

# Spectral analysis of Emmett' data

Joaquín Rapela\*

January 2, 2023

## List of Figures

1	Inter-spike interval histogram. ClusterID 0. Click on the image to access its interactive version. . . . .	5
2	Mean autocorrelation function. ClusterID 0. Click on the image to access its interactive version. . . . .	6
3	Mean spectrum. ClusterID 0. Click on the image to access its interactive version. . . . .	7
4	Spectrogram. ClusterID 0. Click on the image to access its interactive version. . . . .	8
5	Inter-spike interval histogram. ClusterID 1. Click on the image to access its interactive version. . . . .	9
6	Mean autocorrelation function. ClusterID 1. Click on the image to access its interactive version. . . . .	10
7	Mean spectrum. ClusterID 1. Click on the image to access its interactive version. . . . .	11
8	Spectrogram. ClusterID 1. Click on the image to access its interactive version. . . . .	12
9	Inter-spike interval histogram. ClusterID 4. Click on the image to access its interactive version. . . . .	13
10	Mean autocorrelation function. ClusterID 4. Click on the image to access its interactive version. . . . .	14
11	Mean spectrum. ClusterID 4. Click on the image to access its interactive version. . . . .	15

---

\*j.rapela@ucl.ac.uk

12	Spectrogram. ClusterID 4. Click on the image to access its interactive version. . . . .	16
13	Inter-spike interval histogram. ClusterID 6. Click on the image to access its interactive version. . . . .	17
14	Mean autocorrelation function. ClusterID 6. Click on the image to access its interactive version. . . . .	18
15	Mean spectrum. ClusterID 6. Click on the image to access its interactive version. . . . .	19
16	Spectrogram. ClusterID 6. Click on the image to access its interactive version. . . . .	20
17	Inter-spike interval histogram. ClusterID 7. Click on the image to access its interactive version. . . . .	21
18	Mean autocorrelation function. ClusterID 7. Click on the image to access its interactive version. . . . .	22
19	Mean spectrum. ClusterID 7. Click on the image to access its interactive version. . . . .	23
20	Spectrogram. ClusterID 7. Click on the image to access its interactive version. . . . .	24
21	Inter-spike interval histogram. ClusterID 15. Click on the image to access its interactive version. . . . .	25
22	Mean autocorrelation function. ClusterID 15. Click on the image to access its interactive version. . . . .	26
23	Mean spectrum. ClusterID 15. Click on the image to access its interactive version. . . . .	27
24	Spectrogram. ClusterID 15. Click on the image to access its interactive version. . . . .	28
25	Inter-spike interval histogram. ClusterID 26. Click on the image to access its interactive version. . . . .	29
26	Mean autocorrelation function. ClusterID 26. Click on the image to access its interactive version. . . . .	30
27	Mean spectrum. ClusterID 26. Click on the image to access its interactive version. . . . .	31
28	Spectrogram. ClusterID 26. Click on the image to access its interactive version. . . . .	32
29	Inter-spike interval histogram. ClusterID 34. Click on the image to access its interactive version. . . . .	33
30	Mean autocorrelation function. ClusterID 34. Click on the image to access its interactive version. . . . .	34

31	Mean spectrum. ClusterID 34. Click on the image to access its interactive version. . . . .	35
32	Spectrogram. ClusterID 34. Click on the image to access its interactive version. . . . .	36
33	Inter-spike interval histogram. ClusterID 35. Click on the image to access its interactive version. . . . .	37
34	Mean autocorrelation function. ClusterID 35. Click on the image to access its interactive version. . . . .	38
35	Mean spectrum. ClusterID 35. Click on the image to access its interactive version. . . . .	39
36	Spectrogram. ClusterID 35. Click on the image to access its interactive version. . . . .	40
37	Inter-spike interval histogram. ClusterID 37. Click on the image to access its interactive version. . . . .	41
38	Mean autocorrelation function. ClusterID 37. Click on the image to access its interactive version. . . . .	42
39	Mean spectrum. ClusterID 37. Click on the image to access its interactive version. . . . .	43
40	Spectrogram. ClusterID 37. Click on the image to access its interactive version. . . . .	44
41	Inter-spike interval histogram. ClusterID 44. Click on the image to access its interactive version. . . . .	45
42	Mean autocorrelation function. ClusterID 44. Click on the image to access its interactive version. . . . .	46
43	Mean spectrum. ClusterID 44. Click on the image to access its interactive version. . . . .	47
44	Spectrogram. ClusterID 44. Click on the image to access its interactive version. . . . .	48
45	Inter-spike interval histogram. ClusterID 49. Click on the image to access its interactive version. . . . .	49
46	Mean autocorrelation function. ClusterID 49. Click on the image to access its interactive version. . . . .	50
47	Mean spectrum. ClusterID 49. Click on the image to access its interactive version. . . . .	51
48	Spectrogram. ClusterID 49. Click on the image to access its interactive version. . . . .	52
49	Inter-spike interval histogram. ClusterID 50. Click on the image to access its interactive version. . . . .	53

50	Mean autocorrelation function. ClusterID 50. Click on the image to access its interactive version. . . . .	54
51	Mean spectrum. ClusterID 50. Click on the image to access its interactive version. . . . .	55
52	Spectrogram. ClusterID 50. Click on the image to access its interactive version. . . . .	56
53	Inter-spike interval histogram. ClusterID 52. Click on the image to access its interactive version. . . . .	57
54	Mean autocorrelation function. ClusterID 52. Click on the image to access its interactive version. . . . .	58
55	Mean spectrum. ClusterID 52. Click on the image to access its interactive version. . . . .	59
56	Spectrogram. ClusterID 52. Click on the image to access its interactive version. . . . .	60
57	Inter-spike interval histogram. ClusterID 58. Click on the image to access its interactive version. . . . .	61
58	Mean autocorrelation function. ClusterID 58. Click on the image to access its interactive version. . . . .	62
59	Mean spectrum. ClusterID 58. Click on the image to access its interactive version. . . . .	63
60	Spectrogram. ClusterID 58. Click on the image to access its interactive version. . . . .	64
61	Inter-spike interval histogram. ClusterID 66. Click on the image to access its interactive version. . . . .	65
62	Mean autocorrelation function. ClusterID 66. Click on the image to access its interactive version. . . . .	66
63	Mean spectrum. ClusterID 66. Click on the image to access its interactive version. . . . .	67
64	Spectrogram. ClusterID 66. Click on the image to access its interactive version. . . . .	68
65	Inter-spike interval histogram. ClusterID 72. Click on the image to access its interactive version. . . . .	69
66	Mean autocorrelation function. ClusterID 72. Click on the image to access its interactive version. . . . .	70
67	Mean spectrum. ClusterID 72. Click on the image to access its interactive version. . . . .	71
68	Spectrogram. ClusterID 72. Click on the image to access its interactive version. . . . .	72

Cluster id: 0, Region: striatum

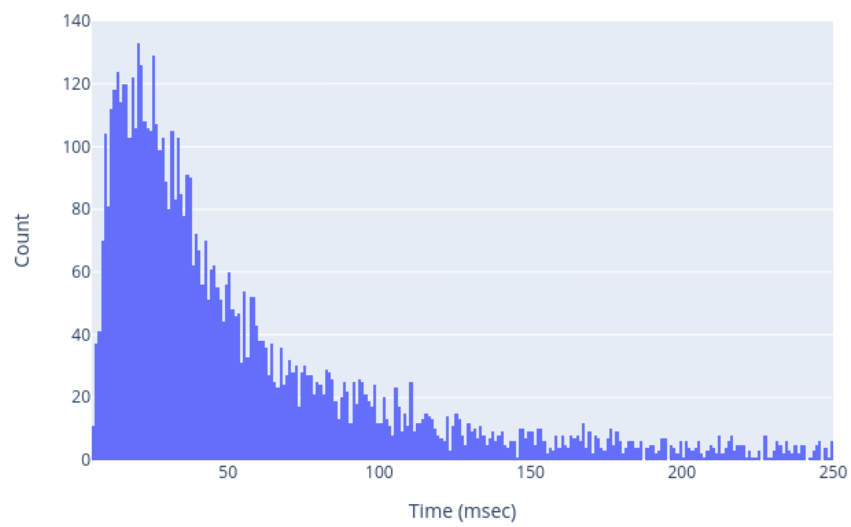


Figure 1: Inter-spike interval histogram. ClusterID 0. Click on the image to access its interactive version.

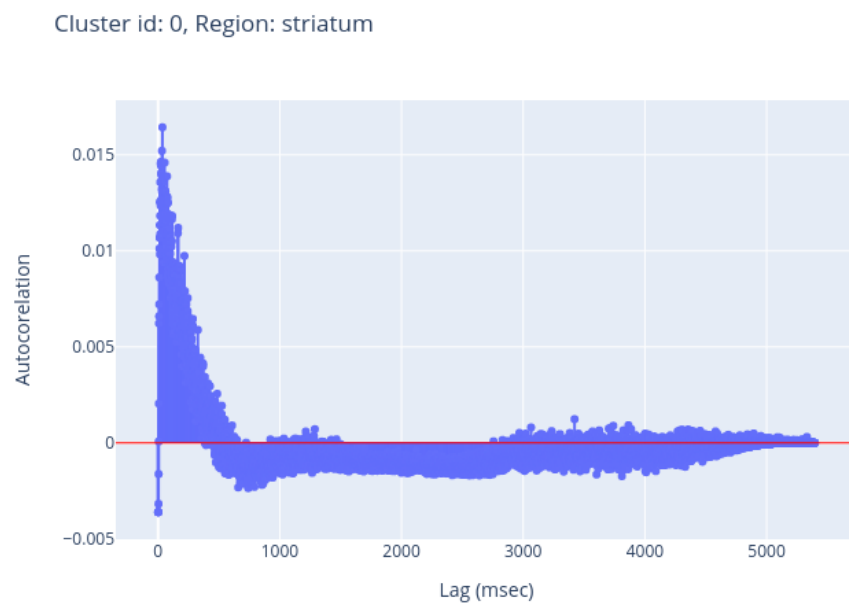


Figure 2: Mean autocorrelation function. ClusterID 0. Click on the image to access its interactive version.

Cluster id: 0, Region: striatum

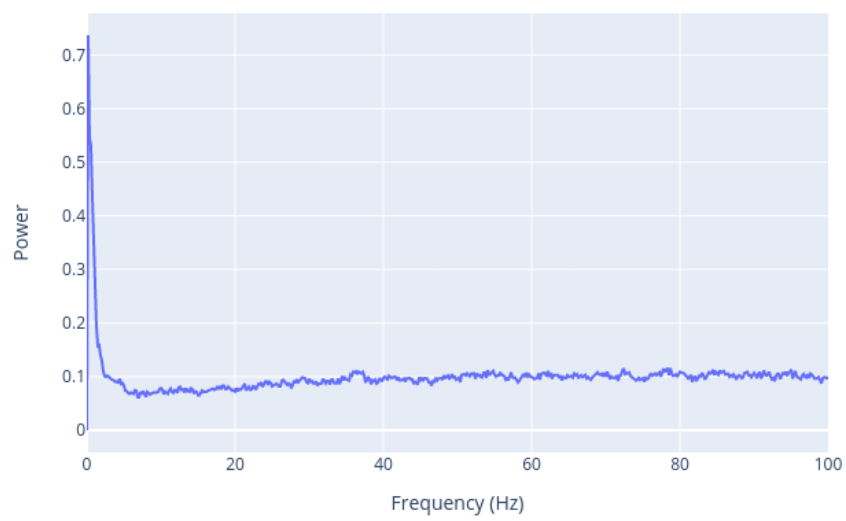


Figure 3: Mean spectrum. ClusterID 0. Click on the image to access its interactive version.

Cluster id: 0, Region: striatum

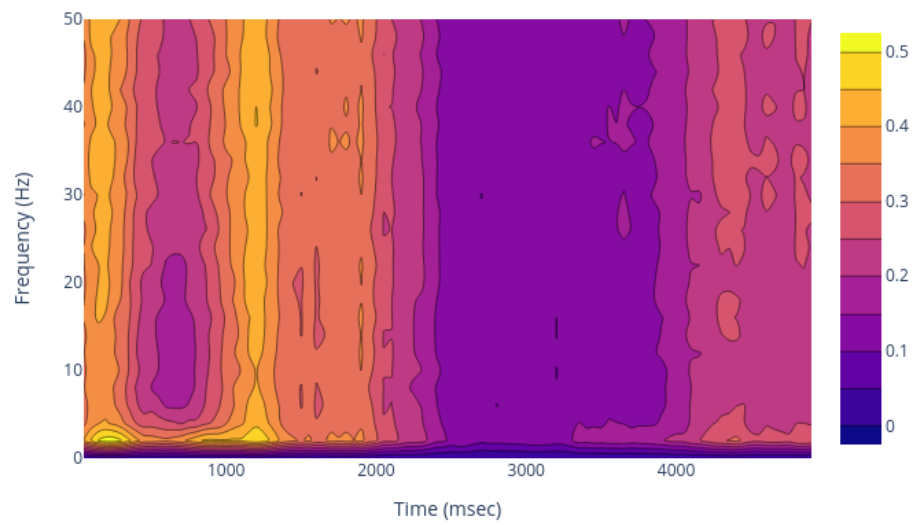


Figure 4: Spectrogram. ClusterID 0. Click on the image to access its interactive version.



Cluster id: 1, Region: striatum

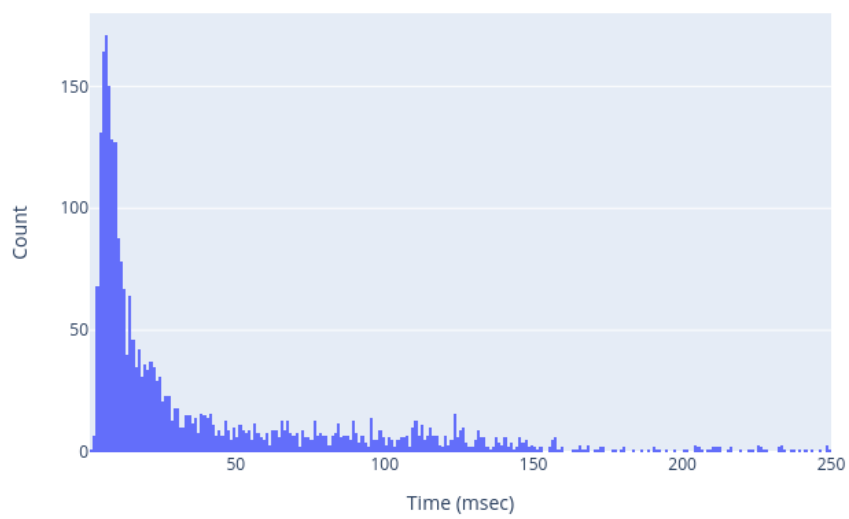


Figure 5: Inter-spike interval histogram. ClusterID 1. Click on the image to access its interactive version.

