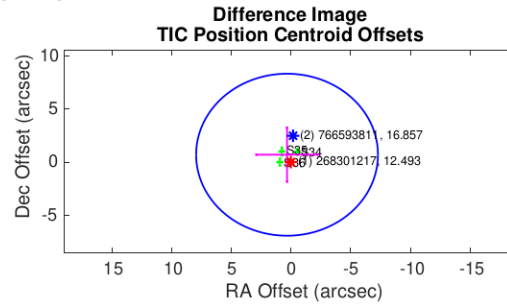
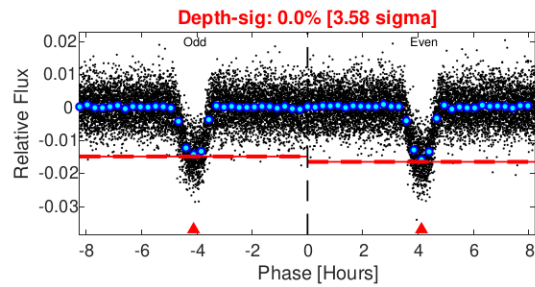
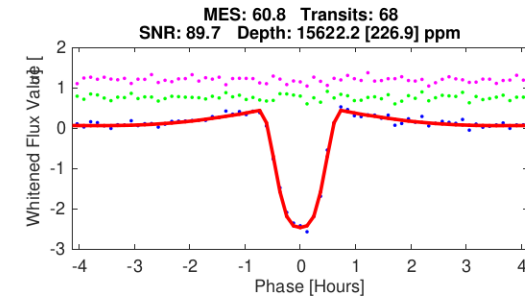
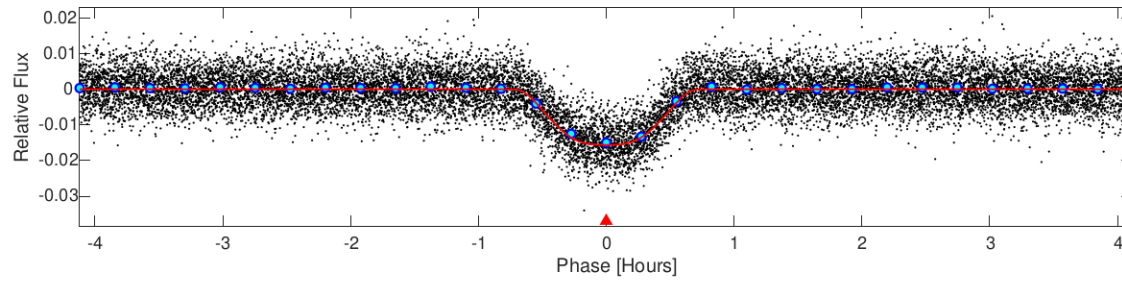
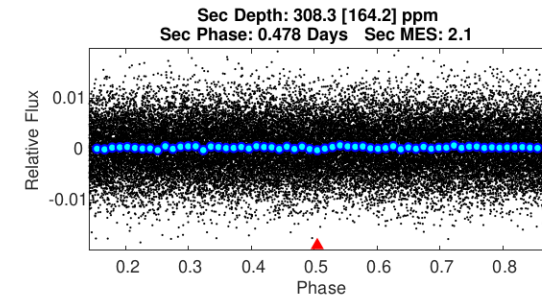
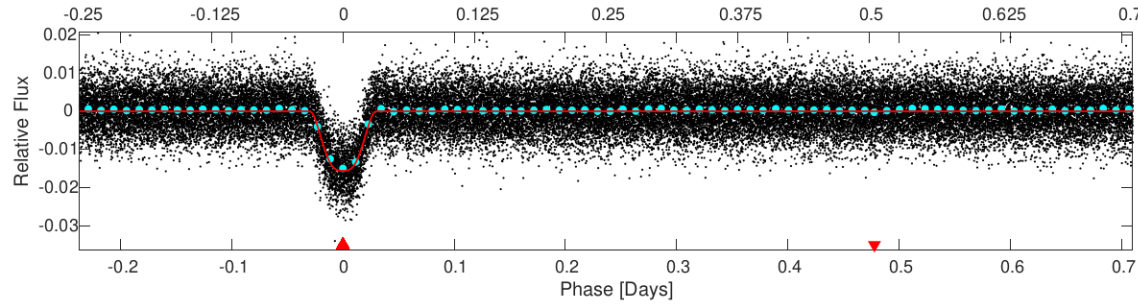
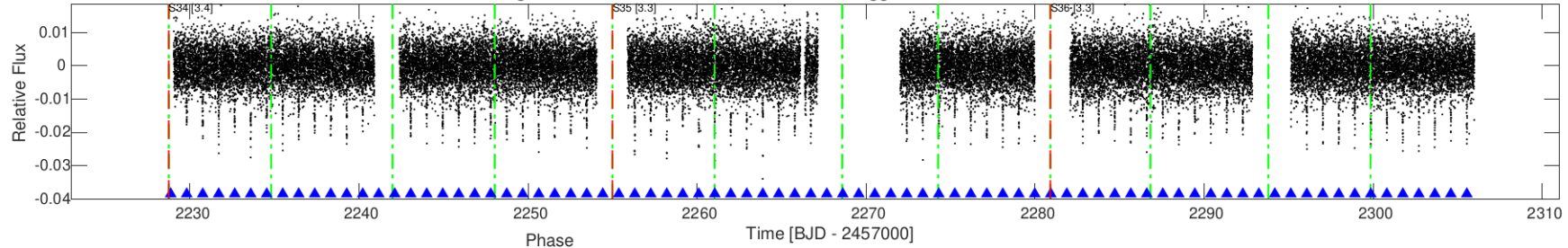


TIC: 268301217 Candidate: 1 of 1 Period: 0.947 d
TOI: 1937.01 Corr: 0.979

Tmag: 12.49 R*: 1.07 Rs Teff: 5707.0 K Logg: 4.39 M/H: 0.000 Rho: 0.832



DV Fit Results:

Period = 0.94666 [0.00001] d
Epoch = 2228.8599 [0.0003] BTJD
Rp/R* = 0.1306 [0.0015]
a/R* = 4.04 [0.08]
b = 0.85 [0.01]
Seff = 3013.88 [479.76]
Teq = 1890 [75] K
Rp = 15.26 [0.80] Re
a = 0.0190 [0.0013] AU
Rho = 0.991 [0.062]
Ag = 0.26 [0.14] [-5.11 sigma]
Tp = 2092 [283] K [0.69 sigma]

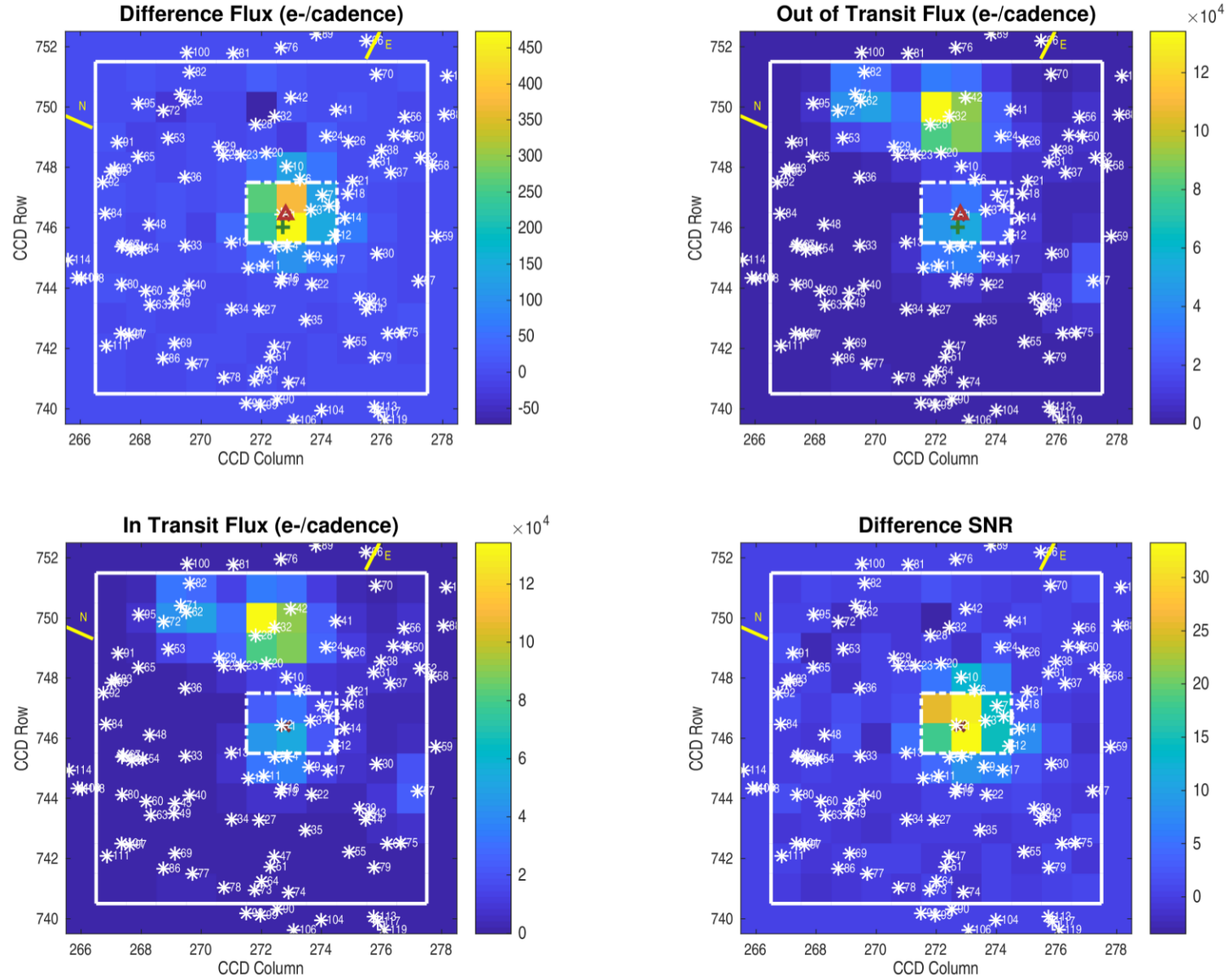
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
GhostDiagnostic-chr: 3.614
OotOffset-rm: 8.926 arcsec [3.21 sigma]
TicOffset-rm: 0.768 arcsec [0.30 sigma]
OotOffset-tot: 3
TicOffset-tot: 3
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

