

KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
| 007974877-02 | OBS | No | 47.525385 | 162.529614 | 173.2 | 1.728 | 8.7 | 7.7 | 2.21 | 6675 | 3.41 | 108.58 |
| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

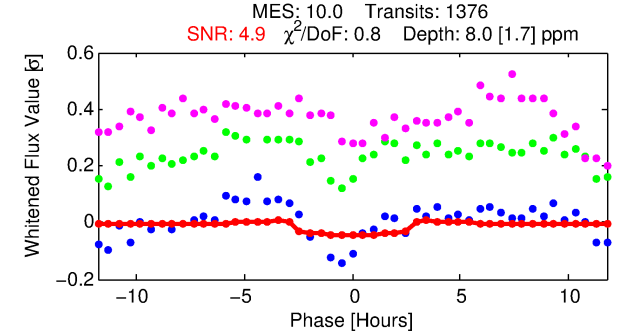
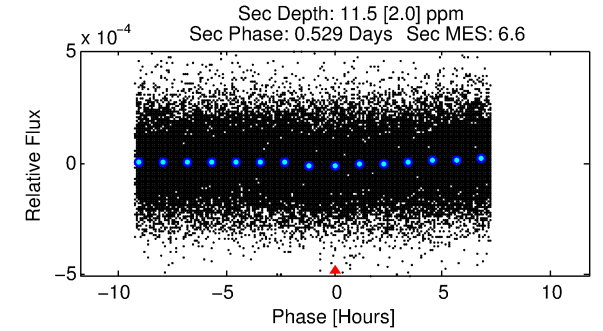
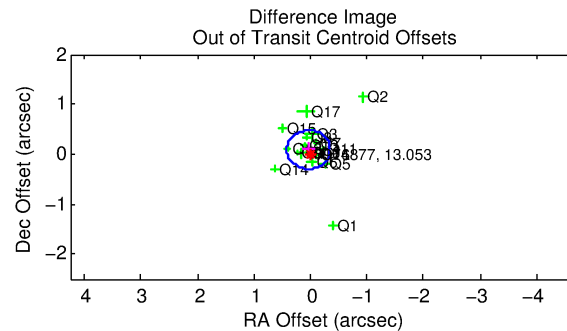
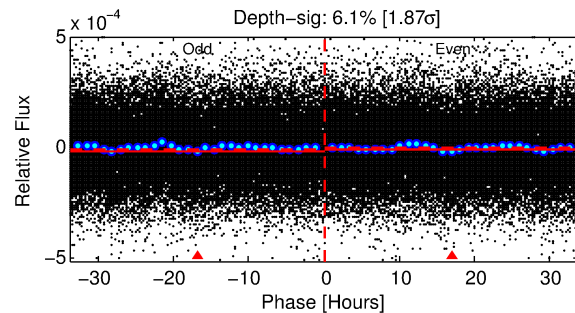
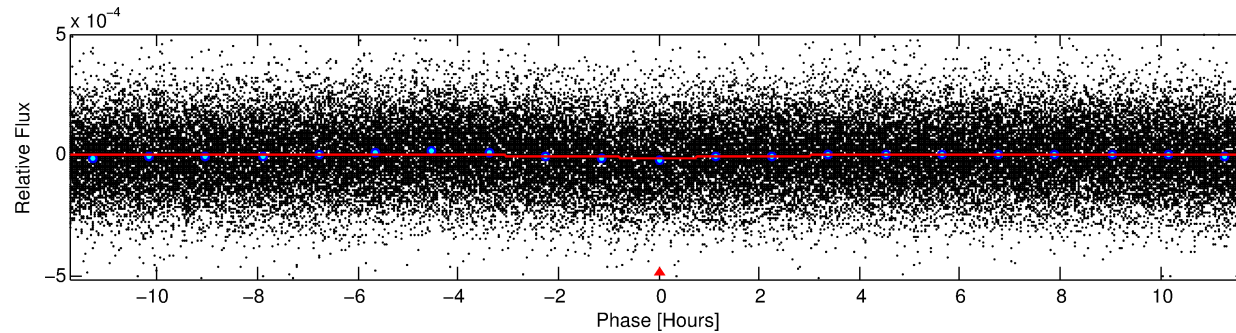
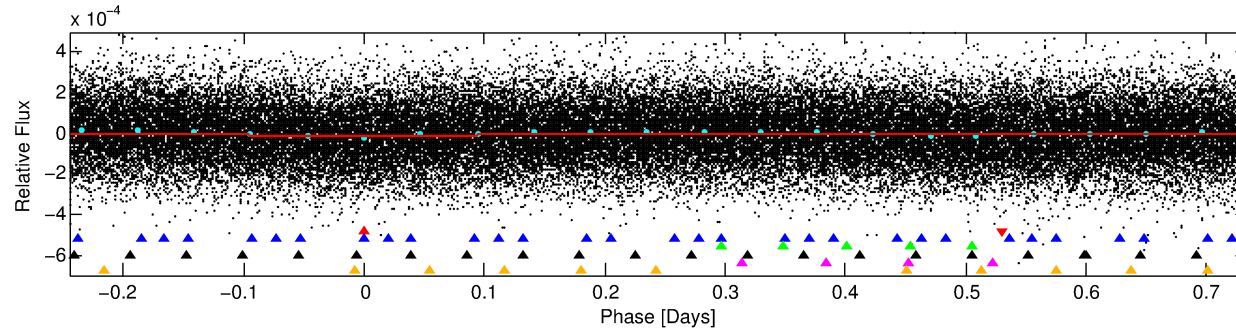
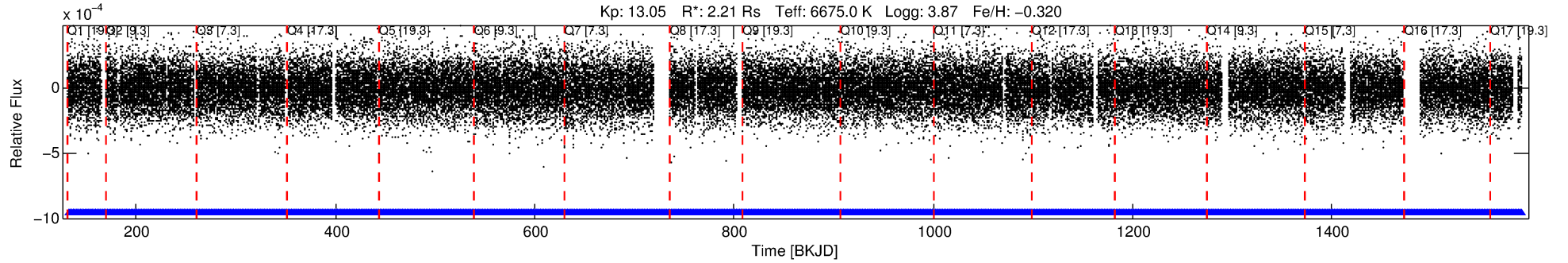
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-01

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 1 of 6 Period: 0.979 d



DV Fit Results:

Period = 0.97895 [0.00003] d
Epoch = 132.4602 [0.0092] BKJD
Rp/R* = 0.0027 [0.0013]
a/R* = 1.35 [1.59]
b = 0.53 [3.55]
Seff = 19229.05 [9948.48]
Teff = 3003 [388] K
Rp = 0.65 [0.38] Re
a = 0.0212 [0.0068] AU
Ag = 6.83 [7.41] [0.79 σ]
Teffp = 7504 [1818] K [2.42 σ]

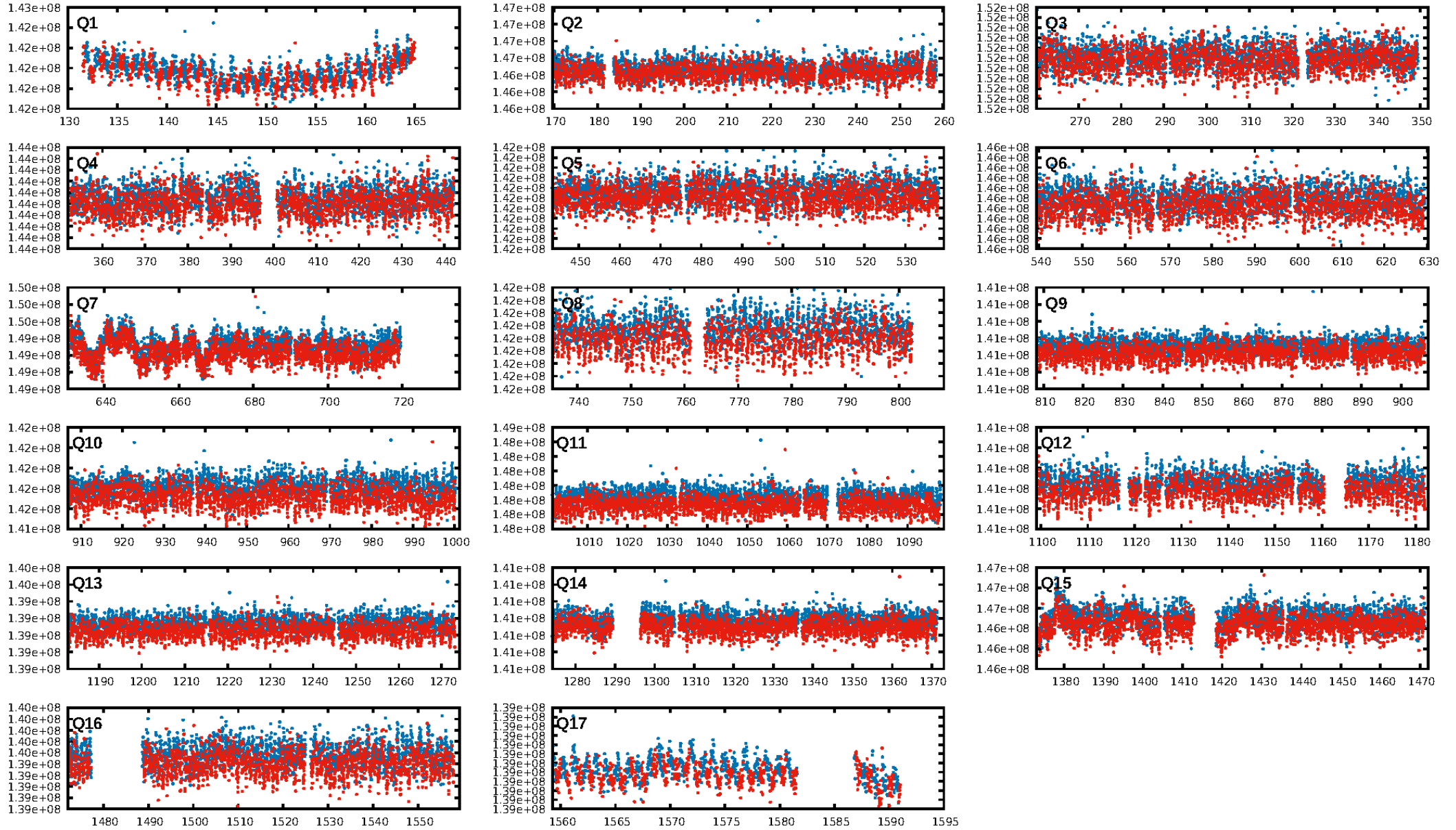
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [189.27 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.79e-14
RollingBand-fgt: 1.00 [1313/1313]
GhostDiagnostic-chr: 0.6649
Centroid-sig: 0.1%
Centroid-so: 3.212 arcsec [2.18 σ]
OotOffset-rm: 0.098 arcsec [0.76 σ]
KicOffset-rm: 0.111 arcsec [0.80 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

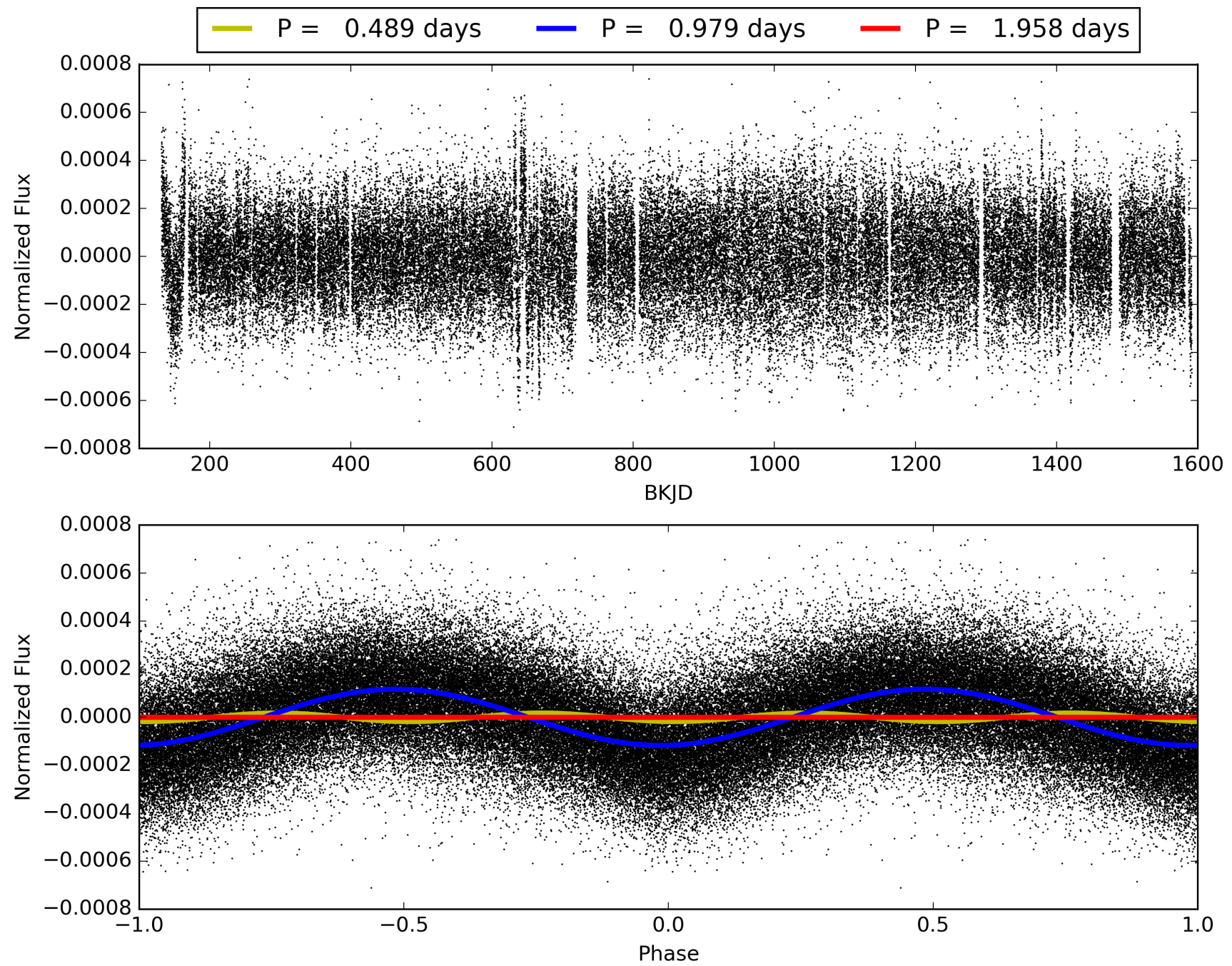
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:00 Z

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

TCE 007974877-01, PDC Light Curves

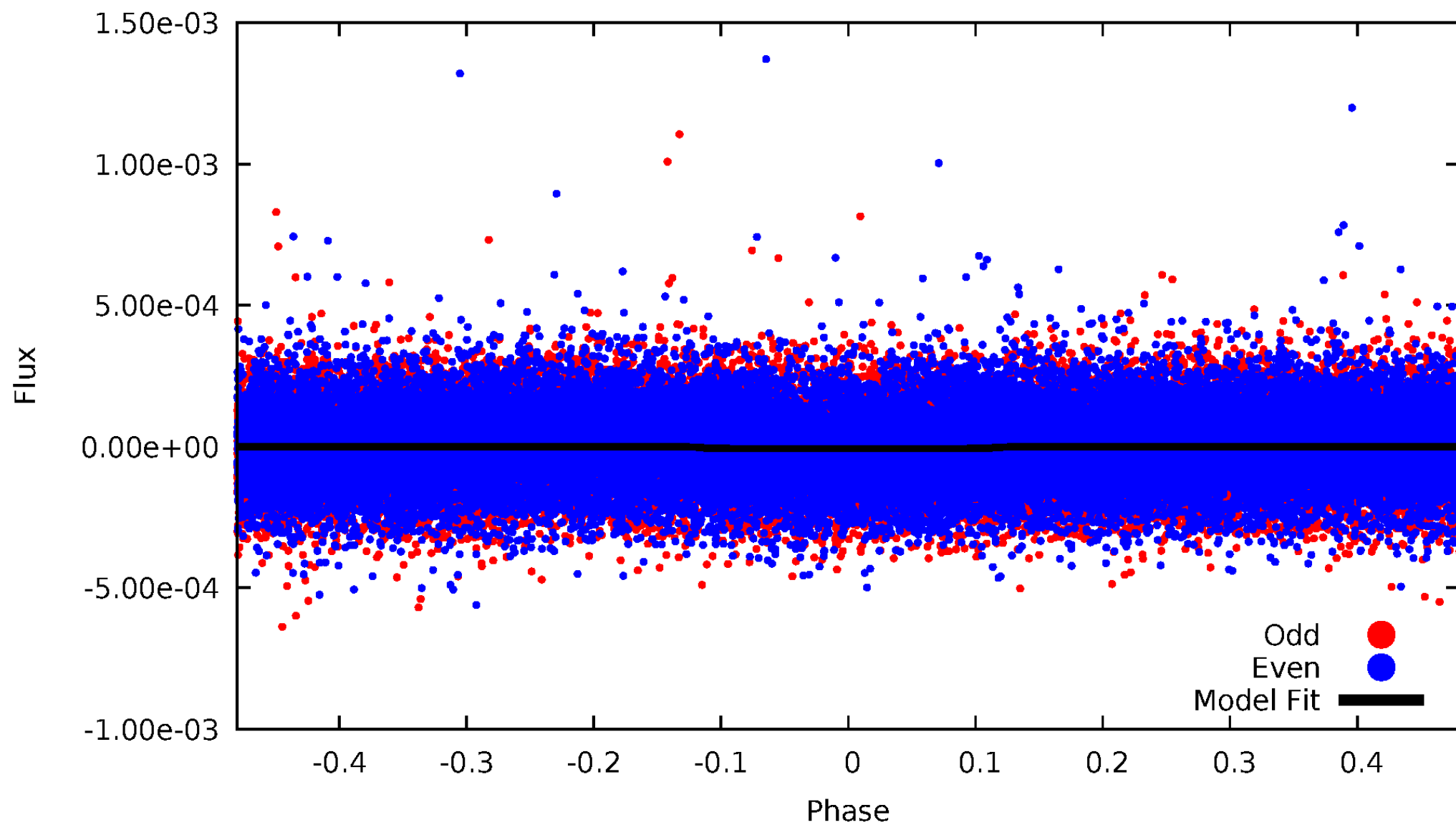


TCE 007974877-01



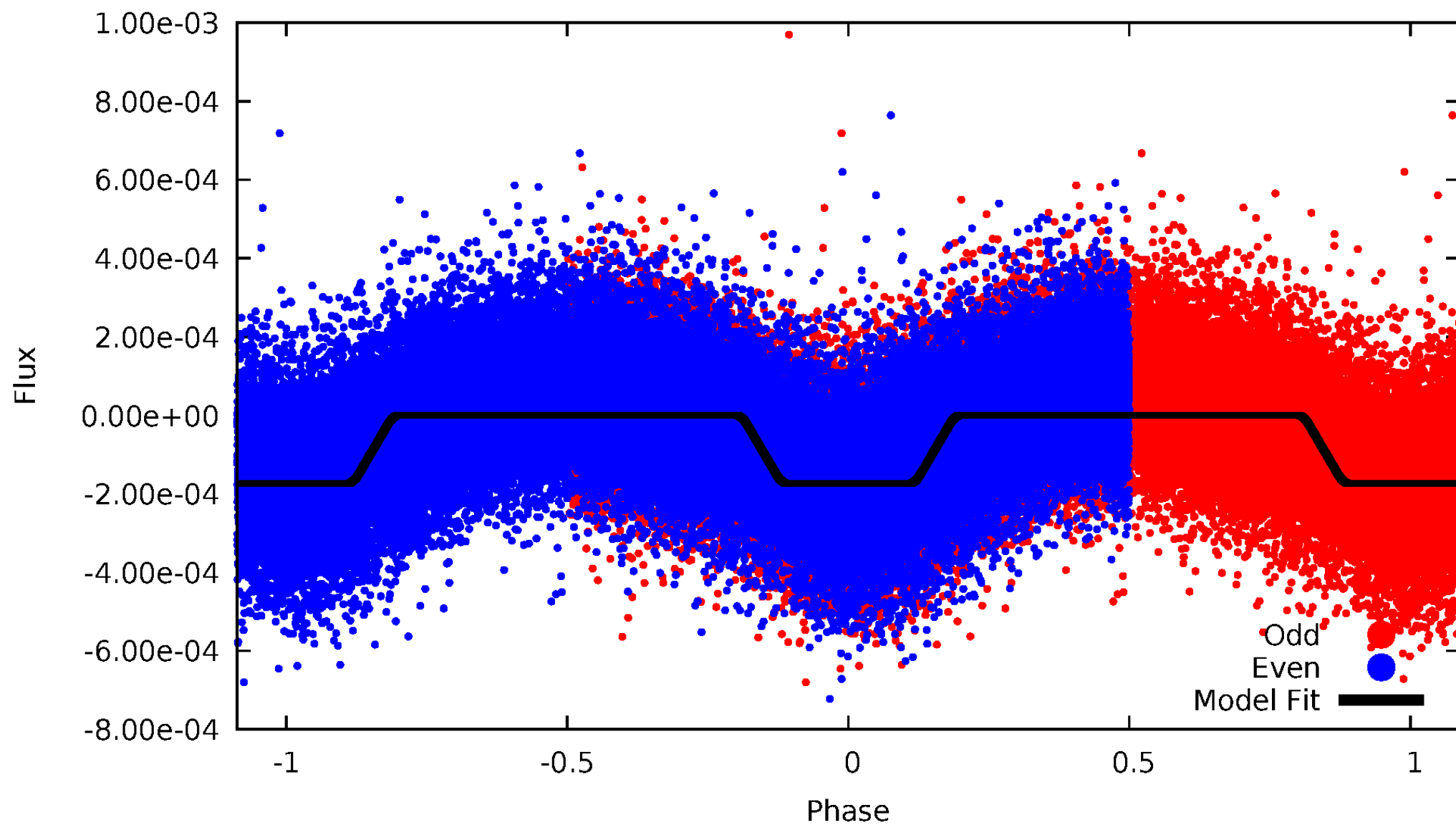
DV Odd/Even

TCE 007974877-01

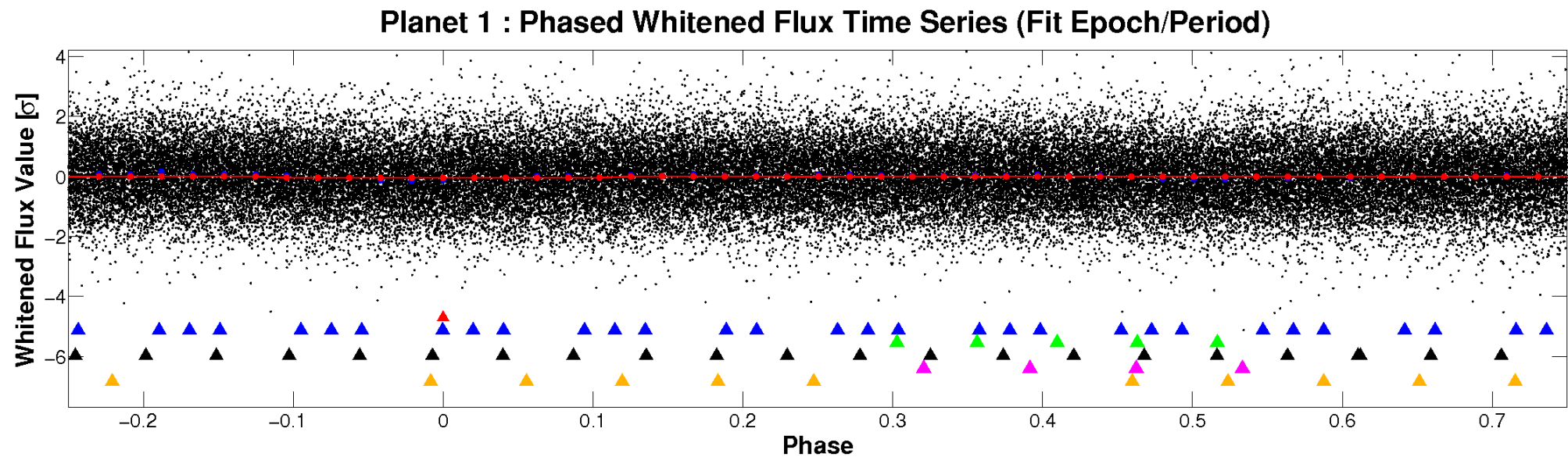
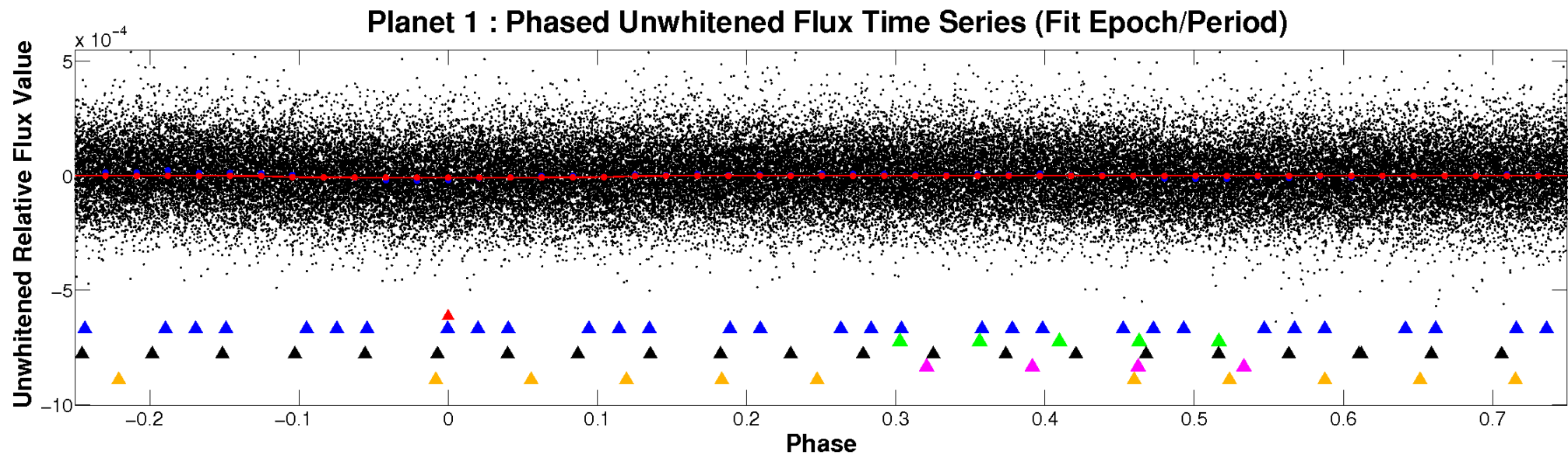


ALT Odd/Even

TCE 007974877-01

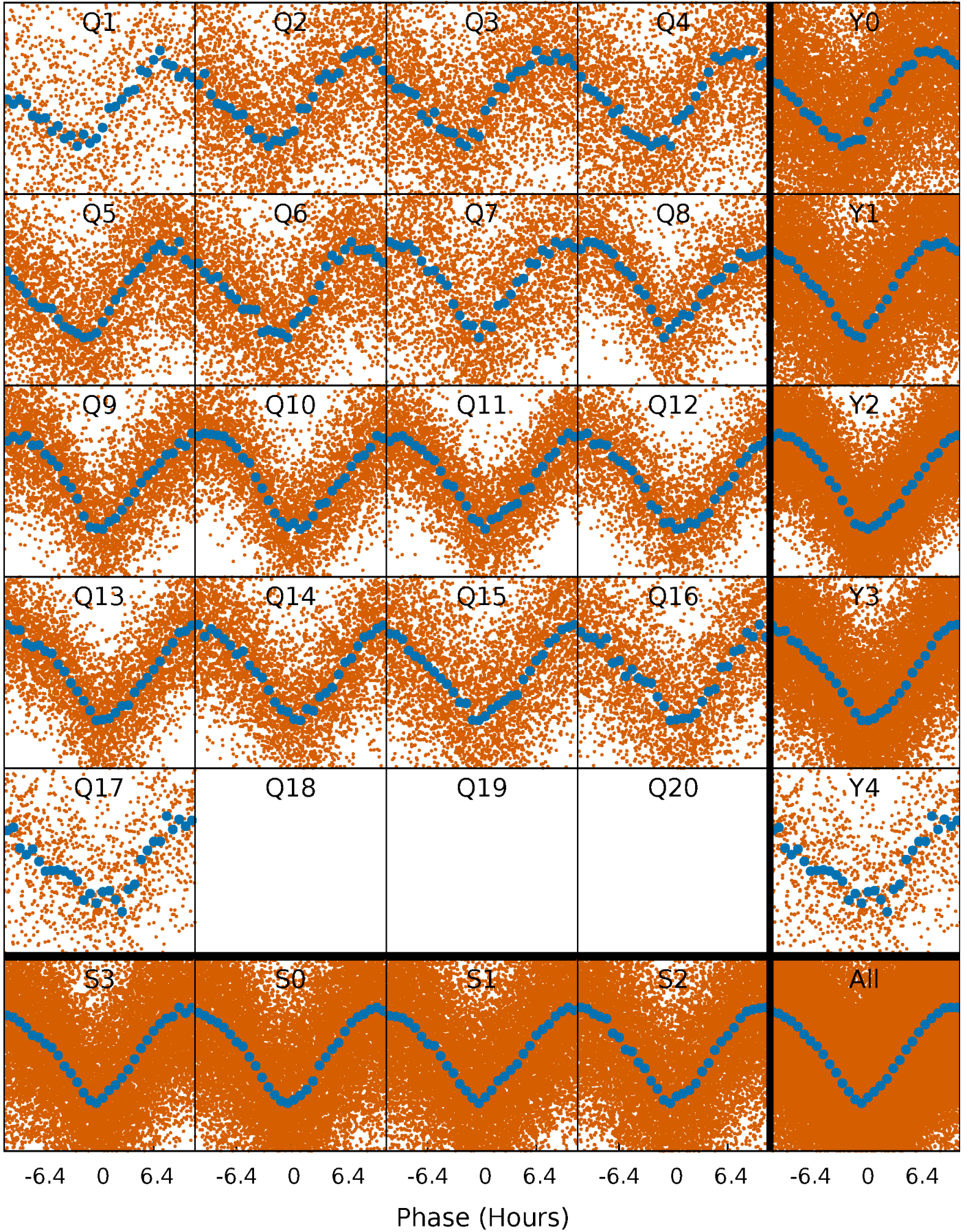


Non-Whitened Vs. Whitened Light Curve



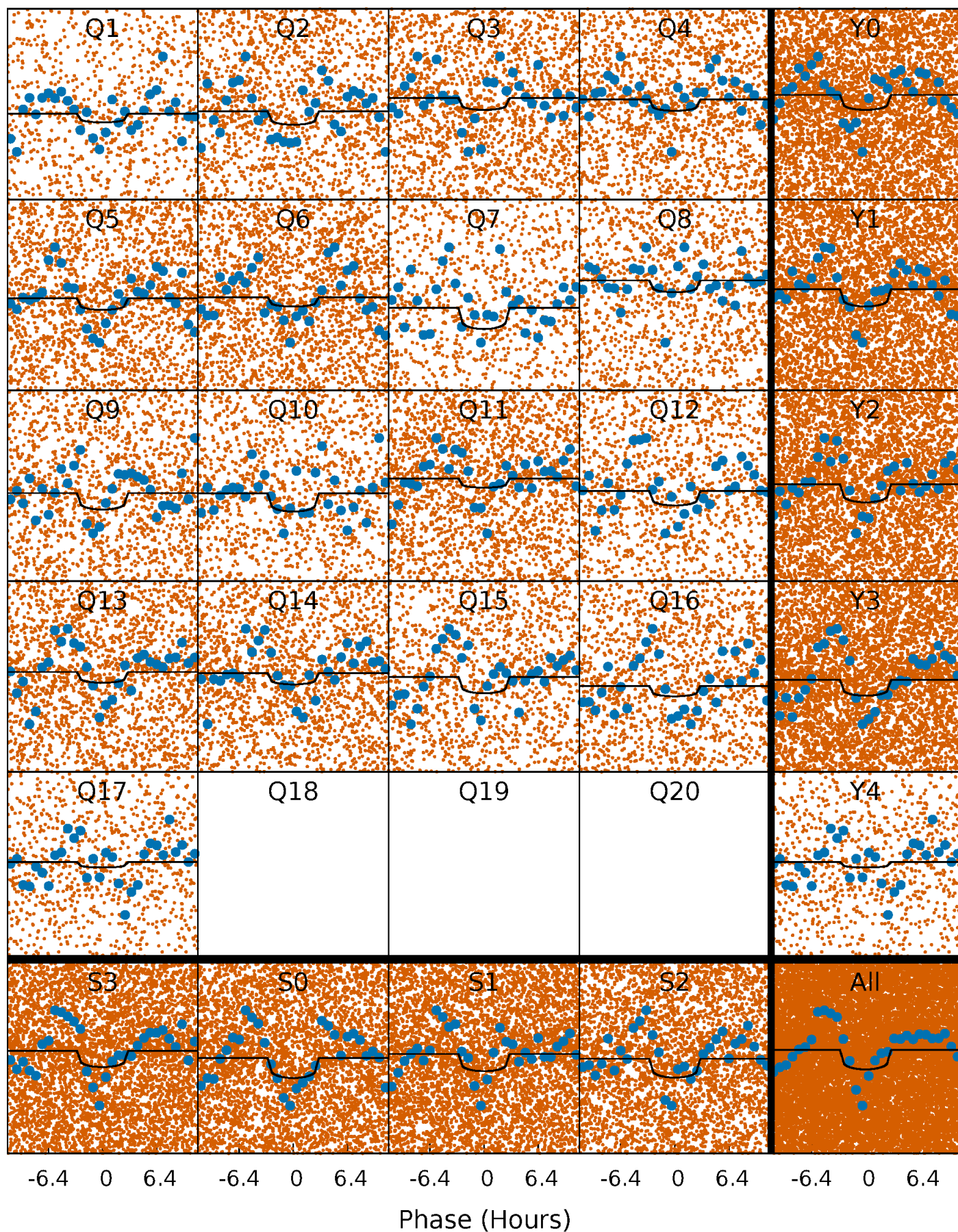
PDC Quarter-Phased Transit Curves

TCE 007974877-01 P= 0.978950 Days $T_0=132.460245$ (BKJD)



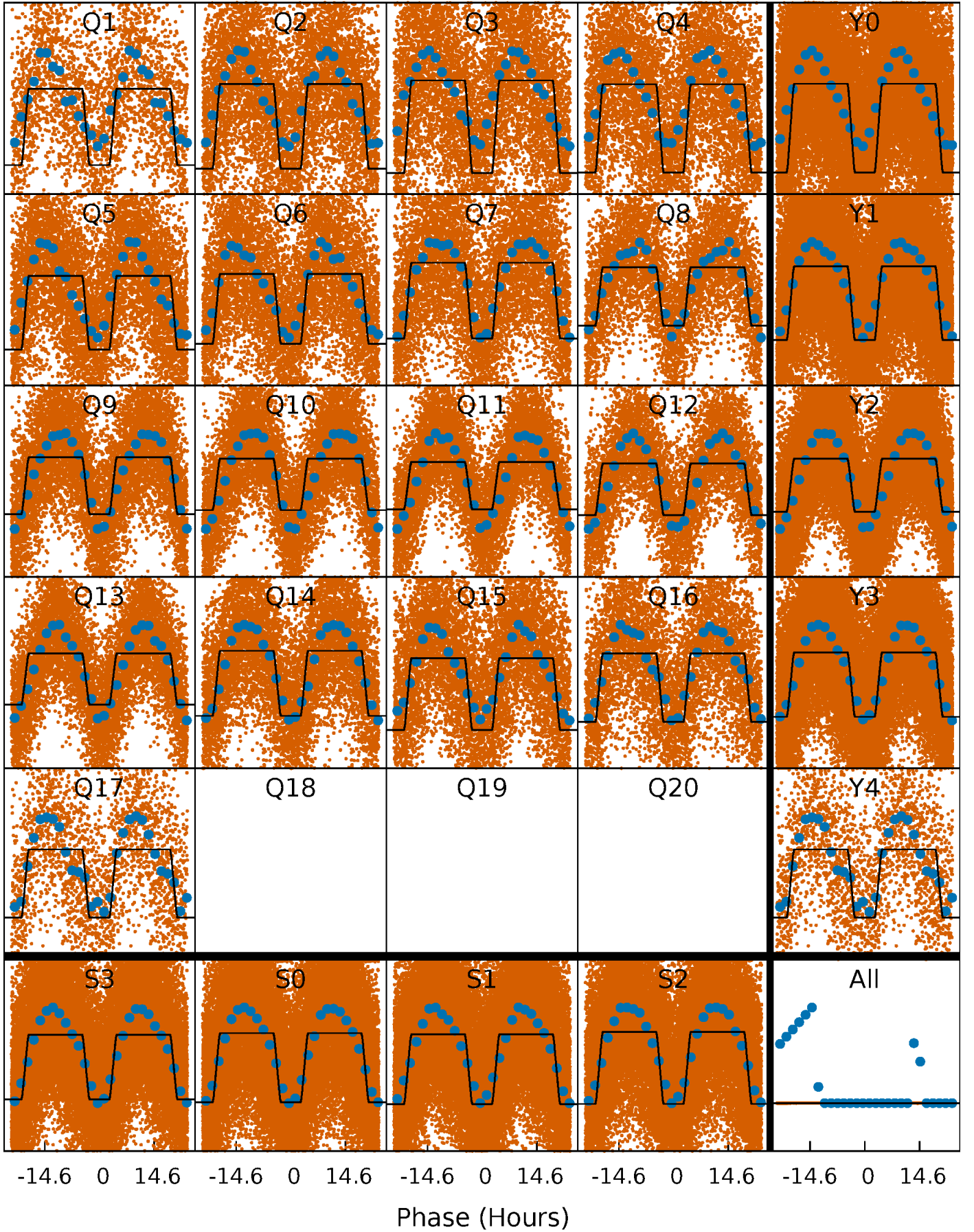
DV Quarter-Phased Transit Curves

TCE 007974877-01 P= 0.978950 Days $T_0=132.460245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

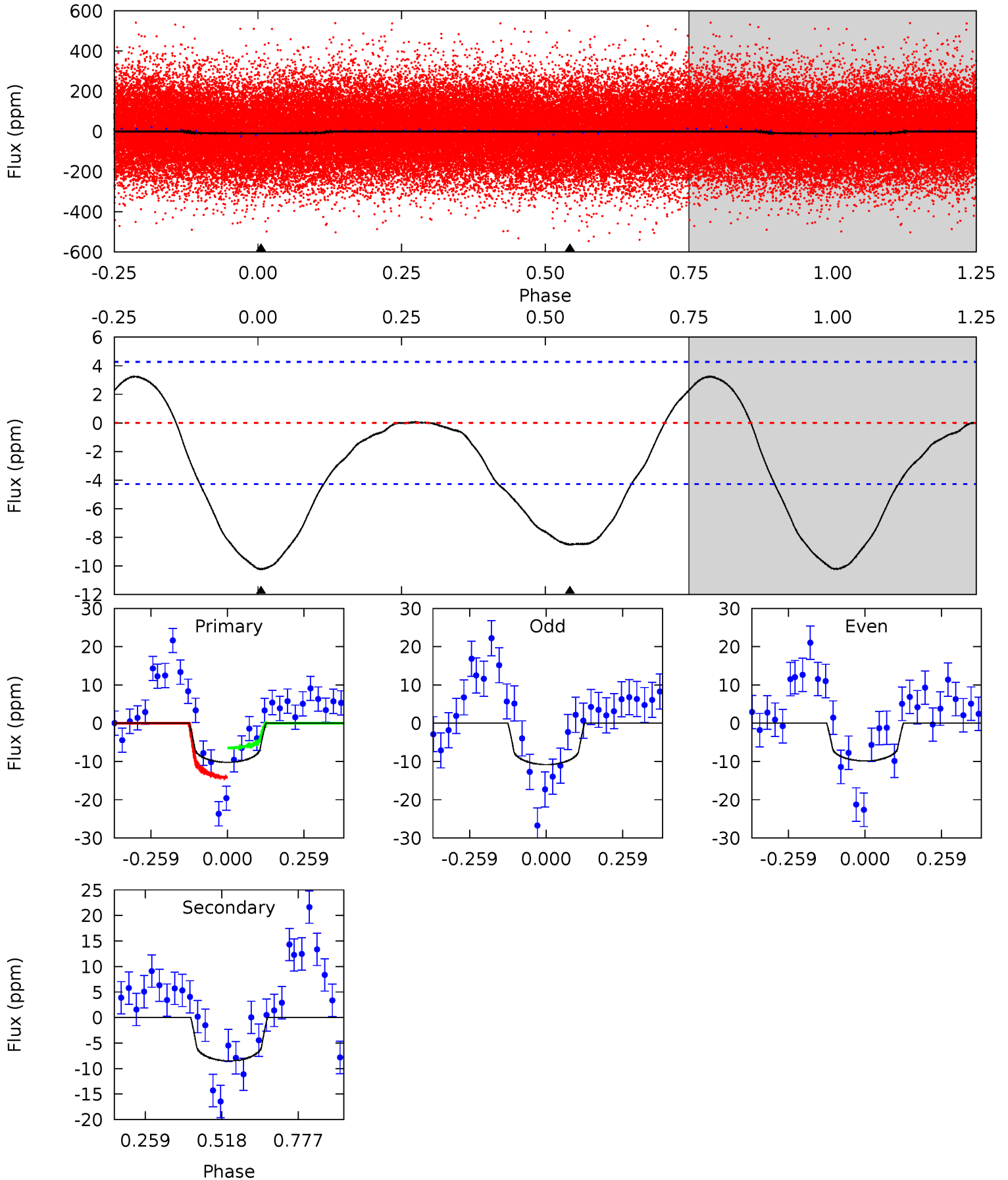
TCE 007974877-01 P= 0.979013 Days $T_0=132.398606$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-01, P = 0.978950 Days, E = 131.481295 Days

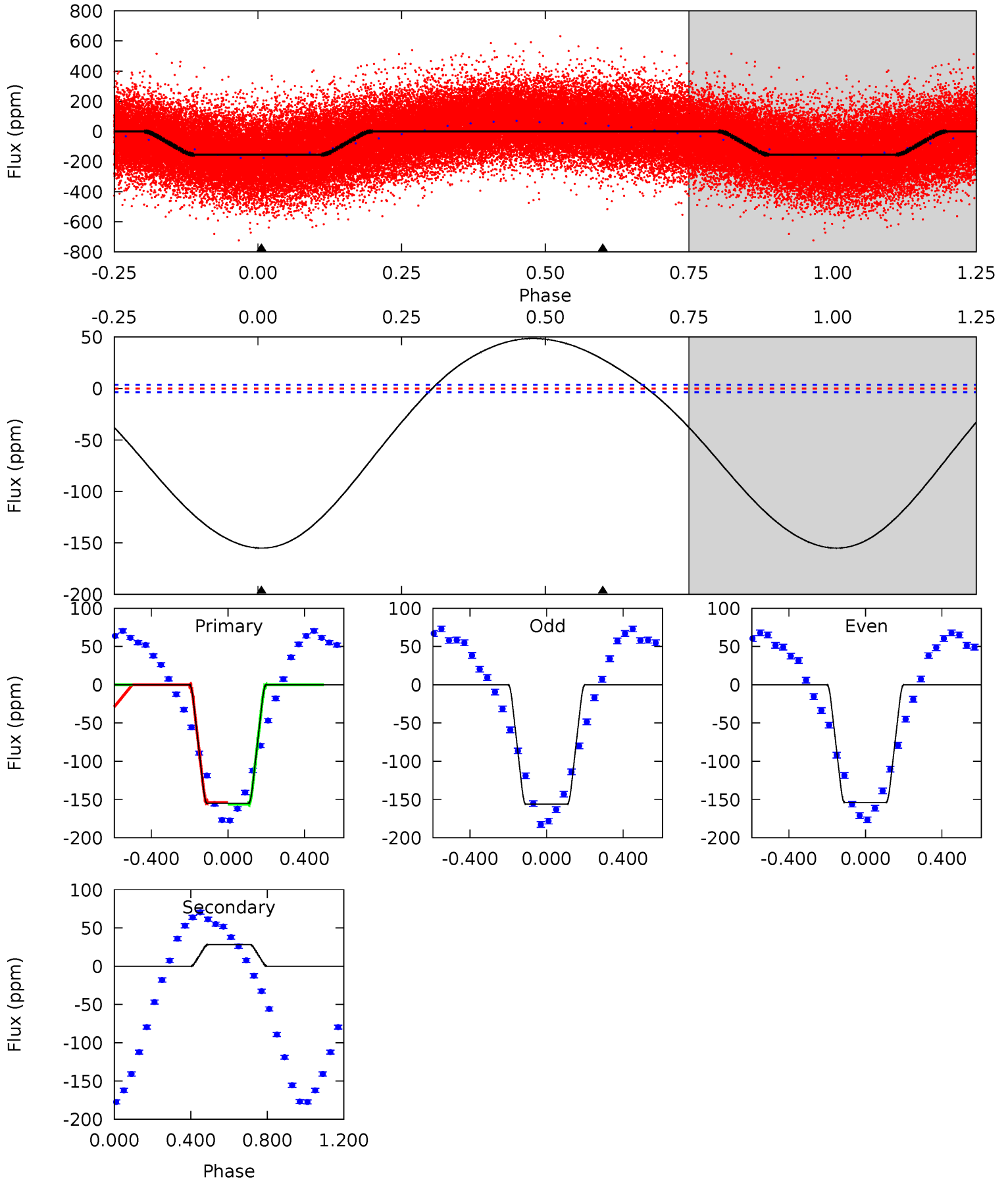
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.4 | 8.67 | 0 | 0 | 4.36 | 1.13 | 1.09 | 10.4 | 10.4 | 8.67 | 8.67 | 0.48 | 1.01 | 0.24 | 3.88 |



Alt Model-Shift Uniqueness Test

007974877-01, P = 0.979013 Days, E = 131.419593 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 188.5 | -34.4 | 0 | 0 | 4.26 | 0.84 | 19.7 | 188.5 | 188.5 | -34.4 | -34.4 | 1.41 | 1.01 | 0.24 | 1.46 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|----------------------------|
| DV | -8 ± 1 | $0.60^{+0.31}_{-0.28}$ | 4113^{+239}_{-346} | 6893^{+3397}_{-1328} | $5.932^{+14.299}_{-3.429}$ |
| Alt. | 28 ± 1 | $3.04^{+0.55}_{-0.60}$ | 4111^{+258}_{-369} | -4735^{+182}_{-183} | $-0.775^{+0.215}_{-0.370}$ |

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

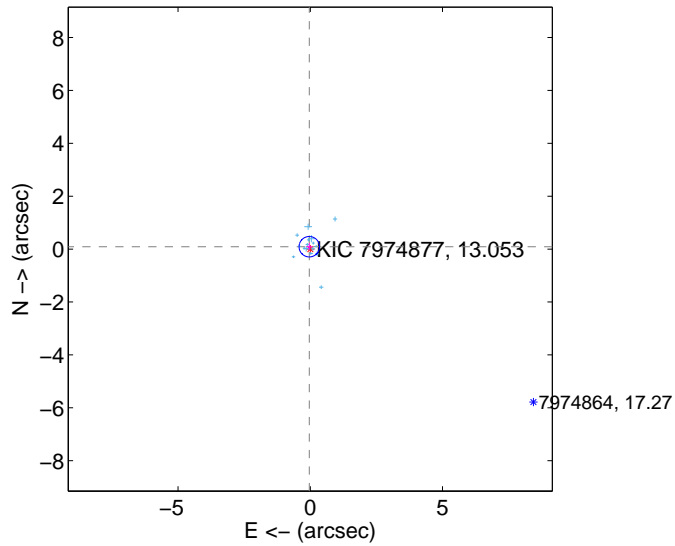
Supplemental centroid analysis for 007974877-01. Kepler magnitude: 13.05. Transit SNR 4.86

There are 17 quarters with good PRF difference image offsets

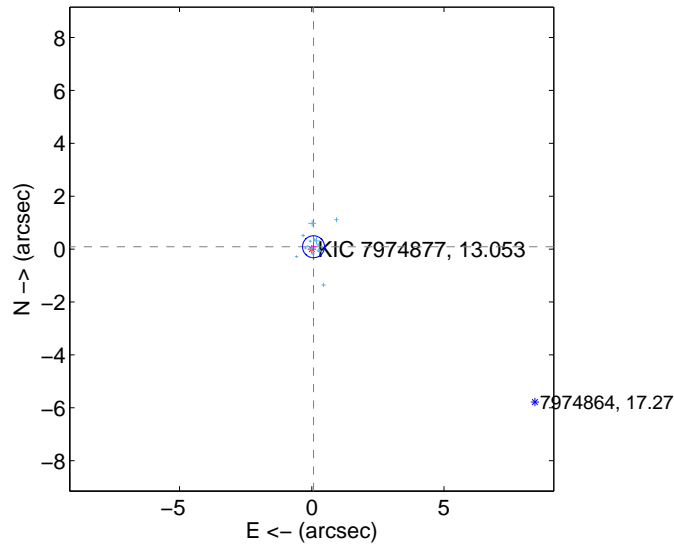
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.098 ± 0.129 | 0.76 | 0.037 ± 0.109 | 0.090 ± 0.134 |
| PRF-fit source offset from KIC position | 0.111 ± 0.138 | 0.80 | -0.067 ± 0.107 | 0.089 ± 0.147 |
| photometric centroid source offset | 3.21 ± 1.47 | 2.18 | 1.76 ± 1.38 | 2.69 ± 1.51 |

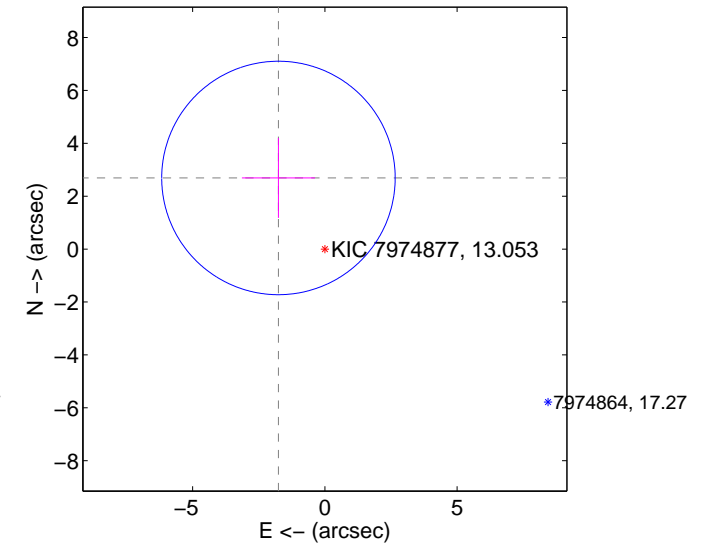
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

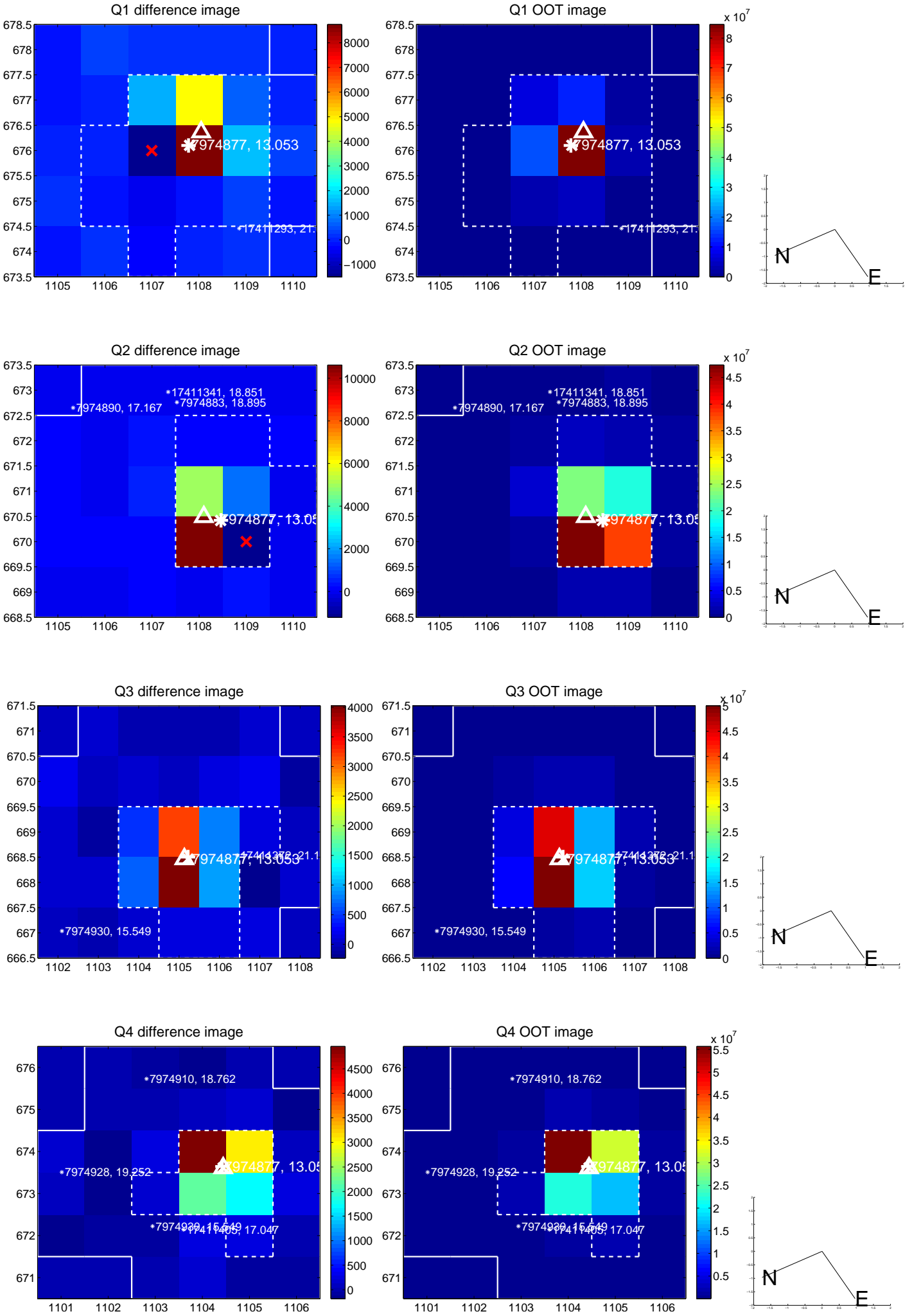


offset from photometric centroids

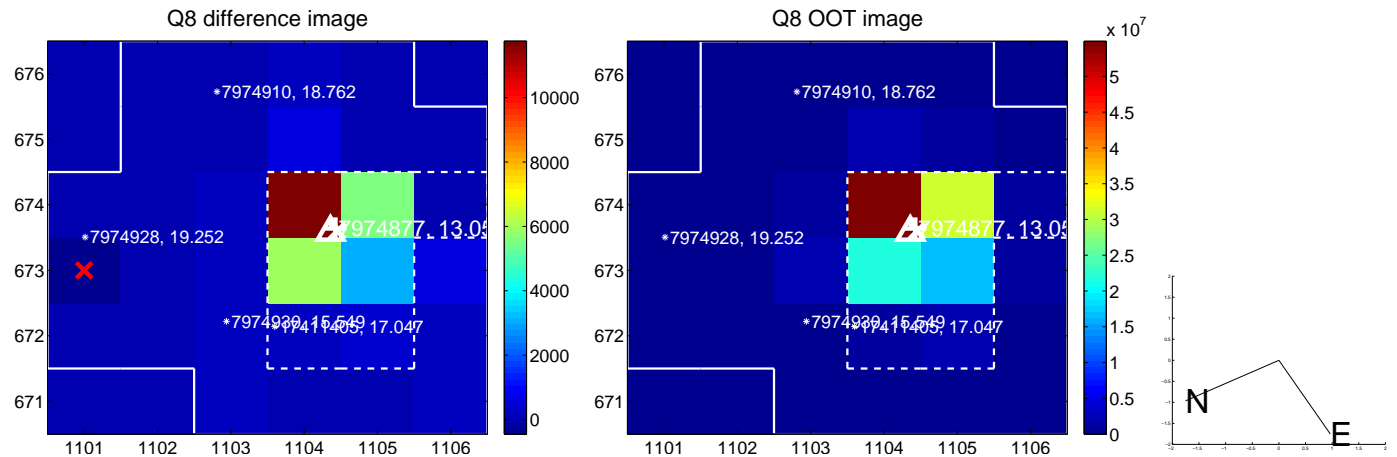
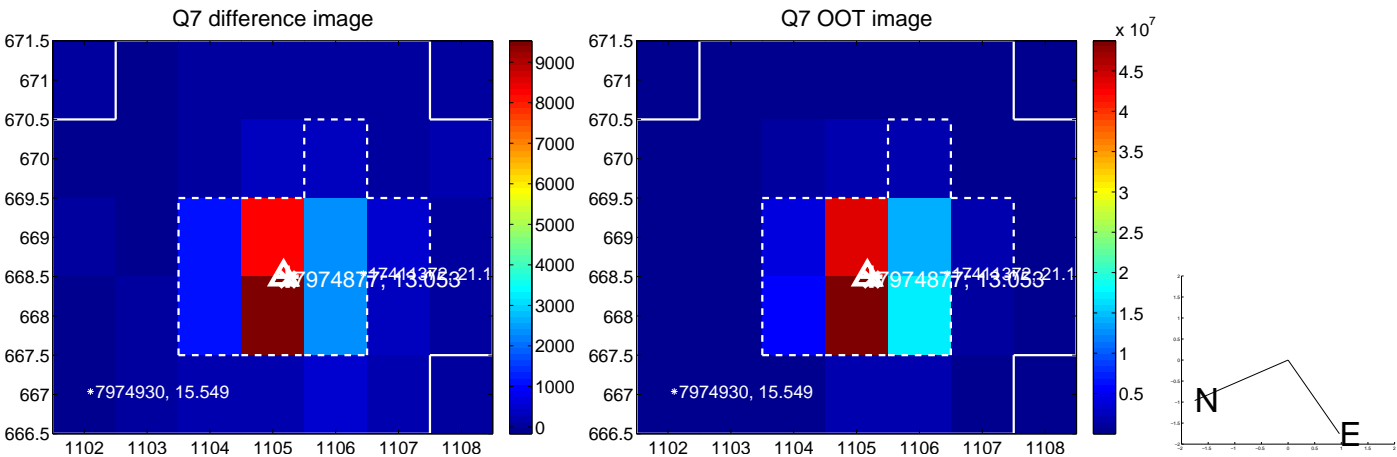
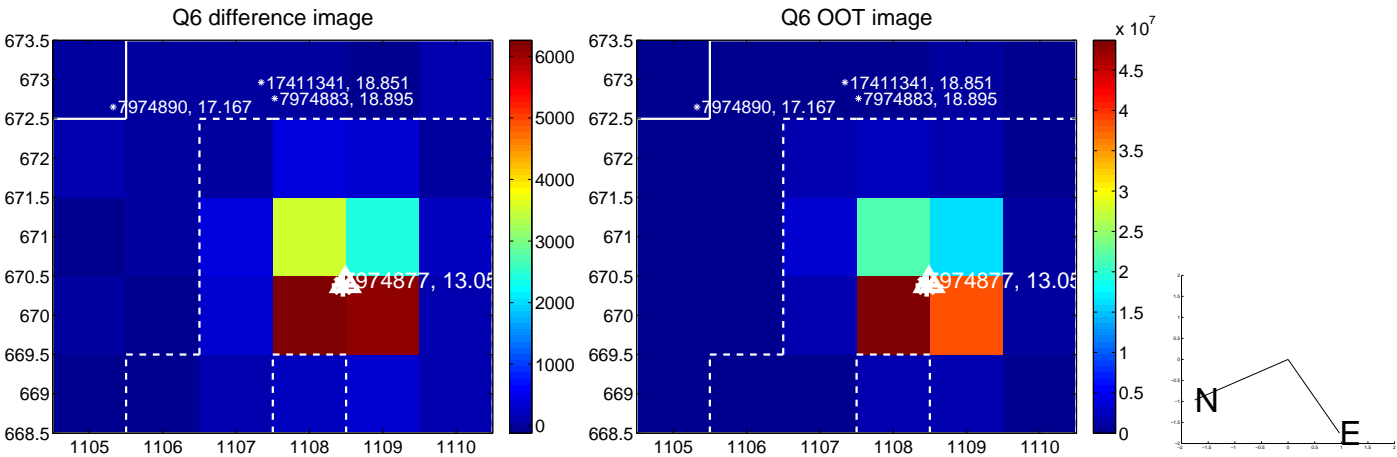
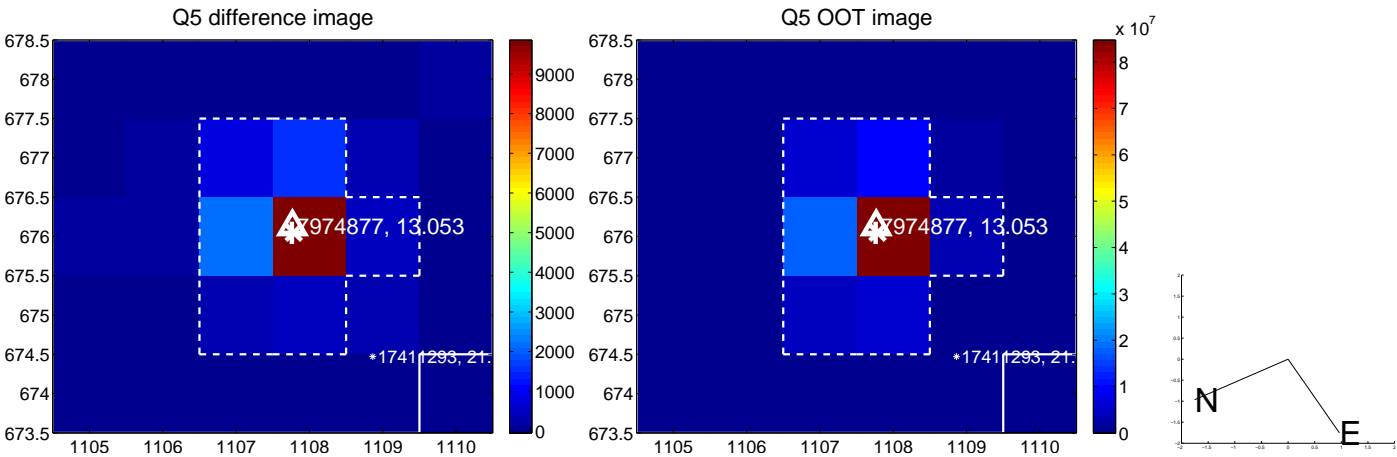


