

KIC 005688032

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 005688032-01 | OBS | No | 215.387063 | 302.992568 | 271.6 | 3.379 | 13.6 | 5.8 | 1.87 | 5927 | 3.18 | 7.36 |
| 005688032-02 | OBS | No | 280.554150 | 214.424827 | 411.1 | 3.123 | 11.6 | 7.5 | 1.87 | 5927 | 4.19 | 5.18 |
| 005688032-03 | OBS | No | 395.690210 | 315.513059 | 294.7 | 2.311 | 9.2 | 7.1 | 1.87 | 5927 | 3.73 | 3.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 005688032-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS |
| 005688032-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_UNCERTAIN |
| 005688032-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS |

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

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

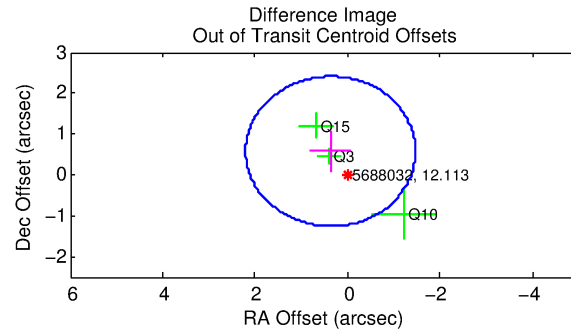
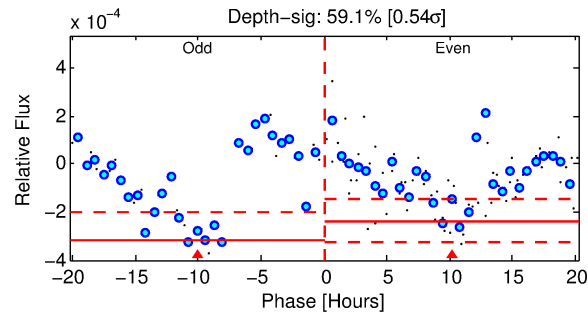
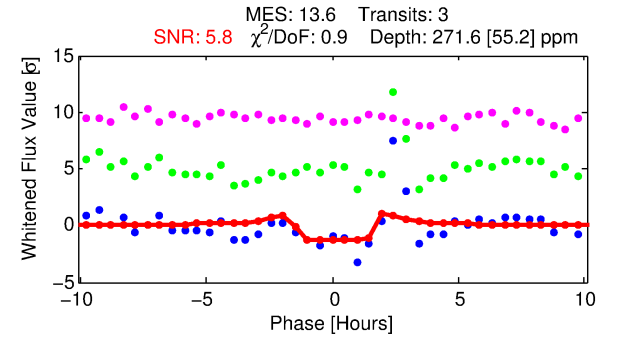
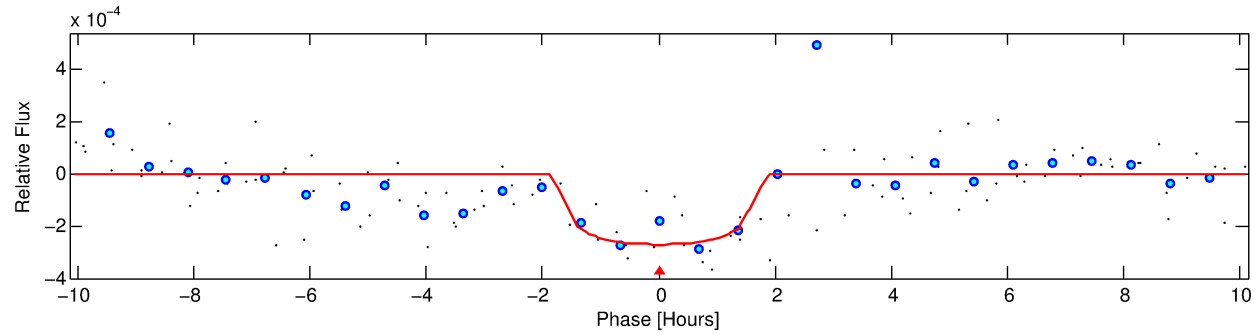
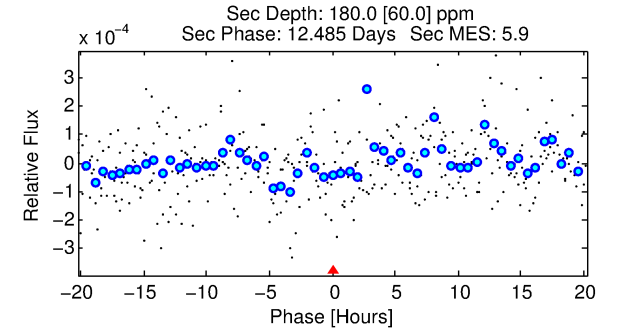
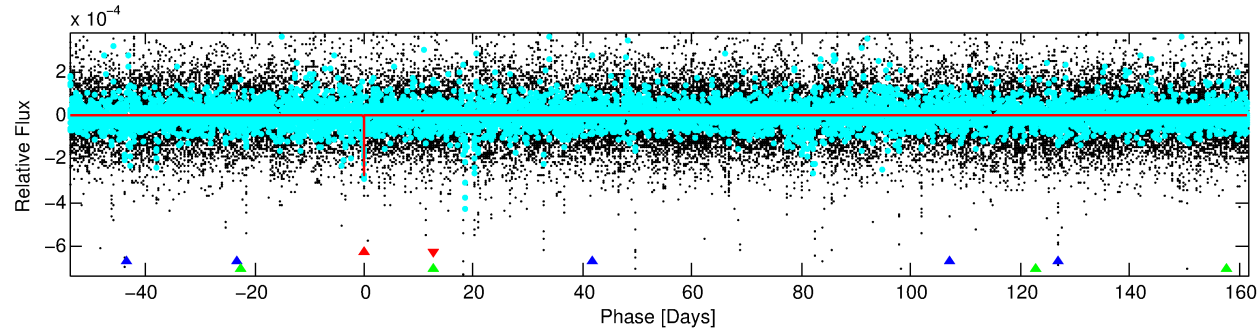
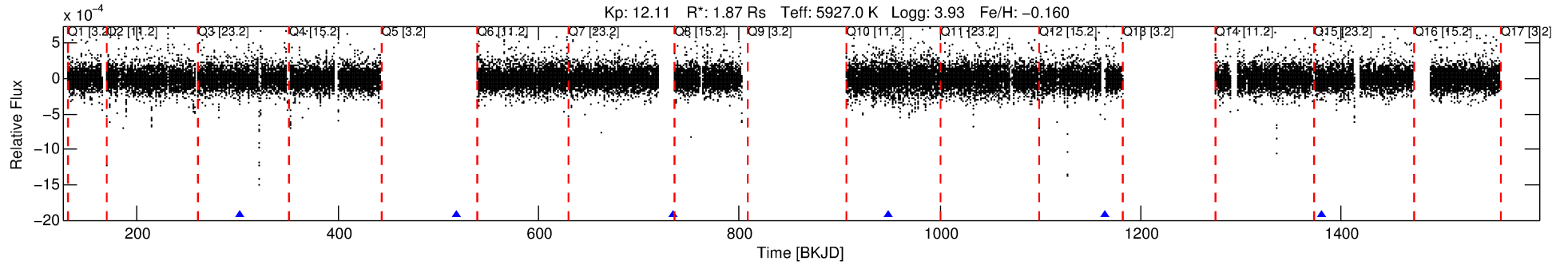
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005688032-01

No Significant Match Found

DV One-Page Summary

KIC: 5688032 Candidate: 1 of 3 Period: 215.387 d



DV Fit Results:

Period = 215.38706 [0.00254] d
Epoch = 302.9926 [0.0078] BKJD
Rp/R* = 0.0155 [0.0207]
a/R* = 427.12 [2647.40]
b = 0.51 [9.01]
Seff = 7.36 [3.90]
Teq = 420 [56] K
Rp = 3.18 [4.37] Re
a = 0.7261 [0.2395] AU
Ag = 5175.30 [14138.26] [0.37σ]
Teffp = 5508 [3697] K [1.38σ]

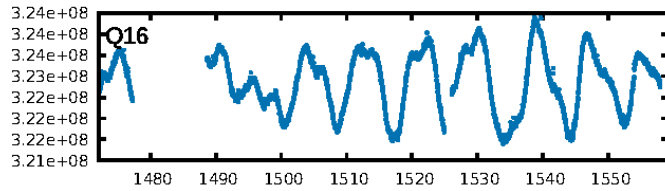
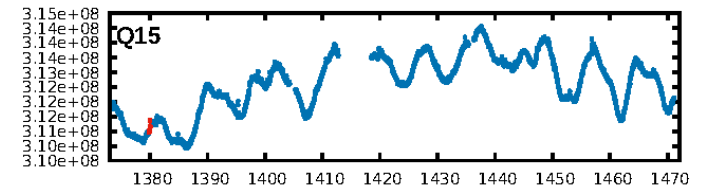
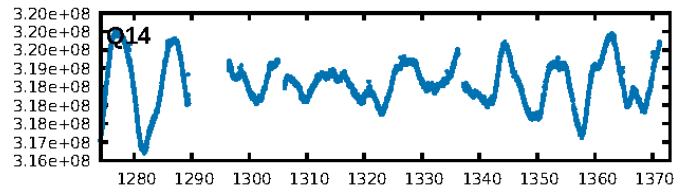
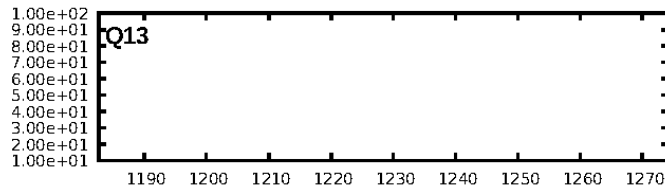
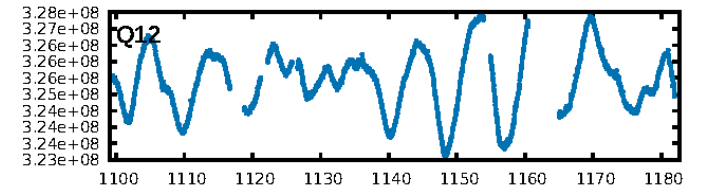
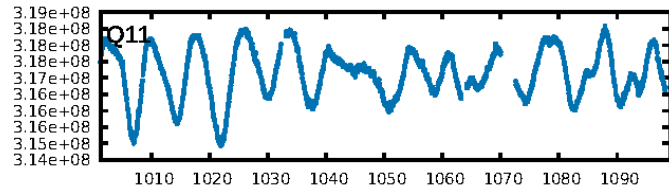
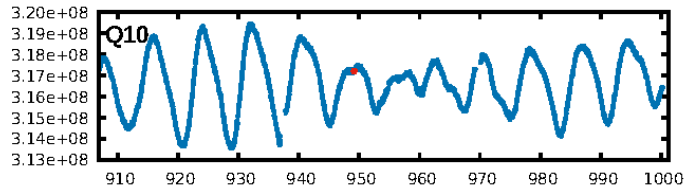
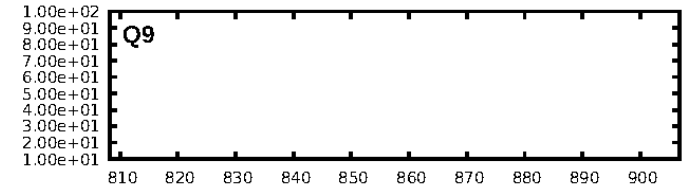
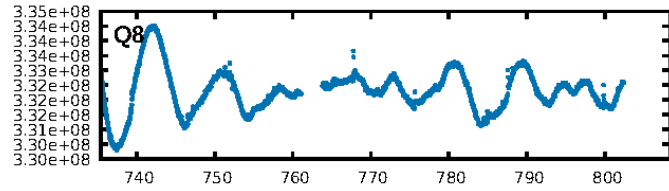
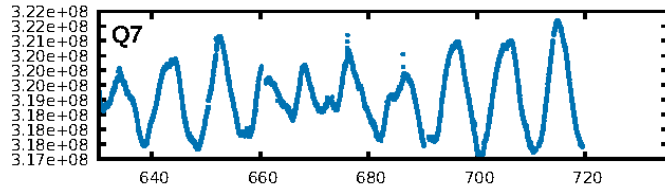
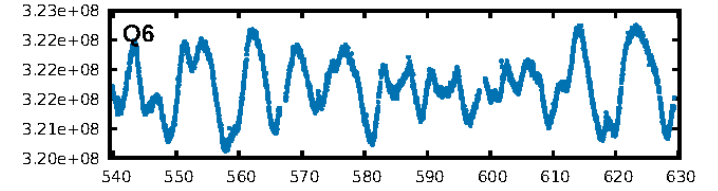
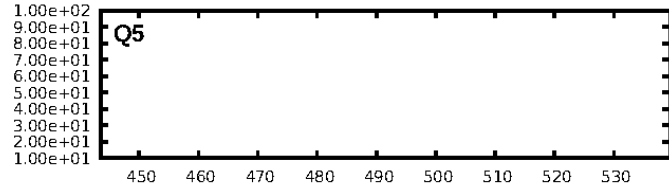
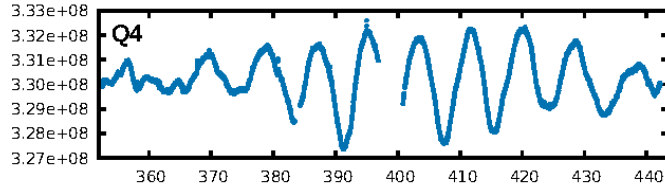
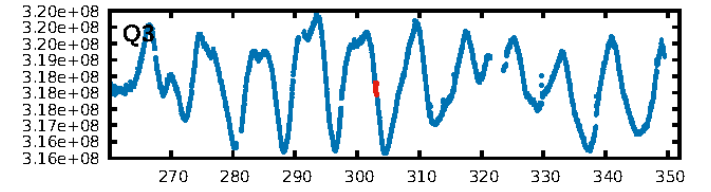
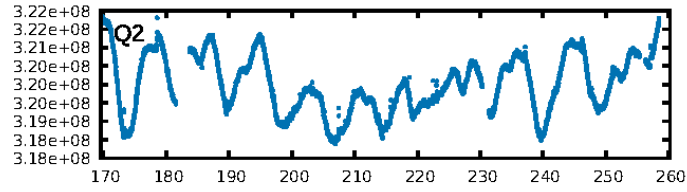
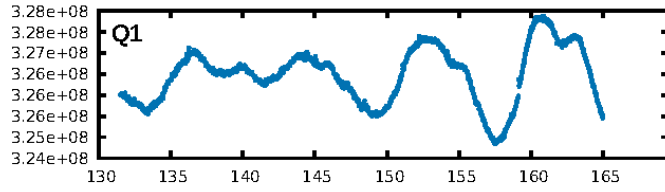
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [339.92σ]
ModelChiSquare2-sig: 74.5%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 5.33e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.955
Centroid-sig: N/A
Centroid-so: 1.013 arcsec [1.06σ]
OotOffset-rm: 0.685 arcsec [1.12σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-rm: 0.840 arcsec [1.37σ]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

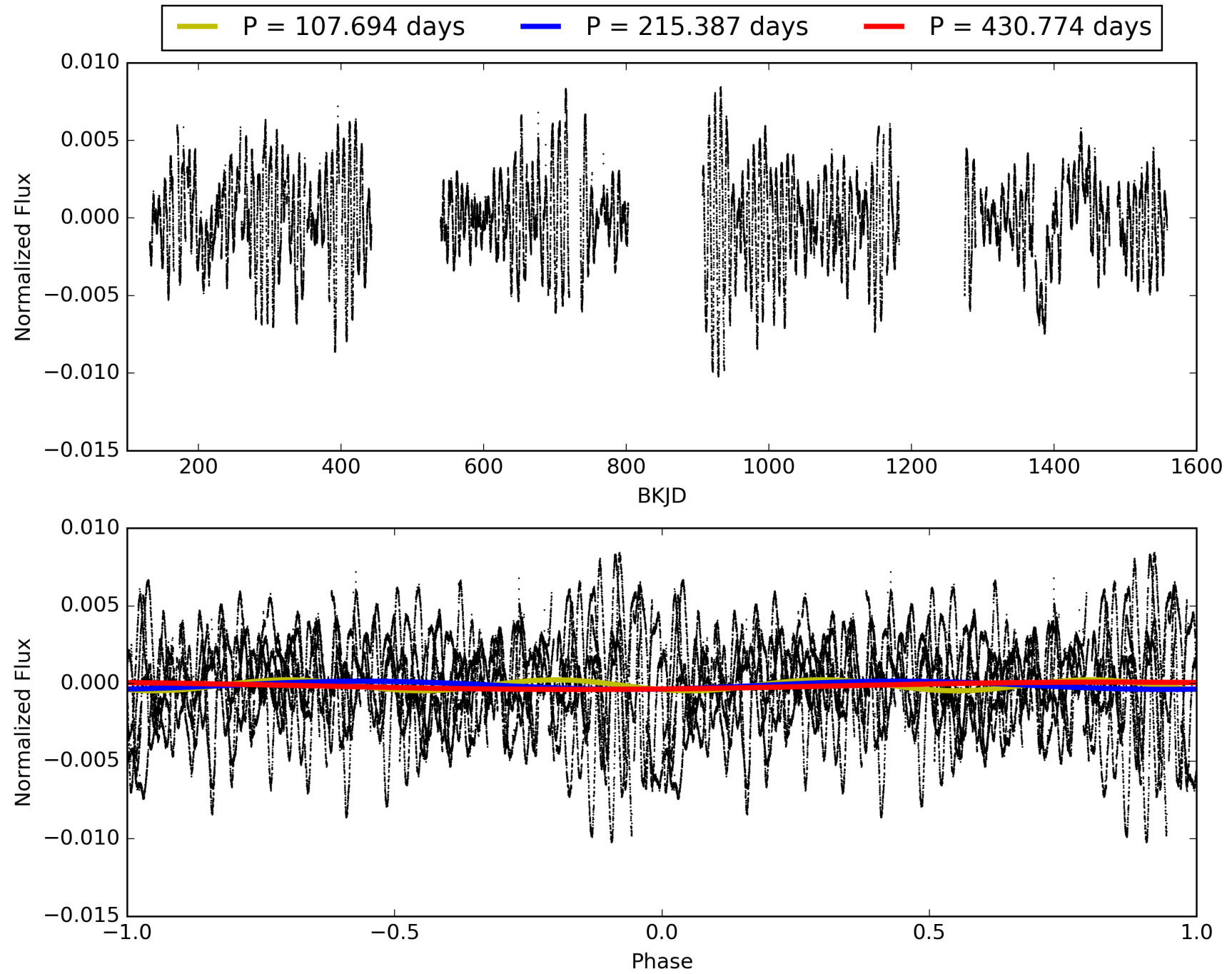
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:20:49 Z

