

--- 各ファイルの処理を開始 ---

--- 全てのファイルの処理が完了しました ---

--- データの分析を開始 ---

全データを1つのDataFrameに結合しました。

総行数: 55968, 総列数: 27

--- データ概要 ---

<class 'pandas.core.frame.DataFrame'>

RangeIndex: 55968 entries, 0 to 55967

Data columns (total 27 columns):

#	Column	Non-Null Count	Dtype
0	label	55968 non-null	object
1	Loudness_sma3	55968 non-null	float64
2	alphaRatio_sma3	55968 non-null	float64
3	hammarbergIndex_sma3	55968 non-null	float64
4	slope0-500_sma3	55968 non-null	float64
5	slope500-1500_sma3	55968 non-null	float64
6	spectralFlux_sma3	55968 non-null	float64
7	mfcc1_sma3	55968 non-null	float64
8	mfcc2_sma3	55968 non-null	float64
9	mfcc3_sma3	55968 non-null	float64
10	mfcc4_sma3	55968 non-null	float64
11	F0semitoneFrom27.5Hz_sma3nz	55968 non-null	float64
12	jitterLocal_sma3nz	55968 non-null	float64
13	shimmerLocaldB_sma3nz	55968 non-null	float64
14	HNRdBACF_sma3nz	55968 non-null	float64
15	logRelF0-H1-H2_sma3nz	55968 non-null	float64
16	logRelF0-H1-A3_sma3nz	55968 non-null	float64
17	F1frequency_sma3nz	55968 non-null	float64
18	F1bandwidth_sma3nz	55968 non-null	float64
19	F1amplitudeLogRelF0_sma3nz	55968 non-null	float64
20	F2frequency_sma3nz	55968 non-null	float64
21	F2bandwidth_sma3nz	55968 non-null	float64
22	F2amplitudeLogRelF0_sma3nz	55968 non-null	float64
23	F3frequency_sma3nz	55968 non-null	float64
24	F3bandwidth_sma3nz	55968 non-null	float64
25	F3amplitudeLogRelF0_sma3nz	55968 non-null	float64
26	condition	55968 non-null	int64

dtypes: float64(25), int64(1), object(1)

memory usage: 11.5+ MB

--- 基本統計量 (数値データ) ---

	Loudness_sma3	alphaRatio_sma3	hammarbergIndex_sma3	slope0-500_sma3	\
count	55968.000000	55968.000000	55968.000000	55968.000000	
mean	0.718270	-13.123006	22.052904	0.039664	
std	0.547922	8.505123	10.053308	0.050003	
min	0.116039	-40.714620	-24.848532	-0.134423	
25%	0.338168	-19.007551	15.725755	0.017051	
50%	0.553353	-13.058675	22.214703	0.045086	
75%	0.928875	-7.609874	29.364638	0.072548	
max	5.257342	20.210970	51.545338	0.179703	

	slope500-1500_sma3	spectralFlux_sma3	mfcc1_sma3	mfcc2_sma3	\
count	55968.000000	55968.000000	55968.000000	55968.000000	
mean	-0.017052	0.391293	21.429136	6.986493	
std	0.012884	0.463161	11.576291	11.231518	

min	-0.074042	0.005333	-28.057710	-50.944378
25%	-0.024804	0.103617	14.448816	0.591231
50%	-0.015997	0.235320	22.222299	7.793074
75%	-0.008342	0.493994	29.791421	14.111669
max	0.040735	9.534186	49.514538	49.428295

	mfcc3_sma3	mfcc4_sma3	...	F1frequency_sma3nz	\
count	55968.000000	55968.000000	...	55968.000000	
mean	6.921789	-1.698756	...	586.056393	
std	13.139787	13.550345	...	242.820324	
min	-46.006910	-66.947330	...	66.418526	
25%	-1.366375	-9.314980	...	386.189475	
50%	6.871393	-0.951172	...	524.222015	
75%	15.924132	6.579317	...	754.686700	
max	61.243010	51.008530	...	1709.840200	

	F1bandwidth_sma3nz	F1amplitudeLogRelF0_sma3nz	F2frequency_sma3nz	\
count	55968.000000	55968.000000	55968.000000	
mean	1265.198708	-57.243632	1606.022701	
std	242.570960	81.626937	293.419041	
min	6.900076	-201.000000	742.385250	
25%	1122.270450	-132.193705	1374.715100	
50%	1263.389000	-11.833960	1557.889450	
75%	1408.124425	-0.021245	1802.760175	
max	3608.028000	42.134445	2837.335200	

	F2bandwidth_sma3nz	F2amplitudeLogRelF0_sma3nz	F3frequency_sma3nz	\
count	55968.000000	55968.000000	55968.000000	
mean	985.931475	-66.626224	2626.492020	
std	339.701013	75.526130	336.503788	
min	1.288697	-201.000000	1470.731800	
25%	799.696225	-134.938348	2354.990875	
50%	962.081980	-27.205845	2576.151250	
75%	1131.769850	-15.371125	2867.543475	
max	7980.276000	37.967850	4013.250000	

	F3bandwidth_sma3nz	F3amplitudeLogRelF0_sma3nz	condition
count	55968.000000	55968.000000	55968.000000
mean	843.692078	-70.131069	0.495712
std	369.337411	73.458451	0.499986
min	8.079284	-201.000000	0.000000
25%	633.965875	-136.099983	0.000000
50%	781.581900	-31.638928	0.000000
75%	962.374075	-20.675997	1.000000
max	6376.009300	48.062687	1.000000

[8 rows x 26 columns]

--- condition別 の基本統計量比較 ---

condition		0	1
Loudness_sma3	count	28224.000000	27744.000000
	mean	0.716685	0.719883
	std	0.532821	0.562874
	min	0.116039	0.116737
	25%	0.342974	0.333542
...
F3amplitudeLogRelF0_sma3nz	min	-201.000000	-201.000000
	25%	-82.850520	-140.120070
	50%	-30.662399	-32.850834
	75%	-20.214541	-21.198399

max

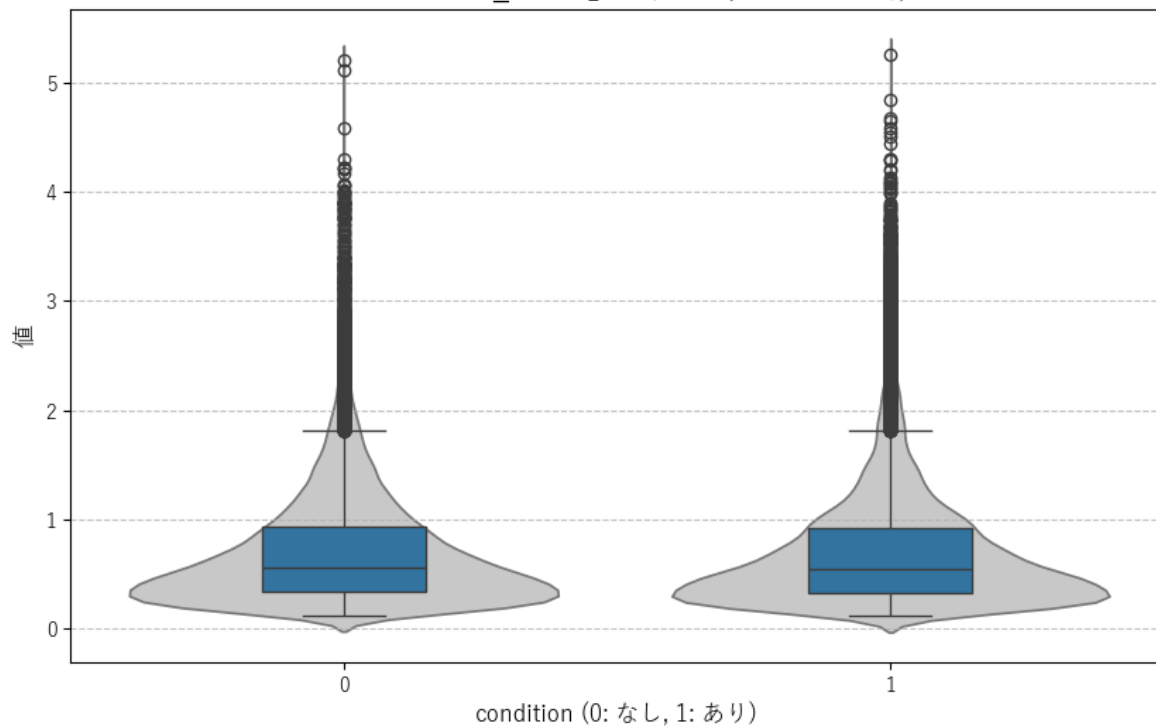
39.710075

48.062687

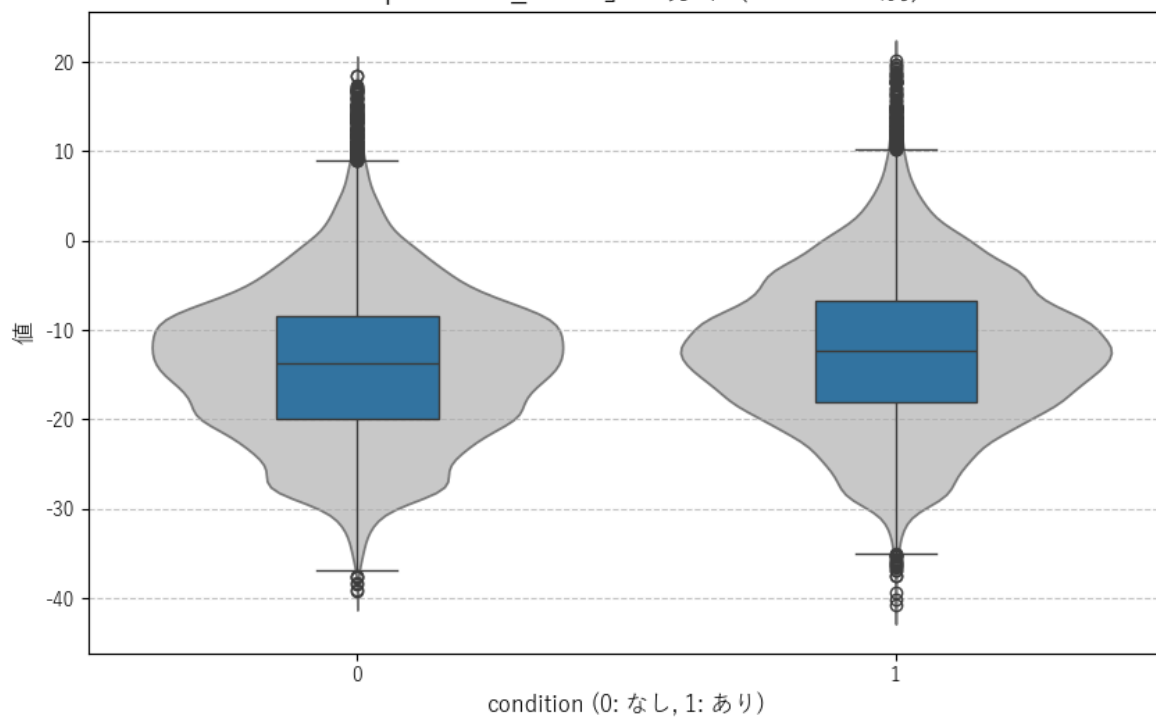
[200 rows x 2 columns]

