

KIC 004464287

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 004464287-01 | OBS | No | 1.482906 | 132.172747 | 3.7 | 13.116 | 7.4 | 4.1 | 1.55 | 7716 | 0.30 | 8512.42 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|-----------------------|
| 004464287-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_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.

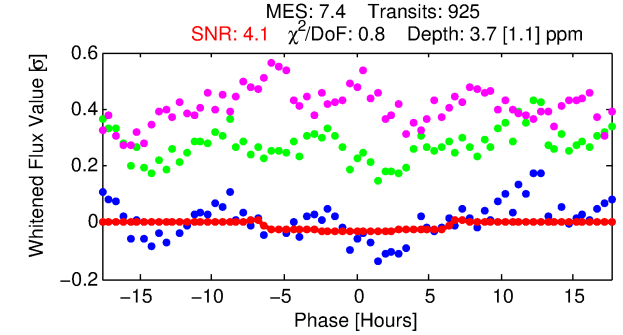
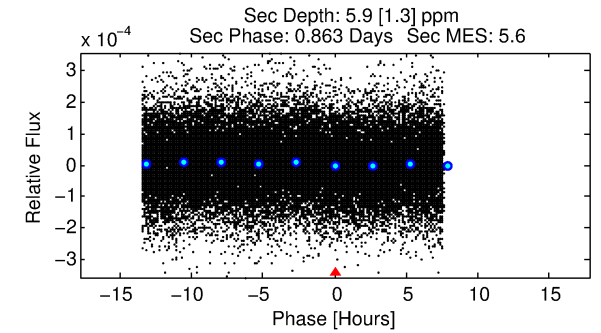
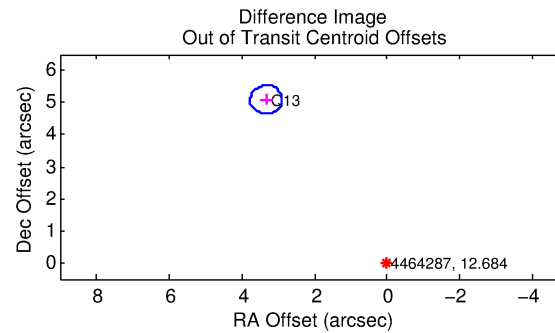
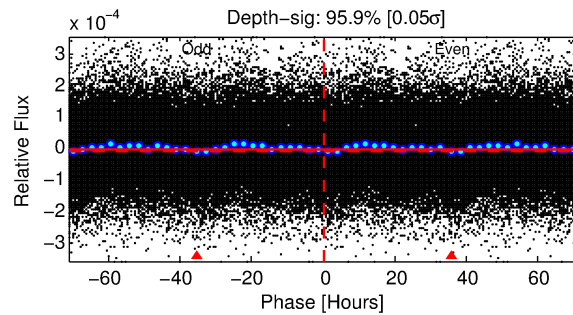
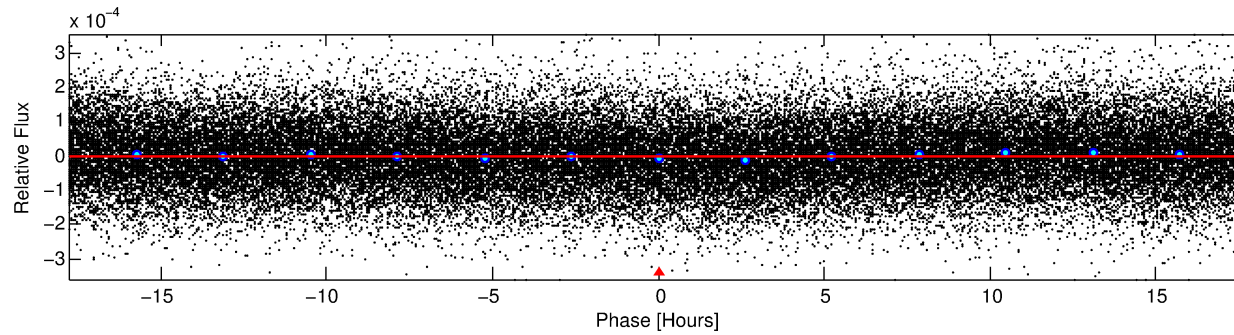
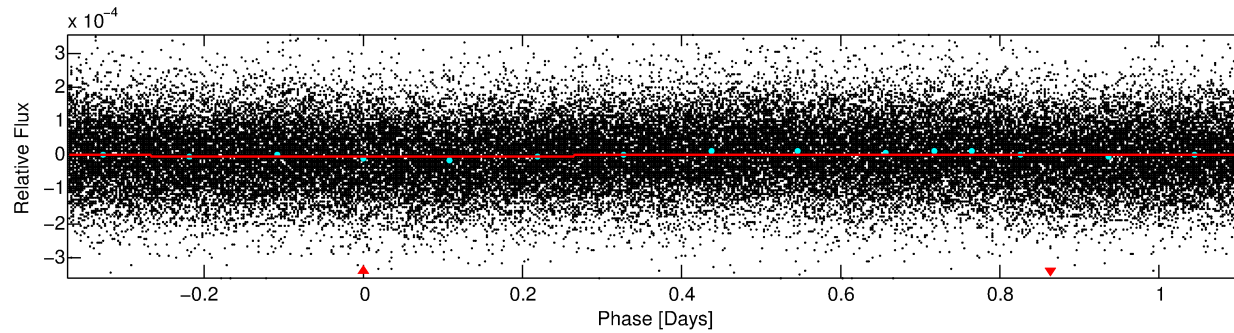
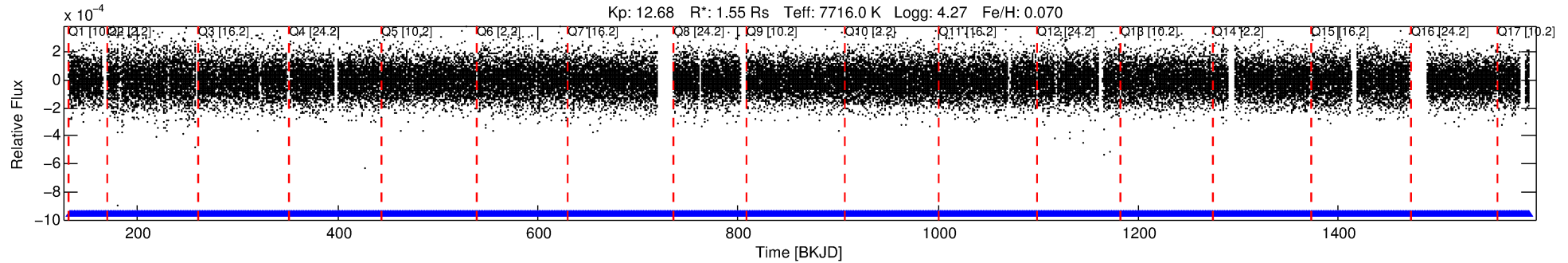
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004464287-01

No Significant Match Found

DV One-Page Summary

KIC: 4464287 Candidate: 1 of 1 Period: 1.483 d



DV Fit Results:

Period = 1.48291 [0.00007] d
Epoch = 132.1727 [0.0217] BKJD
Rp/R* = 0.0018 [0.0037]
a/R* = 1.09 [2.27]
b = 0.00 [14230.36]
Seff = 8512.42 [4027.28]
Teq = 2449 [290] K
Rp = 0.30 [0.64] Re
a = 0.0300 [0.0092] AU
Ag = 31.58 [131.02] [0.23 σ]
Teffp = 8977 [9265] K [0.70 σ]

