

KIC 006357667

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 006357667-01 | OBS | No | 6.073150 | 137.336478 | 44.6 | 25.858 | 10.6 | 10.0 | 1.71 | 7123 | 1.26 | 1246.37 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 006357667-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |

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

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

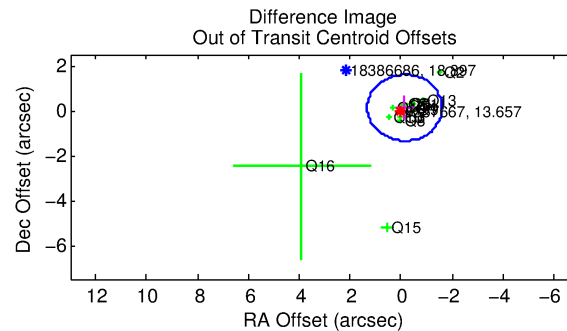
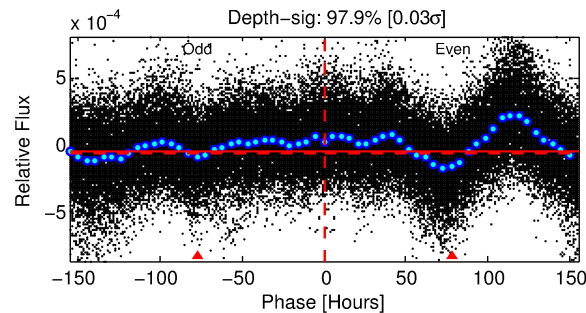
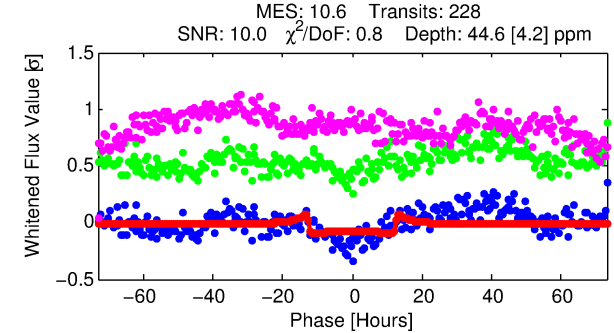
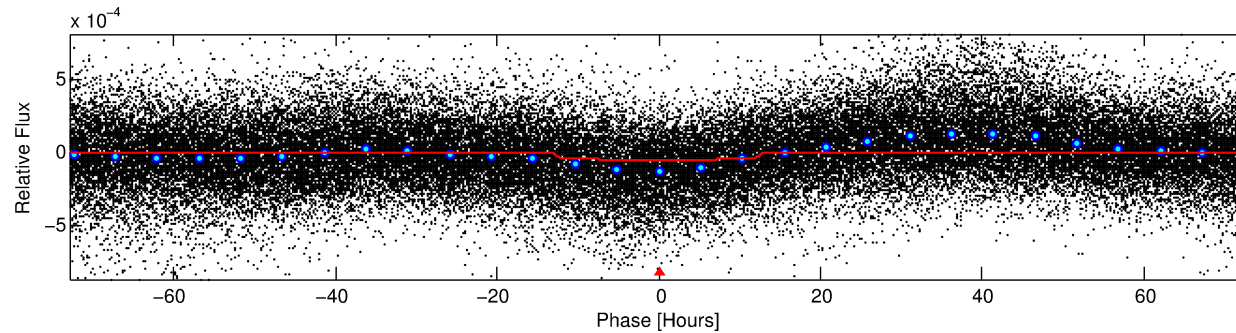
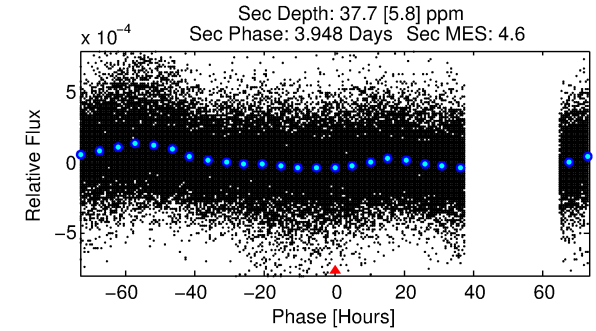
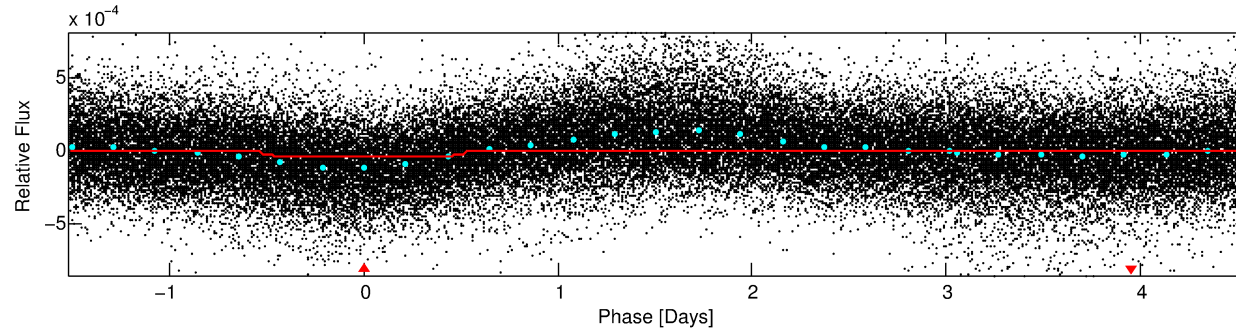
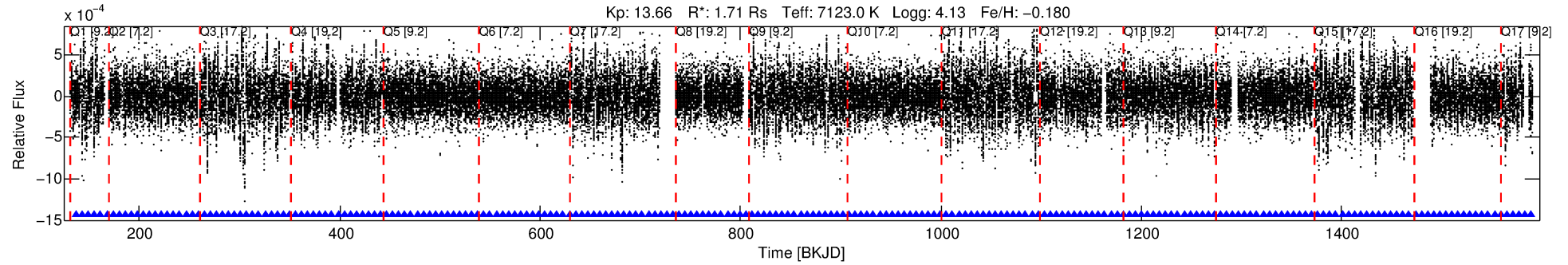
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006357667-01

No Significant Match Found

DV One-Page Summary

KIC: 6357667 Candidate: 1 of 1 Period: 6.073 d



DV Fit Results:

Period = 6.07315 [0.00010] d
Epoch = 137.3365 [0.0113] BKJD
Rp/R* = 0.0068 [0.0006]
a/R* = 1.39 [0.33]
b = 0.81 [0.21]
Seff = 1246.37 [499.75]
Teq = 1515 [152] K
Rp = 1.26 [0.42] Re
a = 0.0734 [0.0190] AU
Ag = 70.26 [30.86] [2.24σ]
Teffp = 6782 [506] K [9.98σ]

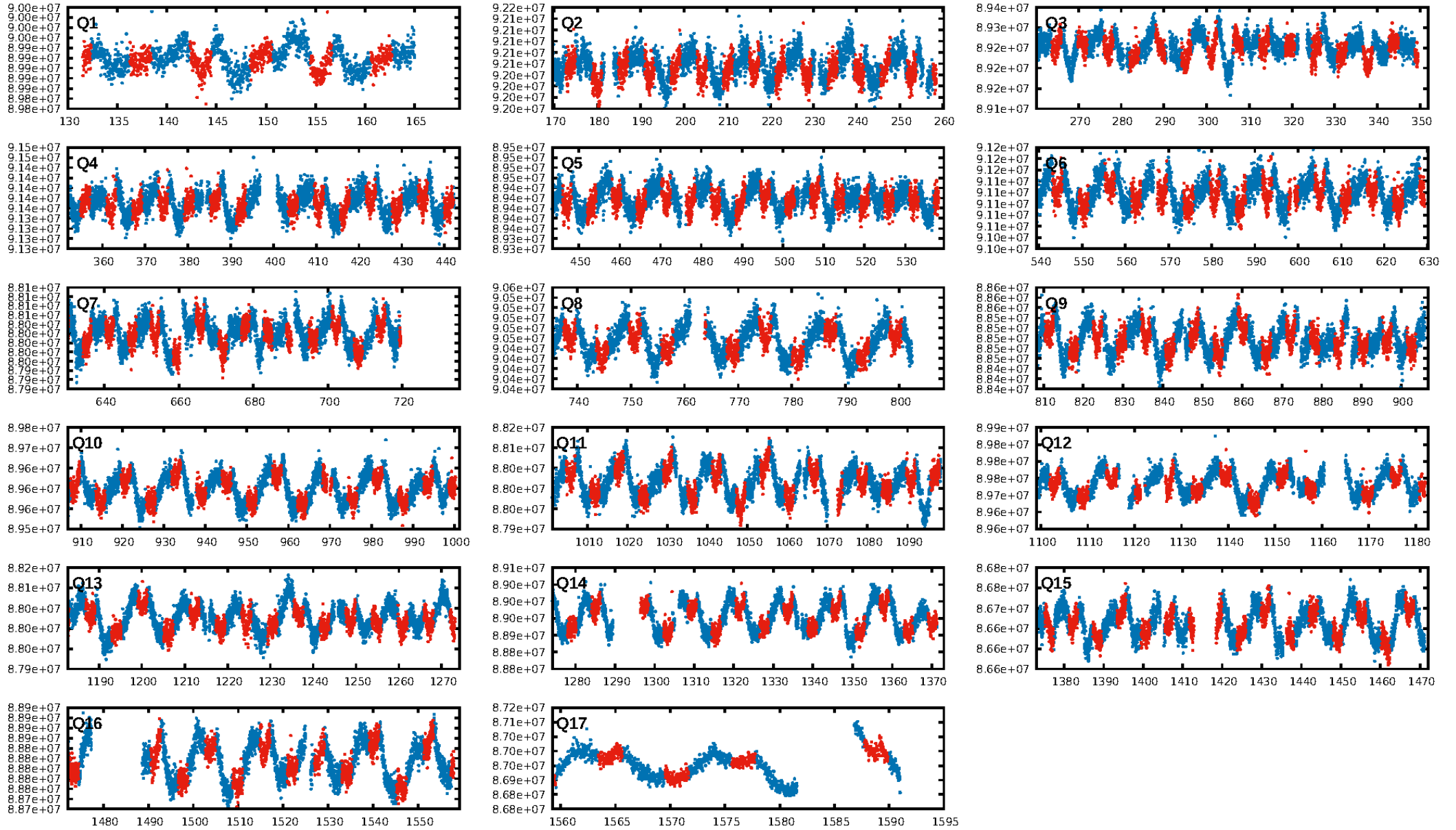
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.08e-25
RollingBand-fgt: 1.00 [218/218]
GhostDiagnostic-chr: 2.845
Centroid-sig: 0.3%
Centroid-so: 1.167 arcsec [1.66σ]
OotOffset-rm: 0.192 arcsec [0.39σ]
KicOffset-rm: 0.161 arcsec [0.34σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

