

KIC 004483235

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 004483235-01 | OBS | 7550.01 | 1.760936 | 132.309365 | 38.9 | 4.224 | 13.6 | 14.4 | 1.97 | 8784 | 1.25 | 15844.38 |
| 004483235-02 | OBS | No | 3.521868 | 134.990428 | 0.0 | 0.766 | 7.9 | 0.0 | 1.97 | 8784 | 0.03 | 6287.85 |
| 004483235-03 | OBS | No | 3.522010 | 134.841895 | 26.5 | 8.237 | 7.9 | 7.4 | 1.97 | 8784 | 1.03 | 6287.52 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 004483235-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | SWEET_NTL—LPP_DV |
| 004483235-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS |
| 004483235-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

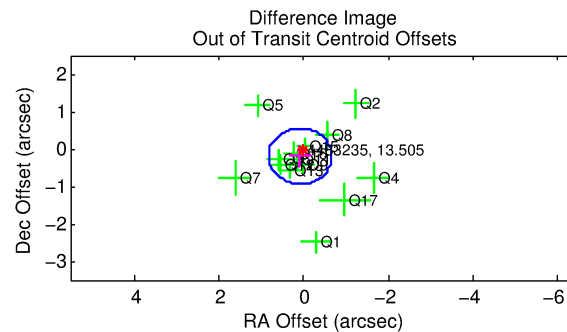
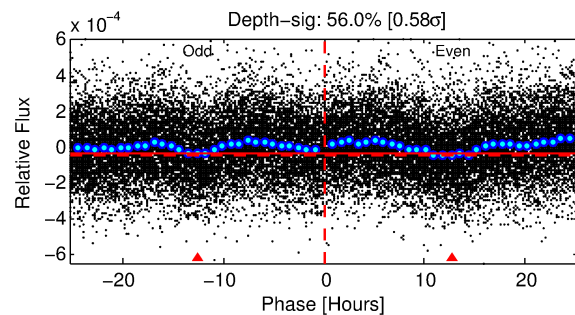
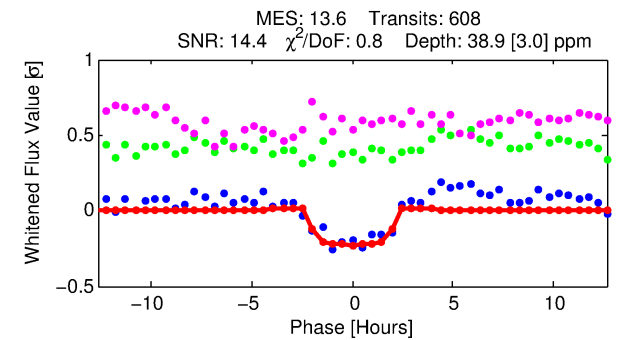
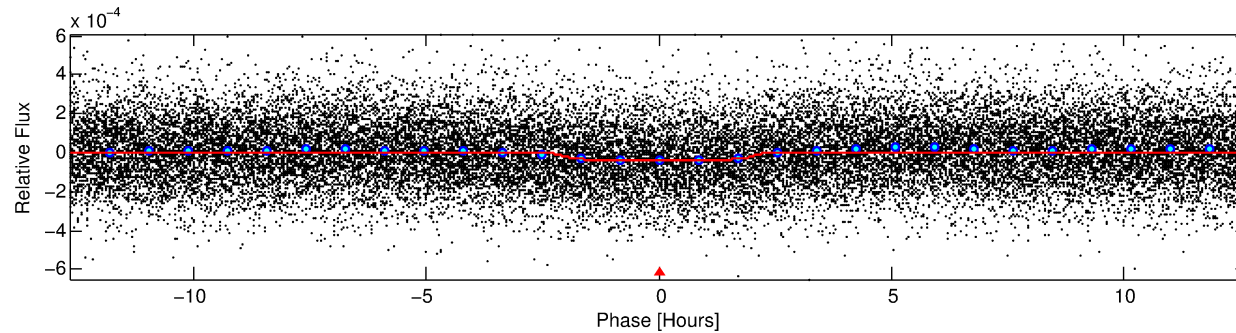
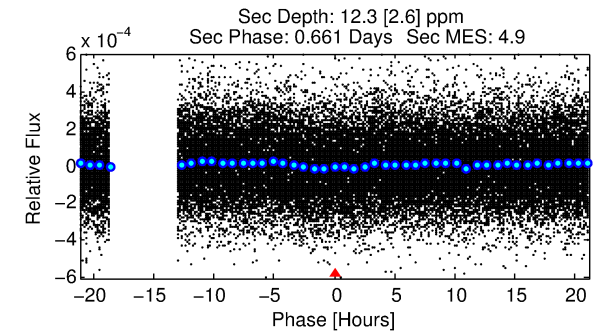
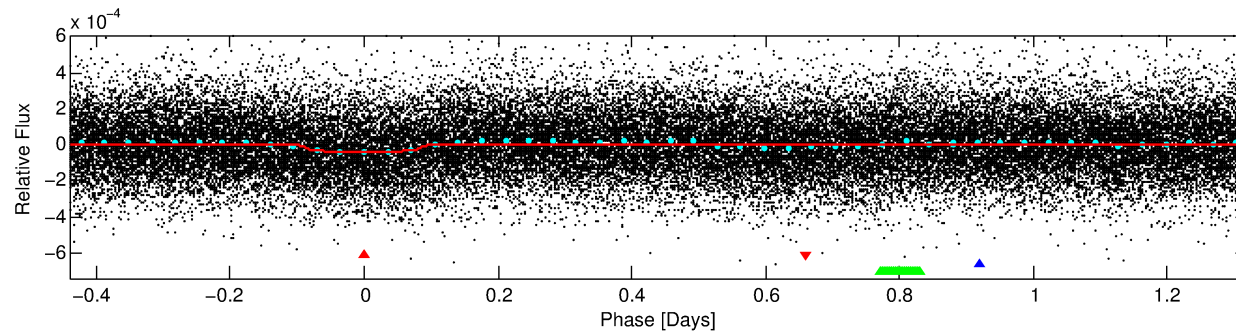
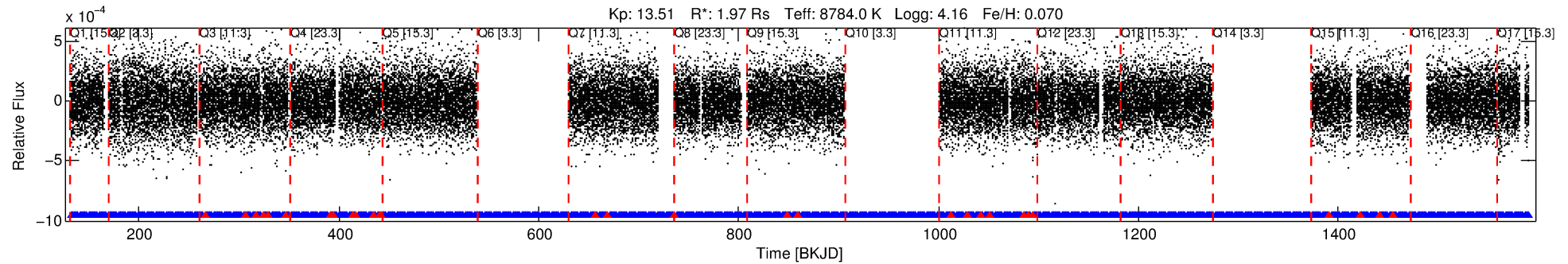
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004483235-01

No Significant Match Found

DV One-Page Summary

KIC: 4483235 Candidate: 1 of 3 Period: 1.761 d
KOI: K07550.01 Corr: 0.905



DV Fit Results:

Period = 1.76094 [0.00001] d
Epoch = 132.3094 [0.0035] BKJD
Rp/R* = 0.0058 [0.0048]
a/R* = 3.25 [15.06]
b = 0.08 [64.63]
Seff = 15844.38 [6532.60]
Teq = 2861 [295] K
Rp = 1.25 [1.12] Re
a = 0.0361 [0.0099] AU
Ag = 5.65 [9.60] [0.48σ]
Teffp = 6818 [2849] K [1.38σ]

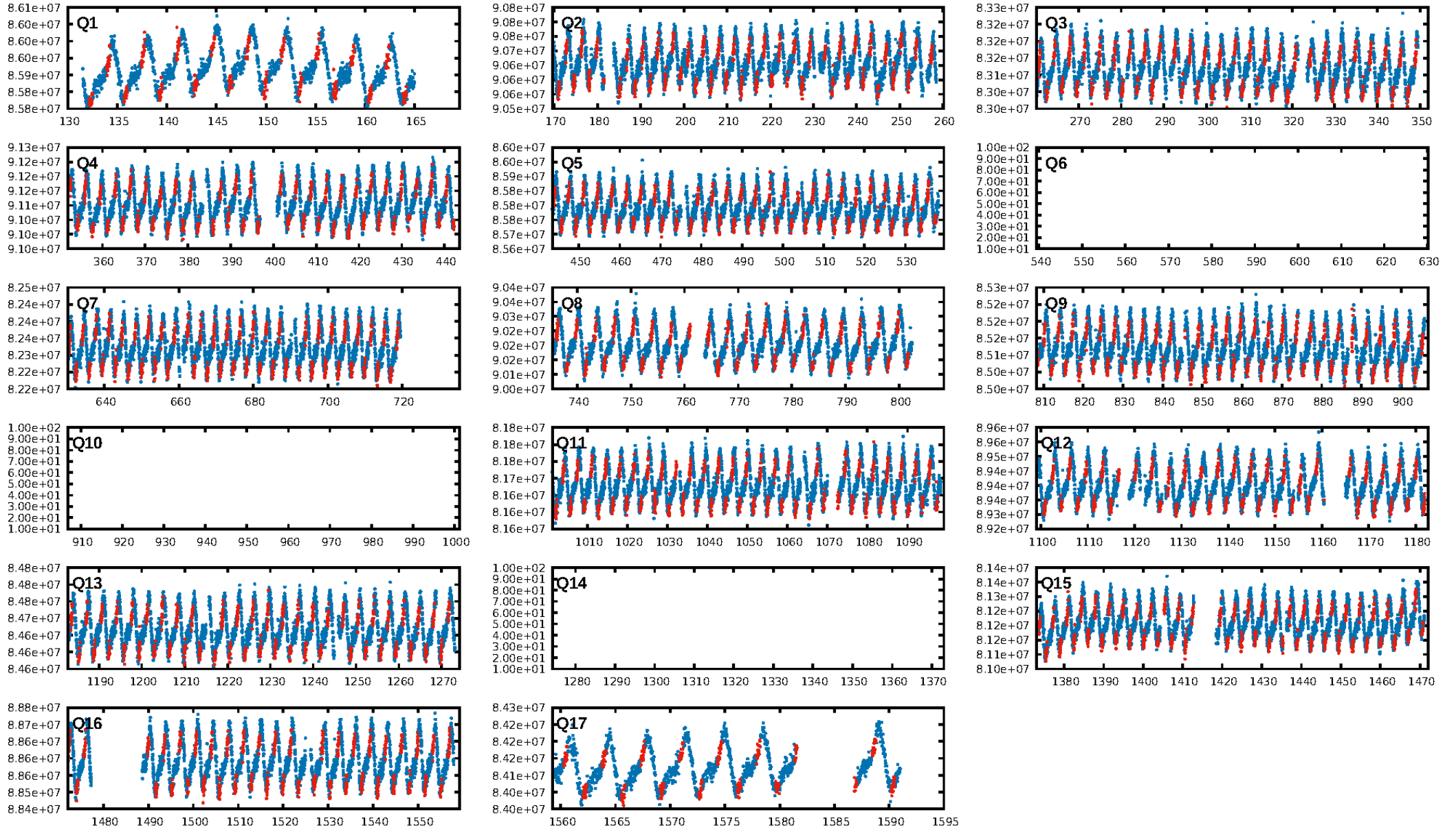
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [9.84σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.64e-35
RollingBand-fgt: 0.95 [544/573]
GhostDiagnostic-chr: 6.072
Centroid-sig: 74.4%
Centroid-so: 1.334 arcsec [1.12σ]
OotOffset-rm: 0.211 arcsec [0.85σ]
KicOffset-rm: 0.158 arcsec [0.66σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

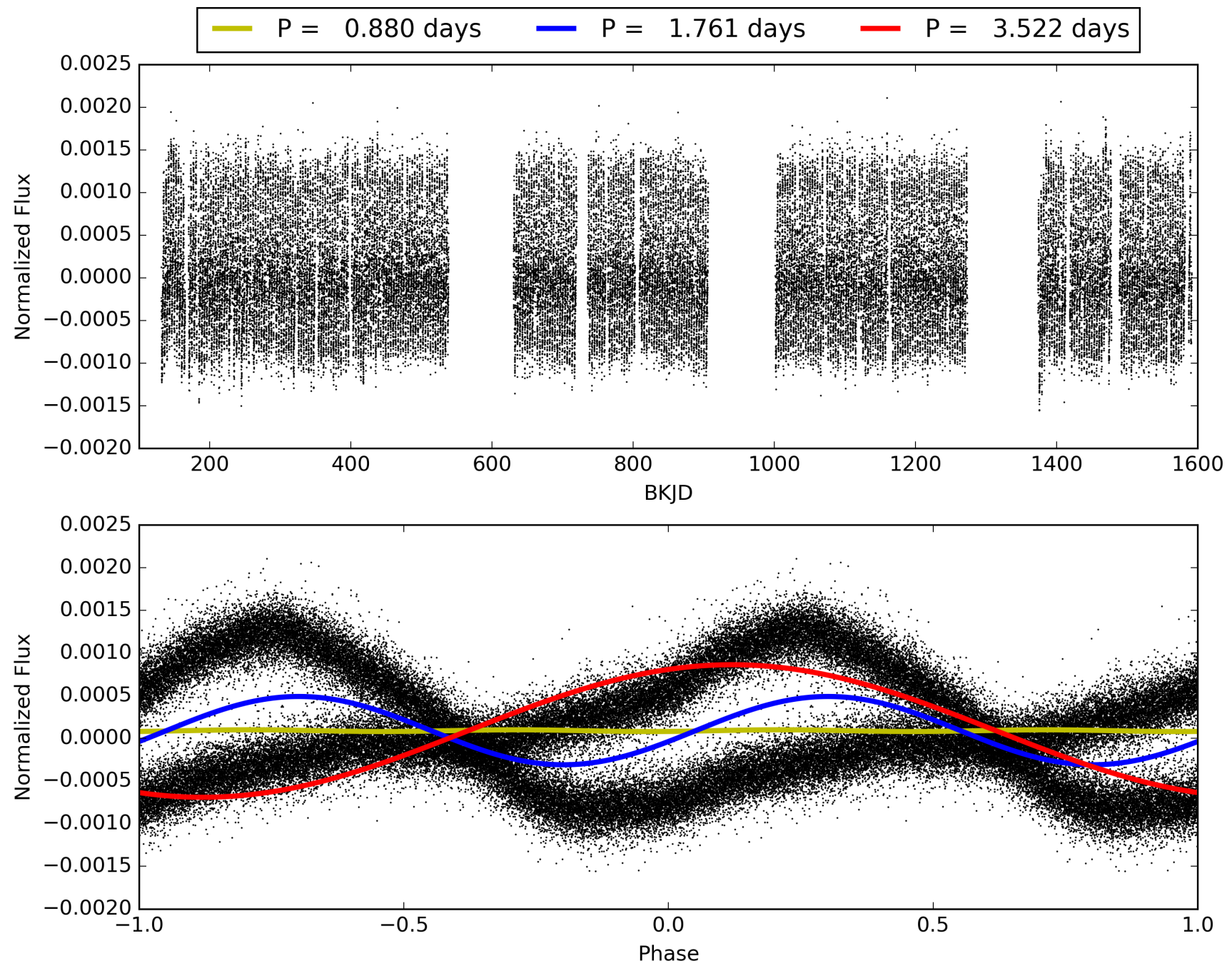
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:13:55 Z

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

TCE 004483235-01, PDC Light Curves

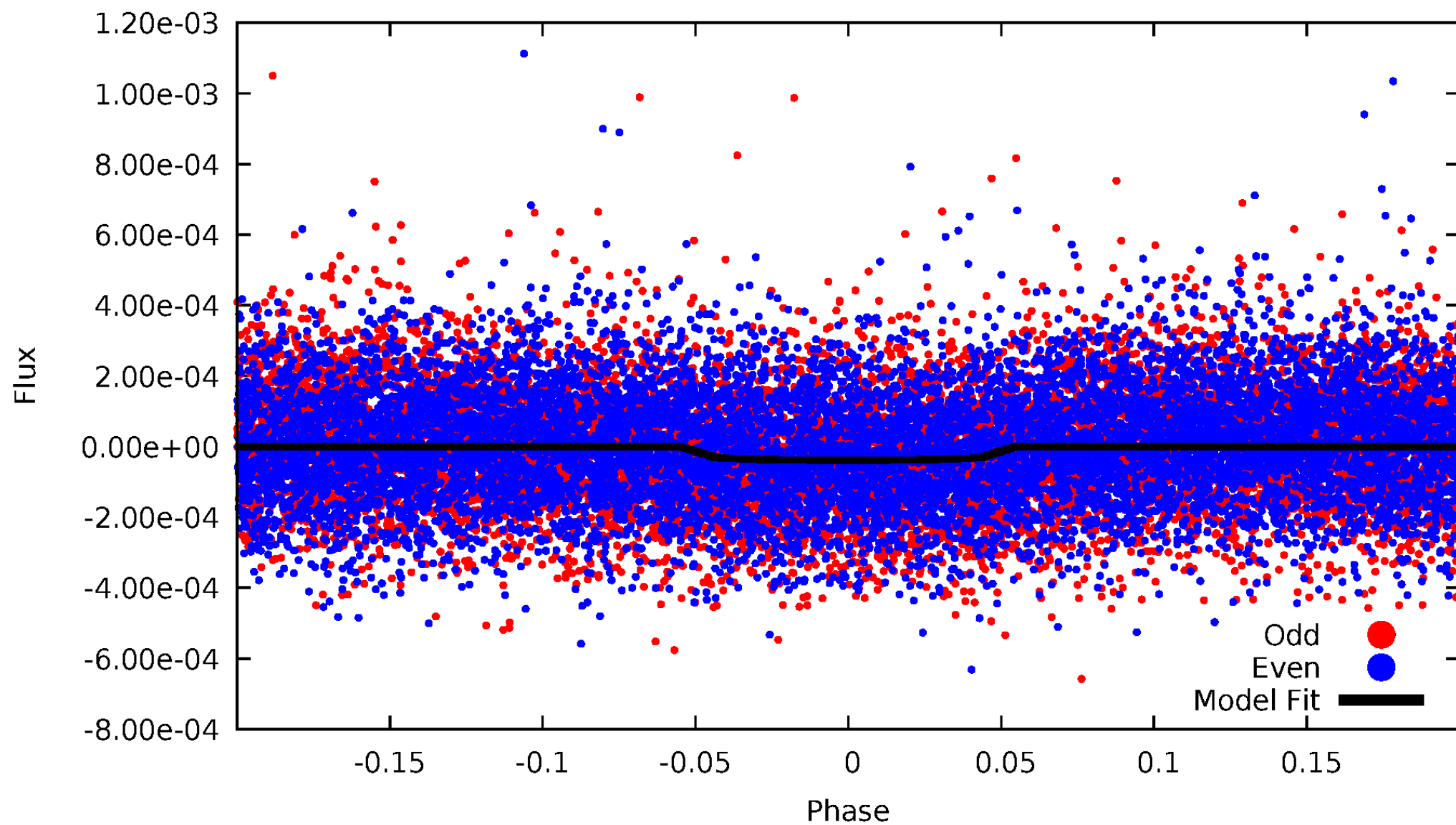


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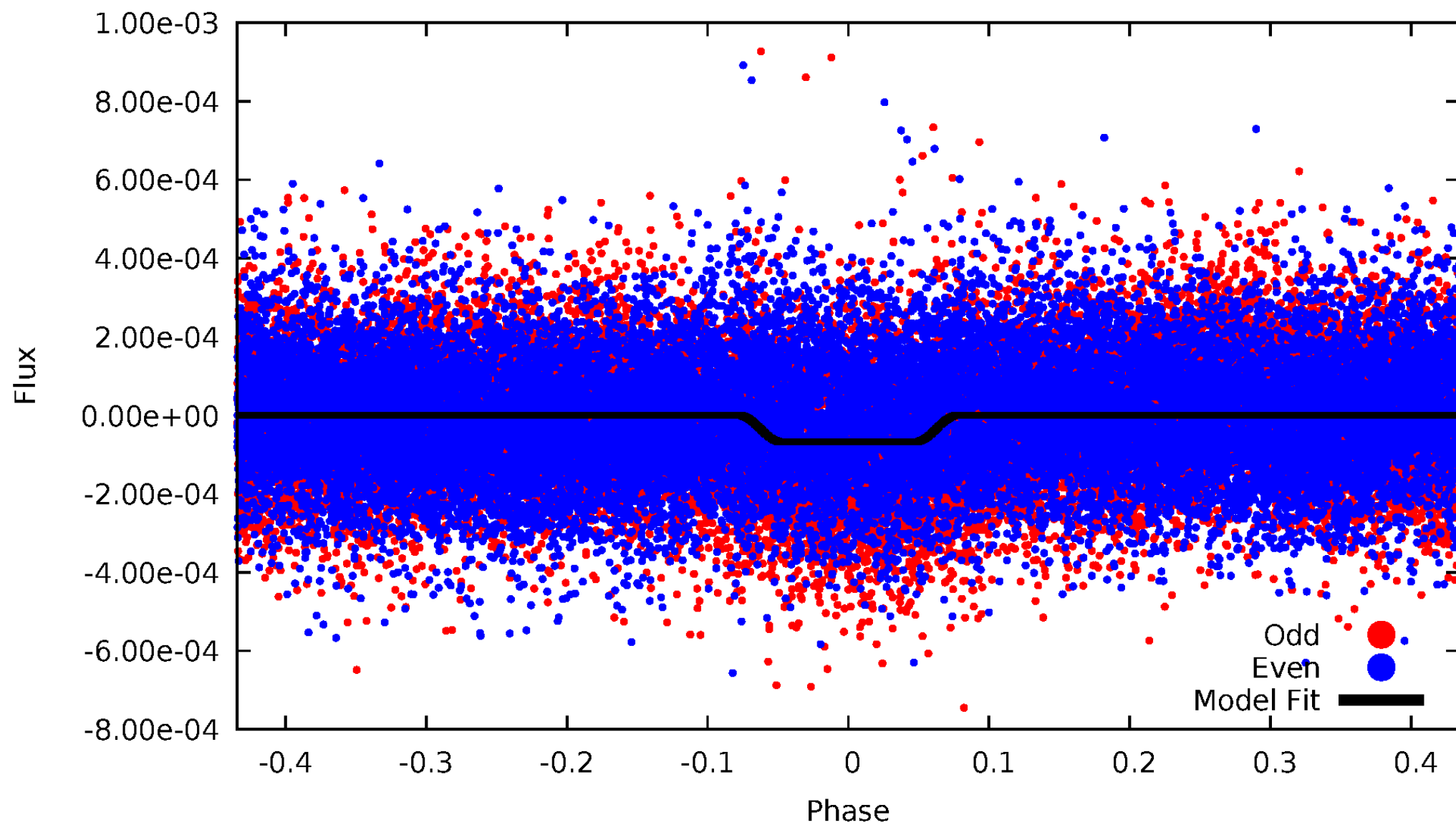
DV Odd/Even

TCE 004483235-01

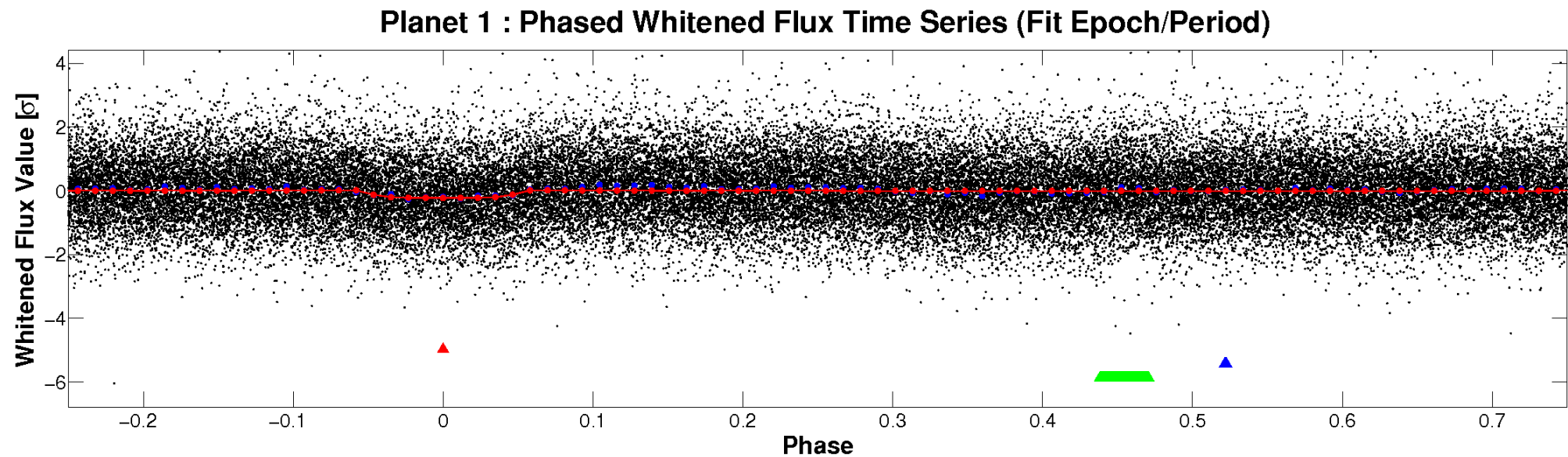
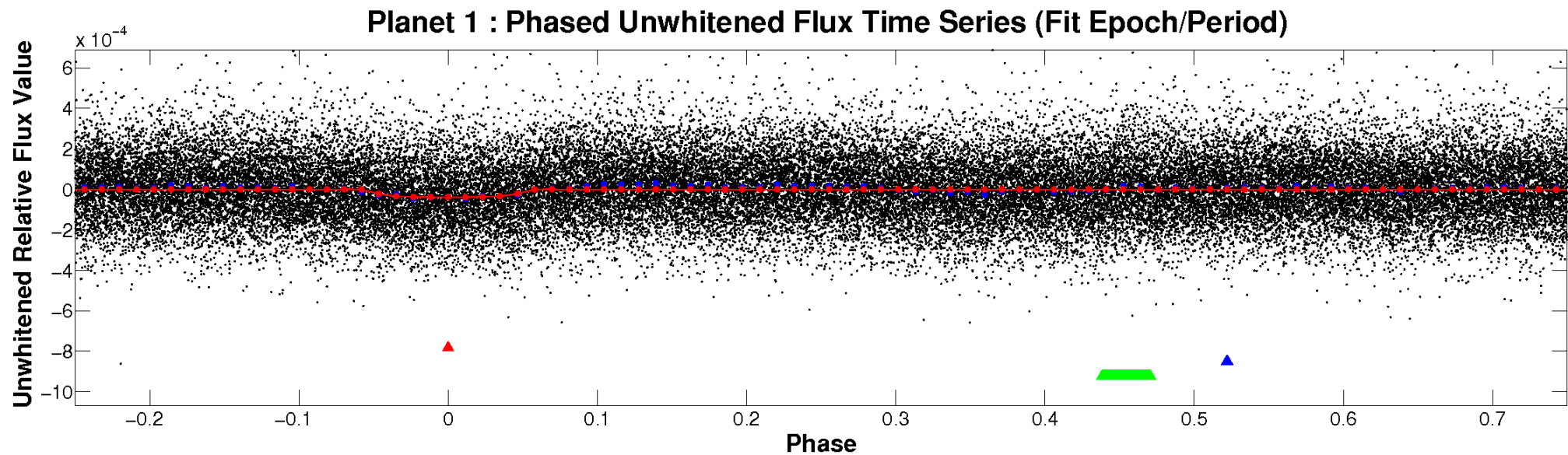