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

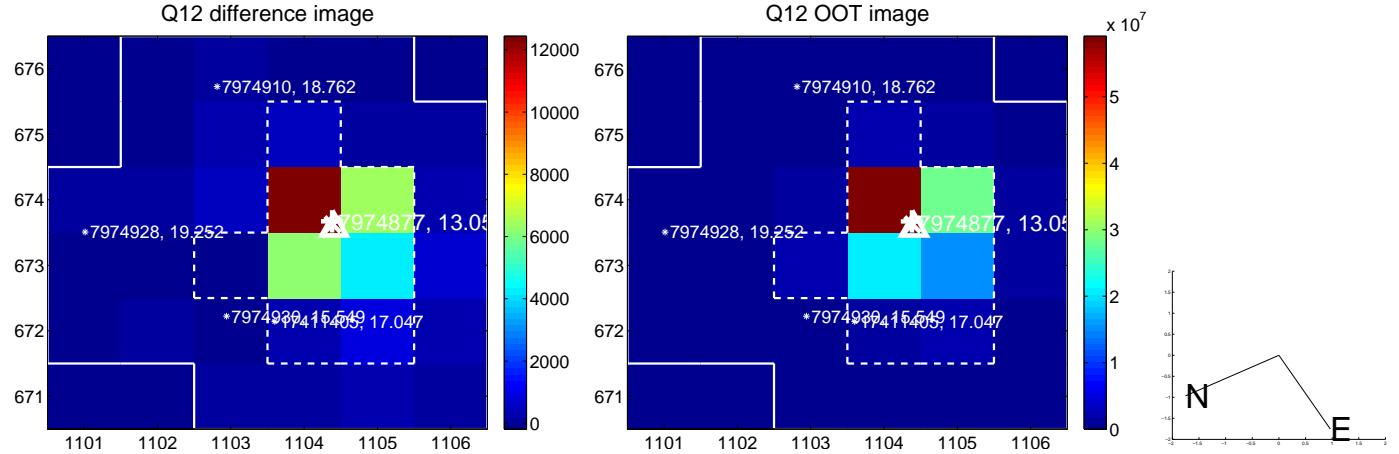
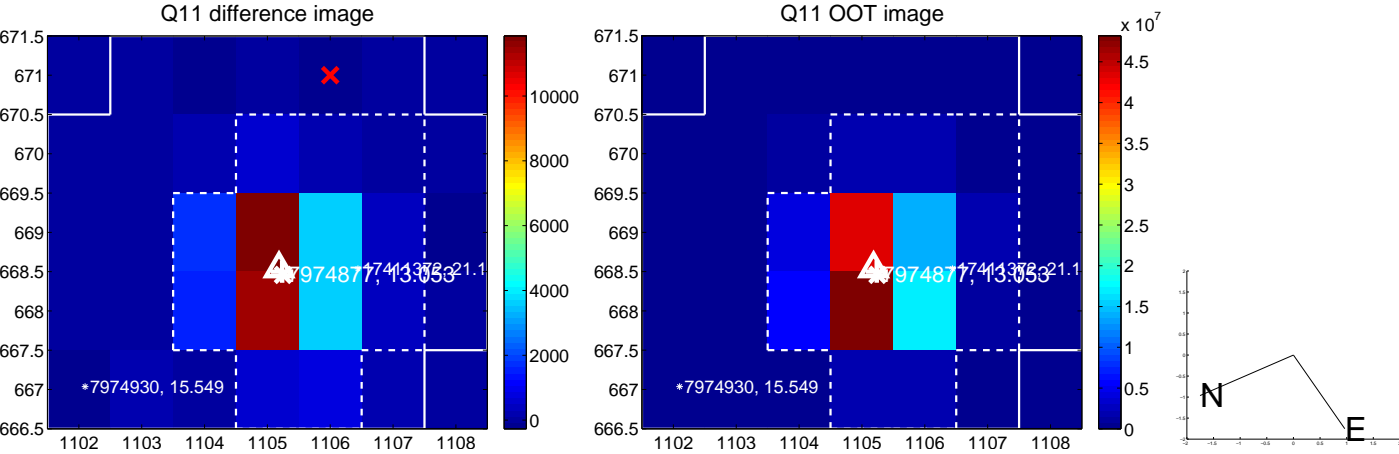
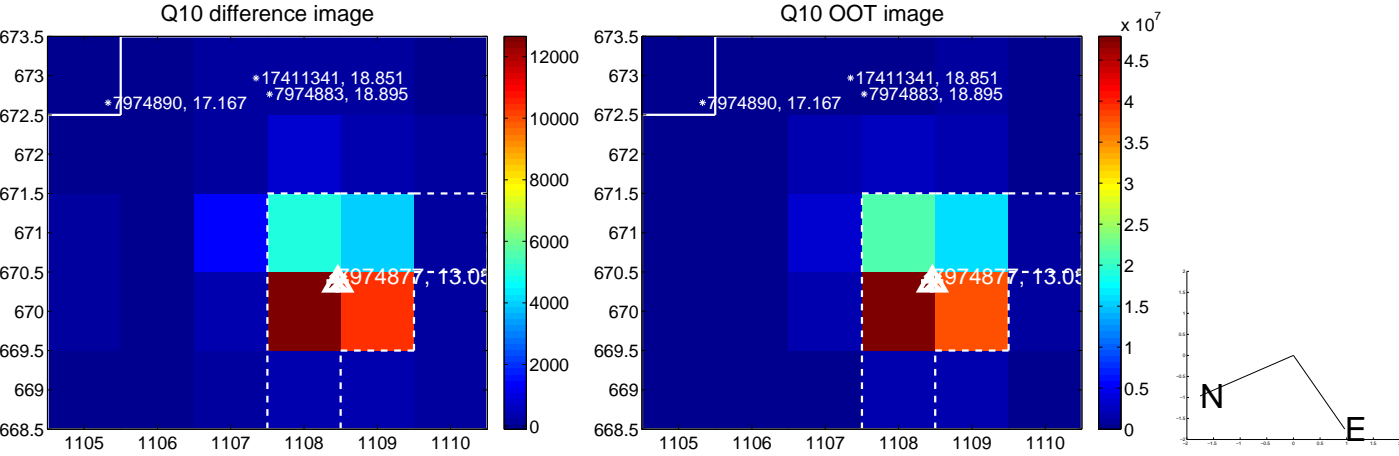
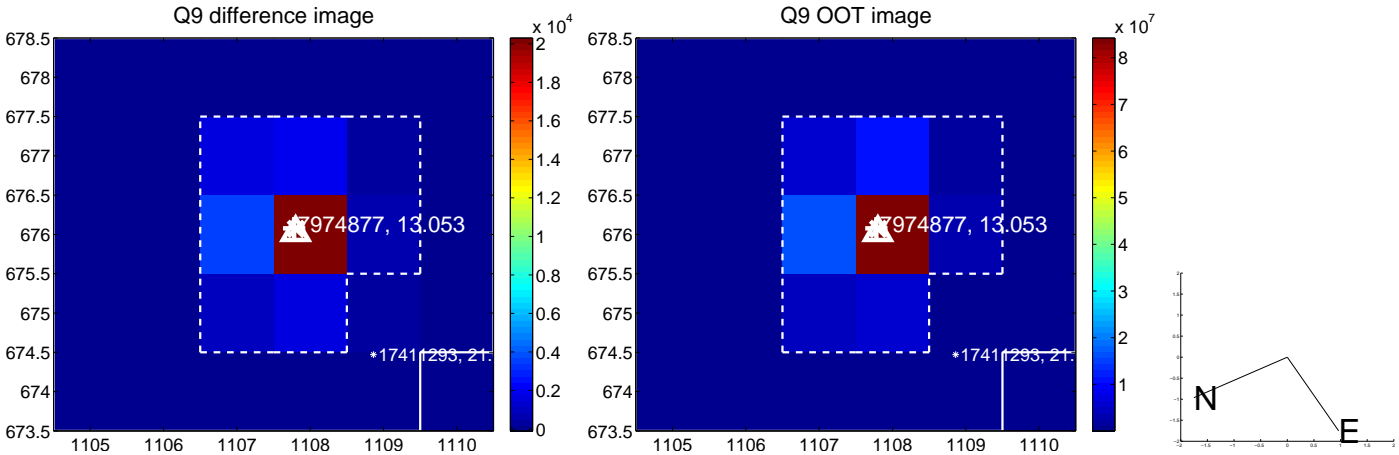
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



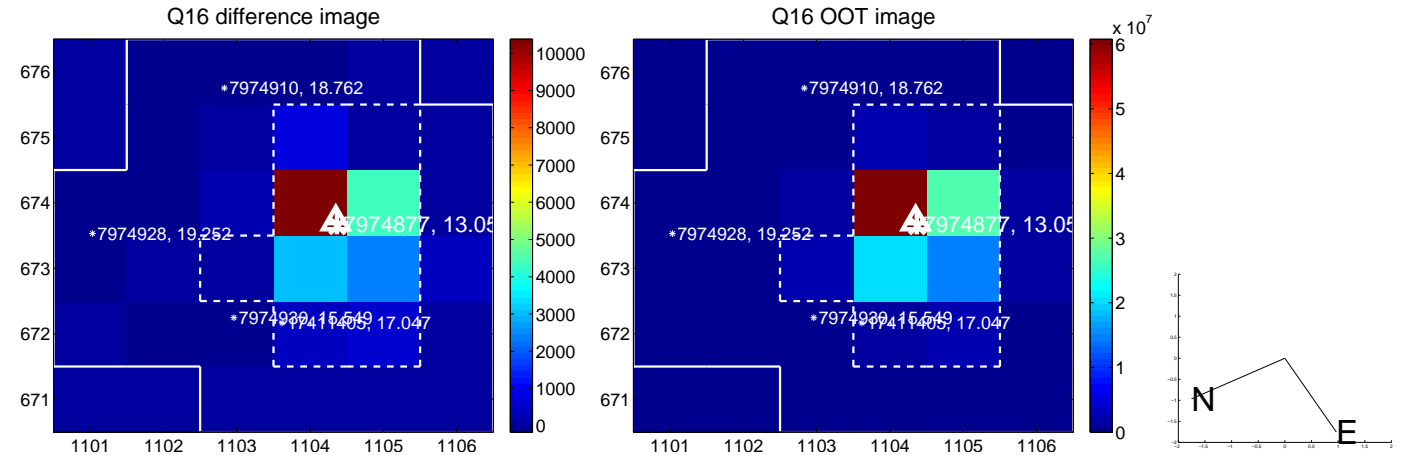
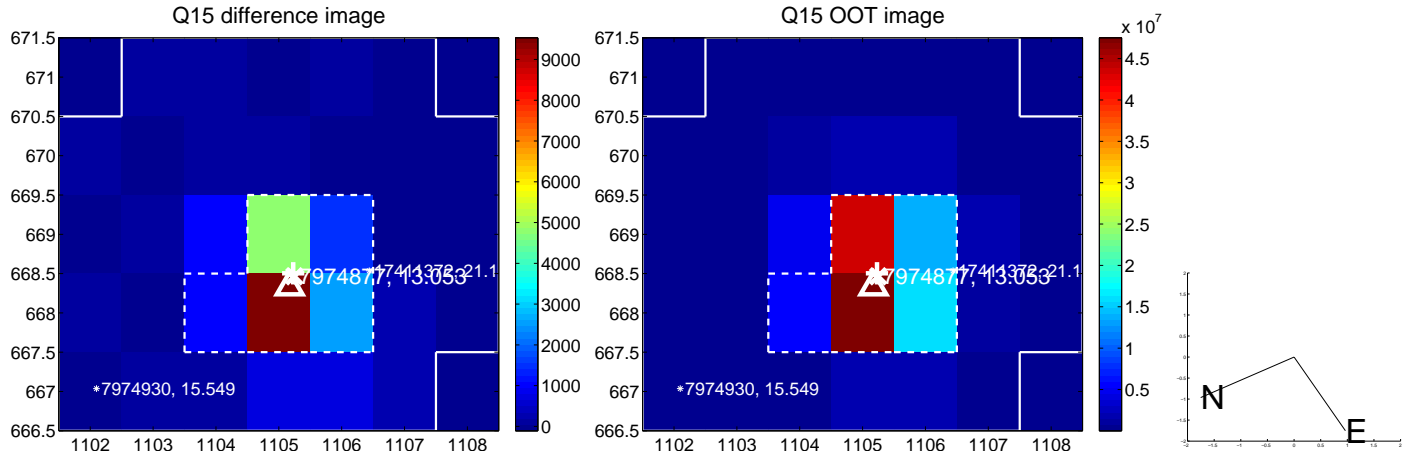
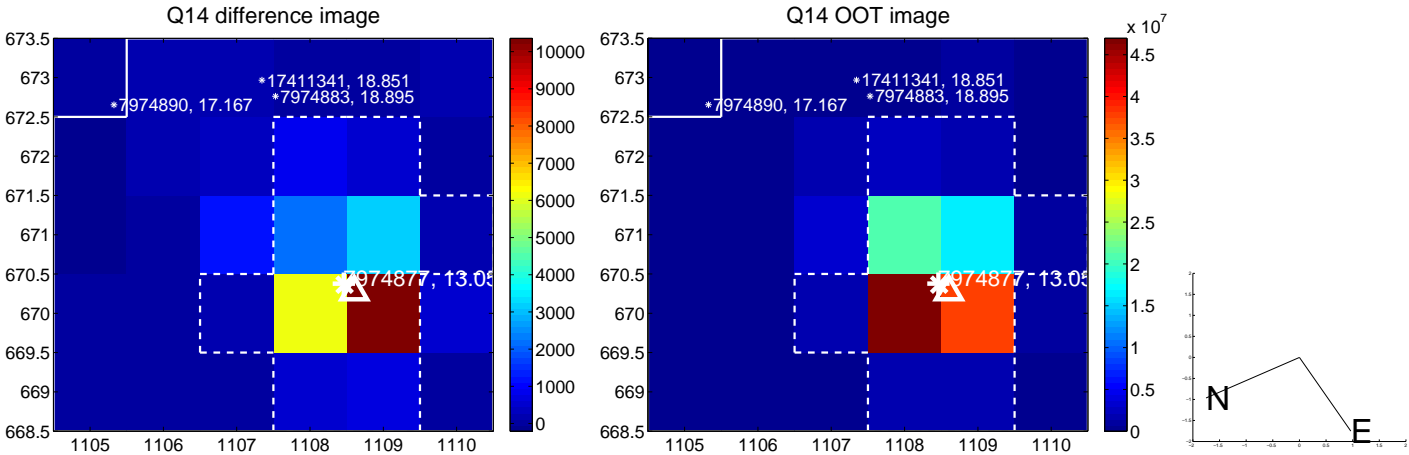
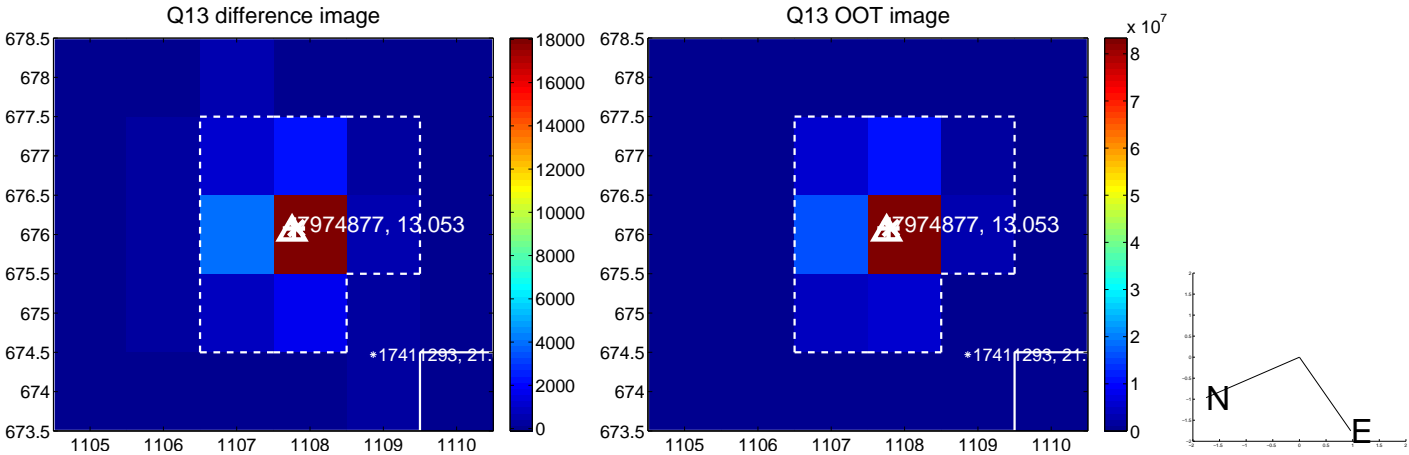
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



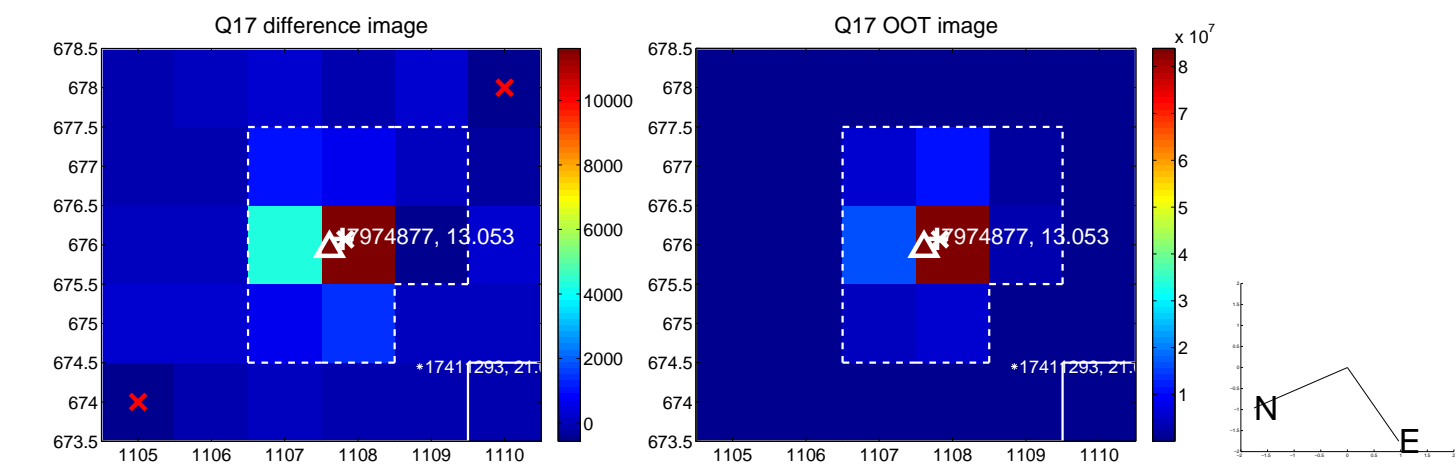
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



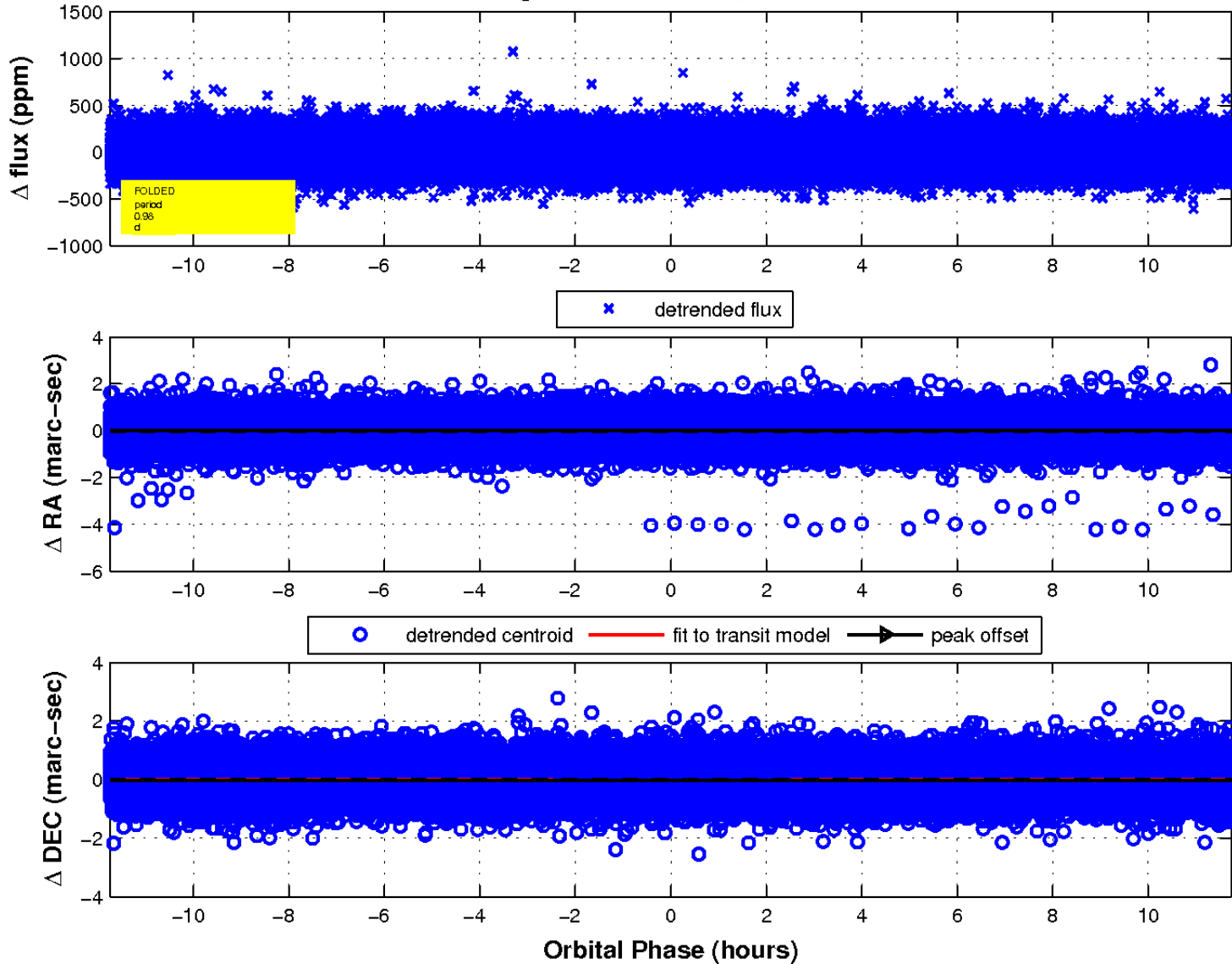
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



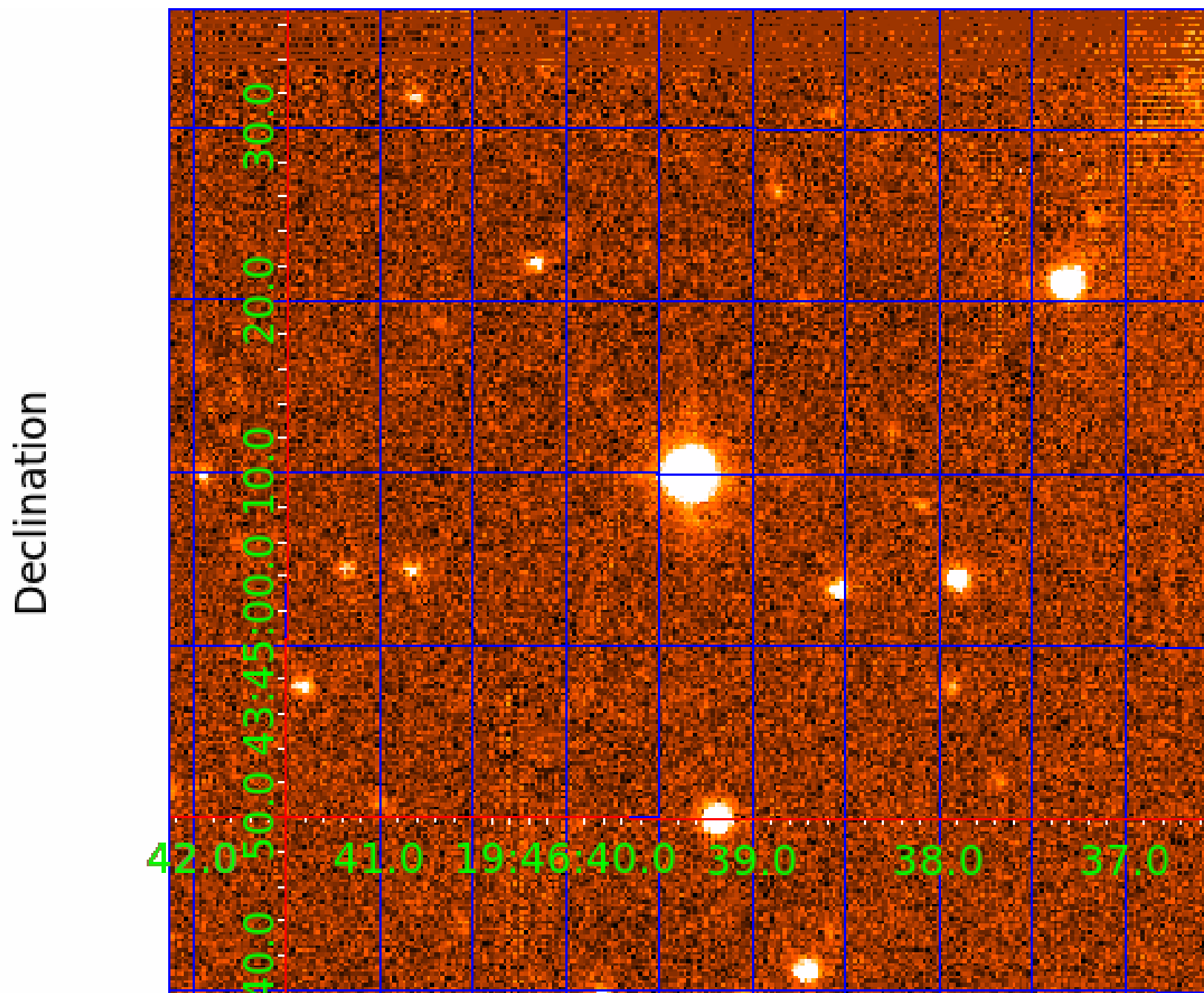
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 6



UKIRT Image



KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
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| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

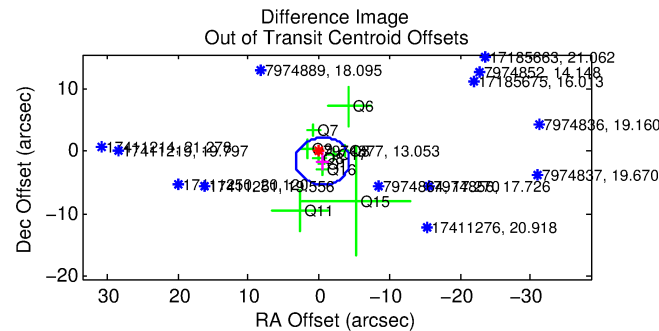
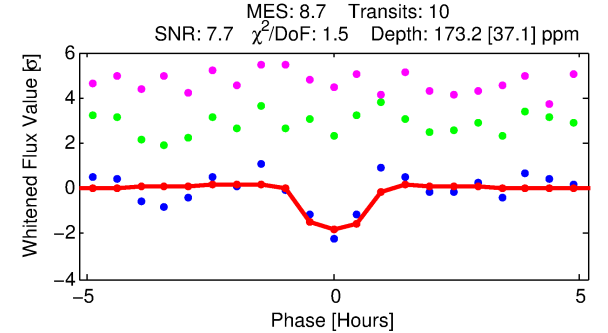
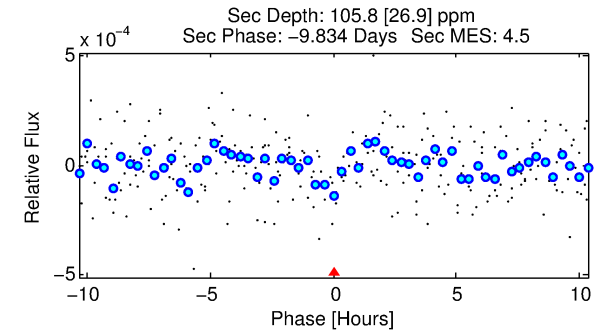
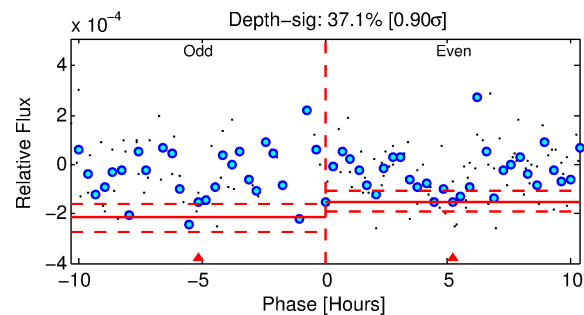
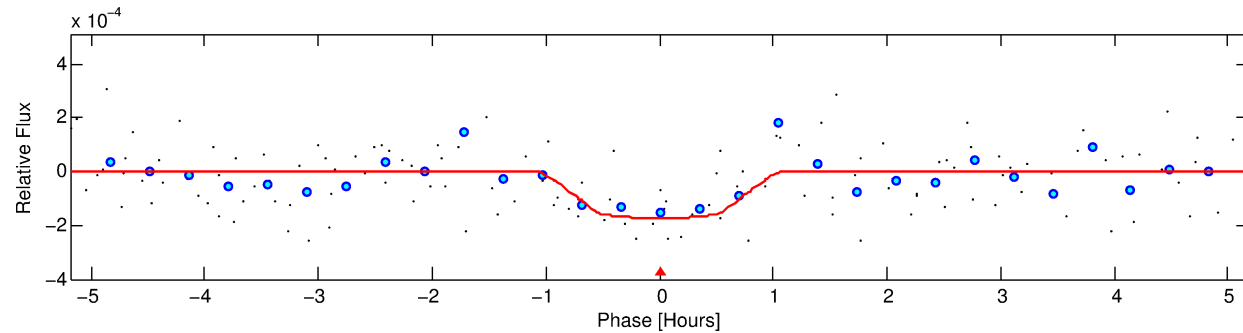
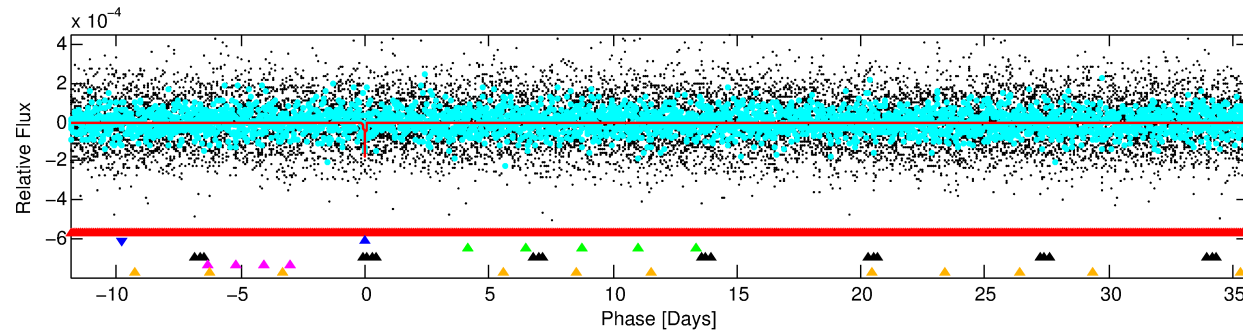
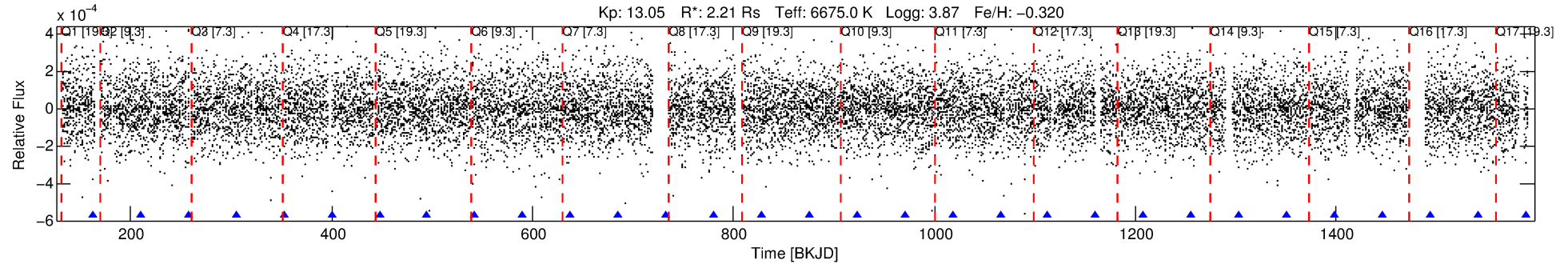
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-02

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 2 of 6 Period: 47.525 d



DV Fit Results:

Period = 47.52539 [0.00051] d
Epoch = 162.5296 [0.0107] BKJD
Rp/R* = 0.0142 [0.0113]
a/R* = 95.02 [439.88]
b = 0.91 [0.91]
Seff = 108.58 [56.17]
Teq = 823 [106] K
Rp = 3.41 [2.96] Re
a = 0.2822 [0.0903] AU
Ag = 398.85 [674.64] [0.59 σ]
Teffp = 5687 [2303] K [2.11 σ]

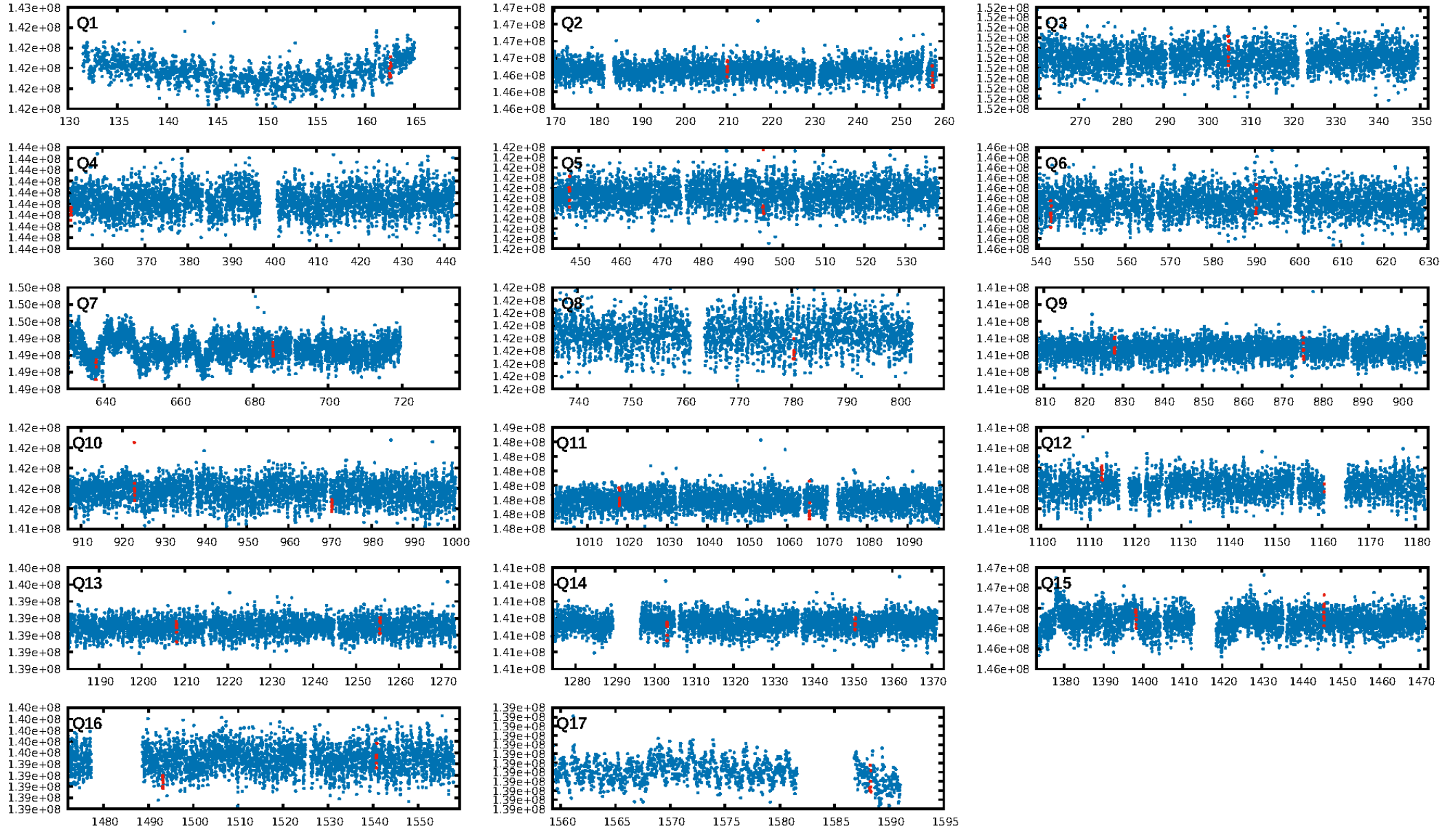
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [189.27 σ]
LongPeriod-sig: 100.0% [119.87 σ]
ModelChiSquare2-sig: 30.9%
ModelChiSquareGof-sig: 96.2%
Bootstrap-pfa: 5.75e-11
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 2.678
Centroid-sig: 30.4%
Centroid-so: 0.802 arcsec [0.91 σ]
OotOffset-rm: 1.689 arcsec [1.34 σ]
OotOffset-st: 1/4/2/3 [10]
KicOffset-rm: 1.670 arcsec [1.14 σ]
KicOffset-st: 1/4/2/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.47 [7/15]

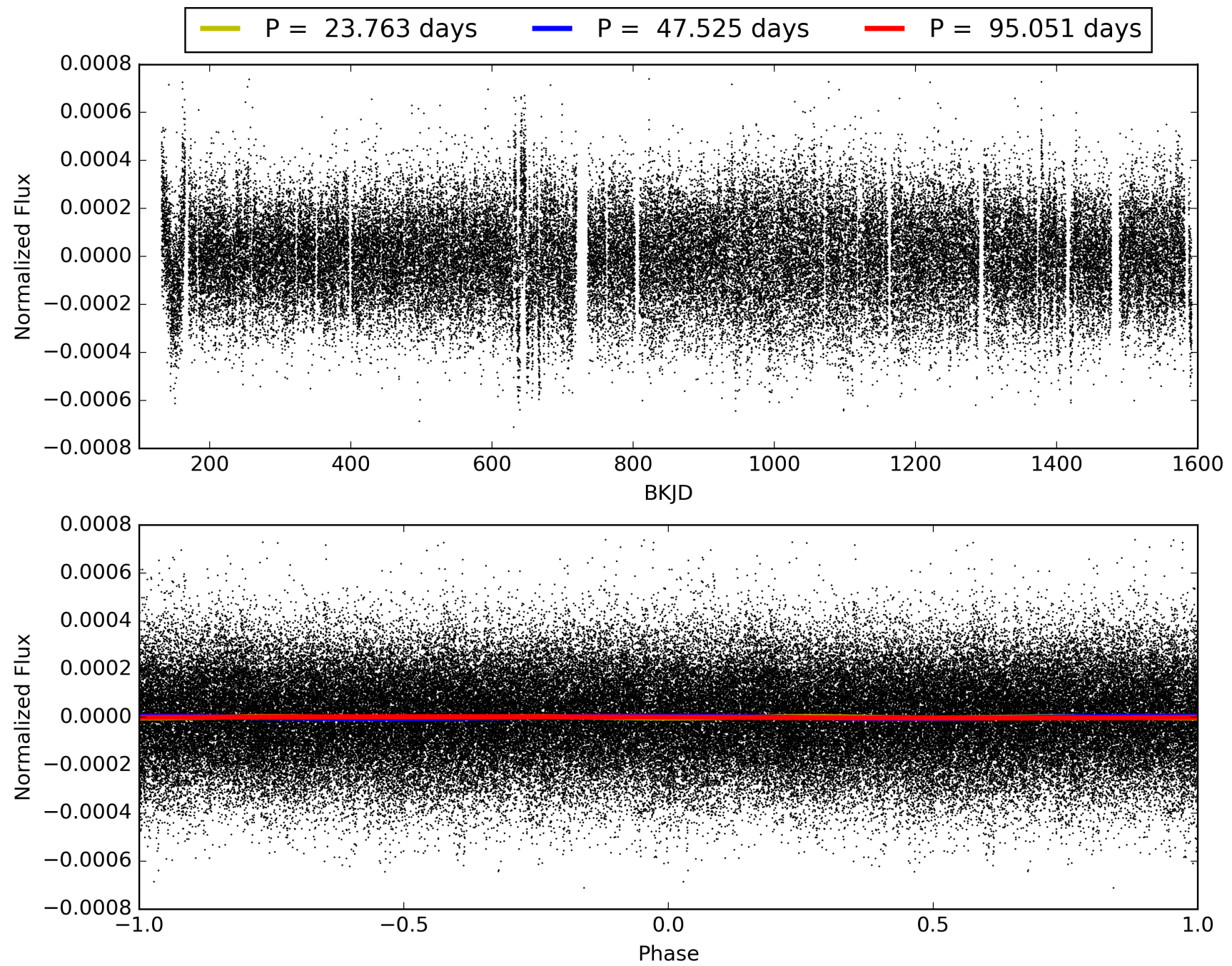
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:11 Z

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

TCE 007974877-02, PDC Light Curves

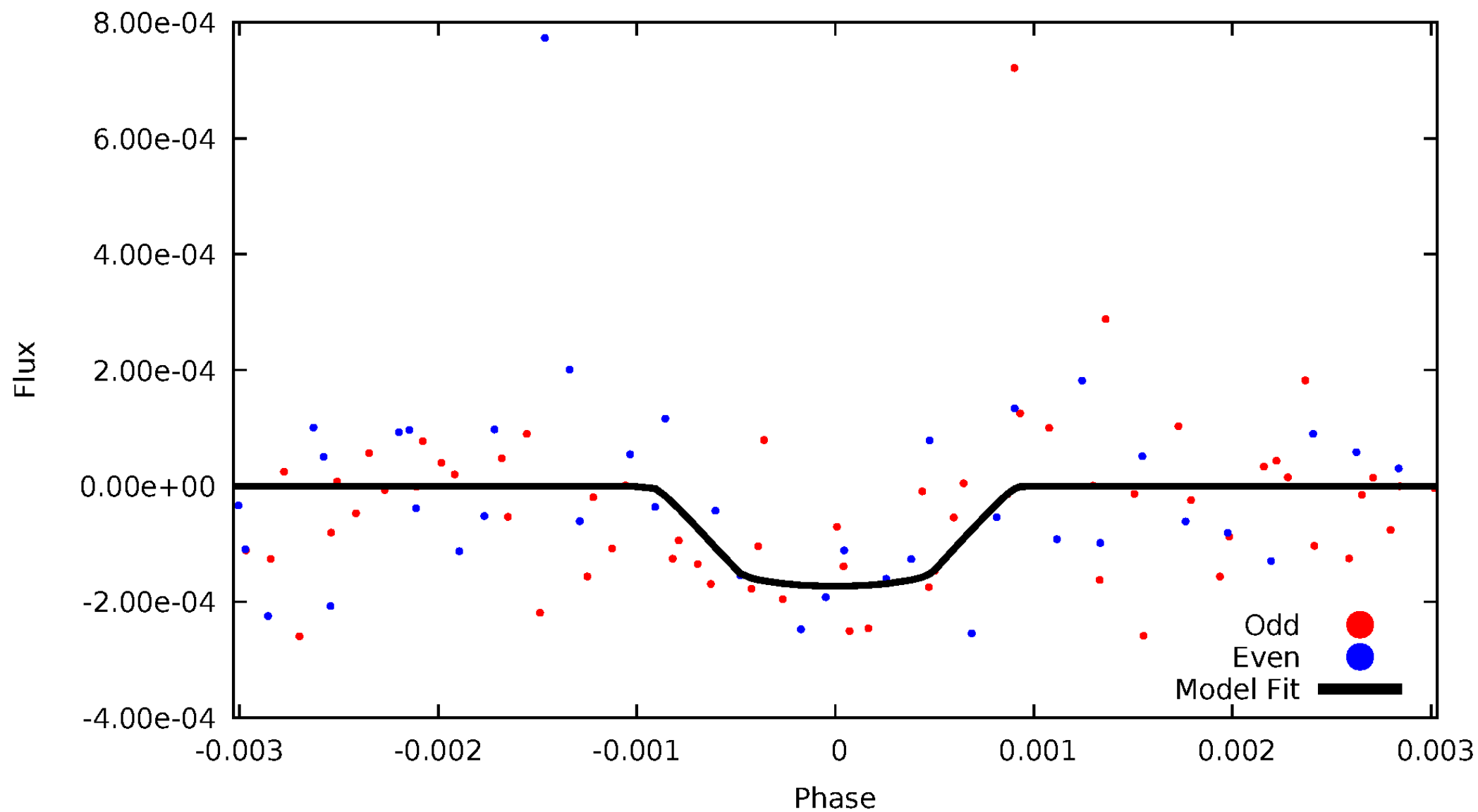


TCE 007974877-02



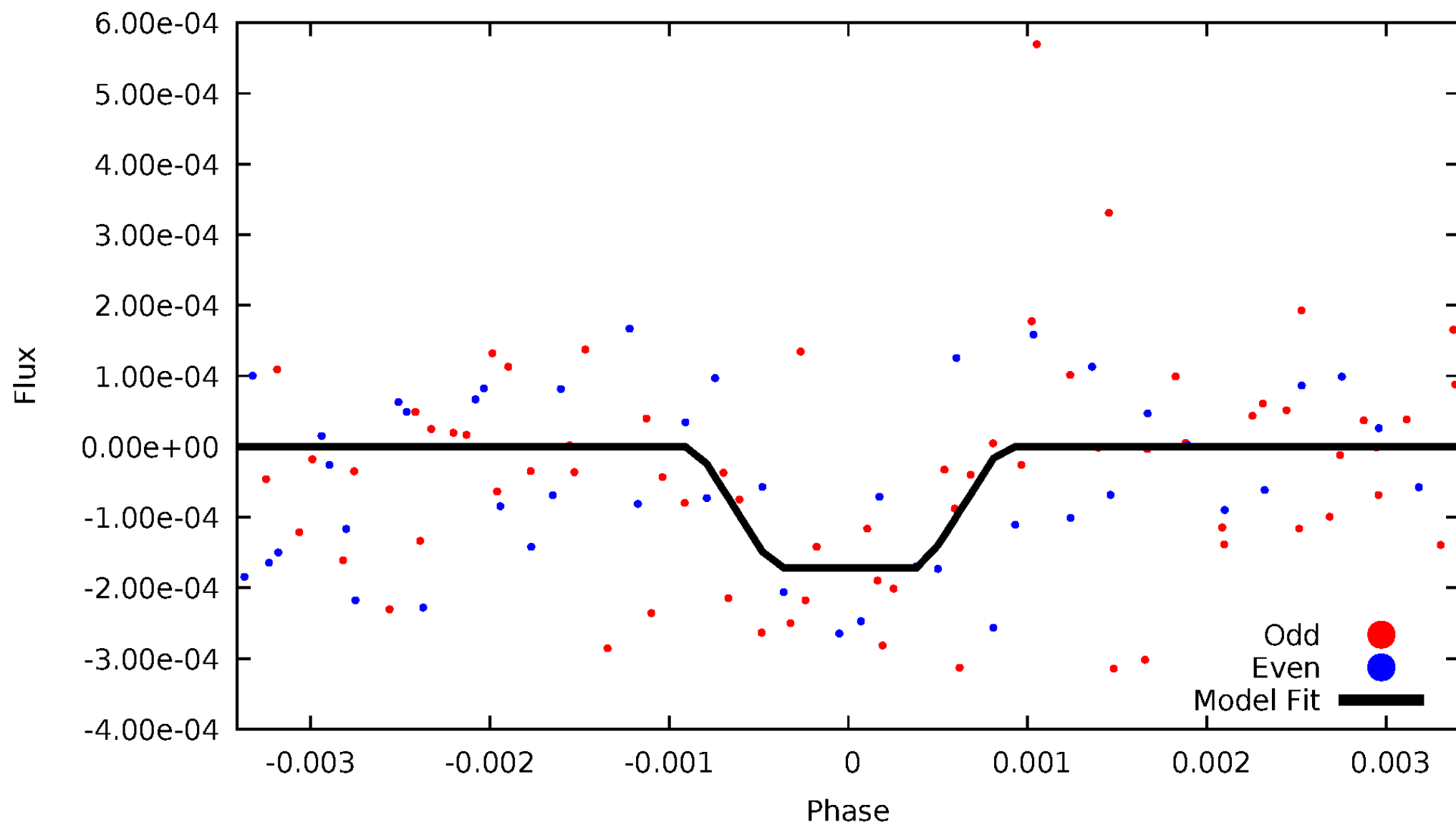
DV Odd/Even

TCE 007974877-02



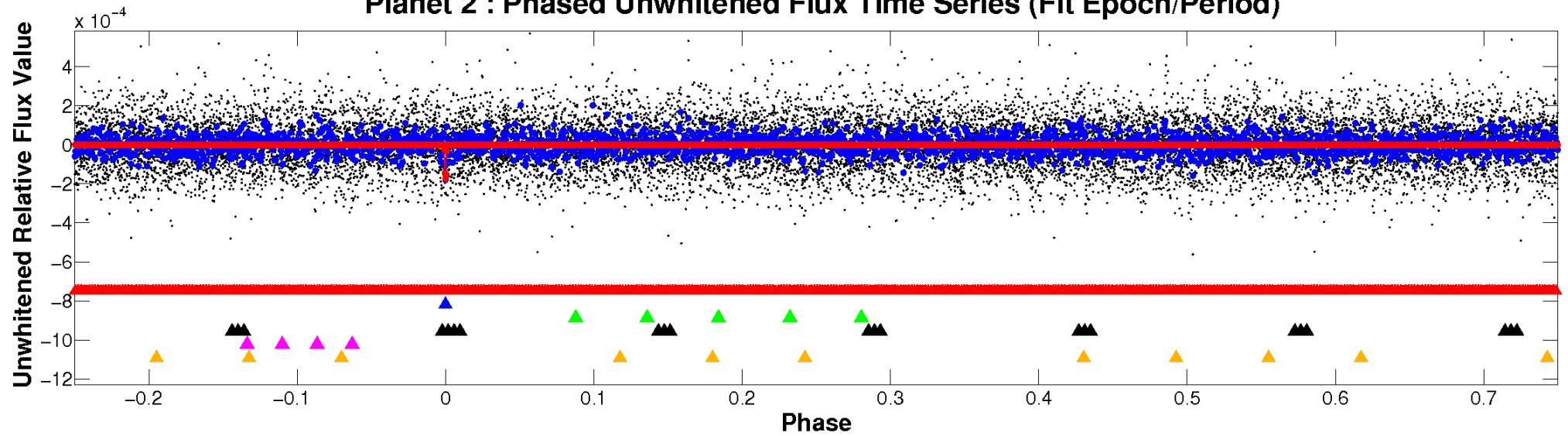
ALT Odd/Even

TCE 007974877-02

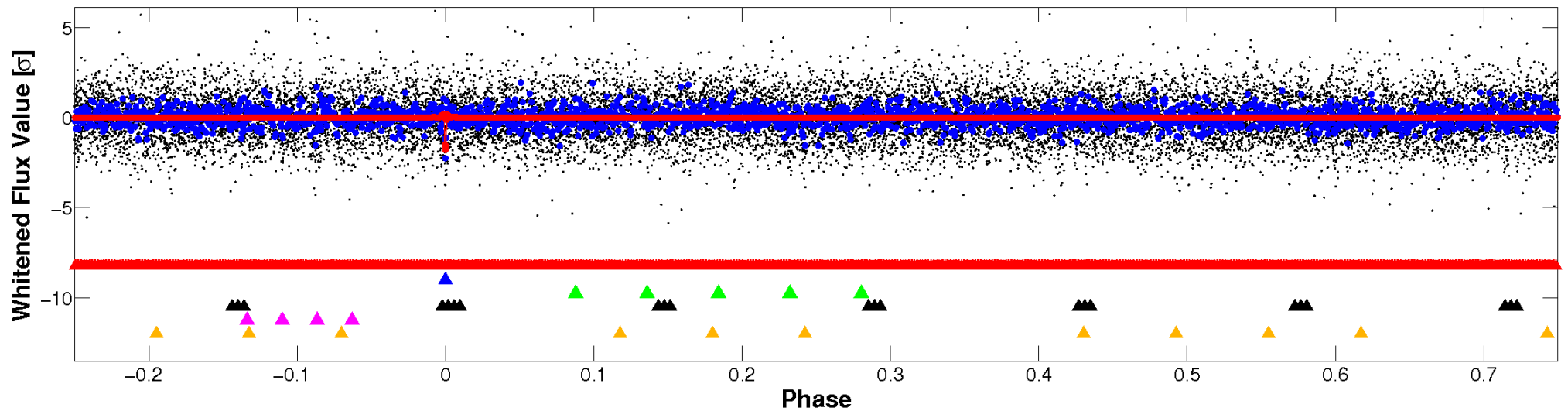


Non-Whitened Vs. Whitened Light Curve

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

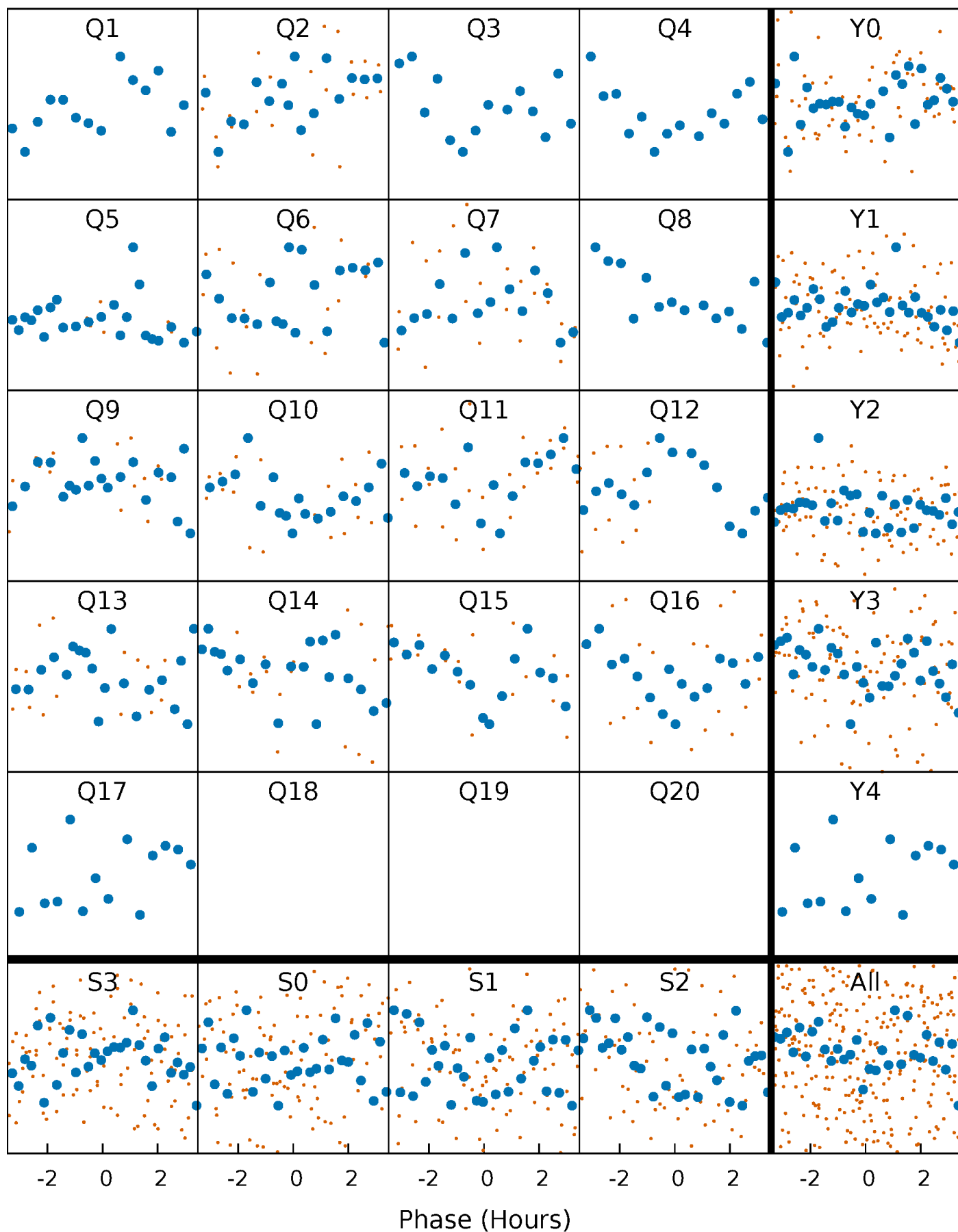


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



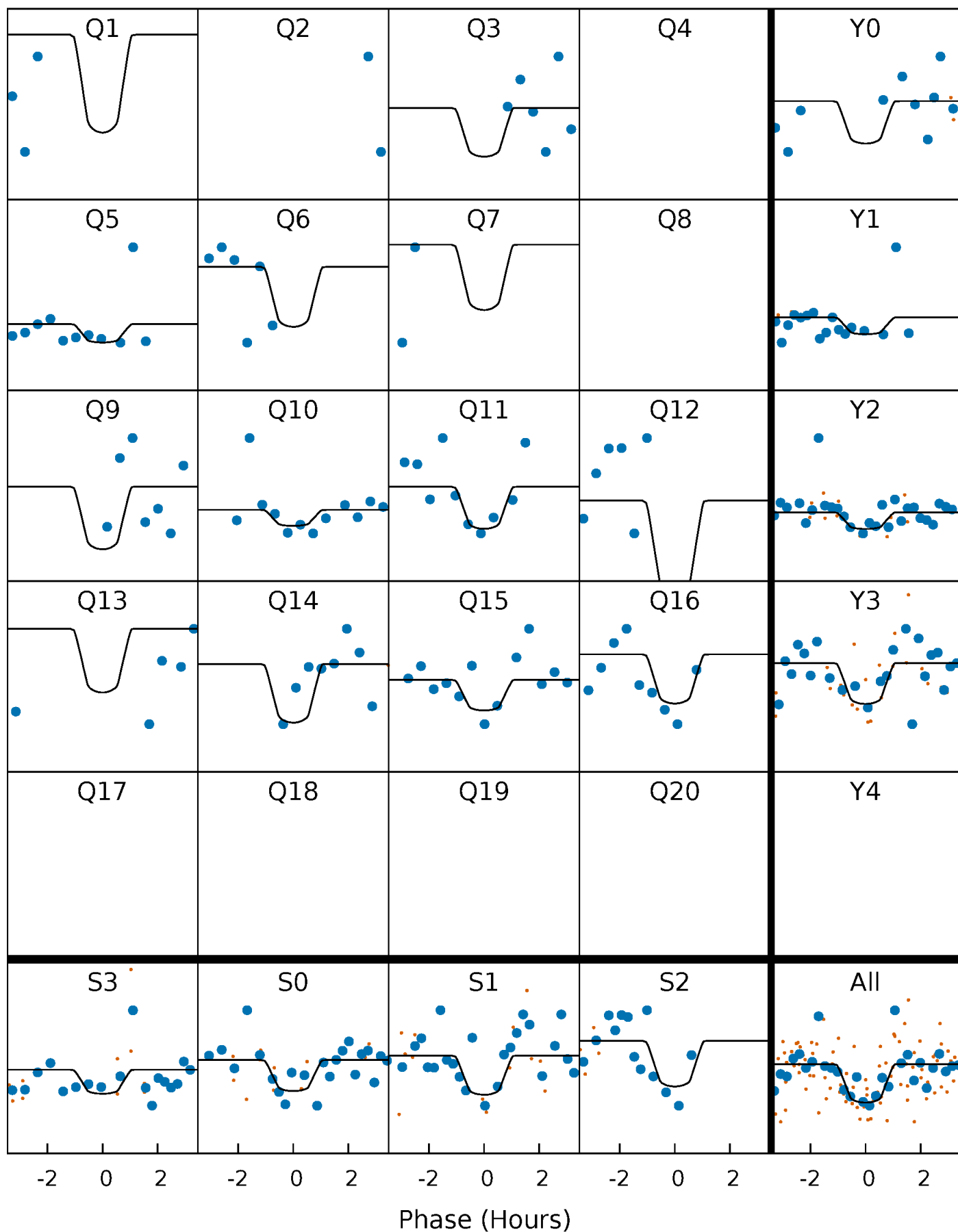
PDC Quarter-Phased Transit Curves

TCE 007974877-02 P= 47.525385 Days $T_0=162.529614$ (BKJD)



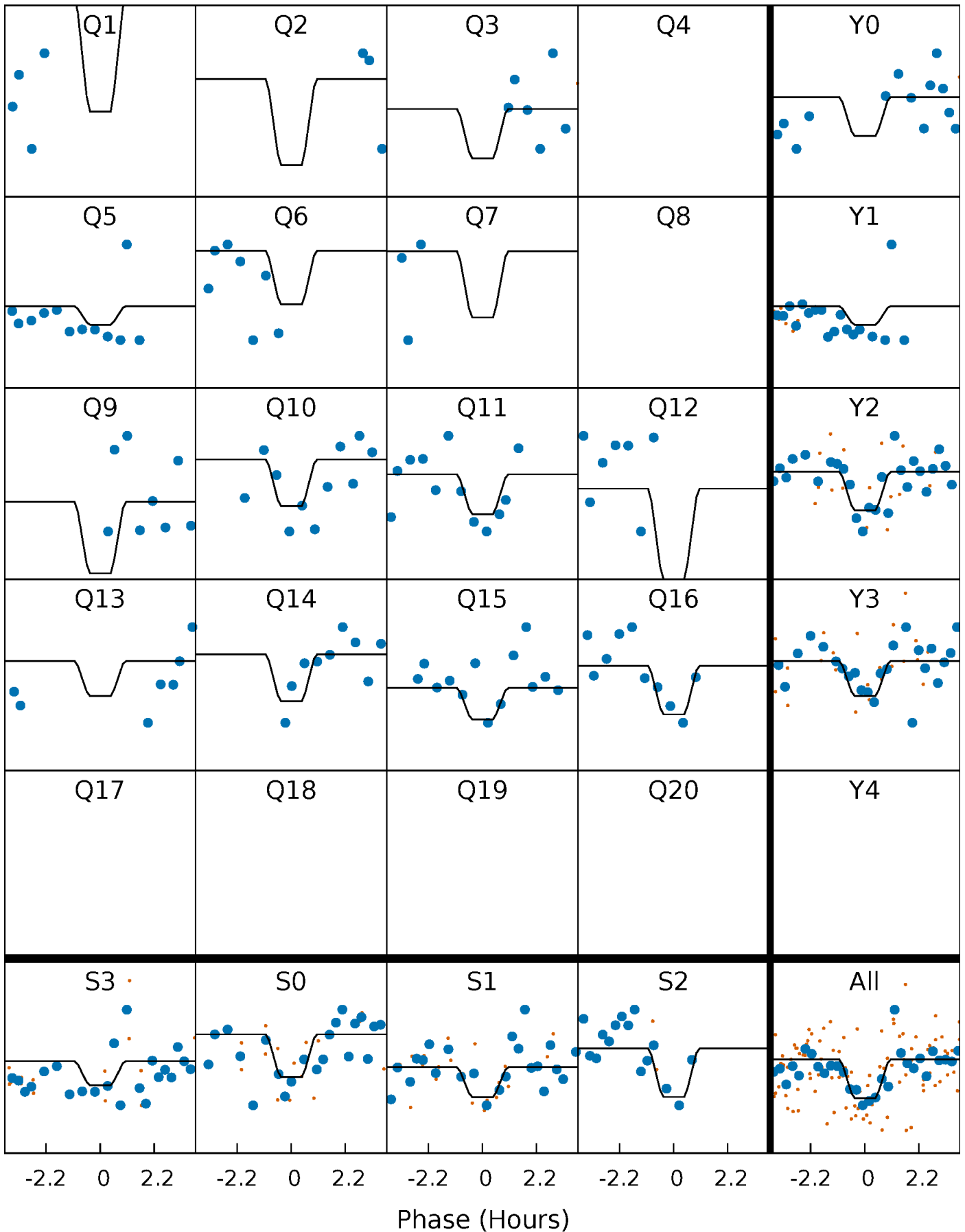
DV Quarter-Phased Transit Curves

TCE 007974877-02 P= 47.525385 Days $T_0=162.529614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

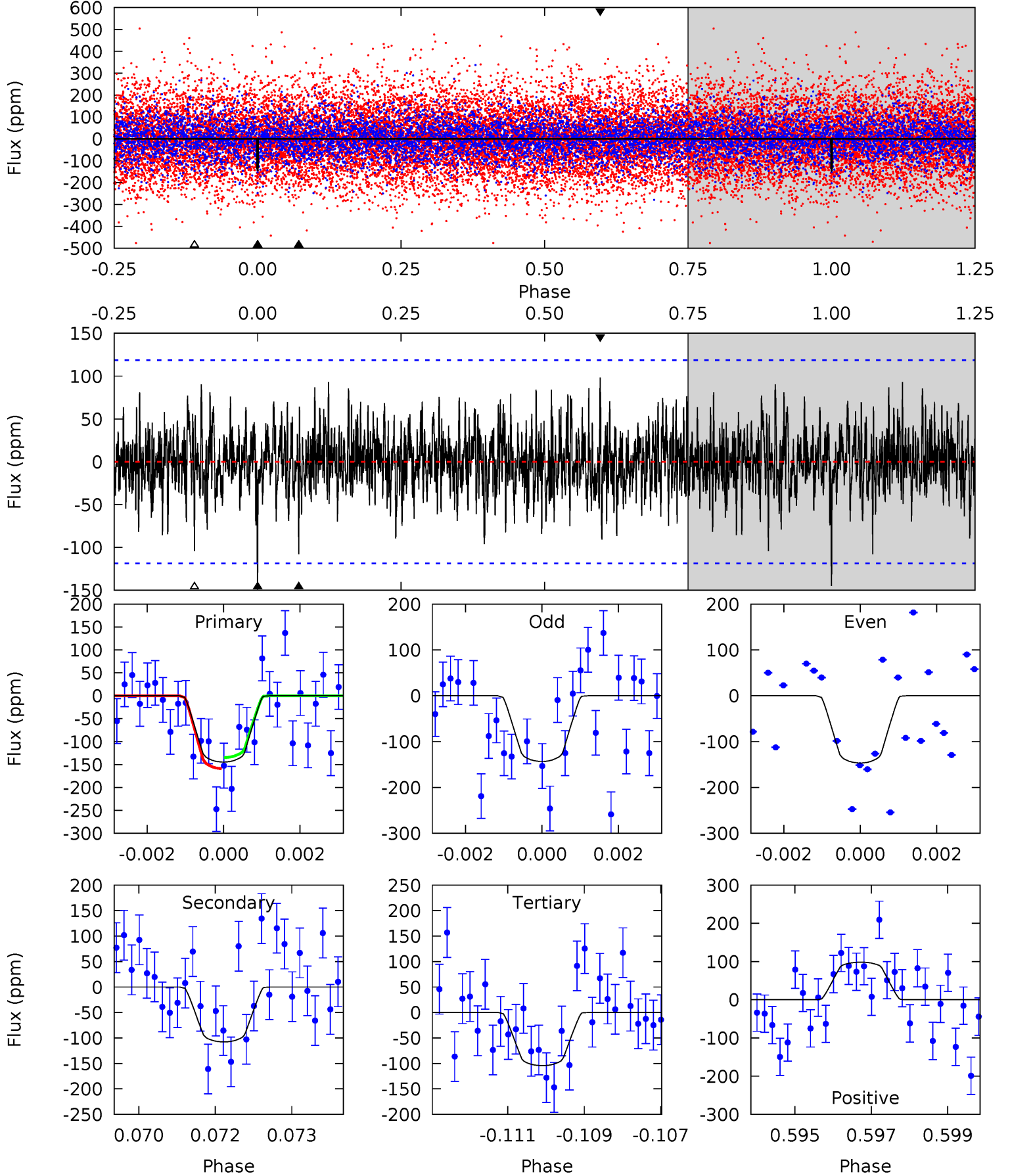
TCE 007974877-02 P= 47.525521 Days $T_0=162.521574$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-02, $P = 47.525385$ Days, $E = 115.004229$ Days

