

# KIC 007211879

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007211879-01	OBS	4342.01	0.594309	131.761626	108.9	0.736	12.0	13.3	0.84	5931	0.92	4331.40

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211879-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

**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 007211879-01

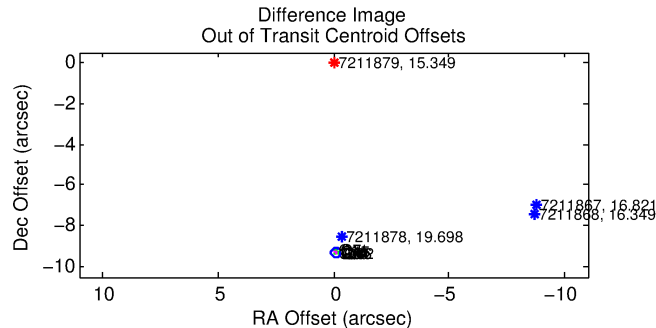
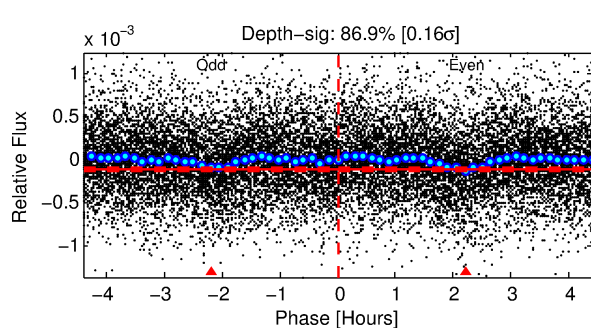
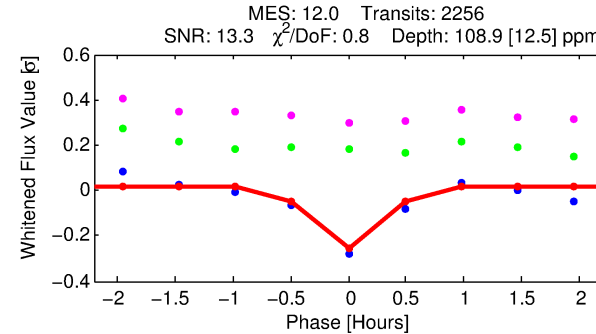
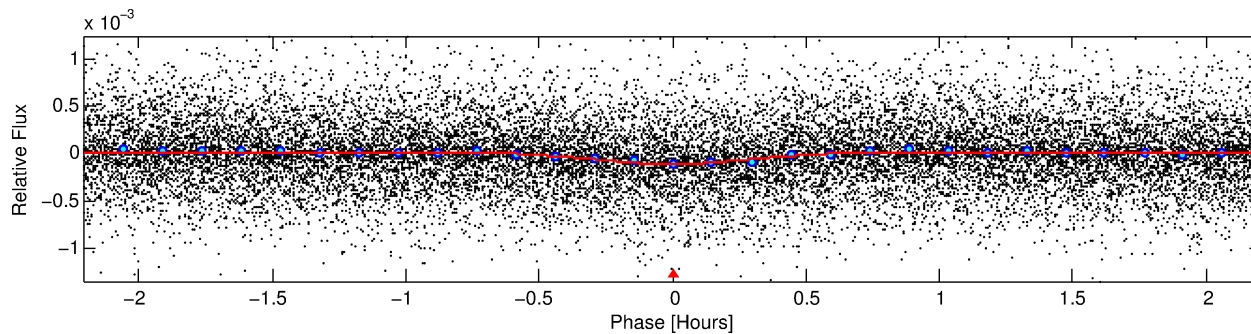
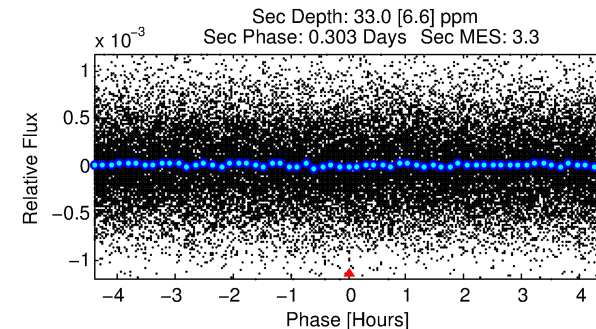
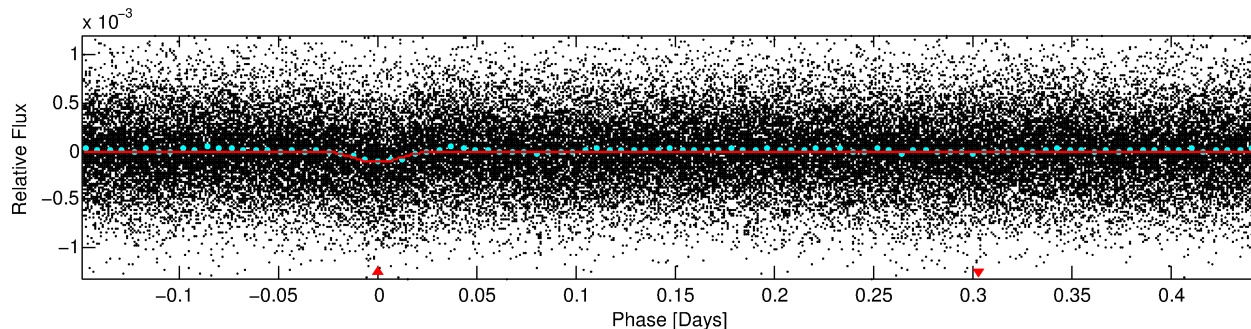
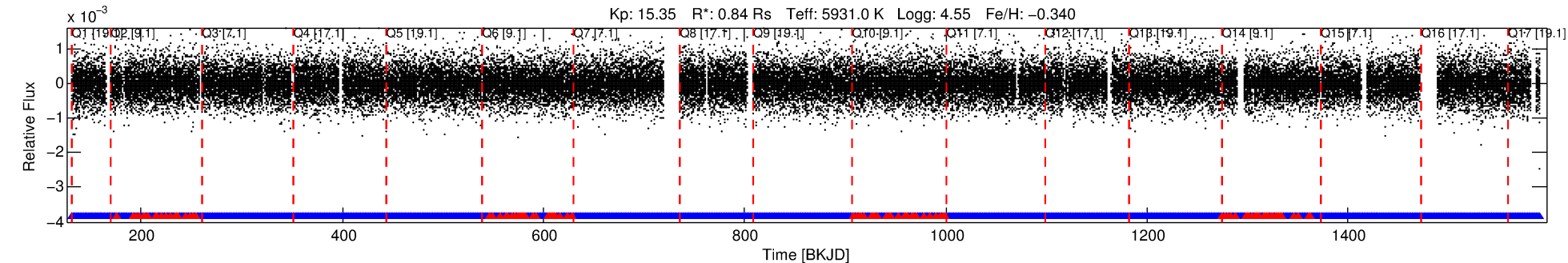
No Significant Match Found

# DV One-Page Summary

KIC: 7211879 Candidate: 1 of 1 Period: 0.594 d

KOI: K04342.01 Corr: 0.942

Kp: 15.35 R\*: 0.84 Rs Teff: 5931.0 K Logg: 4.55 Fe/H: -0.340



## DV Fit Results:

Period = 0.59431 [0.00001] d  
Epoch = 131.7616 [0.0010] BKJD  
Rp/R\* = 0.0100 [0.0042]  
a/R\* = 5.46 [10.66]  
b = 0.50 [3.04]  
Seff = 4331.40 [1679.09]  
Teq = 2069 [200] K  
Rp = 0.92 [0.47] Re  
a = 0.0135 [0.0034] AU  
Ag = 3.91 [3.65] [0.80σ]  
Teff = 4497 [973] K [2.44σ]

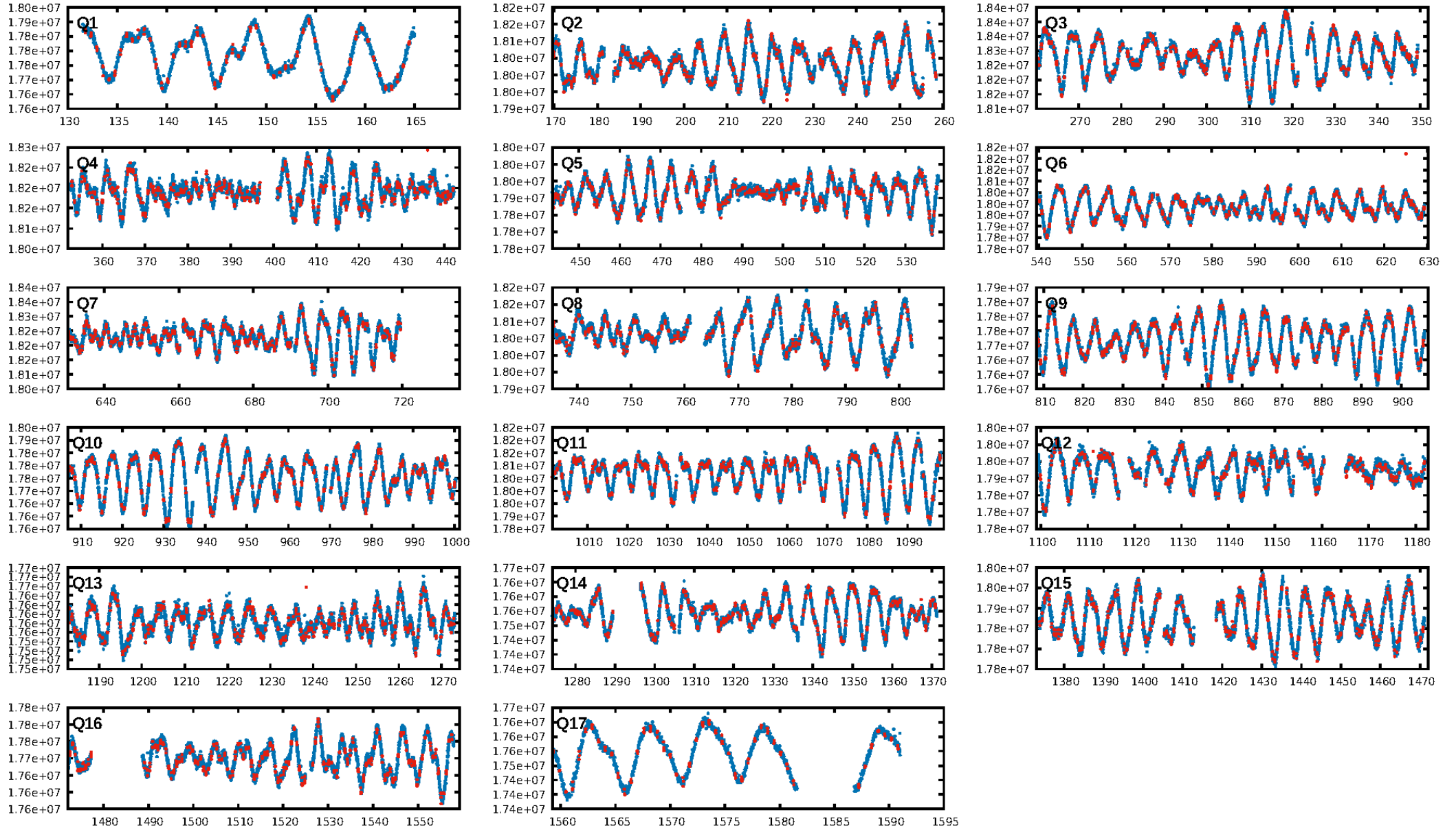
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.19e-32  
RollingBand-fgt: 0.95 [2045/2155]  
GhostDiagnostic-chr: -0.5931  
Centroid-sig: 0.0%  
Centroid-so: 111.078 arcsec [107.66σ]  
OotOffset-rm: 9.305 arcsec [131.45σ]  
KicOffset-rm: 9.376 arcsec [123.83σ]  
OotOffset-st: 4/4/4/0 [12]  
KicOffset-st: 4/4/4/0 [12]  
DiffImageQuality-fgm: 1.00 [12/12]  
DiffImageOverlap-fno: 1.00 [17/17]

