

KIC 006152521

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006152521-01 | OBS | 6670.01 | 0.949010 | 131.895185 | 5.2 | 8.763 | 7.2 | 1.7 | 3.07 | 6661 | 0.72 | 34080.04 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--------------------------------------|
| 006152521-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS |

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

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

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

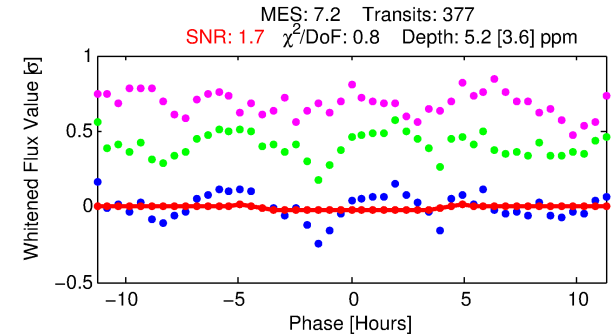
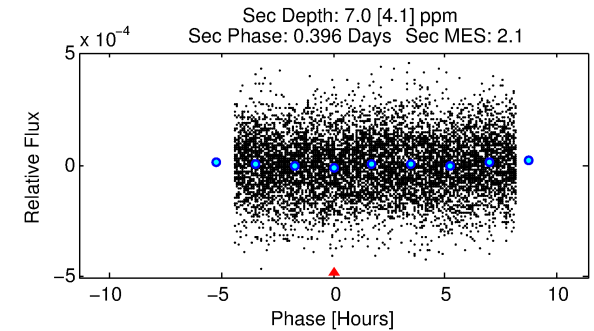
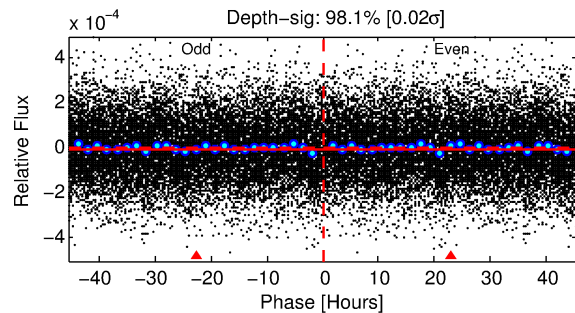
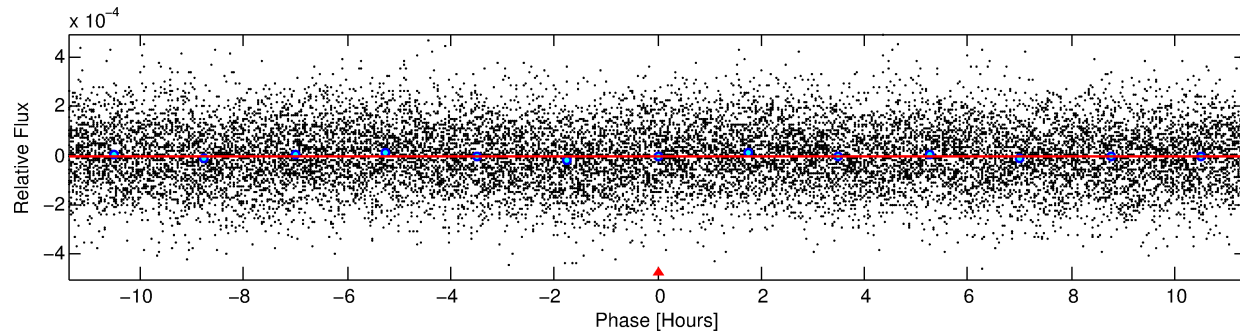
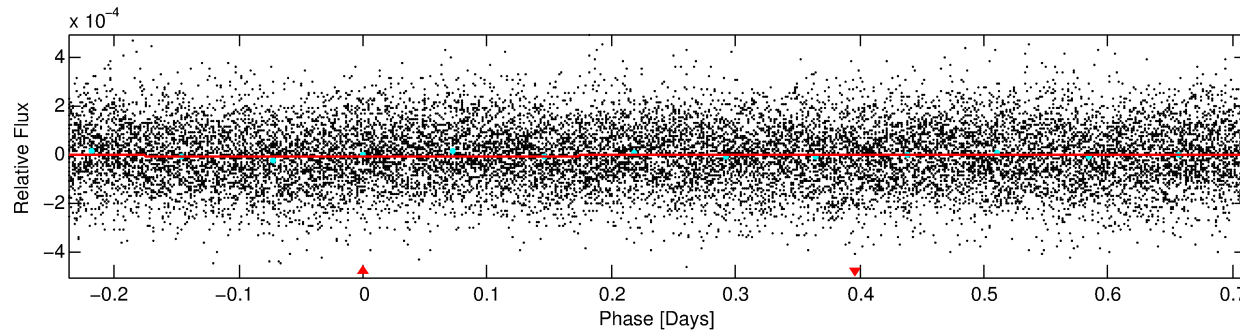
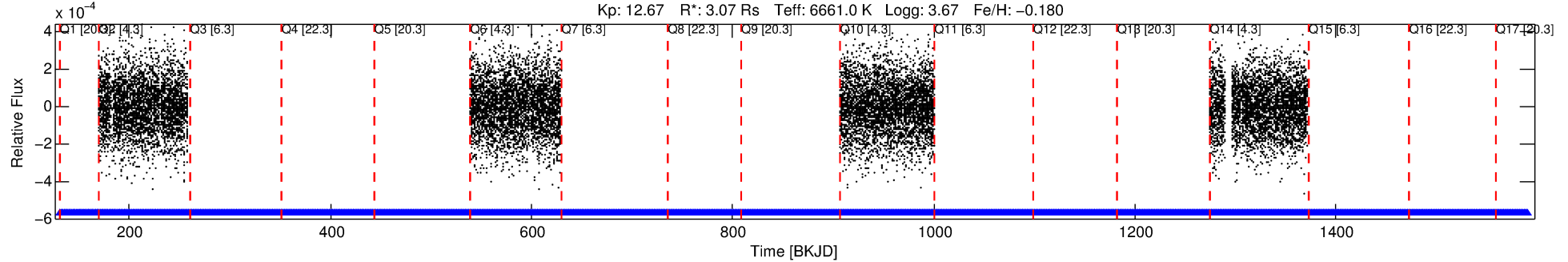
Ephemeris Match Information For 006152521-01

No Significant Match Found

DV One-Page Summary

KIC: 6152521 Candidate: 1 of 1 Period: 0.949 d
KOI: K06670 Corr: No Ephemeris Match

Kp: 12.67 R*: 3.07 Rs Teff: 6661.0 K Logg: 3.67 Fe/H: -0.180



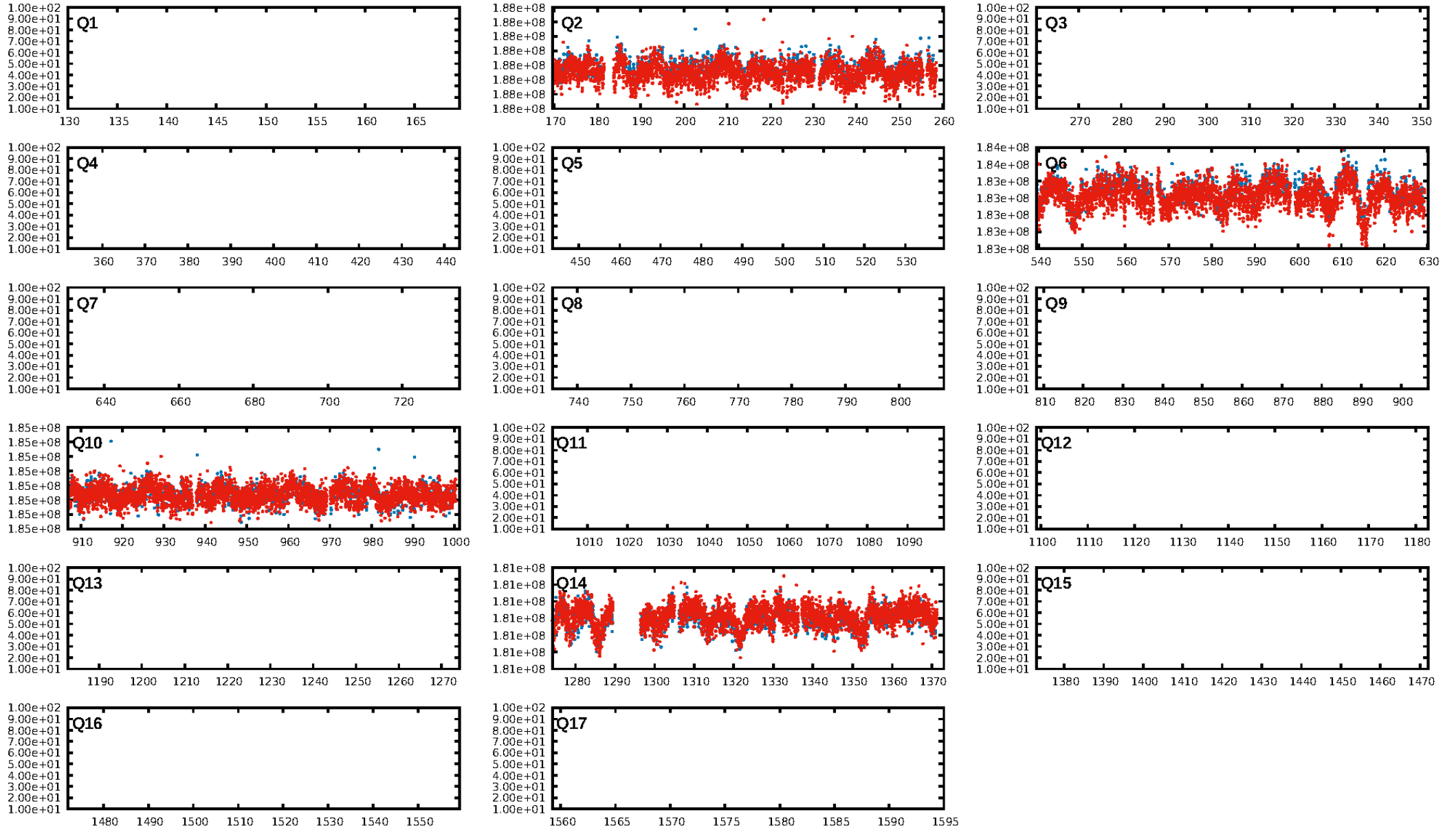
DV Fit Results:

Period = 0.94901 [0.00009] d
Epoch = 131.8952 [0.0314] BKJD
Rp/R* = 0.0021 [0.0076]
a/R* = 1.06 [2.30]
b = 0.40 [41.71]
Seff = 34080.04 [18415.33]
Teq = 3465 [468] K
Rp = 0.72 [2.57] Re
a = 0.0221 [0.0073] AU
Ag = 3.63 [26.01] [0.10σ]
Teffp = 7393 [13218] K [0.30σ]

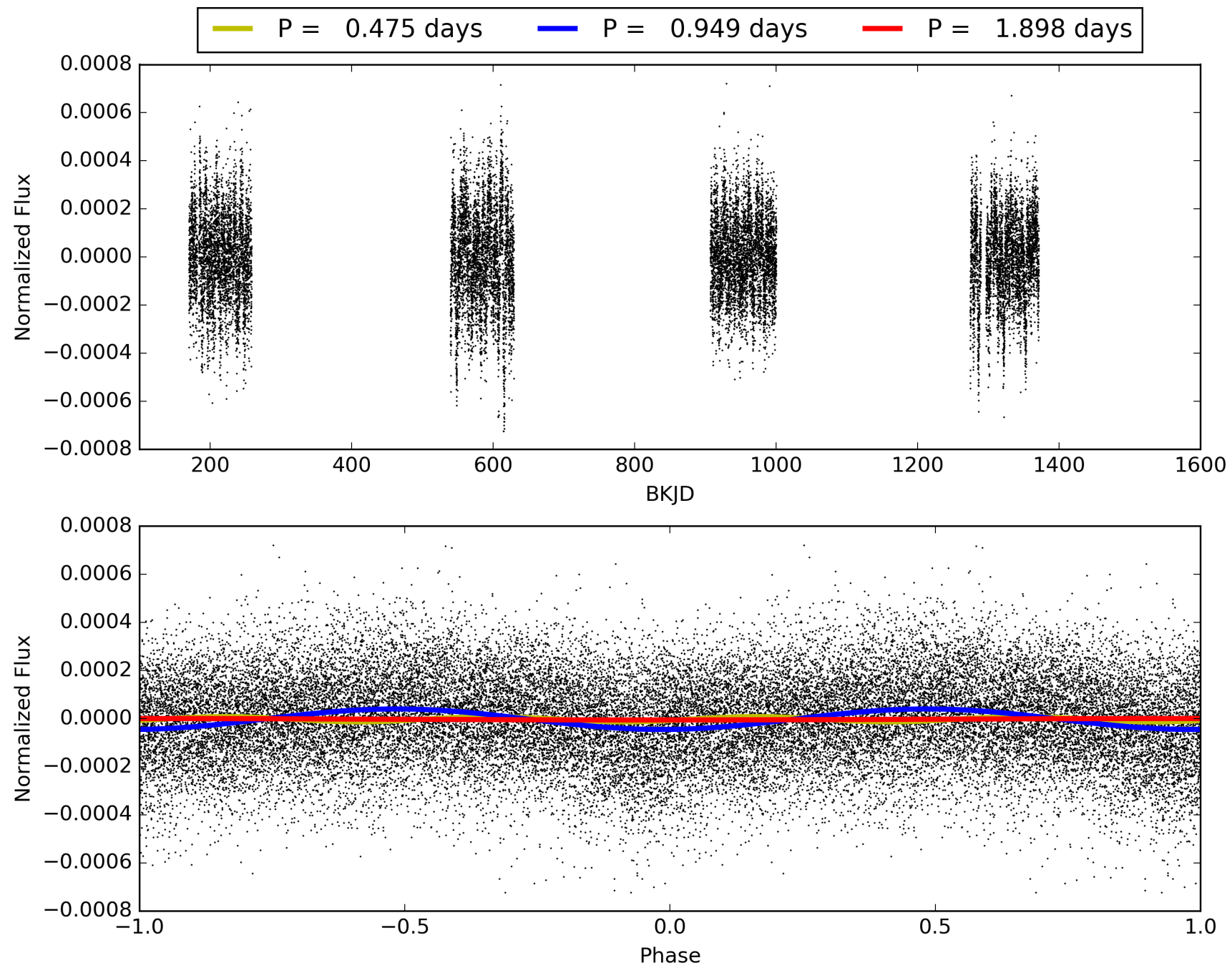
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [377/377]
GhostDiagnostic-chr: -0.2503
Centroid-sig: 39.5%
Centroid-so: 4.215 arcsec [0.79σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006152521-01, PDC Light Curves