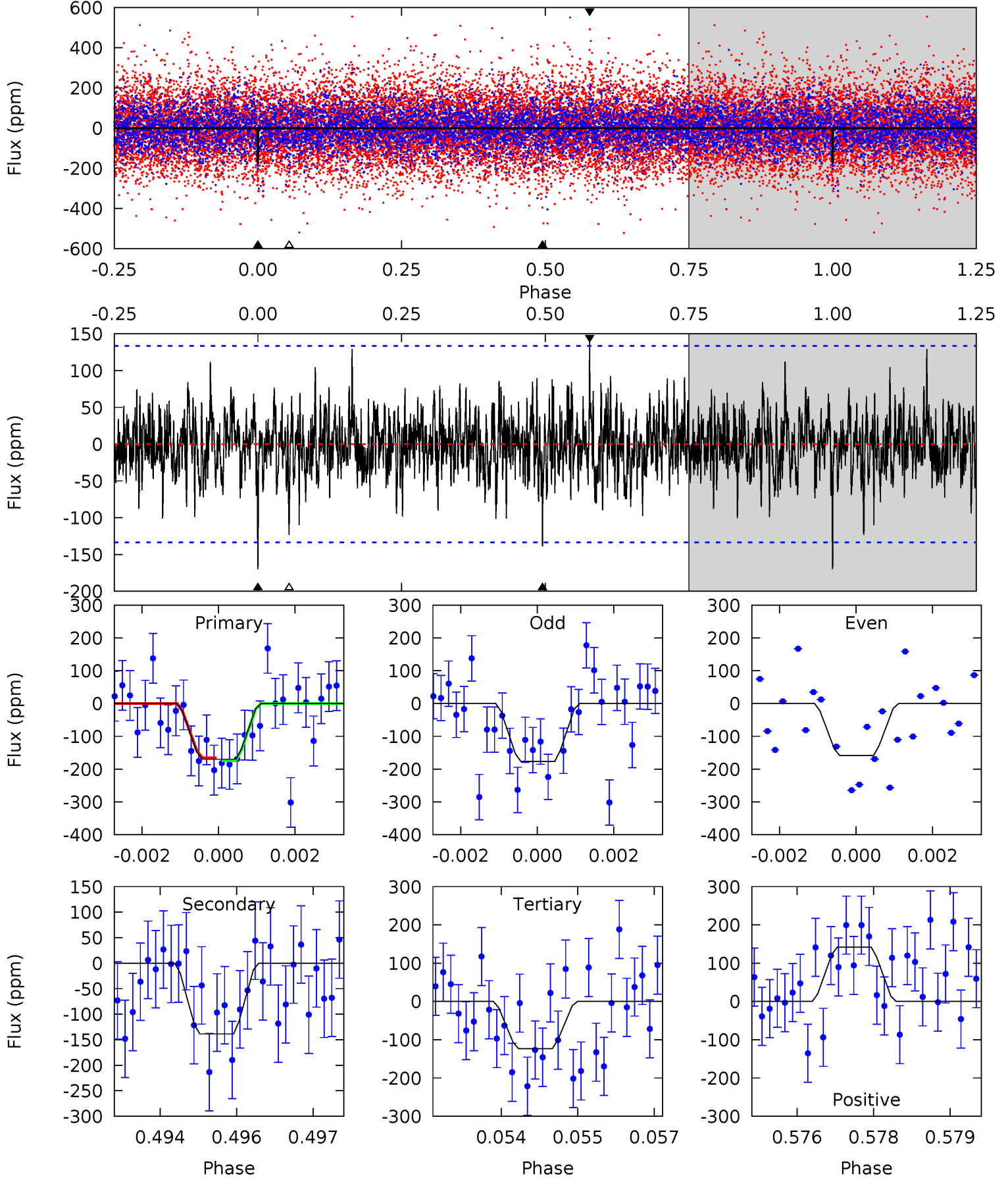
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 6.52 | 4.86 | 4.70 | 4.44 | 5.35 | 3.12 | 1.34 | 1.82 | 2.09 | 0.16 | 0.42 | 0.08 | 0.96 | 0.40 | 0.54 |



Alt Model-Shift Uniqueness Test

007974877-02, P = 47.525521 Days, E = 114.996053 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 6.81 | 5.56 | 4.95 | 5.70 | 5.36 | 3.14 | 1.35 | 1.86 | 1.11 | 0.61 | -0.14 | 0.36 | 0.95 | 0.46 | 0.18 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-02 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|---------------------|------------------------|----------------------|
| DV | -108 ± 22 | $3.50^{+2.86}_{-2.13}$ | 1126^{+72}_{-95} | 5433^{+3467}_{-1134} | 391^{+2051}_{-274} |
| Alt. | -139 ± 25 | $3.23^{+2.54}_{-2.04}$ | 1130^{+74}_{-100} | 6055^{+4943}_{-1386} | 590^{+3956}_{-408} |

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 $A_{obs} \gg 1.0$

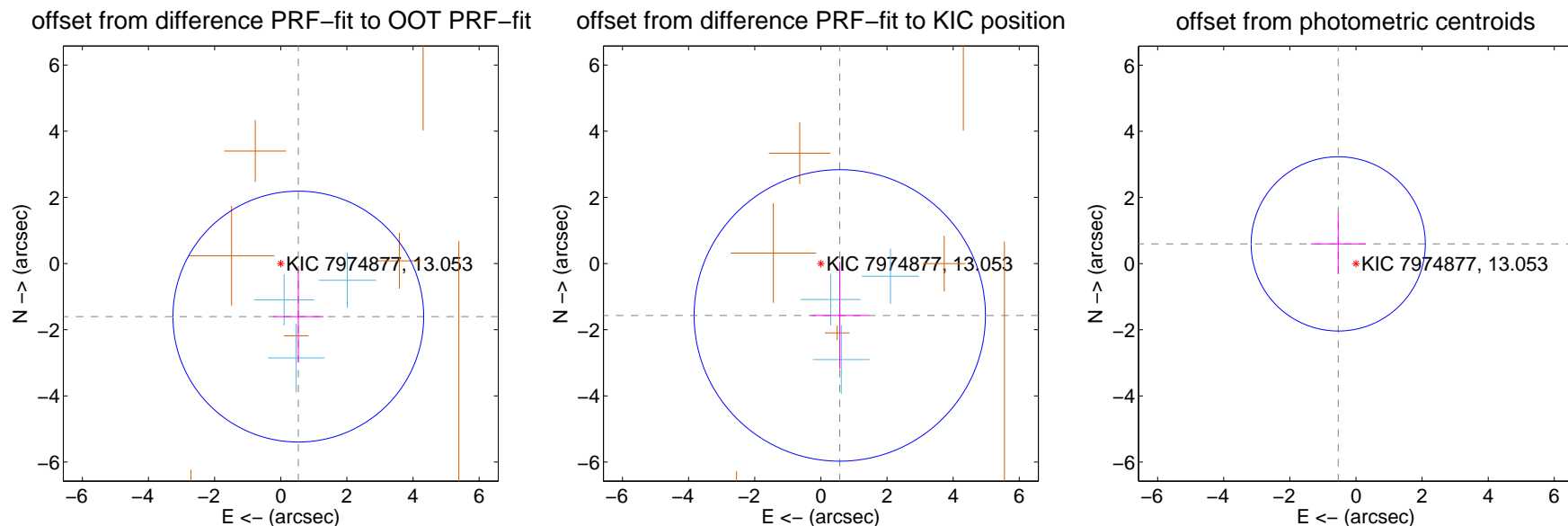
DV Centroid Data

Supplemental centroid analysis for 007974877-02. Kepler magnitude: 13.05. Transit SNR 7.69

There are 3 quarters with good PRF difference image offsets

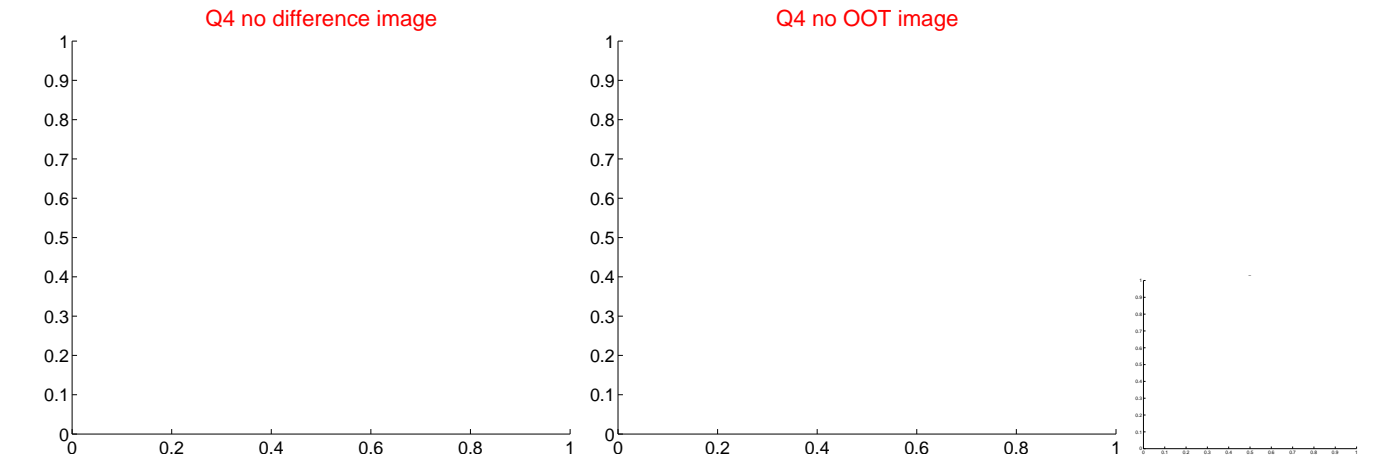
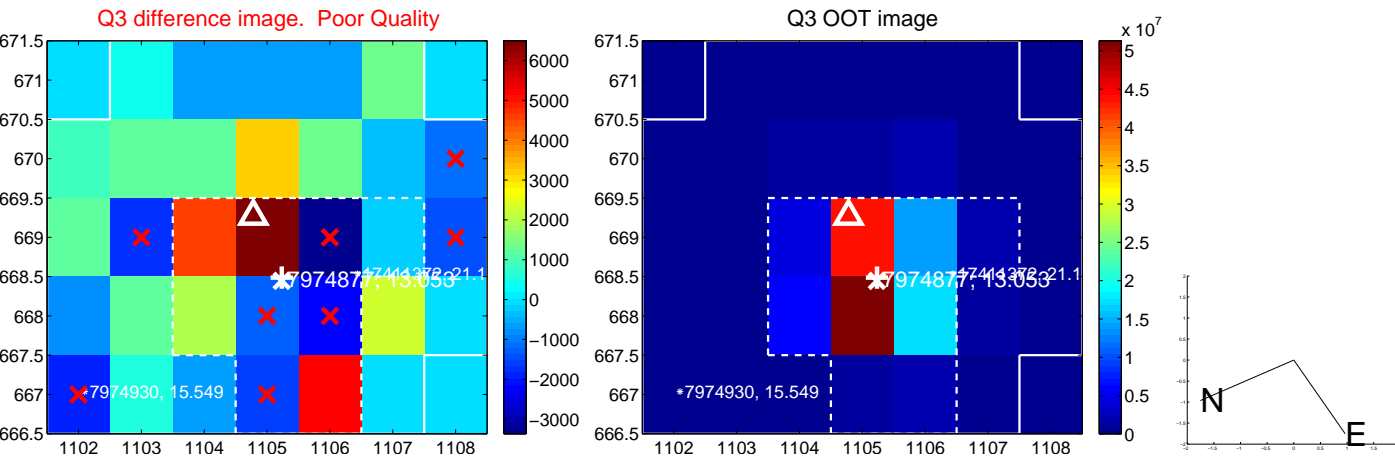
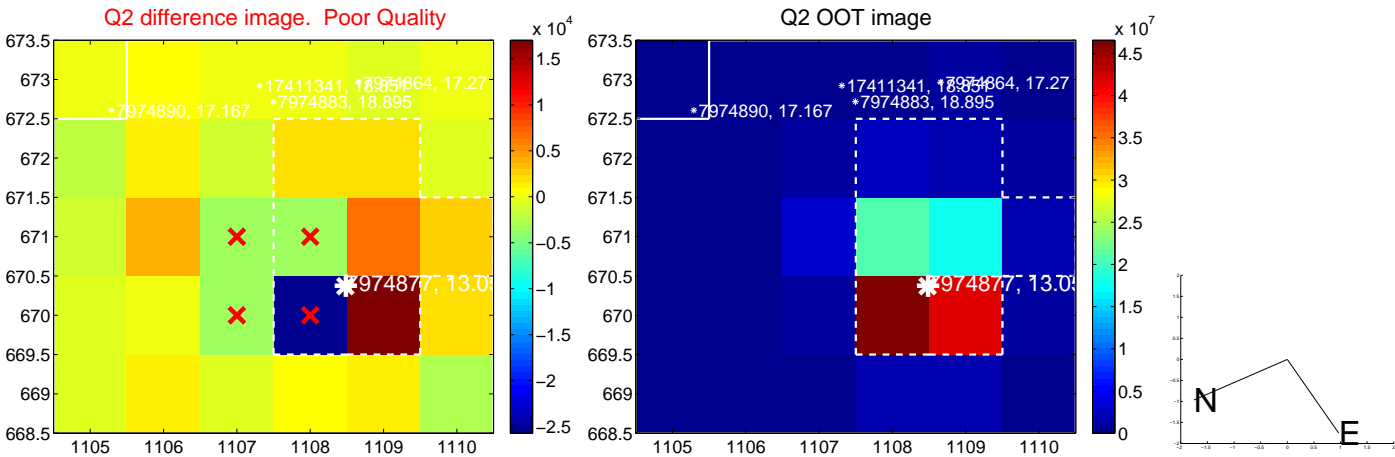
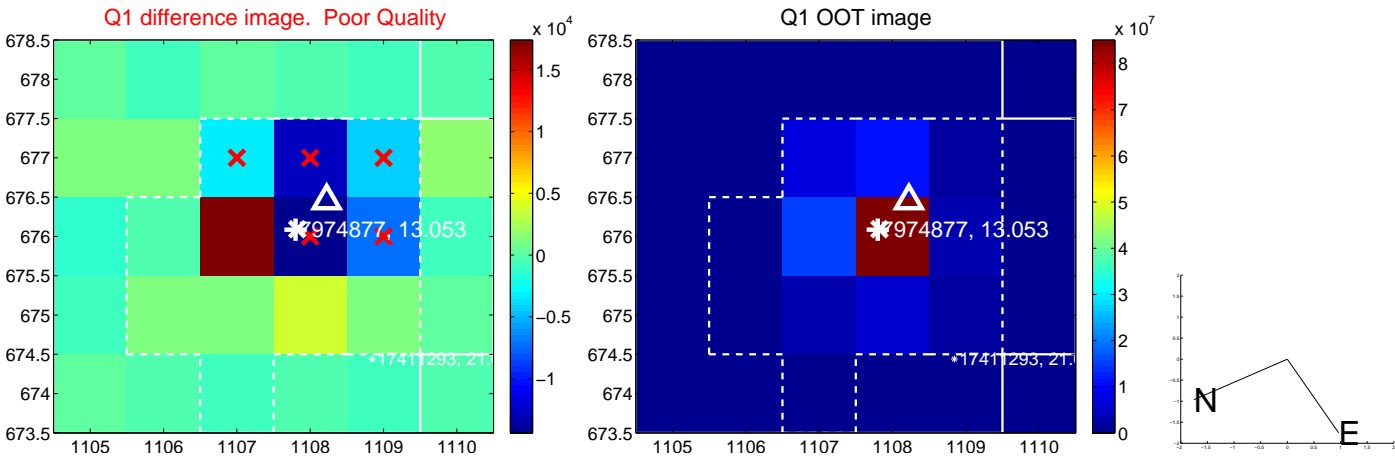
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 1.689 ± 1.264 | 1.34 | -0.531 ± 0.762 | -1.604 ± 1.383 |
| PRF-fit source offset from KIC position | 1.670 ± 1.468 | 1.14 | -0.572 ± 0.867 | -1.569 ± 1.617 |
| photometric centroid source offset | 0.80 ± 0.88 | 0.91 | 0.54 ± 0.83 | 0.60 ± 0.92 |

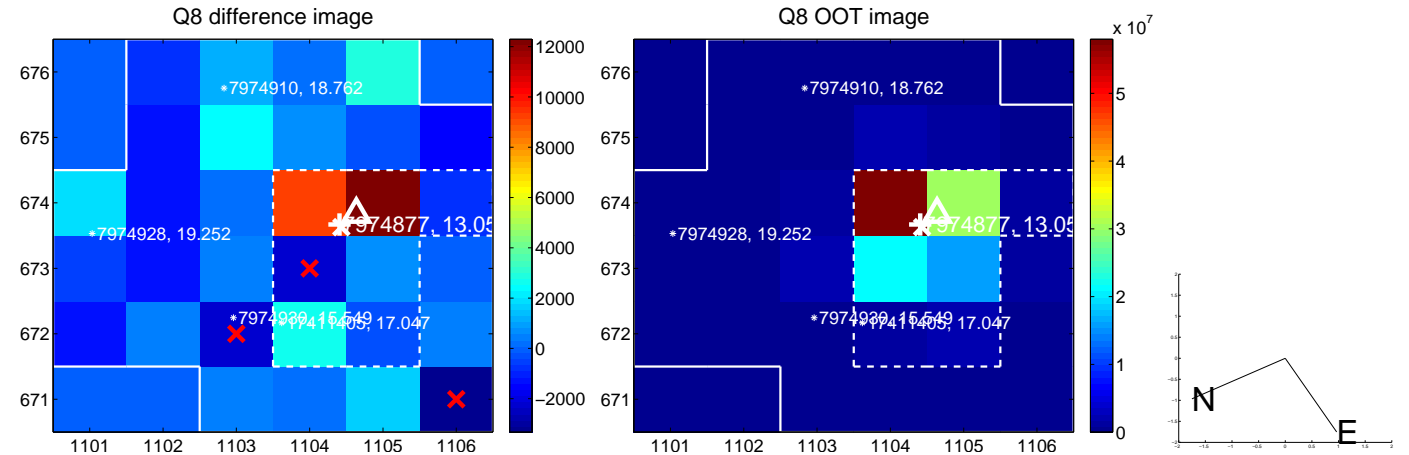
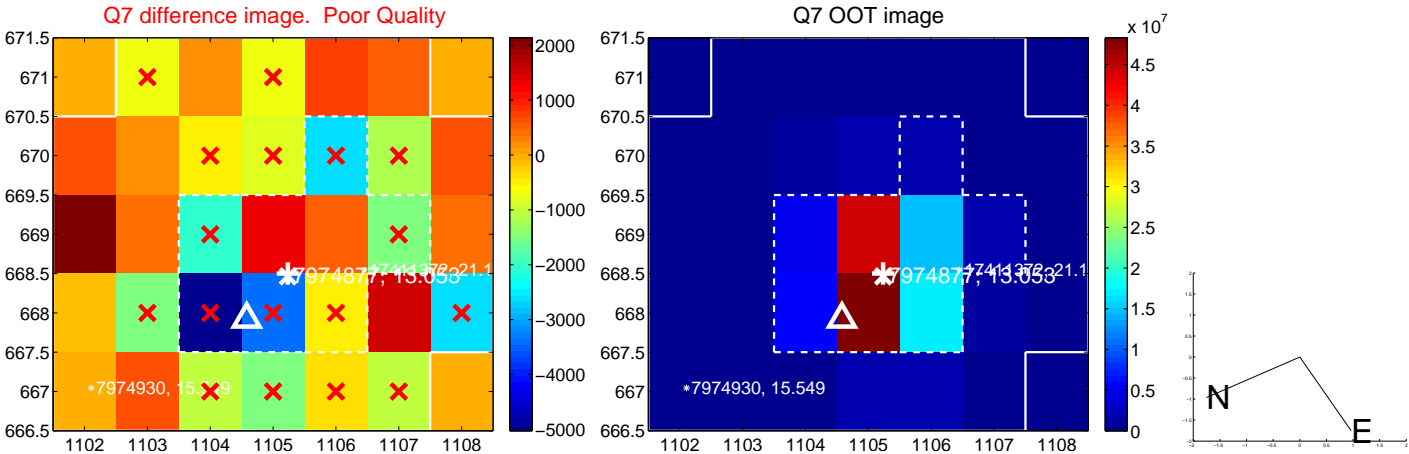
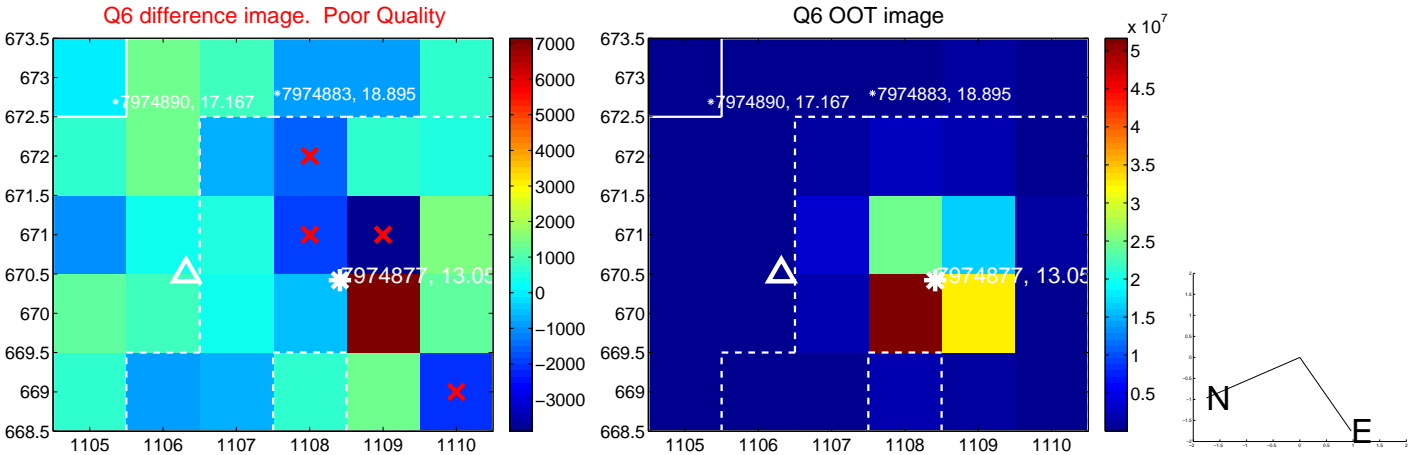
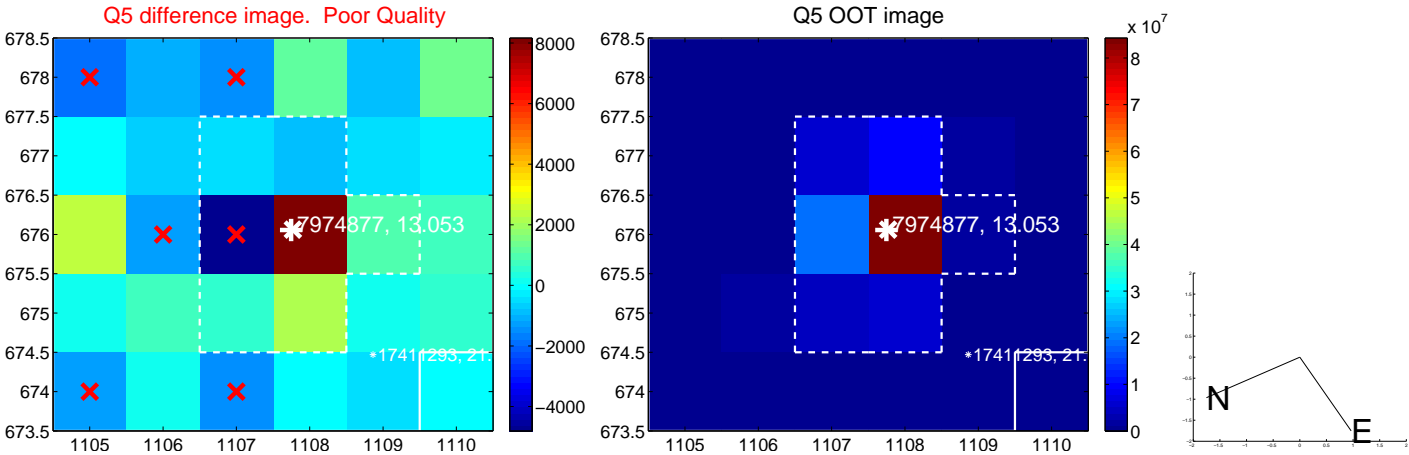


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

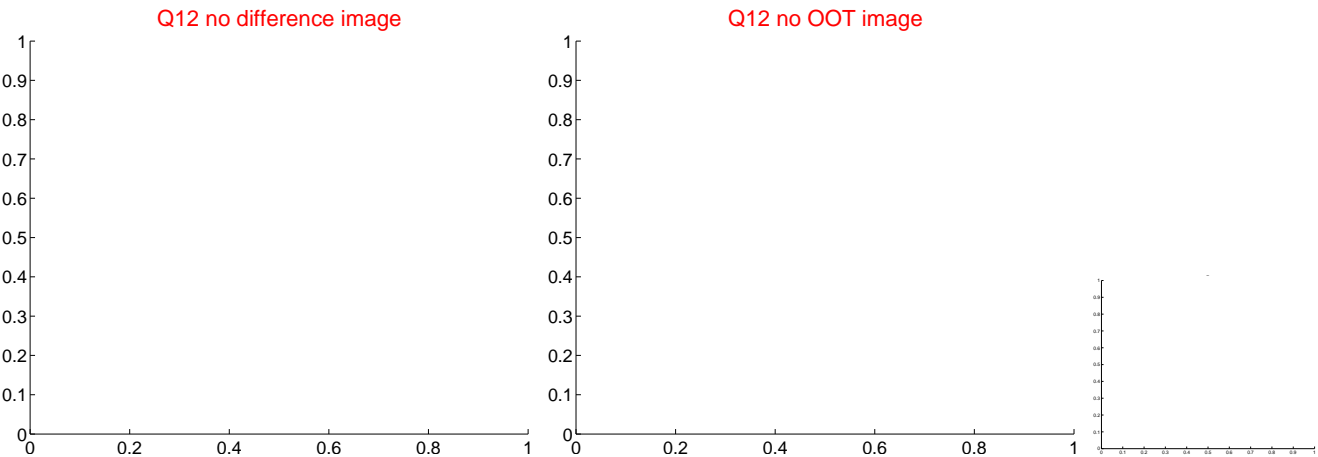
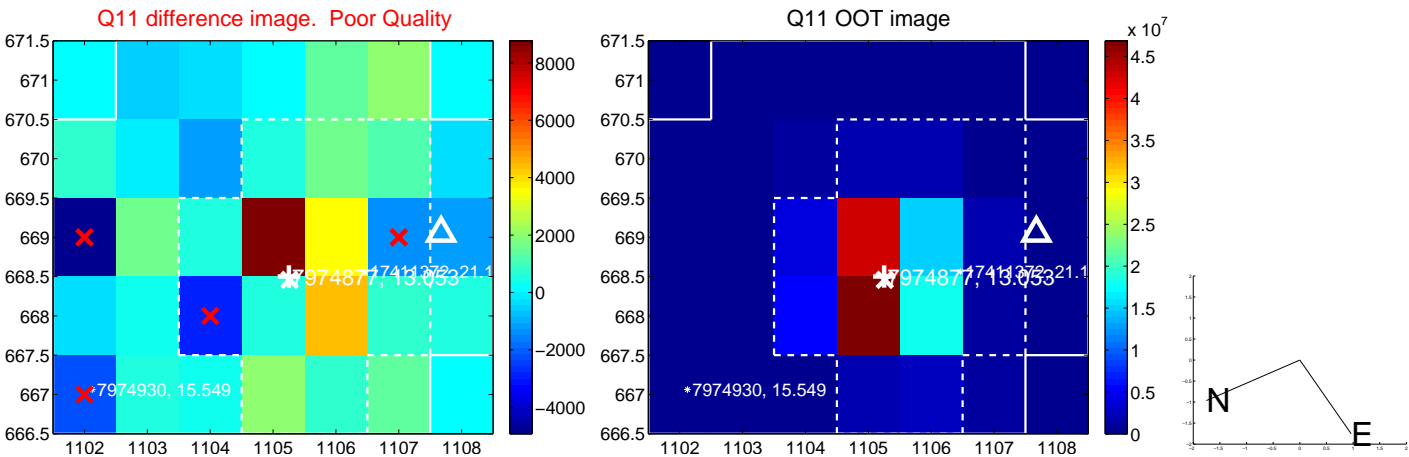
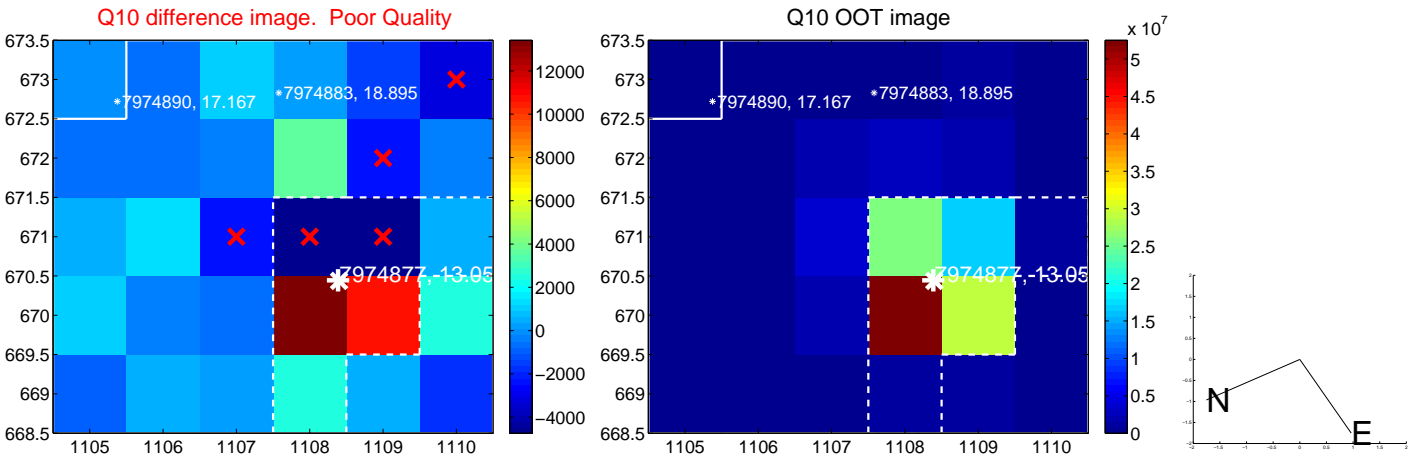
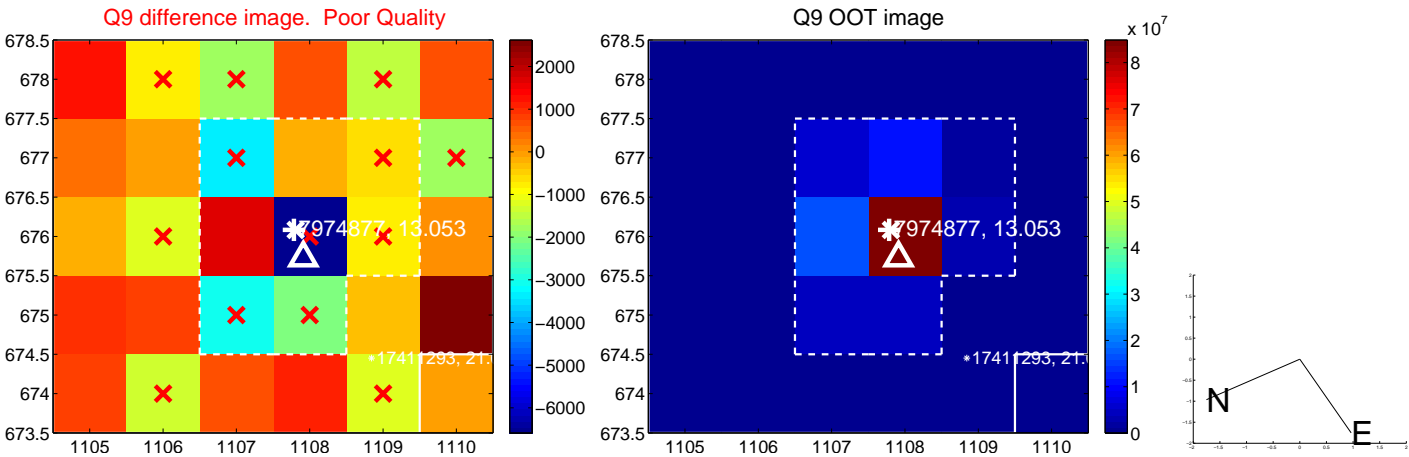
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



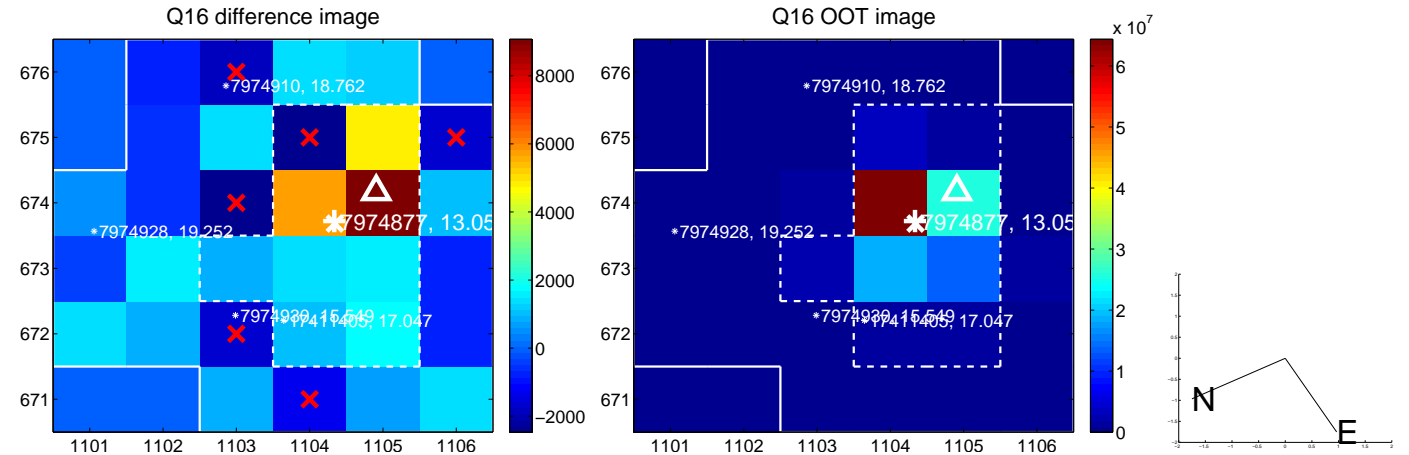
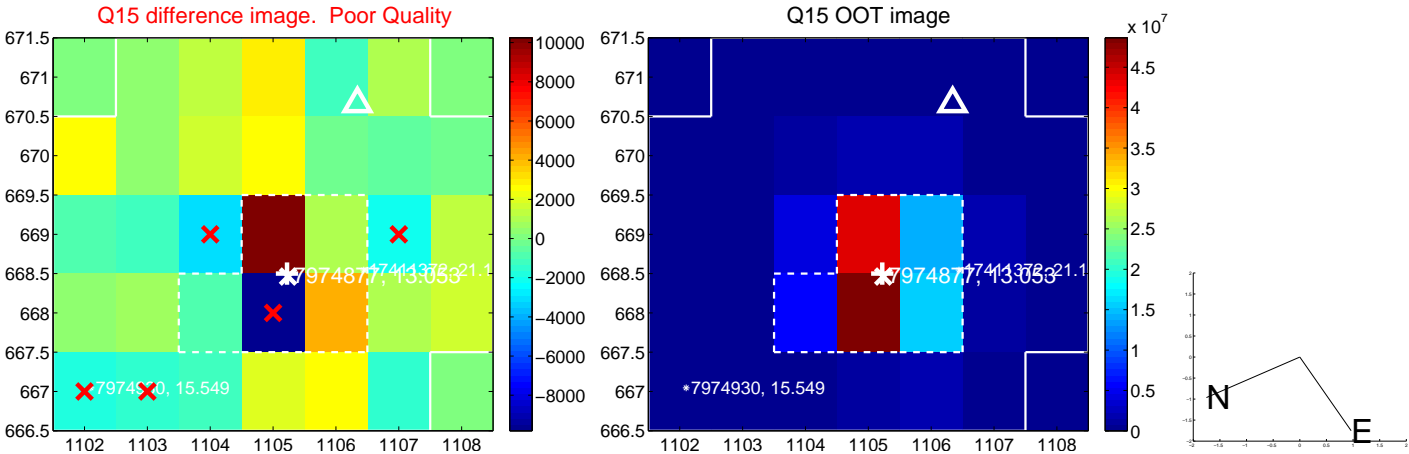
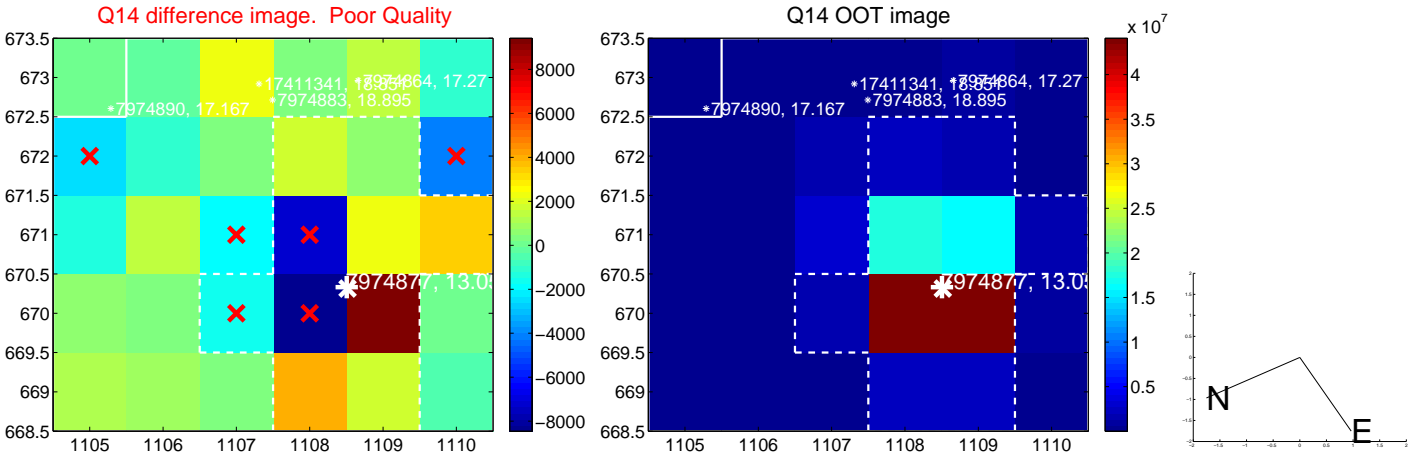
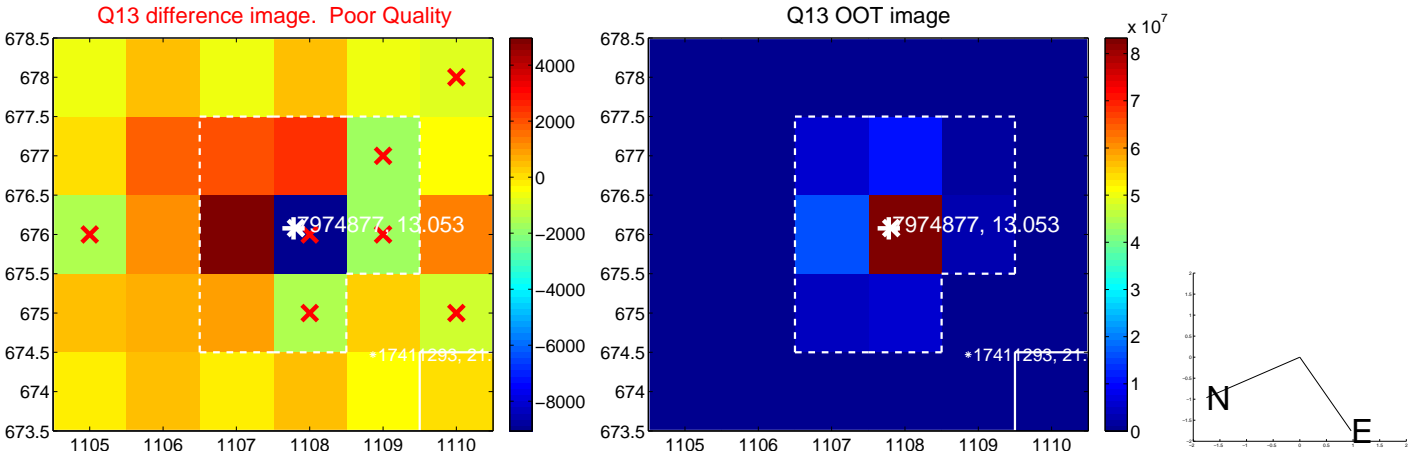
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



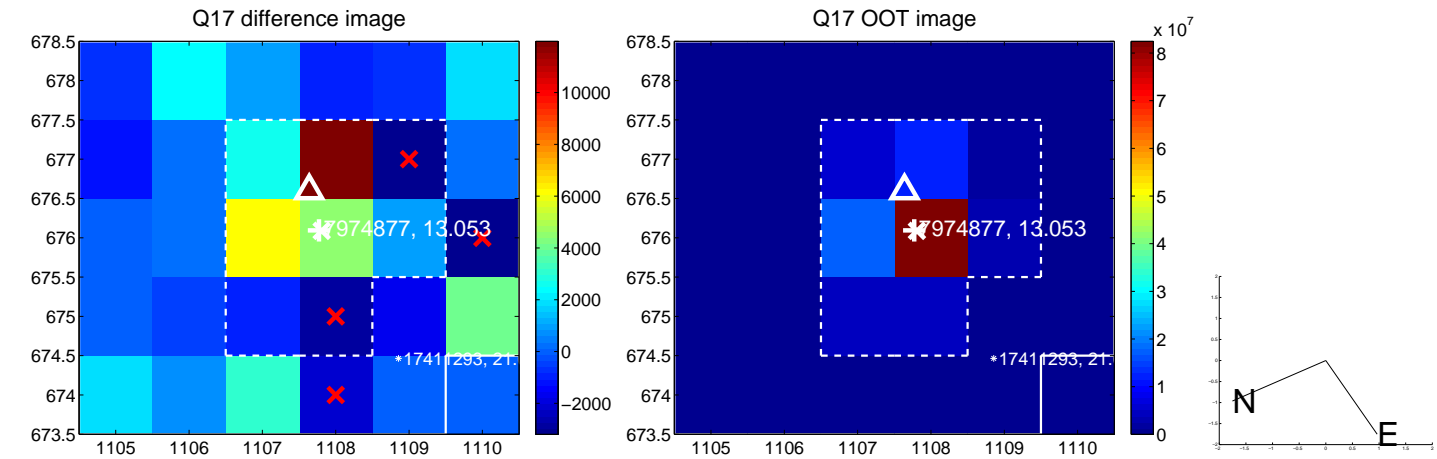
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



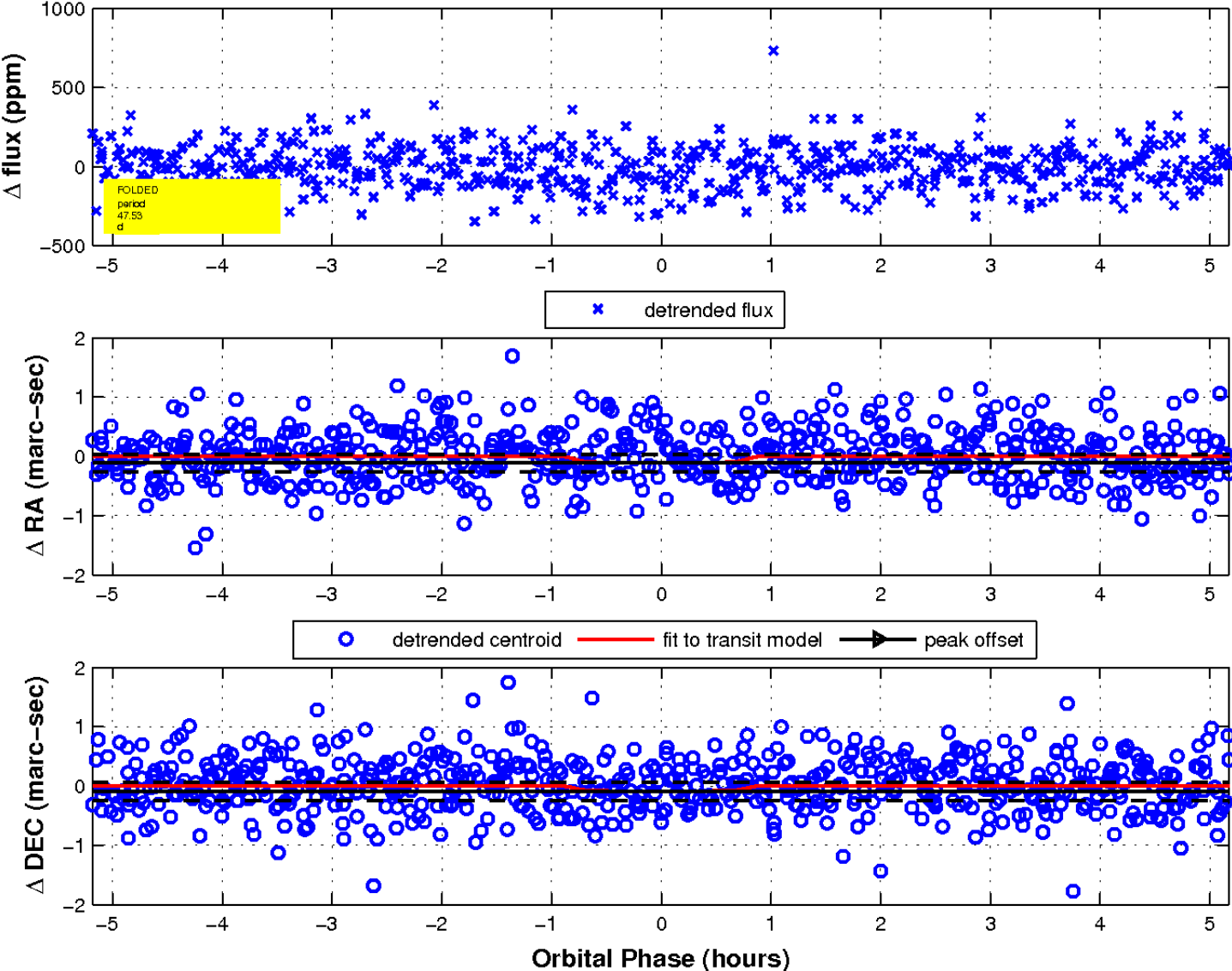
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



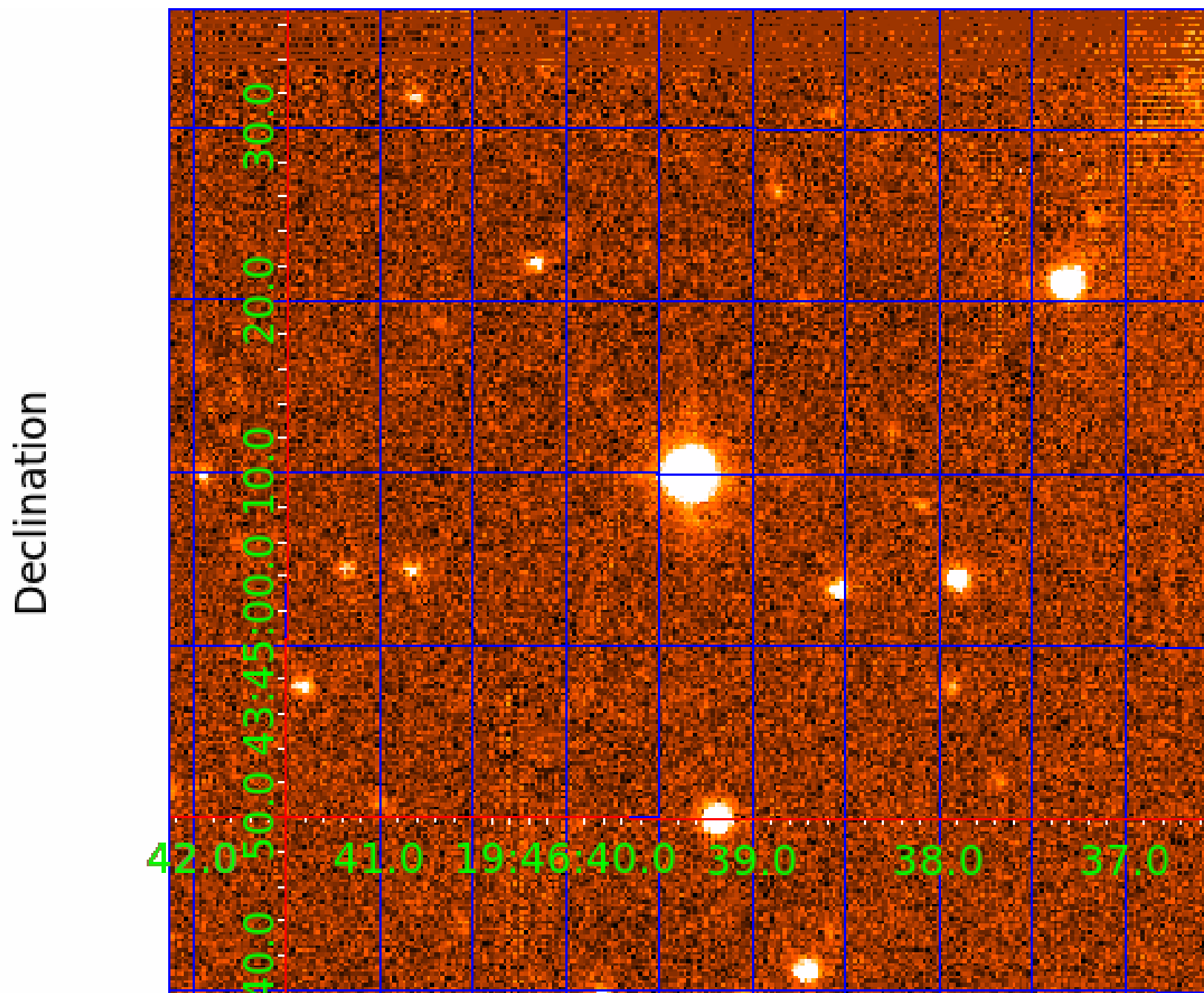
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 6



UKIRT Image



KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
| 007974877-02 | OBS | No | 47.525385 | 162.529614 | 173.2 | 1.728 | 8.7 | 7.7 | 2.21 | 6675 | 3.41 | 108.58 |
| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

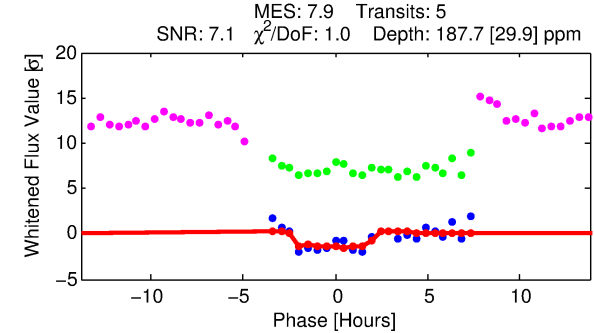
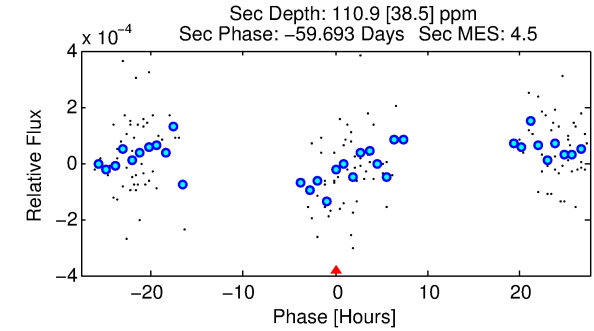
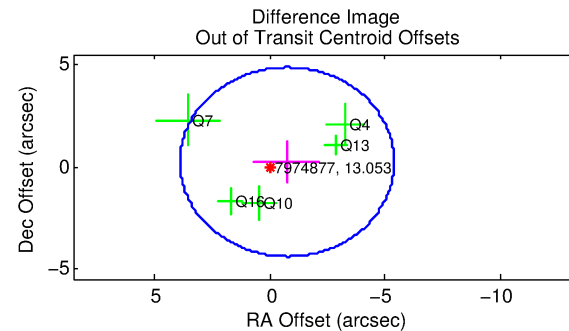
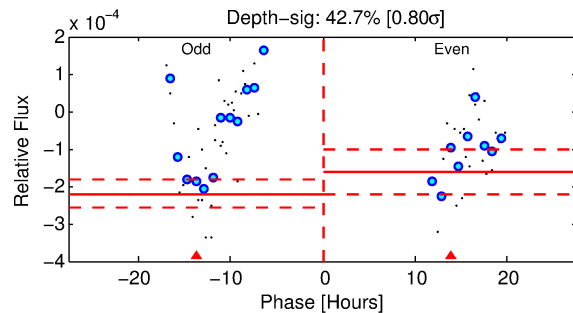
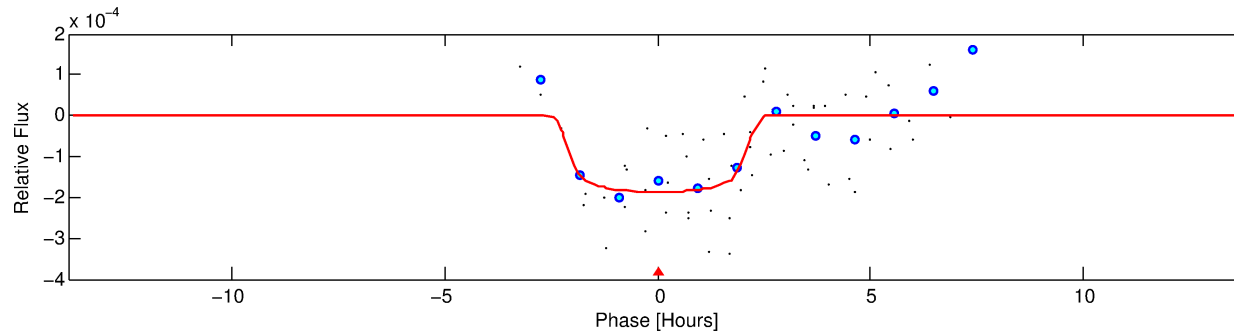
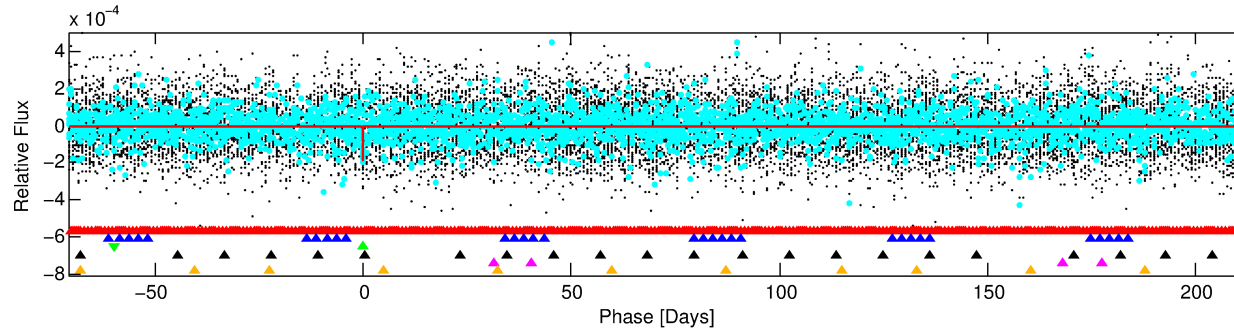
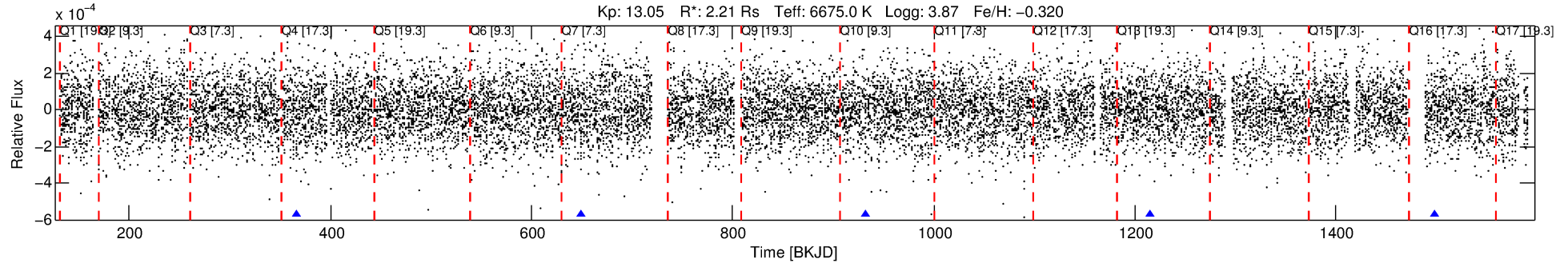
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-03

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 3 of 6 Period: 282.864 d



DV Fit Results:

Period = 282.86428 [0.00489] d
Epoch = 365.9561 [0.0087] BKJD
Rp/R* = 0.0146 [0.0090]
a/R* = 219.65 [789.91]
b = 0.90 [0.78]
Seff = 10.07 [5.21]
Teq = 454 [59] K
Rp = 3.52 [2.47] Re
a = 0.9269 [0.2967] AU
Ag = 4232.90 [5801.03] [0.73 σ]
Teffp = 5664 [1813] K [2.87 σ]

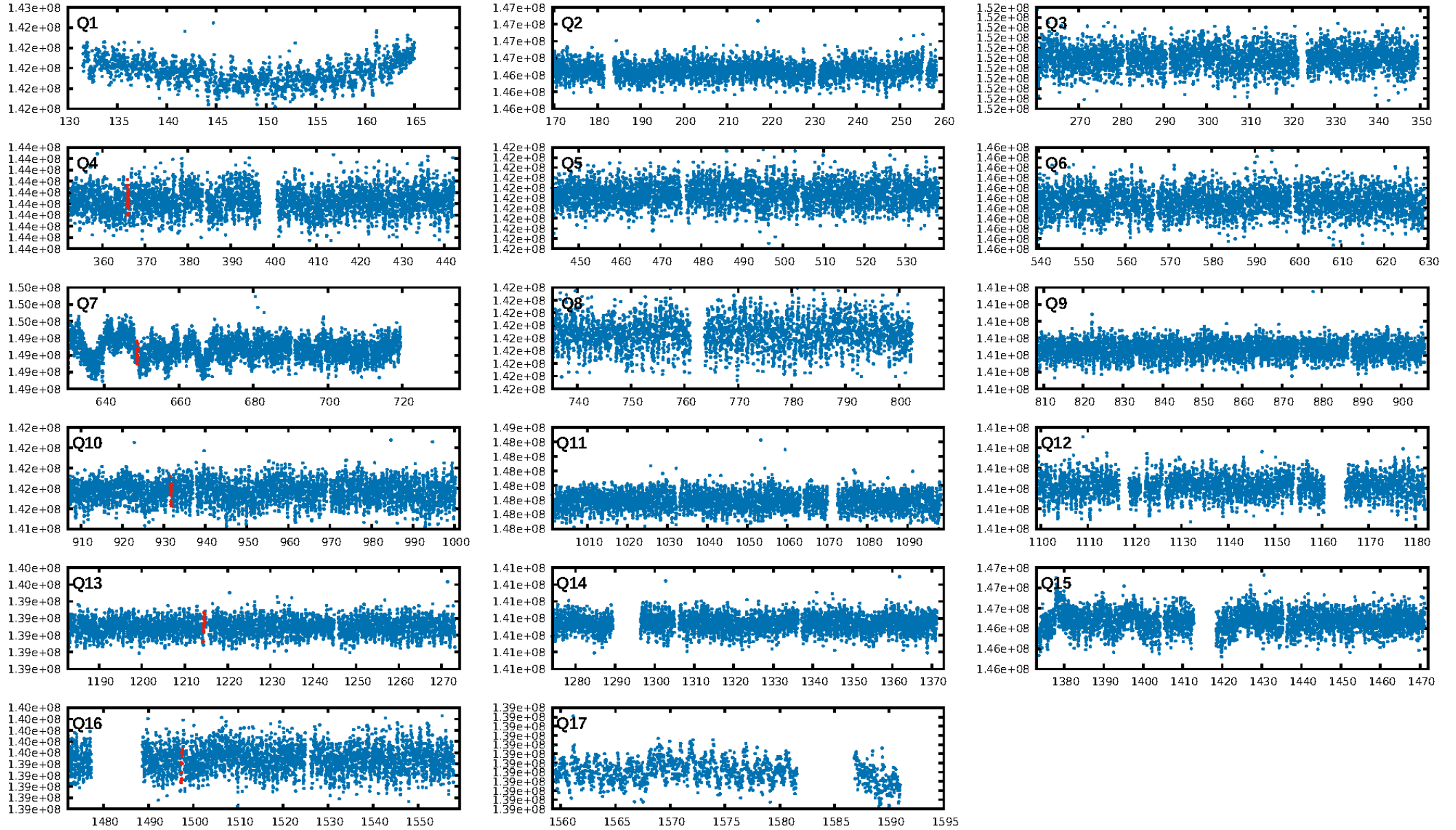
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [642.39 σ]
LongPeriod-sig: 100.0% [550.63 σ]
ModelChiSquare2-sig: 13.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 5.43e-09
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.159
Centroid-sig: 7.3%
Centroid-so: 1.423 arcsec [1.09 σ]
OotOffset-rm: 0.785 arcsec [0.51 σ]
KicOffset-rm: 0.886 arcsec [0.69 σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/5]

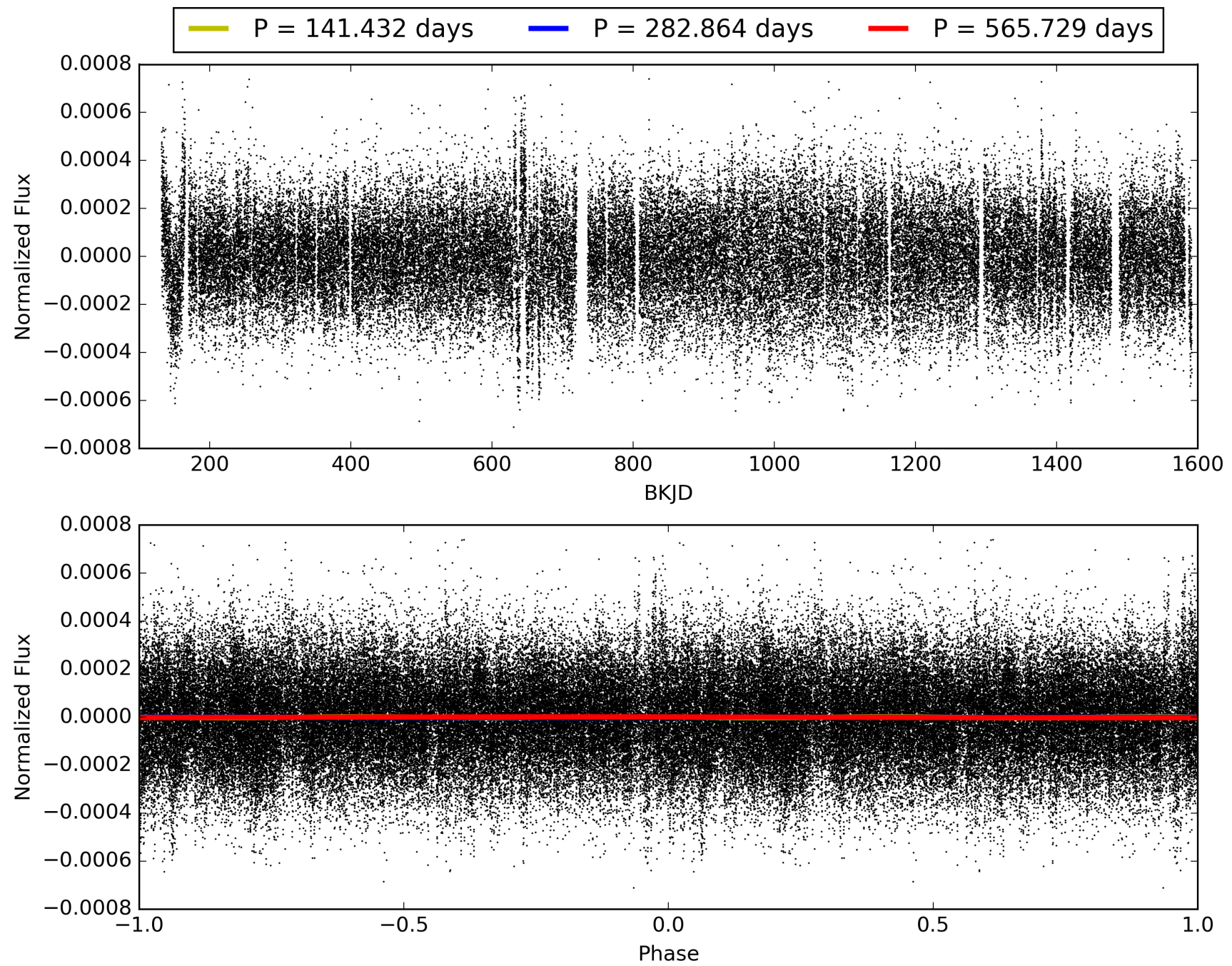
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:16 Z

