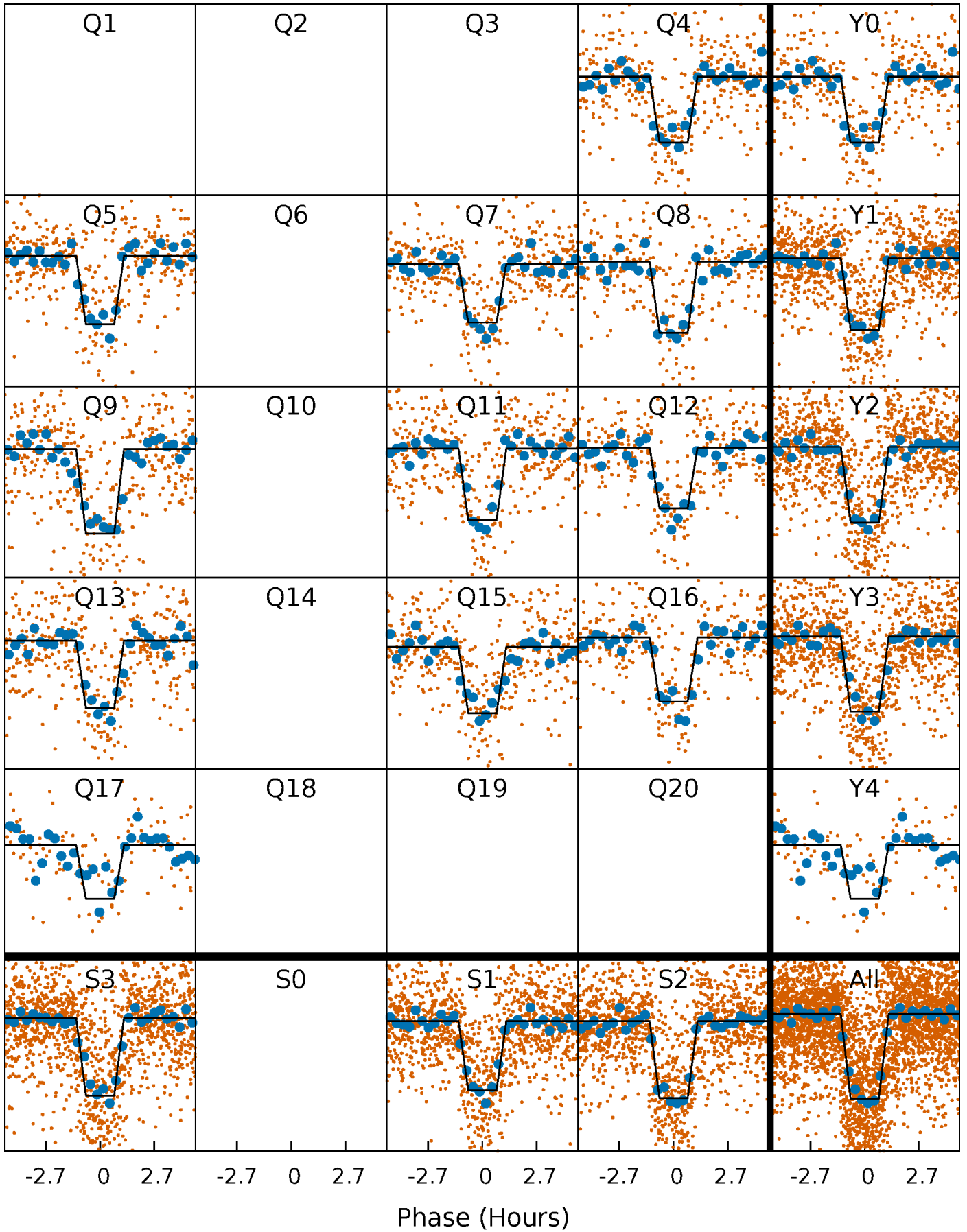
# DV Quarter-Phased Transit Curves

TCE 003967326-01 P= 4.195778 Days  $T_0=135.175003$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

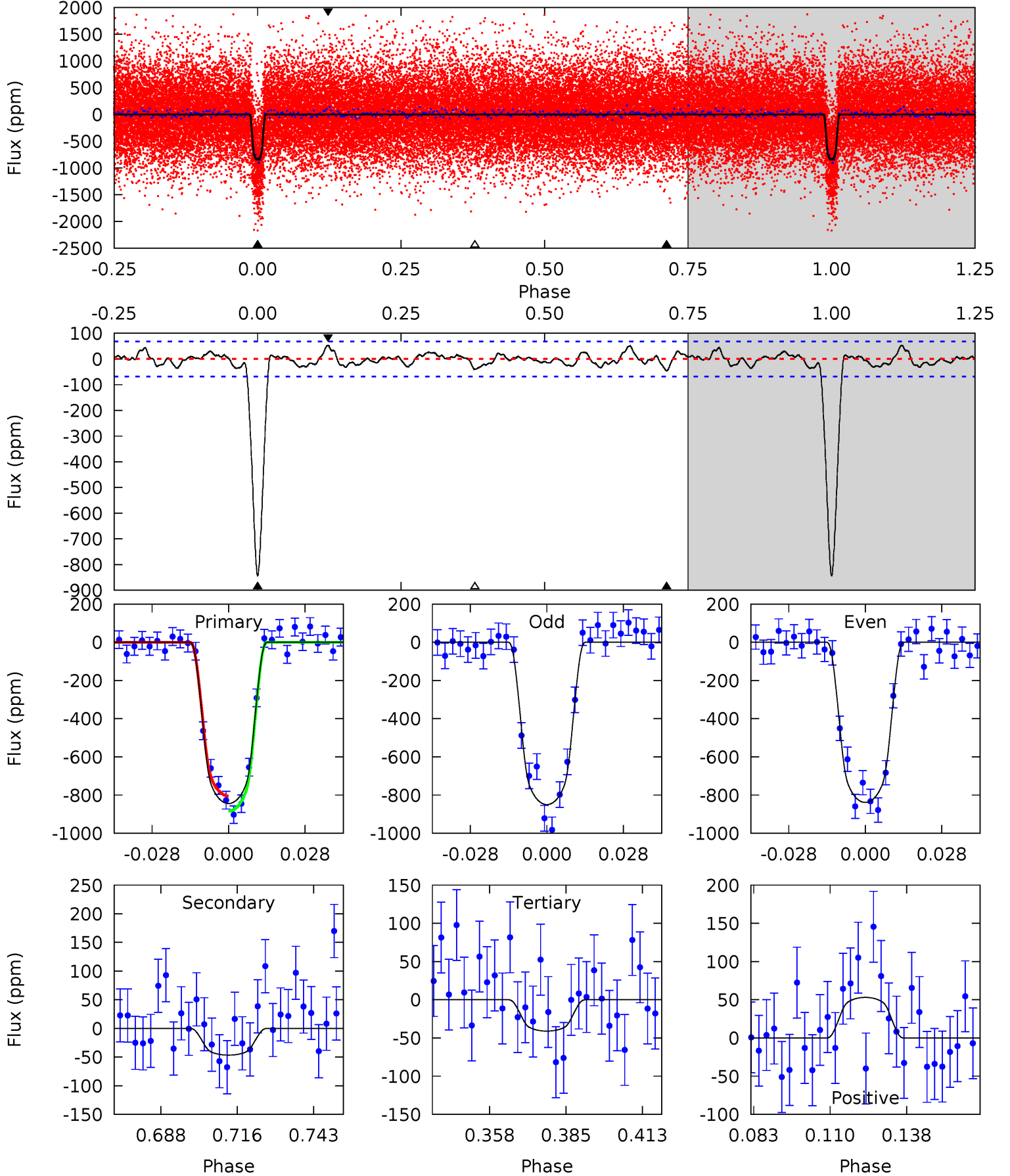
TCE 003967326-01 P= 4.195748 Days  $T_0=135.180646$  (BKJD)



