

# KIC 008779891

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008779891-01	OBS	No	1.010187	131.876025	156.9	4.955	16.6	17.3	2.76	6286	3.47	22035.80

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008779891-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

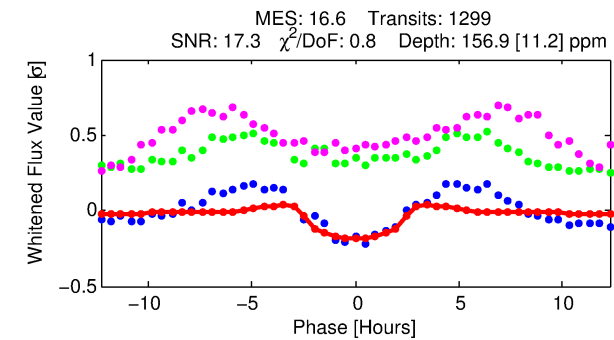
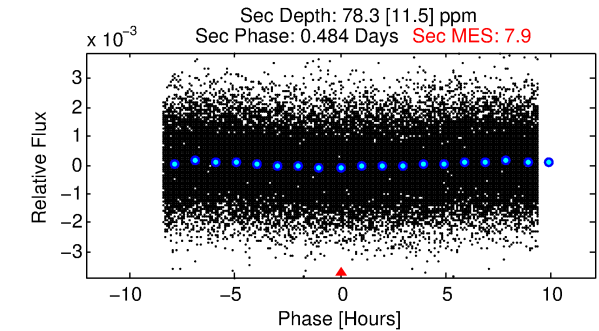
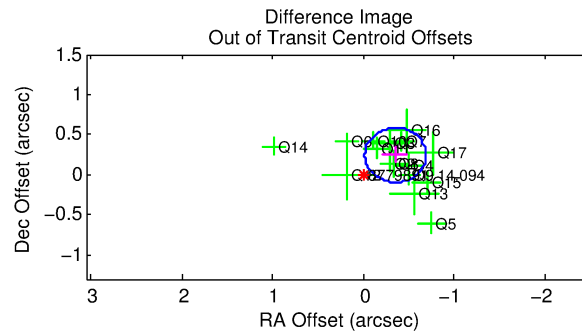
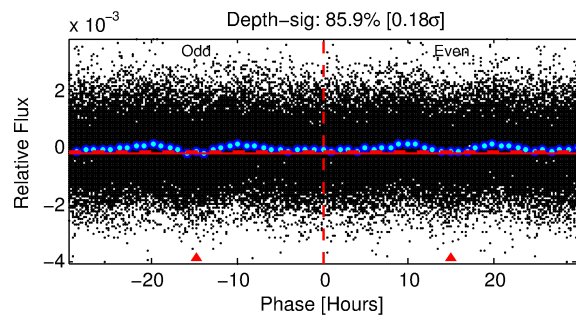
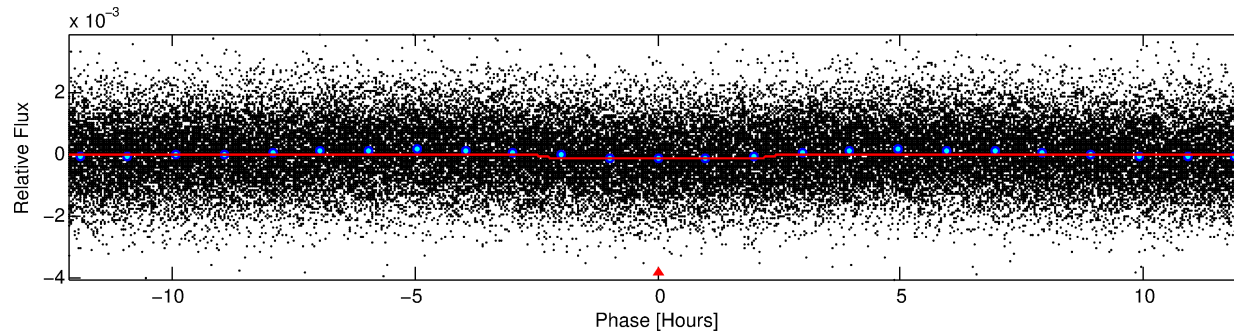
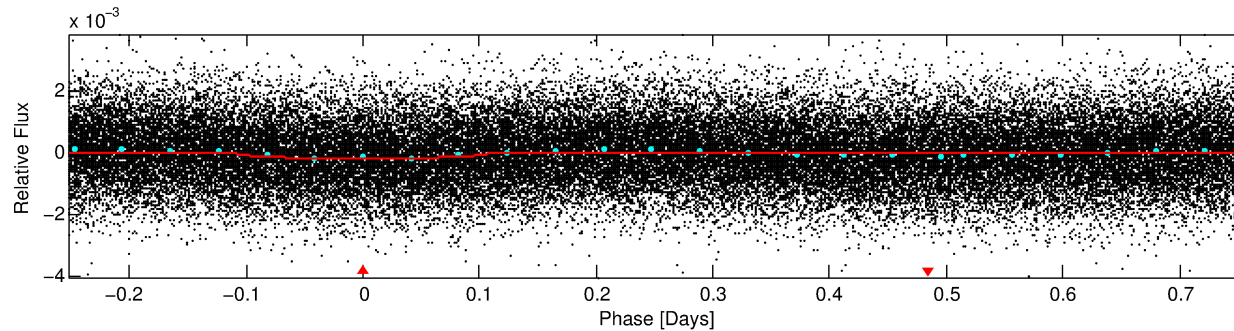
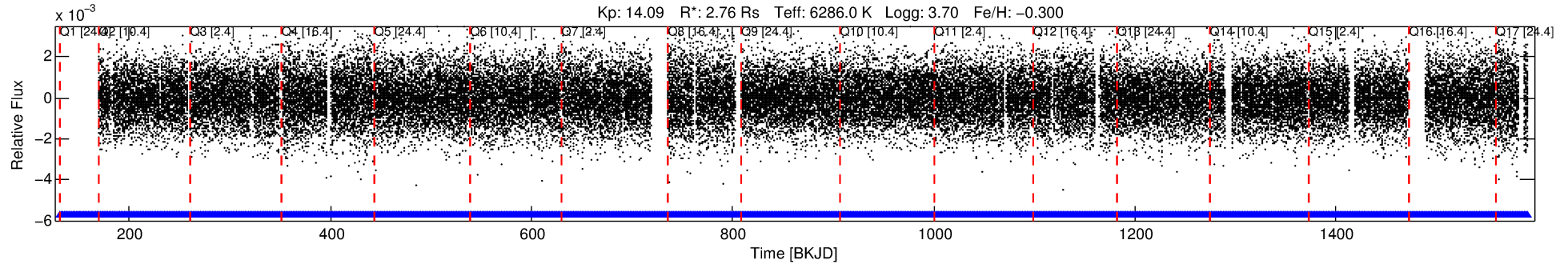
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008779891-01

No Significant Match Found

# DV One-Page Summary

KIC: 8779891 Candidate: 1 of 1 Period: 1.010 d



## DV Fit Results:

Period = 1.01019 [0.00001] d  
Epoch = 131.8760 [0.0034] BKJD  
Rp/R\* = 0.0115 [0.0099]  
a/R\* = 1.69 [4.75]  
b = 0.01 [642.23]  
Seff = 22035.80 [22344.38]  
Teq = 3107 [788] K  
Rp = 3.47 [3.58] Re  
a = 0.0220 [0.0132] AU  
Ag = 1.73 [3.45] [0.21 $\sigma$ ]  
Teffp = 5511 [2379] K [0.96 $\sigma$ ]

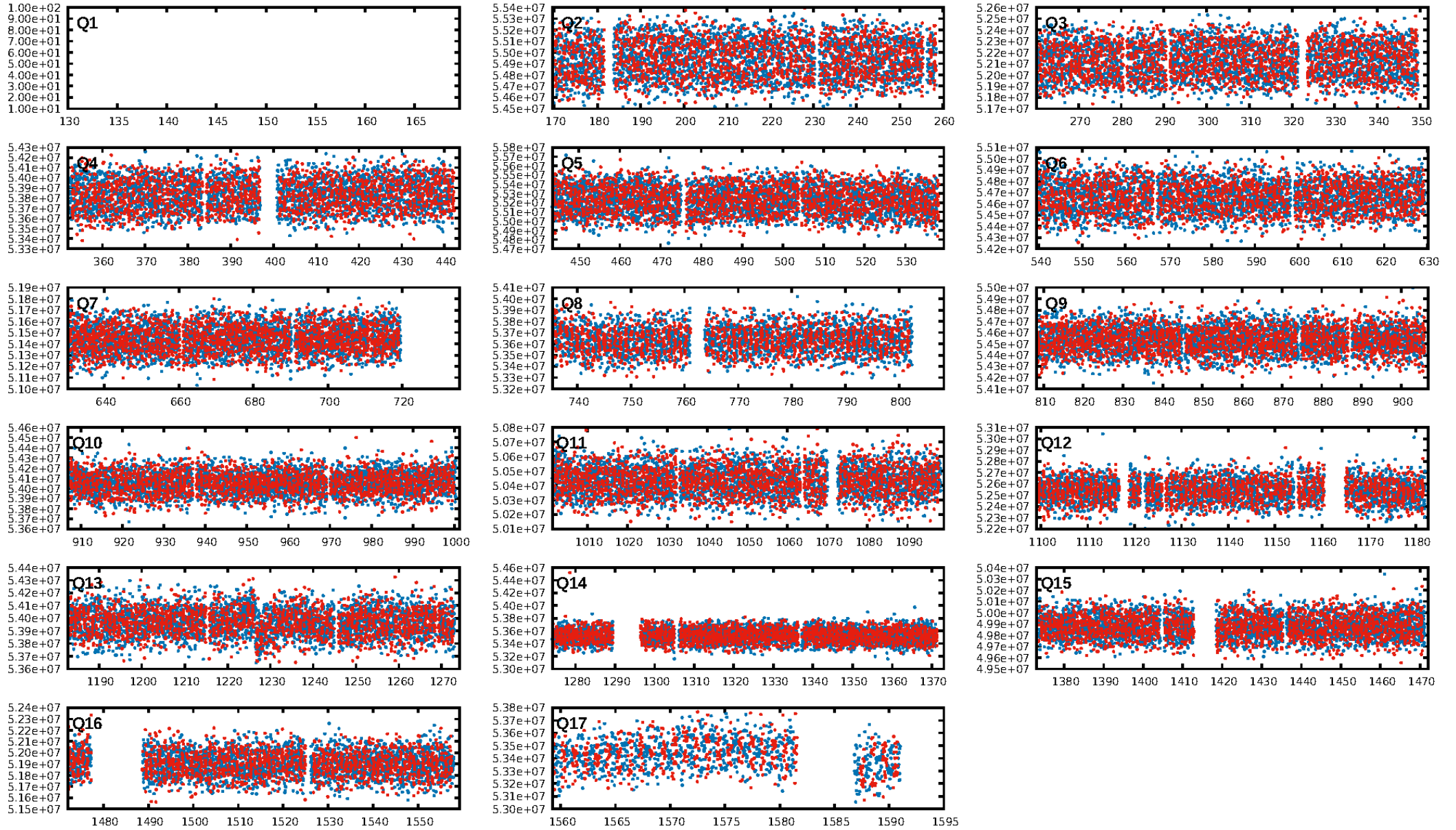
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 6.10e-51  
RollingBand-fgt: 1.00 [1272/1272]  
GhostDiagnostic-chr: 1.224  
Centroid-sig: 0.0%  
Centroid-so: 0.489 arcsec [1.73 $\sigma$ ]  
OotOffset-rm: 0.430 arcsec [3.81 $\sigma$ ]  
KicOffset-rm: 0.351 arcsec [2.82 $\sigma$ ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [16/16]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:50:21 Z