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

TCE 007974877-03, PDC Light Curves

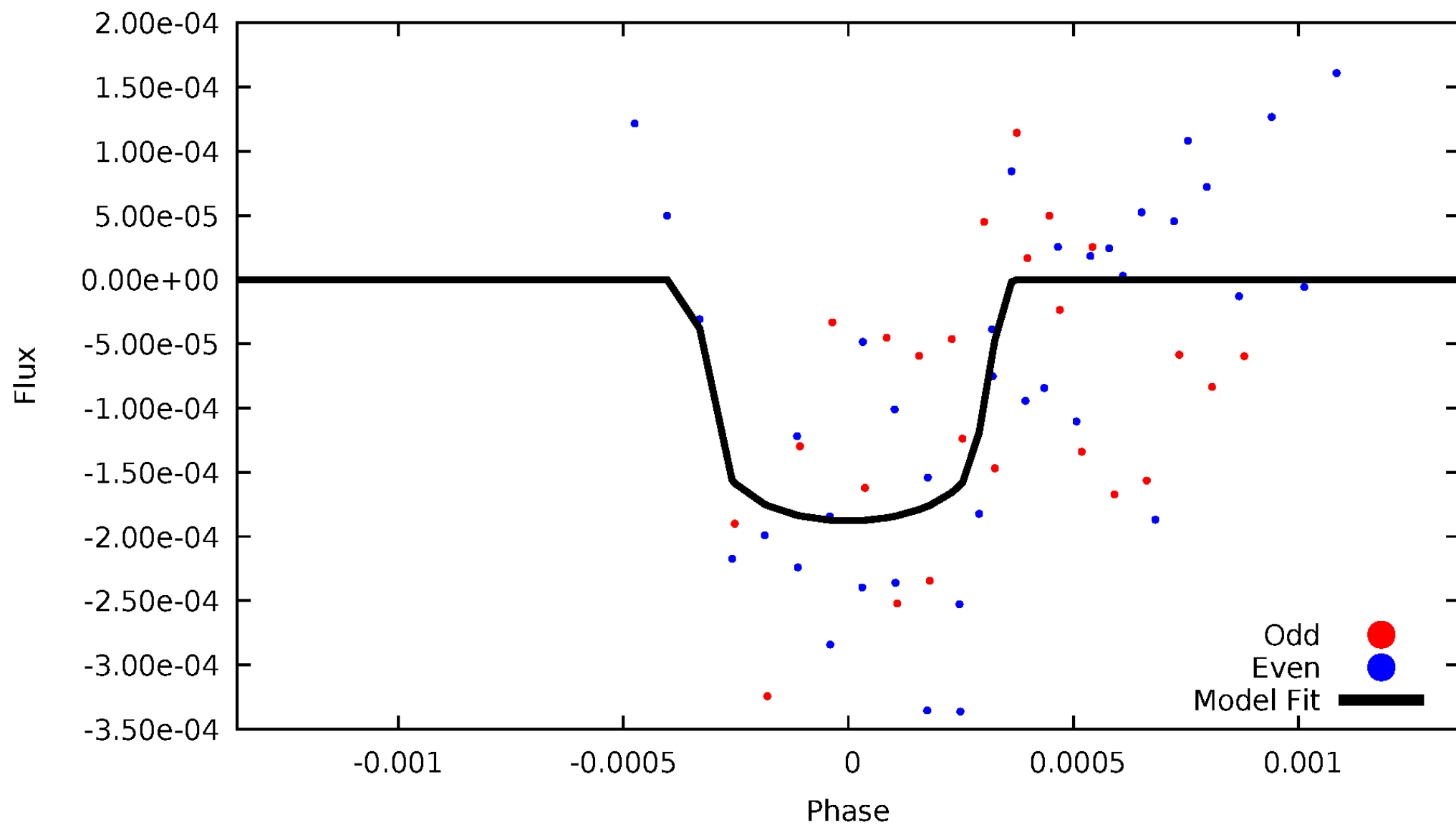


TCE 007974877-03



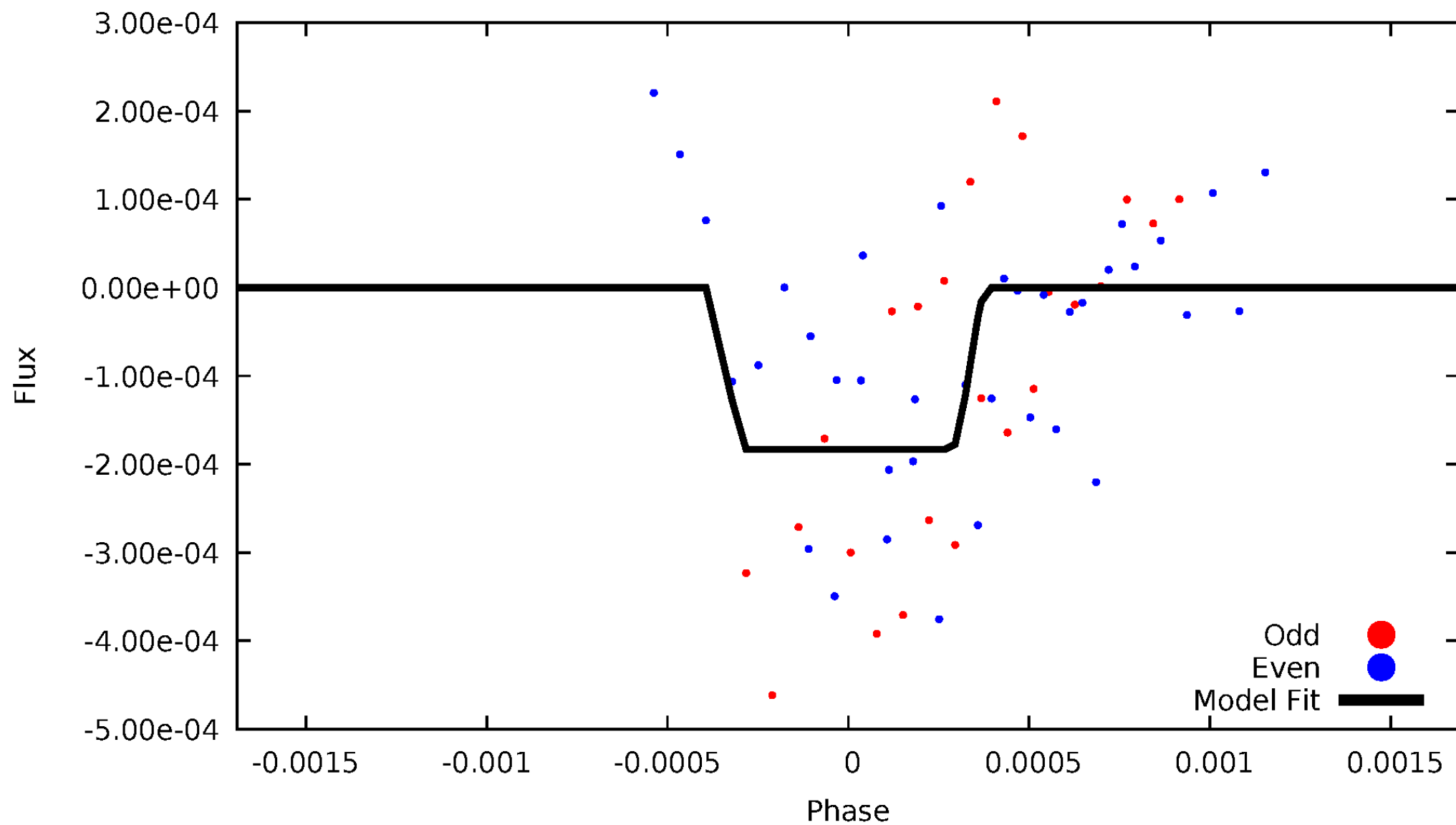
DV Odd/Even

TCE 007974877-03



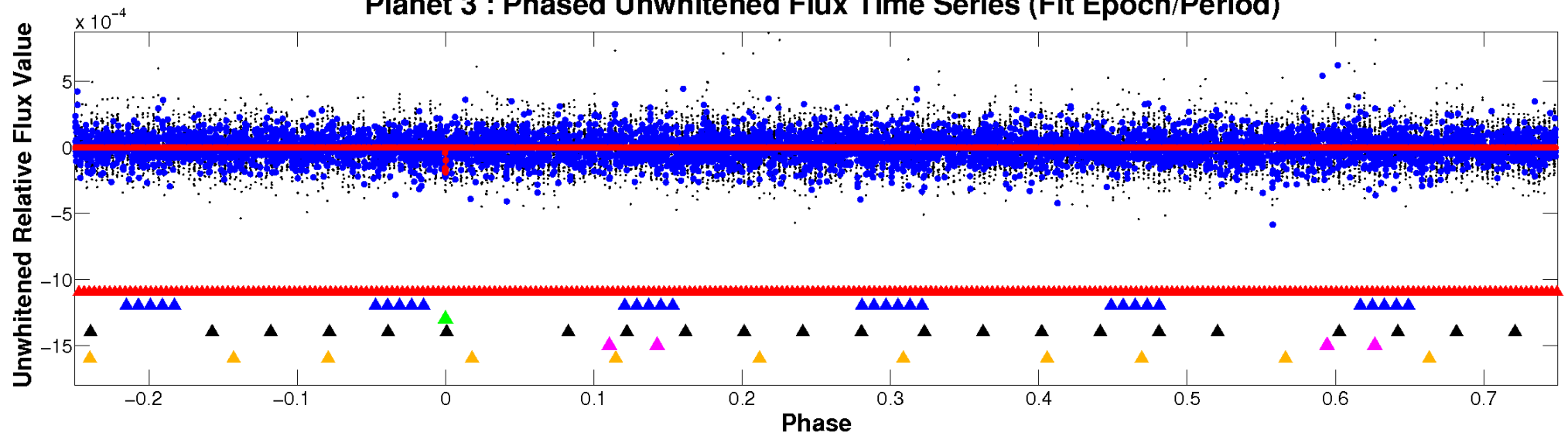
ALT Odd/Even

TCE 007974877-03

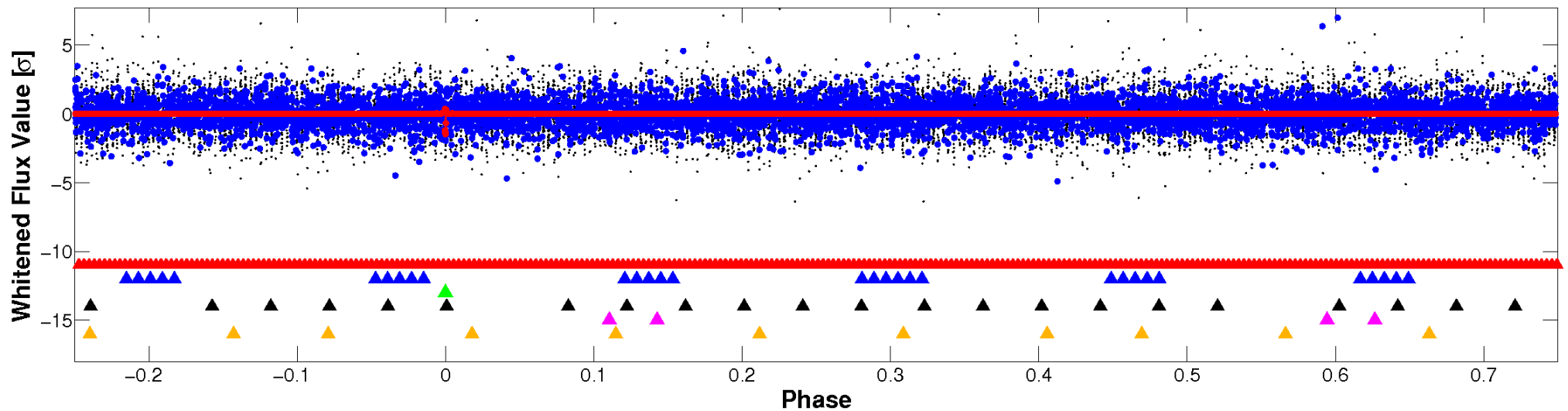


Non-Whitened Vs. Whitened Light Curve

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

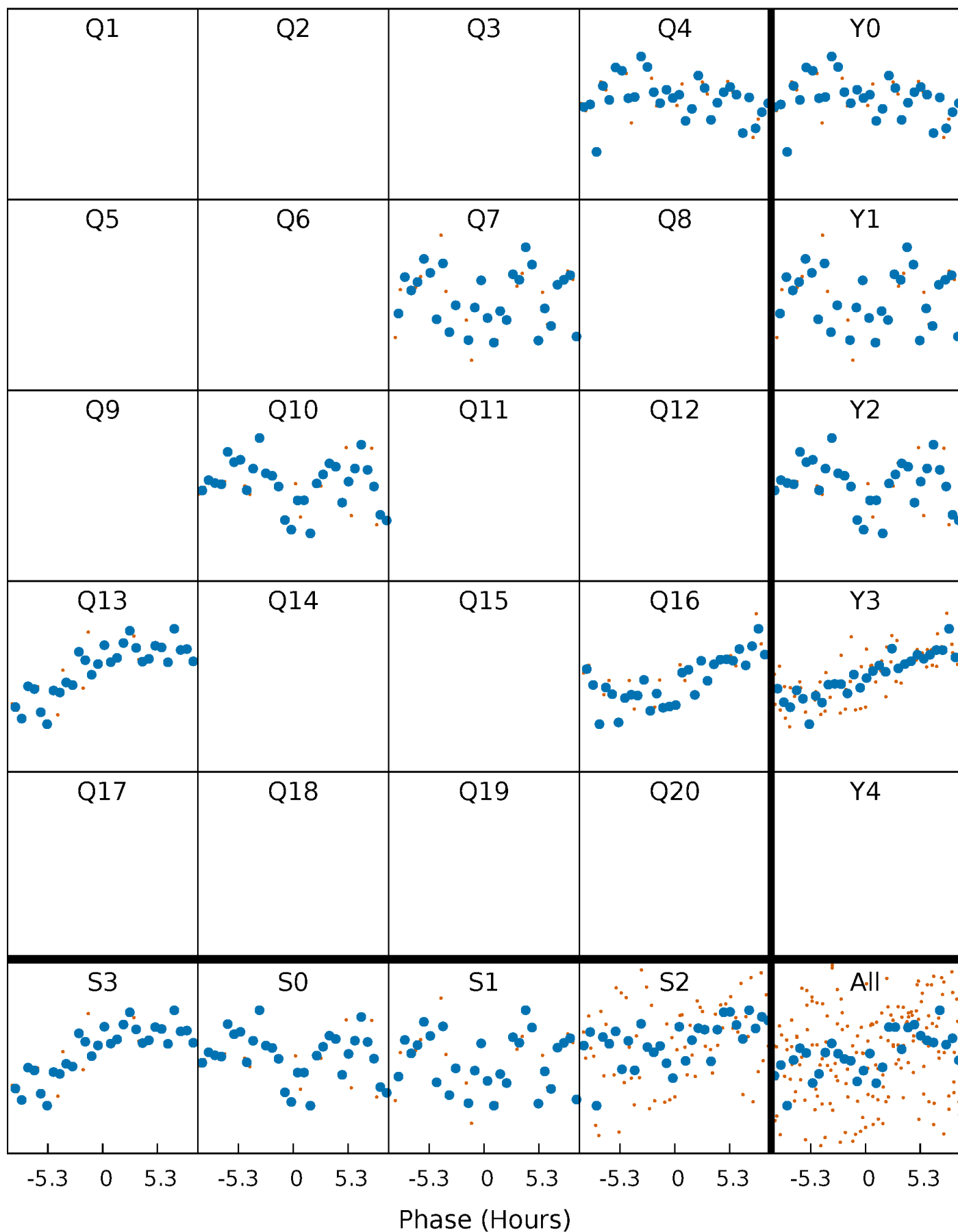


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



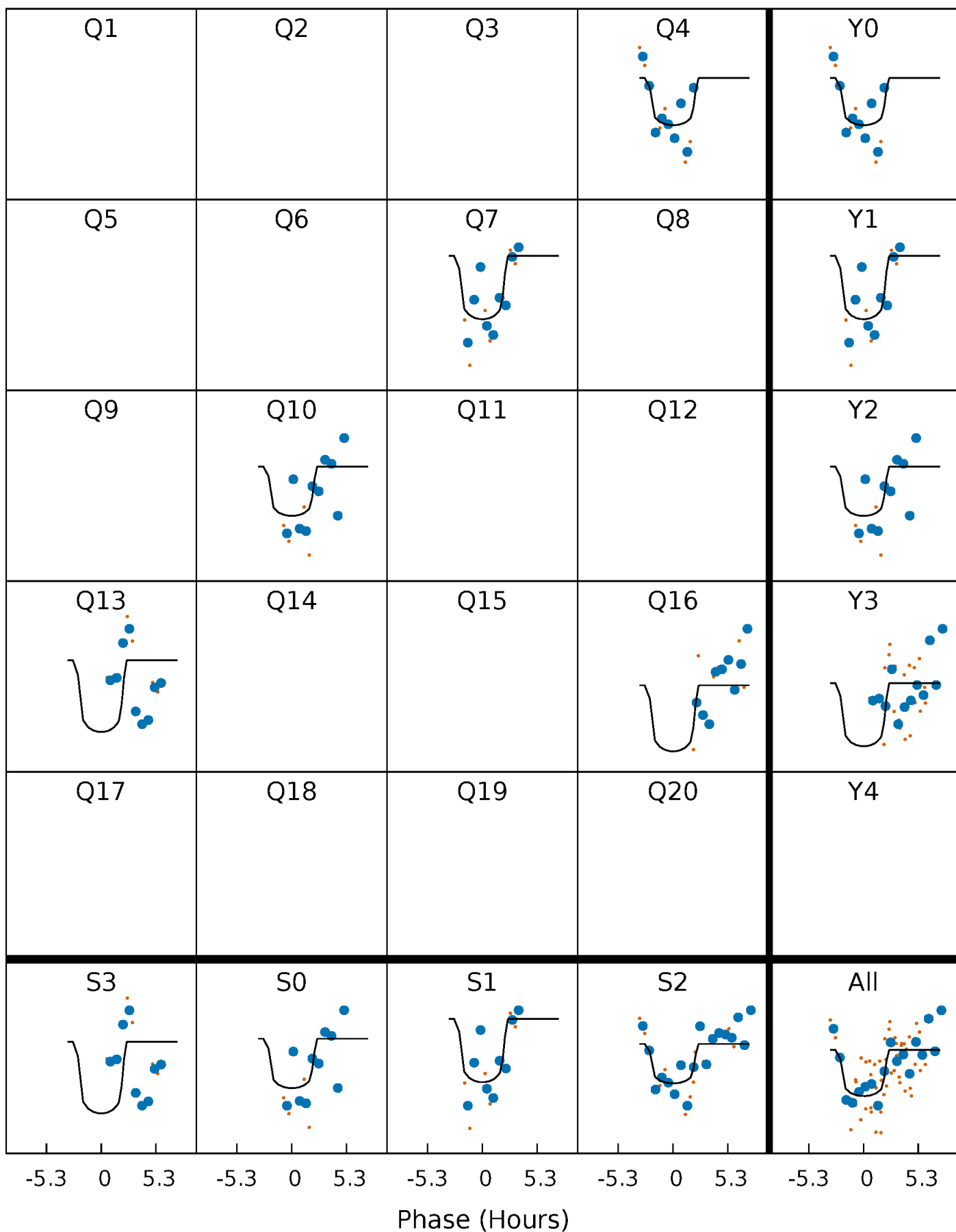
PDC Quarter-Phased Transit Curves

TCE 007974877-03 $P=282.864279$ Days $T_0=365.956110$ (BKJD)



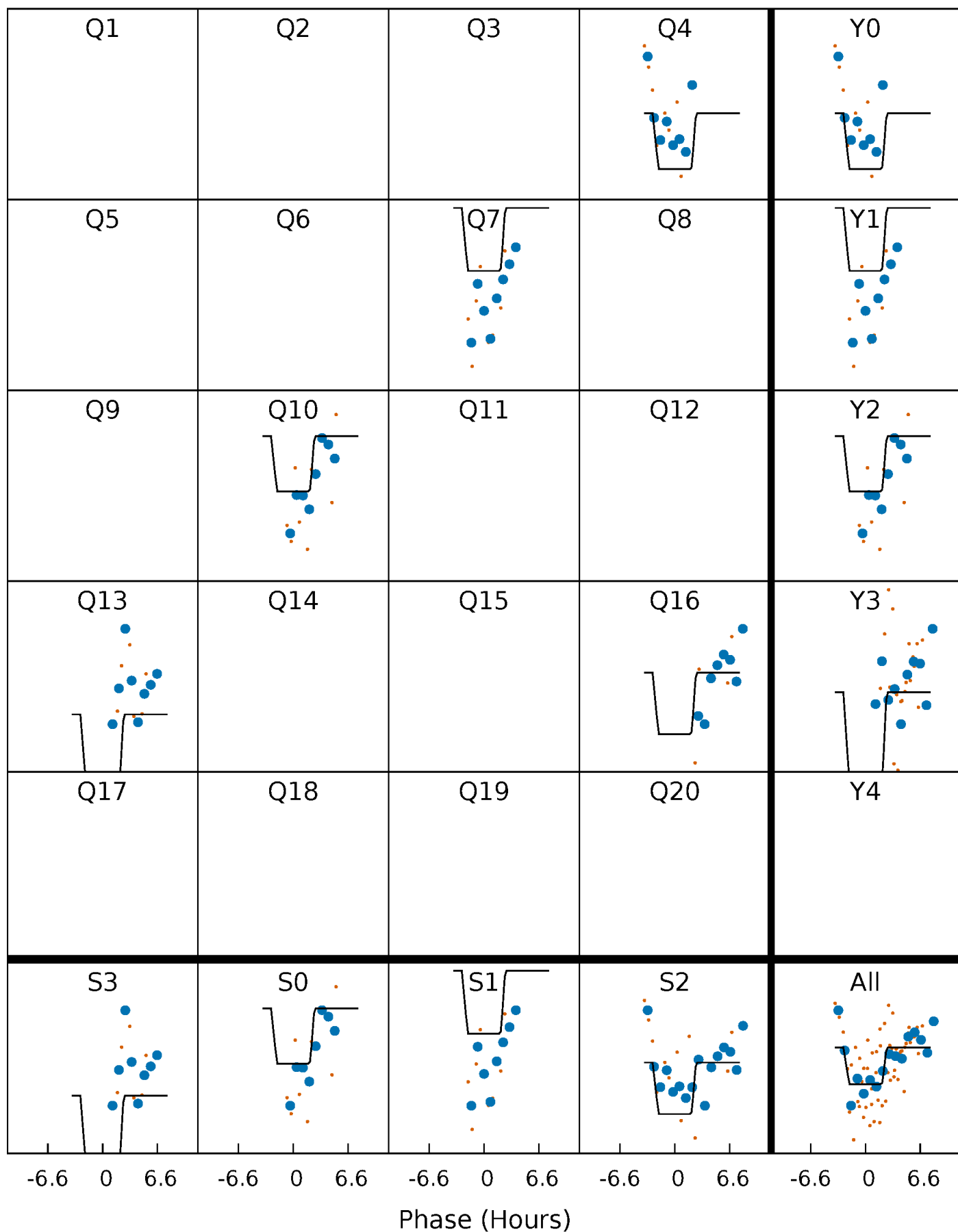
DV Quarter-Phased Transit Curves

TCE 007974877-03 P=282.864279 Days $T_0=365.956110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

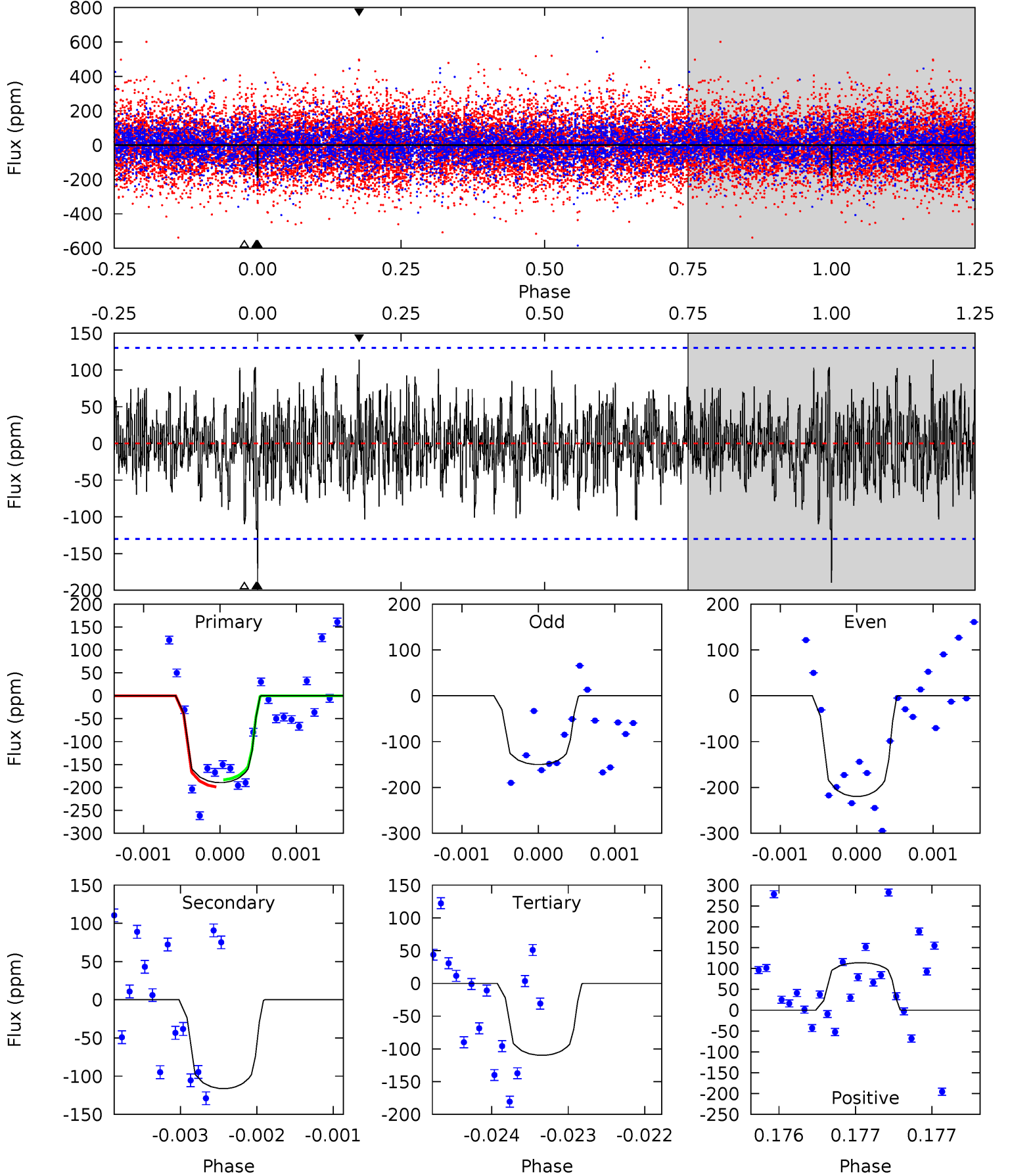
TCE 007974877-03 P=282.855021 Days $T_0=365.973935$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-03, P = 282.864279 Days, E = 83.091831 Days

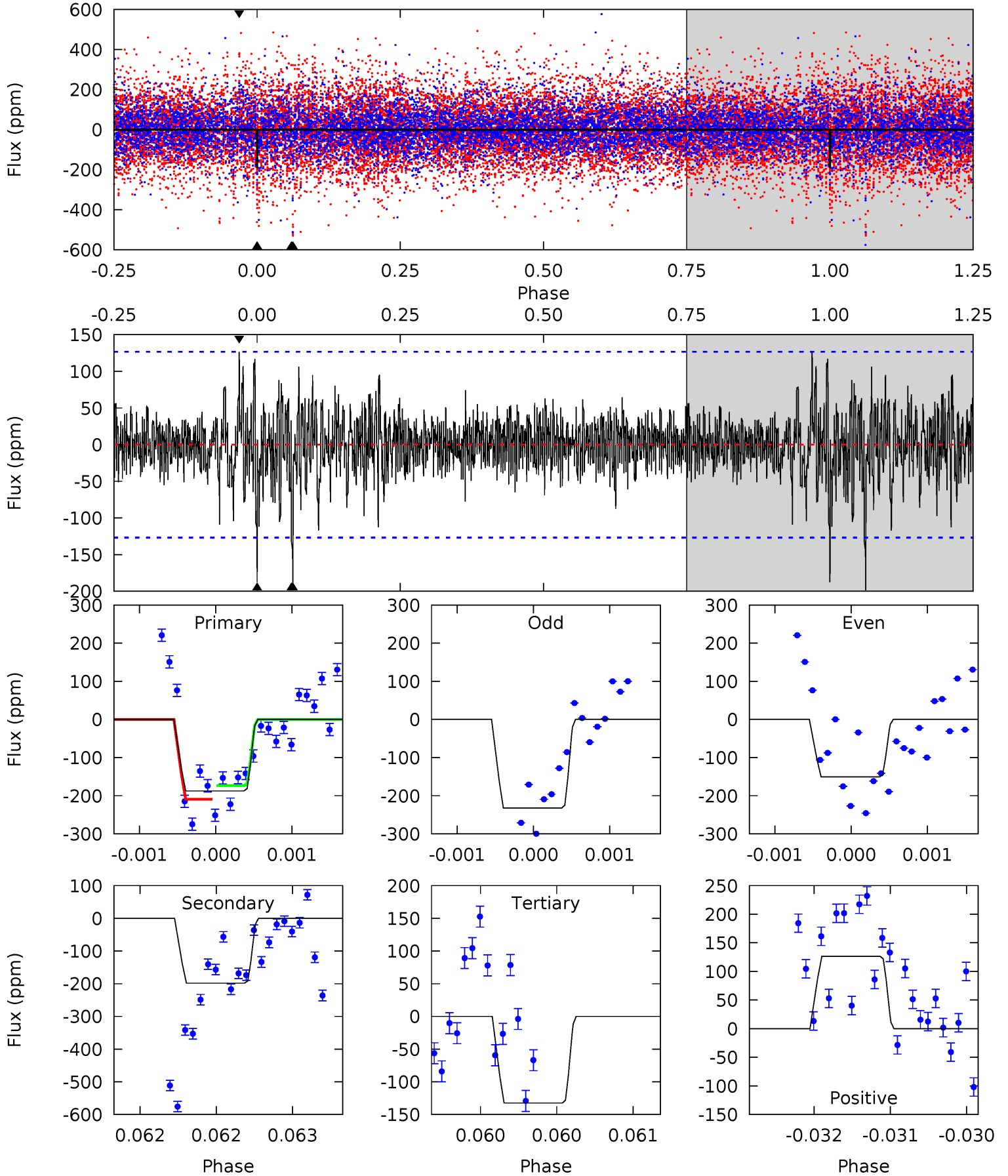
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.03 | 4.92 | 4.65 | 4.83 | 5.52 | 3.39 | 1.43 | 3.38 | 3.20 | 0.27 | 0.09 | 1.50 | 0.89 | 0.38 | 0.31 |



Alt Model-Shift Uniqueness Test

007974877-03, P = 282.855021 Days, E = 83.118914 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.15 | 8.63 | 5.76 | 5.50 | 5.51 | 3.38 | 1.25 | 2.39 | 2.65 | 2.86 | 3.13 | 1.77 | 0.98 | 0.39 | 0.74 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-03 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|-------------------|------------------------|-------------------------|
| DV | -116 ± 24 | $3.49^{+2.08}_{-1.87}$ | 620^{+43}_{-52} | 5549^{+2800}_{-952} | 4494^{+17600}_{-2705} |
| Alt. | -198 ± 23 | $3.26^{+2.03}_{-1.84}$ | 622^{+37}_{-55} | 6612^{+4629}_{-1399} | 8840^{+36039}_{-5589} |

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 $A_{obs} \gg 1.0$

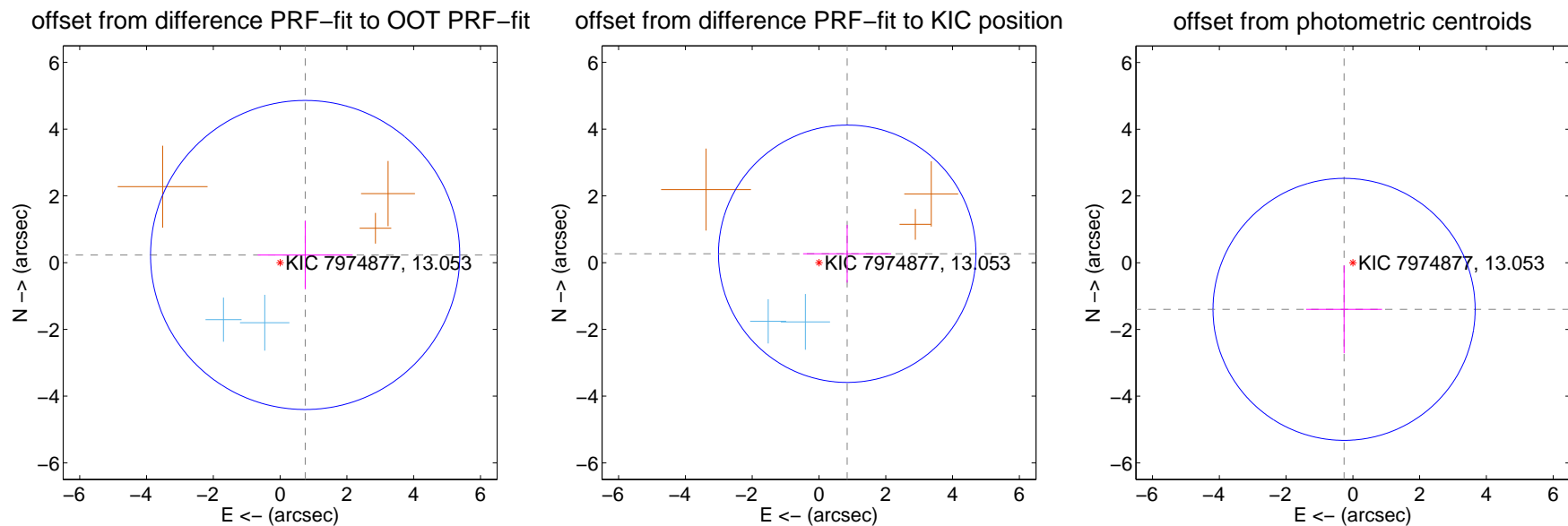
DV Centroid Data

Supplemental centroid analysis for 007974877-03. Kepler magnitude: 13.05. Transit SNR 7.11

There are 2 quarters with good PRF difference image offsets

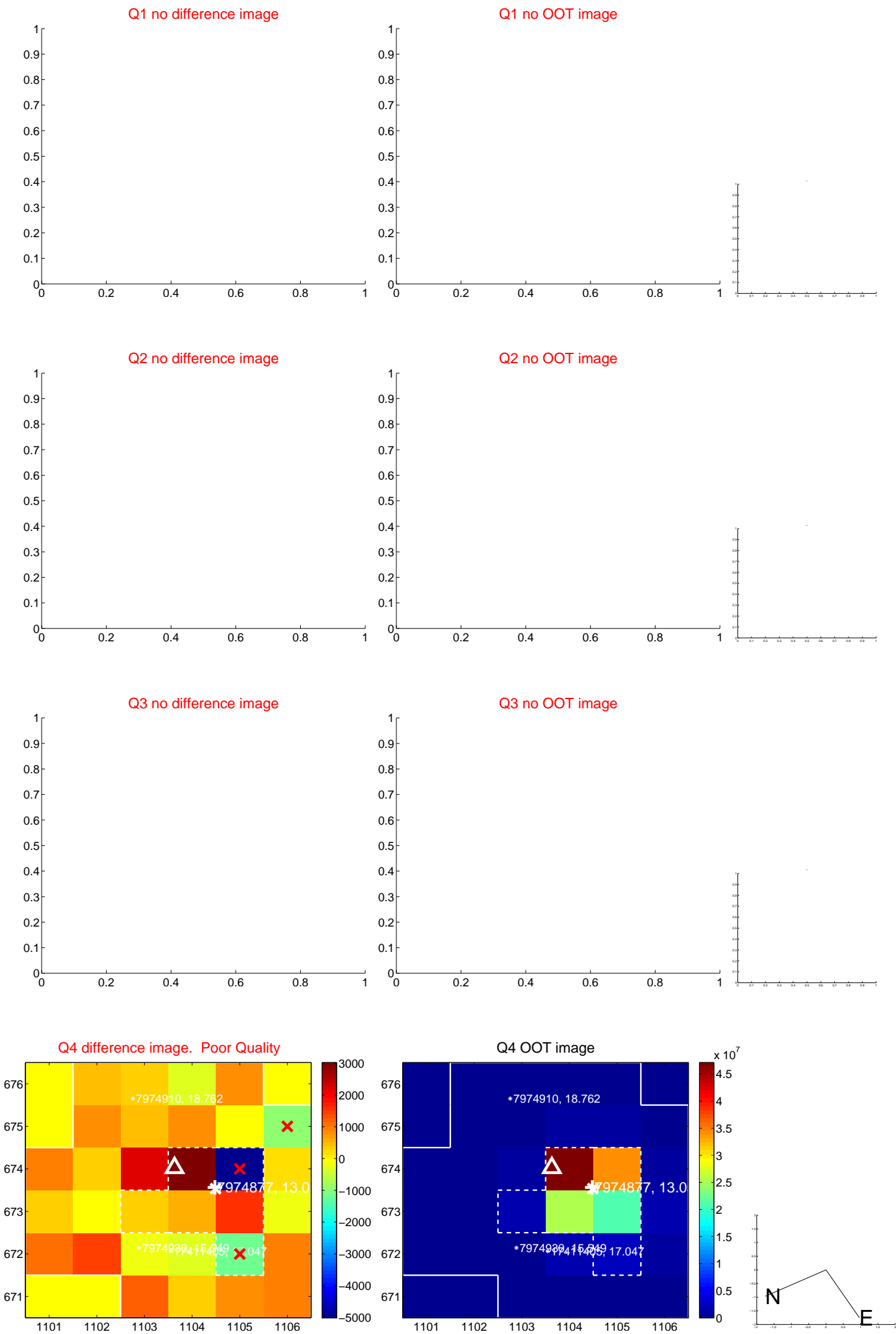
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.785 ± 1.543 | 0.51 | -0.750 ± 1.423 | 0.229 ± 1.027 |
| PRF-fit source offset from KIC position | 0.886 ± 1.285 | 0.69 | -0.845 ± 1.320 | 0.266 ± 0.864 |
| photometric centroid source offset | 1.42 ± 1.31 | 1.09 | 0.26 ± 1.14 | -1.40 ± 1.31 |

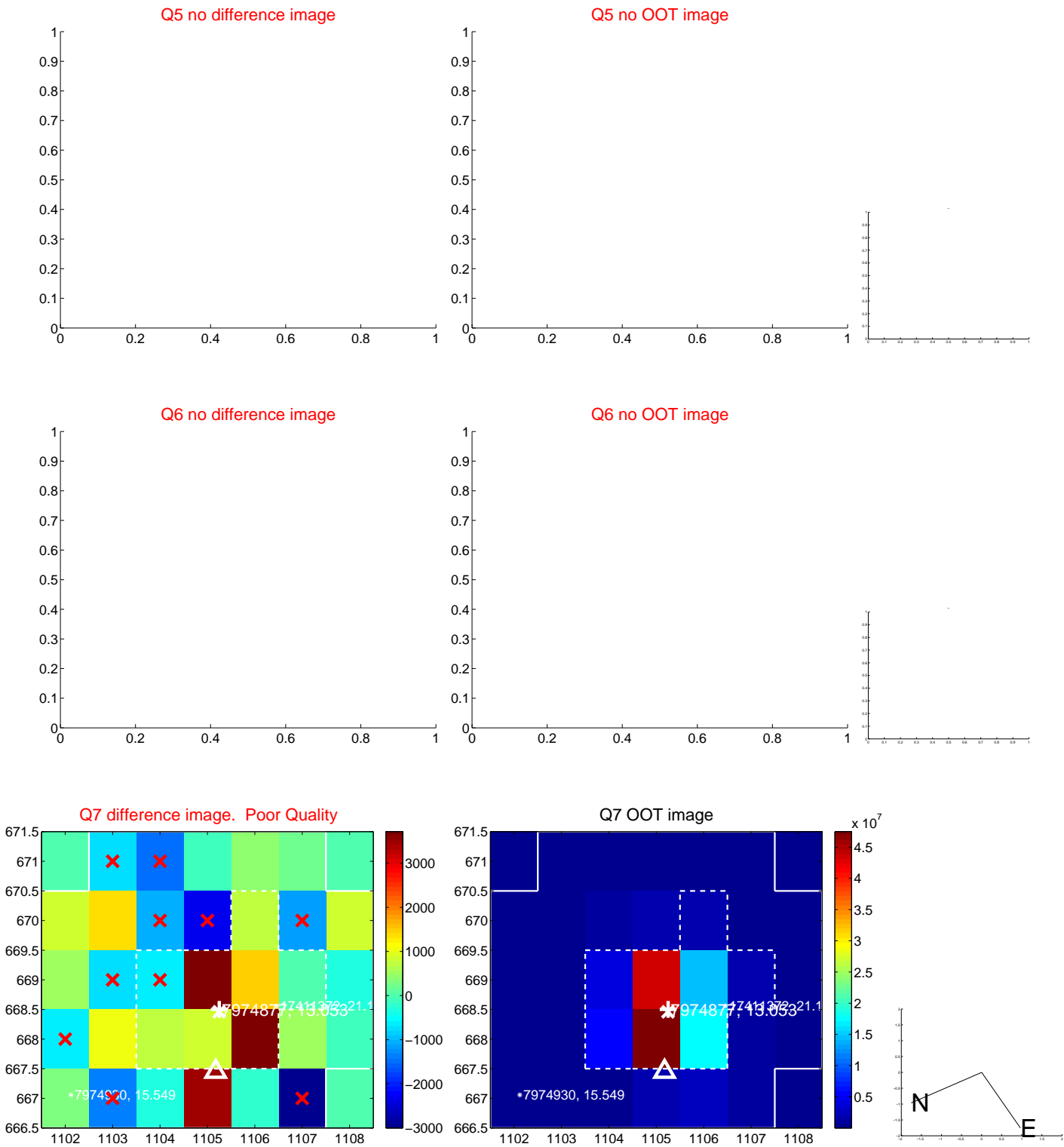


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

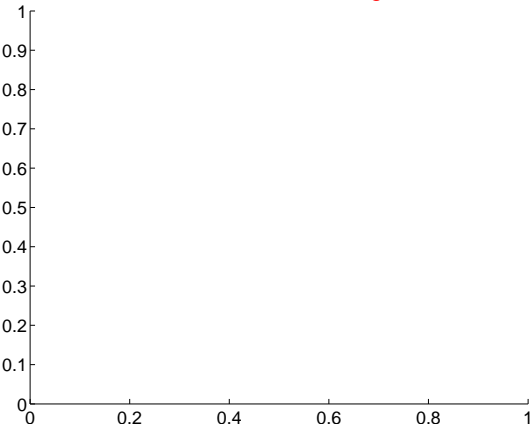


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

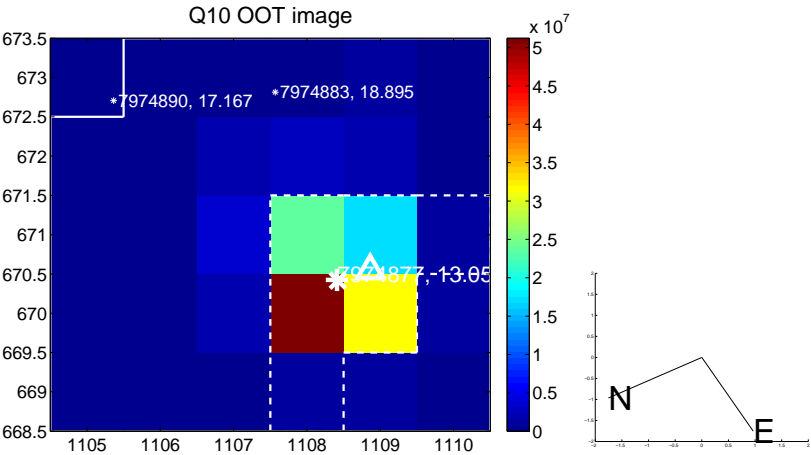
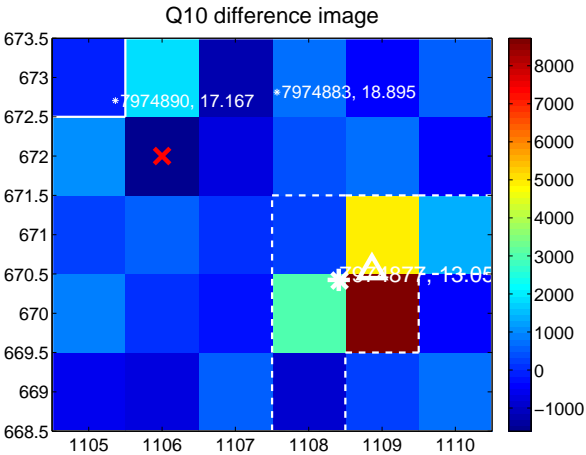
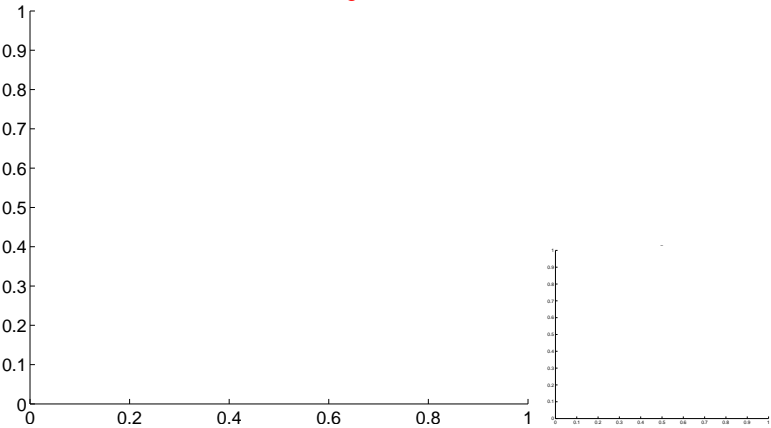


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

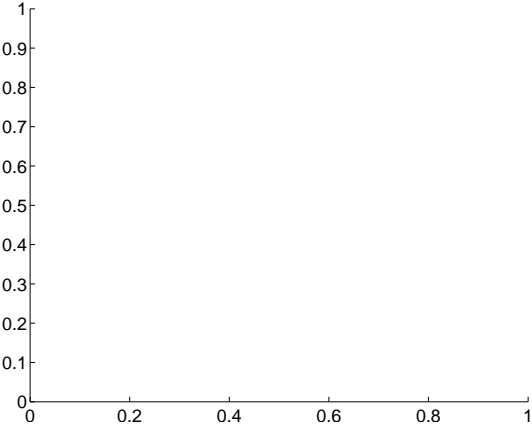
Q9 no difference image



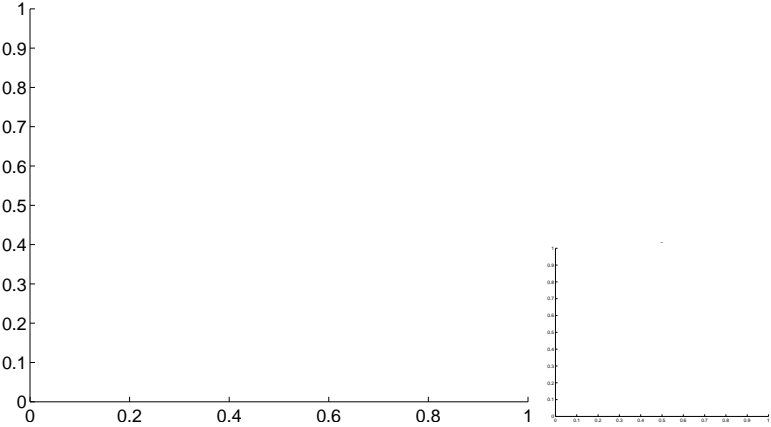
Q9 no OOT image



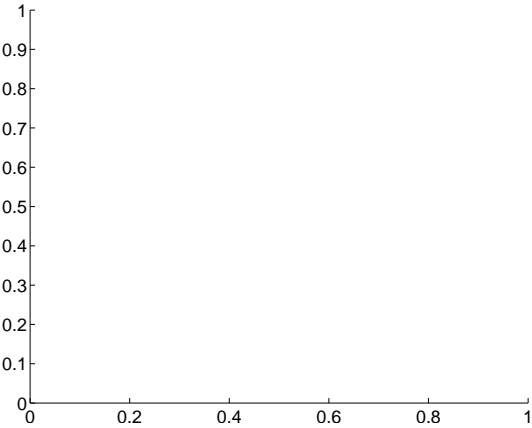
Q11 no difference image



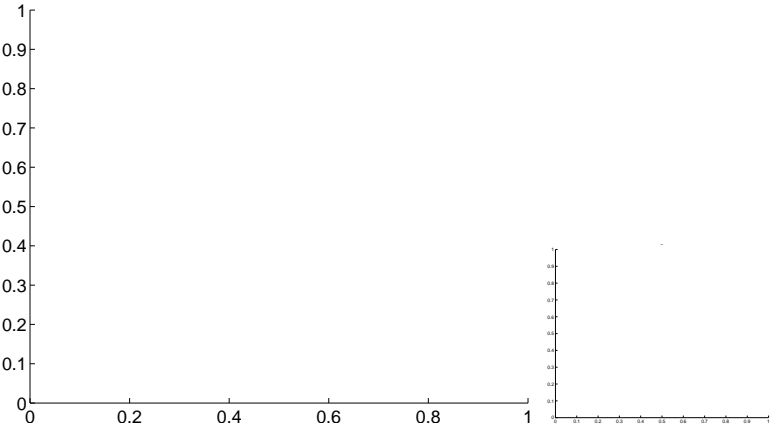
Q11 no OOT image



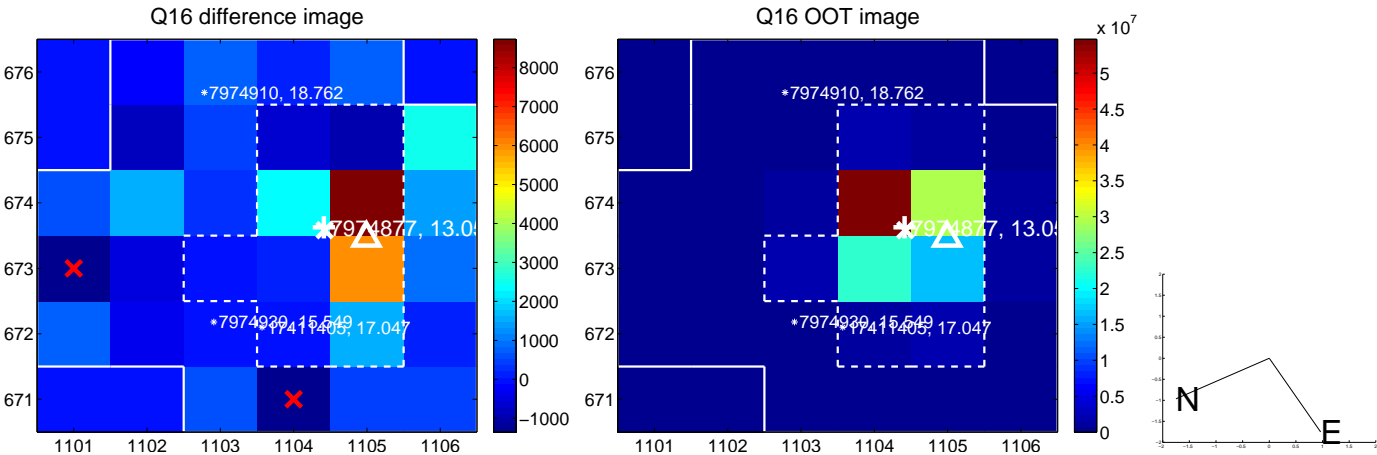
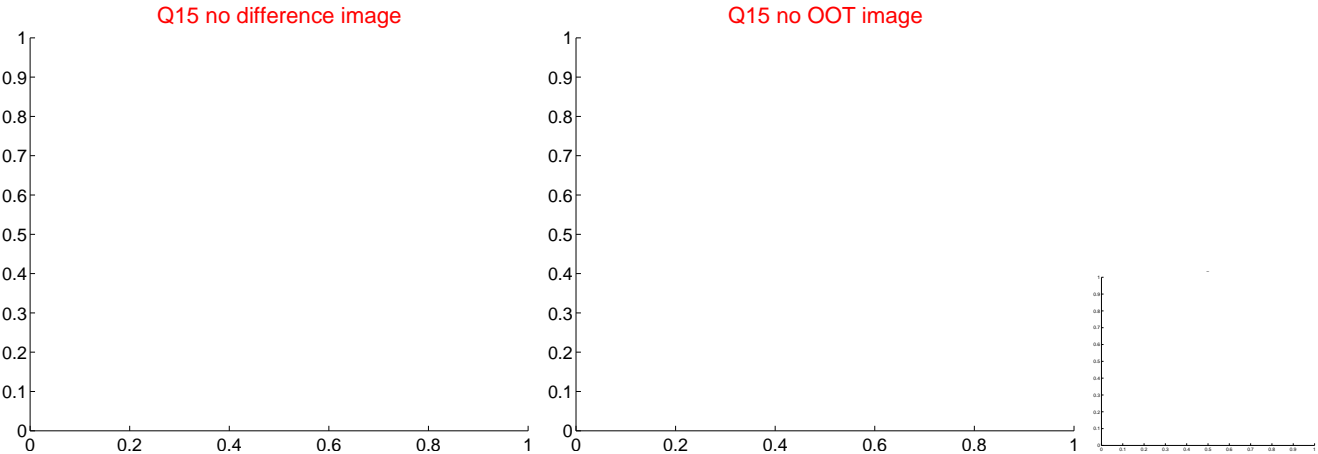
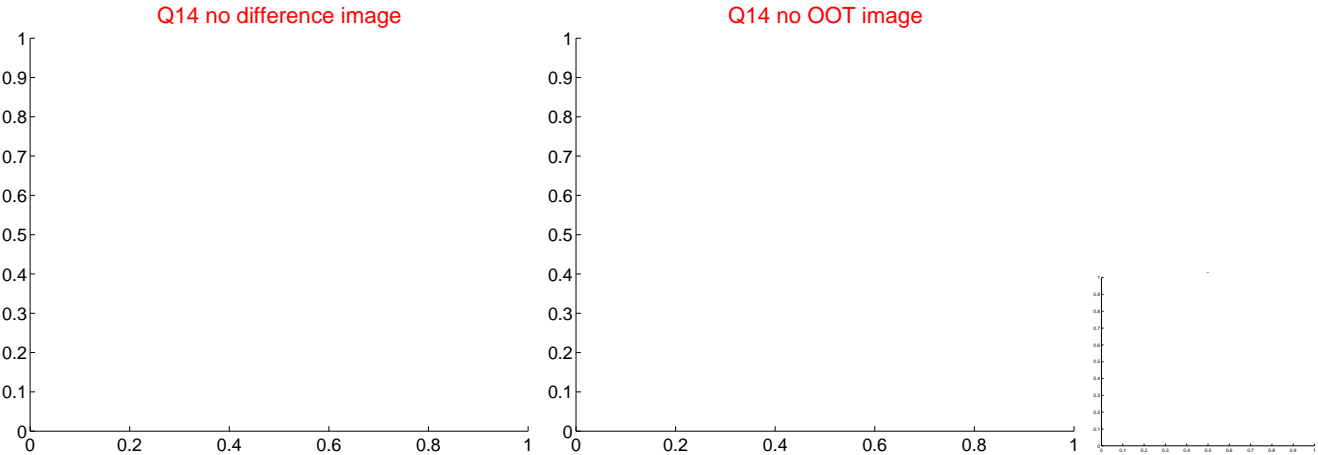
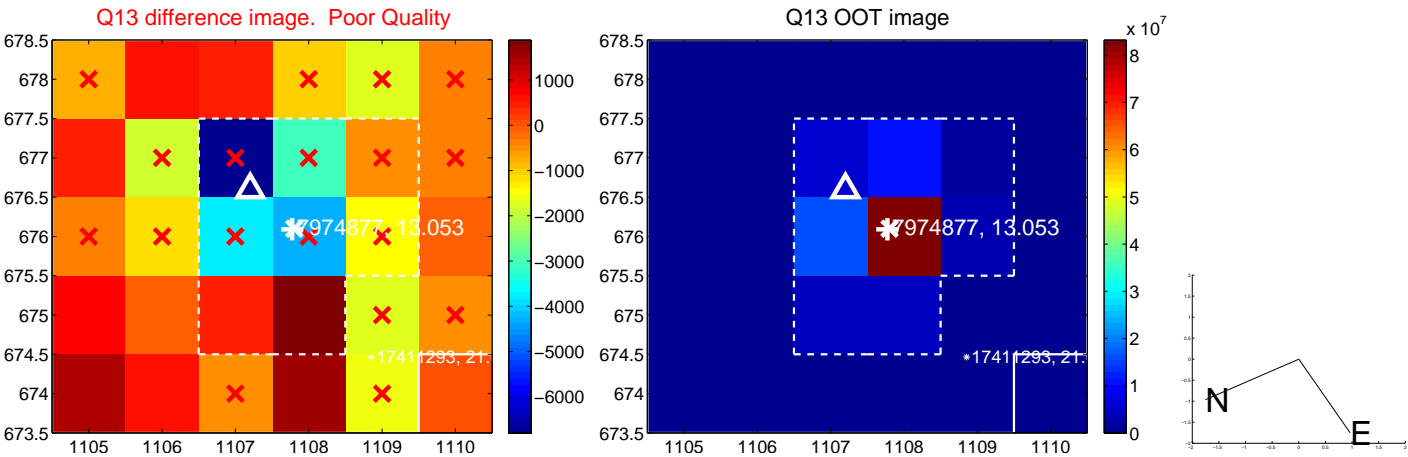
Q12 no difference image



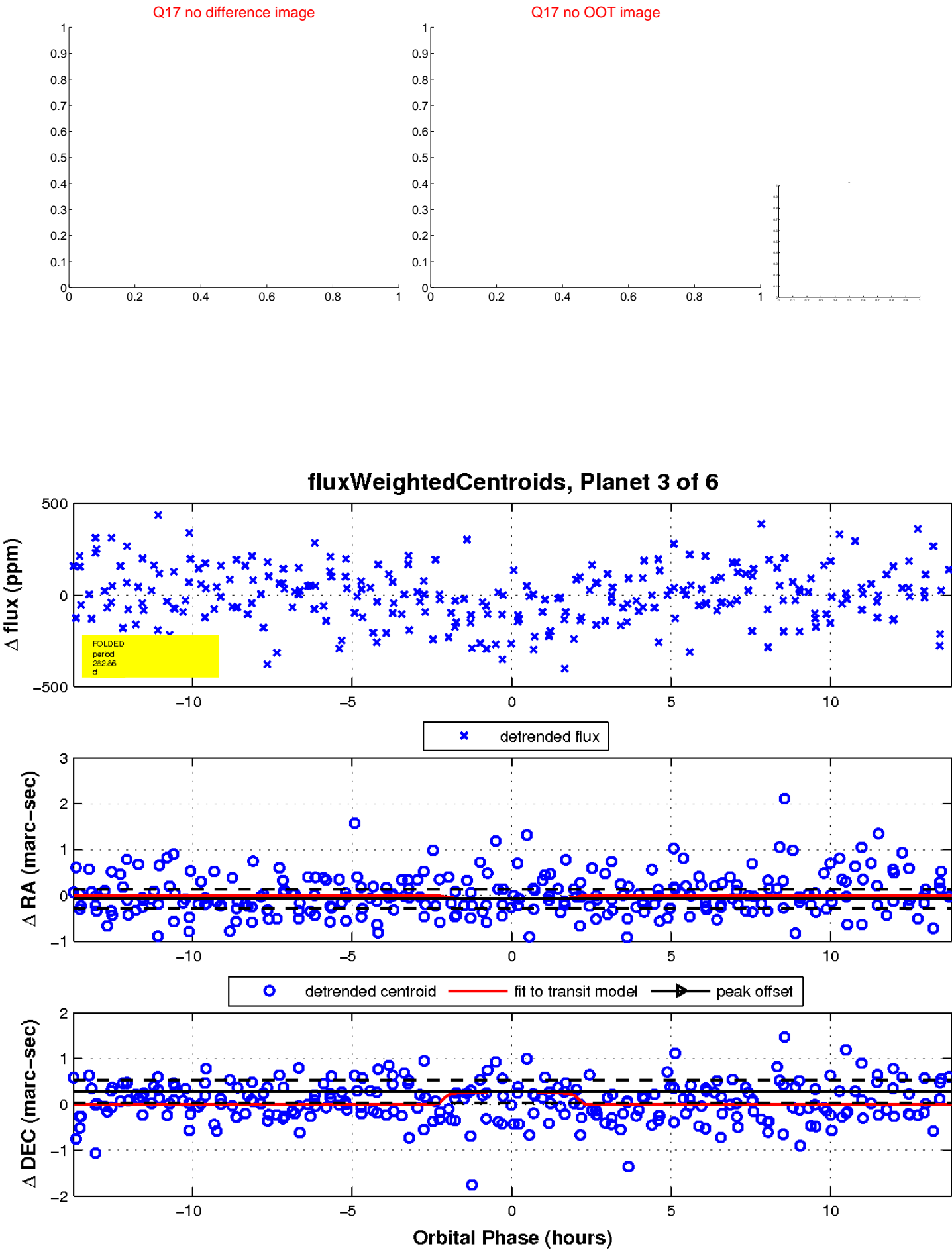
Q12 no OOT image



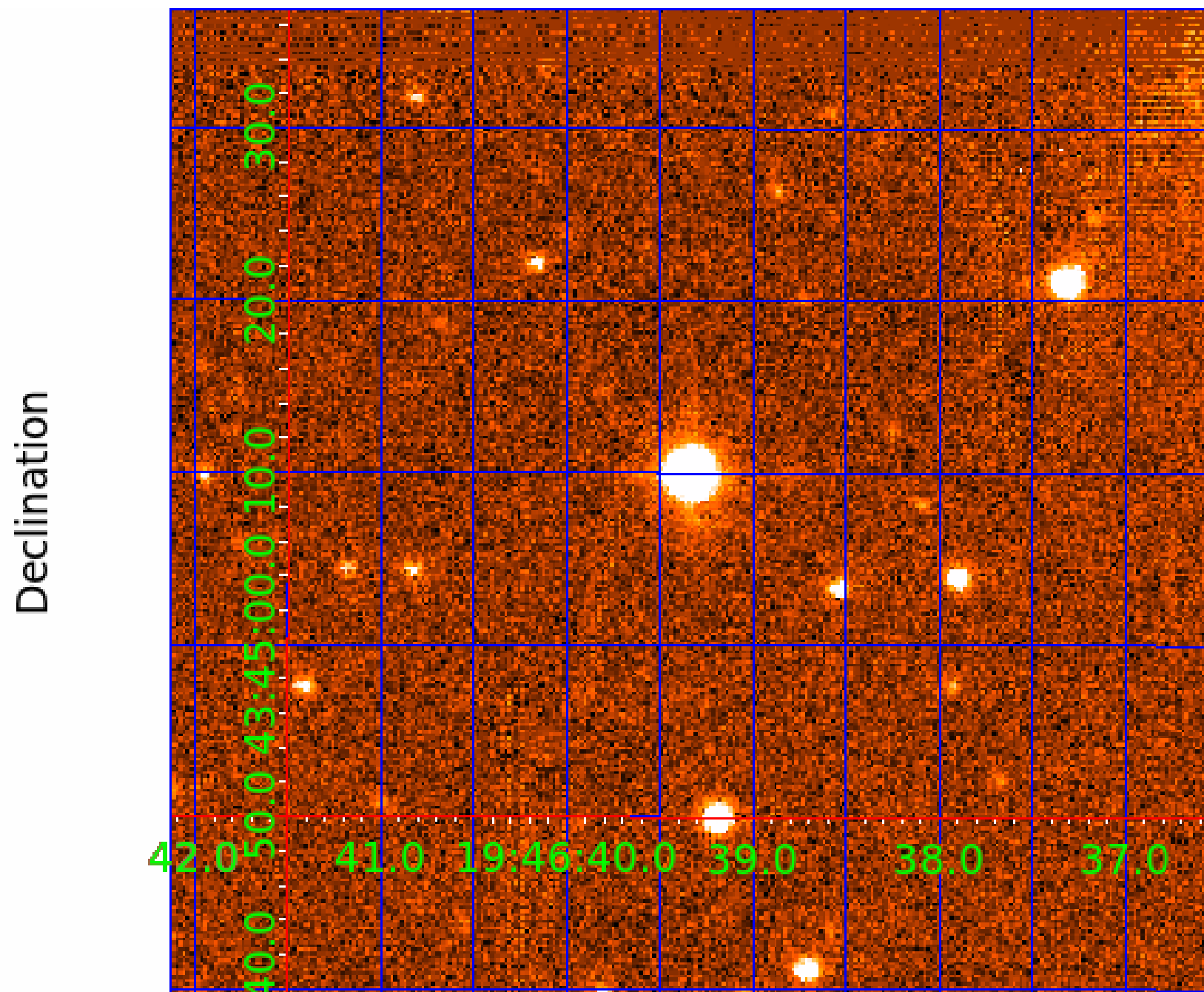
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
| 007974877-02 | OBS | No | 47.525385 | 162.529614 | 173.2 | 1.728 | 8.7 | 7.7 | 2.21 | 6675 | 3.41 | 108.58 |
| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

