

KIC 011081053

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 011081053-01 | OBS | No | 0.646921 | 131.609988 | 36.7 | 1.963 | 9.8 | 8.2 | 3.14 | 7596 | 2.23 | 87564.61 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 011081053-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT |

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

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

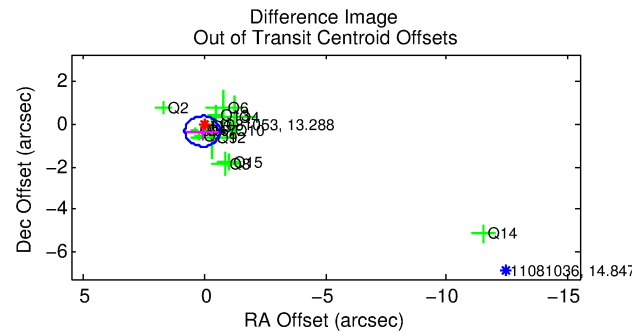
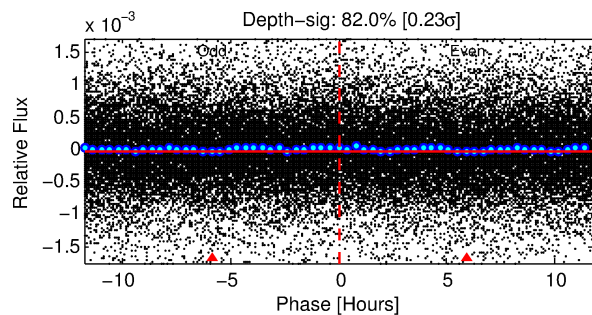
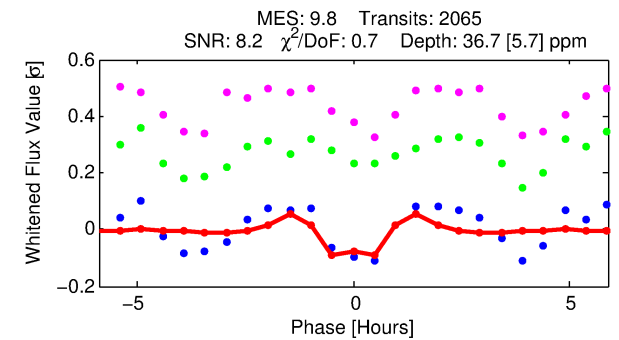
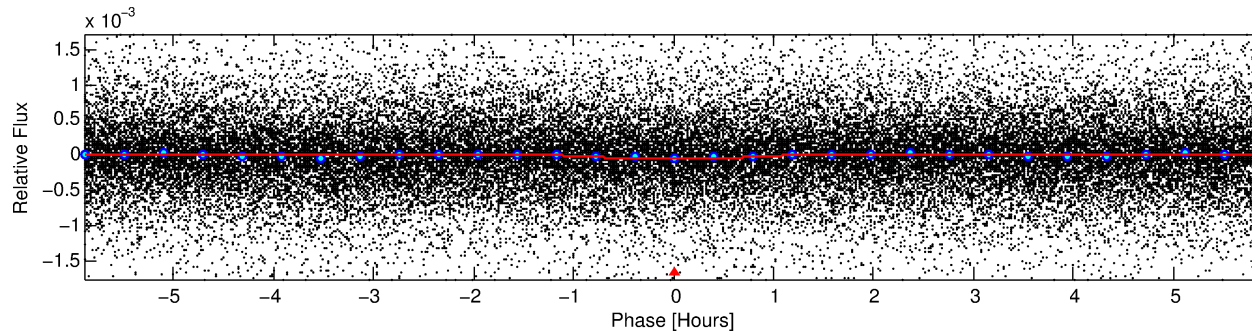
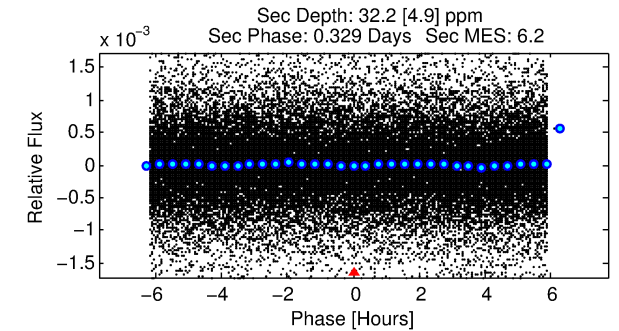
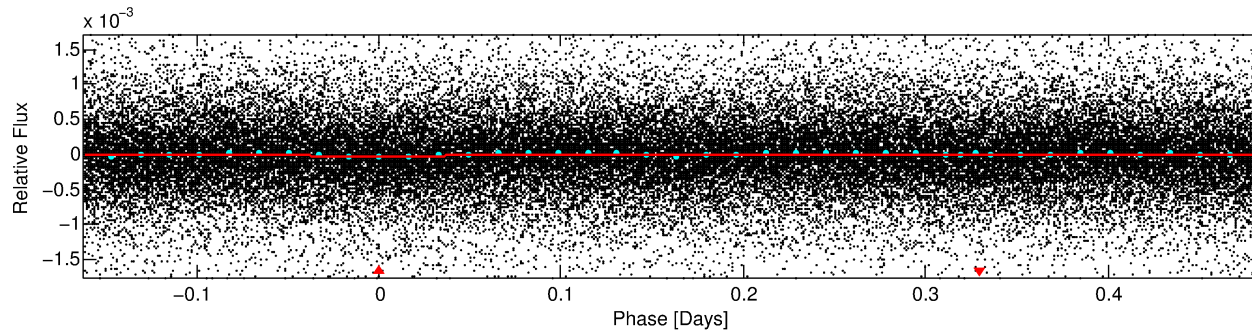
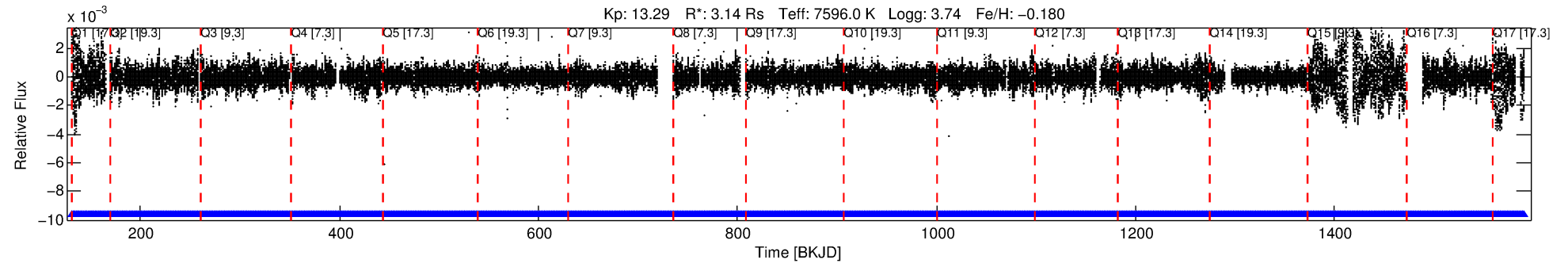
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011081053-01

No Significant Match Found

DV One-Page Summary

KIC: 11081053 Candidate: 1 of 1 Period: 0.647 d



DV Fit Results:

Period = 0.64692 [0.00001] d
Epoch = 131.6100 [0.0017] BKJD
Rp/R* = 0.0065 [0.0019]
a/R* = 1.49 [1.30]
b = 0.90 [0.36]
Seff = 87564.61 [67585.86]
Teq = 4386 [846] K
Rp = 2.23 [1.28] Re
a = 0.0183 [0.0087] AU
Ag = 1.20 [1.15] [0.17σ]
Teffp = 7098 [1093] K [1.96σ]

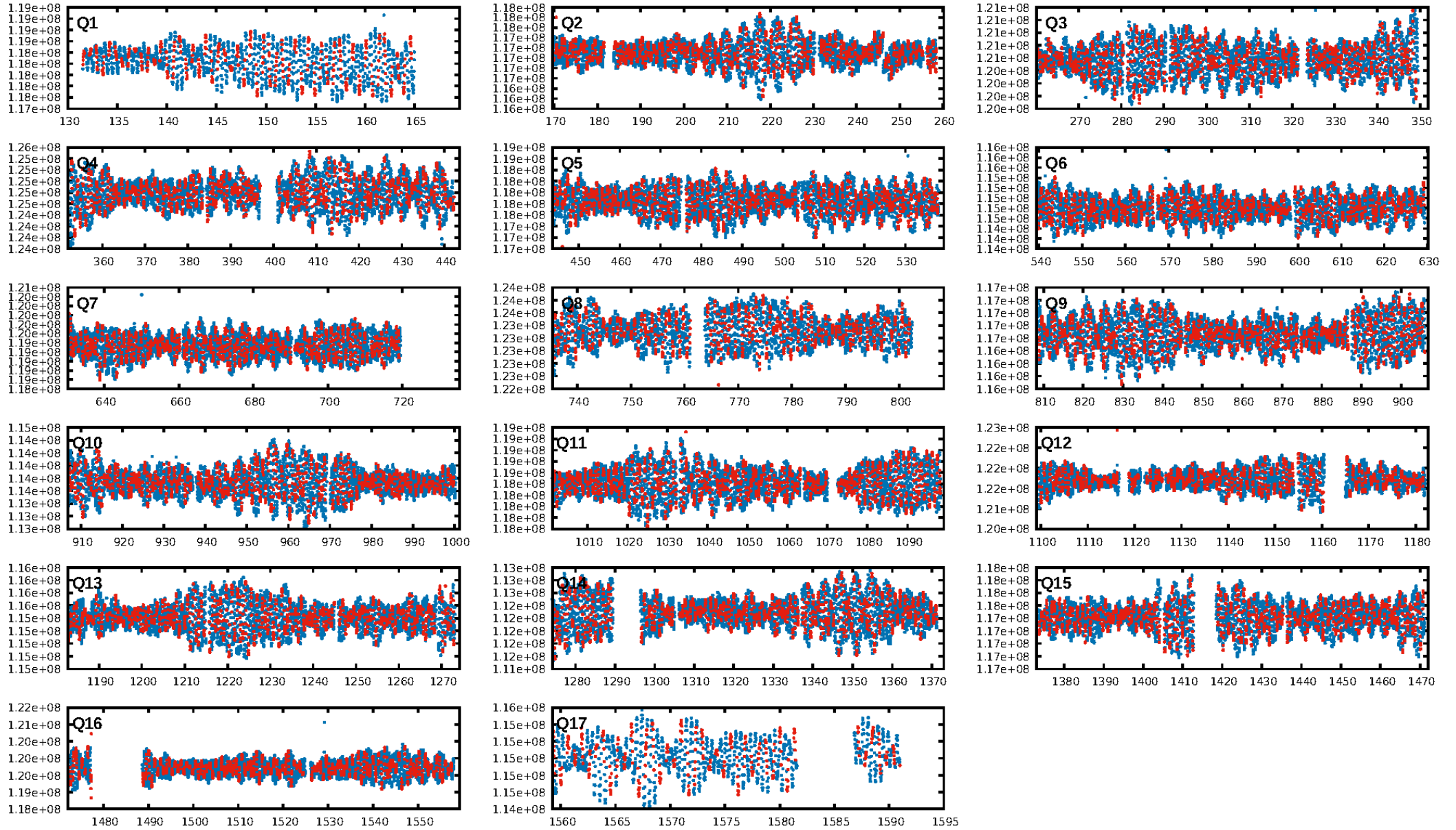
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.49e-24
RollingBand-fgt: 1.00 [1972/1972]
GhostDiagnostic-chr: 13.55
Centroid-sig: 1.5%
Centroid-so: 0.786 arcsec [1.47σ]
OotOffset-rm: 0.355 arcsec [1.50σ]
KicOffset-rm: 0.363 arcsec [1.76σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

