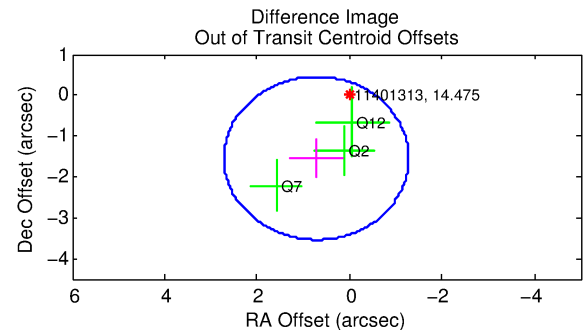
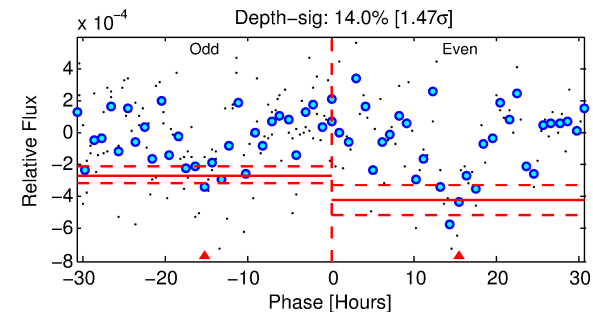
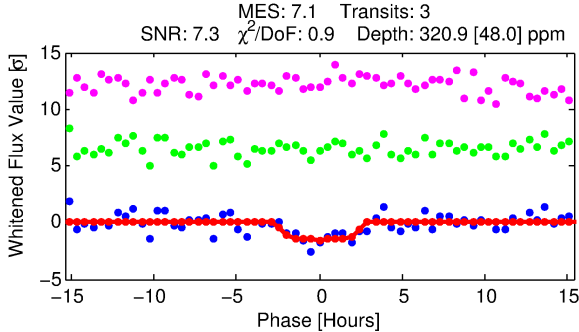
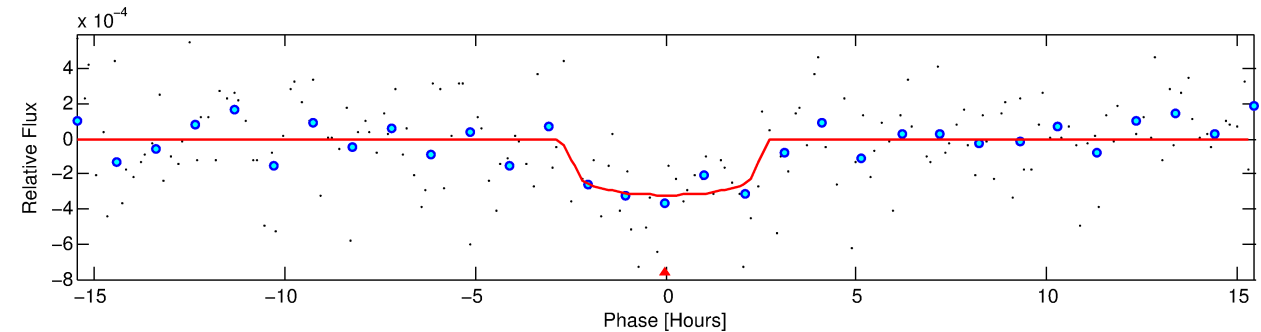
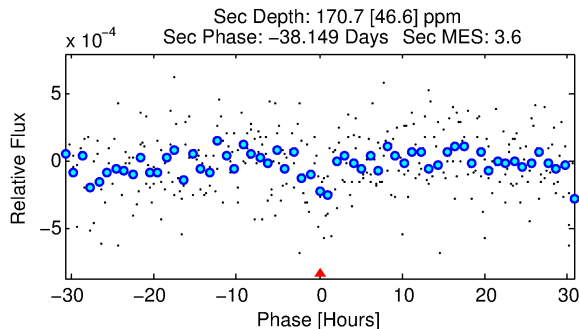
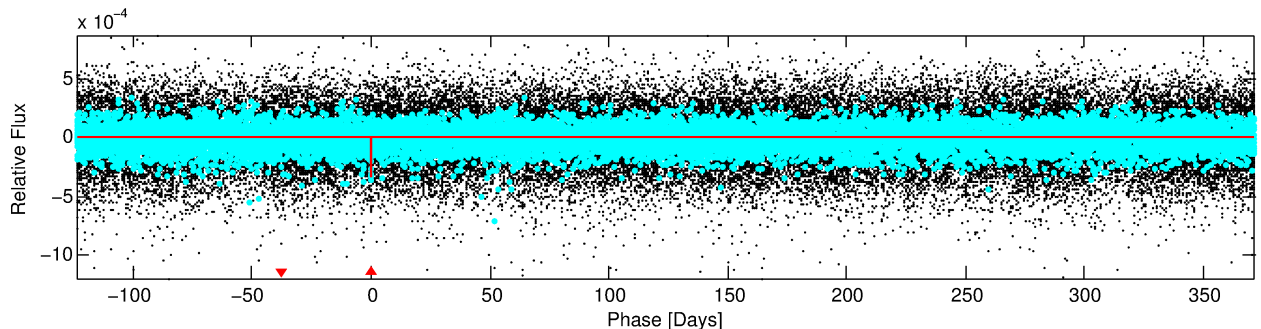
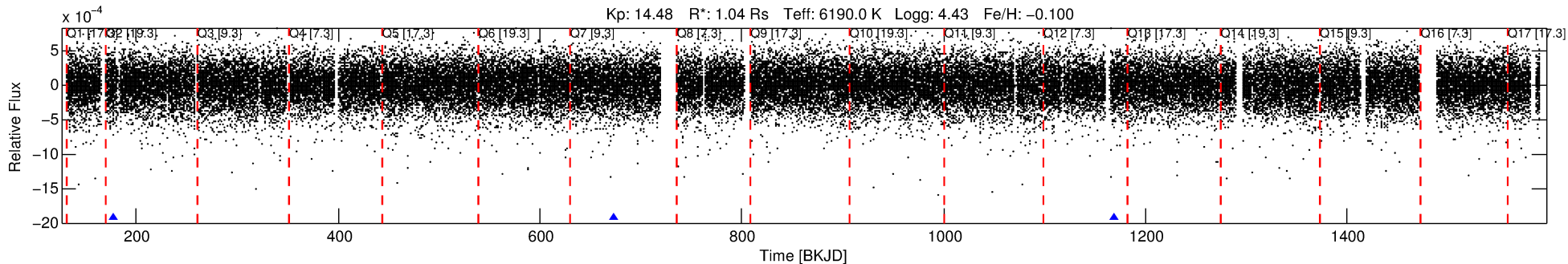


**WARNING: THIS DATA IS  
SIMULATED, NOT OBSERVED**

# DV One-Page Summary

KIC: 11401313 Candidate: 1 of 1 Period: 495.586 d

**WARNING: THIS DATA IS  
SIMULATED, NOT OBSERVED**



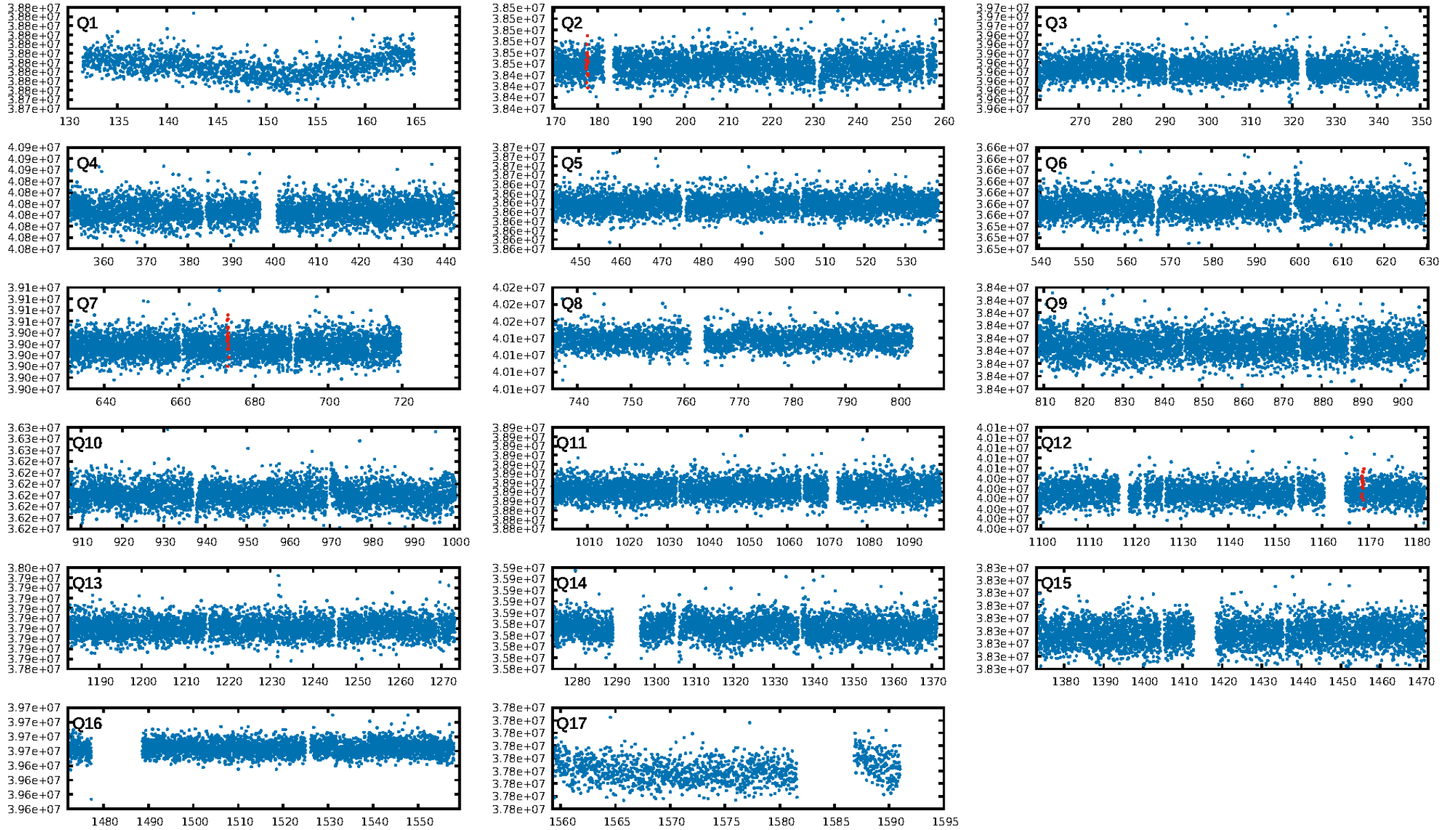
## DV Fit Results:

Period = 495.58604 [0.00979] d  
Epoch = 177.5885 [0.0137] BKJD  
Rp/R\* = 0.0174 [0.0267]  
a/R\* = 565.95 [4378.50]  
b = 0.67 [6.55]  
Seff = 0.91 [0.39]  
Teq = 249 [27] K  
Rp = 1.98 [3.12] Re  
a = 1.2537 [0.3486] AU  
Ag = 37492.91 [116714.36] [0.32σ]  
Teffp = 5364 [4144] K [1.23σ]

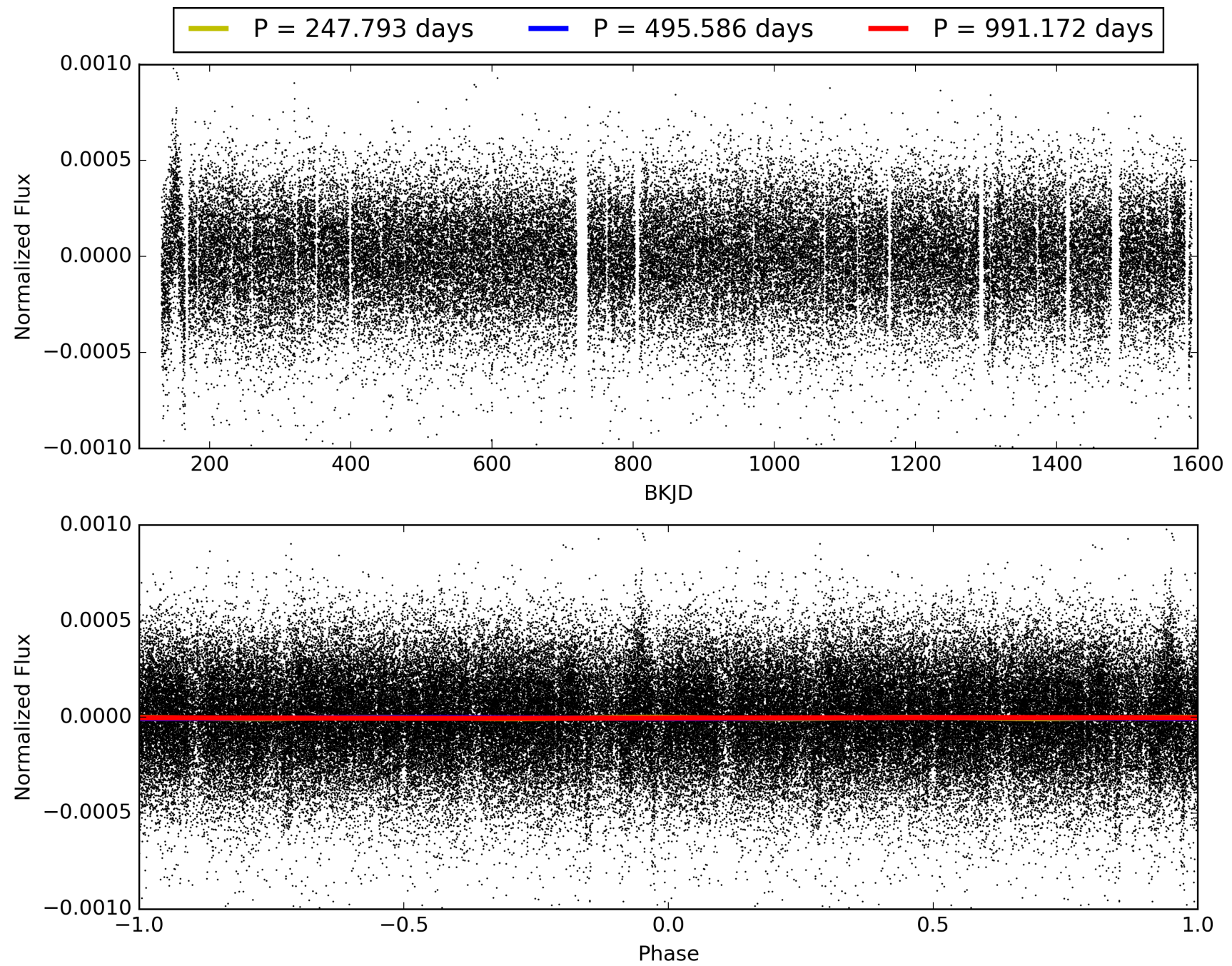
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 36.7%  
ModelChiSquareGof-sig: 99.8%  
**Bootstrap-pfa: 1.31e-10**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 3.074  
Centroid-sig: 29.0%  
Centroid-so: 2.881 arcsec [1.35σ]  
OotOffset-rm: 1.706 arcsec [2.57σ]  
**KicOffset-rm: 1.810 arcsec [3.62σ]**  
OotOffset-st: 1/1/1/0 [3]  
KicOffset-st: 1/1/1/0 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [3/3]