# DV Model-Shift Uniqueness Test

003967326-01, P = 4.195778 Days, E = 135.175003 Days

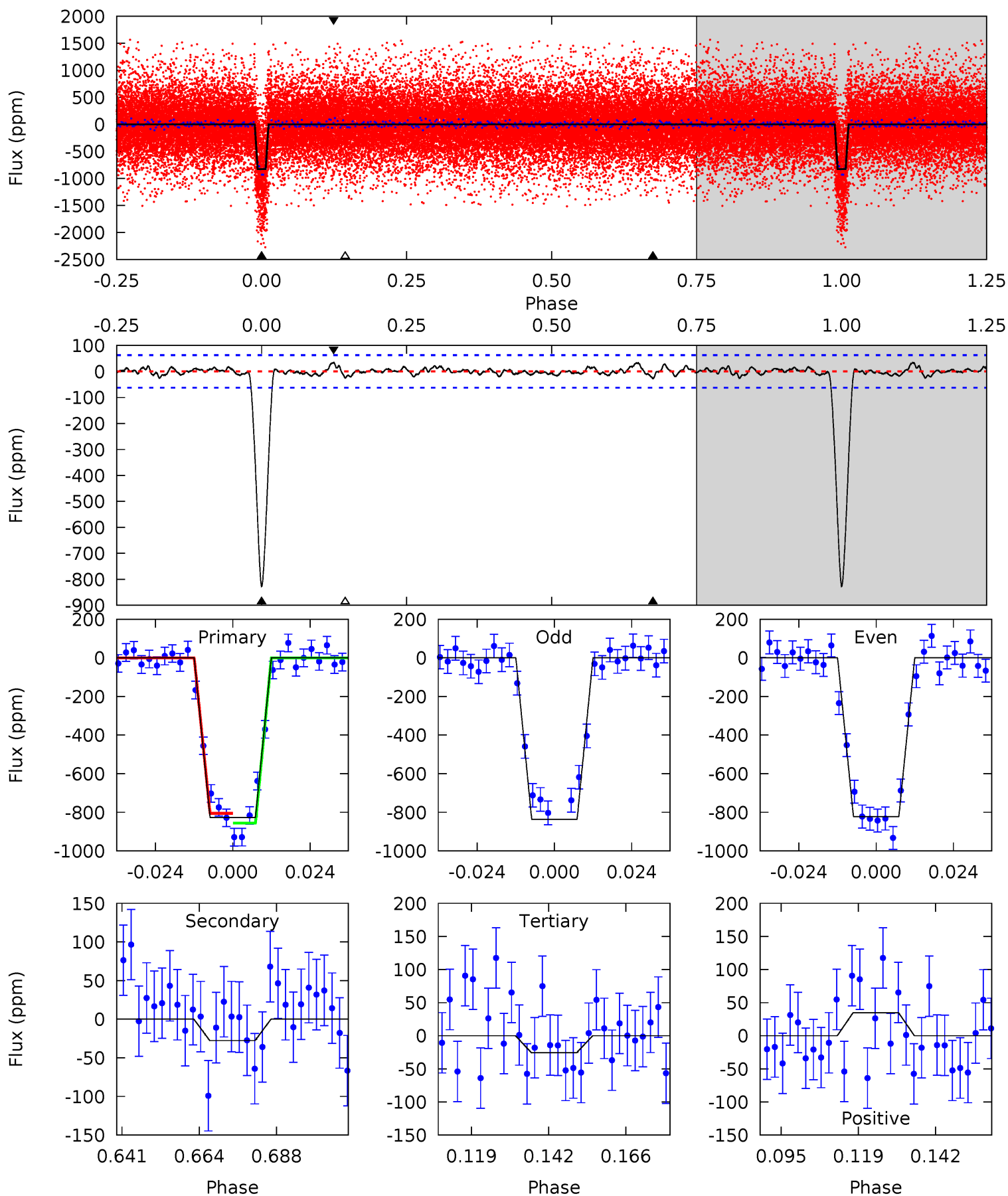
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.8	3.30	2.90	3.76	4.83	2.20	1.32	56.9	56.0	0.39	-0.46	0.40	0.99	0.06	2.84



# Alt Model-Shift Uniqueness Test

003967326-01, P = 4.195748 Days, E = 135.180646 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
63.9	2.14	1.97	2.69	4.86	2.26	0.79	61.9	61.2	0.16	-0.56	0.53	0.98	0.04	1.95



