

KIC 006213774

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006213774-01 | OBS | No | 2.813552 | 133.424490 | 0.1 | 21.395 | 12.7 | 0.1 | 1.54 | 6694 | 0.06 | 2411.63 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 006213774-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |

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

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

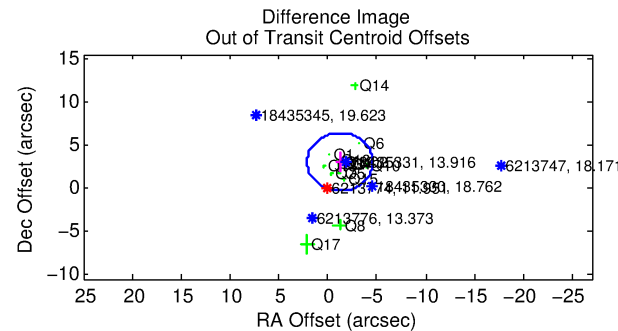
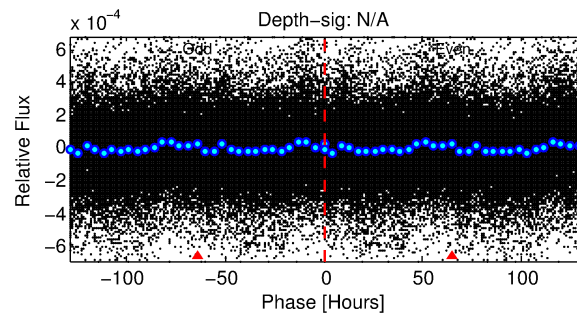
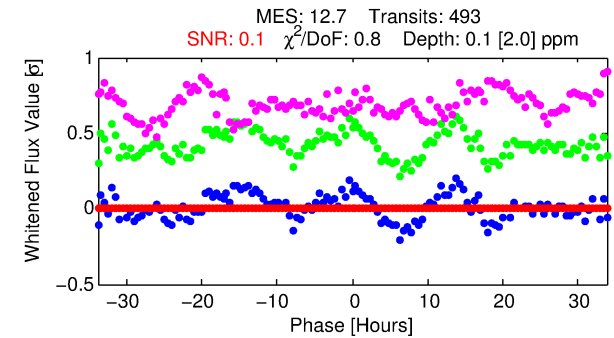
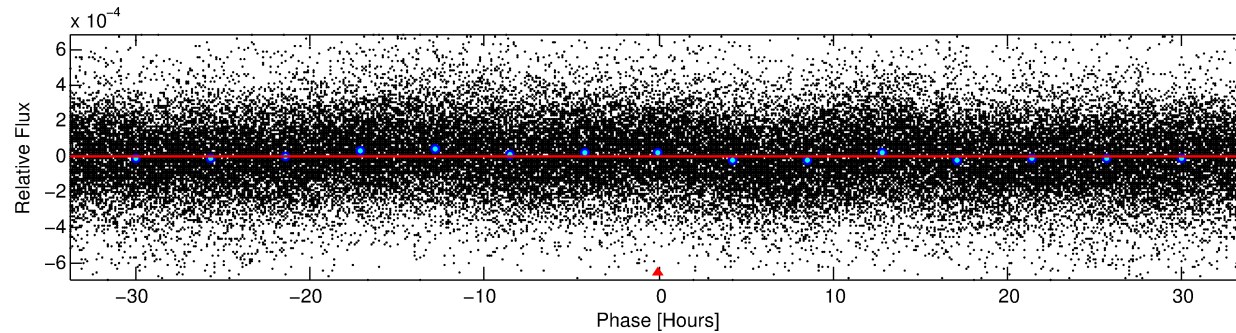
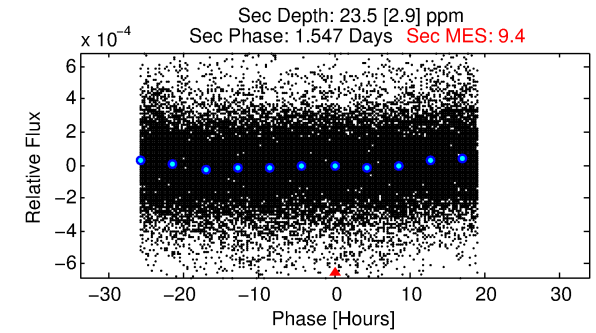
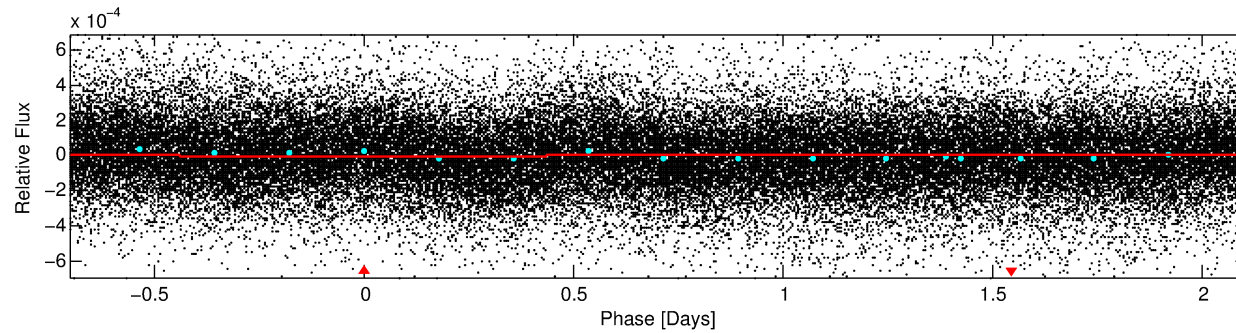
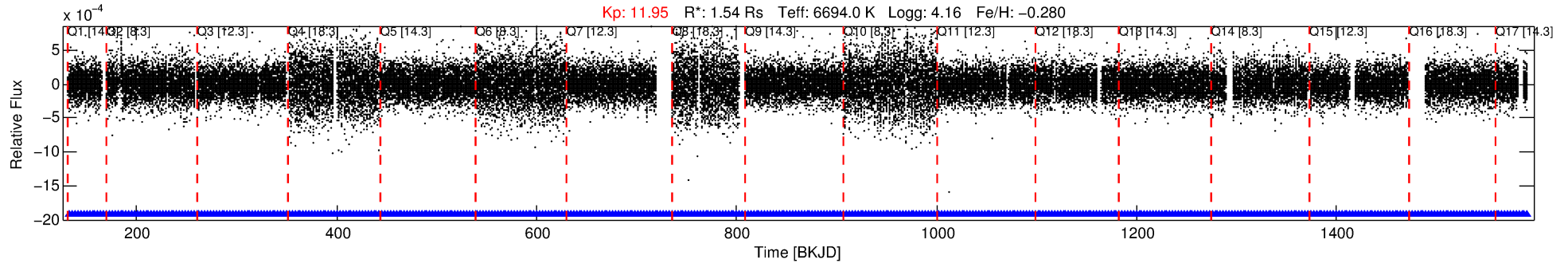
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006213774-01

No Significant Match Found

DV One-Page Summary

KIC: 6213774 Candidate: 1 of 1 Period: 2.814 d



DV Fit Results:

Period = 2.81355 [0.00850] d
Epoch = 133.4245 [1.8461] BKJD
Rp/R* = 0.0003 [0.0046]
a/R* = 1.16 [19.66]
b = 0.39 [138.82]
Seff = 2411.63 [911.71]
Teq = 1787 [169] K
Rp = 0.06 [0.78] Re
a = 0.0421 [0.0102] AU
Ag = 7371.08 [205180.58] [0.04σ]
Teffp = 25599 [178136] K [0.13σ]

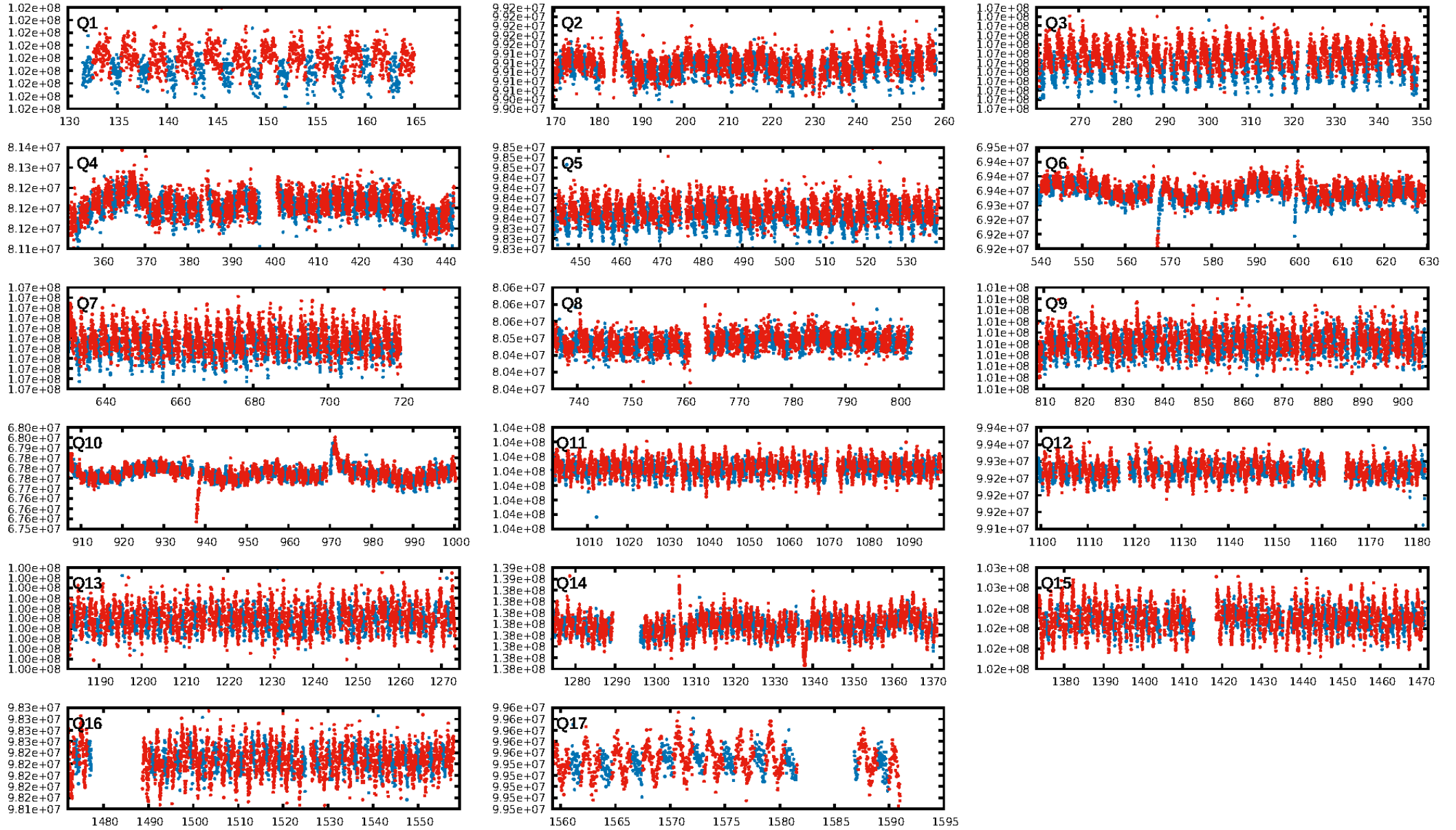
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [471/471]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.285 arcsec [2.94σ]
KicOffset-rm: 3.884 arcsec [4.28σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