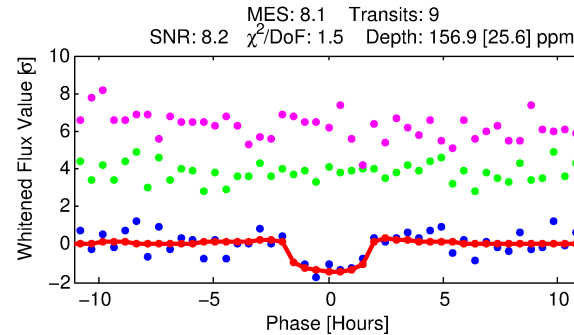
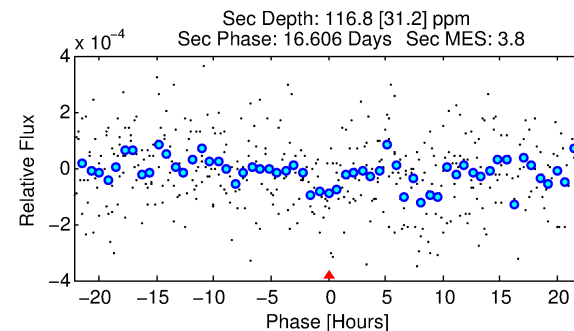
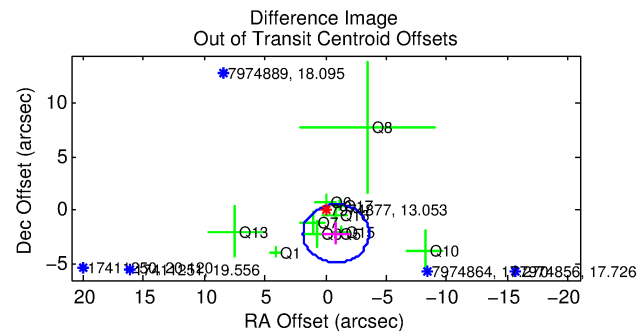
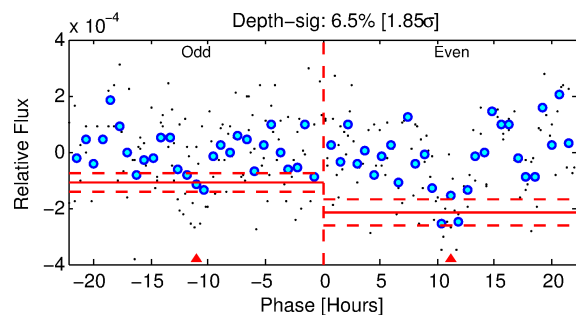
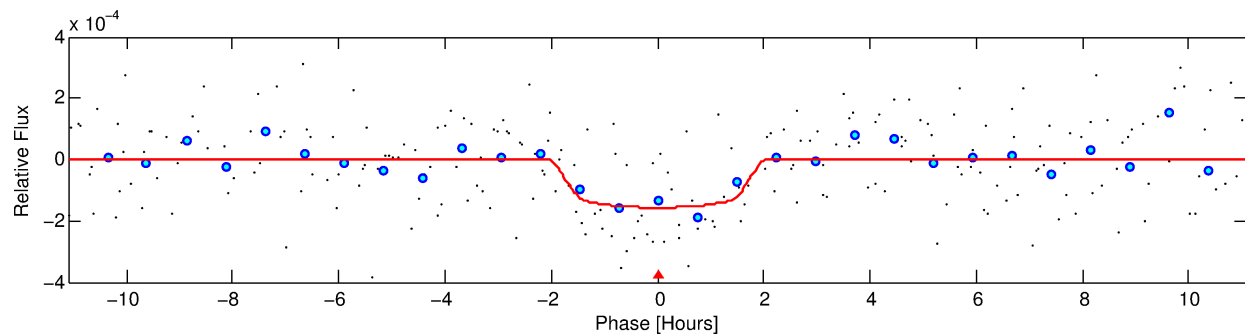
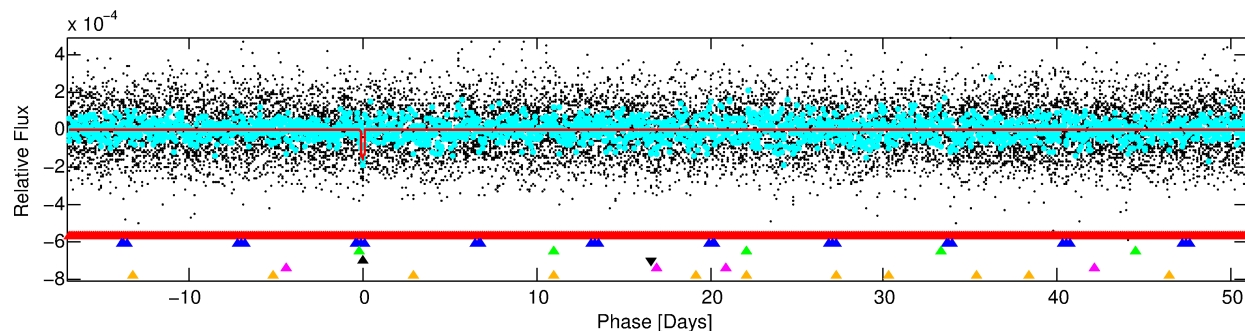
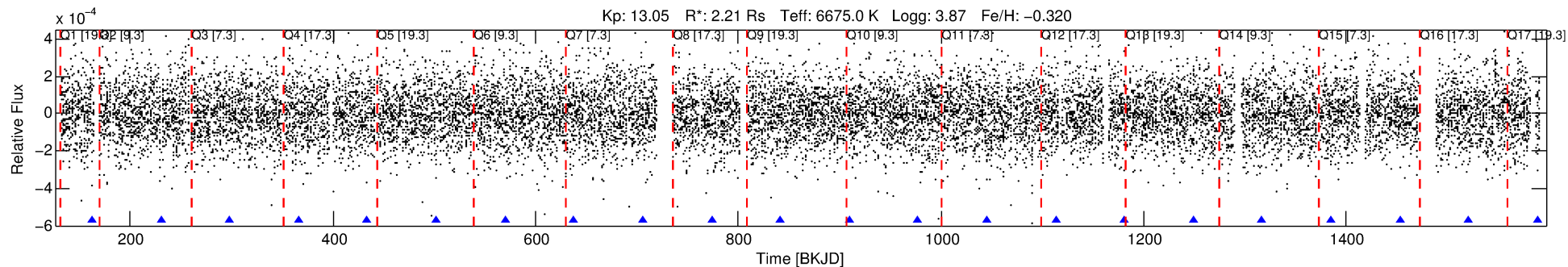
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-04

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 4 of 6 Period: 67.920 d



DV Fit Results:

Period = 67.92042 [0.00095] d
Epoch = 162.4278 [0.0126] BKJD
Rp/R* = 0.0131 [0.0096]
a/R* = 73.20 [316.57]
b = 0.87 [1.23]
Seff = 67.45 [34.90]
Teq = 731 [95] K
Rp = 3.15 [2.56] Re
a = 0.3581 [0.1146] AU
Ag = 831.11 [1311.73] [0.63 σ]
Teffp = 6066 [2276] K [2.34 σ]

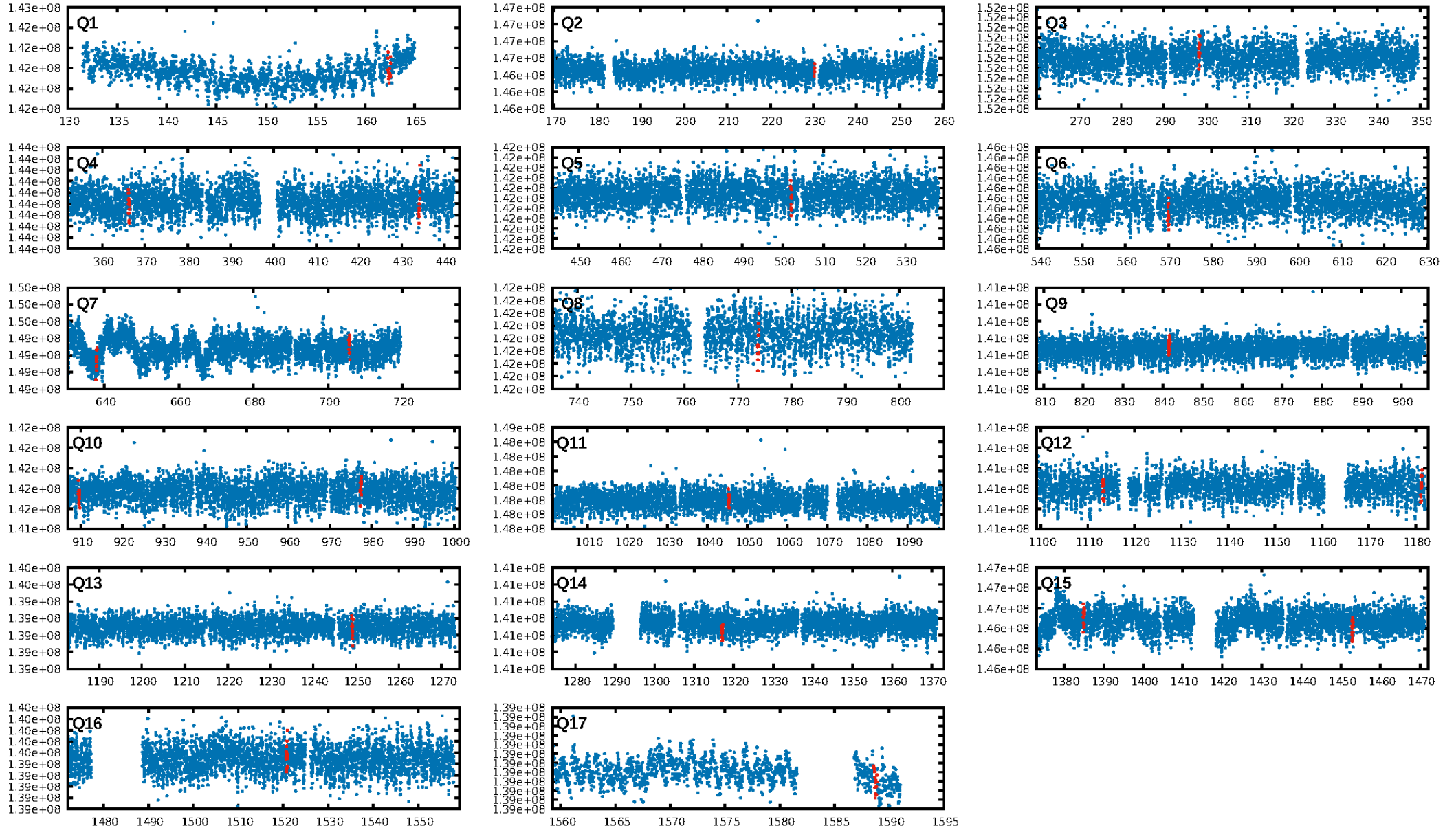
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [119.87 σ]
LongPeriod-sig: 100.0% [281.24 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: 4.44e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 9.346
Centroid-sig: 35.1%
Centroid-so: 0.536 arcsec [0.70 σ]
OotOffset-rm: 2.321 arcsec [2.55 σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-rm: 2.276 arcsec [2.53 σ]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/16]

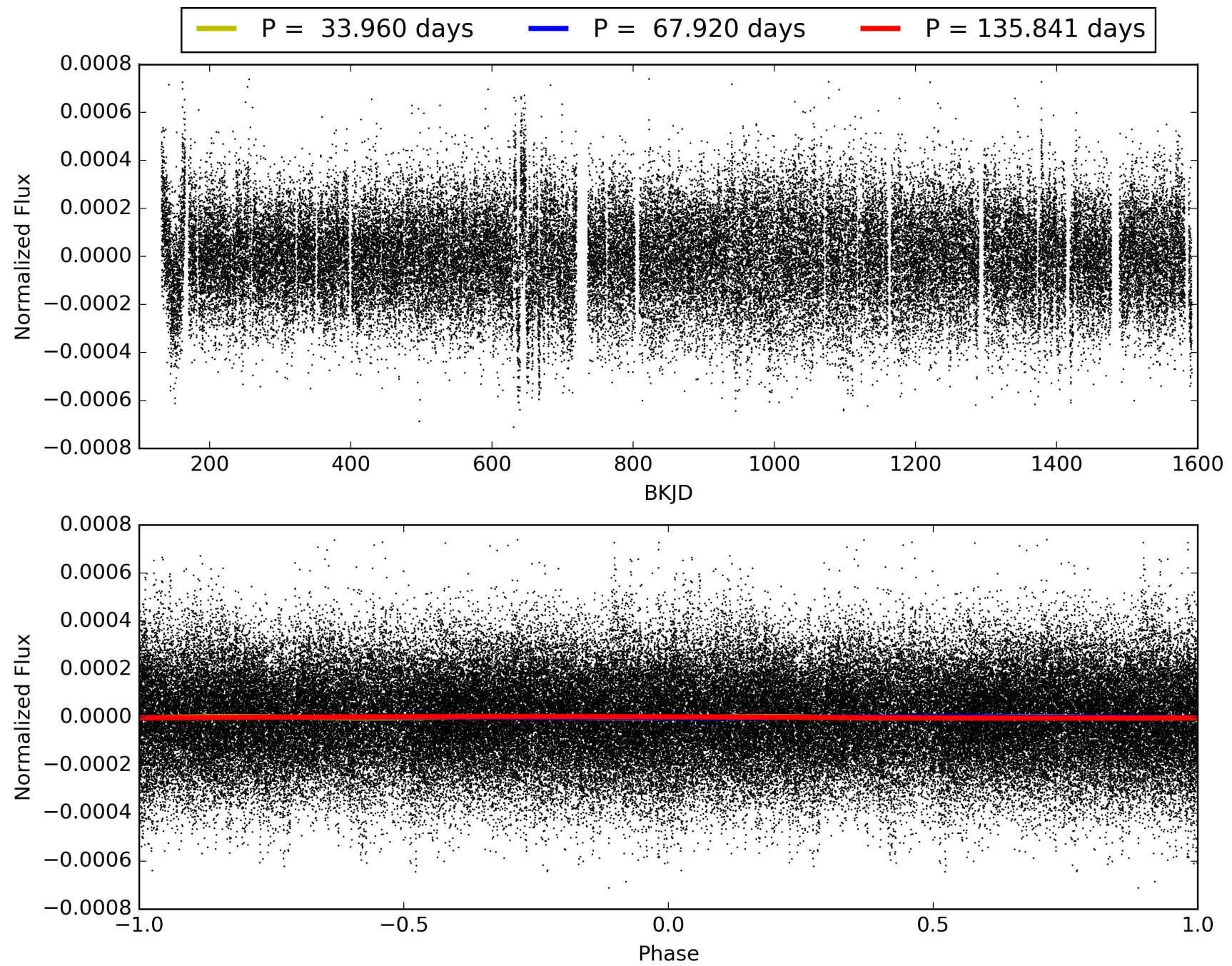
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:20 Z

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

TCE 007974877-04, PDC Light Curves

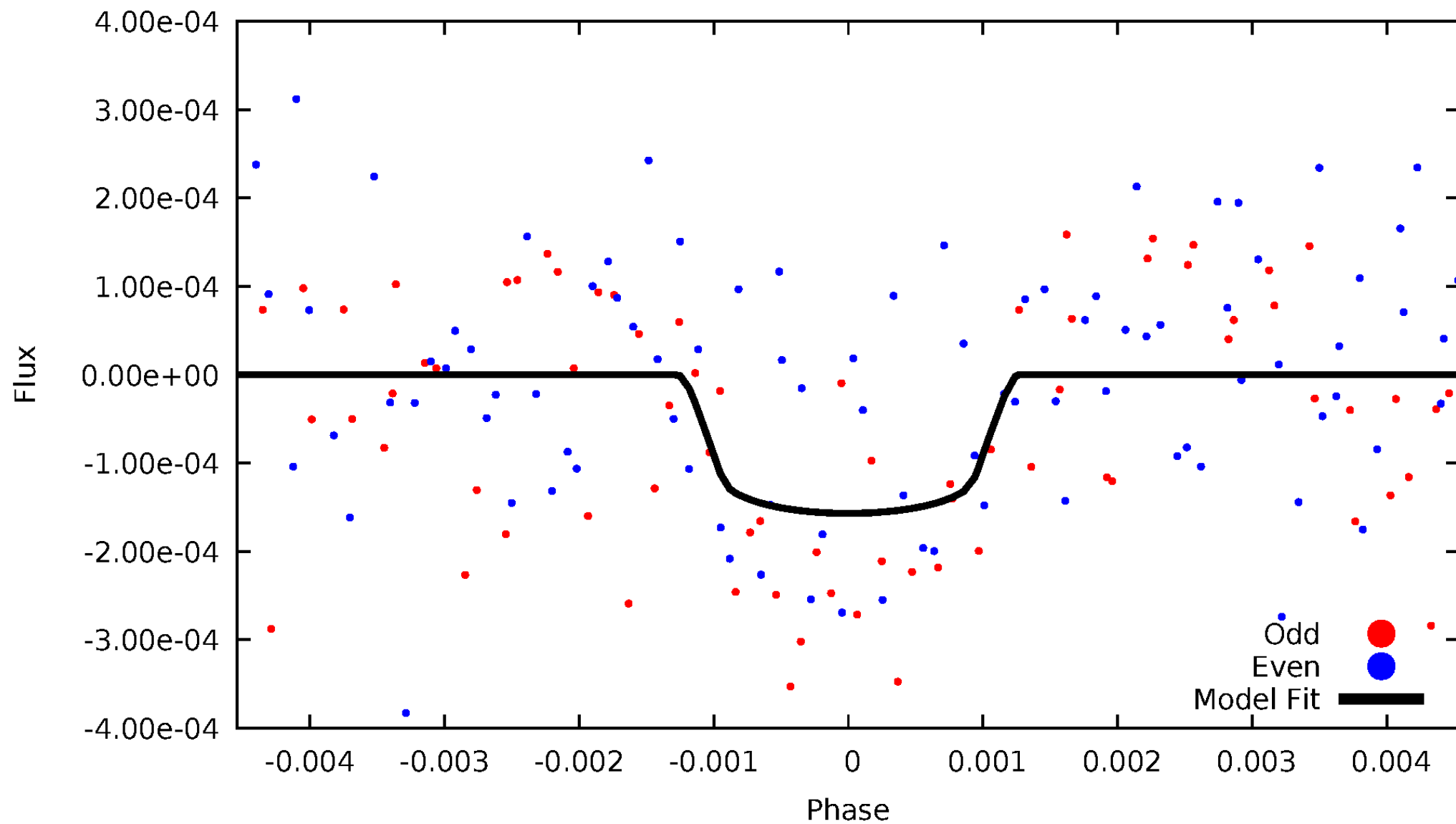


TCE 007974877-04



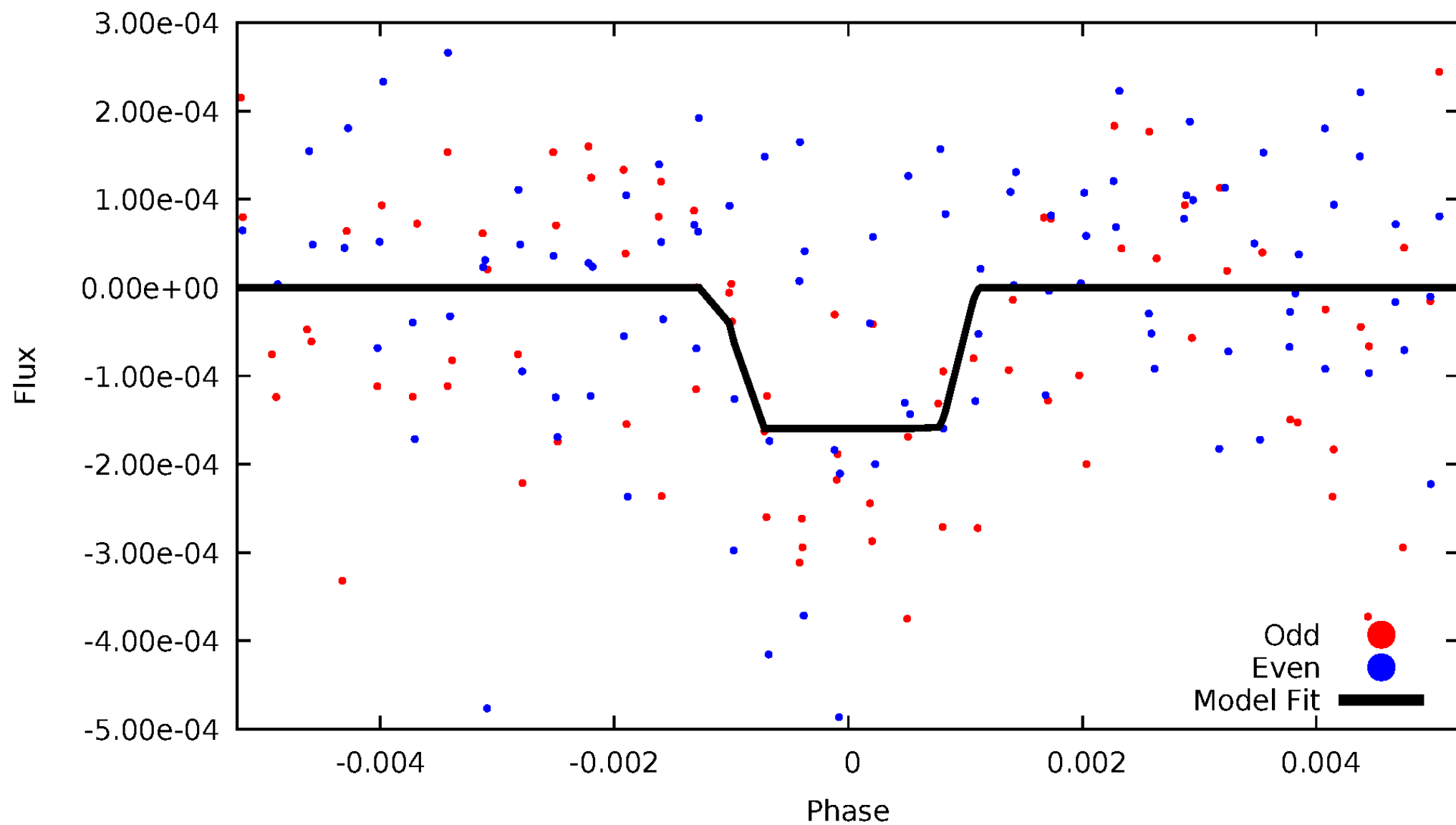
DV Odd/Even

TCE 007974877-04



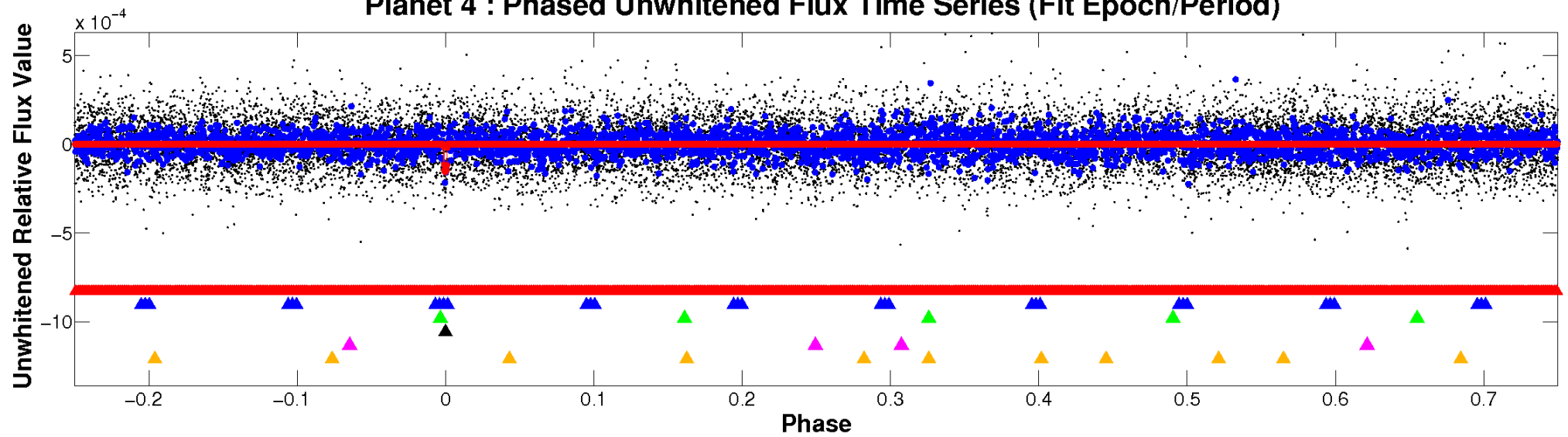
ALT Odd/Even

TCE 007974877-04

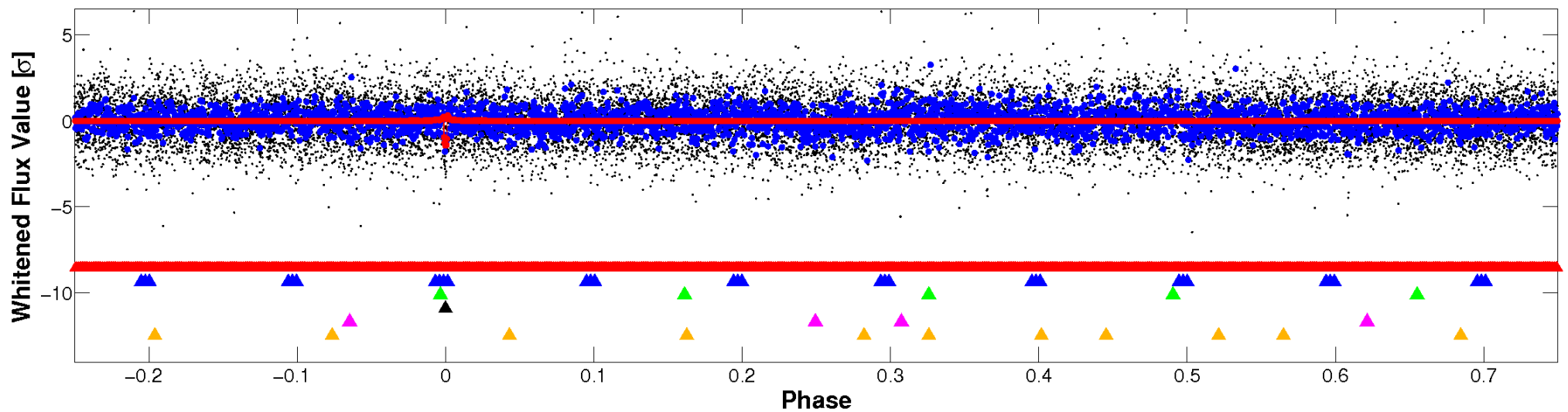


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

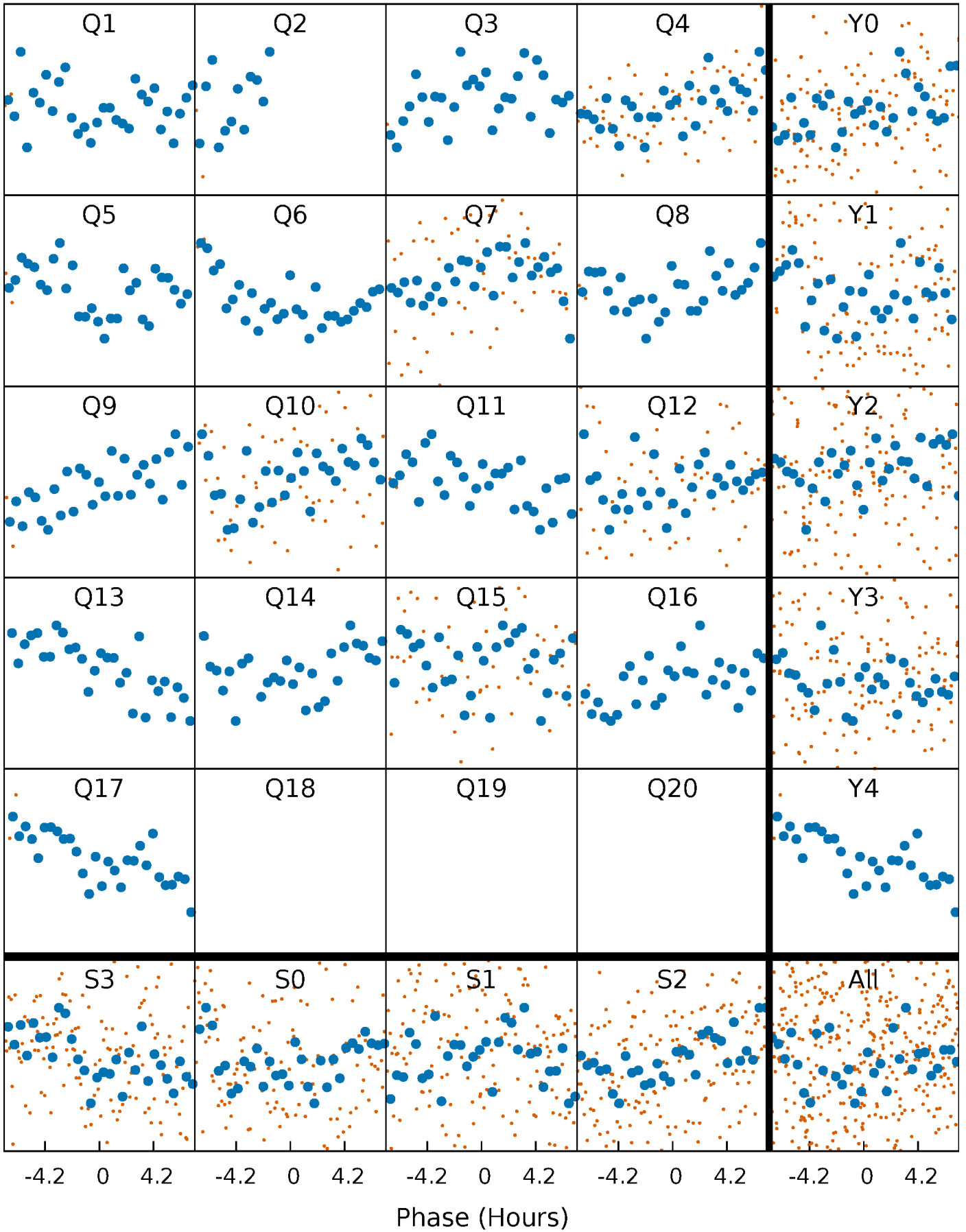


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



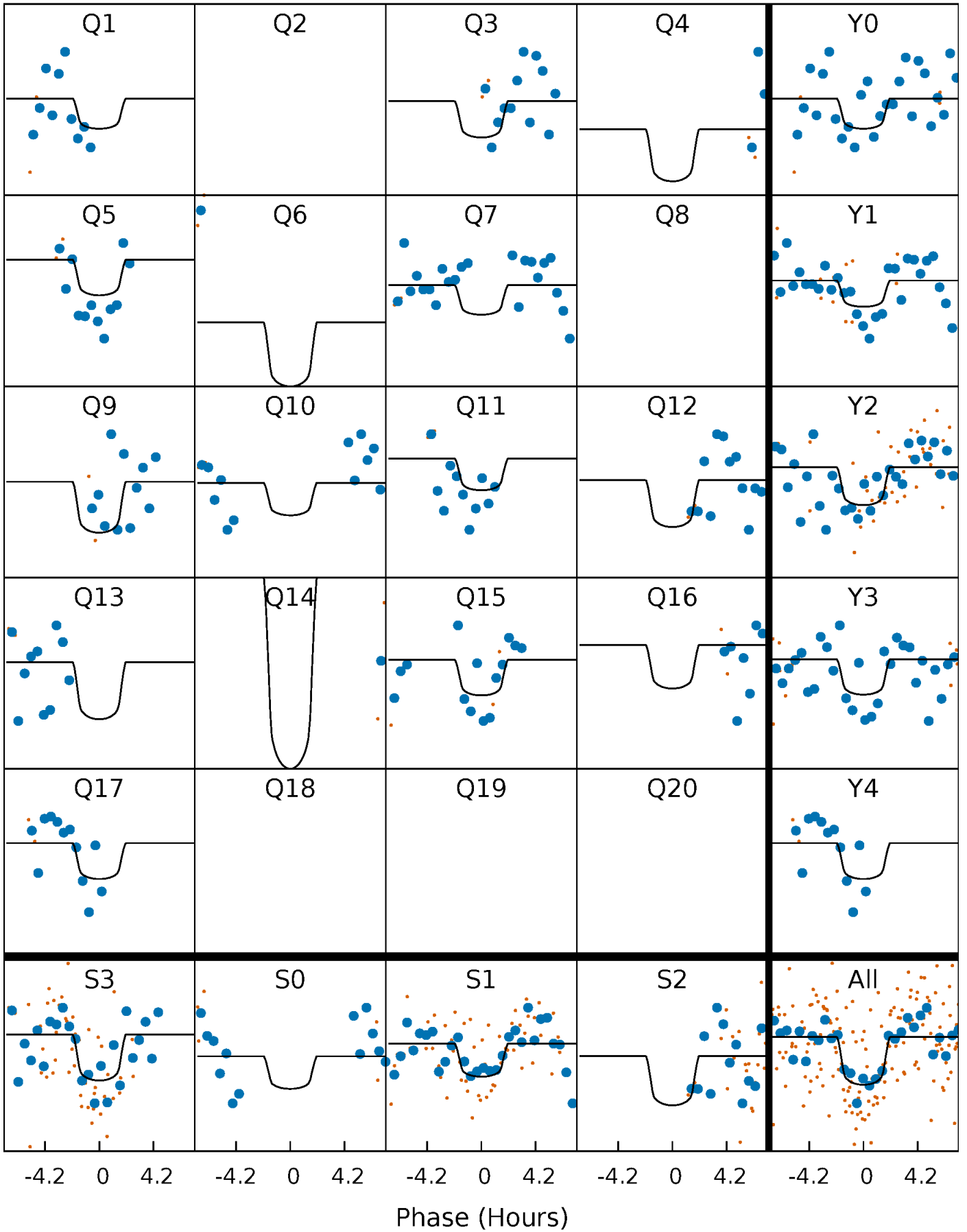
PDC Quarter-Phased Transit Curves

TCE 007974877-04 P= 67.920424 Days $T_0=162.427849$ (BKJD)



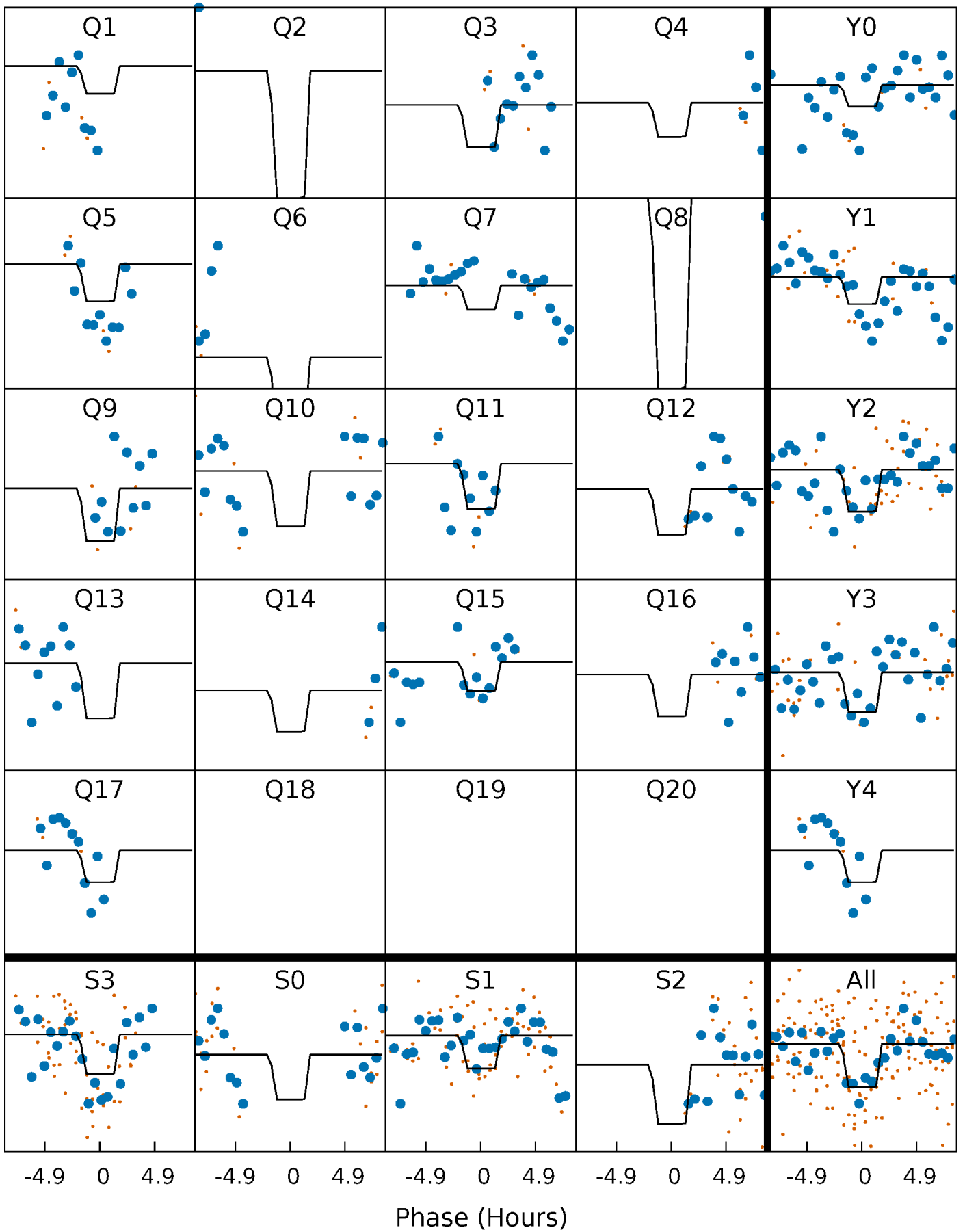
DV Quarter-Phased Transit Curves

TCE 007974877-04 P= 67.920424 Days $T_0=162.427849$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

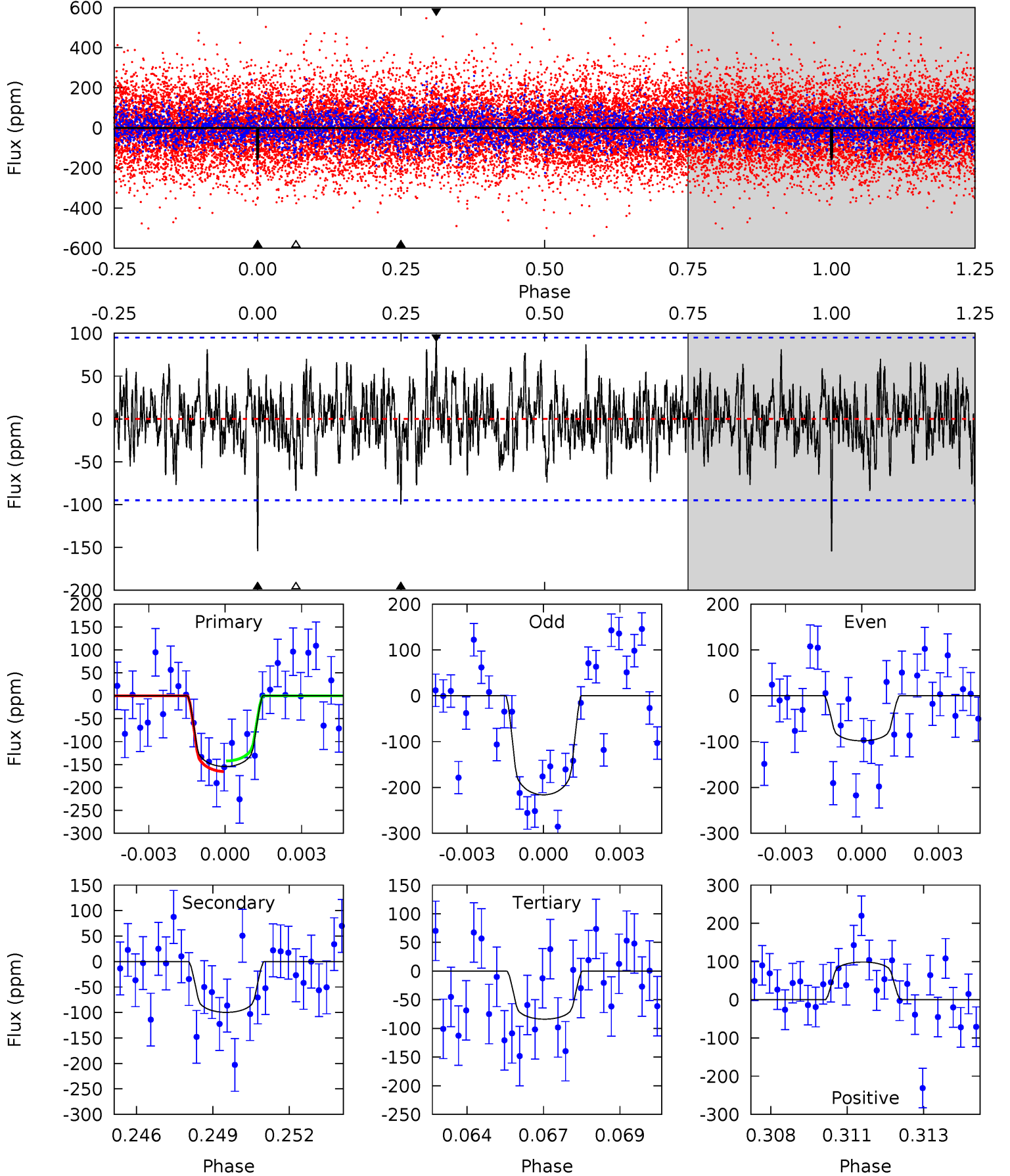
TCE 007974877-04 $P = 67.921278$ Days $T_0 = 162.414247$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-04, P = 67.920424 Days, E = 94.507425 Days

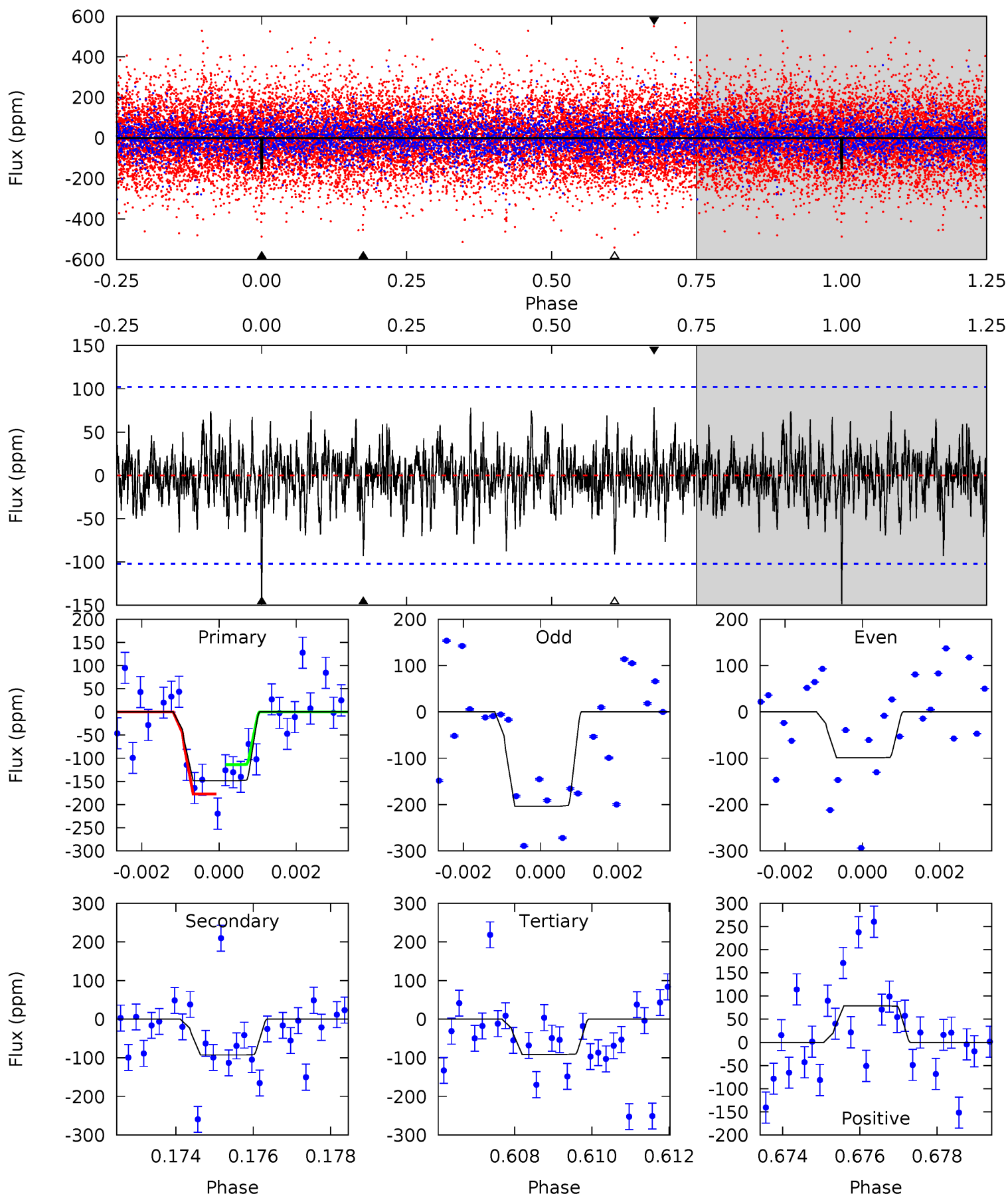
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.60 | 5.56 | 4.67 | 5.50 | 5.28 | 3.02 | 1.51 | 3.93 | 3.10 | 0.89 | 0.06 | 3.26 | 0.82 | 0.39 | 0.64 |



Alt Model-Shift Uniqueness Test

007974877-04, P = 67.921278 Days, E = 94.492969 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 7.72 | 4.82 | 4.74 | 4.09 | 5.31 | 3.07 | 1.26 | 2.99 | 3.63 | 0.09 | 0.73 | 2.72 | 0.94 | 0.35 | 1.64 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-04 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|--------------------|------------------------|----------------------|
| DV | -100 ± 18 | $3.19^{+2.28}_{-1.87}$ | 1003^{+62}_{-86} | 5612^{+3411}_{-1106} | 684^{+3106}_{-450} |
| Alt. | -93 ± 19 | $3.01^{+2.23}_{-1.70}$ | 997^{+69}_{-88} | 5576^{+3232}_{-1128} | 735^{+2965}_{-514} |

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 $A_{obs} \gg 1.0$

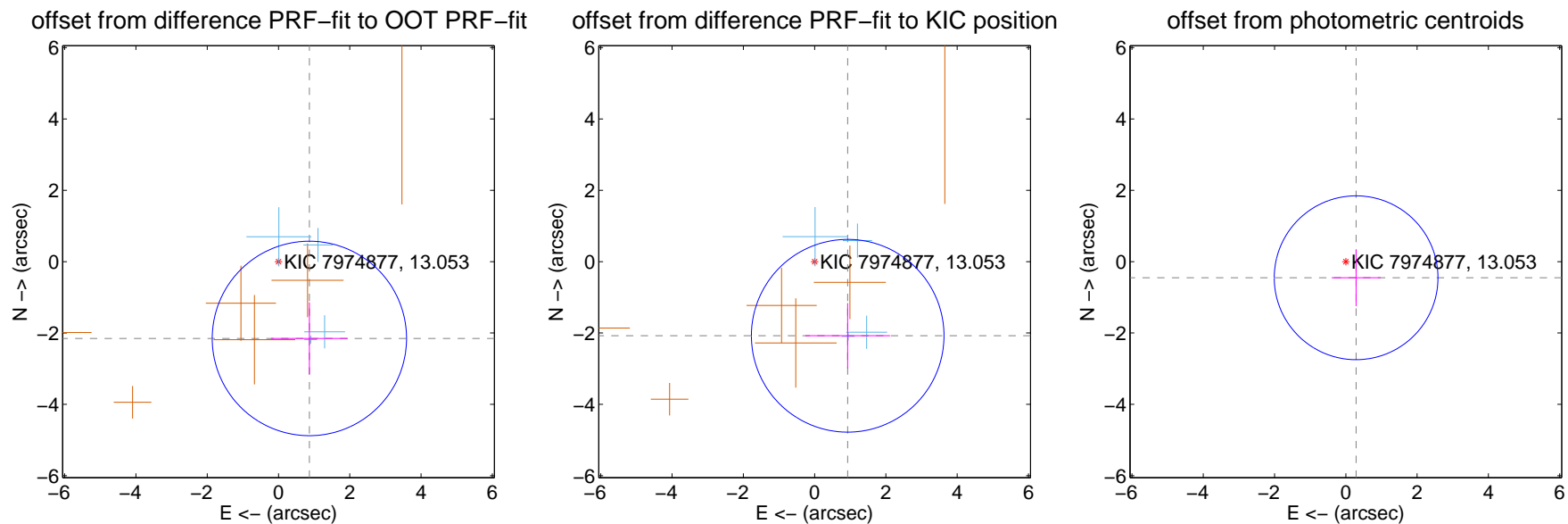
DV Centroid Data

Supplemental centroid analysis for 007974877-04. Kepler magnitude: 13.05. Transit SNR 8.23

There are 4 quarters with good PRF difference image offsets

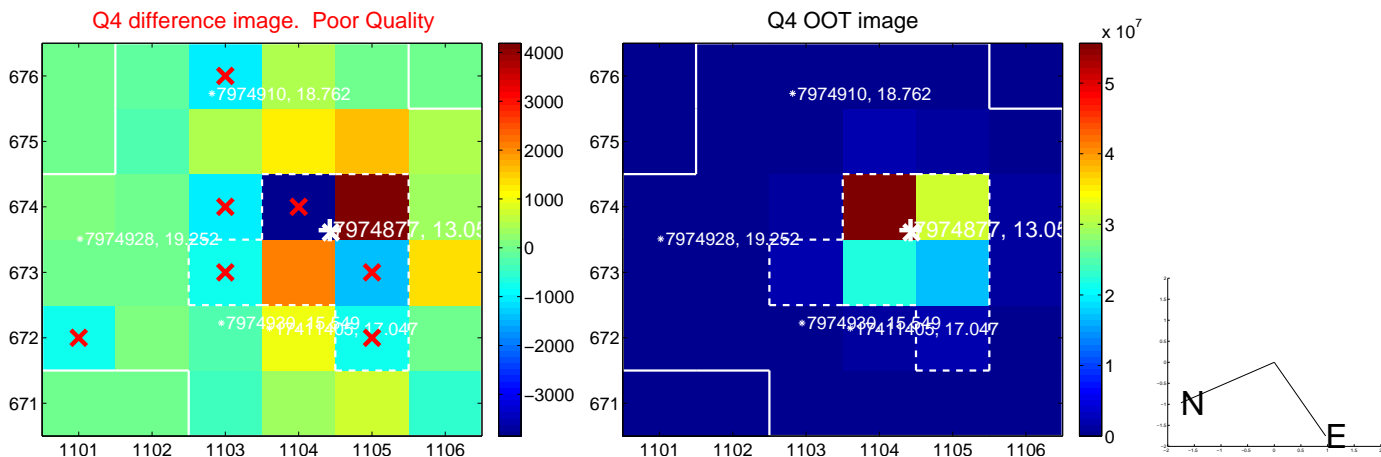
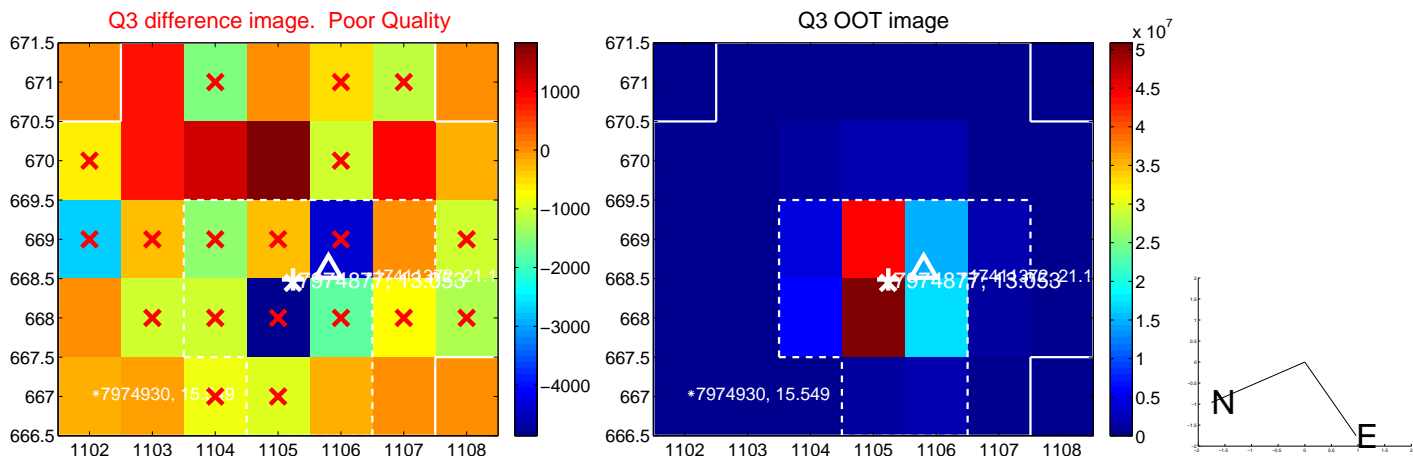
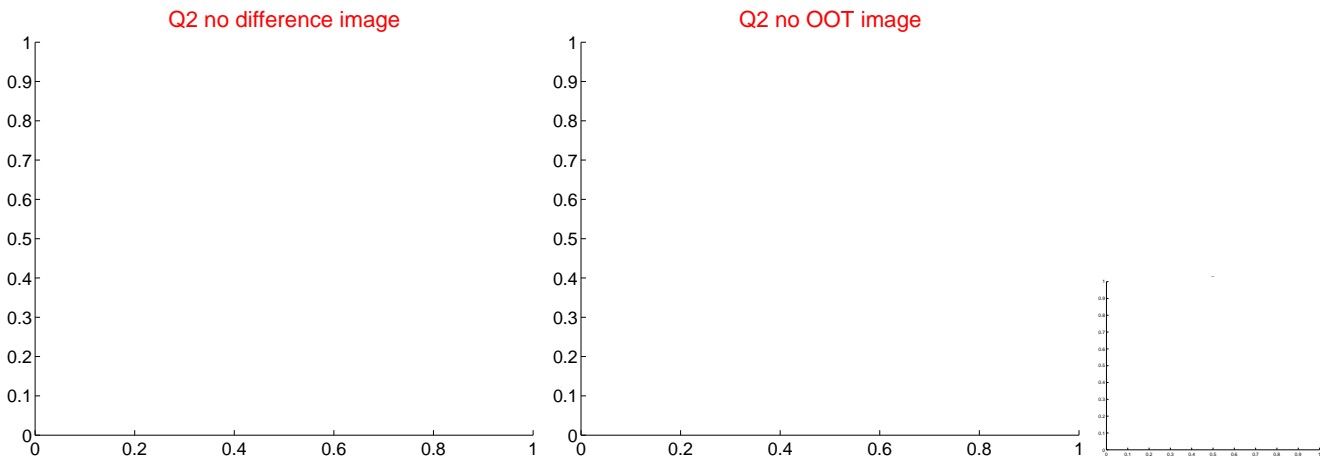
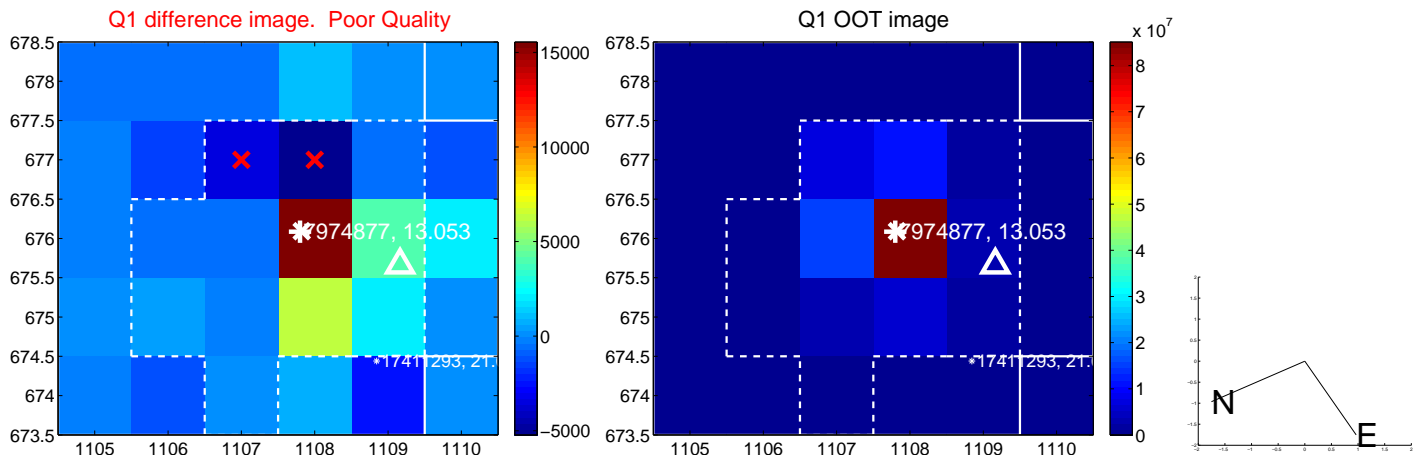
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 2.321 ± 0.909 | 2.55 | -0.867 ± 1.077 | -2.153 ± 1.011 |
| PRF-fit source offset from KIC position | 2.276 ± 0.901 | 2.53 | -0.928 ± 1.187 | -2.078 ± 0.916 |
| photometric centroid source offset | 0.54 ± 0.77 | 0.70 | -0.29 ± 0.69 | -0.45 ± 0.80 |

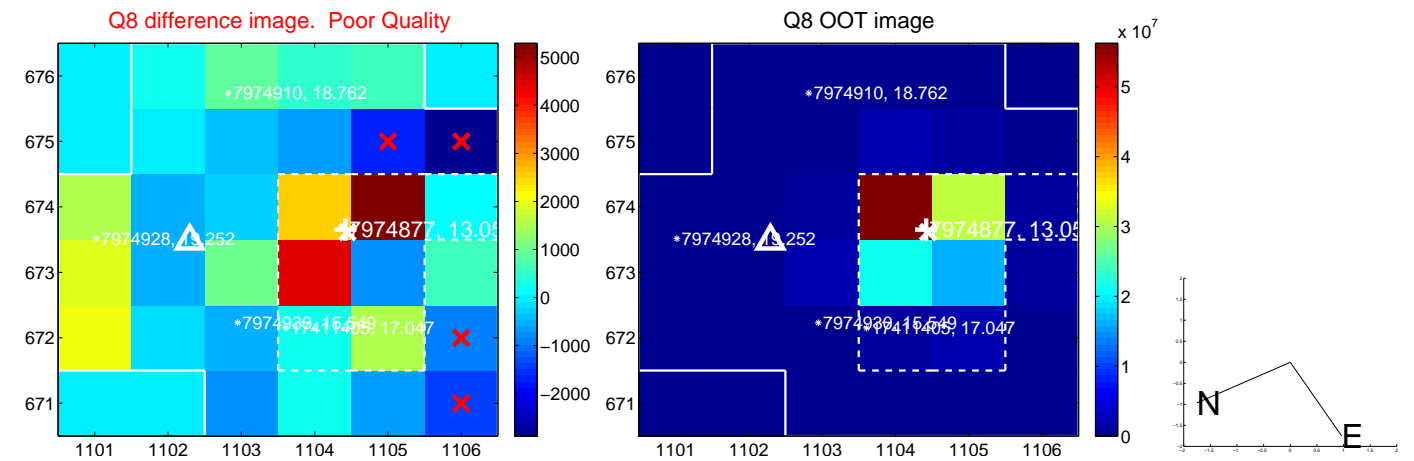
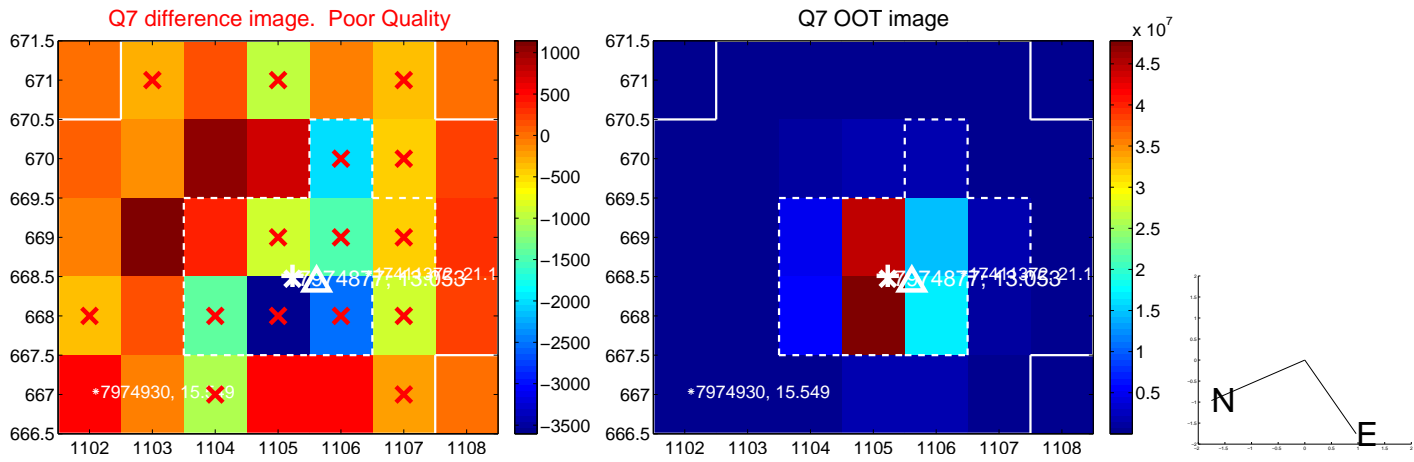
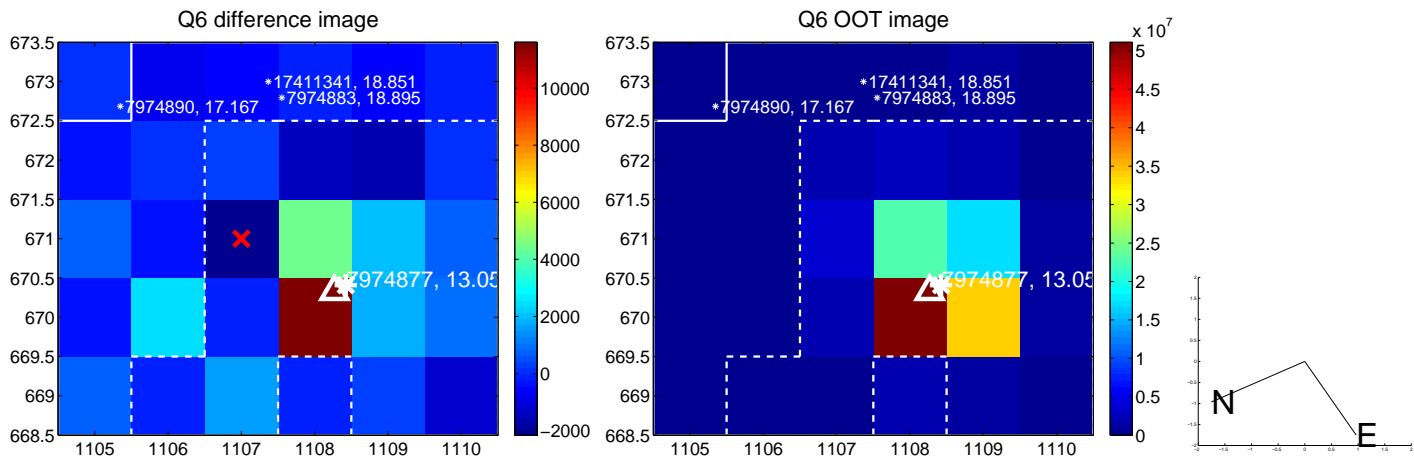
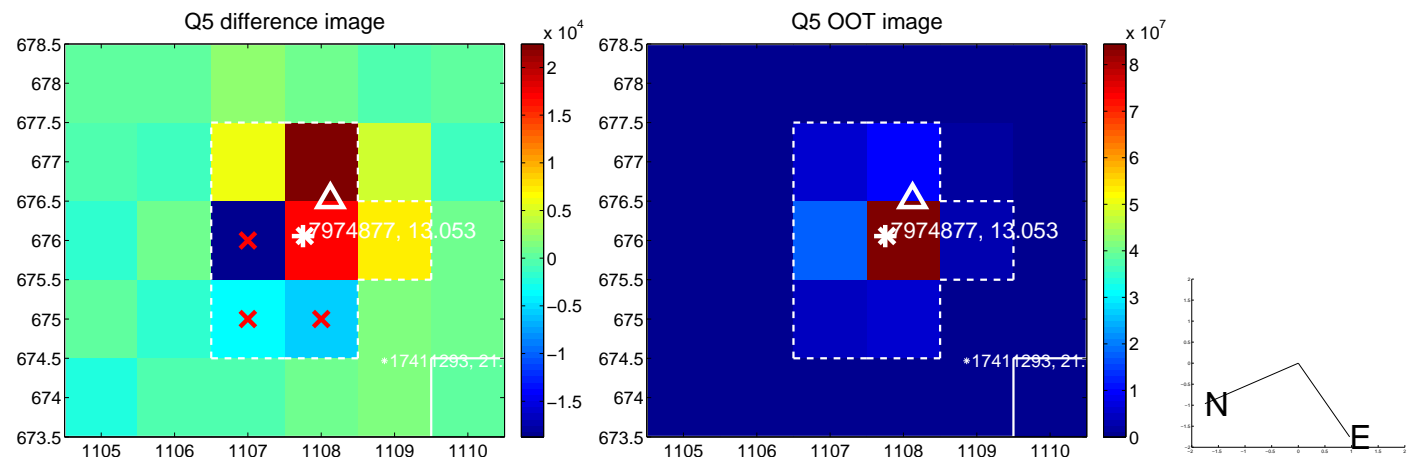