ALT Odd/Even

TCE 004483235-01

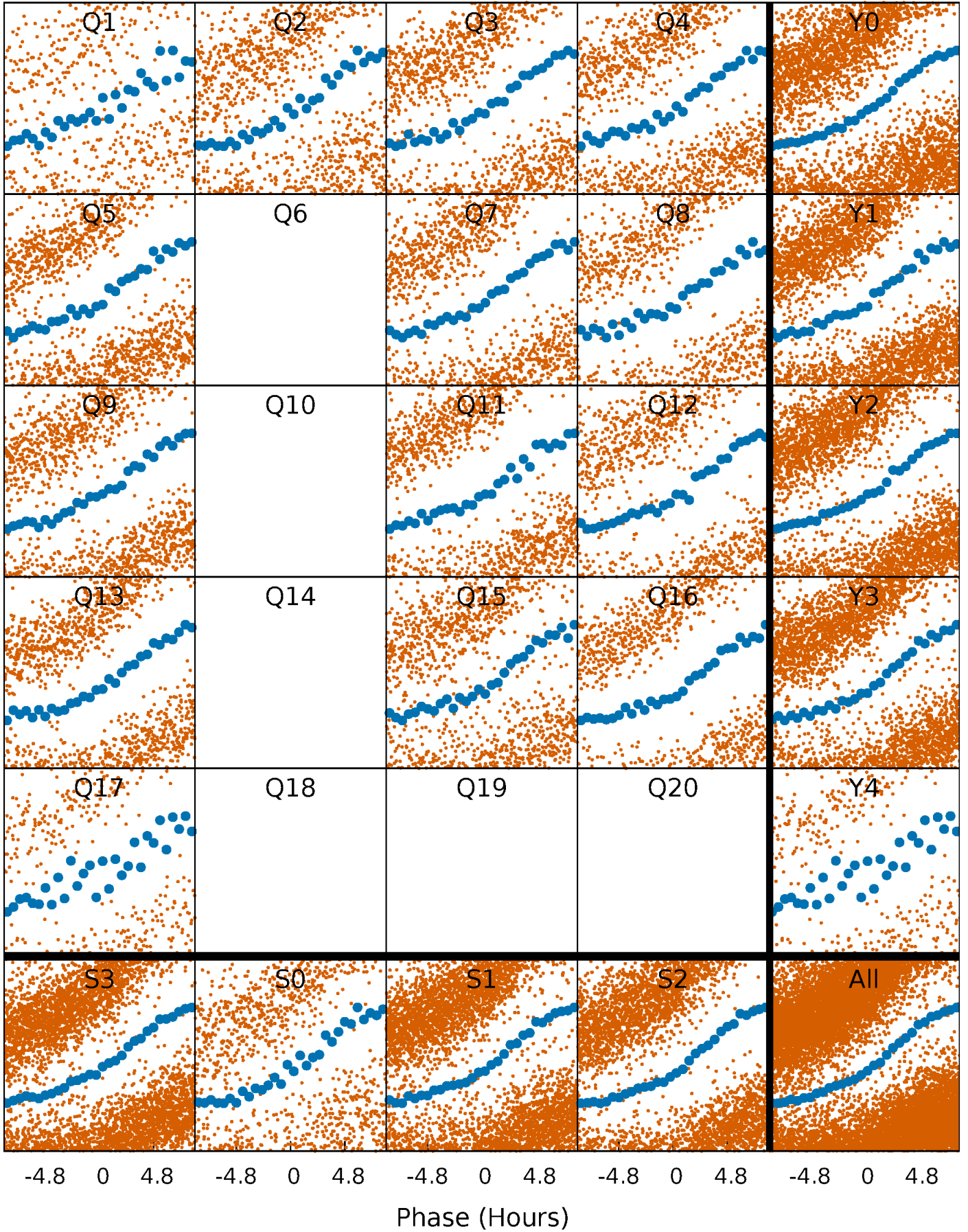


Non-Whitened Vs. Whitened Light Curve



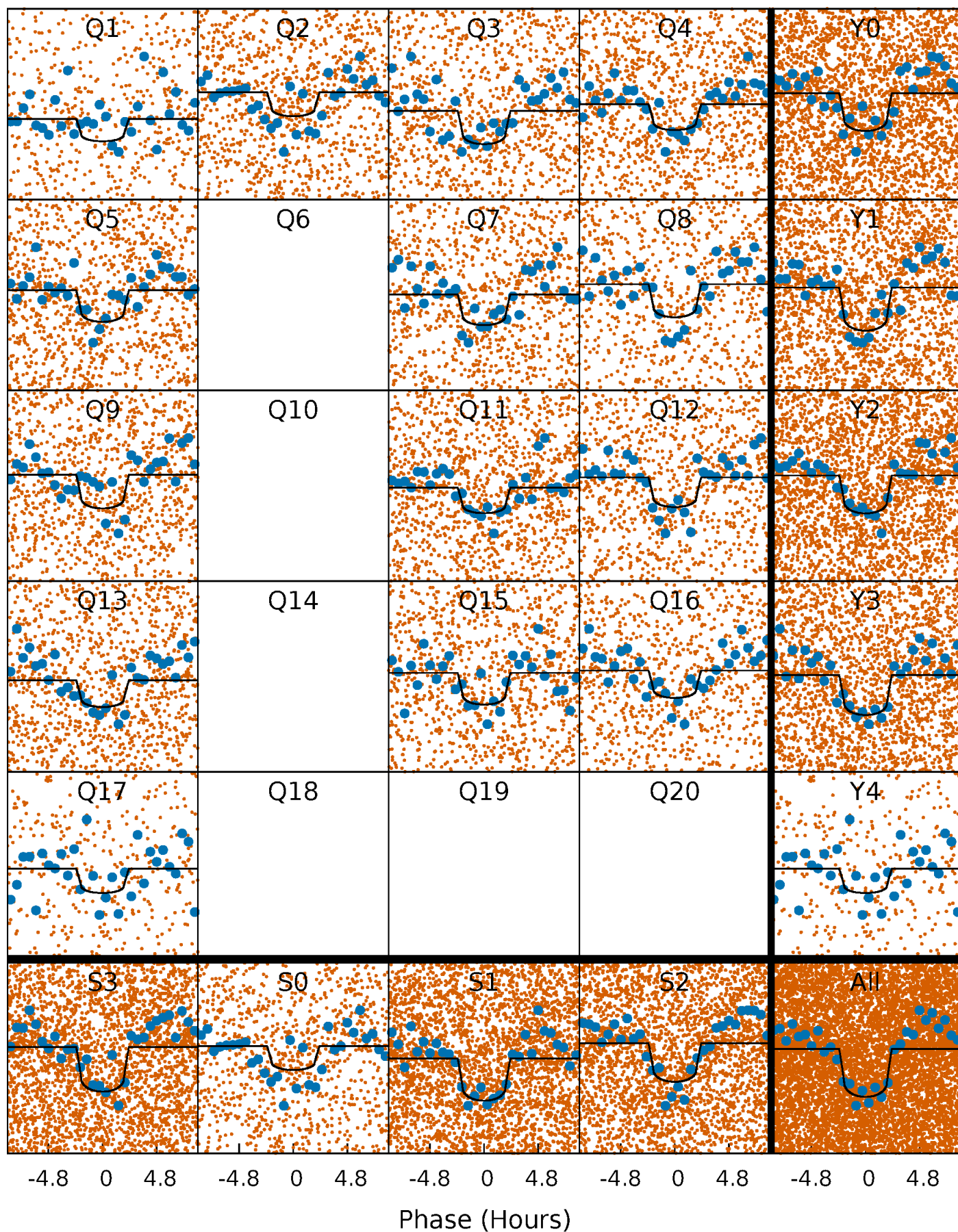
PDC Quarter-Phased Transit Curves

TCE 004483235-01 P= 1.760936 Days $T_0=132.309364$ (BKJD)



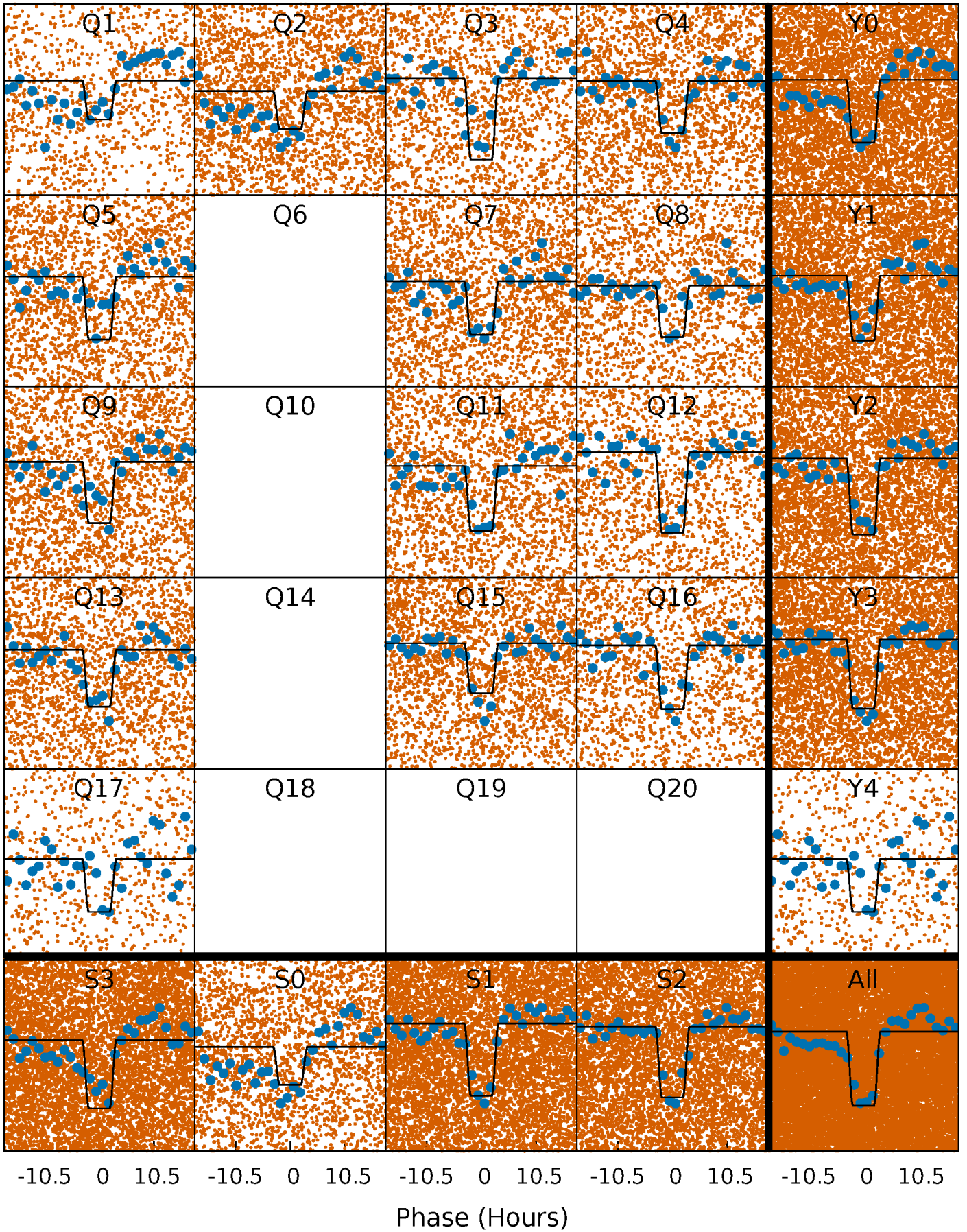
DV Quarter-Phased Transit Curves

TCE 004483235-01 P= 1.760936 Days $T_0=132.309364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

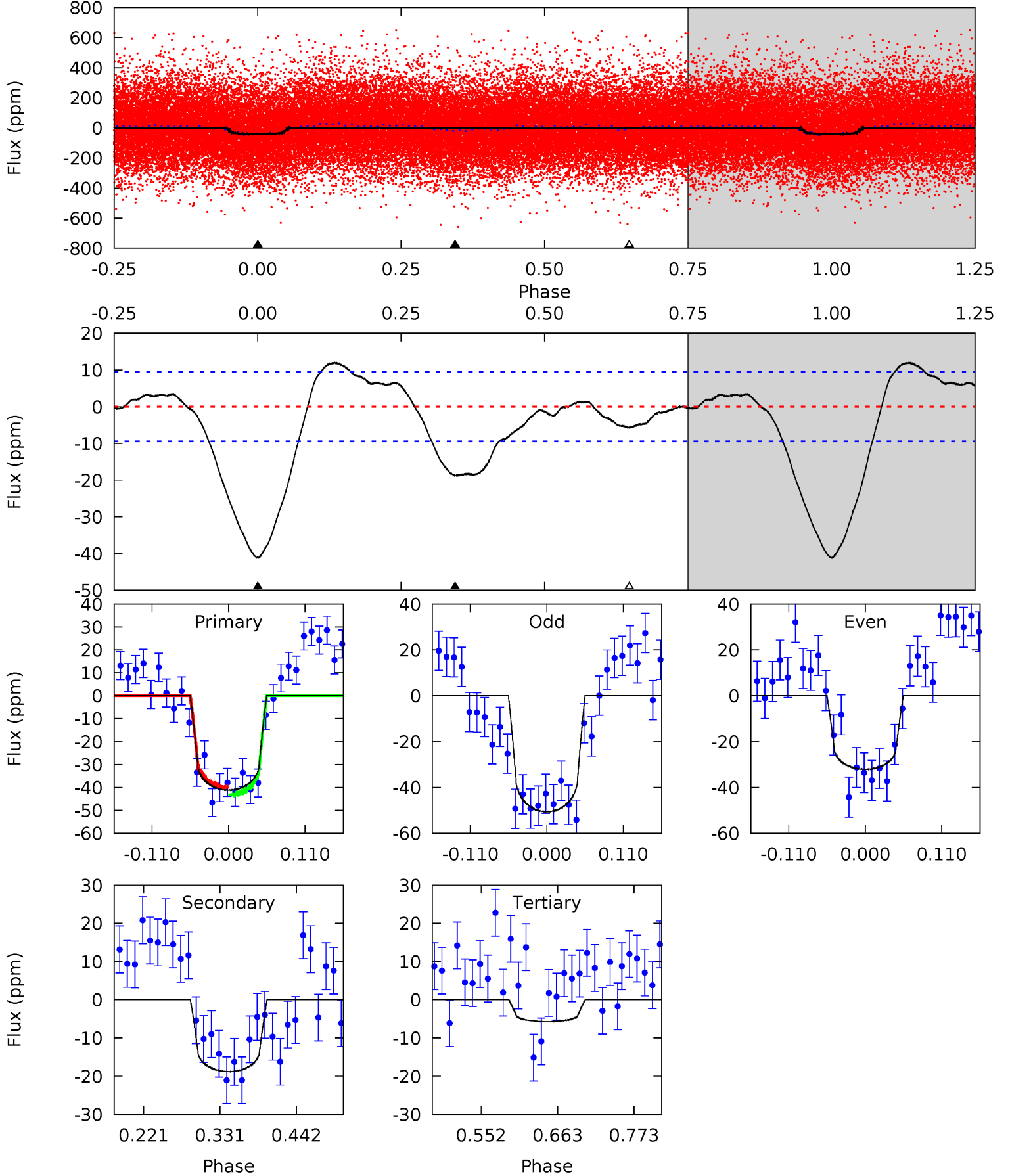
TCE 004483235-01 P= 1.760938 Days $T_0=132.298477$ (BKJD)



DV Model-Shift Uniqueness Test

004483235-01, P = 1.760936 Days, E = 130.548428 Days

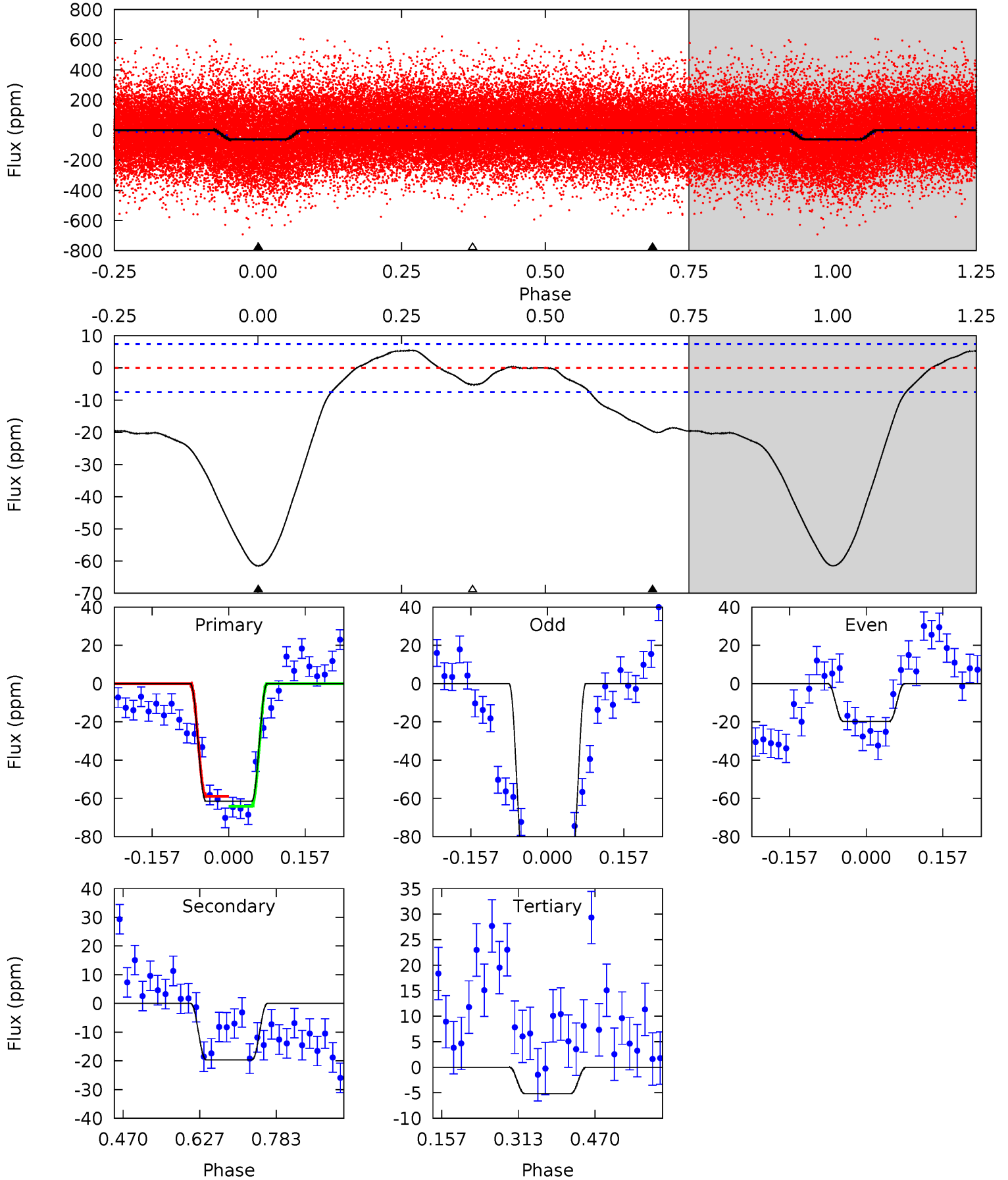
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 19.8 | 9.05 | 2.74 | 0 | 4.54 | 1.60 | 2.28 | 17.1 | 19.8 | 6.31 | 9.05 | 4.45 | 1.06 | 0.22 | 0.81 |



Alt Model-Shift Uniqueness Test

004483235-01, P = 1.760938 Days, E = 130.537539 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 36.7 | 11.7 | 3.09 | 0 | 4.47 | 1.42 | 1.90 | 33.6 | 36.7 | 8.65 | 11.7 | 24.4 | 1.03 | 0.08 | 1.56 |



Stellar Parameters For KIC 004483235

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 8784^{+246}_{-422} | $4.156^{+0.098}_{-0.182}$ | $0.070^{+0.250}_{-0.600}$ | $1.967^{+0.692}_{-0.346}$ | $2.017^{+0.372}_{-0.413}$ | $0.374^{+0.179}_{-0.193}$ |
| | +3%/-5% | +2%/-4% | +357%/-857% | +35%/-18% | +18%/-20% | +48%/-52% |
| Source | KIC0 | 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 004483235-01 / KOI 7550.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|----------------------------|
| DV | -19 ± 2 | $1.37^{+1.08}_{-0.77}$ | 4030^{+295}_{-245} | 6893^{+4965}_{-1727} | $7.061^{+28.621}_{-4.846}$ |
| Alt. | -20 ± 2 | $1.82^{+1.08}_{-0.94}$ | 4032^{+292}_{-254} | 5930^{+3252}_{-1193} | $4.065^{+13.821}_{-2.422}$ |

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

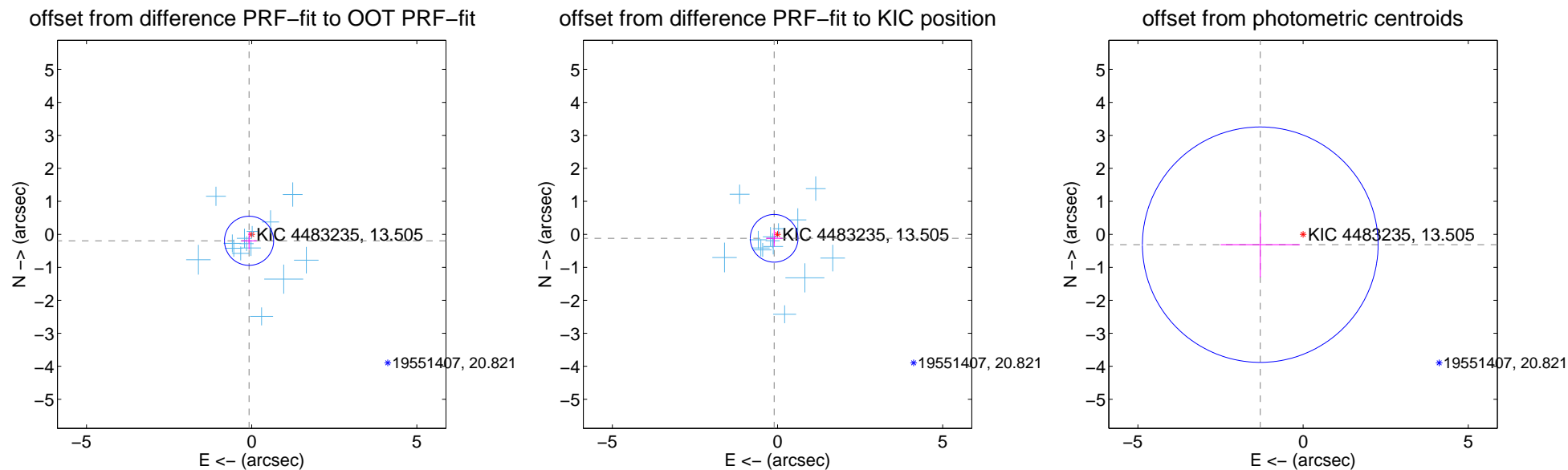
DV Centroid Data

Supplemental centroid analysis for 004483235-01. Kepler magnitude: 13.51. Transit SNR 14.41

There are 14 quarters with good PRF difference image offsets

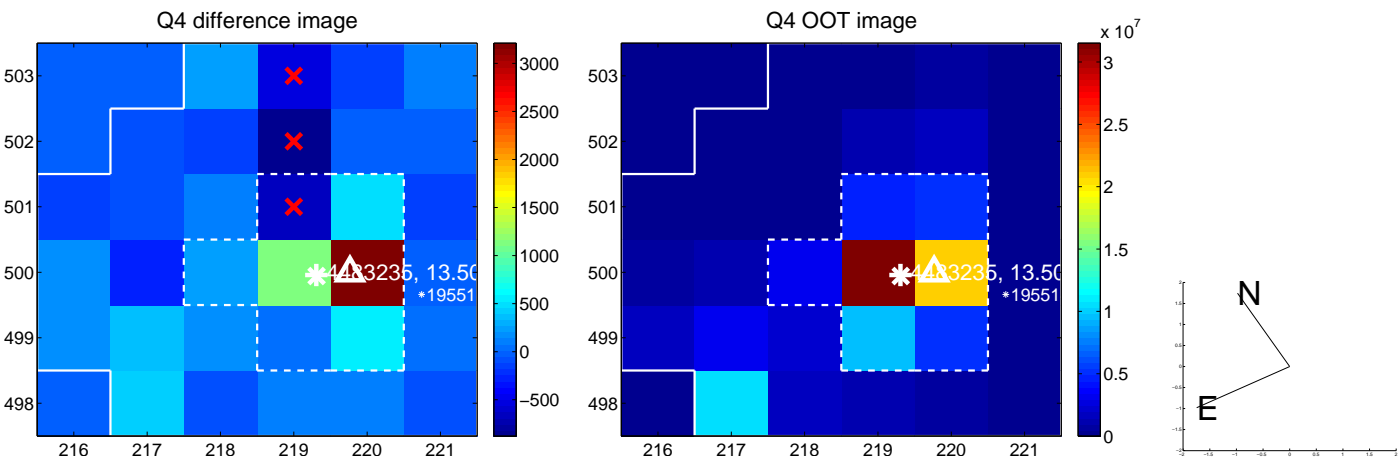
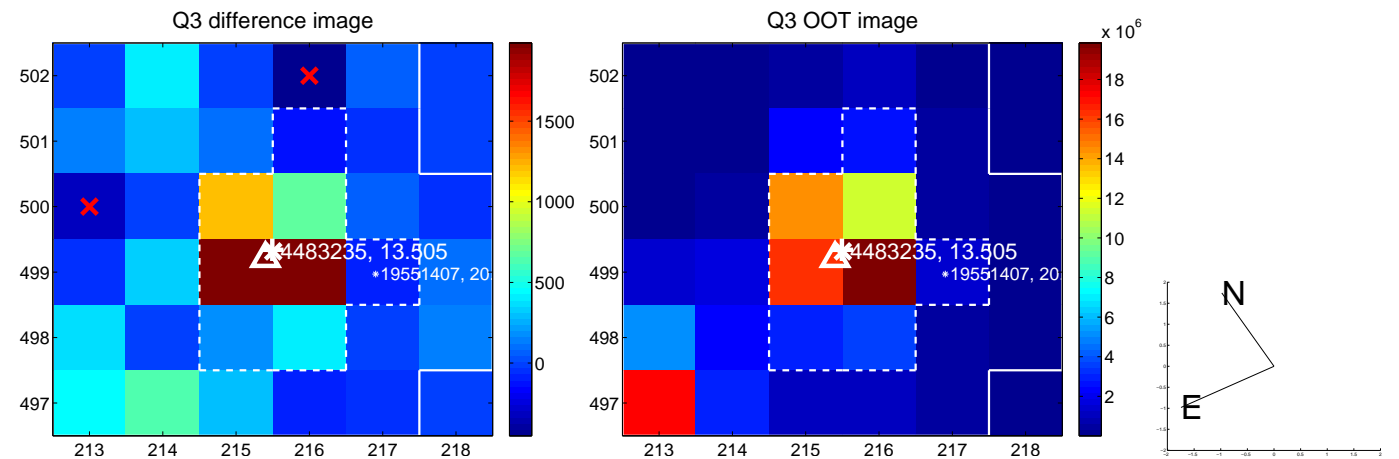
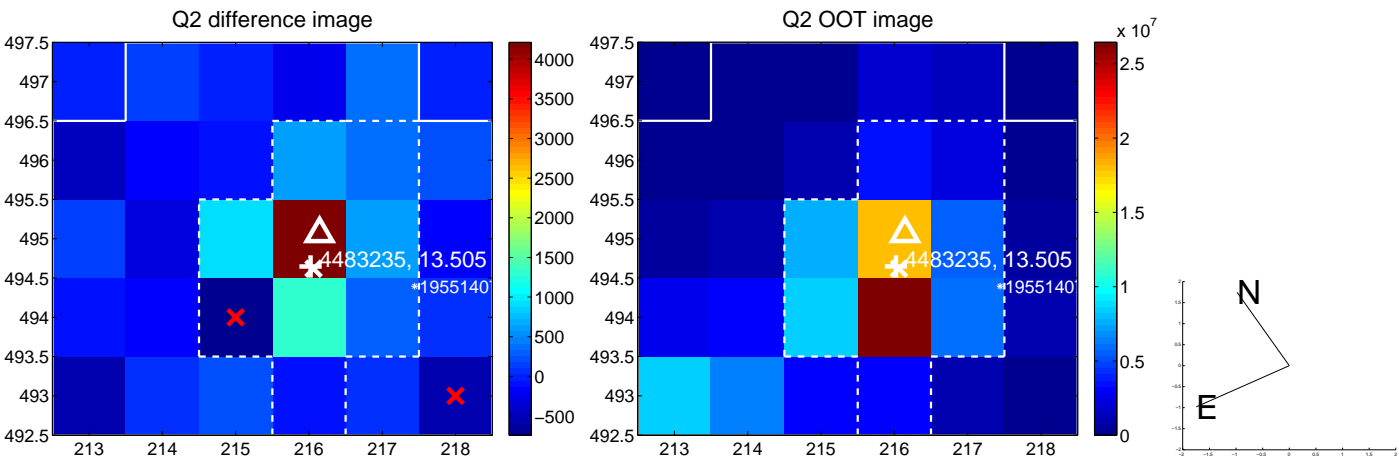
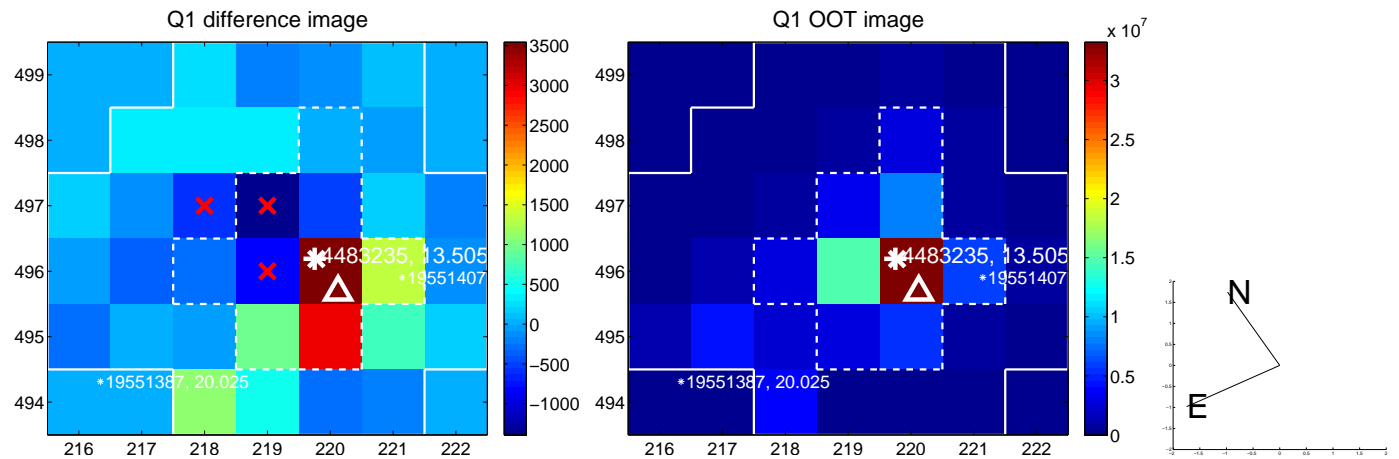
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 0.211 ± 0.248 | 0.85 | 0.079 ± 0.230 | -0.195 ± 0.260 |
| PRF-fit source offset from KIC position | 0.158 ± 0.241 | 0.66 | 0.102 ± 0.248 | -0.121 ± 0.250 |
| photometric centroid source offset | 1.33 ± 1.19 | 1.12 | 1.30 ± 1.20 | -0.31 ± 0.99 |

