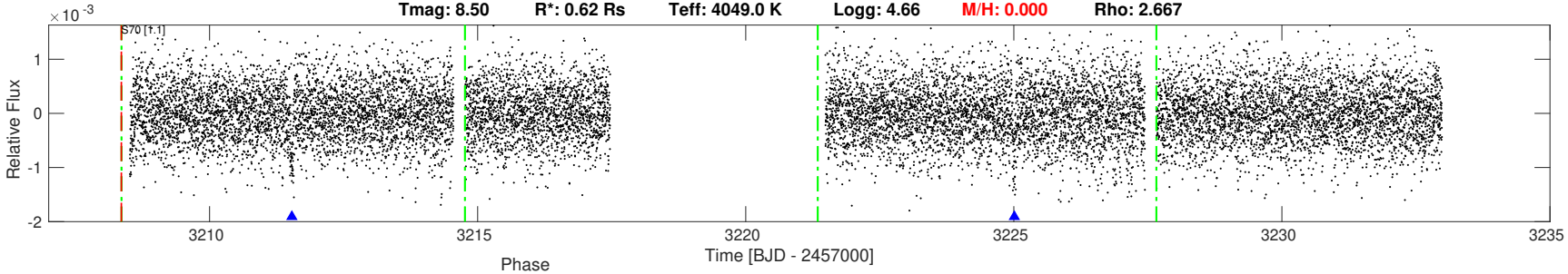
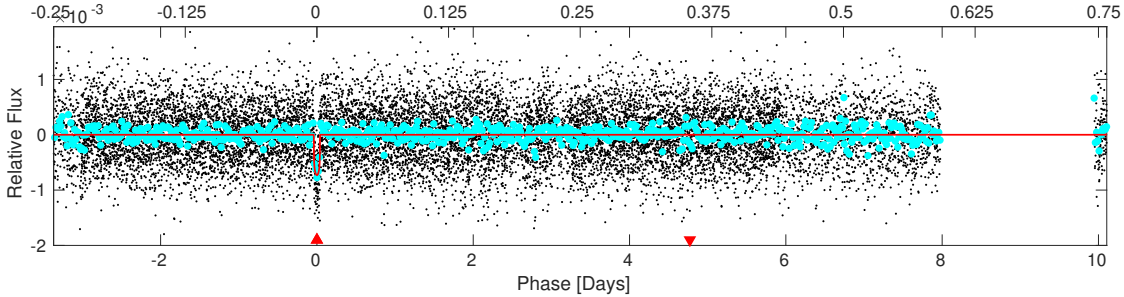
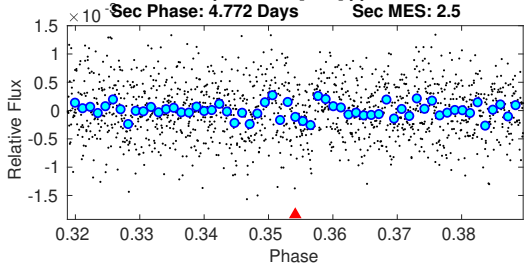
**TIC: 37749396 Candidate: 1 of 1 Period: 13.475 d**
**TOI: 260.01 Corr: 0.991**

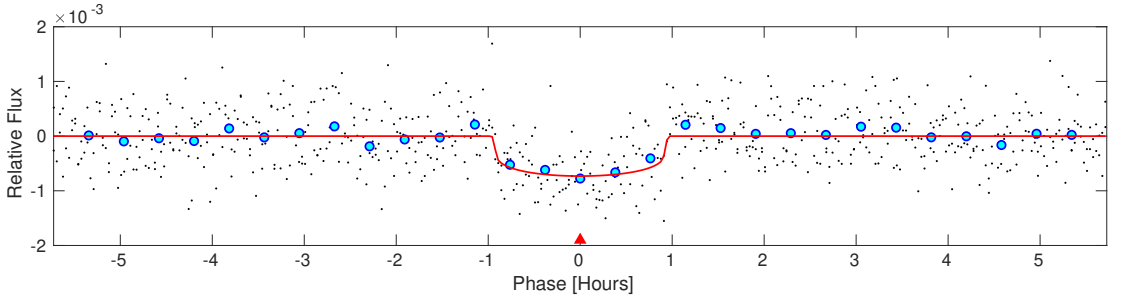
**Tmag: 8.50 R*: 0.62 Rs Teff: 4049.0 K Logg: 4.66 M/H: 0.000 Rho: 2.667**



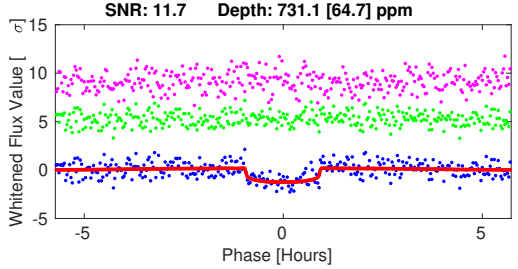




**Sec Depth: 139.9 [65.0] ppm**
**Sec Phase: 4.772 Days Sec MES: 2.5**

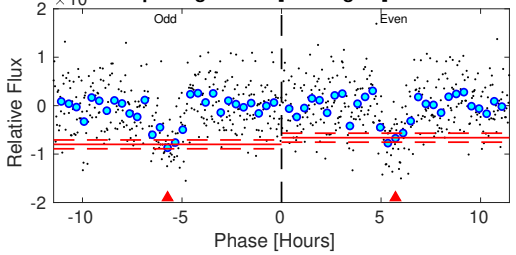


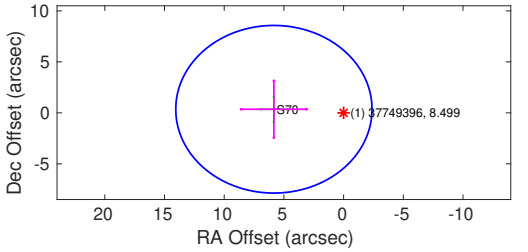

**MES: 10.9 Transits: 2**
**SNR: 11.7 Depth: 731.1 [64.7] ppm**




**Depth-sig: 28.9% [1.06 sigma]**




**Difference Image**
**TIC Position Centroid Offsets**




DV Fit Results:

Period = 13.47487 [0.00213] d
Epoch = 3211.5349 [0.0015] BTJD
Rp/R* = 0.0247 [0.0103]
a/R* = 54.21 [100.37]
b = 0.20 [8.88]

Seff = 10.18 [2.28]
Teq = 456 [25] K
Rp = 1.67 [0.71] Re
a = 0.0951 [0.0104] AU
Rho = 11.785 [65.463]

Ag = 250.17 [242.68] [1.03 sigma]
Tp = 2802 [672] K [3.49 sigma]

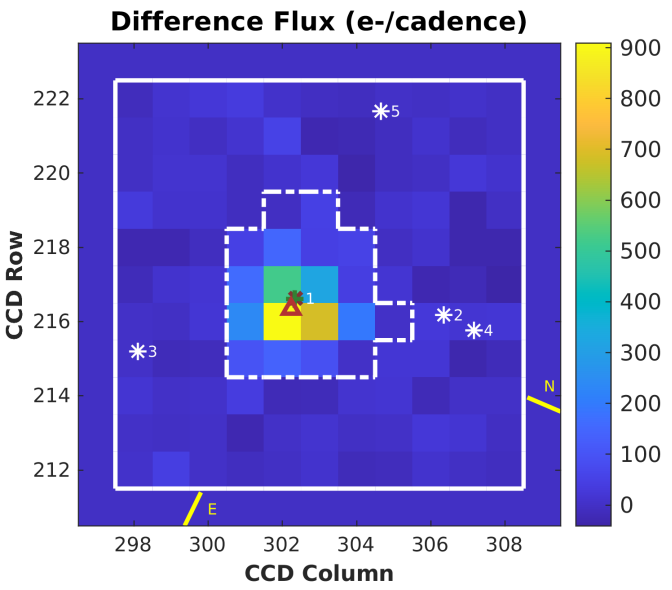
DV Diagnostic Results:

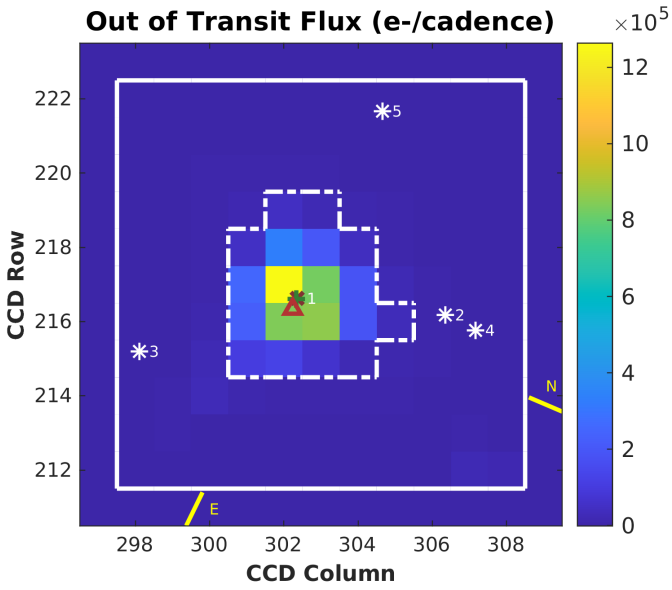
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.40e-25
GhostDiagnostic-chr: 6.17