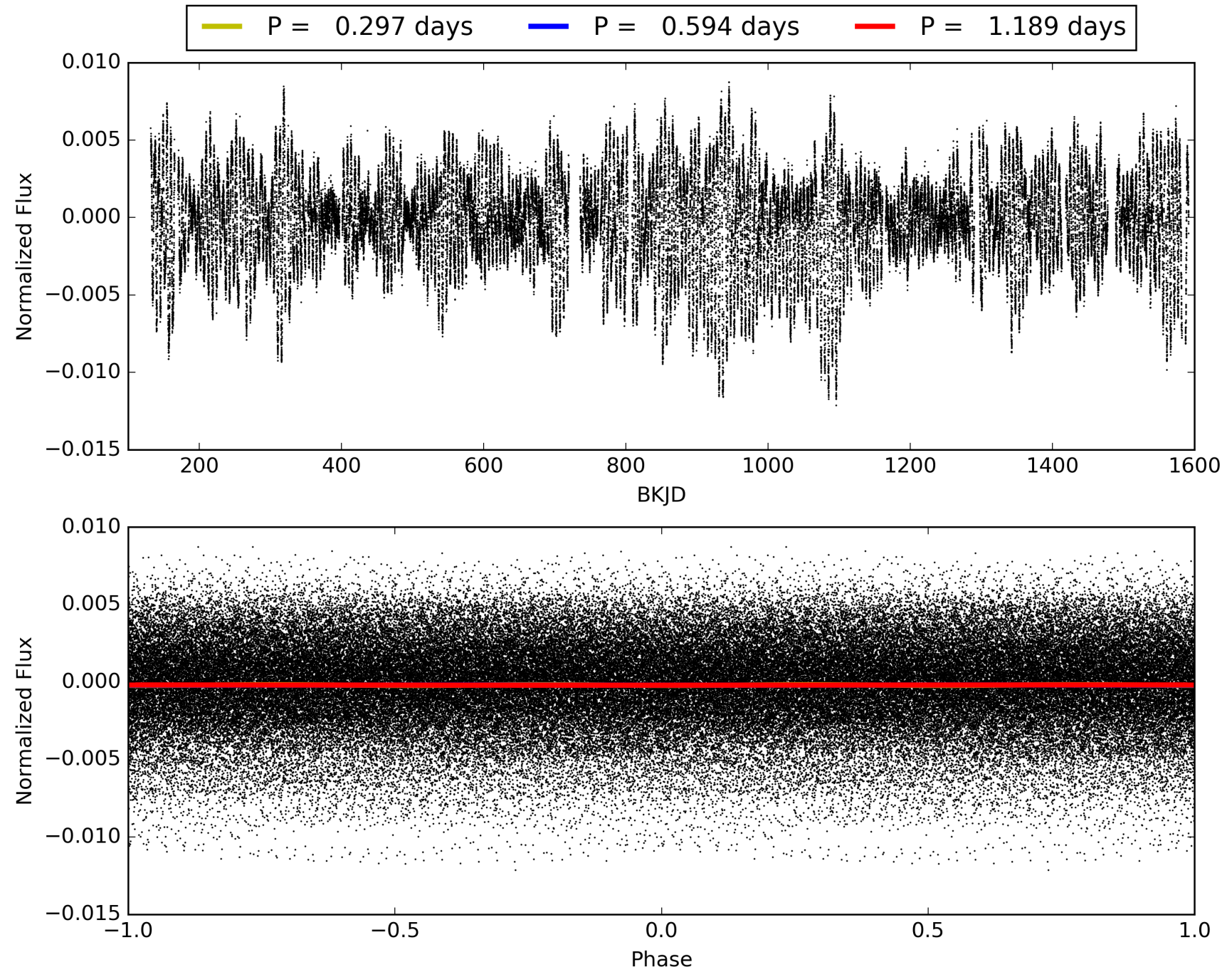
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:37:33 Z