Cluster id: 1, Region: striatum

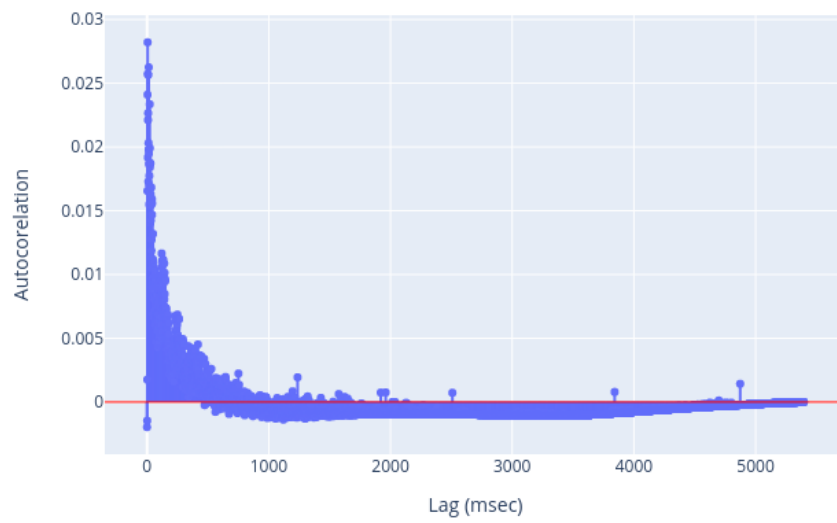


Figure 6: Mean autocorrelation function. ClusterID 1. Click on the image to access its interactive version.

Cluster id: 1, Region: striatum

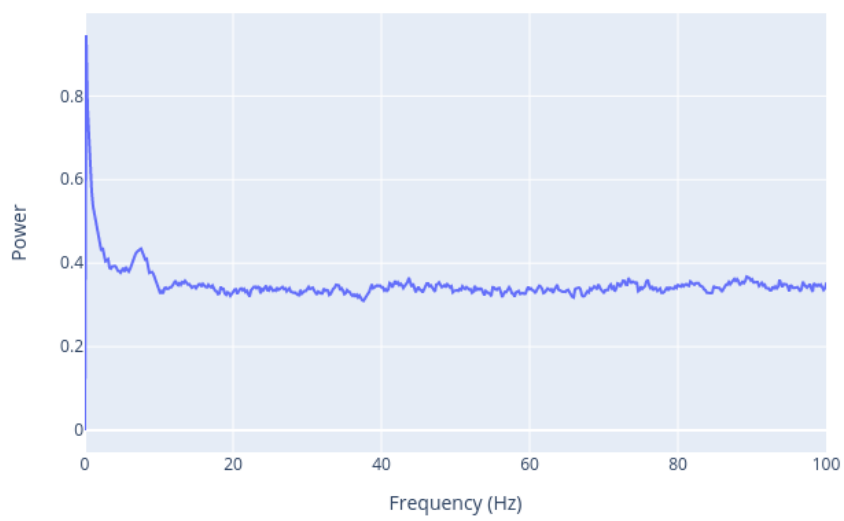


Figure 7: Mean spectrum. ClusterID 1. Click on the image to access its interactive version.

Cluster id: 1, Region: striatum

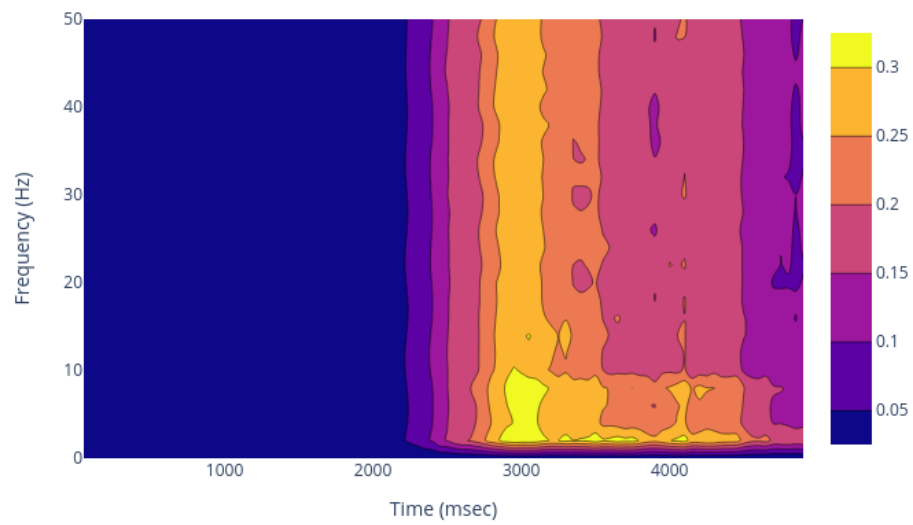


Figure 8: Spectrogram. ClusterID 1. Click on the image to access its interactive version.

Cluster id: 4, Region: striatum

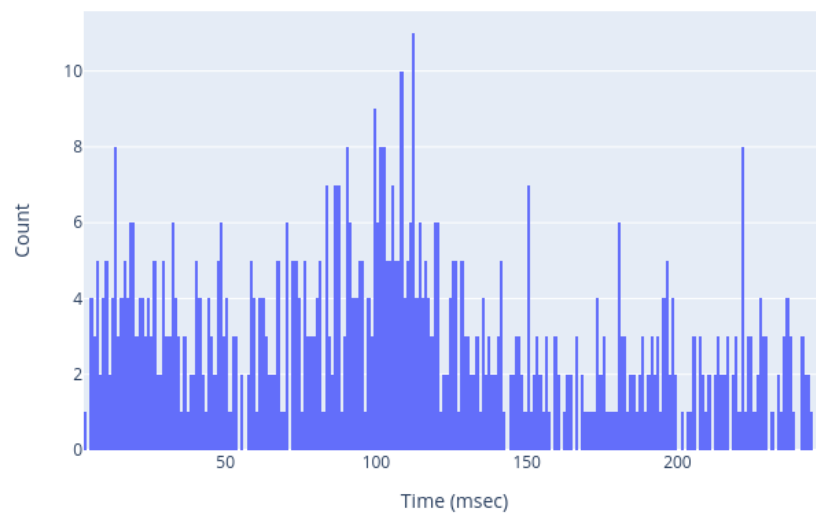


Figure 9: Inter-spike interval histogram. ClusterID 4. Click on the image to access its interactive version.

Cluster id: 4, Region: striatum

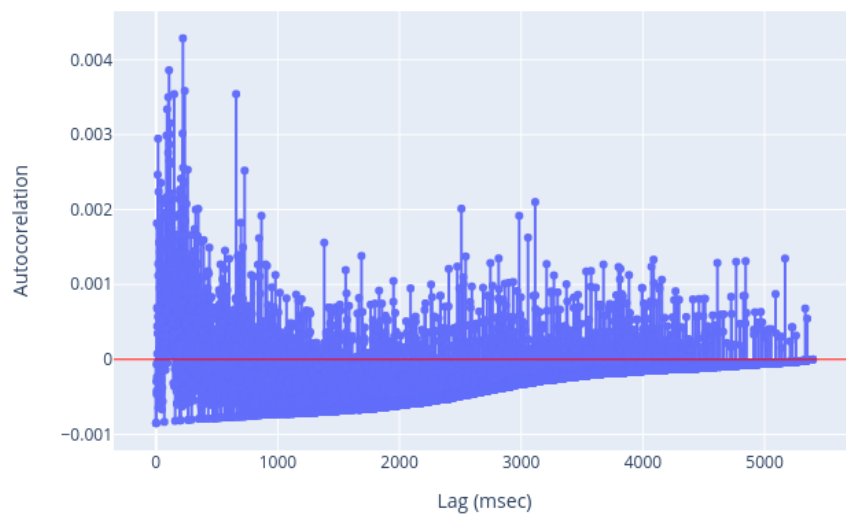


Figure 10: Mean autocorrelation function. ClusterID 4. Click on the image to access its interactive version.

Cluster id: 4, Region: striatum

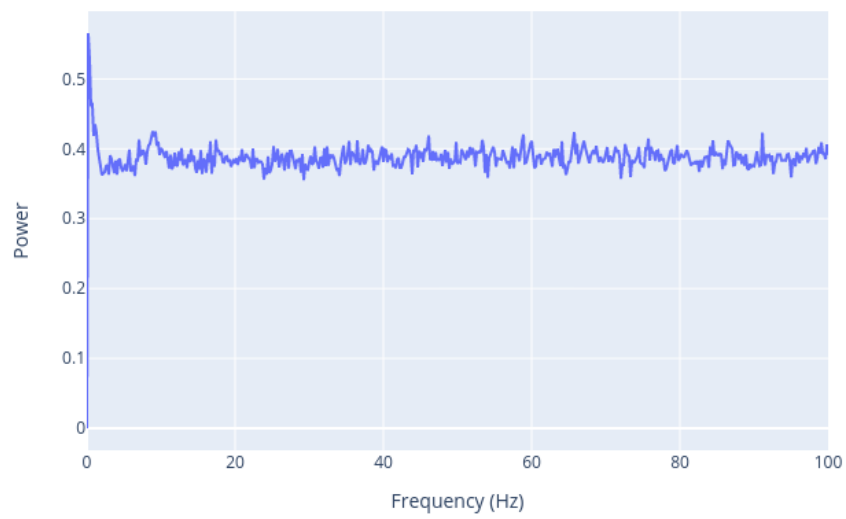


Figure 11: Mean spectrum. ClusterID 4. Click on the image to access its interactive version.

Cluster id: 4, Region: striatum

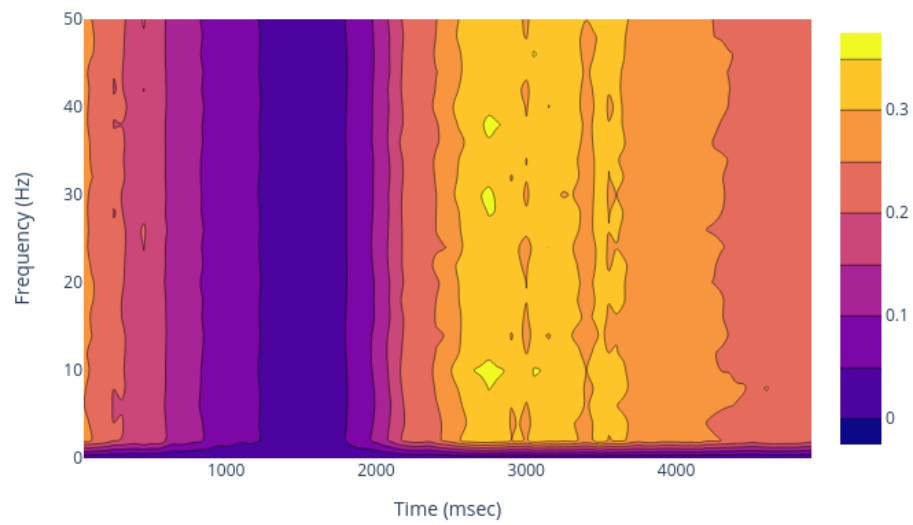


Figure 12: Spectrogram. ClusterID 4. Click on the image to access its interactive version.



Cluster id: 6, Region: striatum

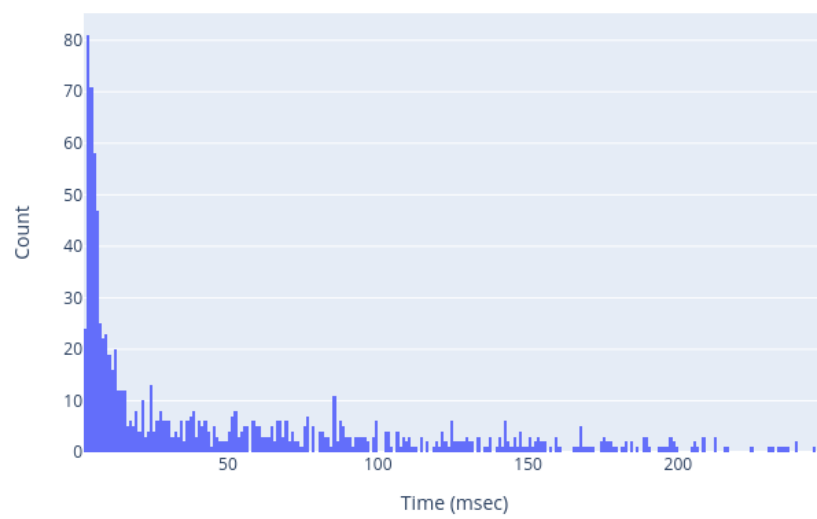


Figure 13: Inter-spike interval histogram. ClusterID 6. Click on the image to access its interactive version.

Cluster id: 6, Region: striatum

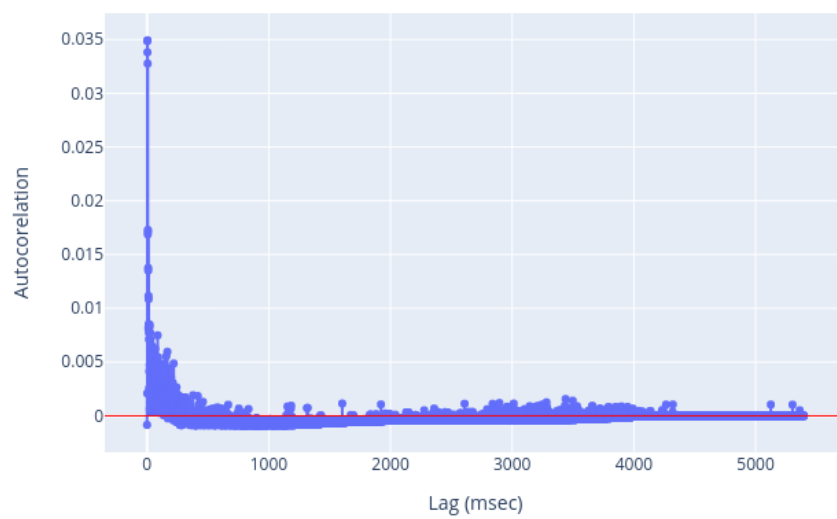


Figure 14: Mean autocorrelation function. ClusterID 6. Click on the image to access its interactive version.