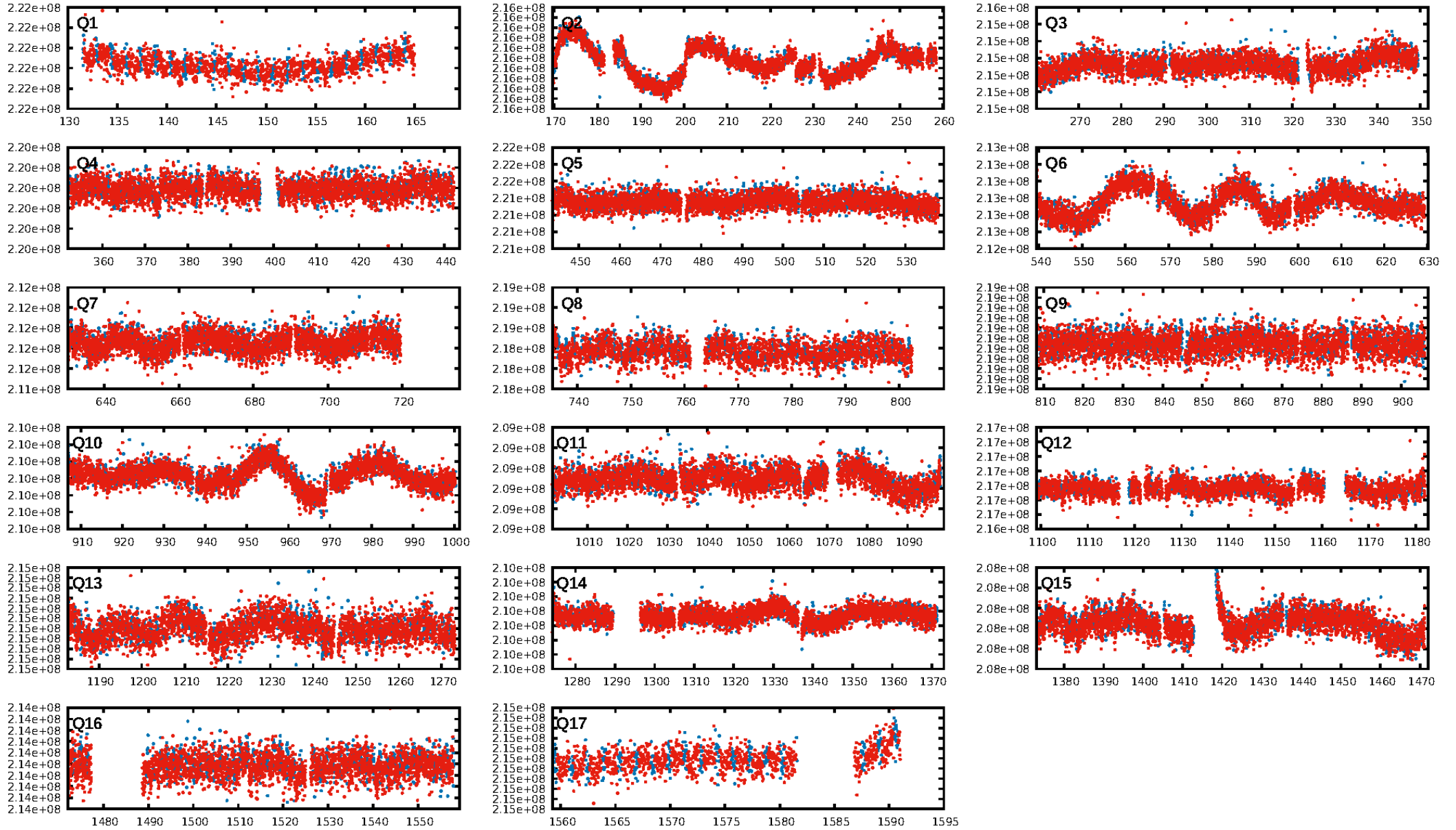
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [884/884]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 6.085 arcsec [41.68 σ]
KicOffset-rm: 6.169 arcsec [42.37 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

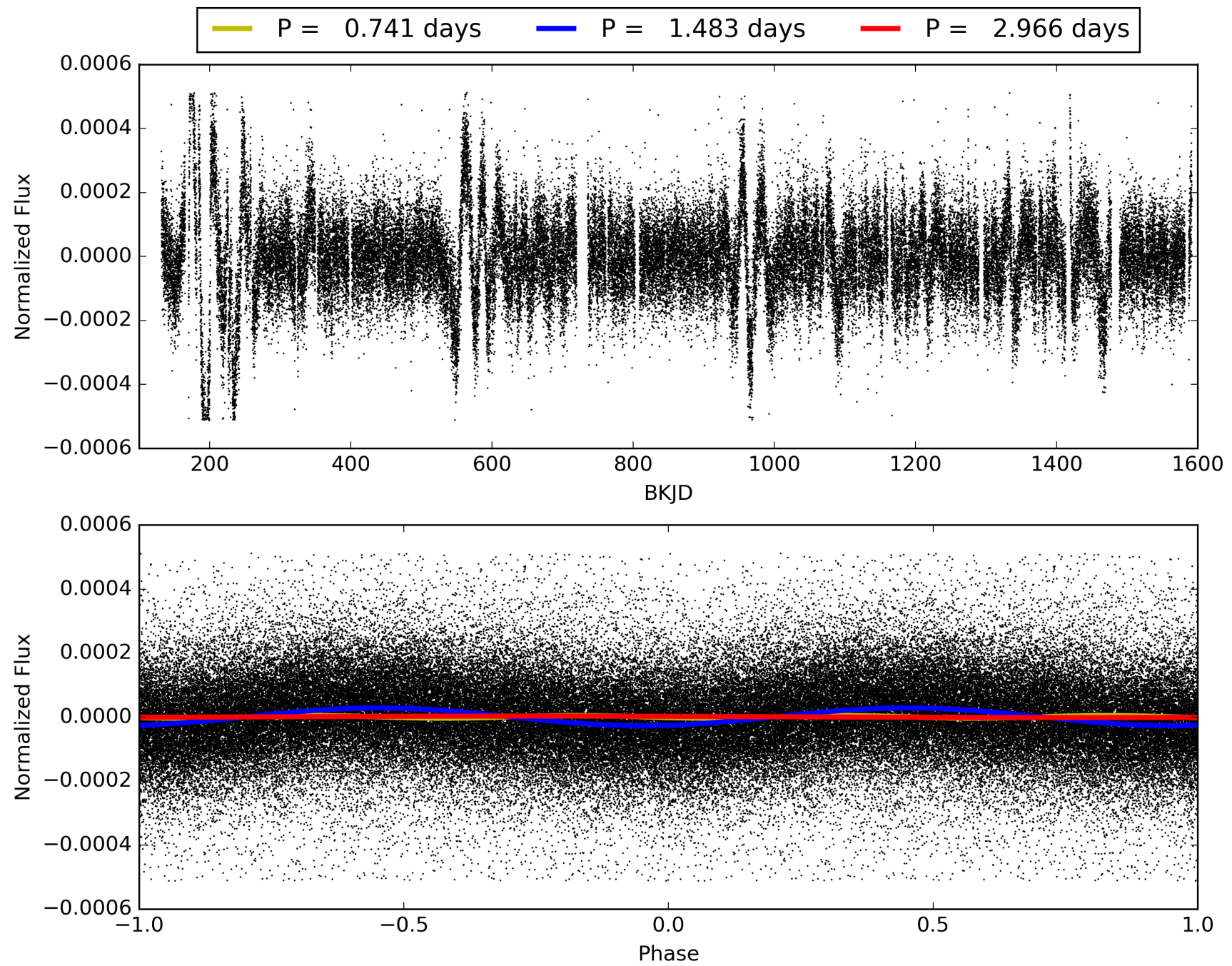
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:23:40 Z