# TCE 011401313-01, PDC Light Curves

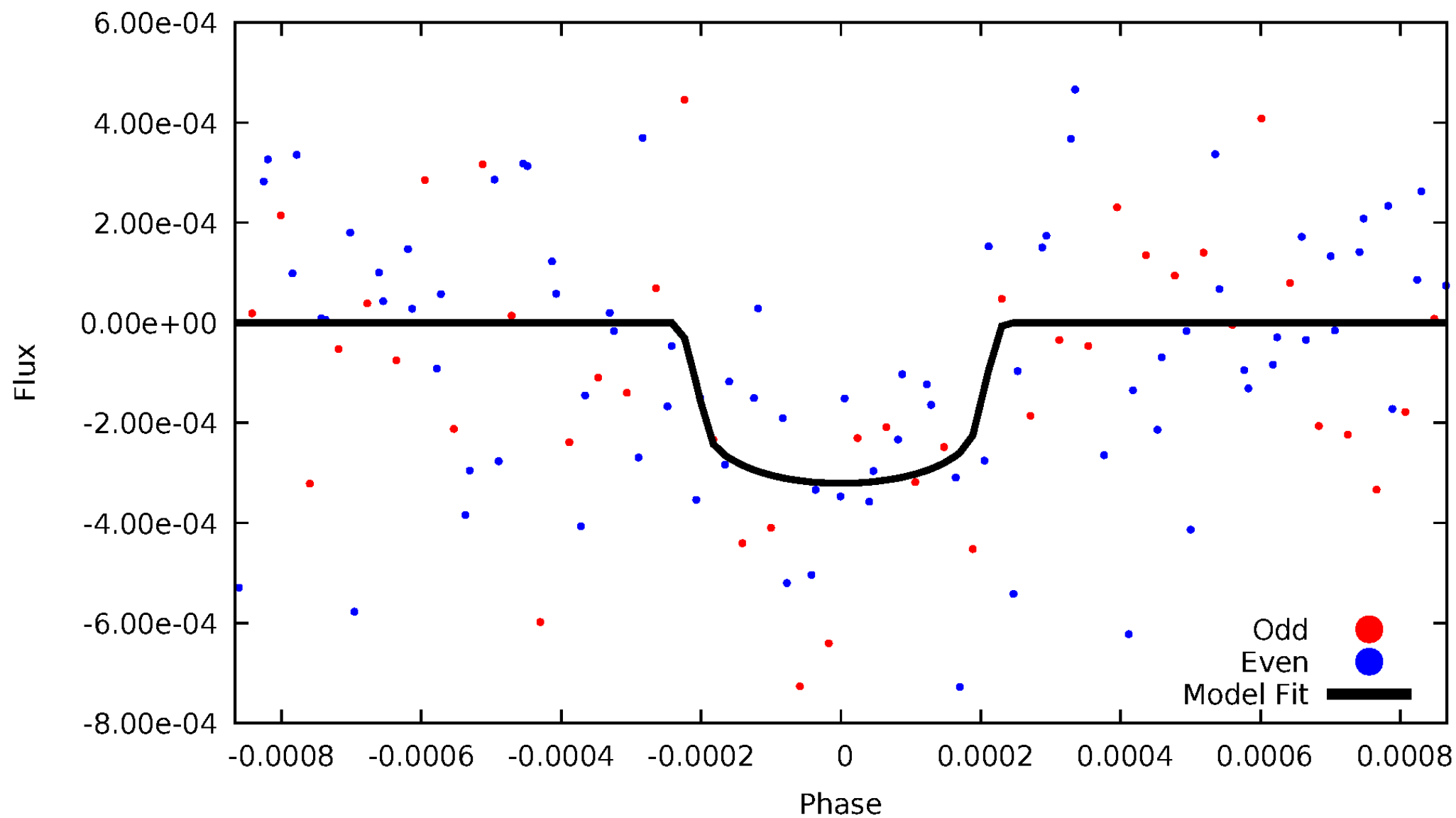


TCE 011401313-01



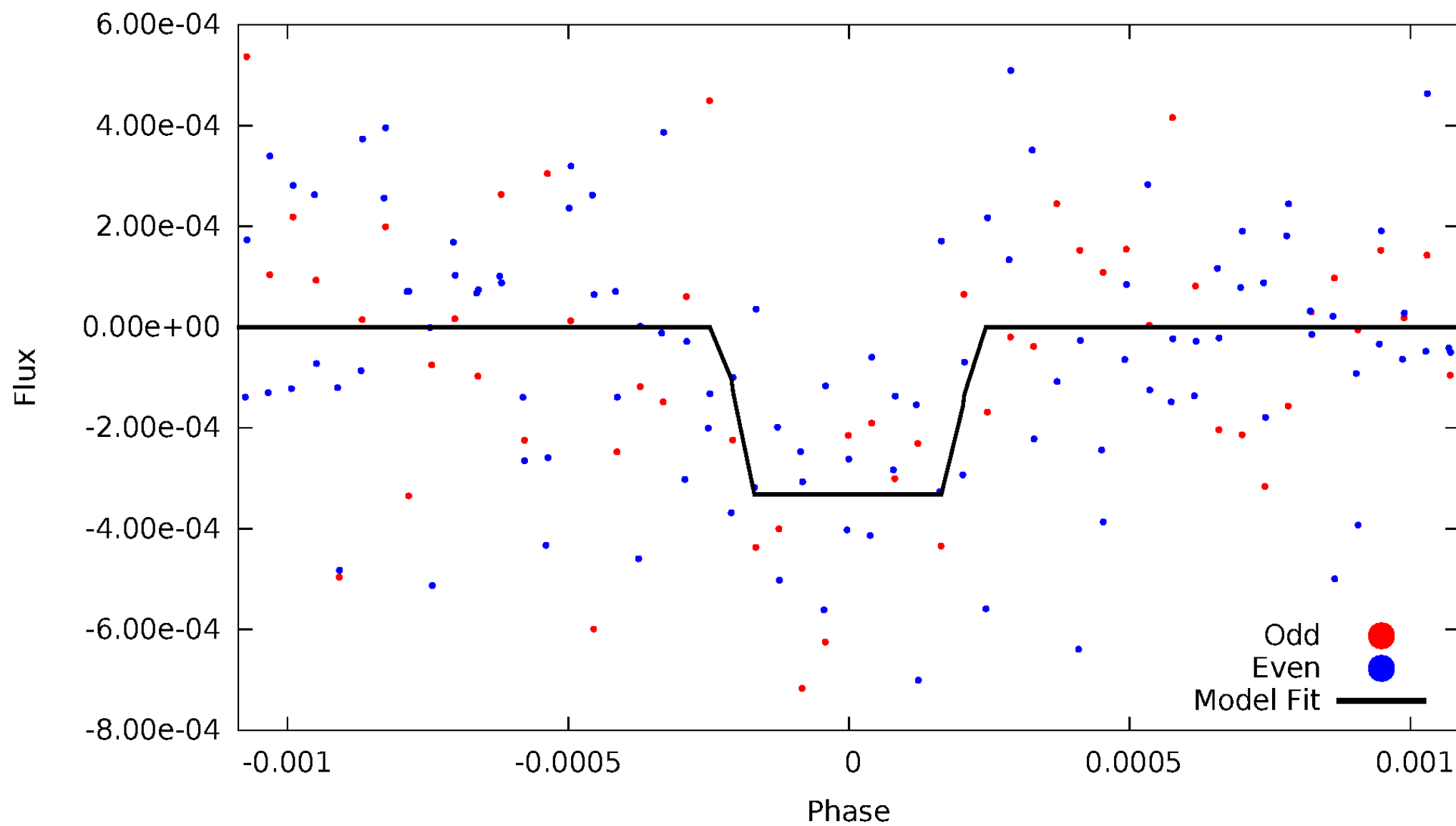
# DV Odd/Even

TCE 011401313-01



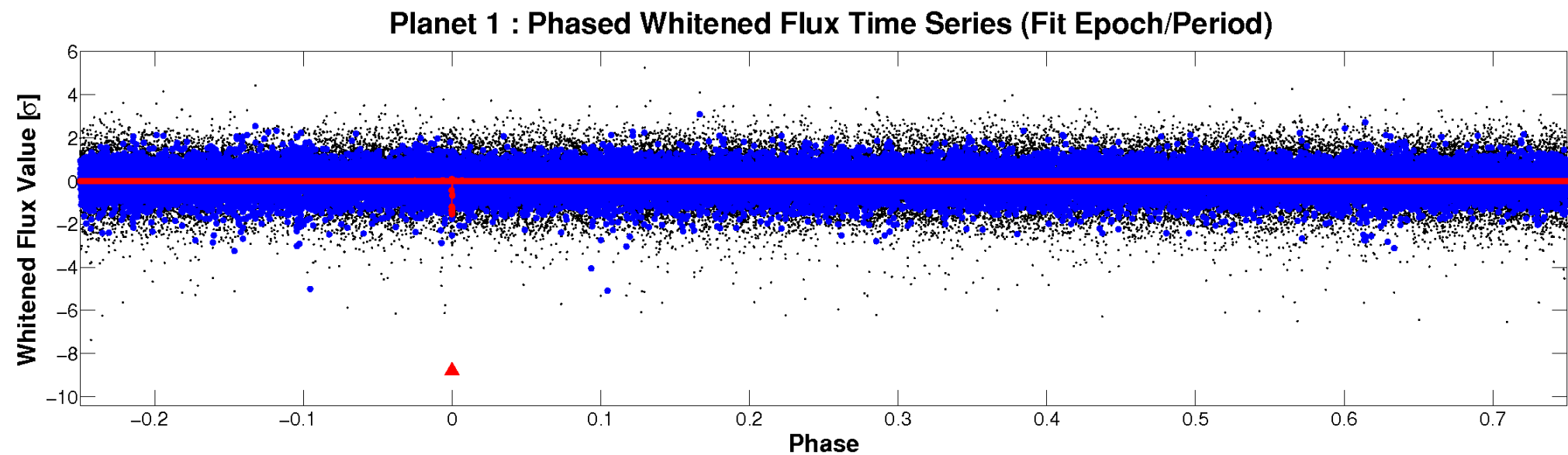
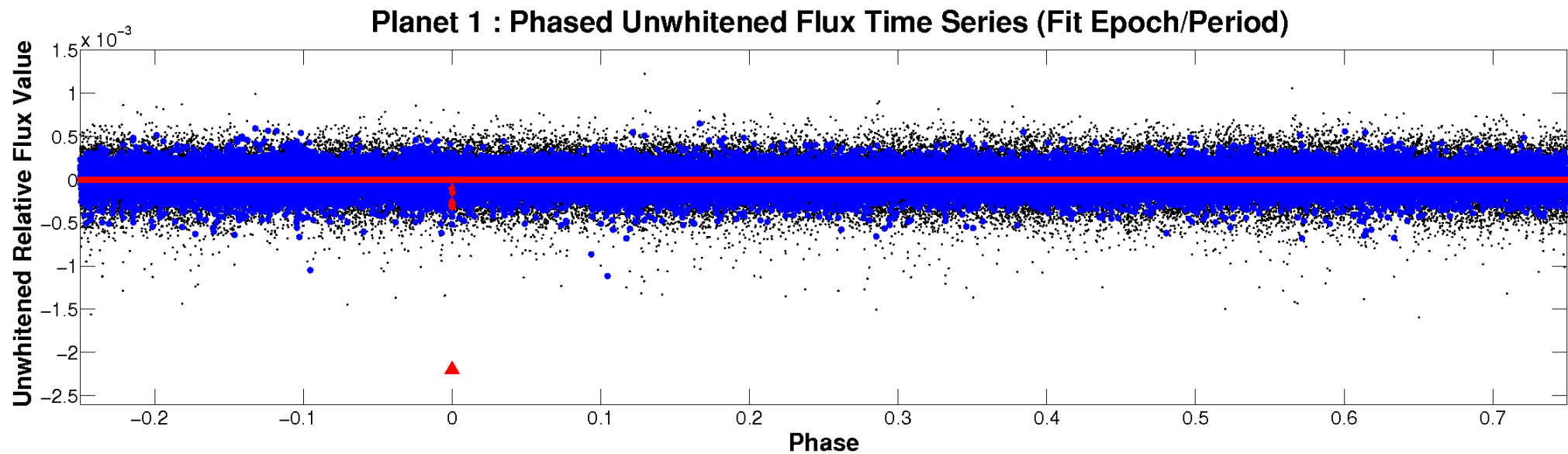
# ALT Odd/Even