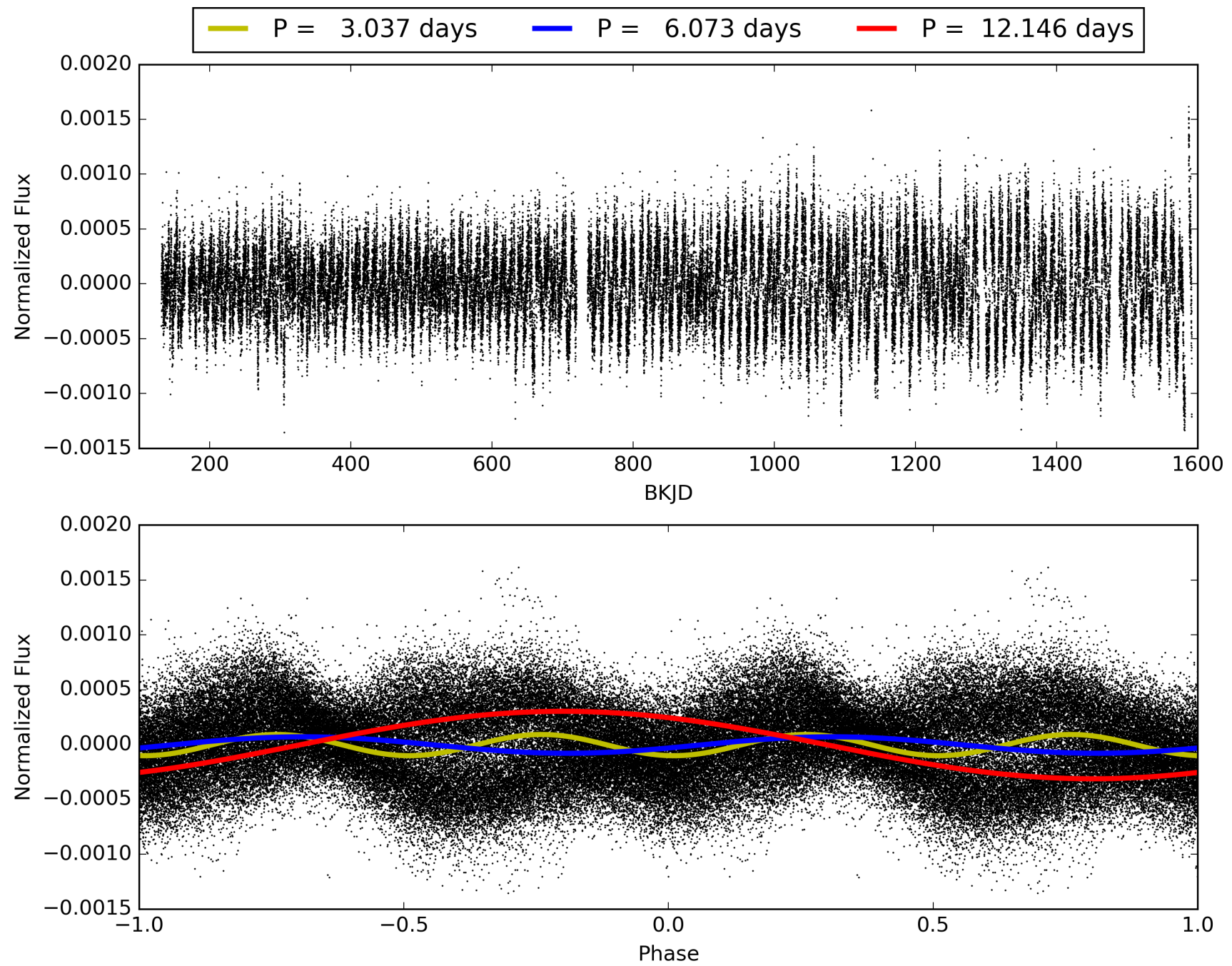
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:56:41 Z