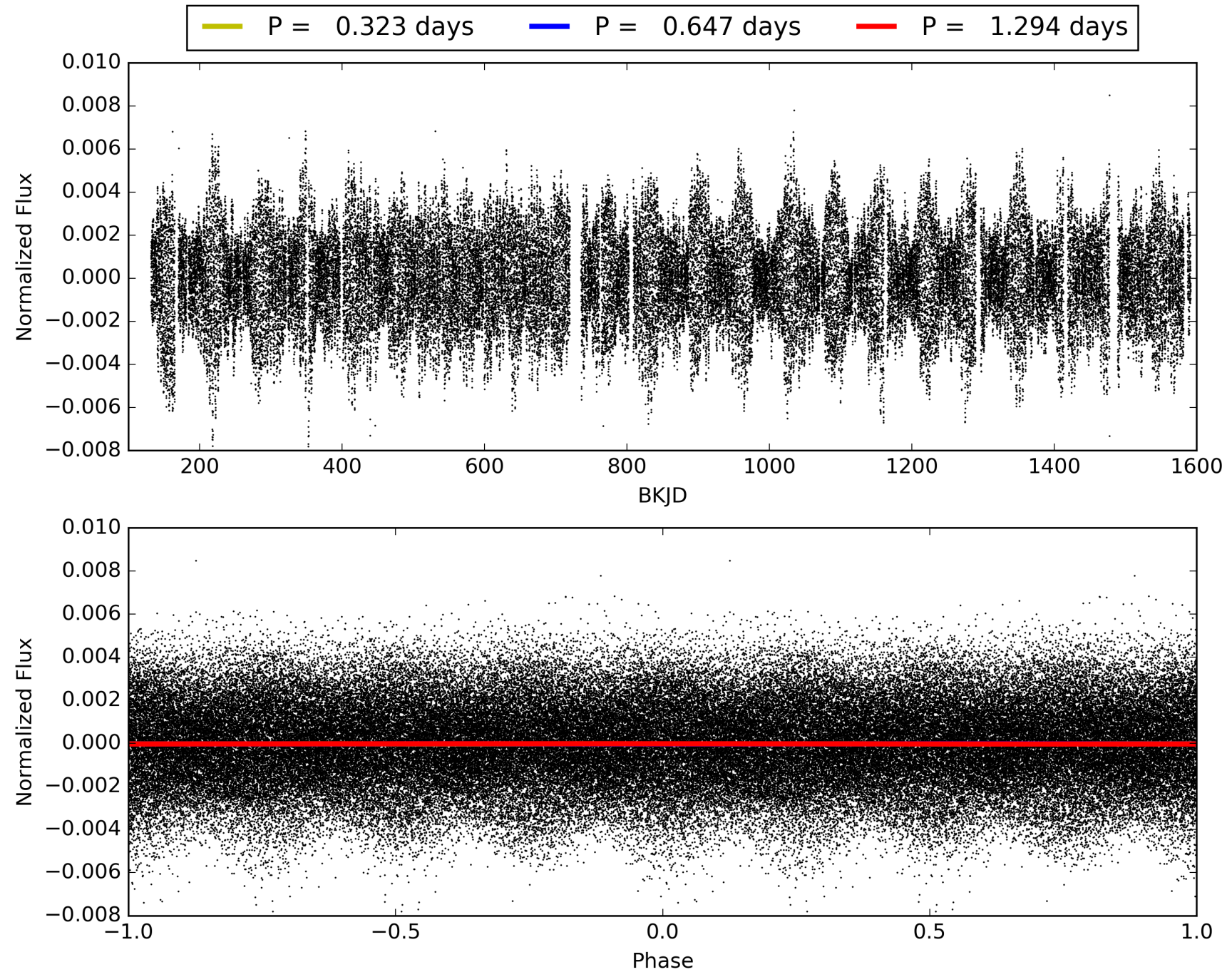
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:35:25 Z