### Stellar Parameters For KIC 003967326

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5229^{+183}_{-183}$	$4.378^{+0.160}_{-0.240}$	$0.320^{+0.150}_{-0.250}$	$1.005^{+0.328}_{-0.177}$	$0.878^{+0.081}_{-0.061}$	$1.220^{+0.908}_{-0.679}$
	+3%/-3%	+4%/-5%	+47%/-78%	+33%/-18%	+9%/-7%	+74%/-56%
Source	KIC0	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 003967326-01 / KOI 2084.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-47 \pm 14$	$3.62^{+0.78}_{-0.56}$	$1473^{+143}_{-98}$	$2997^{+178}_{-188}$	$4.465^{+2.628}_{-1.701}$
Alt.	$-28 \pm 13$	$3.28^{+0.70}_{-0.53}$	$1481^{+137}_{-100}$	$2871^{+220}_{-279}$	$3.312^{+2.460}_{-1.815}$

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

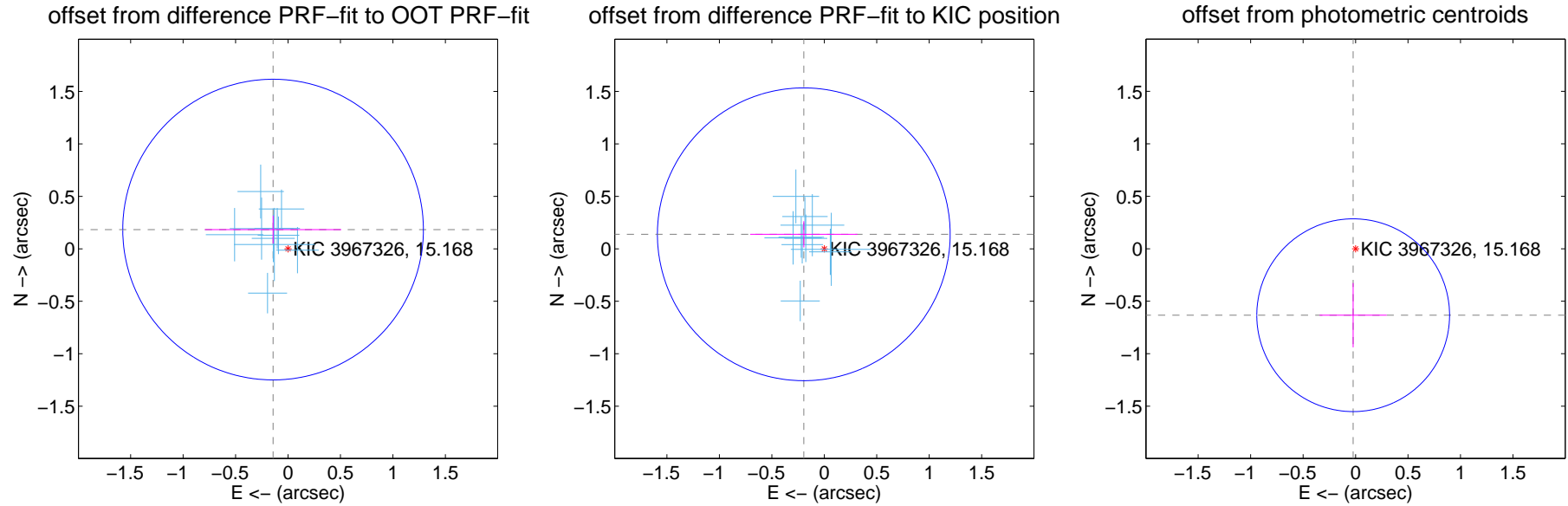
## DV Centroid Data

Supplemental centroid analysis for 003967326-01. Kepler magnitude: 15.17. Transit SNR 37.80

There are 10 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

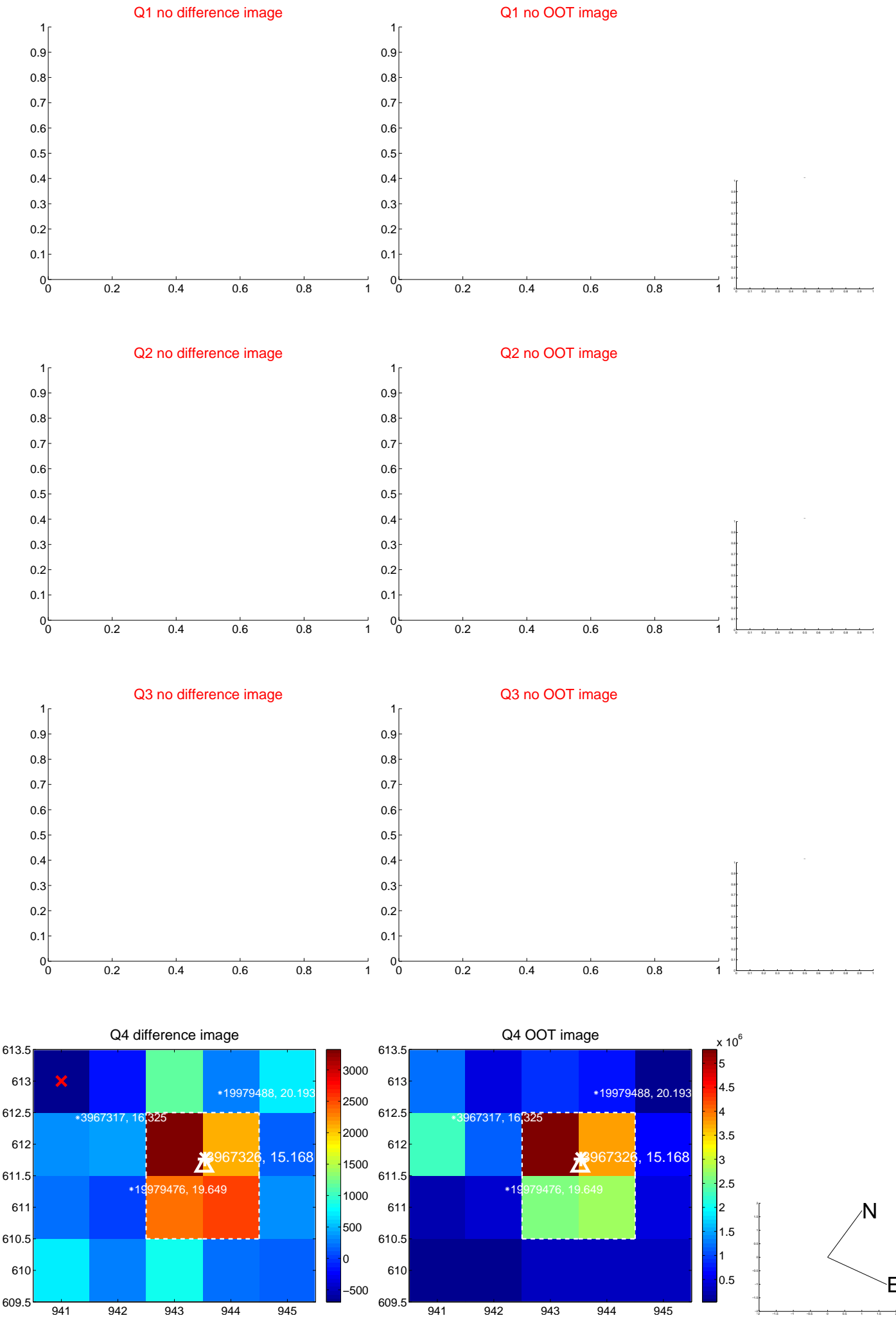
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.232 \pm 0.478$	0.49	$0.142 \pm 0.650$	$0.183 \pm 0.133$
PRF-fit source offset from KIC position	$0.239 \pm 0.465$	0.51	$0.195 \pm 0.511$	$0.138 \pm 0.125$
photometric centroid source offset	$0.63 \pm 0.31$	2.07	$0.02 \pm 0.32$	$-0.63 \pm 0.31$