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

TCE 006357667-01, PDC Light Curves

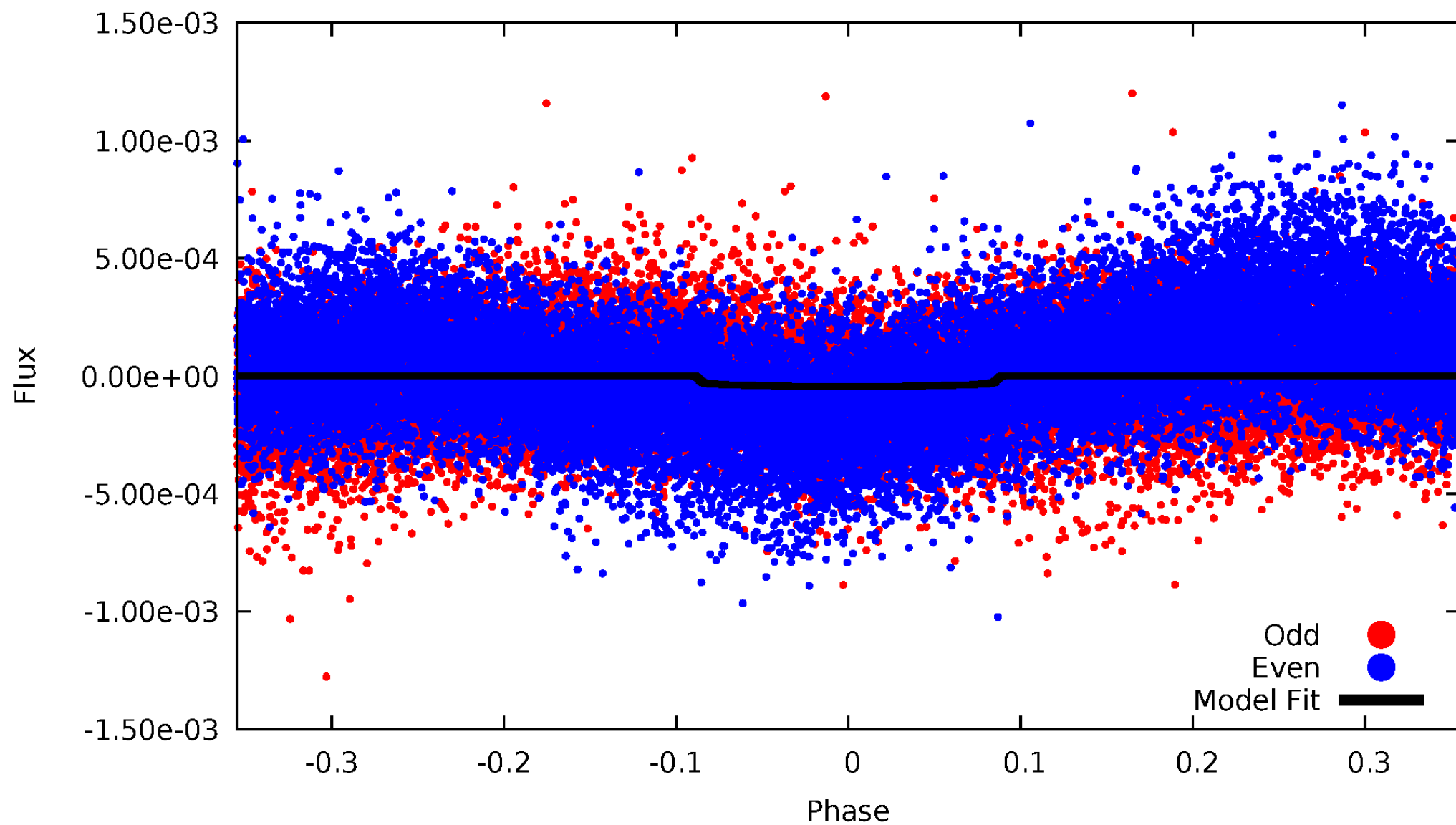


TCE 006357667-01



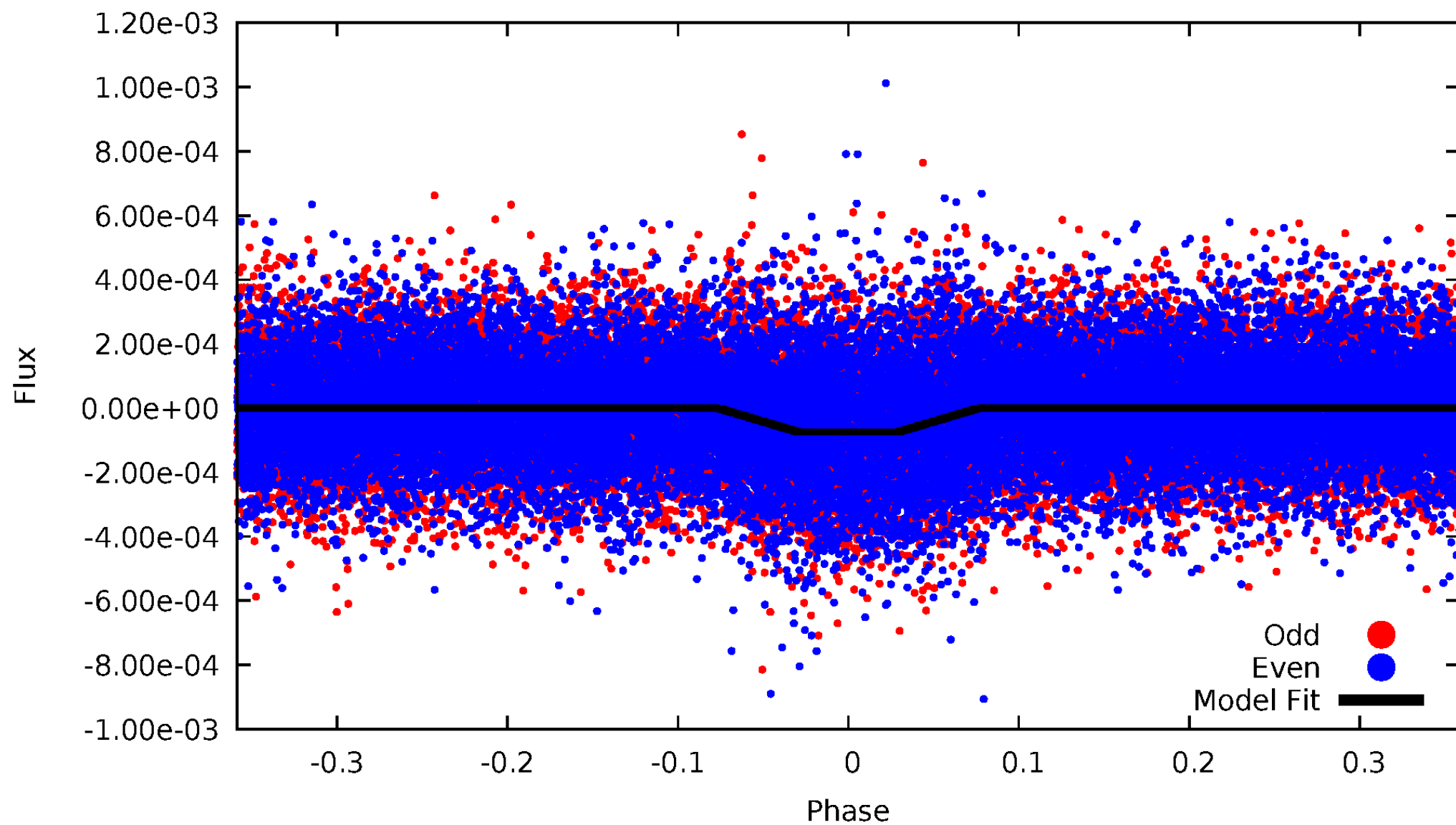
DV Odd/Even

TCE 006357667-01

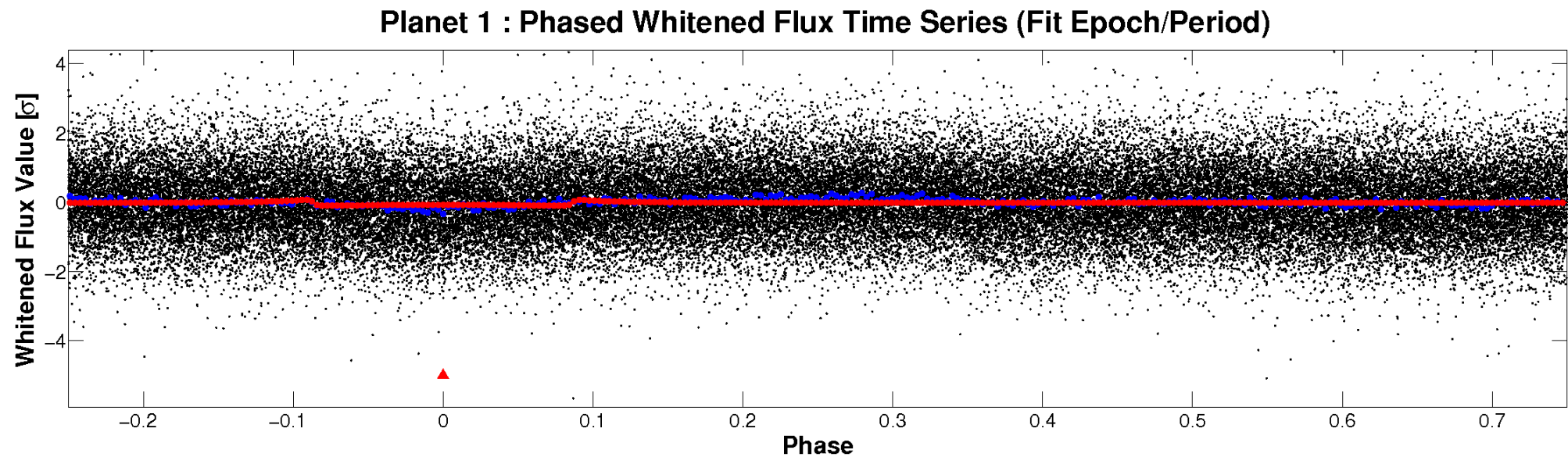
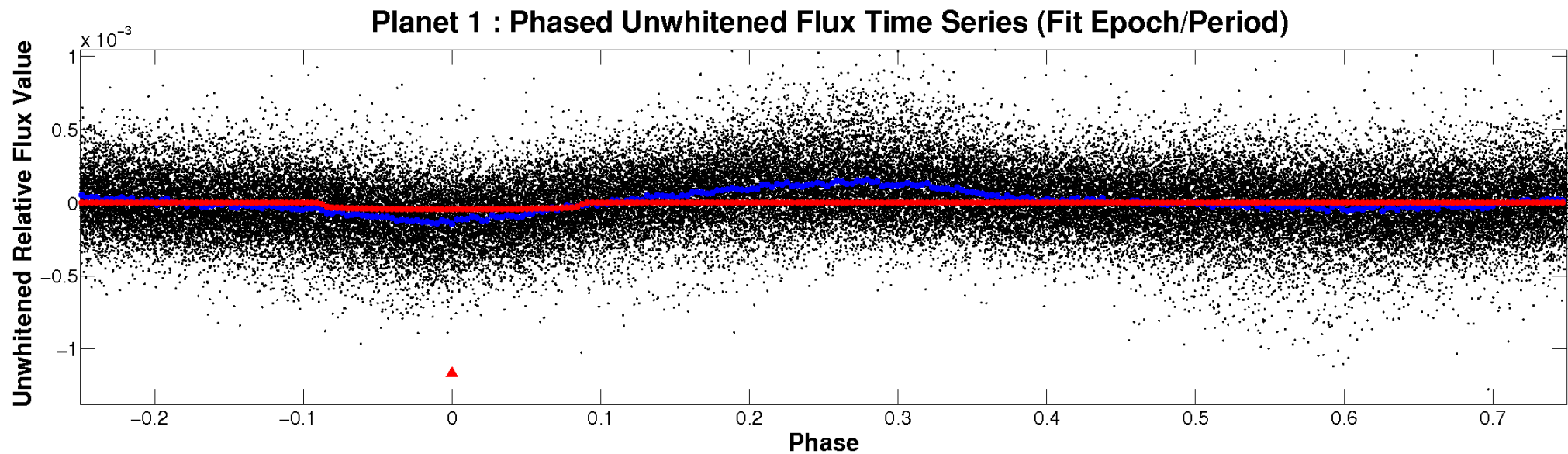