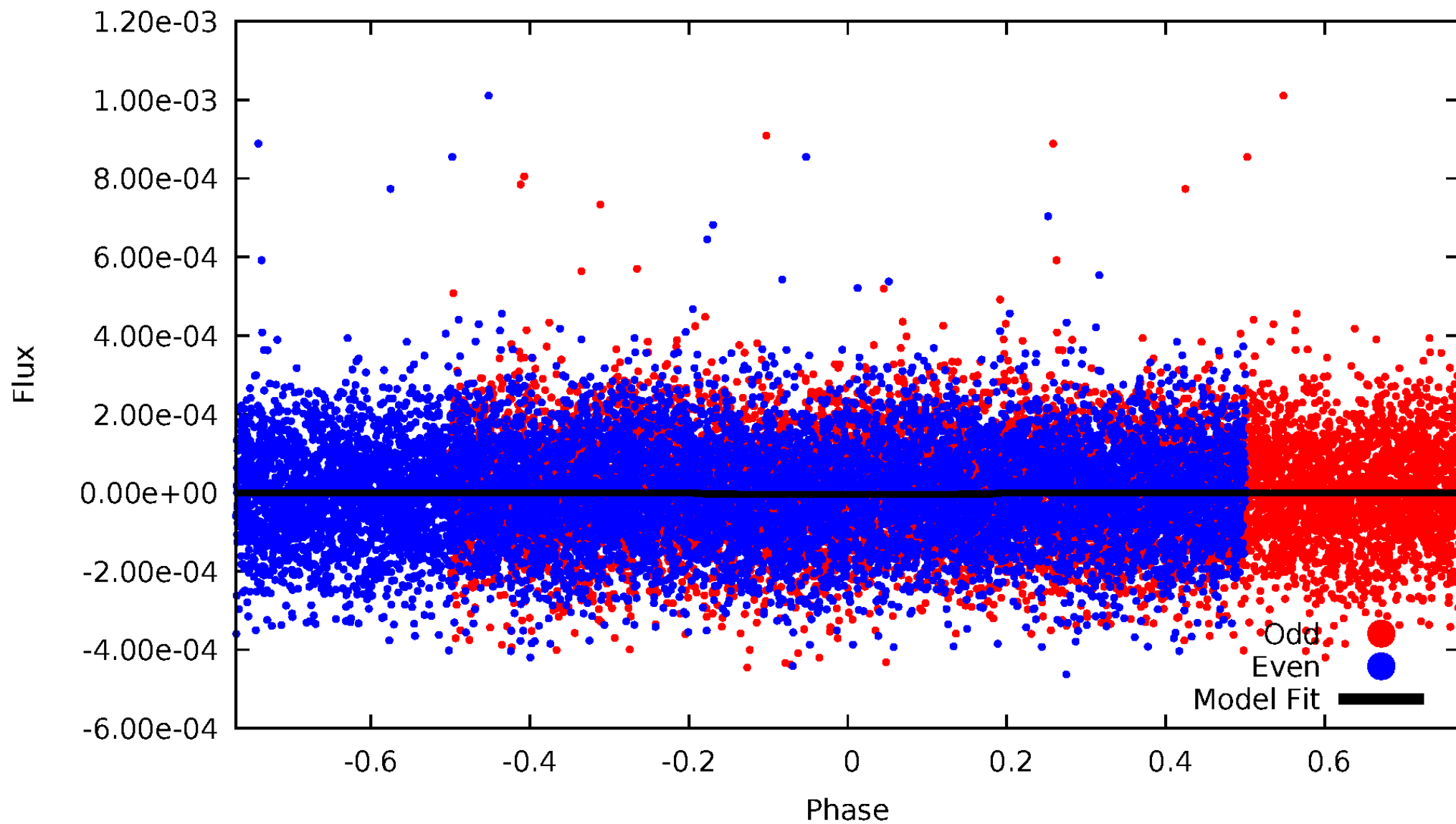


TCE 006152521-01



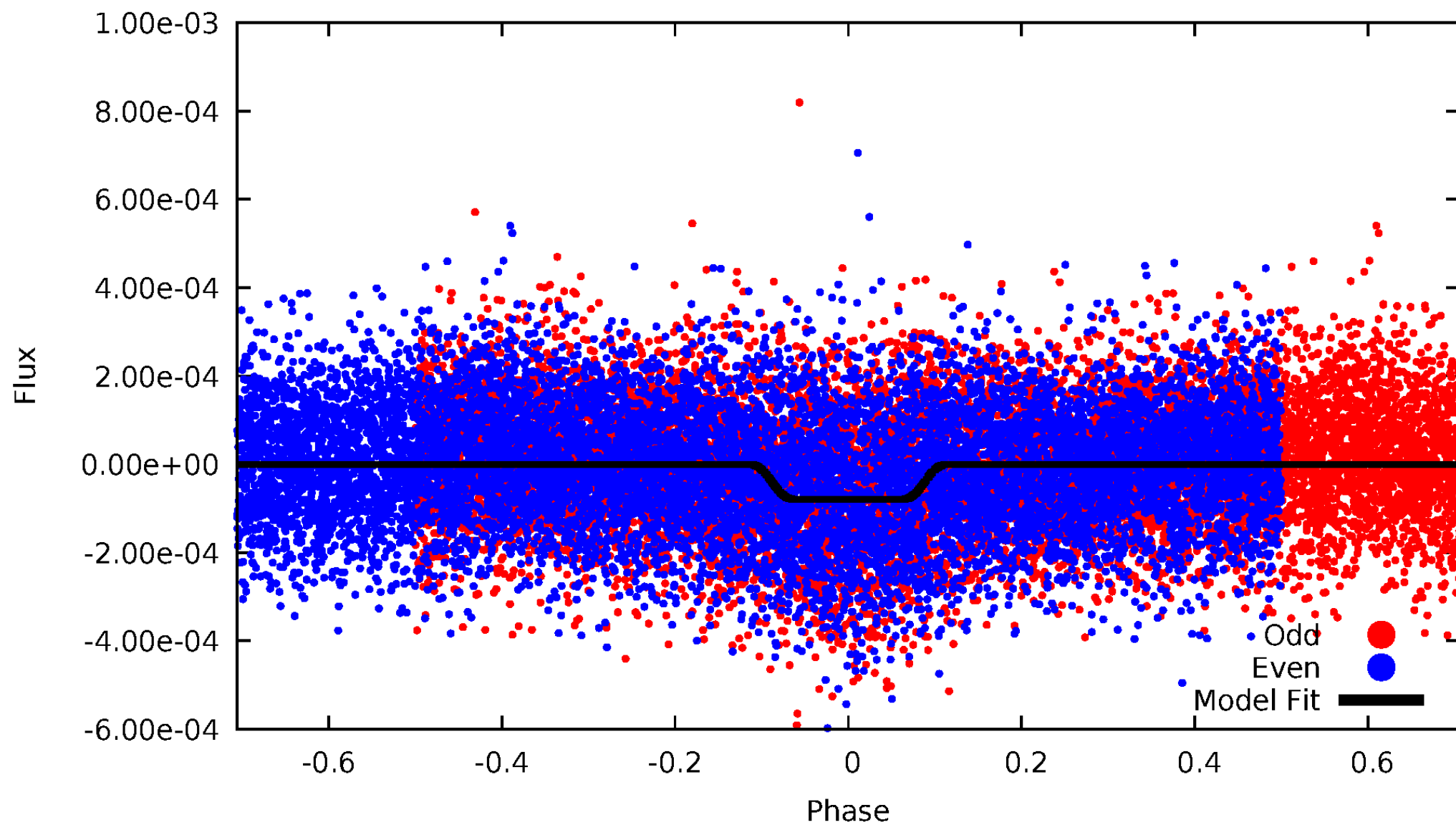
DV Odd/Even

TCE 006152521-01

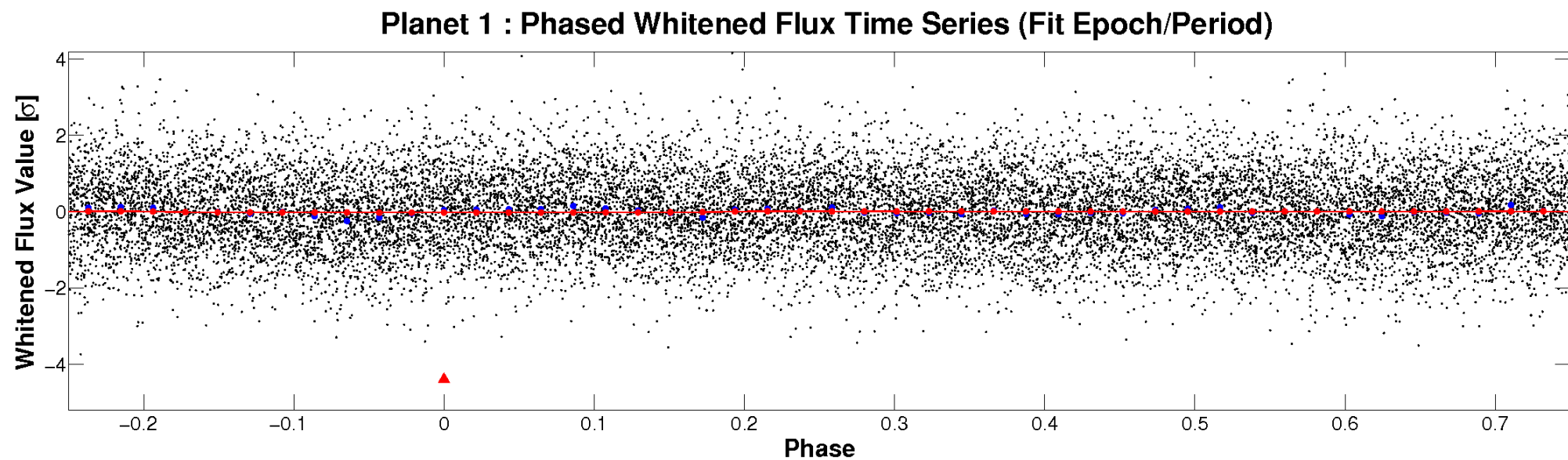
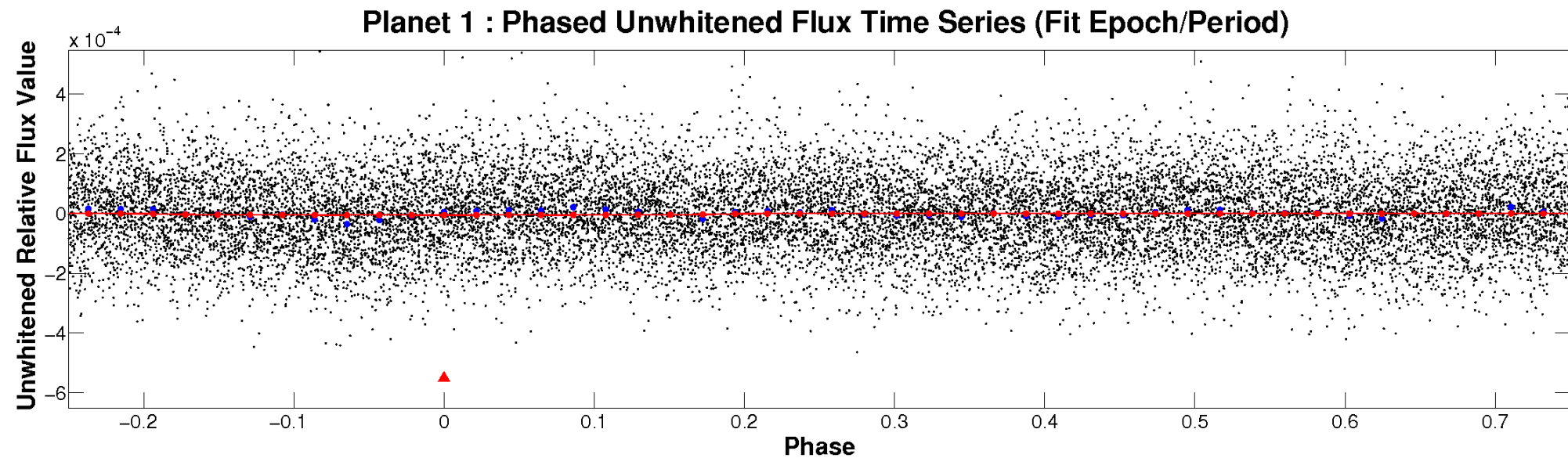


