

KIC 008881697

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 008881697-01 | OBS | No | 1.302745 | 131.570575 | 28.5 | 11.146 | 10.4 | 11.0 | 2.48 | 7932 | 1.36 | 26081.30 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 008881697-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED |

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

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

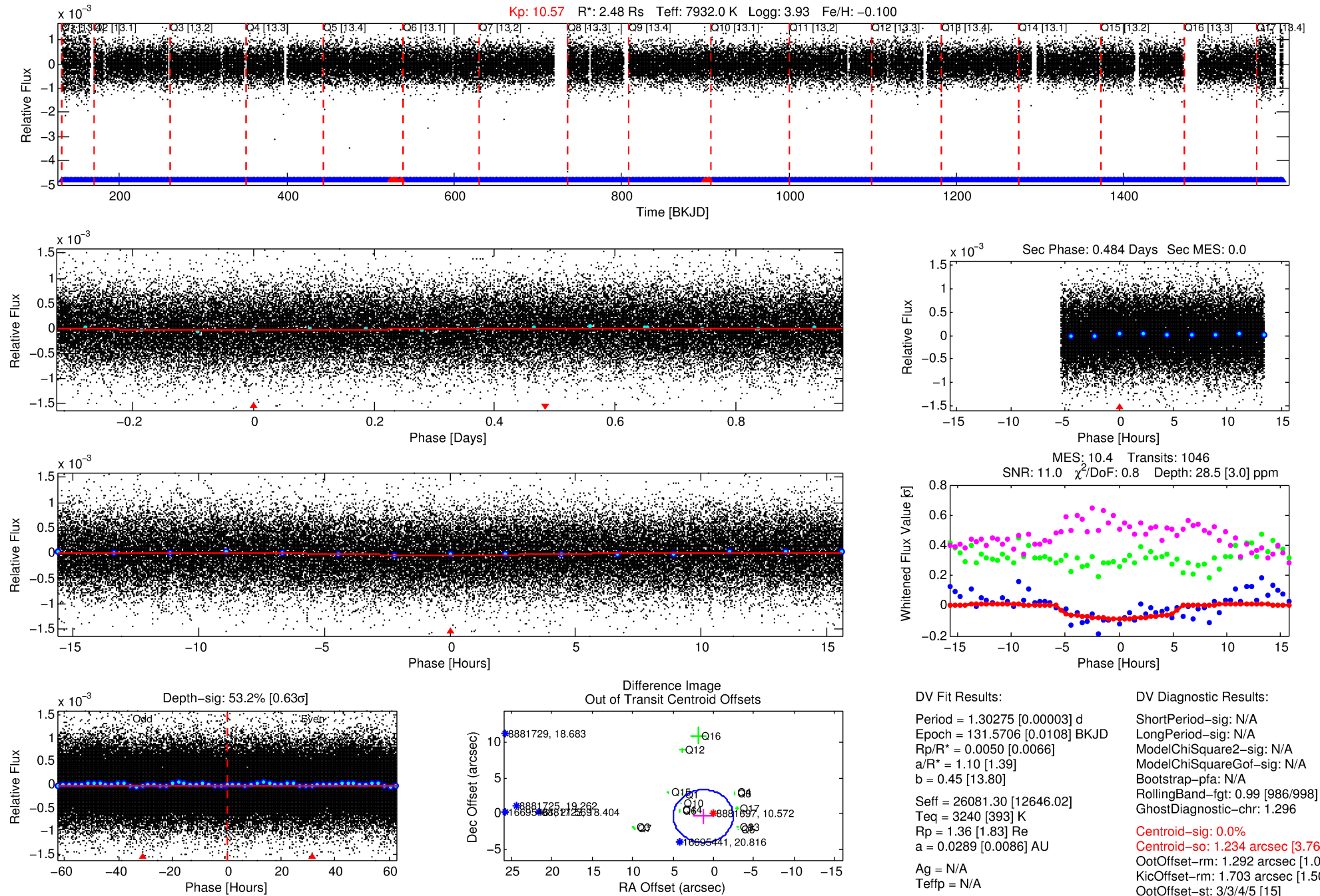
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008881697-01

No Significant Match Found

DV One-Page Summary

KIC: 8881697 Candidate: 1 of 1 Period: 1.303 d



DV Fit Results:

Period = 1.30275 [0.00003] d
 Epoch = 131.5706 [0.0108] BKJD
 Rp/R* = 0.0050 [0.0066]
 a/R* = 1.10 [1.39]
 b = 0.45 [13.80]
 Seff = 26081.30 [12646.02]
 Teq = 3240 [393] K
 Rp = 1.36 [1.83] Re
 a = 0.0289 [0.0086] AU
 Ag = N/A
 Tefp = N/A

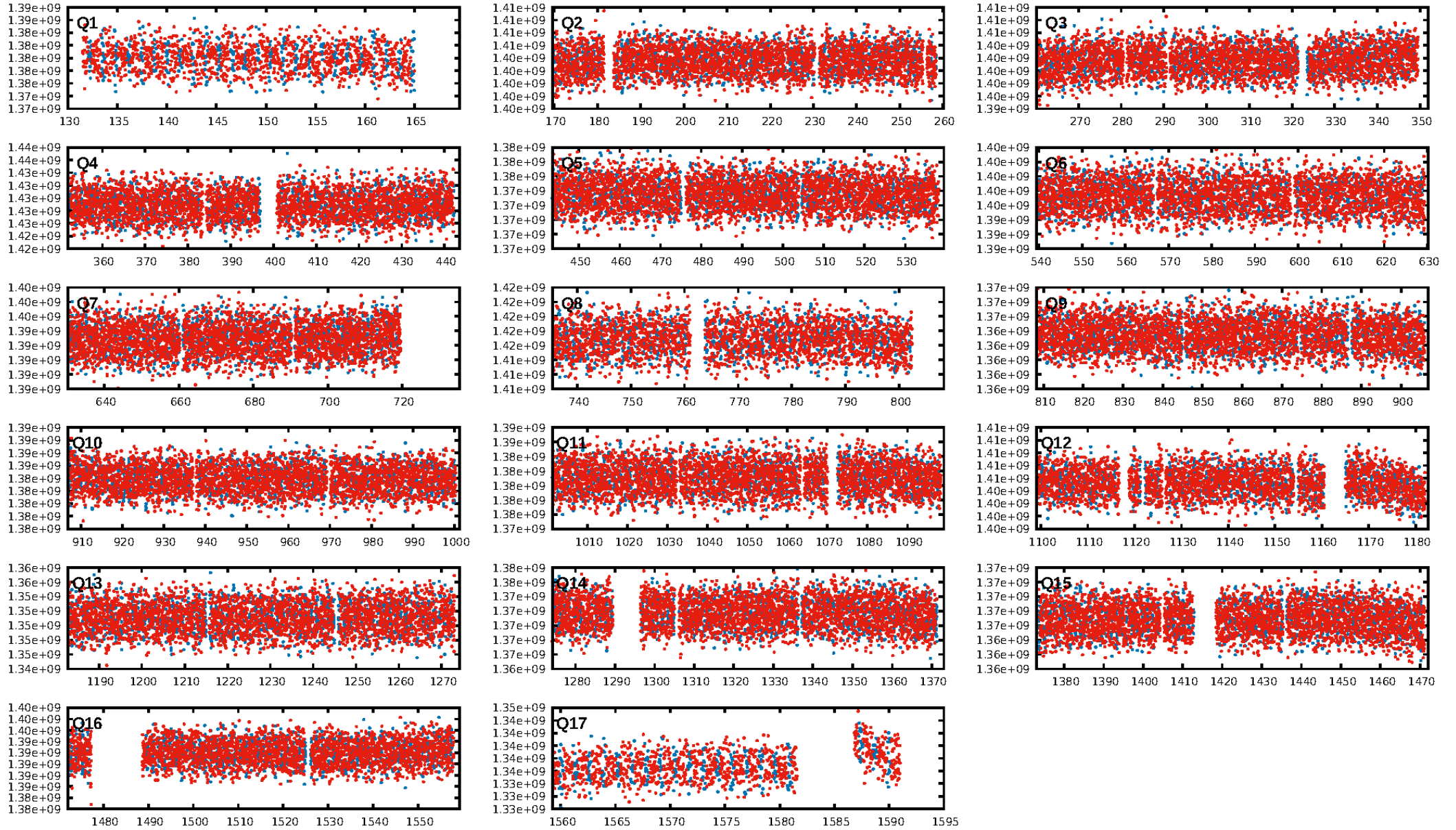
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: N/A
 RollingBand-fgt: 0.99 [986/998]
 GhostDiagnostic-chr: 1.296
 Centroid-sig: 0.0%
 Centroid-so: 1.234 arcsec [3.76σ]
 OotOffset-rm: 1.292 arcsec [1.04σ]
 KicOffset-rm: 1.703 arcsec [1.50σ]
 OotOffset-st: 3/3/4/5 [15]
 KicOffset-st: 3/3/4/5 [15]
 DiffImageQuality-fgm: 0.00 [0/15]
 DiffImageOverlap-fno: 1.00 [17/17]