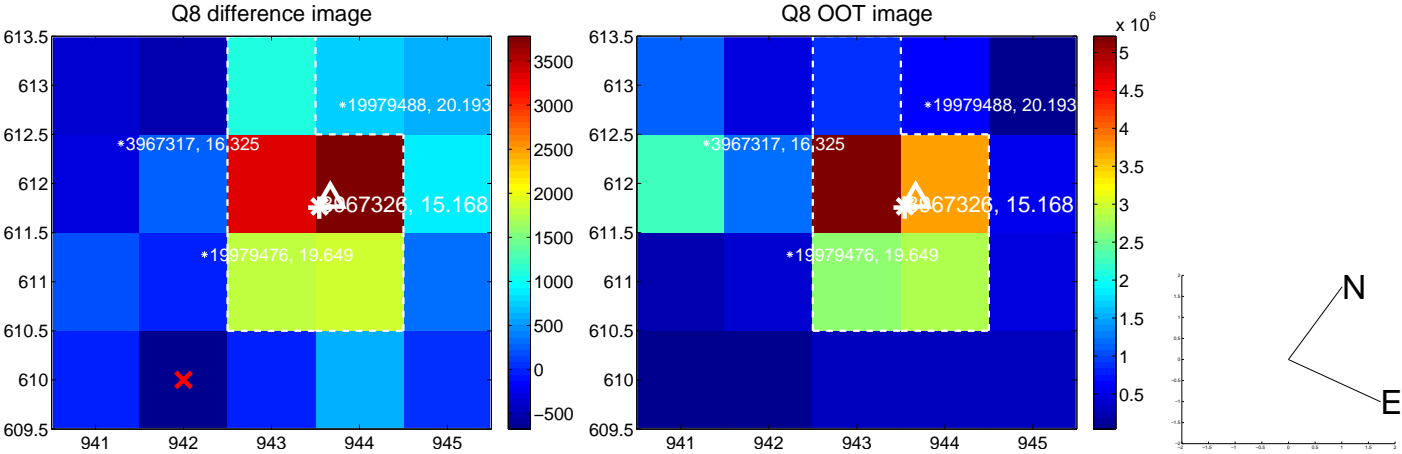
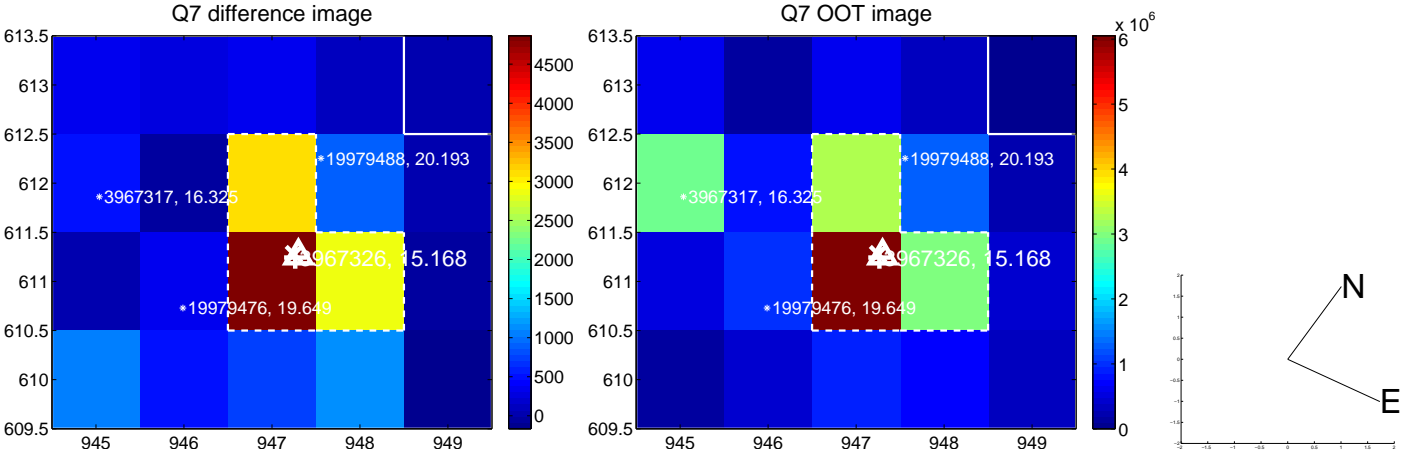
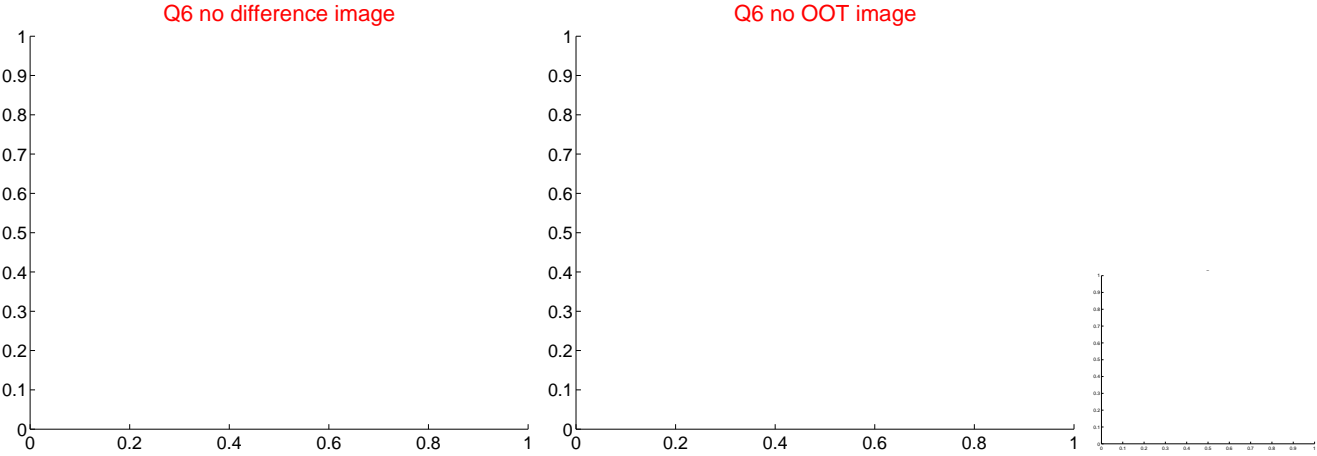
