

KIC 011076176

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|--------|------|-----------------------------|-----------------|------------------------|------------------------|
| 011076176-01 | OBS | 5862.01 | 0.699986 | 131.834110 | 128787.0 | 2.000 | 4187.3 | -1.0 | 0.72 | 5264 | 25.77 | 1769.56 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------------------|
| 011076176-01 | OBS | FP | 0.00 | 0 | 1 | 0 | 0 | SWEET_EB—CENT_NOFITS |

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 for comment definitions.

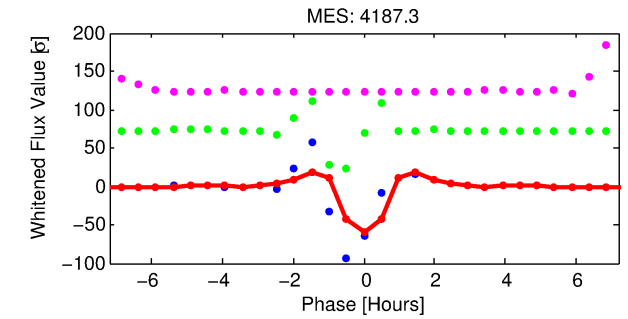
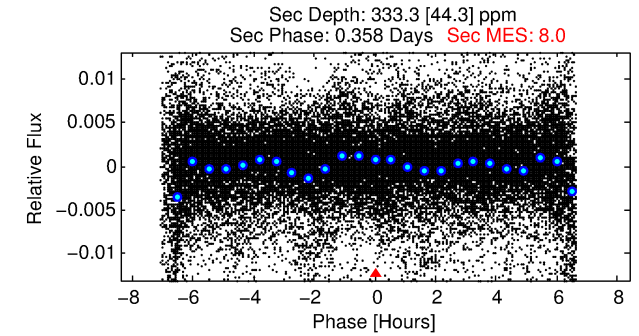
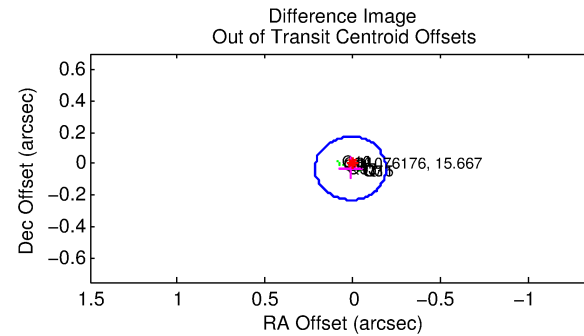
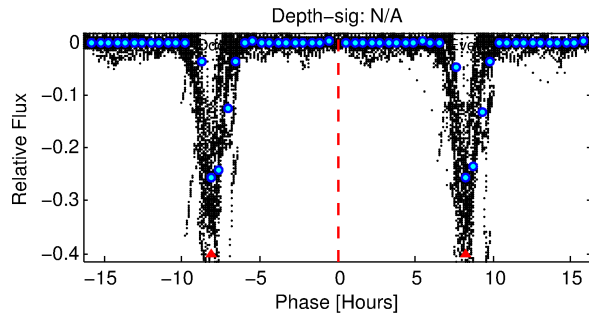
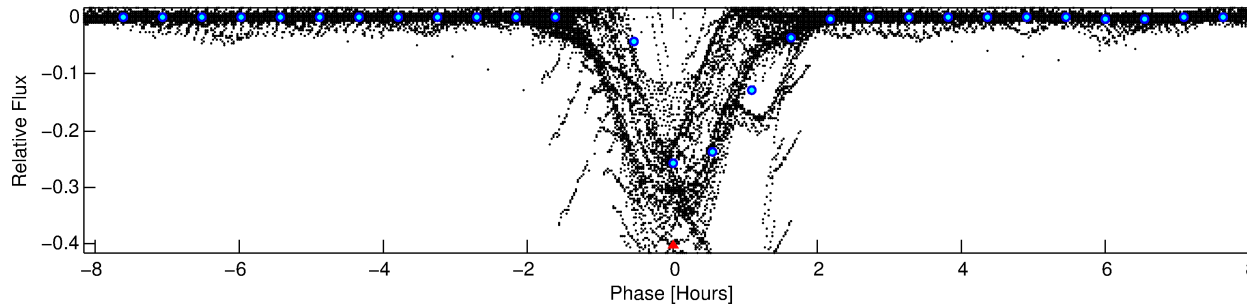
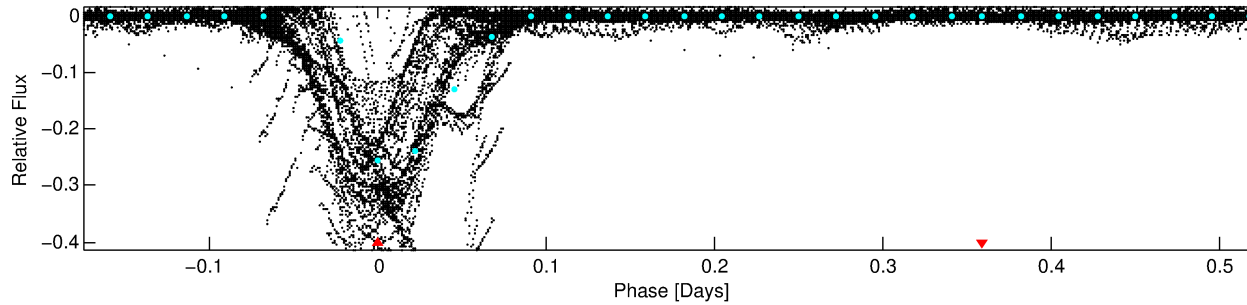
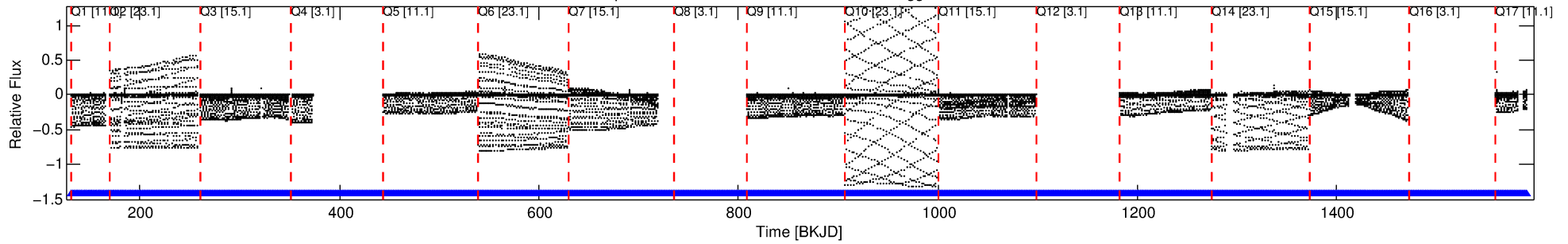
Ephemeris Match Information For 011076176-01

No Significant Match Found

DV One-Page Summary

KIC: 11076176 Candidate: 1 of 1 Period: 0.700 d
KOI: K05862.01 Corr: 0.815

Kp: 15.67 R*: 0.72 Rs Teff: 5264.0 K Logg: 4.62 Fe/H: -0.300



TPS TCE Results:

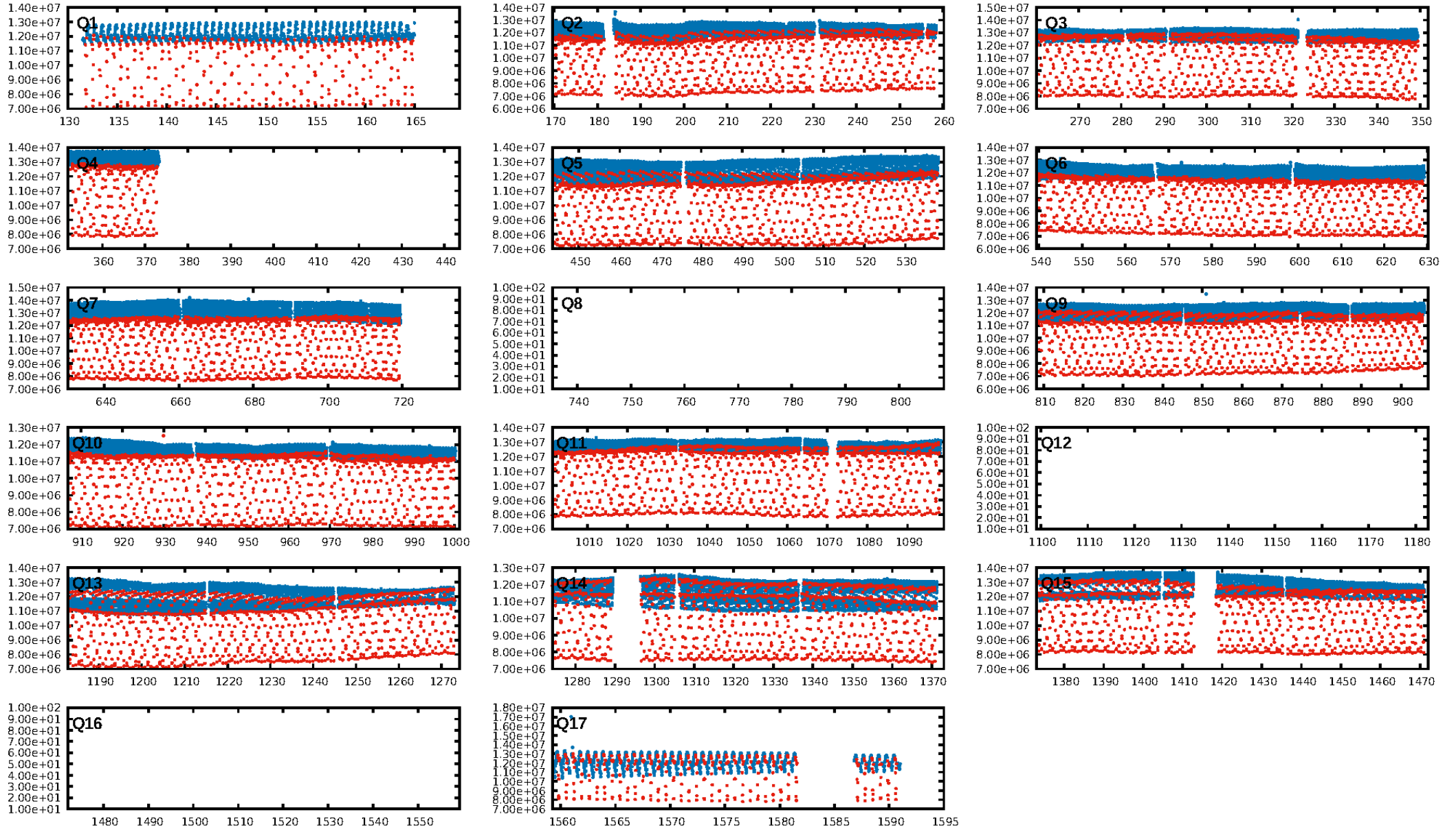
Period = 0.69999 d
Epoch = 131.8341 BKJD

DV fit results are unavailable

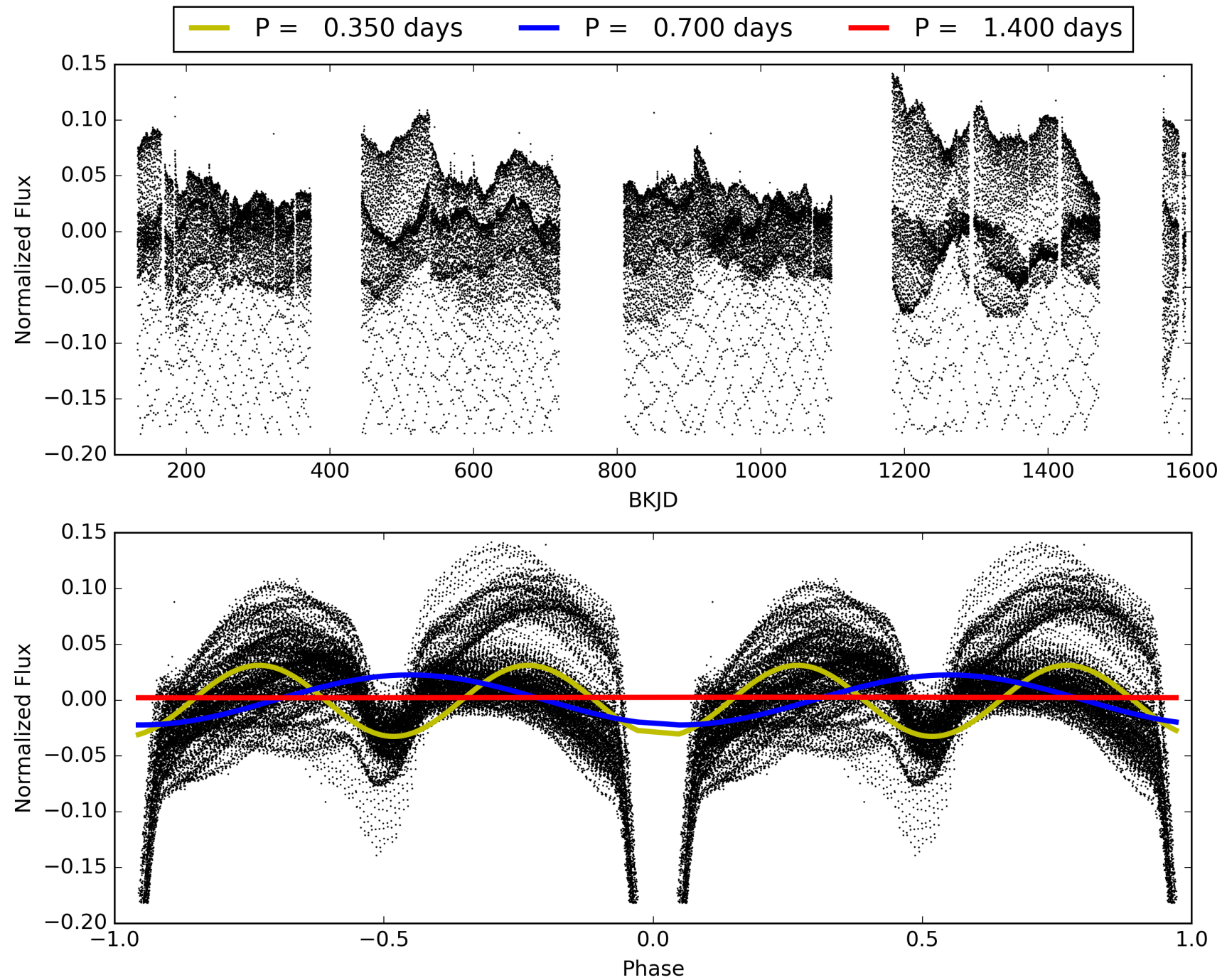
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1410/1410]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.200 arcsec [288.19σ]
OotOffset-rm: 0.031 arcsec [0.47σ]
KicOffset-rm: 0.045 arcsec [0.61σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011076176-01, PDC Light Curves

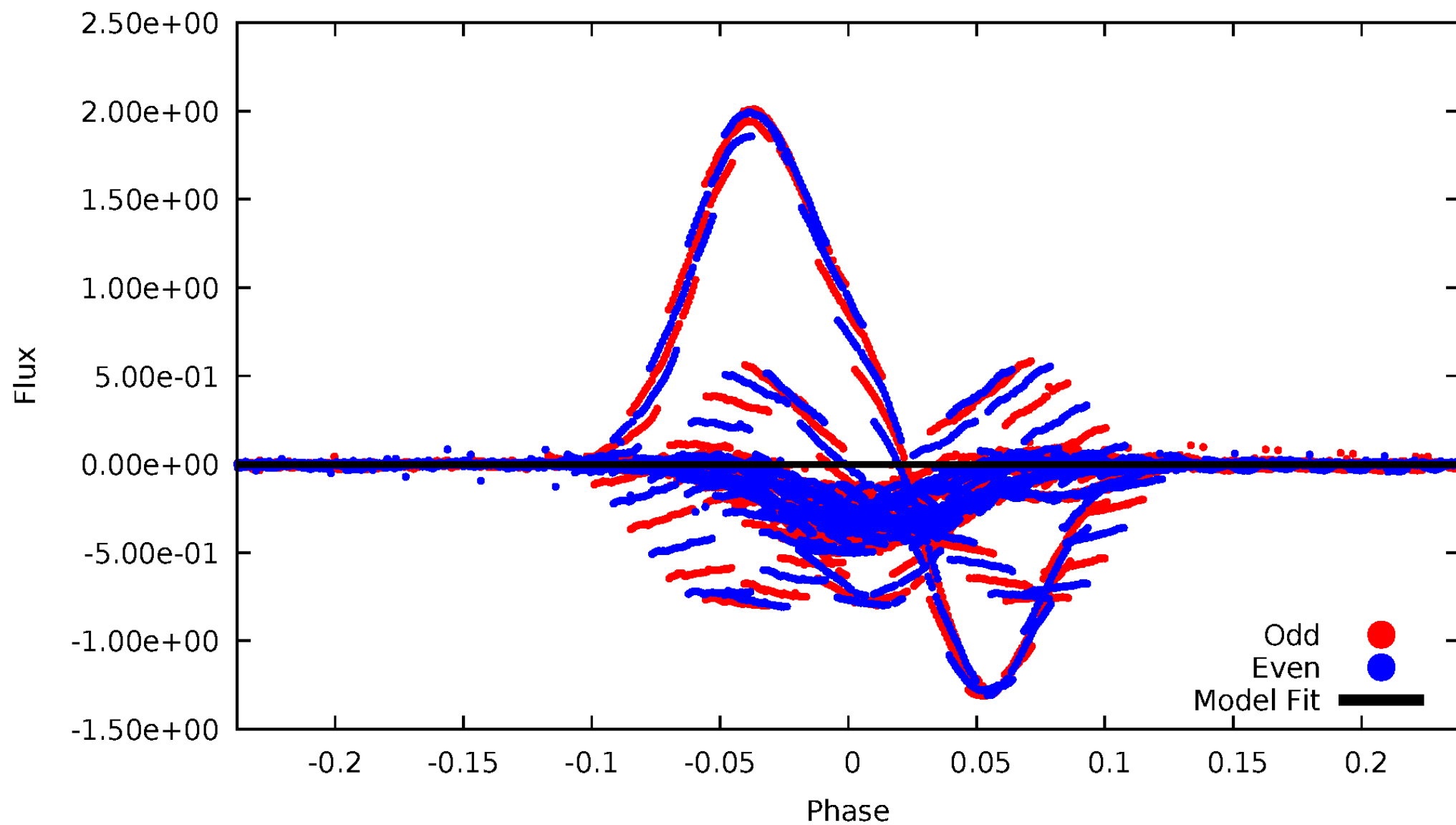


TCE 011076176-01



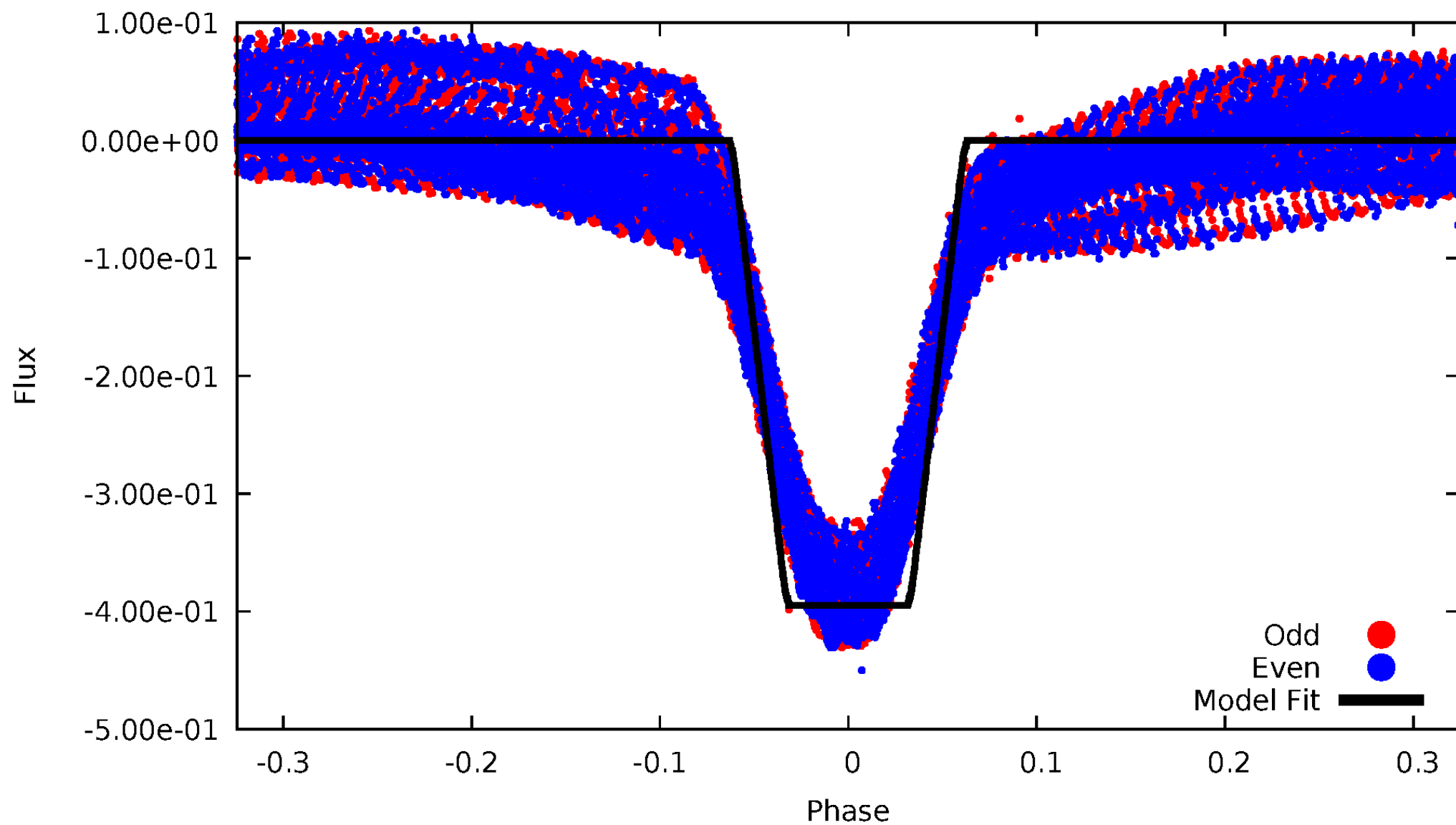
DV Odd/Even

TCE 011076176-01



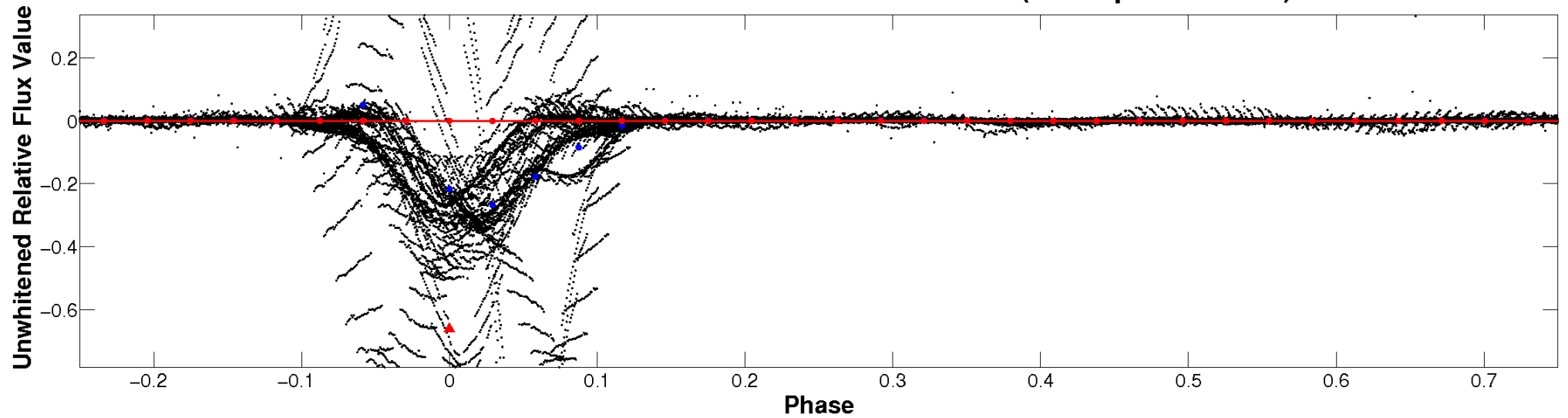
ALT Odd/Even

TCE 011076176-01

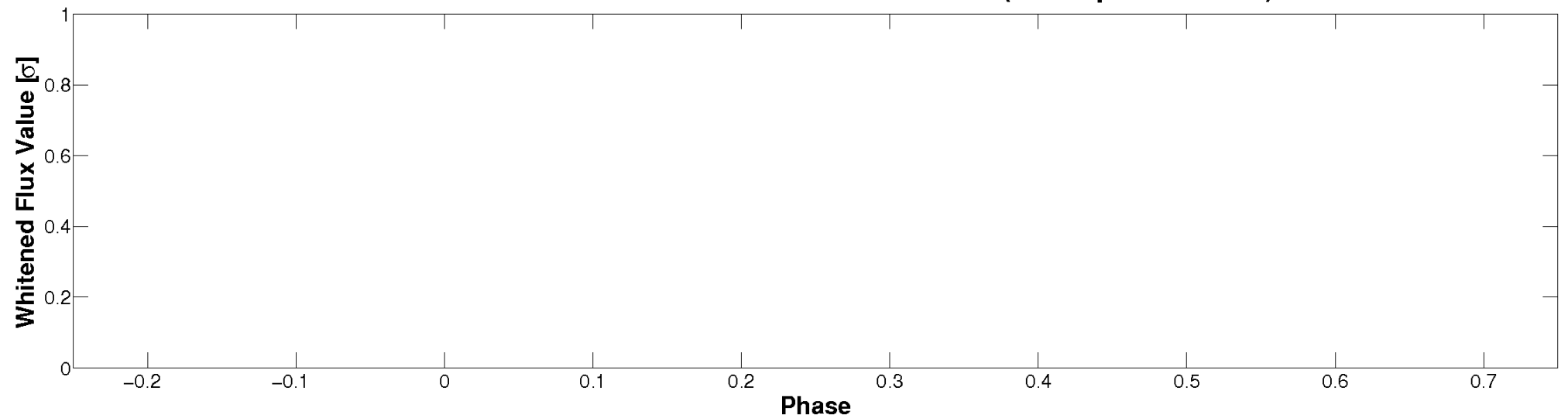


Non-Whitened Vs. Whitened Light Curve

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

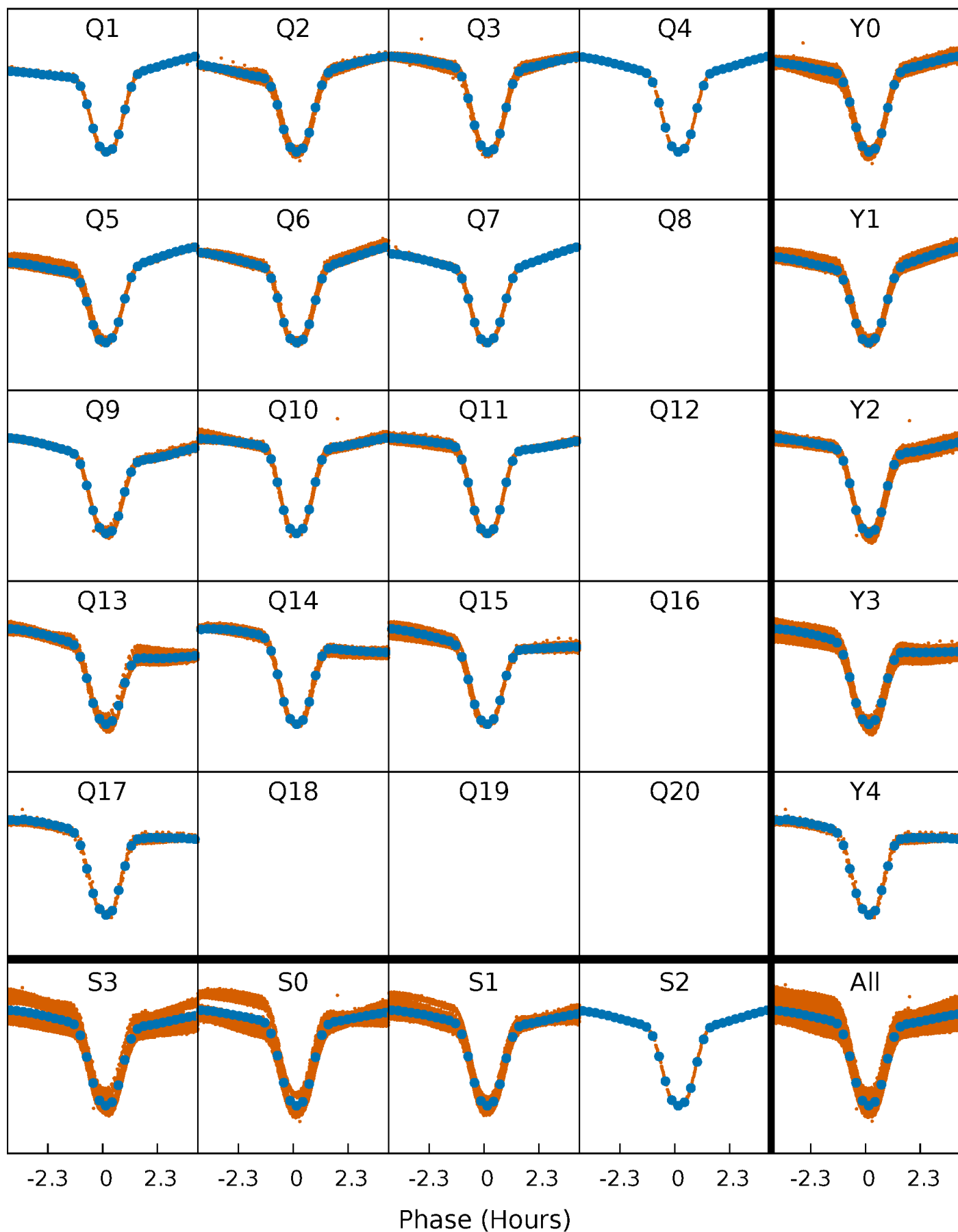


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



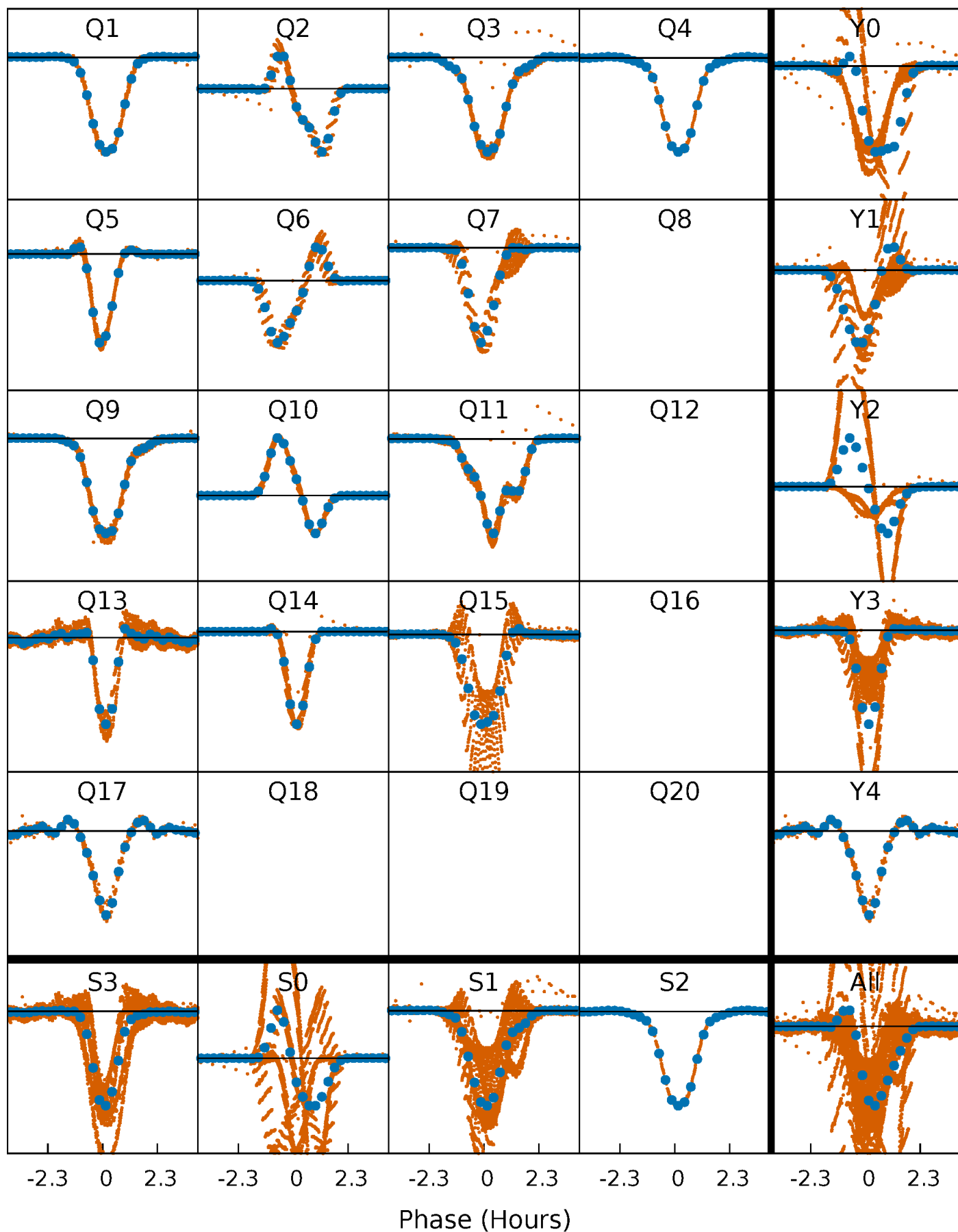
PDC Quarter-Phased Transit Curves

TCE 011076176-01 P= 0.699986 Days $T_0=131.834111$ (BKJD)



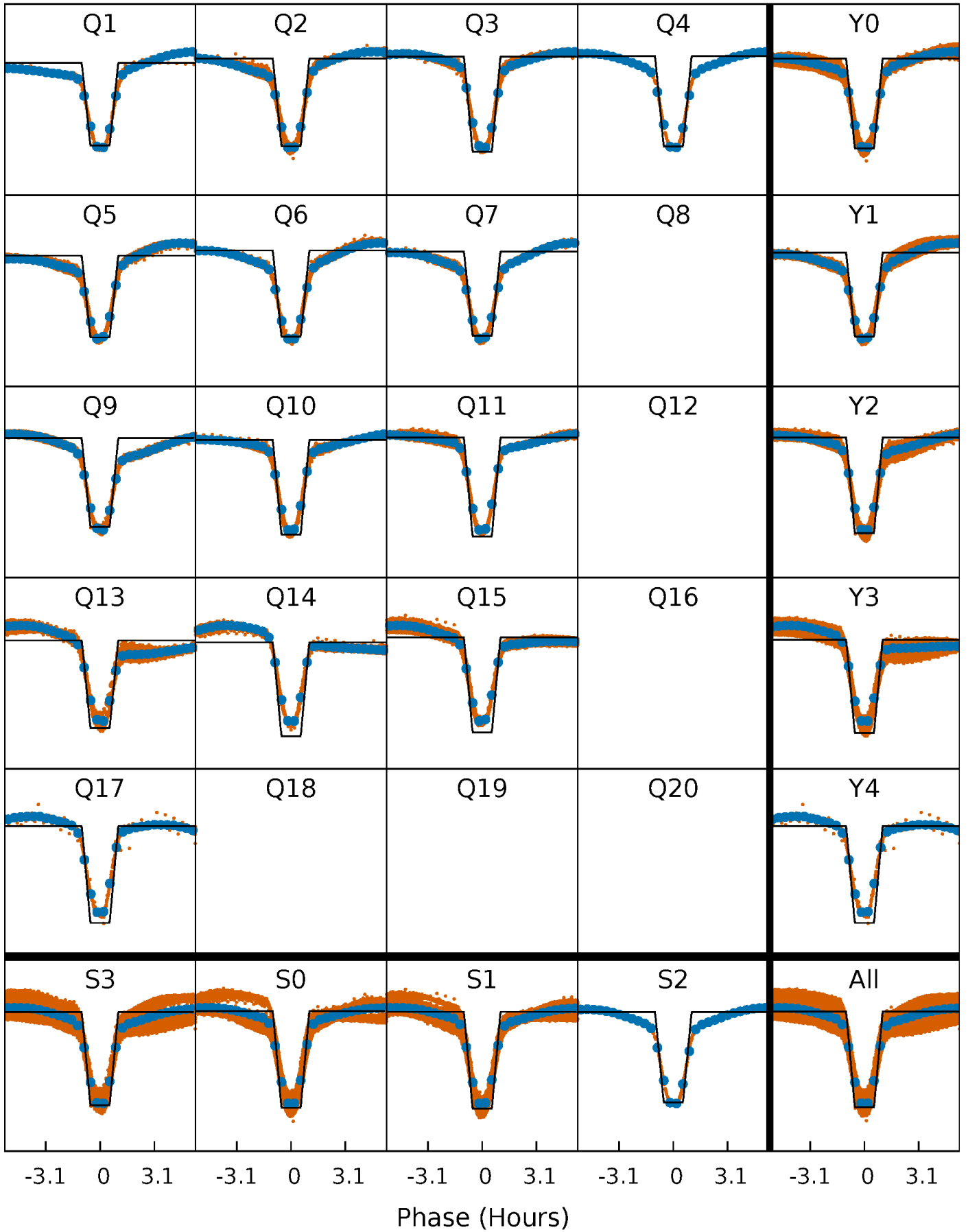
DV Quarter-Phased Transit Curves

TCE 011076176-01 P= 0.699986 Days $T_0=131.834111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

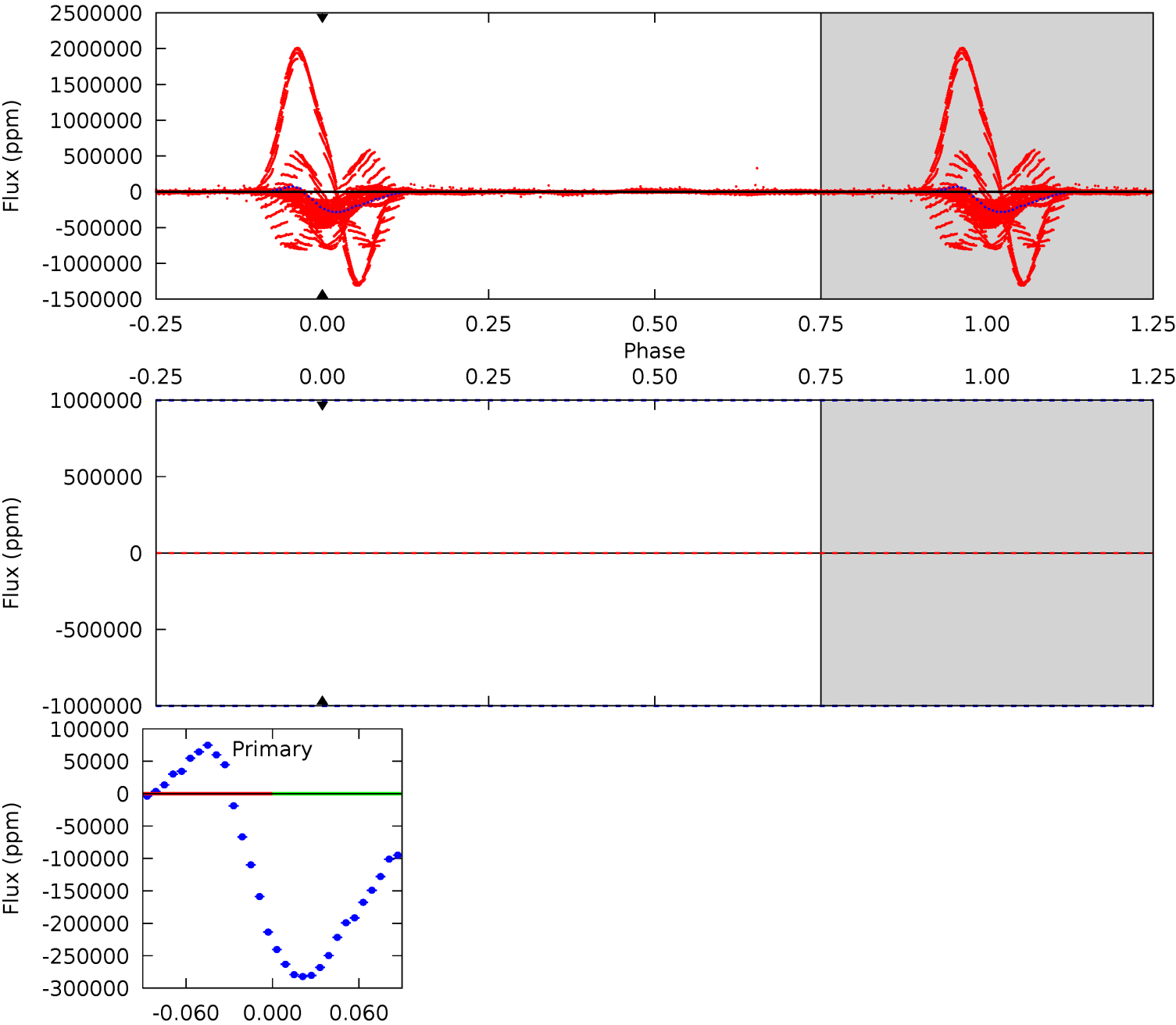
TCE 011076176-01 P= 0.699986 Days $T_0=131.840439$ (BKJD)



DV Model-Shift Uniqueness Test

011076176-01, P = 0.699986 Days, E = 131.134125 Days

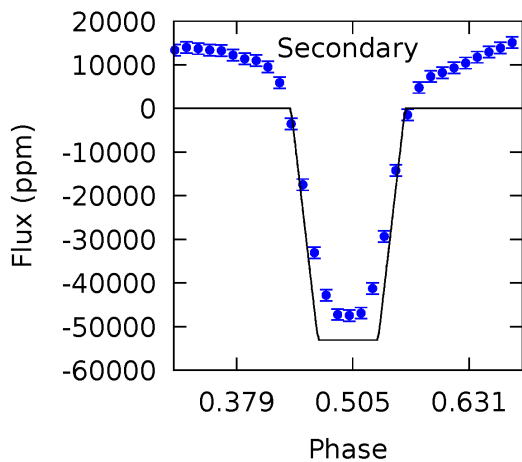
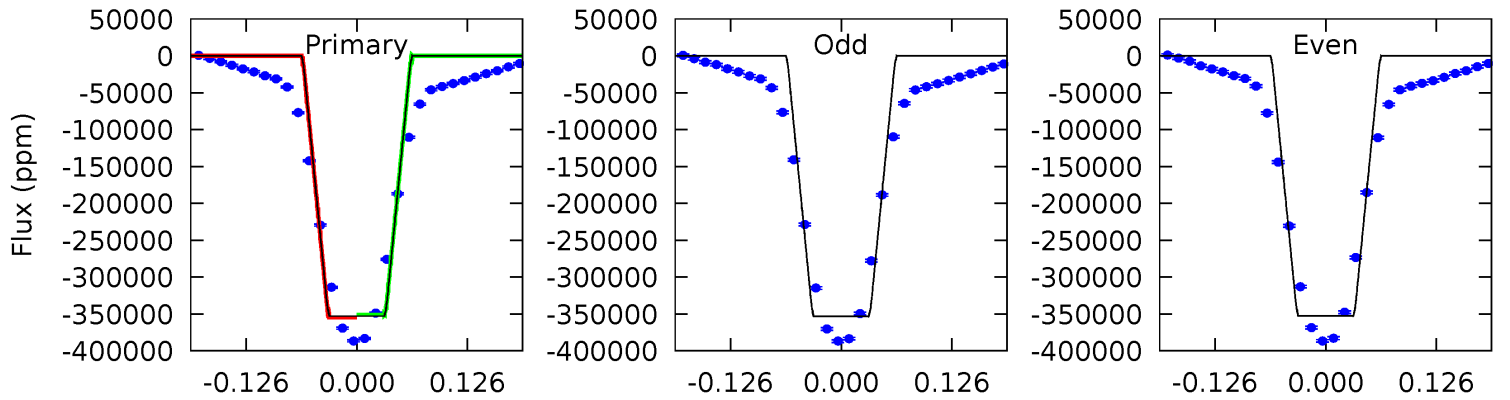
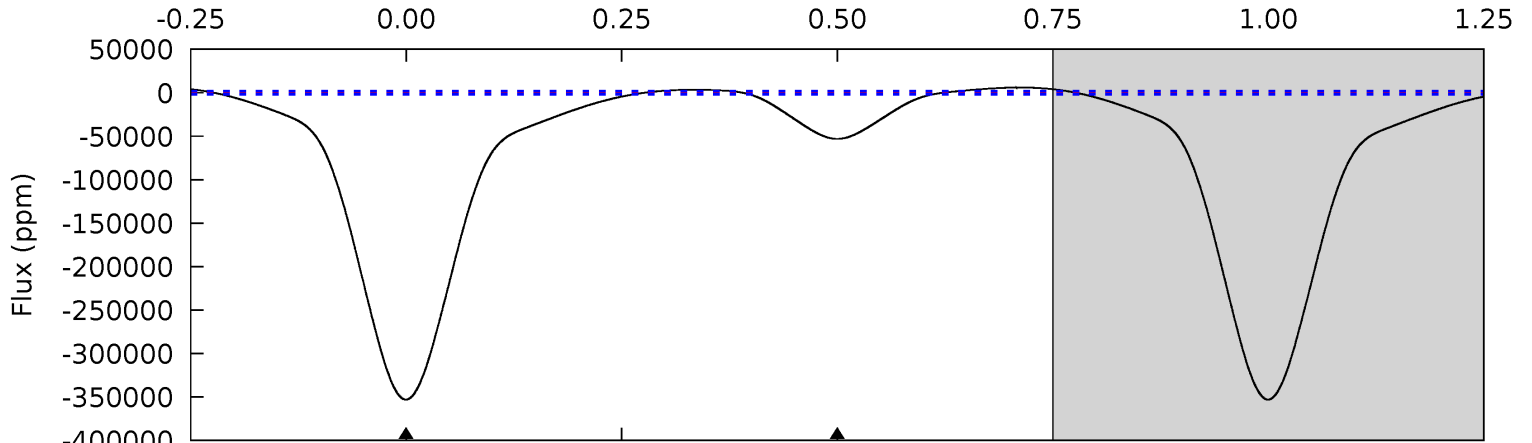
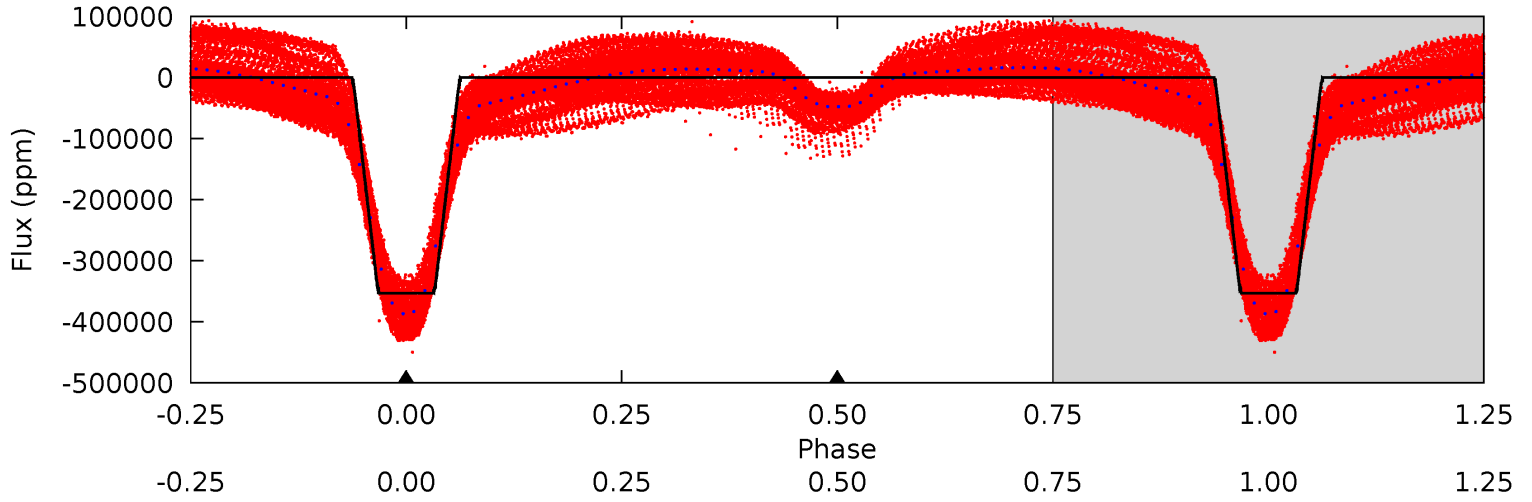
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-----|-----|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-----|-------|-----|
| 0 | 0 | 0 | 0 | 1.00 | 1.00 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Alt Model-Shift Uniqueness Test

011076176-01, P = 0.699986 Days, E = 131.140453 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 876.0 | 131.7 | 0 | 0 | 4.52 | 1.53 | 33.7 | 876.0 | 876.0 | 131.7 | 131.7 | 0.60 | 0.99 | 0.02 | 4.16 |



Stellar Parameters For KIC 011076176

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5264^{+158}_{-158} | $4.617^{+0.036}_{-0.096}$ | $-0.300^{+0.300}_{-0.300}$ | $0.724^{+0.112}_{-0.060}$ | $0.807^{+0.078}_{-0.095}$ | $2.991^{+0.521}_{-0.938}$ |
| | +3%/-3% | +1%/-2% | +100%/-100% | +15%/-8% | +10%/-12% | +17%/-31% |
| 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 011076176-01 / KOI 5862.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|------------------|-------------------------|--------------------|-------------------------|------------------------------|
| DV | 0 ± 1000000 | $26.76^{+8.67}_{-8.41}$ | 2340^{+92}_{-87} | -2858^{+8228}_{-2356} | $-0.145^{+19.280}_{-15.900}$ |
| Alt. | -53076 ± 403 | $50.63^{+9.51}_{-8.23}$ | 2339^{+99}_{-93} | 3563^{+251}_{-214} | $2.445^{+1.053}_{-0.691}$ |

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 $A_{obs} \gg 1.0$

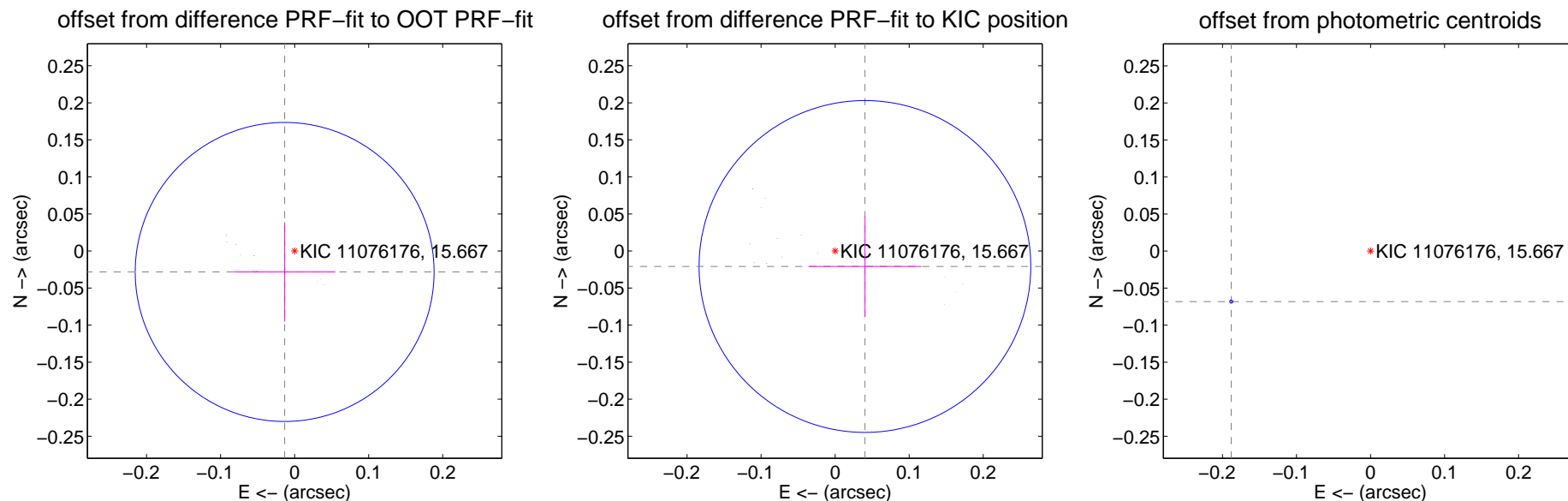
DV Centroid Data

Supplemental centroid analysis for 011076176-01. Kepler magnitude: 15.67. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

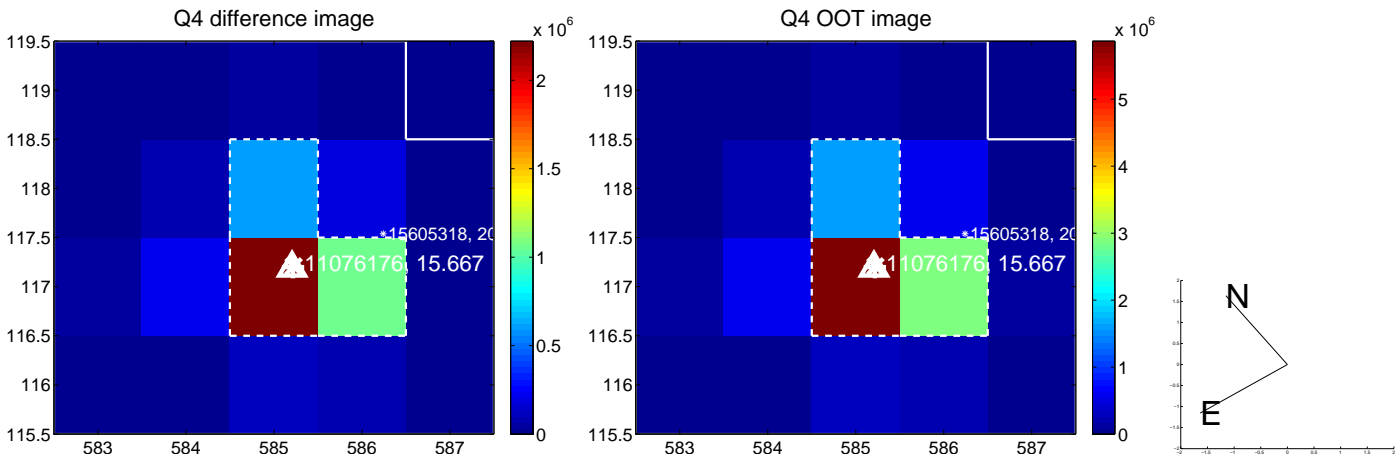
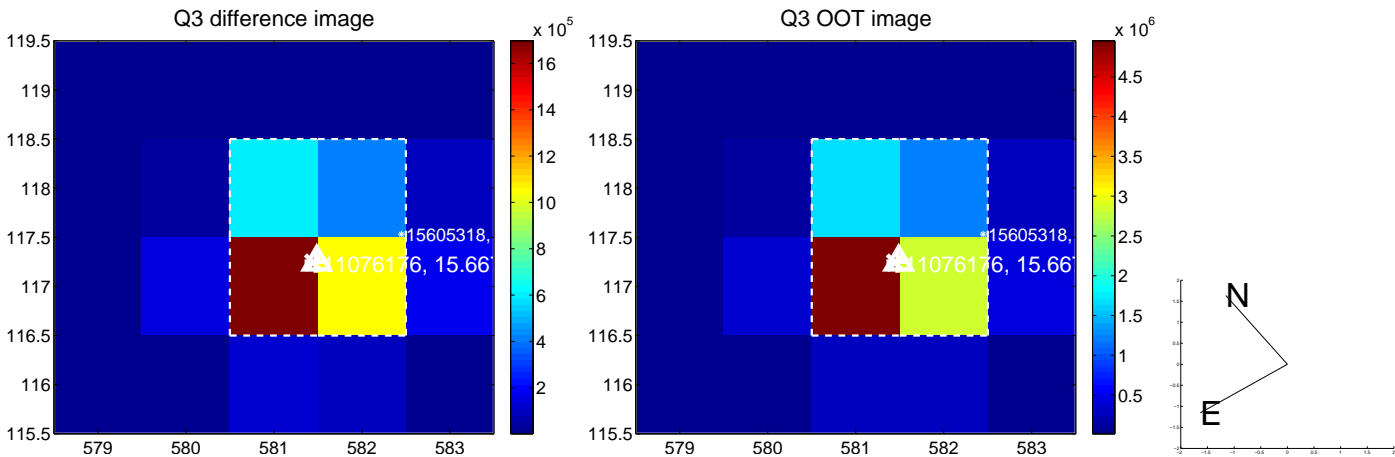
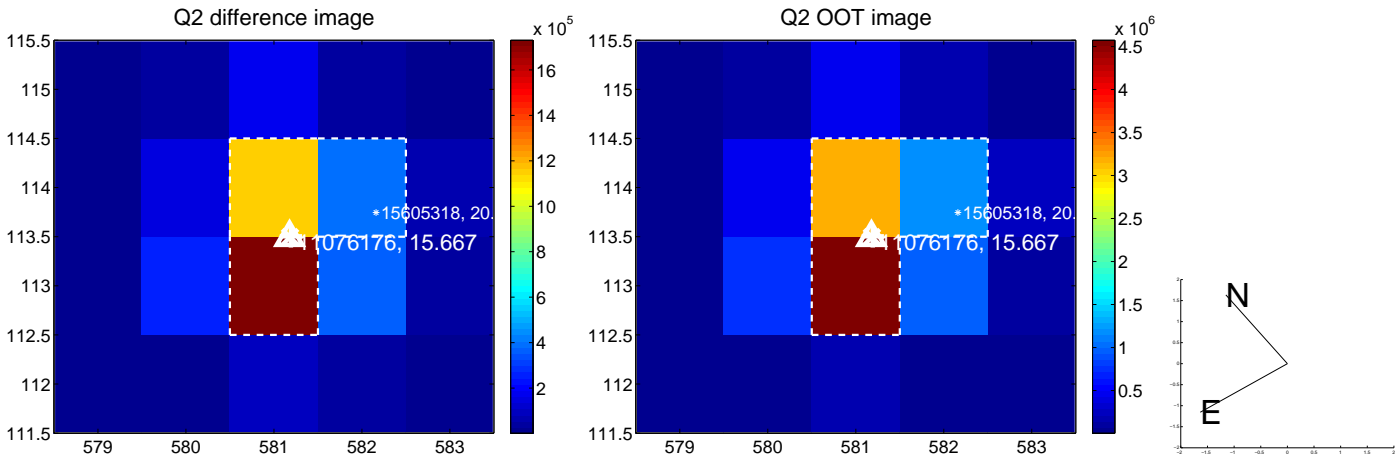
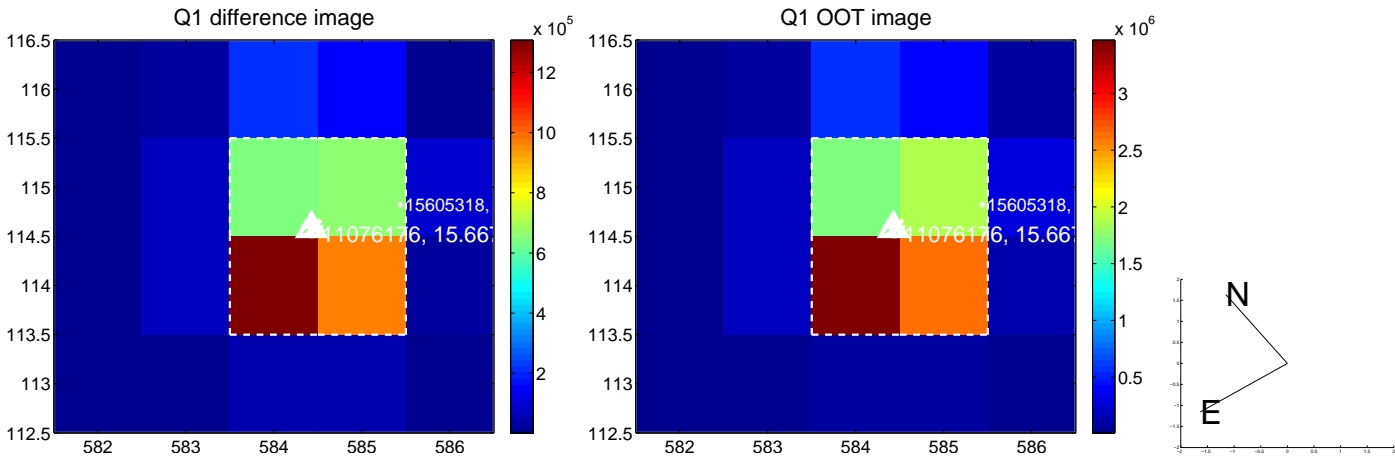
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.031 ± 0.067 | 0.47 | 0.013 ± 0.069 | -0.028 ± 0.067 |
| PRF-fit source offset from KIC position | 0.045 ± 0.075 | 0.61 | -0.040 ± 0.076 | -0.021 ± 0.068 |
| photometric centroid source offset | 0.20 ± 0.00 | 288.19 | 0.19 ± 0.00 | -0.07 ± 0.00 |

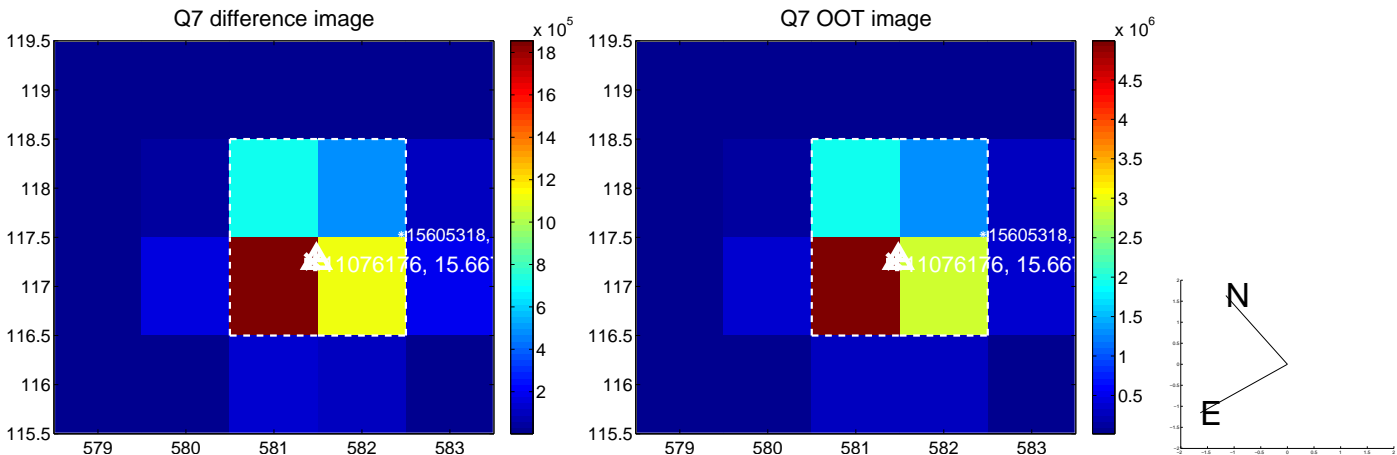
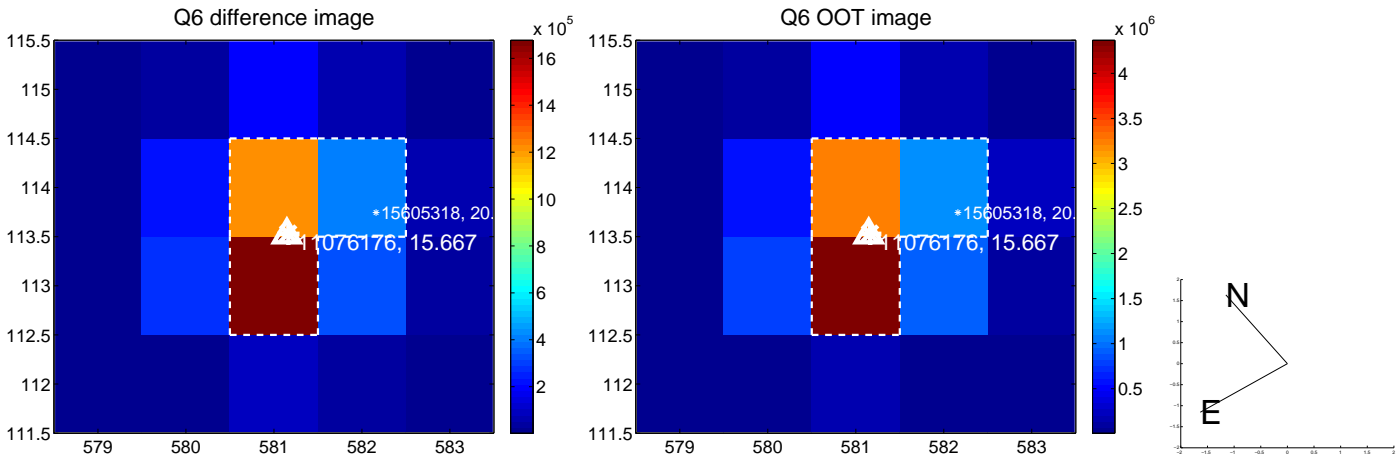
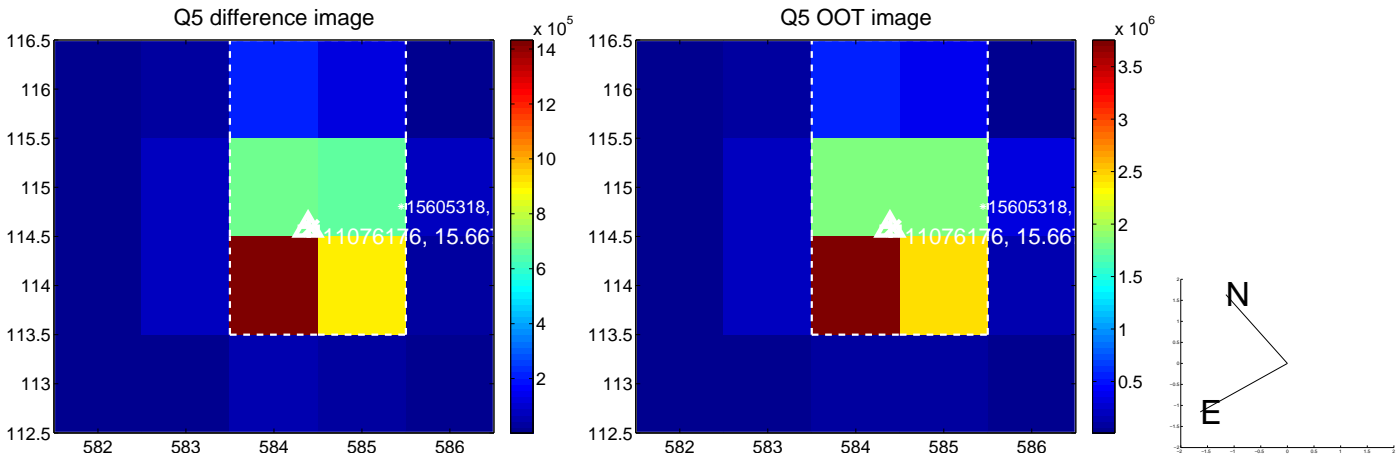


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

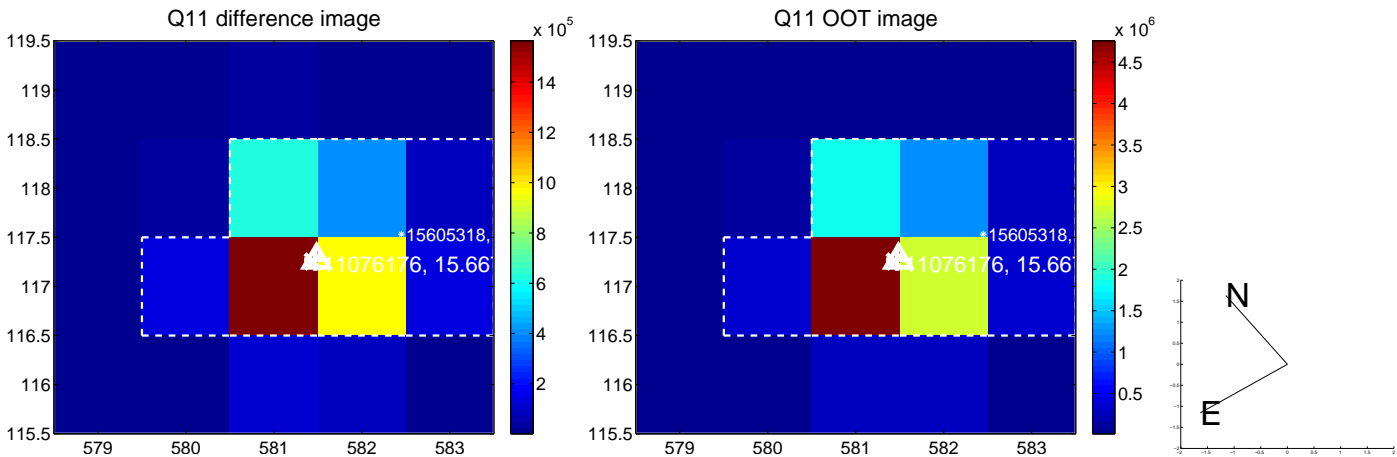
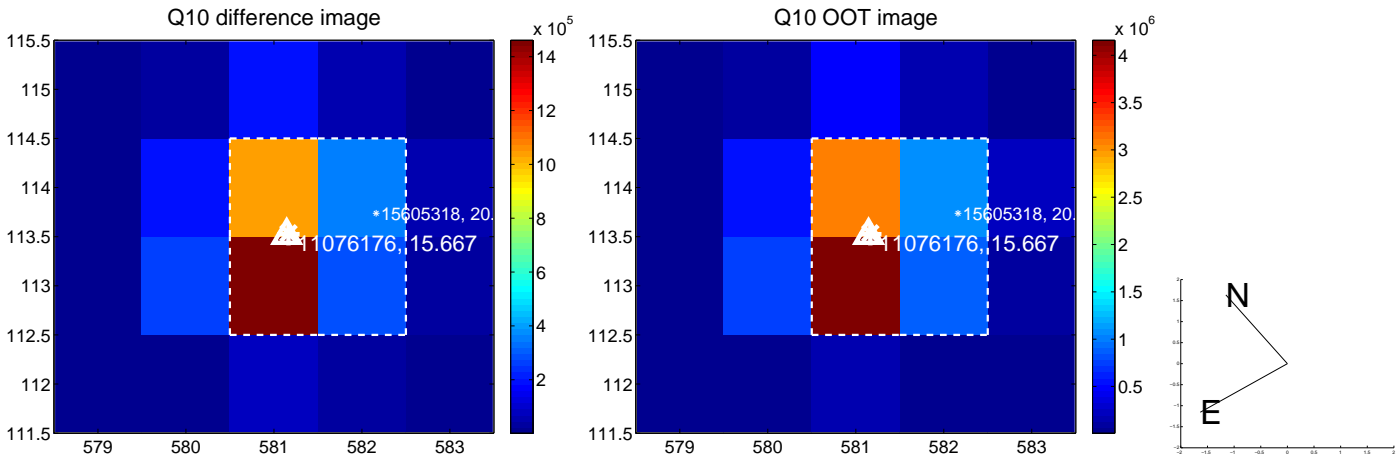
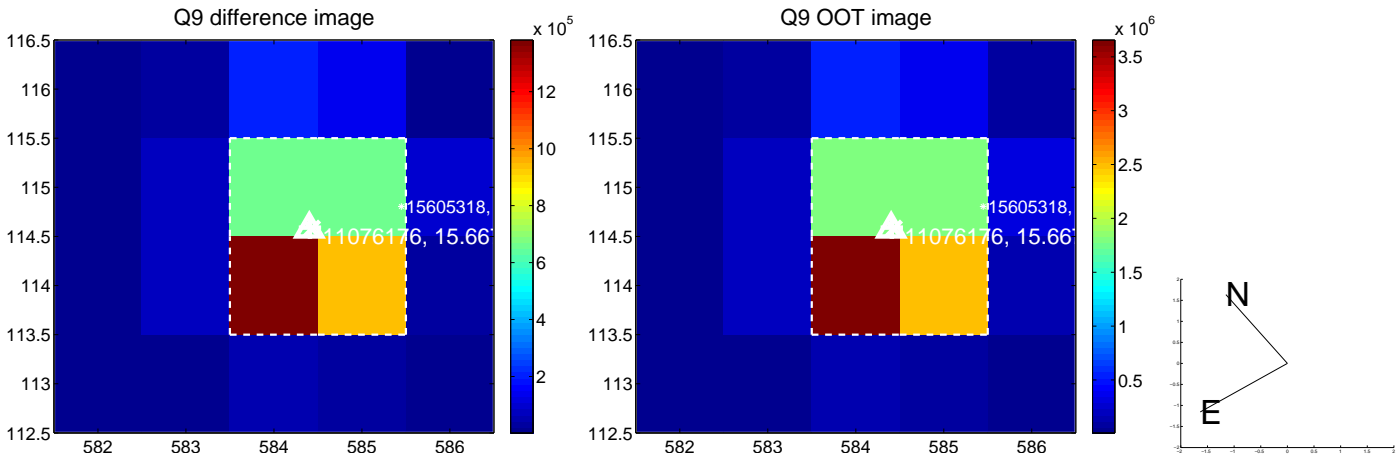
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



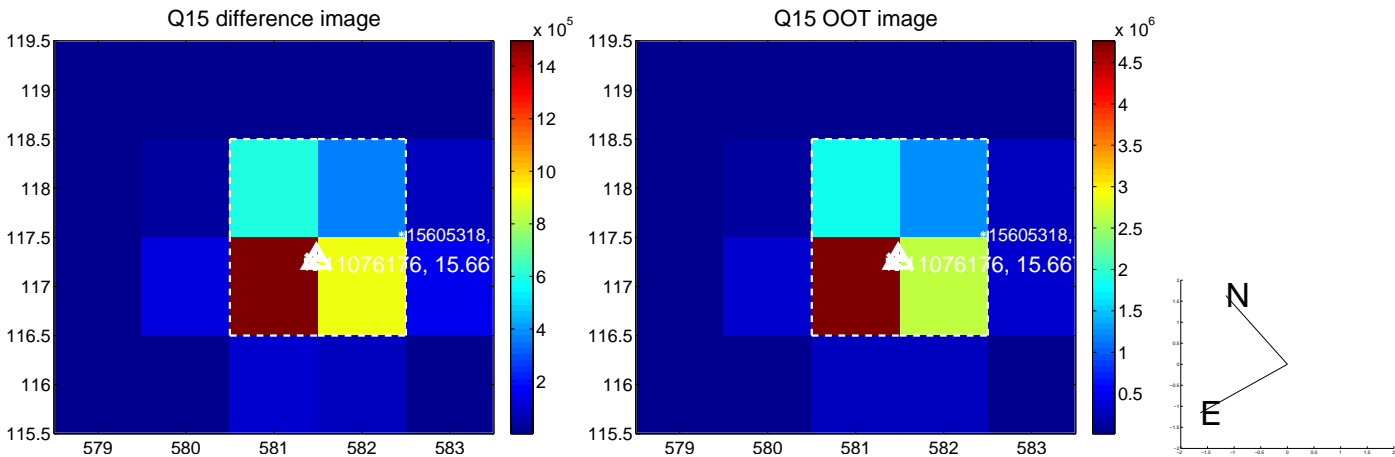
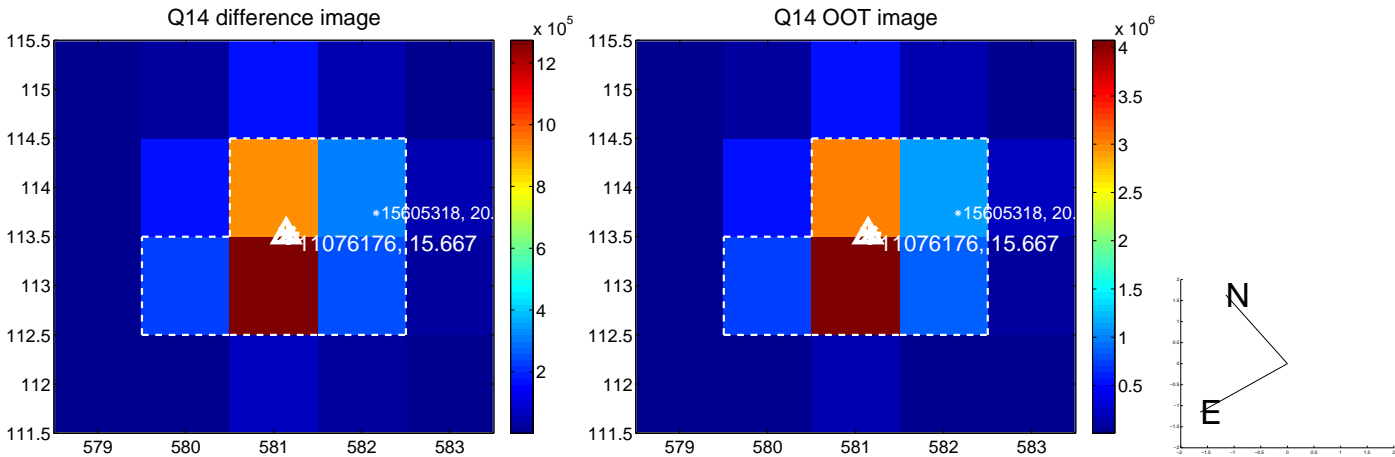
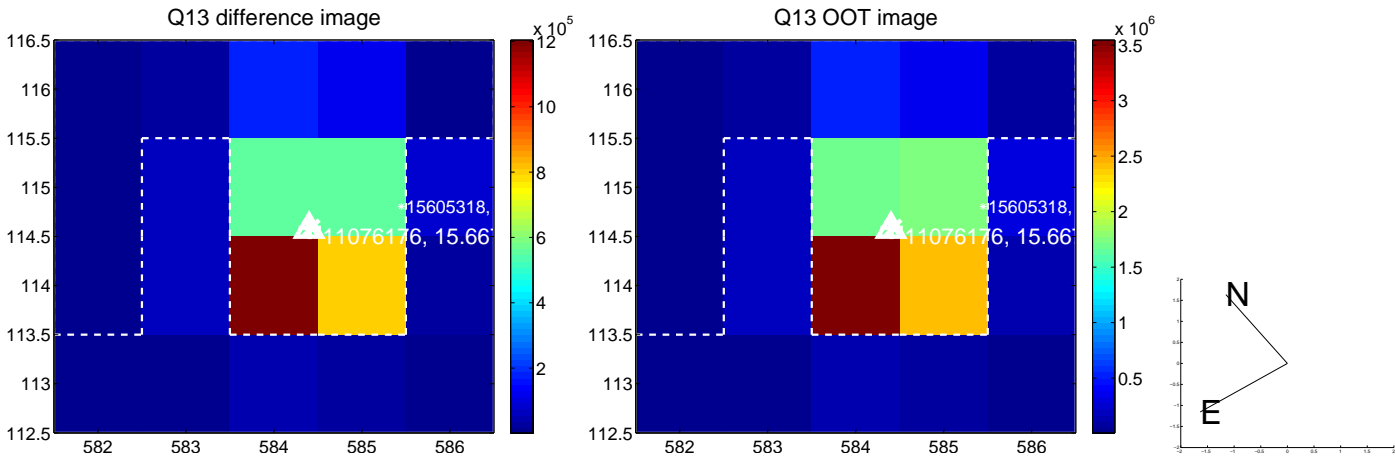
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



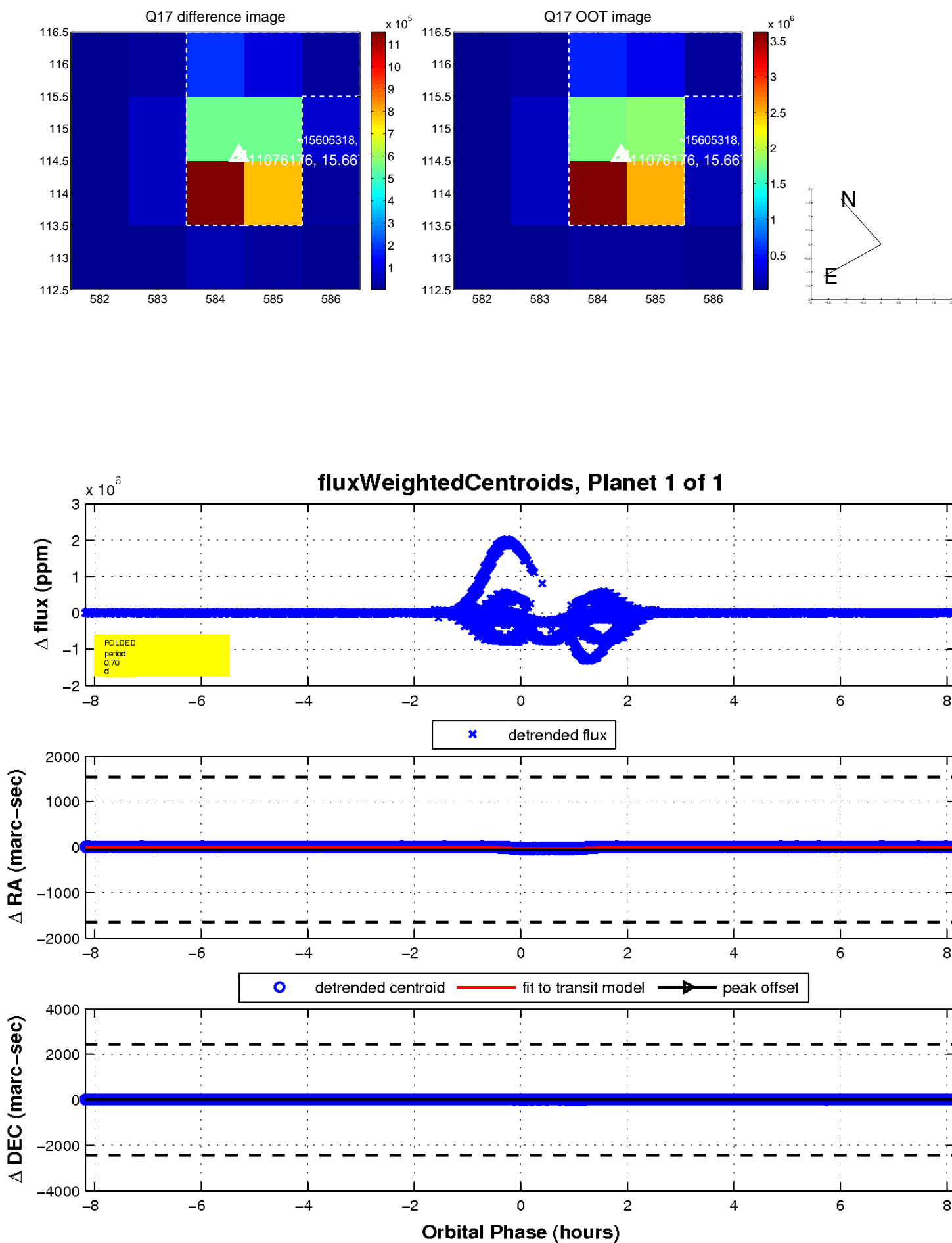
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