ALT Odd/Even

TCE 006152521-01

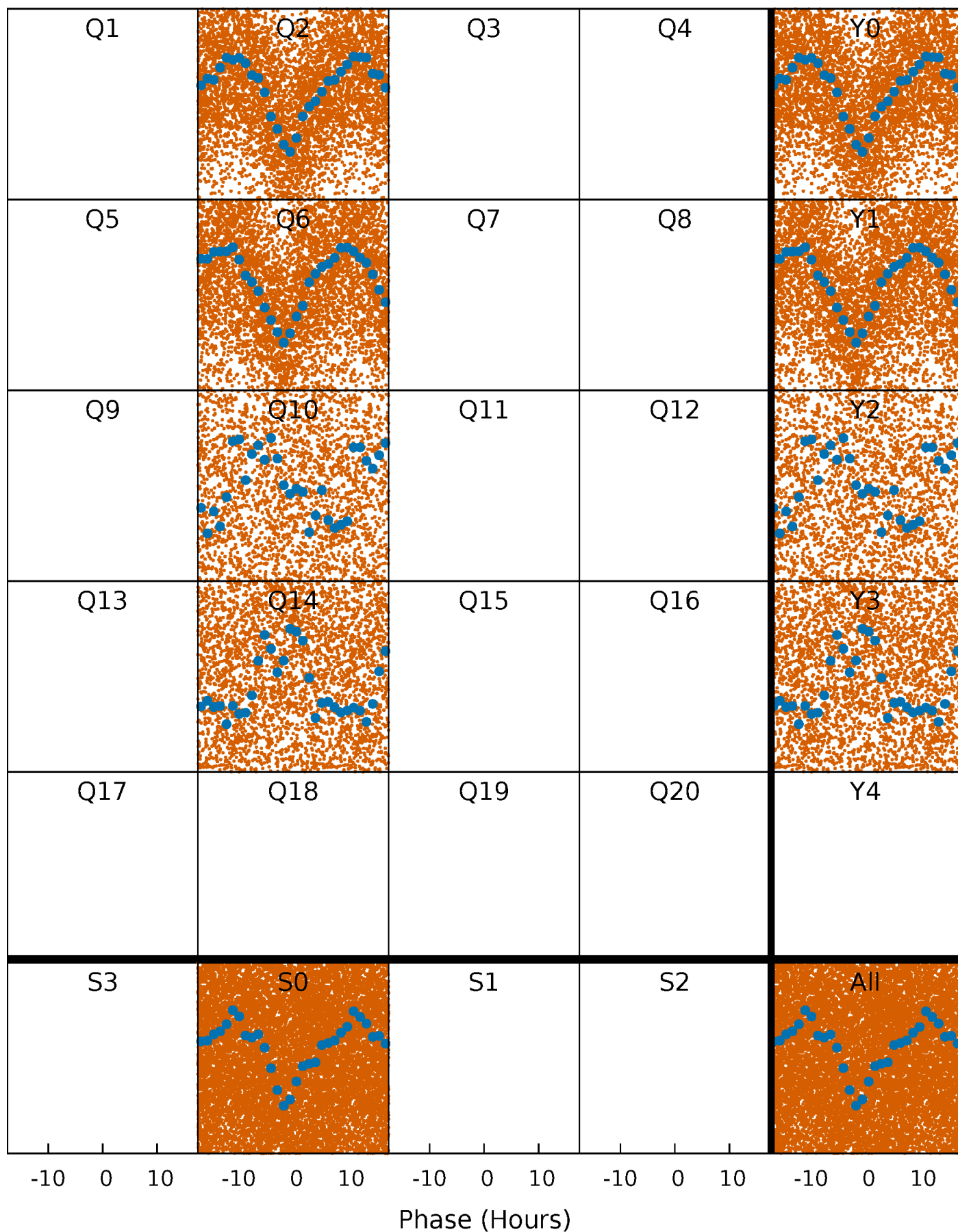


Non-Whitened Vs. Whitened Light Curve



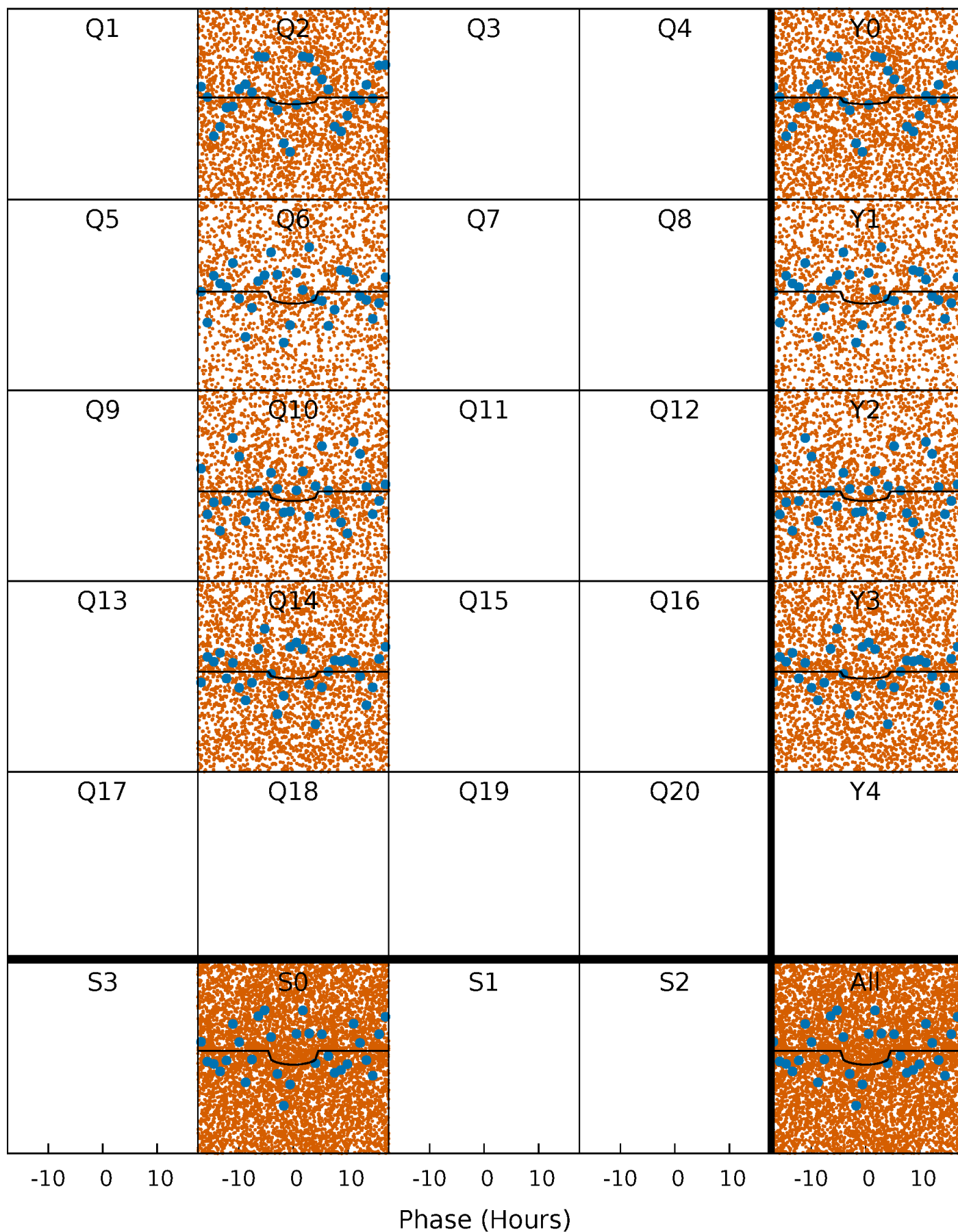
PDC Quarter-Phased Transit Curves

TCE 006152521-01 P= 0.949010 Days $T_0=131.895185$ (BKJD)