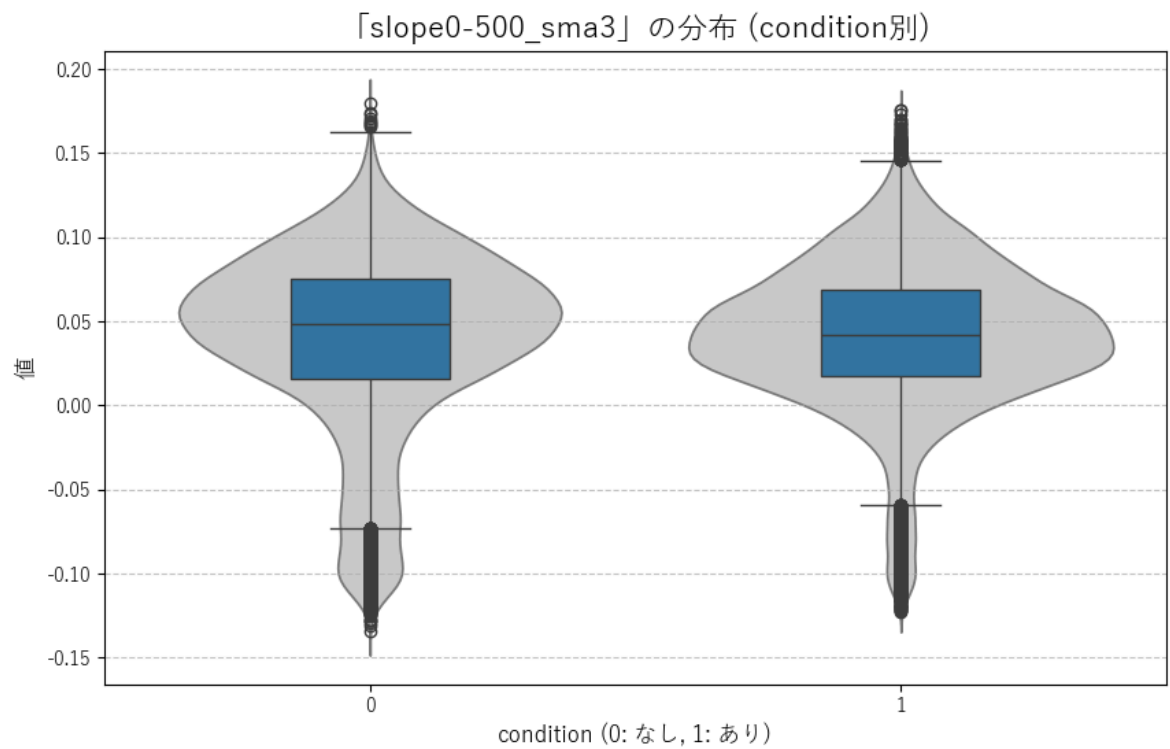
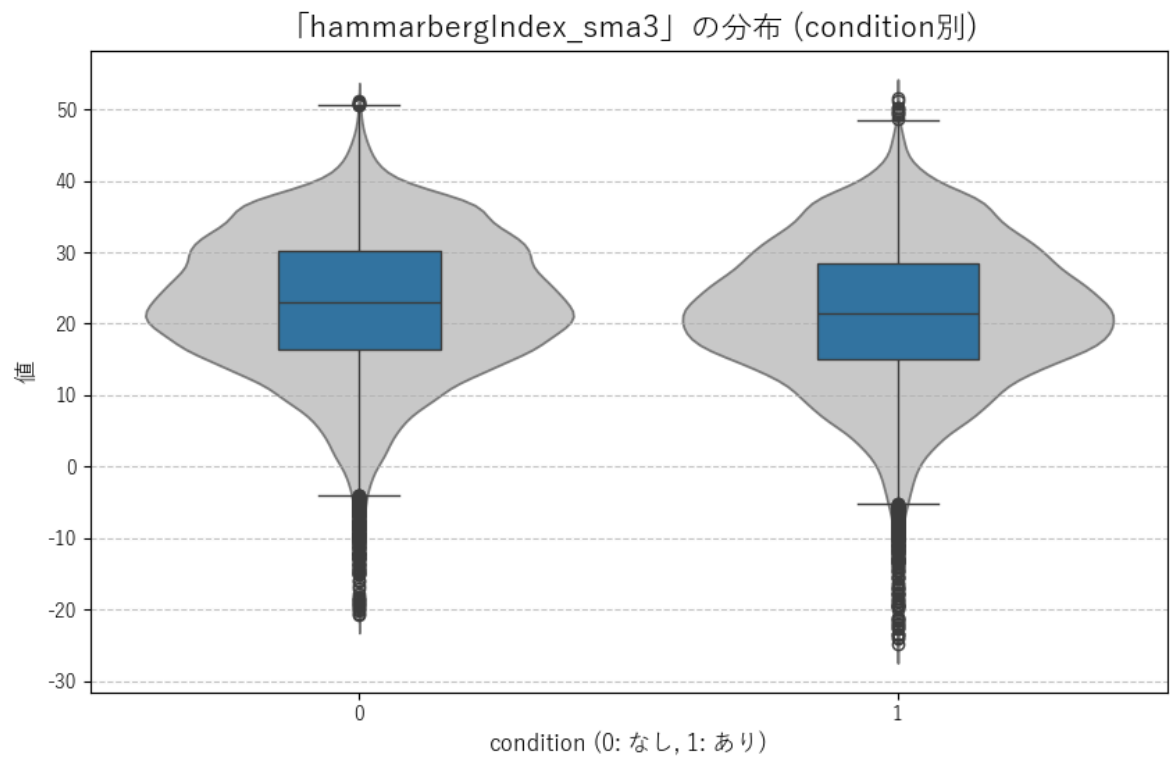
--- 特徴量ごとの分布比較 (by condition) ---

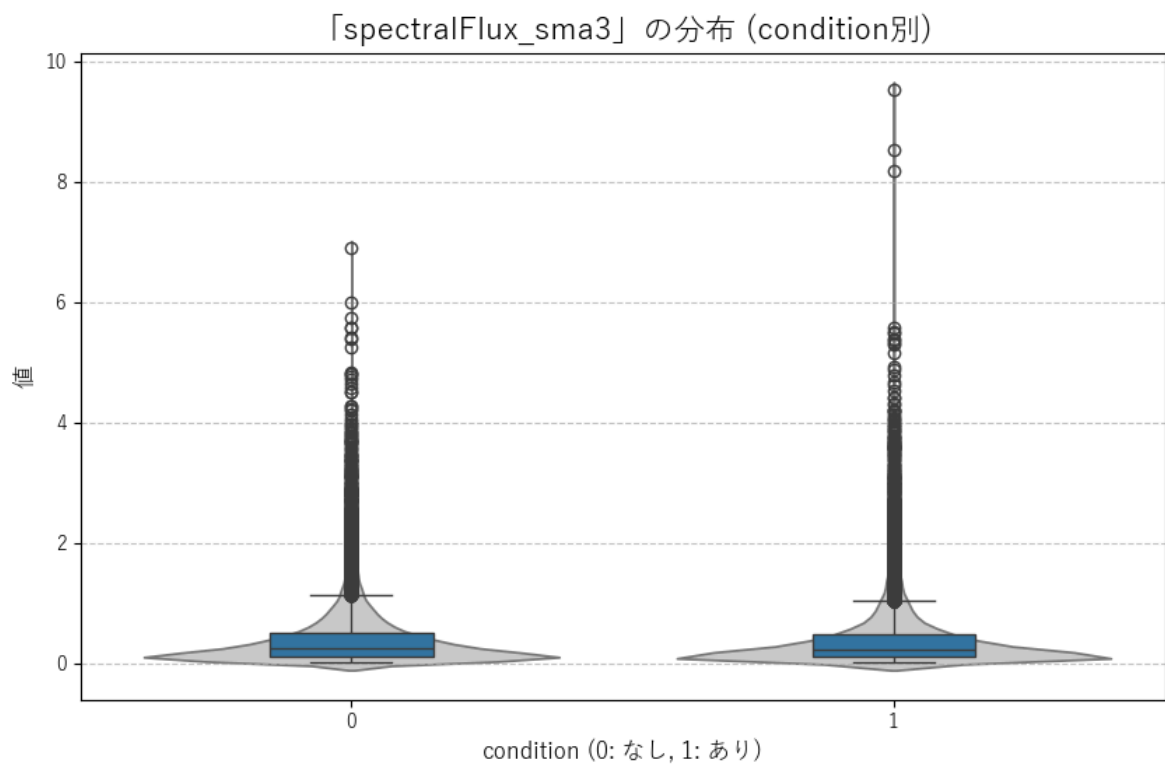
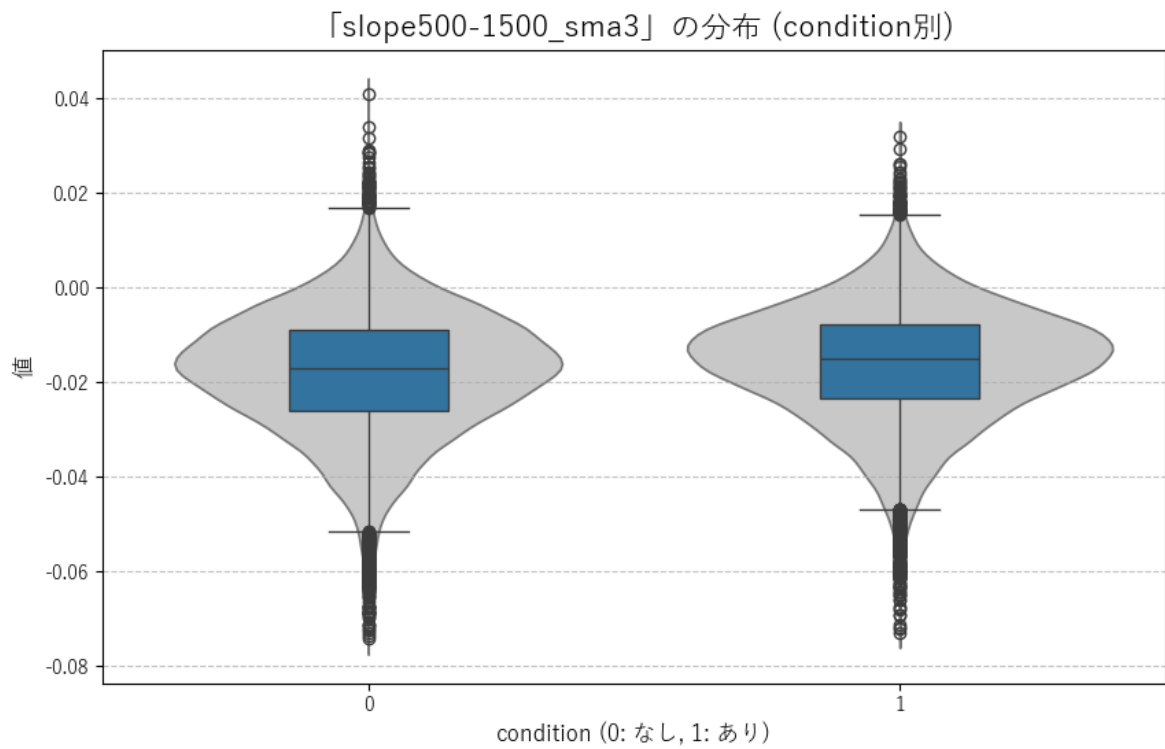
「Loudness_sma3」の分布 (condition別)