ALT Odd/Even

TCE 006357667-01

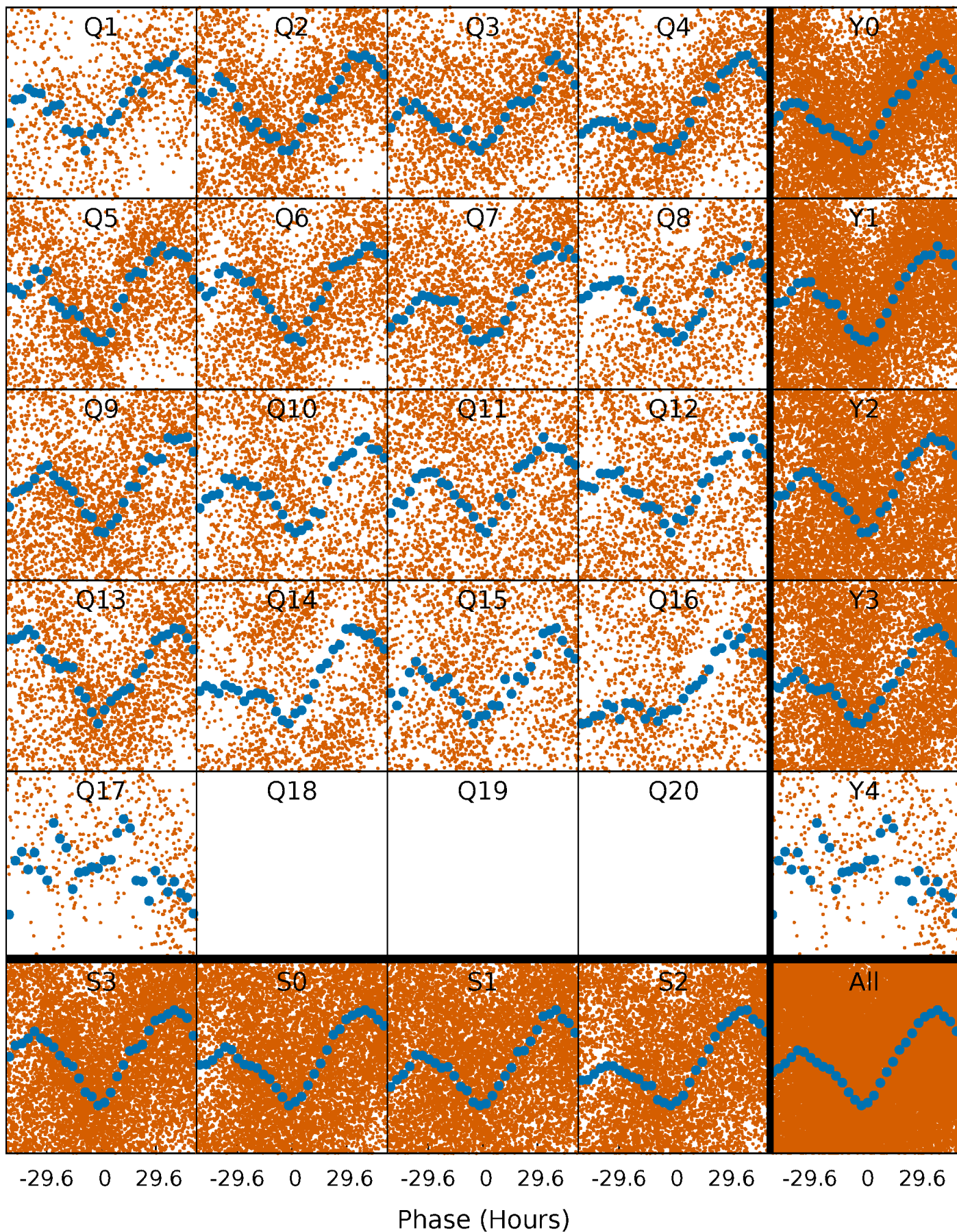


Non-Whitened Vs. Whitened Light Curve



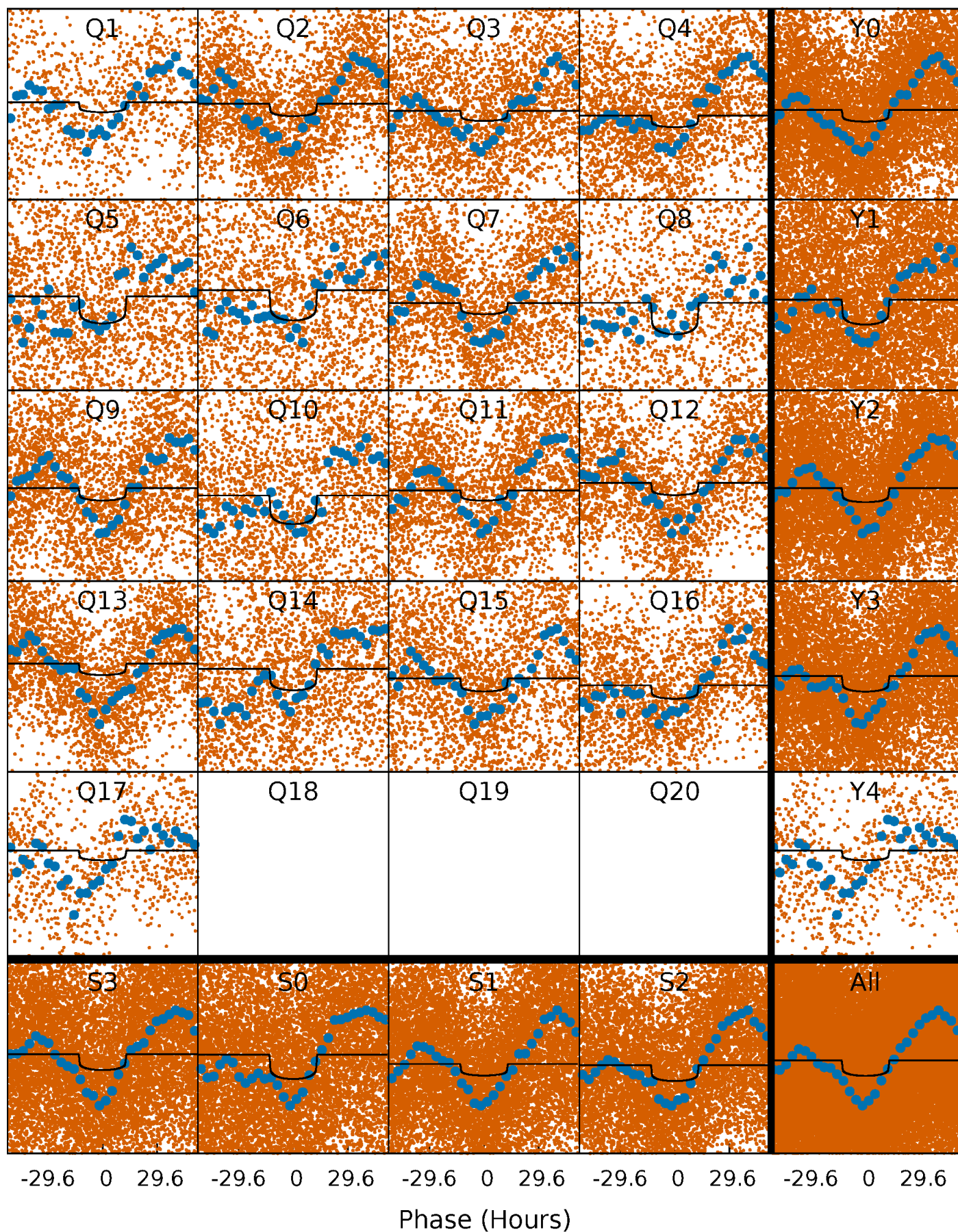
PDC Quarter-Phased Transit Curves

TCE 006357667-01 P= 6.073150 Days $T_0=137.336478$ (BKJD)



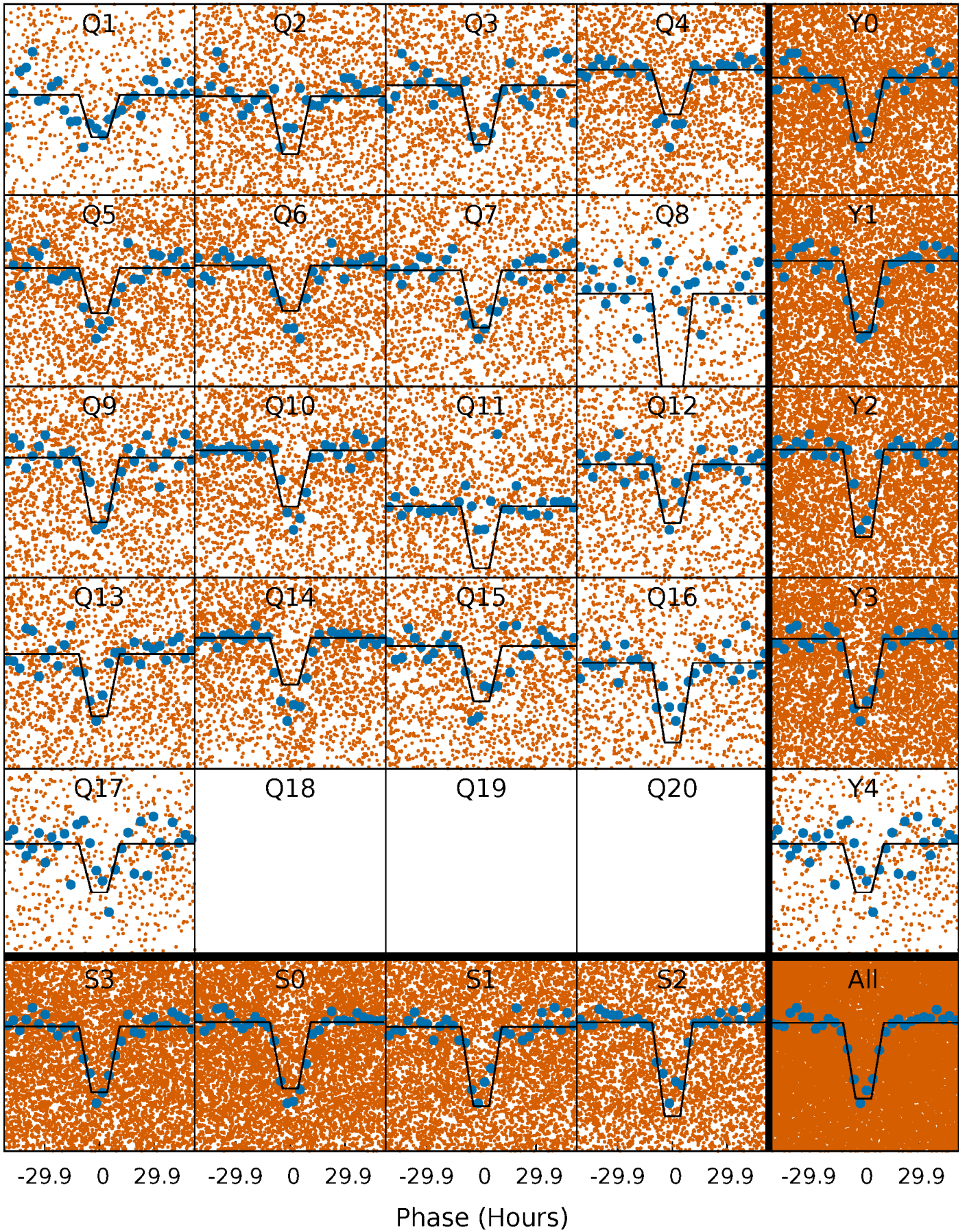
DV Quarter-Phased Transit Curves

TCE 006357667-01 P= 6.073150 Days $T_0=137.336478$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

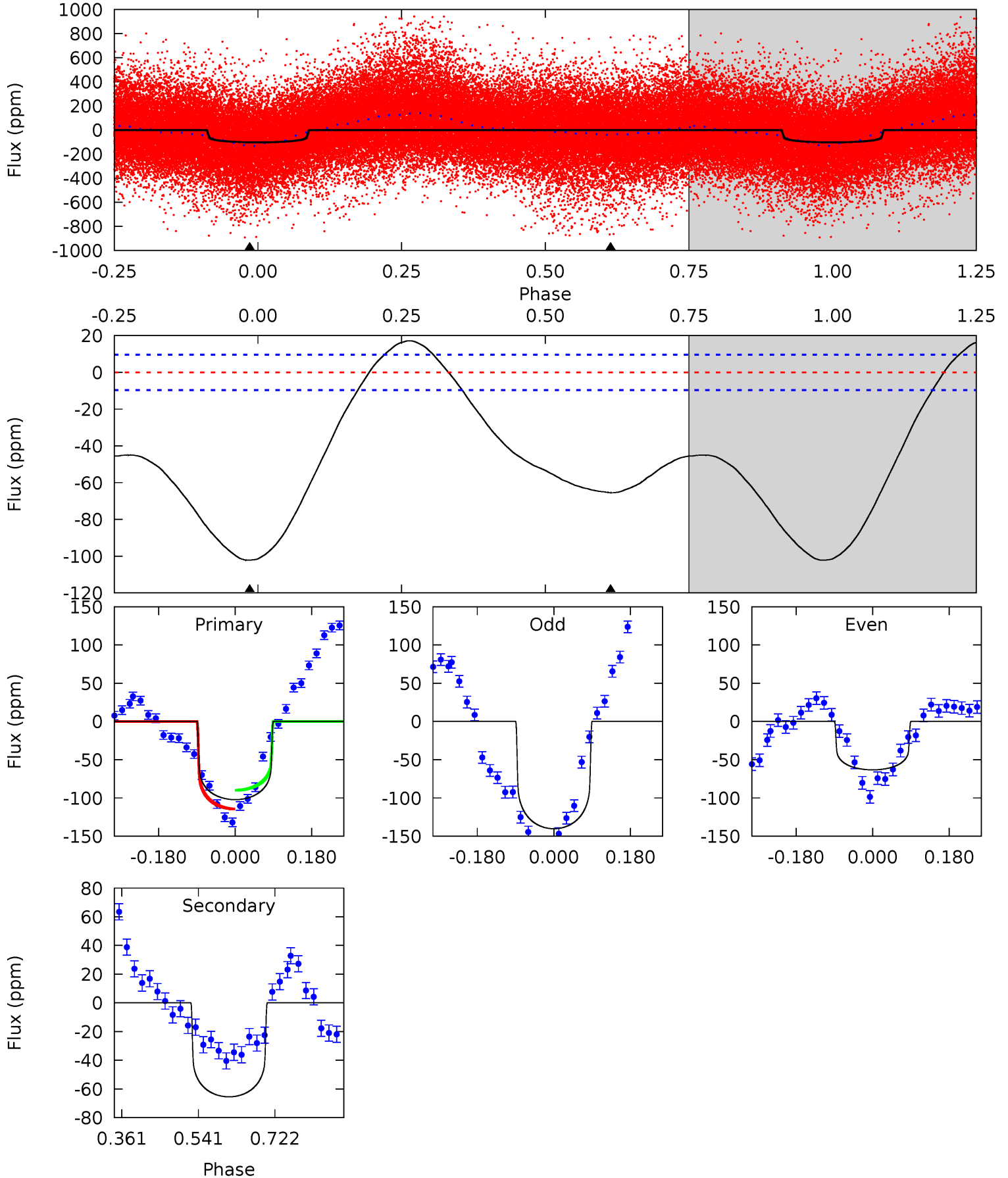
TCE 006357667-01 P= 6.072878 Days $T_0=137.380802$ (BKJD)