Cluster id: 6, Region: striatum

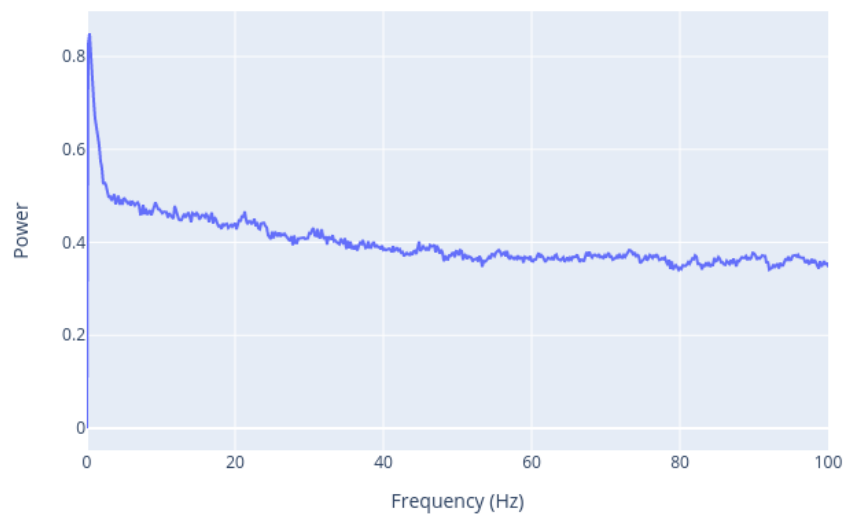


Figure 15: Mean spectrum. ClusterID 6. Click on the image to access its interactive version.

Cluster id: 6, Region: striatum

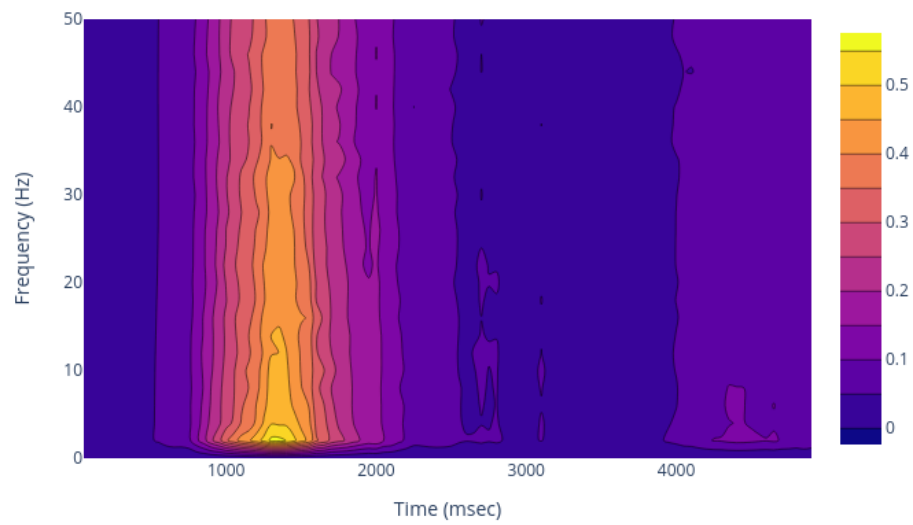


Figure 16: Spectrogram. ClusterID 6. Click on the image to access its interactive version.

Cluster id: 7, Region: striatum

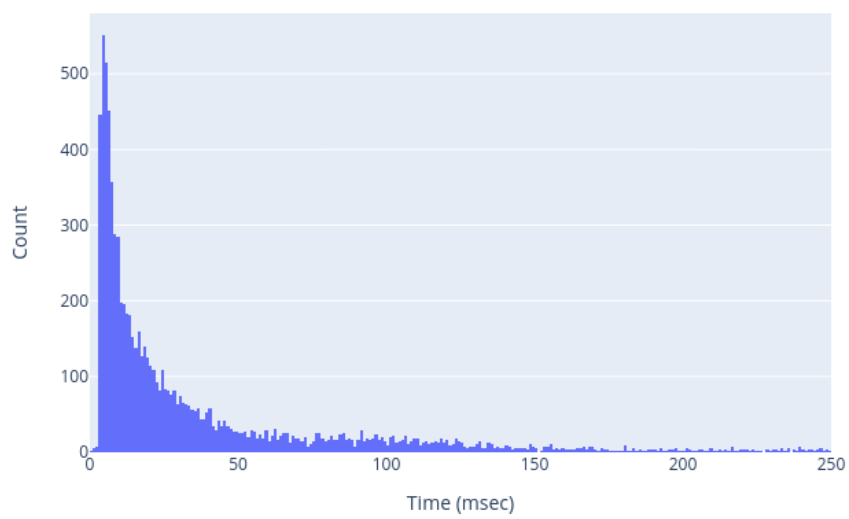


Figure 17: Inter-spike interval histogram. ClusterID 7. Click on the image to access its interactive version.

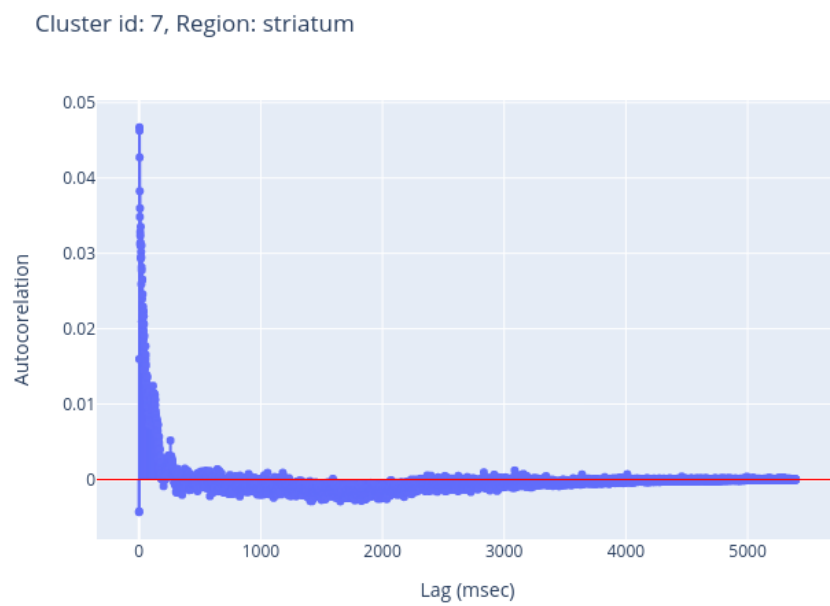


Figure 18: Mean autocorrelation function. ClusterID 7. Click on the image to access its interactive version.

Cluster id: 7, Region: striatum

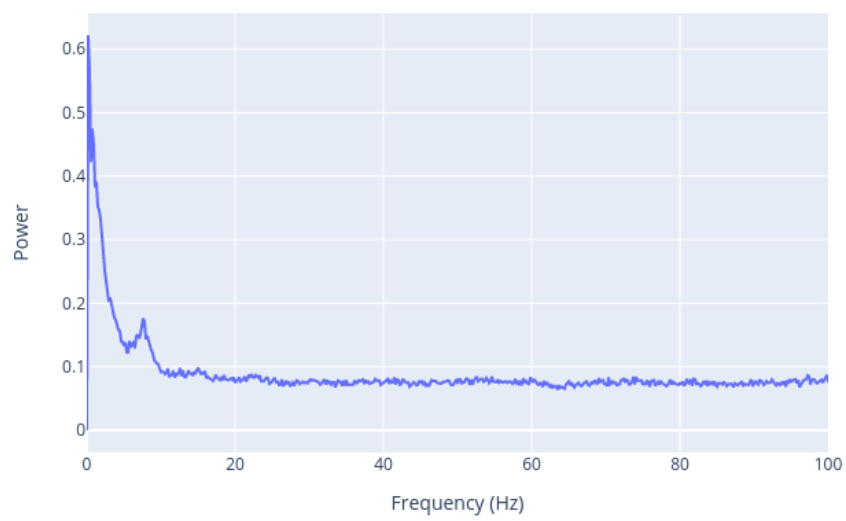


Figure 19: Mean spectrum. ClusterID 7. Click on the image to access its interactive version.

Cluster id: 7, Region: striatum

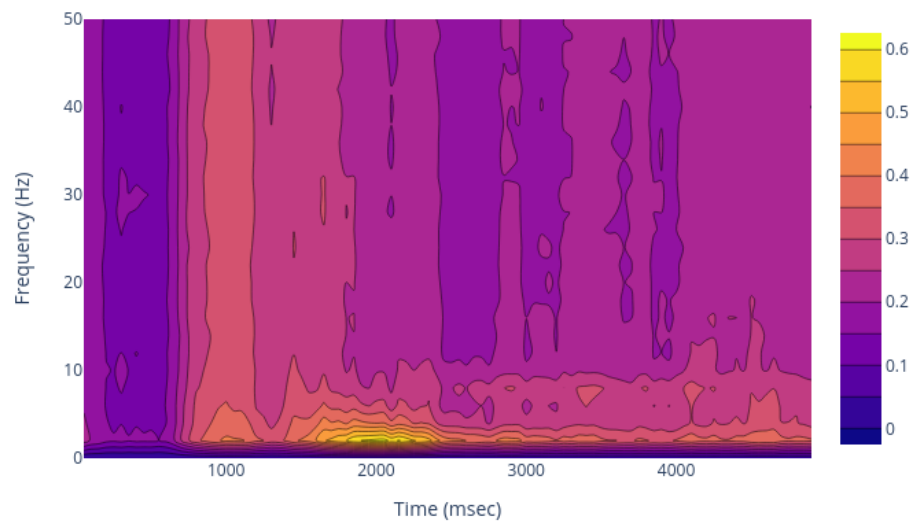


Figure 20: Spectrogram. ClusterID 7. Click on the image to access its interactive version.



Cluster id: 15, Region: striatum

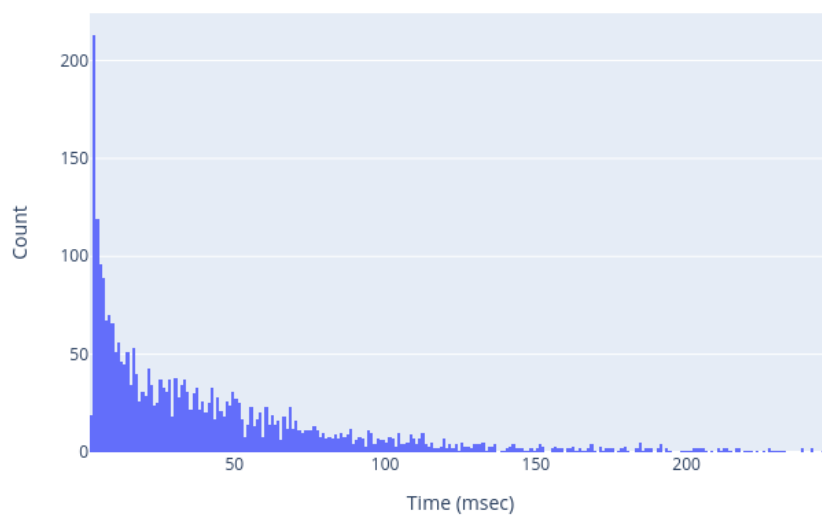


Figure 21: Inter-spike interval histogram. ClusterID 15. Click on the image to access its interactive version.

Cluster id: 15, Region: striatum

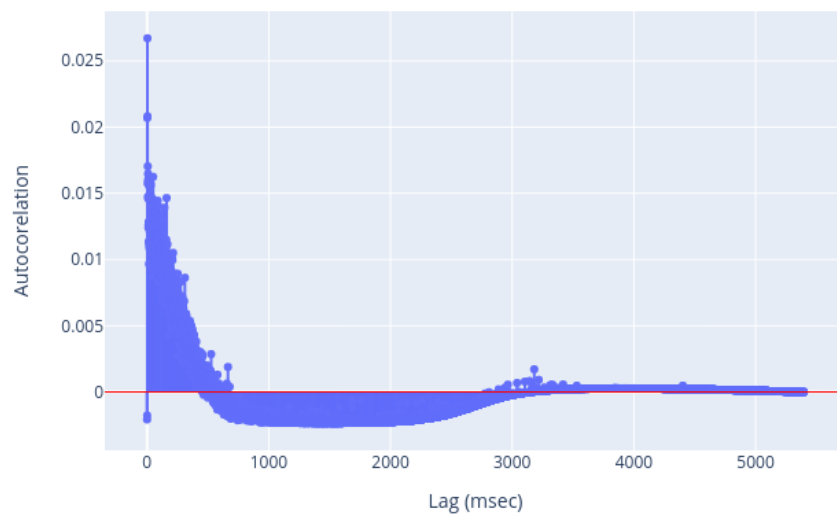


Figure 22: Mean autocorrelation function. ClusterID 15. Click on the image to access its interactive version.

Cluster id: 15, Region: striatum

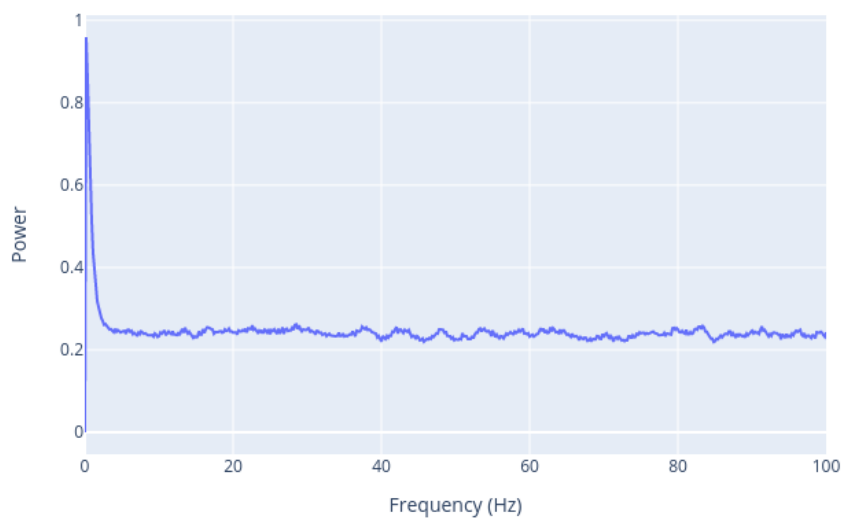


Figure 23: Mean spectrum. ClusterID 15. Click on the image to access its interactive version.