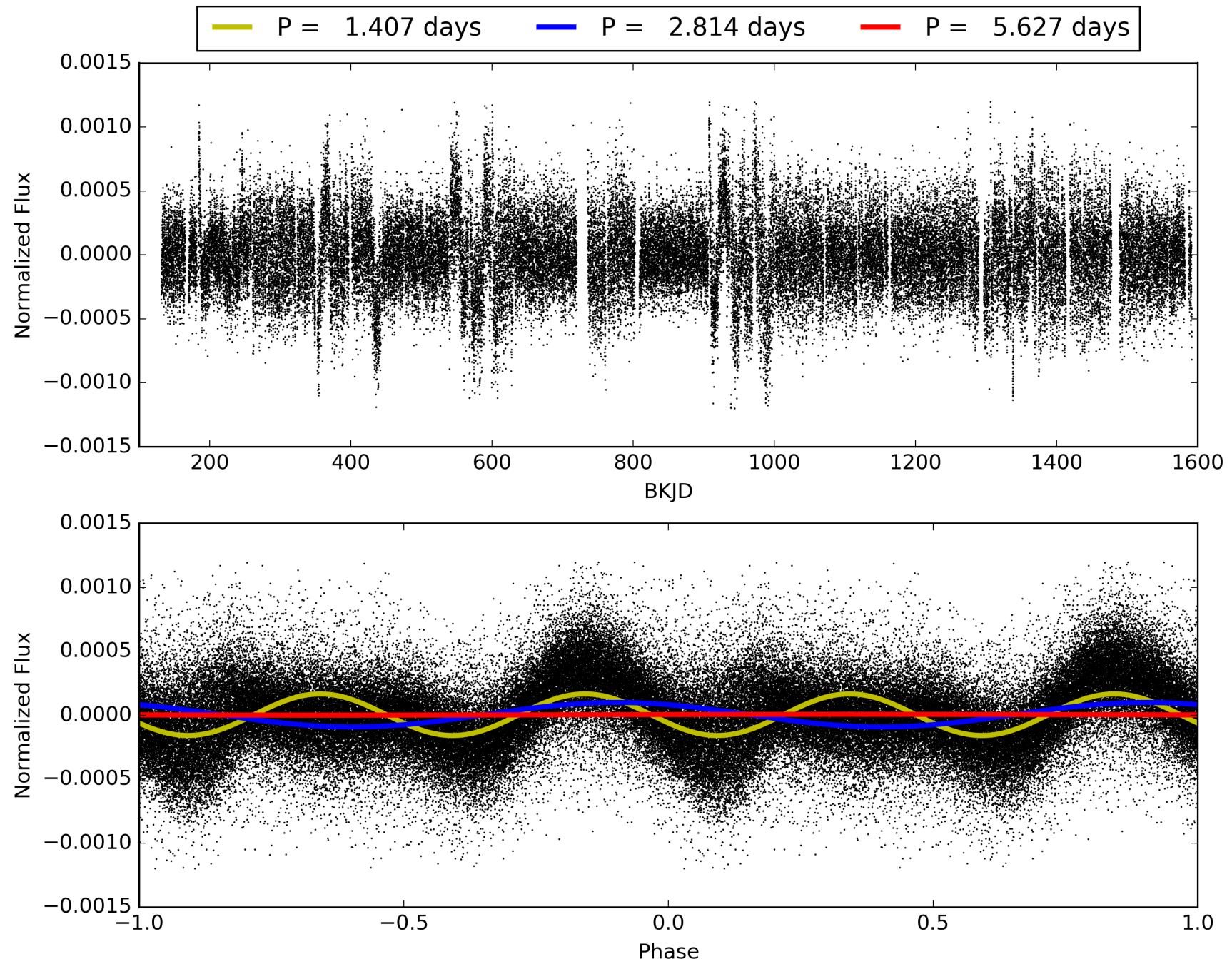
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:16:52 Z