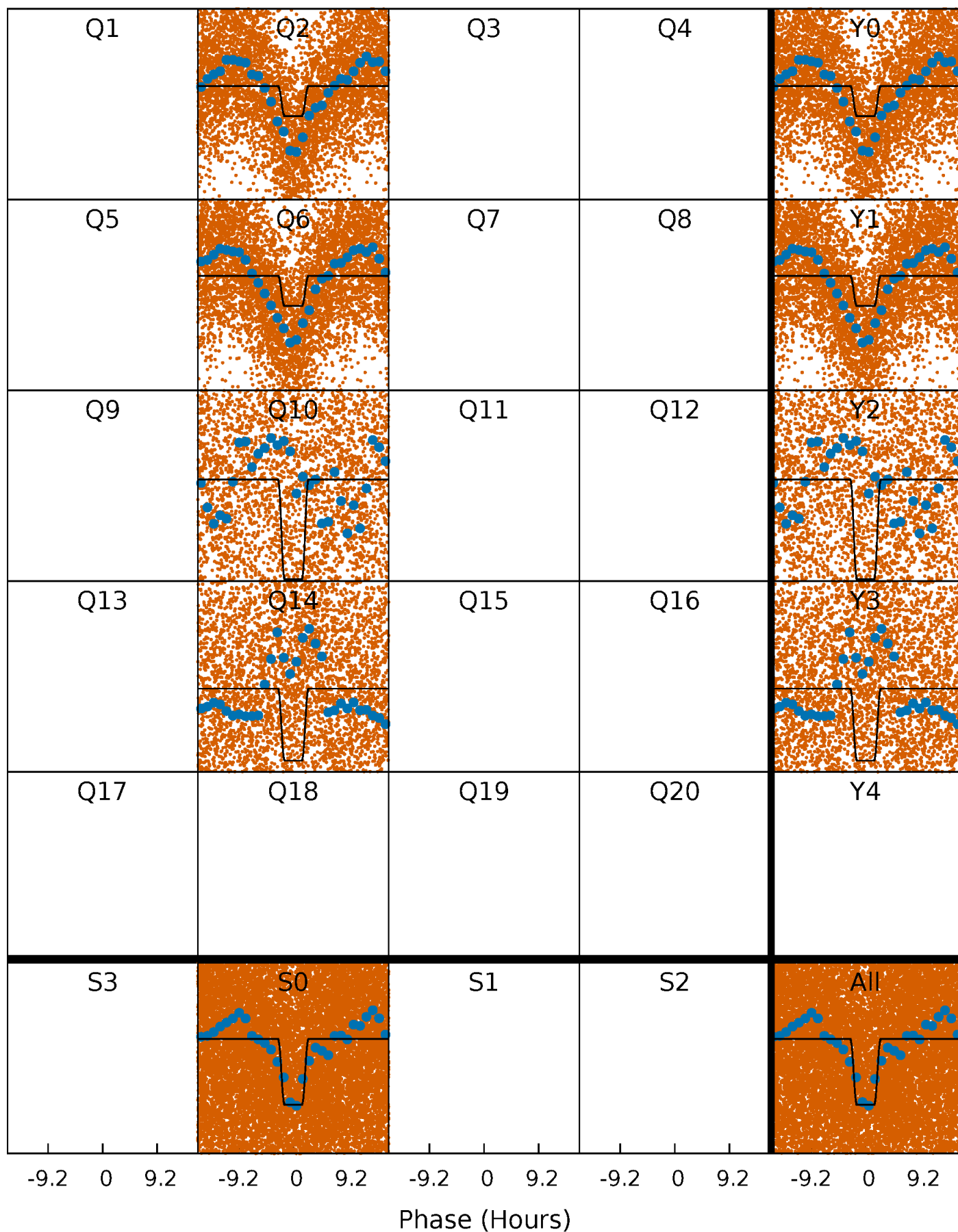
DV Quarter-Phased Transit Curves

TCE 006152521-01 P= 0.949010 Days $T_0=131.895185$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

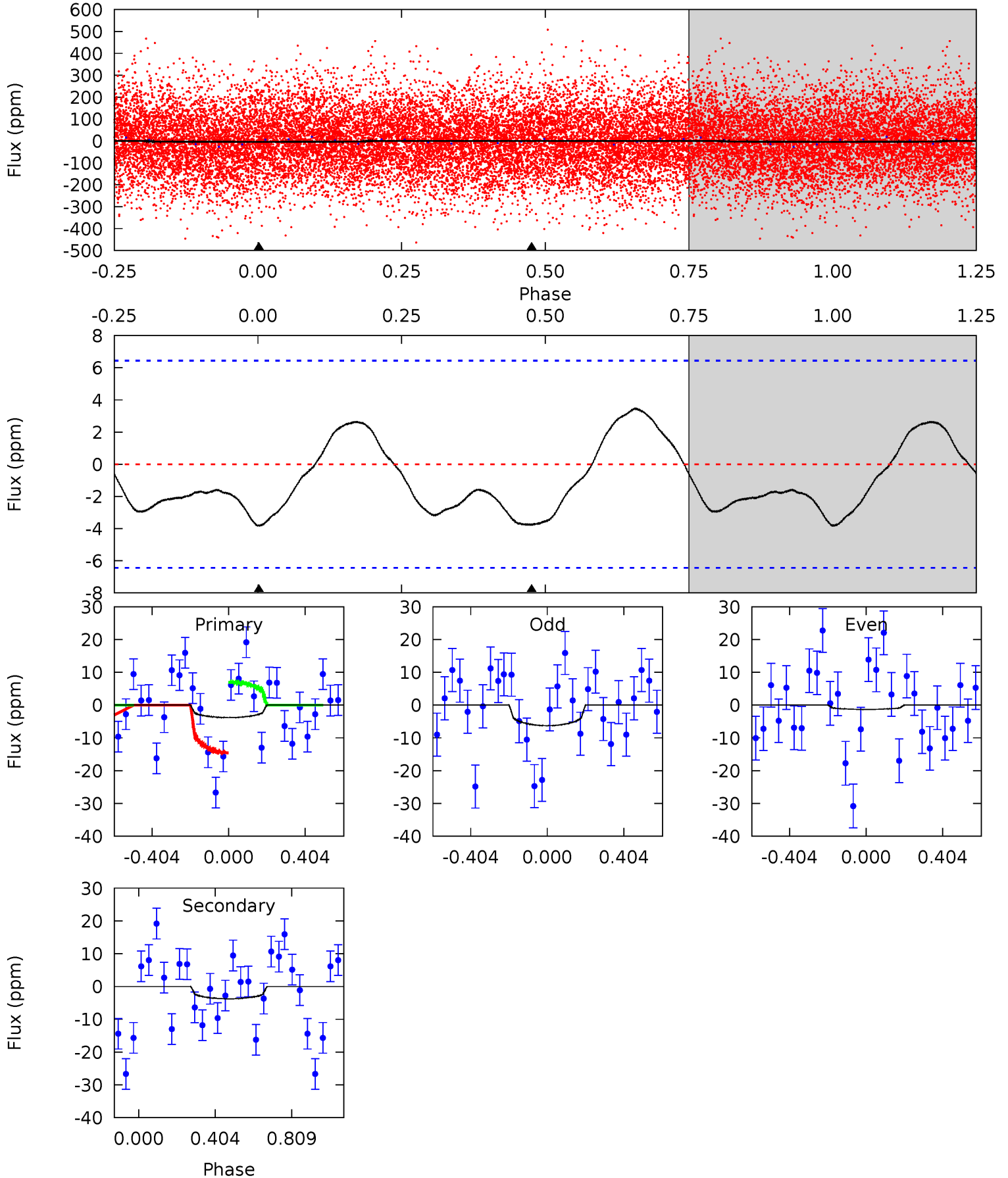
TCE 006152521-01 P= 0.948959 Days $T_0=131.857299$ (BKJD)



DV Model-Shift Uniqueness Test

006152521-01, P = 0.949010 Days, E = 131.895185 Days

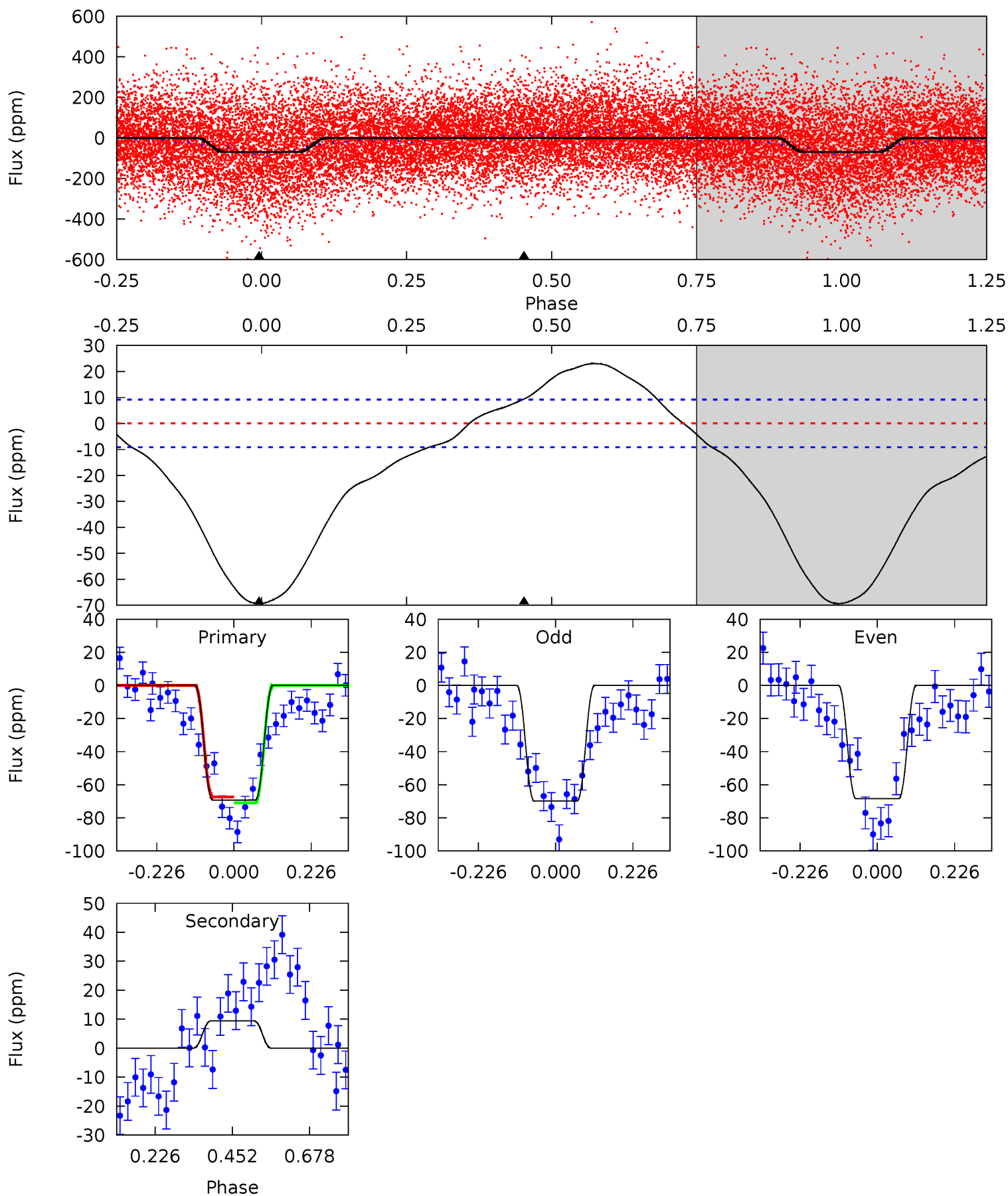
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 2.52 | 2.49 | 0 | 0 | 4.26 | 0.83 | 0.79 | 2.52 | 2.52 | 2.49 | 2.49 | 1.66 | 2.14 | 0.48 | 2.52 |



