

In [22]:

```
# Librosa.
import librosa
import librosa.display

# Plotting and numeric libraries.
import IPython.display as ipd
import numpy as np
import matplotlib.pyplot as plt
```

In [23]:

```
def show_plt(data, sr, y_axis, title):
    """
    Show plot.
    :param data: data for plotting
    :param sr: sample rate
    :param y_axis: text for y_axis
    :param title: plot title
    """

    # Create figure and plot graphs onto it.
    plt.figure(figsize=(20, 5.8))
    librosa.display.specshow(data, sr=sr, x_axis='time', y_axis=y_axis, cmap='turbo')
    plt.title(title)
    plt.colorbar(format='%+02.0f dB')

def show_file_info(filename):
    """
    Show audio file info.
    Plot common and mel spectrograms.
    :param filename: name of file
    """

    # Show name of file.
    print('INFO : {}'.format(filename))

    # Load.
    y, sr = librosa.load(filename, mono=False, sr=None)

    # Spectrogram.
    for ch in range(2):
        Y_db = librosa.amplitude_to_db(abs(librosa.stft(y[ch])))
        show_plt(Y_db, sr, 'hz', 'spectrogram (channel {})'.format(ch))

    # Mel spectrogram.
    for ch in range(2):
        log_S = librosa.amplitude_to_db(librosa.feature.melspectrogram(y[ch], sr=sr, n_mels=128))
        show_plt(log_S, sr, 'mel', 'mel spectrogram (channel {})'.format(ch))

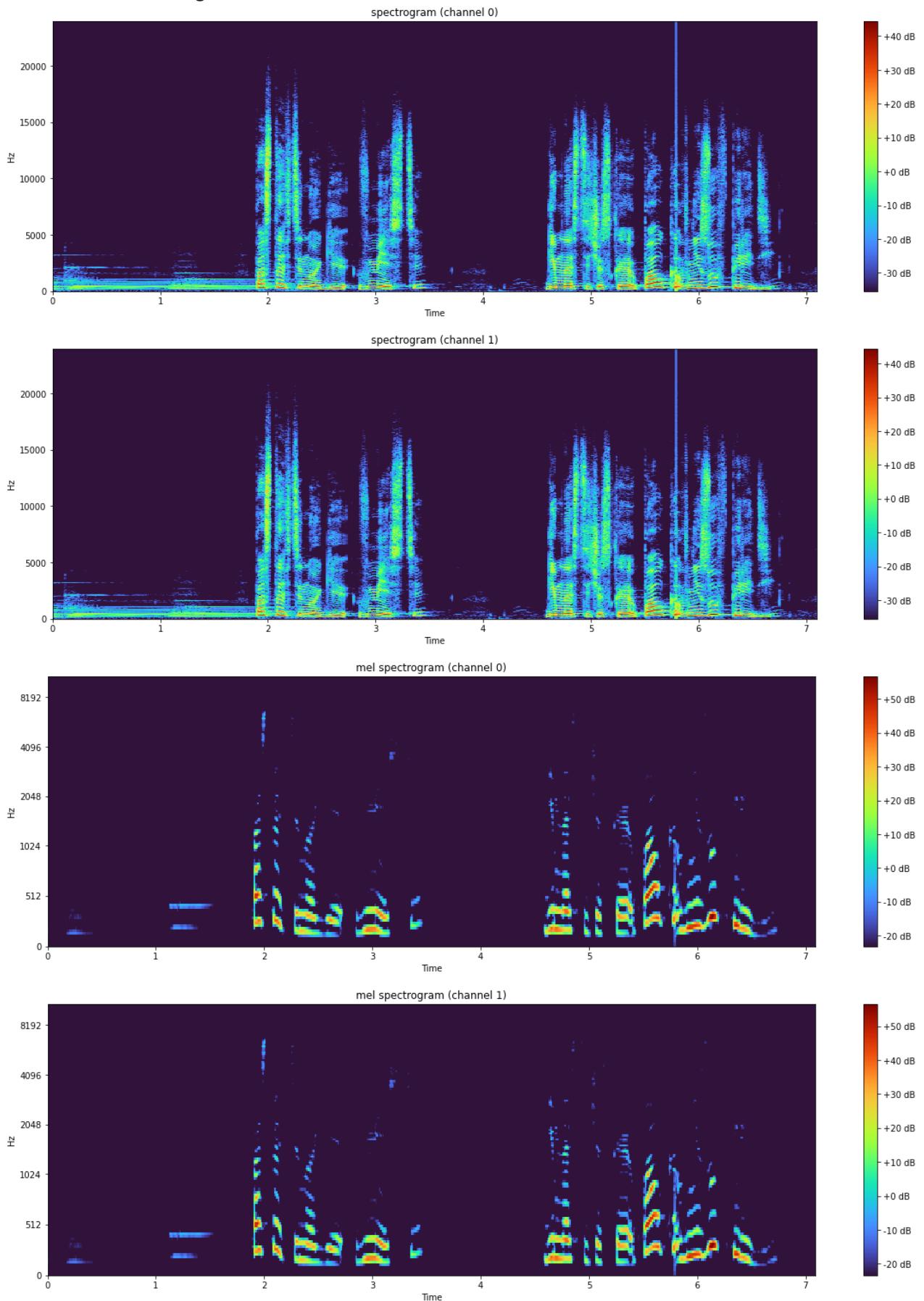
def sh(i):
    """
    Show info by index.
    Files are taken from ../wavs/origin folder.
    :param i: file index
    """

    show_file_info('../wavs/origin/{:04}.wav'.format(i))
```

In [24]:

sh(1)

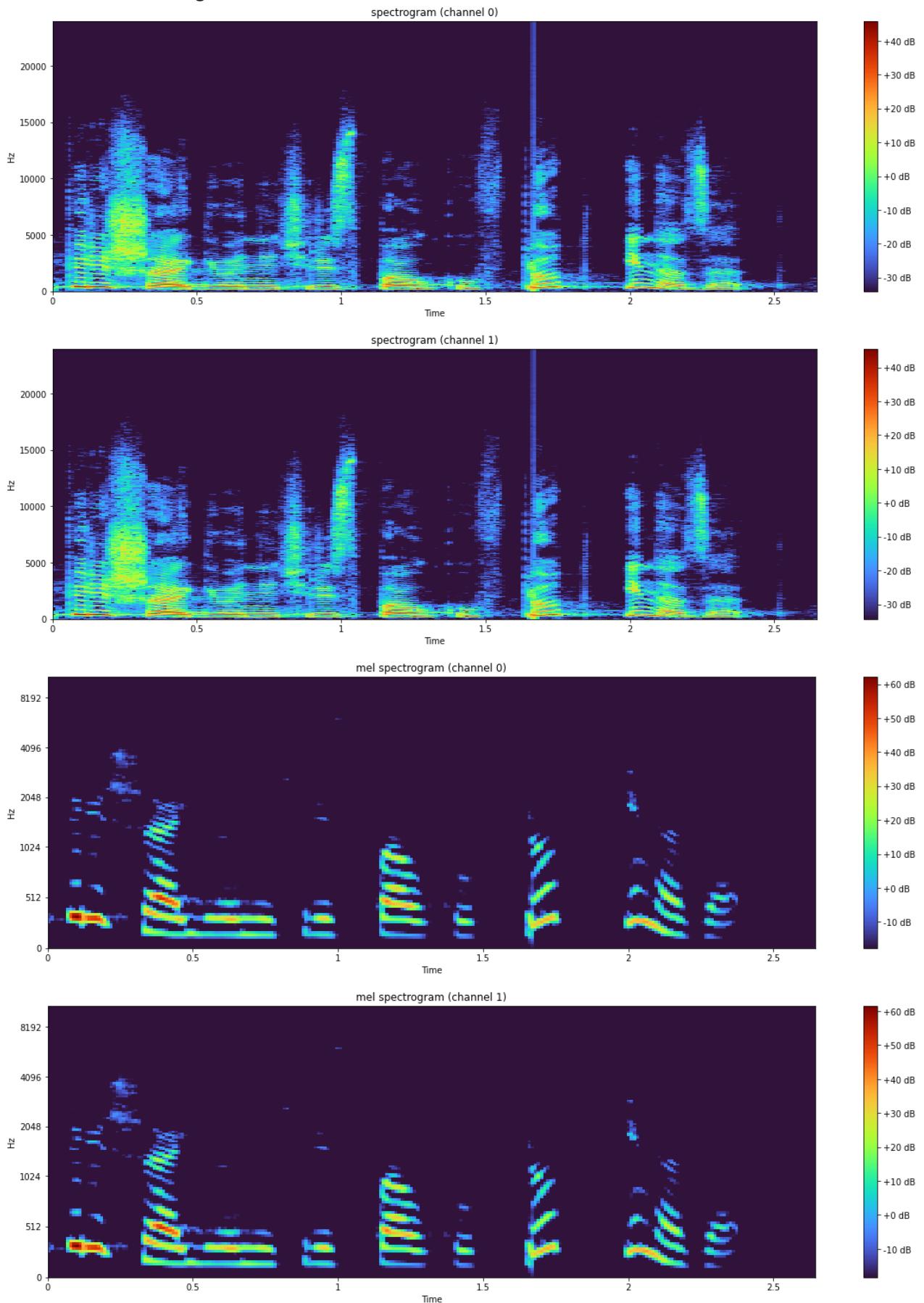
INFO : ../wavs/origin/0001.wav



In [25]:

sh(2)

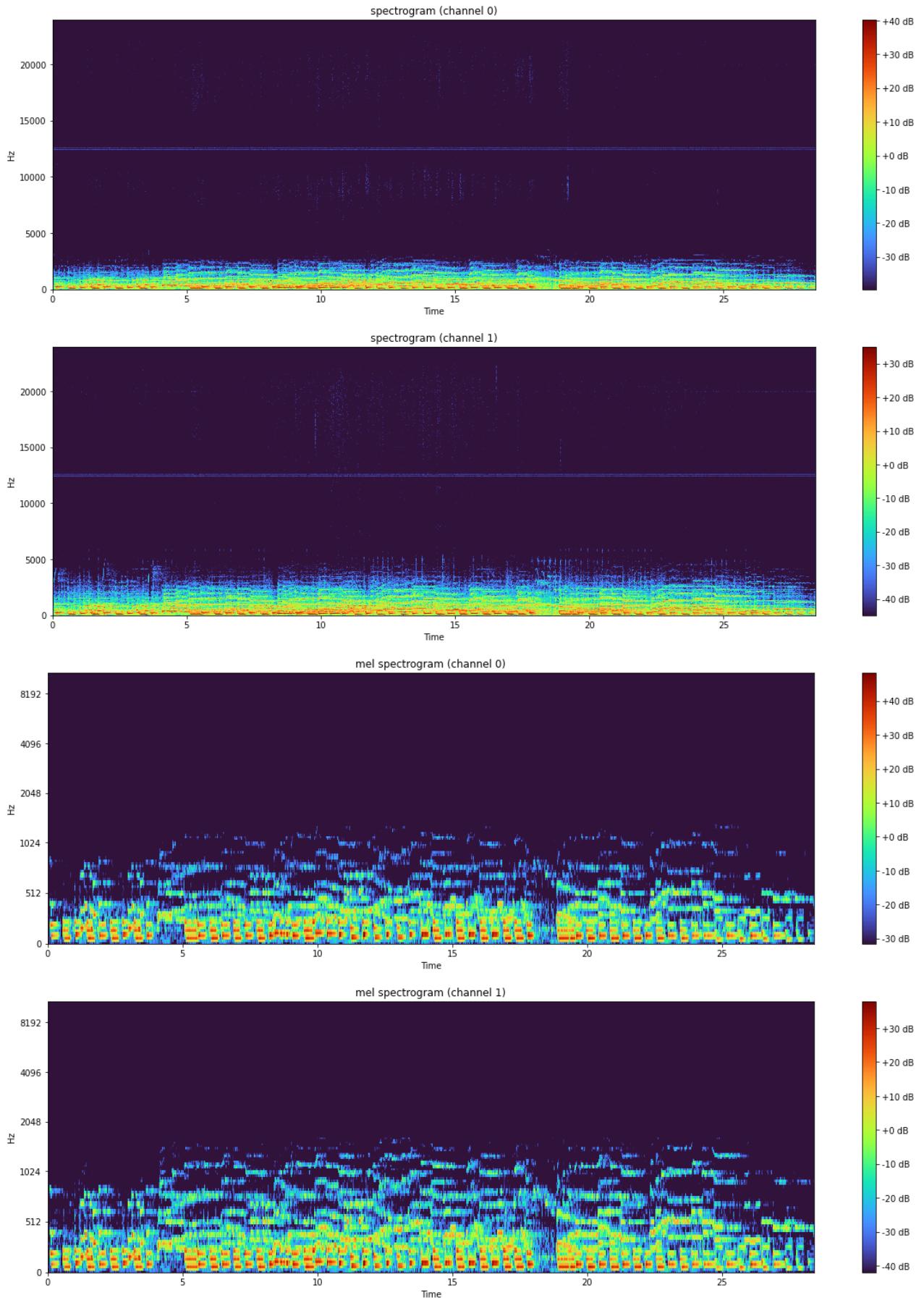
INFO : .../wavs/origin/0002.wav



In [26]:

sh(3)

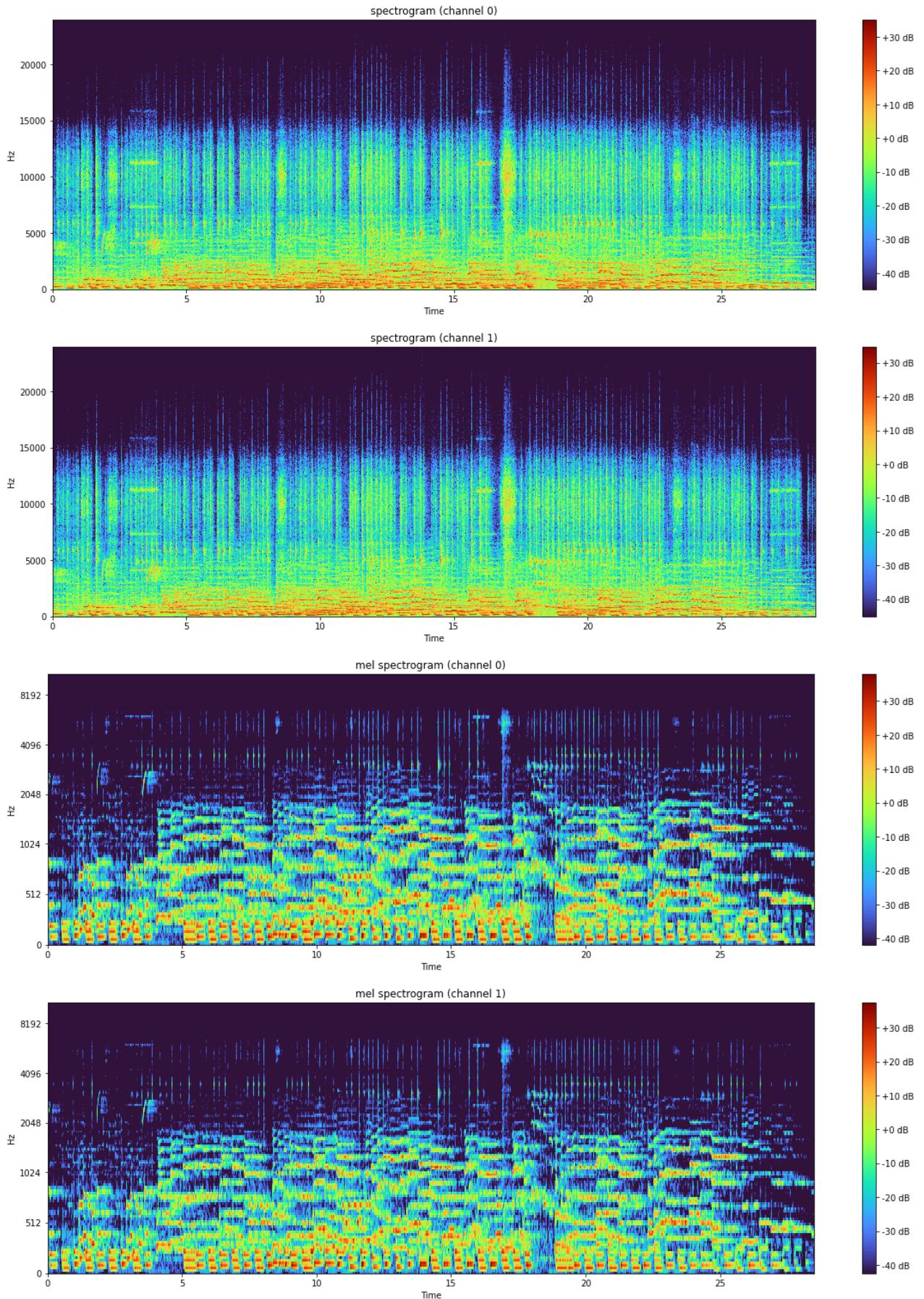
INFO : ./wavs/origin/0003.wav



In [27]:

sh(4)

INFO : ./wavs/origin/0004.wav

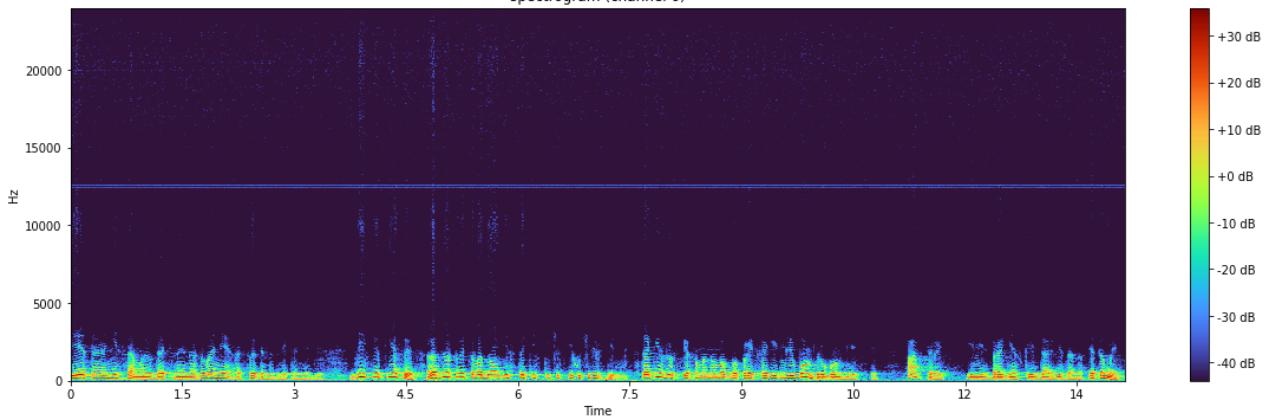


In [28]:

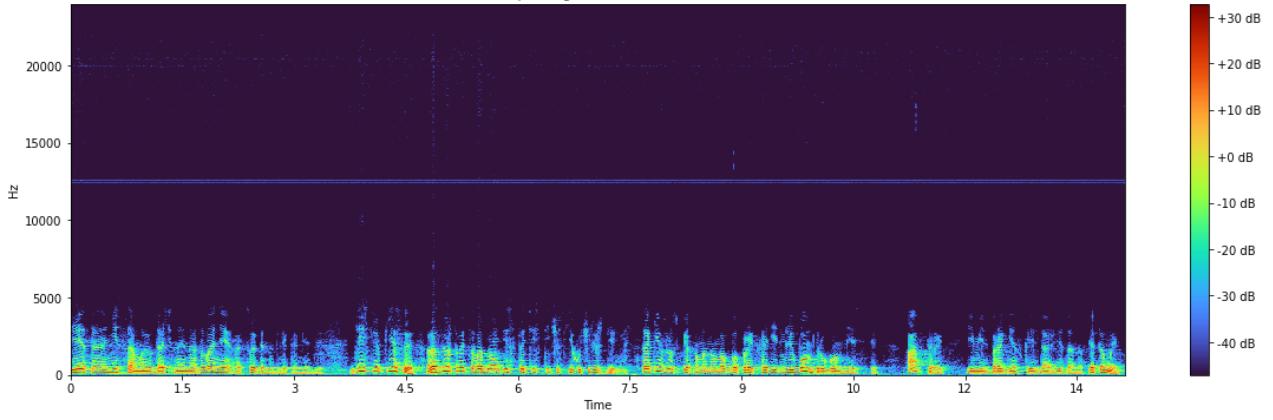
sh(5)

INFO : ./wavs/origin/0005.wav

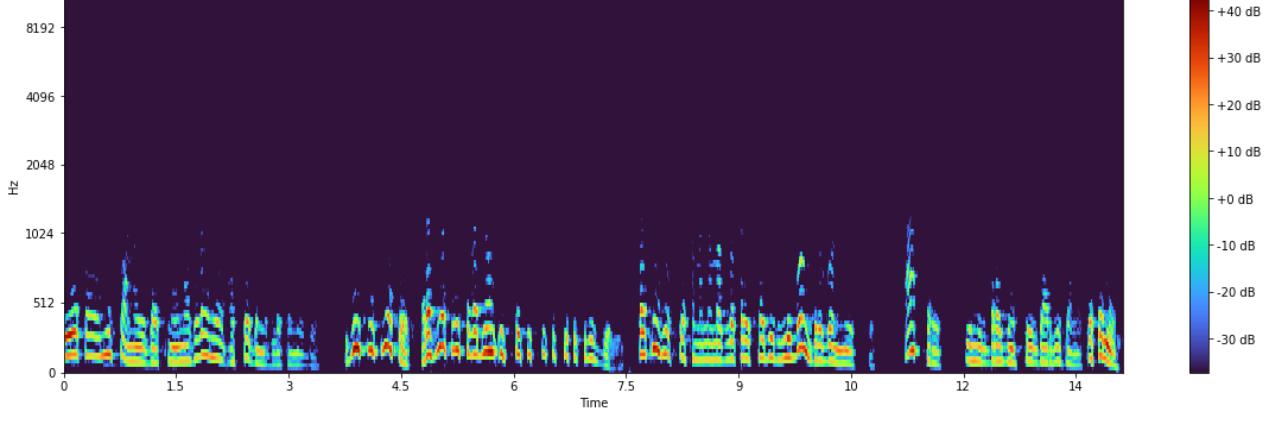
spectrogram (channel 0)



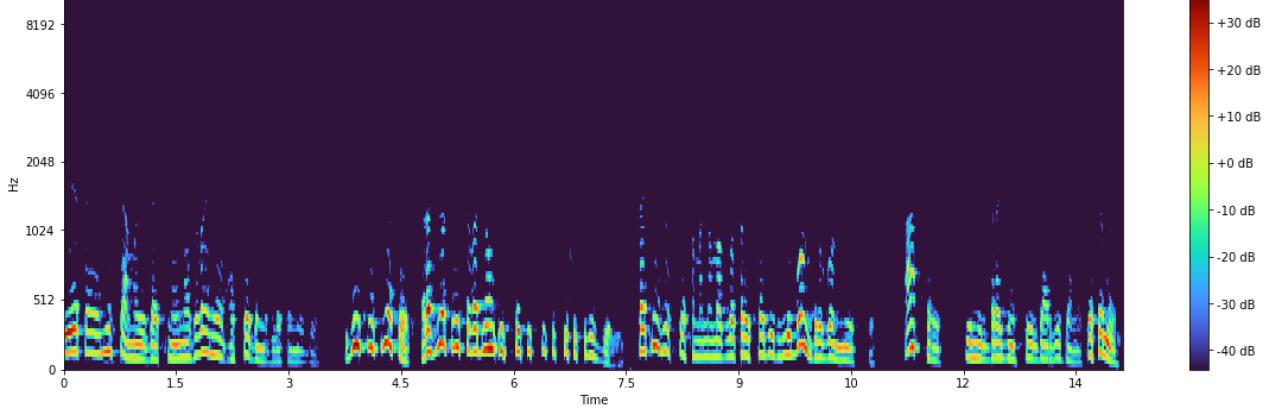
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

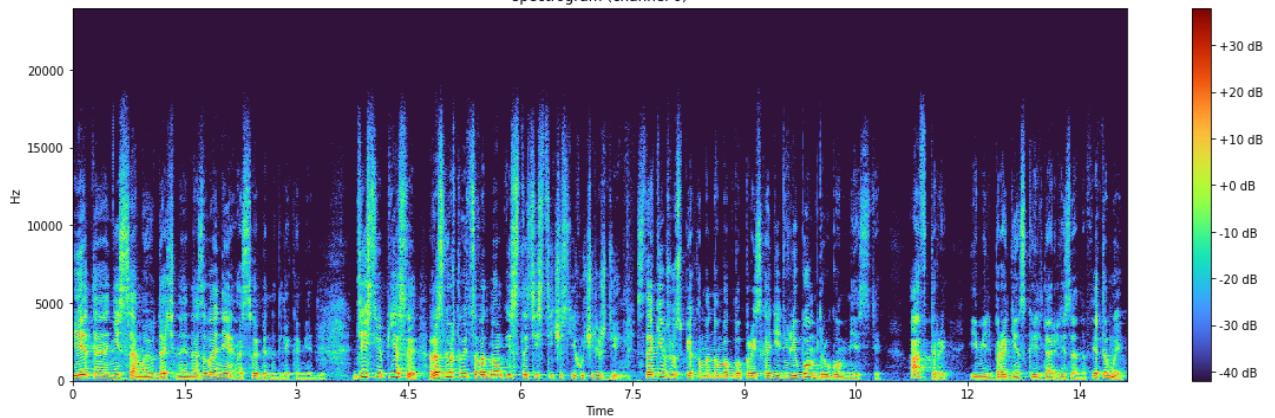


In [29]:

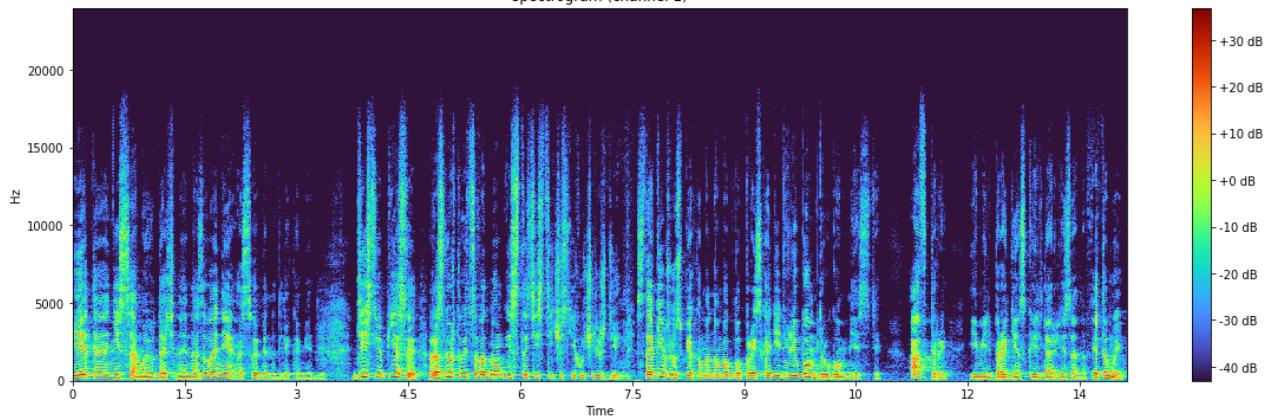
sh(6)

INFO : ./wavs/origin/0006.wav

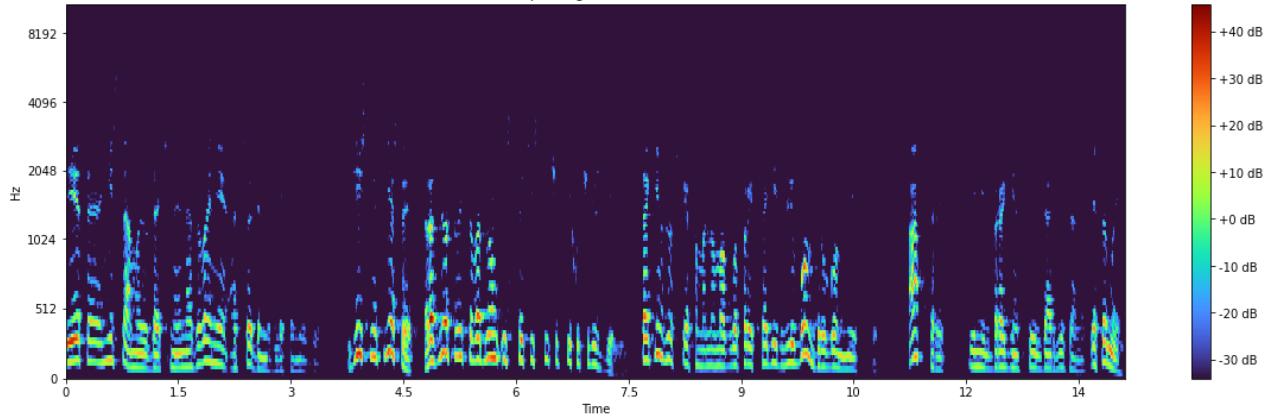
spectrogram (channel 0)



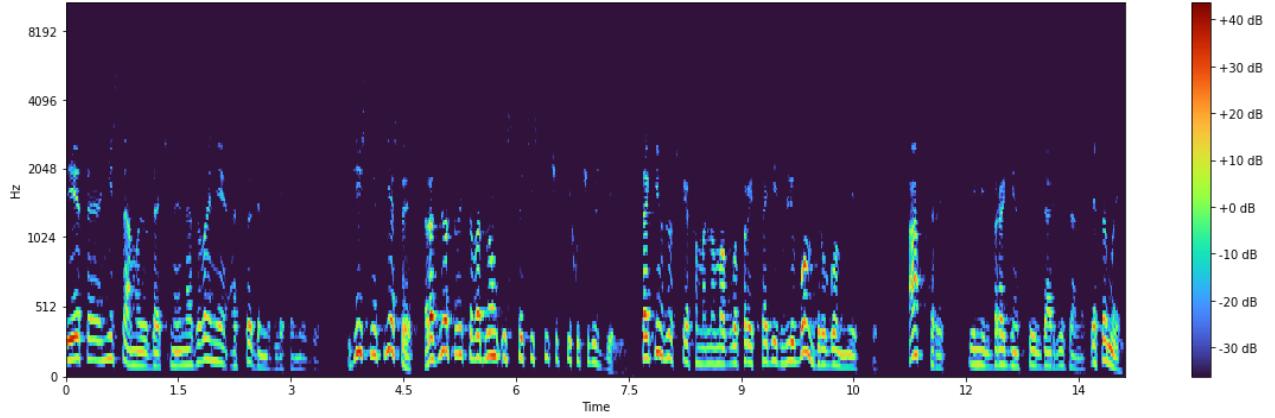
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

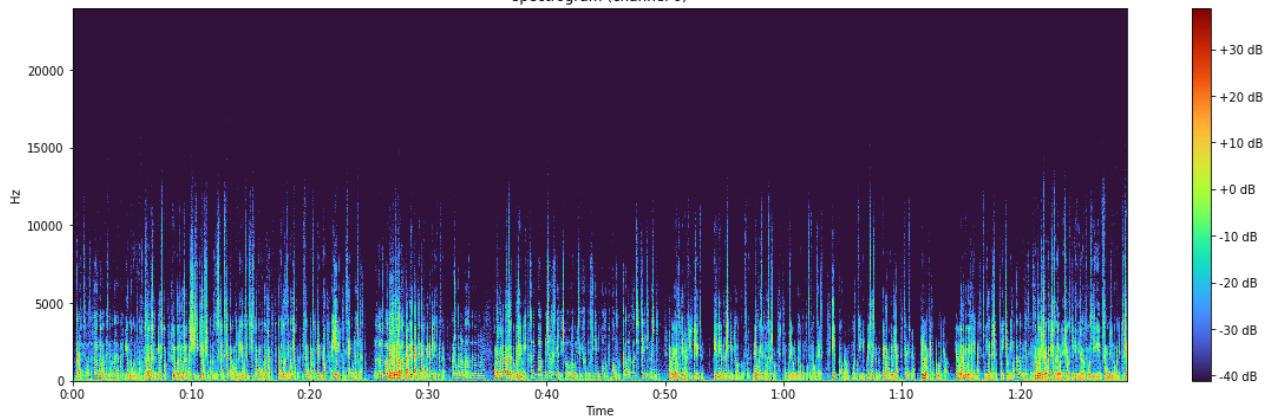


In [30]:

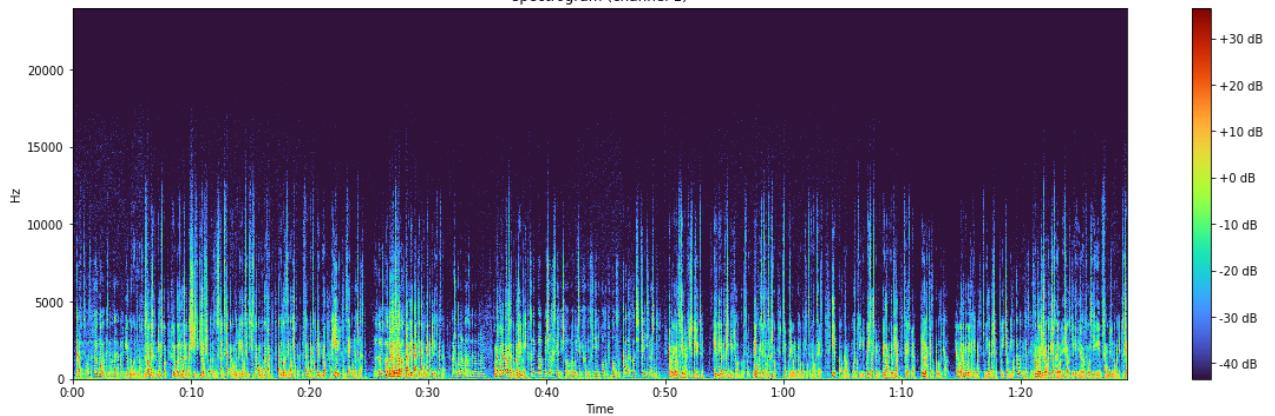
sh(7)

INFO : ./wavs/origin/0007.wav

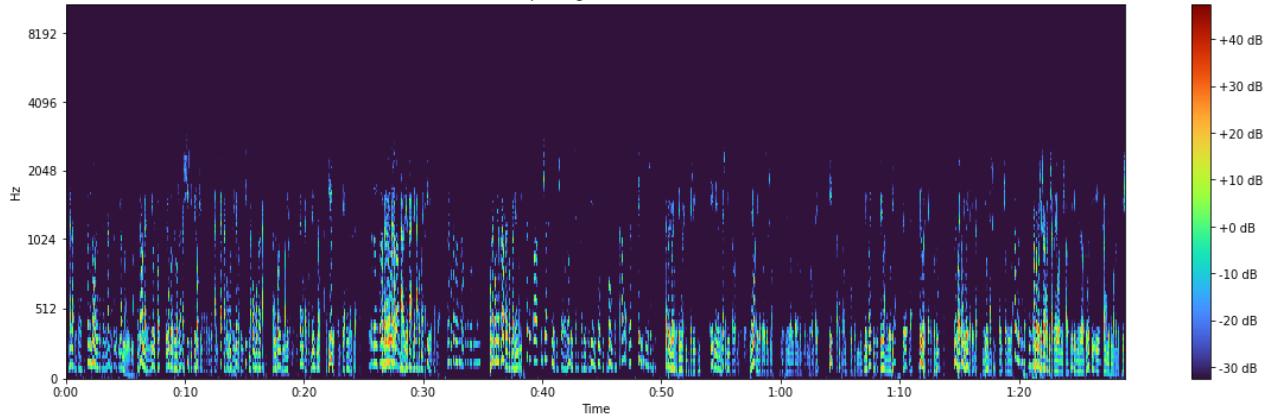
spectrogram (channel 0)



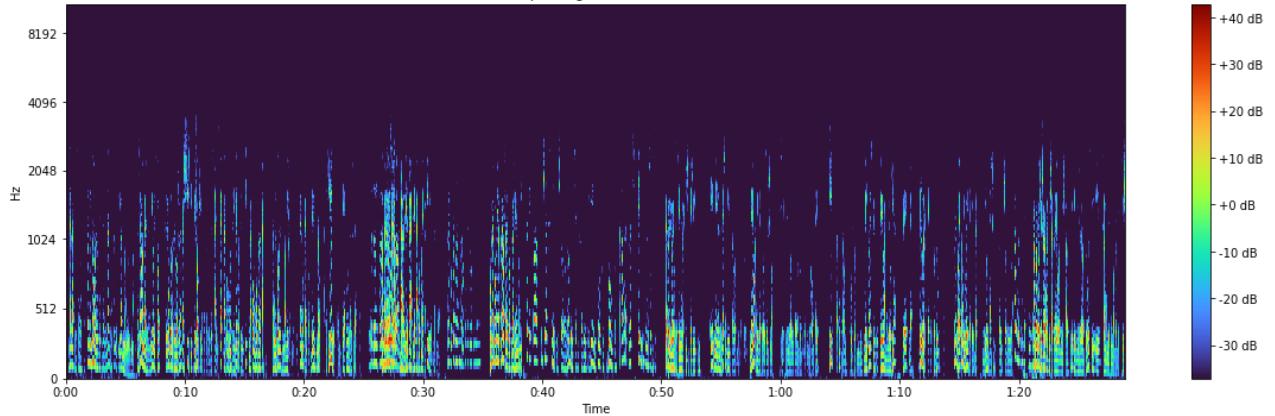
spectrogram (channel 1)



mel spectrogram (channel 0)



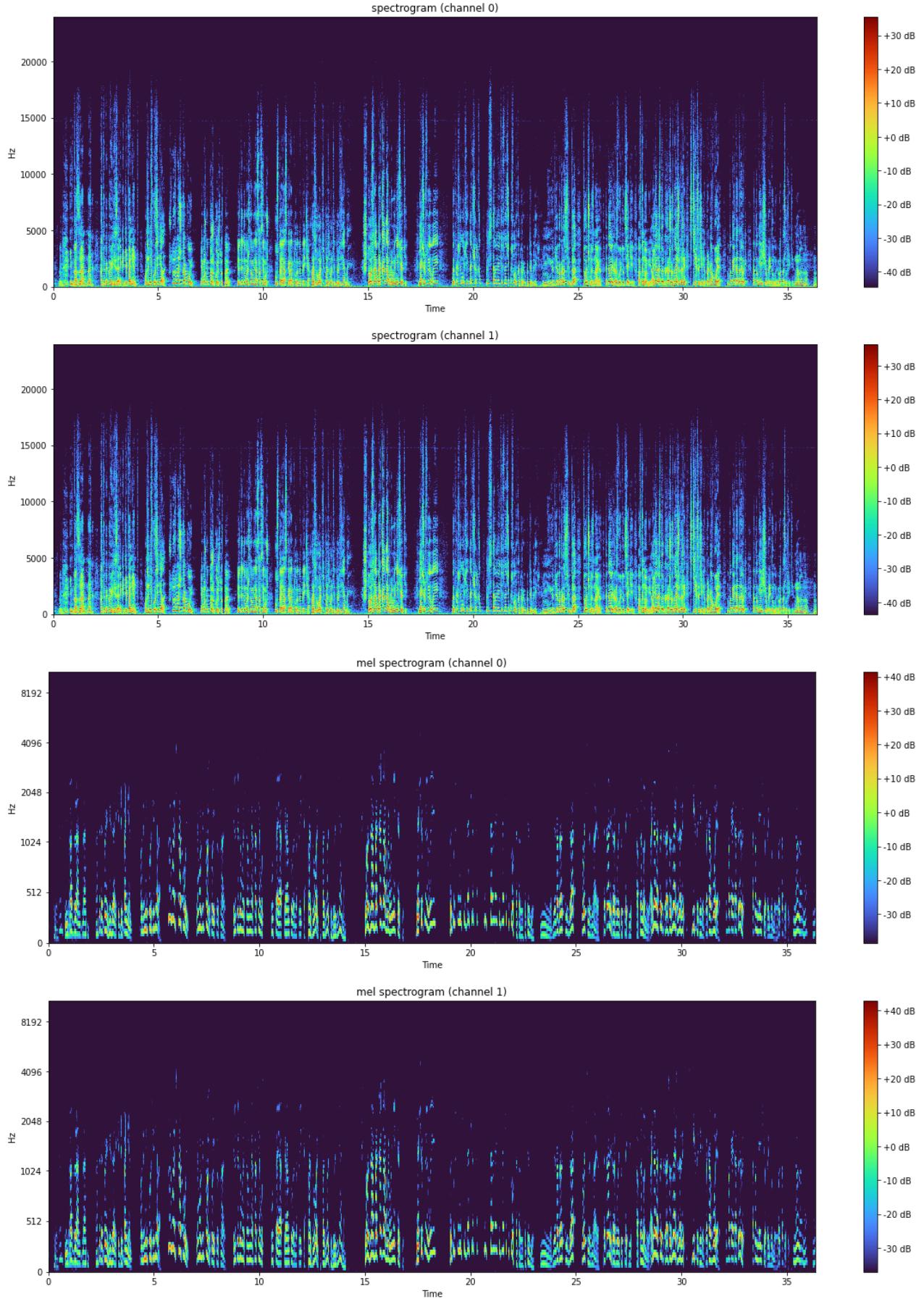
mel spectrogram (channel 1)



In [31]:

sh(8)

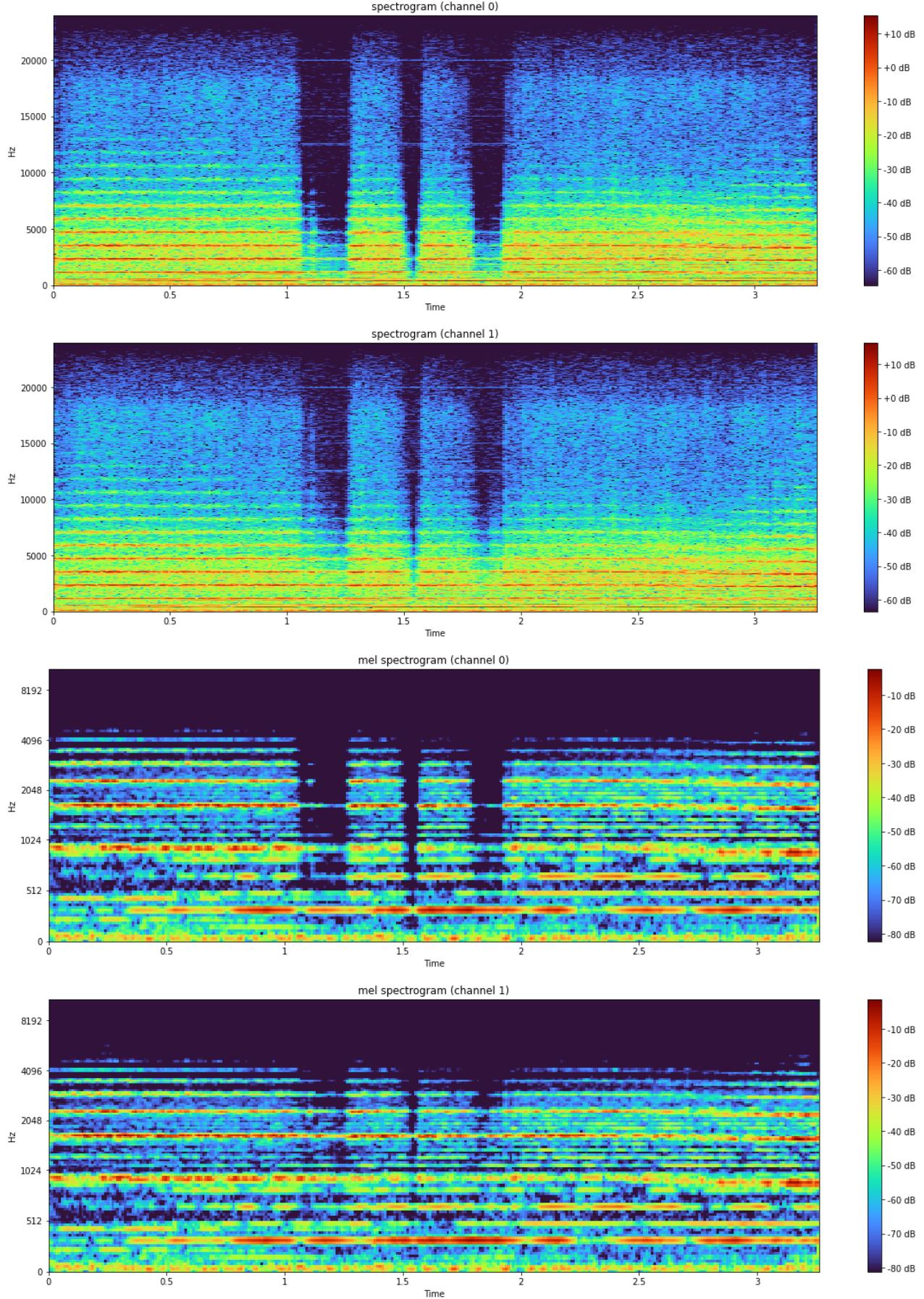
INFO : ./wavs/origin/0008.wav



In [32]:

sh(9)

INFO : ./wavs/origin/0009.wav

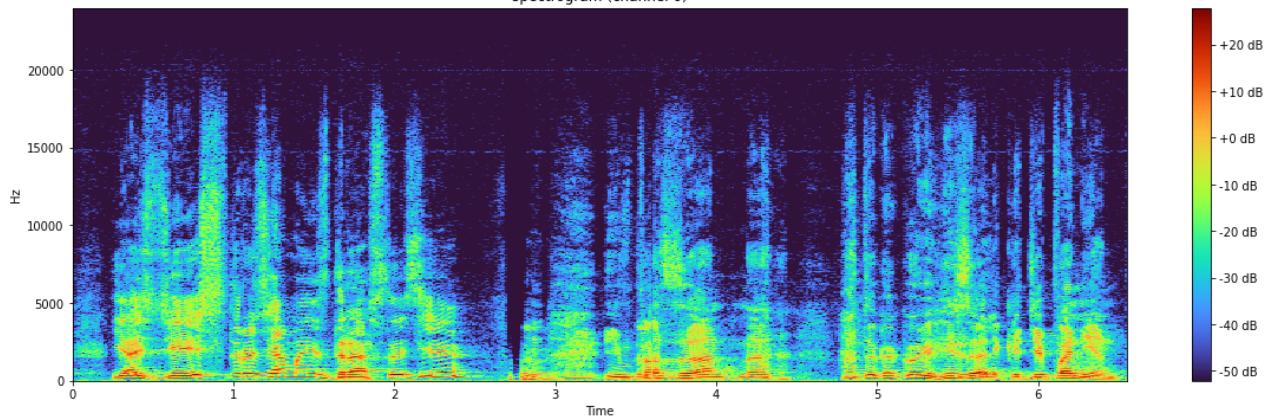


In [33]:

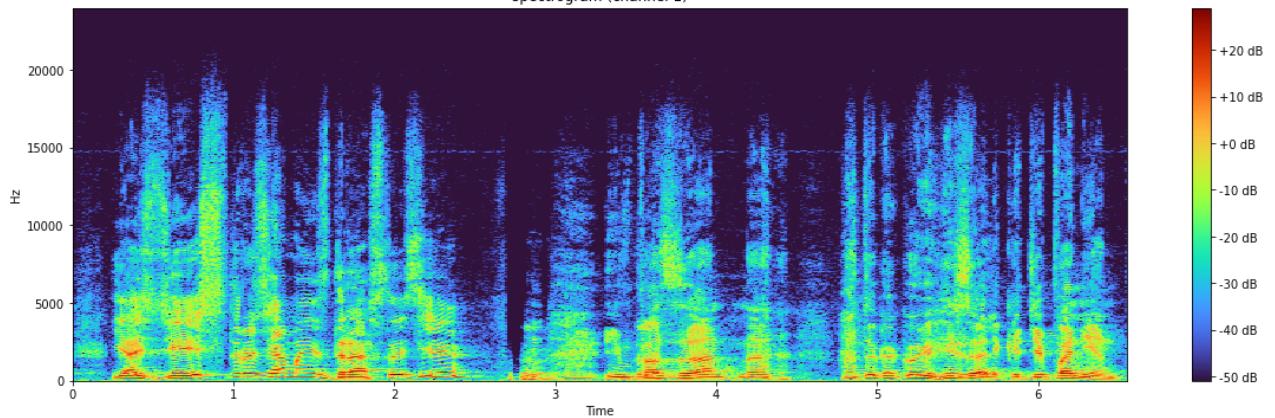
sh(10)

INFO : ./wavs/origin/0010.wav

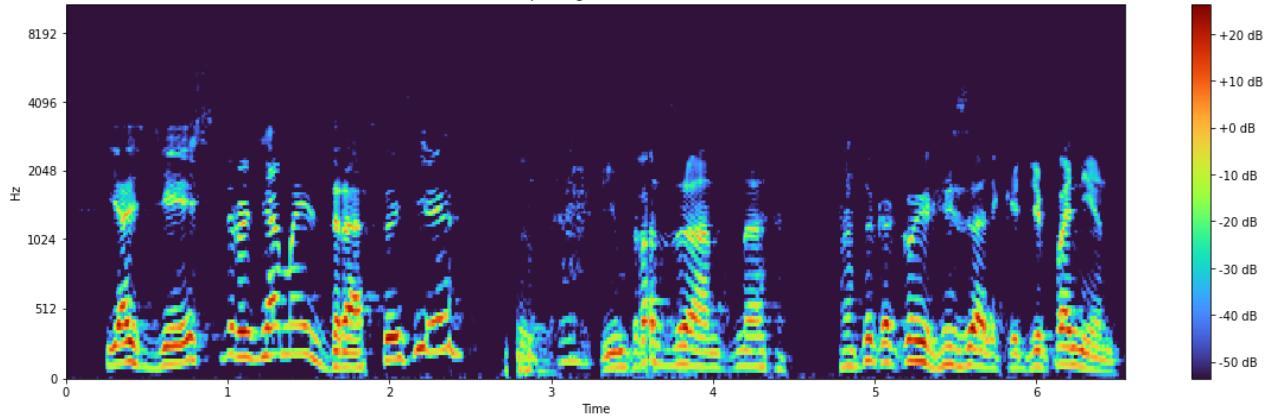
spectrogram (channel 0)



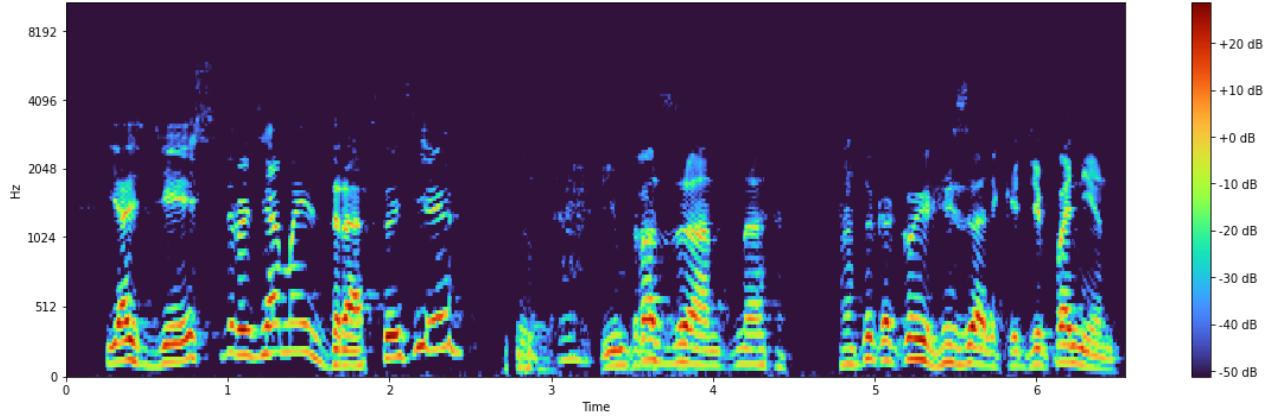
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

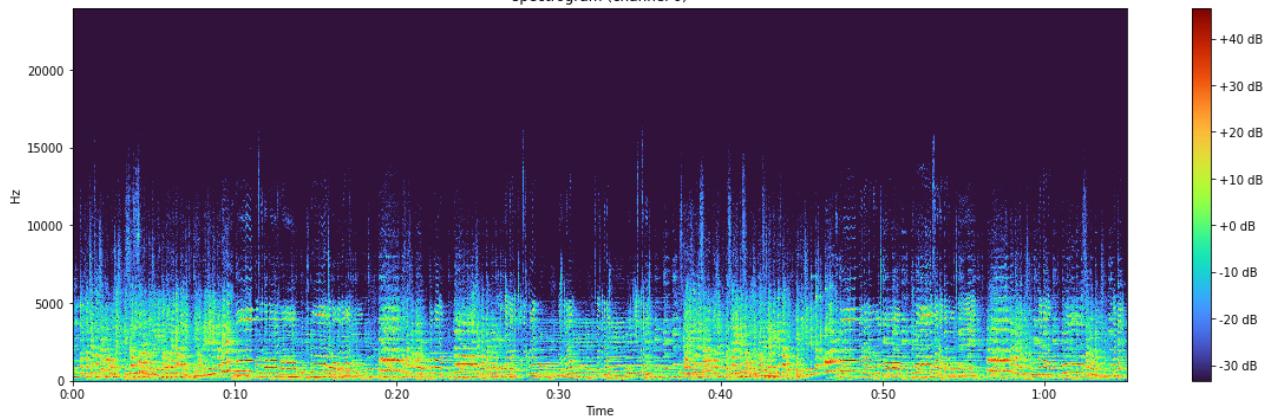


In [34]:

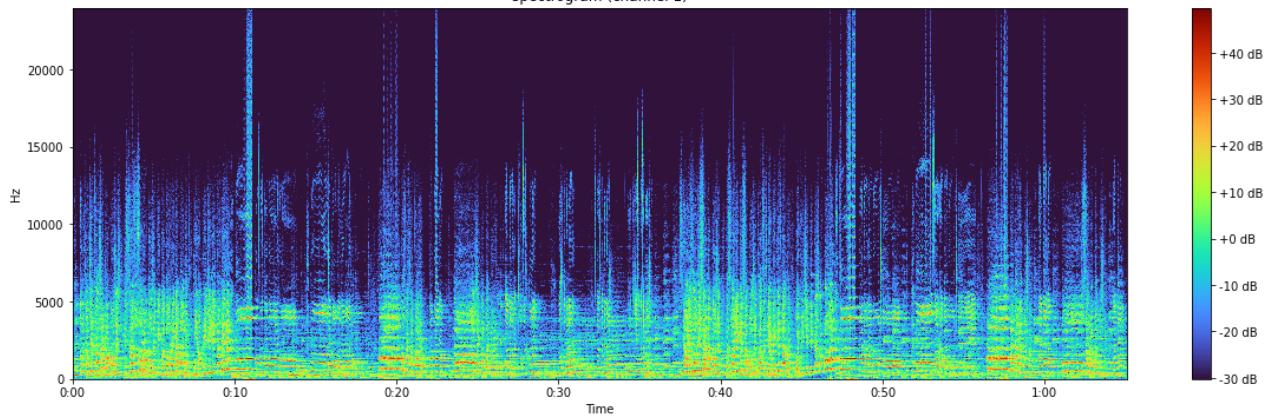
sh(11)

INFO : ./wavs/origin/0011.wav

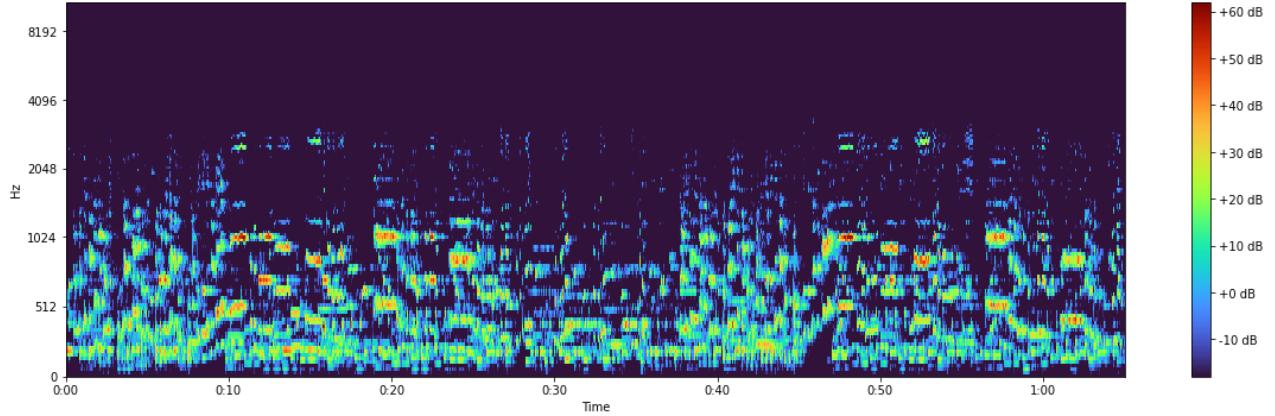
spectrogram (channel 0)



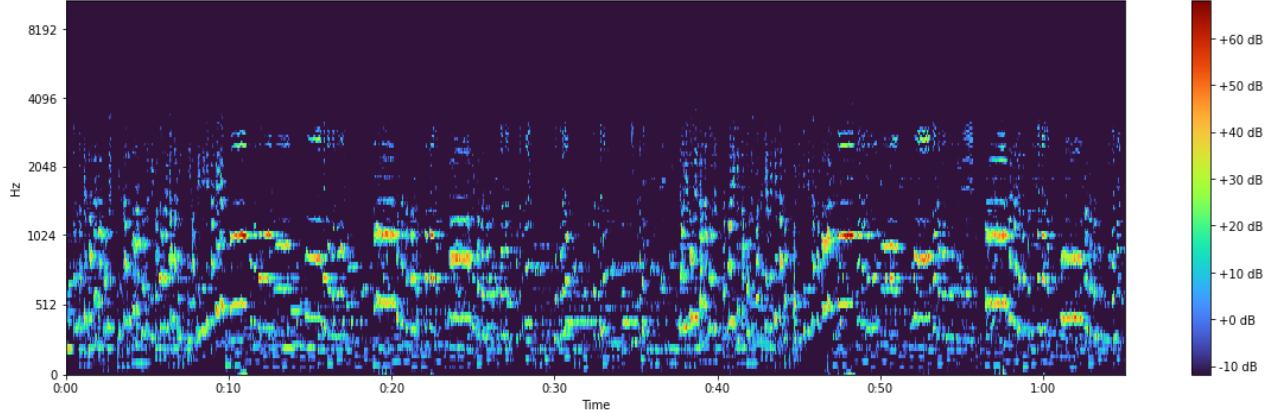
spectrogram (channel 1)



mel spectrogram (channel 0)



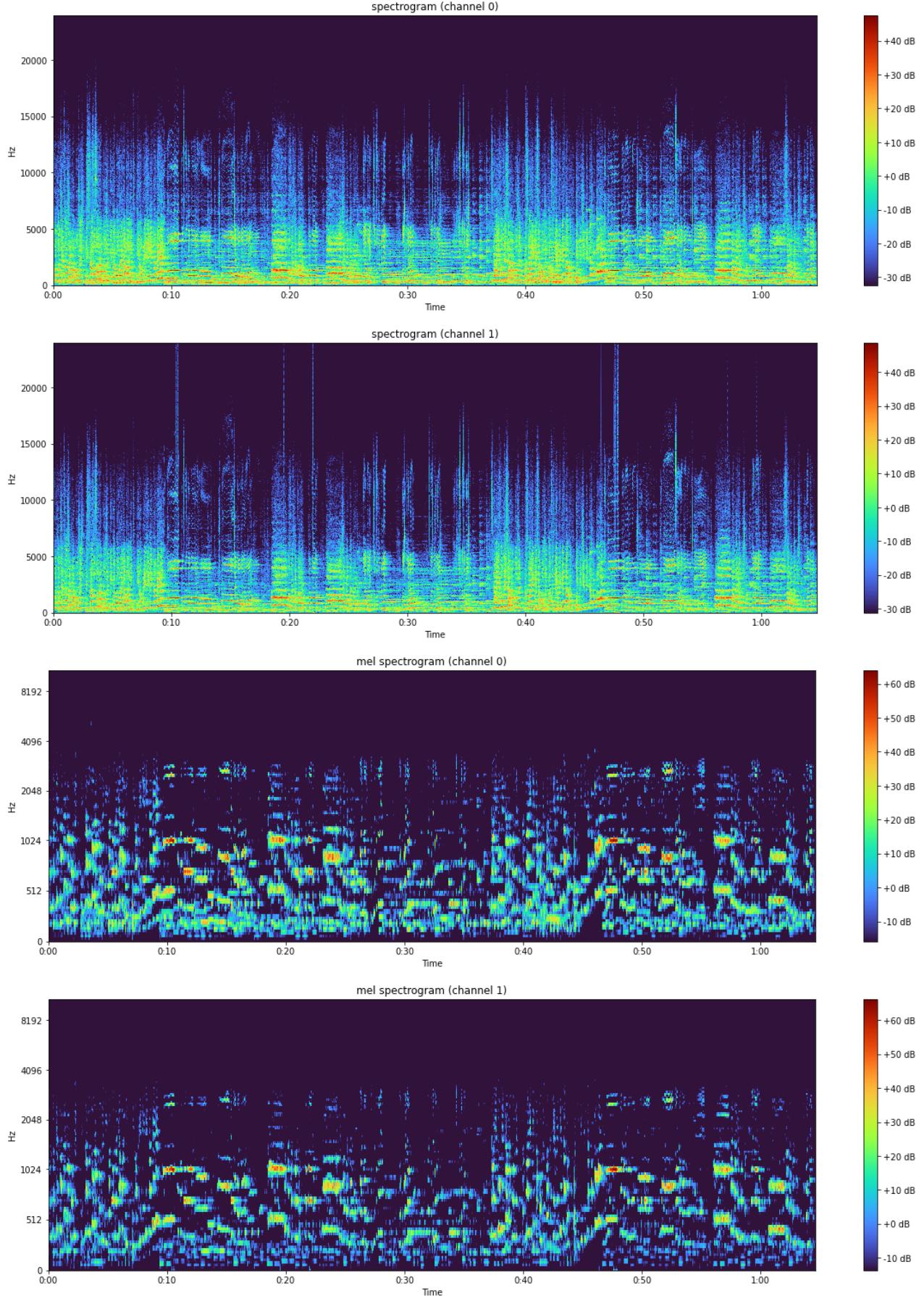
mel spectrogram (channel 1)



In [35]:

sh(12)