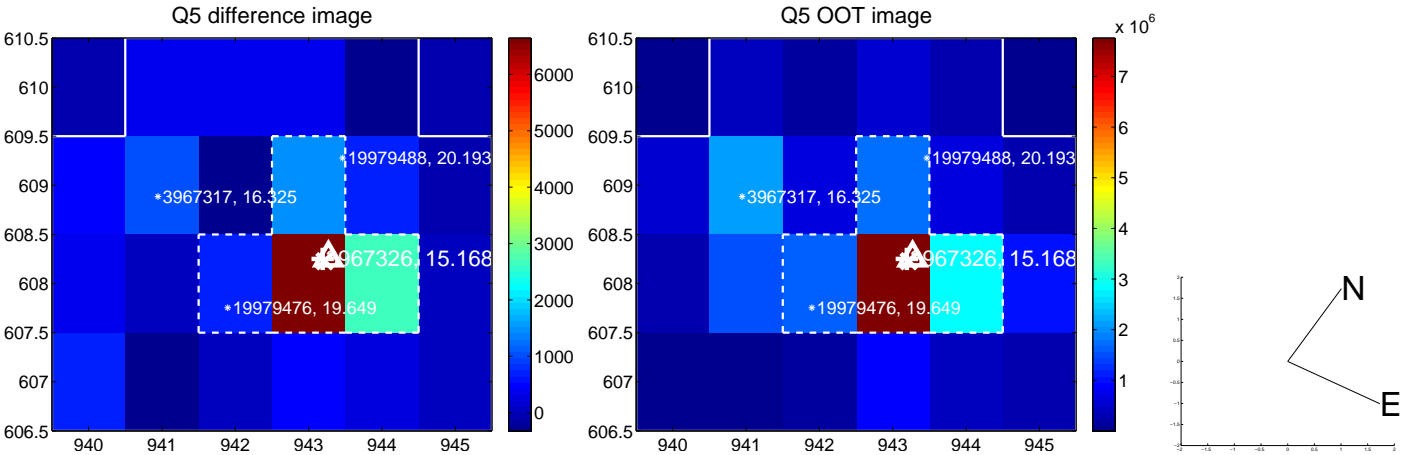
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