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

TCE 004464287-01, PDC Light Curves

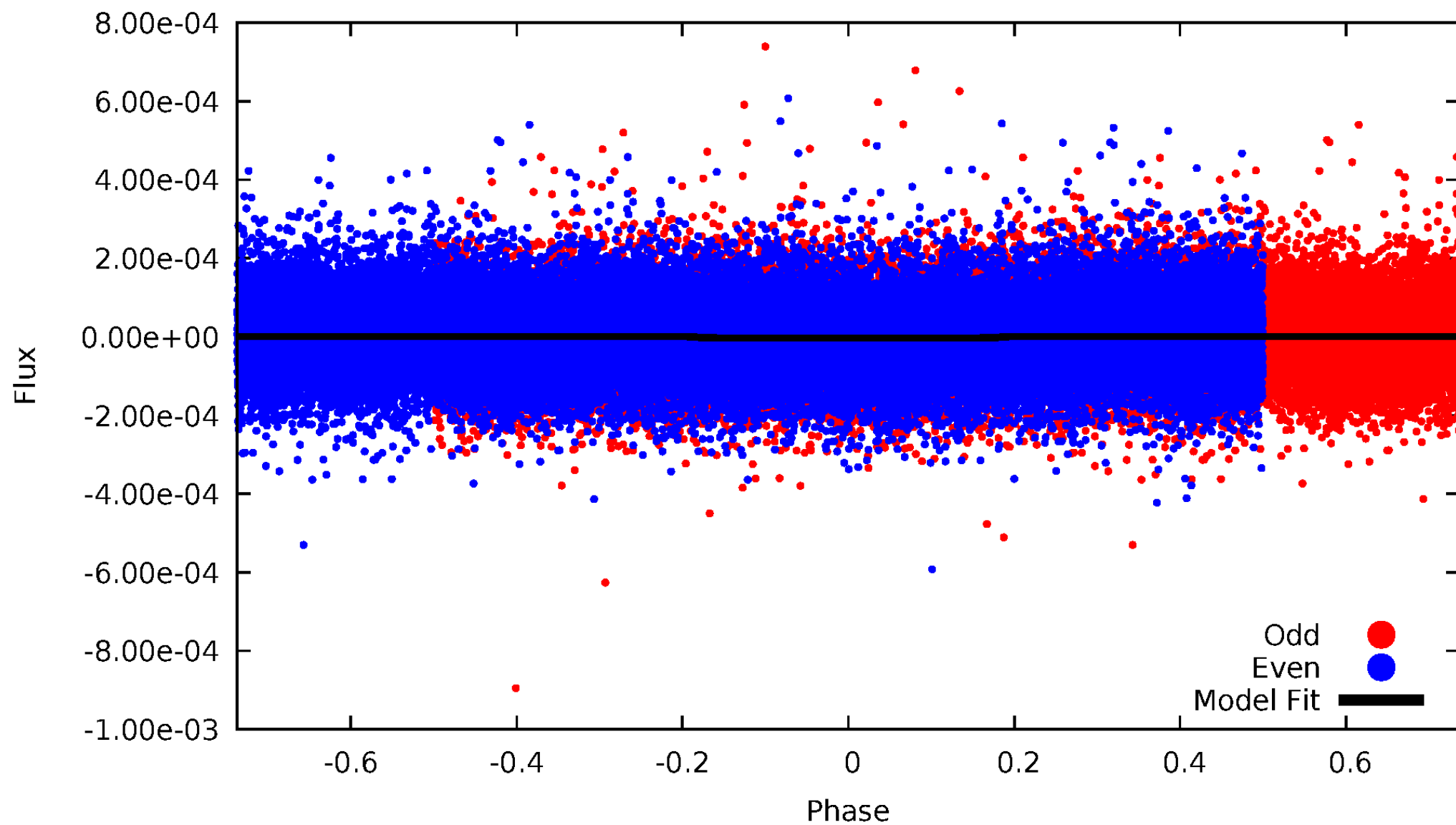


TCE 004464287-01



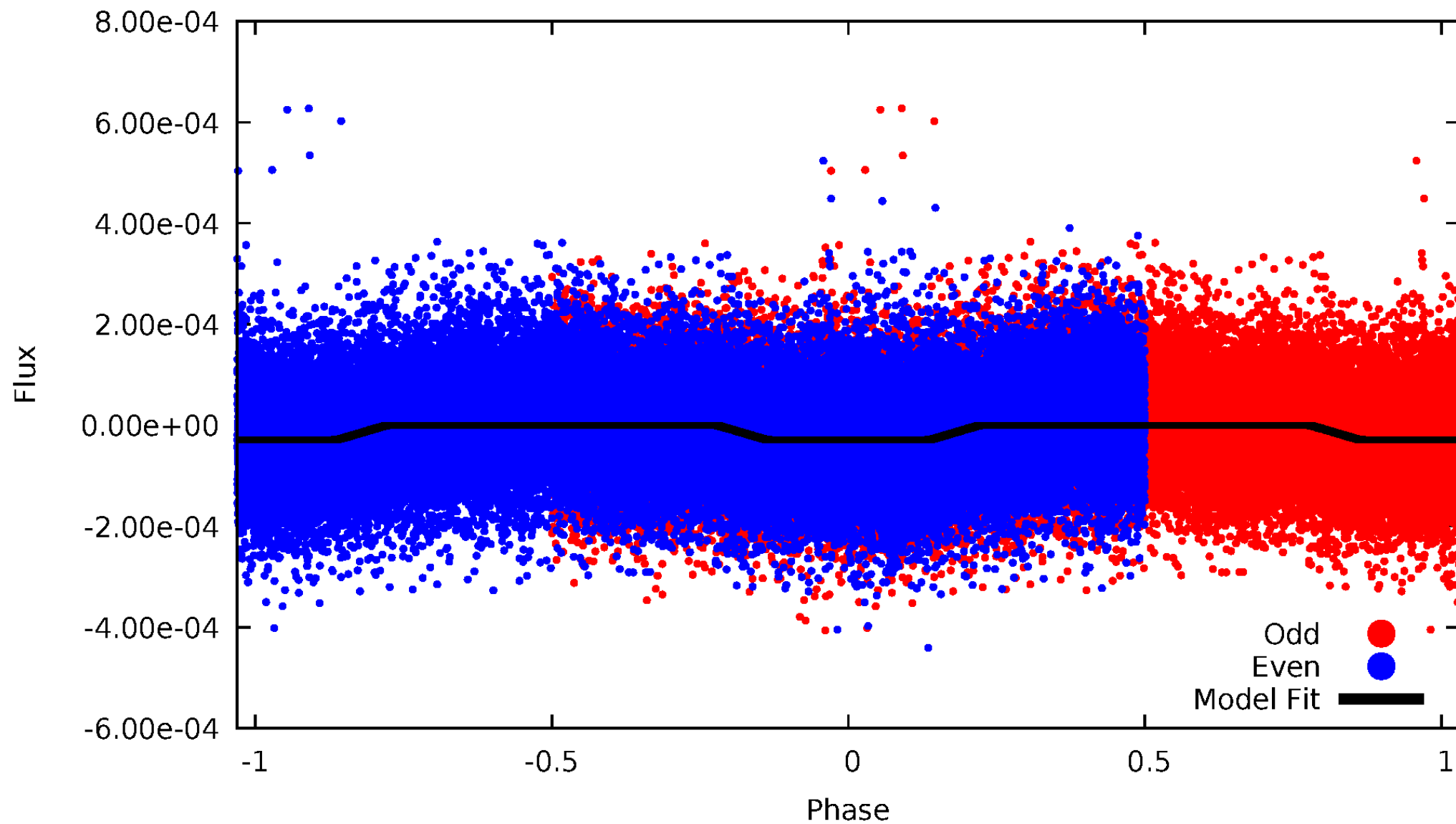
DV Odd/Even

TCE 004464287-01



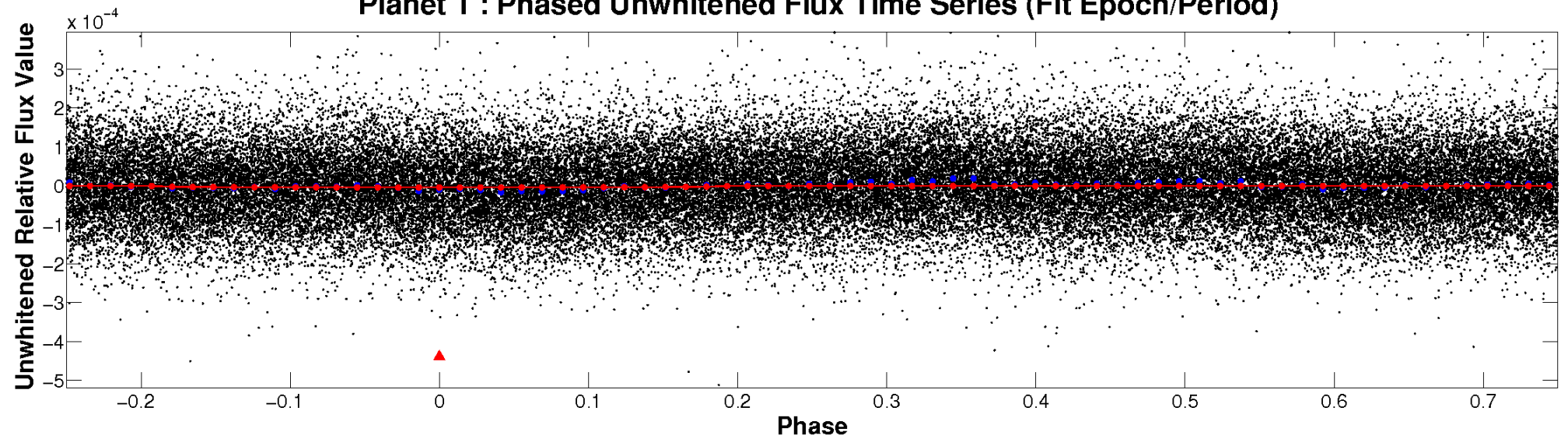
ALT Odd/Even

TCE 004464287-01

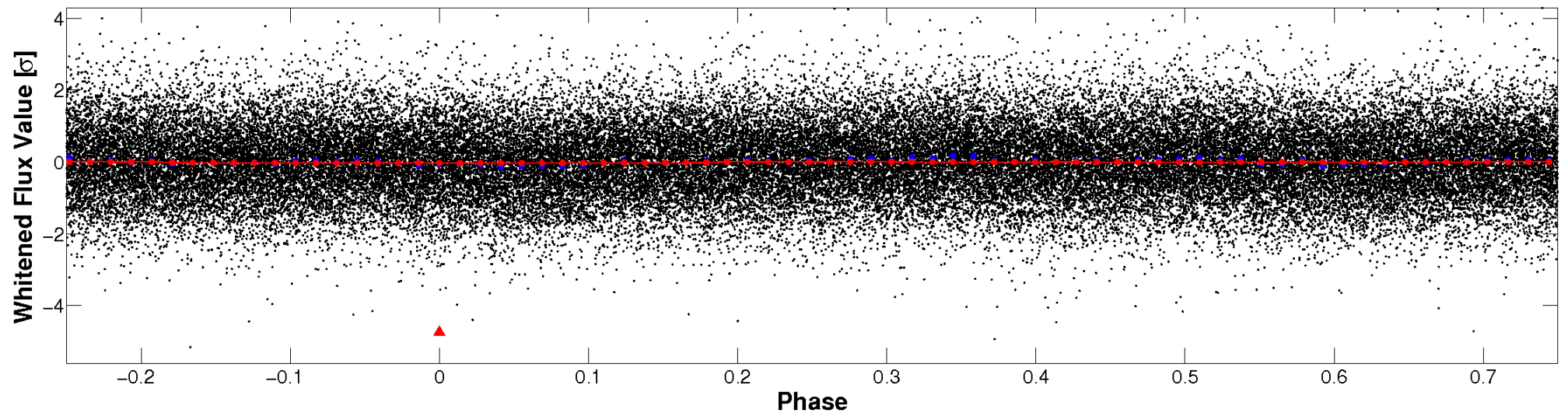