DV Model-Shift Uniqueness Test

006357667-01, P = 6.073150 Days, E = 131.263328 Days

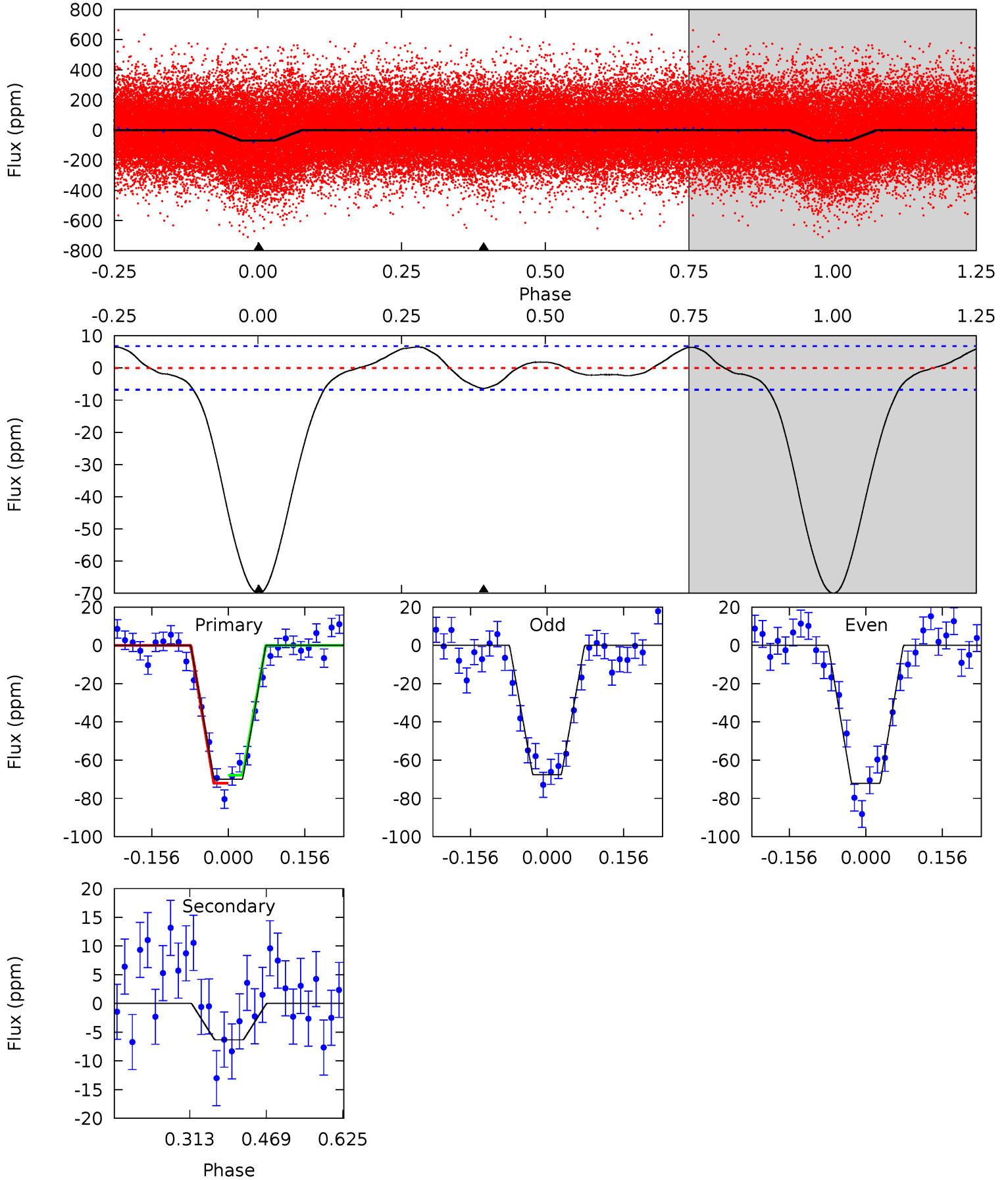
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 47.1 | 30.2 | 0 | 0 | 4.44 | 1.34 | 8.69 | 47.1 | 47.1 | 30.2 | 30.2 | 19.0 | 1.12 | 0.14 | 5.68 |



Alt Model-Shift Uniqueness Test

006357667-01, P = 6.072878 Days, E = 131.307924 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 46.1 | 4.18 | 0 | 0 | 4.47 | 1.42 | 1.88 | 46.1 | 46.1 | 4.18 | 4.18 | 1.48 | 0.83 | 0.09 | 1.40 |



Stellar Parameters For KIC 006357667

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7123^{+200}_{-300} | $4.129^{+0.157}_{-0.192}$ | $-0.180^{+0.250}_{-0.350}$ | $1.706^{+0.546}_{-0.410}$ | $1.429^{+0.209}_{-0.232}$ | $0.406^{+0.336}_{-0.215}$ |
| | +3%/-4% | +4%/-5% | +139%/-194% | +32%/-24% | +15%/-16% | +83%/-53% |
| Source | PHO1 | 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 006357667-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|----------------------|---------------------------|
| DV | -65 ± 2 | $1.28^{+0.24}_{-0.20}$ | 2138^{+153}_{-159} | 7869^{+563}_{-522} | 117^{+41}_{-32} |
| Alt. | -6 ± 2 | $1.61^{+0.30}_{-0.24}$ | 2114^{+166}_{-146} | 4050^{+252}_{-248} | $7.109^{+3.106}_{-2.422}$ |

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

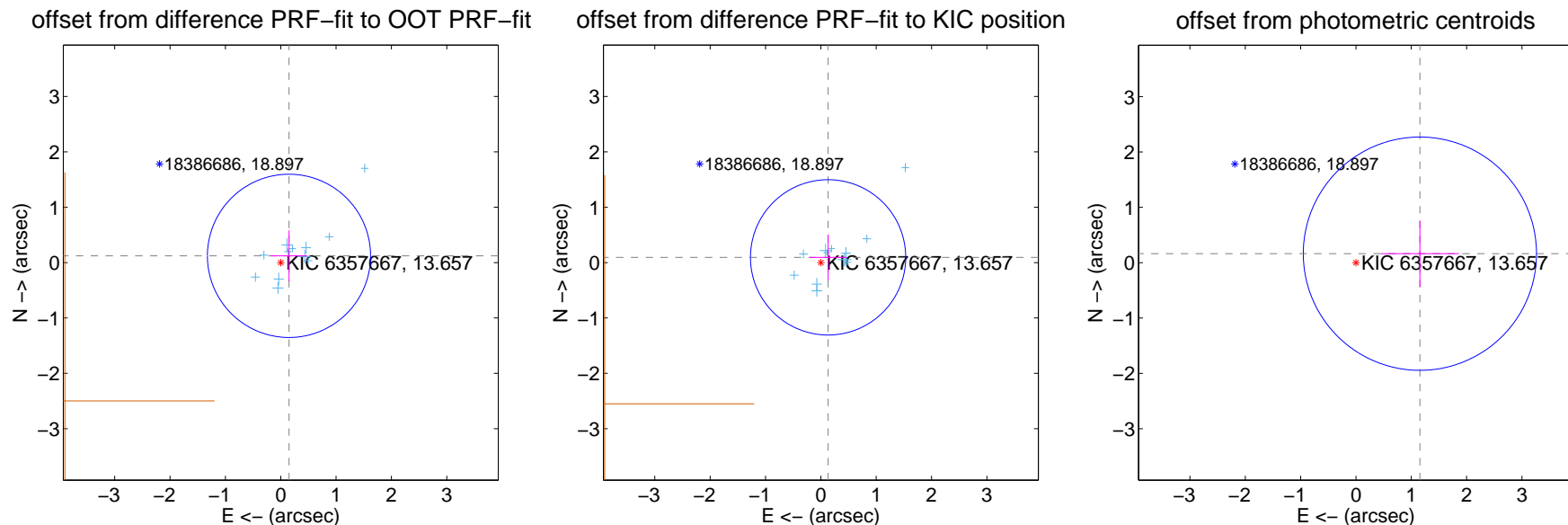
DV Centroid Data

Supplemental centroid analysis for 006357667-01. Kepler magnitude: 13.66. Transit SNR 9.96

There are 12 quarters with good PRF difference image offsets

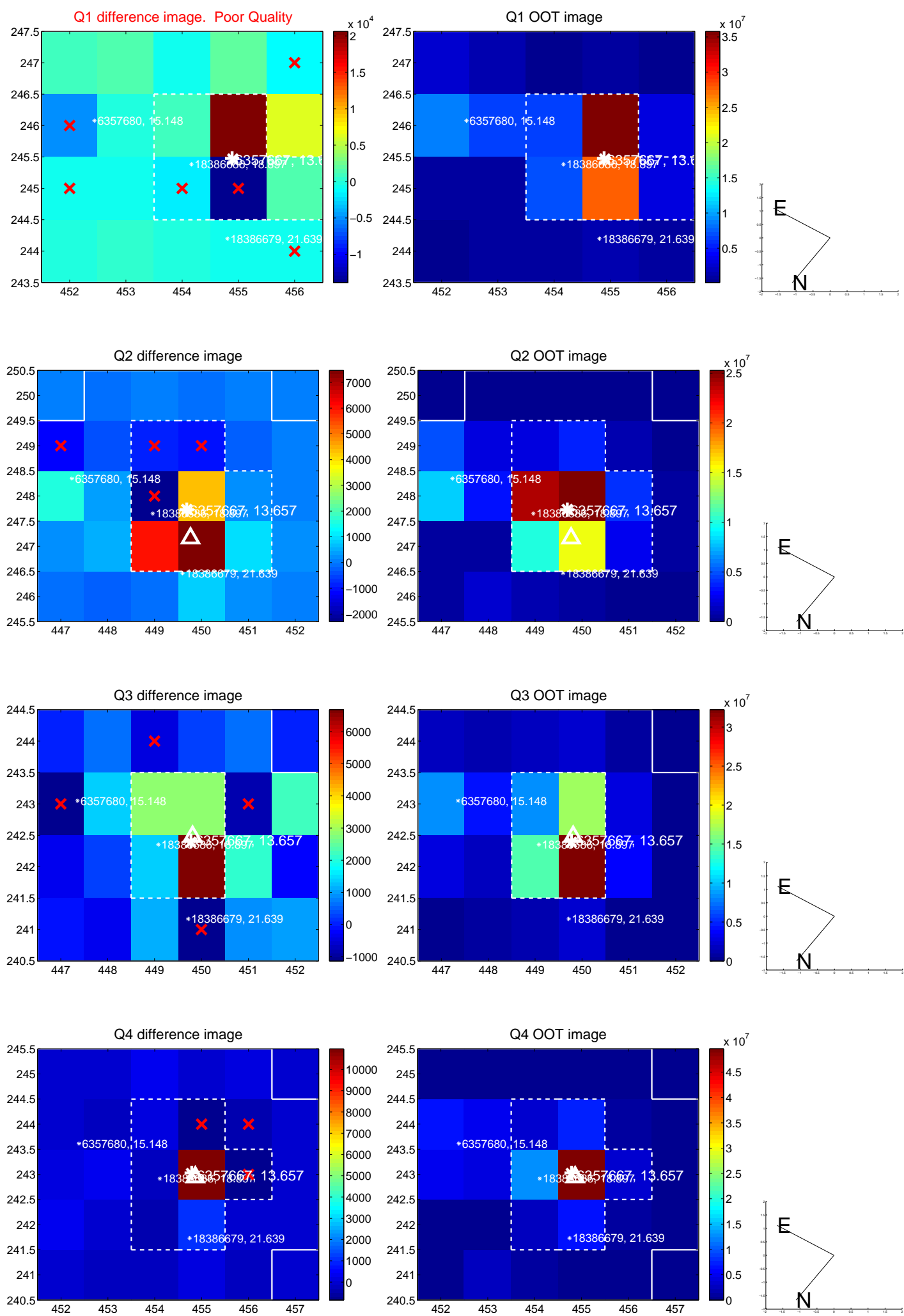
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.192 ± 0.491 | 0.39 | -0.149 ± 0.332 | 0.121 ± 0.462 |
| PRF-fit source offset from KIC position | 0.161 ± 0.467 | 0.34 | -0.130 ± 0.340 | 0.095 ± 0.415 |
| photometric centroid source offset | 1.17 ± 0.70 | 1.66 | -1.16 ± 0.70 | 0.16 ± 0.60 |

