

KIC 005562784

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 005562784-01 | OBS | 0608.01 | 25.337094 | 142.239160 | 2220.7 | 9.619 | 95.9 | 94.7 | 0.64 | 4469 | 3.44 | 6.95 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|------------------------|
| 005562784-01 | OBS | FP | 0.00 | 0 | 0 | 1 | 0 | CENT_UNRESOLVED_OFFSET |

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

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

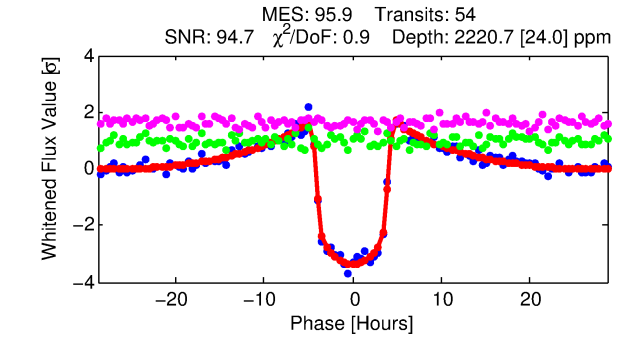
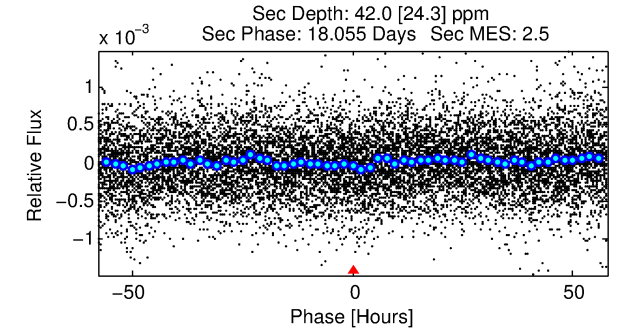
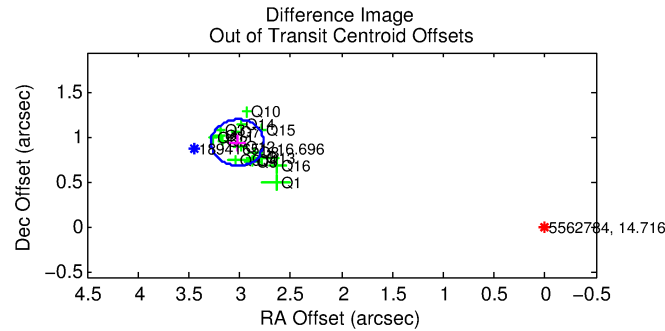
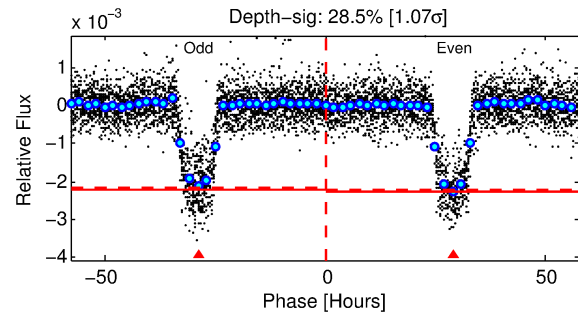
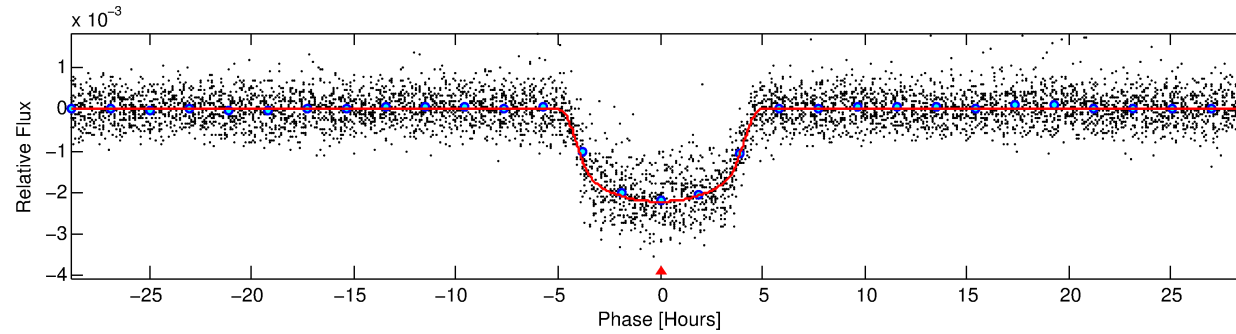
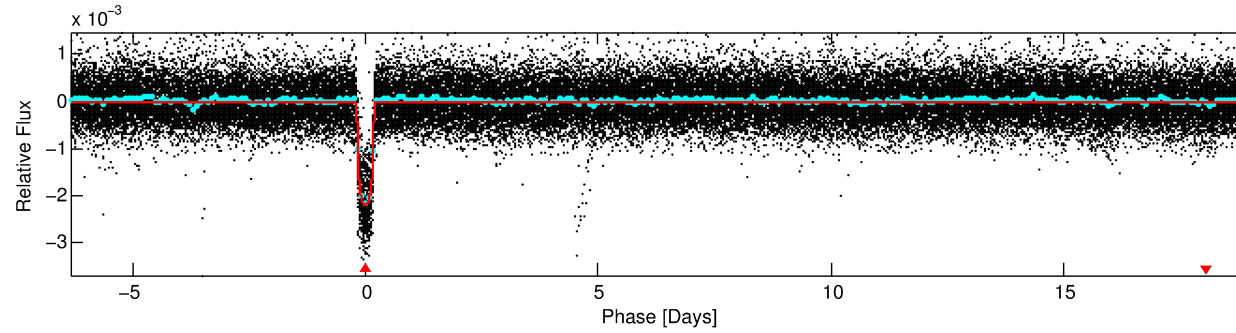
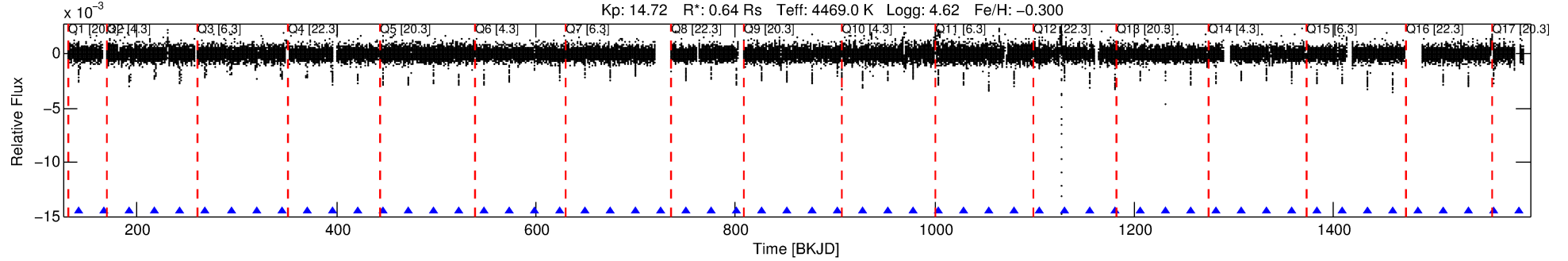
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005562784-01

No Significant Match Found

DV One-Page Summary

KIC: 5562784 Candidate: 1 of 1 Period: 25.337 d
KOI: K00608.01 Corr: 0.996



DV Fit Results:

Period = 25.33709 [0.00005] d
Epoch = 142.2392 [0.0016] BKJD
Rp/R* = 0.0496 [0.0006]
a/R* = 12.97 [0.48]
b = 0.83 [0.01]
Seff = 6.95 [1.08]
Teq = 414 [16] K
Rp = 3.43 [0.31] Re
a = 0.1440 [0.0102] AU
Ag = 40.59 [23.89] [1.66 σ]
Teffp = 1616 [239] K [5.01 σ]

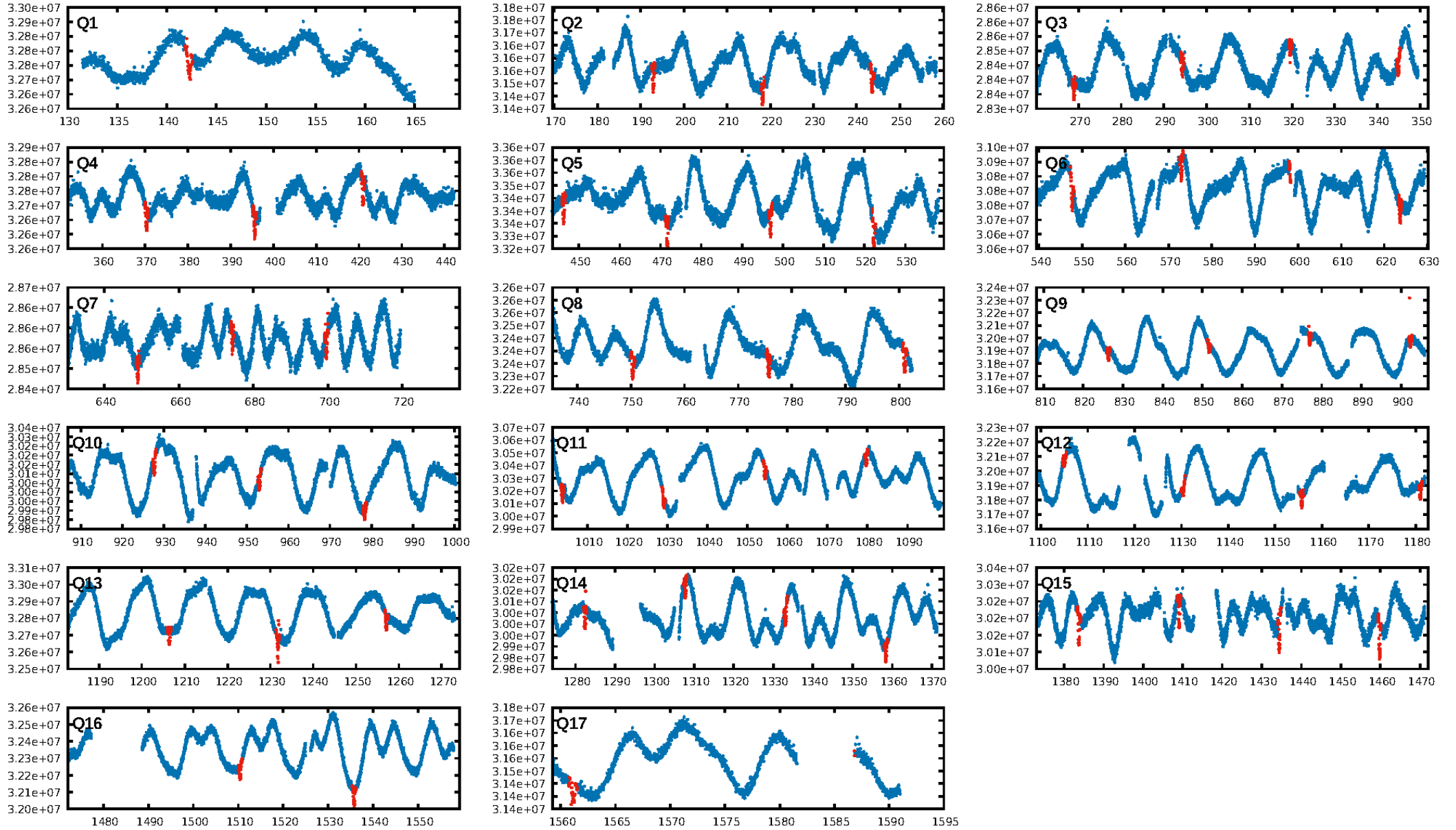
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 0.7803
Centroid-sig: 0.0%
Centroid-so: 4.127 arcsec [41.56 σ]
OotOffset-rm: 3.165 arcsec [36.85 σ]
KicOffset-rm: 3.437 arcsec [44.13 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