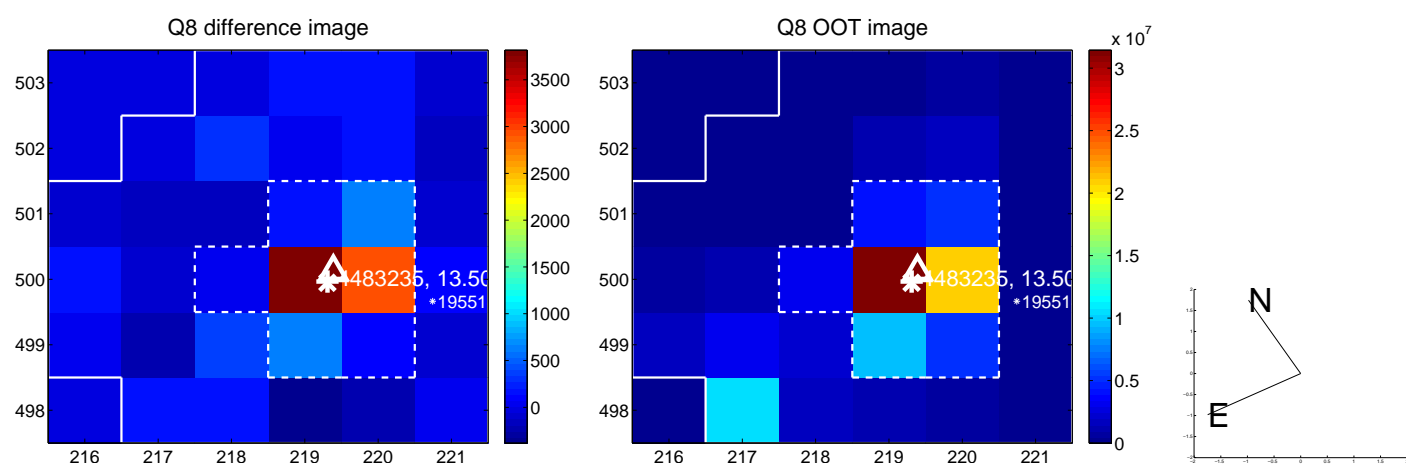
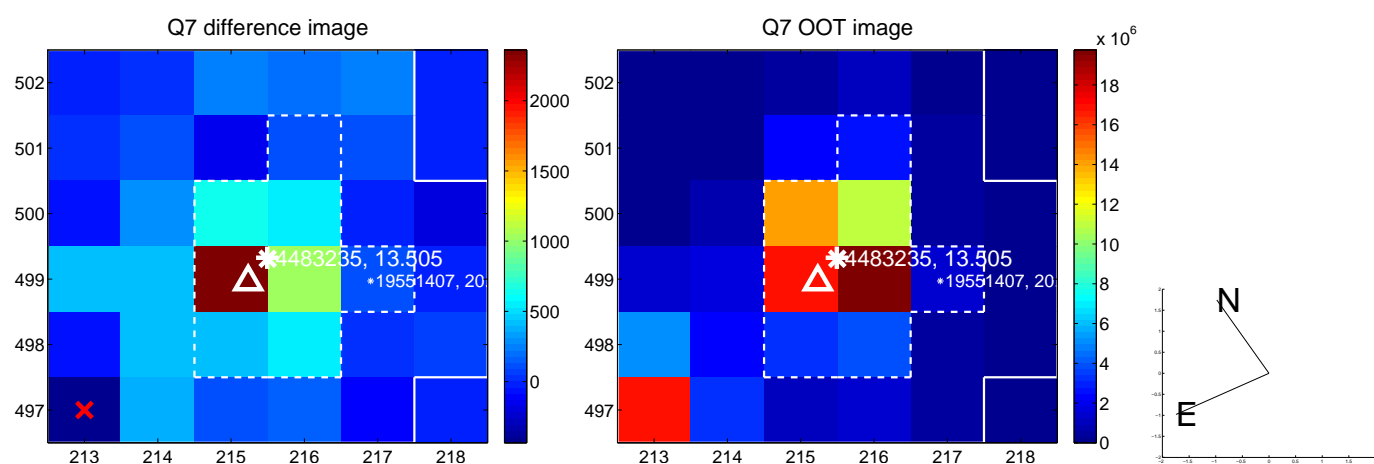
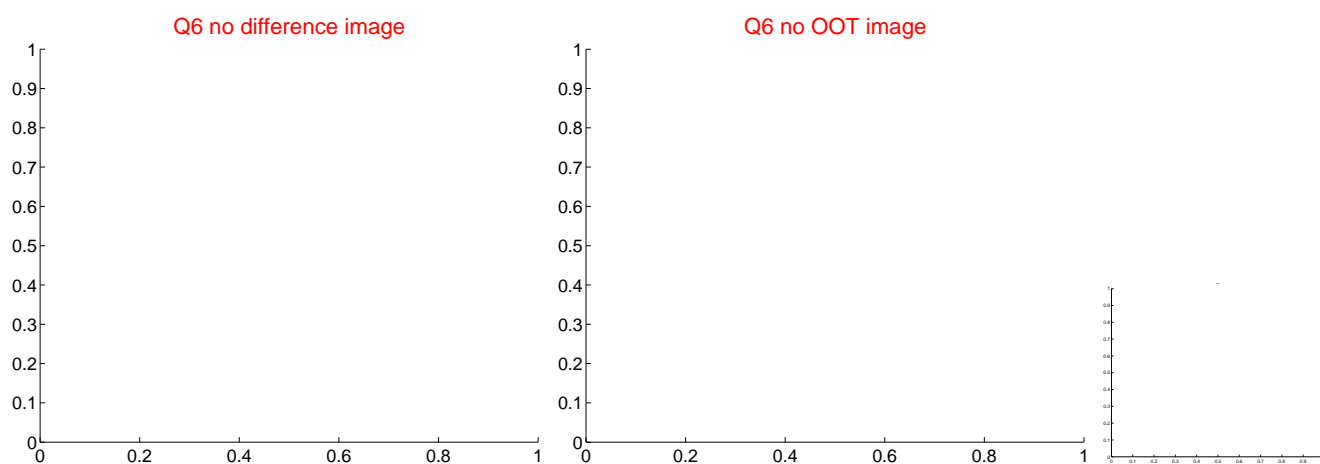
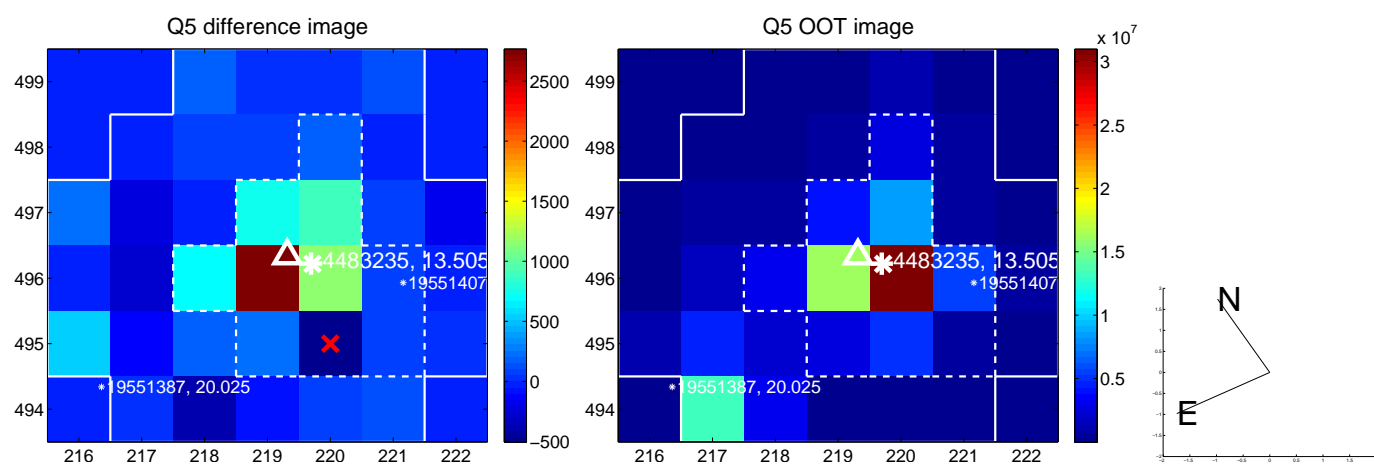


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

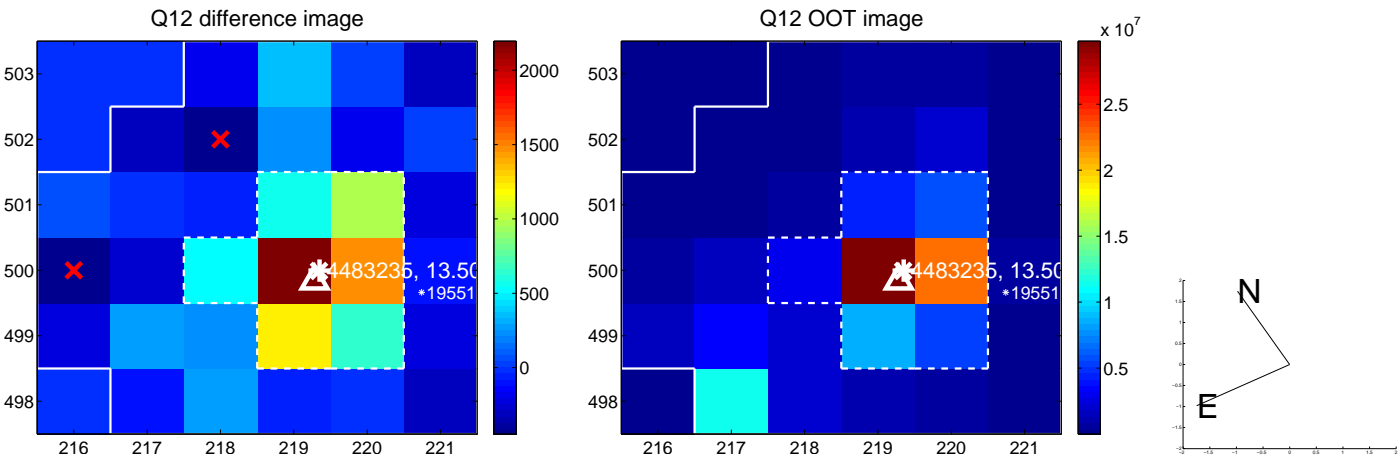
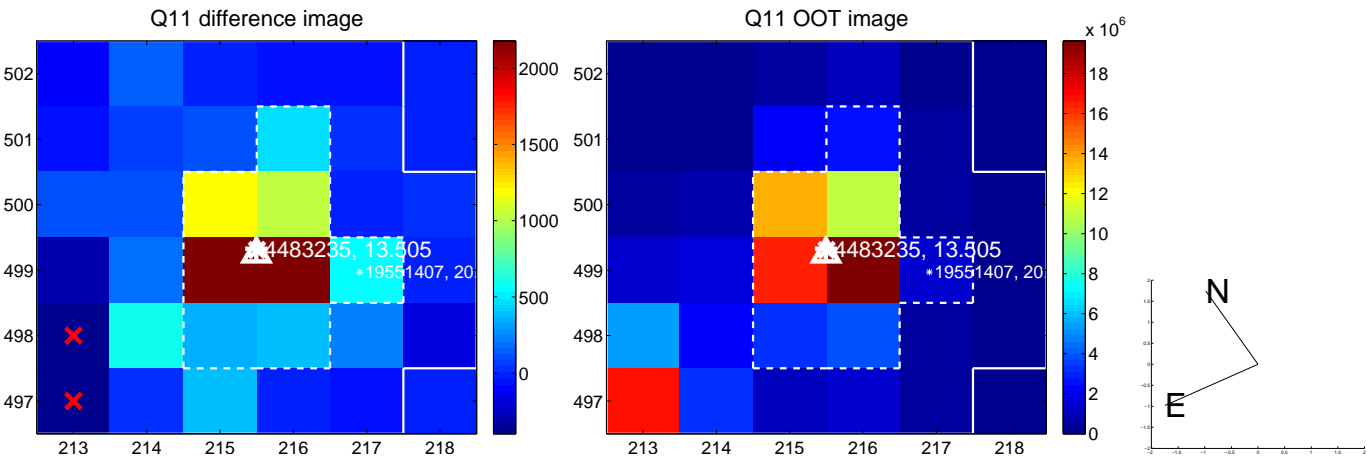
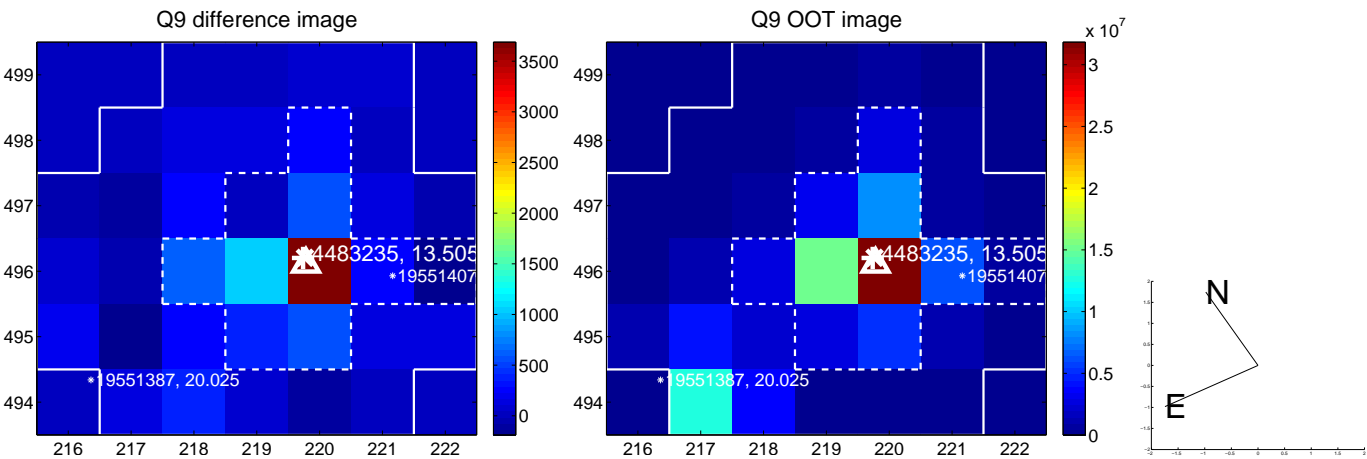
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



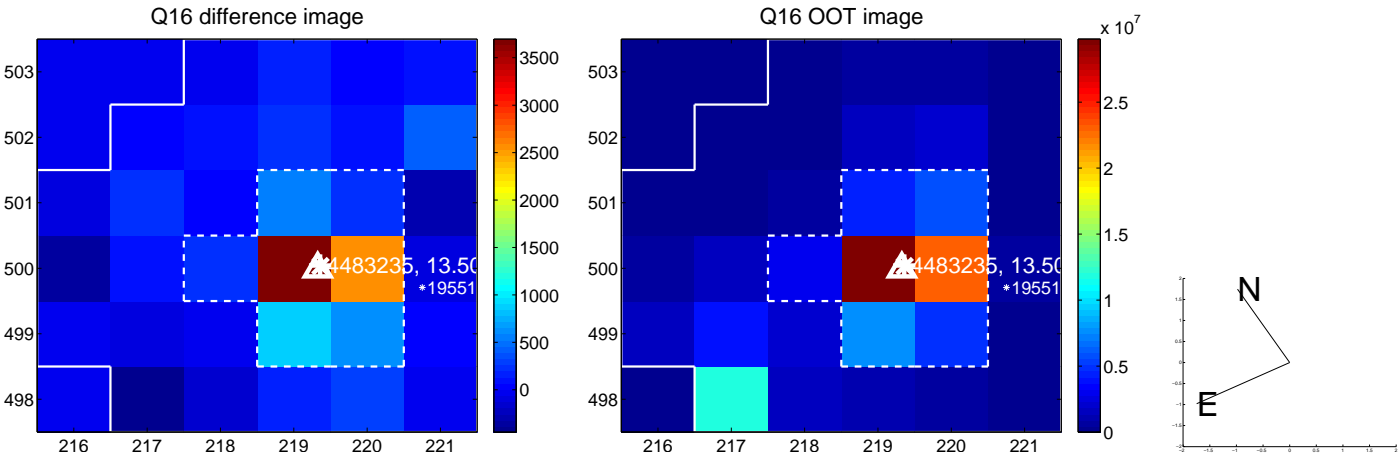
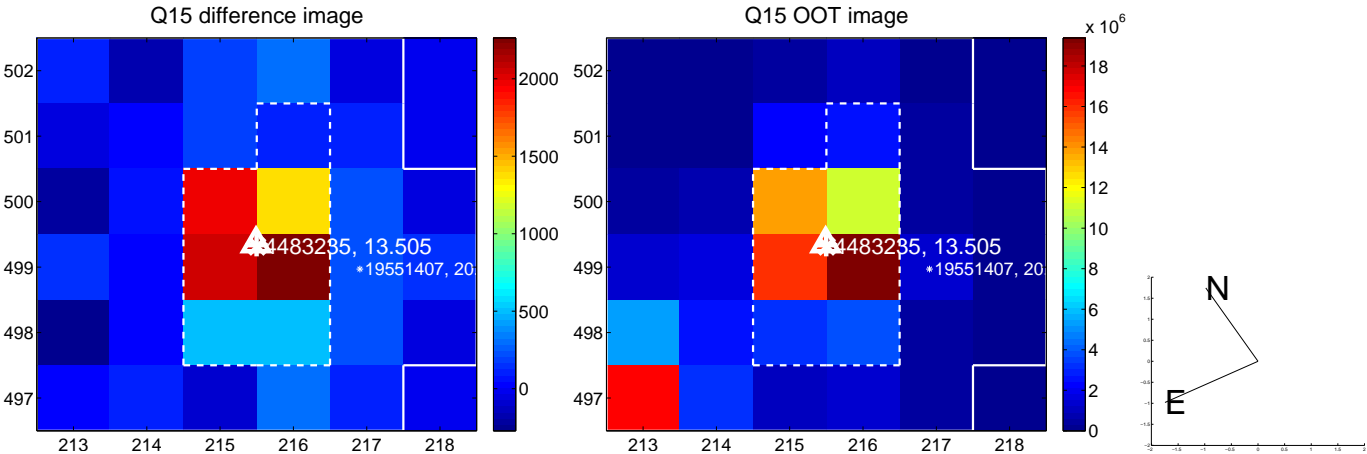
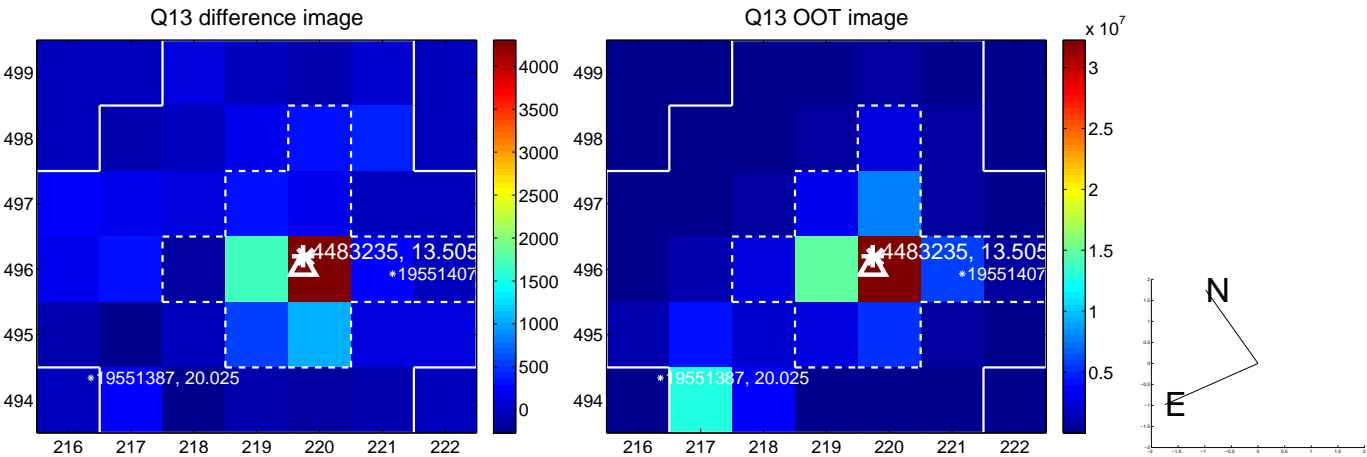
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



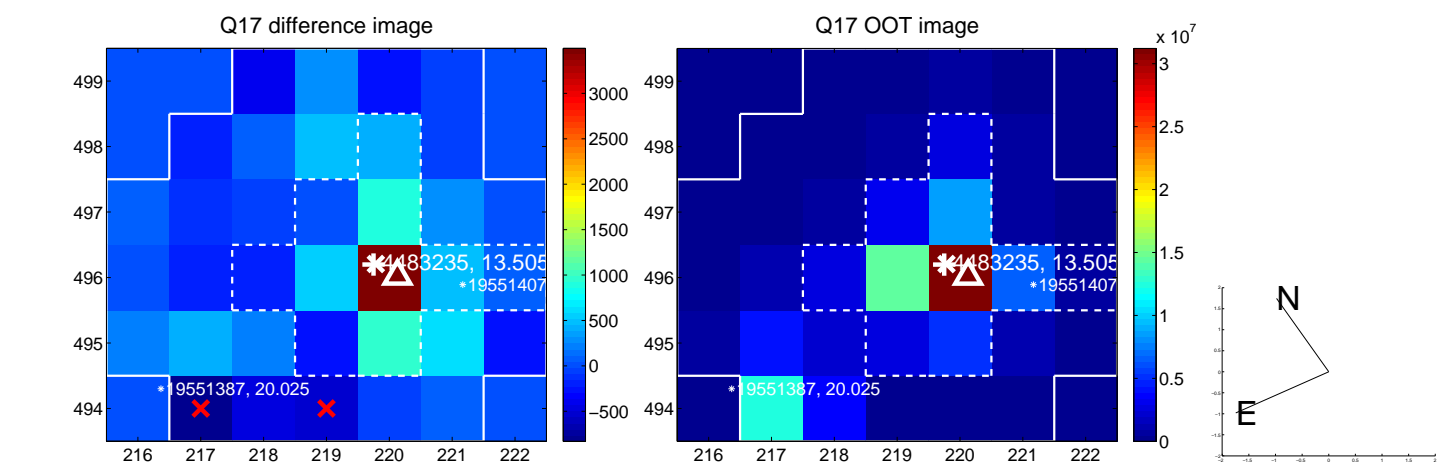
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



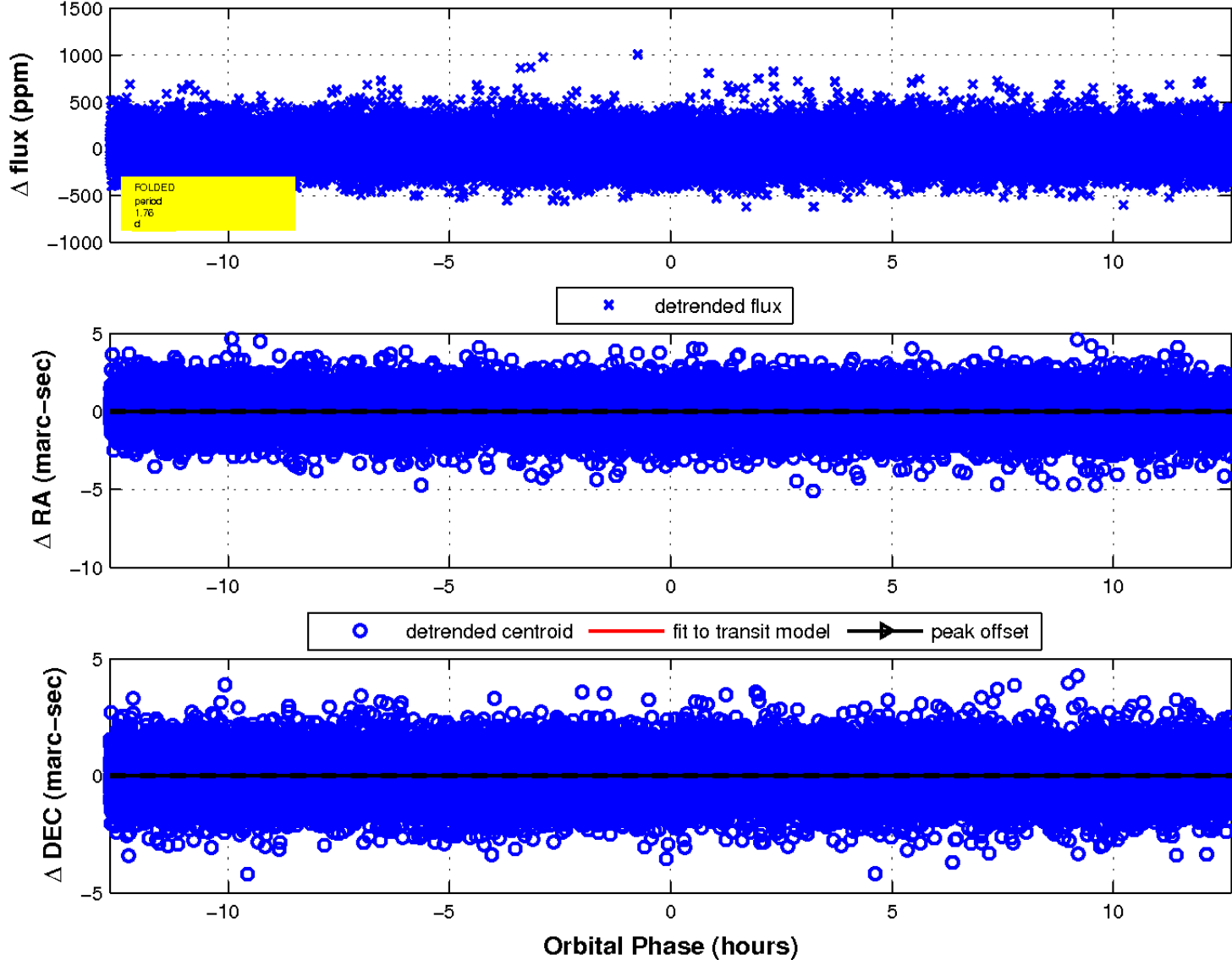
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

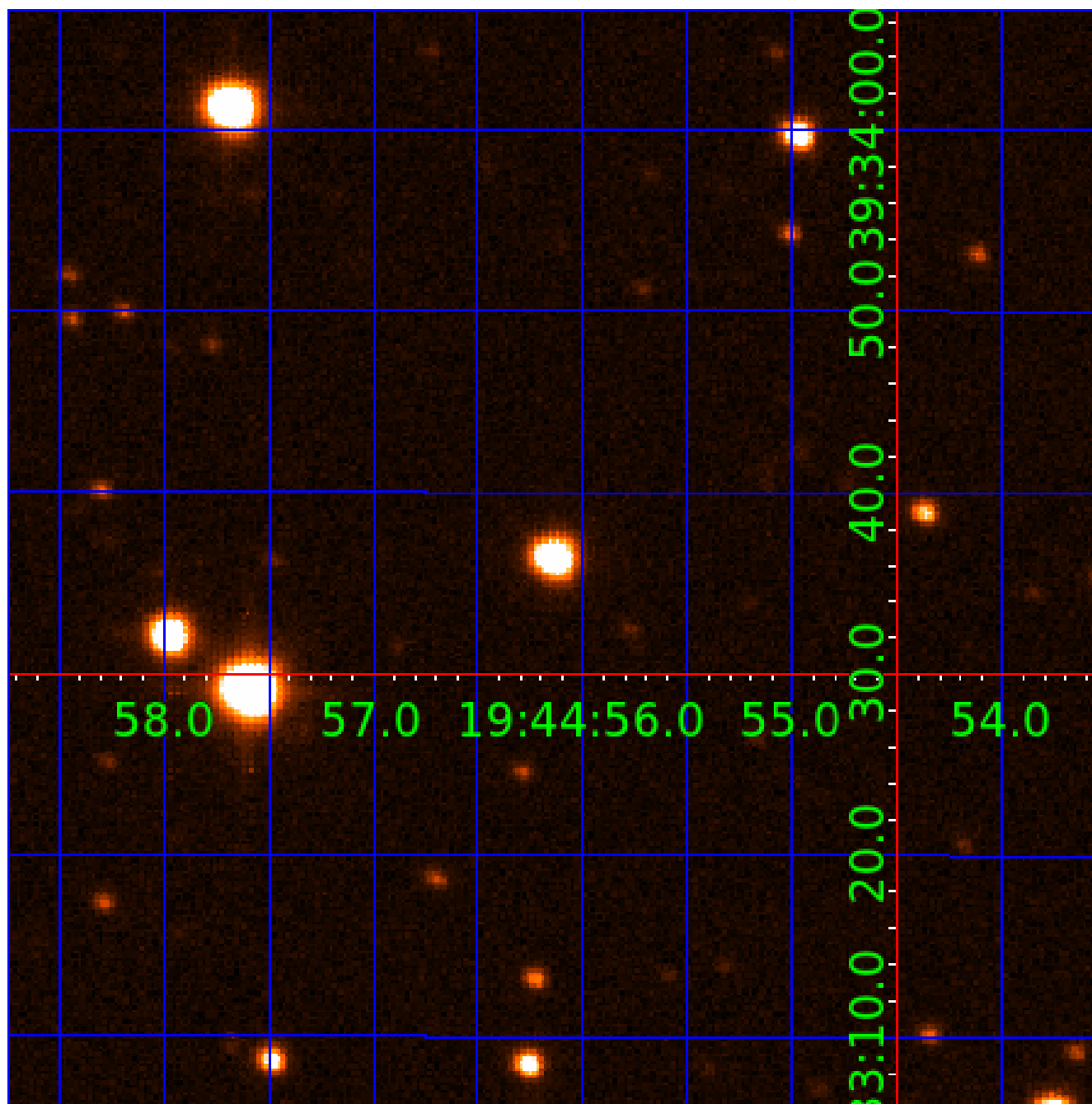


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 004483235

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 004483235-01 | OBS | 7550.01 | 1.760936 | 132.309365 | 38.9 | 4.224 | 13.6 | 14.4 | 1.97 | 8784 | 1.25 | 15844.38 |
| 004483235-02 | OBS | No | 3.521868 | 134.990428 | 0.0 | 0.766 | 7.9 | 0.0 | 1.97 | 8784 | 0.03 | 6287.85 |
| 004483235-03 | OBS | No | 3.522010 | 134.841895 | 26.5 | 8.237 | 7.9 | 7.4 | 1.97 | 8784 | 1.03 | 6287.52 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 004483235-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | SWEET_NTL—LPP_DV |
| 004483235-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS |
| 004483235-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

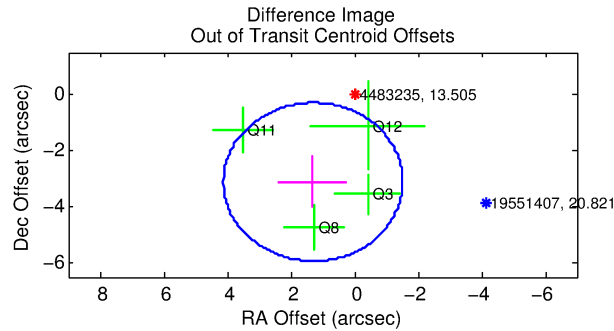
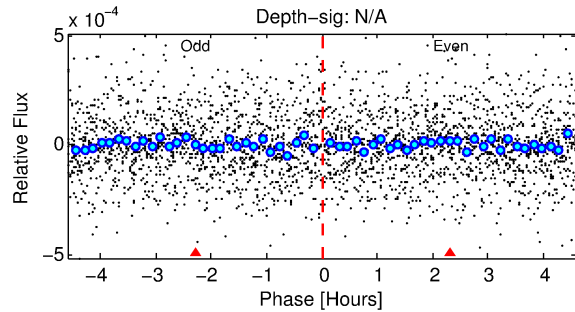
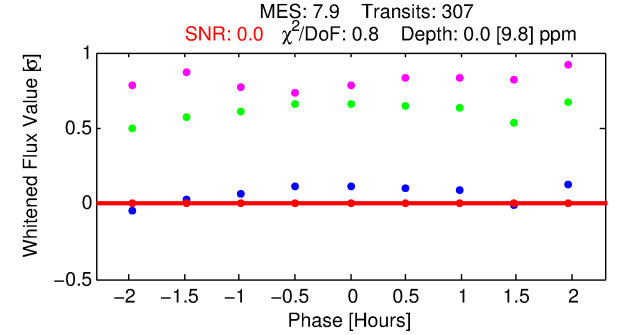
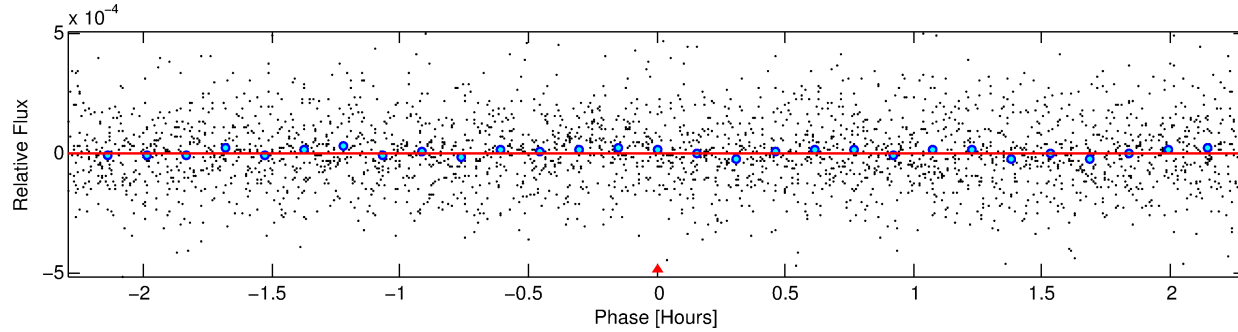
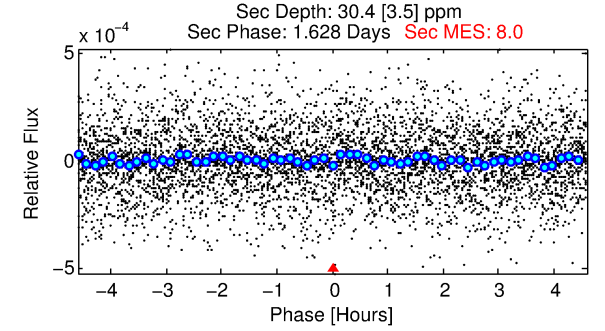
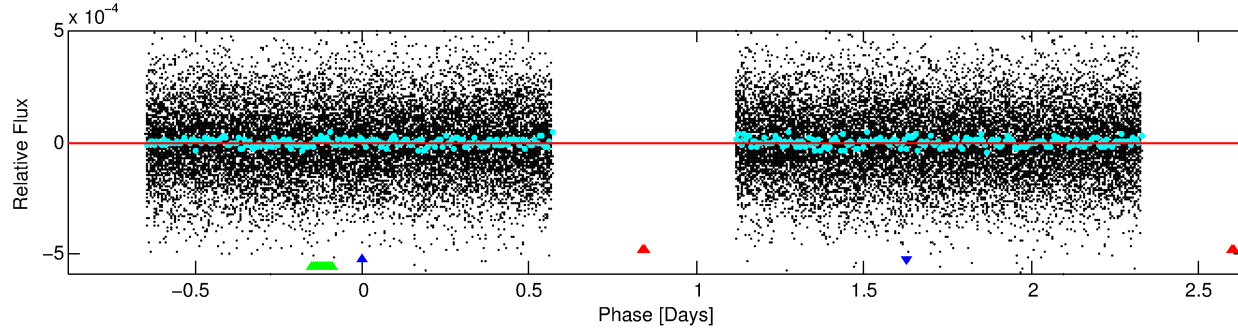
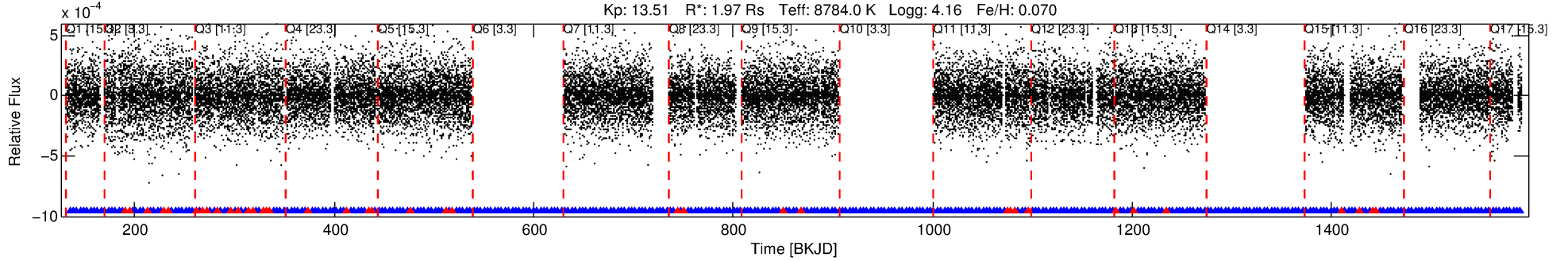
Ephemeris Match Information For 004483235-02

