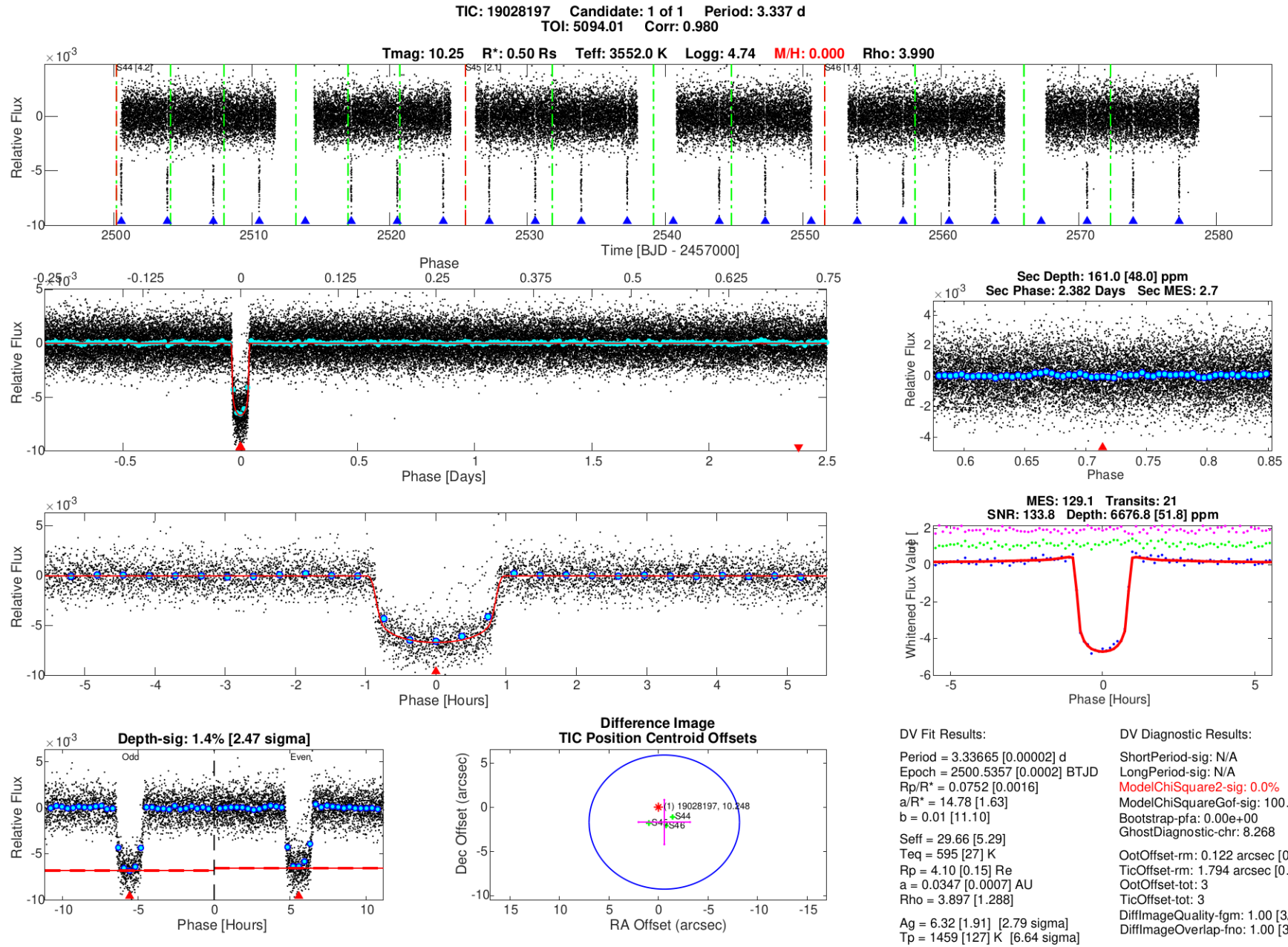
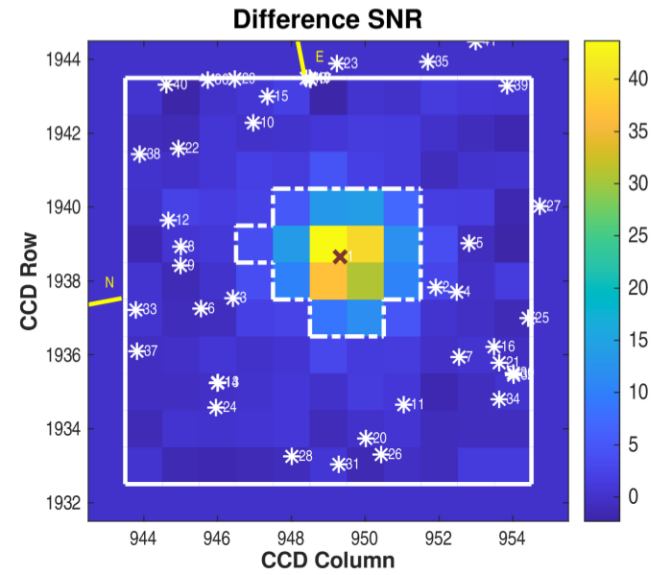
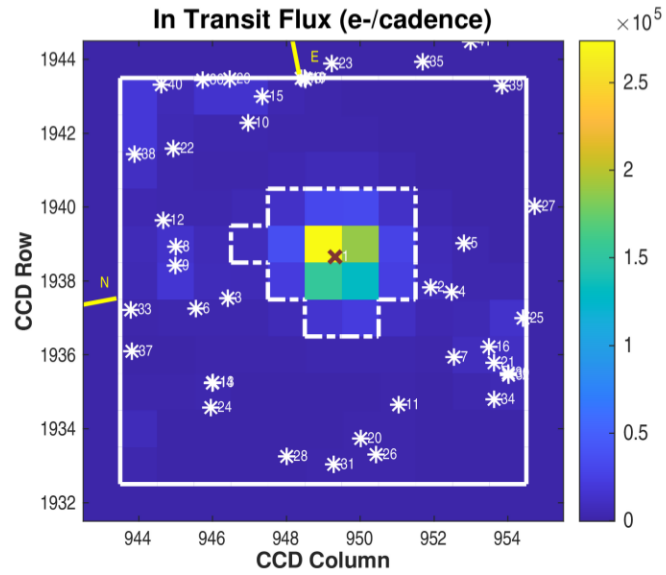
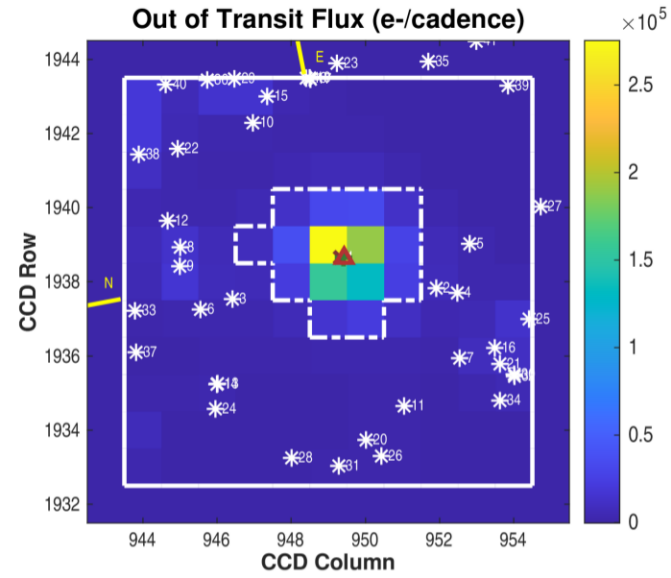
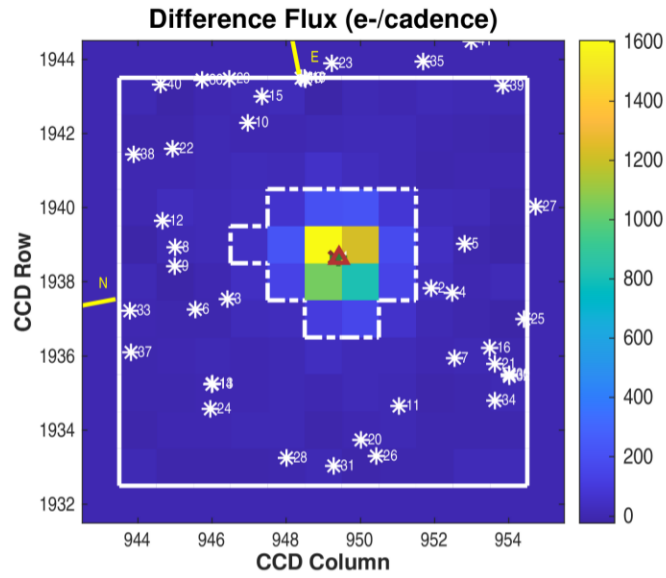