Cluster id: 15, Region: striatum

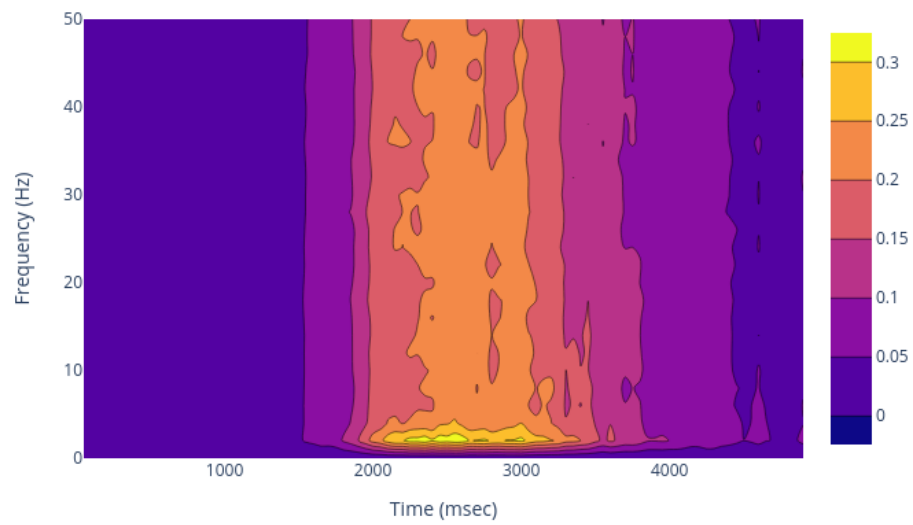


Figure 24: Spectrogram. ClusterID 15. Click on the image to access its interactive version.

Cluster id: 26, Region: striatum

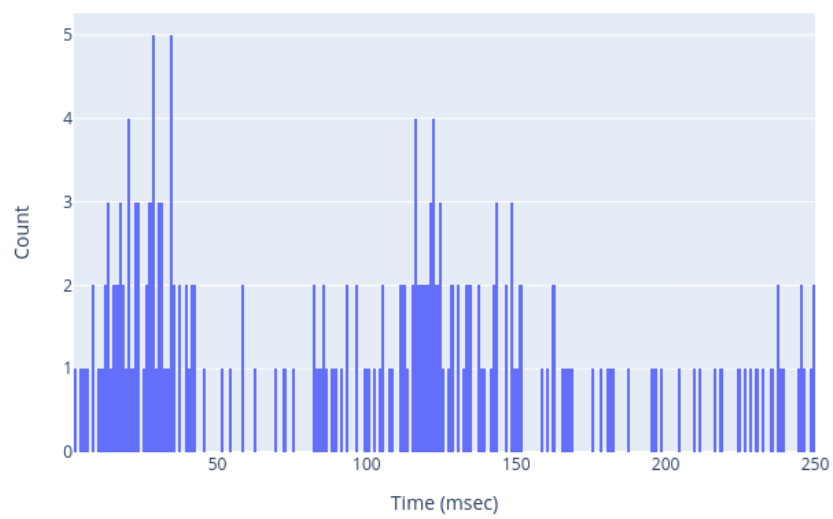


Figure 25: Inter-spike interval histogram. ClusterID 26. Click on the image to access its interactive version.

Cluster id: 26, Region: striatum

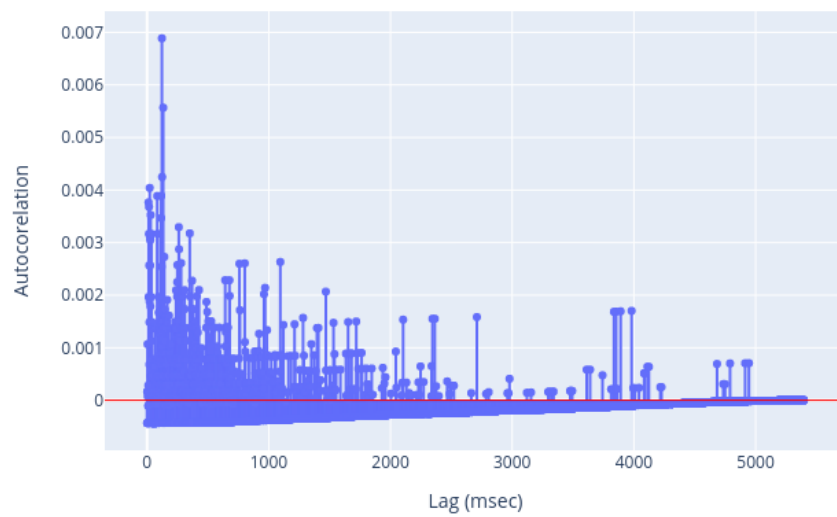


Figure 26: Mean autocorrelation function. ClusterID 26. Click on the image to access its interactive version.

Cluster id: 26, Region: striatum

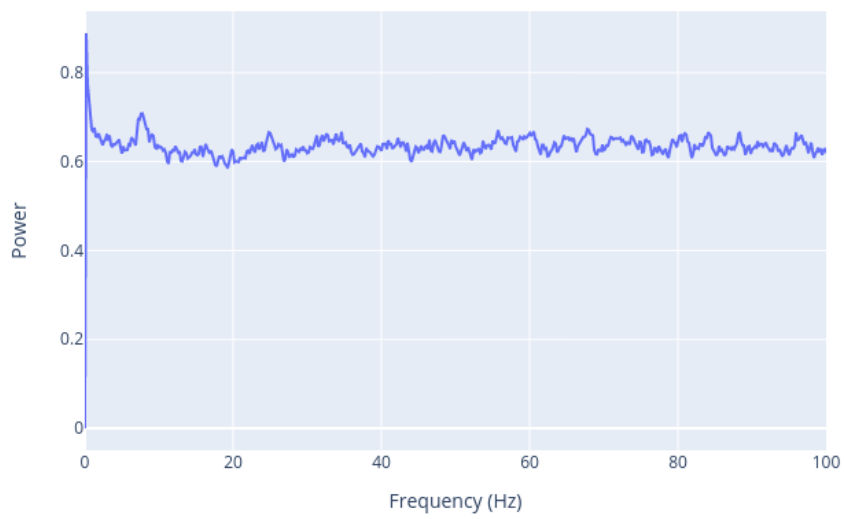


Figure 27: Mean spectrum. ClusterID 26. Click on the image to access its interactive version.

Cluster id: 26, Region: striatum

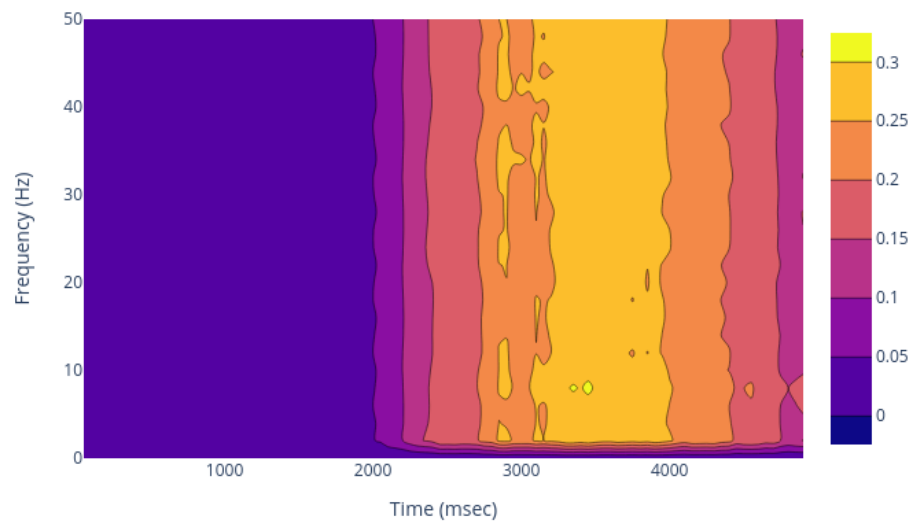


Figure 28: Spectrogram. ClusterID 26. Click on the image to access its interactive version.



Cluster id: 34, Region: striatum

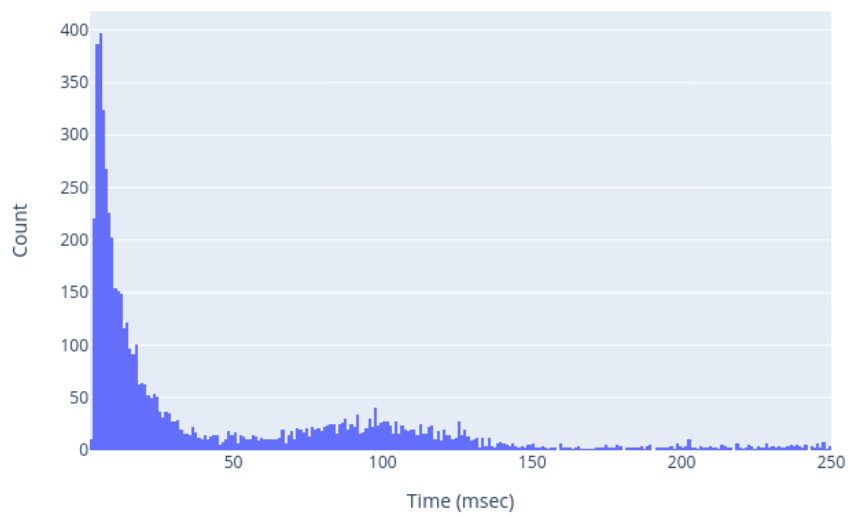


Figure 29: Inter-spike interval histogram. ClusterID 34. Click on the image to access its interactive version.

Cluster id: 34, Region: striatum

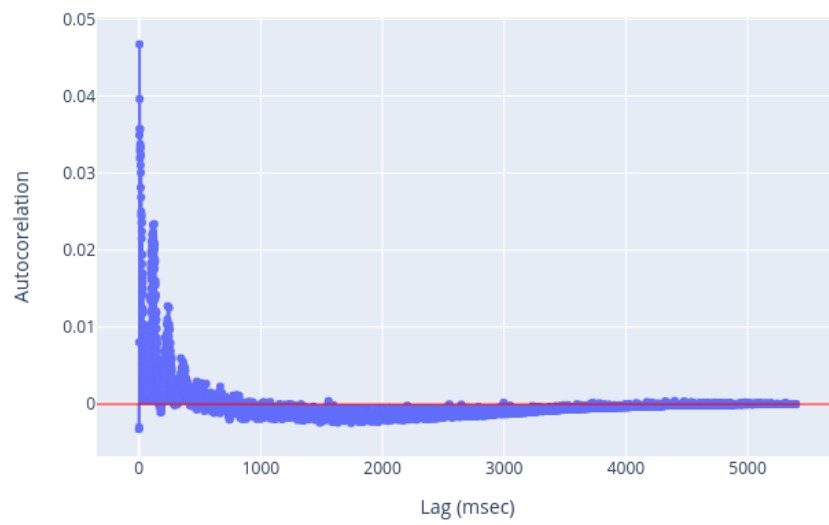


Figure 30: Mean autocorrelation function. ClusterID 34. Click on the image to access its interactive version.

Cluster id: 34, Region: striatum

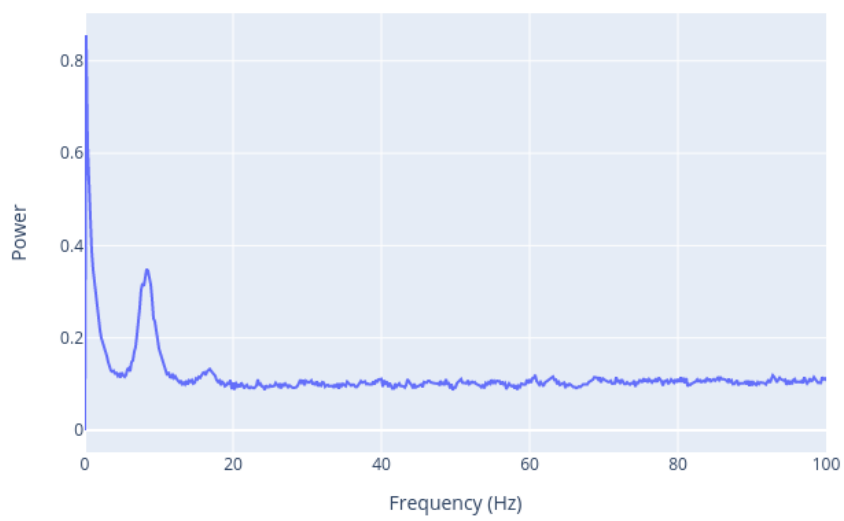


Figure 31: Mean spectrum. ClusterID 34. Click on the image to access its interactive version.

Cluster id: 34, Region: striatum

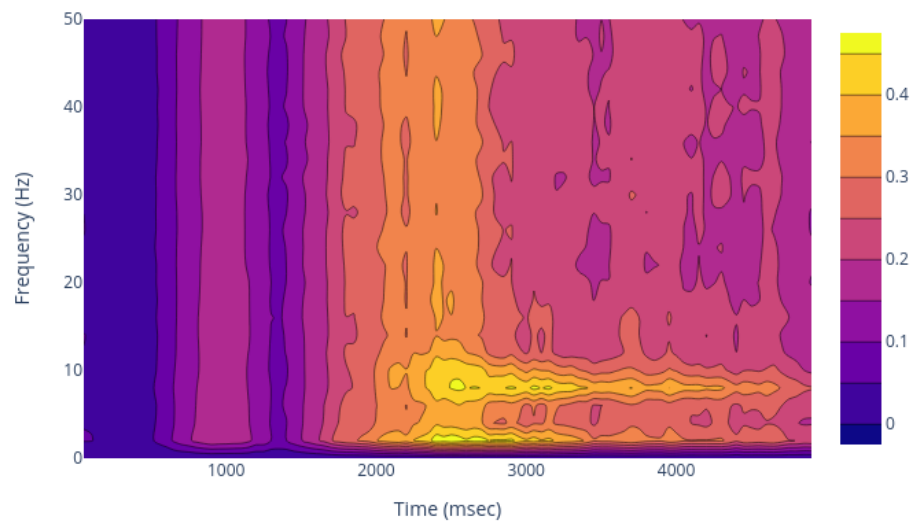


Figure 32: Spectrogram. ClusterID 34. Click on the image to access its interactive version.