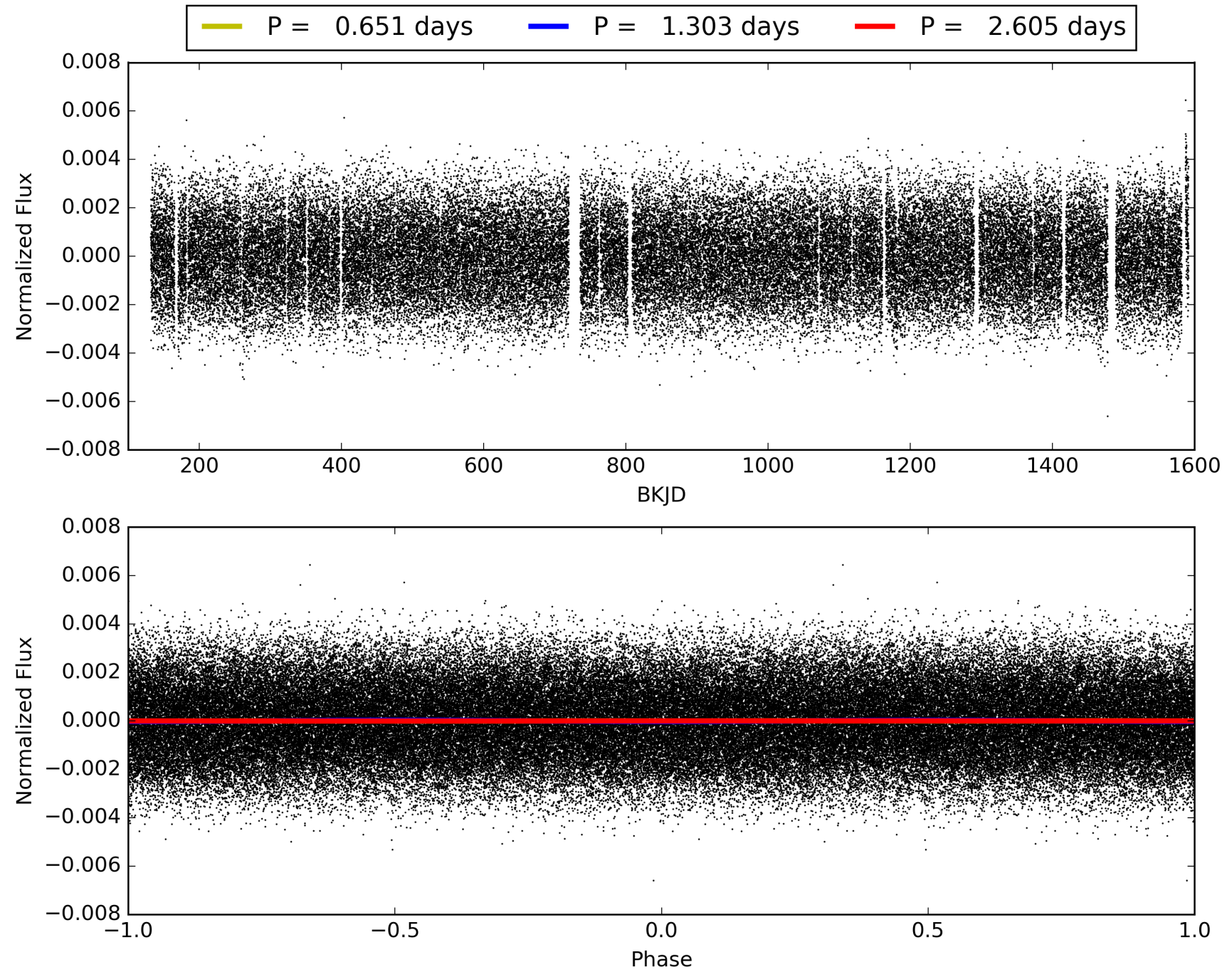
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:36:15 Z