Alt Model-Shift Uniqueness Test

006152521-01, P = 0.948959 Days, E = 131.857299 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 33.3 | -4.52 | 0 | 0 | 4.39 | 1.21 | 3.17 | 33.3 | 33.3 | -4.52 | -4.52 | 0.35 | 0.97 | 0.25 | 0.89 |



Stellar Parameters For KIC 006152521

| | $T_{\text{eff}} (K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M (M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6661^{+209}_{-232} | $3.666^{+0.304}_{-0.076}$ | $-0.180^{+0.300}_{-0.250}$ | $3.067^{+0.461}_{-1.077}$ | $1.589^{+0.252}_{-0.308}$ | $0.078^{+0.168}_{-0.019}$ |
| | +3%/-3% | +8%/-2% | +167%/-139% | +15%/-35% | +16%/-19% | +217%/-25% |
| Source | KIC0 | 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 006152521-01 / KOI 6670.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|-------------------------|----------------------------|
| DV | -4 ± 2 | $1.87^{+2.15}_{-1.24}$ | 4752^{+276}_{-414} | -2869^{+9263}_{-1178} | $0.264^{+2.407}_{-0.209}$ |
| Alt. | 9 ± 2 | $3.18^{+2.16}_{-1.94}$ | 4709^{+278}_{-419} | -4635^{+351}_{-1347} | $-0.249^{+0.161}_{-1.336}$ |

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 006152521-01. Kepler magnitude: 12.67. Transit SNR 1.71

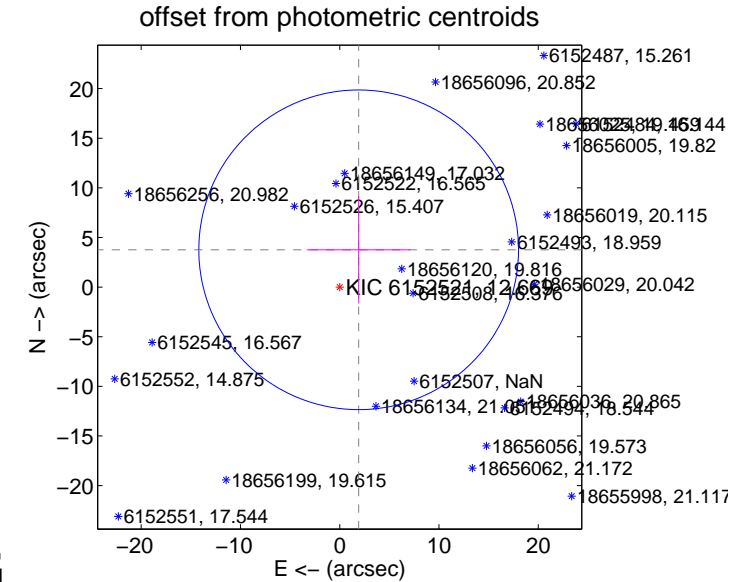
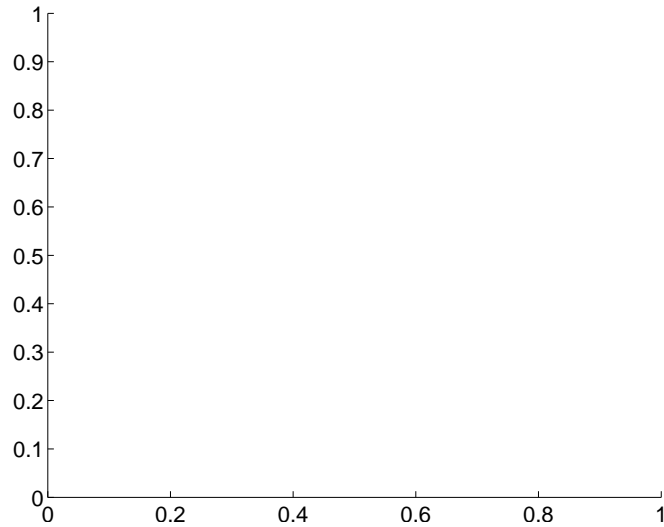
There are 0 quarters with good PRF difference image offsets

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

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|------------------|-----------------|
| PRF-fit source offset from OOT | — | — | — | — |
| PRF-fit source offset from KIC position | — | — | — | — |
| photometric centroid source offset | 4.21 ± 5.37 | 0.79 | -1.91 ± 5.22 | 3.76 ± 5.41 |

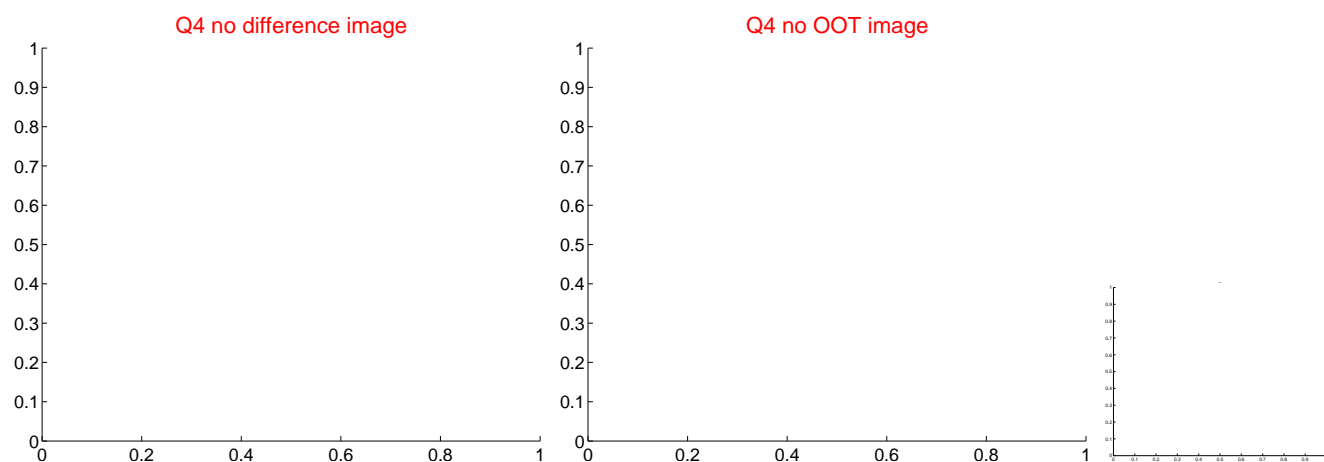
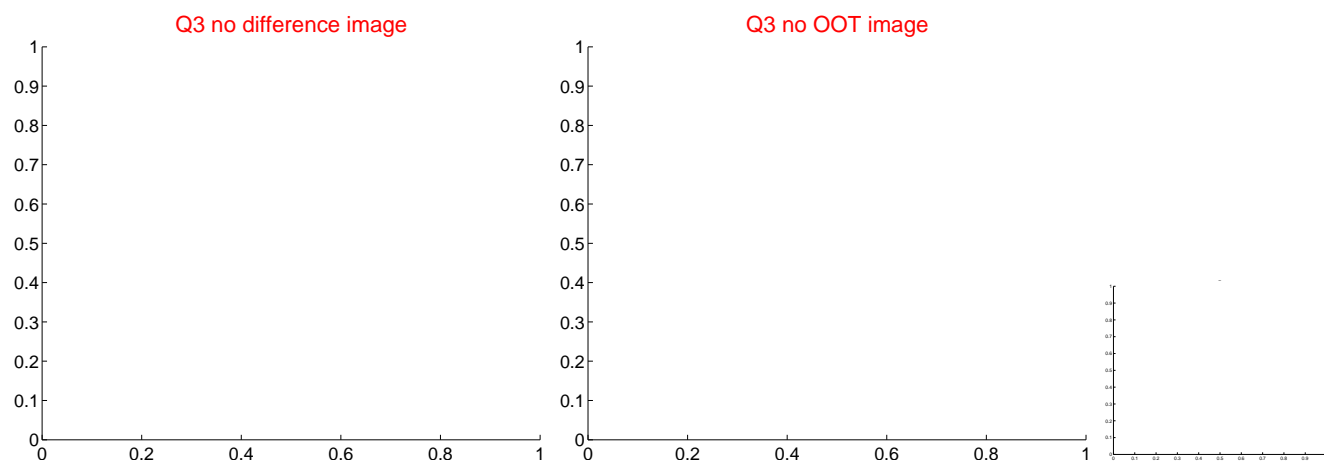
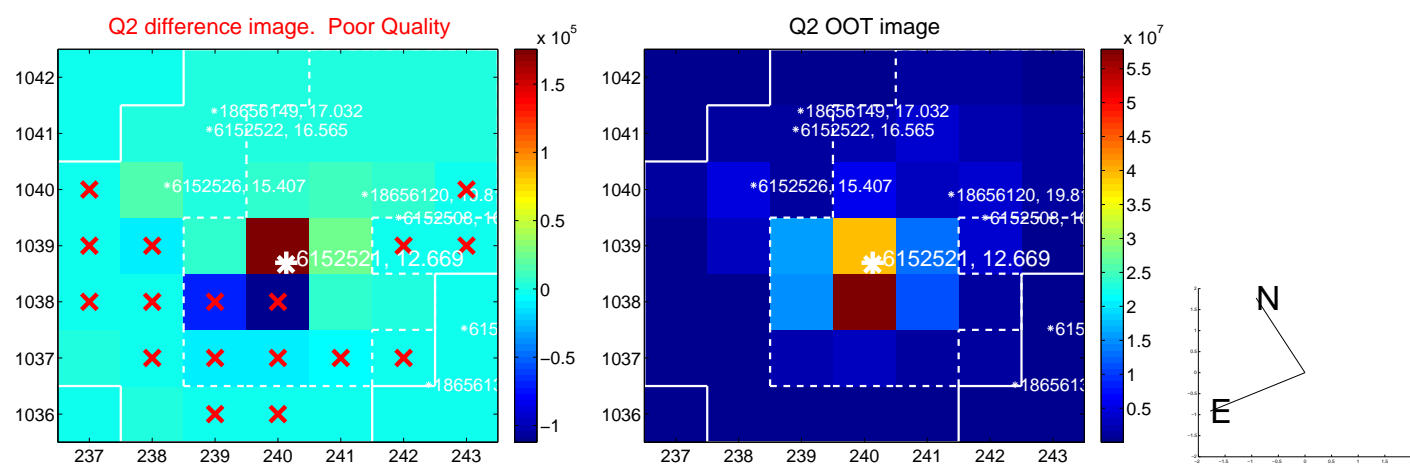
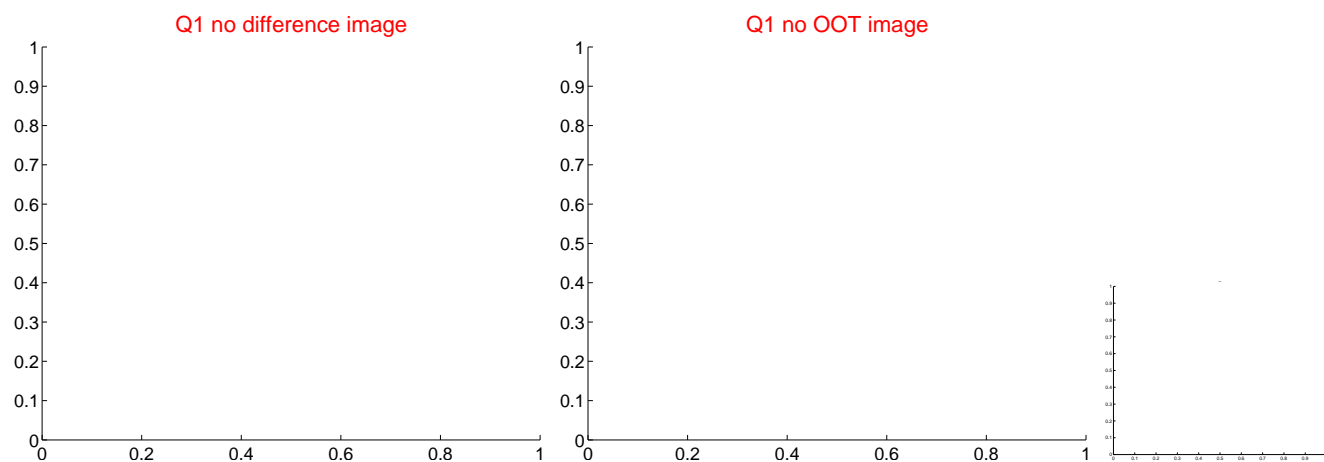
There is no PRF-fit offset from OOT-fit

