

KIC 010790706

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 010790706-01 | OBS | No | 0.642240 | 131.683407 | 36.3 | 5.298 | 12.8 | 9.9 | 1.68 | 7792 | 1.04 | 35165.88 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 010790706-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

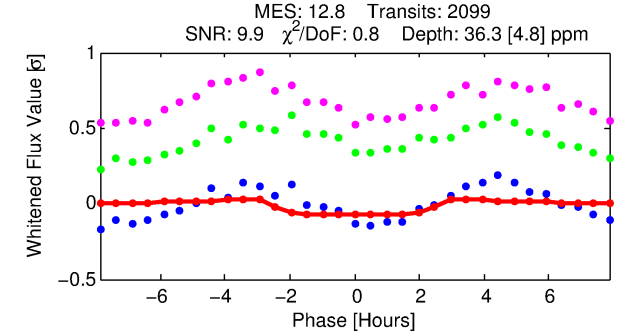
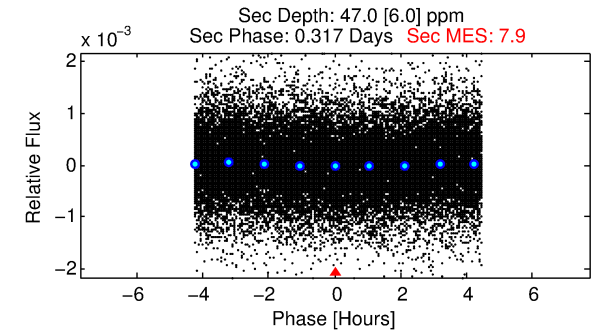
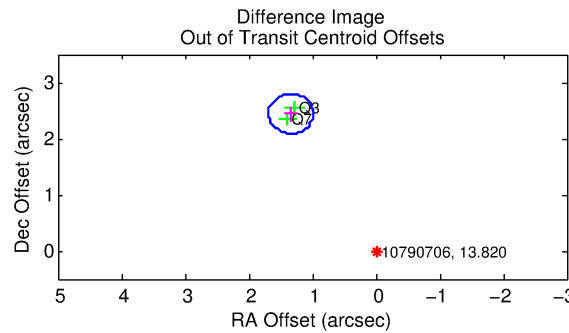
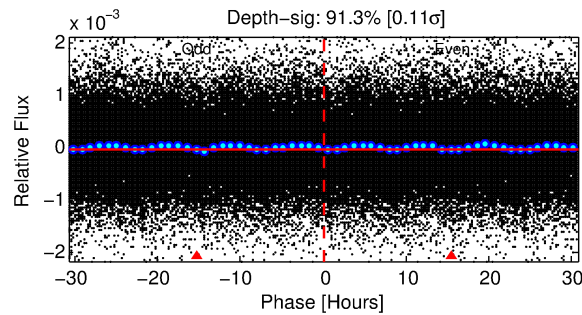
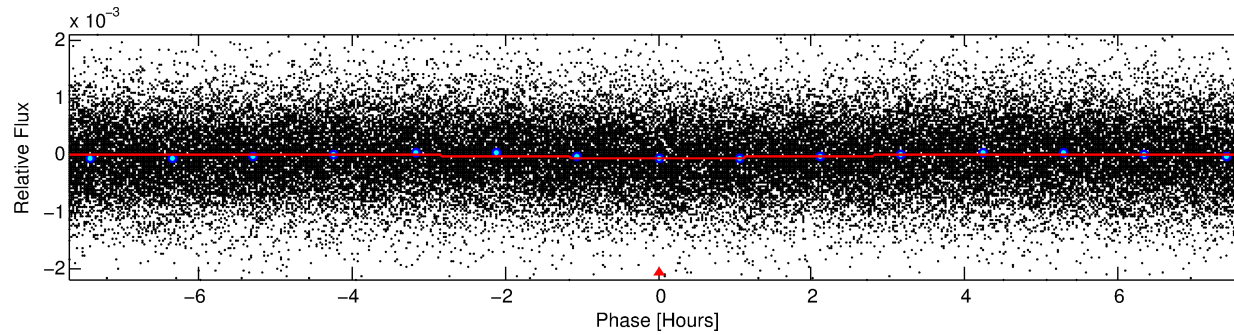
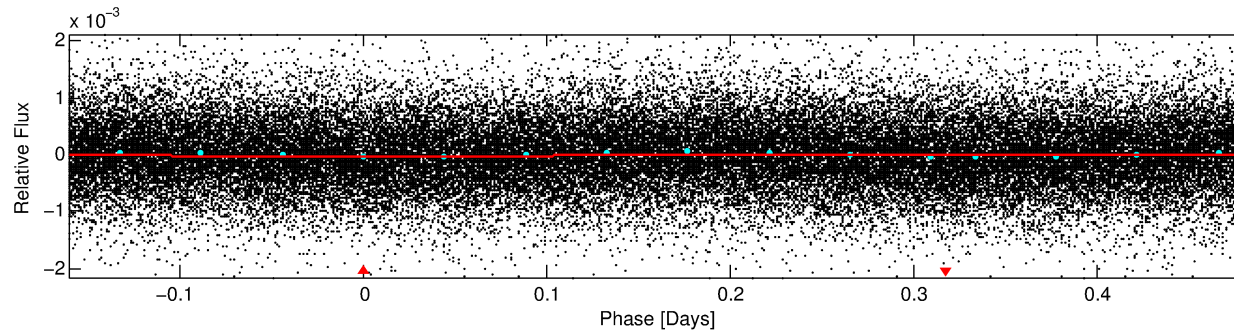
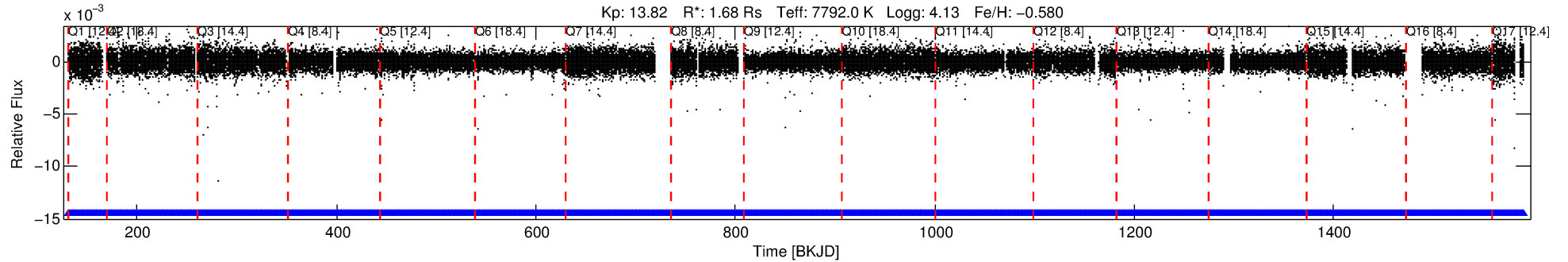
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010790706-01

No Significant Match Found

DV One-Page Summary

KIC: 10790706 Candidate: 1 of 1 Period: 0.642 d



DV Fit Results:

Period = 0.64224 [0.00001] d
Epoch = 131.6834 [0.0047] BKJD
Rp/R* = 0.0057 [0.0064]
a/R* = 1.12 [1.53]
b = 0.39 [14.71]
Seff = 35165.88 [13047.70]
Teq = 3492 [324] K
Rp = 1.04 [1.21] Re
a = 0.0163 [0.0037] AU
Ag = 6.33 [14.46] [0.37 σ]
Teff = 8564 [4848] K [1.04 σ]