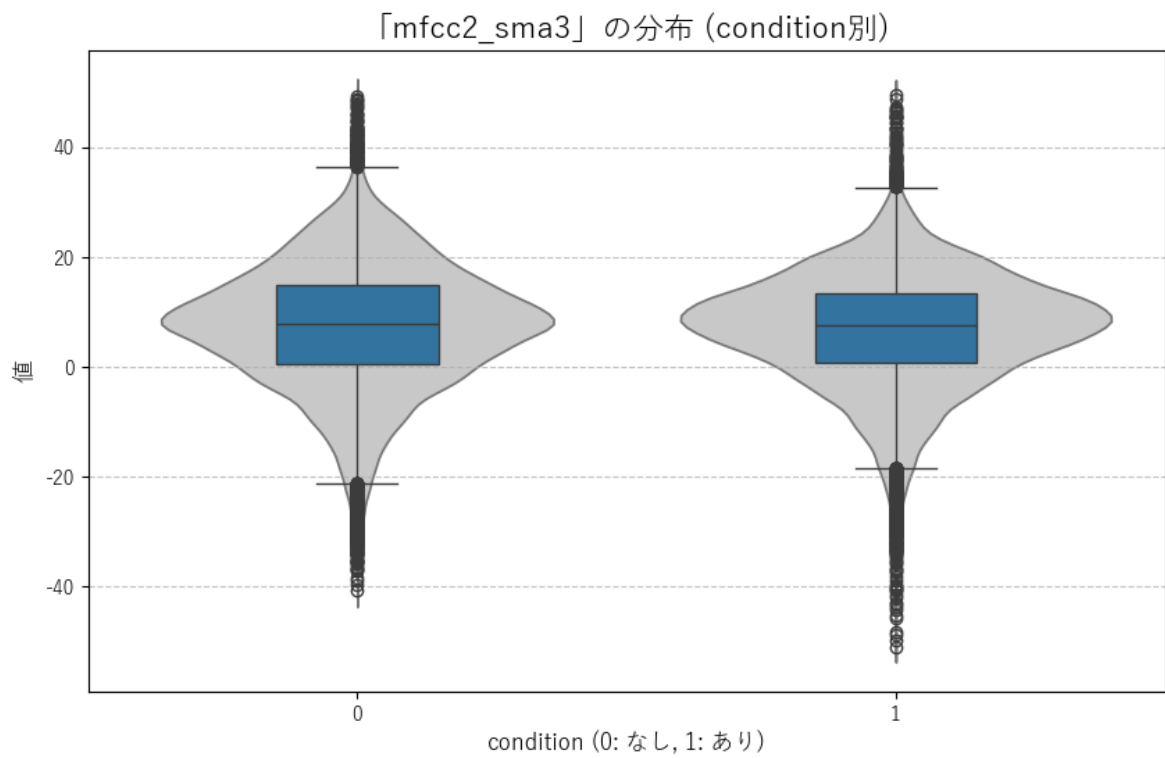
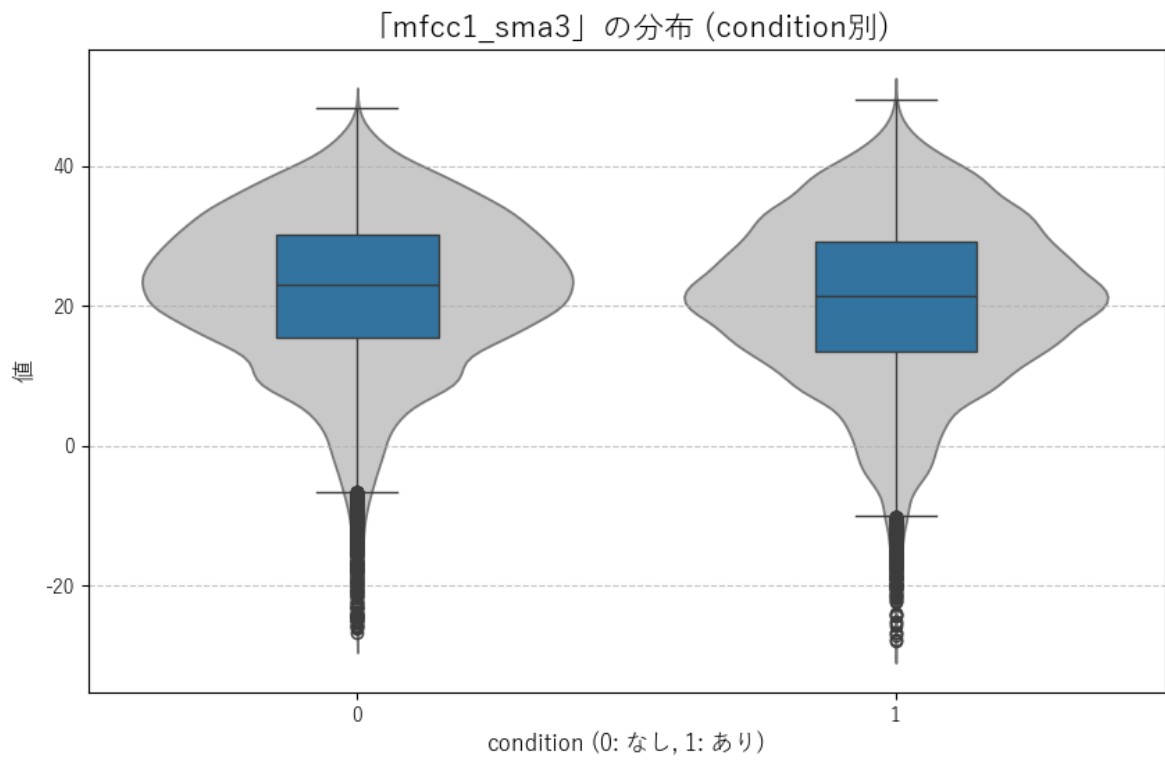