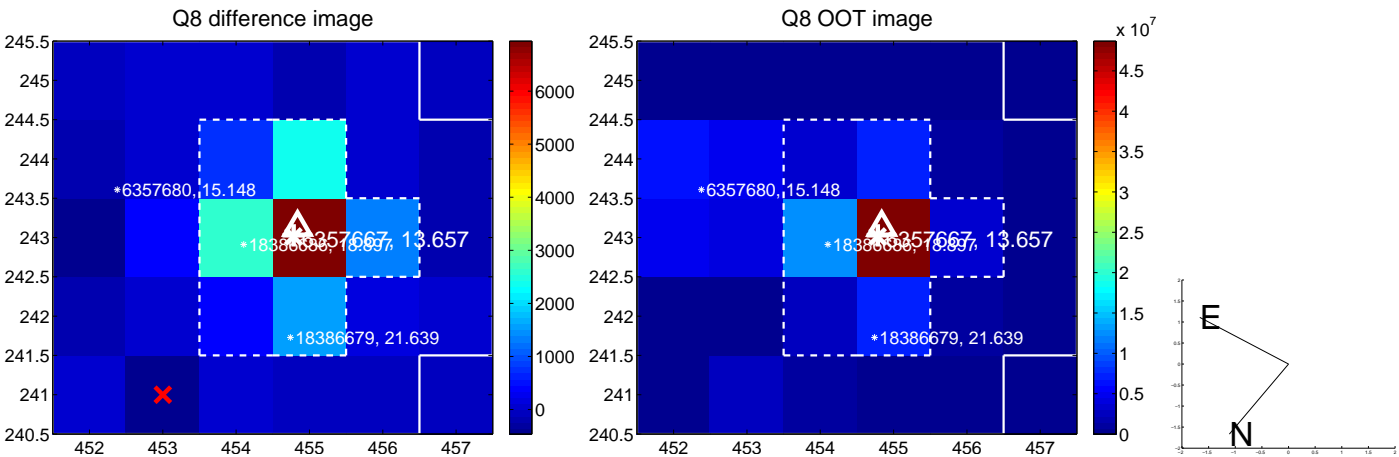
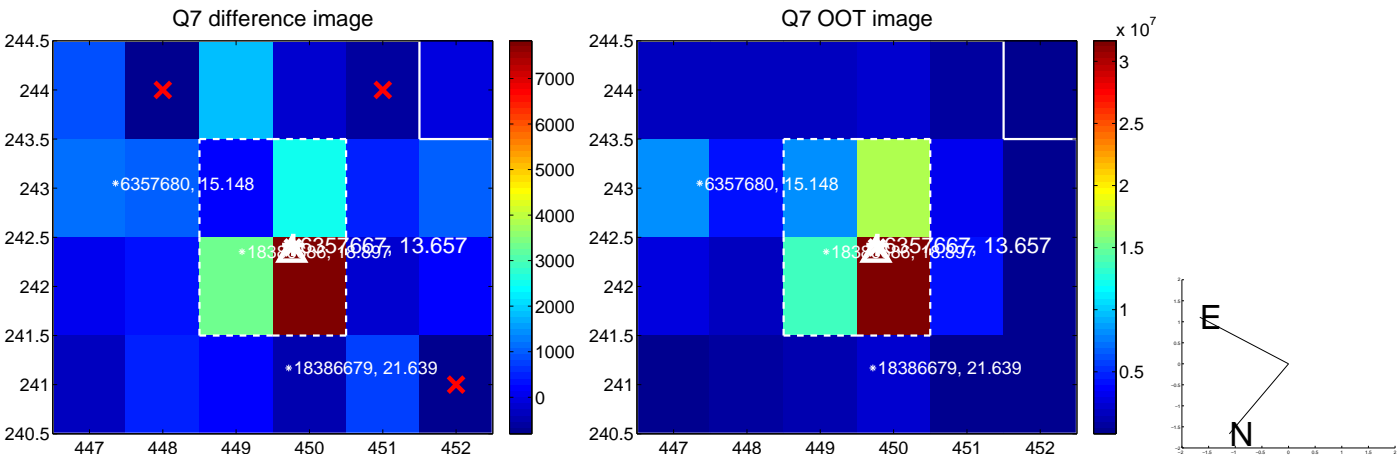
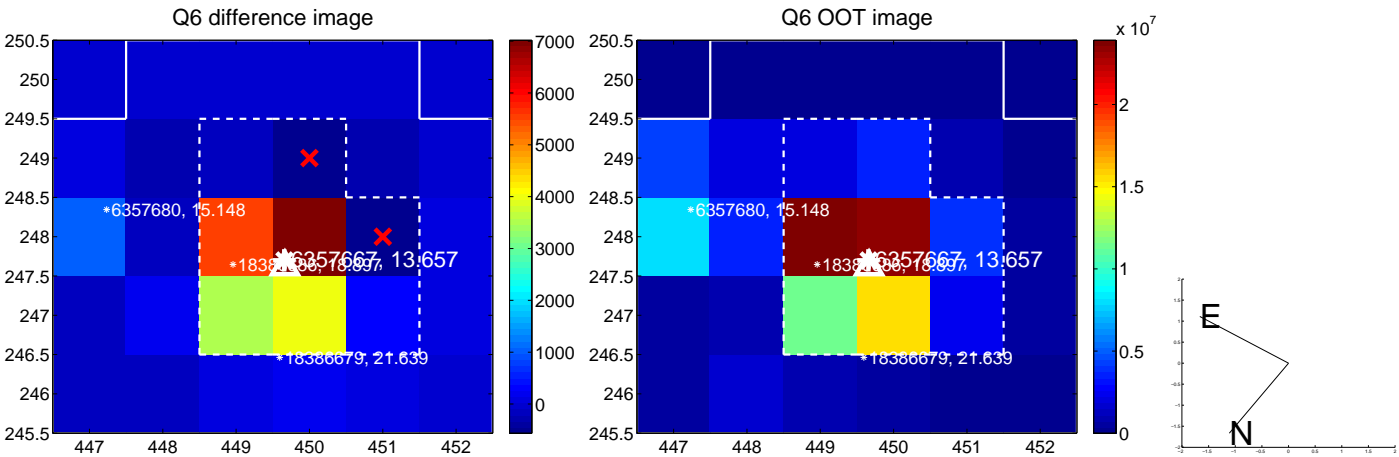
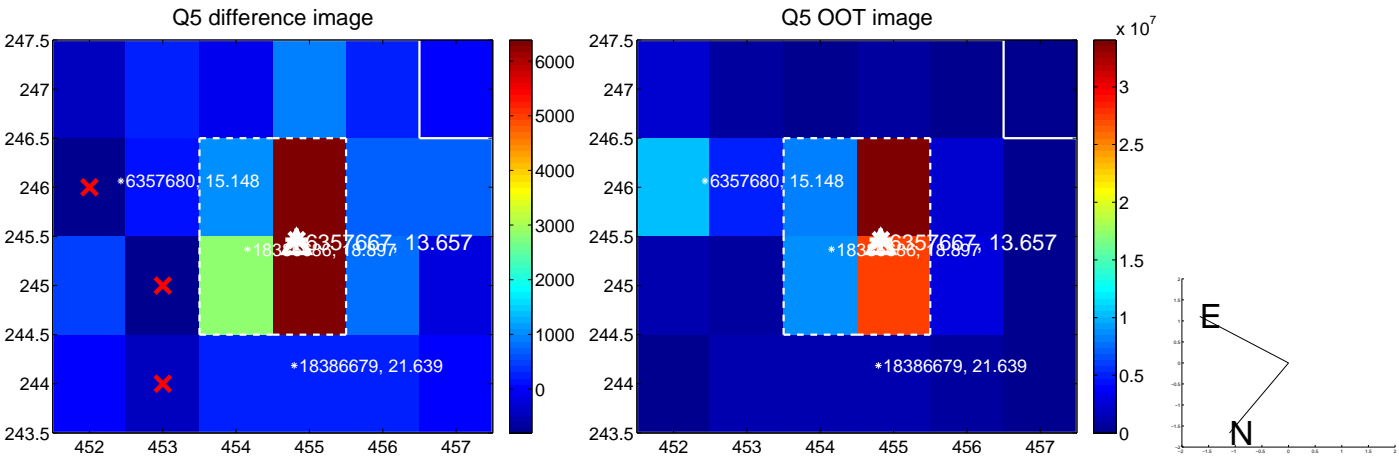