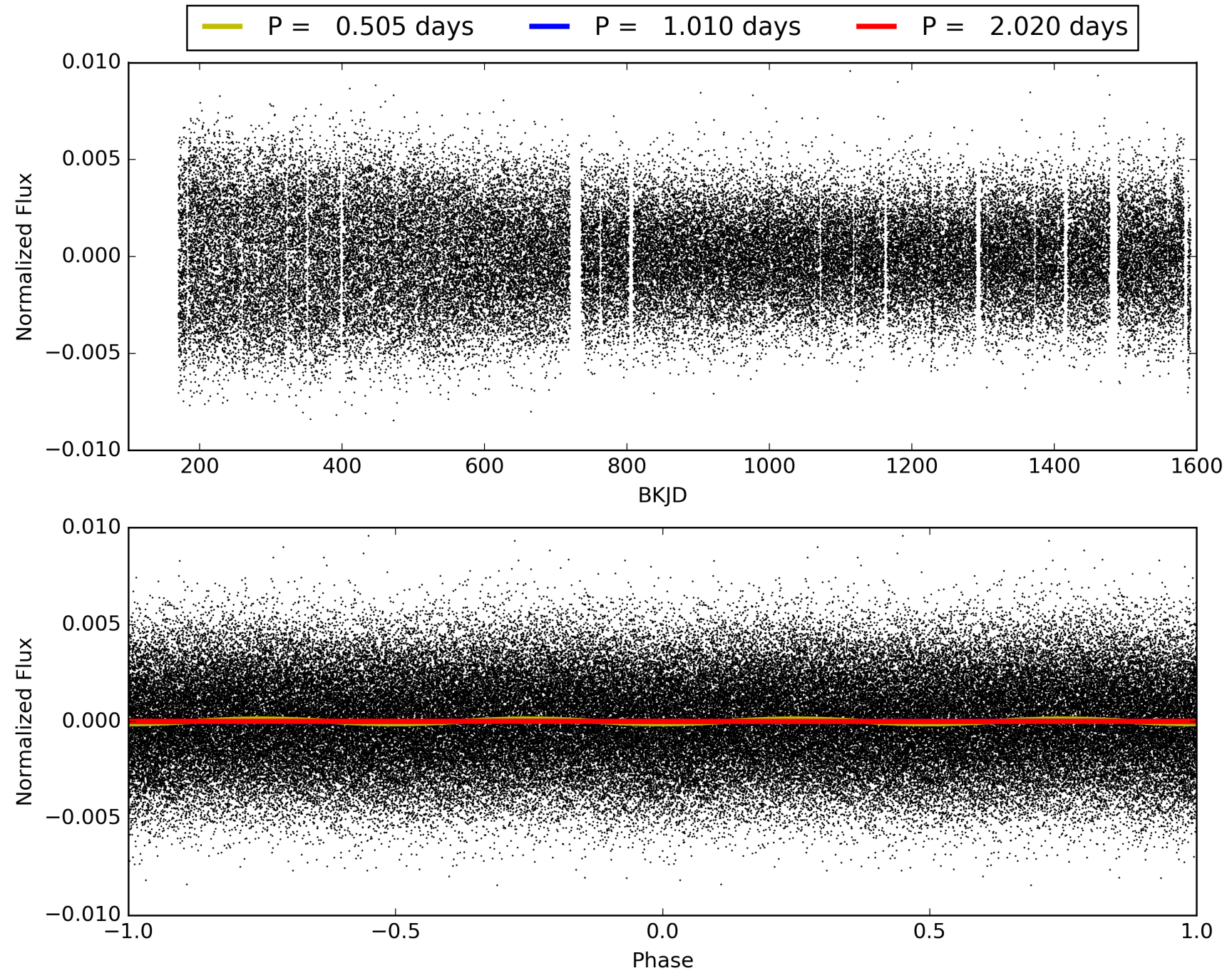
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008779891-01, PDC Light Curves