No Significant Match Found

DV One-Page Summary

KIC: 4483235 Candidate: 2 of 3 Period: 3.522 d
KOI: K07550 Corr: No Ephemeris Match

Kp: 13.51 R*: 1.97 Rs Teff: 8784.0 K Logg: 4.16 Fe/H: 0.070



DV Fit Results:

Period = 3.52187 [0.04586] d
Epoch = 134.9904 [6.5950] BKJD
Rp/R* = 0.0002 [0.0319]
a/R* = 27.10 [1103.87]
b = 0.64 [48.59]
Seff = 6287.86 [2594.76]
Teq = 2271 [234] K
Rp = 0.03 [6.85] Re
a = 0.0573 [0.0156] AU
Ag = 52770.88 [22397127.20] [0.00σ]
Teffp = 53210 [5645961] K [0.01σ]

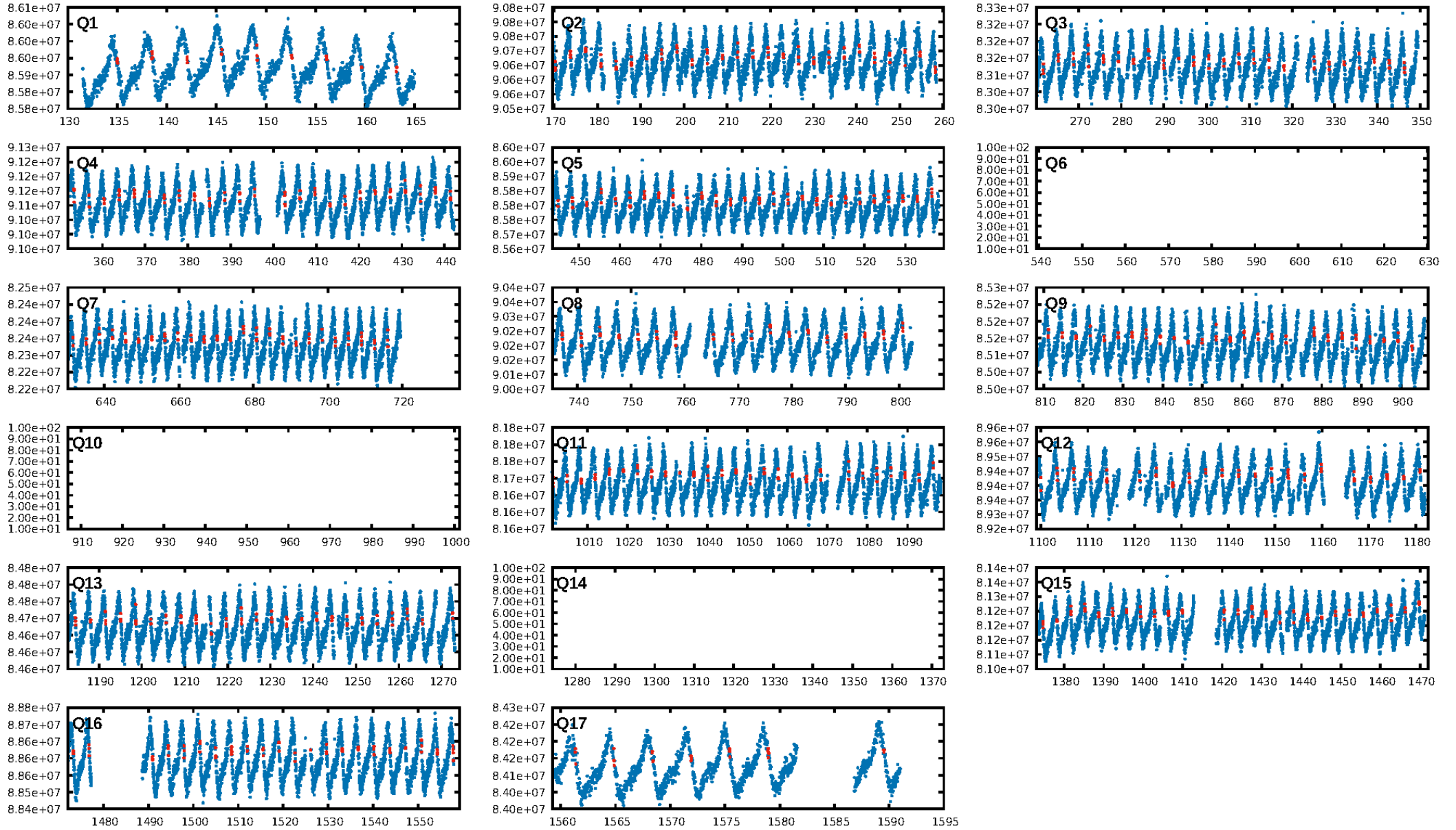
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.84σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.40e-13
RollingBand-fgt: 0.87 [253/291]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.376 arcsec [3.59σ]
KicOffset-rm: 3.291 arcsec [3.48σ]
OotOffset-st: 0/2/2/0 [4]
KicOffset-st: 0/2/2/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.00 [0/14]

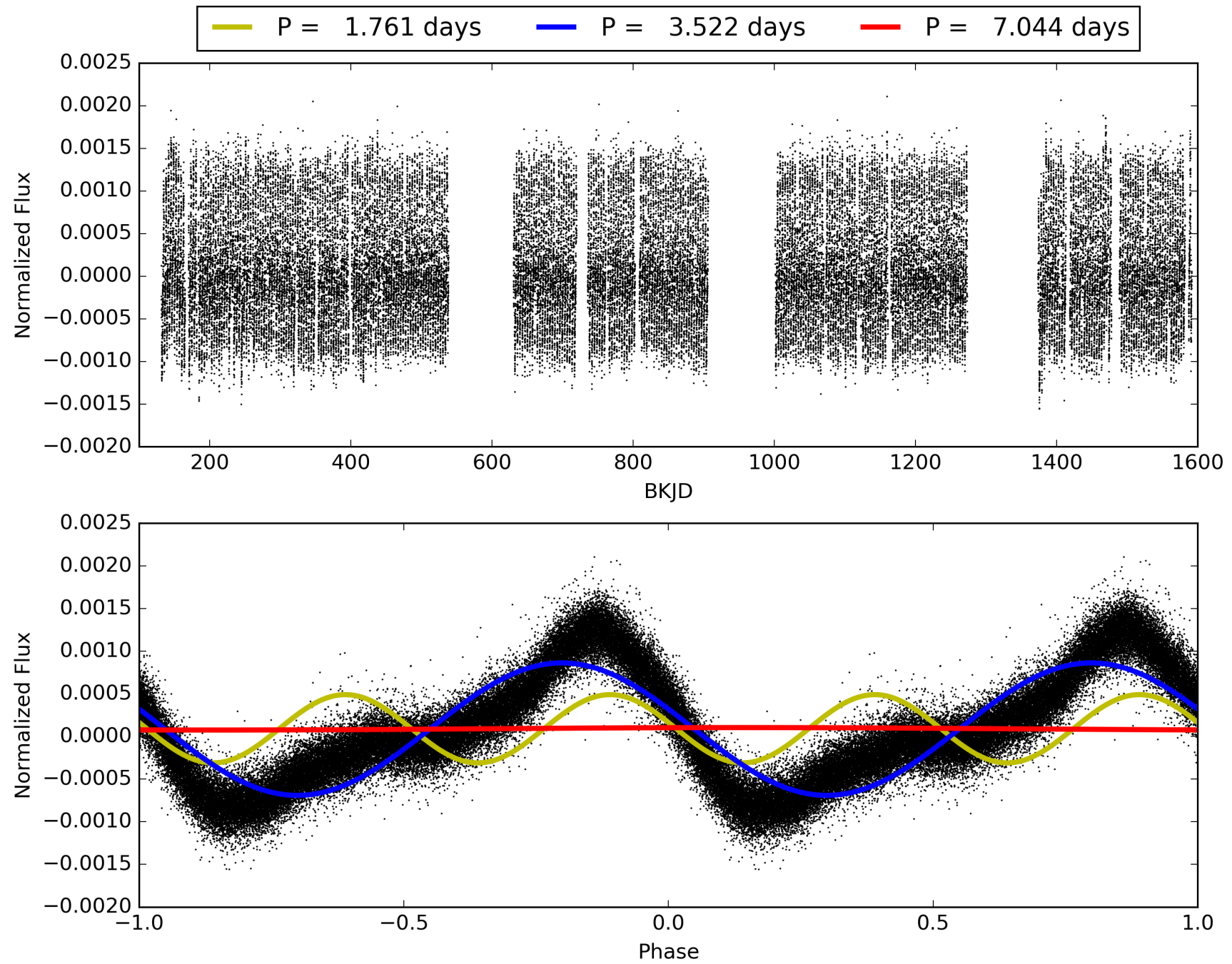
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:14:04 Z

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

TCE 004483235-02, PDC Light Curves

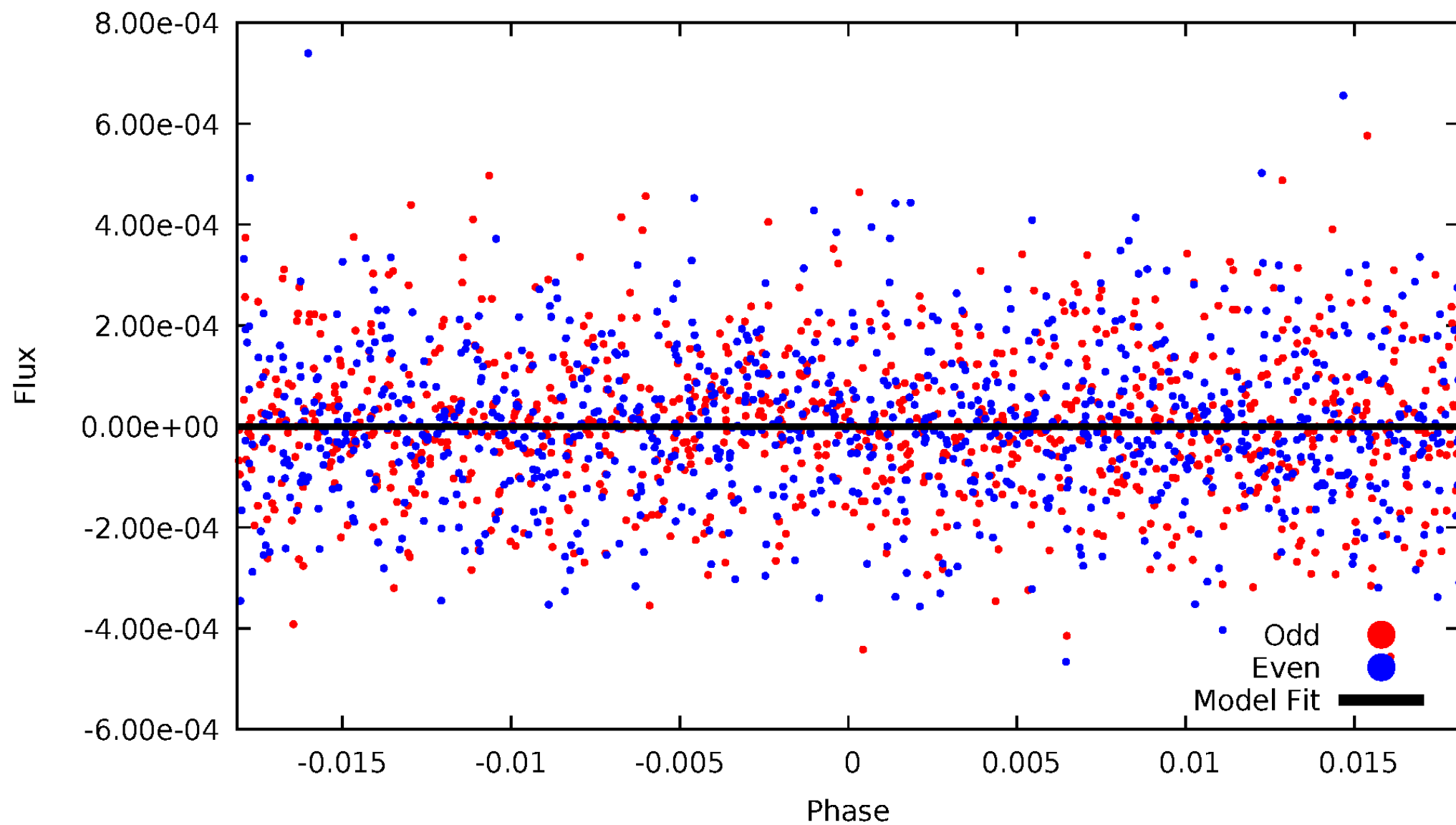


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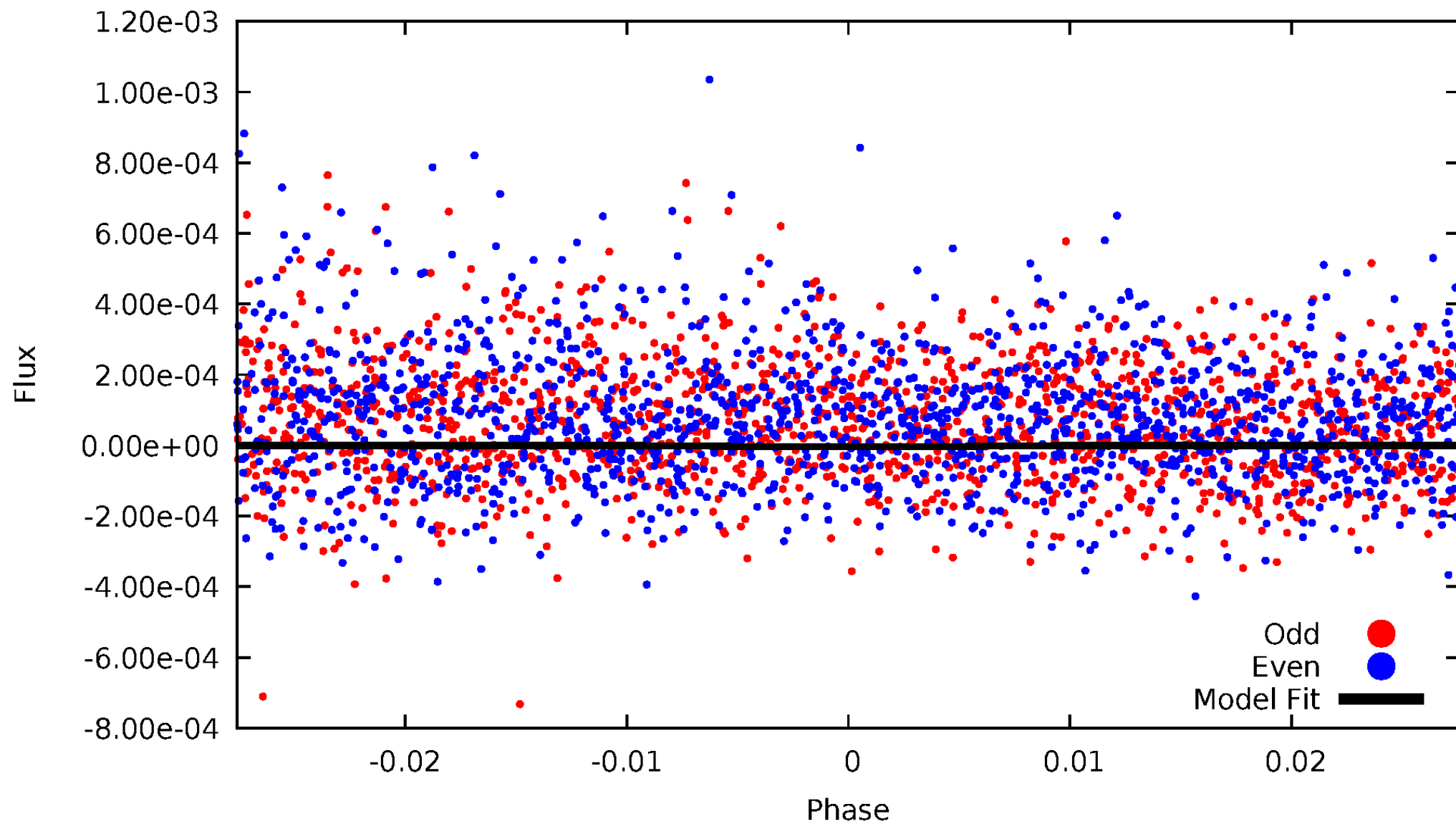
DV Odd/Even

TCE 004483235-02



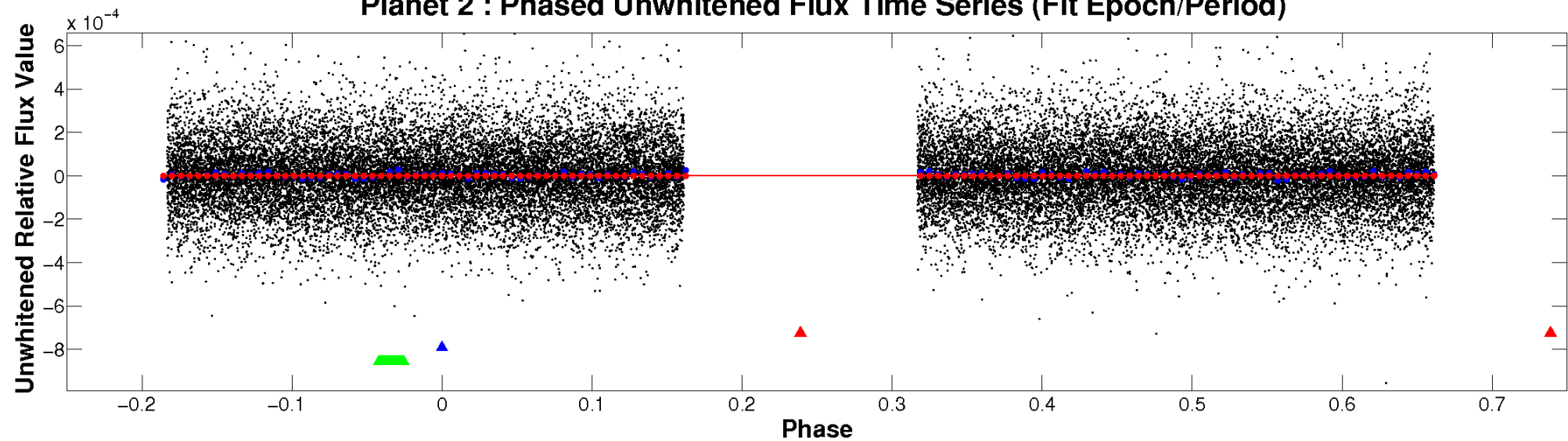
ALT Odd/Even

TCE 004483235-02

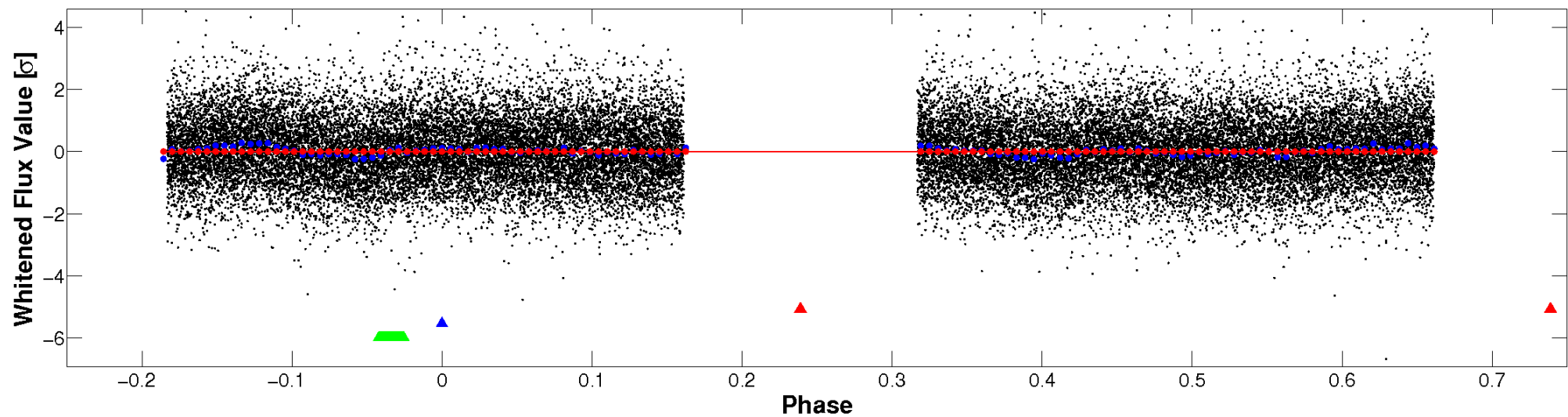


Non-Whitened Vs. Whitened Light Curve

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

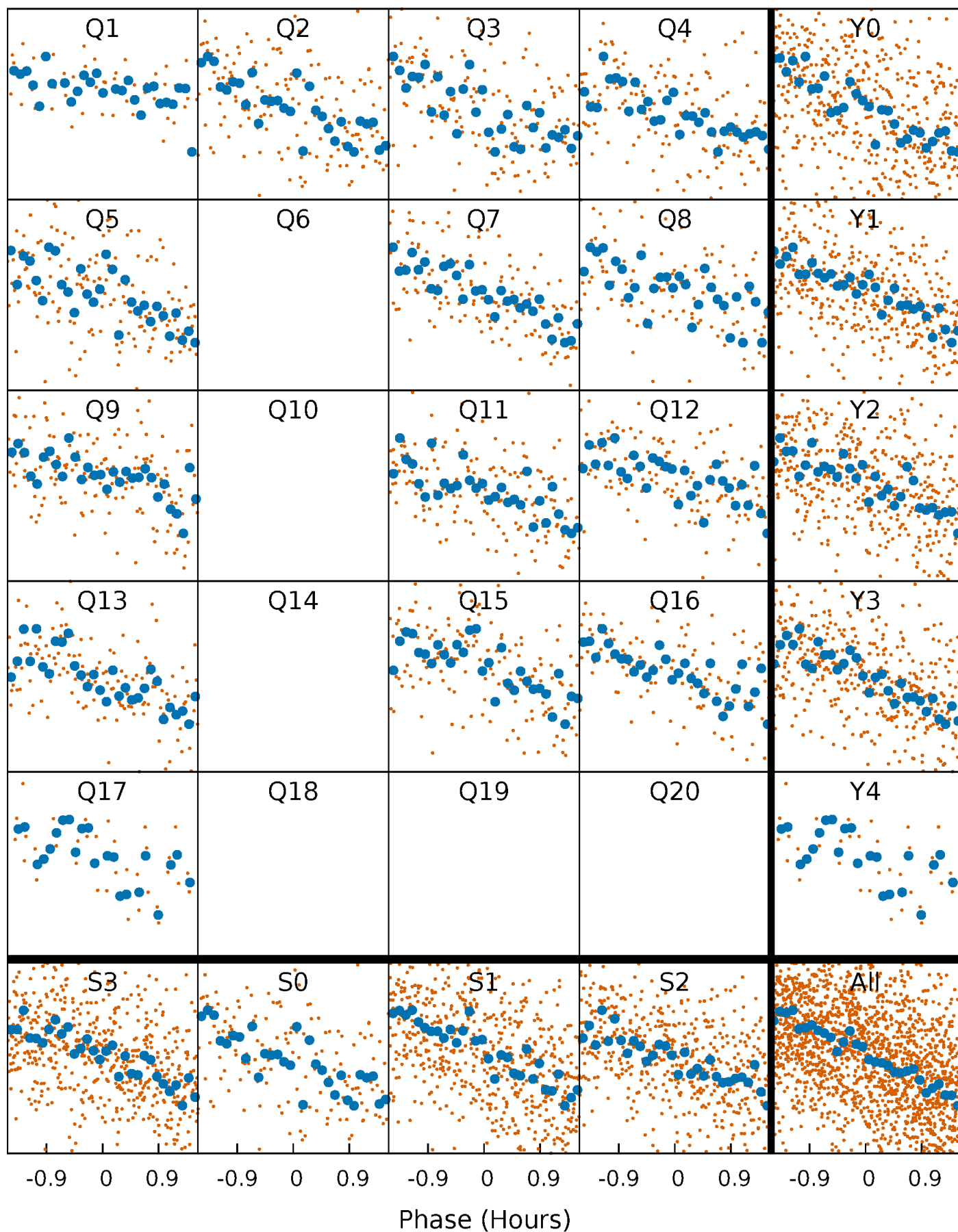


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



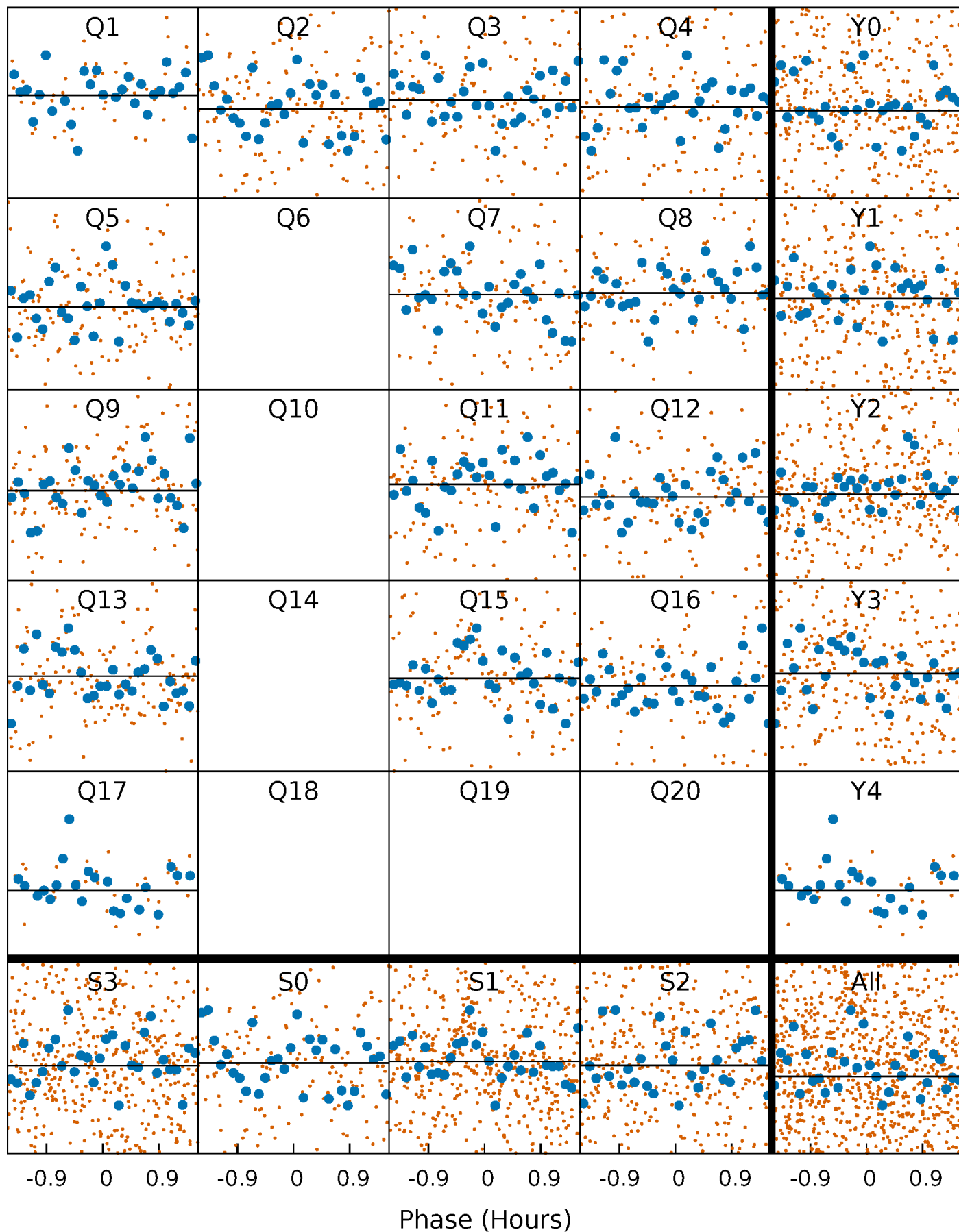
PDC Quarter-Phased Transit Curves

TCE 004483235-02 P= 3.521868 Days $T_0=134.990428$ (BKJD)