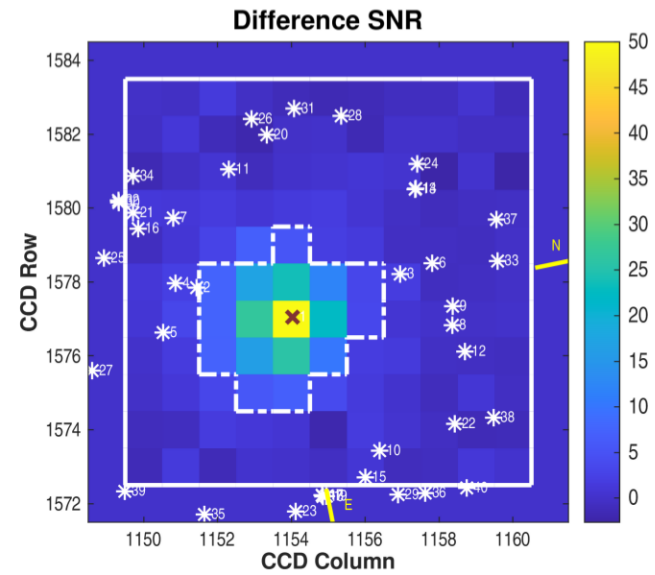
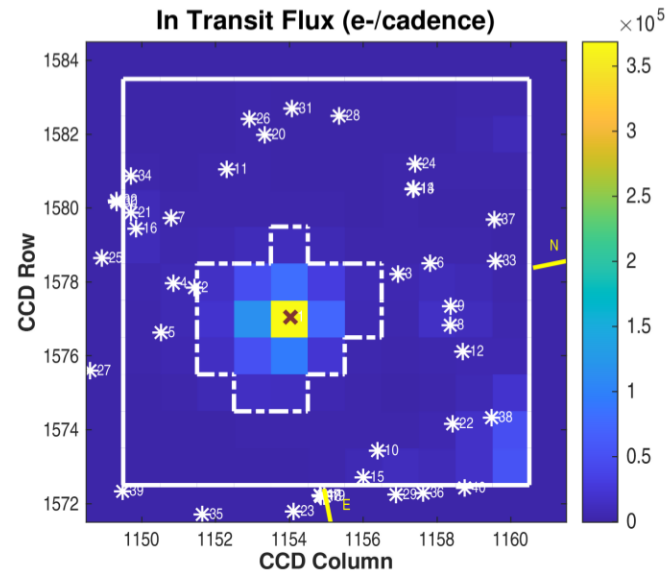
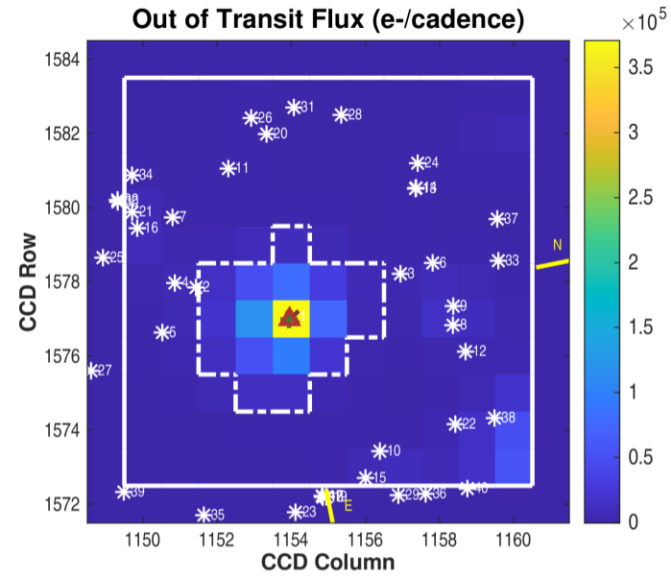
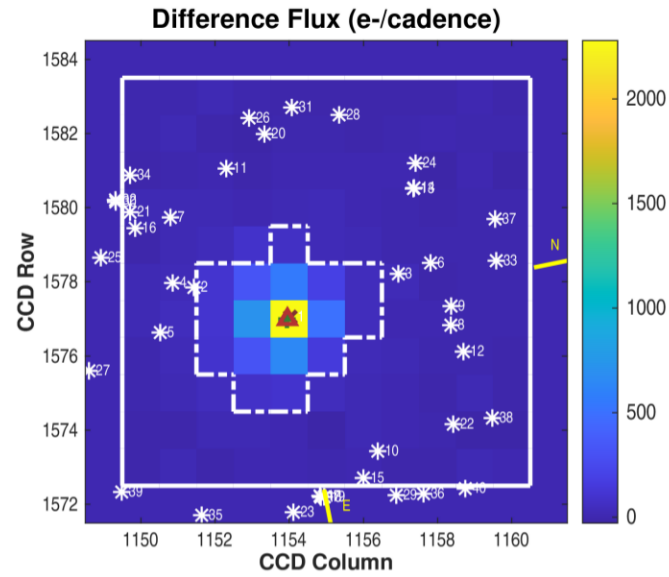


Software Revision: spoc-5.0.57-20220106 -- Cadence Type: TARGET (2.0-min) -- Date Generated: 16-Jan-2022 13:41:34 Z
 This Data Validation Report Summary was produced in the TESS Science Processing Operations Center Pipeline at NASA Ames Research Center

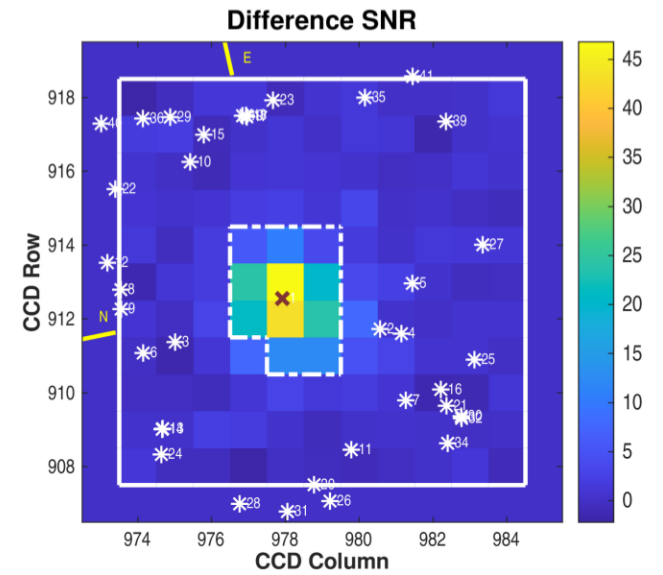
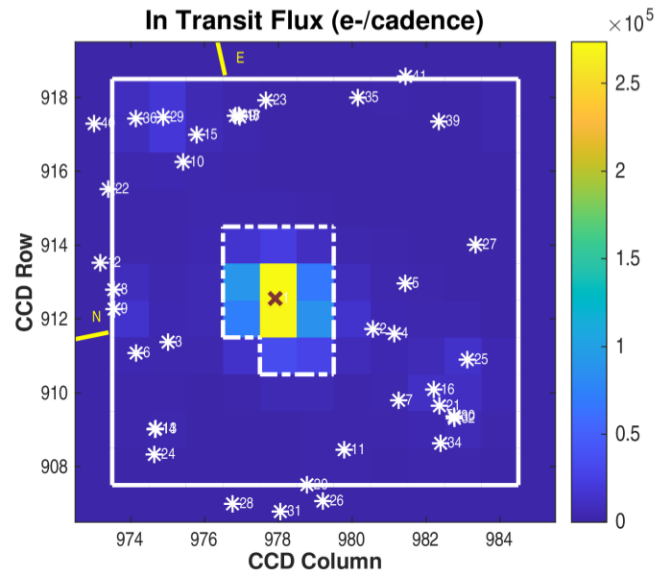
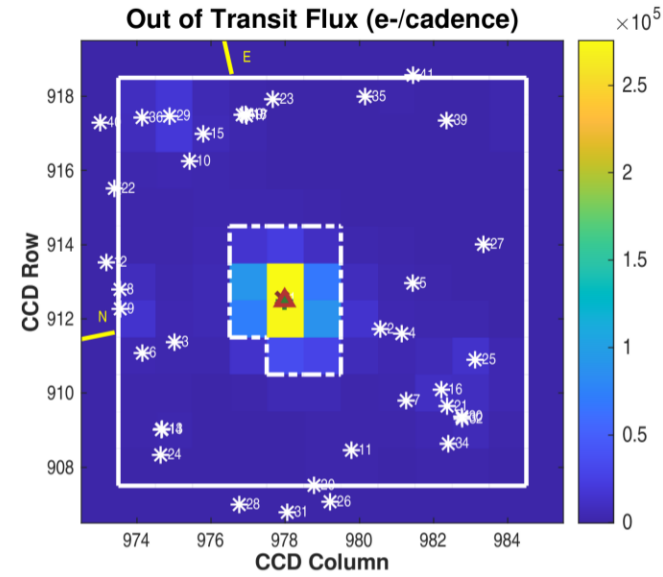
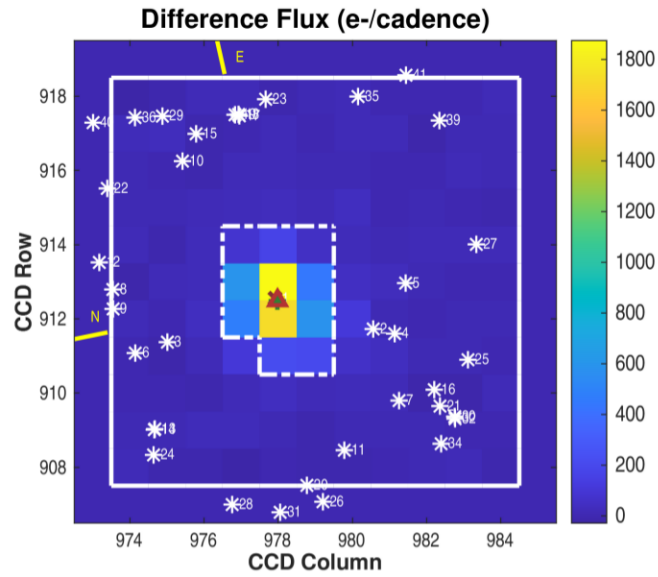
Planet Candidate 1 / Sector 46 / Target Pixel Table 336