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

TCE 006213774-01, PDC Light Curves

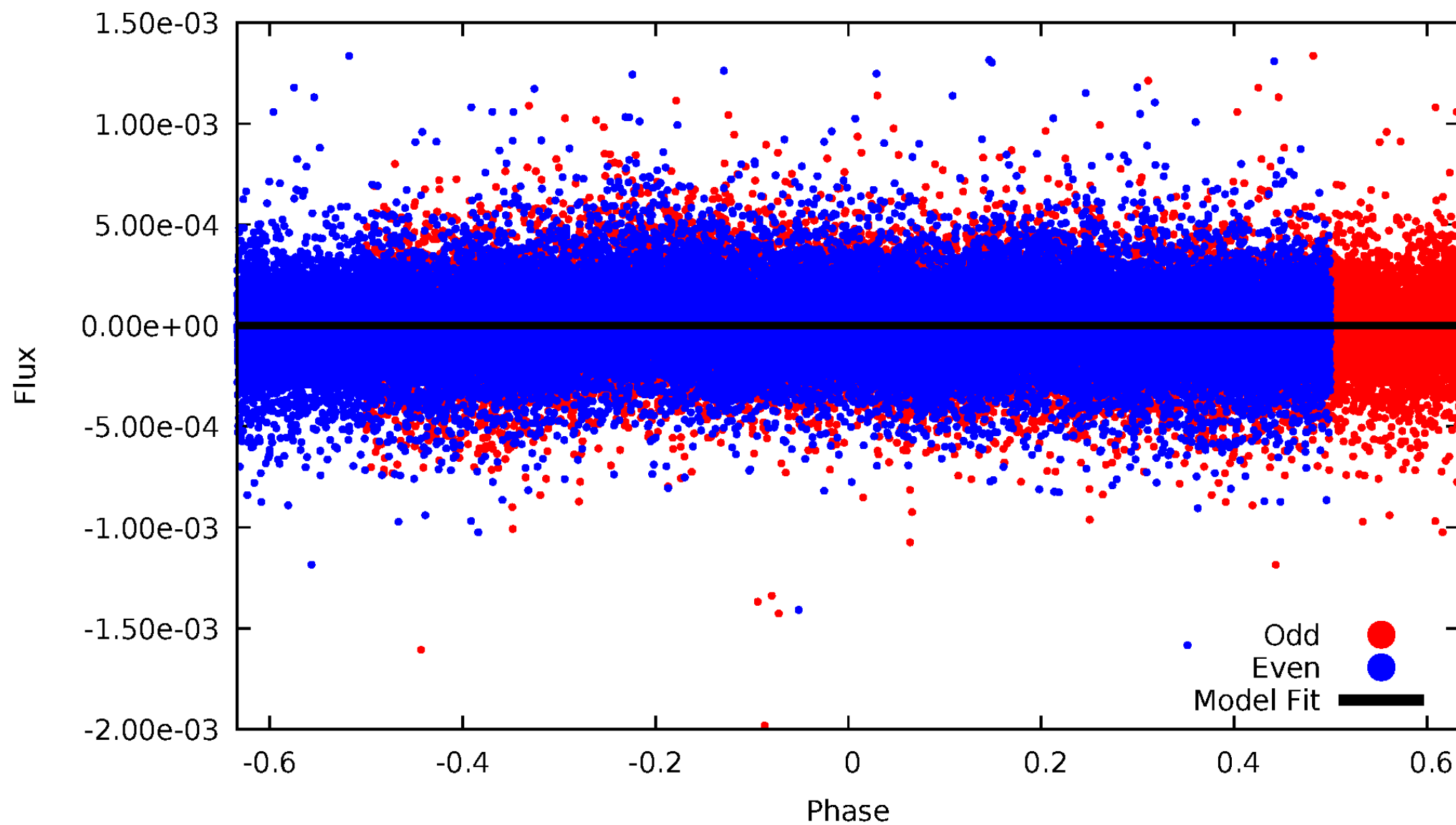


TCE 006213774-01



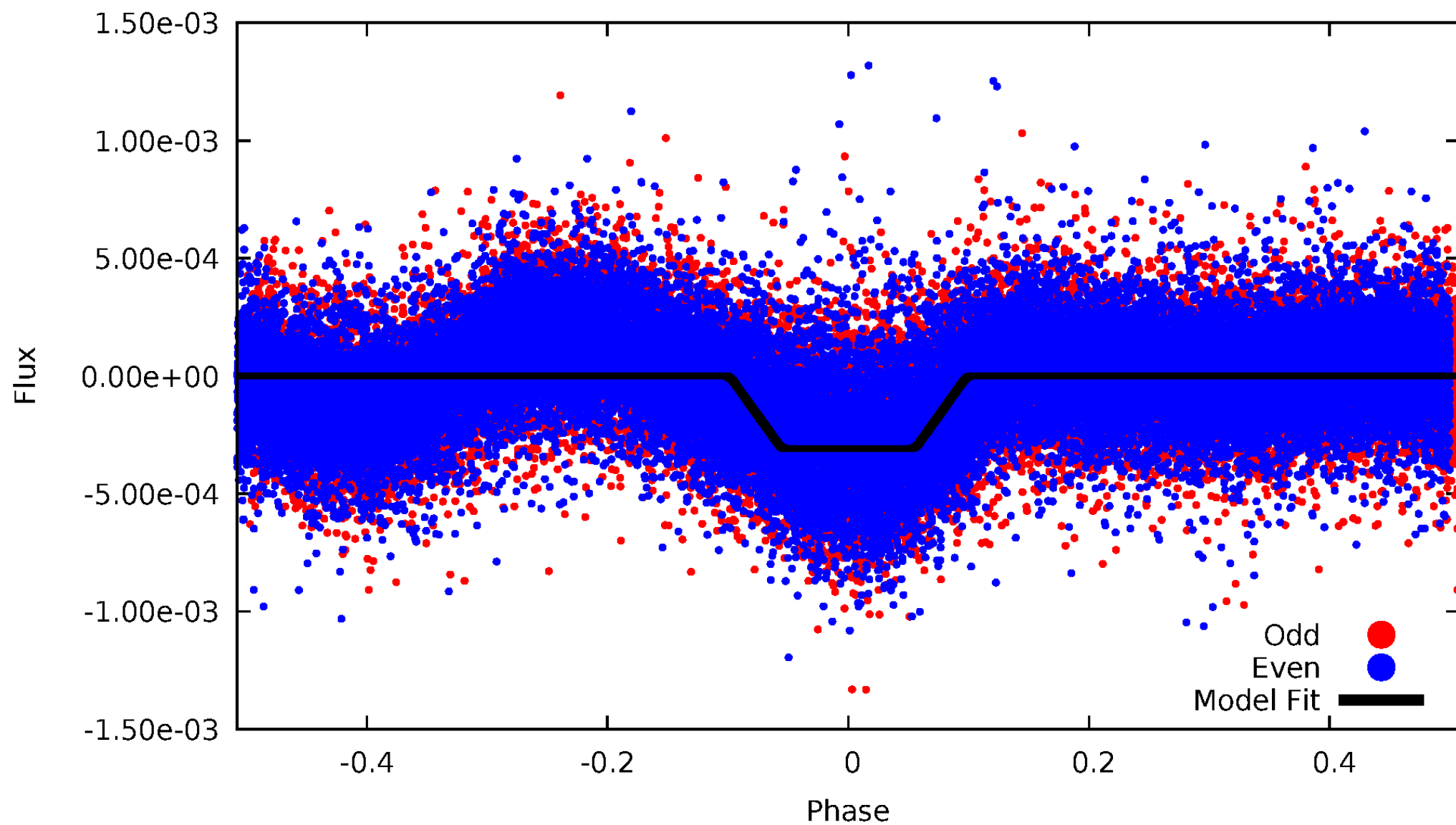
DV Odd/Even

TCE 006213774-01



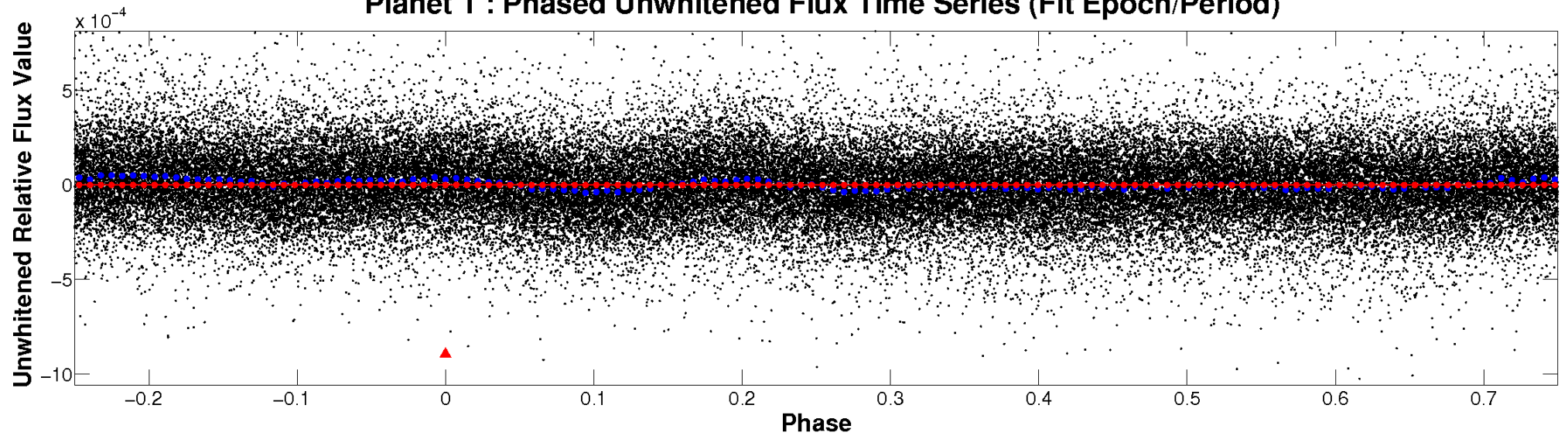
ALT Odd/Even

TCE 006213774-01

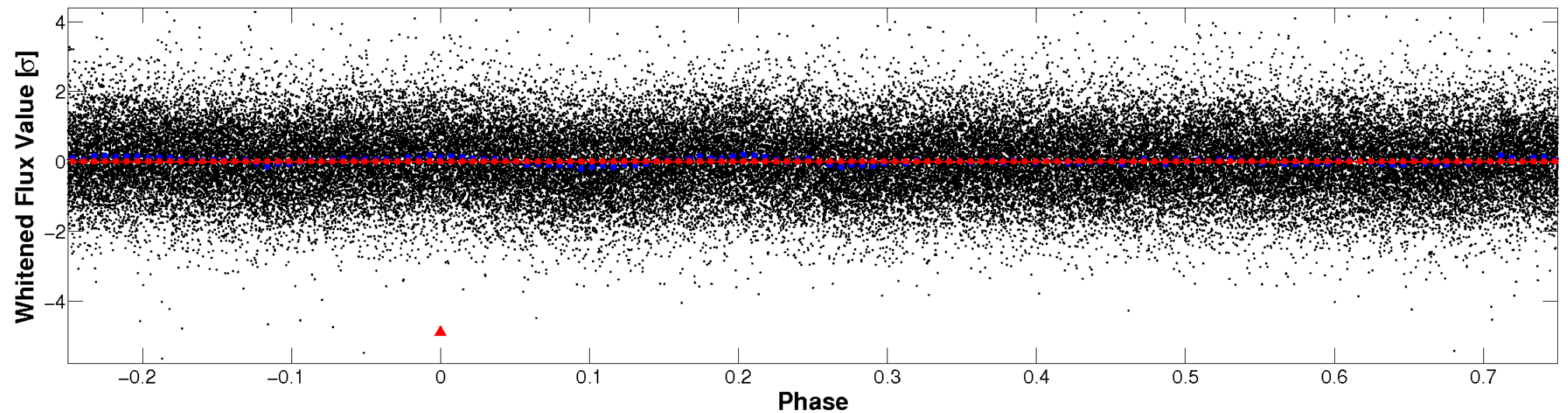


Non-Whitened Vs. Whitened Light Curve

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