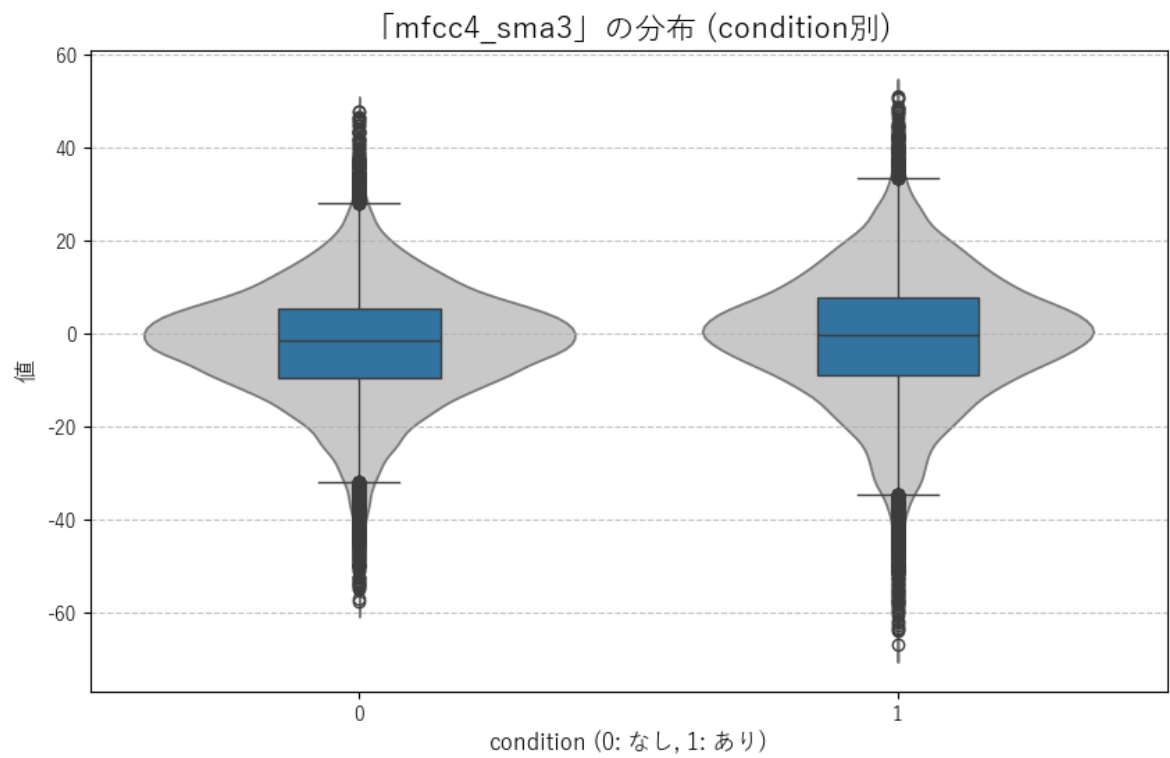
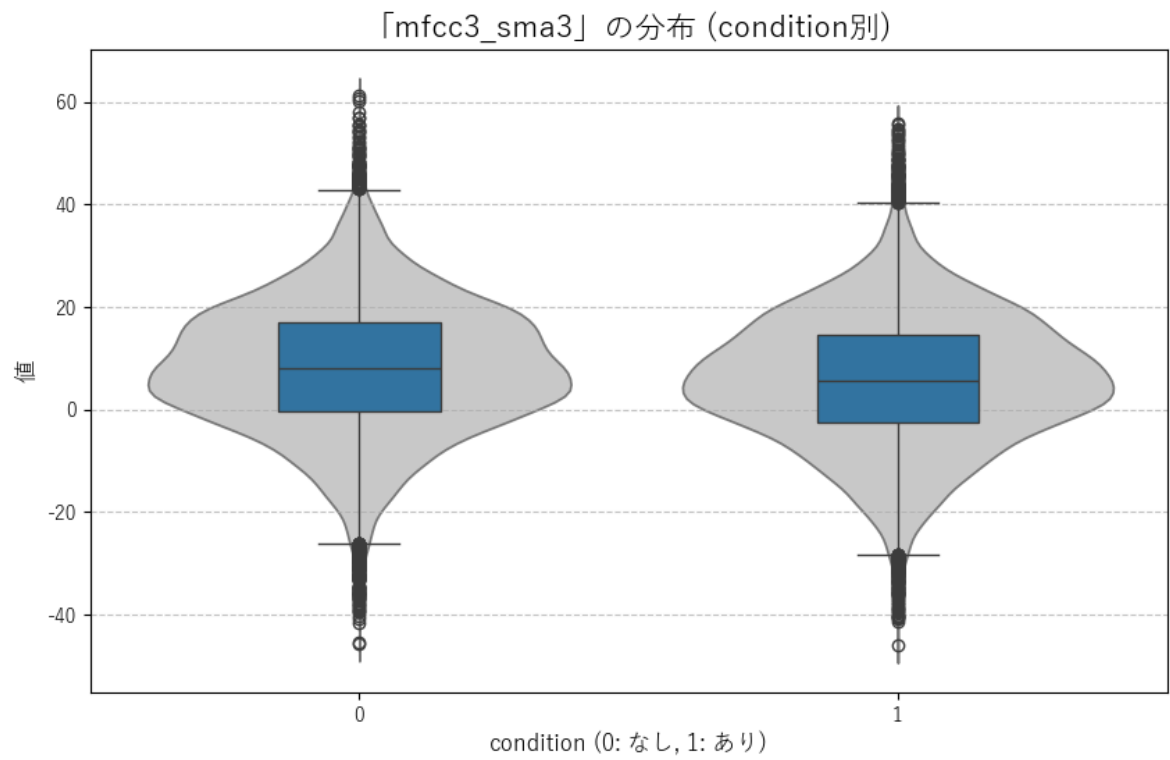
「alphaRatio_sma3」の分布 (condition別)

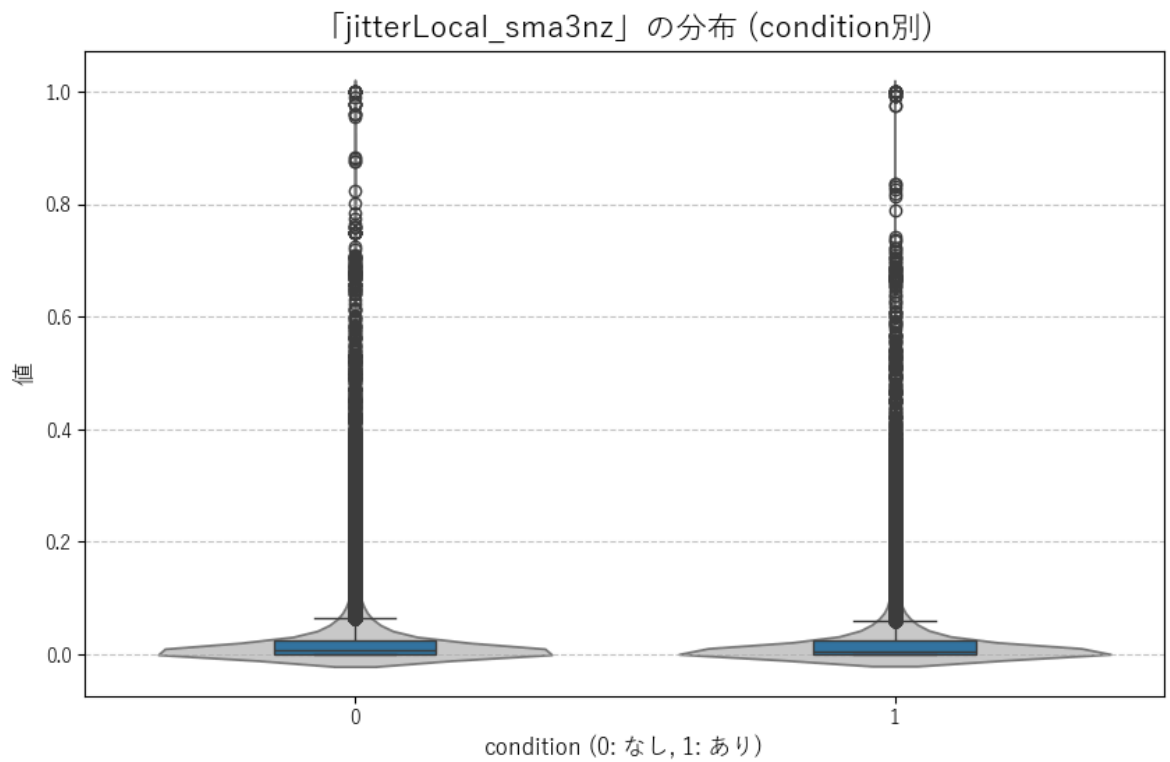
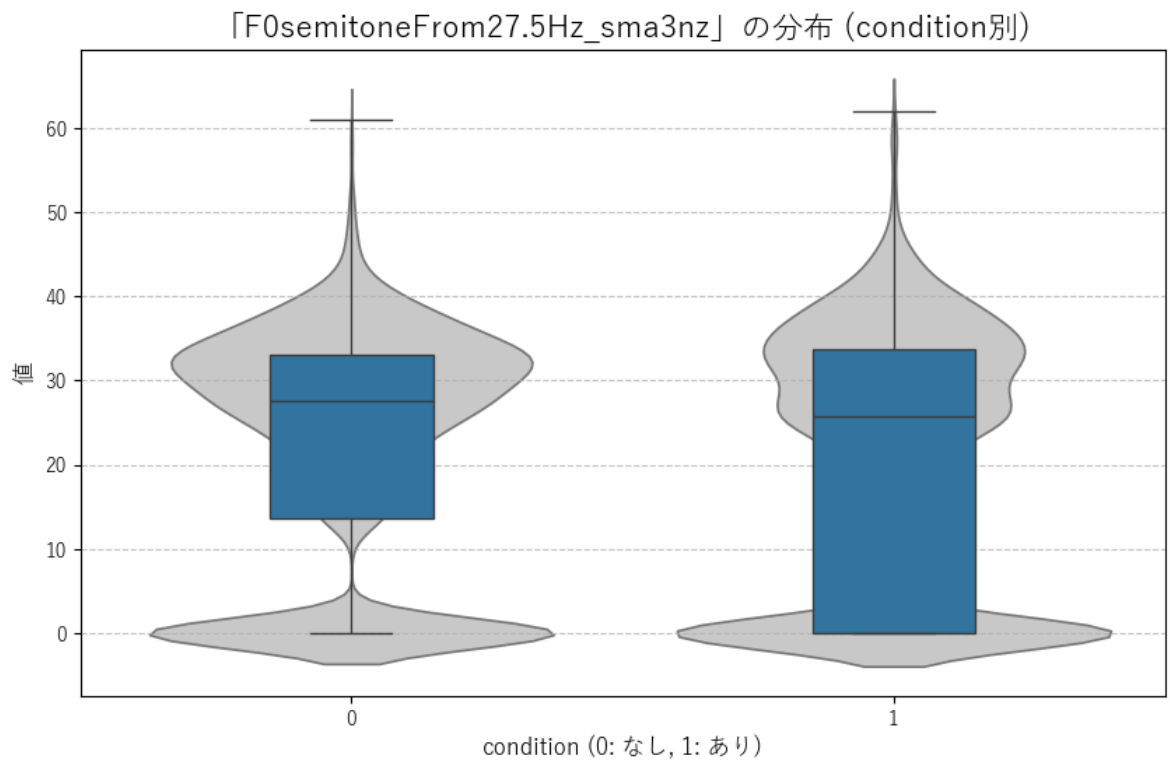