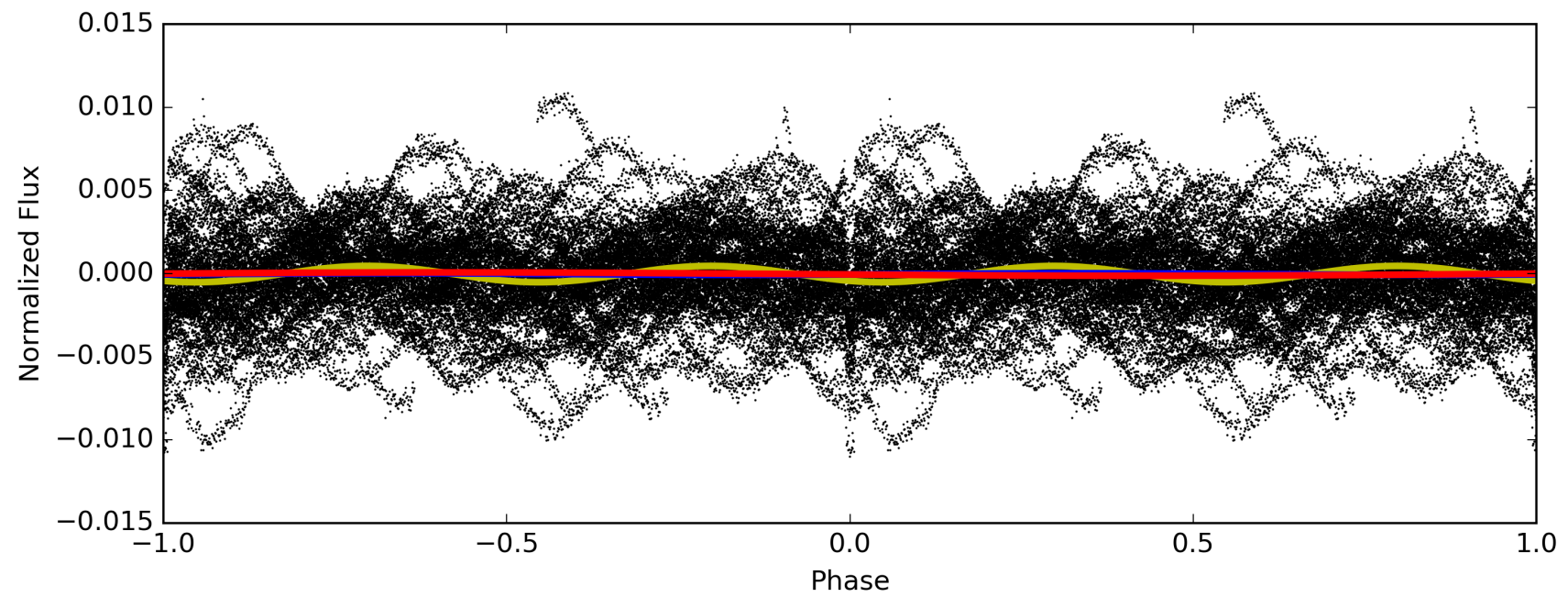
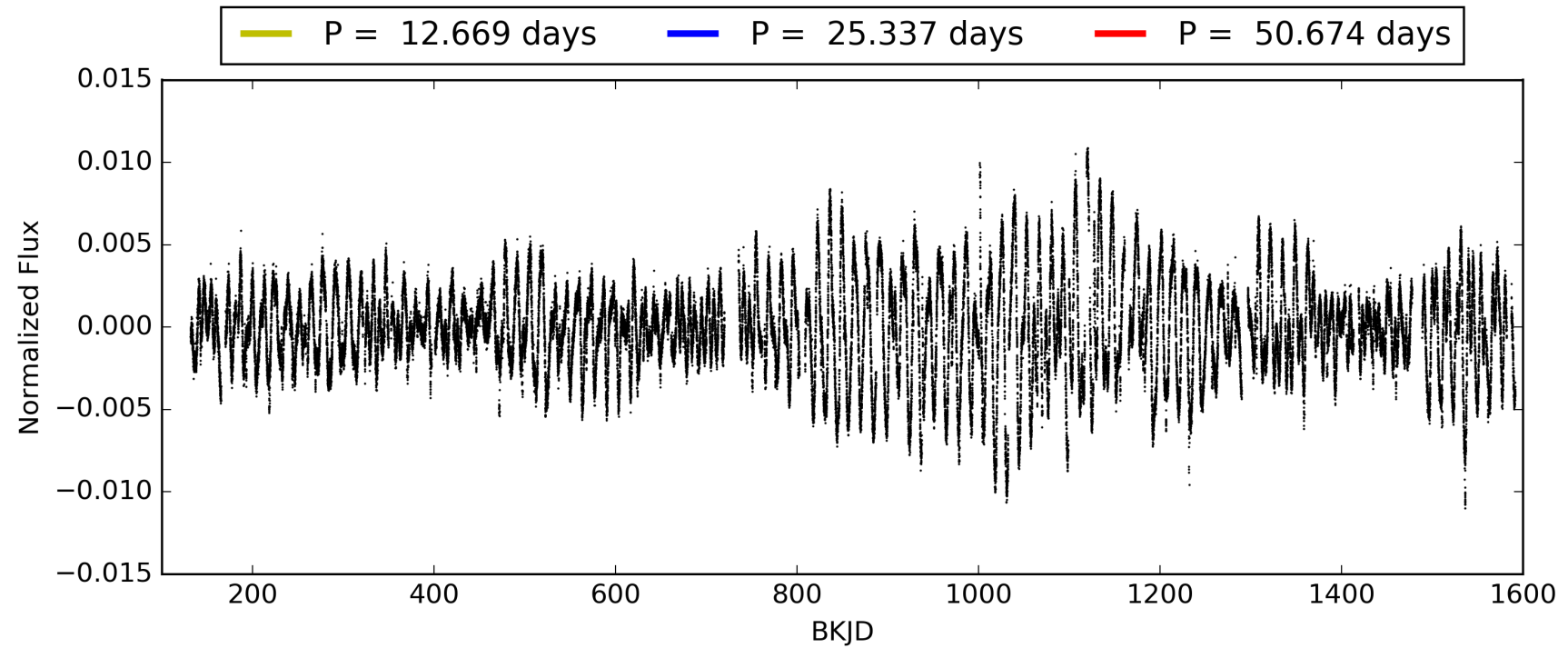
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:09:40 Z