TCE 011401313-01



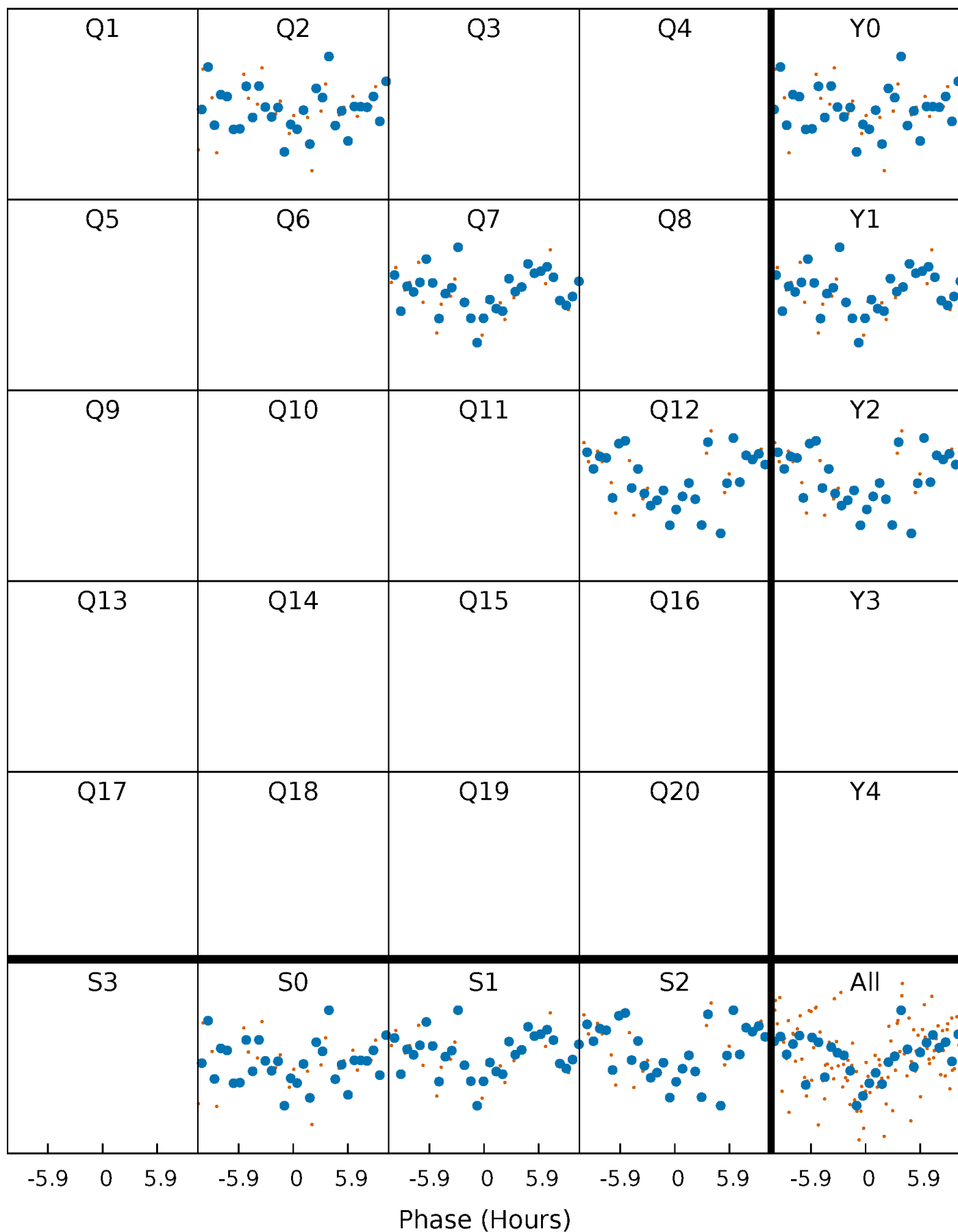


# Non-Whitened Vs. Whitened Light Curve



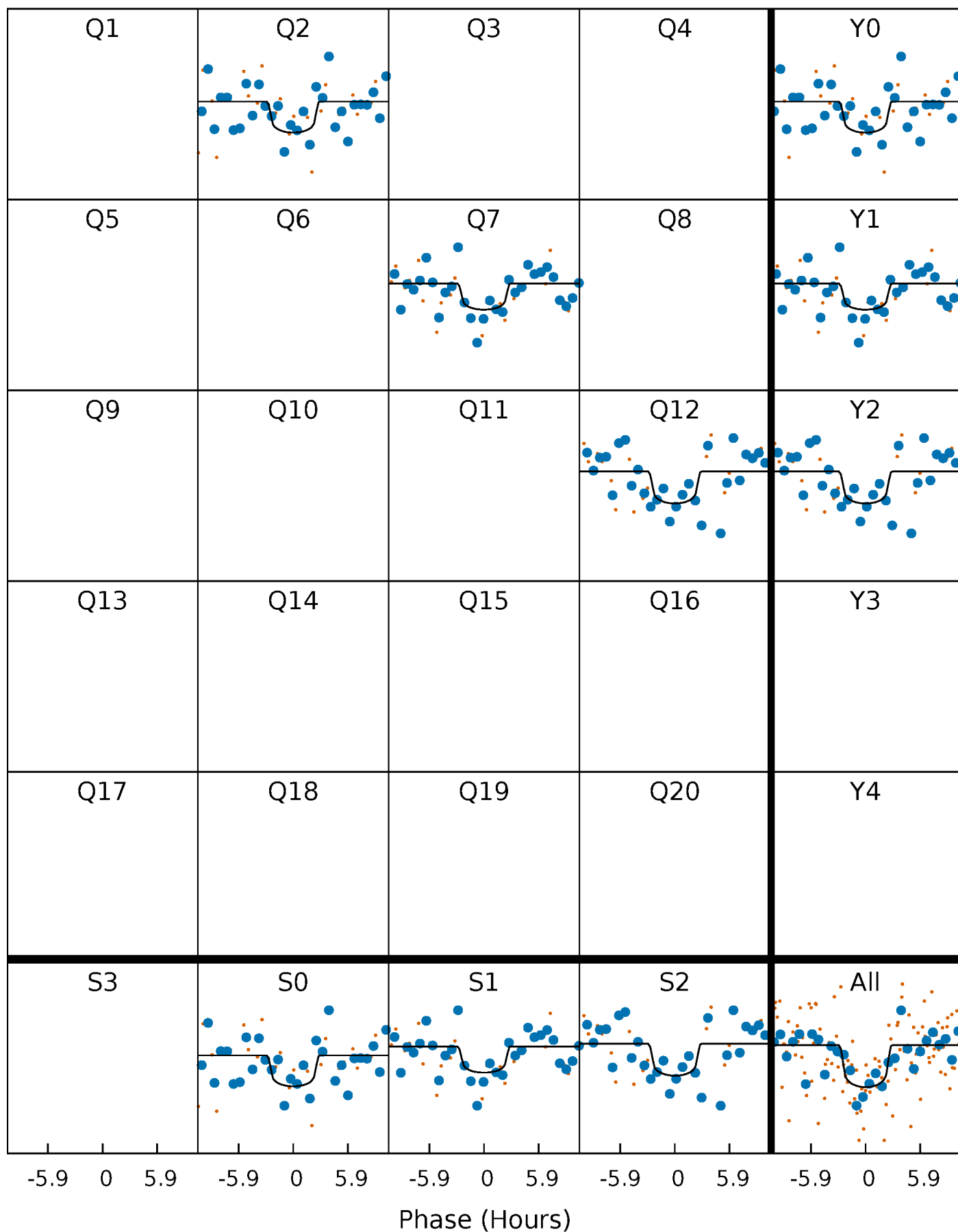
# PDC Quarter-Phased Transit Curves

TCE 011401313-01 P=495.586044 Days  $T_0=177.588505$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 011401313-01 P=495.586044 Days  $T_0=177.588505$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

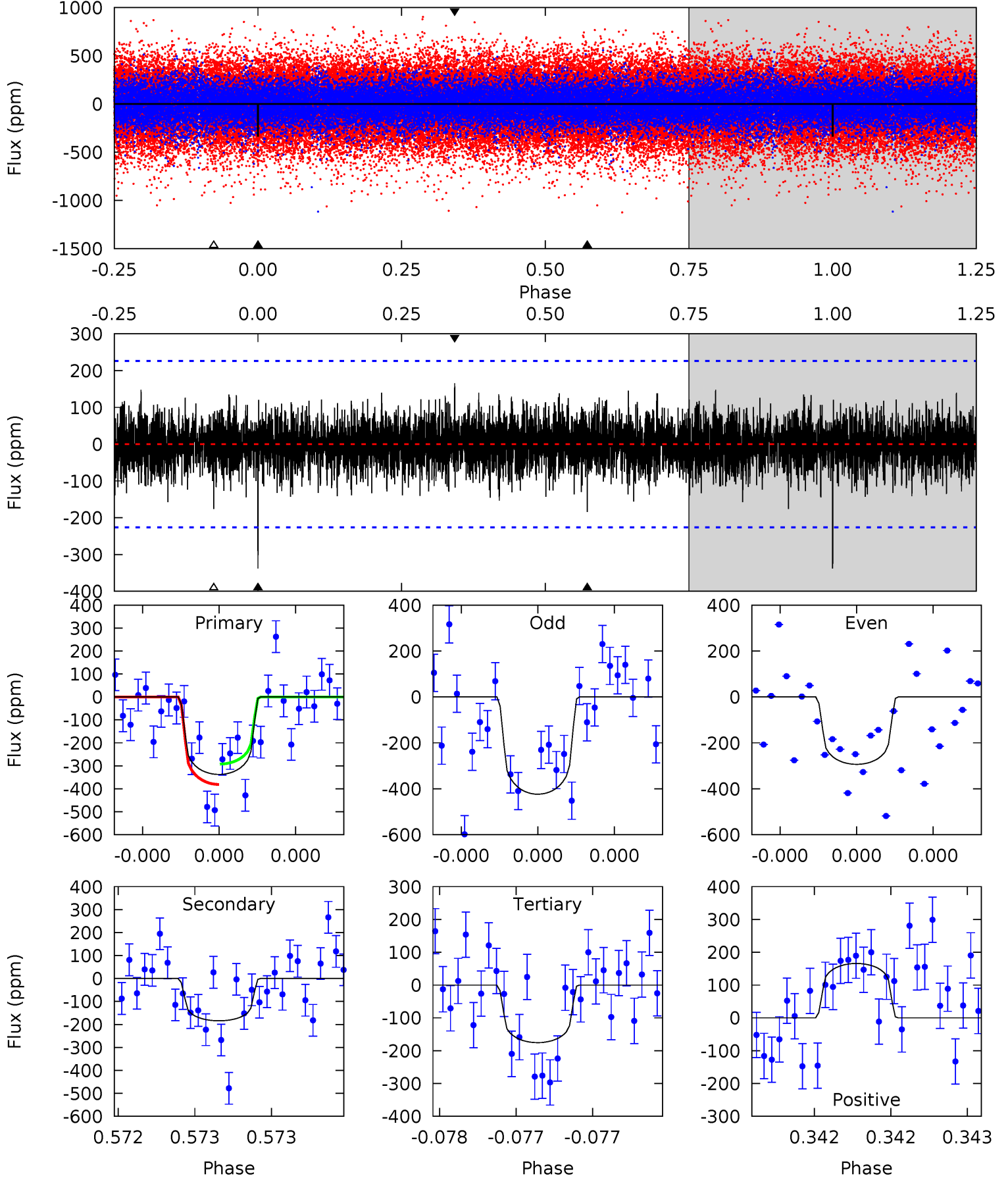
TCE 011401313-01 P=495.575131 Days  $T_0=177.611704$  (BKJD)