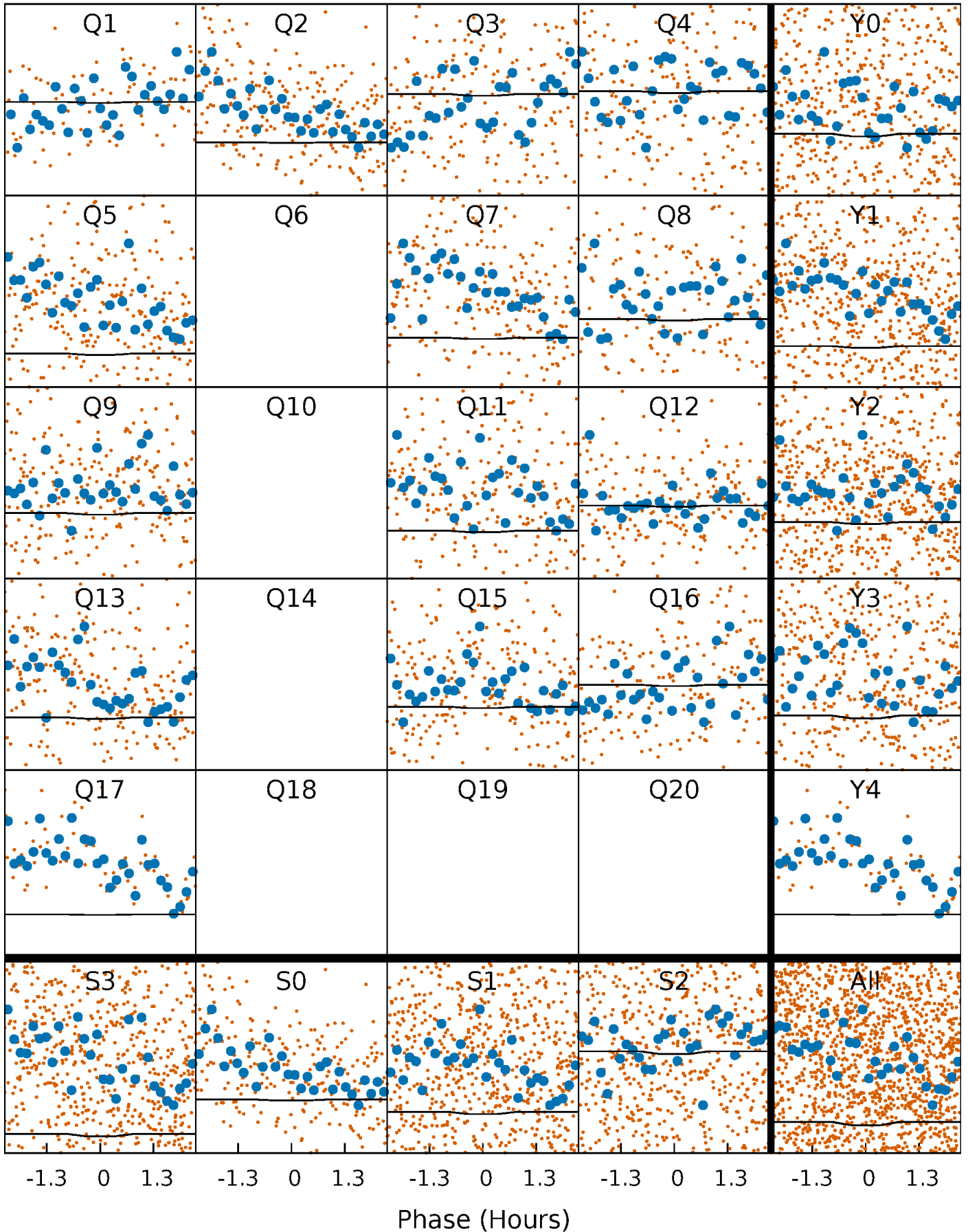
DV Quarter-Phased Transit Curves

TCE 004483235-02 P= 3.521868 Days $T_0=134.990428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

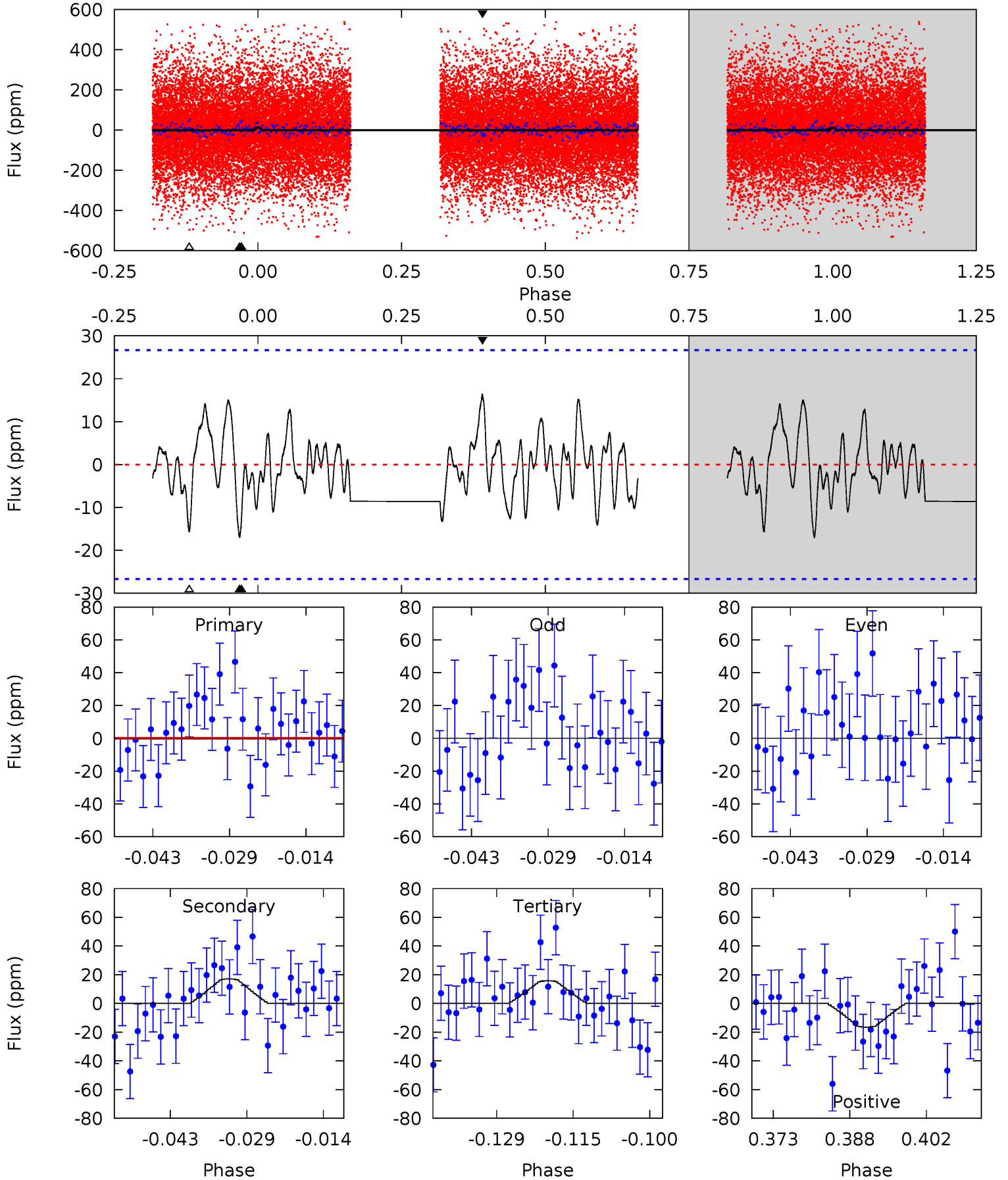
TCE 004483235-02 P= 3.521960 Days $T_0=134.954935$ (BKJD)



DV Model-Shift Uniqueness Test

004483235-02, P = 3.521868 Days, E = 131.468560 Days

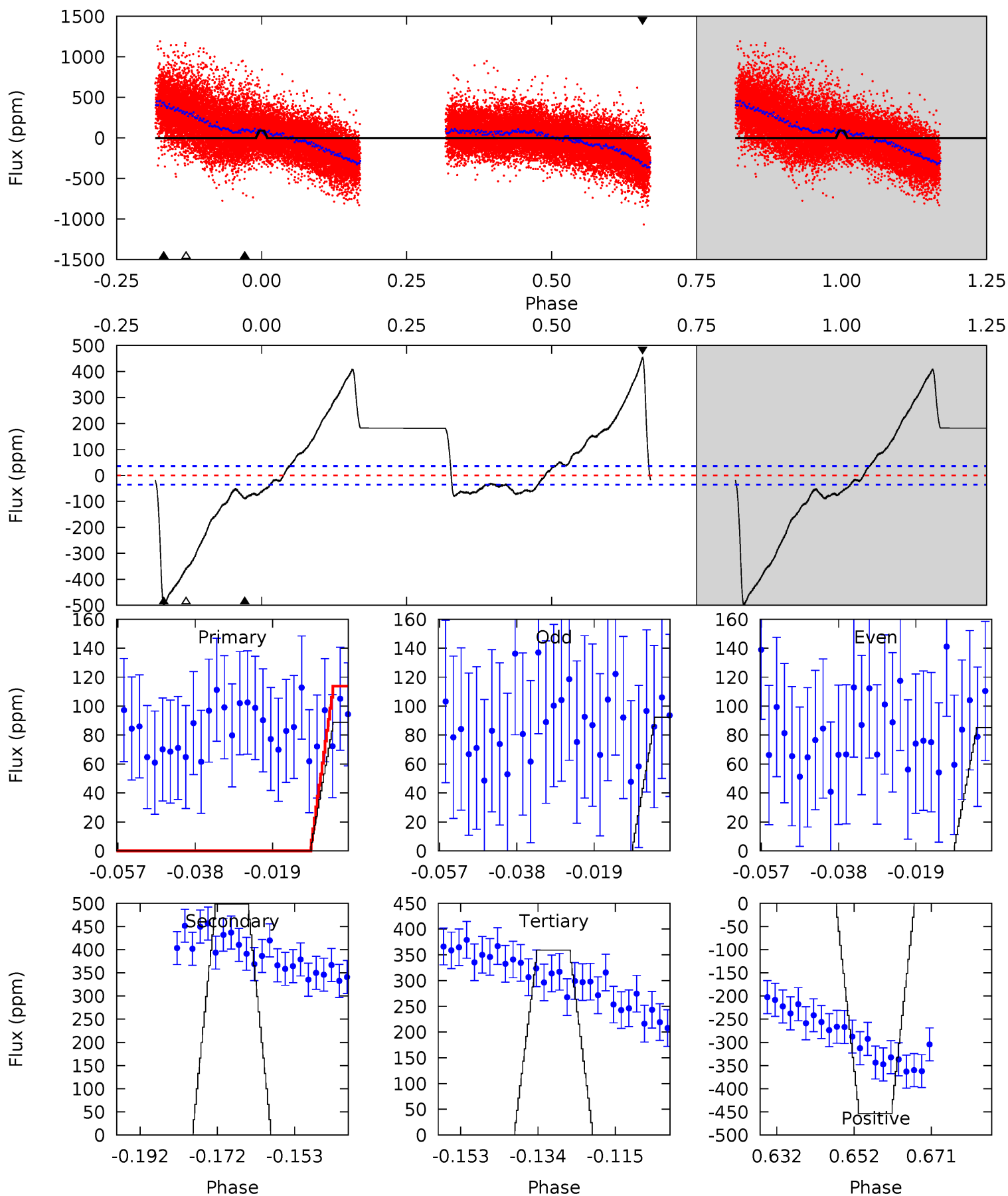
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 2.37 | 3.18 | 2.93 | 3.06 | 4.96 | 2.45 | 1.19 | -0.57 | -0.69 | 0.24 | 0.12 | 0.55 | 3.02 | 0.49 | 2.49 |



Alt Model-Shift Uniqueness Test

004483235-02, P = 3.521960 Days, E = 131.432975 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 12.0 | 67.2 | 48.4 | 61.2 | 4.90 | 2.34 | 25.3 | -36.5 | -49.2 | 18.8 | 6.05 | 0.48 | 1.18 | 0.48 | 3.32 |



Stellar Parameters For KIC 004483235

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 8784^{+246}_{-422} | $4.156^{+0.098}_{-0.182}$ | $0.070^{+0.250}_{-0.600}$ | $1.967^{+0.692}_{-0.346}$ | $2.017^{+0.372}_{-0.413}$ | $0.374^{+0.179}_{-0.193}$ |
| | +3%/-5% | +2%/-4% | +357%/-857% | +35%/-18% | +18%/-20% | +48%/-52% |
| Source | KIC0 | 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 004483235-02 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|--------------|------------------------|----------------------|-------------------------|----------------------------|
| DV | -17 ± 5 | $4.69^{+5.27}_{-3.43}$ | 3200^{+242}_{-212} | 3760^{+3326}_{-5867} | $1.329^{+17.508}_{-1.040}$ |
| Alt. | -498 ± 7 | $4.71^{+5.25}_{-3.12}$ | 3200^{+246}_{-189} | 9082^{+16833}_{-3288} | 40^{+318}_{-31} |

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 $A_{obs} \gg 1.0$

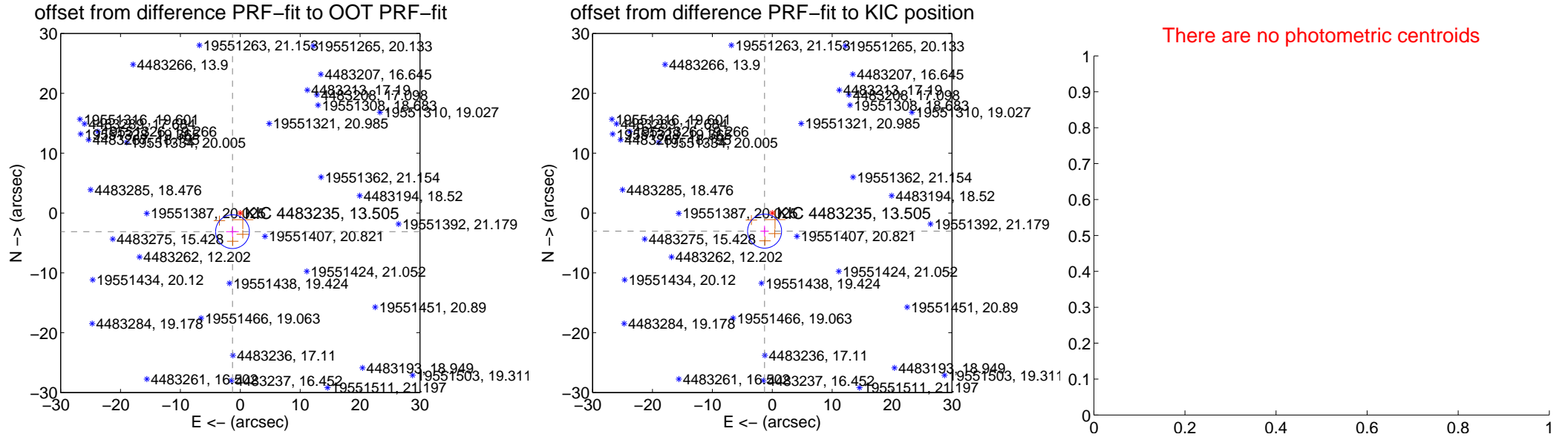
DV Centroid Data

Supplemental centroid analysis for 004483235-02. Kepler magnitude: 13.51. Transit SNR 0.00

There are 0 quarters with good PRF difference image offsets

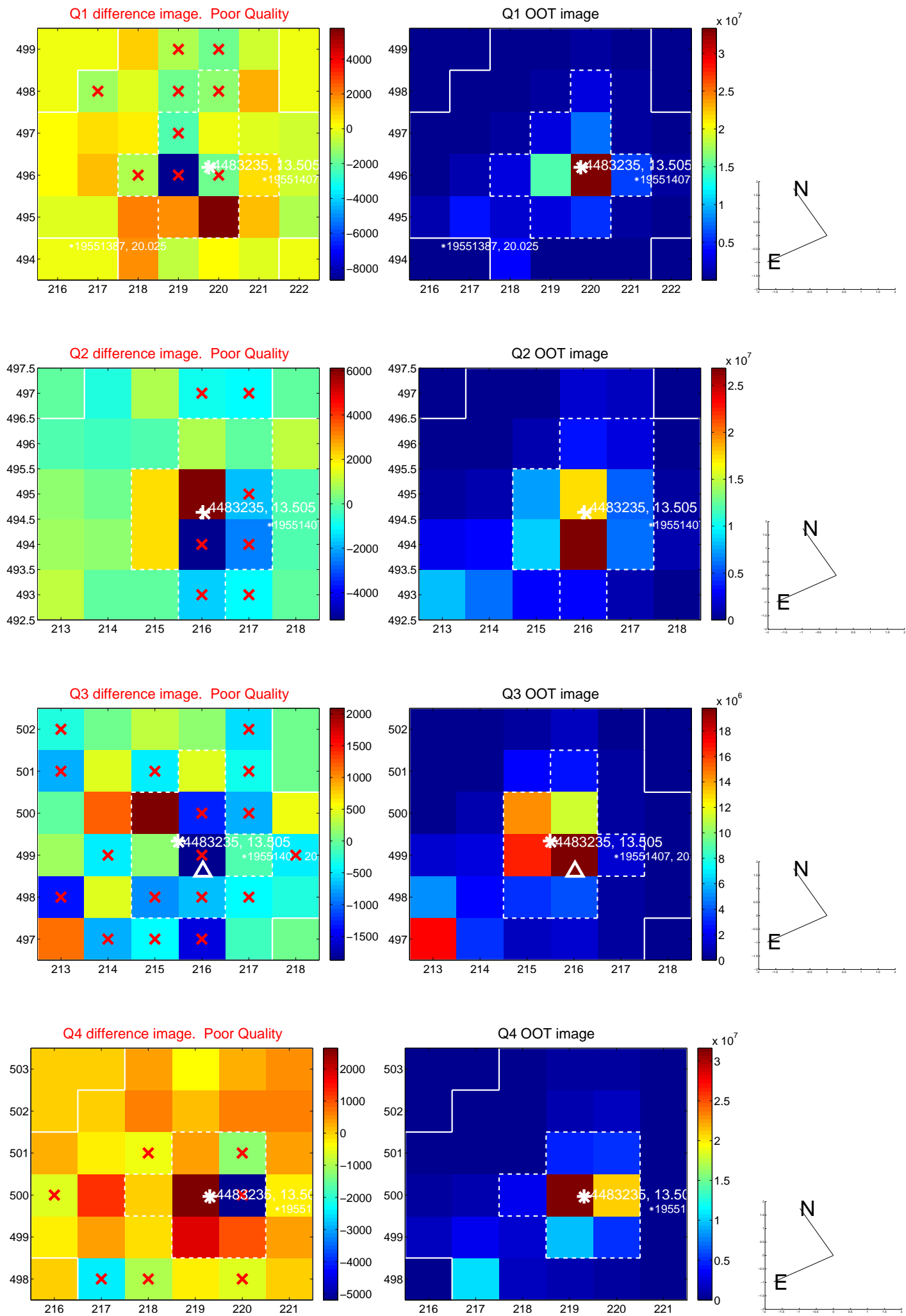
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 3.376 ± 0.940 | 3.59 | 1.301 ± 1.060 | -3.115 ± 0.918 |
| PRF-fit source offset from KIC position | 3.291 ± 0.946 | 3.48 | 1.280 ± 0.706 | -3.032 ± 0.909 |
| photometric centroid source offset | — | — | — | — |

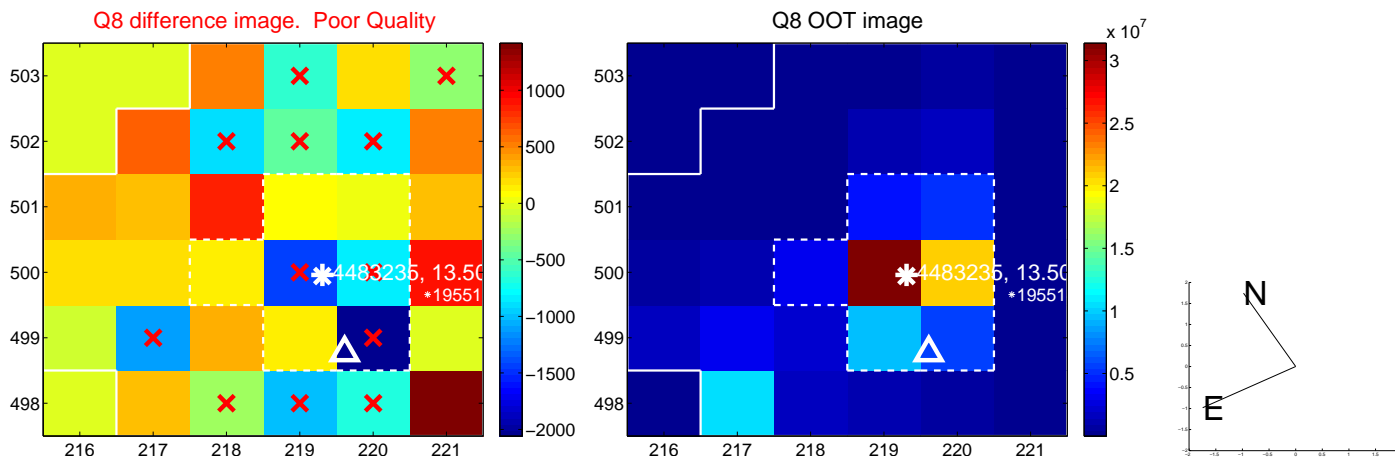
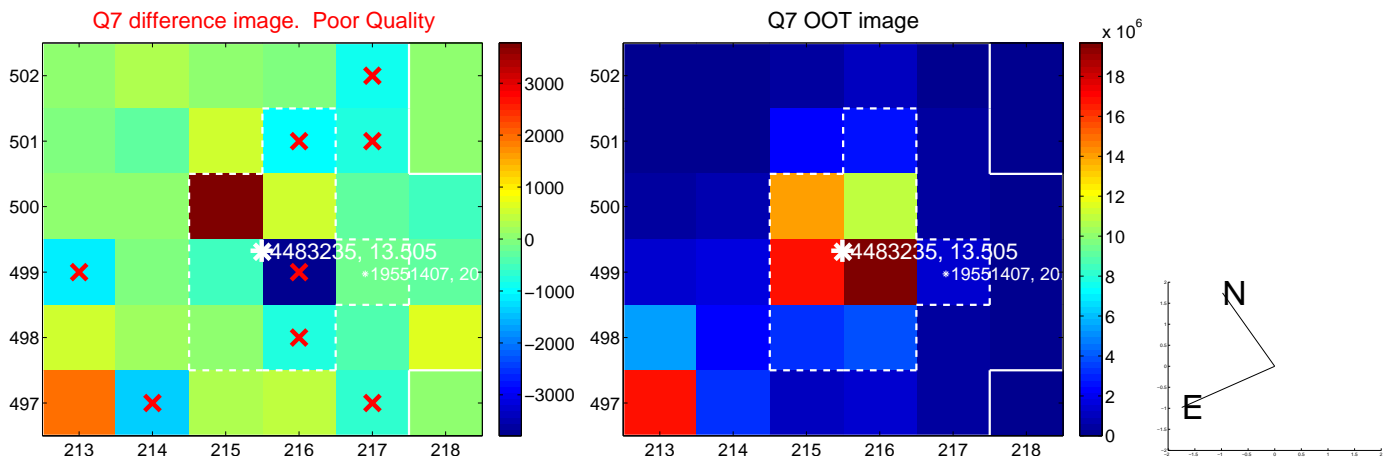
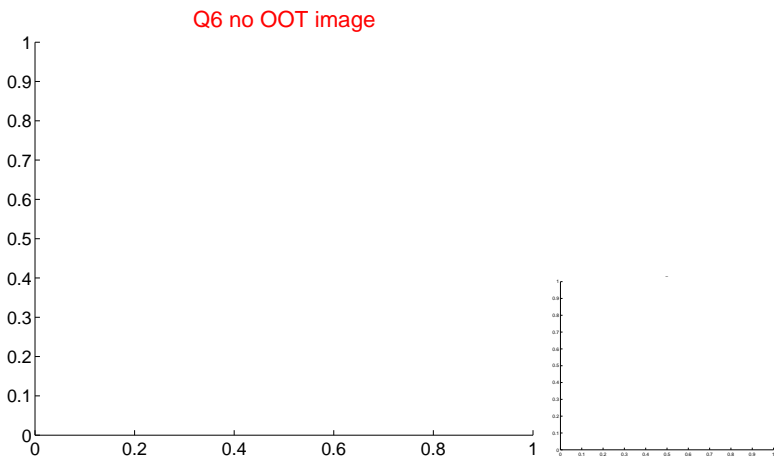
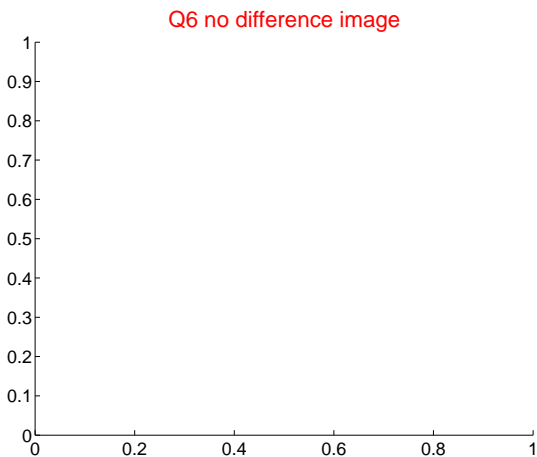
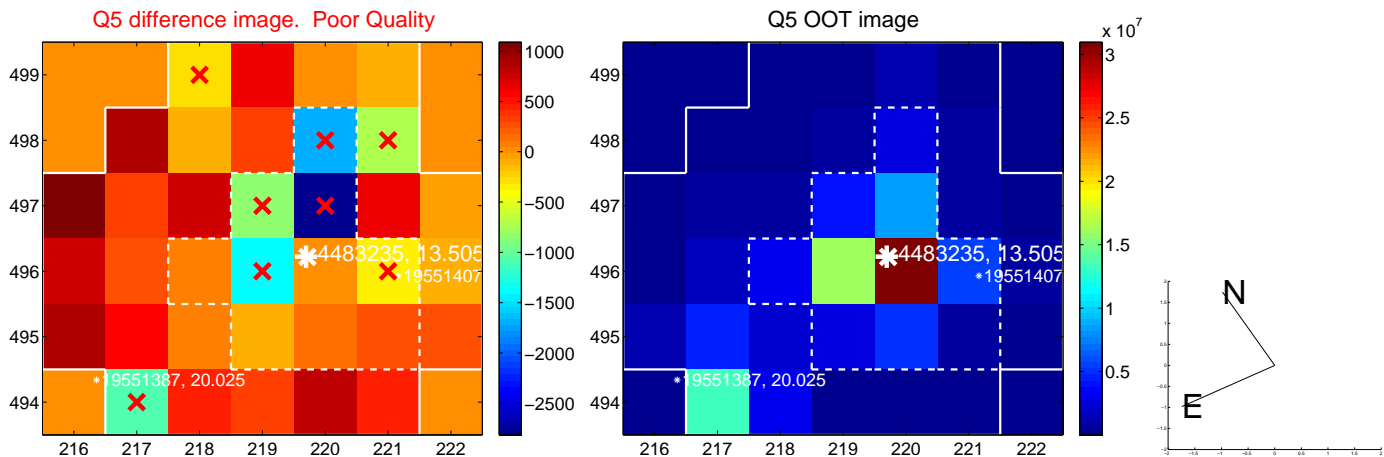