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

TCE 005688032-01, PDC Light Curves

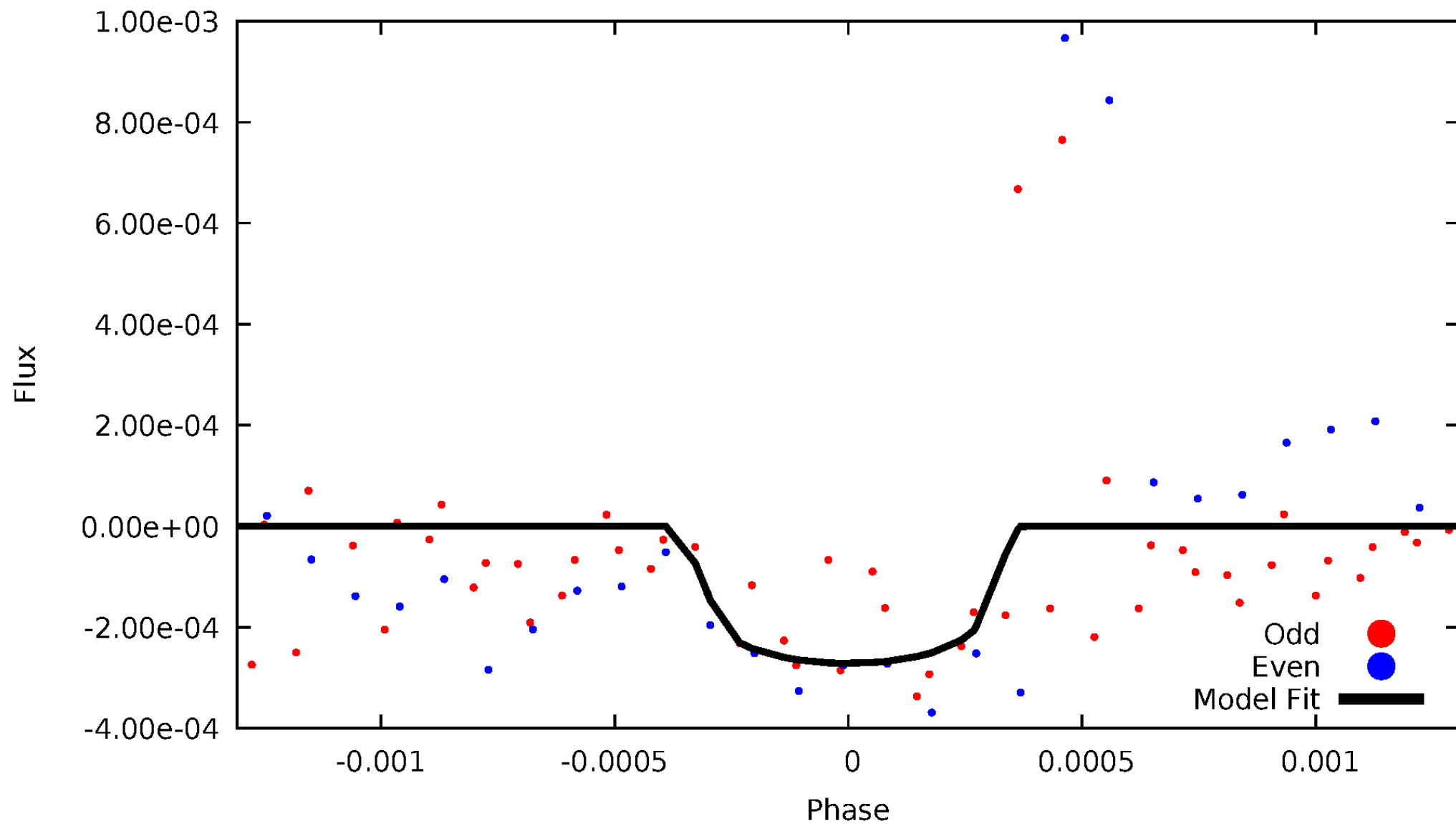


TCE 005688032-01



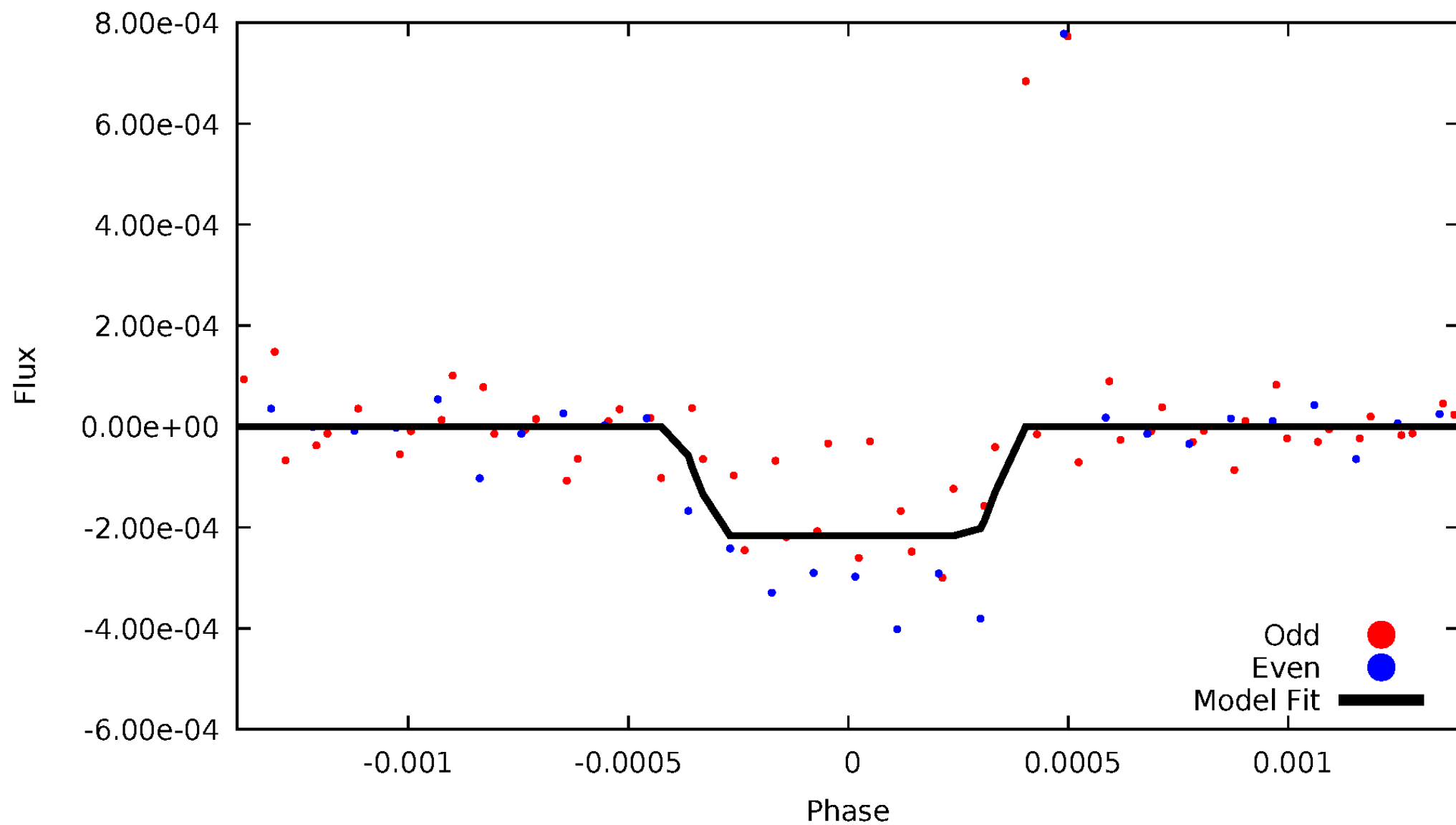
DV Odd/Even

TCE 005688032-01



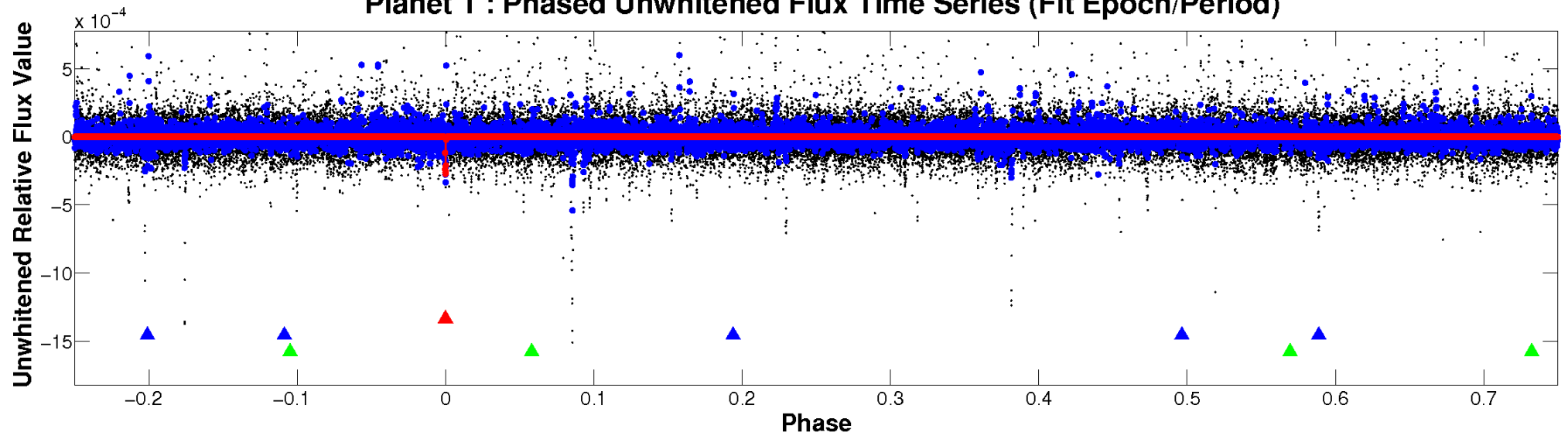
ALT Odd/Even

TCE 005688032-01

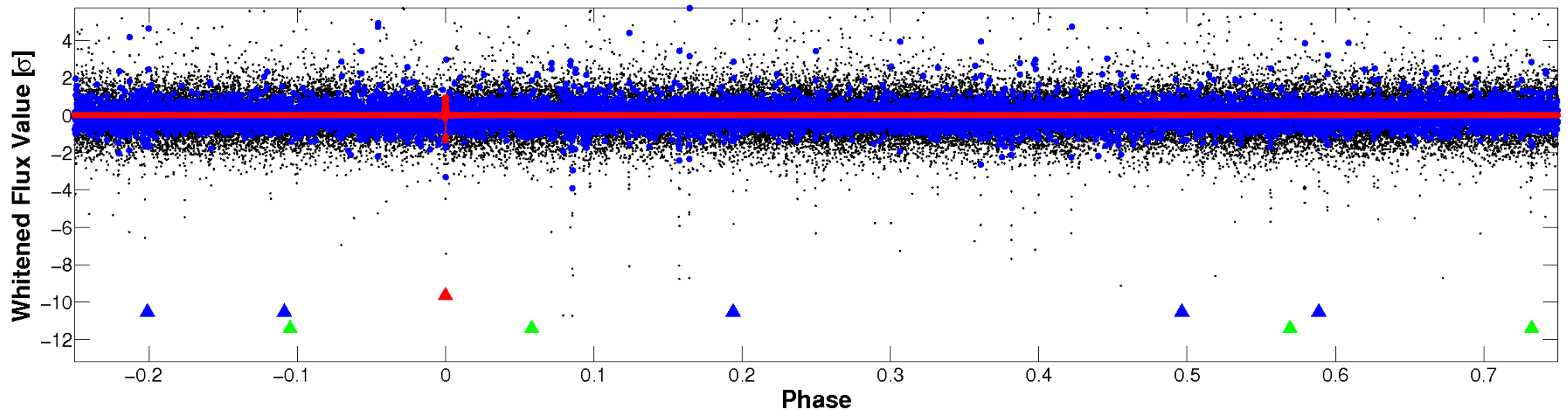


Non-Whitened Vs. Whitened Light Curve

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

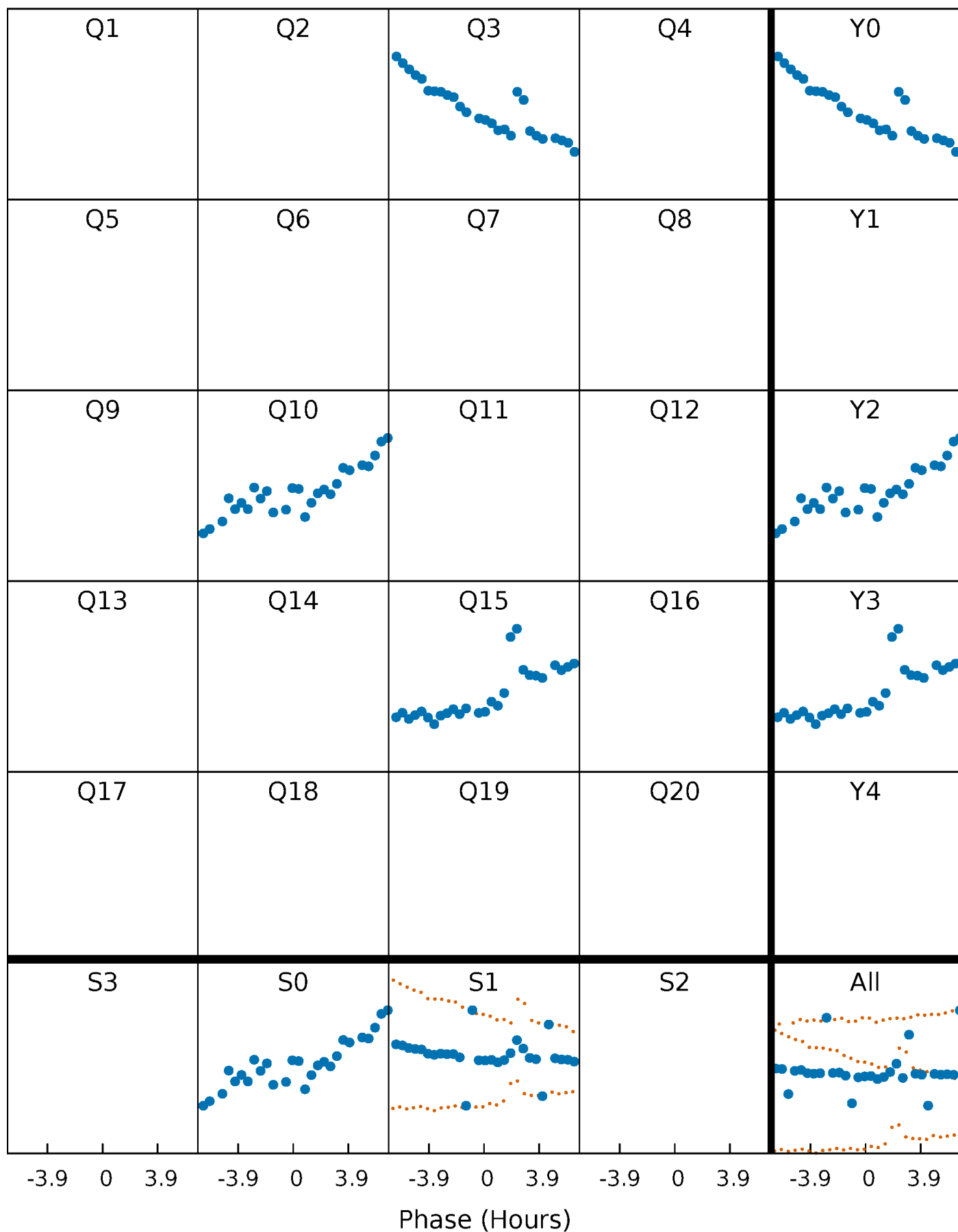


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



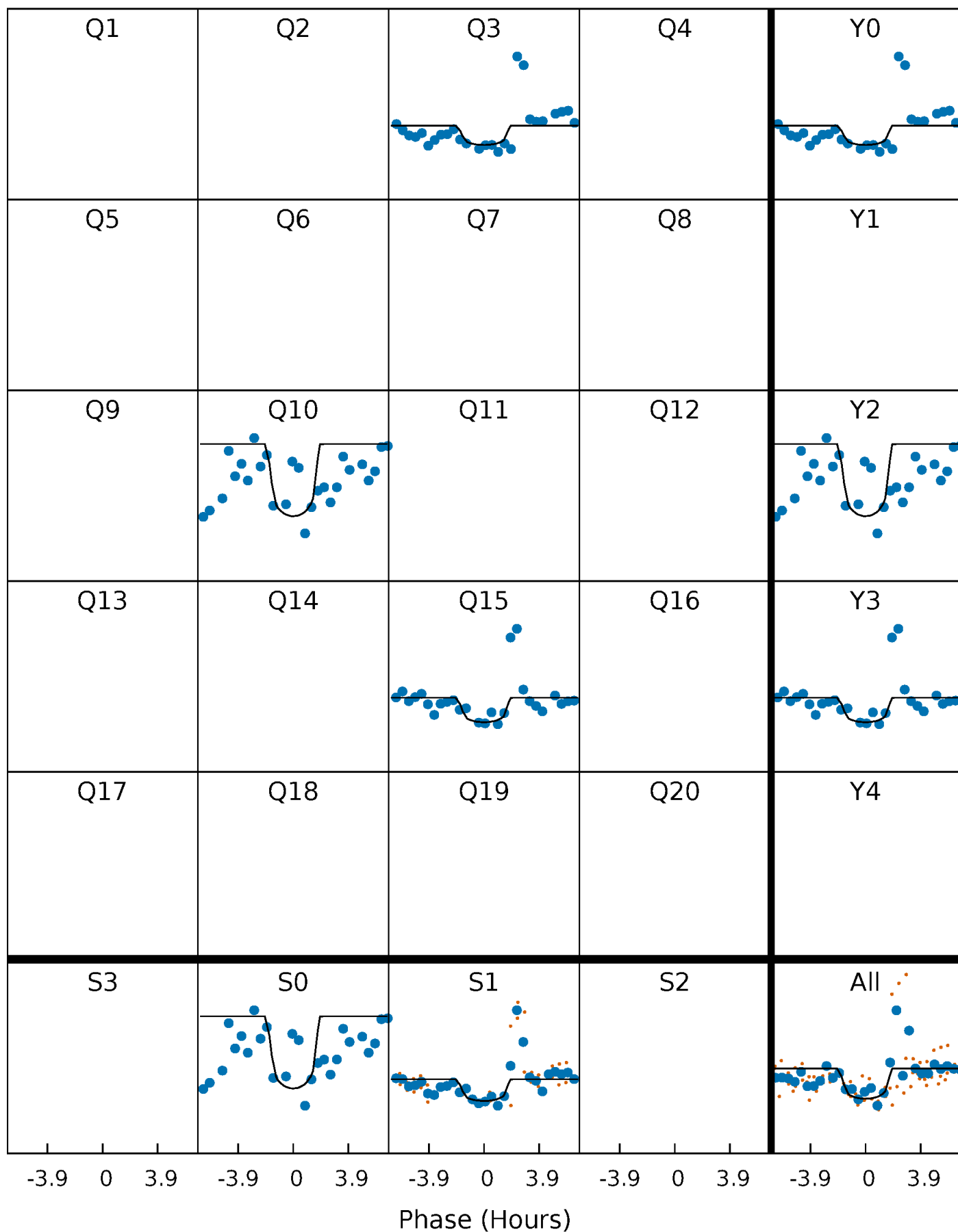
PDC Quarter-Phased Transit Curves

TCE 005688032-01 P=215.387063 Days $T_0=302.992568$ (BKJD)



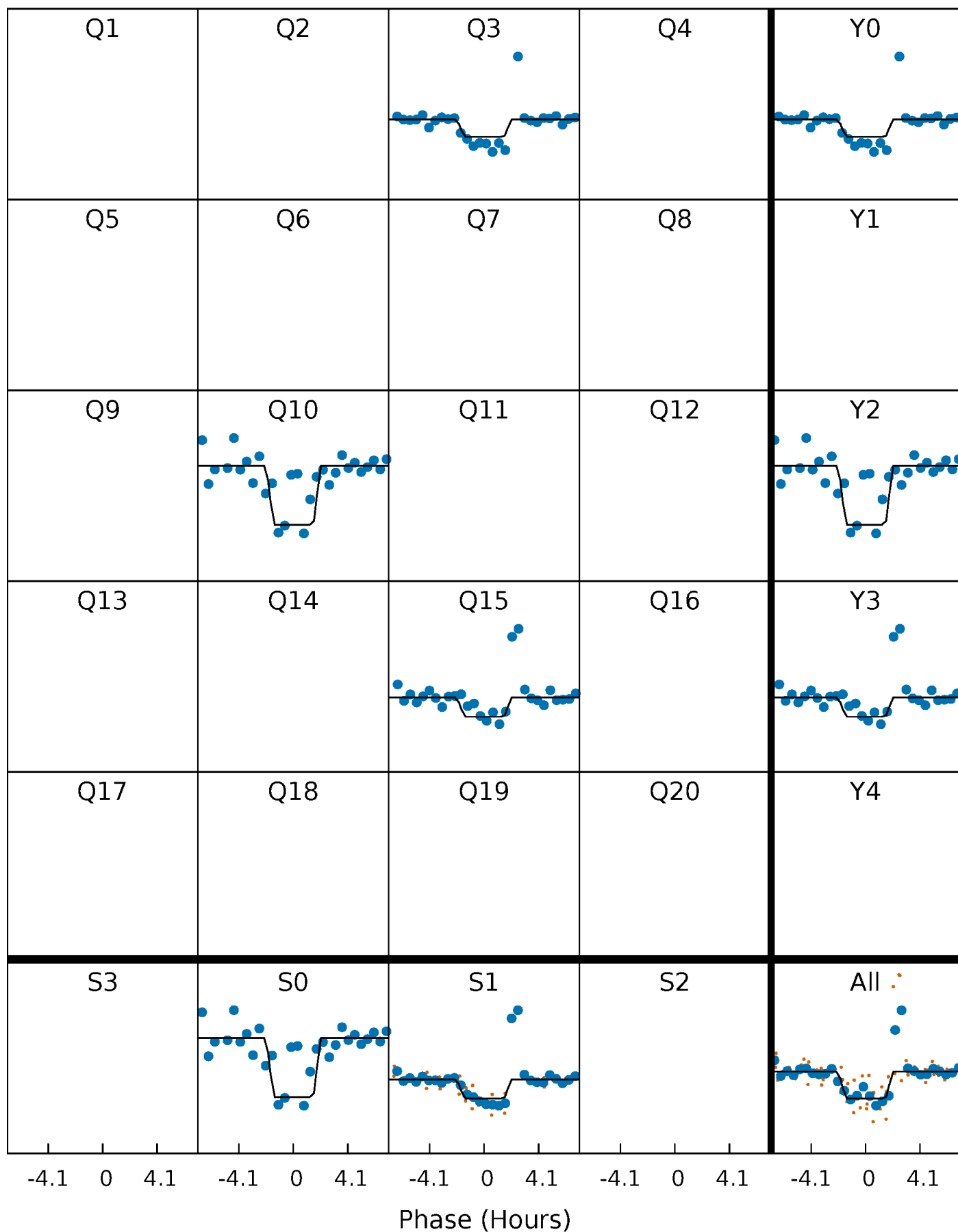
DV Quarter-Phased Transit Curves

TCE 005688032-01 P=215.387063 Days $T_0=302.992568$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

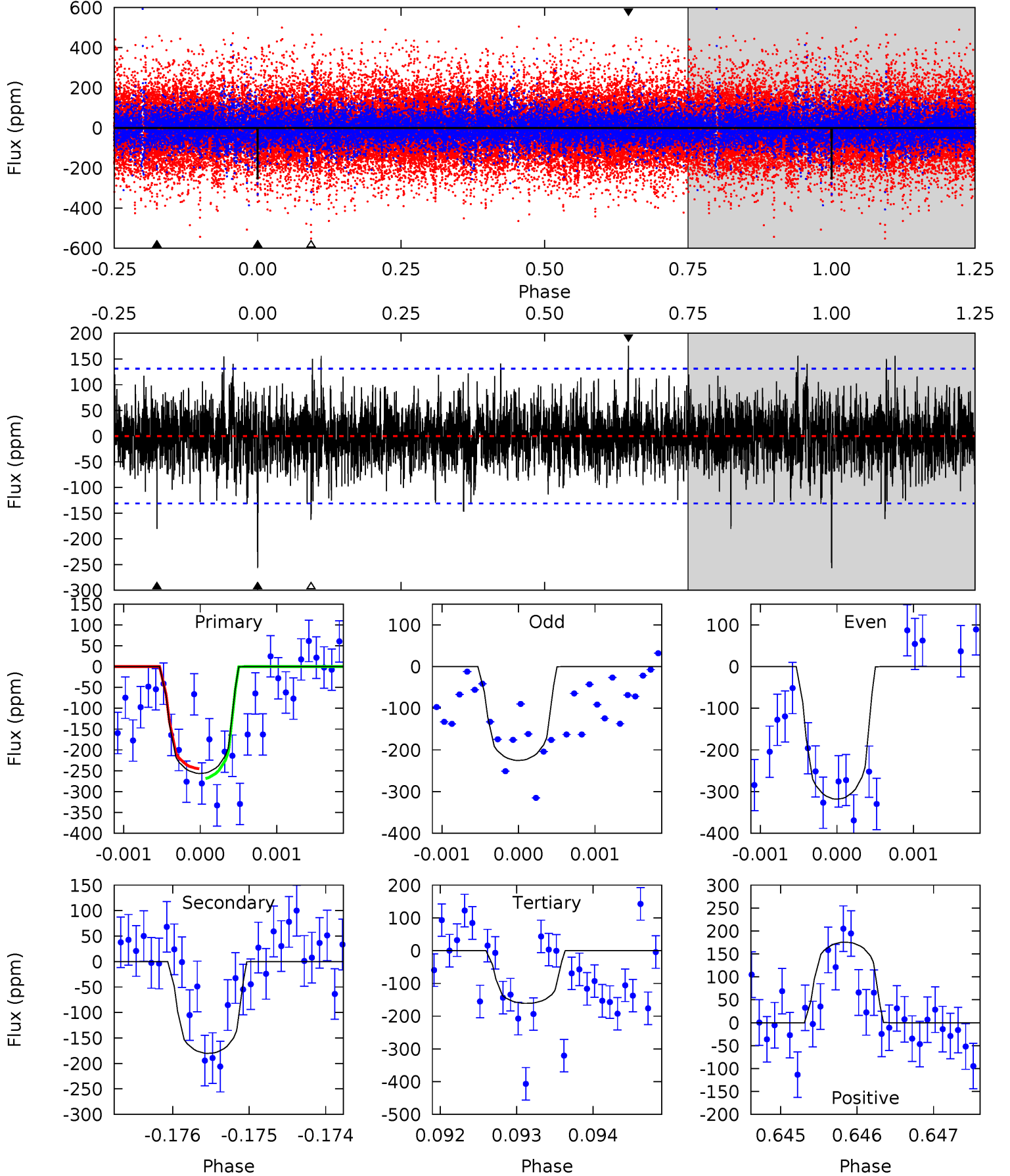
TCE 005688032-01 P=215.382378 Days $T_0=303.007235$ (BKJD)



DV Model-Shift Uniqueness Test

005688032-01, $P = 215.387063$ Days, $E = 87.605505$ Days

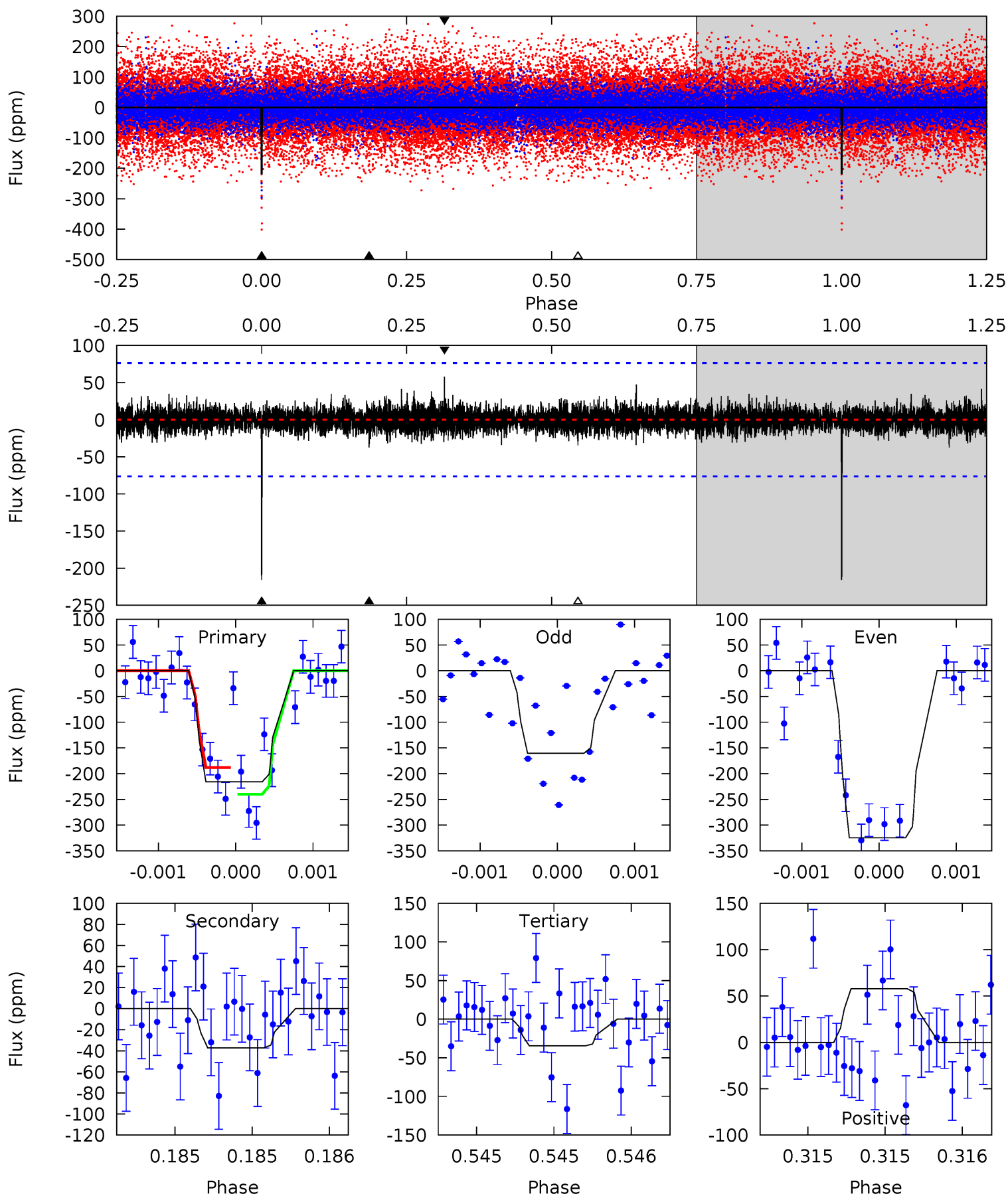
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.8 | 7.58 | 6.78 | 7.39 | 5.51 | 3.38 | 1.58 | 4.01 | 3.40 | 0.80 | 0.19 | 1.87 | 1.09 | 0.41 | 0.50 |



Alt Model-Shift Uniqueness Test

005688032-01, P = 215.382378 Days, E = 87.624857 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 15.6 | 2.68 | 2.49 | 4.17 | 5.52 | 3.39 | 0.67 | 13.1 | 11.4 | 0.20 | -1.49 | 5.55 | 1.21 | 0.21 | 1.89 |



Stellar Parameters For KIC 005688032

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5927^{+164}_{-145} | $3.934^{+0.300}_{-0.100}$ | $-0.160^{+0.350}_{-0.250}$ | $1.874^{+0.332}_{-0.664}$ | $1.100^{+0.187}_{-0.187}$ | $0.235^{+0.471}_{-0.072}$ |
| | +3%/-2% | +8%/-3% | +219%/-156% | +18%/-35% | +17%/-17% | +200%/-30% |
| Source | PHO1 | FLK73 | 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 005688032-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|----------------------|------------------------|-------------------------|
| DV | -180 ± 24 | $4.16^{+3.77}_{-2.82}$ | 578^{+34}_{-50} | 4828^{+3380}_{-1026} | 3089^{+24516}_{-2242} |
| Alt. | -37 ± 14 | $3.99^{+3.81}_{-2.49}$ | 578^{+37}_{-53} | 3593^{+1685}_{-606} | 607^{+3800}_{-435} |

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

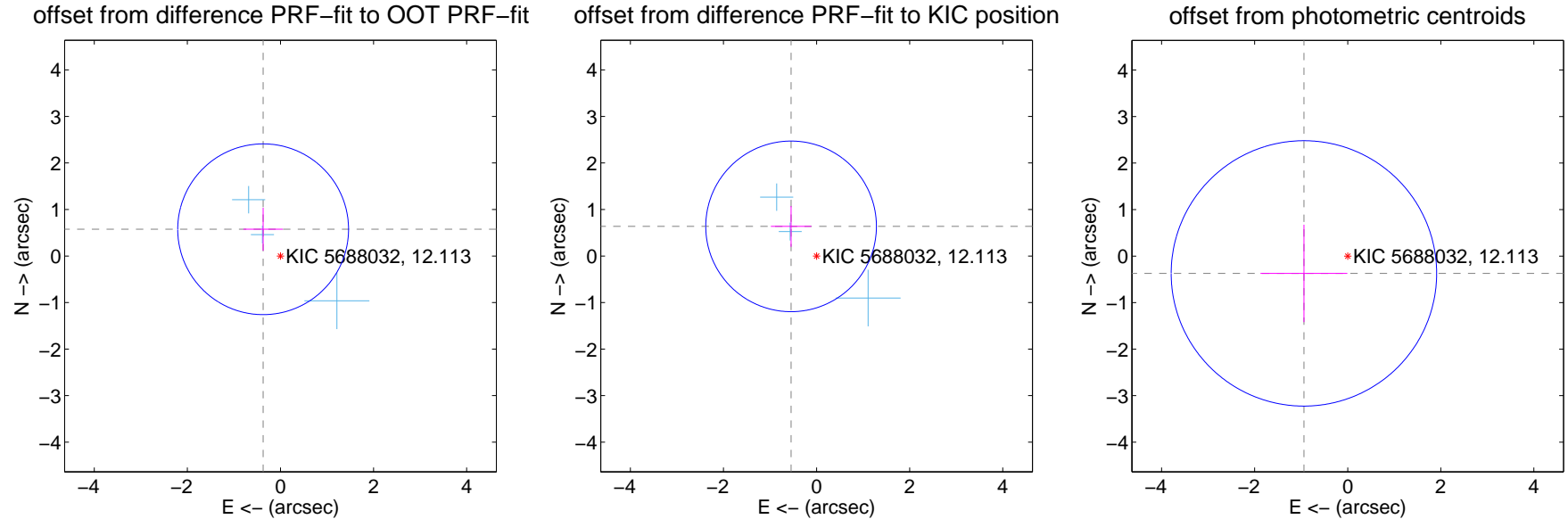
DV Centroid Data

Supplemental centroid analysis for 005688032-01. Kepler magnitude: 12.11. Transit SNR 5.78

There are 3 quarters with good PRF difference image offsets

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

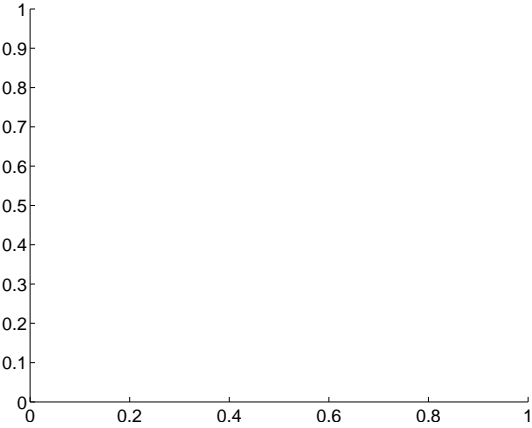
| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 0.685 ± 0.612 | 1.12 | 0.372 ± 0.423 | 0.575 ± 0.463 |
| PRF-fit source offset from KIC position | 0.840 ± 0.611 | 1.37 | 0.548 ± 0.435 | 0.637 ± 0.438 |
| photometric centroid source offset | 1.01 ± 0.95 | 1.06 | 0.94 ± 0.94 | -0.37 ± 1.05 |



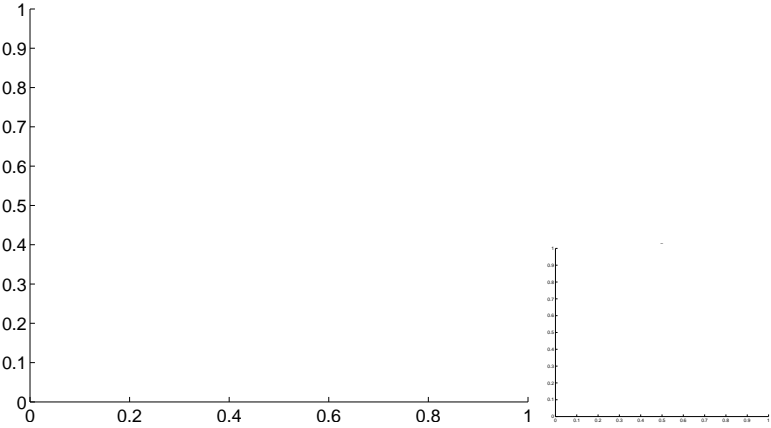
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