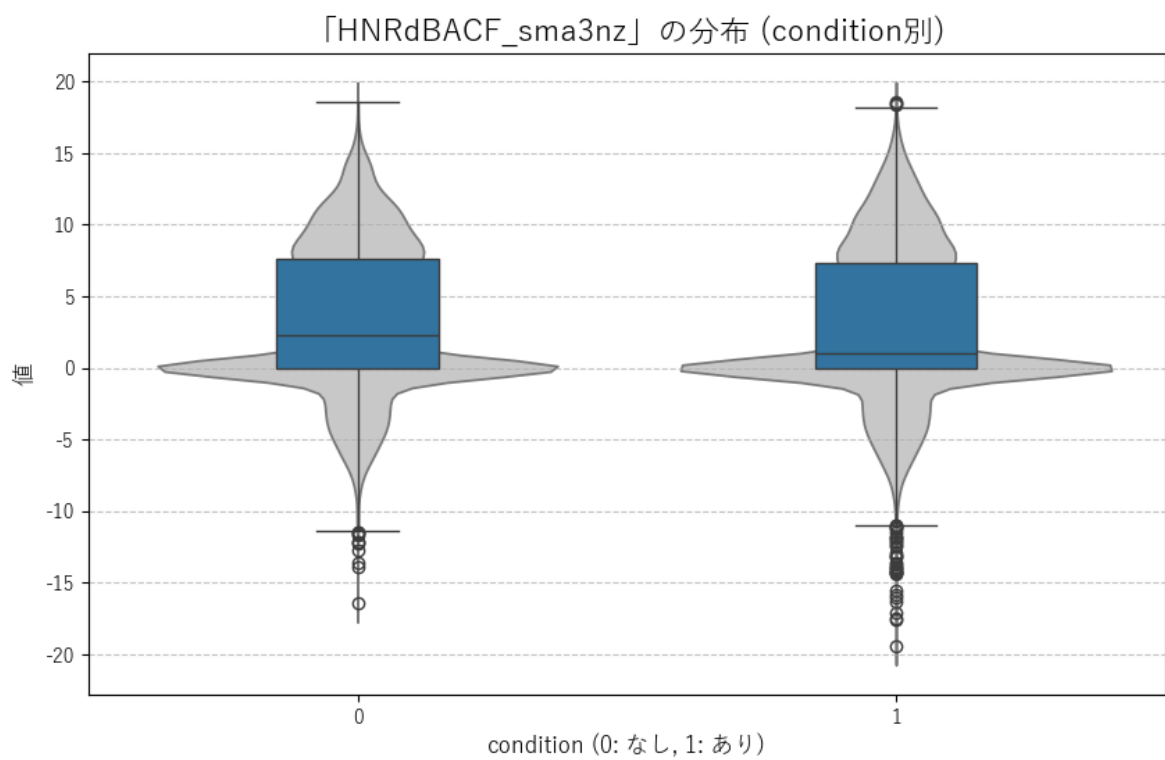
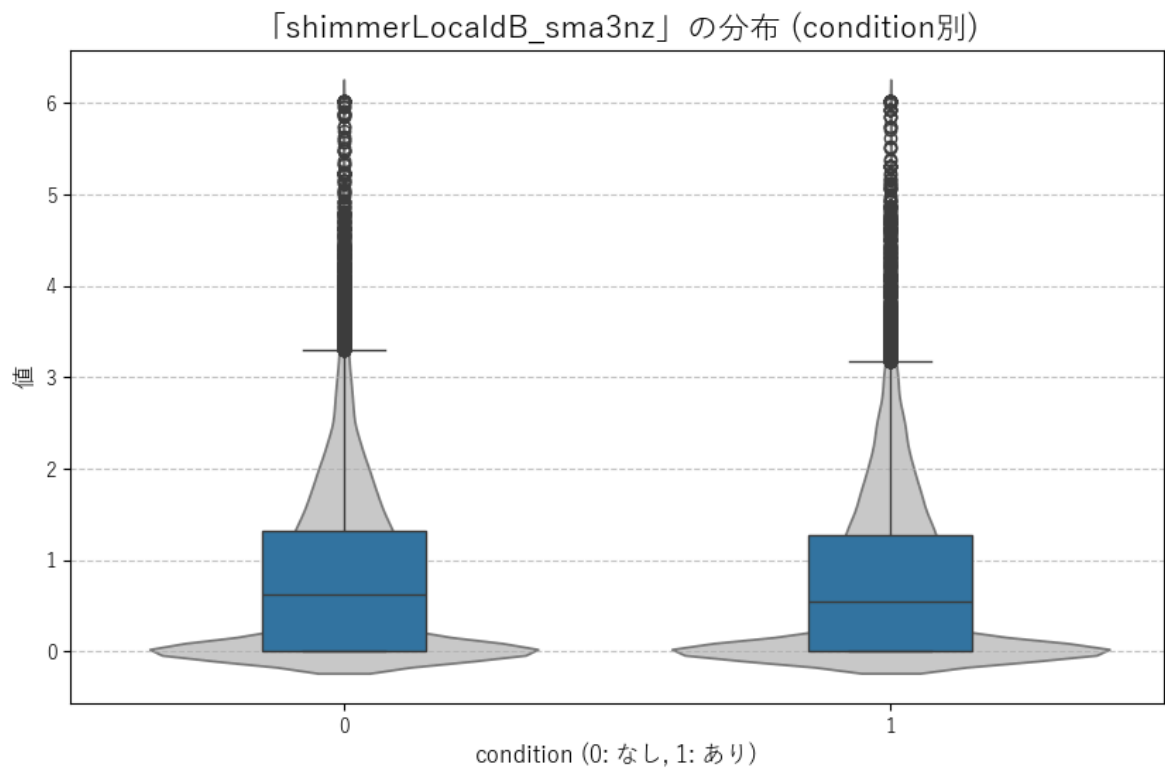


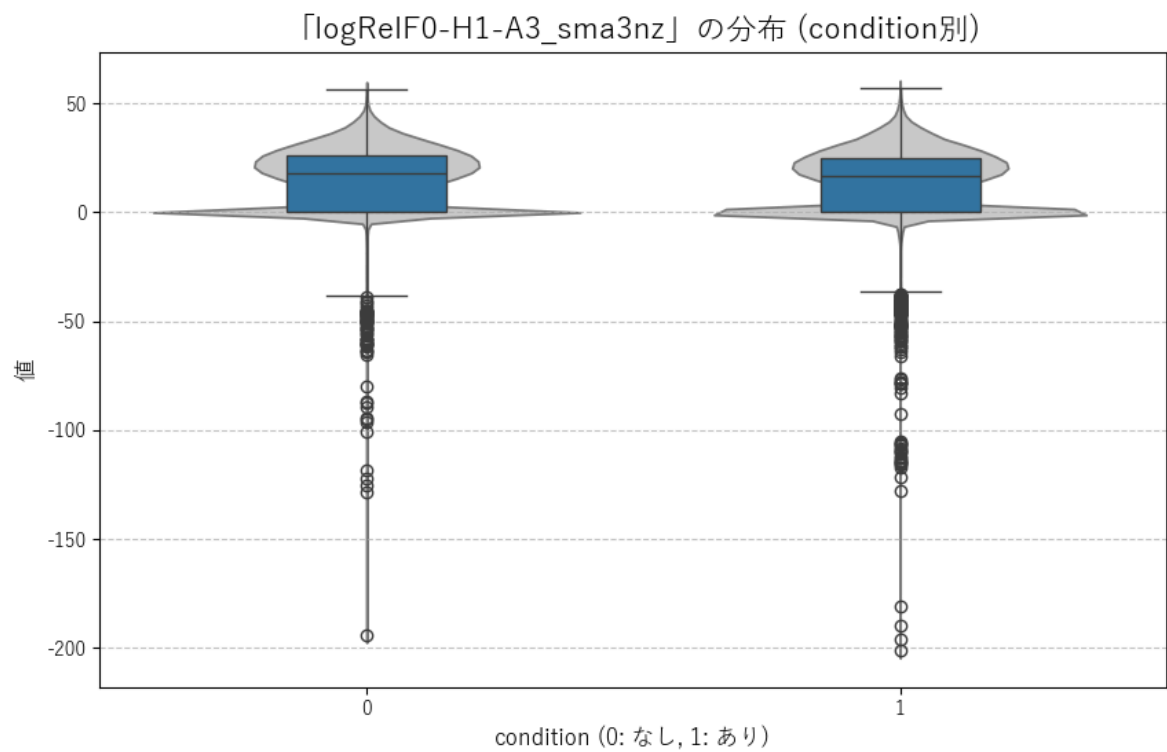
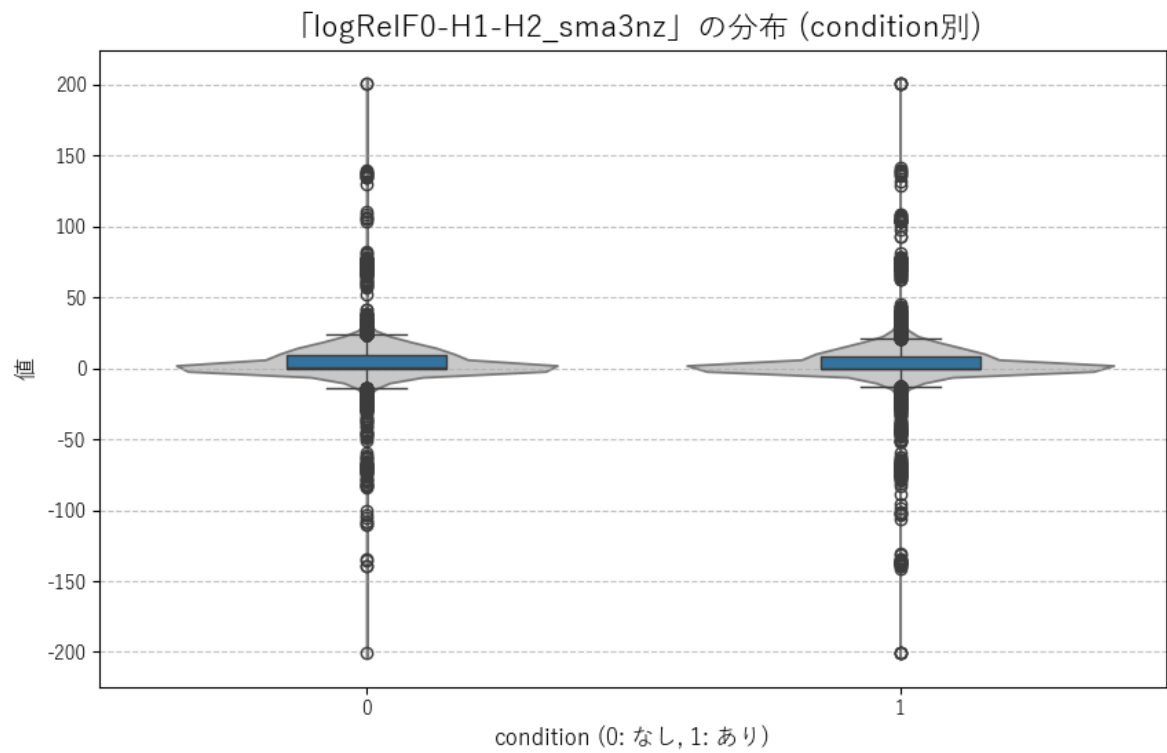