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

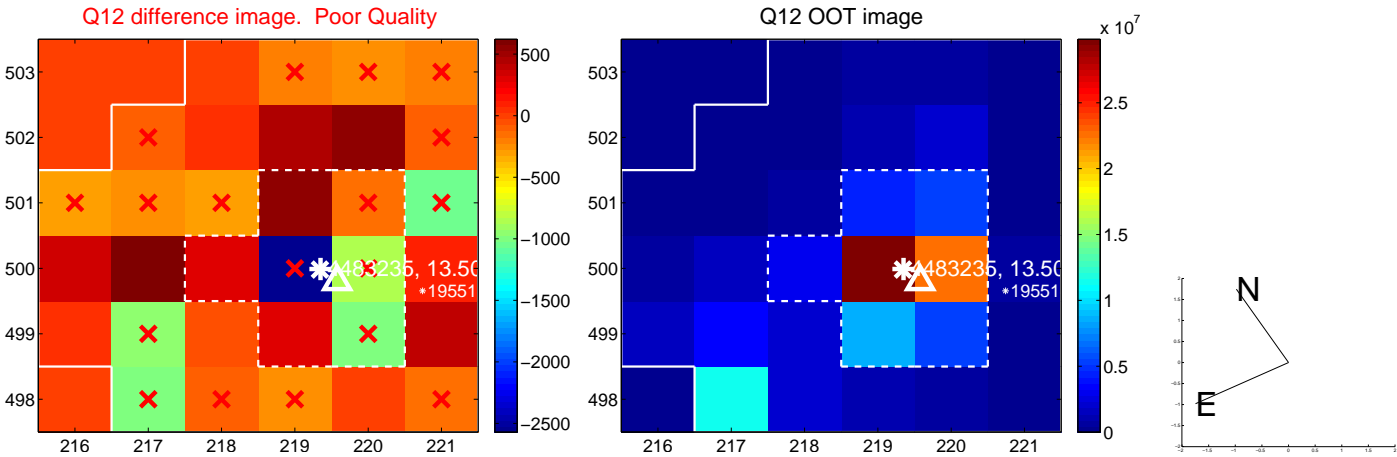
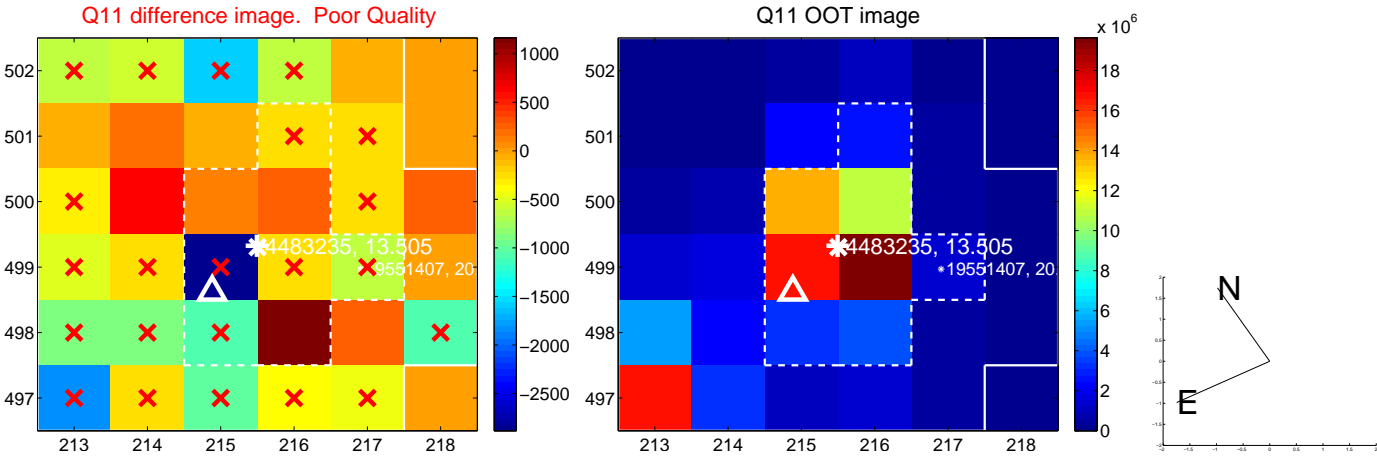
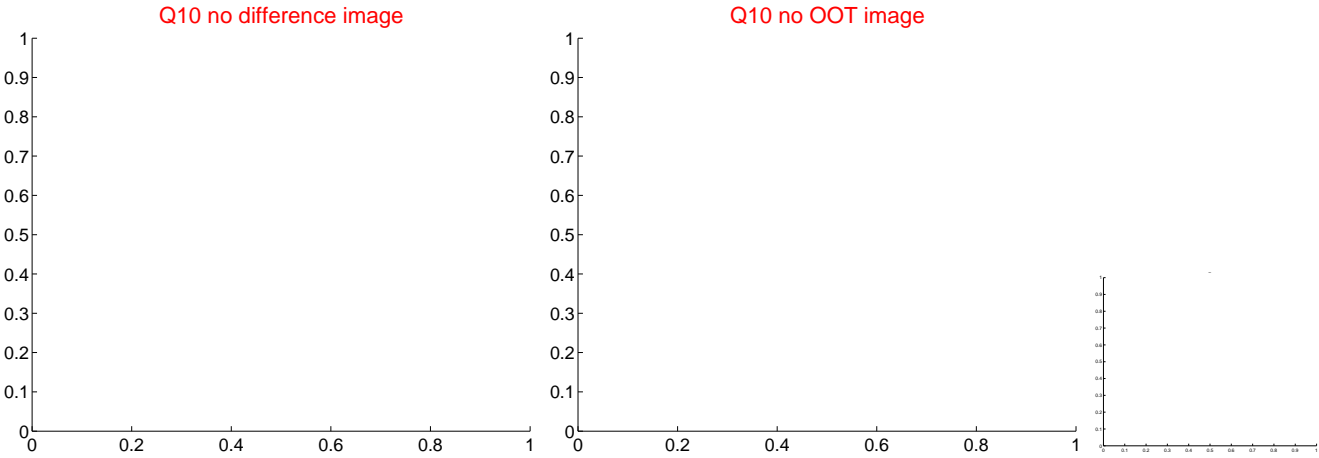
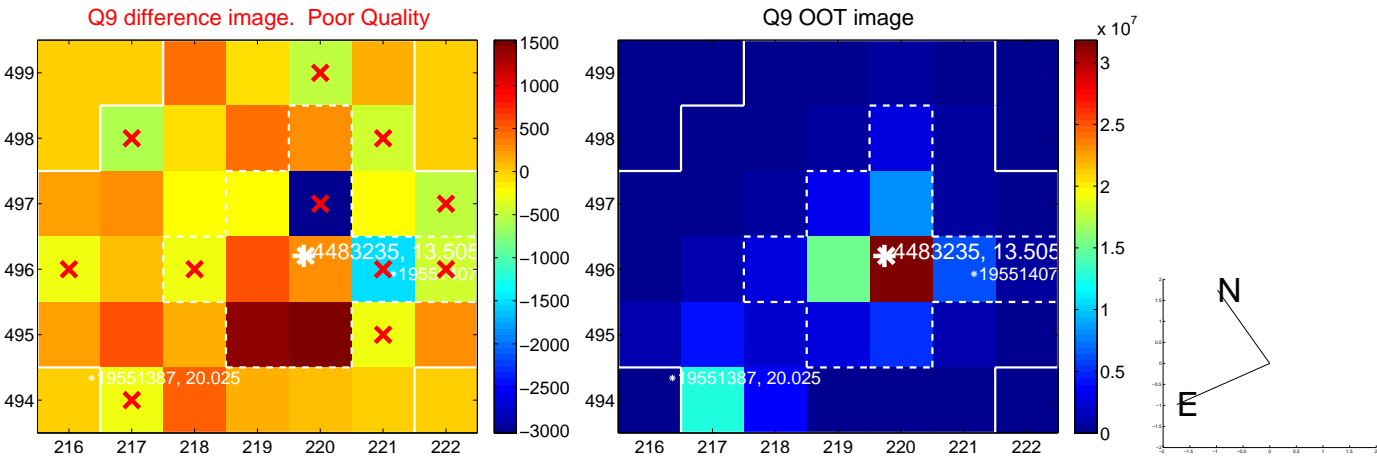
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



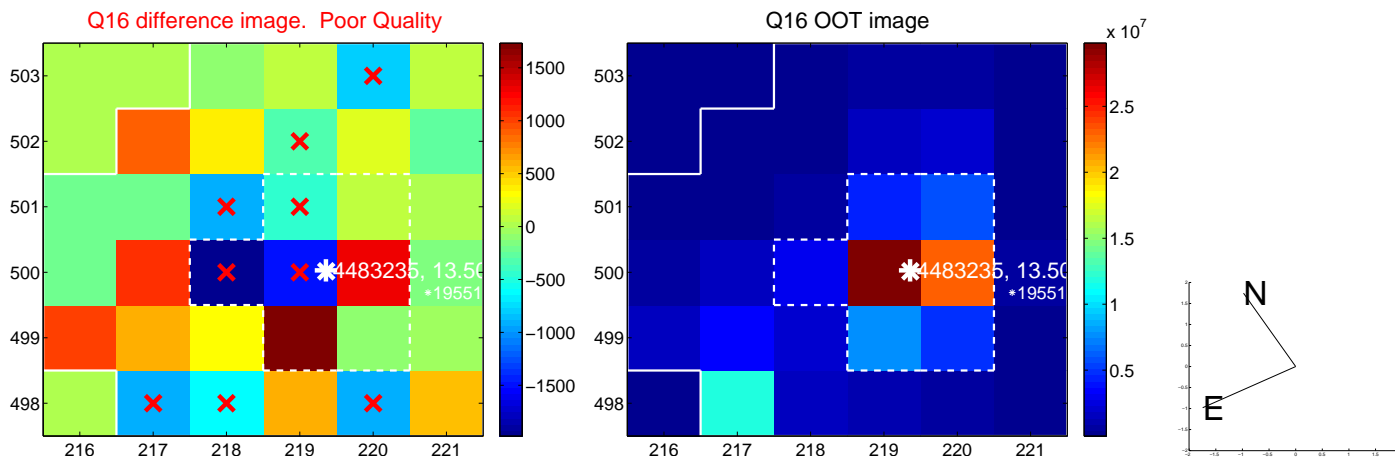
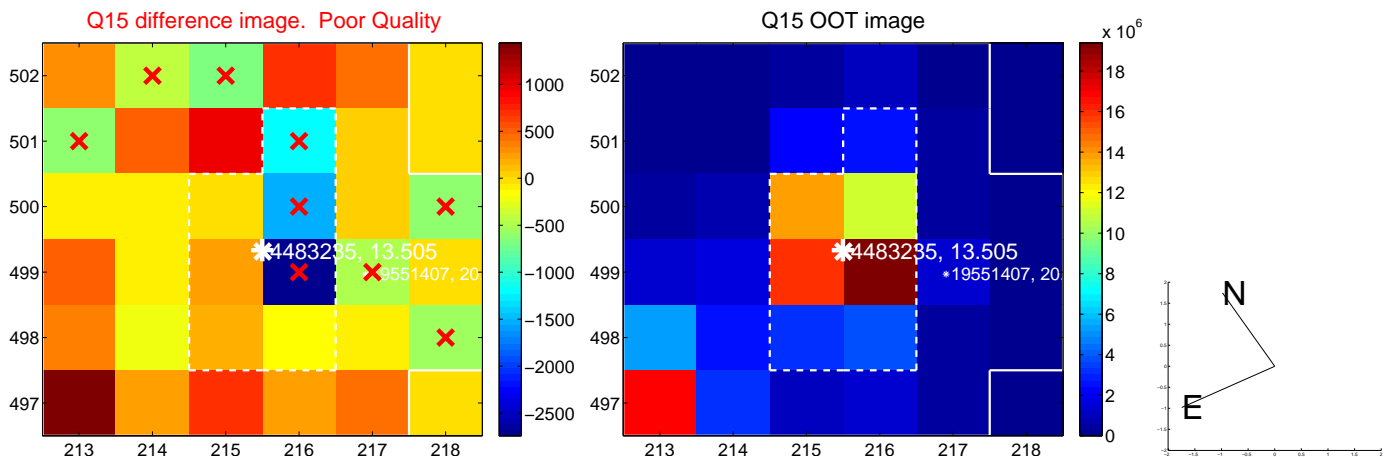
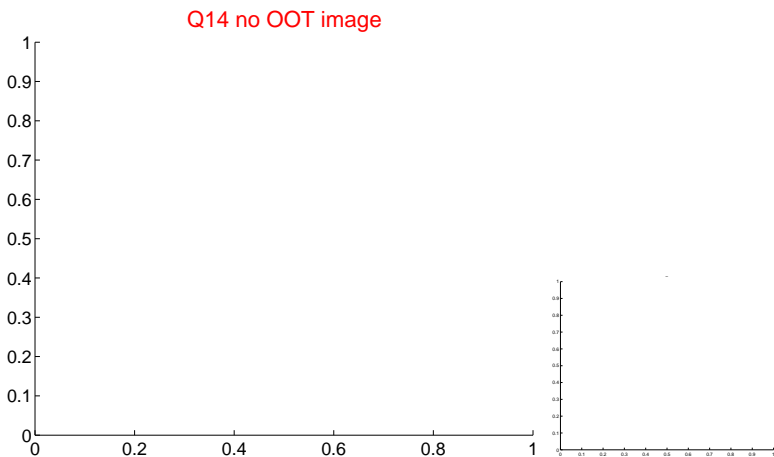
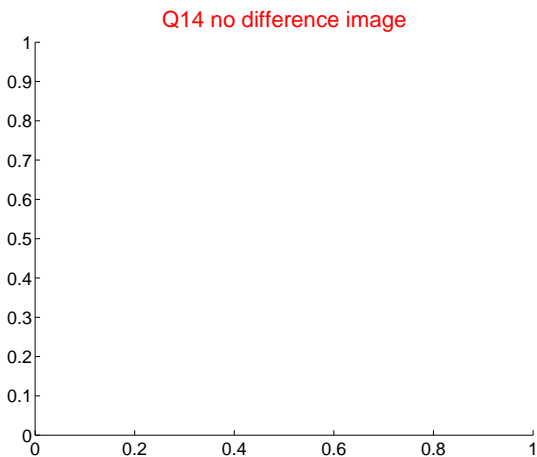
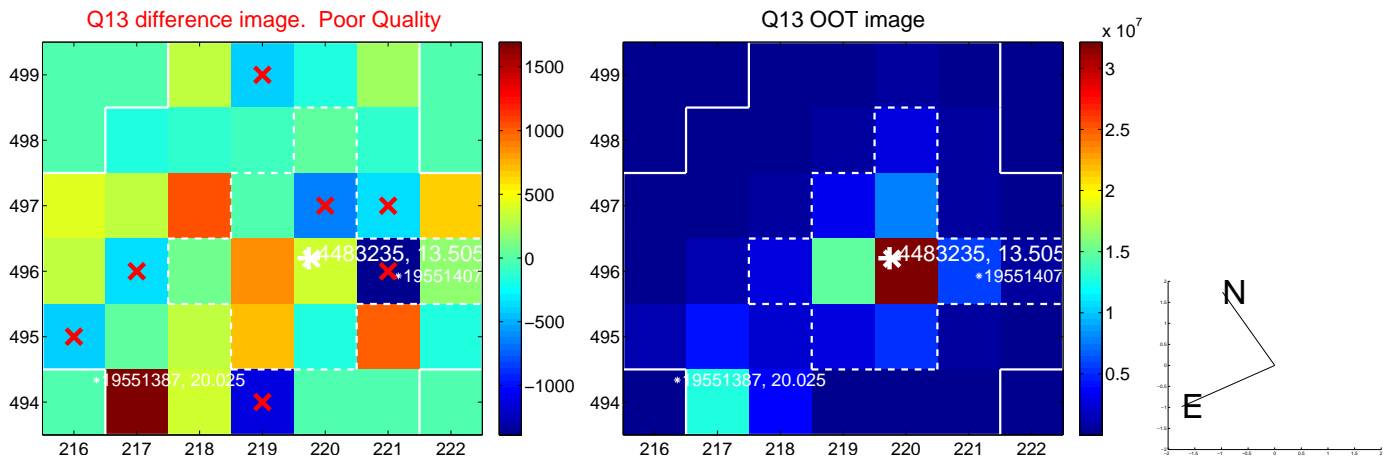
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



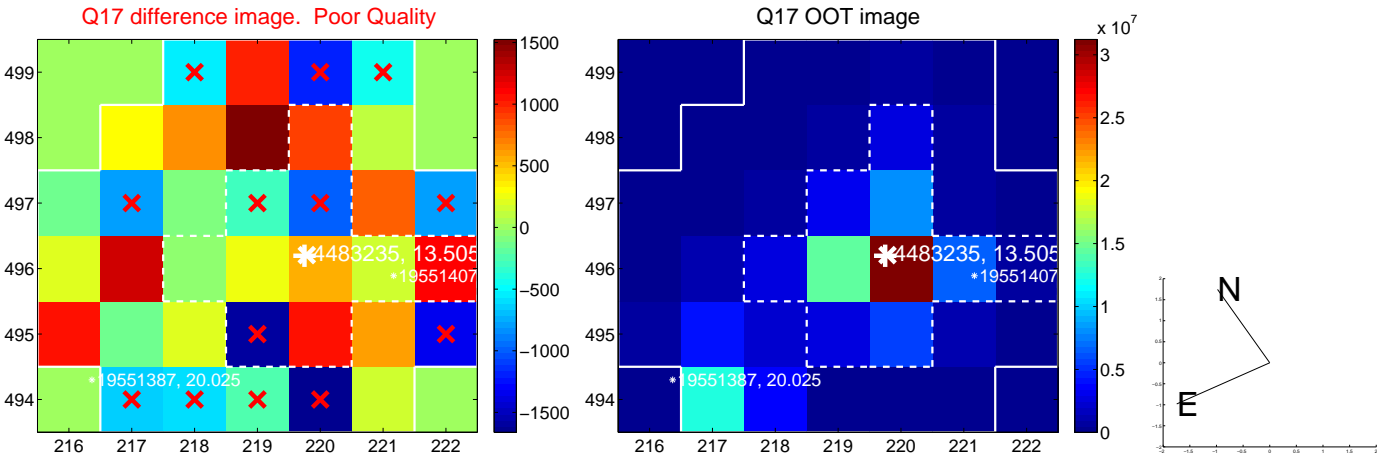
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



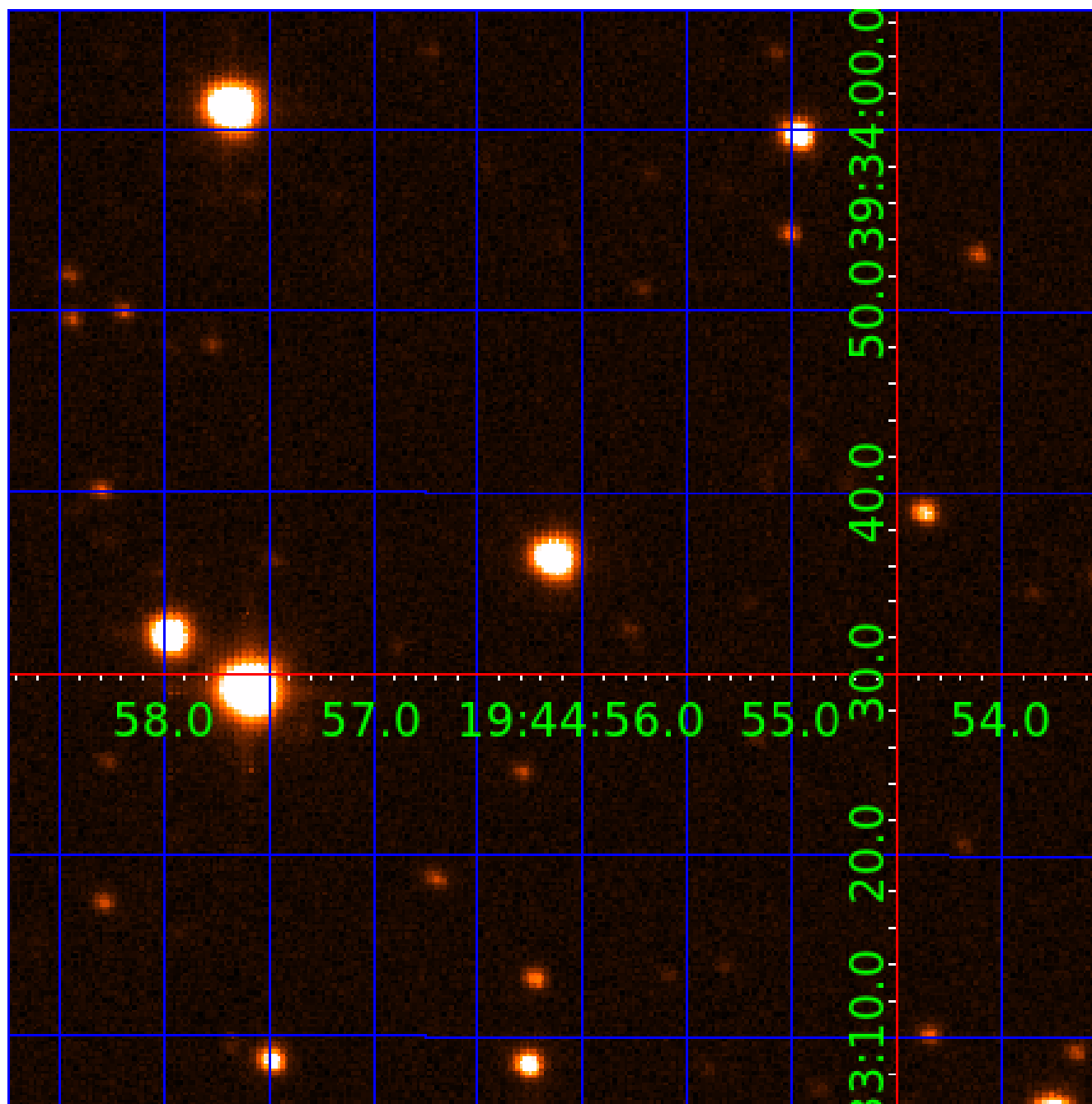
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 004483235

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 004483235-01 | OBS | 7550.01 | 1.760936 | 132.309365 | 38.9 | 4.224 | 13.6 | 14.4 | 1.97 | 8784 | 1.25 | 15844.38 |
| 004483235-02 | OBS | No | 3.521868 | 134.990428 | 0.0 | 0.766 | 7.9 | 0.0 | 1.97 | 8784 | 0.03 | 6287.85 |
| 004483235-03 | OBS | No | 3.522010 | 134.841895 | 26.5 | 8.237 | 7.9 | 7.4 | 1.97 | 8784 | 1.03 | 6287.52 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 004483235-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | SWEET_NTL—LPP_DV |
| 004483235-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS |
| 004483235-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

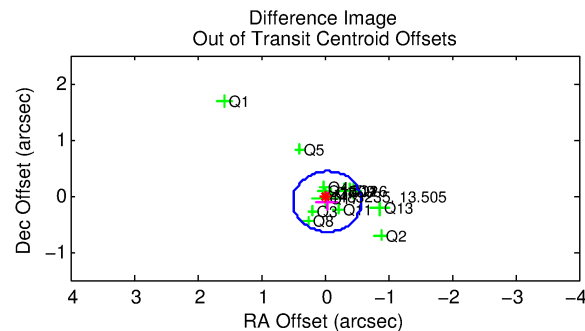
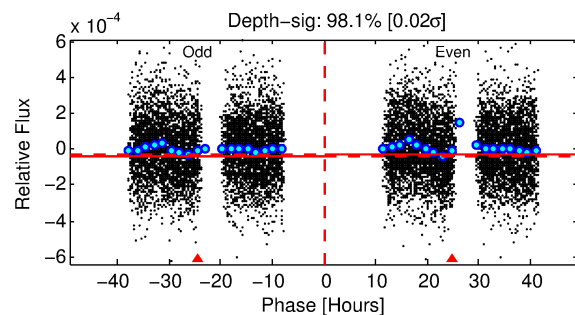
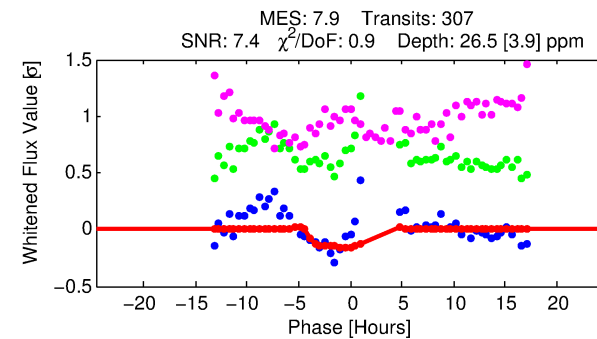
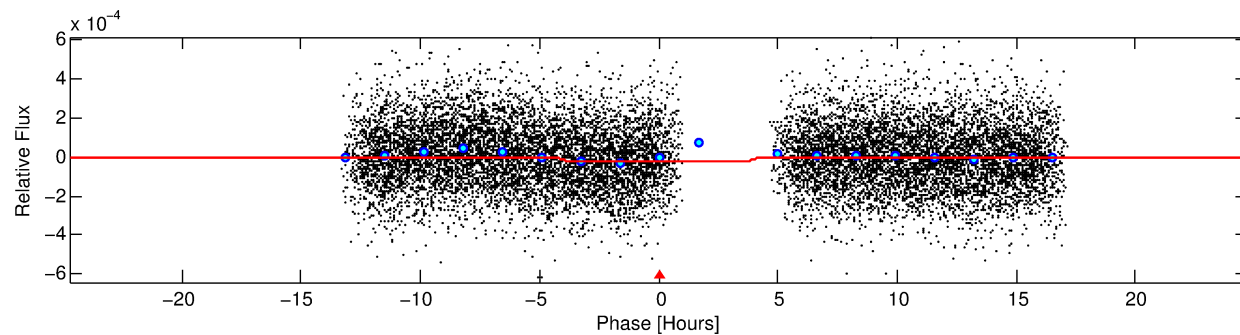
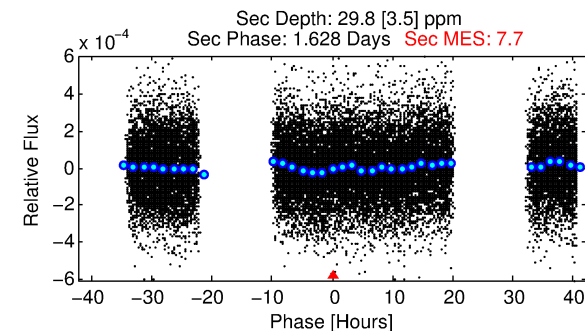
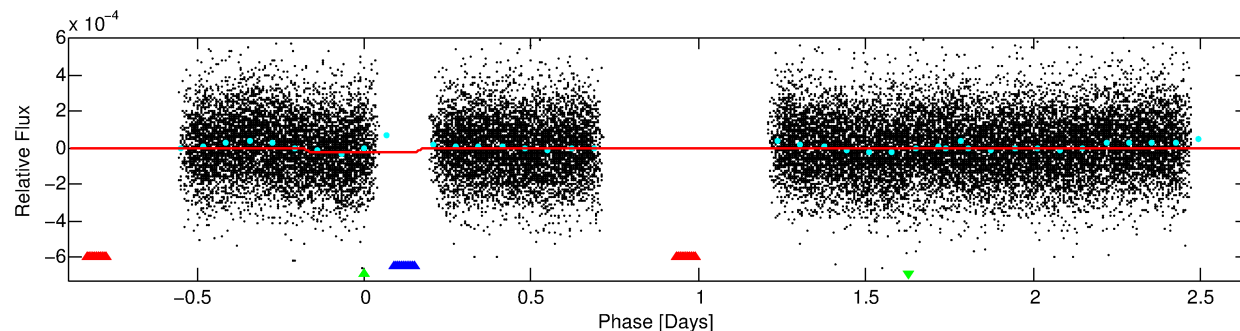
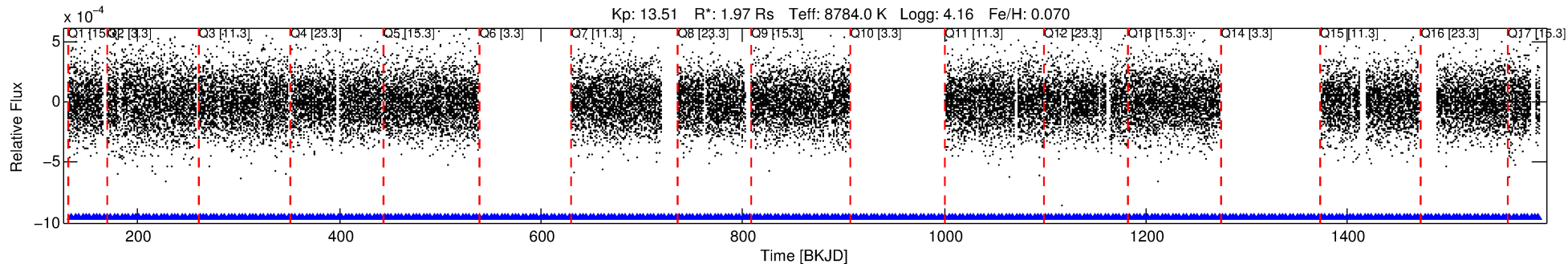
Ephemeris Match Information For 004483235-03

No Significant Match Found

DV One-Page Summary

KIC: 4483235 Candidate: 3 of 3 Period: 3.522 d
KOI: K07550 Corr: No Ephemeris Match

Kp: 13.51 R*: 1.97 Rs Teff: 8784.0 K Logg: 4.16 Fe/H: 0.070



DV Fit Results:

Period = 3.52201 [0.00007] d
Epoch = 134.8419 [0.0271] BKJD
Rp/R* = 0.0048 [0.0040]
a/R* = 3.23 [14.86]
b = 0.26 [18.25]
Seff = 6287.52 [2592.33]
Teq = 2271 [234] K
Rp = 1.03 [0.93] Re
a = 0.0573 [0.0156] AU
Ag = 50.33 [85.00] [0.58σ]
Teffp = 9351 [3881] K [1.82σ]

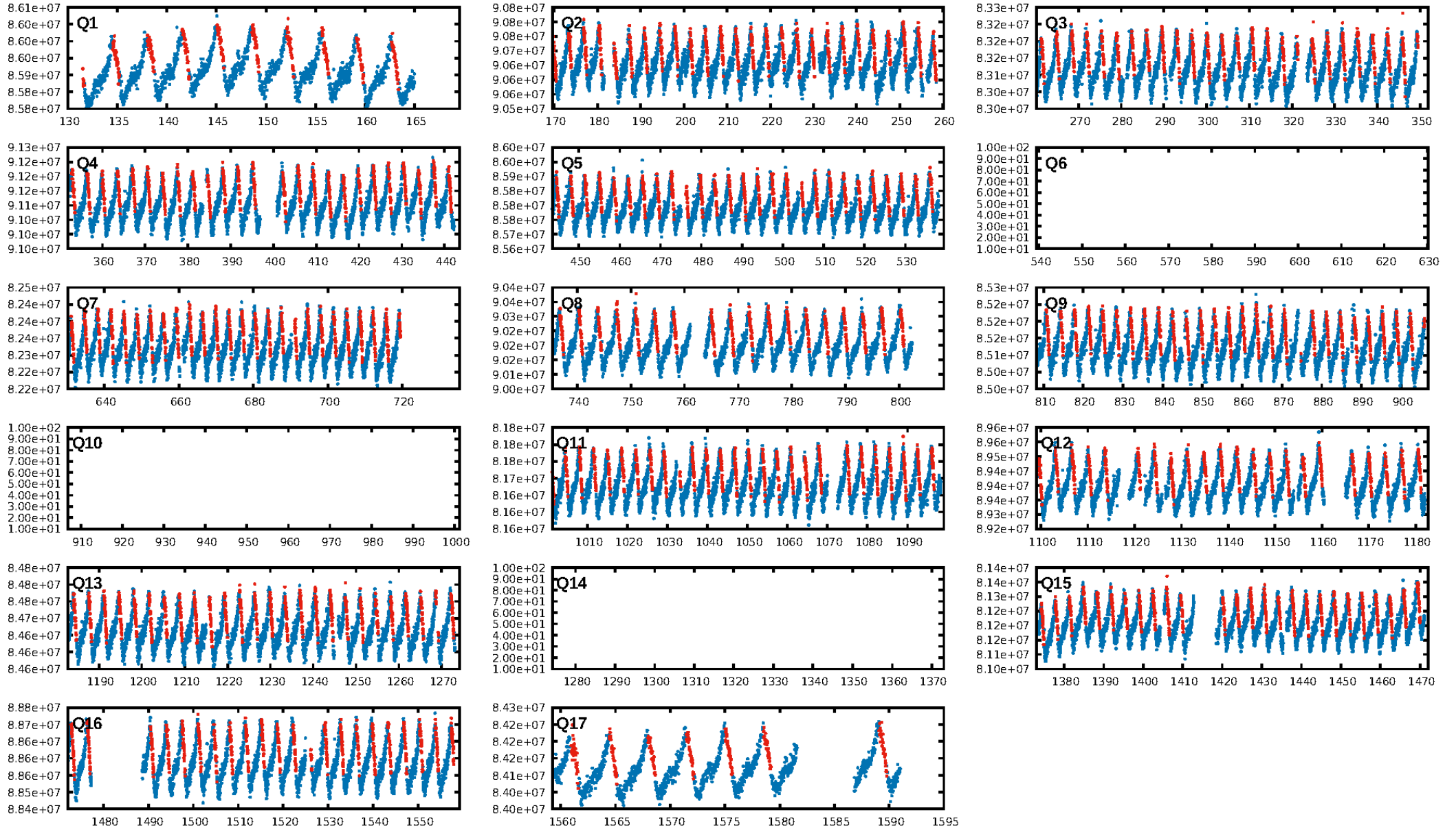
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 3.79e-13
RollingBand-fgt: 1.00 [291/291]
GhostDiagnostic-chr: 3.049
Centroid-sig: 1.4%
Centroid-so: 2.576 arcsec [1.58σ]
OotOffset-rm: 0.111 arcsec [0.62σ]
KicOffset-rm: 0.049 arcsec [0.22σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 0.00 [0/14]