Cluster id: 35, Region: striatum

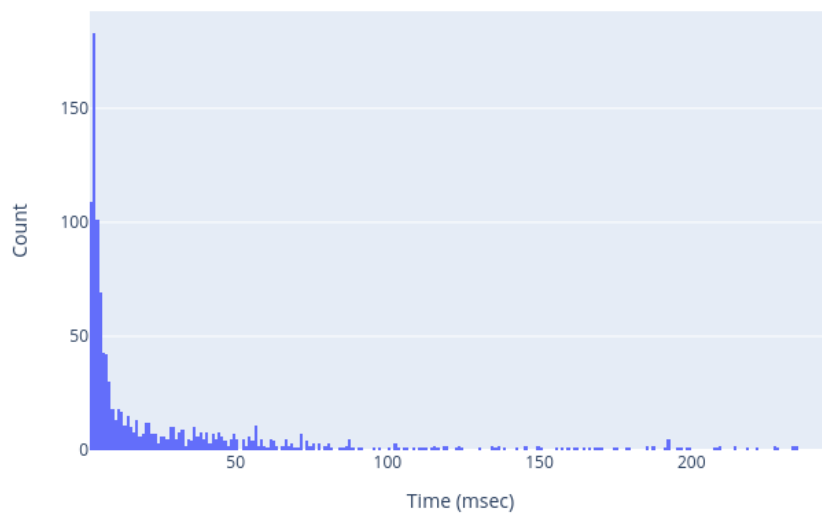


Figure 33: Inter-spike interval histogram. ClusterID 35. Click on the image to access its interactive version.

Cluster id: 35, Region: striatum

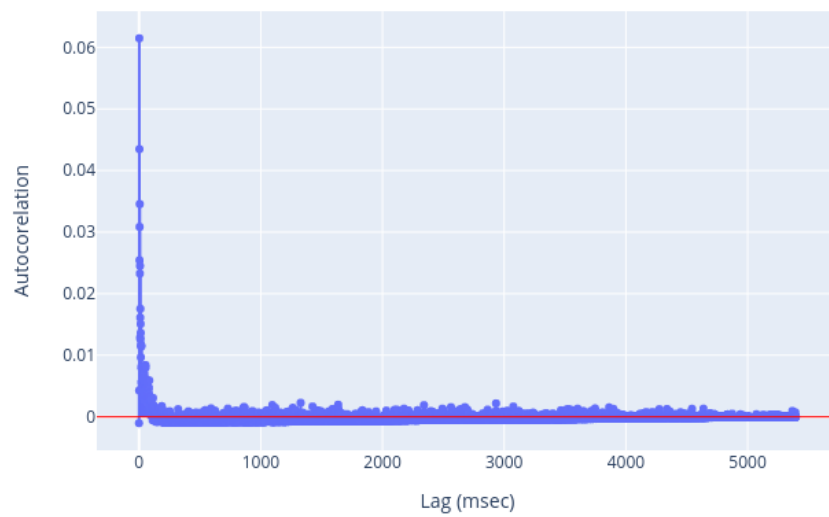


Figure 34: Mean autocorrelation function. ClusterID 35. Click on the image to access its interactive version.

Cluster id: 35, Region: striatum

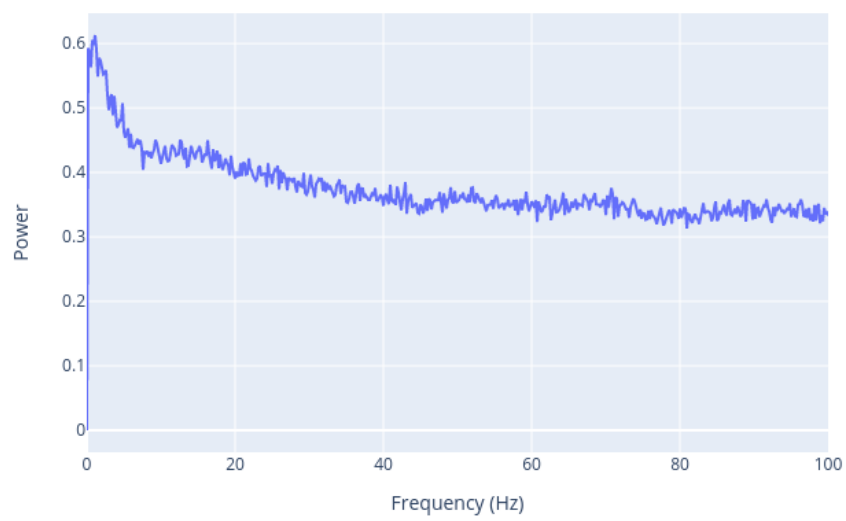


Figure 35: Mean spectrum. ClusterID 35. Click on the image to access its interactive version.

Cluster id: 35, Region: striatum

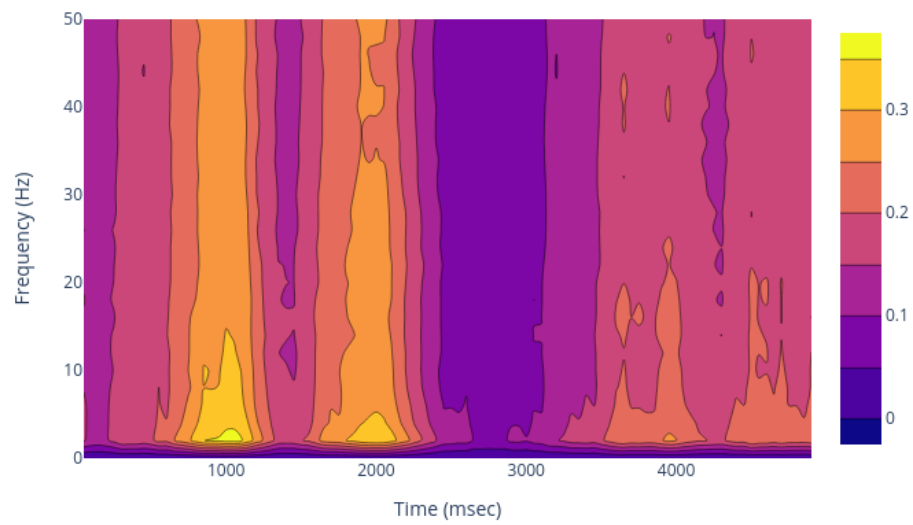


Figure 36: Spectrogram. ClusterID 35. Click on the image to access its interactive version.



Cluster id: 37, Region: striatum

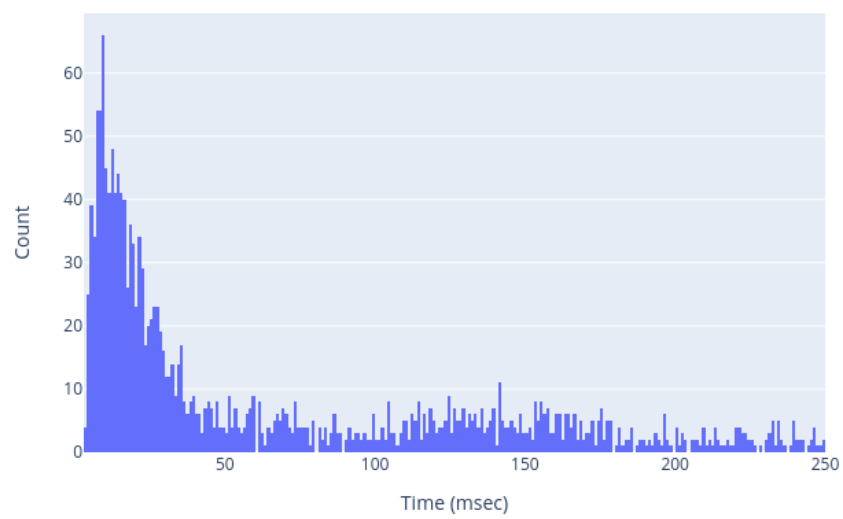


Figure 37: Inter-spike interval histogram. ClusterID 37. Click on the image to access its interactive version.

Cluster id: 37, Region: striatum

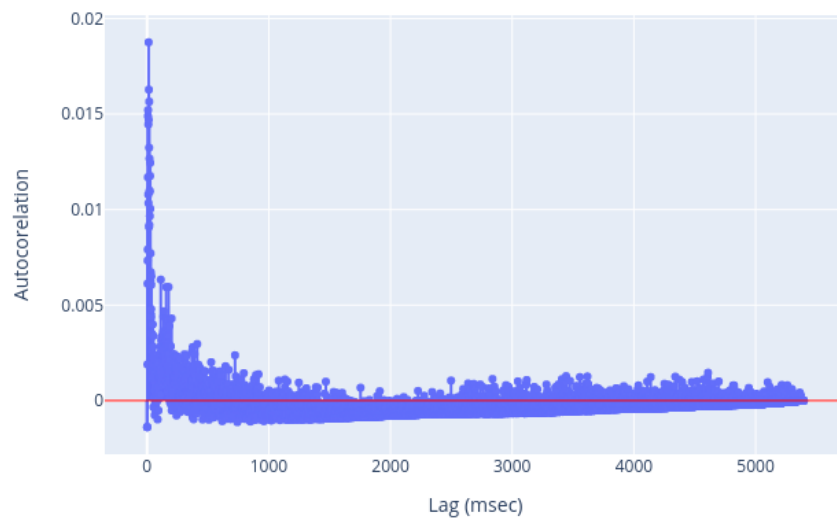


Figure 38: Mean autocorrelation function. ClusterID 37. Click on the image to access its interactive version.

Cluster id: 37, Region: striatum

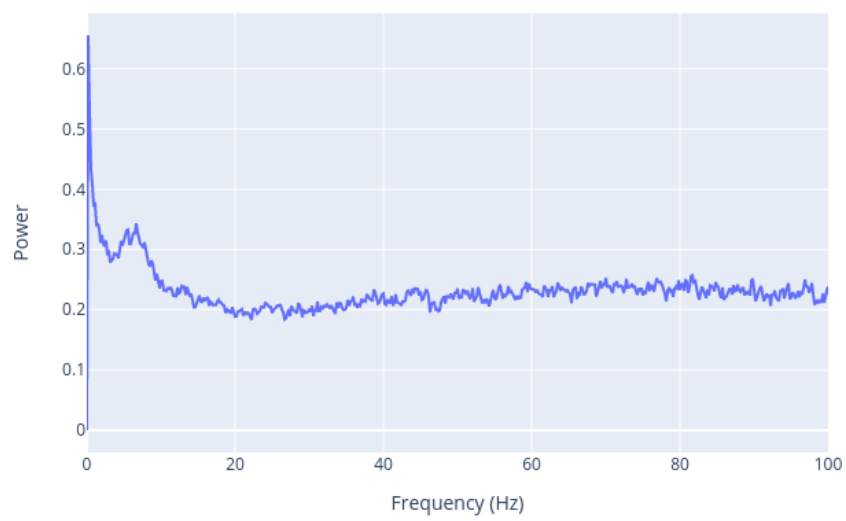


Figure 39: Mean spectrum. ClusterID 37. Click on the image to access its interactive version.

Cluster id: 37, Region: striatum

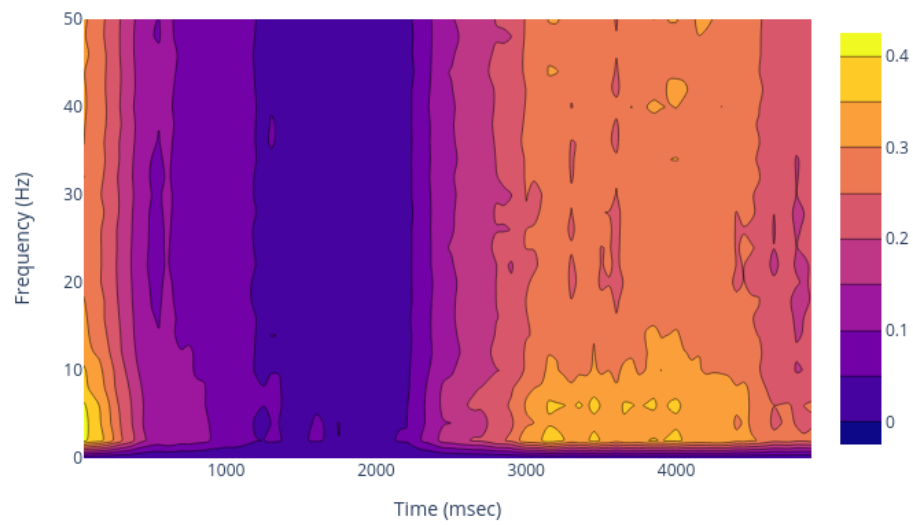


Figure 40: Spectrogram. ClusterID 37. Click on the image to access its interactive version.

Cluster id: 44, Region: striatum

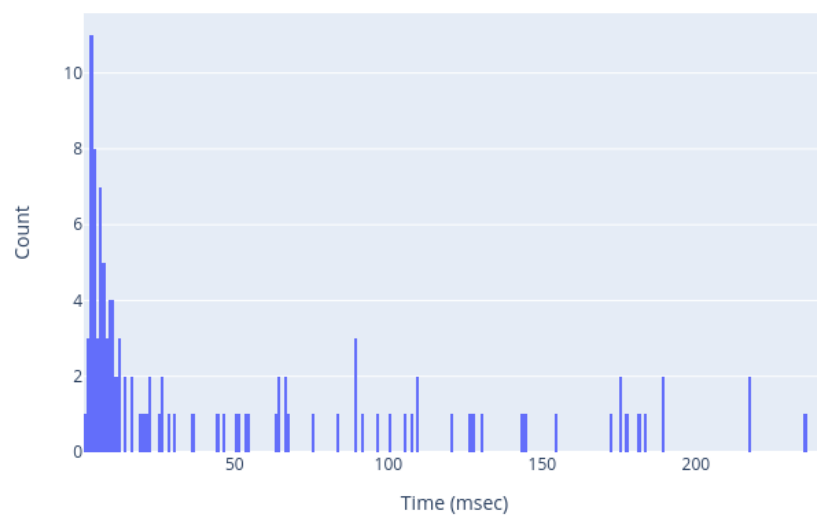


Figure 41: Inter-spike interval histogram. ClusterID 44. Click on the image to access its interactive version.