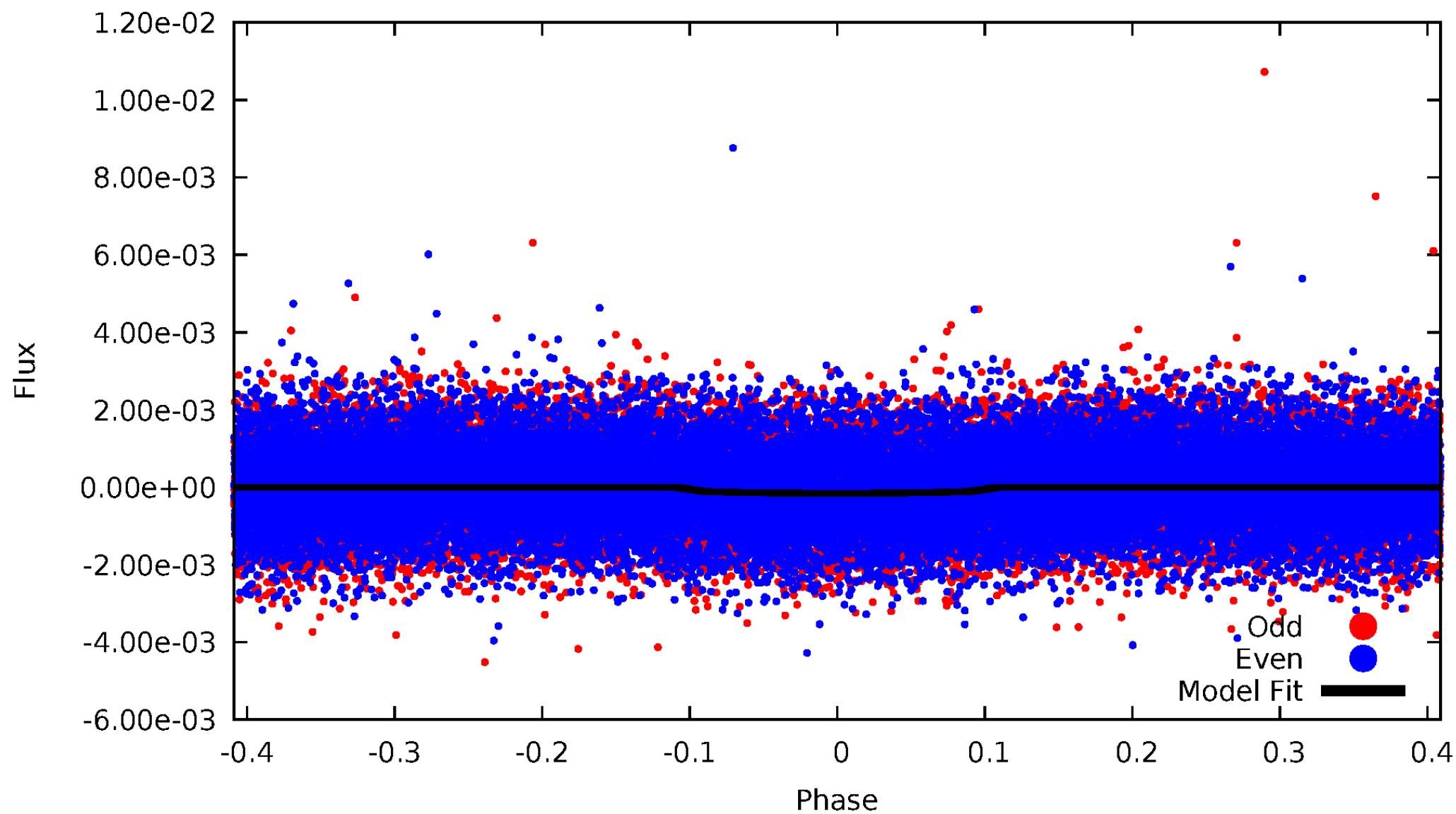


TCE 008779891-01



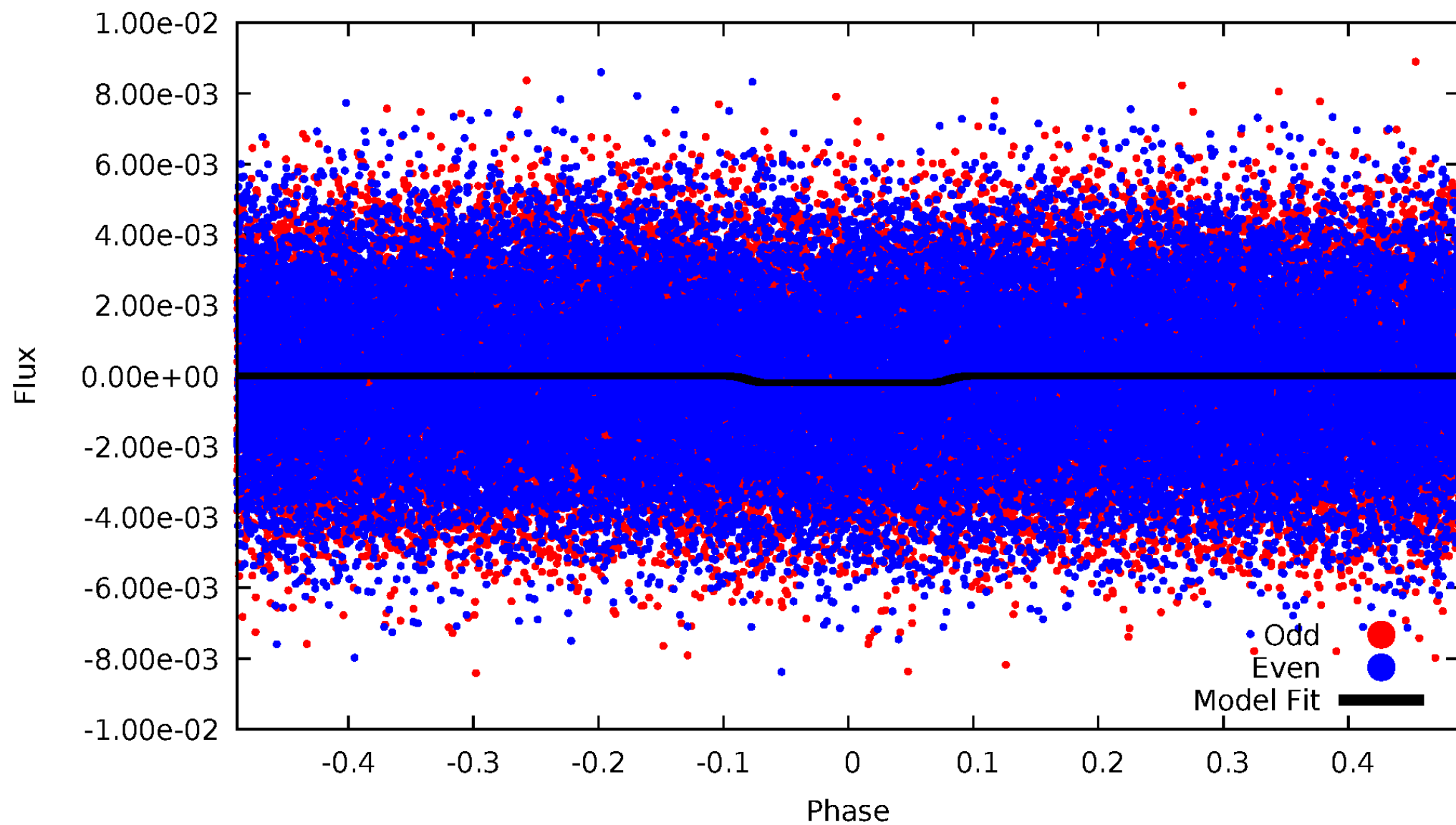
# DV Odd/Even

TCE 008779891-01

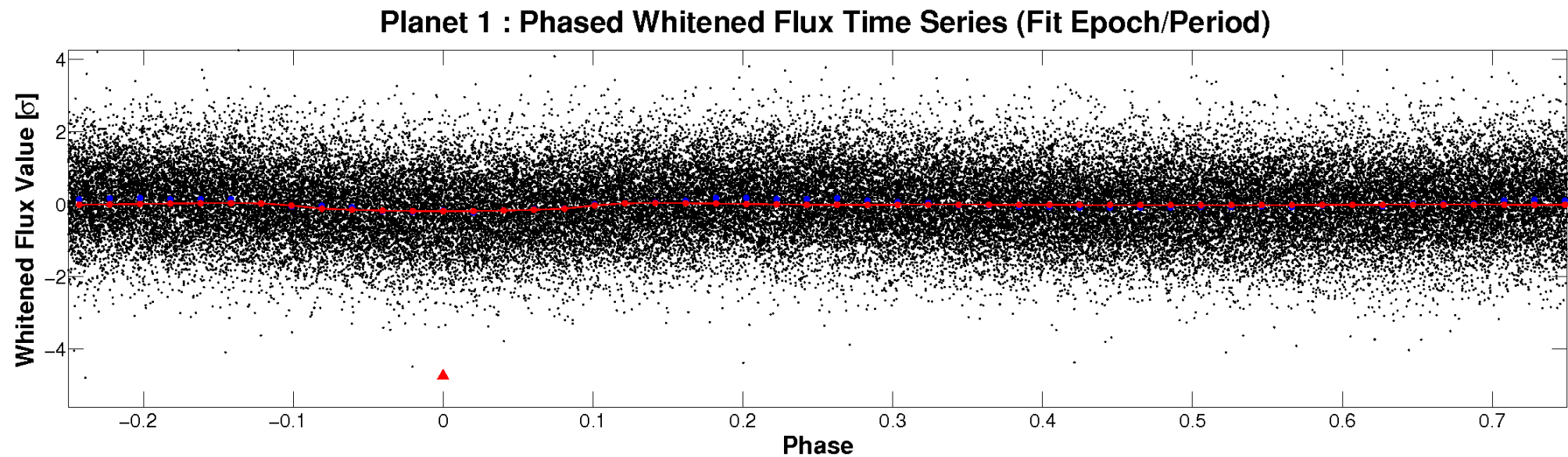
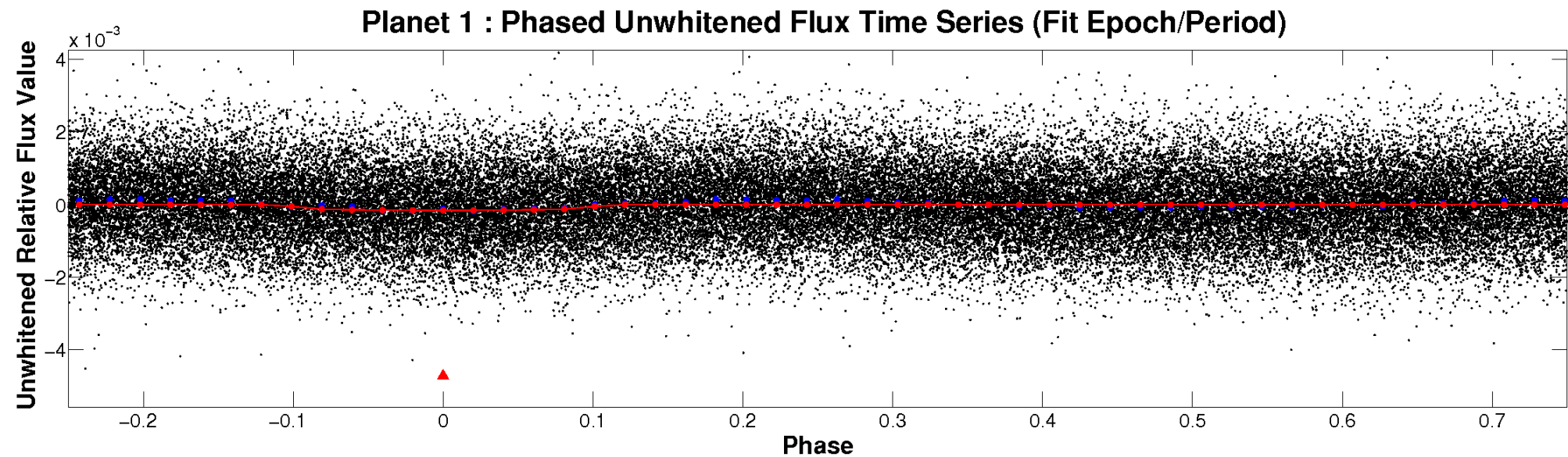


# ALT Odd/Even

TCE 008779891-01



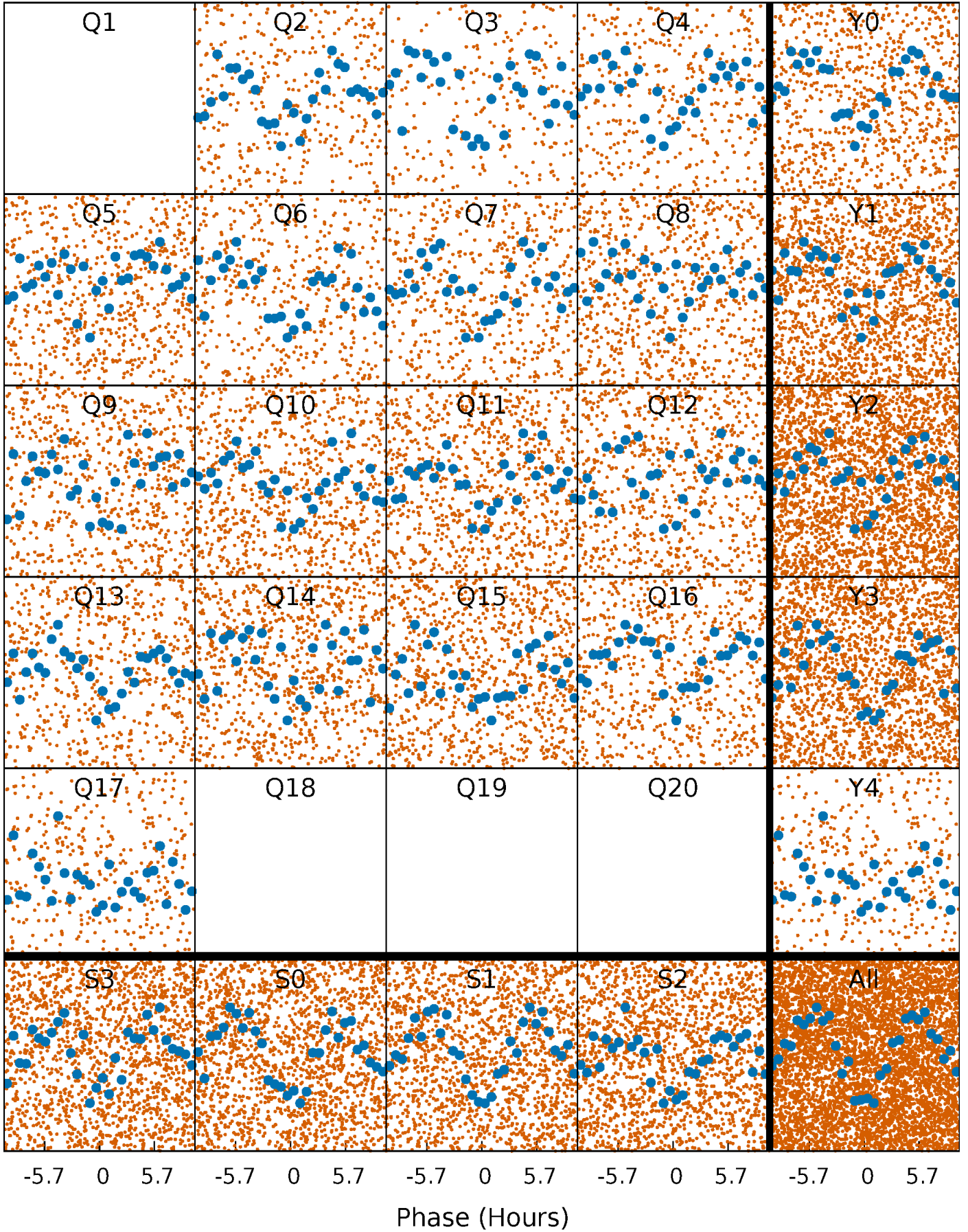
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

