

KIC 008056337

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 008056337-01 | OBS | No | 0.865662 | 131.701404 | 748.8 | 1.737 | 11.3 | 23.7 | 1.23 | 6240 | 3.97 | 5828.22 |
| 008056337-02 | OBS | No | 0.519406 | 131.698761 | 685.2 | 1.871 | 20.4 | 27.3 | 1.23 | 6240 | 3.81 | 11516.60 |
| 008056337-03 | OBS | No | 0.519398 | 131.532869 | 344.2 | 1.500 | 15.9 | -1.0 | 1.23 | 6240 | 2.29 | 11516.84 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008056337-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS |

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

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

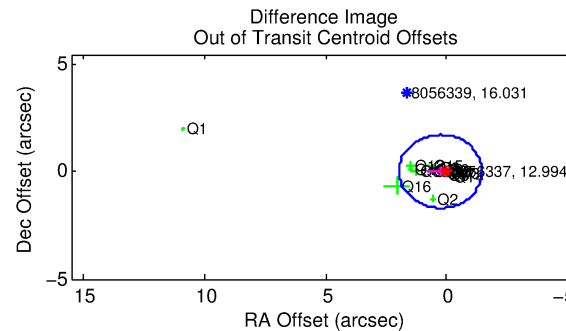
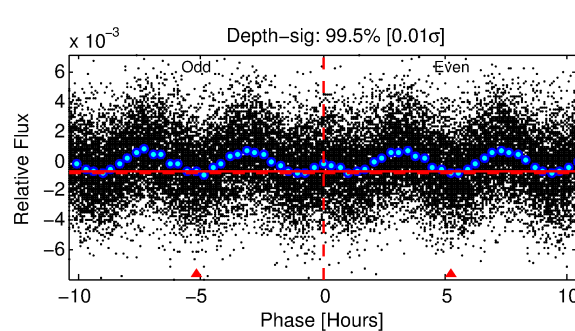
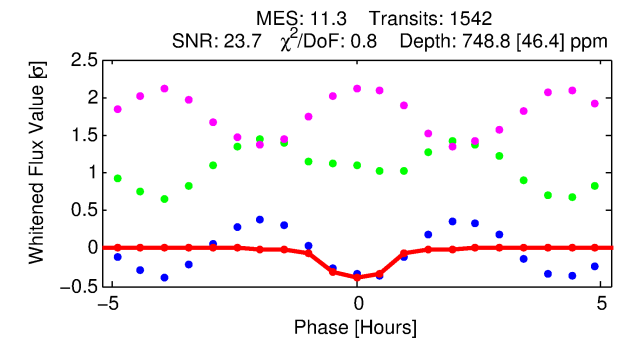
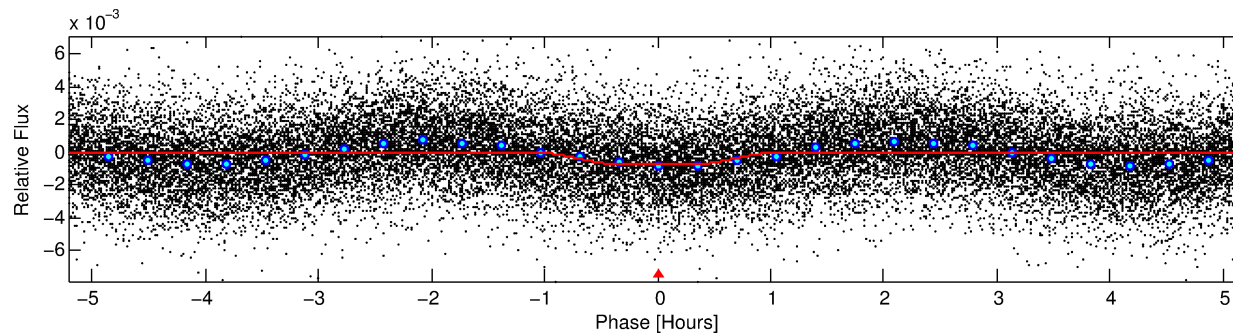
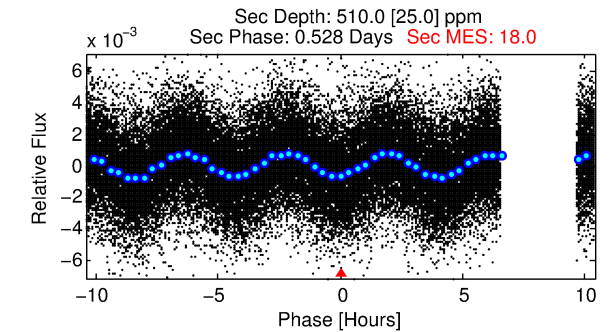
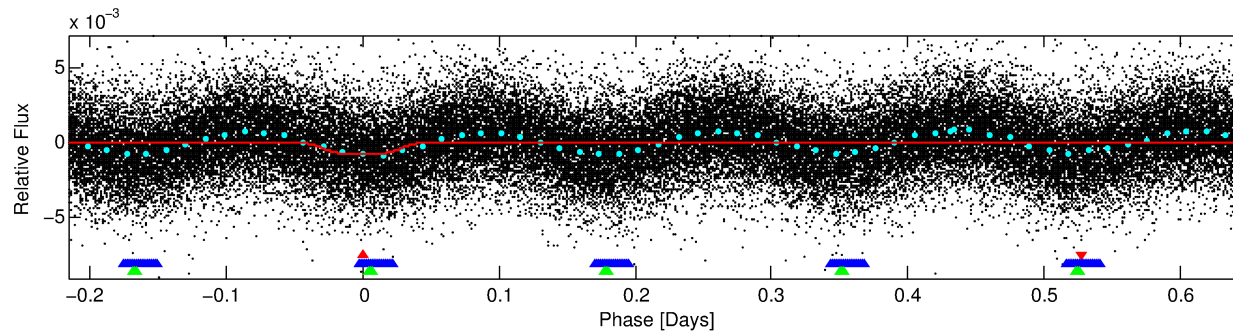
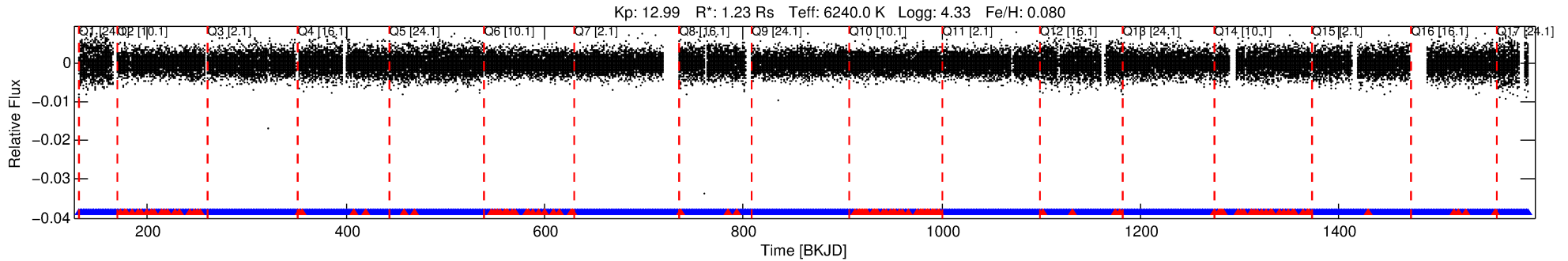
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056337-01

No Significant Match Found

DV One-Page Summary

KIC: 8056337 Candidate: 1 of 3 Period: 0.866 d



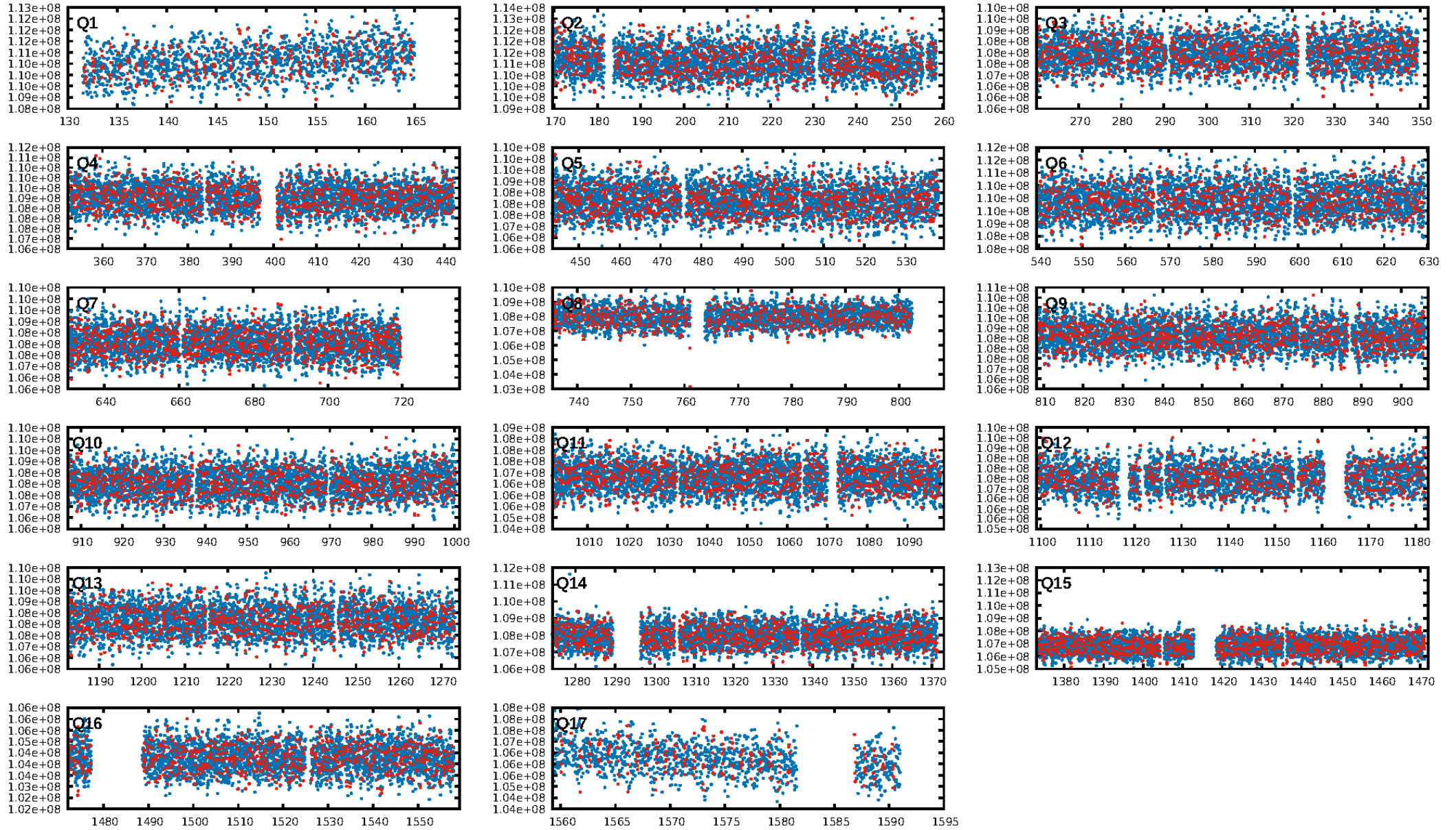
DV Fit Results:

Period = 0.86566 [0.00000] d
Epoch = 131.7014 [0.0011] BKJD
Rp/R* = 0.0296 [0.0049]
a/R* = 2.12 [1.36]
b = 0.90 [0.18]
Seff = 5828.22 [2396.82]
Teff = 2228 [229] K
Rp = 3.97 [1.44] Re
a = 0.0188 [0.0050] AU
Ag = 6.26 [3.16] [1.67σ]
Teffp = 5450 [511] K [5.75σ]

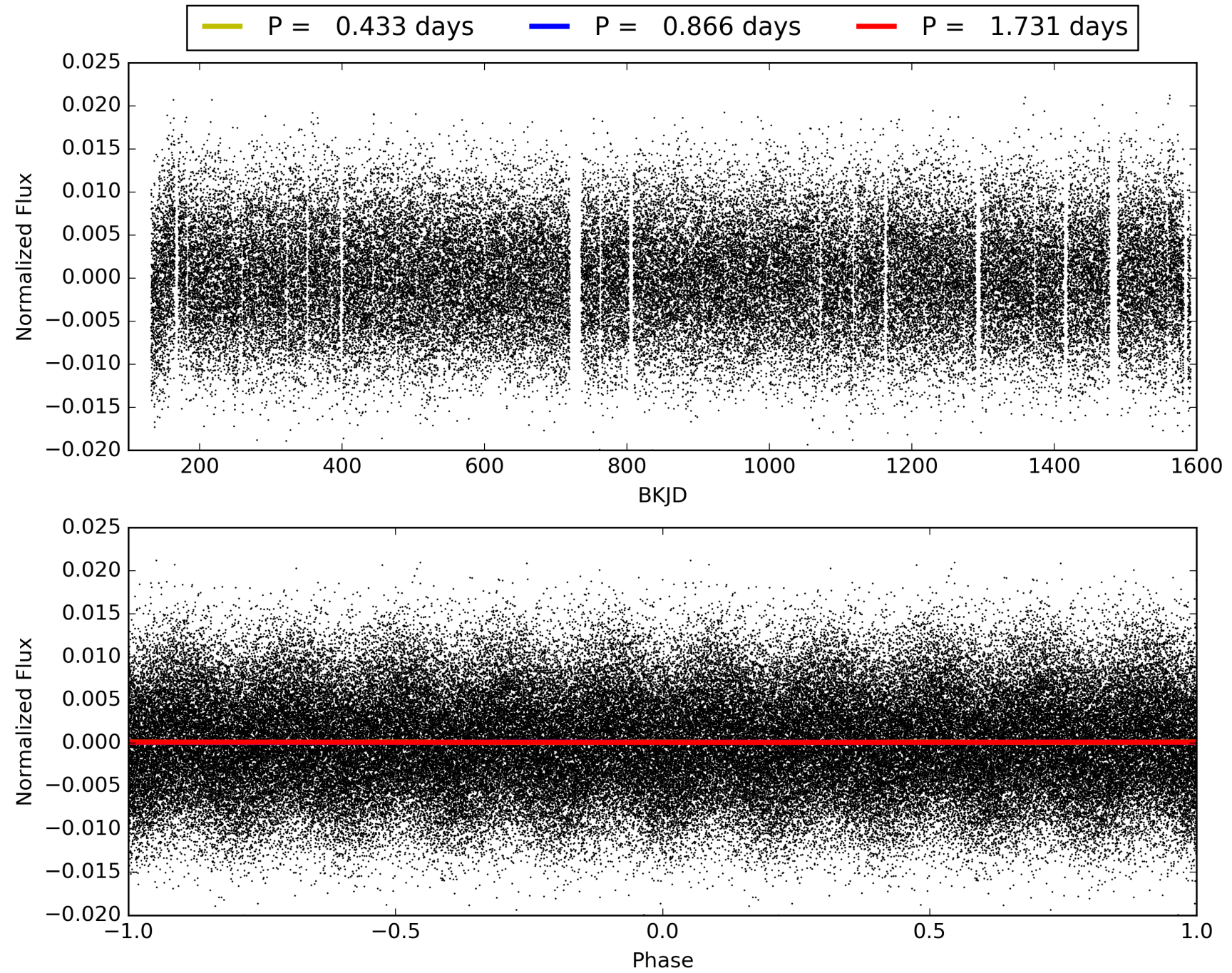
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.26σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [1360/1474]
GhostDiagnostic-chr: 0.3936
Centroid-sig: 0.0%
Centroid-so: 3.142 arcsec [15.49σ]
OotOffset-rm: 0.266 arcsec [0.47σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.097 arcsec [1.05σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008056337-01, PDC Light Curves

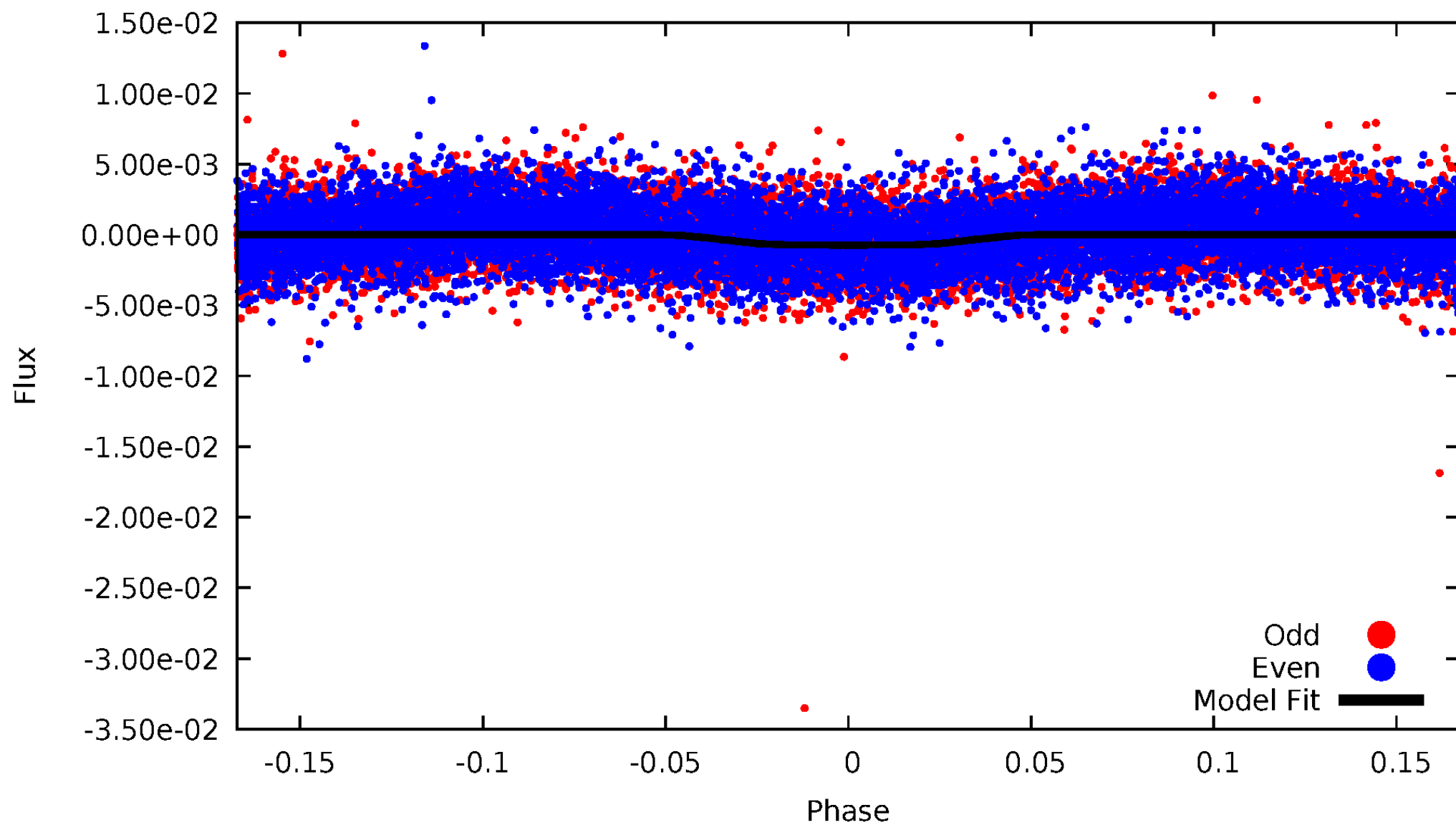


TCE 008056337-01



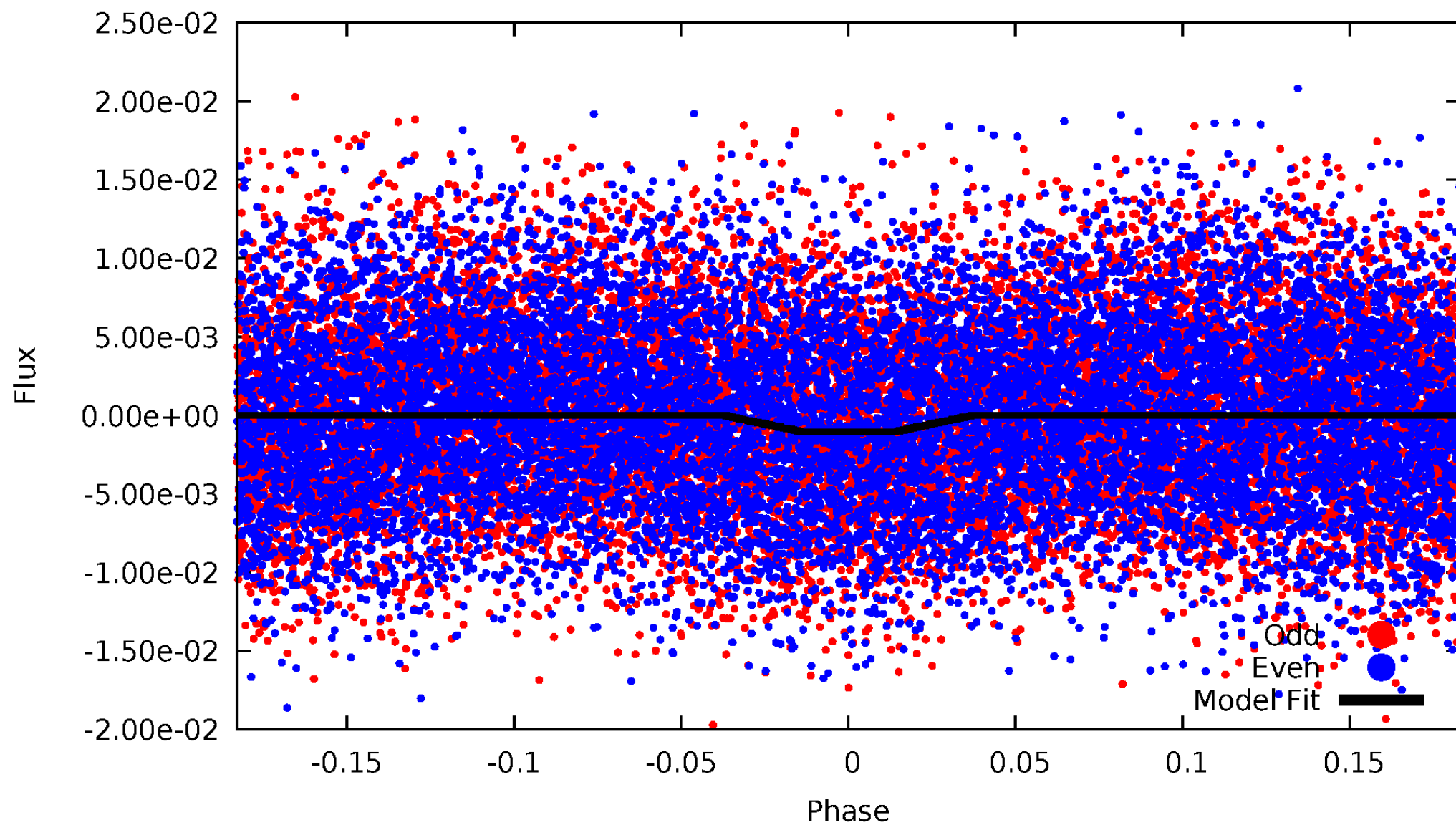
DV Odd/Even

TCE 008056337-01

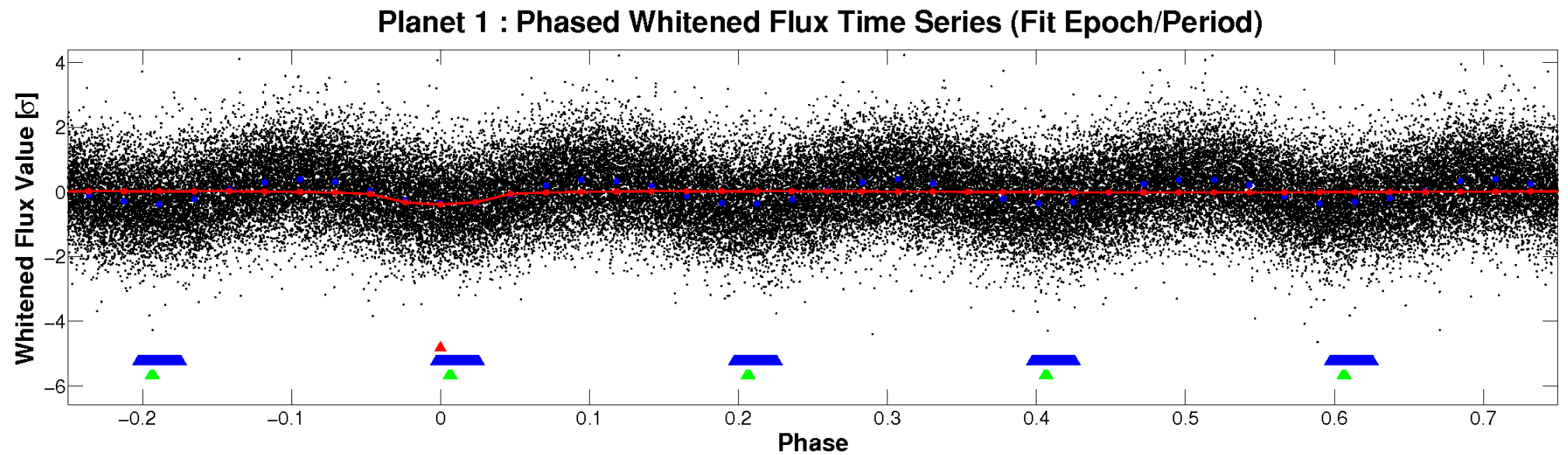
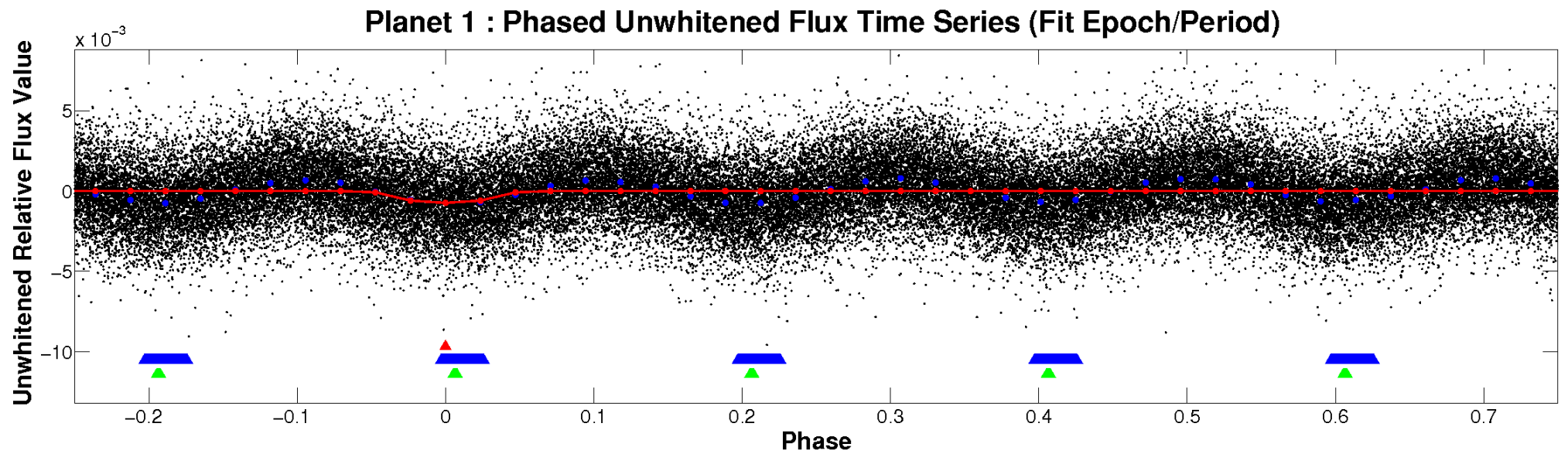