There is no PRF-fit offset from KIC

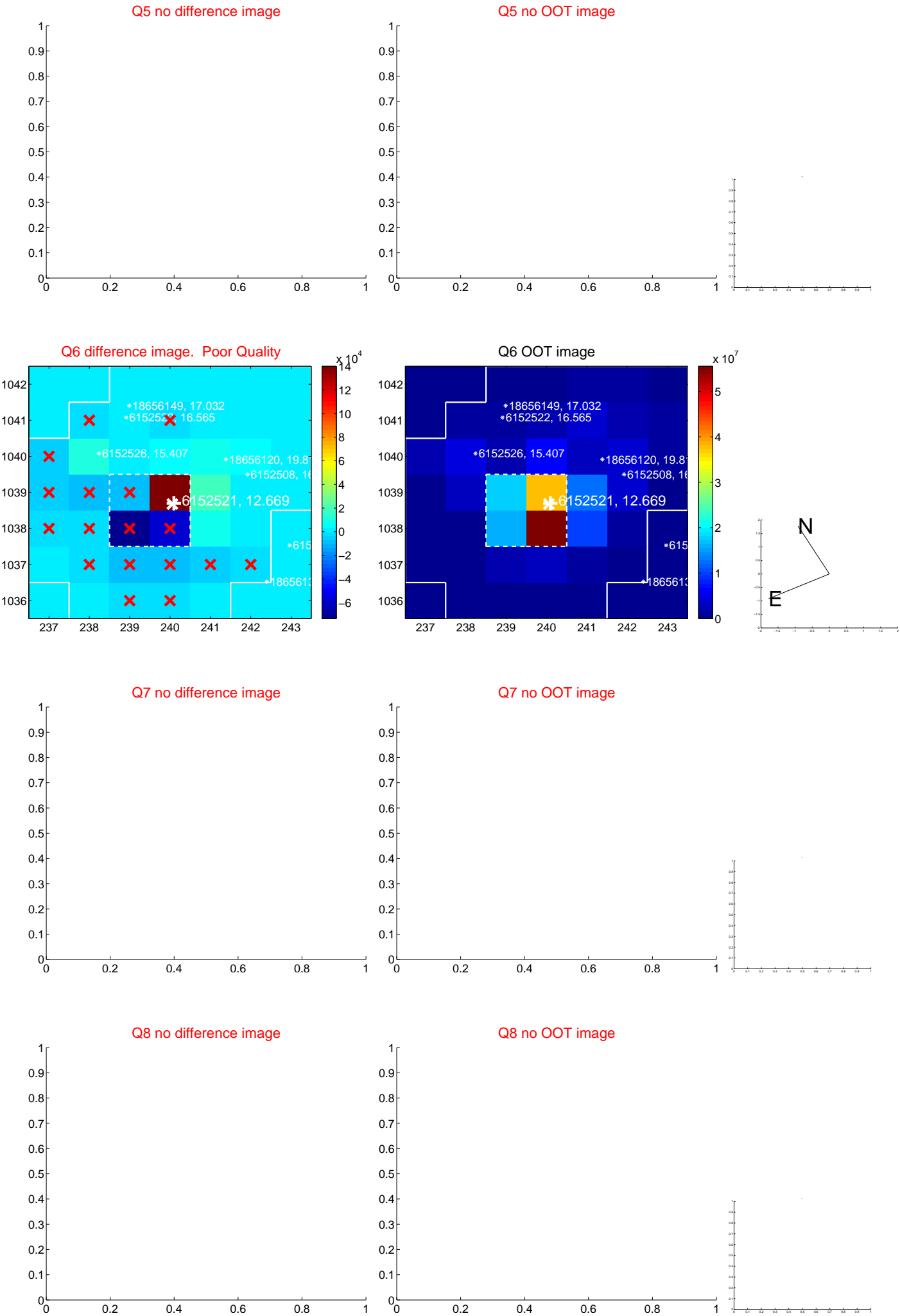


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

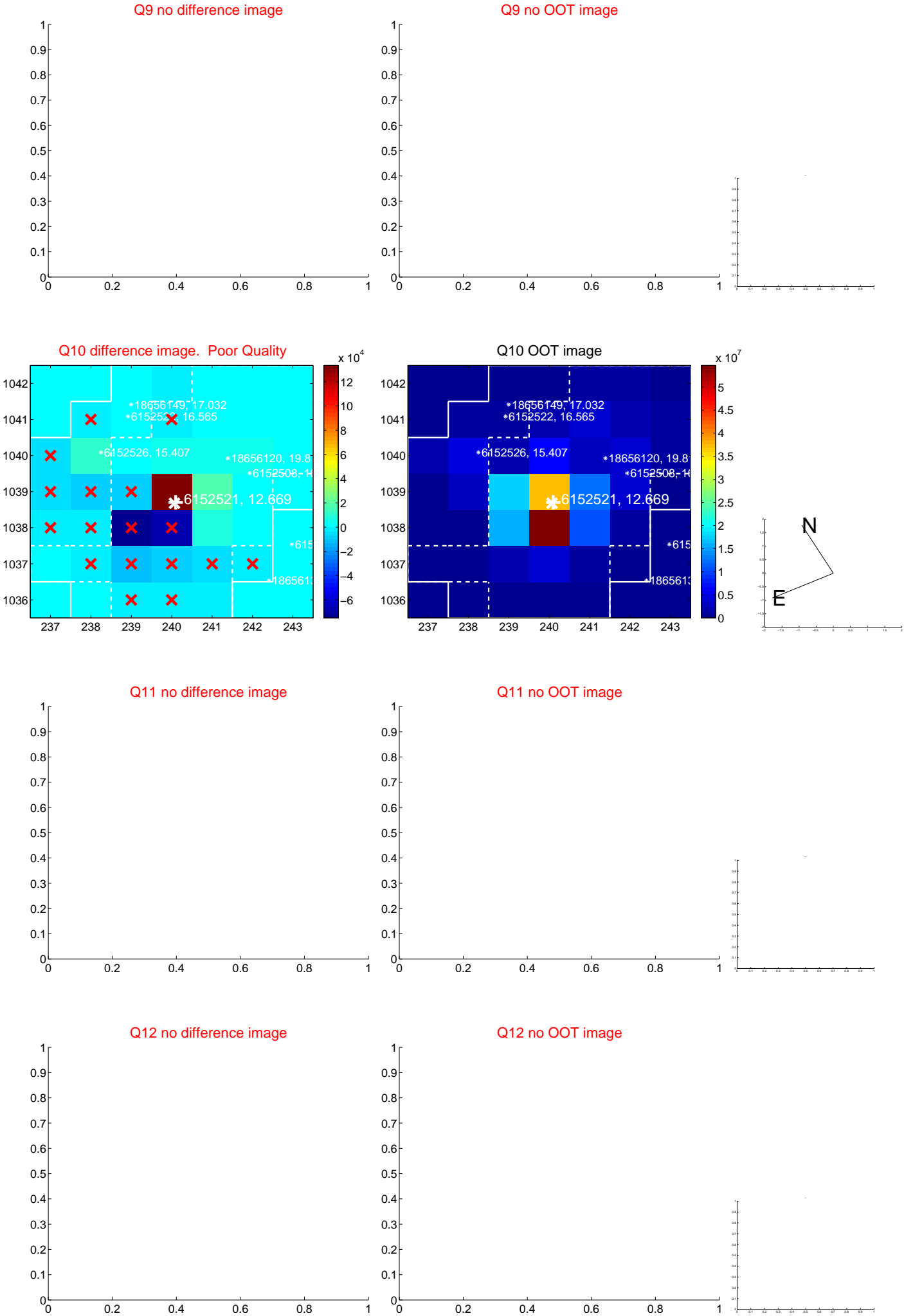
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