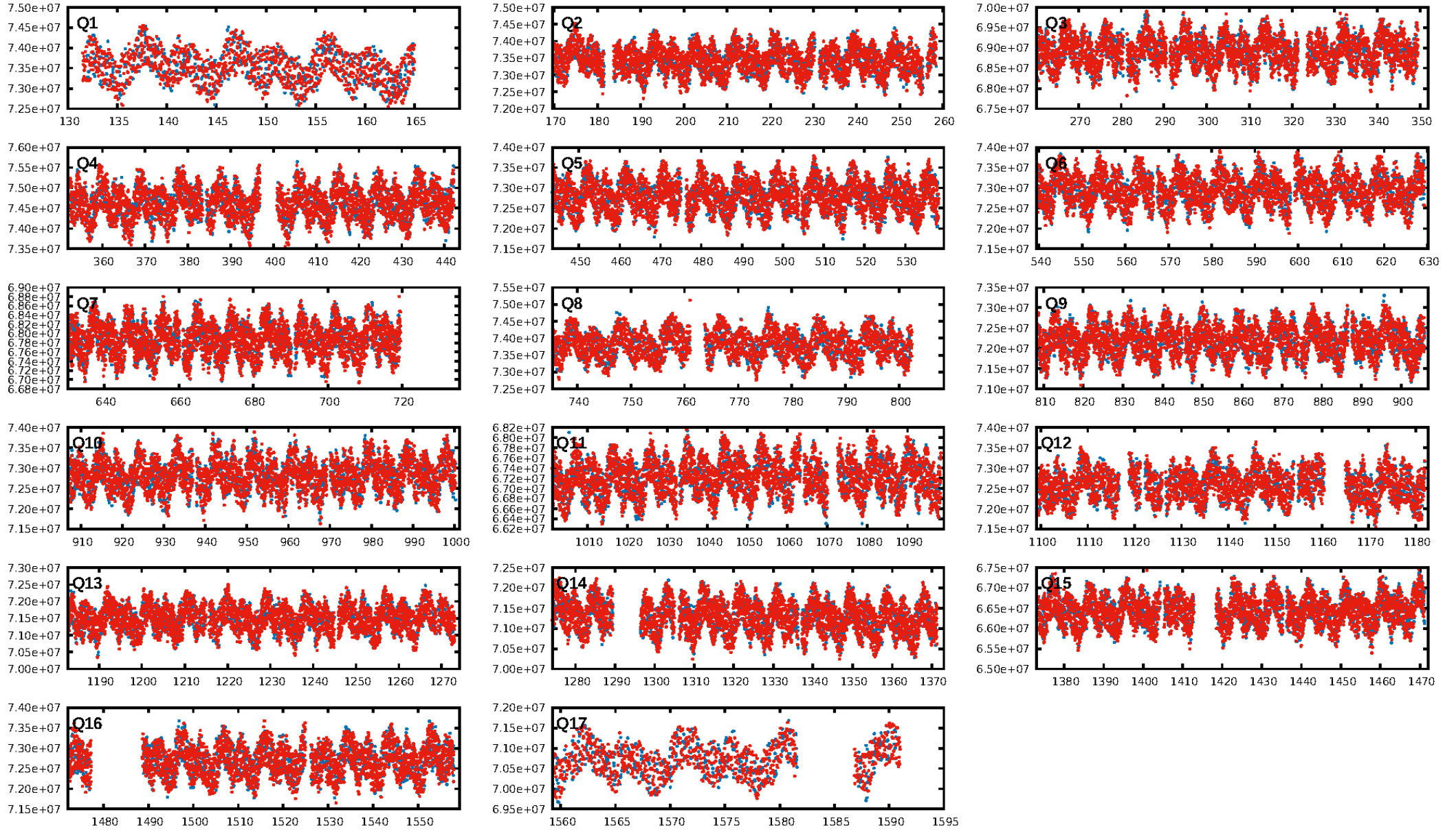
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2004/2004]
GhostDiagnostic-chr: 28.12
Centroid-sig: 2.7%
Centroid-so: 0.634 arcsec [1.28 σ]
OotOffset-rm: 2.785 arcsec [23.79 σ]
KicOffset-rm: 2.844 arcsec [21.81 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [17/17]

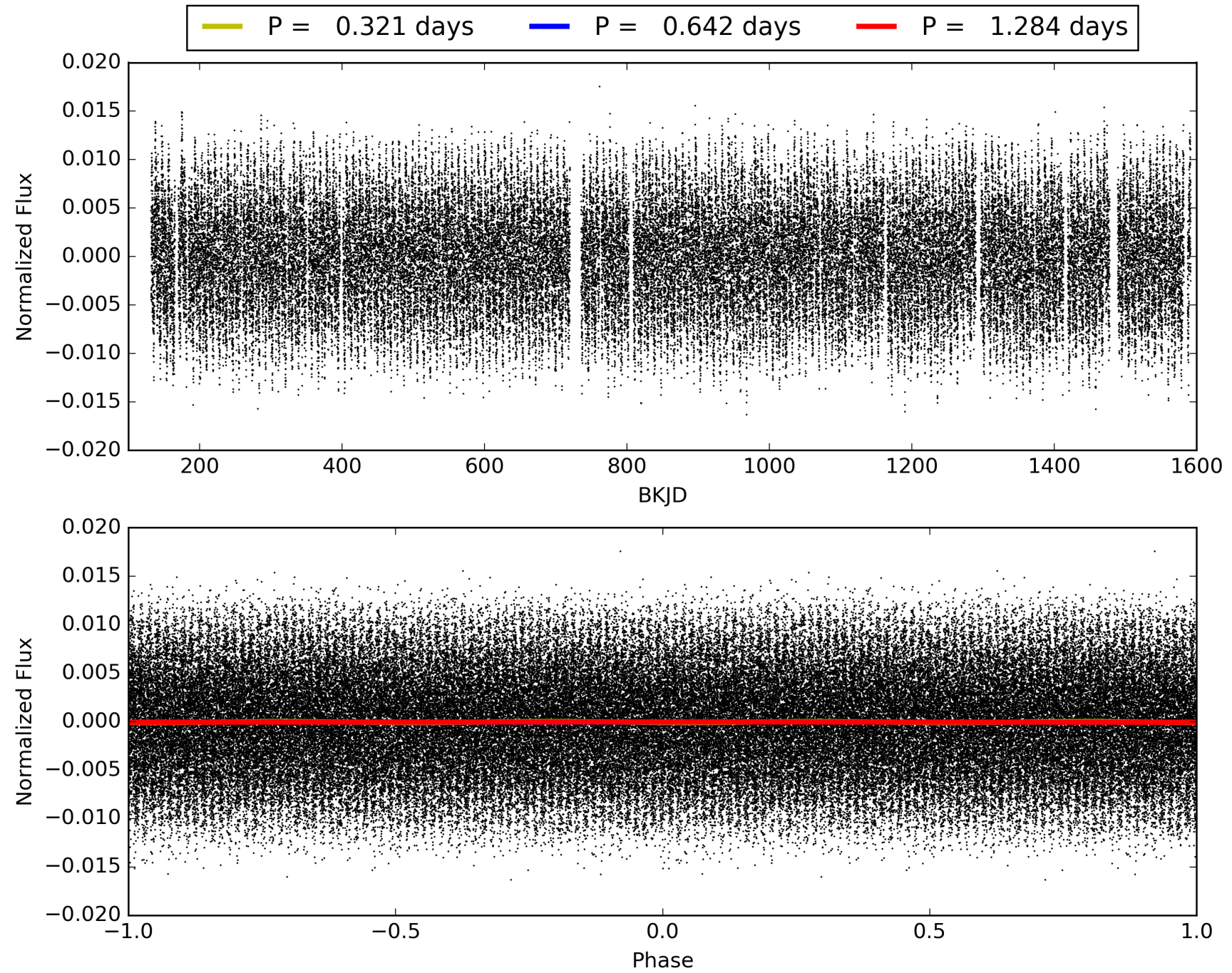
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:19:32 Z