ALT Odd/Even

TCE 008056337-01

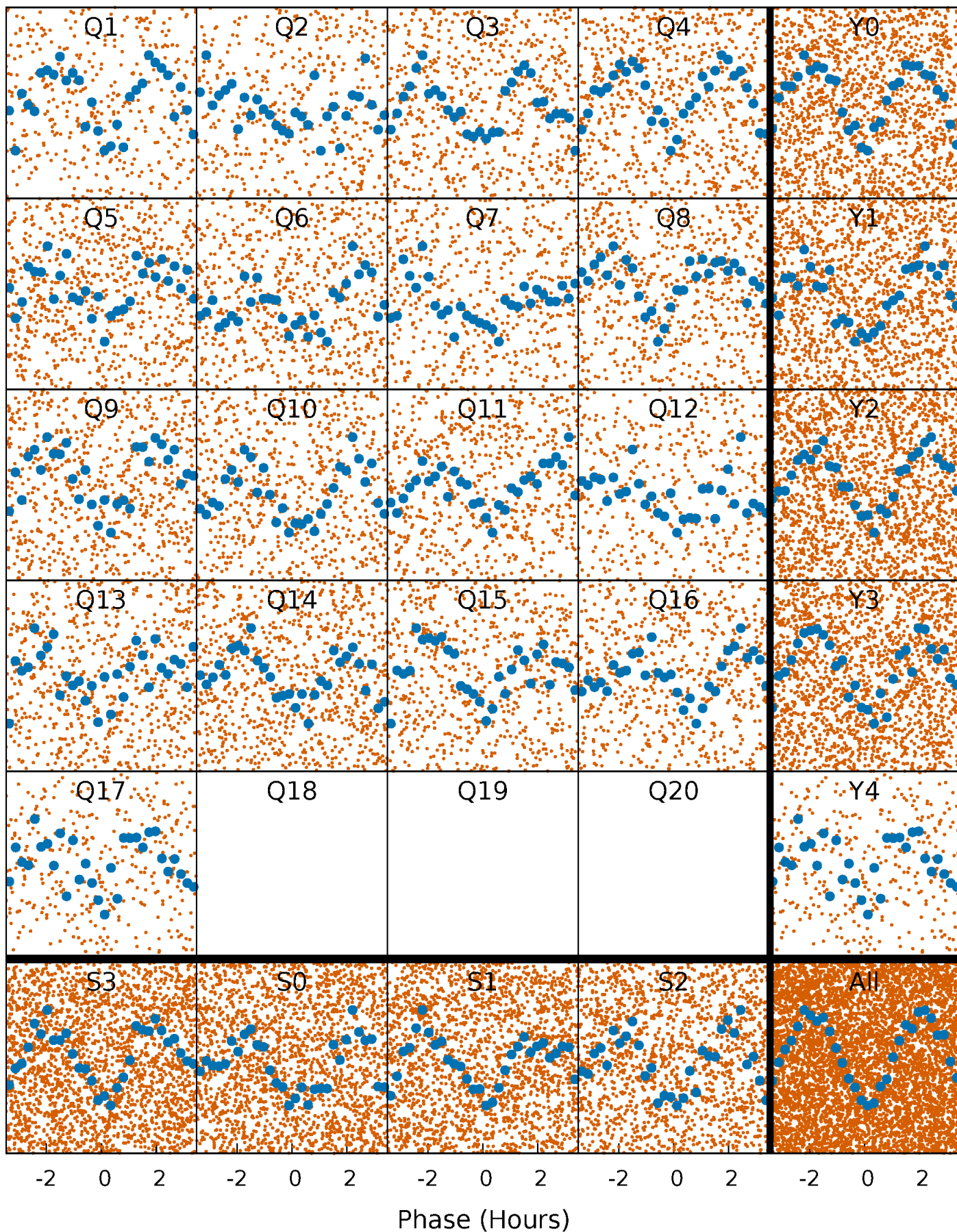


Non-Whitened Vs. Whitened Light Curve



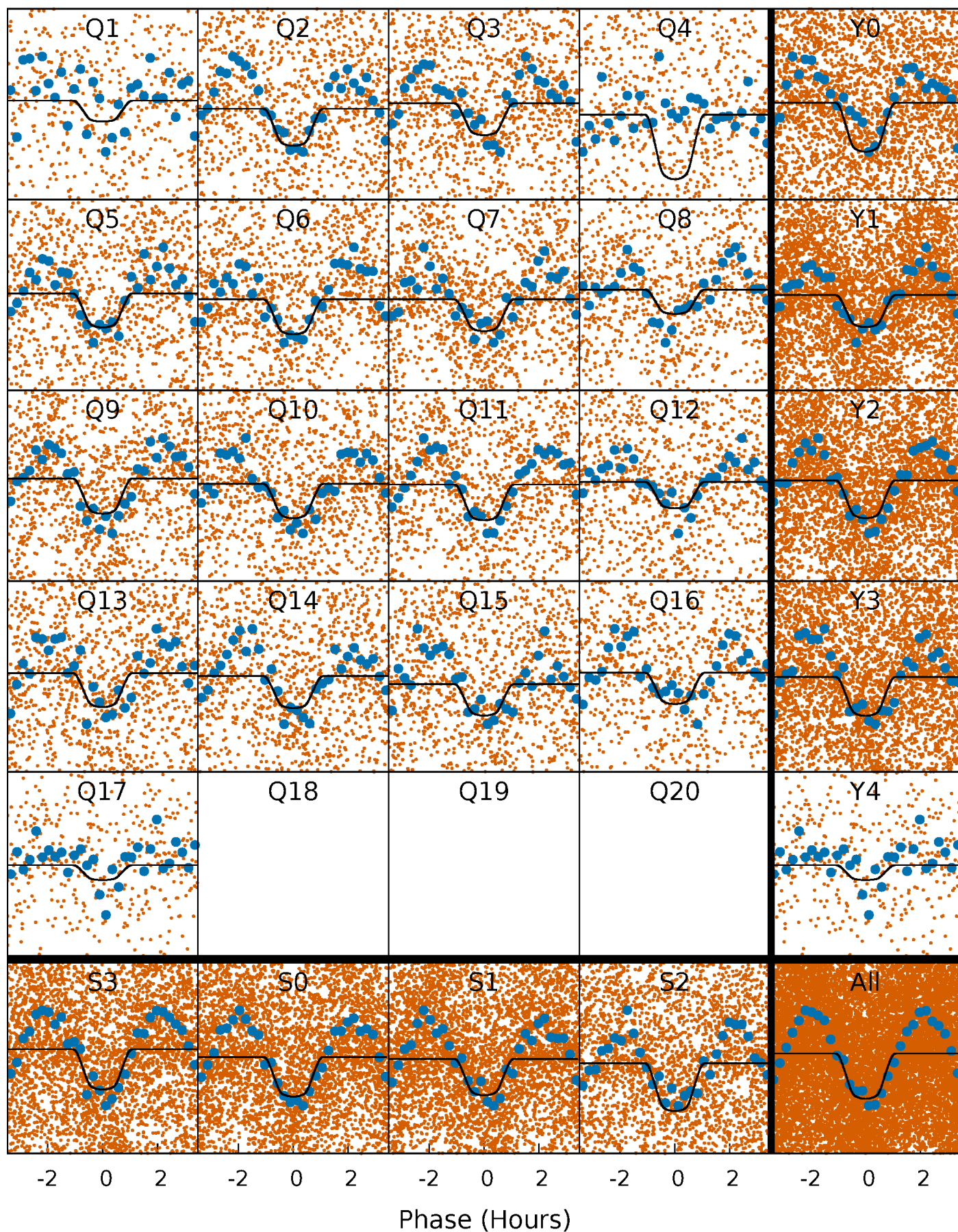
PDC Quarter-Phased Transit Curves

TCE 008056337-01 P= 0.865662 Days $T_0=131.701404$ (BKJD)



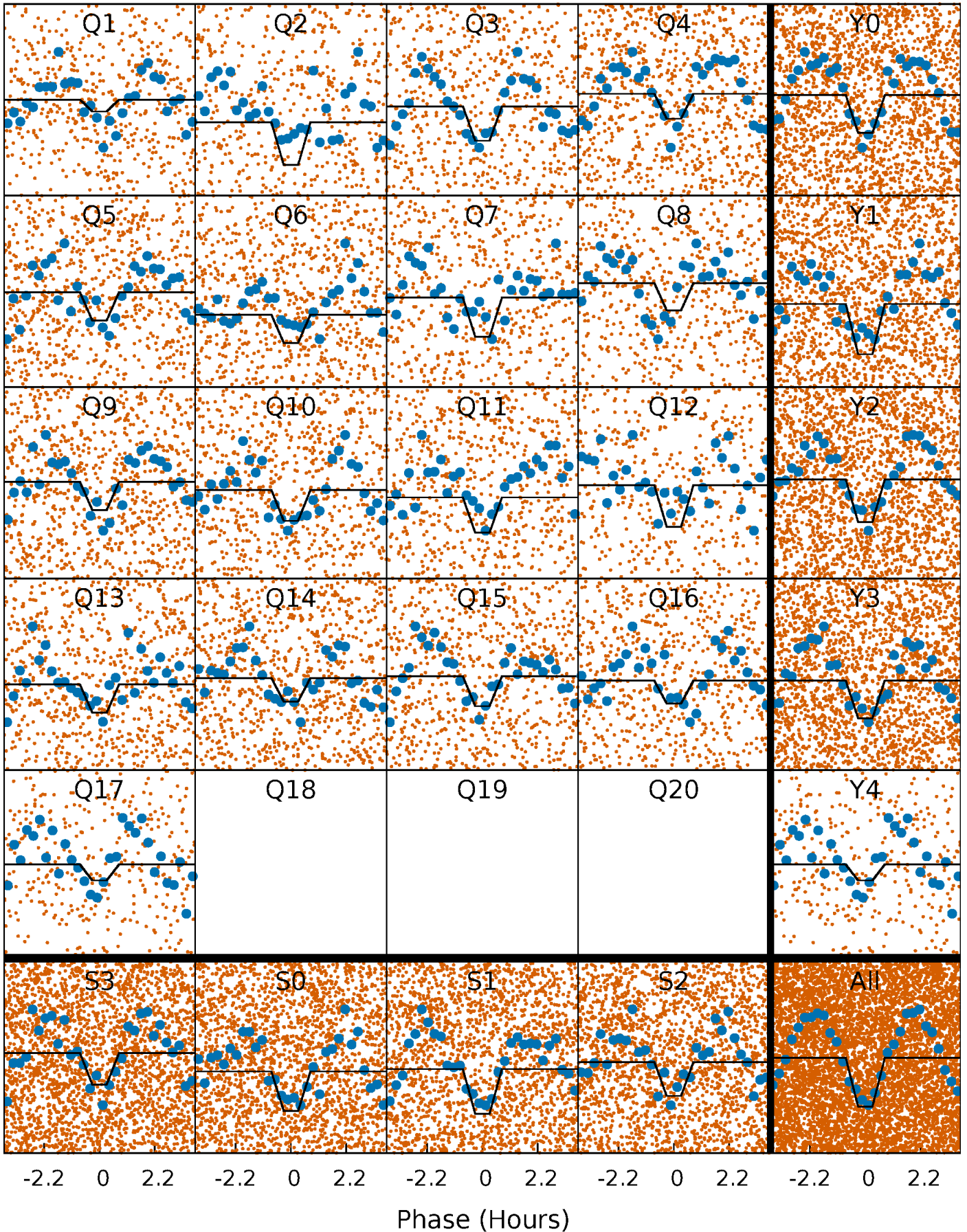
DV Quarter-Phased Transit Curves

TCE 008056337-01 P= 0.865662 Days $T_0=131.701404$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

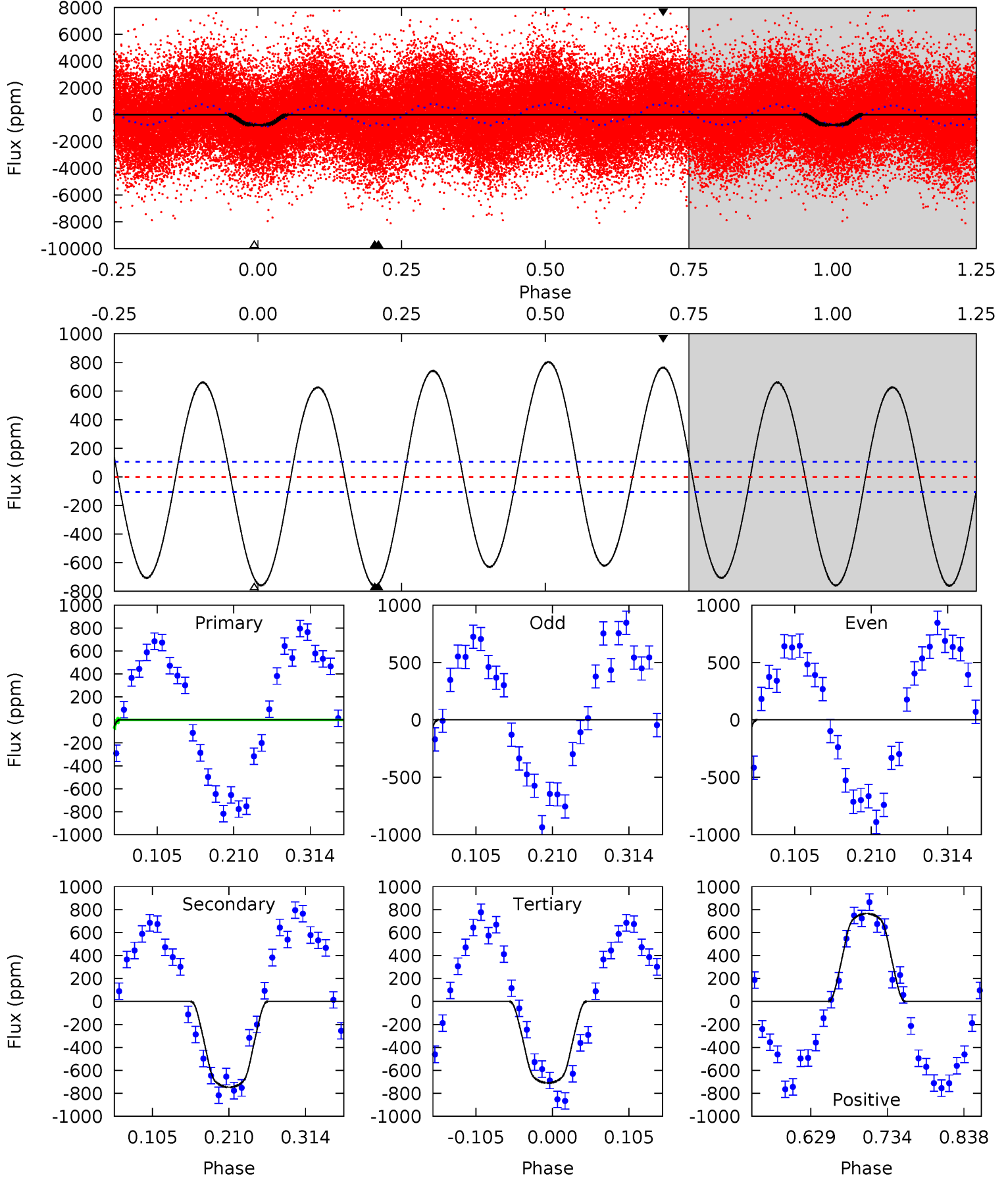
TCE 008056337-01 P= 0.865669 Days $T_0=131.700724$ (BKJD)



DV Model-Shift Uniqueness Test

008056337-01, P = 0.865662 Days, E = 130.835742 Days

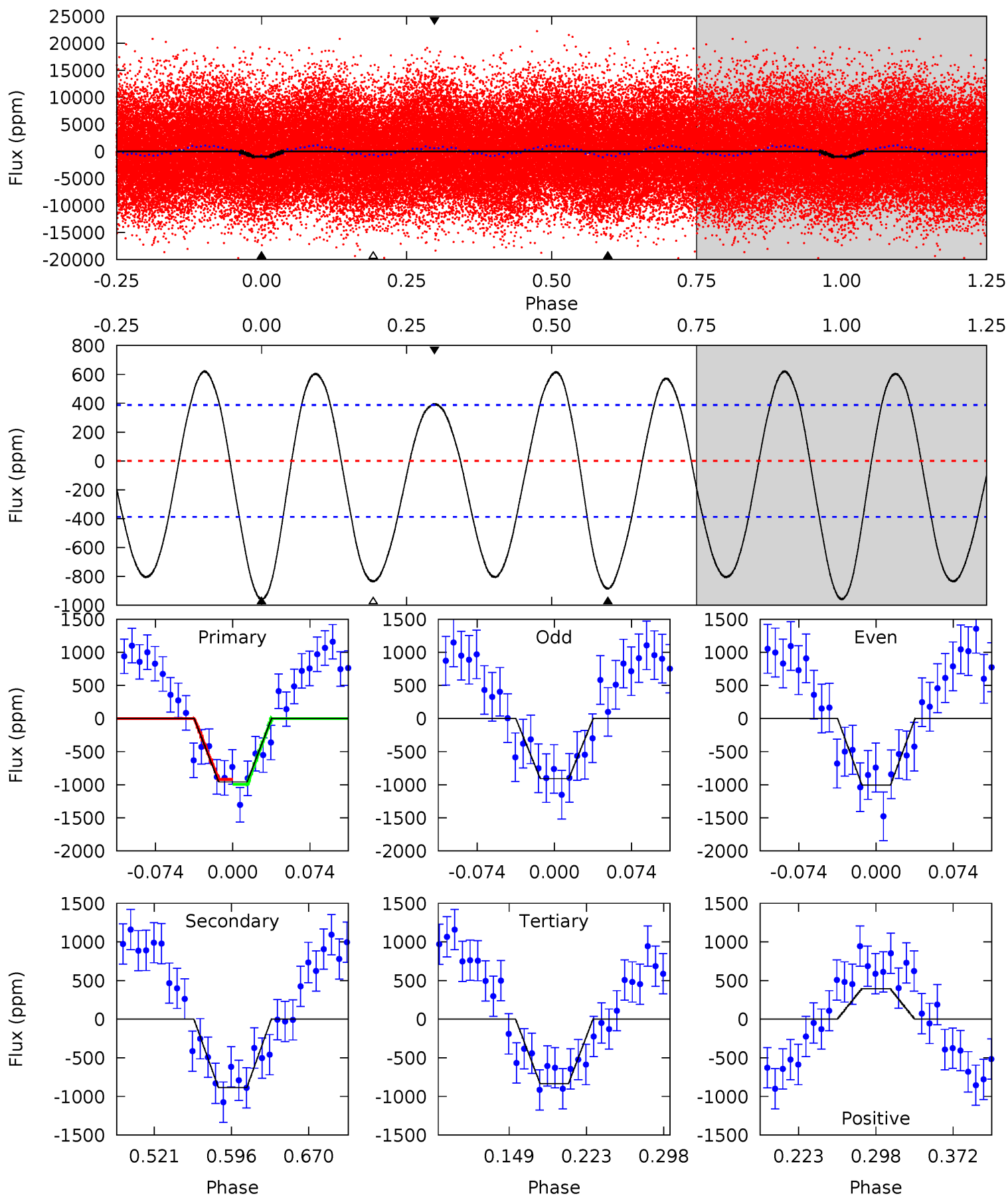
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 32.7 | 32.1 | 30.5 | 32.9 | 4.55 | 1.62 | 21.4 | 2.23 | -0.14 | 1.60 | -0.77 | 0.26 | 0.99 | 0.51 | 5.77 |



Alt Model-Shift Uniqueness Test

008056337-01, P = 0.865669 Days, E = 130.835055 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 11.4 | 10.6 | 9.95 | 4.70 | 4.63 | 1.78 | 5.97 | 1.48 | 6.72 | 0.61 | 5.86 | 0.59 | 0.91 | 0.39 | 0.46 |



Stellar Parameters For KIC 008056337

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 6240^{+195}_{-260} | $4.329^{+0.093}_{-0.201}$ | $0.080^{+0.250}_{-0.300}$ | $1.229^{+0.396}_{-0.213}$ | $1.175^{+0.170}_{-0.170}$ | $0.891^{+0.454}_{-0.482}$ |
| | +3%/-4% | +2%/-5% | +312%/-375% | +32%/-17% | +14%/-14% | +51%/-54% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008056337-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|----------------------|---------------------------|
| DV | -747 ± 23 | $4.09^{+0.94}_{-0.79}$ | 3151^{+255}_{-193} | 5948^{+566}_{-517} | $8.611^{+4.469}_{-2.949}$ |
| Alt. | -885 ± 84 | $4.45^{+0.98}_{-0.80}$ | 3152^{+254}_{-192} | 5890^{+615}_{-439} | $8.621^{+3.827}_{-2.819}$ |

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

DV Centroid Data

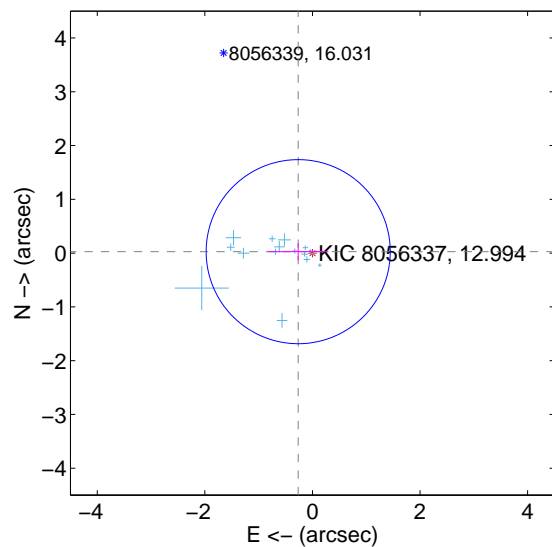
Supplemental centroid analysis for 008056337-01. Kepler magnitude: 12.99. Transit SNR 23.75

There are 17 quarters with good PRF difference image offsets

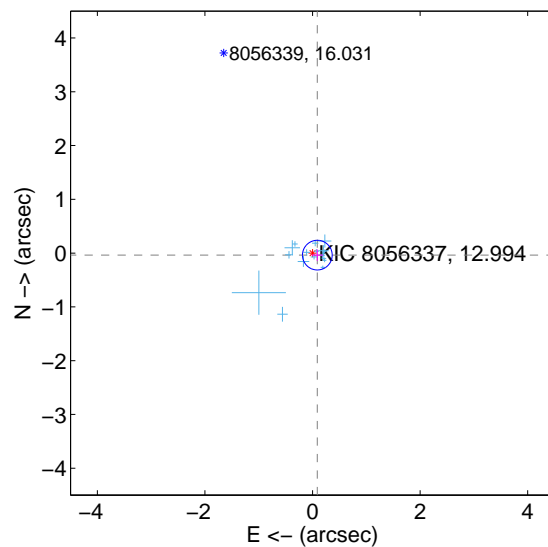
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.266 ± 0.570 | 0.47 | 0.265 ± 0.562 | 0.026 ± 0.158 |
| PRF-fit source offset from KIC position | 0.097 ± 0.092 | 1.05 | -0.089 ± 0.106 | -0.038 ± 0.106 |
| photometric centroid source offset | 3.14 ± 0.20 | 15.49 | -3.12 ± 0.20 | -0.36 ± 0.05 |

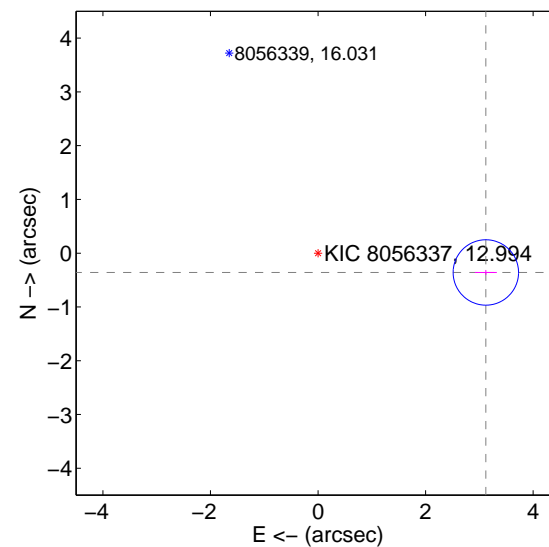
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

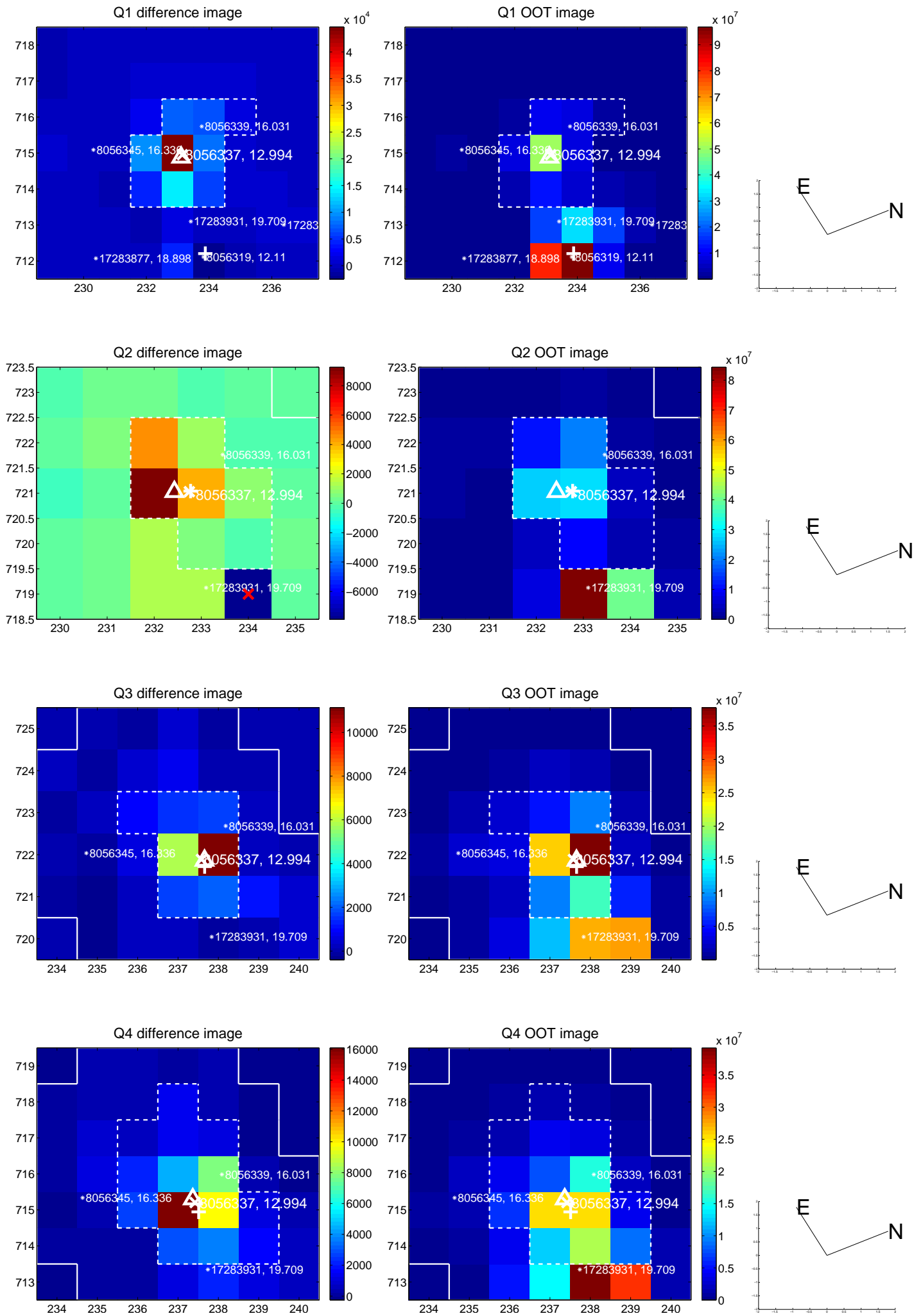


offset from photometric centroids

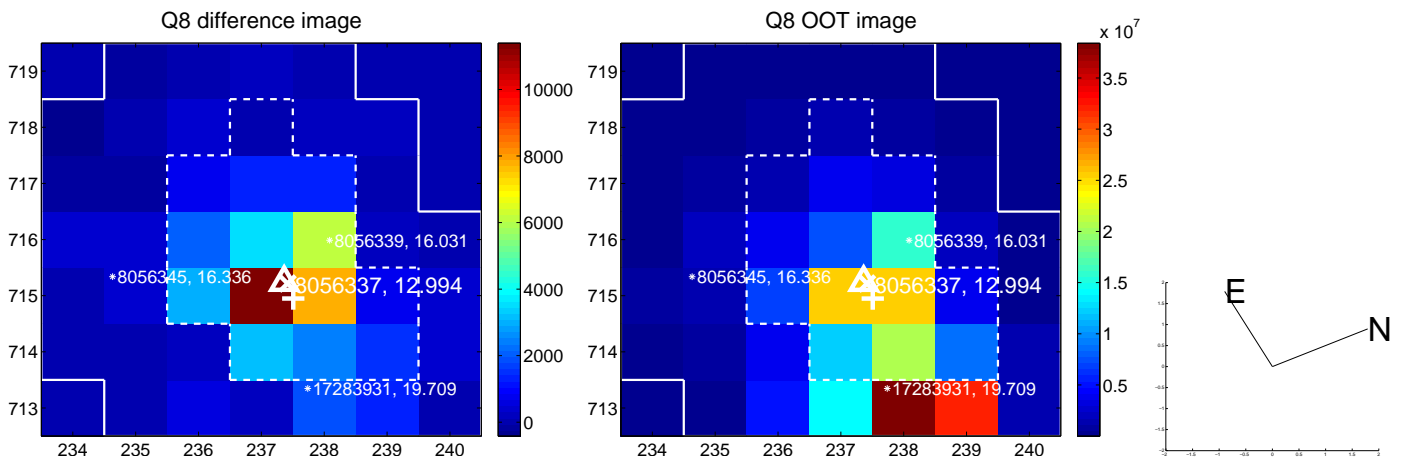
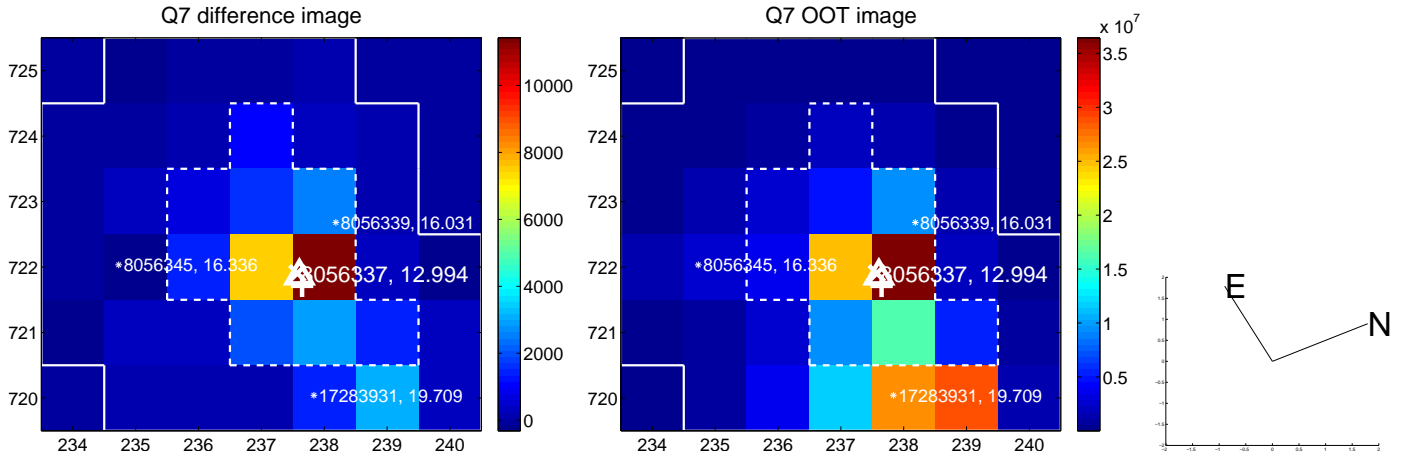
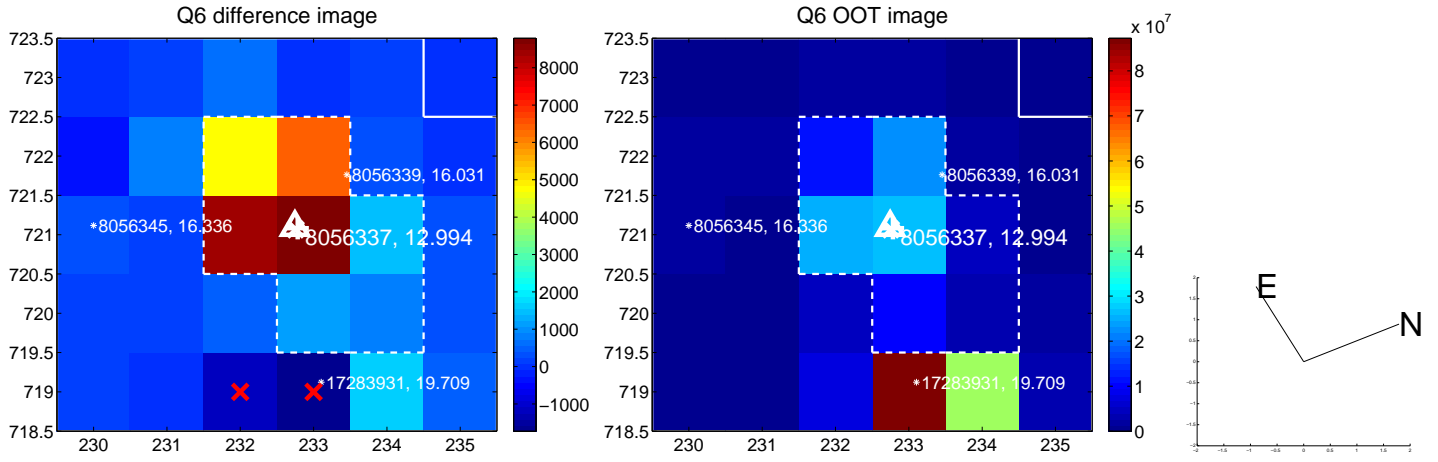
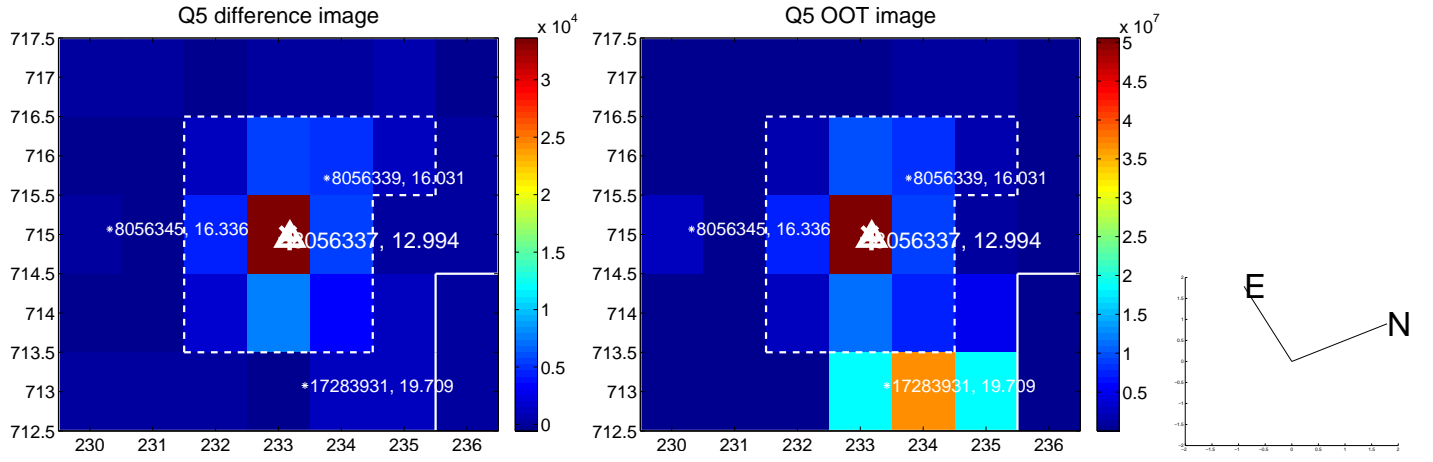