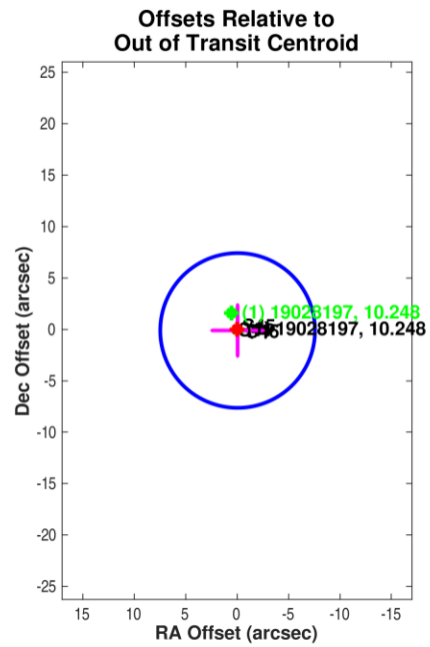


Planet Candidate 1 / Sector 45 / Target Pixel Table 332

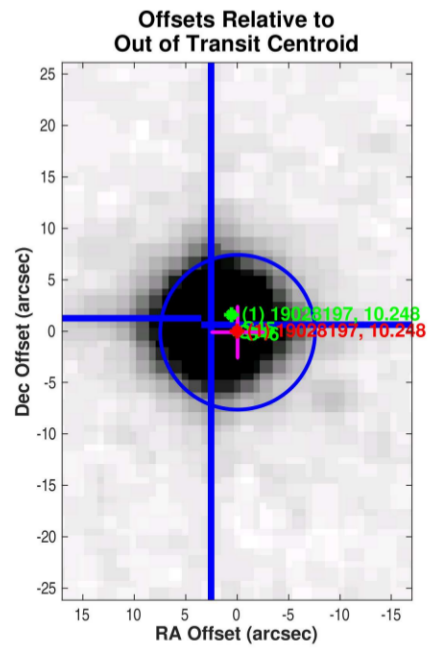
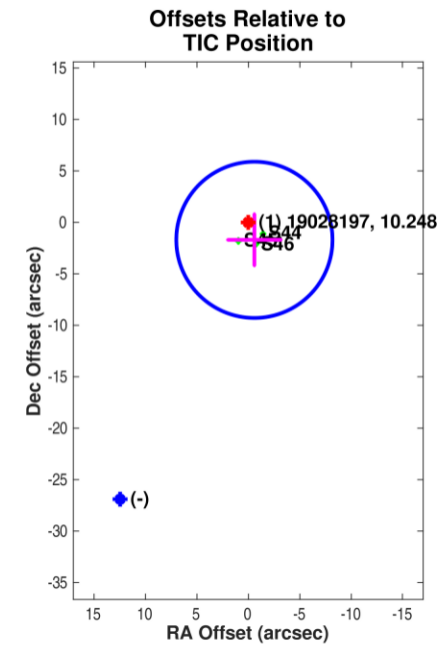


Planet Candidate 1 / Sector 44 / Target Pixel Table 328

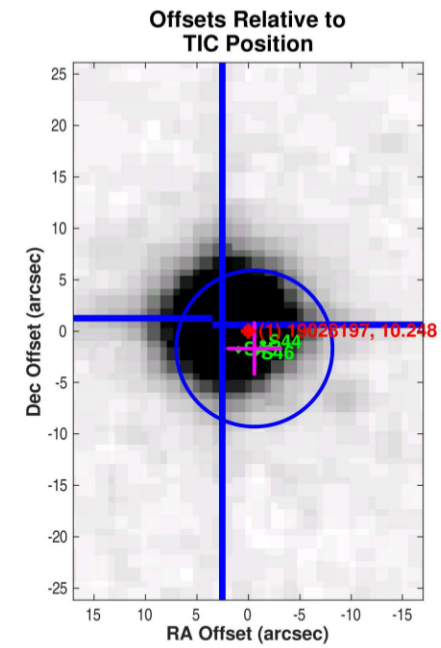


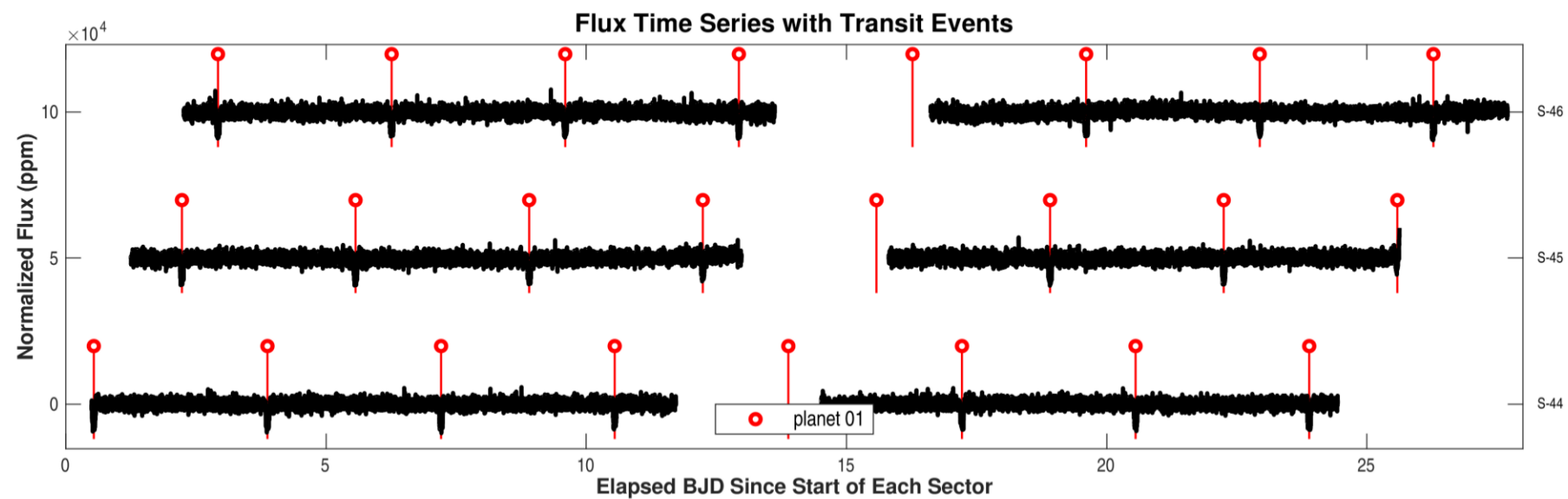
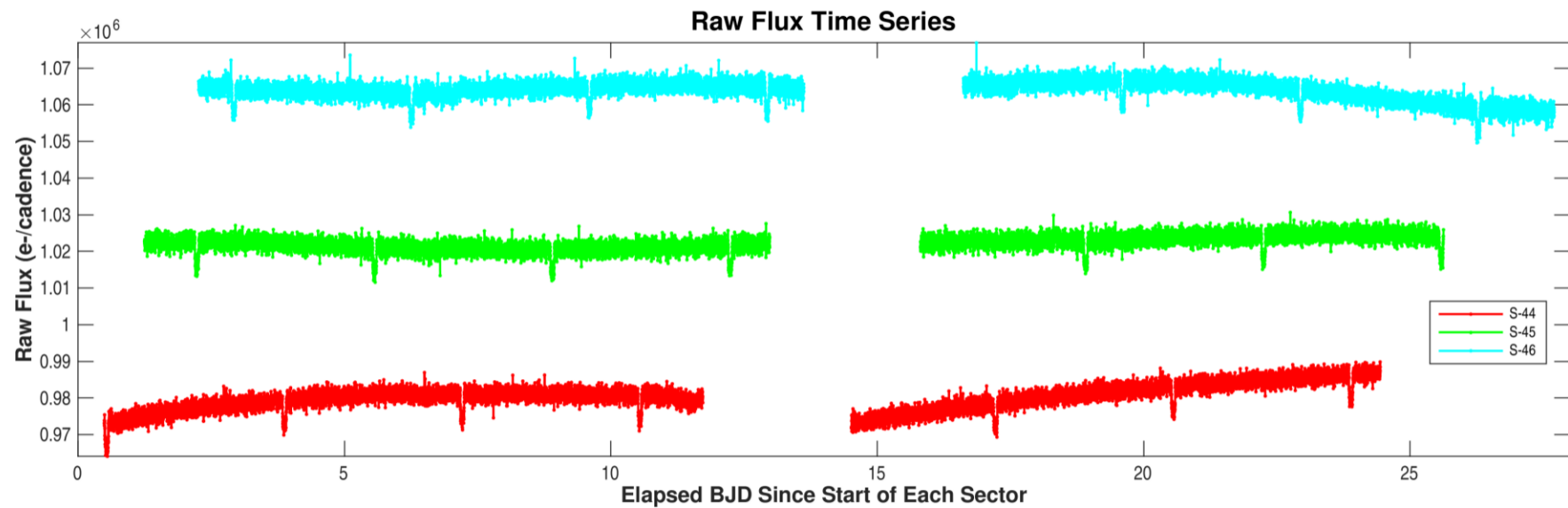