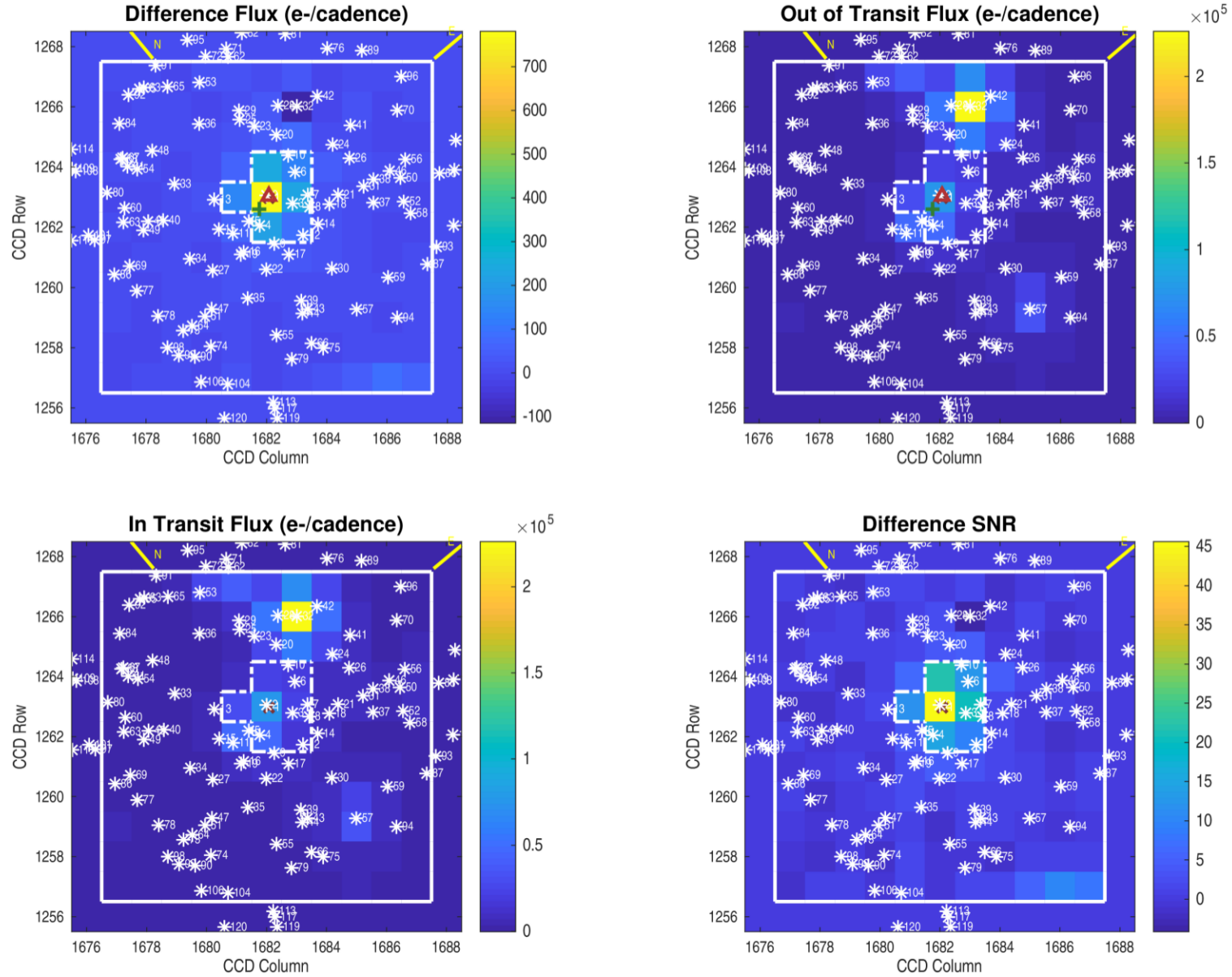
Software Revision: spoc-5.0.28-20210413 -- Cadence Type: TARGET (2-min) -- Date Generated: 25-Apr-2021 15:20:12 Z

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

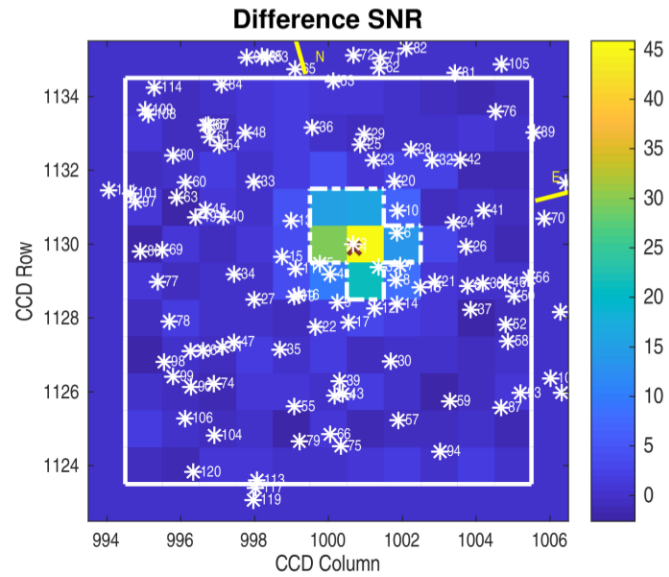
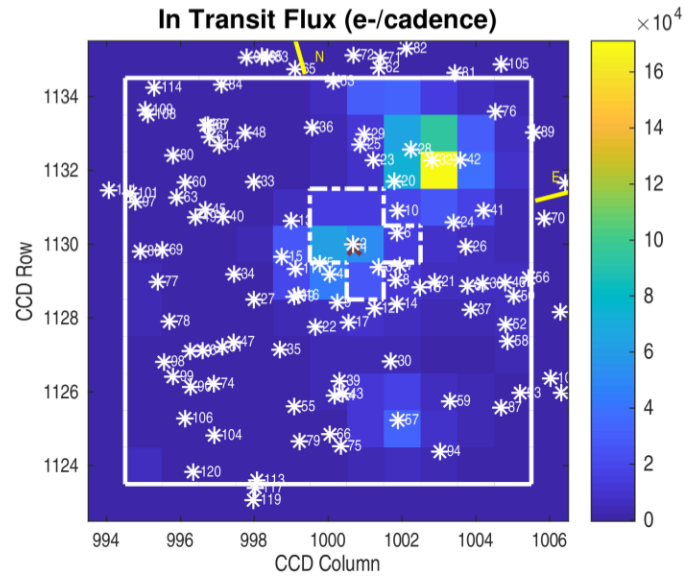
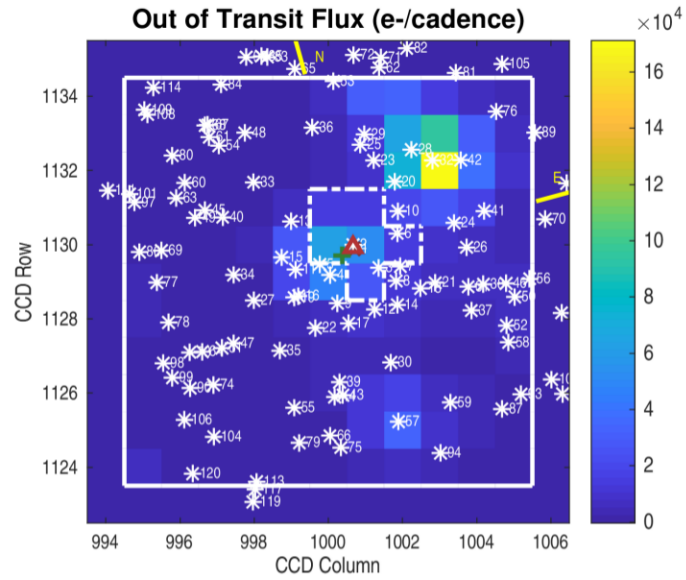
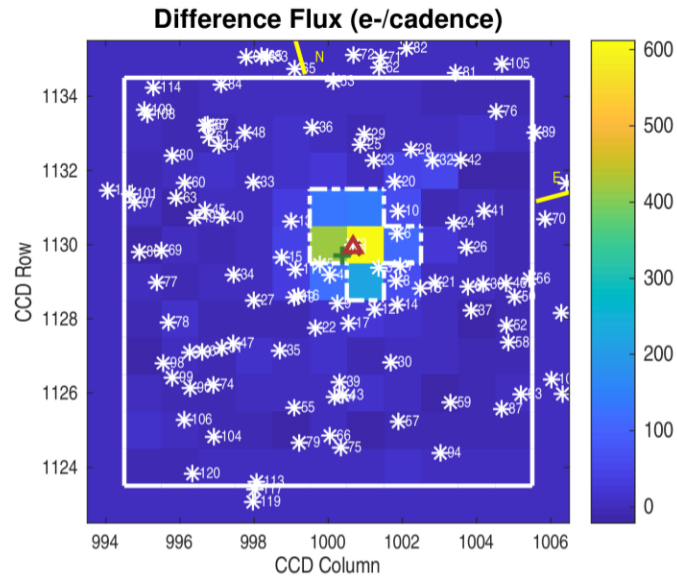
Planet Candidate 1 / Sector 36 / Target Pixel Table 296



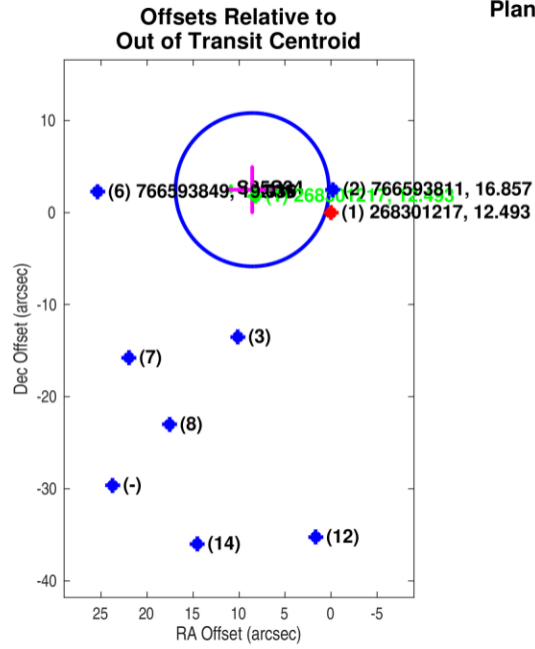
Planet Candidate 1 / Sector 35 / Target Pixel Table 292



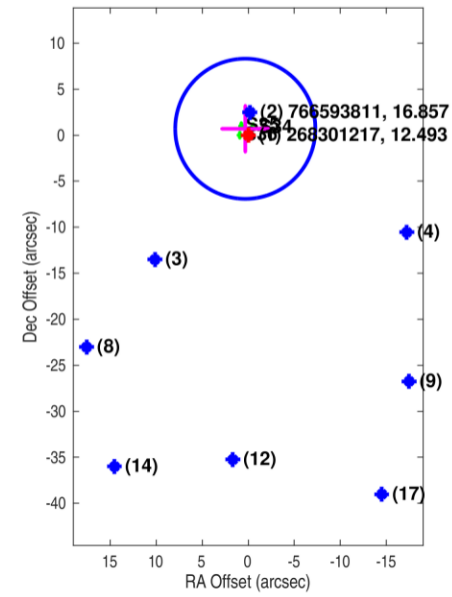
Planet Candidate 1 / Sector 34 / Target Pixel Table 288