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

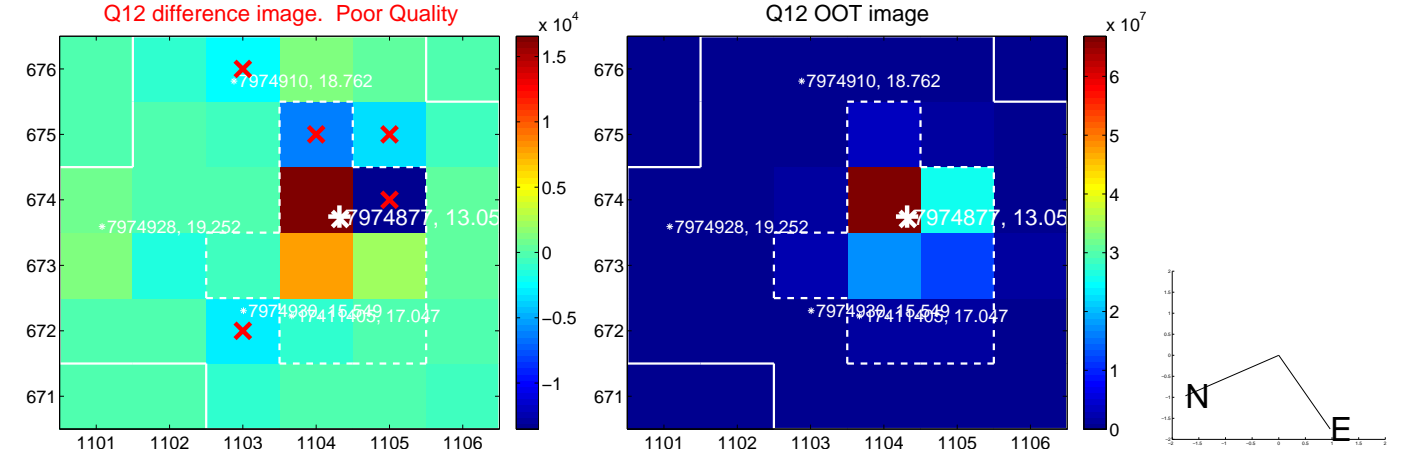
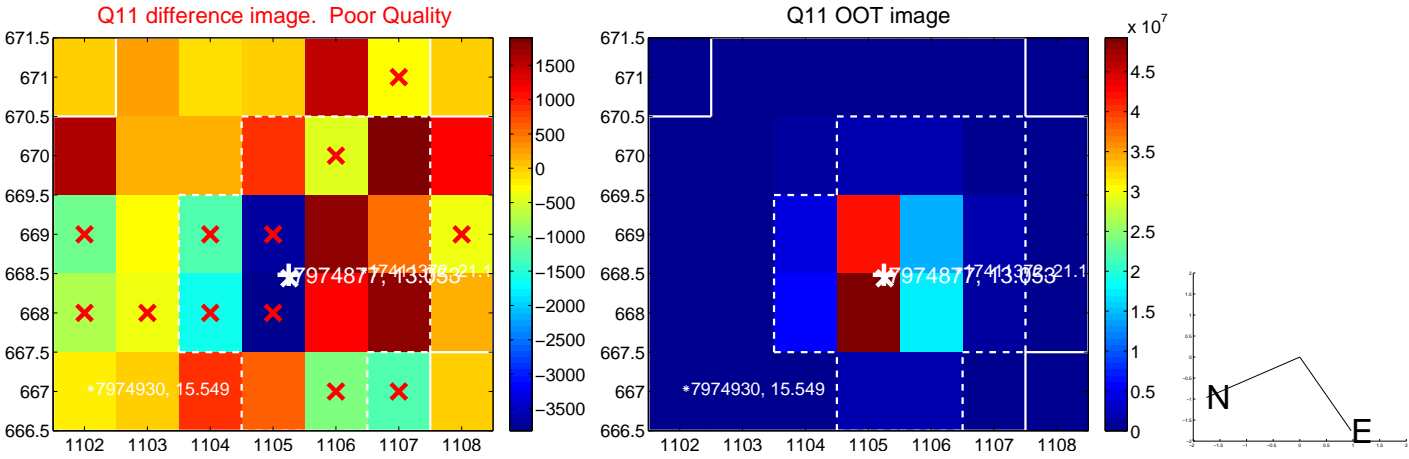
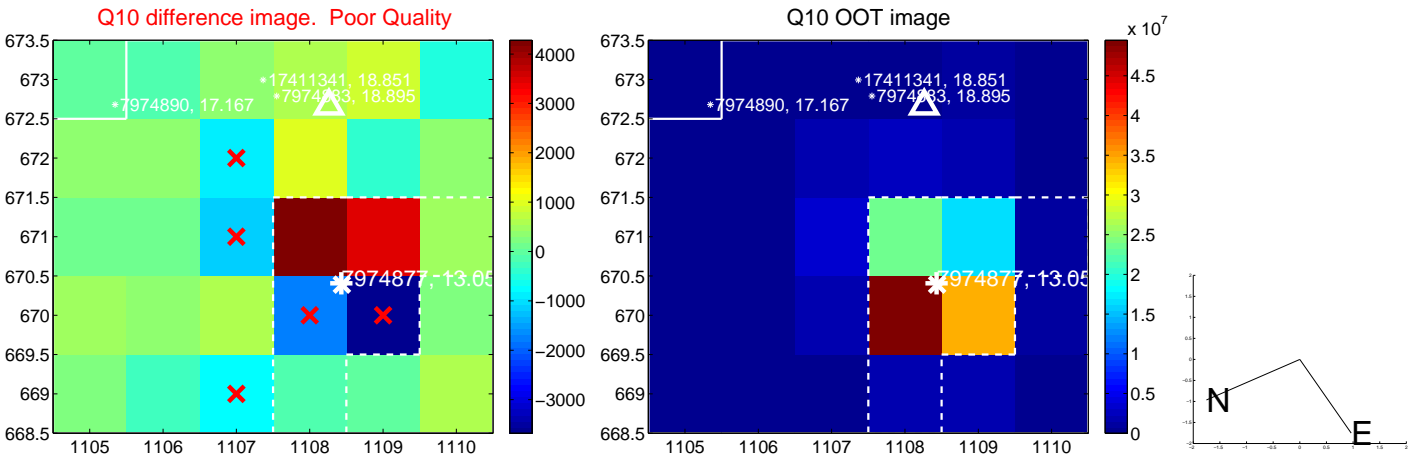
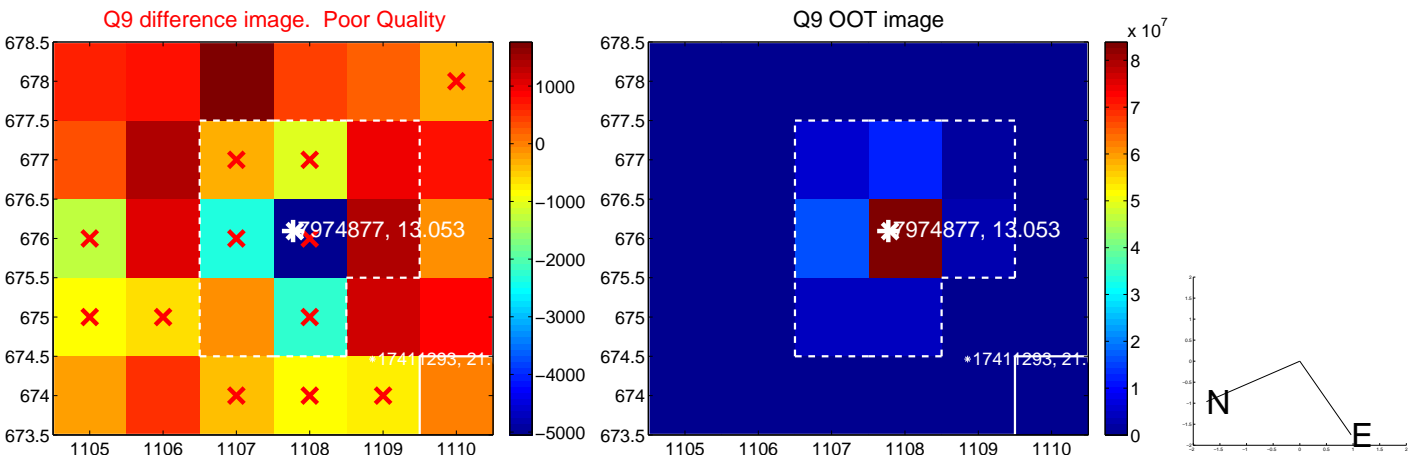
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



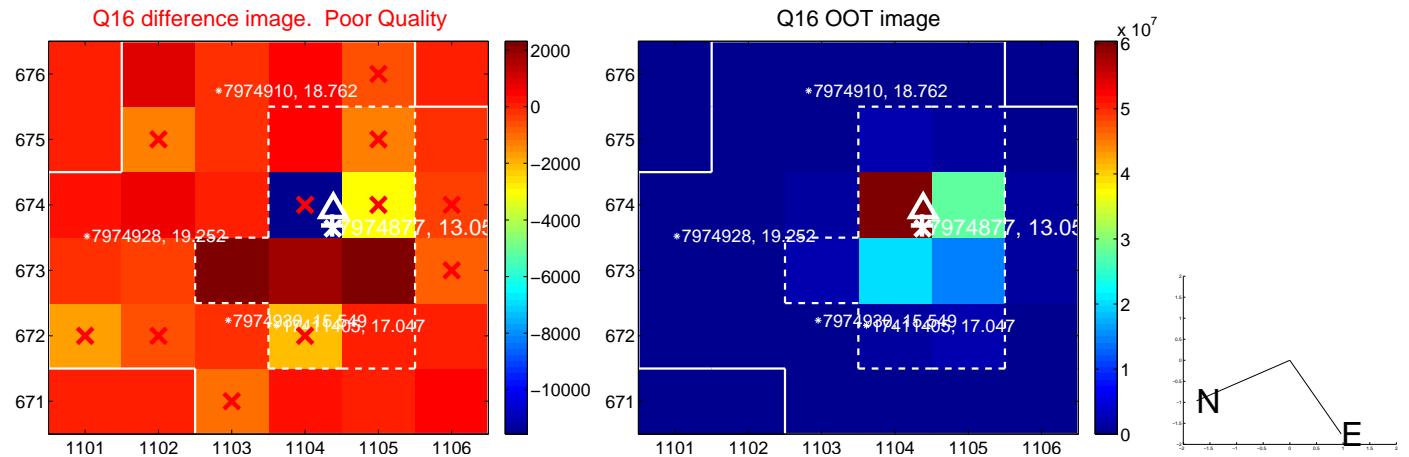
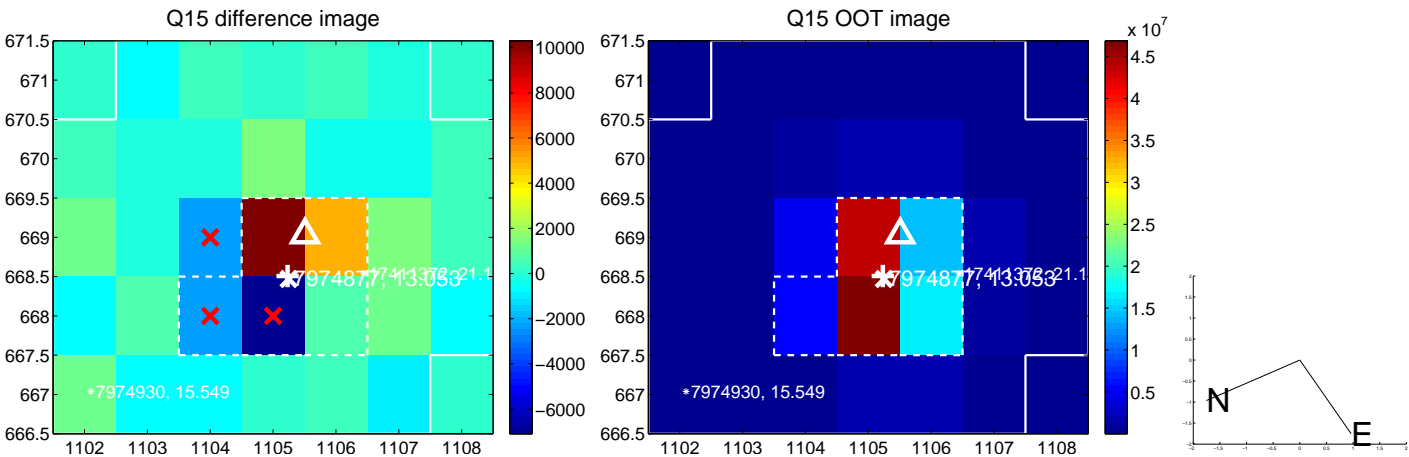
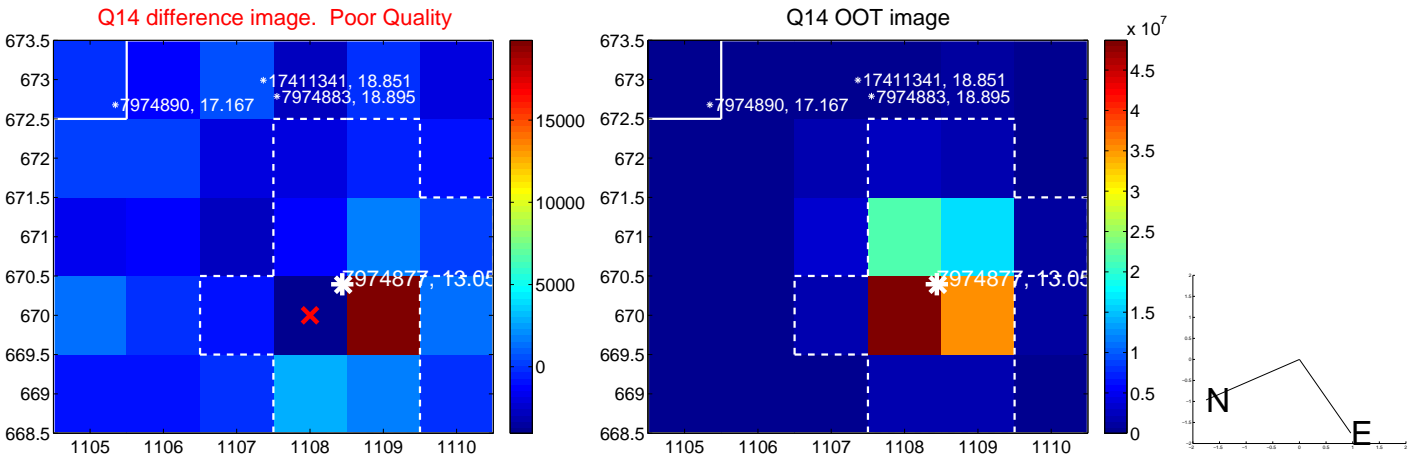
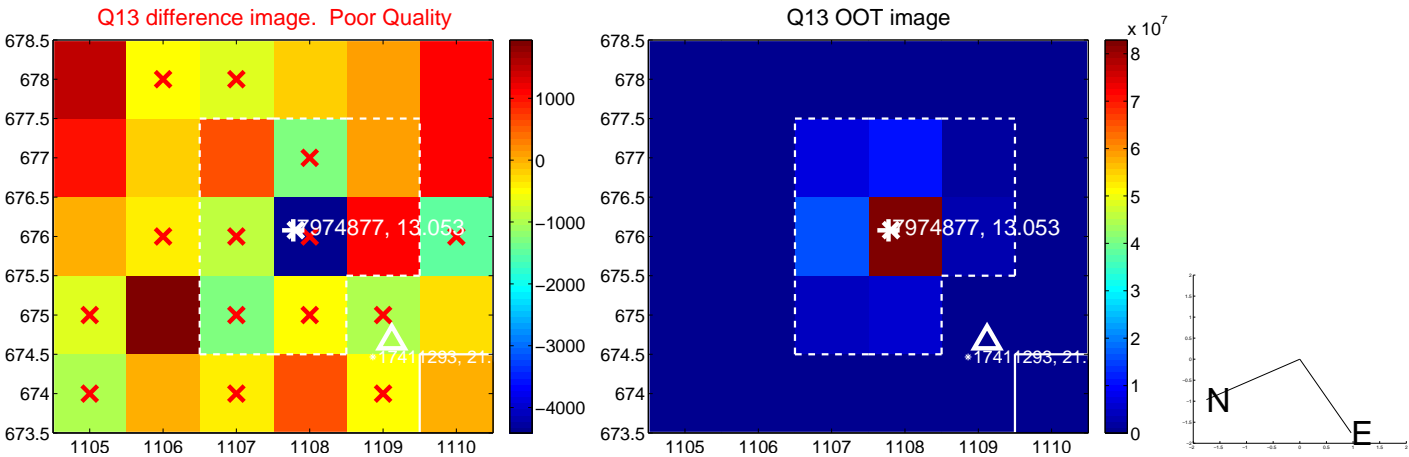
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



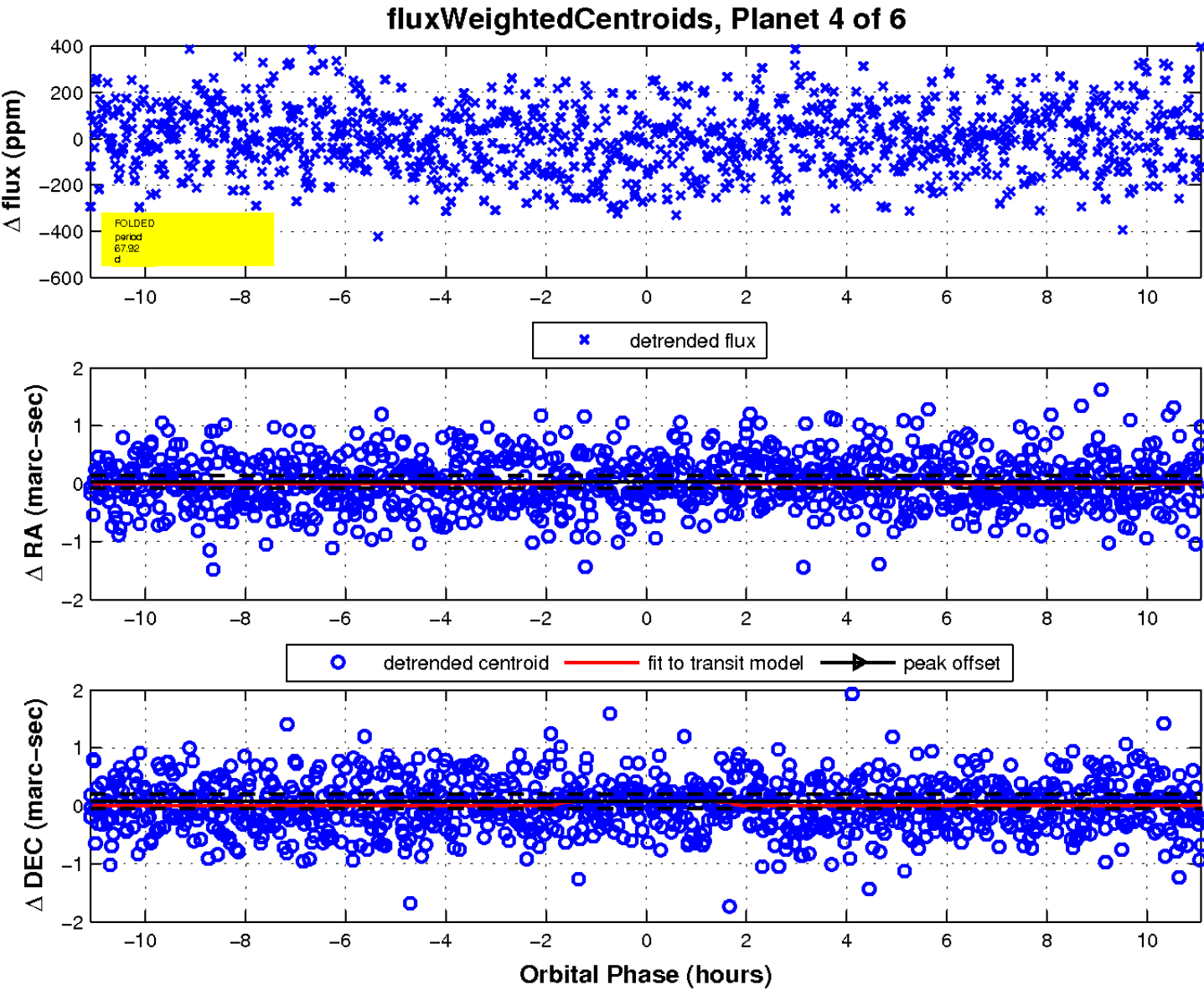
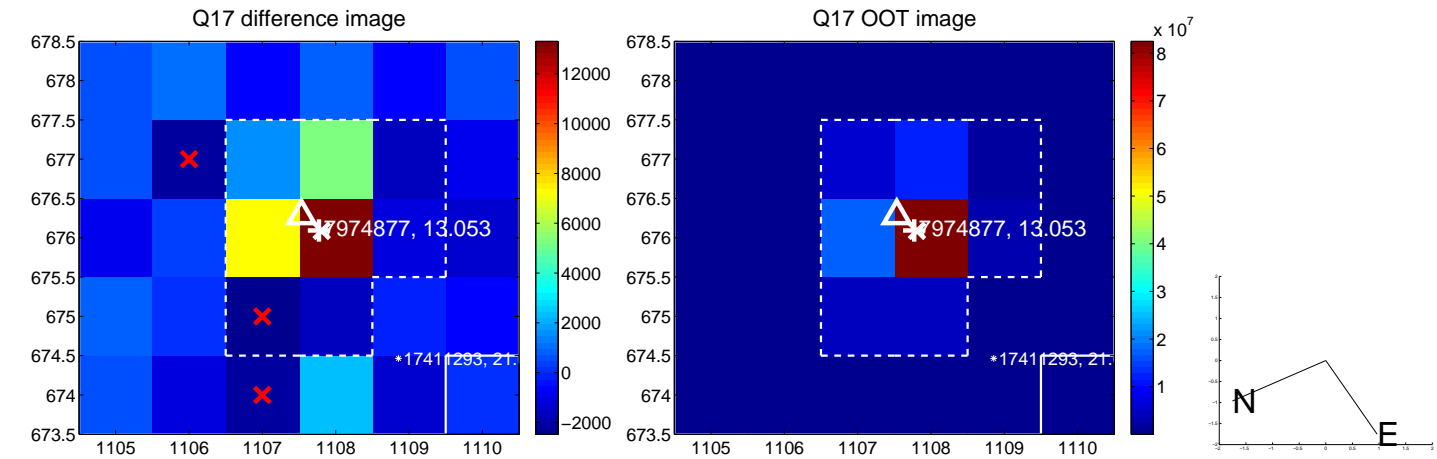
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



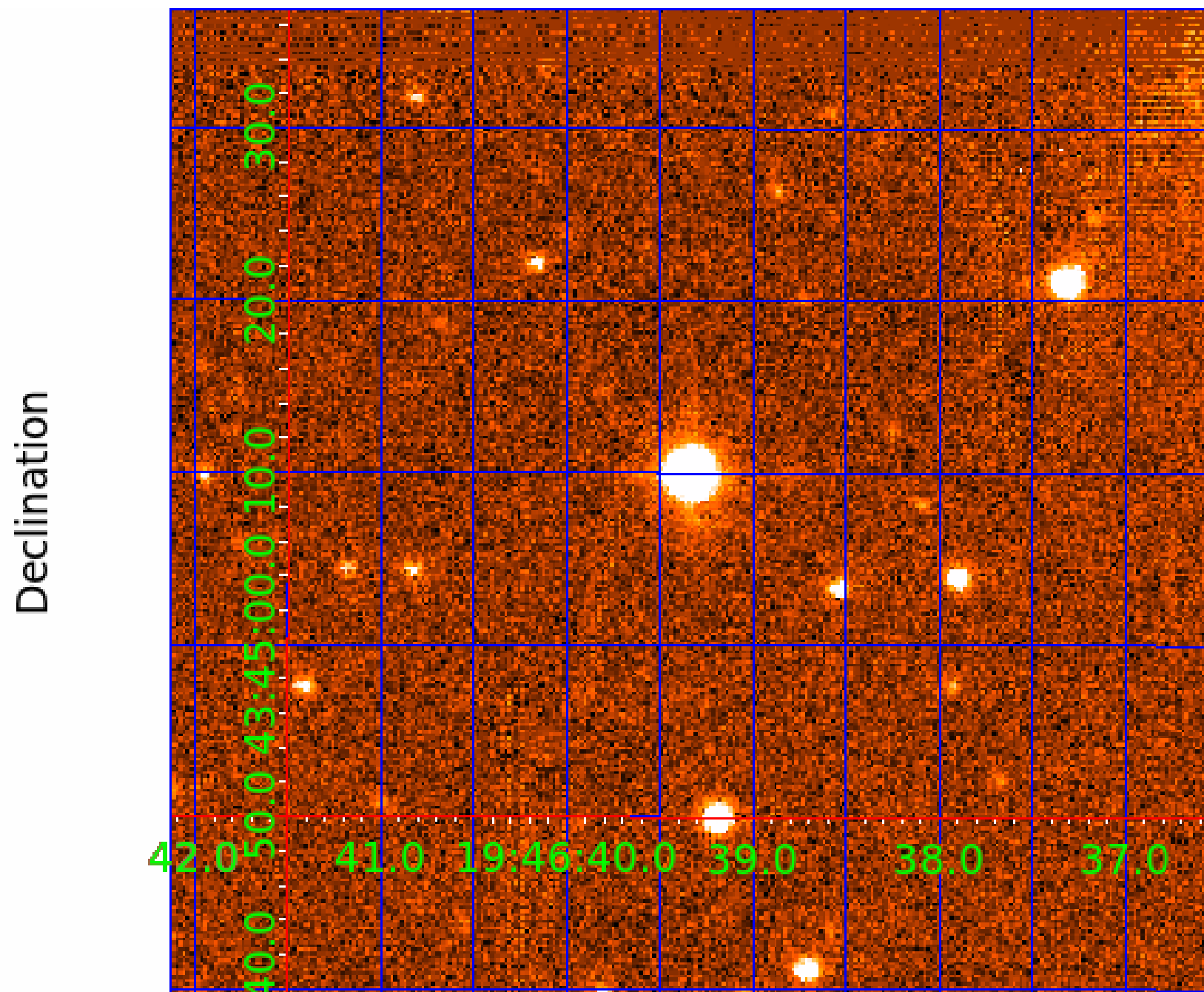
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
| 007974877-02 | OBS | No | 47.525385 | 162.529614 | 173.2 | 1.728 | 8.7 | 7.7 | 2.21 | 6675 | 3.41 | 108.58 |
| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

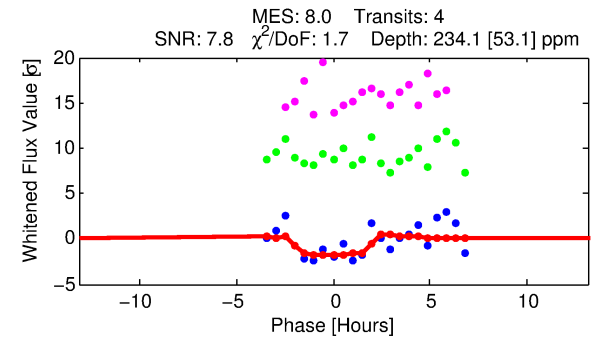
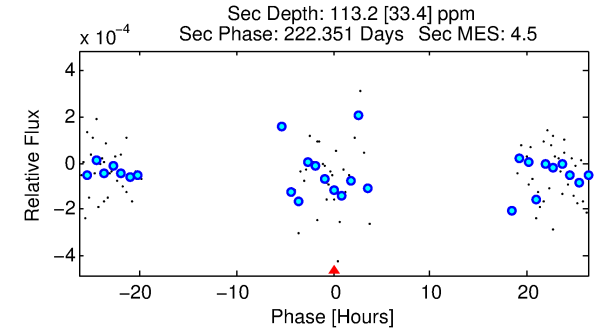
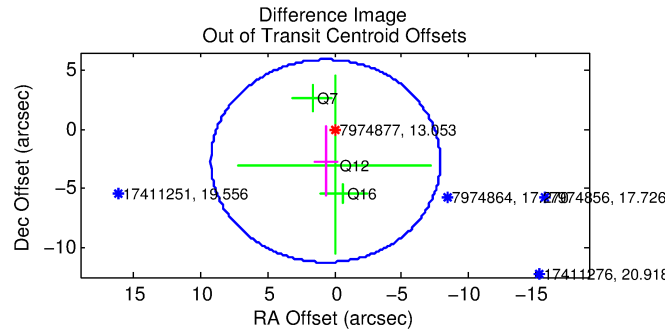
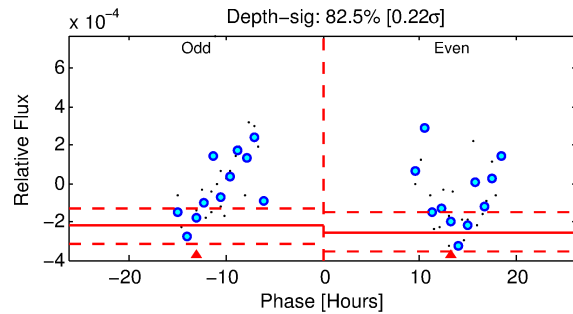
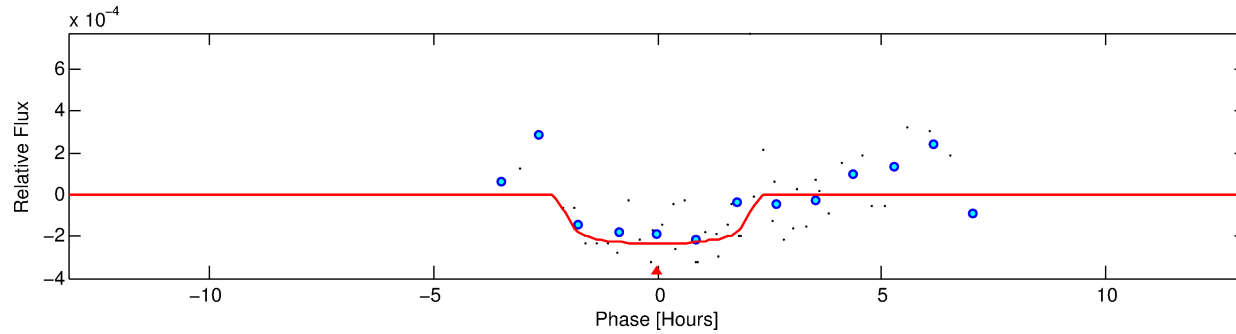
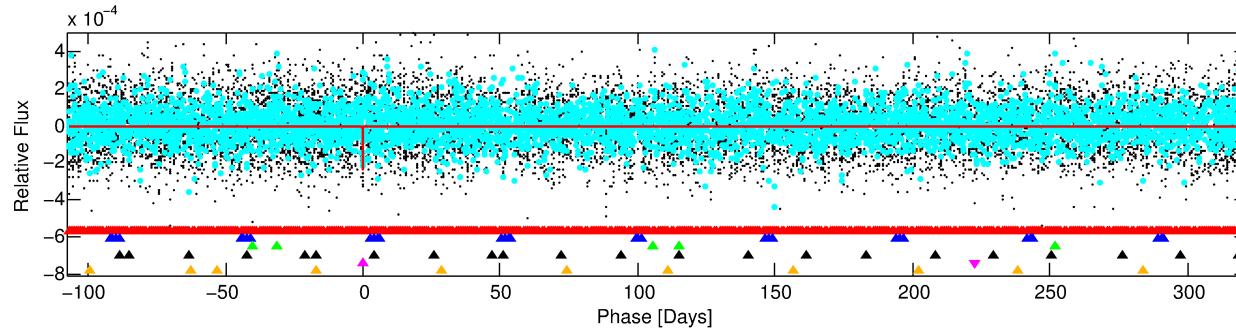
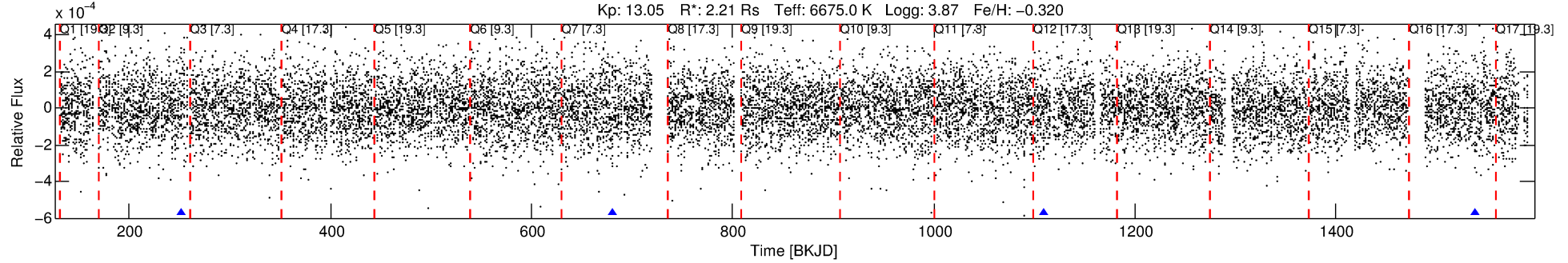
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-05

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 5 of 6 Period: 428.850 d



DV Fit Results:

Period = 428.84955 [0.01225] d
Epoch = 251.2272 [0.0250] BKJD
Rp/R* = 0.0160 [0.0204]
a/R* = 397.76 [3024.42]
b = 0.87 [2.20]
Seff = 5.78 [2.99]
Teq = 395 [51] K
Rp = 3.84 [5.08] Re
a = 1.2232 [0.3916] AU
Ag = 6317.64 [16560.47] [0.38 σ]
Teff = 5450 [3509] K [1.44 σ]

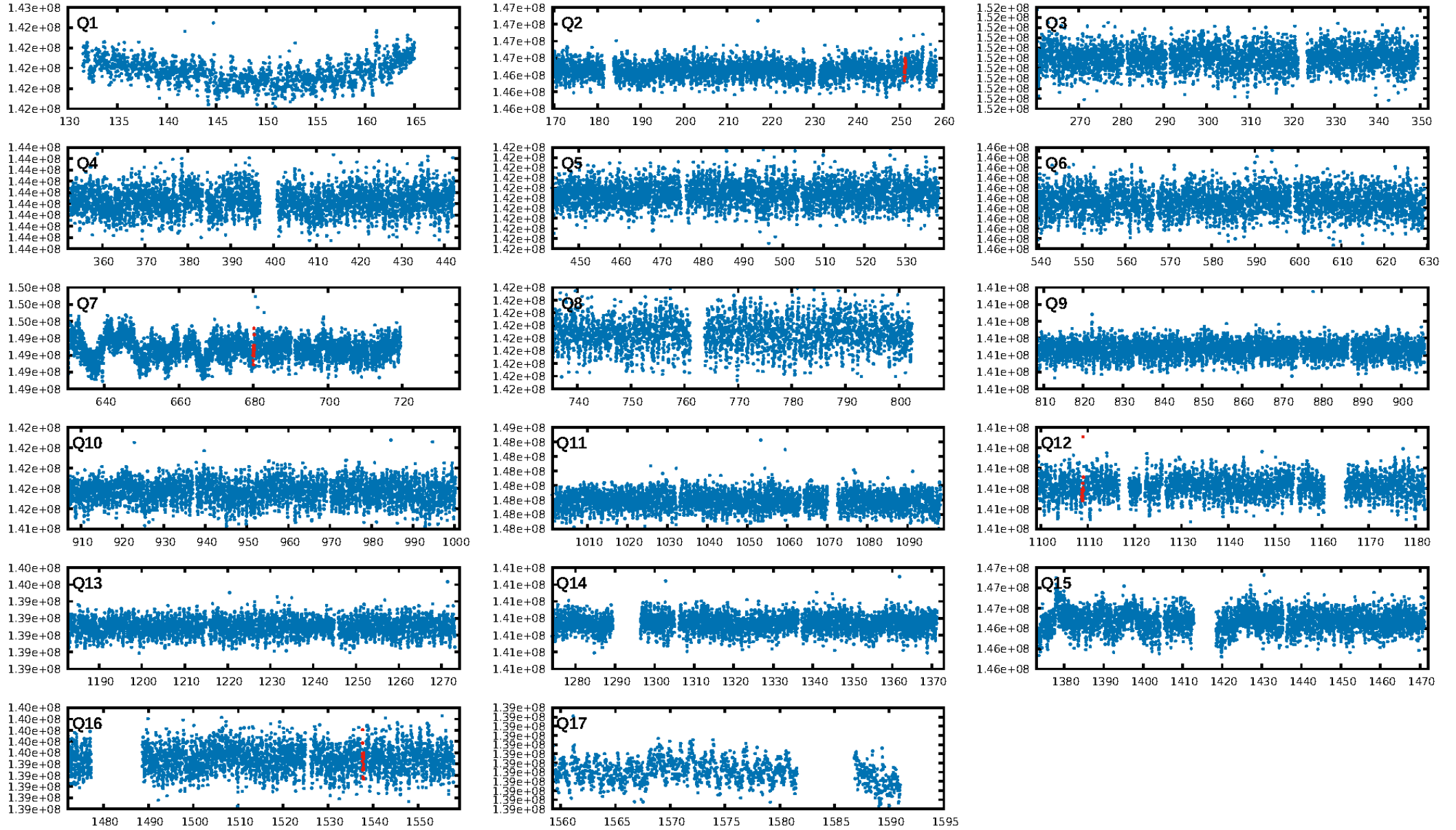
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [550.63 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 2.51e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2258
Centroid-sig: 26.3%
Centroid-so: 1.338 arcsec [1.07 σ]
OotOffset-rm: 2.775 arcsec [0.97 σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-rm: 2.795 arcsec [0.97 σ]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/4]

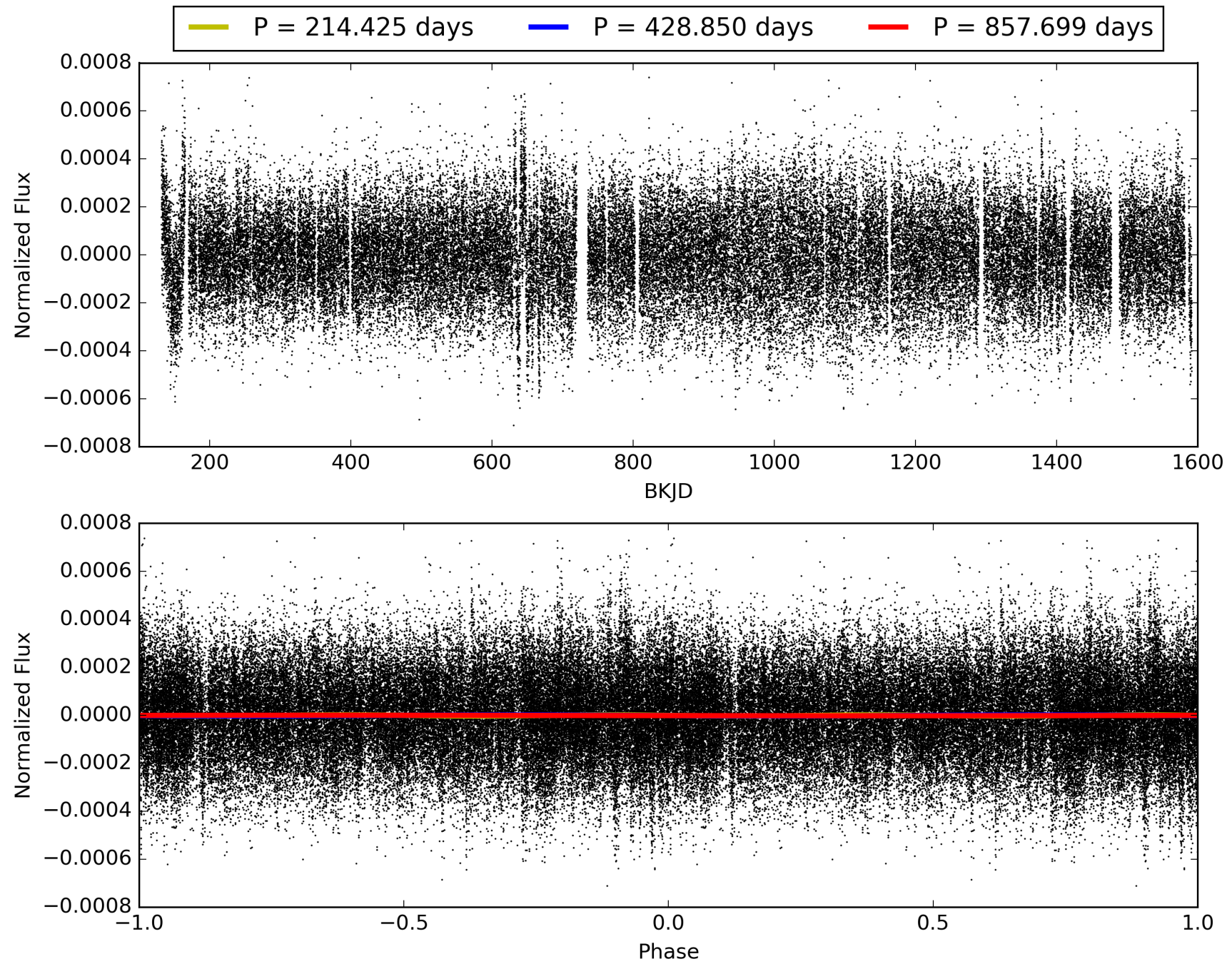
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:27 Z

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

TCE 007974877-05, PDC Light Curves

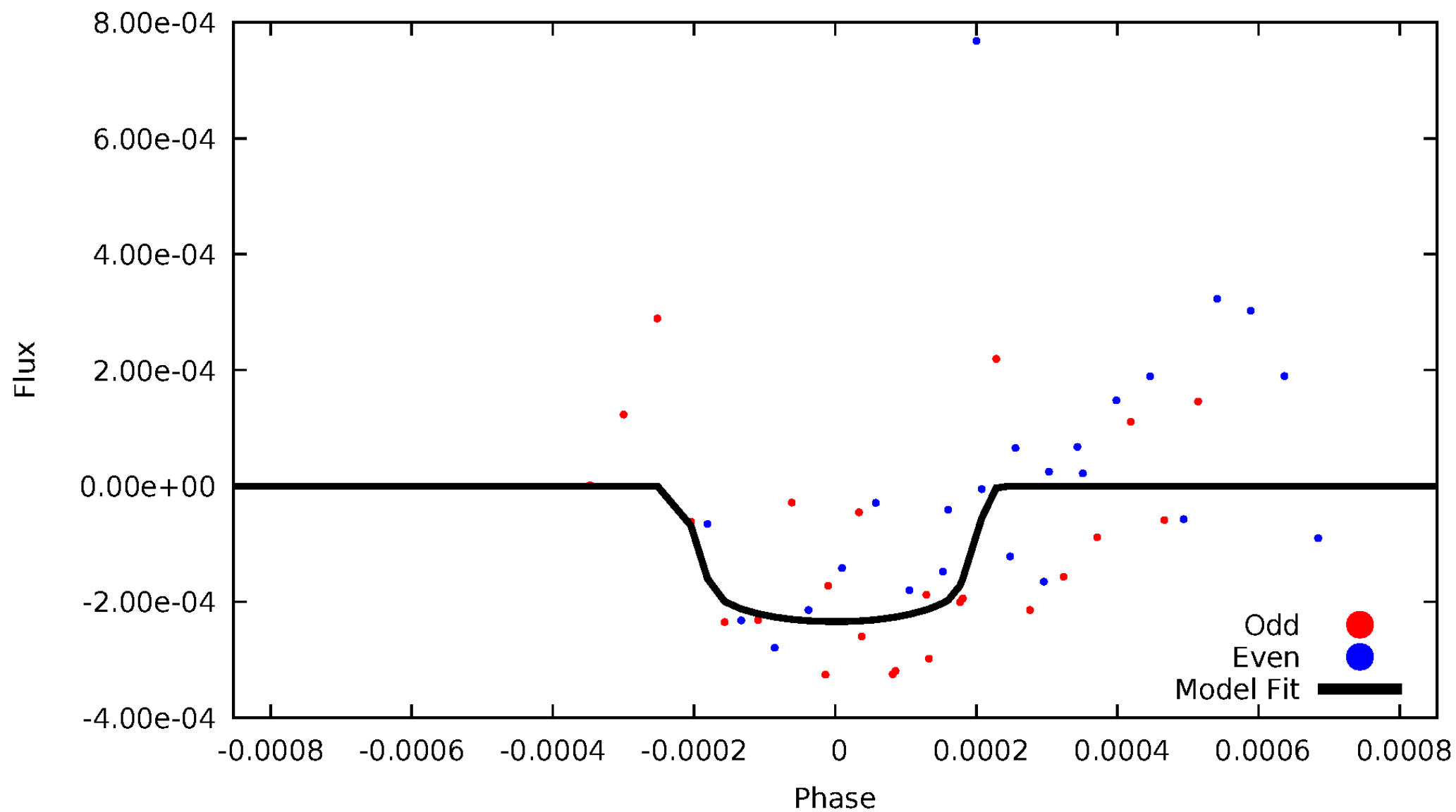


TCE 007974877-05



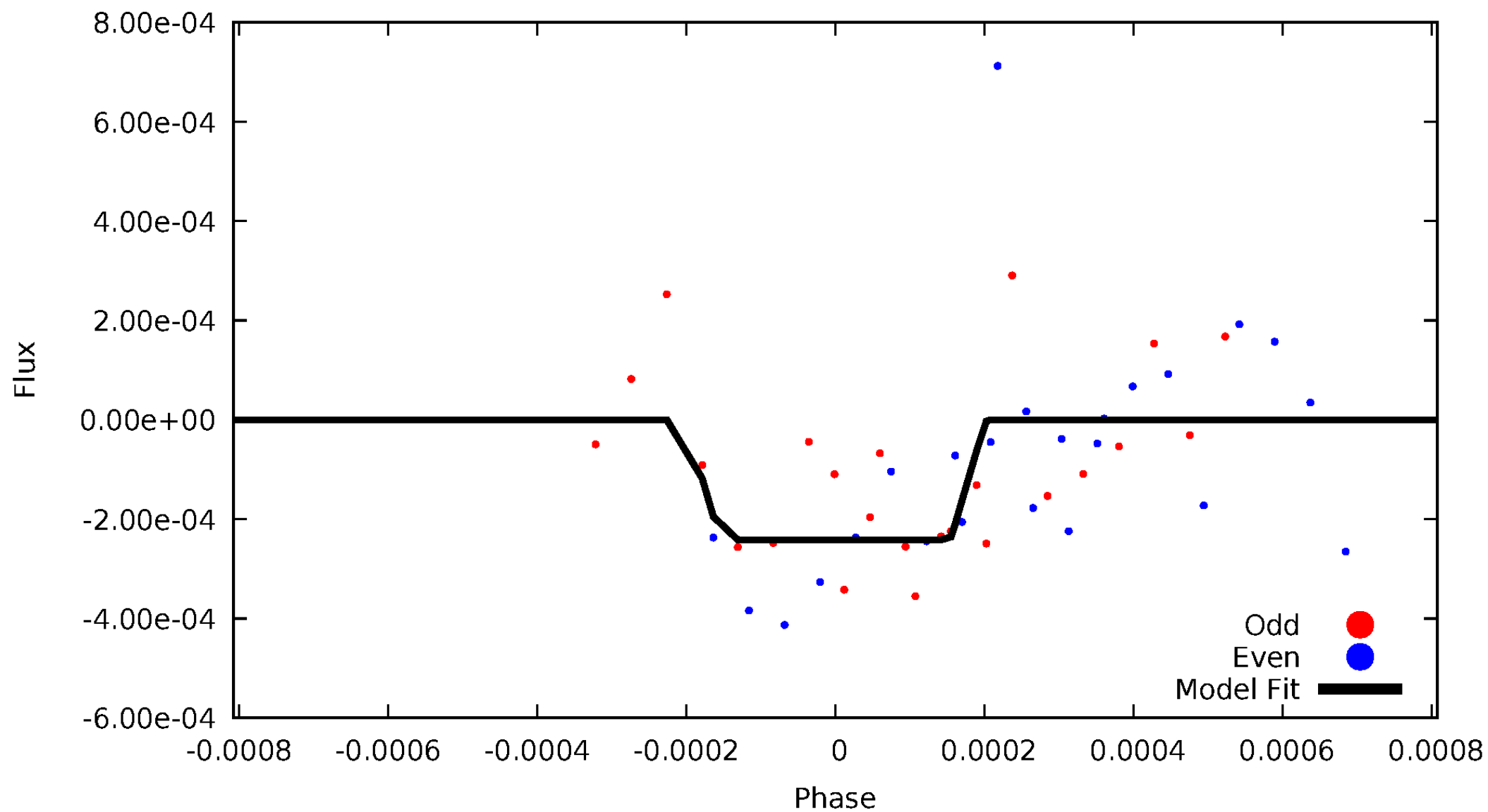
DV Odd/Even

TCE 007974877-05



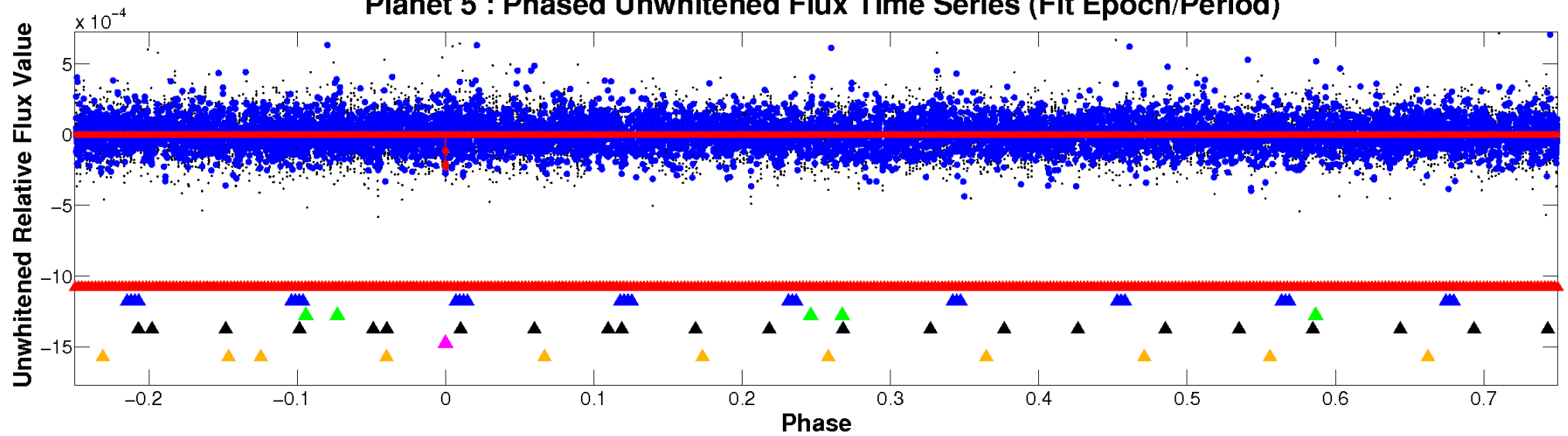
ALT Odd/Even

TCE 007974877-05

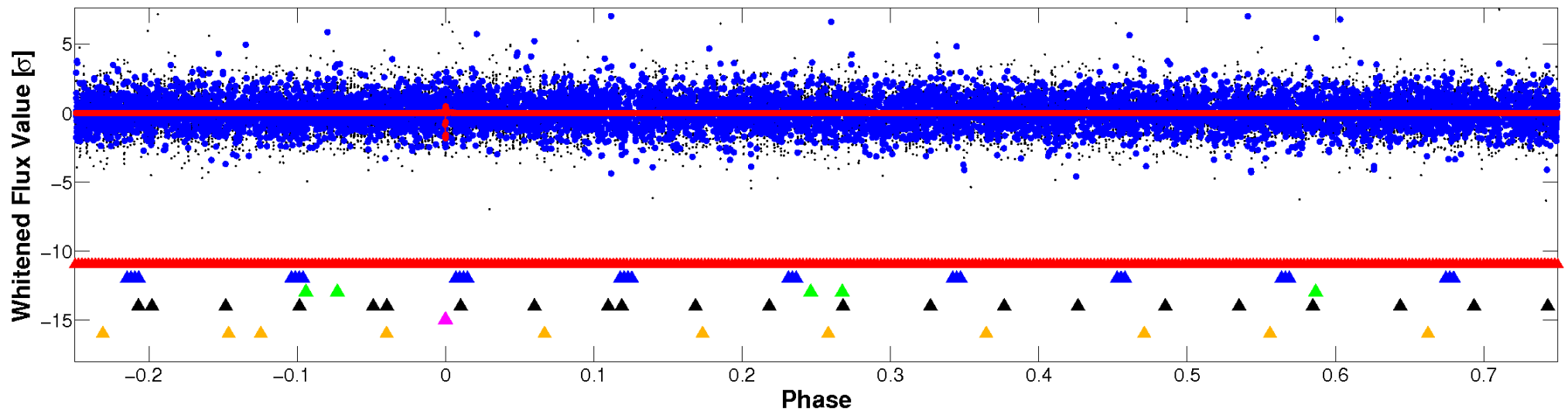


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

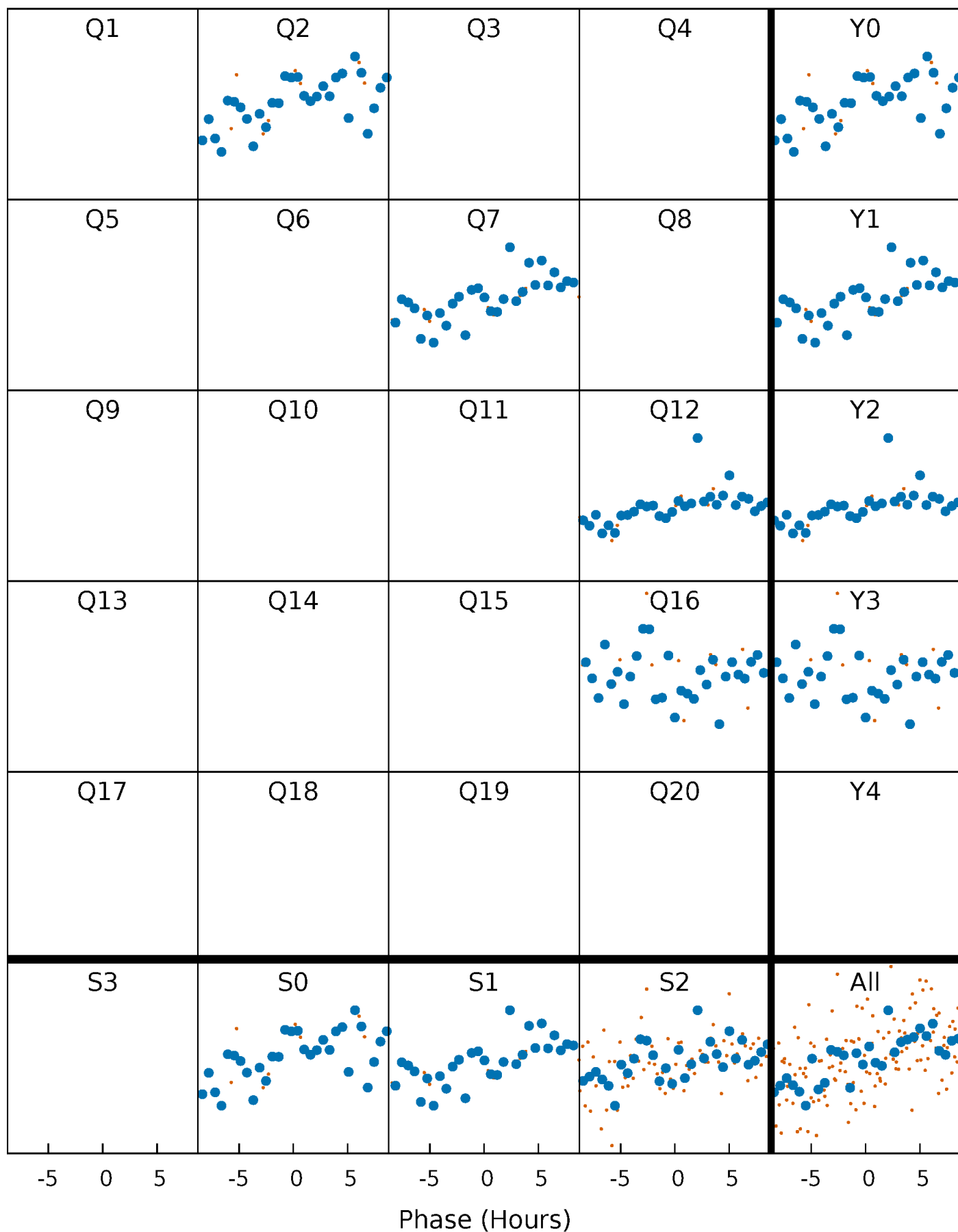


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



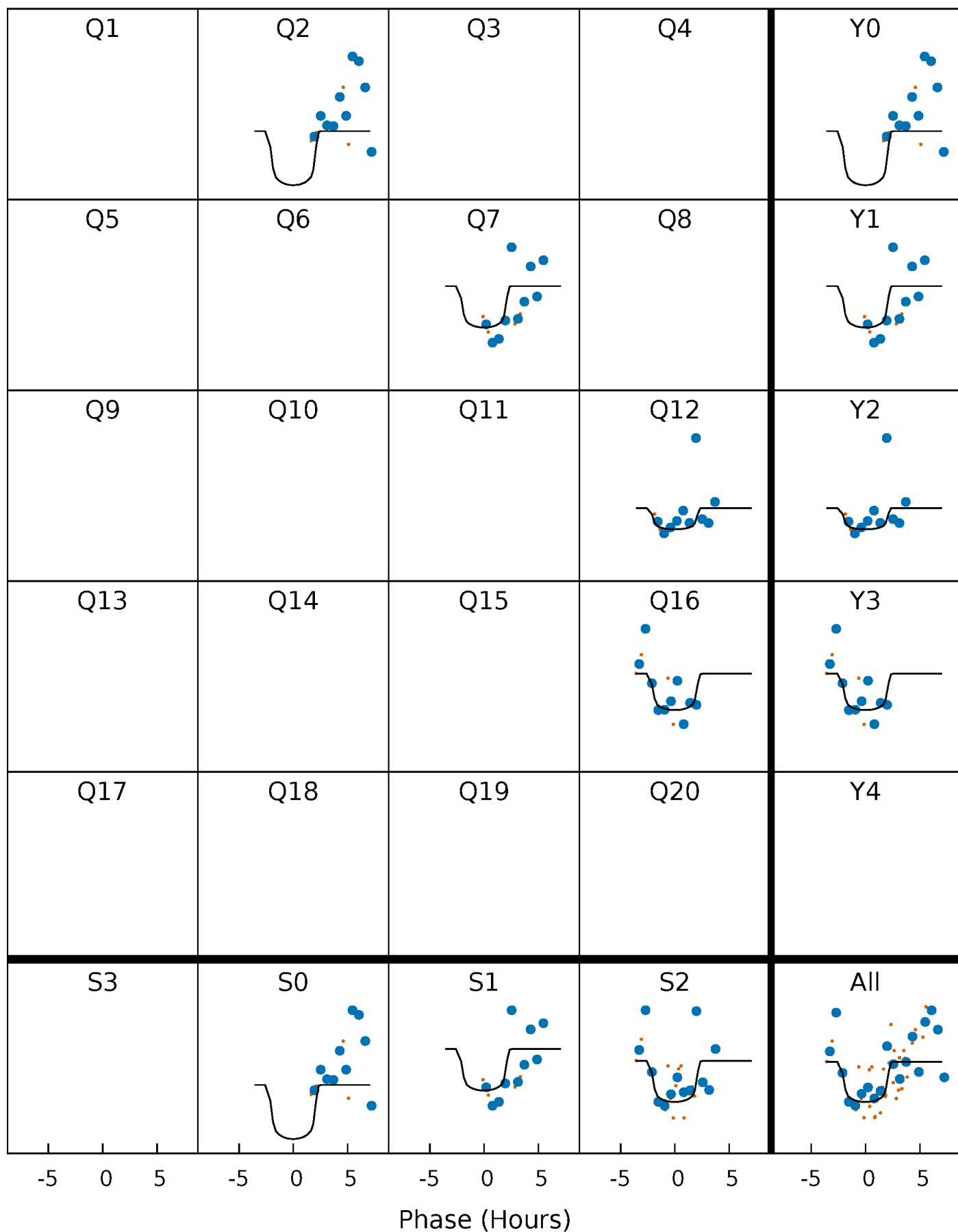
PDC Quarter-Phased Transit Curves

TCE 007974877-05 $P=428.849549$ Days $T_0=251.227192$ (BKJD)



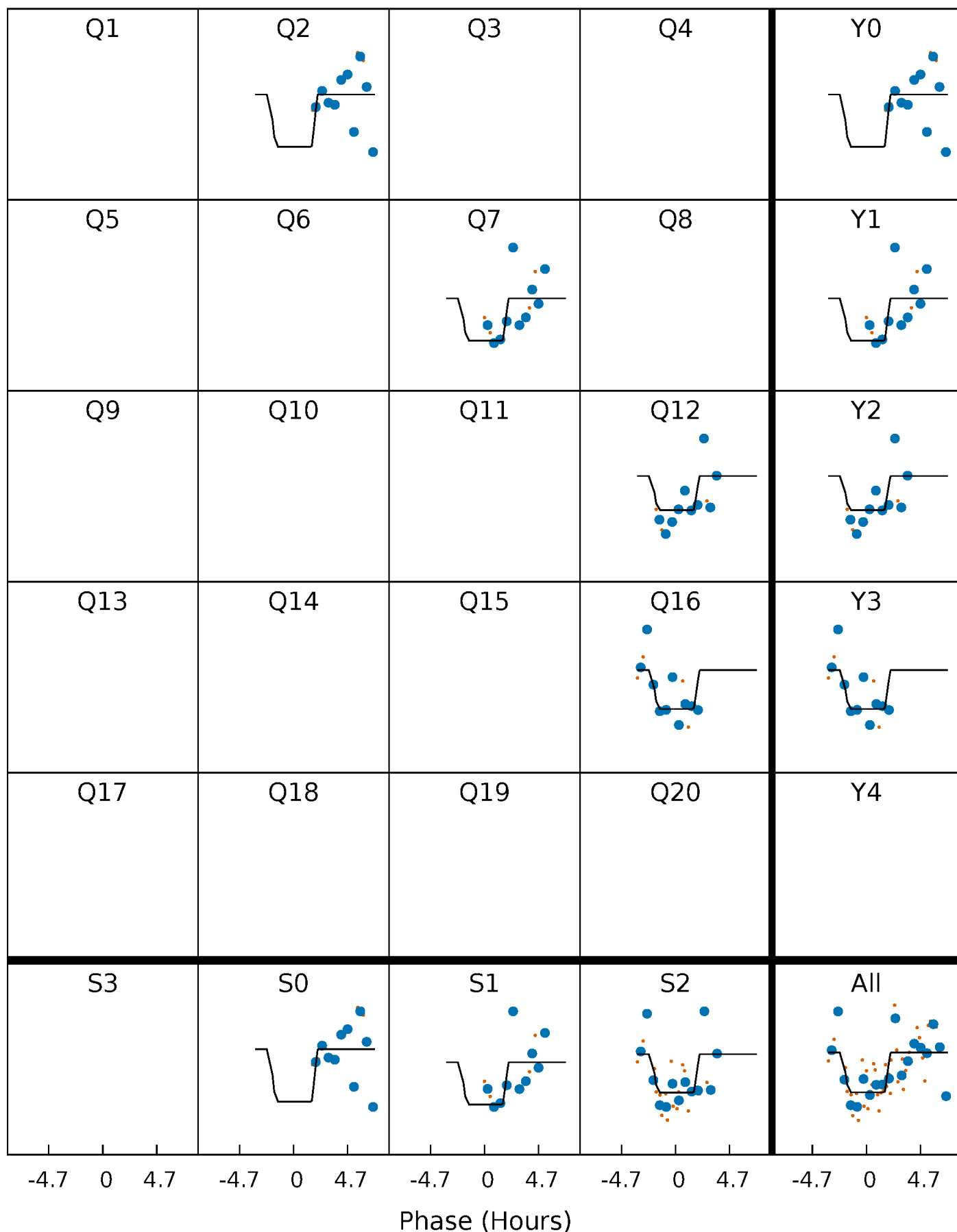
DV Quarter-Phased Transit Curves

TCE 007974877-05 $P=428.849549$ Days $T_0=251.227192$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