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

TCE 010790706-01, PDC Light Curves

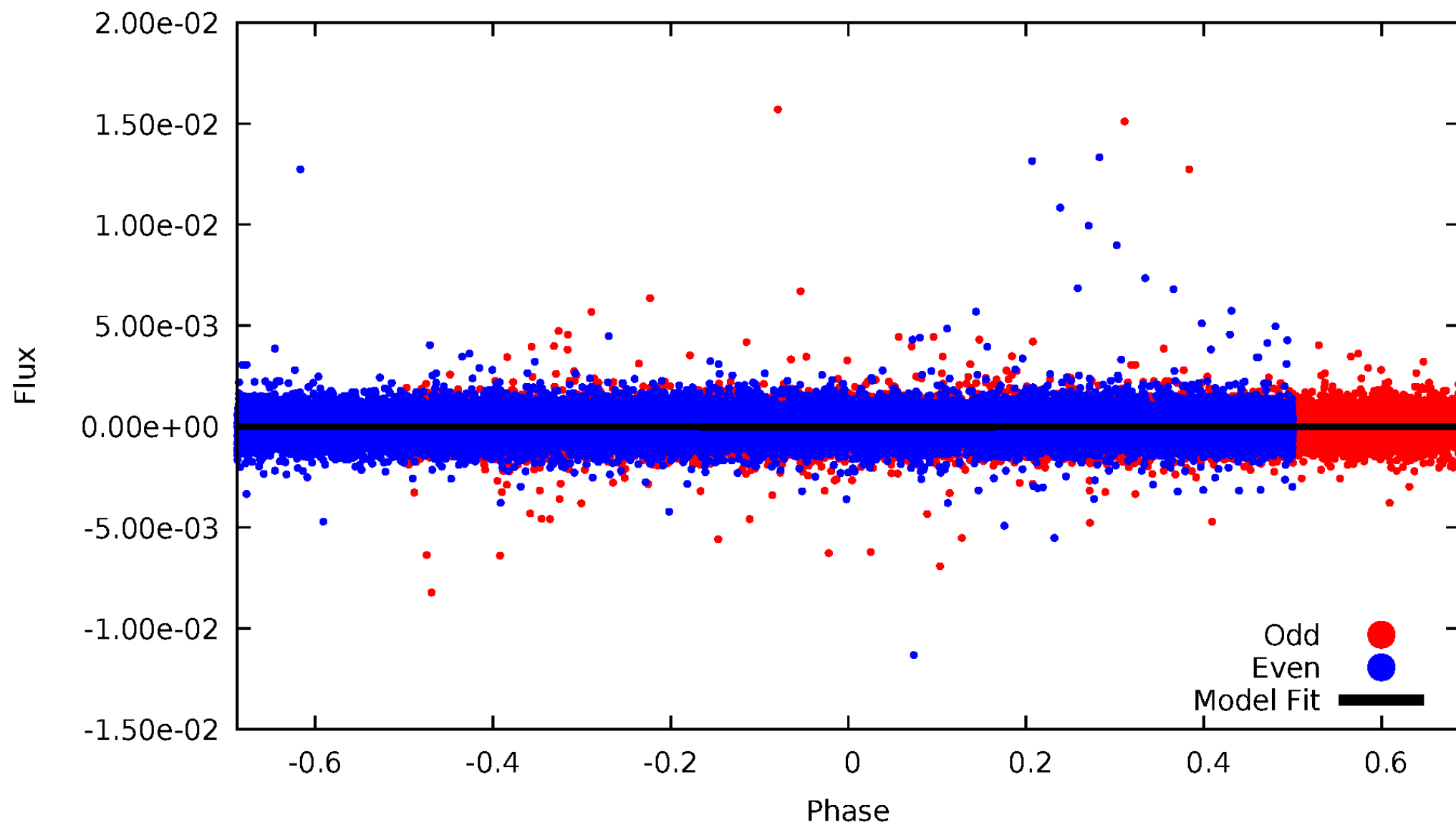


TCE 010790706-01



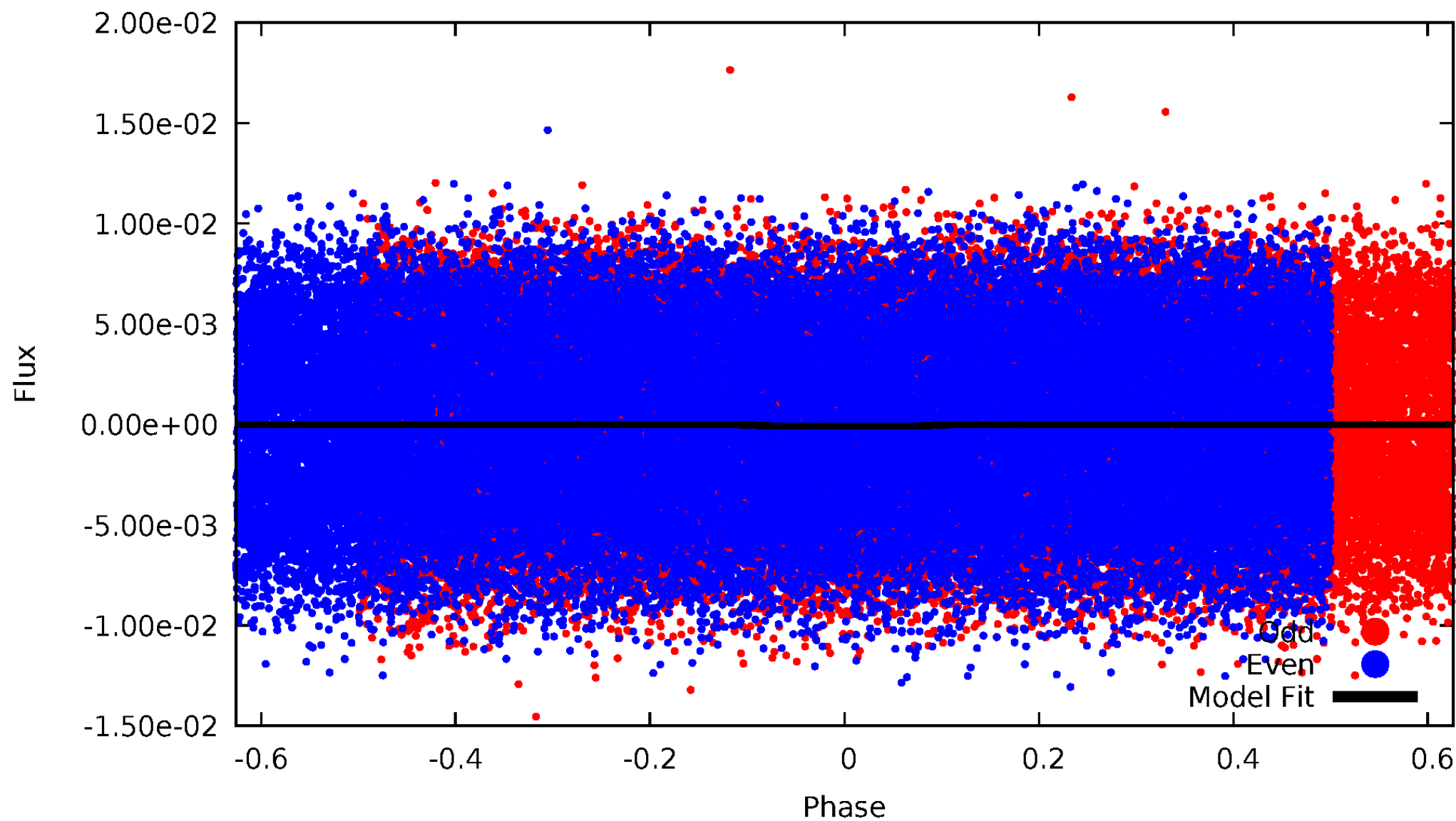
DV Odd/Even

TCE 010790706-01



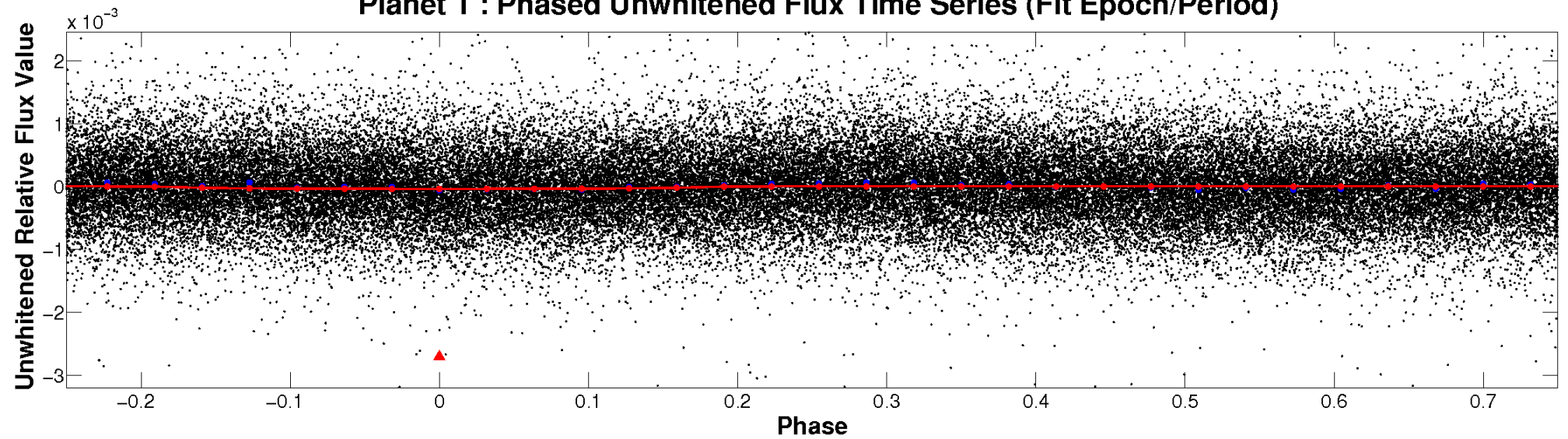
ALT Odd/Even

TCE 010790706-01

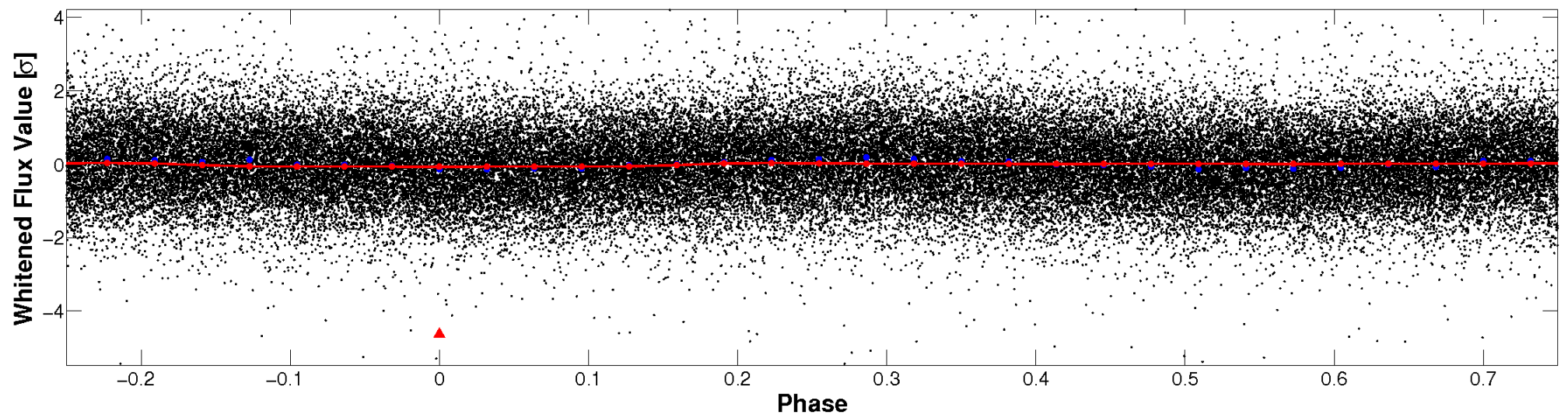