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

TCE 008881697-01, PDC Light Curves

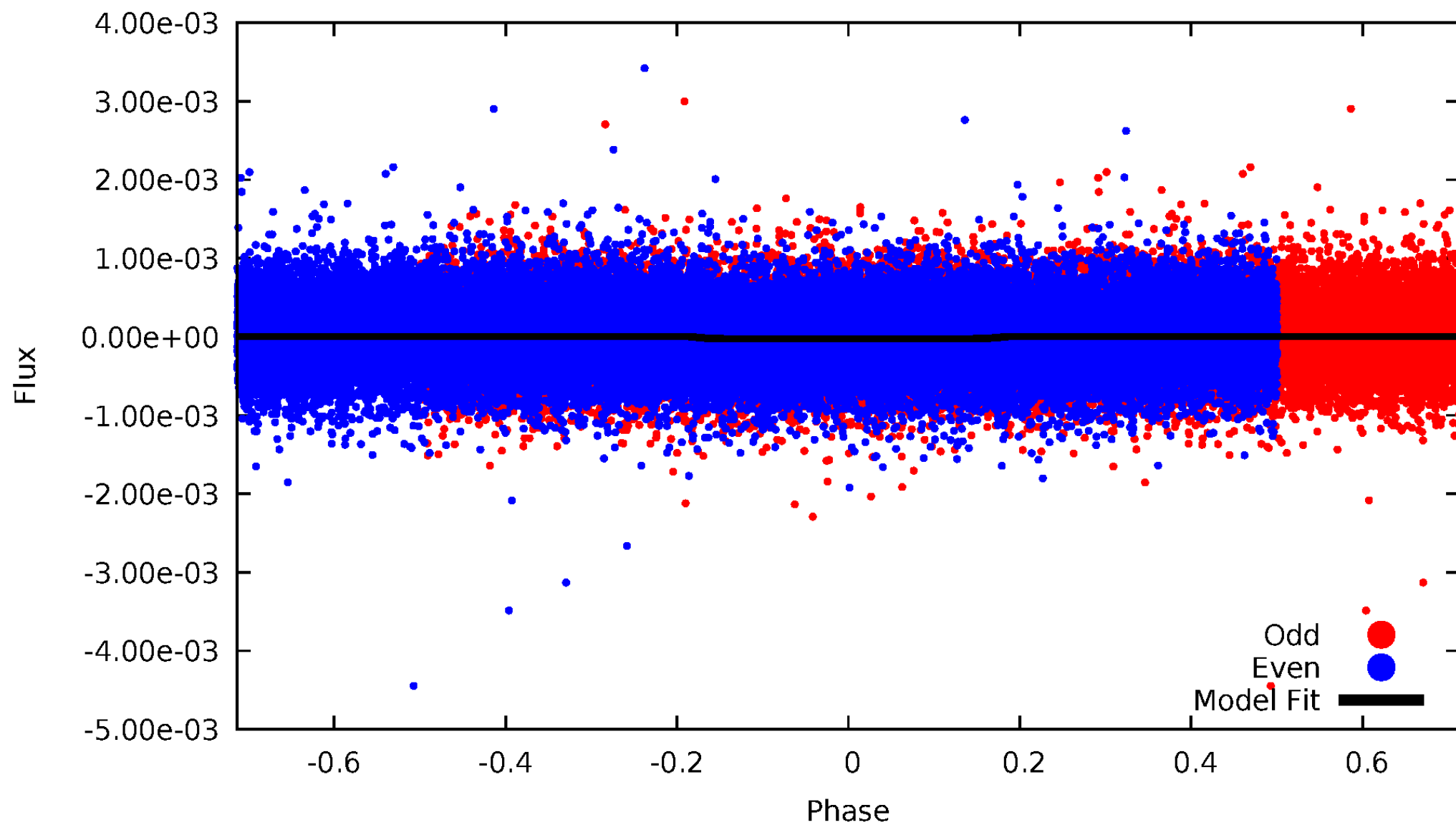


TCE 008881697-01



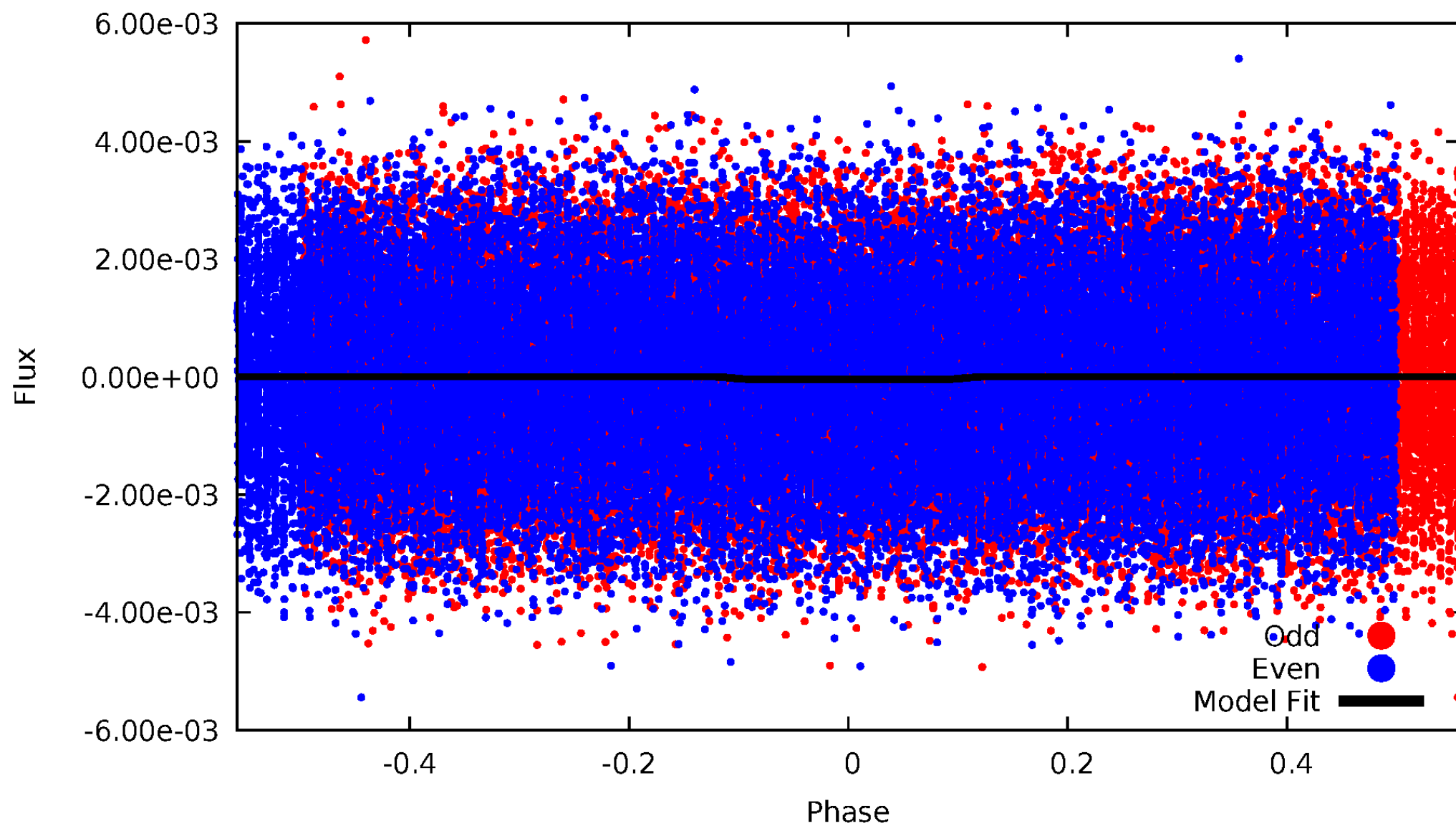
DV Odd/Even

TCE 008881697-01



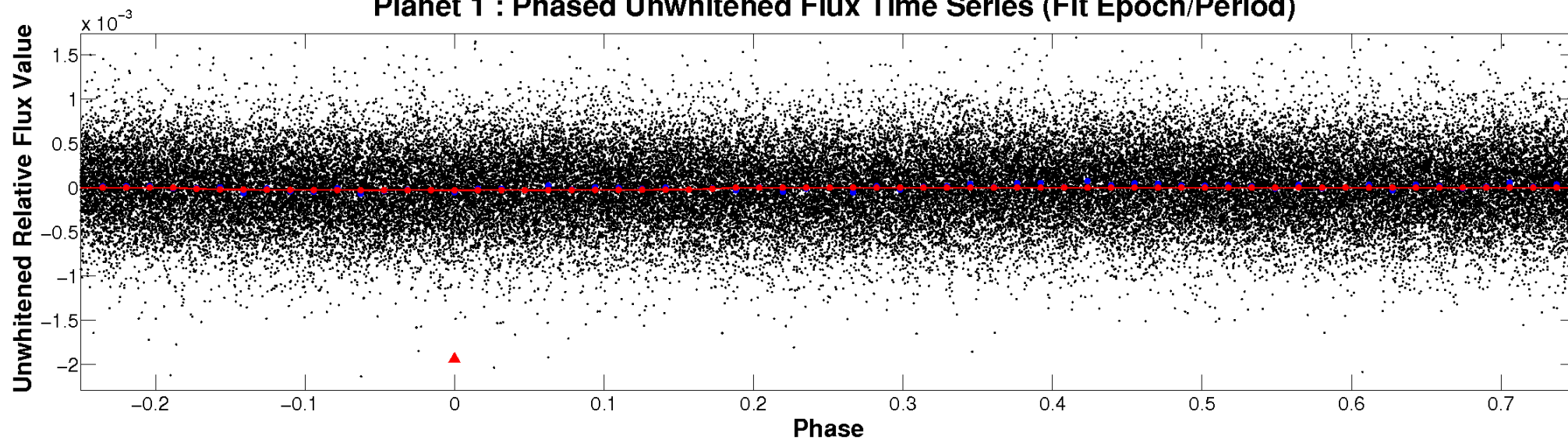
ALT Odd/Even

TCE 008881697-01

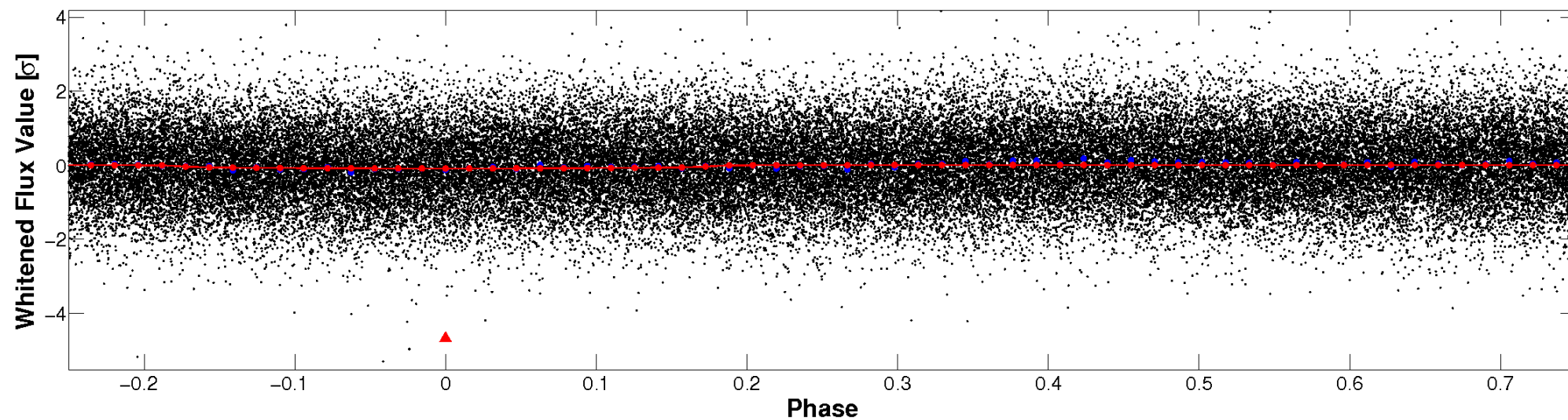


Non-Whitened Vs. Whitened Light Curve

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

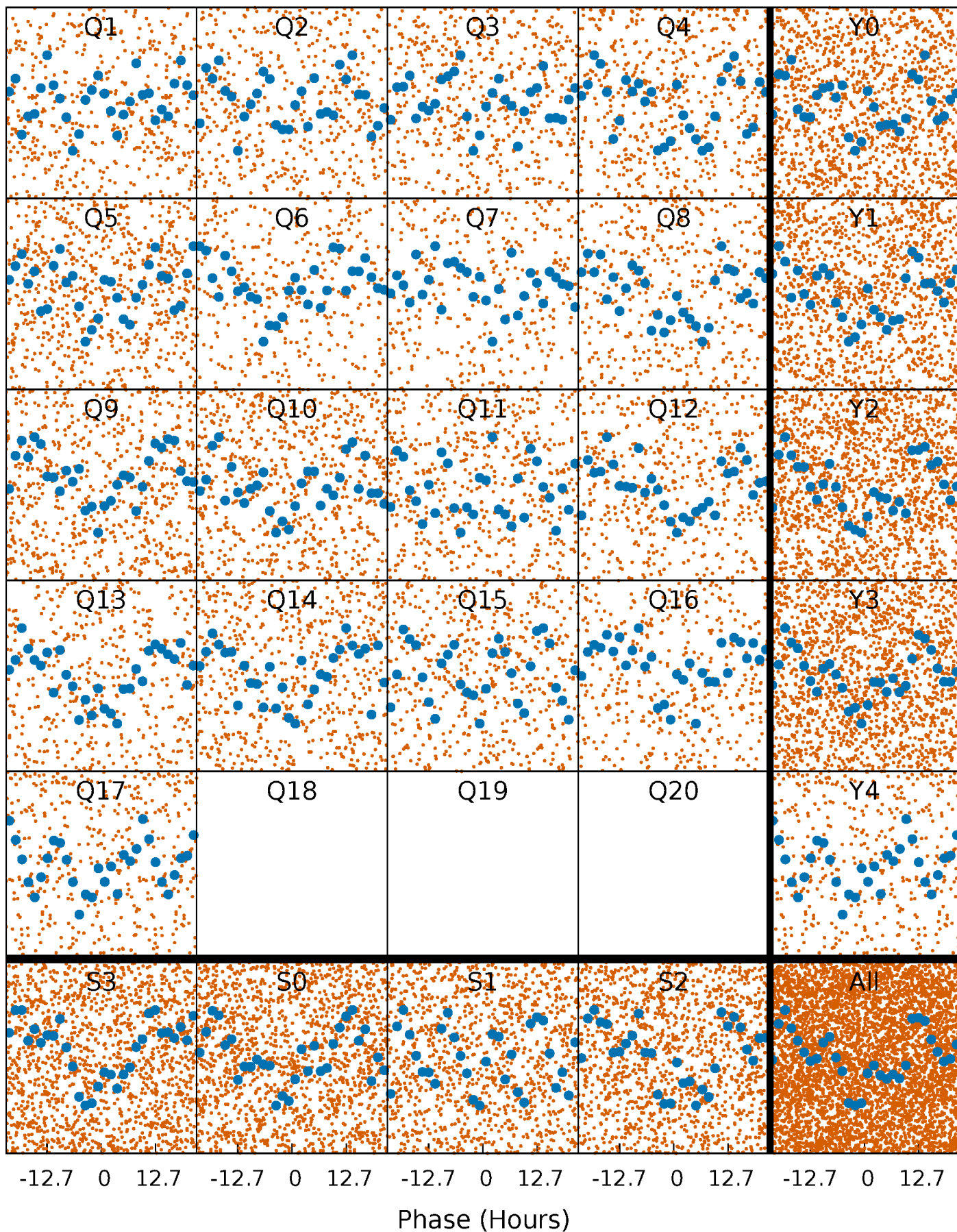