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

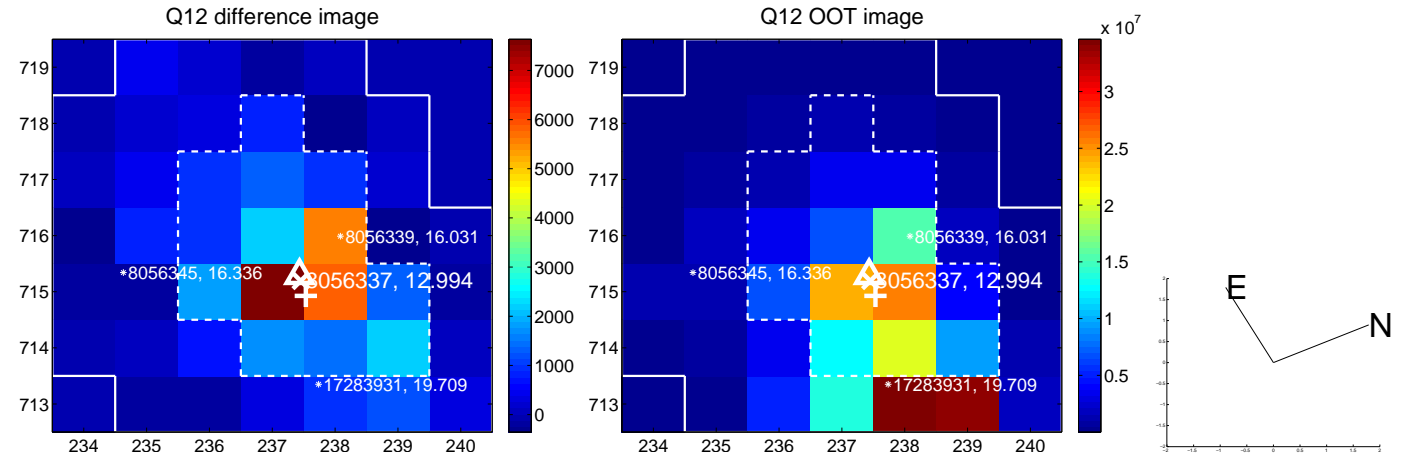
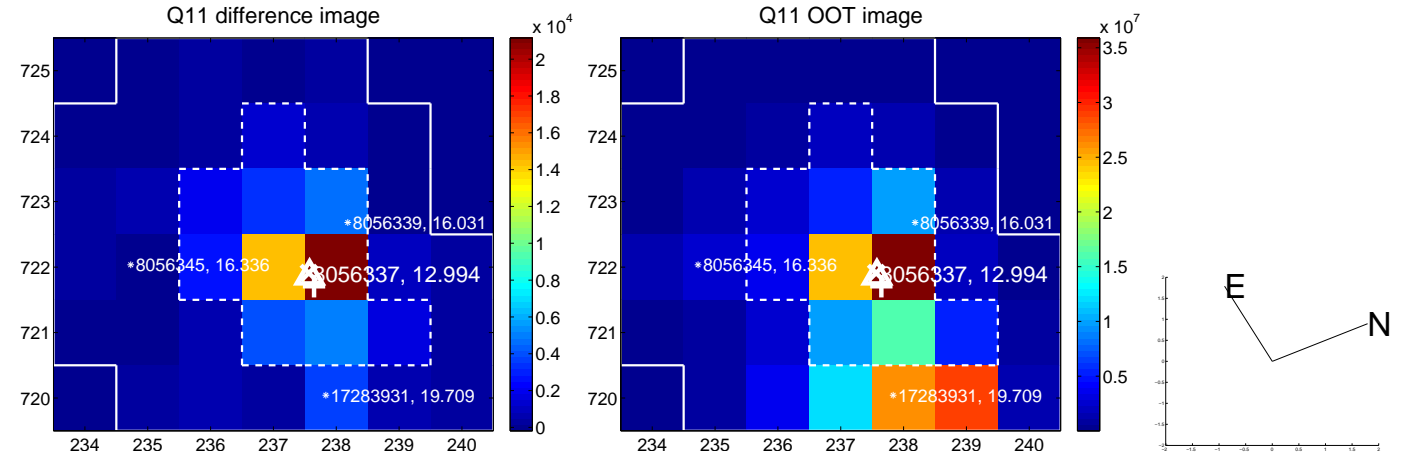
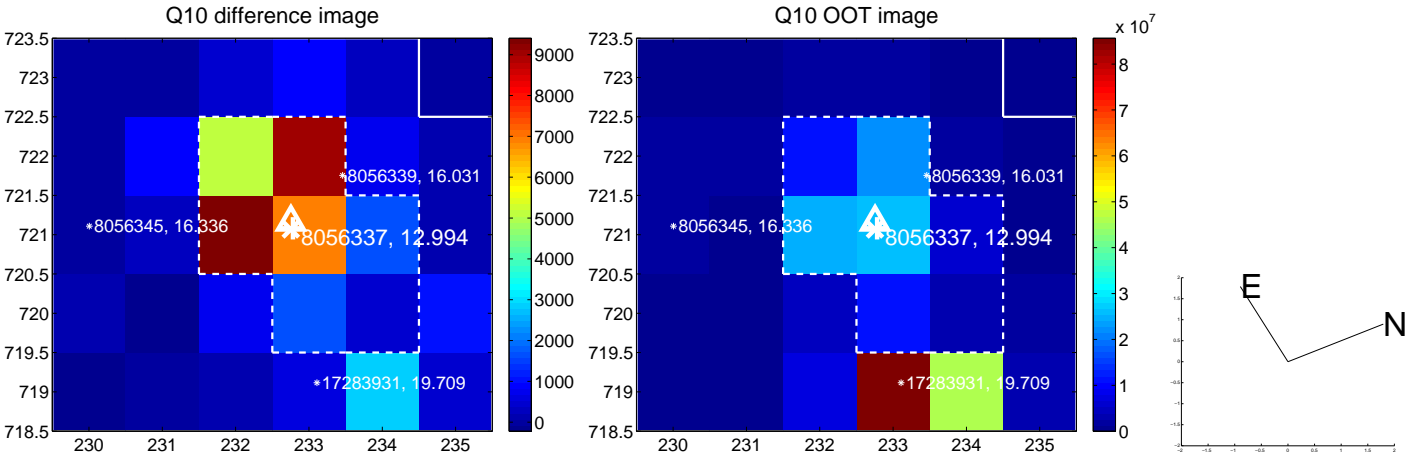
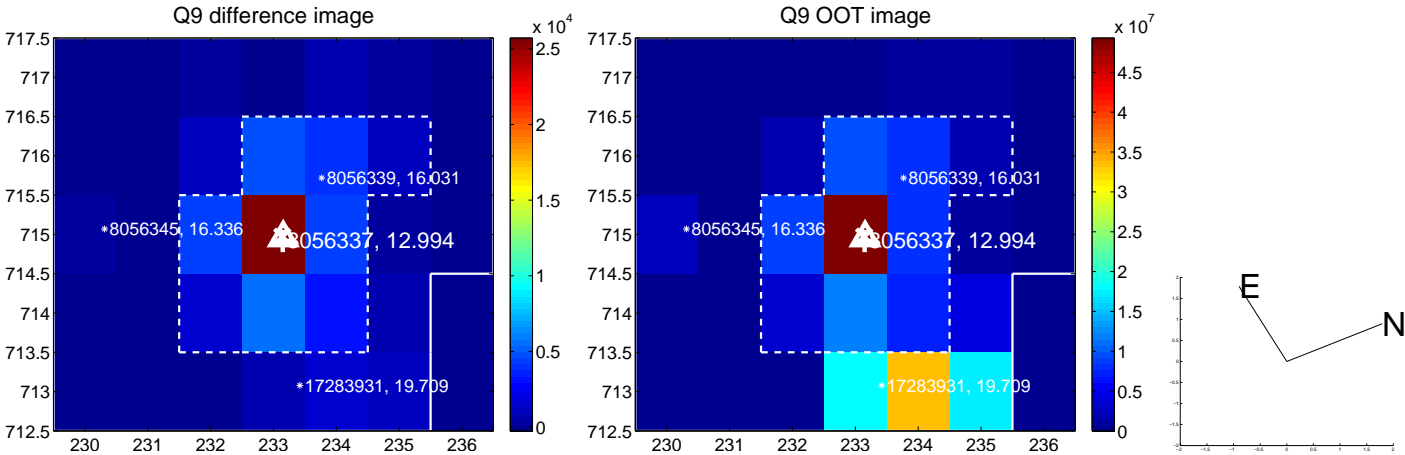
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



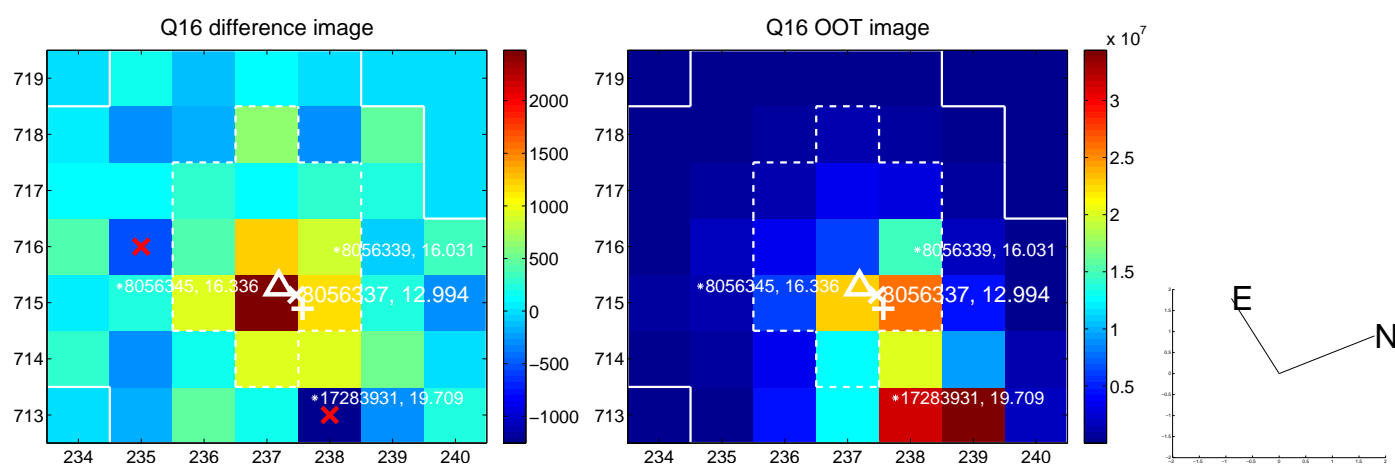
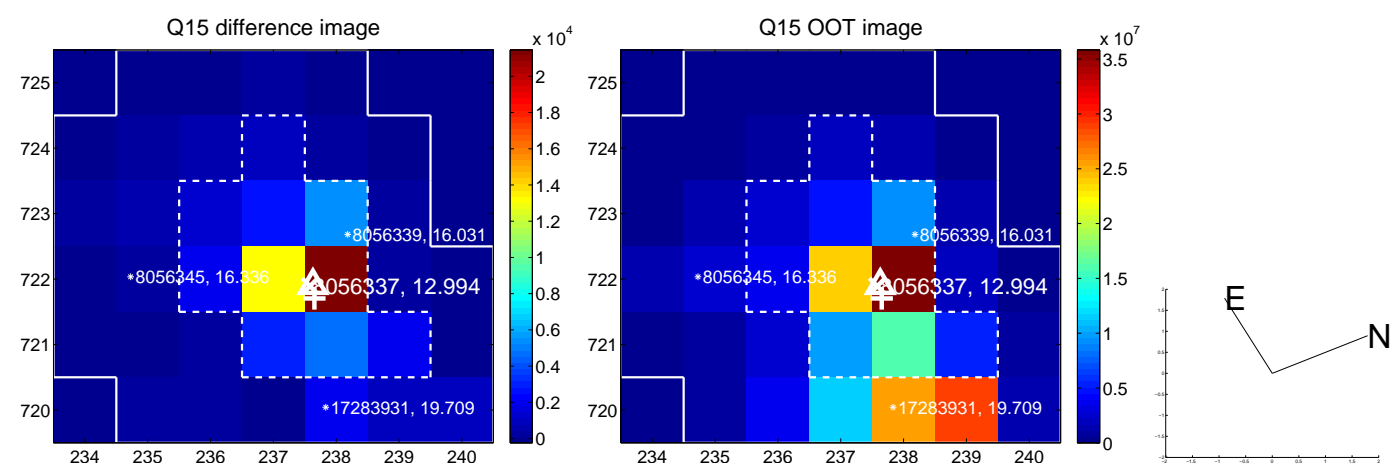
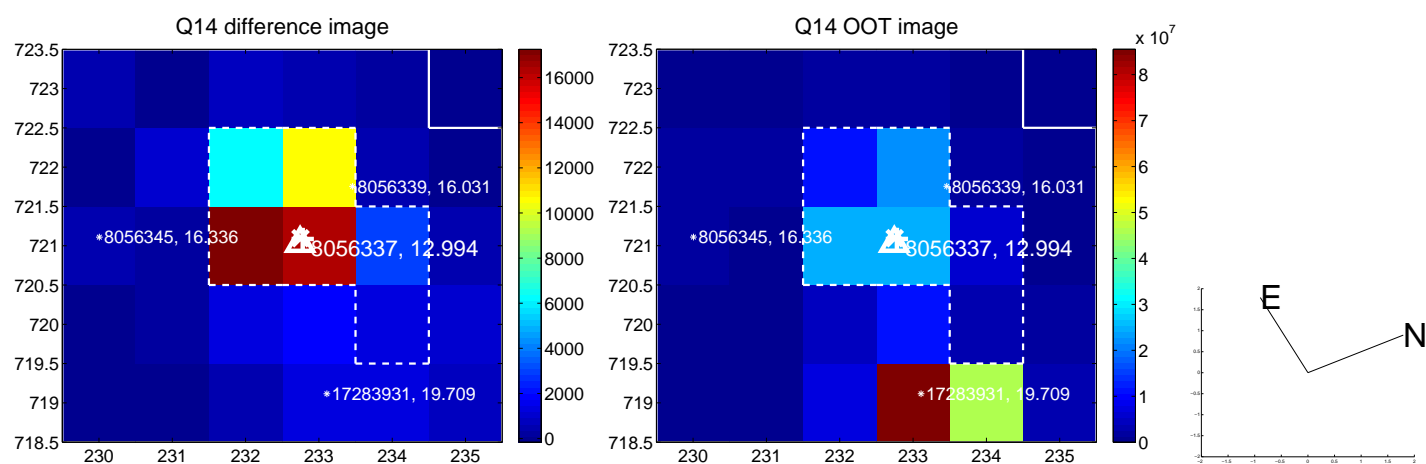
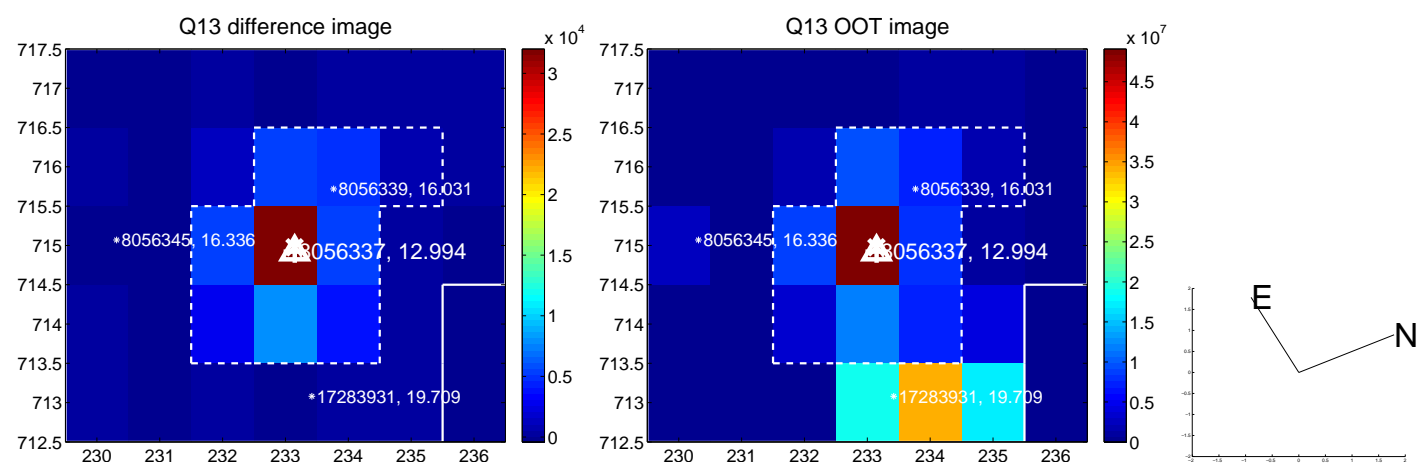
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



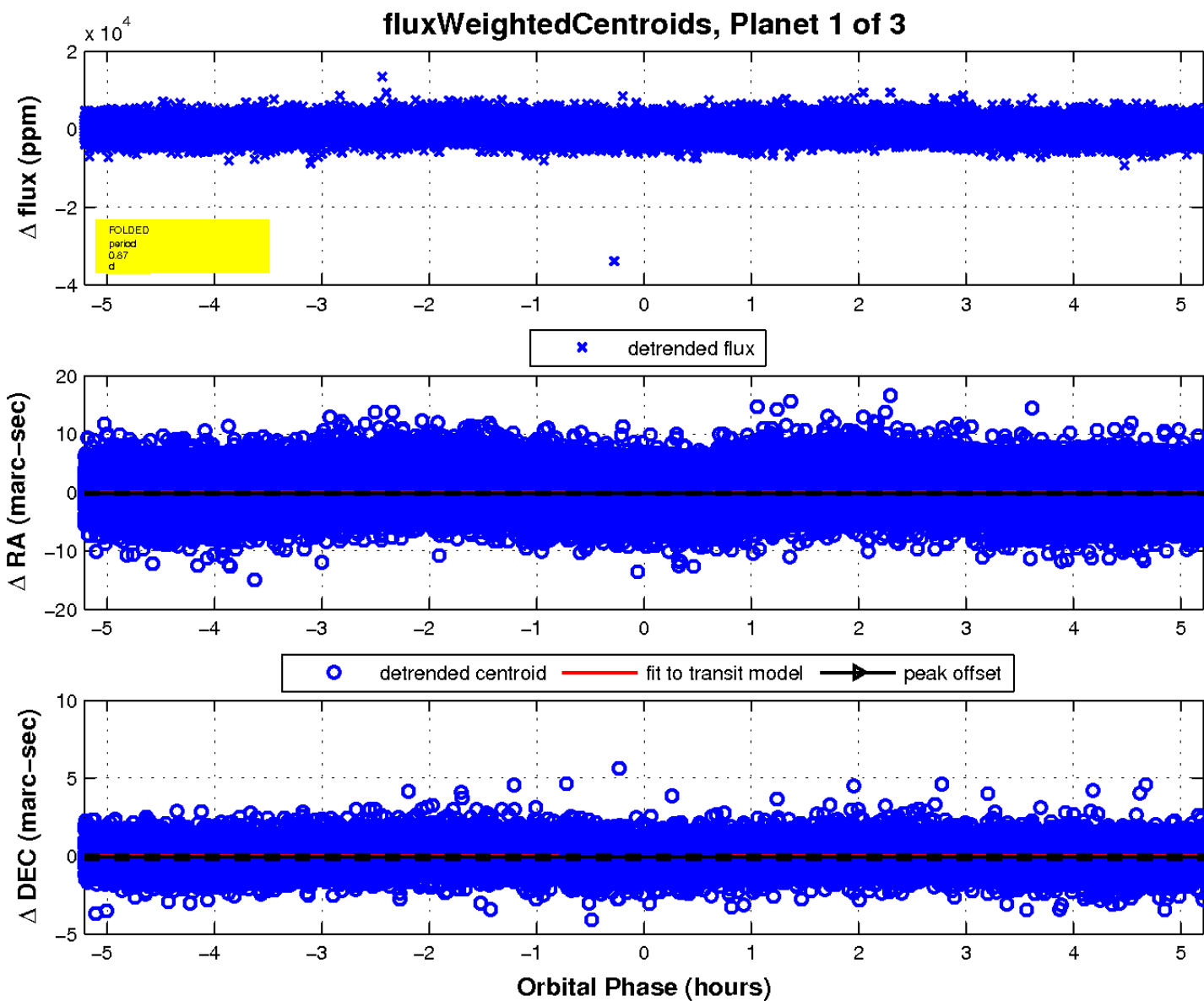
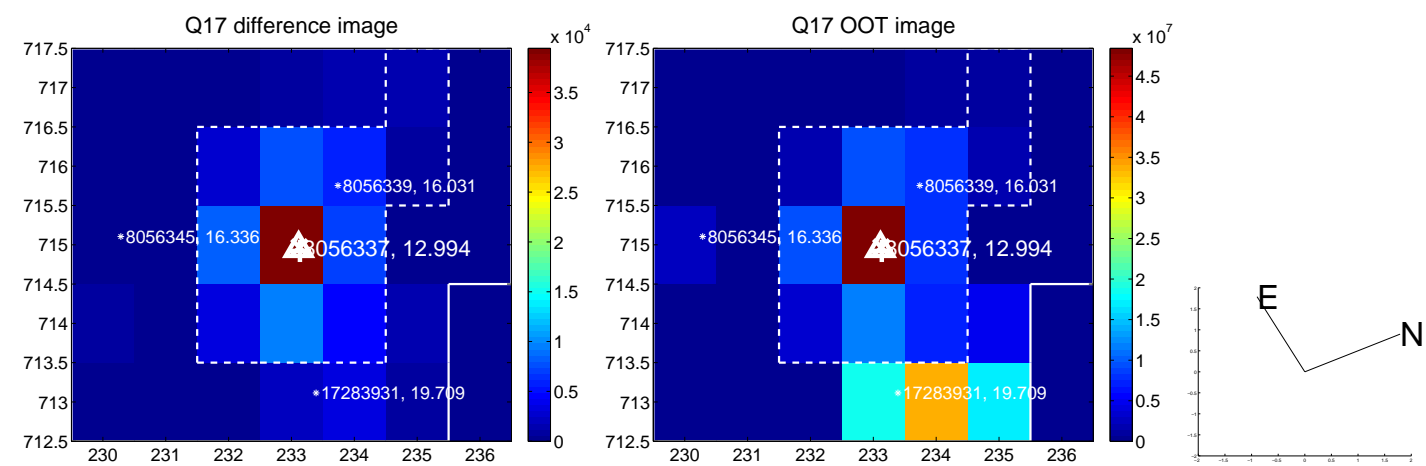
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



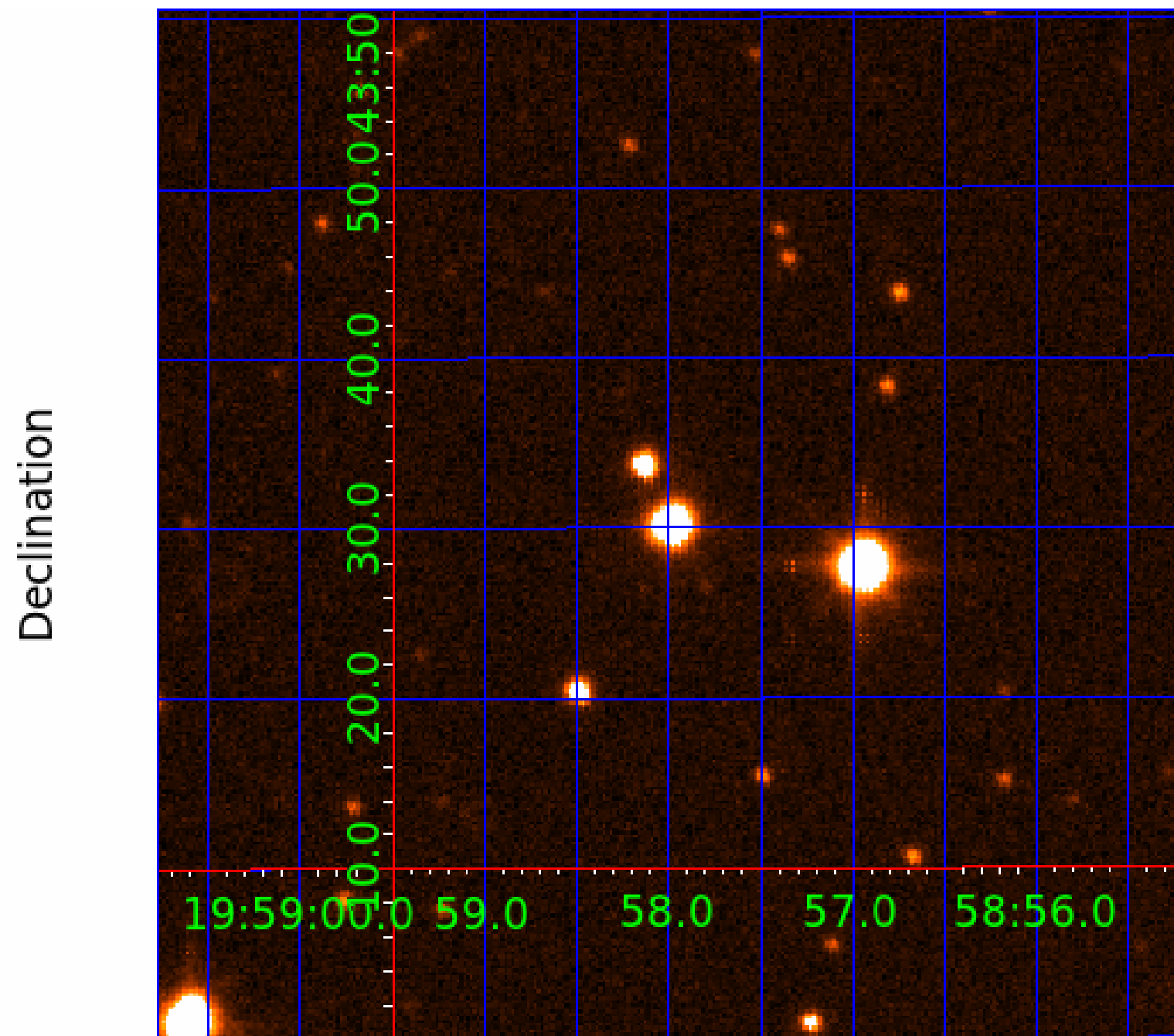
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056337

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 008056337-01 | OBS | No | 0.865662 | 131.701404 | 748.8 | 1.737 | 11.3 | 23.7 | 1.23 | 6240 | 3.97 | 5828.22 |
| 008056337-02 | OBS | No | 0.519406 | 131.698761 | 685.2 | 1.871 | 20.4 | 27.3 | 1.23 | 6240 | 3.81 | 11516.60 |
| 008056337-03 | OBS | No | 0.519398 | 131.532869 | 344.2 | 1.500 | 15.9 | -1.0 | 1.23 | 6240 | 2.29 | 11516.84 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008056337-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS |

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

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

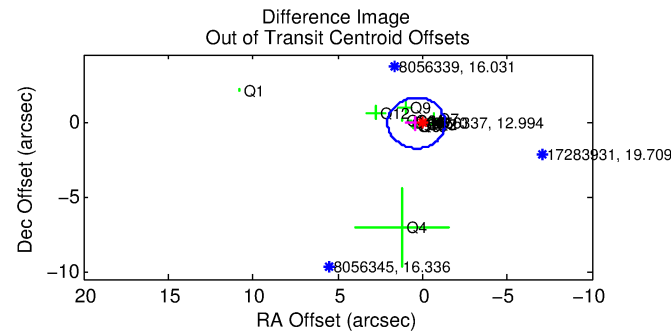
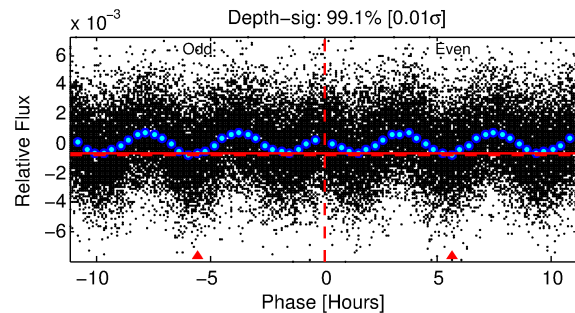
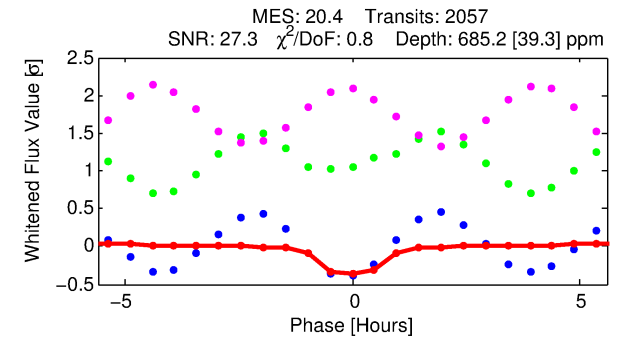
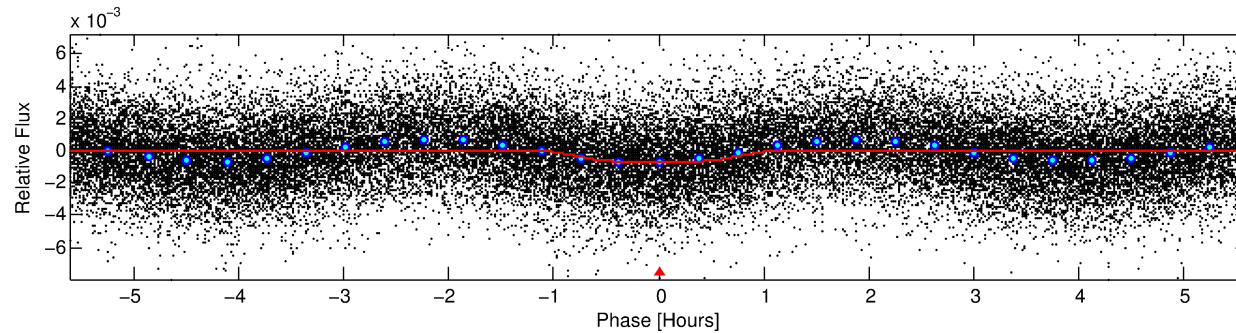
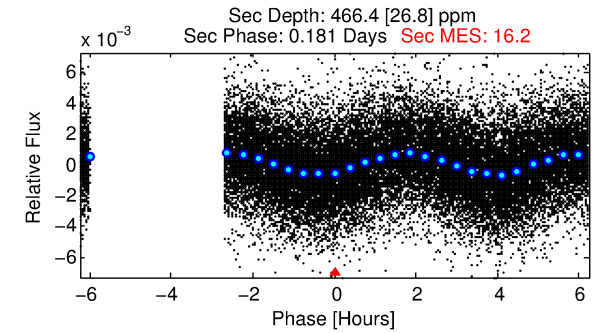
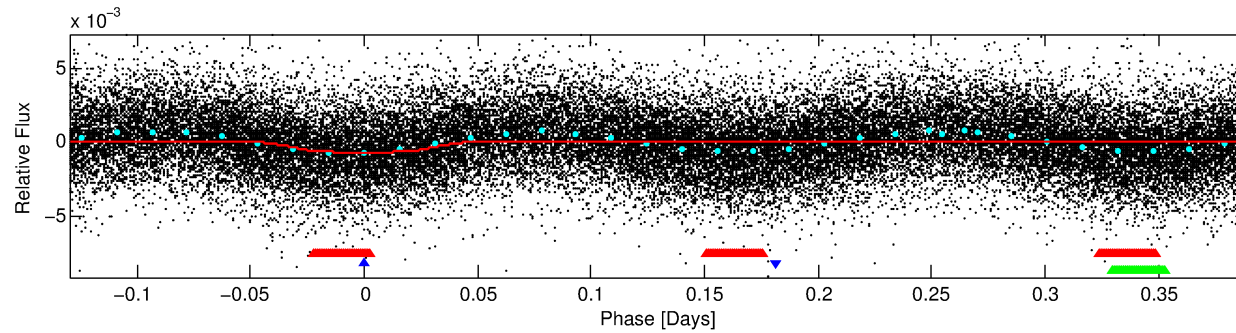
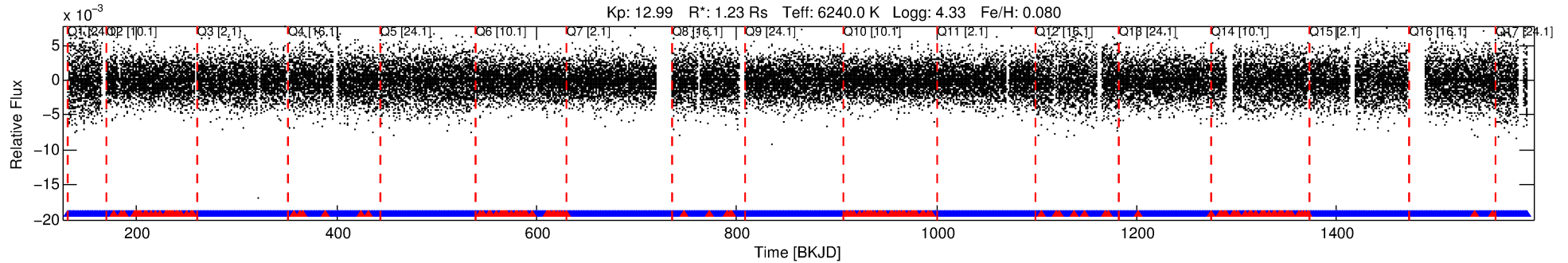
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056337-02

No Significant Match Found

DV One-Page Summary

KIC: 8056337 Candidate: 2 of 3 Period: 0.519 d



DV Fit Results:

Period = 0.51941 [0.00000] d
Epoch = 131.6988 [0.0010] BKJD
Rp/R* = 0.0284 [0.0038]
a/R* = 1.41 [0.45]
b = 0.90 [0.14]
Seff = 11516.60 [4736.13]
Teq = 2642 [272] K
Rp = 3.81 [1.33] Re
a = 0.0133 [0.0035] AU
Ag = 3.16 [1.46] [1.47σ]
Teffp = 5443 [432] K [5.49σ]

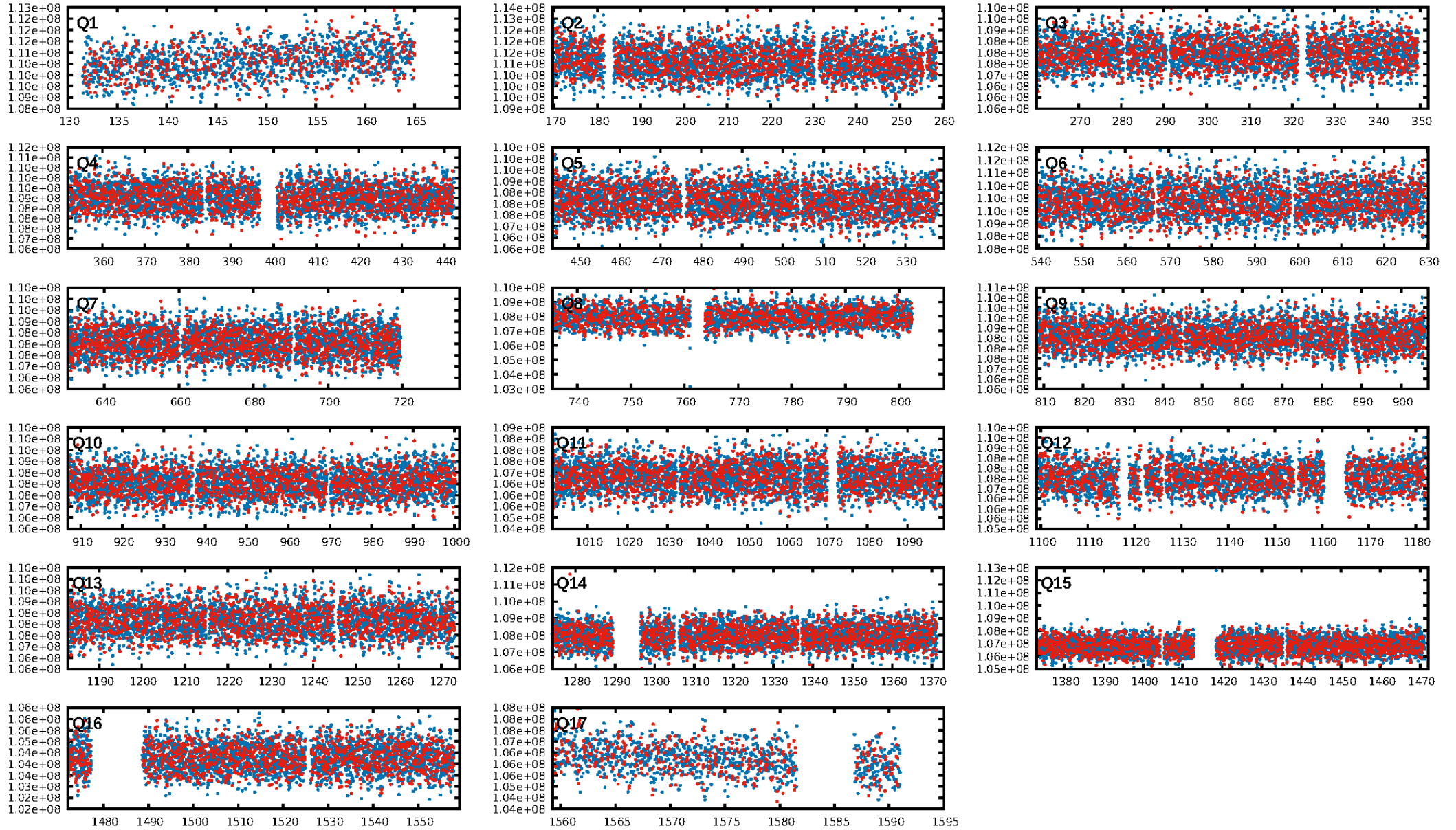
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 99.9% [3.26σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [1814/1964]
GhostDiagnostic-chr: 2.406
Centroid-sig: 0.0%
Centroid-so: 2.364 arcsec [15.54σ]
OotOffset-rm: 0.377 arcsec [0.67σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.198 arcsec [0.73σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

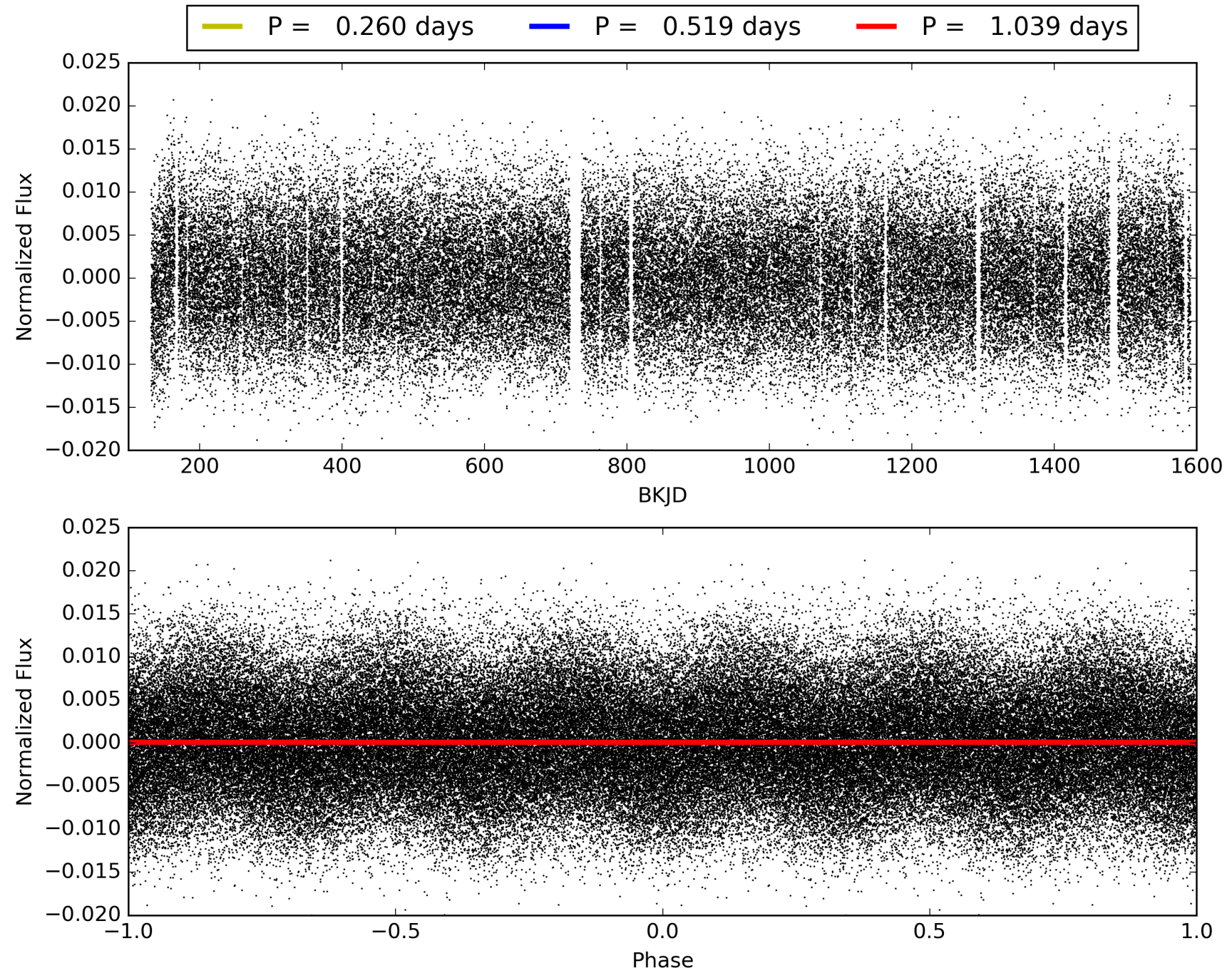
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:27:08 Z

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

TCE 008056337-02, PDC Light Curves

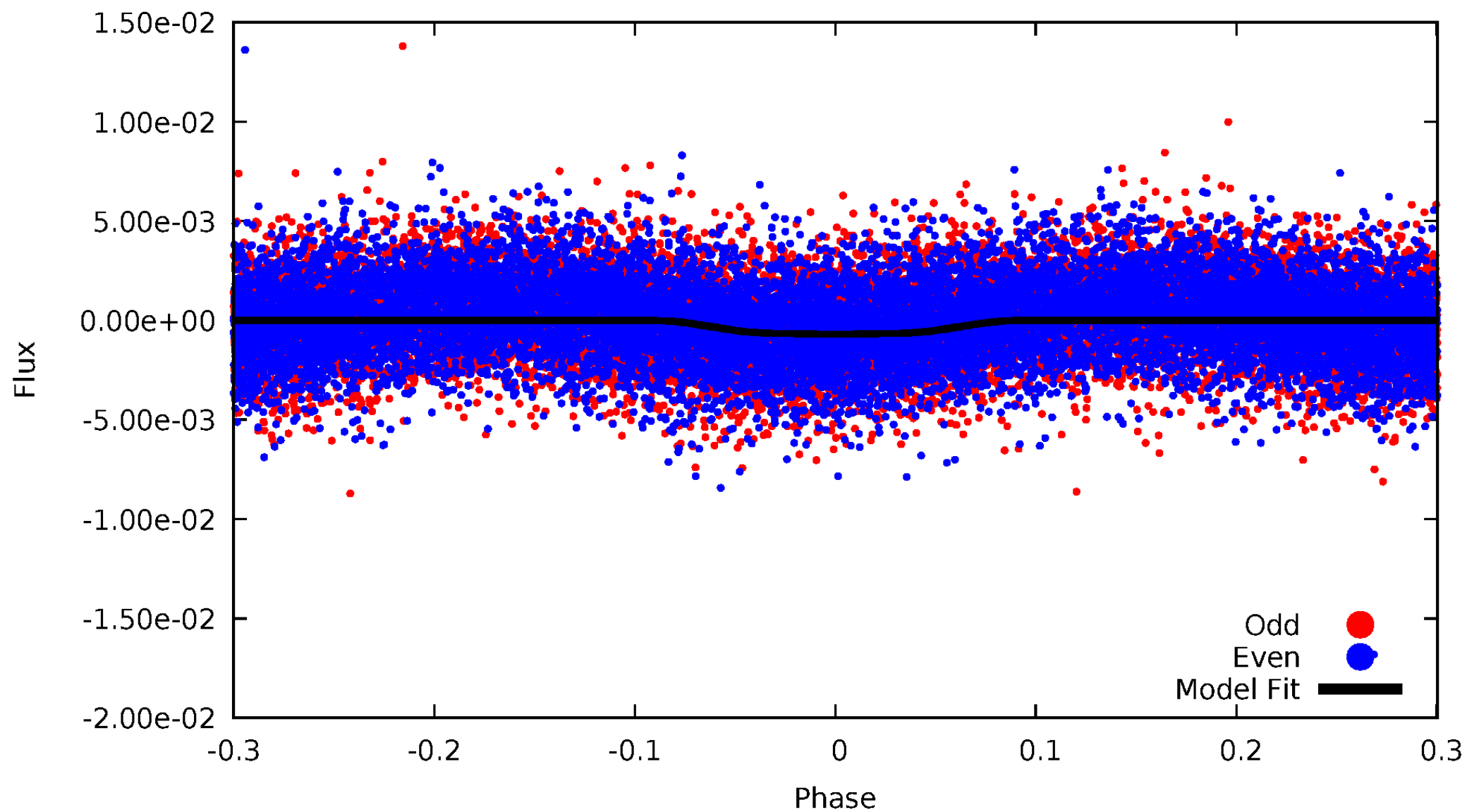


TCE 008056337-02



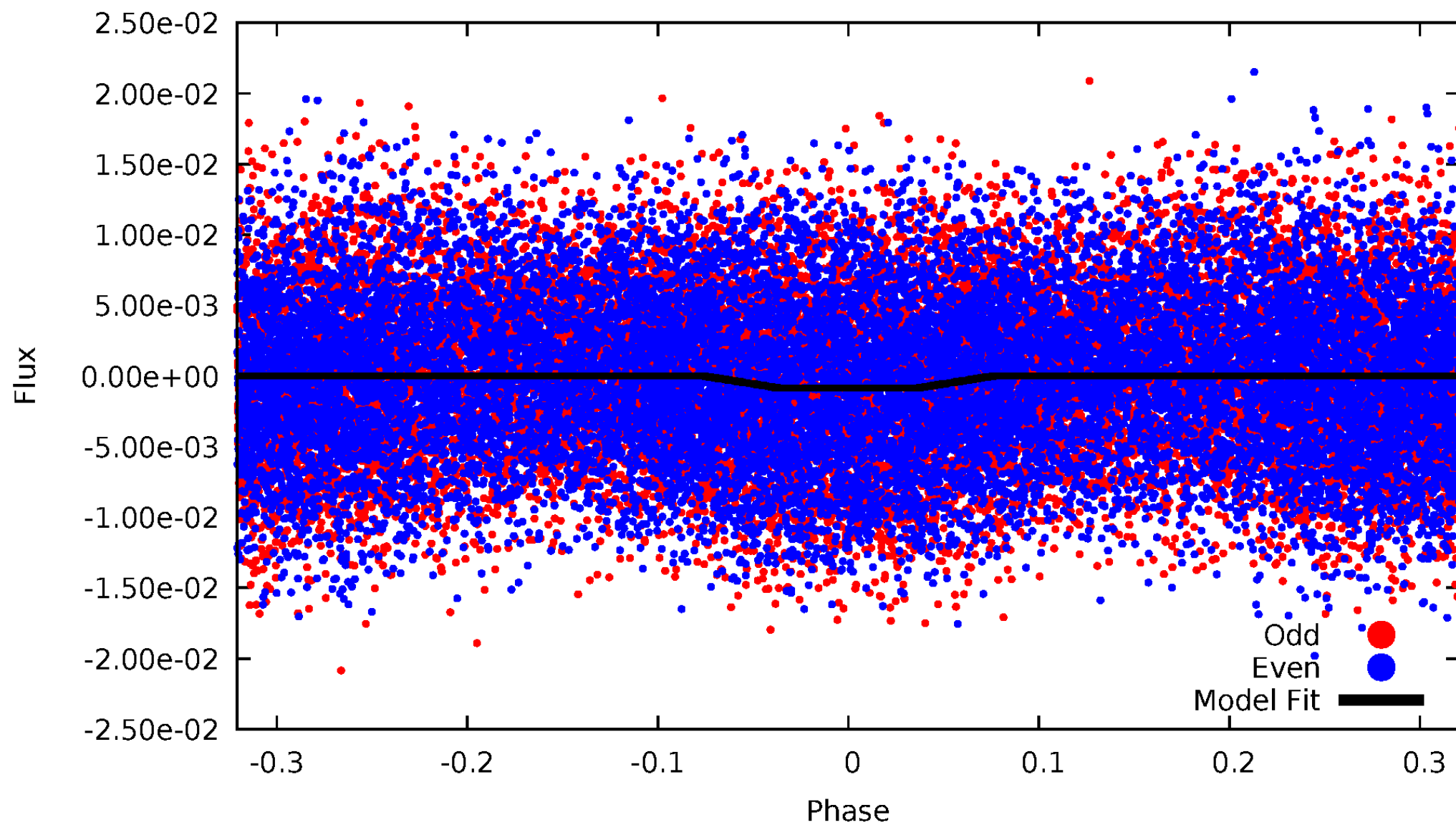
DV Odd/Even

TCE 008056337-02



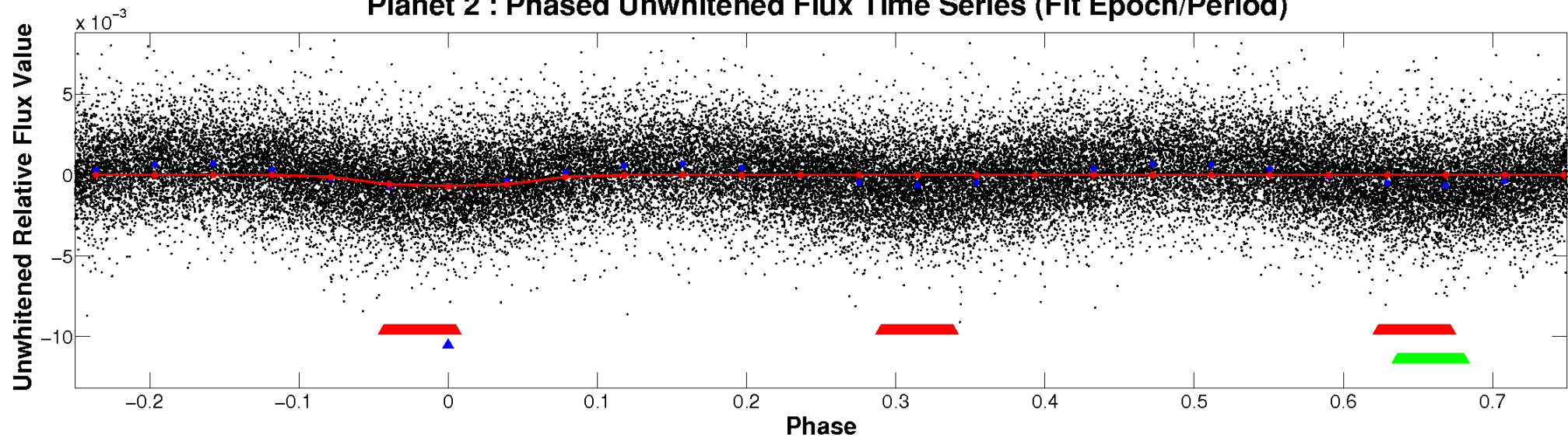
ALT Odd/Even

TCE 008056337-02

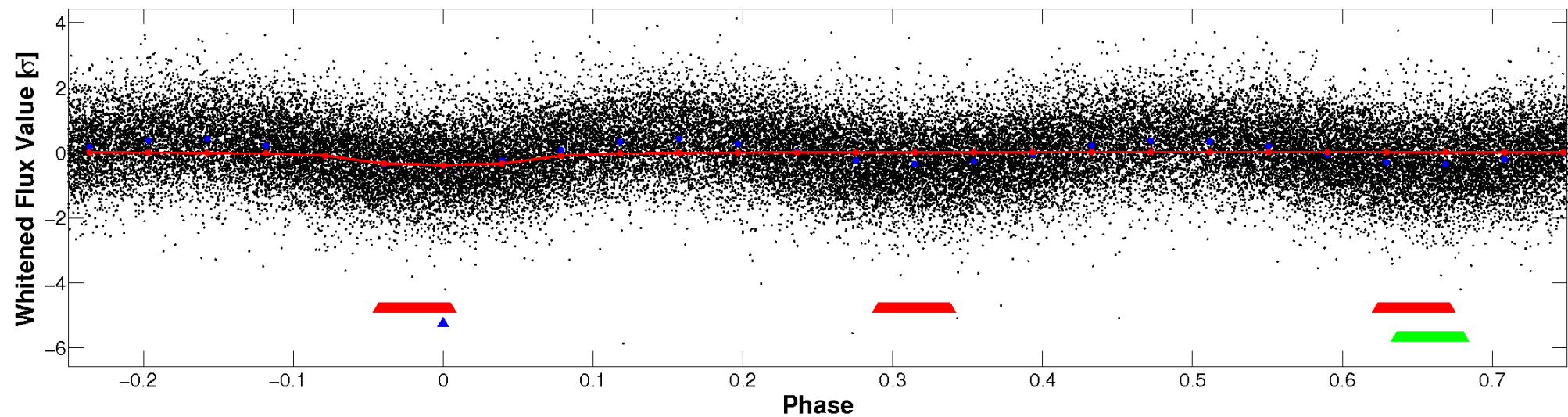


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

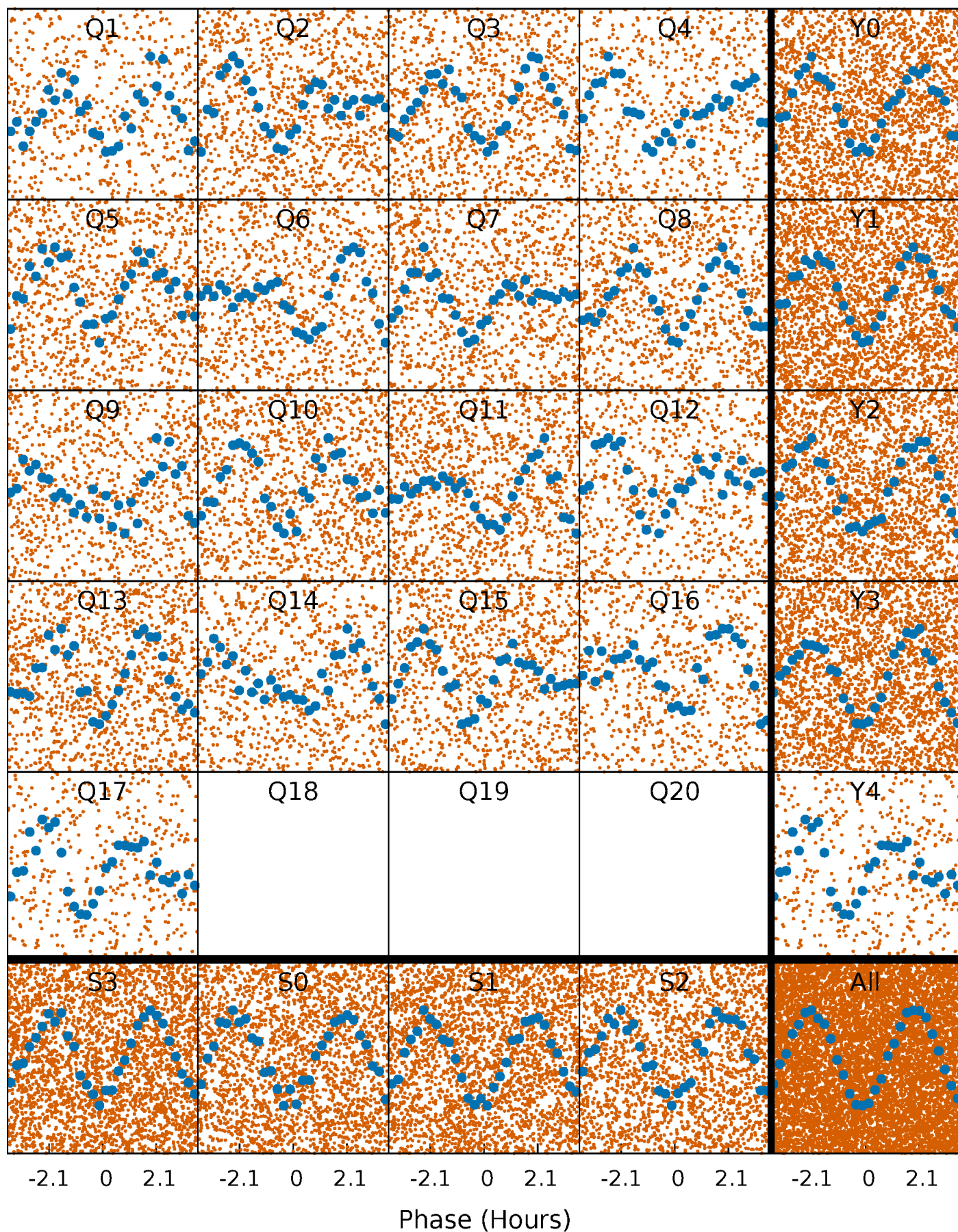


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



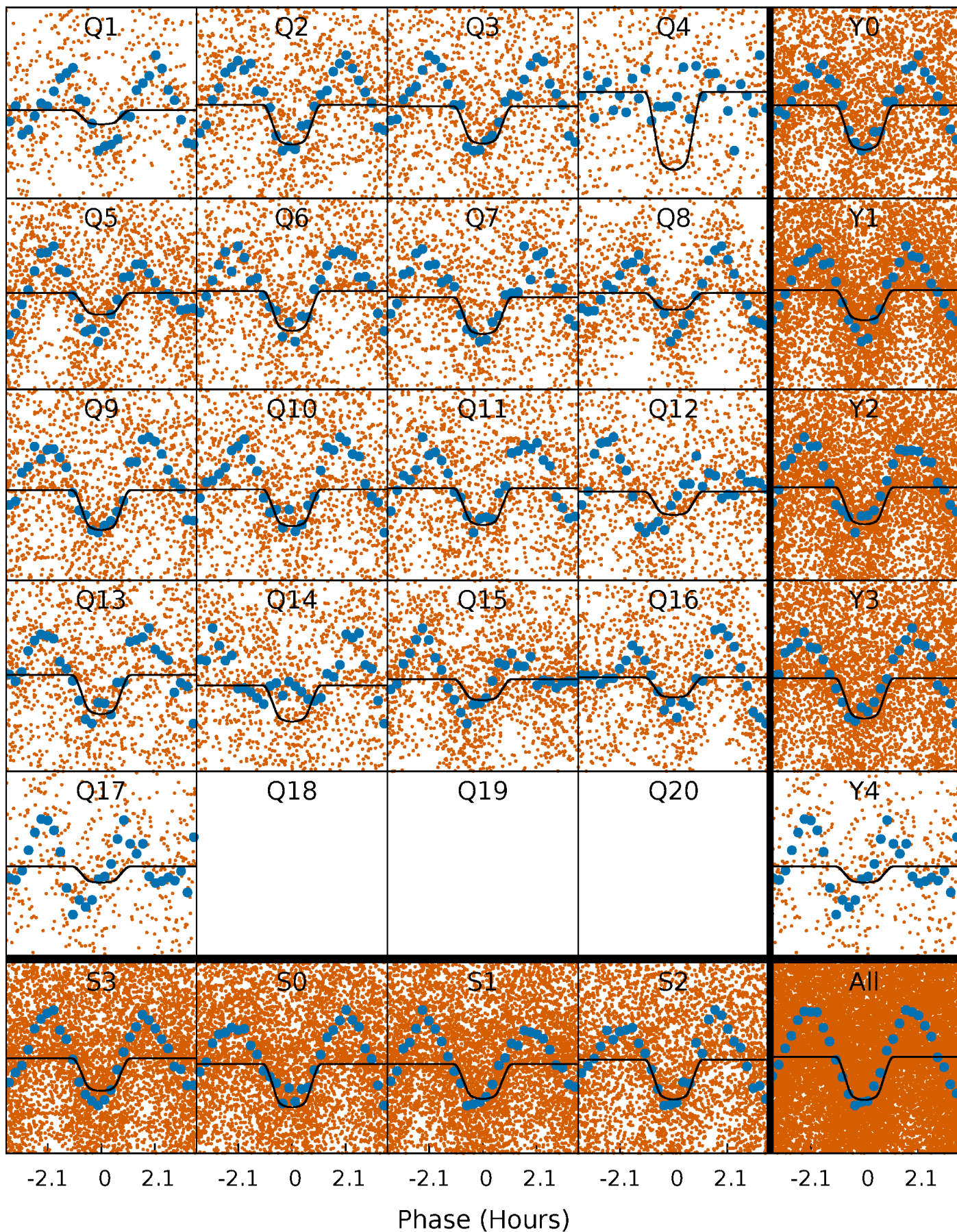
PDC Quarter-Phased Transit Curves

TCE 008056337-02 P= 0.519406 Days $T_0=131.698761$ (BKJD)



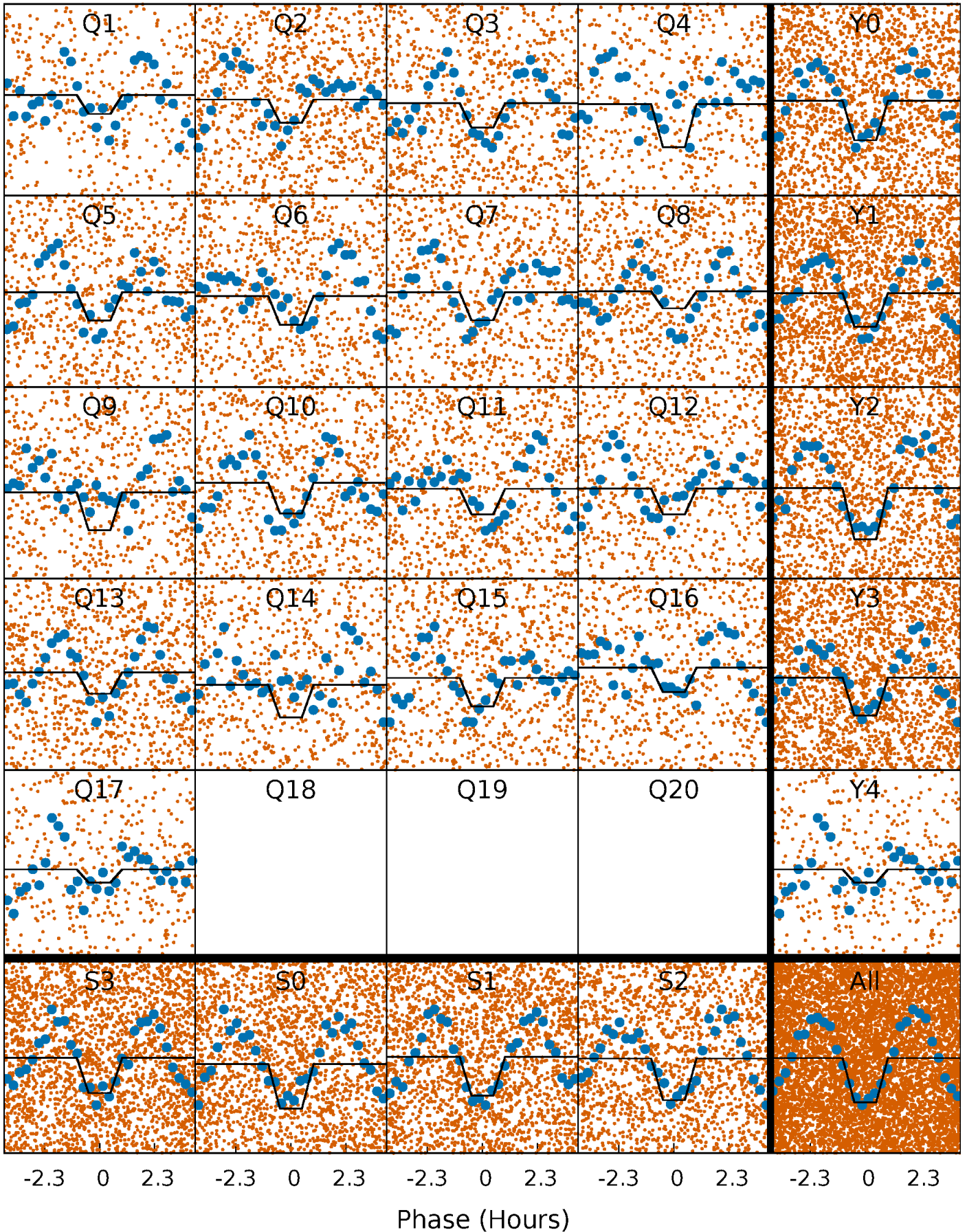
DV Quarter-Phased Transit Curves

TCE 008056337-02 P= 0.519406 Days $T_0=131.698761$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

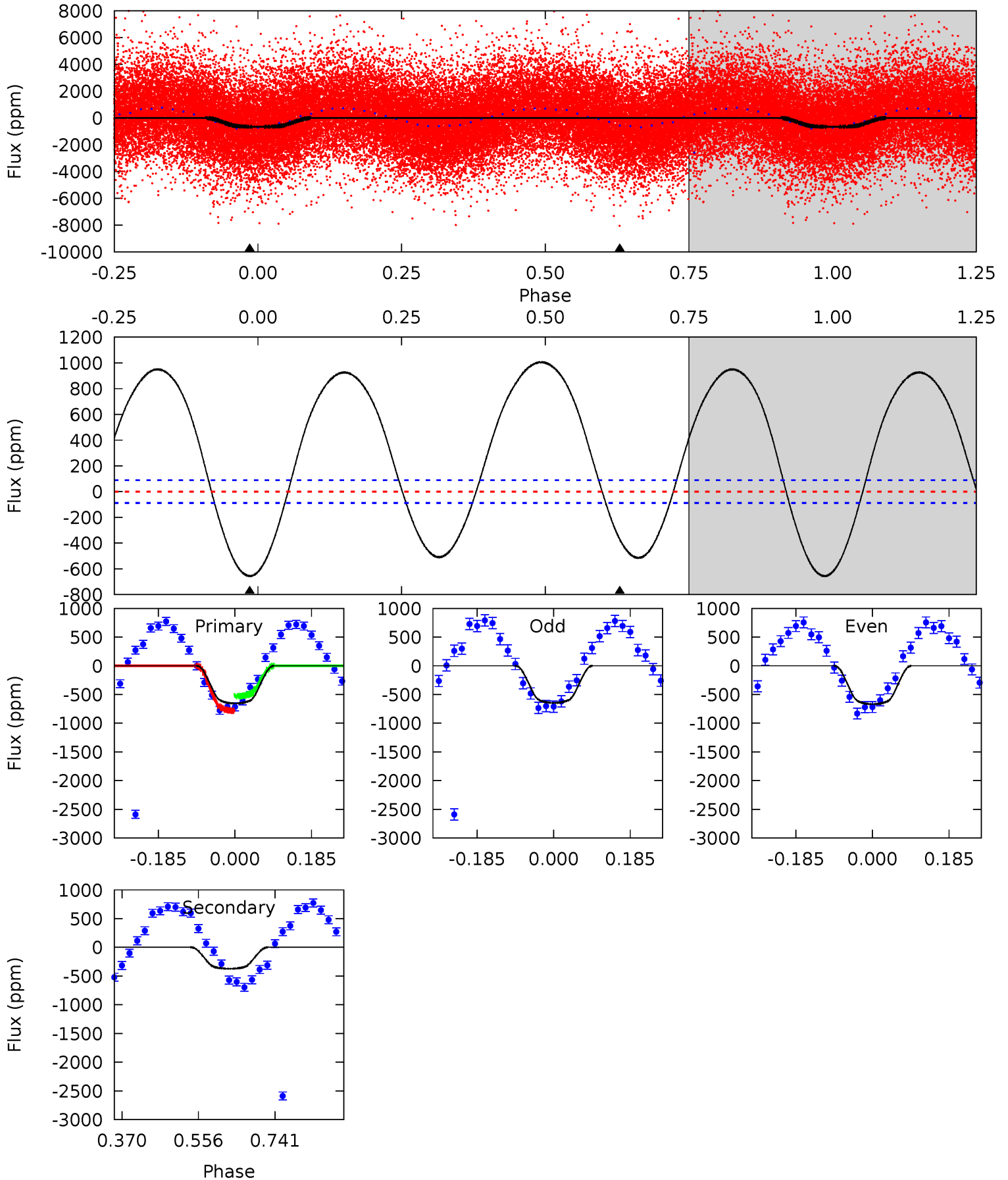
TCE 008056337-02 P= 0.519403 Days $T_0=131.699543$ (BKJD)



DV Model-Shift Uniqueness Test

008056337-02, P = 0.519406 Days, E = 131.179355 Days

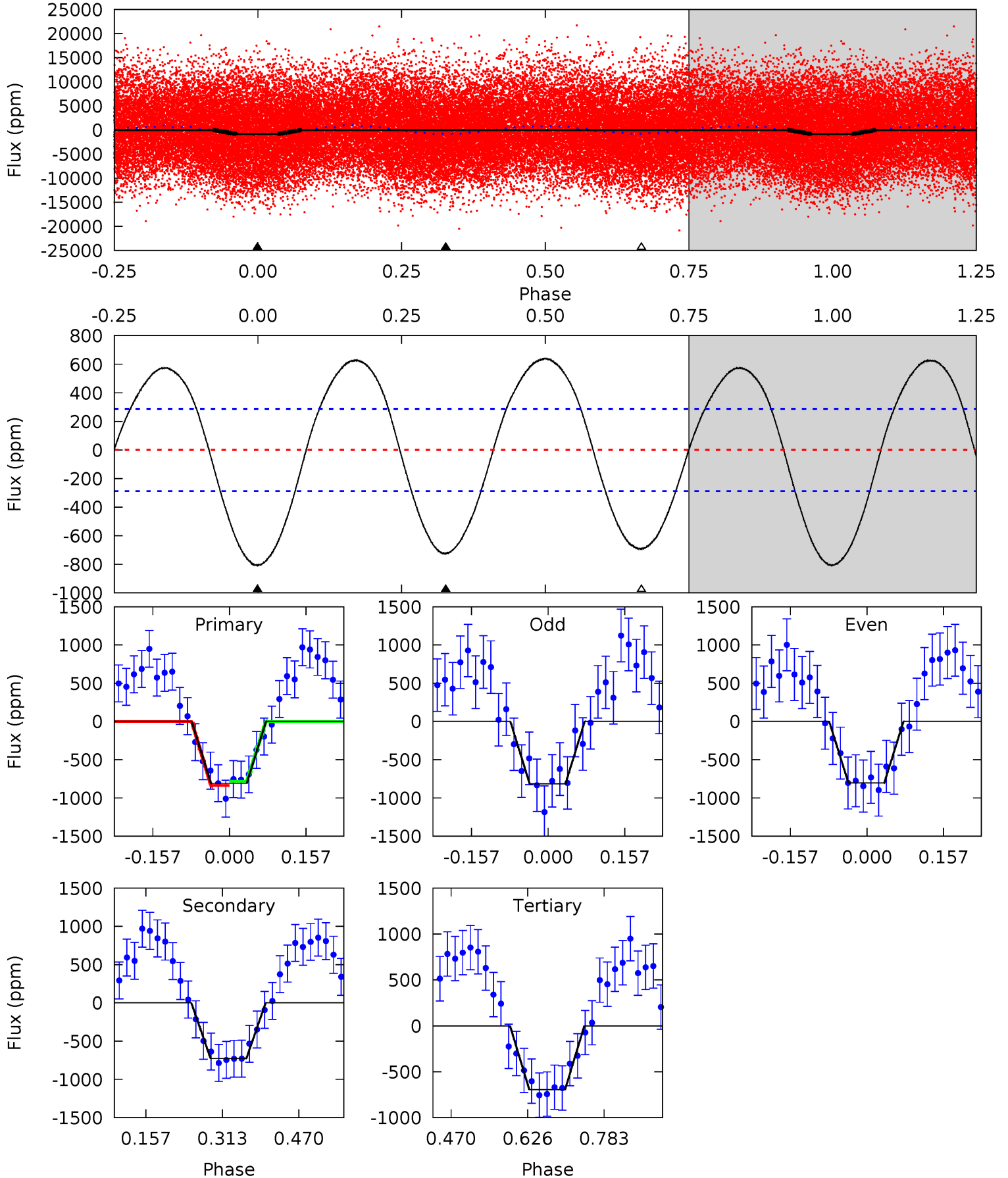
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 33.1 | 18.7 | 0 | 0 | 4.43 | 1.32 | 22.7 | 33.1 | 33.1 | 18.7 | 18.7 | 0.57 | 0.99 | 0.61 | 6.51 |



Alt Model-Shift Uniqueness Test

008056337-02, P = 0.519403 Days, E = 131.180140 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 12.6 | 11.3 | 10.8 | 0 | 4.47 | 1.42 | 7.42 | 1.78 | 12.6 | 0.50 | 11.3 | 0.08 | 1.05 | 0.44 | 0.43 |



Stellar Parameters For KIC 008056337

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 6240^{+195}_{-260} | $4.329^{+0.093}_{-0.201}$ | $0.080^{+0.250}_{-0.300}$ | $1.229^{+0.396}_{-0.213}$ | $1.175^{+0.170}_{-0.170}$ | $0.891^{+0.454}_{-0.482}$ |
| | +3%/-4% | +2%/-5% | +312%/-375% | +32%/-17% | +14%/-14% | +51%/-54% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008056337-02 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|----------------------|---------------------------|
| DV | -372 ± 20 | $3.91^{+0.78}_{-0.63}$ | 3752^{+284}_{-245} | 5049^{+385}_{-340} | $2.348^{+0.947}_{-0.661}$ |
| Alt. | -727 ± 64 | $4.04^{+0.78}_{-0.68}$ | 3741^{+275}_{-238} | 5872^{+516}_{-419} | $4.313^{+1.974}_{-1.279}$ |

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

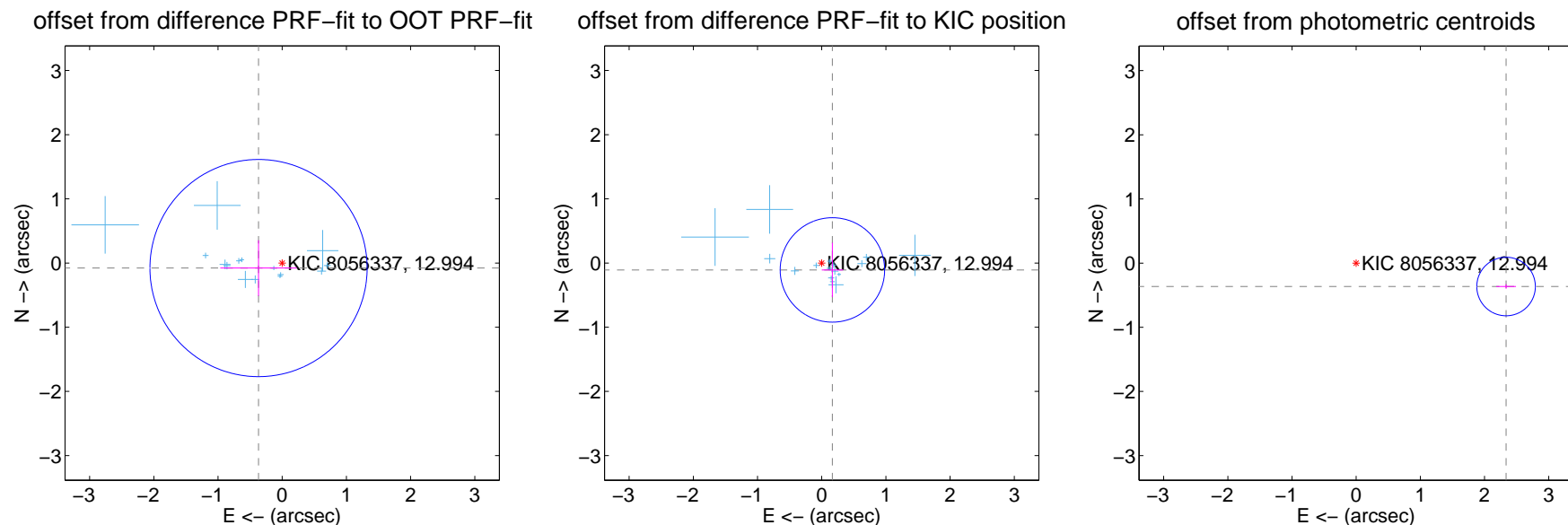
DV Centroid Data

Supplemental centroid analysis for 008056337-02. Kepler magnitude: 12.99. Transit SNR 27.26

There are 16 quarters with good PRF difference image offsets

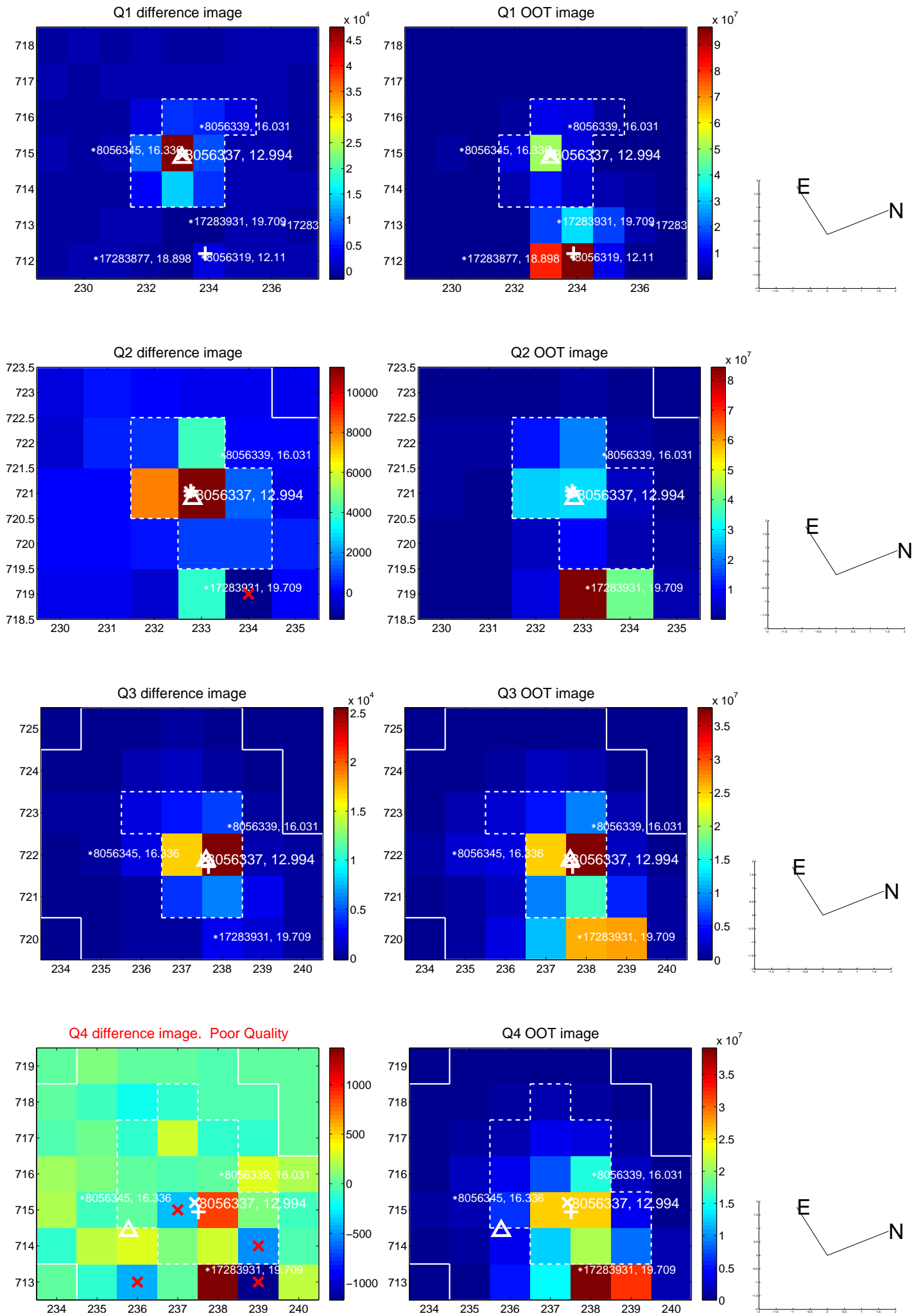
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.377 ± 0.564 | 0.67 | 0.369 ± 0.596 | -0.078 ± 0.434 |
| PRF-fit source offset from KIC position | 0.198 ± 0.271 | 0.73 | -0.167 ± 0.166 | -0.107 ± 0.424 |
| photometric centroid source offset | 2.36 ± 0.15 | 15.54 | -2.34 ± 0.15 | -0.36 ± 0.04 |

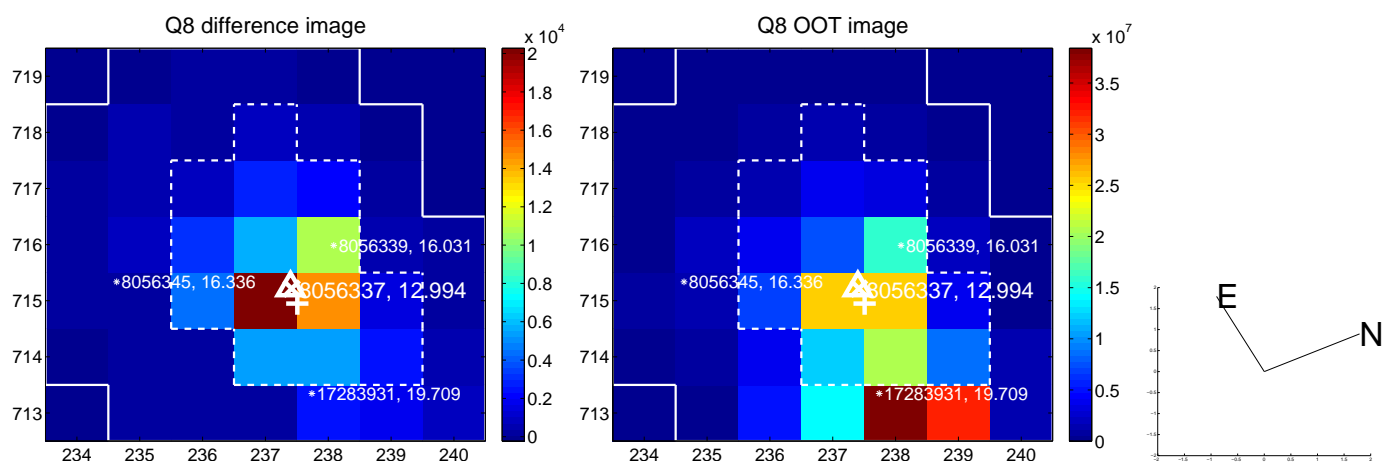
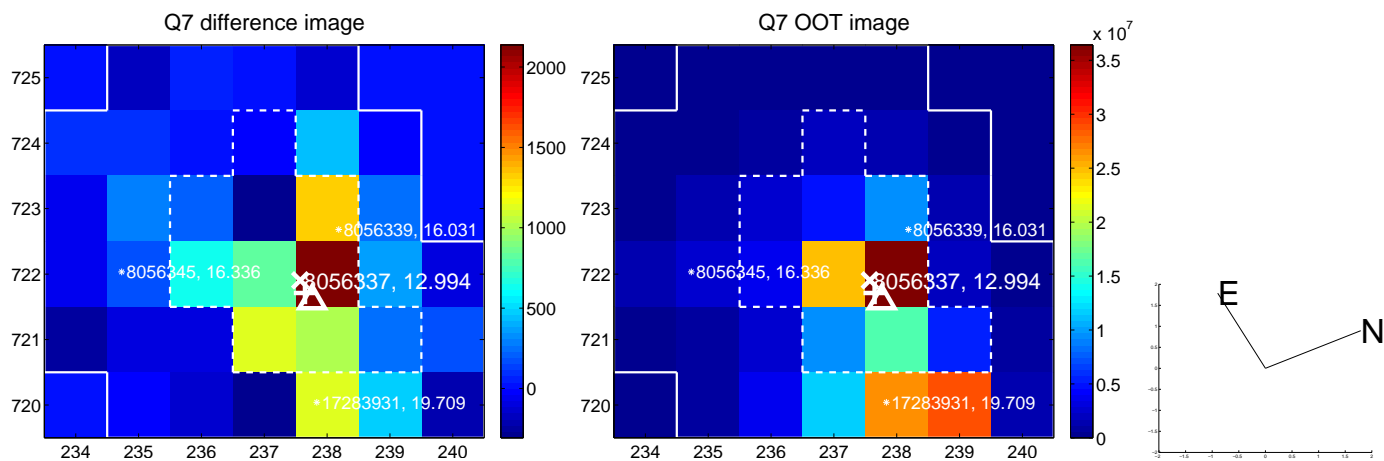
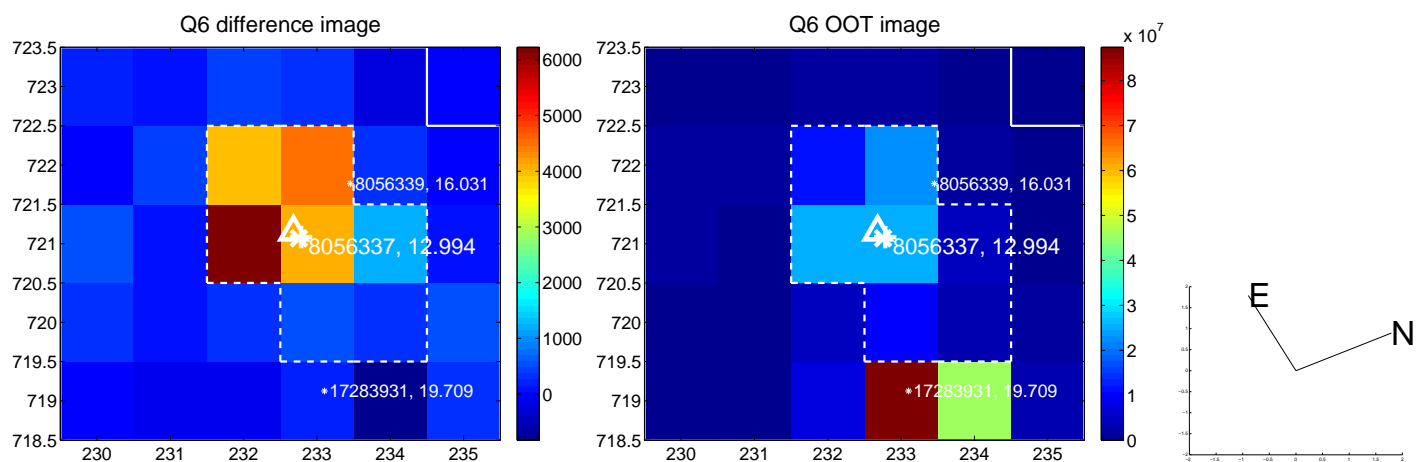
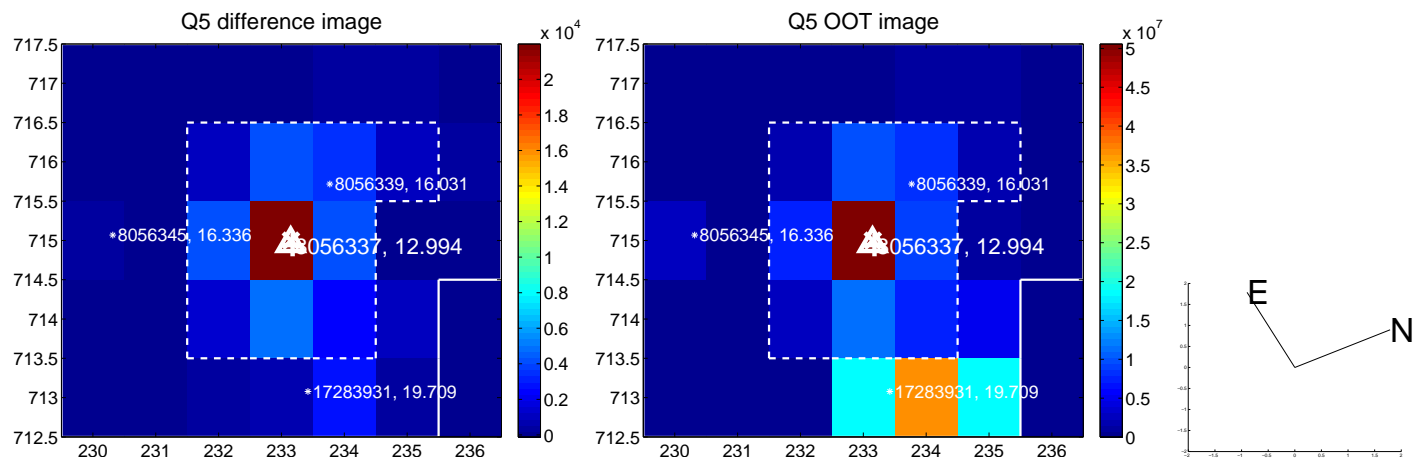


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

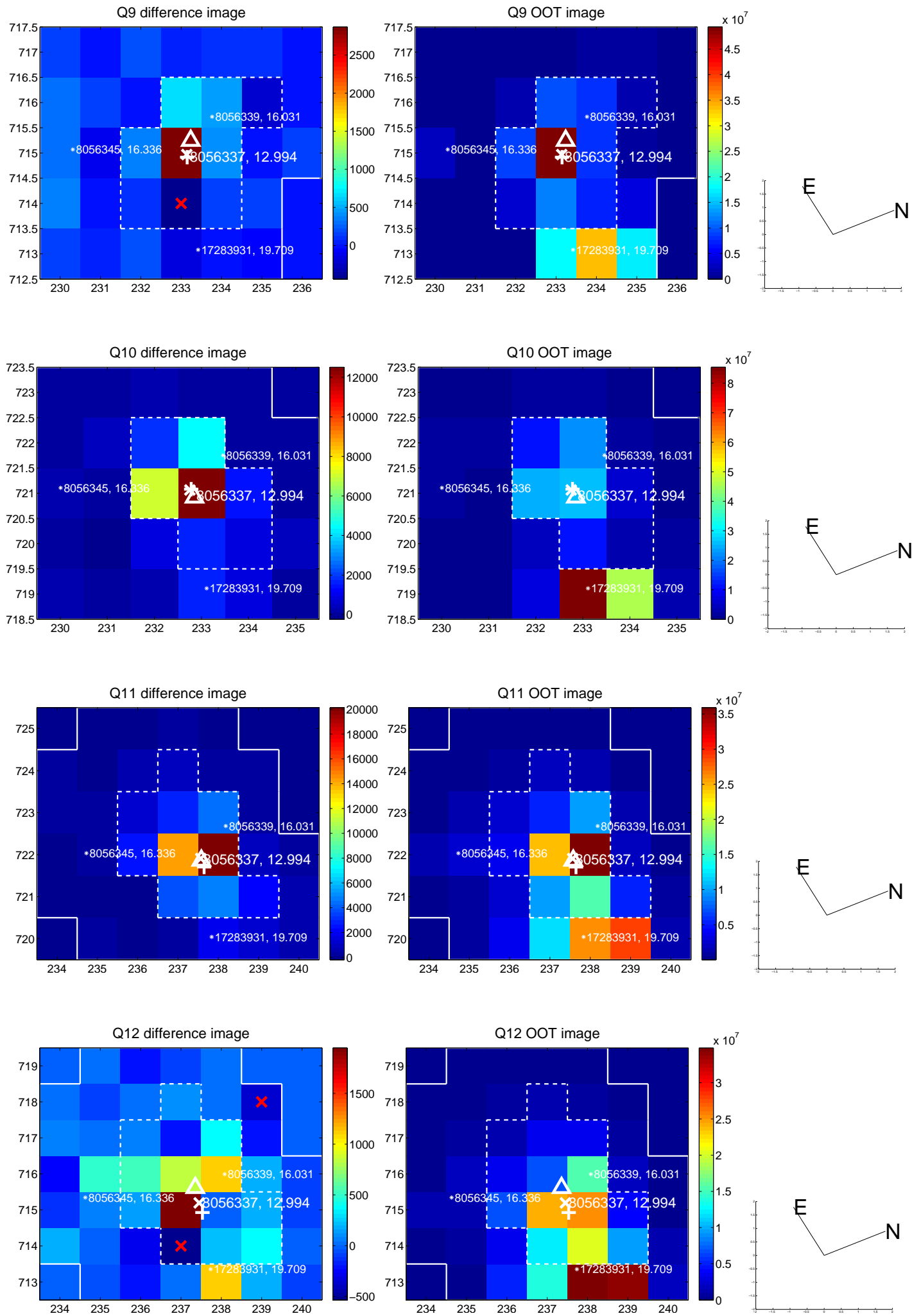
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



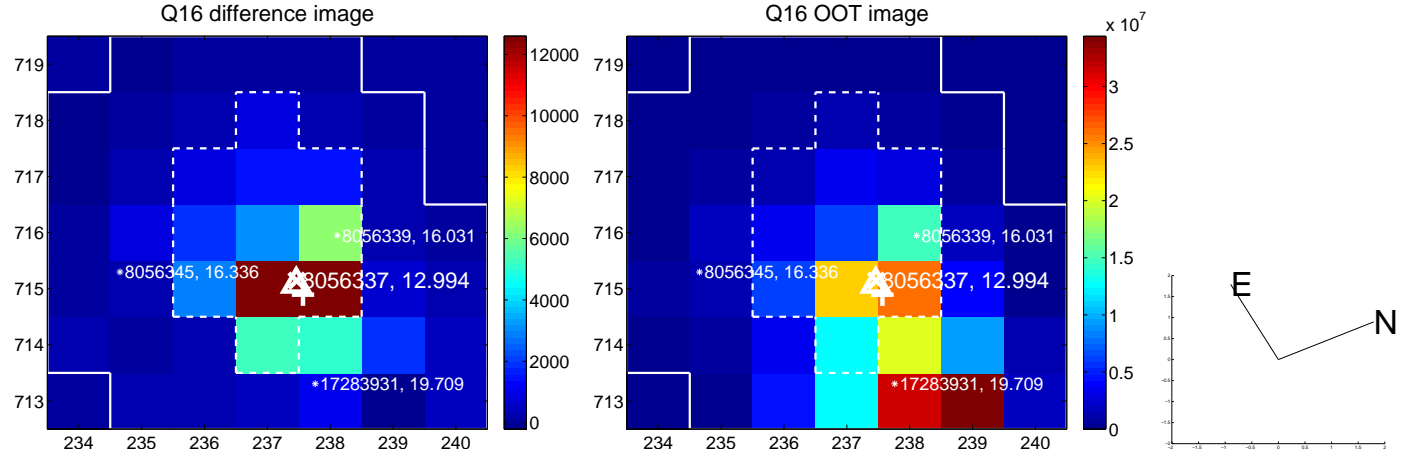
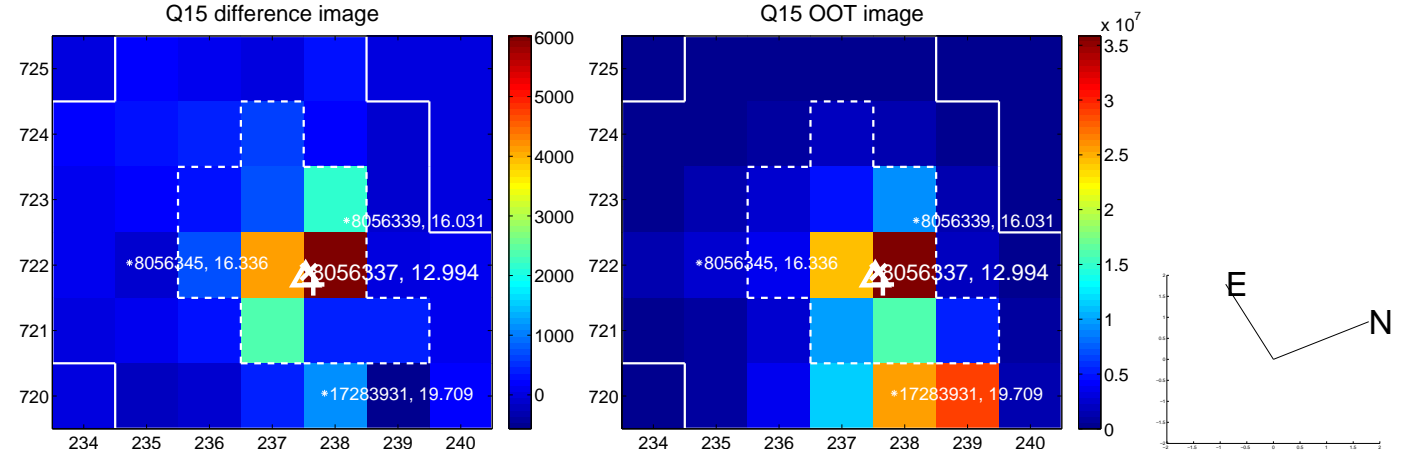
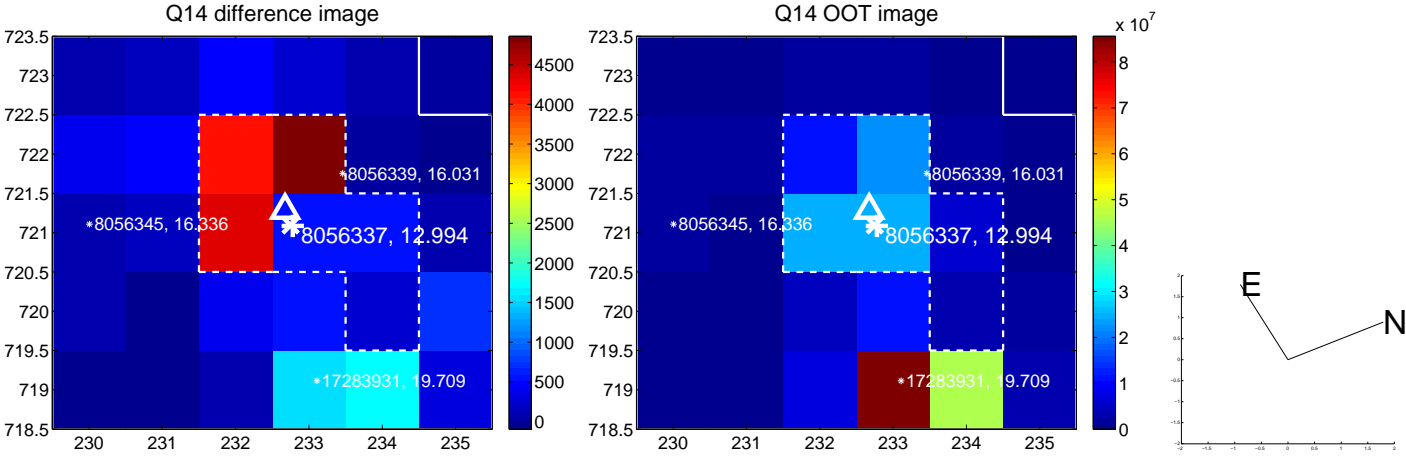
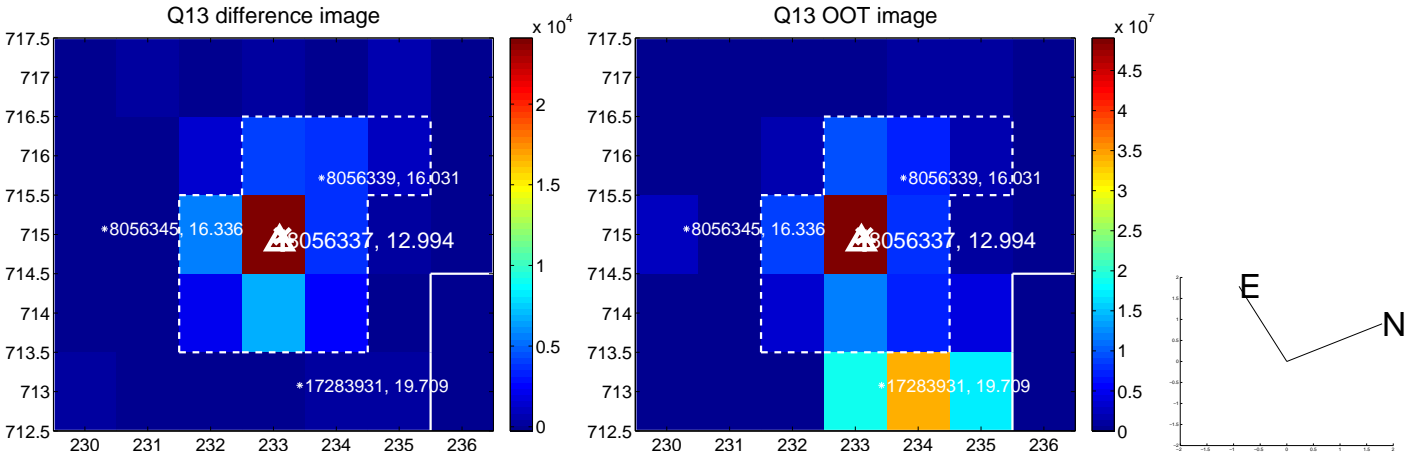
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



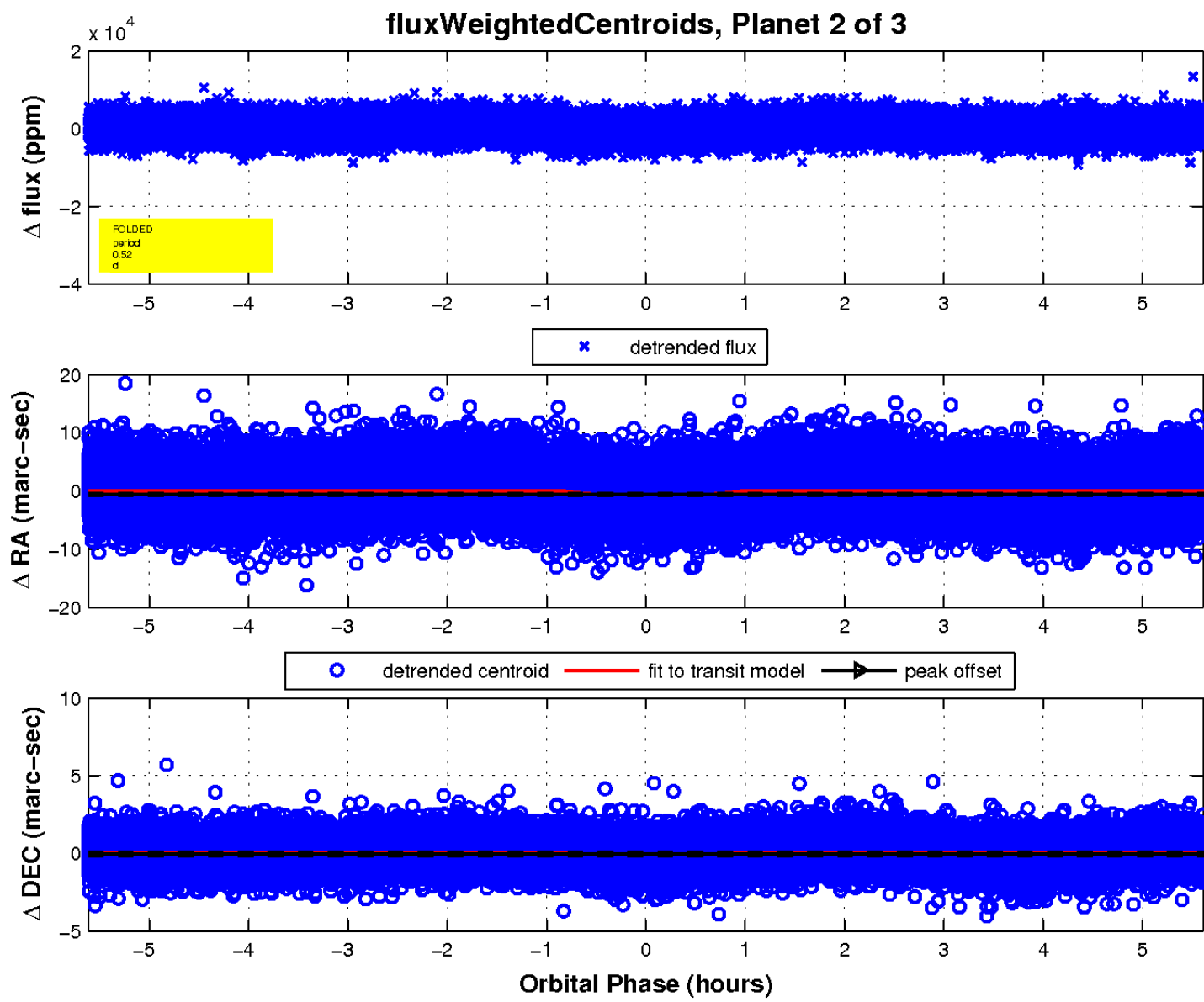
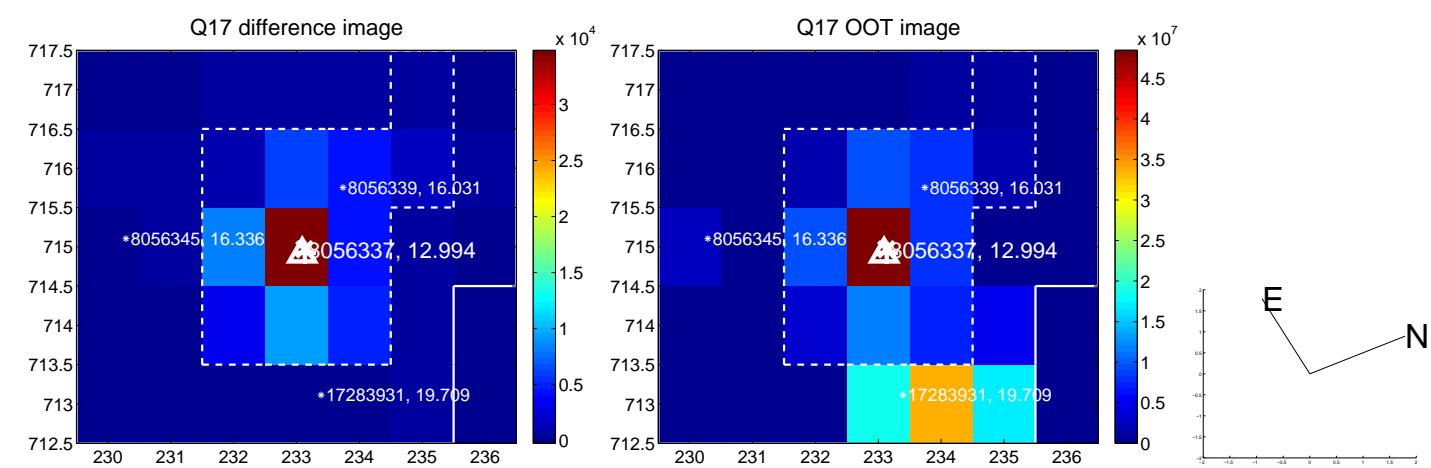
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



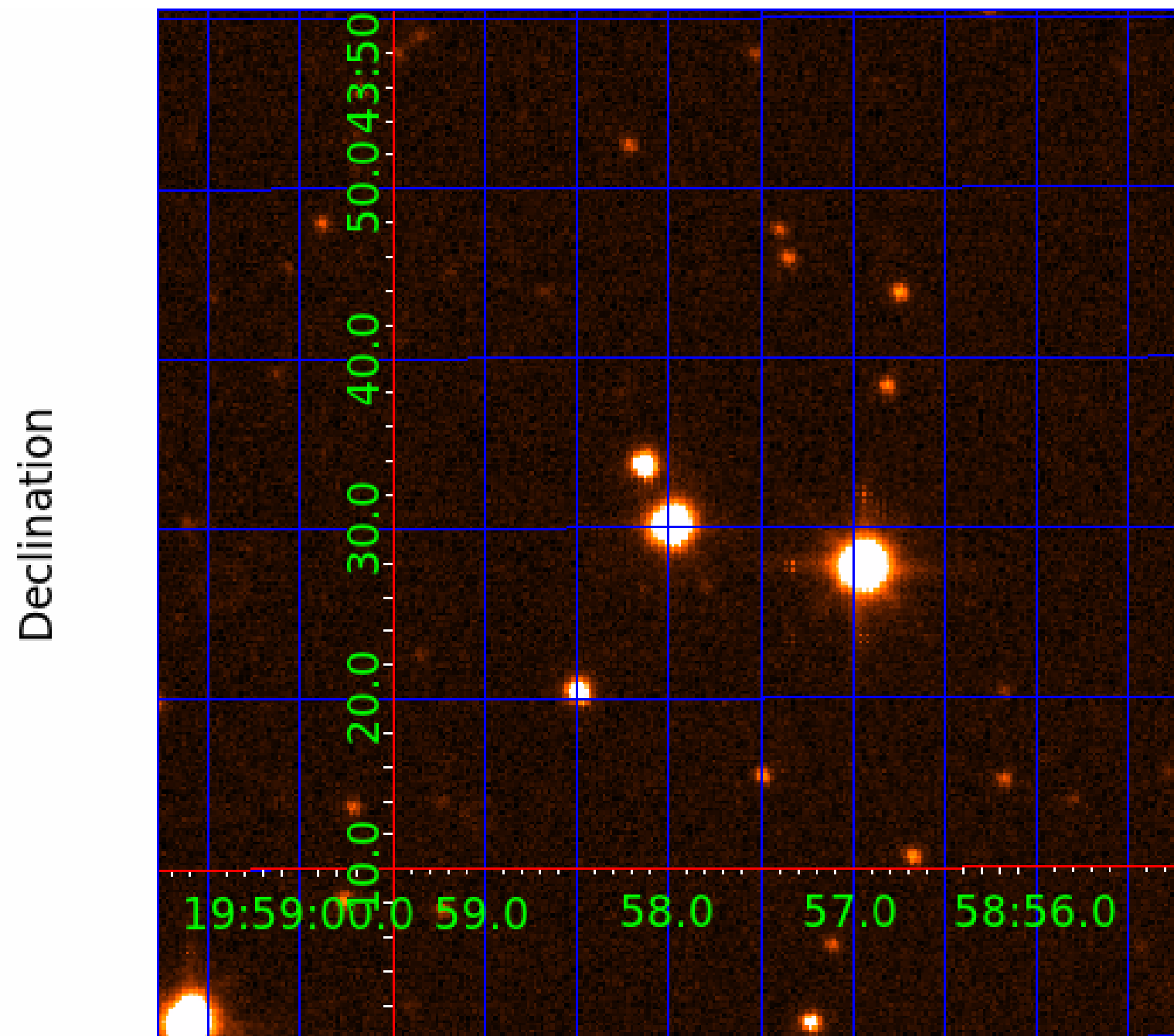
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056337

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 008056337-01 | OBS | No | 0.865662 | 131.701404 | 748.8 | 1.737 | 11.3 | 23.7 | 1.23 | 6240 | 3.97 | 5828.22 |
| 008056337-02 | OBS | No | 0.519406 | 131.698761 | 685.2 | 1.871 | 20.4 | 27.3 | 1.23 | 6240 | 3.81 | 11516.60 |
| 008056337-03 | OBS | No | 0.519398 | 131.532869 | 344.2 | 1.500 | 15.9 | -1.0 | 1.23 | 6240 | 2.29 | 11516.84 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008056337-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 008056337-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS |

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

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

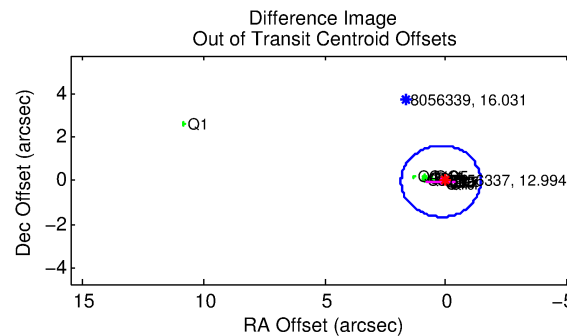
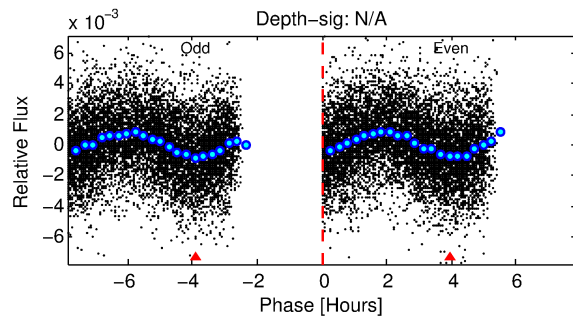
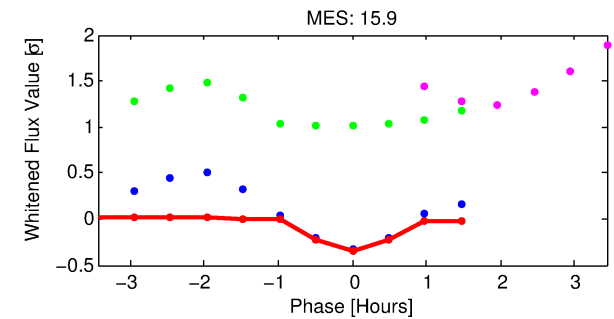
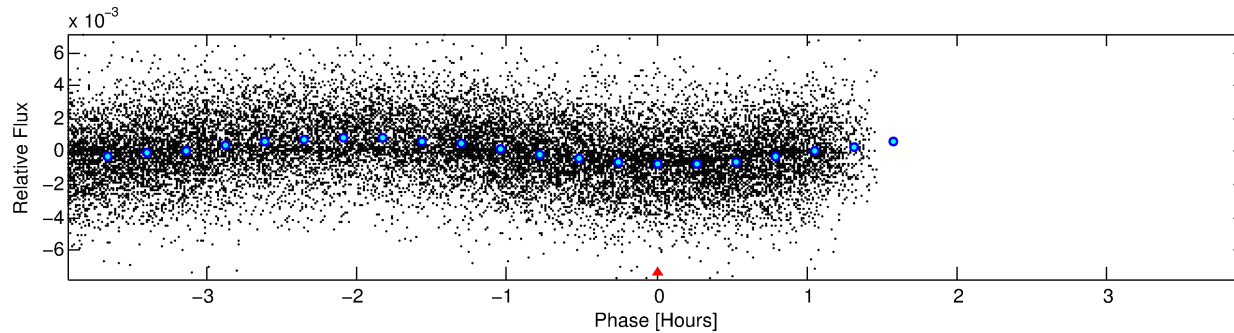
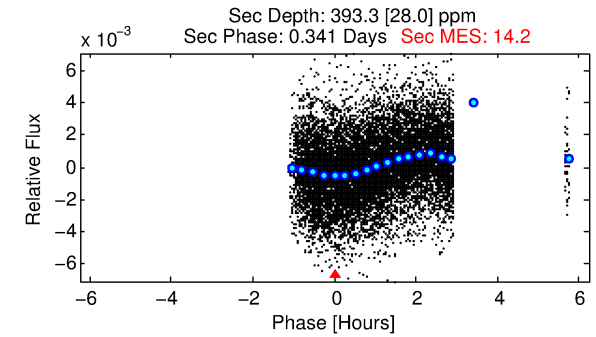
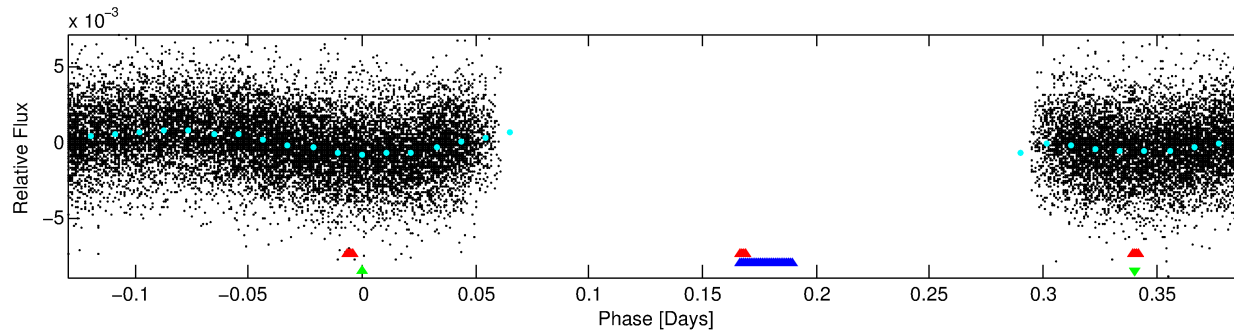
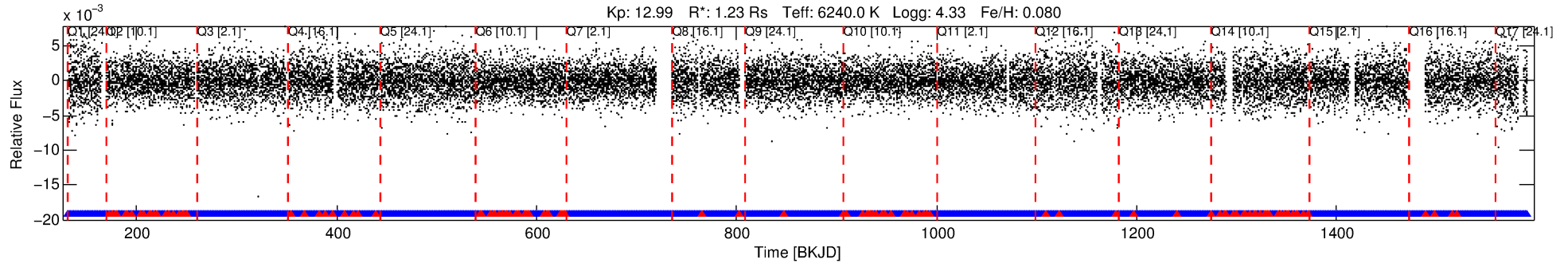
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056337-03

No Significant Match Found

DV One-Page Summary

KIC: 8056337 Candidate: 3 of 3 Period: 0.519 d



TPS TCE Results:

Period = 0.51940 d
Epoch = 131.5329 BKJD

DV fit results are unavailable

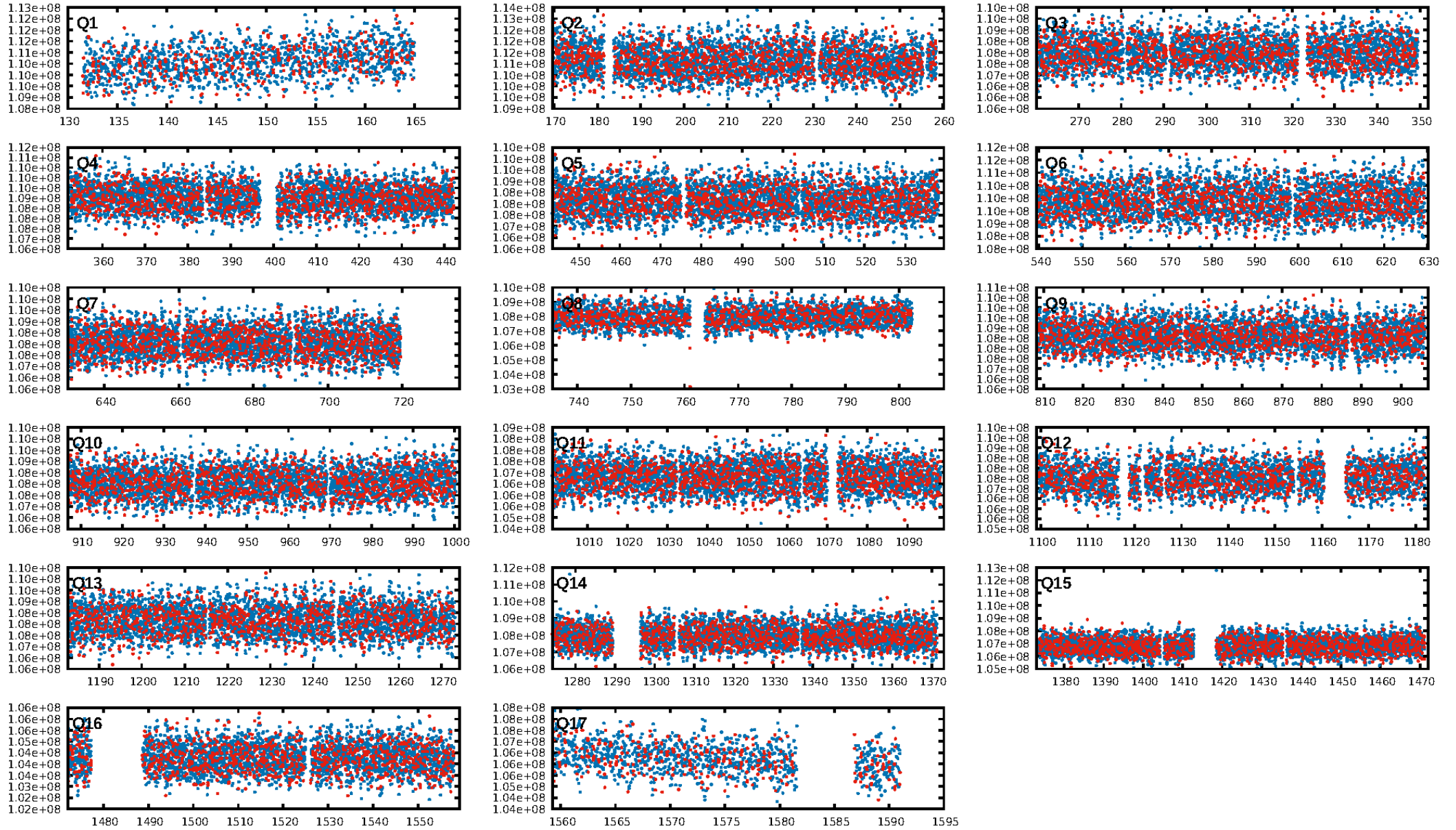
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1840/1970]
GhostDiagnostic-chr: 3.535
Centroid-sig: 0.0%
Centroid-so: 1.964 arcsec [10.32σ]
OotOffset-rm: 0.201 arcsec [0.37σ]
KicOffset-rm: 0.182 arcsec [2.45σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

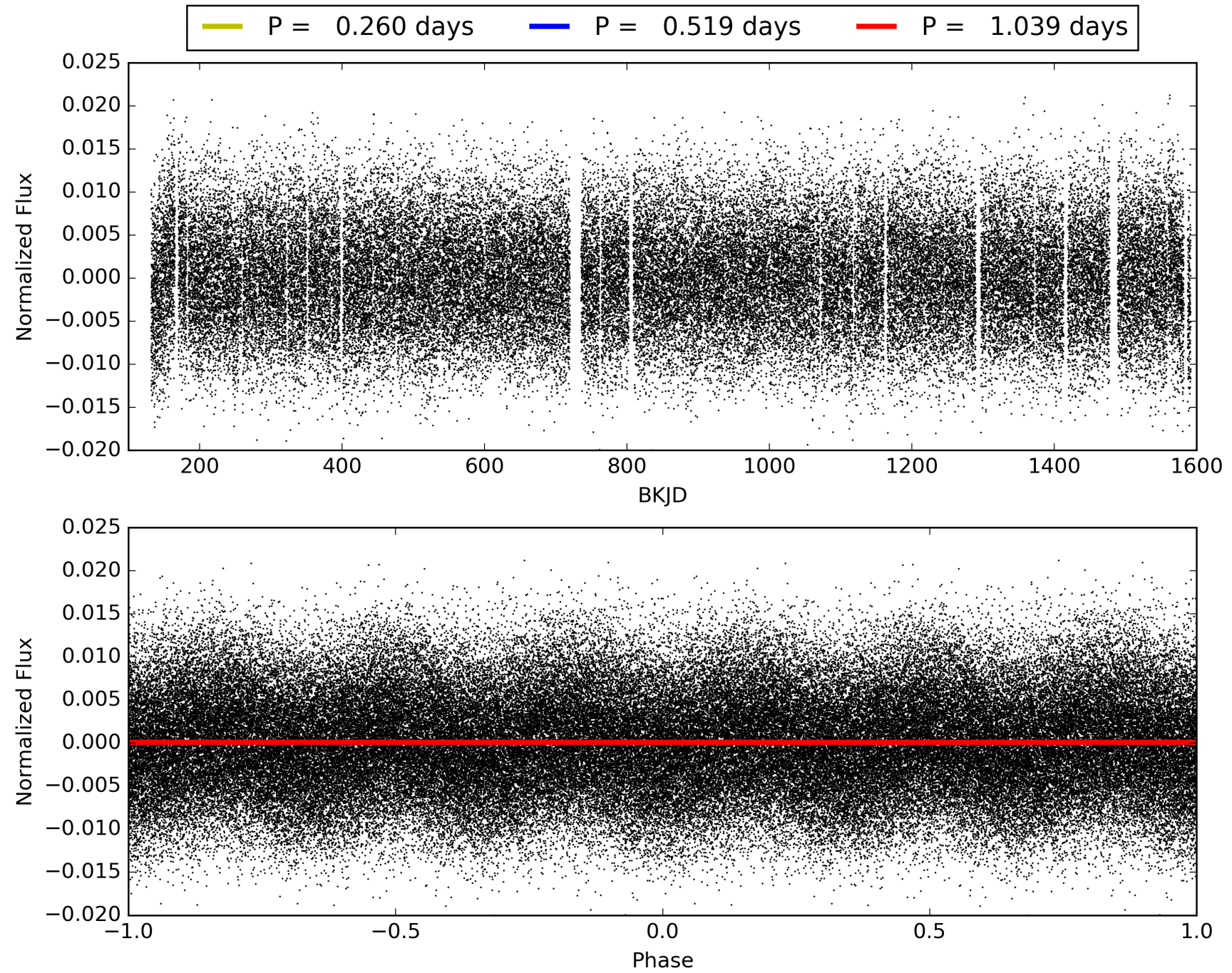
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:27:18 Z

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

TCE 008056337-03, PDC Light Curves

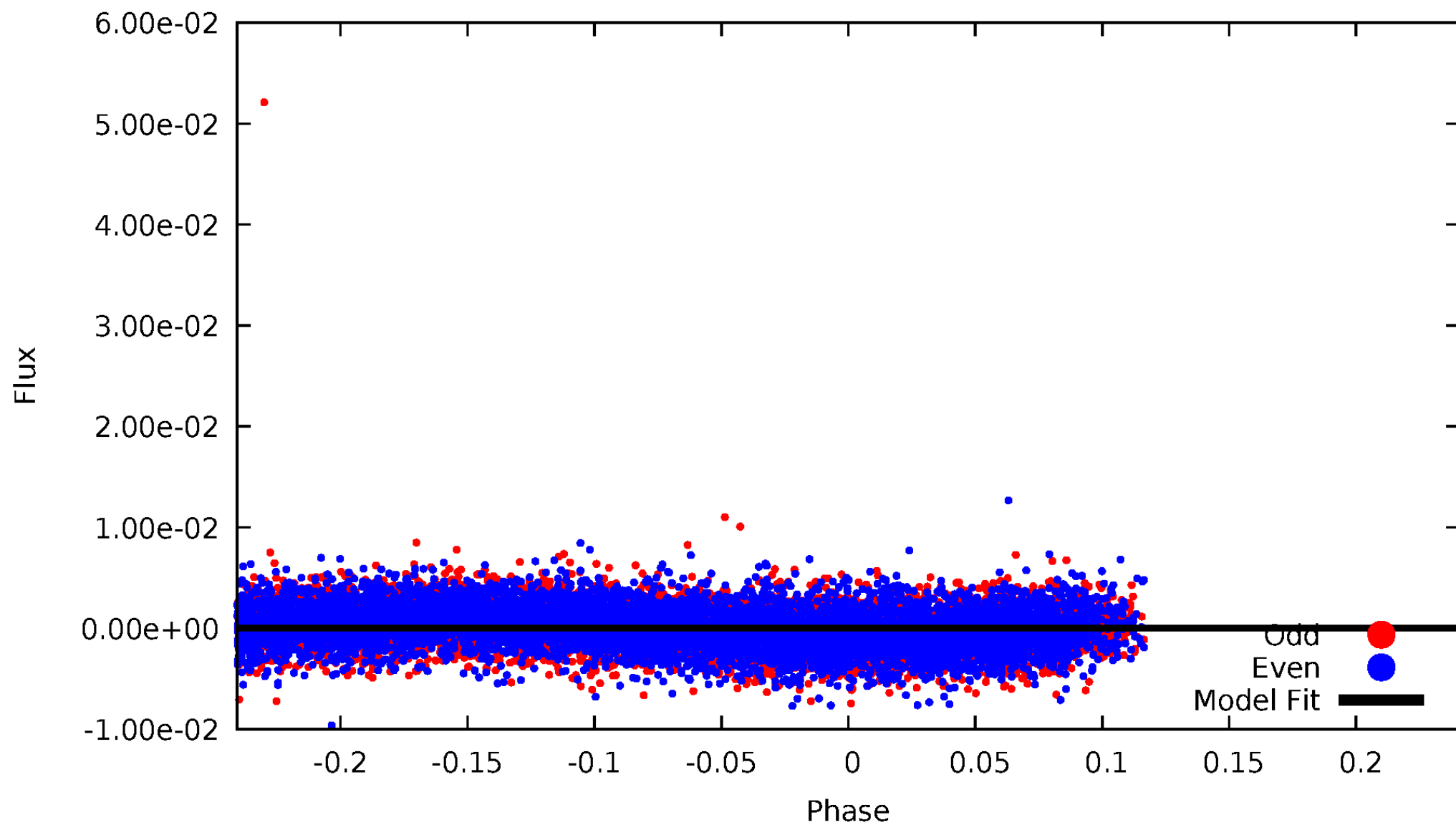


TCE 008056337-03



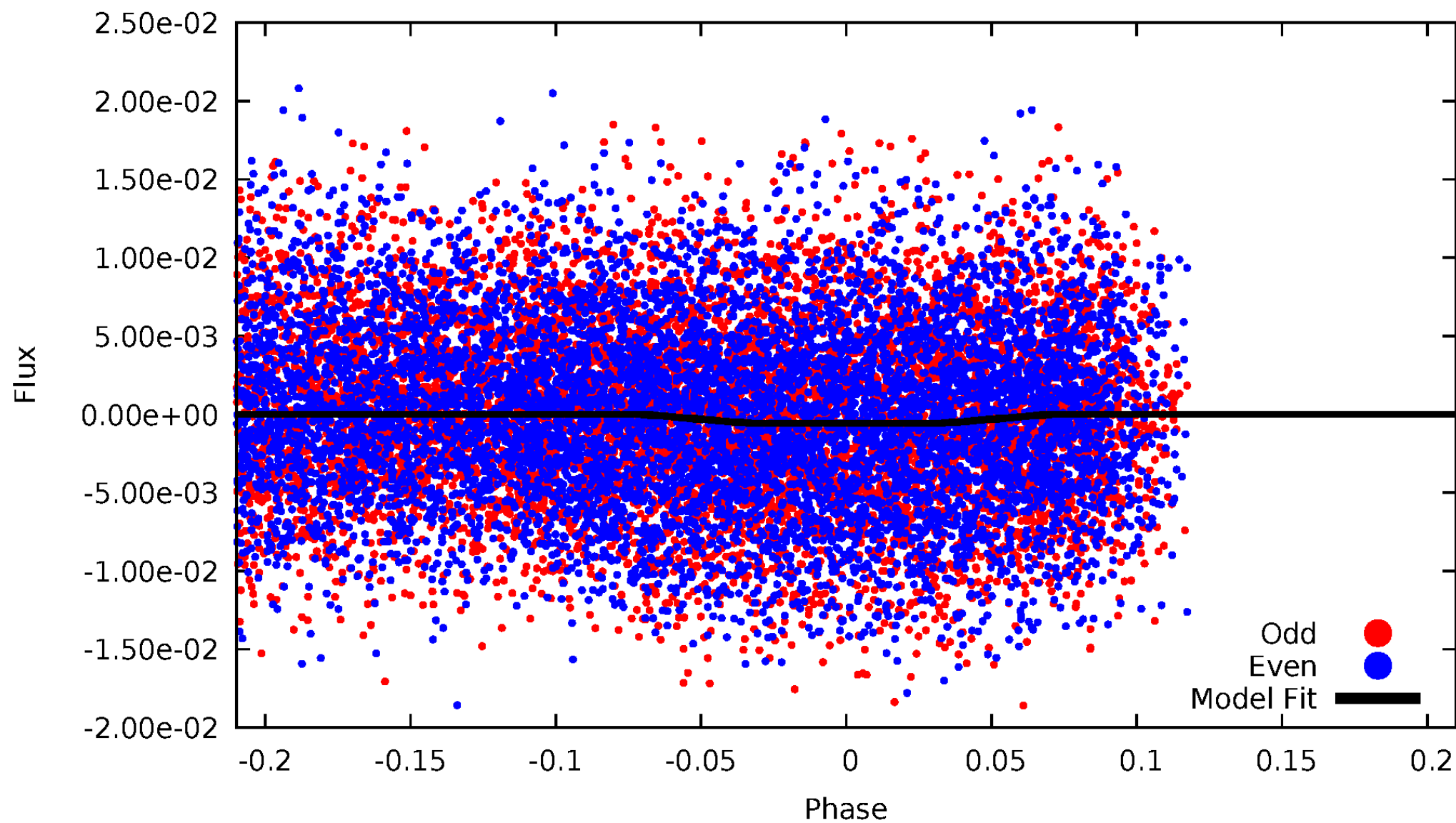
DV Odd/Even

TCE 008056337-03

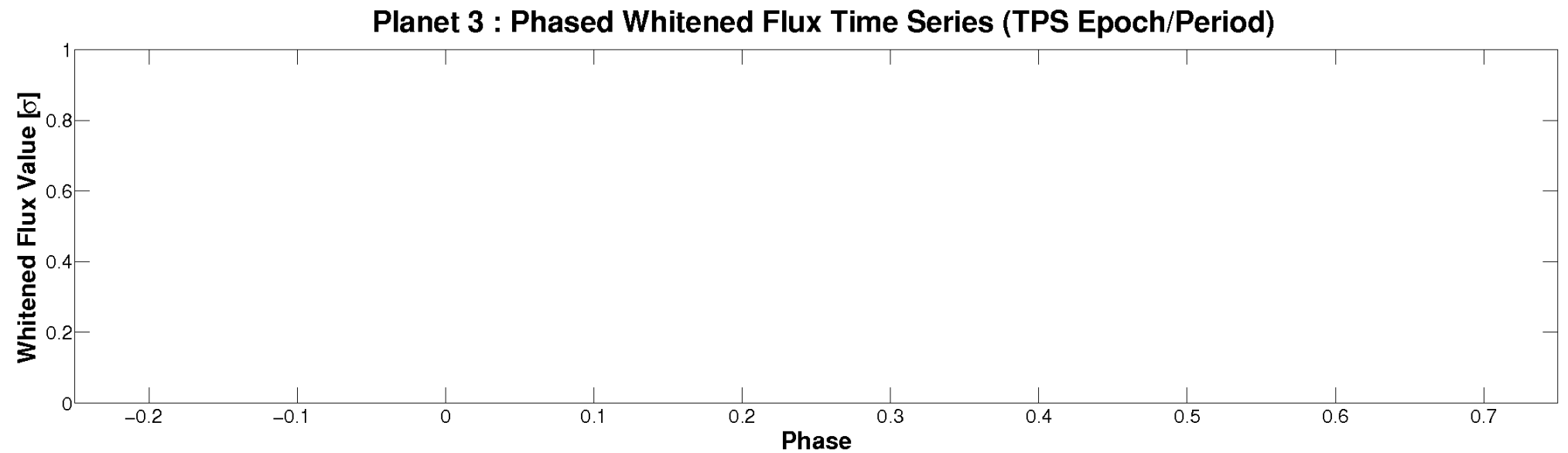
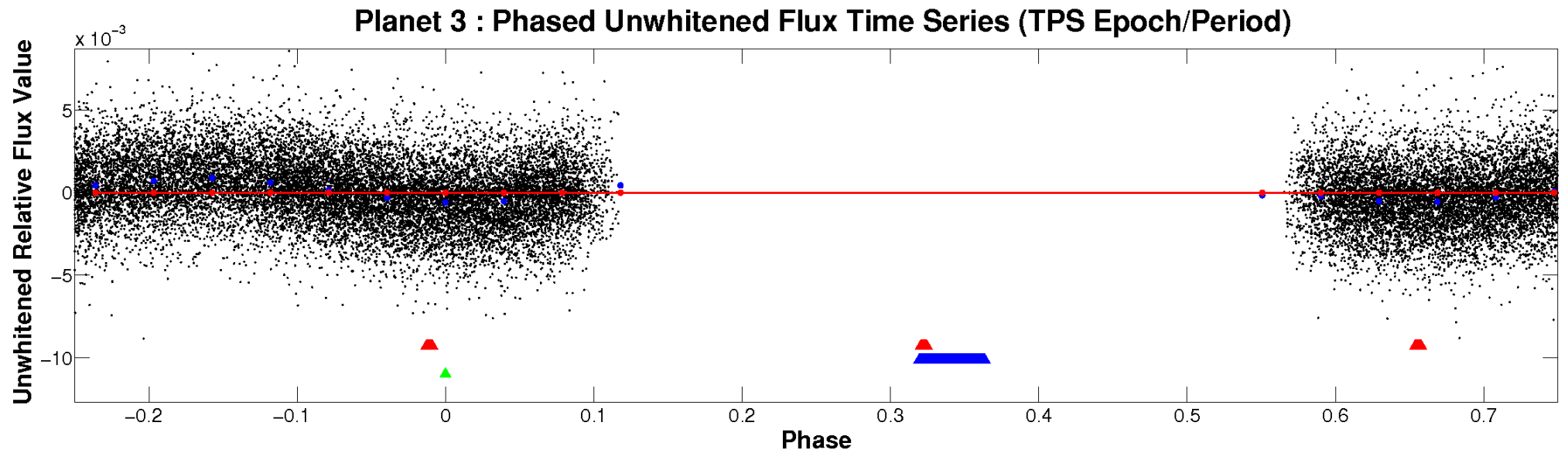


ALT Odd/Even

TCE 008056337-03

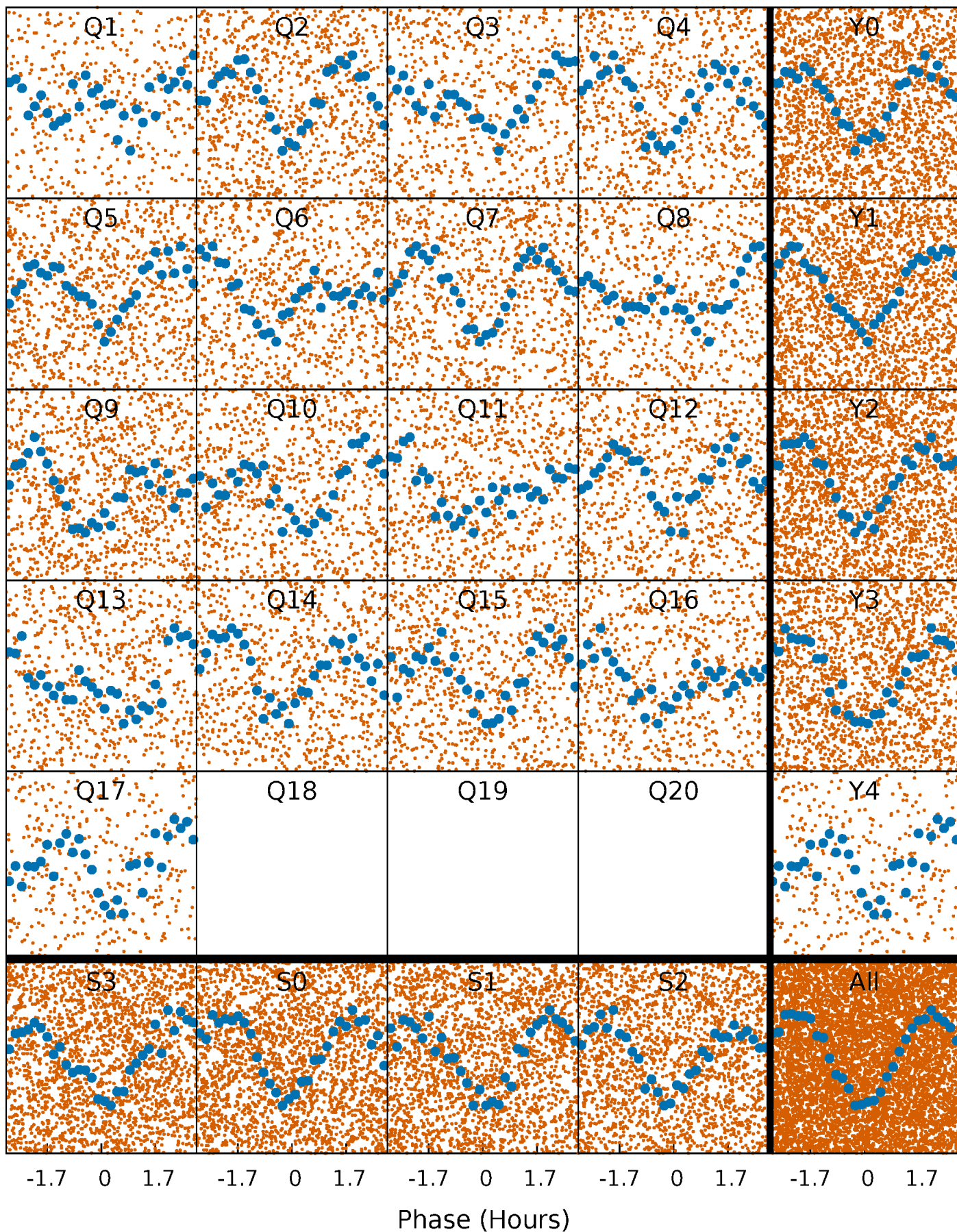


Non-Whitened Vs. Whitened Light Curve



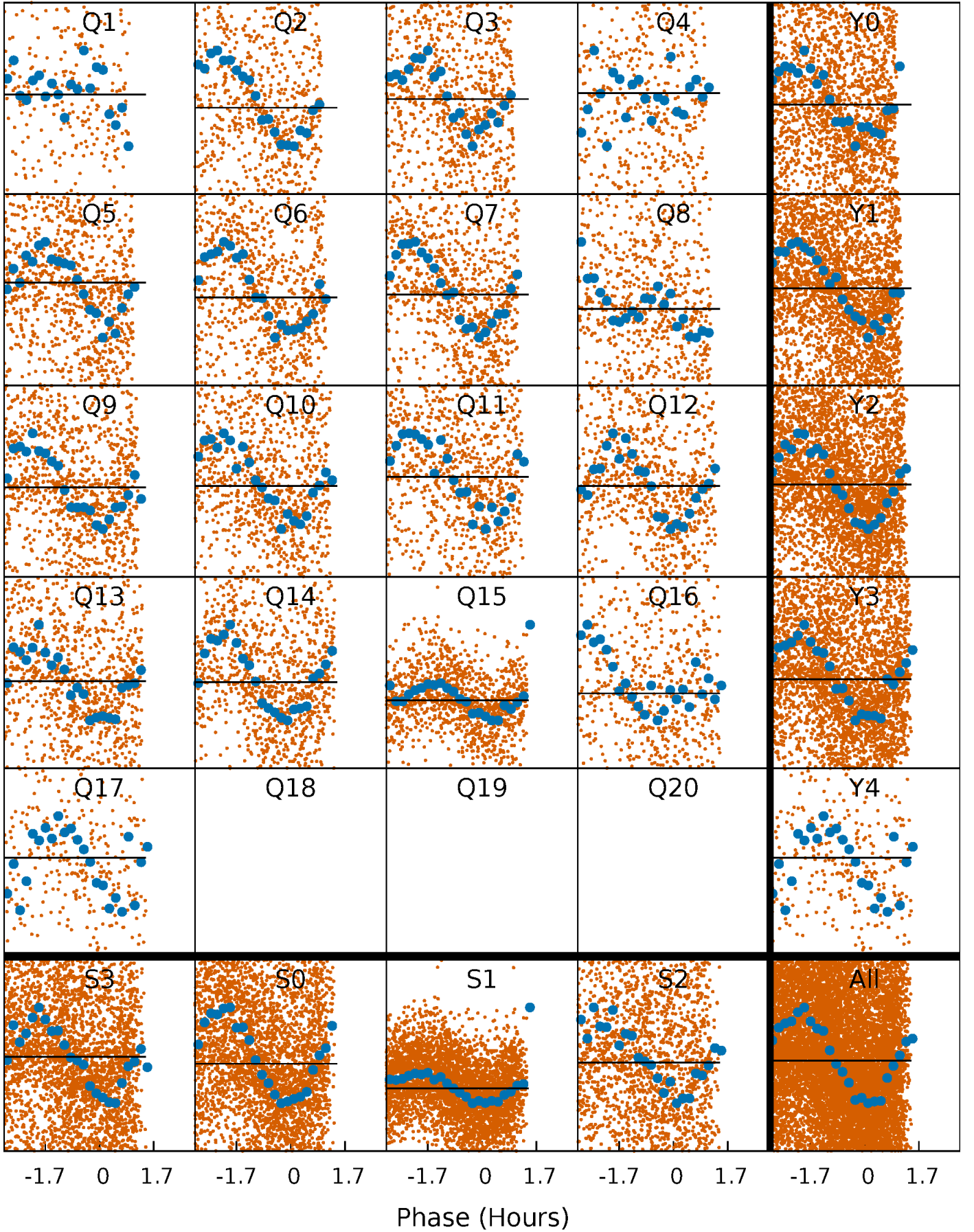
PDC Quarter-Phased Transit Curves

TCE 008056337-03 P= 0.519398 Days $T_0=131.532869$ (BKJD)



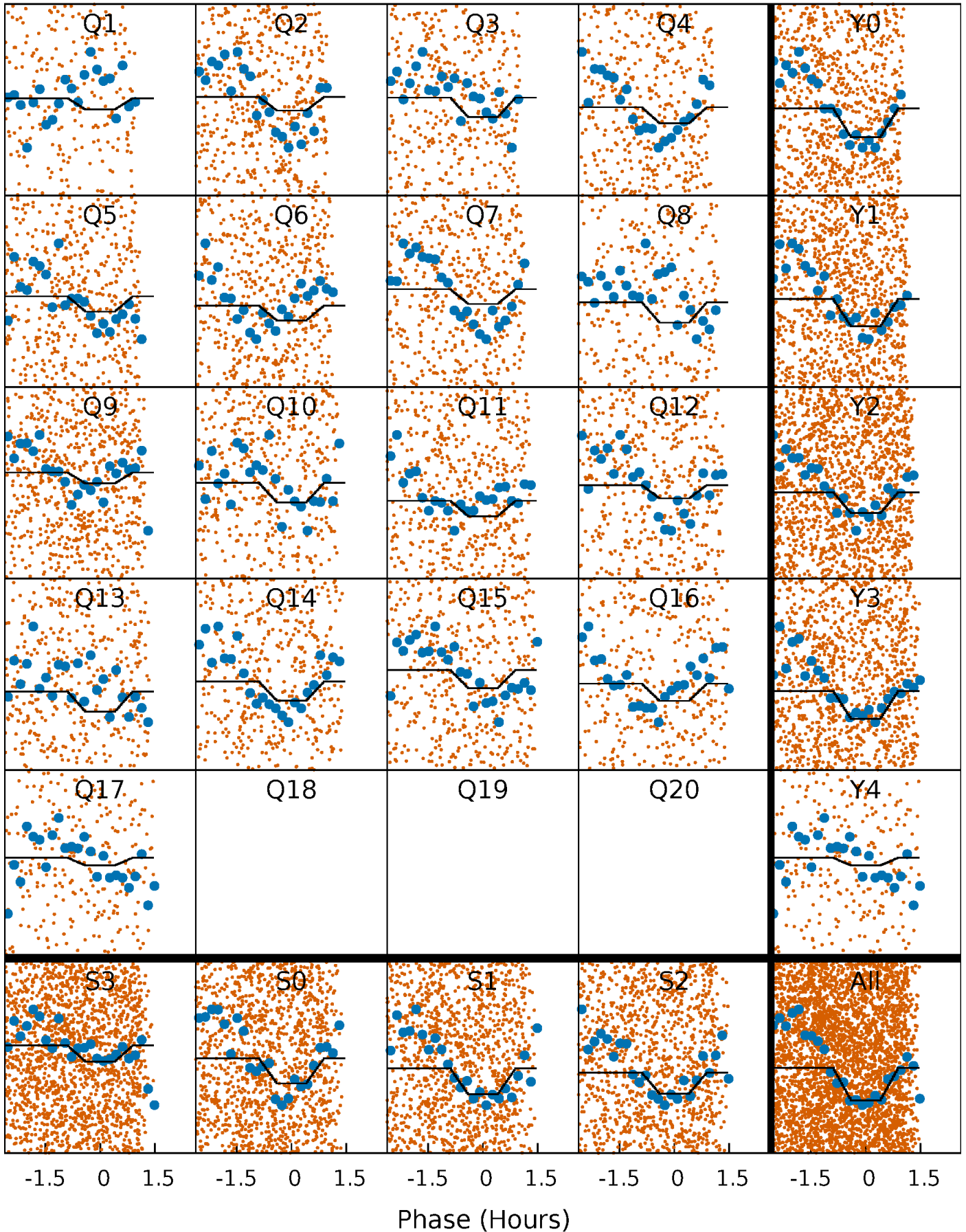
DV Quarter-Phased Transit Curves

TCE 008056337-03 P= 0.519398 Days $T_0=131.532869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

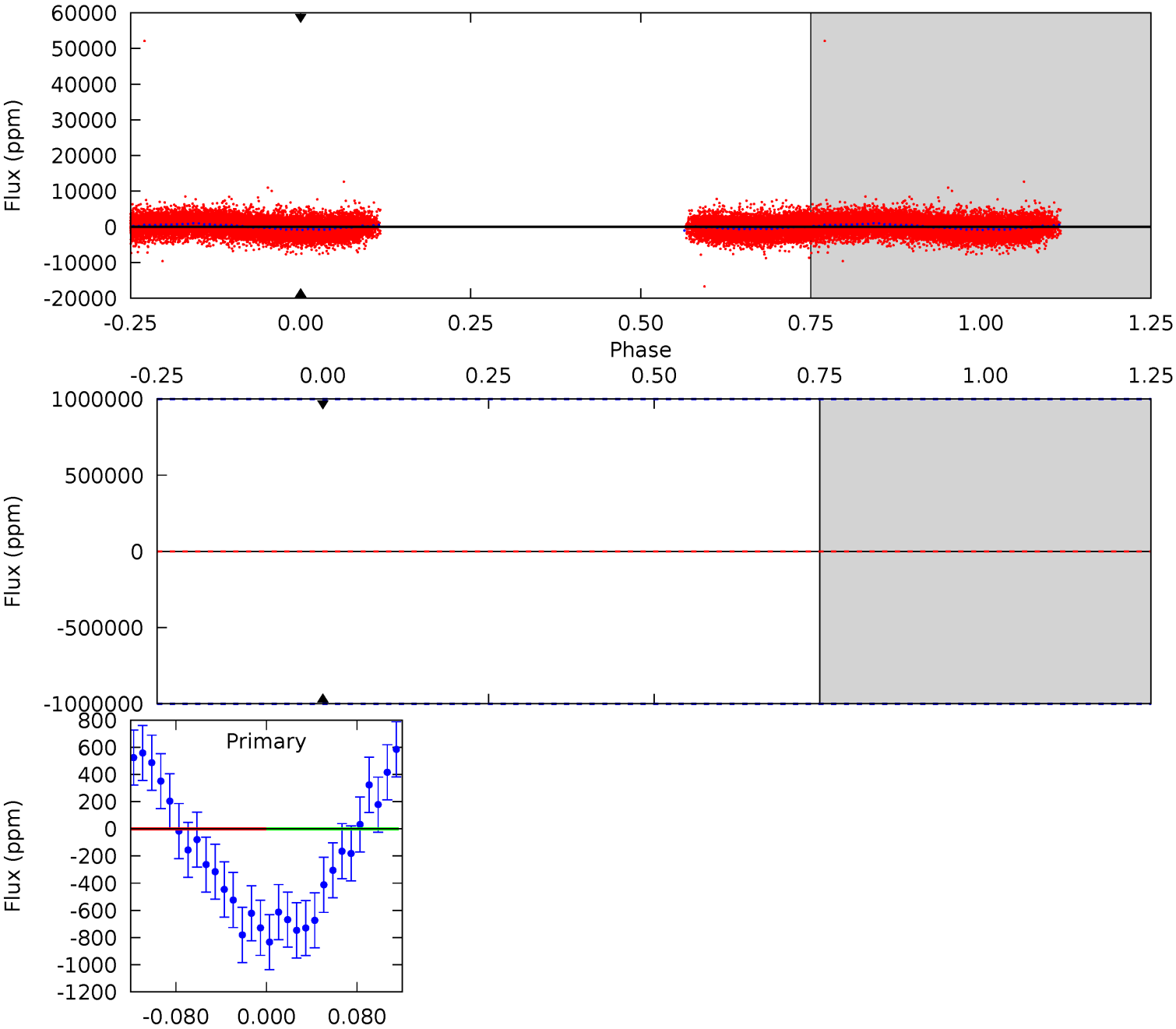
TCE 008056337-03 P= 0.519398 Days $T_0=131.532391$ (BKJD)



DV Model-Shift Uniqueness Test

008056337-03, P = 0.519398 Days, E = 131.013471 Days

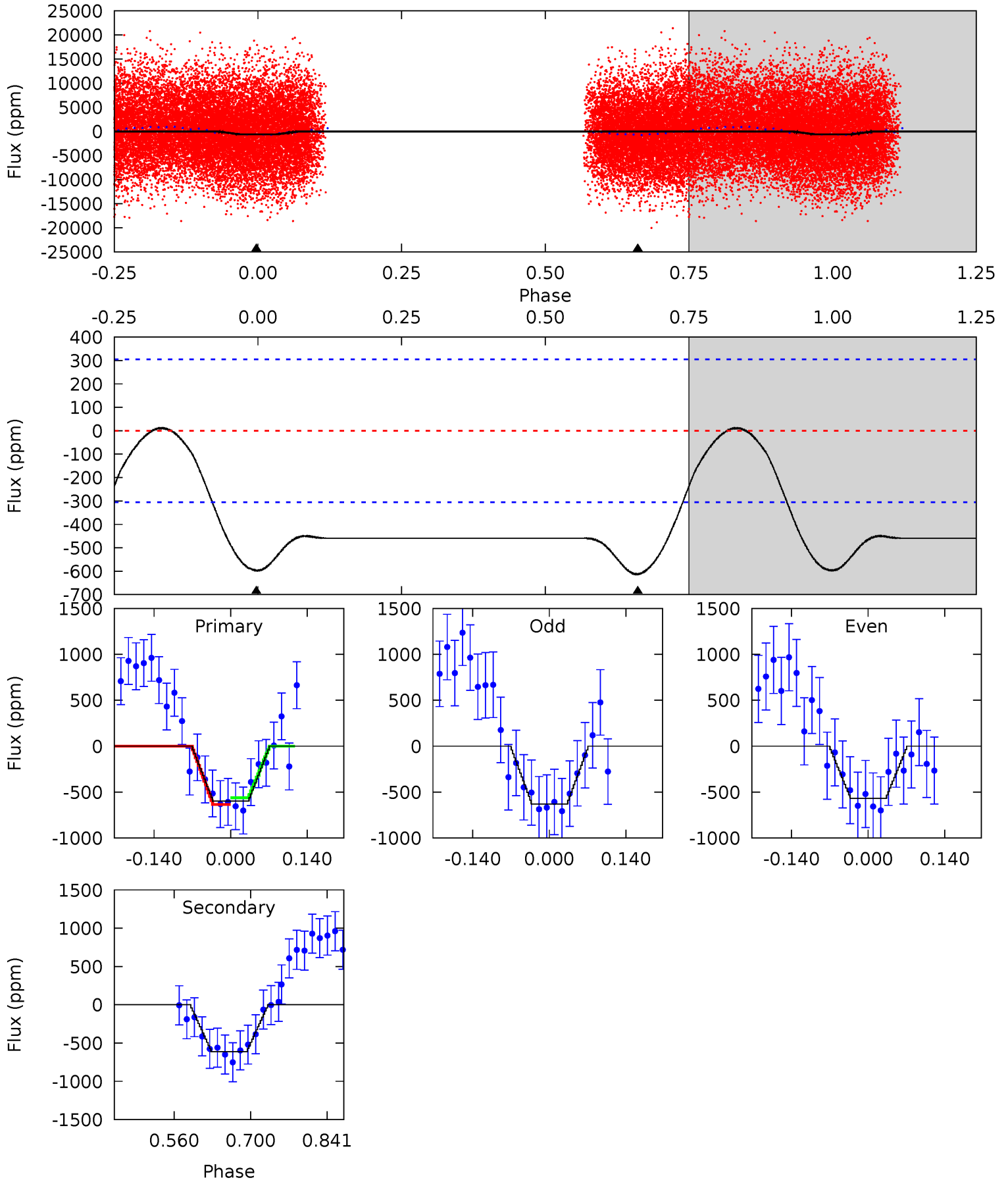
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-----|-----|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-----|-------|-----|
| 0 | 0 | 0 | 0 | 1.00 | 1.00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



Alt Model-Shift Uniqueness Test

008056337-03, P = 0.519398 Days, E = 131.012993 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.81 | 9.03 | 0 | 0 | 4.49 | 1.48 | 0.20 | 8.81 | 8.81 | 9.03 | 9.03 | 0.45 | 1.14 | 0.02 | 0.55 |



Stellar Parameters For KIC 008056337

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 6240^{+195}_{-260} | $4.329^{+0.093}_{-0.201}$ | $0.080^{+0.250}_{-0.300}$ | $1.229^{+0.396}_{-0.213}$ | $1.175^{+0.170}_{-0.170}$ | $0.891^{+0.454}_{-0.482}$ |
| | +3%/-4% | +2%/-5% | +312%/-375% | +32%/-17% | +14%/-14% | +51%/-54% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008056337-03 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-----------------|--------------------------|----------------------|--------------------------|-------------------------------|
| DV | 0 ± 1000000 | $10.45^{+11.29}_{-7.28}$ | 3746^{+296}_{-232} | 4578^{+21613}_{-27886} | $1.498^{+153.534}_{-147.264}$ |
| Alt. | -613 ± 68 | $10.66^{+11.79}_{-7.20}$ | 3760^{+286}_{-232} | 3388^{+2760}_{-6689} | $0.528^{+4.091}_{-0.409}$ |

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

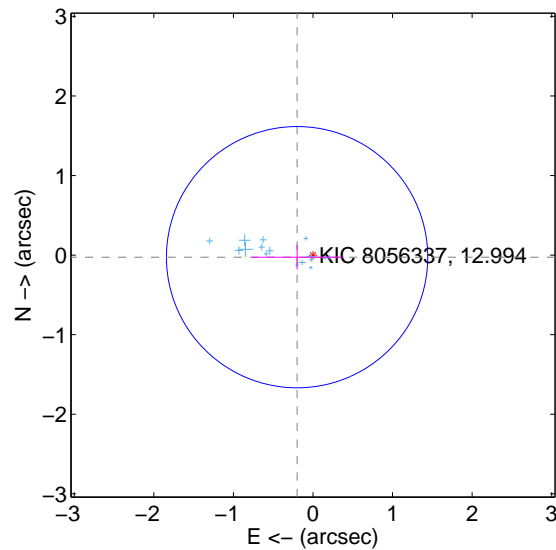
Supplemental centroid analysis for 008056337-03. Kepler magnitude: 12.99. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

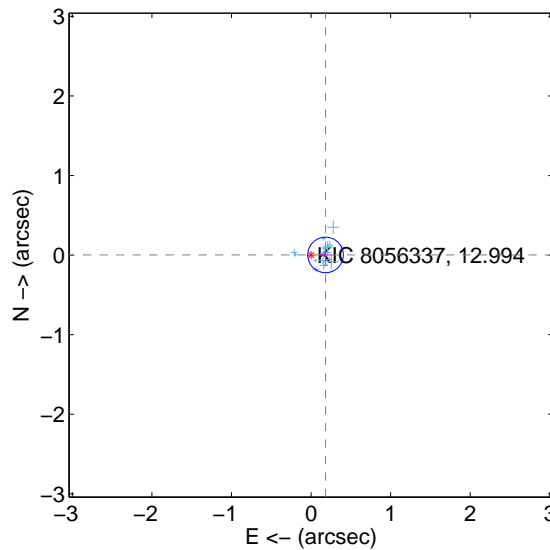
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.201 ± 0.547 | 0.37 | 0.199 ± 0.570 | -0.026 ± 0.156 |
| PRF-fit source offset from KIC position | 0.182 ± 0.074 | 2.45 | -0.182 ± 0.074 | 0.002 ± 0.073 |
| photometric centroid source offset | 1.96 ± 0.19 | 10.32 | -1.94 ± 0.19 | -0.30 ± 0.04 |

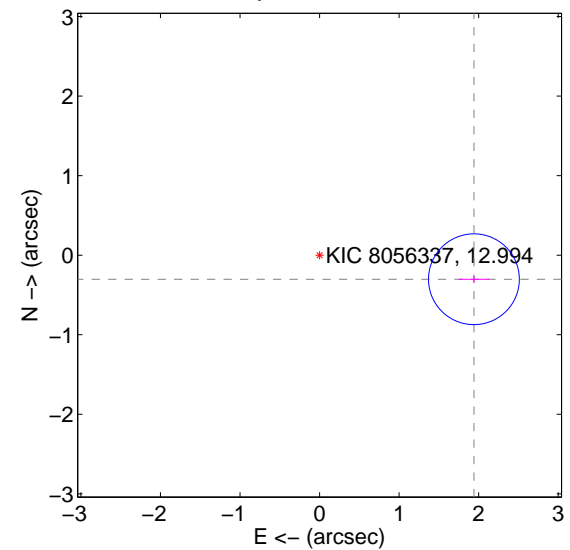
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

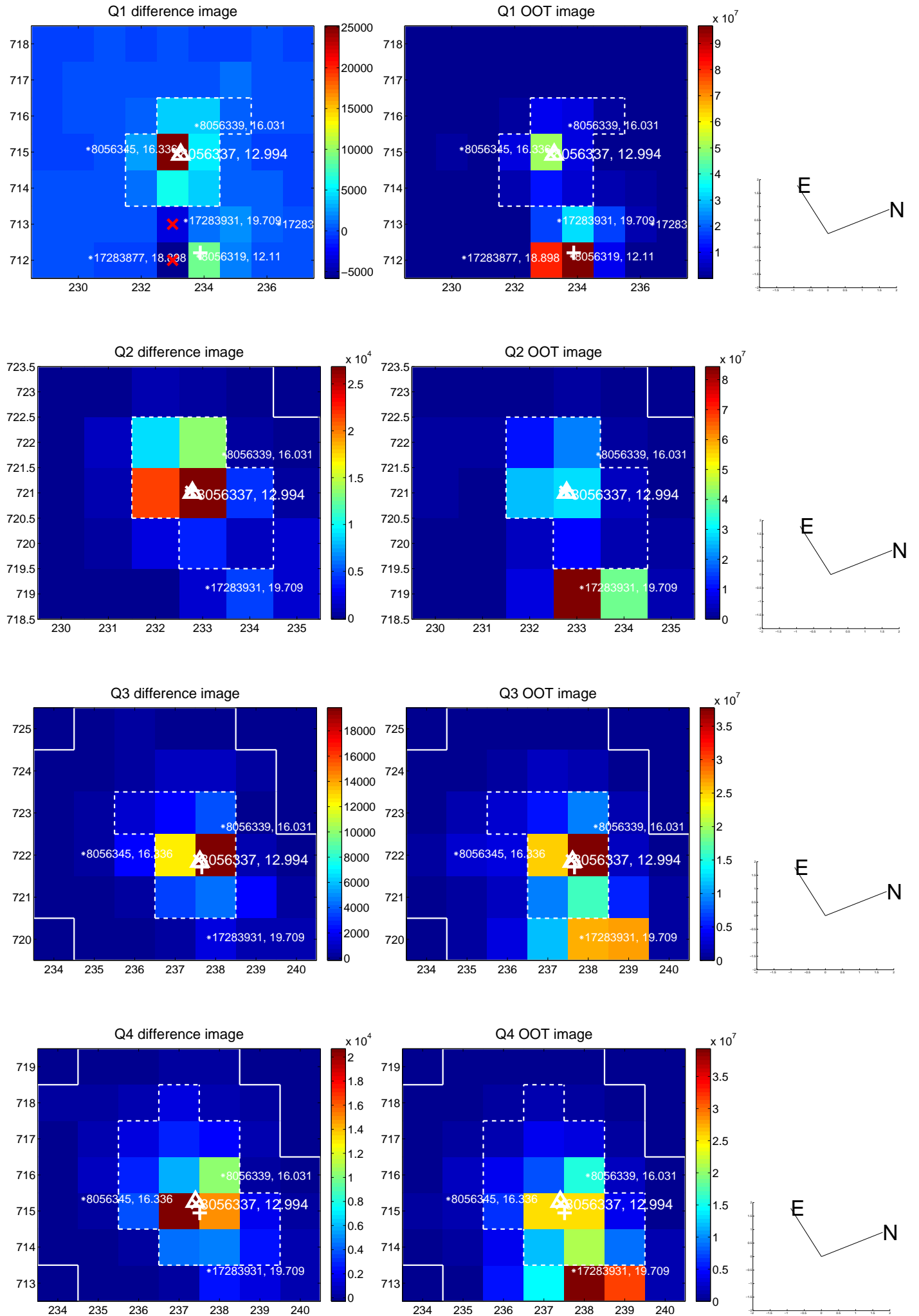


offset from photometric centroids

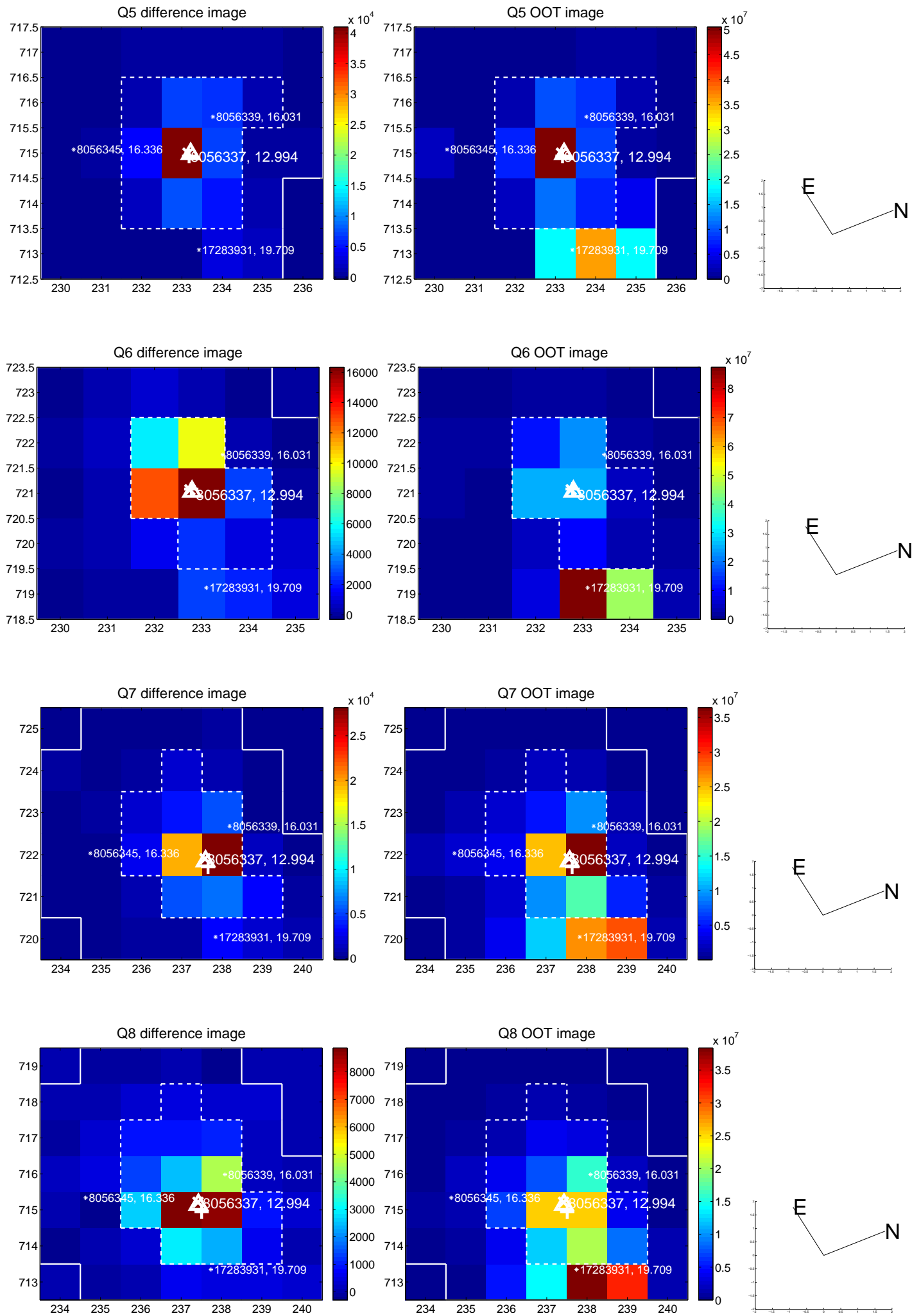


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

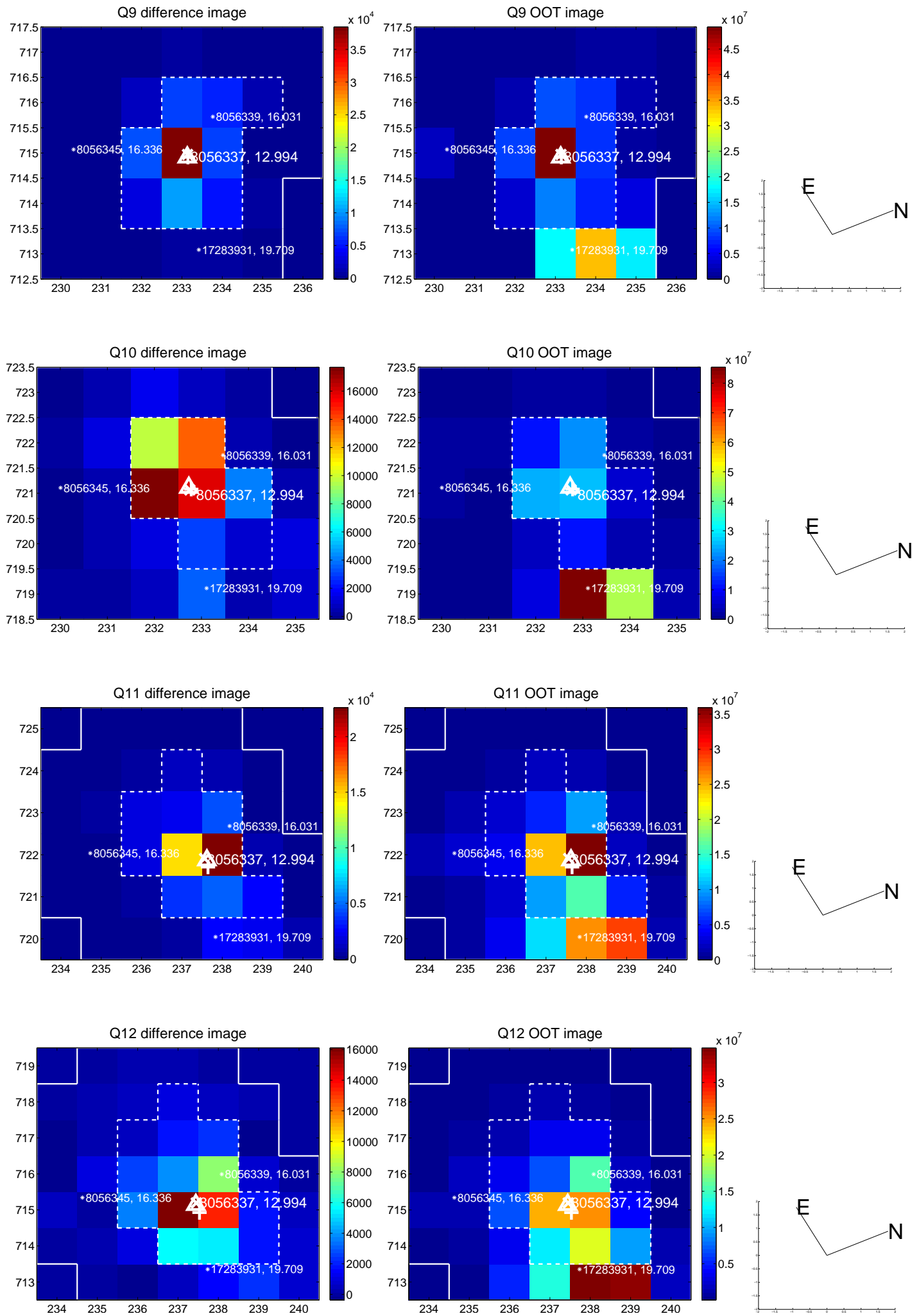
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



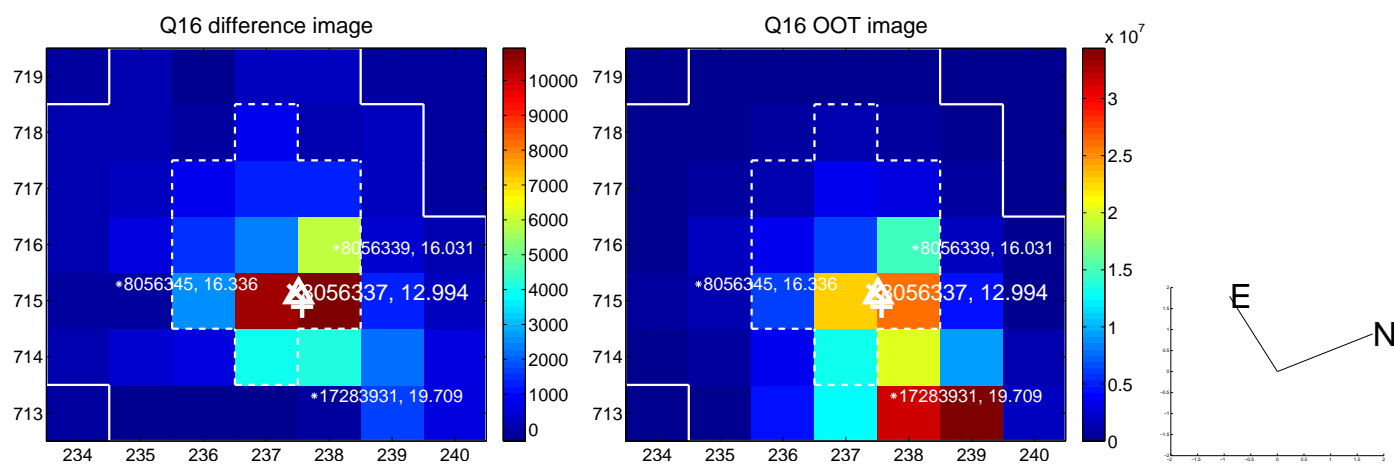
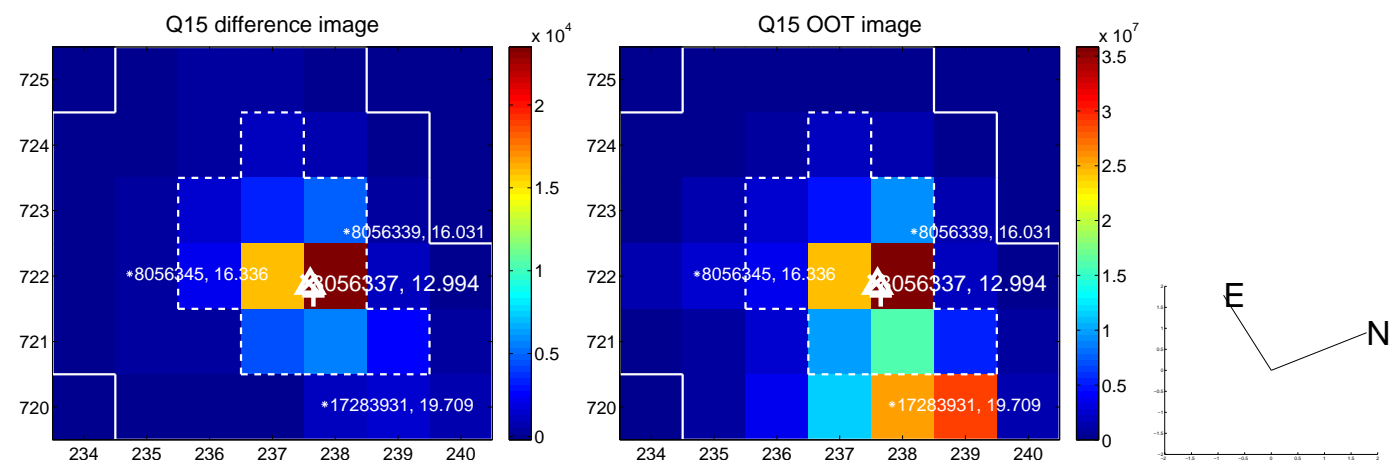
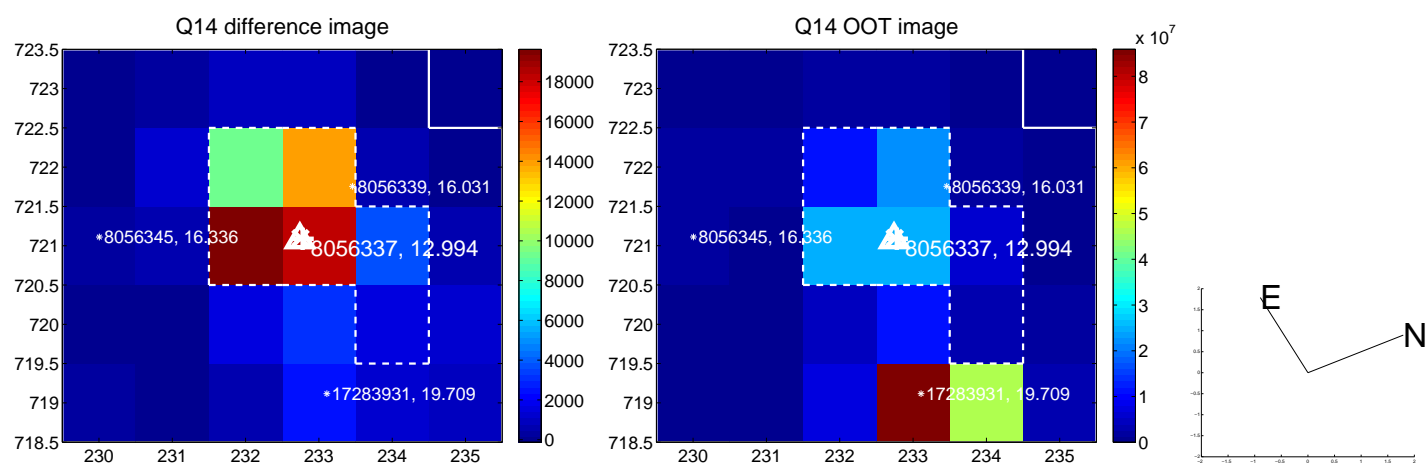
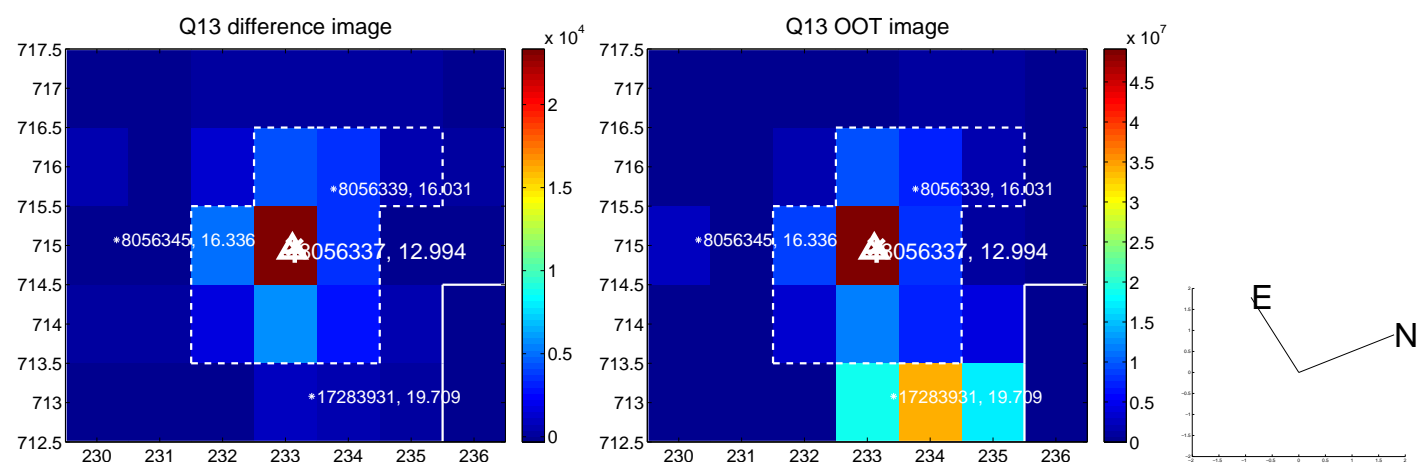
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



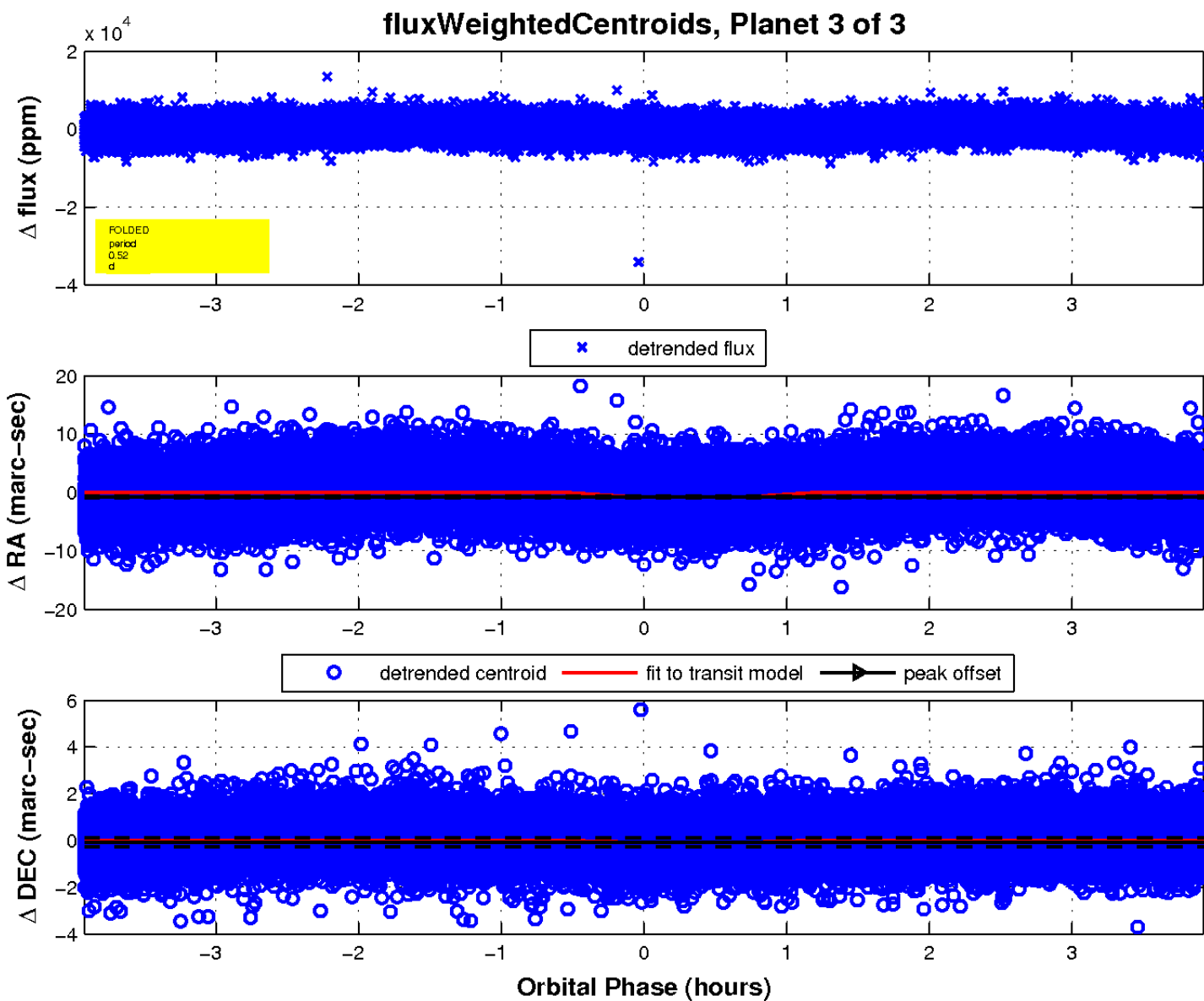
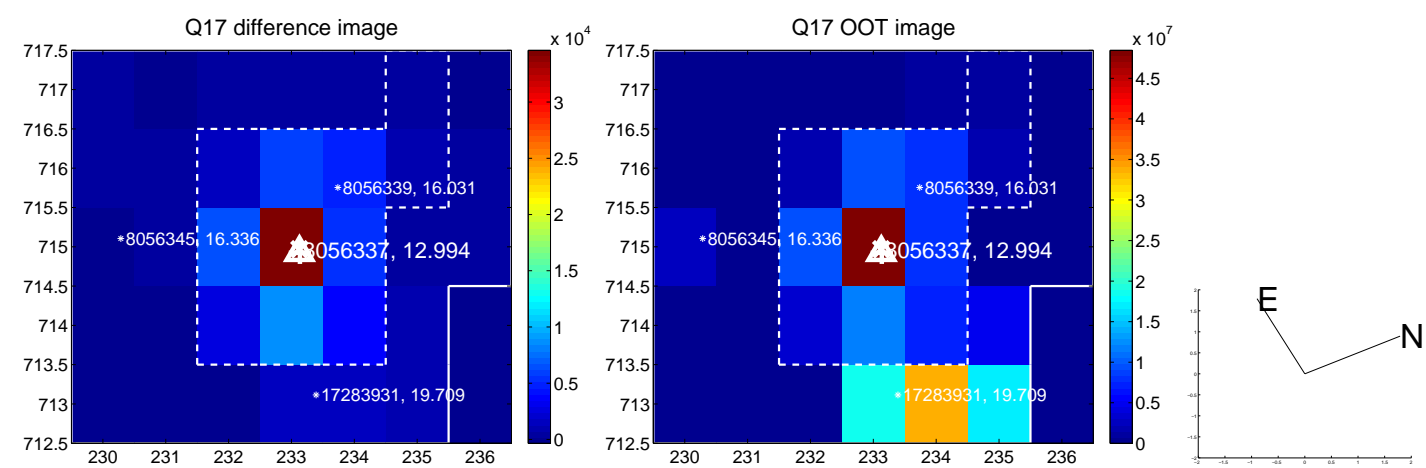
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