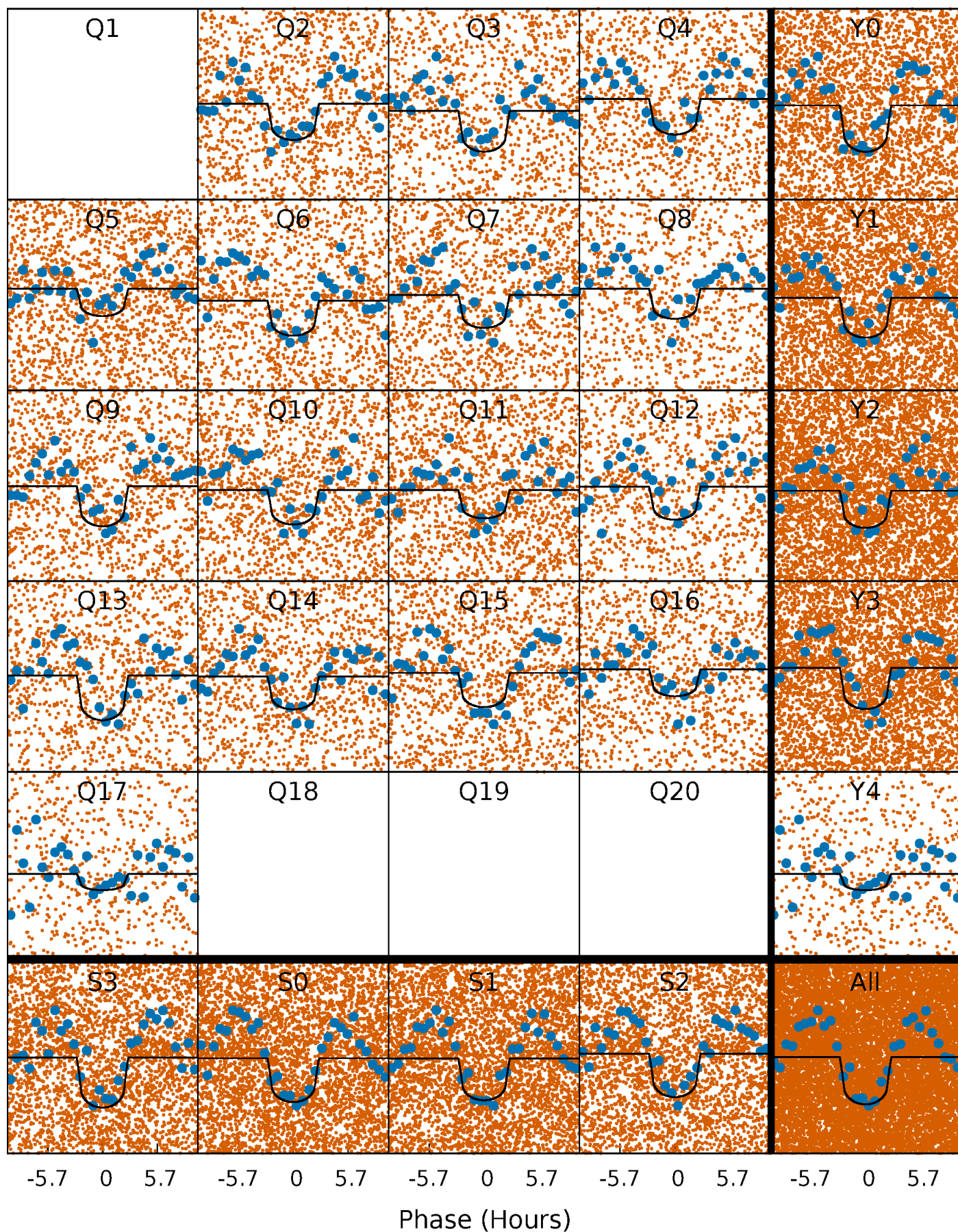
TCE 008779891-01 P= 1.010187 Days  $T_0=131.876025$  (BKJD)





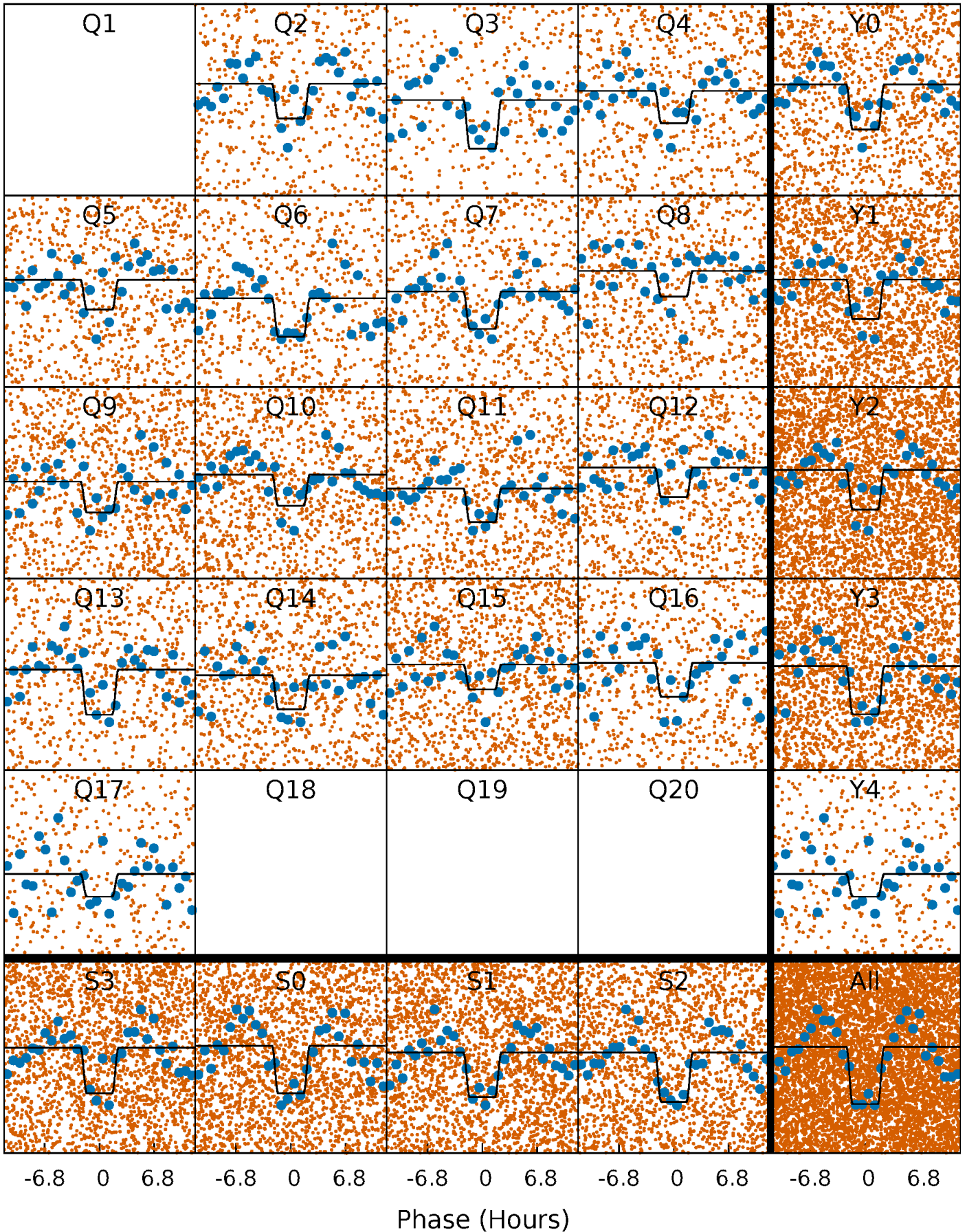
# DV Quarter-Phased Transit Curves

TCE 008779891-01 P= 1.010187 Days  $T_0=131.876025$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008779891-01 P= 1.010225 Days  $T_0=131.850759$  (BKJD)