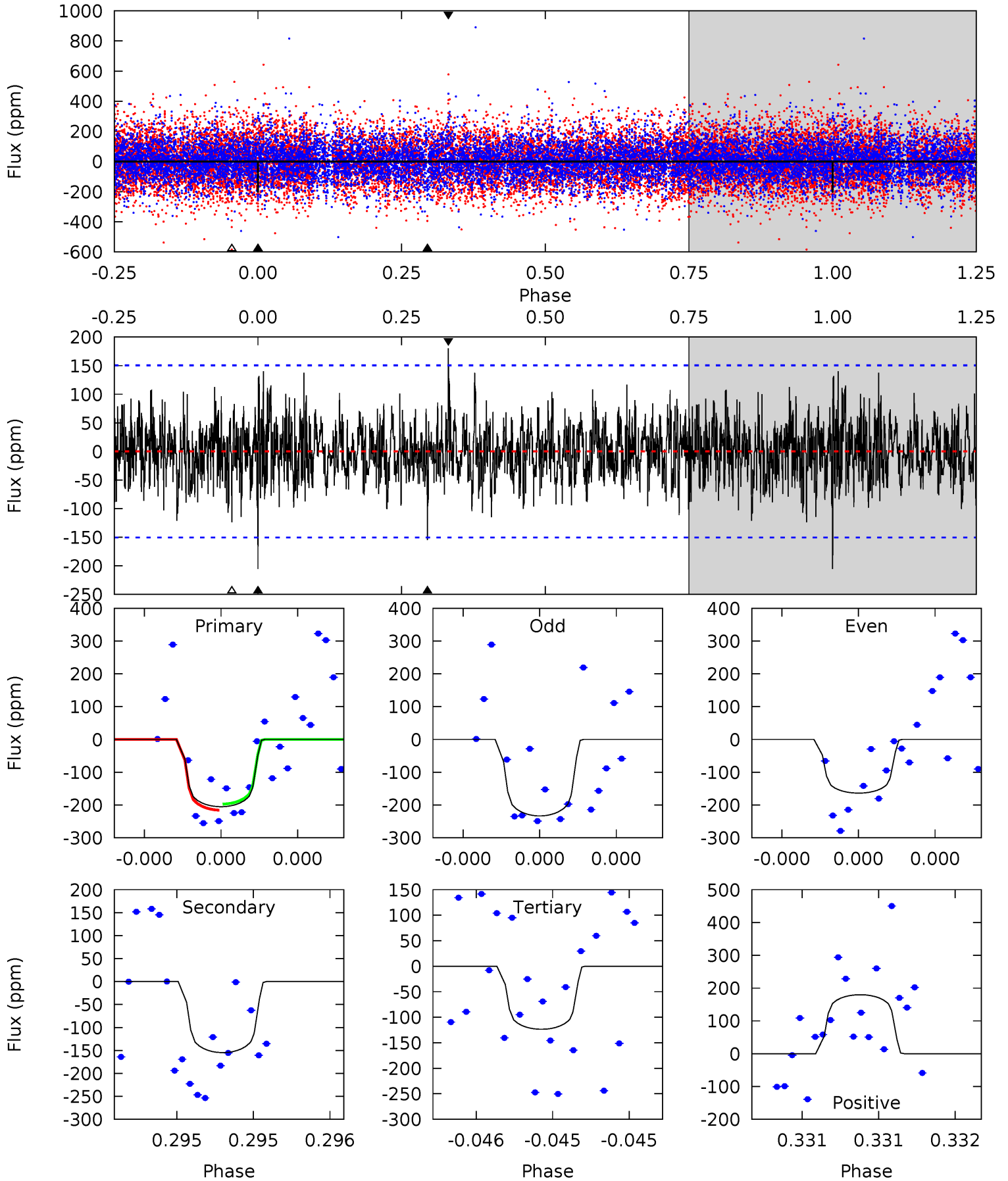
TCE 007974877-05 P=428.845935 Days $T_0=251.226966$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-05, P = 428.849549 Days, E = 251.227192 Days

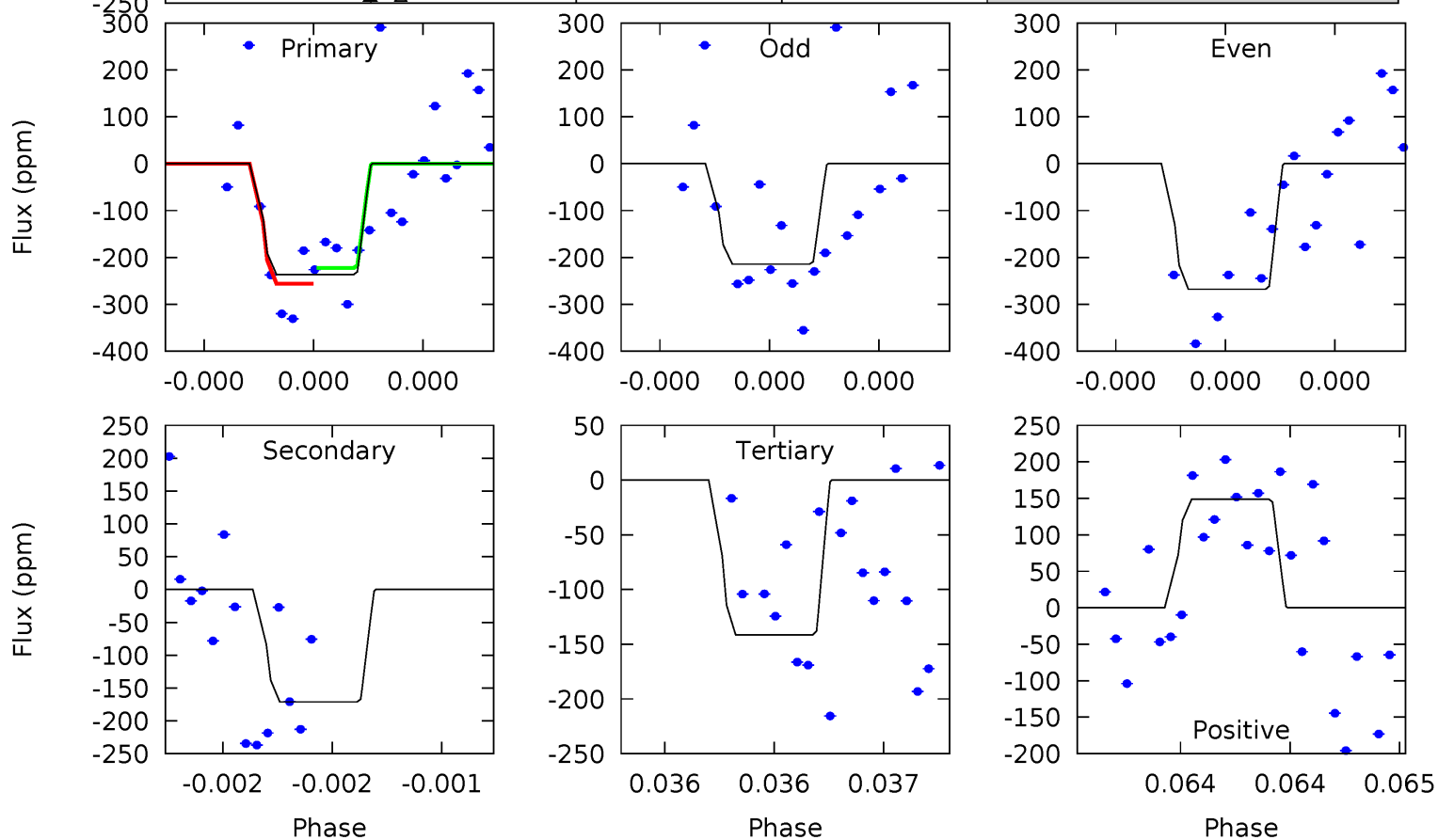
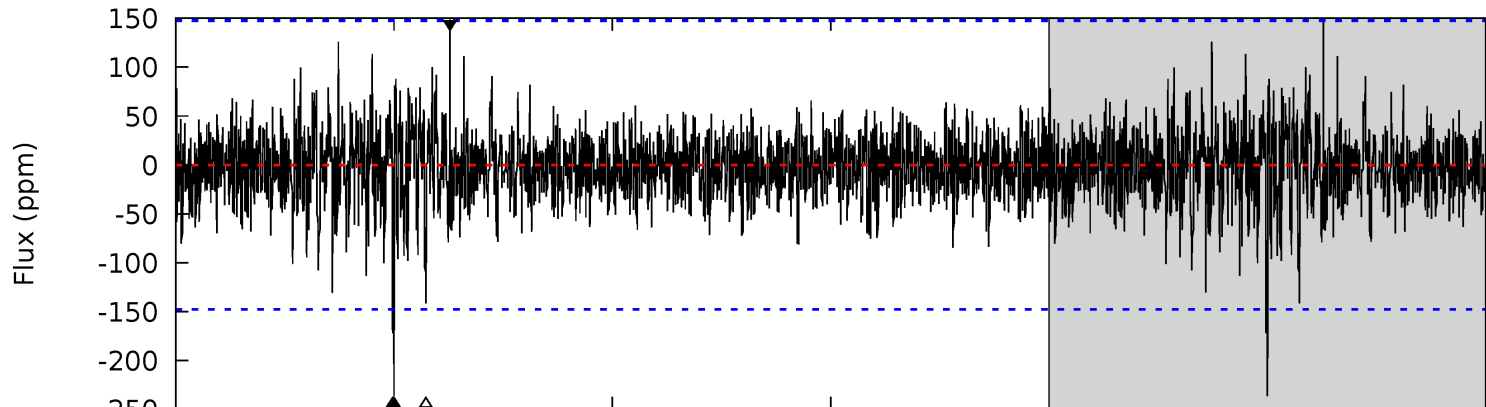
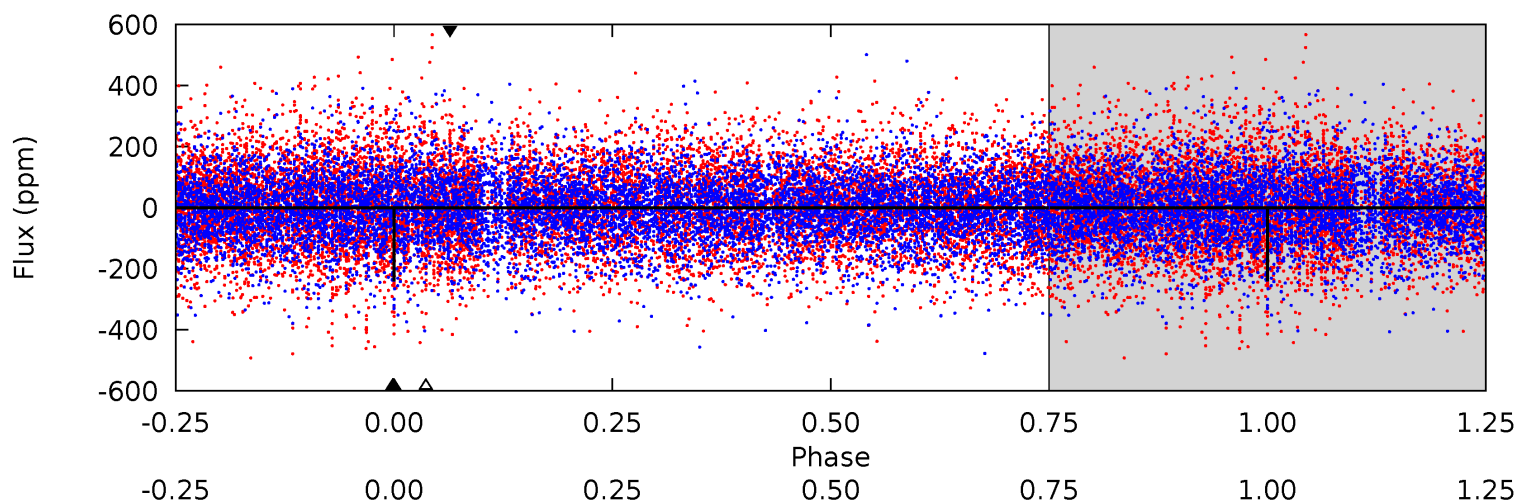
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 7.63 | 5.76 | 4.60 | 6.69 | 5.60 | 3.52 | 1.50 | 3.04 | 0.94 | 1.16 | -0.94 | 1.28 | 0.96 | 0.47 | 0.34 |



Alt Model-Shift Uniqueness Test

007974877-05, P = 428.845935 Days, E = 251.226966 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.99 | 6.51 | 5.38 | 5.66 | 5.62 | 3.55 | 1.15 | 3.61 | 3.33 | 1.13 | 0.85 | 1.04 | 1.08 | 0.39 | 0.61 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-05 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|-------------------|------------------------|-------------------------|
| DV | -155 ± 27 | $4.69^{+4.11}_{-3.06}$ | 543^{+32}_{-45} | 5216^{+3893}_{-1141} | 5873^{+43296}_{-4209} |
| Alt. | -171 ± 26 | $4.80^{+4.55}_{-3.11}$ | 540^{+36}_{-47} | 5250^{+3870}_{-1189} | 6011^{+42089}_{-4427} |

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 $A_{obs} \gg 1.0$

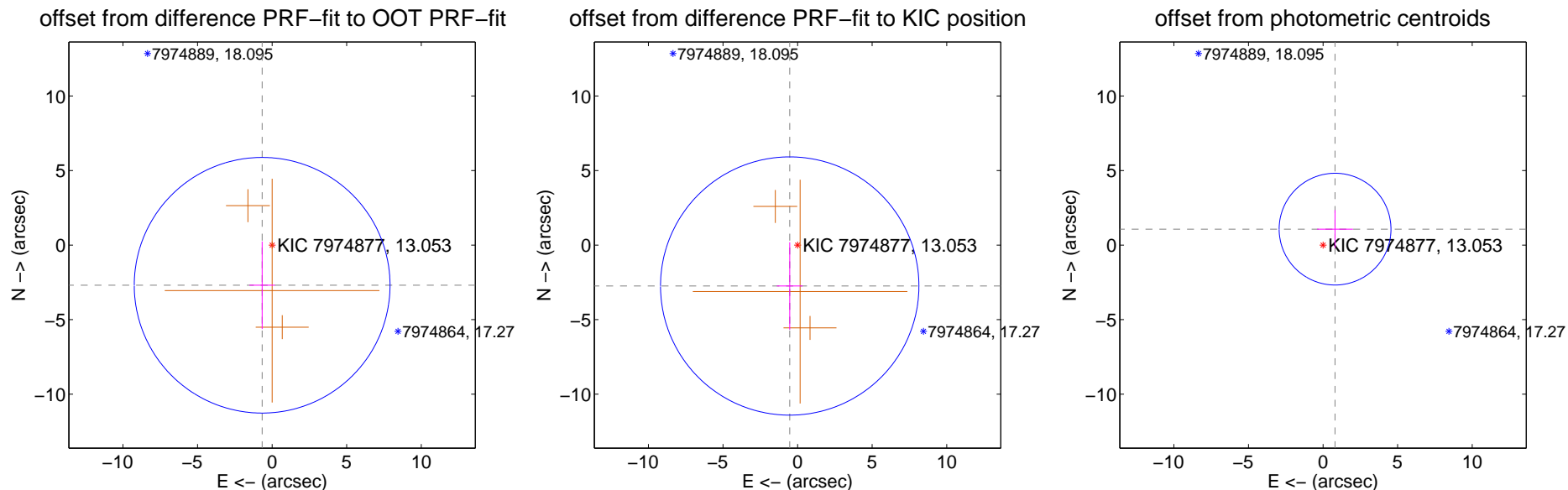
DV Centroid Data

Supplemental centroid analysis for 007974877-05. Kepler magnitude: 13.05. Transit SNR 7.80

There are 0 quarters with good PRF difference image offsets

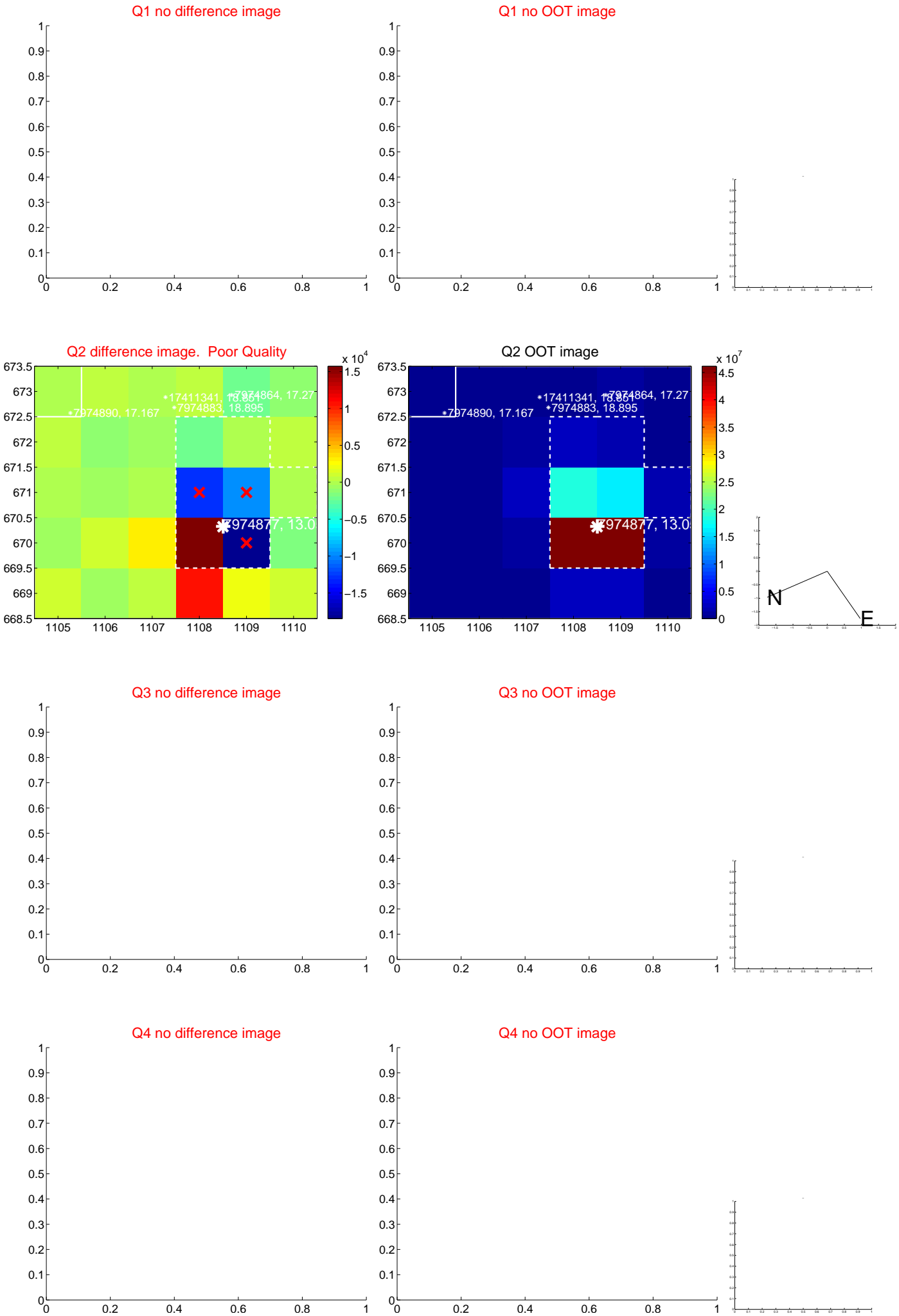
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 2.775 ± 2.857 | 0.97 | 0.668 ± 0.857 | -2.694 ± 2.936 |
| PRF-fit source offset from KIC position | 2.795 ± 2.887 | 0.97 | 0.527 ± 0.866 | -2.745 ± 2.935 |
| photometric centroid source offset | 1.34 ± 1.25 | 1.07 | -0.81 ± 1.20 | 1.07 ± 1.28 |

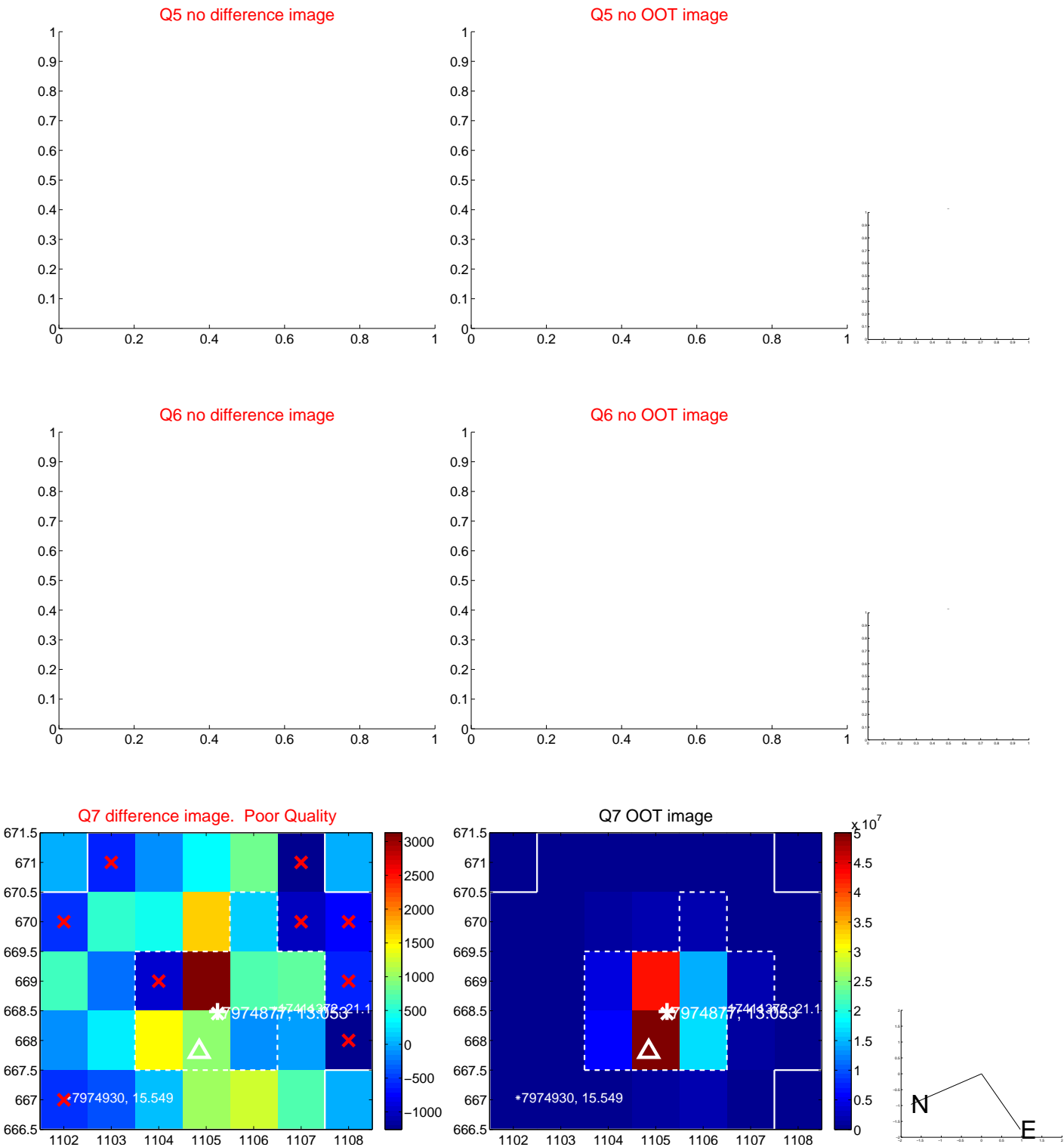


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

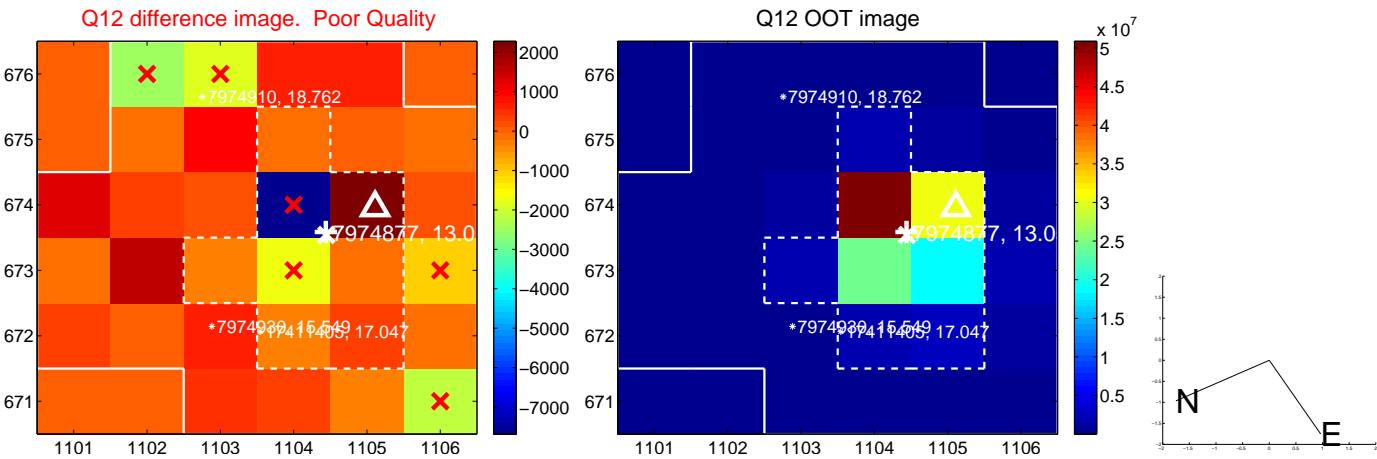
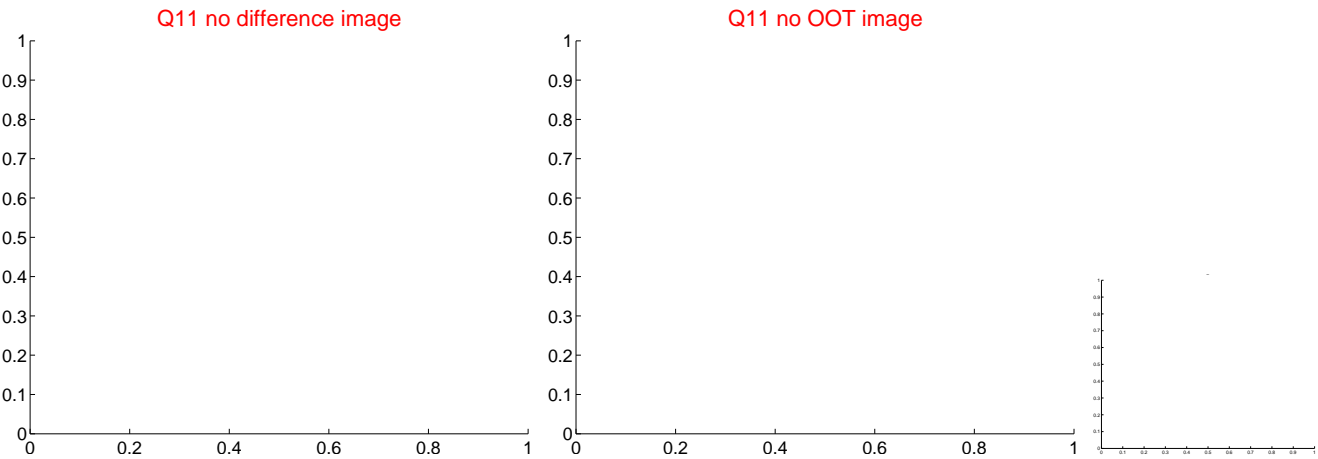
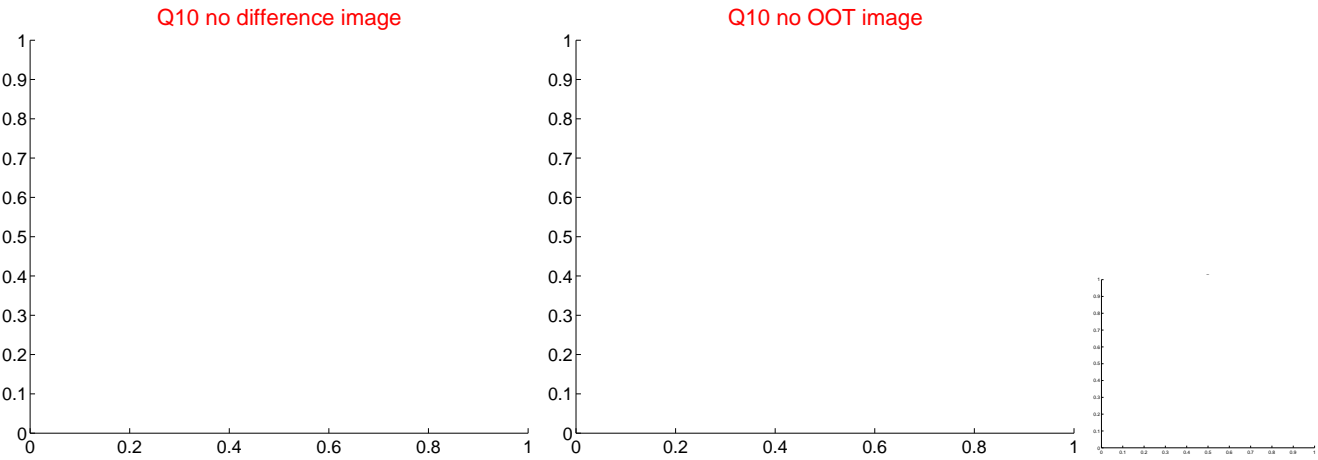
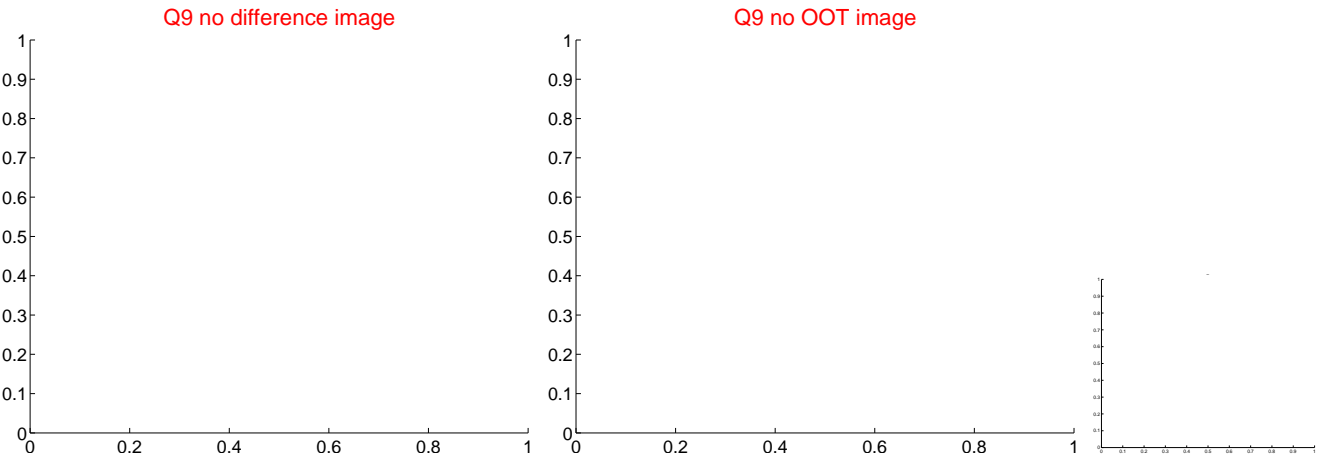
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



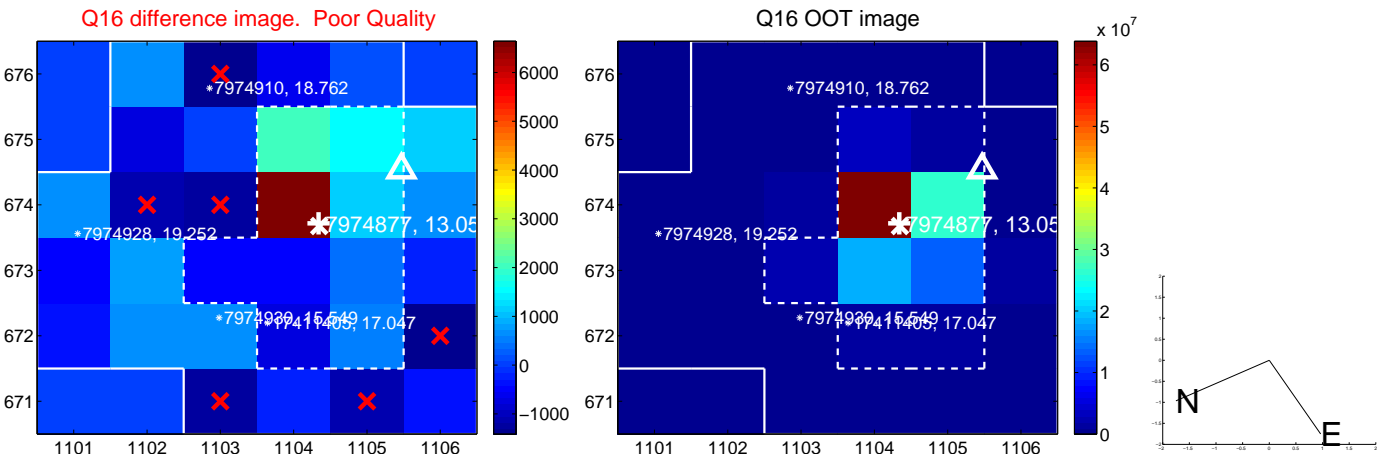
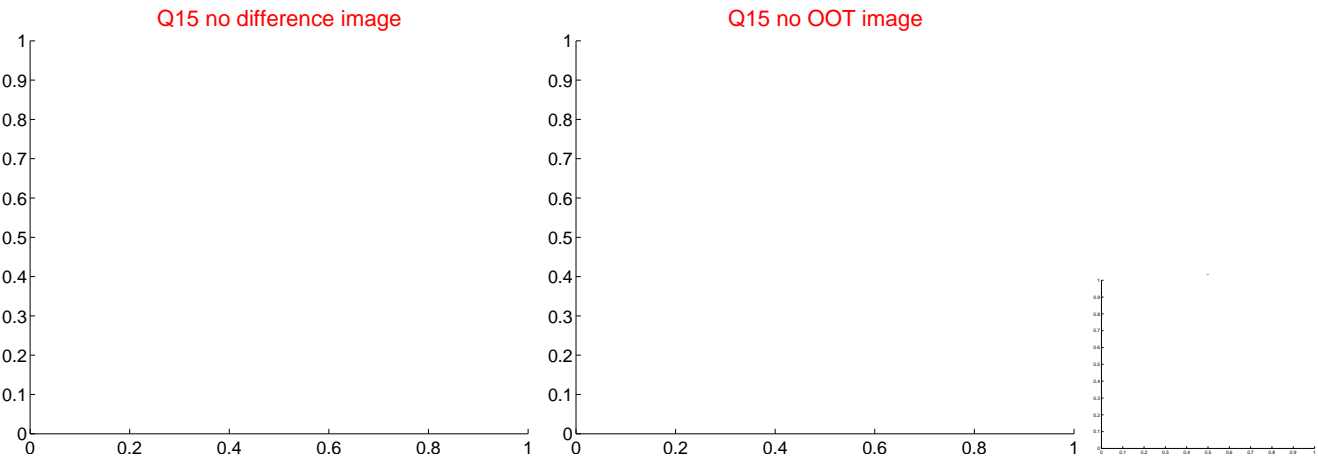
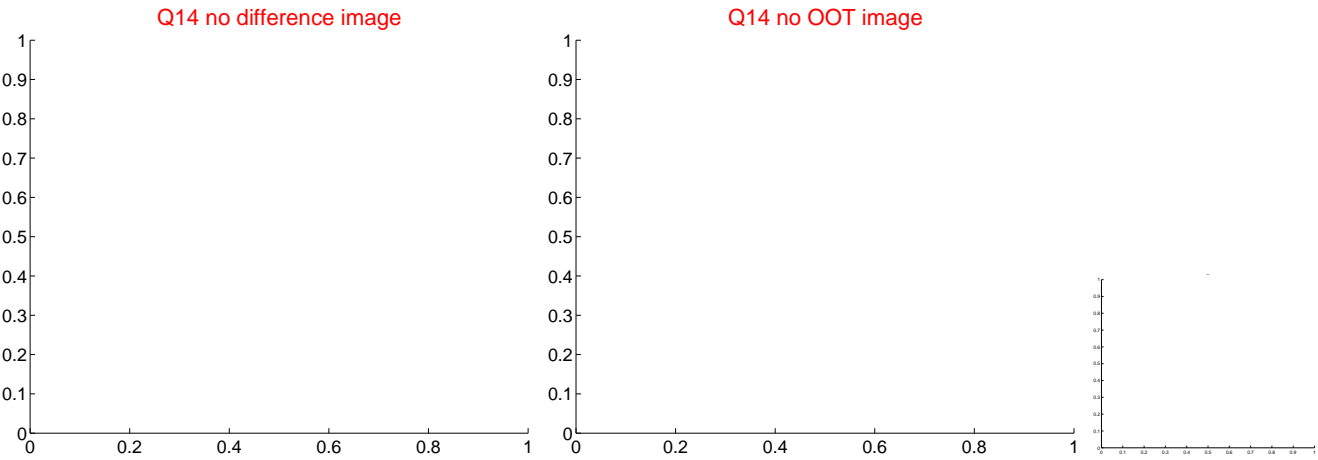
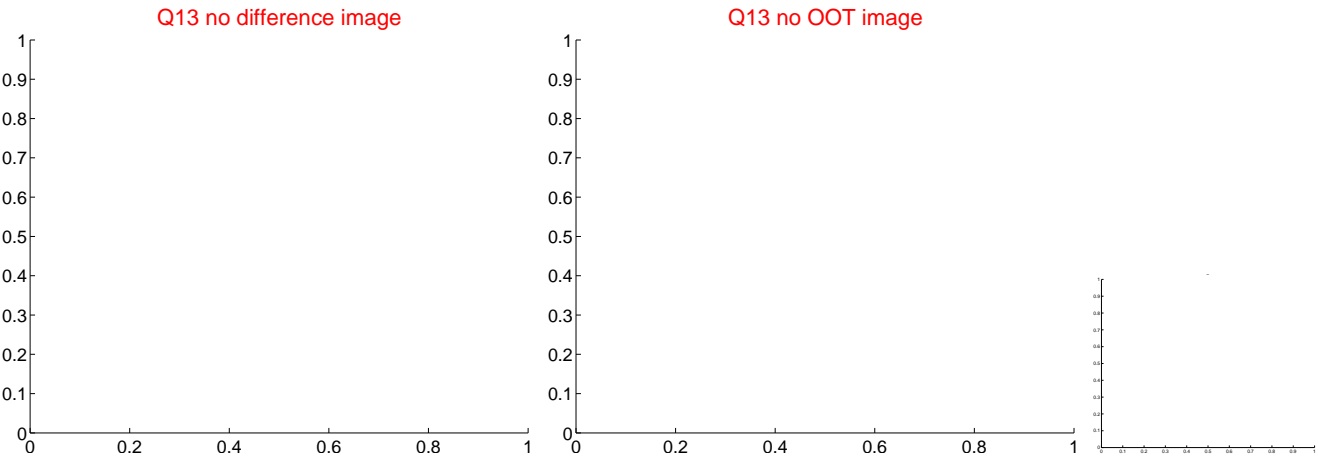
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



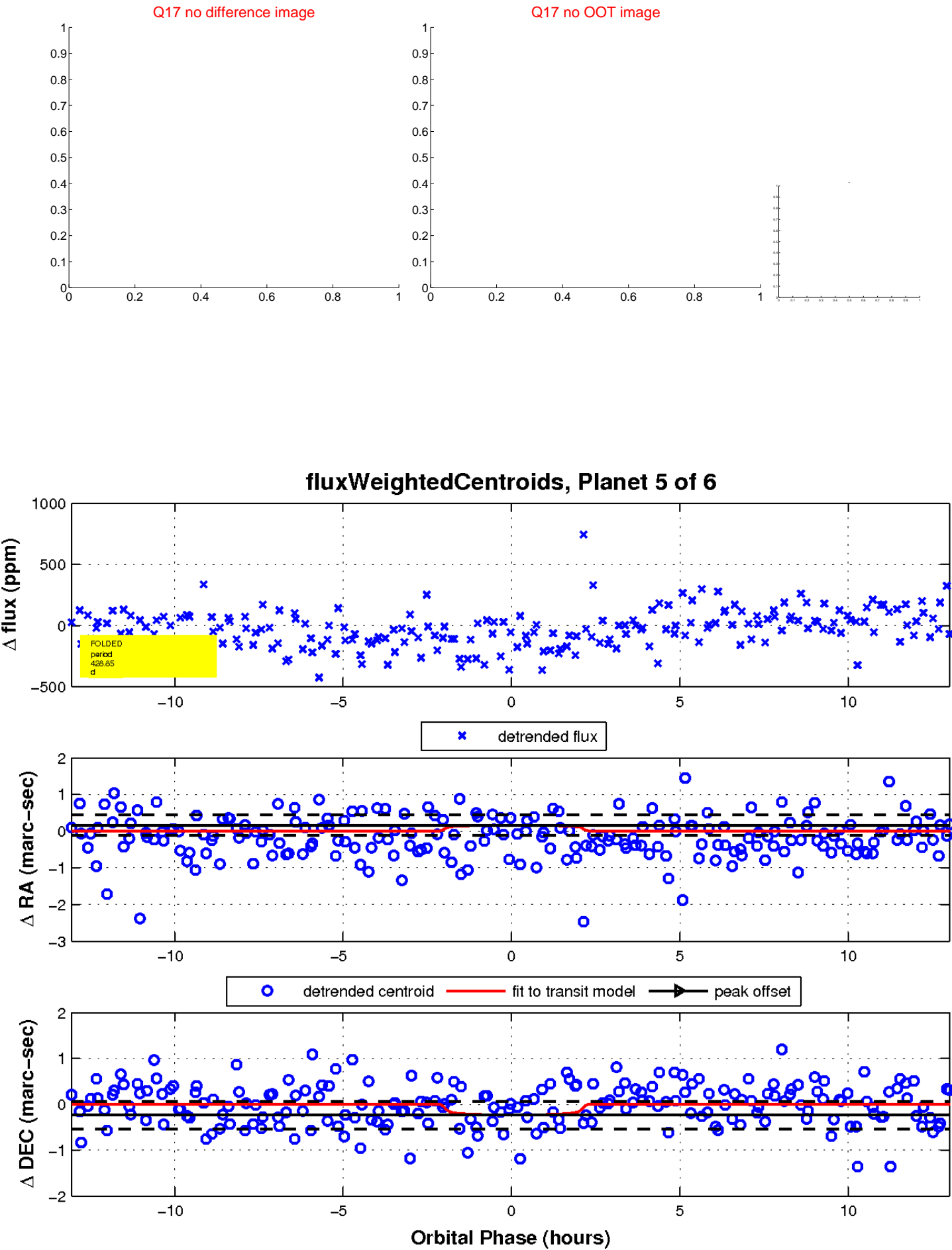
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



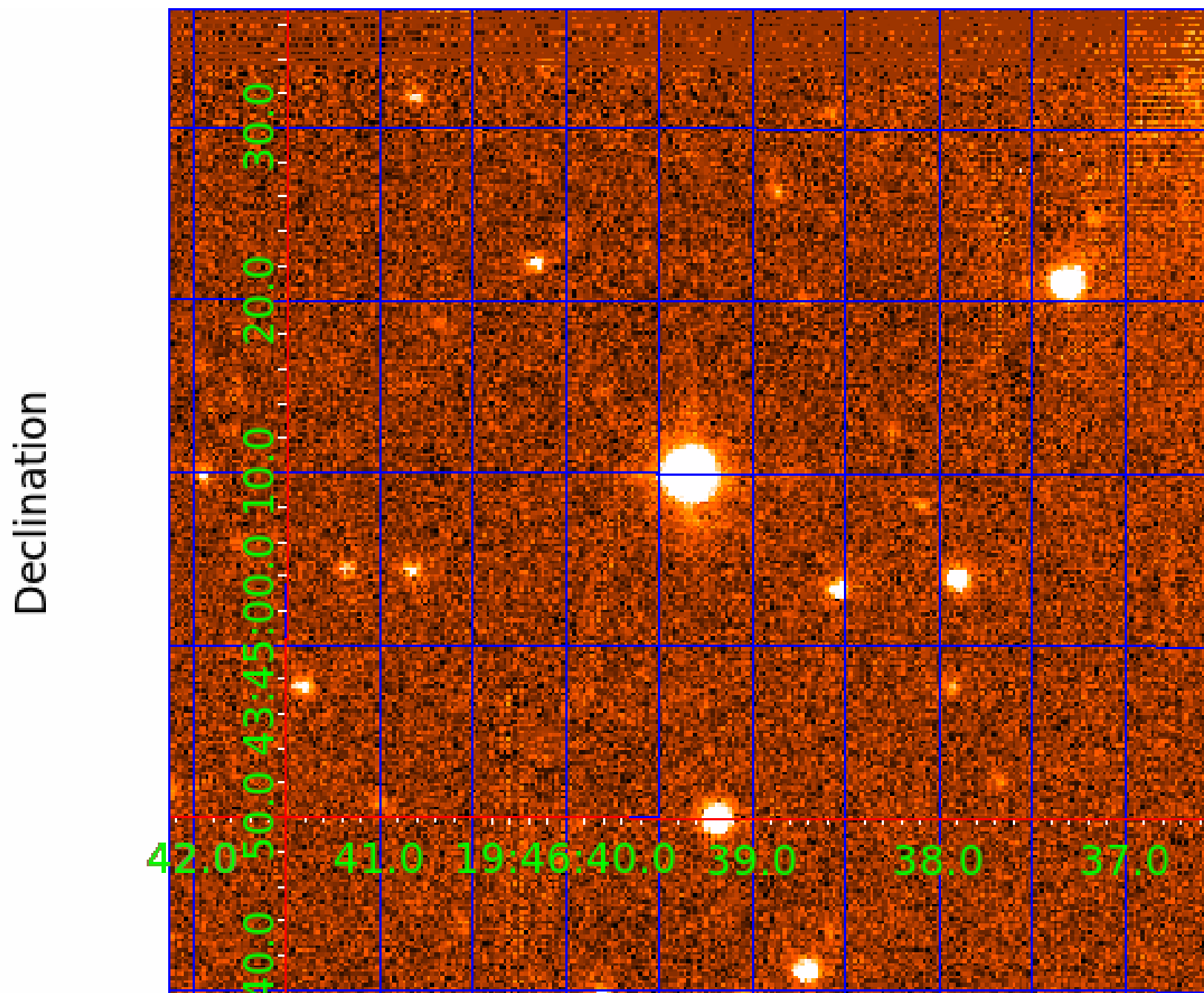
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007974877

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007974877-01 | OBS | No | 0.978950 | 132.460245 | 8.0 | 5.644 | 10.0 | 4.9 | 2.21 | 6675 | 0.65 | 19229.04 |
| 007974877-02 | OBS | No | 47.525385 | 162.529614 | 173.2 | 1.728 | 8.7 | 7.7 | 2.21 | 6675 | 3.41 | 108.58 |
| 007974877-03 | OBS | No | 282.864279 | 365.956110 | 187.7 | 4.609 | 7.9 | 7.1 | 2.21 | 6675 | 3.52 | 10.07 |
| 007974877-04 | OBS | No | 67.920424 | 162.427849 | 156.9 | 3.700 | 8.1 | 8.2 | 2.21 | 6675 | 3.15 | 67.45 |
| 007974877-05 | OBS | No | 428.849549 | 251.227192 | 234.1 | 4.387 | 8.0 | 7.8 | 2.21 | 6675 | 3.84 | 5.78 |
| 007974877-06 | OBS | No | 127.721725 | 197.833786 | 243.2 | 3.515 | 8.1 | 7.7 | 2.21 | 6675 | 4.01 | 29.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007974877-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |
| 007974877-02 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS |
| 007974877-03 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS |
| 007974877-04 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT |
| 007974877-05 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST |
| 007974877-06 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST |

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

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

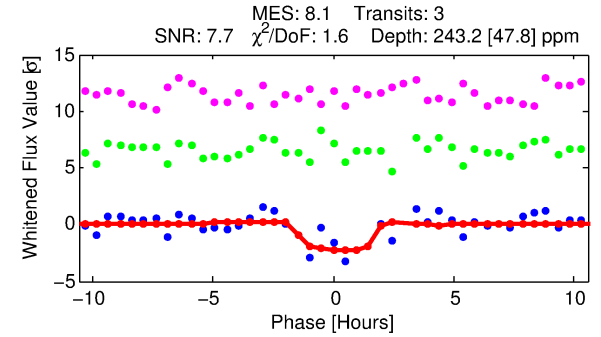
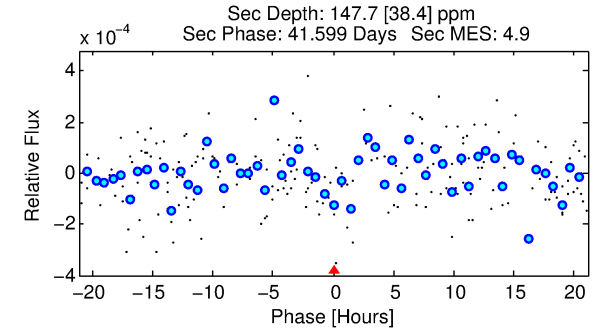
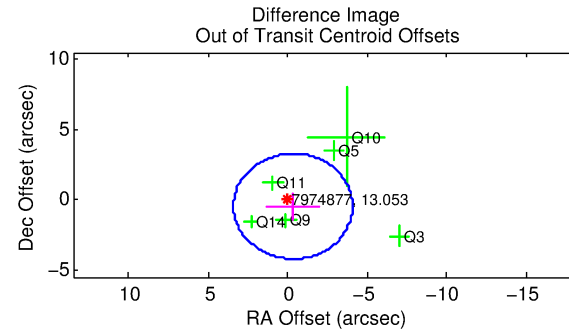
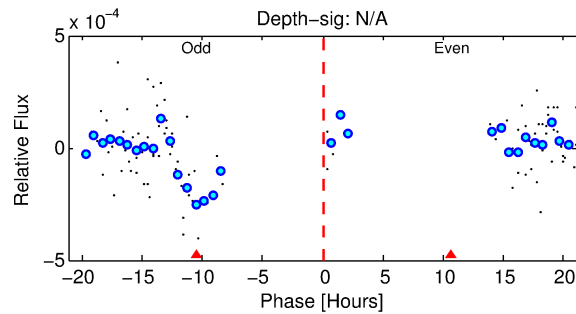
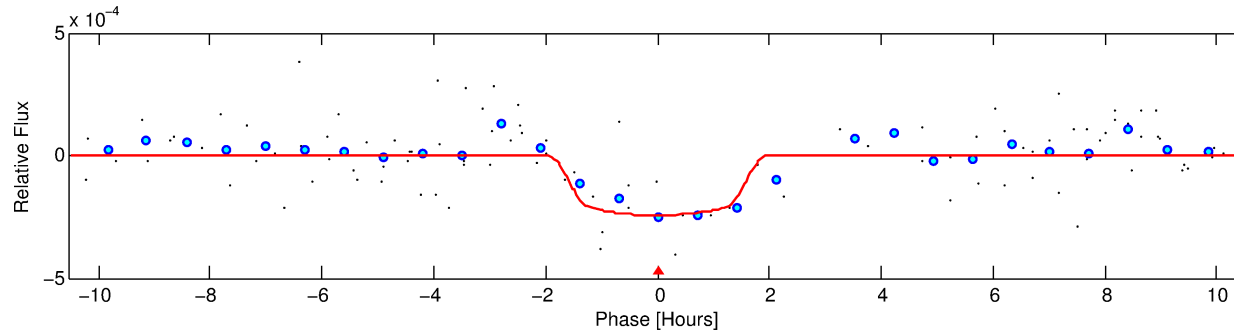
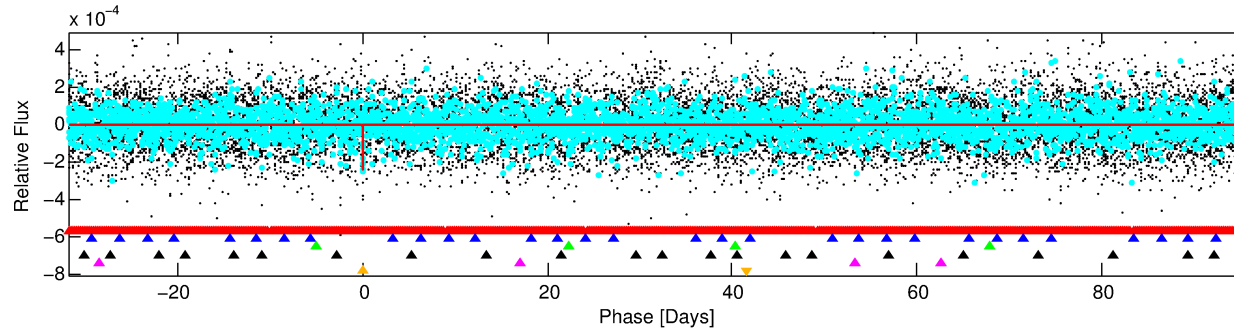
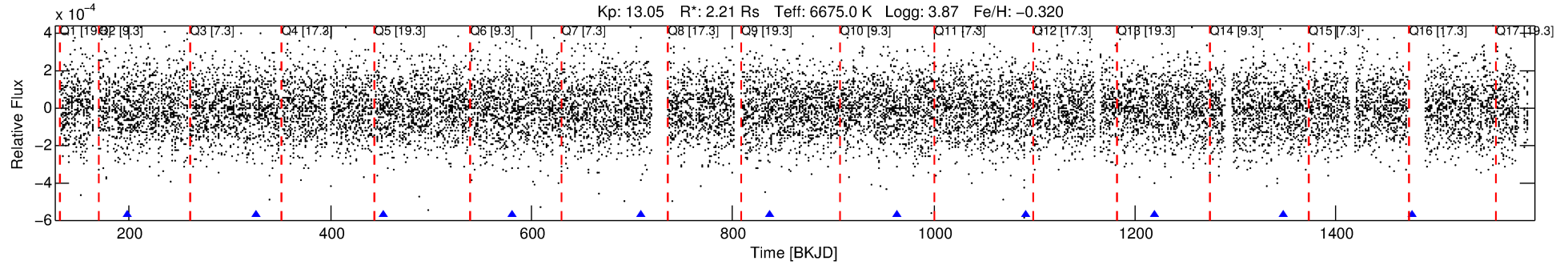
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007974877-06

No Significant Match Found

DV One-Page Summary

KIC: 7974877 Candidate: 6 of 6 Period: 127.722 d



DV Fit Results:

Period = 127.72173 [0.00465] d
Epoch = 197.8338 [0.0337] BKJD
Rp/R* = 0.0167 [0.0162]
a/R* = 130.53 [740.56]
b = 0.90 [1.21]
Seff = 29.06 [15.03]
Teq = 592 [77] K
Rp = 4.01 [4.13] Re
a = 0.5455 [0.1746] AU
Ag = 1502.16 [3037.75] [0.49σ]
Teffp = 5699 [2796] K [1.83σ]

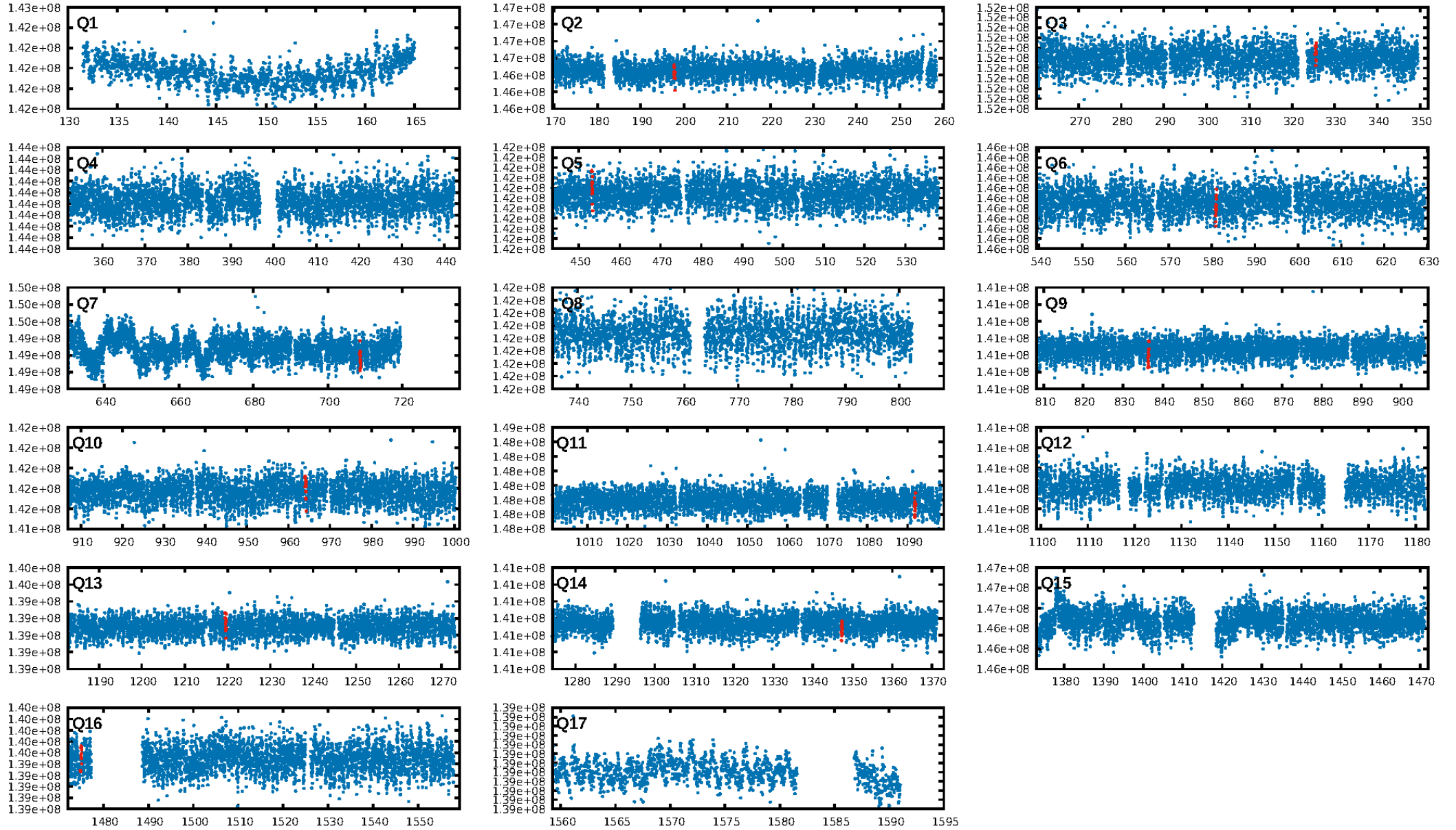
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [281.24σ]
LongPeriod-sig: 100.0% [642.39σ]
ModelChiSquare2-sig: 43.3%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 3.26e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.004564
Centroid-sig: 25.5%
Centroid-so: 0.746 arcsec [0.99σ]
OotOffset-rm: 0.566 arcsec [0.45σ]
OotOffset-st: 2/2/0/2 [6]
KicOffset-rm: 0.576 arcsec [0.43σ]
KicOffset-st: 2/2/0/2 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.00 [0/10]

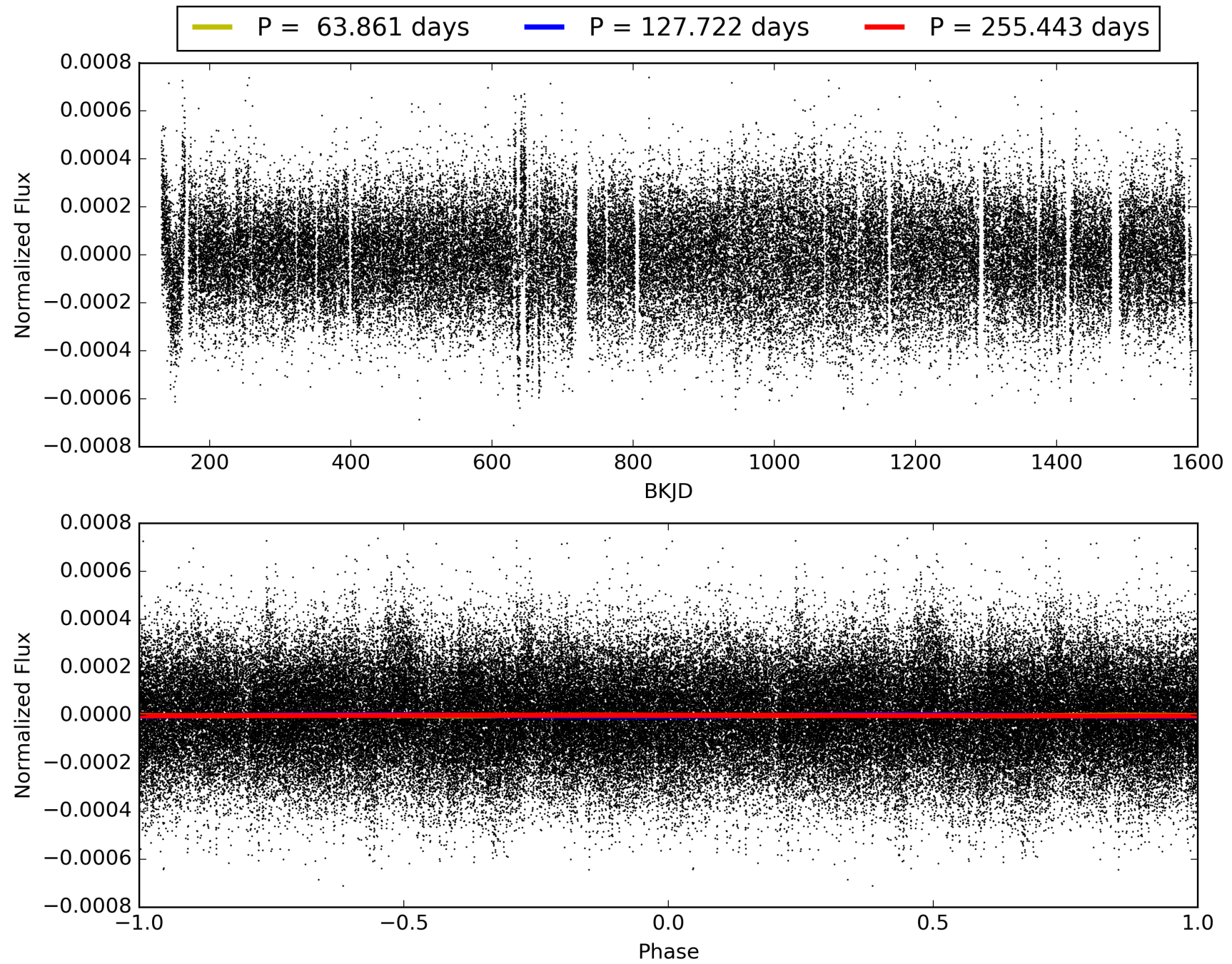
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:39 Z