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

TCE 005562784-01, PDC Light Curves

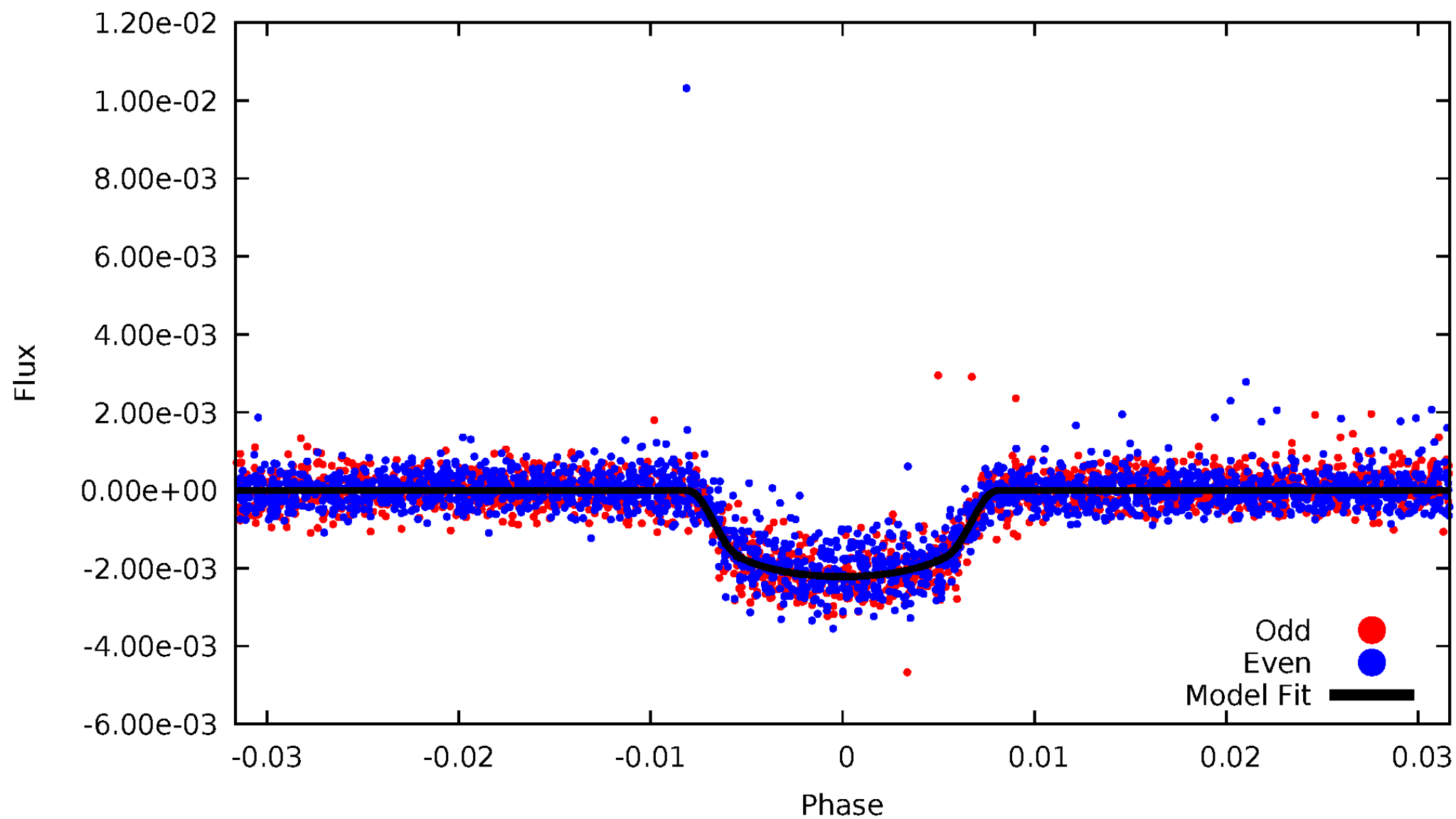


TCE 005562784-01



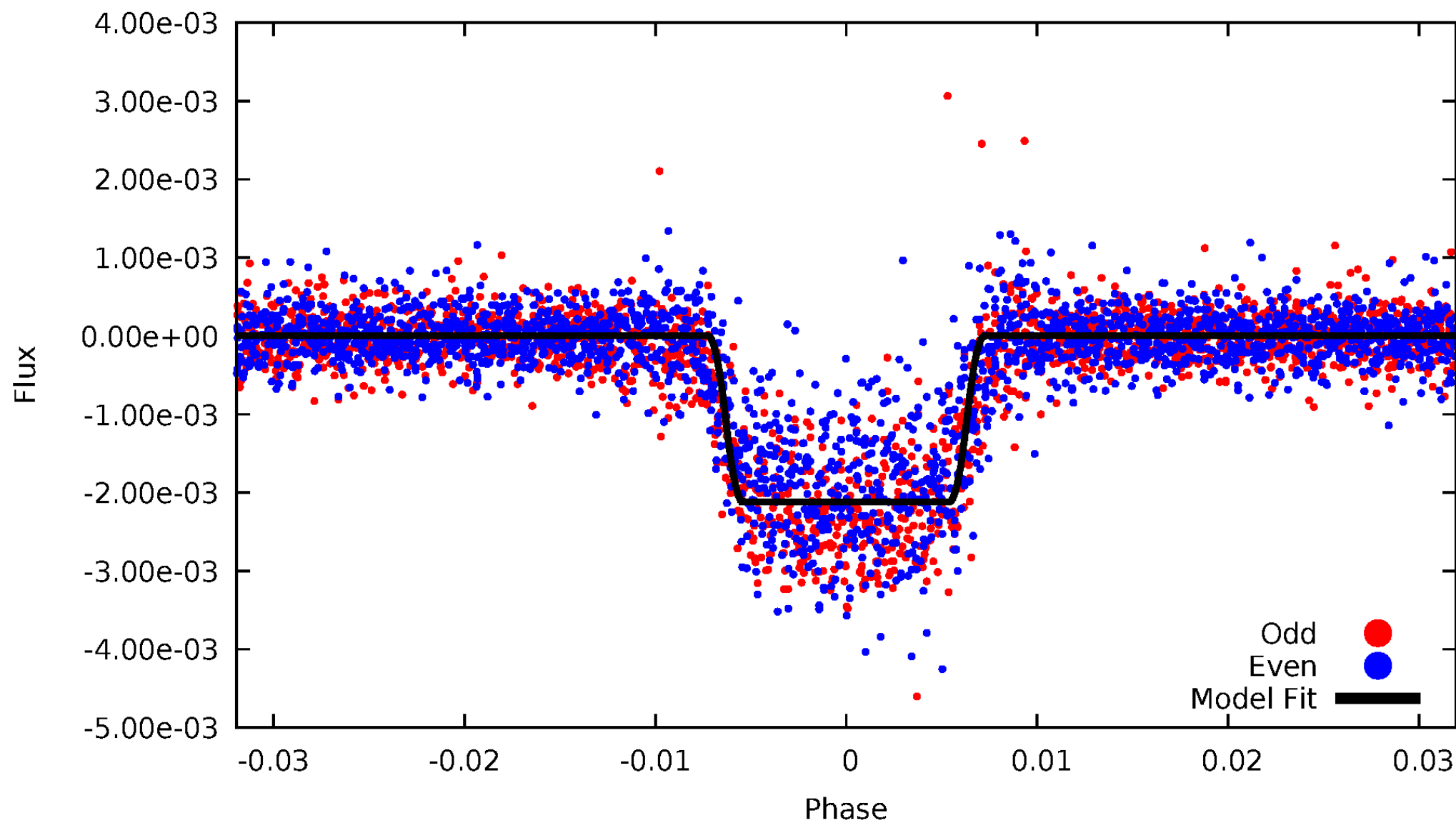
DV Odd/Even

TCE 005562784-01



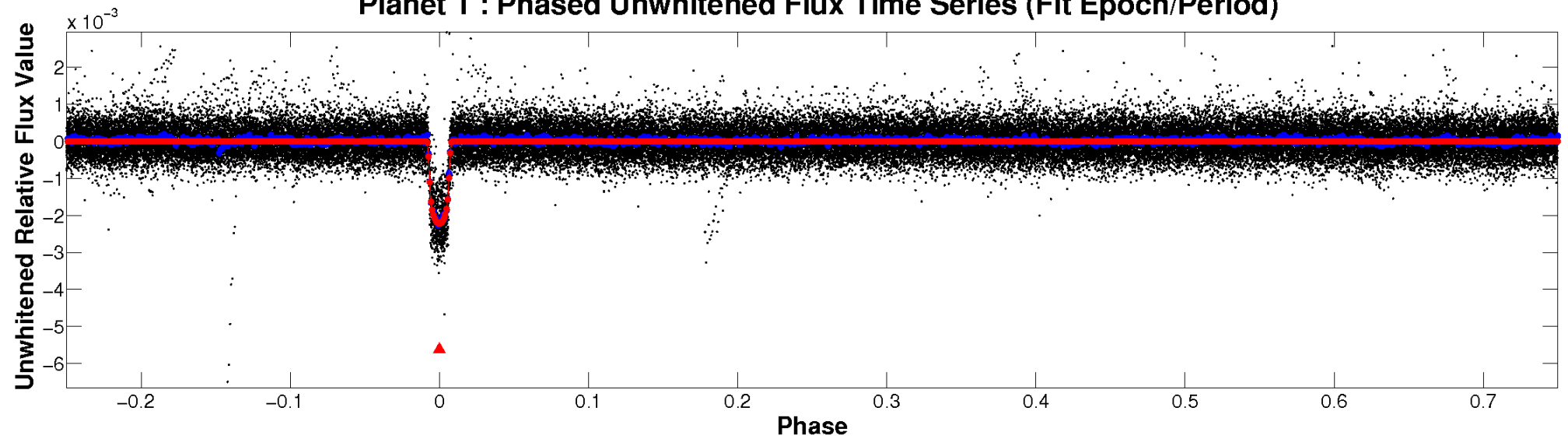
ALT Odd/Even

TCE 005562784-01

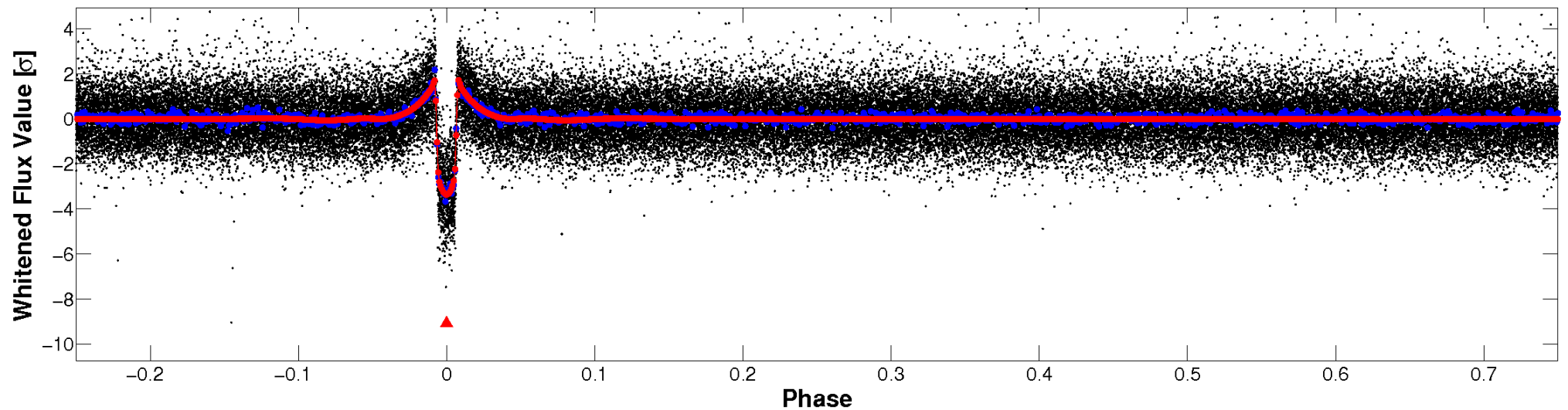


Non-Whitened Vs. Whitened Light Curve

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