Cluster id: 44, Region: striatum

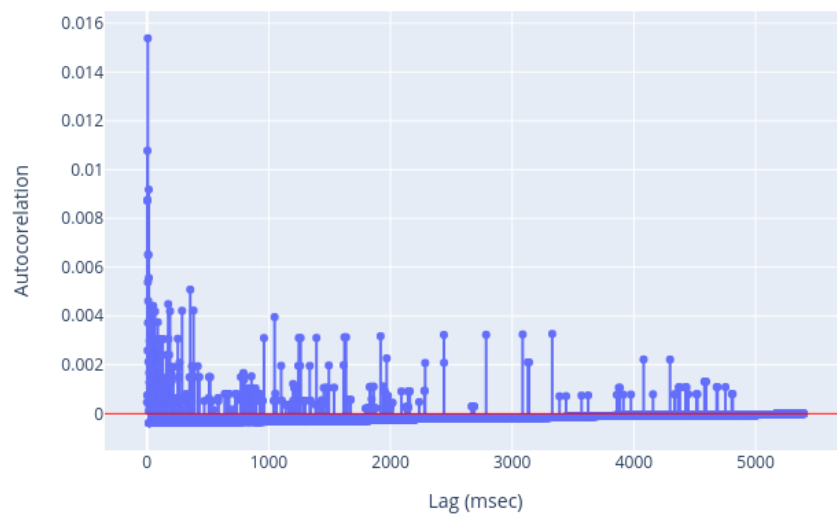


Figure 42: Mean autocorrelation function. ClusterID 44. Click on the image to access its interactive version.

Cluster id: 44, Region: striatum

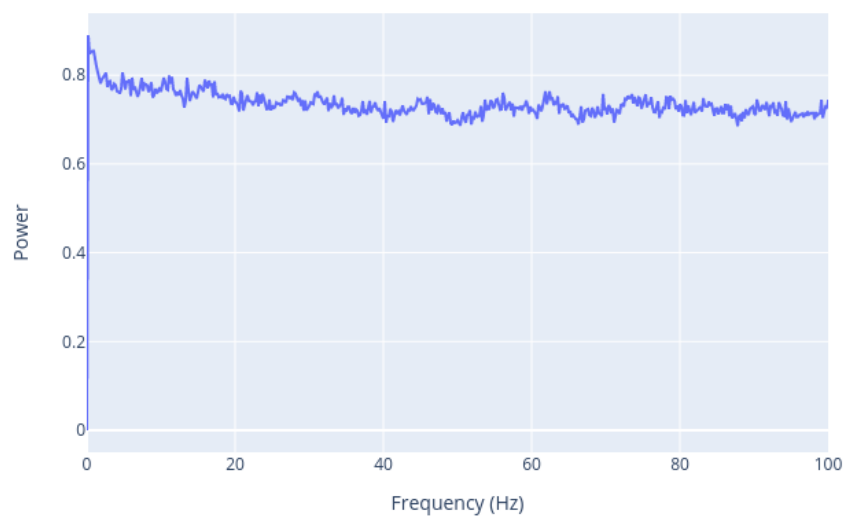


Figure 43: Mean spectrum. ClusterID 44. Click on the image to access its interactive version.

Cluster id: 44, Region: striatum

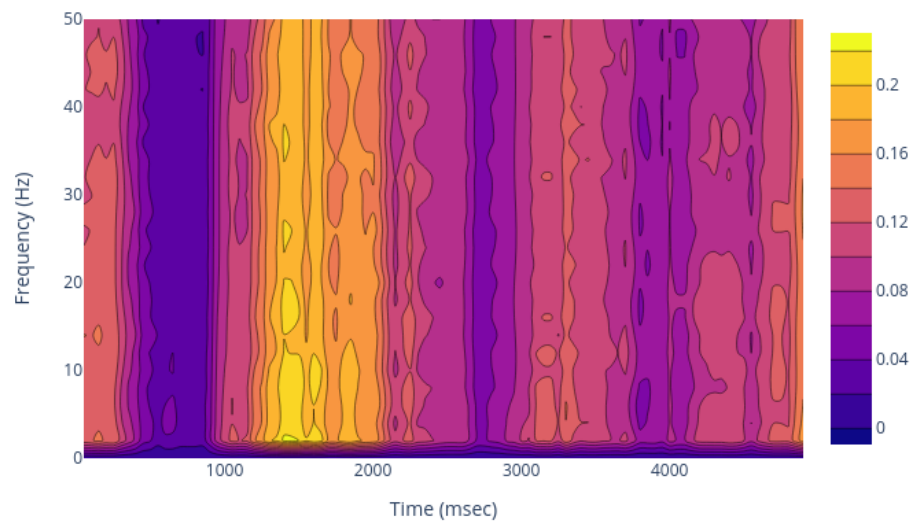


Figure 44: Spectrogram. ClusterID 44. Click on the image to access its interactive version.



Cluster id: 49, Region: striatum

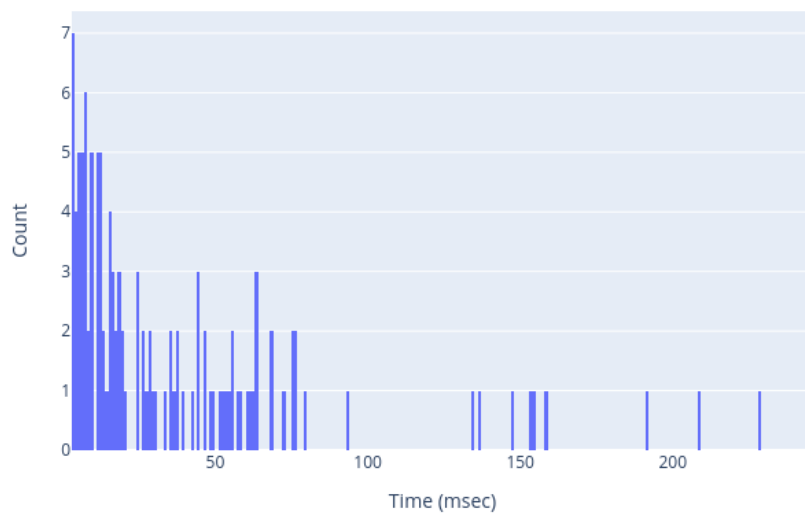


Figure 45: Inter-spike interval histogram. ClusterID 49. Click on the image to access its interactive version.

Cluster id: 49, Region: striatum

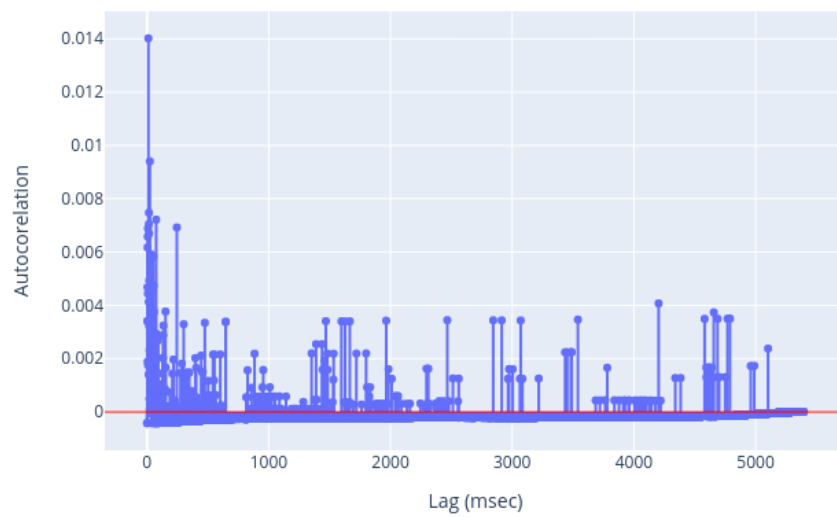


Figure 46: Mean autocorrelation function. ClusterID 49. Click on the image to access its interactive version.

Cluster id: 49, Region: striatum

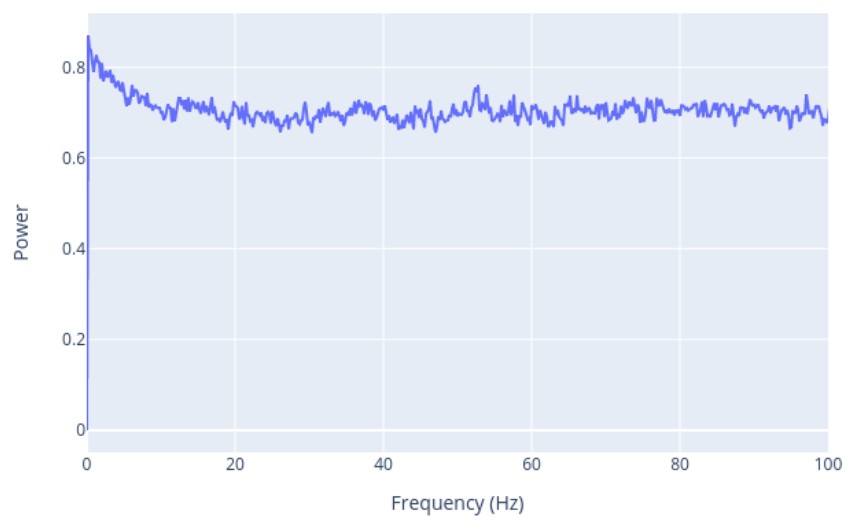


Figure 47: Mean spectrum. ClusterID 49. Click on the image to access its interactive version.

Cluster id: 49, Region: striatum

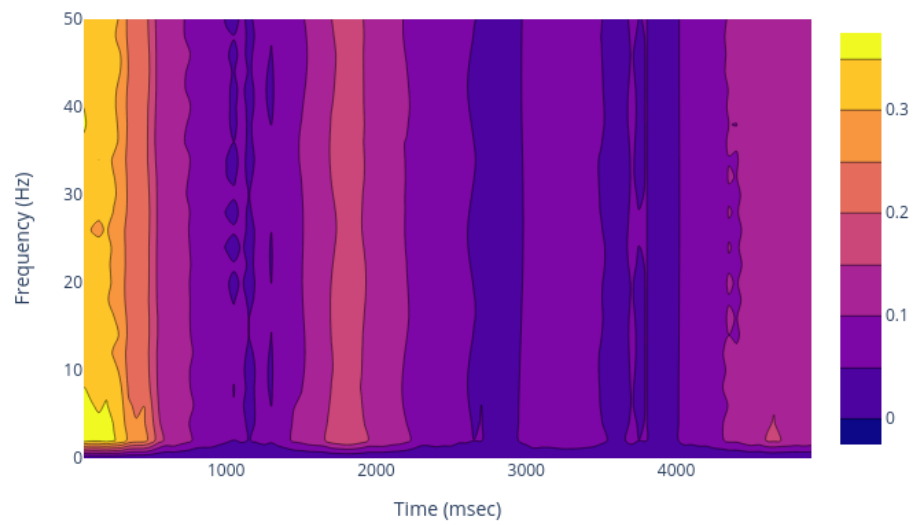


Figure 48: Spectrogram. ClusterID 49. Click on the image to access its interactive version.

Cluster id: 50, Region: striatum

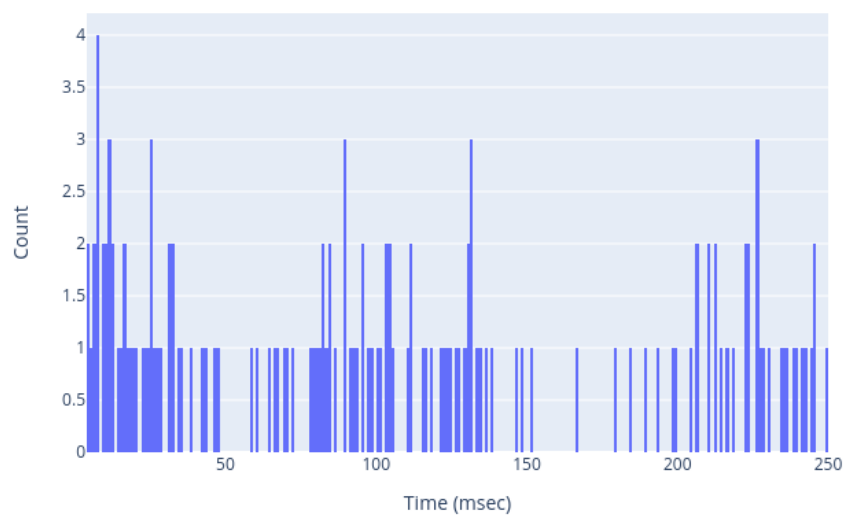


Figure 49: Inter-spike interval histogram. ClusterID 50. Click on the image to access its interactive version.

Cluster id: 50, Region: striatum

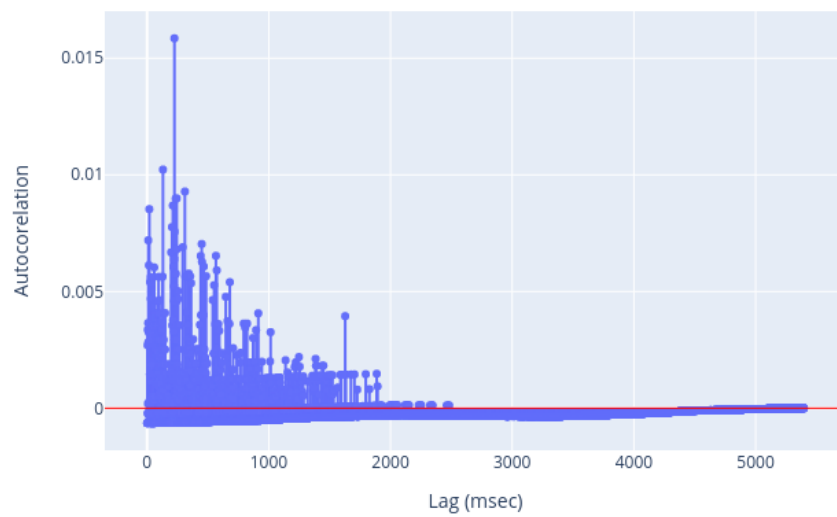


Figure 50: Mean autocorrelation function. ClusterID 50. Click on the image to access its interactive version.