Non-Whitened Vs. Whitened Light Curve

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

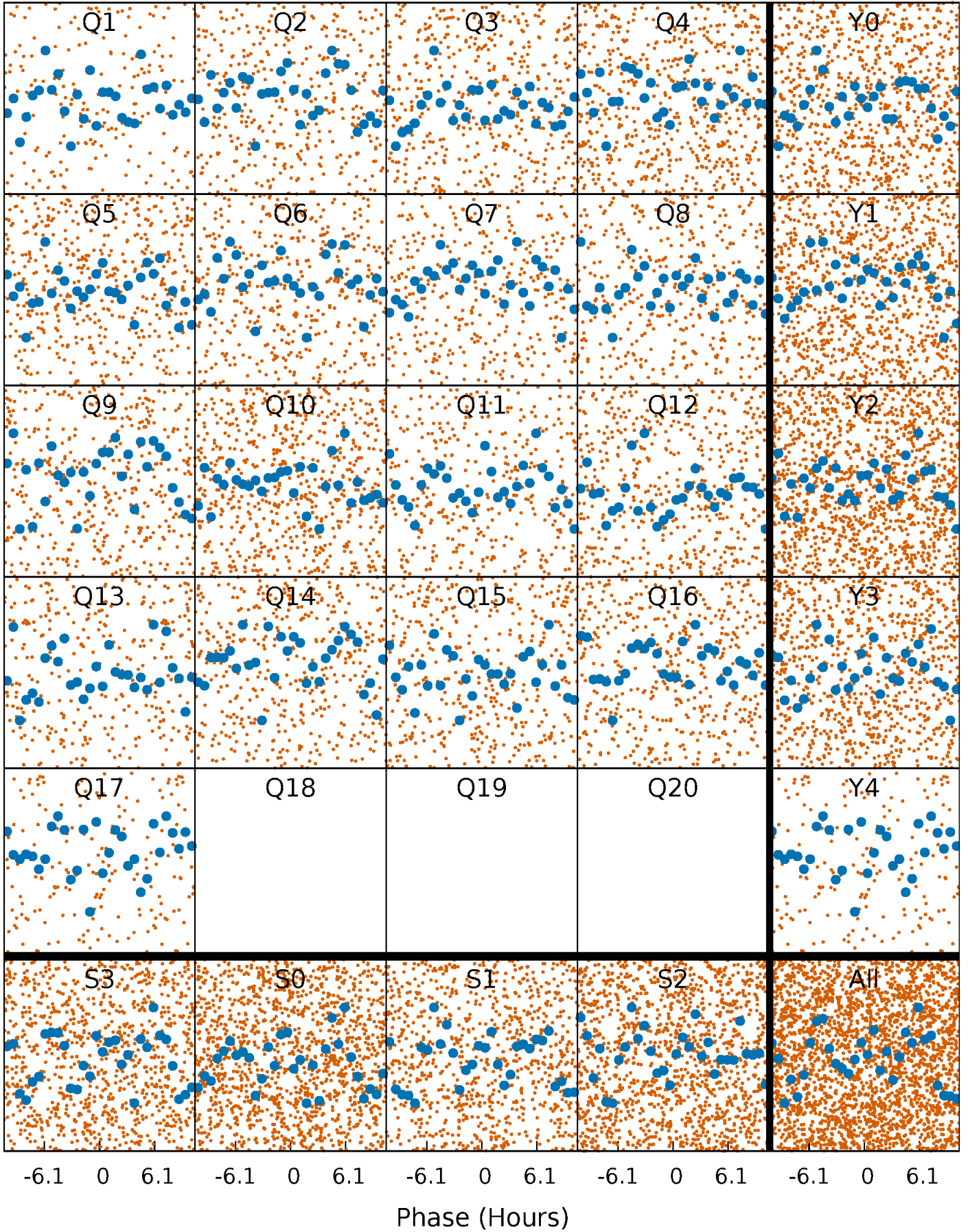


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



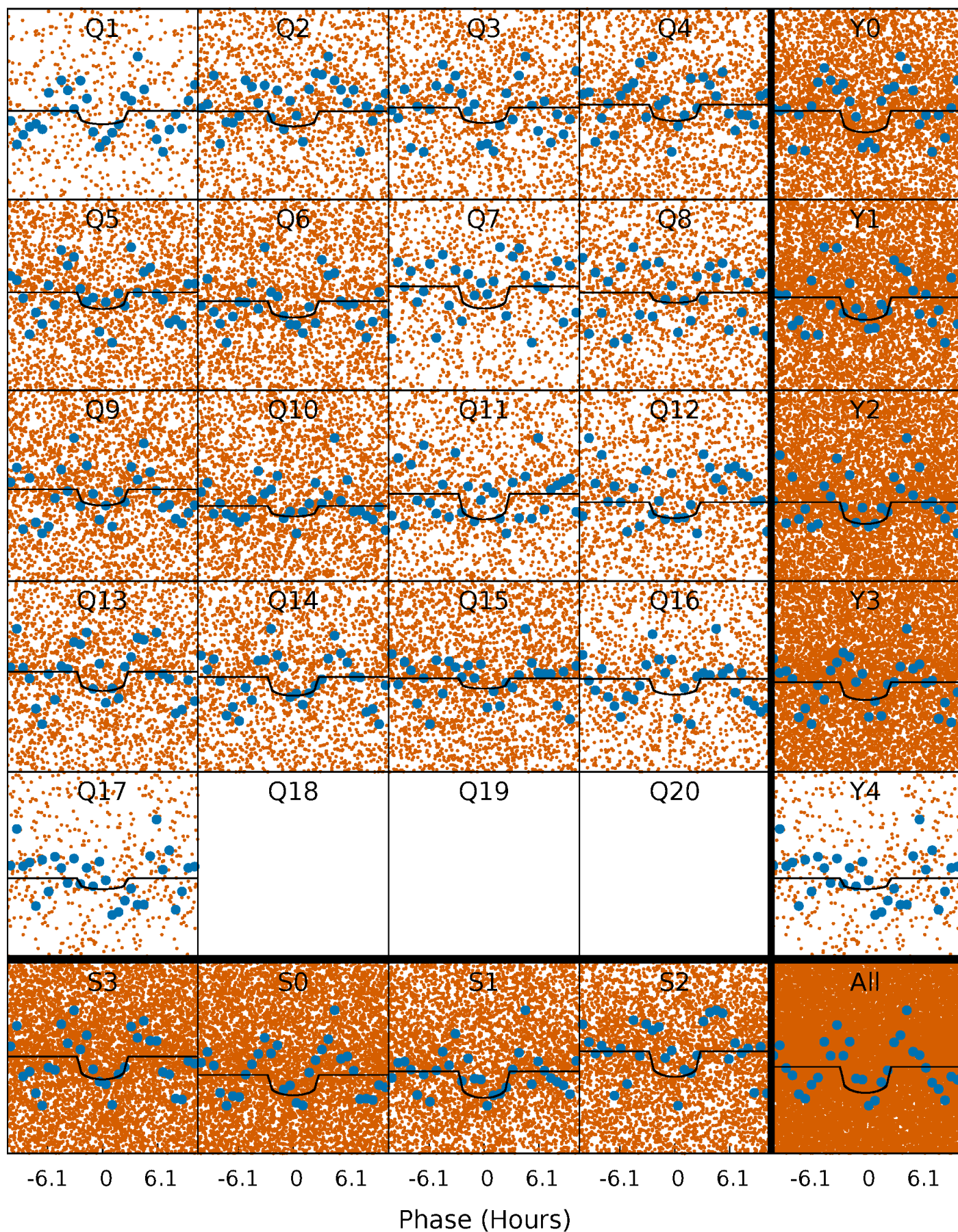
PDC Quarter-Phased Transit Curves

TCE 010790706-01 P= 0.642240 Days $T_0=131.683407$ (BKJD)