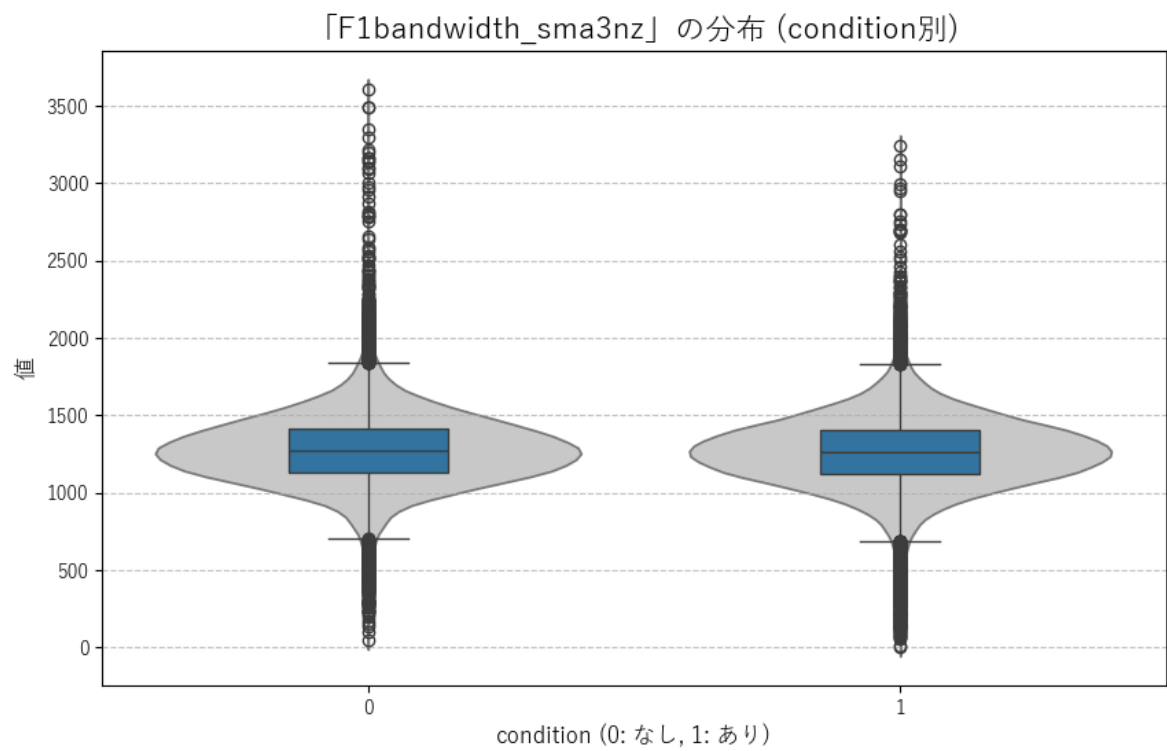
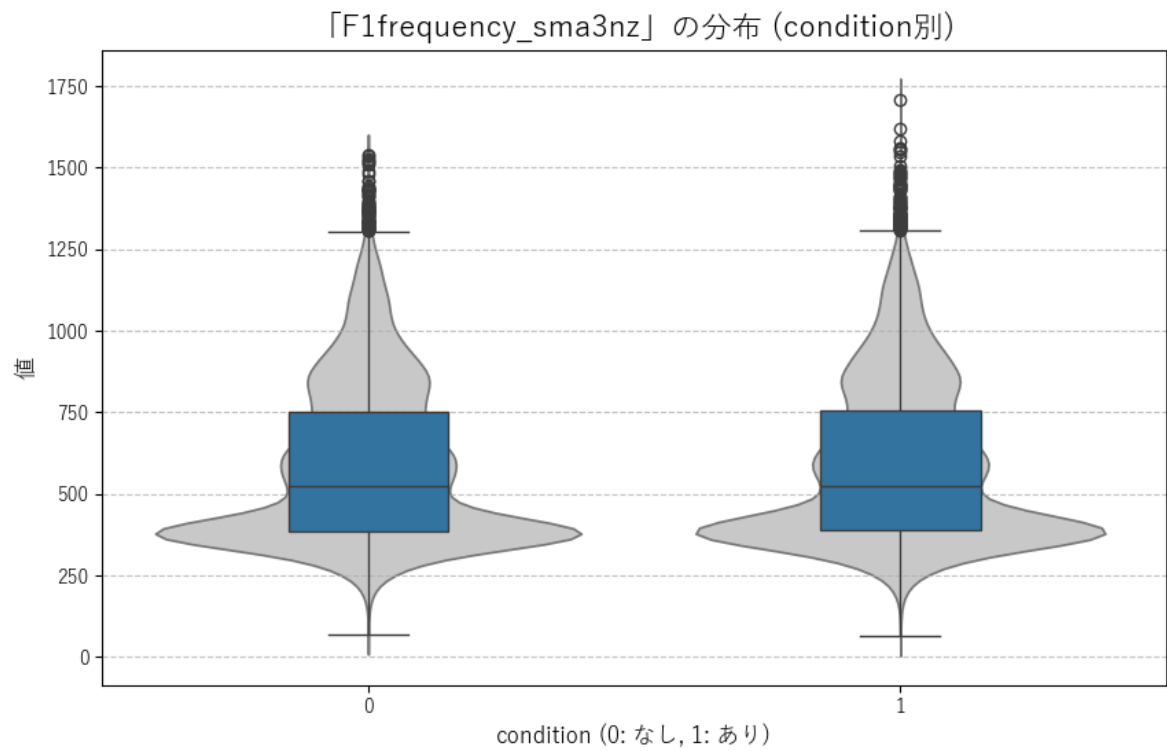


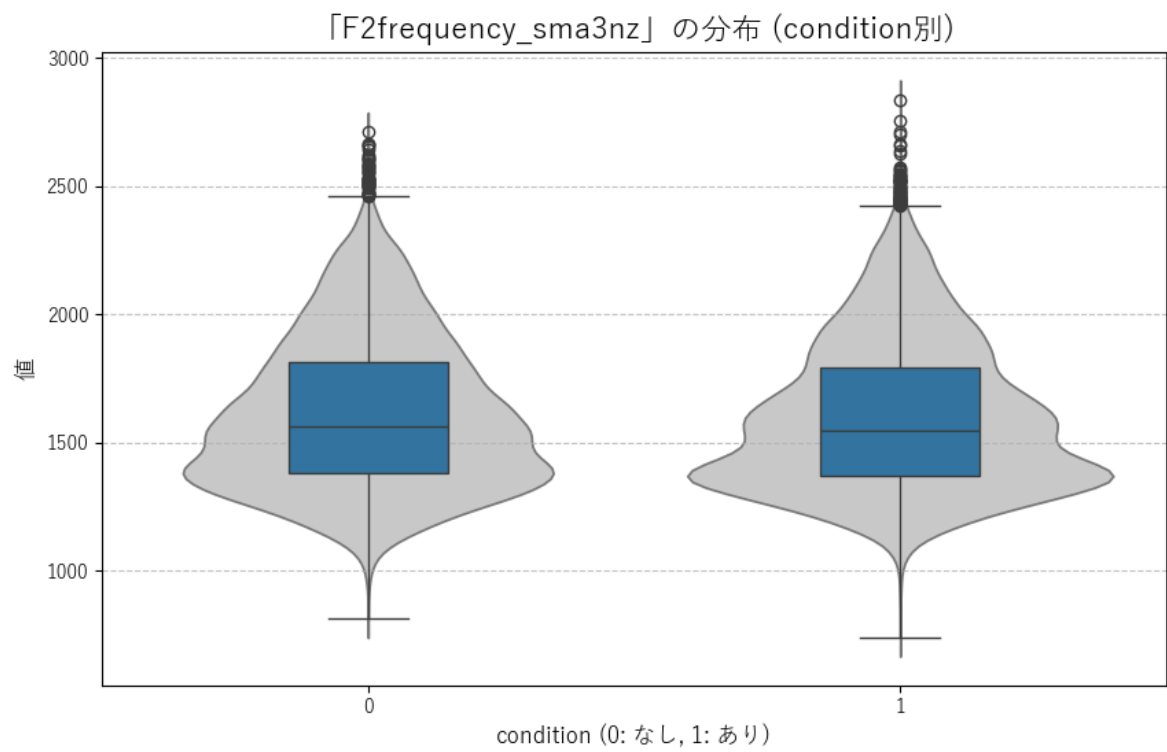
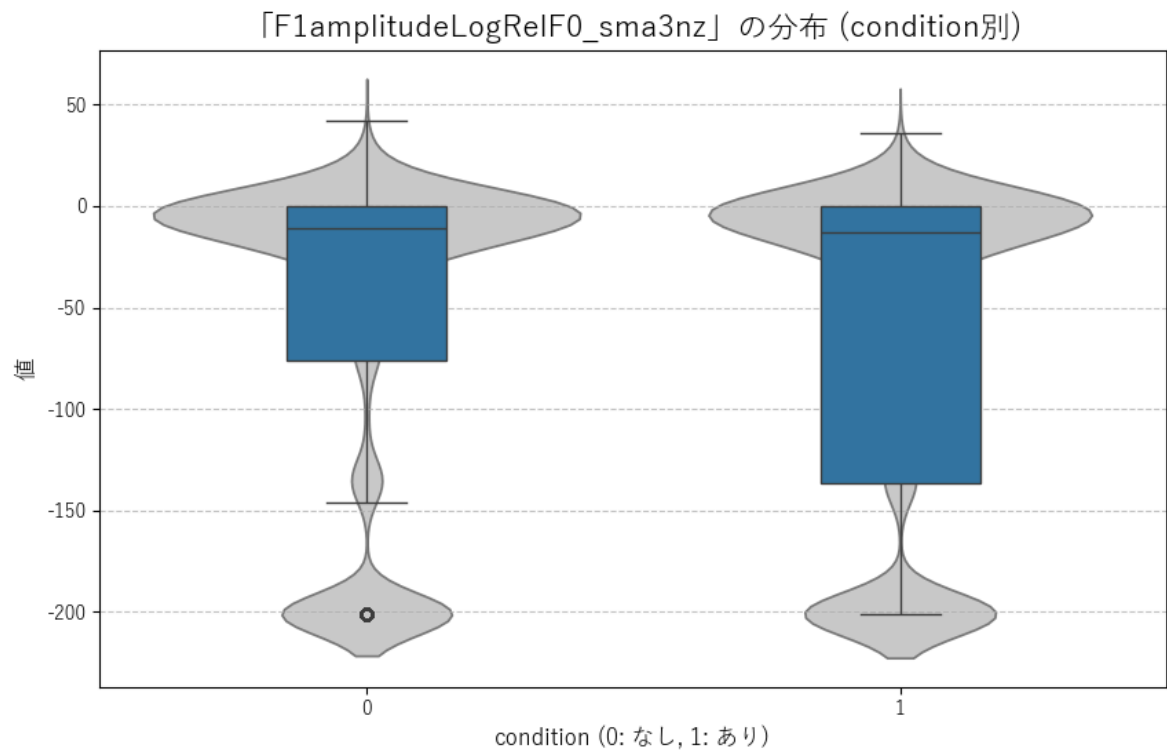