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



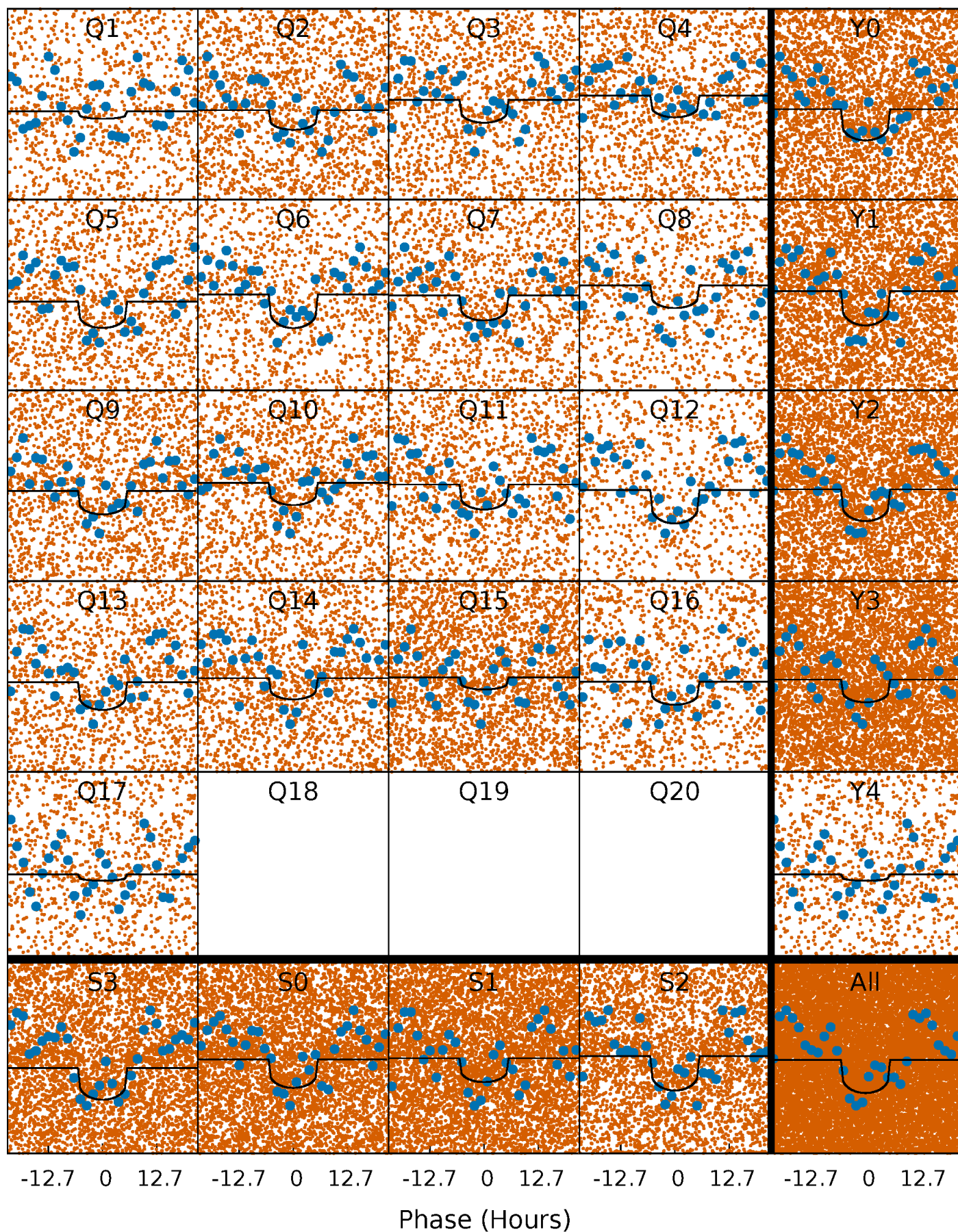
PDC Quarter-Phased Transit Curves

TCE 008881697-01 P= 1.302745 Days $T_0=131.570575$ (BKJD)



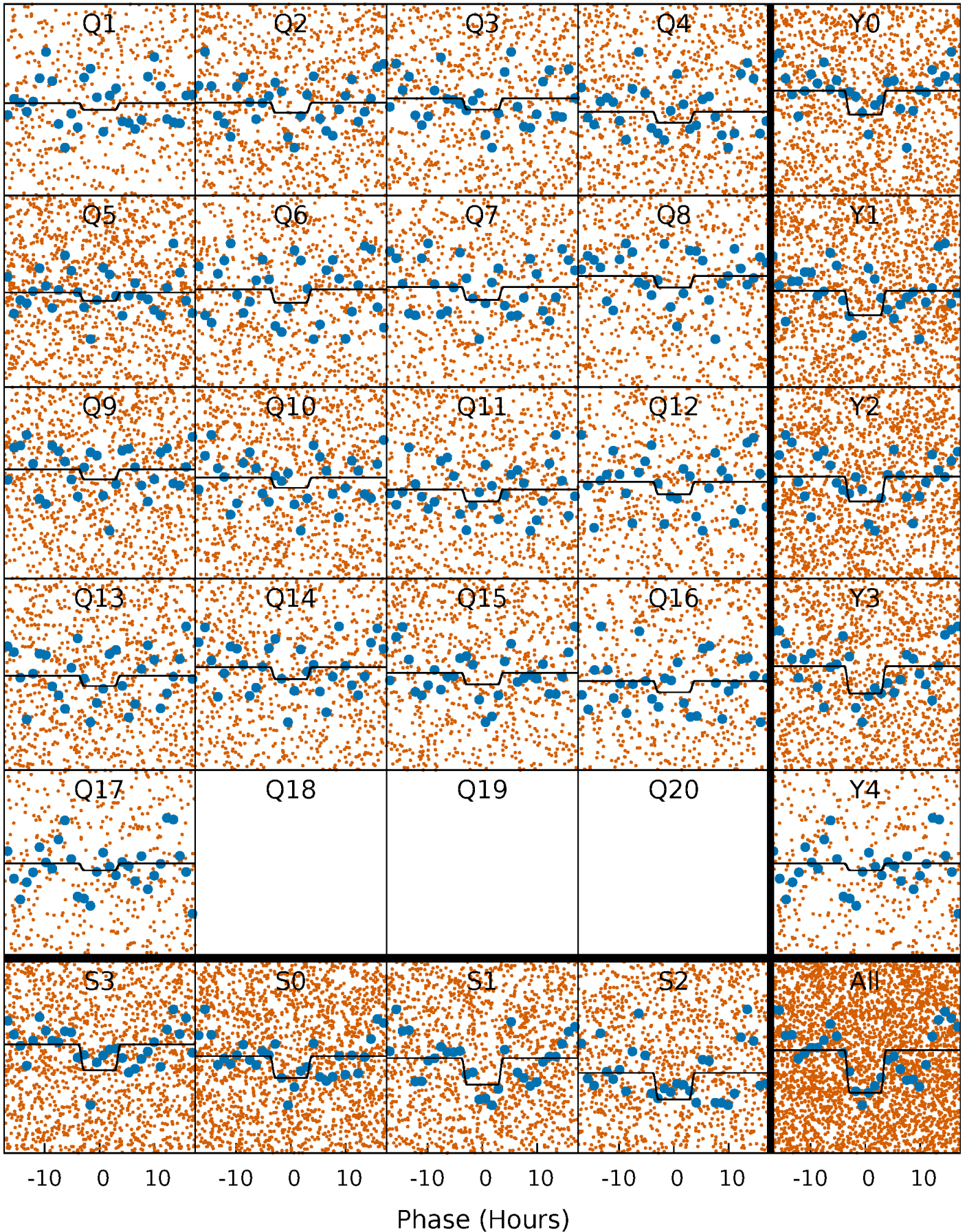
DV Quarter-Phased Transit Curves

TCE 008881697-01 P= 1.302745 Days $T_0=131.570575$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

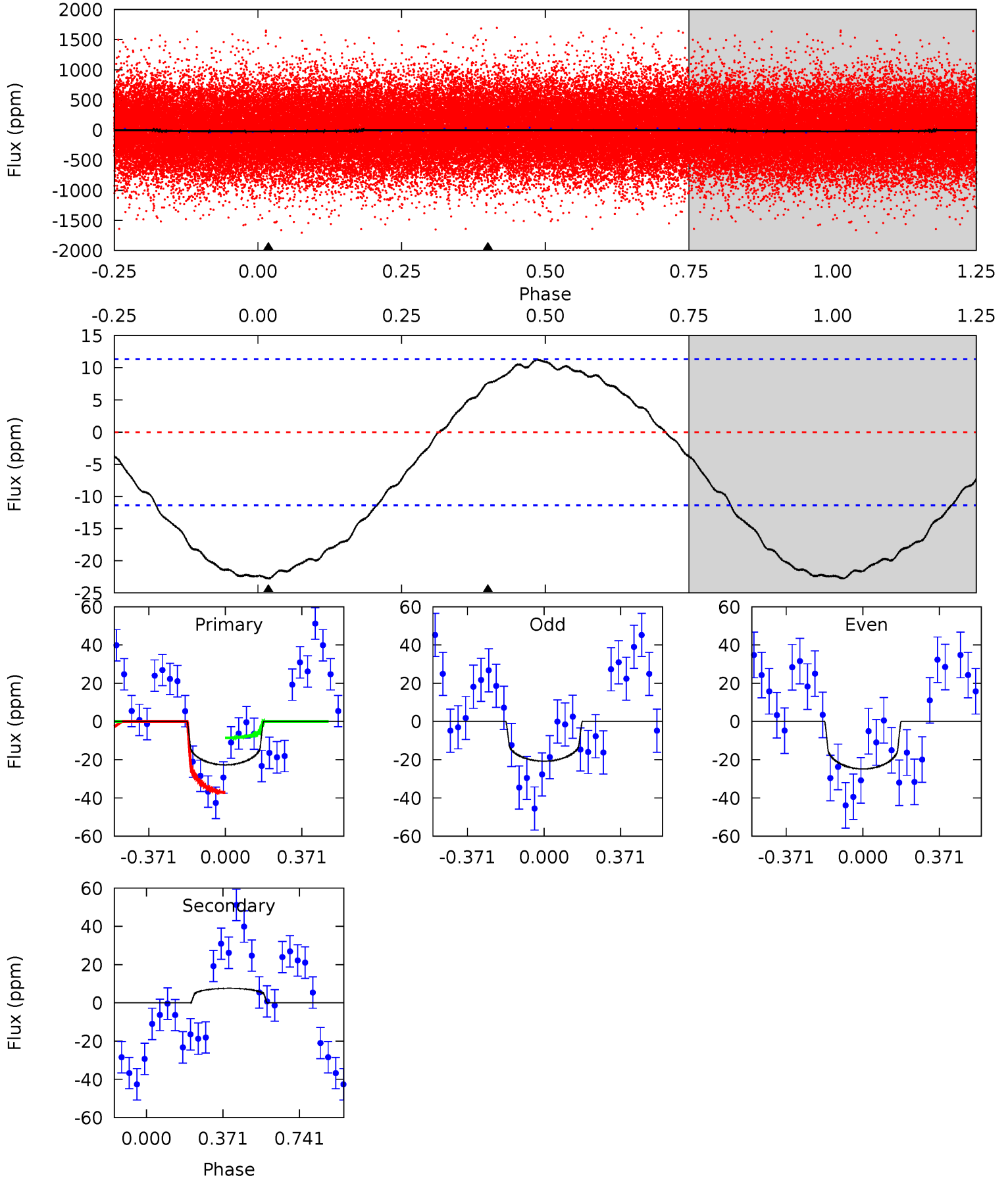
TCE 008881697-01 P= 1.302678 Days $T_0=131.528641$ (BKJD)