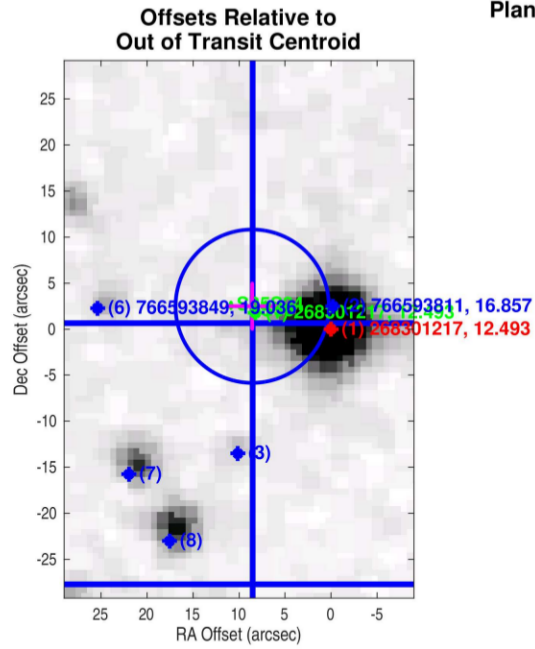
Planet Candidate 1



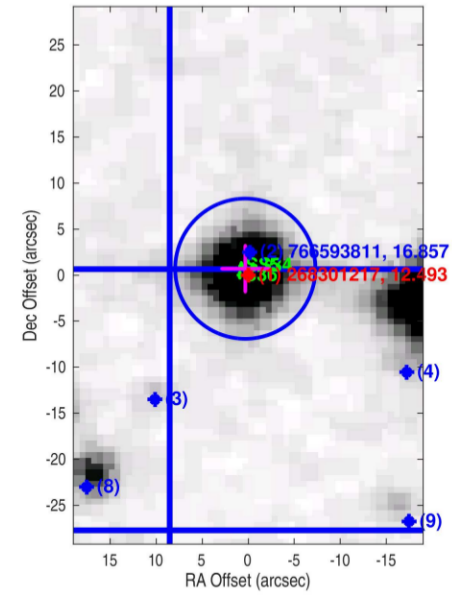
Offsets Relative to TIC Position

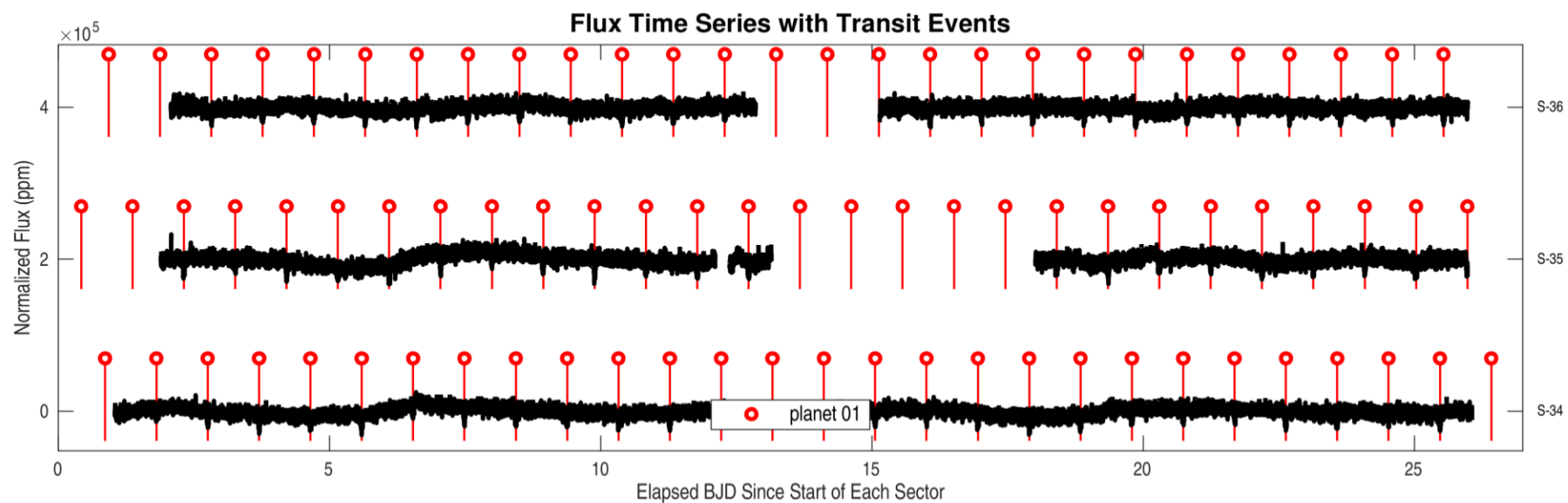
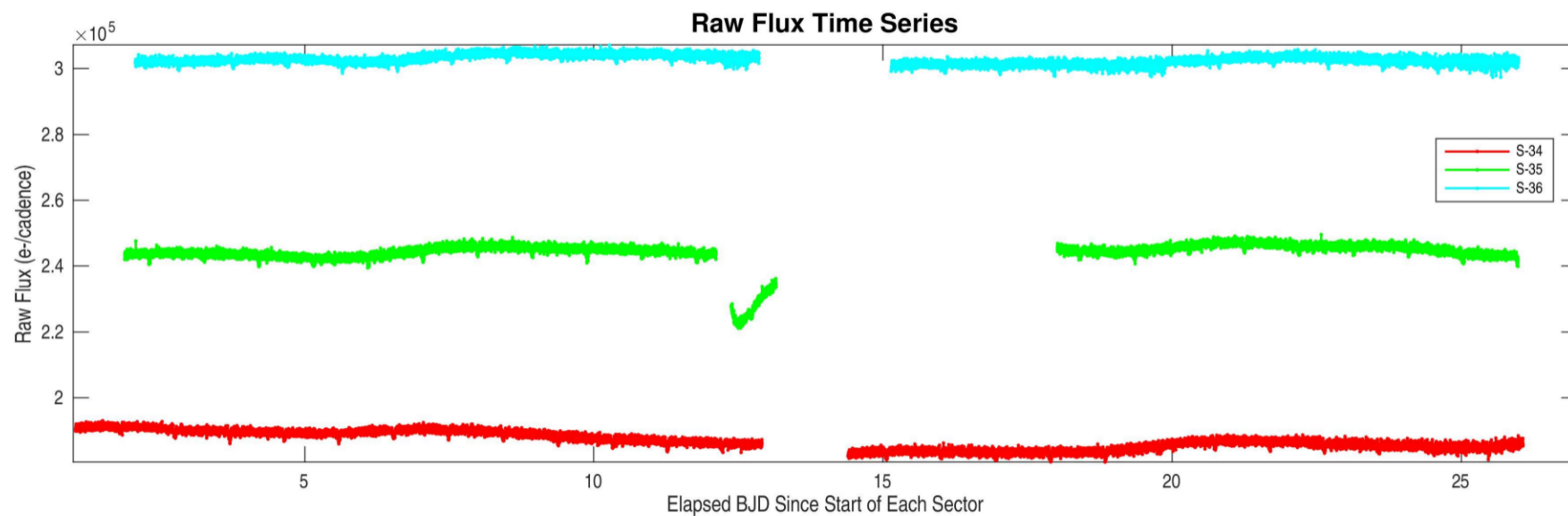


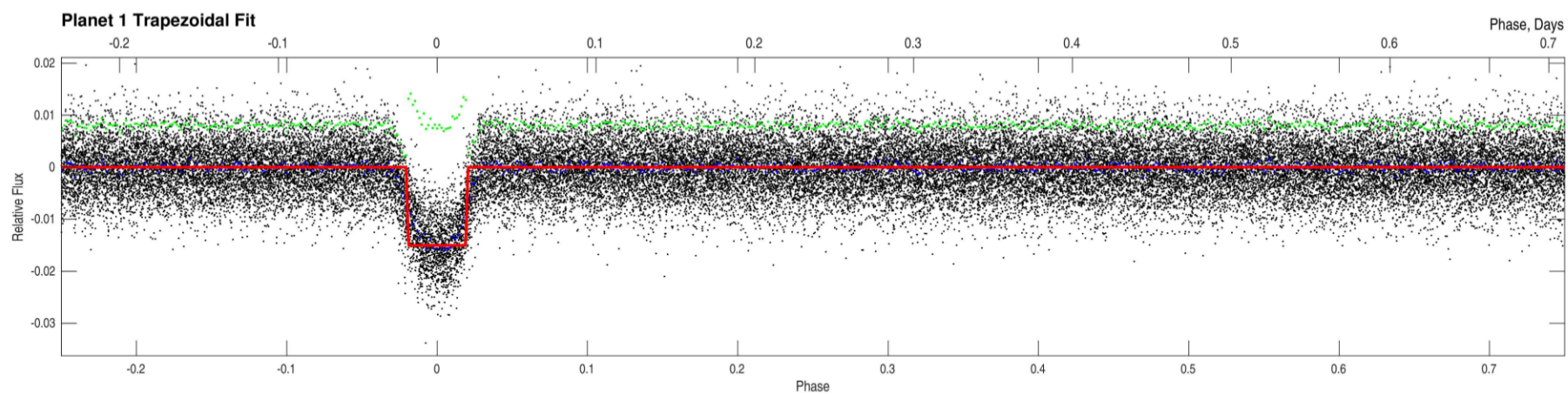
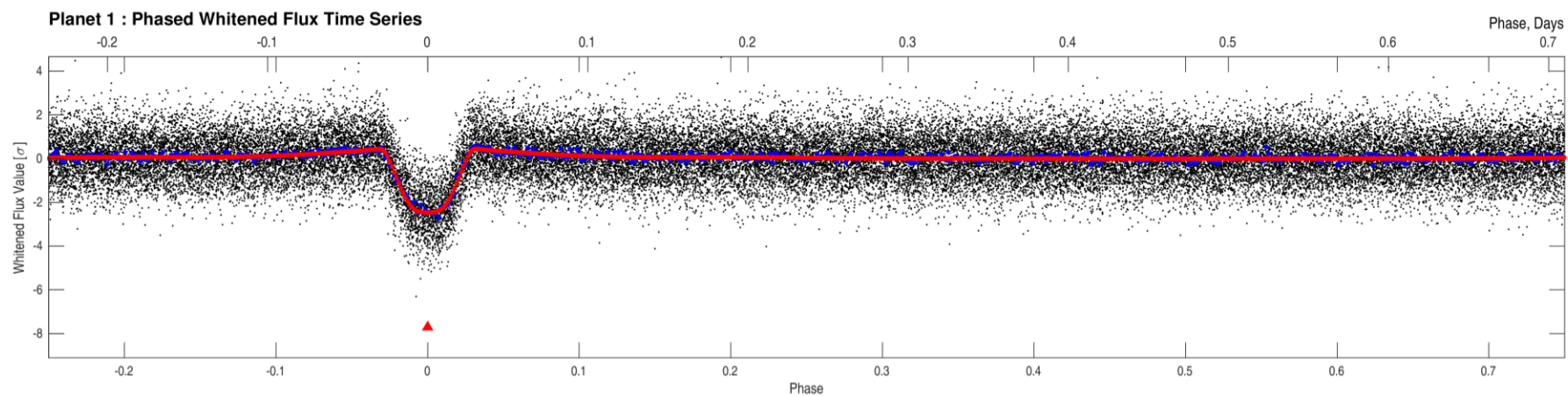
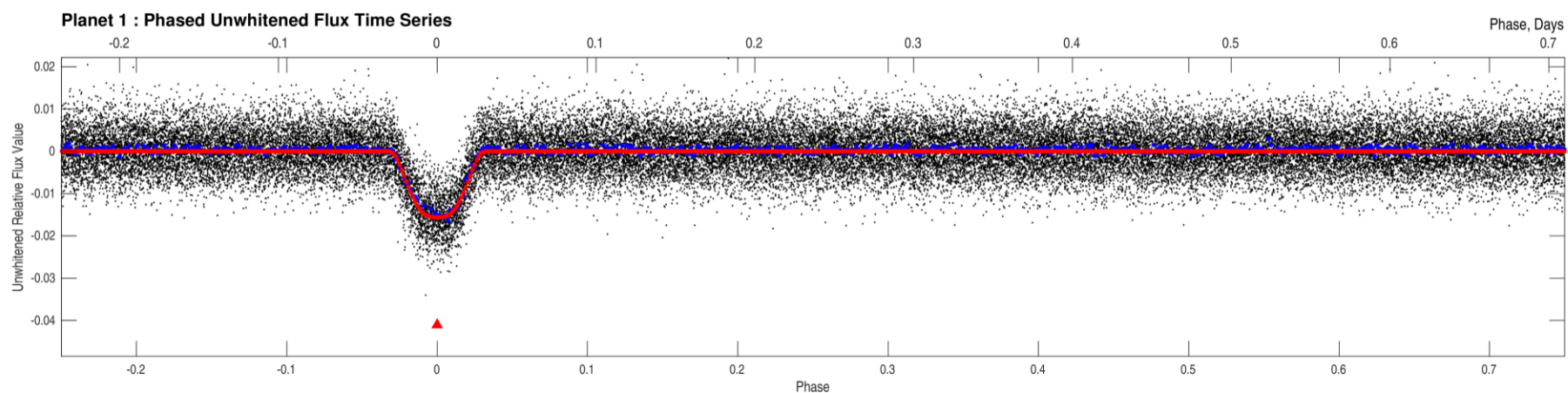
Planet Candidate 1