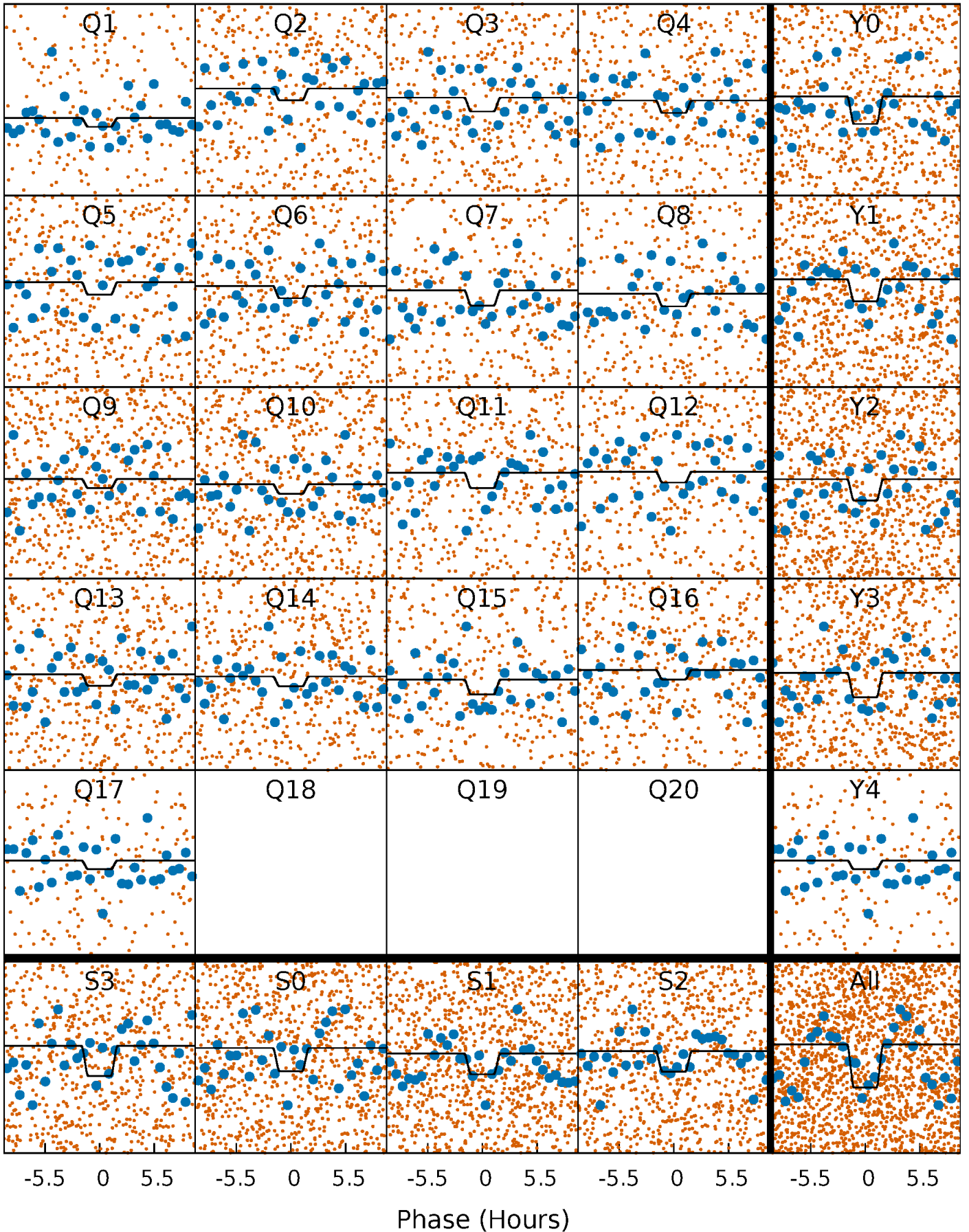
DV Quarter-Phased Transit Curves

TCE 010790706-01 P= 0.642240 Days $T_0=131.683407$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

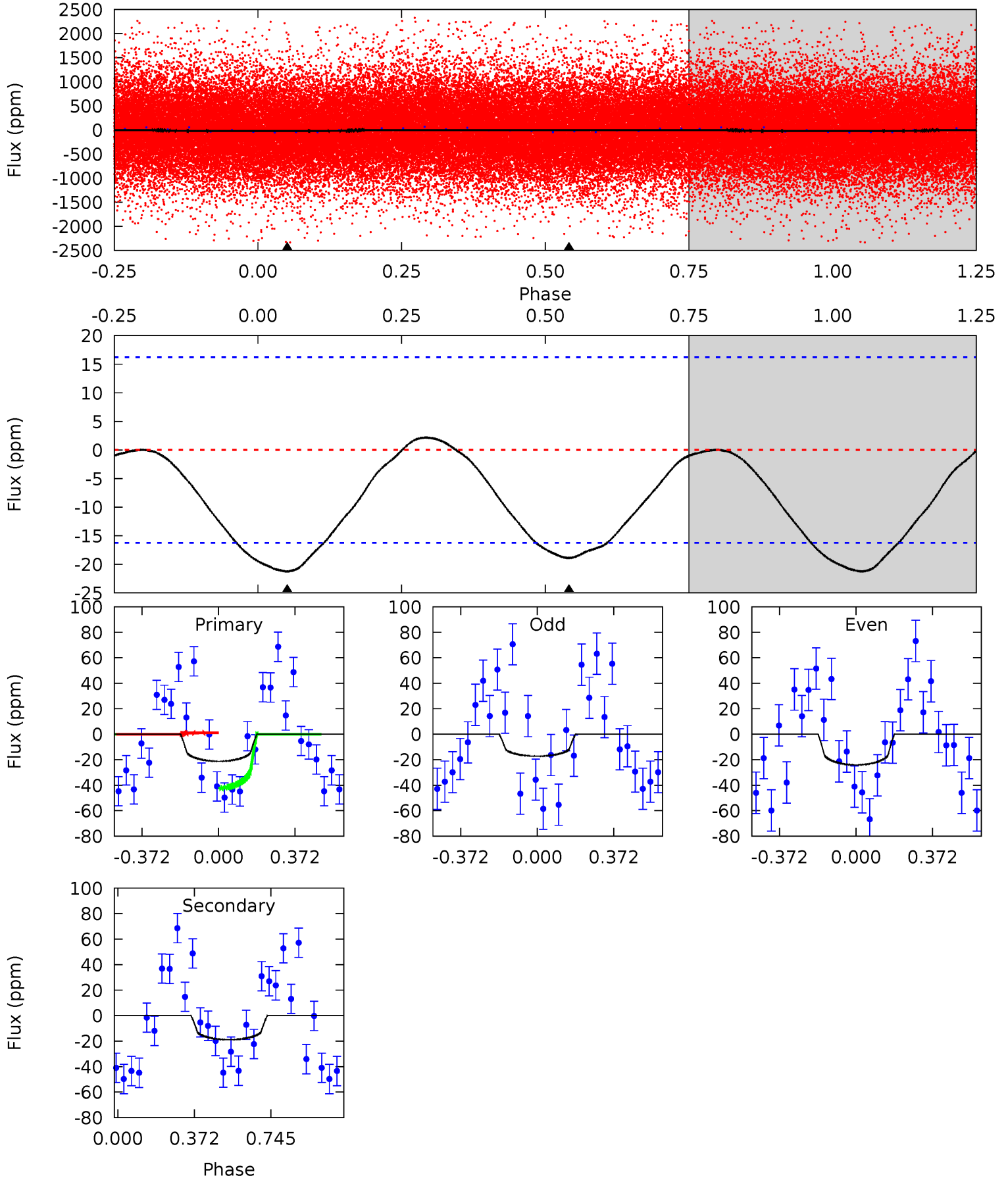
TCE 010790706-01 P= 0.642265 Days $T_0=131.683676$ (BKJD)



DV Model-Shift Uniqueness Test

010790706-01, P = 0.642240 Days, E = 131.041167 Days

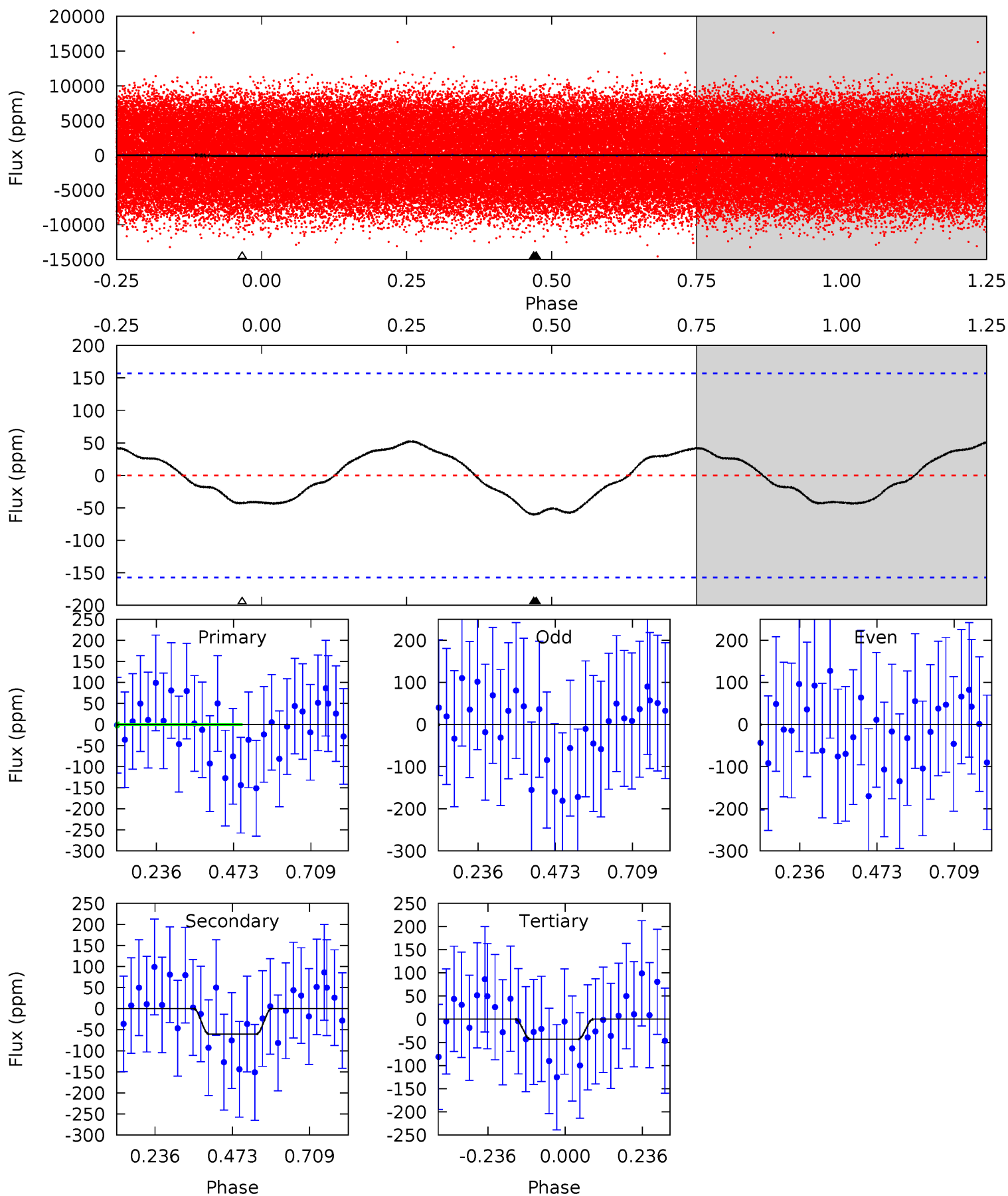
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 5.60 | 4.98 | 0 | 0 | 4.28 | 0.89 | 0.29 | 5.60 | 5.60 | 4.98 | 4.98 | 0.93 | 0.92 | 0.09 | 5.62 |