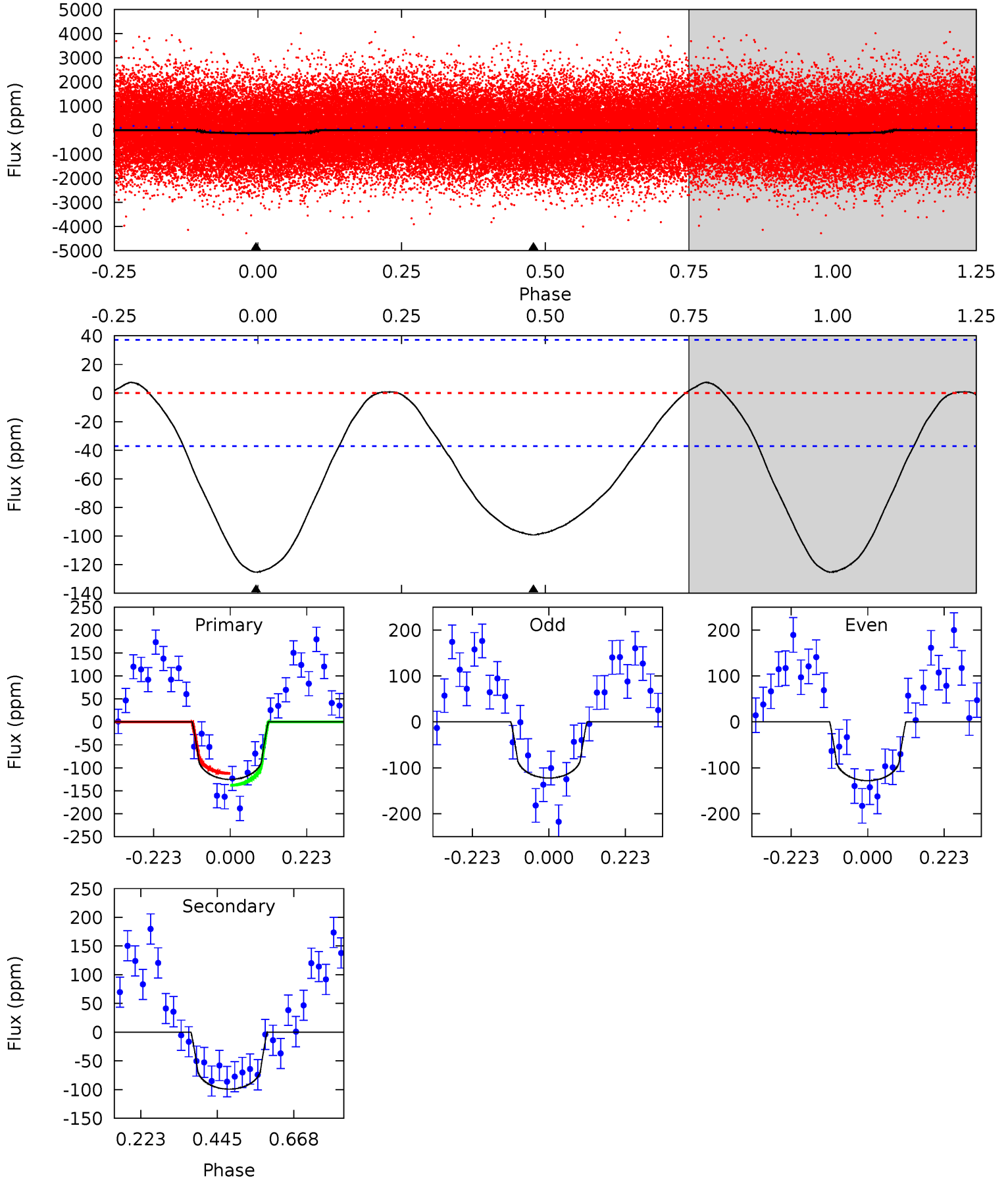




# DV Model-Shift Uniqueness Test

008779891-01, P = 1.010187 Days, E = 131.876025 Days

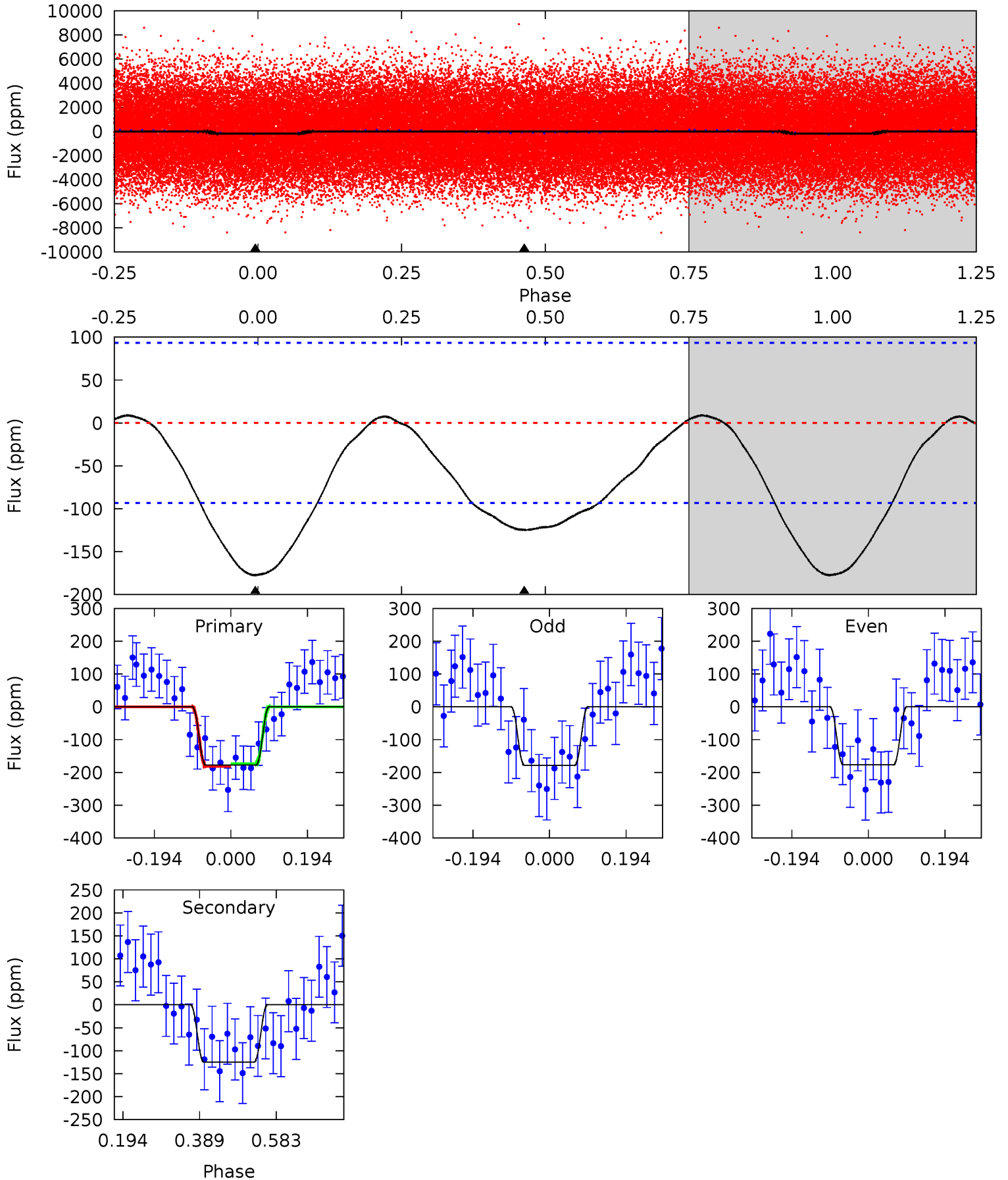
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	11.8	0	0	4.39	1.22	0.71	14.8	14.8	11.8	11.8	0.34	0.96	0.06	1.53



# Alt Model-Shift Uniqueness Test

008779891-01, P = 1.010225 Days, E = 131.850759 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
8.41	5.91	0	0	4.42	1.30	0.81	8.41	8.41	5.91	5.91	0.03	1.04	0.05	0.18





### Stellar Parameters For KIC 008779891

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6286^{+227}_{-227}$	$3.699^{+0.604}_{-0.107}$	$-0.300^{+0.300}_{-0.300}$	$2.760^{+0.530}_{-1.591}$	$1.390^{+0.206}_{-0.413}$	$0.093^{+0.718}_{-0.032}$
	+4%/-4%	+16%/-3%	+100%/-100%	+19%/-58%	+15%/-30%	+771%/-35%
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 008779891-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-99 \pm 8$	$3.15^{+2.88}_{-1.96}$	$4202^{+366}_{-616}$	$5587^{+4229}_{-1595}$	$2.626^{+15.567}_{-1.914}$
Alt.	$-125 \pm 21$	$3.93^{+2.92}_{-2.31}$	$4230^{+311}_{-666}$	$5272^{+2999}_{-1338}$	$2.153^{+9.826}_{-1.470}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

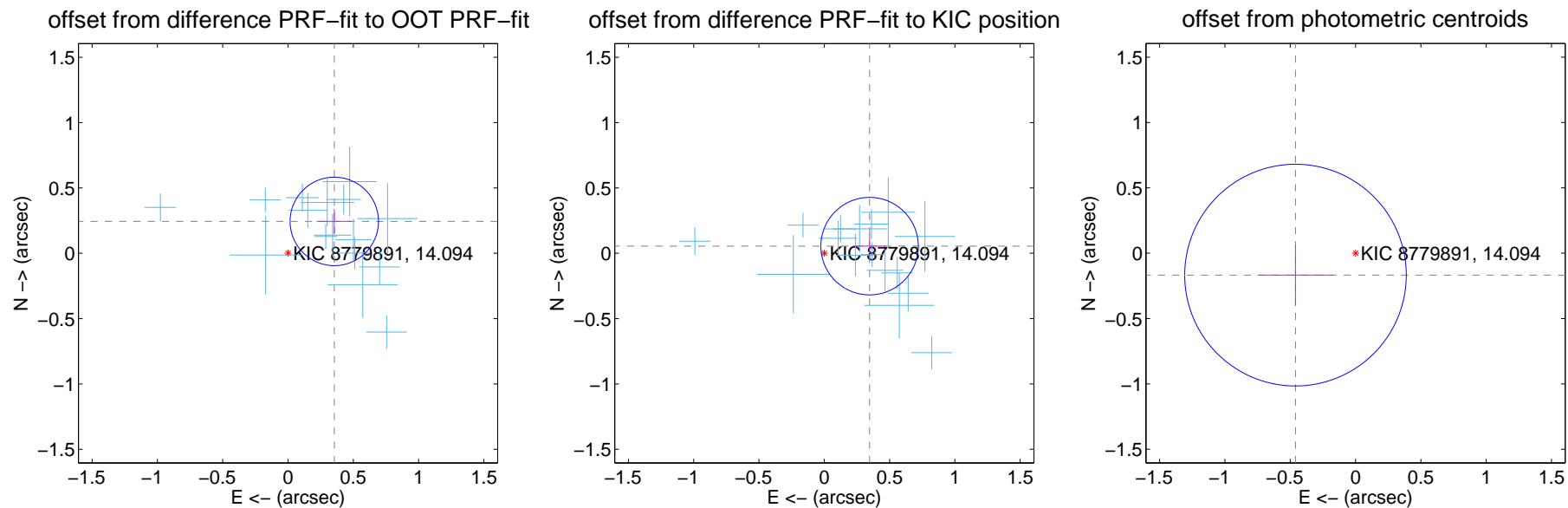
## DV Centroid Data

Supplemental centroid analysis for 008779891-01. Kepler magnitude: 14.09. Transit SNR 17.35

There are 16 quarters with good PRF difference image offsets

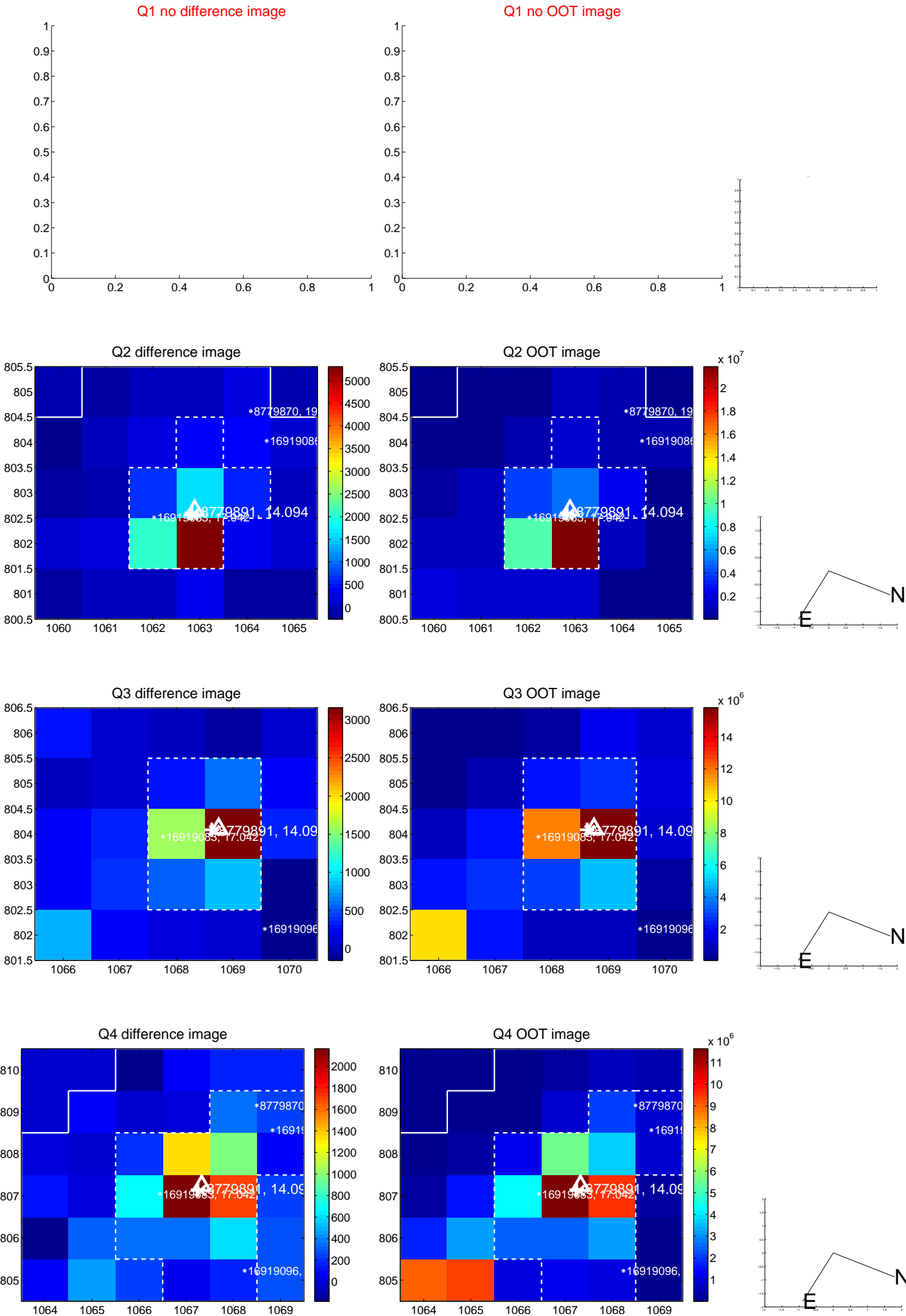
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>0.430 \pm 0.113</math></b>	<b>3.81</b>	$-0.354 \pm 0.134$	$0.244 \pm 0.093$
PRF-fit source offset from KIC position	$0.351 \pm 0.124$	2.82	$-0.347 \pm 0.128$	$0.055 \pm 0.095$
photometric centroid source offset	$0.49 \pm 0.28$	1.73	$0.46 \pm 0.29$	$-0.17 \pm 0.23$