INFO : ./wavs/origin/0012.wav

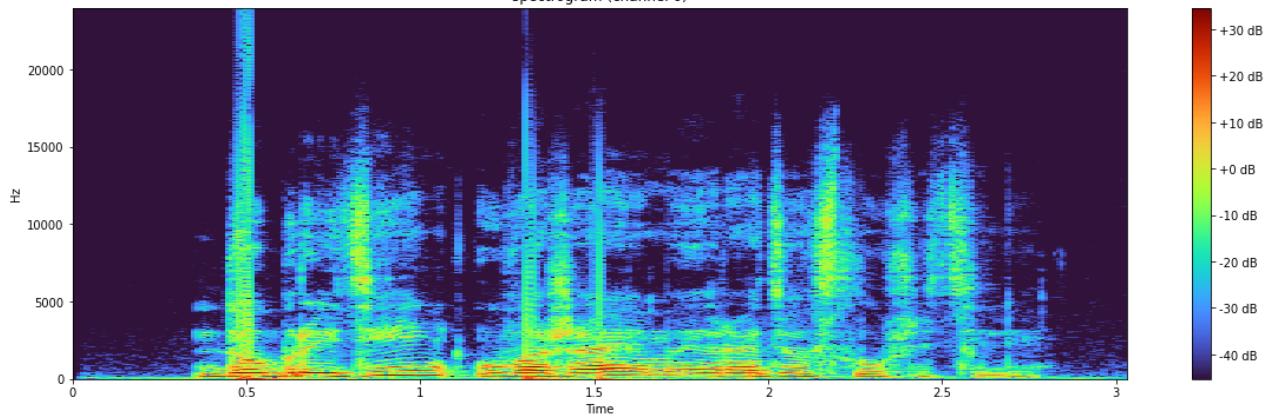


In [36]:

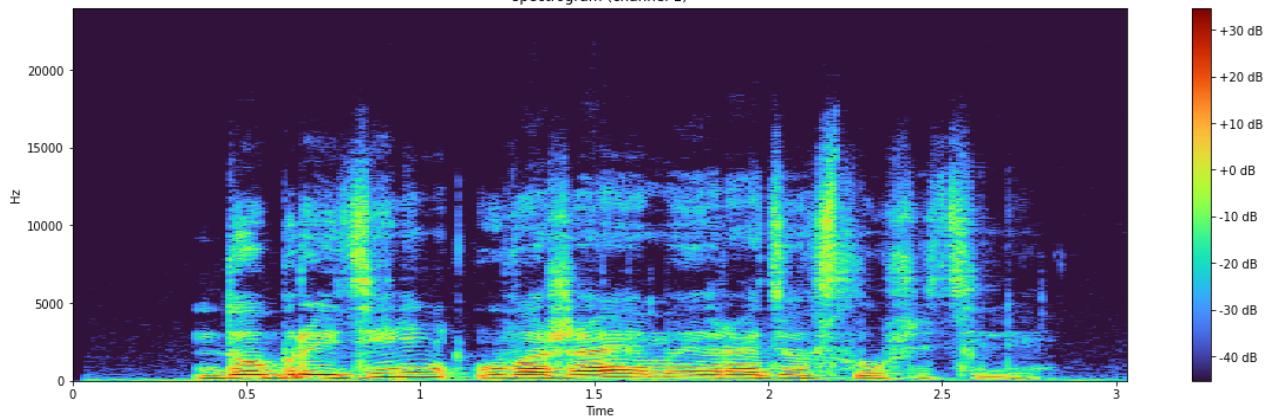
sh(13)

INFO : ./wavs/origin/0013.wav

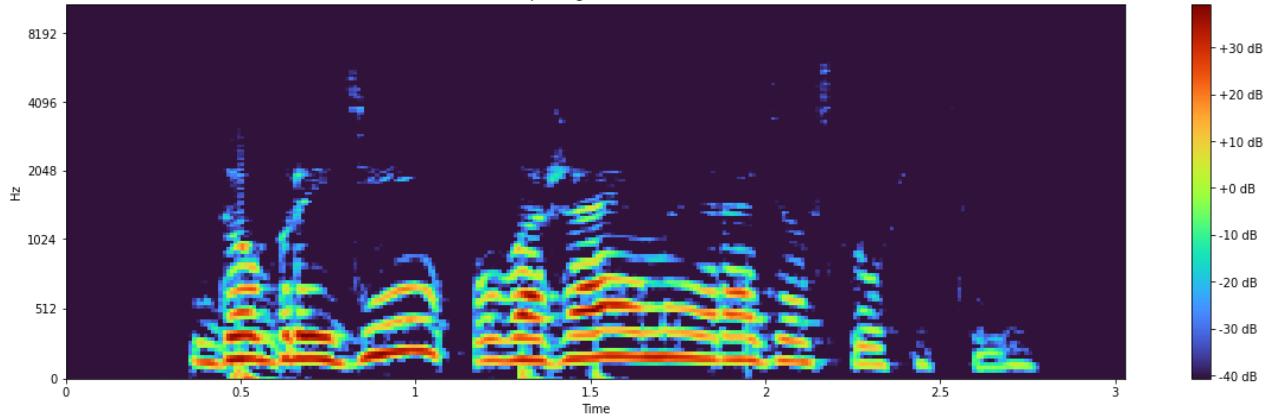
spectrogram (channel 0)



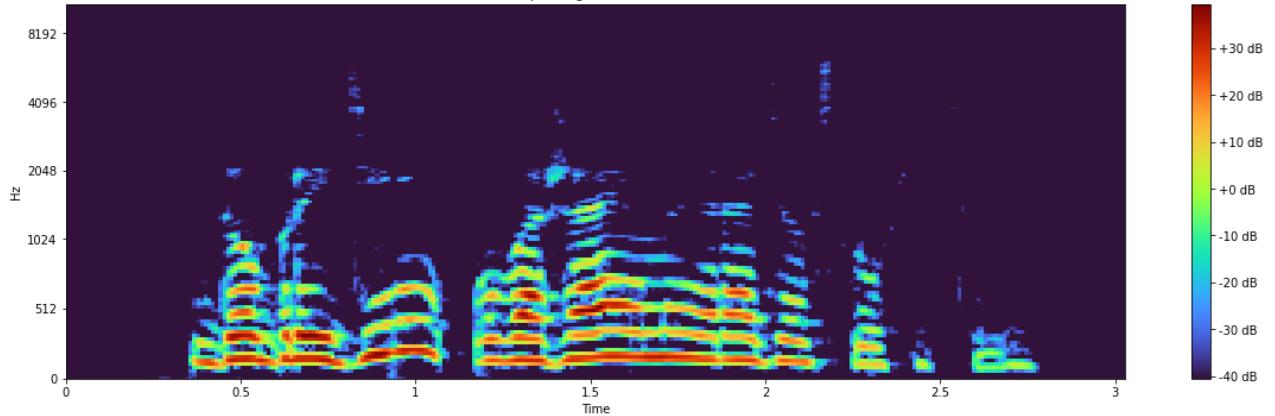
spectrogram (channel 1)



mel spectrogram (channel 0)



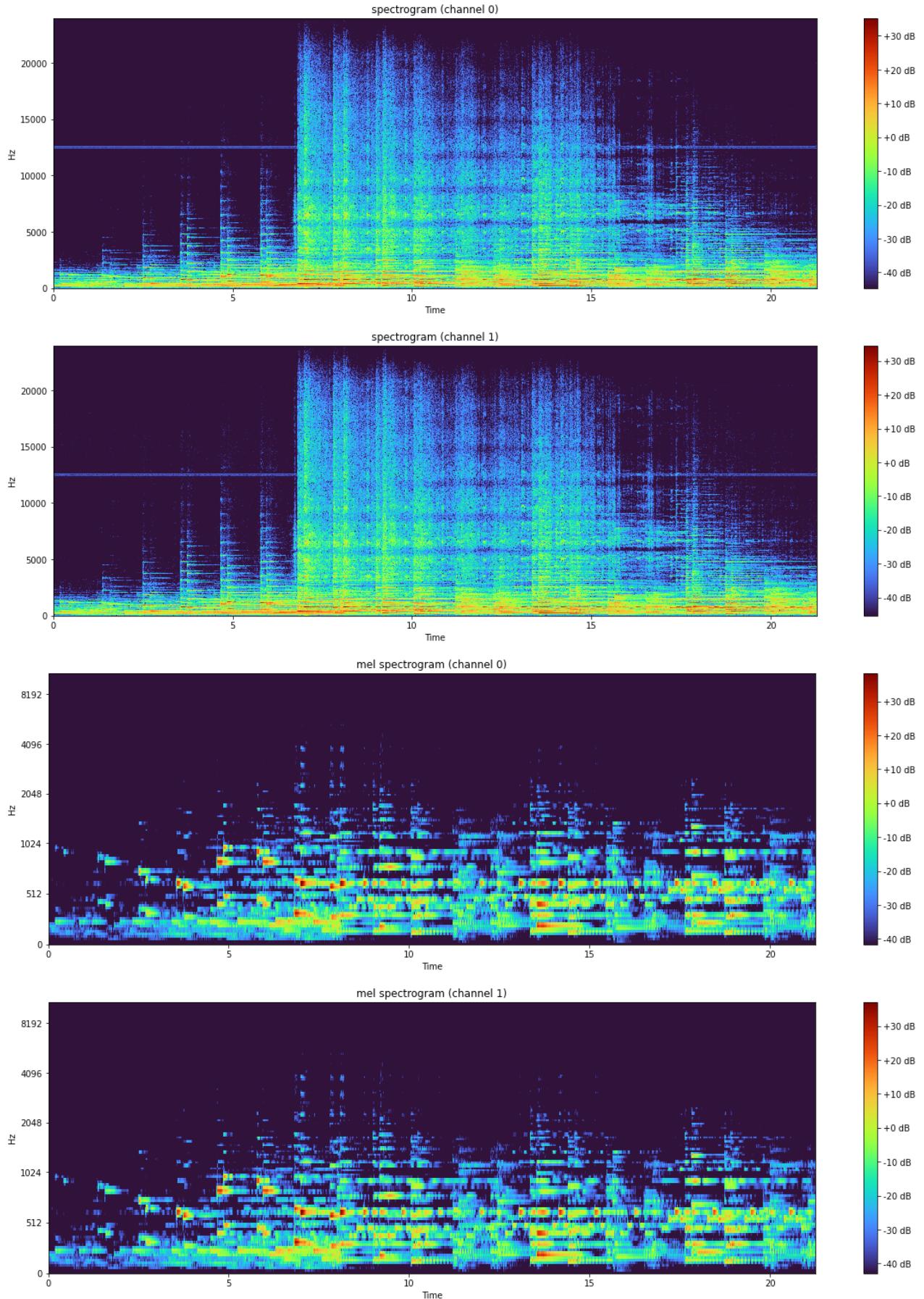
mel spectrogram (channel 1)



In [37]:

sh(14)

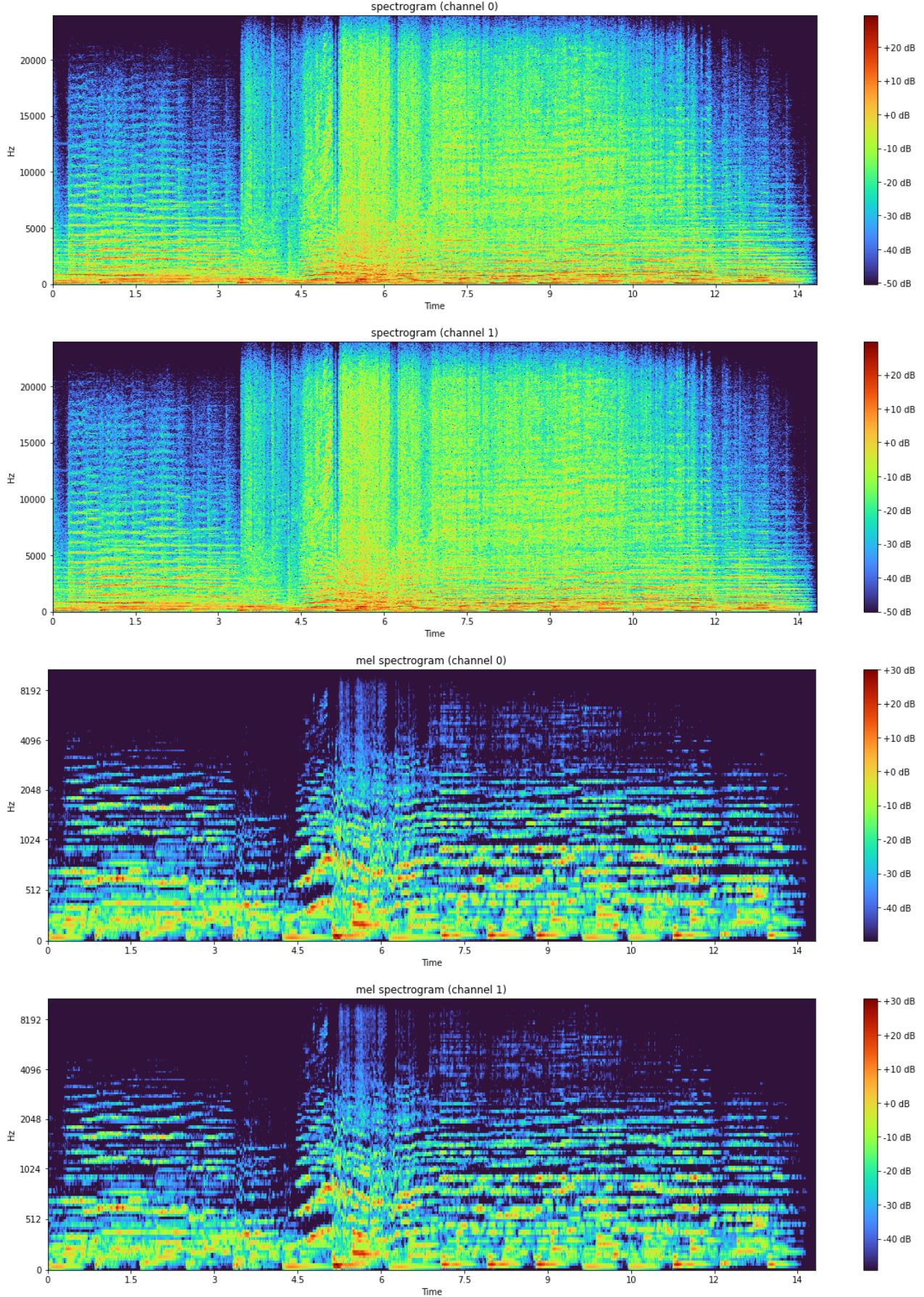
INFO : ./wavs/origin/0014.wav



In [38]:

sh(15)

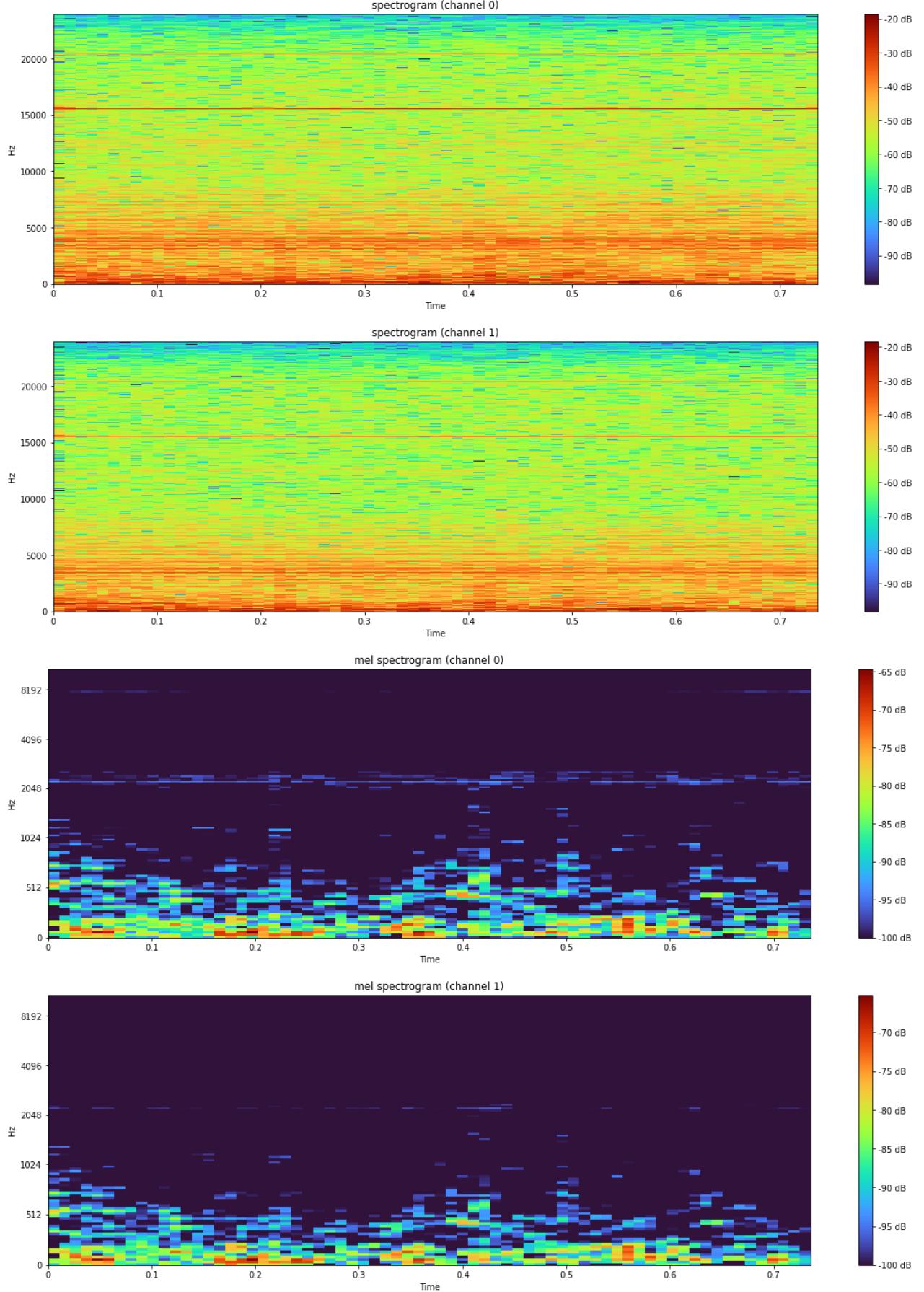
INFO : ./wavs/origin/0015.wav



In [39]:

sh(16)

INFO : ./wavs/origin/0016.wav

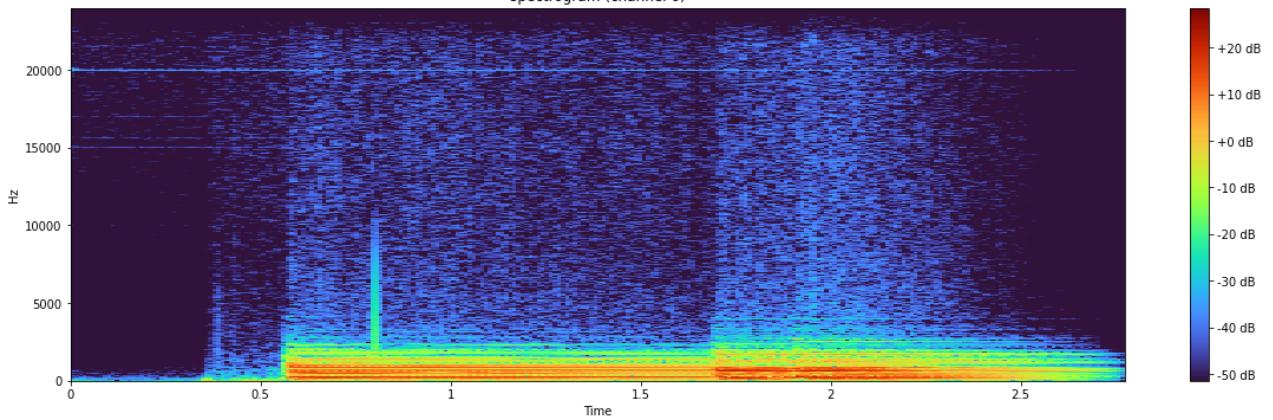


In [40]:

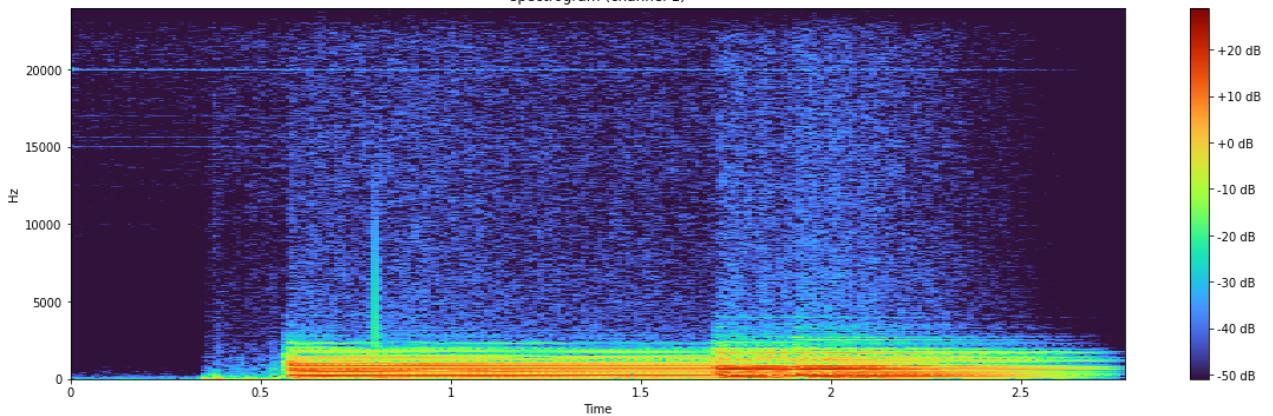
sh(17)

INFO : ./wavs/origin/0017.wav

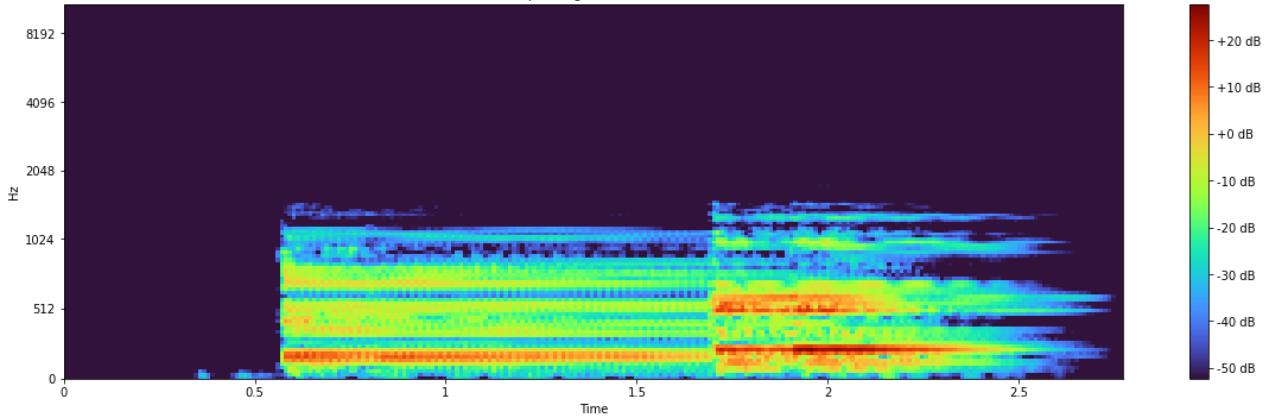
spectrogram (channel 0)



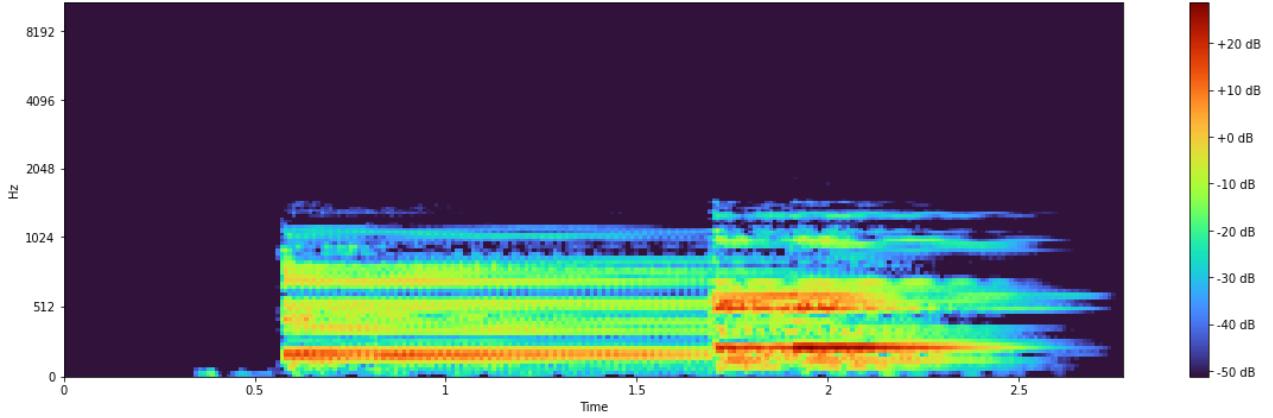
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

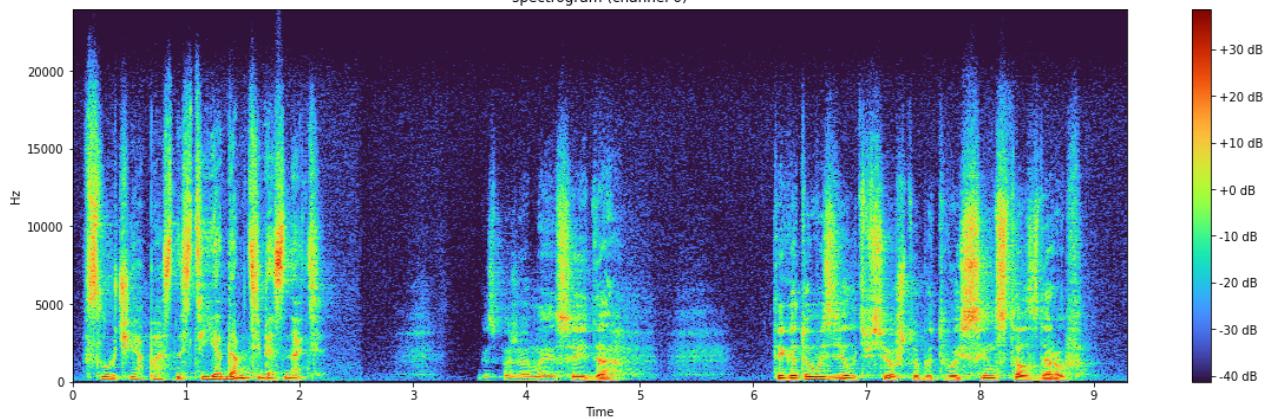


In [41]:

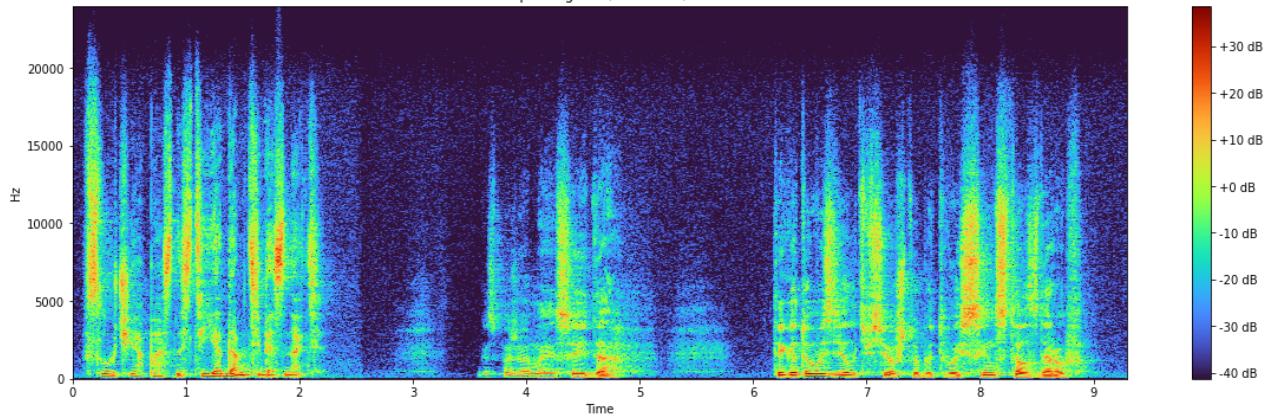
sh(18)

INFO : ../wavs/origin/0018.wav

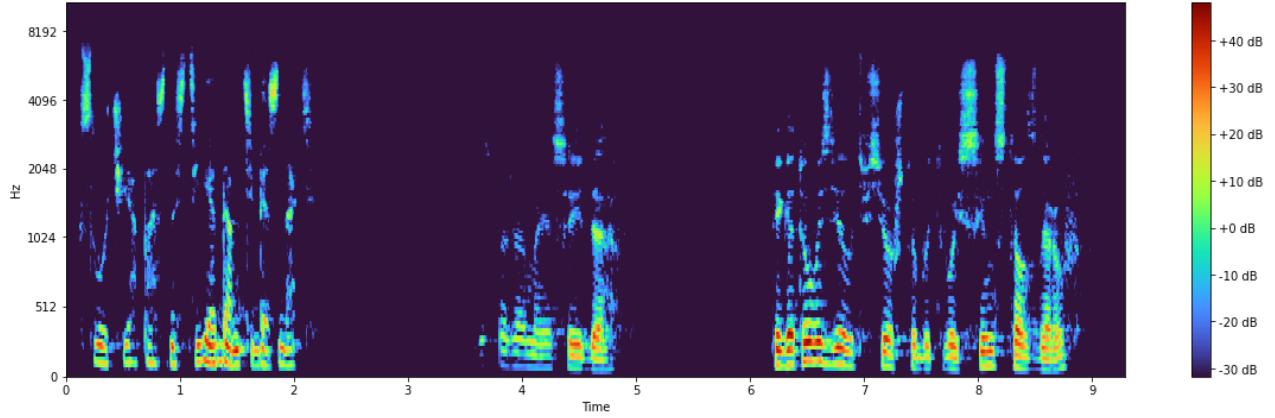
spectrogram (channel 0)



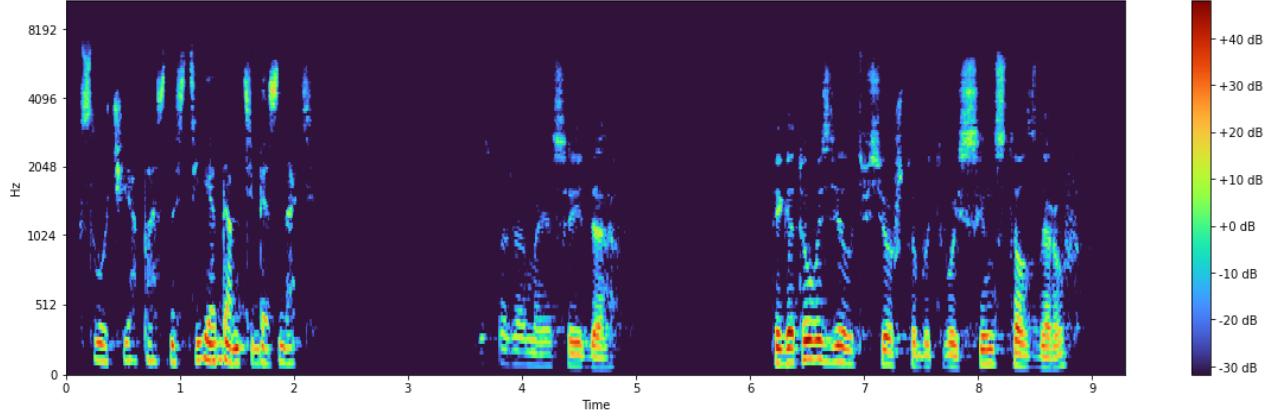
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

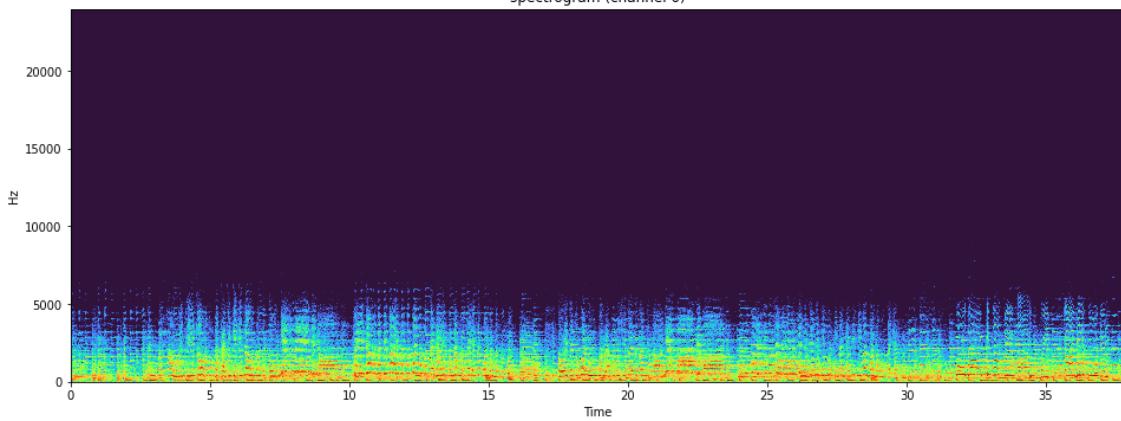


In [42]:

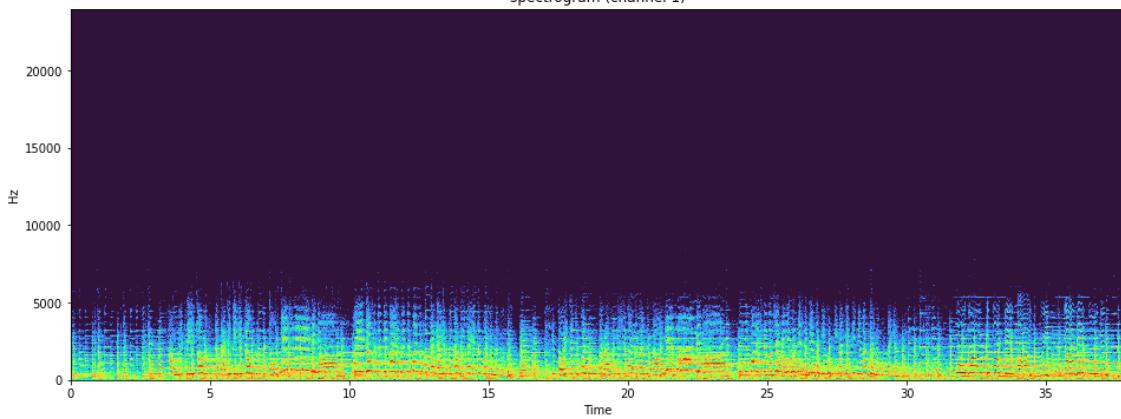
sh(19)

INFO : ./wavs/origin/0019.wav

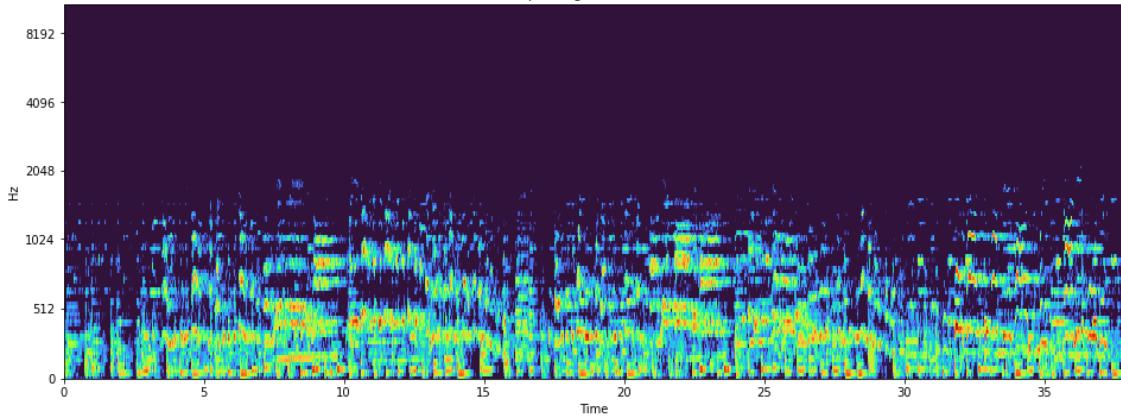
spectrogram (channel 0)



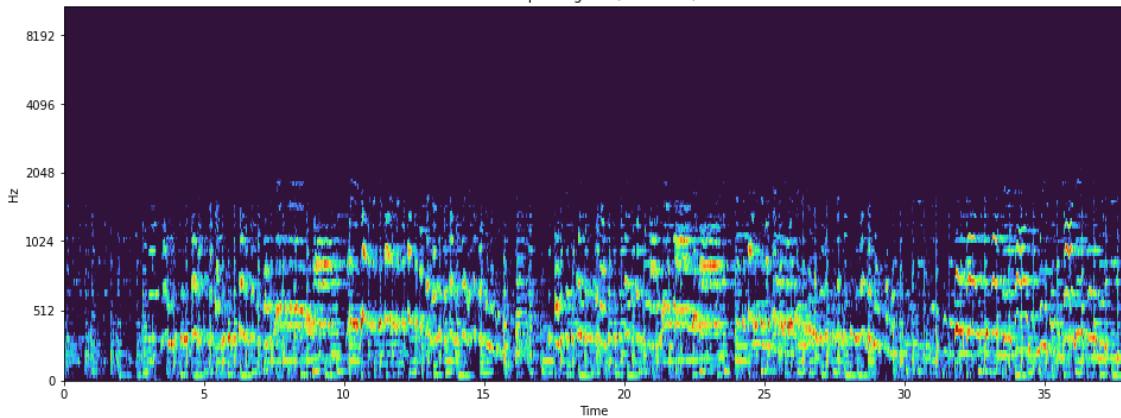
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

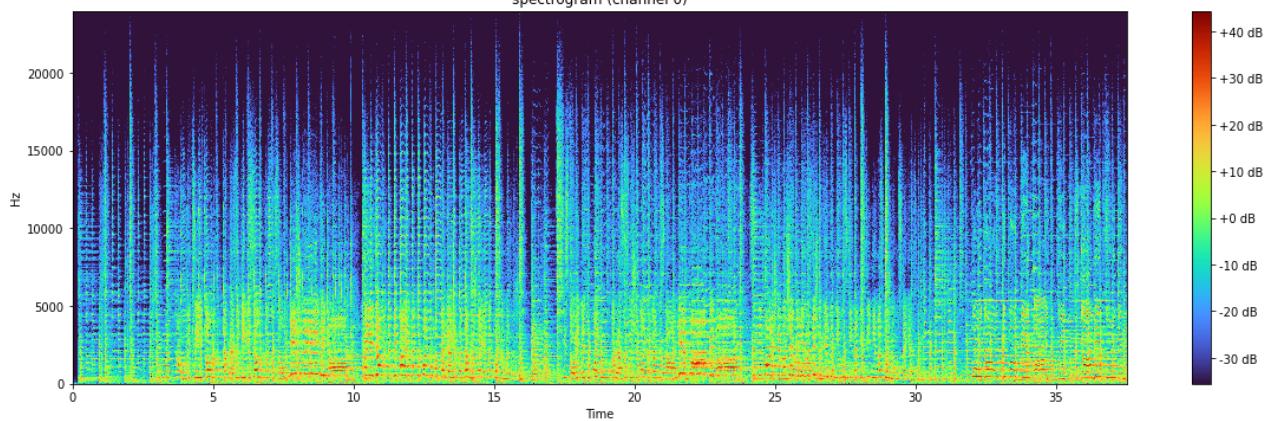


In [43]:

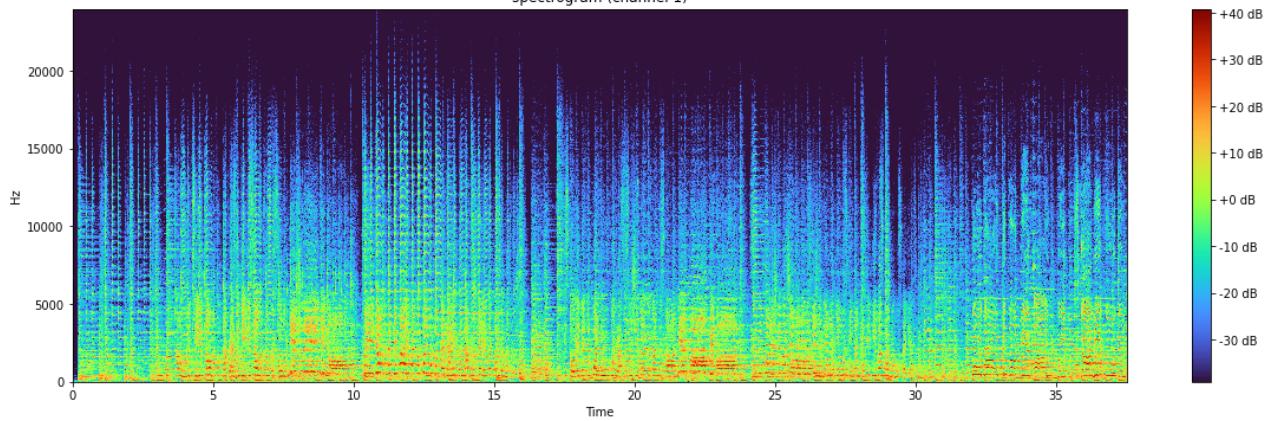
sh(20)

INFO : ./wavs/origin/0020.wav

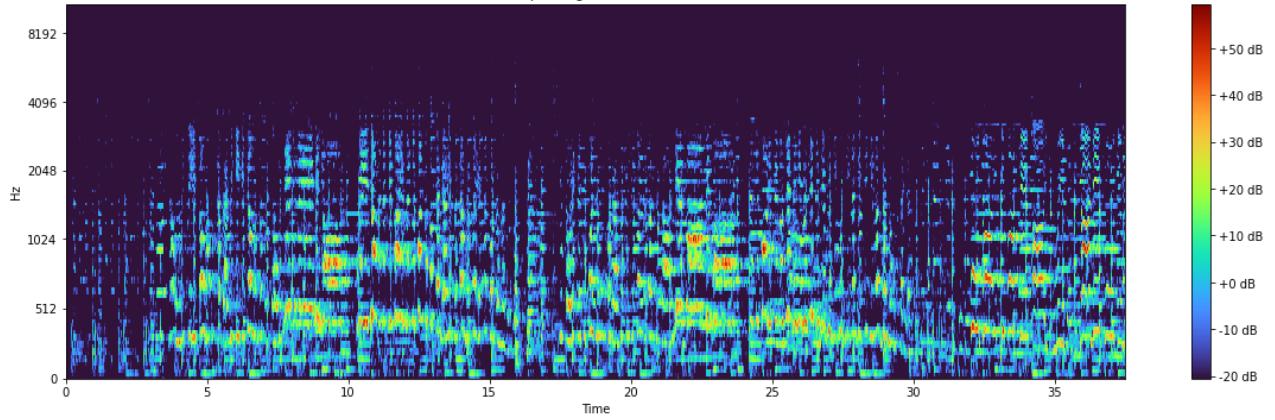
spectrogram (channel 0)



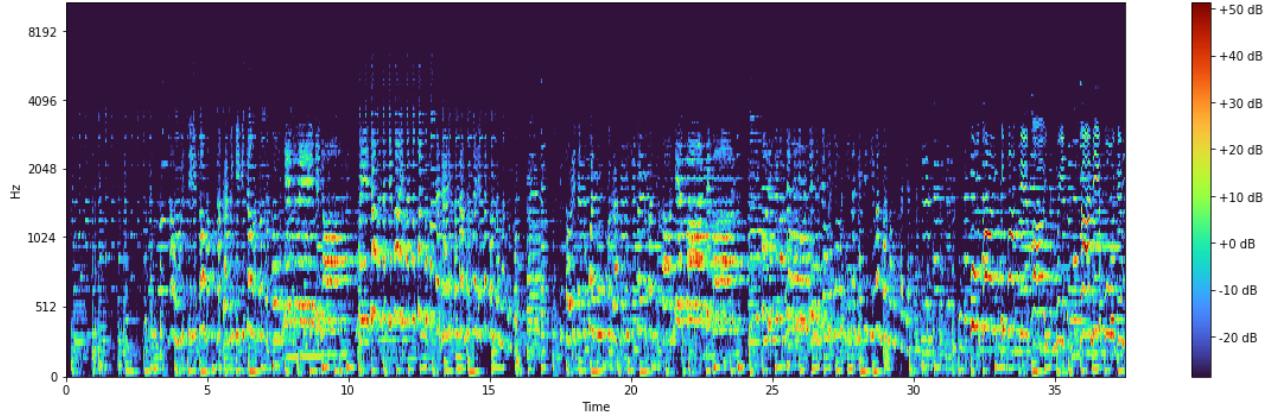
spectrogram (channel 1)



mel spectrogram (channel 0)



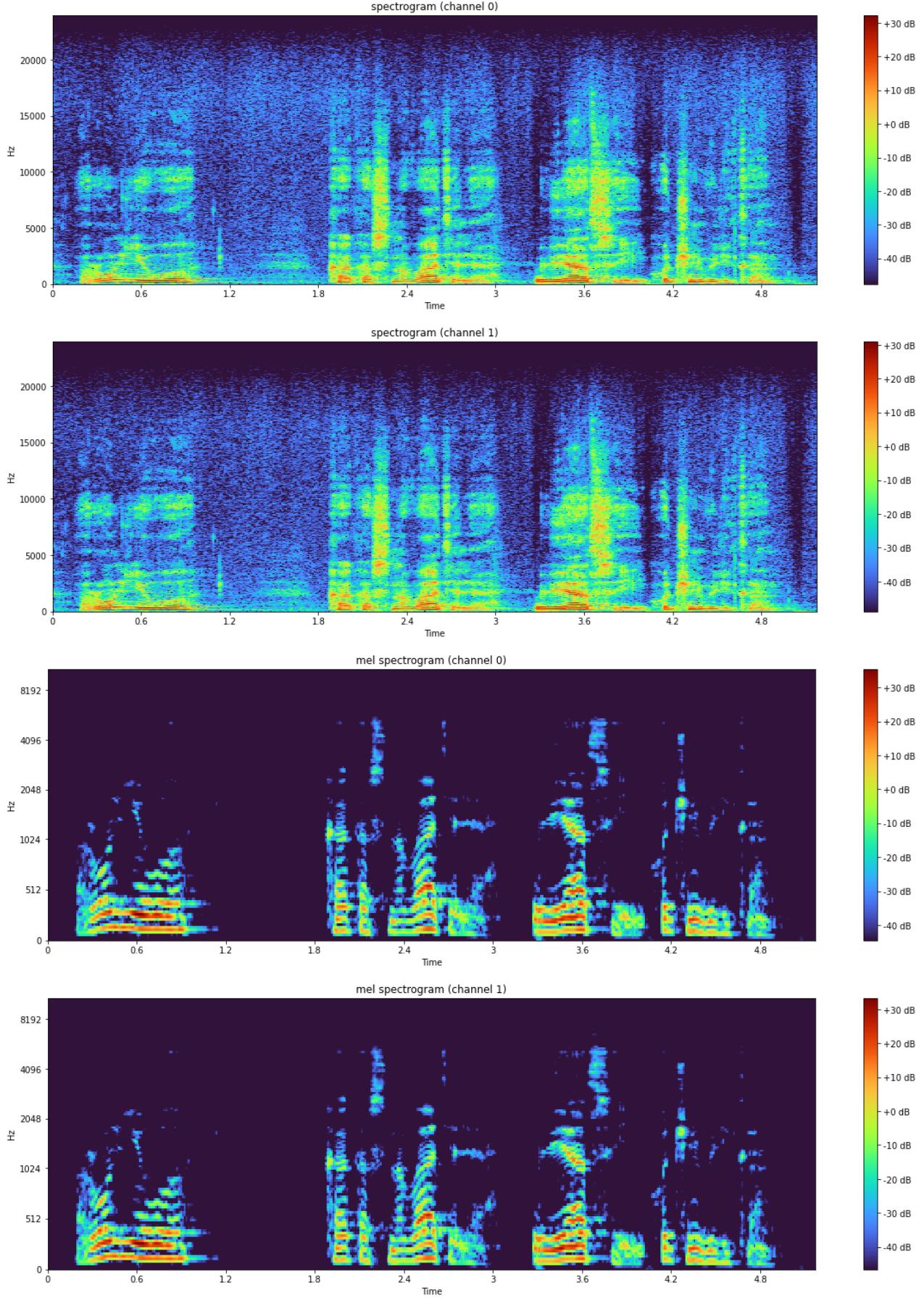
mel spectrogram (channel 1)



In [44]:

sh(21)

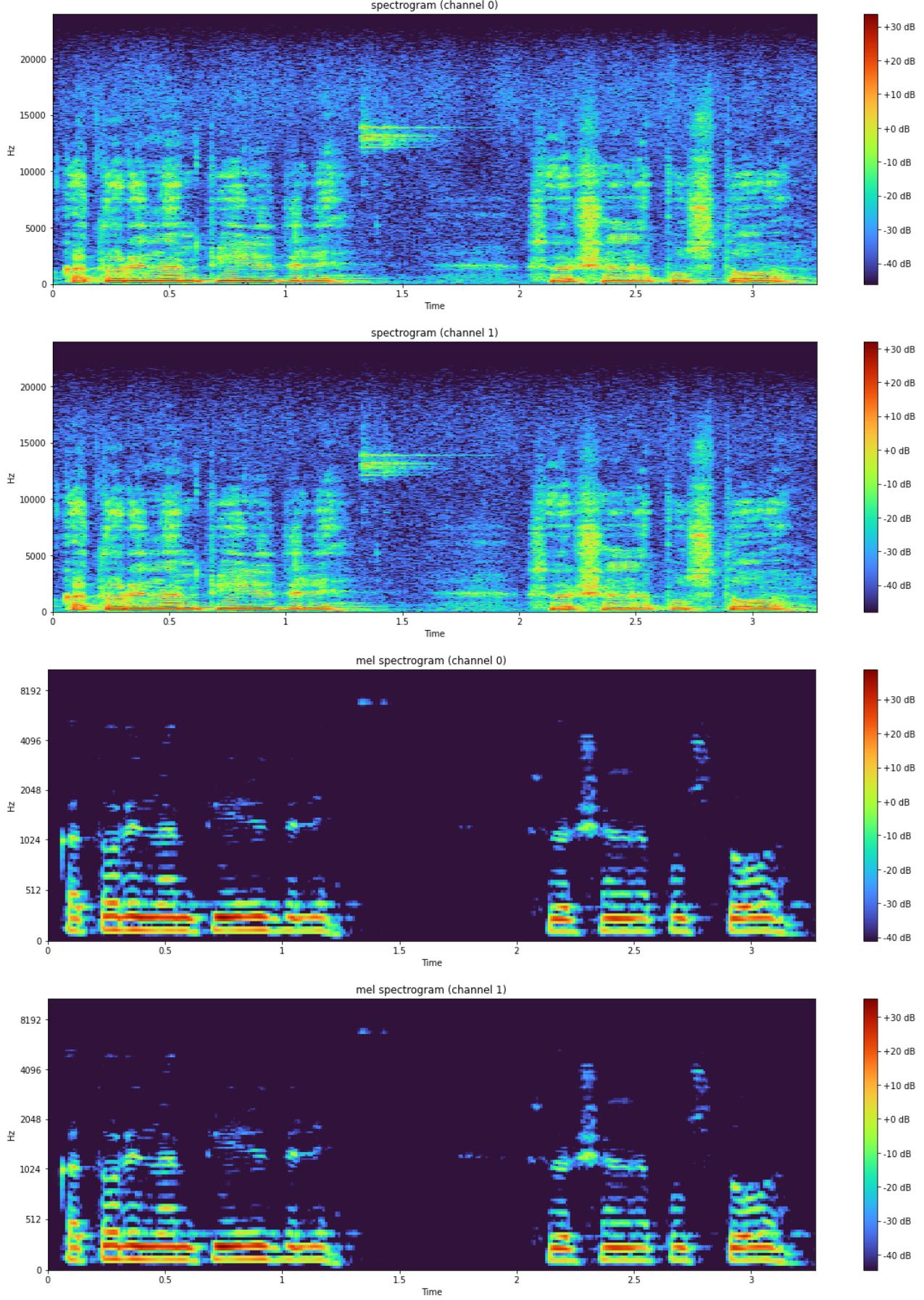
INFO : ./wavs/origin/0021.wav



In [45]:

sh(22)

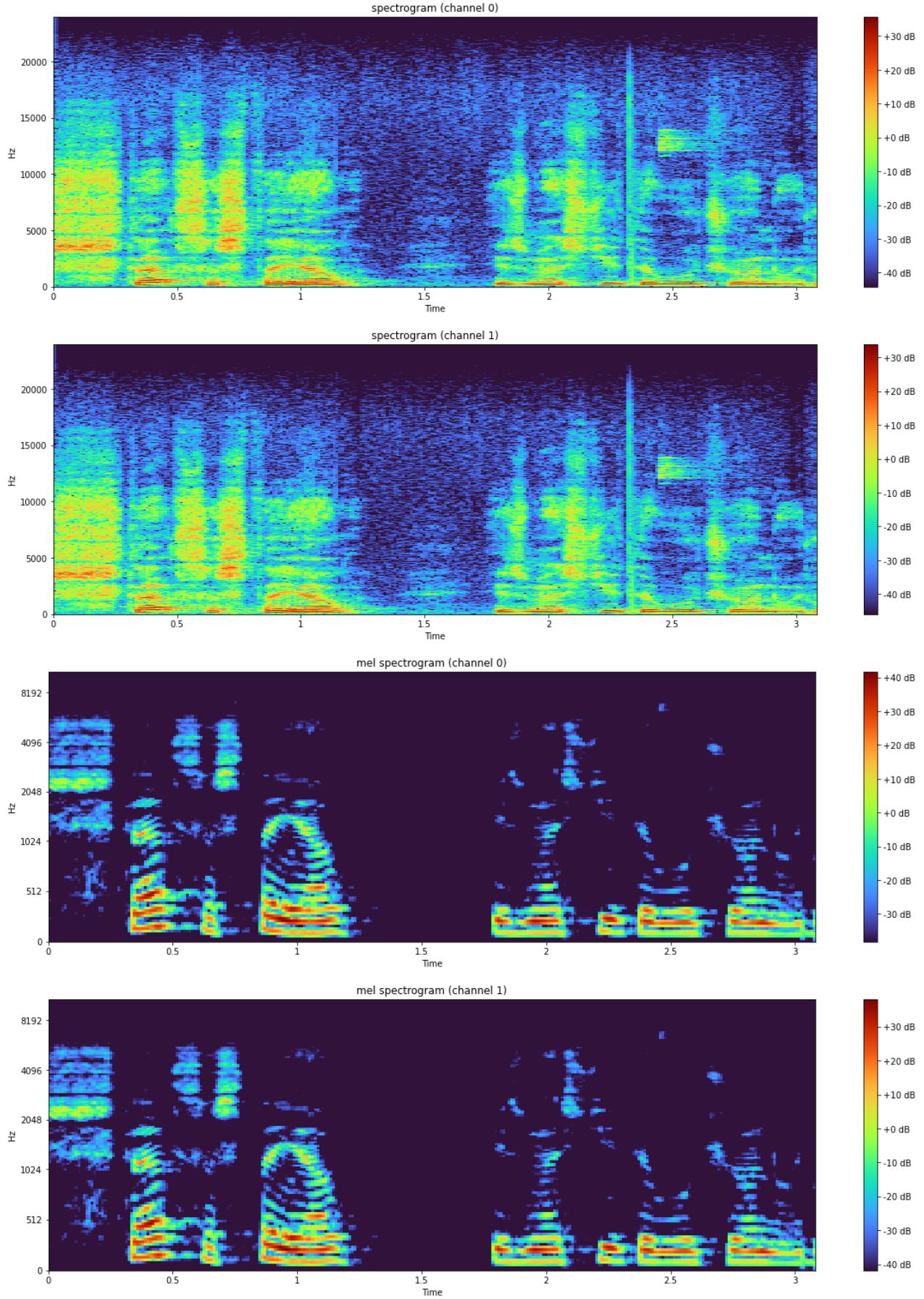
INFO : ./wavs/origin/0022.wav



In [46]:

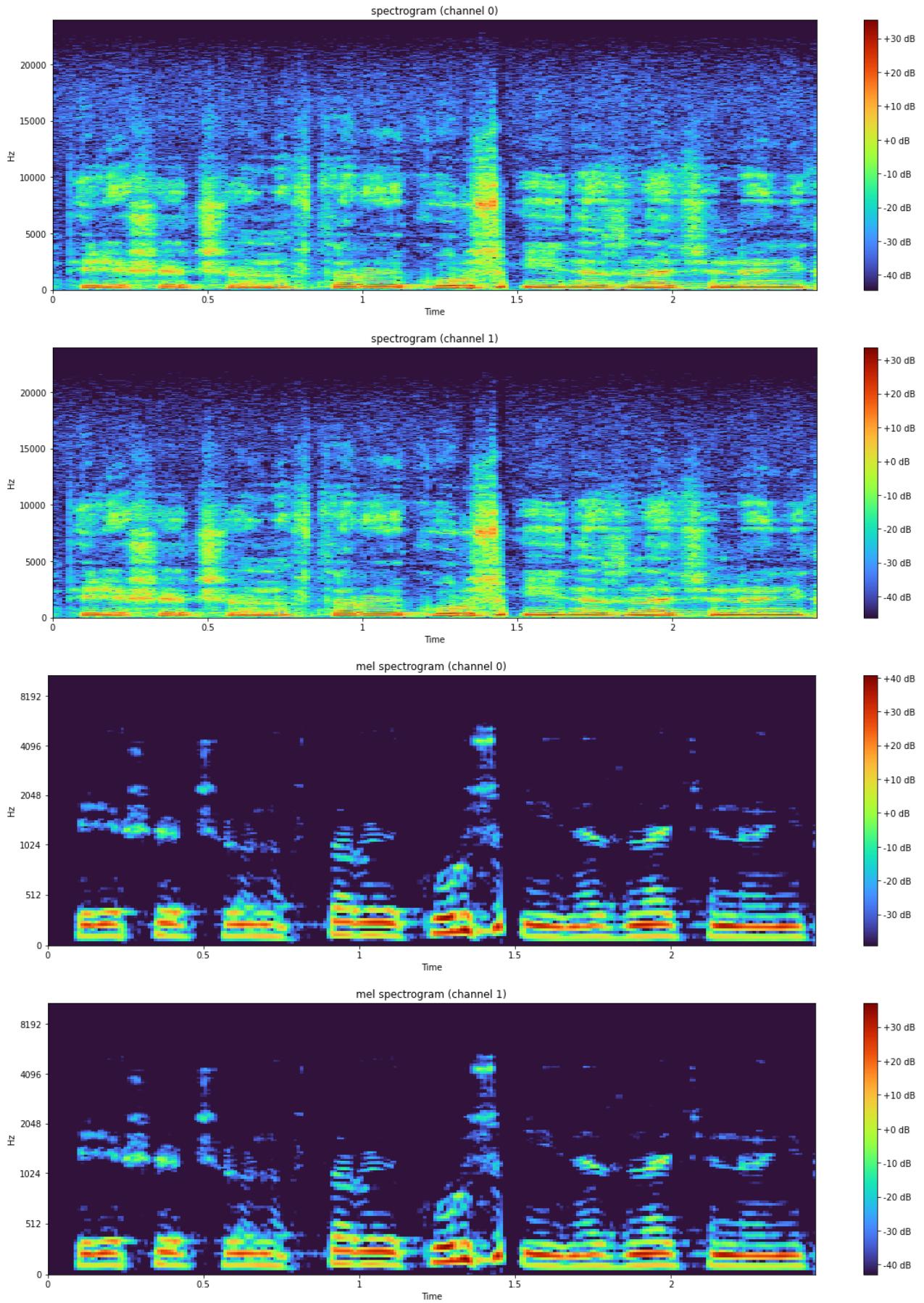
sh(23)

INFO : ./wavs/origin/0023.wav



In [47]: sh(24)

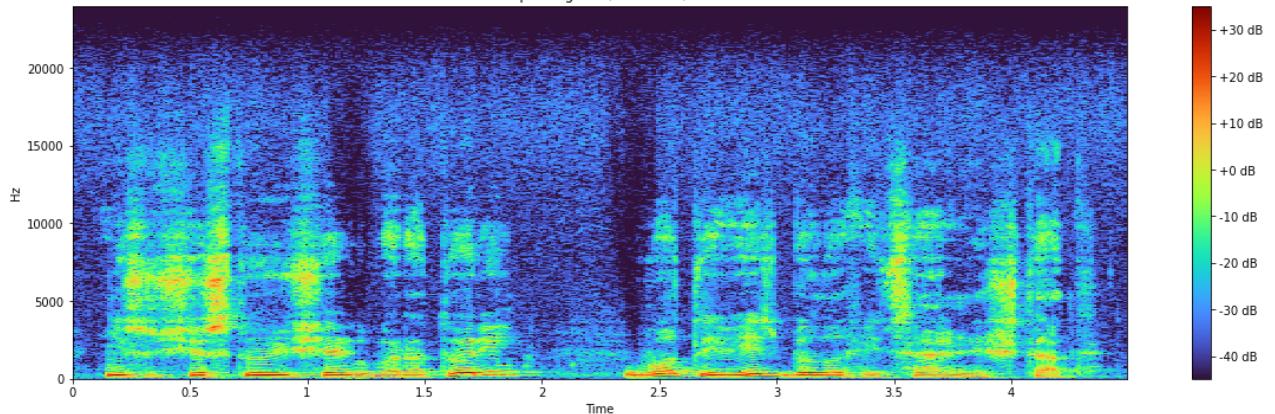
INFO : ./wavs/origin/0024.wav



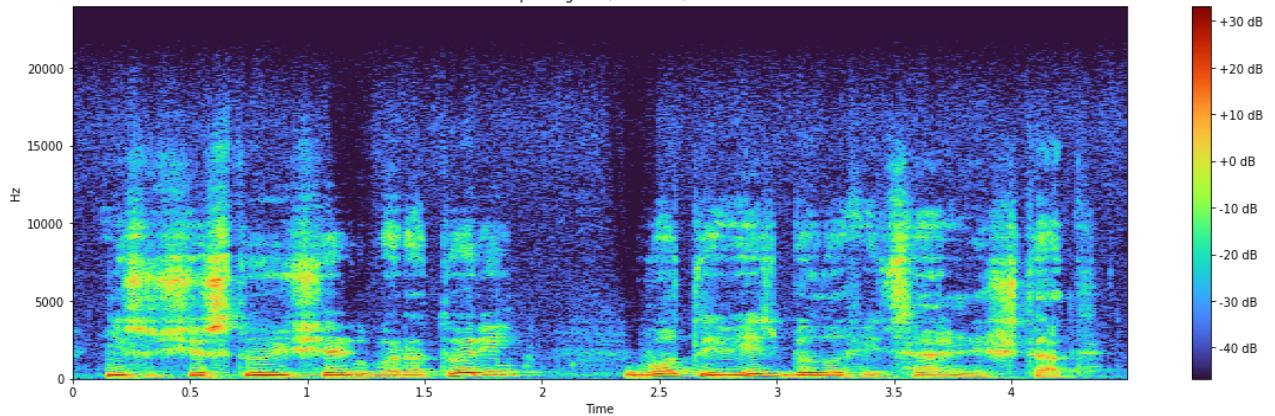
In [48]: sh(25)