Alt Model-Shift Uniqueness Test

010790706-01, P = 0.642265 Days, E = 131.041411 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 1.70 | 1.68 | 1.20 | 0 | 4.38 | 1.18 | 0.86 | 0.49 | 1.70 | 0.47 | 1.68 | 0.39 | 1.11 | 0.46 | 0.15 |



Stellar Parameters For KIC 010790706

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7792^{+270}_{-297} | $4.133^{+0.187}_{-0.153}$ | $-0.580^{+0.250}_{-0.300}$ | $1.684^{+0.452}_{-0.411}$ | $1.407^{+0.194}_{-0.194}$ | $0.415^{+0.422}_{-0.180}$ |
| | +3%/-4% | +5%/-4% | +43%/-52% | +27%/-24% | +14%/-14% | +102%/-43% |
| 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 010790706-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|--------------|------------------------|----------------------|------------------------|----------------------------|
| DV | -19 ± 4 | $1.25^{+1.11}_{-0.76}$ | 4841^{+353}_{-350} | 5665^{+4702}_{-1800} | $1.686^{+9.703}_{-1.196}$ |
| Alt. | -60 ± 36 | $1.63^{+1.21}_{-0.93}$ | 4844^{+382}_{-312} | 6770^{+5692}_{-2458} | $2.895^{+14.364}_{-2.276}$ |

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 $A_{obs} \gg 1.0$

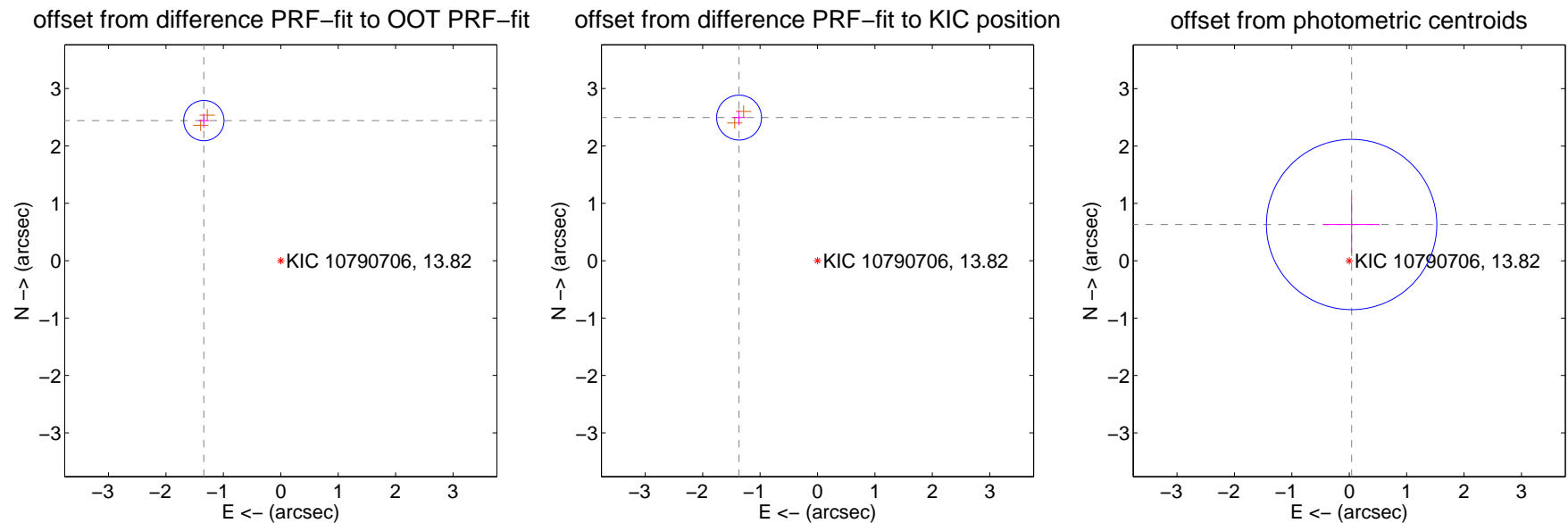
DV Centroid Data

Supplemental centroid analysis for 010790706-01. Kepler magnitude: 13.82. Transit SNR 9.92

There are 0 quarters with good PRF difference image offsets

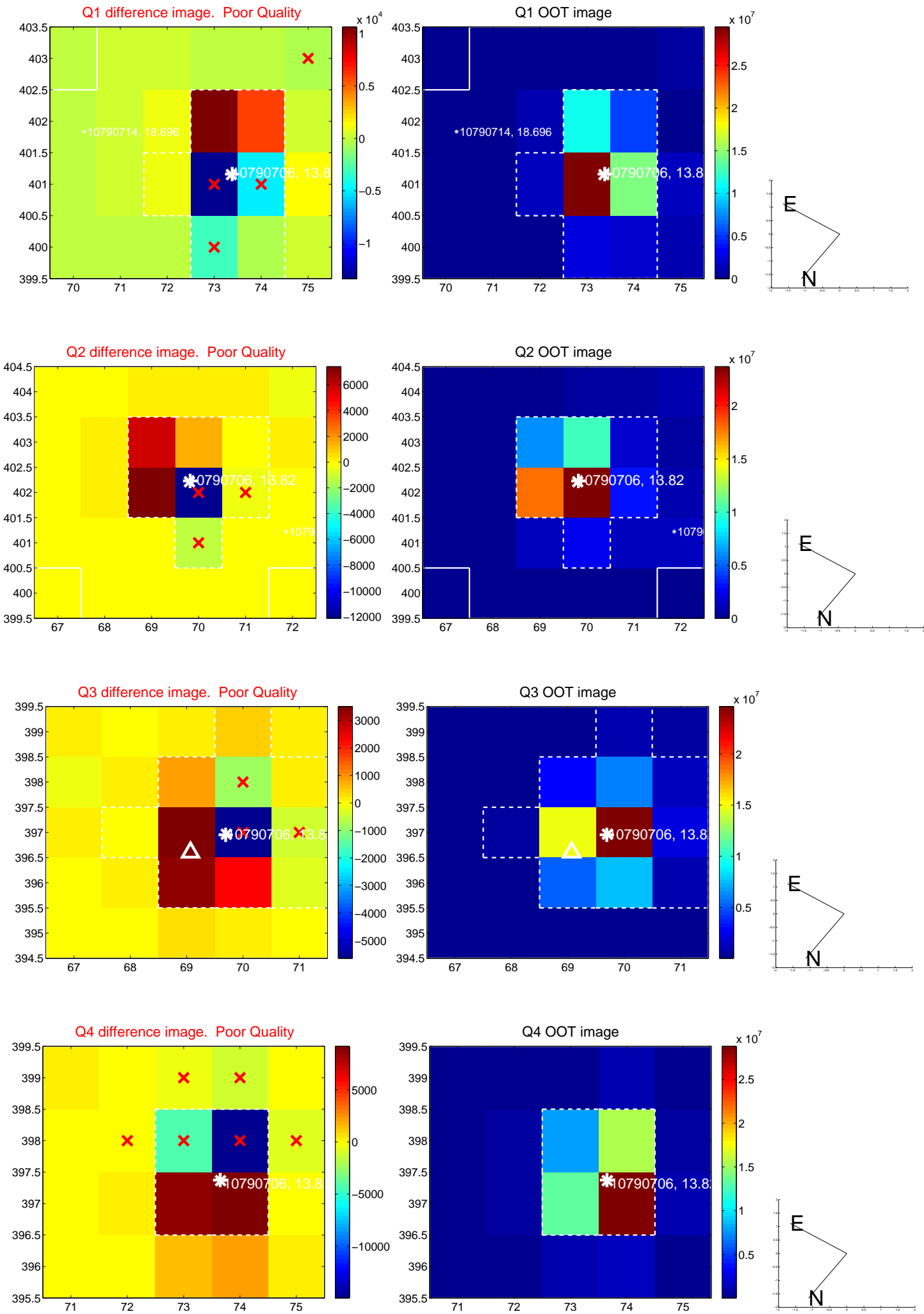
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 2.785 ± 0.117 | 23.79 | 1.340 ± 0.095 | 2.442 ± 0.123 |
| PRF-fit source offset from KIC position | 2.844 ± 0.130 | 21.81 | 1.366 ± 0.113 | 2.494 ± 0.135 |
| photometric centroid source offset | 0.63 ± 0.49 | 1.28 | -0.04 ± 0.49 | 0.63 ± 0.49 |