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

# TCE 007211879-01, PDC Light Curves



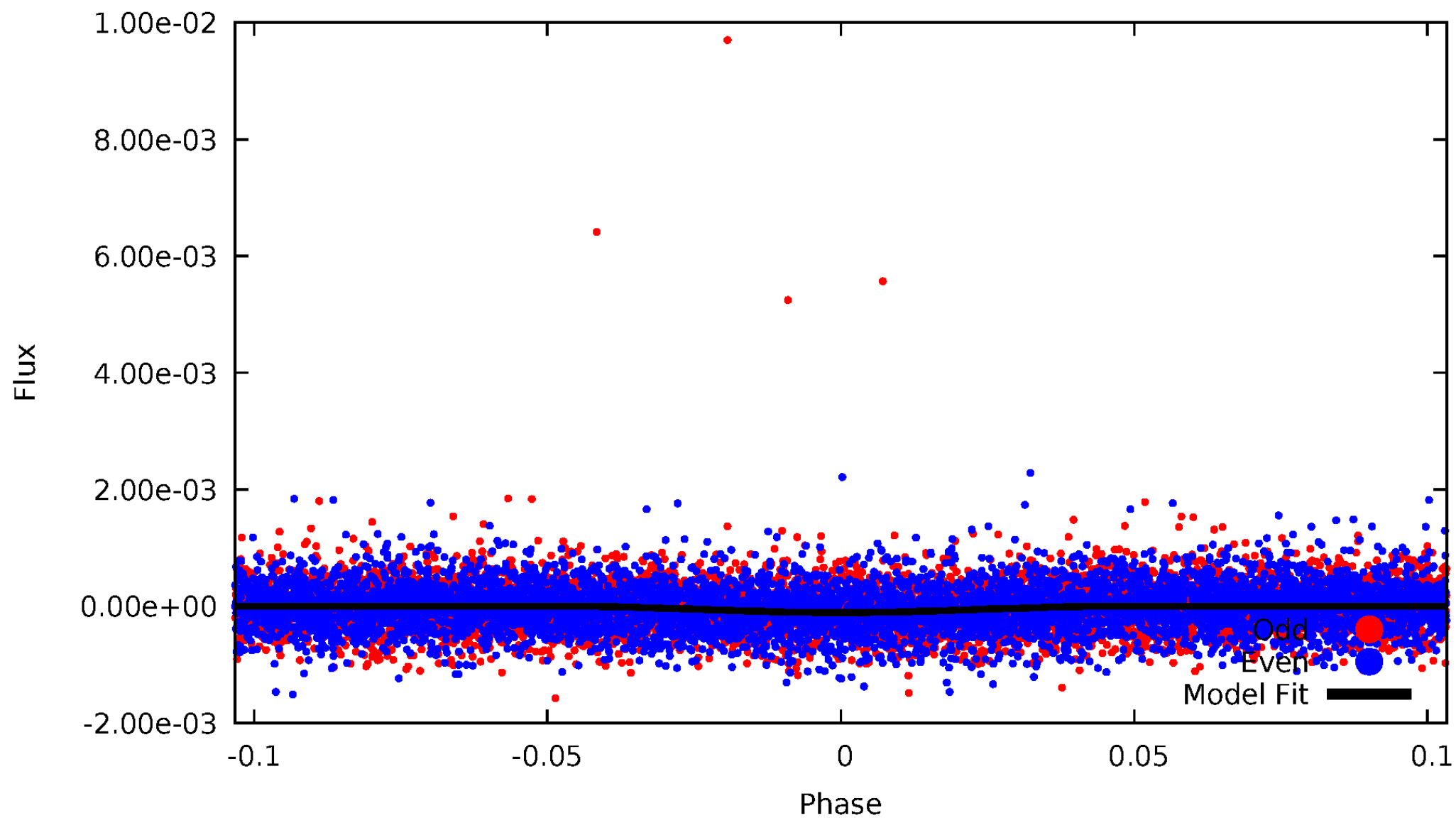
# TCE 007211879-01





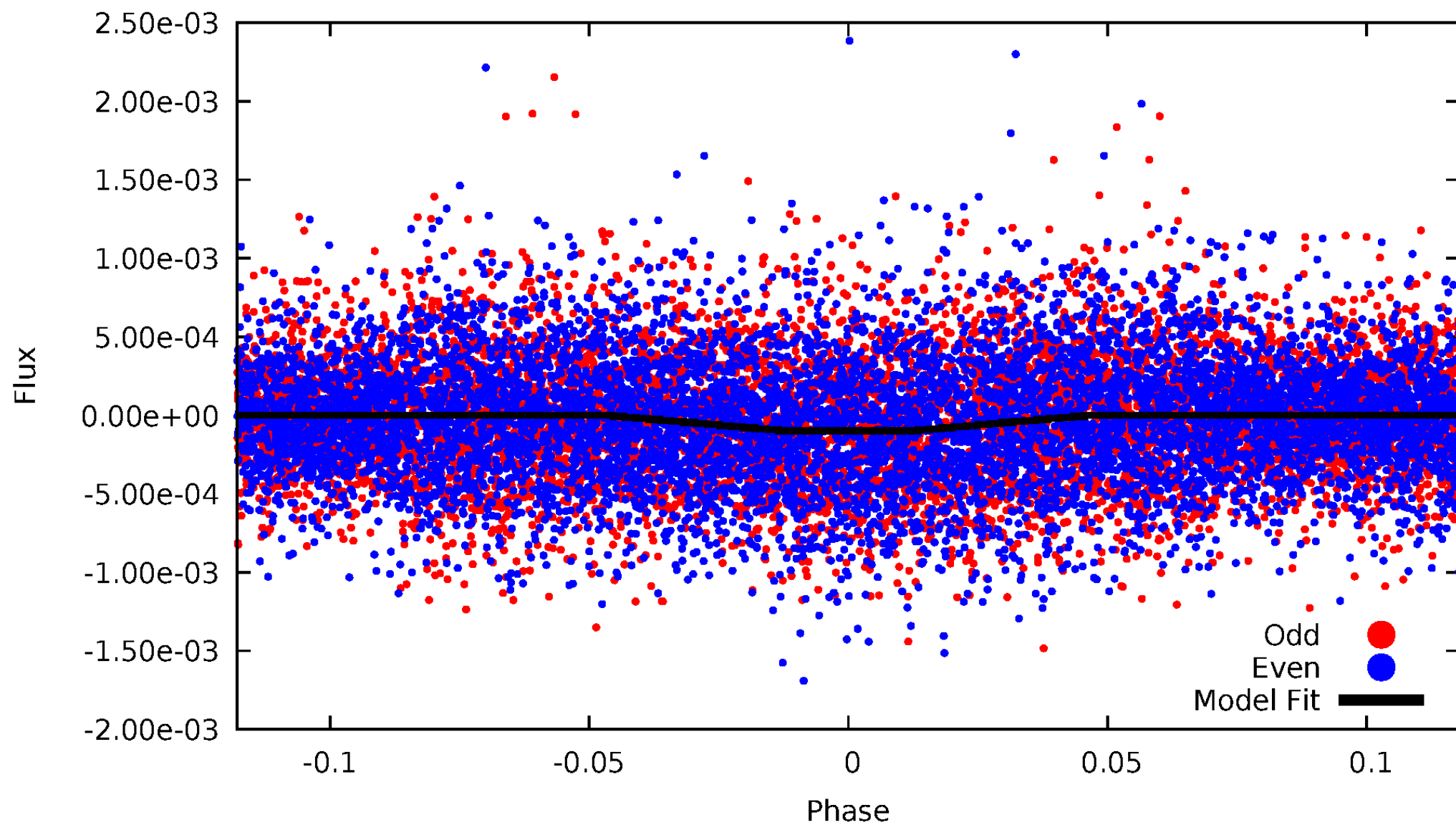
# DV Odd/Even

TCE 007211879-01



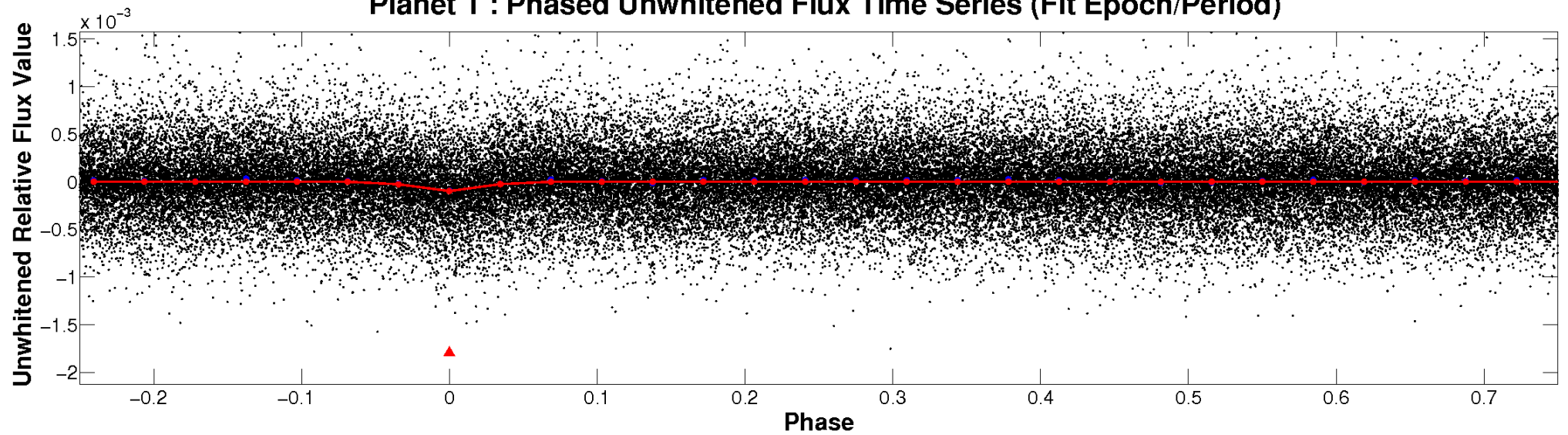
# ALT Odd/Even

TCE 007211879-01

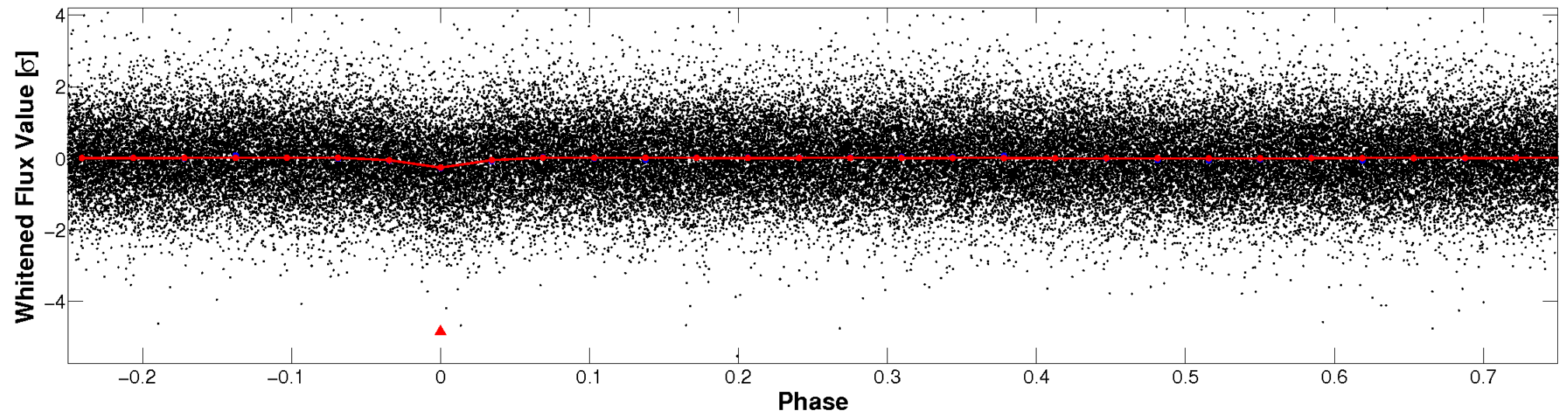


# Non-Whitened Vs. Whitened Light Curve

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

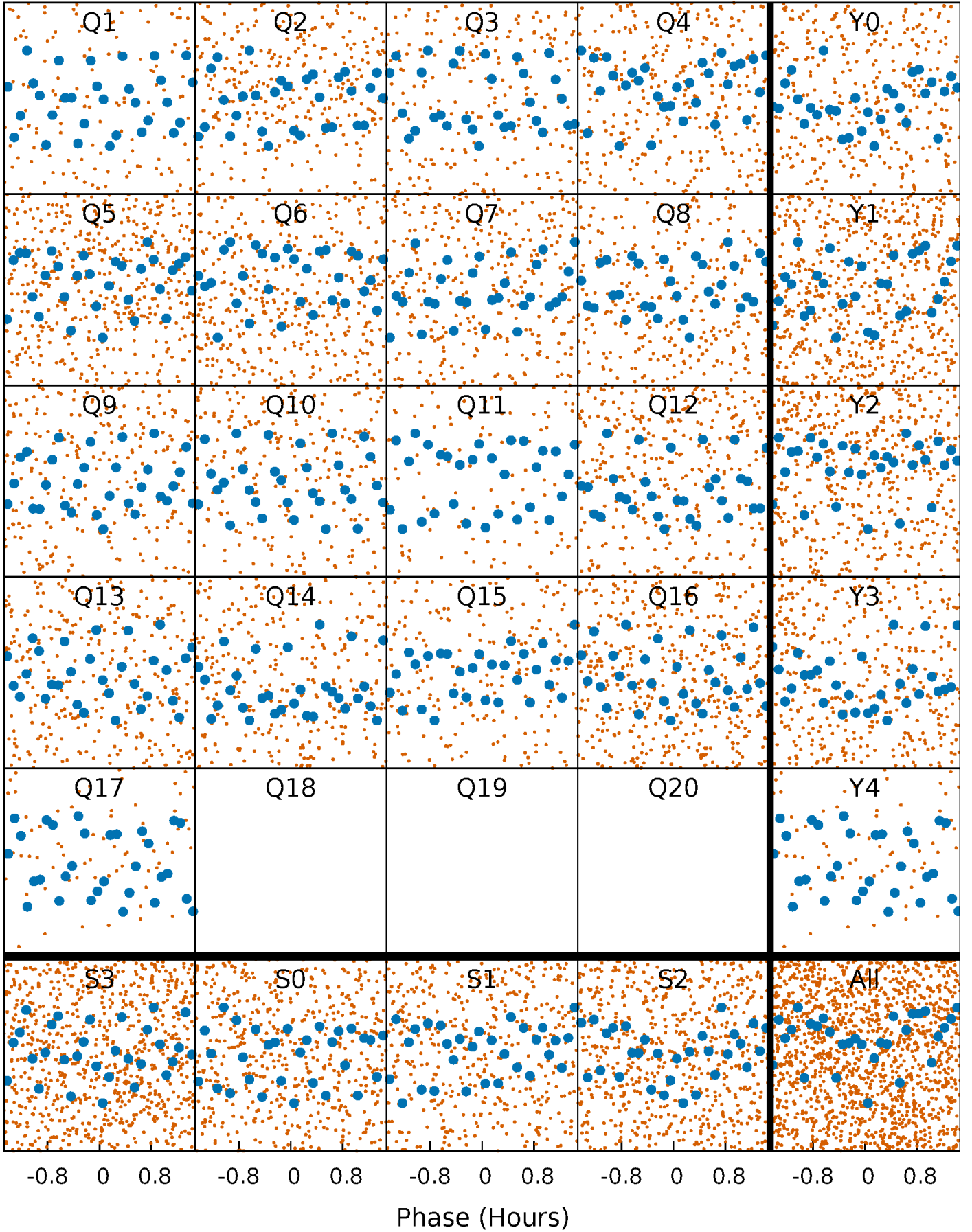


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

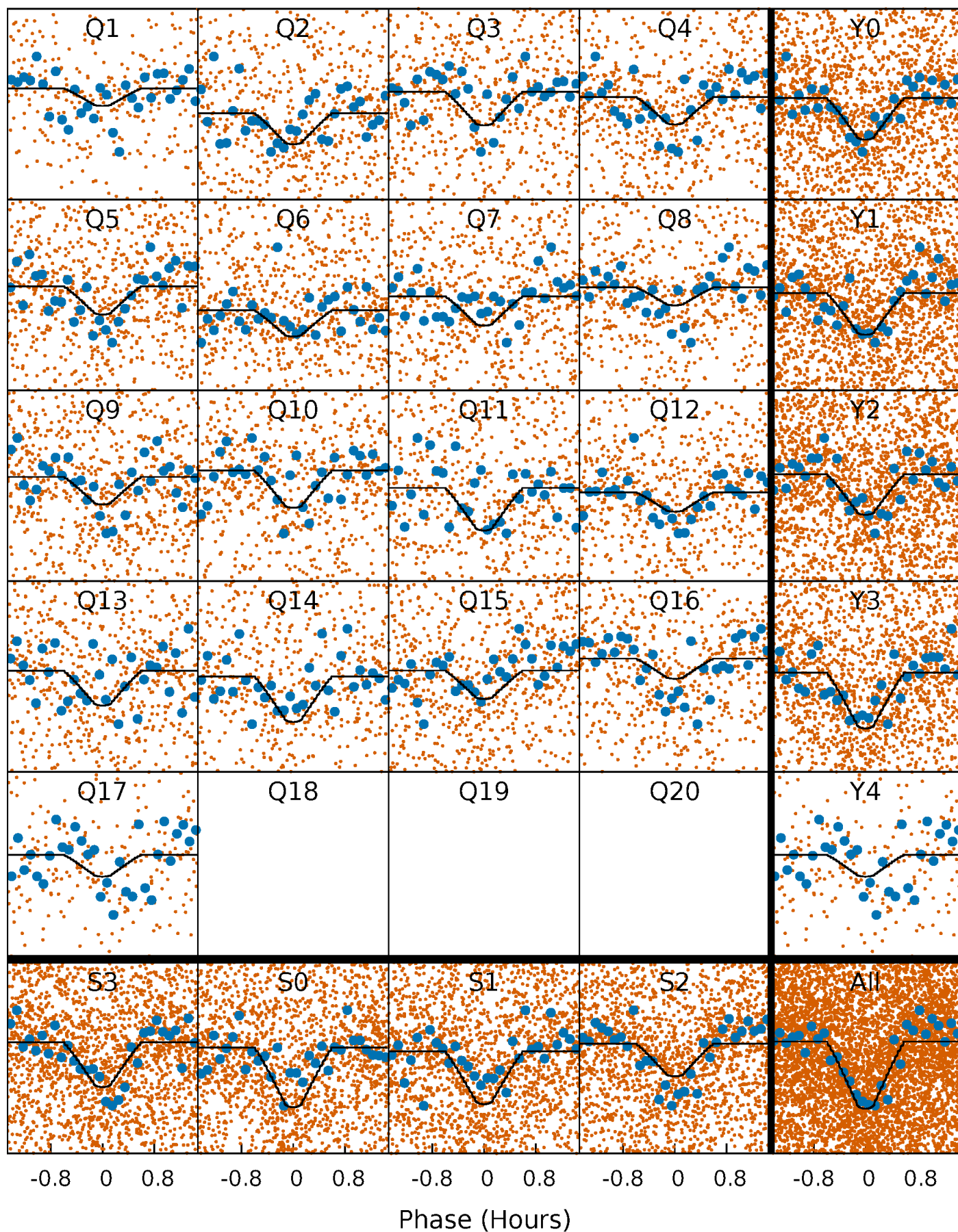
TCE 007211879-01 P= 0.594309 Days  $T_0=131.761626$  (BKJD)