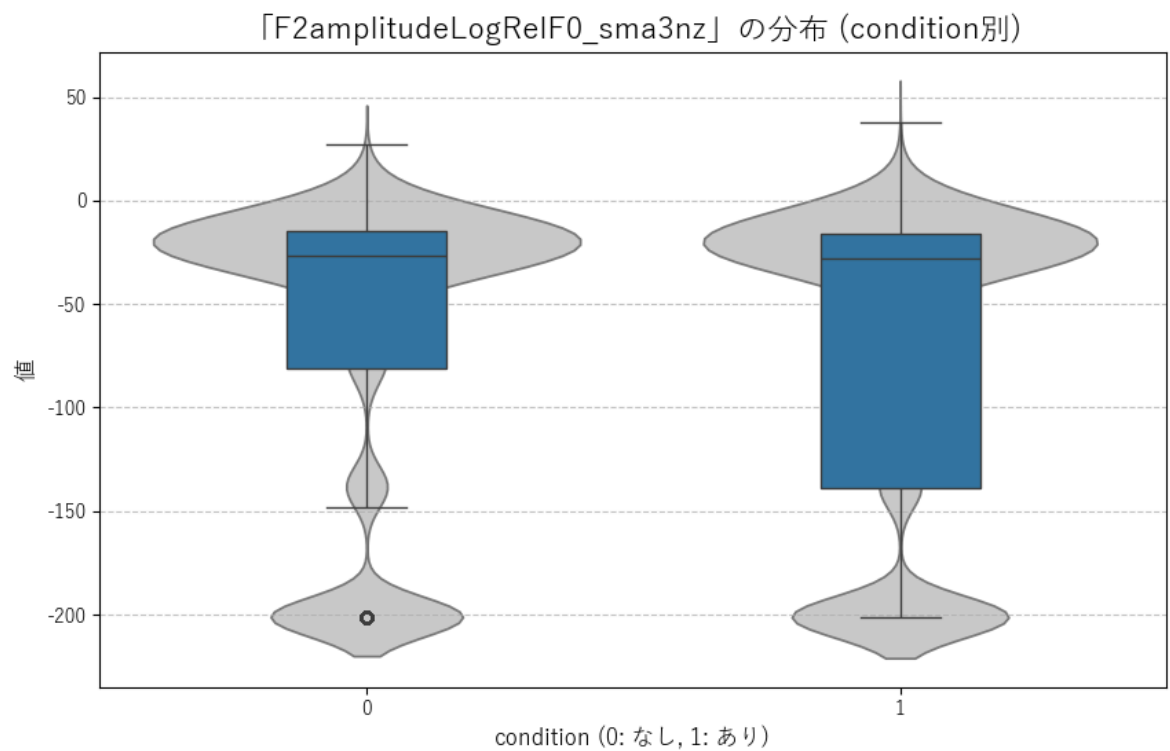
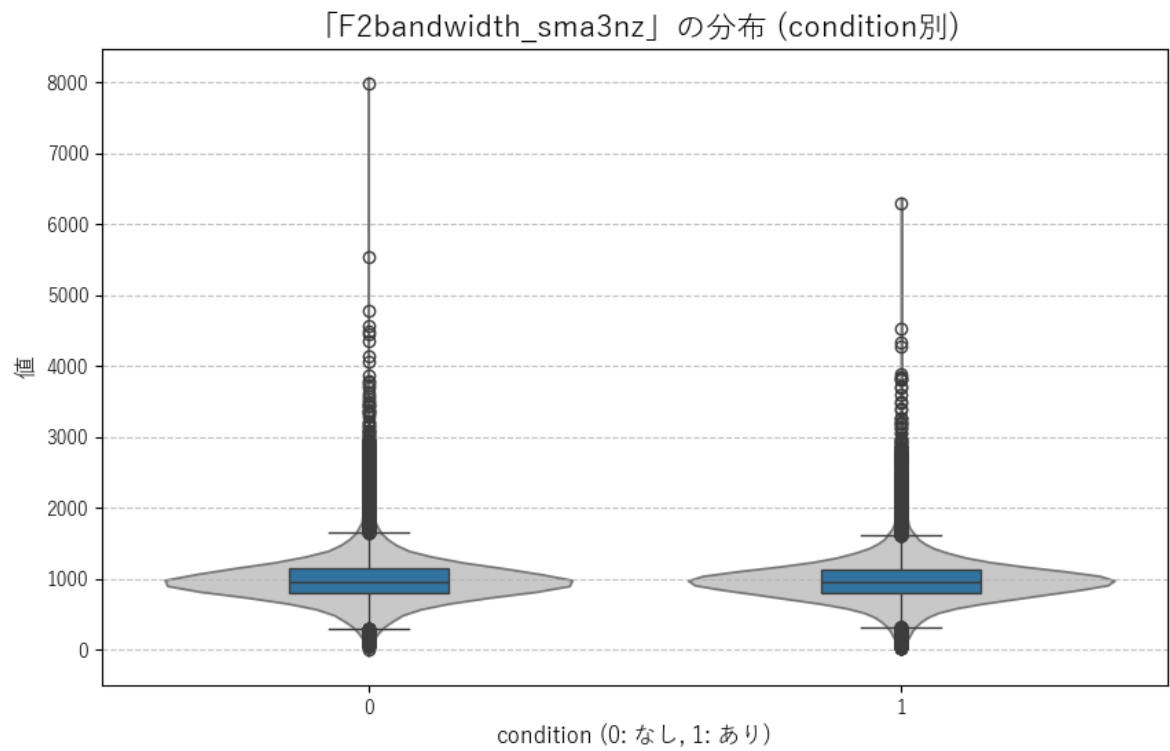