Non-Whitened Vs. Whitened Light Curve

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

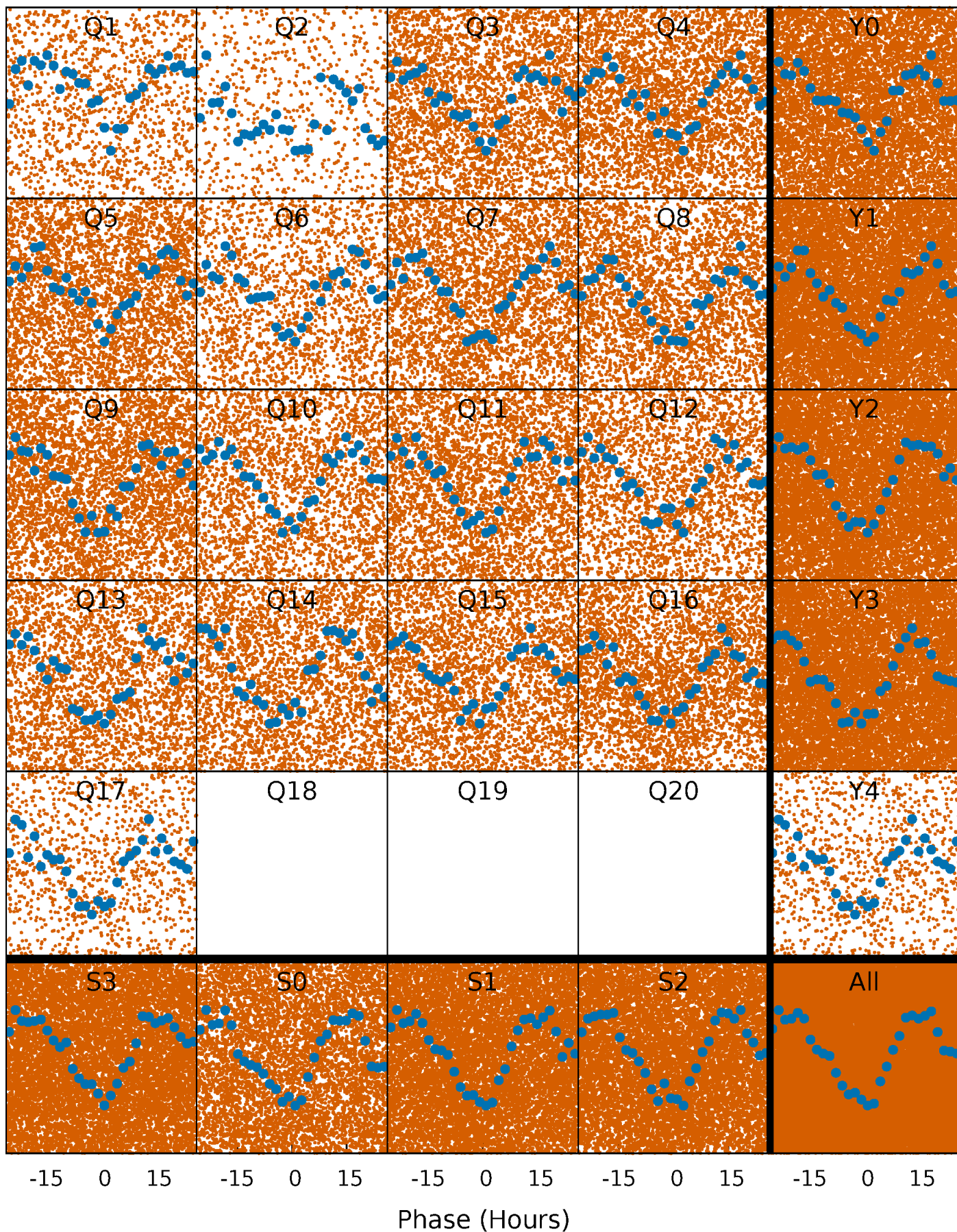


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



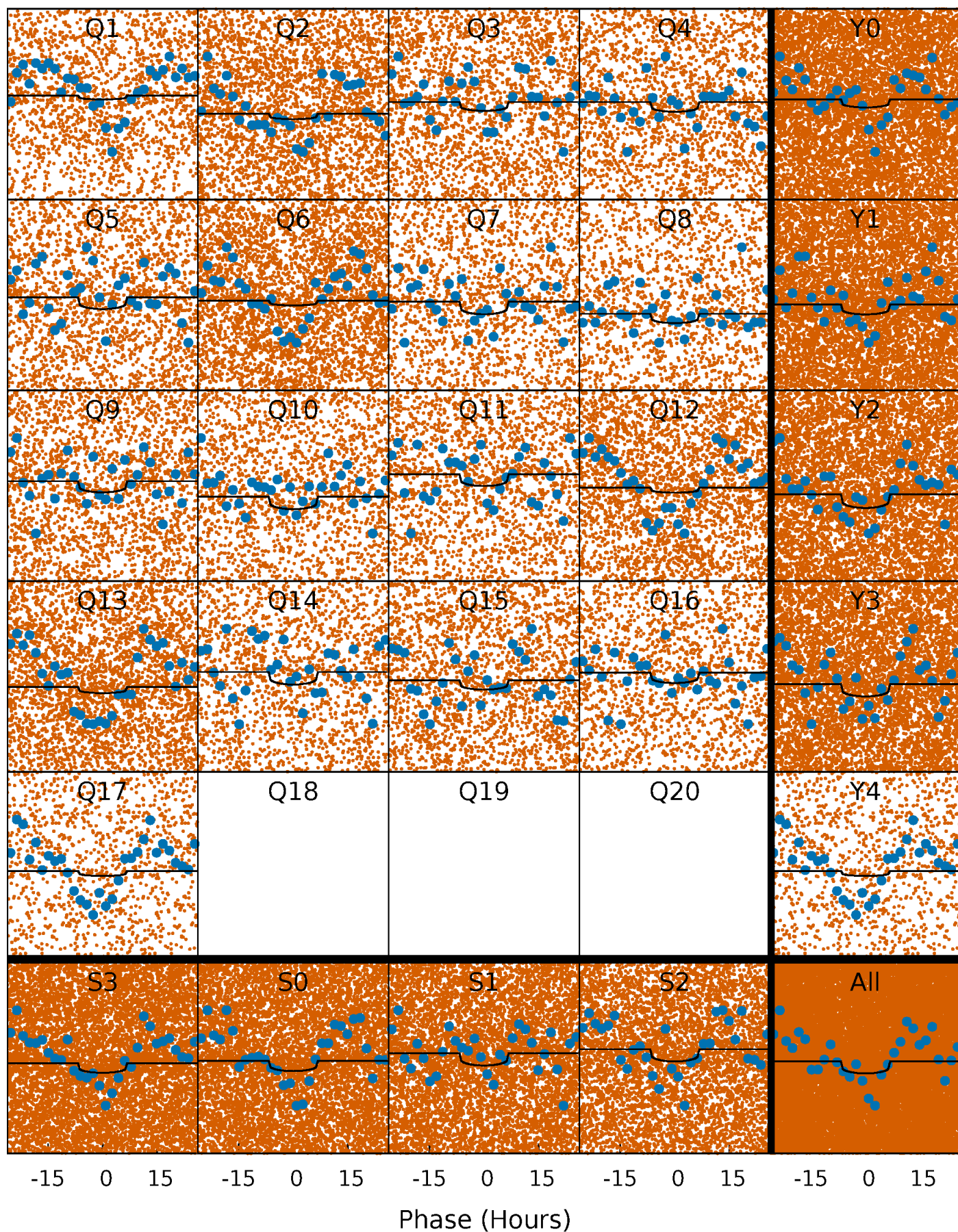
PDC Quarter-Phased Transit Curves

TCE 004464287-01 P= 1.482906 Days $T_0=132.172747$ (BKJD)