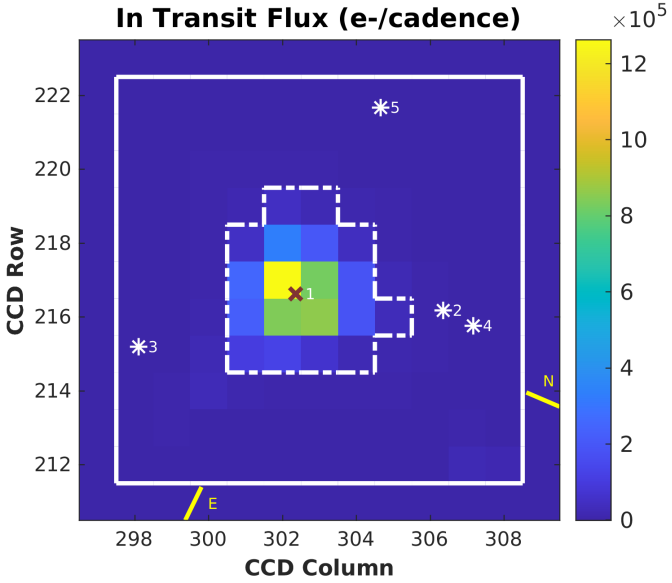
OotOffset-rm: 5.410 arcsec [1.97 sigma]
TicOffset-rm: 5.850 arcsec [2.14 sigma]
OotOffset-tot: 1
TicOffset-tot: 1
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

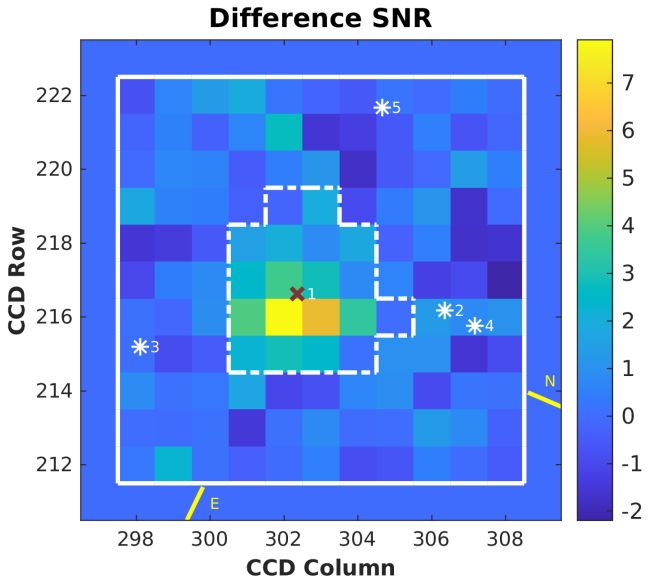
**Software Revision: spoc-5.0.101-20231004 -- Cadence Type: TARGET (2.0-min) -- Date Generated: 21-Oct-2023 02:42:15 Z**
**This Data Validation Report Summary was produced in the TESS Science Processing Operations Center Pipeline at NASA Ames Research Center**

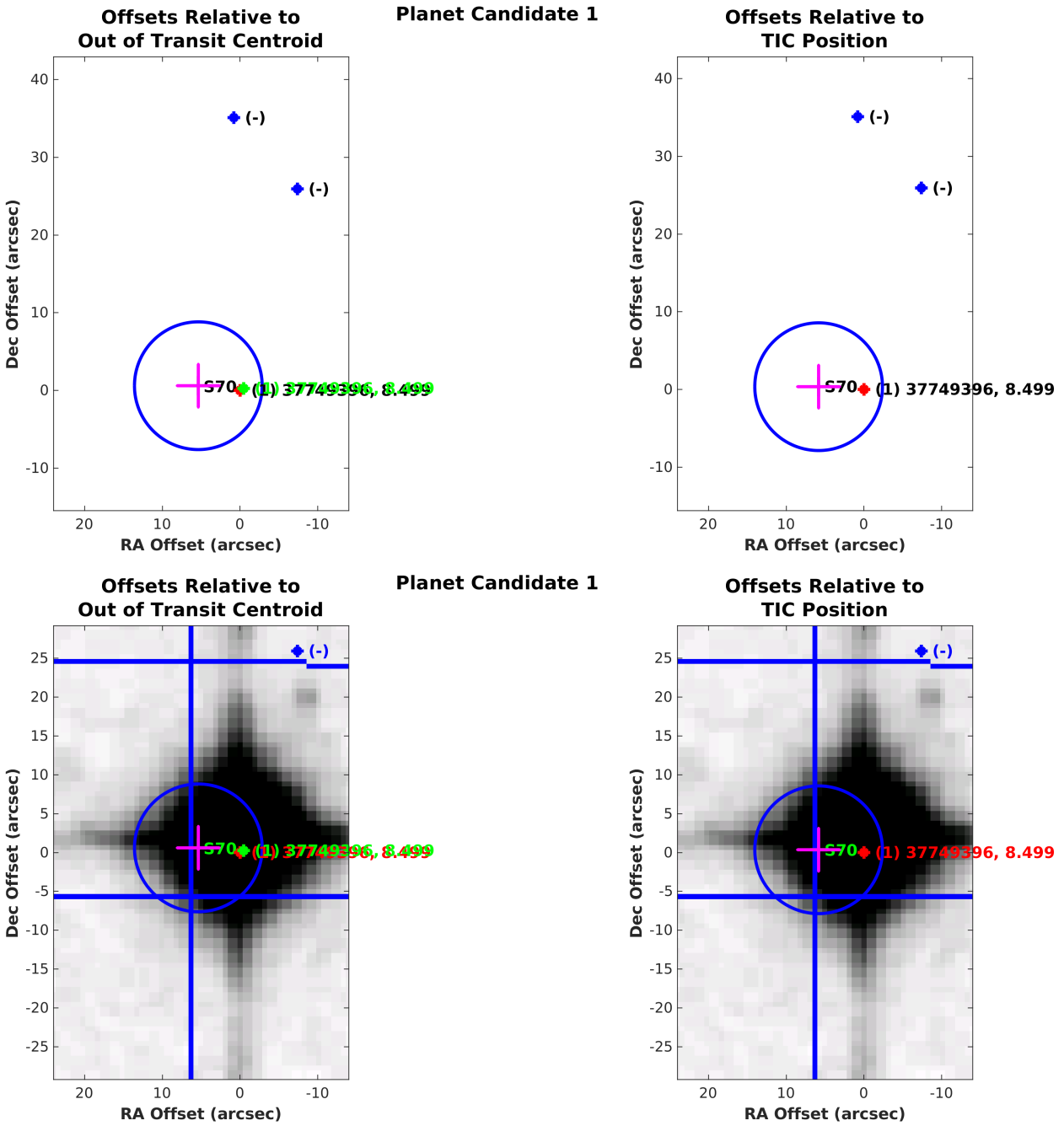
## Planet Candidate 1 / Sector 70 / Target Pixel Table 415