INFO : ./wavs/origin/0025.wav

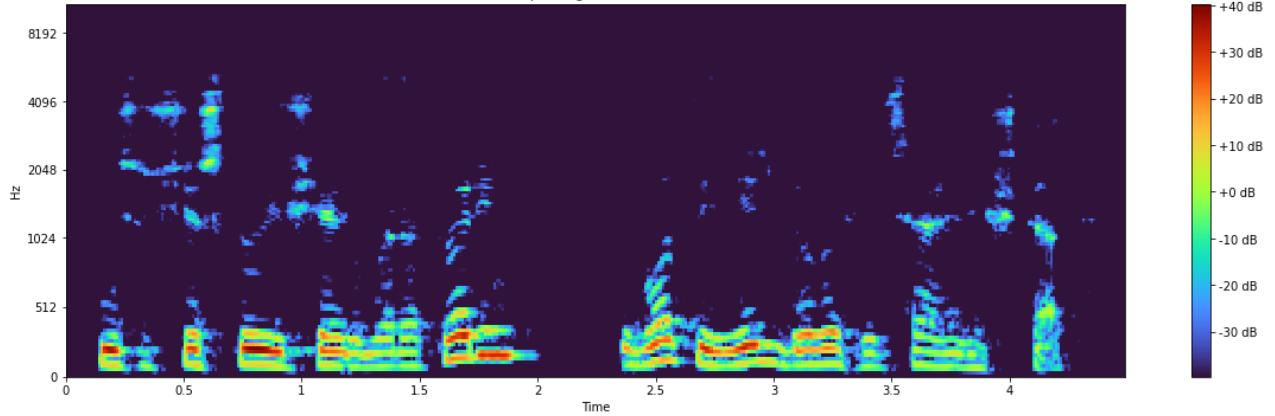
spectrogram (channel 0)



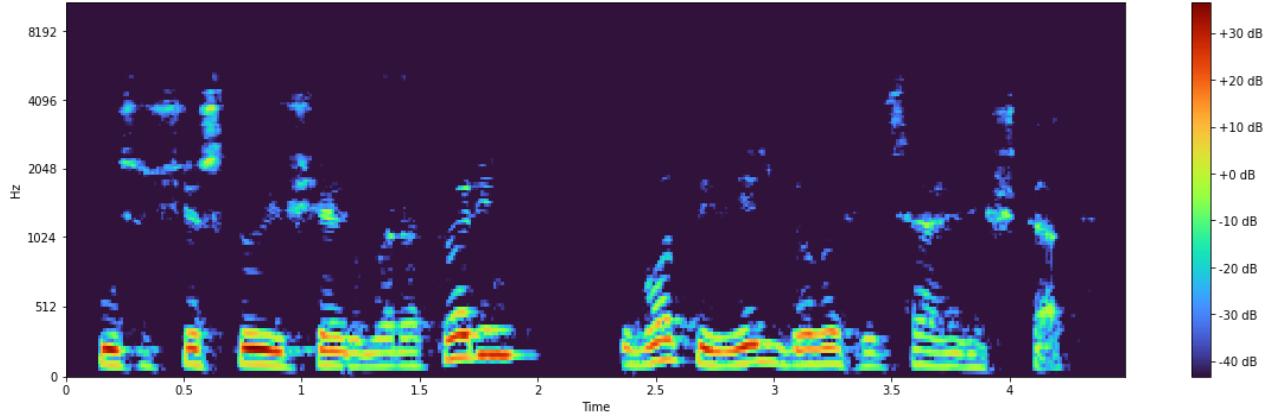
spectrogram (channel 1)



mel spectrogram (channel 0)

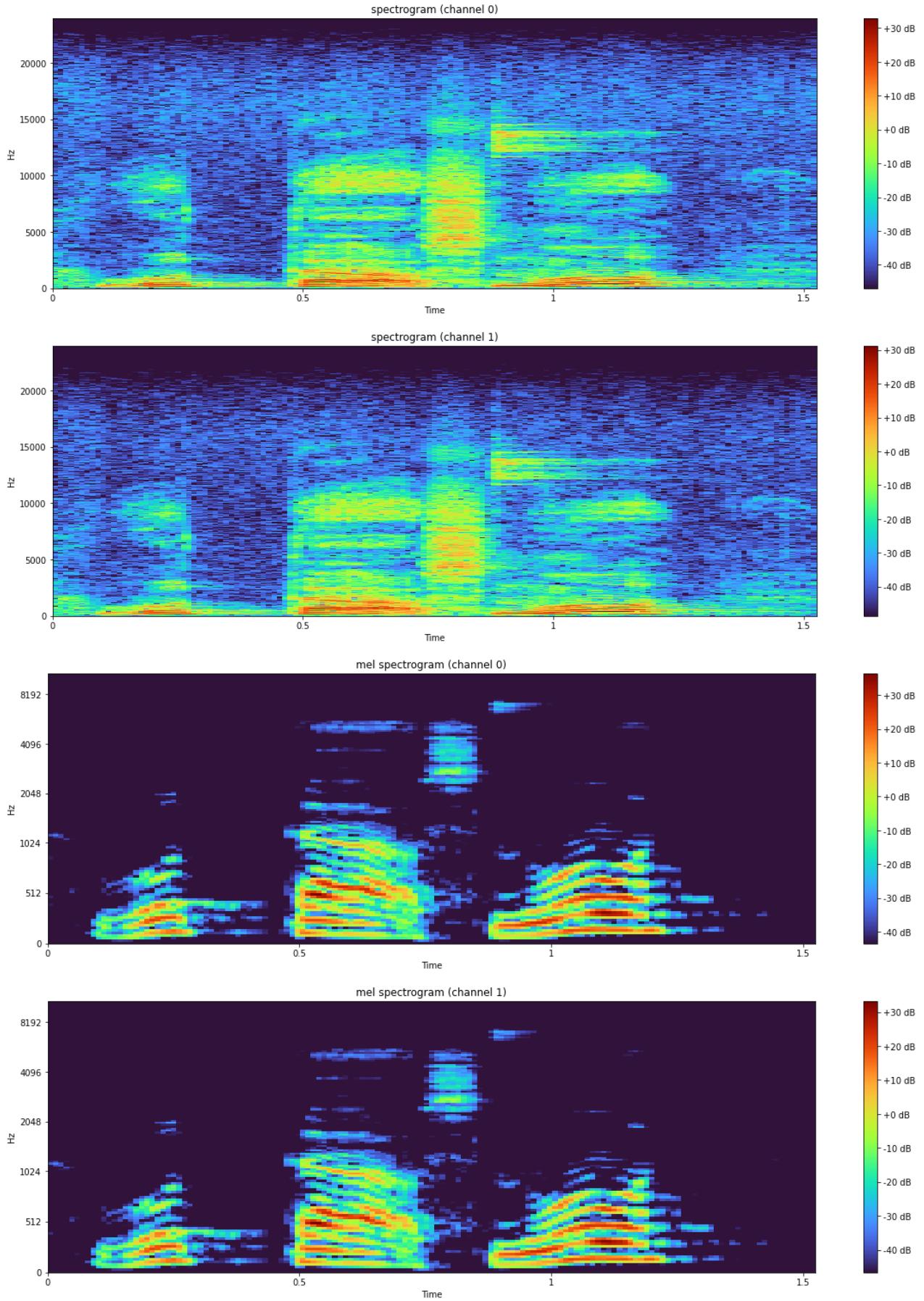


mel spectrogram (channel 1)



In [49]: sh(26)

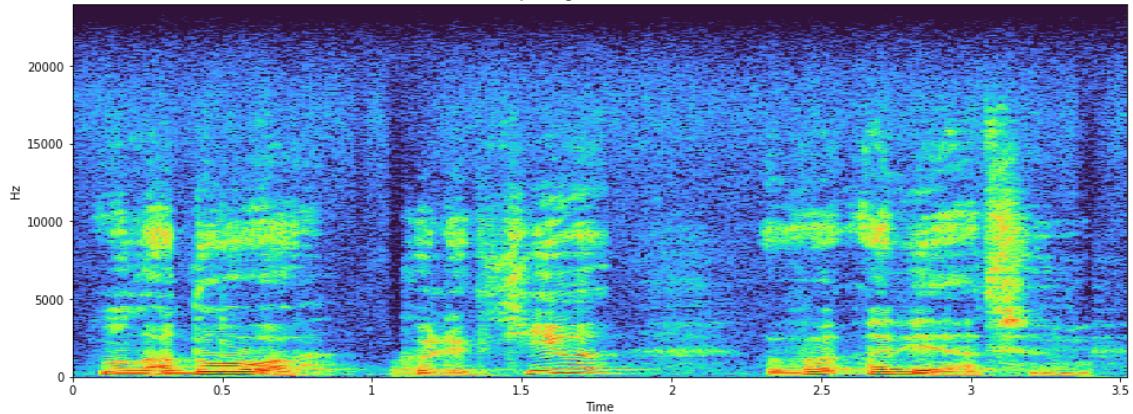
INFO : ./wavs/origin/0026.wav



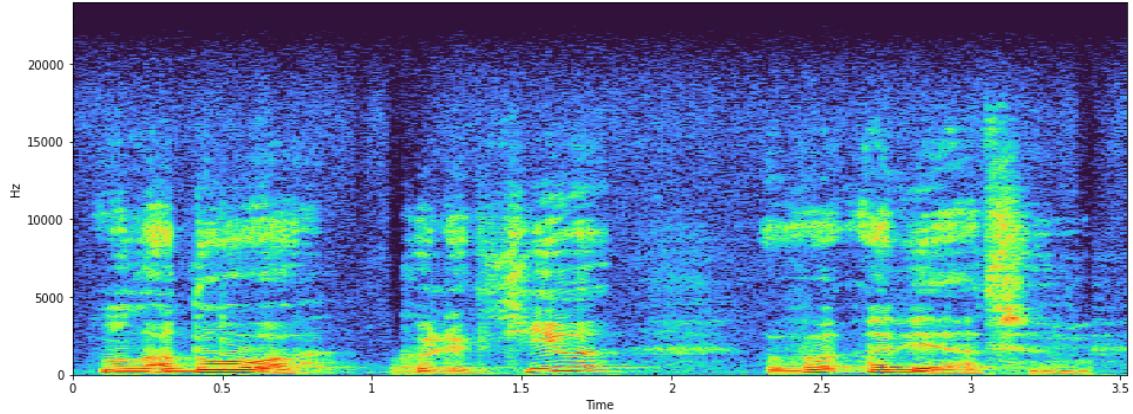
In [50]: sh(27)

INFO : ./wavs/origin/0027.wav

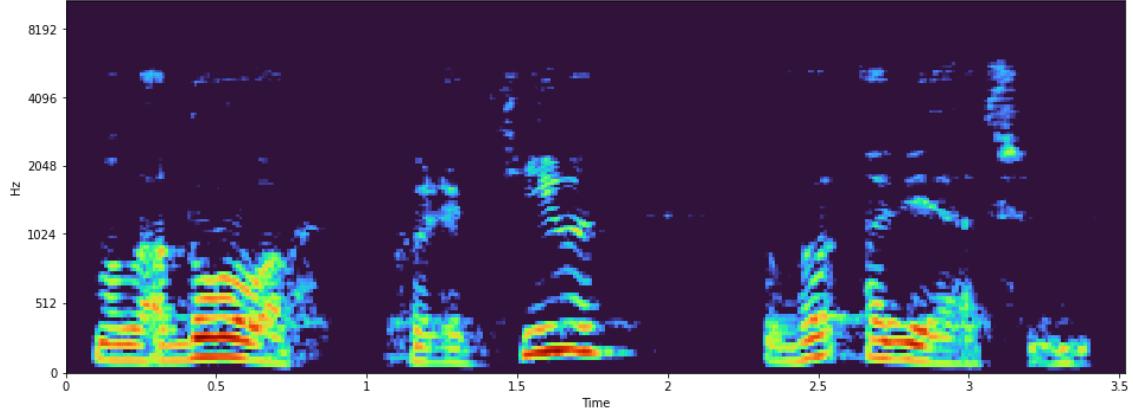
spectrogram (channel 0)



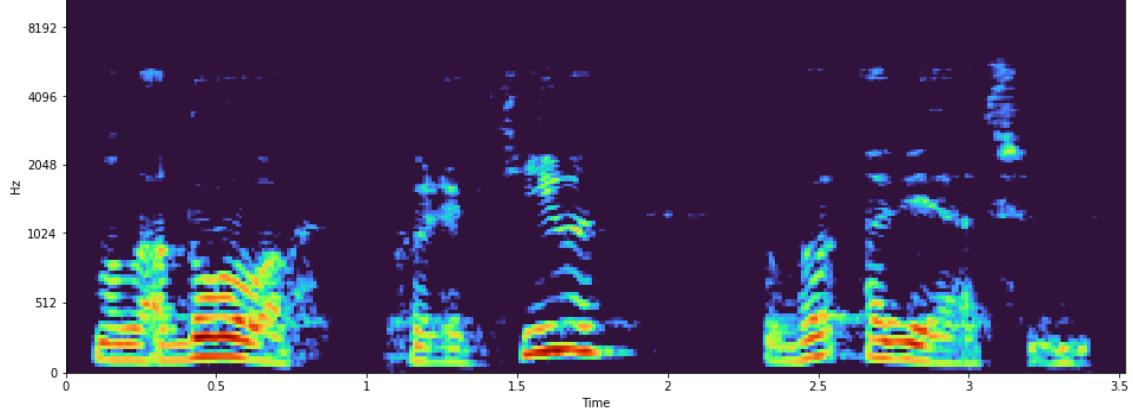
spectrogram (channel 1)



mel spectrogram (channel 0)

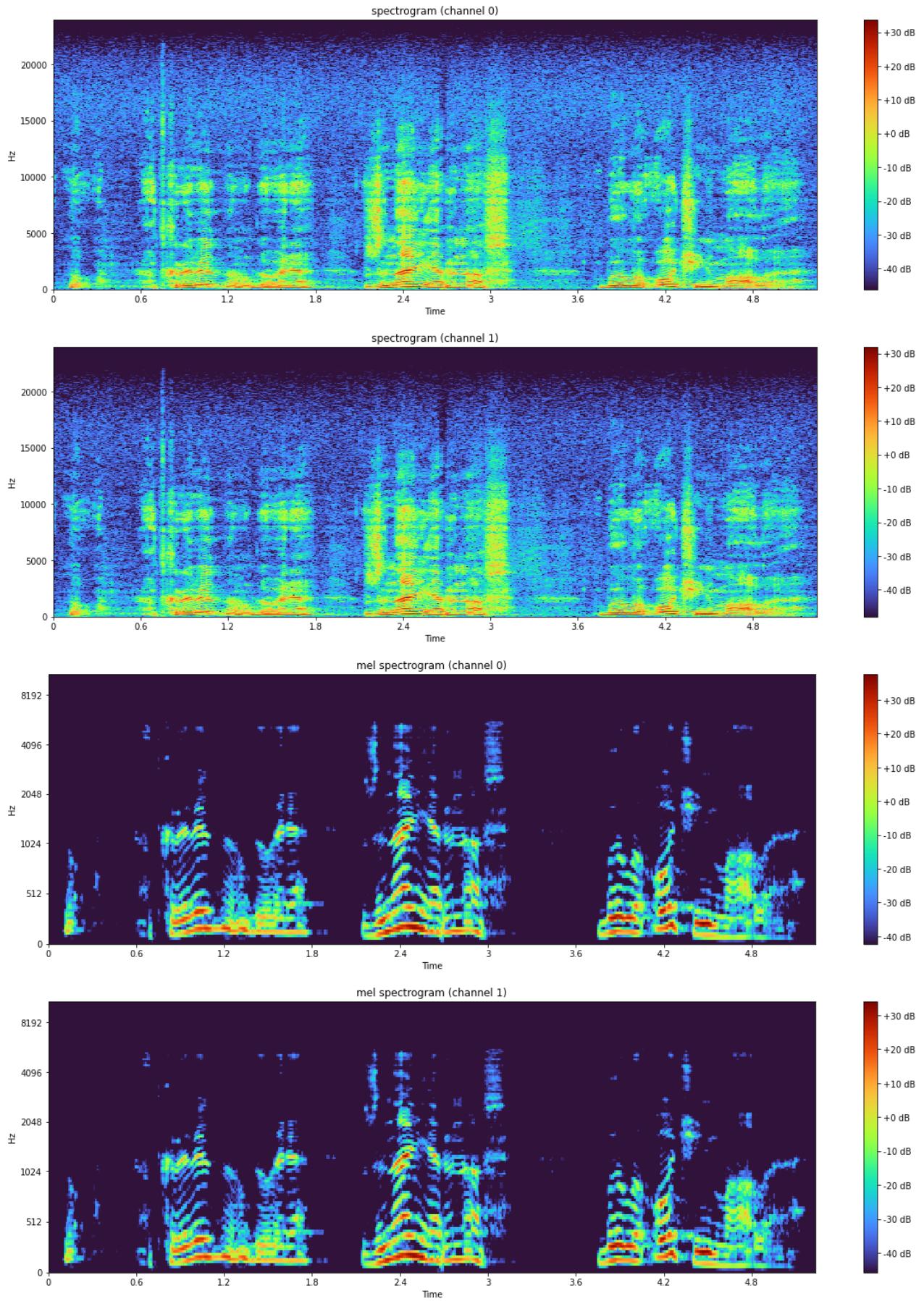


mel spectrogram (channel 1)



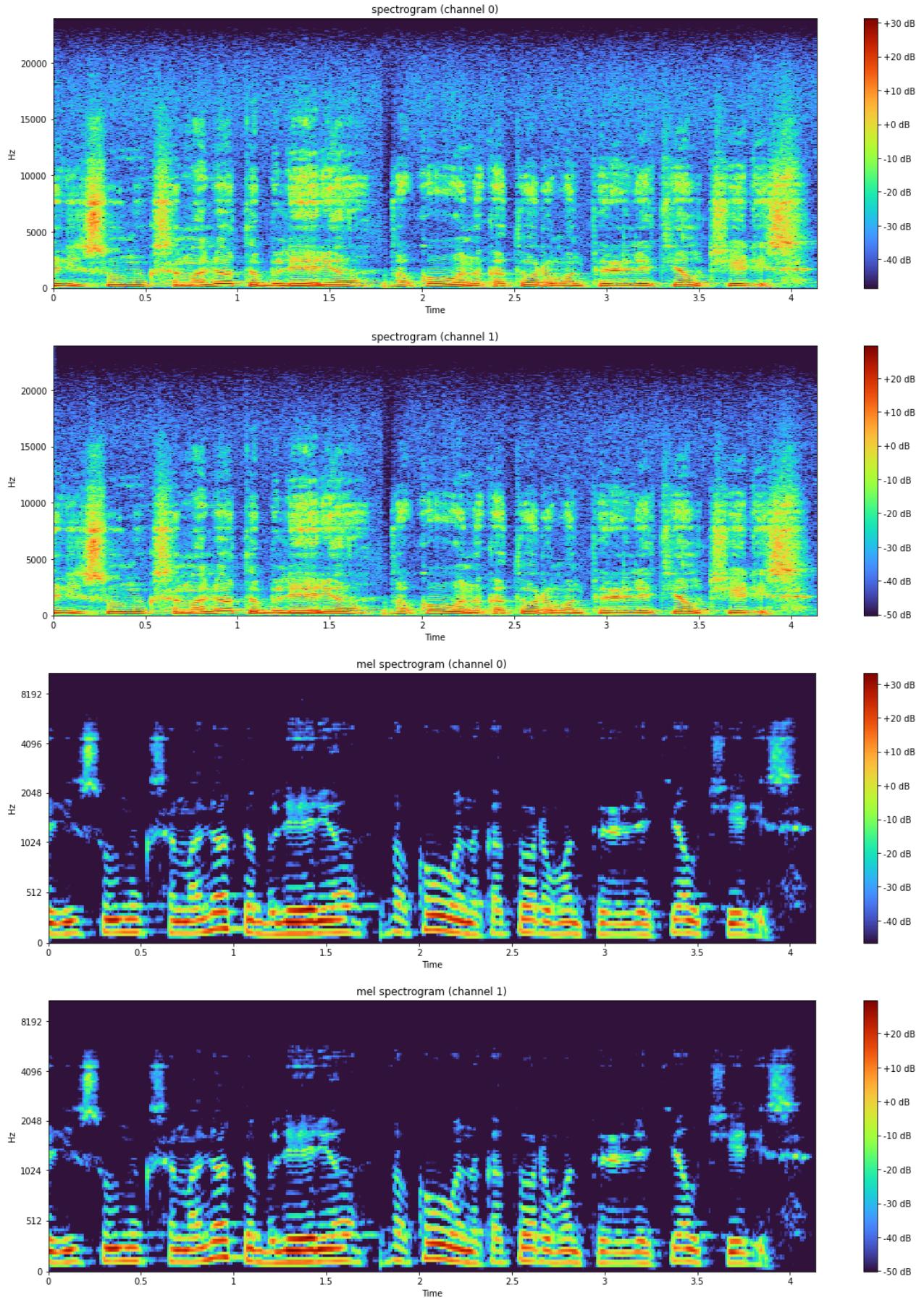
In [51]: sh(28)

INFO : ./wavs/origin/0028.wav



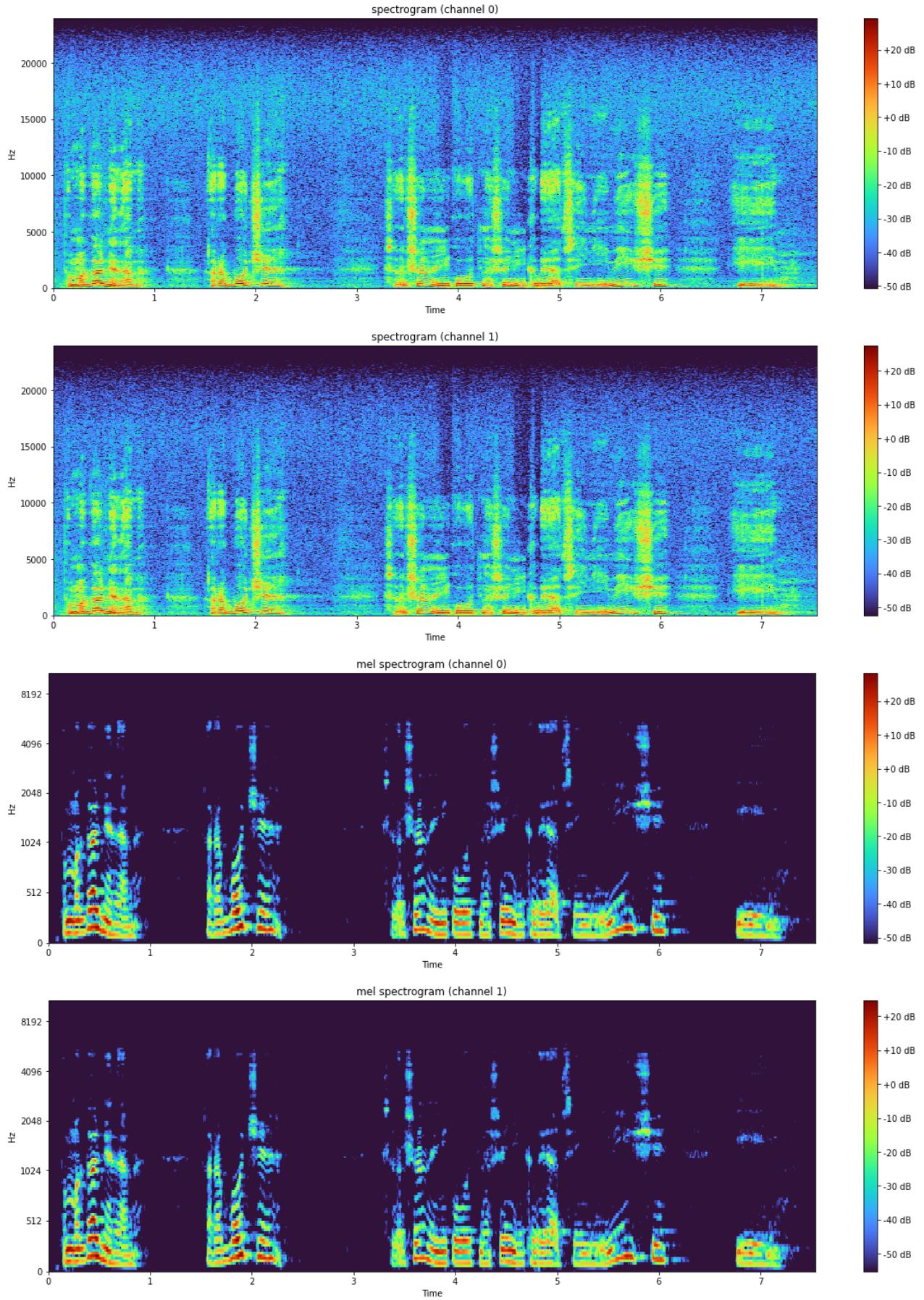
In [52]: sh(29)

INFO : ./wavs/origin/0029.wav



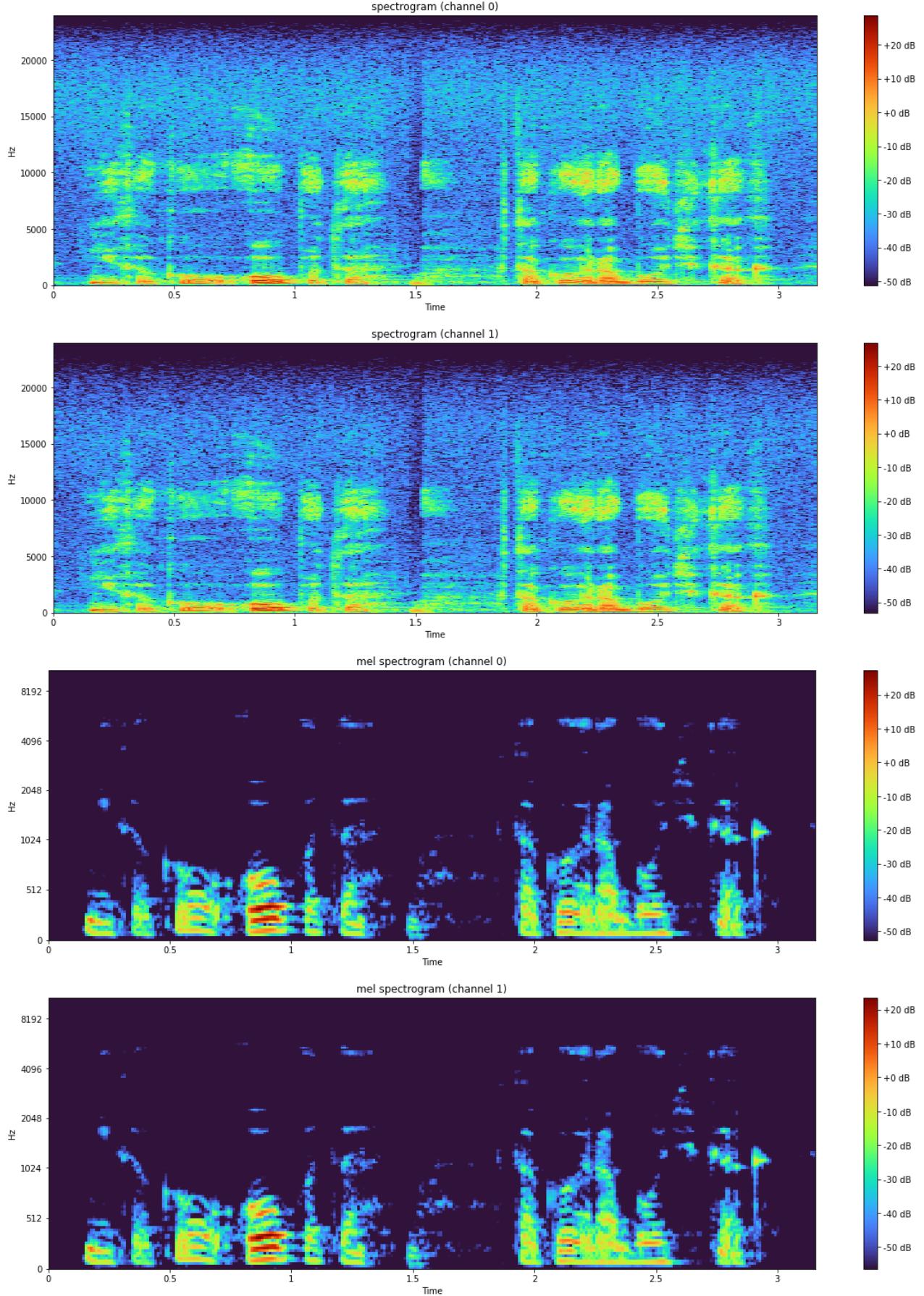
In [53]: sh(30)

INFO : ./wavs/origin/0030.wav



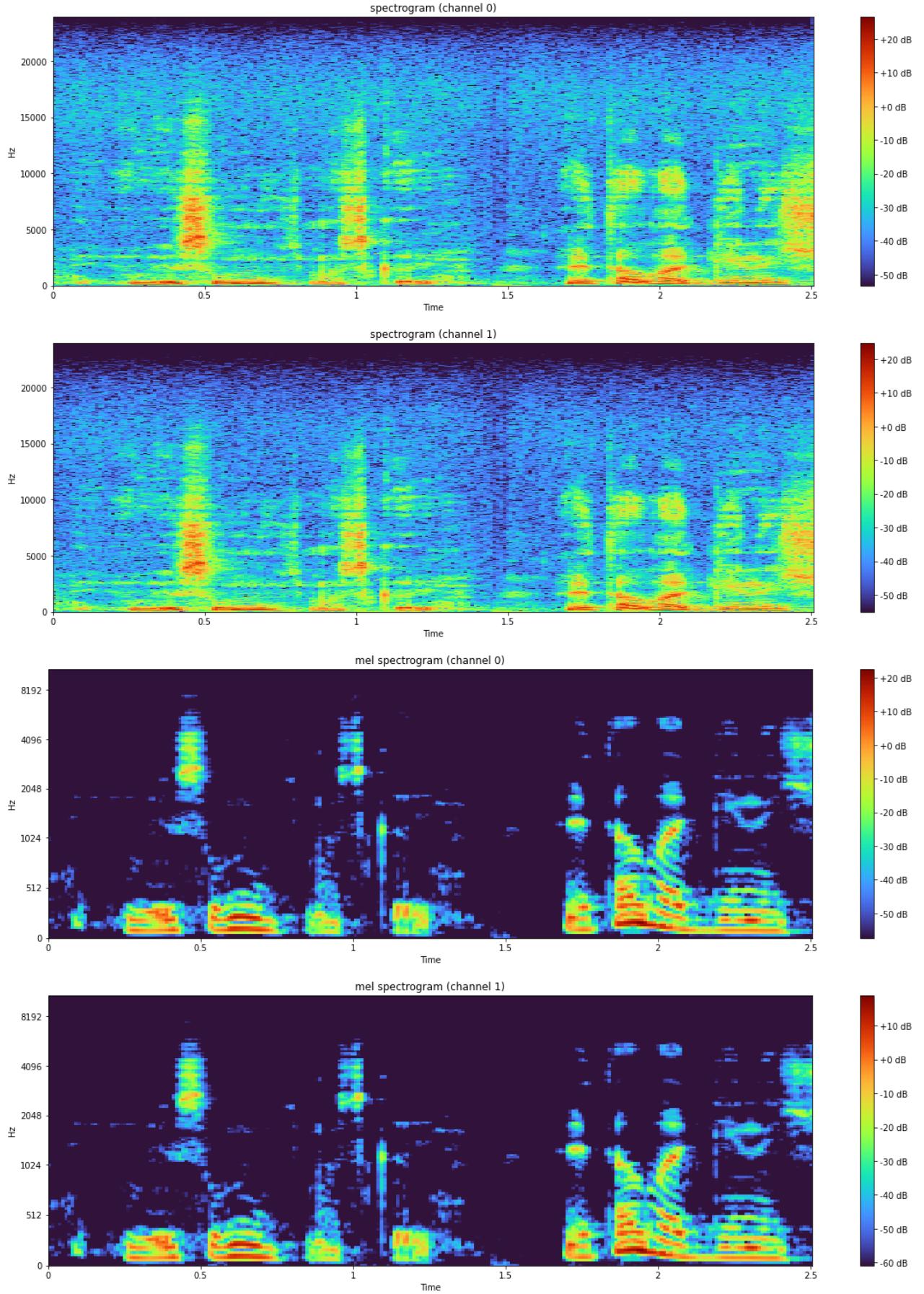
In [54]: sh(31)

INFO : ./wavs/origin/0031.wav



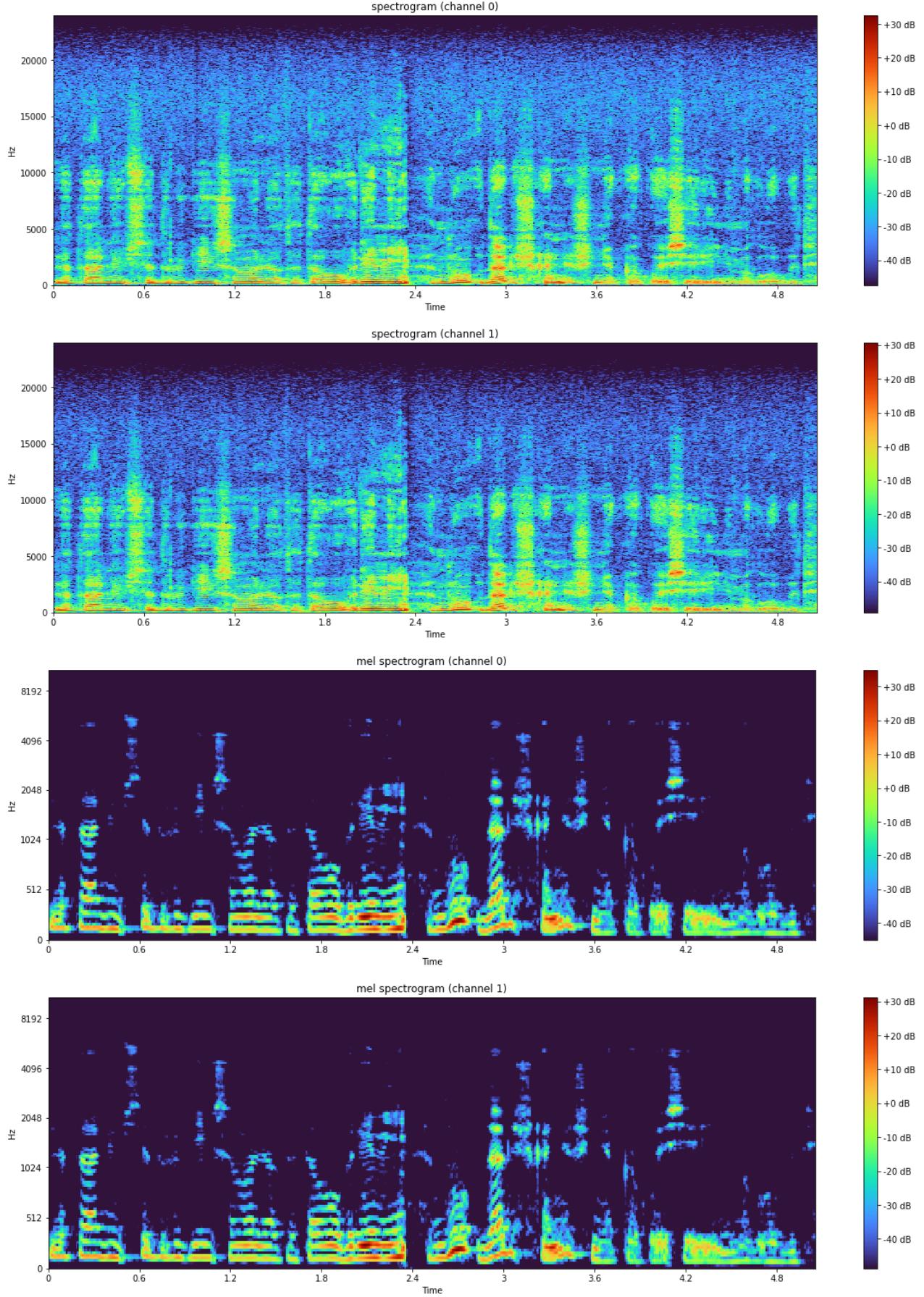
In [55]: sh(32)

INFO : ./wavs/origin/0032.wav



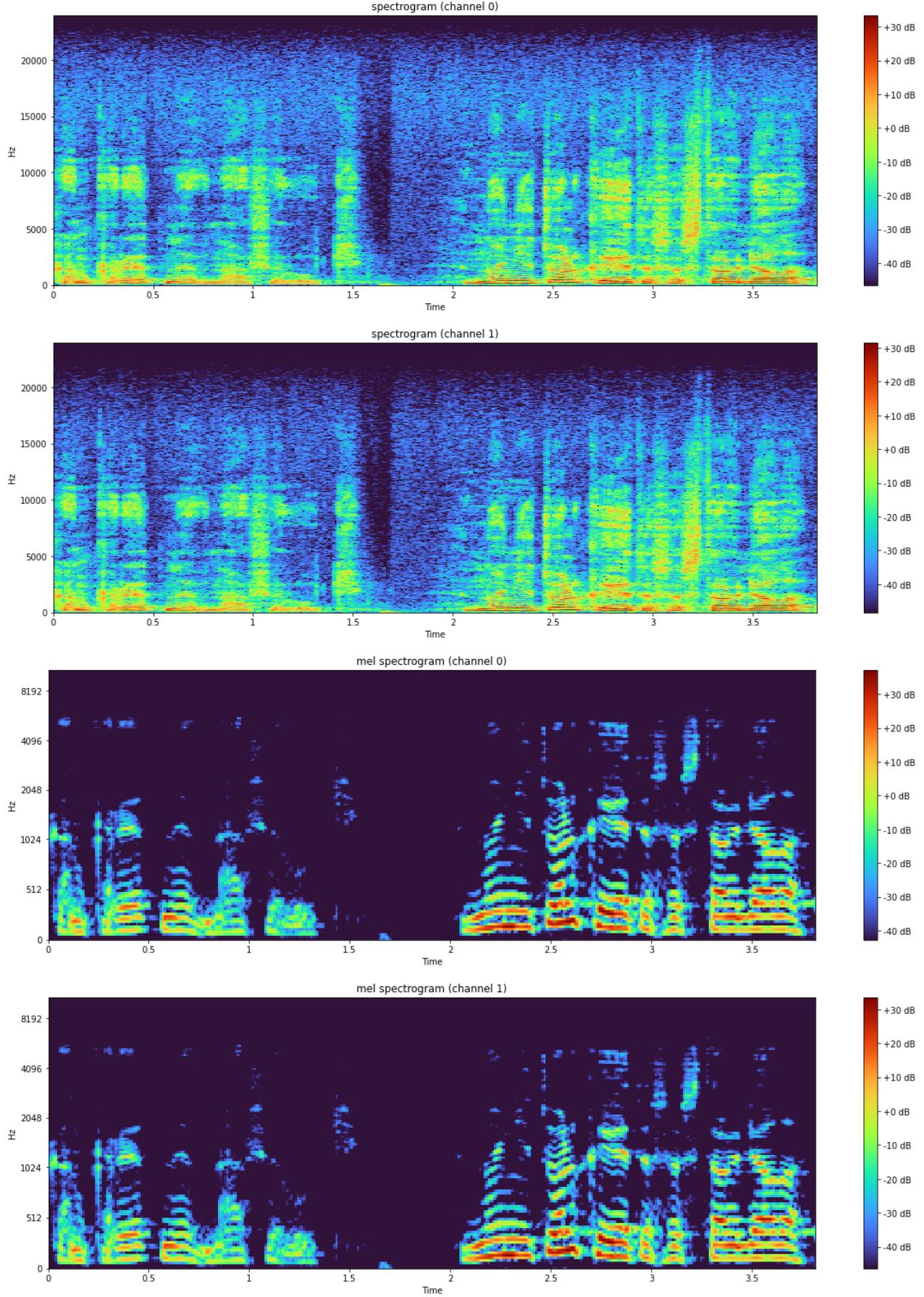
In [56]: sh(33)

INFO : ./wavs/origin/0033.wav



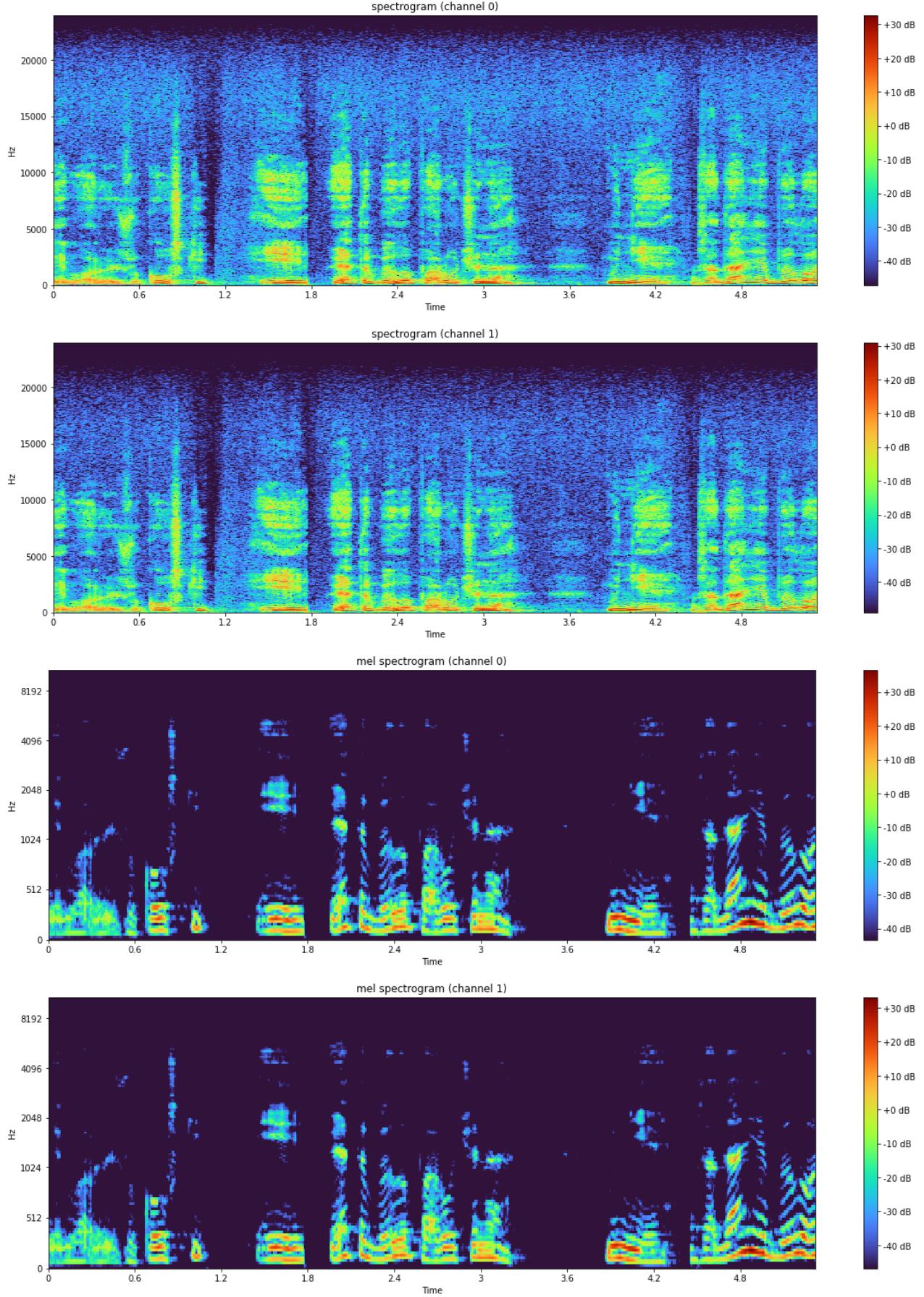
In [57]: sh(34)

INFO : ./wavs/origin/0034.wav



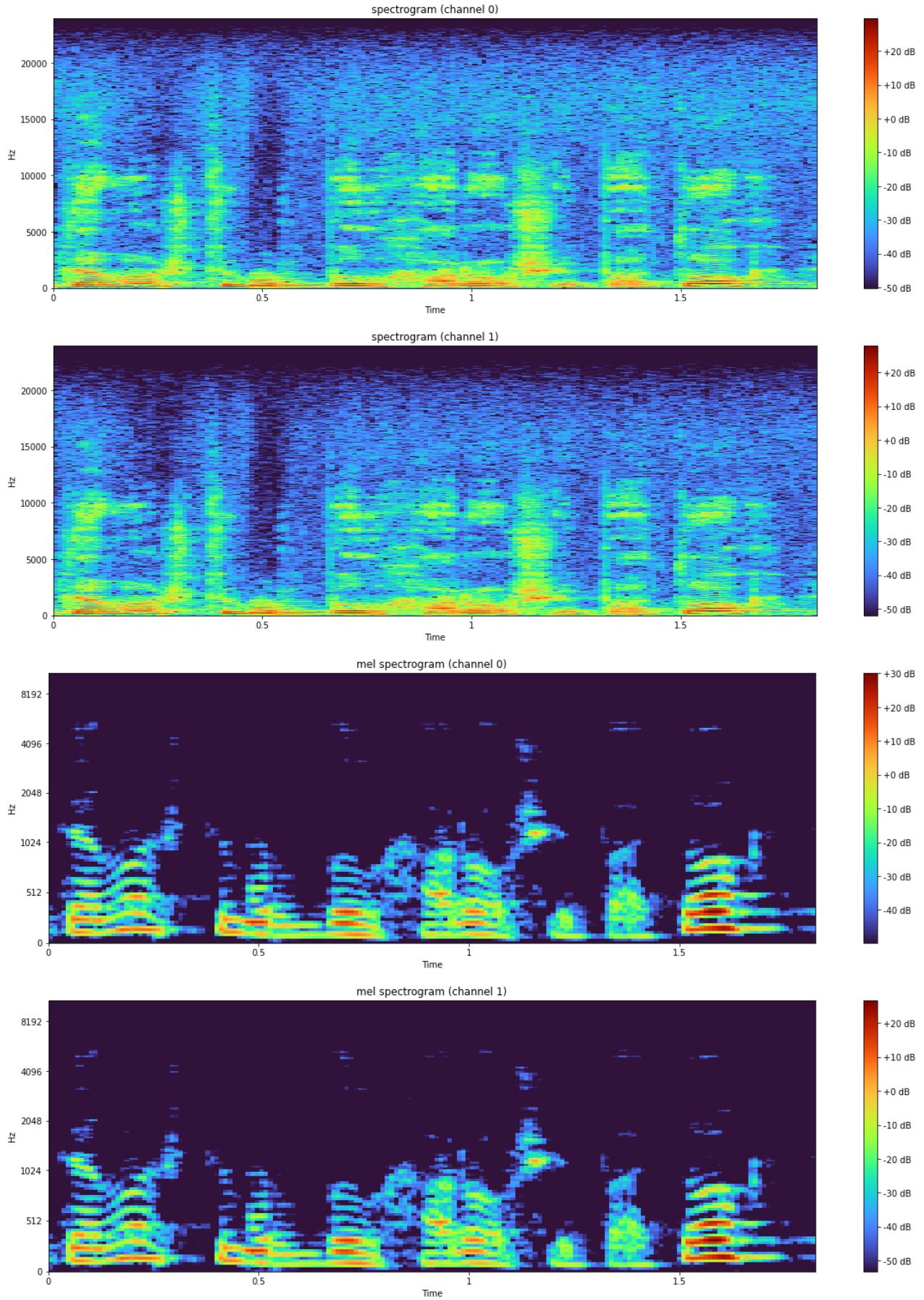
In [58]: sh(35)

INFO : ./wavs/origin/0035.wav



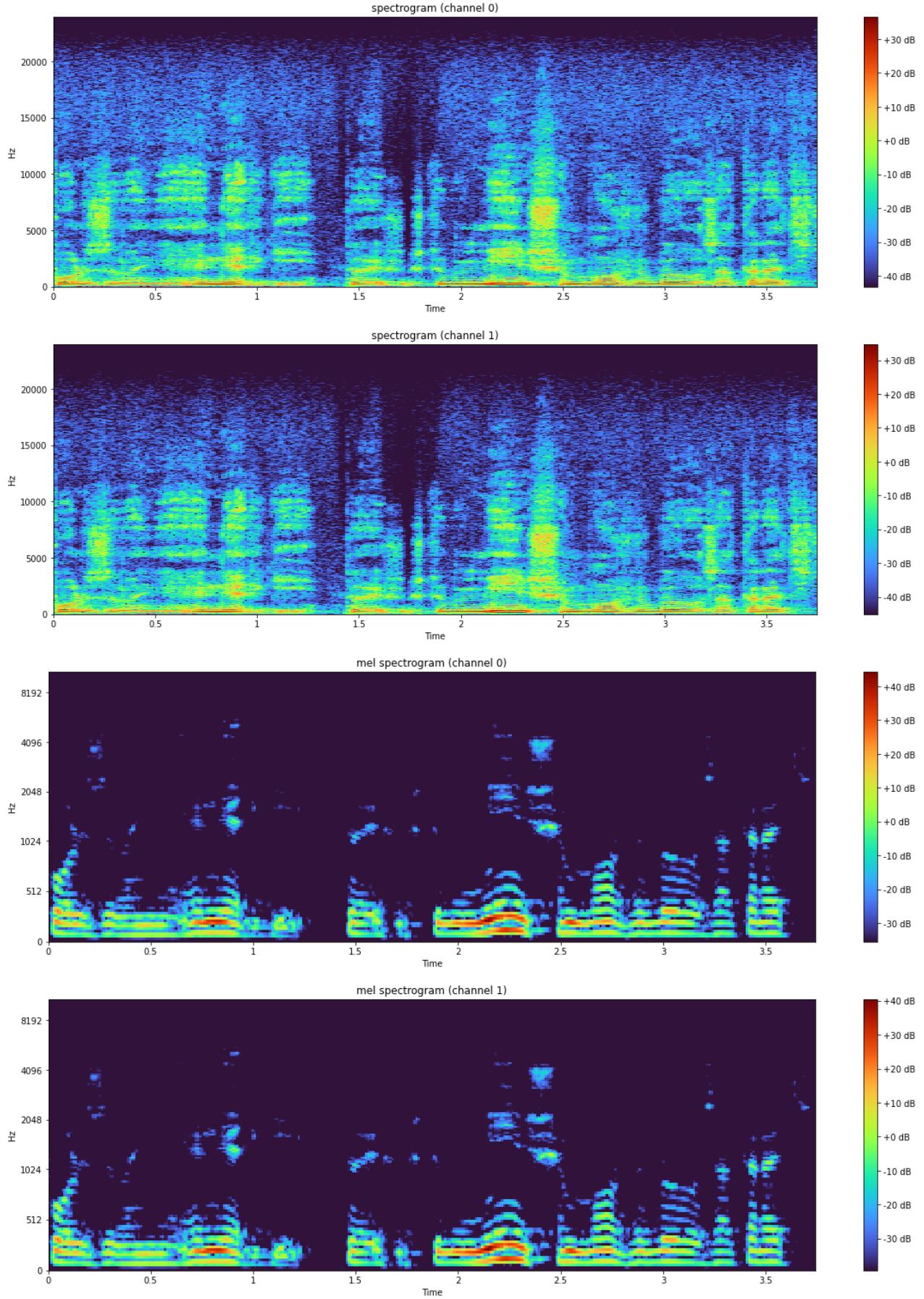
In [59]: sh(36)

INFO : ./wavs/origin/0036.wav



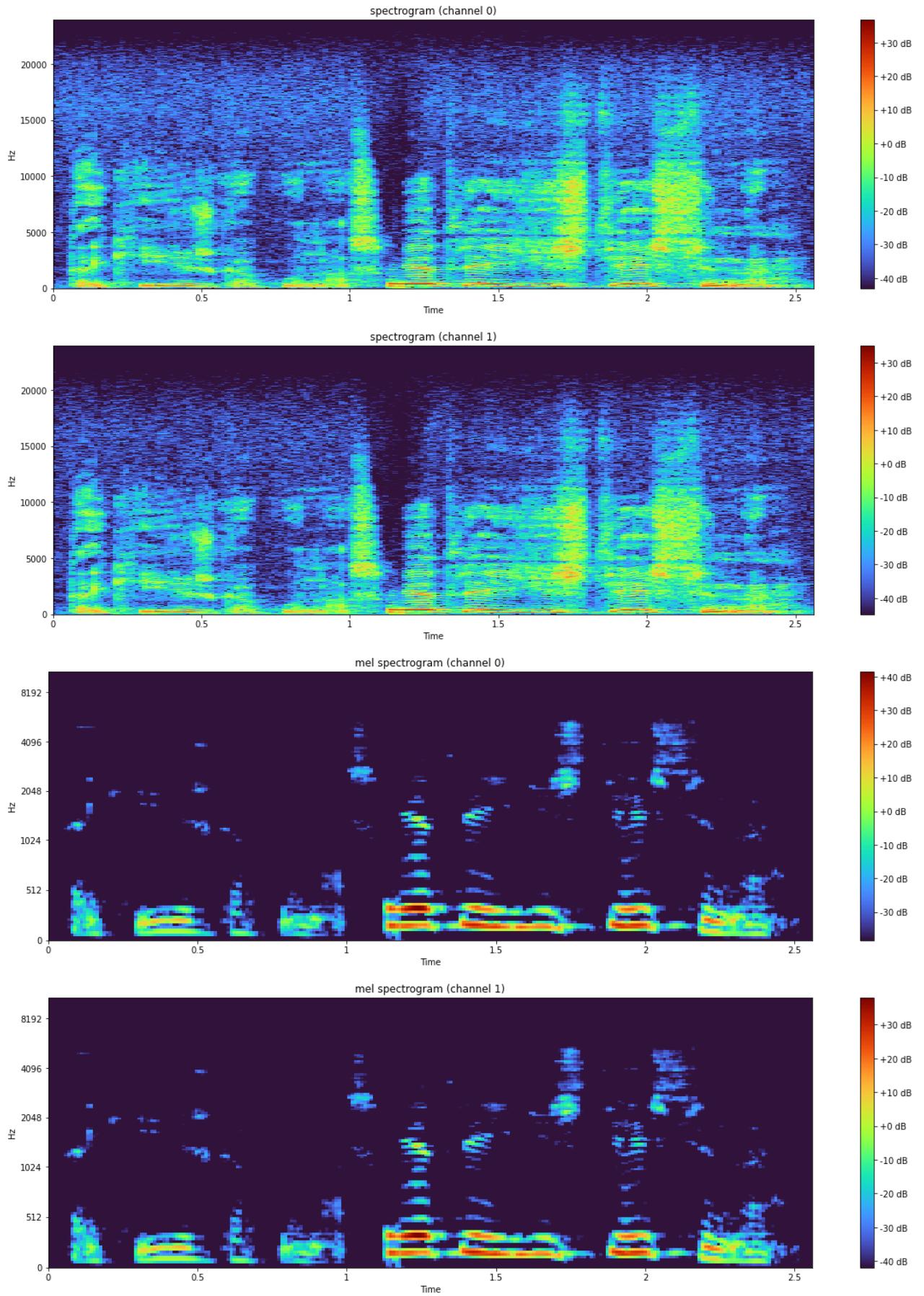
In [60]: sh(37)

INFO : ./wavs/origin/0037.wav



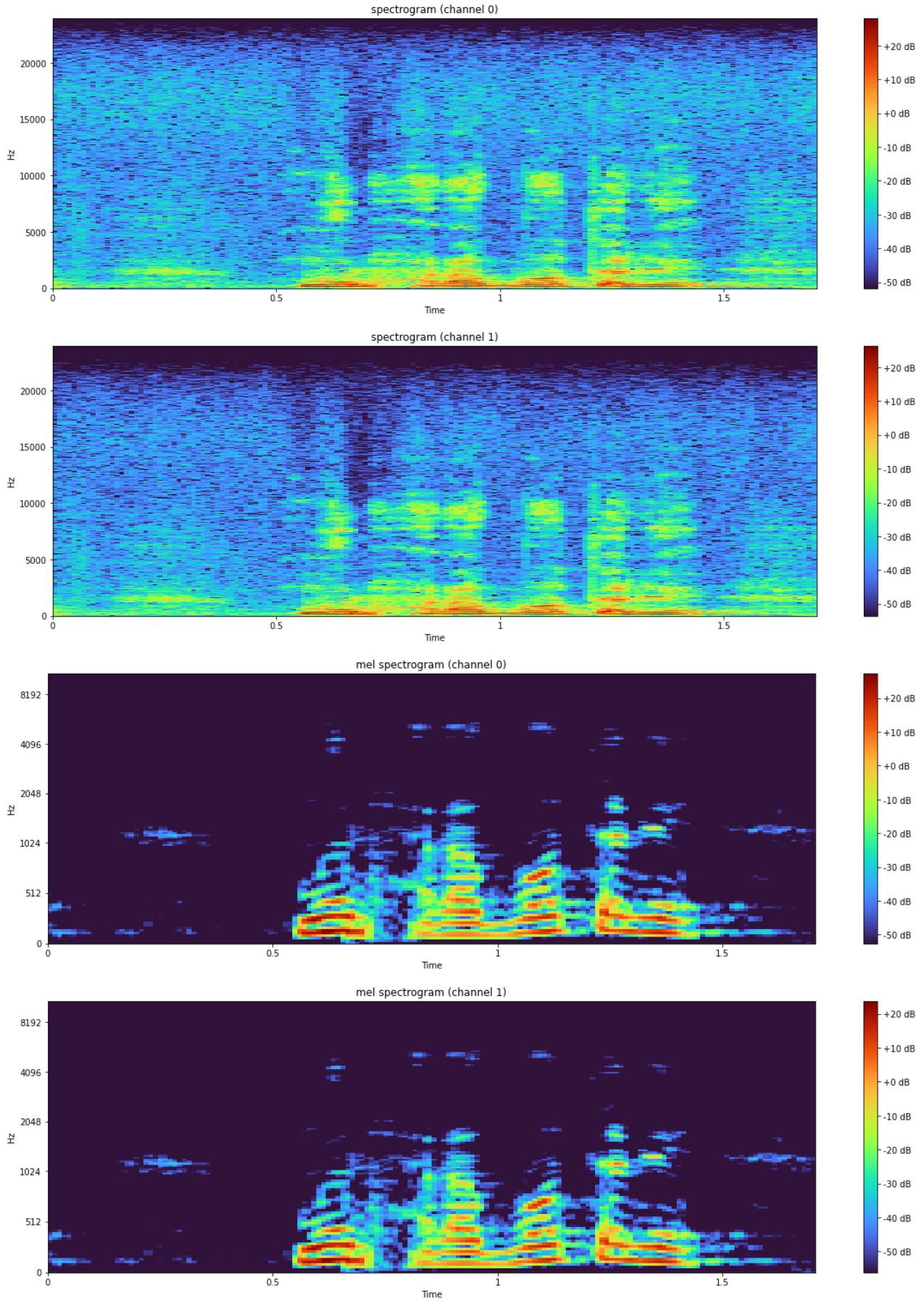
In [61]: sh(38)

INFO : ./wavs/origin/0038.wav



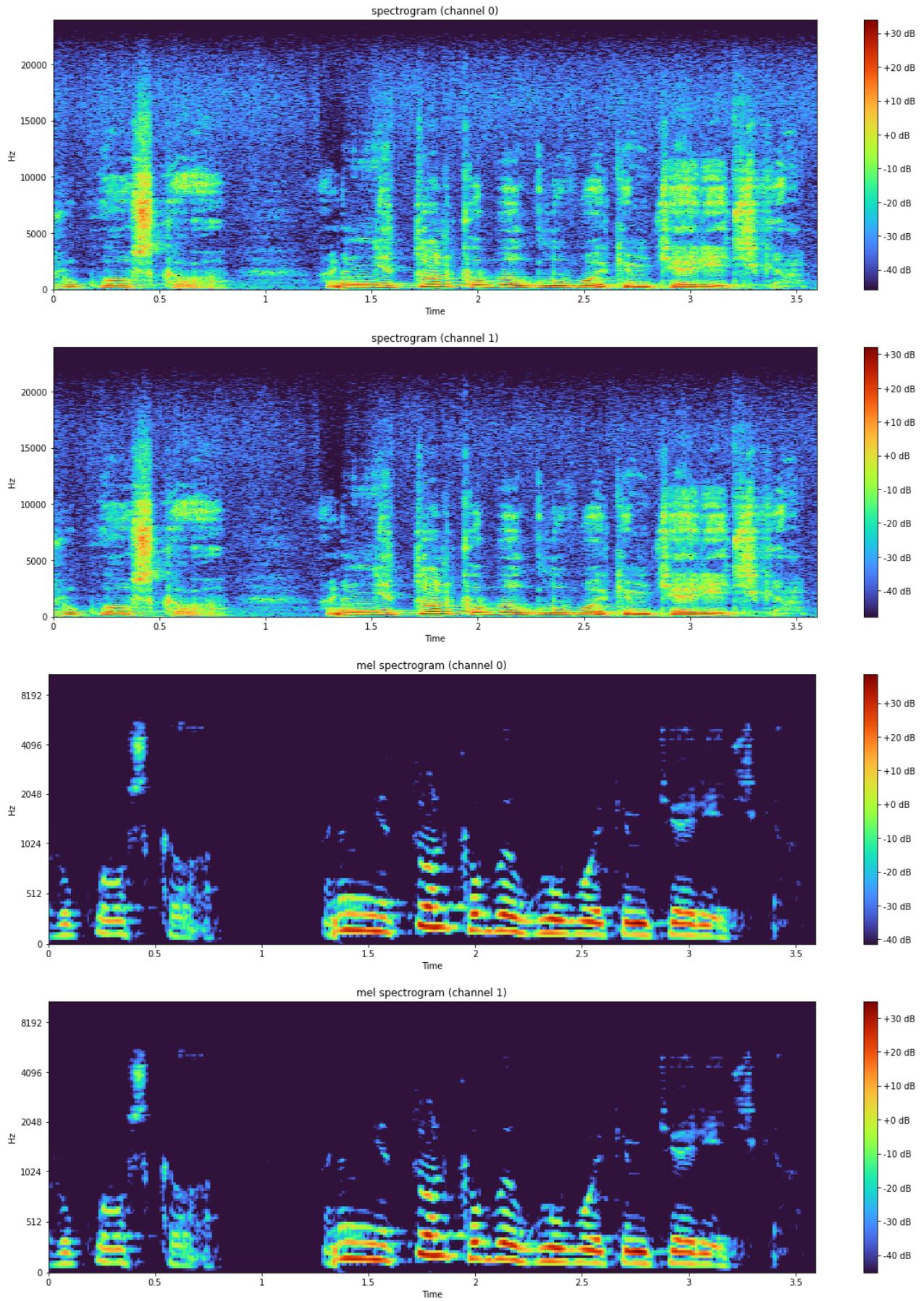
In [62]: sh(39)