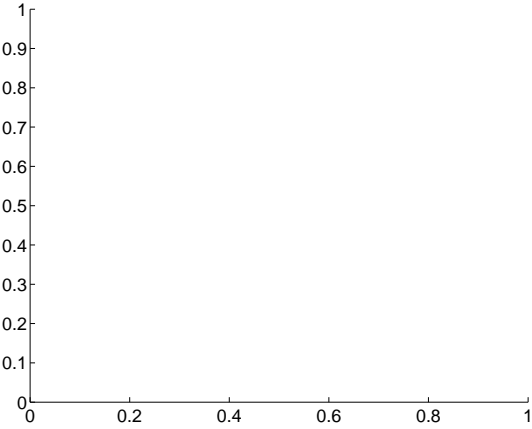
Q1 no difference image



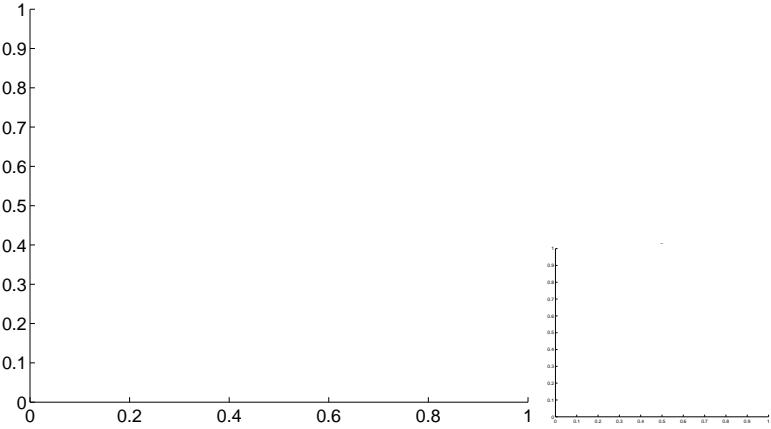
Q1 no OOT image



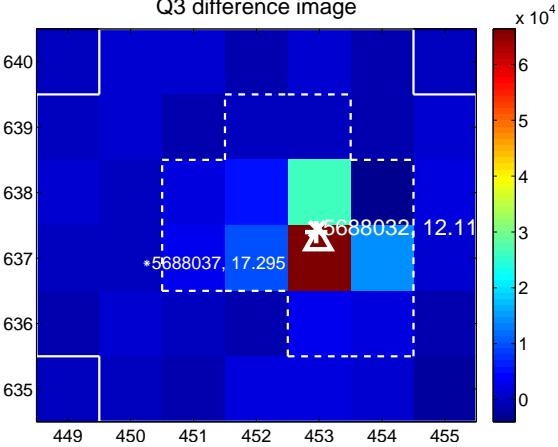
Q2 no difference image



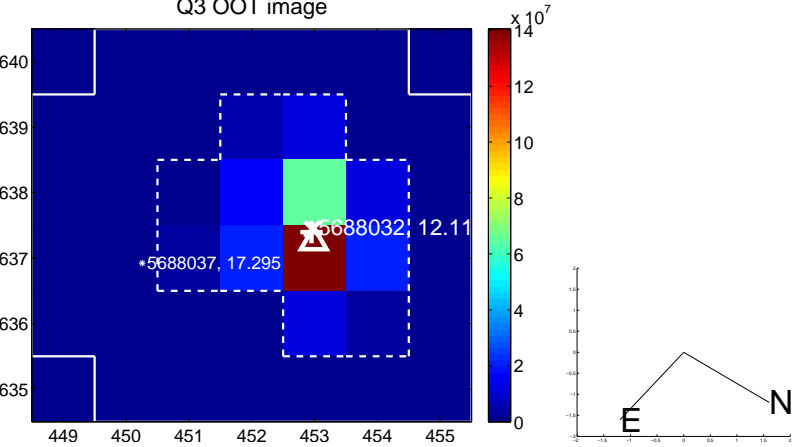
Q2 no OOT image



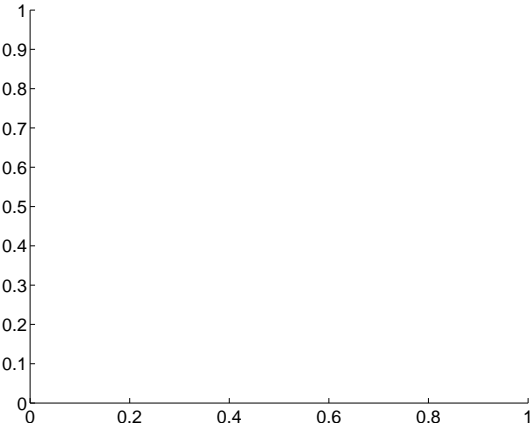
Q3 difference image



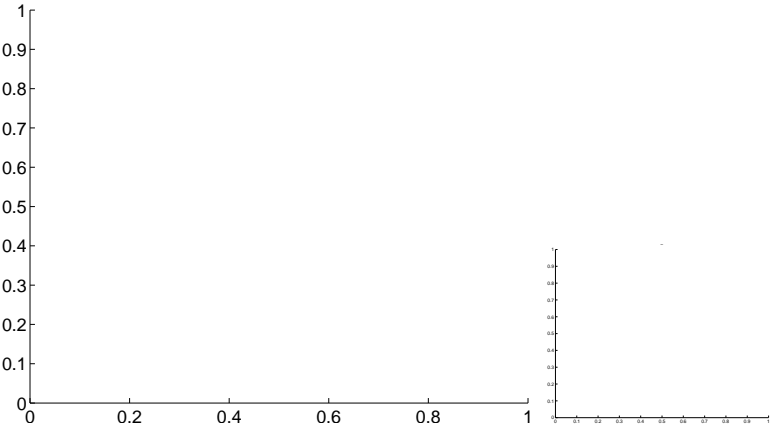
Q3 OOT image



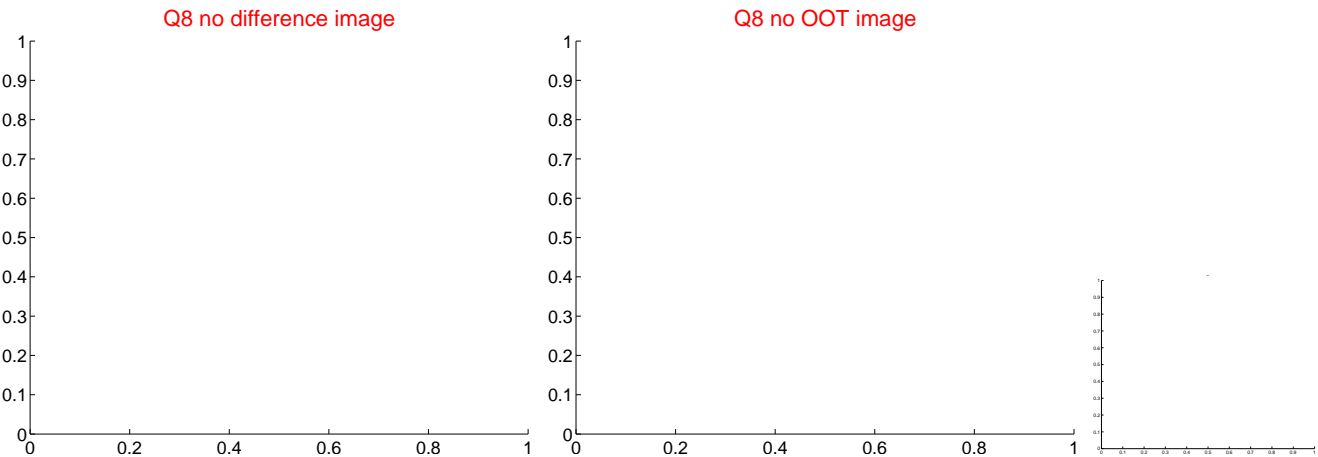
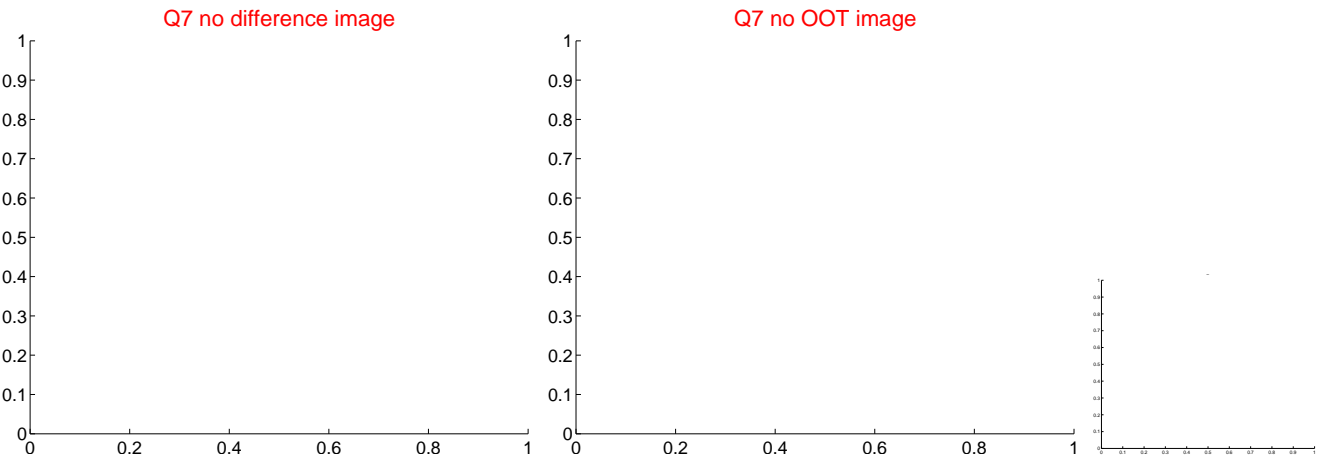
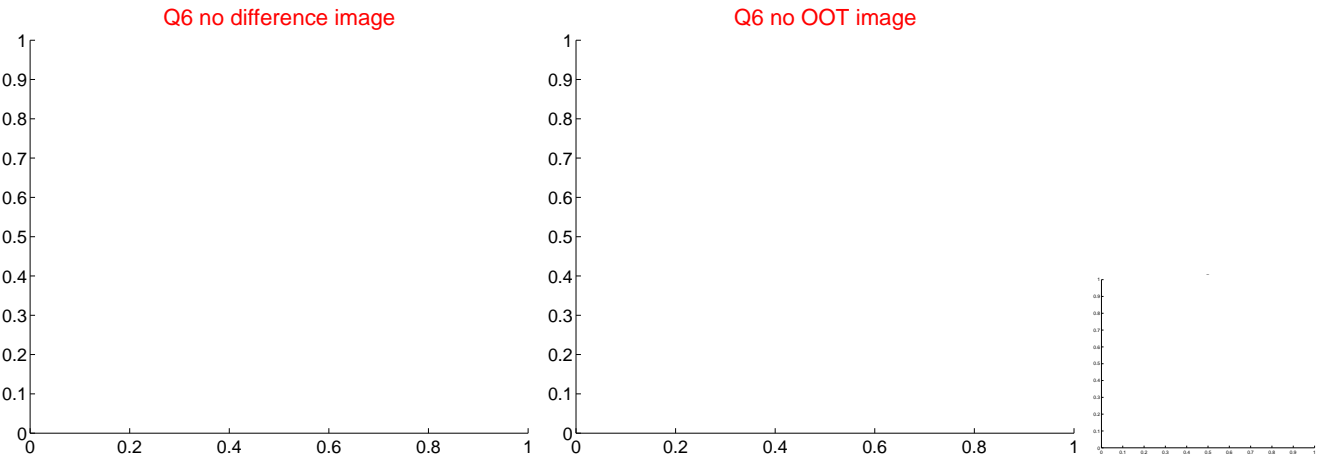
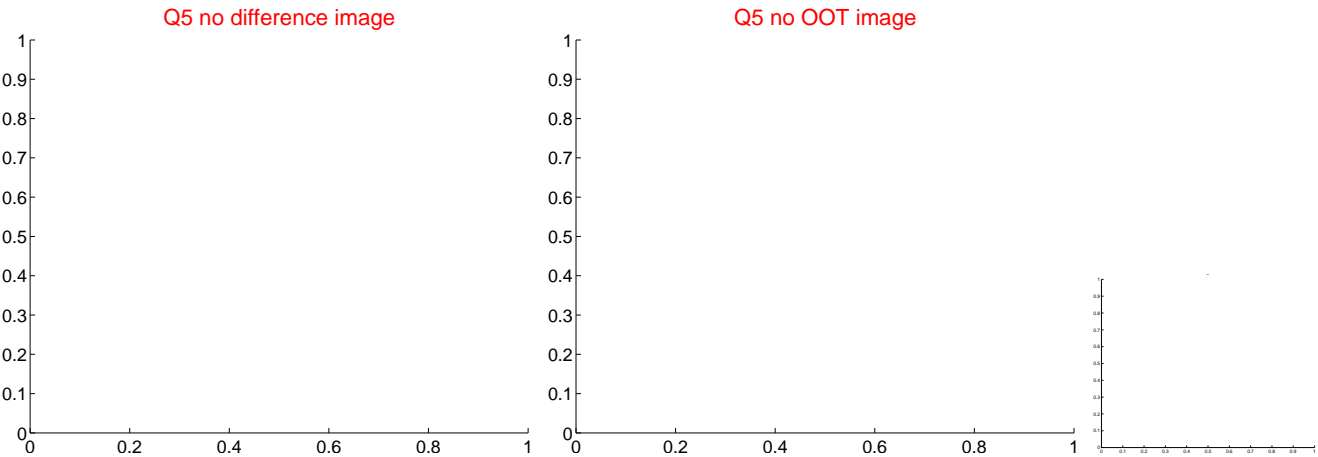
Q4 no difference image



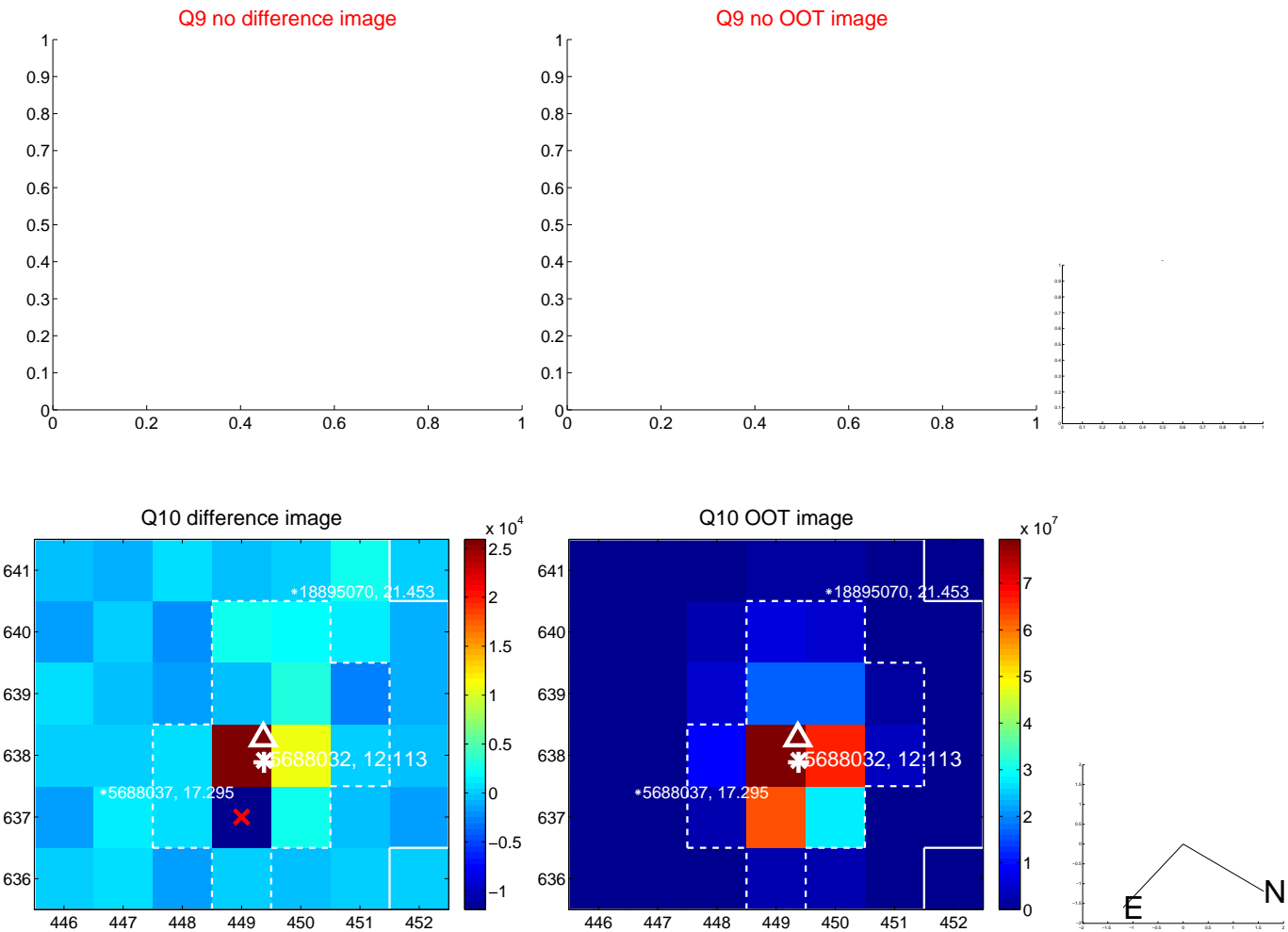
Q4 no OOT image



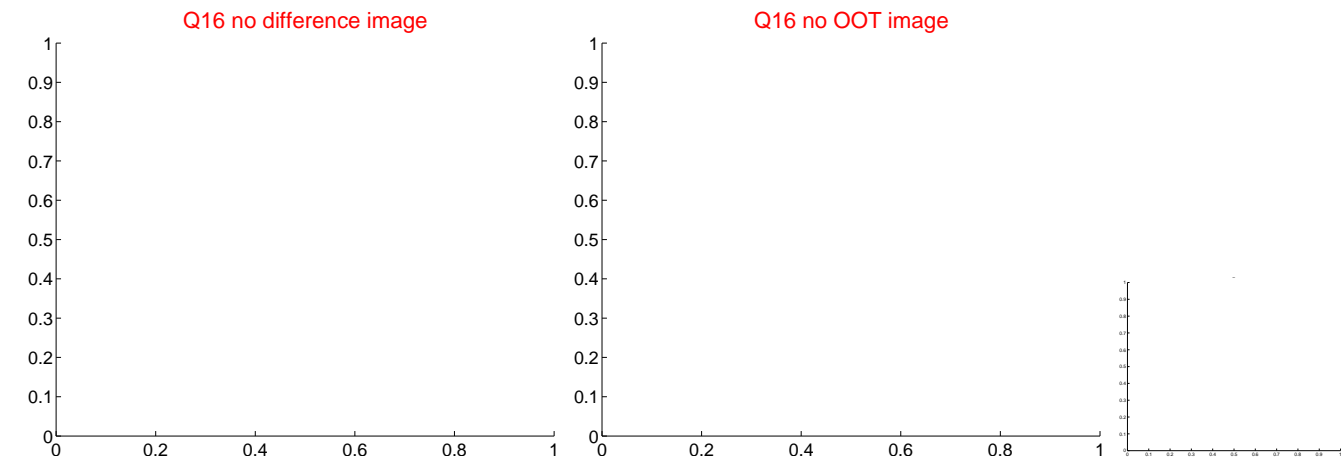
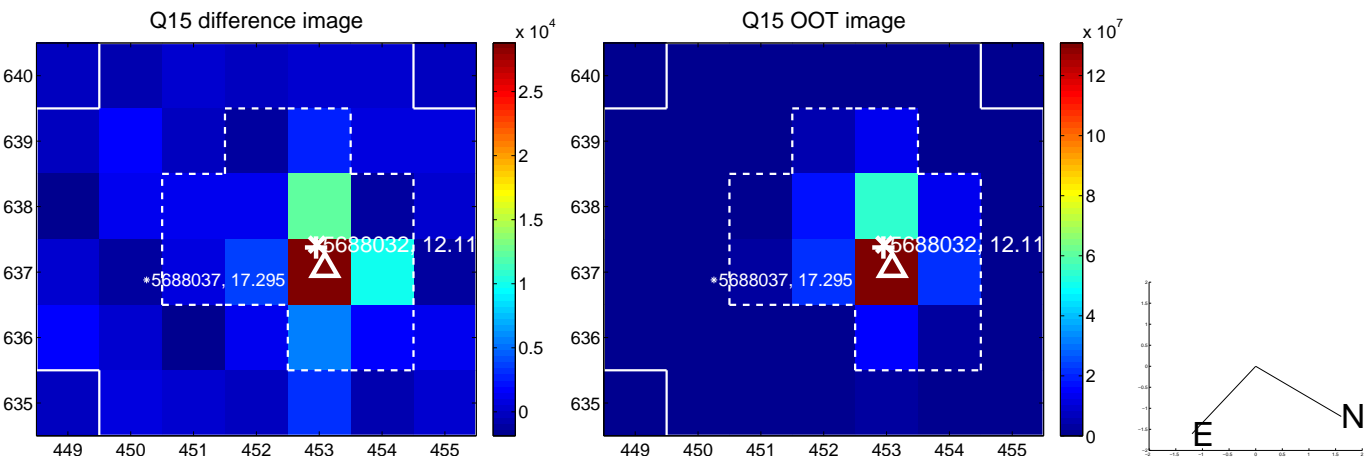
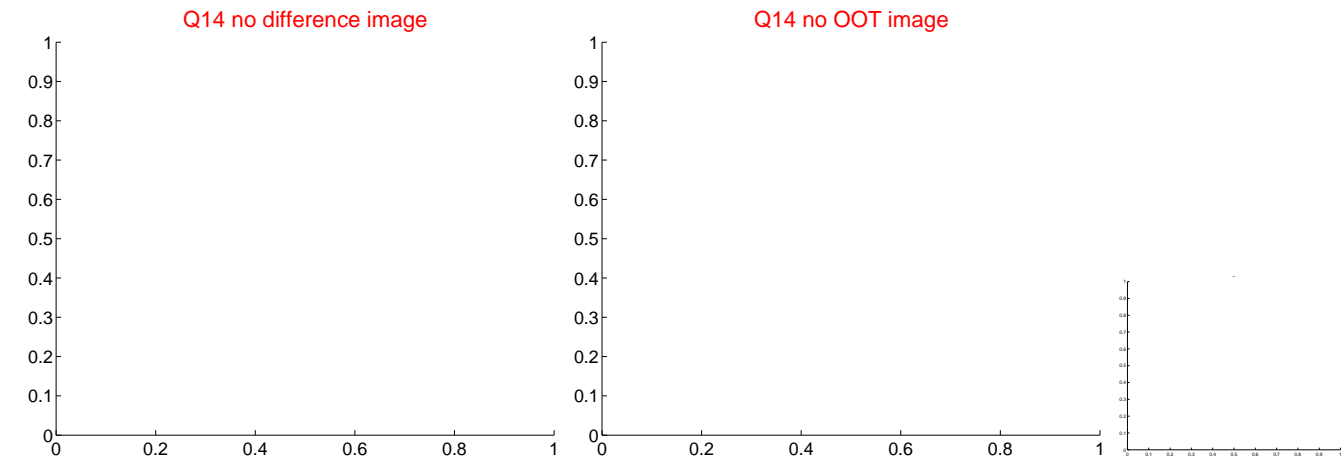
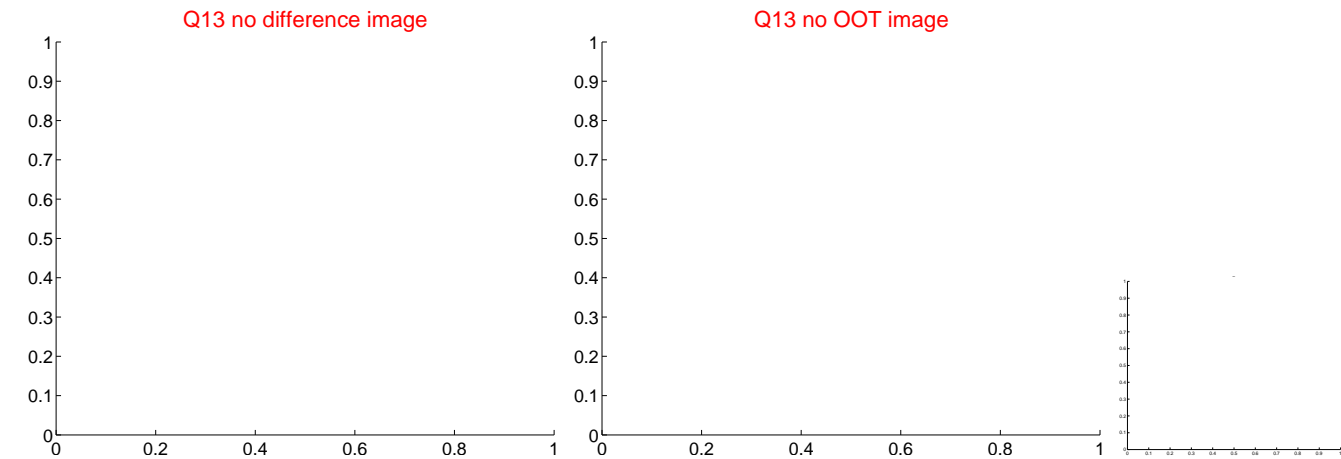
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



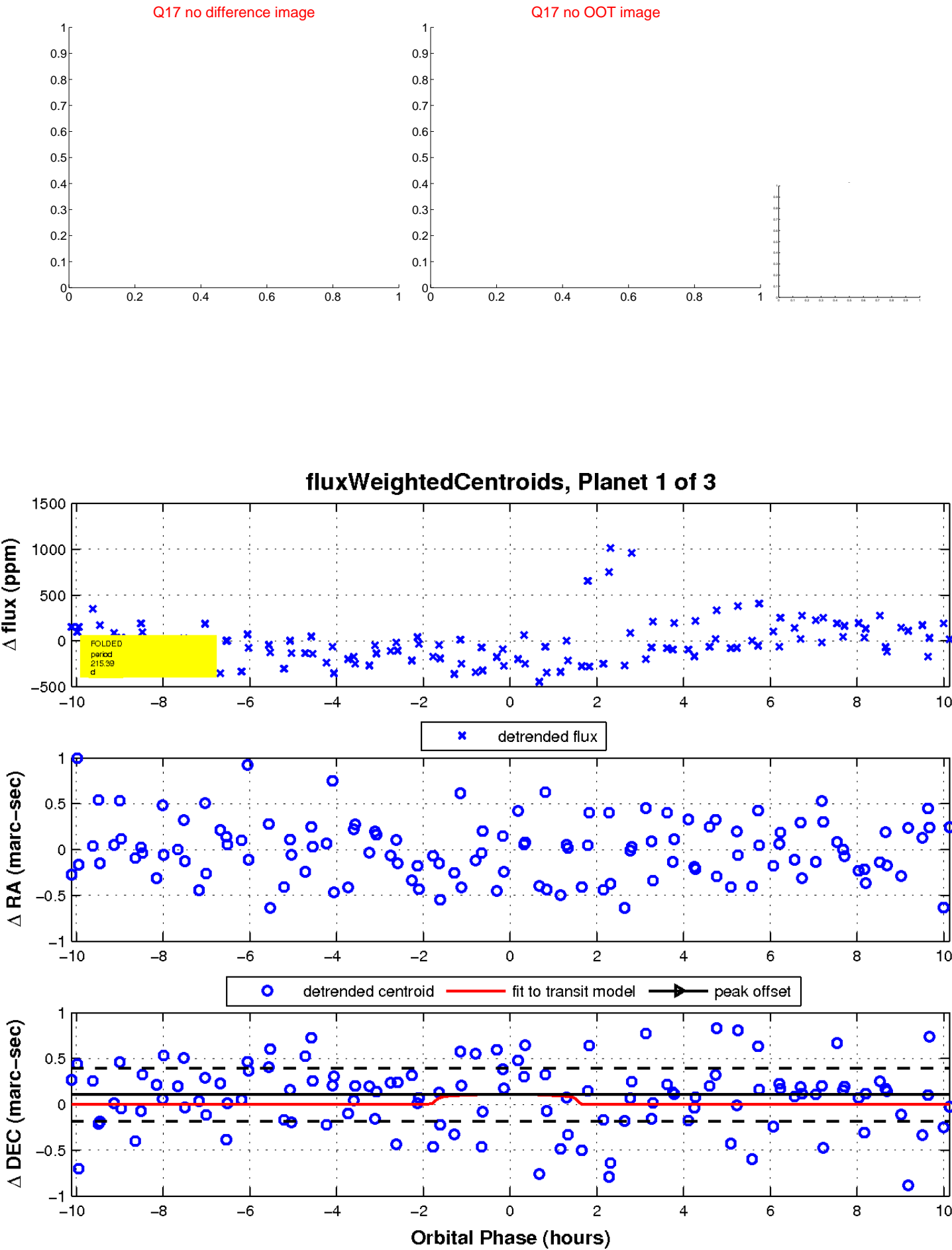
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:040:55:00:010:0, and 20:0. The central bright star is located at approximately RA 34.0 and Dec 50:040:55:00:010:0.

This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:040:55:00:010:0, and 20:0. The central star is the brightest and most prominent, with several other stars of varying brightness scattered throughout the field.

KIC 005688032

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 005688032-01 | OBS | No | 215.387063 | 302.992568 | 271.6 | 3.379 | 13.6 | 5.8 | 1.87 | 5927 | 3.18 | 7.36 |
| 005688032-02 | OBS | No | 280.554150 | 214.424827 | 411.1 | 3.123 | 11.6 | 7.5 | 1.87 | 5927 | 4.19 | 5.18 |
| 005688032-03 | OBS | No | 395.690210 | 315.513059 | 294.7 | 2.311 | 9.2 | 7.1 | 1.87 | 5927 | 3.73 | 3.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 005688032-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS |
| 005688032-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_UNCERTAIN |
| 005688032-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS |

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

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

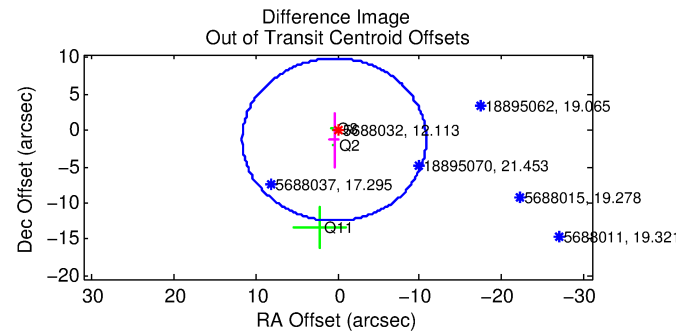
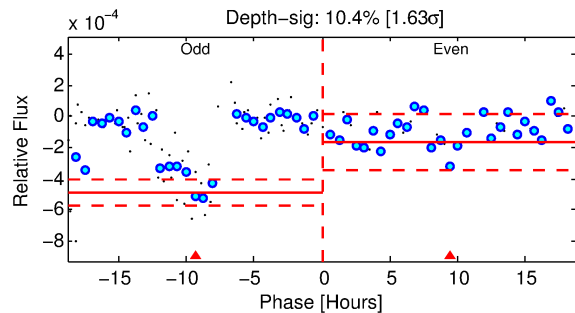
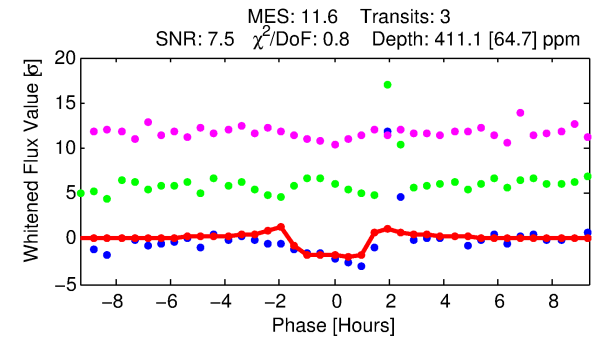
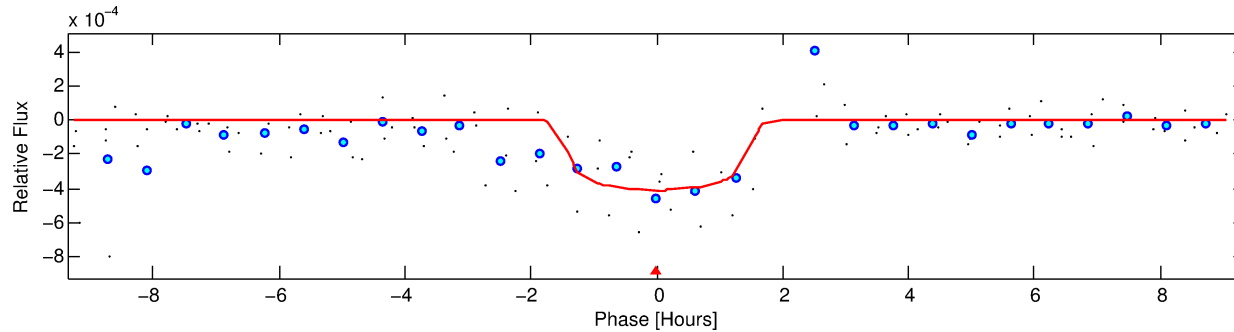
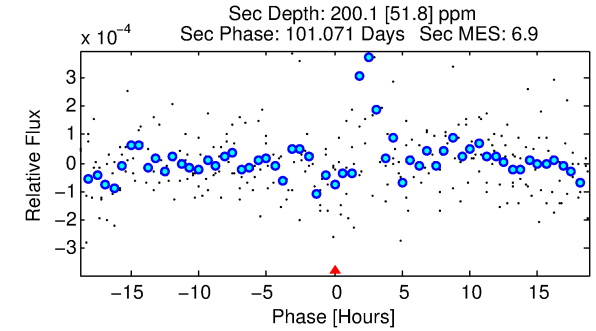
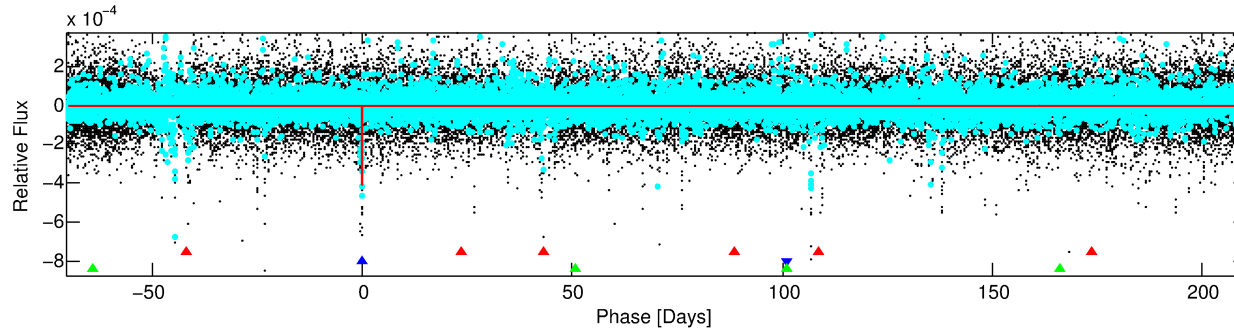
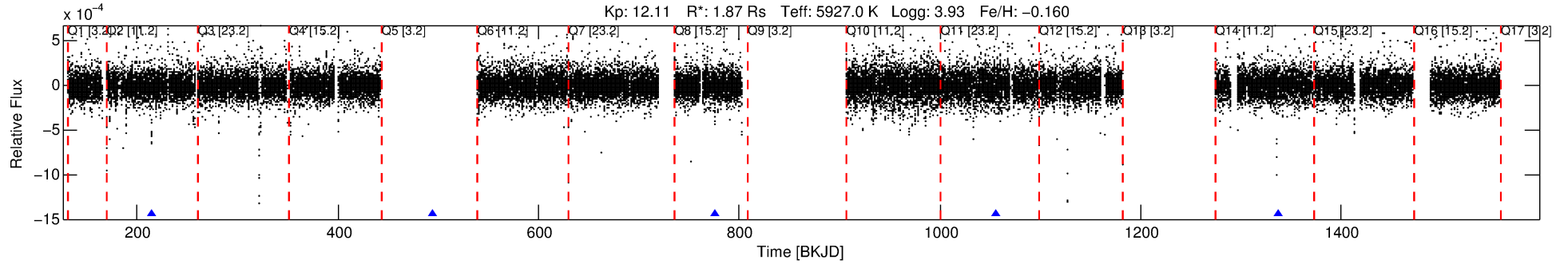
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005688032-02