# DV Model-Shift Uniqueness Test

011401313-01, P = 495.586044 Days, E = 177.588505 Days

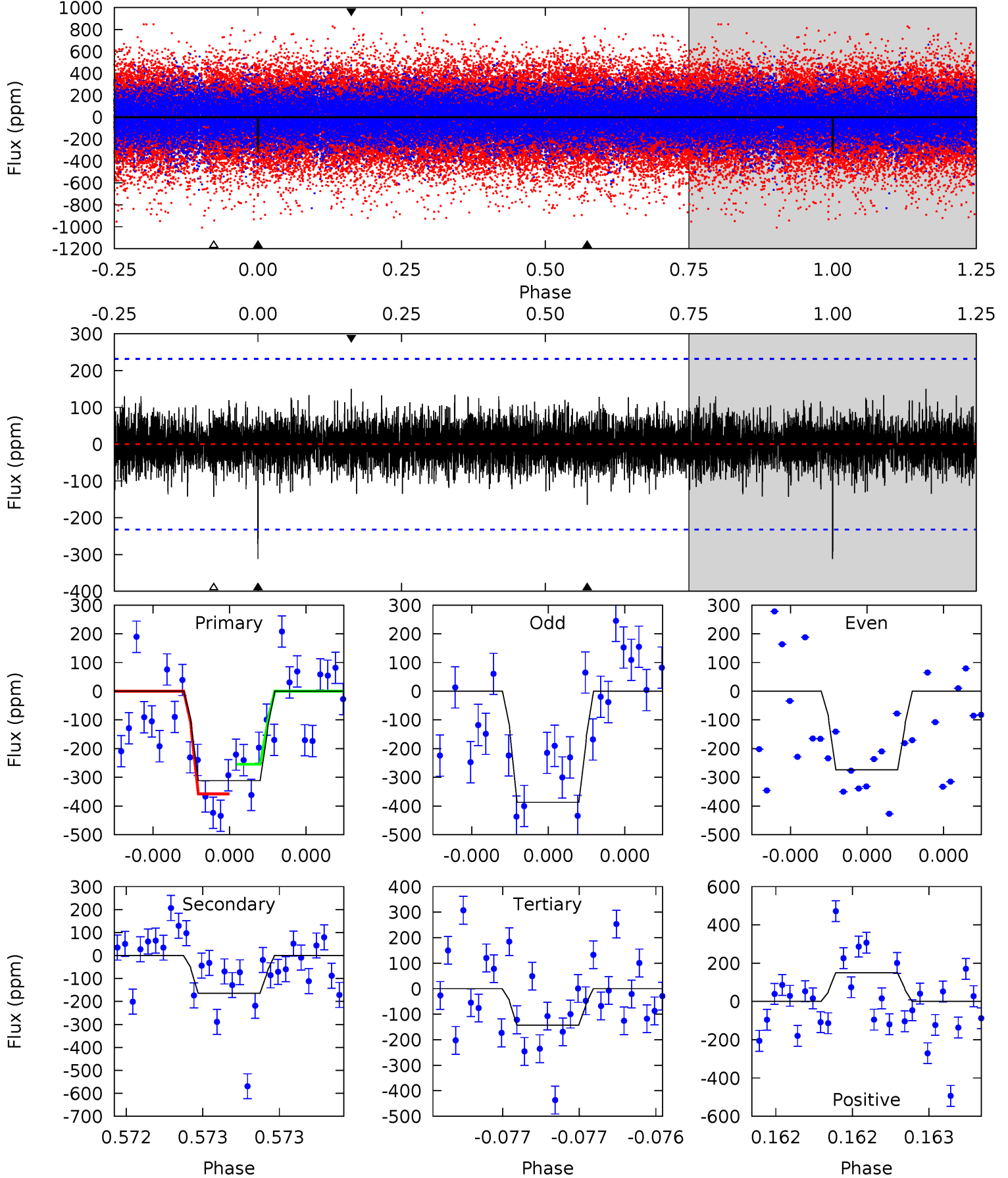
| Pri  | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT  |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.34 | 4.55 | 4.34 | 4.10 | 5.59            | 3.51            | 1.11             | 4.00    | 4.25    | 0.21    | 0.46    | 1.53    | 1.06 | 0.33  | 1.10 |



# Alt Model-Shift Uniqueness Test

011401313-01, P = 495.575131 Days, E = 177.611704 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  |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 7.53 | 3.98 | 3.45 | 3.63 | 5.61            | 3.53            | 0.95             | 4.07    | 3.90    | 0.53    | 0.35    | 1.30    | 0.92 | 0.33  | 1.25 |



### Stellar Parameters For KIC 011401313

|        | $T_{\text{eff}}(K)$  | $\log(g)$                 | [Fe/H]                     | $R (R_{\odot})$           | $M(M_{\odot})$            | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
|        | $6190^{+166}_{-222}$ | $4.429^{+0.072}_{-0.217}$ | $-0.100^{+0.250}_{-0.300}$ | $1.045^{+0.349}_{-0.116}$ | $1.064^{+0.168}_{-0.137}$ | $1.313^{+0.402}_{-0.726}$                 |
|        | +3%/-4%              | +2%/-5%                   | +250%/-300%                | +33%/-11%                 | +16%/-13%                 | +31%/-55%                                 |
| 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 011401313-01 / KOI

| Detrend | Depth (ppm)   | $R_p (R_{\oplus})$     | $T_{max} (K)$     | $T_{obs} (K)$          | $A_{obs}$                  |
|---------|---------------|------------------------|-------------------|------------------------|----------------------------|
| DV      | $-184 \pm 40$ | $3.19^{+2.96}_{-2.12}$ | $354^{+27}_{-18}$ | $4554^{+3316}_{-959}$  | $14370^{+123861}_{-10348}$ |
| Alt.    | $-165 \pm 41$ | $3.01^{+3.02}_{-1.99}$ | $355^{+27}_{-19}$ | $4586^{+3069}_{-1030}$ | $15494^{+119192}_{-11676}$ |

$T_{max}$  = 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

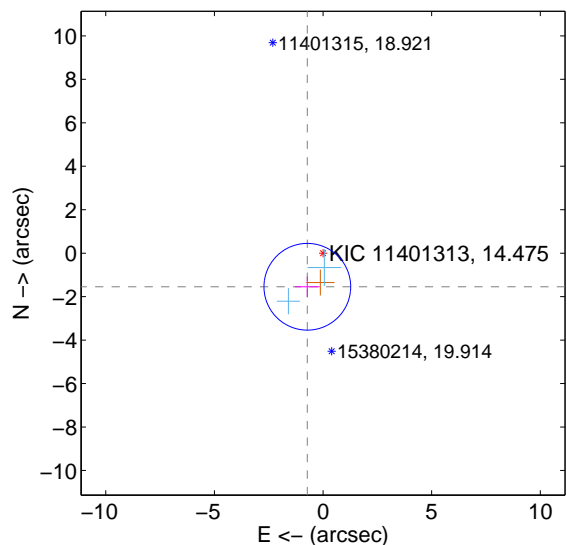
Supplemental centroid analysis for 011401313-01. Kepler magnitude: 14.47. Transit SNR 7.30

There are 2 quarters with good PRF difference image offsets

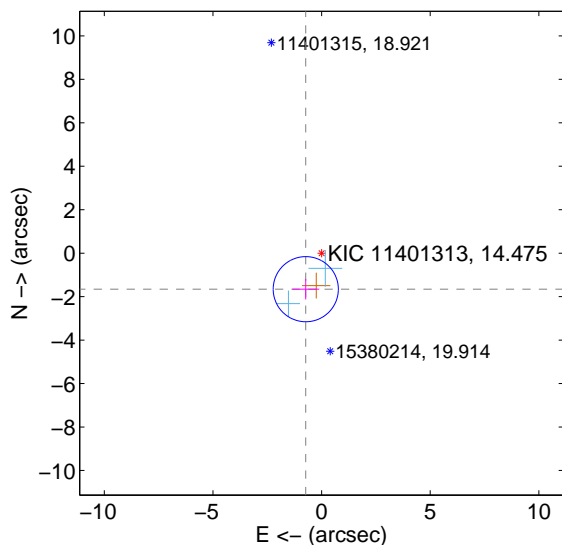
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

|   | Distance in arcsec | Distance / $\sigma$ | $\Delta$ RA       | $\Delta$ Dec       |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT          | $1.706 \pm 0.665$  | 2.57                | $0.723 \pm 0.574$ | $-1.546 \pm 0.476$ |
| PRF-fit source offset from KIC position | $1.810 \pm 0.500$  | 3.62                | $0.728 \pm 0.618$ | $-1.657 \pm 0.473$ |
| photometric centroid source offset      | $2.88 \pm 2.13$    | 1.35                | $-2.74 \pm 2.12$  | $-0.89 \pm 2.25$   |

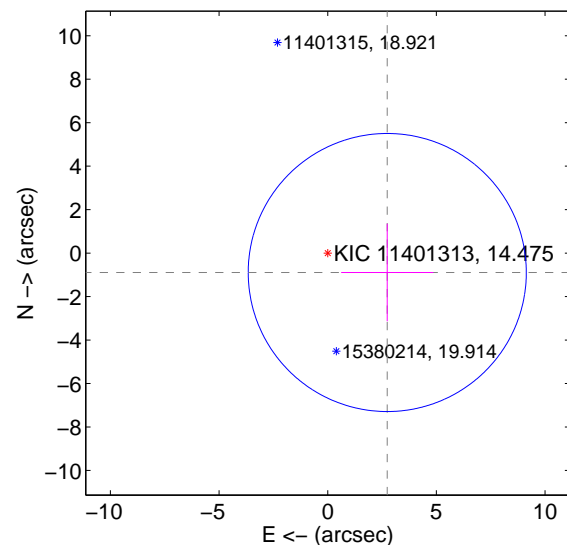
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