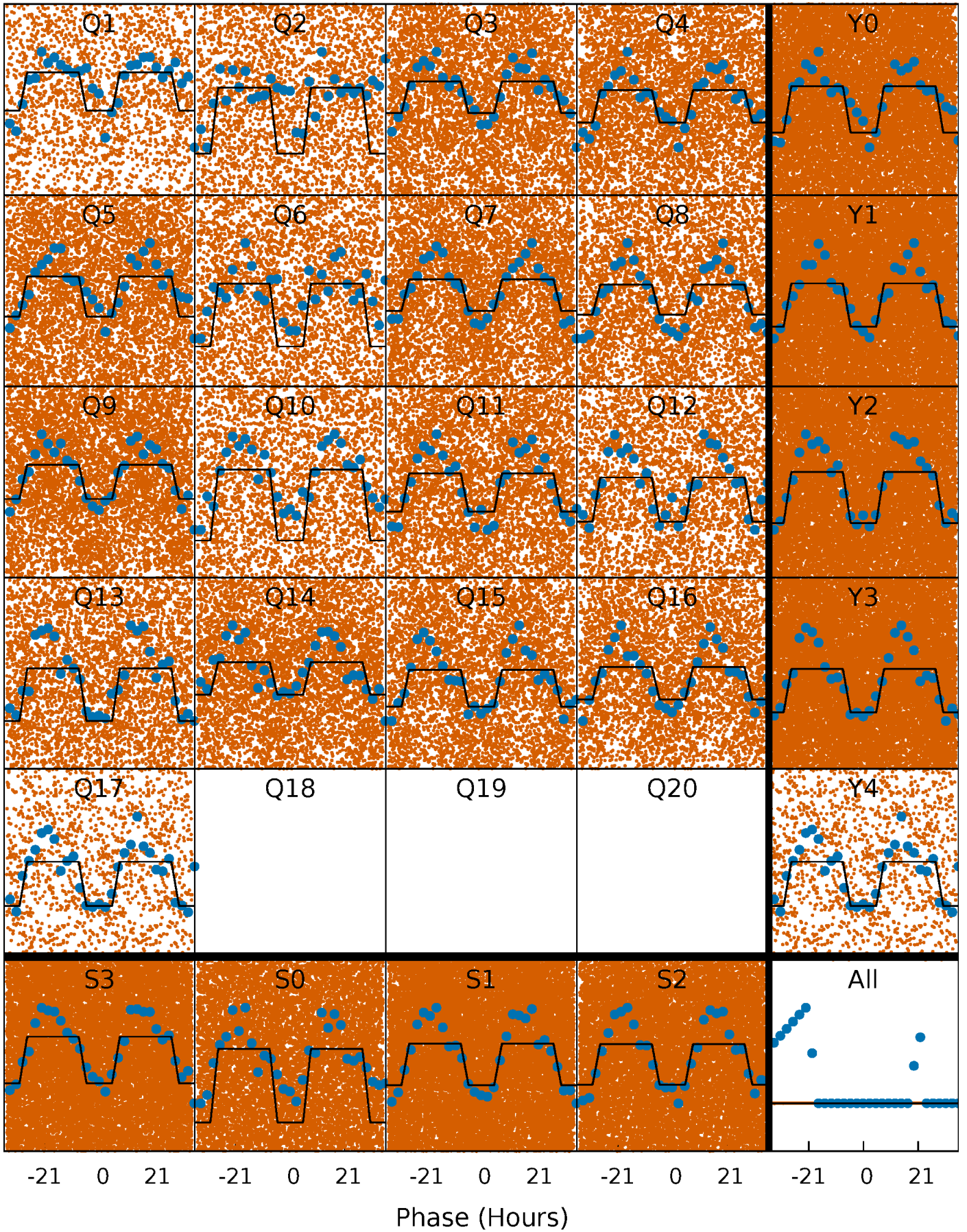
DV Quarter-Phased Transit Curves

TCE 004464287-01 P= 1.482906 Days $T_0=132.172747$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

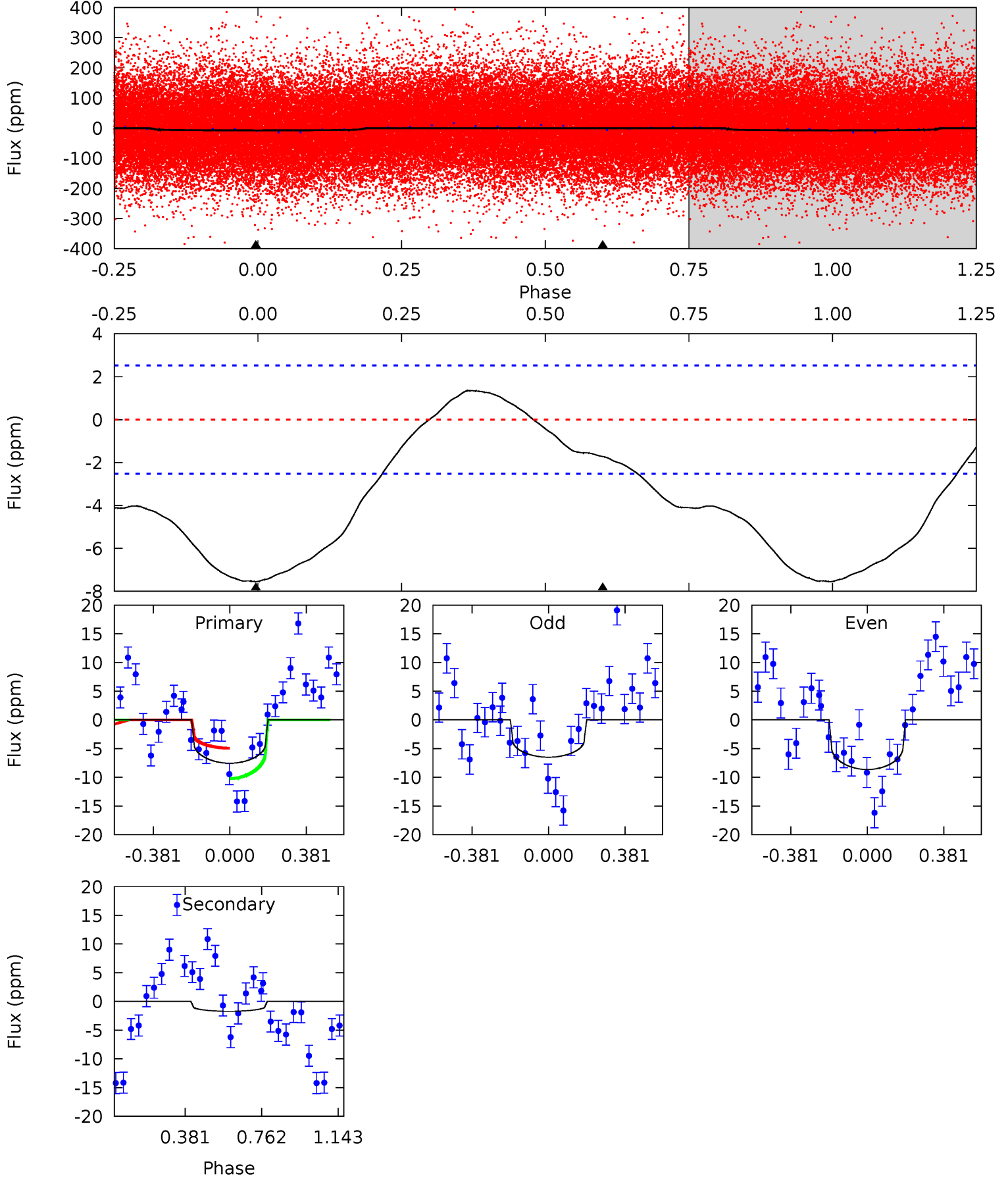
TCE 004464287-01 P= 1.482854 Days $T_0=132.163122$ (BKJD)