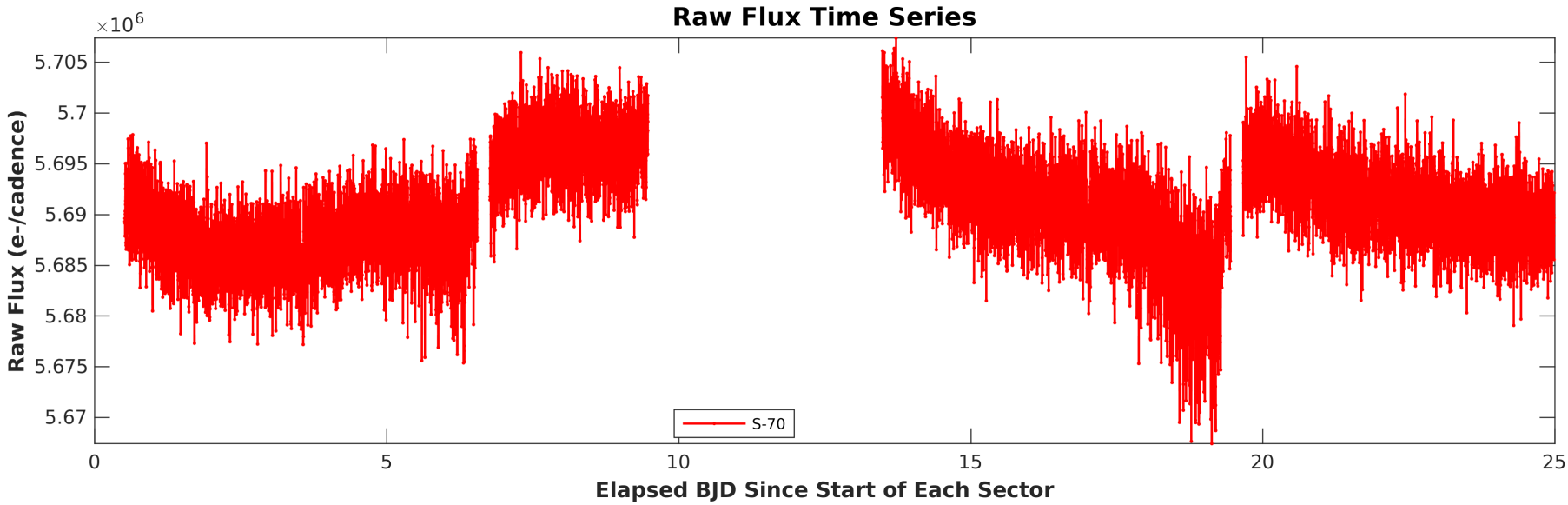


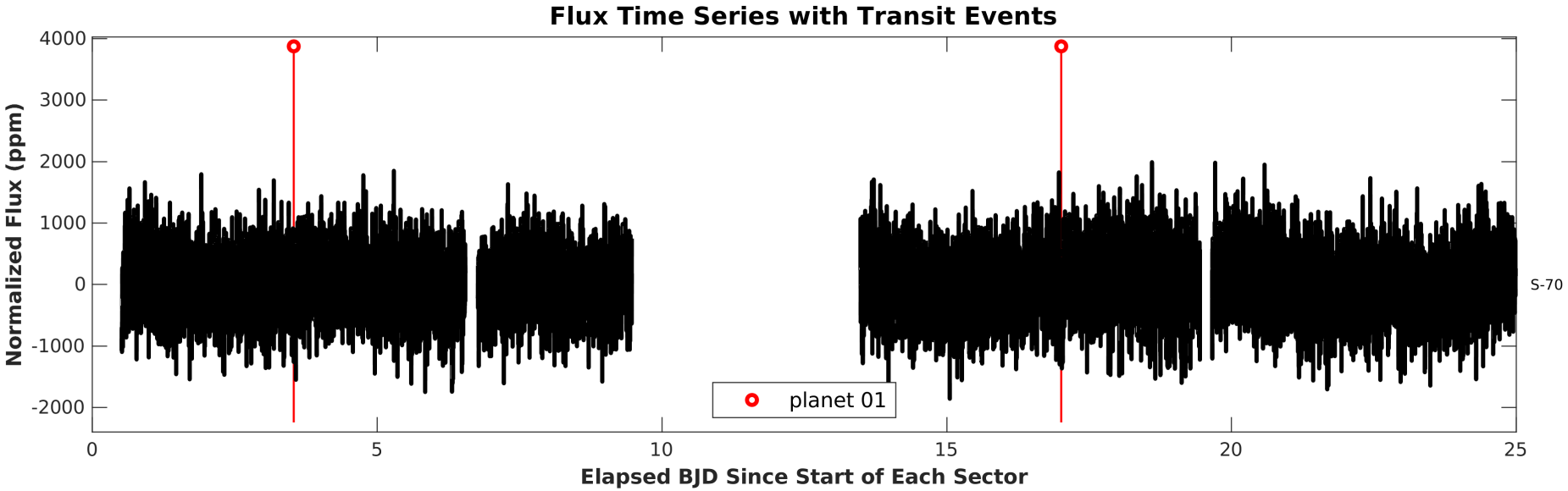



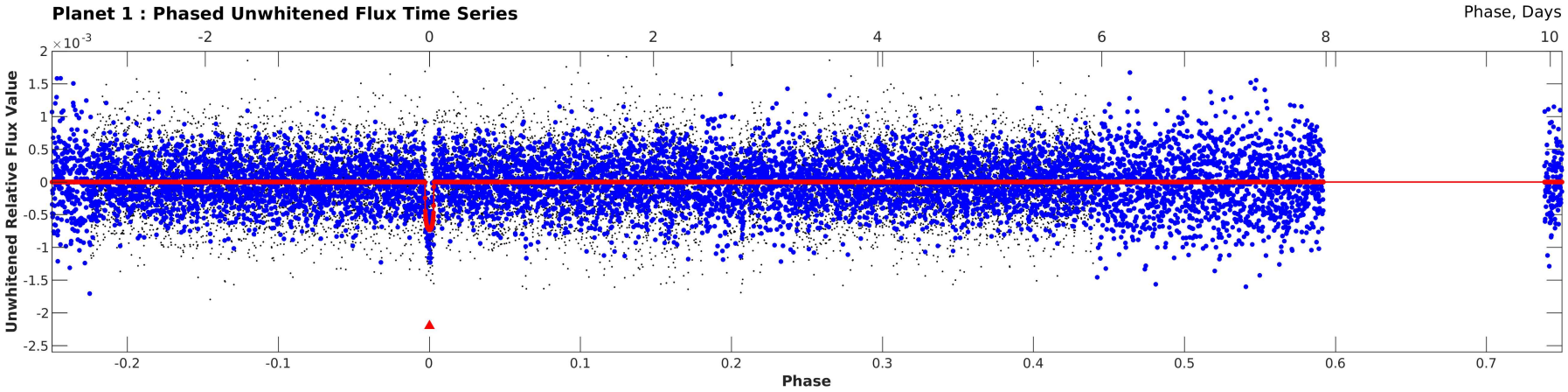



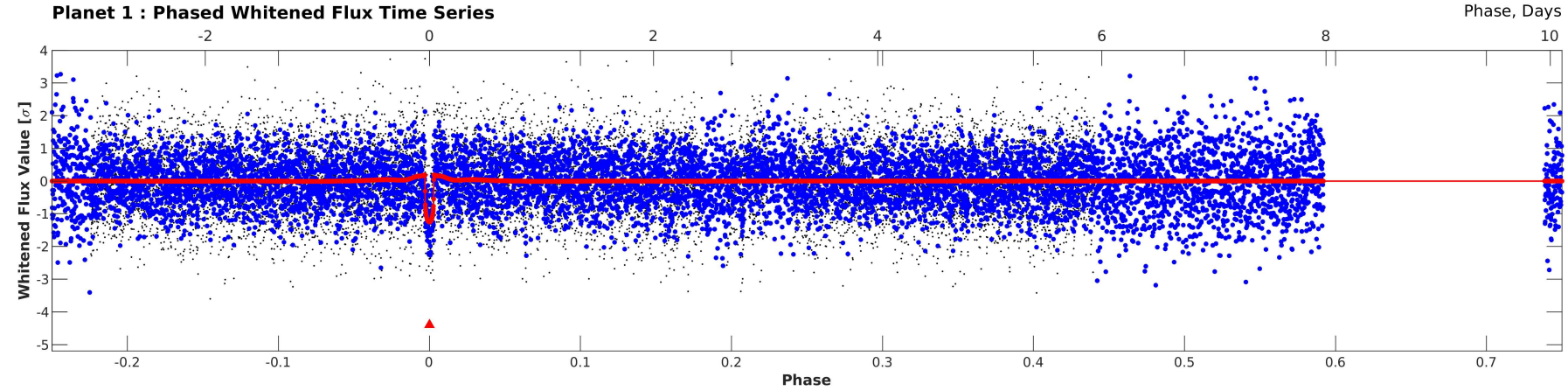



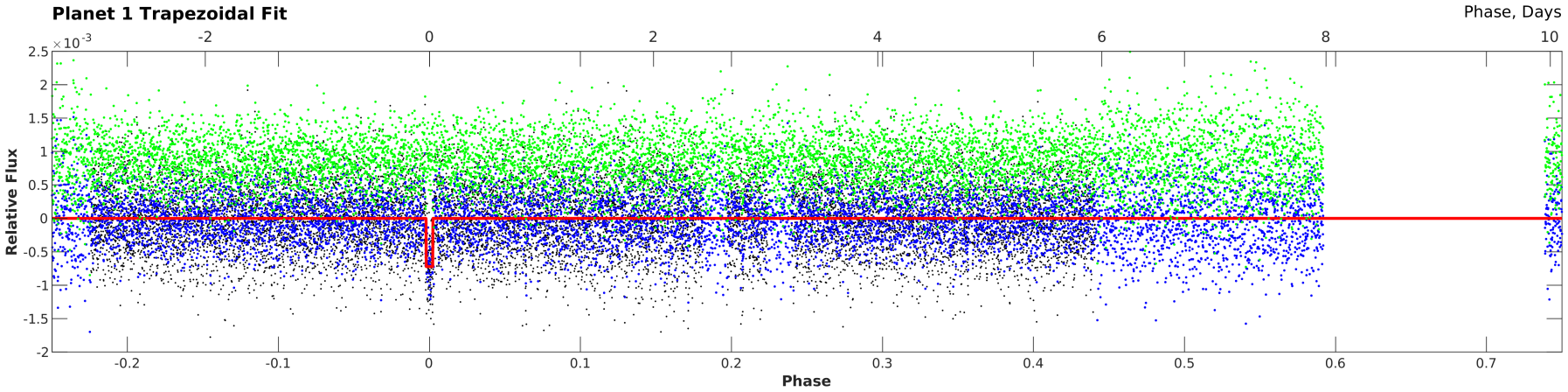

Planet Candidate 1
Offsets Relative to
Out of Transit Centroid
Offsets Relative to
TIC Position
Dec Offset (arcsec)
RA Offset (arcsec)
(-)
S70
(1) 37749396, 8.499
Planet Candidate 1
Offsets Relative to
Out of Transit Centroid
Offsets Relative to
TIC Position
Dec Offset (arcsec)
RA Offset (arcsec)
(-)
S70
(1) 37749396, 8.499


Raw Flux Time Series
×10^6
5.705
5.7
5.695
5.69
5.685
5.68
5.675
5.67
Raw Flux (e-/cadence)
S-70
0
5
10
15
20
25
Elapsed BJD Since Start of Each Sector


Flux Time Series with Transit Events
4000
3000
2000
1000
0
-1000
-2000
Normalized Flux (ppm)
planet 01
S-70
0
5
10
15
20
25
Elapsed BJD Since Start of Each Sector