INFO : ./wavs/origin/0039.wav



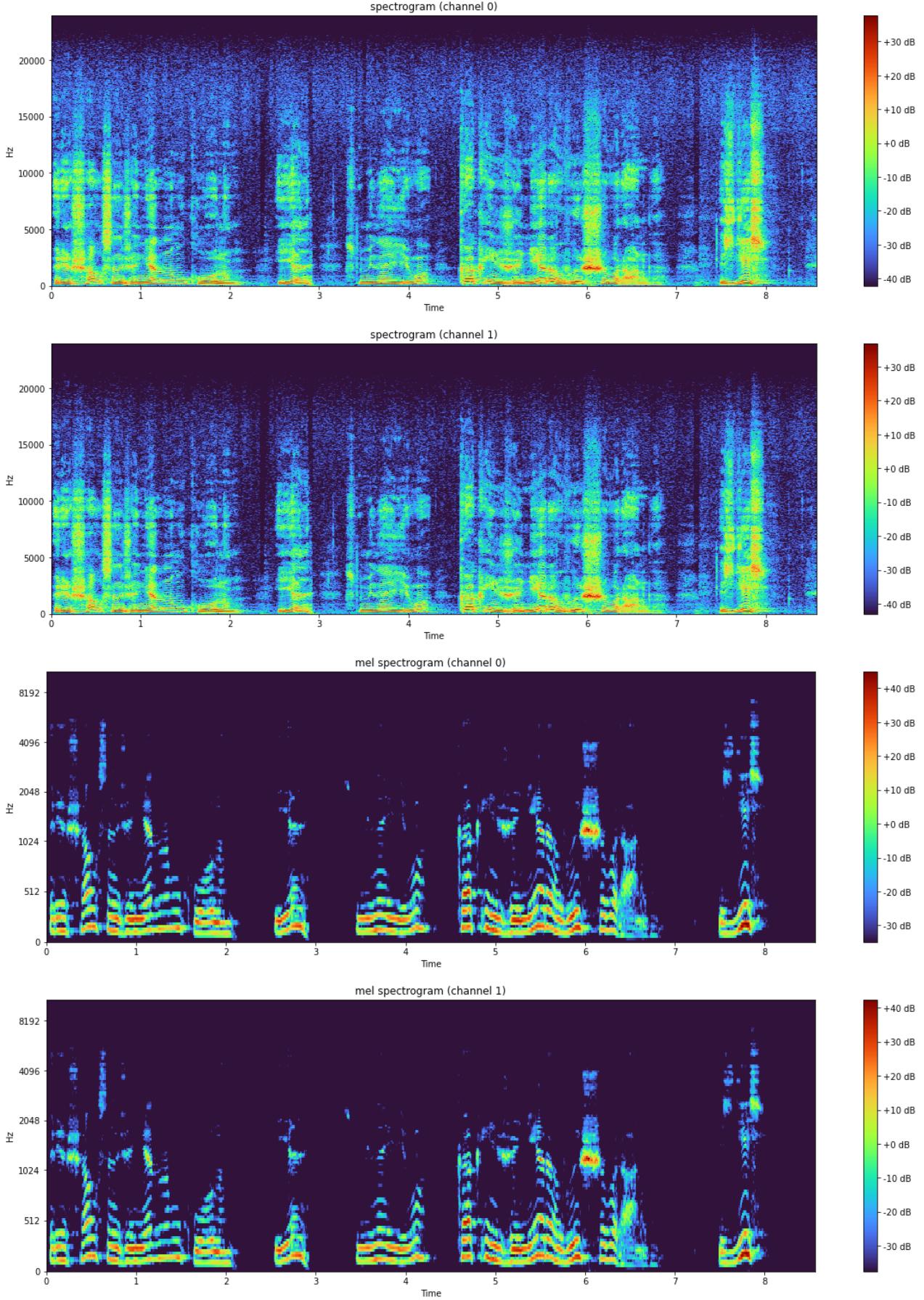
In [63]: sh(40)

INFO : ./wavs/origin/0040.wav



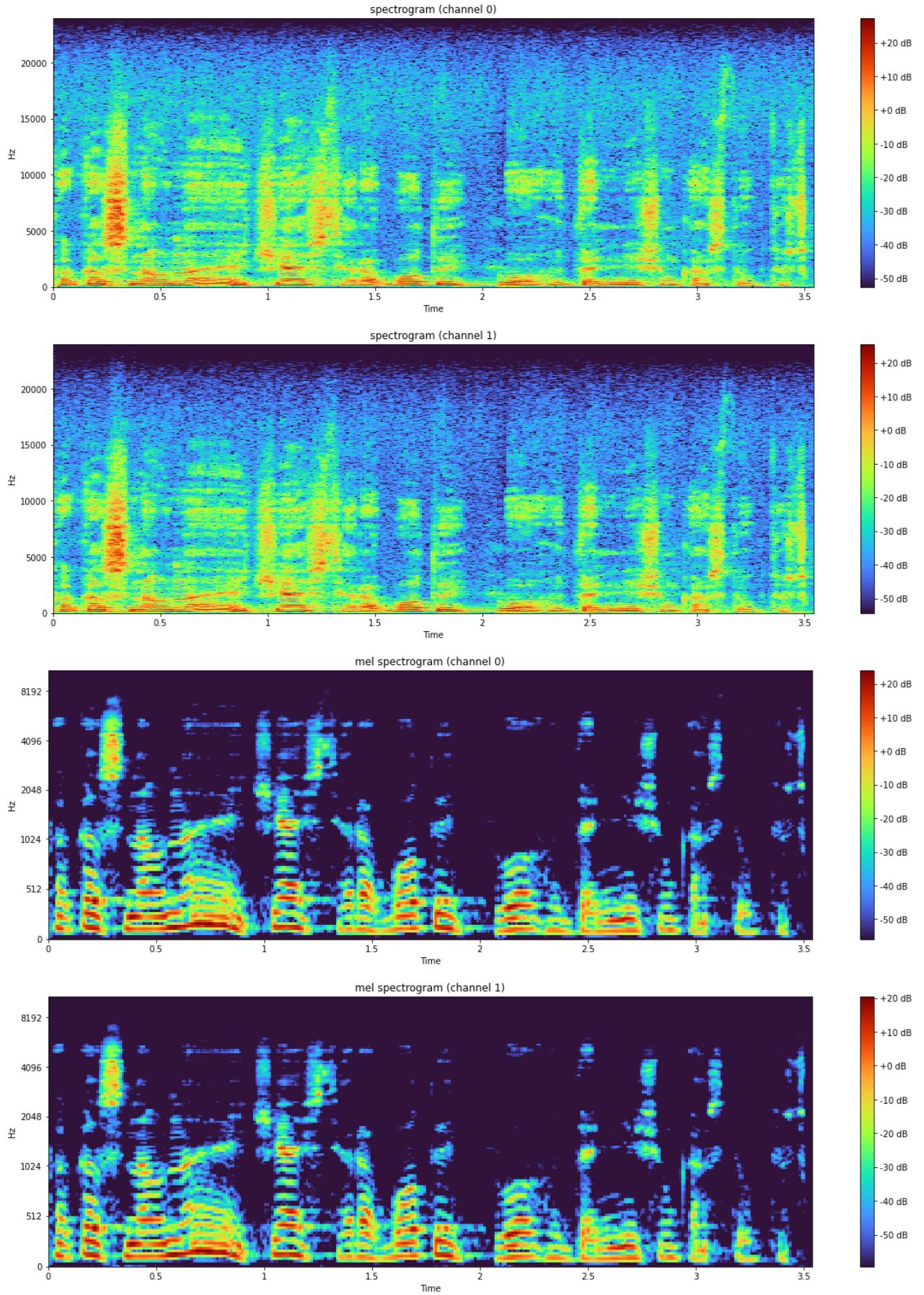
In [64]: sh(41)

INFO : ./wavs/origin/0041.wav



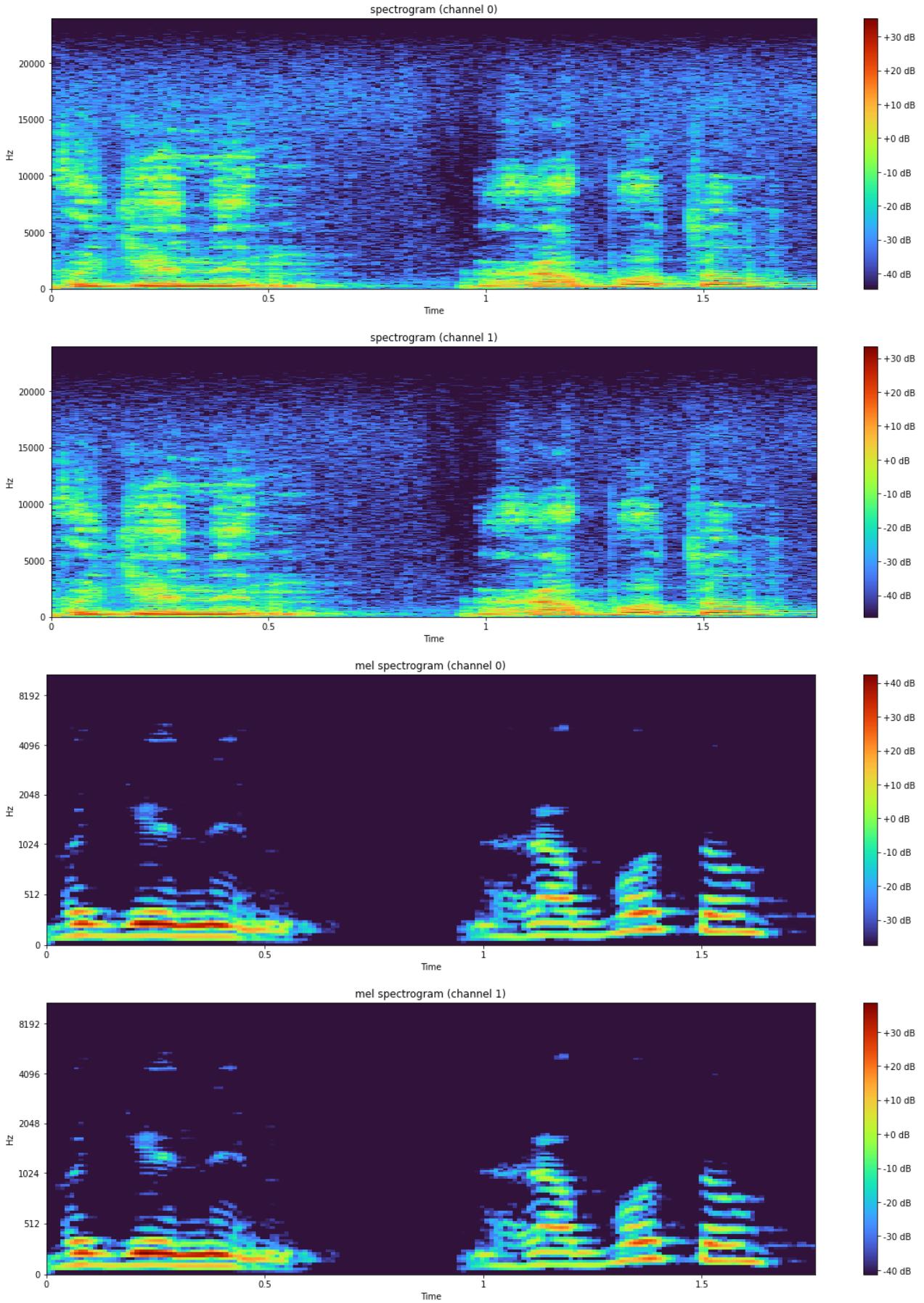
In [65]: sh(42)

INFO : ./wavs/origin/0042.wav



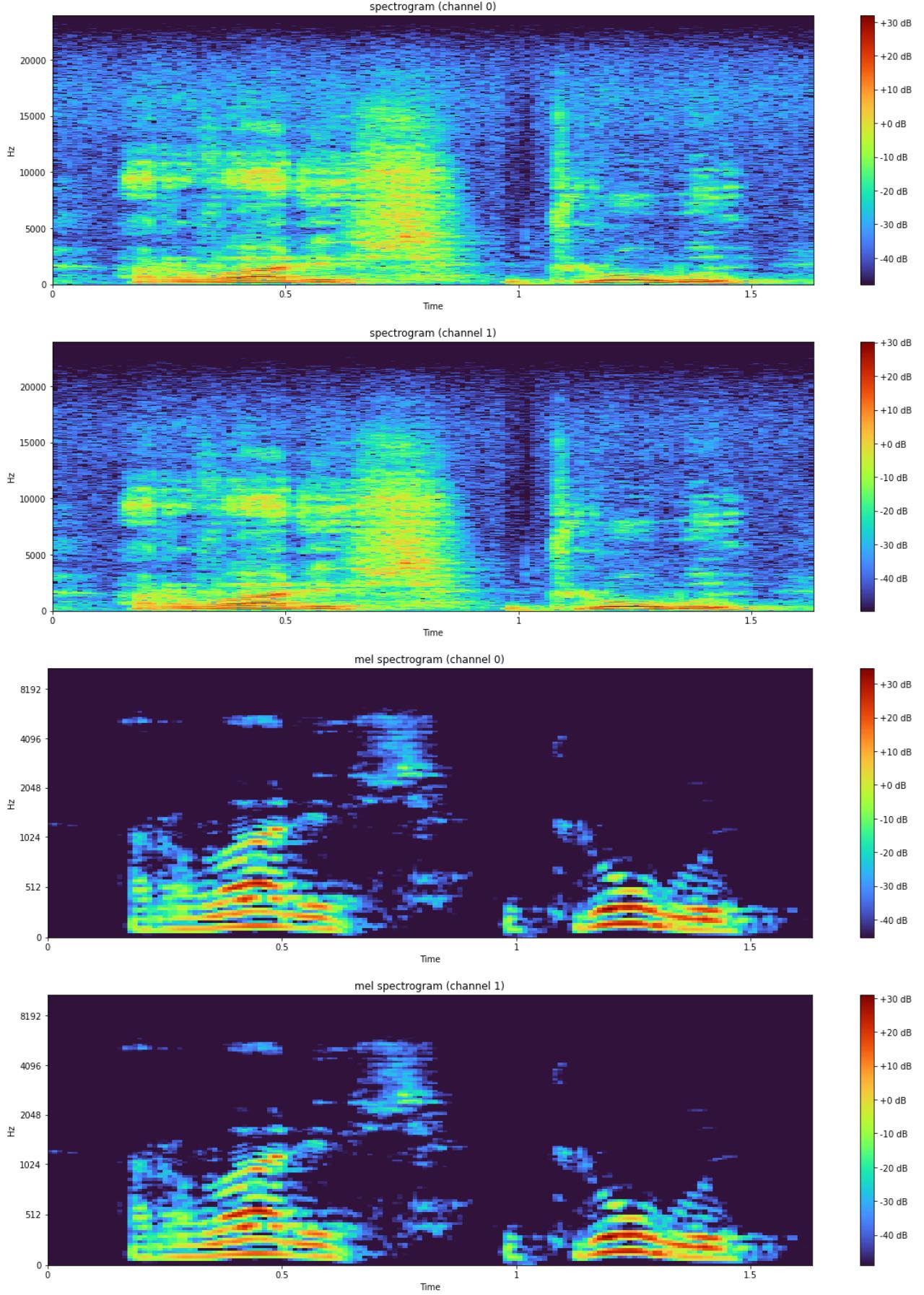
In [66]: sh(43)

INFO : ./wavs/origin/0043.wav



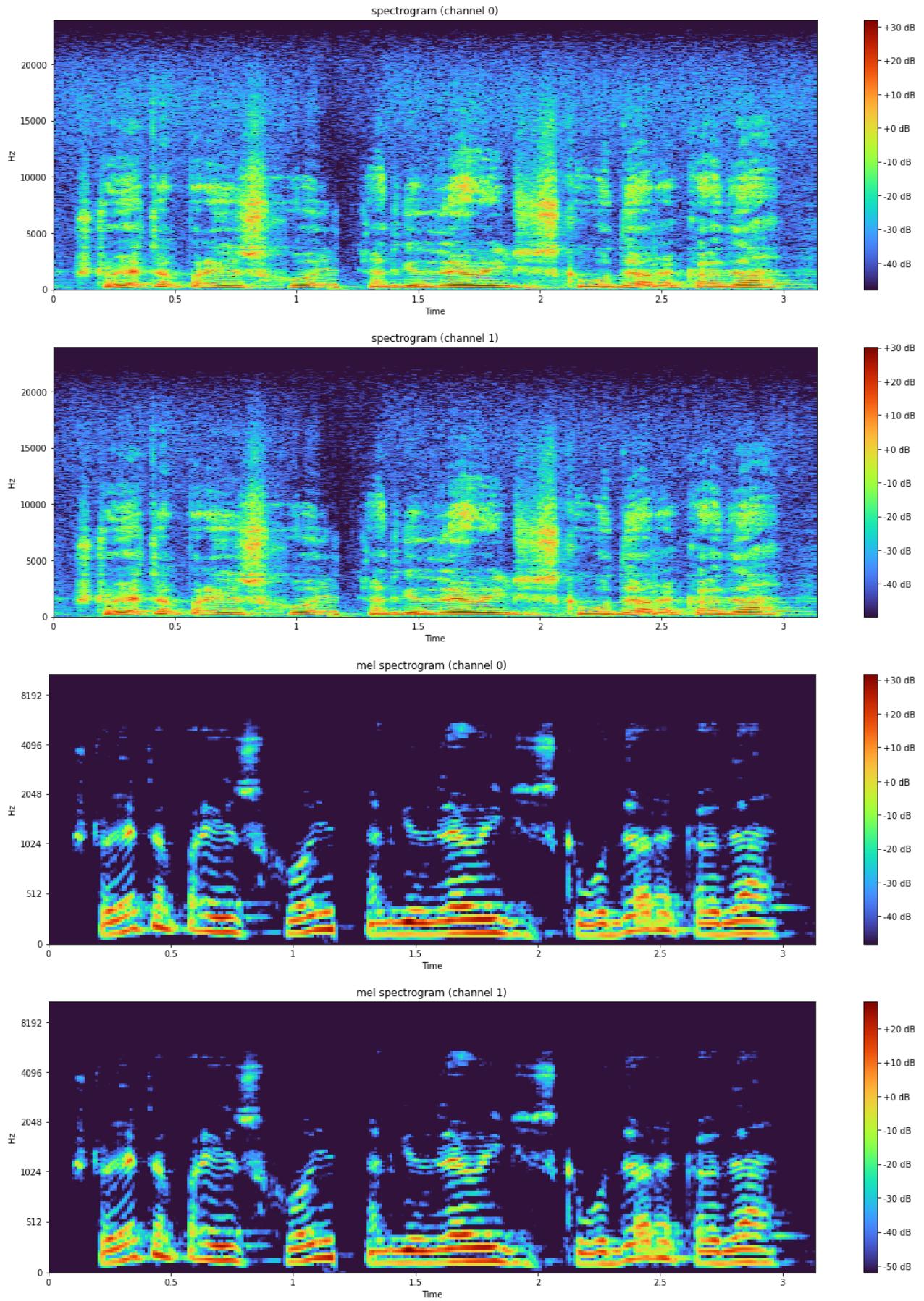
In [67]: sh(44)

INFO : ./wavs/origin/0044.wav



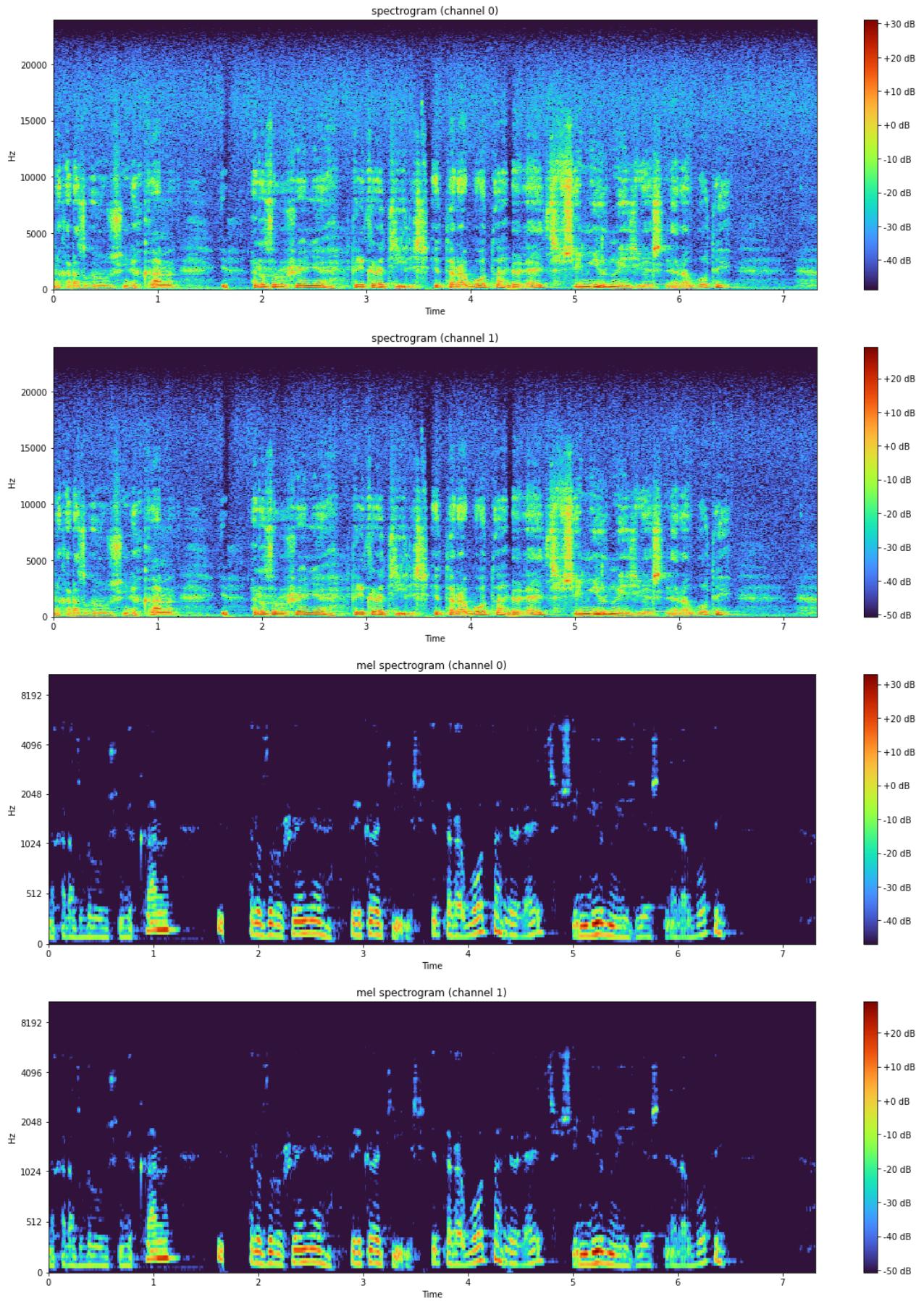
In [68]: sh(45)

INFO : ./wavs/origin/0045.wav



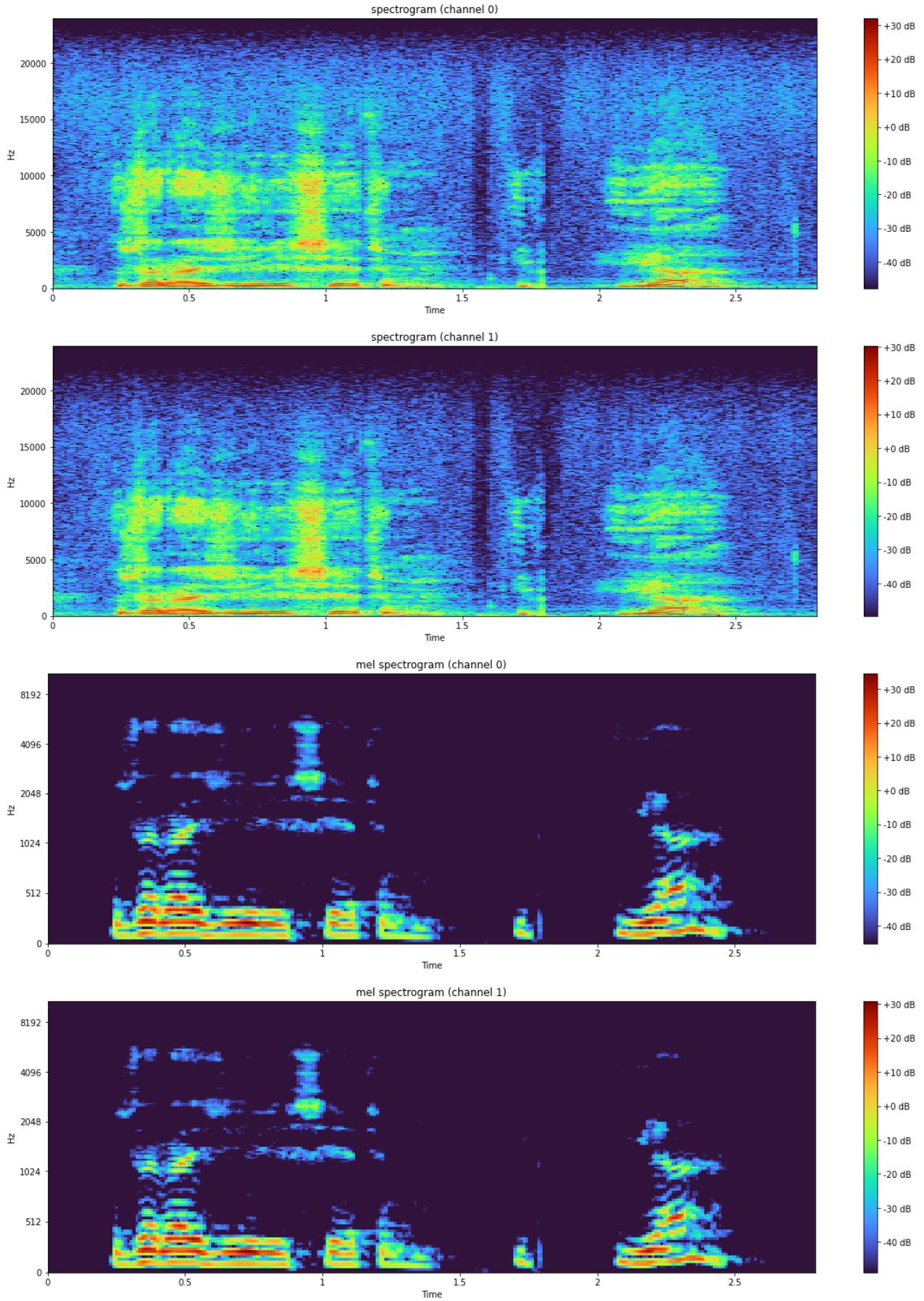
In [69]: sh(46)

INFO : ./wavs/origin/0046.wav



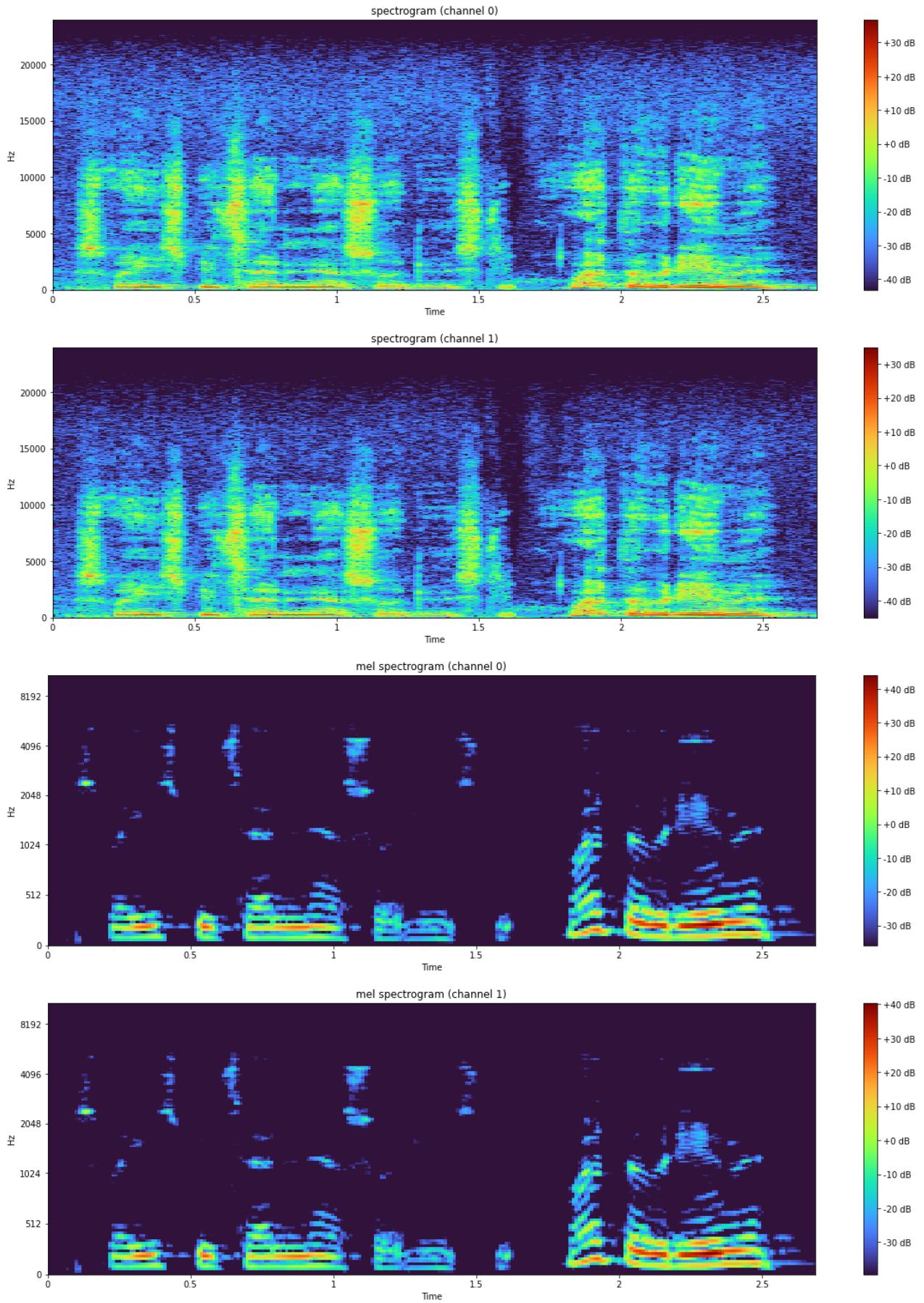
In [70]: sh(47)

INFO : ./wavs/origin/0047.wav



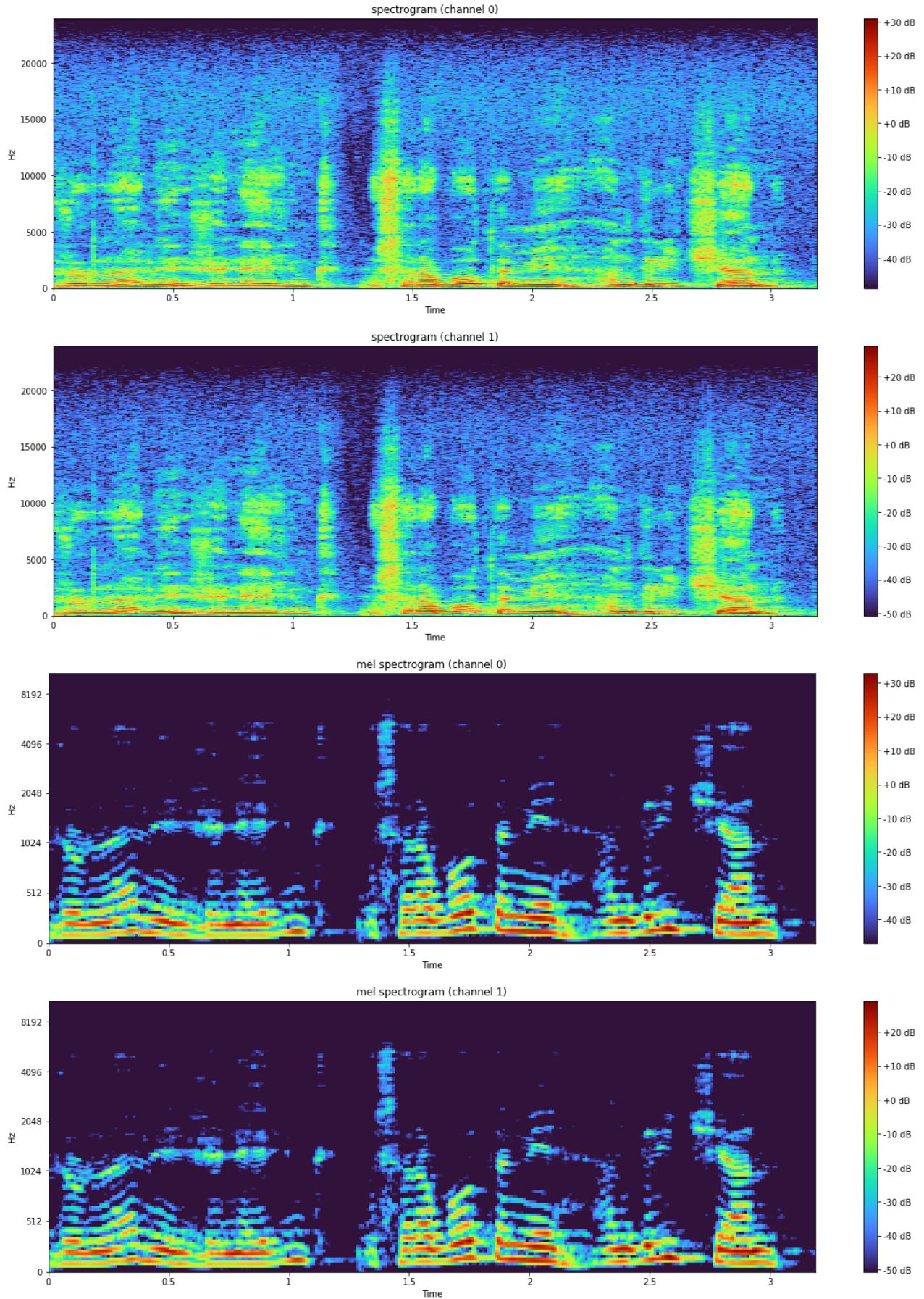
In [71]: sh(48)

INFO : ./wavs/origin/0048.wav



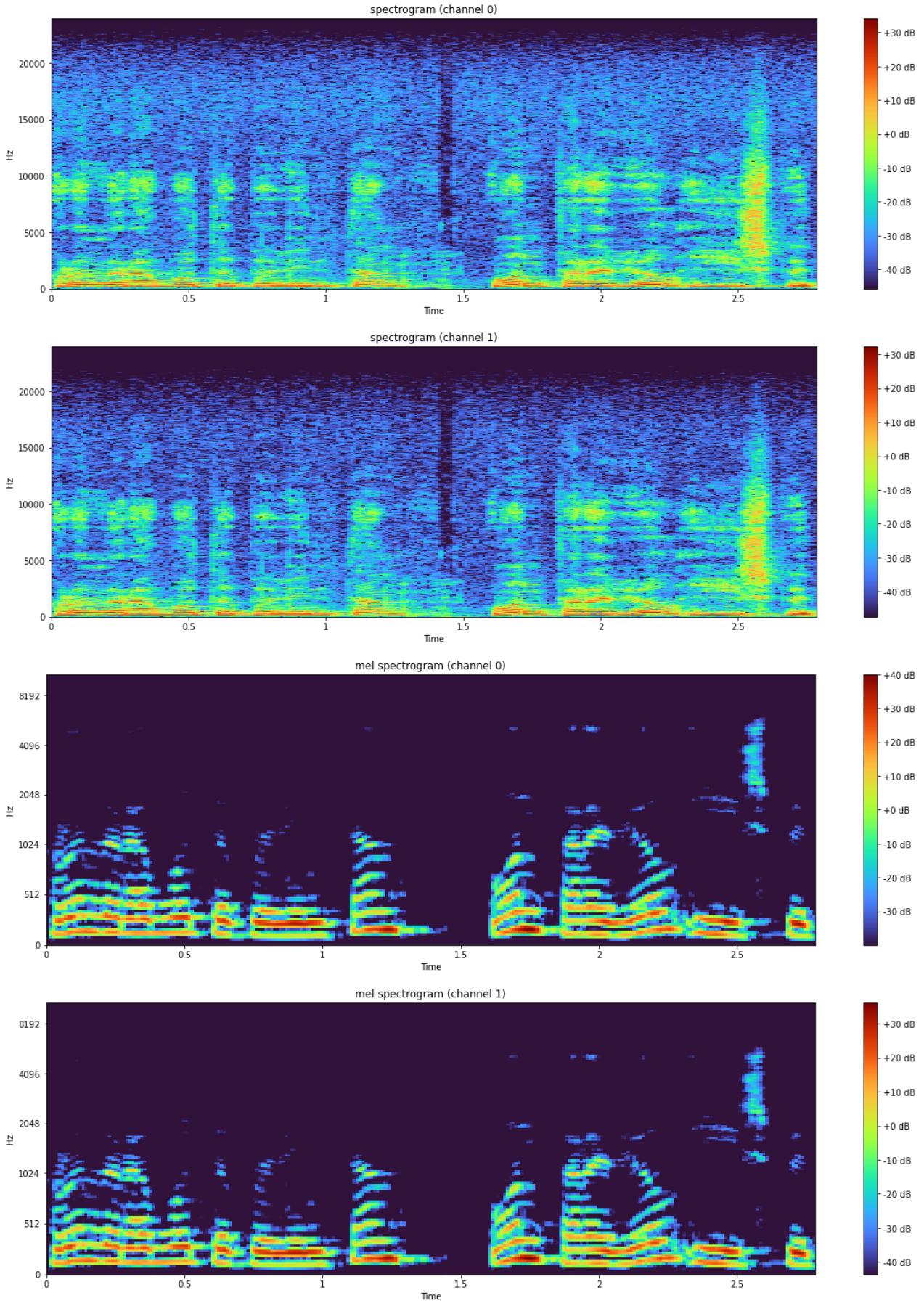
In [72]: sh(49)

INFO : ./wavs/origin/0049.wav



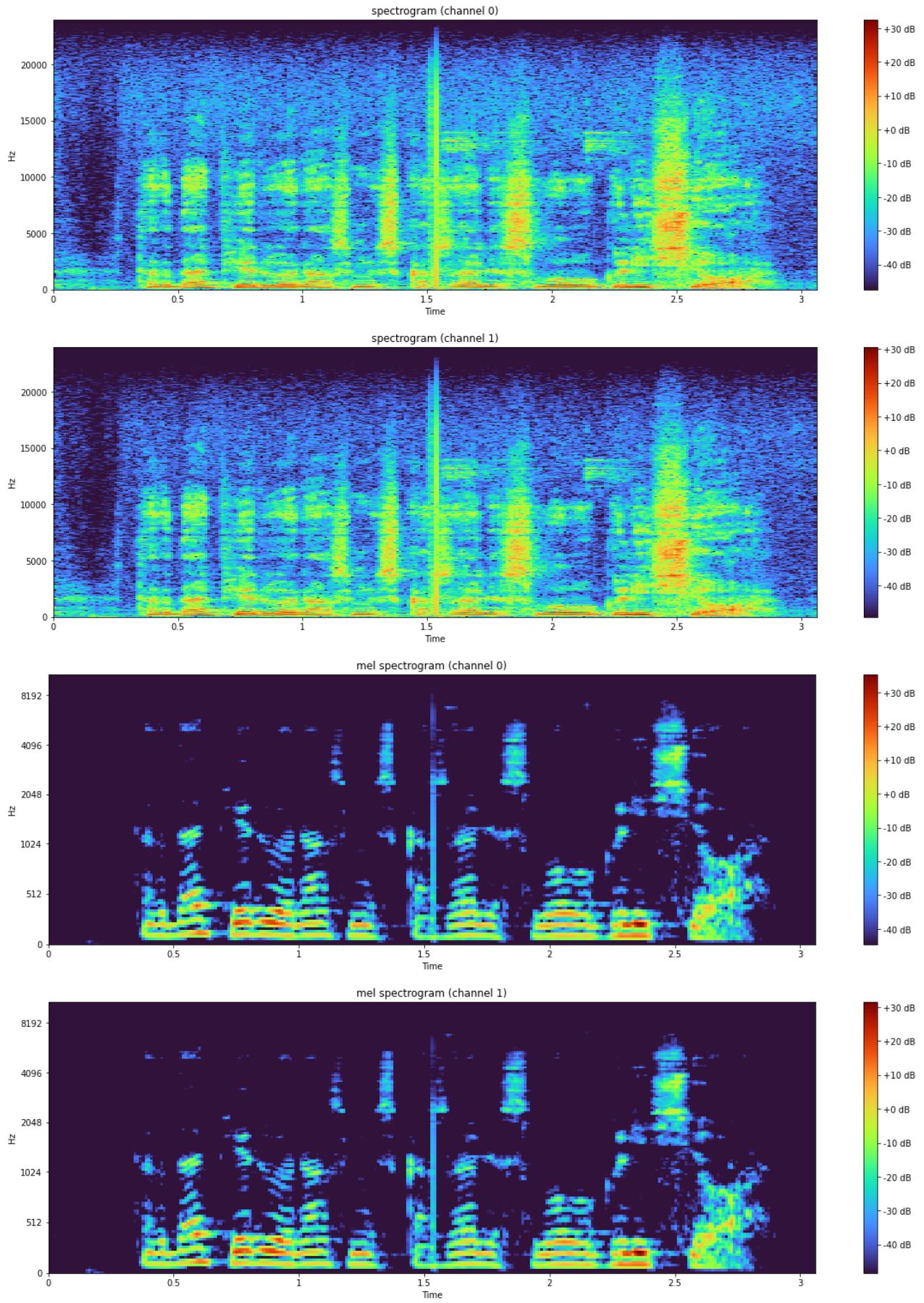
In [73]: sh(50)

INFO : ./wavs/origin/0050.wav



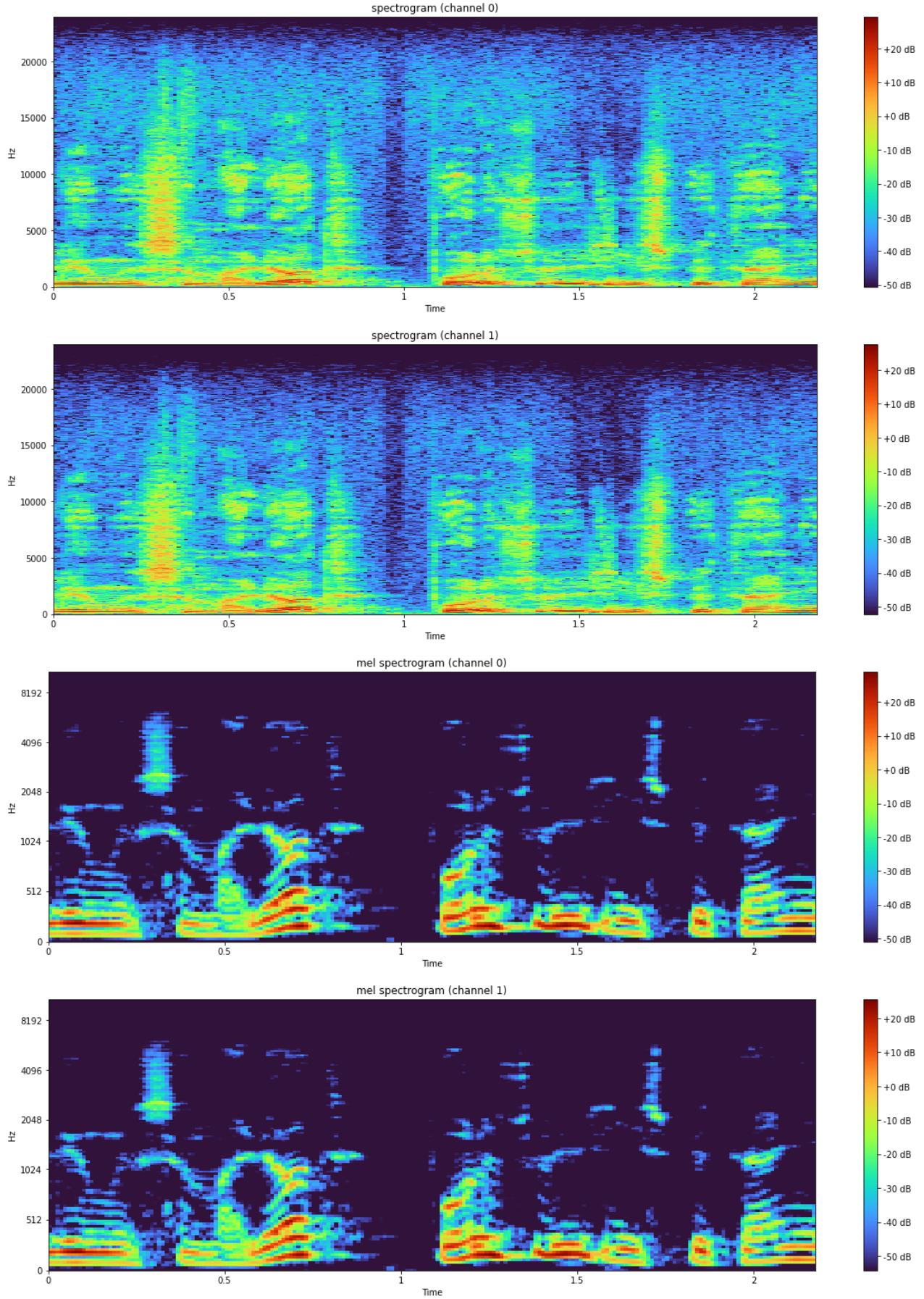
In [74]: sh(51)

INFO : ./wavs/origin/0051.wav



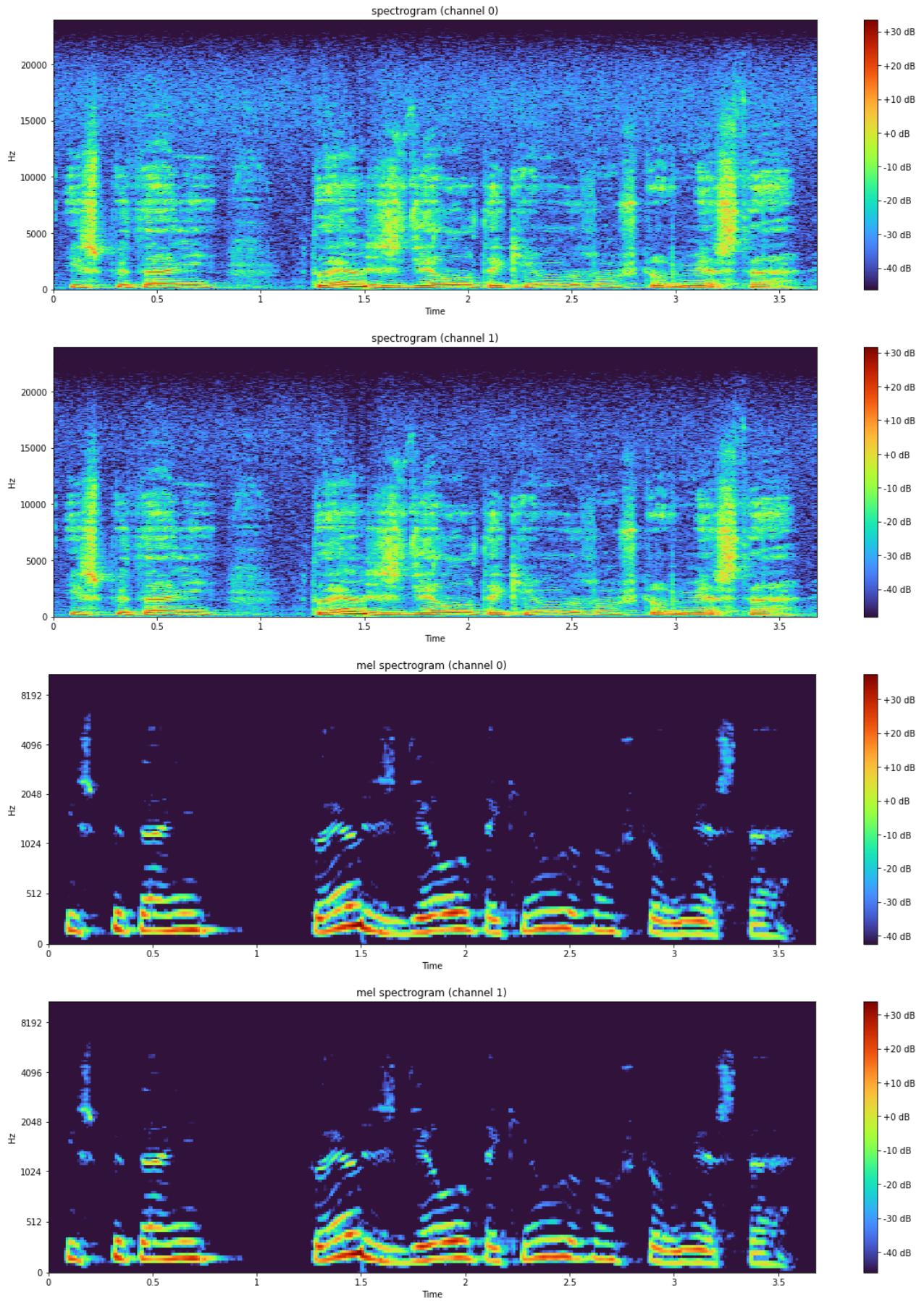
In [75]: sh(52)

INFO : ./wavs/origin/0052.wav



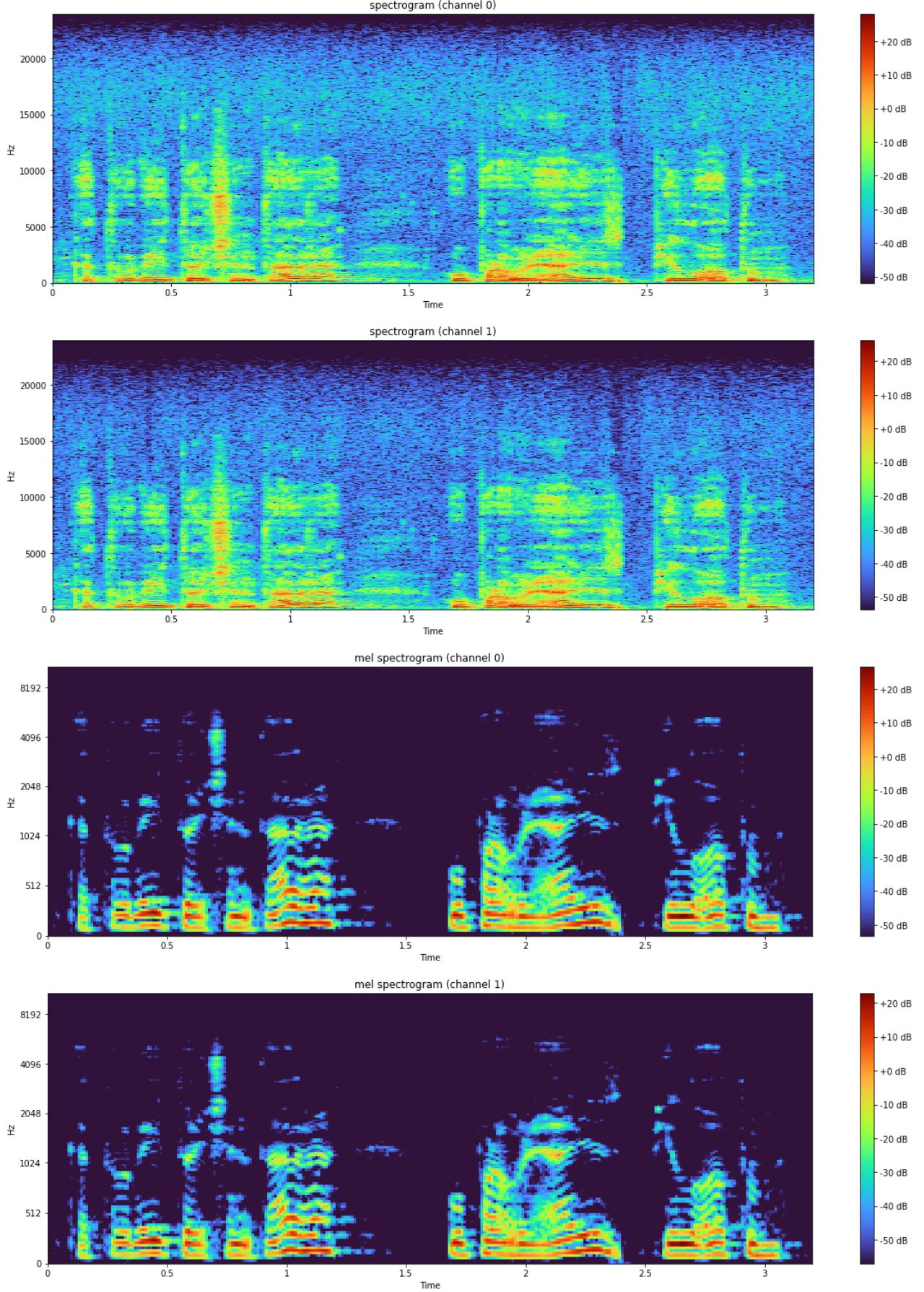
In [76]: sh(53)

INFO : ./wavs/origin/0053.wav



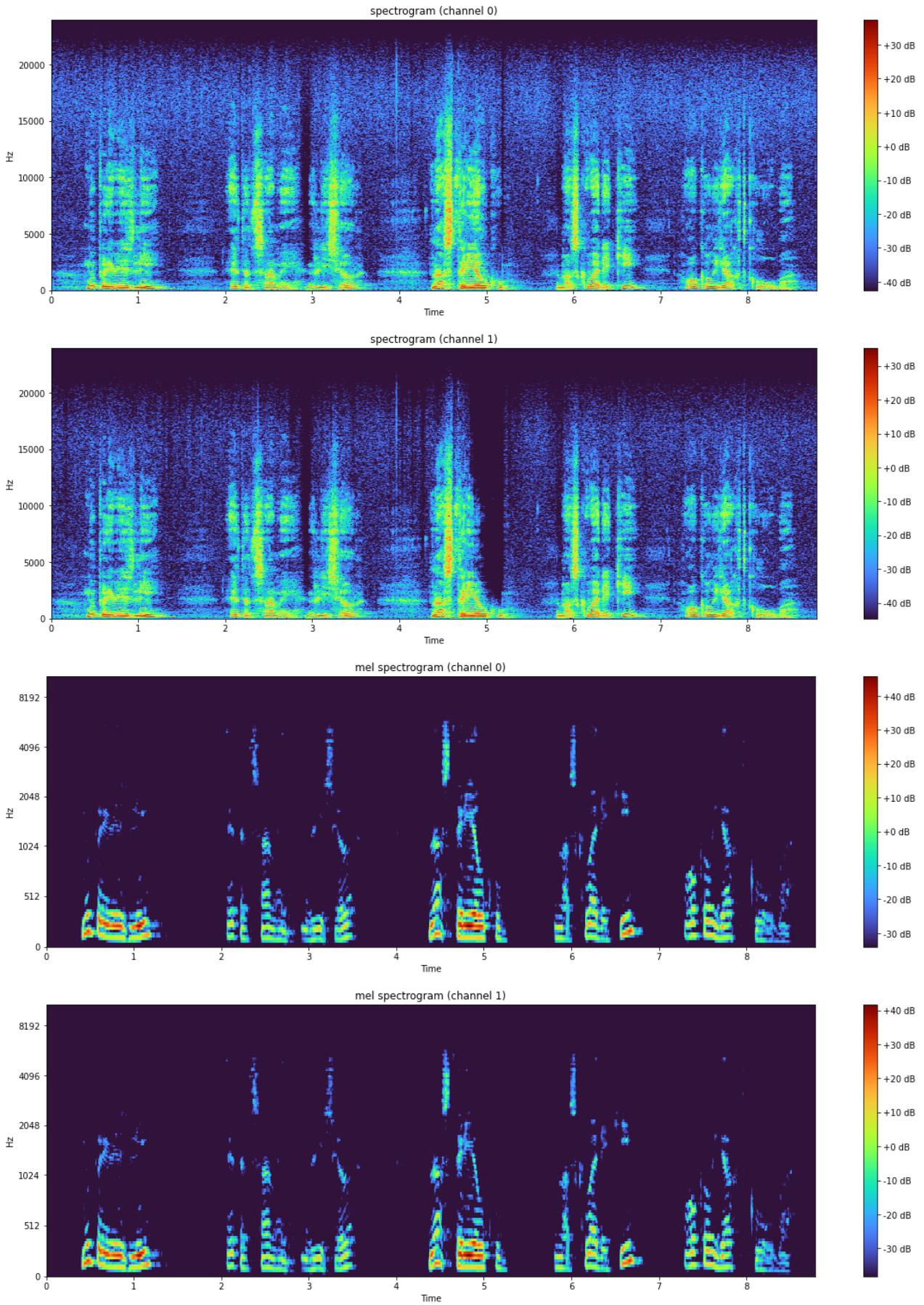
In [77]: sh(54)

INFO : ./wavs/origin/0054.wav



In [78]: sh(55)

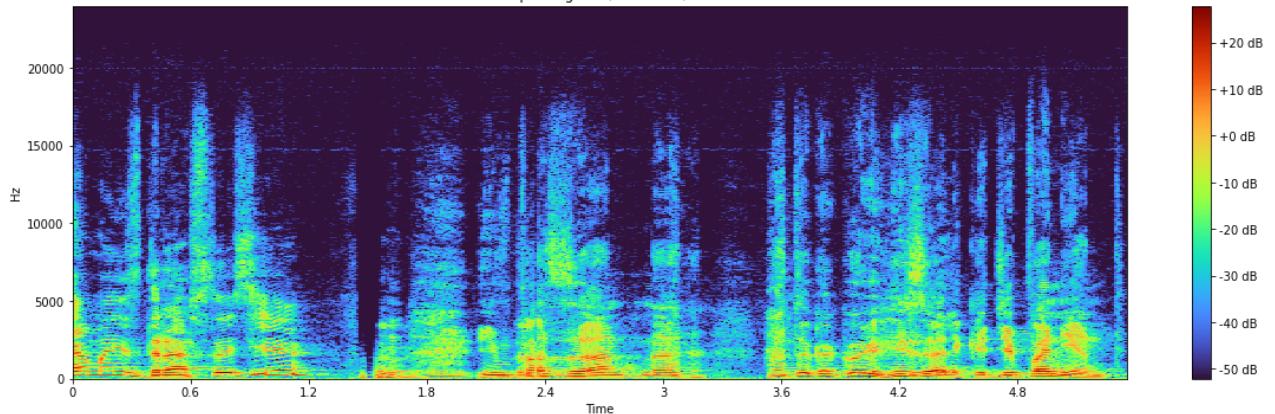
INFO : ./wavs/origin/0055.wav



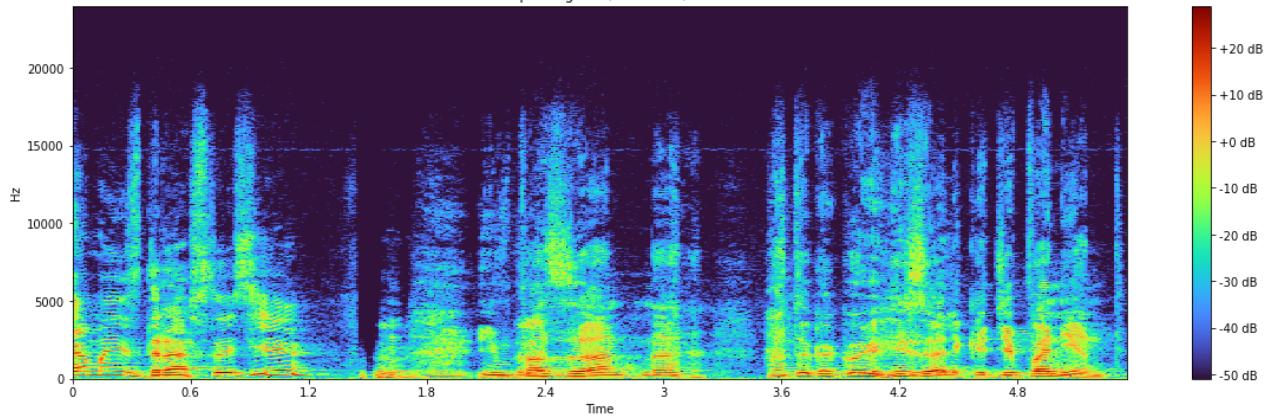
In [79]: sh(56)