No Significant Match Found

DV One-Page Summary

KIC: 5688032 Candidate: 2 of 3 Period: 280.554 d



DV Fit Results:

Period = 280.55415 [0.00354] d
Epoch = 214.4248 [0.0076] BKJD
Rp/R* = 0.0205 [0.0209]
a/R* = 445.01 [2155.99]
b = 0.79 [2.36]
Seff = 5.18 [2.74]
Teq = 385 [51] K
Rp = 4.19 [4.52] Re
a = 0.8661 [0.2857] AU
Ag = 4703.33 [9960.49] [0.47σ]
Teffp = 4925 [2532] K [1.79σ]

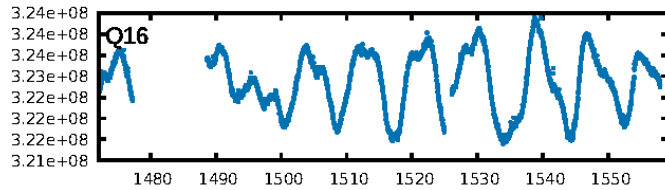
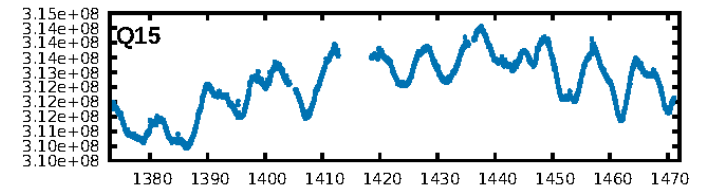
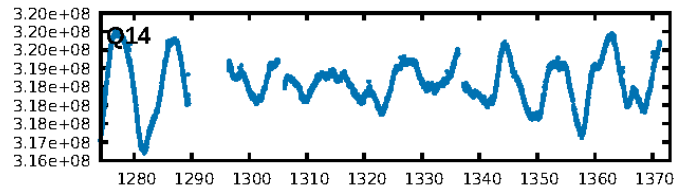
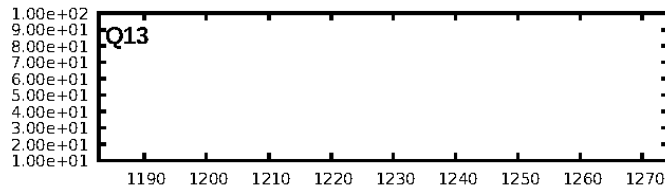
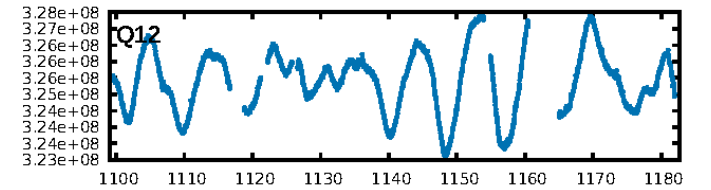
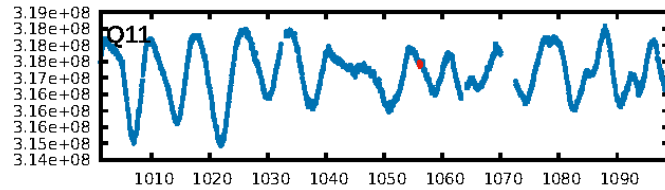
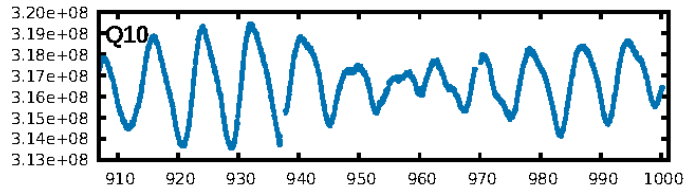
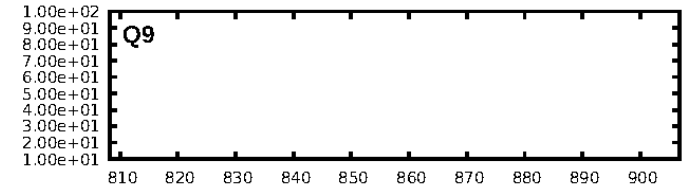
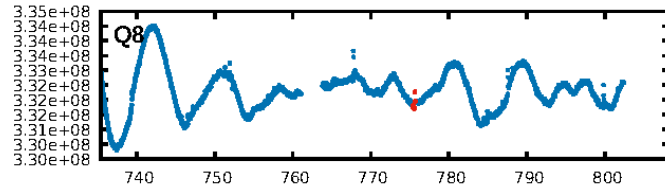
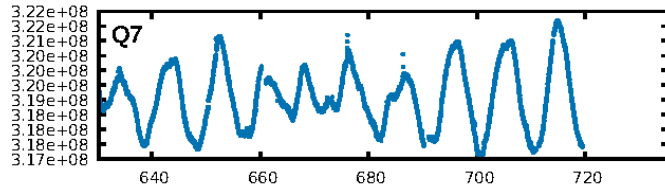
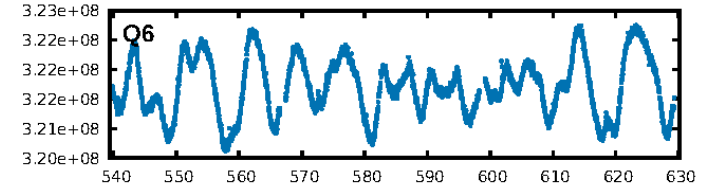
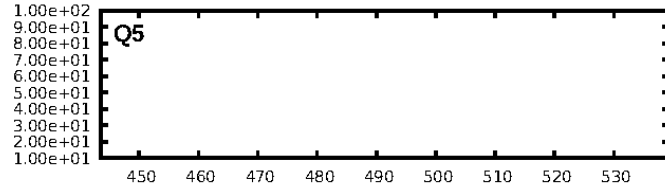
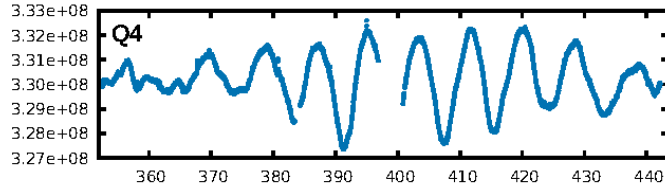
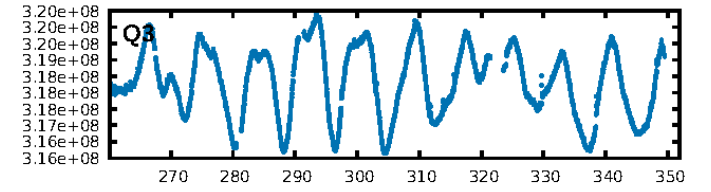
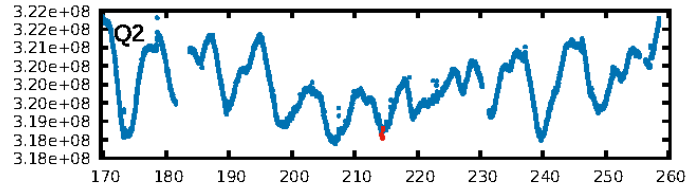
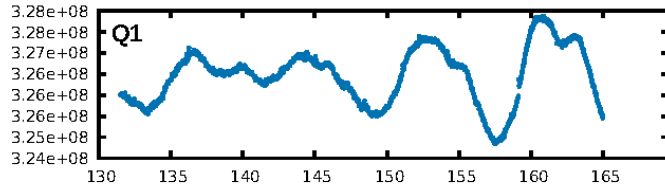
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [339.92σ]
LongPeriod-sig: 100.0% [711.34σ]
ModelChiSquare2-sig: 8.6%
ModelChiSquareGof-sig: 92.0%
Bootstrap-pfa: 3.13e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.336
Centroid-sig: N/A
Centroid-so: 0.603 arcsec [0.96σ]
OotOffset-rm: 1.344 arcsec [0.36σ]
KicOffset-rm: 1.332 arcsec [0.38σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

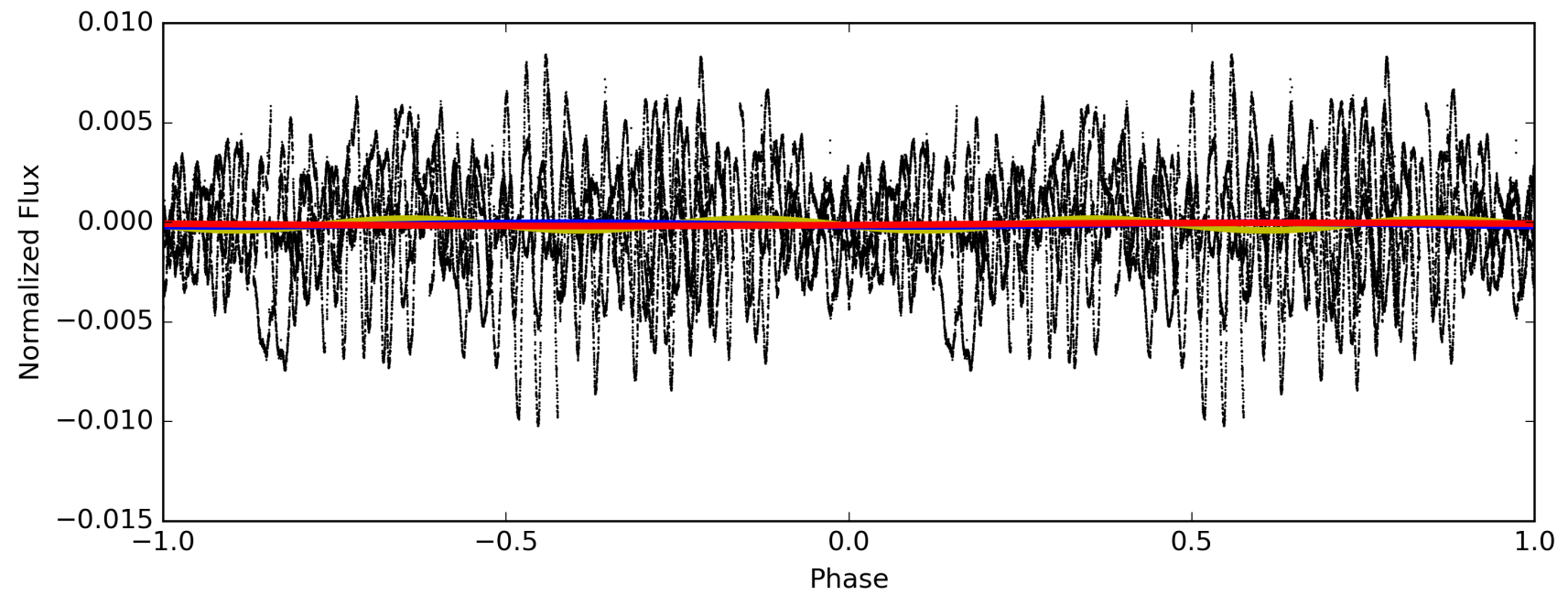
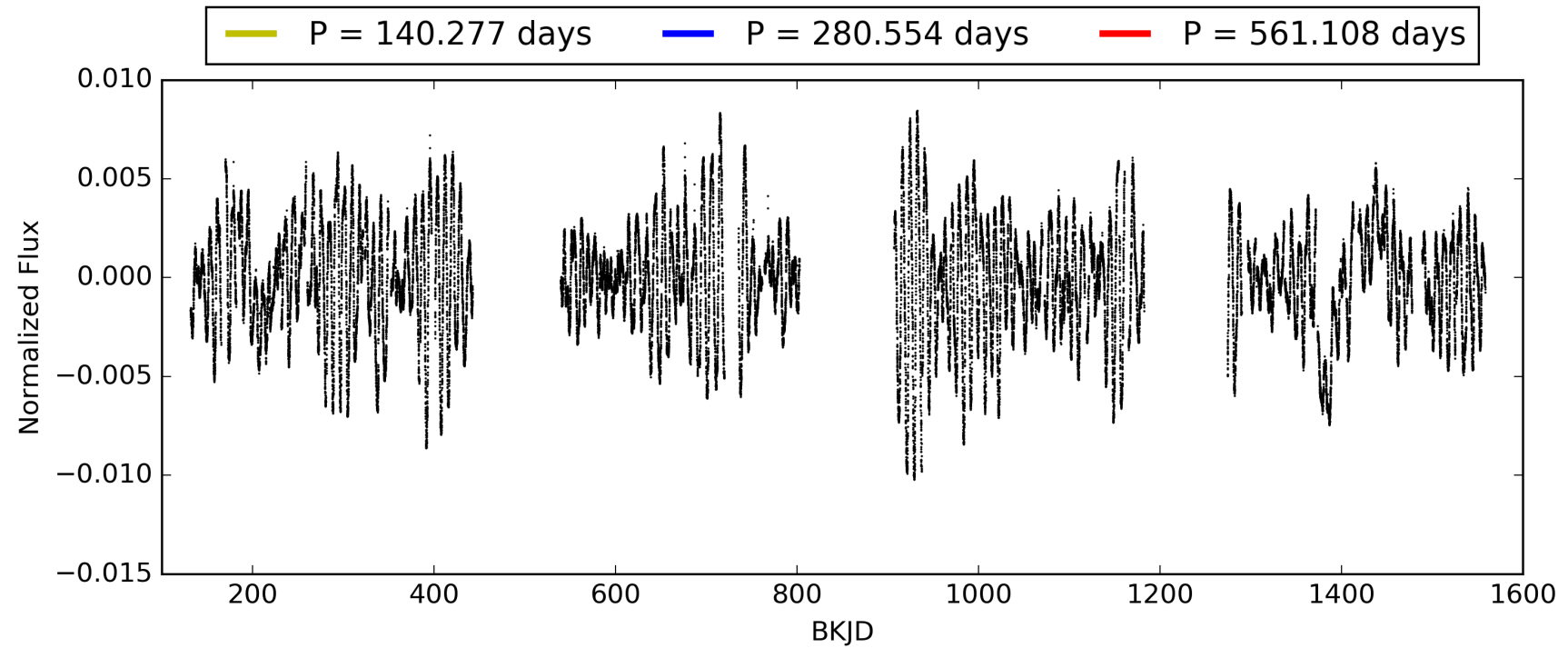
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:21:01 Z

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

TCE 005688032-02, PDC Light Curves

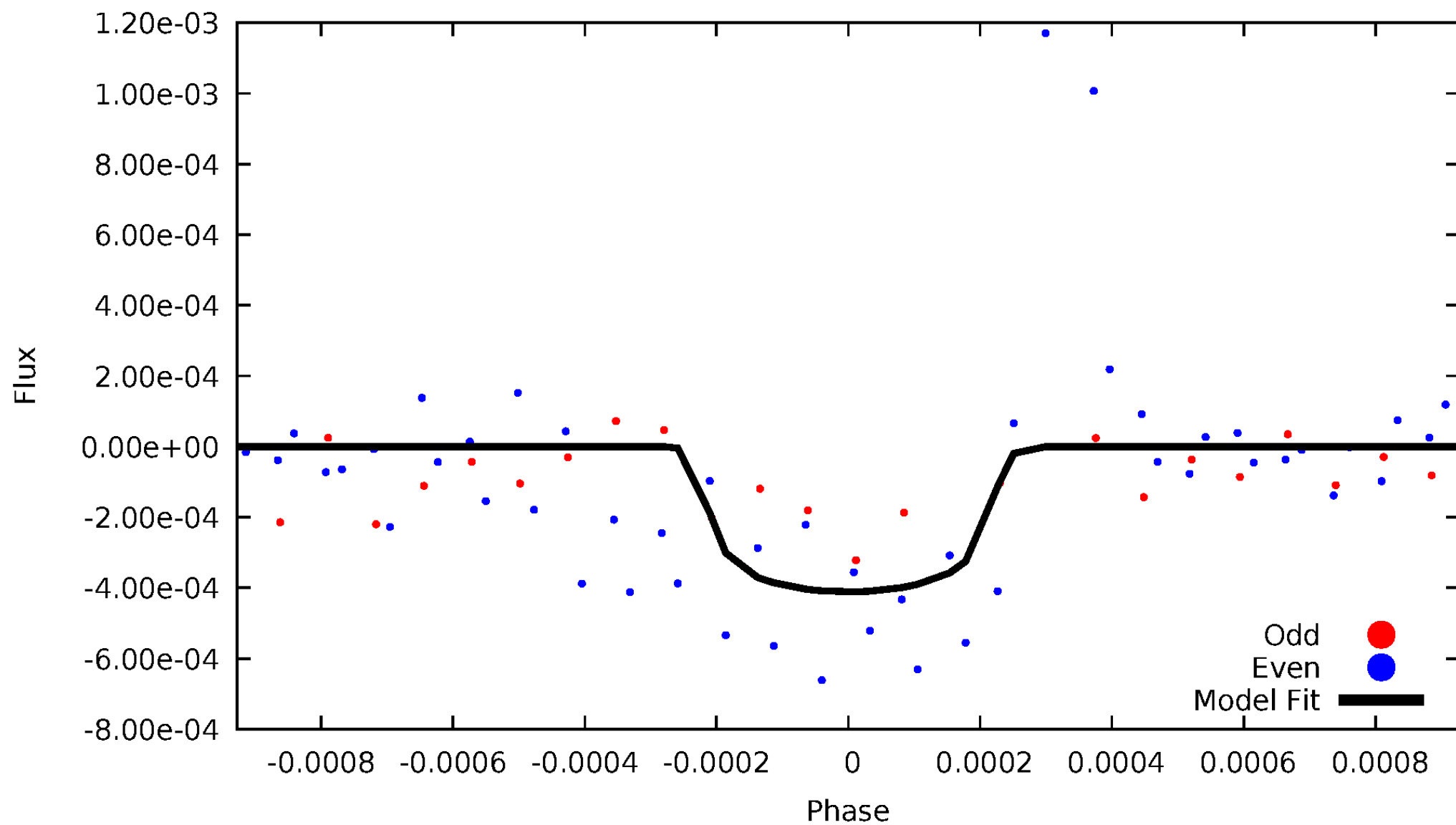


TCE 005688032-02



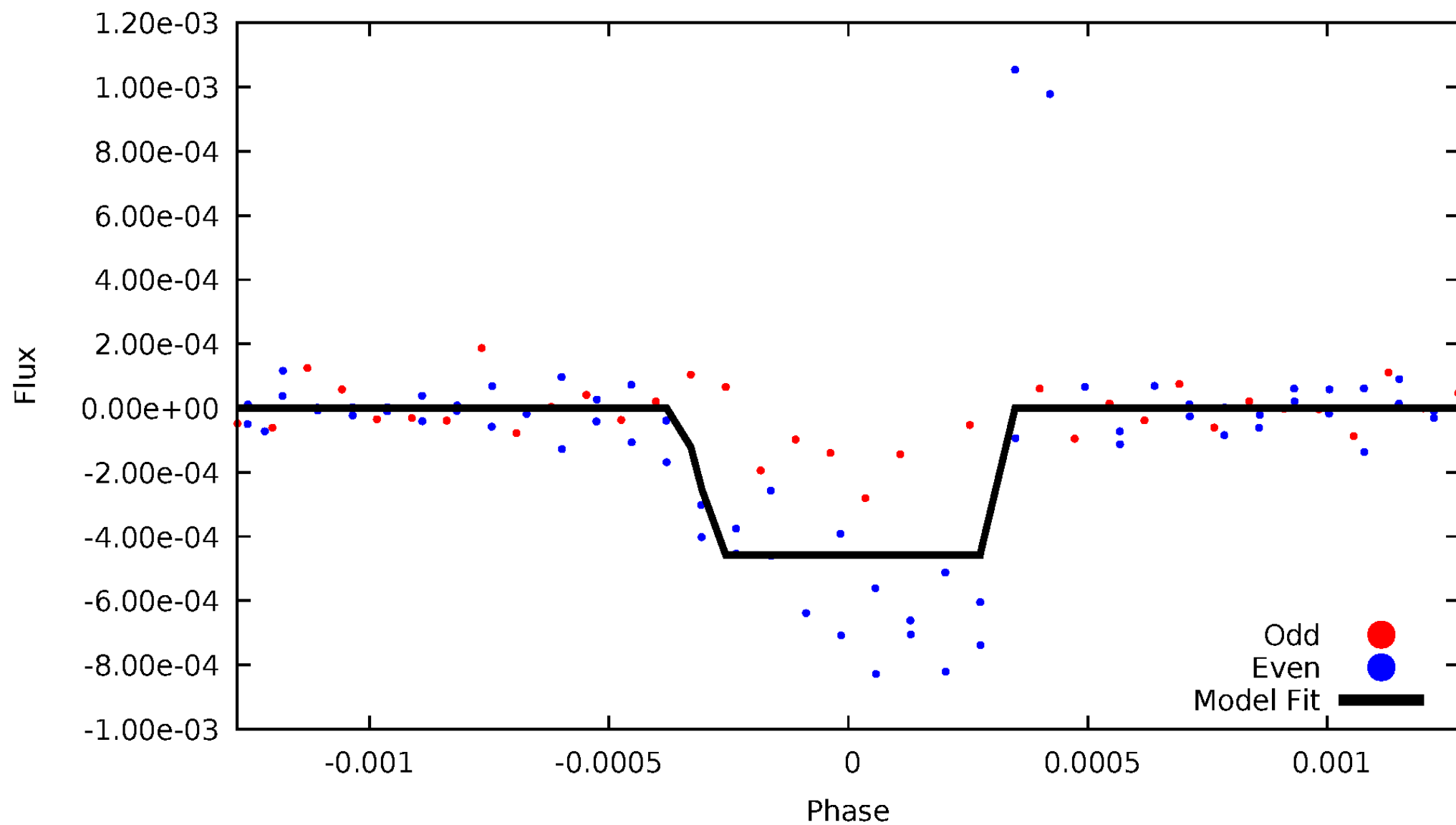
DV Odd/Even

TCE 005688032-02



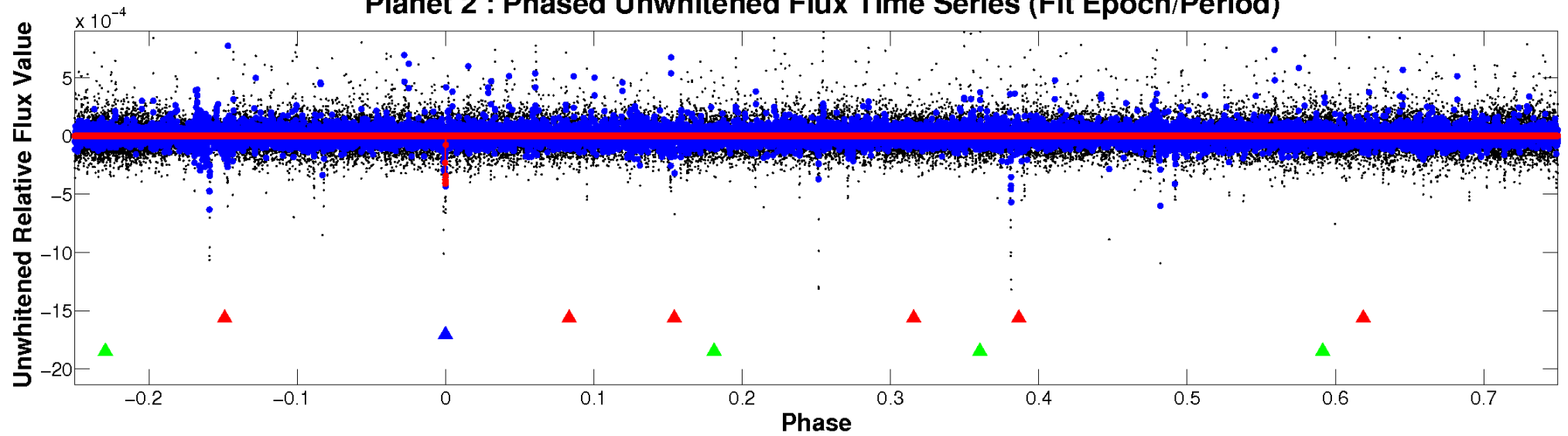
ALT Odd/Even

TCE 005688032-02

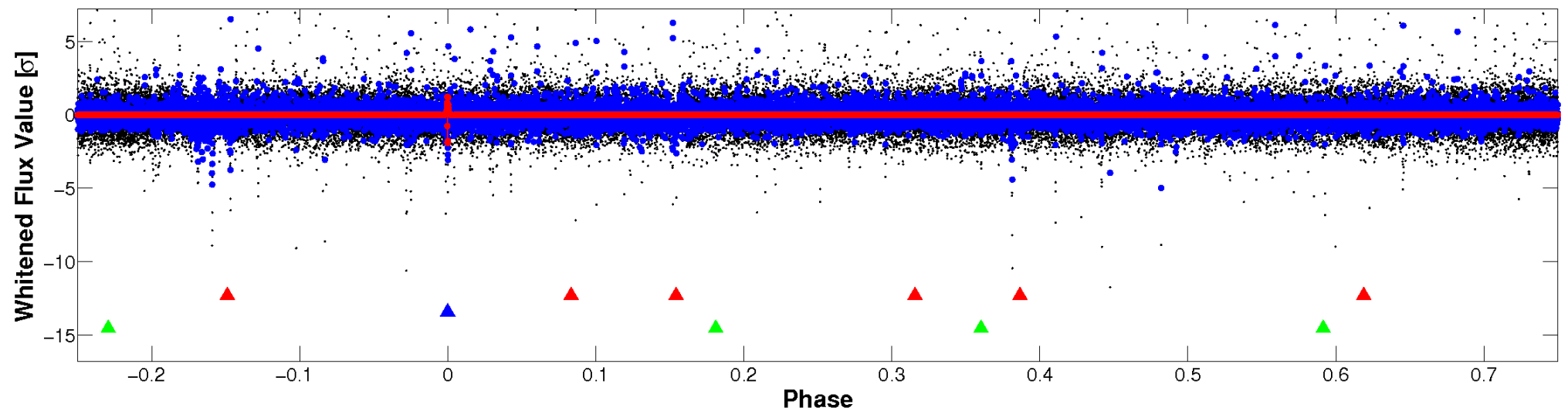


Non-Whitened Vs. Whitened Light Curve

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

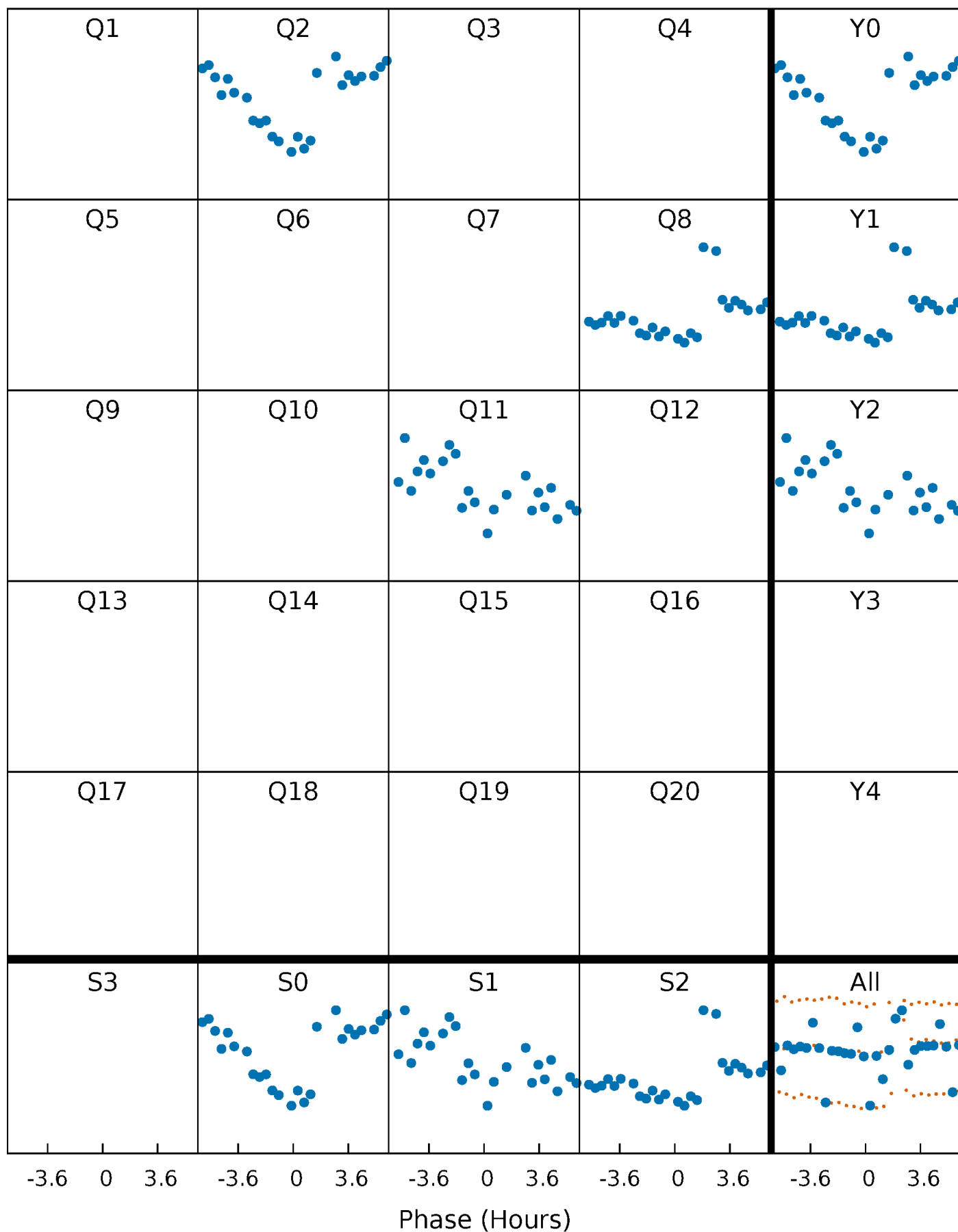


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



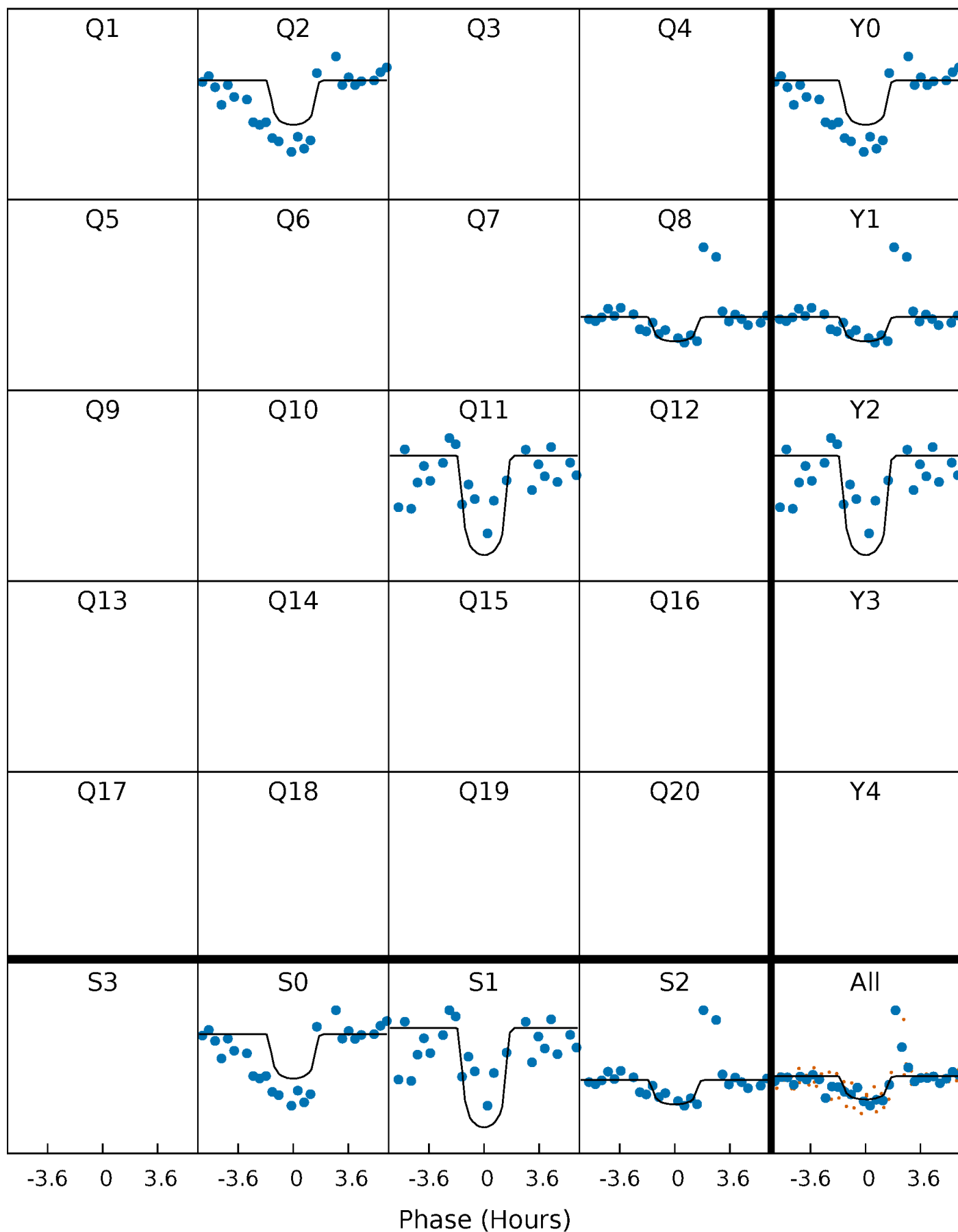
PDC Quarter-Phased Transit Curves

TCE 005688032-02 P=280.554150 Days $T_0=214.424827$ (BKJD)