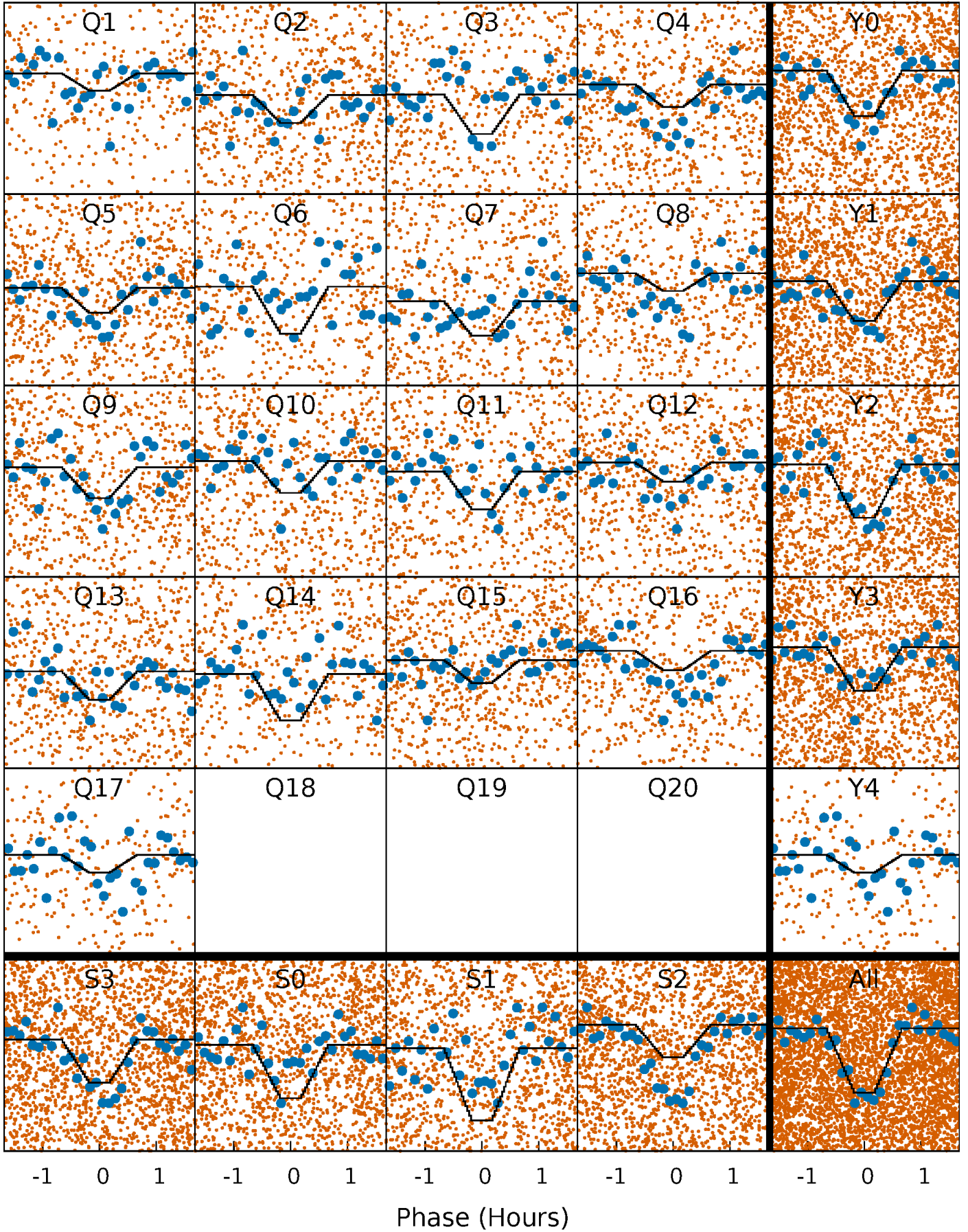
# DV Quarter-Phased Transit Curves

TCE 007211879-01 P= 0.594309 Days  $T_0=131.761626$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

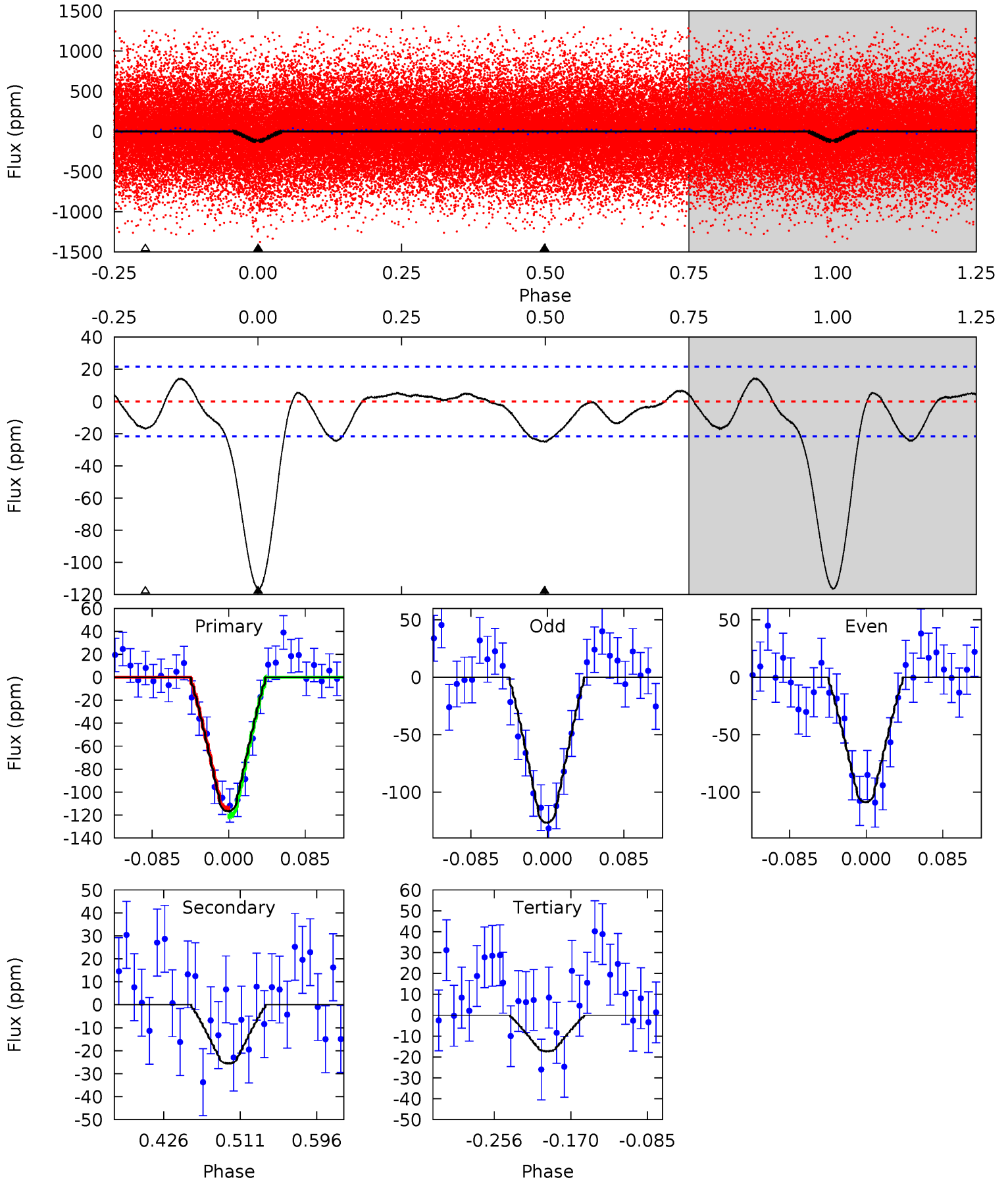
TCE 007211879-01 P= 0.594309 Days  $T_0=131.761626$  (BKJD)



# DV Model-Shift Uniqueness Test

007211879-01, P = 0.594309 Days, E = 131.167317 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
24.8	5.42	3.66	0	4.60	1.72	1.81	21.1	24.8	1.75	5.42	1.91	0.92	0.11	0.73