DV Model-Shift Uniqueness Test

008881697-01, P = 1.302745 Days, E = 130.267830 Days

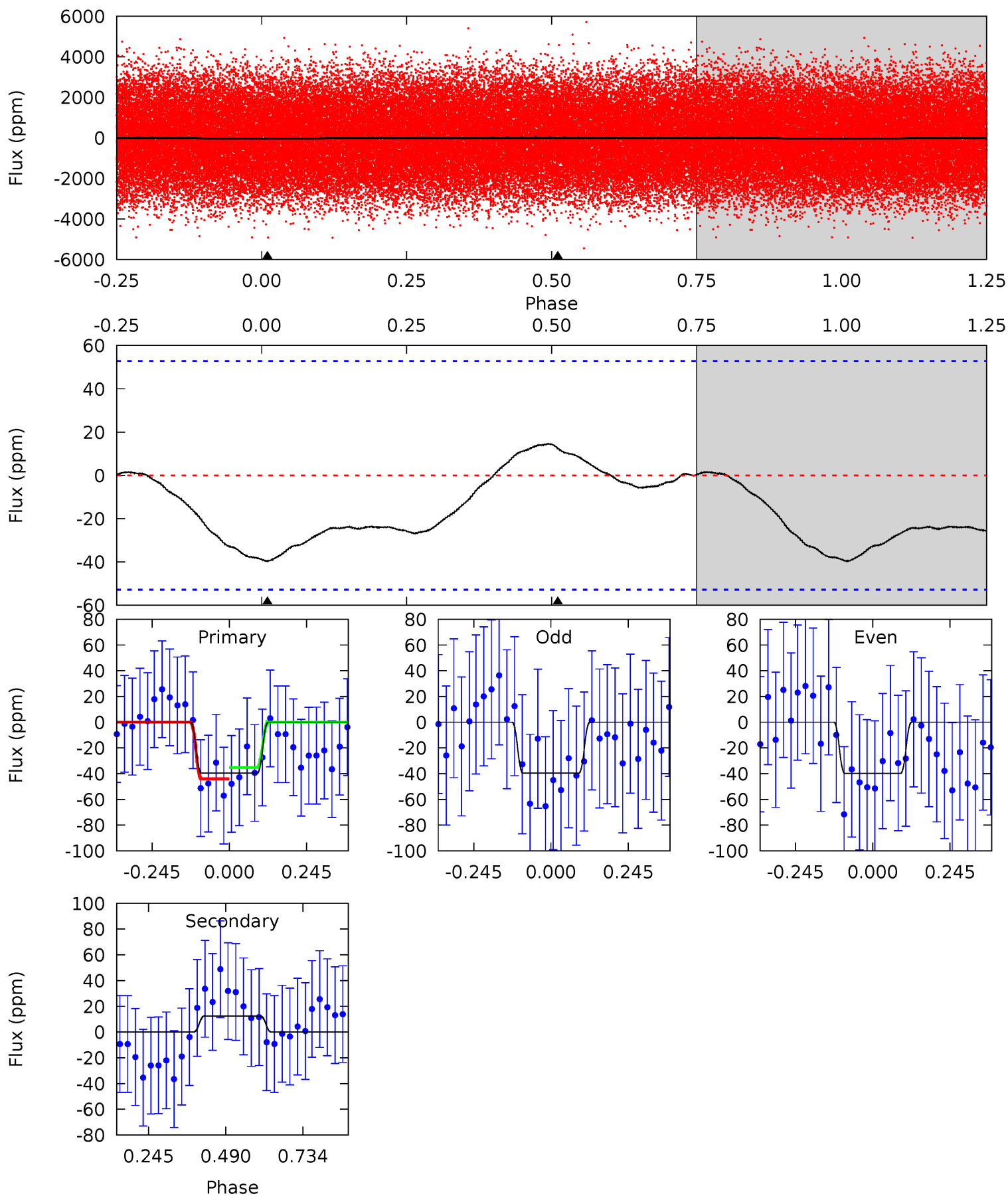
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.56 | -2.87 | 0 | 0 | 4.28 | 0.90 | 1.02 | 8.56 | 8.56 | -2.87 | -2.87 | 0.77 | 1.28 | 0.33 | 5.37 |



Alt Model-Shift Uniqueness Test

008881697-01, P = 1.302678 Days, E = 130.225963 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 3.28 | -1.03 | 0 | 0 | 4.37 | 1.16 | 1.11 | 3.28 | 3.28 | -1.03 | -1.03 | 0.01 | 1.13 | 0.27 | 0.37 |



Stellar Parameters For KIC 008881697

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7932^{+219}_{-329} | $3.927^{+0.259}_{-0.130}$ | $-0.100^{+0.200}_{-0.300}$ | $2.475^{+0.445}_{-0.826}$ | $1.887^{+0.123}_{-0.369}$ | $0.175^{+0.293}_{-0.059}$ |
| | +3%/-4% | +7%/-3% | +200%/-300% | +18%/-33% | +7%/-20% | +167%/-34% |
| 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 008881697-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|-------------------------|----------------------------|
| DV | 8 ± 3 | $1.70^{+1.58}_{-1.05}$ | 4479^{+284}_{-389} | -5279^{+856}_{-3349} | $-1.115^{+0.842}_{-7.425}$ |
| Alt. | 12 ± 12 | $1.95^{+1.67}_{-1.21}$ | 4468^{+310}_{-376} | -5247^{+1202}_{-3413} | $-1.128^{+1.065}_{-8.127}$ |

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

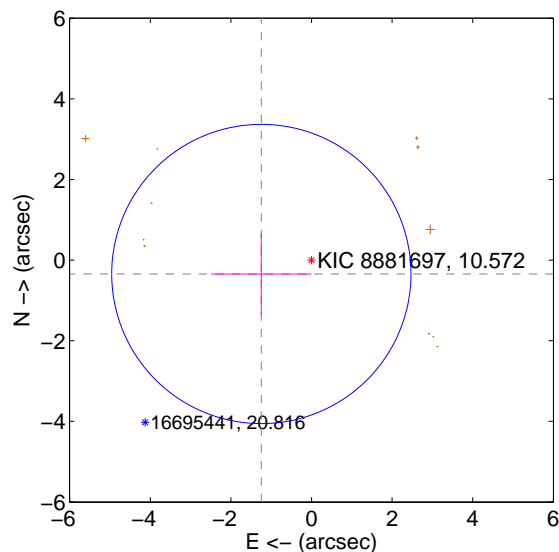
Supplemental centroid analysis for 008881697-01. **Kepler magnitude: 10.57.** Transit SNR 11.03

There are 0 quarters with good PRF difference image offsets

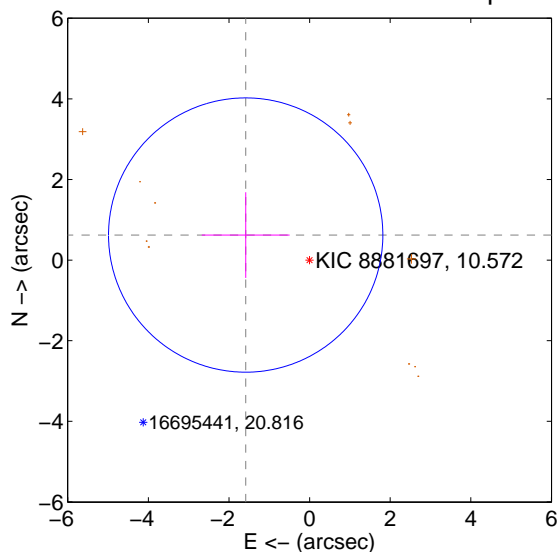
The direct PRF centroid is offset from the target star catalog position by about 0.84 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|-----------------------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 1.292 ± 1.237 | 1.04 | 1.245 ± 1.244 | -0.344 ± 1.014 |
| PRF-fit source offset from KIC position | 1.703 ± 1.134 | 1.50 | 1.585 ± 1.091 | 0.622 ± 1.063 |
| photometric centroid source offset | 1.23 ± 0.33 | 3.76 | 1.21 ± 0.33 | -0.25 ± 0.30 |