DV Model-Shift Uniqueness Test

004464287-01, P = 1.482906 Days, E = 130.689841 Days

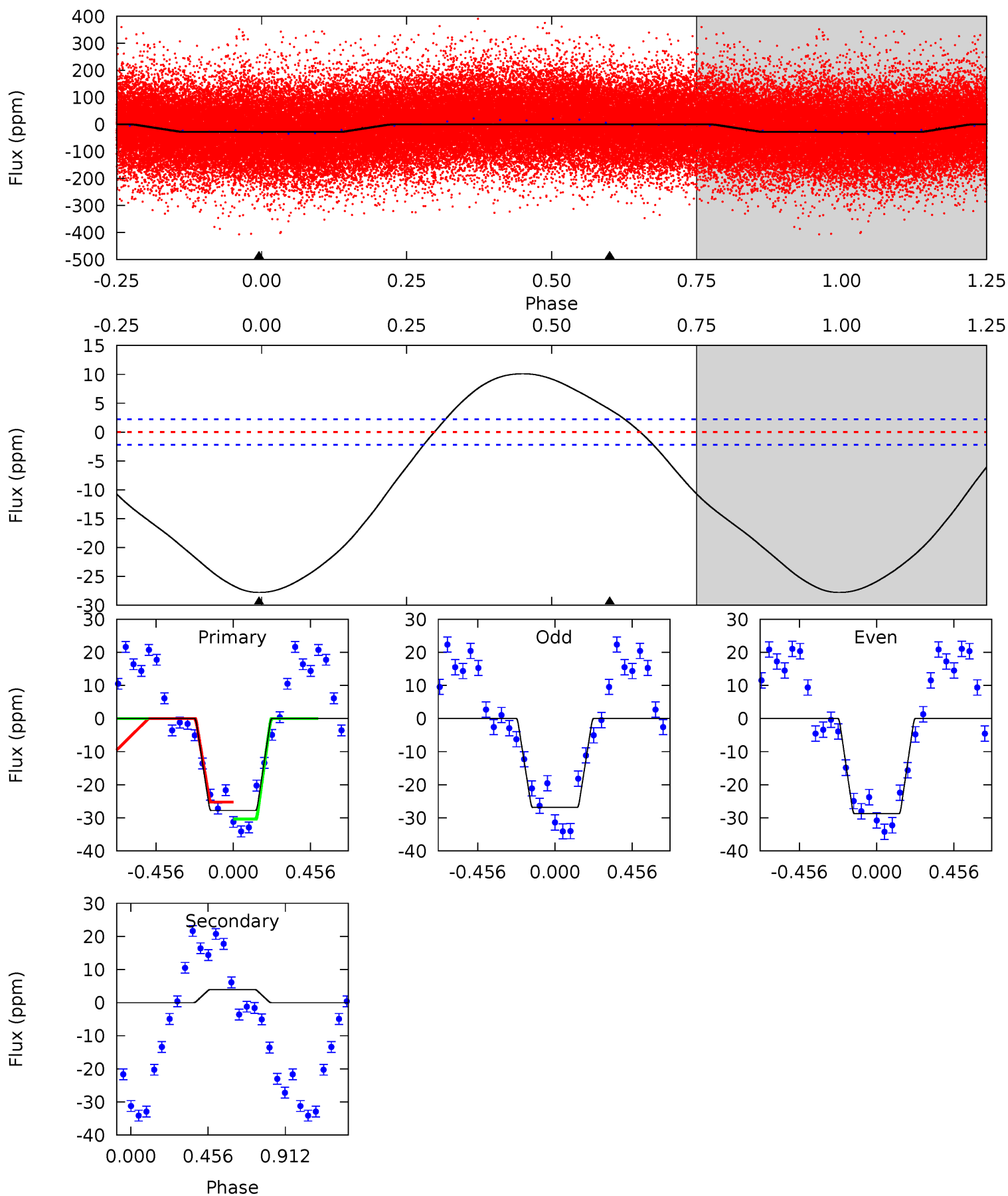
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 12.8 | 2.91 | 0 | 0 | 4.28 | 0.88 | 1.18 | 12.8 | 12.8 | 2.91 | 2.91 | 1.83 | 1.07 | 0.15 | 4.51 |



Alt Model-Shift Uniqueness Test

004464287-01, P = 1.482854 Days, E = 130.680268 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 53.2 | -7.54 | 0 | 0 | 4.24 | 0.75 | 6.78 | 53.2 | 53.2 | -7.54 | -7.54 | 1.83 | 0.98 | 0.27 | 5.01 |



Stellar Parameters For KIC 004464287

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 7716^{+214}_{-322} | $4.269^{+0.060}_{-0.240}$ | $0.070^{+0.200}_{-0.400}$ | $1.551^{+0.571}_{-0.190}$ | $1.632^{+0.231}_{-0.210}$ | $0.616^{+0.196}_{-0.361}$ |
| | +3%/-4% | +1%/-6% | +286%/-571% | +37%/-12% | +14%/-13% | +32%/-59% |
| 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 004464287-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|----------------------------|
| DV | -2 ± 1 | $0.60^{+0.57}_{-0.39}$ | 3497^{+324}_{-202} | 4696^{+3480}_{-1436} | $2.331^{+17.535}_{-1.796}$ |
| Alt. | 4 ± 1 | $1.00^{+0.73}_{-0.54}$ | 3498^{+301}_{-195} | -4817^{+709}_{-1817} | $-1.906^{+1.247}_{-6.742}$ |

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 $A_{obs} \gg 1.0$

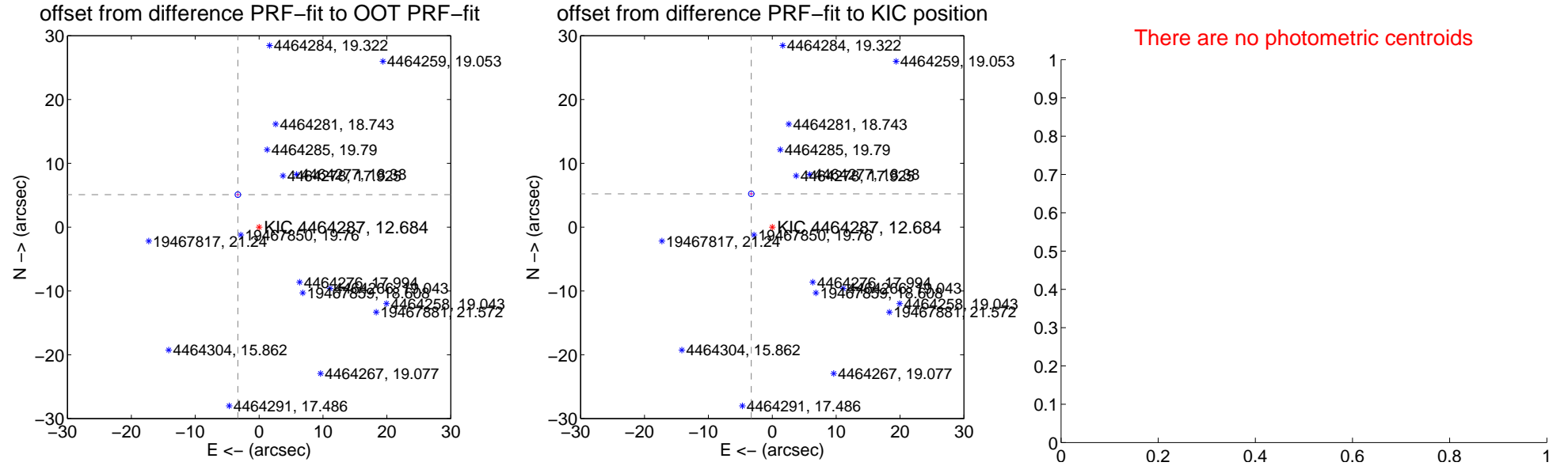
DV Centroid Data

Supplemental centroid analysis for 004464287-01. Kepler magnitude: 12.68. Transit SNR 4.14