Offsets Relative to TIC Position

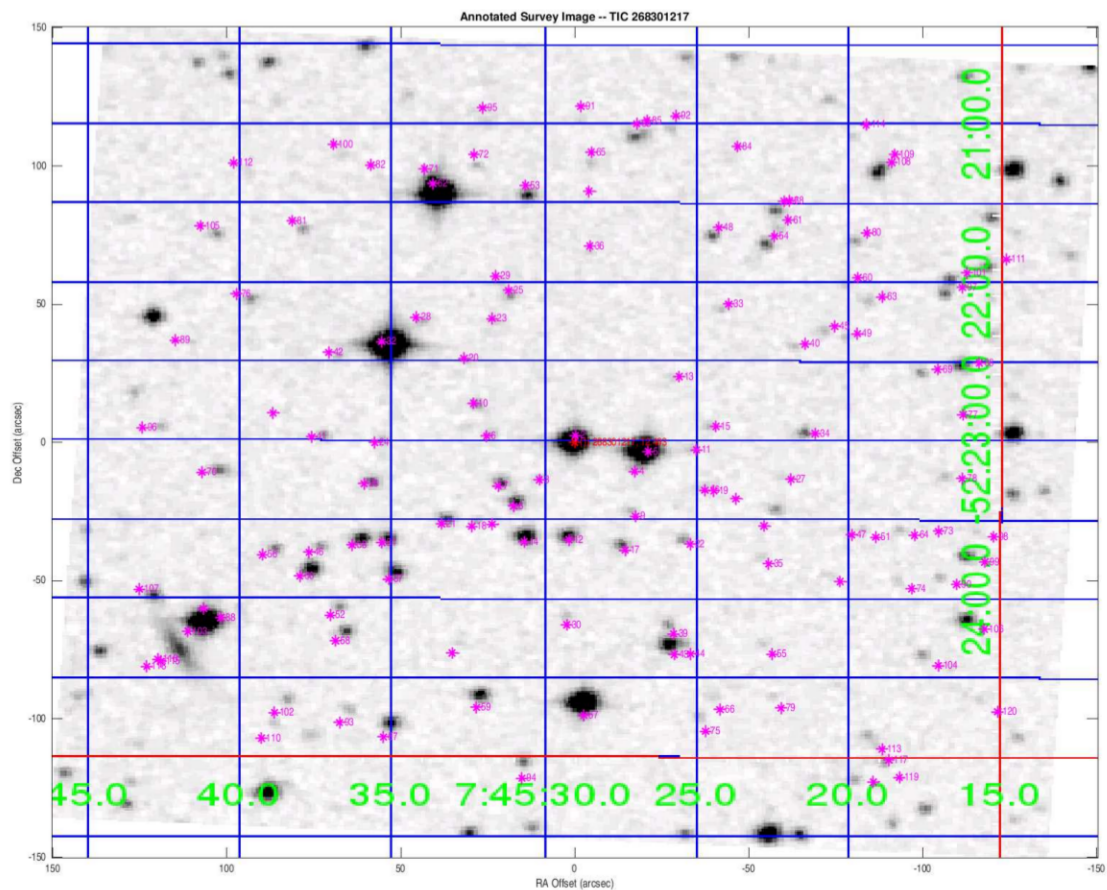






Stellar Distance Table

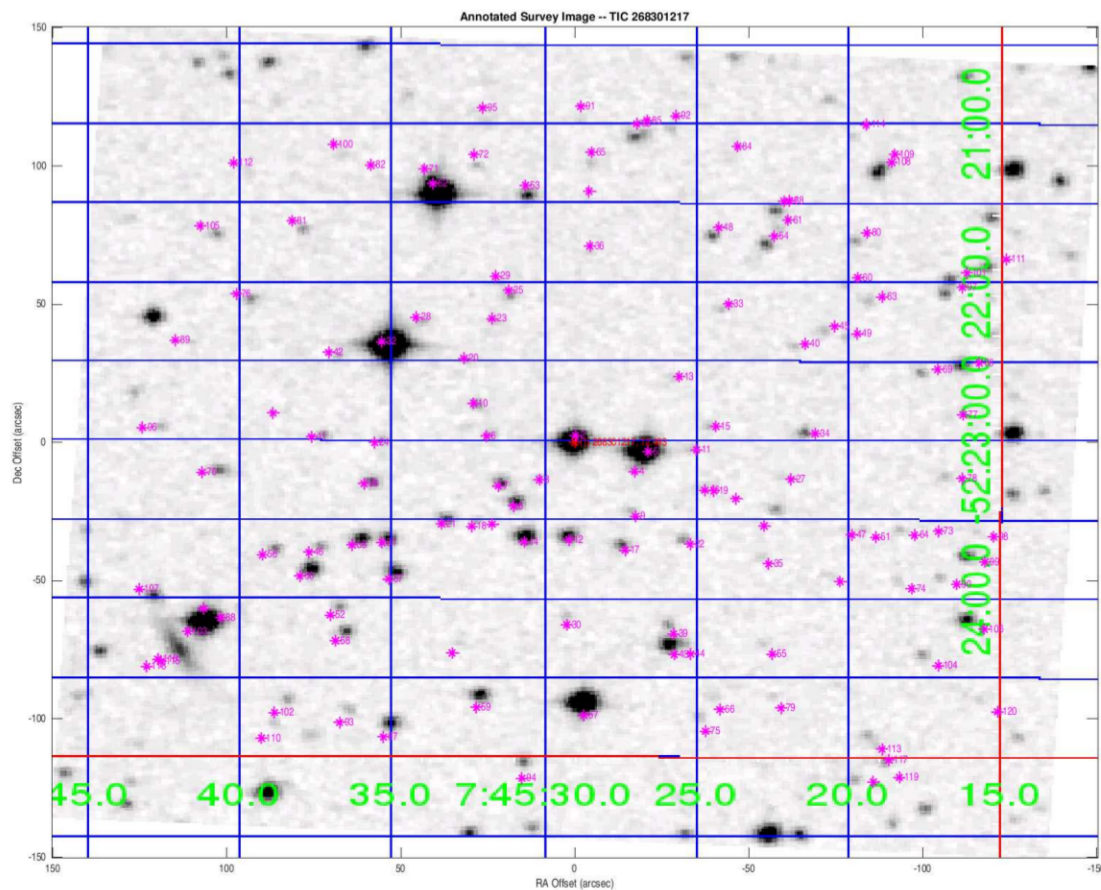
Index	TIC ID	TESS Mag	Distance (arcsec)
1	0000000268301217	12.49	0.00
2	0000000766593811	16.86	2.48
3	0000000268301209	18.37	16.89
4	0000000766593823	19.87	20.19
5	0000000268301215	12.35	21.34
6	0000000766593849	19.04	25.47
7	0000000268301202	17.27	27.04
8	0000000268301198	16.51	28.95
9	0000000766593809	18.52	31.95
10	0000000766593852	18.39	32.34
11	0000000766593824	19.71	35.08
12	0000000268301181	15.94	35.29
13	0000000766593821	20.44	38.29
14	0000000268301179	15.10	38.82
15	0000000766593820	18.91	40.96
16	0000000766593822	20.04	41.25
17	0000000268301172	17.37	41.62
18	0000000268301185	18.41	42.39
19	0000000766593819	20.05	43.63
20	0000000766593850	19.43	44.02
21	0000000268301190	17.30	48.31
22	0000000268301174	17.72	49.54
23	0000000766593856	19.23	50.68
24	0000000766593831	19.22	57.51
25	0000000766593857	18.18	58.20
26	0000000268301204	17.12	62.37
27	0000000766593814	19.48	63.57
28	0000000766593851	18.92	64.21
29	0000000766593858	19.53	64.25
30	0000000766593778	19.12	66.00
31	0000000268301178	15.52	66.24
32	0000000268301234	10.94	66.33
33	0000000766595151	19.13	66.78
34	0000000268293433	17.63	69.15
35	0000000766593818	19.19	70.96
36	0000000766595197	20.14	71.15
37	0000000268301164	16.25	72.86
38	0000000268301176	16.14	73.95
39	0000000766593805	18.24	74.86
40	0000000766595150	19.26	75.18



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

Stellar Distance Table – Continued

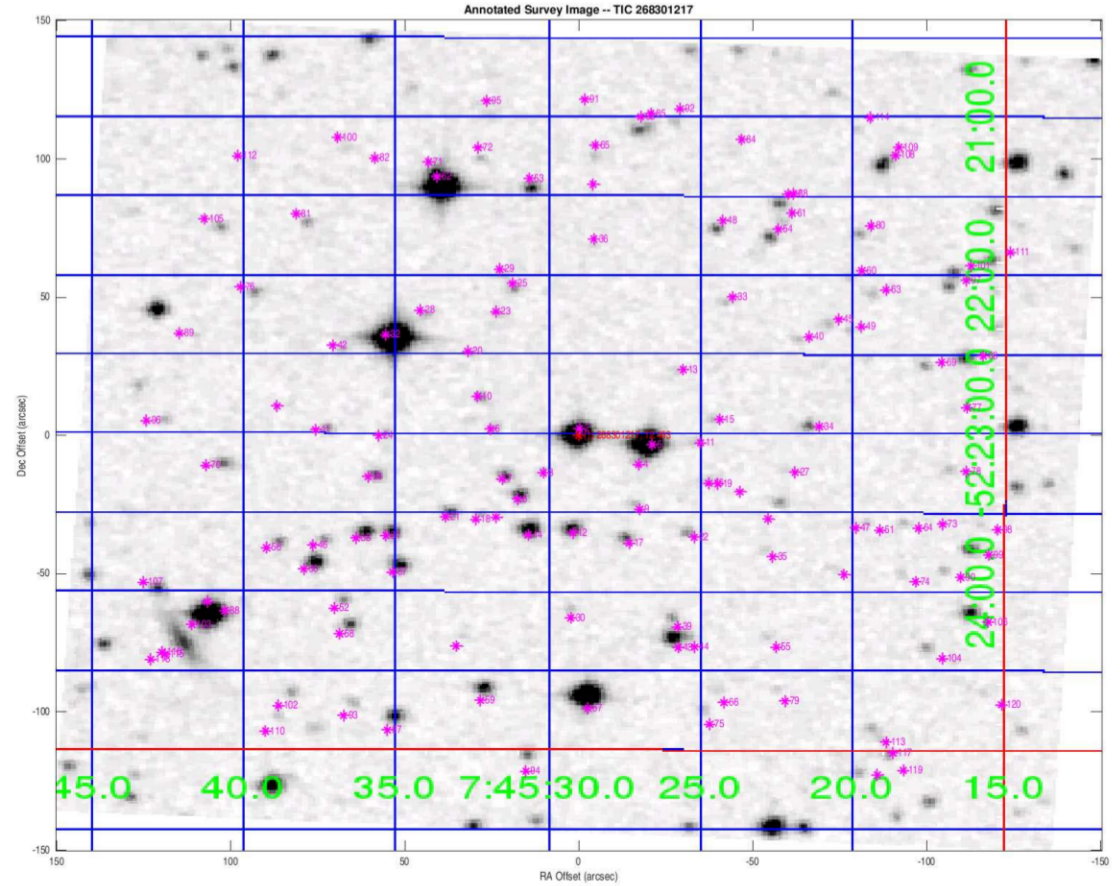
Index	TIC ID	TESS Mag	Distance (arcsec)
41	0000000766593833	18.33	75.63
42	0000000766593854	18.89	77.85
43	0000000268301147	15.58	81.84
44	0000000766593806	19.00	83.45
45	0000000766595149	19.13	85.69
46	0000000766593832	18.24	86.07
47	0000000766593813	19.92	86.35
48	0000000268301264	17.42	88.05
49	0000000766595147	19.43	90.18
50	0000000268301166	15.89	92.60
51	0000000766593812	19.41	93.12
52	0000000268301157	17.77	93.97
53	0000000268301268	16.75	93.99
54	0000000268293373	17.25	94.07
55	0000000766593804	19.63	95.29
56	0000000766593825	17.99	98.48
57	0000000268301125	12.79	98.76
58	0000000268301149	16.73	99.36
59	0000000268301129	16.02	99.90
60	0000000766595155	19.39	100.81
61	0000000766595160	19.32	101.14
62	0000000268301270	11.95	102.14
63	0000000766595152	19.22	102.78
64	0000000766593802	18.97	103.24
65	0000000766595194	19.07	105.07
66	0000000766593807	19.33	105.26
67	0000000268293358	17.62	105.91
68	0000000766595159	19.85	106.93
69	0000000268293412	17.51	107.59
70	0000000268301211	17.61	107.69
71	0000000268301272	16.93	107.91
72	0000000766595198	18.59	108.02
73	0000000766595133	20.24	109.36
74	0000000766593803	20.27	110.34
75	0000000766593776	18.93	111.06
76	0000000766593853	18.13	111.07
77	0000000766595148	19.26	112.01
78	0000000766595130	19.12	112.13
79	0000000766593808	19.07	112.93
80	0000000766595153	18.46	113.09