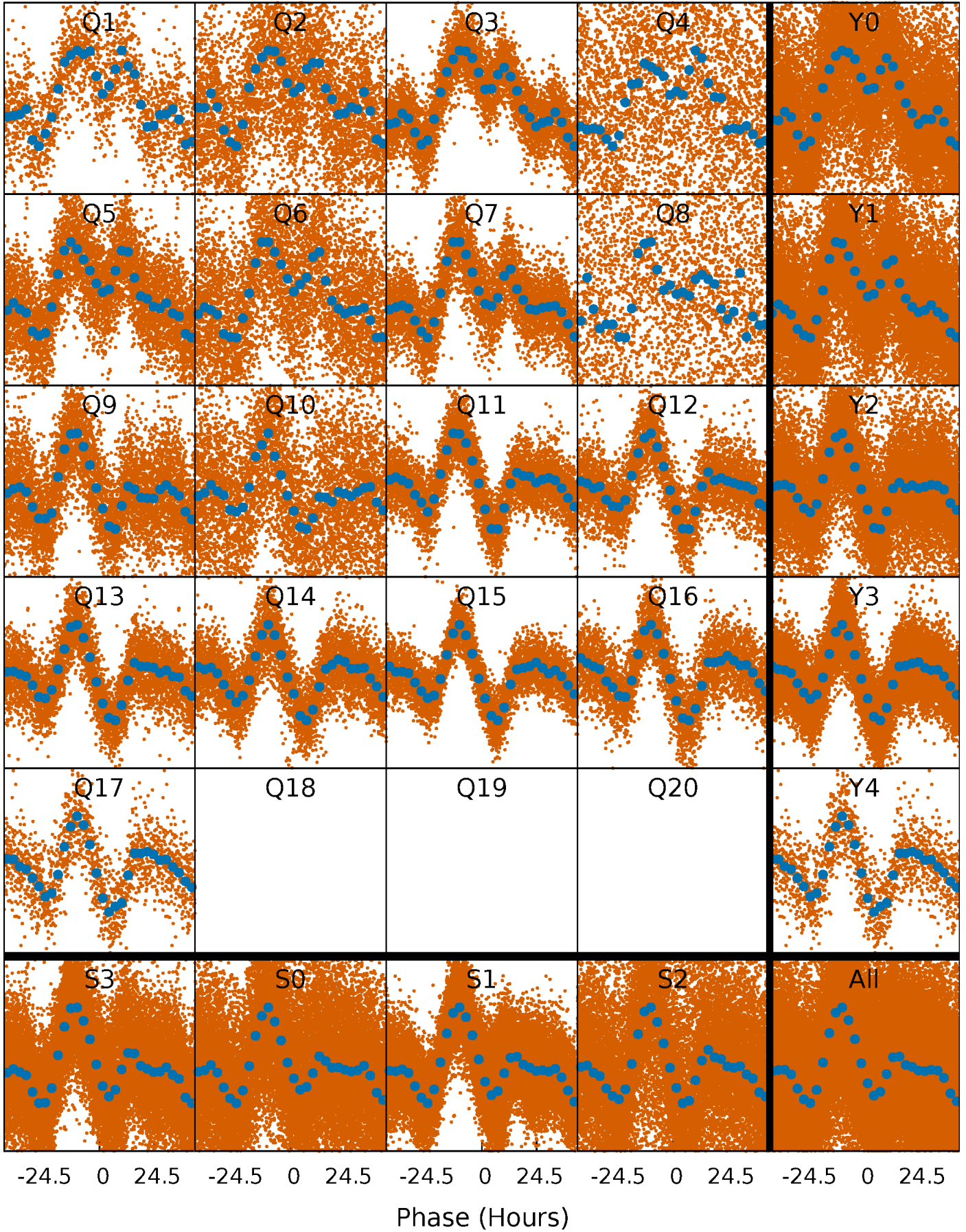


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



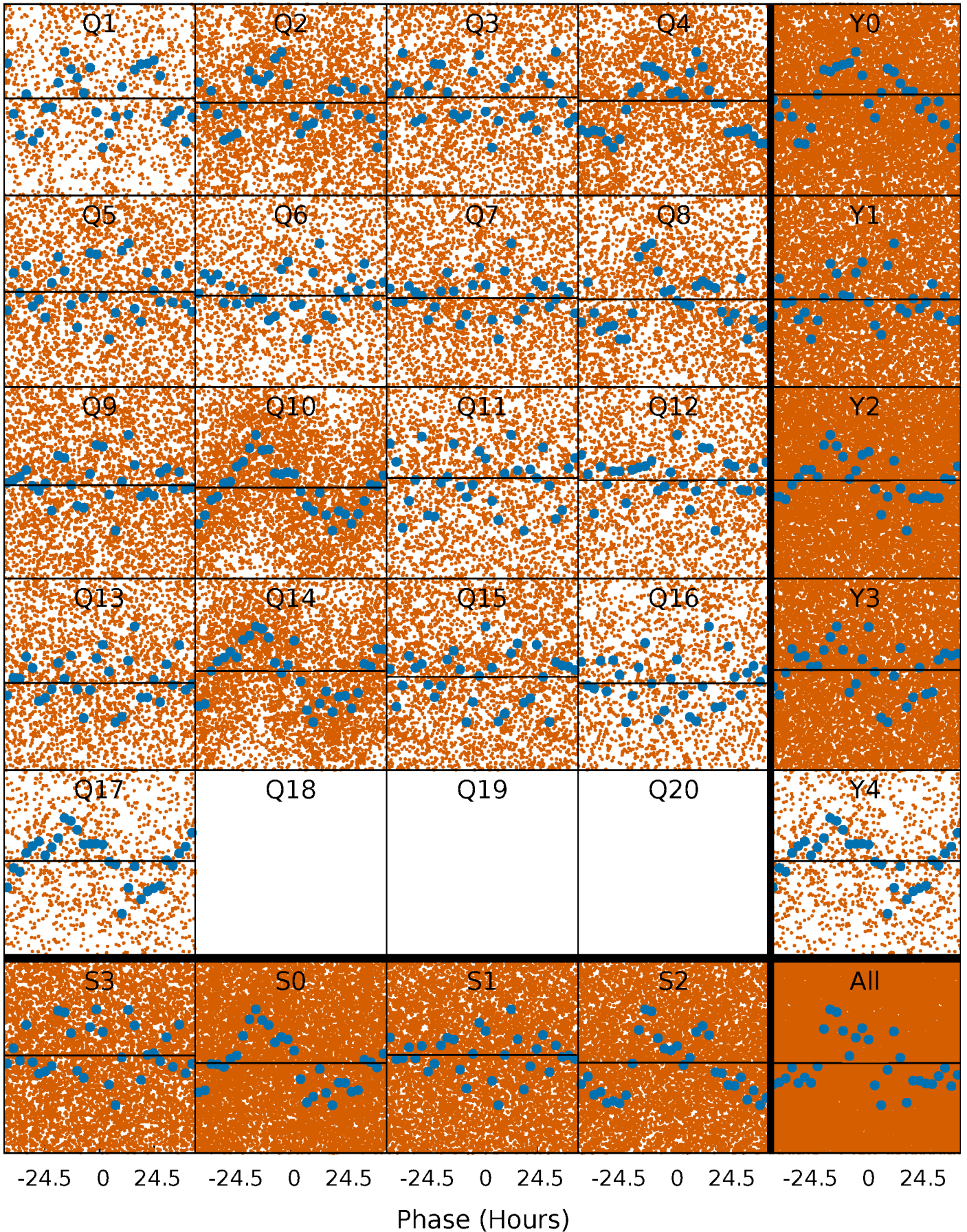
PDC Quarter-Phased Transit Curves

TCE 006213774-01 P= 2.813552 Days $T_0=133.424490$ (BKJD)



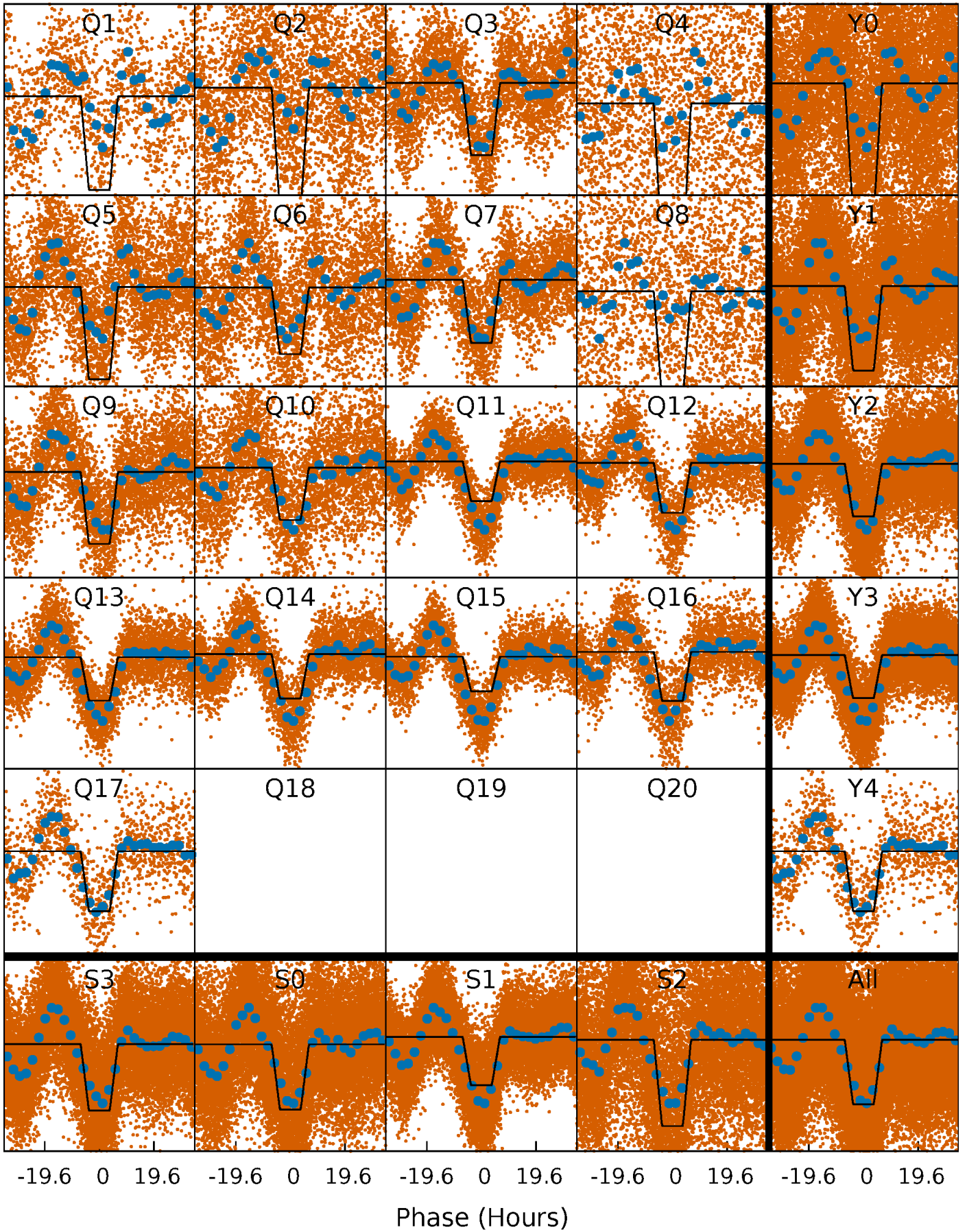
DV Quarter-Phased Transit Curves

TCE 006213774-01 P= 2.813552 Days $T_0=133.424490$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