There are 0 quarters with good PRF difference image offsets

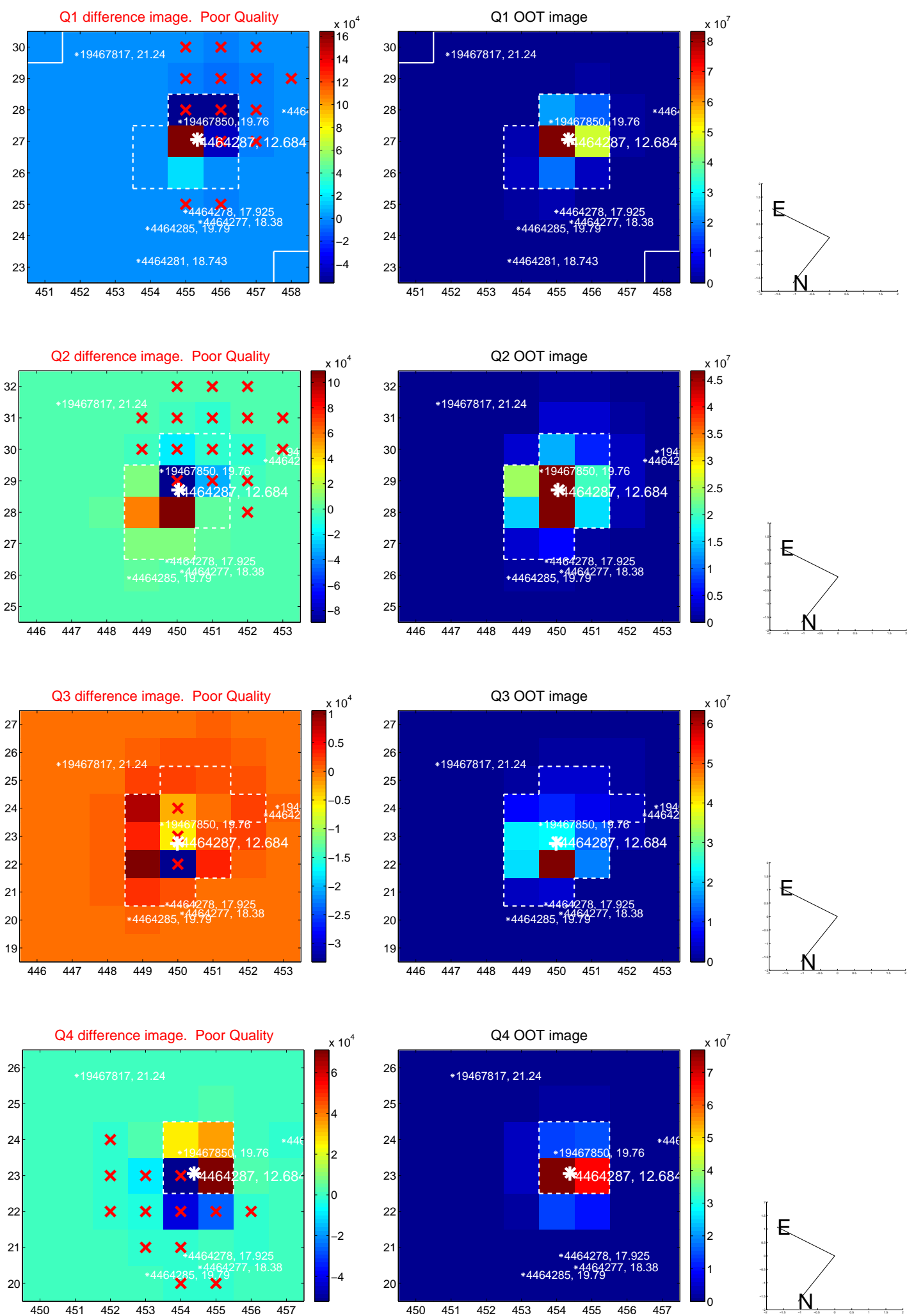
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 6.085 \pm 0.146 | 41.68 | 3.327 \pm 0.164 | 5.095 \pm 0.138 |
| PRF-fit source offset from KIC position | 6.169 \pm 0.146 | 42.37 | 3.287 \pm 0.164 | 5.220 \pm 0.138 |
| photometric centroid source offset | — | — | — | — |