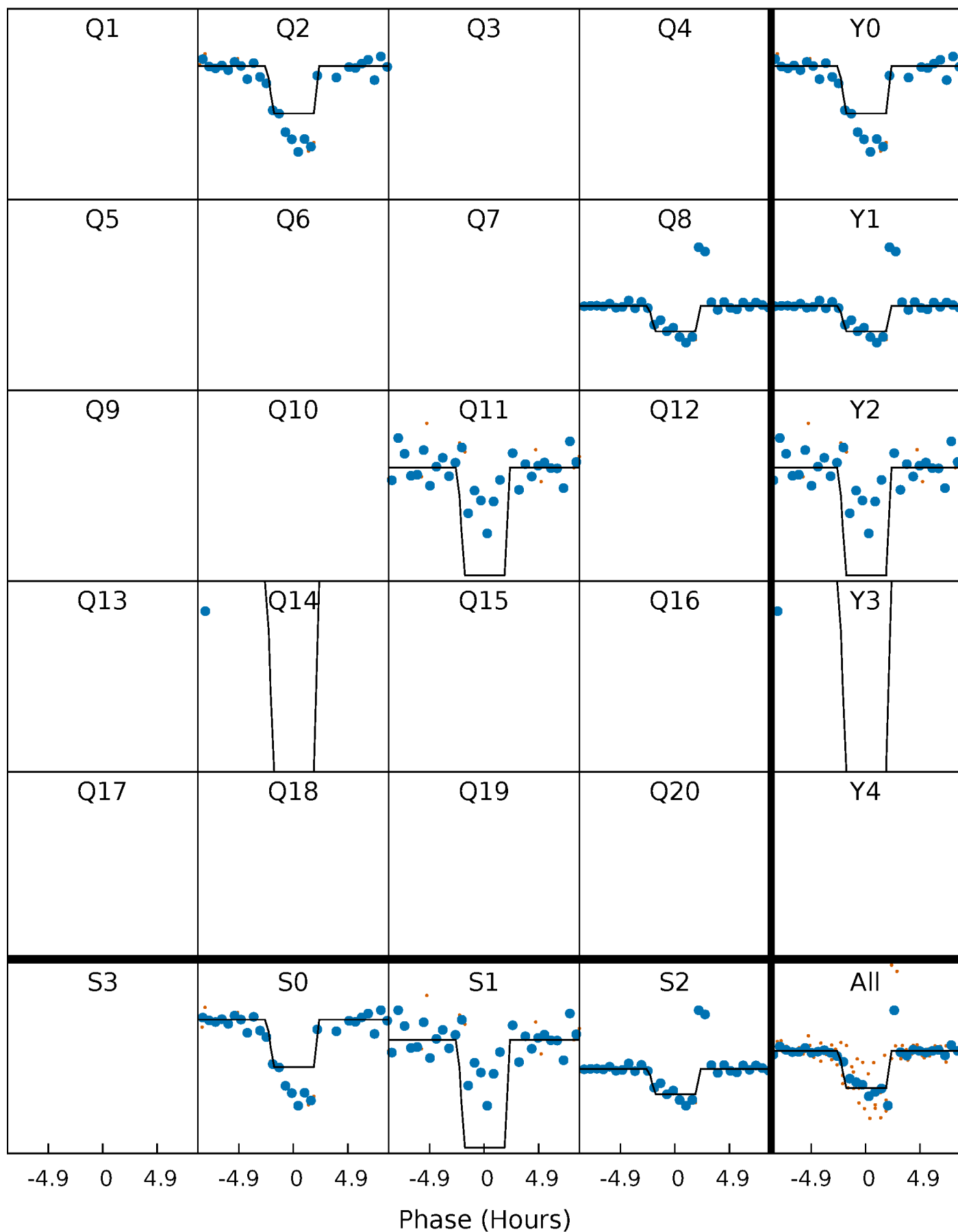
DV Quarter-Phased Transit Curves

TCE 005688032-02 $P=280.554150$ Days $T_0=214.424827$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

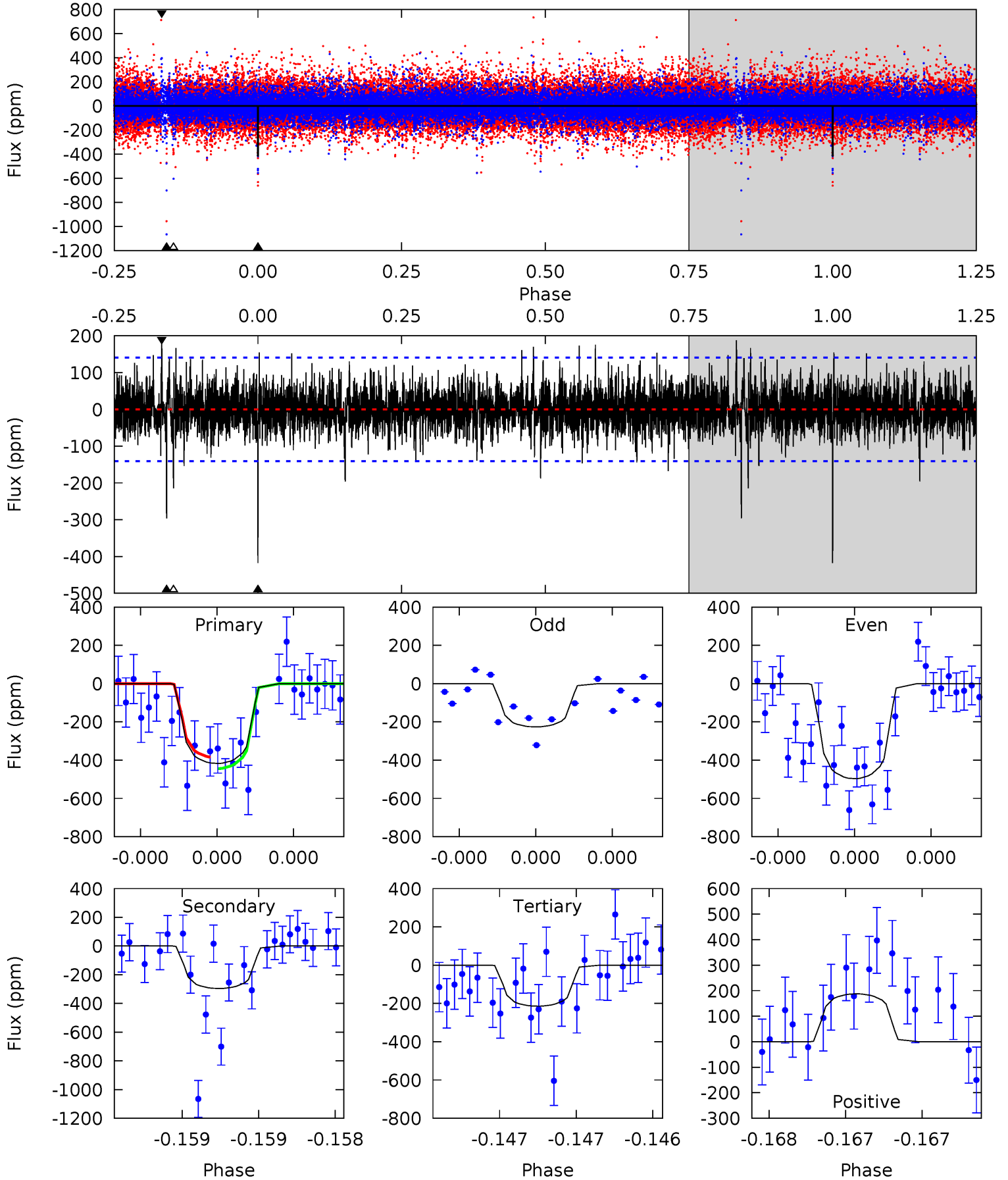
TCE 005688032-02 P=280.561053 Days $T_0=214.397391$ (BKJD)



DV Model-Shift Uniqueness Test

005688032-02, P = 280.554150 Days, E = 214.424827 Days

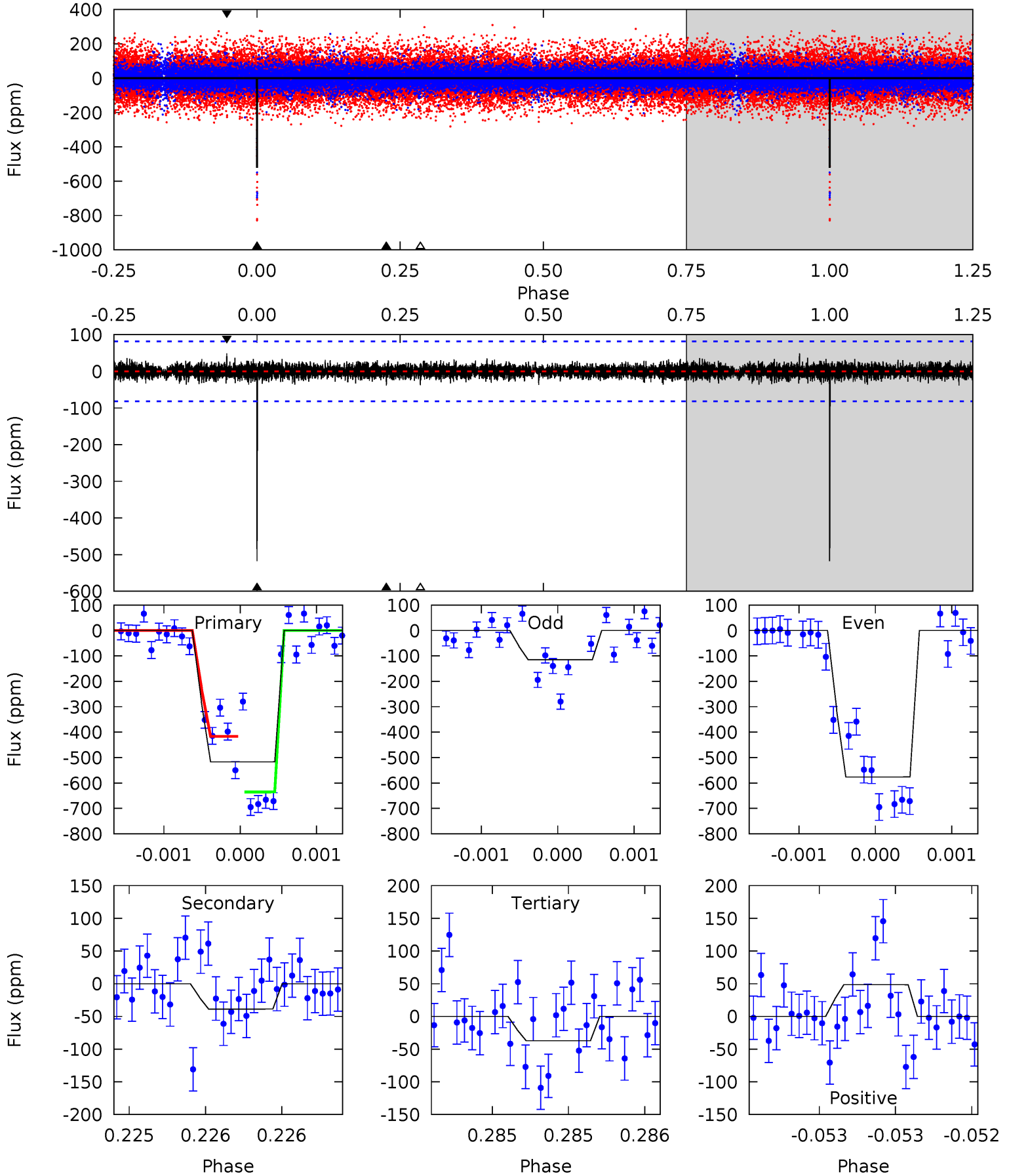
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.6 | 11.7 | 8.50 | 7.45 | 5.59 | 3.50 | 1.60 | 8.06 | 9.12 | 3.23 | 4.28 | 4.82 | 1.15 | 0.31 | 1.18 |



Alt Model-Shift Uniqueness Test

005688032-02, P = 280.561053 Days, E = 214.397391 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 35.0 | 2.62 | 2.53 | 3.29 | 5.54 | 3.43 | 0.63 | 32.5 | 31.7 | 0.09 | -0.67 | 15.7 | 0.88 | 0.09 | 7.24 |



Stellar Parameters For KIC 005688032

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5927^{+164}_{-145} | $3.934^{+0.300}_{-0.100}$ | $-0.160^{+0.350}_{-0.250}$ | $1.874^{+0.332}_{-0.664}$ | $1.100^{+0.187}_{-0.187}$ | $0.235^{+0.471}_{-0.072}$ |
| | +3%/-2% | +8%/-3% | +219%/-156% | +18%/-35% | +17%/-17% | +200%/-30% |
| Source | PHO1 | FLK73 | 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 005688032-02 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|----------------------|-----------------------|-------------------------|
| DV | -296 ± 25 | $4.82^{+3.76}_{-2.96}$ | 530^{+31}_{-48} | 4998^{+3225}_{-929} | 5056^{+31464}_{-3305} |
| Alt. | -39 ± 15 | $4.93^{+3.85}_{-3.13}$ | 529^{+35}_{-45} | 3407^{+1401}_{-562} | 661^{+3748}_{-490} |

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

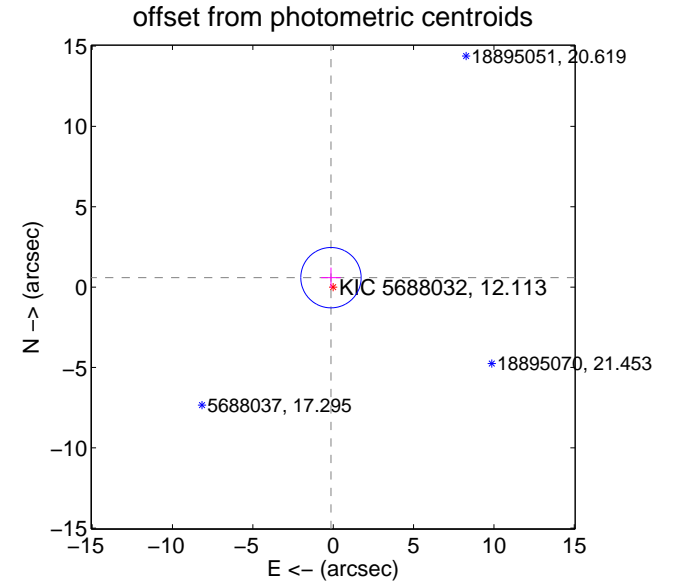
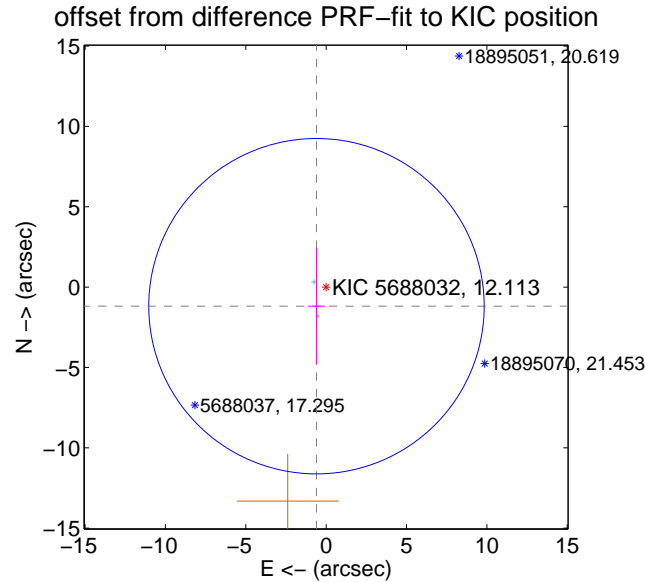
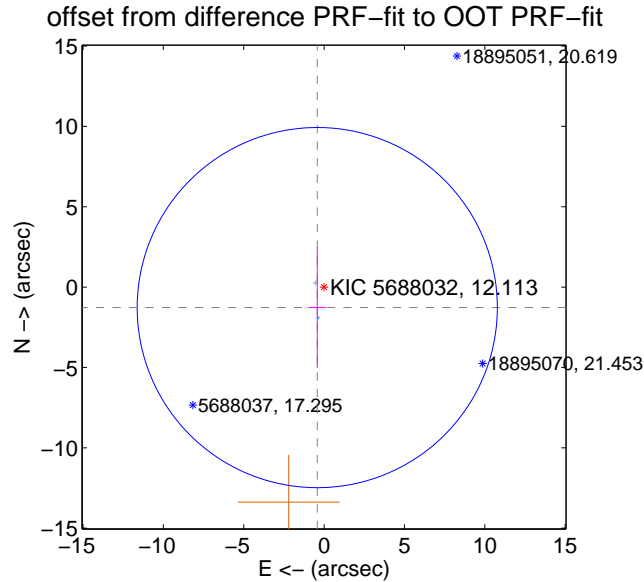
DV Centroid Data

Supplemental centroid analysis for 005688032-02. Kepler magnitude: 12.11. Transit SNR 7.50

There are 2 quarters with good PRF difference image offsets

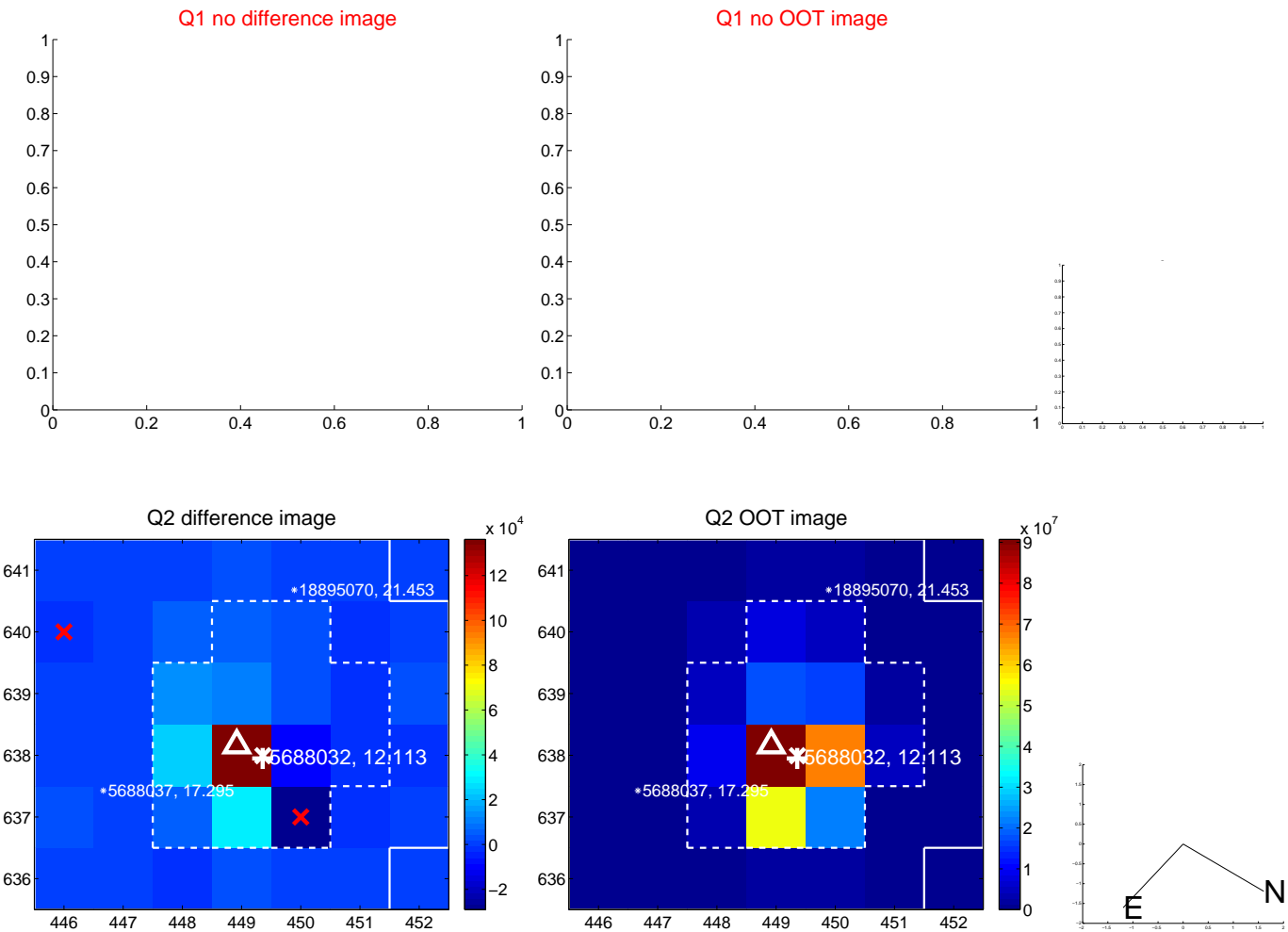
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 1.344 ± 3.735 | 0.36 | 0.425 ± 0.559 | -1.275 ± 3.754 |
| PRF-fit source offset from KIC position | 1.332 ± 3.478 | 0.38 | 0.602 ± 0.535 | -1.188 ± 3.637 |
| photometric centroid source offset | 0.60 ± 0.63 | 0.96 | 0.14 ± 0.62 | 0.59 ± 0.63 |