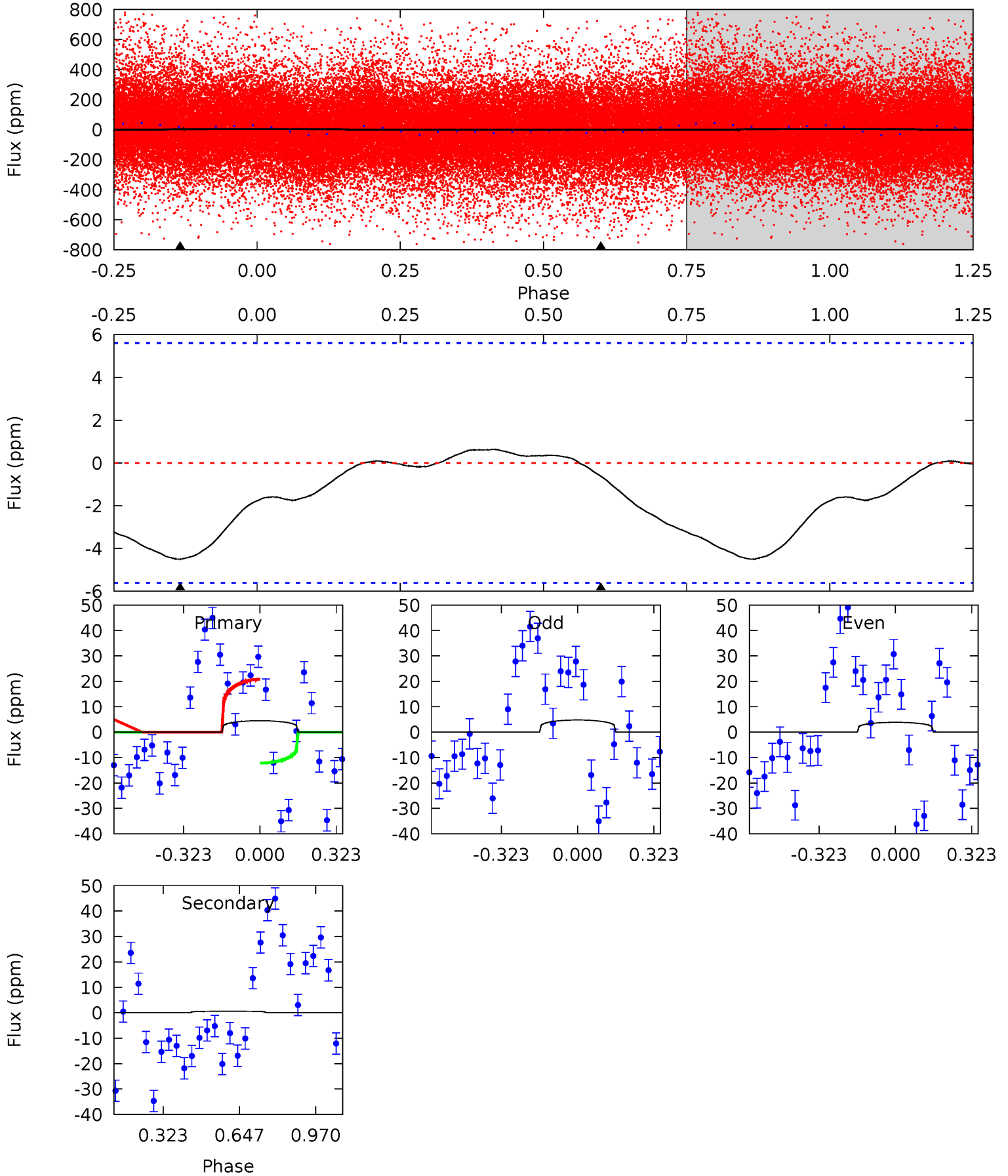
TCE 006213774-01 P= 2.814036 Days $T_0=133.456068$ (BKJD)



DV Model-Shift Uniqueness Test

006213774-01, P = 2.813552 Days, E = 130.610938 Days

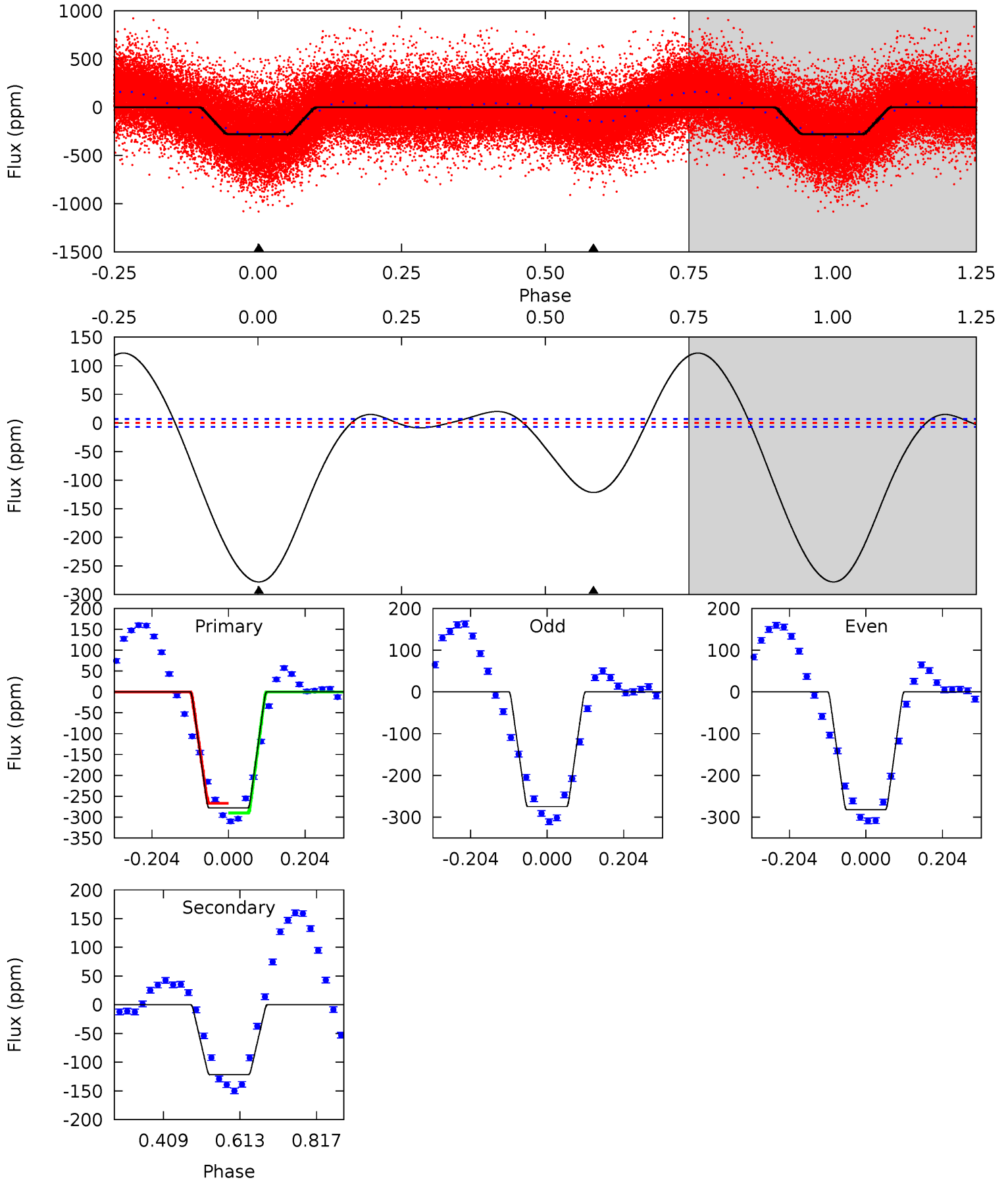
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-------|-------|------|
| 3.46 | 0.48 | 0 | 0 | 4.31 | 0.99 | 0.07 | 3.46 | 3.46 | 0.48 | 0.48 | 0.35 | -31.1 | 0.12 | 3.39 |



Alt Model-Shift Uniqueness Test

006213774-01, P = 2.814036 Days, E = 130.642032 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 176.2 | 77.1 | 0 | 0 | 4.41 | 1.27 | 15.7 | 176.2 | 176.2 | 77.1 | 77.1 | 2.31 | 1.00 | 0.31 | 6.35 |



Stellar Parameters For KIC 006213774

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6694^{+189}_{-260} | $4.161^{+0.185}_{-0.185}$ | $-0.280^{+0.250}_{-0.300}$ | $1.540^{+0.451}_{-0.369}$ | $1.262^{+0.182}_{-0.223}$ | $0.486^{+0.554}_{-0.223}$ |
| | +3%/-4% | +4%/-4% | +89%/-107% | +29%/-24% | +14%/-18% | +114%/-46% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 006213774-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|--------------|------------------------|----------------------|------------------------|----------------------------|
| DV | -1 ± 1 | $0.53^{+0.61}_{-0.34}$ | 2491^{+206}_{-176} | 3260^{+2085}_{-7159} | $1.167^{+13.962}_{-3.368}$ |
| Alt. | -122 ± 2 | $2.92^{+0.98}_{-0.82}$ | 2500^{+205}_{-197} | 5312^{+845}_{-547} | 14^{+13}_{-6} |

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

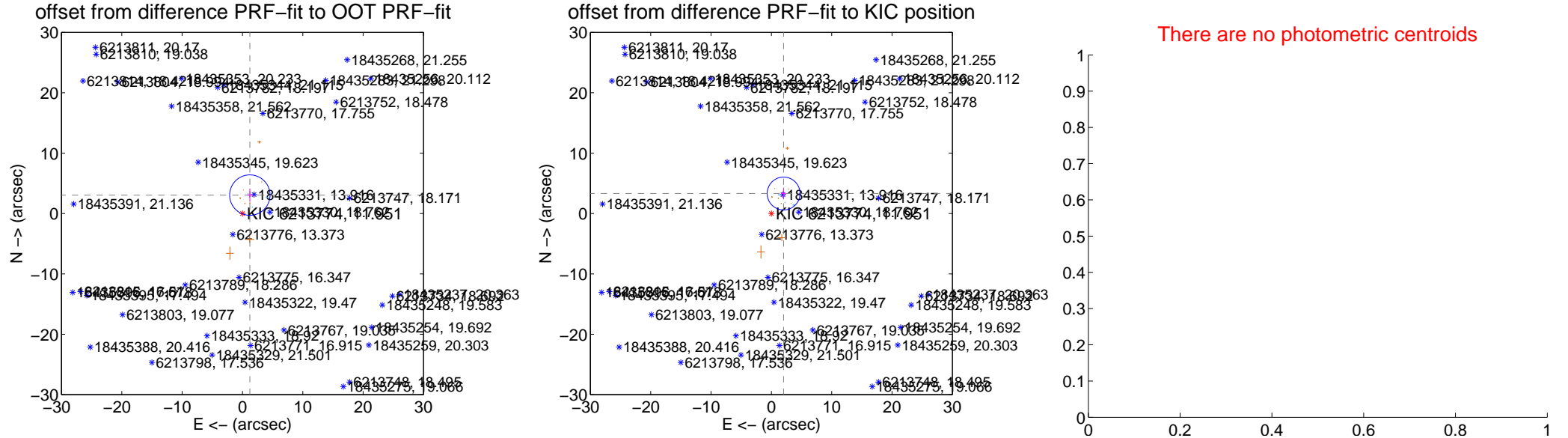
DV Centroid Data

Supplemental centroid analysis for 006213774-01. **Kepler magnitude: 11.95.** Transit SNR 0.06