INFO : ./wavs/origin/0056.wav

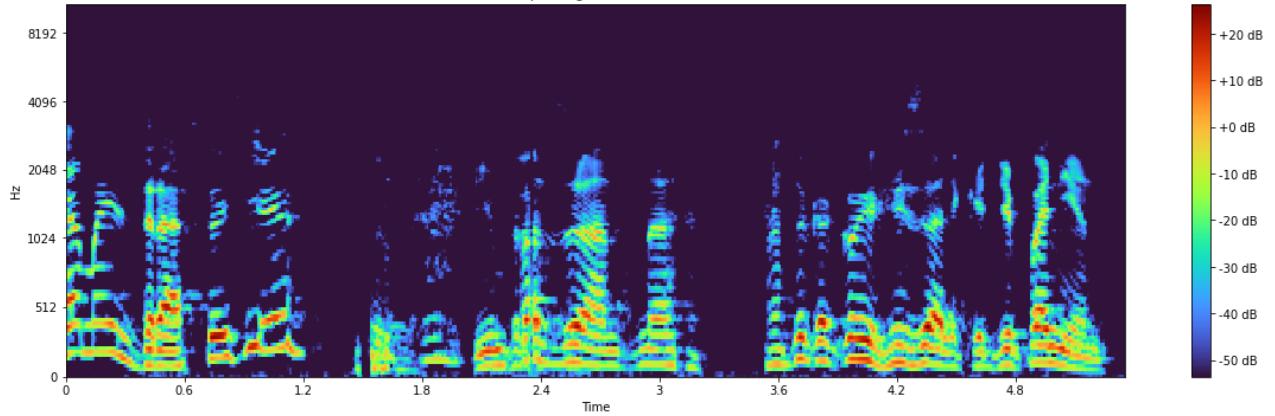
spectrogram (channel 0)



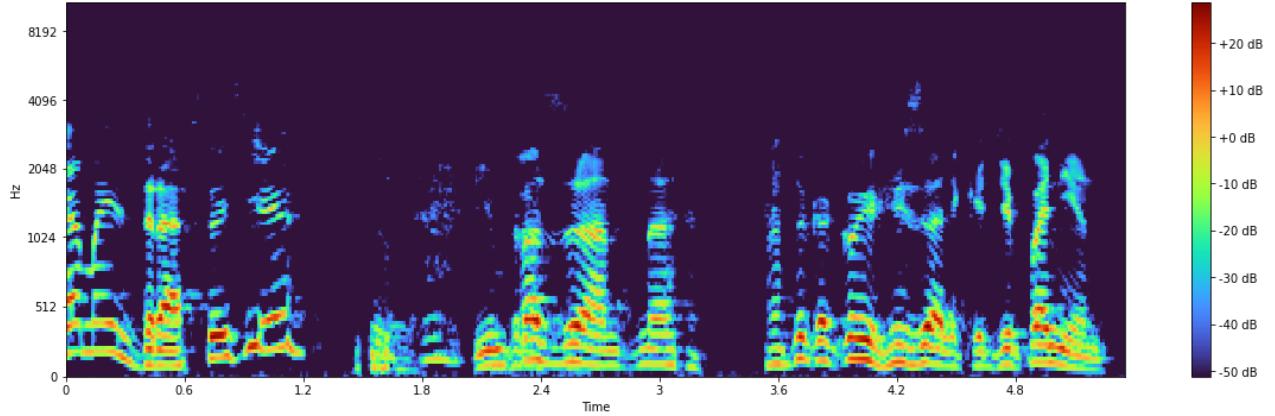
spectrogram (channel 1)



mel spectrogram (channel 0)

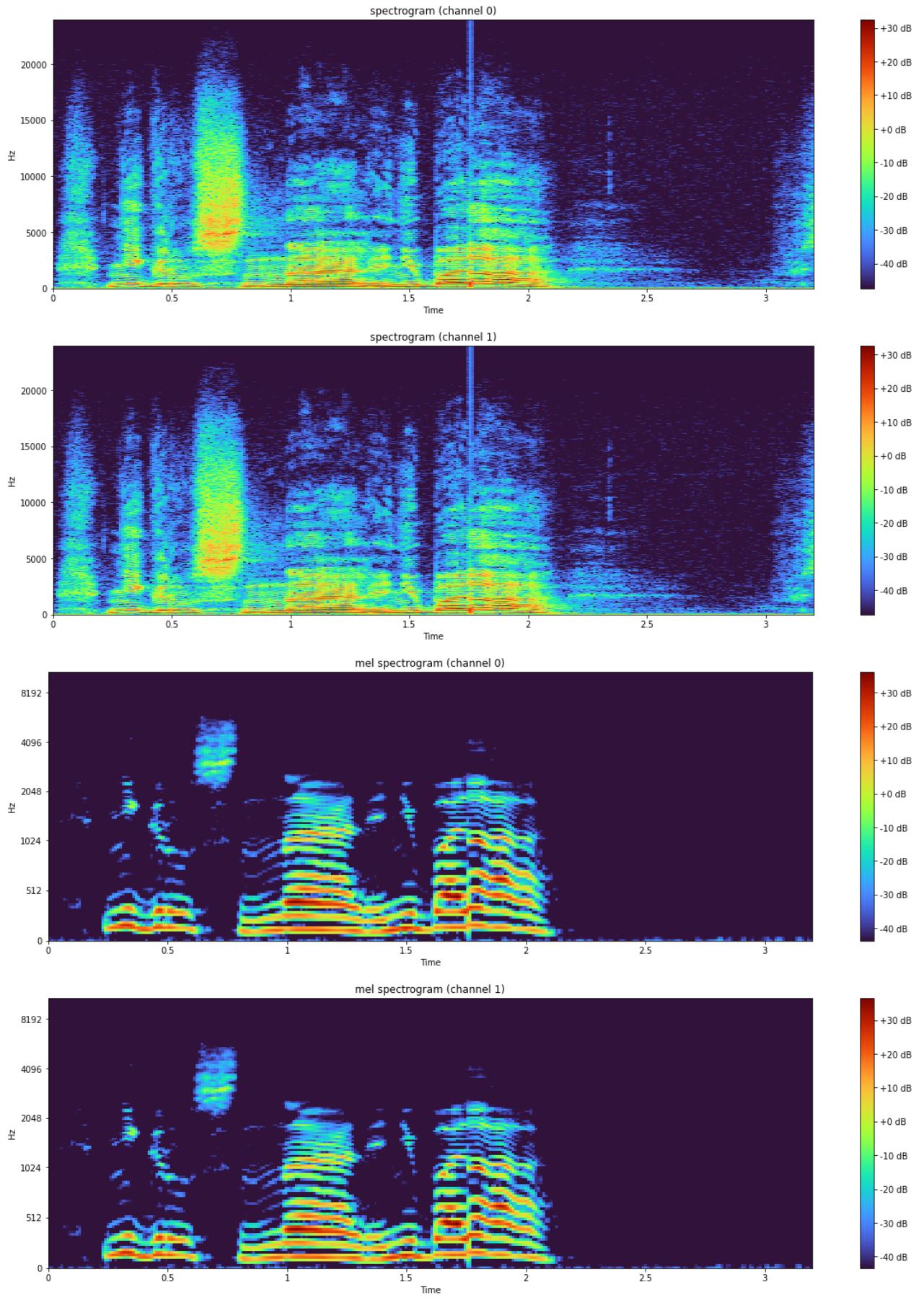


mel spectrogram (channel 1)



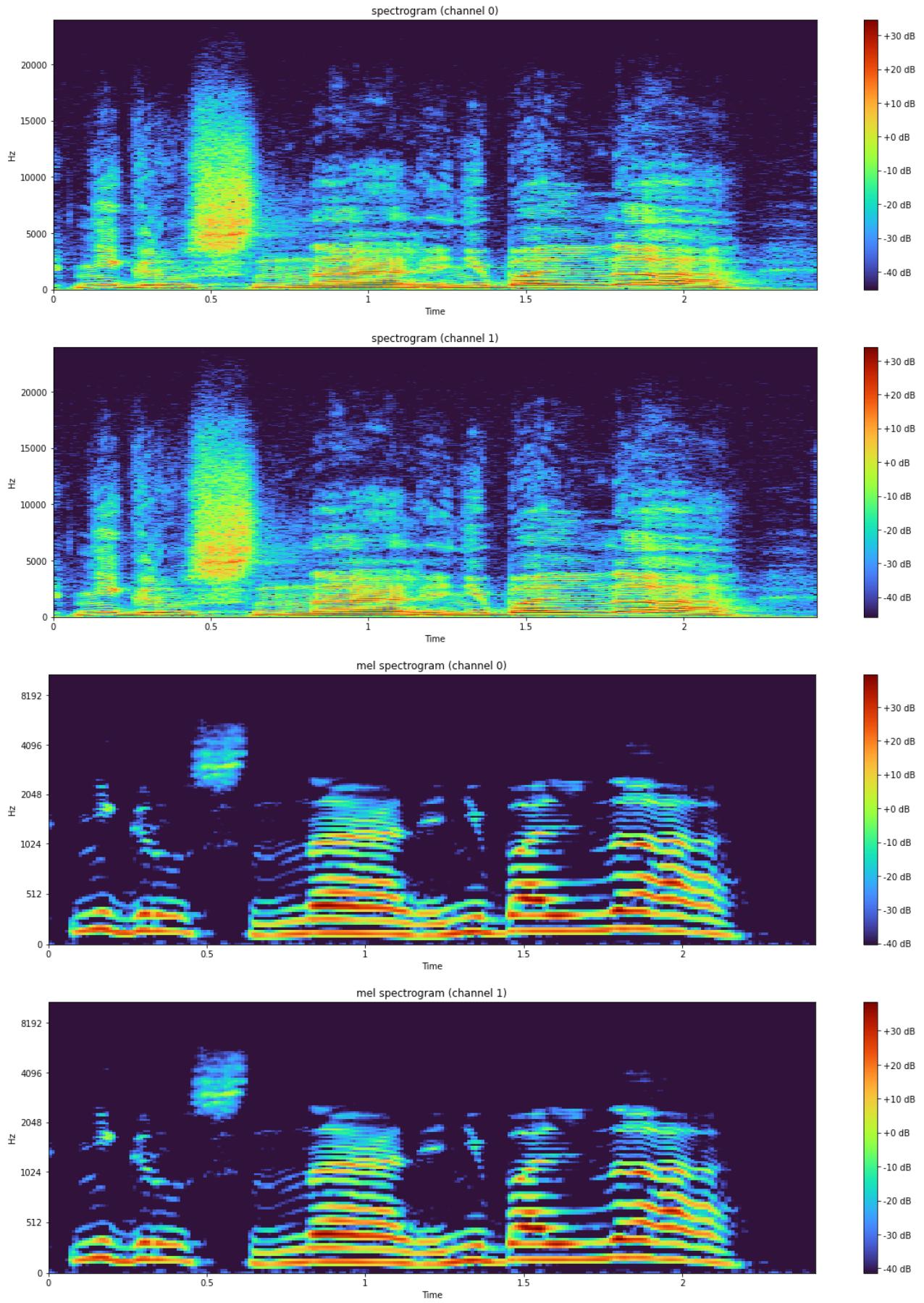
In [80]: sh(57)

INFO : ./wavs/origin/0057.wav



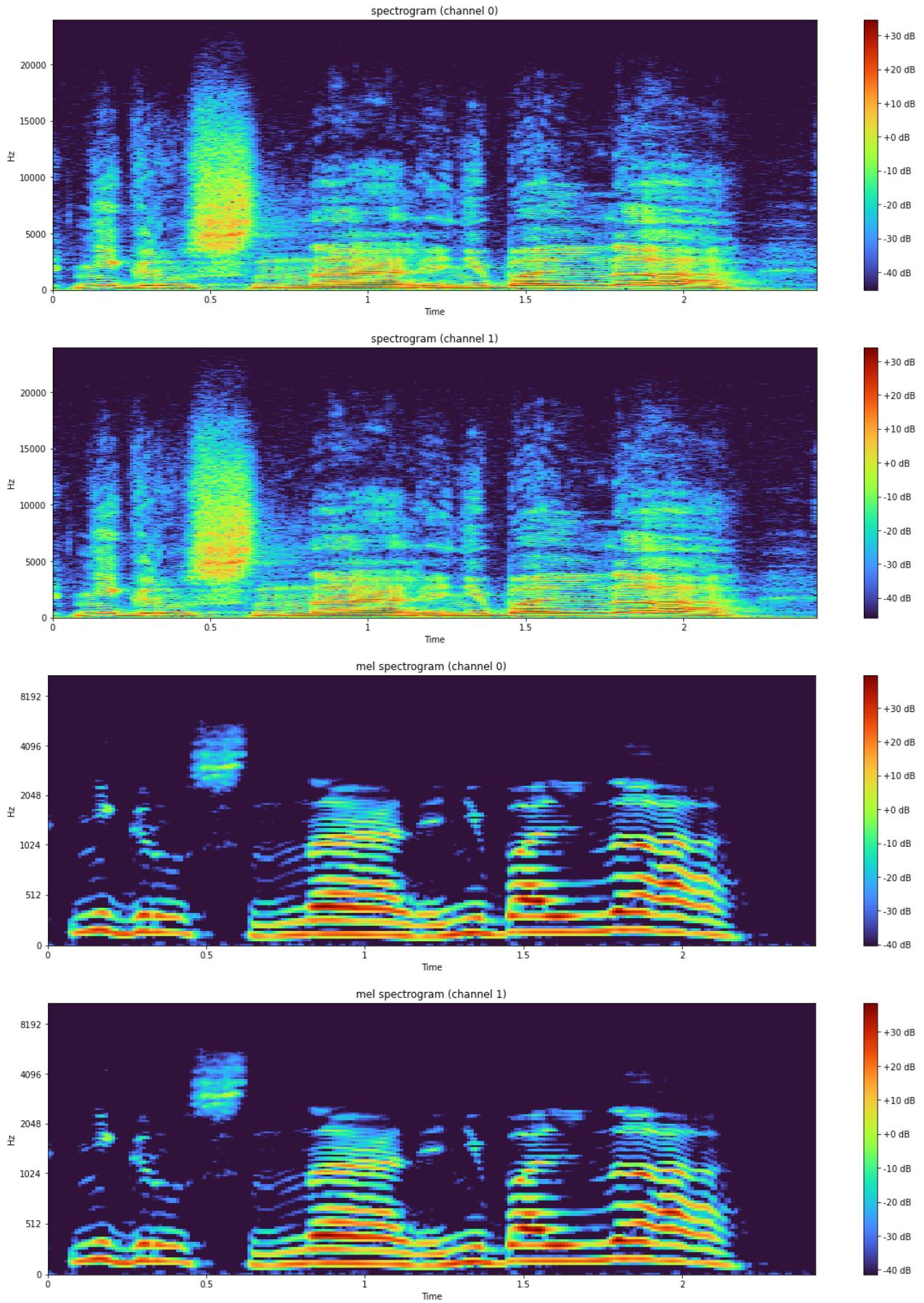
In [81]: sh(58)

INFO : ./wavs/origin/0058.wav



In [82]: sh(59)

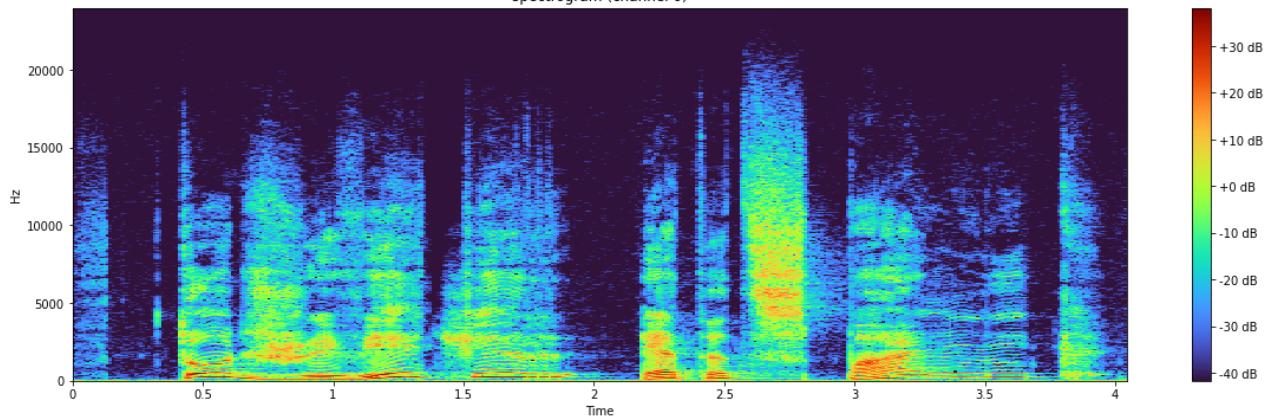
INFO : ./wavs/origin/0059.wav



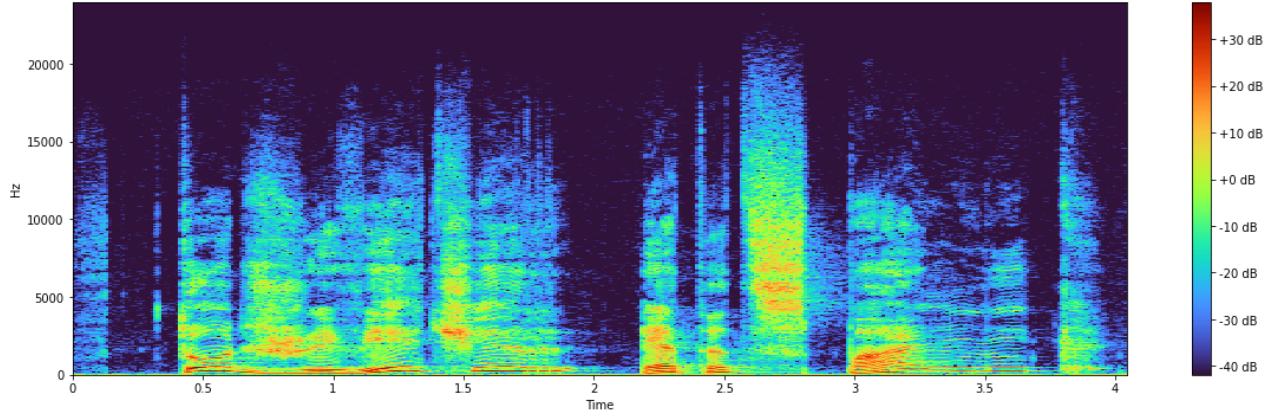
In [83]: sh(60)

INFO : ./wavs/origin/0060.wav

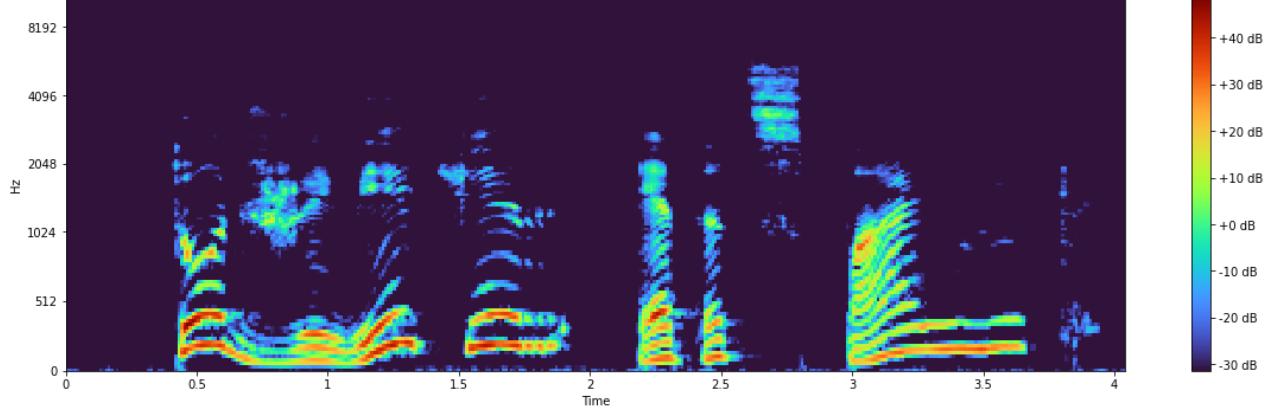
spectrogram (channel 0)



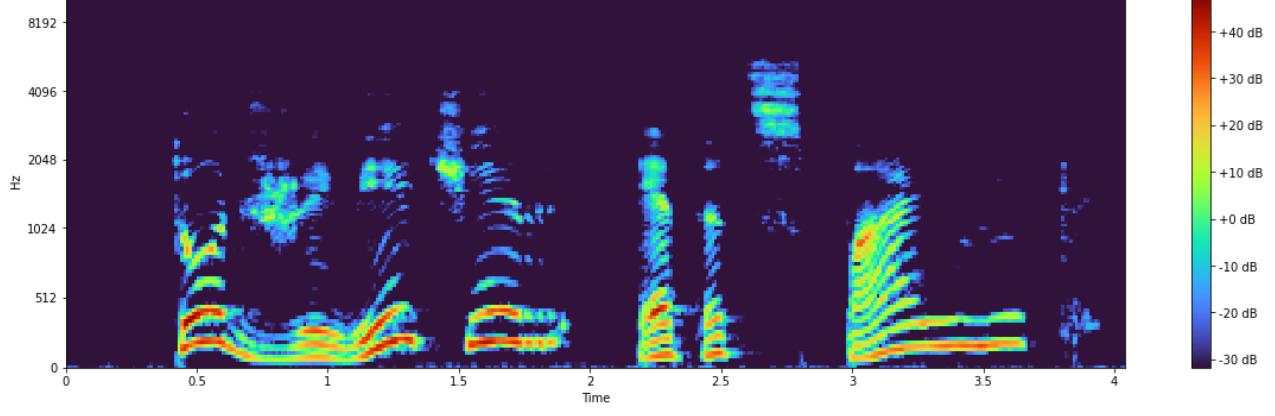
spectrogram (channel 1)



mel spectrogram (channel 0)



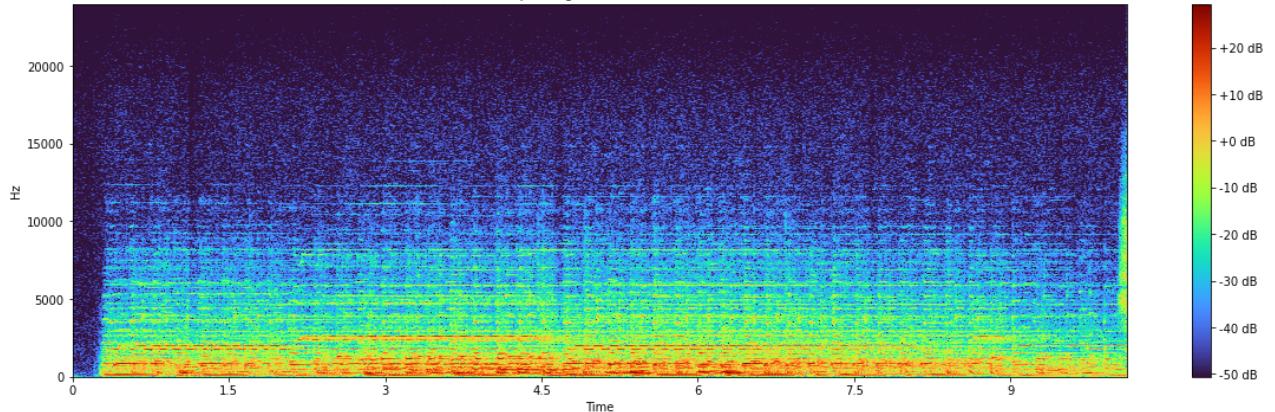
mel spectrogram (channel 1)



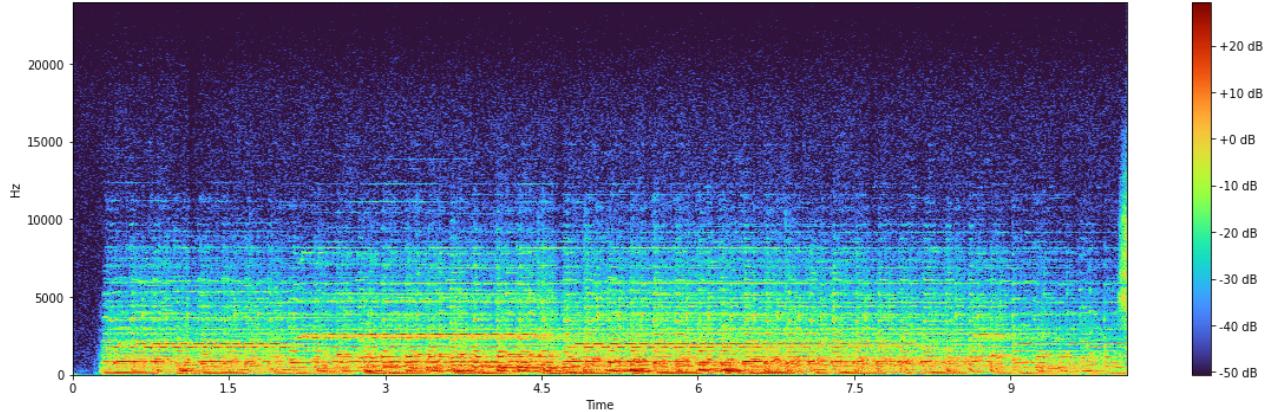
In [84]: sh(61)

INFO : ./wavs/origin/0061.wav

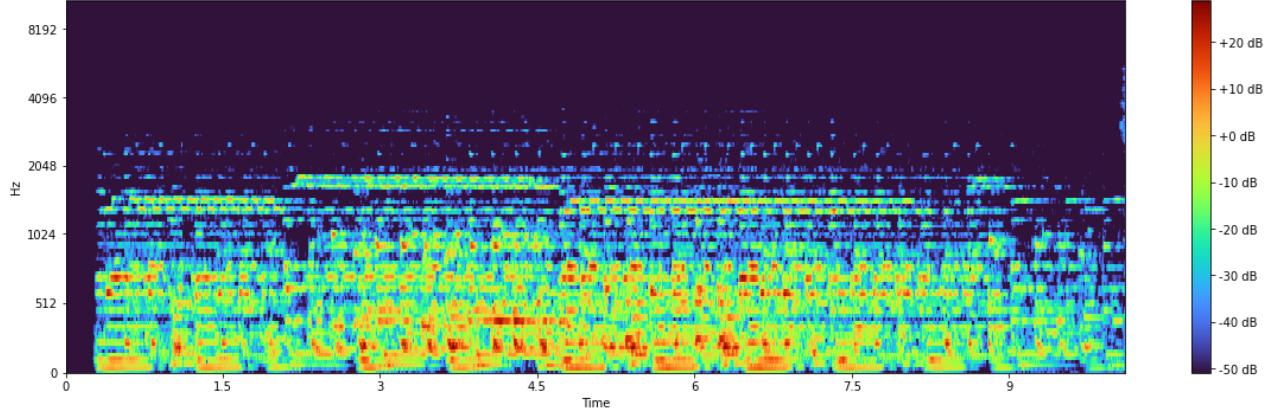
spectrogram (channel 0)



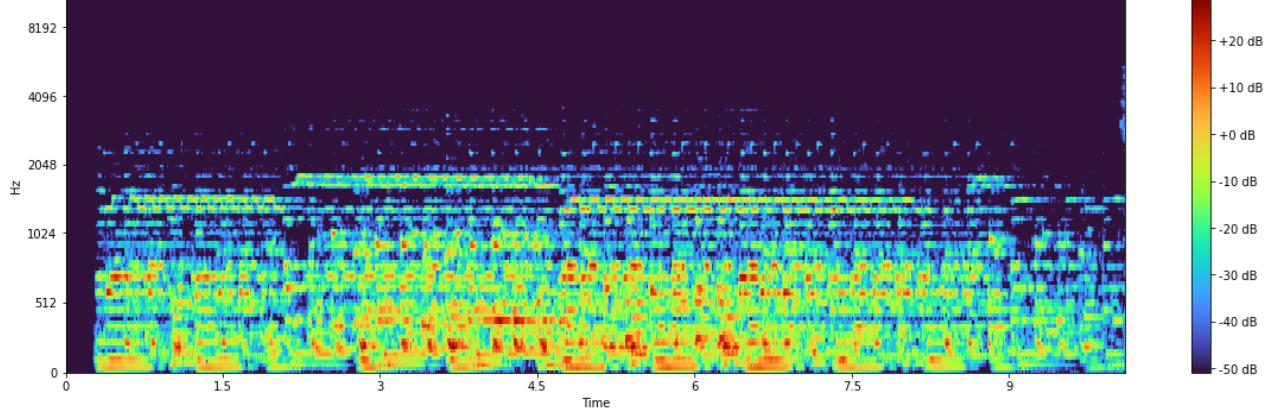
spectrogram (channel 1)



mel spectrogram (channel 0)



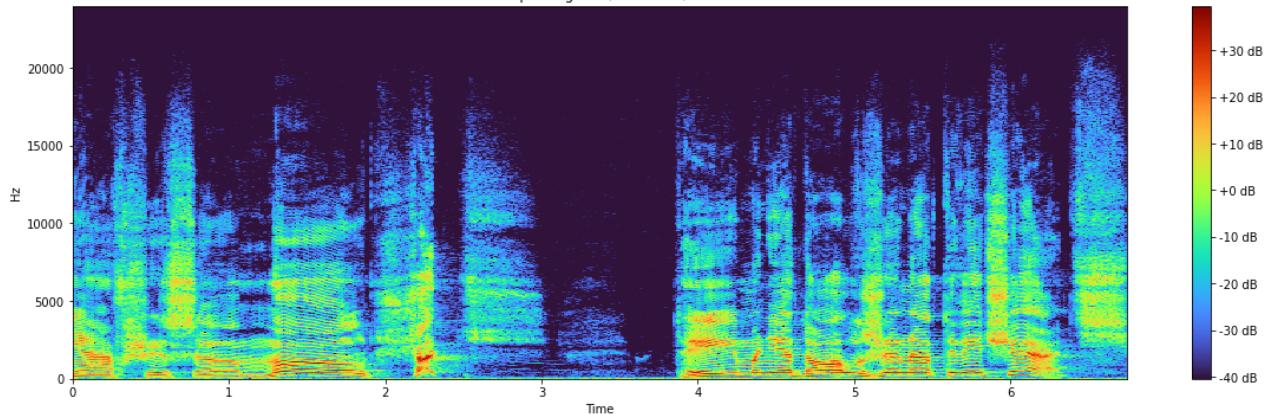
mel spectrogram (channel 1)



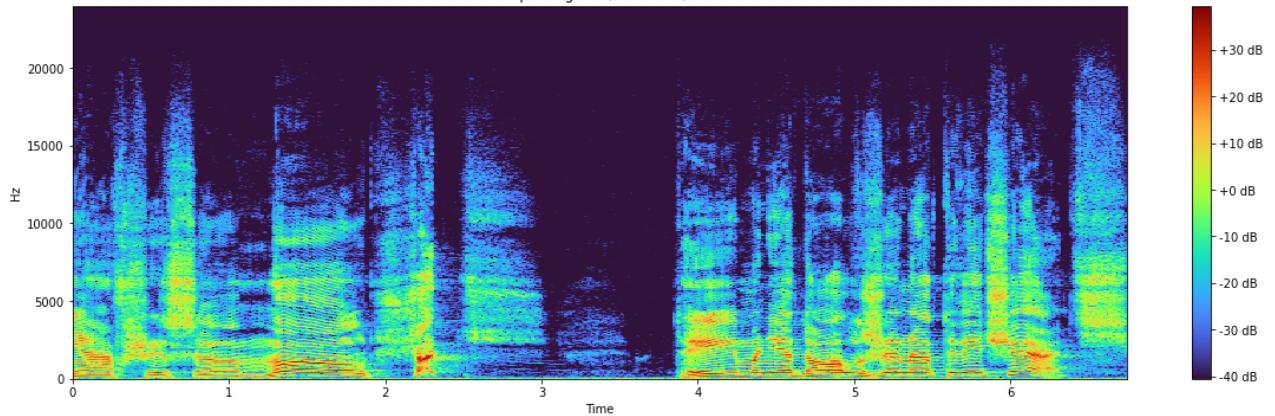
In [85]: sh(62)

INFO : ./wavs/origin/0062.wav

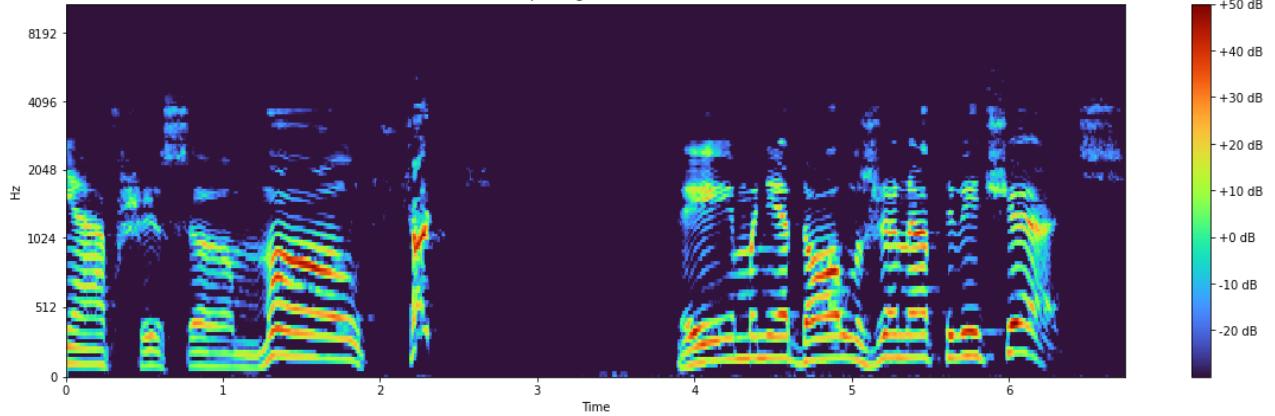
spectrogram (channel 0)



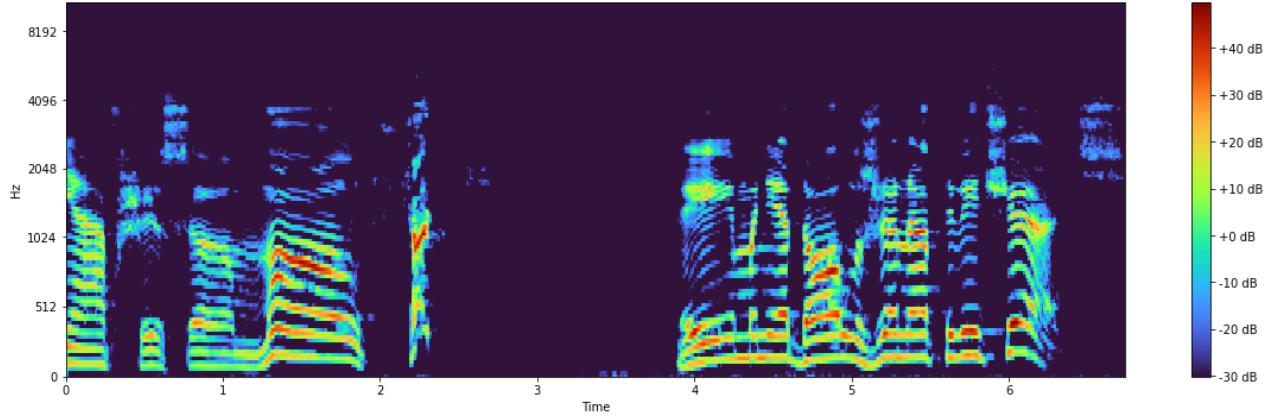
spectrogram (channel 1)



mel spectrogram (channel 0)

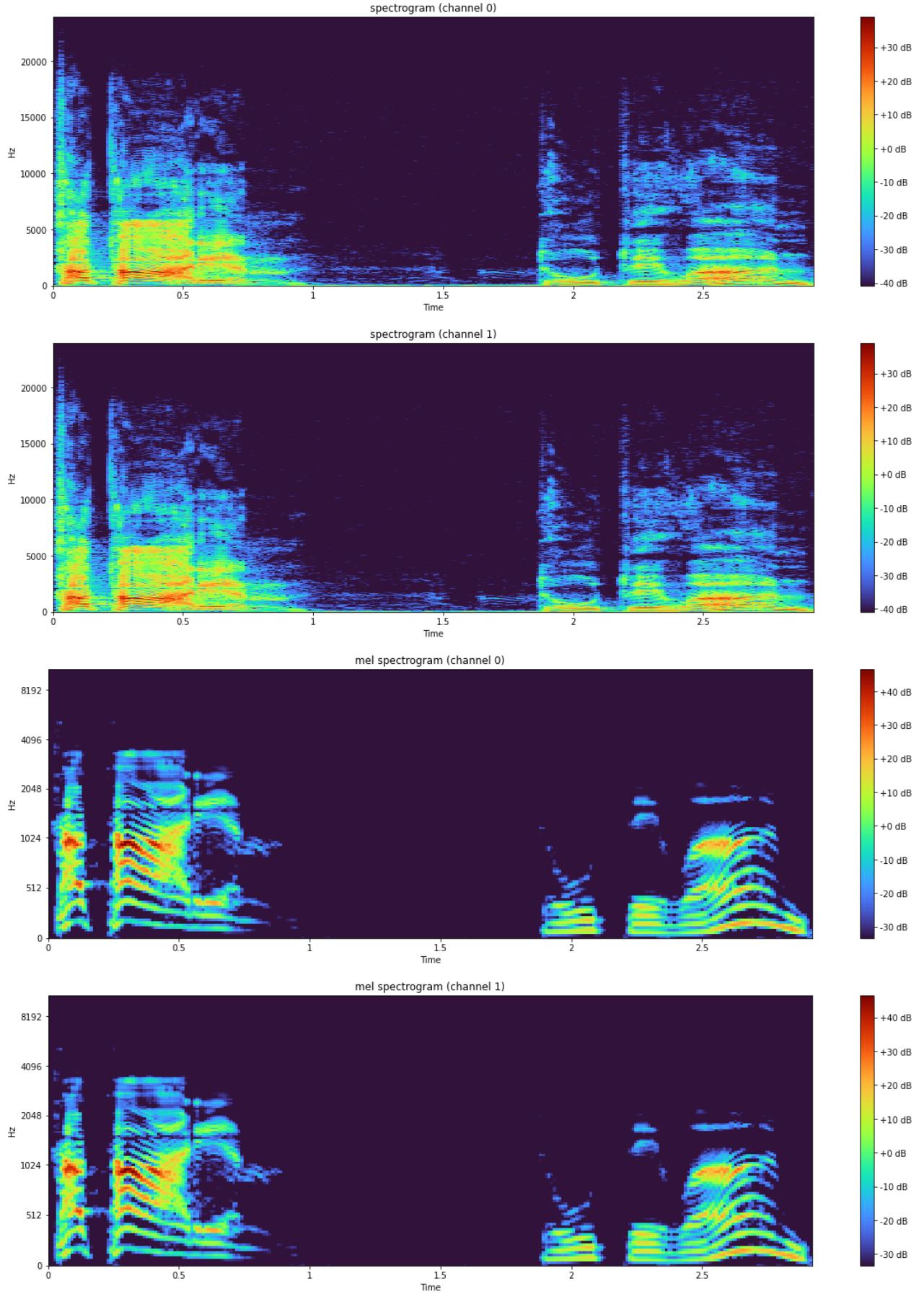


mel spectrogram (channel 1)



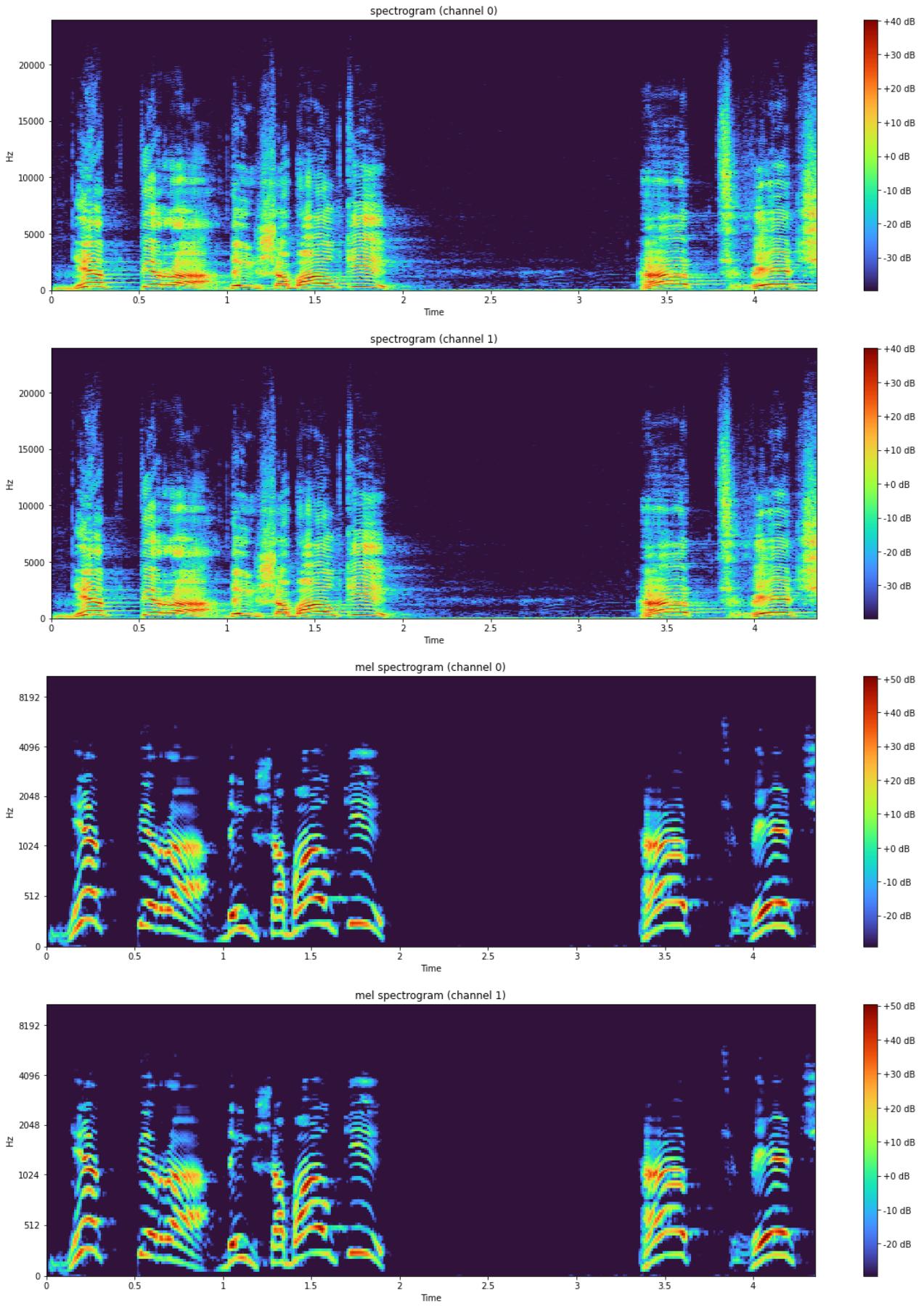
In [86]: sh(63)

INFO : ./wavs/origin/0063.wav



In [87]: sh(64)

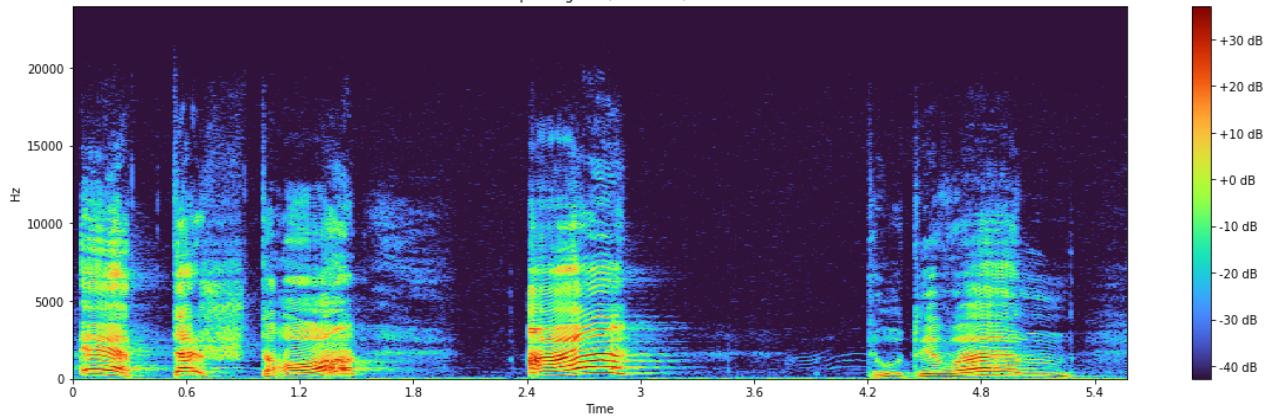
INFO : ./wavs/origin/0064.wav



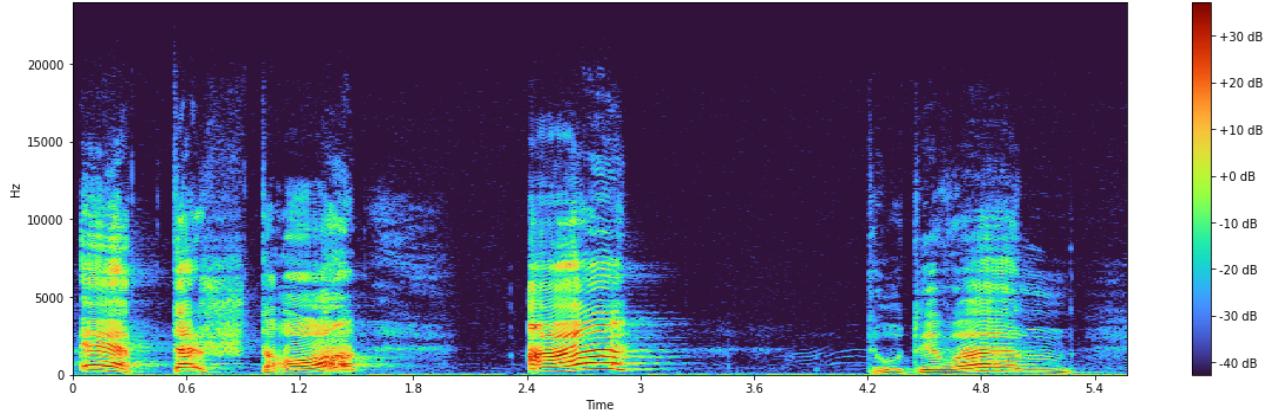
In [88]: sh(65)

INFO : ./wavs/origin/0065.wav

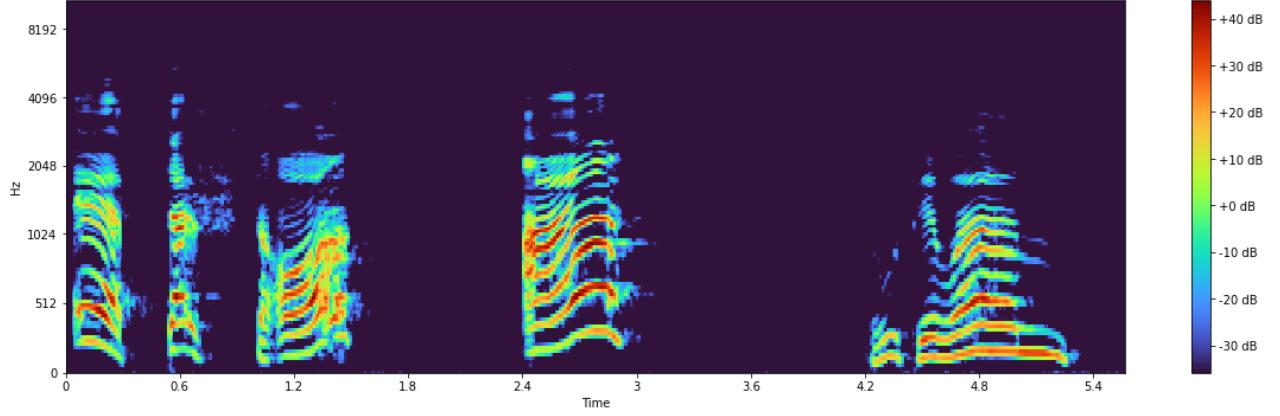
spectrogram (channel 0)



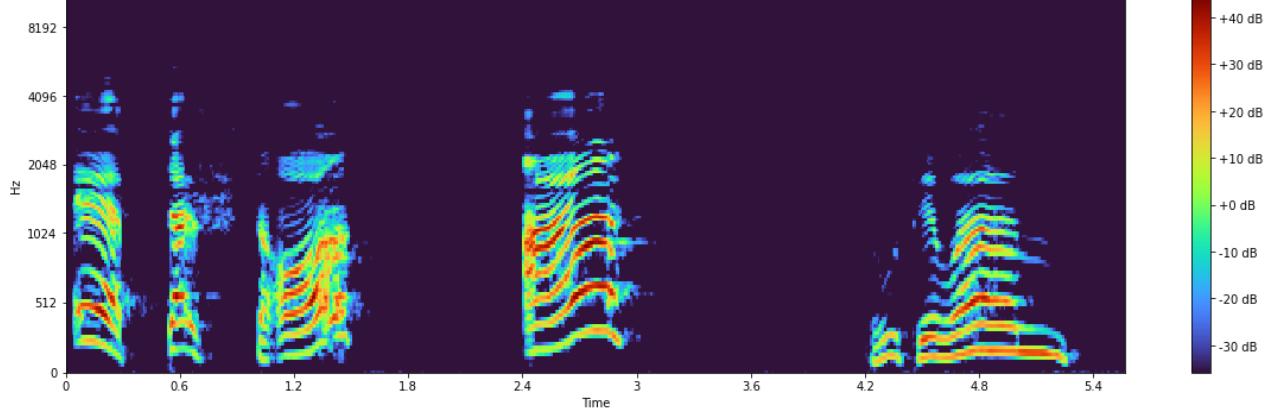
spectrogram (channel 1)



mel spectrogram (channel 0)

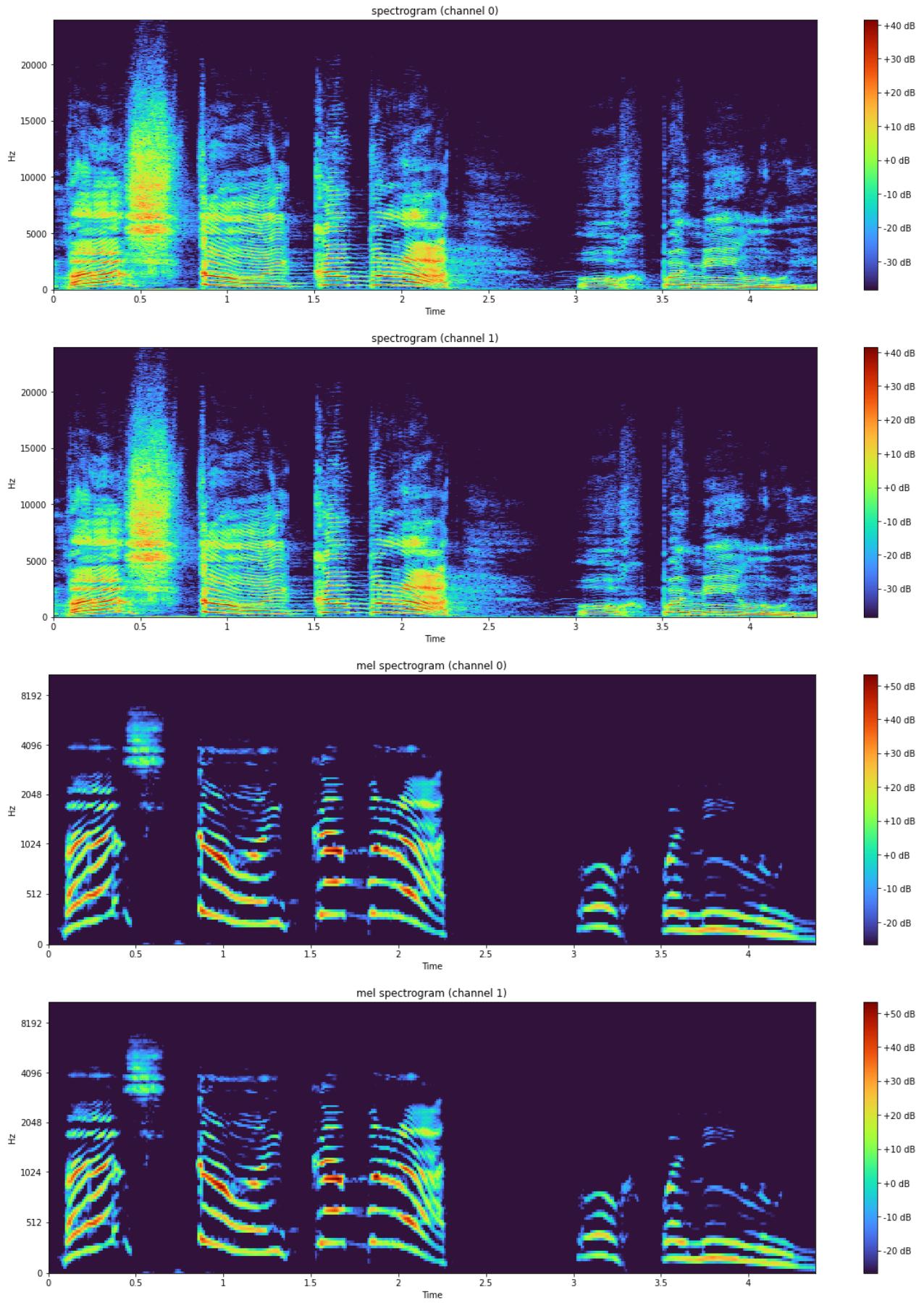


mel spectrogram (channel 1)



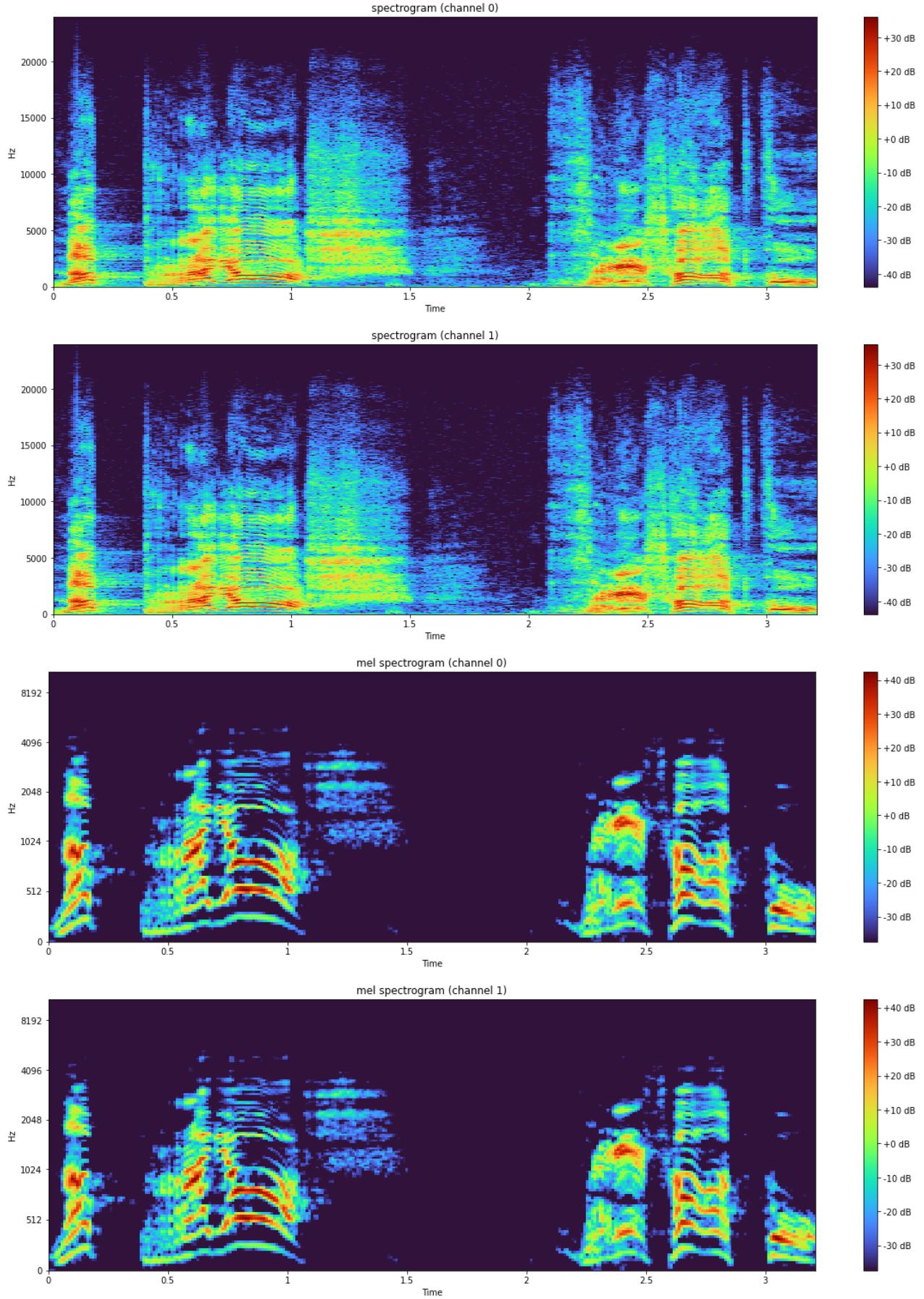
In [89]: sh(66)

INFO : ./wavs/origin/0066.wav



In [90]: sh(67)

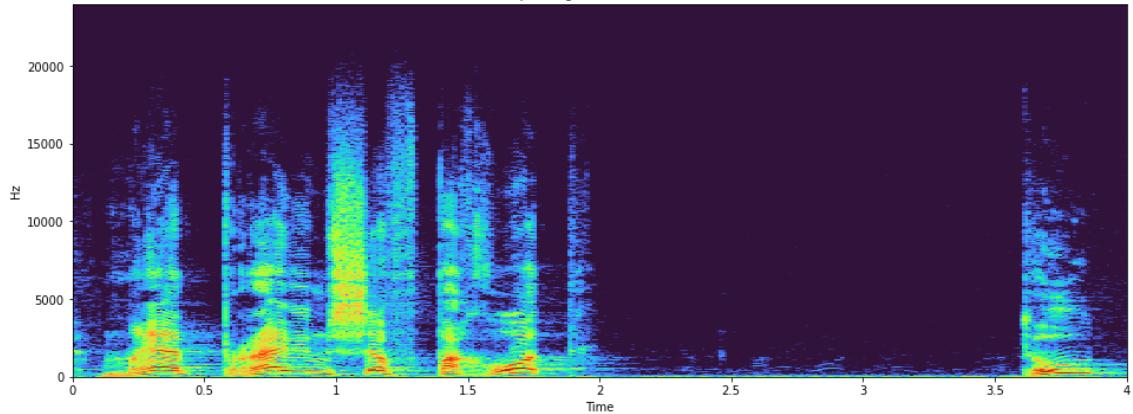
INFO : ./wavs/origin/0067.wav



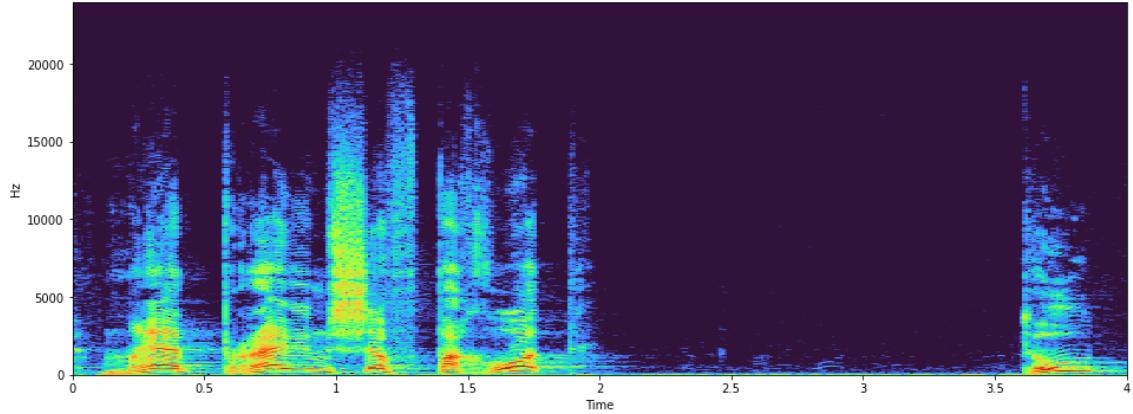
In [91]: sh(68)

INFO : ./wavs/origin/0068.wav

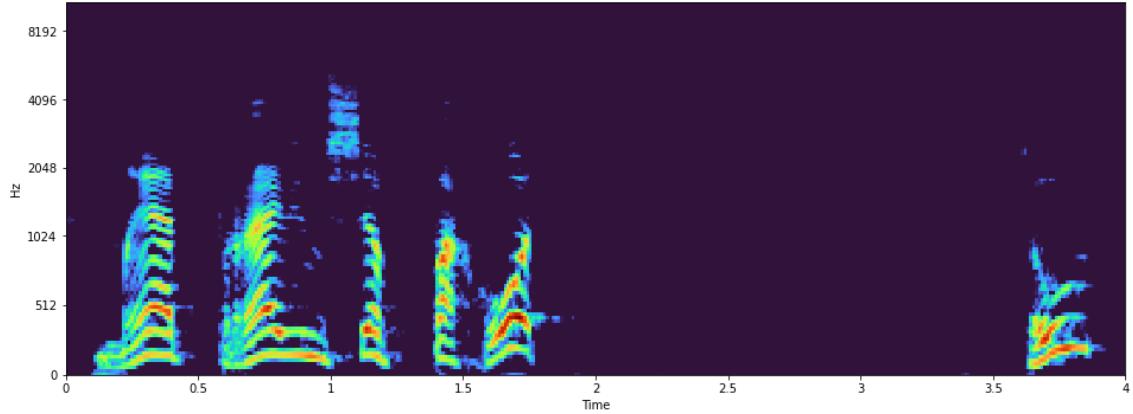
spectrogram (channel 0)



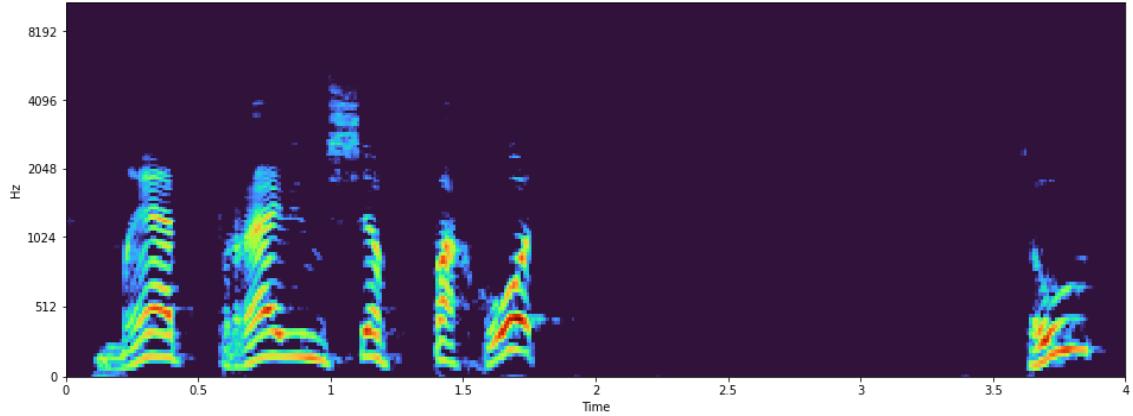
spectrogram (channel 1)



mel spectrogram (channel 0)