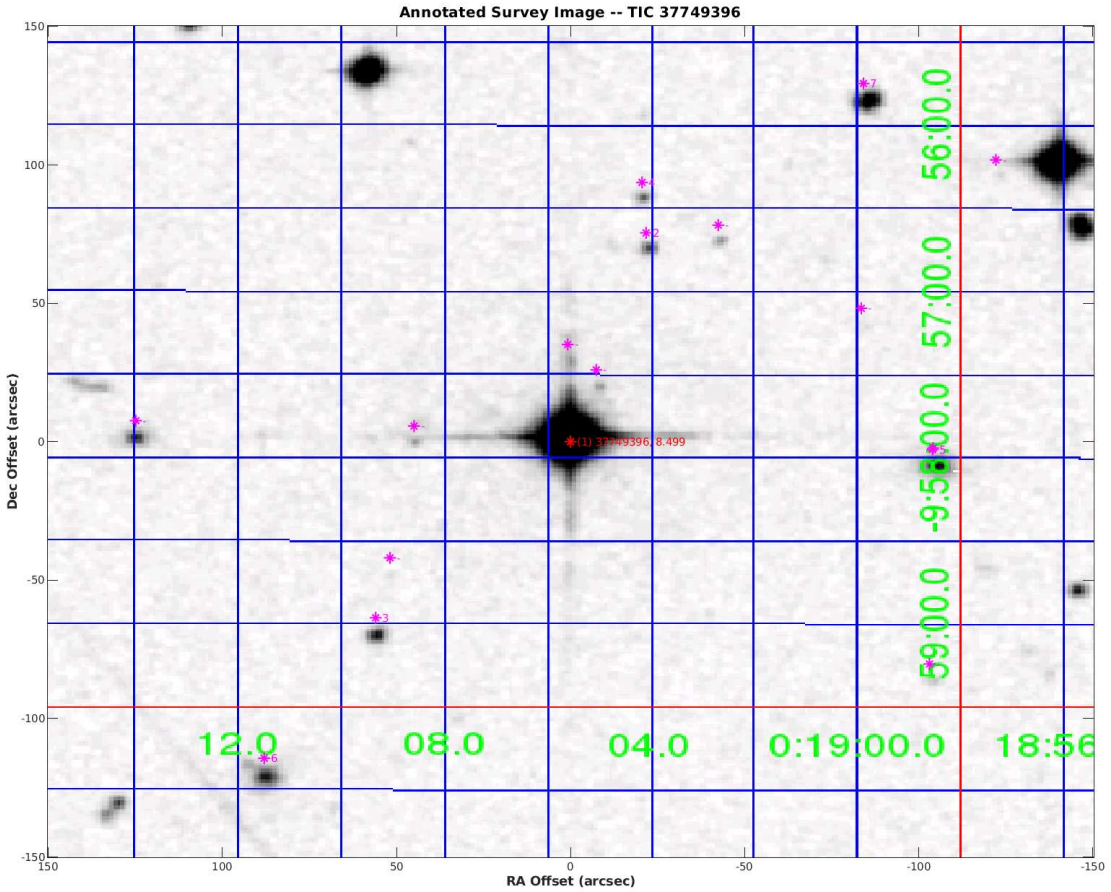

Planet 1 : Phased Unwhitened Flux Time Series
Phase, Days
Unwhitened Relative Flux Value
Phase


Planet 1 : Phased Whitened Flux Time Series
Phase, Days
Whitened Flux Value [σ]
Phase


Planet 1 Trapezoidal Fit
Phase, Days
Relative Flux
Phase

Stellar Distance Table

| Index | TIC ID | TESS Mag | Distance (arcsec) |
|---|---|---|---|
| 1 | 0000000037749396 | 8.50 | 0.00 |
| 2 | 0000000037749390 | 16.90 | 78.50 |
| 3 | 0000000037749399 | 16.20 | 84.73 |
| 4 | 0000000037749386 | 16.85 | 95.88 |
| 5 | 0000010000269039 | 16.12 | 103.99 |
| 6 | 0000010000269075 | 15.99 | 144.28 |
| 7 | 0000000037748010 | 14.60 | 154.36 |

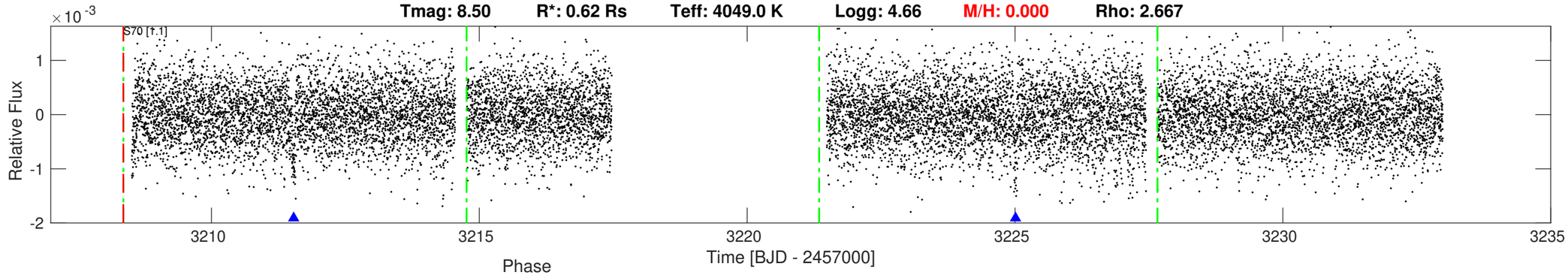


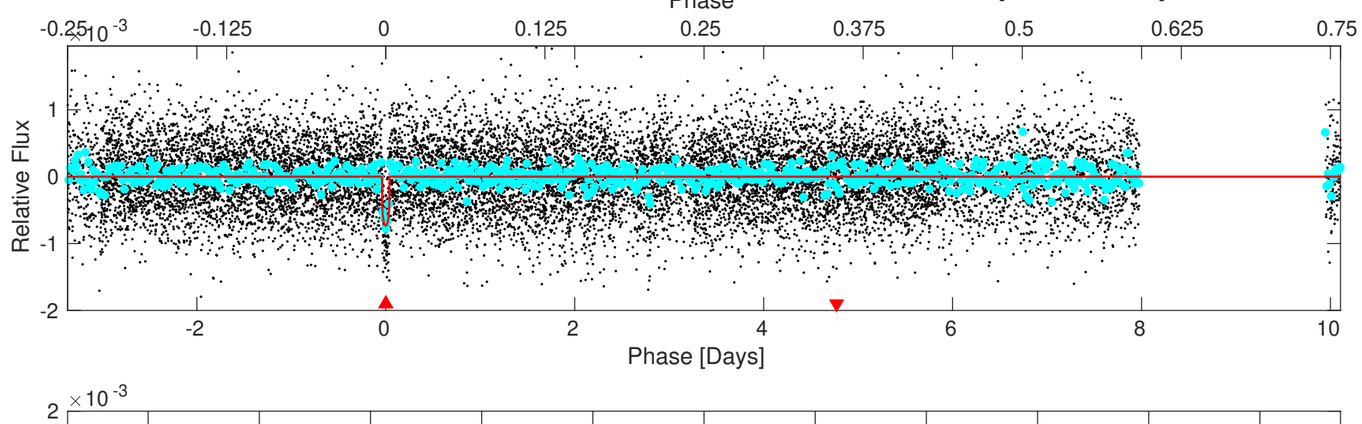

Distances are corrected for proper motion. This table may not contain all of the objects shown.