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

TCE 011081053-01, PDC Light Curves

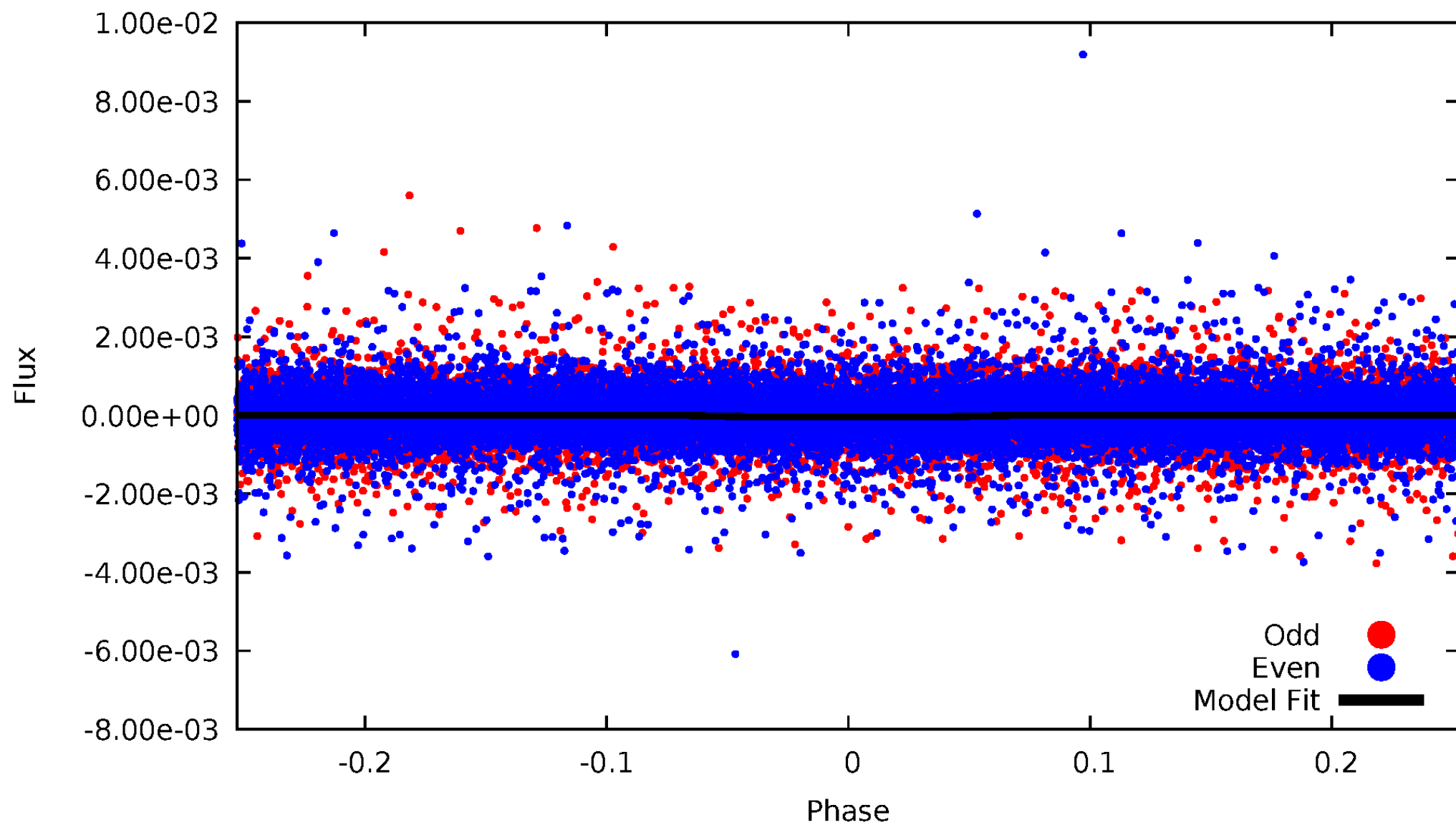


TCE 011081053-01



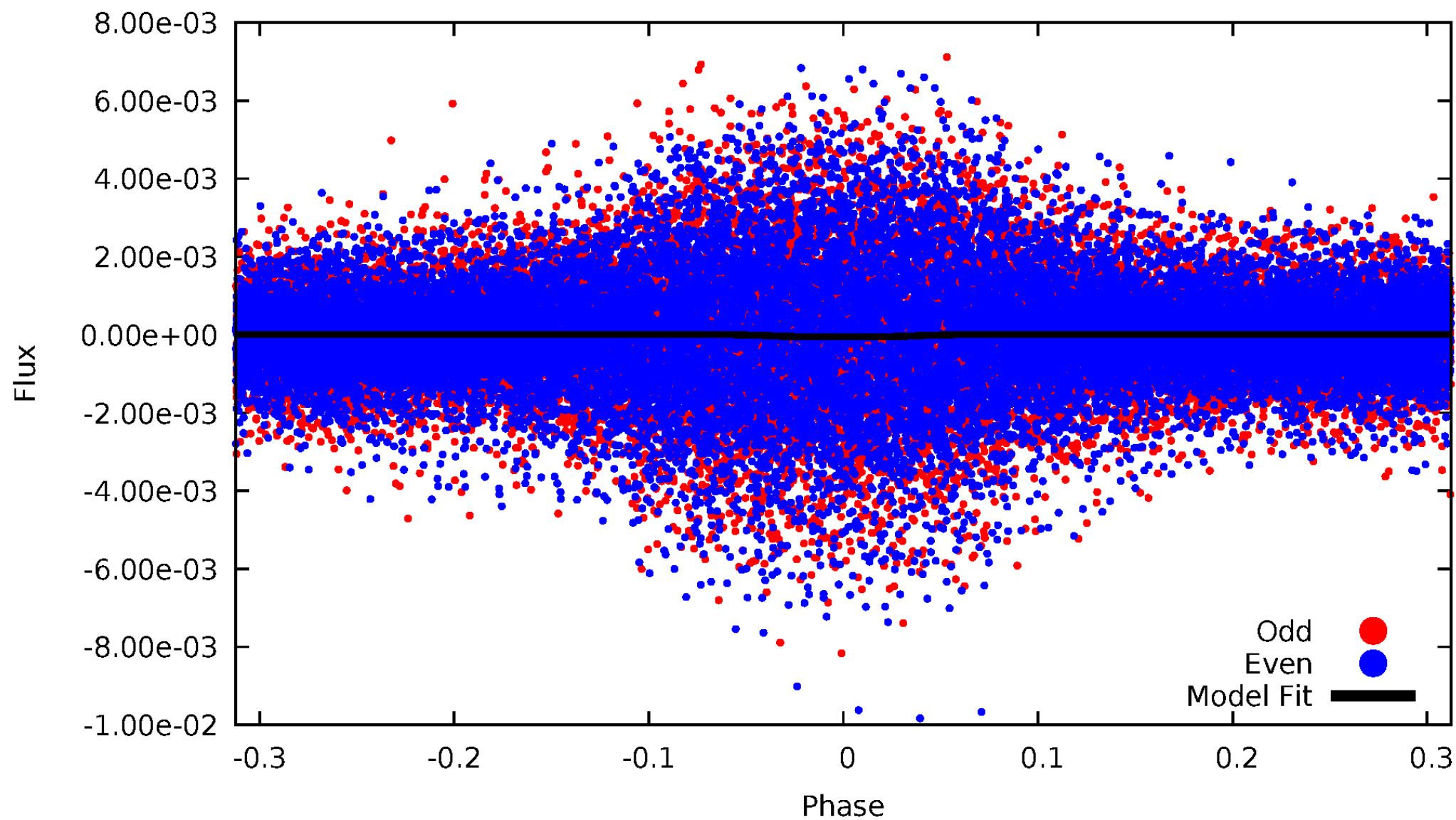
DV Odd/Even

TCE 011081053-01



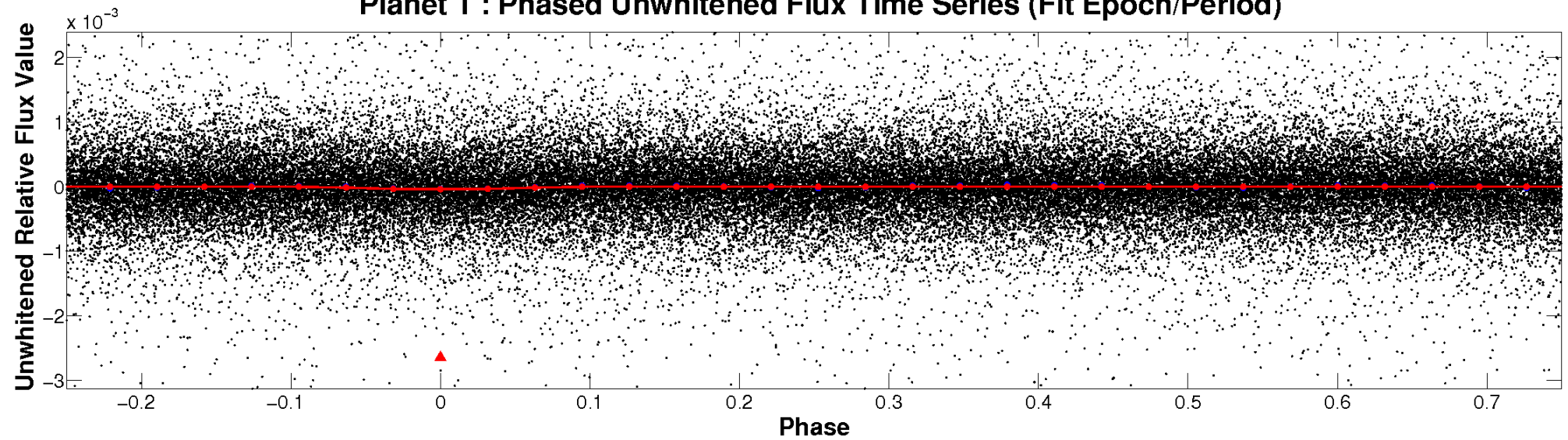
ALT Odd/Even

TCE 011081053-01

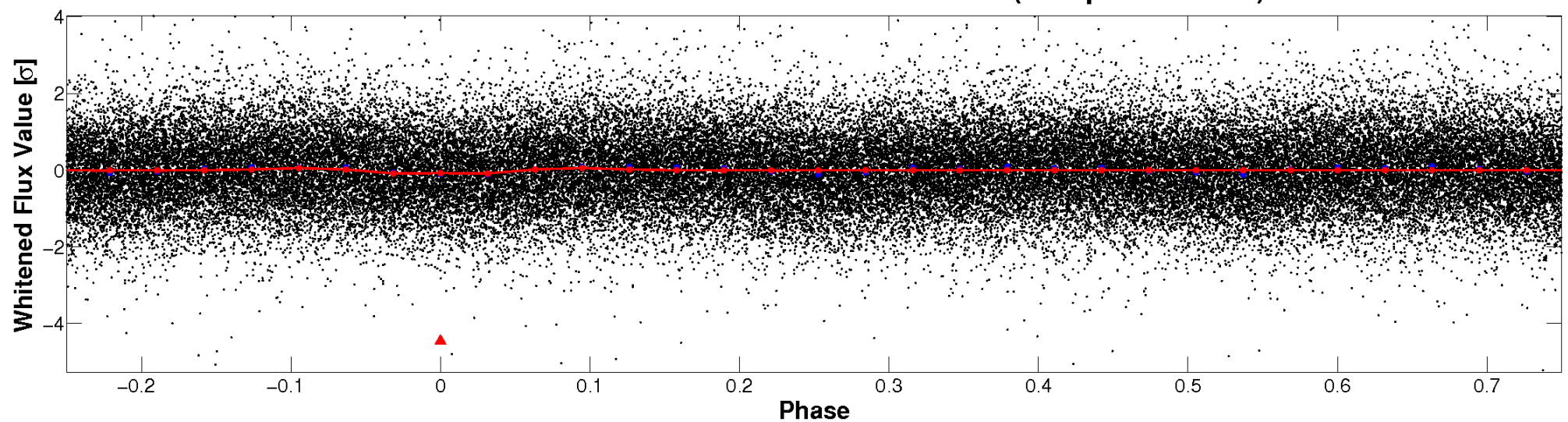


Non-Whitened Vs. Whitened Light Curve

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

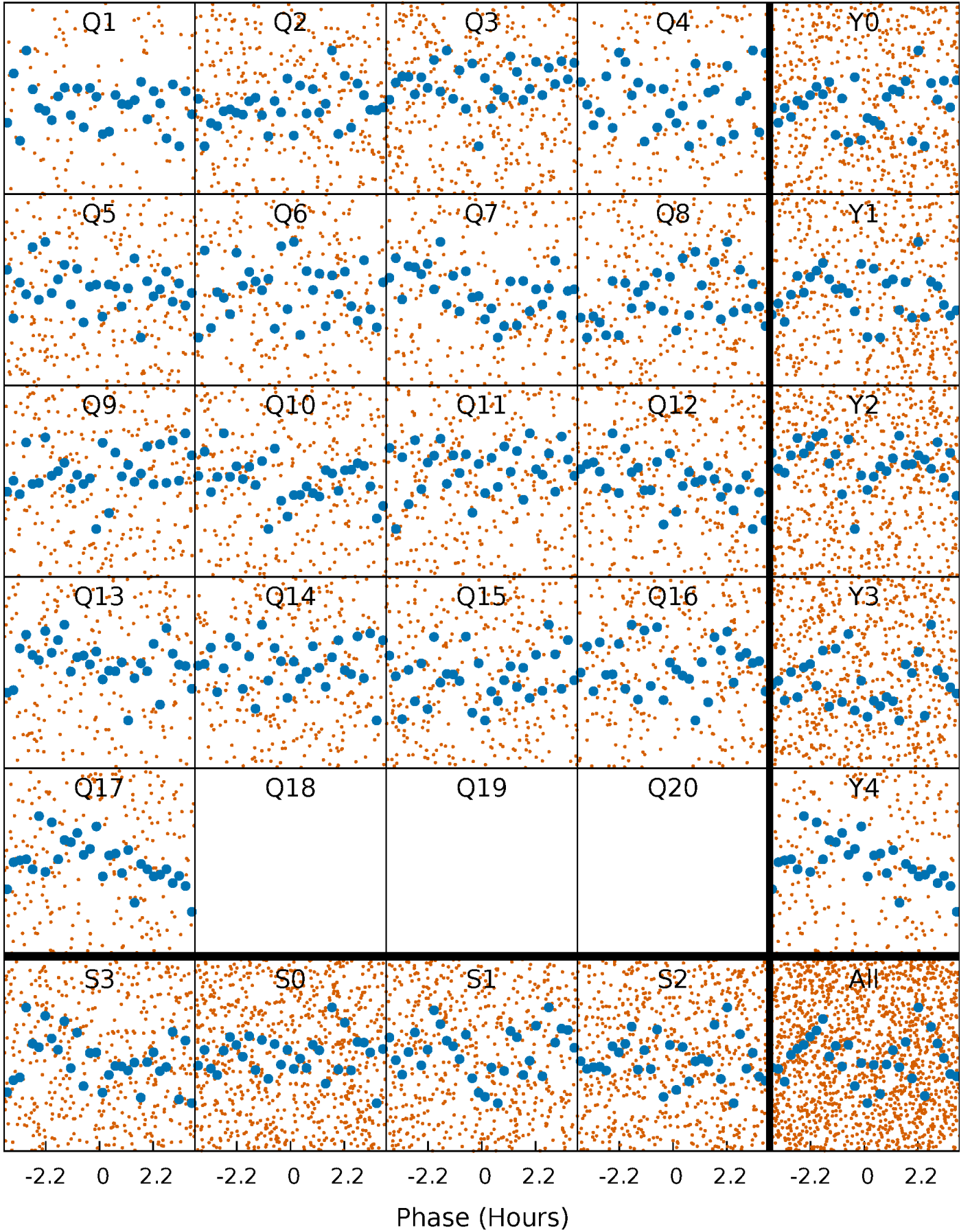


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



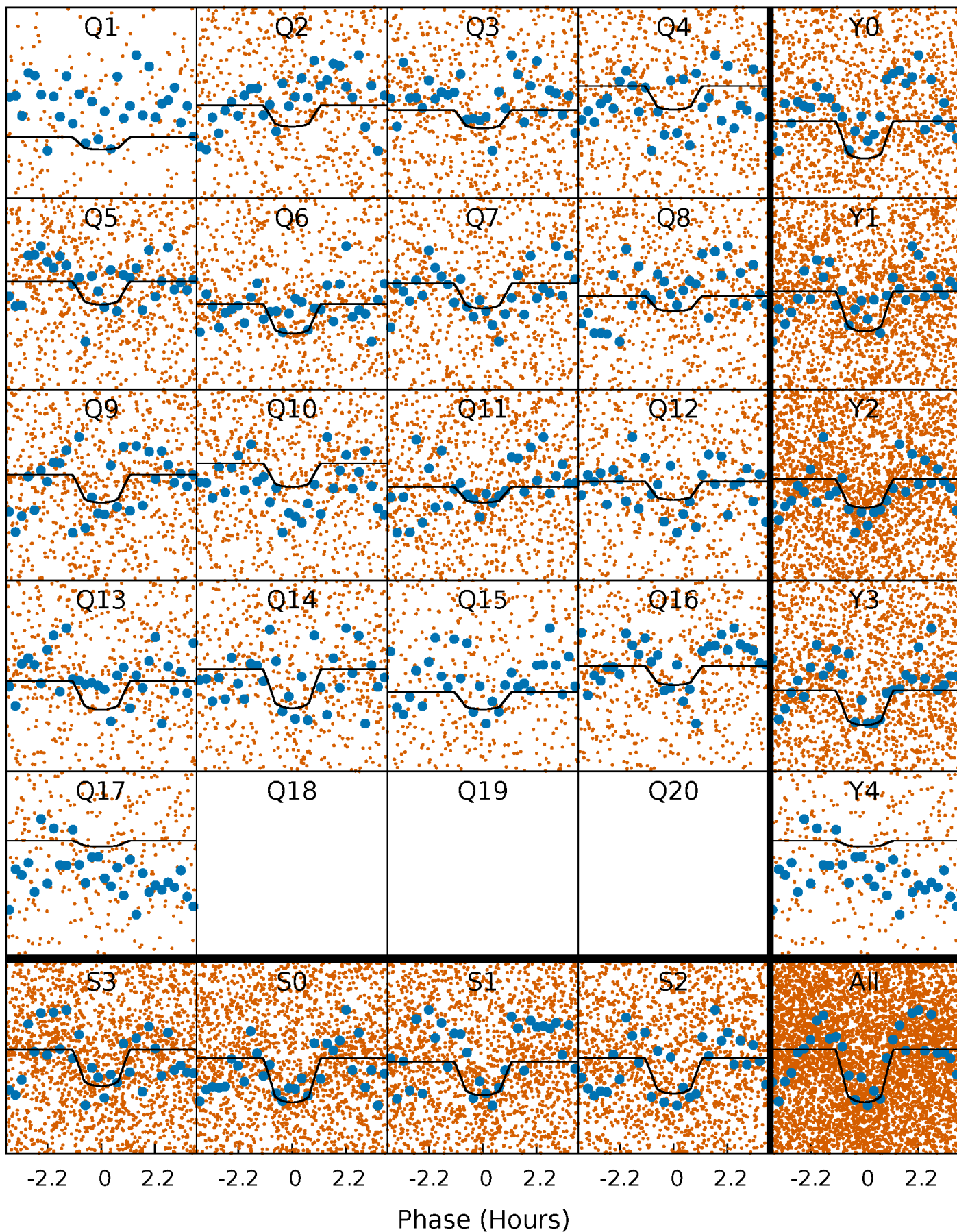
PDC Quarter-Phased Transit Curves

TCE 011081053-01 P= 0.646921 Days $T_0=131.609988$ (BKJD)