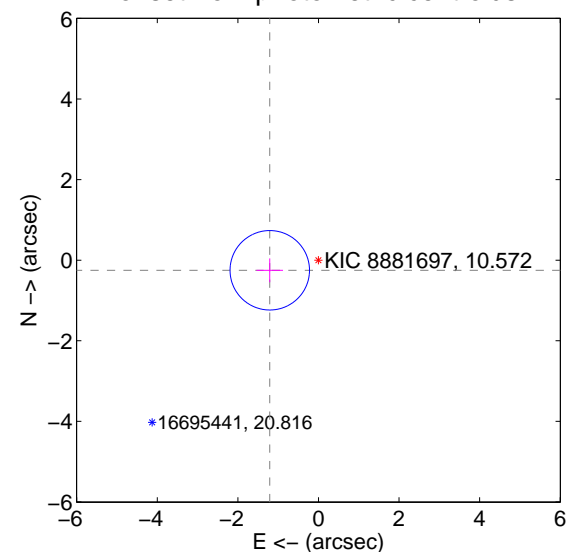
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

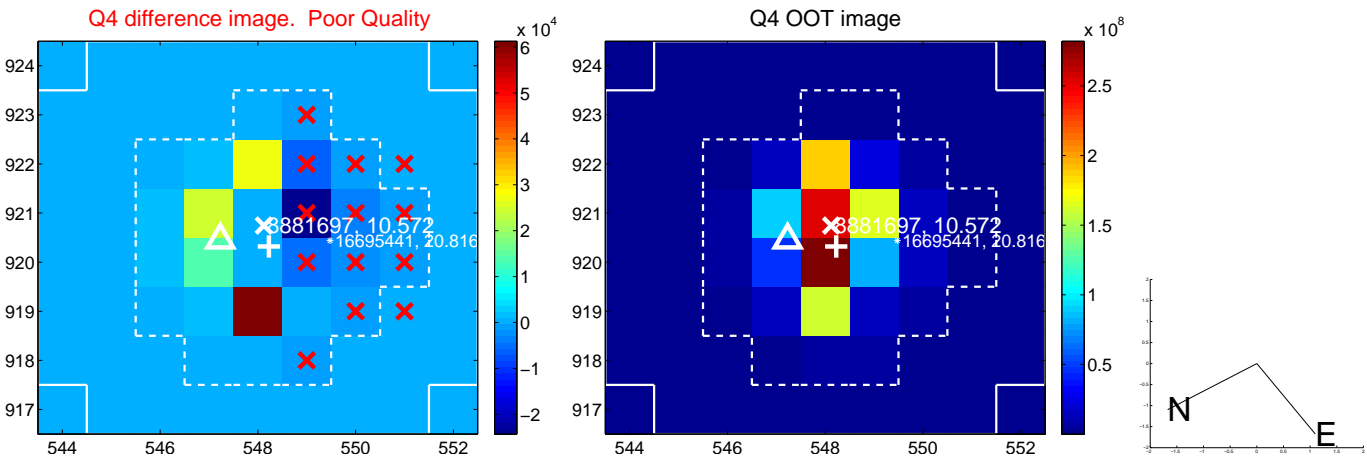
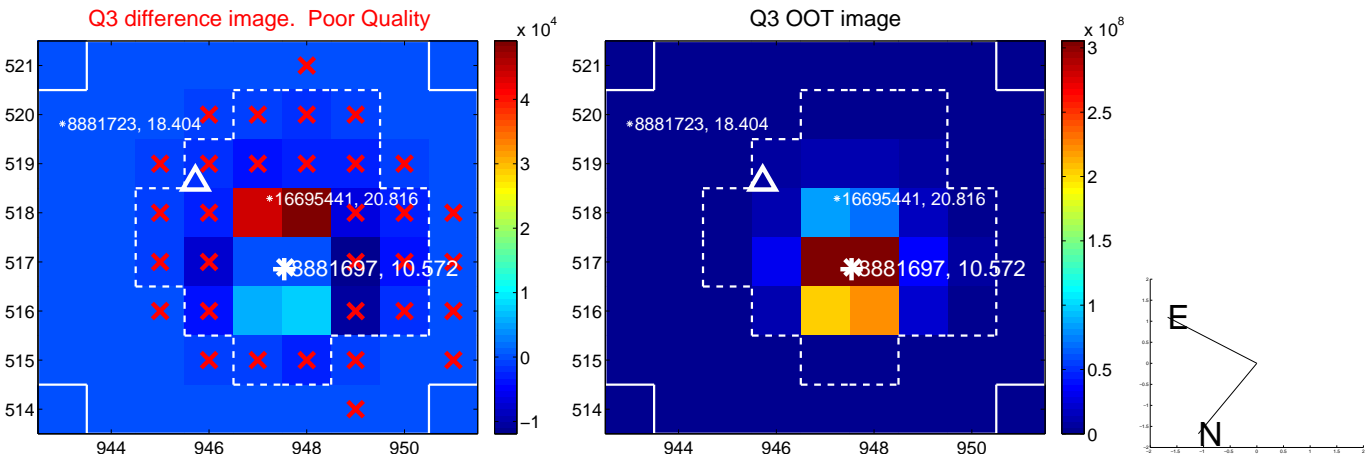
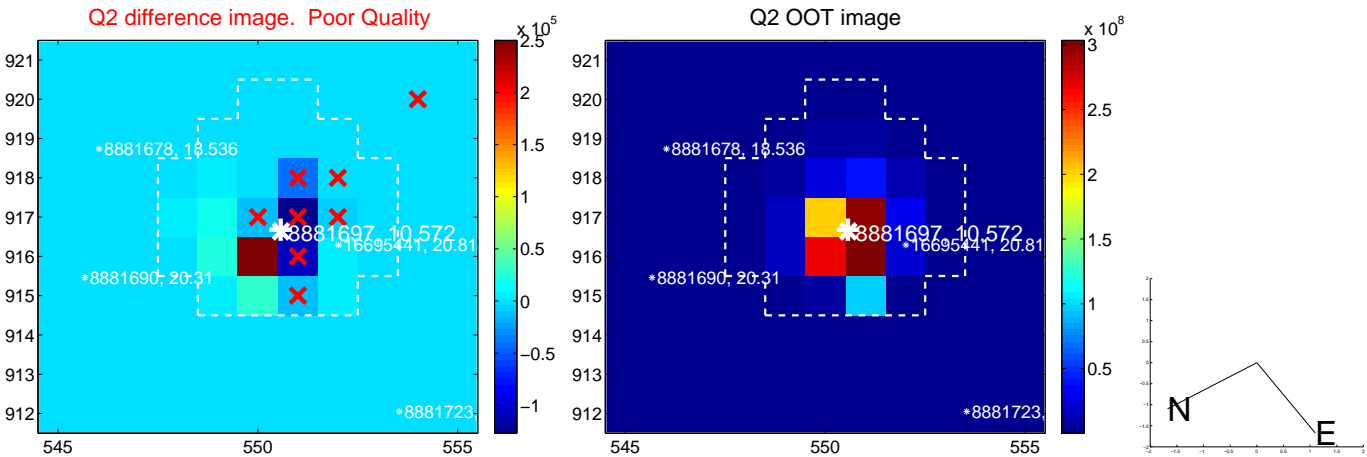
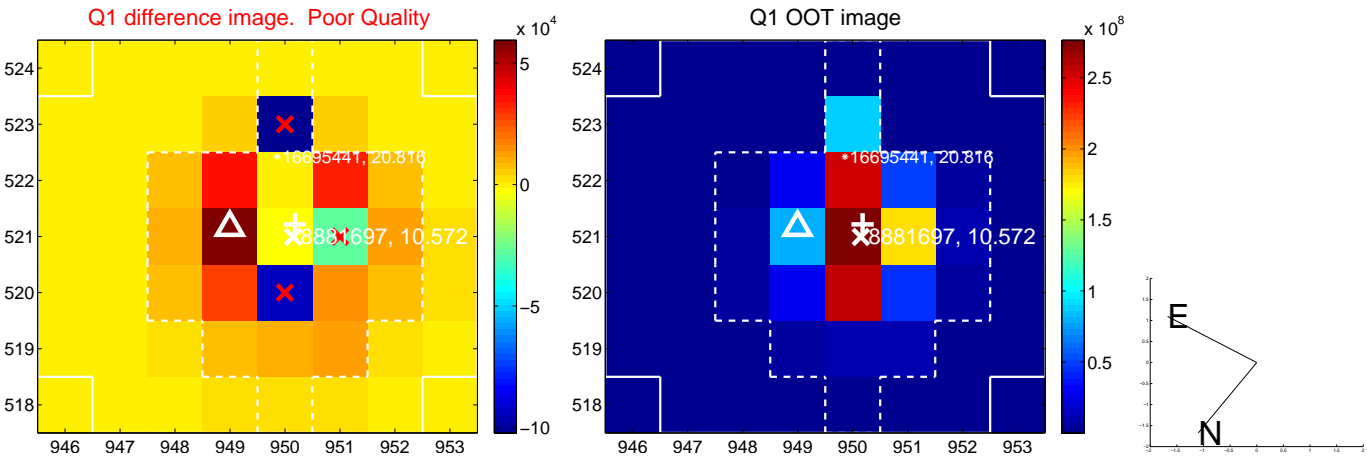