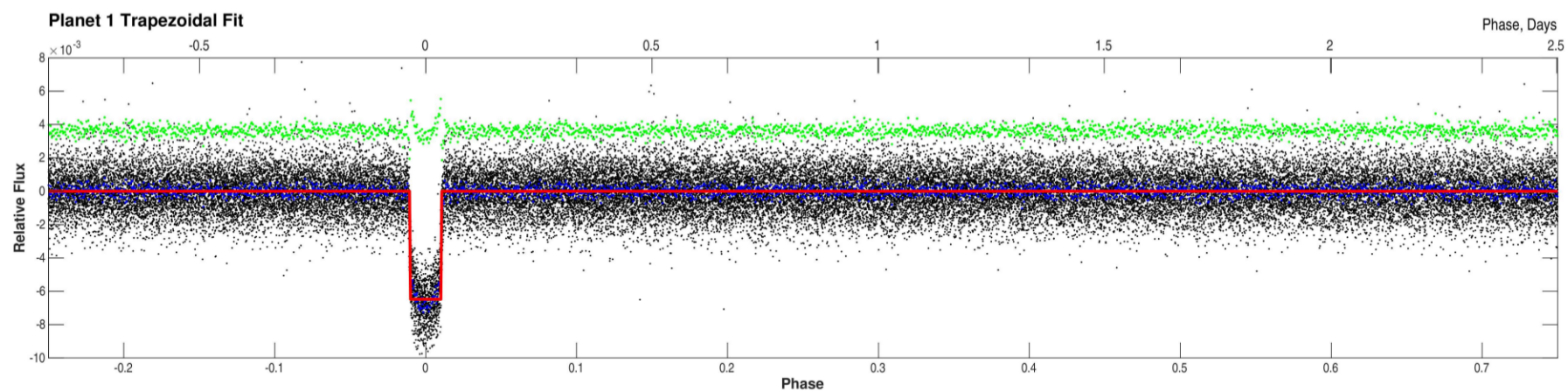
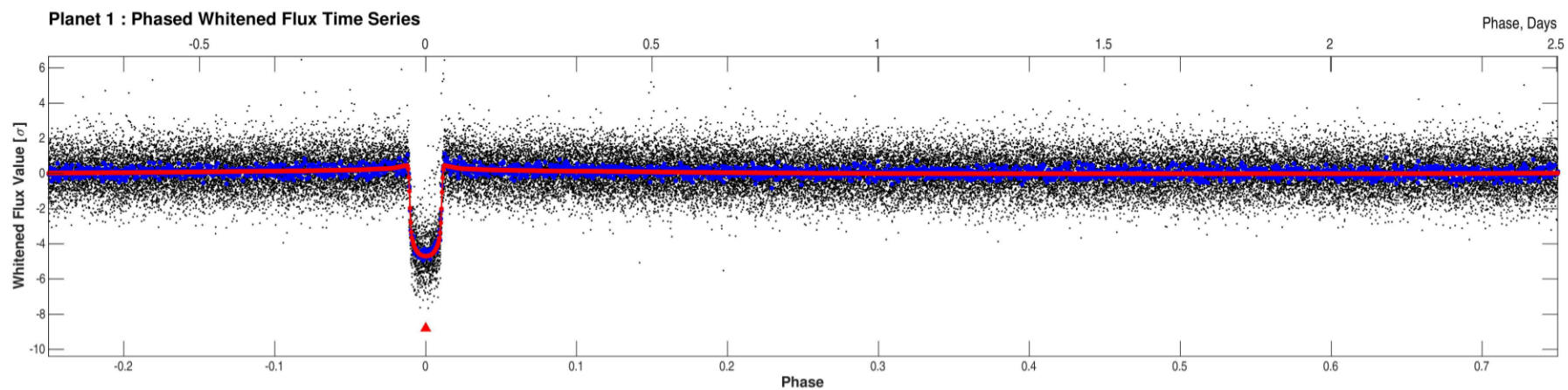
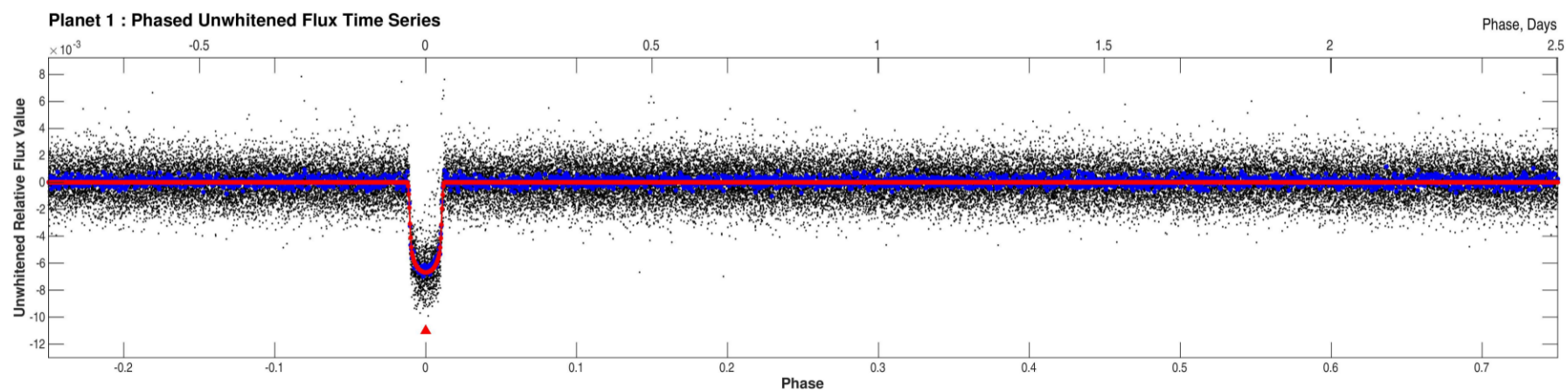
Planet Candidate 1