Cluster id: 50, Region: striatum

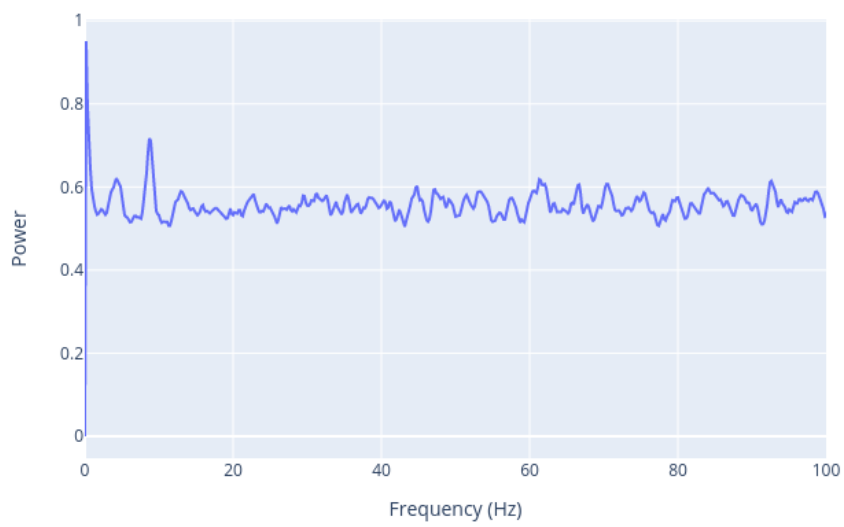


Figure 51: Mean spectrum. ClusterID 50. Click on the image to access its interactive version.

Cluster id: 50, Region: striatum

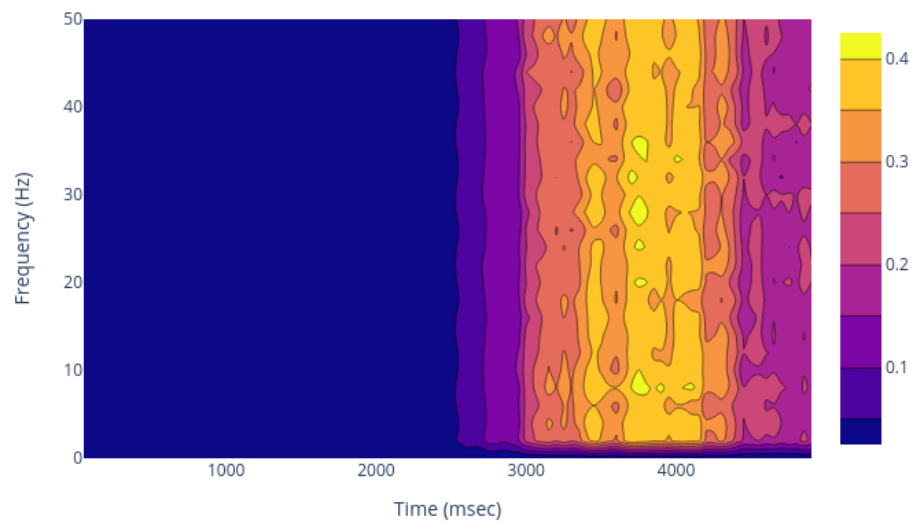


Figure 52: Spectrogram. ClusterID 50. Click on the image to access its interactive version.



Cluster id: 52, Region: striatum

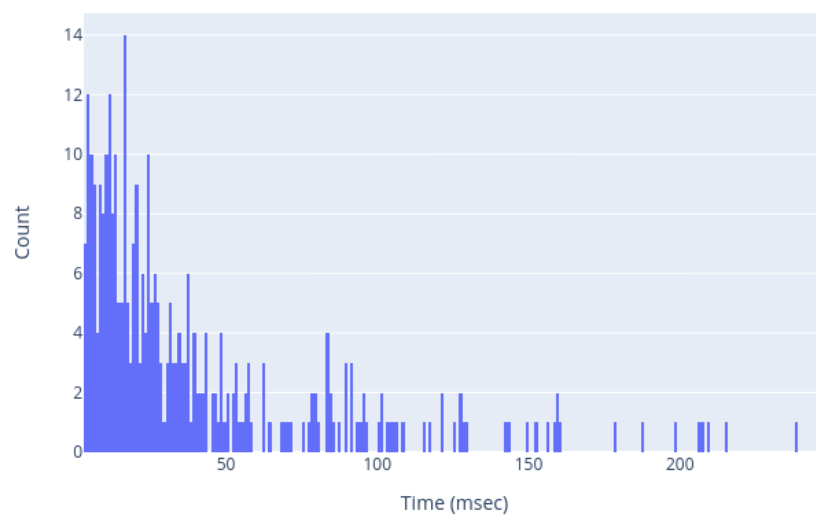


Figure 53: Inter-spike interval histogram. ClusterID 52. Click on the image to access its interactive version.

Cluster id: 52, Region: striatum

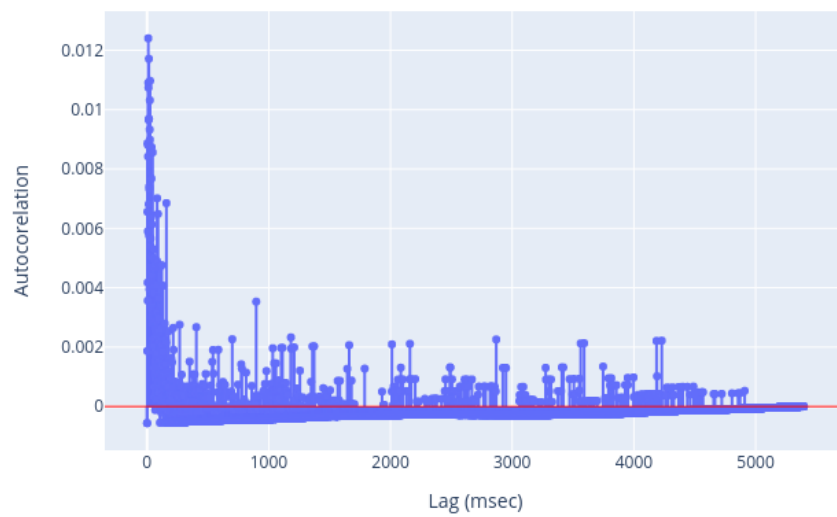


Figure 54: Mean autocorrelation function. ClusterID 52. Click on the image to access its interactive version.

Cluster id: 52, Region: striatum

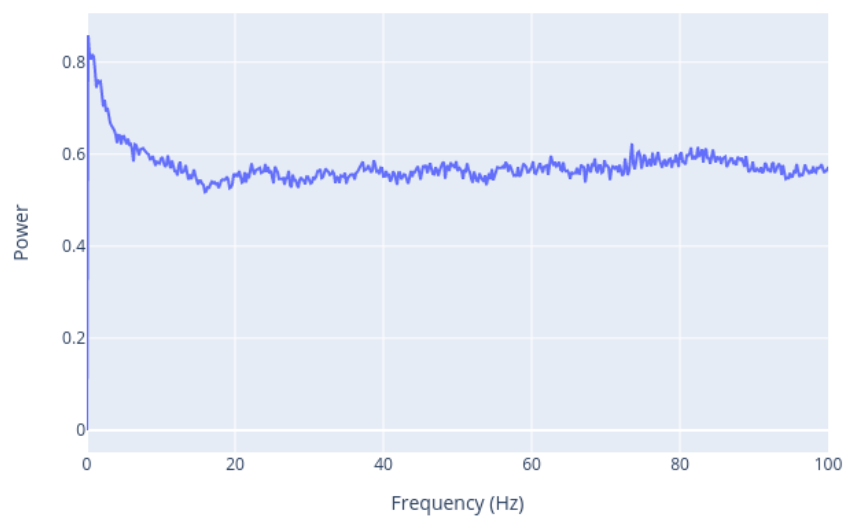


Figure 55: Mean spectrum. ClusterID 52. Click on the image to access its interactive version.

Cluster id: 52, Region: striatum

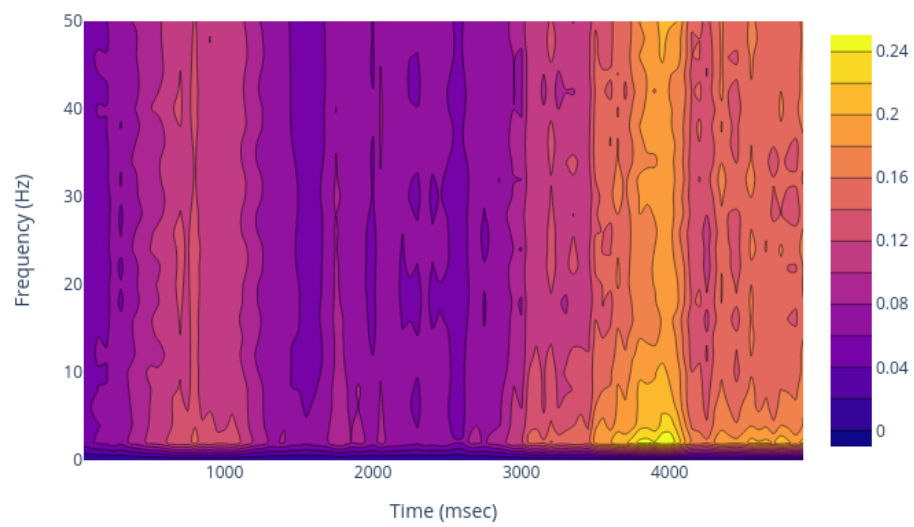


Figure 56: Spectrogram. ClusterID 52. Click on the image to access its interactive version.

Cluster id: 58, Region: striatum

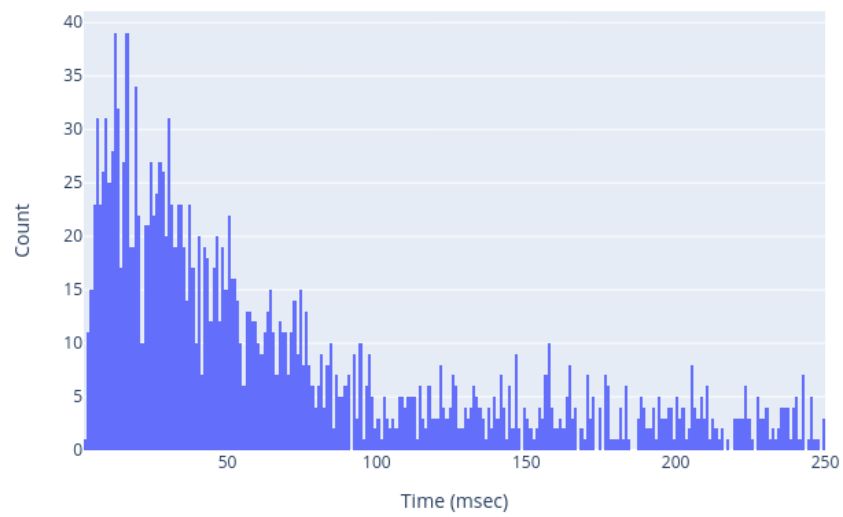


Figure 57: Inter-spike interval histogram. ClusterID 58. Click on the image to access its interactive version.

Cluster id: 58, Region: striatum

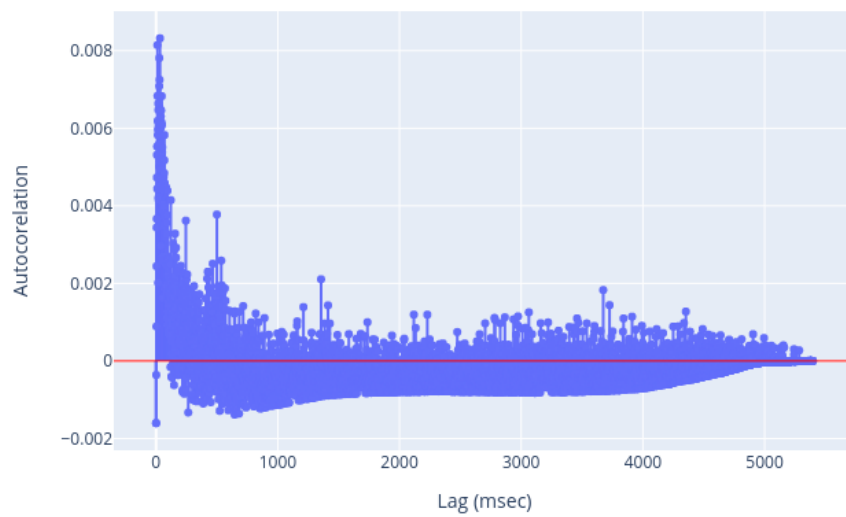


Figure 58: Mean autocorrelation function. ClusterID 58. Click on the image to access its interactive version.

Cluster id: 58, Region: striatum

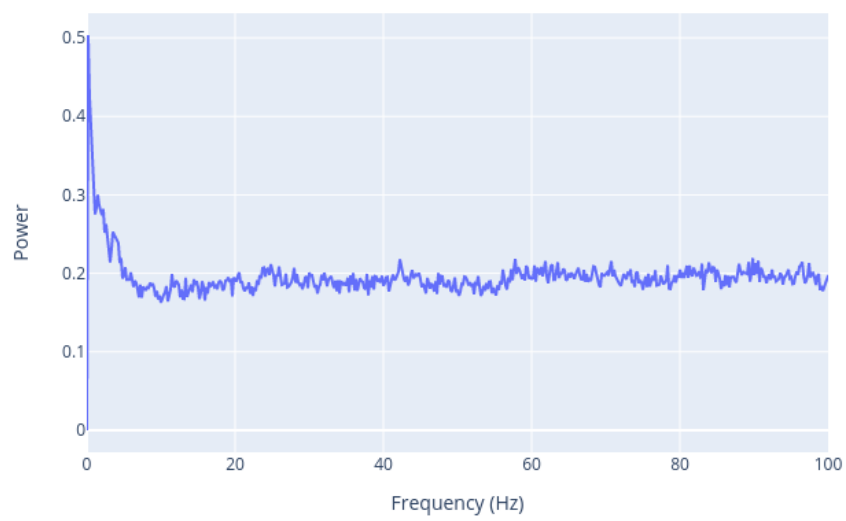


Figure 59: Mean spectrum. ClusterID 58. Click on the image to access its interactive version.