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

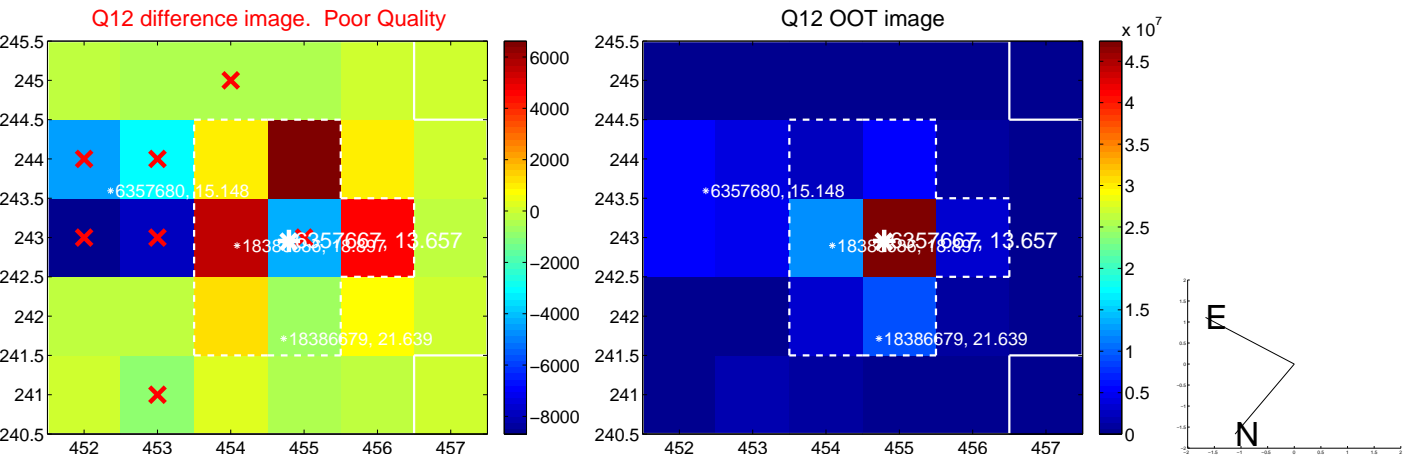
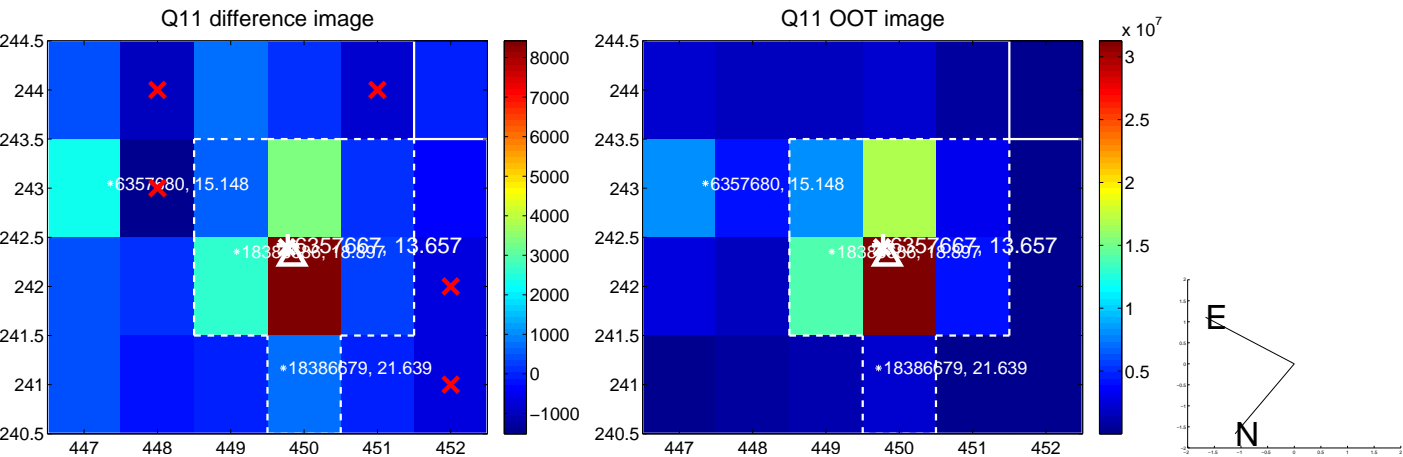
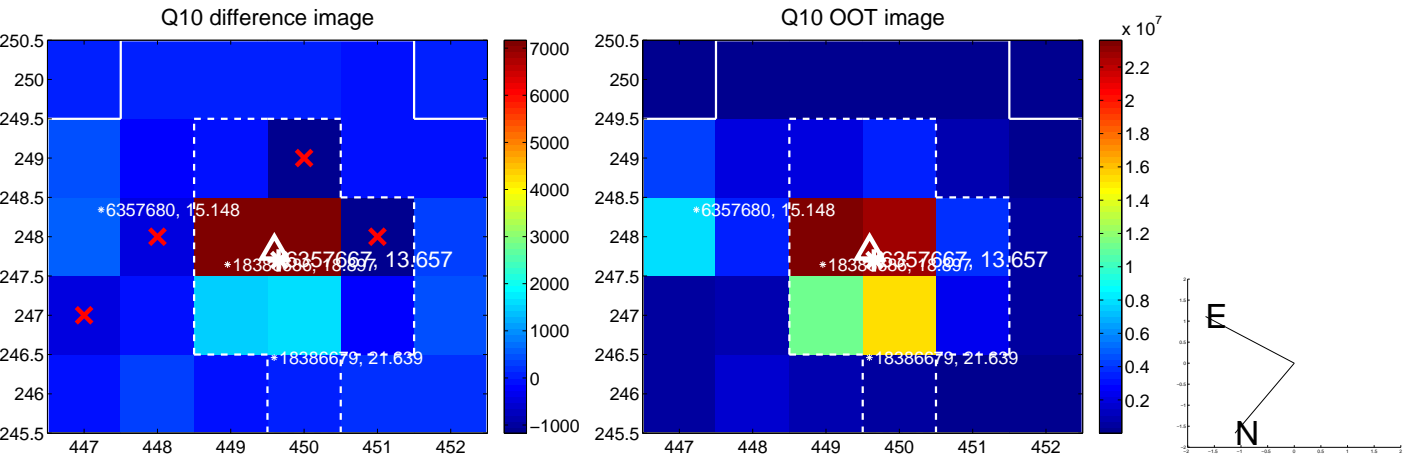
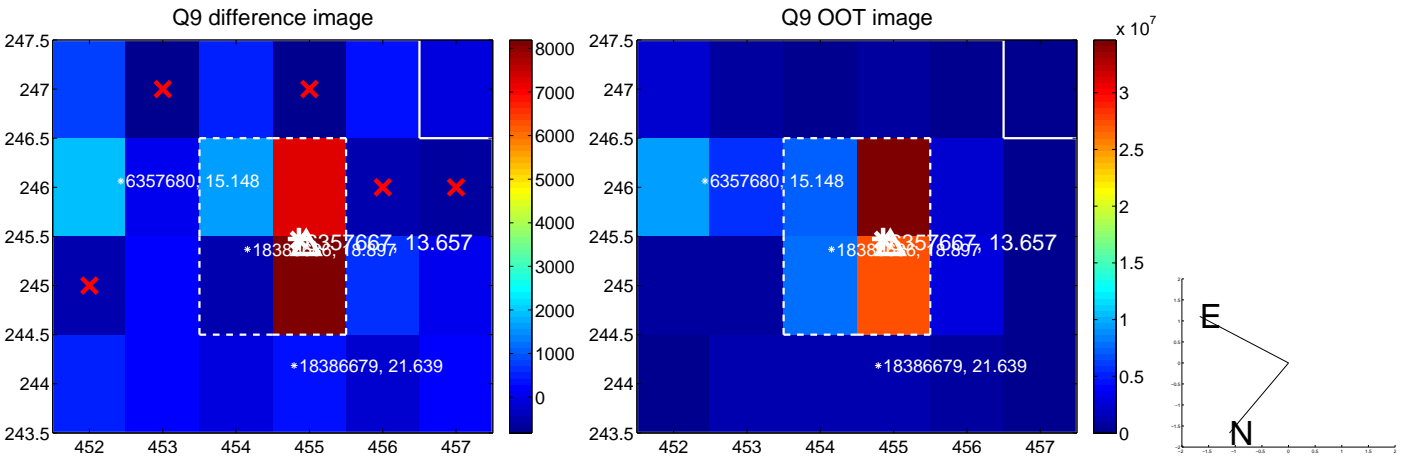
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