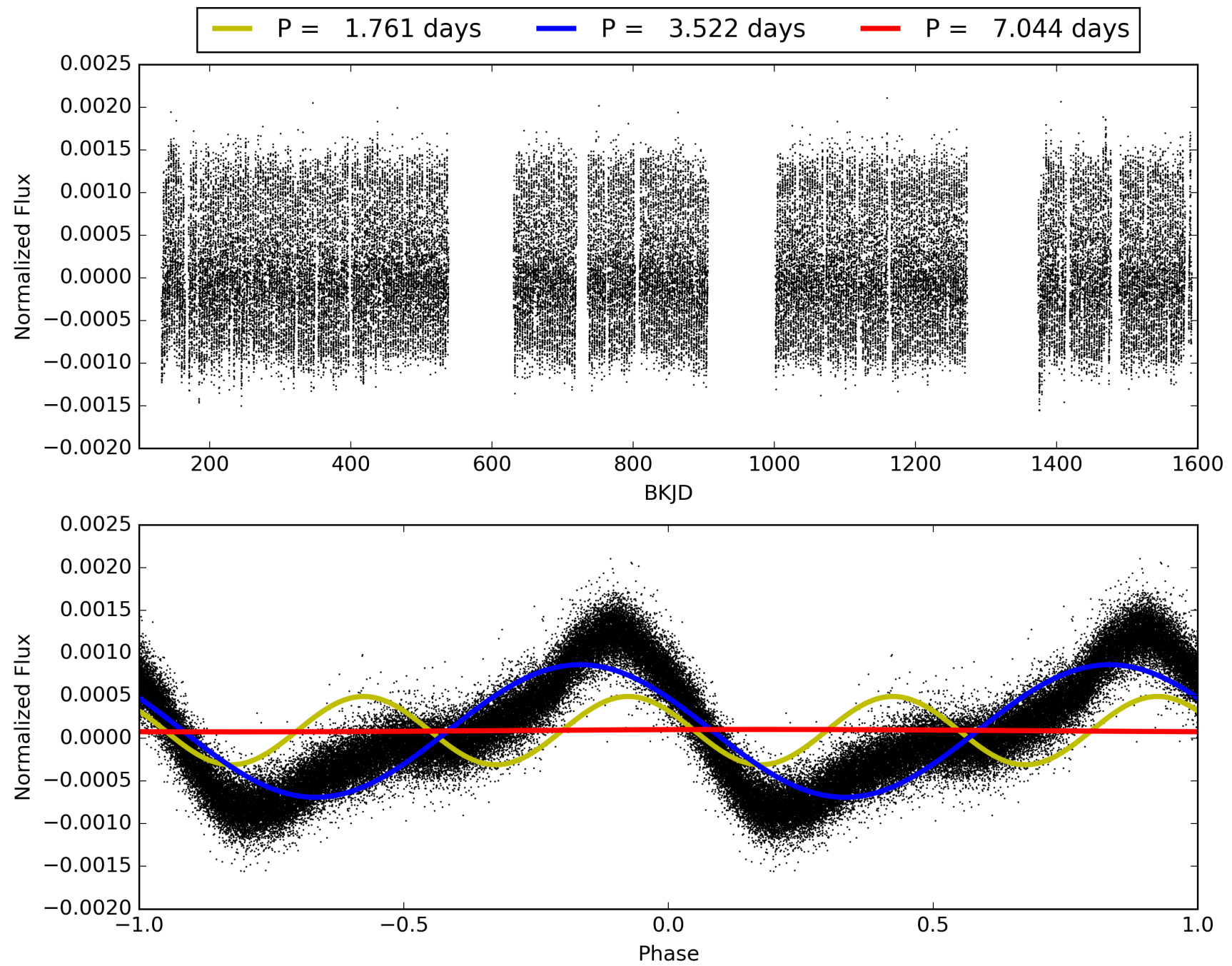
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:14:10 Z

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

TCE 004483235-03, PDC Light Curves

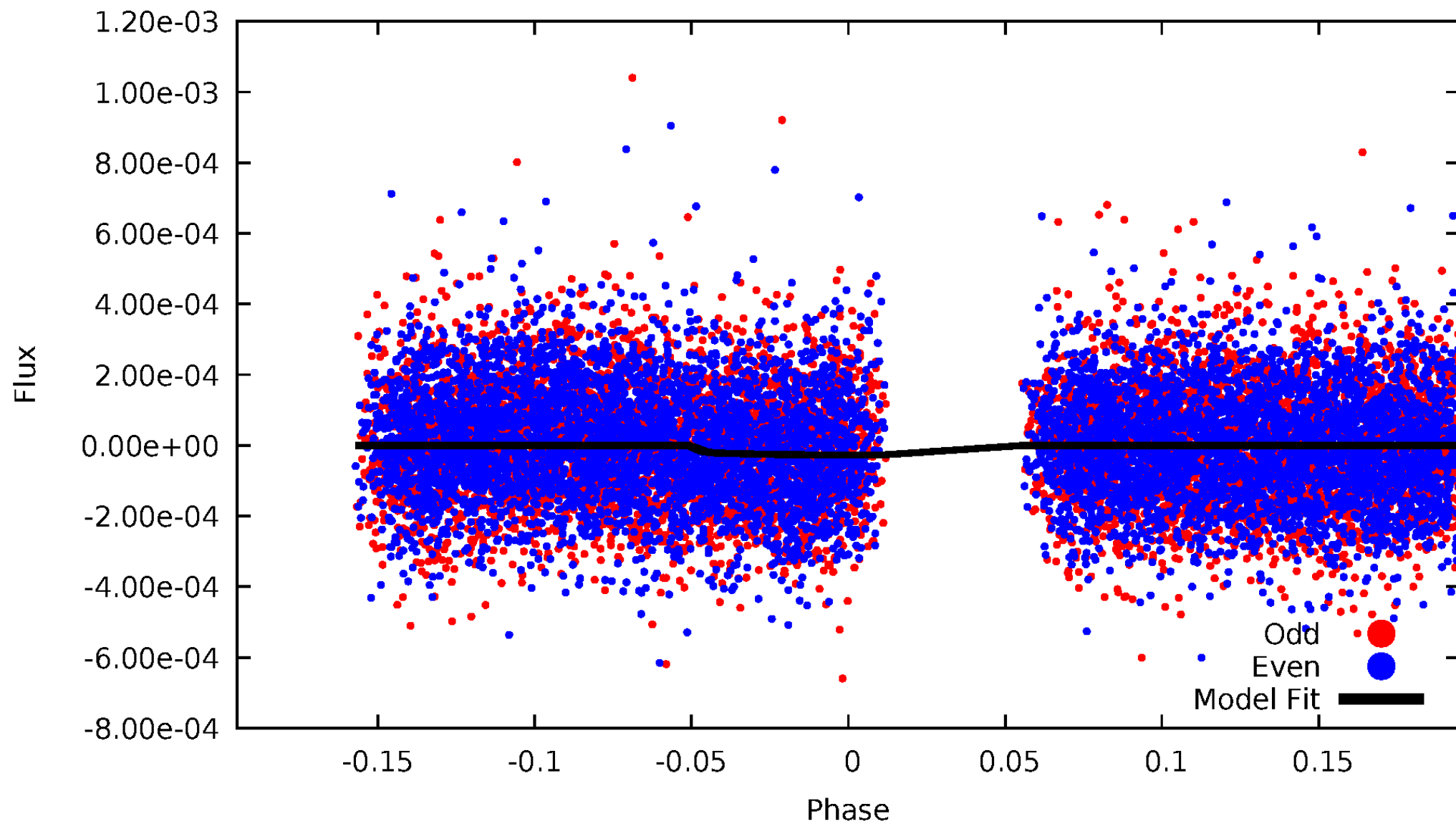


TCE 004483235-03



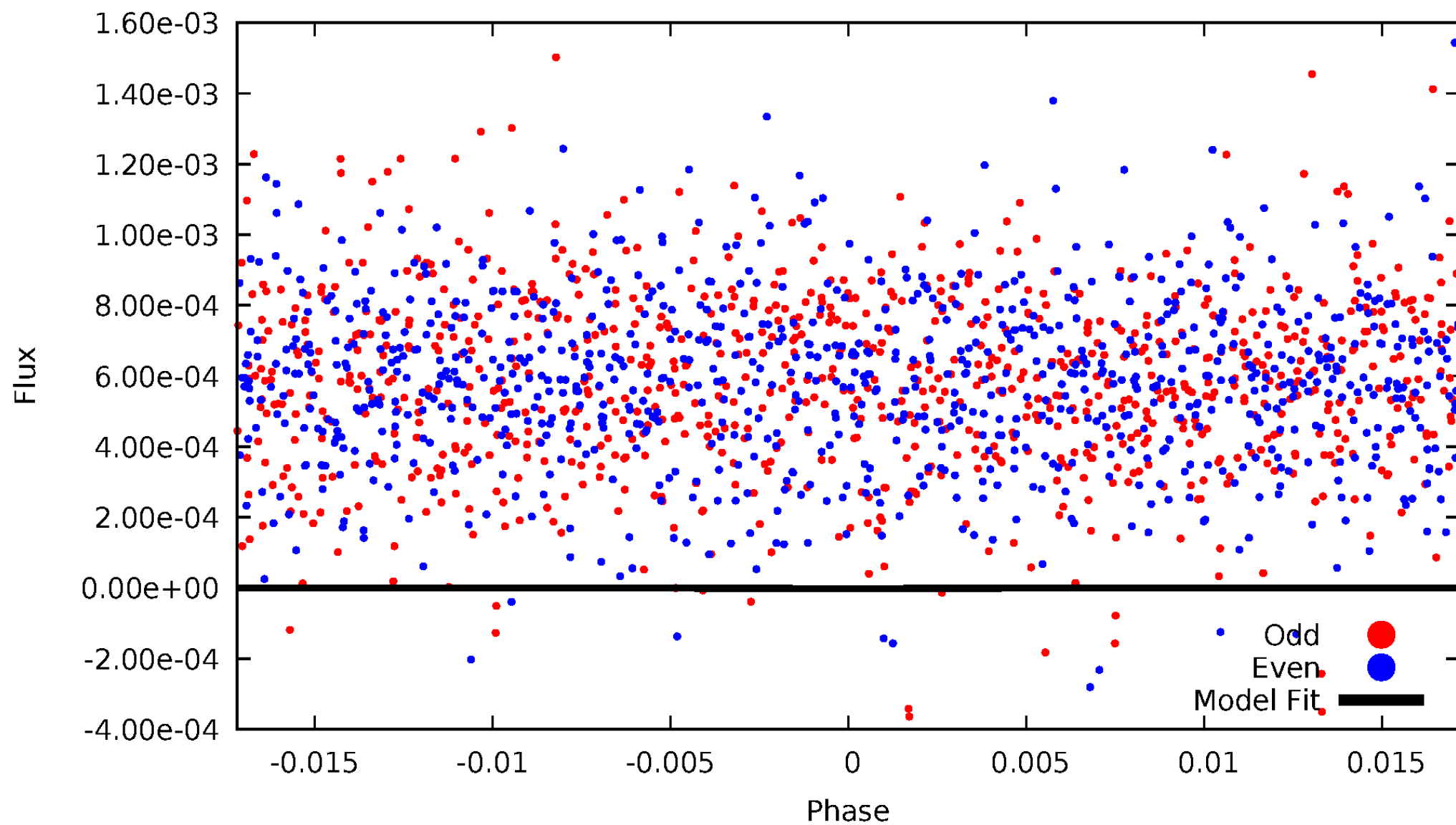
DV Odd/Even

TCE 004483235-03



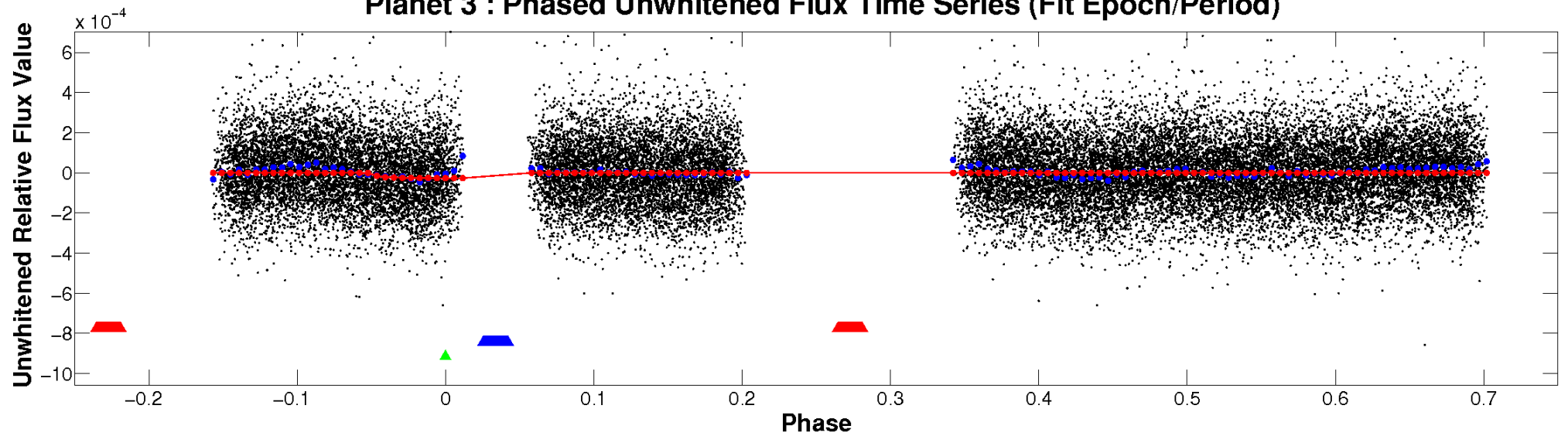
ALT Odd/Even

TCE 004483235-03

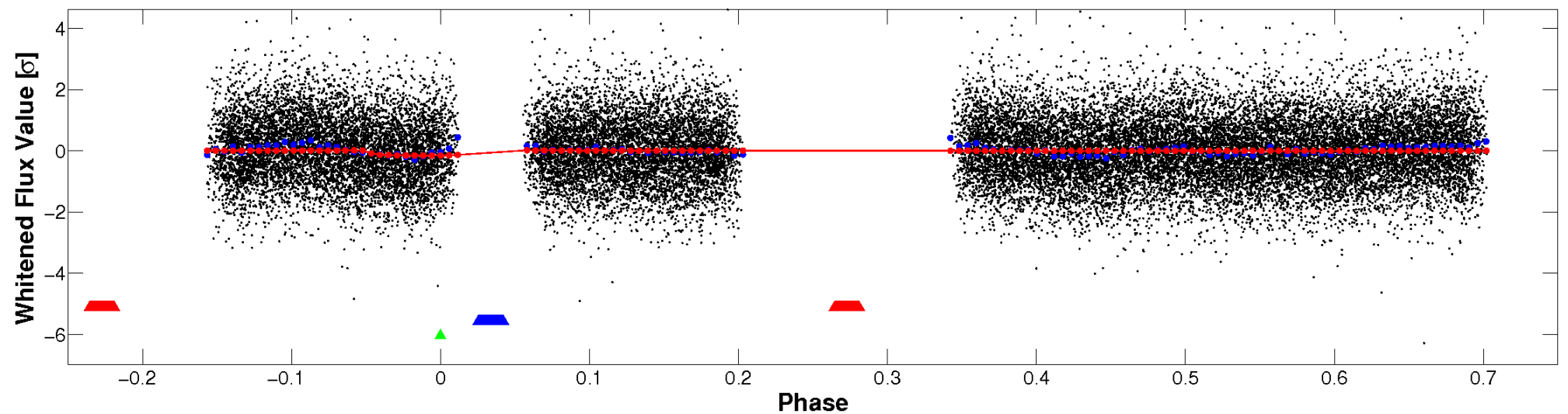


Non-Whitened Vs. Whitened Light Curve

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

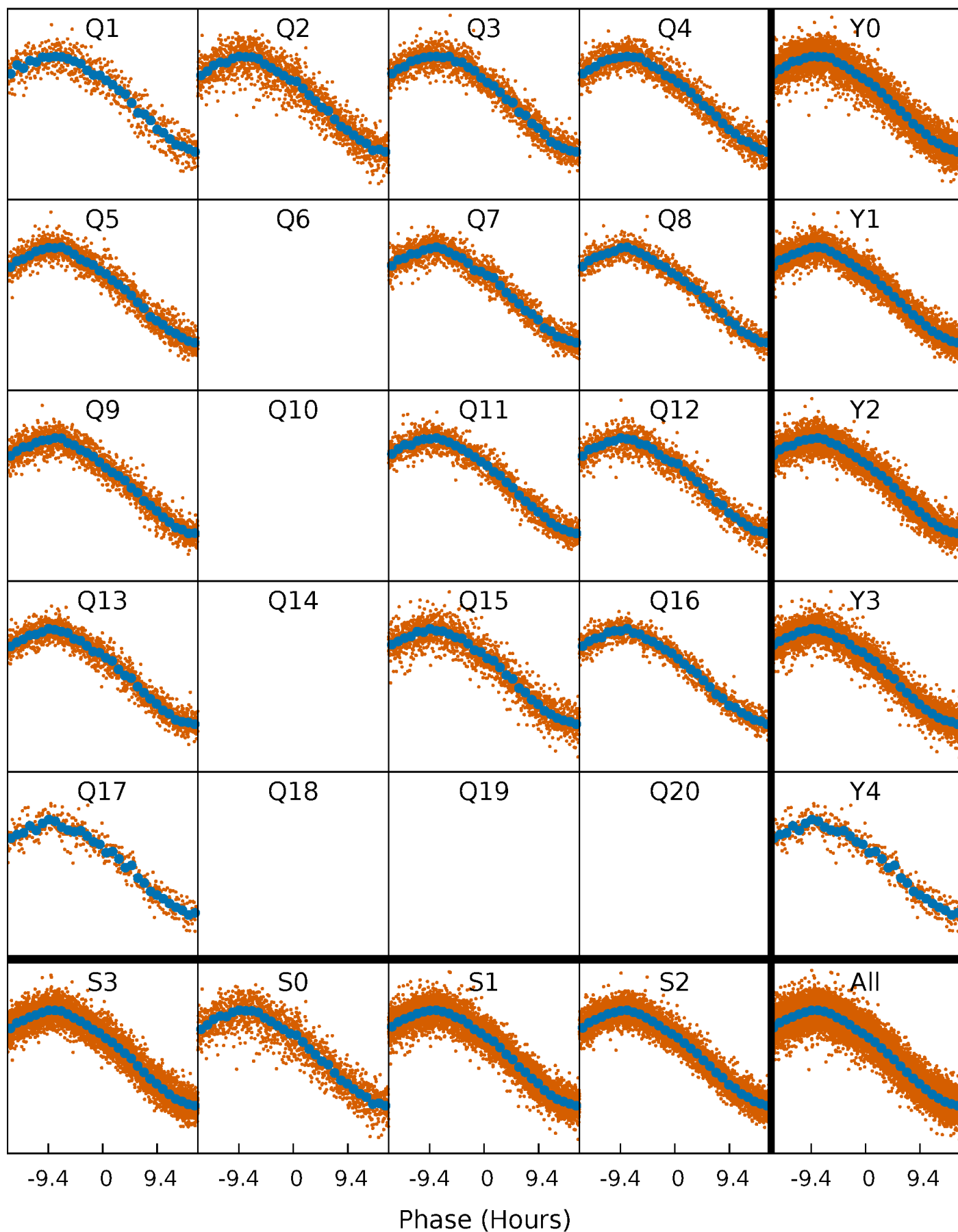


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



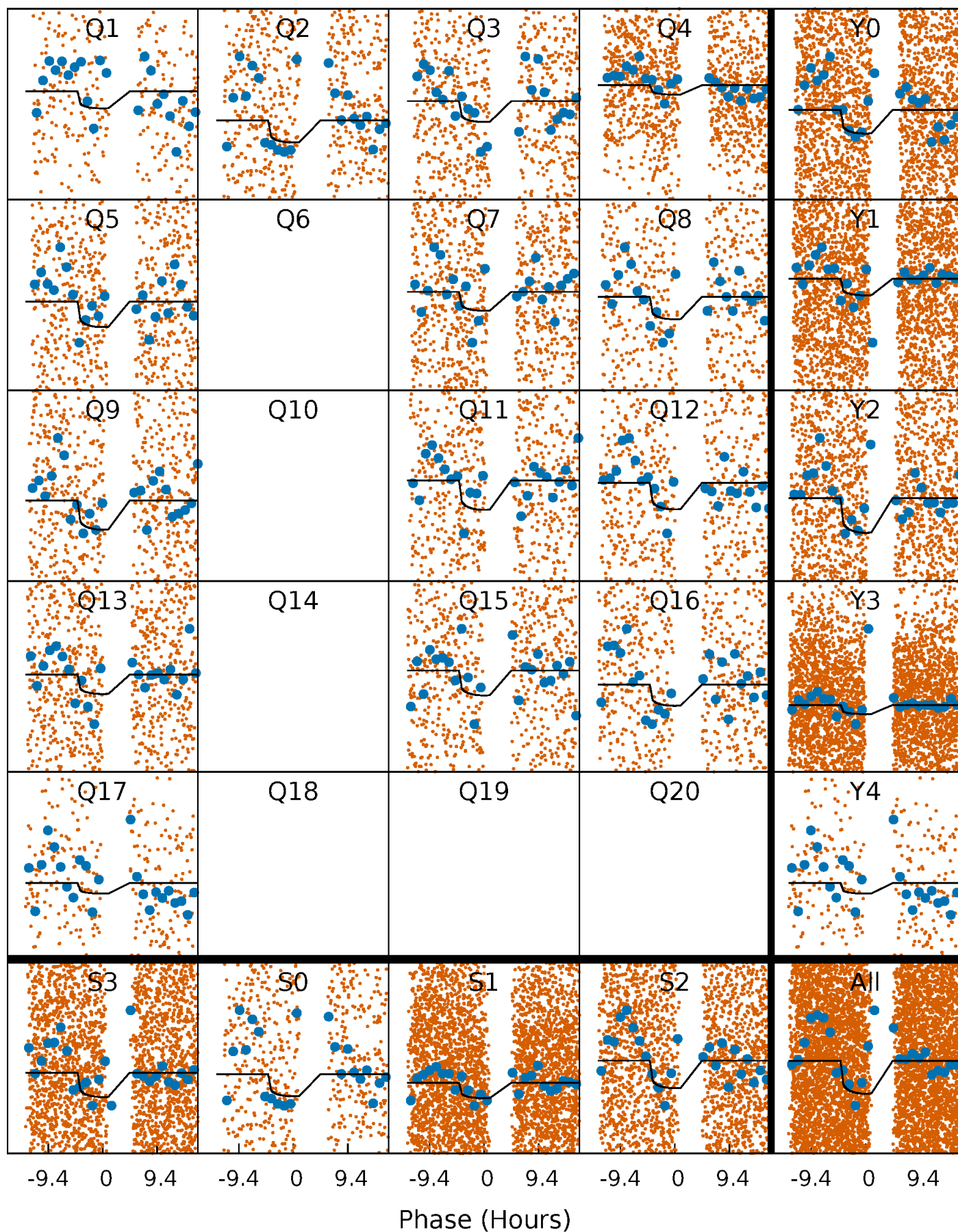
PDC Quarter-Phased Transit Curves

TCE 004483235-03 P= 3.522010 Days $T_0=134.841895$ (BKJD)



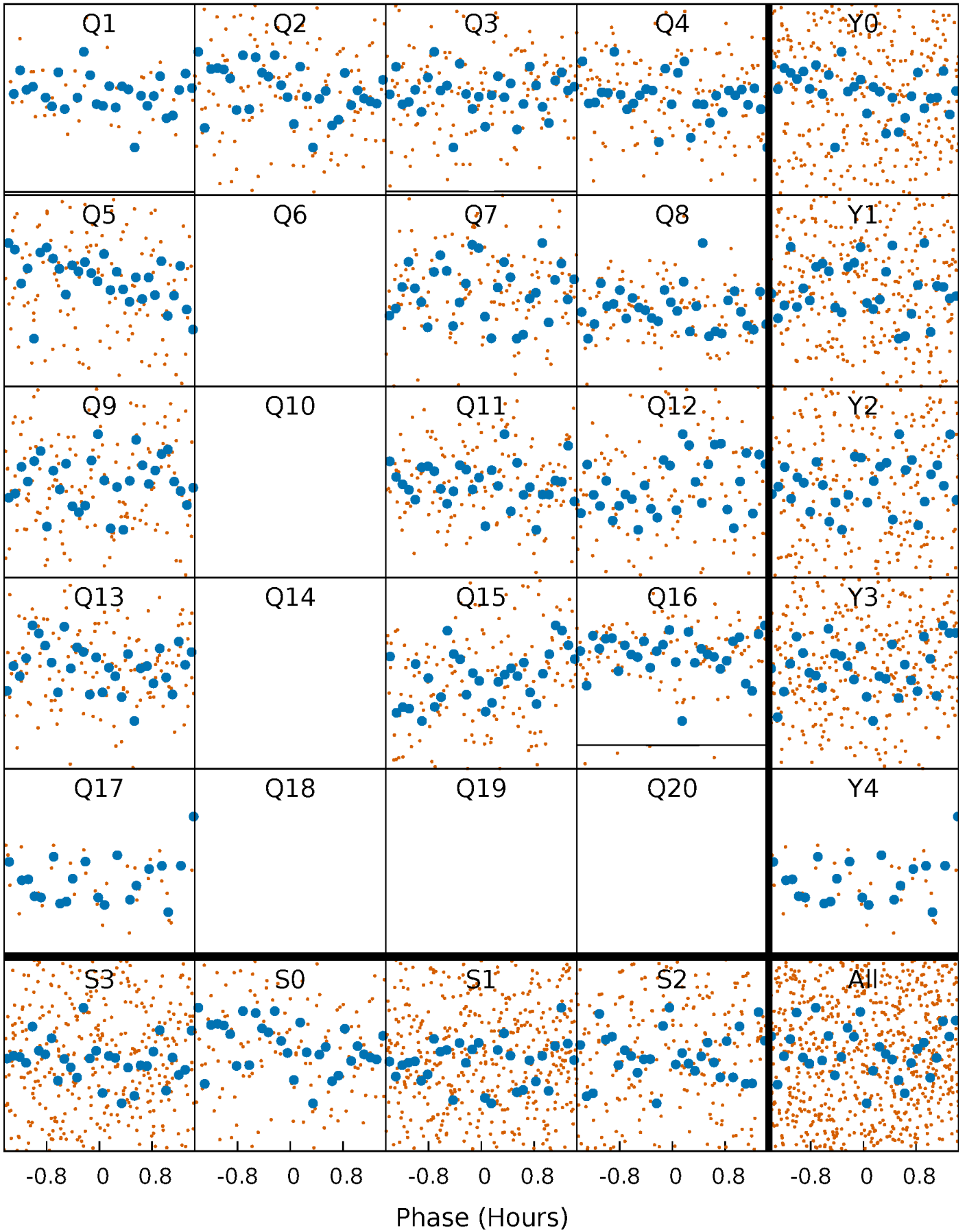
DV Quarter-Phased Transit Curves

TCE 004483235-03 P= 3.522010 Days $T_0=134.841895$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

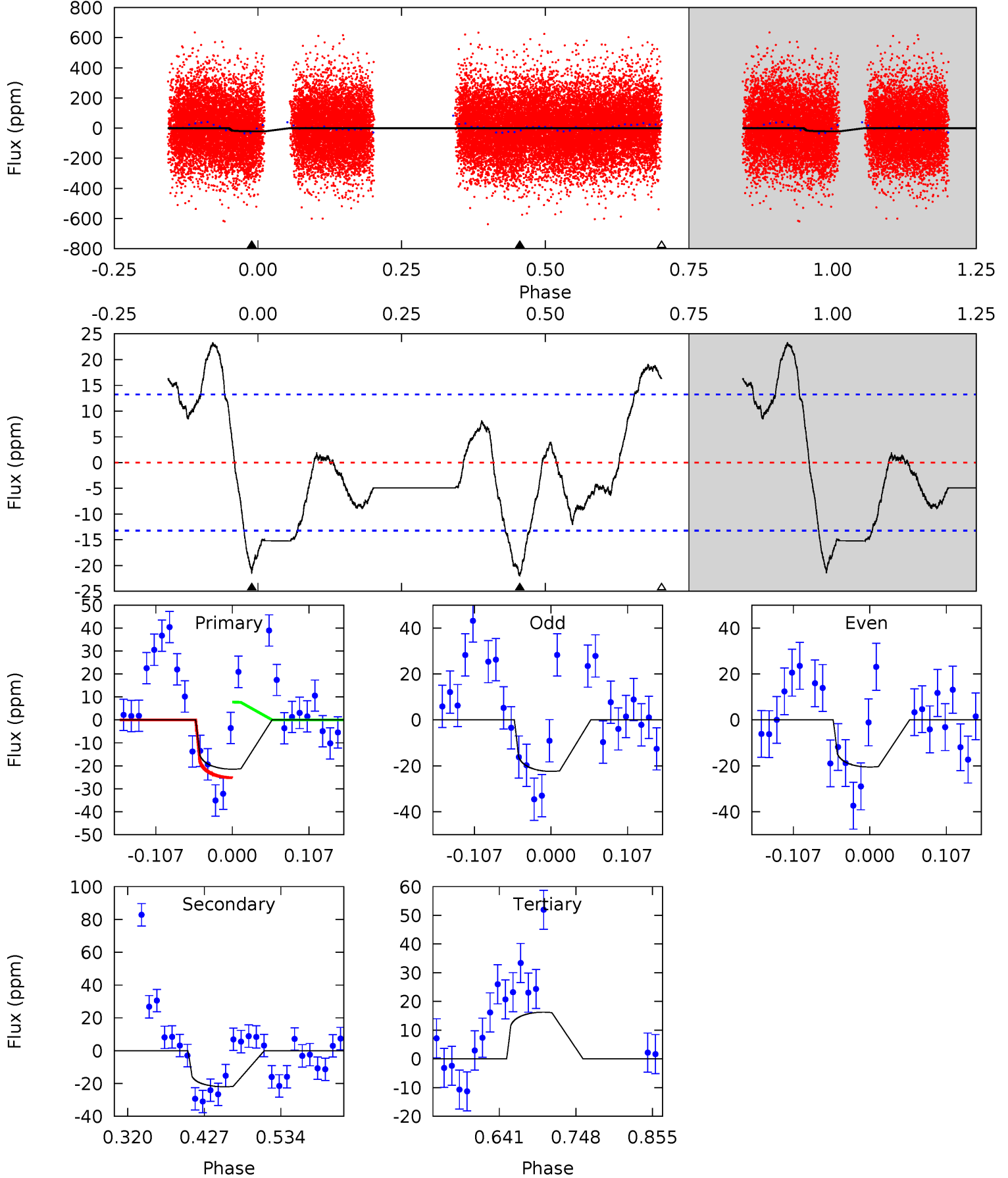
TCE 004483235-03 P= 3.521960 Days $T_0=134.631131$ (BKJD)