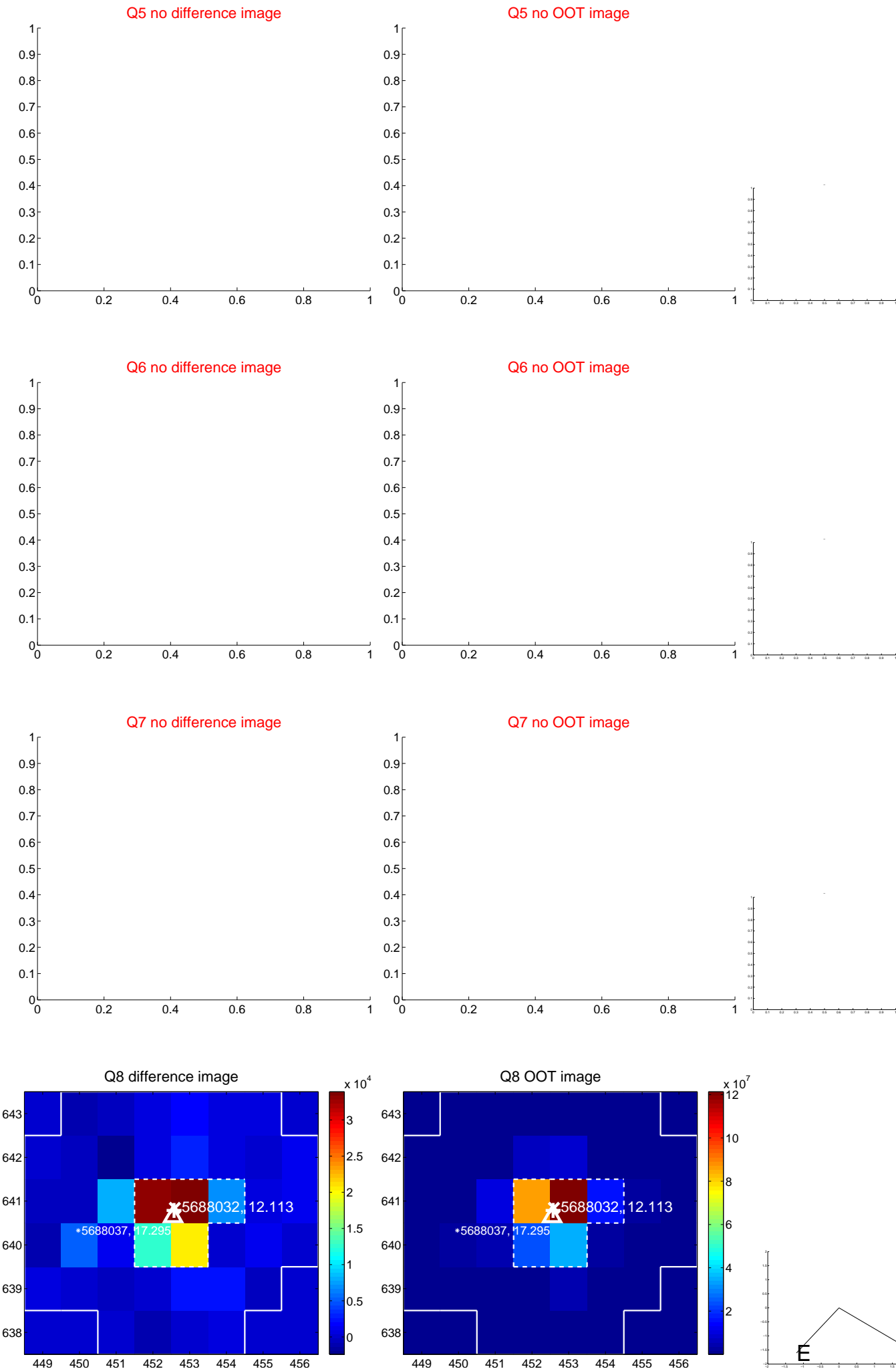


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

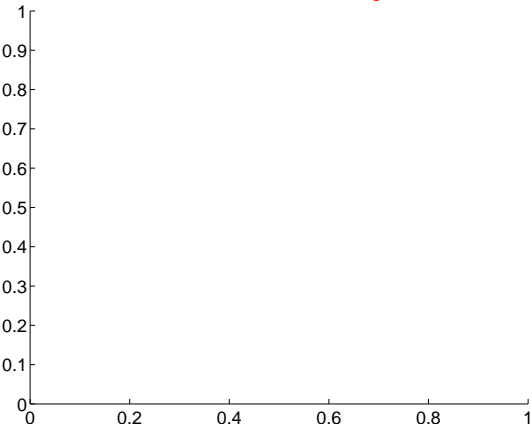


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

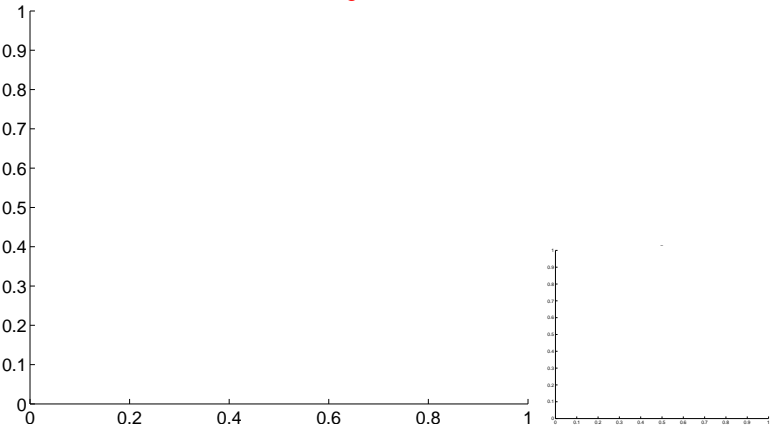


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

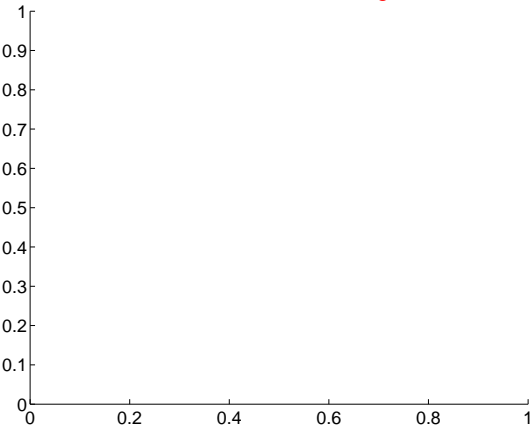
Q9 no difference image



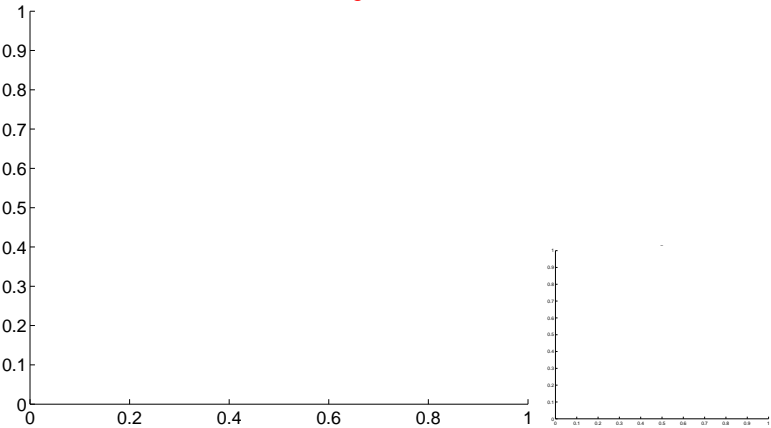
Q9 no OOT image



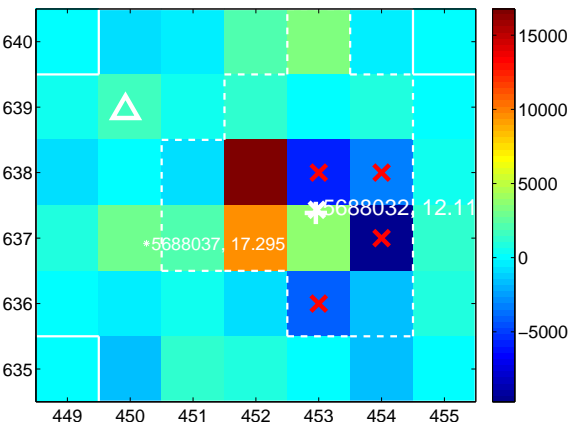
Q10 no difference image



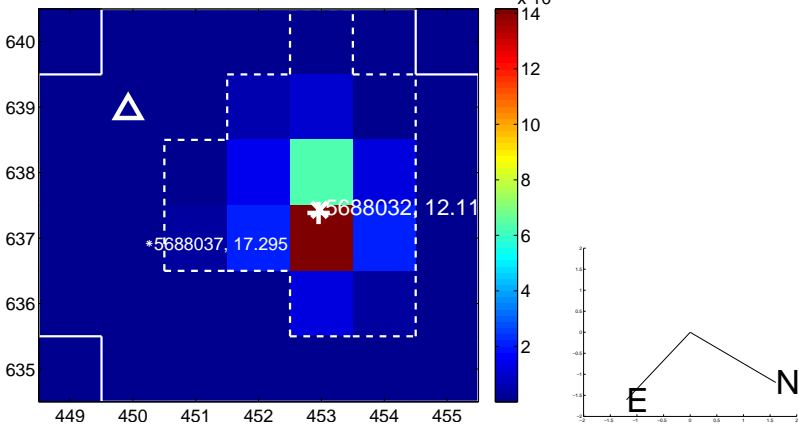
Q10 no OOT image



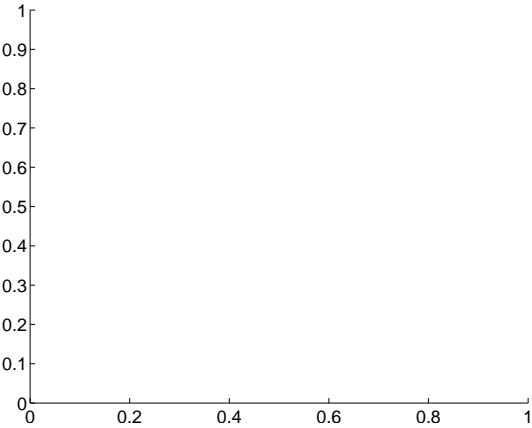
Q11 difference image. Poor Quality



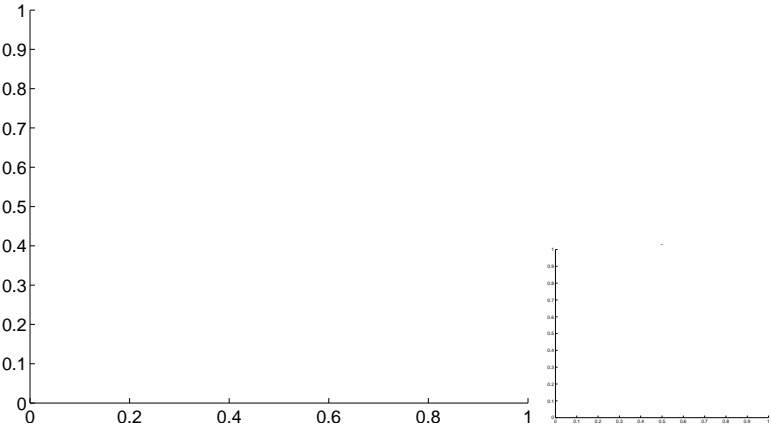
Q11 OOT image



Q12 no difference image



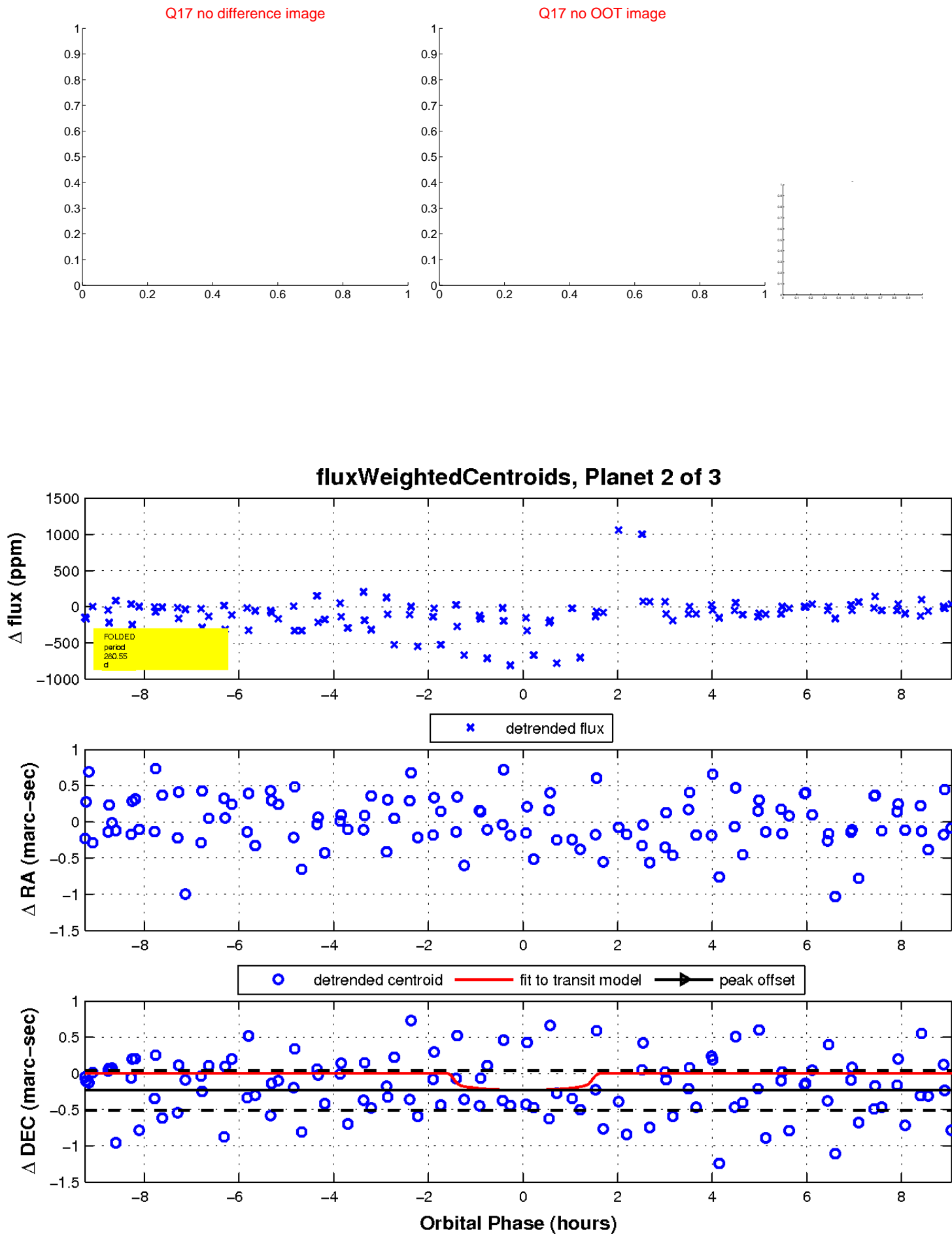
Q12 no OOT image



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



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



This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:040:55:00:010:0, and 20:0. The central bright star is located at approximately RA 34.0 and Dec 50:040:55:00:010:0.

This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:040:55:00:010:0, and 20:0. The central bright star is located at approximately RA 34.0 and Dec 50:040:55:00:010:0.

KIC 005688032

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 005688032-01 | OBS | No | 215.387063 | 302.992568 | 271.6 | 3.379 | 13.6 | 5.8 | 1.87 | 5927 | 3.18 | 7.36 |
| 005688032-02 | OBS | No | 280.554150 | 214.424827 | 411.1 | 3.123 | 11.6 | 7.5 | 1.87 | 5927 | 4.19 | 5.18 |
| 005688032-03 | OBS | No | 395.690210 | 315.513059 | 294.7 | 2.311 | 9.2 | 7.1 | 1.87 | 5927 | 3.73 | 3.27 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 005688032-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS |
| 005688032-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_UNCERTAIN |
| 005688032-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS |

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

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

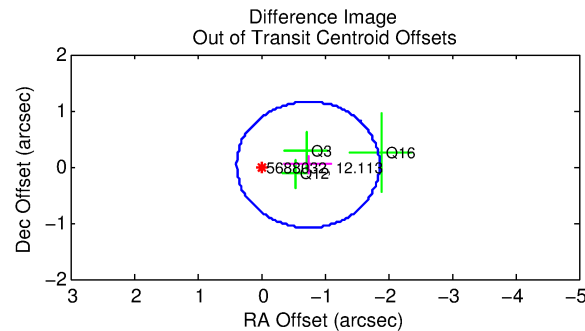
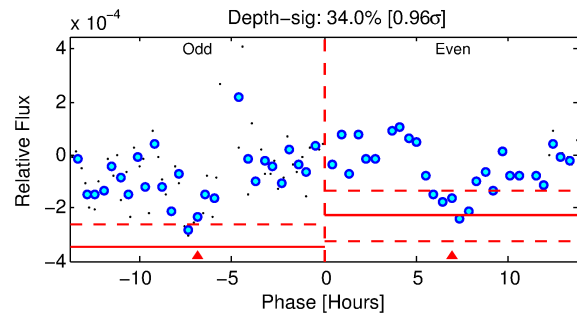
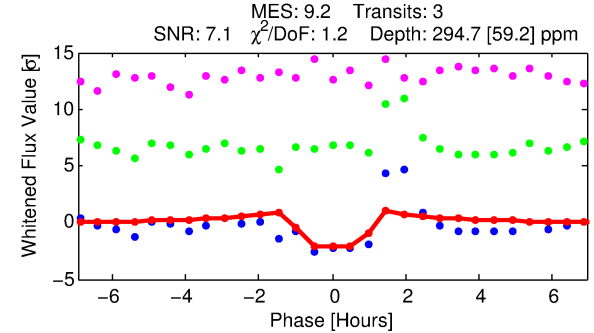
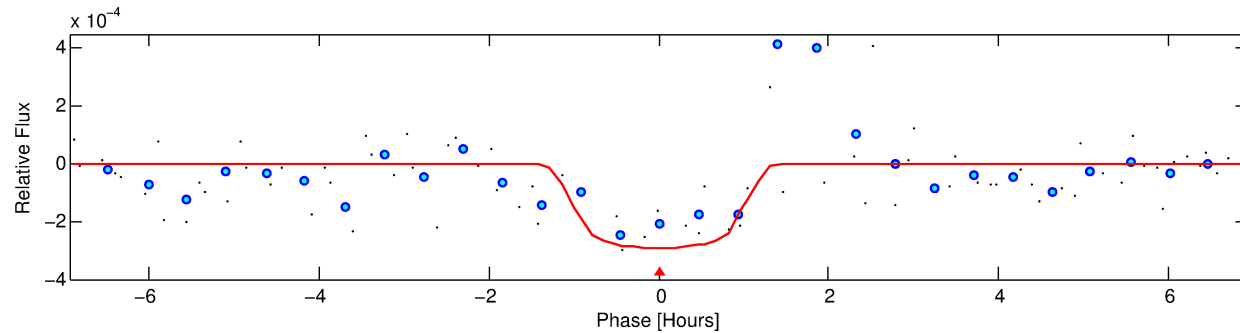
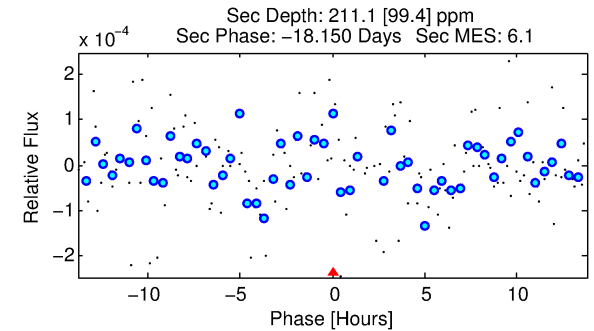
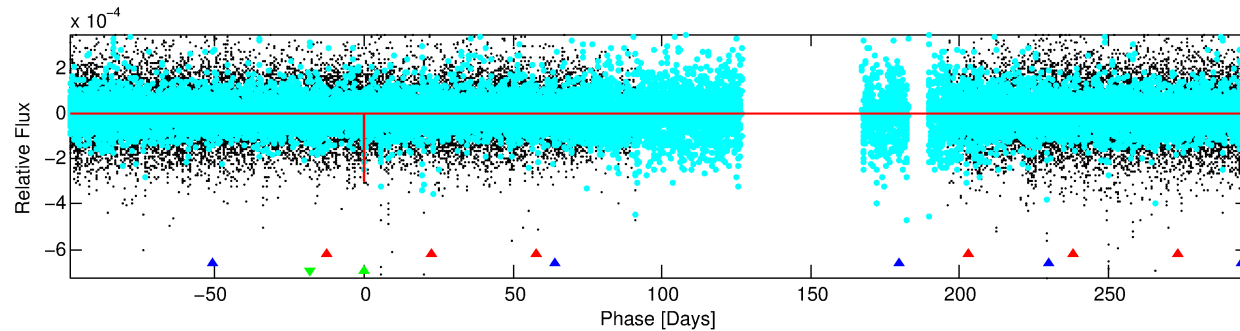
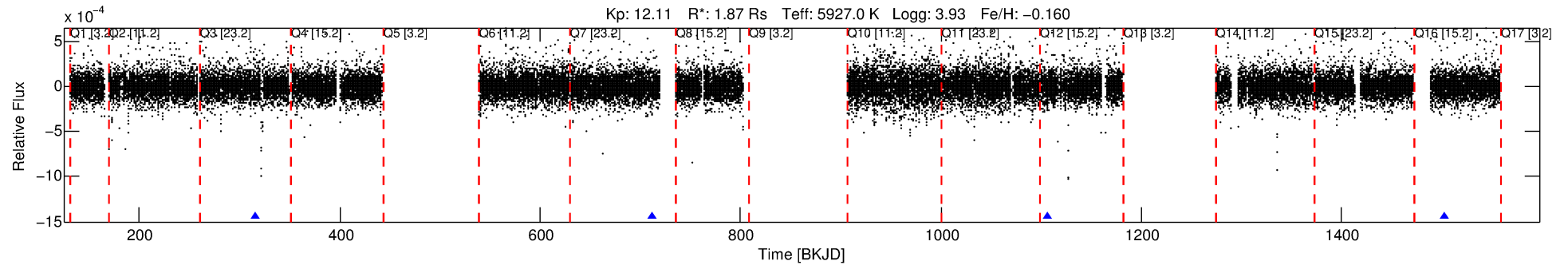
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005688032-03

No Significant Match Found

DV One-Page Summary

KIC: 5688032 Candidate: 3 of 3 Period: 395.690 d



DV Fit Results:

Period = 395.69021 [0.00305] d
Epoch = 315.5131 [0.0075] BKJD
Rp/R* = 0.0183 [0.0169]
a/R* = 673.83 [3067.20]
b = 0.88 [1.21]
Seff = 3.27 [1.73]
Teq = 343 [45] K
Rp = 3.74 [3.71] Re
a = 1.0892 [0.3593] AU
Ag = 9878.07 [19569.99] [0.50σ]
Teffp = 5287 [2532] K [1.95σ]

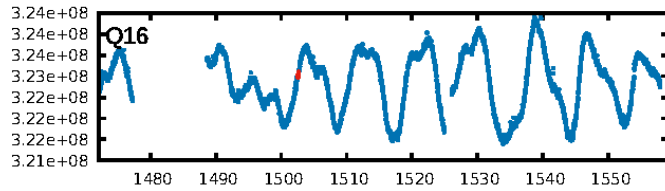
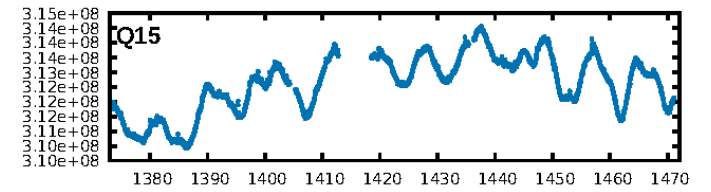
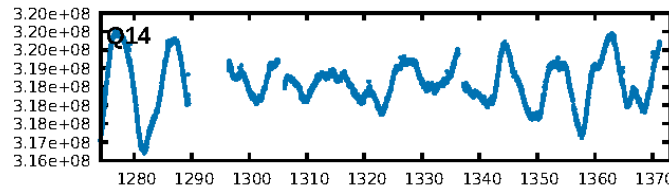
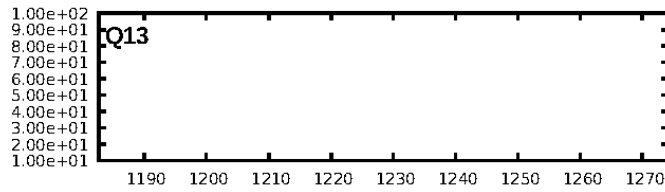
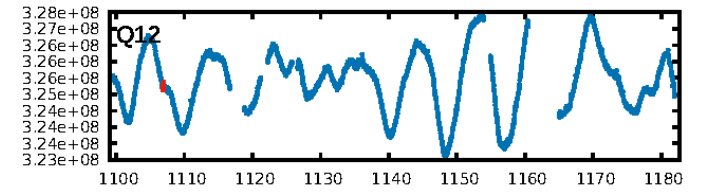
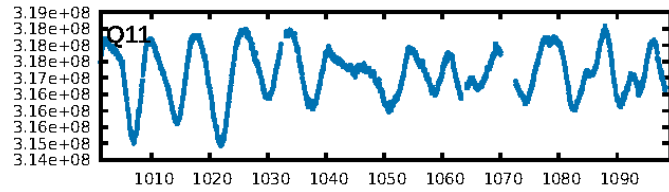
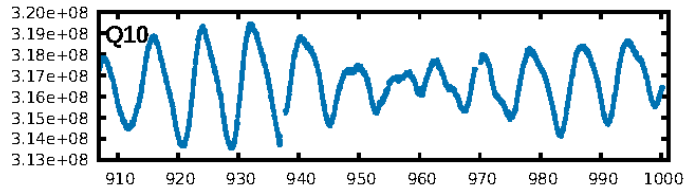
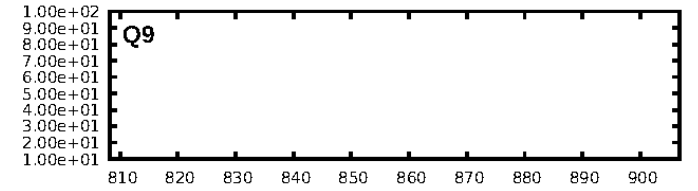
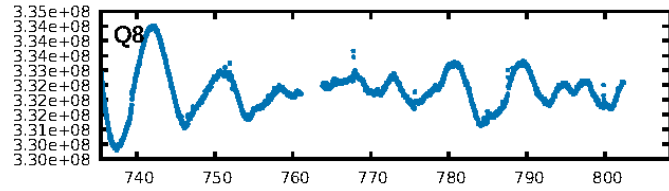
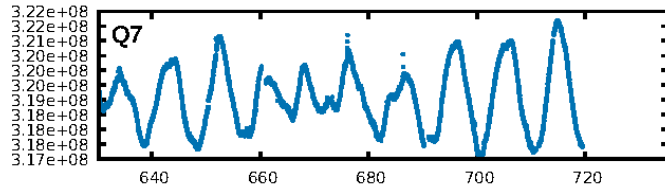
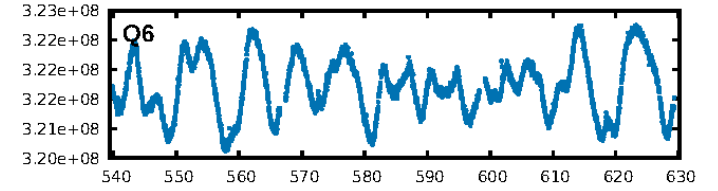
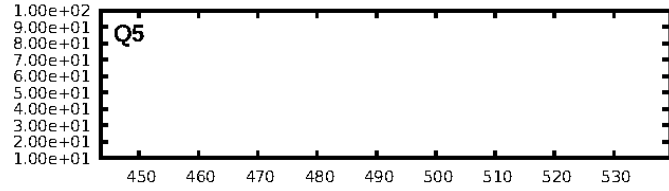
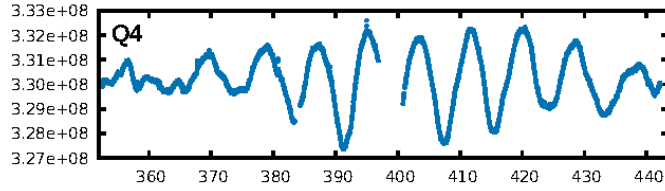
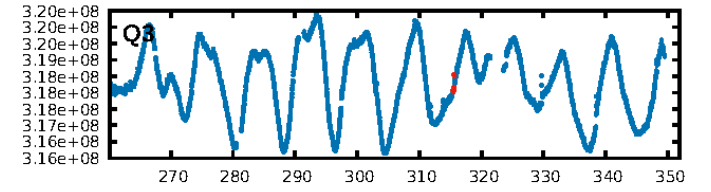
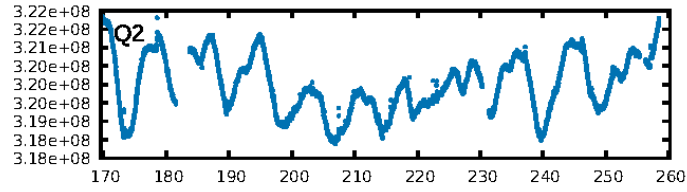
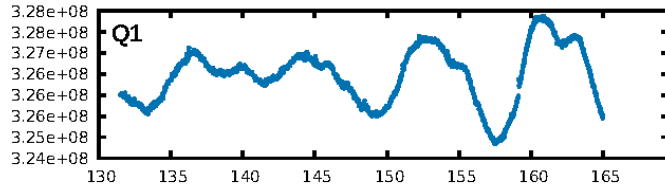
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [711.34σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.9%
ModelChiSquareGof-sig: 89.2%
Bootstrap-pfa: 3.88e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.048
Centroid-sig: N/A
Centroid-so: 0.607 arcsec [0.55σ]
OotOffset-rm: 0.740 arcsec [1.98σ]
KicOffset-rm: 0.505 arcsec [1.52σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

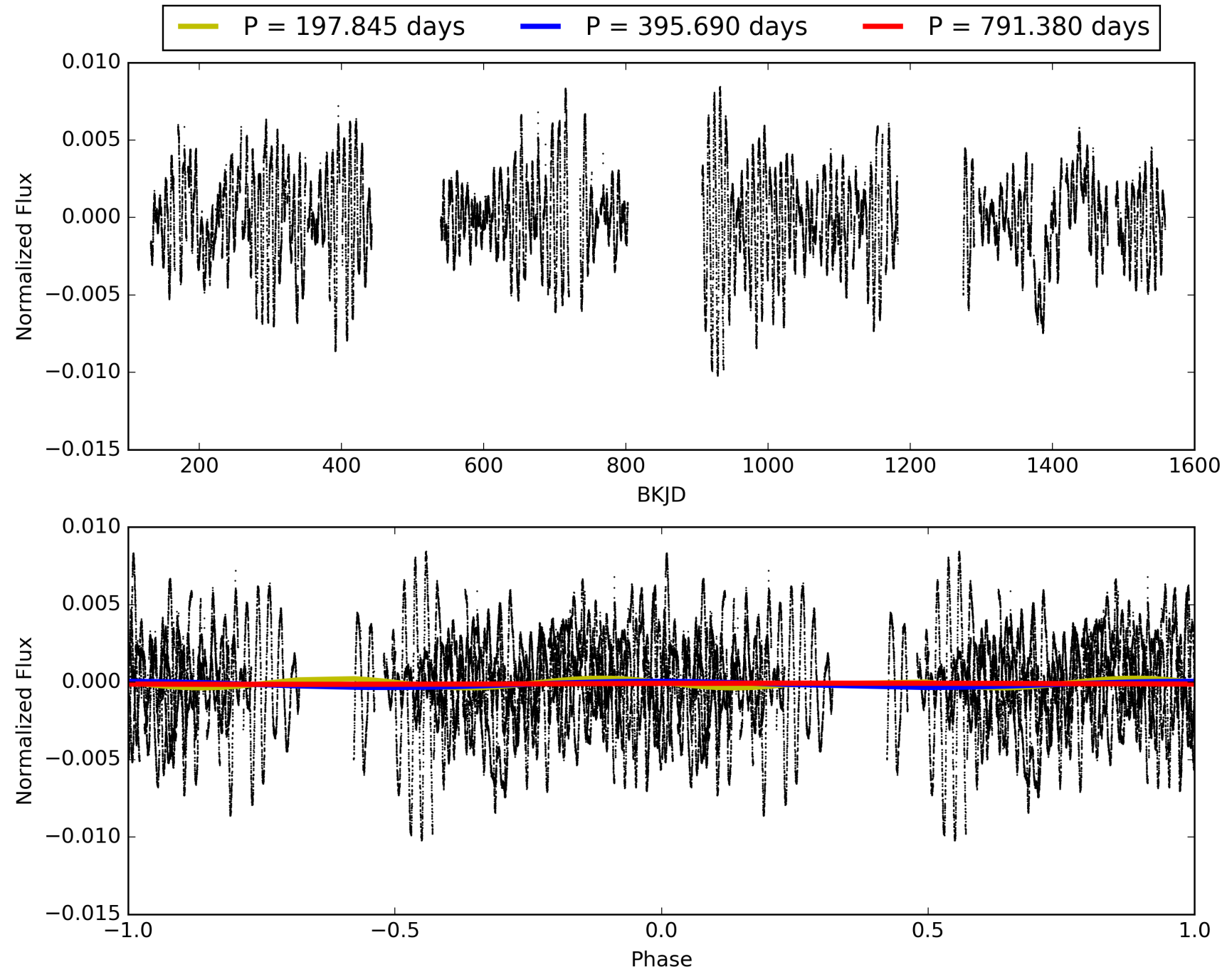
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:21:20 Z