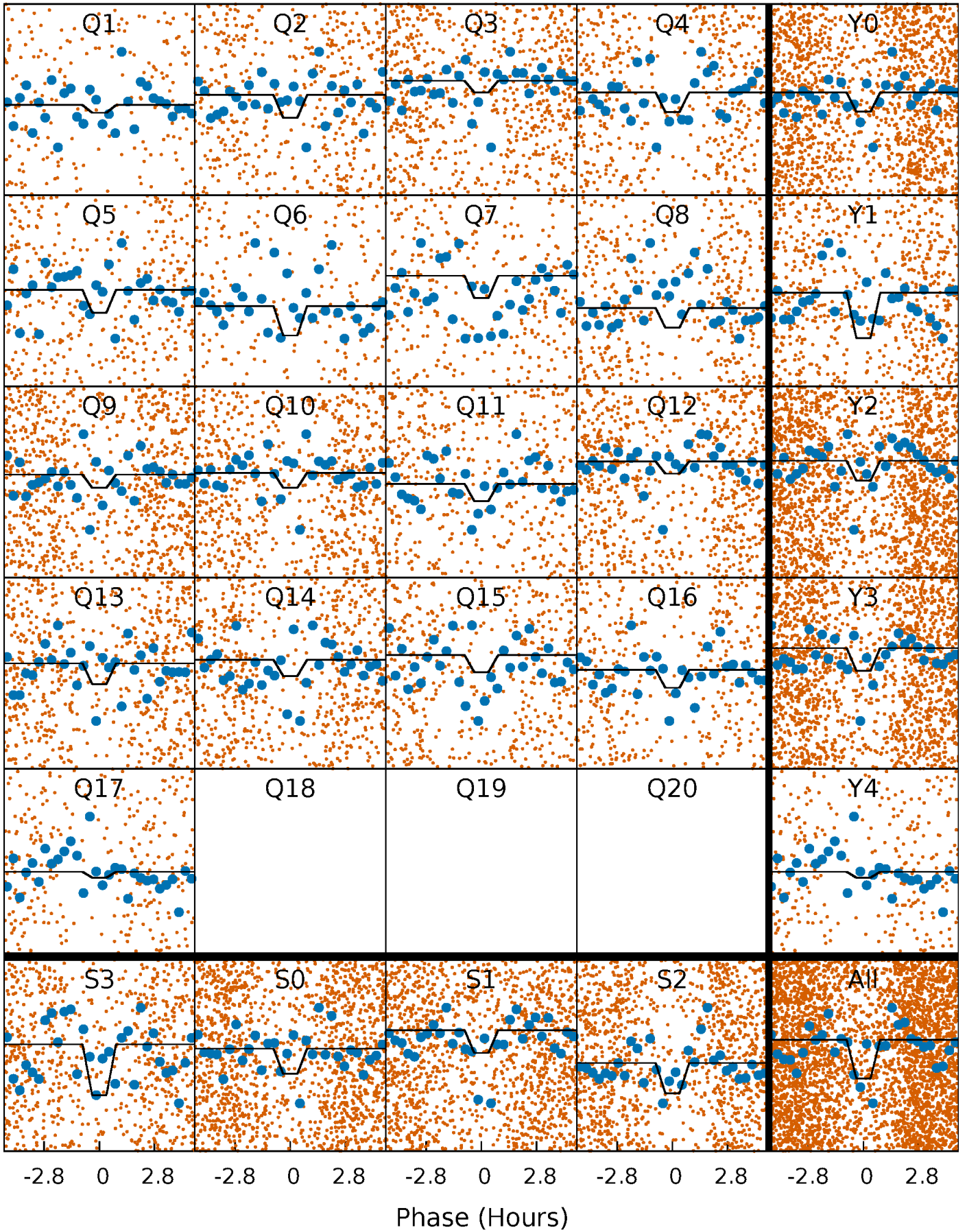
DV Quarter-Phased Transit Curves

TCE 011081053-01 P= 0.646921 Days $T_0=131.609988$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

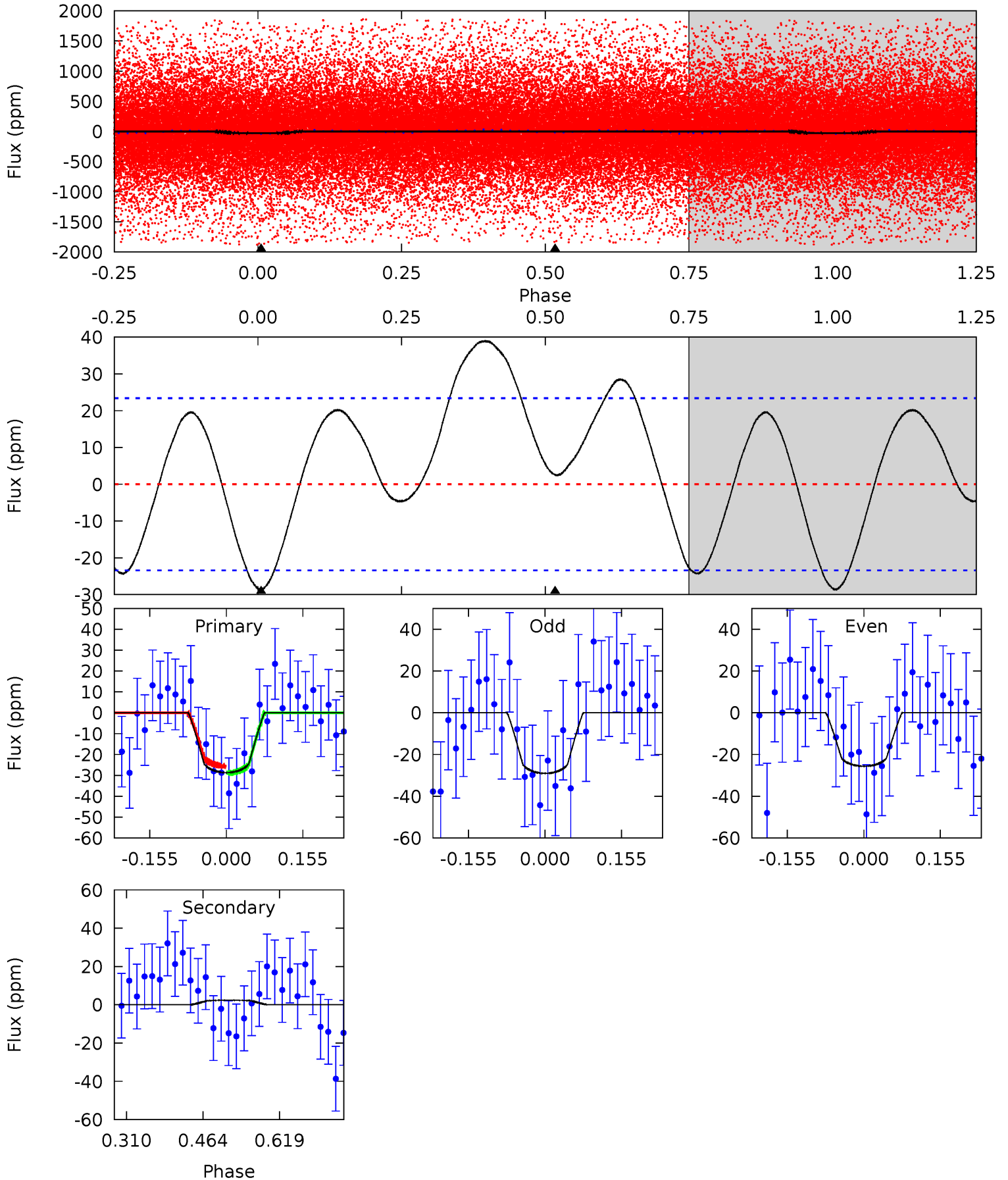
TCE 011081053-01 P= 0.646931 Days $T_0=131.601512$ (BKJD)



DV Model-Shift Uniqueness Test

011081053-01, P = 0.646921 Days, E = 130.963067 Days

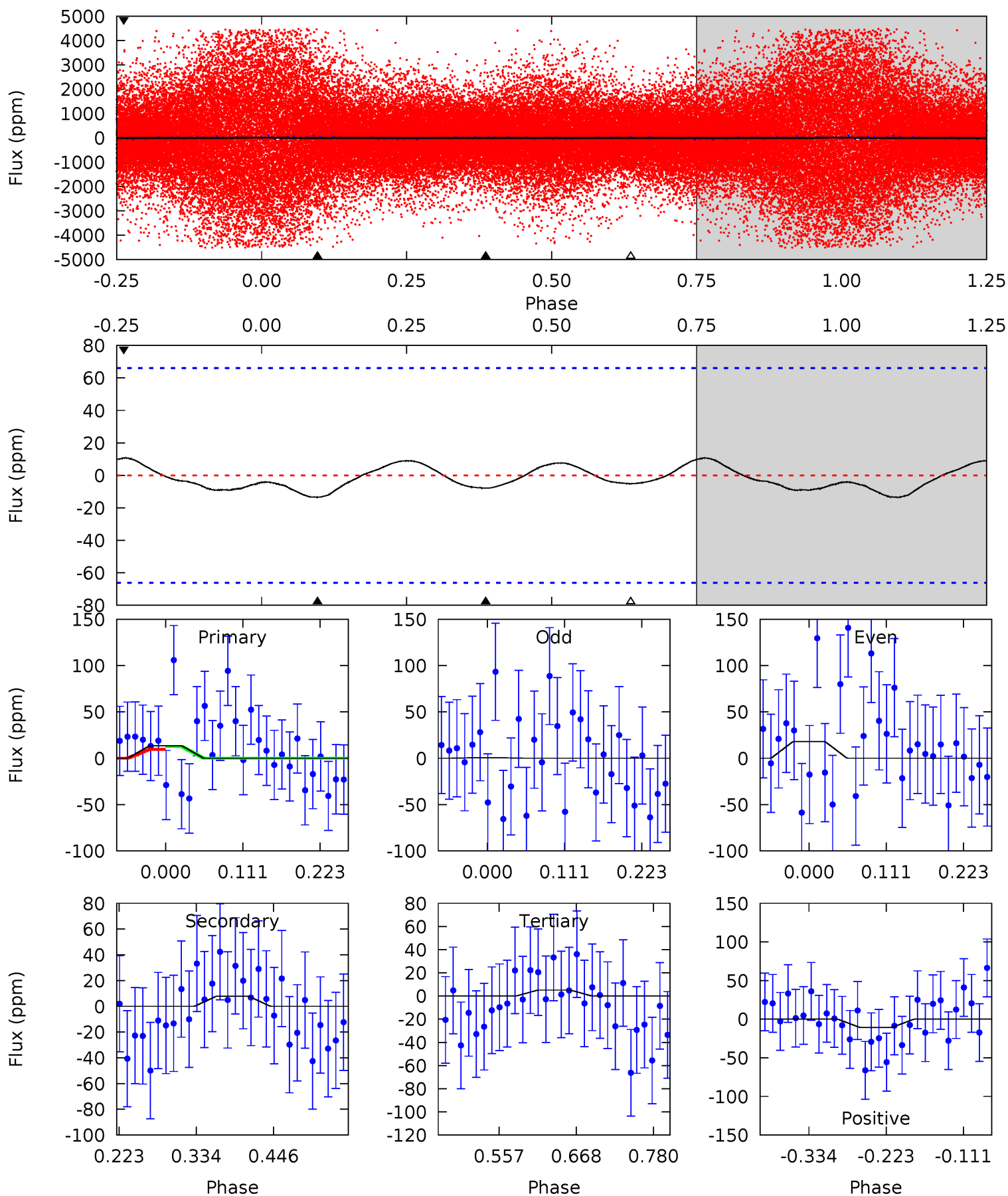
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 5.48 | -0.46 | 0 | 0 | 4.47 | 1.42 | 2.77 | 5.48 | 5.48 | -0.46 | -0.46 | 0.33 | 1.23 | 0.58 | 0.33 |