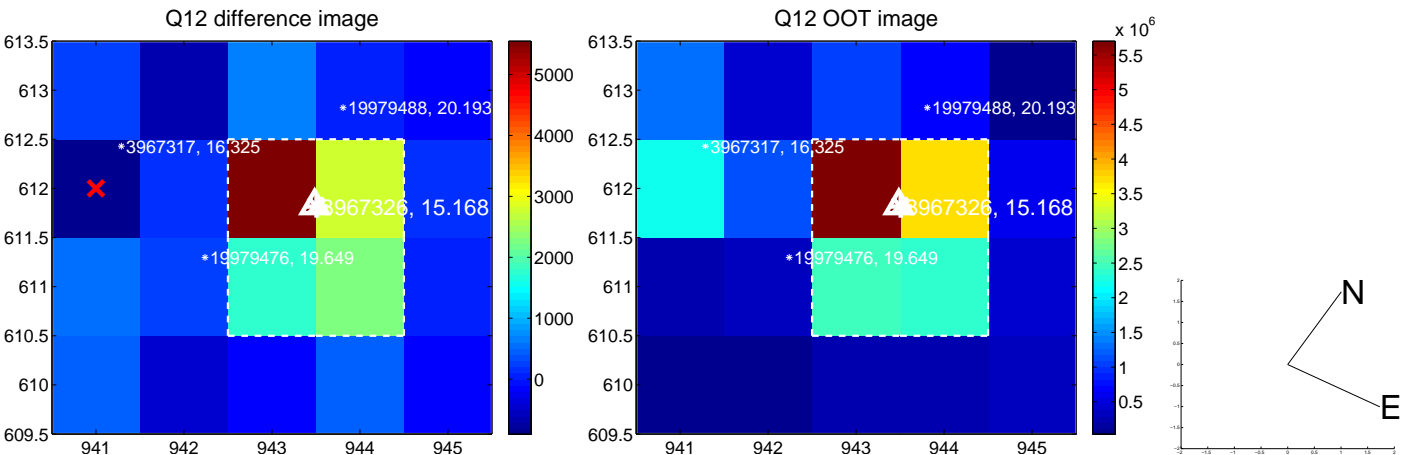
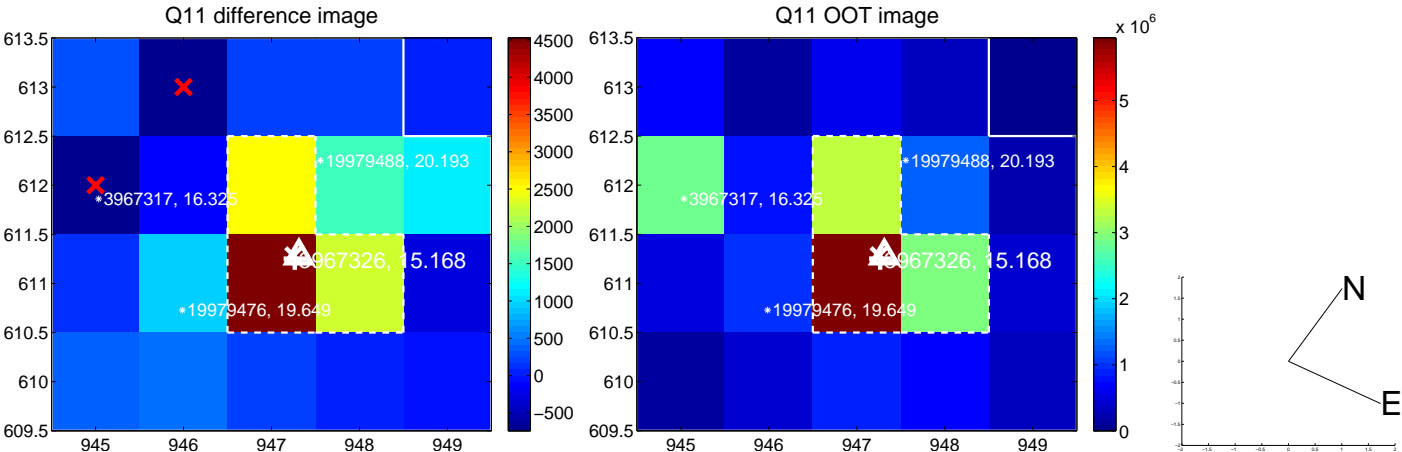
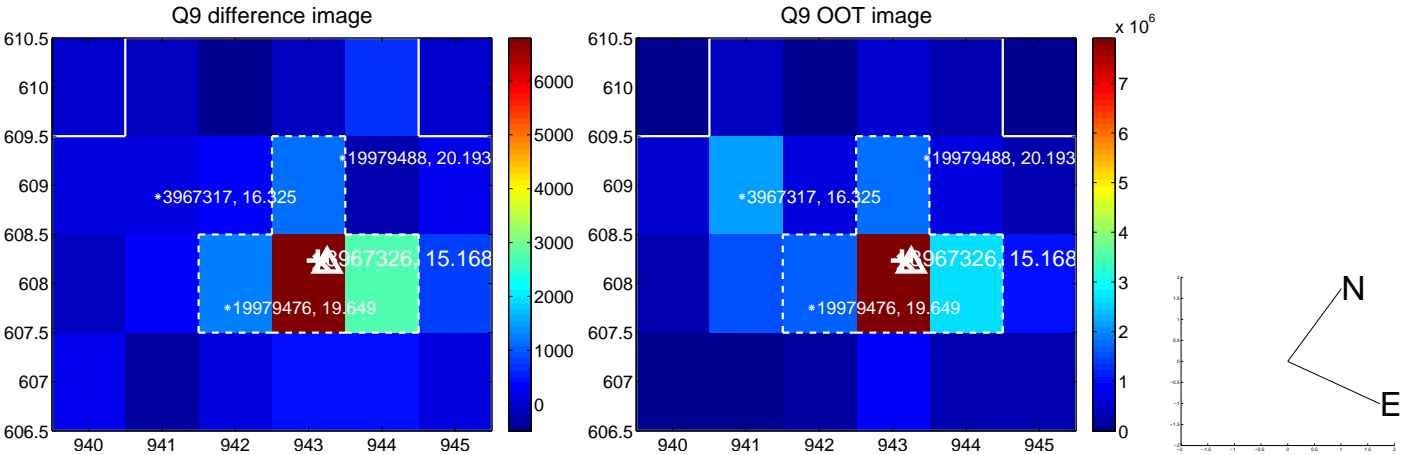
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