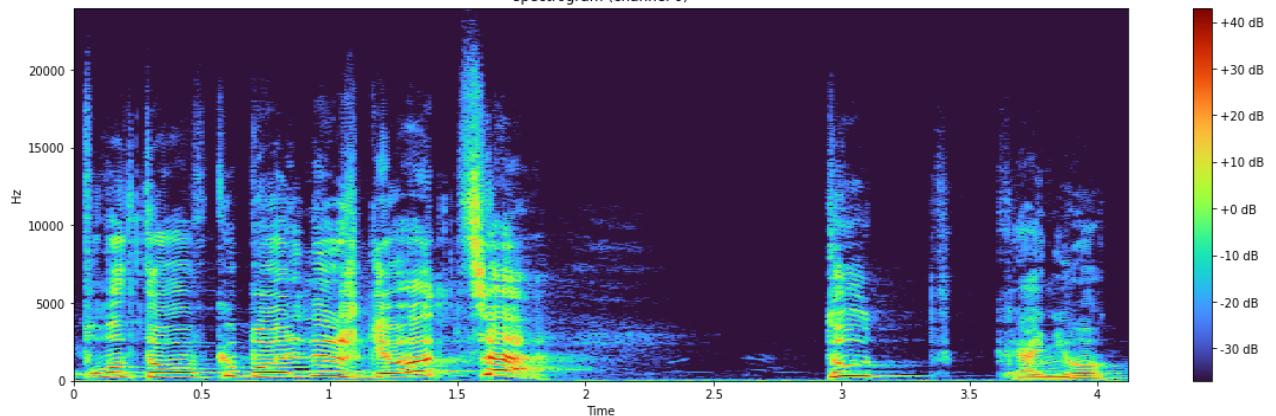
mel spectrogram (channel 1)



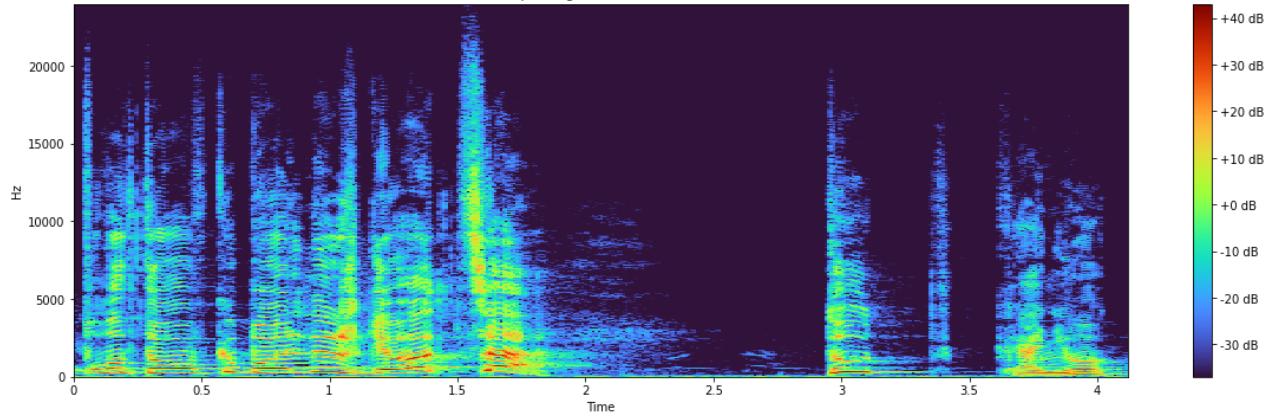
In [92]: sh(69)

INFO : ./wavs/origin/0069.wav

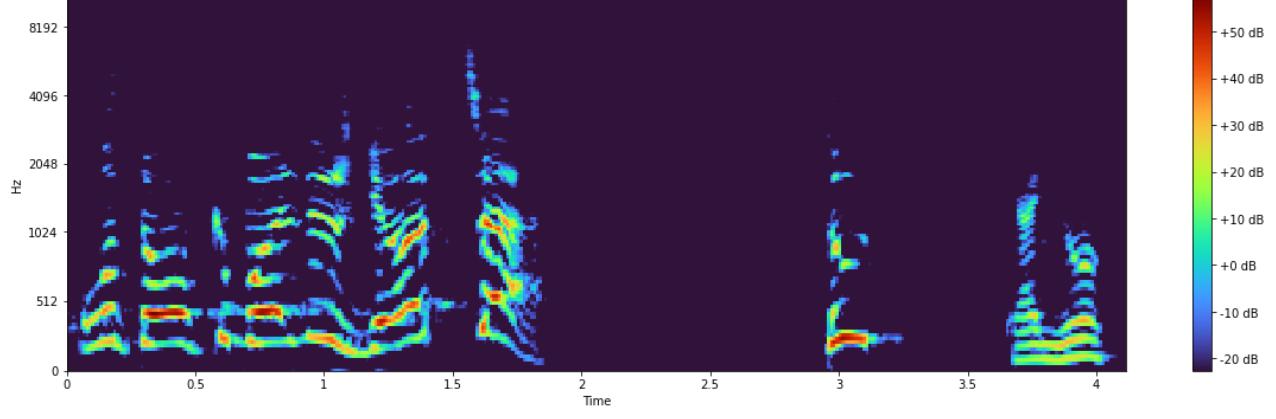
spectrogram (channel 0)



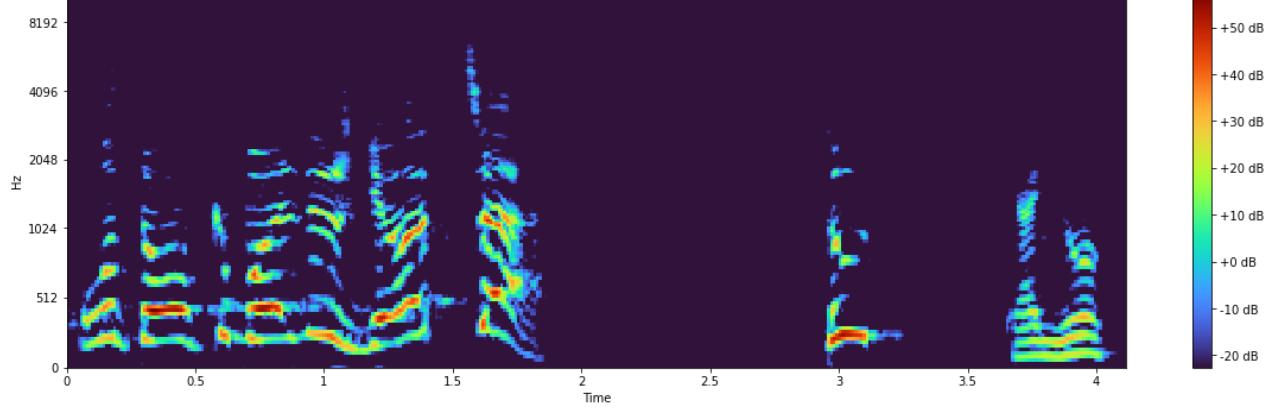
spectrogram (channel 1)



mel spectrogram (channel 0)

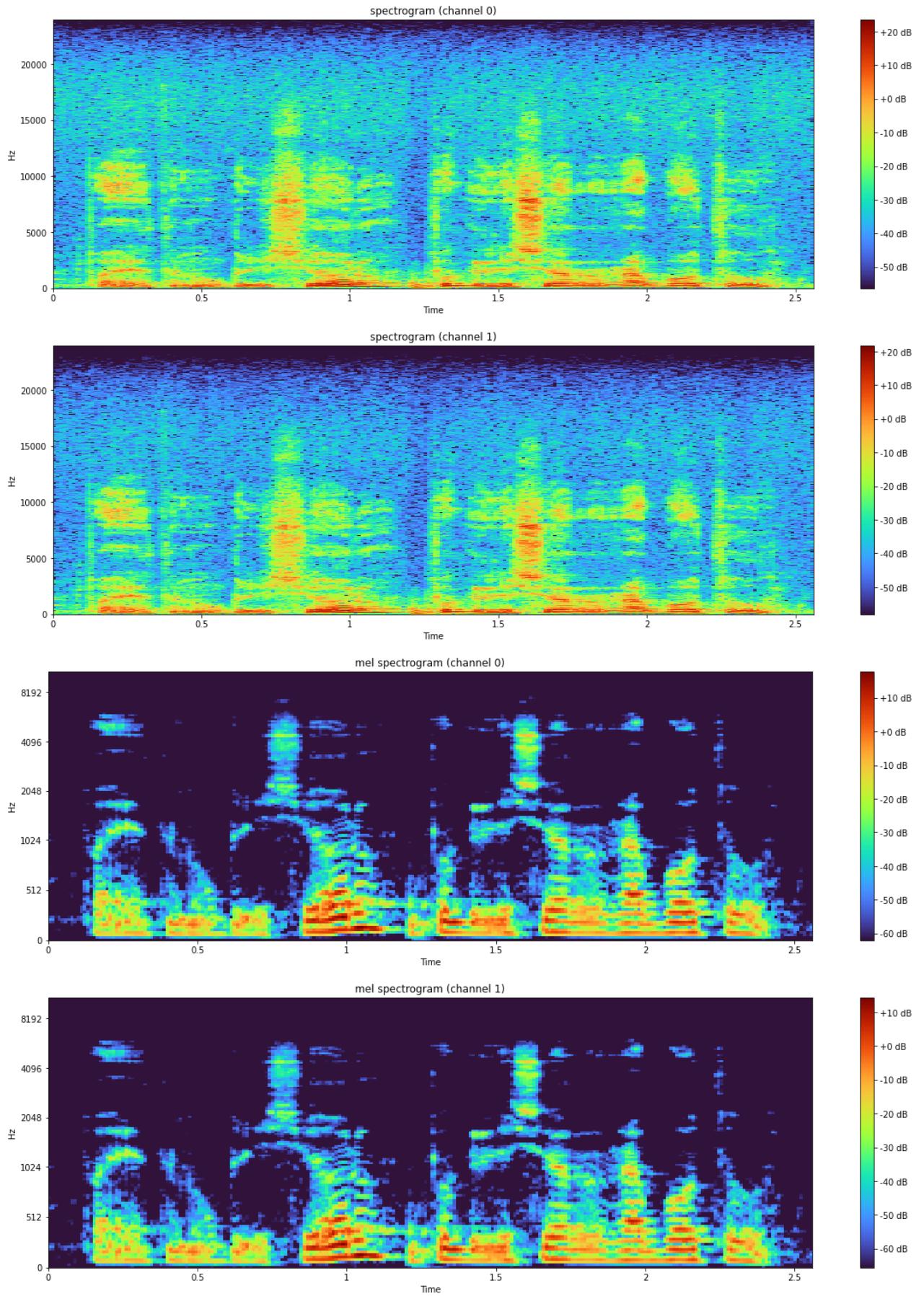


mel spectrogram (channel 1)



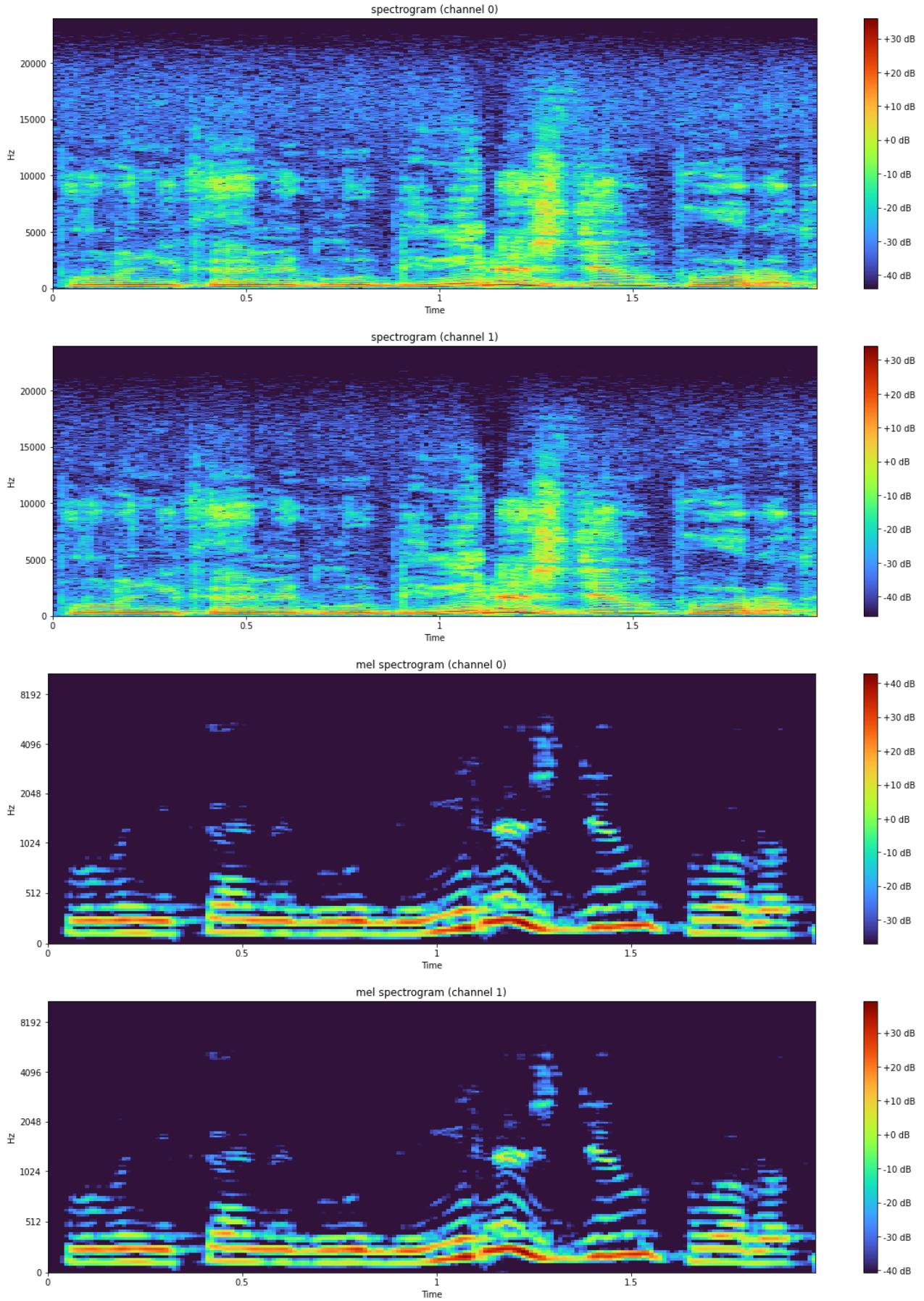
In [93]: sh(70)

INFO : ./wavs/origin/0070.wav



In [94]: sh(71)

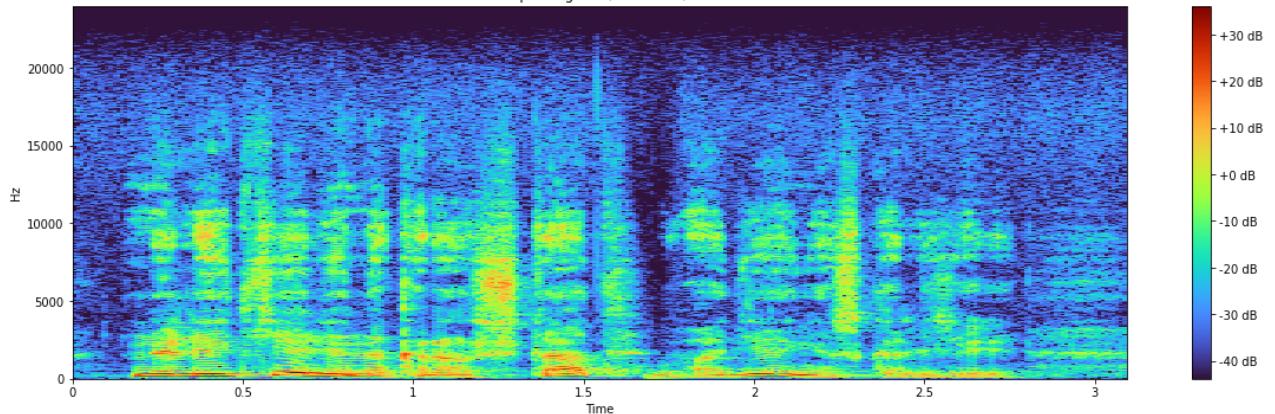
INFO : ./wavs/origin/0071.wav



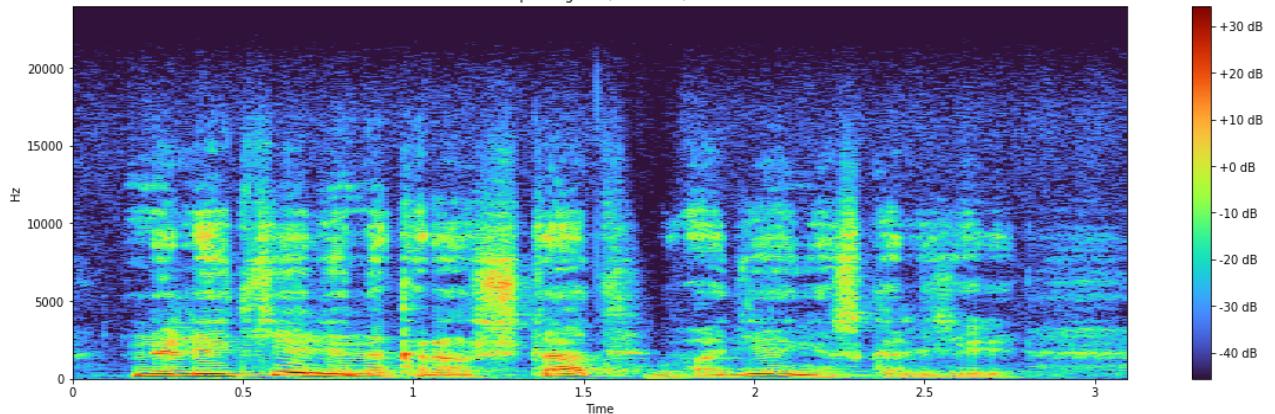
In [95]: sh(72)

INFO : ./wavs/origin/0072.wav

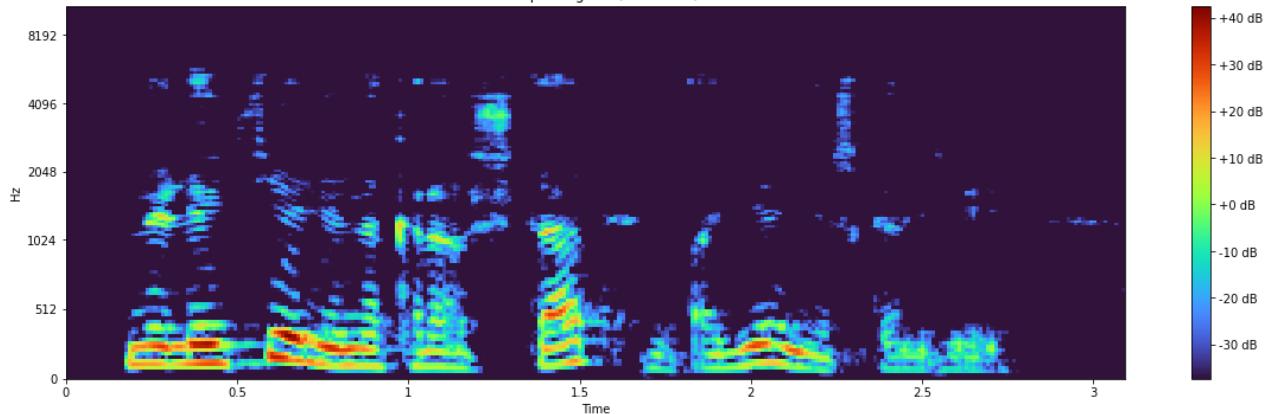
spectrogram (channel 0)



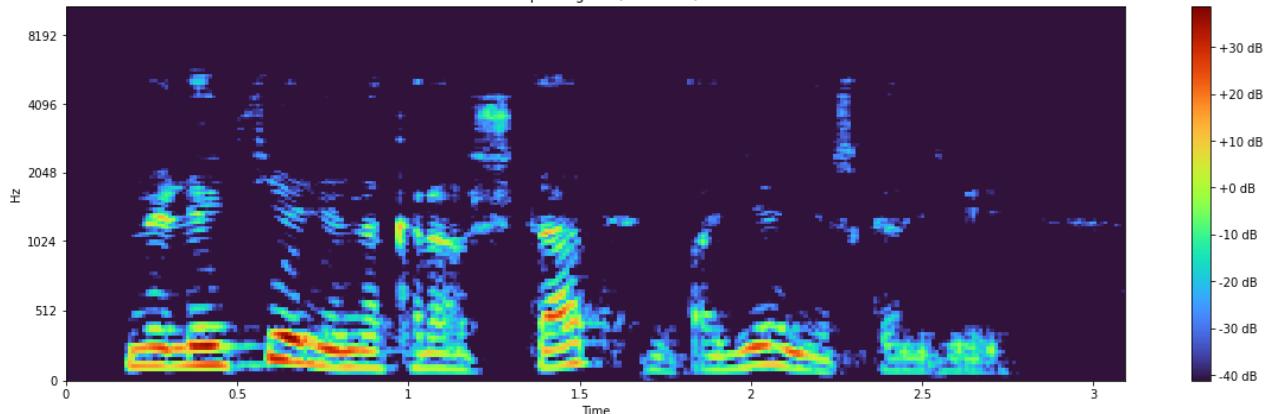
spectrogram (channel 1)



mel spectrogram (channel 0)

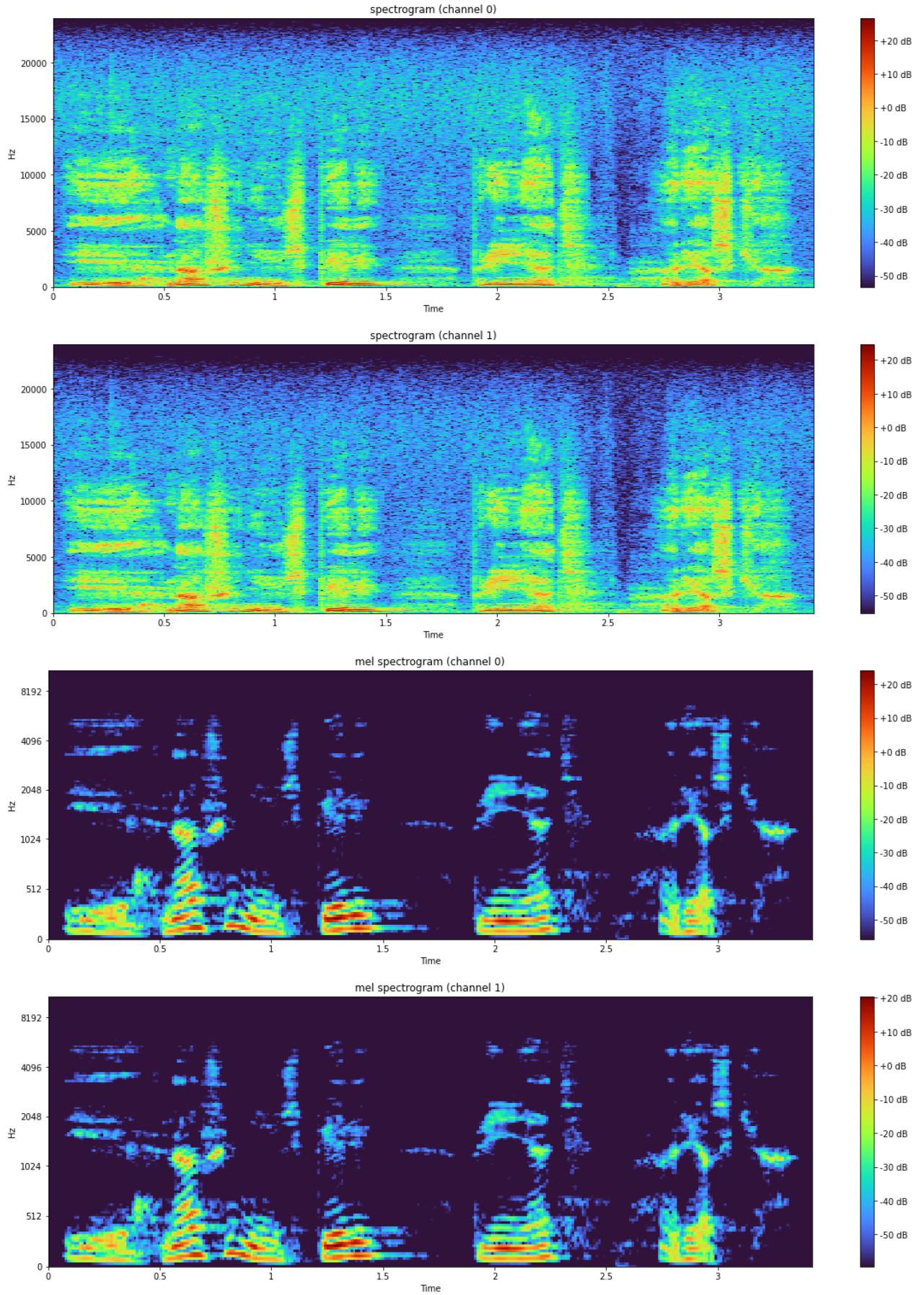


mel spectrogram (channel 1)



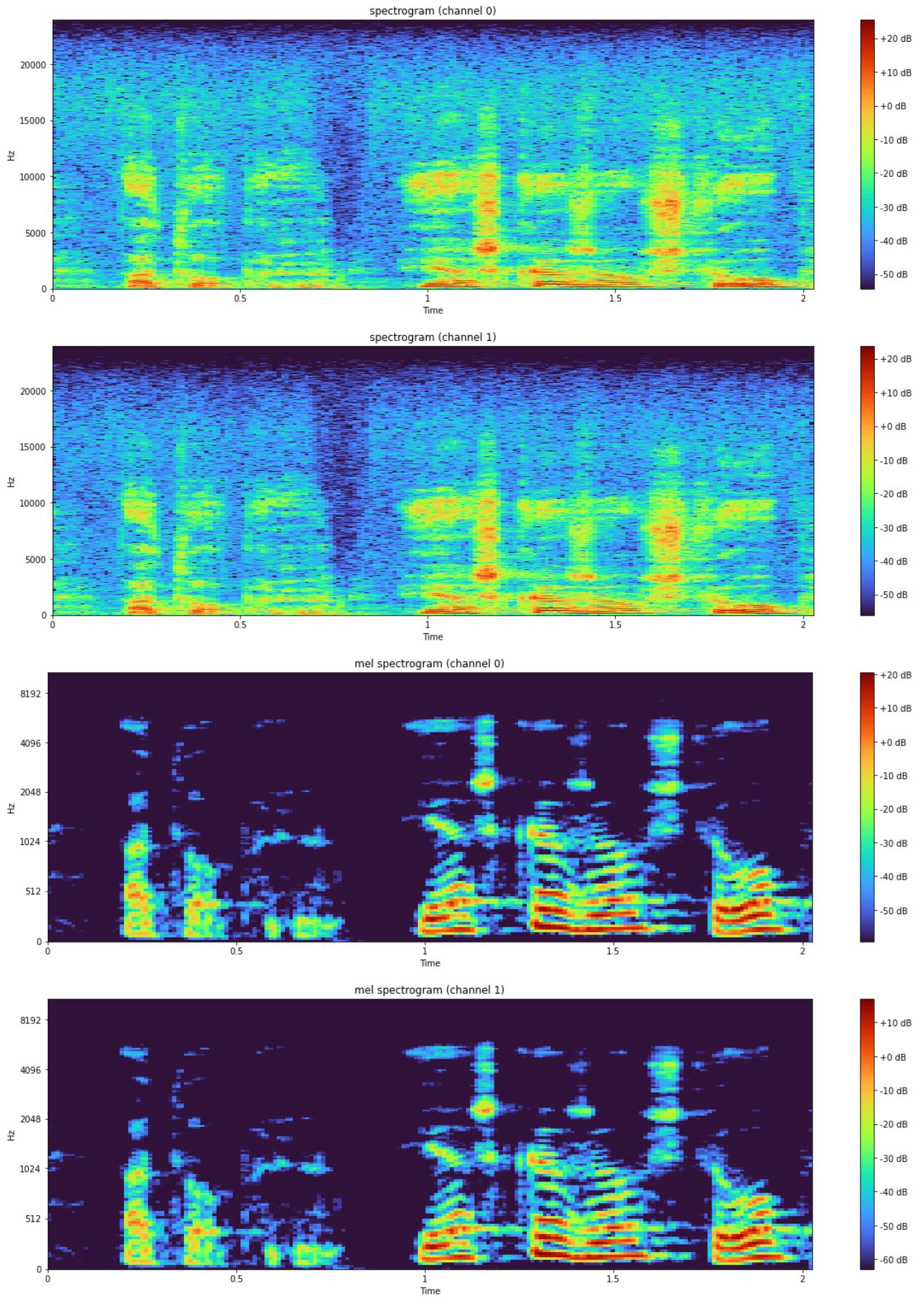
In [96]: sh(73)

INFO : ./wavs/origin/0073.wav



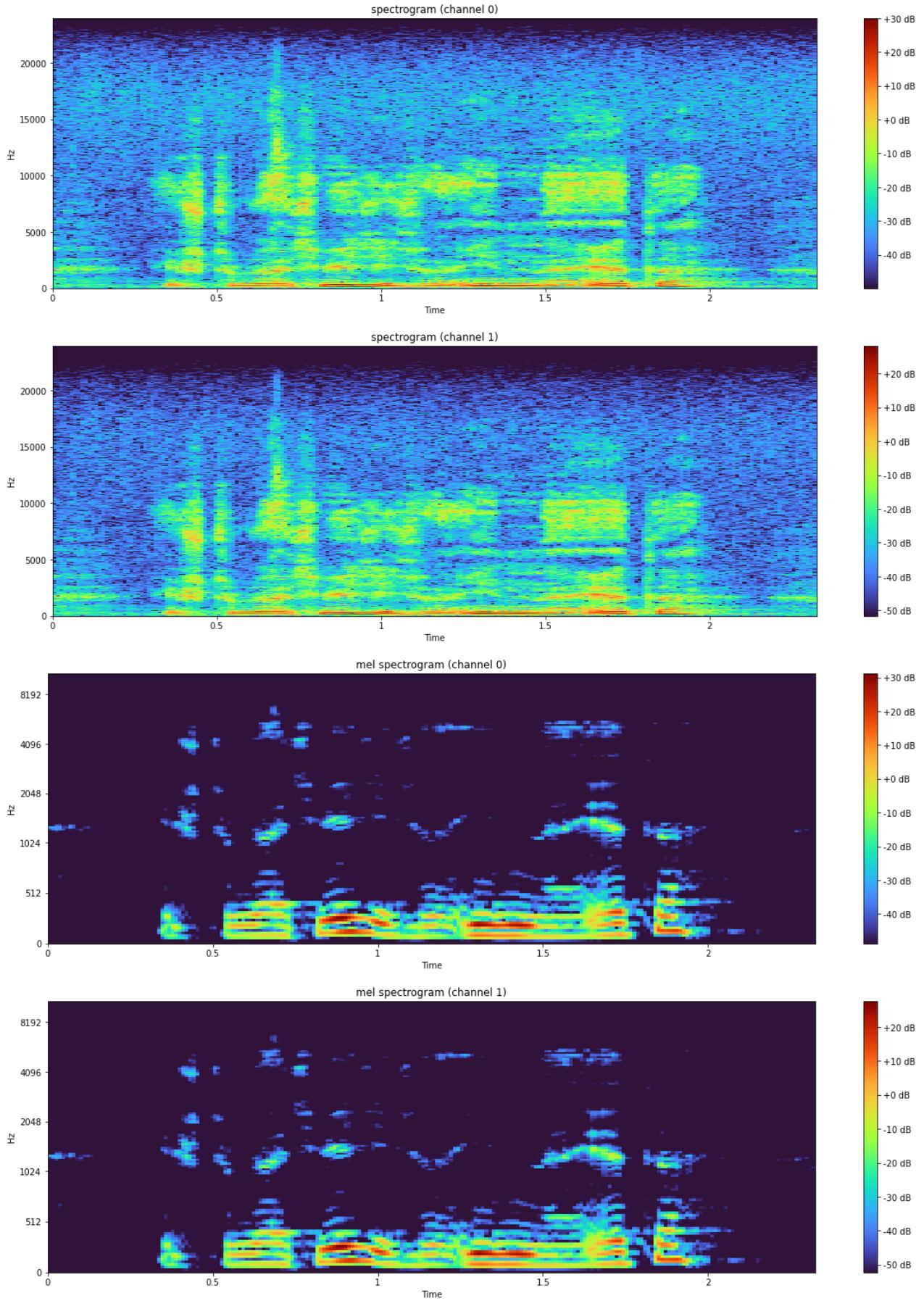
In [97]: sh(74)

INFO : ./wavs/origin/0074.wav



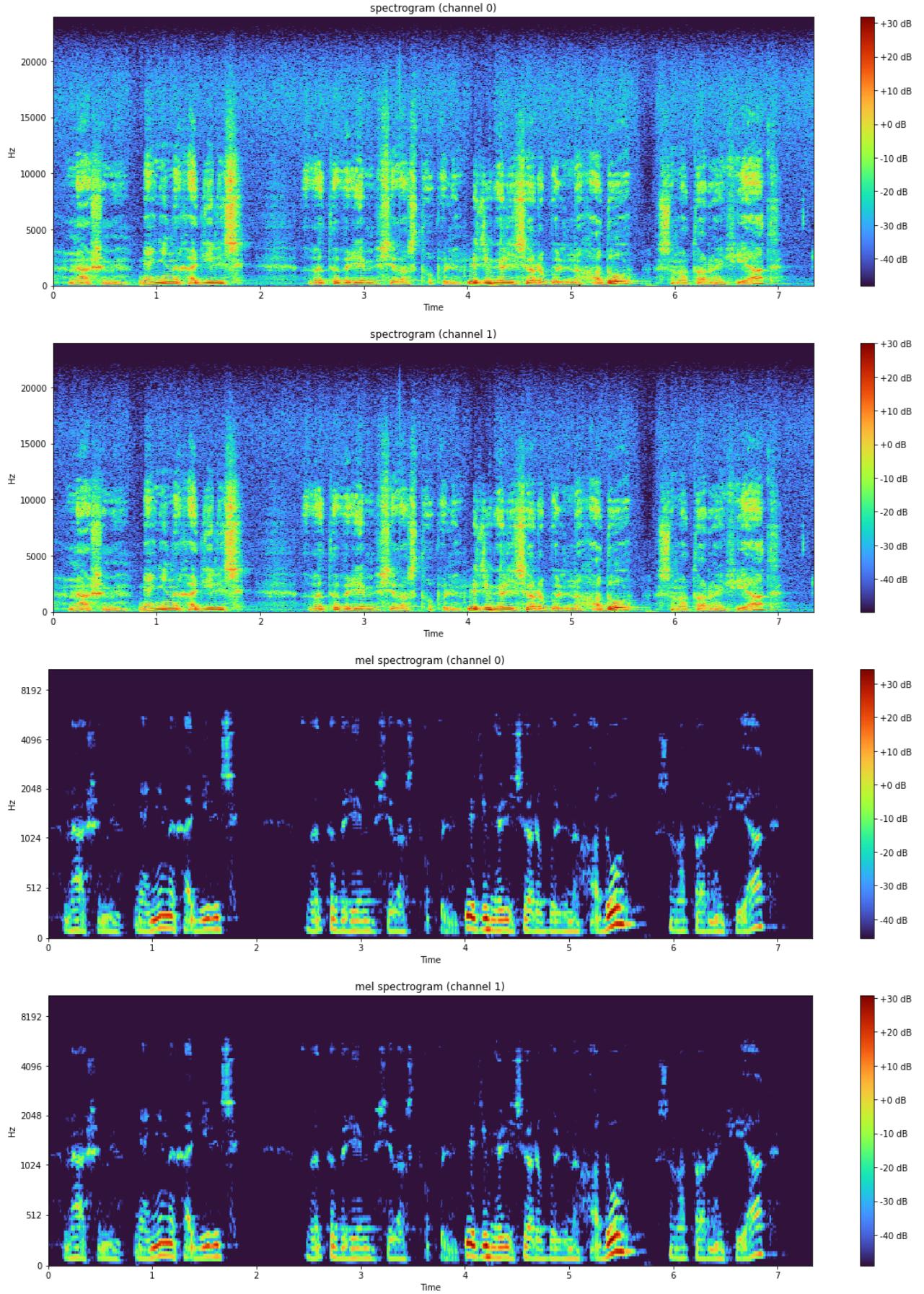
In [98]: sh(75)

INFO : ./wavs/origin/0075.wav



In [99]: sh(76)

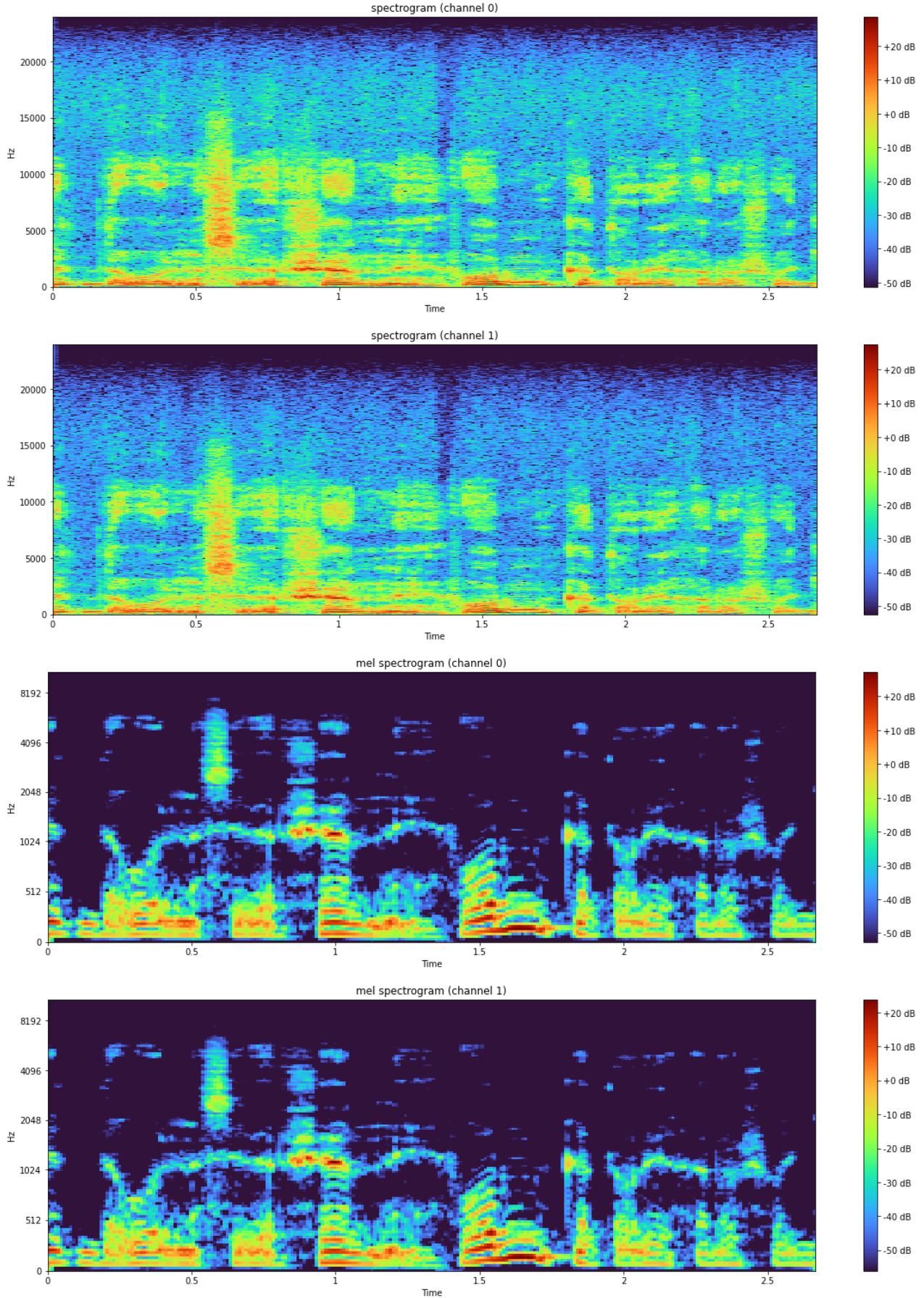
INFO : ./wavs/origin/0076.wav



In [100...]

sh(77)

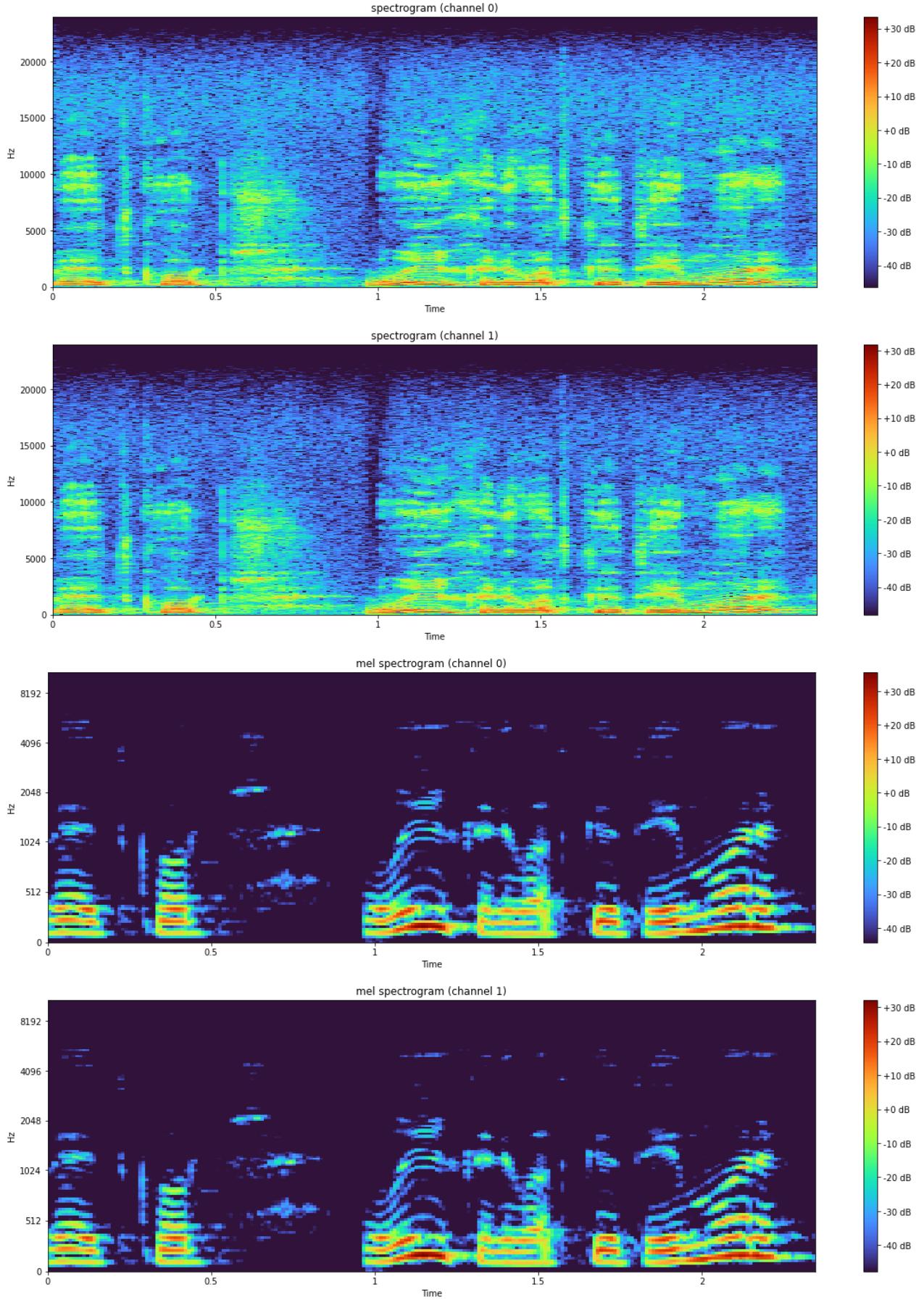
INFO : ../wavs/origin/0077.wav



In [101...]

sh(78)

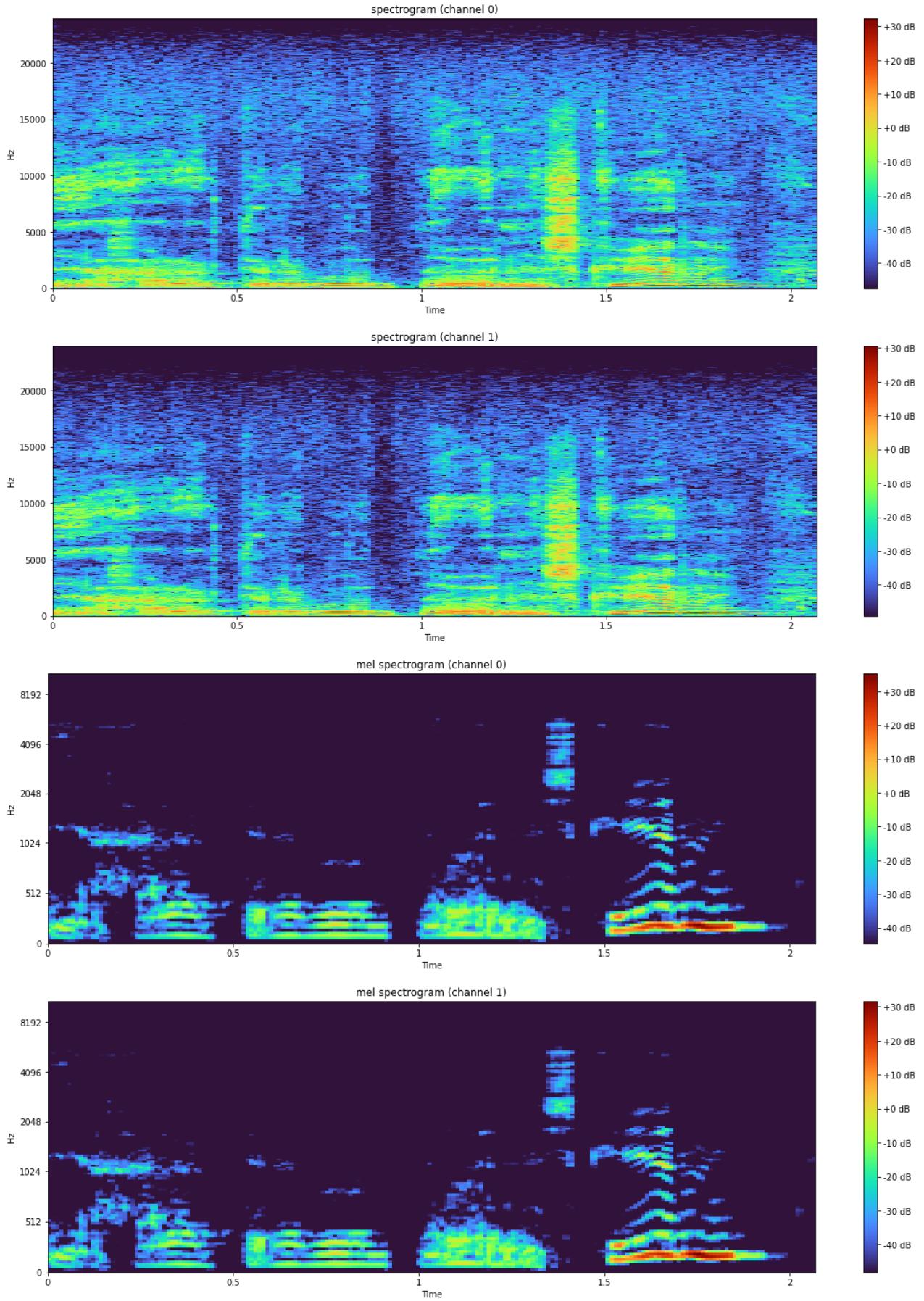
INFO : ./wavs/origin/0078.wav



In [102...]

sh(79)

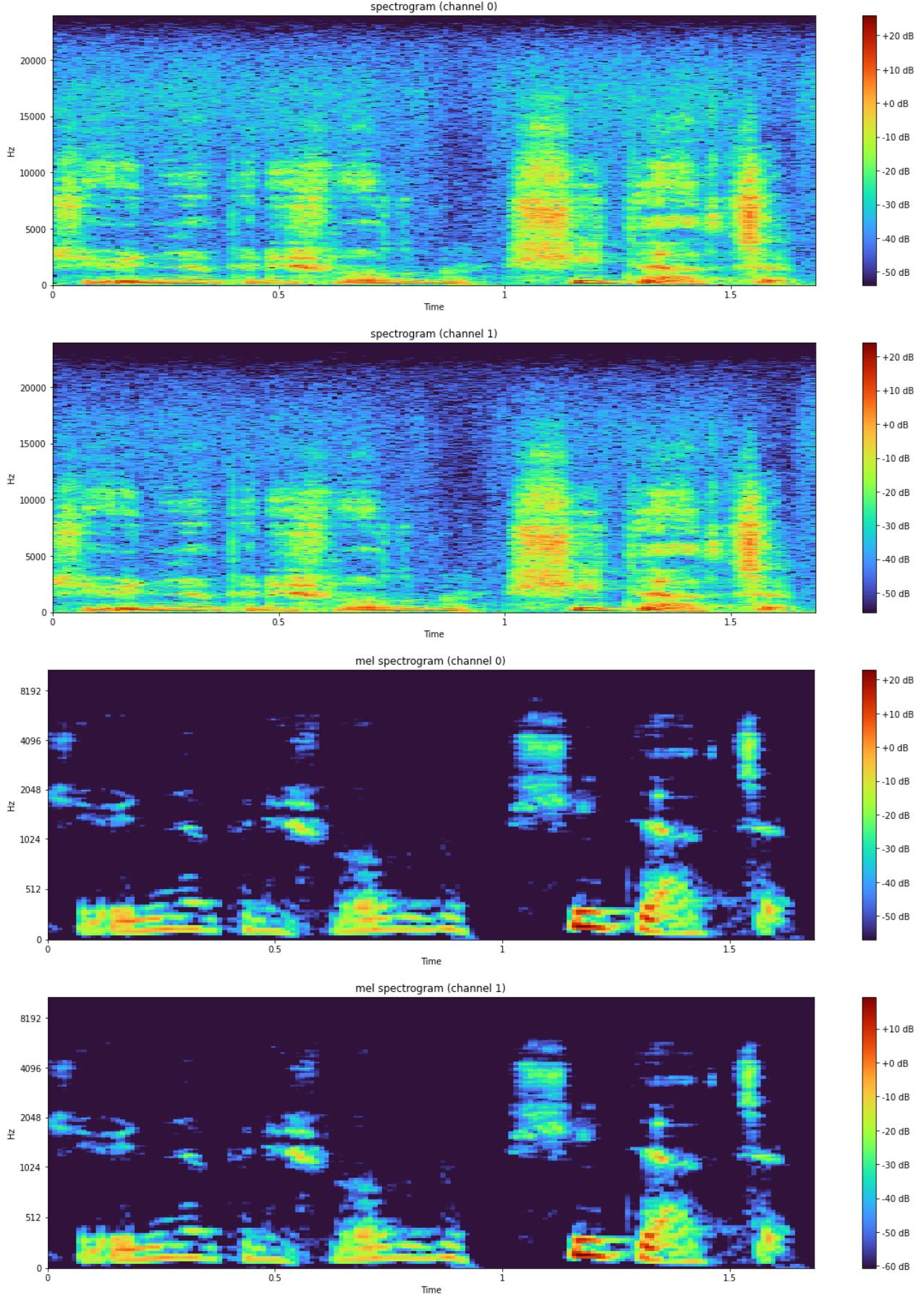
INFO : ./wavs/origin/0079.wav



In [103...]

sh(80)

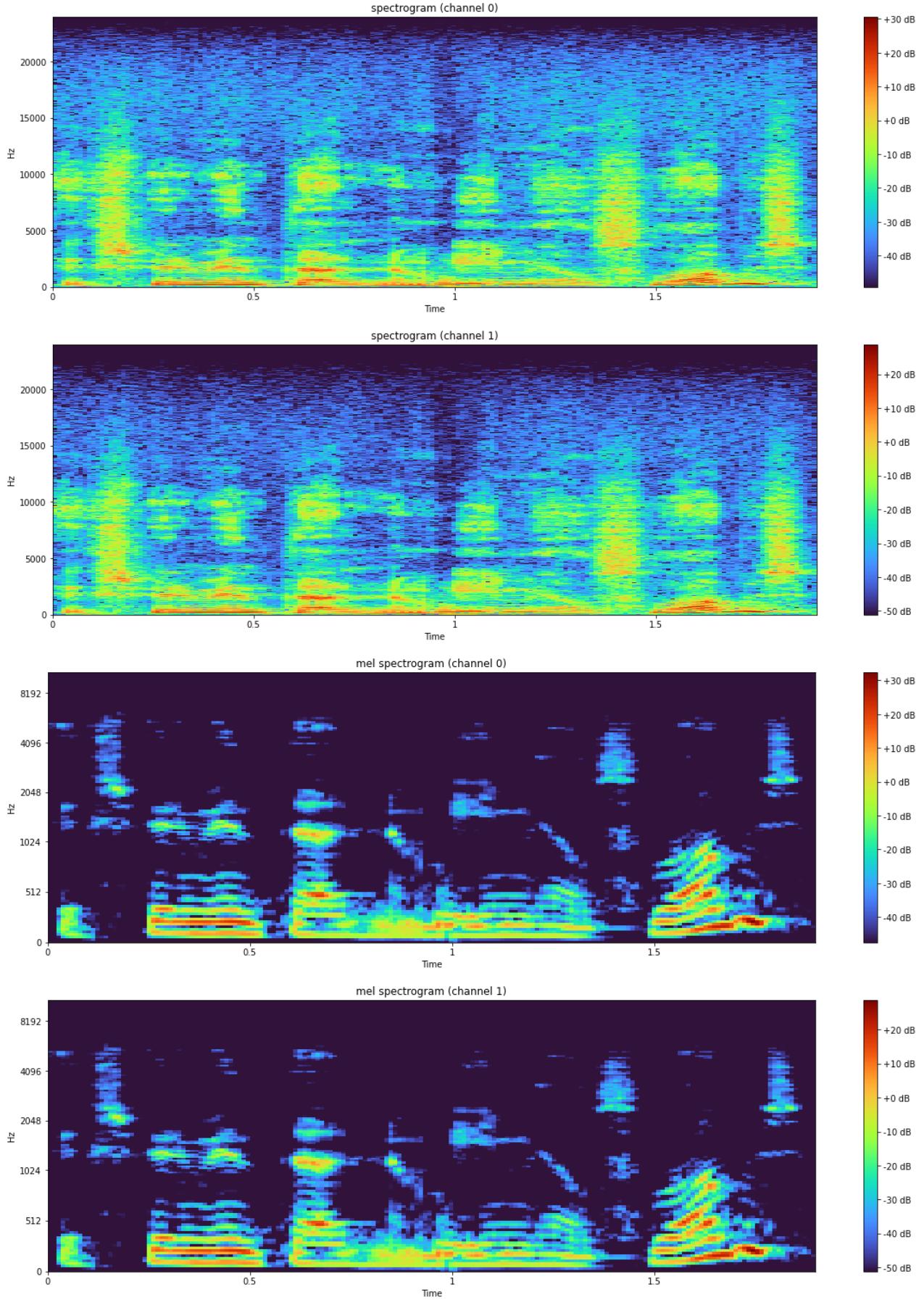
INFO : ./wavs/origin/0080.wav



In [104...]

sh(81)

INFO : ./wavs/origin/0081.wav

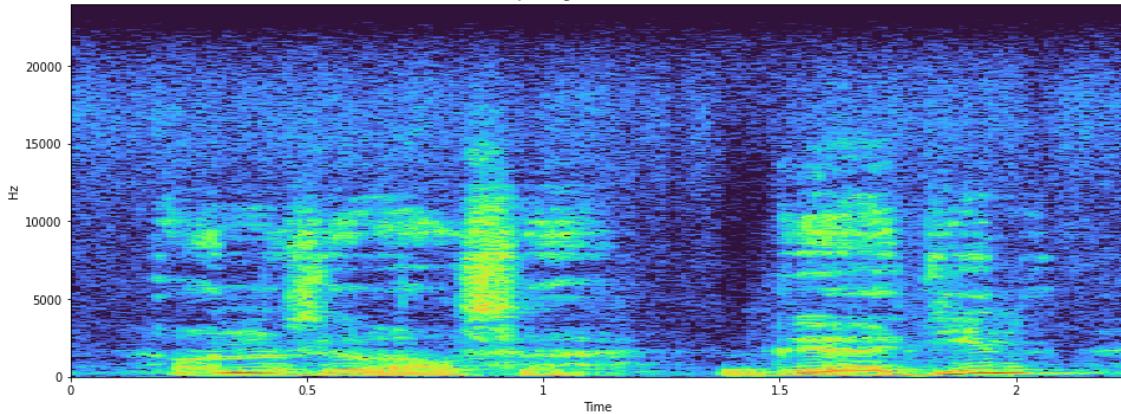


In [105...]