Alt Model-Shift Uniqueness Test

011081053-01, P = 0.646931 Days, E = 130.954581 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 0.93 | 0.54 | 0.35 | 0.73 | 4.54 | 1.59 | 0.43 | 0.57 | 0.20 | 0.19 | -0.19 | 0.60 | 1.84 | 0.44 | 0.12 |



Stellar Parameters For KIC 011081053

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7596^{+211}_{-316} | $3.737^{+0.441}_{-0.074}$ | $-0.180^{+0.200}_{-0.350}$ | $3.143^{+0.368}_{-1.562}$ | $1.968^{+0.061}_{-0.551}$ | $0.089^{+0.385}_{-0.021}$ |
| | +3%/-4% | +12%/-2% | +111%/-194% | +12%/-50% | +3%/-28% | +431%/-24% |
| Source | KIC0 | KIC0 | KIC0 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 011081053-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|----------------------------|
| DV | 2 ± 5 | $1.95^{+0.77}_{-0.67}$ | 5889^{+442}_{-746} | -5067^{+967}_{-784} | $-0.079^{+0.234}_{-0.358}$ |
| Alt. | -8 ± 15 | $2.08^{+0.80}_{-0.72}$ | 5908^{+427}_{-784} | 2894^{+3121}_{-8442} | $0.319^{+0.893}_{-0.562}$ |

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

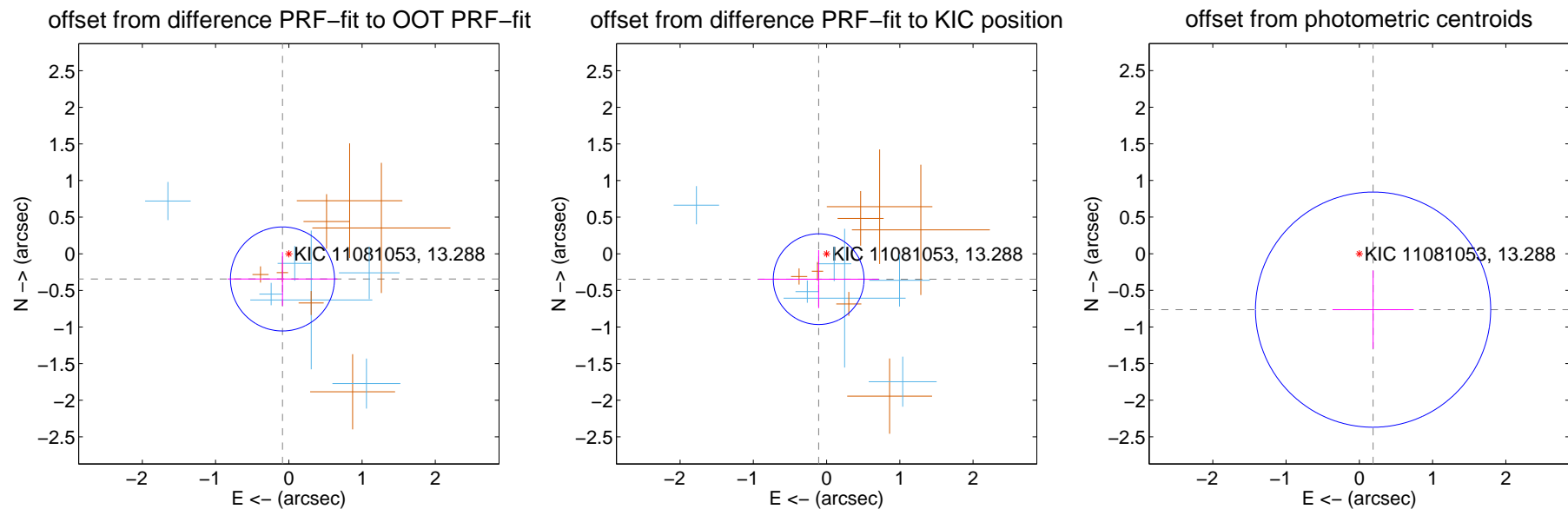
DV Centroid Data

Supplemental centroid analysis for 011081053-01. Kepler magnitude: 13.29. Transit SNR 8.25

There are 6 quarters with good PRF difference image offsets

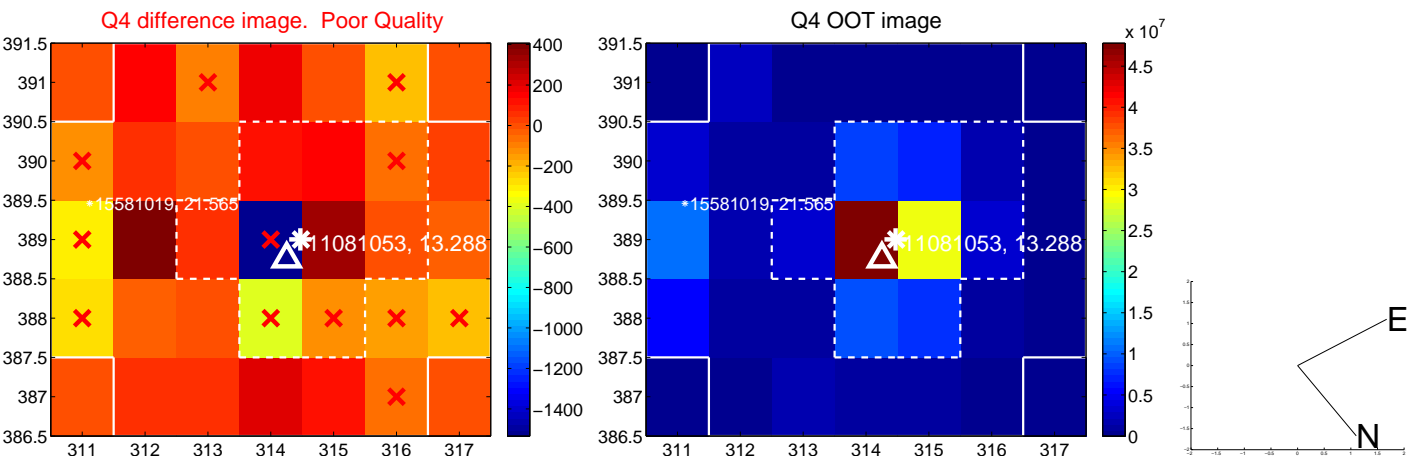
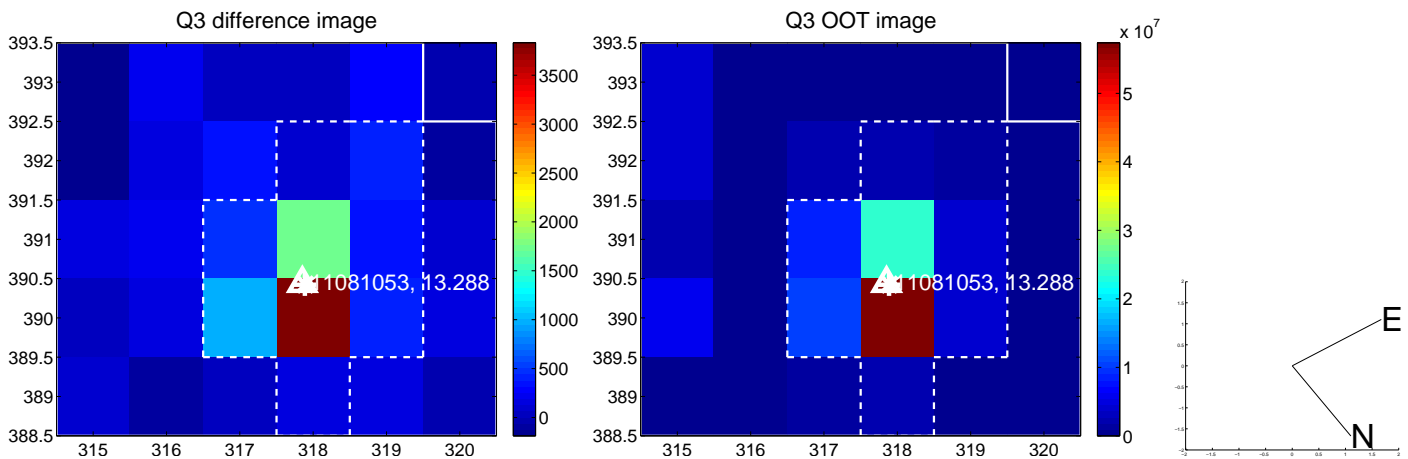
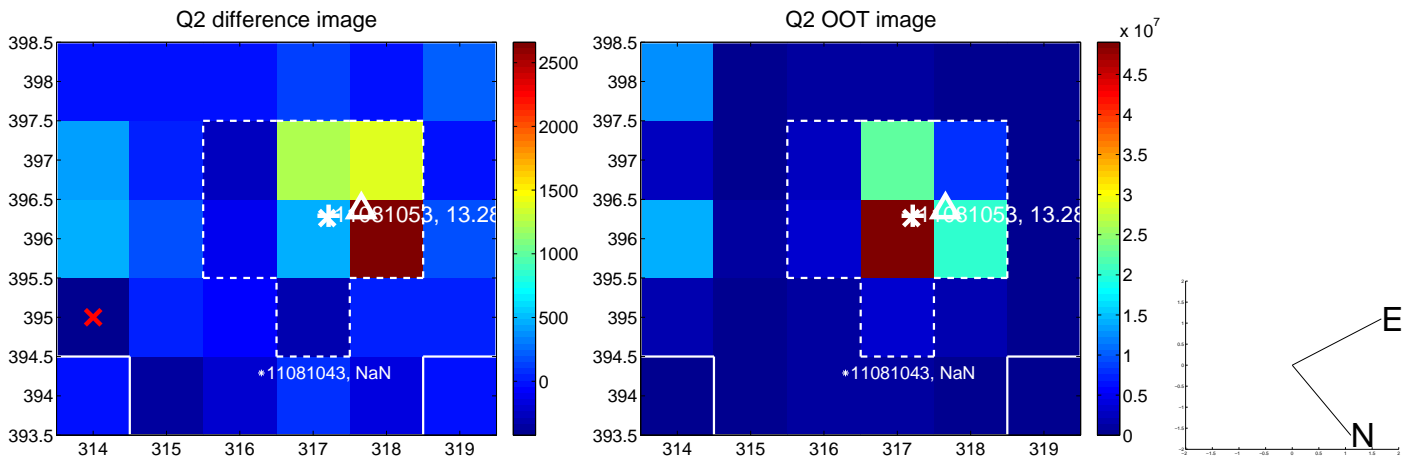
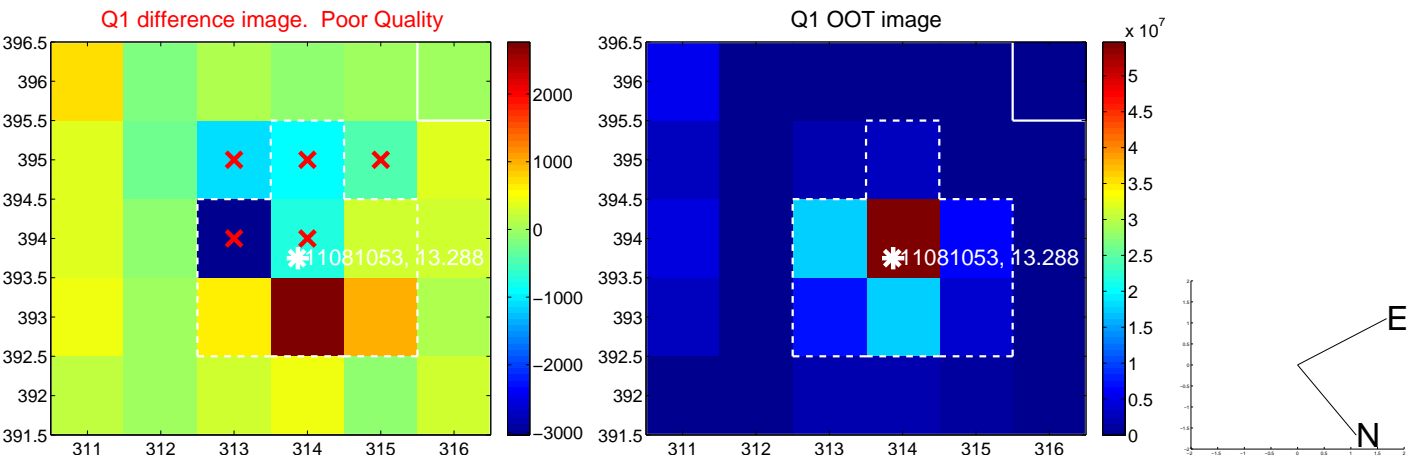
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 0.355 ± 0.237 | 1.50 | 0.087 ± 0.750 | -0.344 ± 0.367 |
| PRF-fit source offset from KIC position | 0.363 ± 0.207 | 1.76 | 0.108 ± 0.822 | -0.347 ± 0.396 |
| photometric centroid source offset | 0.79 ± 0.54 | 1.47 | -0.19 ± 0.55 | -0.76 ± 0.53 |