offset from photometric centroids

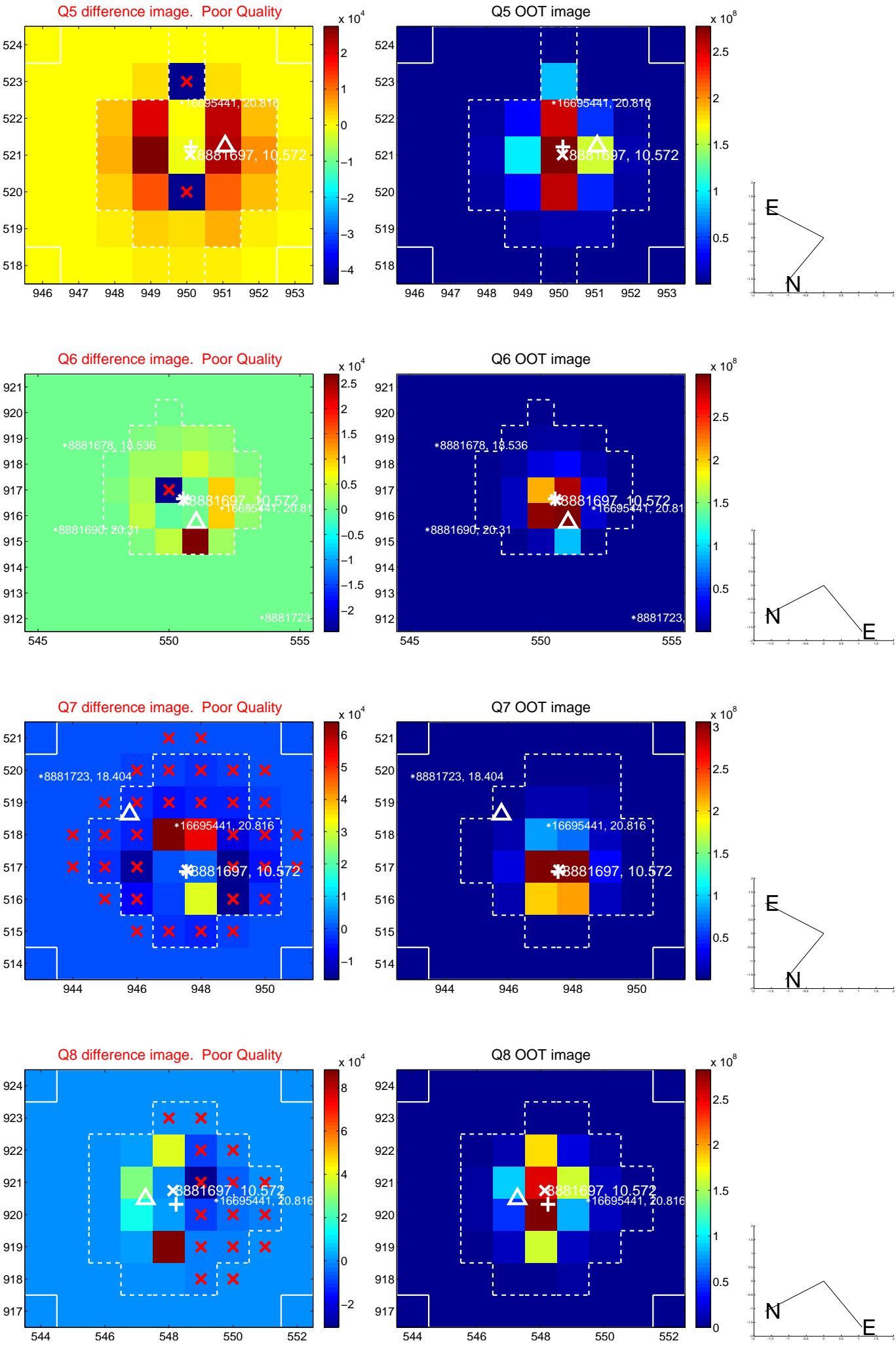


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

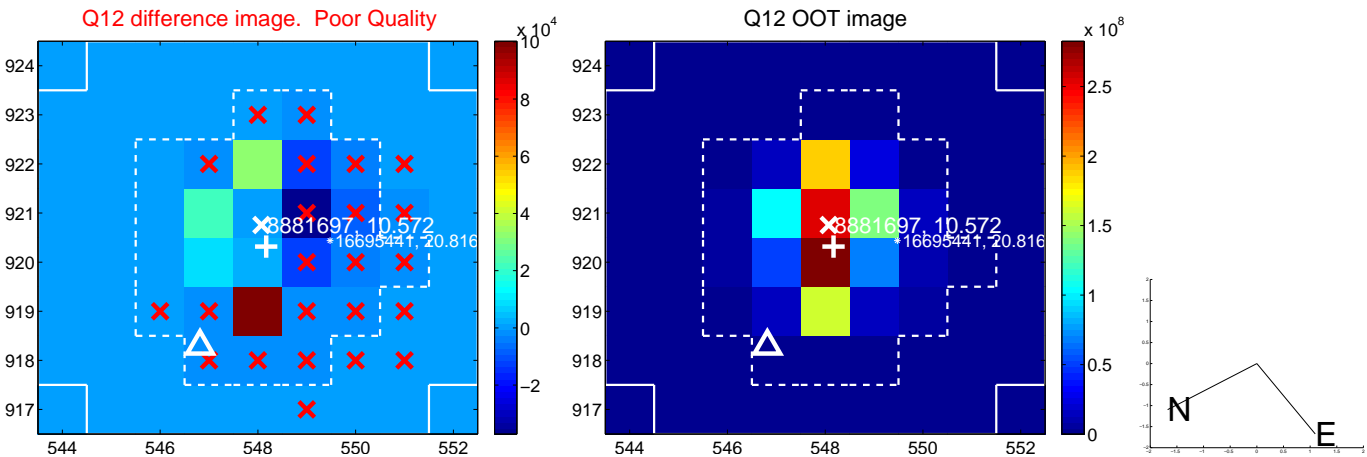
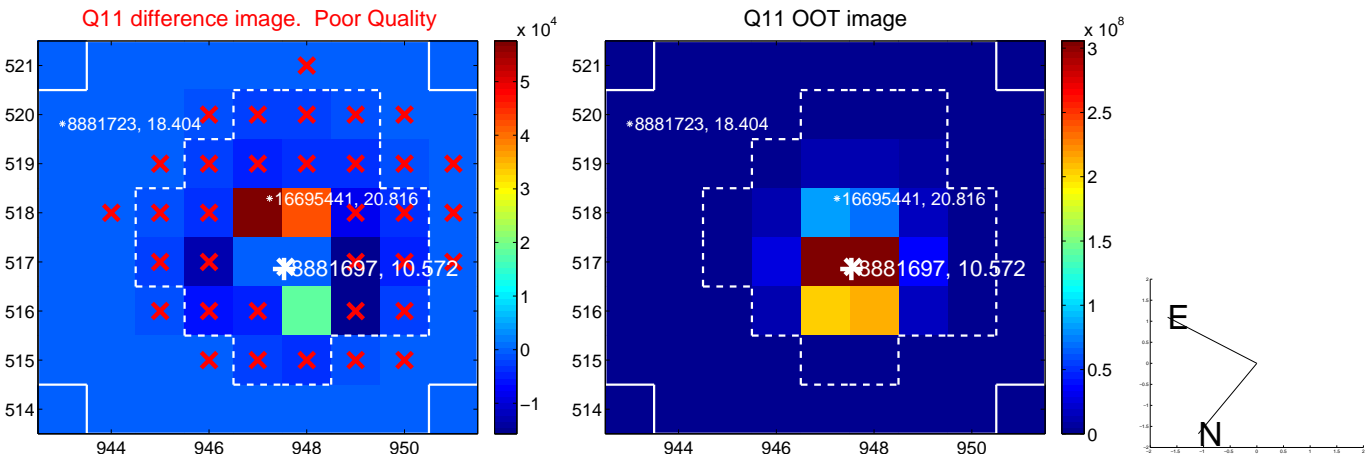
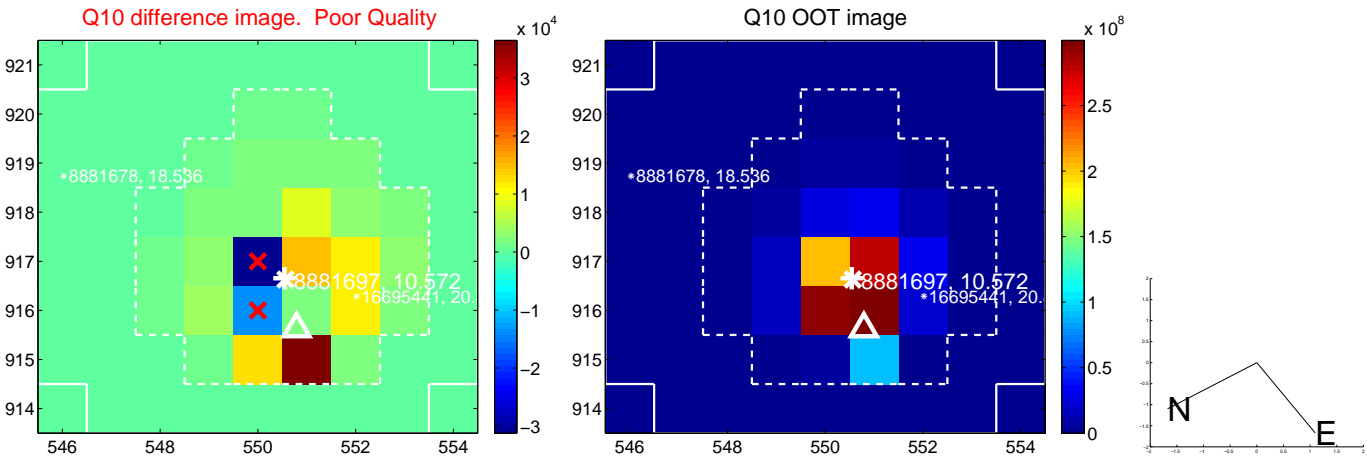
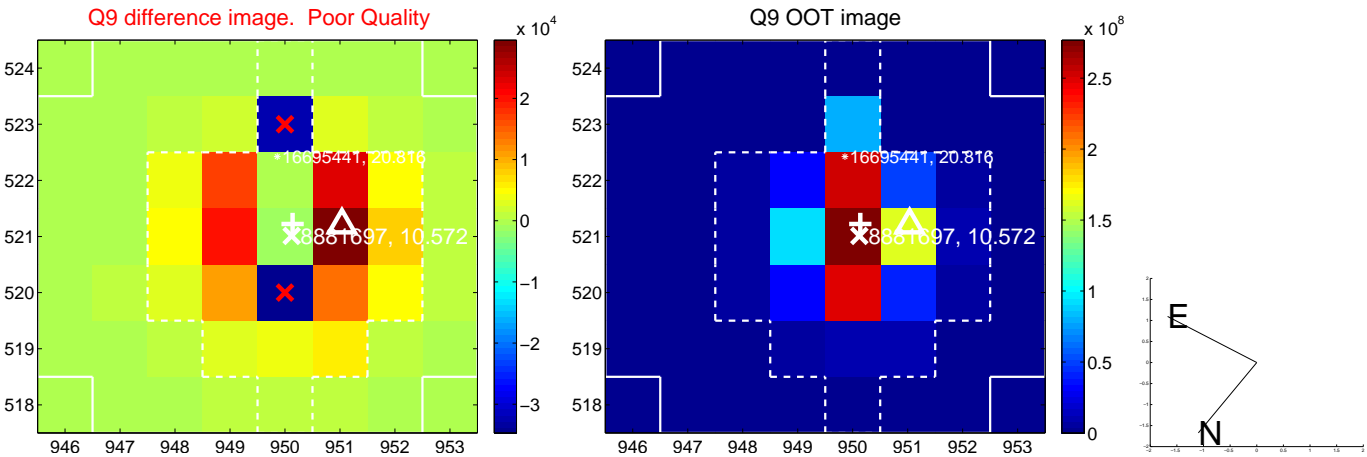
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