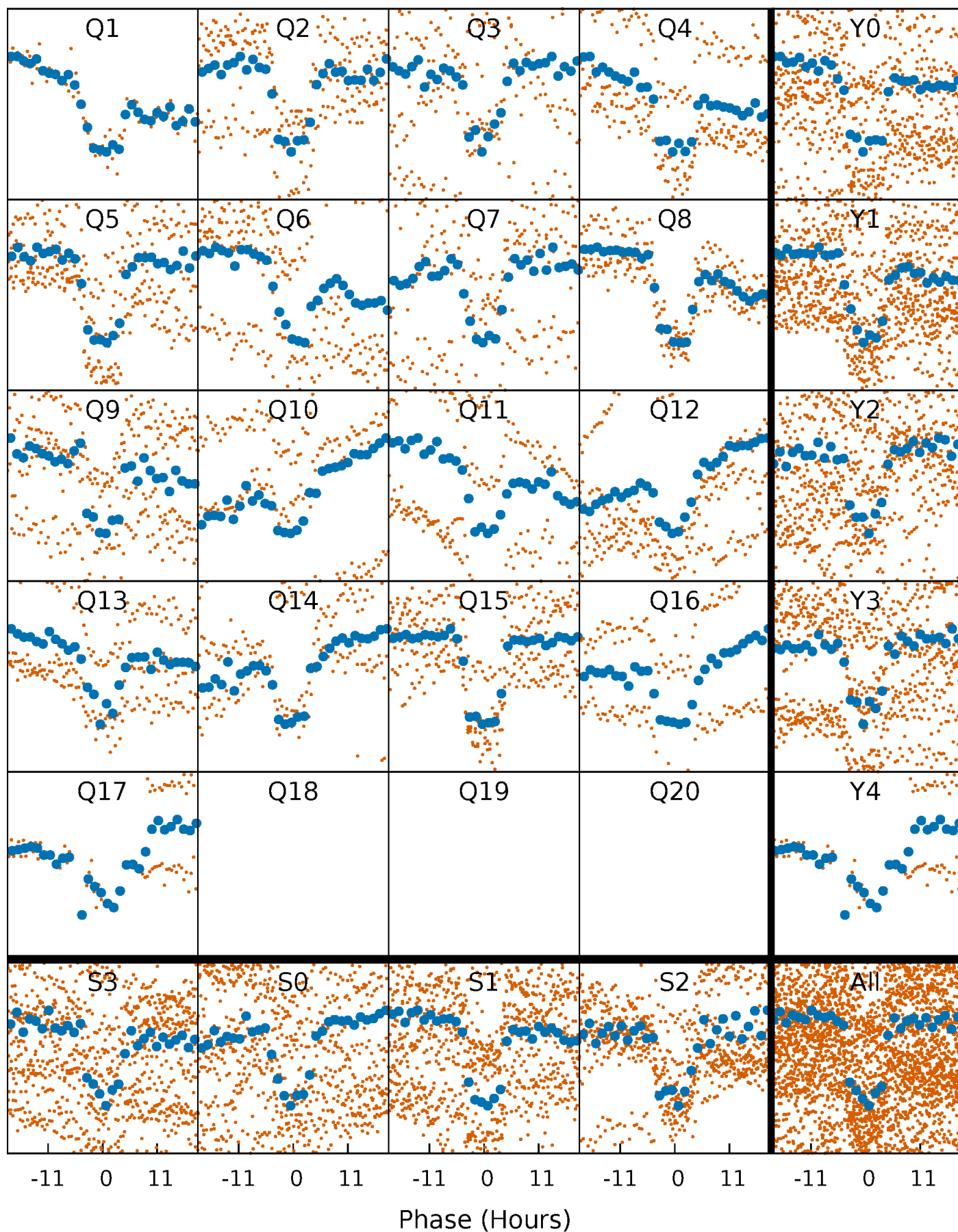


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



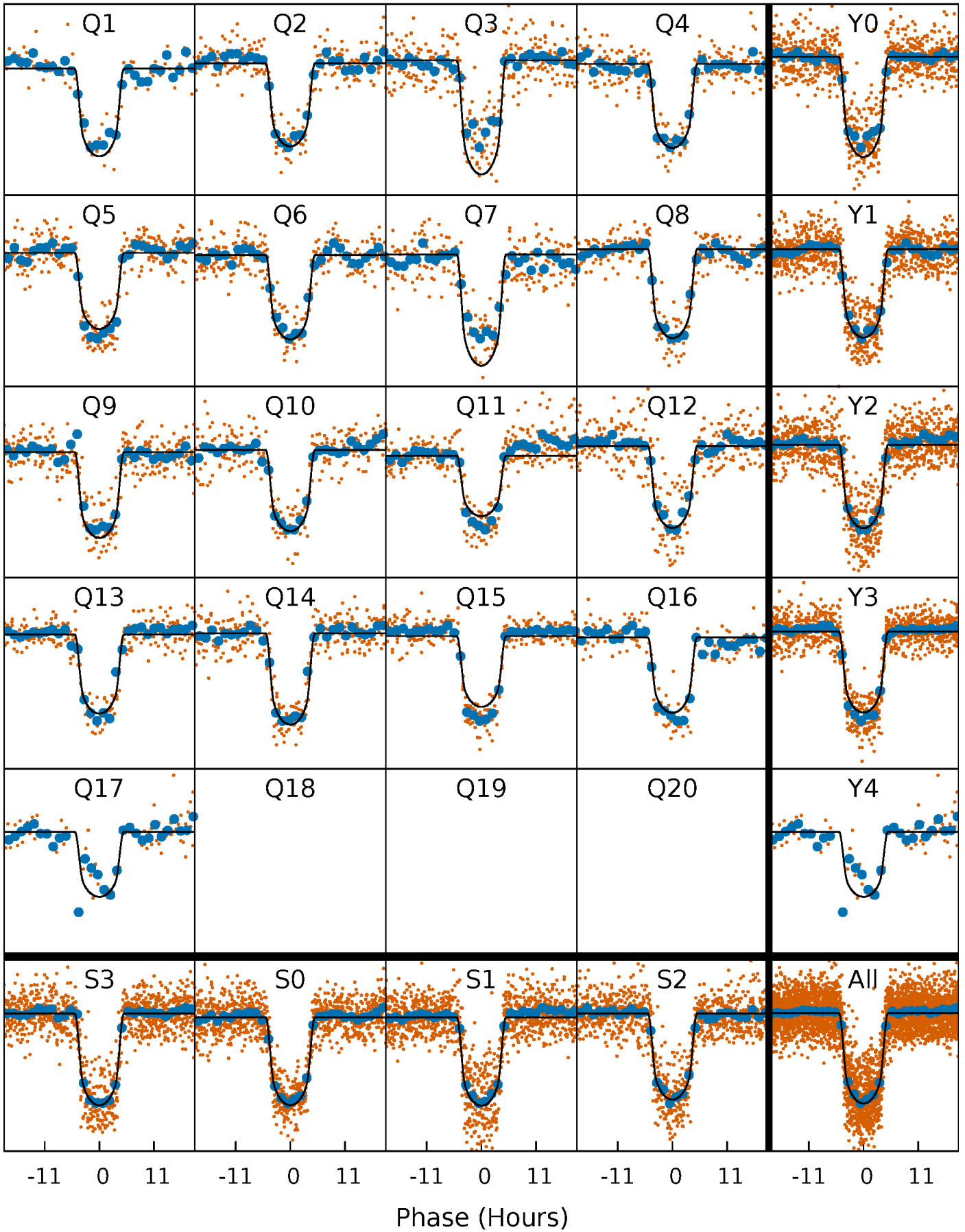
PDC Quarter-Phased Transit Curves

TCE 005562784-01 P= 25.337094 Days $T_0=142.239160$ (BKJD)



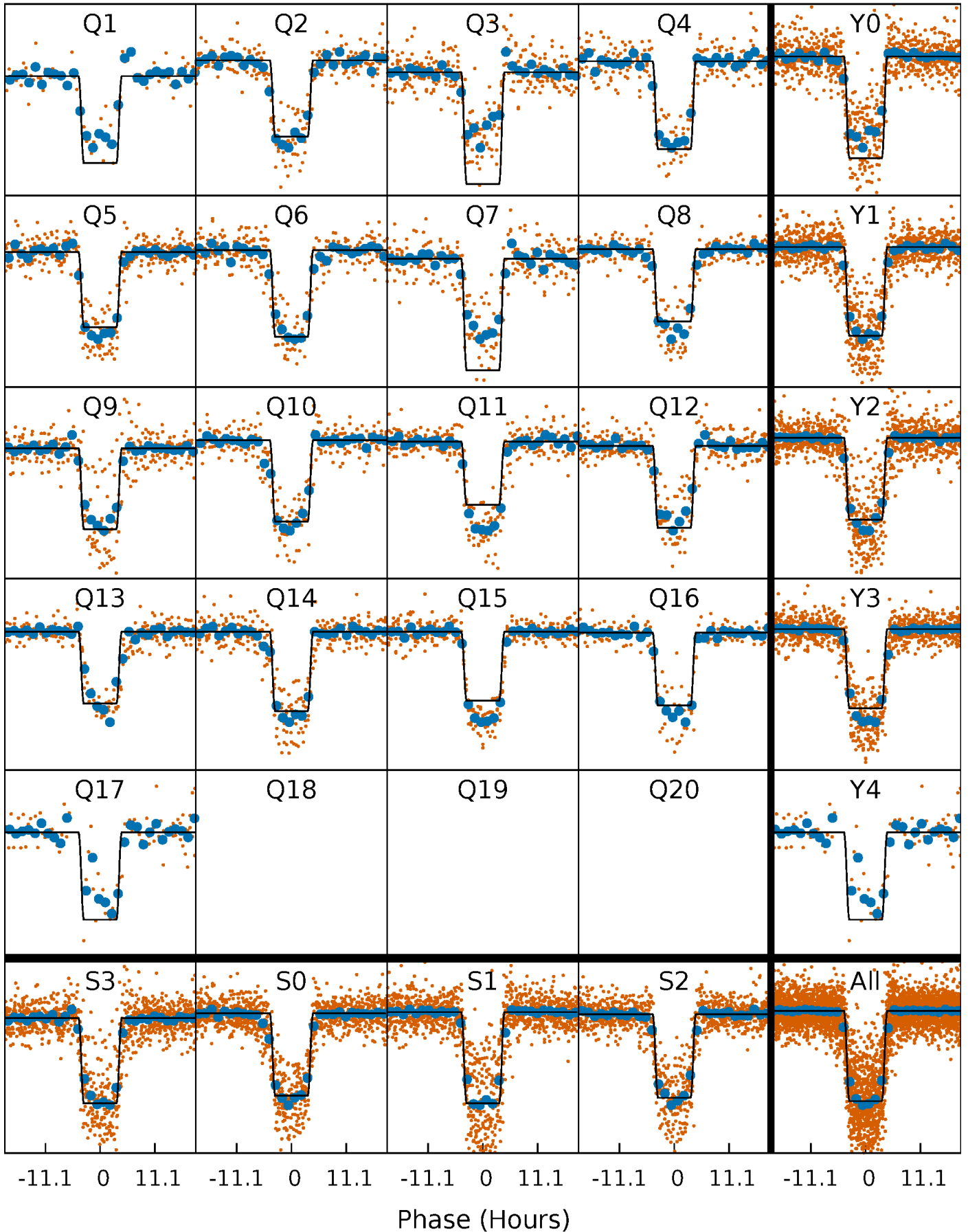
DV Quarter-Phased Transit Curves

TCE 005562784-01 P= 25.337094 Days $T_0=142.239160$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