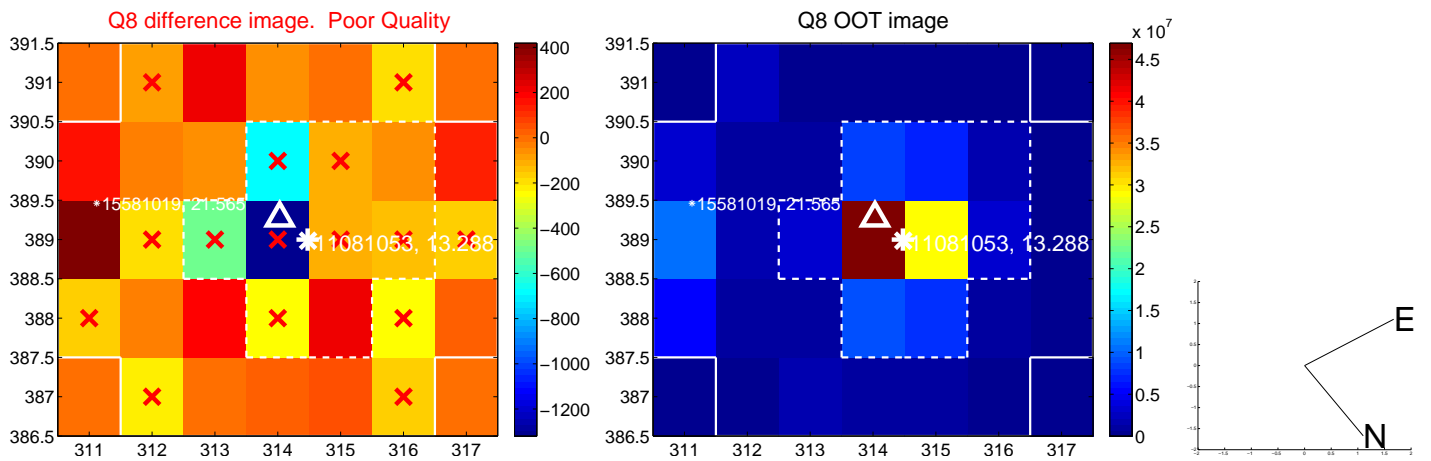
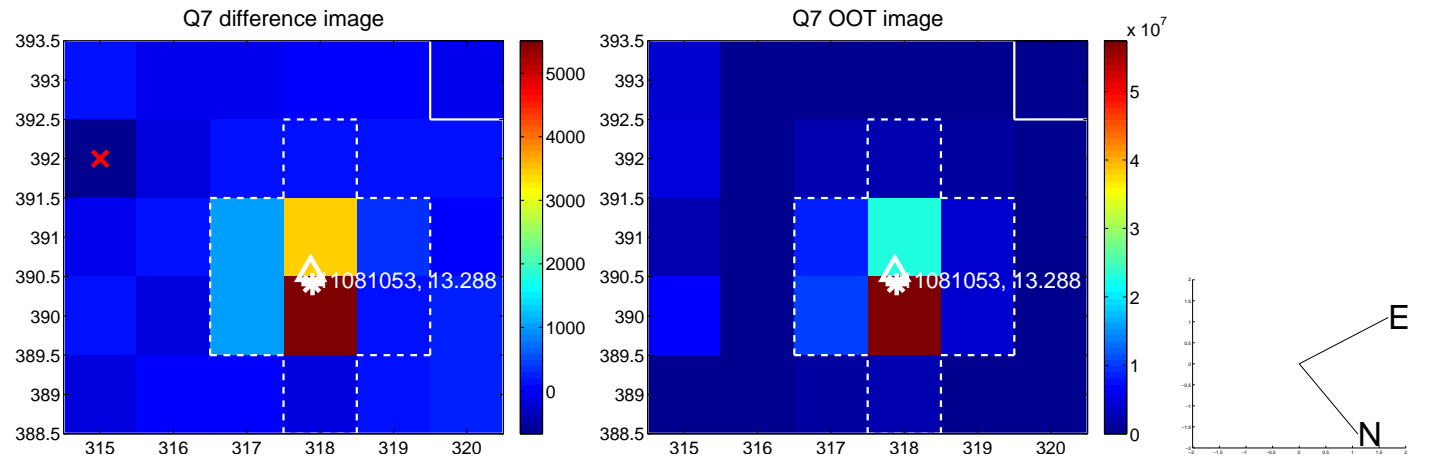
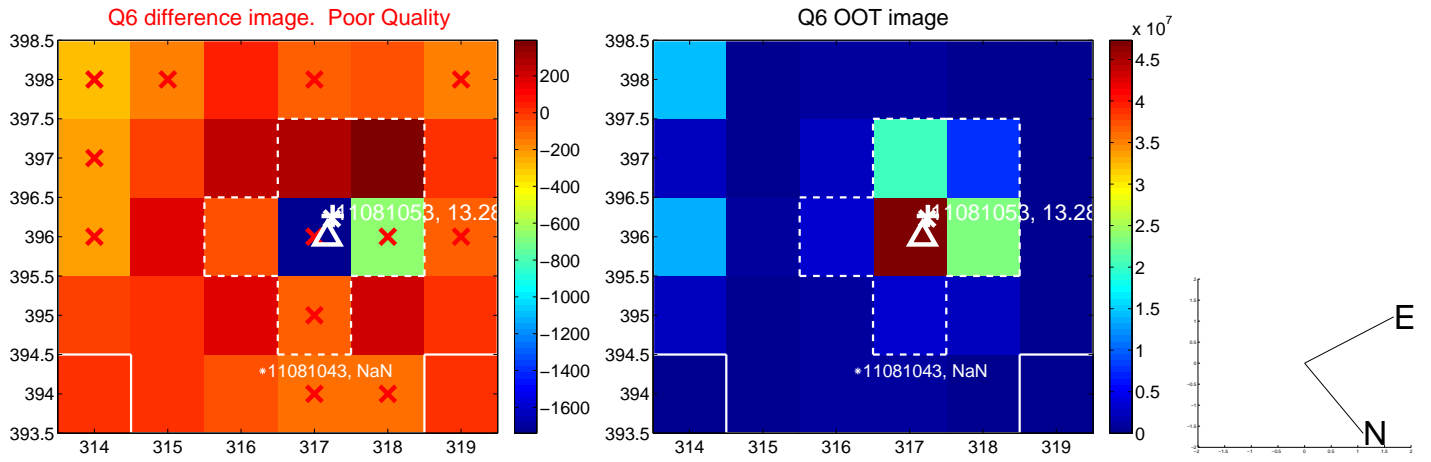
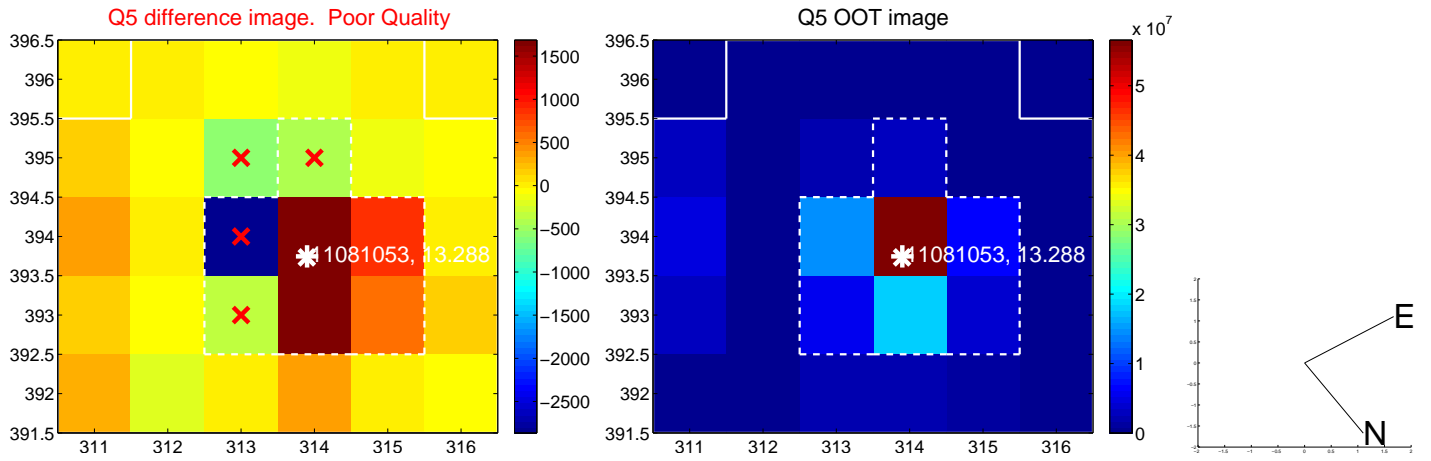


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

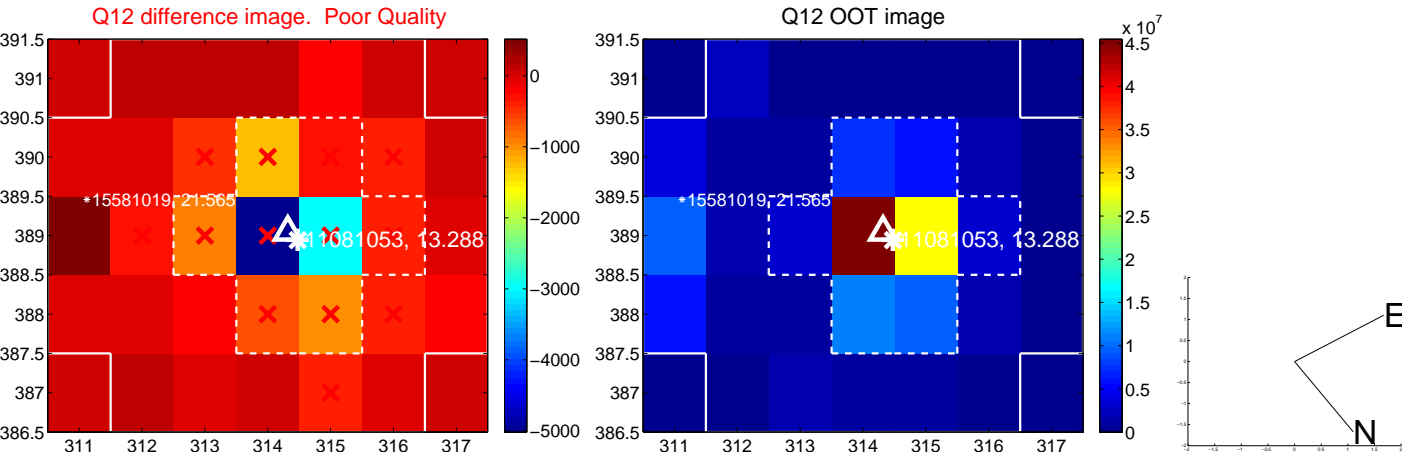
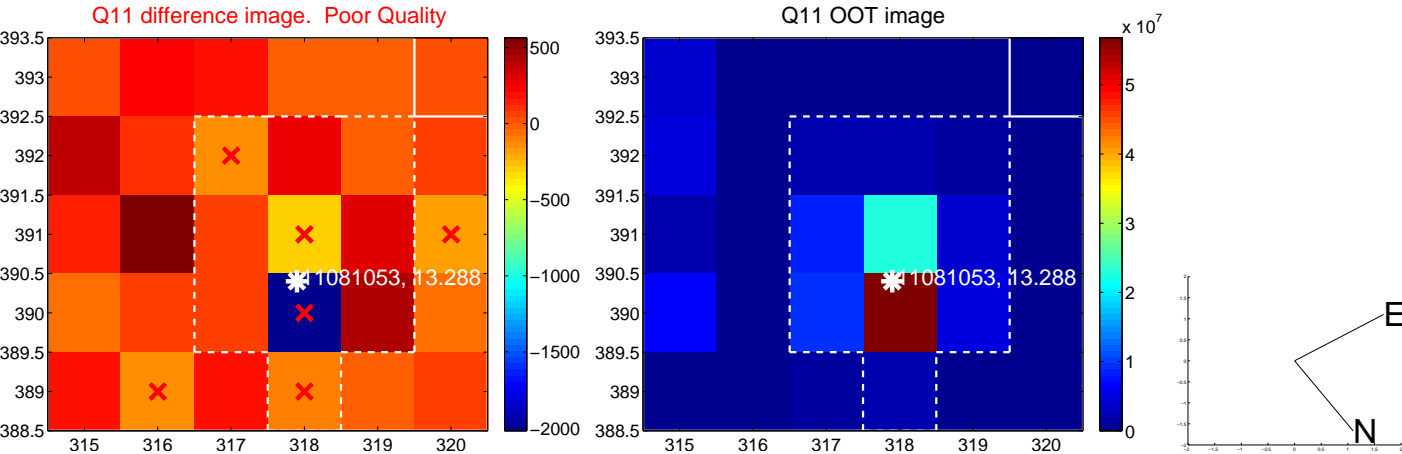
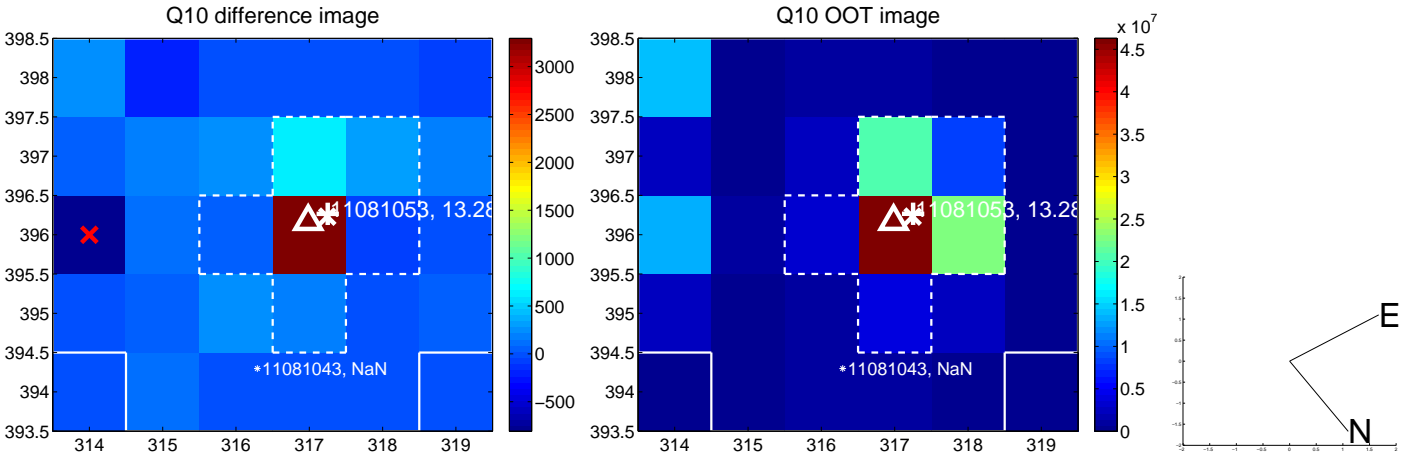
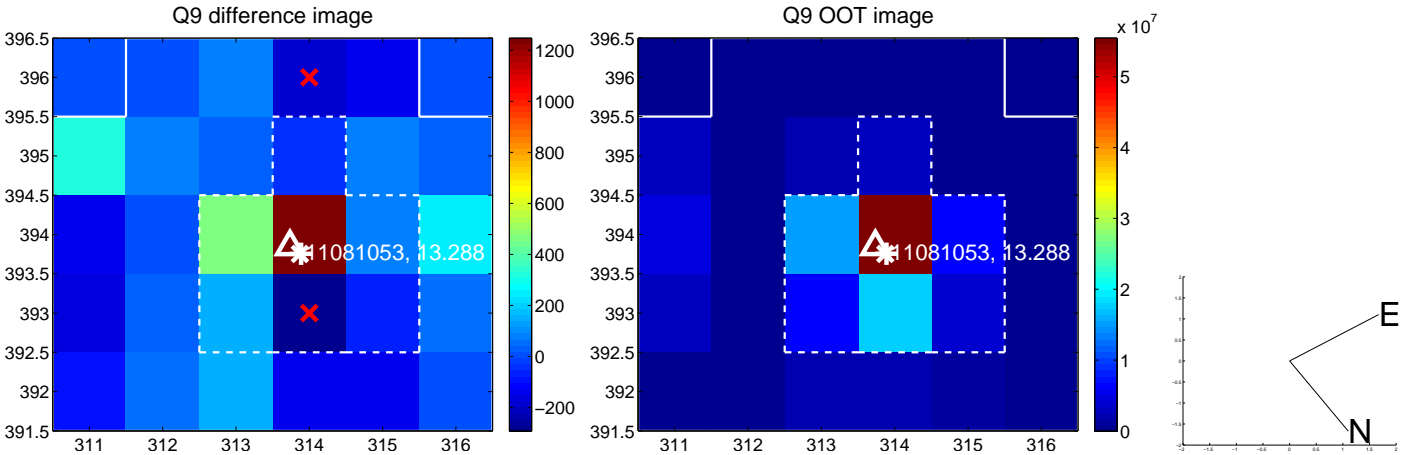
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