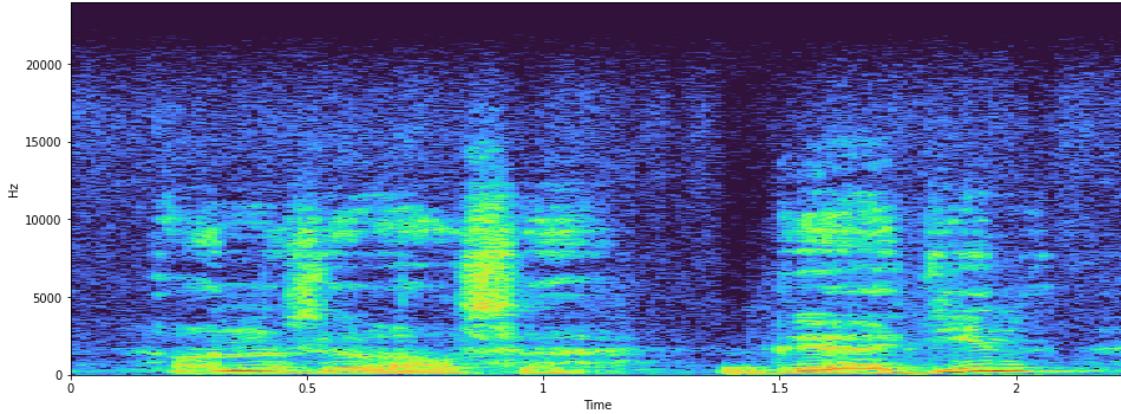
sh(82)

INFO : ./wavs/origin/0082.wav

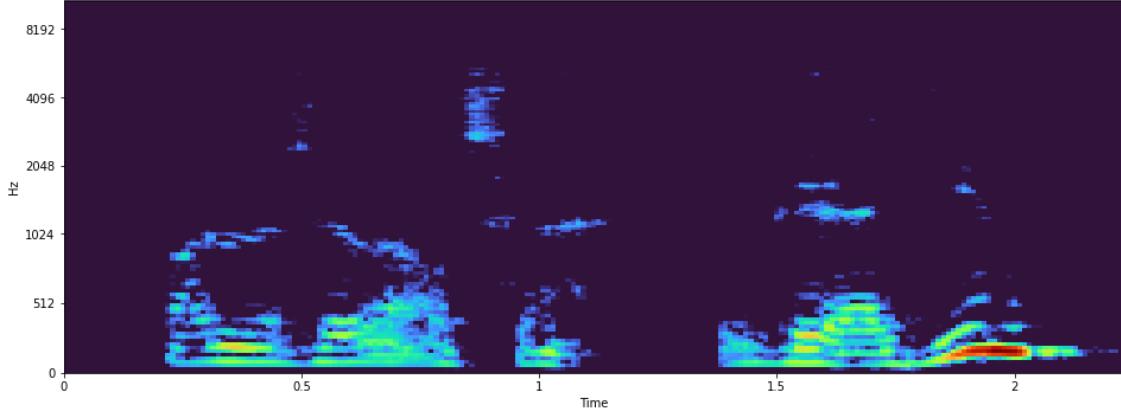
spectrogram (channel 0)



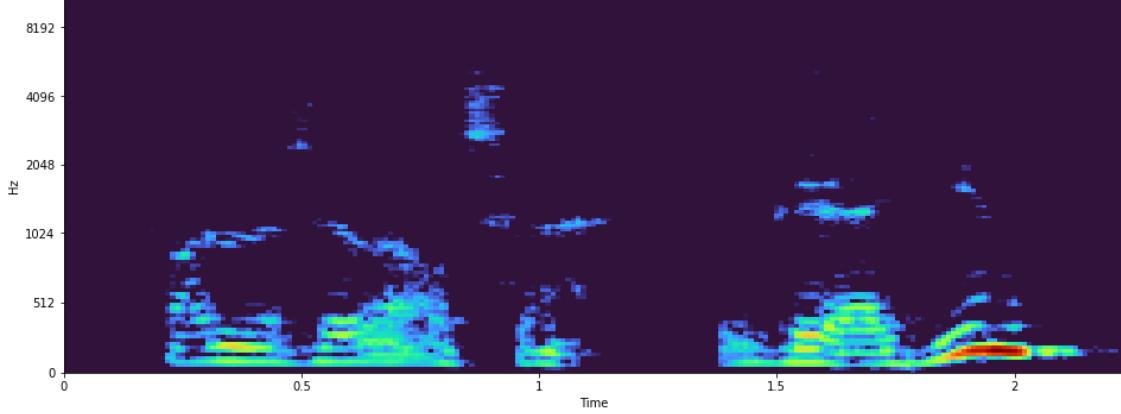
spectrogram (channel 1)



mel spectrogram (channel 0)



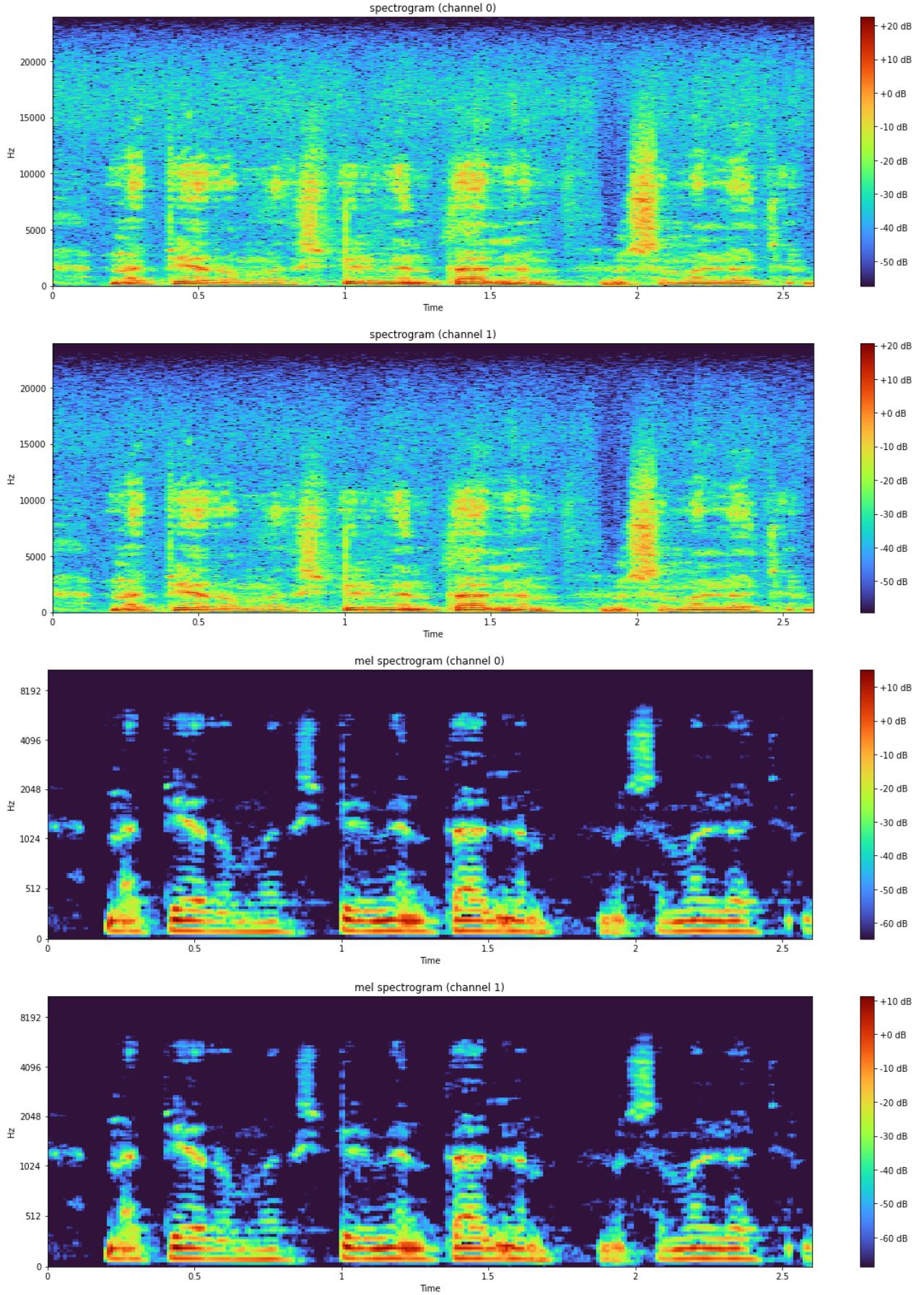
mel spectrogram (channel 1)



In [106...]

sh(83)

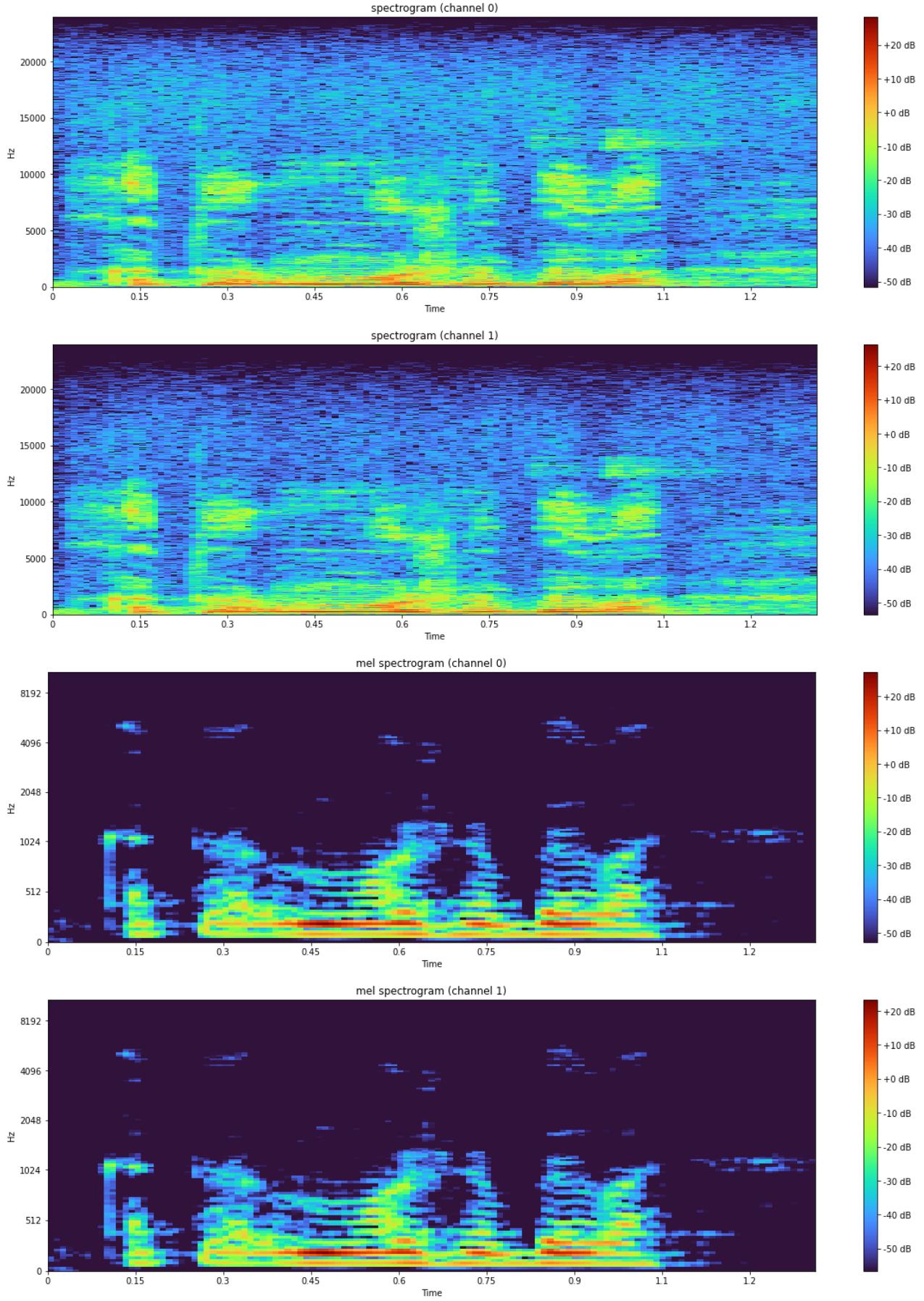
INFO : ./wavs/origin/0083.wav



In [107...]

sh(84)

INFO : ./wavs/origin/0084.wav

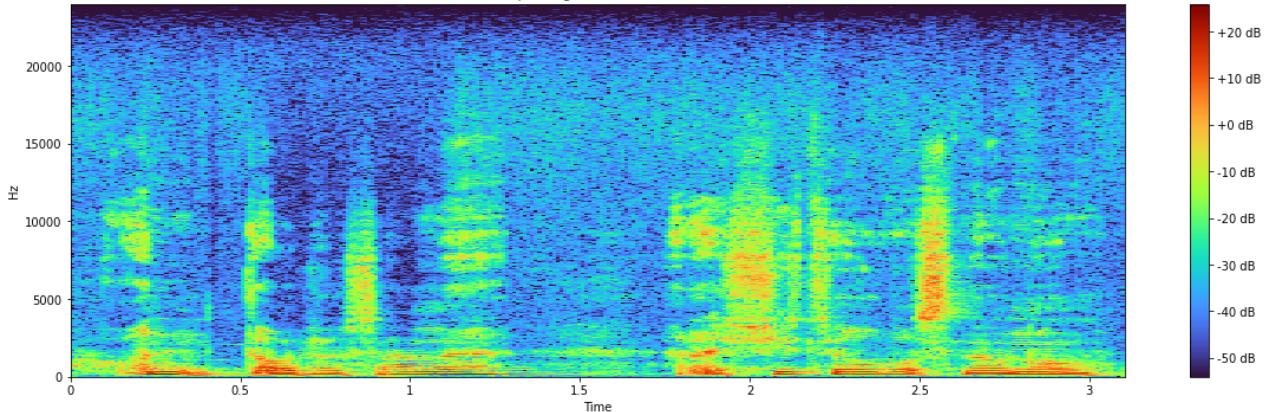


In [108...]

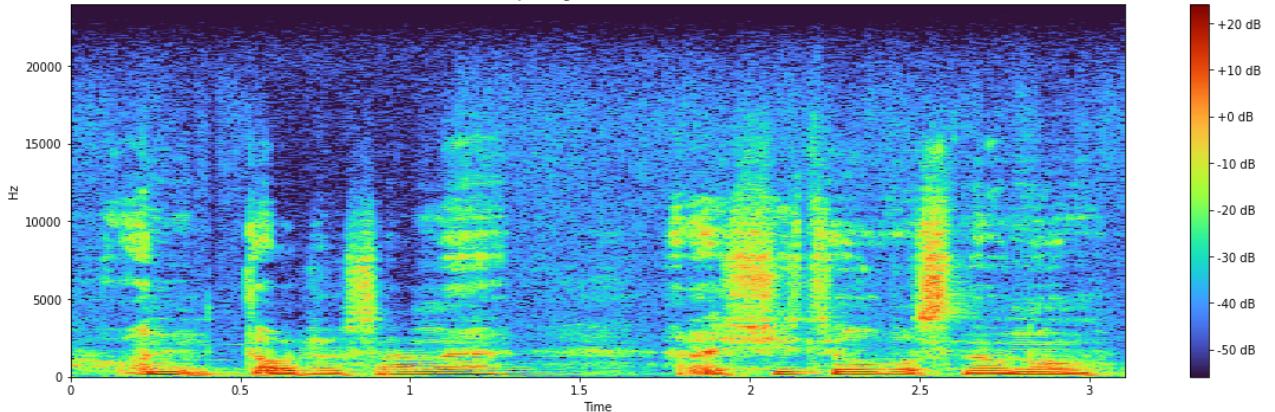
sh(85)

INFO : ./wavs/origin/0085.wav

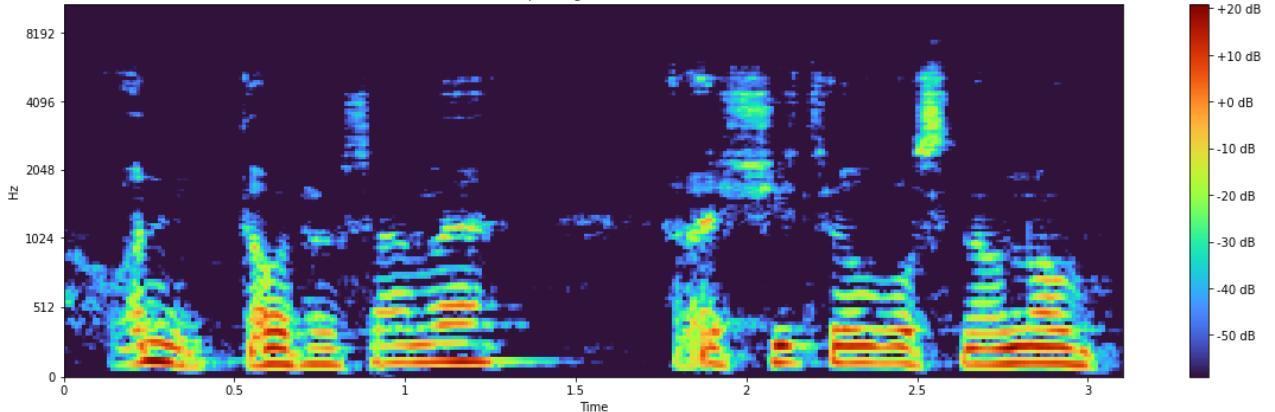
spectrogram (channel 0)



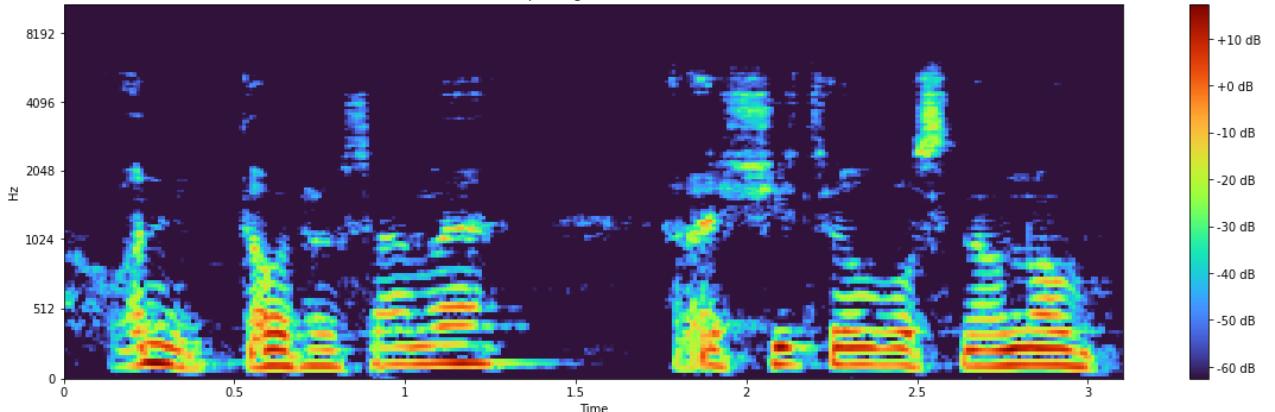
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

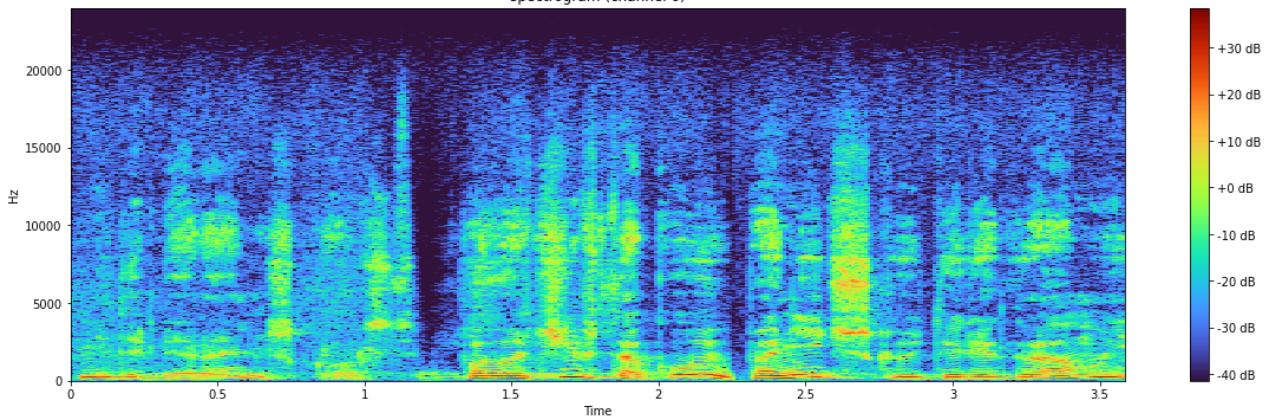


In [109...]

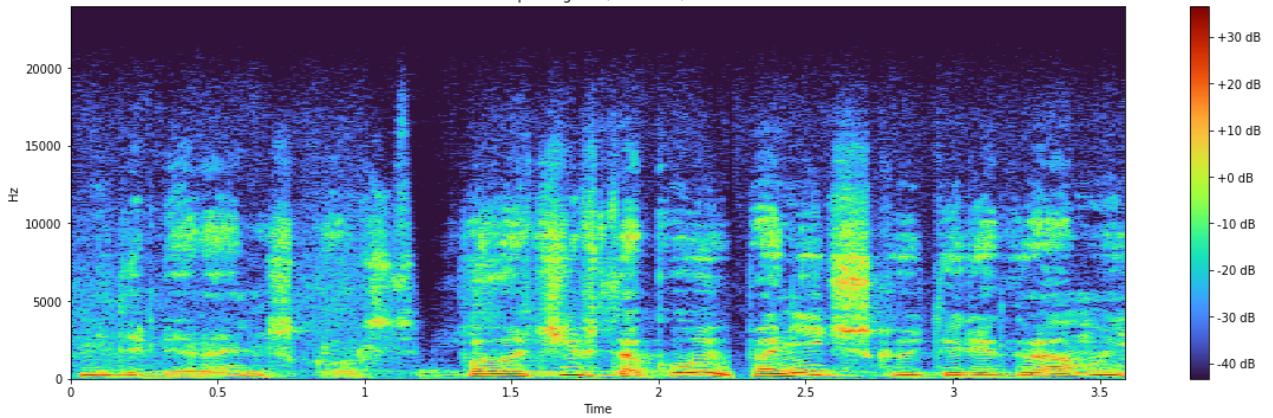
sh(86)

INFO : ../wavs/origin/0086.wav

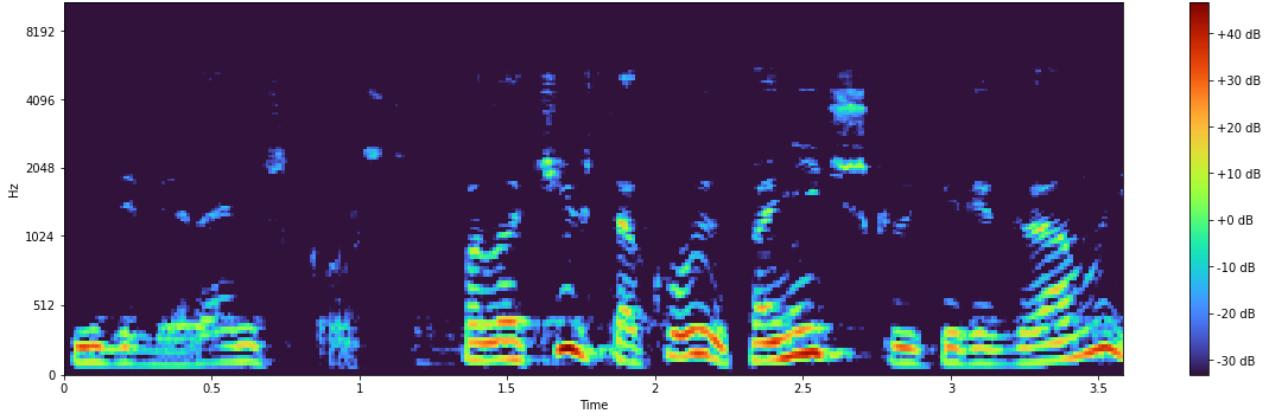
spectrogram (channel 0)



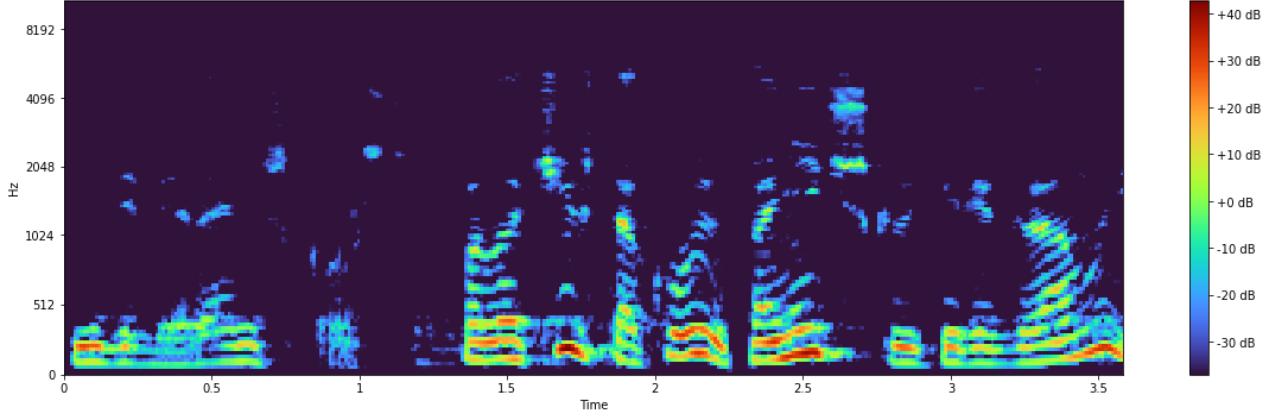
spectrogram (channel 1)



mel spectrogram (channel 0)



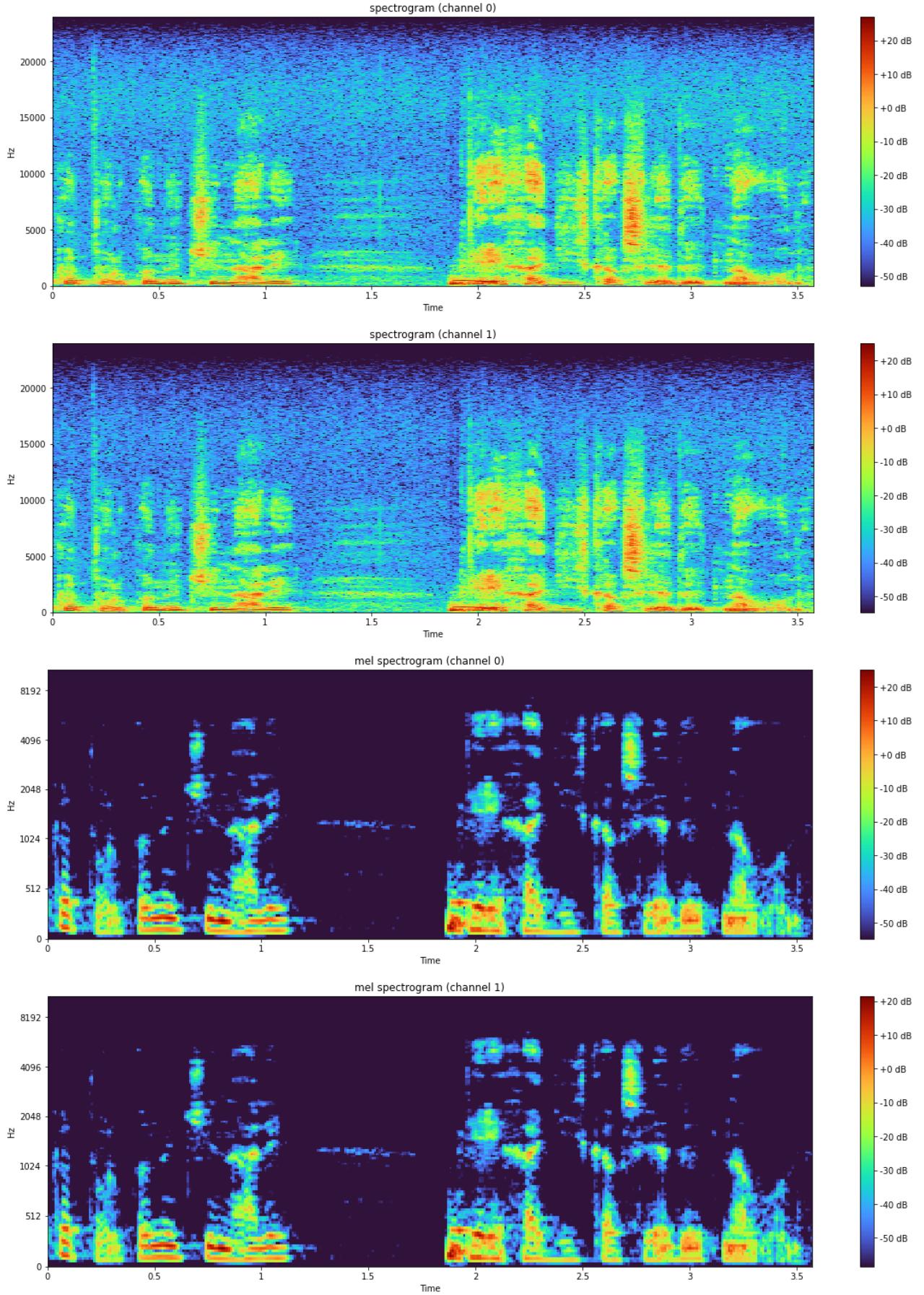
mel spectrogram (channel 1)



In [110...]

sh(87)

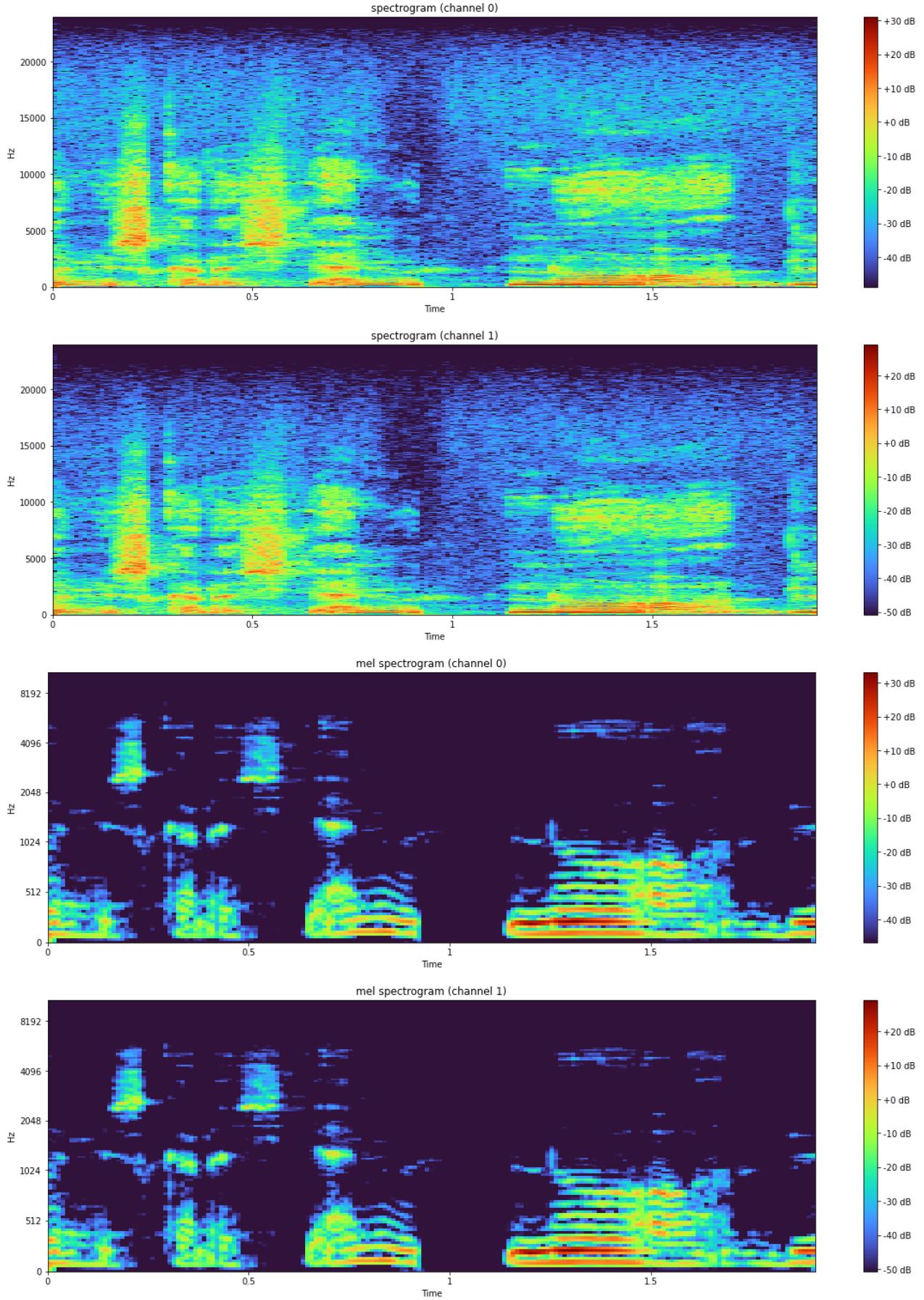
INFO : ./wavs/origin/0087.wav



In [111...]

sh(88)

INFO : ./wavs/origin/0088.wav

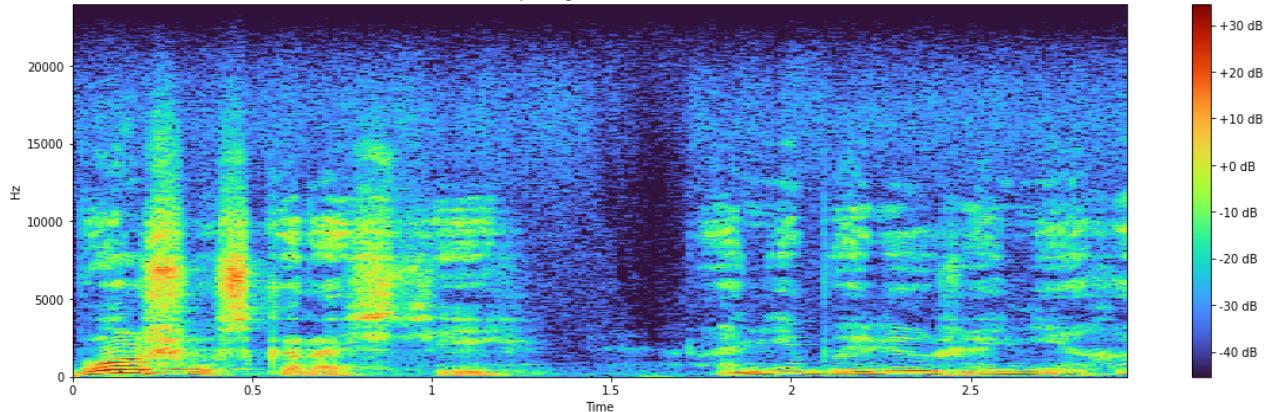


In [112...]

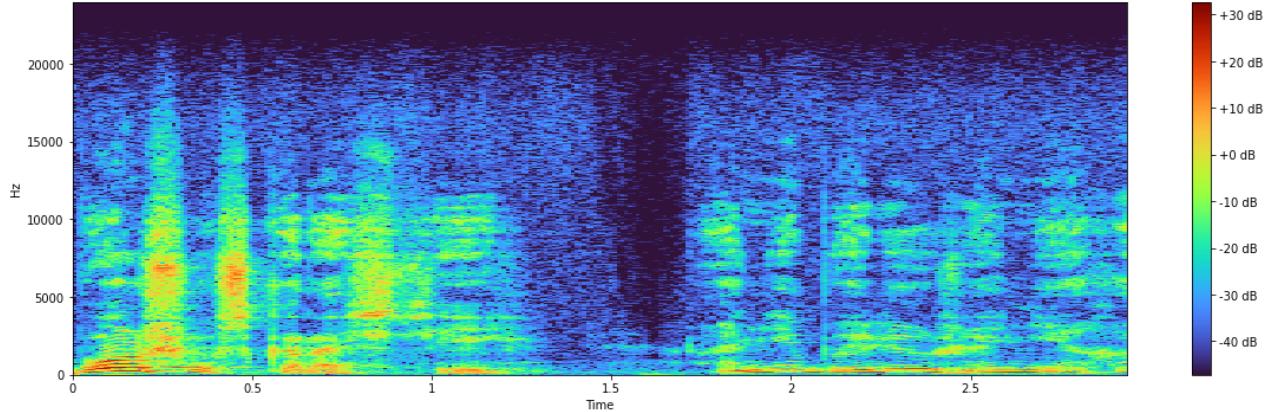
sh(89)

INFO : ./wavs/origin/0089.wav

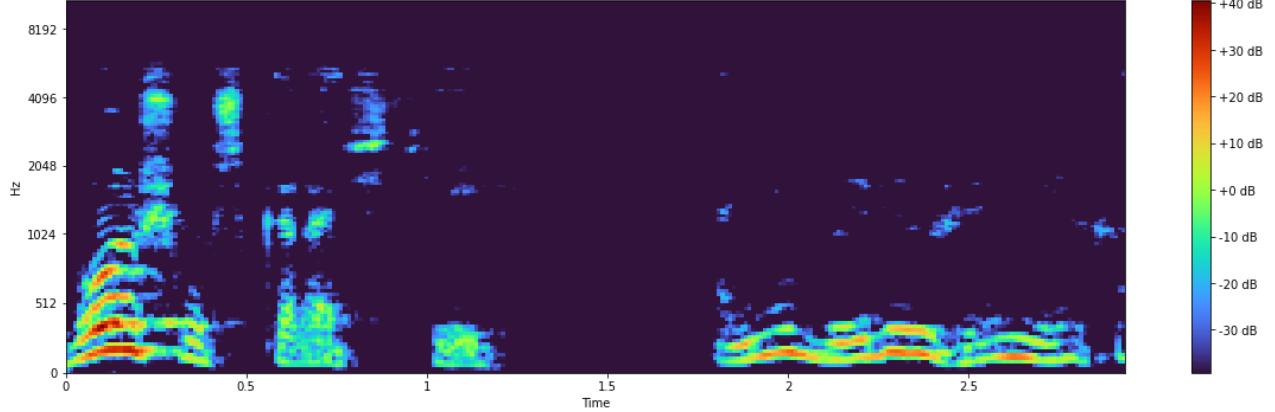
spectrogram (channel 0)



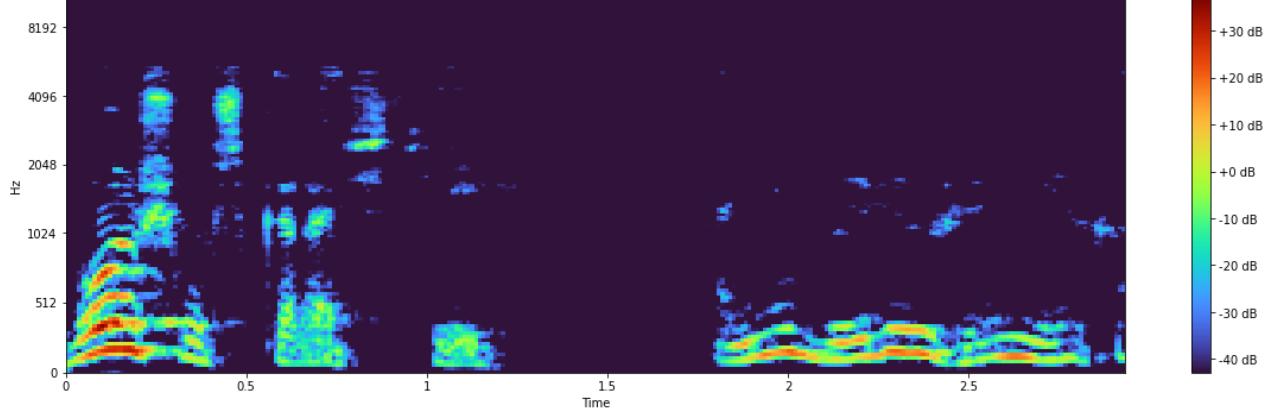
spectrogram (channel 1)



mel spectrogram (channel 0)



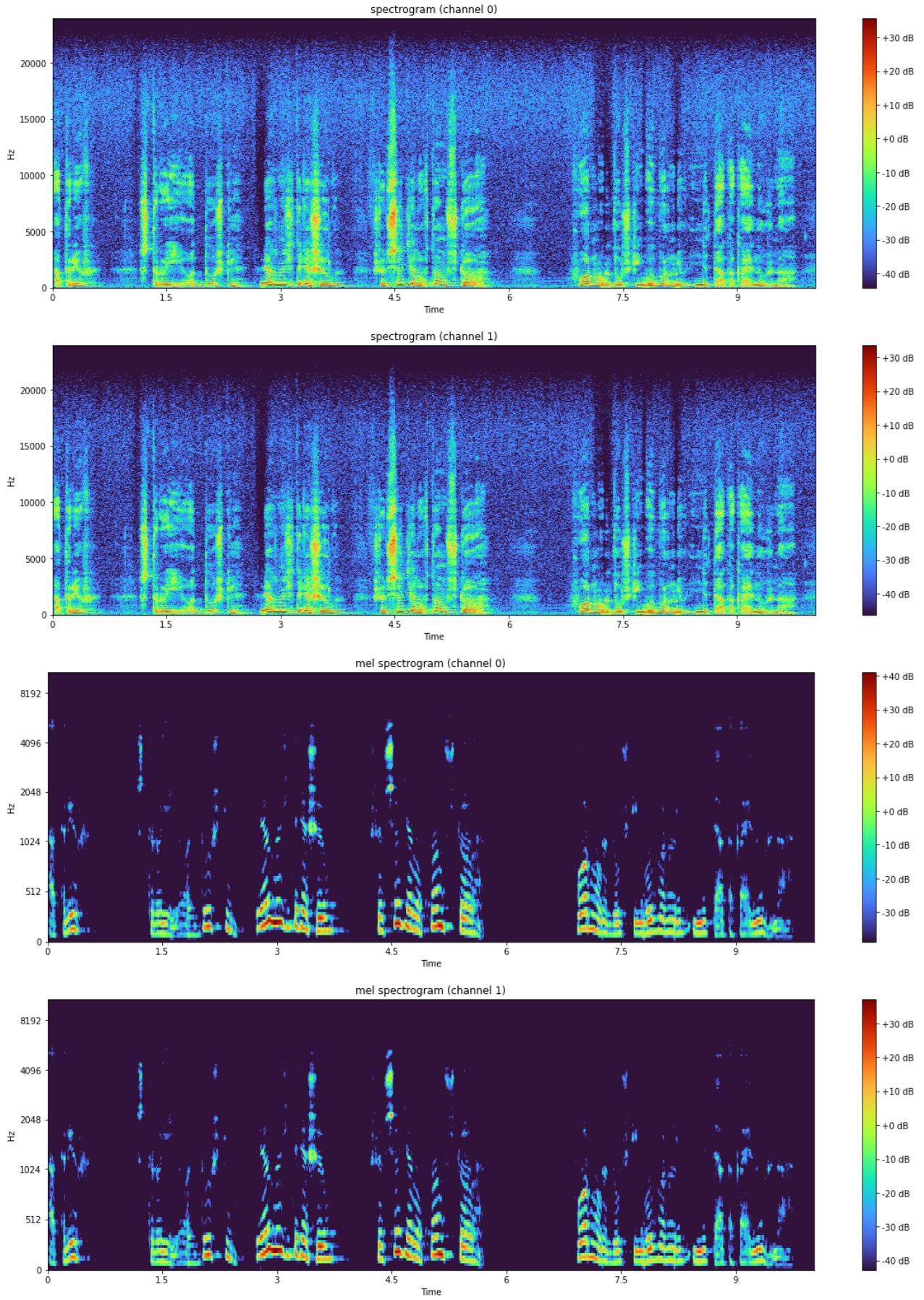
mel spectrogram (channel 1)



In [113...]

sh(90)

INFO : ./wavs/origin/0090.wav

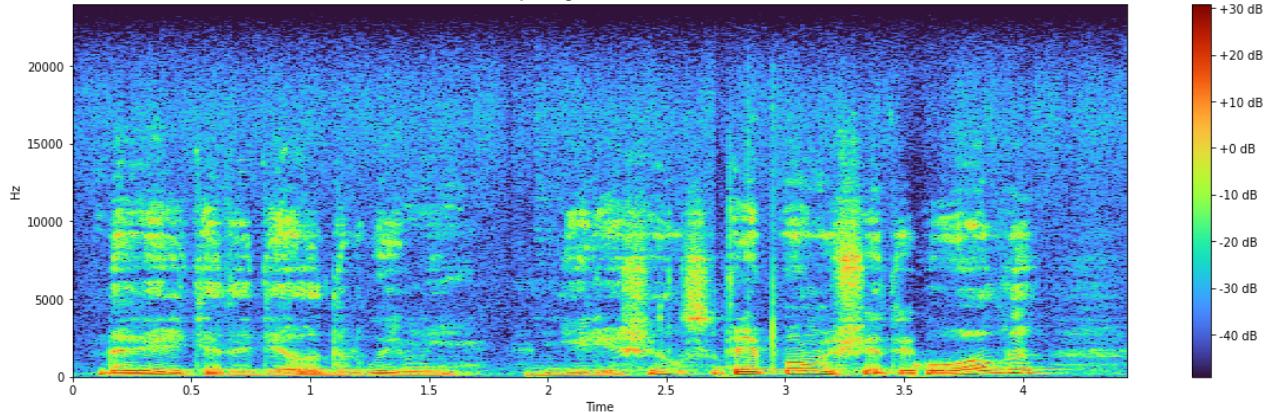


In [114...]

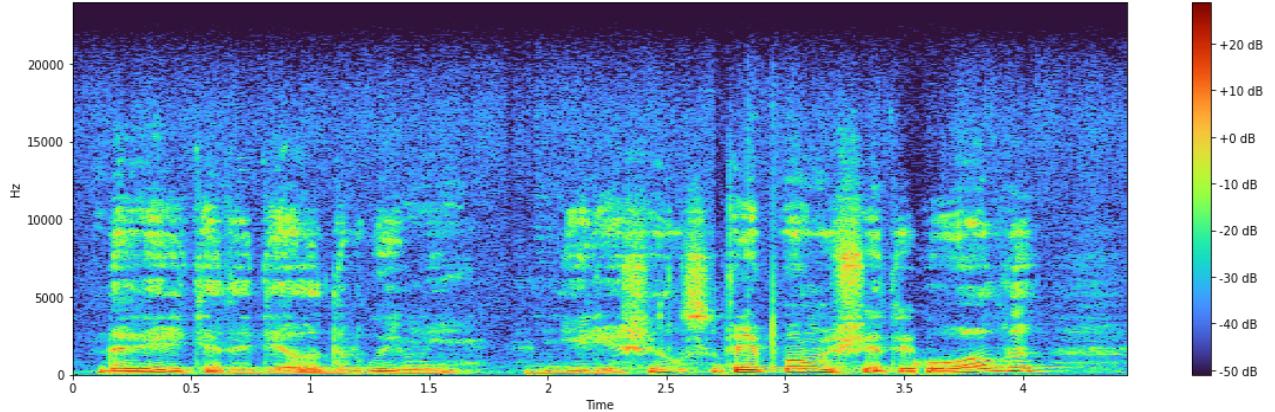
sh(91)

INFO : ./wavs/origin/0091.wav

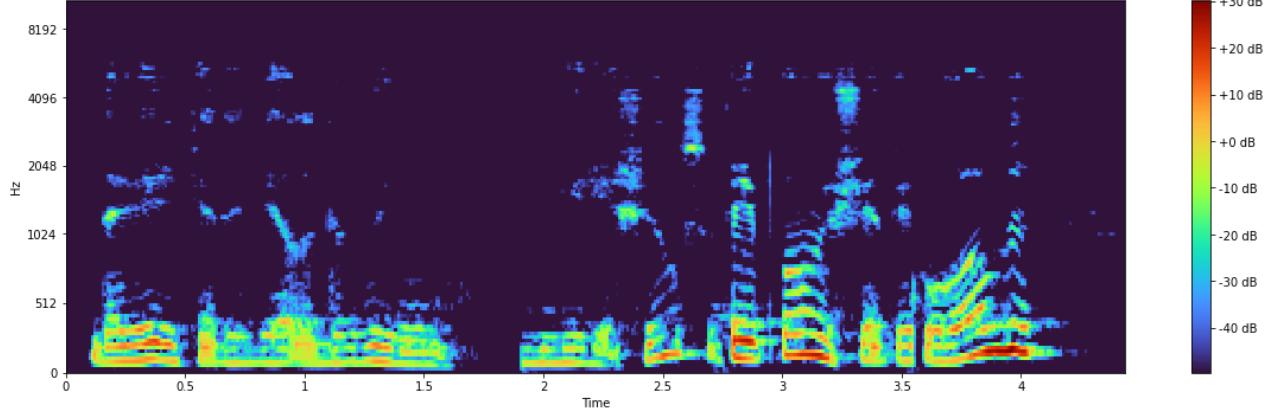
spectrogram (channel 0)



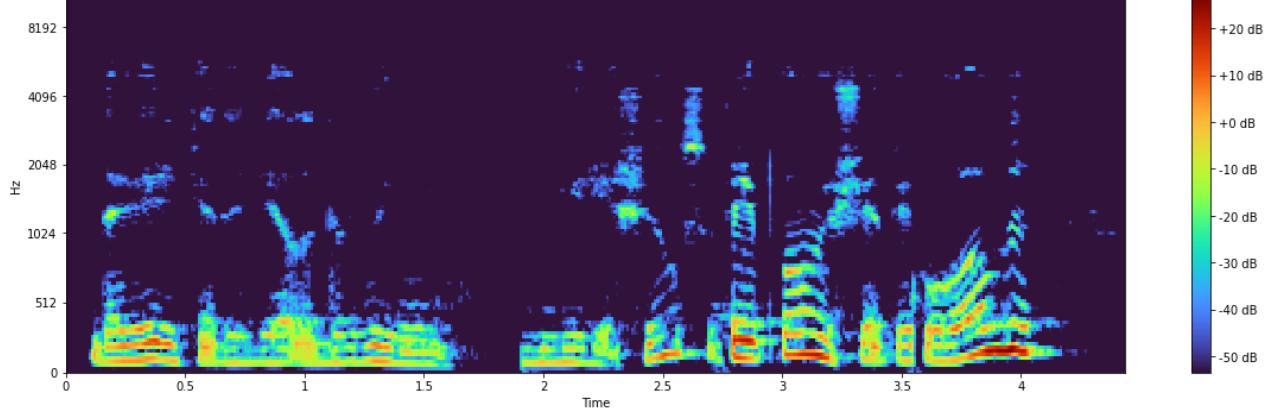
spectrogram (channel 1)



mel spectrogram (channel 0)



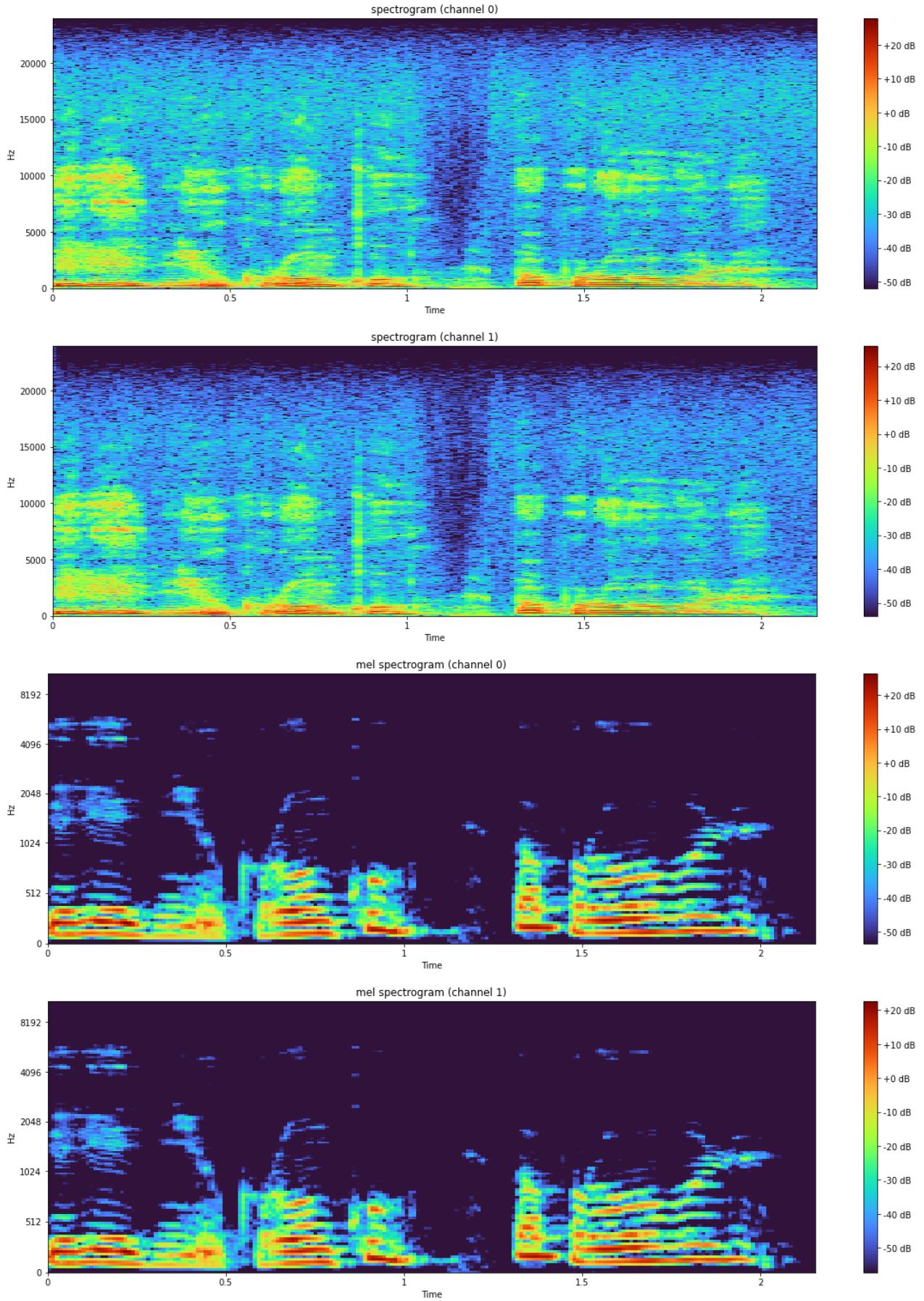
mel spectrogram (channel 1)



In [115...]

sh(92)

INFO : ./wavs/origin/0092.wav

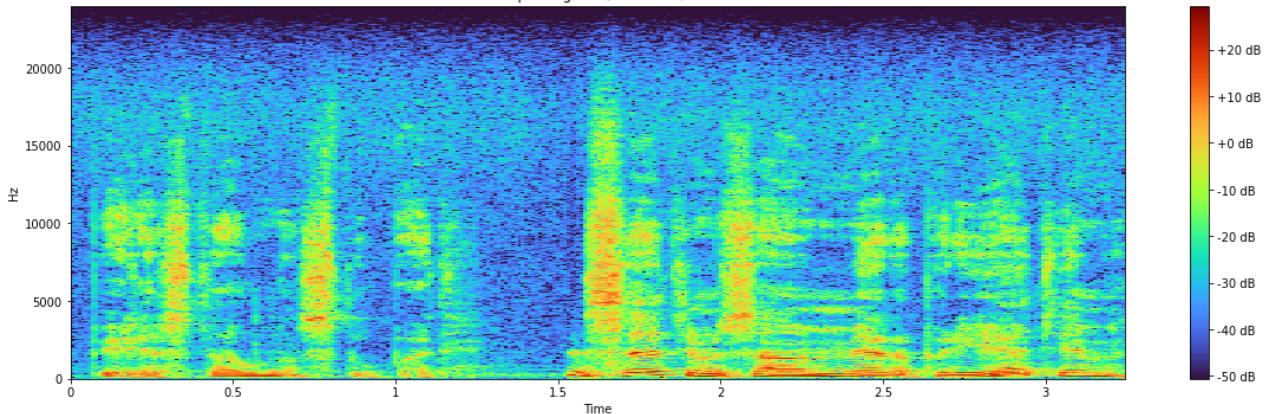


In [116...]

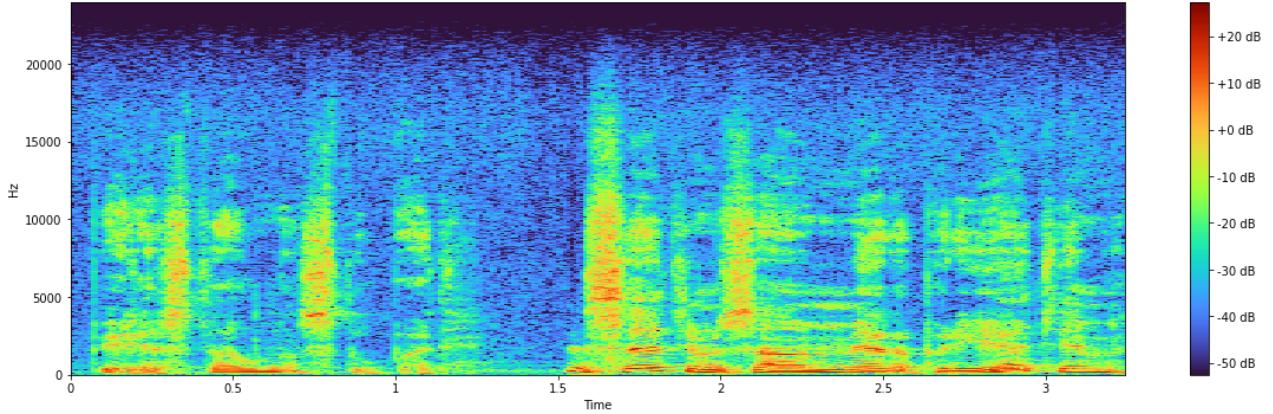
sh(93)

INFO : ./wavs/origin/0093.wav

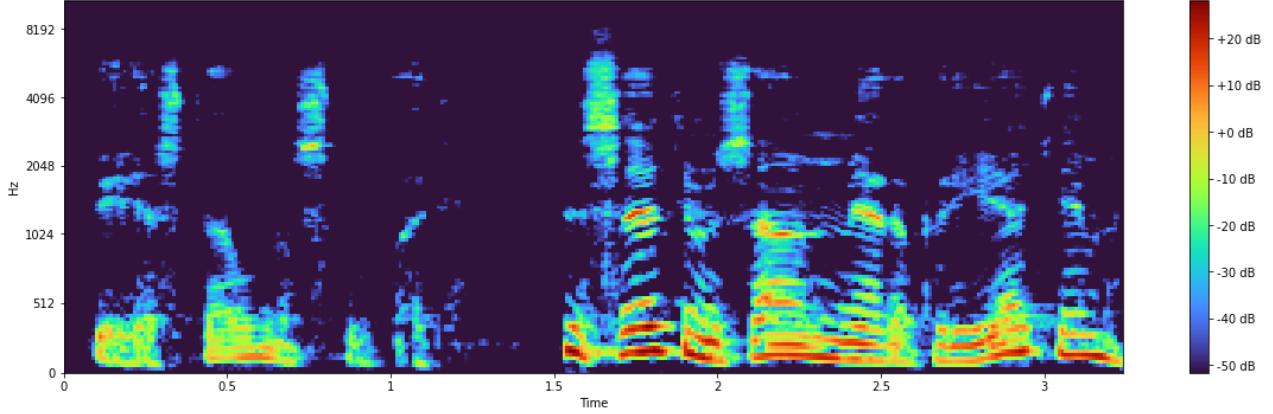
spectrogram (channel 0)



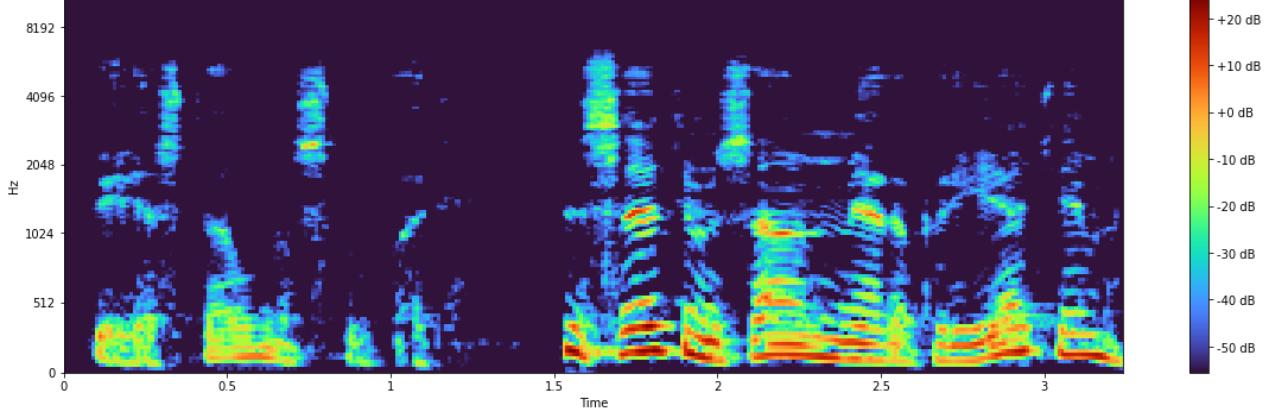
spectrogram (channel 1)



mel spectrogram (channel 0)



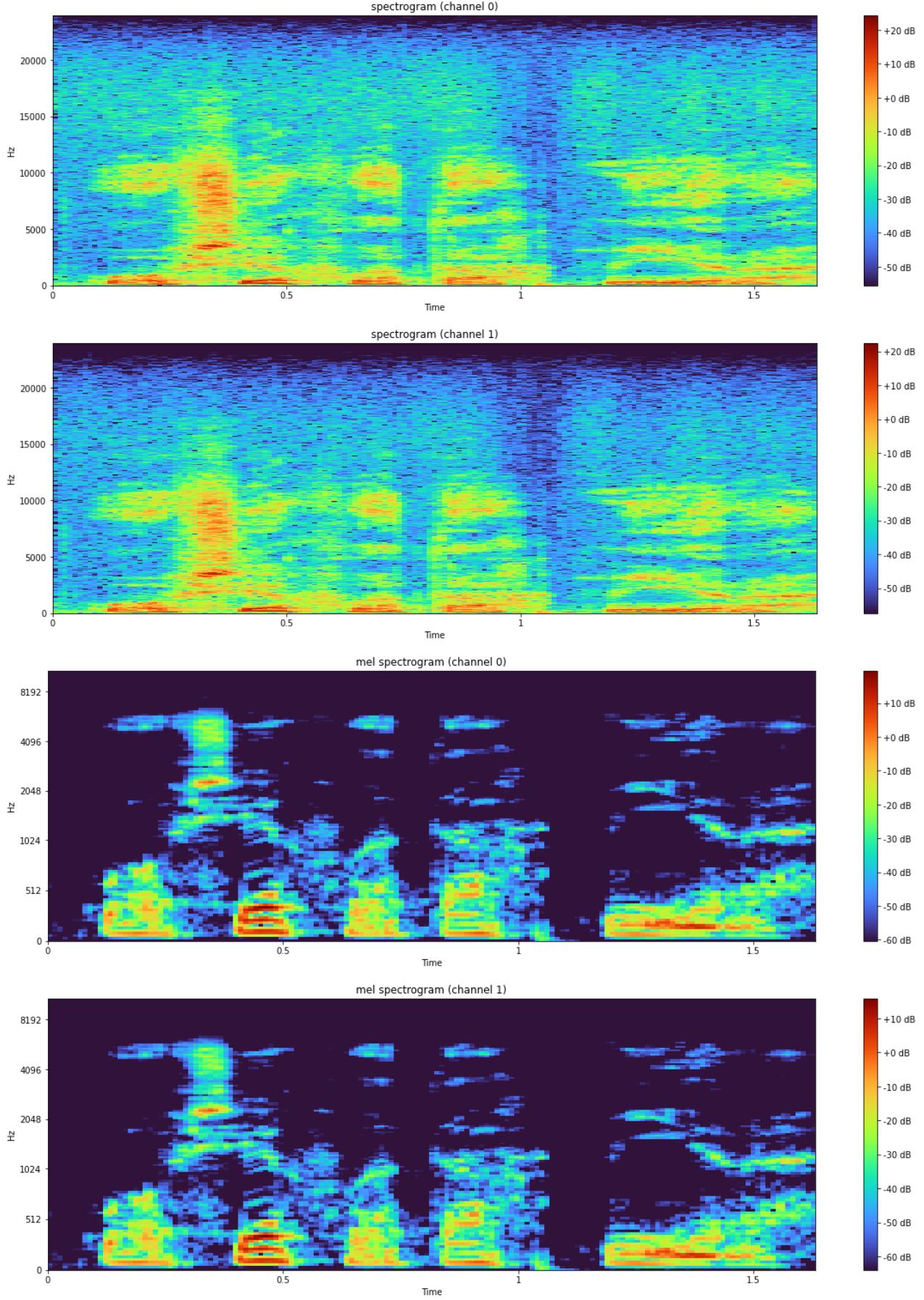
mel spectrogram (channel 1)



In [117...]

sh(94)

INFO : ./wavs/origin/0094.wav

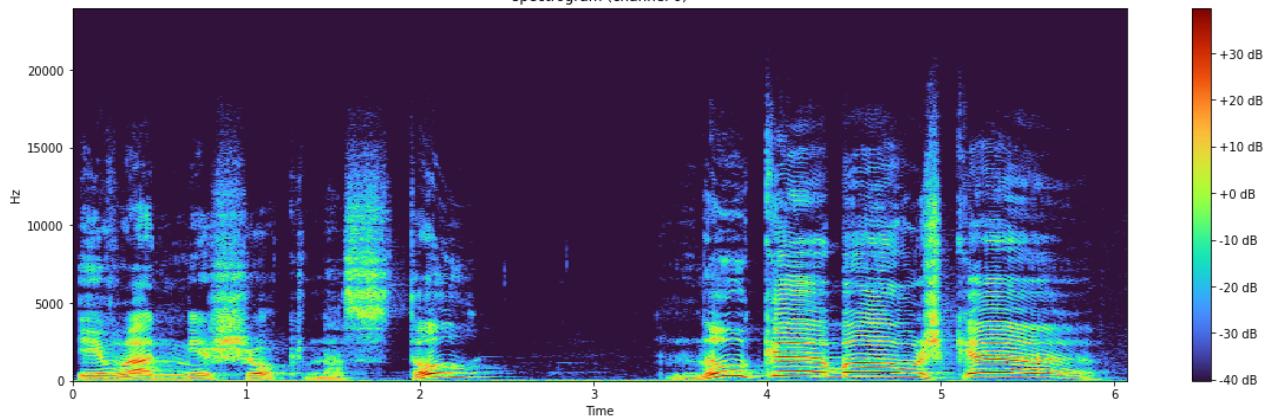


In [118...]