There are 4 quarters with good PRF difference image offsets

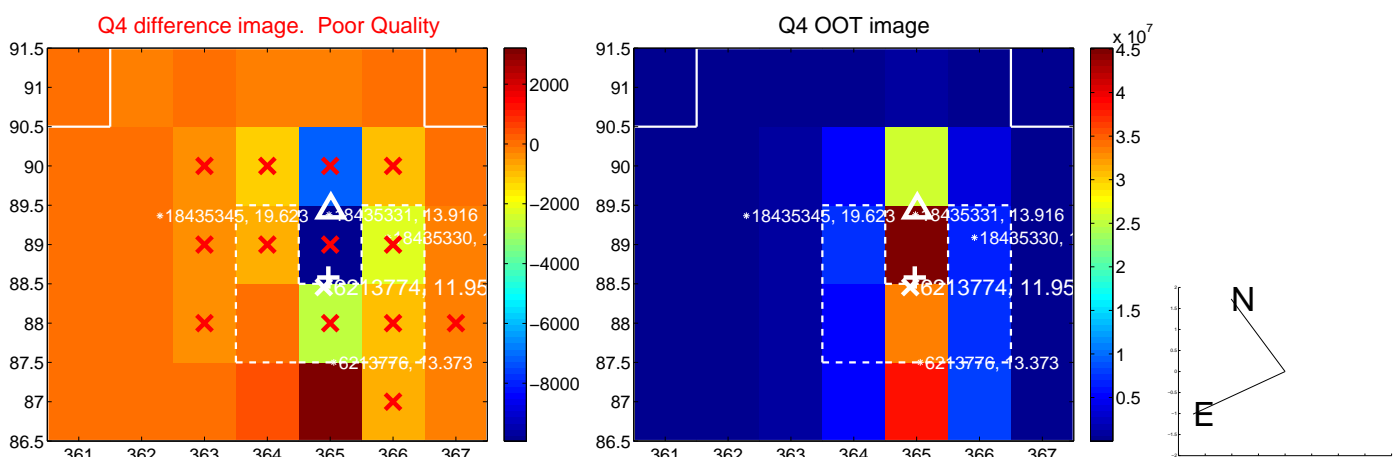
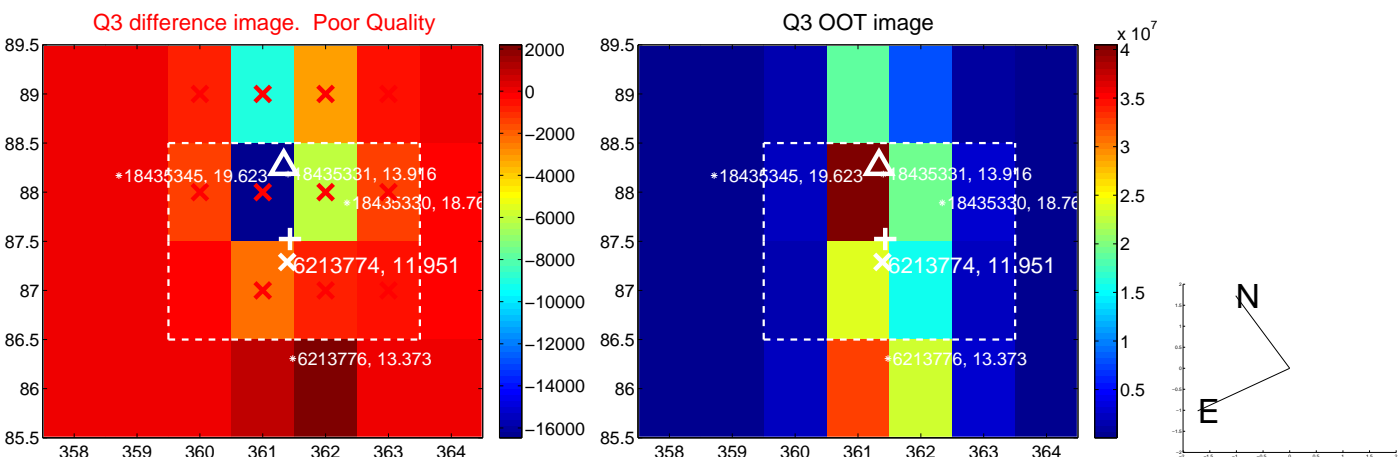
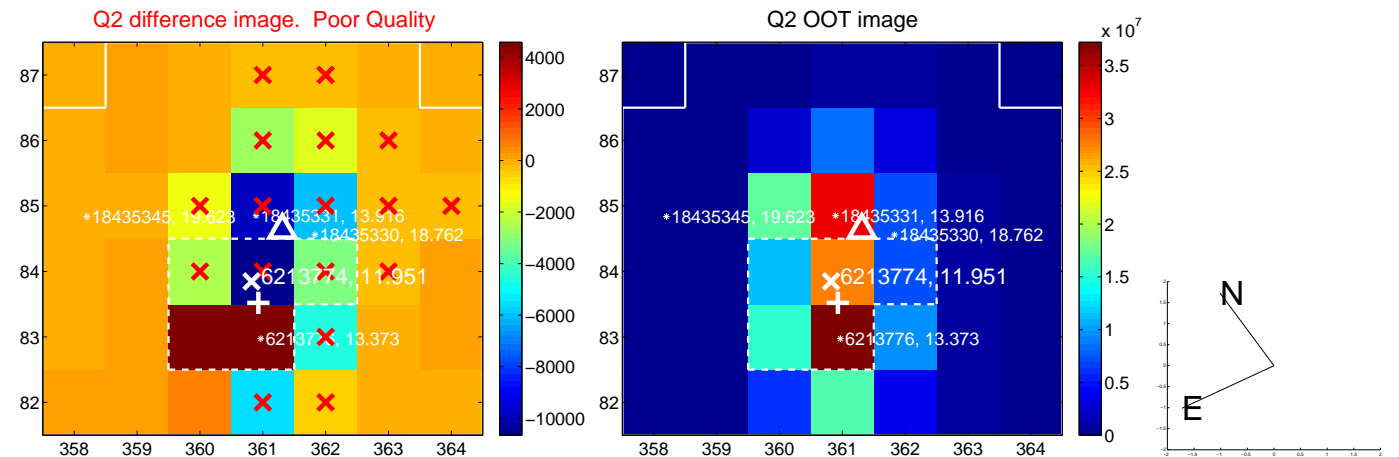
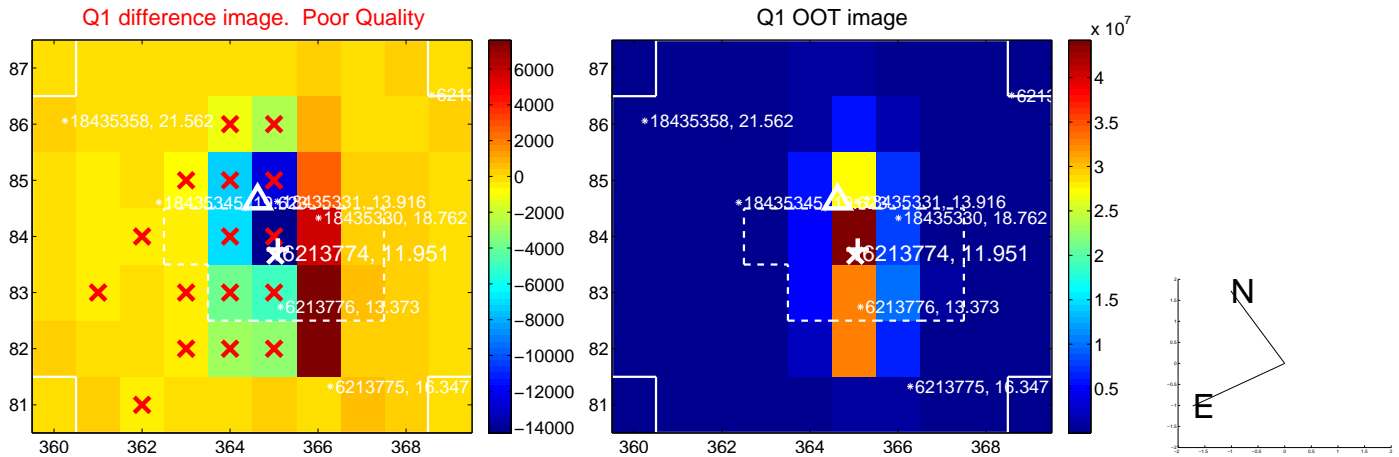
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|-------------------------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 3.285 ± 1.116 | 2.94 | -1.223 ± 0.412 | 3.049 ± 1.091 |
| PRF-fit source offset from KIC position | 3.884 ± 0.908 | 4.28 | -2.029 ± 0.335 | 3.312 ± 0.963 |
| photometric centroid source offset | — | — | — | — |