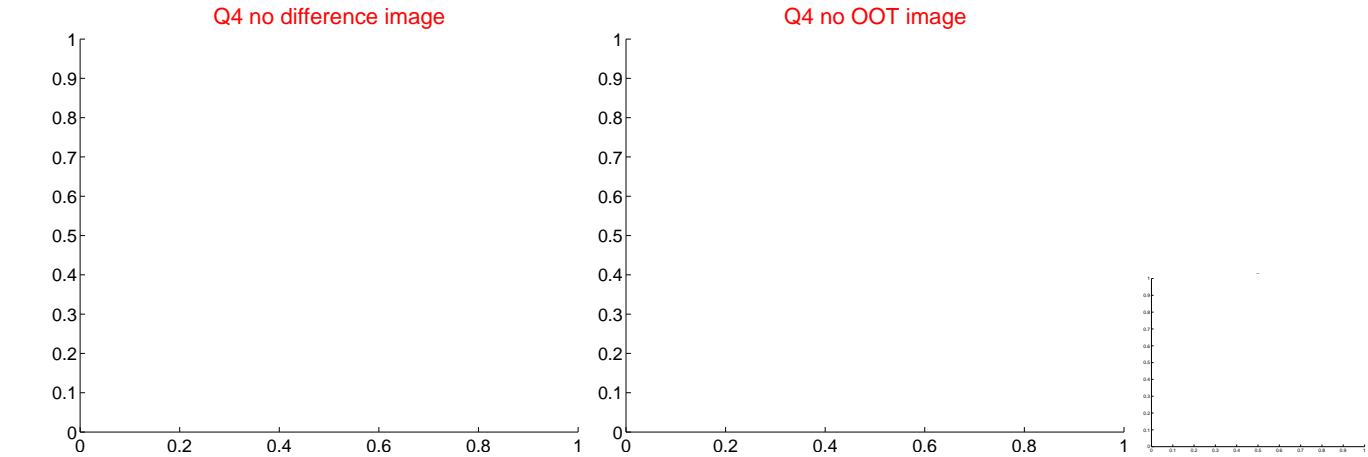
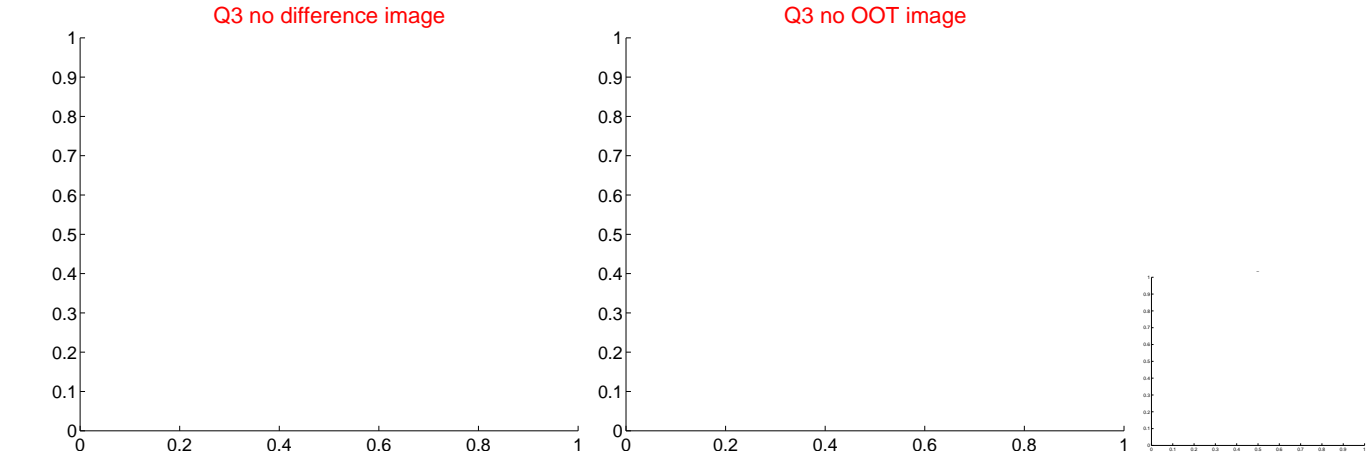
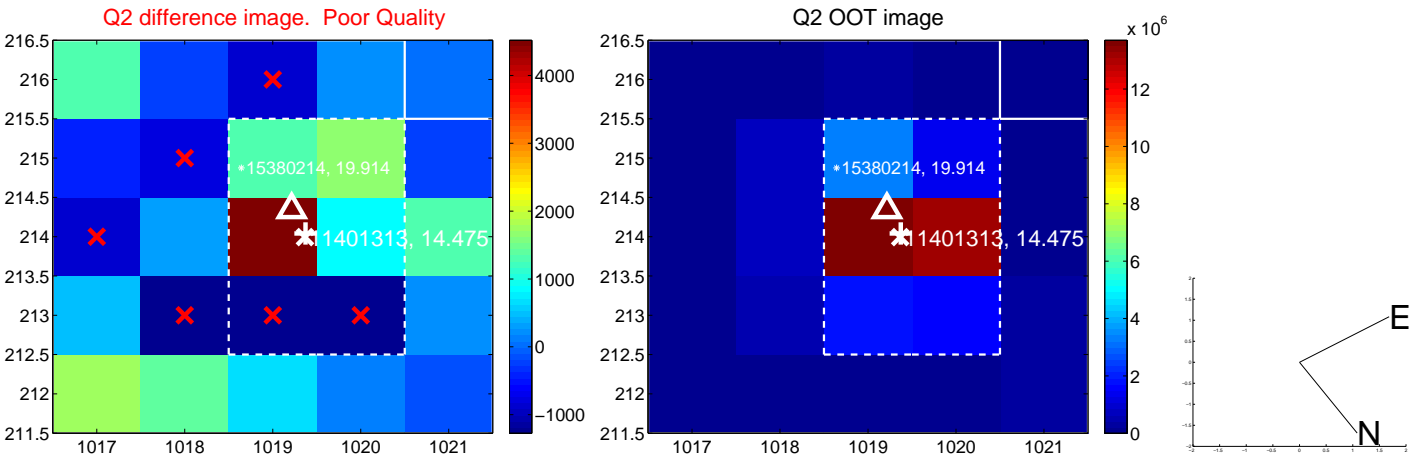
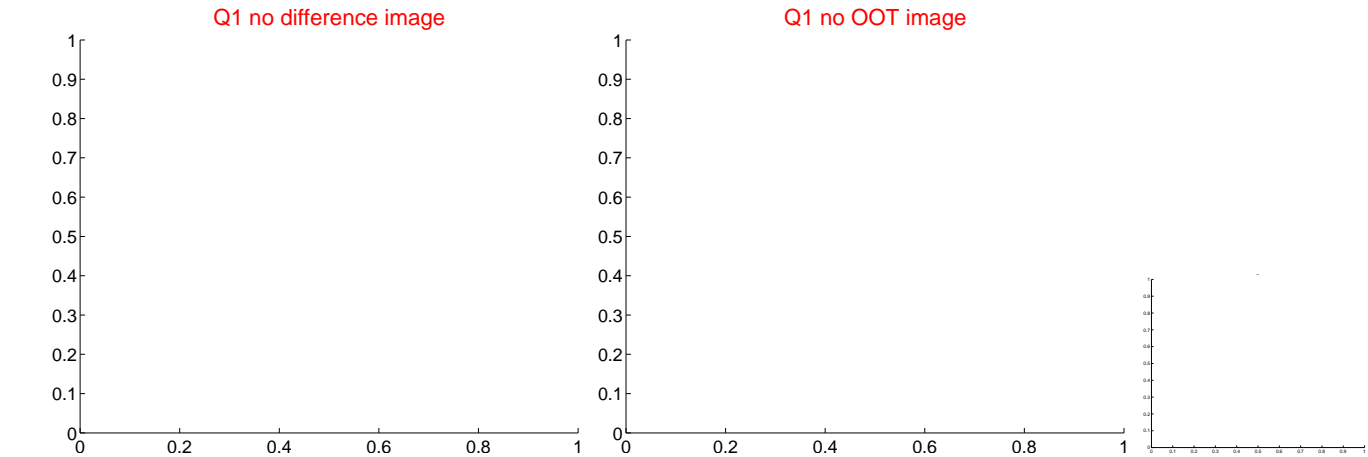


offset from photometric centroids



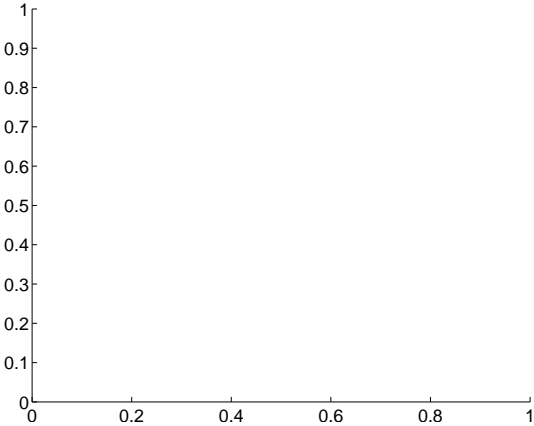
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