Tier 1

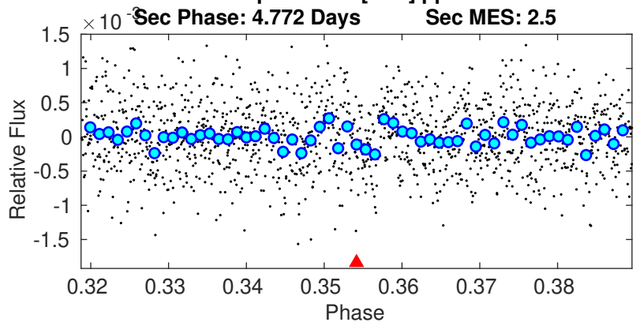
**TIC: 37749396 Candidate: 1 of 1 Period: 13.475 d**
**TOI: 260.01 Corr: 0.991**

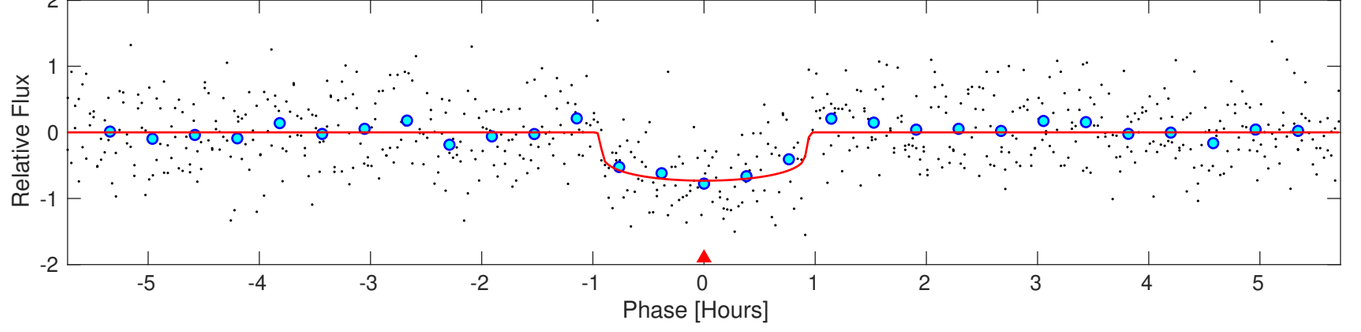
**Tmag: 8.50 R*: 0.62 Rs Teff: 4049.0 K Logg: 4.66 M/H: 0.000 Rho: 2.667**



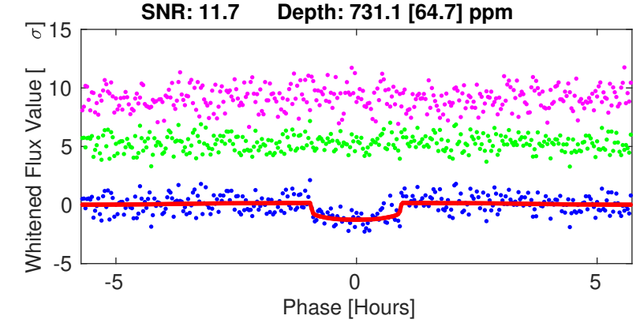



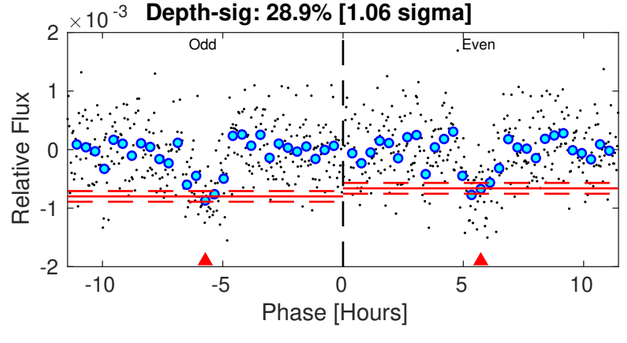

**Sec Depth: 139.9 [65.0] ppm**
**Sec Phase: 4.772 Days Sec MES: 2.5**

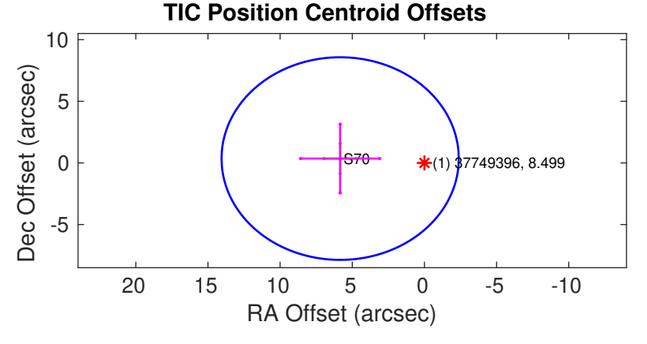



**MES: 10.9 Transits: 2**
**SNR: 11.7 Depth: 731.1 [64.7] ppm**

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a/R* = 54.21 [100.37]
b = 0.20 [8.88]

Seff = 10.18 [2.28]
Teq = 456 [25] K
Rp = 1.67 [0.71] Re
a = 0.0951 [0.0104] AU
Rho = 11.785 [65.463]

Ag = 250.17 [242.68] [1.03 sigma]
Tp = 2802 [672] K [3.49 sigma]

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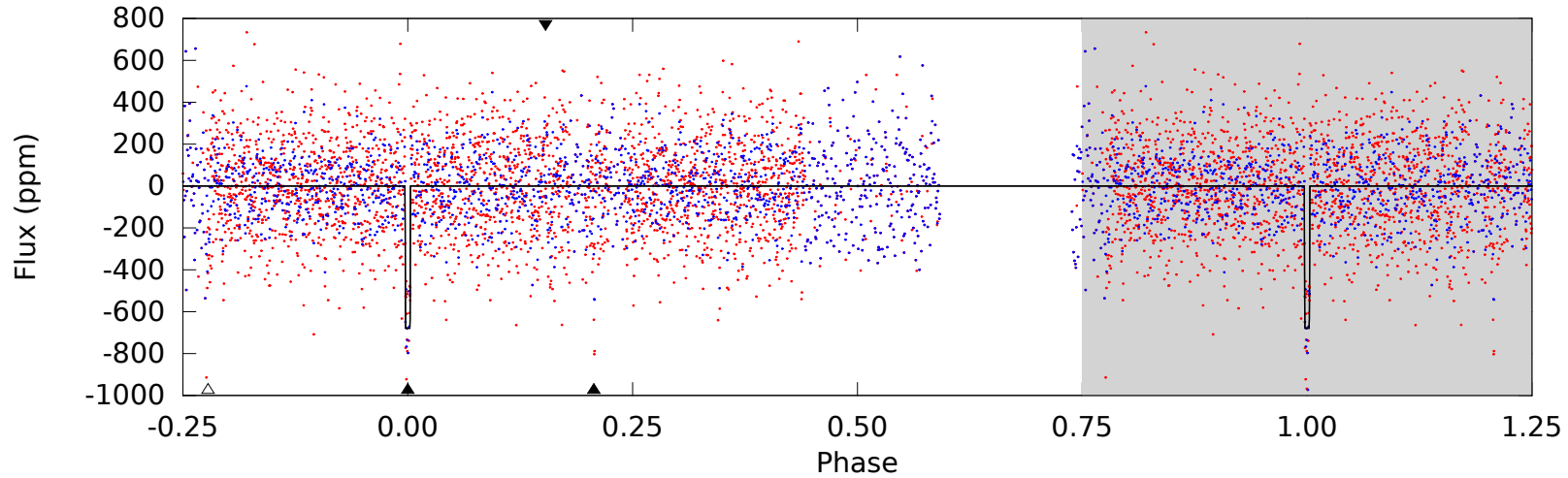
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.40e-25
GhostDiagnostic-chr: 6.17

