

Table A1. The list of sources that are identified simultaneously in Band 3 and Band 6. The uncertainty of both two band flux is also listed. As we have both band 3 and band 6 fluxes, we can also calculate the spectral index uncertainties.

Source ID	R.A. and Decl. (J2000)	Band 6 Fluxes (mJy)	Band 6 Flux uncertainties (mJy)	Band 3 Fluxes (mJy)	Band 3 Flux uncertainties (mJy)	Masses (M_{\odot})	Densities (cm^{-3})	Spectral Index	Spectral Index uncertainty
1	17:46:46.99 -28:32:18.80	0.47	0.0448	0.05	0.0087	0.69	8.2×10^6	2.5420	0.2251
2	17:46:48.39 -28:32:10.31	4.27	0.0834	0.26	0.0130	6.31	1.2×10^7	3.1750	0.0609
3	17:46:47.07 -28:32:08.93	21.00	0.1303	1.52	0.0265	31.04	1.5×10^7	2.9789	0.0210
4	17:46:47.07 -28:32:07.26	150.60	0.2677	10.60	0.0599	222.65	1.2×10^7	3.0106	0.0067
5	17:46:46.95 -28:32:08.01	2.47	0.0836	0.11	0.0125	3.66	$6, 7 \times 10^6$	3.5299	0.1345
6	17:46:47.60 -28:32:07.75	0.91	0.0696	0.07	0.0092	1.35	4.3×10^6	2.9099	0.1725
7	17:46:46.91 -28:32:07.56	1.16	0.0587	0.12	0.0125	1.71	9.0×10^6	2.5738	0.1314
8	17:46:46.94 -28:32:05.46	18.85	0.1227	1.51	0.0250	27.86	1.6×10^7	2.8639	0.0202
9	17:46:47.17 -28:32:04.53	5.16	0.1317	0.41	0.0166	7.62	3.5×10^6	2.8731	0.0543
10	17:46:47.71 -28:32:04.09	1.91	0.0842	0.14	0.0123	2.82	5.0×10^6	2.9646	0.1115
11	17:46:46.66 -28:32:03.63	2.88	0.1004	0.28	0.0150	4.26	4.5×10^6	2.6442	0.0725
12	17:46:47.77 -28:32:03.59	0.88	0.0711	0.06	0.0097	1.30	3.9×10^6	3.0467	0.2050
13	17:46:46.62 -28:32:02.65	0.95	0.0464	0.06	0.0086	1.40	1.5×10^7	3.1336	0.1718
14	17:46:48.23 -28:32:02.19	12.78	0.1341	1.06	0.0206	18.89	8.3×10^6	2.8244	0.0251
15	17:46:46.63 -28:32:02.15	2.83	0.0778	0.34	0.0196	4.18	9.4×10^6	2.4041	0.0725
16	17:46:46.59 -28:32:01.74	2.96	0.0718	0.33	0.0183	4.38	1.3×10^7	2.4889	0.0687
17	17:46:46.55 -28:32:01.36	0.89	0.0515	0.06	0.0091	1.31	1.0×10^7	3.0595	0.1842