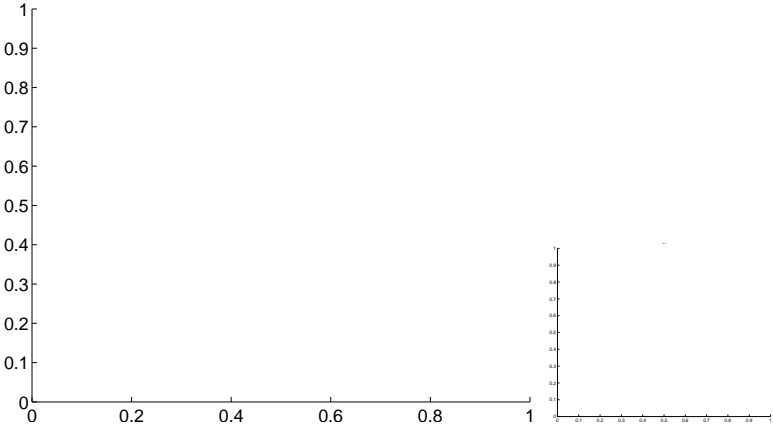


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

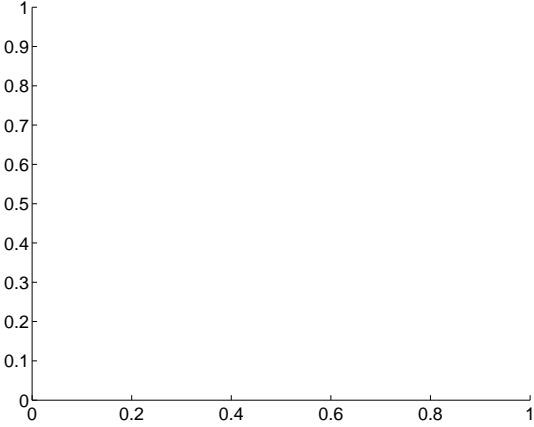
Q5 no difference image



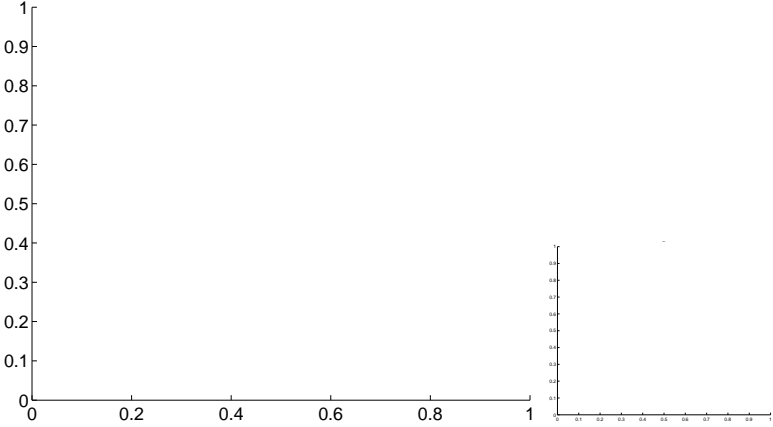
Q5 no OOT image



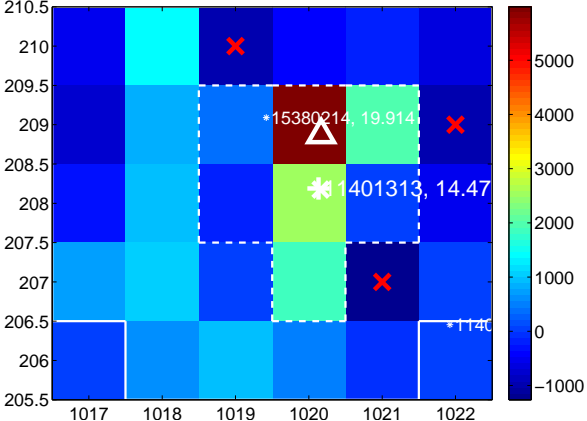
Q6 no difference image



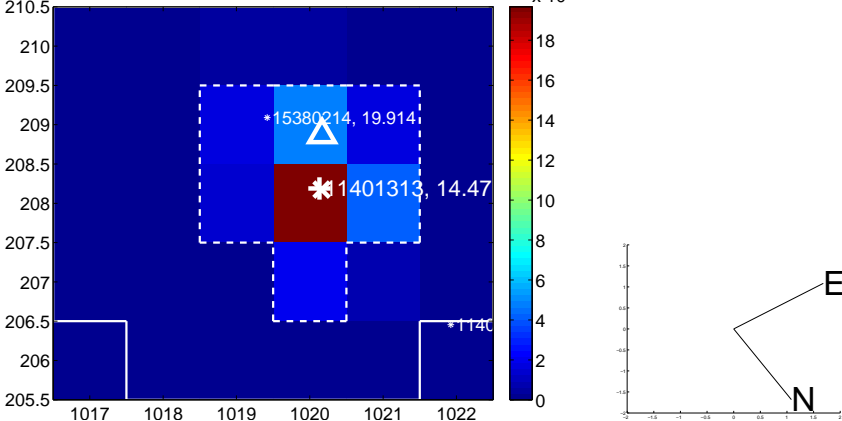
Q6 no OOT image



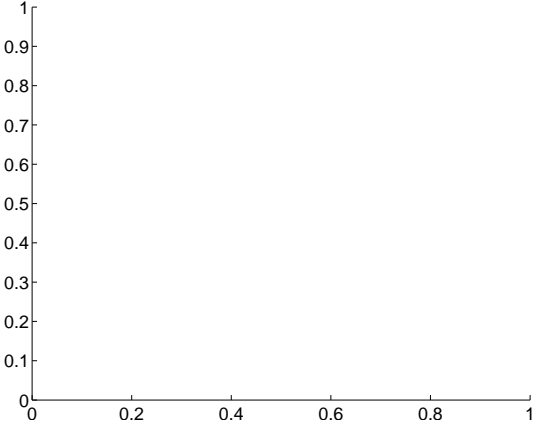
Q7 difference image



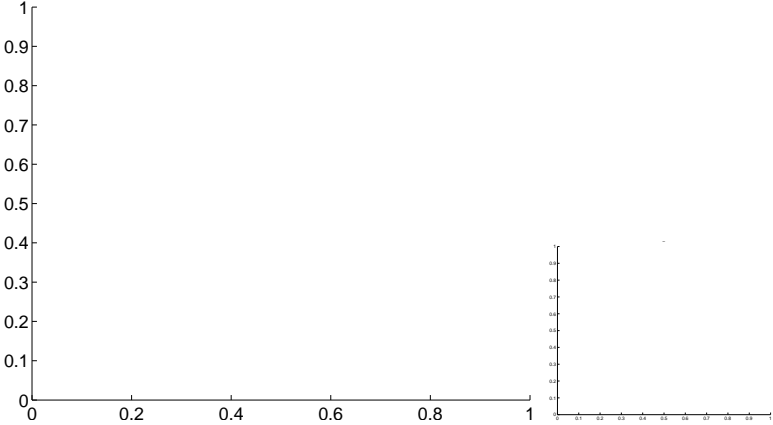
Q7 OOT image



Q8 no difference image

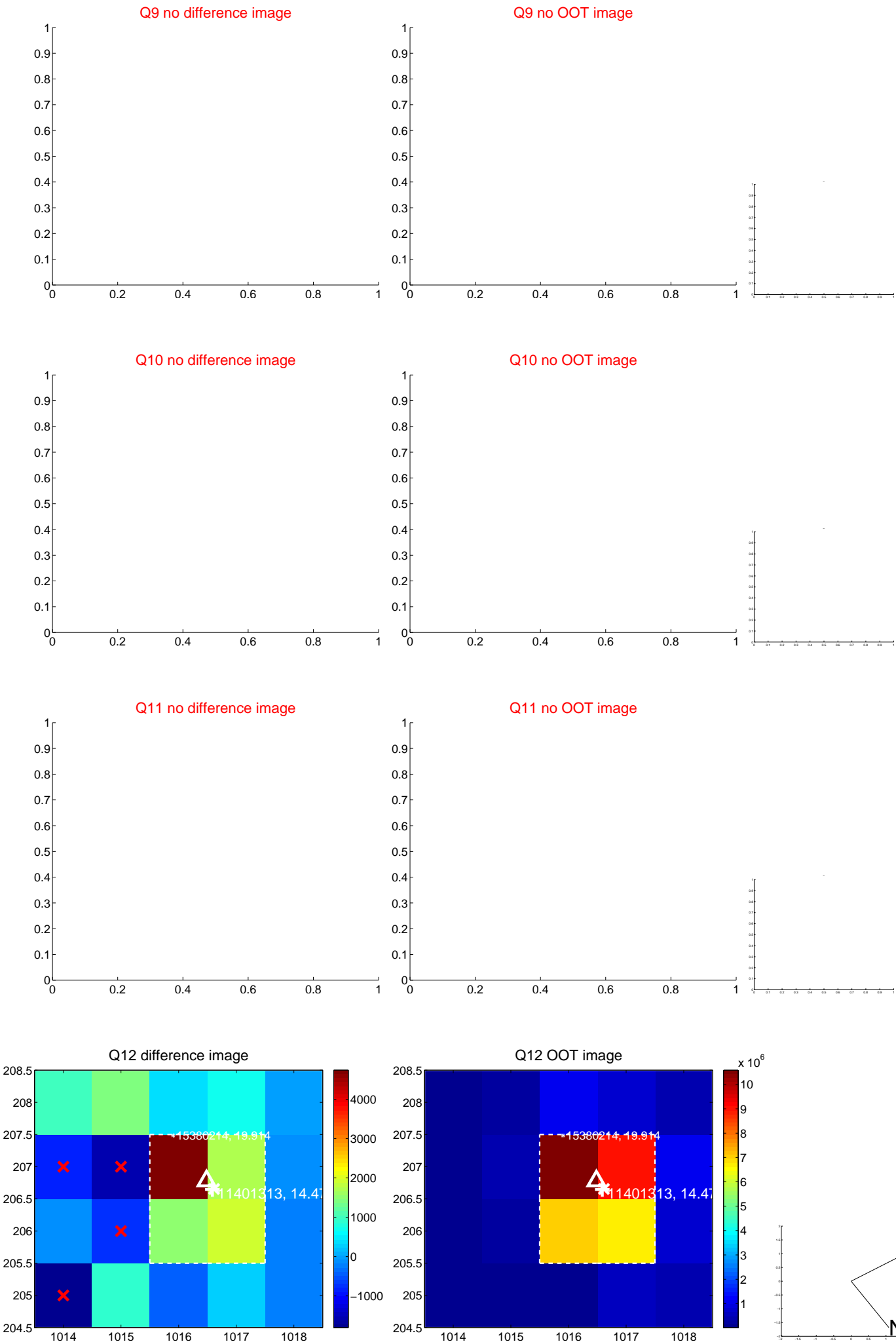


Q8 no OOT image

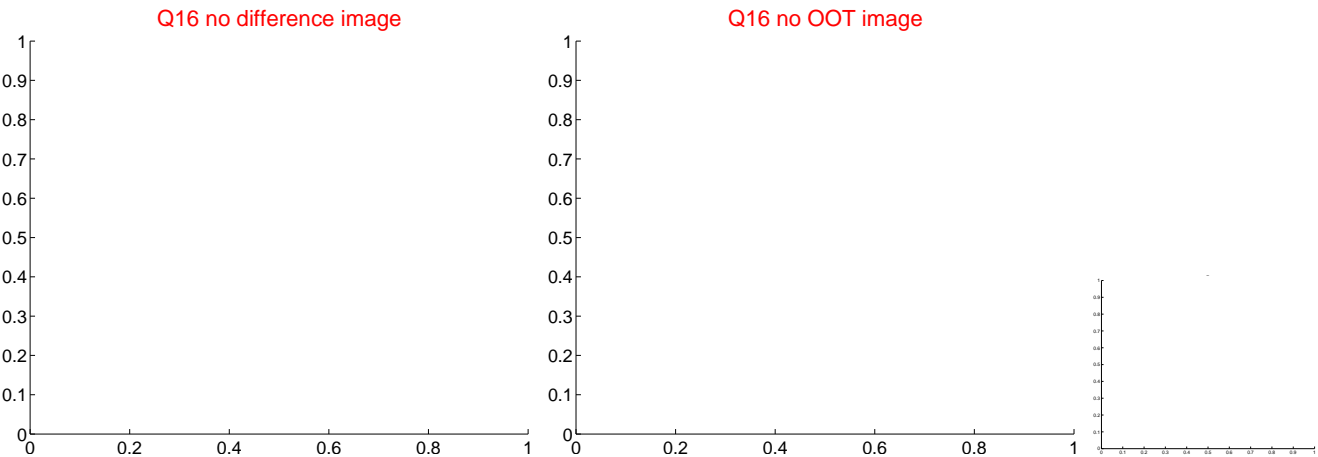
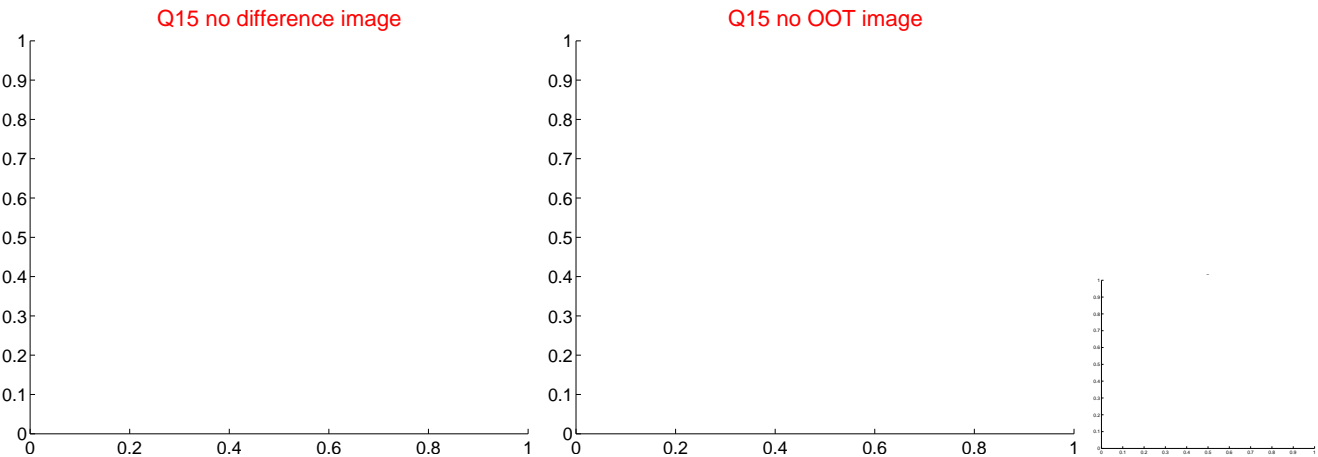
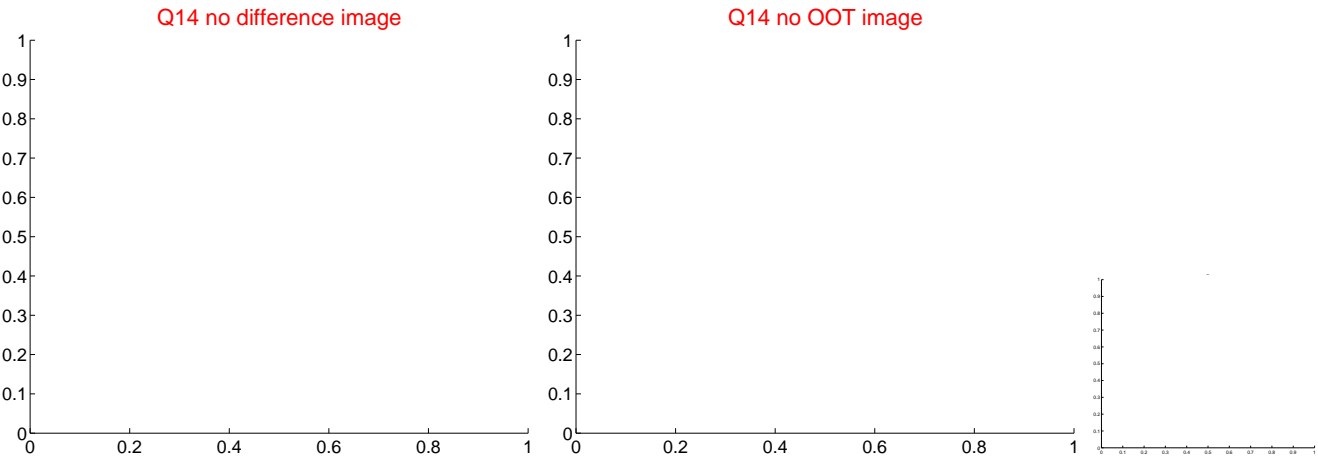
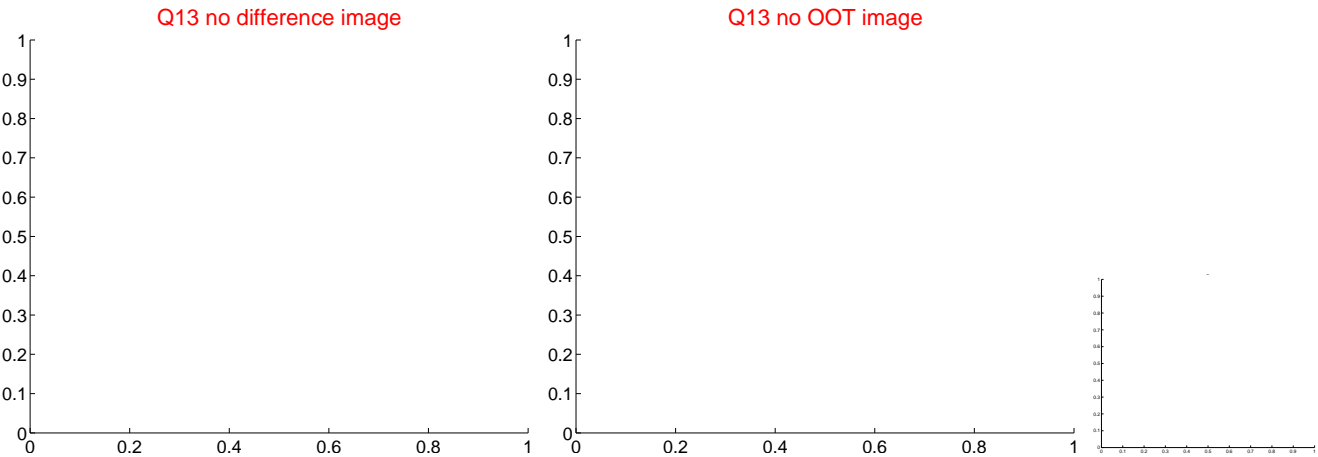




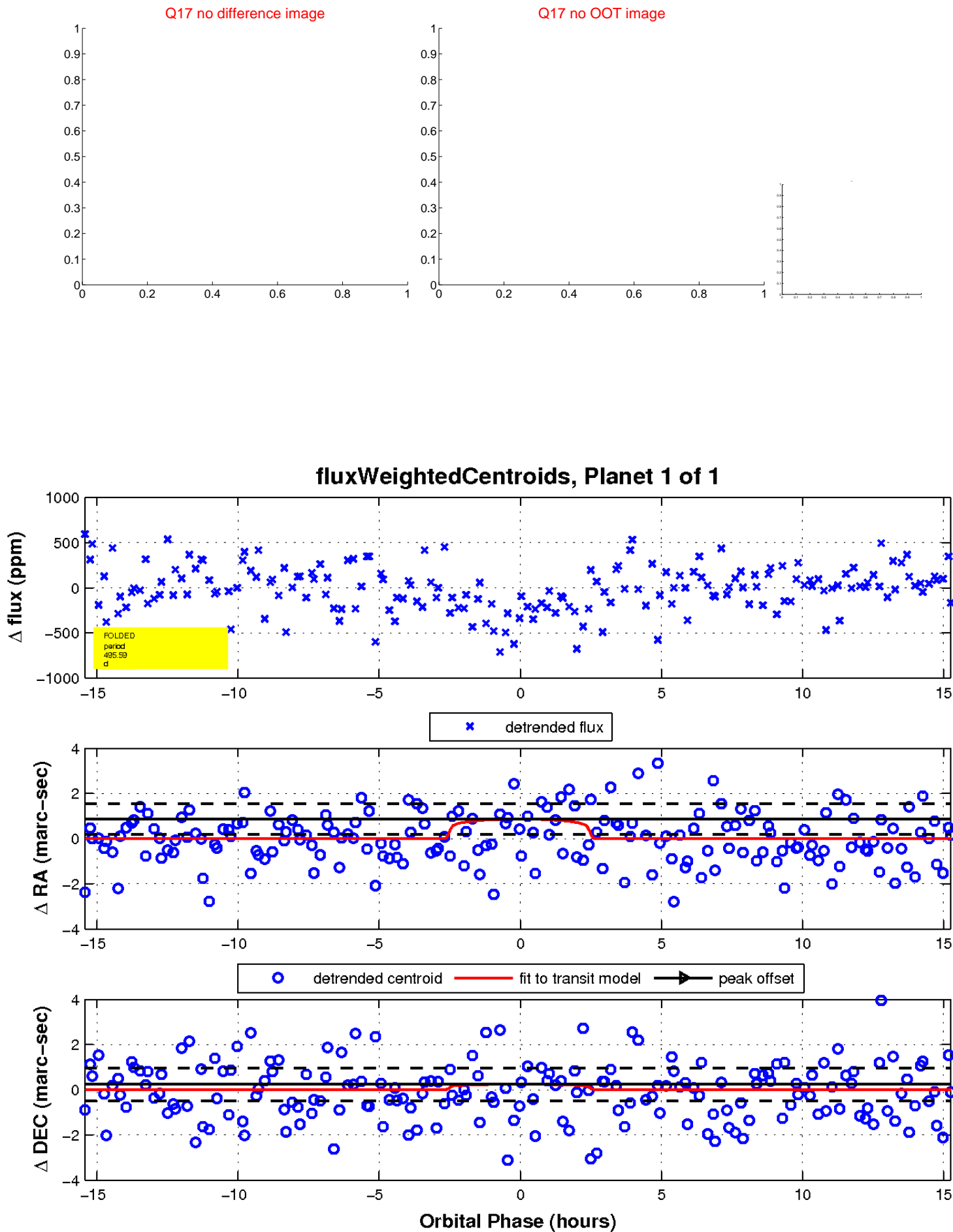
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



UKIRT Image

Declination