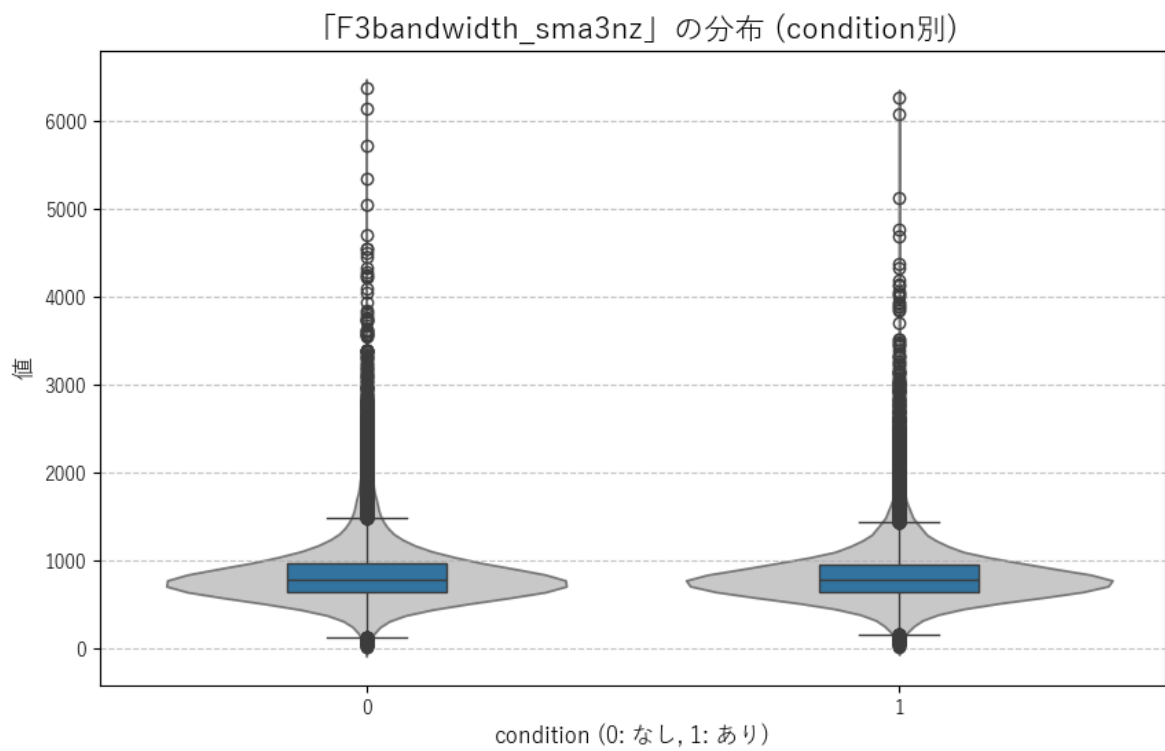
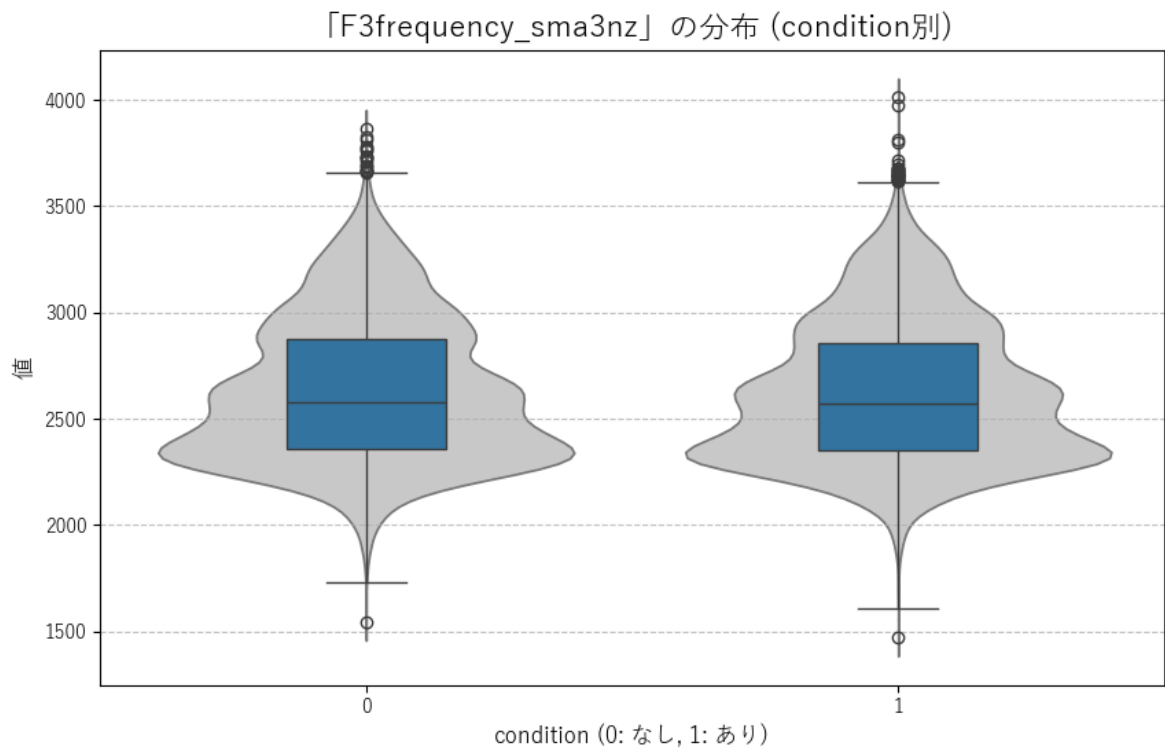


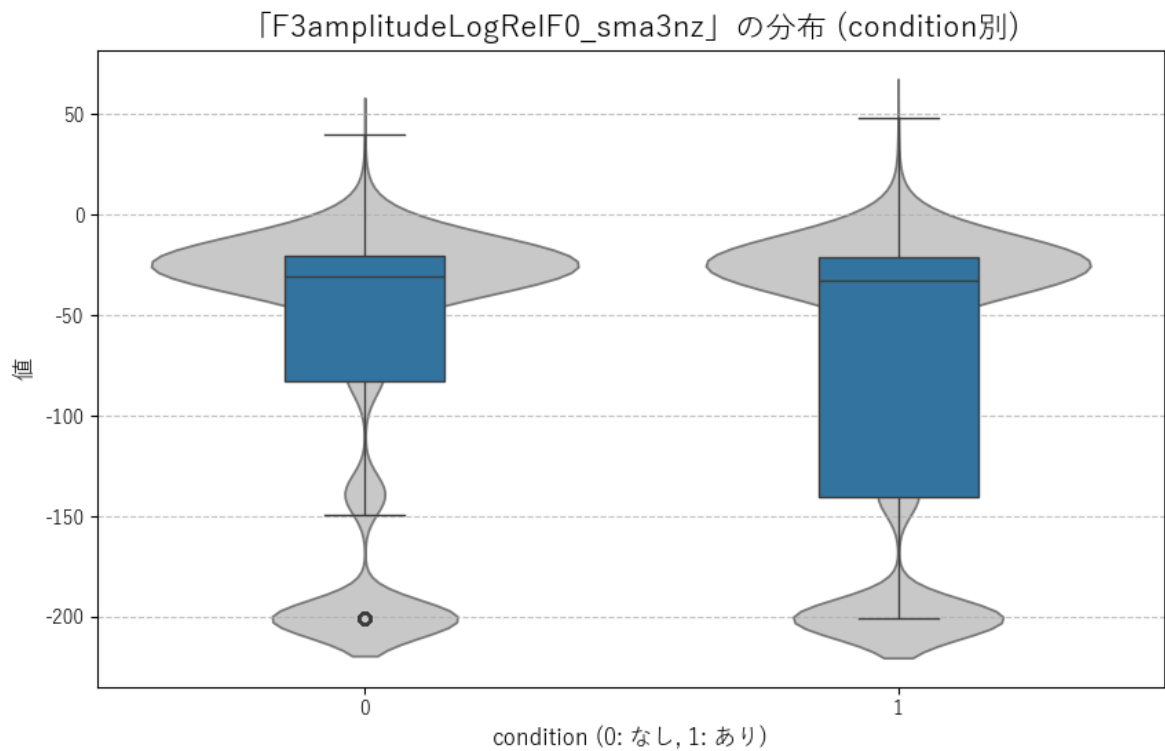




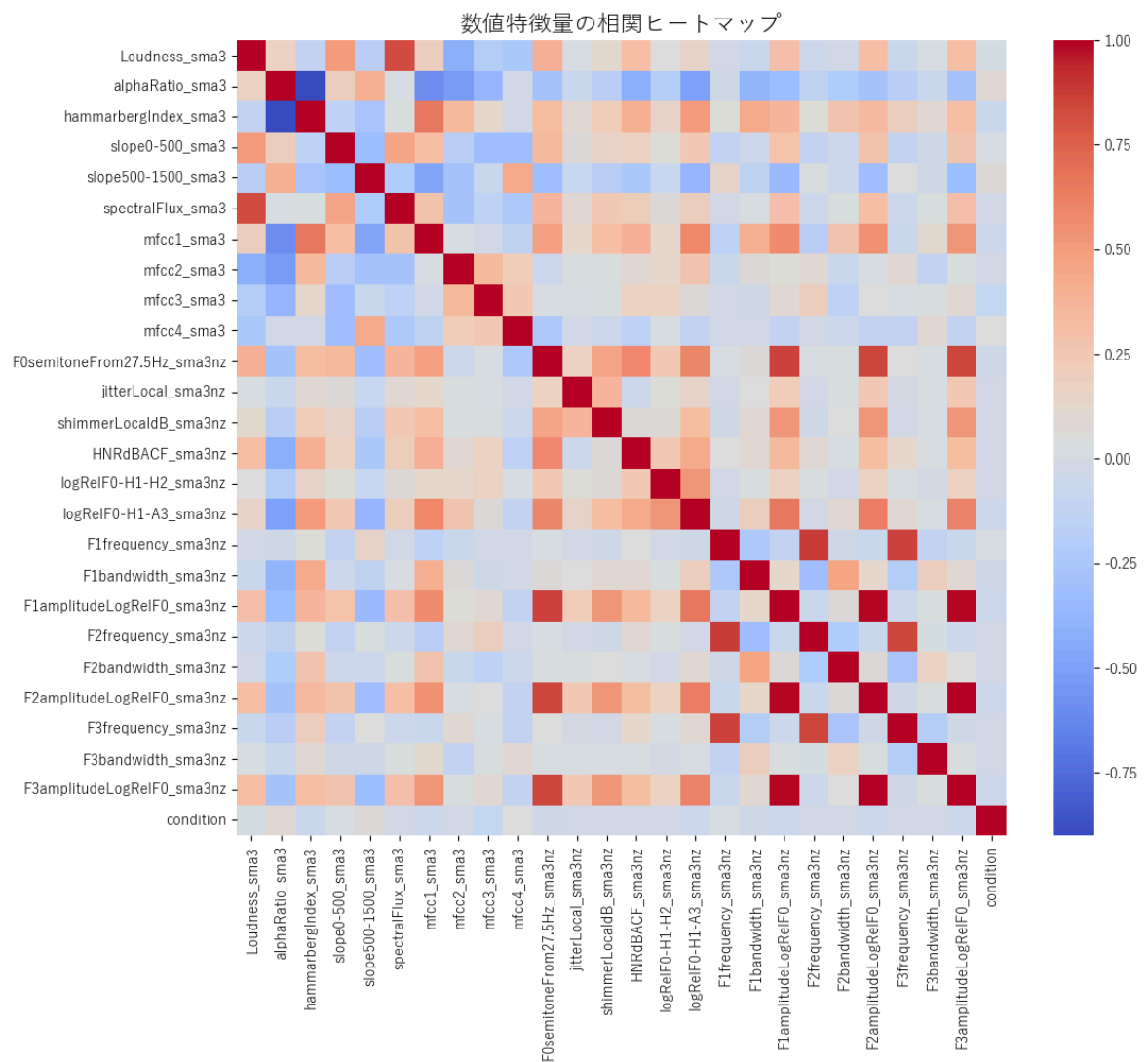








--- データ全体像の可視化 ---



--- 全ての分析が完了しました ---

In []: