

KIC 006385943

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 006385943-01 | OBS | No | 3.353011 | 131.661661 | 137.9 | 17.807 | 9.1 | 11.2 | 0.51 | 4410 | 0.78 | 70.93 |
| 006385943-02 | OBS | No | 178.198566 | 245.384332 | 1008.5 | 6.084 | 13.6 | 7.4 | 0.51 | 4410 | 1.74 | 0.35 |
| 006385943-03 | OBS | No | 217.124672 | 312.176265 | 883.6 | 15.235 | 11.0 | 6.1 | 0.51 | 4410 | 1.62 | 0.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006385943-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 006385943-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS |
| 006385943-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS |

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

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

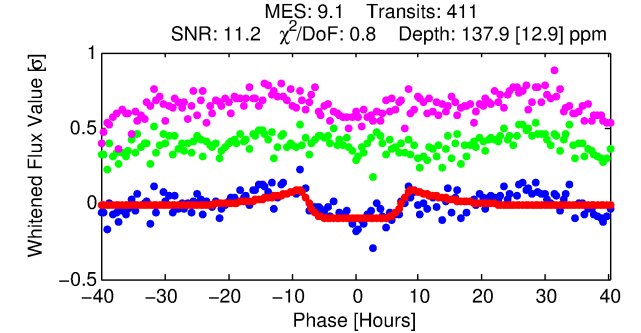
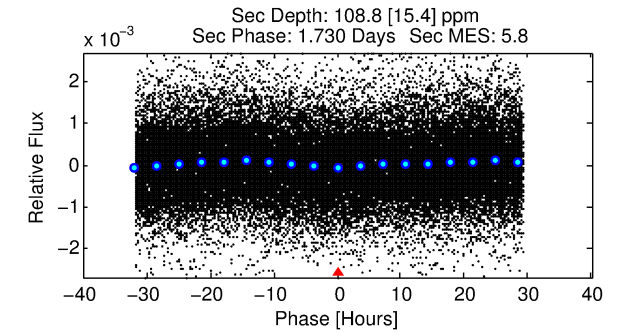
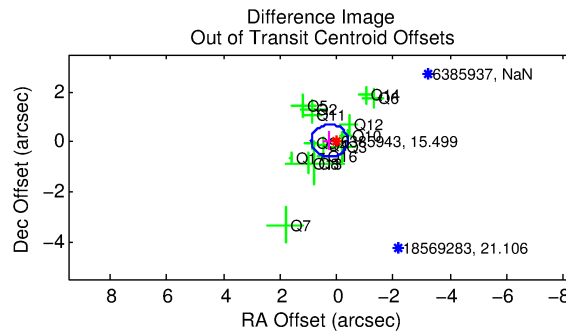
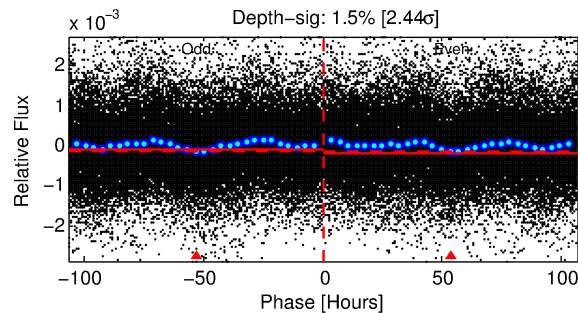
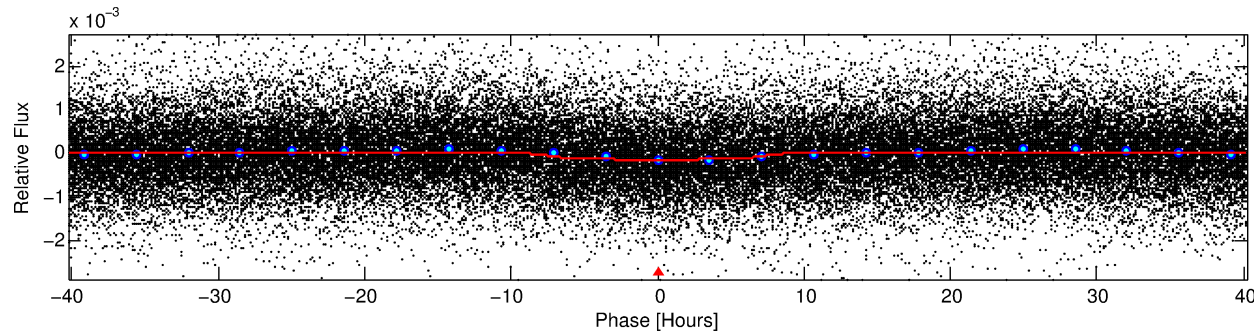
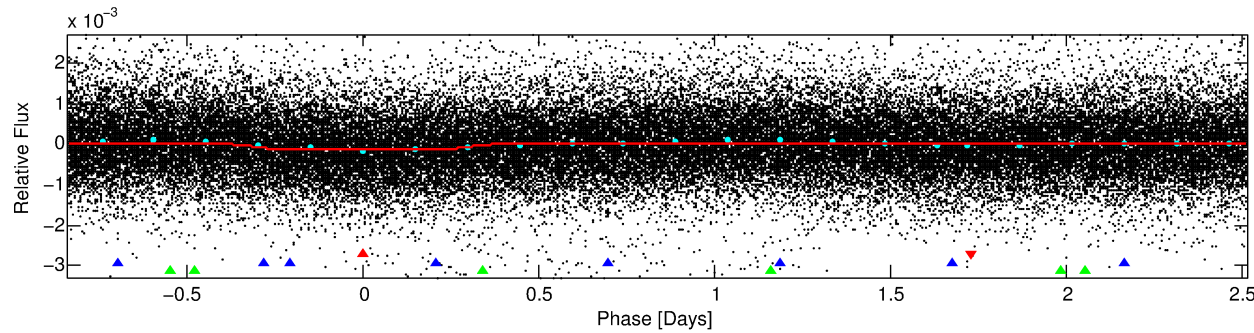
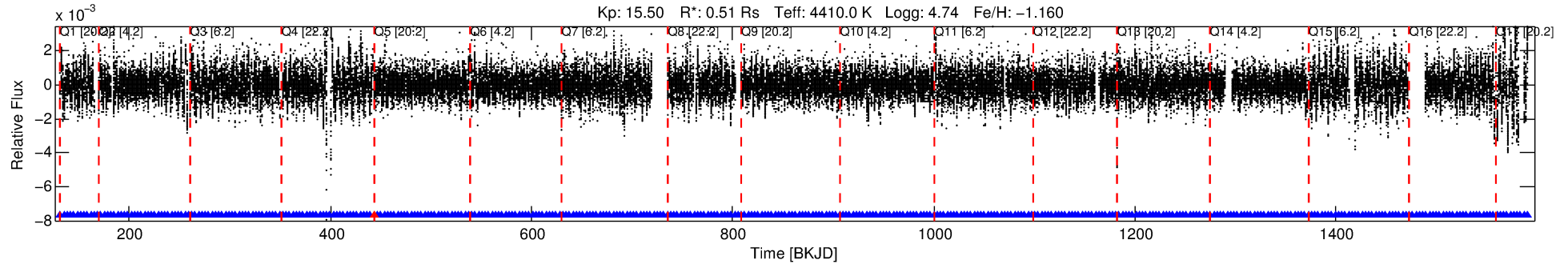
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006385943-01

No Significant Match Found

DV One-Page Summary

KIC: 6385943 Candidate: 1 of 3 Period: 3.353 d



DV Fit Results:

Period = 3.35301 [0.00008] d
Epoch = 131.6617 [0.0180] BKJD
Rp/R* = 0.0140 [0.0009]
a/R* = 1.09 [0.03]
b = 0.96 [0.01]
Seff = 70.93 [11.50]
Teff = 740 [30] K
Rp = 0.78 [0.08] Re
a = 0.0350 [0.0026] AU
Ag = 121.76 [26.41] [4.57 σ]
Teffp = 3801 [212] K [14.28 σ]

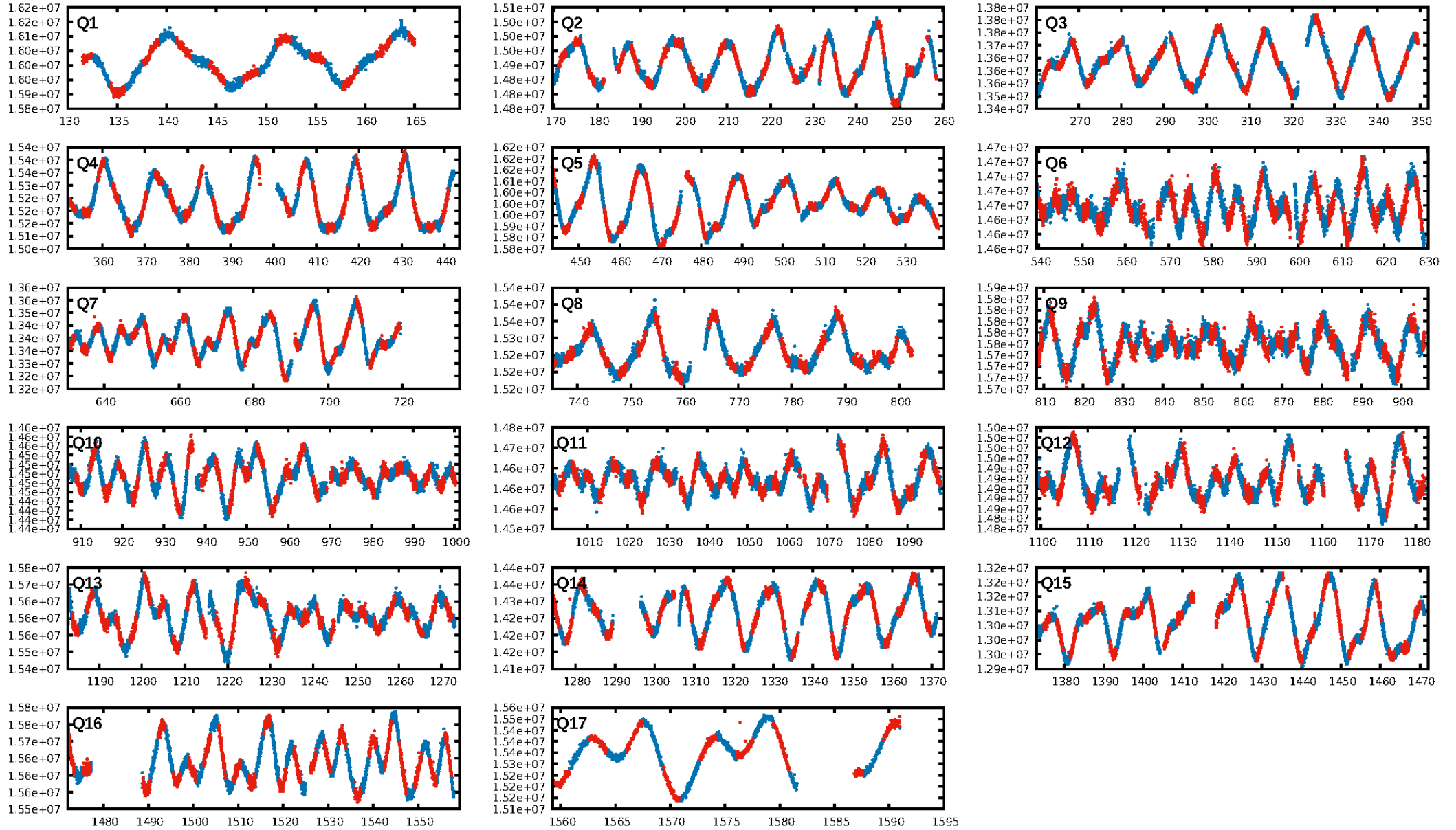
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [223.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.61e-11
RollingBand-fgt: 1.00 [390/391]
GhostDiagnostic-chr: 0.8984
Centroid-sig: 0.0%
Centroid-so: 1.589 arcsec [2.61 σ]
OotOffset-rm: 0.257 arcsec [1.20 σ]
KicOffset-rm: 0.042 arcsec [0.11 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

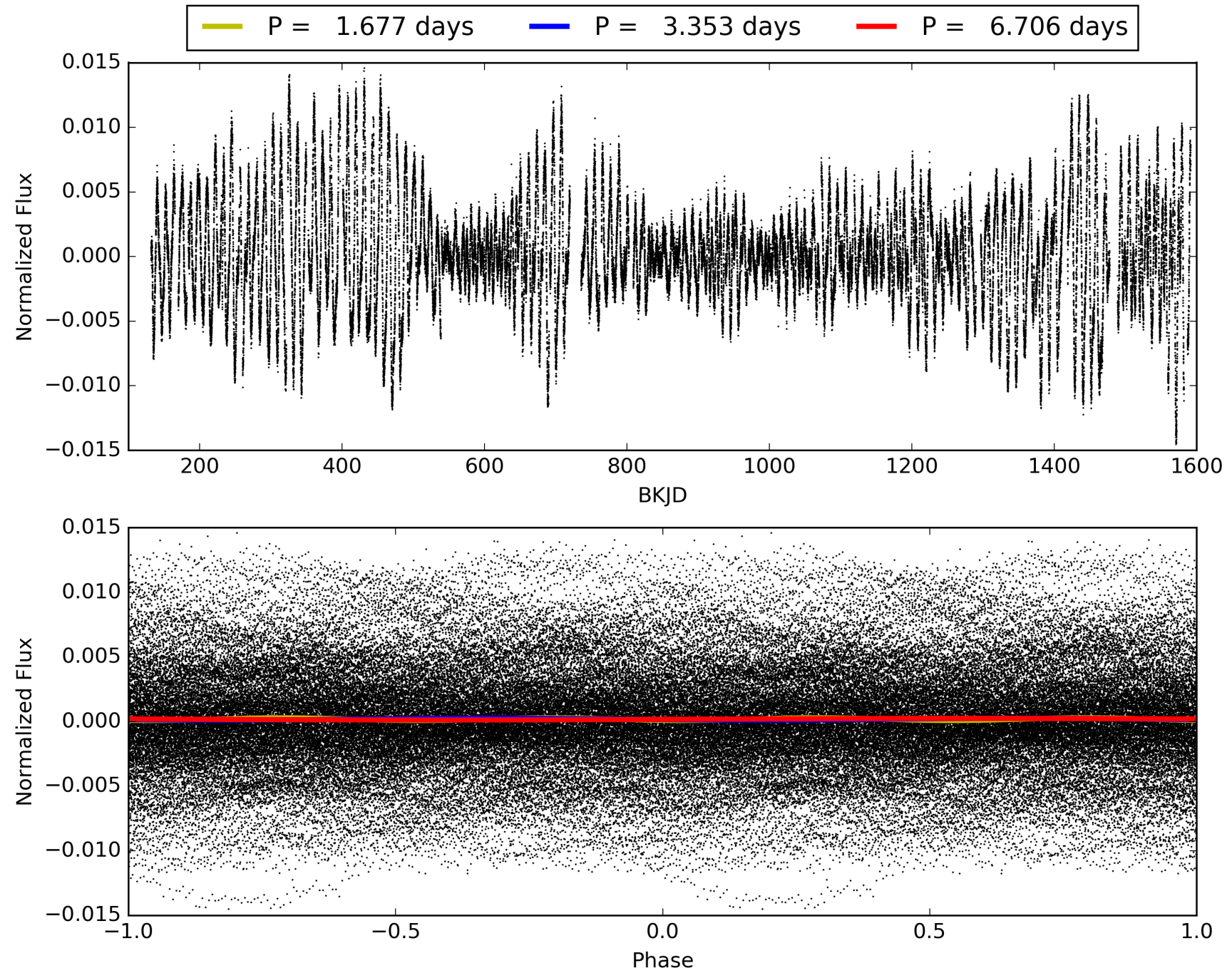
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:49:08 Z

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

TCE 006385943-01, PDC Light Curves

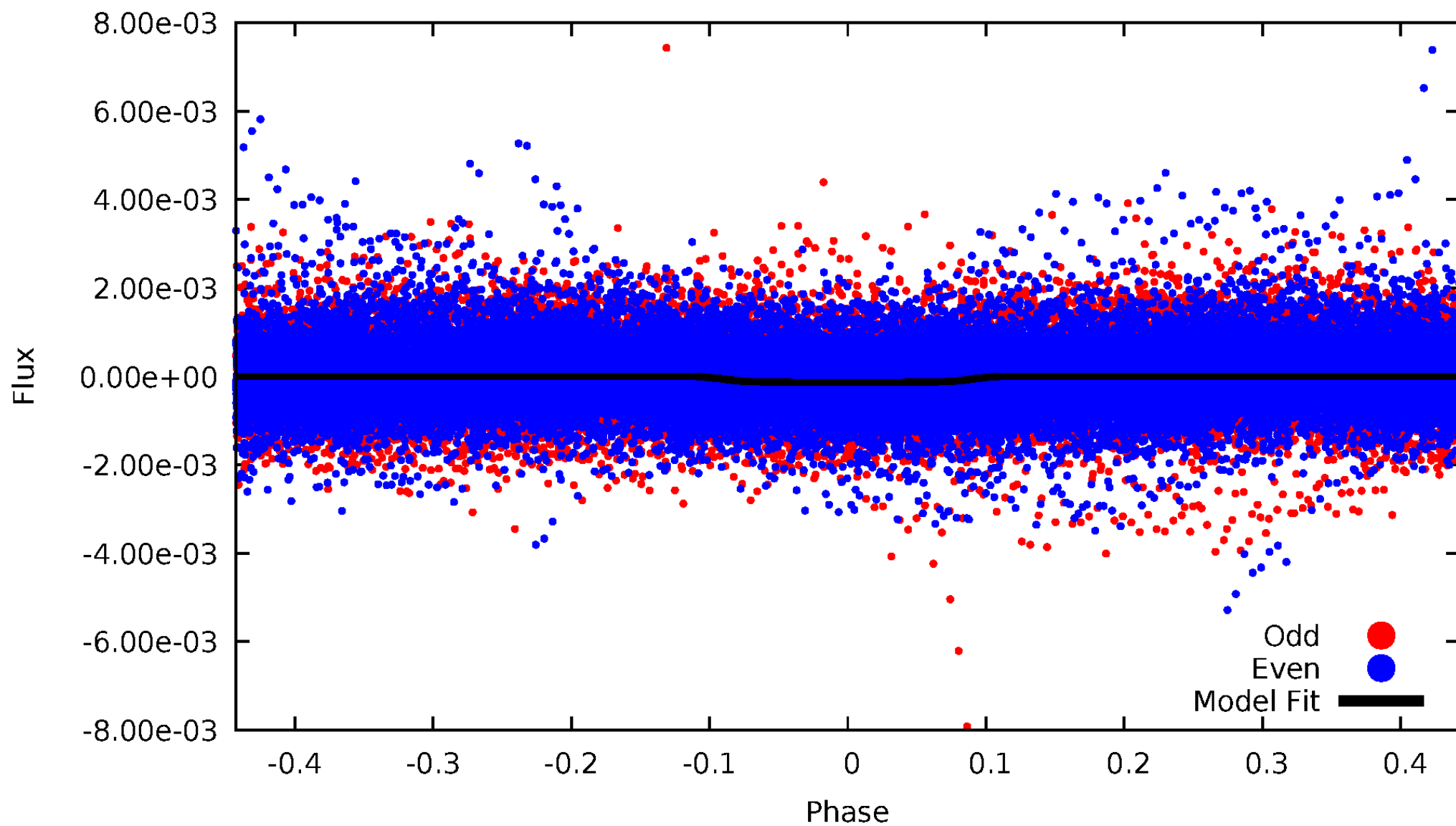


TCE 006385943-01



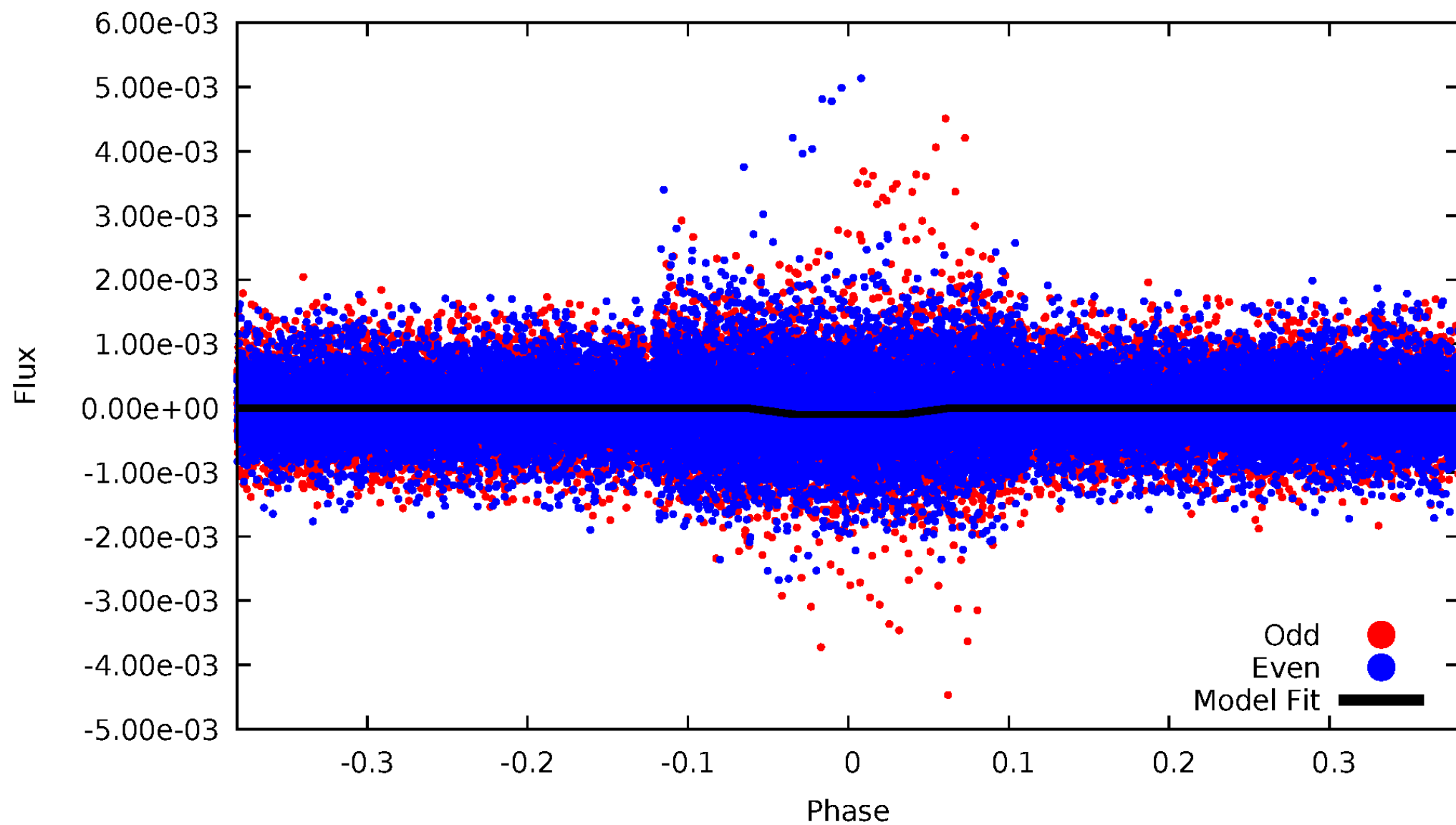
DV Odd/Even

TCE 006385943-01



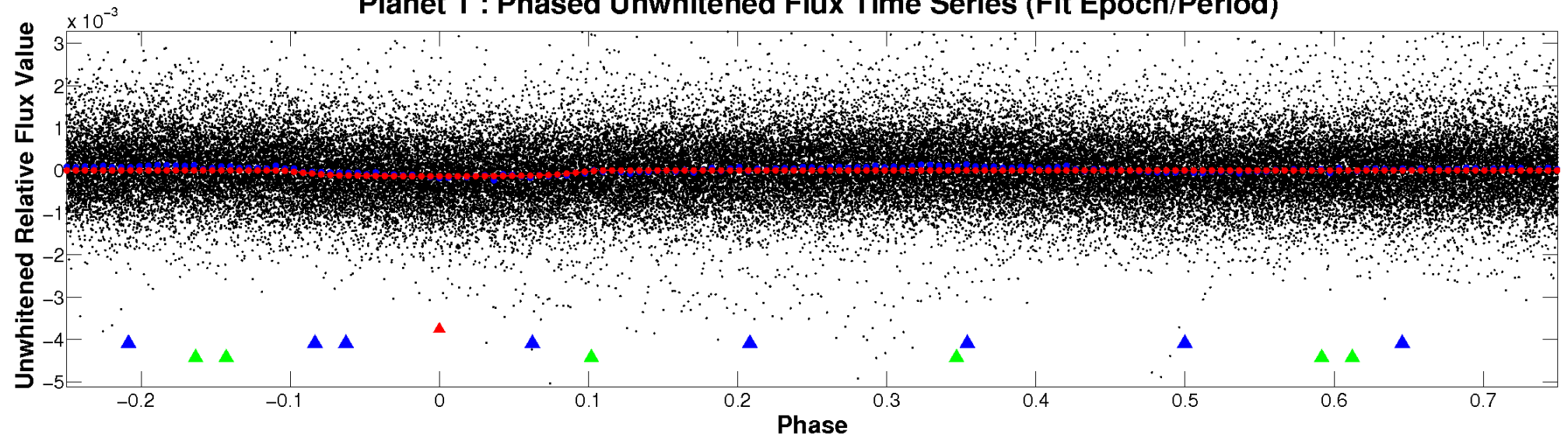
ALT Odd/Even

TCE 006385943-01

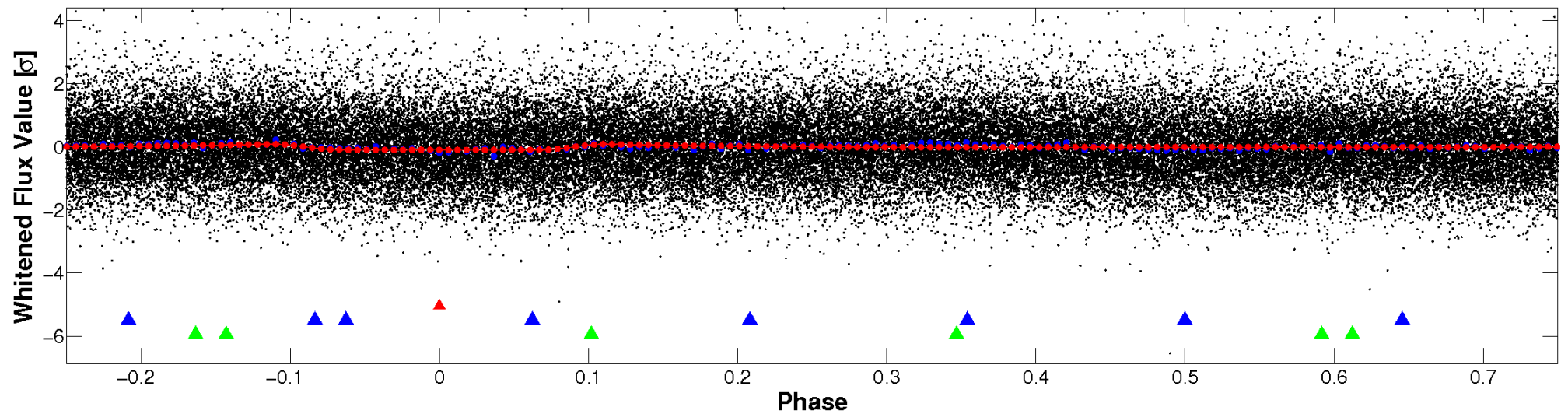


Non-Whitened Vs. Whitened Light Curve

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

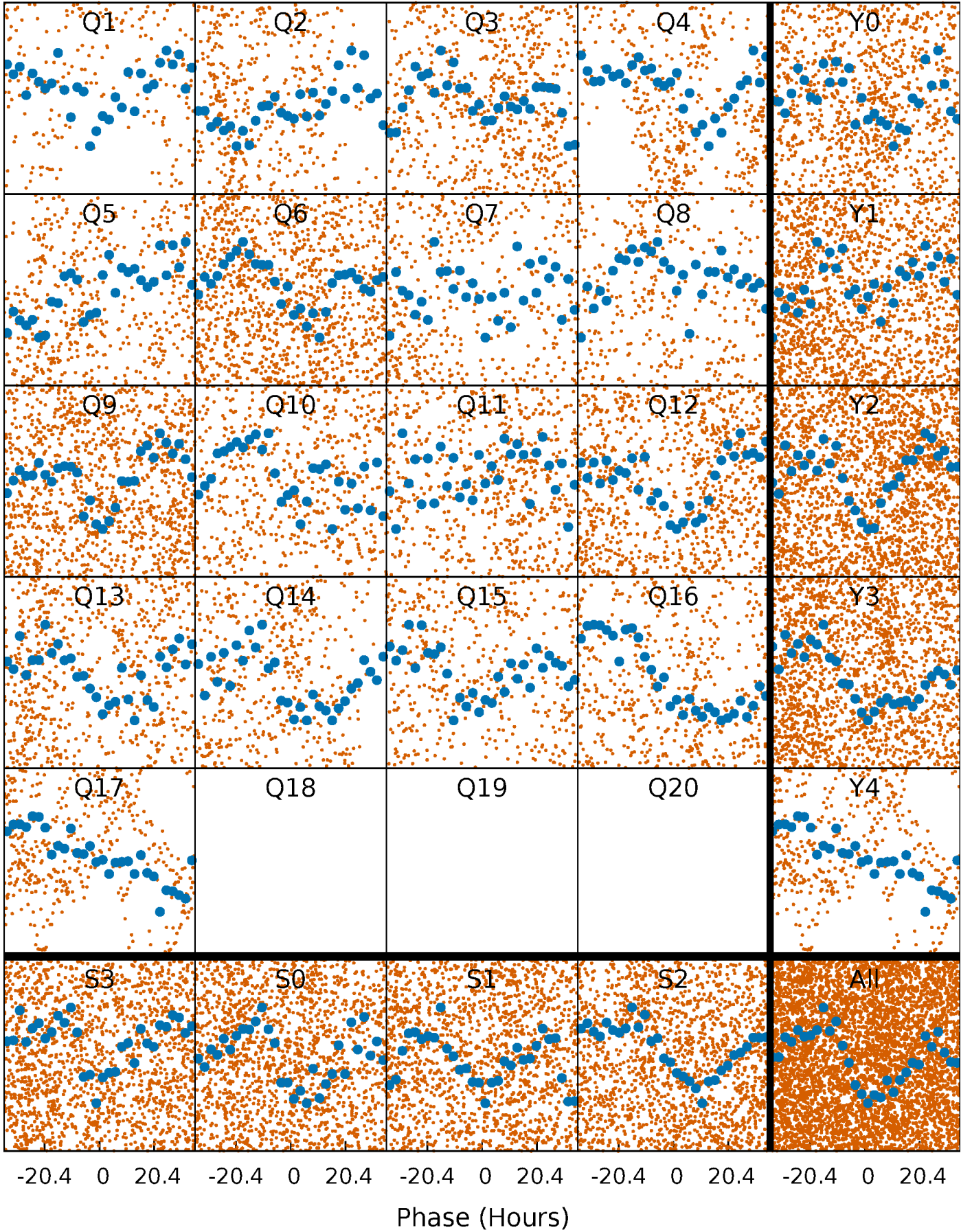


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



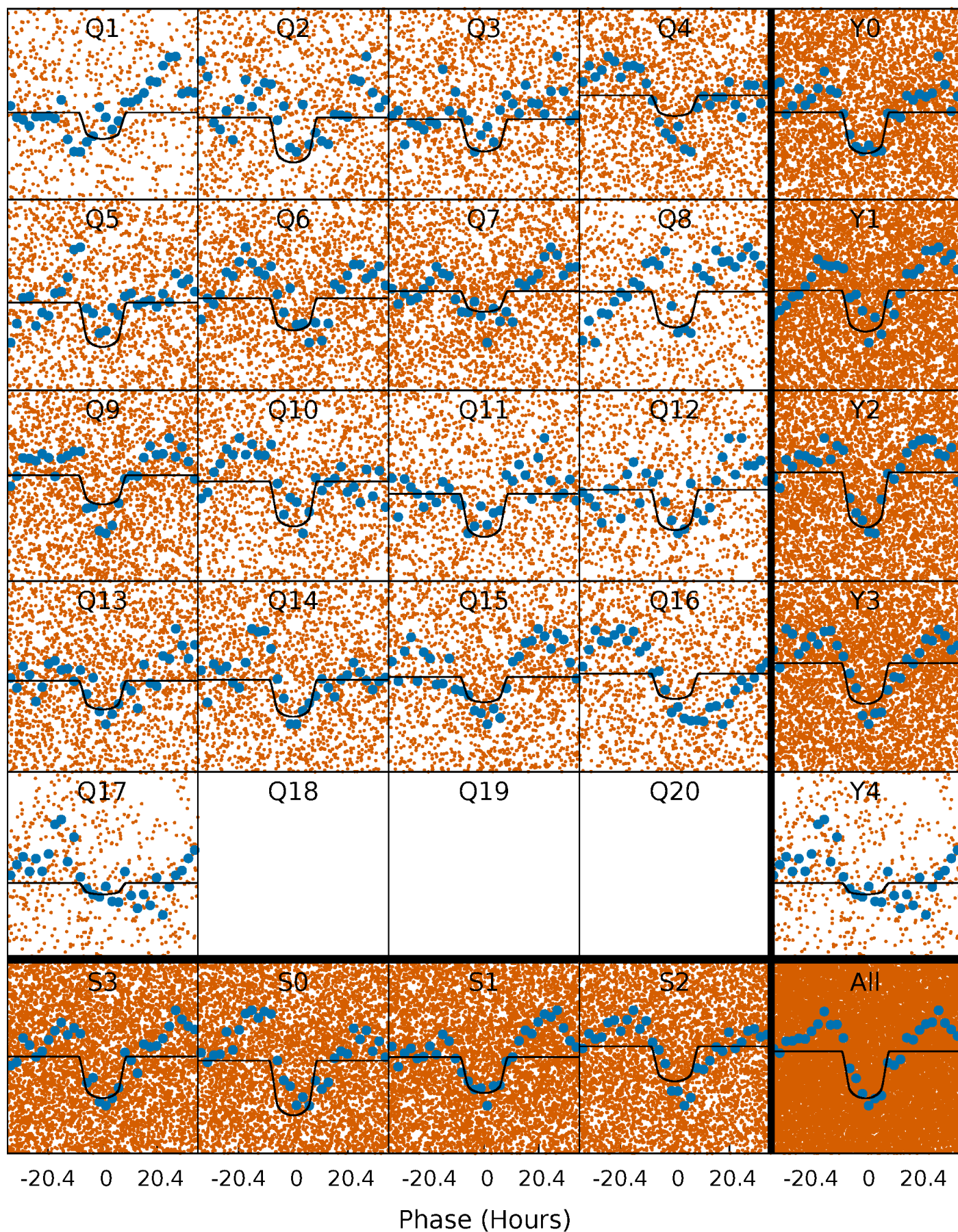
PDC Quarter-Phased Transit Curves

TCE 006385943-01 P= 3.353011 Days $T_0=131.661661$ (BKJD)



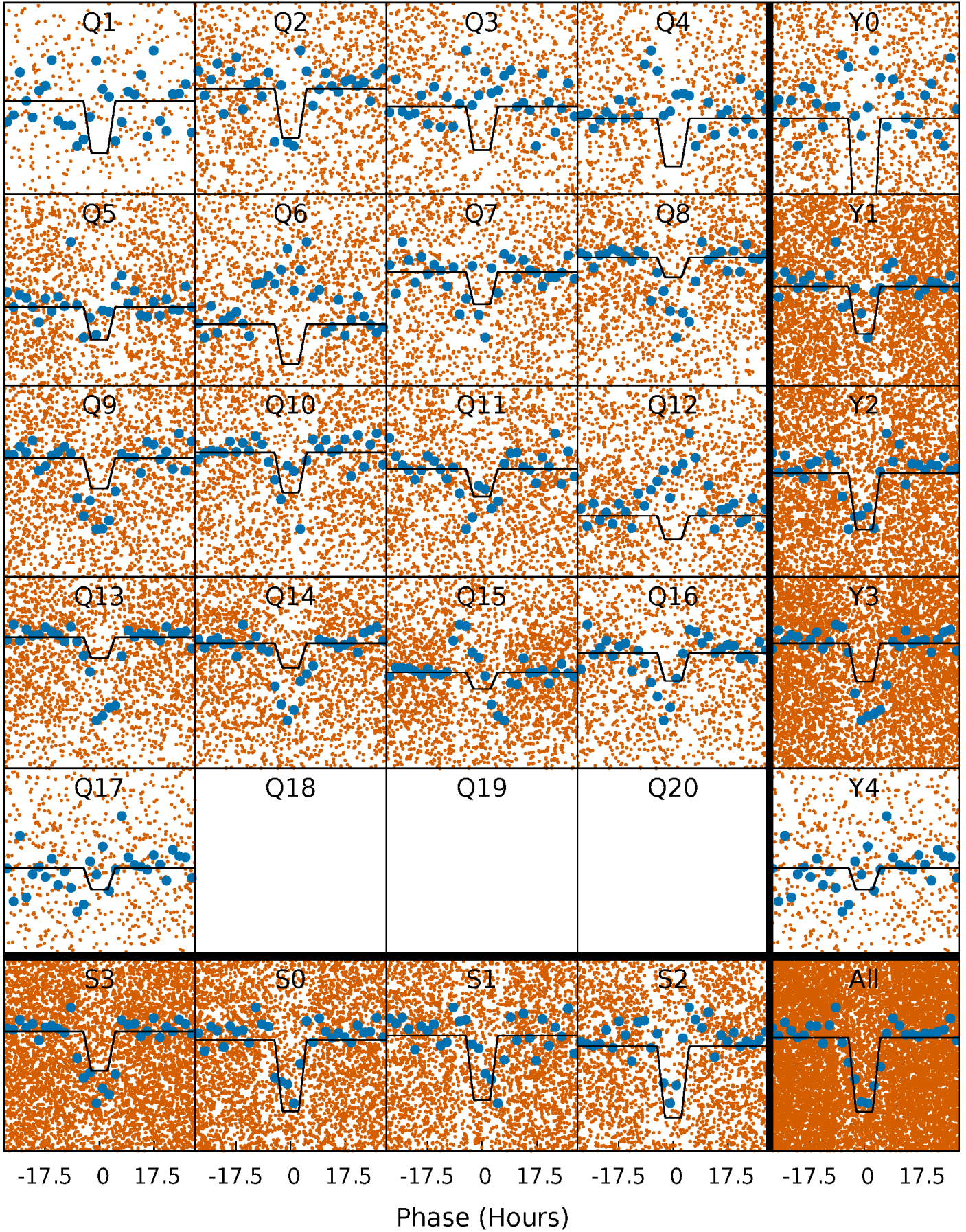
DV Quarter-Phased Transit Curves

TCE 006385943-01 P= 3.353011 Days $T_0=131.661661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

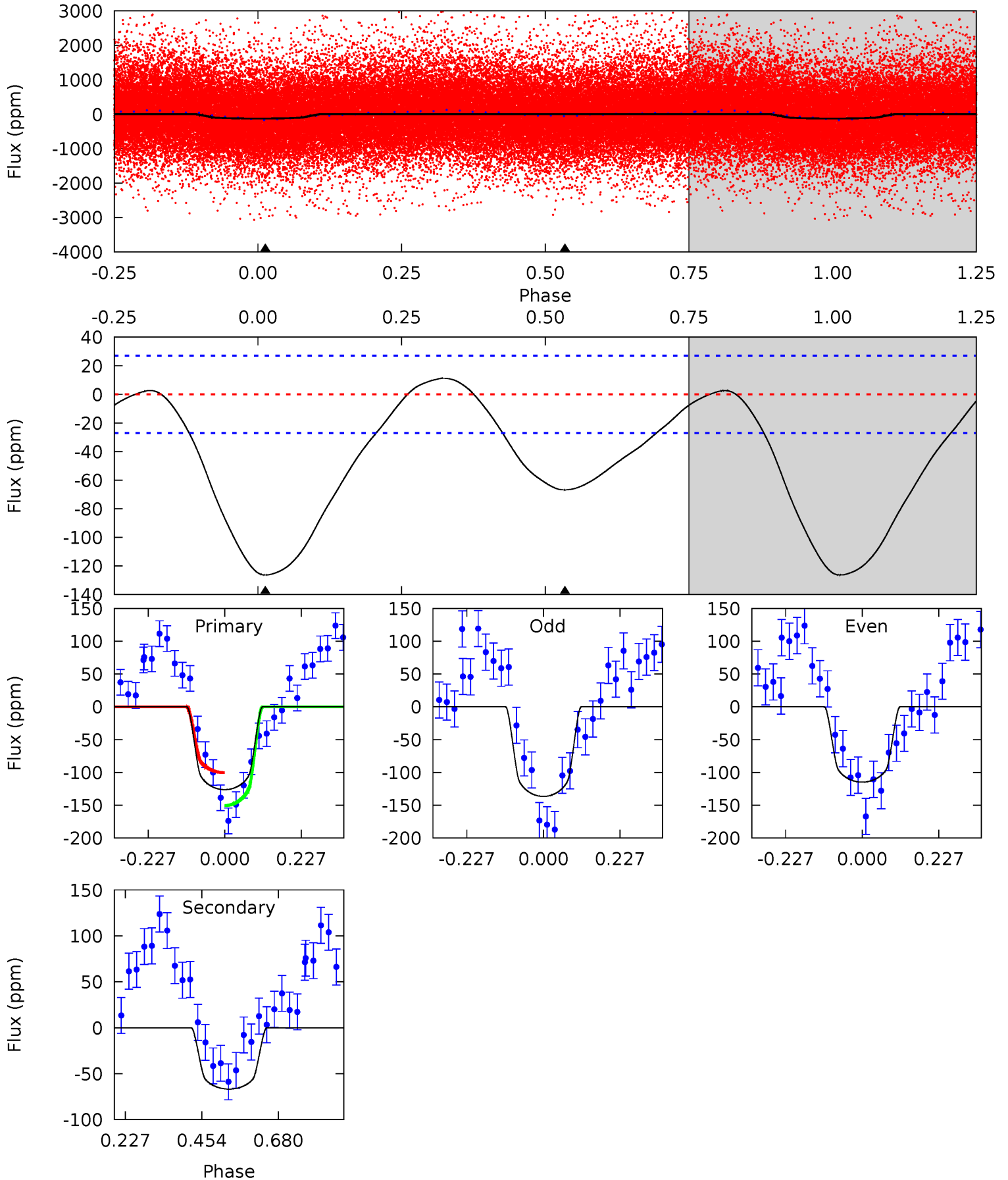
TCE 006385943-01 P= 3.353189 Days $T_0=131.631962$ (BKJD)



DV Model-Shift Uniqueness Test

006385943-01, P = 3.353011 Days, E = 128.308650 Days

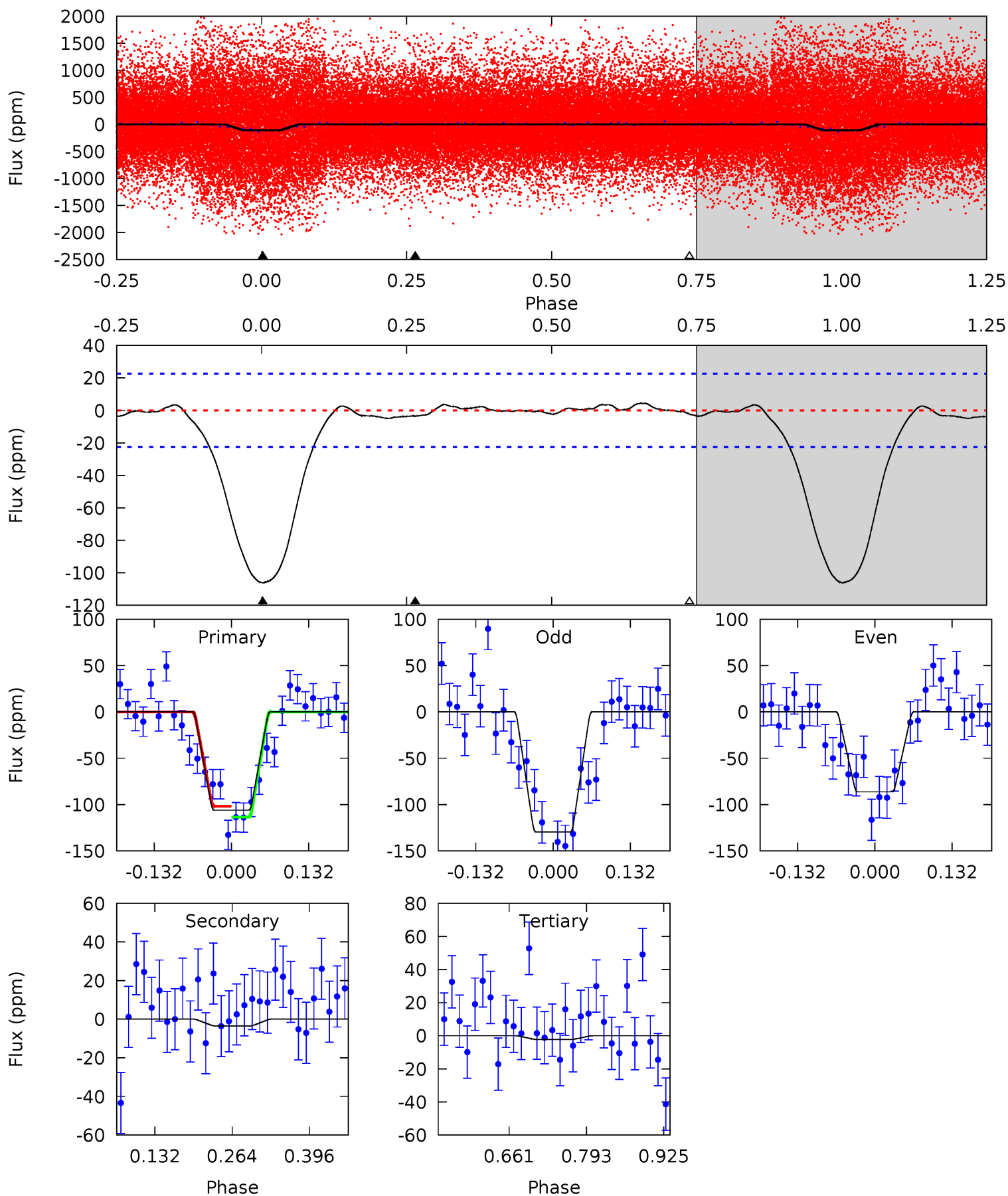
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 20.5 | 10.8 | 0 | 0 | 4.39 | 1.21 | 0.94 | 20.5 | 20.5 | 10.8 | 10.8 | 1.77 | 0.96 | 0.08 | 4.08 |



Alt Model-Shift Uniqueness Test

006385943-01, P = 3.353189 Days, E = 128.278773 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 21.2 | 0.70 | 0.45 | 0 | 4.51 | 1.51 | 0.36 | 20.8 | 21.2 | 0.25 | 0.70 | 4.34 | 1.15 | 0.04 | 1.18 |



Stellar Parameters For KIC 006385943

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 4410^{+133}_{-133} | $4.735^{+0.059}_{-0.032}$ | $-1.160^{+0.300}_{-0.300}$ | $0.506^{+0.033}_{-0.045}$ | $0.508^{+0.037}_{-0.034}$ | $5.517^{+1.369}_{-0.670}$ |
| | +3%/-3% | +1%/-1% | +26%/-26% | +7%/-9% | +7%/-7% | +25%/-12% |
| 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 006385943-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|--------------------|-----------------------|-----------------------------|
| DV | -67 ± 6 | $0.77^{+0.06}_{-0.05}$ | 1030^{+36}_{-35} | 3635^{+132}_{-128} | 76^{+13}_{-12} |
| Alt. | -4 ± 5 | $0.55^{+0.05}_{-0.05}$ | 1030^{+36}_{-38} | 2643^{+337}_{-5059} | $8.806^{+11.378}_{-12.267}$ |

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 $A_{obs} \gg 1.0$

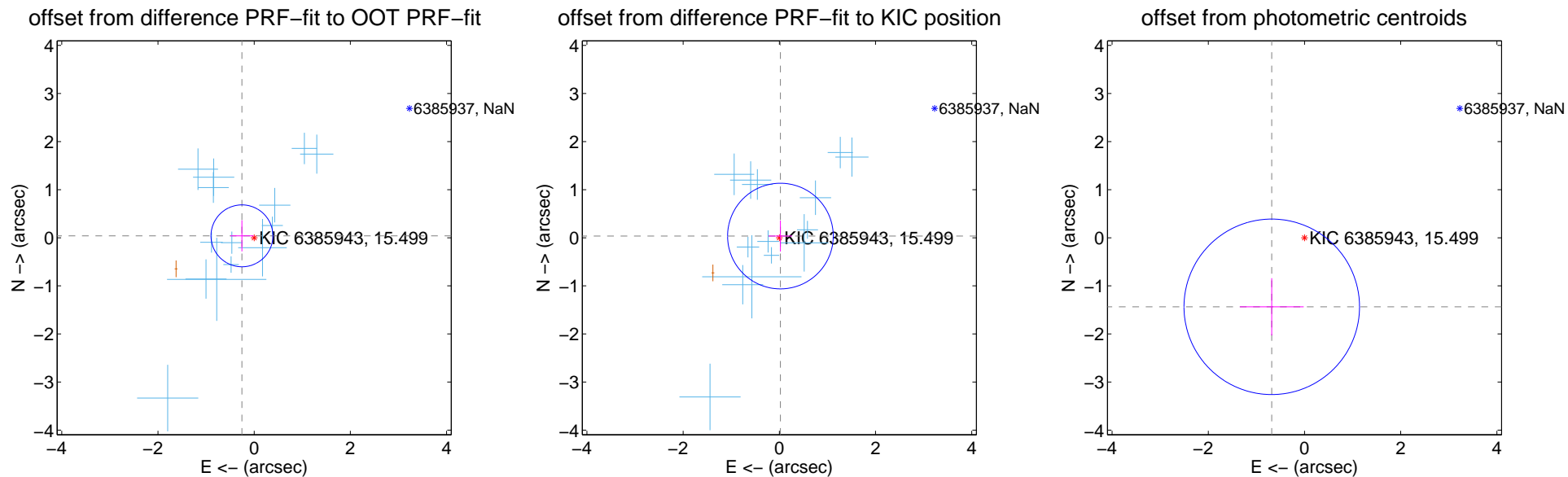
DV Centroid Data

Supplemental centroid analysis for 006385943-01. Kepler magnitude: 15.50. Transit SNR 11.15

There are 14 quarters with good PRF difference image offsets

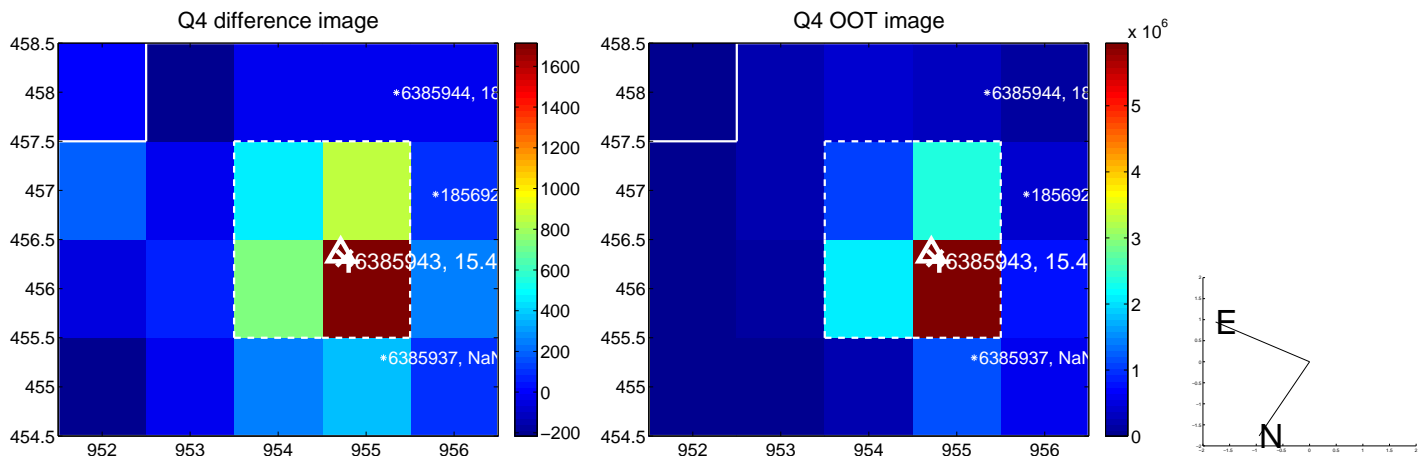
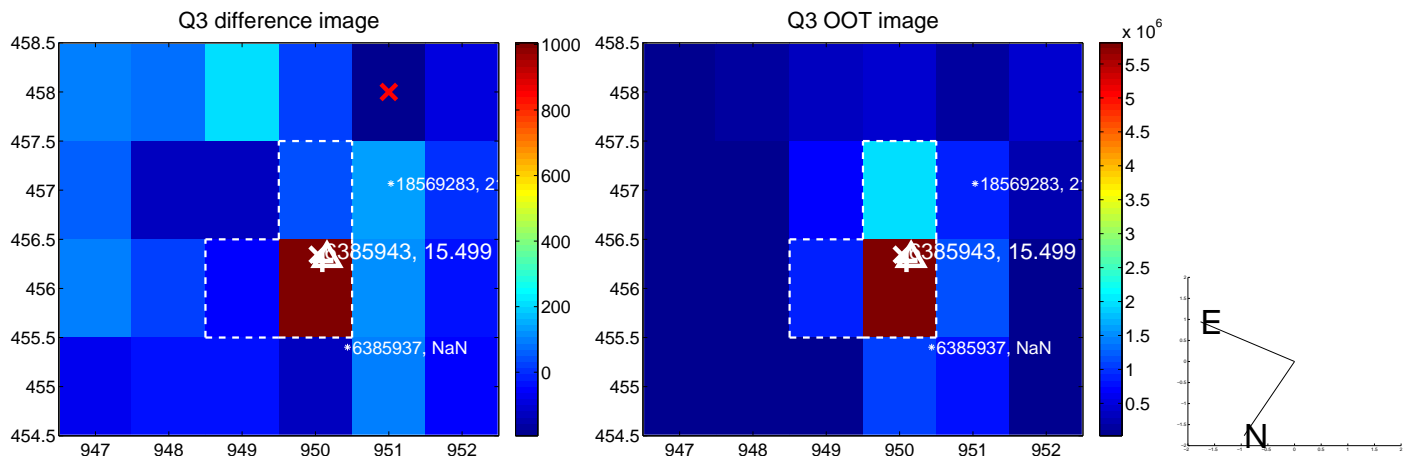
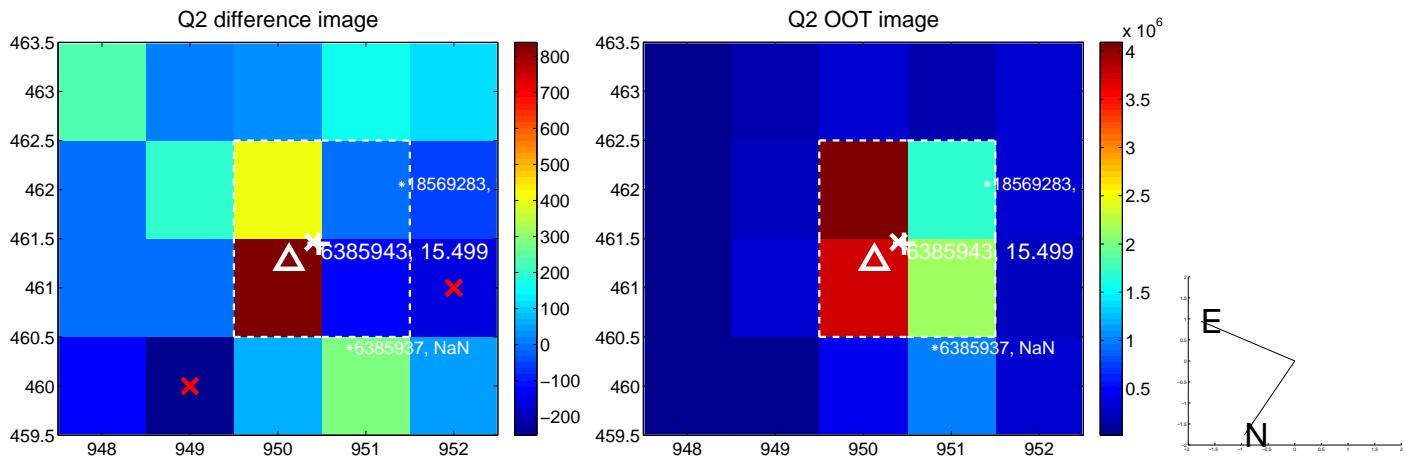
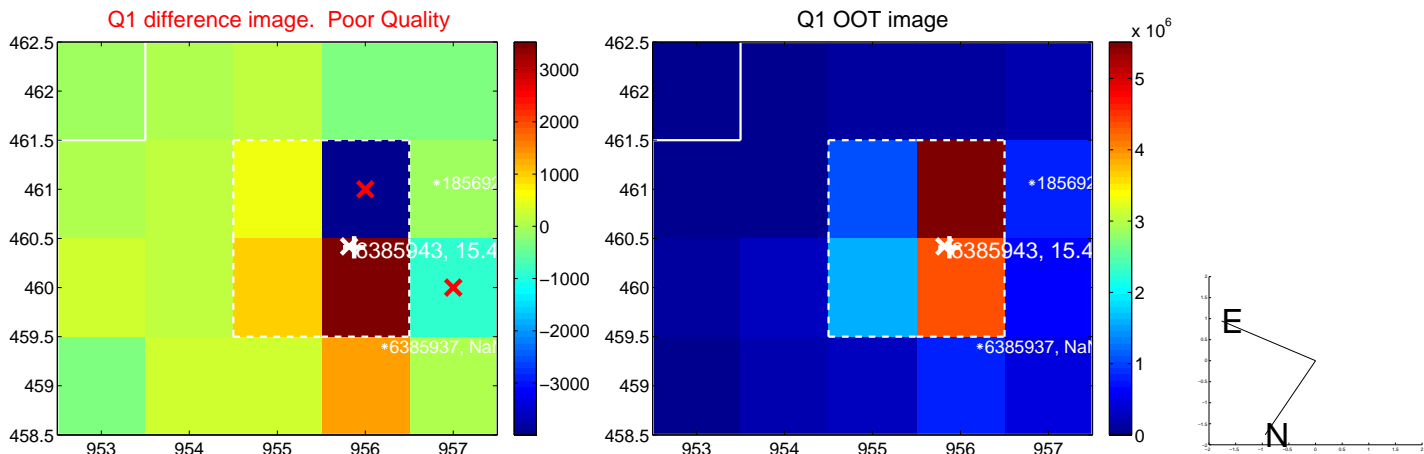
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.257 ± 0.214 | 1.20 | 0.254 ± 0.242 | 0.040 ± 0.324 |
| PRF-fit source offset from KIC position | 0.042 ± 0.366 | 0.11 | -0.023 ± 0.244 | 0.036 ± 0.322 |
| photometric centroid source offset | 1.59 ± 0.61 | 2.61 | 0.68 ± 0.66 | -1.44 ± 0.59 |

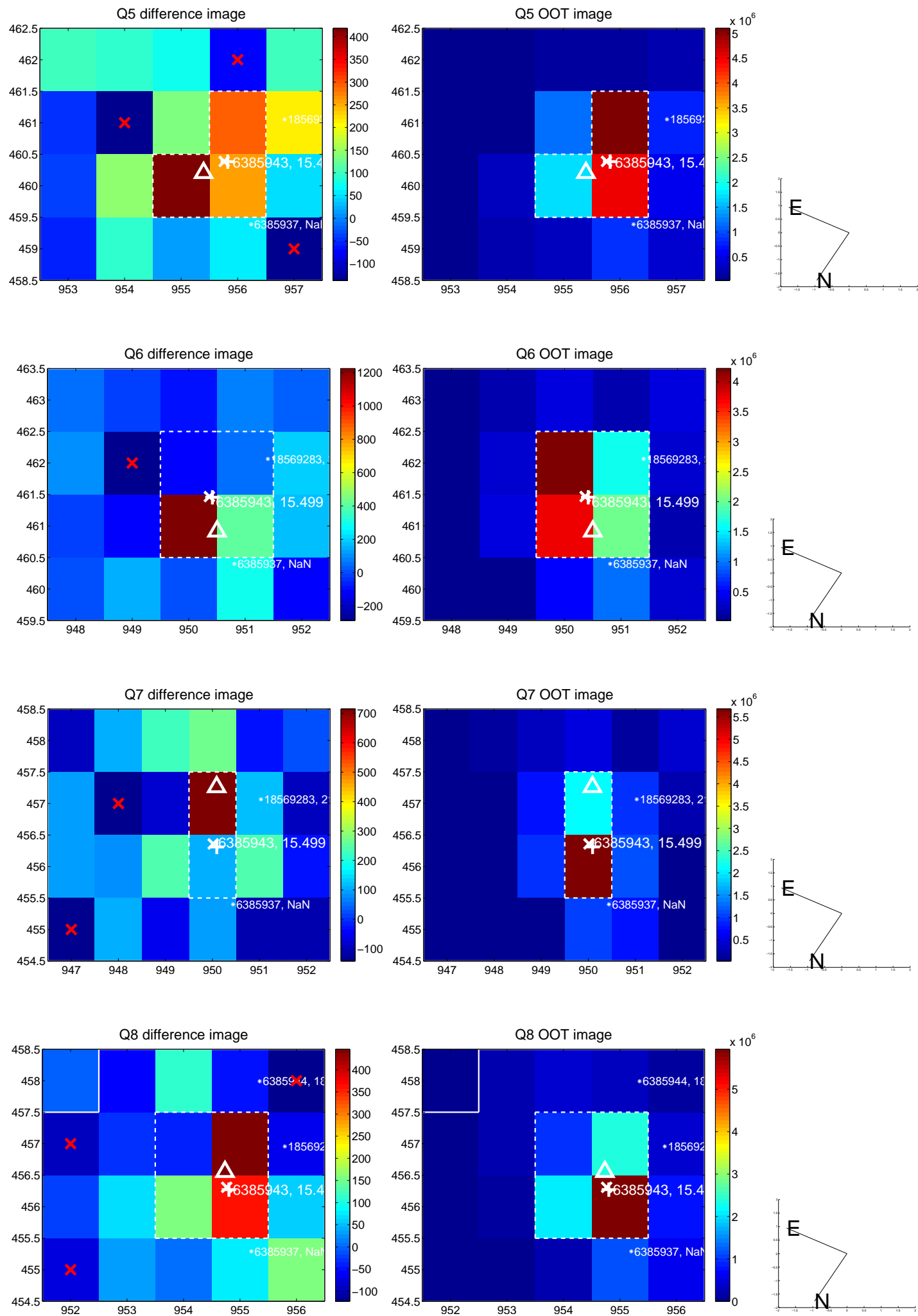


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

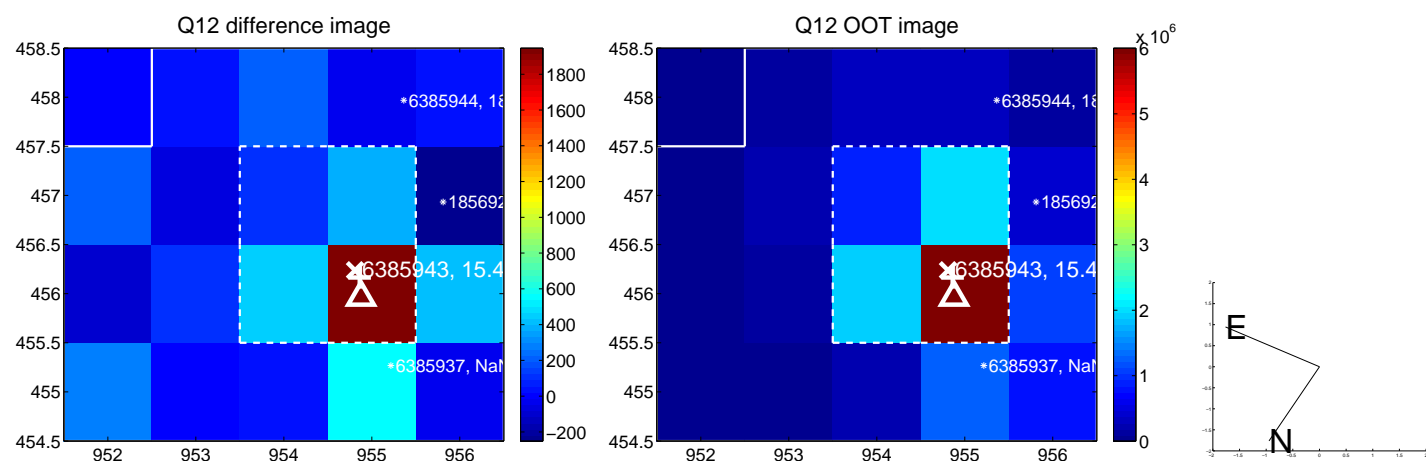
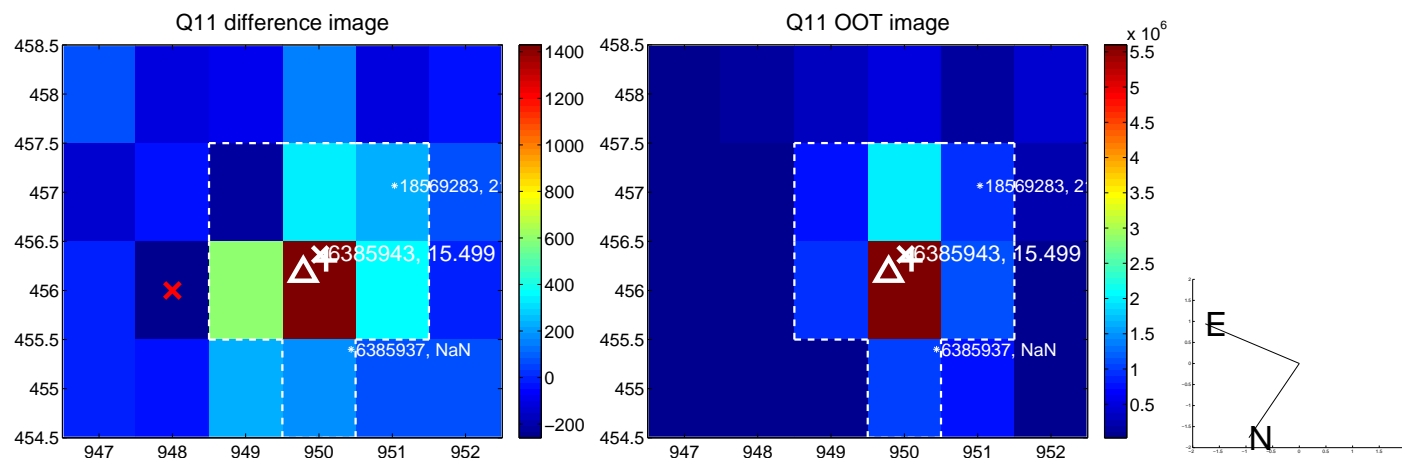
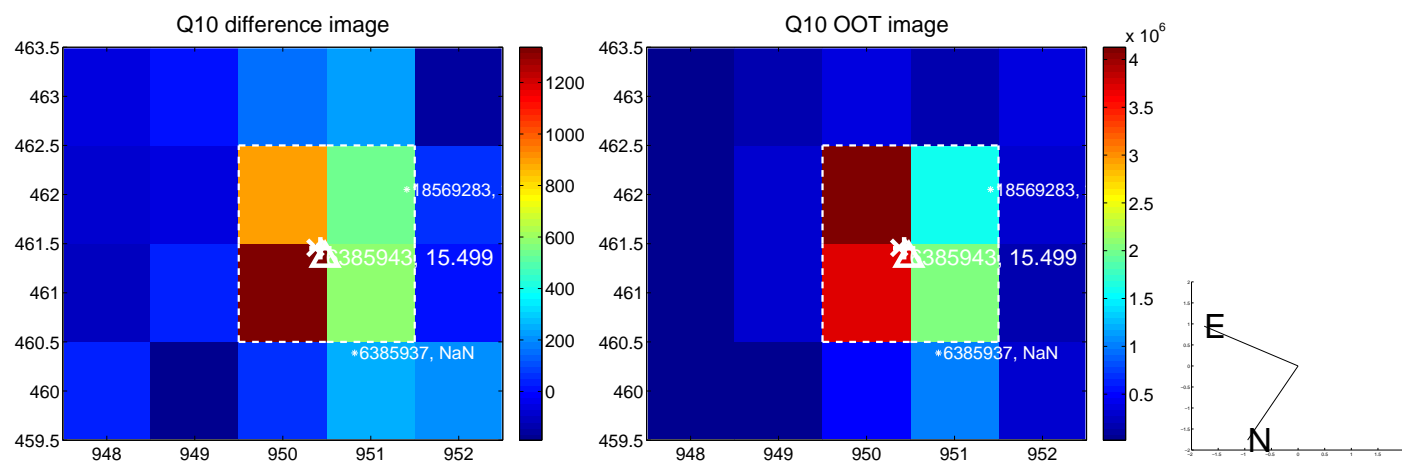
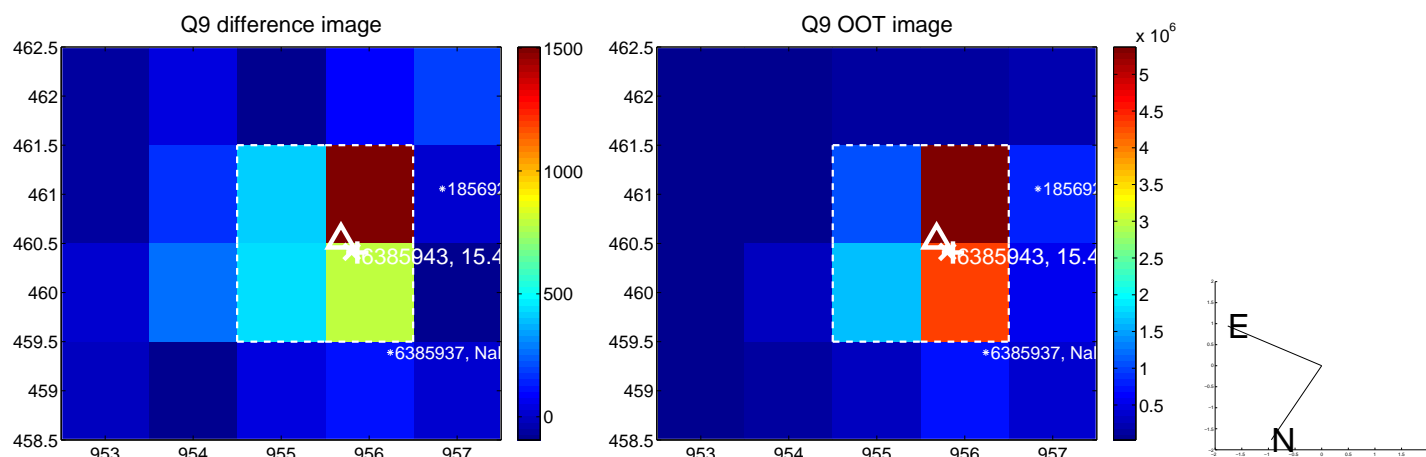
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



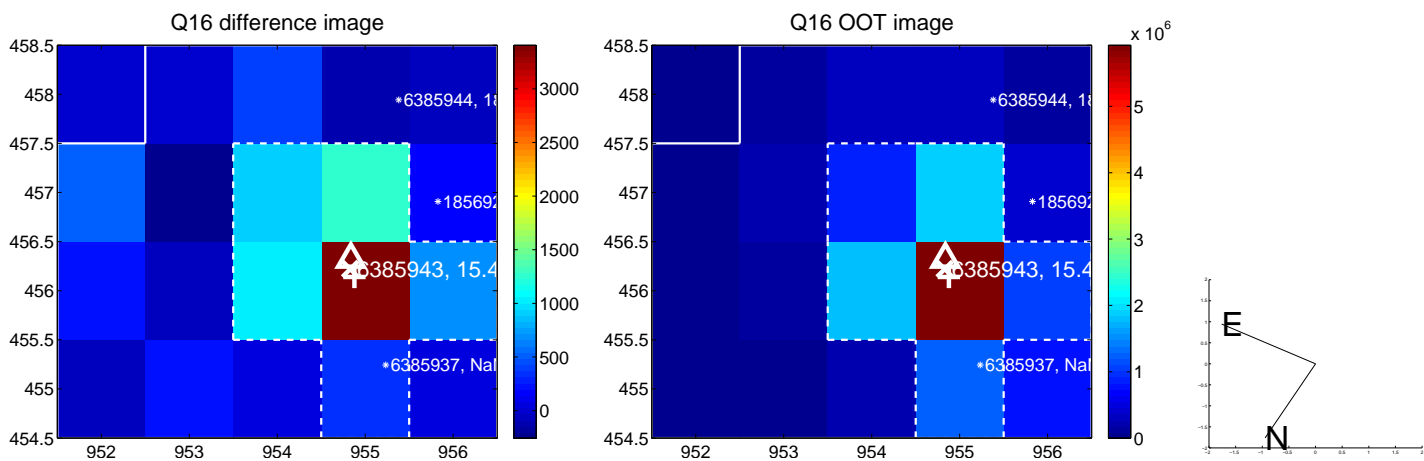
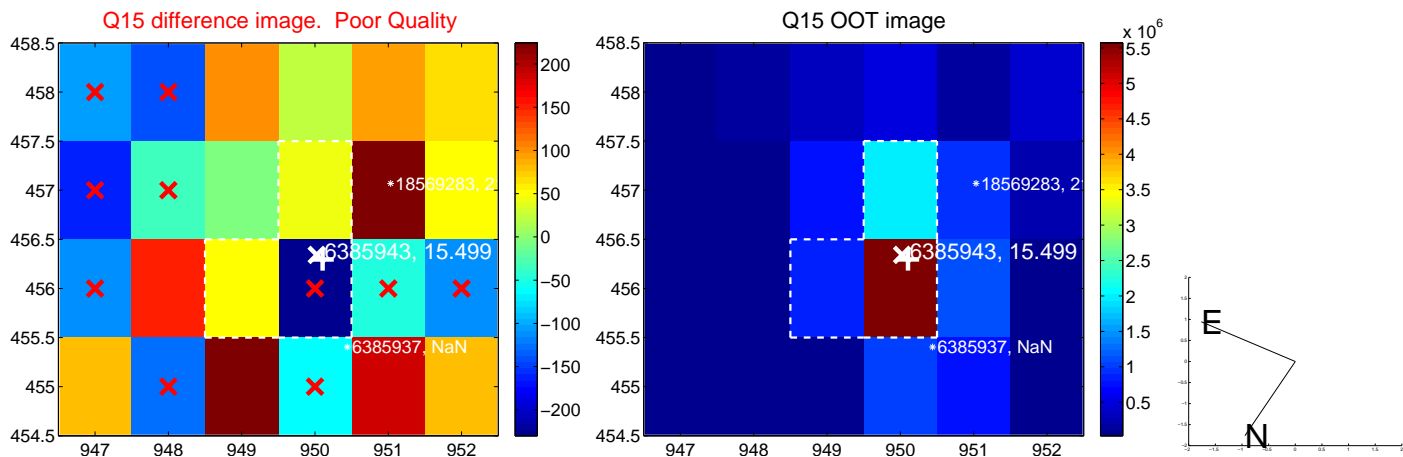
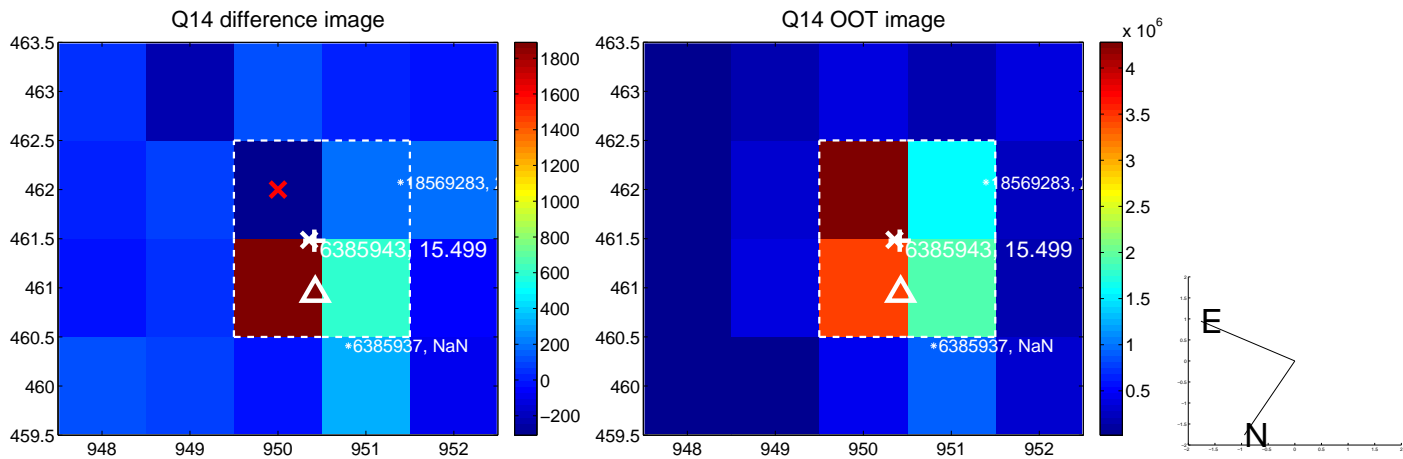
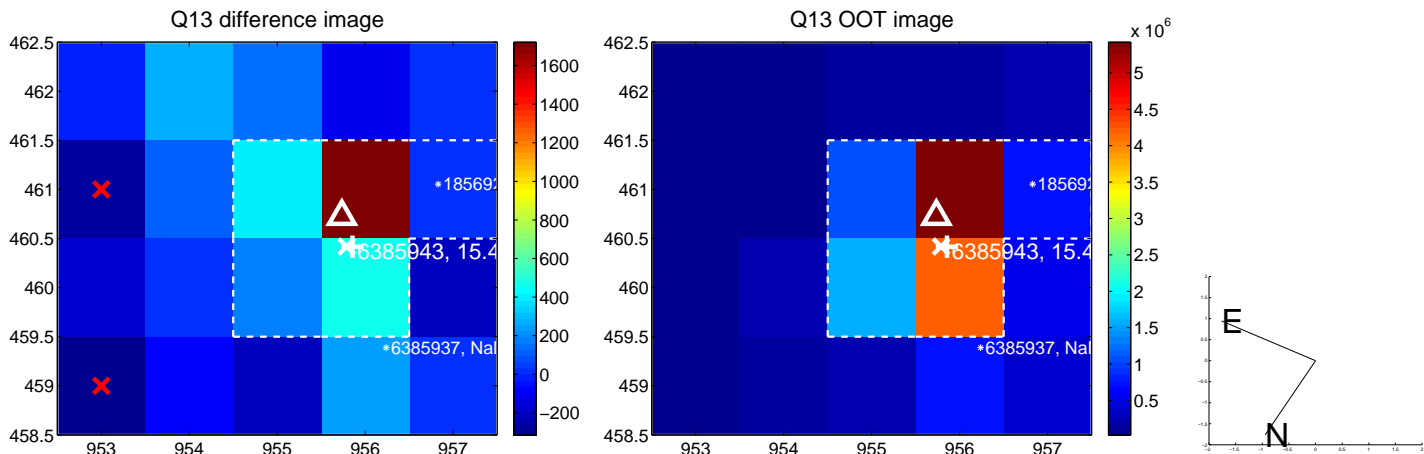
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



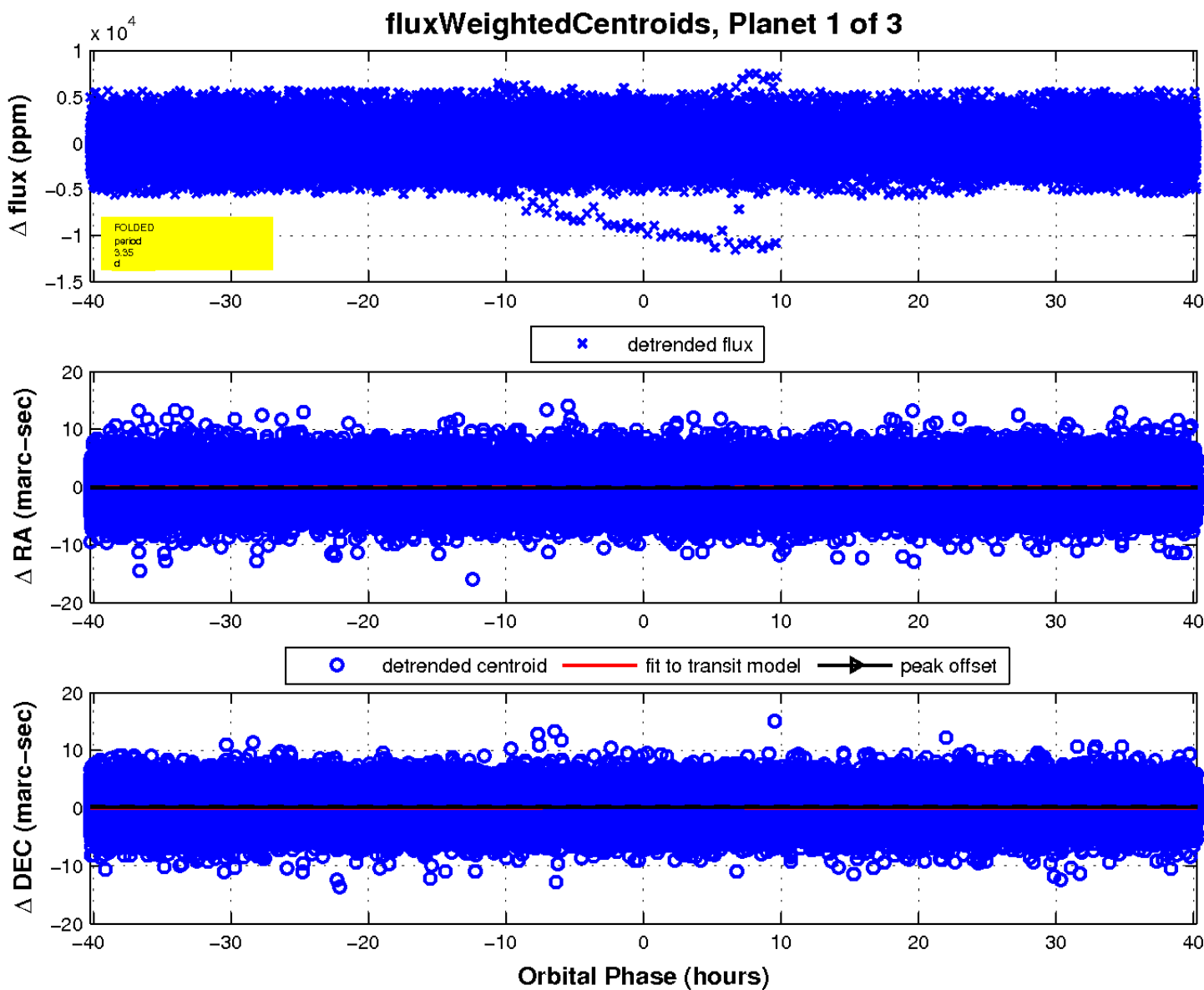
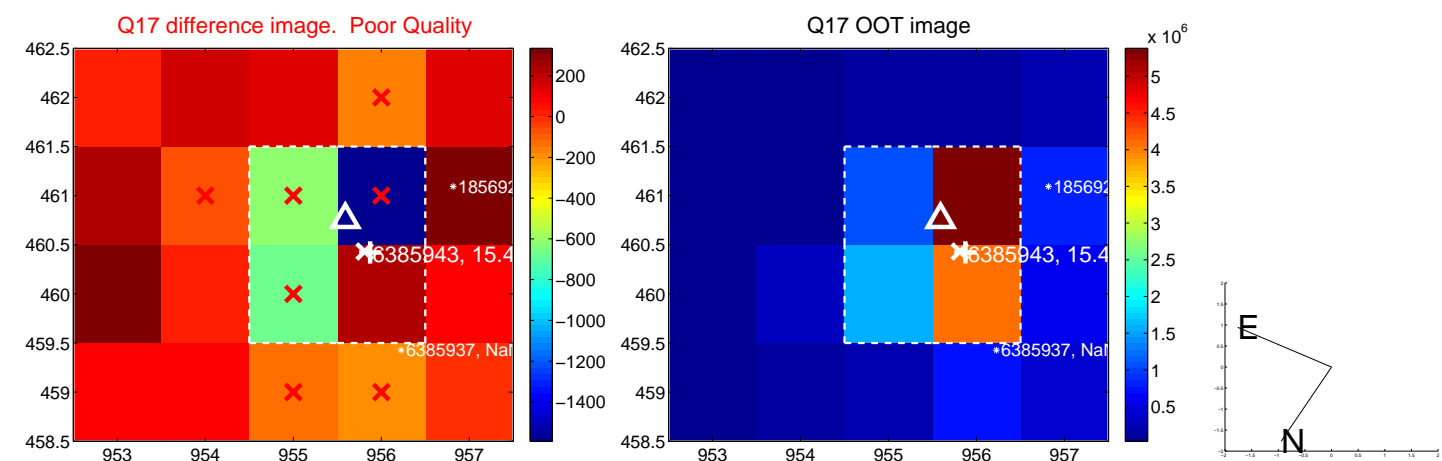
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

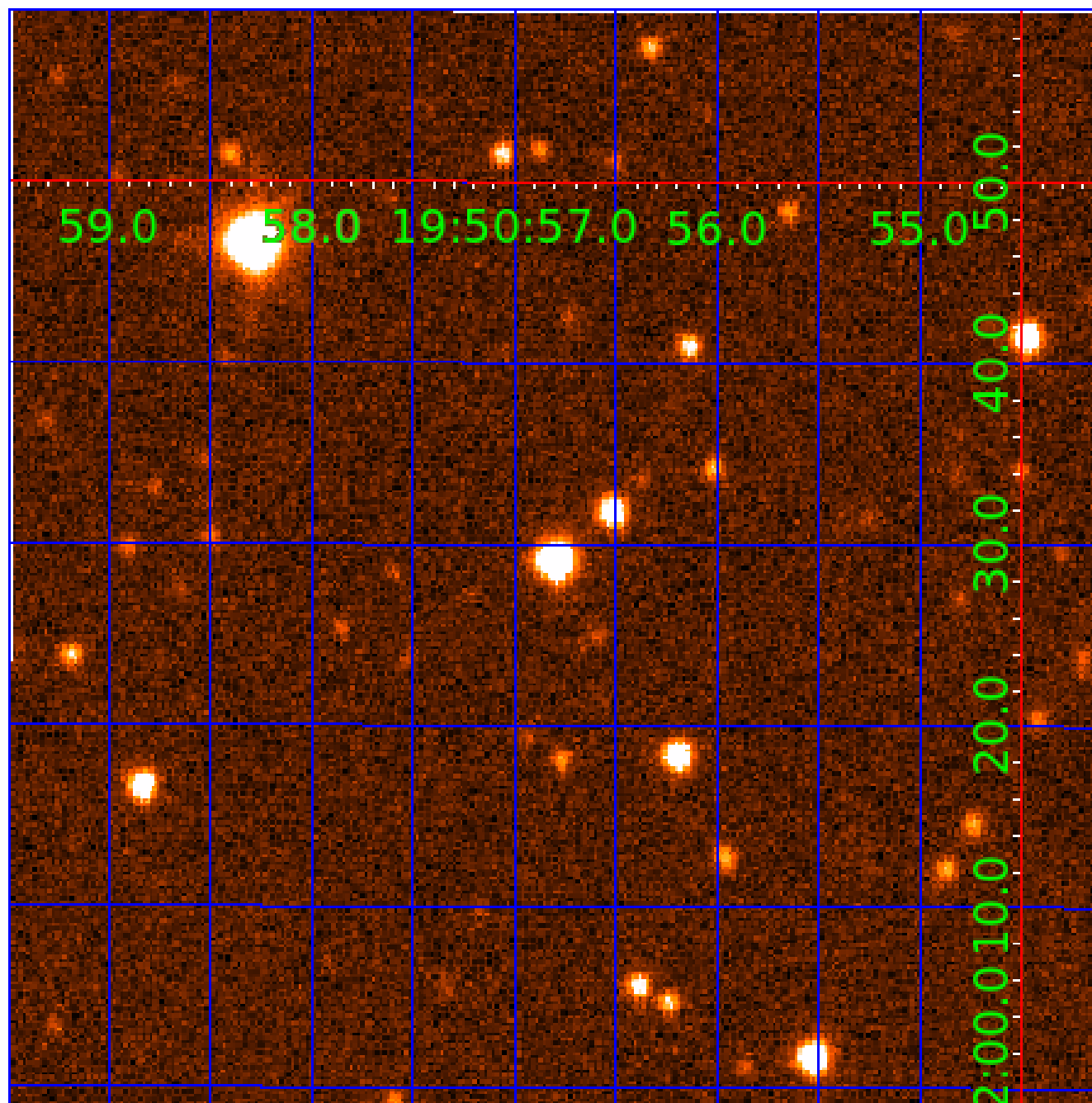


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006385943

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 006385943-01 | OBS | No | 3.353011 | 131.661661 | 137.9 | 17.807 | 9.1 | 11.2 | 0.51 | 4410 | 0.78 | 70.93 |
| 006385943-02 | OBS | No | 178.198566 | 245.384332 | 1008.5 | 6.084 | 13.6 | 7.4 | 0.51 | 4410 | 1.74 | 0.35 |
| 006385943-03 | OBS | No | 217.124672 | 312.176265 | 883.6 | 15.235 | 11.0 | 6.1 | 0.51 | 4410 | 1.62 | 0.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006385943-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 006385943-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS |
| 006385943-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS |

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

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

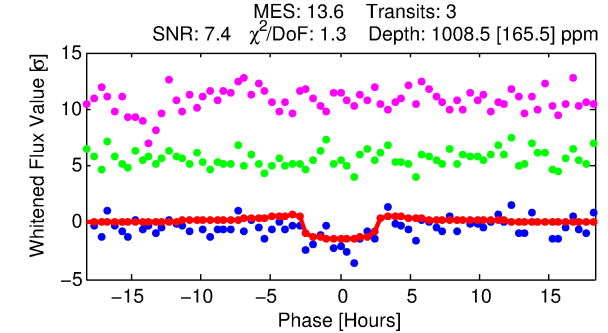
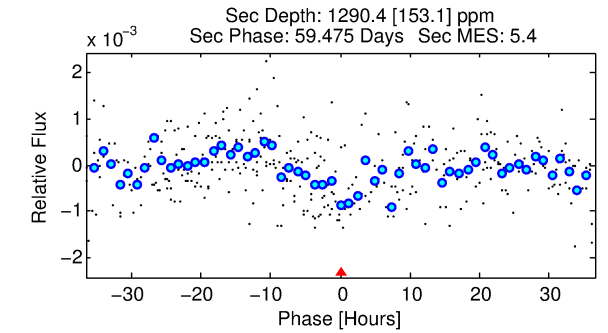
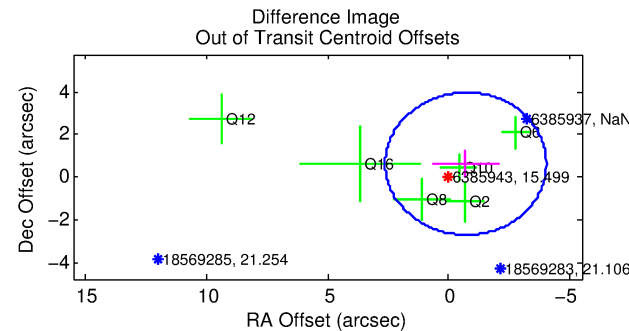
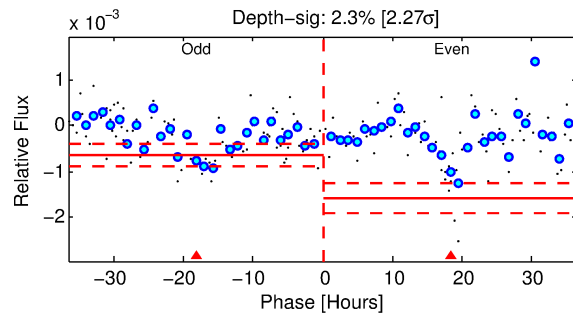
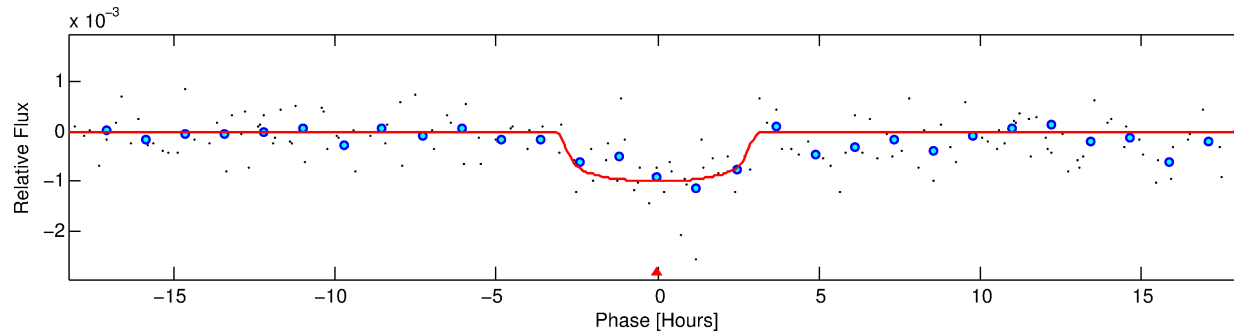
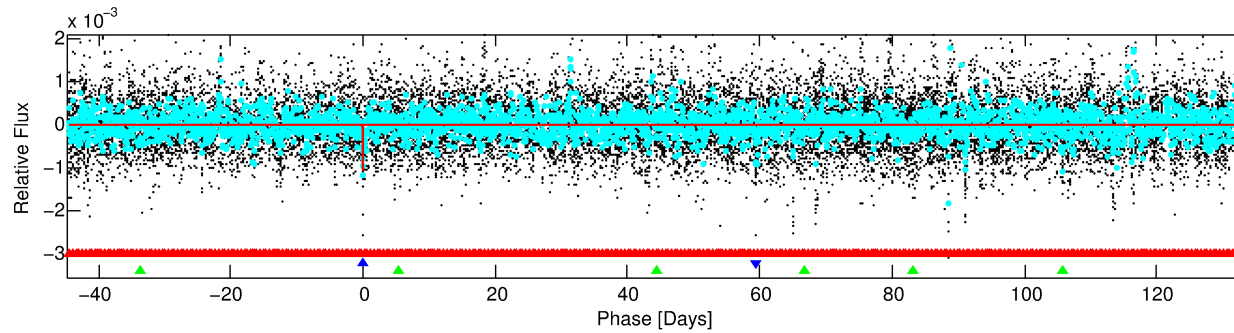
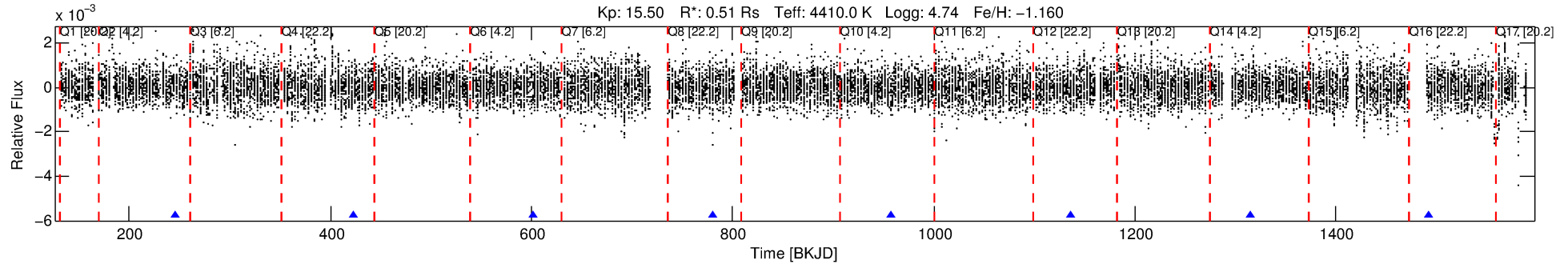
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006385943-02

No Significant Match Found

DV One-Page Summary

KIC: 6385943 Candidate: 2 of 3 Period: 178.199 d



DV Fit Results:

Period = 178.19857 [0.01712] d
Epoch = 245.3843 [0.0704] BKJD
Rp/R* = 0.0314 [0.0261]
a/R* = 162.39 [564.87]
b = 0.73 [2.20]
Seff = 0.35 [0.06]
Teq = 197 [8] K
Rp = 1.74 [1.45] Re
a = 0.4944 [0.0369] AU
Ag = 57587.36 [95988.69] [0.60 σ]
Teff = 4714 [1966] K [2.30 σ]

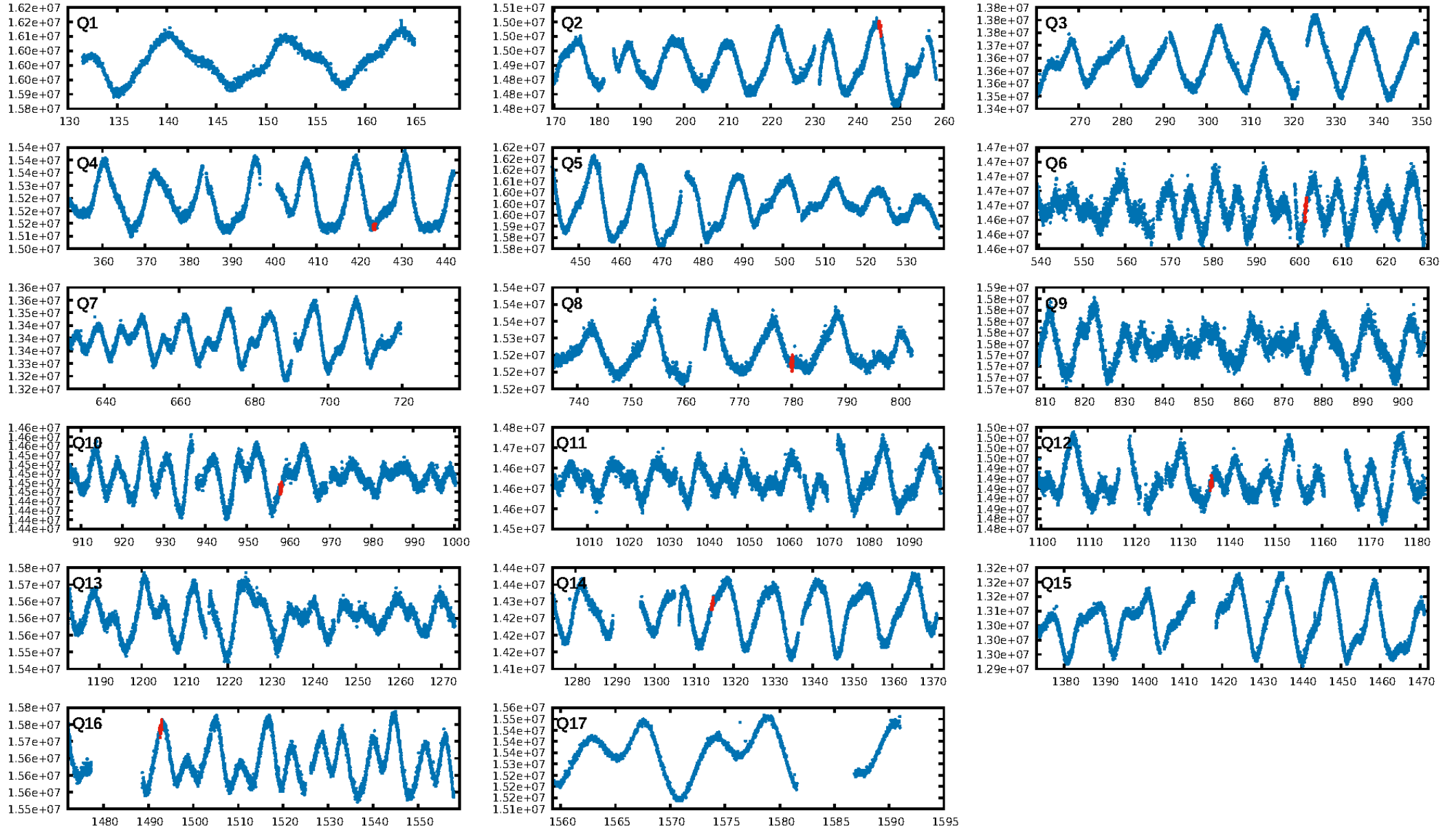
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [223.00 σ]
LongPeriod-sig: 100.0% [56.95 σ]
ModelChiSquare2-sig: 2.0%
ModelChiSquareGof-sig: 64.8%
Bootstrap-pfa: 8.02e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.771
Centroid-sig: 15.1%
Centroid-so: 1.084 arcsec [1.29 σ]
OotOffset-rm: 0.952 arcsec [0.86 σ]
OotOffset-st: 3/0/3/0 [6]
KicOffset-rm: 1.133 arcsec [0.95 σ]
KicOffset-st: 3/0/3/0 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.38 [3/8]

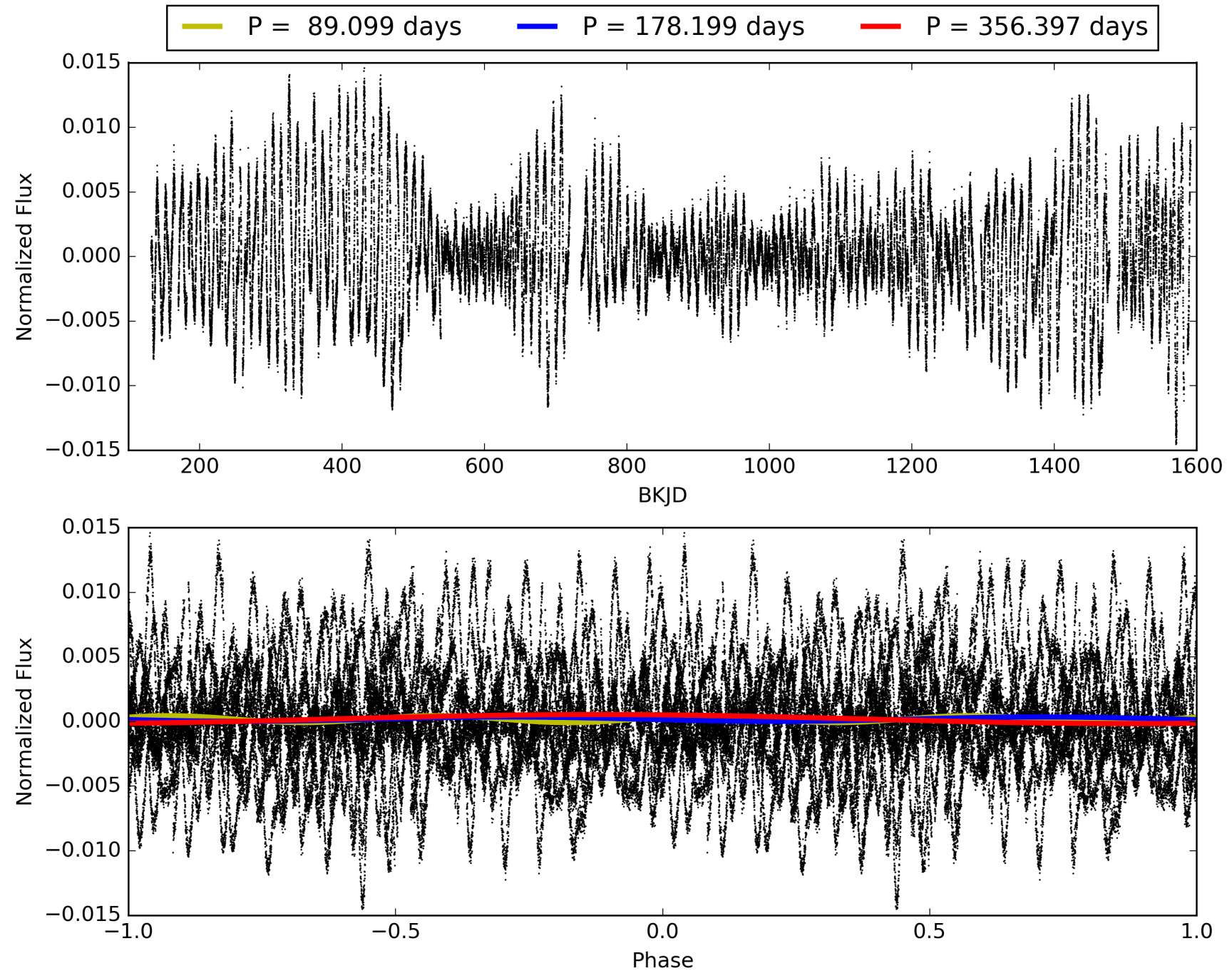
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:49:20 Z

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

TCE 006385943-02, PDC Light Curves

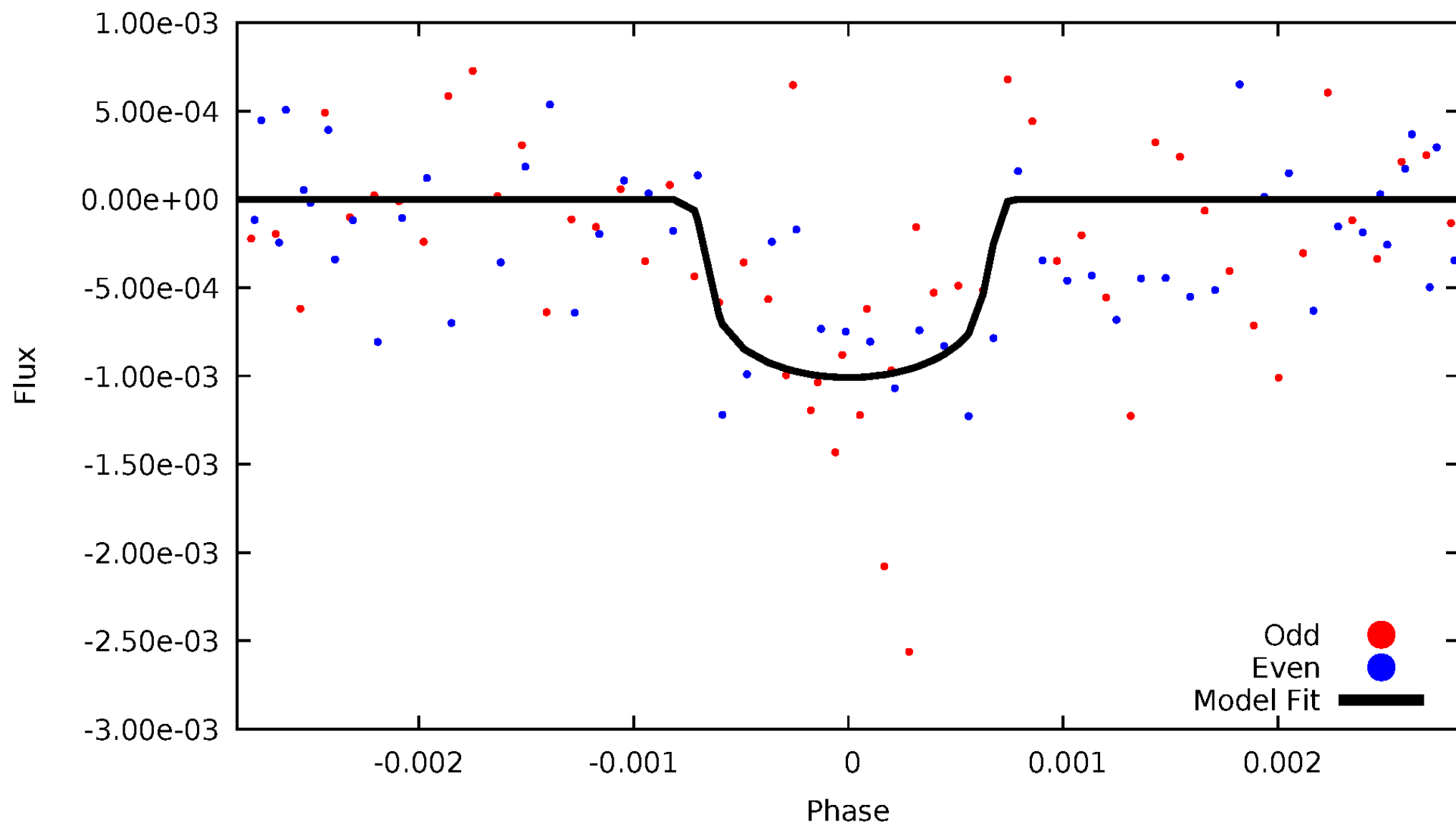


TCE 006385943-02



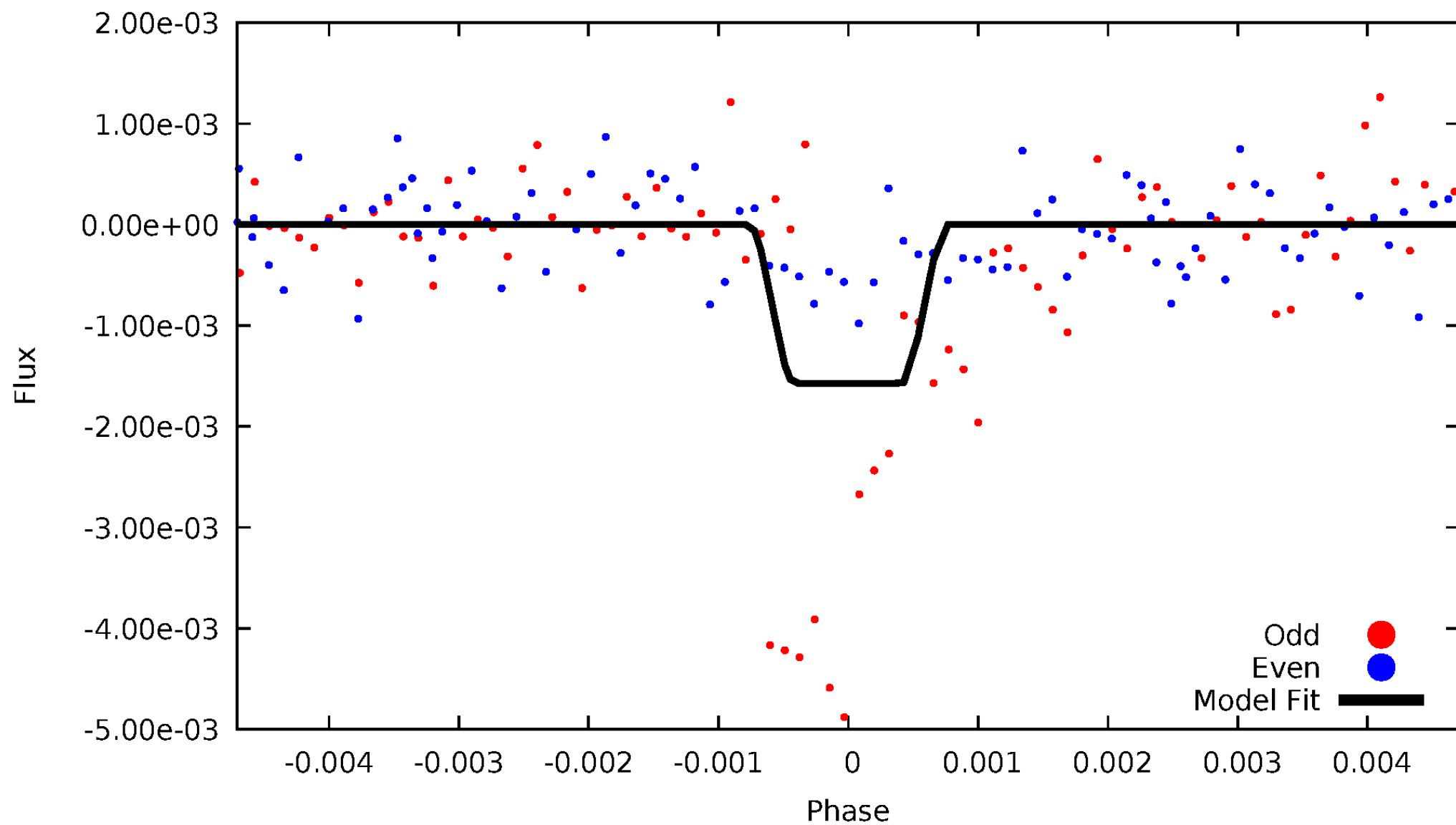
DV Odd/Even

TCE 006385943-02



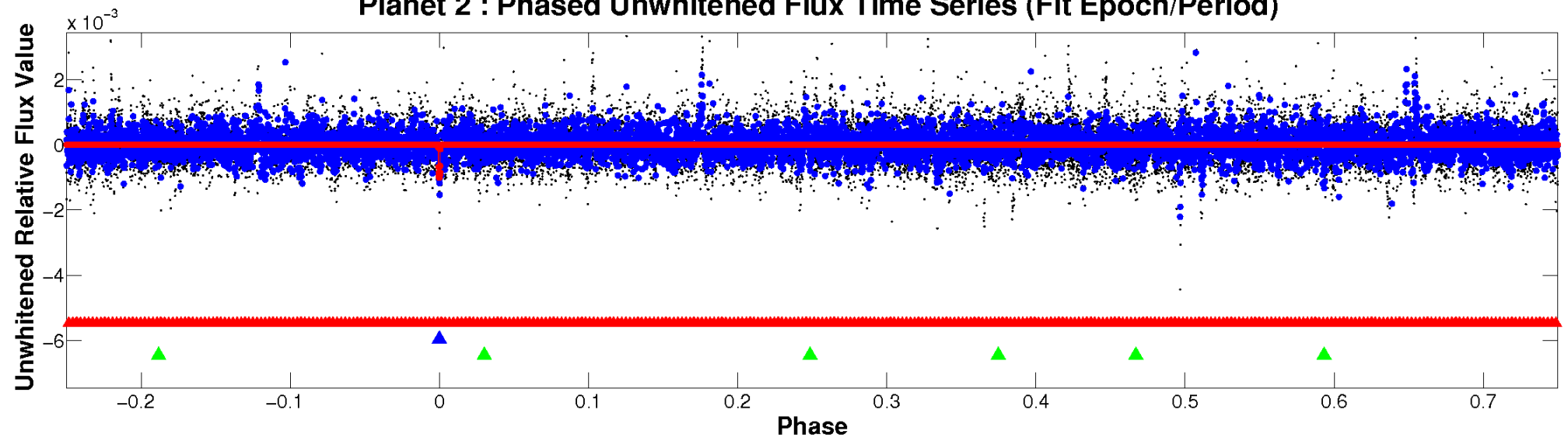
ALT Odd/Even

TCE 006385943-02

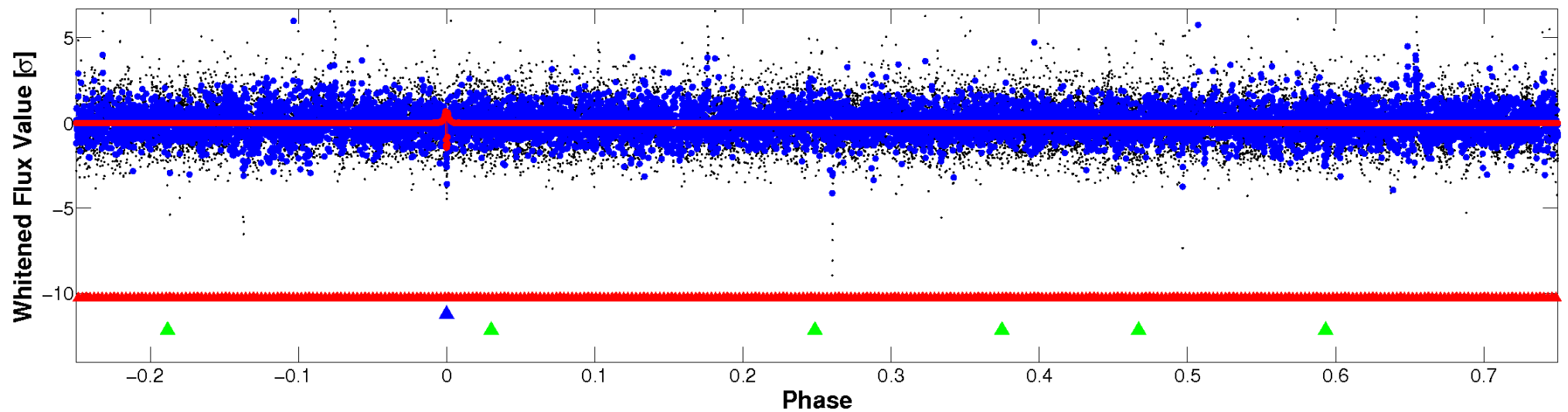


Non-Whitened Vs. Whitened Light Curve

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

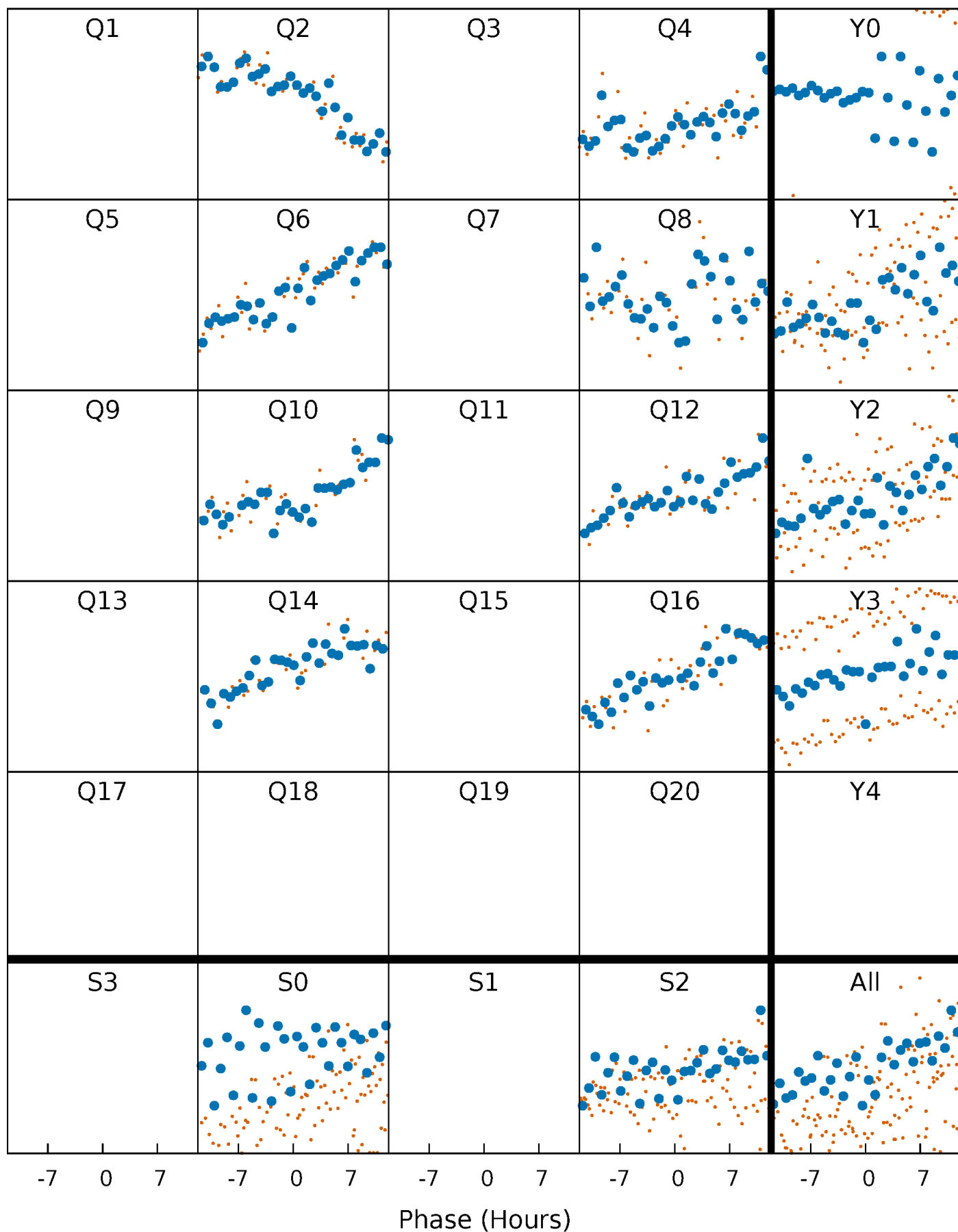


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



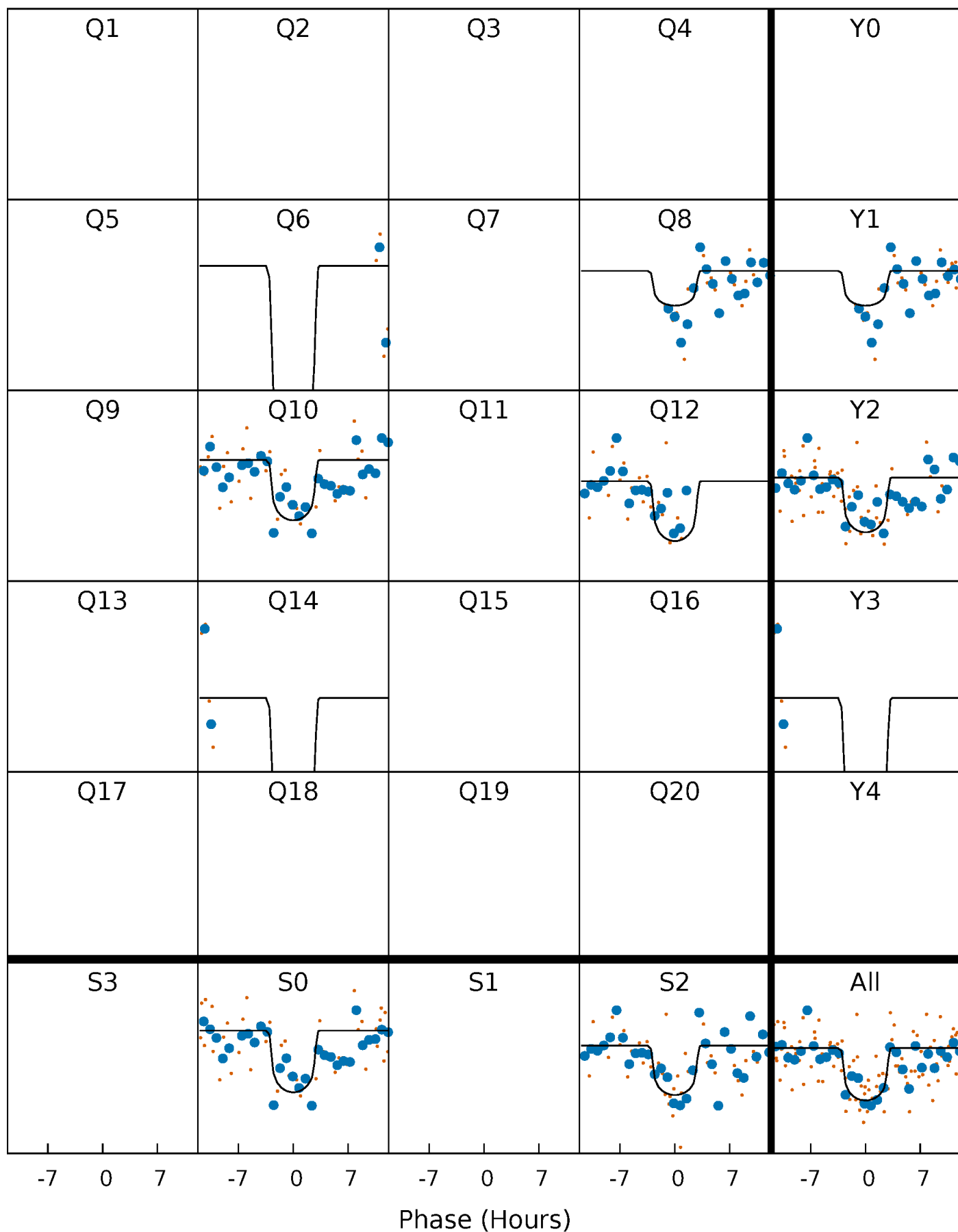
PDC Quarter-Phased Transit Curves

TCE 006385943-02 P=178.198566 Days $T_0=245.384332$ (BKJD)



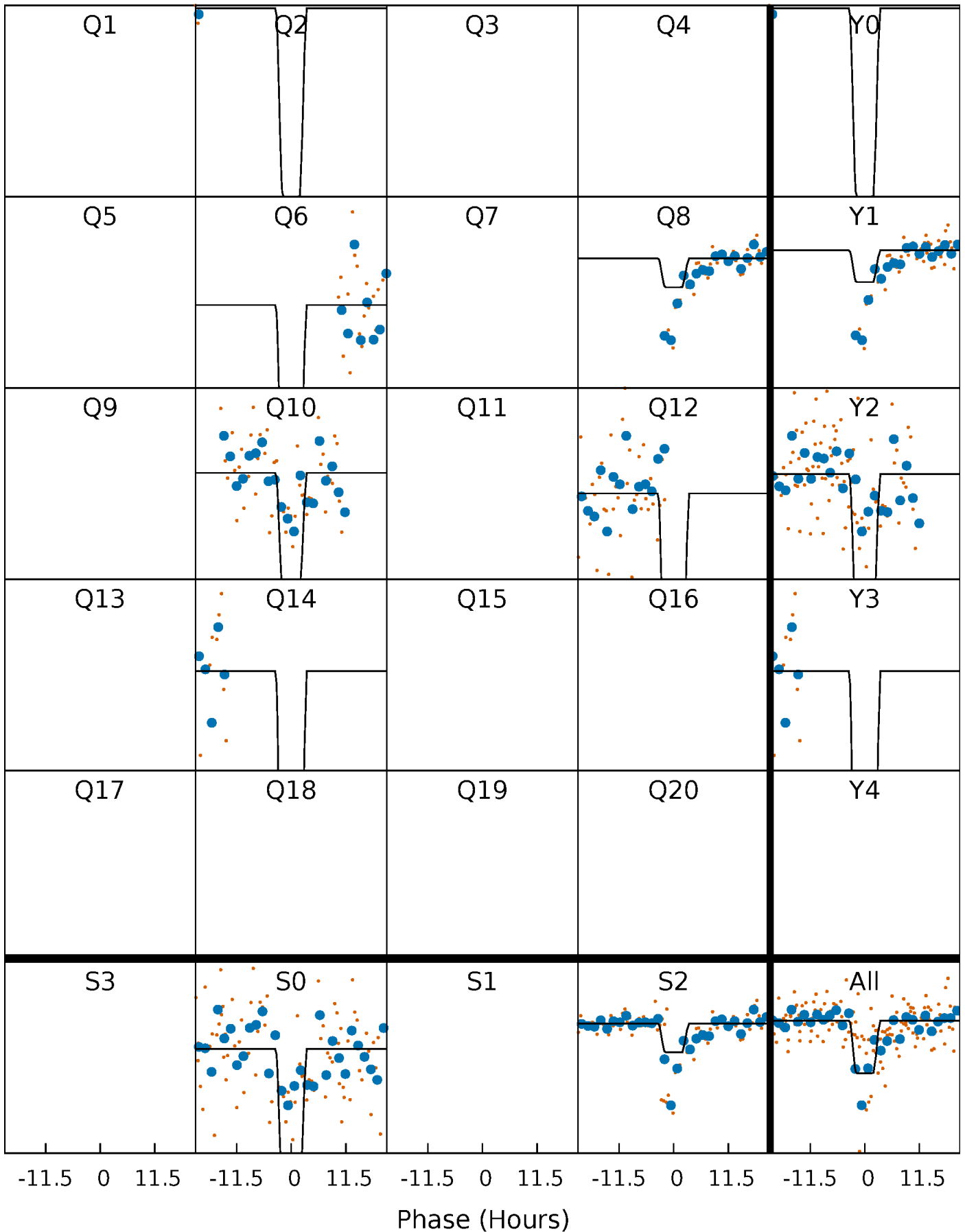
DV Quarter-Phased Transit Curves

TCE 006385943-02 P=178.198566 Days $T_0=245.384332$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

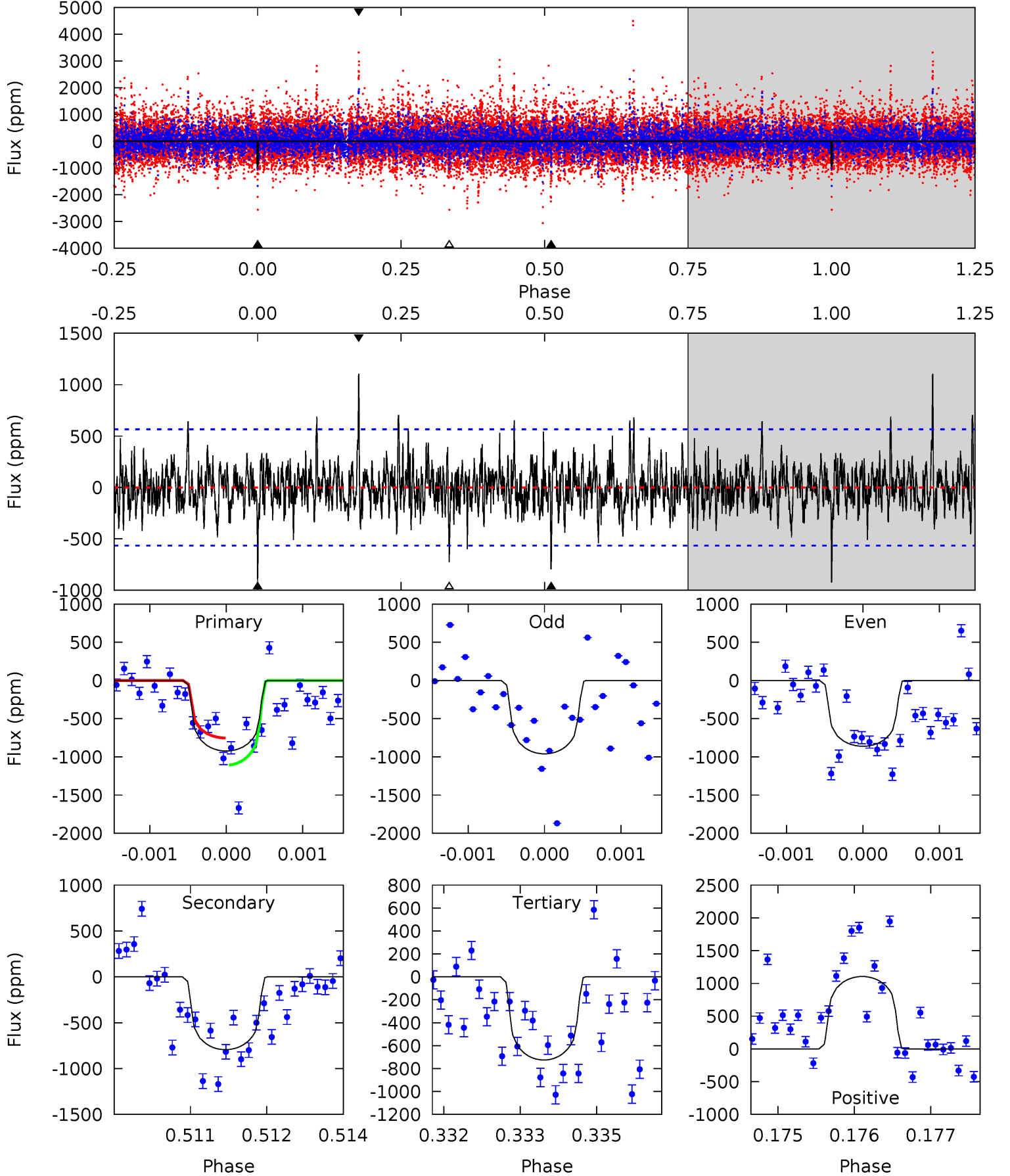
TCE 006385943-02 P=178.228321 Days $T_0=245.350888$ (BKJD)



DV Model-Shift Uniqueness Test

006385943-02, P = 178.198566 Days, E = 67.185766 Days

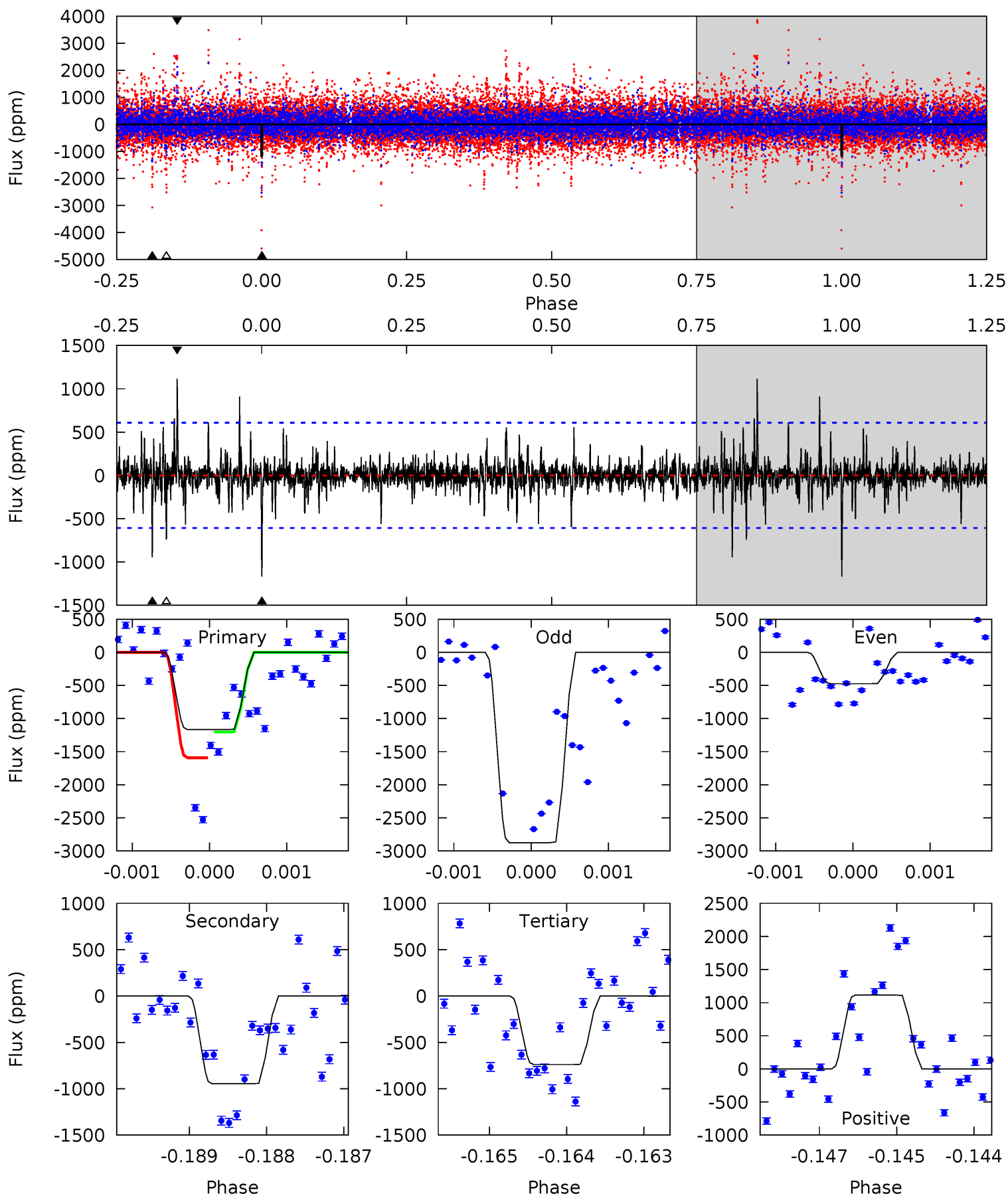
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.80 | 7.57 | 6.91 | 10.5 | 5.39 | 3.19 | 1.70 | 1.88 | -1.73 | 0.65 | -2.96 | 0.46 | 1.08 | 0.54 | 1.69 |



Alt Model-Shift Uniqueness Test

006385943-02, P = 178.228321 Days, E = 67.122567 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.4 | 8.41 | 6.57 | 9.90 | 5.40 | 3.21 | 1.17 | 3.80 | 0.47 | 1.84 | -1.49 | 10.8 | 2.48 | 0.49 | 1.73 |



Stellar Parameters For KIC 006385943

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 4410^{+133}_{-133} | $4.735^{+0.059}_{-0.032}$ | $-1.160^{+0.300}_{-0.300}$ | $0.506^{+0.033}_{-0.045}$ | $0.508^{+0.037}_{-0.034}$ | $5.517^{+1.369}_{-0.670}$ |
| | +3%/-3% | +1%/-1% | +26%/-26% | +7%/-9% | +7%/-7% | +25%/-12% |
| 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 006385943-02 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|----------------|------------------------|------------------|-----------------------|----------------------------|
| DV | -794 ± 105 | $1.91^{+1.34}_{-1.08}$ | 274^{+9}_{-9} | 4095^{+1547}_{-665} | $29738^{+123401}_{-19512}$ |
| Alt. | -946 ± 113 | $2.33^{+1.27}_{-1.31}$ | 273^{+9}_{-10} | 3916^{+1517}_{-556} | $23733^{+106834}_{-14111}$ |

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 $A_{obs} \gg 1.0$

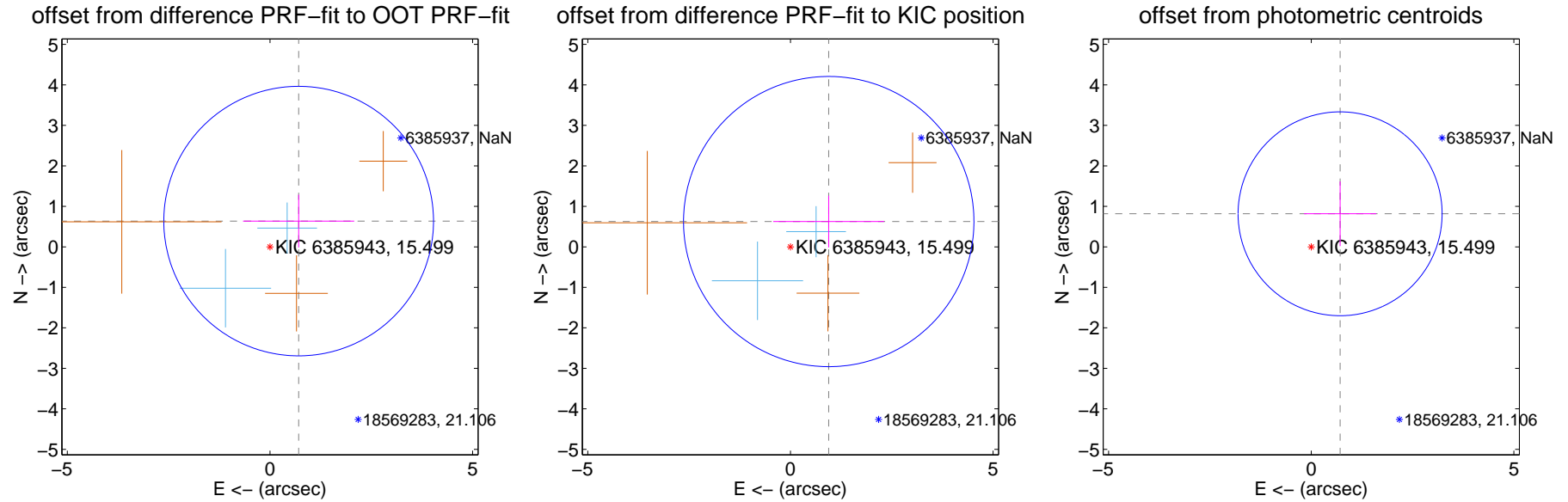
DV Centroid Data

Supplemental centroid analysis for 006385943-02. Kepler magnitude: 15.50. Transit SNR 7.43

There are 2 quarters with good PRF difference image offsets

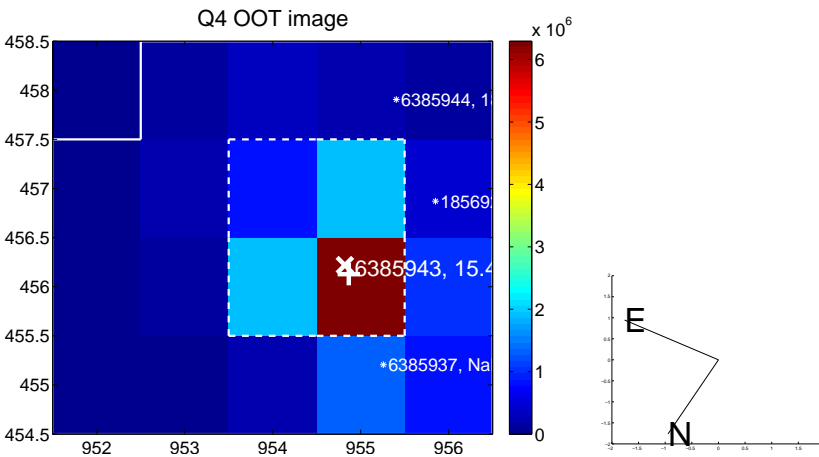
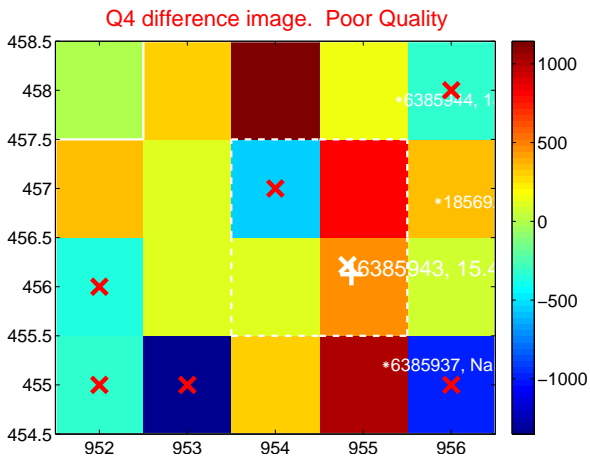
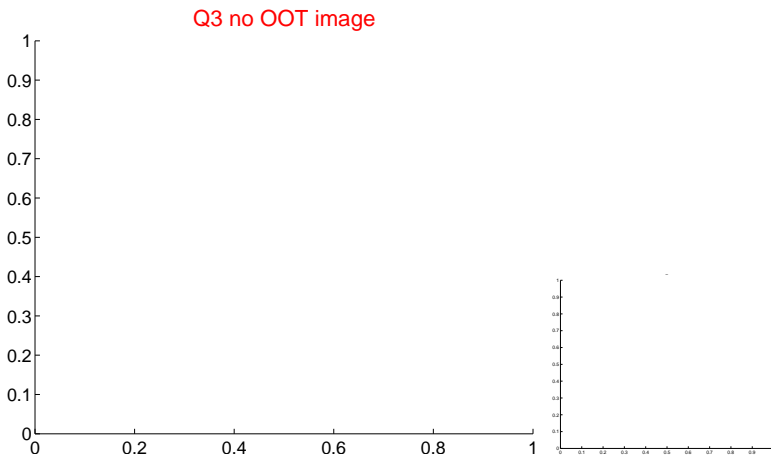
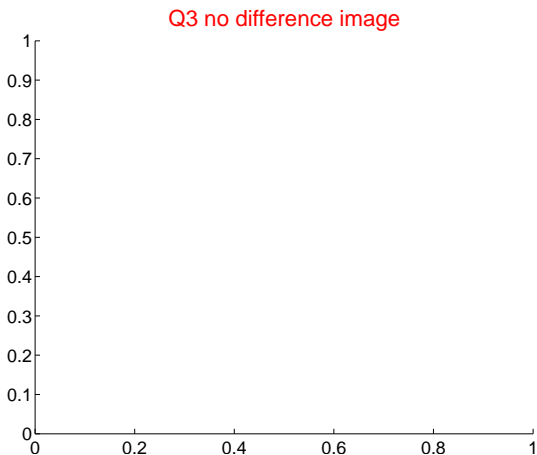
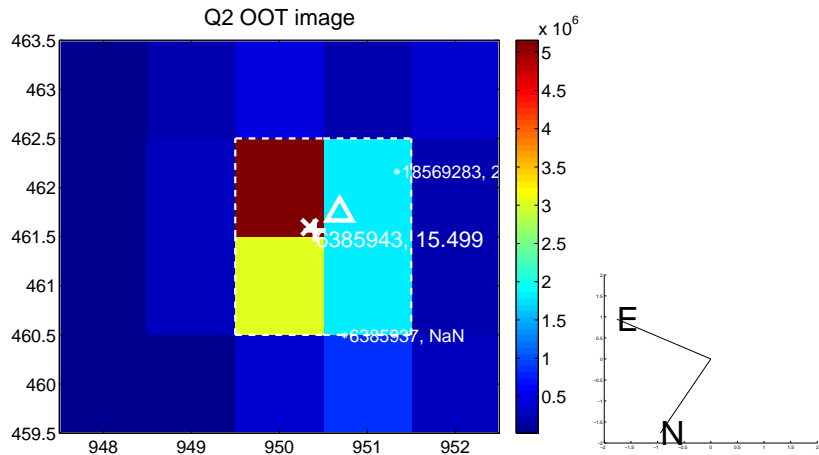
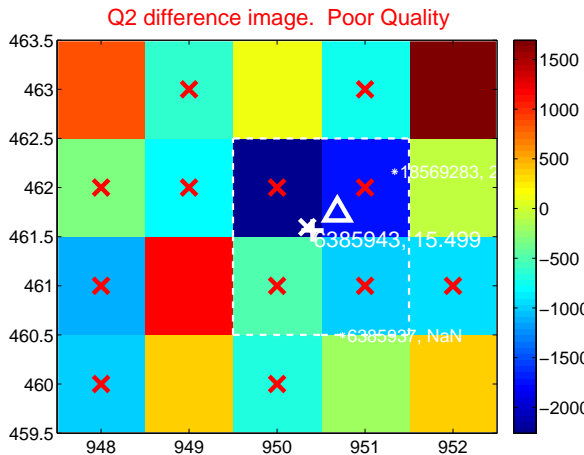
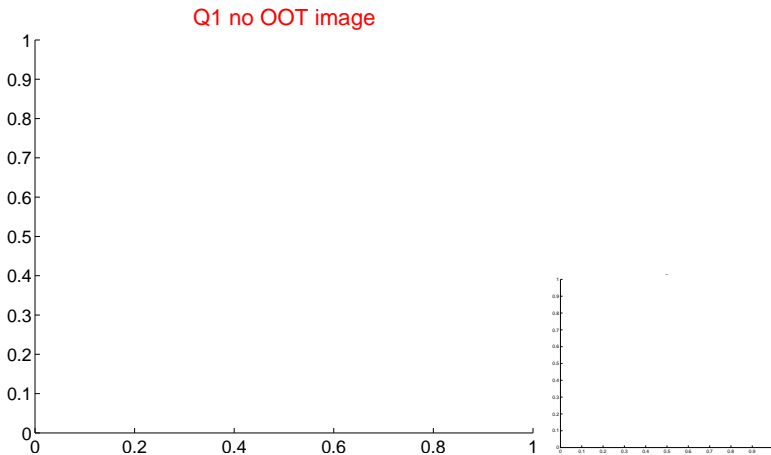
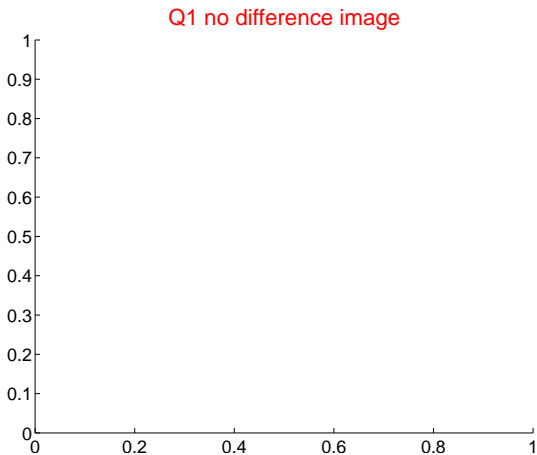
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.952 ± 1.109 | 0.86 | -0.708 ± 1.372 | 0.636 ± 0.650 |
| PRF-fit source offset from KIC position | 1.133 ± 1.194 | 0.95 | -0.945 ± 1.368 | 0.625 ± 0.638 |
| photometric centroid source offset | 1.08 ± 0.84 | 1.29 | -0.71 ± 0.89 | 0.82 ± 0.80 |

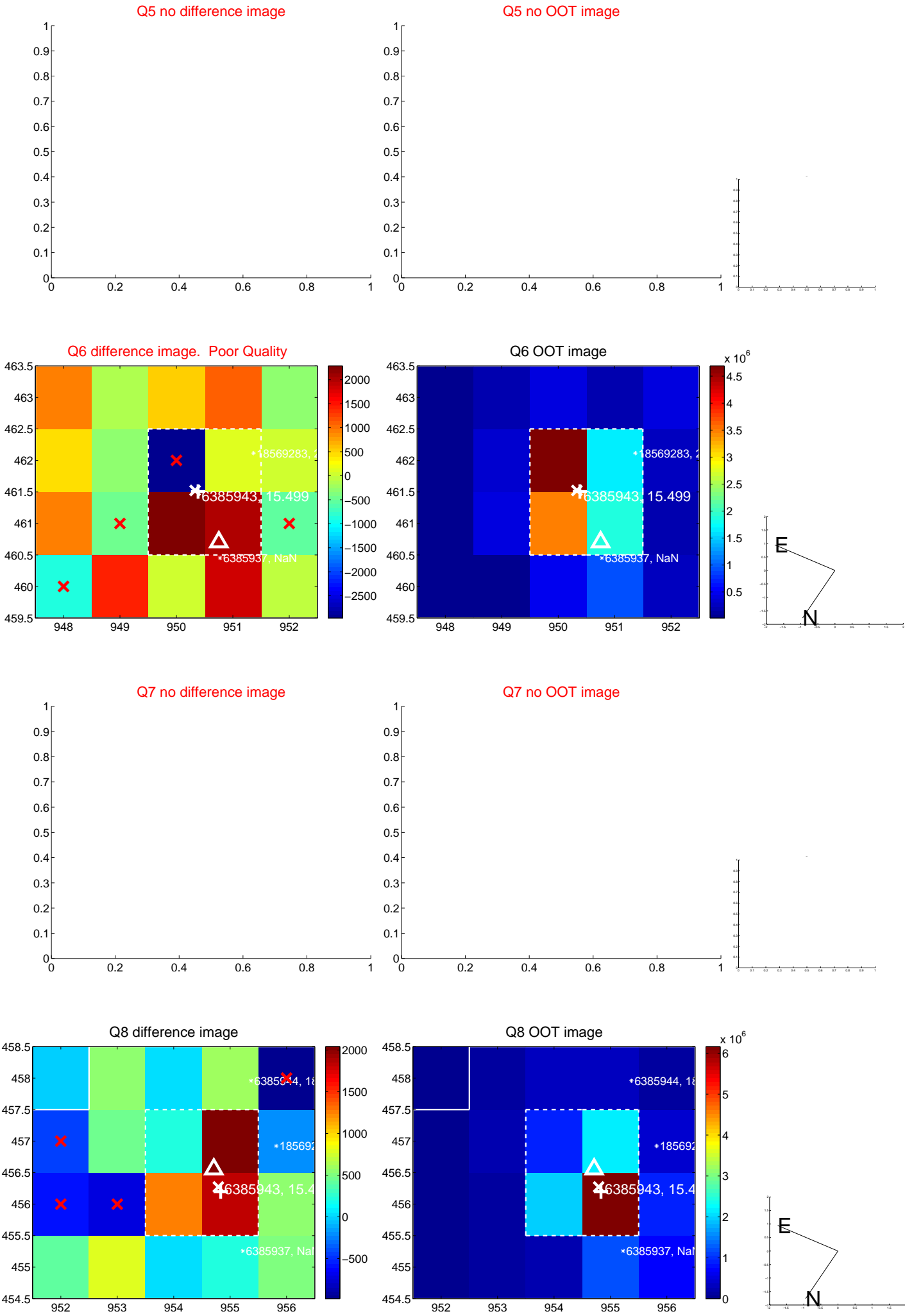


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

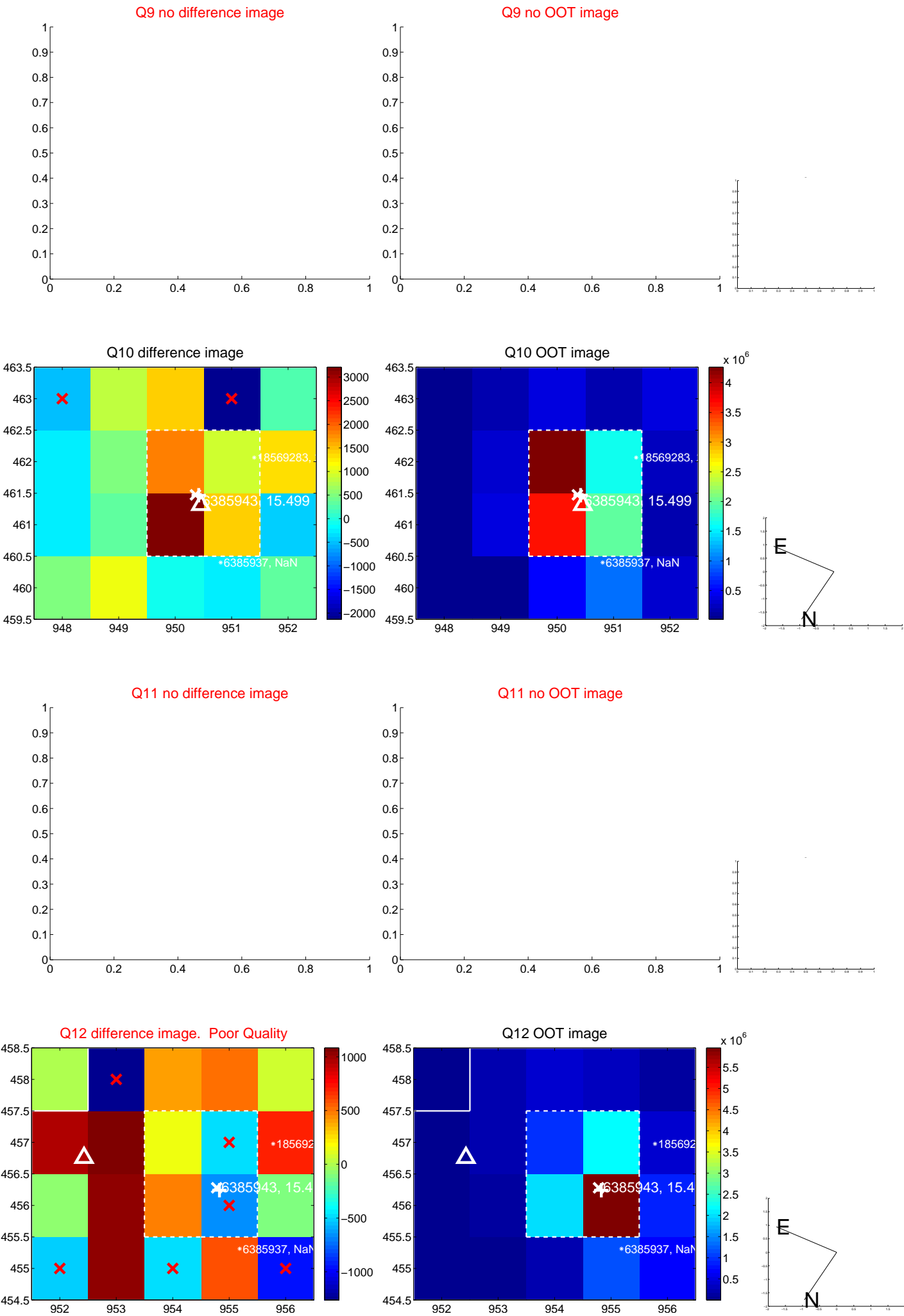
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



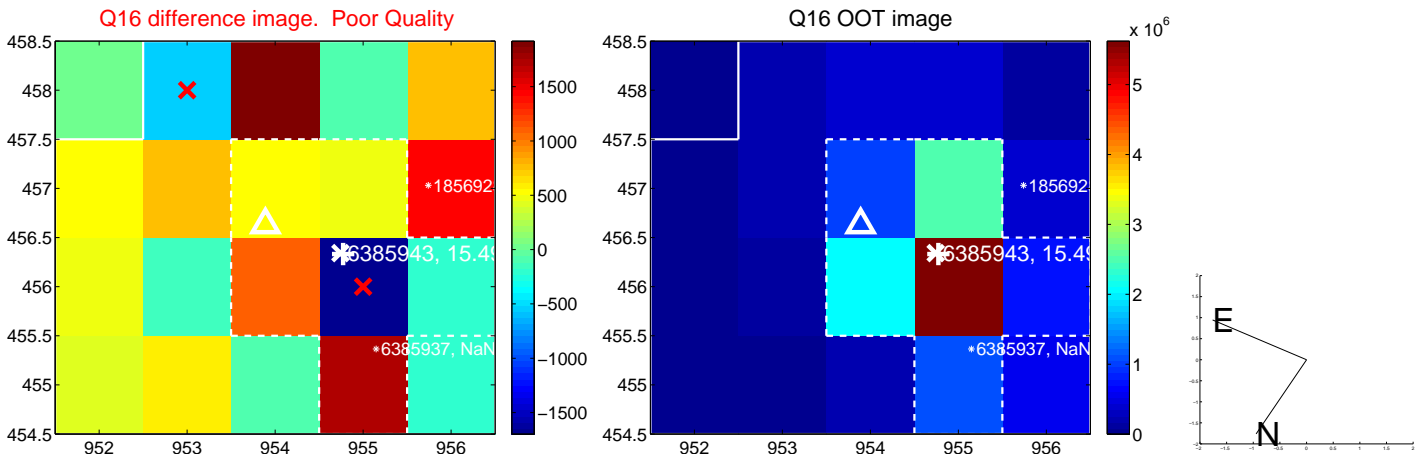
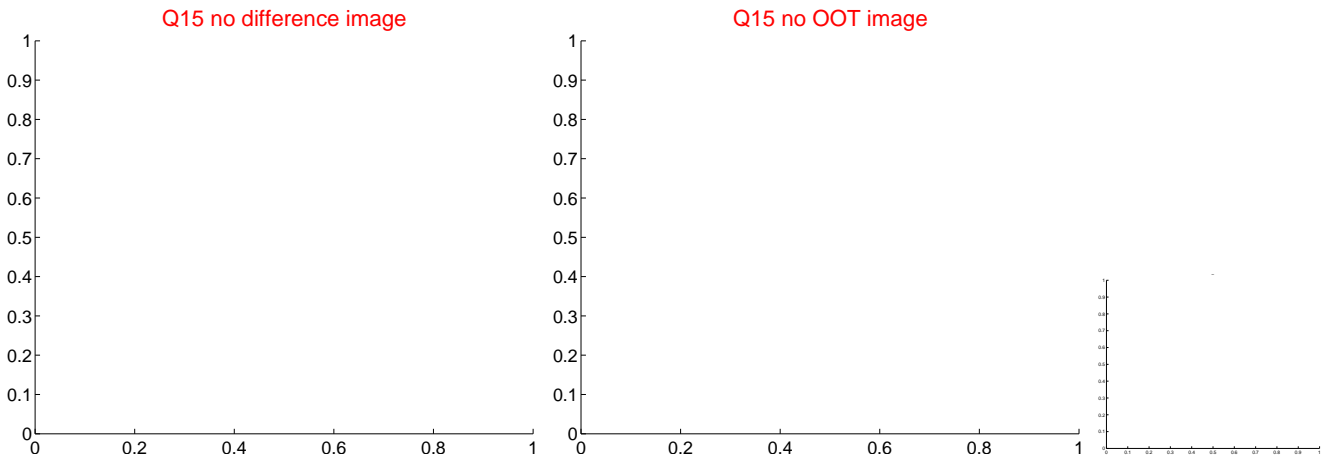
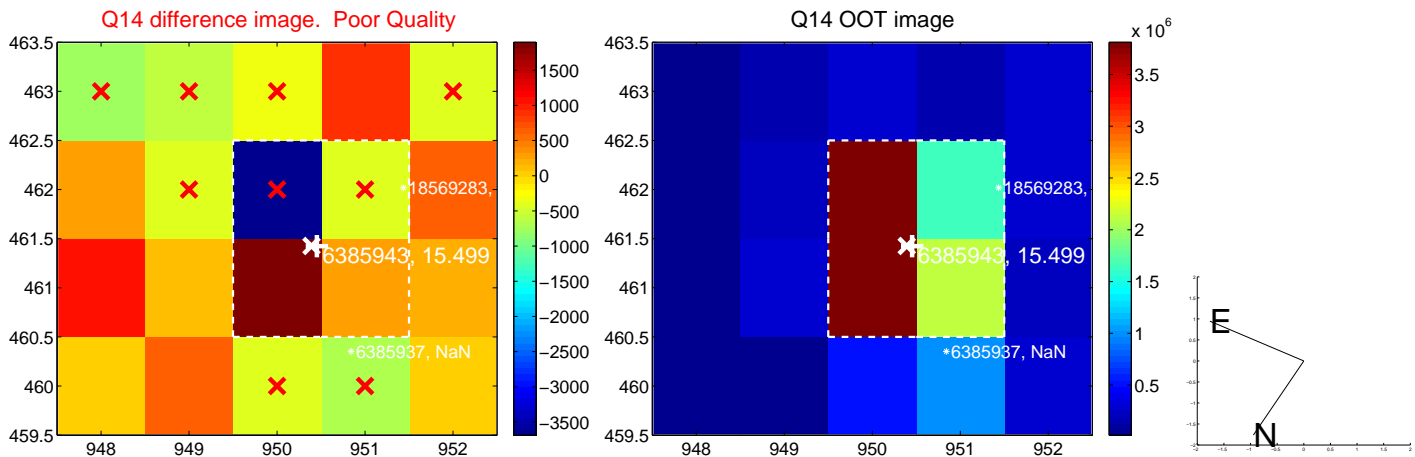
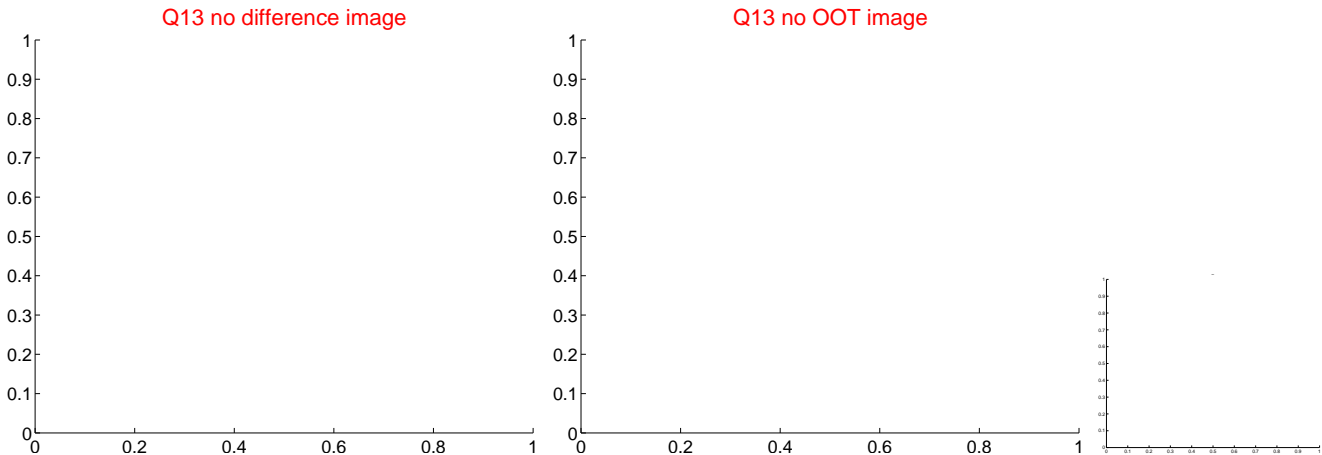
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



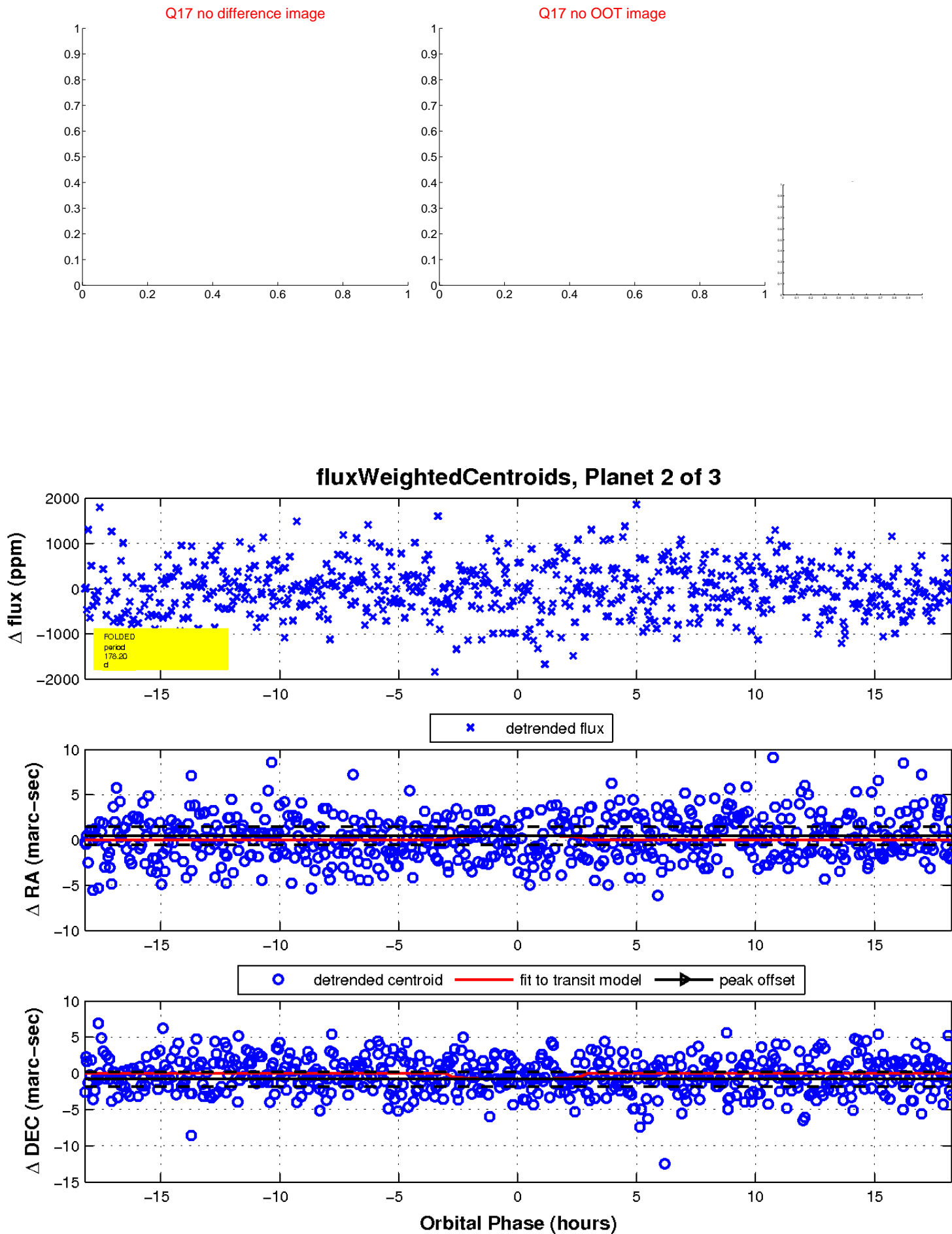
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

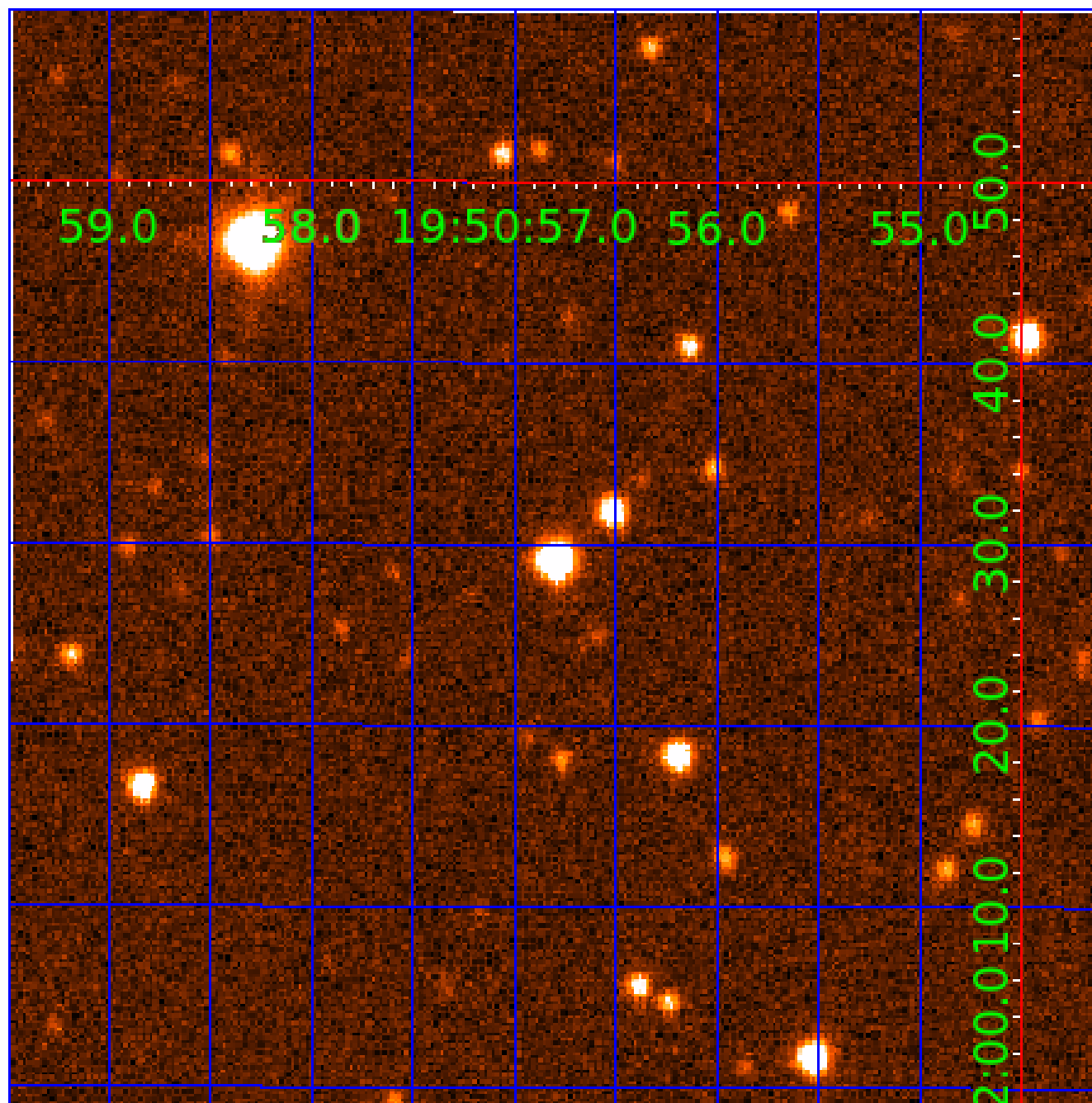


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006385943

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 006385943-01 | OBS | No | 3.353011 | 131.661661 | 137.9 | 17.807 | 9.1 | 11.2 | 0.51 | 4410 | 0.78 | 70.93 |
| 006385943-02 | OBS | No | 178.198566 | 245.384332 | 1008.5 | 6.084 | 13.6 | 7.4 | 0.51 | 4410 | 1.74 | 0.35 |
| 006385943-03 | OBS | No | 217.124672 | 312.176265 | 883.6 | 15.235 | 11.0 | 6.1 | 0.51 | 4410 | 1.62 | 0.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006385943-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 006385943-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS |
| 006385943-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS |

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

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

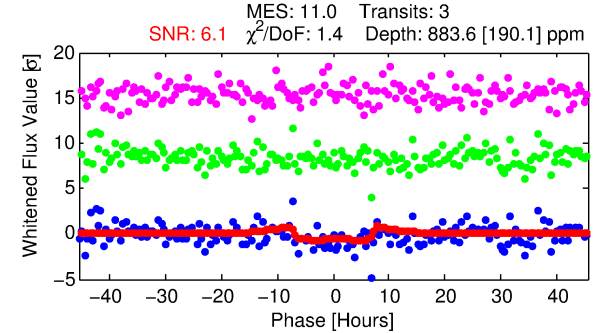
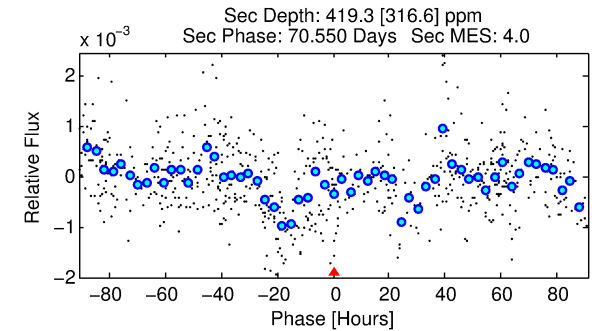
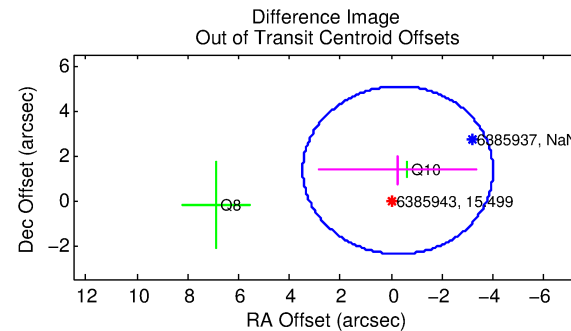
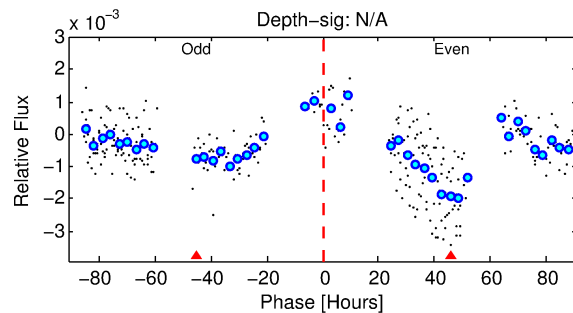
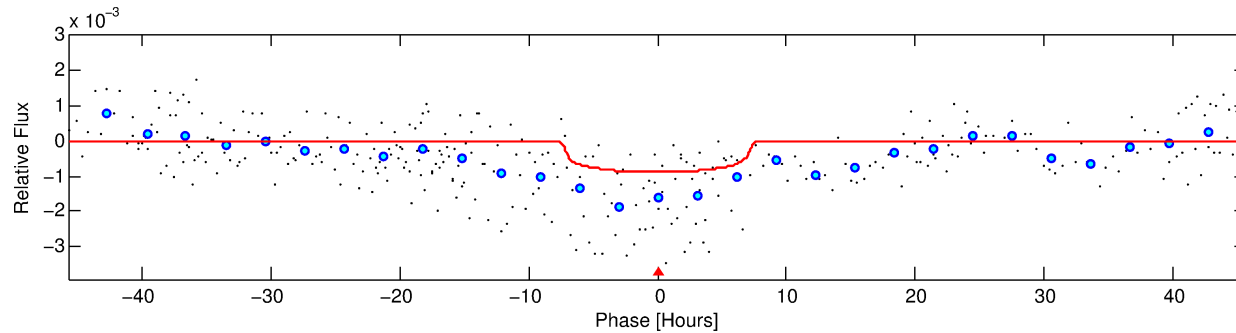
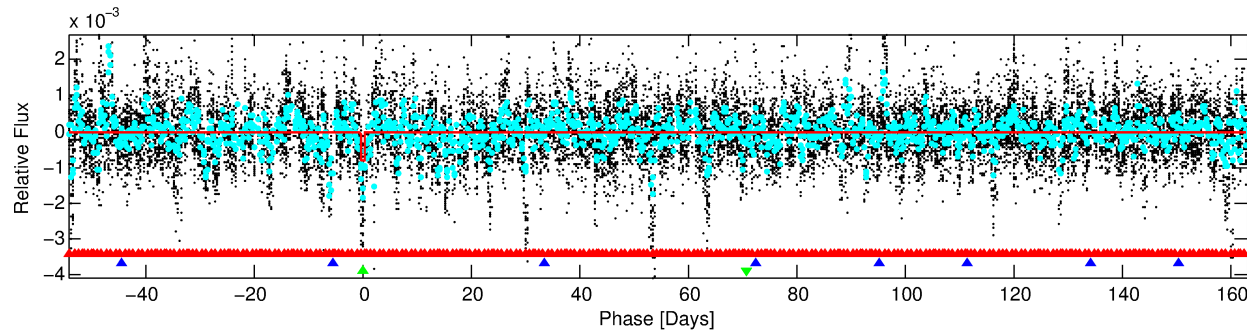
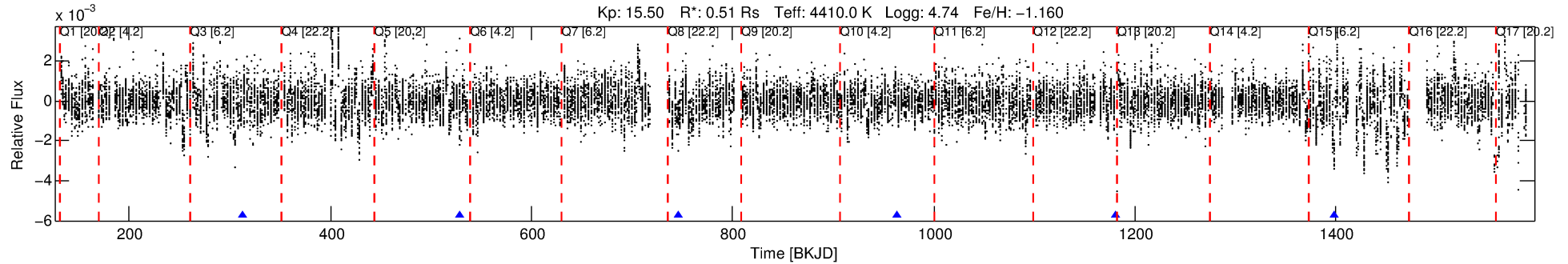
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006385943-03

No Significant Match Found

DV One-Page Summary

KIC: 6385943 Candidate: 3 of 3 Period: 217.125 d



DV Fit Results:

Period = 217.12467 [0.01115] d
Epoch = 312.1763 [0.0319] BKJD
Rp/R* = 0.0293 [0.0117]
a/R* = 79.95 [124.75]
b = 0.72 [1.05]
Seff = 0.27 [0.04]
Teq = 184 [7] K
Rp = 1.62 [0.66] Re
a = 0.5640 [0.0421] AU
Ag = 28047.24 [30971.53] [0.91σ]
Teffp = 3687 [1019] K [3.44σ]

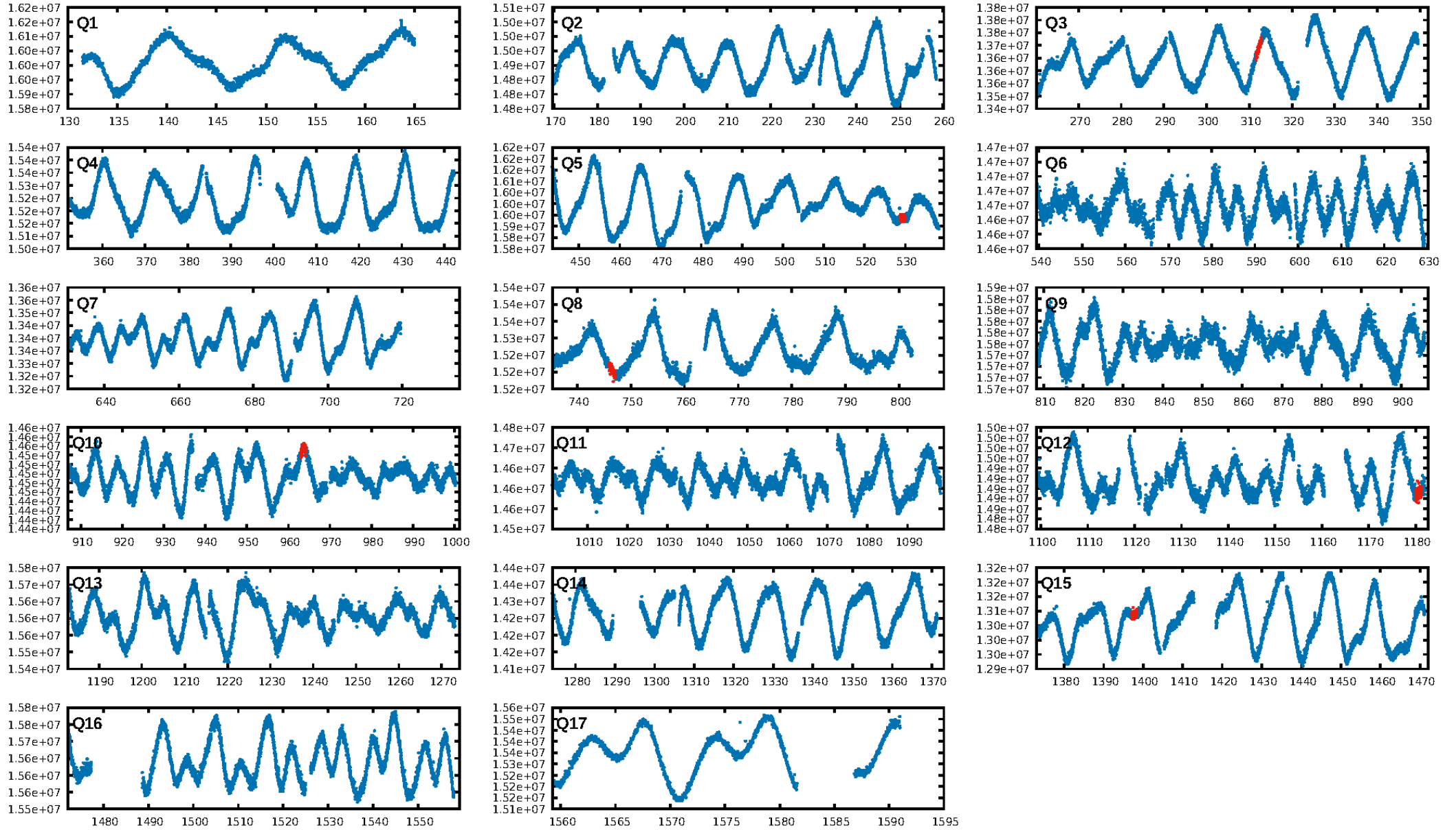
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.95σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.2%
ModelChiSquareGof-sig: 92.3%
Bootstrap-pfa: 2.54e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.284
Centroid-sig: 0.1%
Centroid-so: 2.015 arcsec [2.29σ]
OotOffset-rm: 1.368 arcsec [1.10σ]
KicOffset-rm: 1.348 arcsec [1.32σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/5]

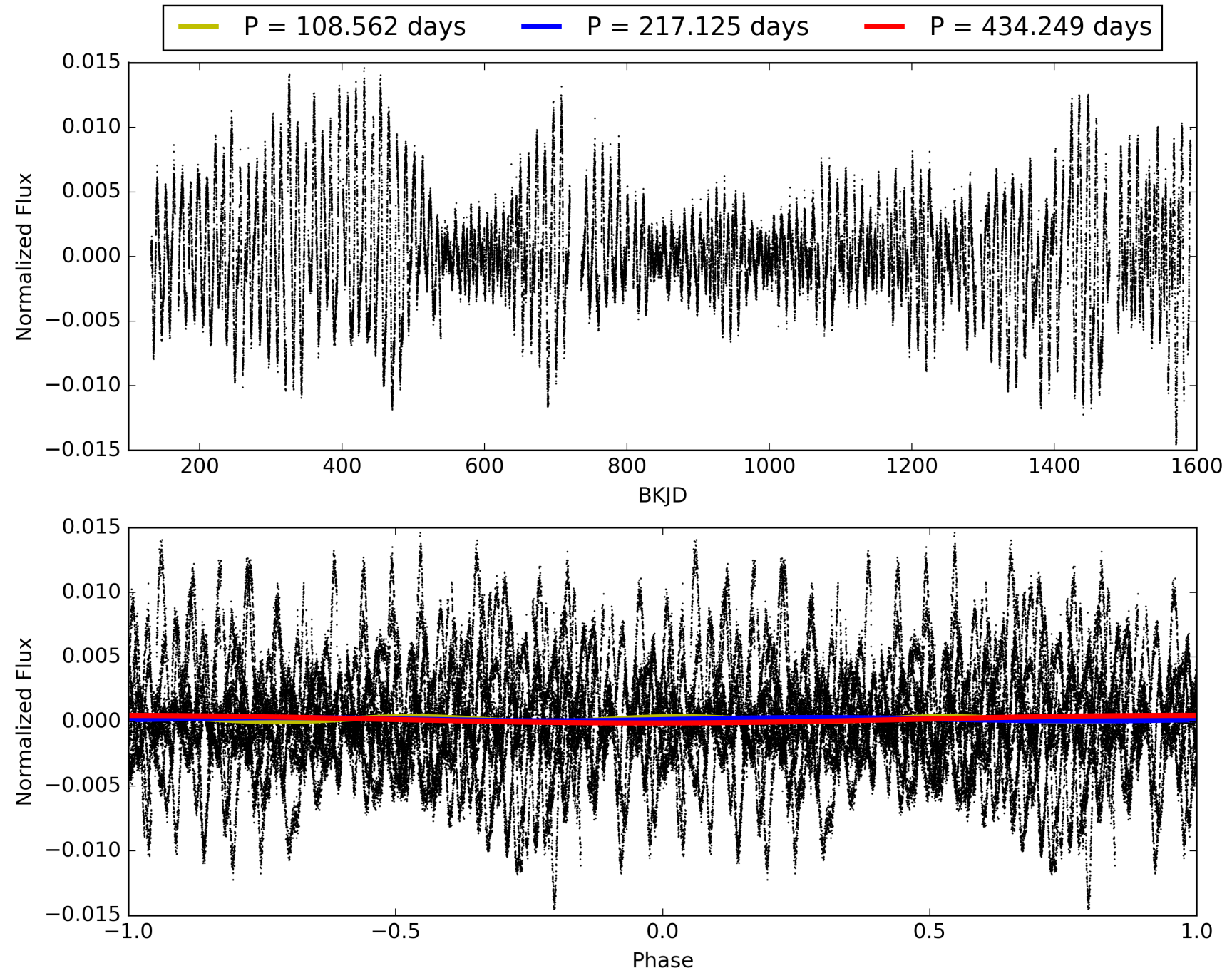
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:49:24 Z

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

TCE 006385943-03, PDC Light Curves

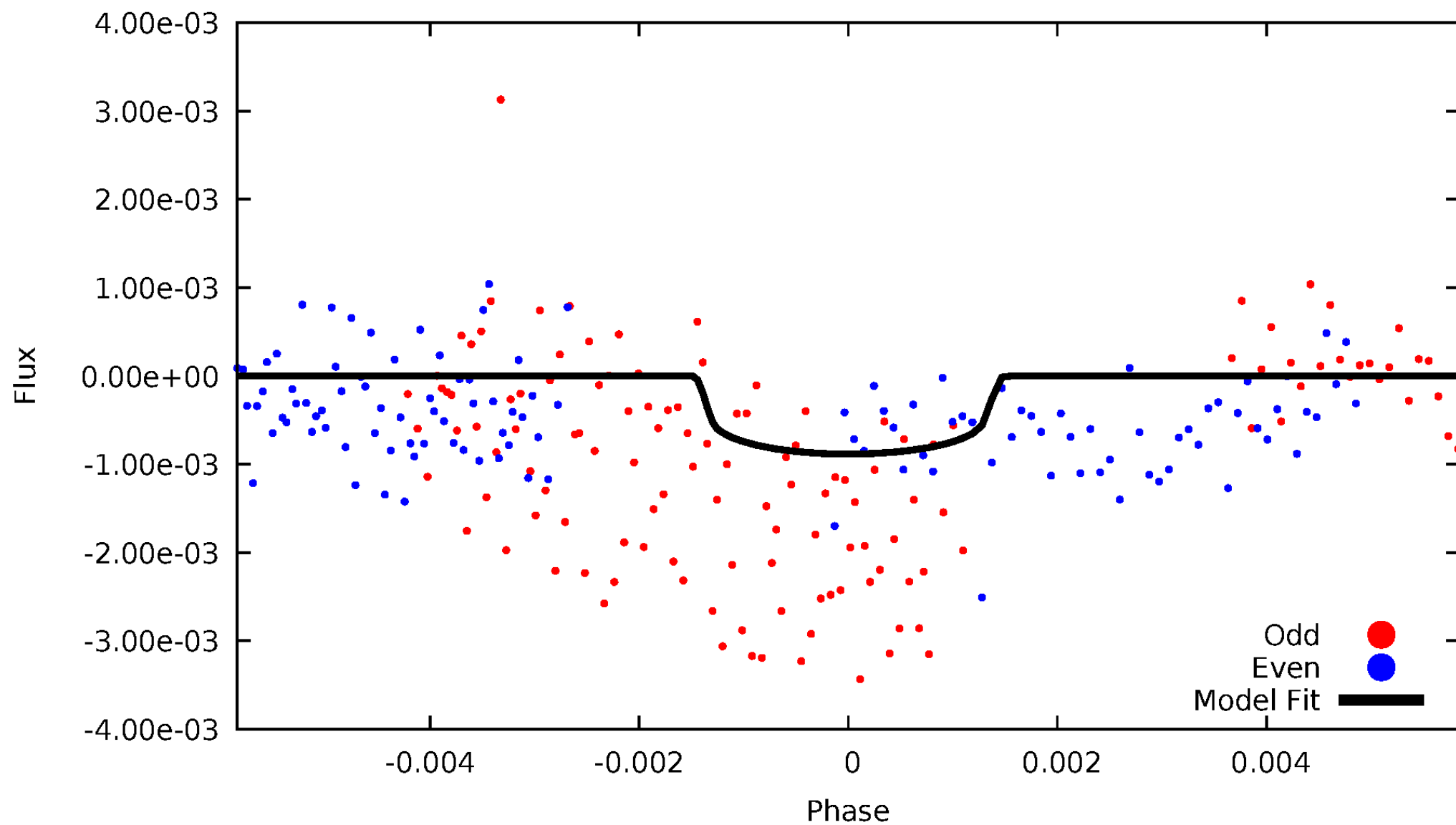


TCE 006385943-03



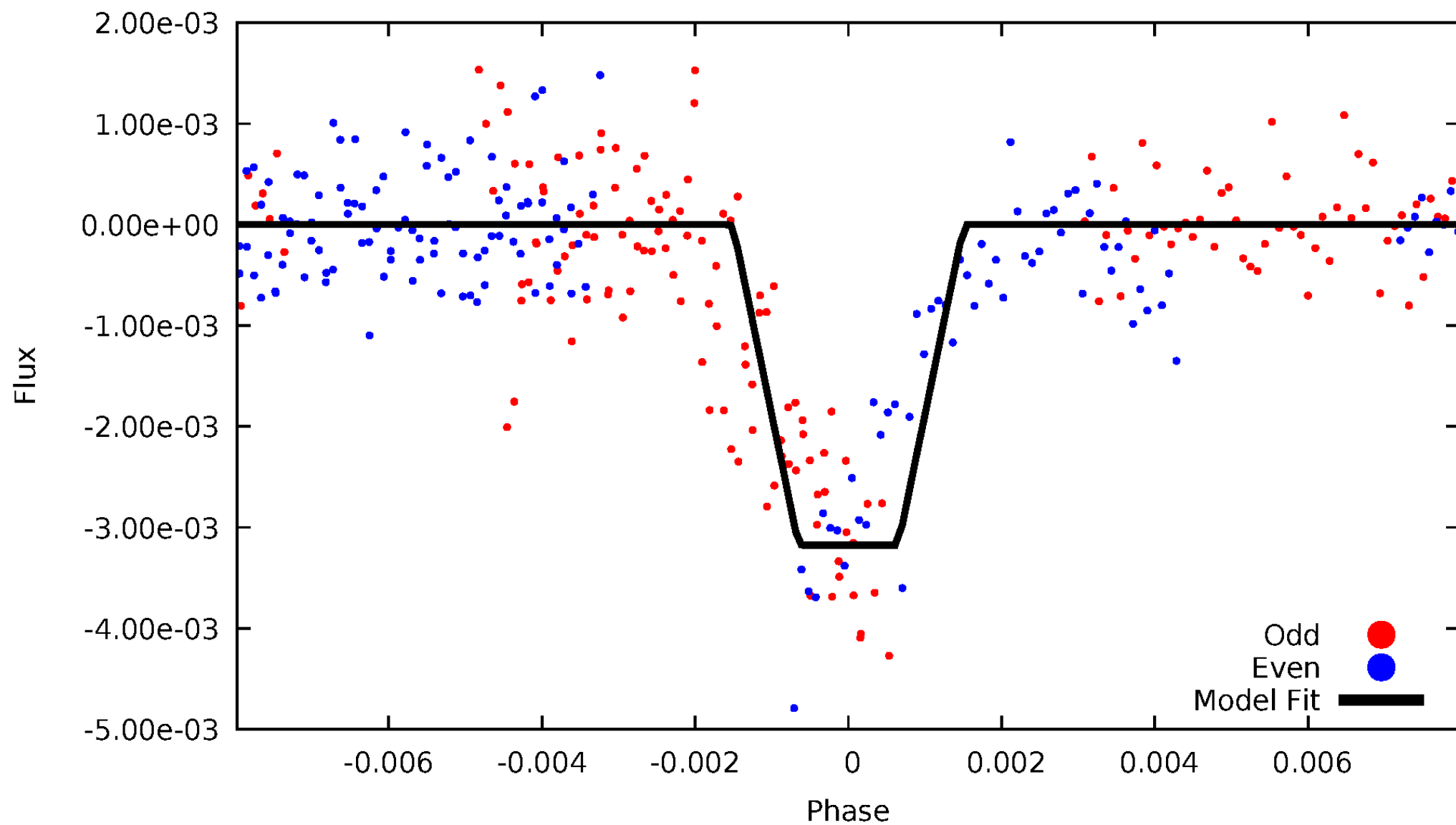
DV Odd/Even

TCE 006385943-03



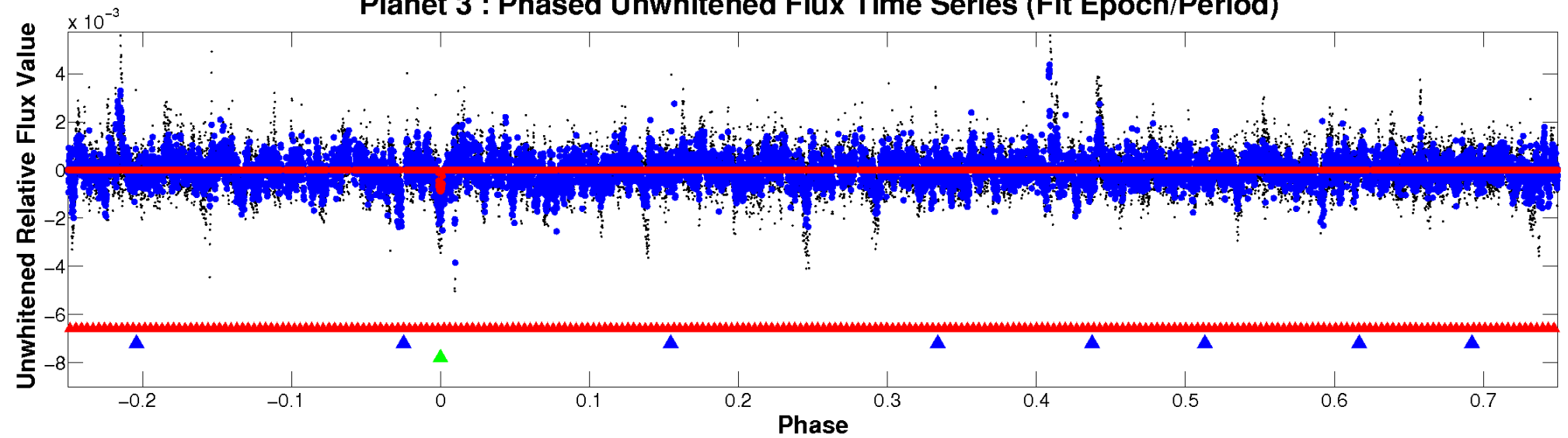
ALT Odd/Even

TCE 006385943-03

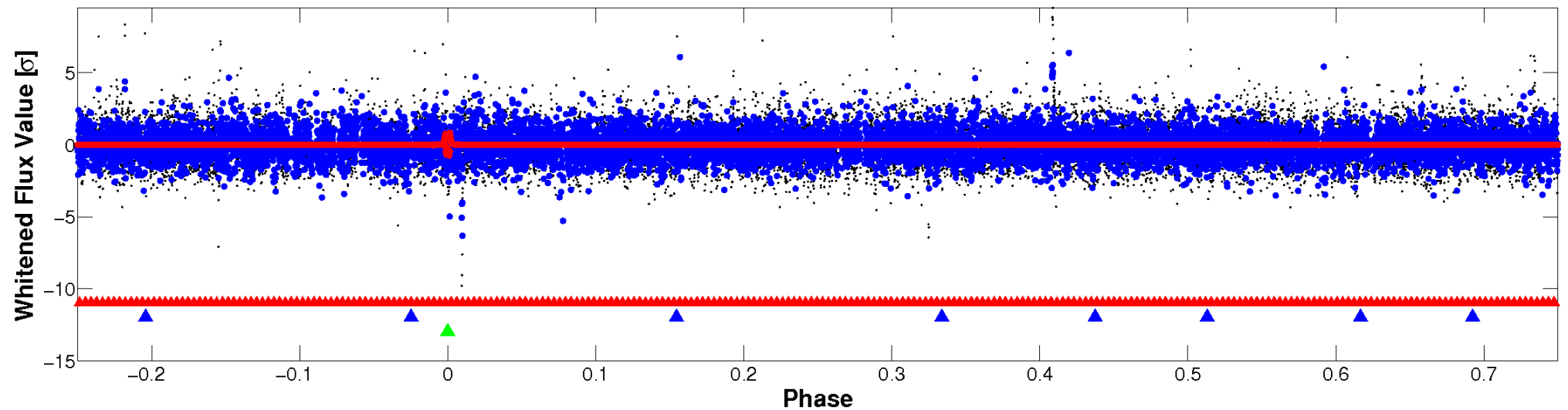


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

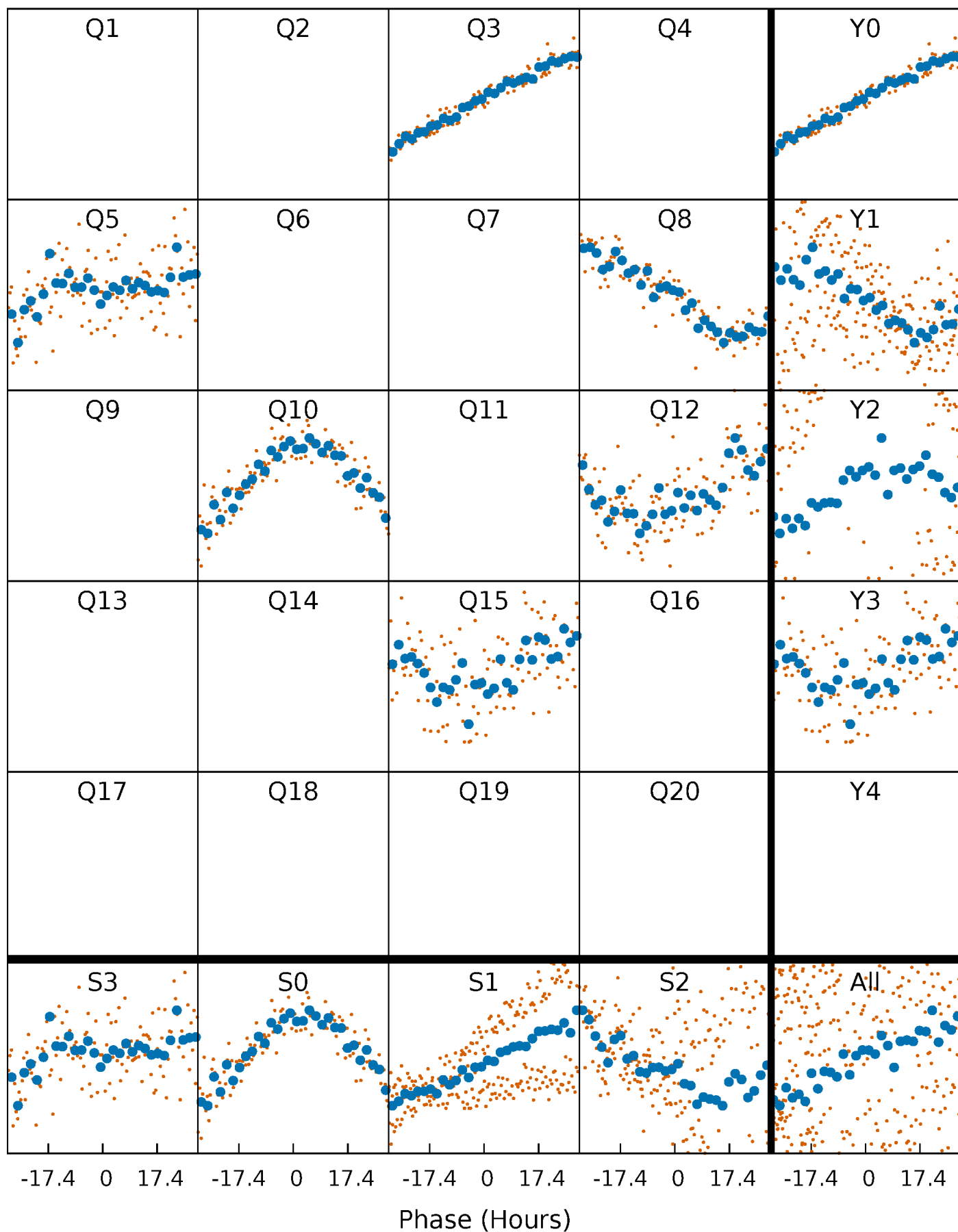


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



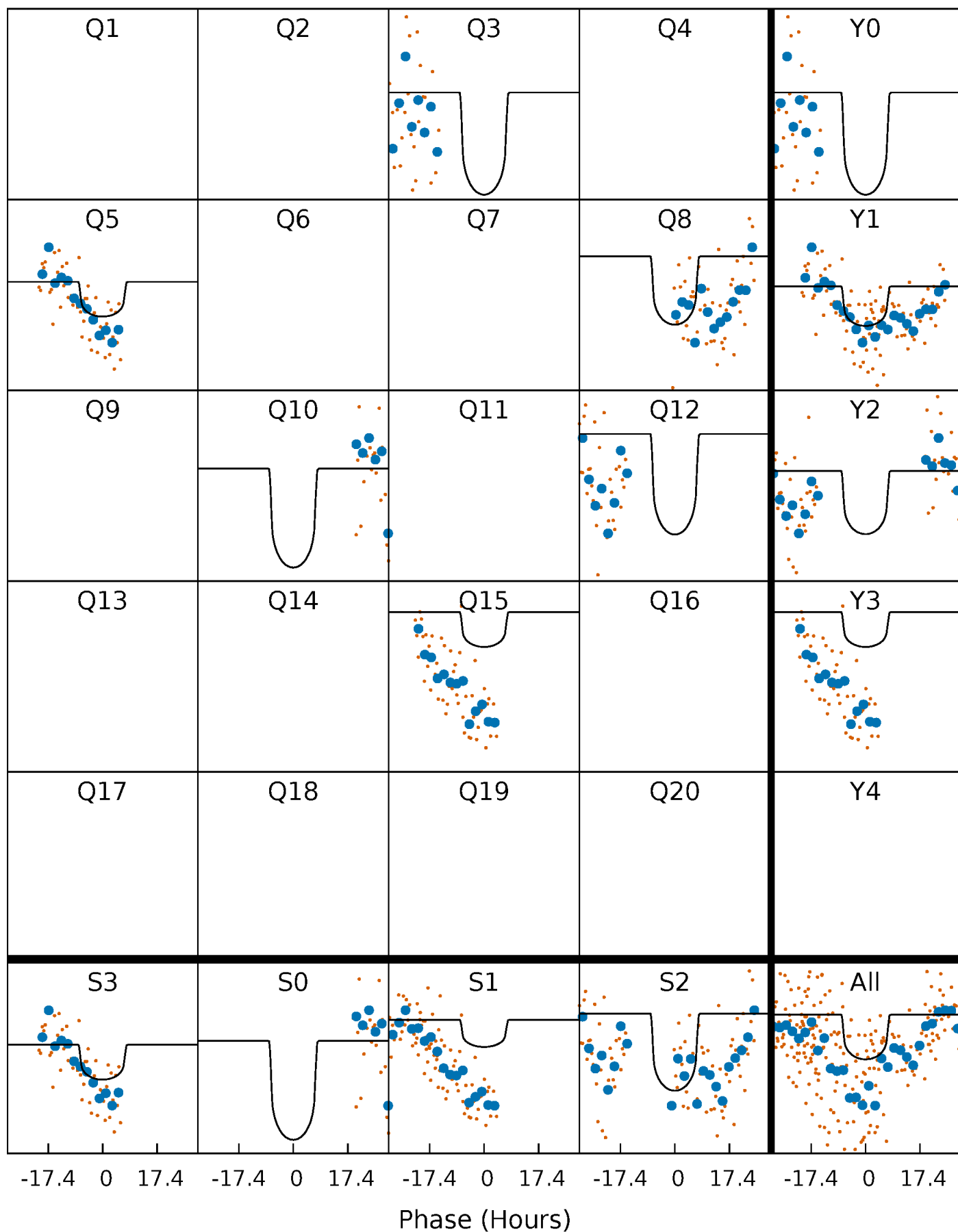
PDC Quarter-Phased Transit Curves

TCE 006385943-03 P=217.124672 Days $T_0=312.176265$ (BKJD)



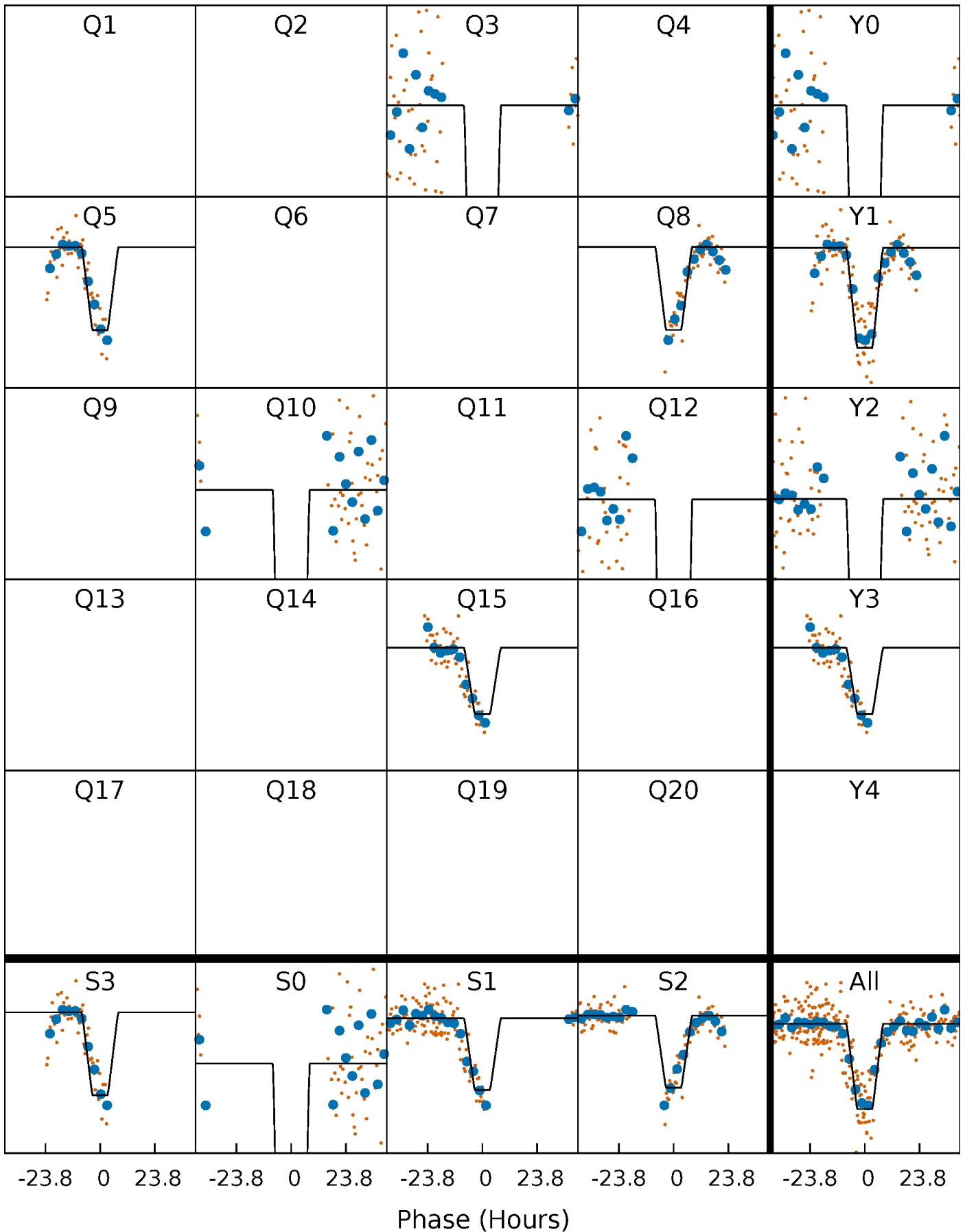
DV Quarter-Phased Transit Curves

TCE 006385943-03 $P=217.124672$ Days $T_0=312.176265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

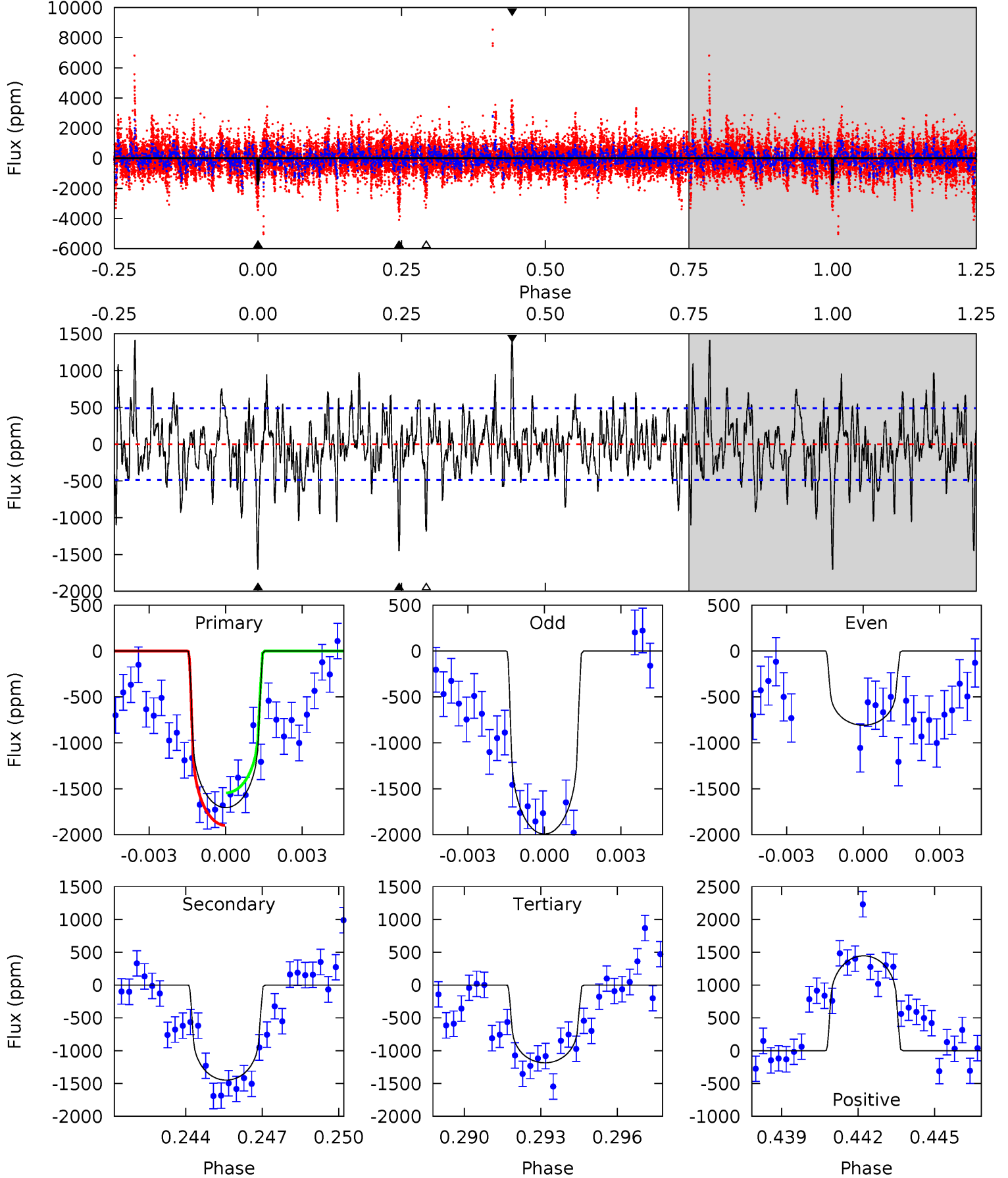
TCE 006385943-03 $P=217.127009$ Days $T_0=312.296659$ (BKJD)



DV Model-Shift Uniqueness Test

006385943-03, P = 217.124672 Days, E = 95.051593 Days

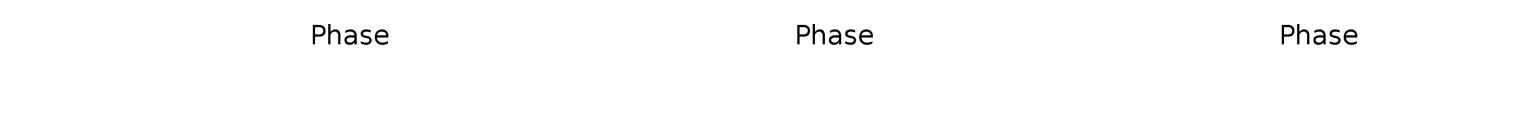
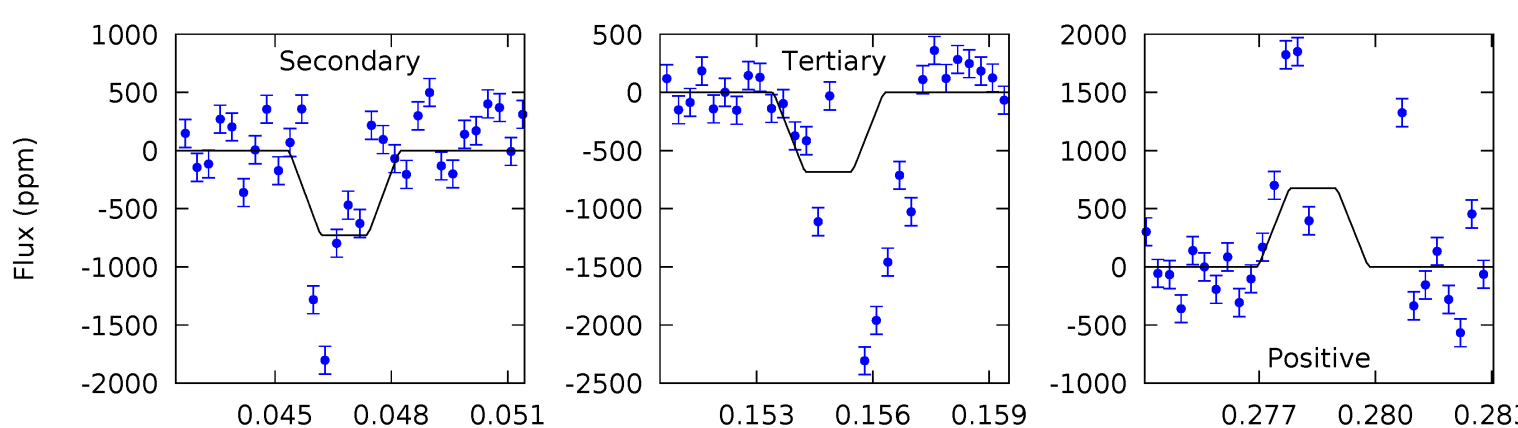
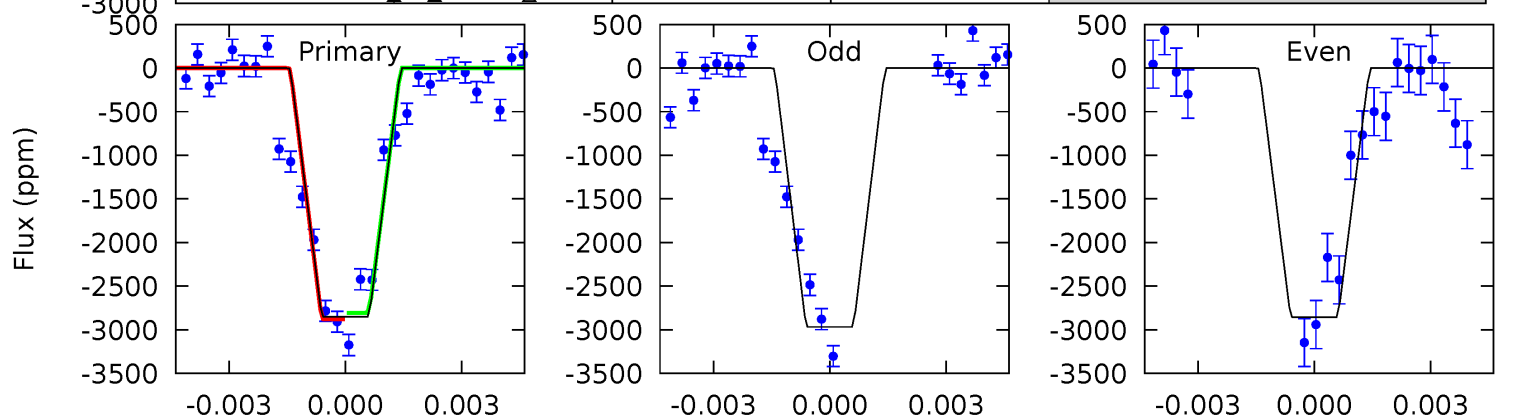
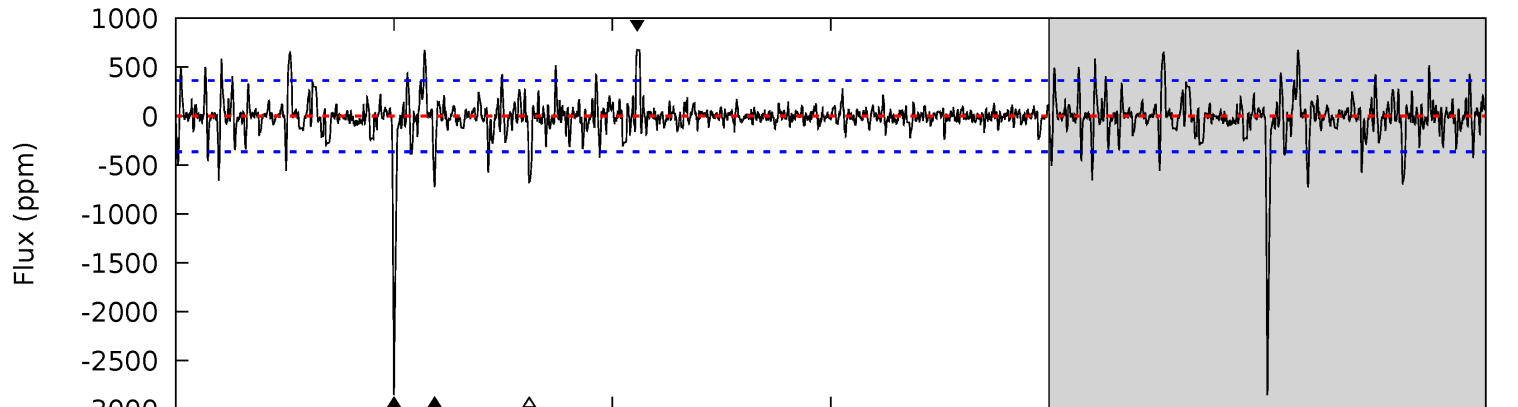
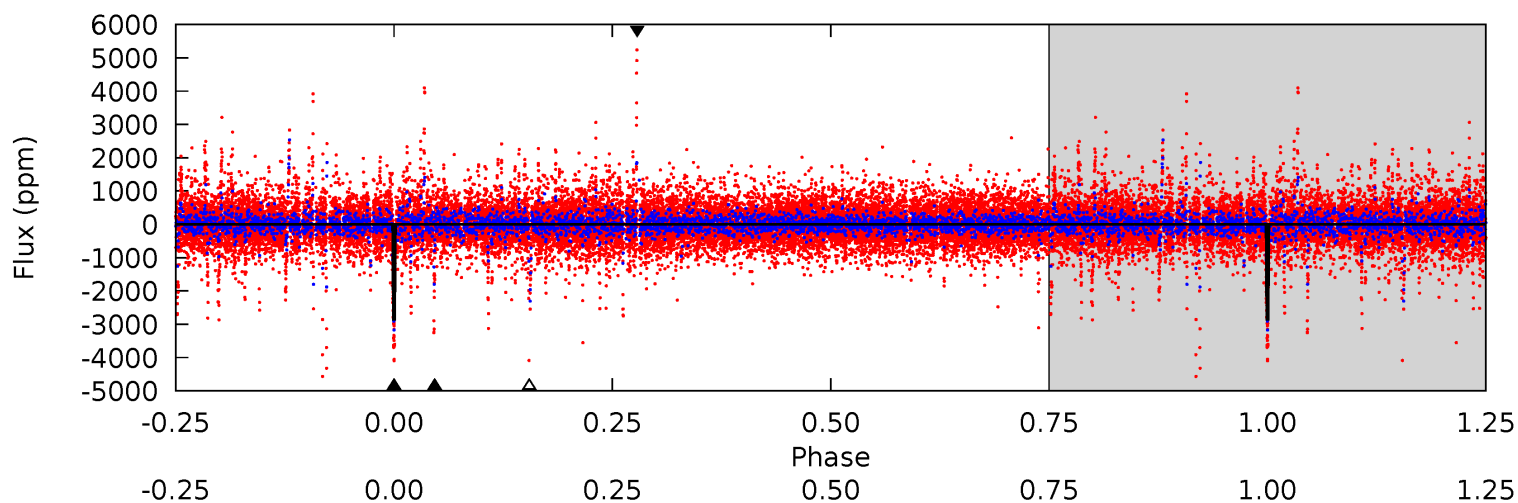
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 18.3 | 15.6 | 12.7 | 15.5 | 5.25 | 2.96 | 3.69 | 5.59 | 2.80 | 2.83 | 0.04 | 5.16 | 1.30 | 0.46 | 1.90 |



Alt Model-Shift Uniqueness Test

006385943-03, P = 217.127009 Days, E = 95.169650 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 41.0 | 10.4 | 9.83 | 9.72 | 5.24 | 2.95 | 1.82 | 31.1 | 31.2 | 0.61 | 0.72 | 0.73 | 1.03 | 0.19 | 0.51 |



Stellar Parameters For KIC 006385943

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 4410^{+133}_{-133} | $4.735^{+0.059}_{-0.032}$ | $-1.160^{+0.300}_{-0.300}$ | $0.506^{+0.033}_{-0.045}$ | $0.508^{+0.037}_{-0.034}$ | $5.517^{+1.369}_{-0.670}$ |
| | +3%/-3% | +1%/-1% | +26%/-26% | +7%/-9% | +7%/-7% | +25%/-12% |
| 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 006385943-03 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|----------------|------------------------|----------------------|-----------------------|-----------------------------|
| DV | -1449 ± 93 | $1.59^{+0.68}_{-0.64}$ | 256^{+9}_{-9} | 4936^{+1346}_{-669} | $101463^{+167983}_{-52066}$ |
| Alt. | -727 ± 70 | $3.04^{+0.69}_{-0.67}$ | 256^{+8}_{-9} | 3435^{+313}_{-229} | 13852^{+9553}_{-4783} |

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 $A_{\text{obs}} \gg 1.0$

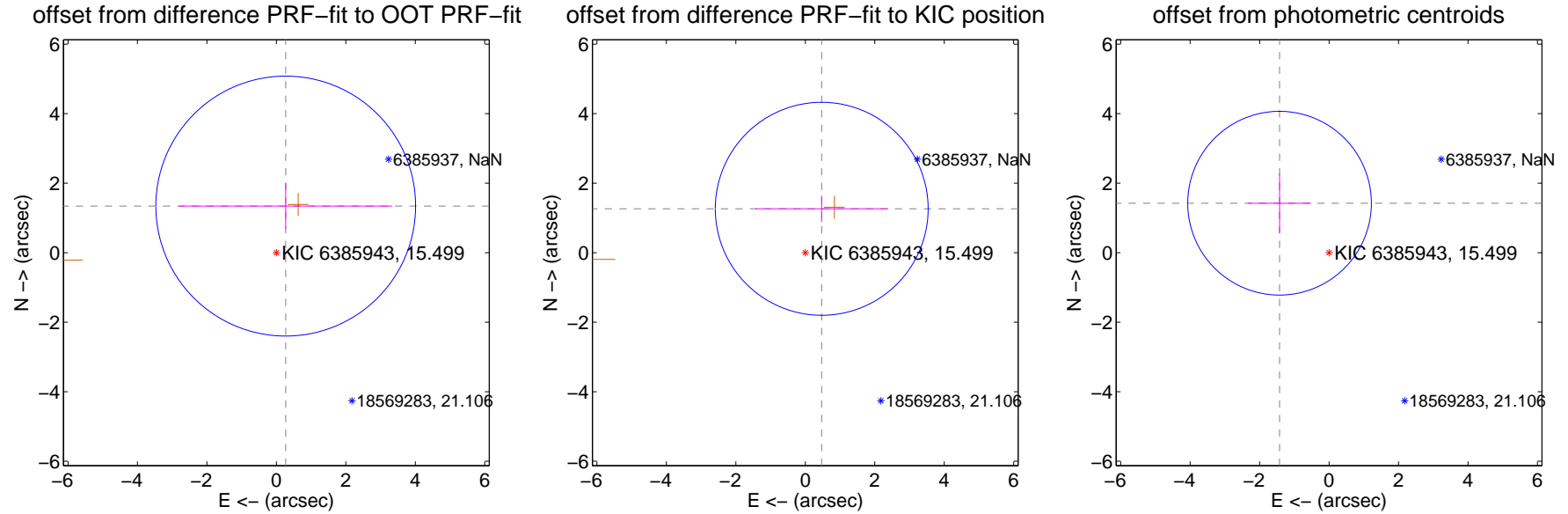
DV Centroid Data

Supplemental centroid analysis for 006385943-03. Kepler magnitude: 15.50. Transit SNR 6.06

There are 0 quarters with good PRF difference image offsets

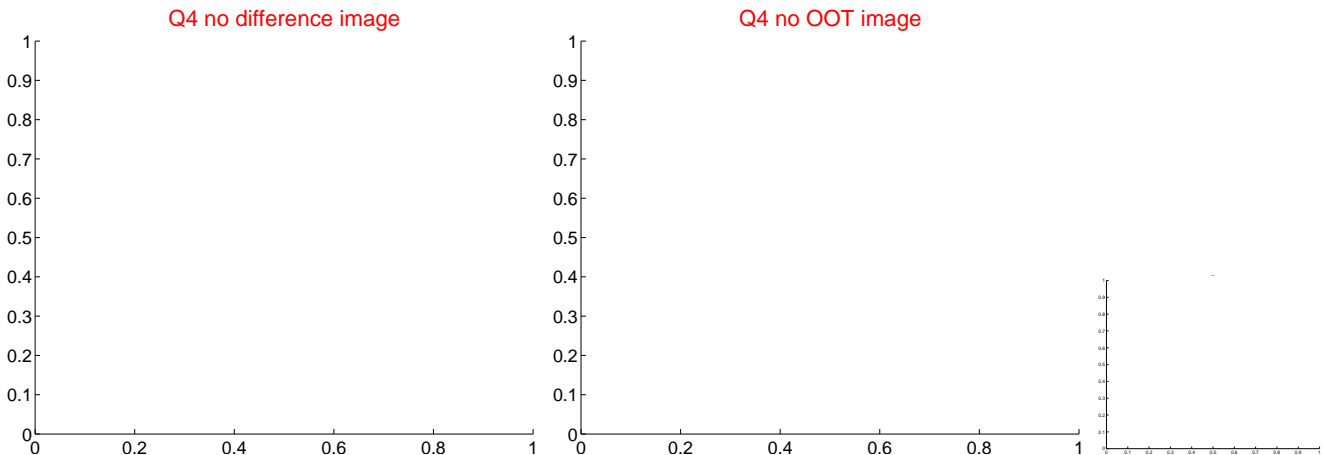
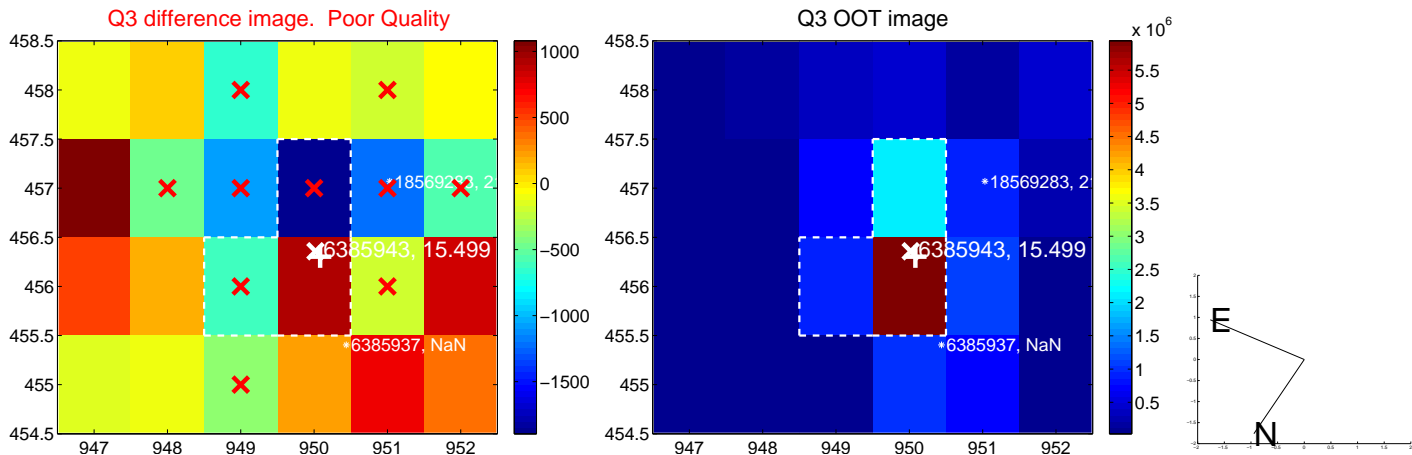
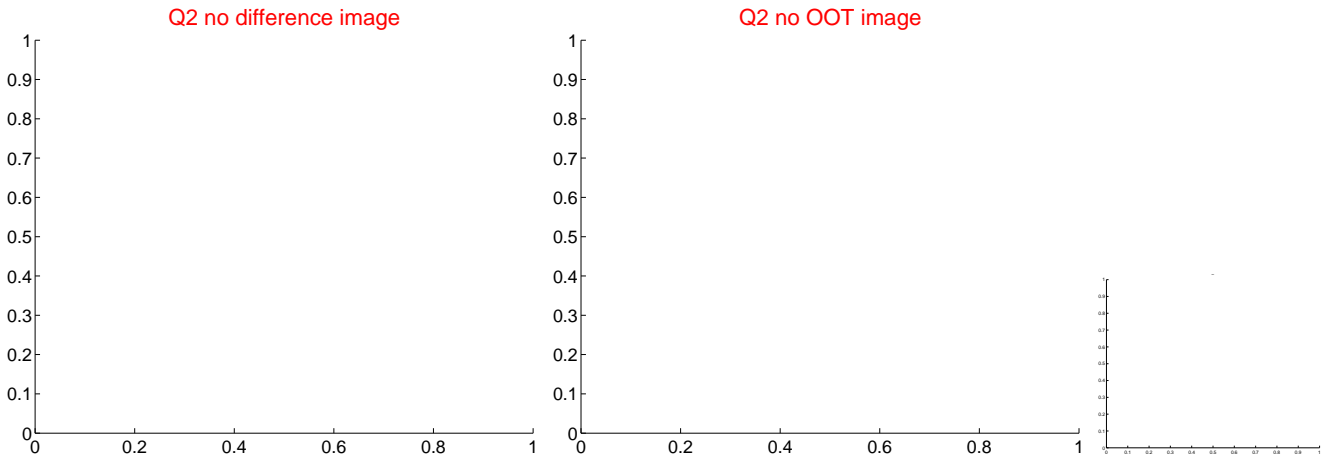
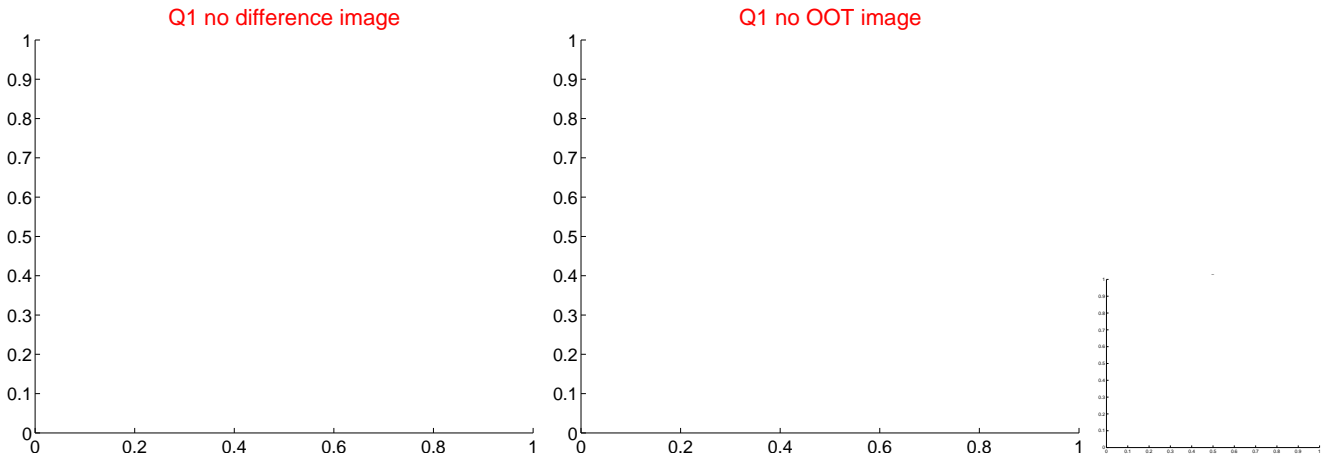
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 1.368 ± 1.246 | 1.10 | -0.269 ± 3.071 | 1.341 ± 0.658 |
| PRF-fit source offset from KIC position | 1.348 ± 1.021 | 1.32 | -0.473 ± 1.908 | 1.263 ± 0.380 |
| photometric centroid source offset | 2.02 ± 0.88 | 2.29 | 1.43 ± 0.90 | 1.42 ± 0.86 |

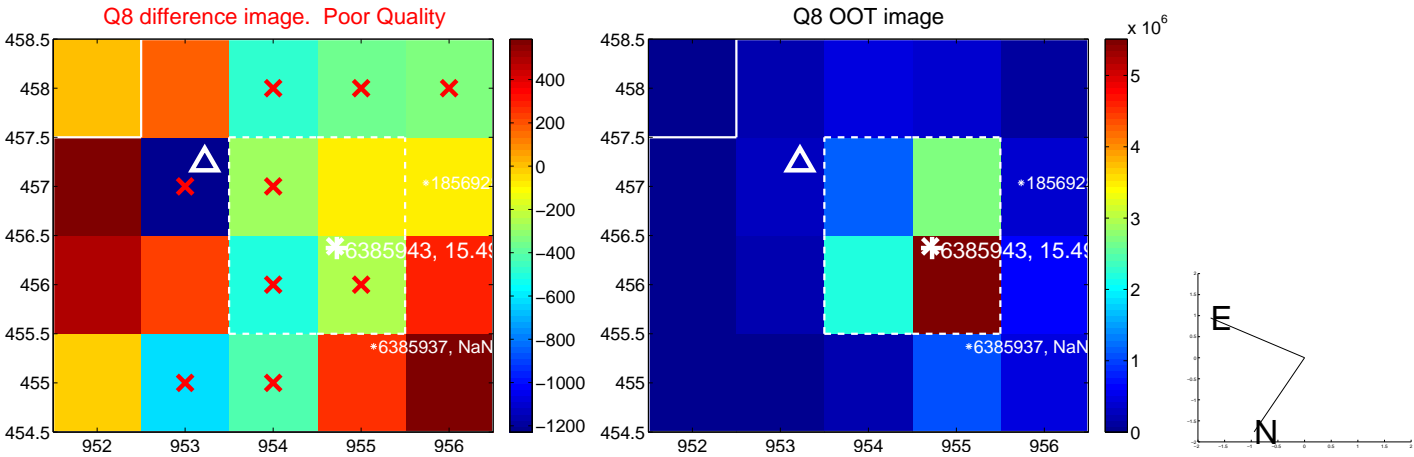
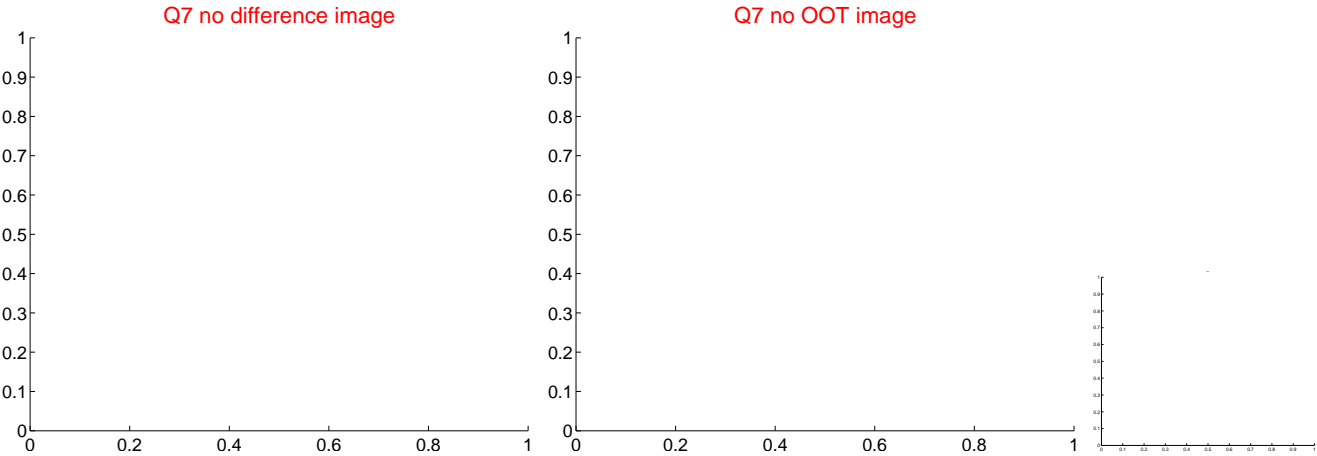
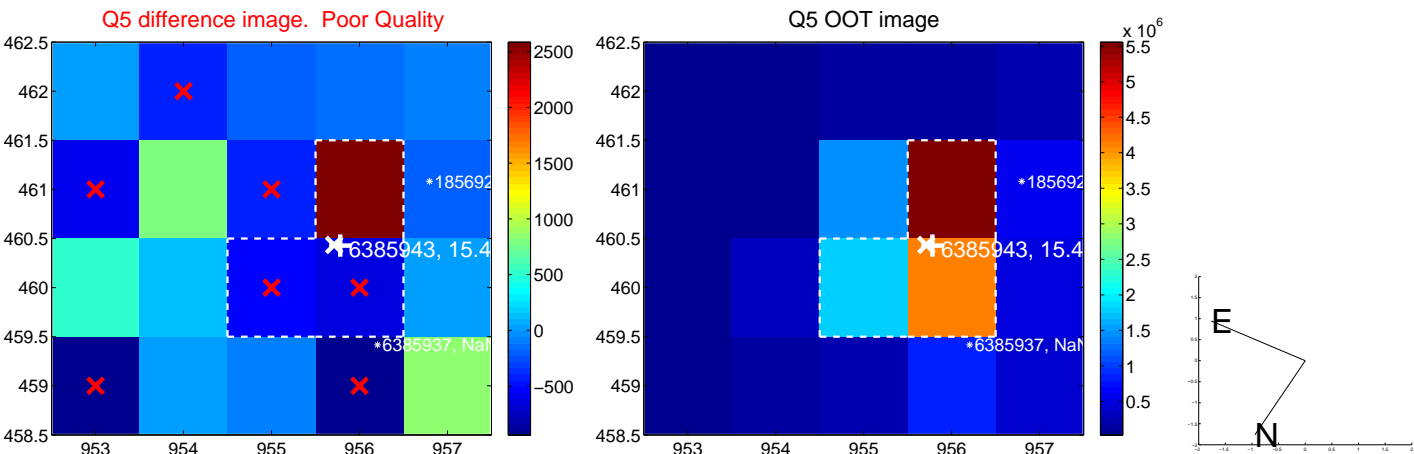


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

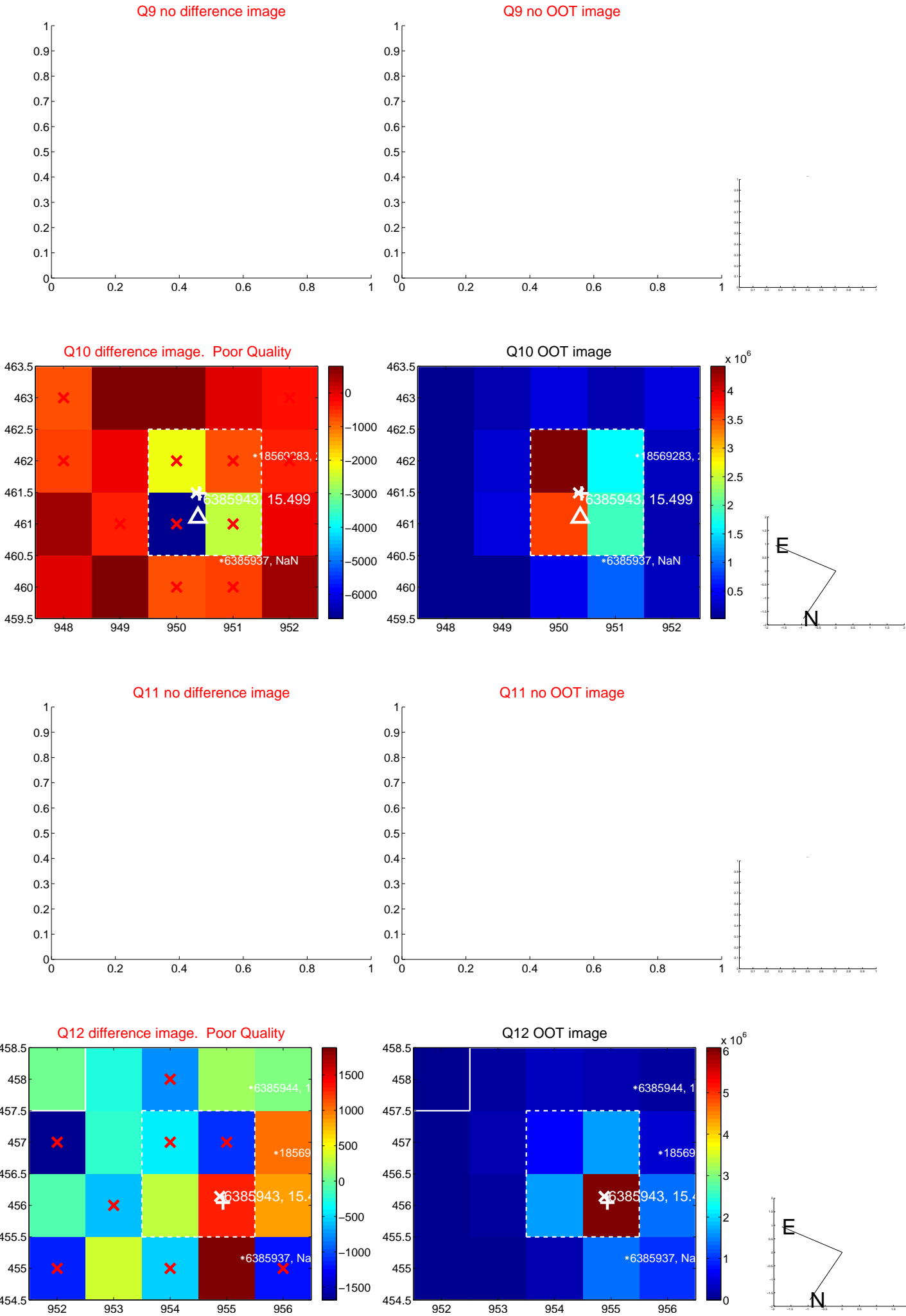
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



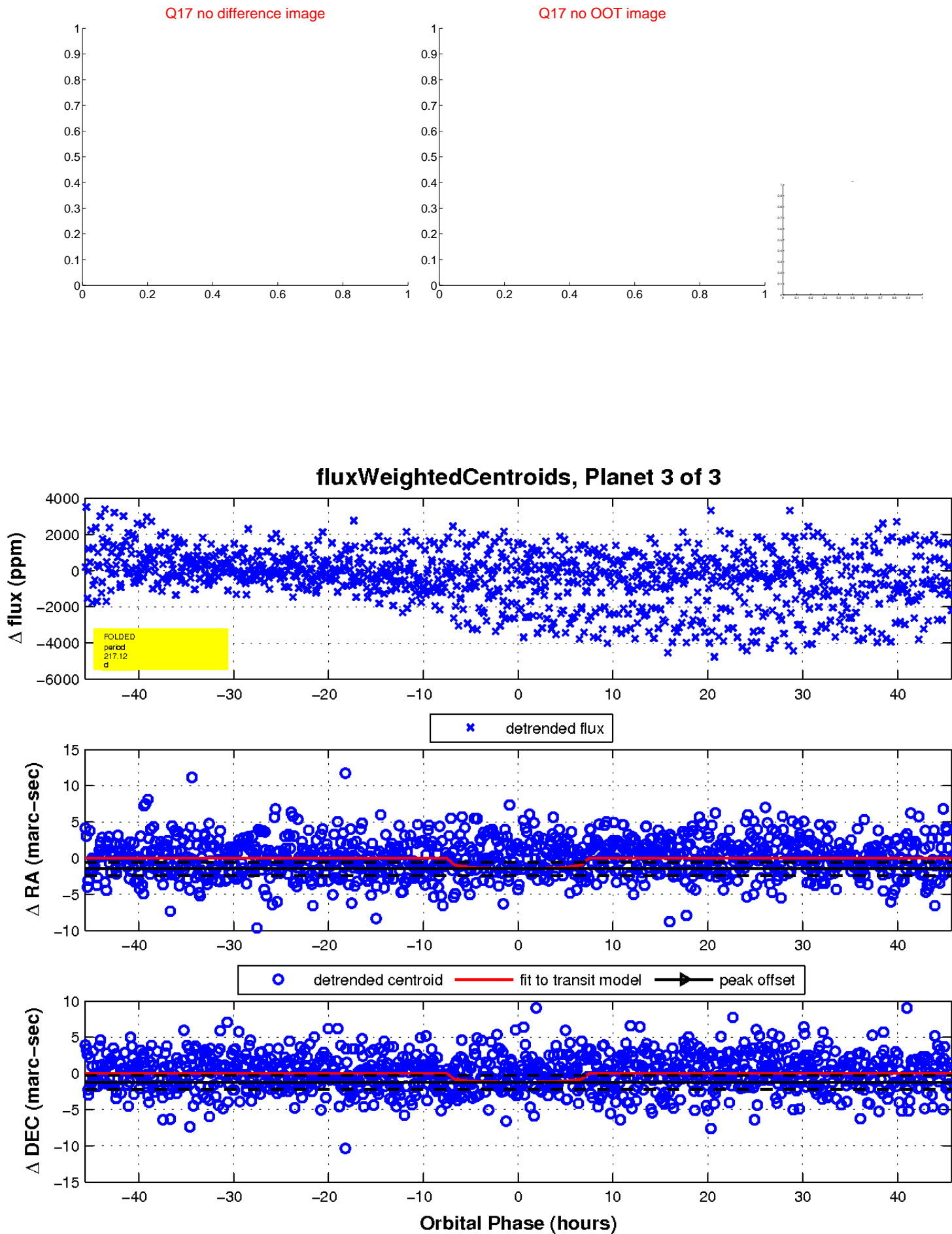
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