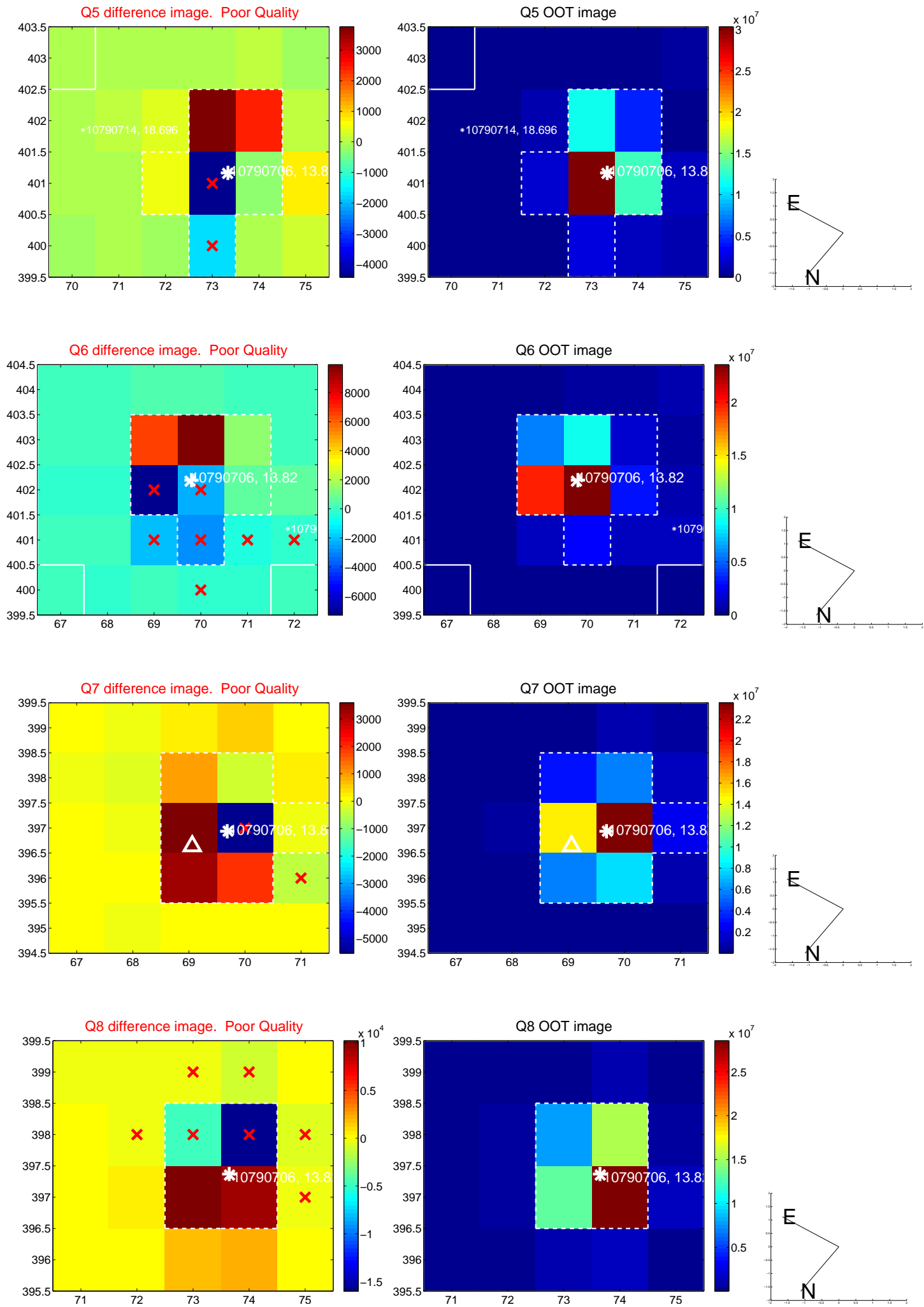


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

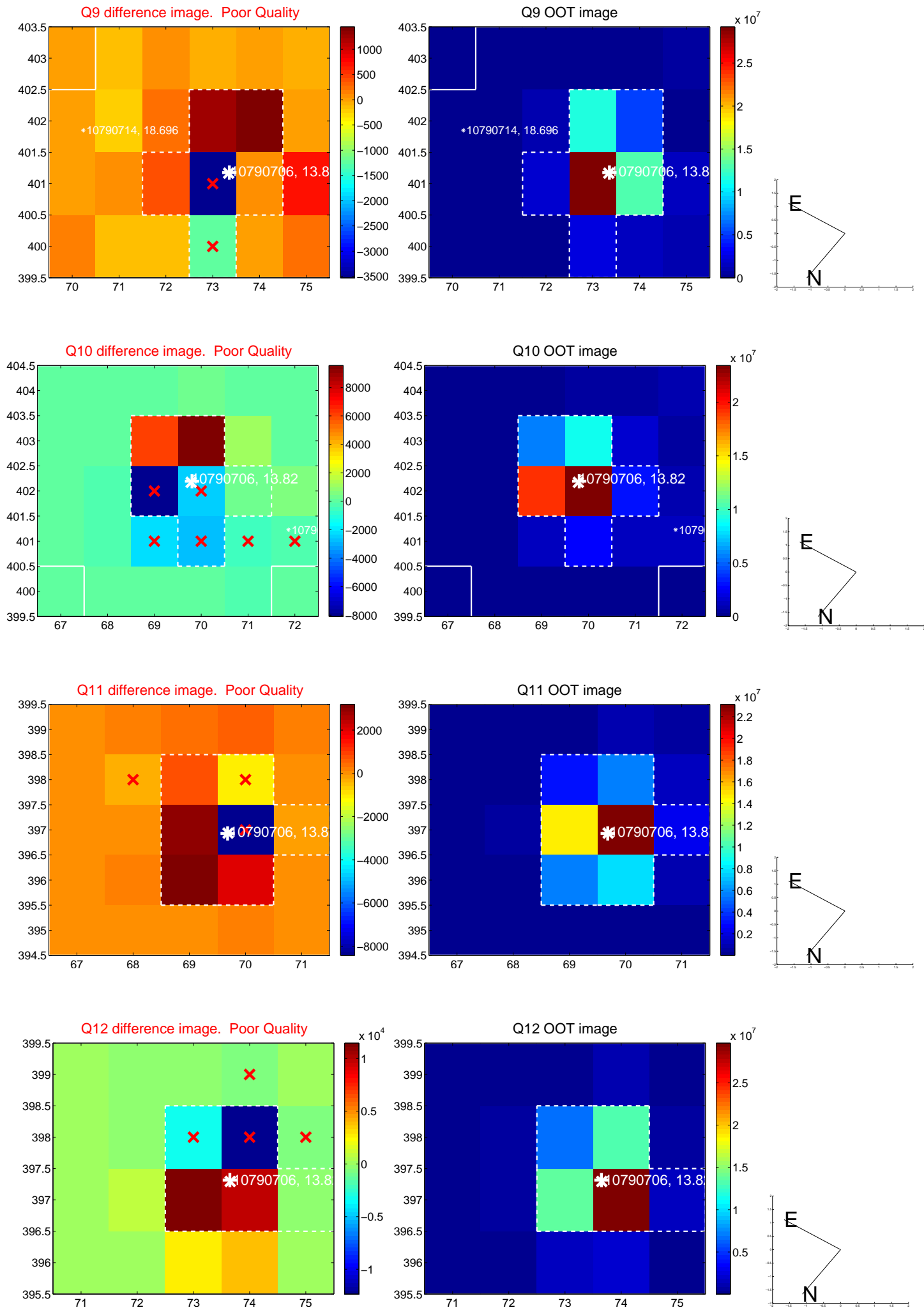
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