Planet Candidate 1

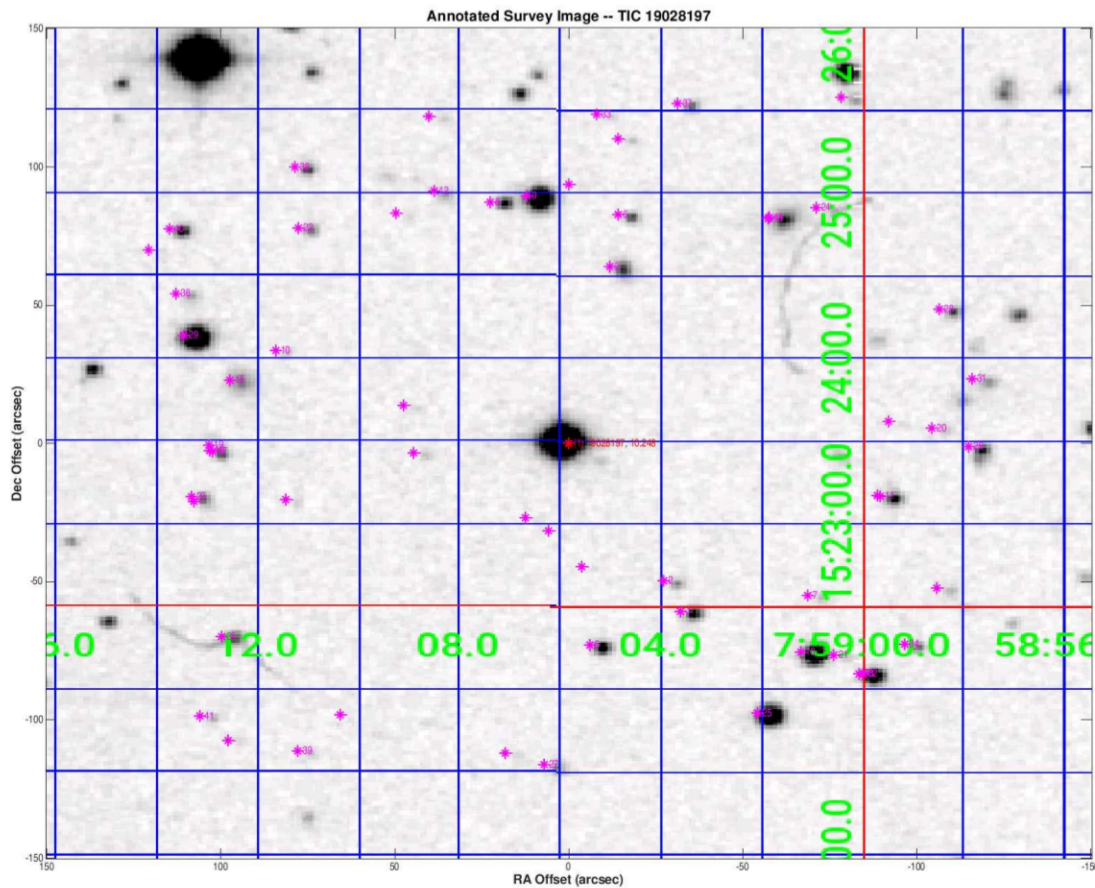






Stellar Distance Table

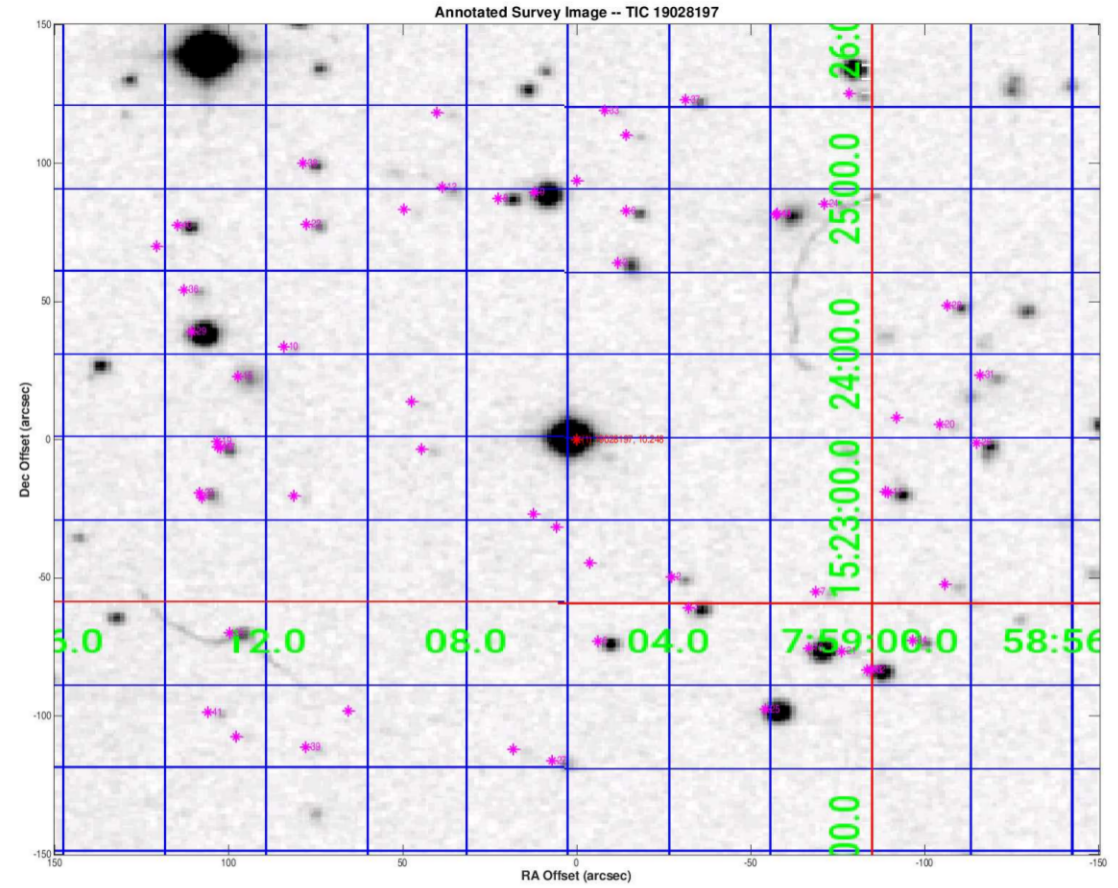
Index	TIC ID	TESS Mag	Distance (arcsec)
1	0000000019028197	10.25	0.00
2	0000000740016752	18.16	56.68
3	0000000019028210	19.10	65.01
4	0000000019028190	16.53	68.77
5	0000000019028188	16.40	73.22
6	0000000019028216	17.70	83.97
7	0000000740016780	18.28	87.99
8	0000000019028219	16.90	90.08
9	0000000019028220	13.51	90.24
10	0000000740016763	19.11	90.62
11	0000000019028193	16.55	91.48
12	0000000019028221	17.91	99.12
13	0000010000228692	16.78	99.53
14	0000000019028215	18.28	100.00
15	0000000019030543	17.11	100.04
16	0000000019028187	14.40	100.74
17	0000000019028194	16.79	102.42
18	0000010000228729	16.64	103.24
19	0000000740016758	18.40	103.41
20	0000000740016785	18.73	104.45
21	0000000740016782	18.92	107.99
22	0000000019028214	16.99	110.02
23	0000000740016757	17.68	110.14
24	0000000019028217	18.30	111.03
25	0000000019028184	14.05	111.58
26	0000000019028195	16.33	114.90
27	0000000740016749	18.15	116.40
28	0000000740016790	17.50	117.01
29	0000000019030541	13.26	117.31
30	0000000019028186	15.59	117.93
31	0000000019028202	17.07	118.23
32	0000000740016783	16.81	118.71
33	0000000740016794	19.21	119.31
34	0000000740016779	17.96	120.83
35	0000000740016755	17.70	121.80
36	0000000019028208	18.37	125.19
37	0000000019028224	17.34	126.83
38	0000000019028223	17.61	127.24
39	0000000740016744	18.94	135.80
40	0000000019030534	16.88	138.49



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

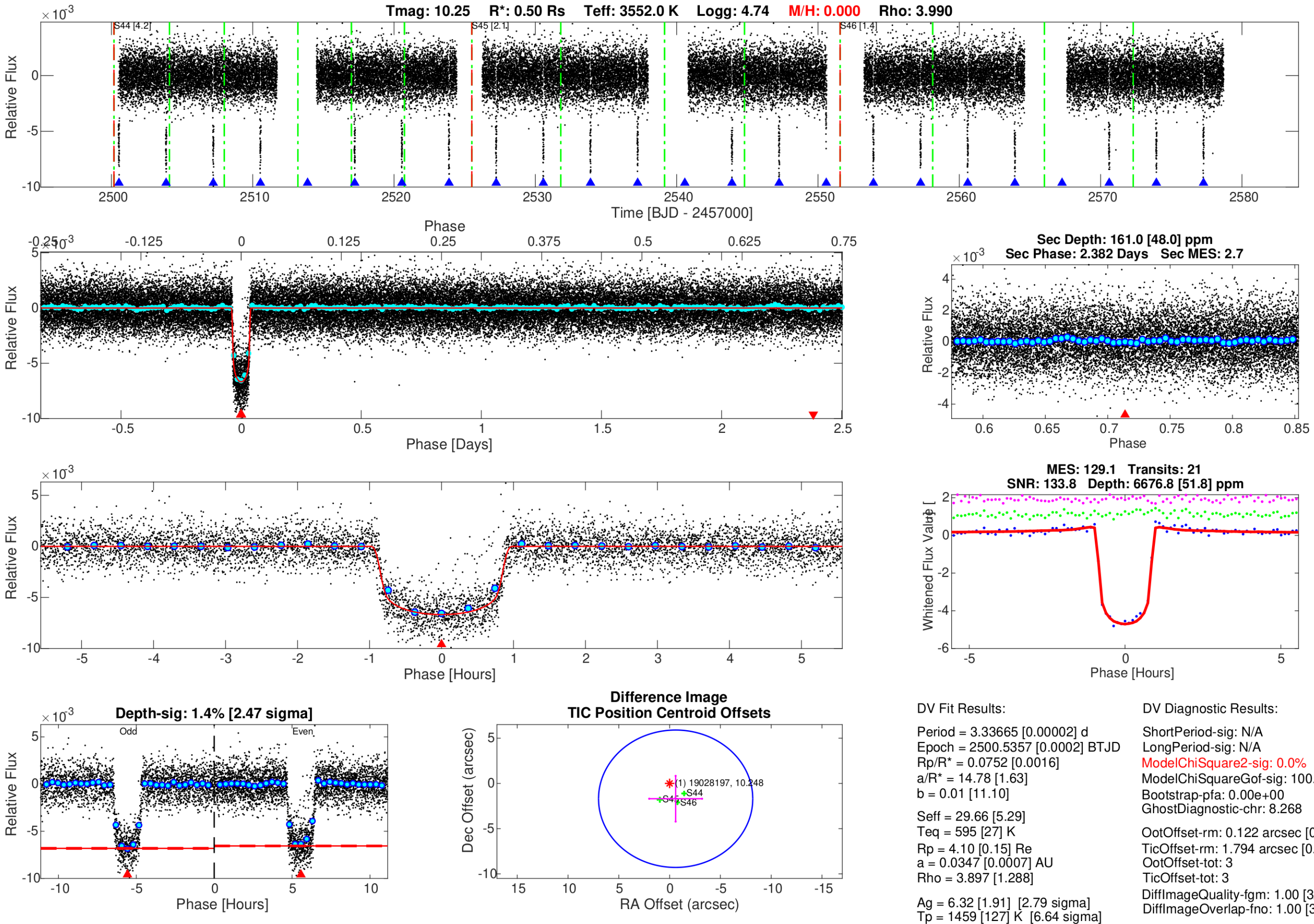
Stellar Distance Table – Continued

Index	TIC ID	TESS Mag	Distance (arcsec)
41	0000000019030571	18.26	144.76



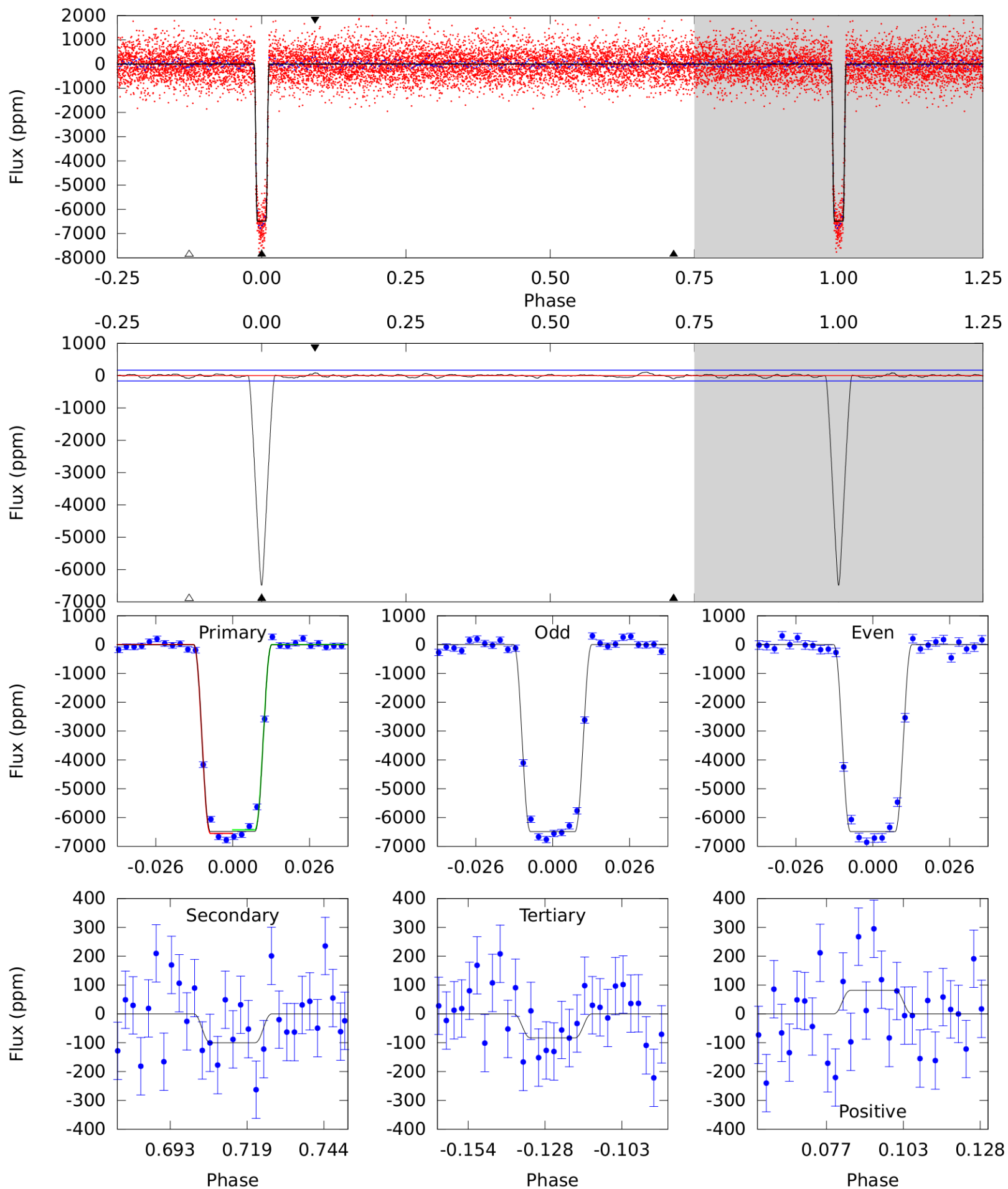
Distances are corrected for proper motion. This table may not contain all of the objects shown.

TIC: 19028197 Candidate: 1 of 1 Period: 3.337 d
TOI: 5094.01 Corr: 0.980



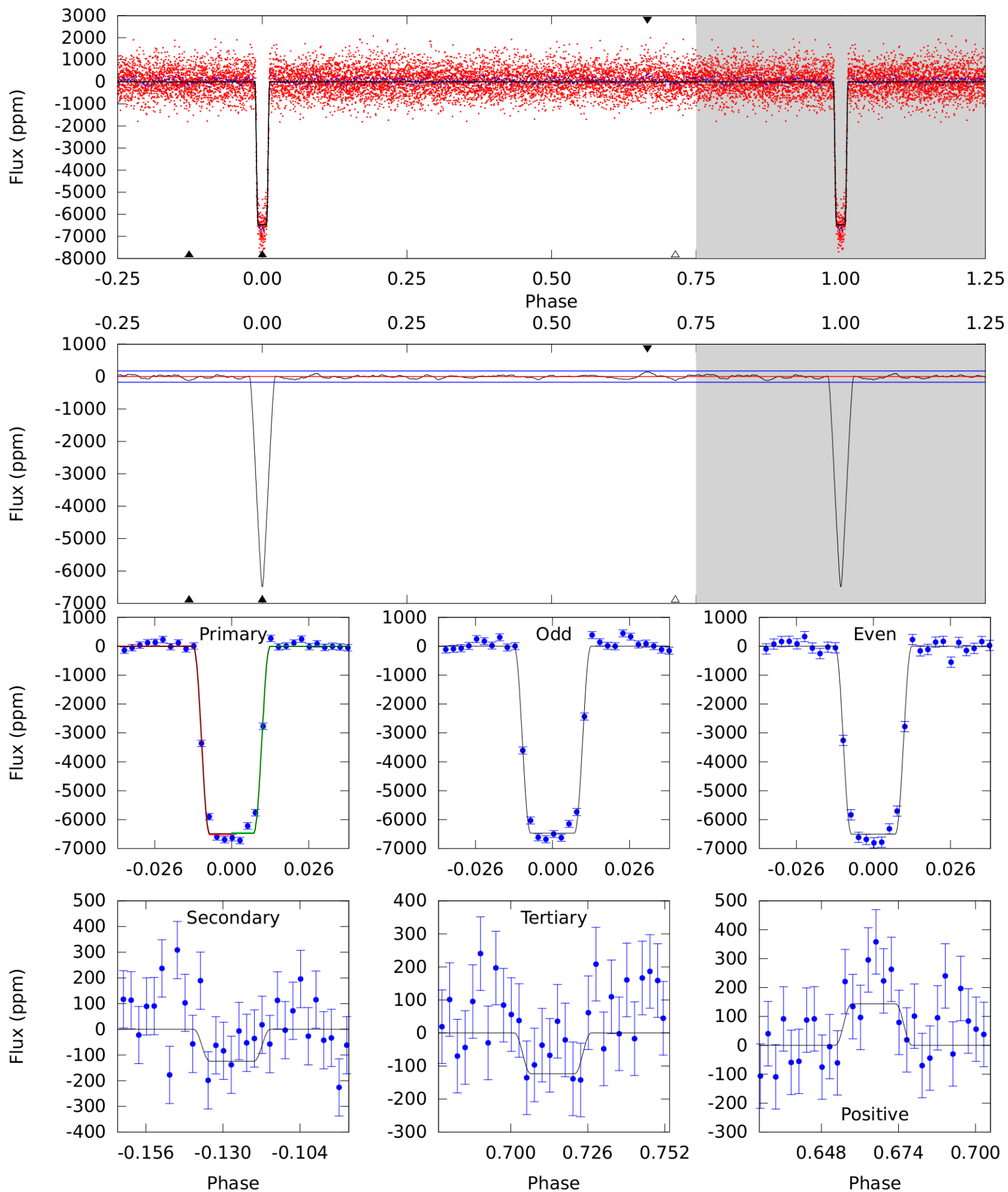
Tier 1 0000000019028197₀1, P = 3.336650 Days, E = 2497.199040 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
188.1	2.91	2.41	2.37	4.84	2.23	1.02	185.7	185.7	0.49	0.54	0.01	0.99	0.02	1.73

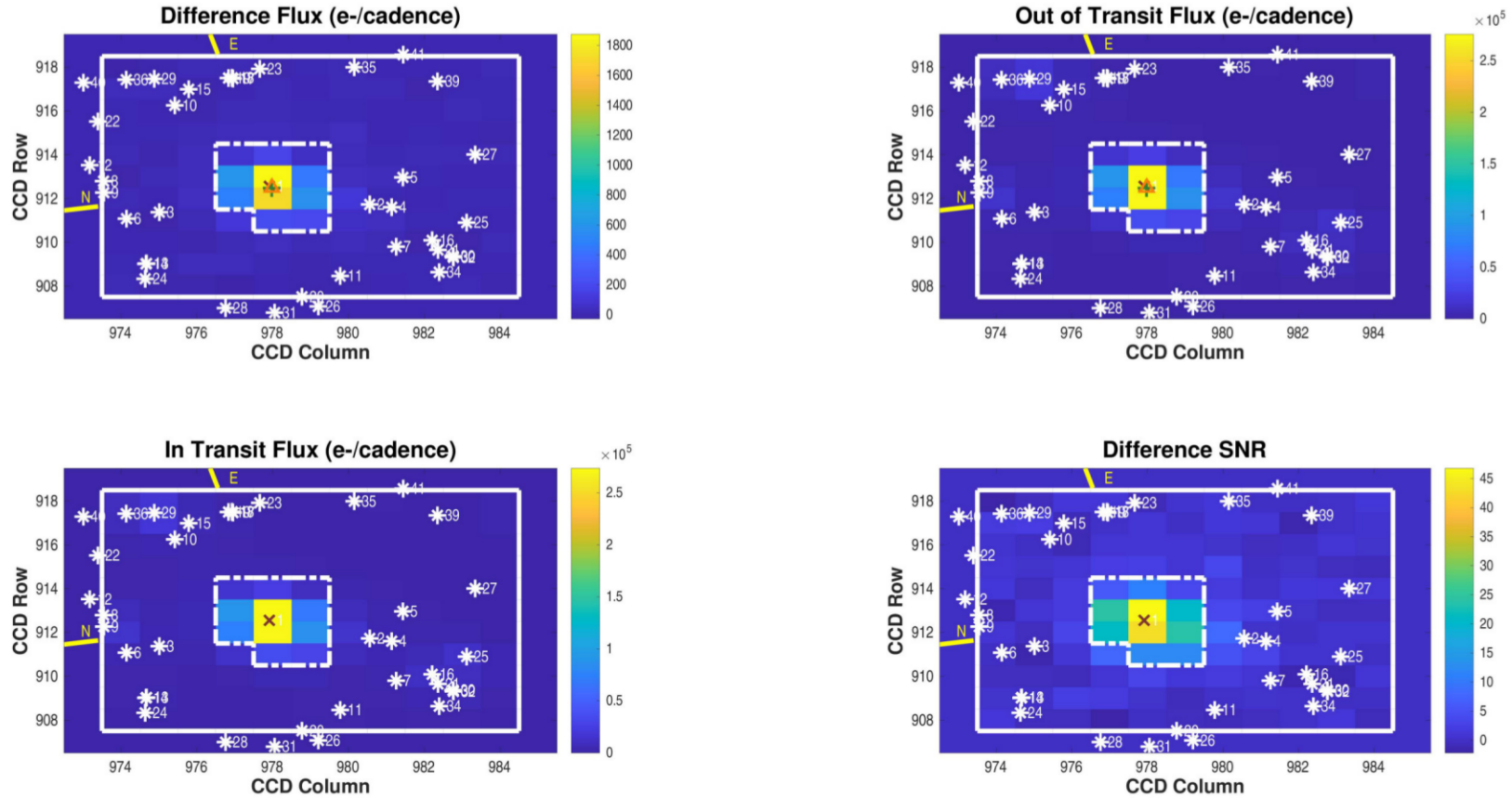


Tier 1 0000000019028197₀1, P = 3.336650 Days, E = 2497.198782 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
181.5	3.48	3.45	4.02	4.84	2.23	1.24	178.0	177.5	0.03	-0.54	0.48	0.97	0.02	0



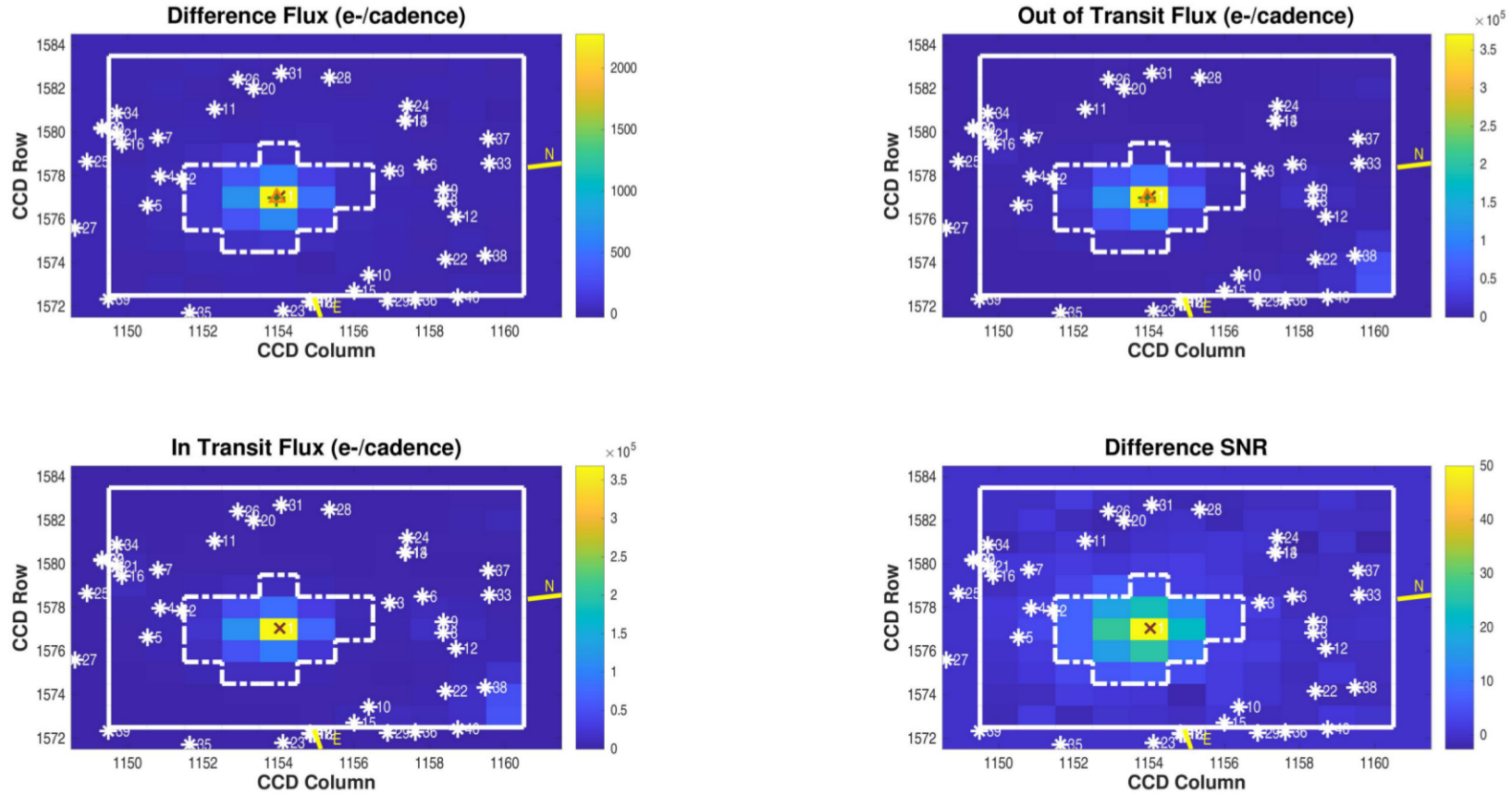
Difference Image
Planet Candidate 1 / Sector 44 / Target Pixel Table 328



Difference image for target 19028197, planet candidate 1, sector 44, target pixel table 328. 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 = 6; number of valid in-transit cadences = 271; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 716; number of out-of-transit cadence gaps = 0. Difference image quality metric = 1.00 (good).

Open `./planet-01/difference-image/0000000019028197-01-difference-image-44-328.fig`

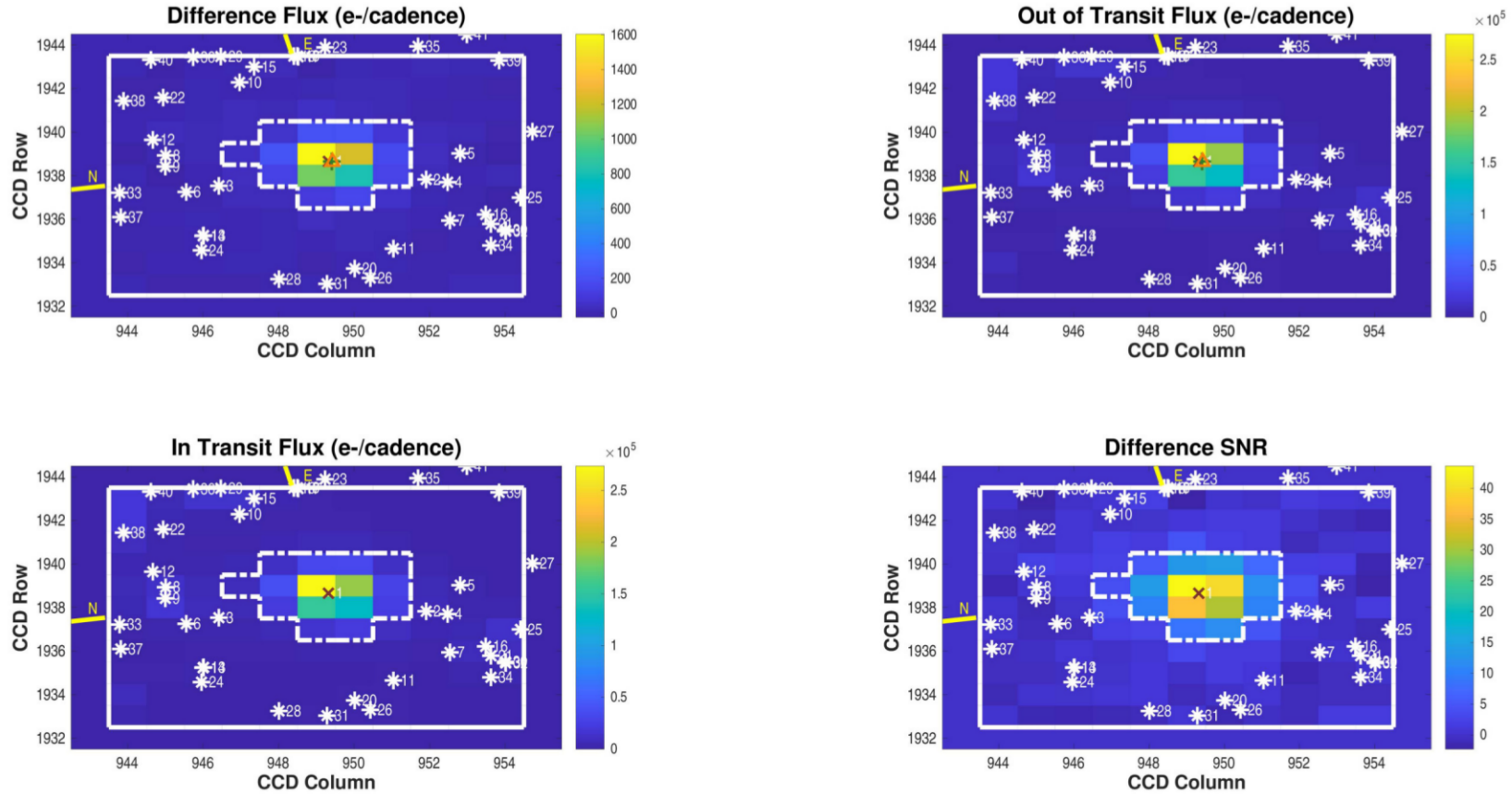
Difference Image
Planet Candidate 1 / Sector 45 / Target Pixel Table 332



Difference image for target 19028197, planet candidate 1, sector 45, target pixel table 332. 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 = 6; number of valid in-transit cadences = 271; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 718; number of out-of-transit cadence gaps = 0. Difference image quality metric = 1.00 (good).

Open `./planet-01/difference-image/0000000019028197-01-difference-image-45-332.fig`

Difference Image
Planet Candidate 1 / Sector 46 / Target Pixel Table 336



Difference image for target 19028197, planet candidate 1, sector 46, target pixel table 336. 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 = 7; number of valid in-transit cadences = 316; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 837; number of out-of-transit cadence gaps = 0. Difference image quality metric = 1.00 (good).

Open `./planet-01/difference-image/0000000019028197-01-difference-image-46-336.fig`

5 Pixel Level Diagnostics

To reduce clutter, the catalog IDs in the difference images have been replaced by indices representing distance from the target star. The mapping between the indices and the catalog IDs is found in a table at the end of this section.

5.1 Planet Candidate 1

Multi-Sector Average PRF Fit of the Difference Images

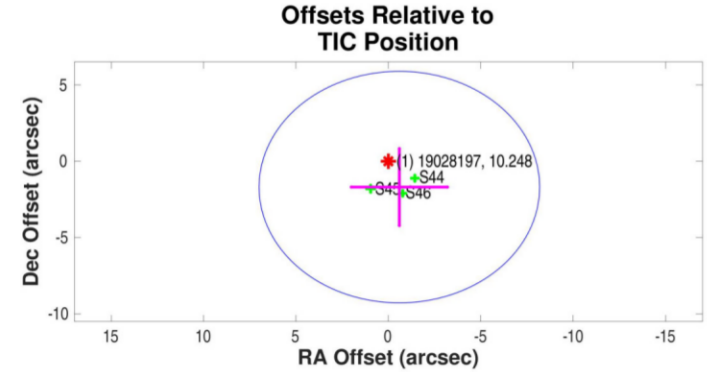
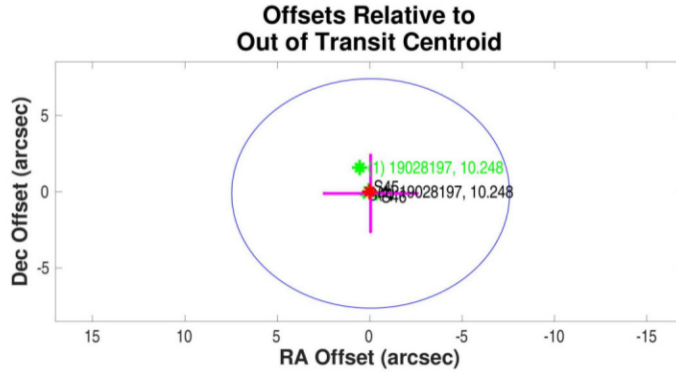
Mean offset from the PRF fit to the out of transit image

	RA	Dec	Units
Offset	$-0.0533 \pm 2.51e+00$	$-0.1100 \pm 2.51e+00$	arcseconds
Offset/ σ	-0.02	-0.04	
Offset Distance	$0.1223 \pm 2.51e+00$		arcseconds
Offset Distance/ σ	0.05		
3σ Radius	7.5217		arcseconds

Mean offset from the TIC RA and Dec

	RA	Dec	Units
Offset	$-0.5941 \pm 2.60e+00$	$-1.6930 \pm 2.52e+00$	arcseconds
Offset/ σ	-0.23	-0.67	
Offset Distance	$1.7942 \pm 2.53e+00$		arcseconds
Offset Distance/ σ	0.71		
3σ Radius	7.5929		arcseconds

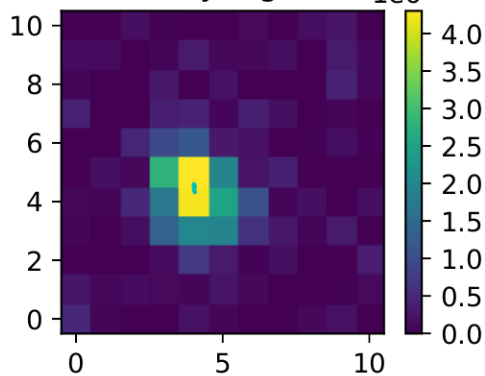
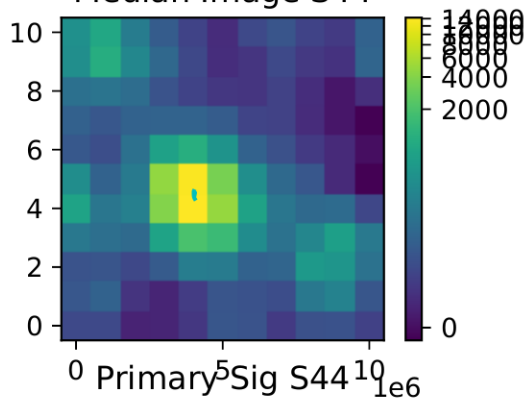
Planet Candidate 1



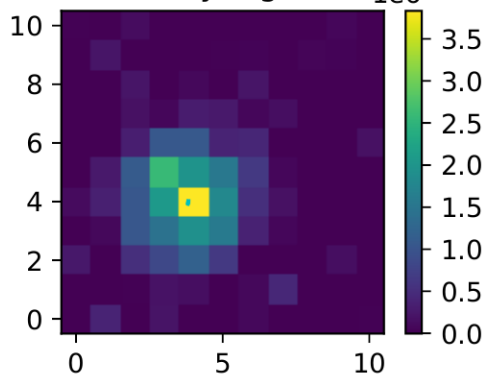
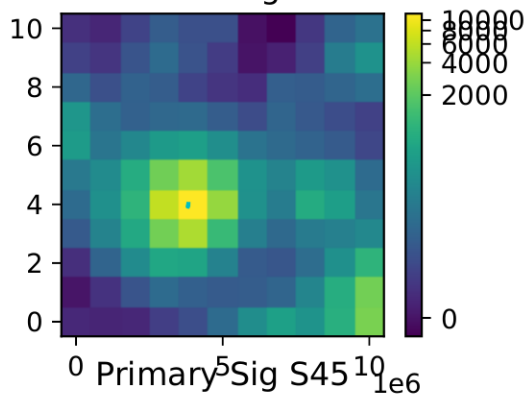
Difference image centroid offsets for target 19028197, planet candidate 1. Left: difference image PRF centroid offsets in RA and Dec with respect to the per sector out-of-transit centroids for the given target. Right: difference image PRF centroid offsets in RA and Dec with respect to the TC coordinates of the given target. Symbol key: green cross: per sector centroid offsets with 1-sigma error bars in RA and Dec; magenta cross: robust weighted mean offset over all sectors with 1-sigma error bars in RA and Dec; blue circle: 3-sigma radius of confusion for weighted mean offset; red asterisk: location of target star (out-of-transit centroid in left panel and TIC position in right panel); green asterisk: TIC location of target star with respect to out-of-transit centroid; blue asterisk: location of other TIC objects in the neighborhood. TIC ID and magnitude are noted in the text associated with each marked object. A constant error term of 2.5000 arcseconds has been added in quadrature to the computed uncertainty in the RA and Dec components of the robust mean offset.

Open `./planet-01/difference-image/0000000019028197-01-difference-image-centroid-offsets.fig`

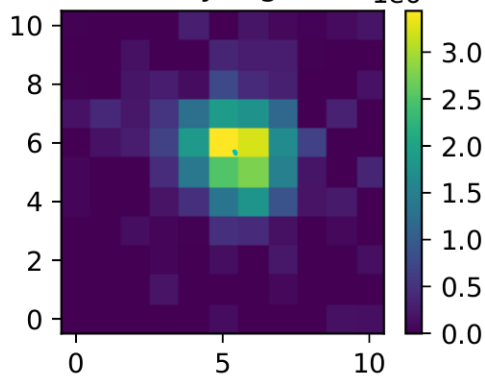
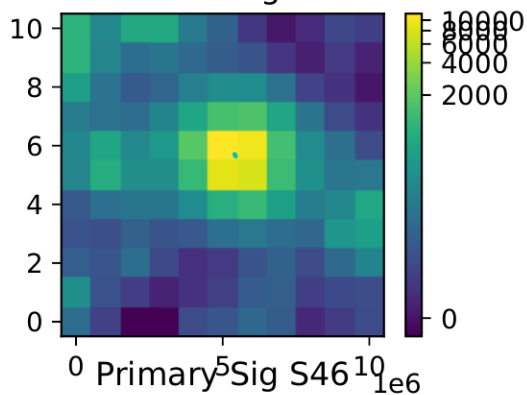
Median Image S44



Median Image S45



Median Image S46



Using TIC: 19028197

Tier 1

Using TIC catalog position 119.774332 15.391456 [J2000.0; epoch 2000.0]

Predicted GAIA position 119.773502 15.391209 [J2000.0; epoch 2015.5]

2MASS J07590587+1523294 From TIC

4 TIC entries within 60.0 arcsec of target 19028197

740016760 Sep [arcsec]: 40.811 Tmag: 19.53 Teff: 4605.0 Logg: 0.00 Rs[Rsun]: 0.00

740016762 Sep [arcsec]: 45.342 Tmag: 19.84 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00

740016753 Sep [arcsec]: 46.309 Tmag: 19.87 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00

740016752 Sep [arcsec]: 59.715 Tmag: 18.16 Teff: 4163.0 Logg: 4.76 Rs[Rsun]: 0.56

TIC Hosts TOIs

5094.01

Target Parameters

Catalog	Tmag/Rpmag	Teff	Logg	Rstar	Mstar
TIC	10.2479	3552.0±157.0	4.74±0.01	0.50± 0.0	0.50± 0.02
GAIA DR2	10.291	3775.5±114.8	...	--±--	...

Other GAIA G: 11.35 Bp: 12.59 AbsG: 8.55 (Bp-Rp)o: 2.062 AstroGOF: 23.75 AstroExNoiSig: 12.38

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/tess2021233042500-s0042-s0046-0000000019028197-00550_dvr.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021233042500-s0042-s0046-0000000019028197-00550_dvm.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021233042500-s0042-s0046-0000000019028197-01-00550_dvs.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021285162058-s0044-s0044-0000000019028197-00536_dvr.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021285162058-s0044-s0044-0000000019028197-00536_dvm.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021285162058-s0044-s0044-0000000019028197-01-00536_dvs.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021311000057-s0045-s0045-0000000019028197-00542_dvr.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021311000057-s0045-s0045-0000000019028197-00542_dvm.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021311000057-s0045-s0045-0000000019028197-01-00542_dvs.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021337012456-s0046-s0046-0000000019028197-00547_dvr.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021337012456-s0046-s0046-0000000019028197-00547_dvm.pdf

https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021337012456-s0046-s0046-0000000019028197-01-00547_dvs.pdf

Tier 1

TESS Observe - Sec Cam Ccd Col Row						
19028197	44	4	2	978.08	912.73	
19028197	45	2	1	1153.94	1577.39	
19028197	46	1	4	949.31	1937.90	