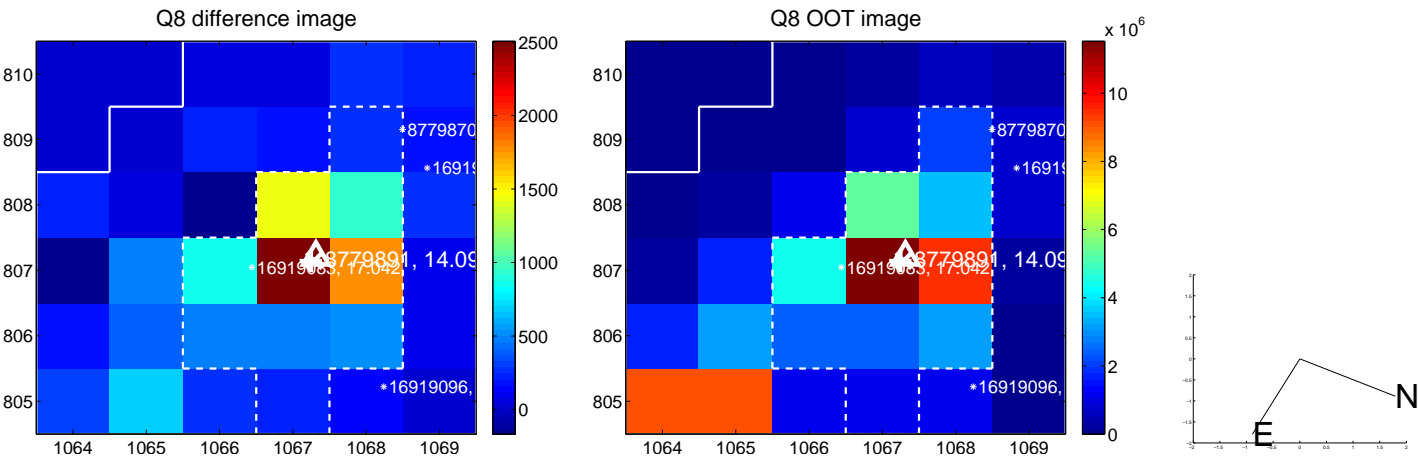
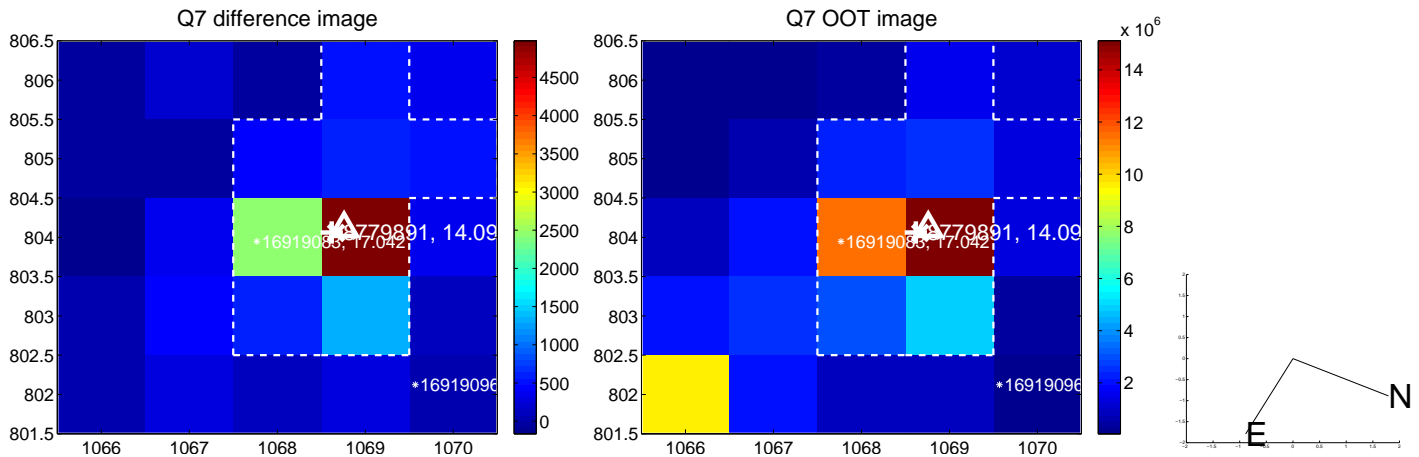
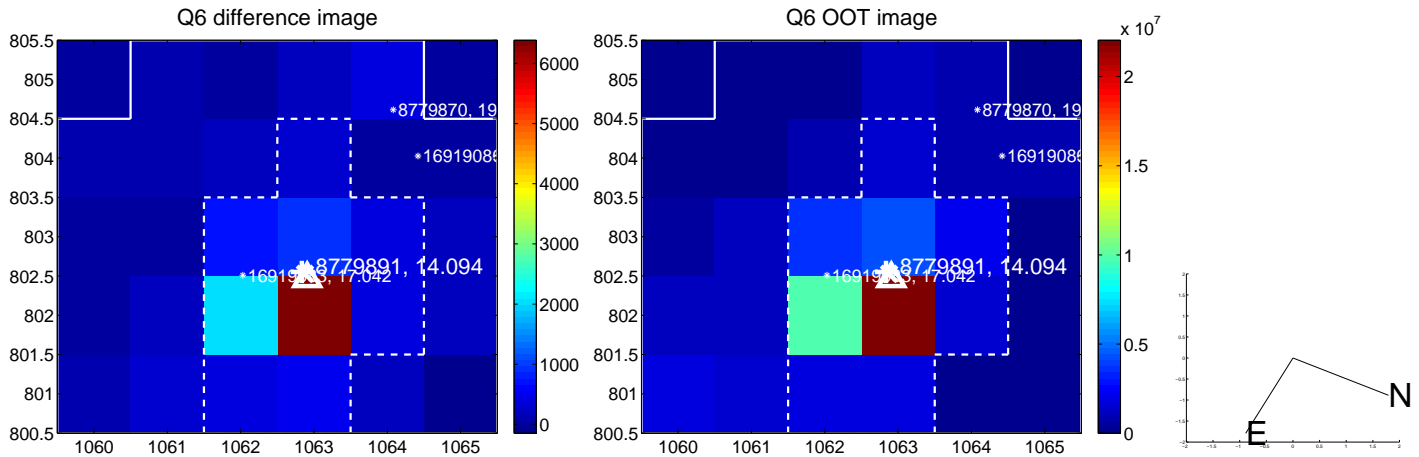
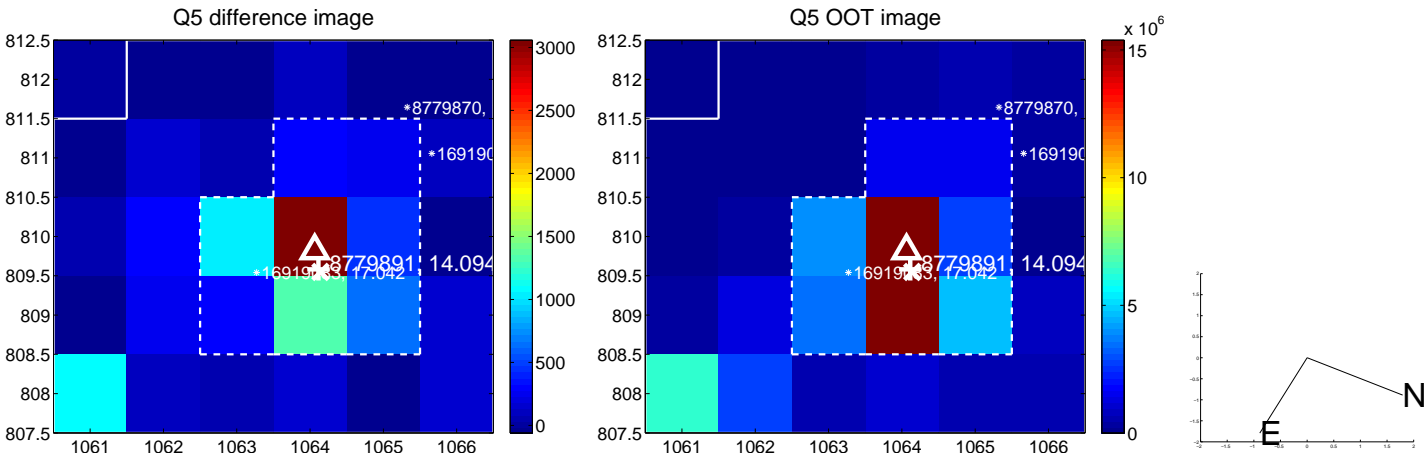