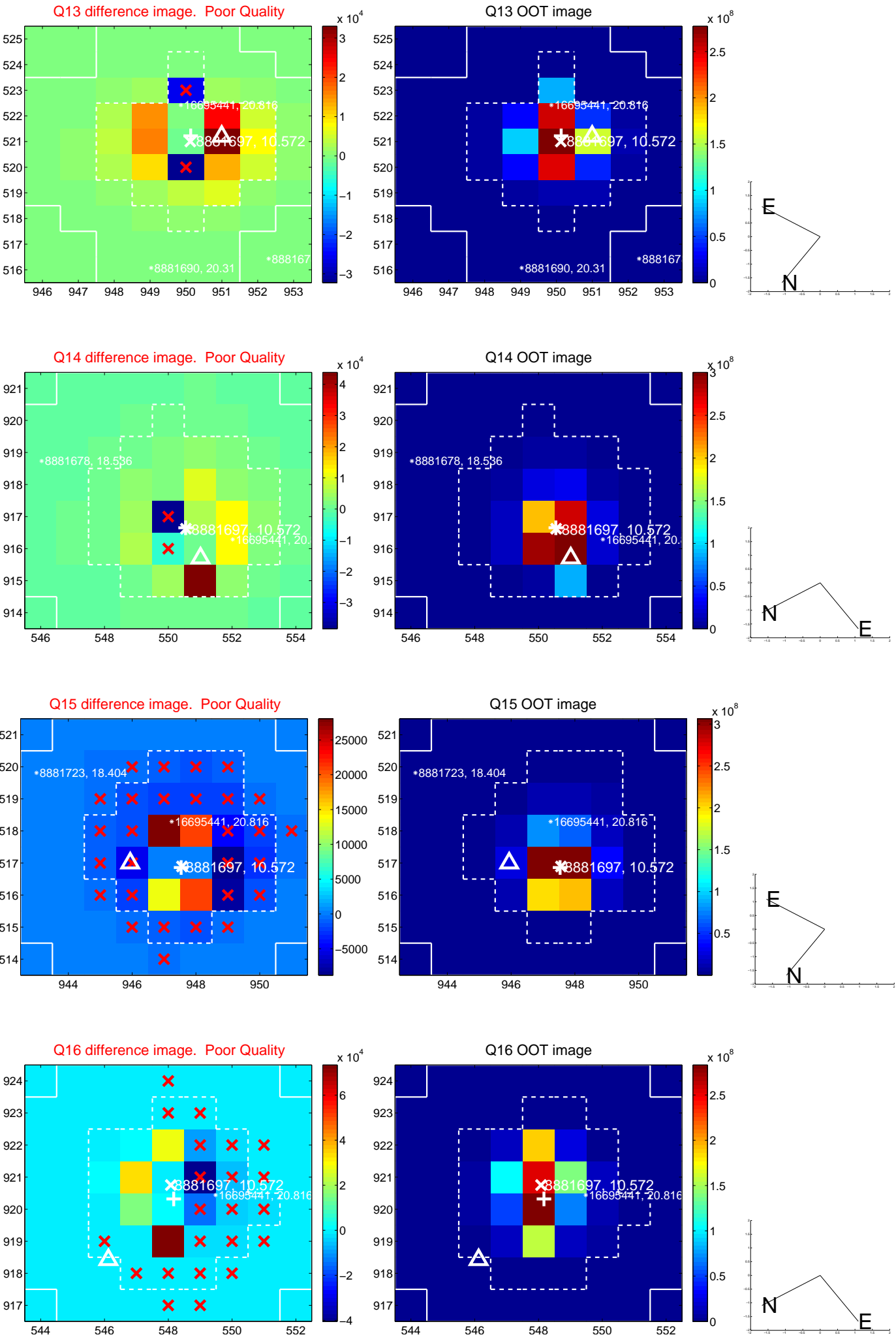
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



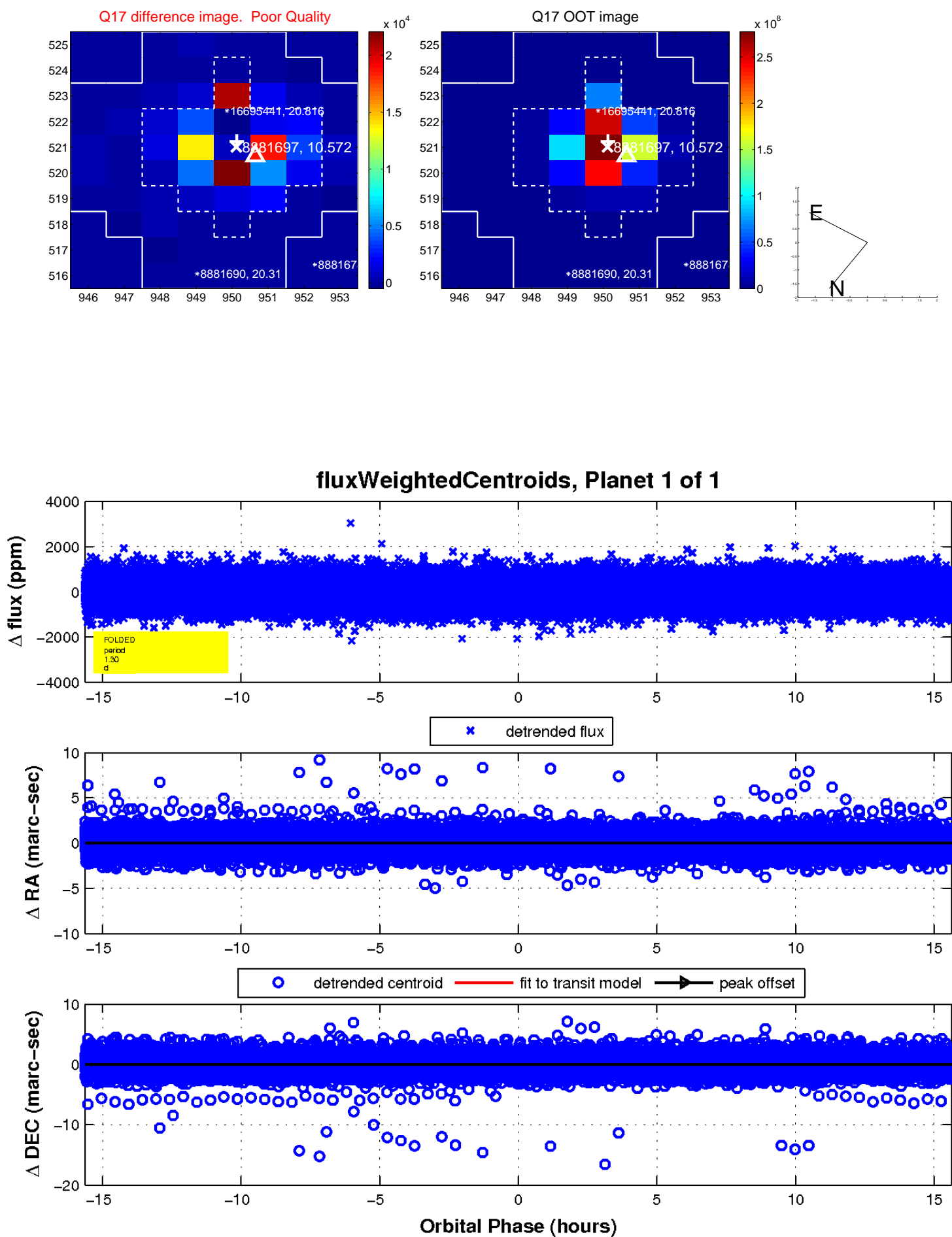
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