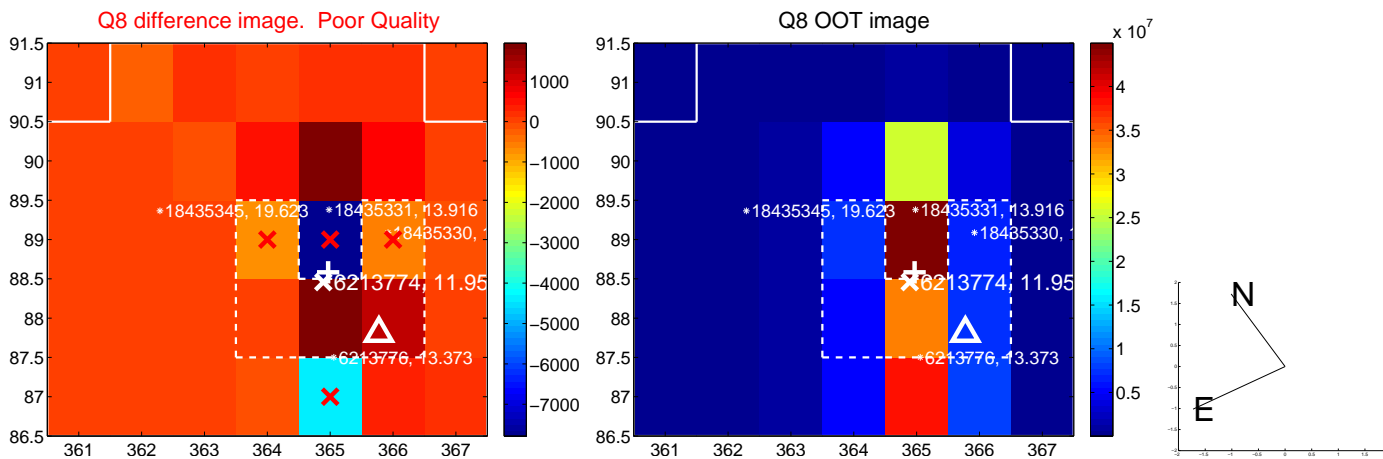
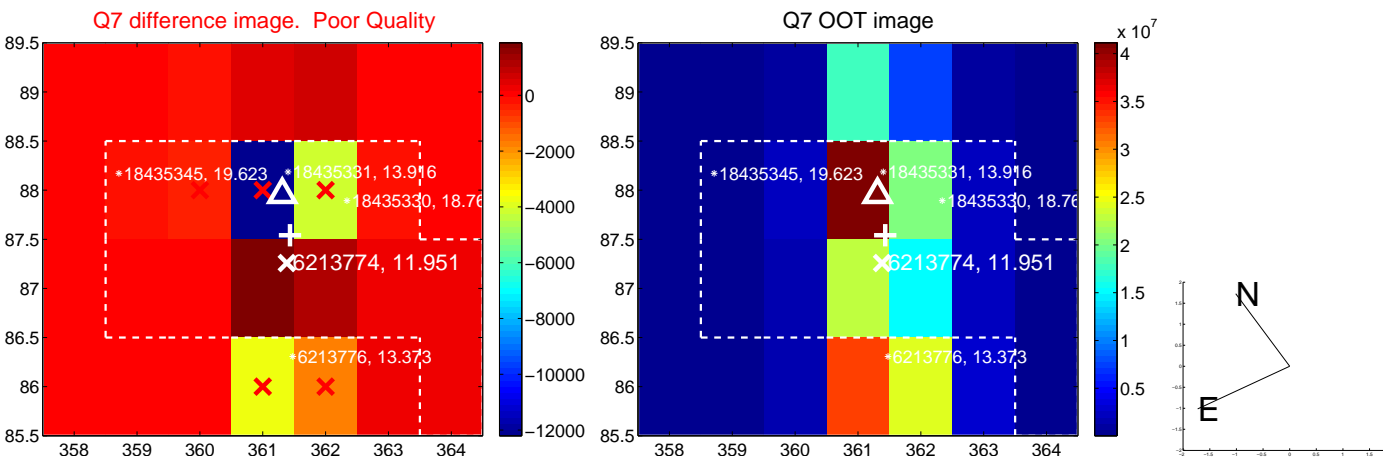
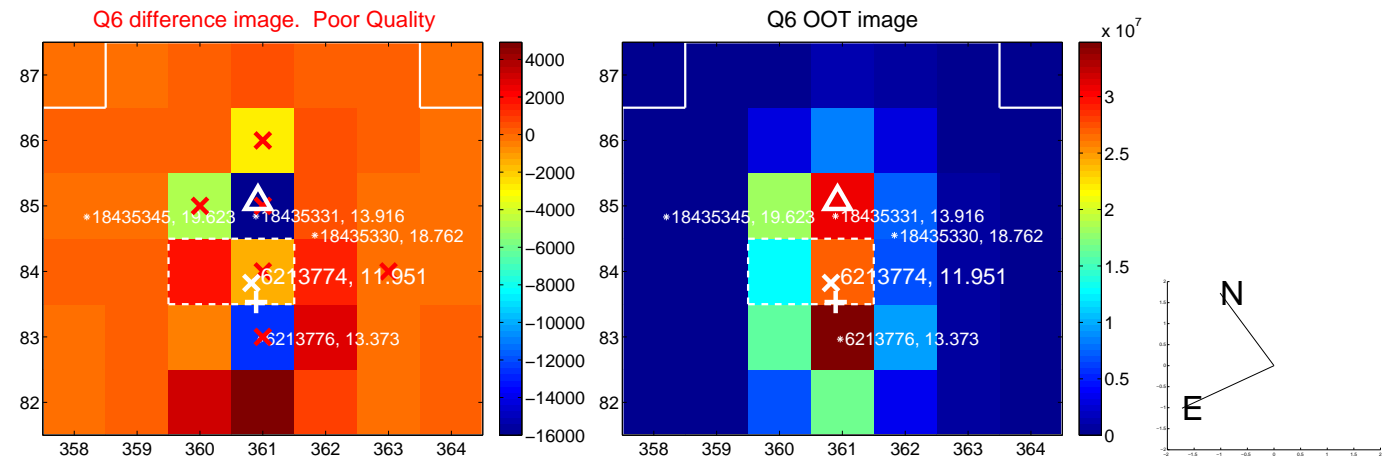
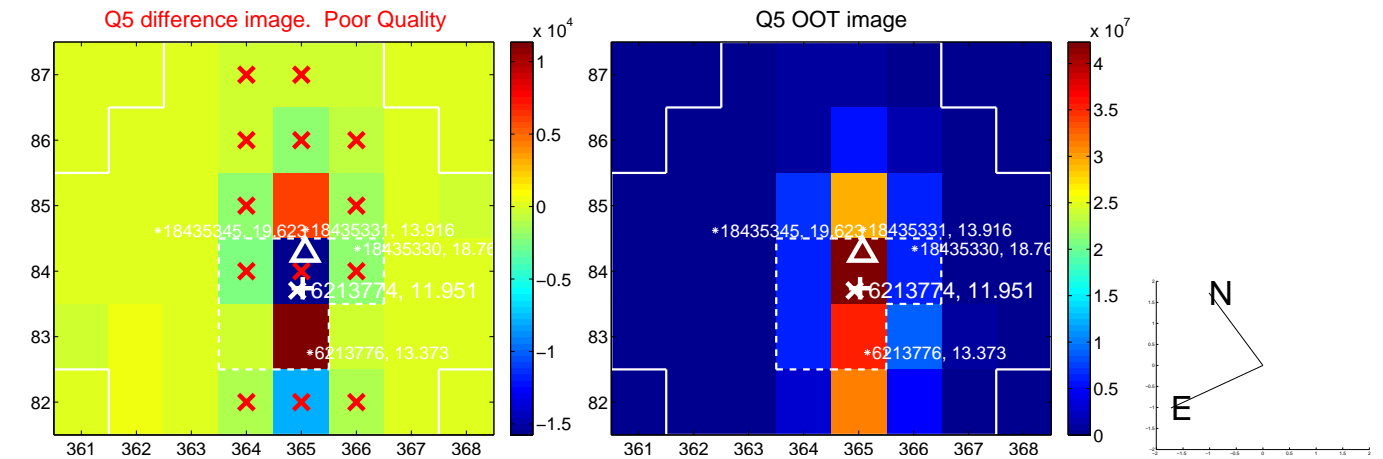