18	17:46:47.54 -28:32:01.20	2.76	0.0870	0.19	0.0142	4.08	6.6×10^6	3.0358	0.0920
19	17:46:46.40 -28:32:00.40	3.60	0.0685	0.51	0.0197	5.32	1.8×10^7	2.2171	0.0489
20	17:46:46.34 -28:32:00.08	1.64	0.0605	0.13	0.0131	2.42	1.2×10^7	2.8758	0.1217
21	17:46:47.31 -28:31:59.57	0.72	0.0497	0.09	0.0109	1.06	9.1×10^6	2.3591	0.1581
22	17:46:47.22 -28:31:58.98	10.07	0.1212	0.90	0.0236	14.89	8.9×10^6	2.7397	0.0327
23	17:46:46.11 -28:31:59.46	1.33	0.0683	0.12	0.0119	1.96	6.6×10^6	2.7289	0.1267
24	17:46:47.32 -28:31:59.16	1.31	0.0602	0.09	0.0105	1.94	9.5×10^6	3.0381	0.1423
25	17:46:46.02 -28:31:59.25	1.47	0.0753	0.15	0.0119	2.17	5.4×10^6	2.5893	0.1071
26	17:46:46.30 -28:31:58.69	34.69	0.1387	2.93	0.0306	51.29	2.0×10^7	2.8038	0.0127
27	17:46:46.25 -28:31:59.11	3.71	0.0518	0.39	0.0122	5.49	4.2×10^7	2.5556	0.0389
28	17:46:46.36 -28:31:58.63	2.80	0.0508	0.29	0.0125	4.15	3.4×10^7	2.5724	0.0531
29	17:46:47.33 -28:31:58.57	0.72	0.0545	0.05	0.0090	1.07	7.0×10^6	3.0259	0.2215
30	17:46:47.20 -28:31:57.79	1.67	0.0769	0.15	0.0123	2.46	5.8×10^6	2.7340	0.1067
31	17:46:46.27 -28:31:57.08	1.64	0.0661	0.10	0.0133	2.43	8.9×10^6	3.1734	0.1577
32	17:46:46.88 -28:31:56.25	2.73	0.1101	0.11	0.0122	4.03	3.2×10^6	3.6435	0.1339
33	17:46:46.23 -28:31:55.31	29.60	0.1225	3.00	0.0260	43.76	2.5×10^7	2.5970	0.0109
34	17:46:46.28 -28:31:54.98	2.98	0.0577	0.31	0.0114	4.40	2.4×10^7	2.5674	0.0471
35	17:46:46.23 -28:31:54.49	5.10	0.0608	0.52	0.0129	7.54	3.6×10^7	2.5902	0.0312
36	17:46:47.04 -28:31:54.40	5.97	0.1368	0.31	0.0185	8.83	3.7×10^6	3.3557	0.0725
37	17:46:45.24 -28:31:49.74	3.80	0.0868	0.31	0.0144	5.62	9.2×10^6	2.8432	0.0587
38	17:46:45.23 -28:31:49.07	3.03	0.0884	0.31	0.0161	4.47	6.9×10^6	2.5863	0.0676
39	17:46:45.08 -28:31:40.32	5.64	0.1343	0.12	0.0105	8.33	3.7×10^6	4.3679	0.1029
40	17:46:46.89 -28:32:05.85	6.75	0.0836	0.57	0.0184	9.98	1.8×10^7	2.8040	0.0392