DV Model-Shift Uniqueness Test

004483235-03, P = 3.522010 Days, E = 131.319885 Days

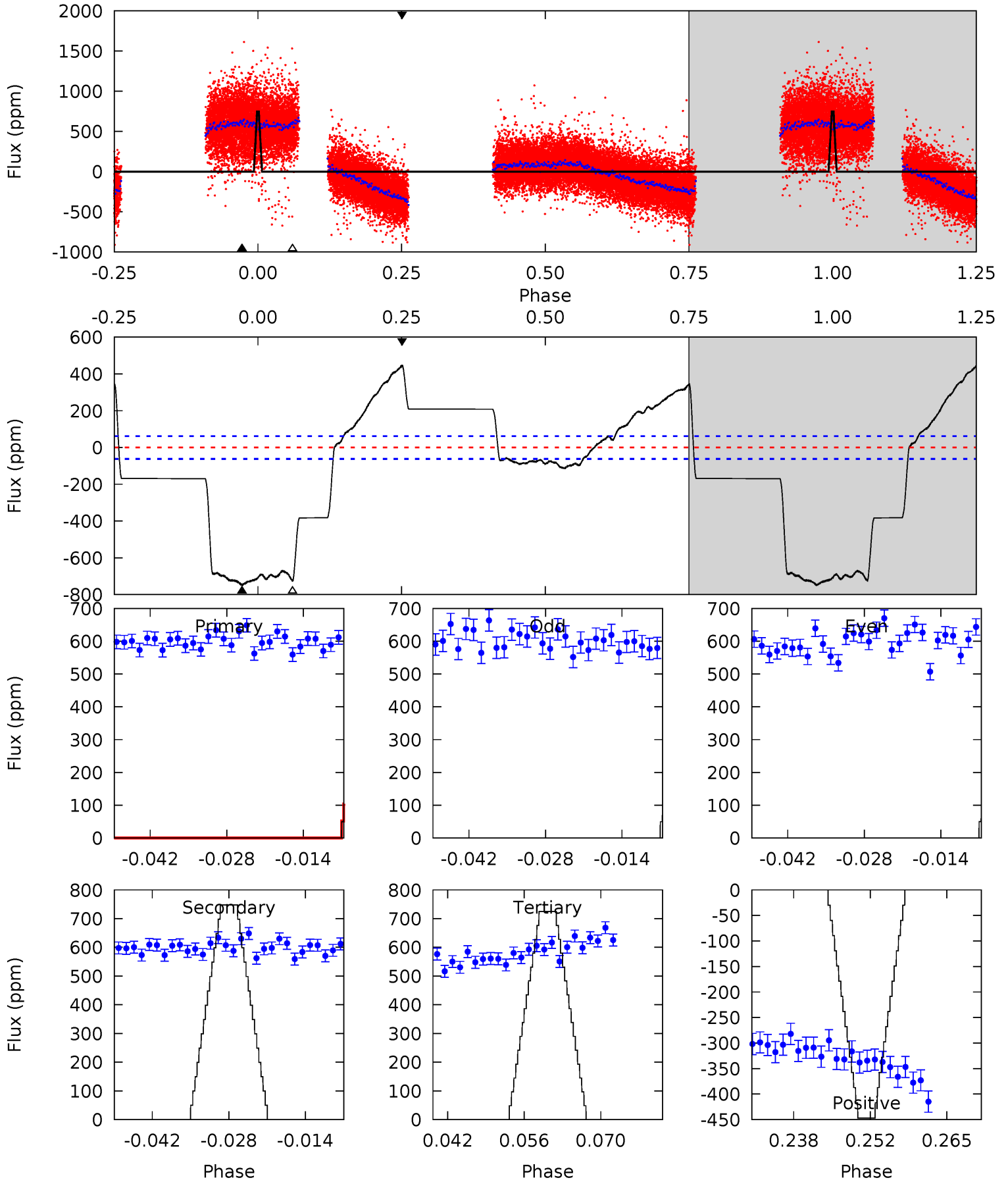
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 7.39 | 7.57 | -5.59 | 0 | 4.55 | 1.61 | 3.12 | 13.0 | 7.39 | 13.2 | 7.57 | 0.32 | 1.00 | 0.52 | 1.76 |



Alt Model-Shift Uniqueness Test

004483235-03, P = 3.521960 Days, E = 131.109171 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 60.2 | 60.1 | 58.3 | 36.0 | 4.96 | 2.46 | 28.5 | 1.86 | 24.2 | 1.84 | 24.2 | 0.19 | 0.97 | 0.37 | 2.91 |



Stellar Parameters For KIC 004483235

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 8784^{+246}_{-422} | $4.156^{+0.098}_{-0.182}$ | $0.070^{+0.250}_{-0.600}$ | $1.967^{+0.692}_{-0.346}$ | $2.017^{+0.372}_{-0.413}$ | $0.374^{+0.179}_{-0.193}$ |
| | +3%/-5% | +2%/-4% | +357%/-857% | +35%/-18% | +18%/-20% | +48%/-52% |
| Source | KIC0 | 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 004483235-03 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|-----------------------------|-------------------------|
| DV | -22 ± 3 | $1.09^{+0.83}_{-0.60}$ | 3187^{+236}_{-204} | 8187^{+8135}_{-2118} | 32^{+137}_{-21} |
| Alt. | -748 ± 12 | $0.69^{+0.71}_{-0.47}$ | 3179^{+247}_{-188} | $114587^{+948458}_{-76826}$ | 2731^{+24241}_{-2041} |

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 $A_{obs} \gg 1.0$

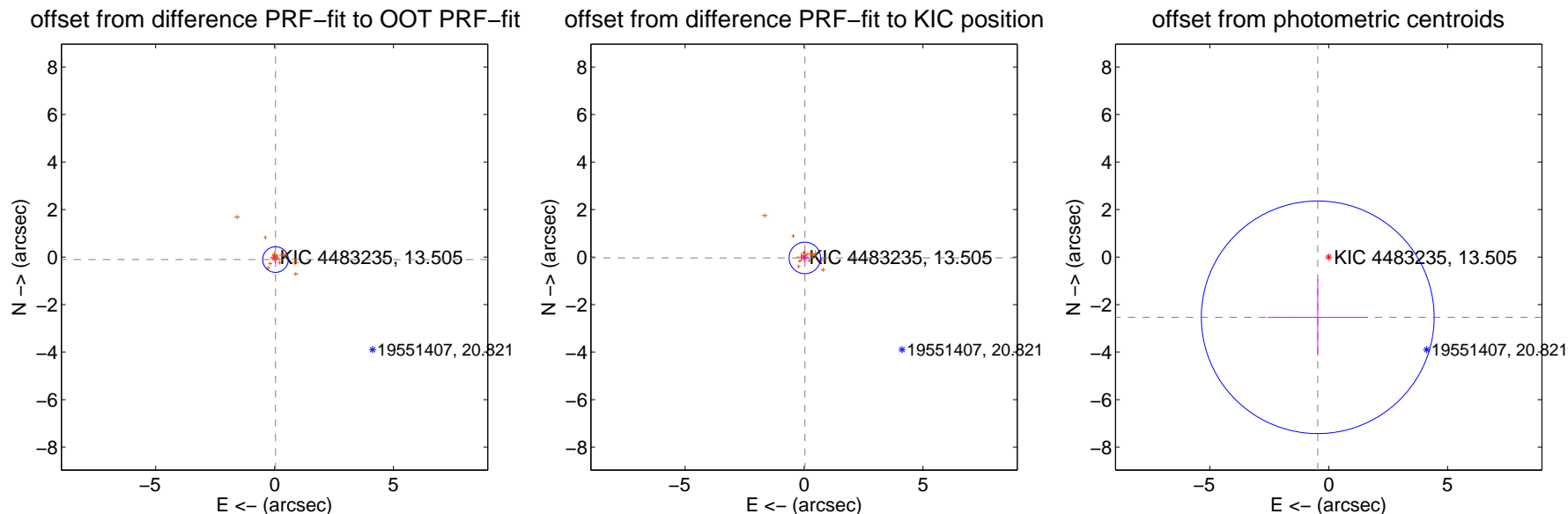
DV Centroid Data

Supplemental centroid analysis for 004483235-03. Kepler magnitude: 13.51. Transit SNR 7.36

There are 0 quarters with good PRF difference image offsets

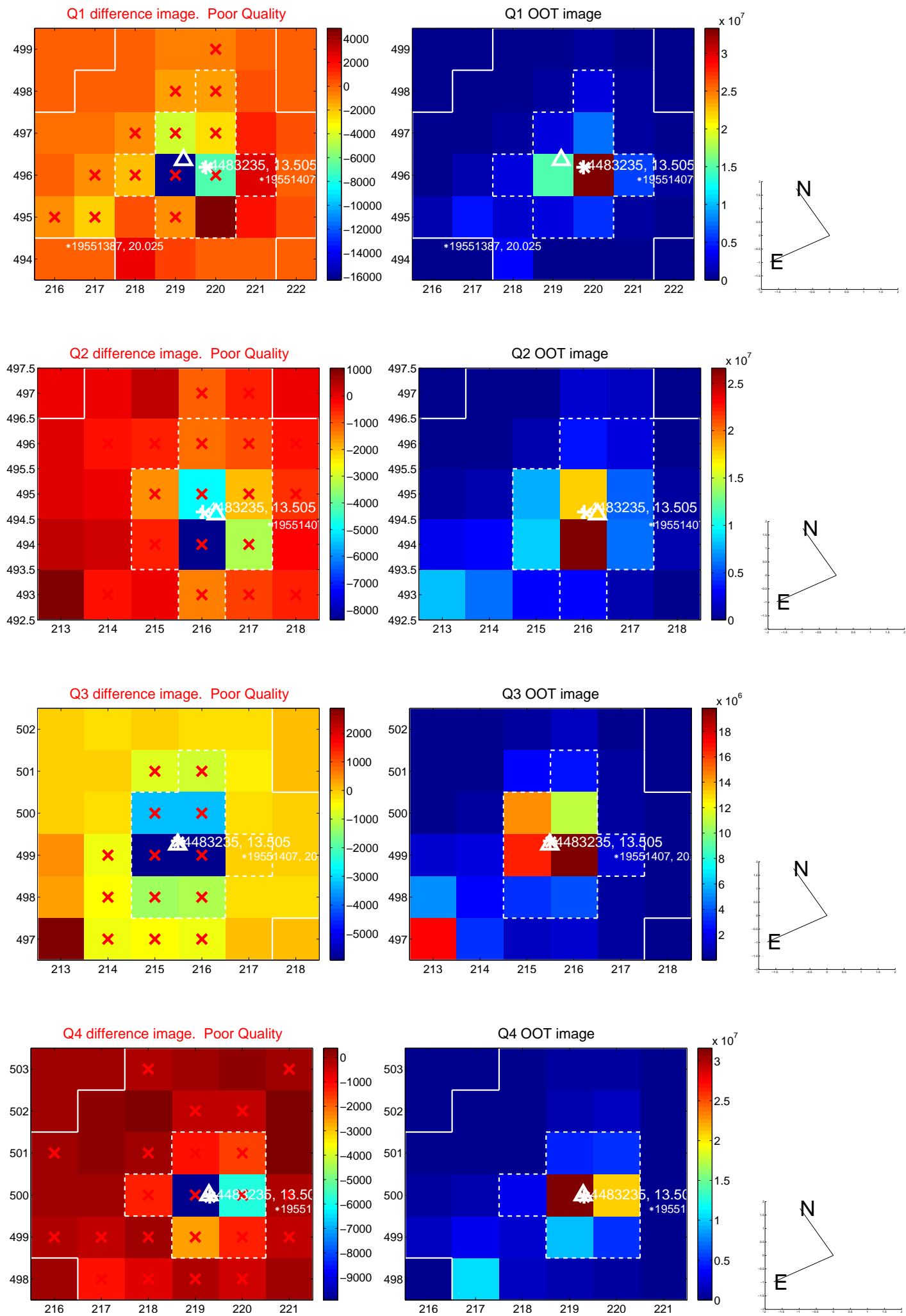
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.111 ± 0.180 | 0.62 | -0.039 ± 0.157 | -0.104 ± 0.153 |
| PRF-fit source offset from KIC position | 0.049 ± 0.221 | 0.22 | -0.034 ± 0.173 | -0.035 ± 0.166 |
| photometric centroid source offset | 2.58 ± 1.63 | 1.58 | 0.46 ± 2.11 | -2.53 ± 1.61 |

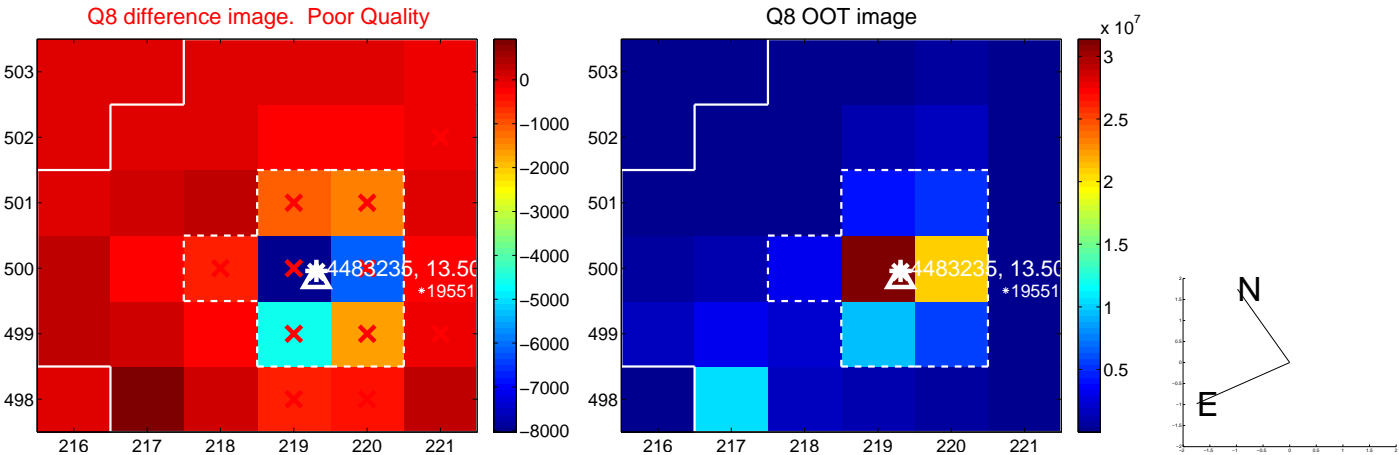
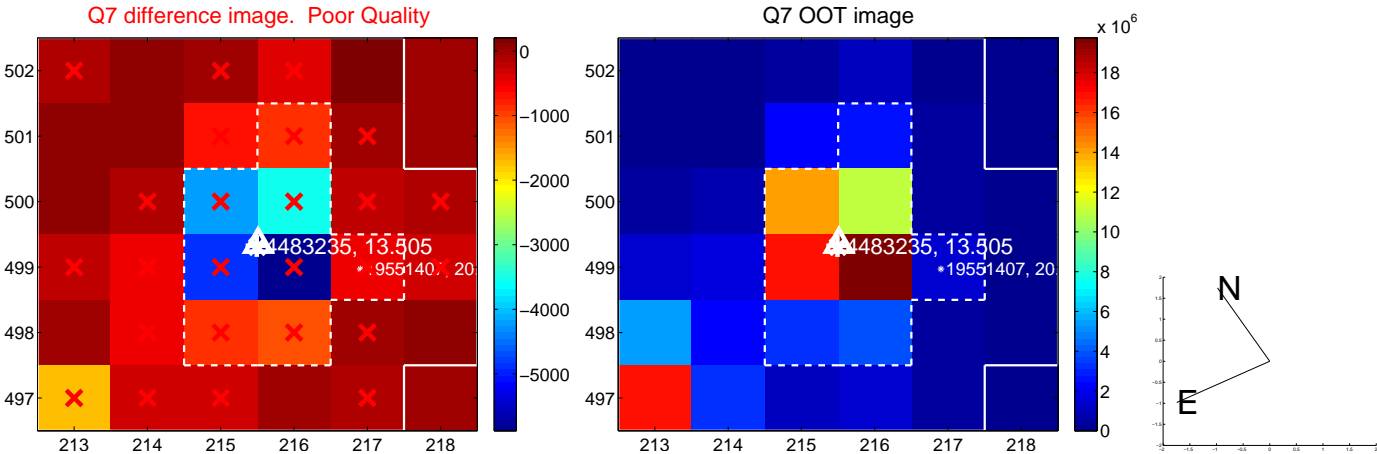
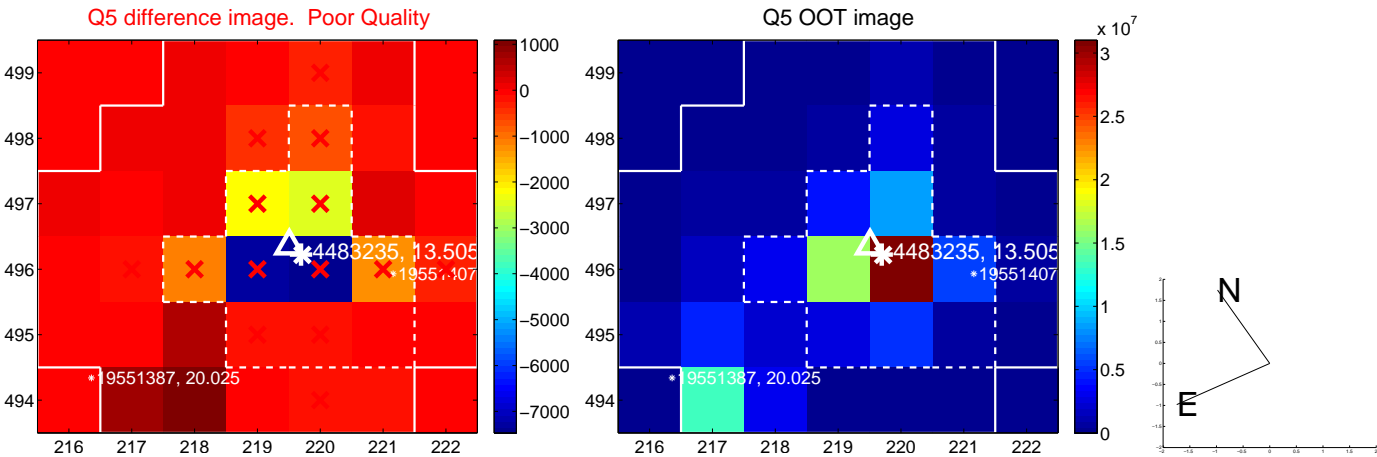


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

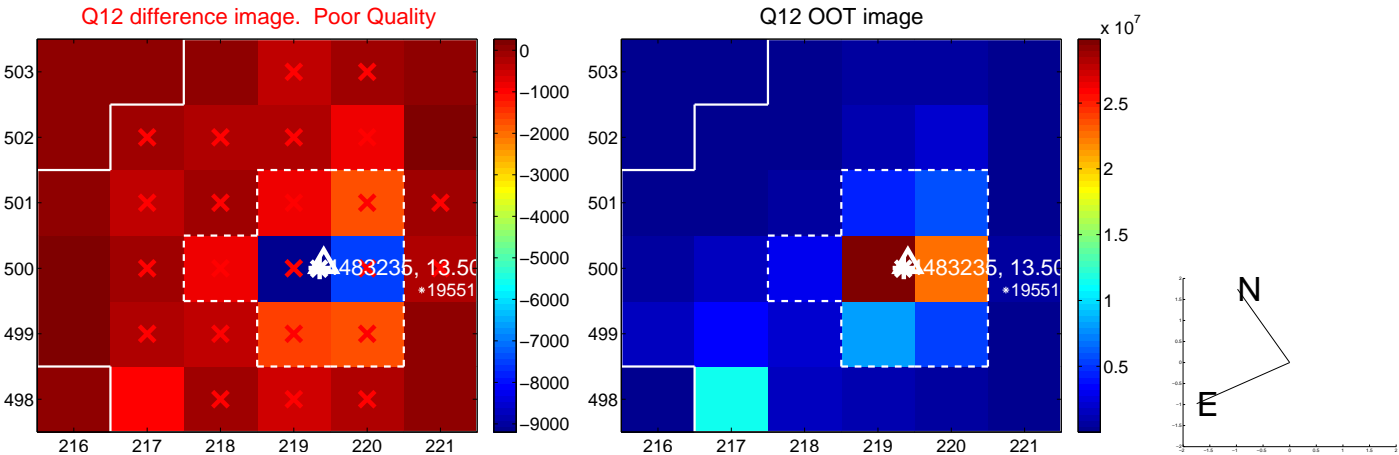
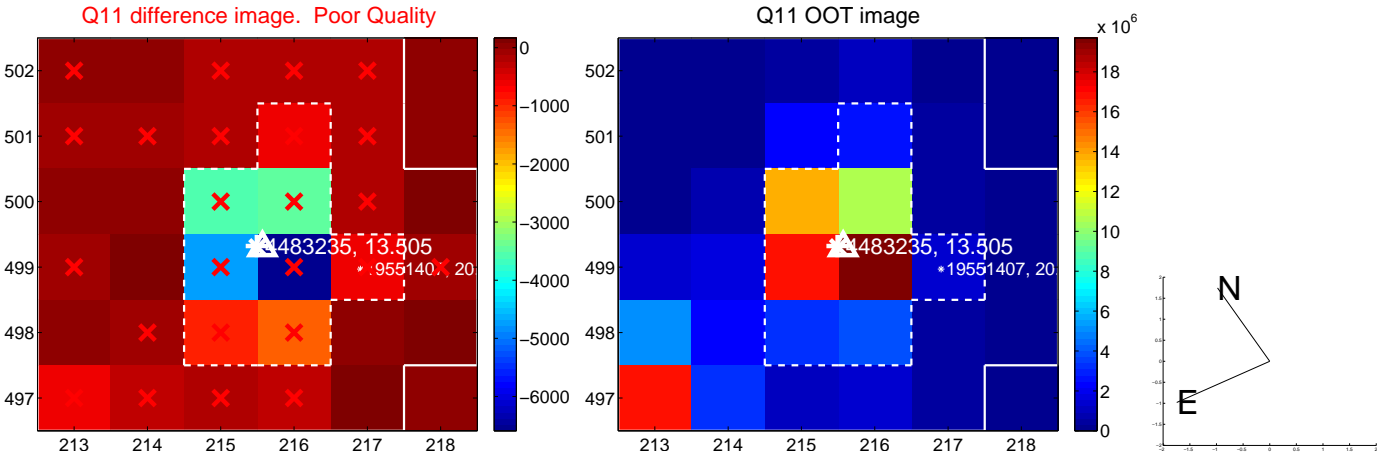
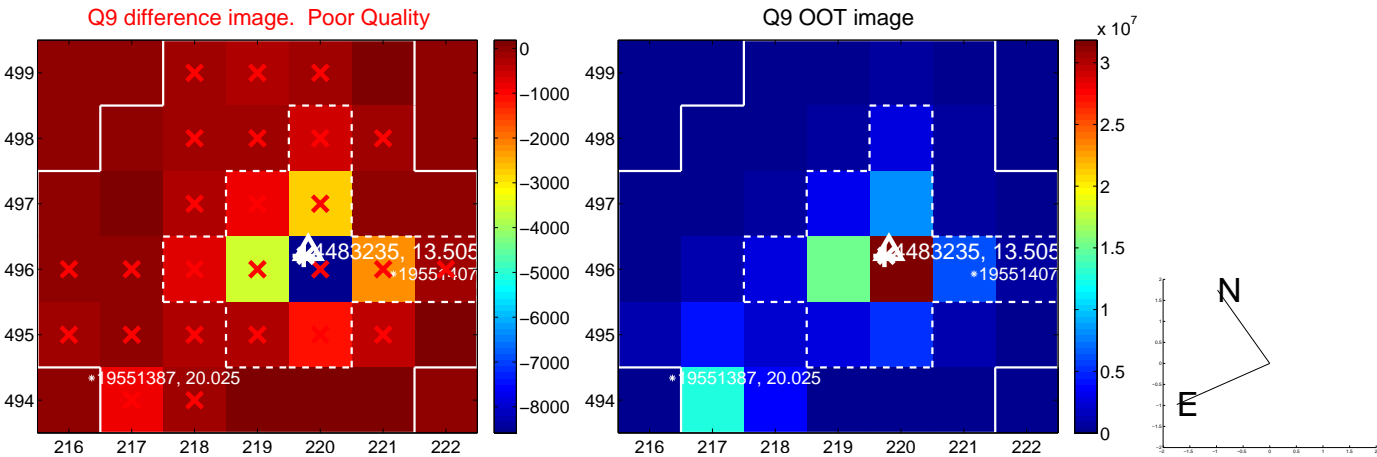
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



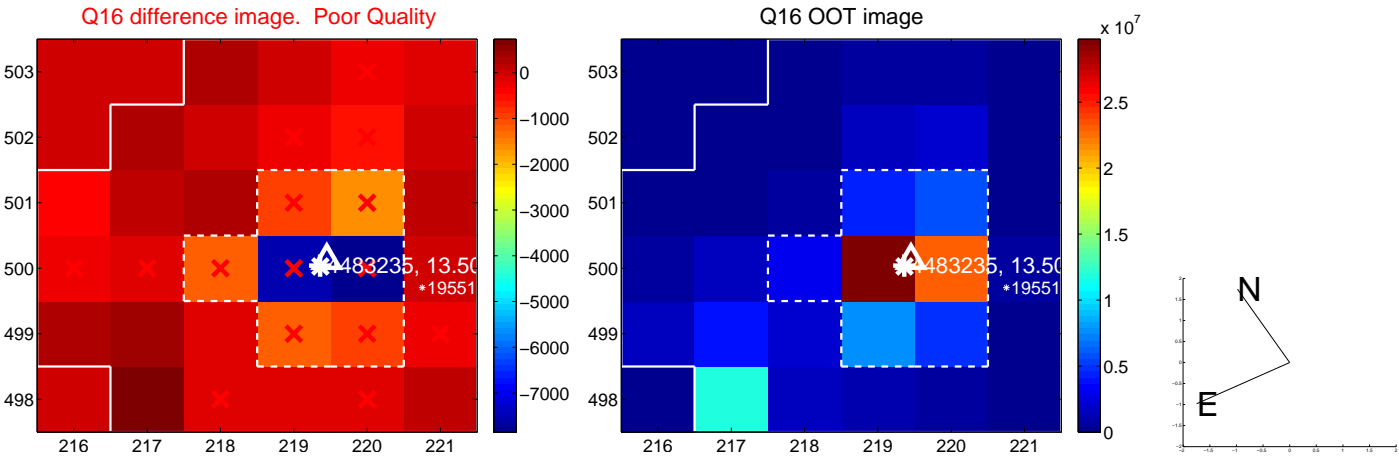
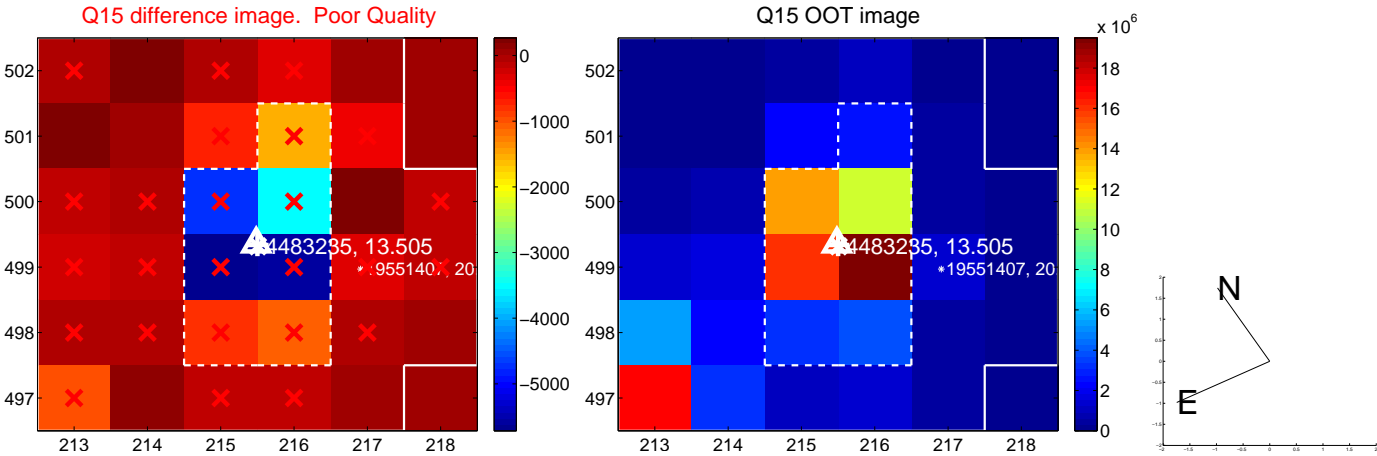
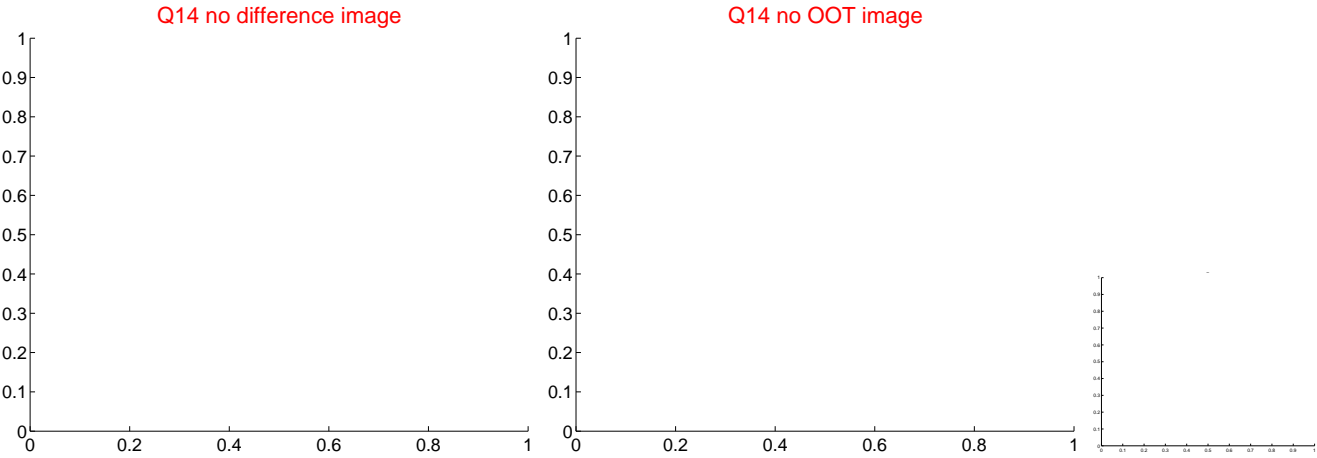
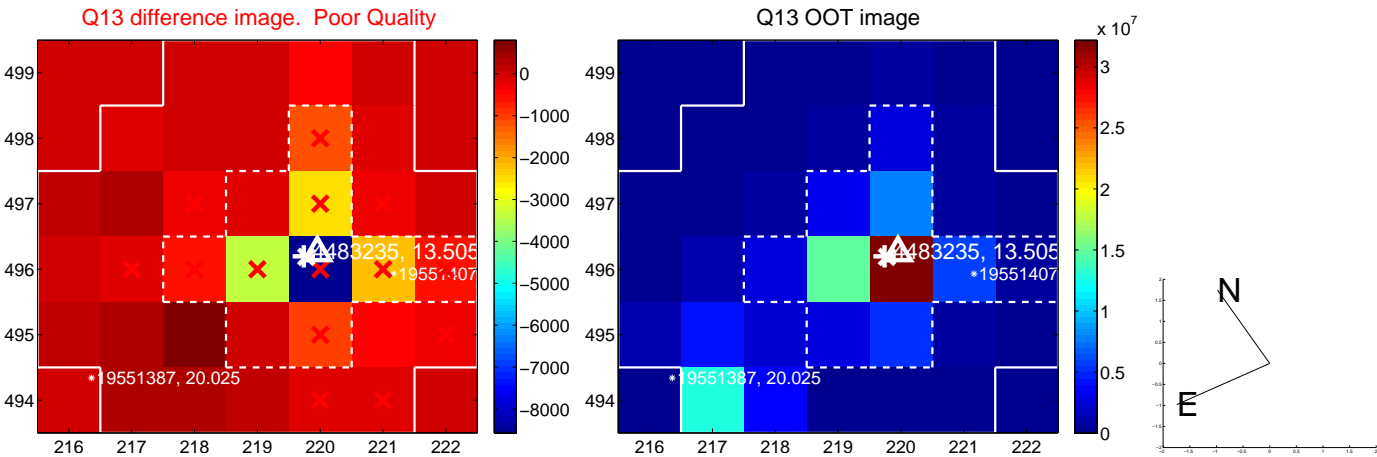
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