Cluster id: 58, Region: striatum

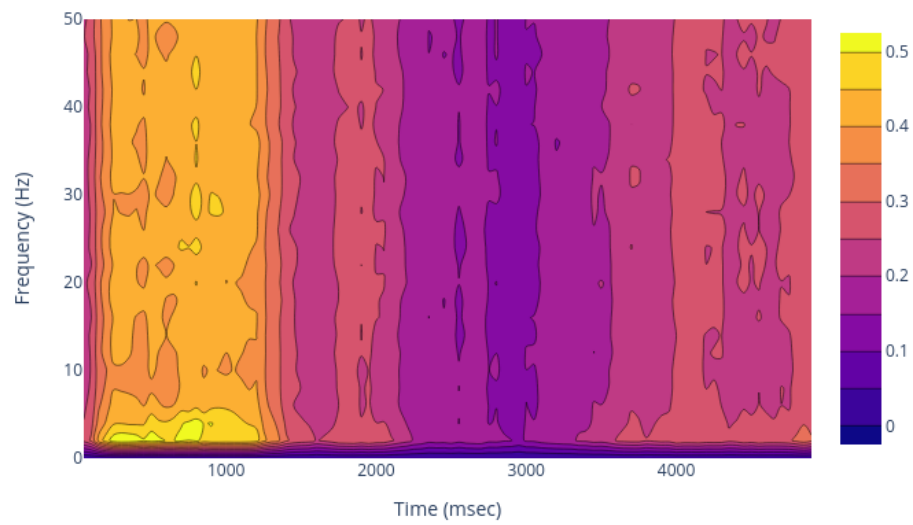


Figure 60: Spectrogram. ClusterID 58. Click on the image to access its interactive version.



Cluster id: 66, Region: striatum

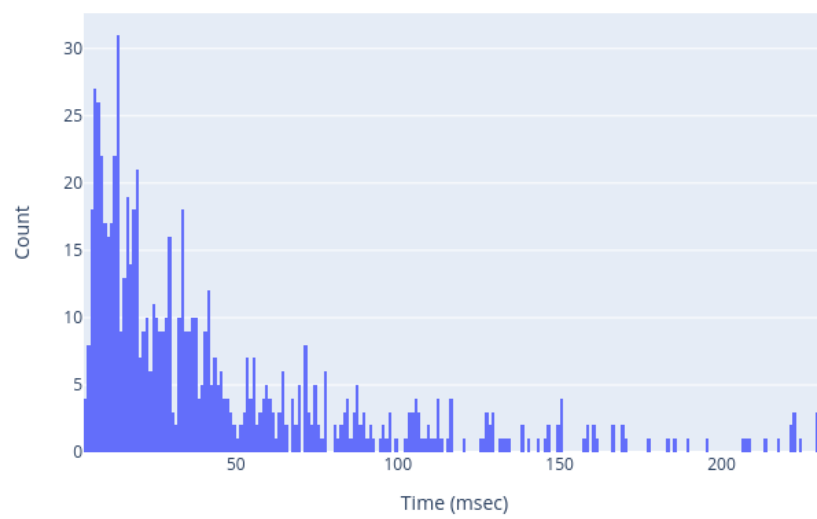


Figure 61: Inter-spike interval histogram. ClusterID 66. Click on the image to access its interactive version.

Cluster id: 66, Region: striatum

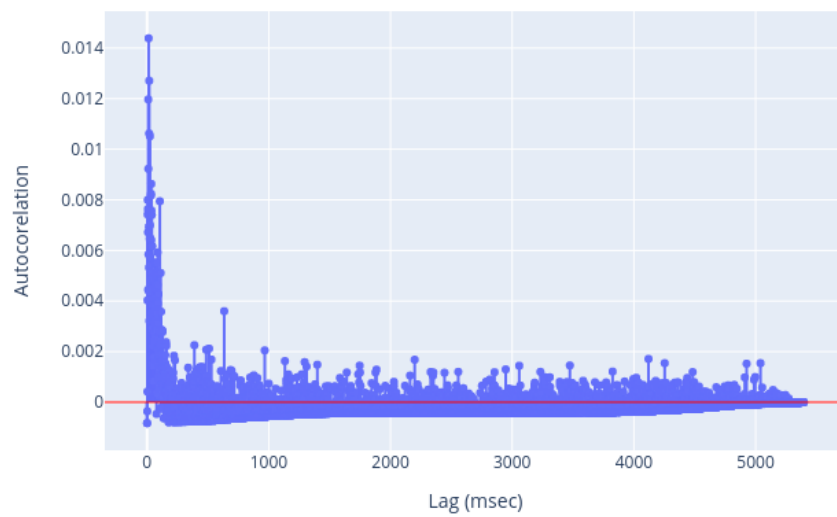


Figure 62: Mean autocorrelation function. ClusterID 66. Click on the image to access its interactive version.

Cluster id: 66, Region: striatum

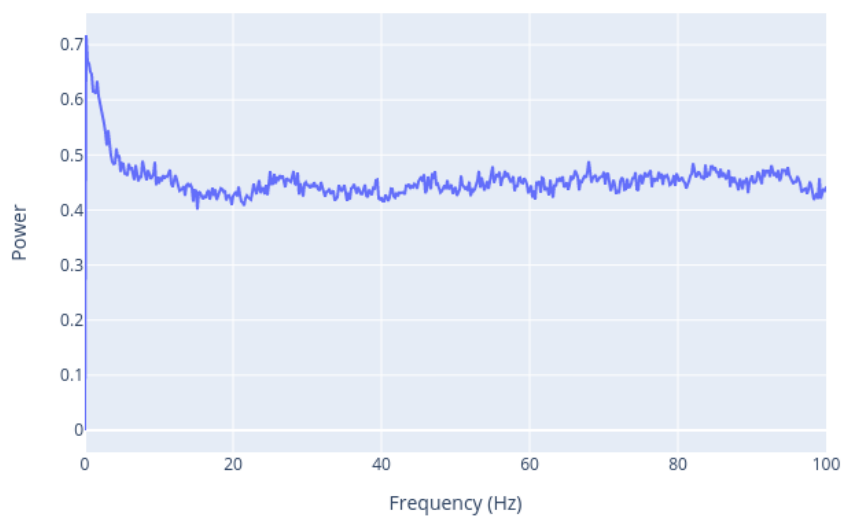


Figure 63: Mean spectrum. ClusterID 66. Click on the image to access its interactive version.

Cluster id: 66, Region: striatum

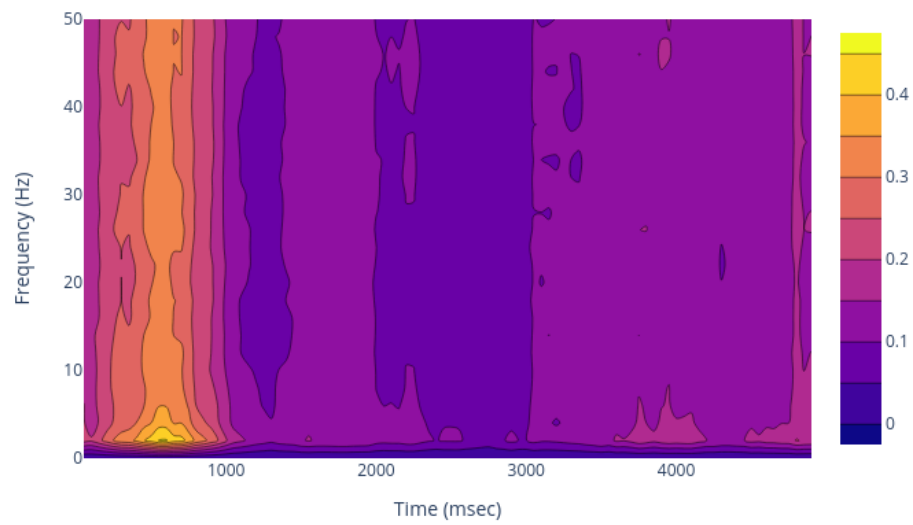


Figure 64: Spectrogram. ClusterID 66. Click on the image to access its interactive version.

Cluster id: 72, Region: striatum

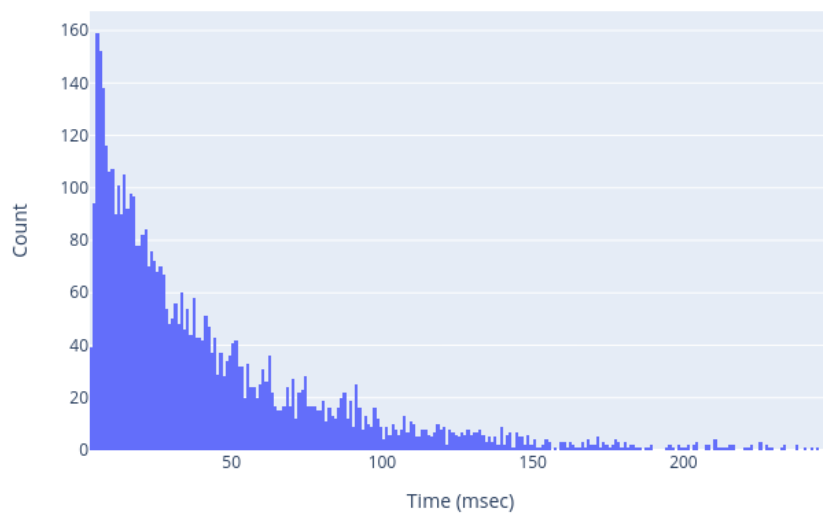


Figure 65: Inter-spike interval histogram. ClusterID 72. Click on the image to access its interactive version.

Cluster id: 72, Region: striatum

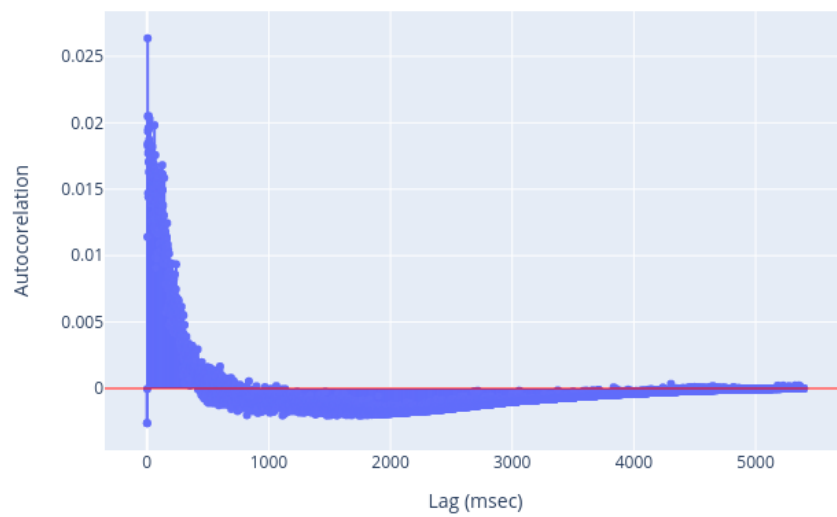


Figure 66: Mean autocorrelation function. ClusterID 72. Click on the image to access its interactive version.

Cluster id: 72, Region: striatum

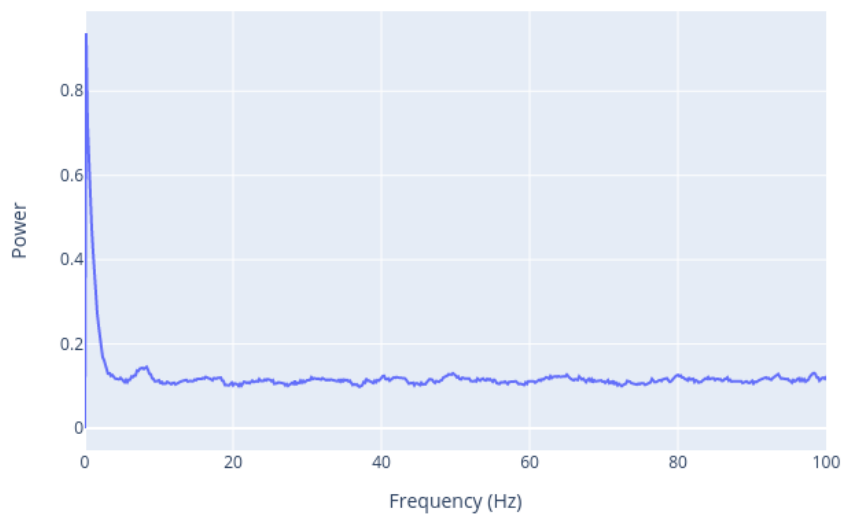


Figure 67: Mean spectrum. ClusterID 72. Click on the image to access its interactive version.

Cluster id: 72, Region: striatum

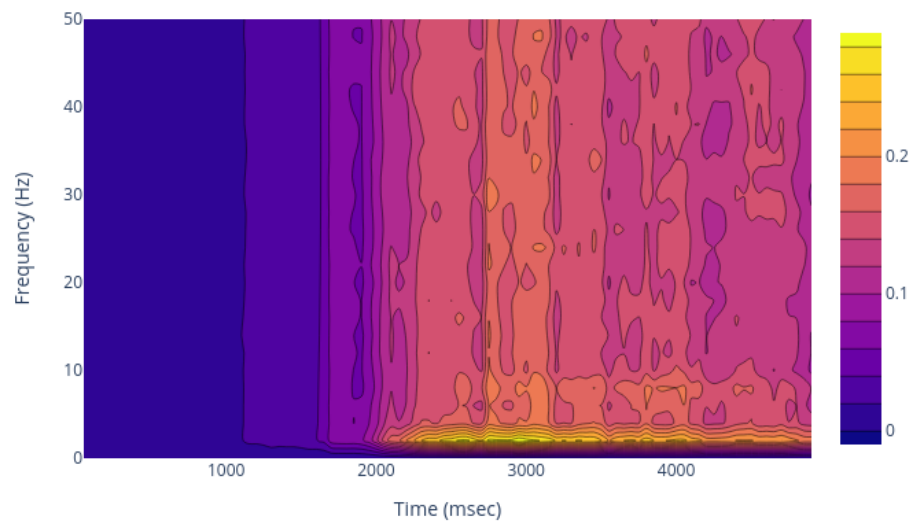


Figure 68: Spectrogram. ClusterID 72. Click on the image to access its interactive version.