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

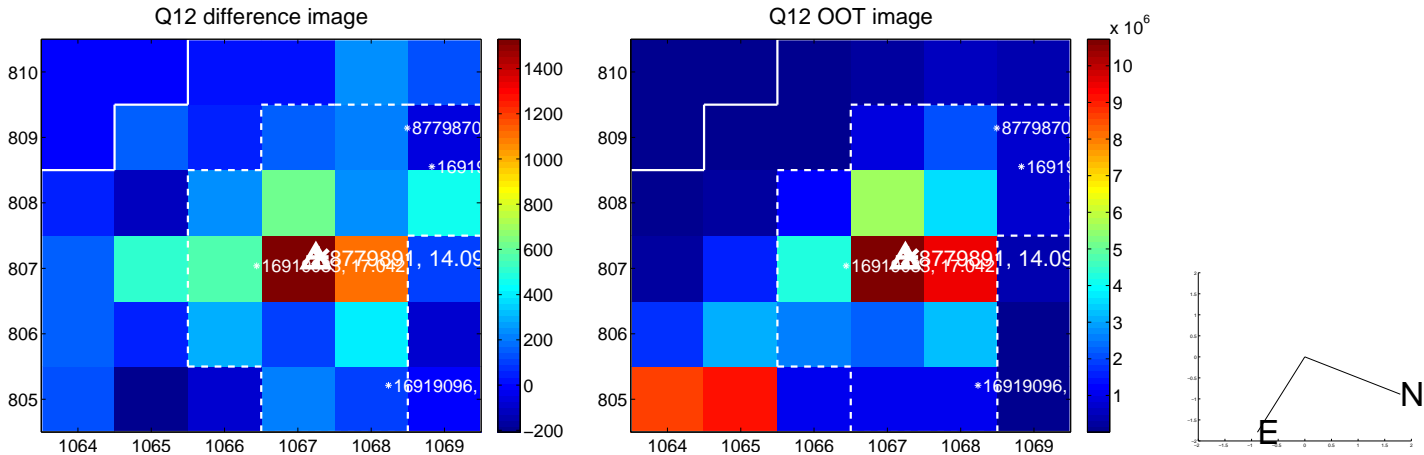
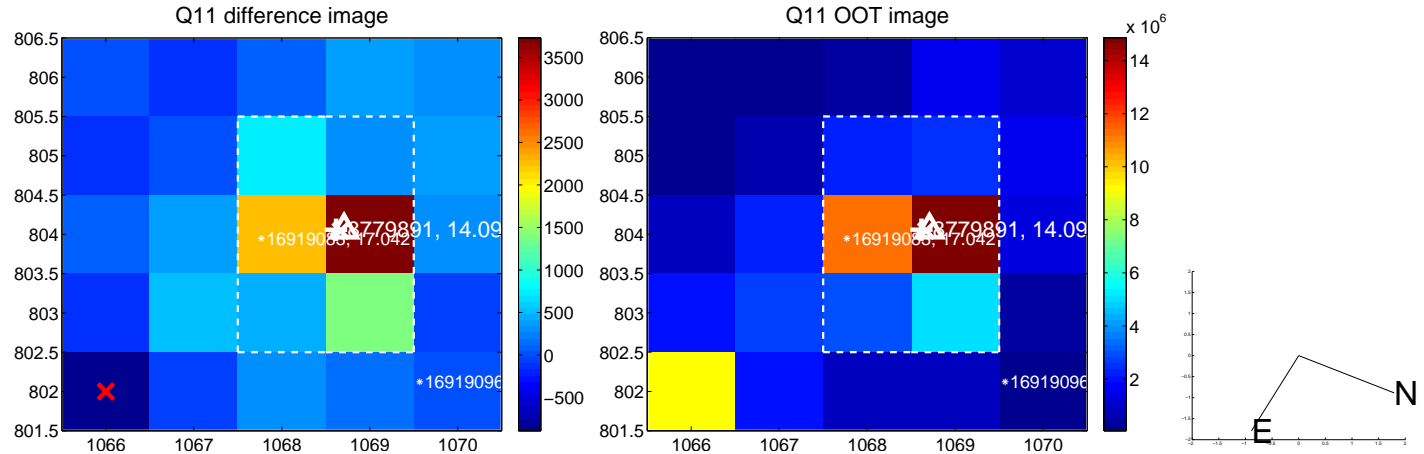
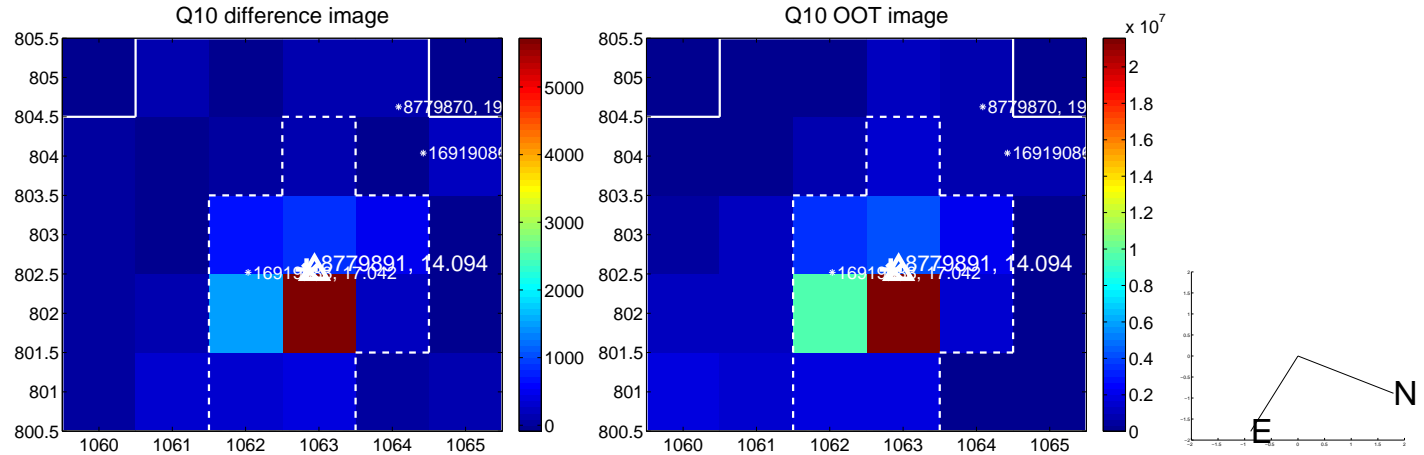
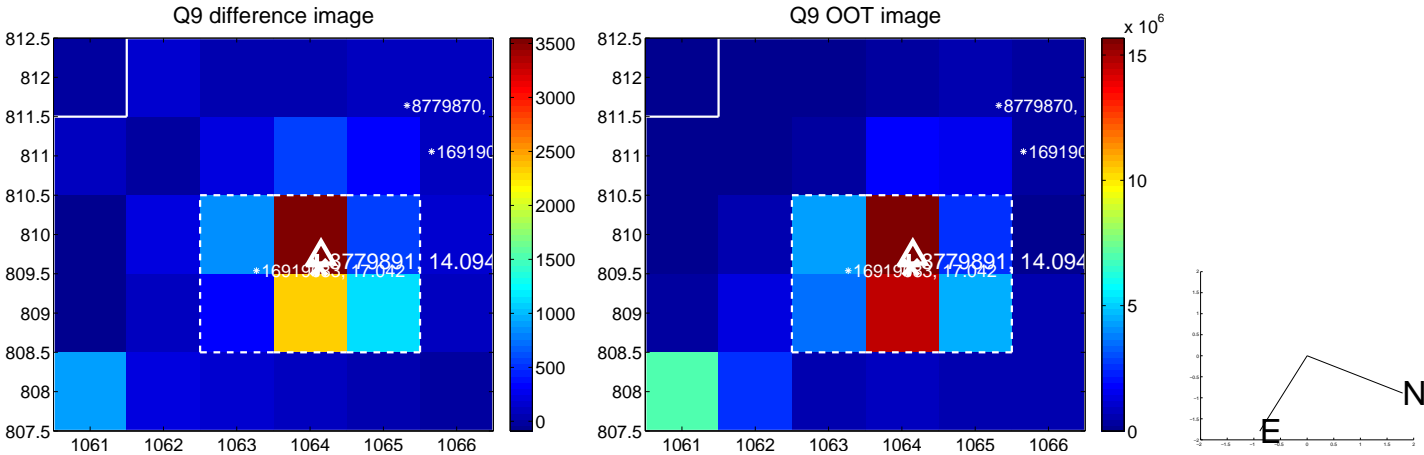