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

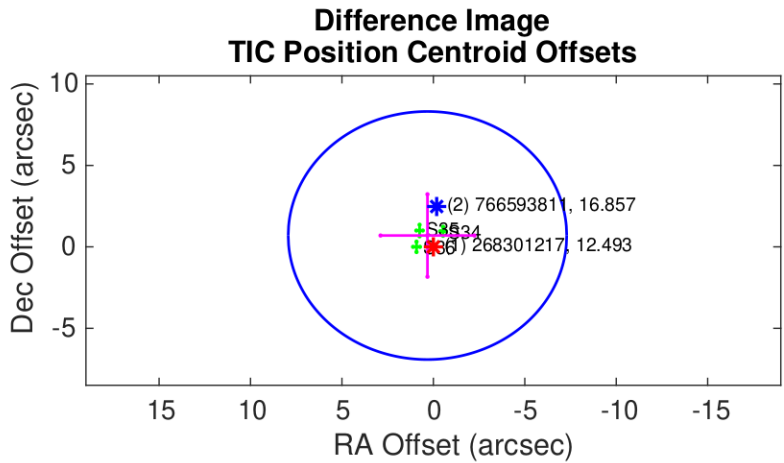
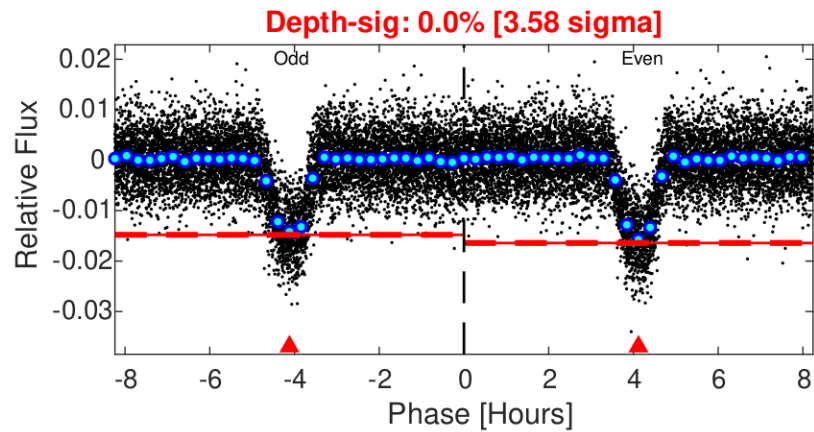
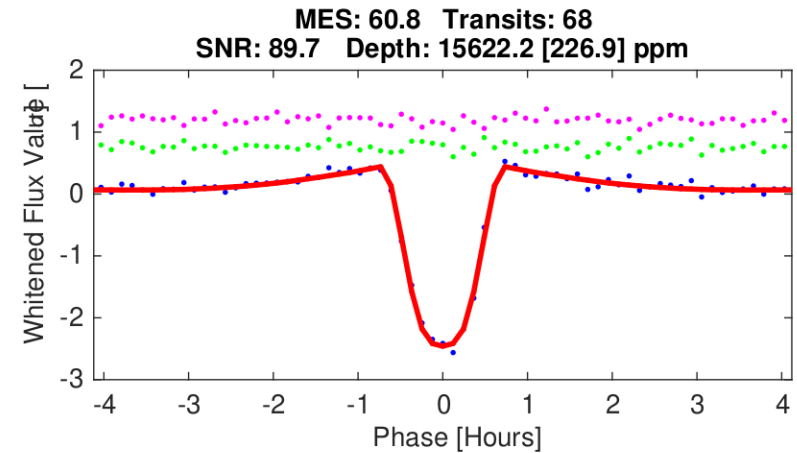
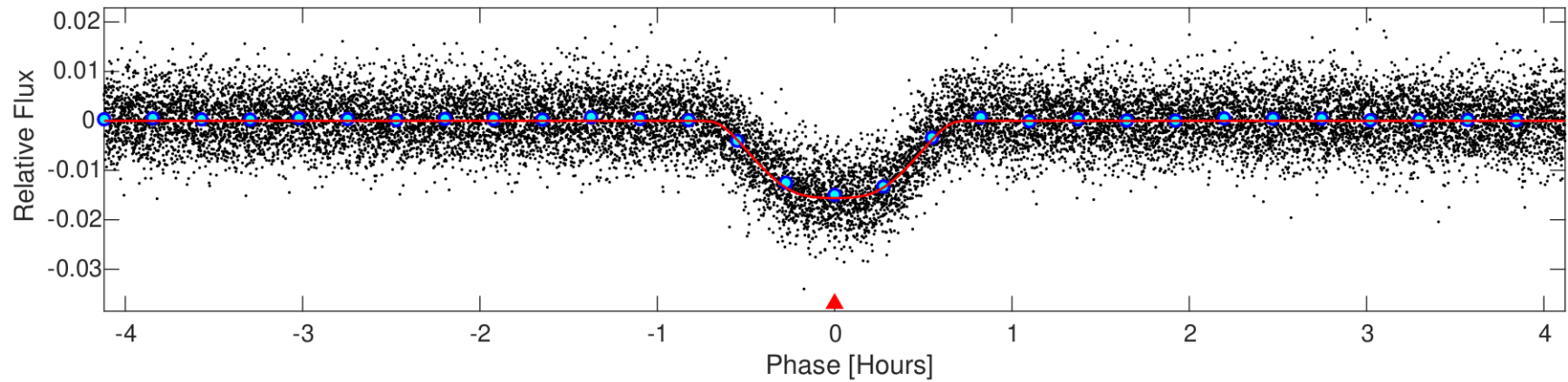
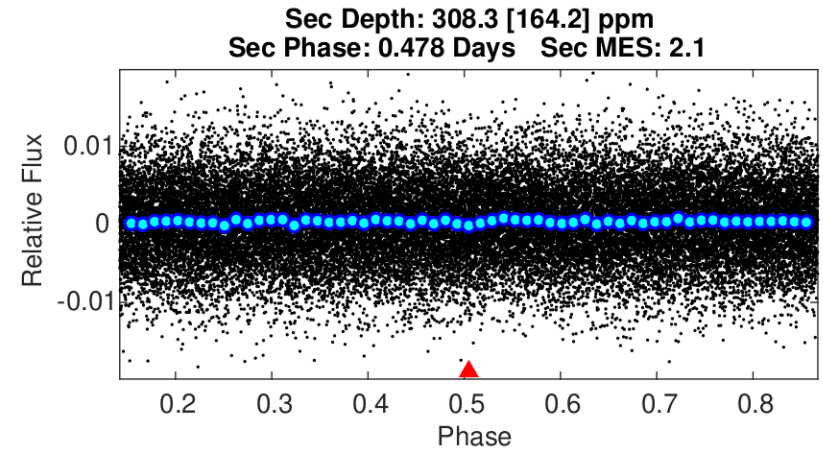
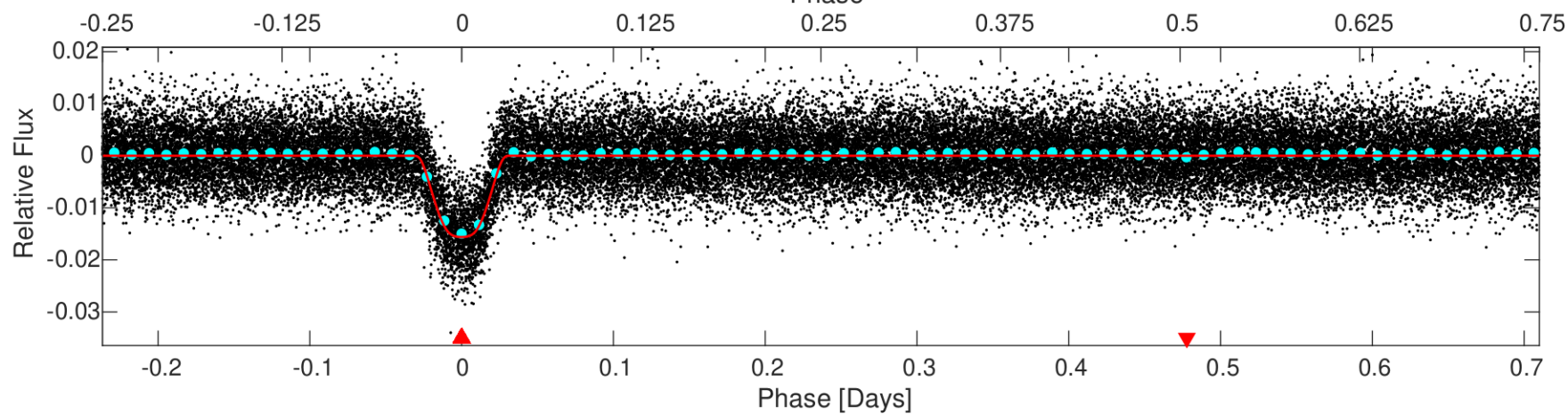
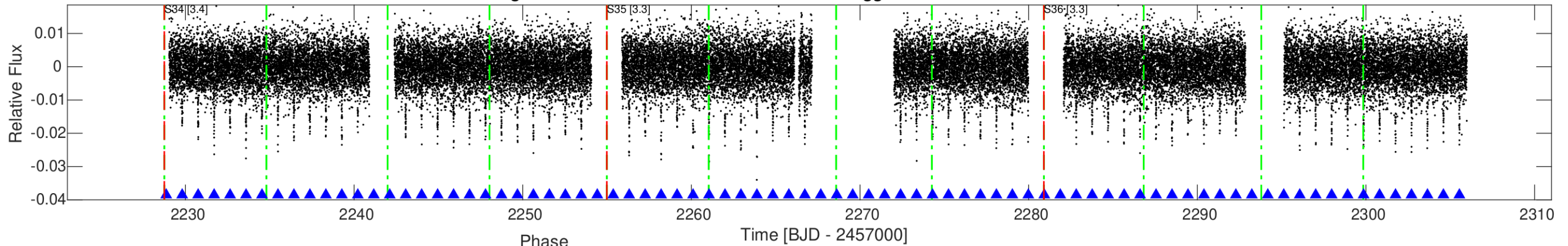
Stellar Distance Table – Continued