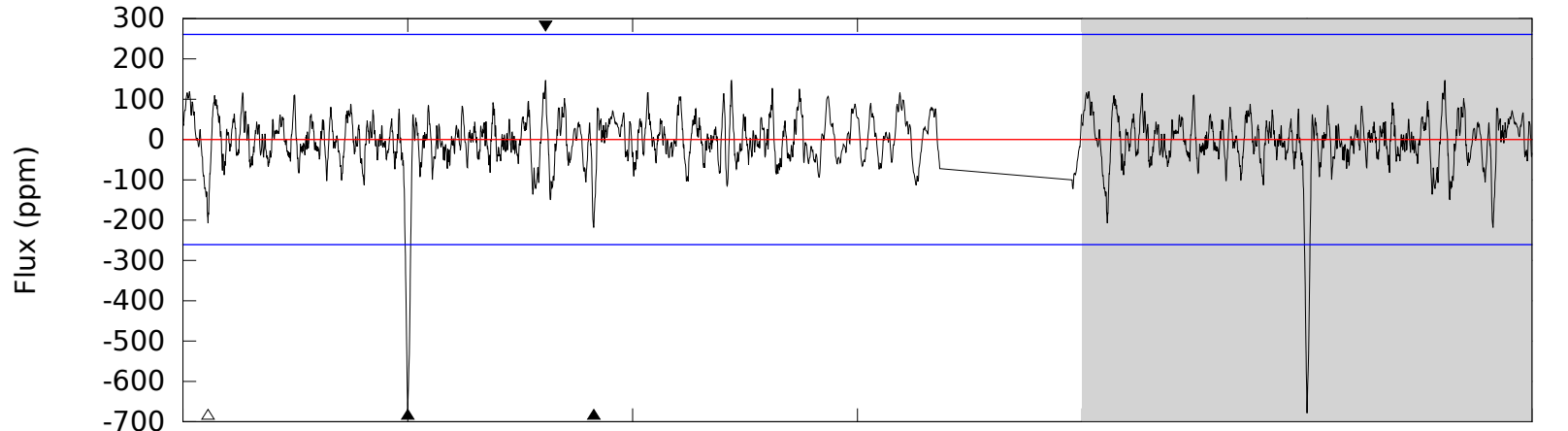
OotOffset-rm: 5.410 arcsec [1.97 sigma]
TicOffset-rm: 5.850 arcsec [2.14 sigma]
OotOffset-tot: 1
TicOffset-tot: 1
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

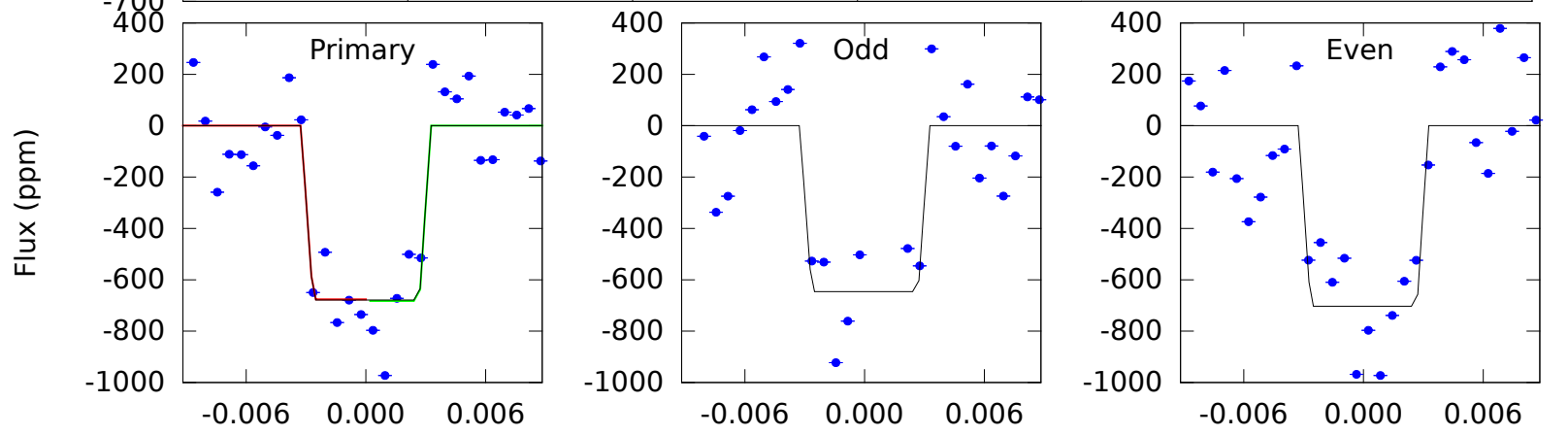
**Software Revision: spoc-5.0.101-20231004 -- Cadence Type: TARGET (2.0-min) -- Date Generated: 21-Oct-2023 02:42:15 Z**
**This Data Validation Report Summary was produced in the TESS Science Processing Operations Center Pipeline at NASA Ames Research Center**

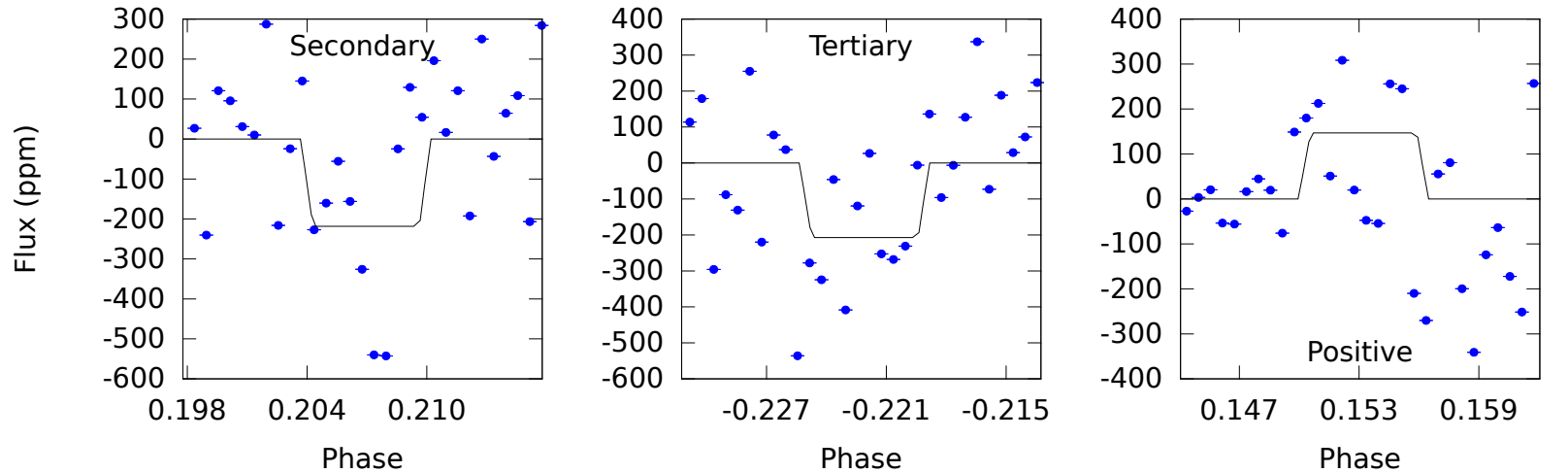
# Tier 1 $000000003774939{6_0}1$, P = 13.474871 Days, E = 3198.060384 Days

| Pri | Sec | Ter | Pos | $FA_1$ | $FA_2$ | $F_{Red}$ | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13.4 | 4.30 | 4.08 | 2.89 | 5.13 | 2.77 | 1.00 | 9.29 | 10.5 | 0.22 | 1.40 | 0.57 | 1.00 | 0.18 | 0.06 |