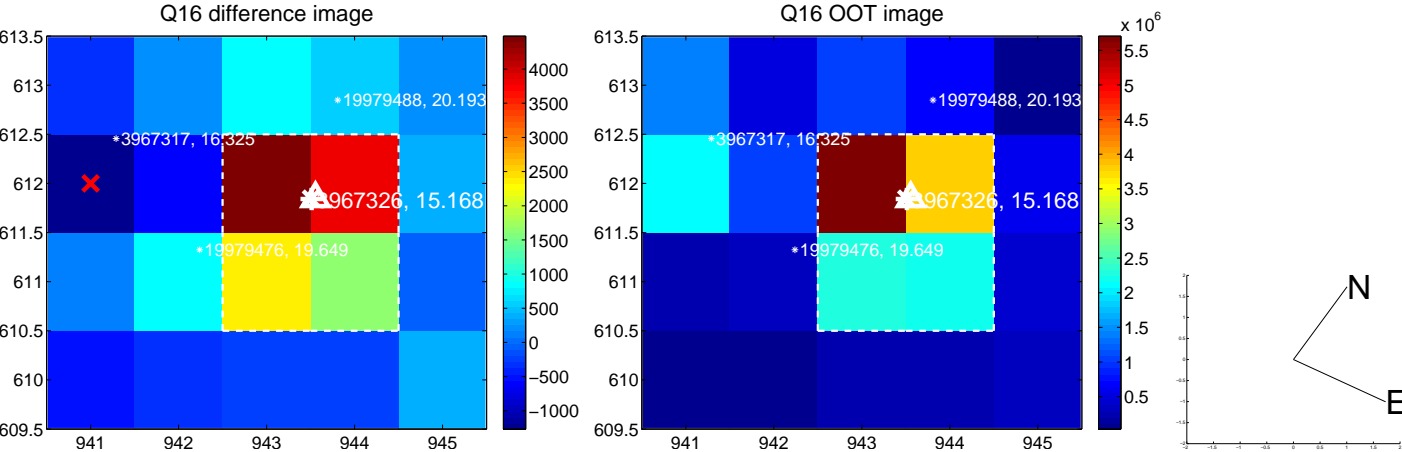
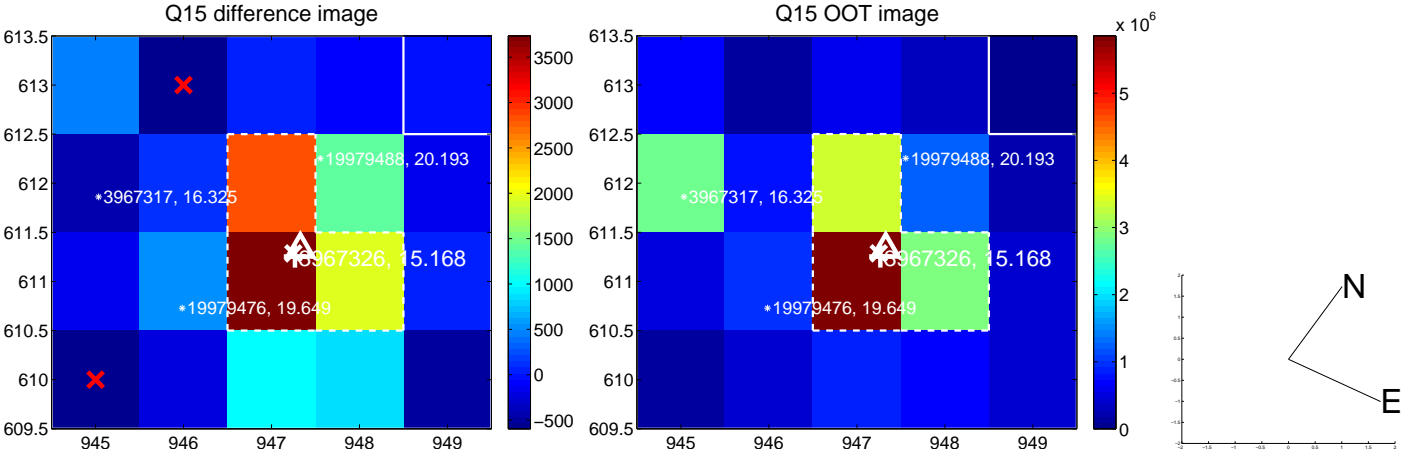
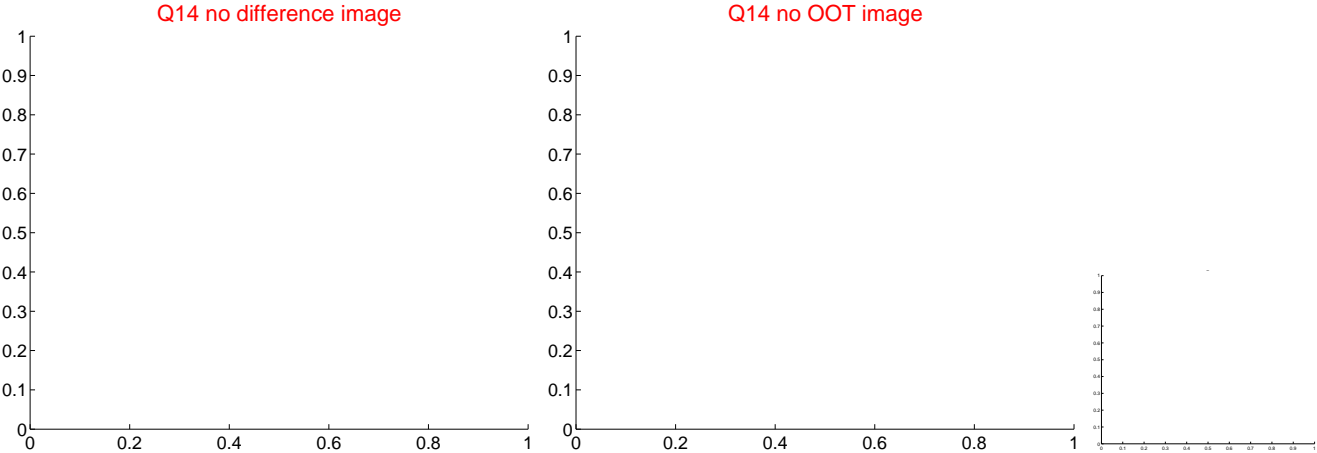
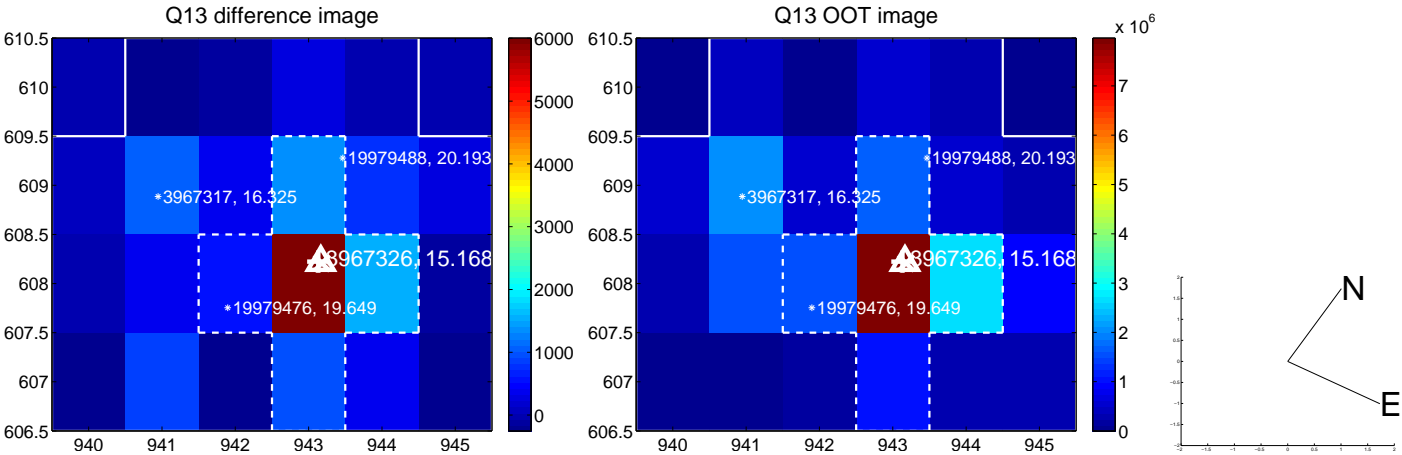
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