Index	TIC ID	TESS Mag	Distance (arcsec)
81	0000000766593855	18.34	114.13
82	0000000766593860	20.35	116.15
83	0000000268301276	17.44	116.58
84	0000000766595158	20.35	116.76
85	0000000766595208	18.92	118.27
86	0000000268293410	16.61	119.76
87	0000000268301117	16.29	119.88
88	0000000268301155	18.87	119.90
89	0000000766593834	19.73	120.57
90	0000000766593800	18.59	121.18
91	0000000766595195	19.93	121.58
92	0000000766595206	19.00	121.65
93	0000000766593826	18.96	121.80
94	0000000268301111	17.30	122.44
95	0000000766595204	19.60	123.85
96	0000000766593830	19.03	124.35
97	0000000766595156	17.66	124.73
98	0000000766595131	19.67	125.17
99	0000000268293455	16.83	125.53
100	0000000766593859	20.02	128.21
101	0000000268293381	17.56	128.32
102	0000000766593740	18.65	130.37
103	0000000268301151	12.28	130.54
104	0000000766593799	18.29	132.03
105	0000000766593864	18.26	133.08
106	0000000268293467	16.26	135.70
107	0000000766593828	19.90	135.95
108	0000000268293348	16.72	136.24
109	0000000766595177	17.71	138.96
110	0000000766593742	19.15	139.85
111	0000000268293380	17.34	140.56
112	0000000766593862	19.79	140.83
113	0000000766593787	18.63	141.83
114	0000000766595180	19.64	142.19
115	0000000268301143	16.14	142.88
116	0000010001487258	15.64	143.12
117	0000000766593786	19.64	146.08
118	0000000766593743	20.02	147.33
119	0000000766593789	18.43	152.95
120	0000000766593801	19.96	155.80



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

Tmag: 12.49 R*: 1.07 Rs Teff: 5707.0 K Logg: 4.39 M/H: 0.000 Rho: 0.832



DV Fit Results:

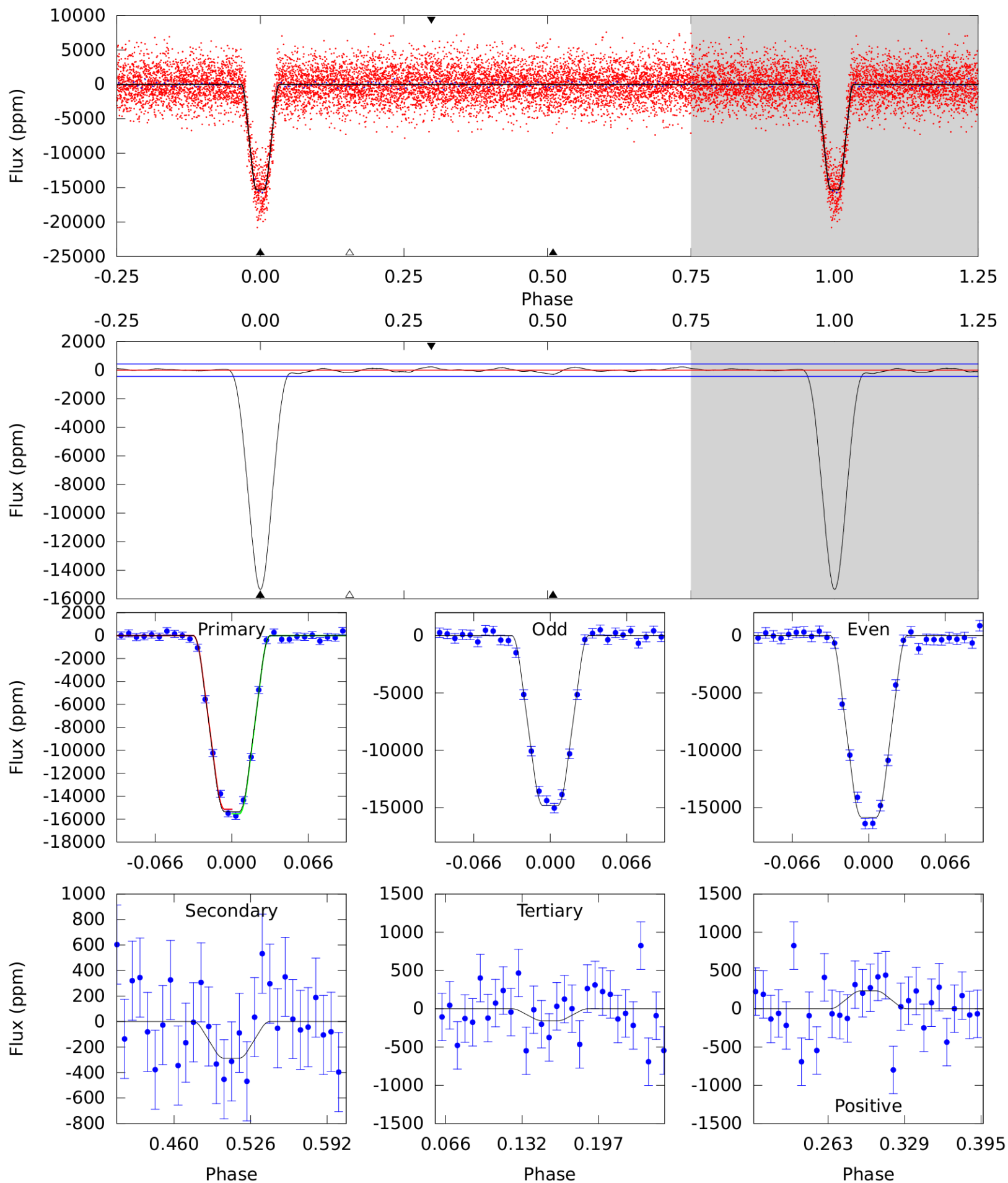
Period = 0.94666 [0.00001] d
Epoch = 2228.8599 [0.0003] BTJD
Rp/R* = 0.1306 [0.0015]
a/R* = 4.04 [0.08]
b = 0.85 [0.01]
Seff = 3013.88 [479.76]
Teq = 1890 [75] K
Rp = 15.26 [0.80] Re
a = 0.0190 [0.0013] AU
Rho = 0.991 [0.062]
Ag = 0.26 [0.14] [-5.11 sigma]
Tp = 2092 [283] K [0.69 sigma]

DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
GhostDiagnostic-chr: 3.614
OotOffset-rm: 8.926 arcsec [3.21 sigma]
TicOffset-rm: 0.768 arcsec [0.30 sigma]
OotOffset-tot: 3
TicOffset-tot: 3
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

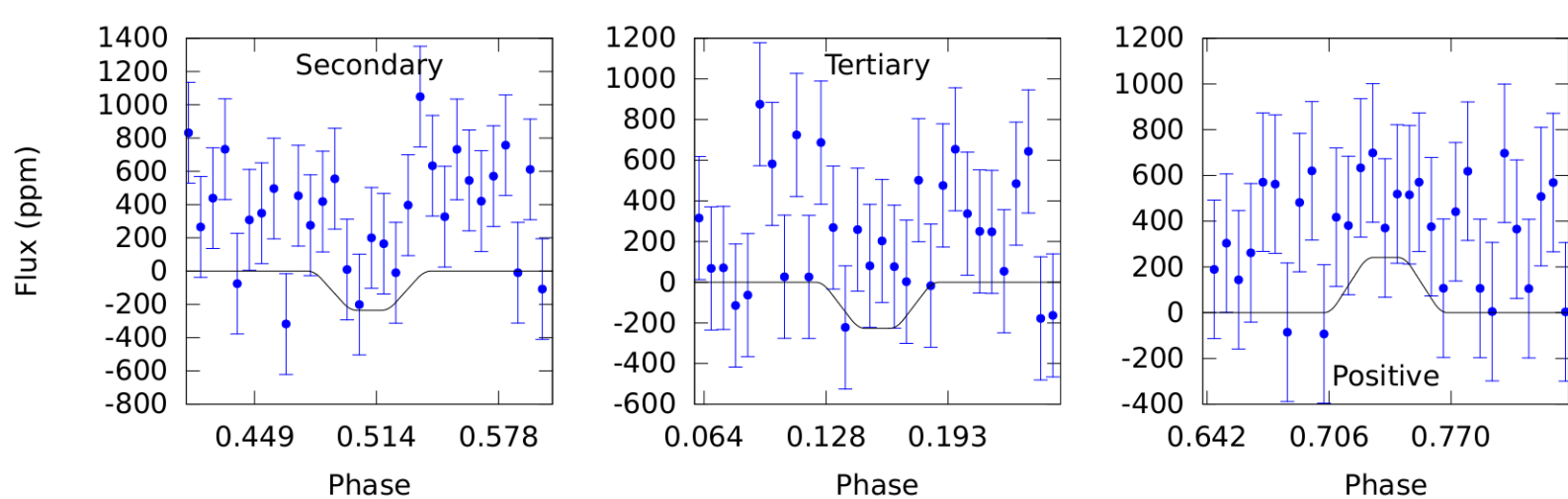
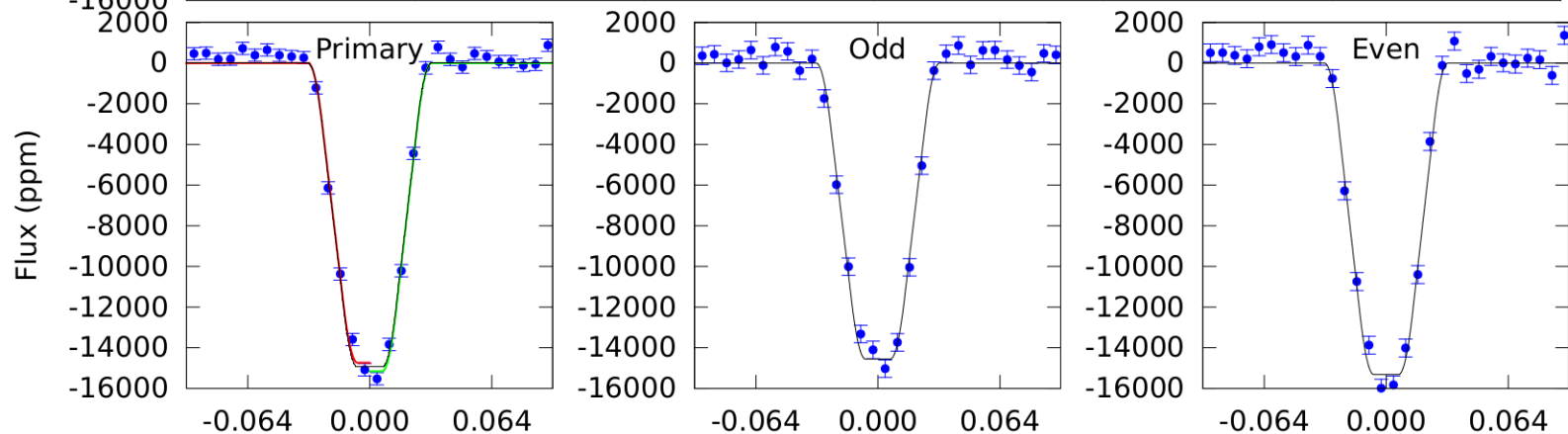
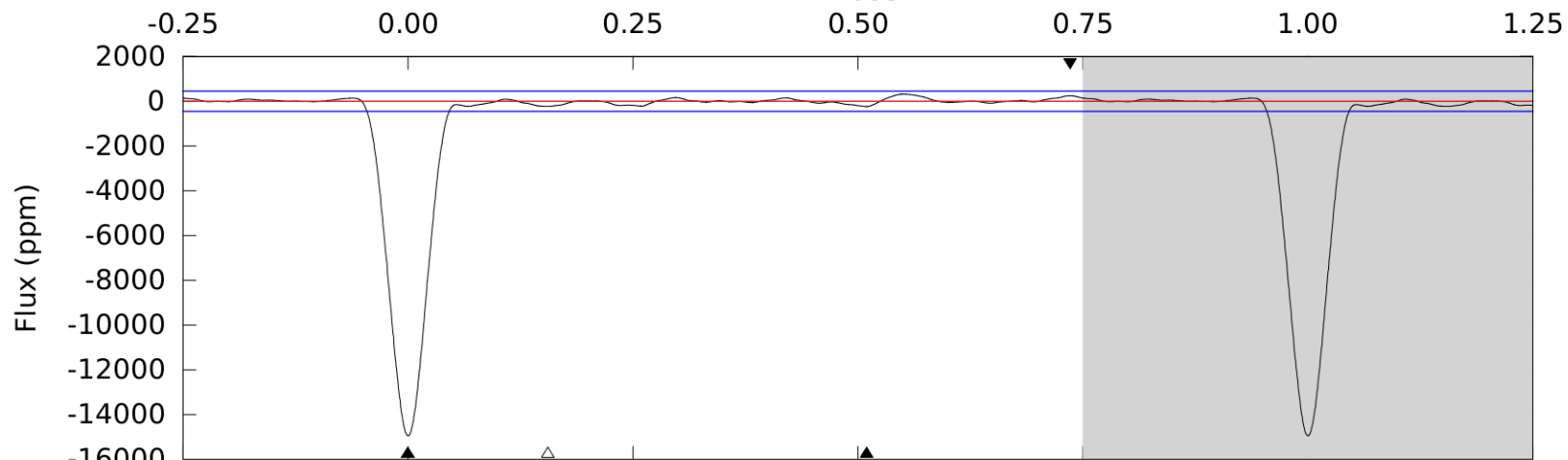
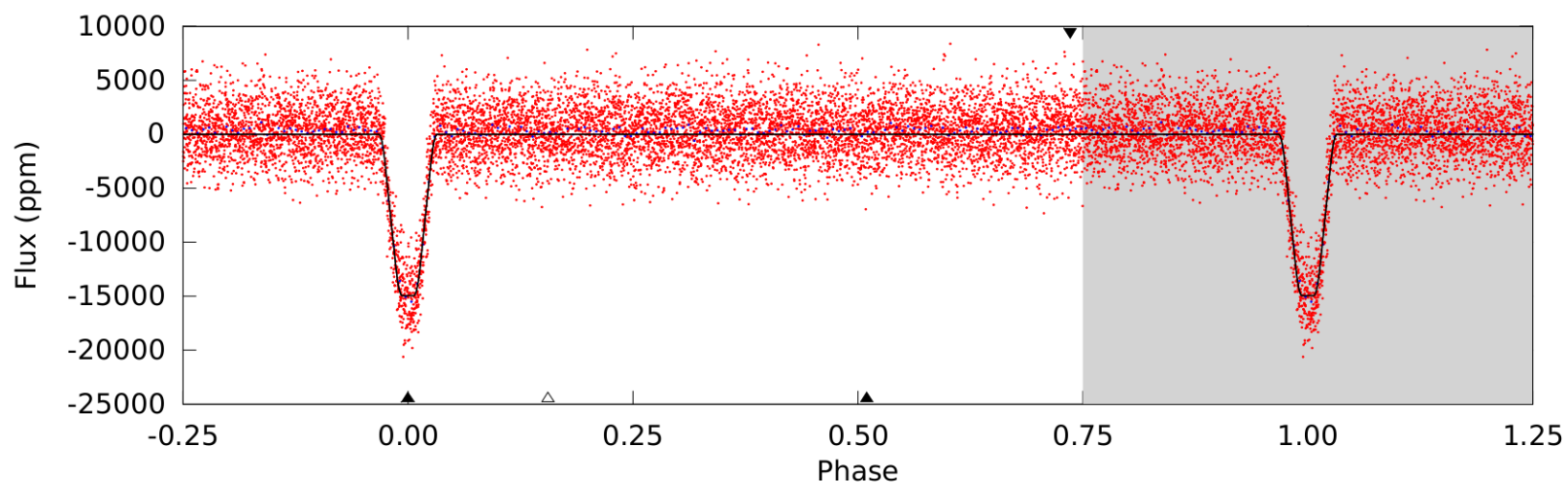
Tier 2 Cen0026301217, P = 0.946652 Days E = 2228.859901 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
163.7	3.07	1.67	2.50	4.65	1.84	0.99	162.0	161.2	1.40	0.57	5.43	0.99	0.02	2.18