Table A2. The list of sources that are solely identified in Band 3, and the spectral index of these sources is smaller than 2. Thus, these sources can't be identified as cores, the mass and density can't be calculated by flux either. Besides, as we don't have the band 6 data in these sources, we can't calculate the spectral index as the band6 flux is set to a certain value.

Source ID	R.A. and Decl. (J2000)	Band 3 Fluxes (mJy)	Fluxes uncertainty (mJy)	Spectral Index
1	17:46:47.16 -28:32:08.72	0.06	0.0094	1.3659
2	17:46:47.11 -28:32:08.52	0.12	0.0106	0.5795
3	17:46:47.00 -28:32:08.02	0.08	0.0107	1.0395
4	17:46:47.07 -28:32:06.13	0.06	0.0086	1.3659
5	17:46:48.46 -28:31:47.48	0.10	0.0101	0.7864

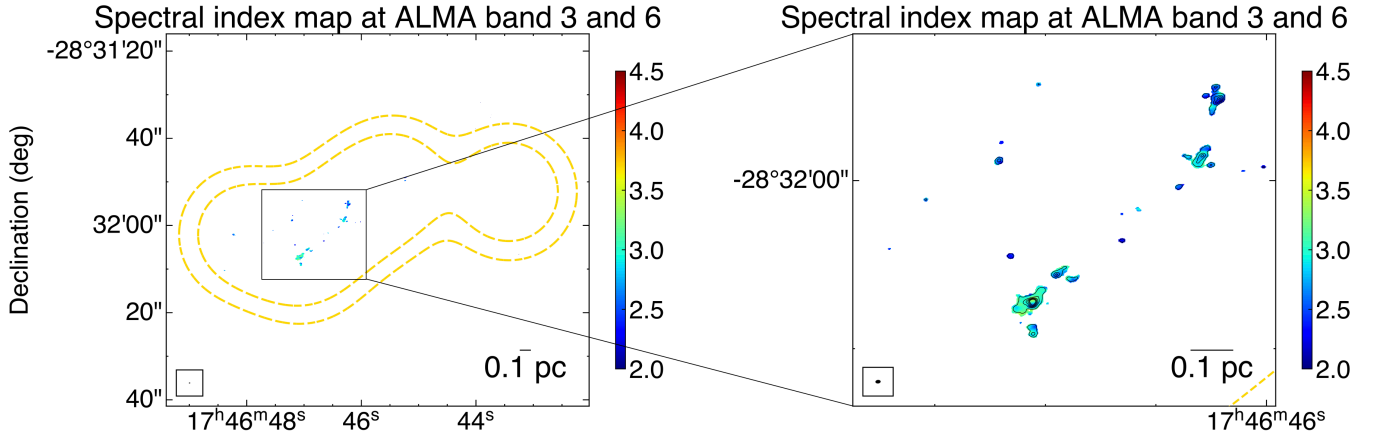


Figure B1. We present the spectral index map of the Sgr B1-off region based on observations obtained with ALMA band 3 and band 6. The data from each pixel were used to generate the spectral index image. We applied a filtering process to exclude pixels with signal-to-noise ratios below two in both bands, aiming to reduce noise interference. The color-coded representation reveals that the majority of positions exhibit spectral indices ranging from 2 to 5.

Table A3. The list of sources that are solely identified in Band 6. As we don't have the band 3 data in these cores, we can't calculate the spectral index as the band 3 flux is set to a certain value.