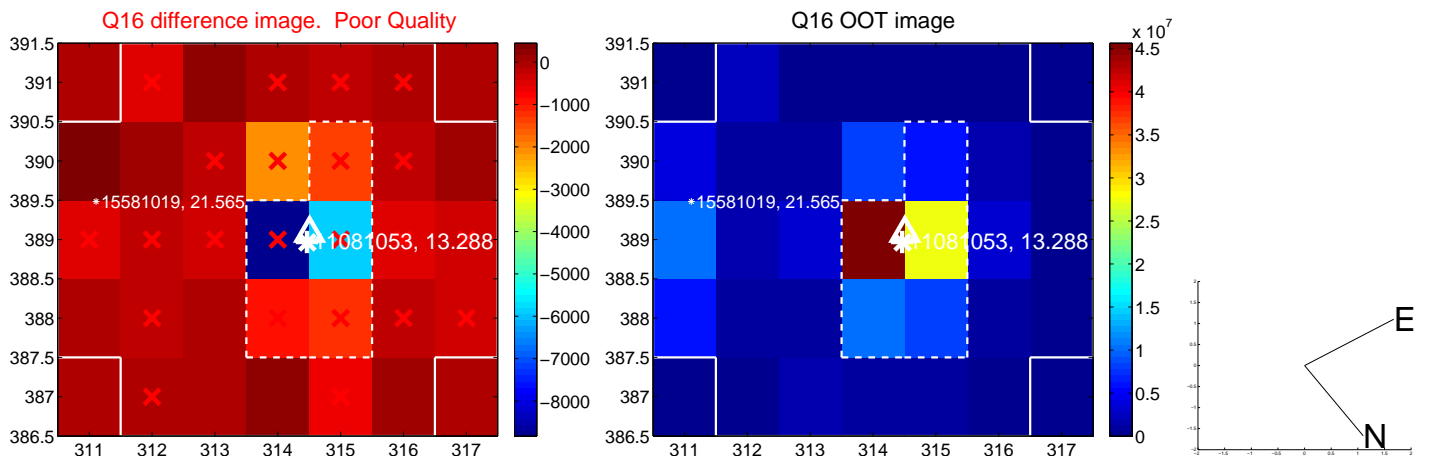
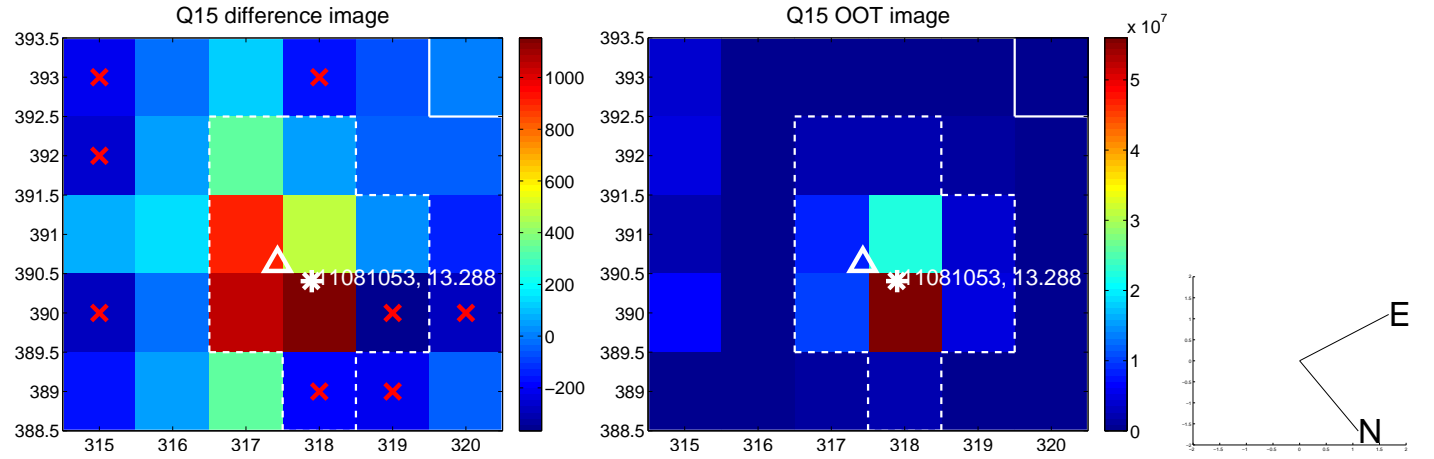
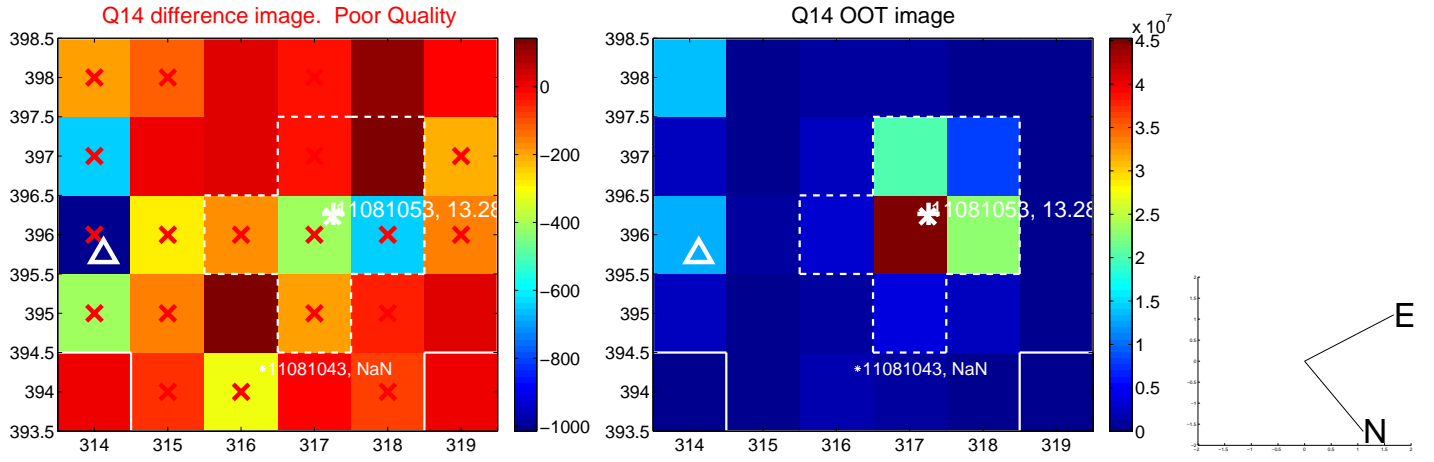
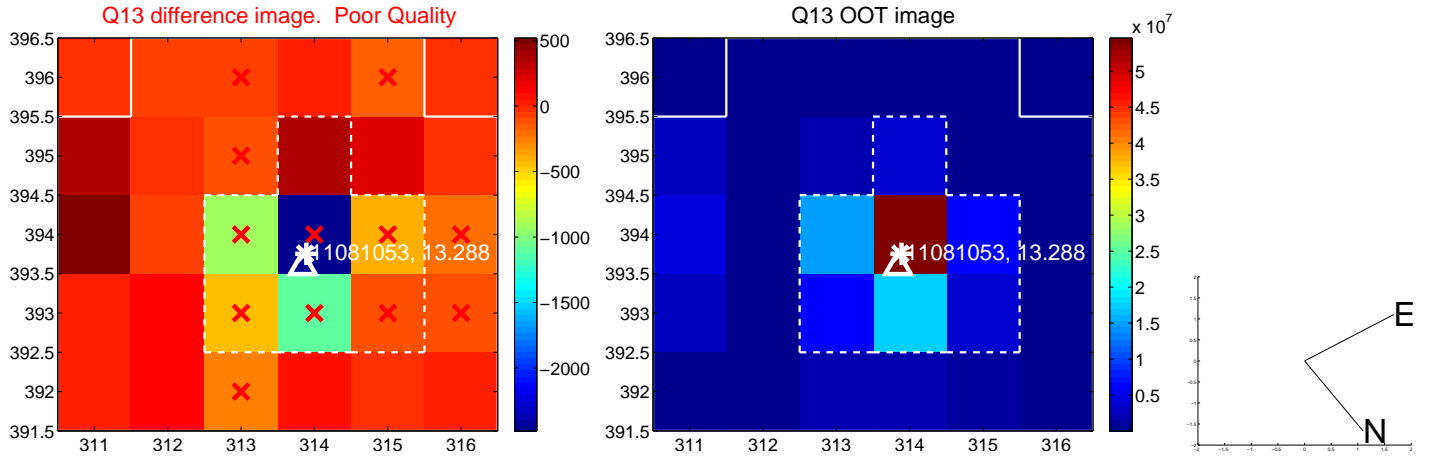
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



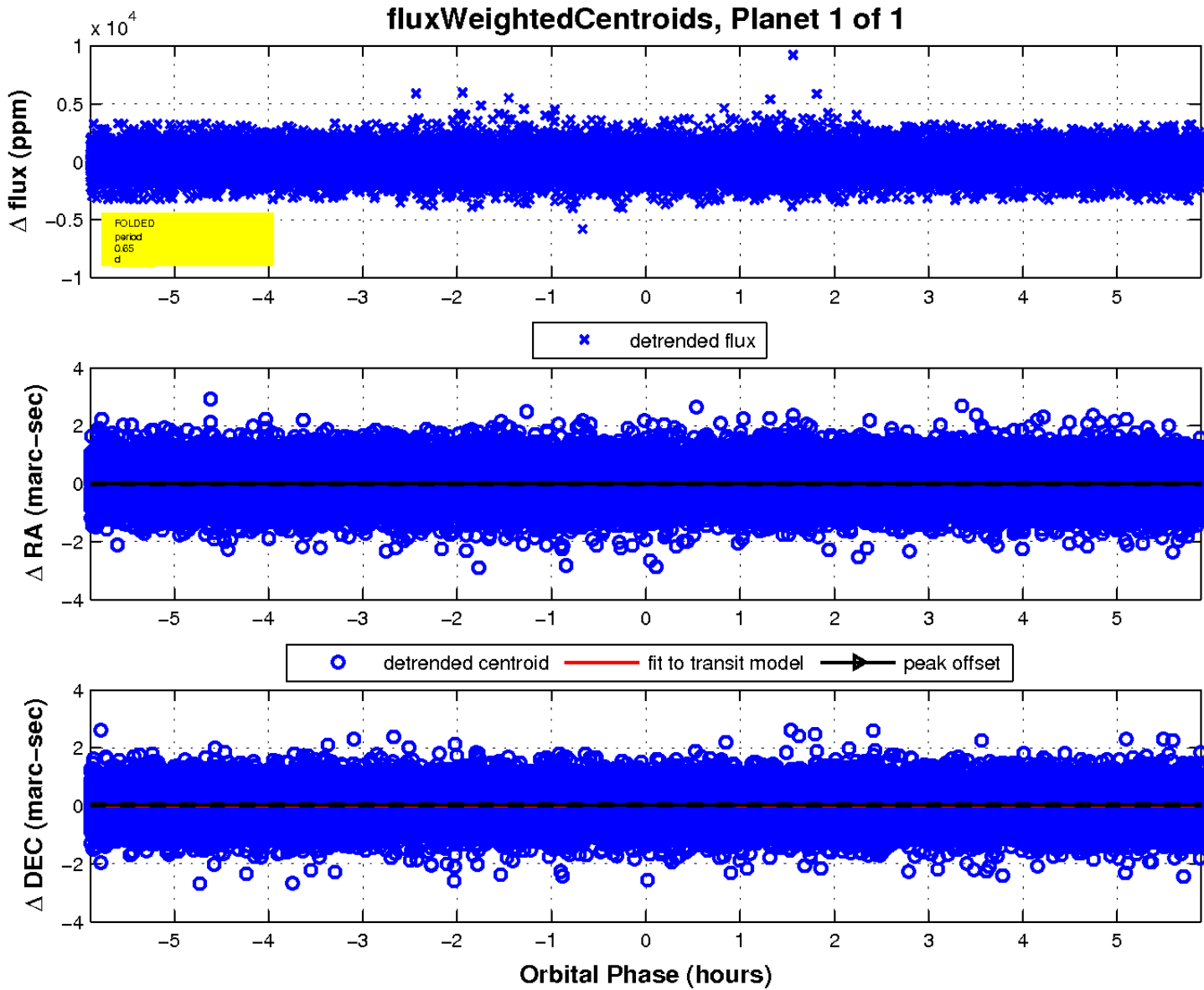
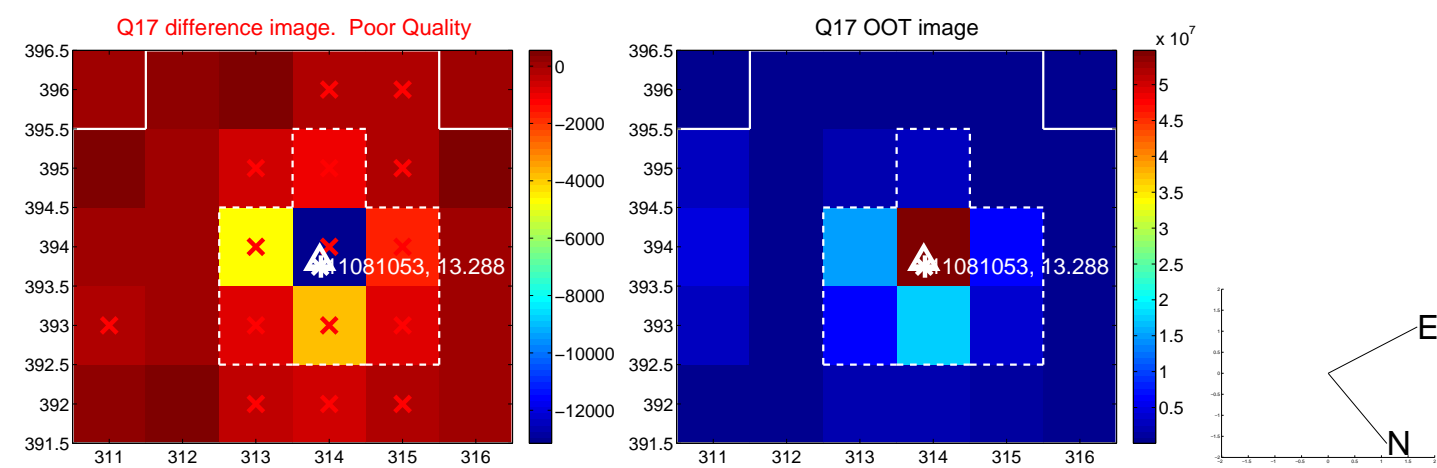
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