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

TCE 007974877-06, PDC Light Curves

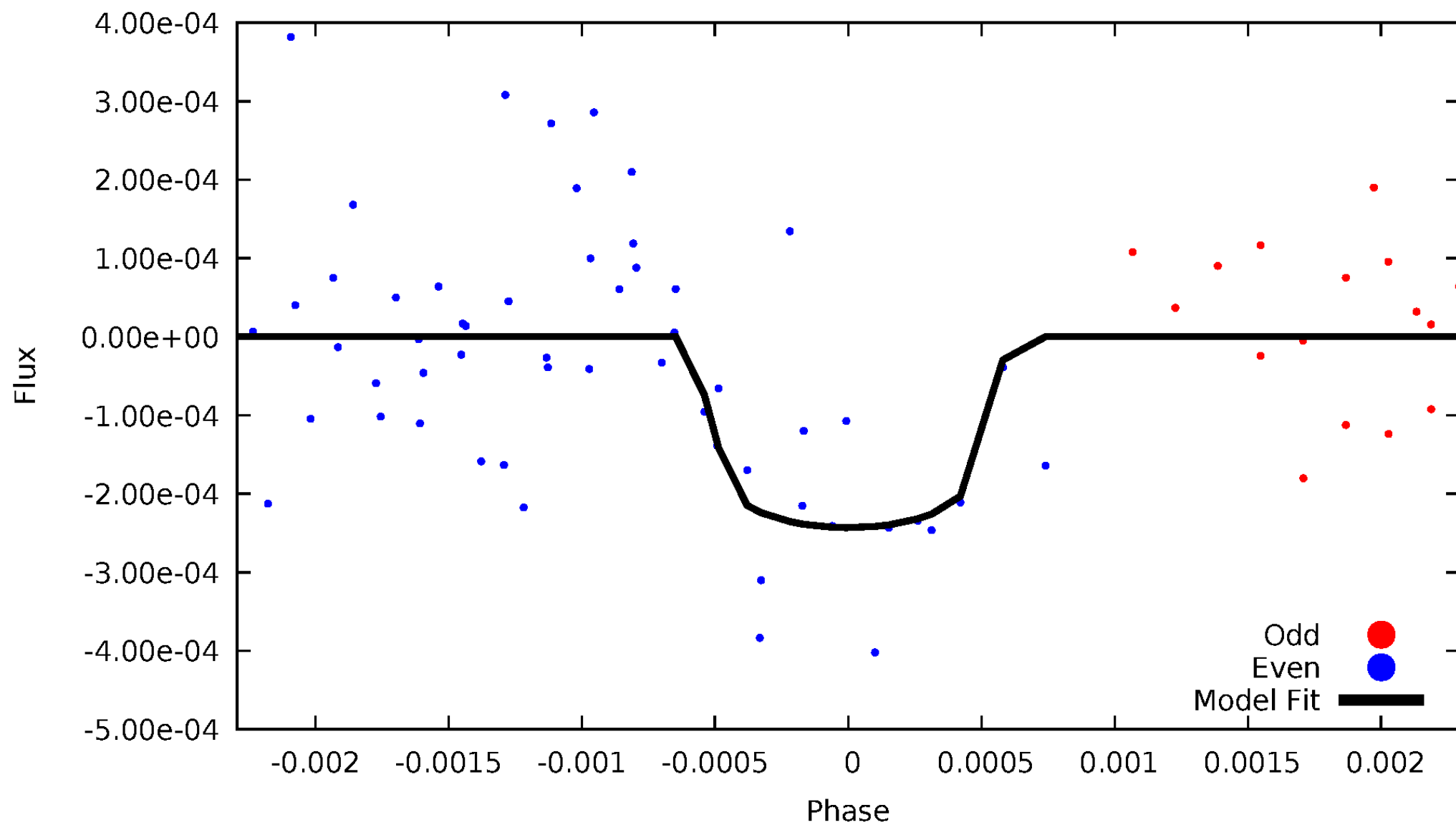


TCE 007974877-06



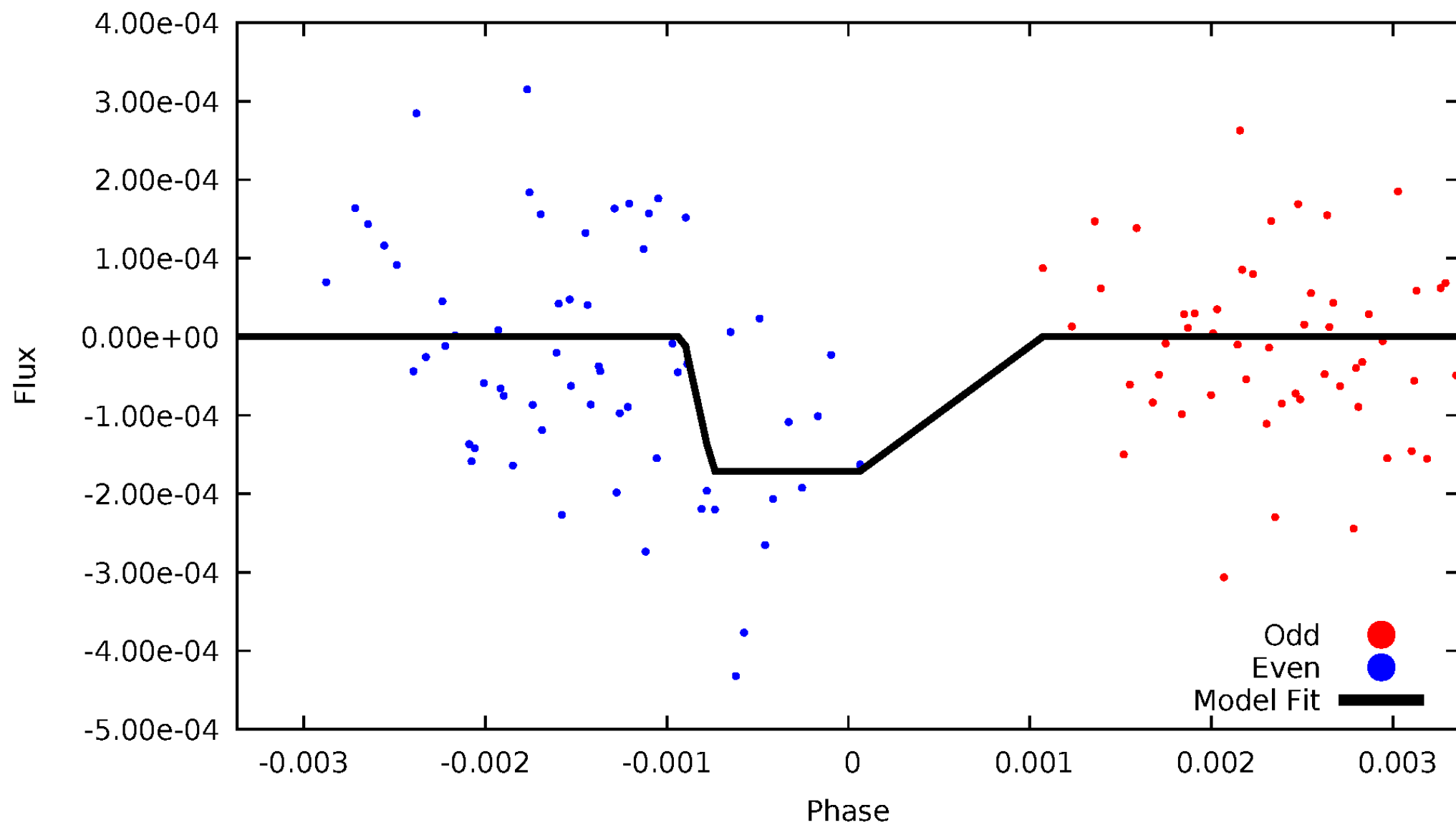
DV Odd/Even

TCE 007974877-06



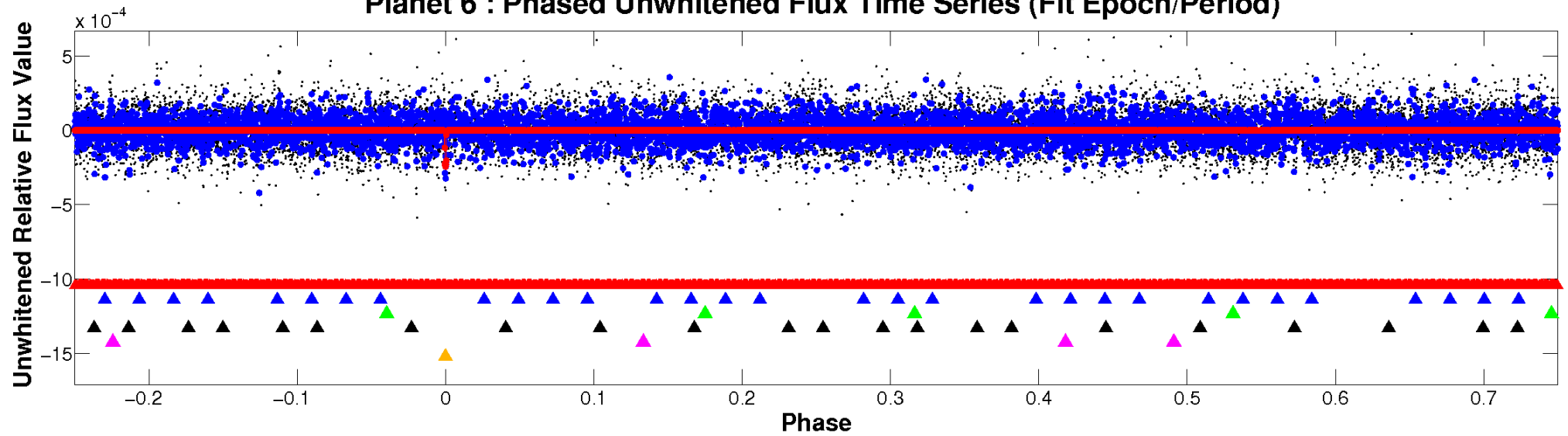
ALT Odd/Even

TCE 007974877-06

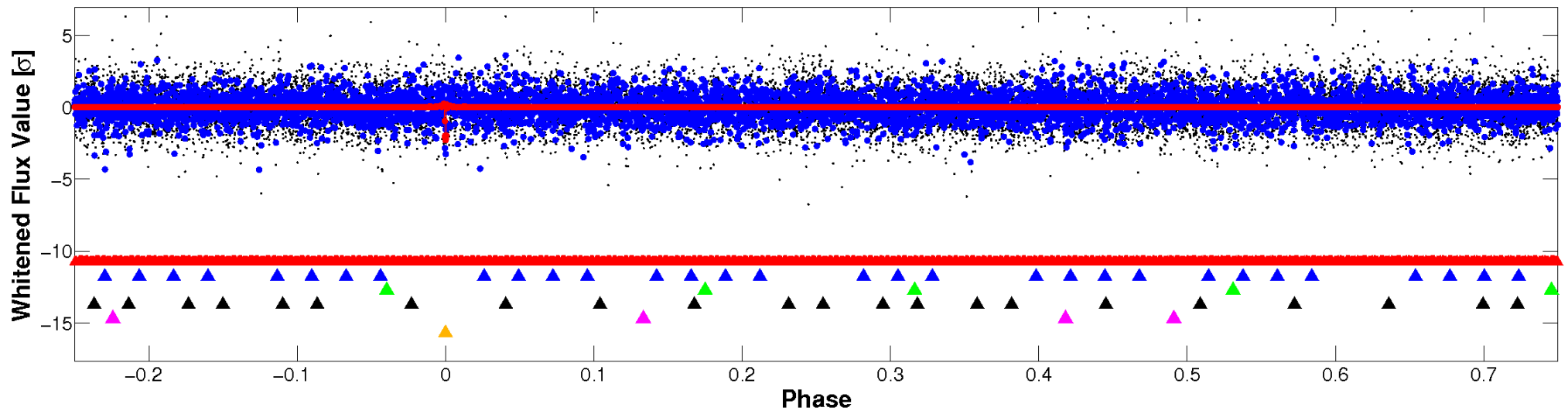


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

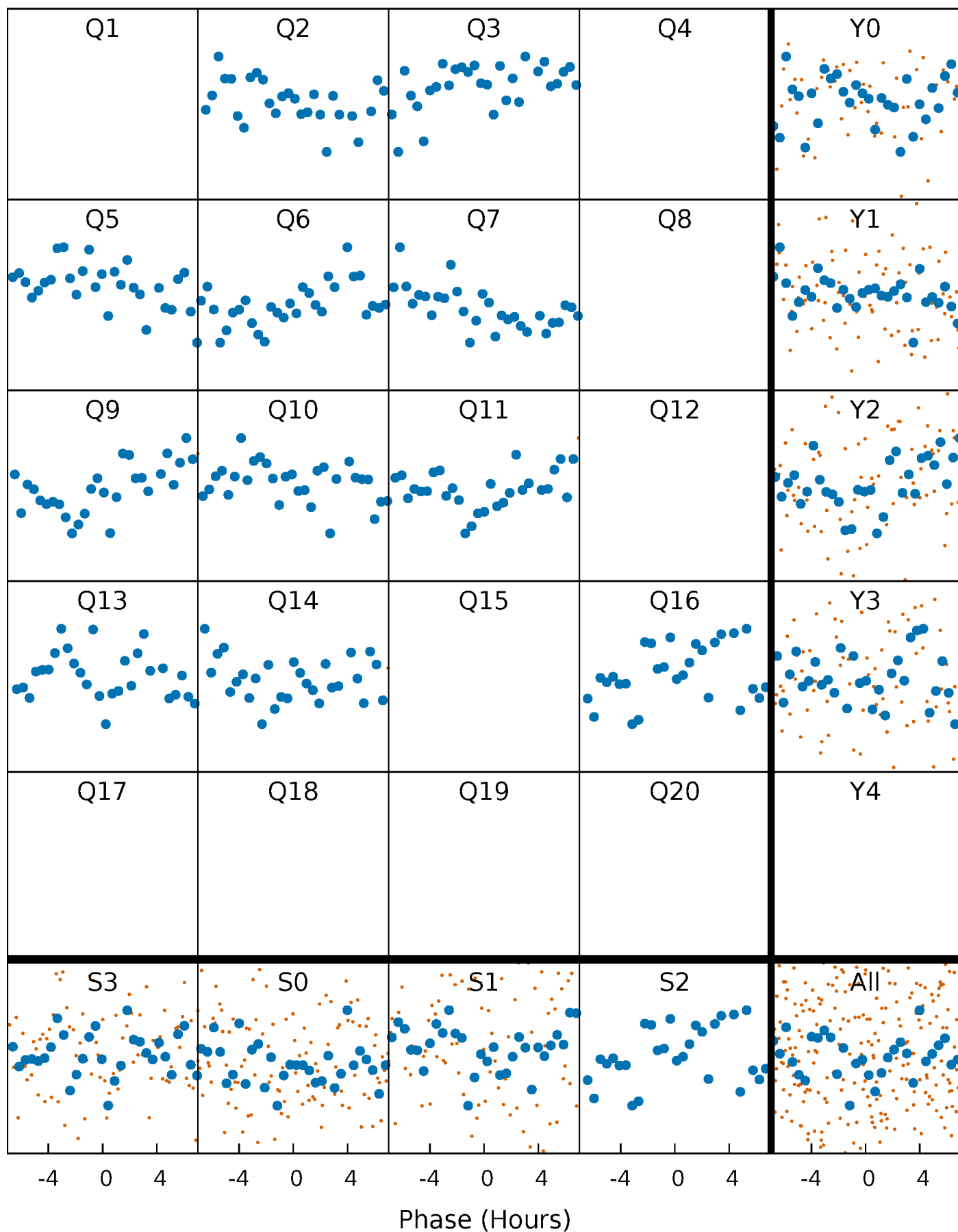


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



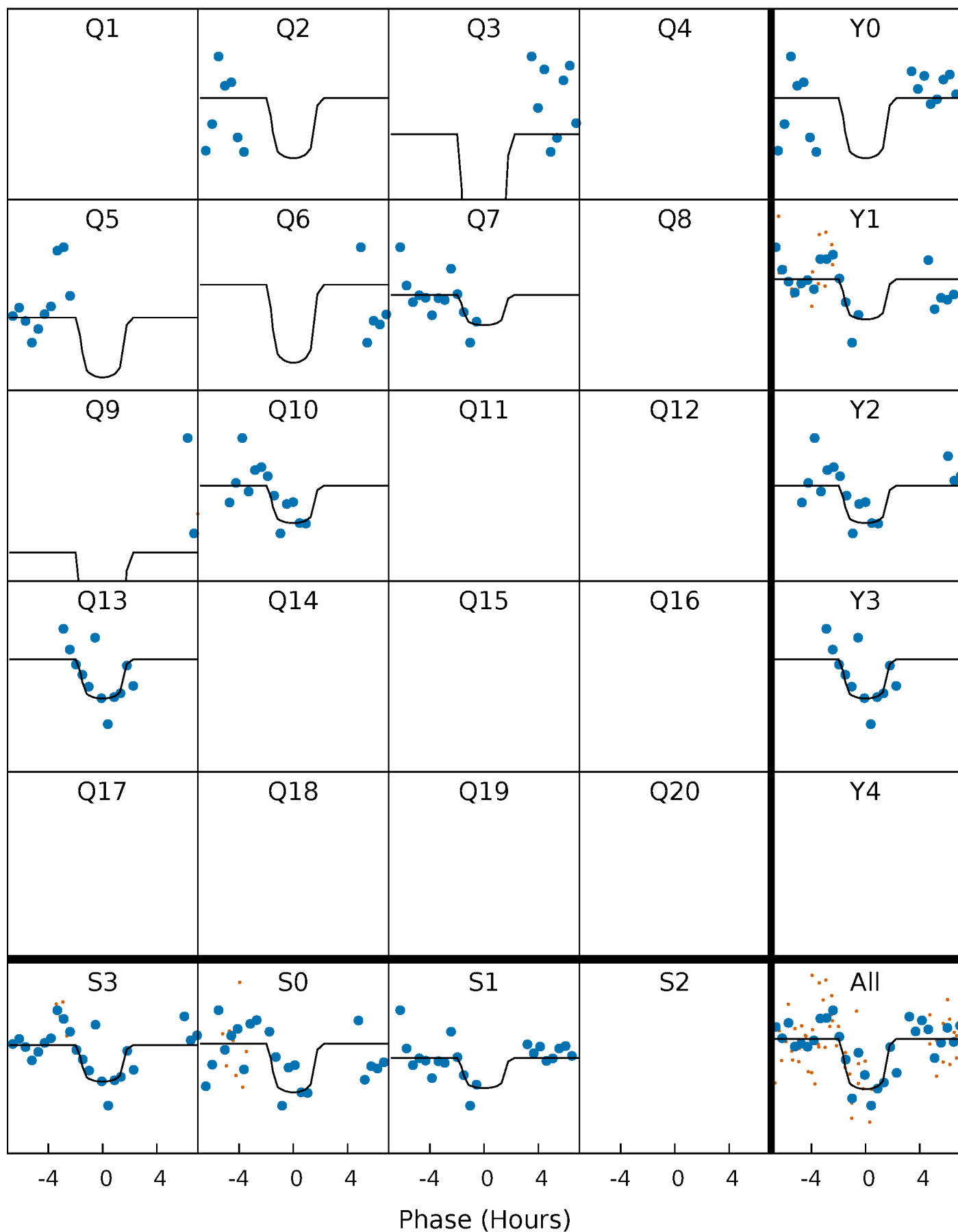
PDC Quarter-Phased Transit Curves

TCE 007974877-06 P=127.721725 Days $T_0=197.833786$ (BKJD)



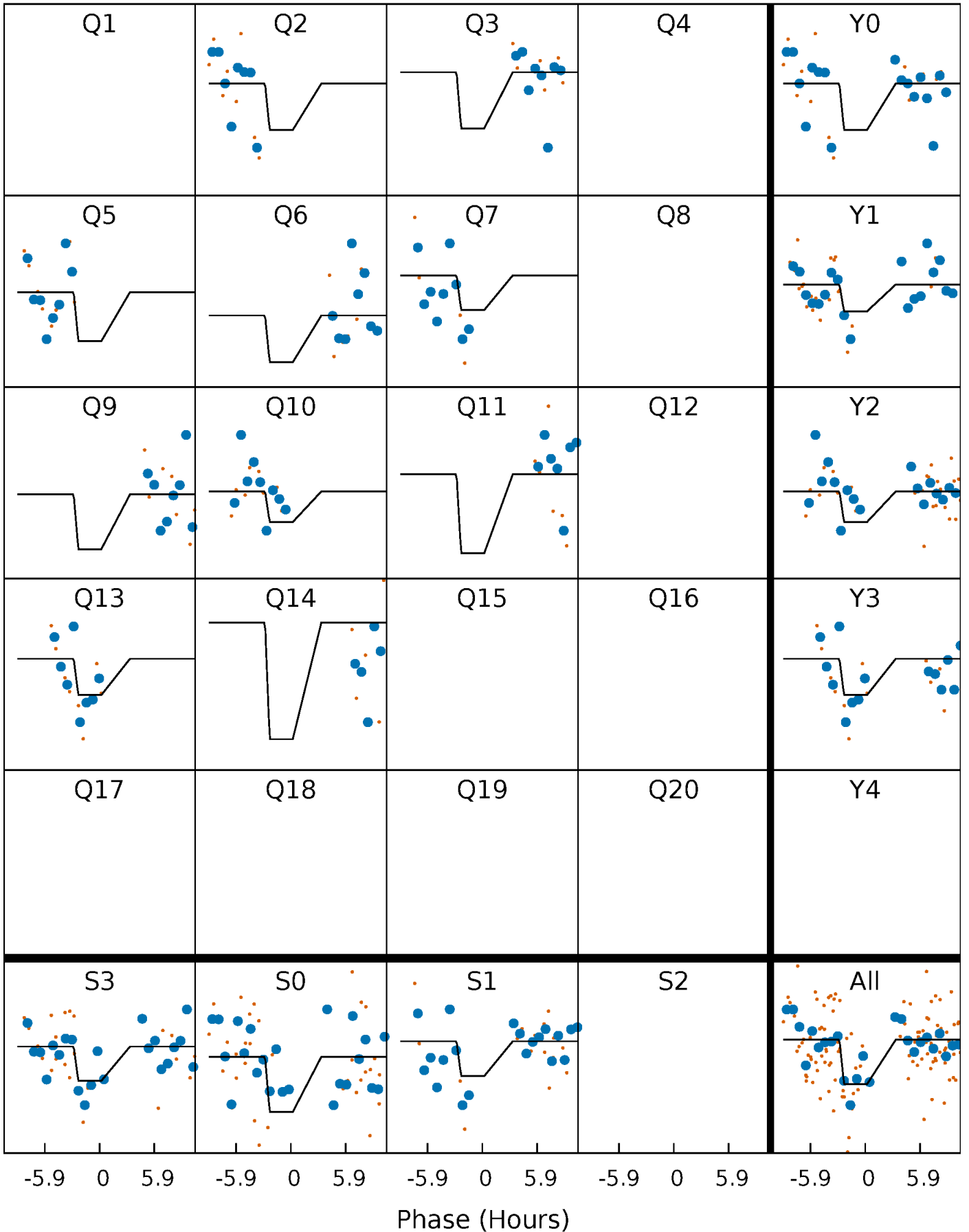
DV Quarter-Phased Transit Curves

TCE 007974877-06 P=127.721725 Days $T_0=197.833786$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

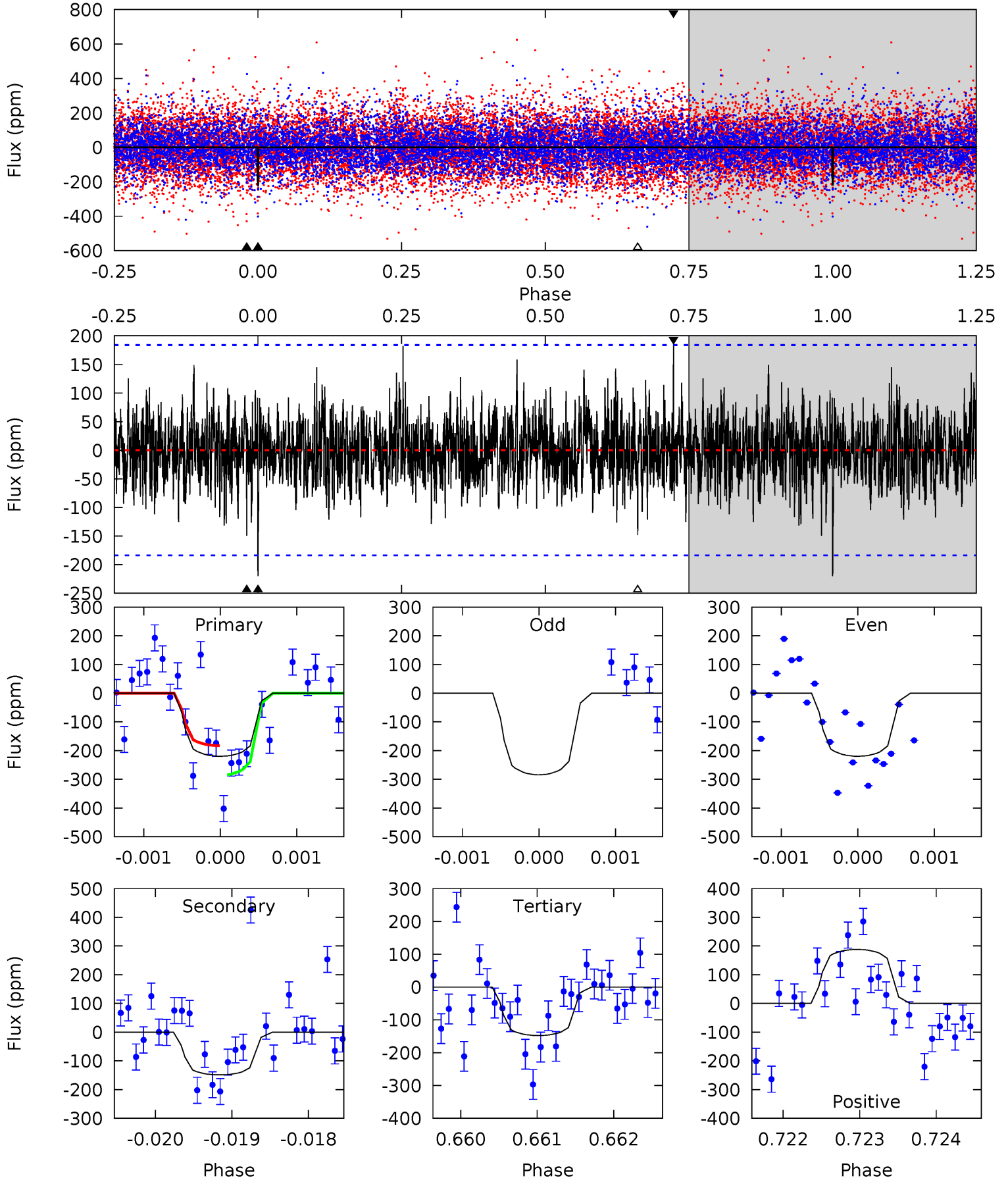
TCE 007974877-06 P=127.734130 Days $T_0=197.820781$ (BKJD)



DV Model-Shift Uniqueness Test

007974877-06, $P = 127.721725$ Days, $E = 70.112061$ Days

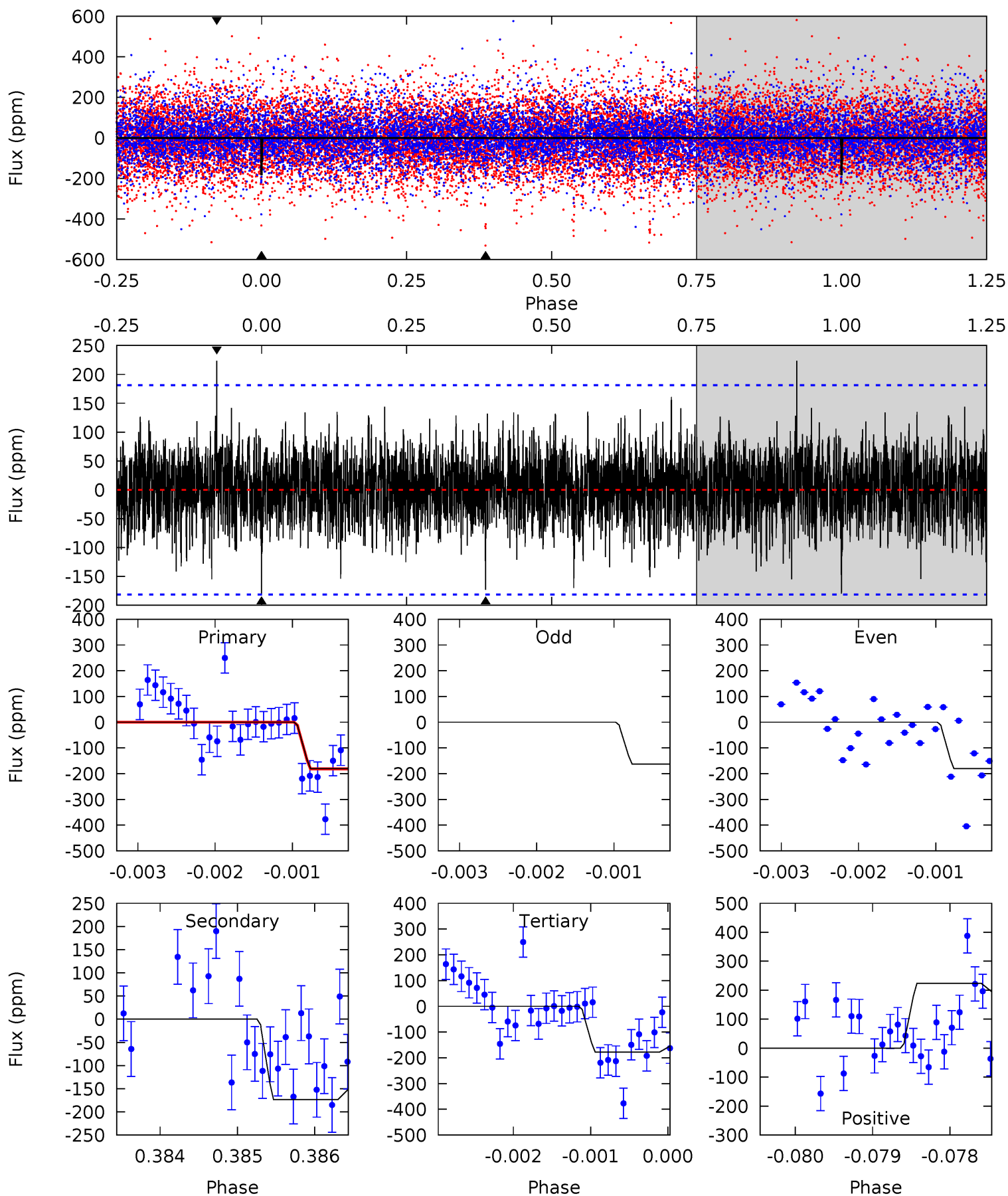
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 6.51 | 4.41 | 4.38 | 5.57 | 5.44 | 3.27 | 1.27 | 2.13 | 0.94 | 0.03 | -1.17 | 1.01 | 1.16 | 0.46 | 1.45 |



Alt Model-Shift Uniqueness Test

007974877-06, $P = 127.734130$ Days, $E = 70.086651$ Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-----|-------|------|
| 5.41 | 5.21 | 5.35 | 6.73 | 5.46 | 3.30 | 1.25 | 0.07 | -1.32 | -0.13 | -1.52 | 0.36 | 0 | 0.55 | 0.39 |



Stellar Parameters For KIC 007974877

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6675^{+181}_{-201} | $3.874^{+0.292}_{-0.097}$ | $-0.320^{+0.300}_{-0.250}$ | $2.205^{+0.465}_{-0.756}$ | $1.328^{+0.220}_{-0.242}$ | $0.174^{+0.332}_{-0.059}$ |
| | +3%/-3% | +8%/-3% | +94%/-78% | +21%/-34% | +17%/-18% | +190%/-34% |
| 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 007974877-06 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|-------------------|------------------------|-------------------------|
| DV | -149 ± 34 | $4.41^{+3.59}_{-2.68}$ | 811^{+53}_{-69} | 5262^{+3690}_{-1071} | 1244^{+6999}_{-876} |
| Alt. | -173 ± 33 | $4.00^{+3.35}_{-2.54}$ | 809^{+50}_{-70} | 5637^{+4524}_{-1183} | 1718^{+10430}_{-1200} |

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 $A_{obs} \gg 1.0$

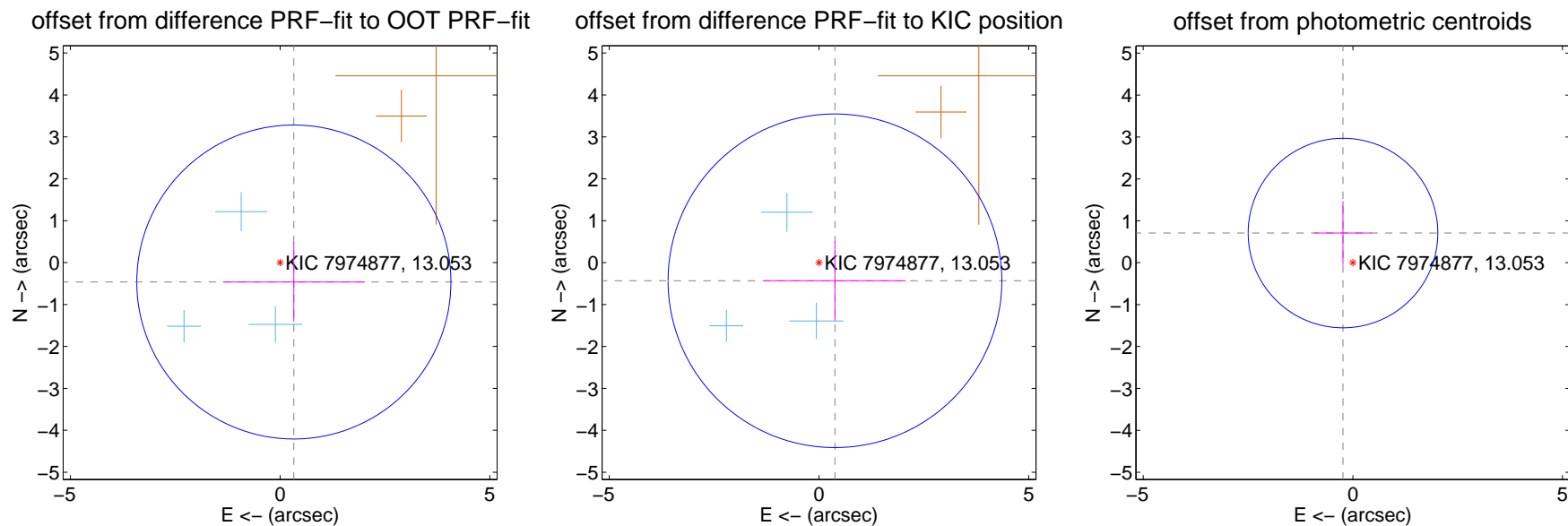
DV Centroid Data

Supplemental centroid analysis for 007974877-06. Kepler magnitude: 13.05. Transit SNR 7.65

There are 3 quarters with good PRF difference image offsets

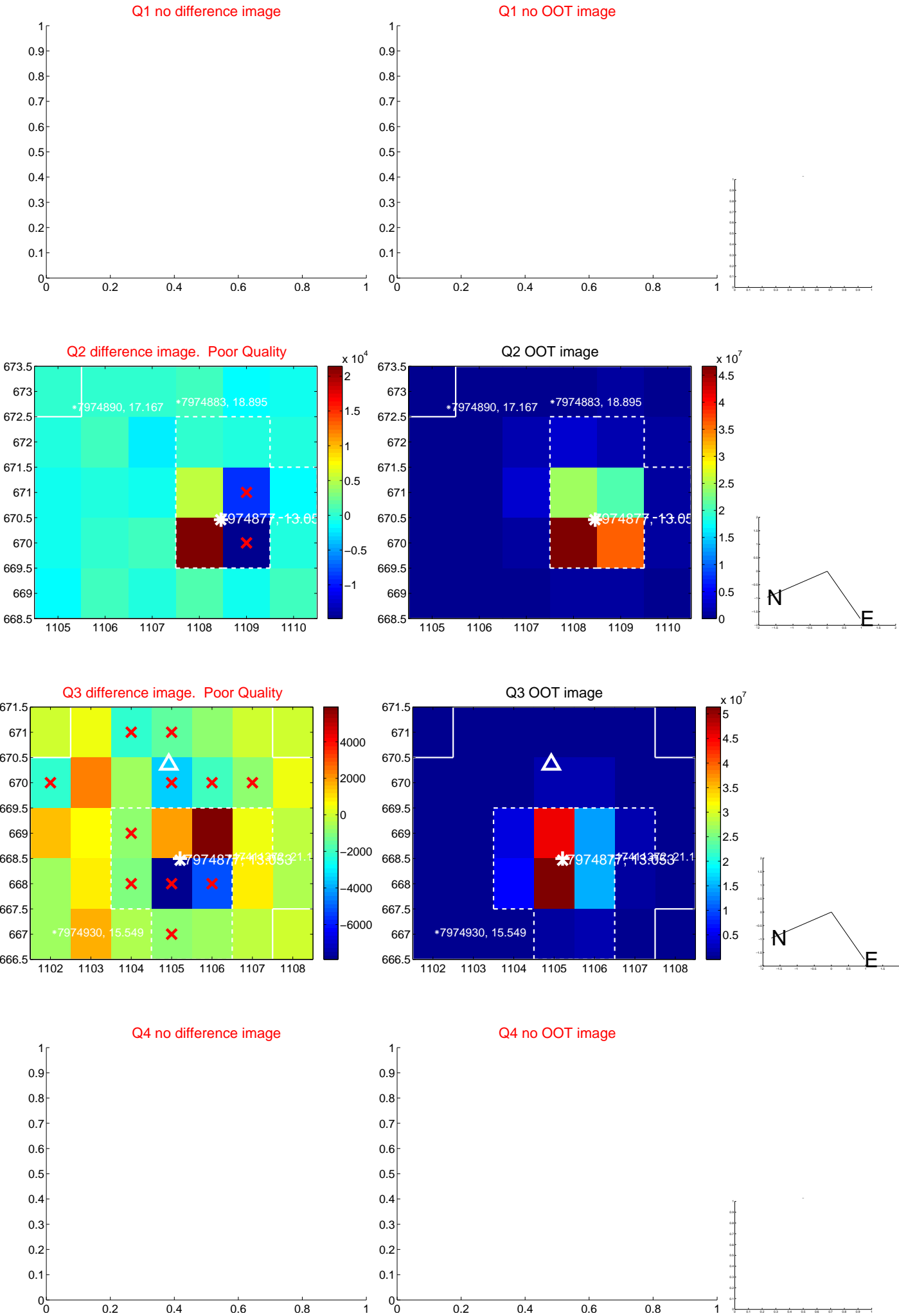
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.566 ± 1.248 | 0.45 | -0.328 ± 1.689 | -0.462 ± 0.952 |
| PRF-fit source offset from KIC position | 0.576 ± 1.326 | 0.43 | -0.381 ± 1.692 | -0.433 ± 0.951 |
| photometric centroid source offset | 0.75 ± 0.75 | 0.99 | 0.24 ± 0.69 | 0.71 ± 0.76 |

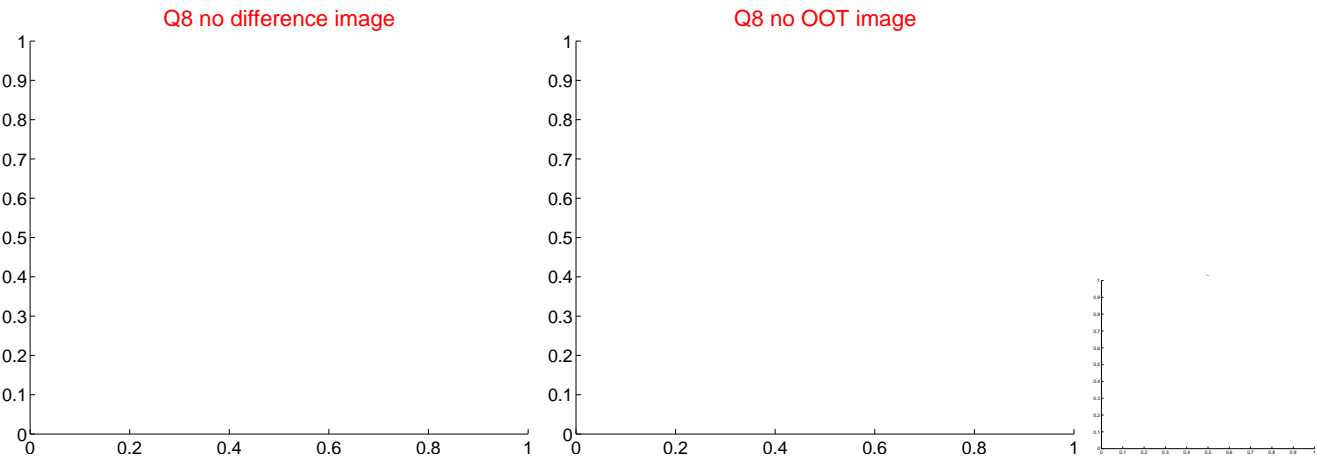
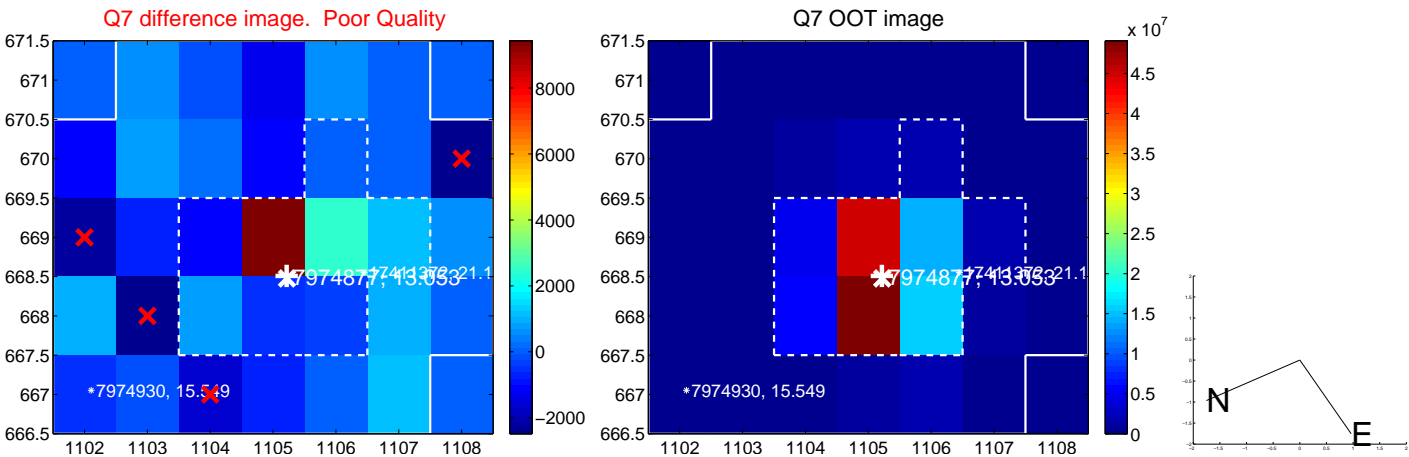
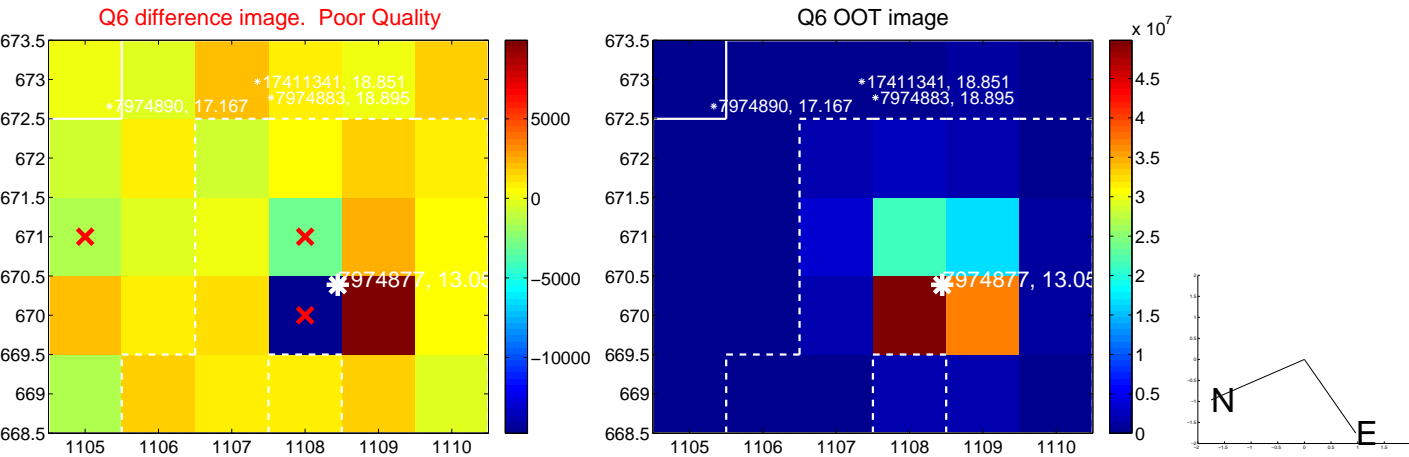
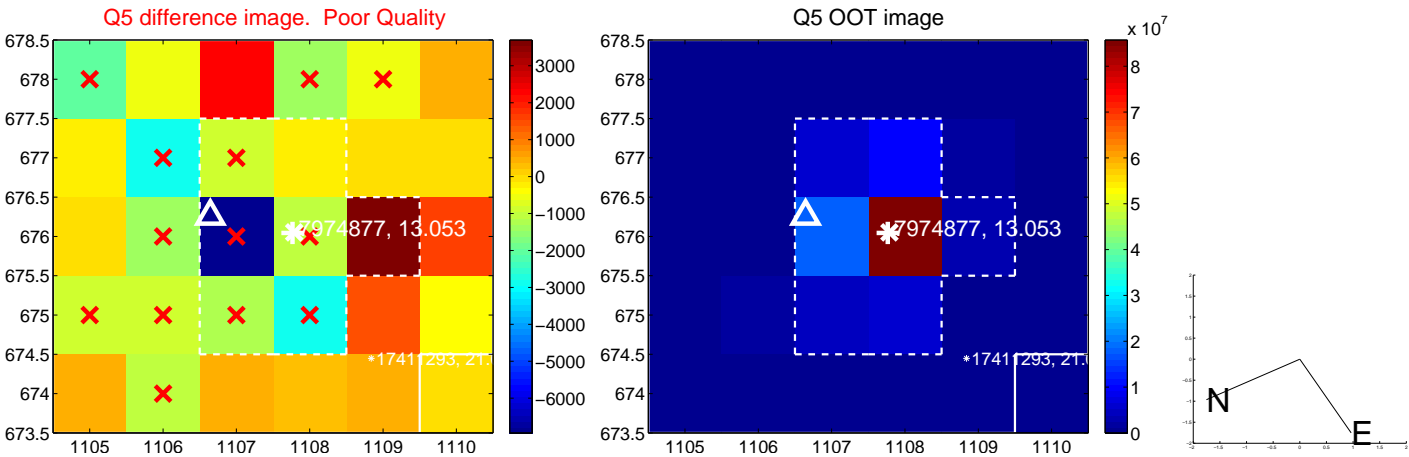


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

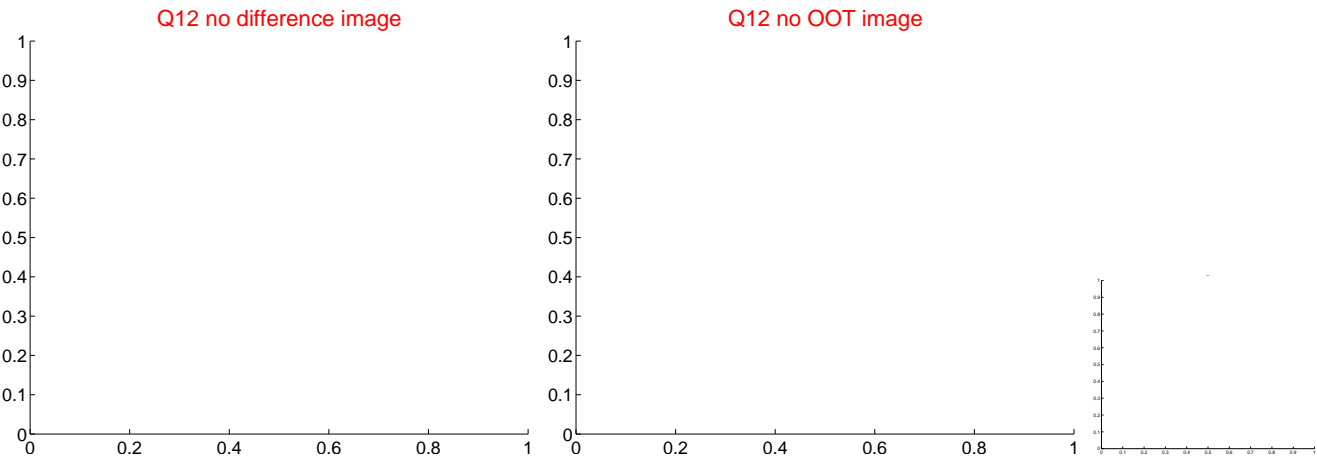
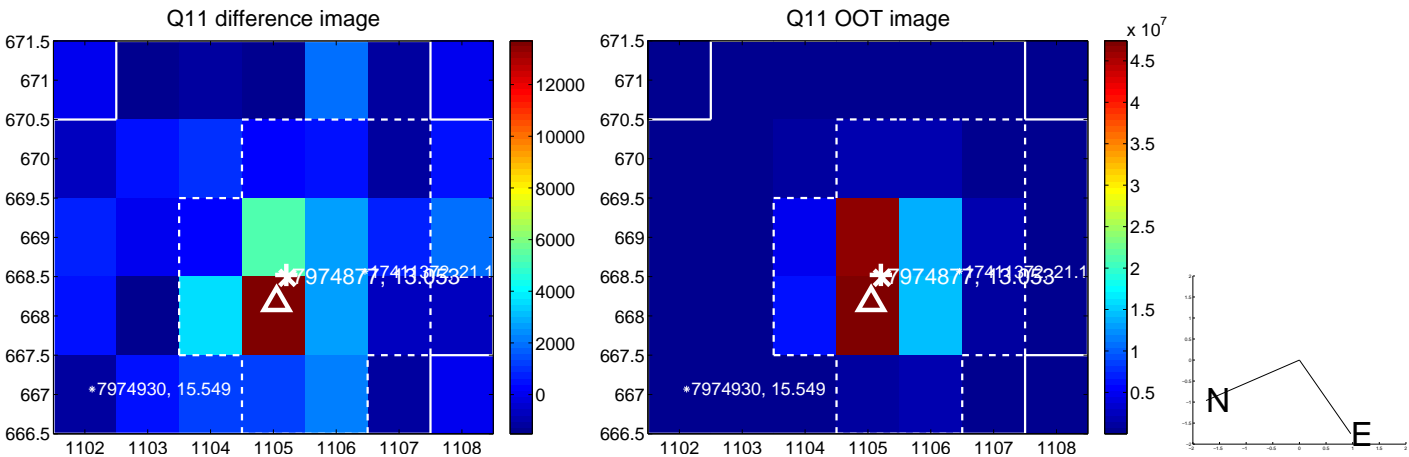
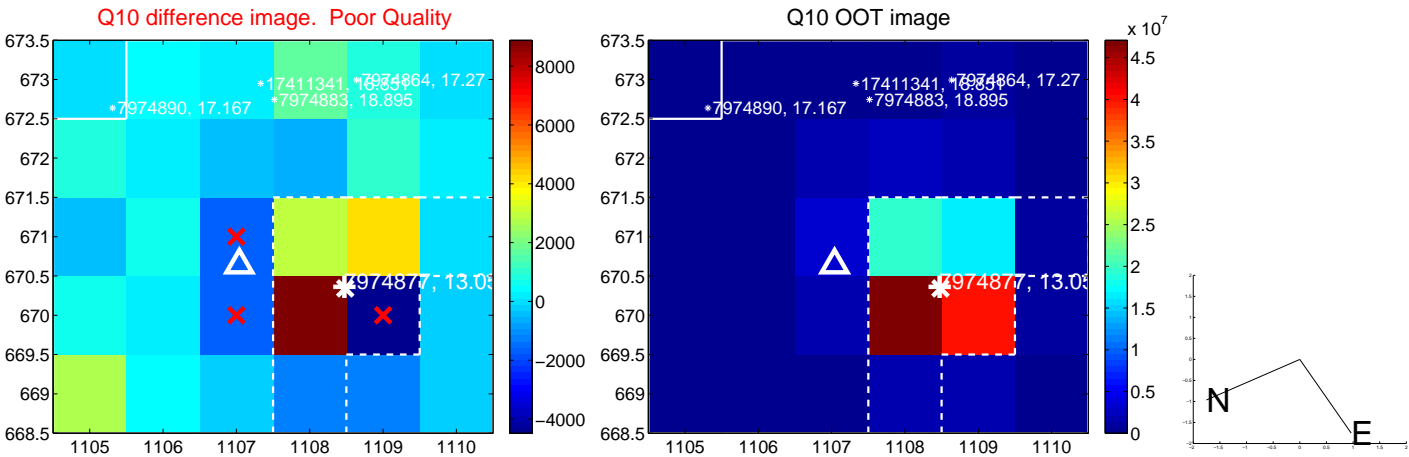
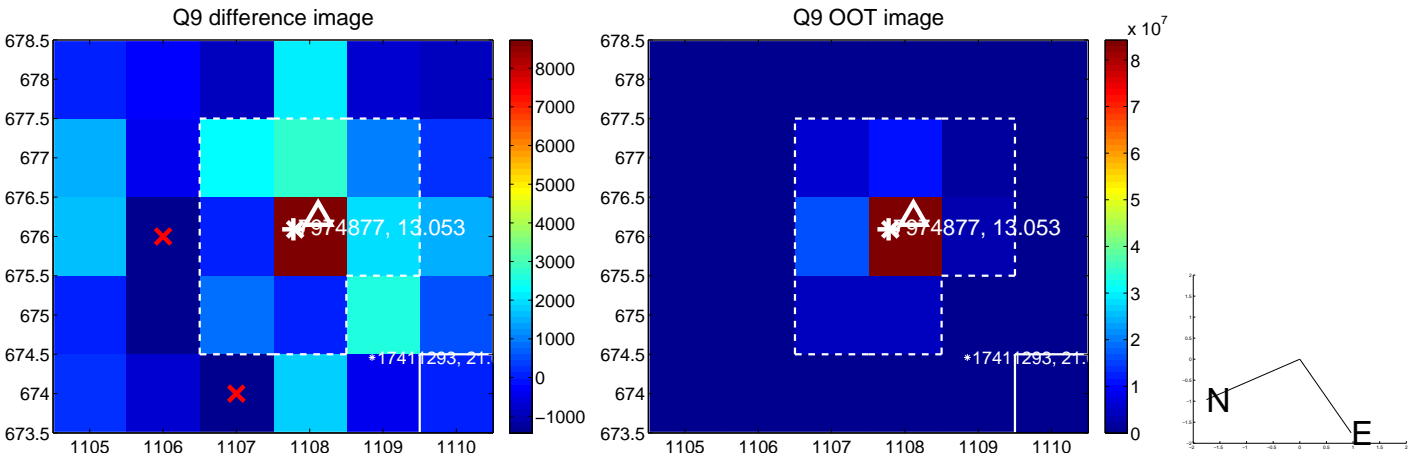
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



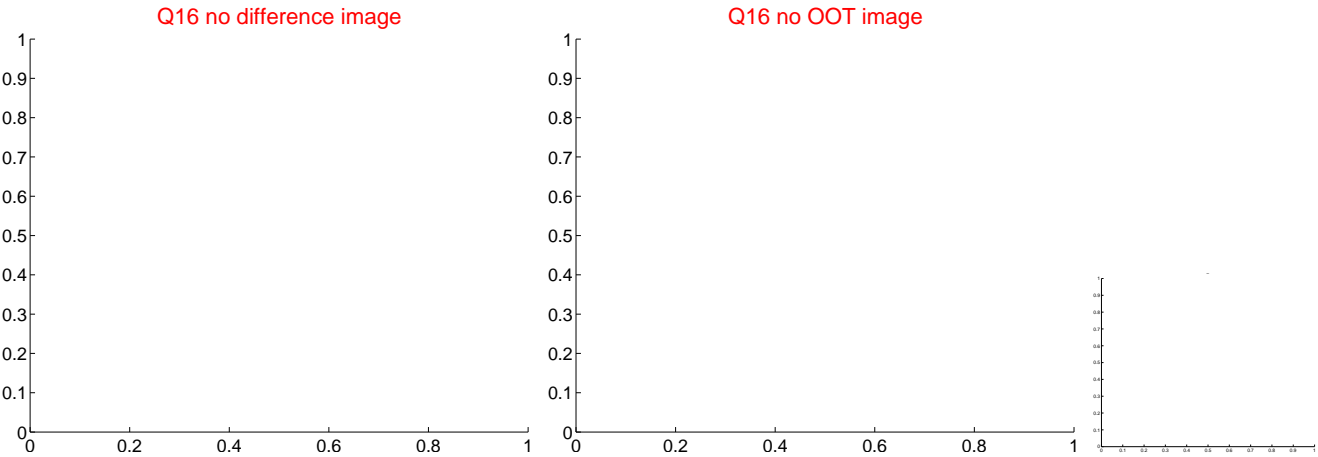
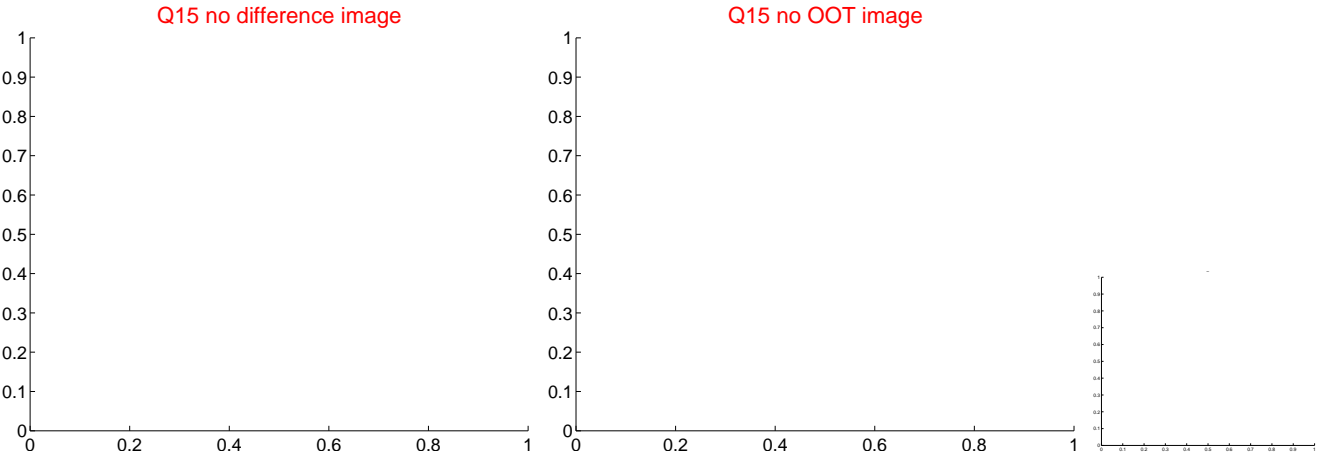
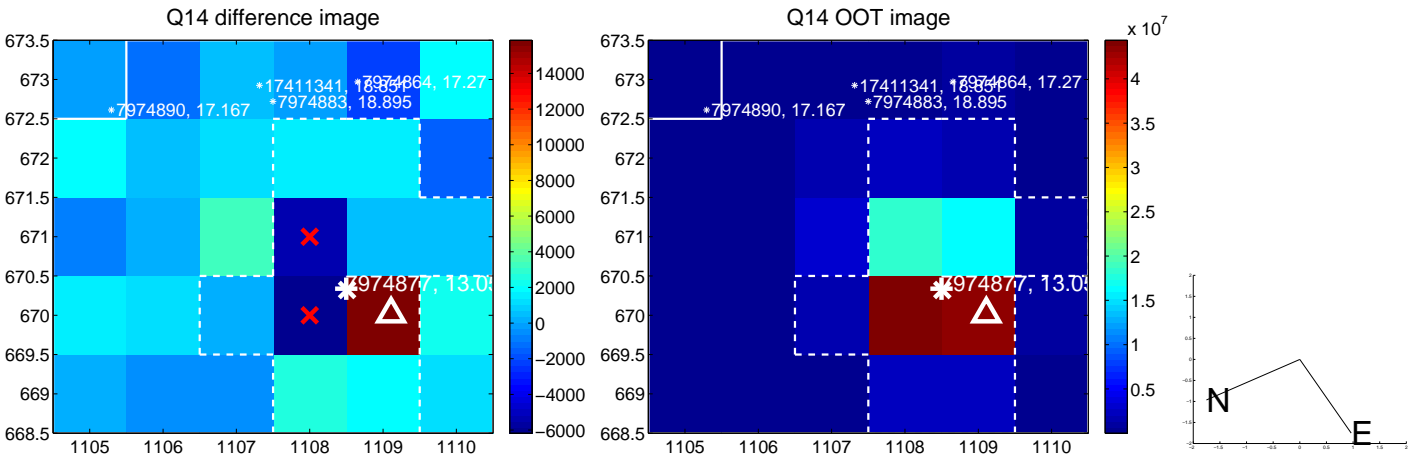
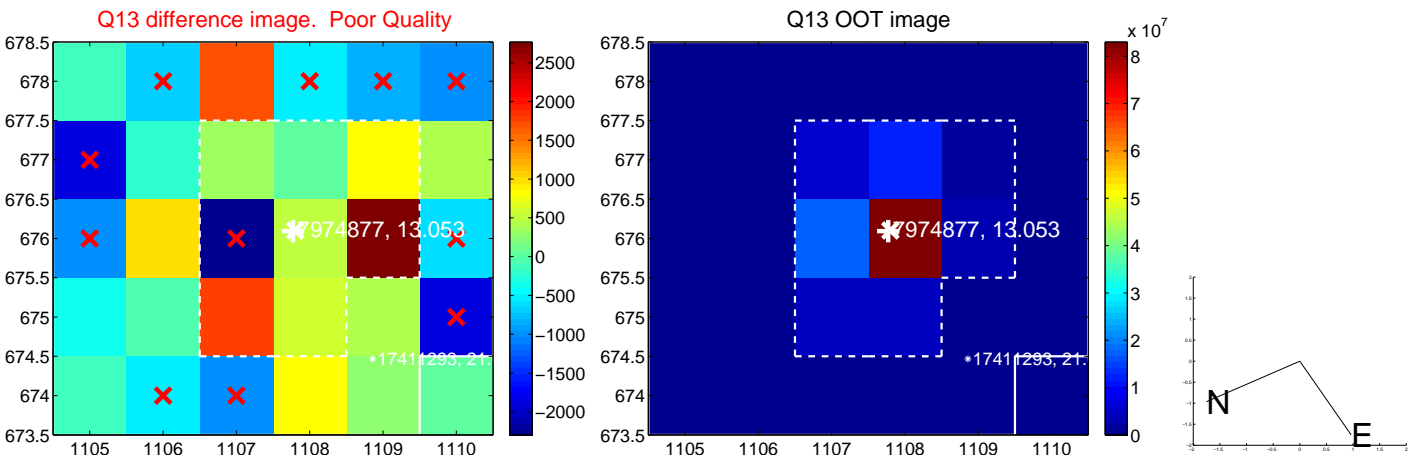
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



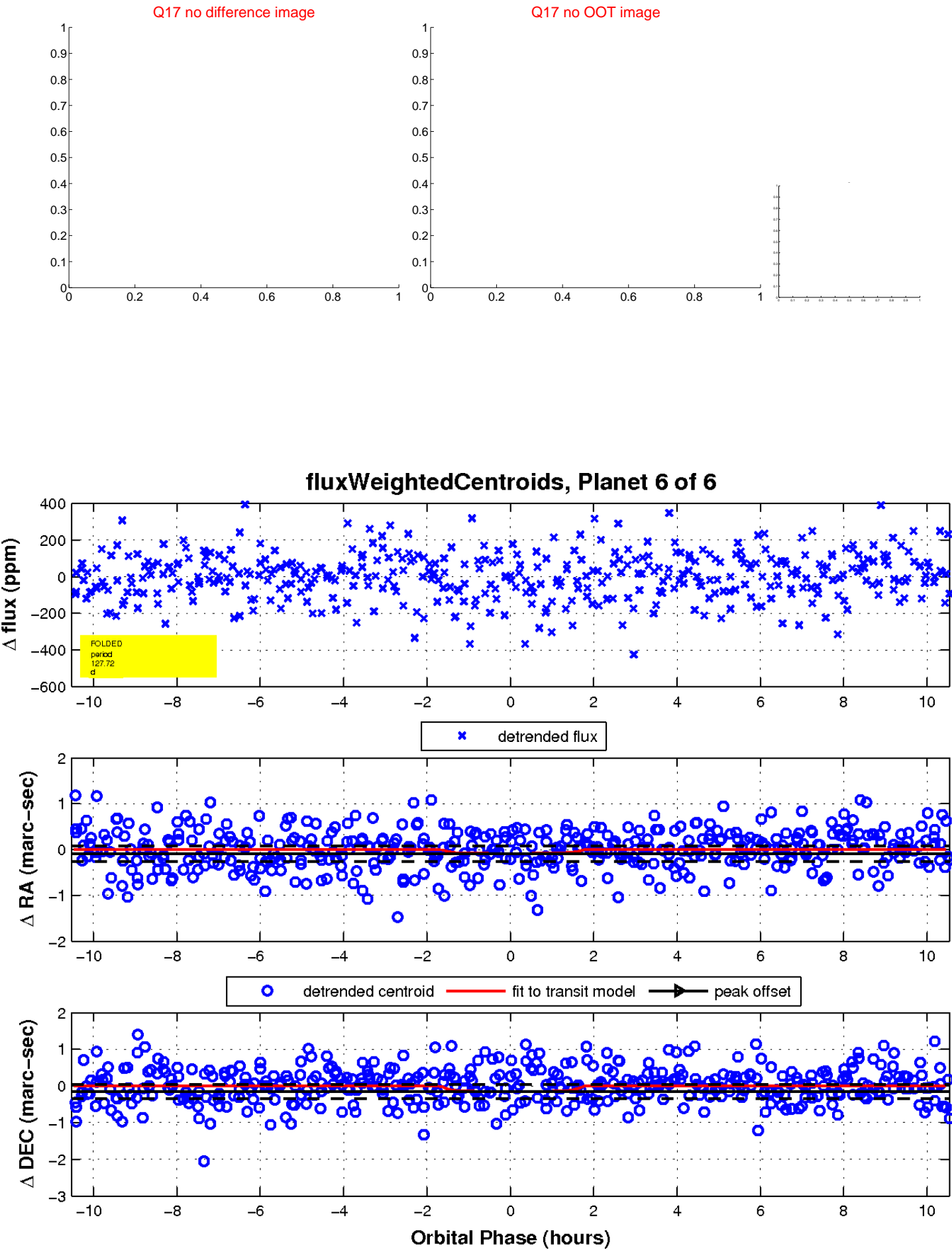
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