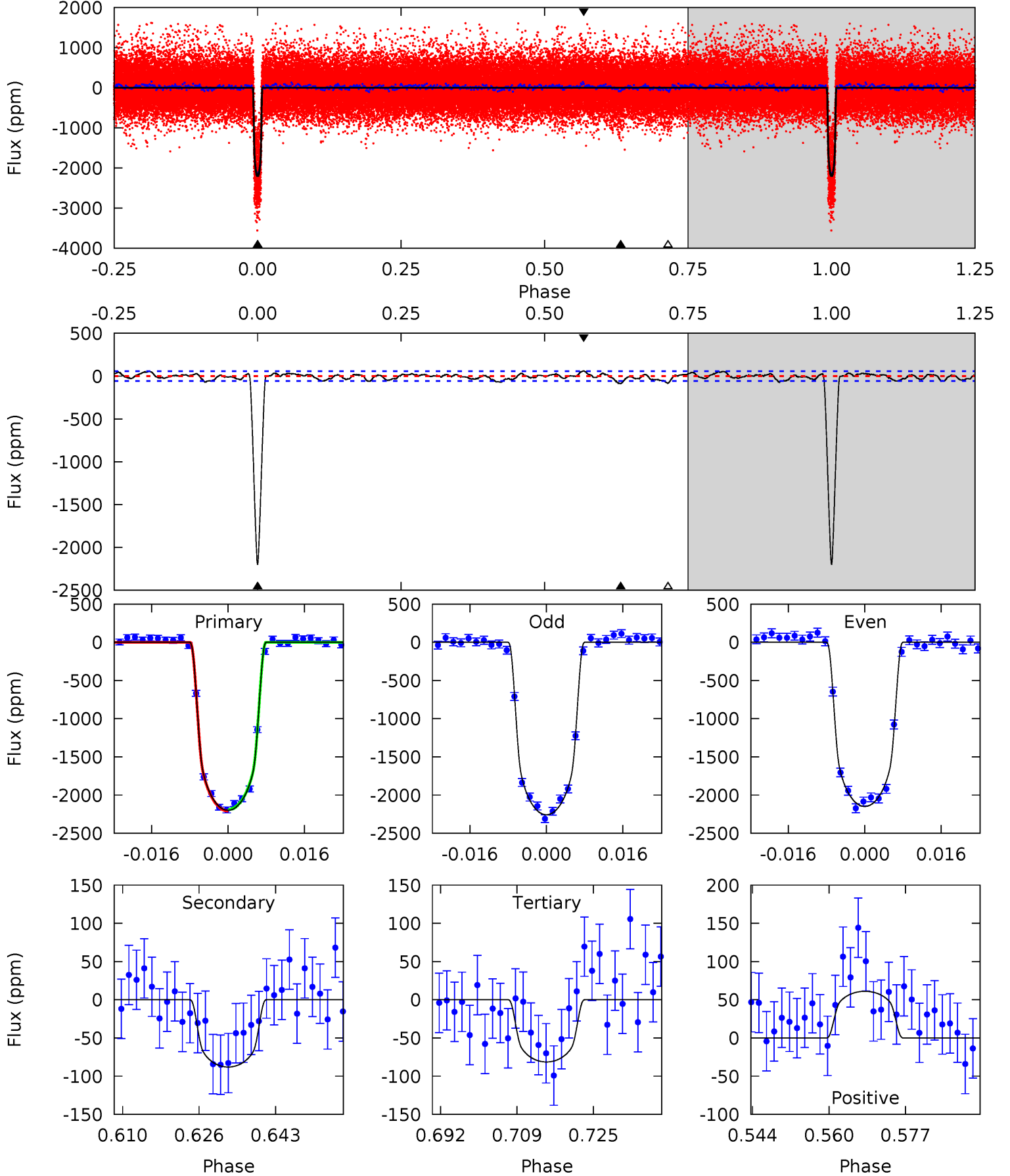
TCE 005562784-01 P= 25.336571 Days $T_0=142.253643$ (BKJD)



DV Model-Shift Uniqueness Test

005562784-01, P = 25.337094 Days, E = 116.902066 Days

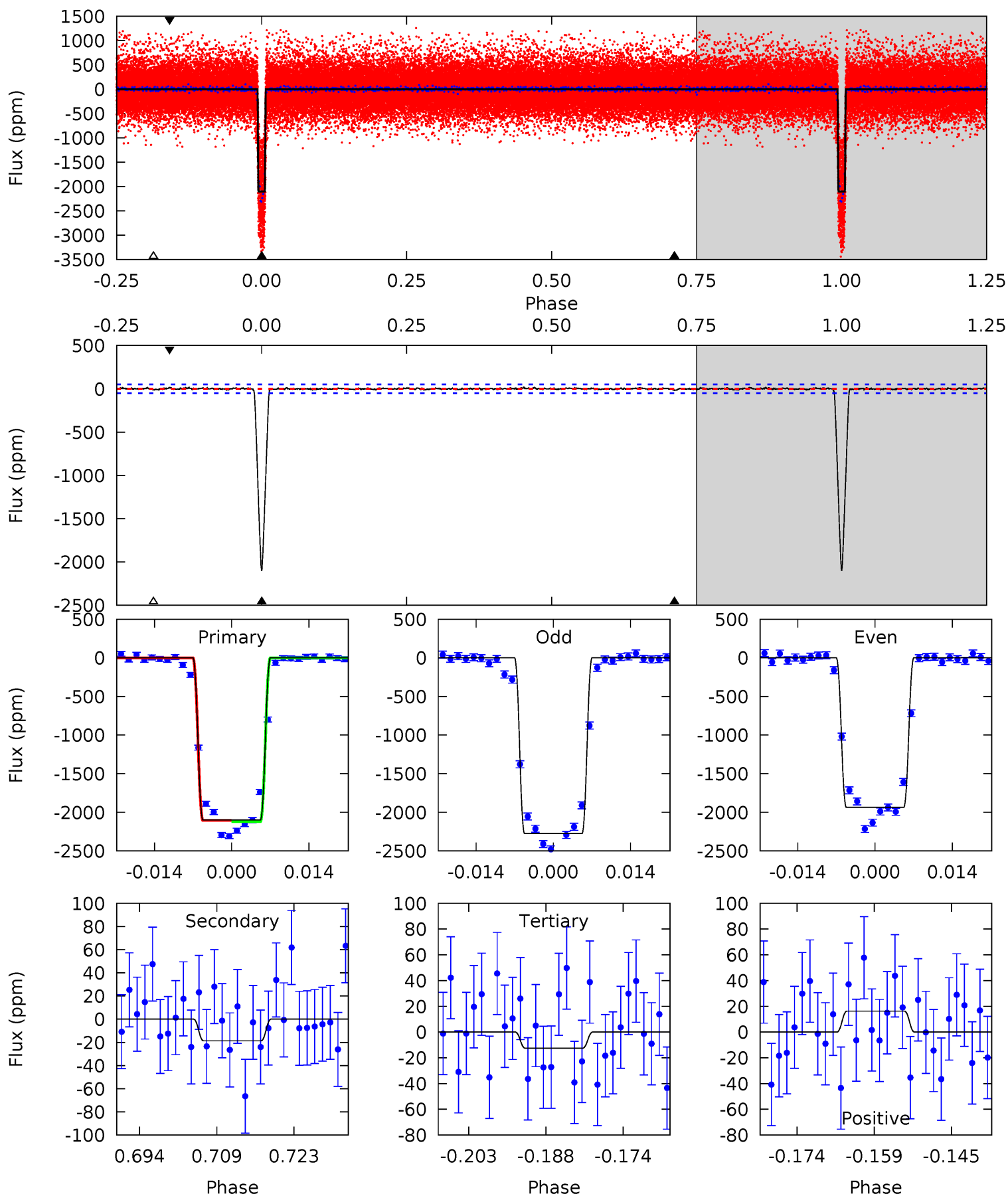
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 188.4 | 7.54 | 6.97 | 5.23 | 4.93 | 2.40 | 2.32 | 181.4 | 183.1 | 0.57 | 2.31 | 4.65 | 1.00 | 0.03 | 0.72 |



Alt Model-Shift Uniqueness Test

005562784-01, P = 25.336571 Days, E = 116.917072 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 208.8 | 1.86 | 1.25 | 1.62 | 4.96 | 2.45 | 0.46 | 207.5 | 207.1 | 0.62 | 0.24 | 16.8 | 0.96 | 0.01 | 0 |



Stellar Parameters For KIC 005562784

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 4469^{+133}_{-133} | $4.625^{+0.052}_{-0.024}$ | $-0.300^{+0.300}_{-0.300}$ | $0.635^{+0.050}_{-0.056}$ | $0.621^{+0.074}_{-0.043}$ | $3.415^{+0.794}_{-0.412}$ |
| | +3%/-3% | +1%/-1% | +100%/-100% | +8%/-9% | +12%/-7% | +23%/-12% |
| 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 005562784-01 / KOI 0608.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|--------------|------------------------|-------------------|----------------------|------------------|
| DV | -88 ± 12 | $3.43^{+0.17}_{-0.18}$ | 575^{+21}_{-20} | 2657^{+71}_{-73} | 87^{+13}_{-13} |
| Alt. | -19 ± 10 | $3.18^{+0.16}_{-0.16}$ | 574^{+19}_{-21} | 2230^{+132}_{-178} | 21^{+12}_{-11} |

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 $A_{obs} \gg 1.0$

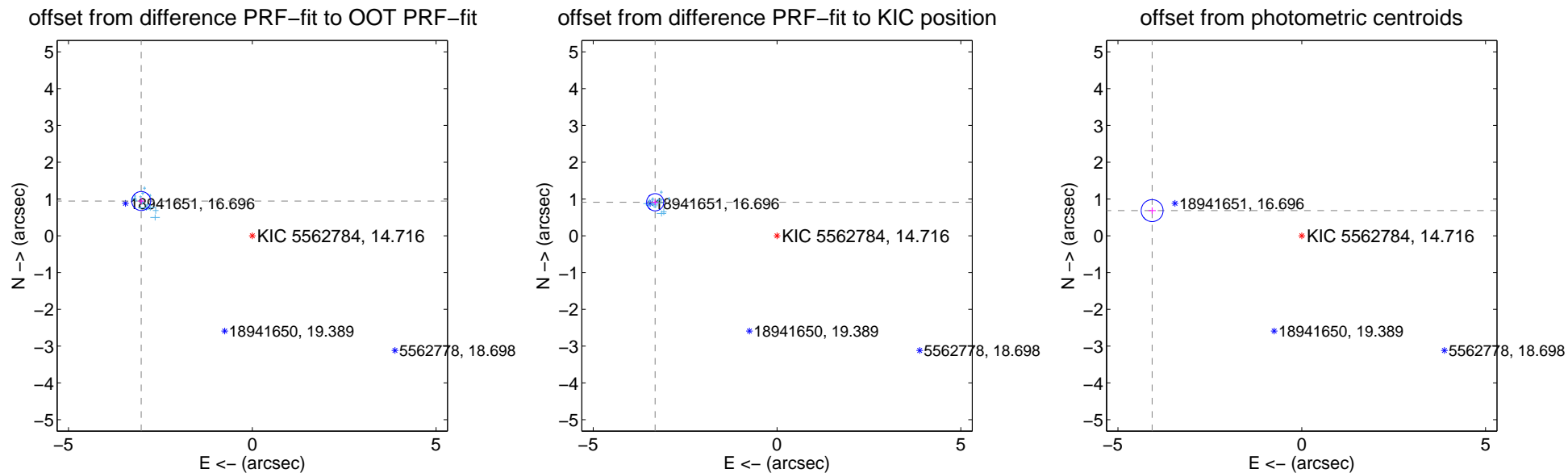
DV Centroid Data

Supplemental centroid analysis for 005562784-01. Kepler magnitude: 14.72. Transit SNR 94.68

There are 16 quarters with good PRF difference image offsets

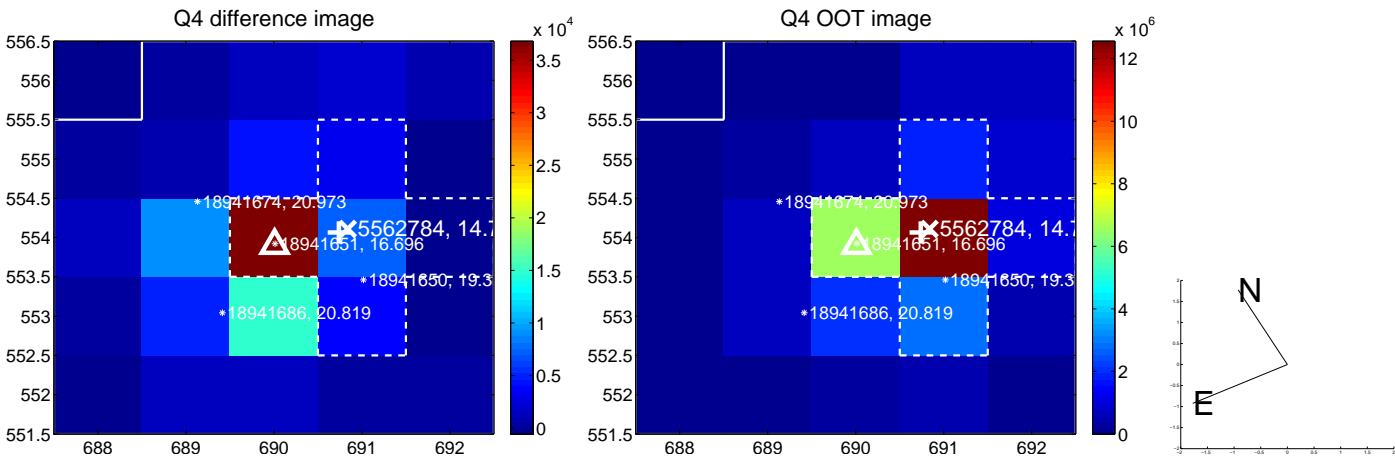
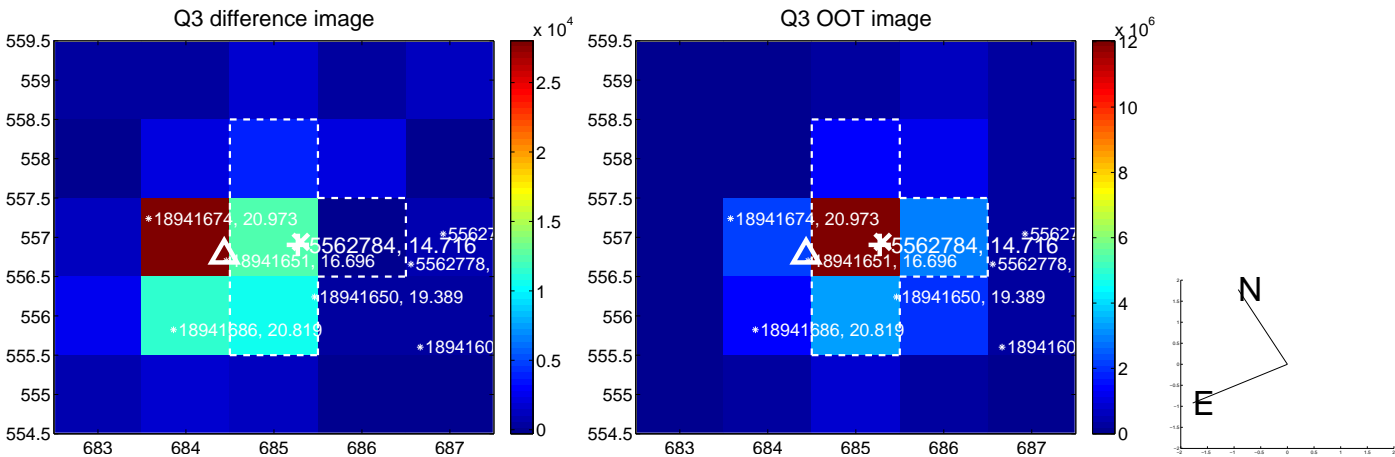
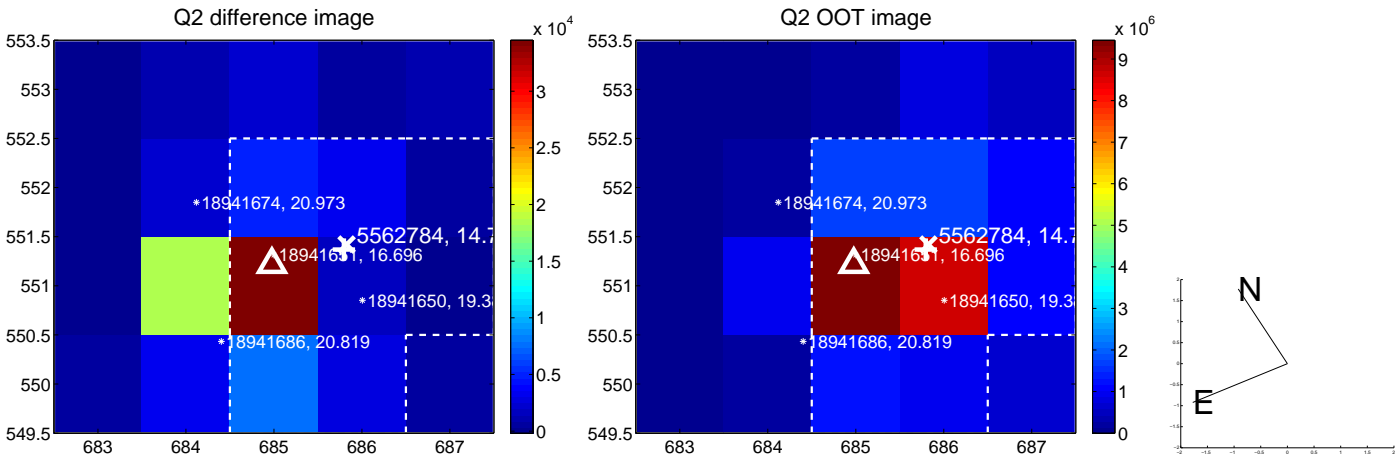
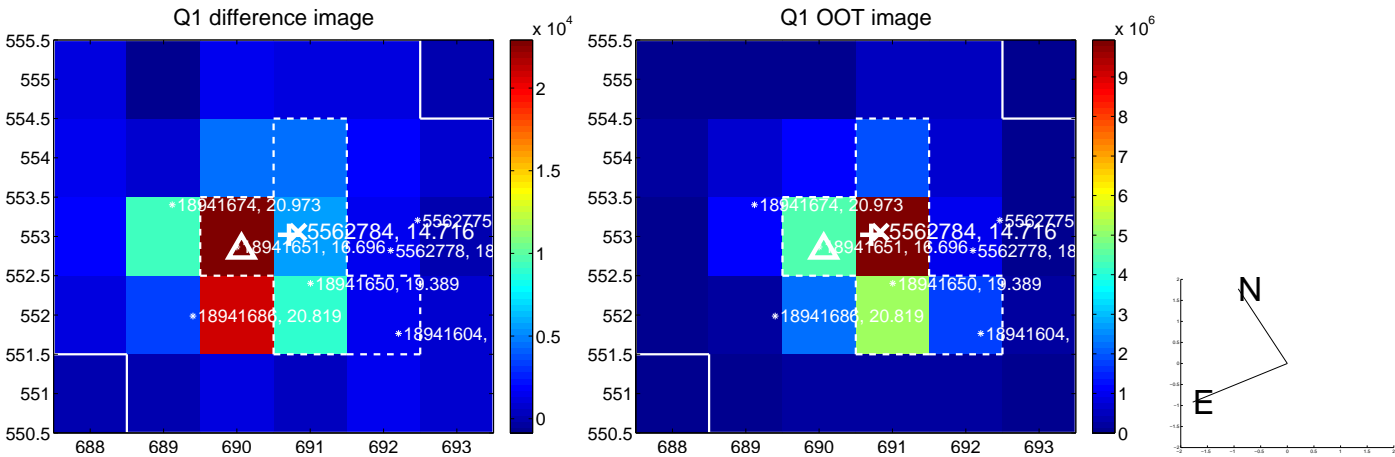
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 3.165 ± 0.086 | 36.85 | 3.021 ± 0.081 | 0.945 ± 0.083 |
| PRF-fit source offset from KIC position | 3.437 ± 0.078 | 44.13 | 3.314 ± 0.078 | 0.911 ± 0.076 |
| photometric centroid source offset | 4.13 ± 0.10 | 41.56 | 4.07 ± 0.10 | 0.68 ± 0.09 |

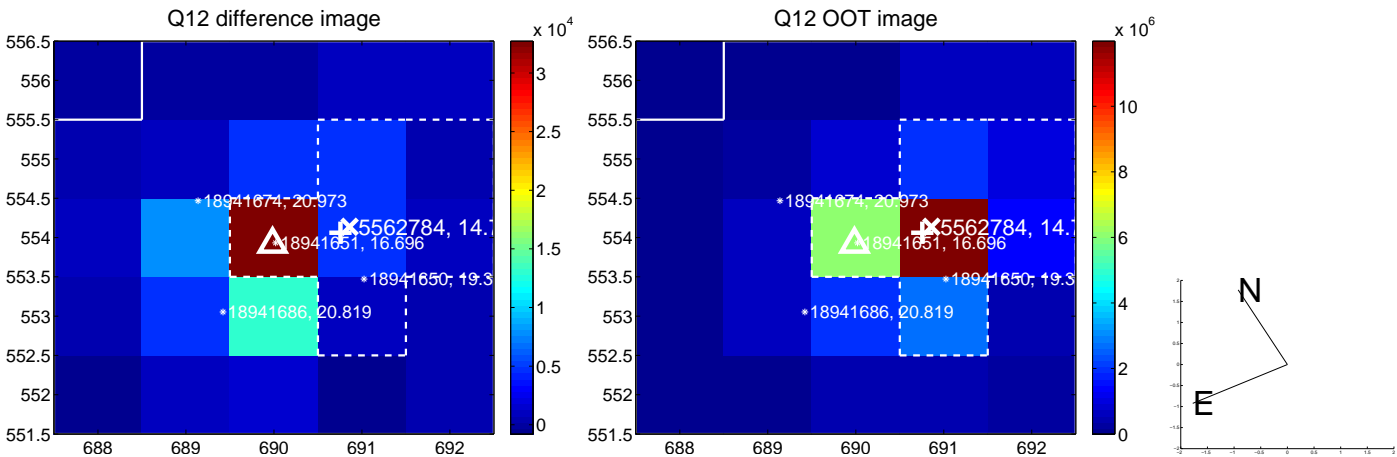
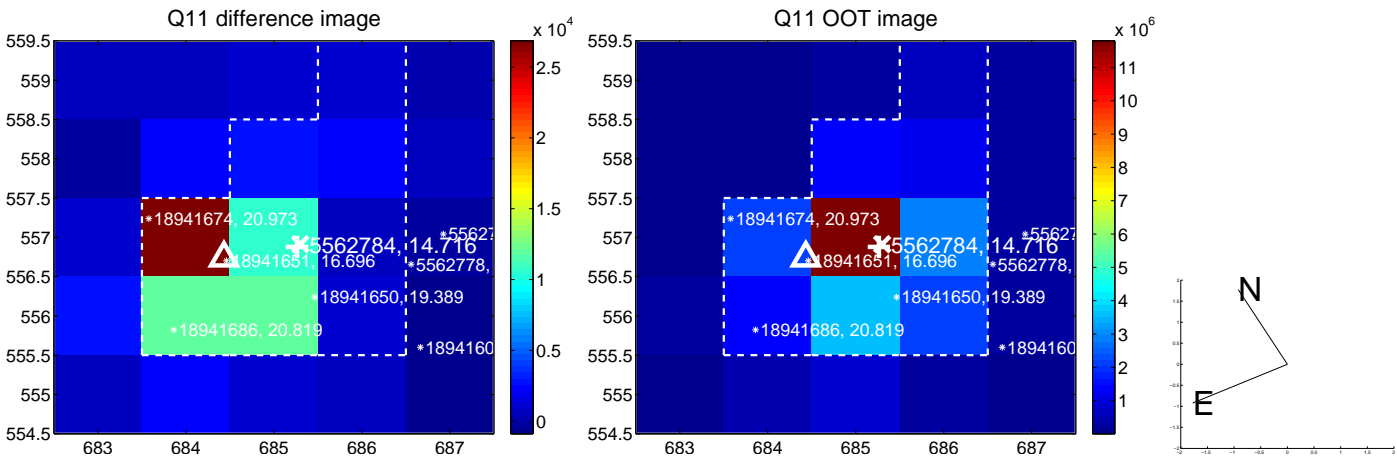
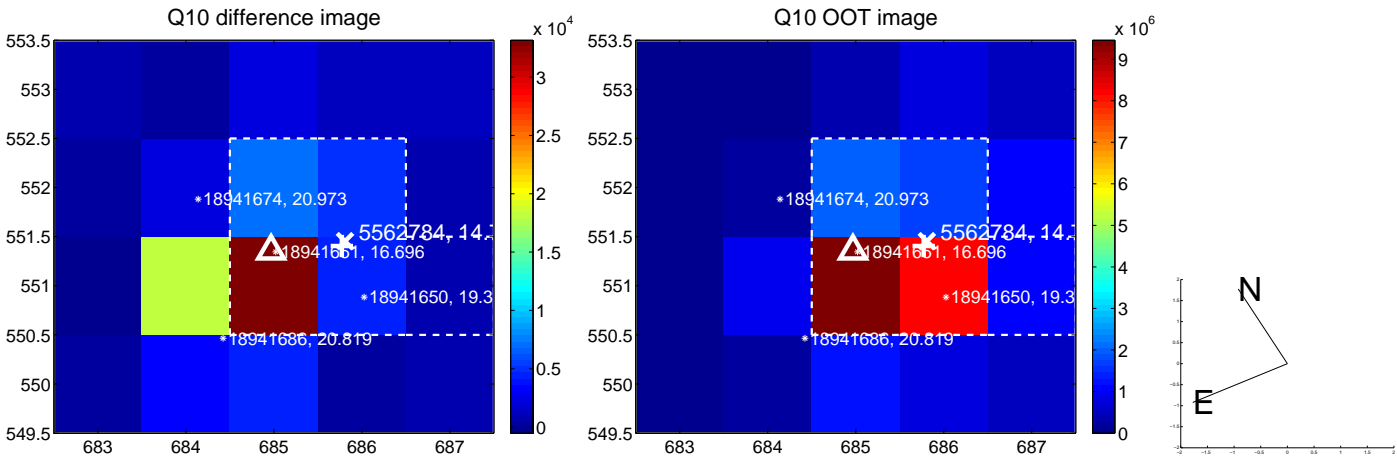
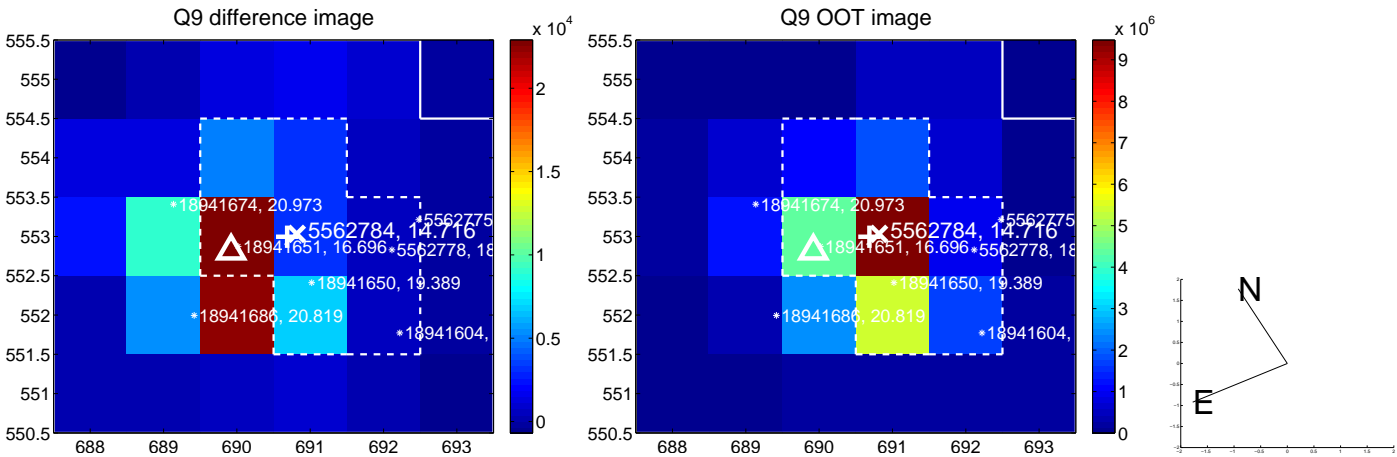