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

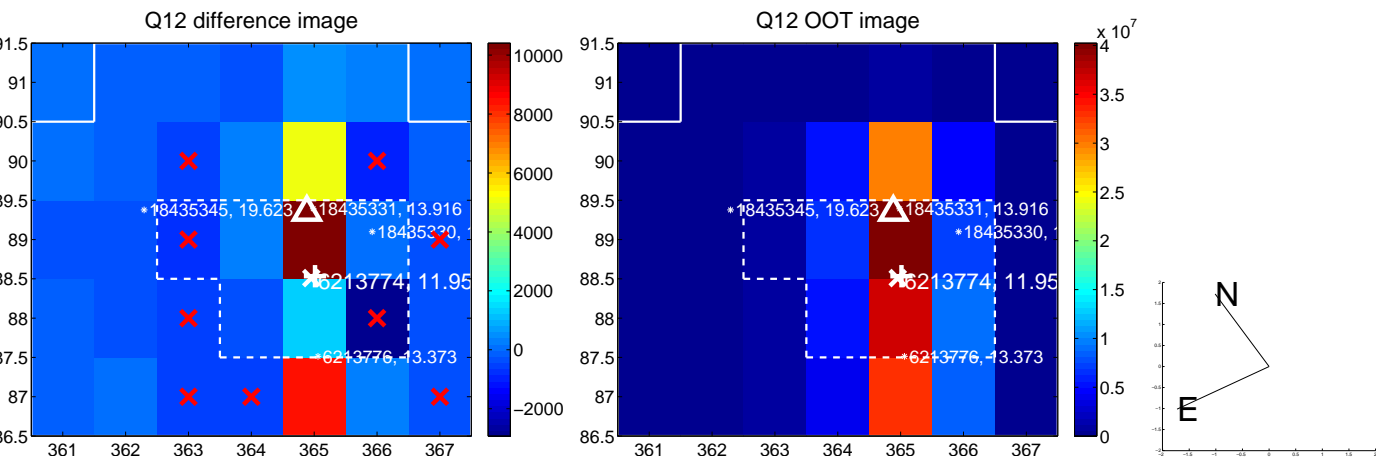
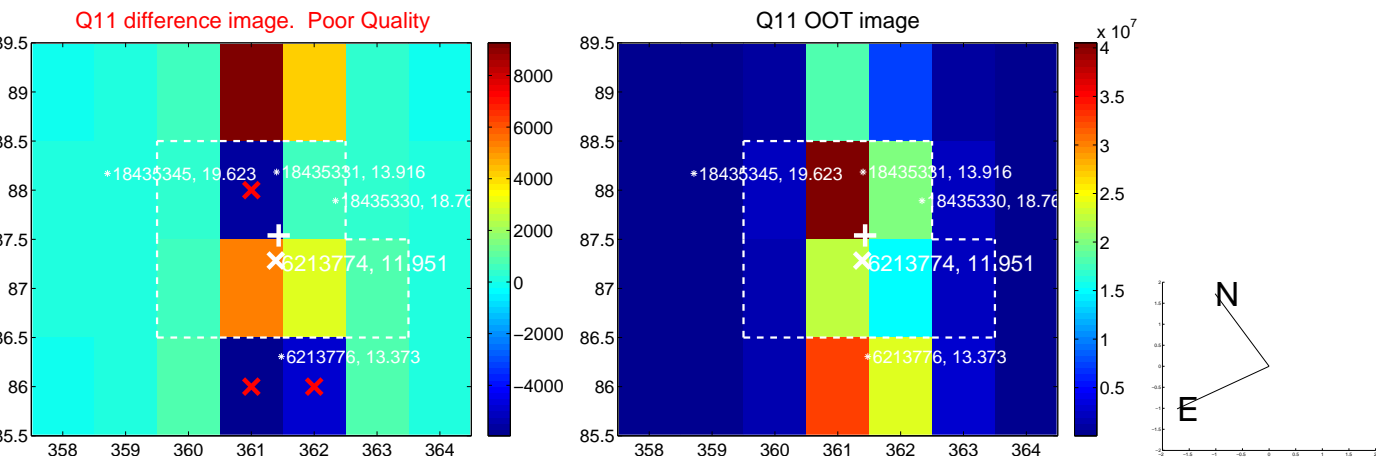
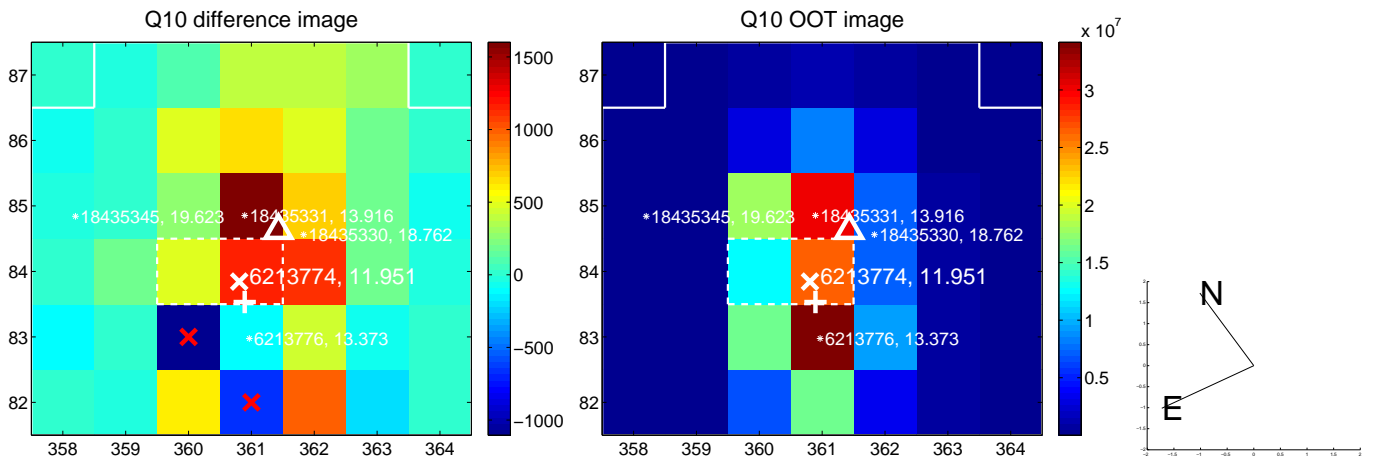
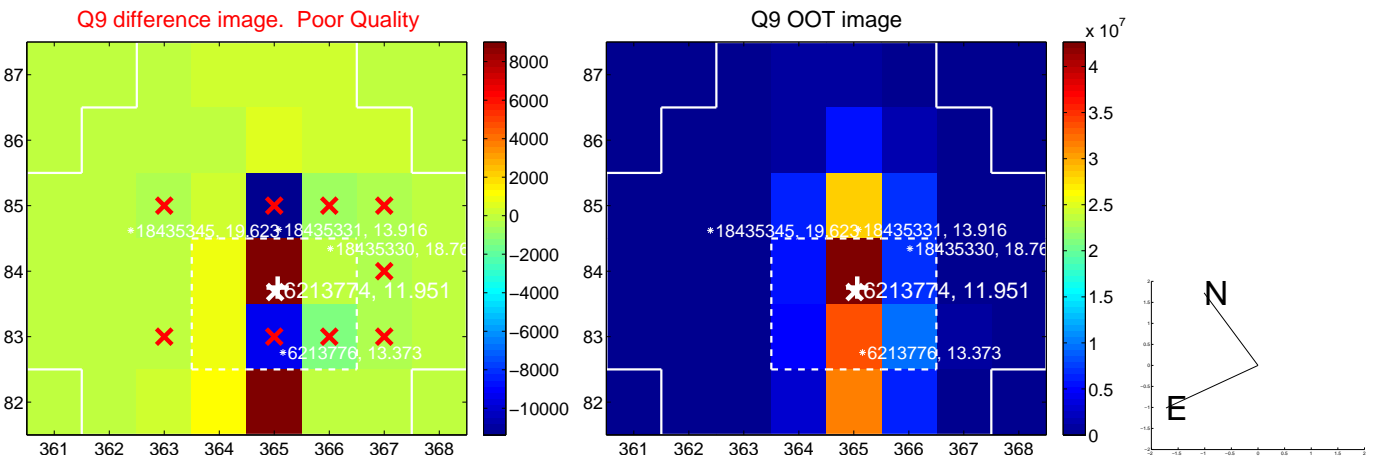
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



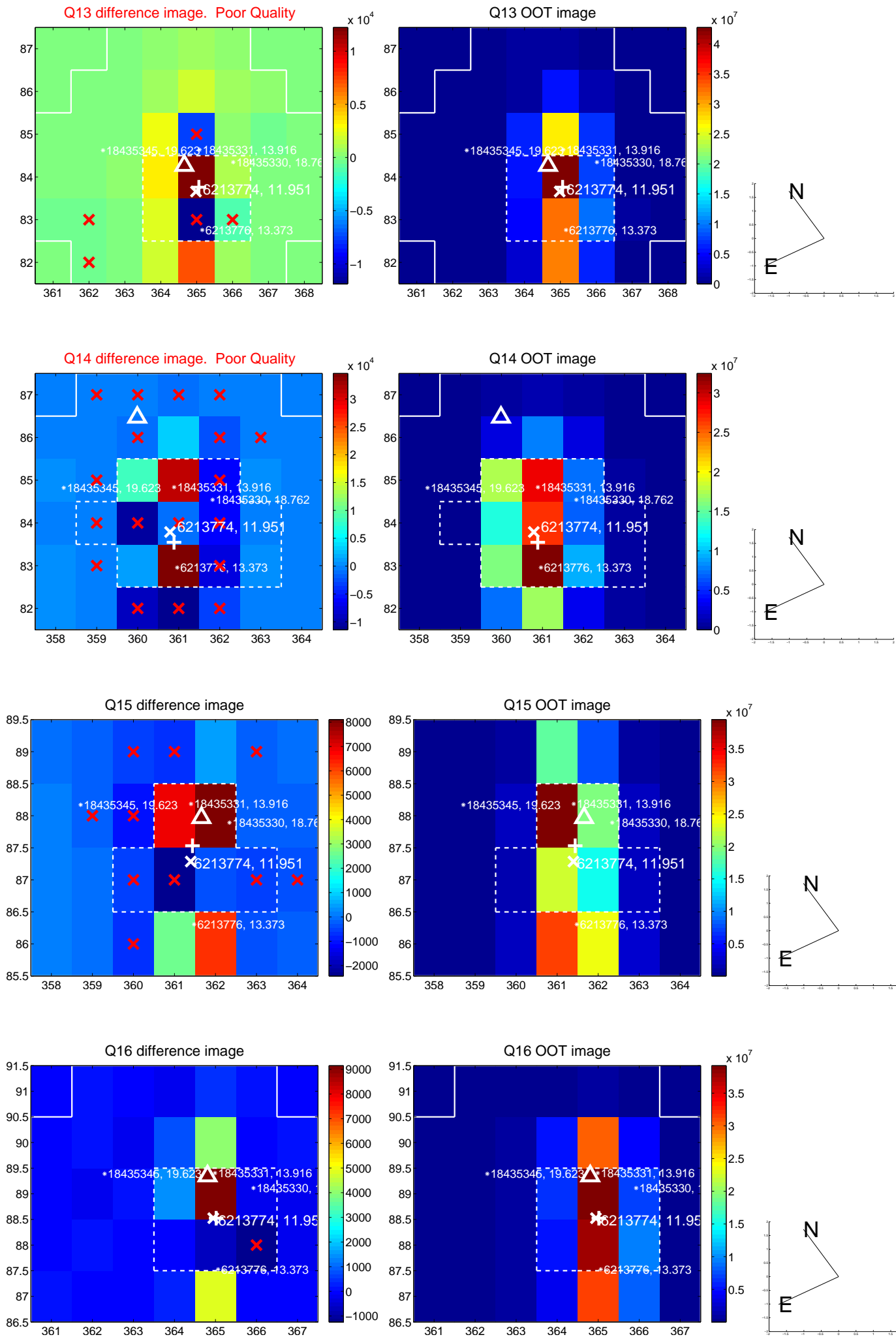
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



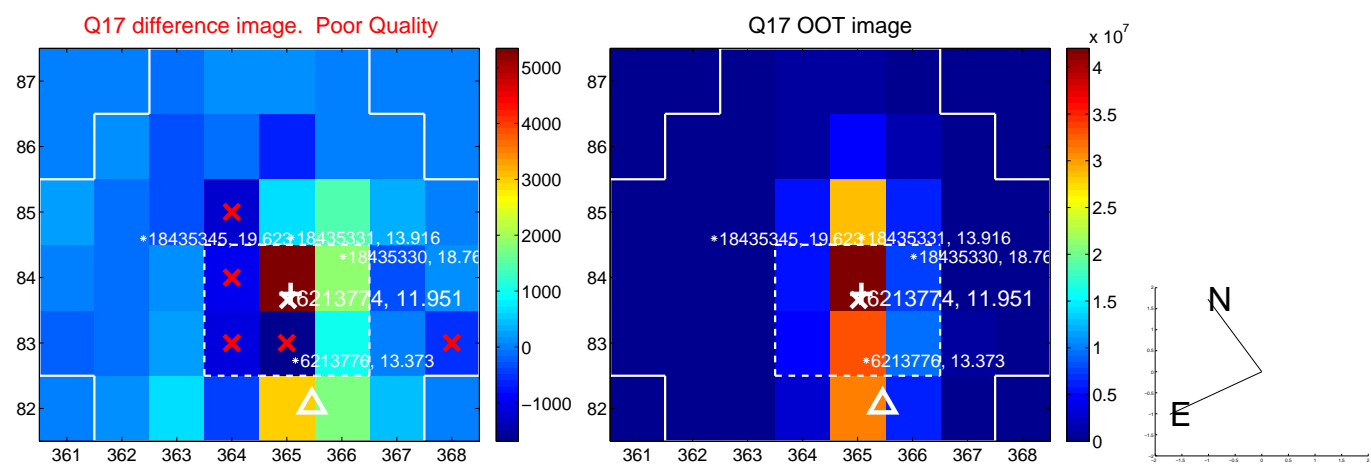
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