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

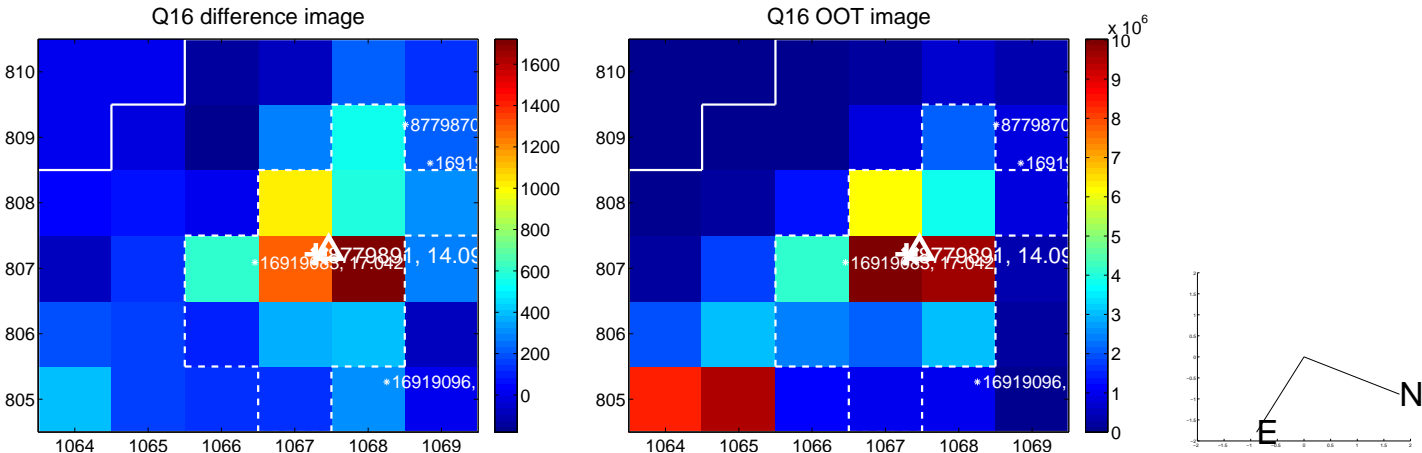
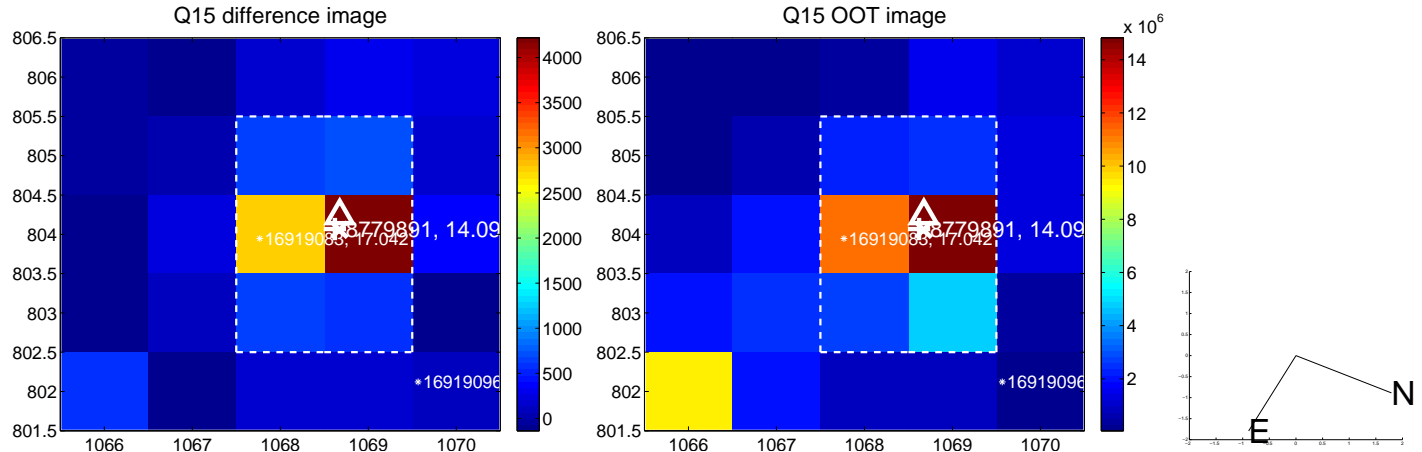
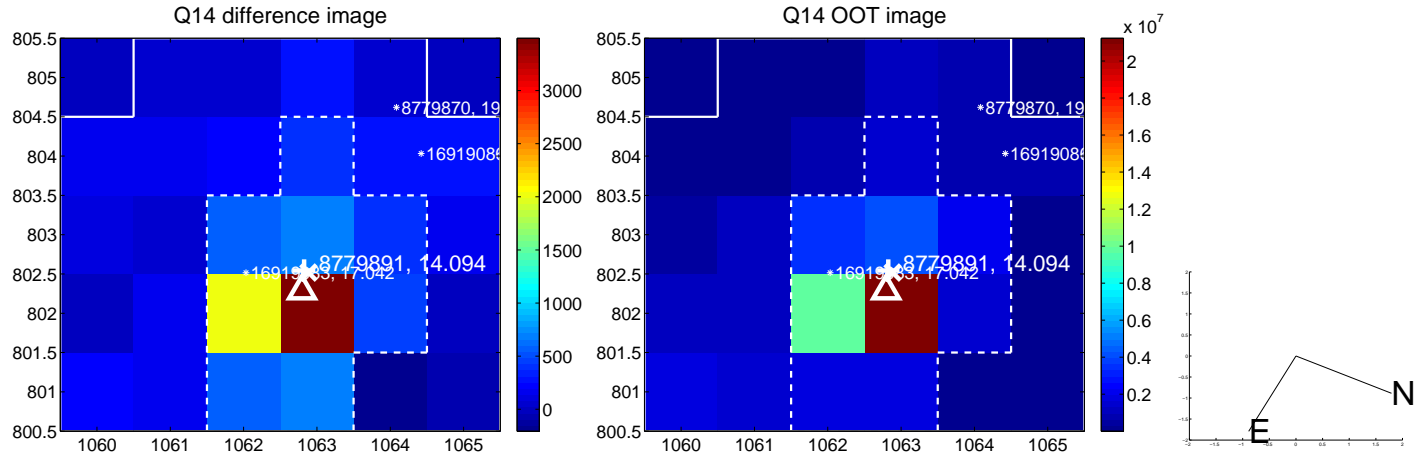
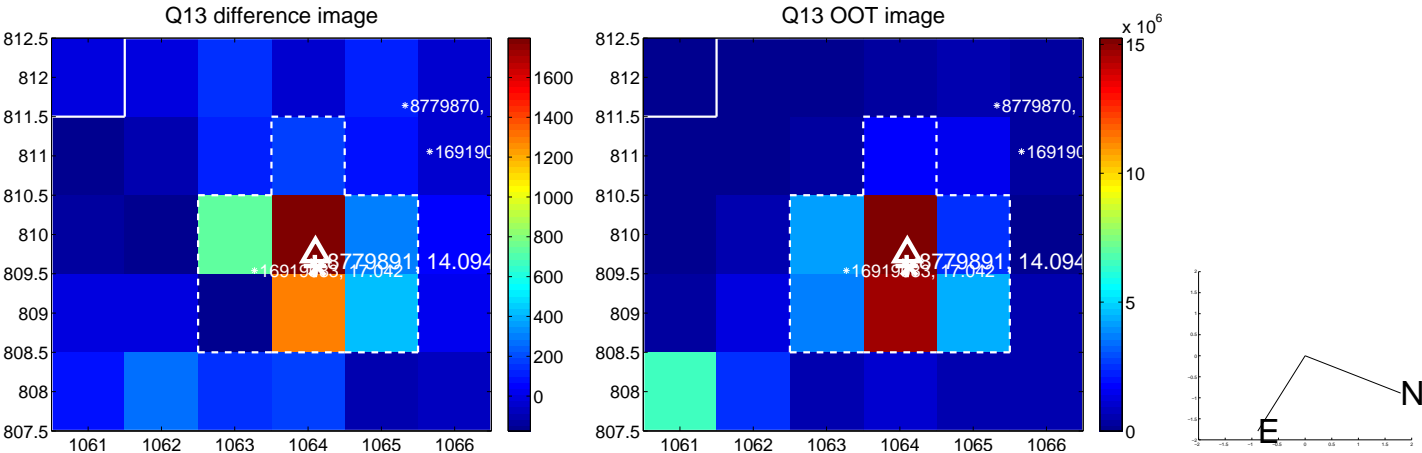




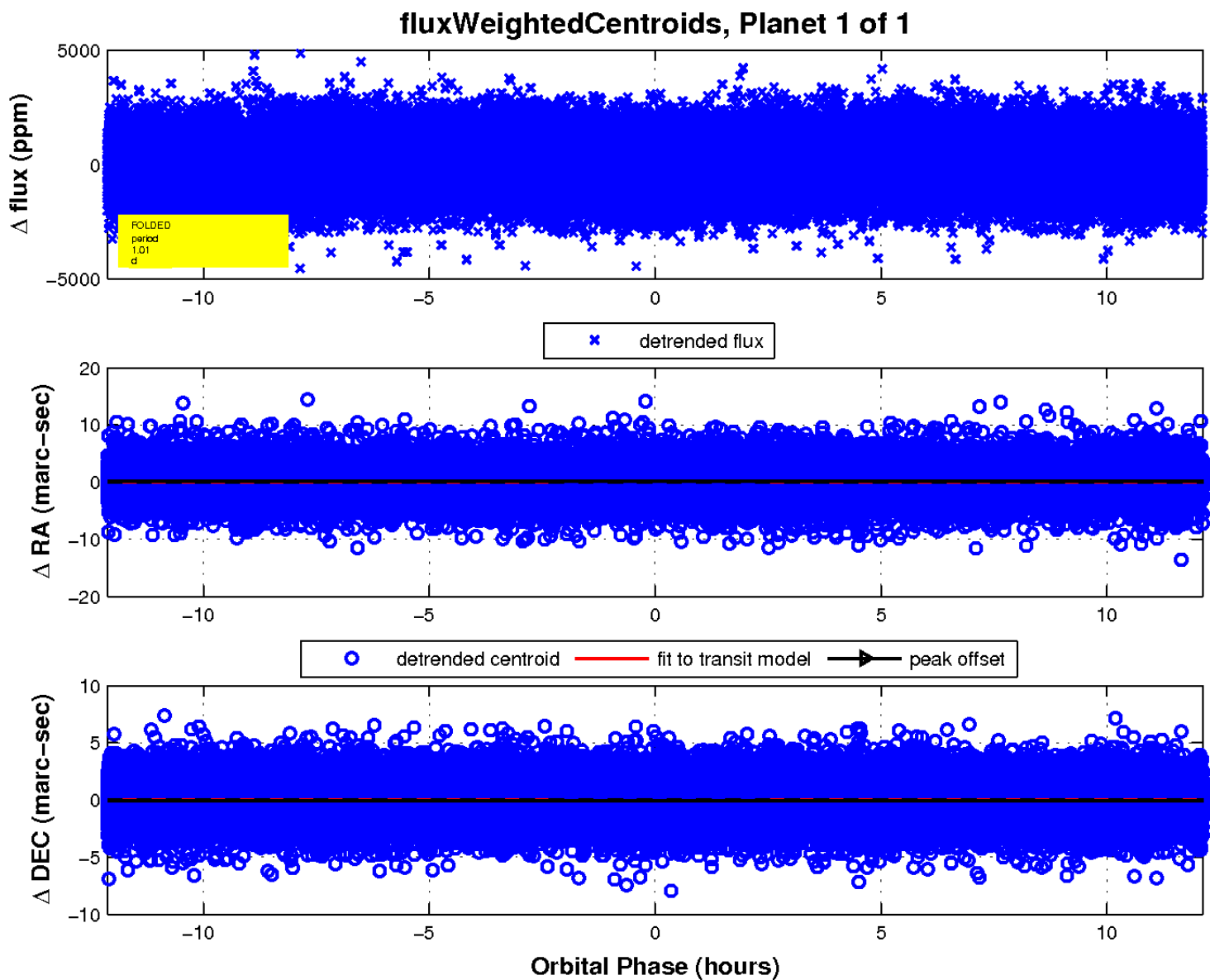
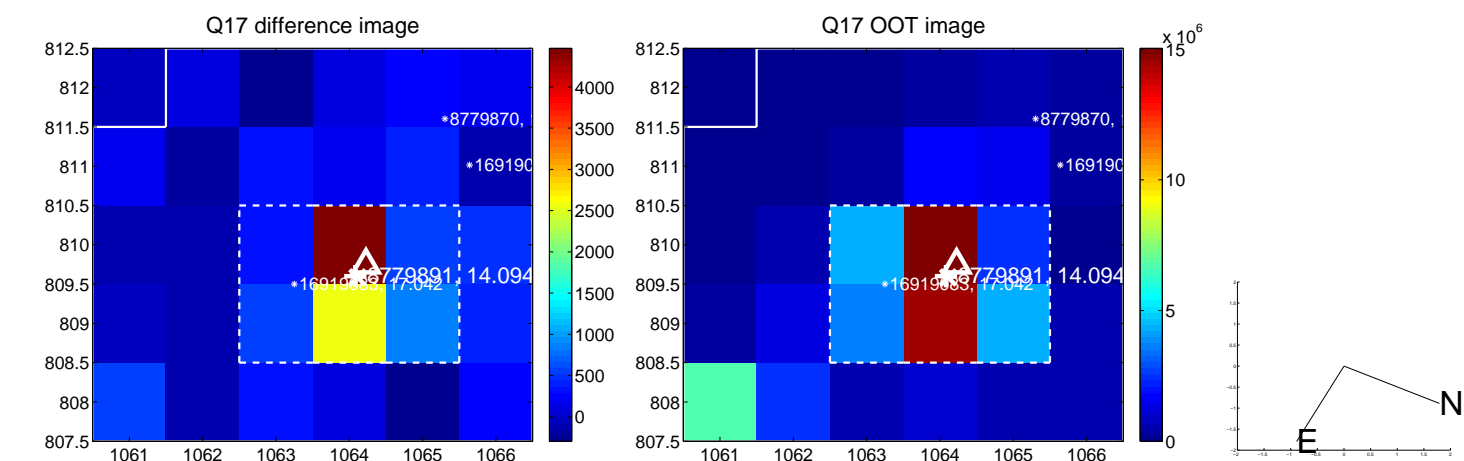
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