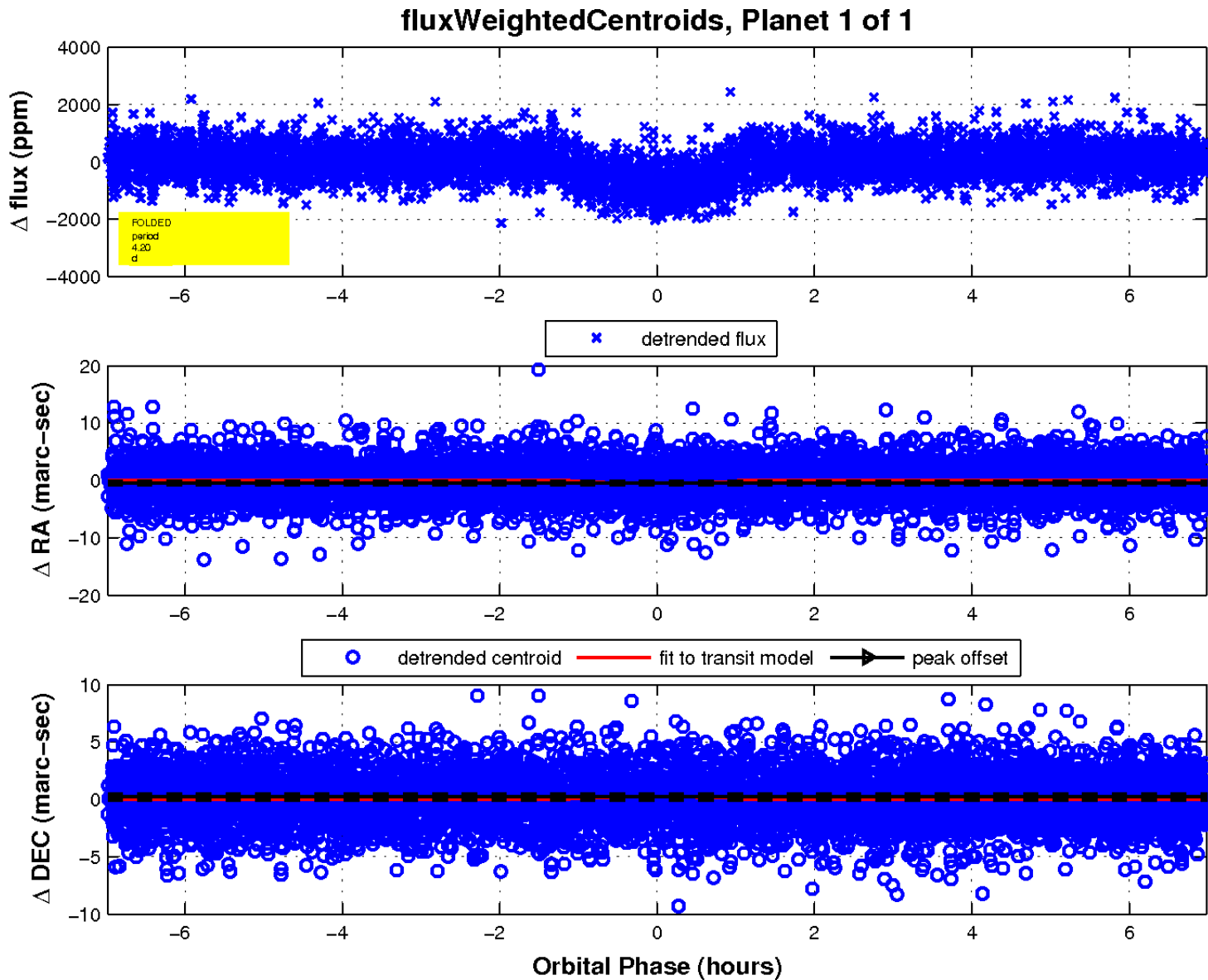
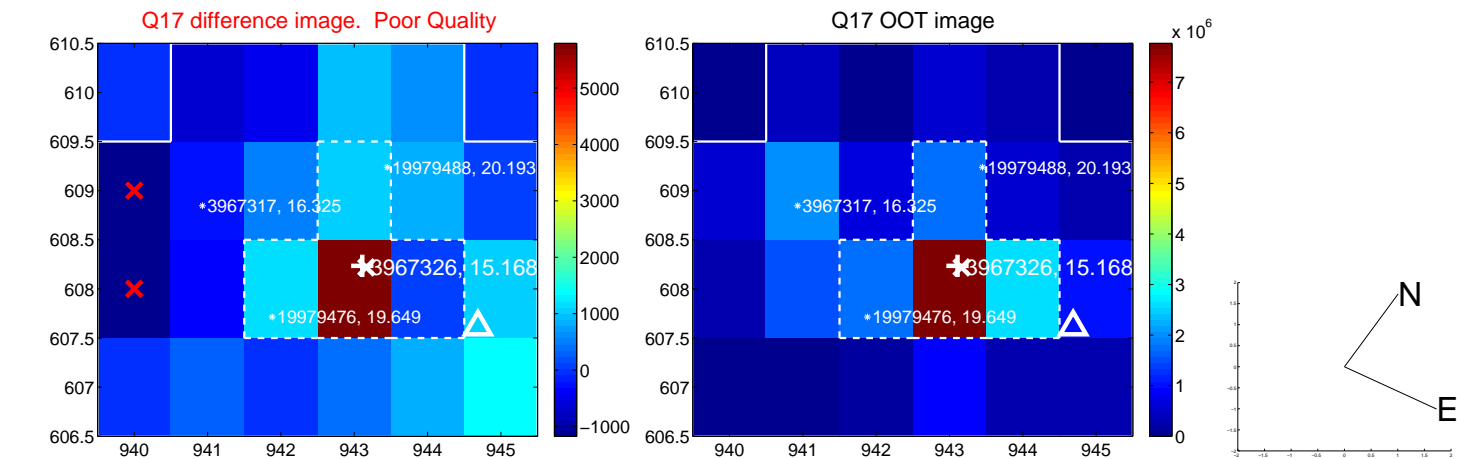
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