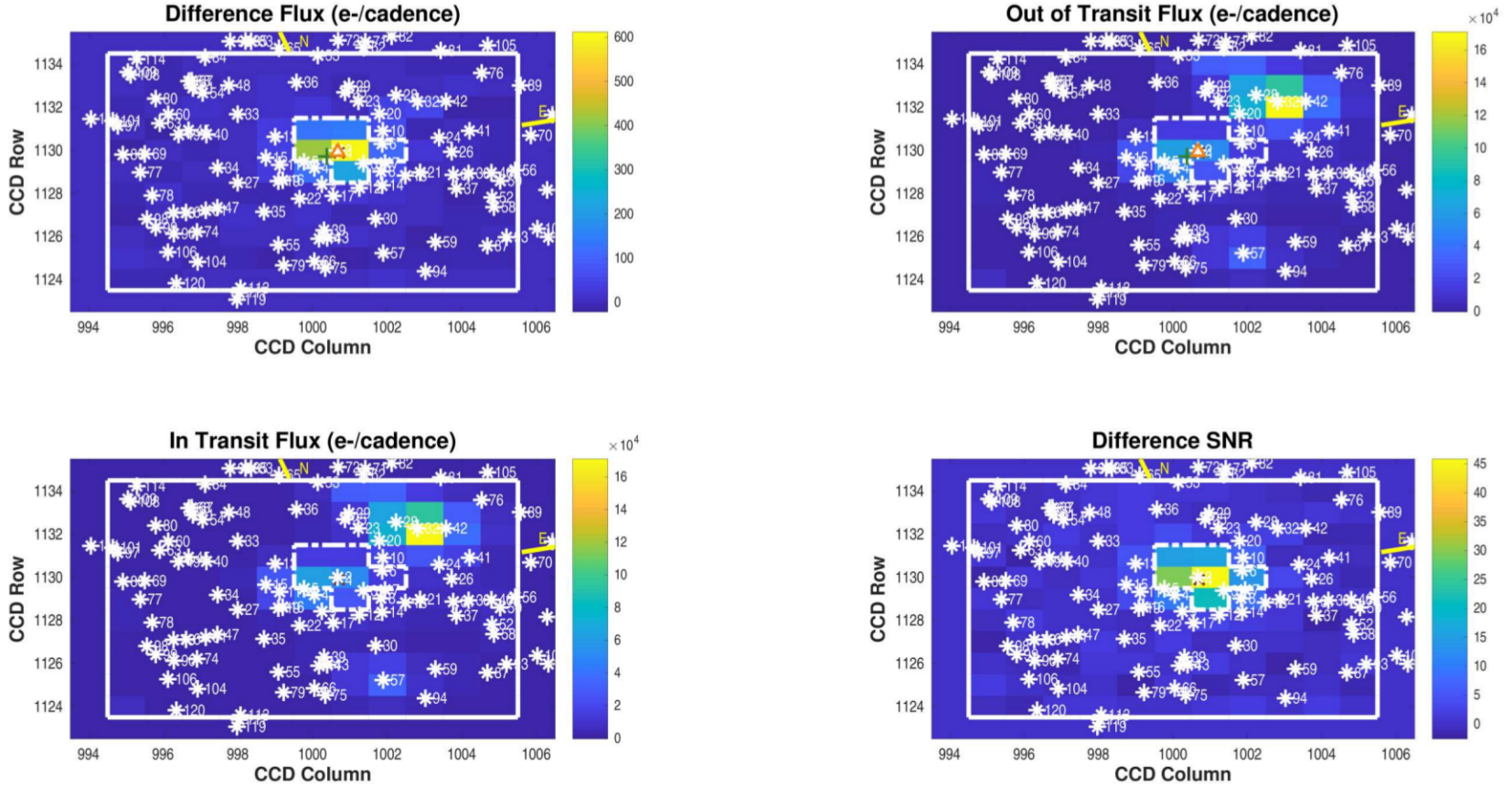


Tier 2 Cen0026301217, P = 0.946652 Days, E = 2228.859904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
154.0	2.43	2.34	2.49	4.66	1.85	1.01	151.7	151.5	0.09	-0.06	3.93	1.00	0.02	2.19



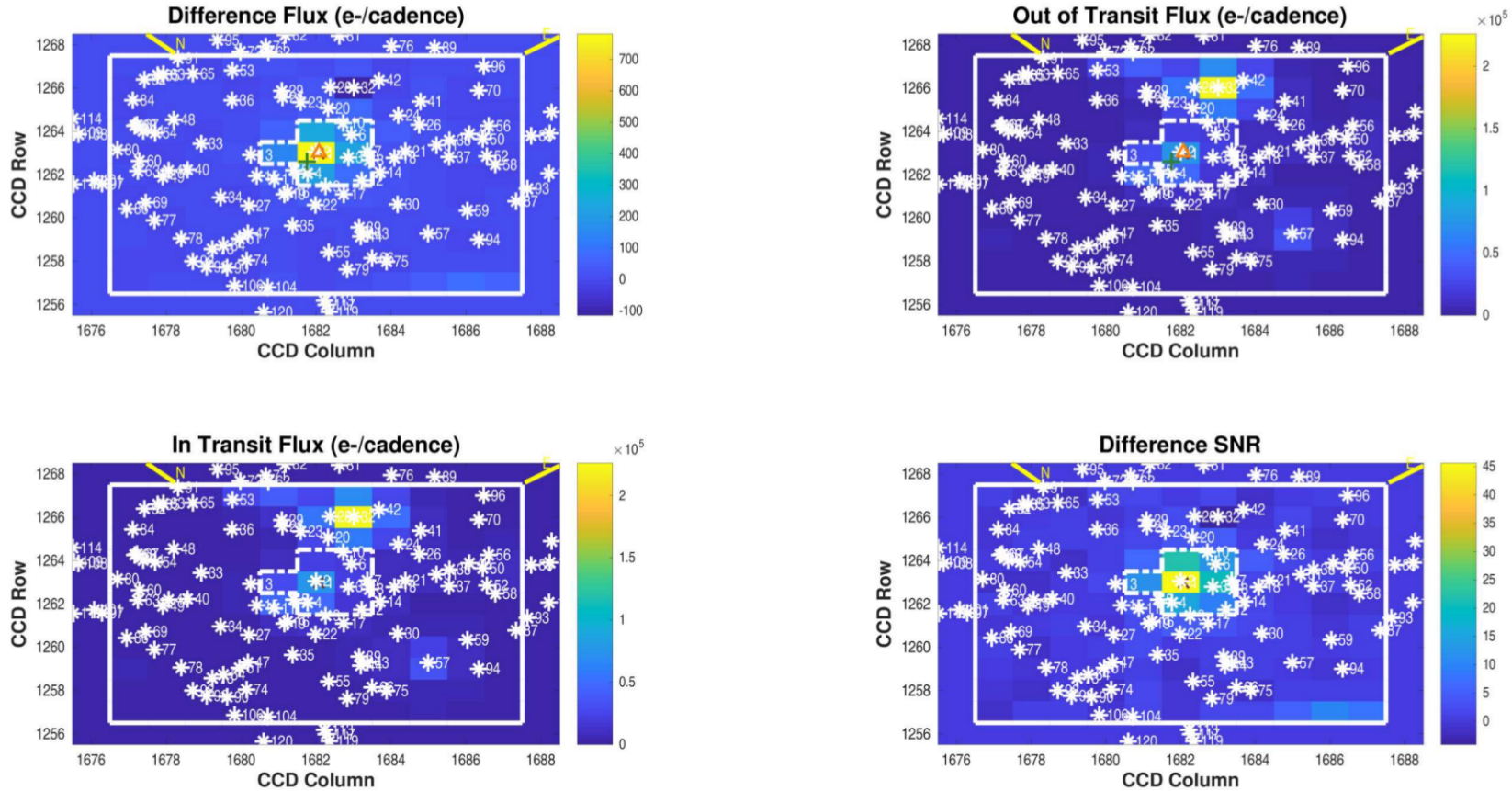
Difference Image
Planet Candidate 1 / Sector 34 / Target Pixel Table 288



Difference image for target 268301217, planet candidate 1, sector 34, target pixel table 288. 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 = 24; number of valid in-transit cadences = 491; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 2165; number of out-of-transit cadence gaps = 4. Difference image quality metric = 0.99 (good).