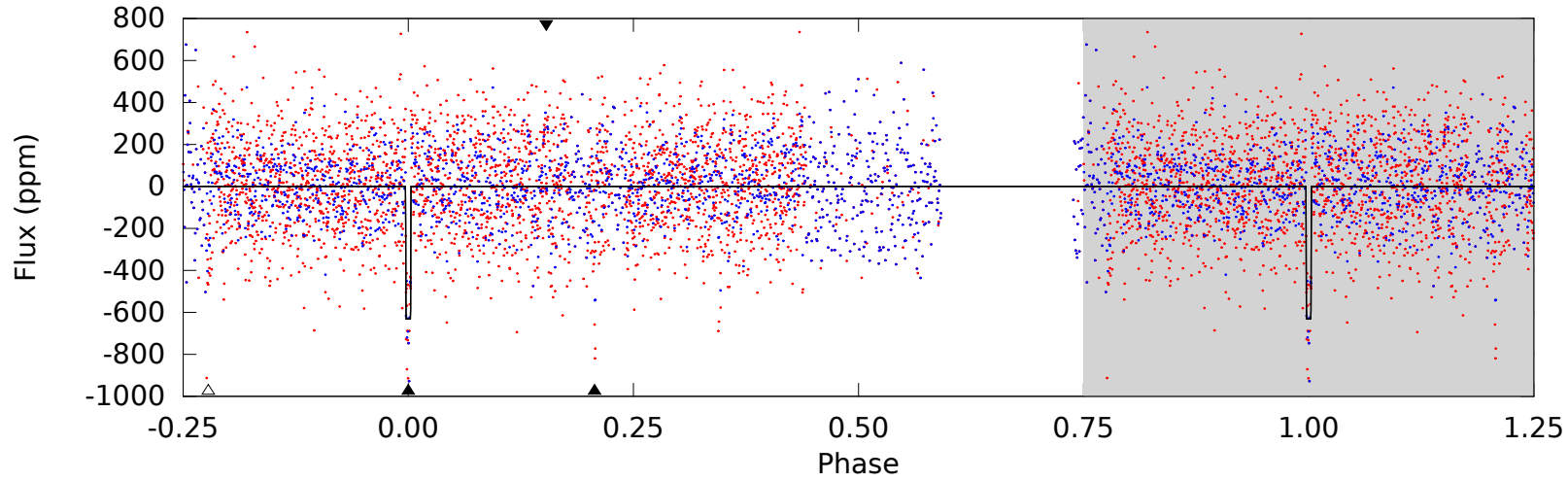



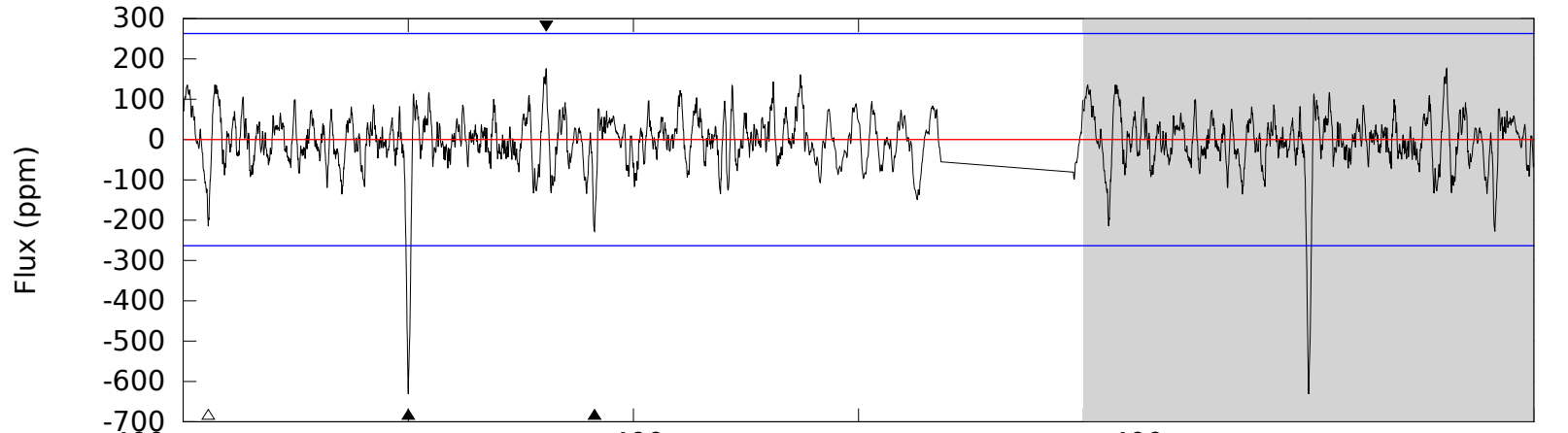



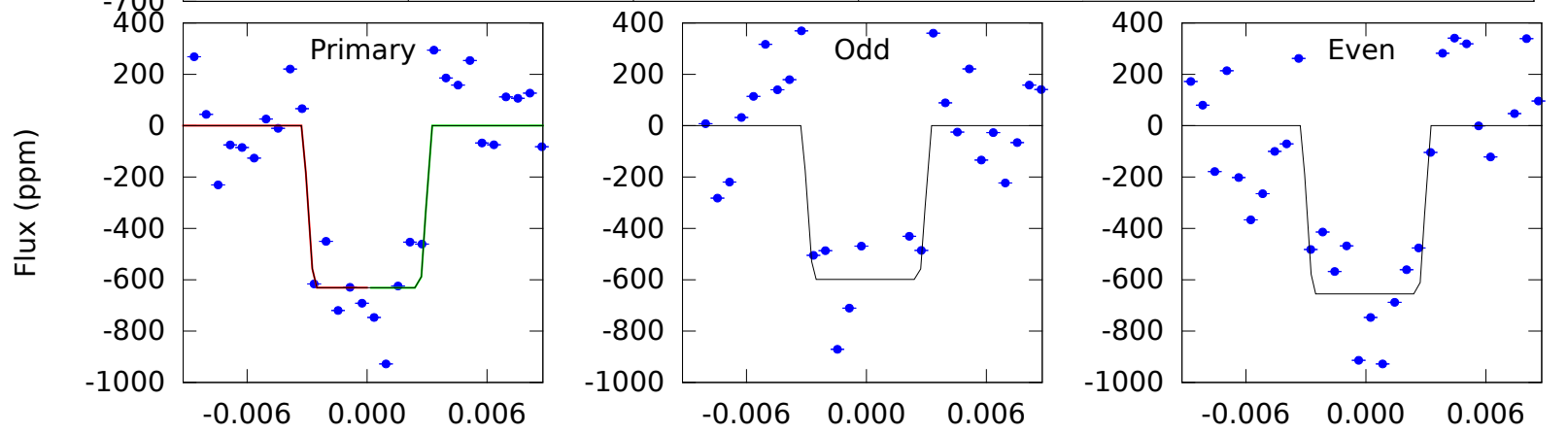



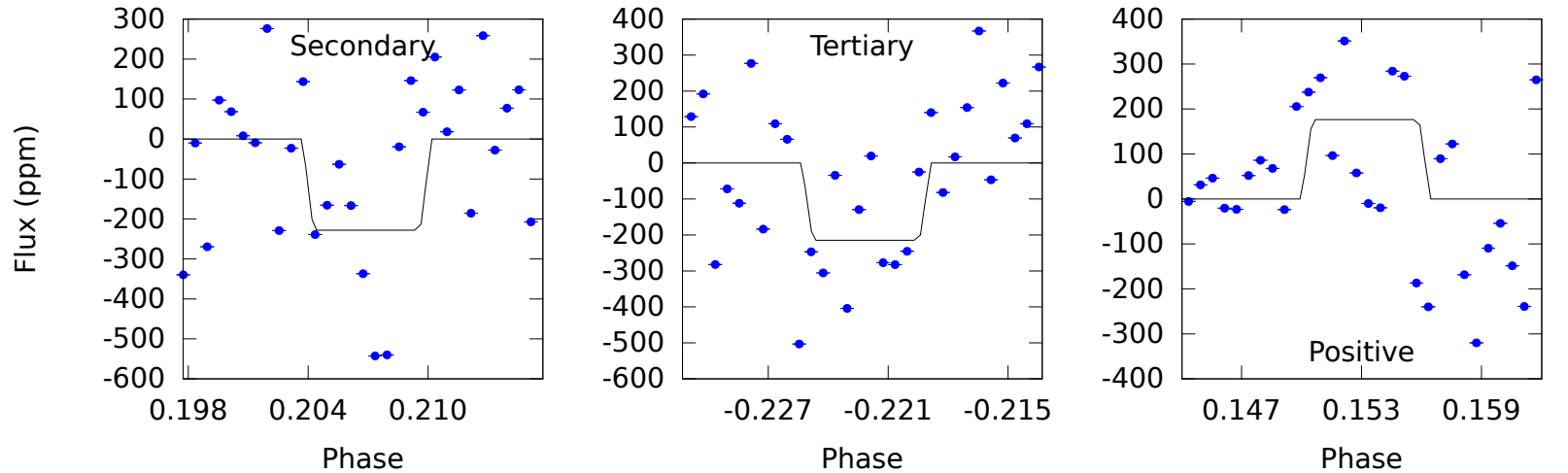
# Tier 1 $000000003774939_{6}1$, P = 13.474871 Days, E = 3198.060502 Days