Source ID	R.A. and Decl. (J2000)	Band 6 Fluxes (mJy)	Flux uncertainty (mJy)	Masses (M_{\odot})	Densities (cm^{-3})	Spectral Index
1	17:46:47.07 -28:32:18.16	0.57	0.0501	0.85	7.2×10^6	2.9320
2	17:46:47.19 -28:32:16.95	0.79	0.0616	1.17	5.3×10^6	3.3023
3	17:46:46.93 -28:32:14.62	0.48	0.0525	0.71	5.2×10^6	2.7370
4	17:46:46.98 -28:32:14.43	0.80	0.0645	1.19	4.7×10^6	3.3165
5	17:46:46.81 -28:32:13.31	0.49	0.0542	0.73	4.8×10^6	2.7604
6	17:46:47.28 -28:32:10.24	0.23	0.0410	0.34	5.2×10^6	1.9024
7	17:46:47.05 -28:32:09.89	0.45	0.0419	0.67	9.6×10^6	2.6638
8	17:46:47.60 -28:32:07.19	0.37	0.0525	0.54	4.0×10^6	2.4417
9	17:46:46.93 -28:32:07.03	0.54	0.0471	0.79	8.1×10^6	2.8706
10	17:46:47.57 -28:32:06.37	0.23	0.0432	0.35	4.6×10^6	1.9024
11	17:46:48.28 -28:32:06.07	0.42	0.0468	0.62	6.4×10^6	2.5855
12	17:46:47.24 -28:32:04.80	0.21	0.0419	0.31	4.5×10^6	1.7992
13	17:46:47.16 -28:32:03.73	0.62	0.0708	0.91	2.7×10^6	3.0274
14	17:46:46.76 -28:32:03.28	1.36	0.1007	2.00	2.1×10^6	3.9185
15	17:46:47.37 -28:32:03.48	0.42	0.0599	0.62	3.1×10^6	2.5855
16	17:46:47.41 -28:32:02.63	1.70	0.1076	2.51	2.1×10^6	4.1717
17	17:46:46.78 -28:32:02.79	0.53	0.0613	0.78	3.6×10^6	2.8494
18	17:46:47.57 -28:32:02.34	0.33	0.0494	0.49	4.3×10^6	2.3119
19	17:46:47.58 -28:32:01.84	0.58	0.0584	0.85	4.6×10^6	2.9517
20	17:46:46.74 -28:32:01.71	0.22	0.0432	0.32	4.2×10^6	1.8519
21	17:46:47.00 -28:32:01.62	0.54	0.0648	0.80	3.2×10^6	2.8706
22	17:46:46.63 -28:32:01.03	0.40	0.0549	0.59	3.8×10^6	2.5302
23	17:46:47.21 -28:32:00.33	0.94	0.0639	1.38	5.6×10^6	3.4995
24	17:46:46.57 -28:32:00.29	0.70	0.0731	1.03	2.8×10^6	3.1651
25	17:46:46.40 -28:31:59.87	0.44	0.0444	0.65	7.9×10^6	2.6383
26	17:46:47.17 -28:31:59.76	0.63	0.0483	0.93	8.8×10^6	3.0455
27	17:46:46.46 -28:31:59.52	0.39	0.0501	0.58	4.9×10^6	2.5015
28	17:46:47.05 -28:31:57.99	0.86	0.0812	1.26	2.5×10^6	3.3986
29	17:46:46.84 -28:31:57.79	0.19	0.0402	0.28	4.7×10^6	1.6856
30	17:46:47.09 -28:31:57.07	0.91	0.0762	1.35	3.3×10^6	3.4627
31	17:46:46.99 -28:31:56.58	0.96	0.0808	1.43	2.9×10^6	3.5234
32	17:46:45.38 -28:31:55.72	1.94	0.1158	2.87	2.0×10^6	4.3215
33	17:46:46.85 -28:31:55.00	0.42	0.0525	0.61	4.5×10^6	2.5855
34	17:46:45.36 -28:31:55.05	0.26	0.0452	0.39	4.4×10^6	2.0415
35	17:46:45.33 -28:31:54.16	0.62	0.0669	0.92	3.3×10^6	3.0274
36	17:46:45.11 -28:31:53.97	0.73	0.0680	1.08	3.7×10^6	3.2127
37	17:46:45.37 -28:31:53.78	0.48	0.0605	0.71	3.4×10^6	2.7370
38	17:46:45.30 -28:31:52.51	1.13	0.0760	1.68	4.1×10^6	3.7083
39	17:46:46.48 -28:31:51.57	0.22	0.0402	0.32	5.3×10^6	1.8519
40	17:46:45.46 -28:31:51.39	0.97	0.0767	1.44	3.4×10^6	3.5351
41	17:46:46.65 -28:31:51.09	1.13	0.0801	1.68	3.5×10^6	3.7083
42	17:46:46.52 -28:31:50.92	0.53	0.0602	0.78	3.8×10^6	2.8494
43	17:46:45.16 -28:31:50.66	0.65	0.0568	0.96	5.6×10^6	3.0810
44	17:46:45.43 -28:31:50.02	1.09	0.0812	1.61	3.2×10^6	3.6675
45	17:46:44.89 -28:31:48.95	0.27	0.0402	0.41	6.7×10^6	2.0843
46	17:46:45.55 -28:31:48.73	1.07	0.0801	1.59	3.3×10^6	3.6464
47	17:46:45.32 -28:31:48.68	0.70	0.0619	1.04	4.6×10^6	3.1651
48	17:46:45.61 -28:31:48.41	1.08	0.0778	1.60	3.6×10^6	3.6570
49	17:46:45.49 -28:31:48.11	1.58	0.0902	2.33	3.4×10^6	4.0886

Table A4. Continuation of the previous table

Source ID	R.A. and Decl. (J2000)	Band 6 Fluxes (mJy)	Flux uncertainty (mJy)	Masses (M_{\odot})	Densities (cm^{-3})	Spectral Index
50	17:46:45.71 -28:31:46.65	0.72	0.0680	1.07	3.6×10^6	3.1970
51	17:46:45.19 -28:31:44.73	0.87	0.0622	1.28	5.6×10^6	3.4117
52	17:46:44.97 -28:31:43.60	1.23	0.0611	1.83	8.5×10^6	3.8045
53	17:46:44.92 -28:31:42.94	0.37	0.0423	0.55	7.8×10^6	2.4417