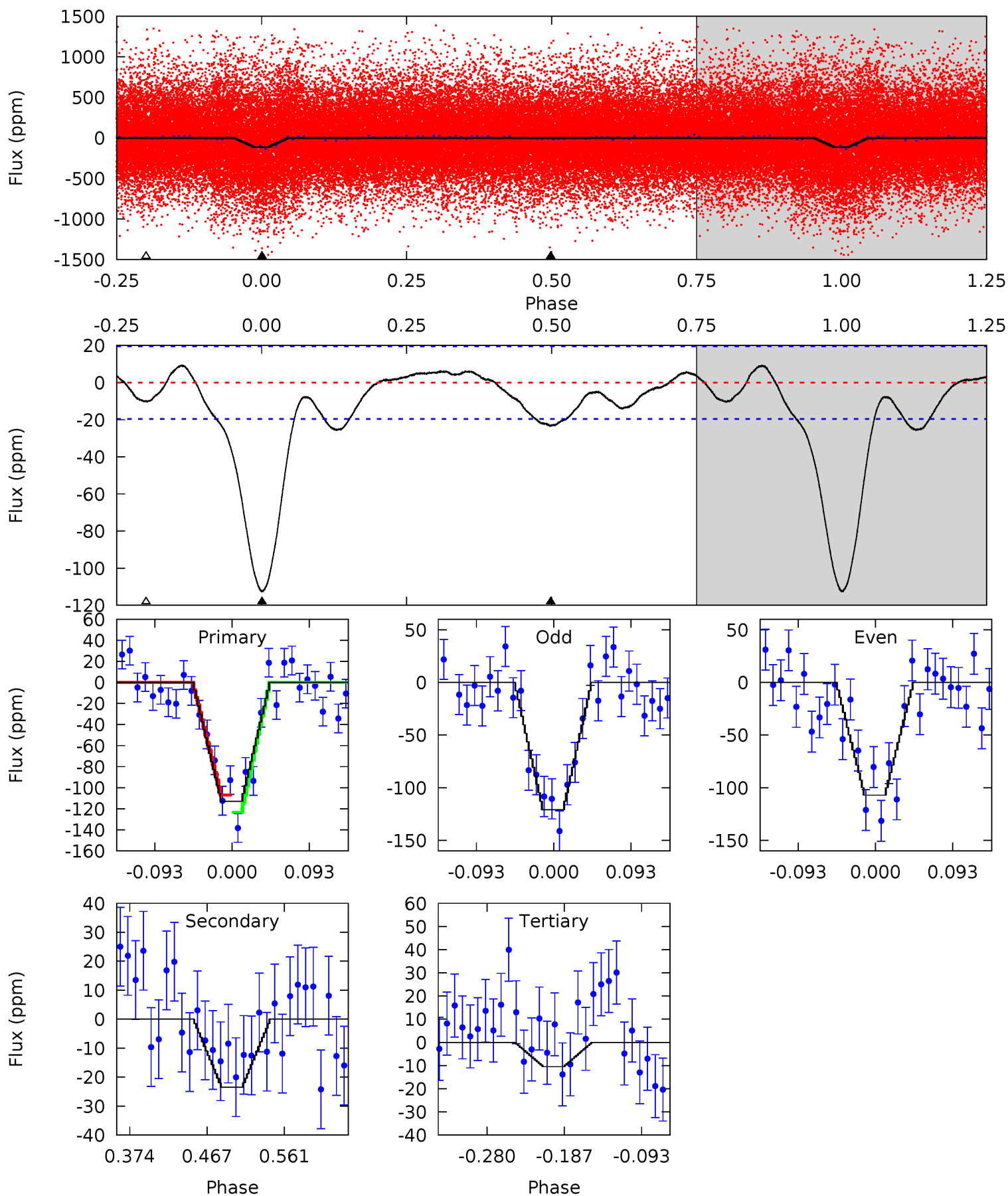




# Alt Model-Shift Uniqueness Test

007211879-01, P = 0.594309 Days, E = 131.167317 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
26.4	5.49	2.45	0	4.58	1.68	2.03	23.9	26.4	3.04	5.49	1.62	0.96	0.08	1.92





### Stellar Parameters For KIC 007211879

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5931^{+158}_{-175}$	$4.554^{+0.036}_{-0.204}$	$-0.340^{+0.300}_{-0.300}$	$0.845^{+0.248}_{-0.083}$	$0.933^{+0.097}_{-0.119}$	$2.182^{+0.435}_{-1.133}$
	+3%/-3%	+1%/-4%	+88%/-88%	+29%/-10%	+10%/-13%	+20%/-52%
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 007211879-01 / KOI 4342.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-26 \pm 5$	$1.00^{+0.43}_{-0.44}$	$2965^{+231}_{-133}$	$4261^{+1208}_{-610}$	$2.502^{+4.920}_{-1.336}$
Alt.	$-24 \pm 4$	$0.94^{+0.44}_{-0.36}$	$2975^{+194}_{-146}$	$4272^{+1038}_{-639}$	$2.481^{+4.194}_{-1.310}$

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

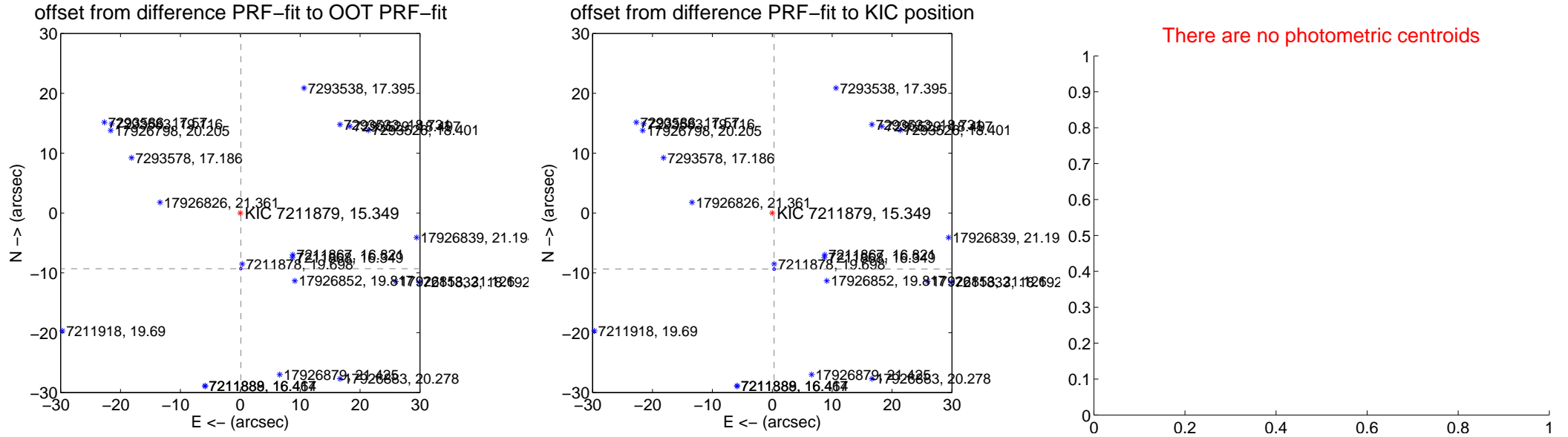
## DV Centroid Data

Supplemental centroid analysis for 007211879-01. Kepler magnitude: 15.35. Transit SNR 13.27

There are 12 quarters with good PRF difference image offsets

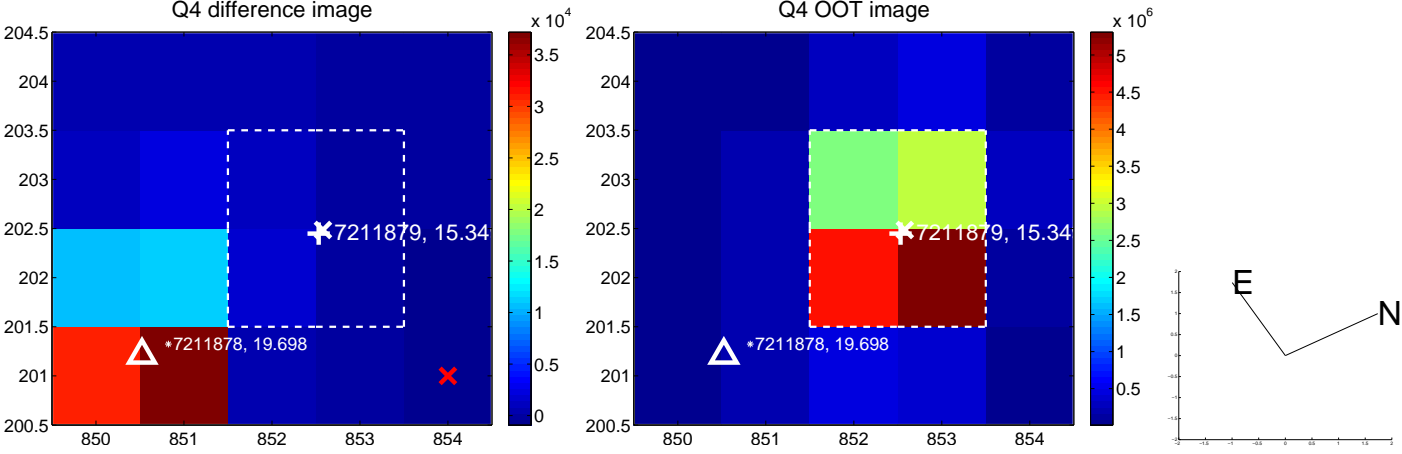
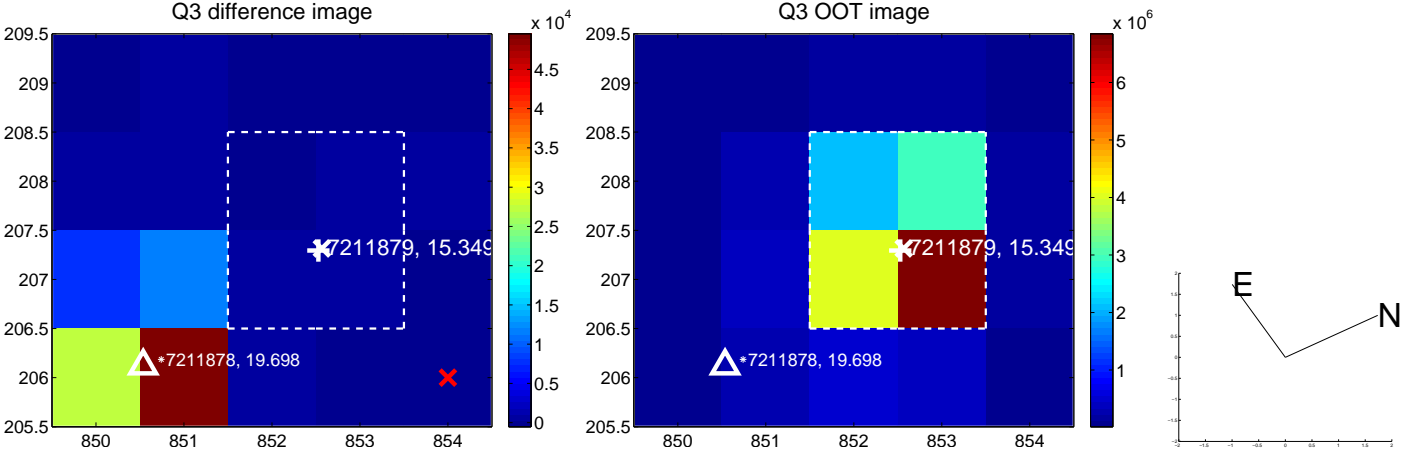
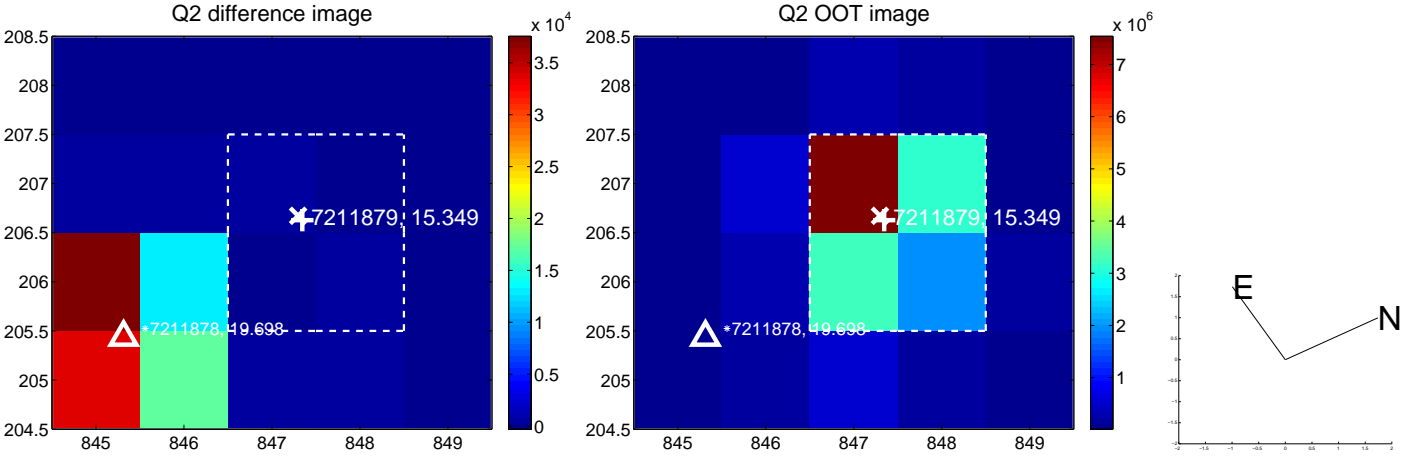
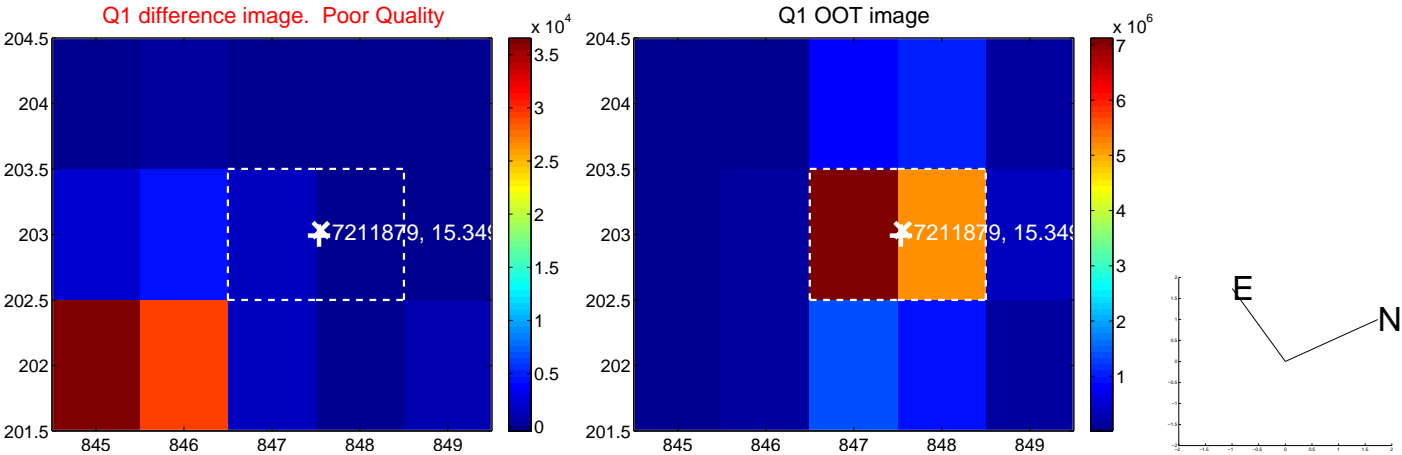
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>9.305 <math>\pm</math> 0.071</b>	<b>131.45</b>	-0.089 $\pm$ 0.069	-9.305 $\pm$ 0.071
PRF-fit source offset from KIC position	<b>9.376 <math>\pm</math> 0.076</b>	<b>123.83</b>	-0.310 $\pm$ 0.077	-9.370 $\pm$ 0.076
photometric centroid source offset	—	—	—	—

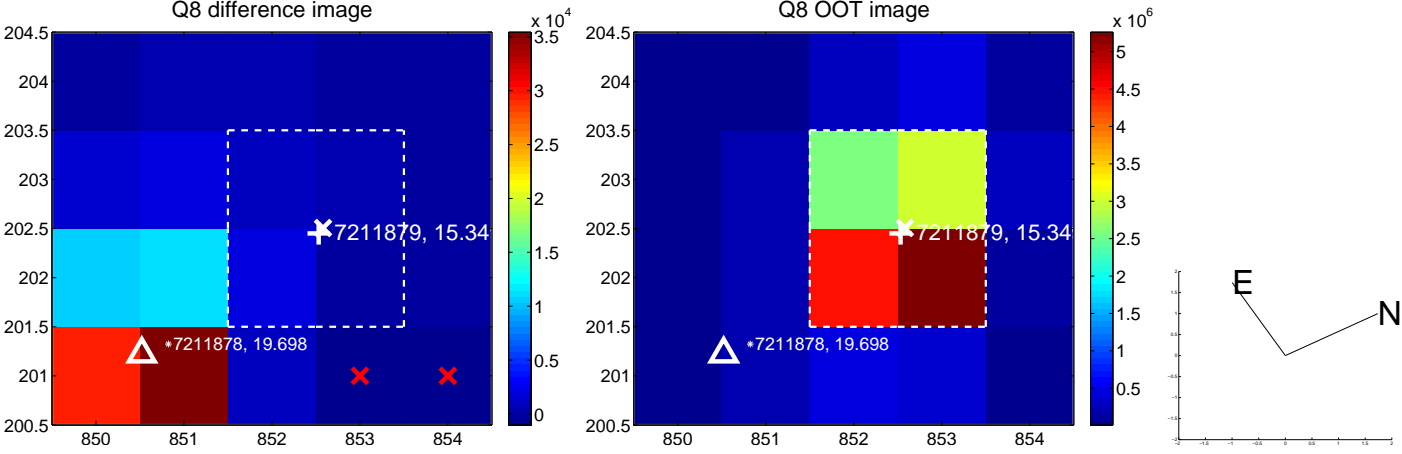
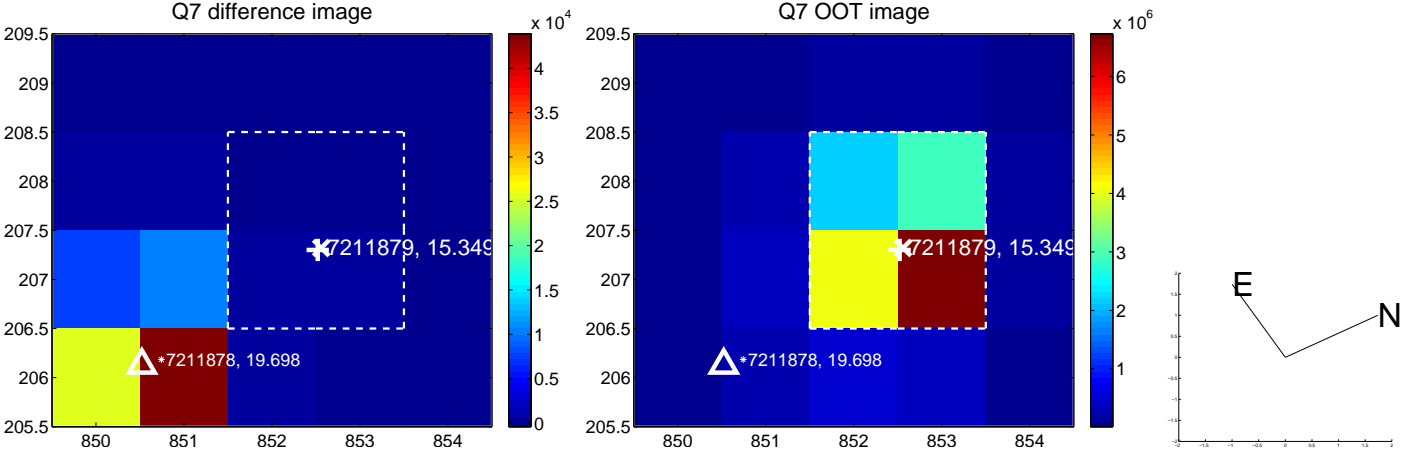
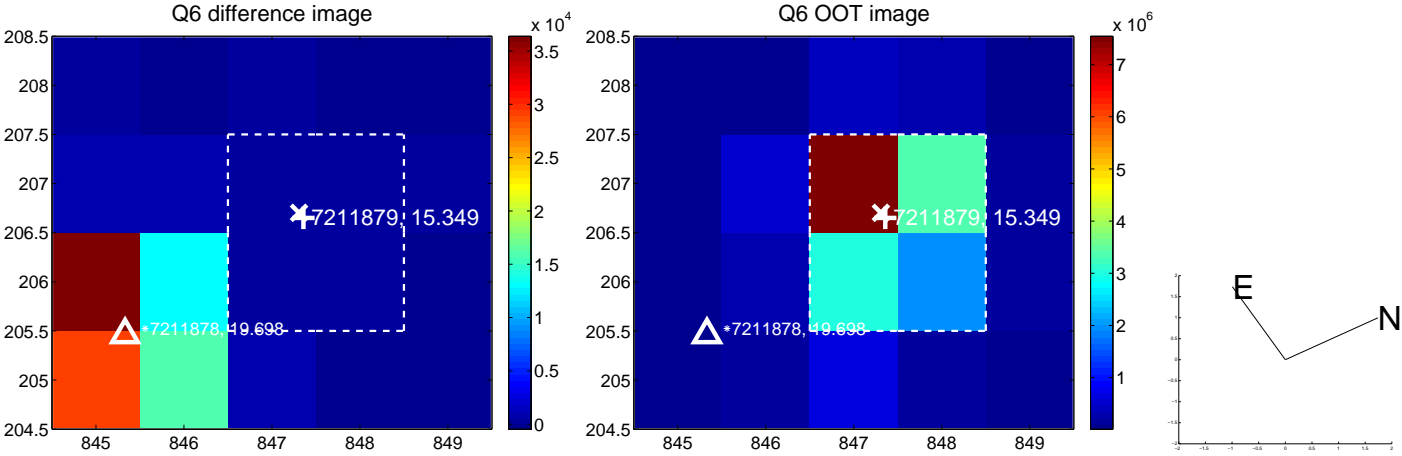
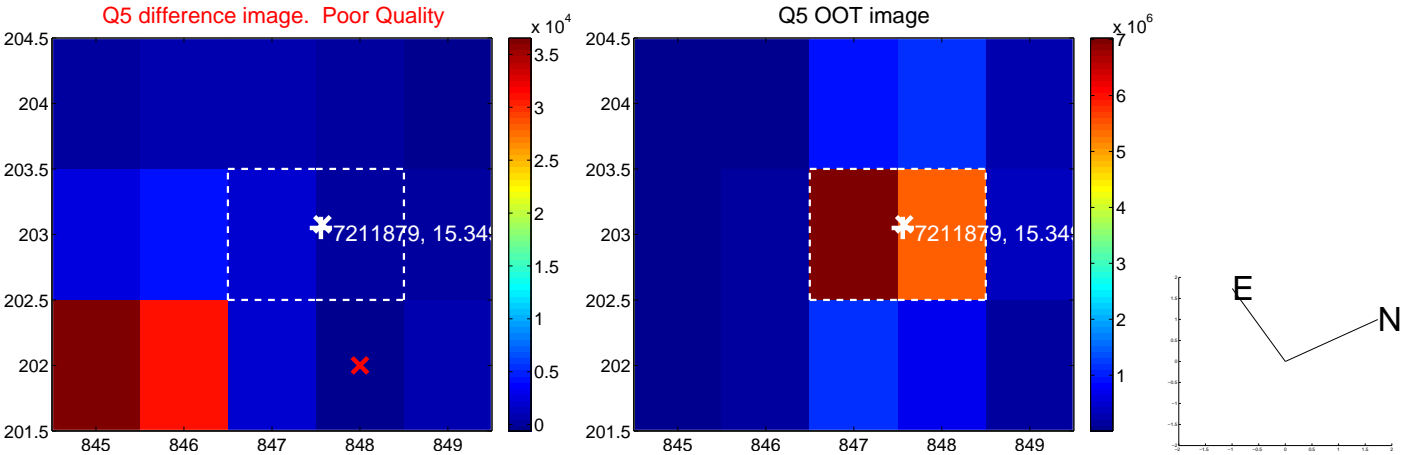


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

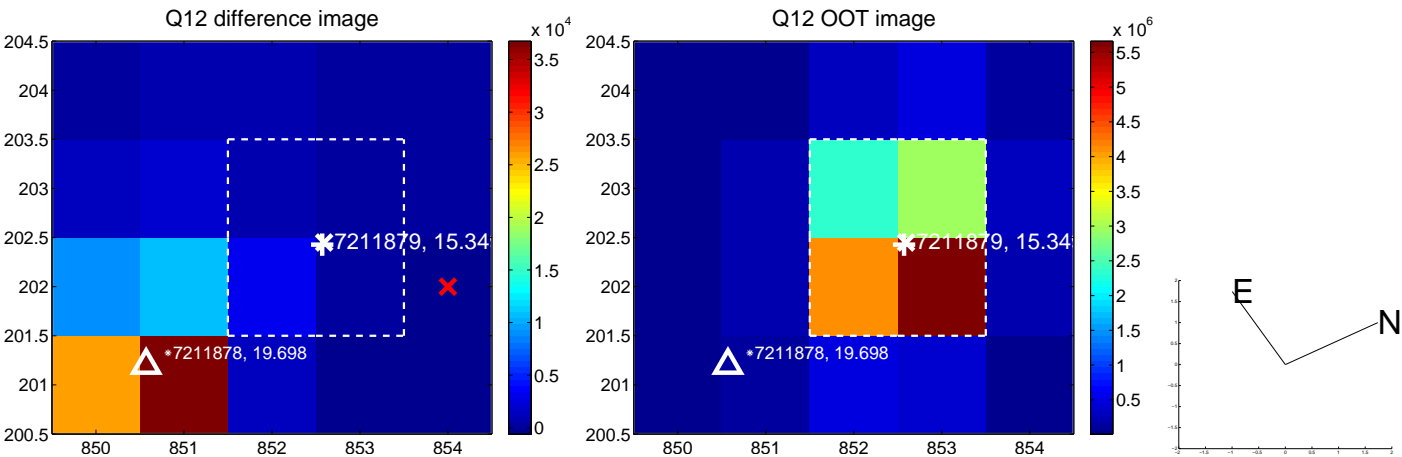
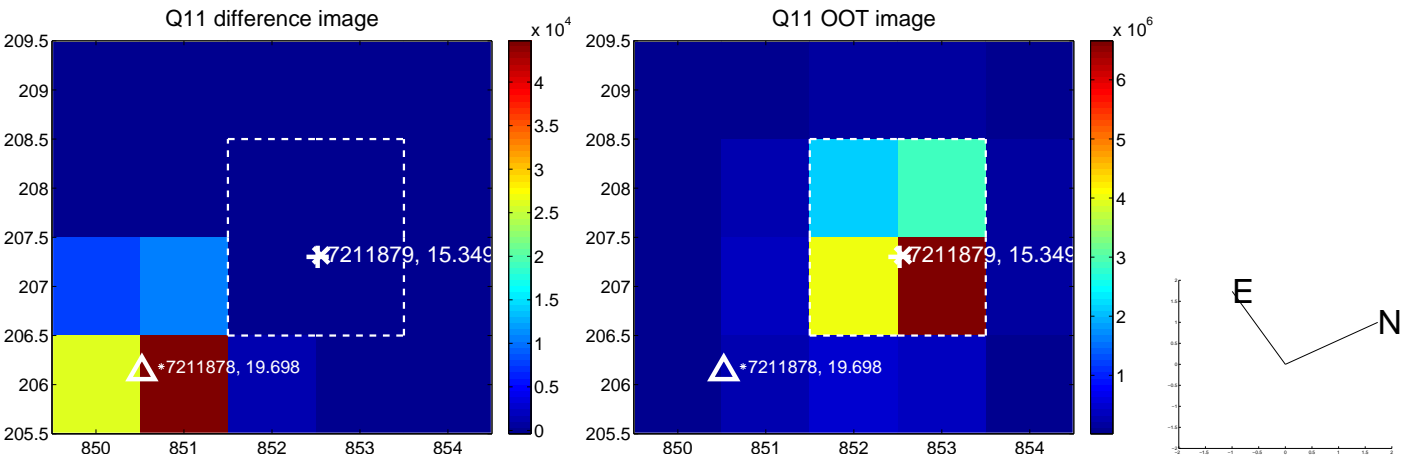
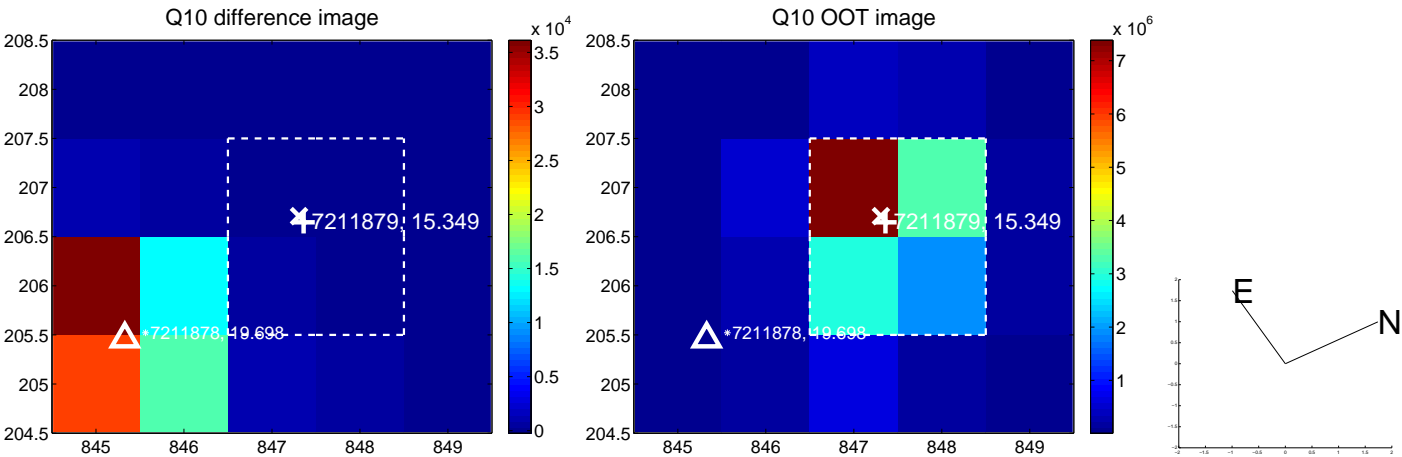
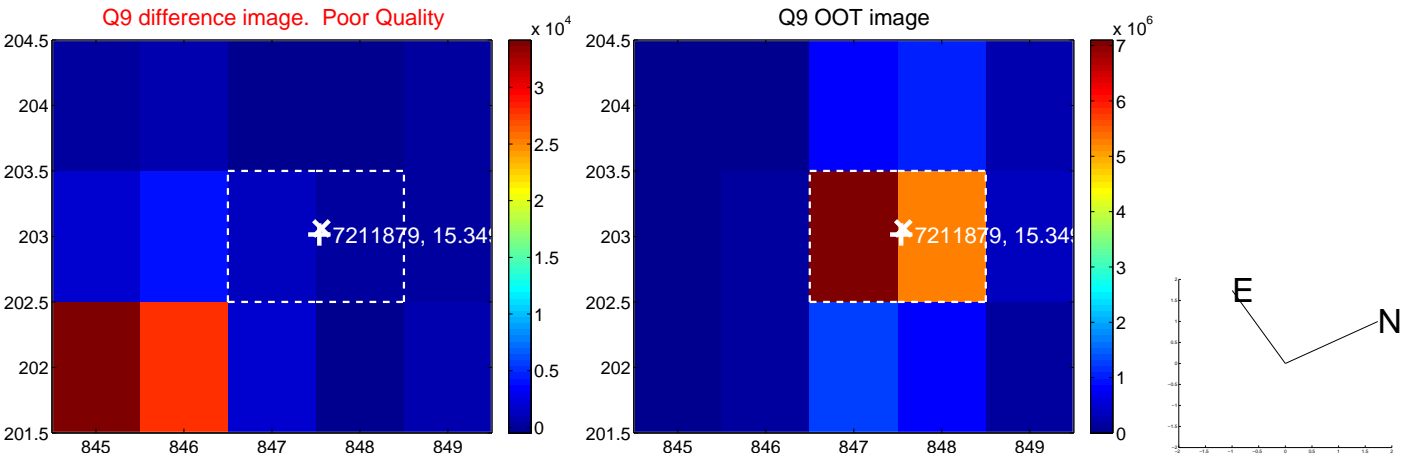


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

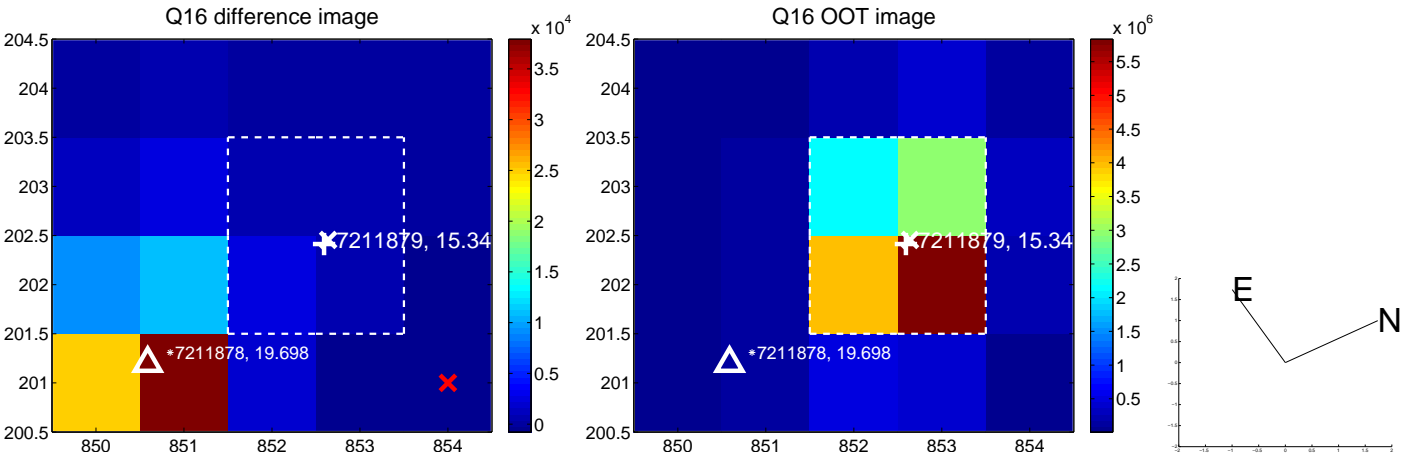
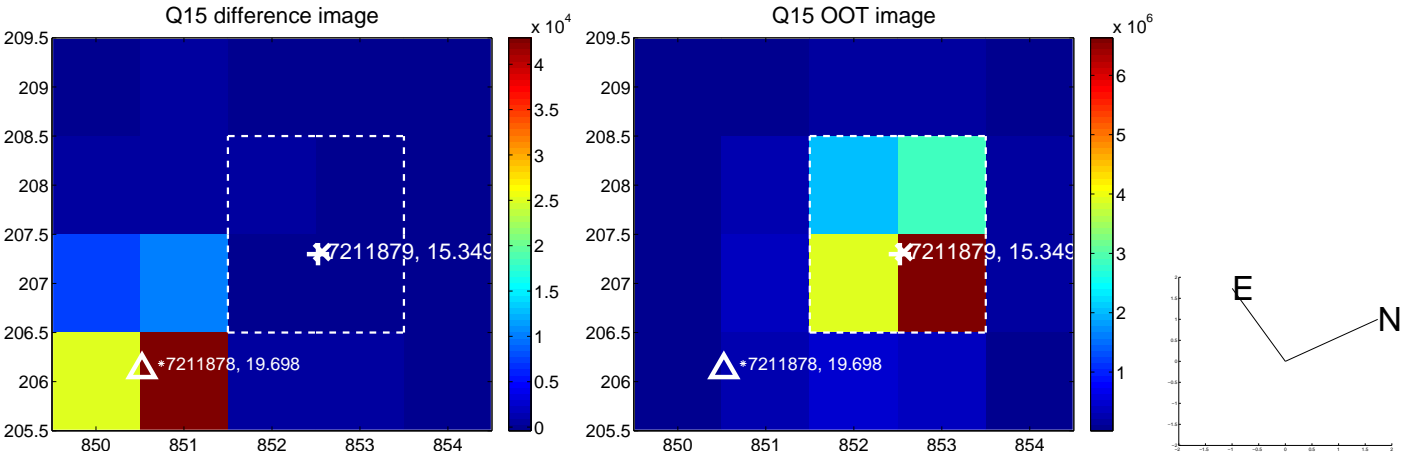
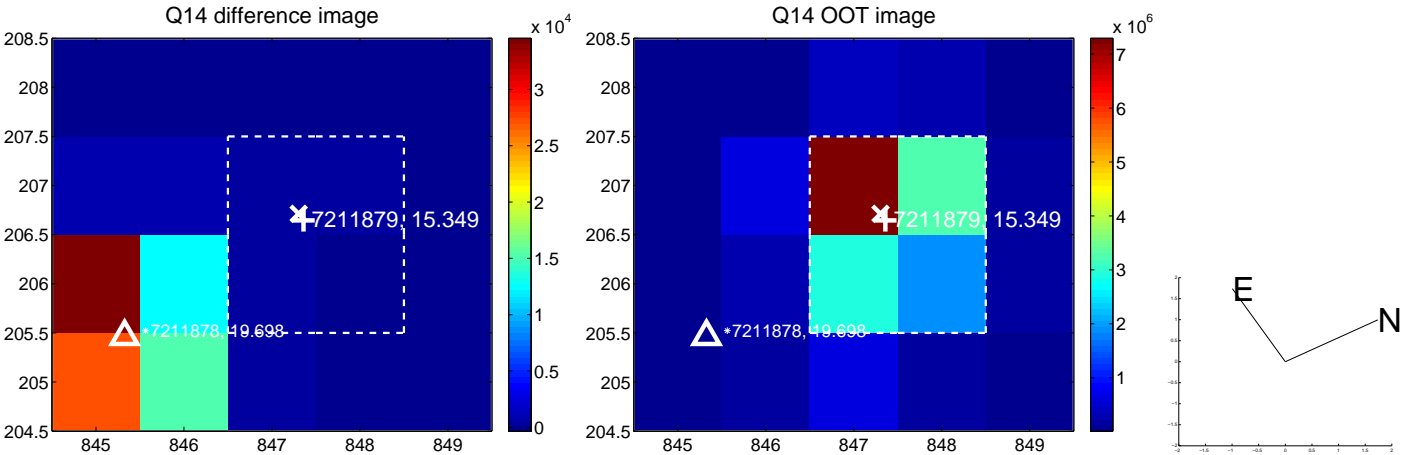
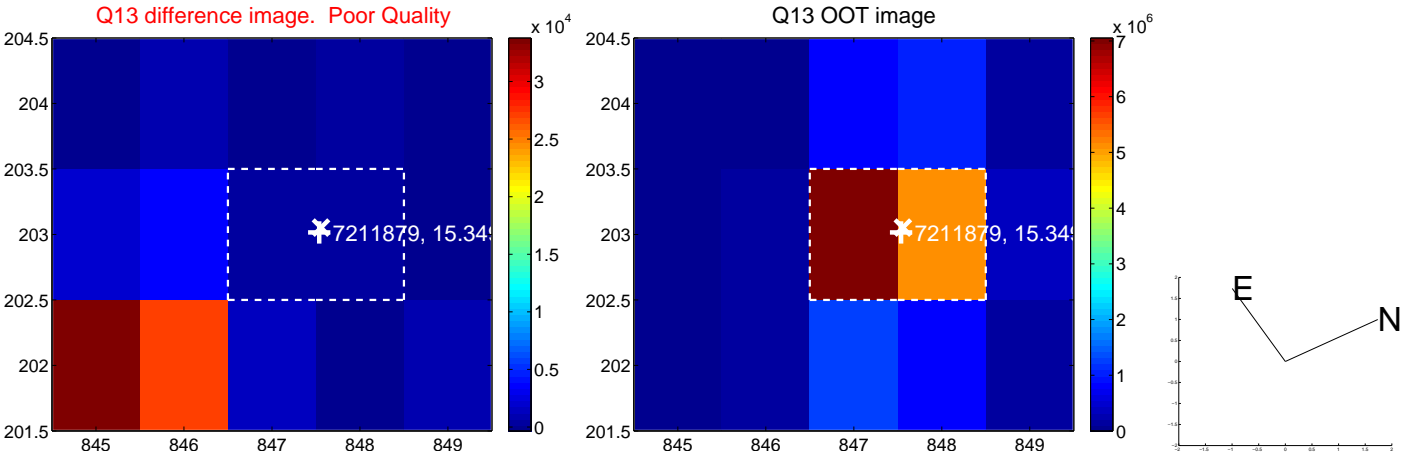




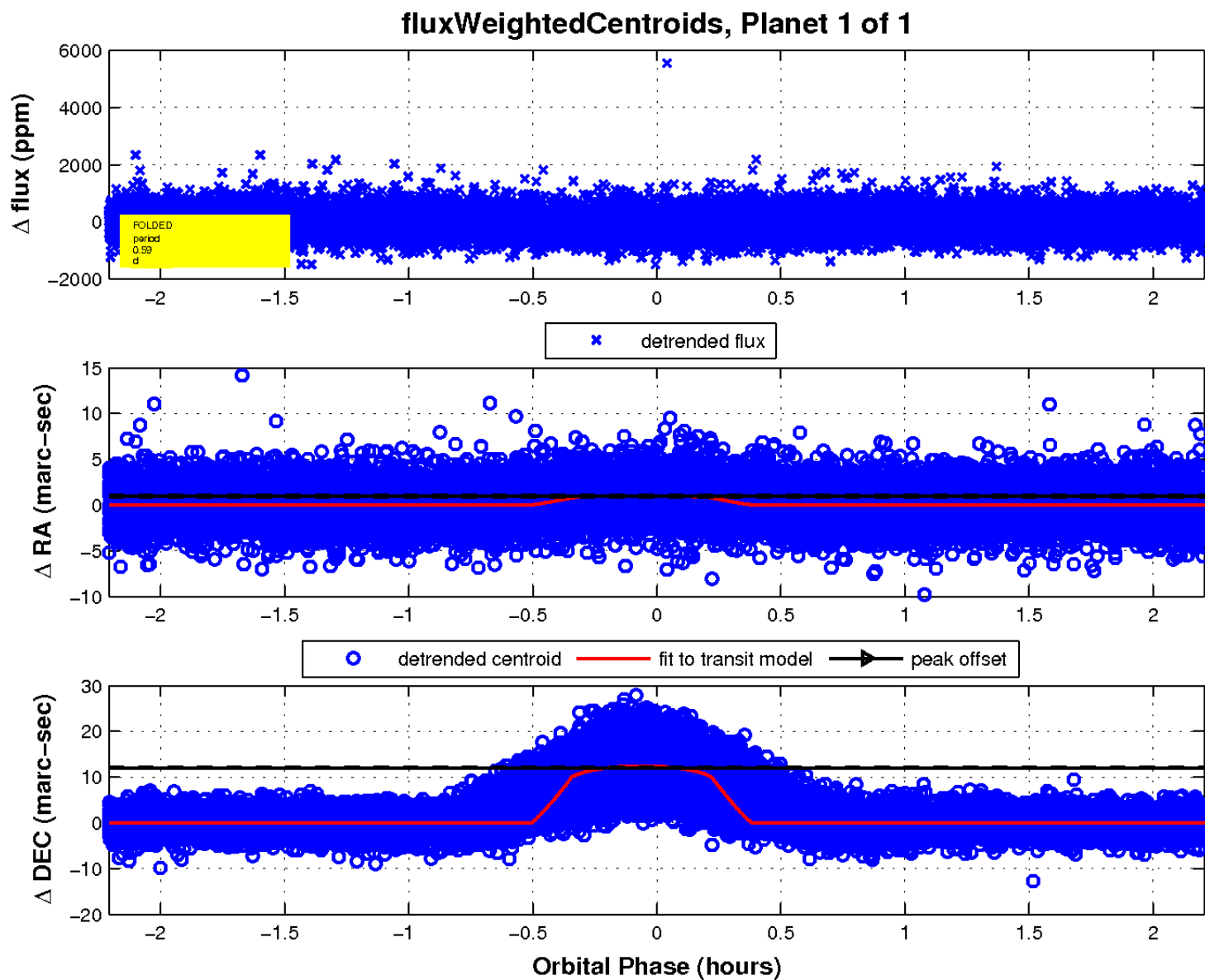
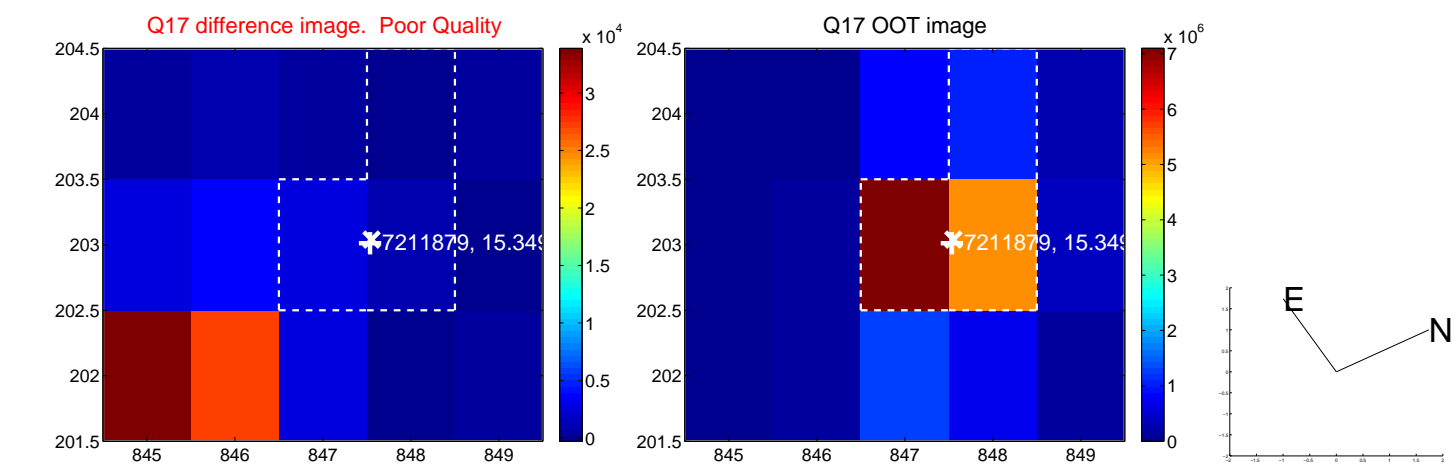
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : 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.



UKIRT Image

Declination