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

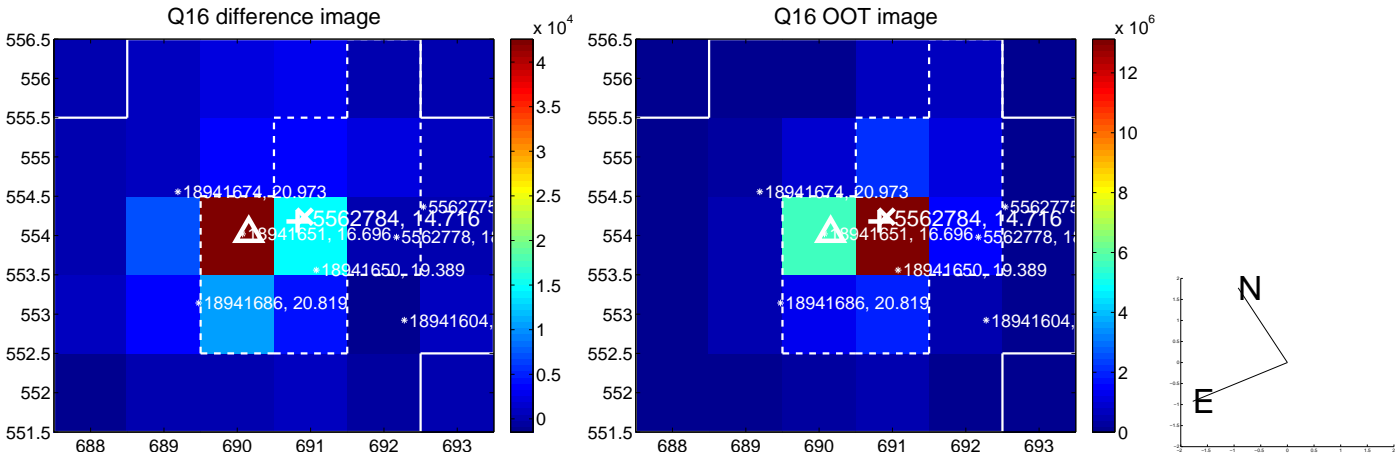
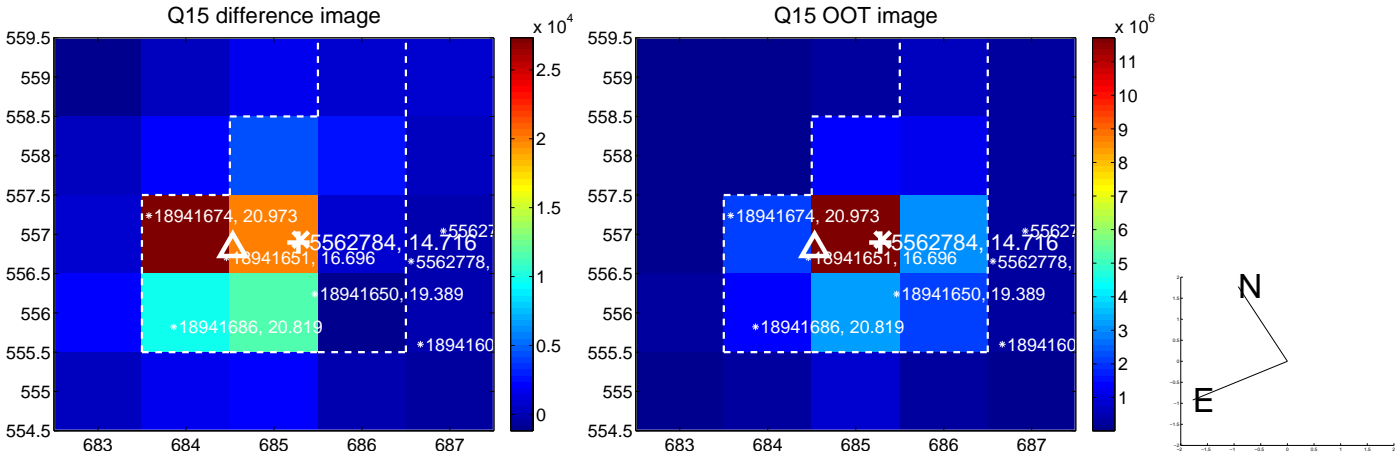
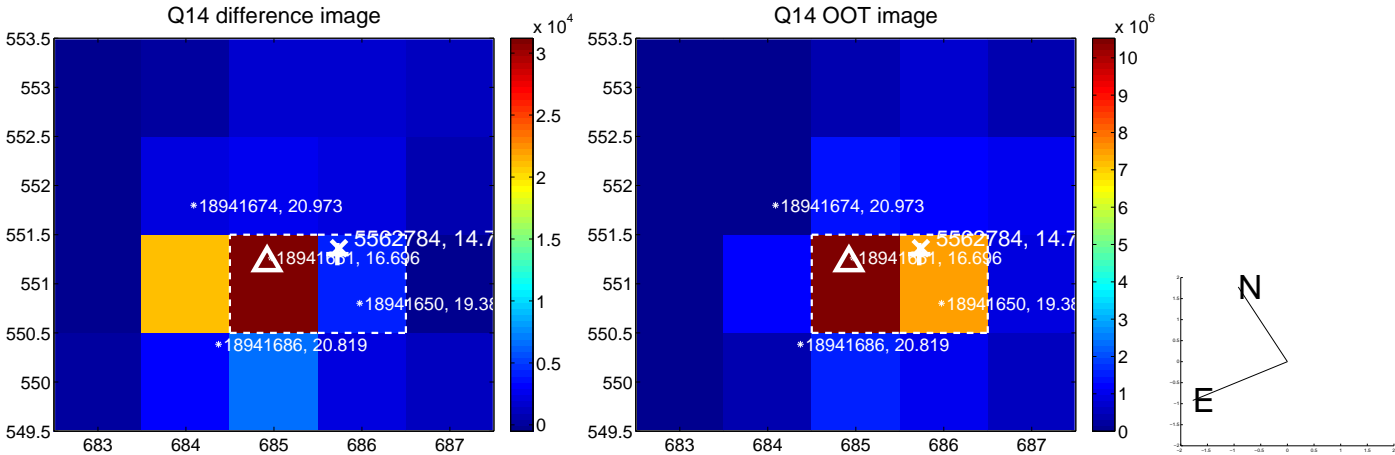
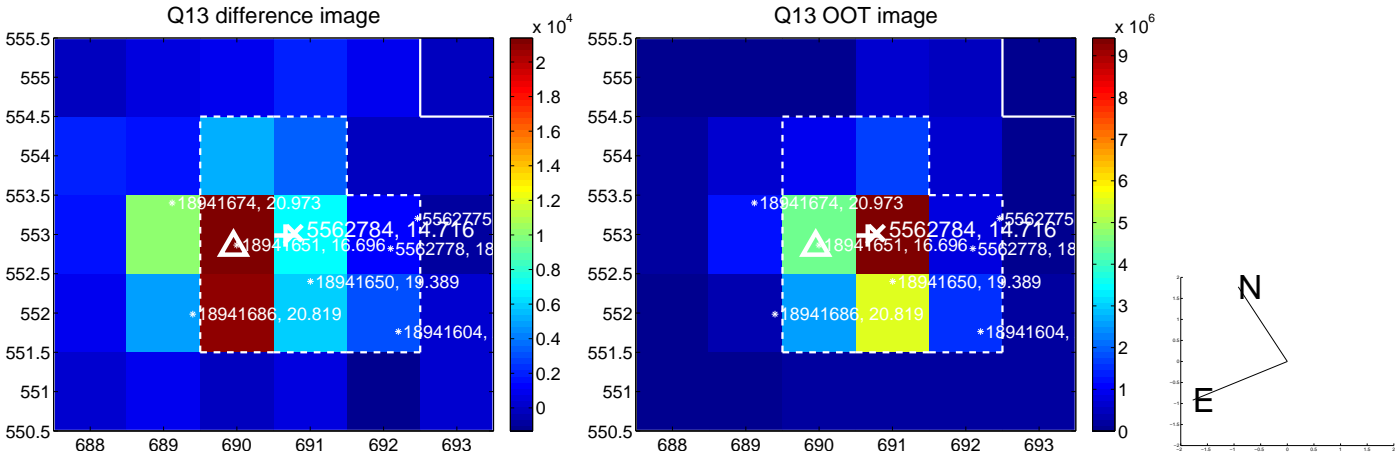
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



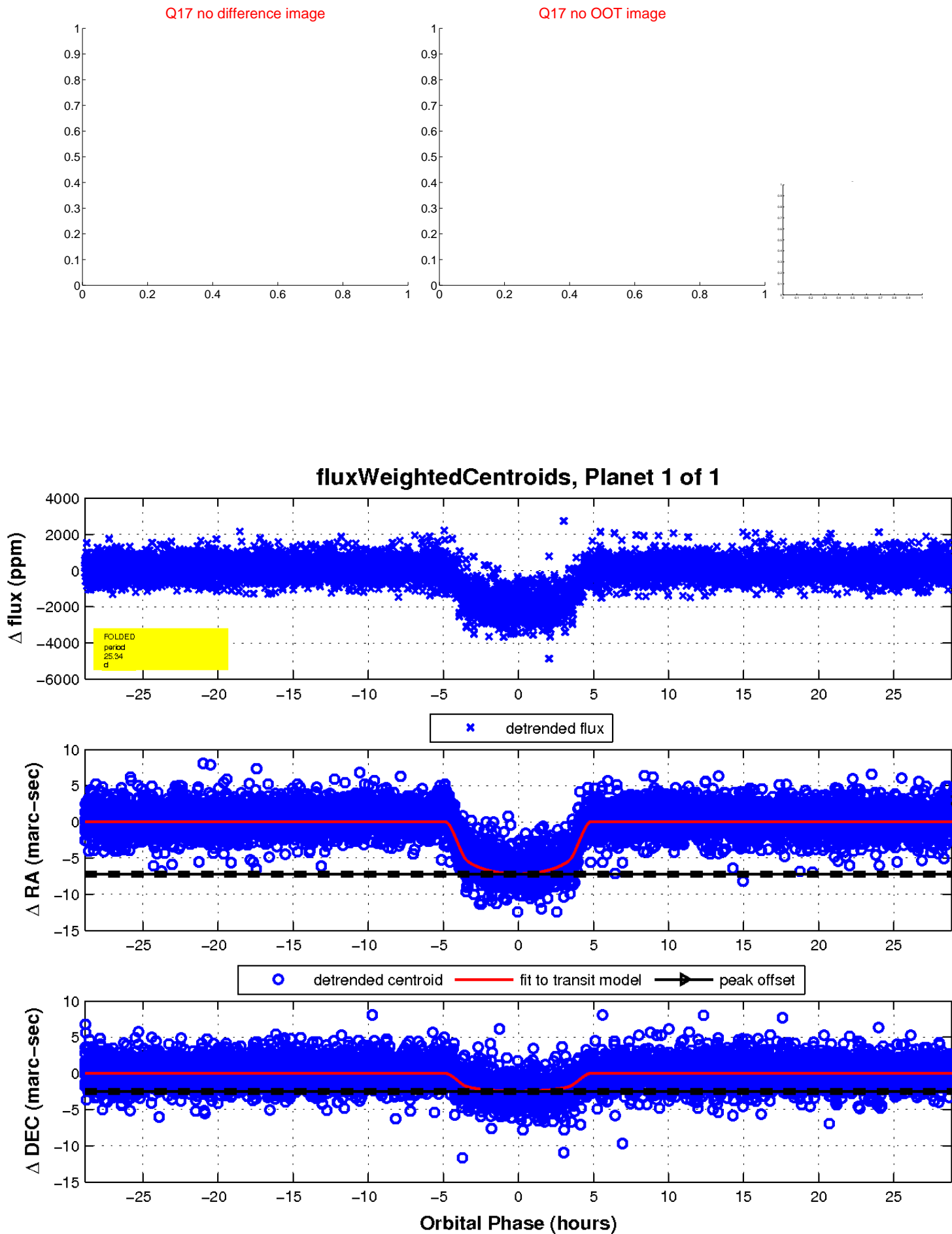
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