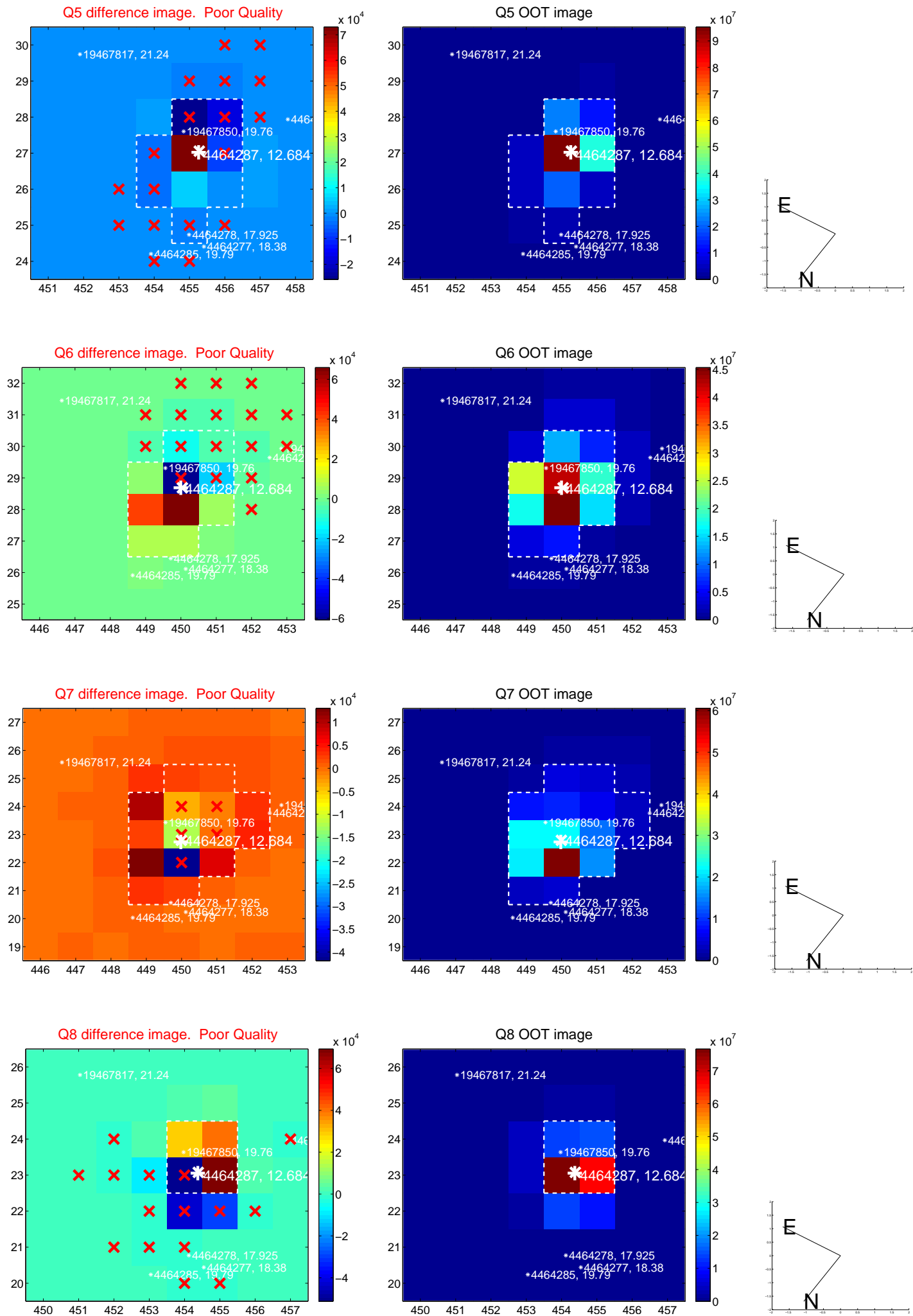


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

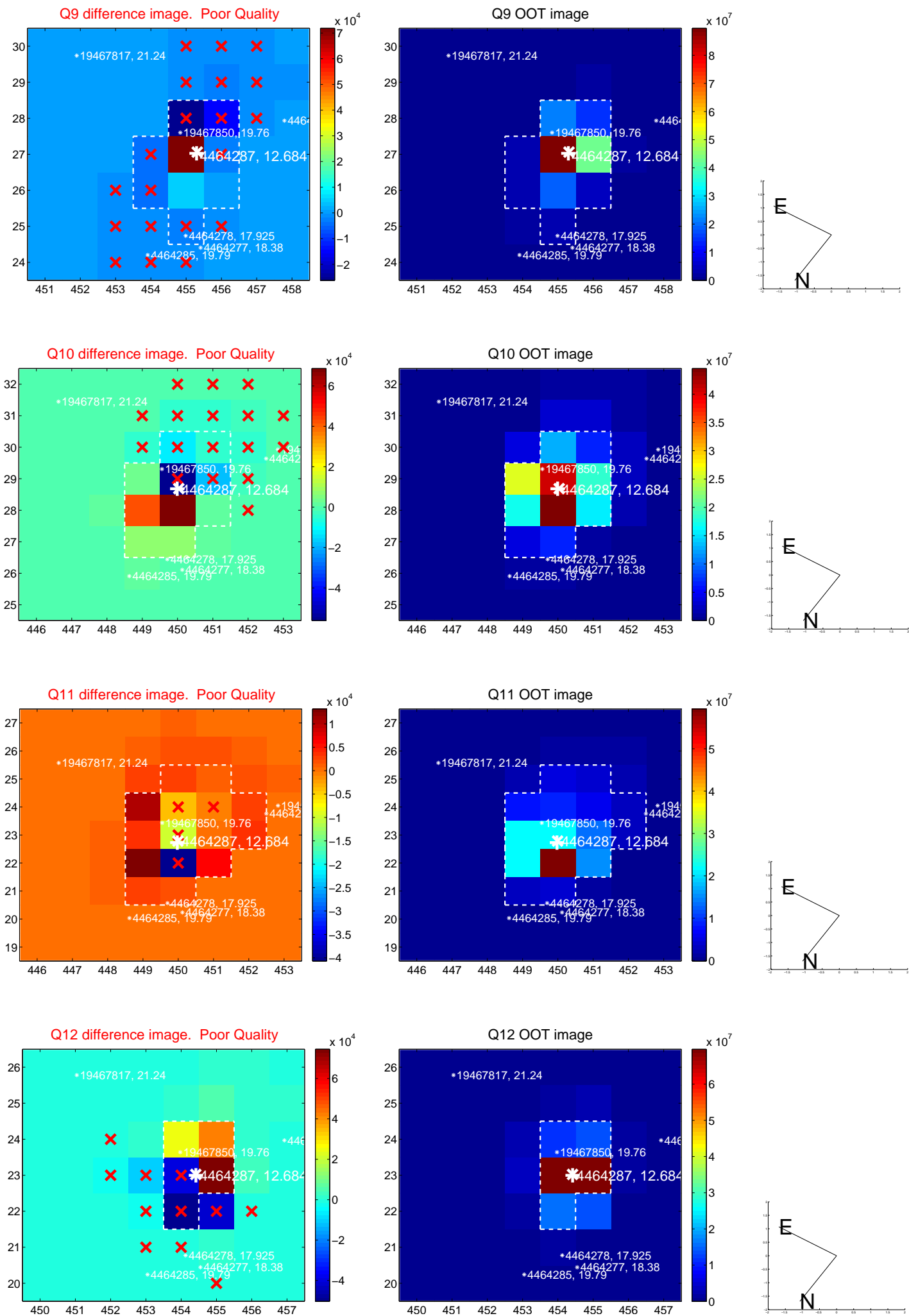
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



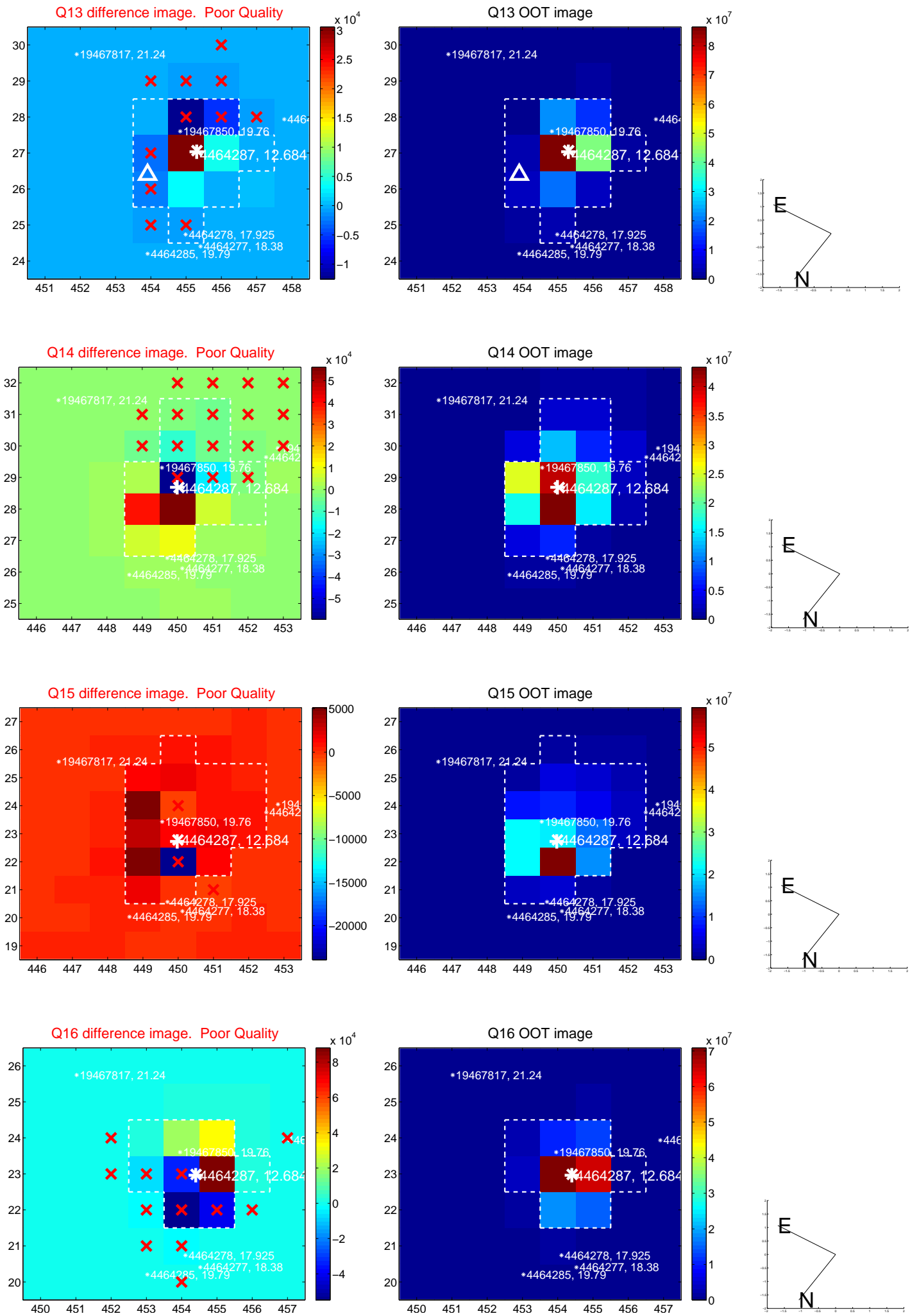
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



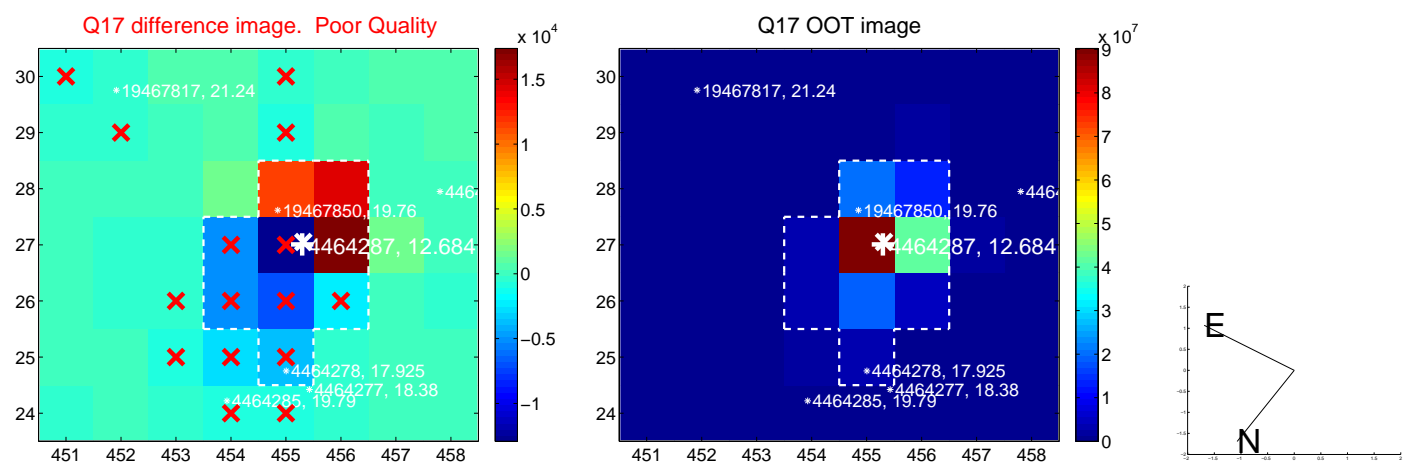
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