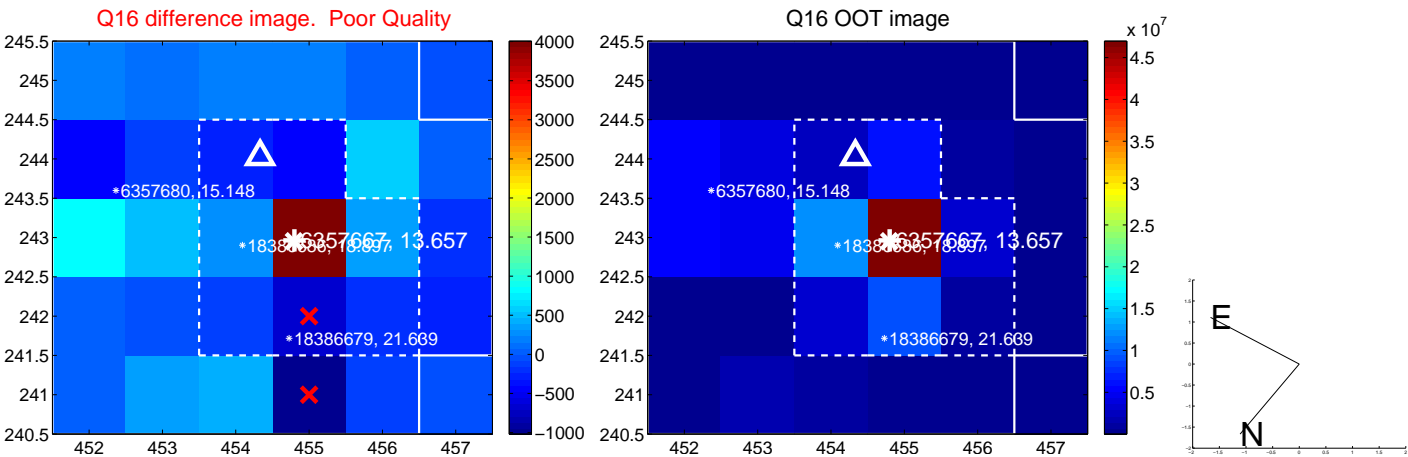
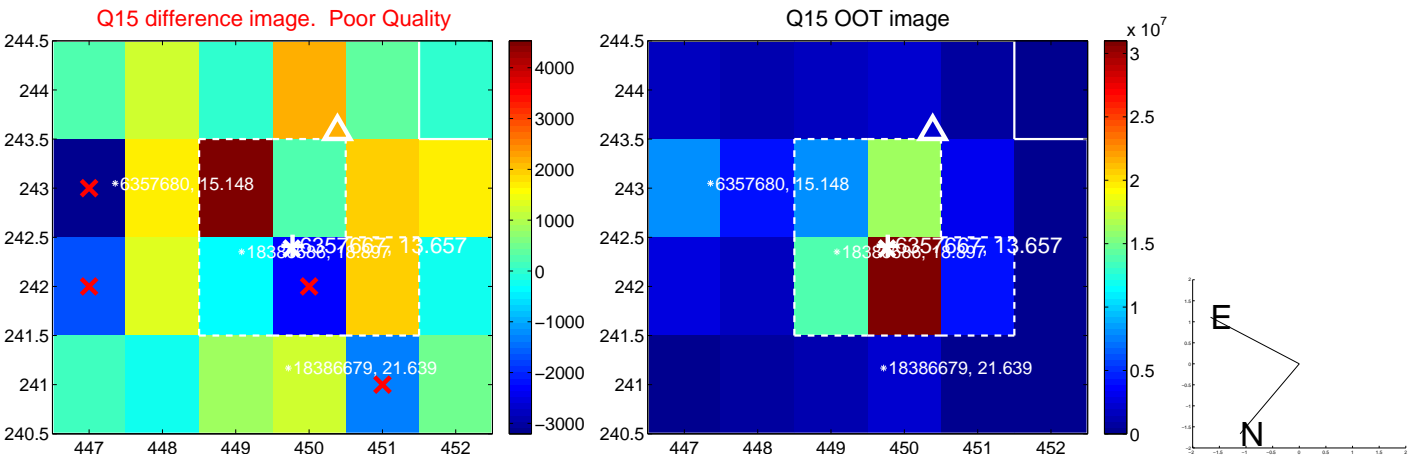
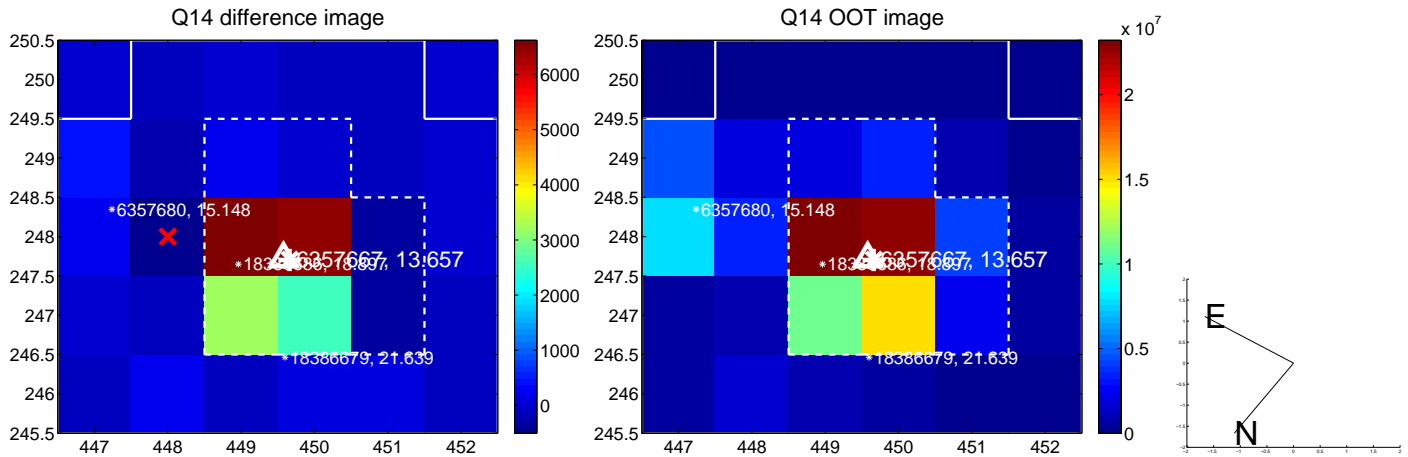
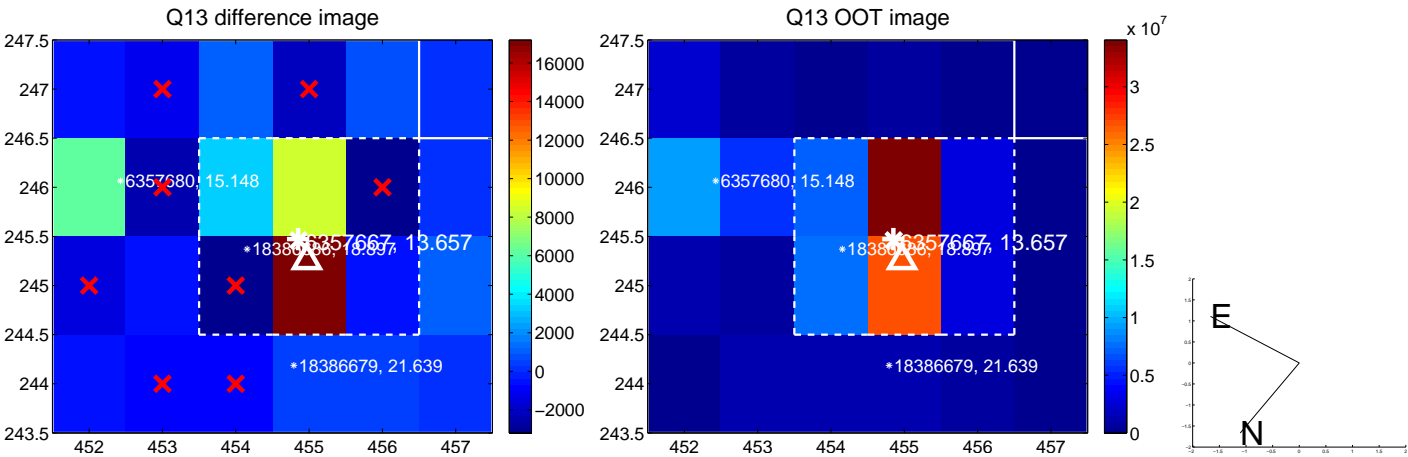
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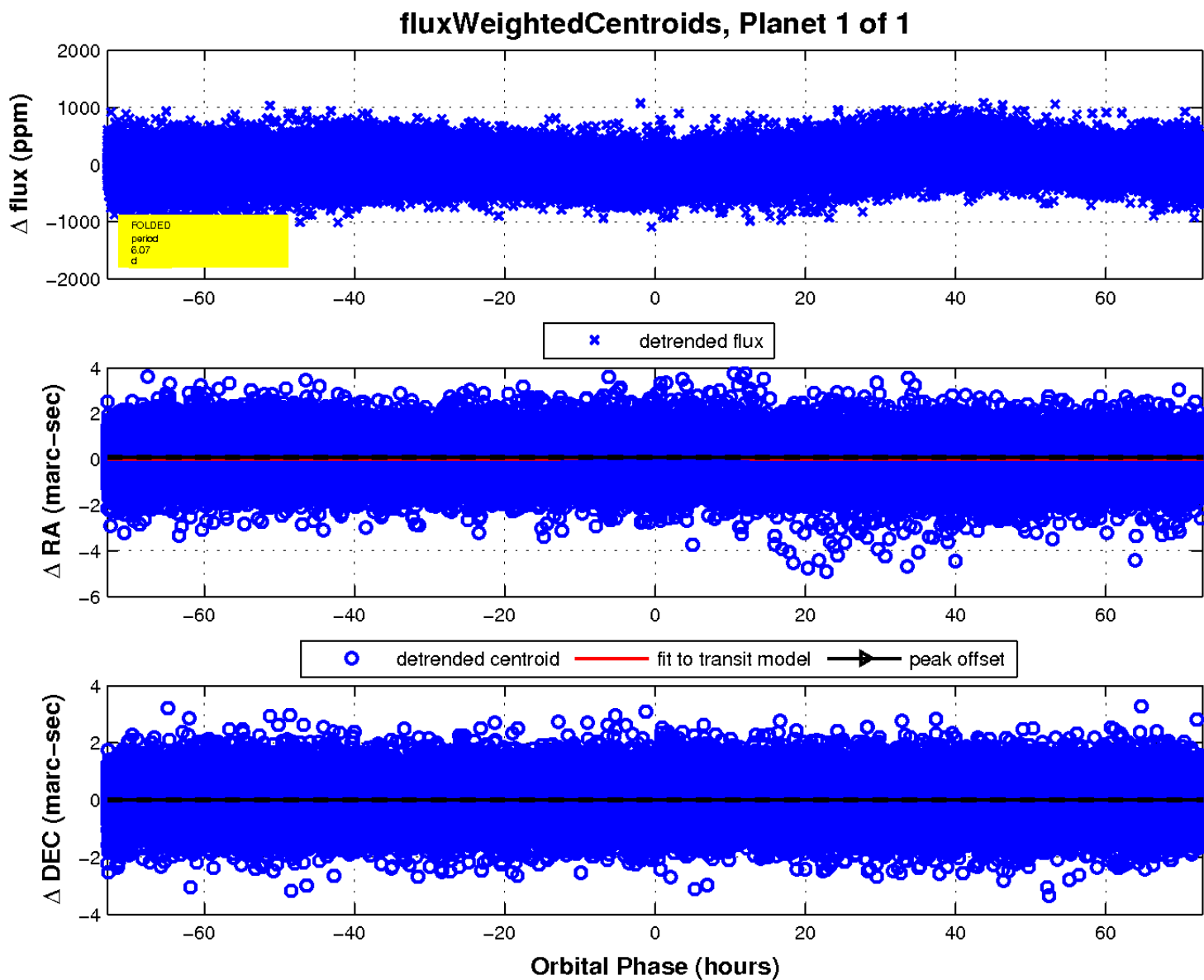
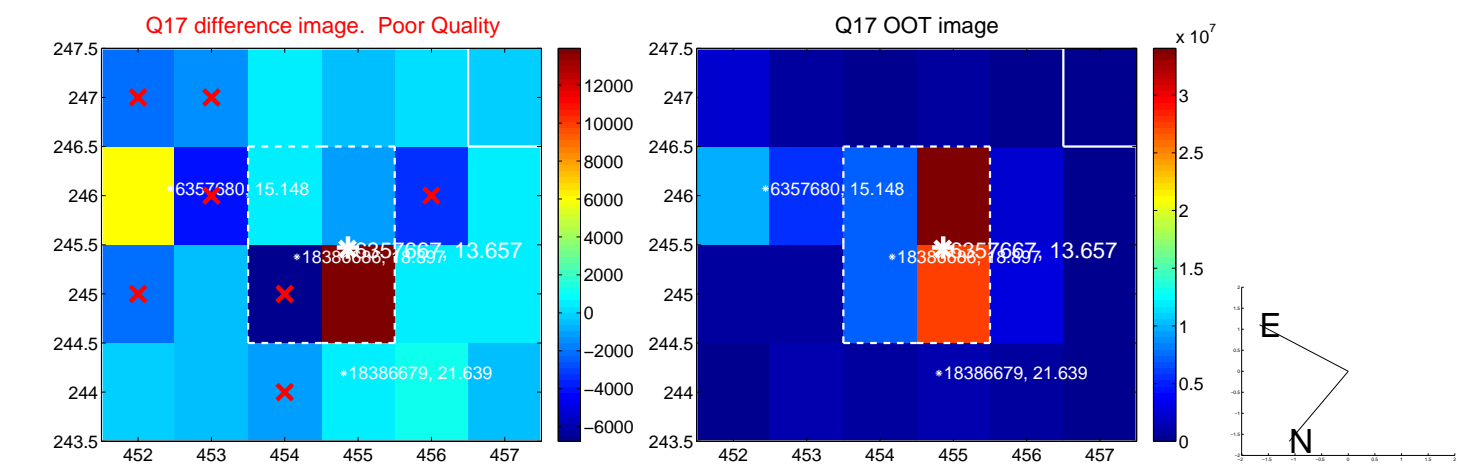
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