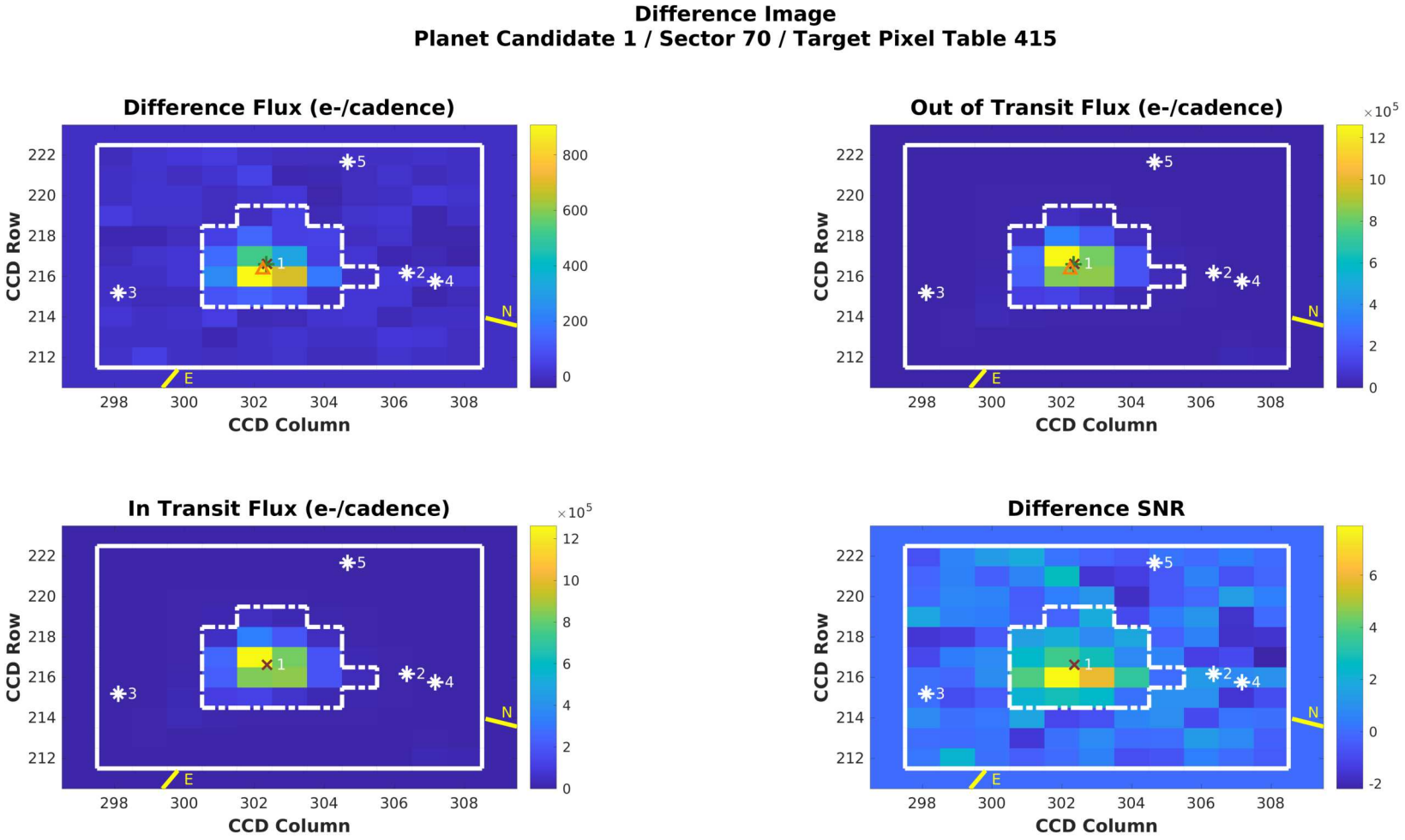
| Pri | Sec | Ter | Pos | $FA_1$ | $FA_2$ | $F_{Red}$ | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.3 | 4.45 | 4.19 | 3.44 | 5.13 | 2.77 | 1.08 | 8.12 | 8.87 | 0.25 | 1.00 | 0.56 | 1.00 | 0.22 | 0.01 |



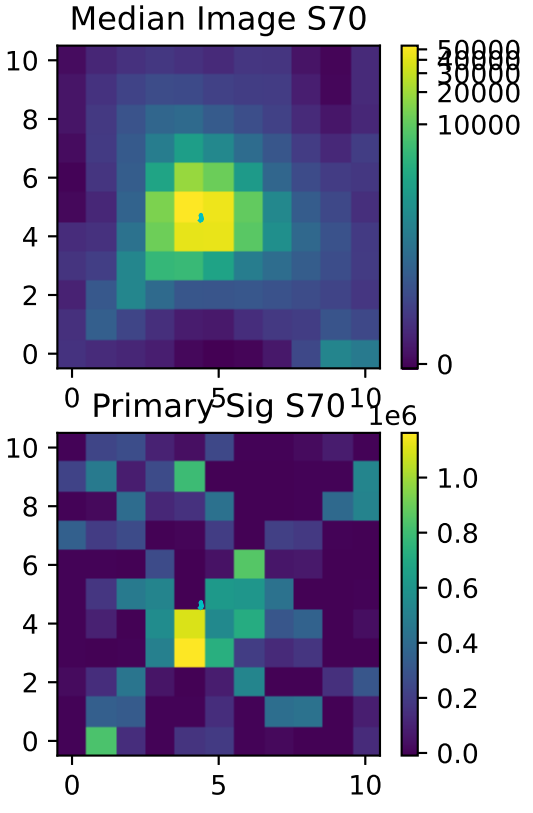






Difference image for target 37749396, planet candidate 1, sector 70, target pixel table 415. Upper left: difference between mean flux out-of-transit and in-transit; upper right: mean out-of-transit flux; lower left: mean in-transit flux; lower right: difference between mean flux out-of-transit and in-transit after normalizing by the uncertainty in the difference for each pixel. The optimal aperture is outlined with a white dash-dotted line in each panel and the target mask is outlined with a solid white line. Symbol key: x: target position from TIC RA and Dec converted to CCD coordinates via motion polynomials; *: position of nearby TIC objects converted to CCD coordinates via motion polynomials; +: PRF-fit location of target from out-of-transit image; triangle: PRF-fit location of transit source from the difference image. Number of transits = 2; number of valid in-transit cadences = 96; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 246; number of out-of-transit cadence gaps = 0. Difference image quality metric = 0.97 (good).
Open `./planet-01/difference-image/0000000037749396-01-difference-image-70-415.fig`


Median Image S70
50000
40000
30000
20000
10000
0
Primary Sig S70
1e6
1.0
0.8
0.6
0.4
0.2
0.0

# Using TIC: 37749396

Tier 1

### Using TIC catalog position 4.773178 -9.964853 [J2000.0; epoch 2000.0]

### Predicted GAIA position 4.773018 -9.966150 [J2000.0; epoch 2015.5]

### 2MASS J00190556-0957530 From TIC

### 3 TIC entries within 60.0 arcsec of target 37749396

37749393 Sep [arcsec]: 20.991 Tmag: 17.92 Teff: 3712.0 Logg: 4.76 Rs[Rsun]: 0.51
610488622 Sep [arcsec]: 28.062 Tmag: 18.51 Teff: 3646.0 Logg: 4.81 Rs[Rsun]: 0.47
610488621 Sep [arcsec]: 44.034 Tmag: 18.75 Teff: 5491.0 Logg: 0.00 Rs[Rsun]: 0.00

### TIC Hosts TOIs

260.01

### Target Parameters

| Catalog | Tmag/Rpmag | Teff | Logg | Rstar | Mstar |
|---|---|---|---|---|---|
| TIC | 8.4991 | 4049.0±120.9 | 4.66±0.12 | 0.62± 0.1 | 0.63± 0.08 |
| GAIA DR2 | 8.446 | 4182.1±117.9 | ... | 0.56± 0.0 | ... |

Other GAIA G: 9.31 Bp: 10.15 AbsG: 7.55 (Bp-Rp)o: 1.567 AstroGOF: 1.45 AstroExNoiSig: 0.00

## Target Links

ExoFOP
Simbad
Vizier
MAST TESS Data Holdings
IRSA Finderchart
ESO Data Archive Holdings
TESScut TPF Download
GAIA DR2 60" Cone Search @MAST

## NASA Ames SPOC DV Results Available at MAST

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018206190142-s0001-s0046-0000000037749396-00555_dvr.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018206190142-s0001-s0046-0000000037749396-00555_dvm.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018206190142-s0001-s0046-0000000037749396-01-00555_dvs.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018267104341-s0003-s0003-0000000037749396-00126_dvr.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018267104341-s0003-s0003-0000000037749396-00126_dvm.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018267104341-s0003-s0003-0000000037749396-01-00126_dvs.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2023263202030-s0070-s0070-0000000037749396-00809_dvr.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2023263202030-s0070-s0070-0000000037749396-00809_dvm.pdf
https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2023263202030-s0070-s0070-0000000037749396-01-00809_dvs.pdf

TESS Observe - Sec Cam Ccd Col Row
37749396 3 1 4 1791.56 926.55
37749396 42 2 4 2032.02 1752.15
37749396 70 1 1 302.53 217.63