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

TCE 005688032-03, PDC Light Curves

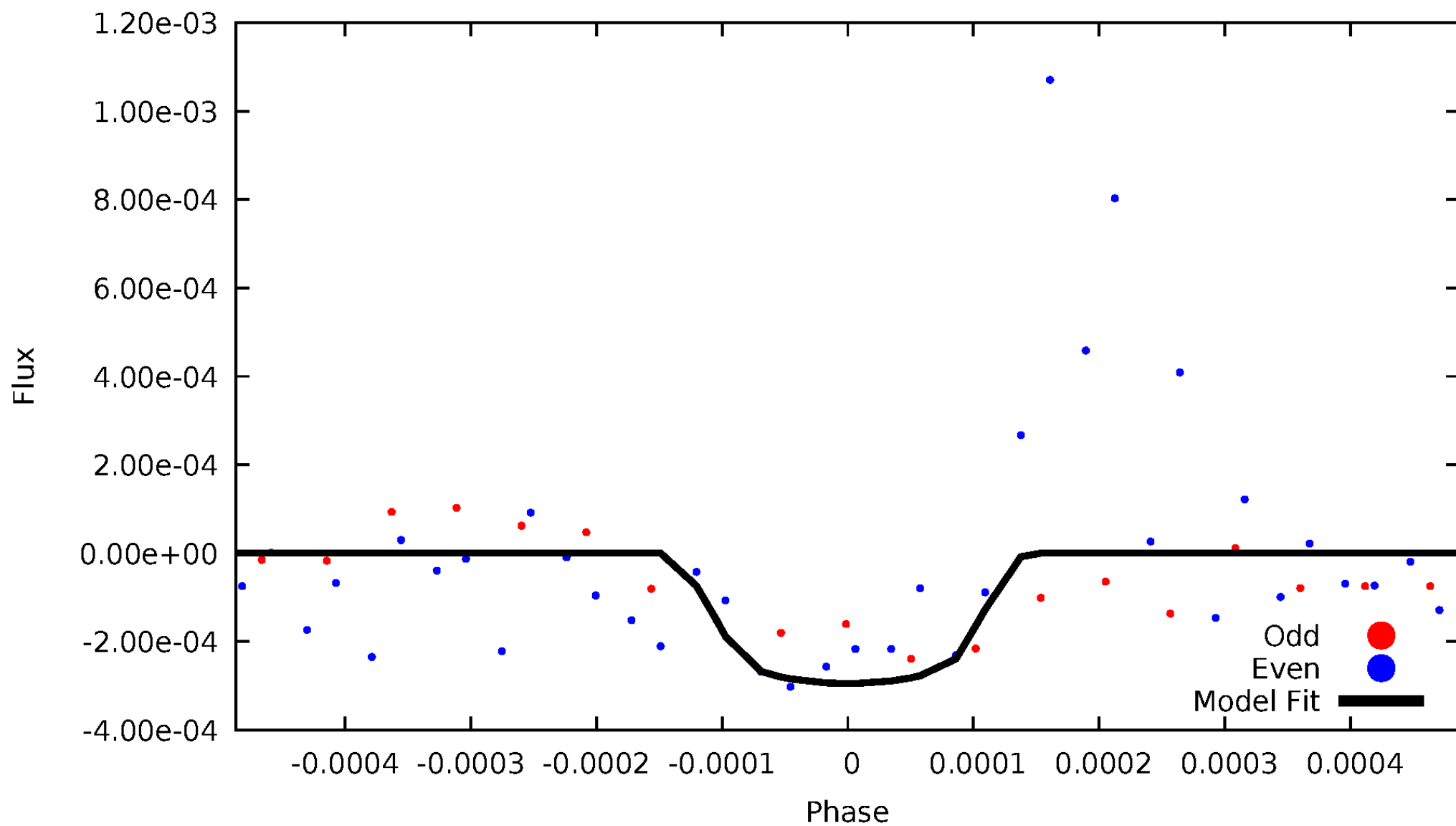


TCE 005688032-03



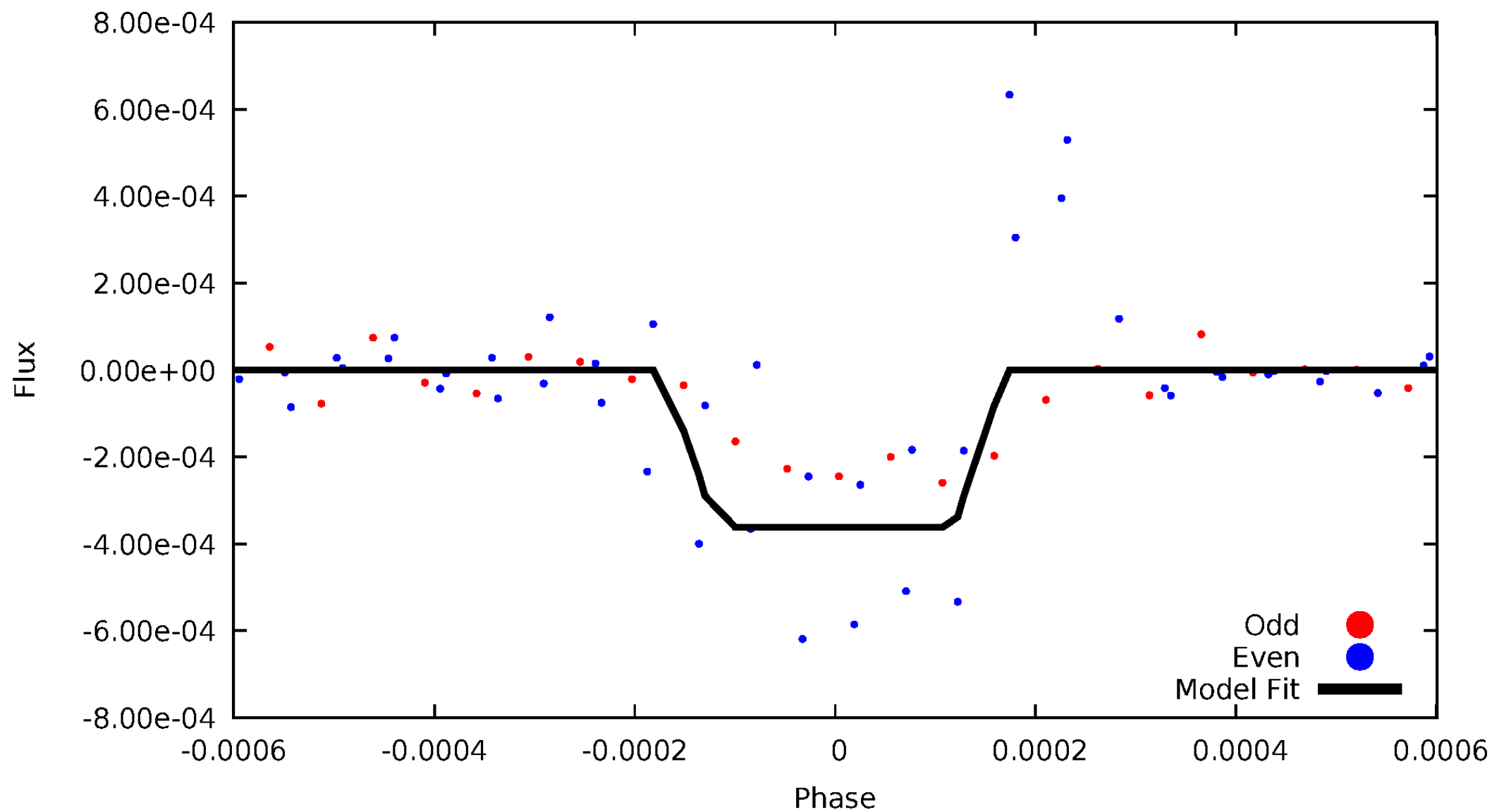
DV Odd/Even

TCE 005688032-03

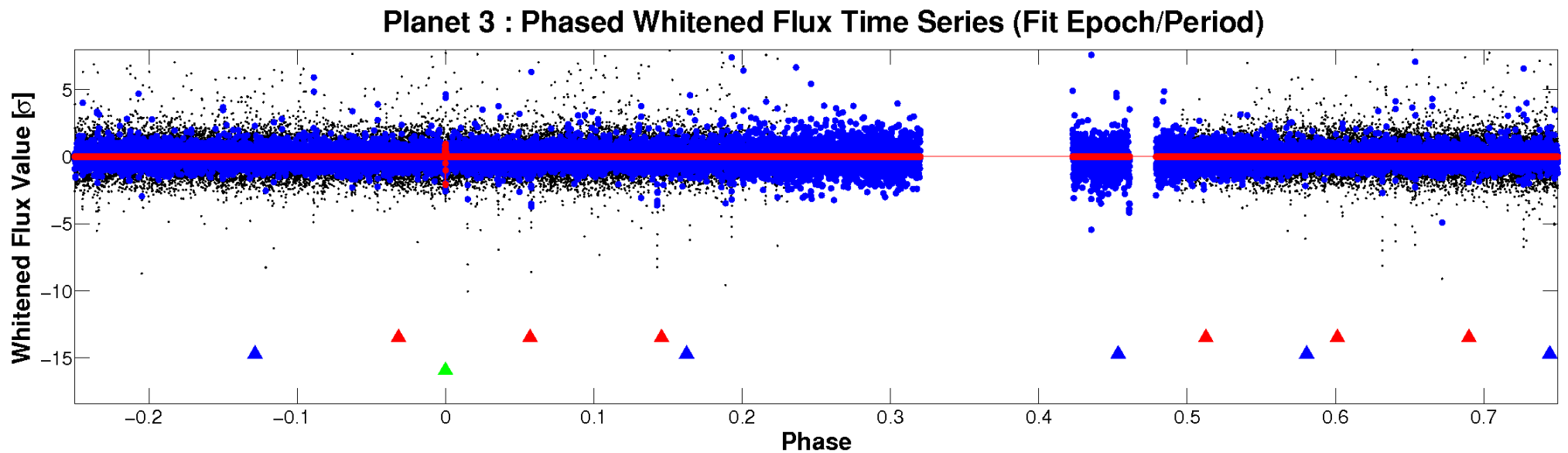
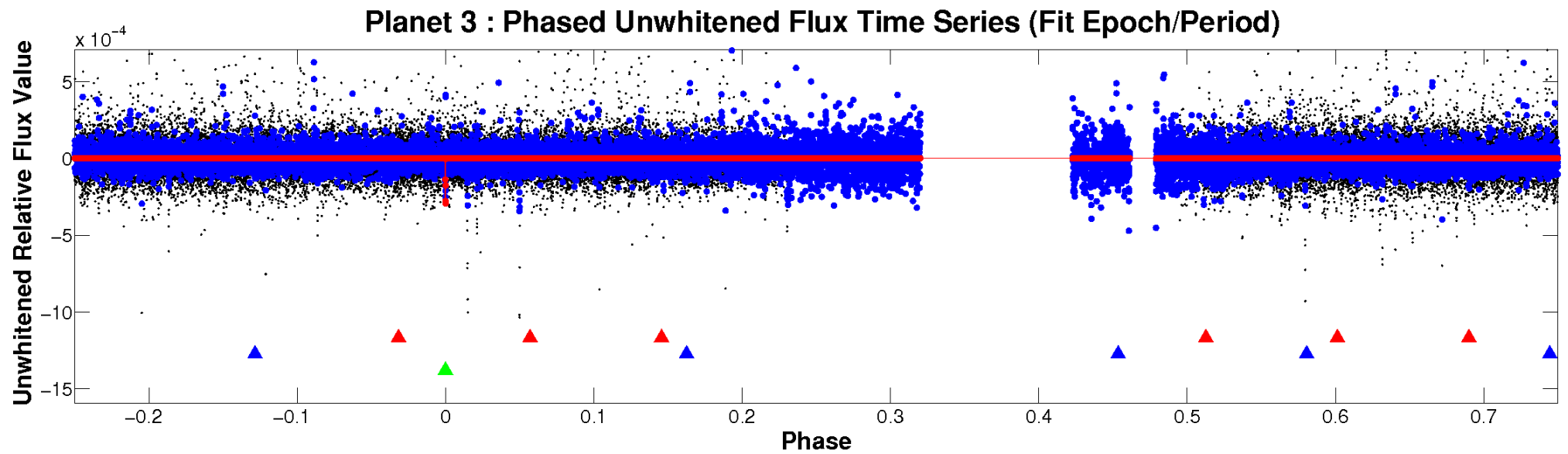


ALT Odd/Even

TCE 005688032-03

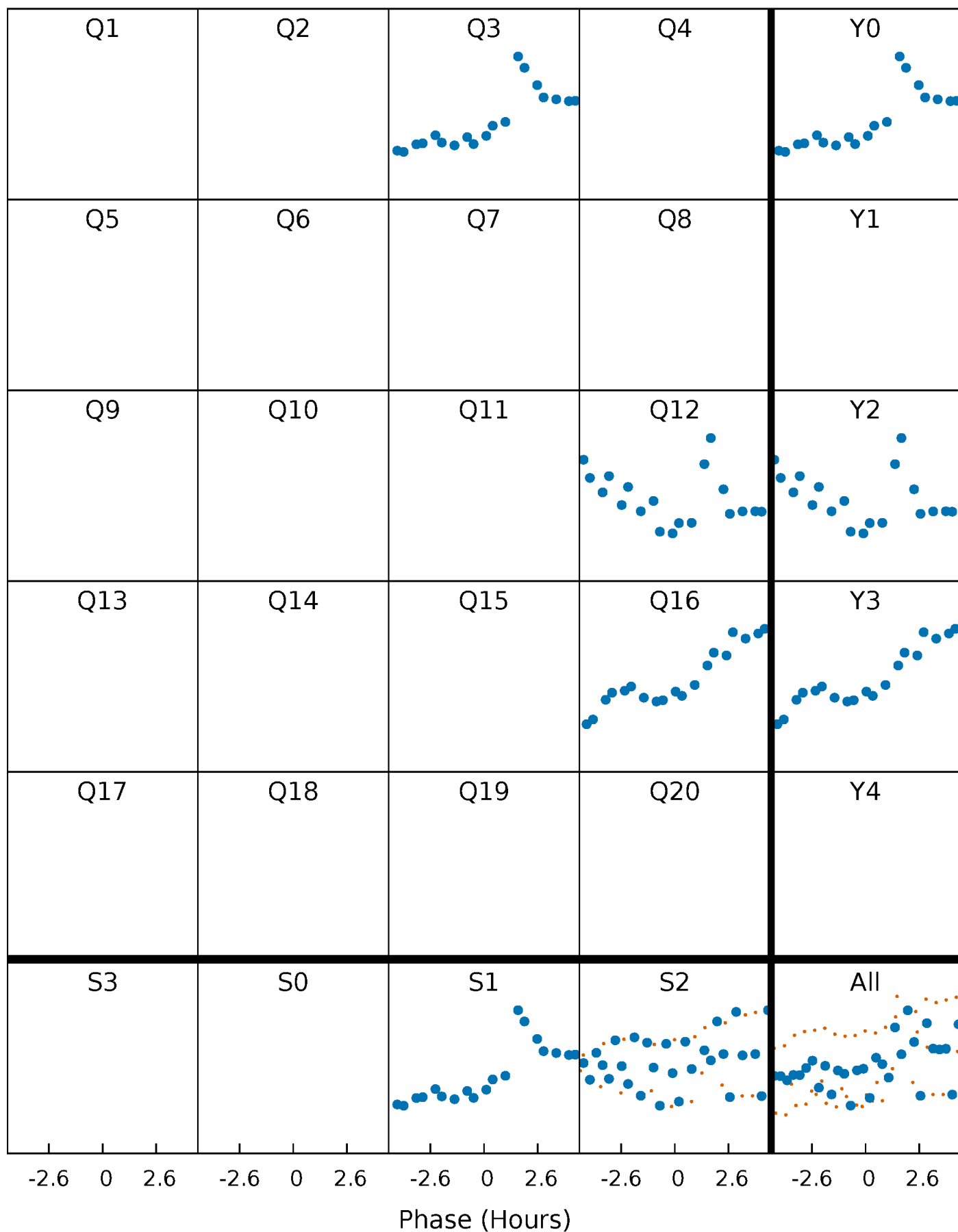


Non-Whitened Vs. Whitened Light Curve



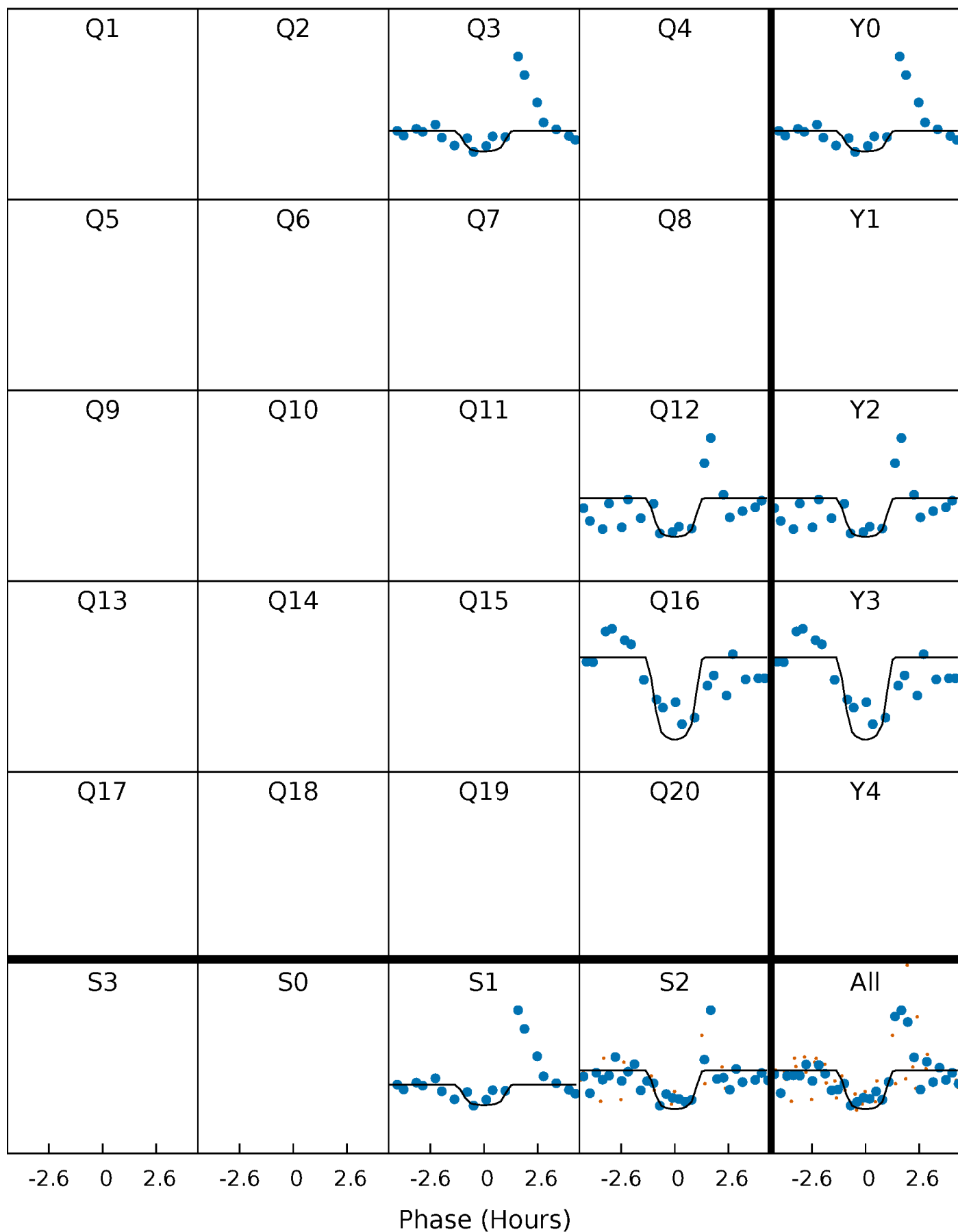
PDC Quarter-Phased Transit Curves

TCE 005688032-03 P=395.690210 Days $T_0=315.513059$ (BKJD)



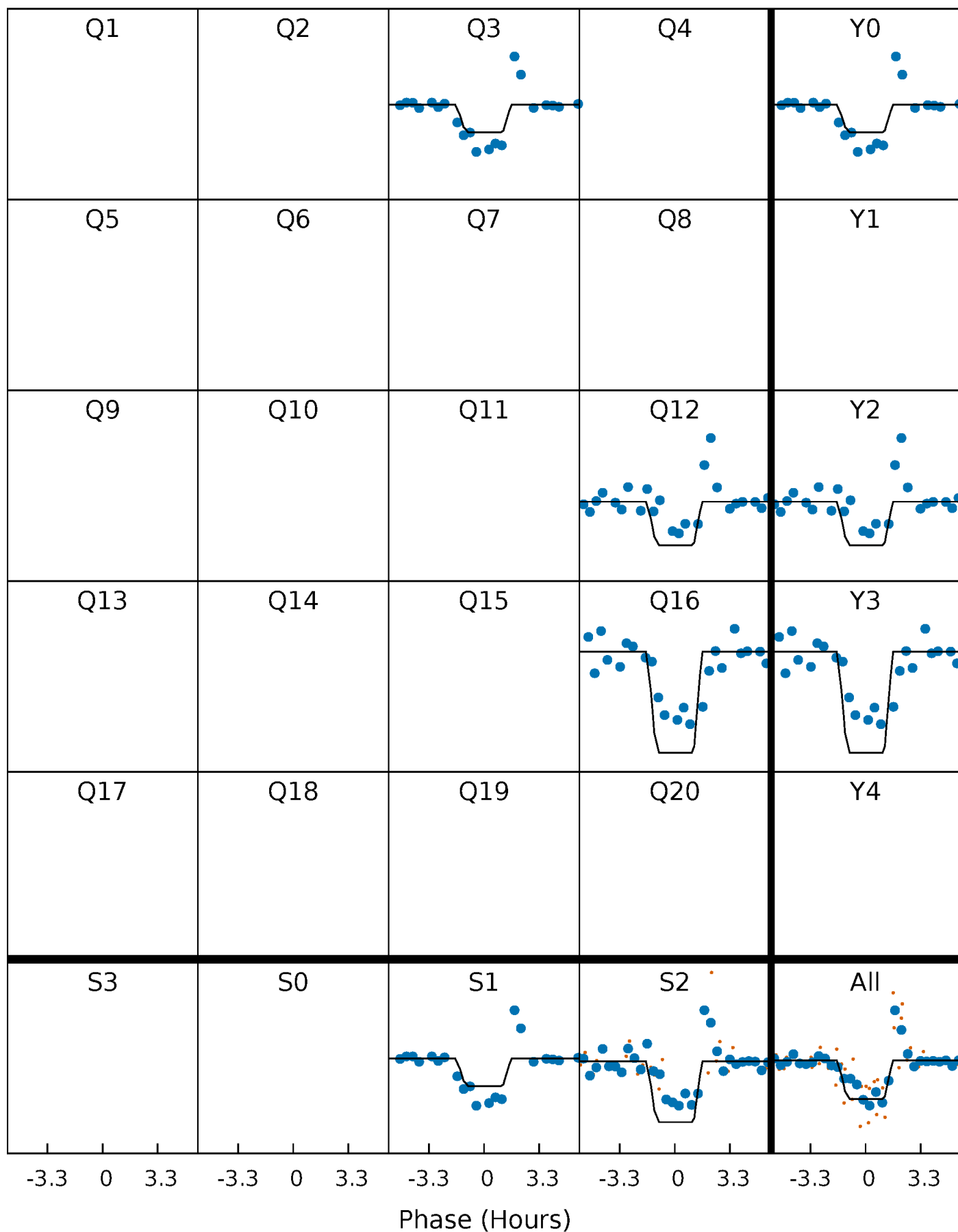
DV Quarter-Phased Transit Curves

TCE 005688032-03 $P=395.690210$ Days $T_0=315.513059$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

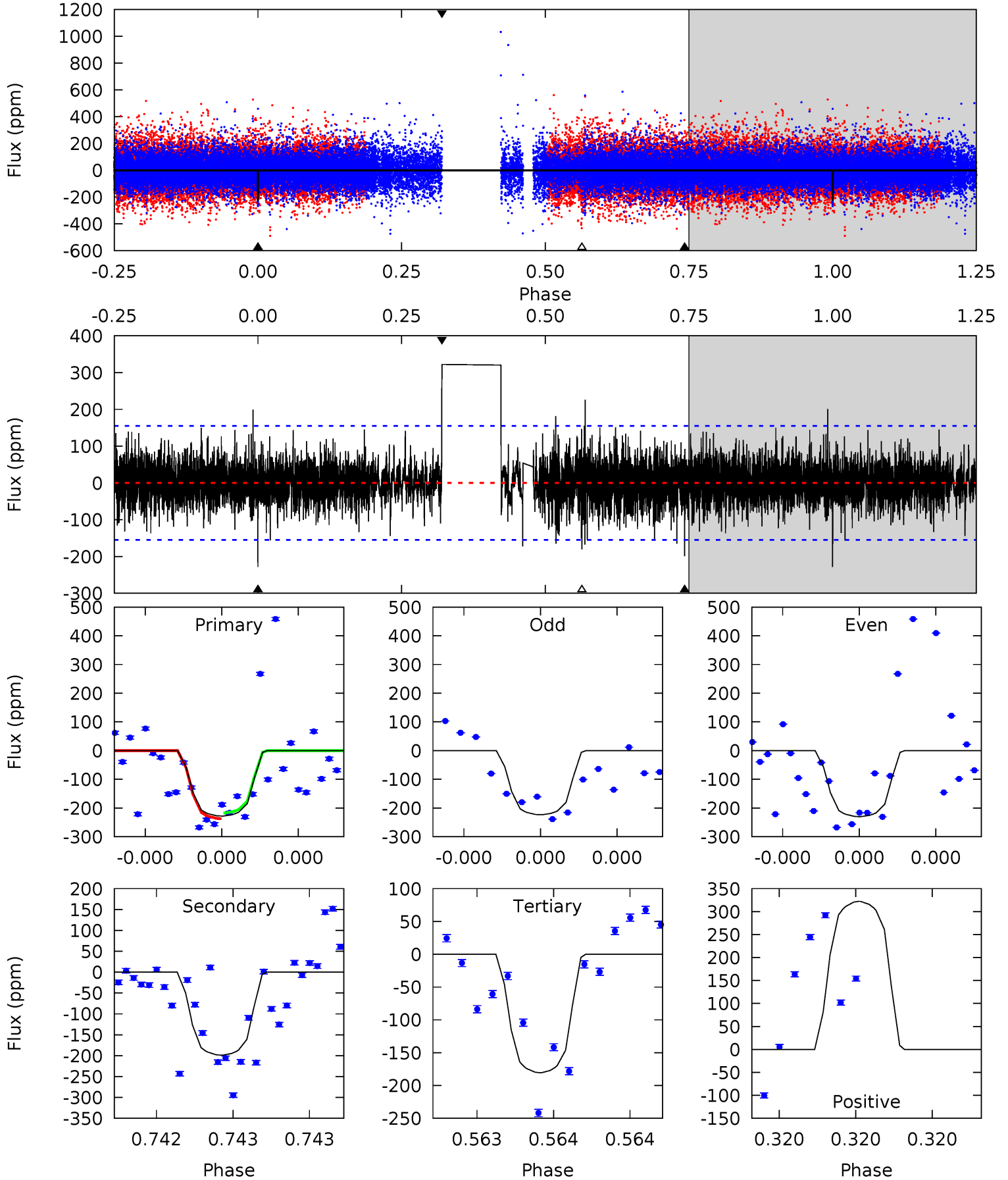
TCE 005688032-03 P=395.684444 Days $T_0=315.507909$ (BKJD)



DV Model-Shift Uniqueness Test

005688032-03, P = 395.690210 Days, E = 315.513059 Days

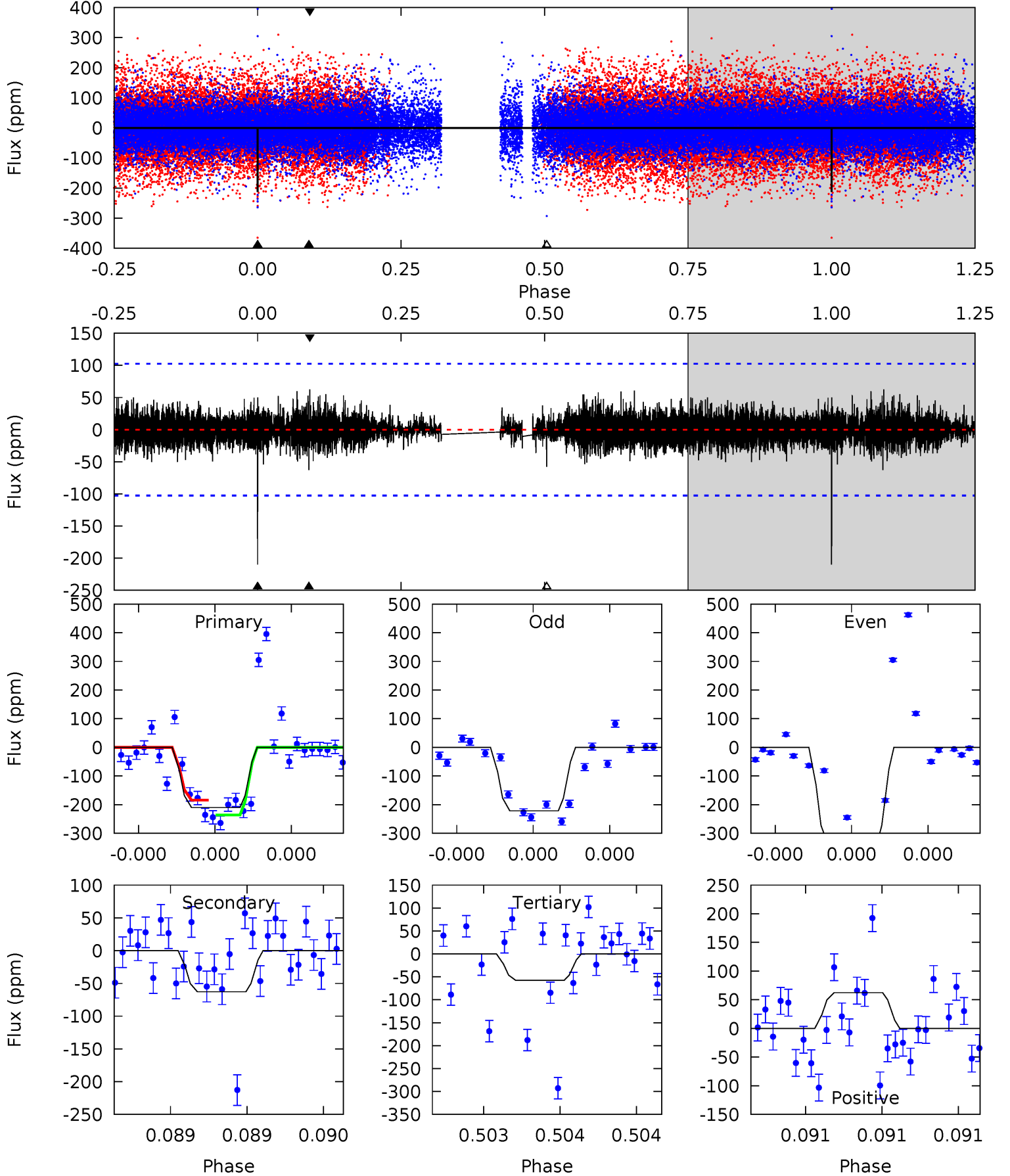
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.36 | 7.29 | 6.62 | 11.8 | 5.69 | 3.65 | 1.51 | 1.74 | -3.45 | 0.67 | -4.53 | 0.12 | 1.02 | 0.59 | 0.36 |



Alt Model-Shift Uniqueness Test

005688032-03, P = 395.684444 Days, E = 315.507909 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 11.6 | 3.46 | 3.18 | 3.44 | 5.65 | 3.59 | 0.74 | 8.40 | 8.14 | 0.28 | 0.02 | 3.41 | 1.39 | 0.23 | 1.43 |



Stellar Parameters For KIC 005688032

| | $T_{\text{eff}} (K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M (M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5927^{+164}_{-145} | $3.934^{+0.300}_{-0.100}$ | $-0.160^{+0.350}_{-0.250}$ | $1.874^{+0.332}_{-0.664}$ | $1.100^{+0.187}_{-0.187}$ | $0.235^{+0.471}_{-0.072}$ |
| | +3%/-2% | +8%/-3% | +219%/-156% | +18%/-35% | +17%/-17% | +200%/-30% |
| Source | PHO1 | FLK73 | 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 005688032-03 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|-----------------------|-------------------------|
| DV | -199 ± 27 | $4.19^{+3.19}_{-2.71}$ | 472^{+27}_{-44} | 4881^{+3315}_{-931} | 7614^{+46829}_{-5274} |
| Alt. | -63 ± 18 | $4.08^{+3.40}_{-2.45}$ | 474^{+27}_{-42} | 3960^{+1603}_{-701} | 2501^{+12250}_{-1807} |