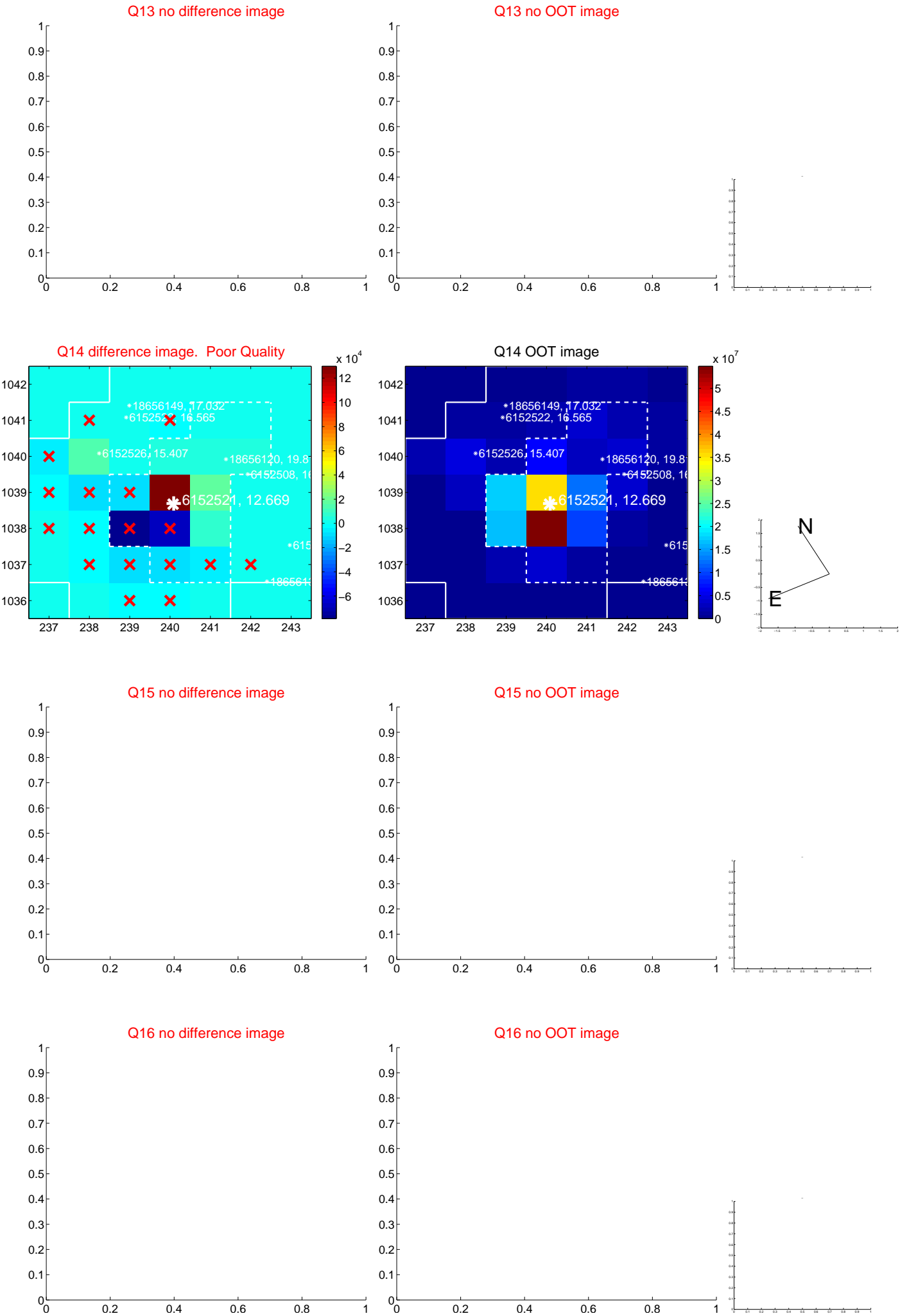
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



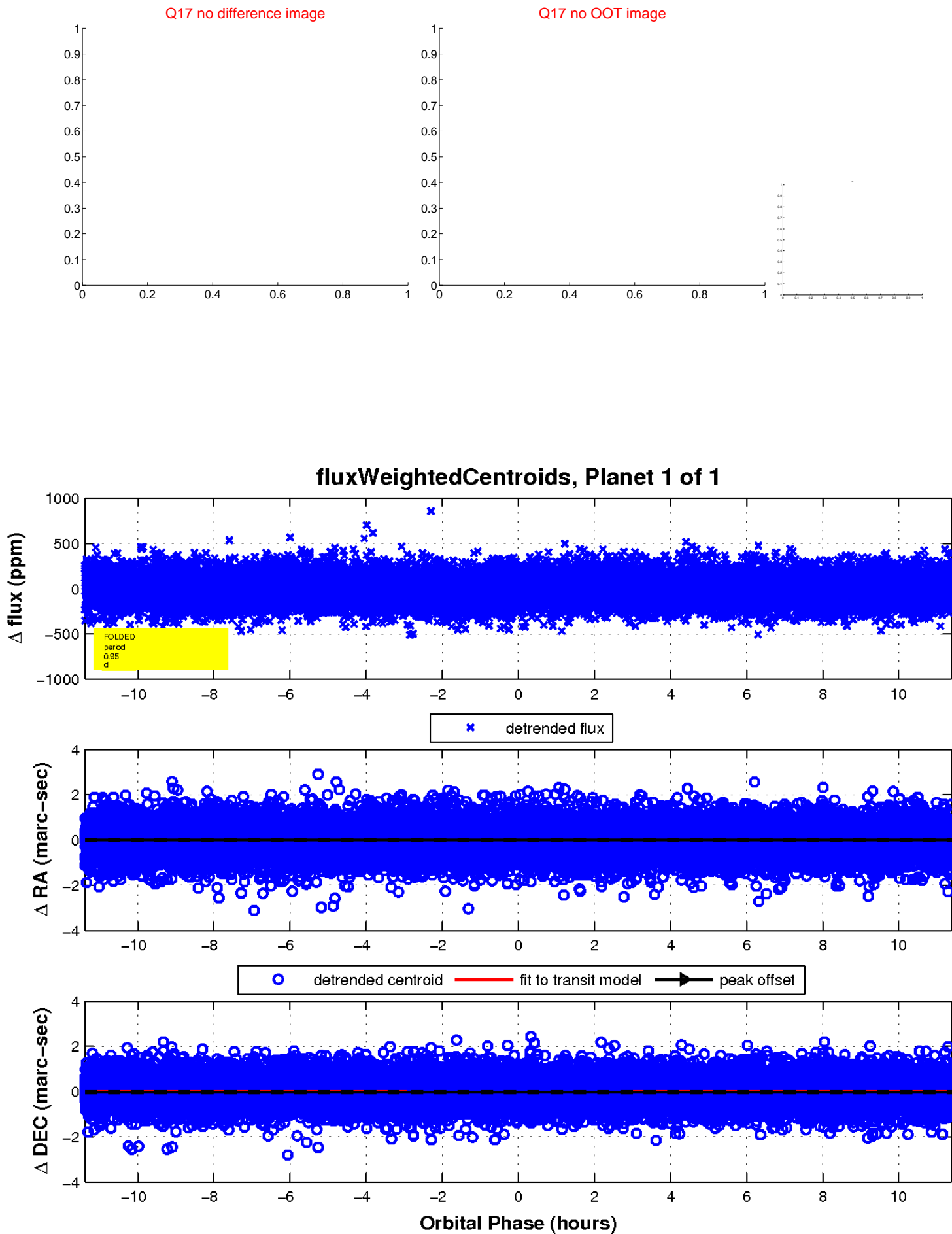
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