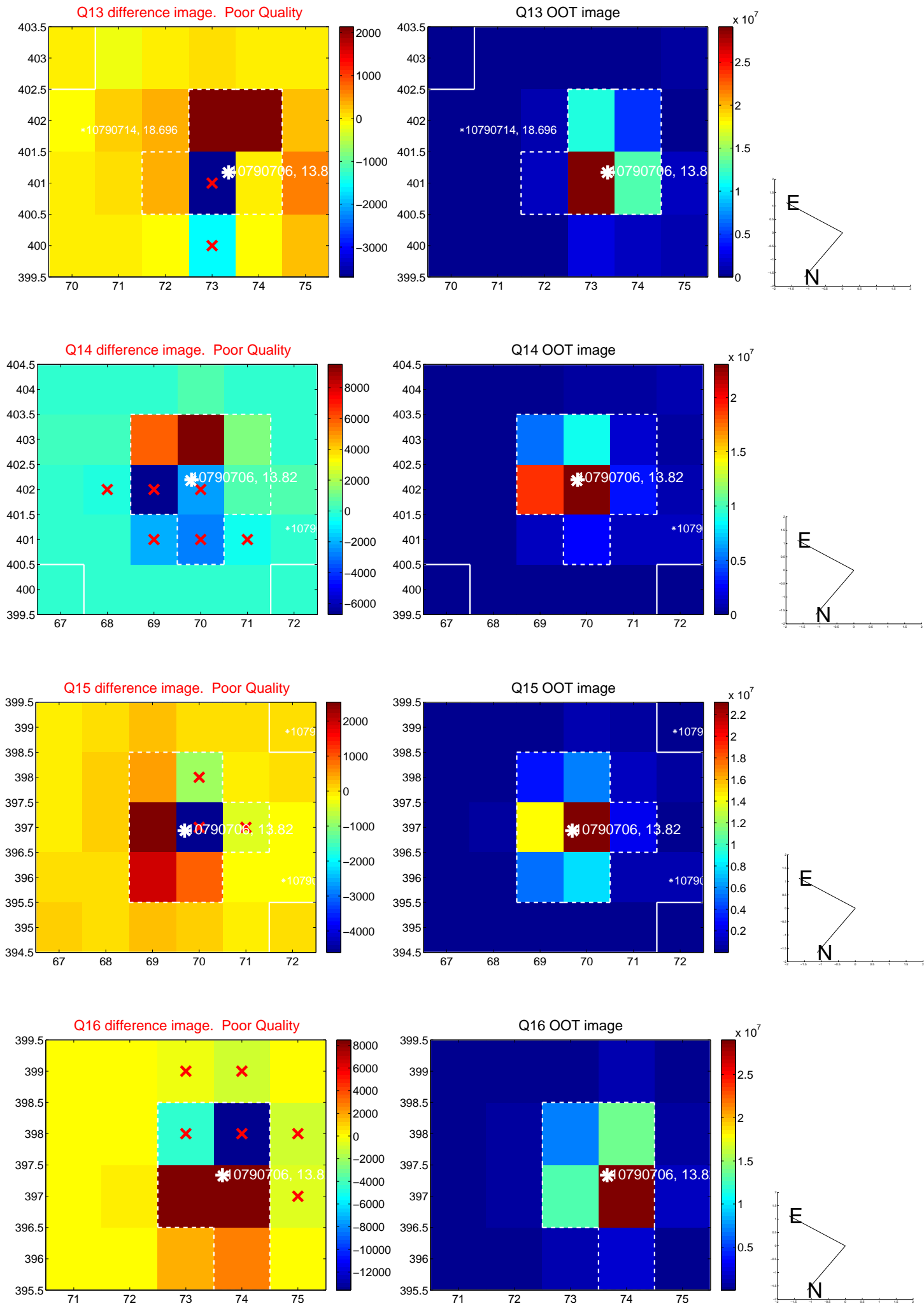
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



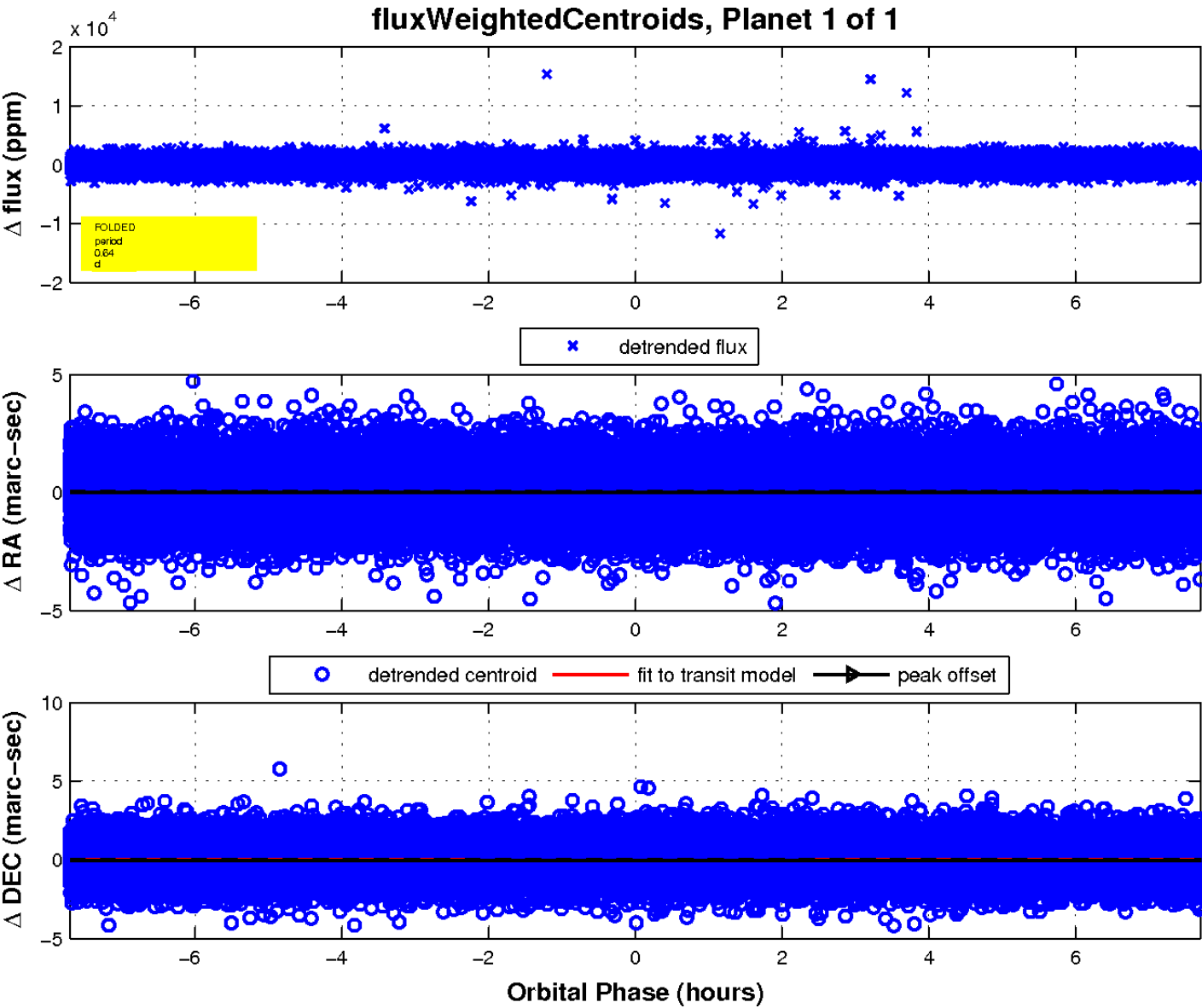
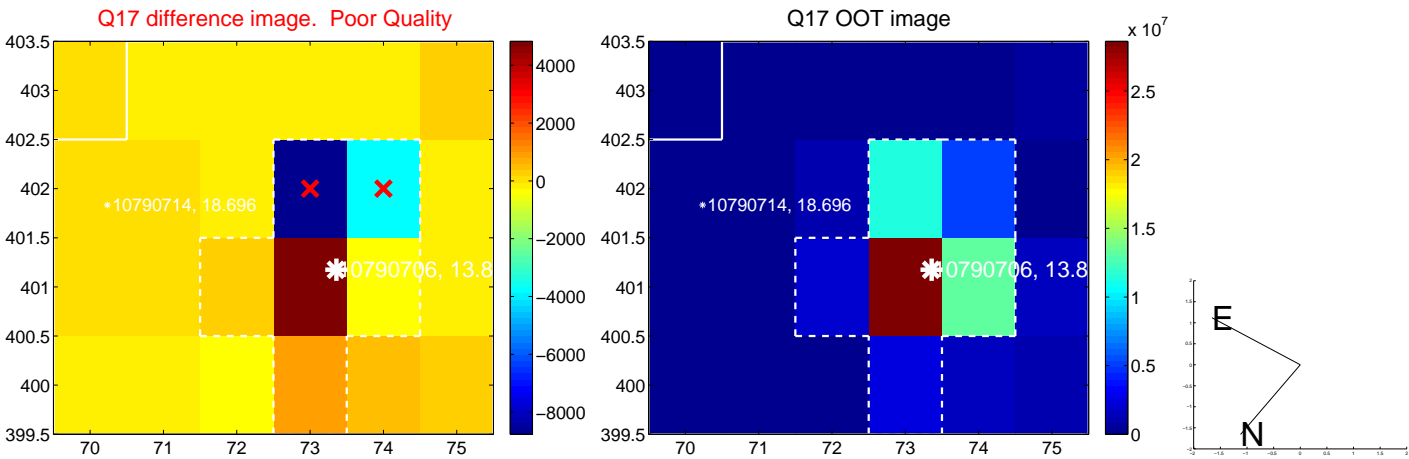
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