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

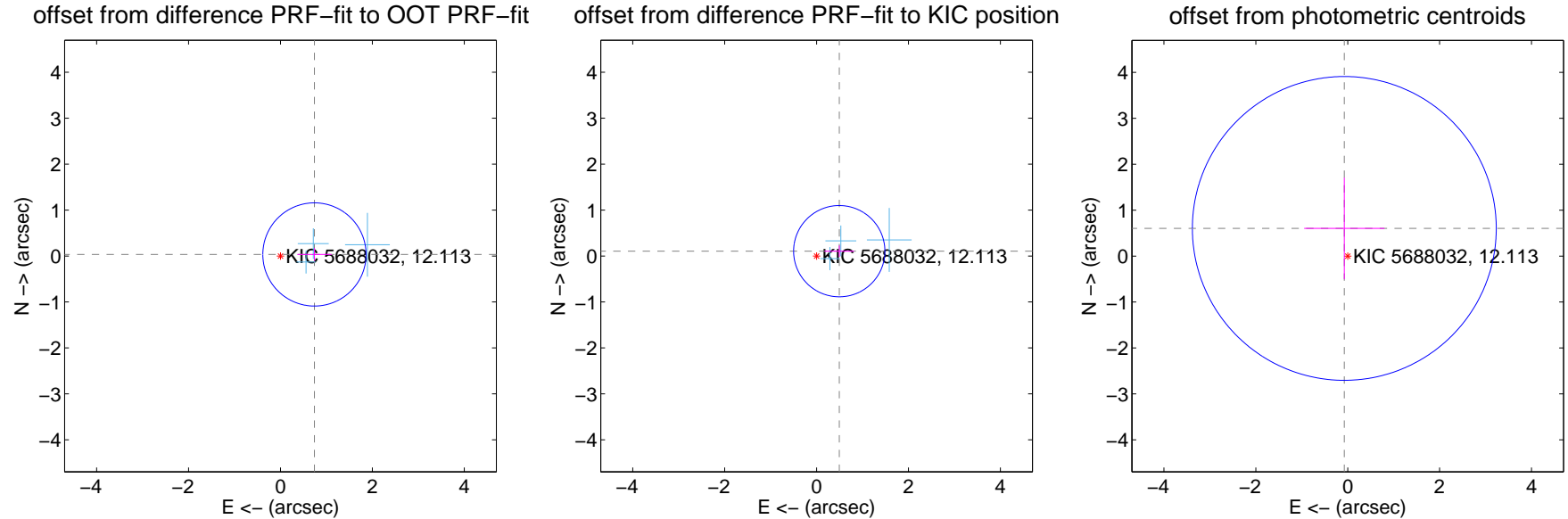
DV Centroid Data

Supplemental centroid analysis for 005688032-03. Kepler magnitude: 12.11. Transit SNR 7.13

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

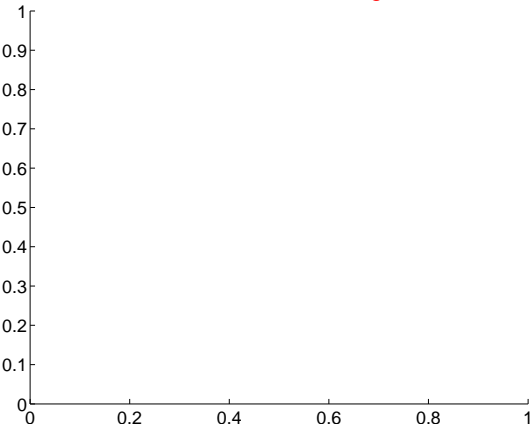
| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.740 ± 0.374 | 1.98 | -0.740 ± 0.372 | 0.034 ± 0.138 |
| PRF-fit source offset from KIC position | 0.505 ± 0.331 | 1.52 | -0.493 ± 0.322 | 0.106 ± 0.124 |
| photometric centroid source offset | 0.61 ± 1.10 | 0.55 | 0.07 ± 0.87 | 0.60 ± 1.11 |



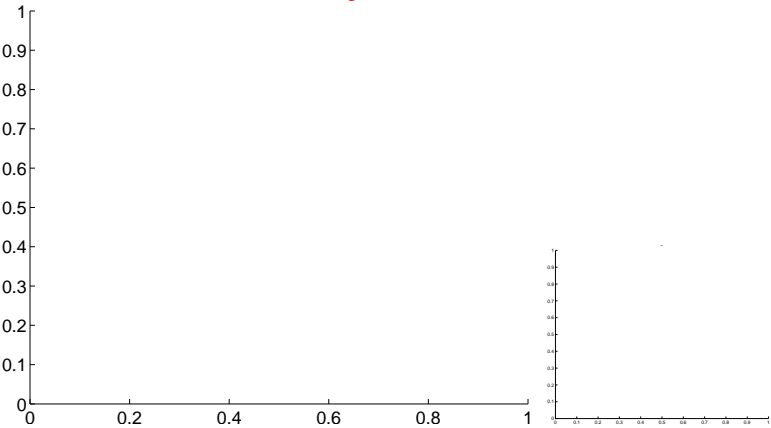
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

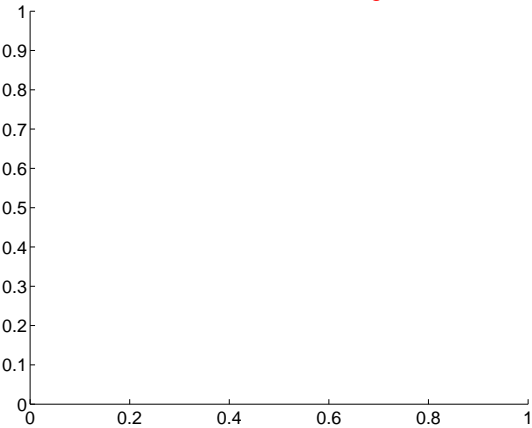
Q1 no difference image



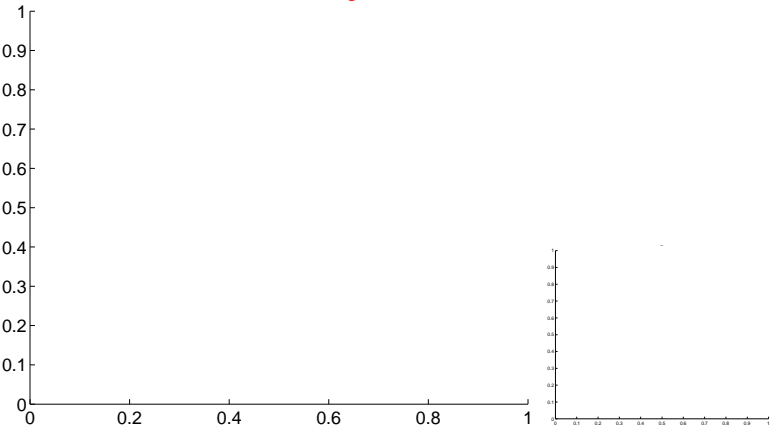
Q1 no OOT image



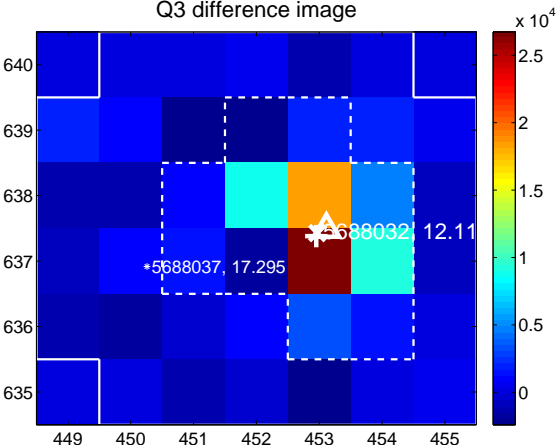
Q2 no difference image



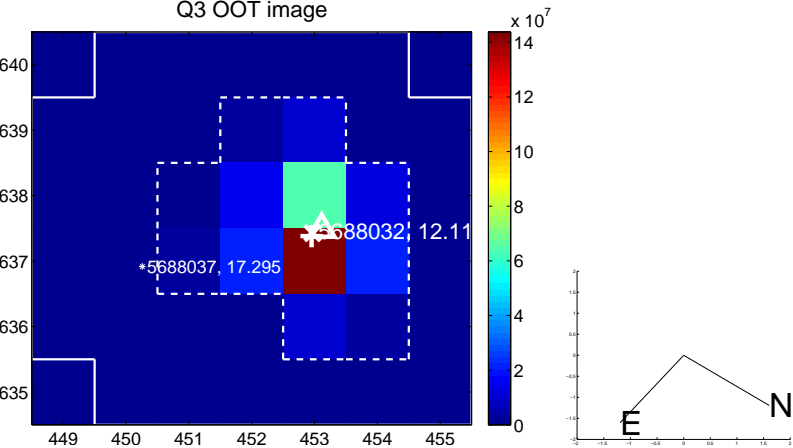
Q2 no OOT image



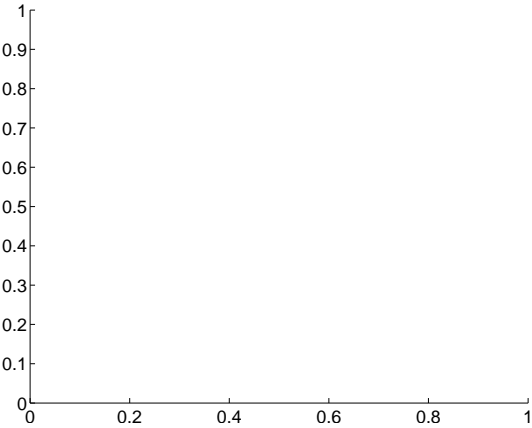
Q3 difference image



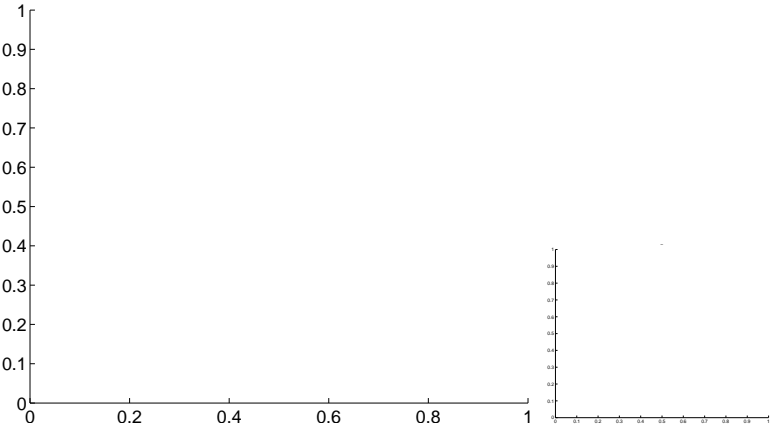
Q3 OOT image



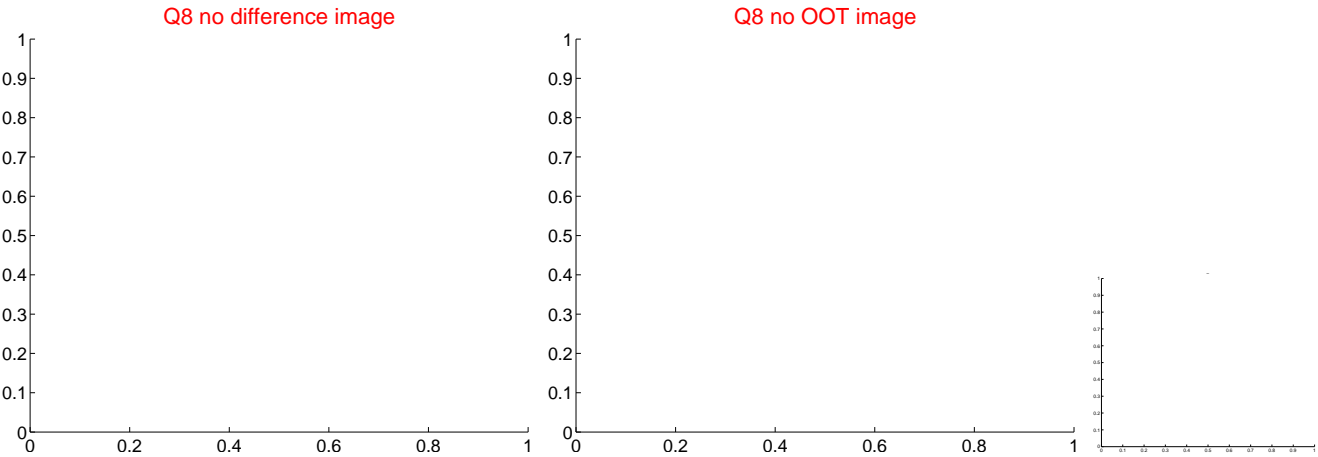
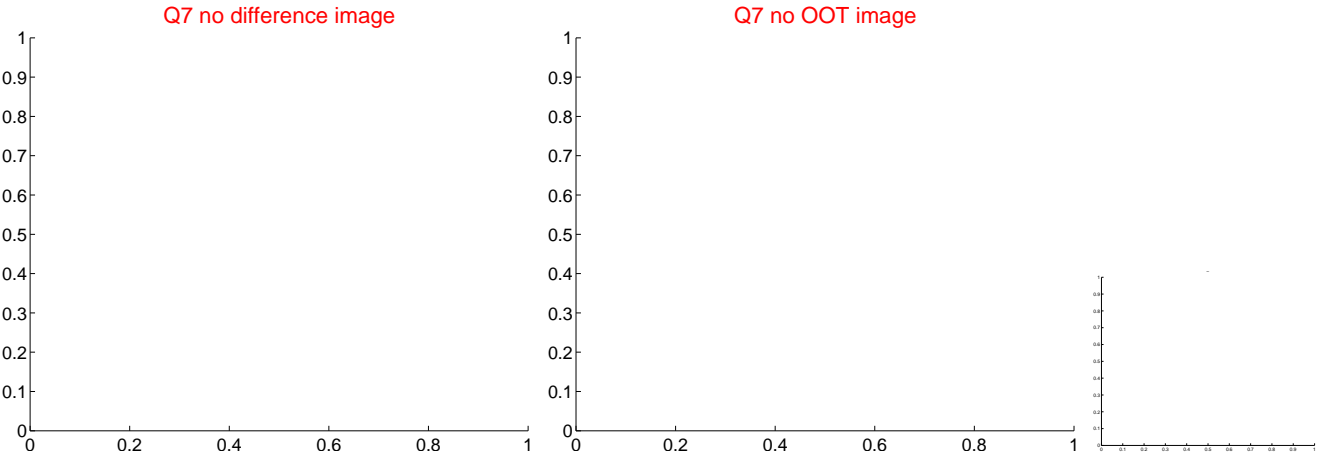
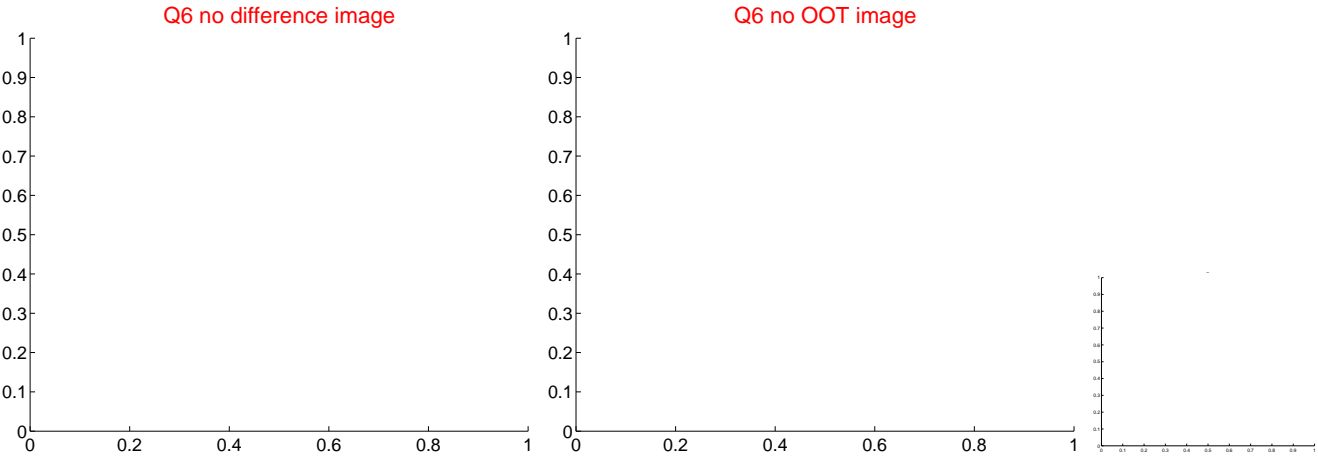
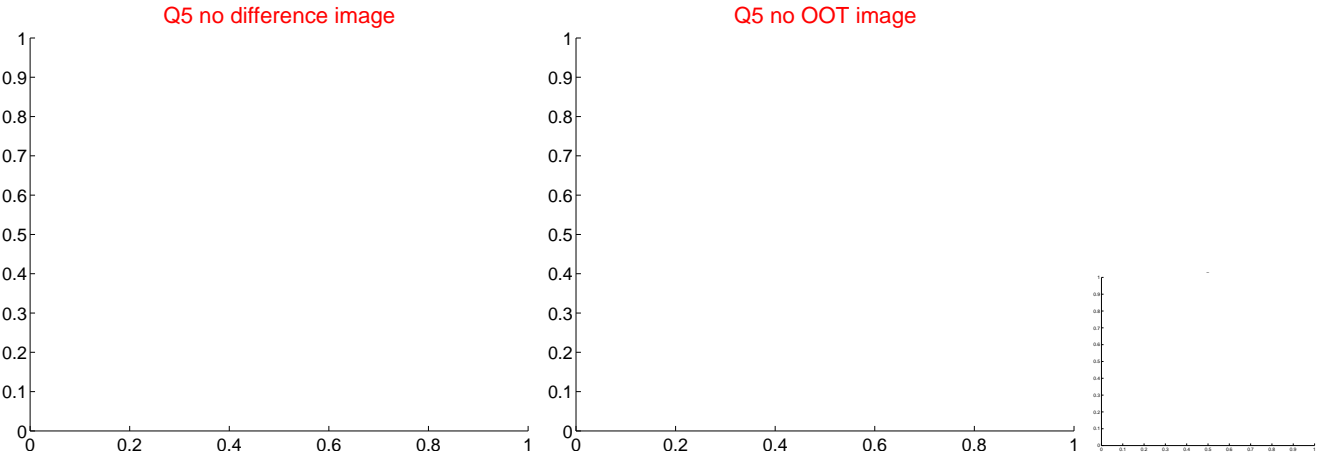
Q4 no difference image



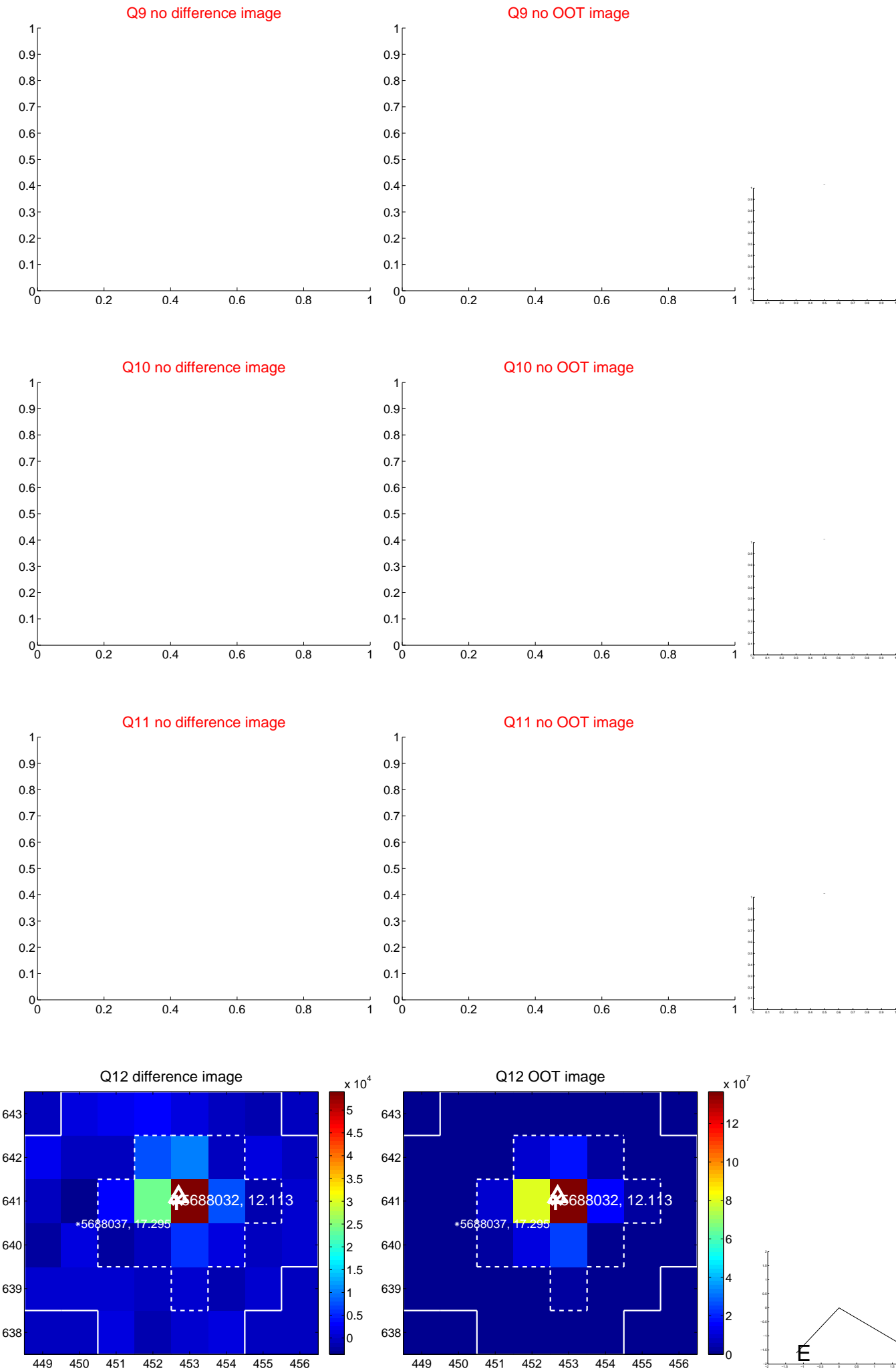
Q4 no OOT image



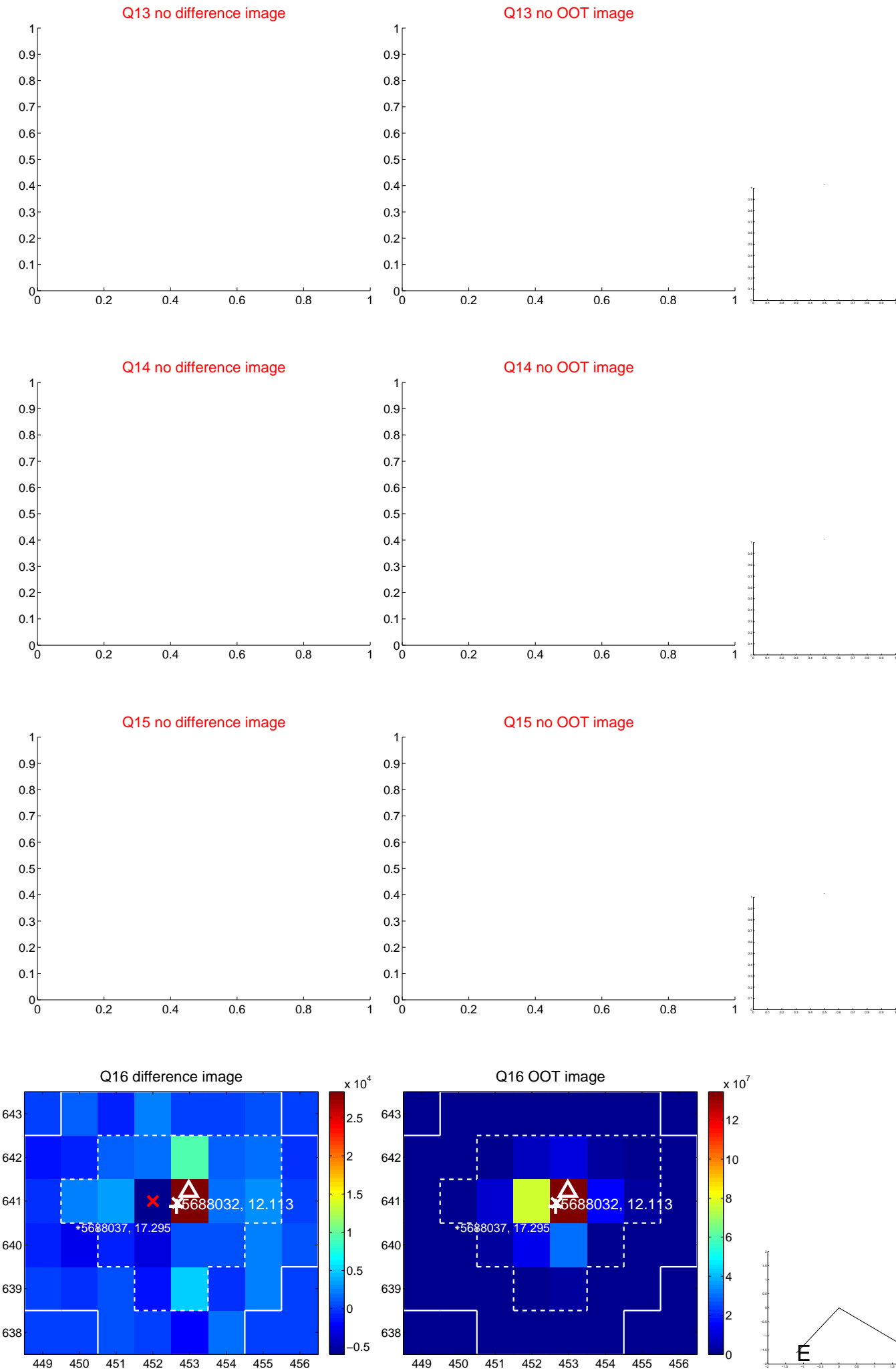
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



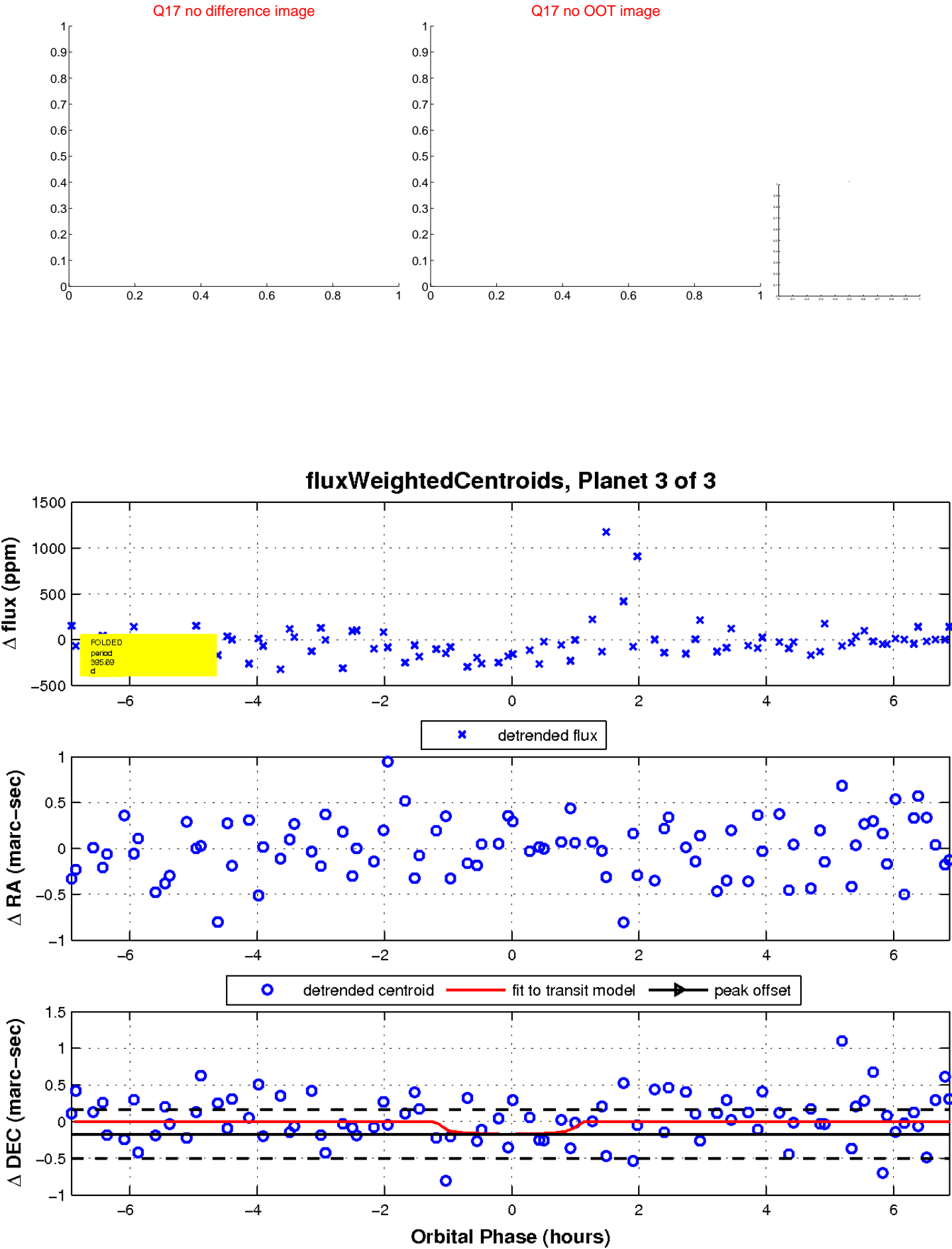
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:0, 40:55:00, 00:0, 10:0, and 20:0. A bright star is visible near the center of the grid, and several other stars are scattered throughout the field.

This panel shows a deep-field astronomical image of a star field. A grid of blue lines is overlaid on the image. The horizontal axis is labeled with Right Ascension (RA) values: 36.0, 35.0, 34.0, 19:01:33.0, 32.0, and 31.0. The vertical axis is labeled with Declination (Dec) values: 54:30:0, 40:0, 50:0, 40:55:00, 00:0, 10:0, and 20:0. A bright star is visible near the center of the grid, and several other stars are scattered throughout the field.