Open `./planet-01/difference-image/0000000268301217-01-difference-image-34-288.fig`

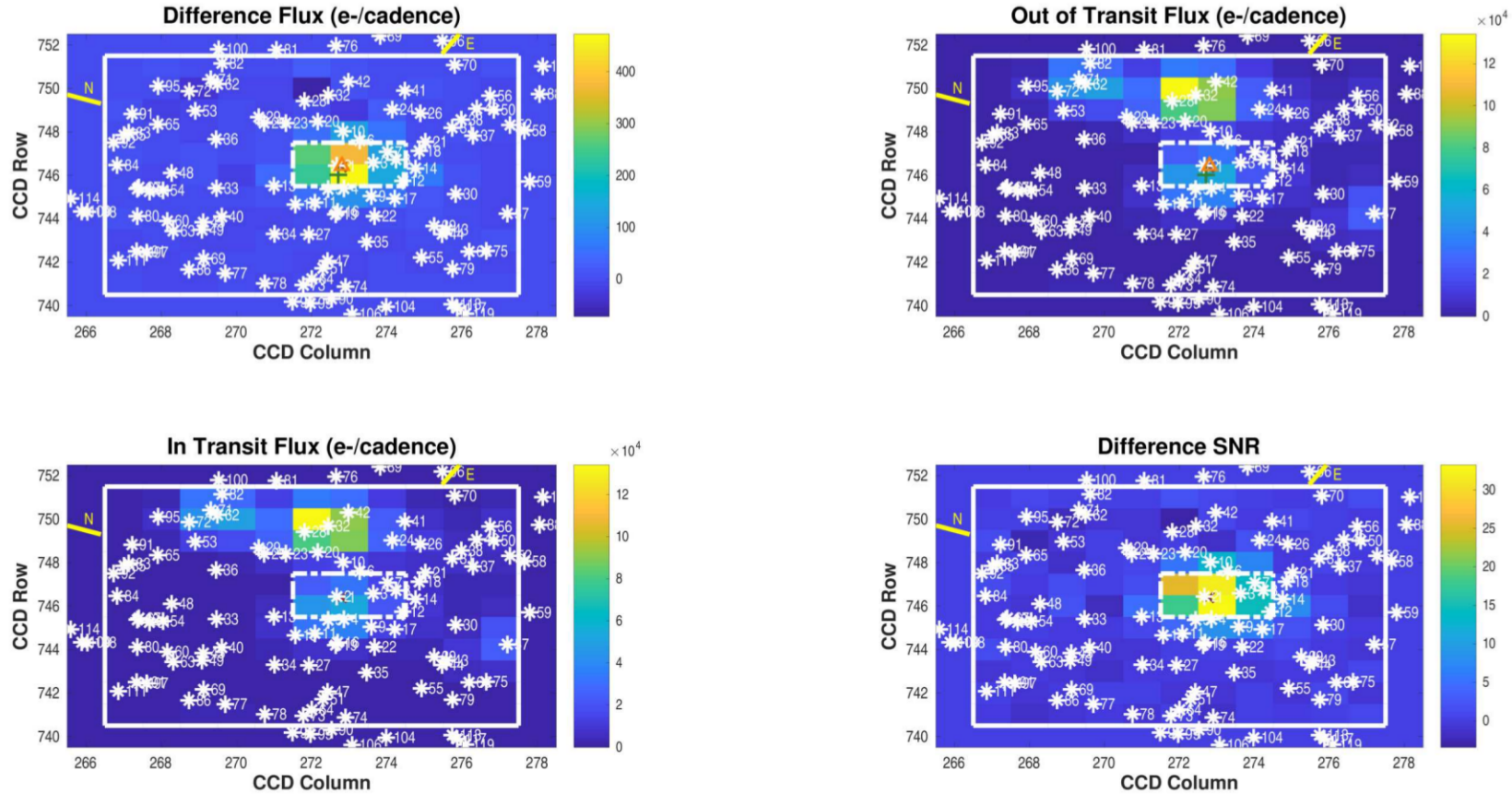
Difference Image
Planet Candidate 1 / Sector 35 / Target Pixel Table 292



Difference image for target 268301217, planet candidate 1, sector 35, target pixel table 292. 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 = 20; number of valid in-transit cadences = 411; number of in-transit cadence gaps = 1; number of valid out-of-transit cadences = 1807; number of out-of-transit cadence gaps = 1. Difference image quality metric = 0.98 (good).

Open `./planet-01/difference-image/0000000268301217-01-difference-image-35-292.fig`

Difference Image
Planet Candidate 1 / Sector 36 / Target Pixel Table 296



Difference image for target 268301217, planet candidate 1, sector 36, target pixel table 296. 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 = 22; number of valid in-transit cadences = 448; number of in-transit cadence gaps = 2; number of valid out-of-transit cadences = 1983; number of out-of-transit cadence gaps = 4. Difference image quality metric = 0.98 (good).

Open `./planet-01/difference-image/0000000268301217-01-difference-image-36-296.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

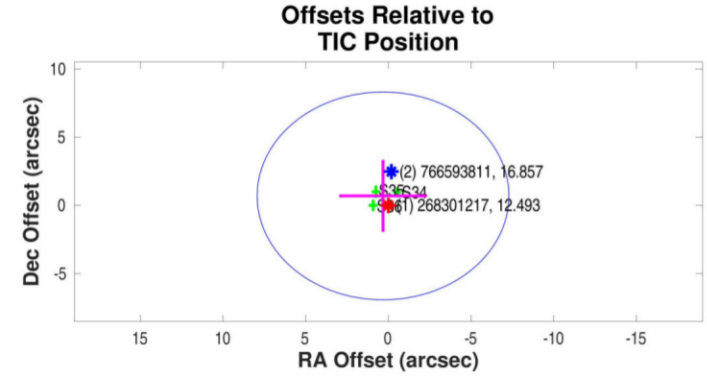
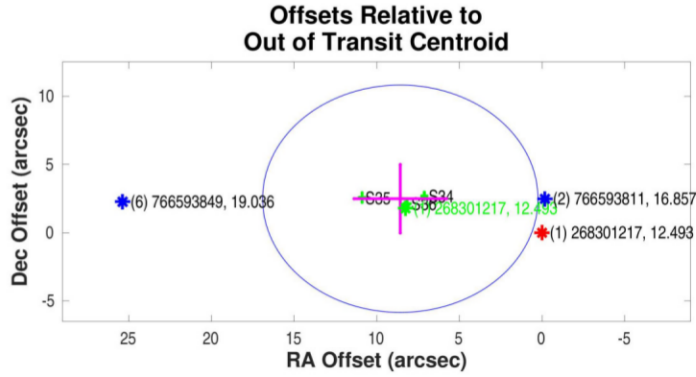
Mean offset from the PRF fit to the out of transit image

	RA	Dec	Units
Offset	$8.5725 \pm 2.80e+00$	$2.4884 \pm 2.51e+00$	arcseconds
Offset/ σ	3.06	0.99	
Offset Distance	$8.9264 \pm 2.78e+00$		arcseconds
Offset Distance/ σ	3.21		
3σ Radius	8.3296		arcseconds

Mean offset from the TIC RA and Dec

	RA	Dec	Units
Offset	$0.3234 \pm 2.57e+00$	$0.6963 \pm 2.53e+00$	arcseconds
Offset/ σ	0.13	0.27	
Offset Distance	$0.7677 \pm 2.54e+00$		arcseconds
Offset Distance/ σ	0.30		
3σ Radius	7.6152		arcseconds

Planet Candidate 1



Difference image centroid offsets for target 268301217, 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/0000000268301217-01-difference-image-centroid-offsets.fig`

Using TIC: 268301217

Tier 2 ConQOT_QEAlt_OthTCEMch
Using TIC catalog position 116.370761 -52.383307 [J2000.0, epoch 2000.0]

Predicted GAIA position 116.370721 -52.383259 [J2000.0; epoch 2015.5]

2MASS J07452898-5222599 From TIC

21 TIC entries within 60.0 arcsec of target 268301217

766593811 Sep [arcsec]: 2.486 Tmag: 16.86 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
268301209 Sep [arcsec]: 17.040 Tmag: 18.37 Teff: 3530.0 Logg: 0.00 Rs[Rsun]: 0.00
766593823 Sep [arcsec]: 20.147 Tmag: 19.87 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
268301215 Sep [arcsec]: 21.231 Tmag: 12.35 Teff: 6477.0 Logg: 4.11 Rs[Rsun]: 1.68
766593849 Sep [arcsec]: 25.382 Tmag: 19.04 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
268301202 Sep [arcsec]: 26.761 Tmag: 17.27 Teff: 6116.0 Logg: 4.75 Rs[Rsun]: 0.75
268301198 Sep [arcsec]: 28.719 Tmag: 16.51 Teff: 6010.0 Logg: 4.67 Rs[Rsun]: 0.80
766593809 Sep [arcsec]: 31.883 Tmag: 18.52 Teff: 4314.0 Logg: 0.00 Rs[Rsun]: 0.00
766593852 Sep [arcsec]: 32.326 Tmag: 18.39 Teff: 5393.0 Logg: 0.00 Rs[Rsun]: 0.00
766593824 Sep [arcsec]: 35.156 Tmag: 19.71 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
268301181 Sep [arcsec]: 35.518 Tmag: 15.94 Teff: 4815.0 Logg: 4.70 Rs[Rsun]: 0.65
268301179 Sep [arcsec]: 38.572 Tmag: 15.10 Teff: 4970.0 Logg: 4.34 Rs[Rsun]: 1.01
766593820 Sep [arcsec]: 41.044 Tmag: 18.91 Teff: 4984.0 Logg: 0.00 Rs[Rsun]: 0.00
268301172 Sep [arcsec]: 41.552 Tmag: 17.37 Teff: 5947.0 Logg: 4.73 Rs[Rsun]: 0.75
268301185 Sep [arcsec]: 42.195 Tmag: 18.41 Teff: 3979.0 Logg: 4.37 Rs[Rsun]: 0.85
766593850 Sep [arcsec]: 44.060 Tmag: 19.43 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
268301190 Sep [arcsec]: 48.164 Tmag: 17.30 Teff: 5690.0 Logg: 4.44 Rs[Rsun]: 1.00
268301174 Sep [arcsec]: 49.511 Tmag: 17.72 Teff: 3960.0 Logg: 4.57 Rs[Rsun]: 0.67
766593856 Sep [arcsec]: 50.828 Tmag: 19.23 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00
766593831 Sep [arcsec]: 57.394 Tmag: 19.22 Teff: 0.0 Logg: 0.00 Rs[Rsun]: 0.00

TIC Hosts TOIs

1937.01

Target Parameters

Catalog	Tmag/Rpmag	Teff	Logg	Rstar	Mstar
TIC	12.4933	5707.0±135.9	4.39±0.08	1.07± 0.1	1.02± 0.13
GAIA DR2	12.435	5326.3± 94.6	...	1.08± 0.0	...

Other GAIA G: 13.02 Bp: 13.44 AbsG: 4.50 (Bp-Rp)o: 0.813 AstroGOF: 2.17 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-s0036-0000000268301217-00464_dvr.pdf

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https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2018206190142-s0001-s0036-0000000268301217-01-00464_dvs.pdf

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Tier 2 GenOOT_OEAlt_OhTCEMch
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https://mast.stsci.edu/api/v0/download/file?uri=mast:TESS/product/tess2021066093107-s0036-s0036-0000000268301217-01-00460_dvs.pdf

TESS Observe - Sec Cam Ccd Col Row

268301217 7 3 4 1404.70 973.00
268301217 9 3 3 655.91 955.94
268301217 34 3 4 999.65 1129.80
268301217 35 3 3 1681.19 1262.85
268301217 36 3 3 271.93 746.28