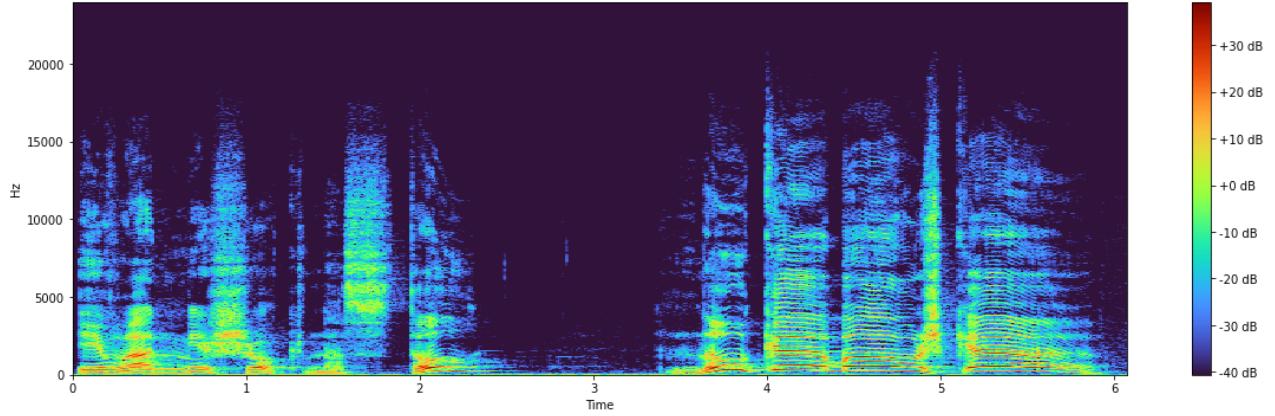
sh(95)

INFO : ./wavs/origin/0095.wav

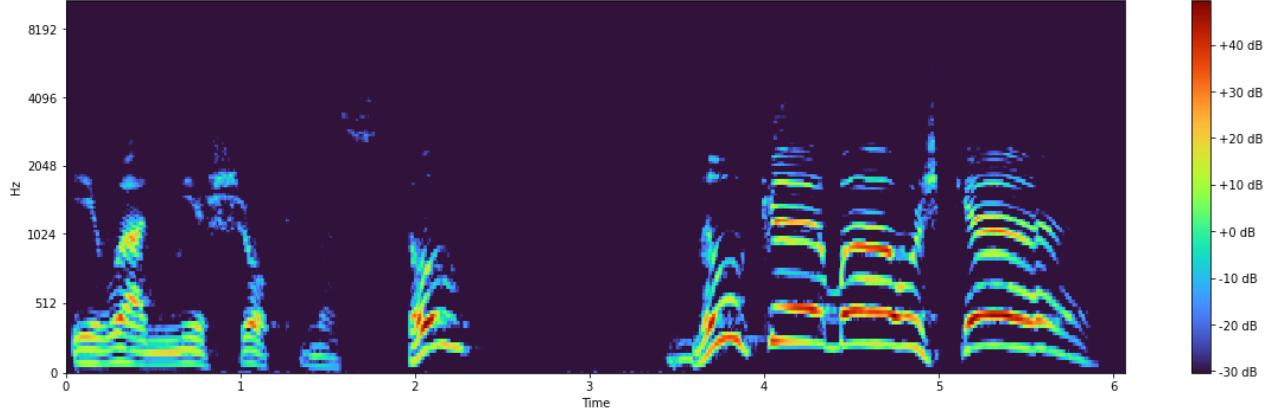
spectrogram (channel 0)



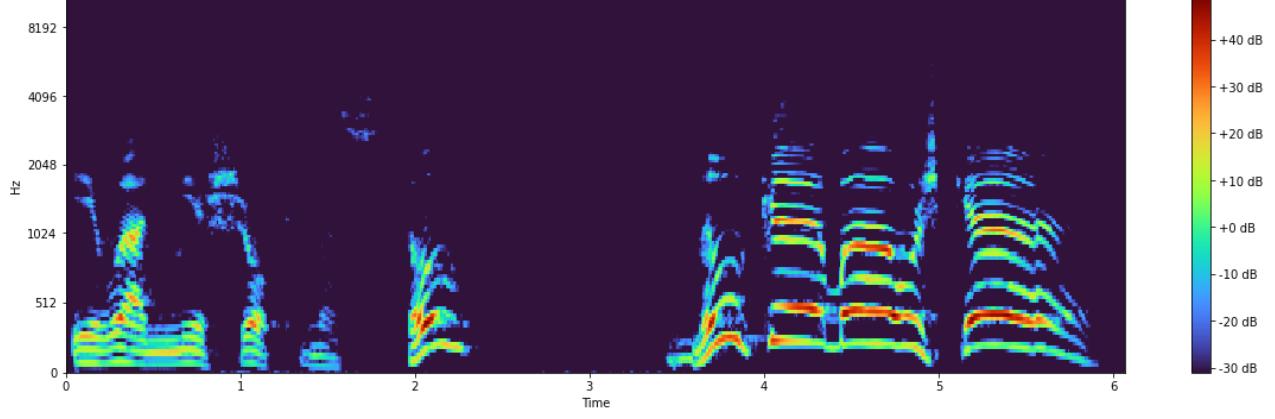
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

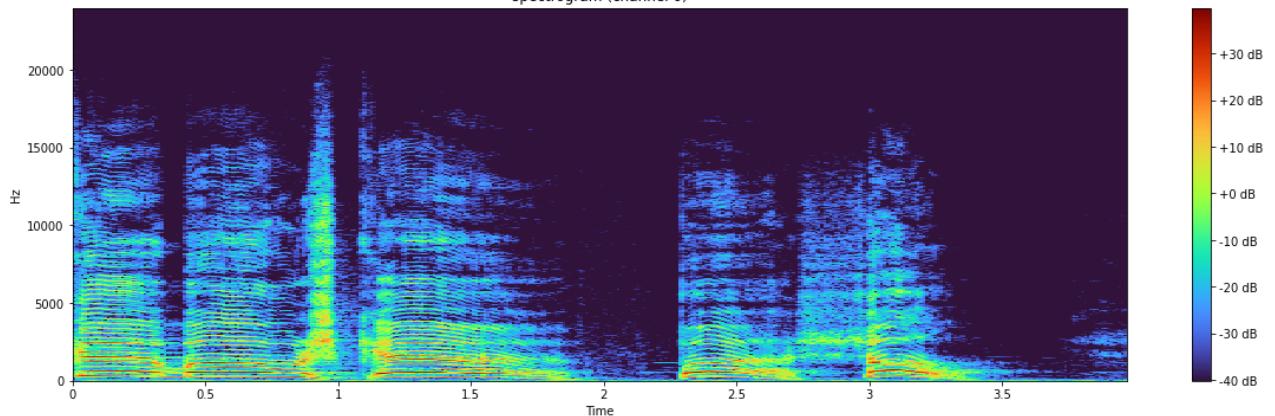


In [119...]

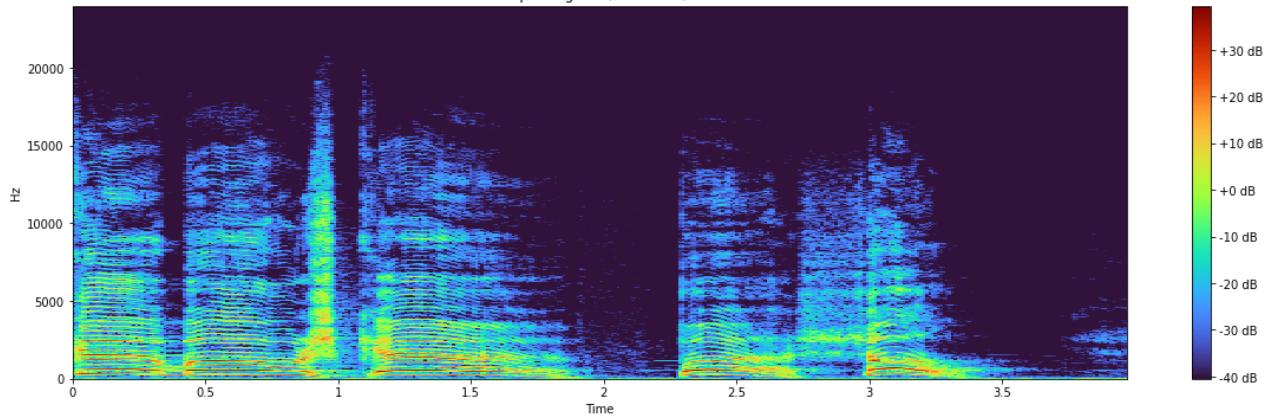
sh(96)

INFO : ./wavs/origin/0096.wav

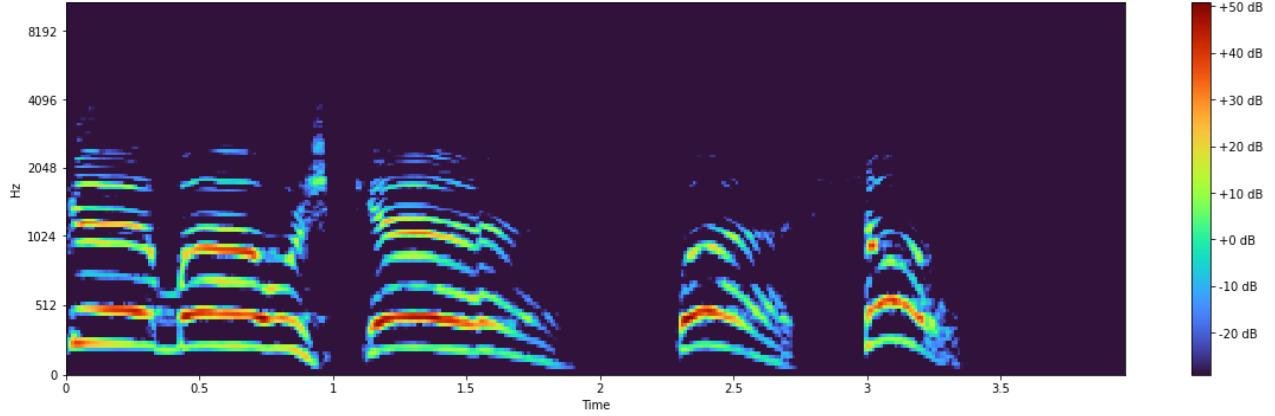
spectrogram (channel 0)



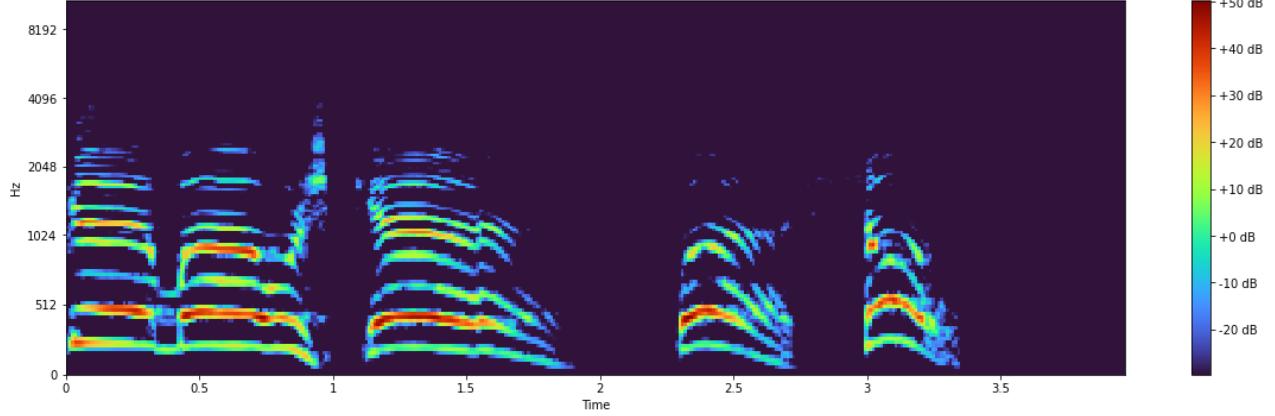
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

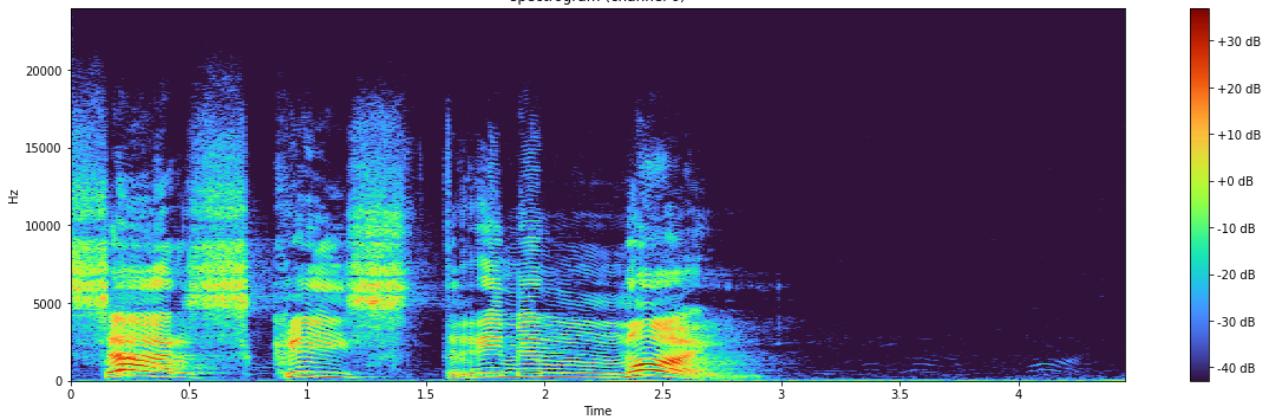


In [120...]

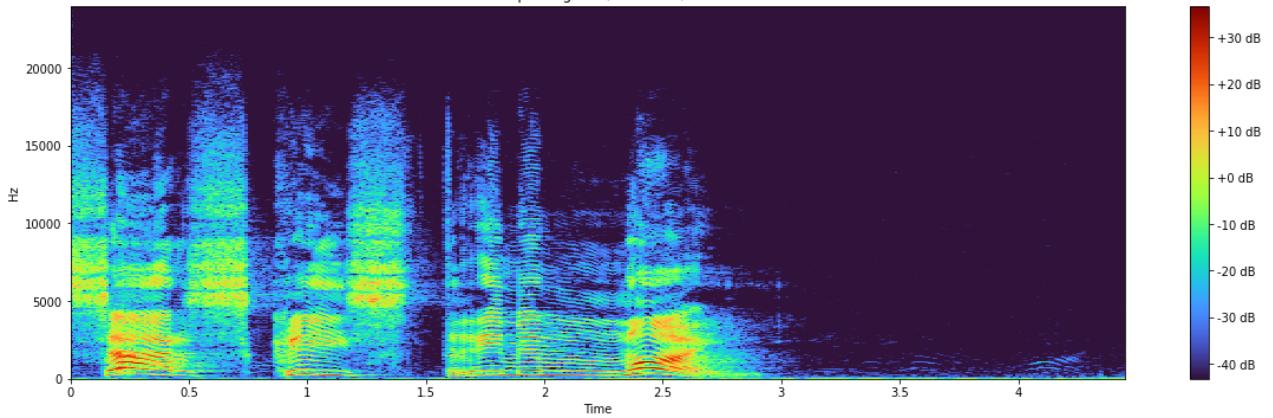
sh(97)

INFO : ../wavs/origin/0097.wav

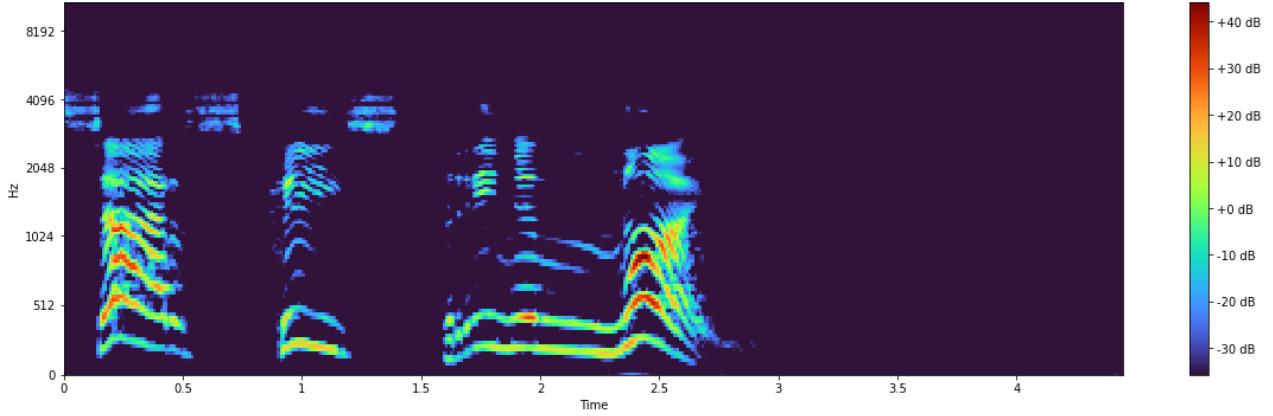
spectrogram (channel 0)



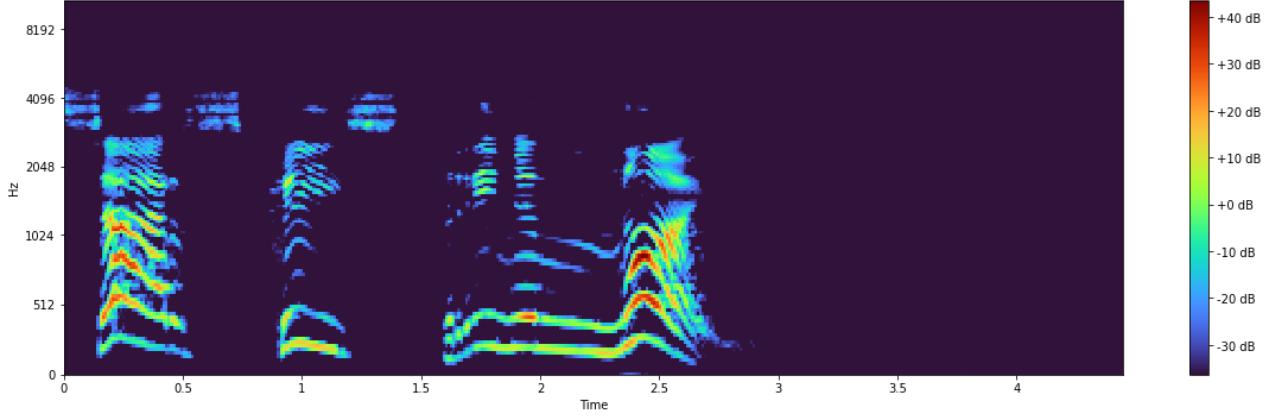
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

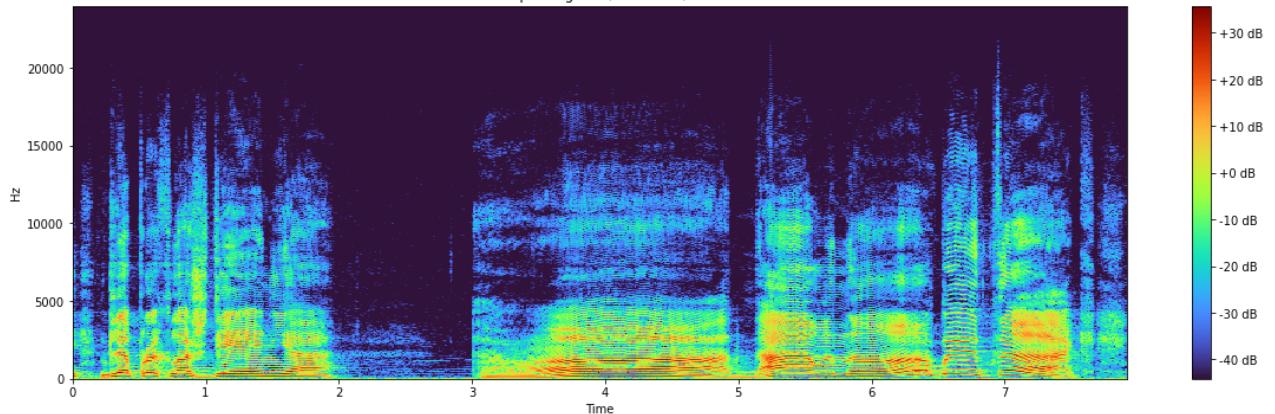


In [121...]

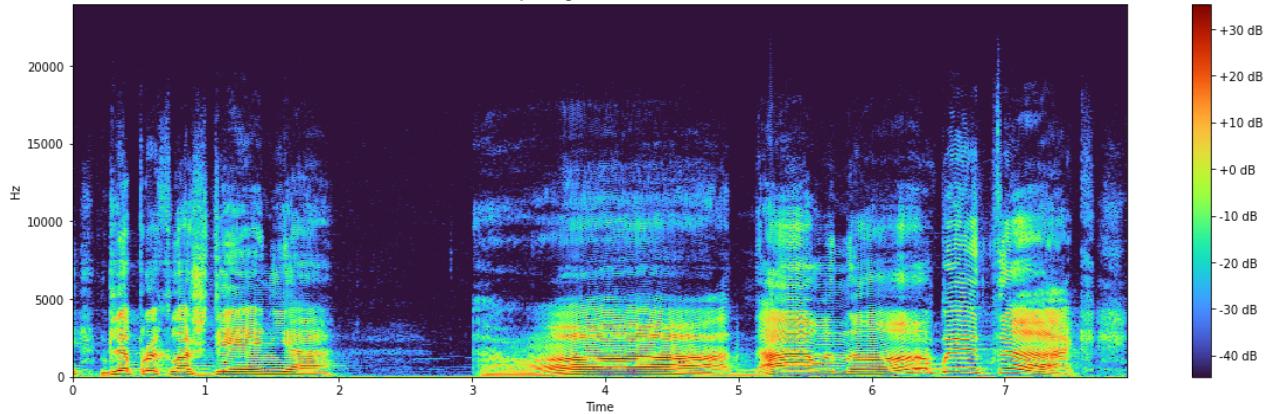
sh(98)

INFO : ./wavs/origin/0098.wav

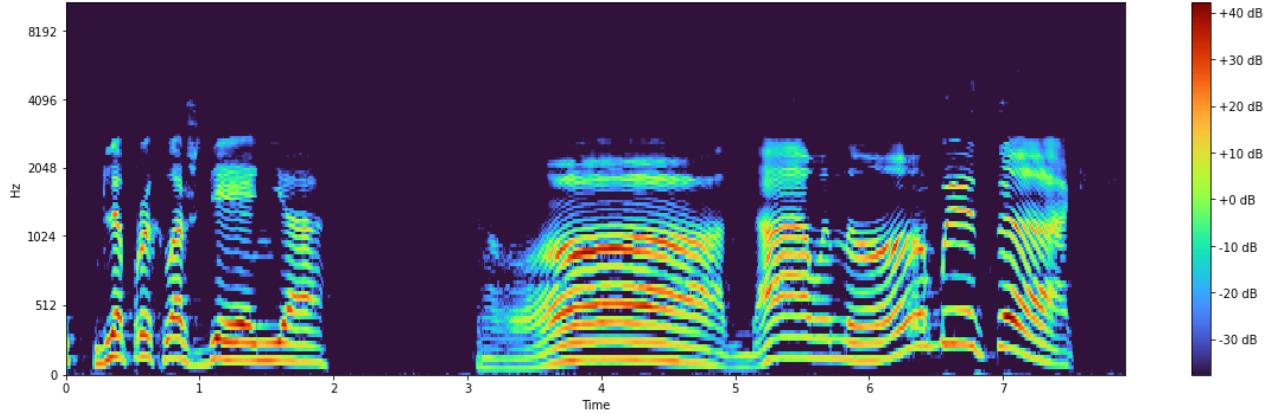
spectrogram (channel 0)



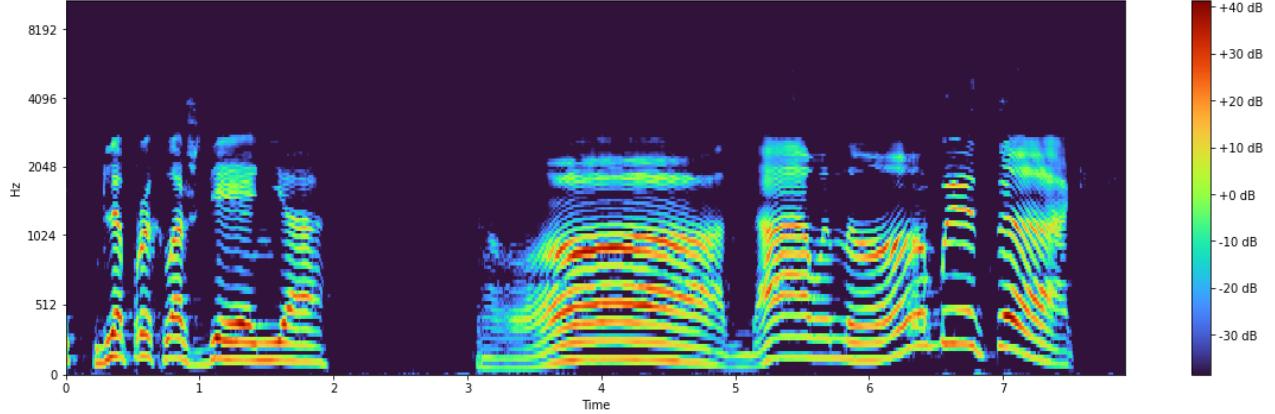
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

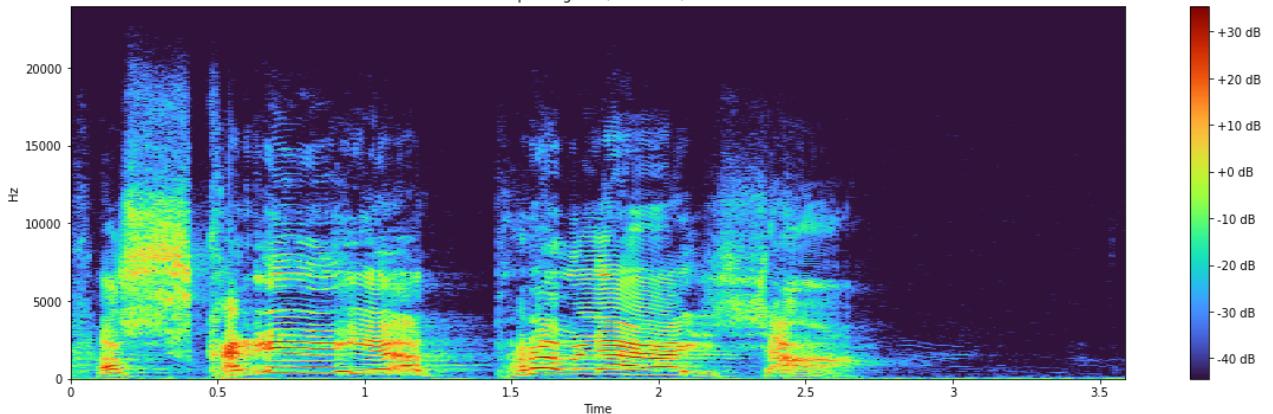


In [122...]

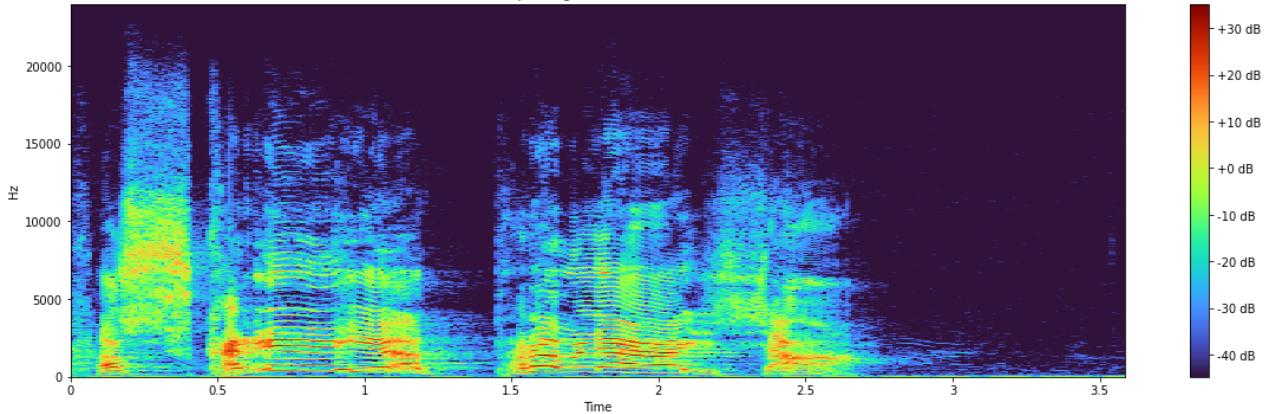
sh(99)

INFO : ../wavs/origin/0099.wav

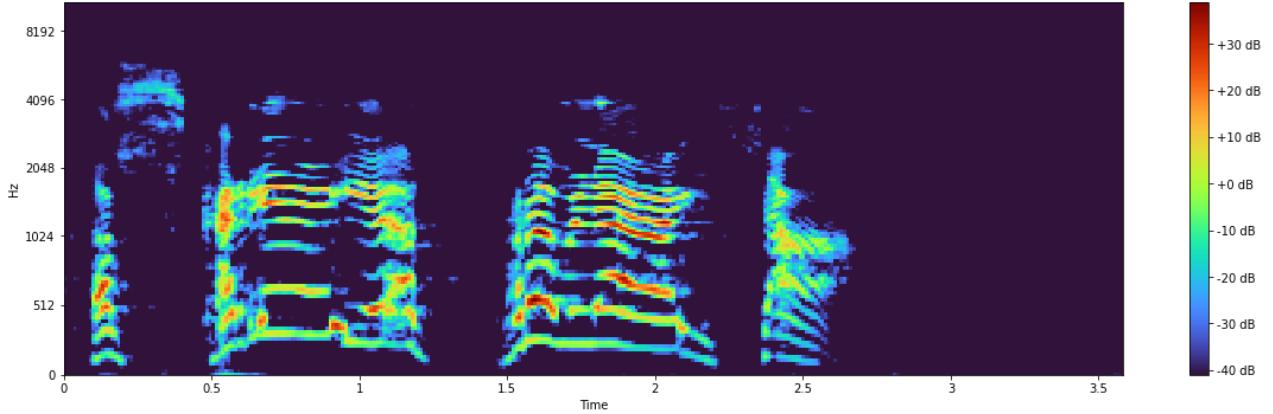
spectrogram (channel 0)



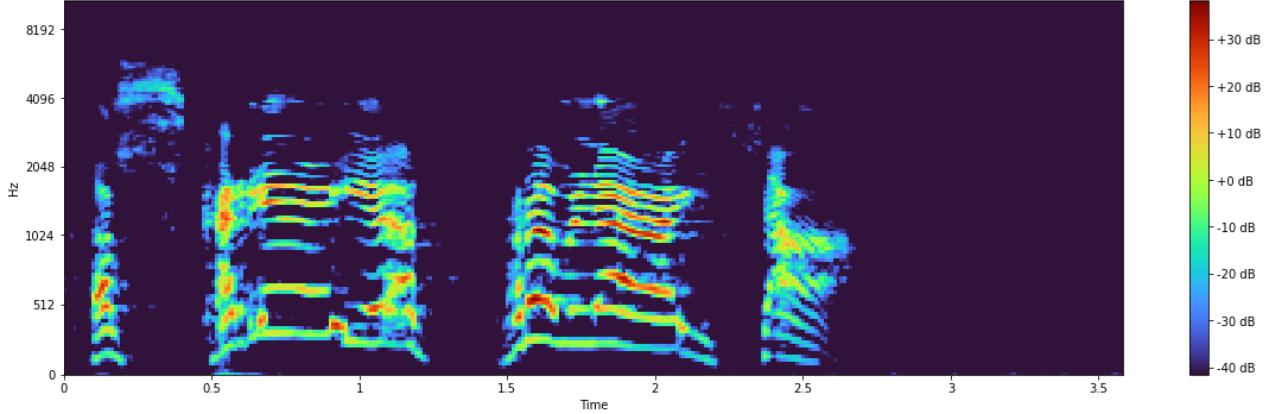
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

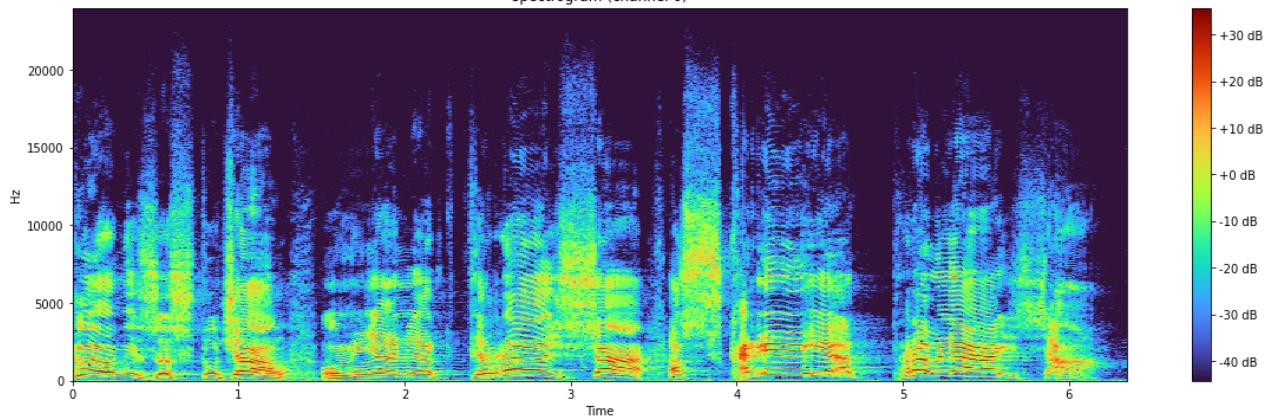


In [123...]

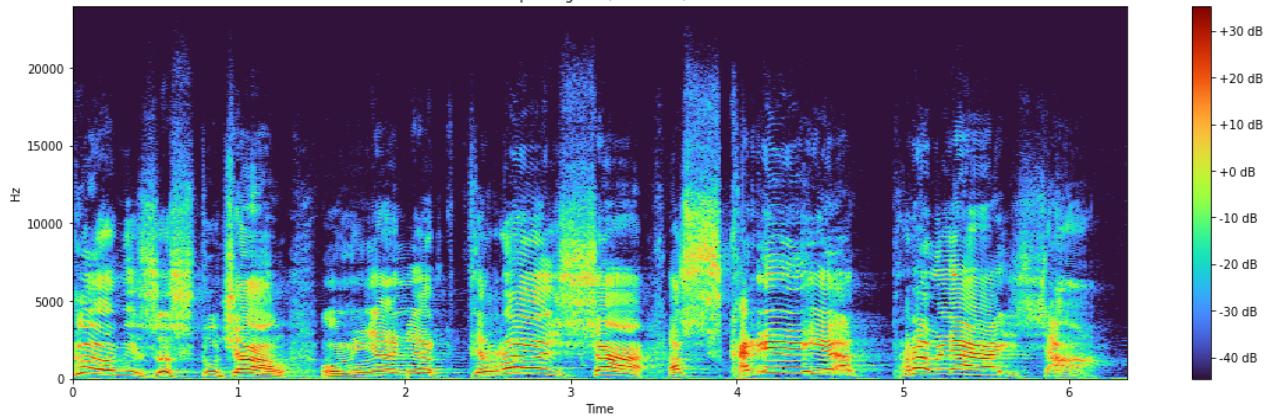
sh(100)

INFO : ./wavs/origin/0100.wav

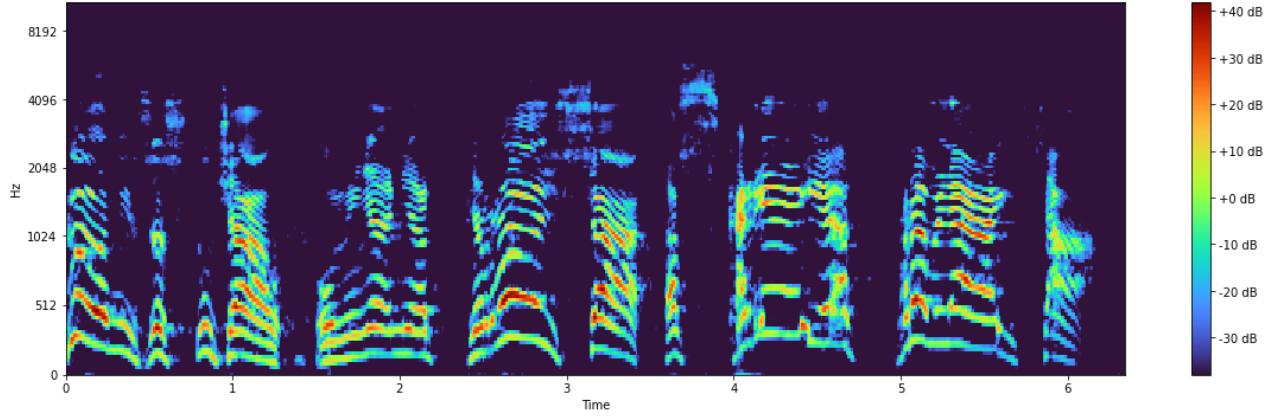
spectrogram (channel 0)



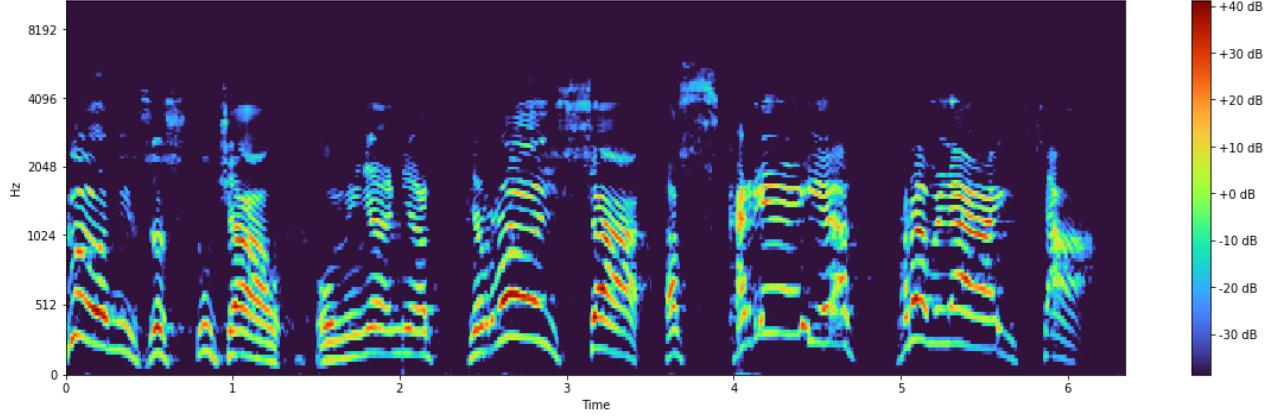
spectrogram (channel 1)



mel spectrogram (channel 0)



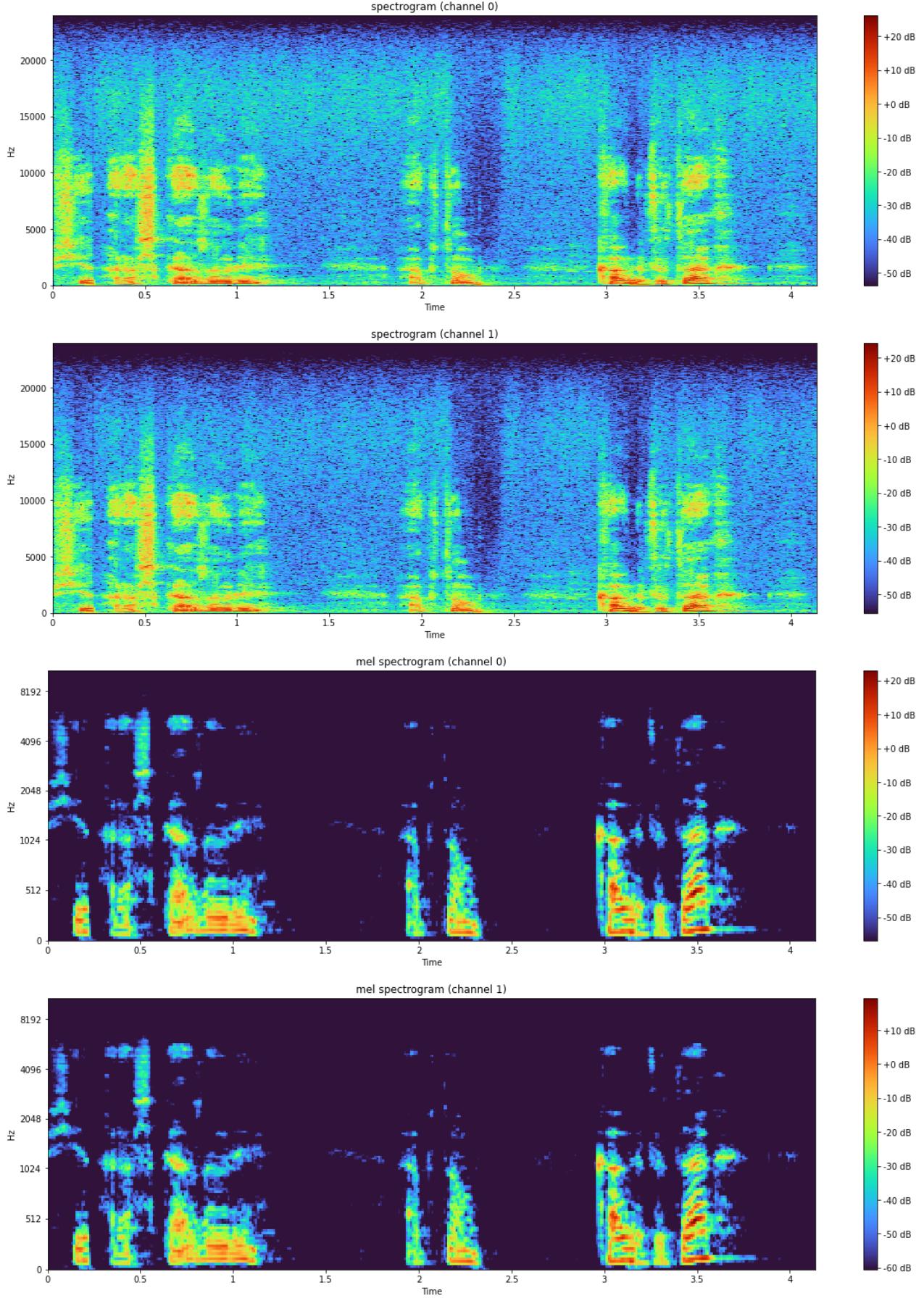
mel spectrogram (channel 1)



In [124...]

sh(101)

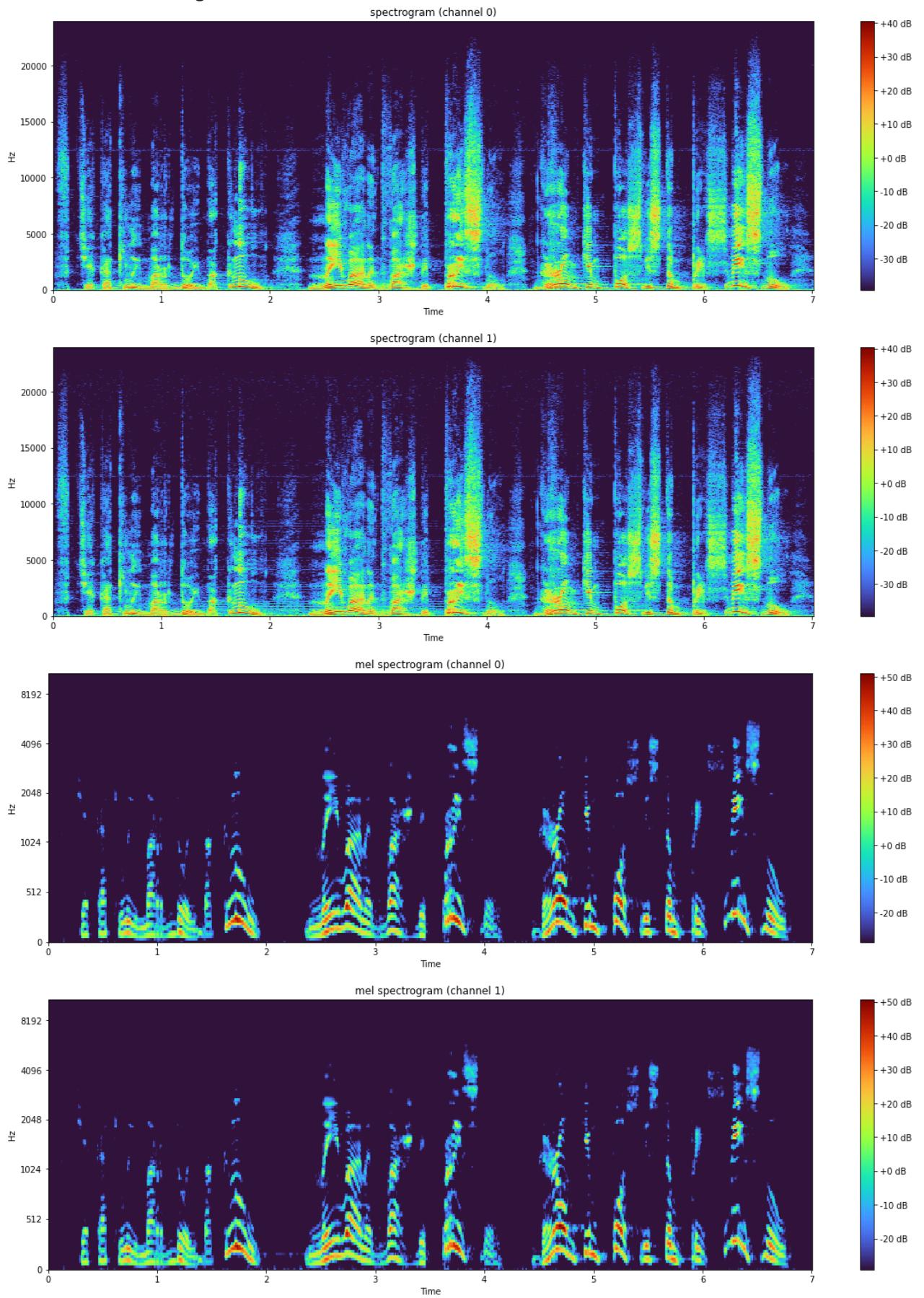
INFO : ./wavs/origin/0101.wav



In [125...]

sh(102)

INFO : ./wavs/origin/0102.wav

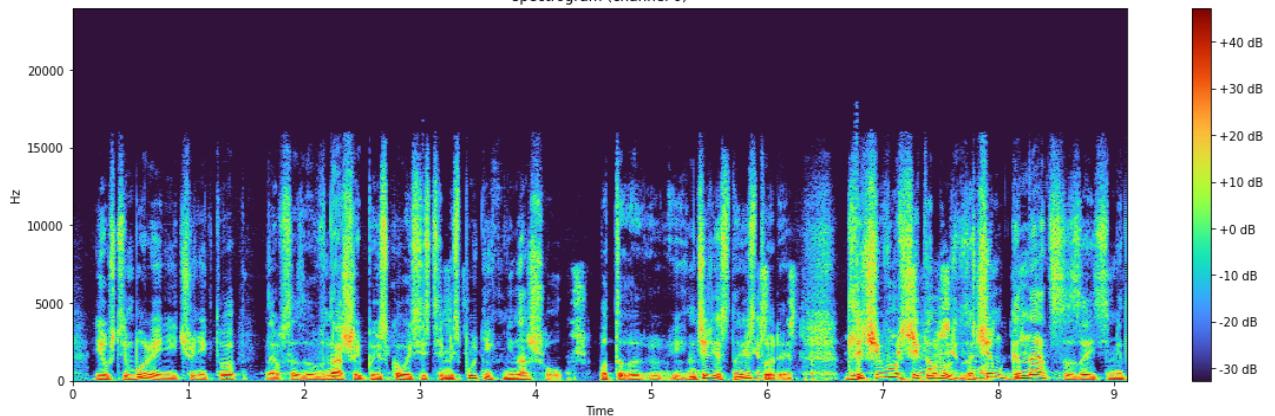


In [126...]

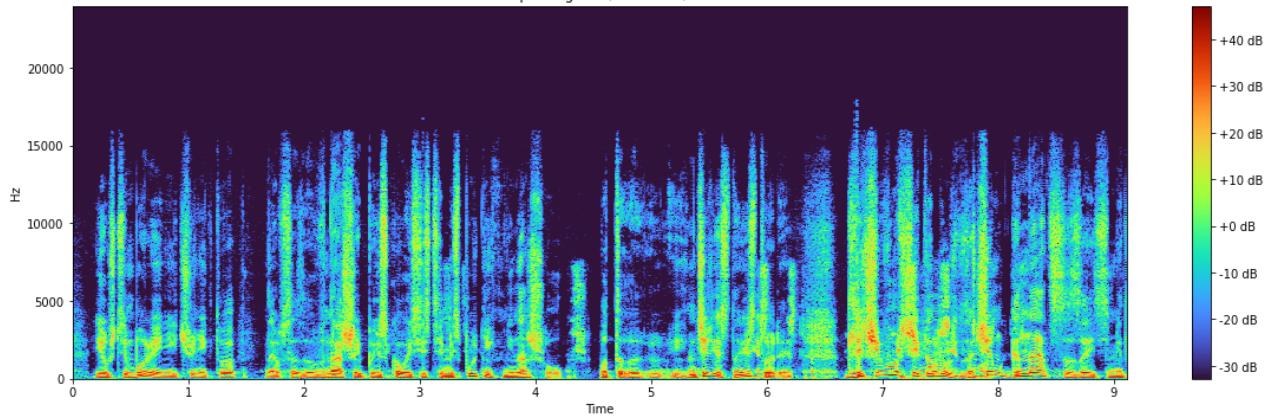
sh(103)

INFO : ./wavs/origin/0103.wav

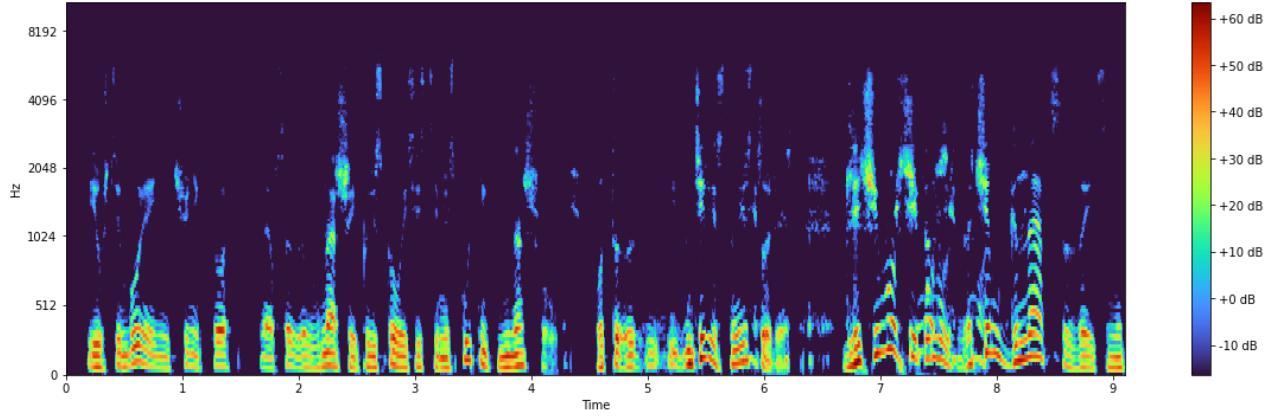
spectrogram (channel 0)



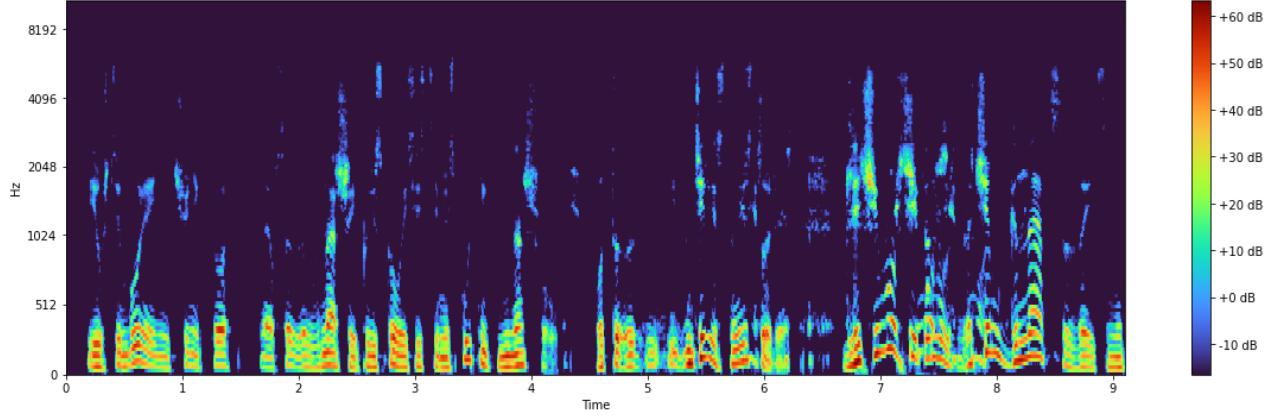
spectrogram (channel 1)



mel spectrogram (channel 0)



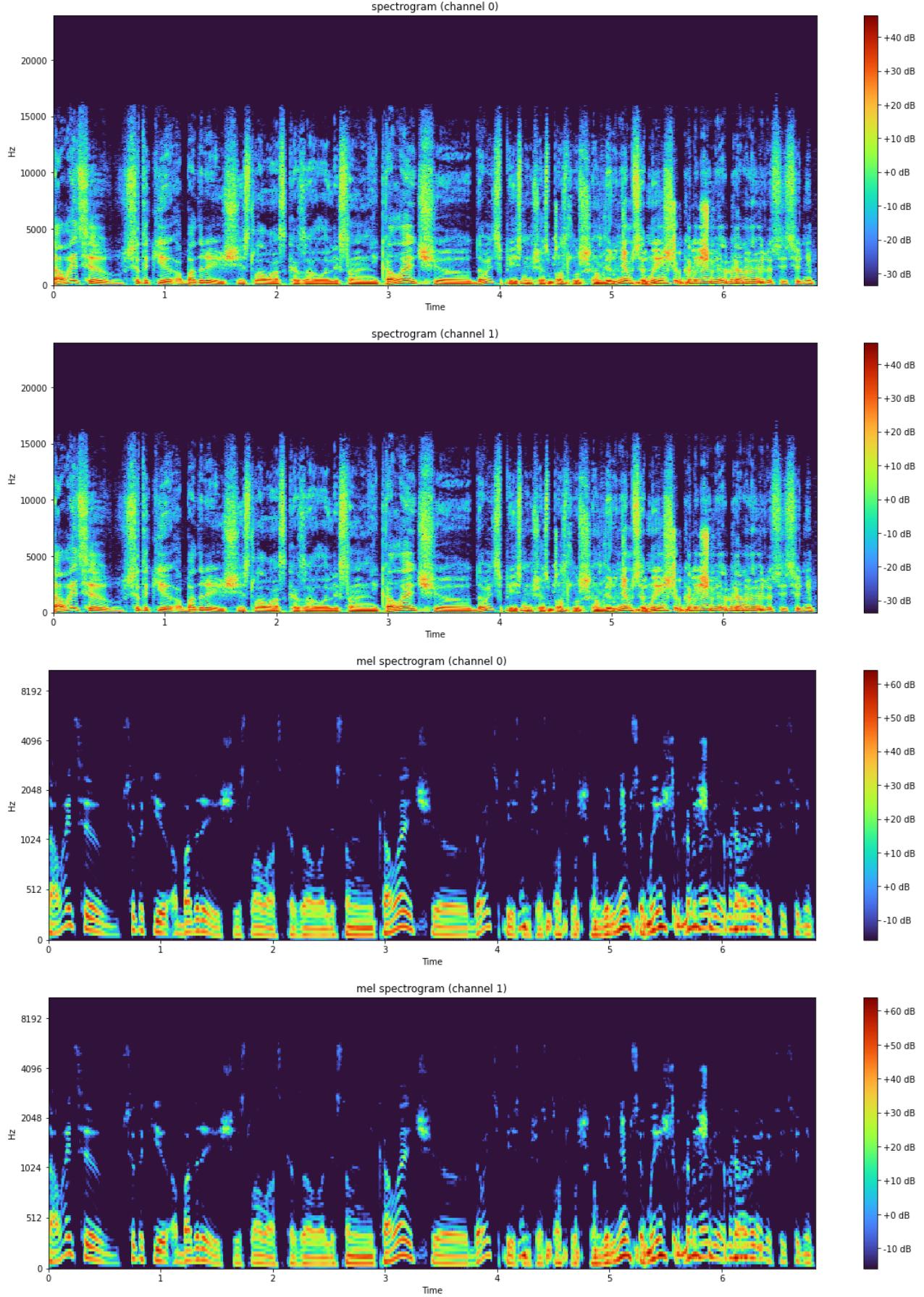
mel spectrogram (channel 1)



In [127...]

sh(104)

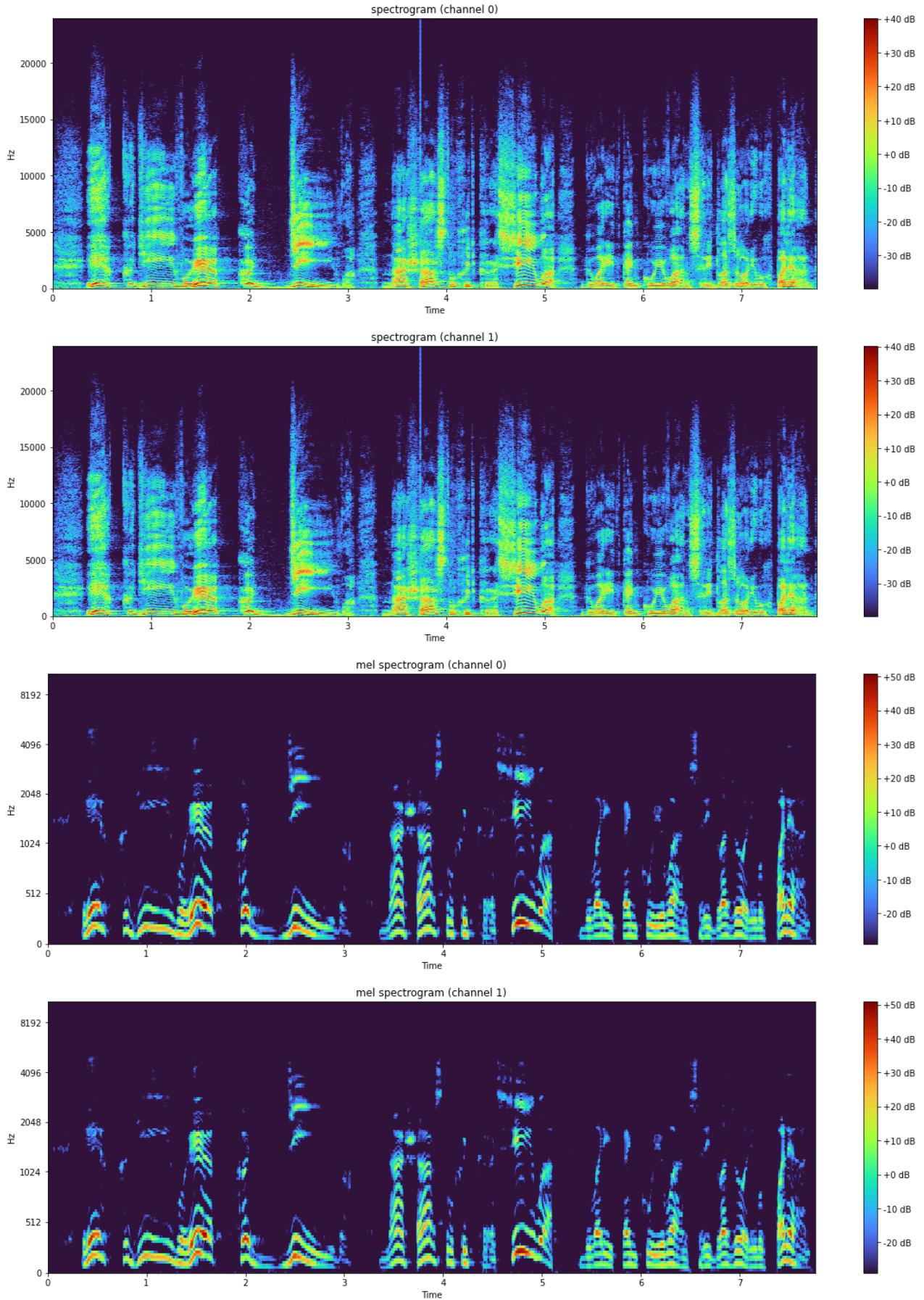
INFO : ./wavs/origin/0104.wav



In [128...]

sh(105)

INFO : ./wavs/origin/0105.wav

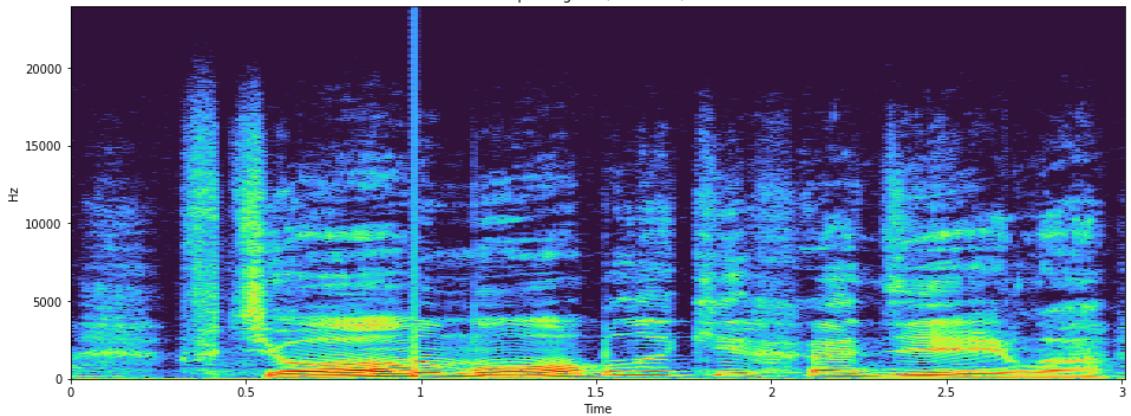


In [129...]

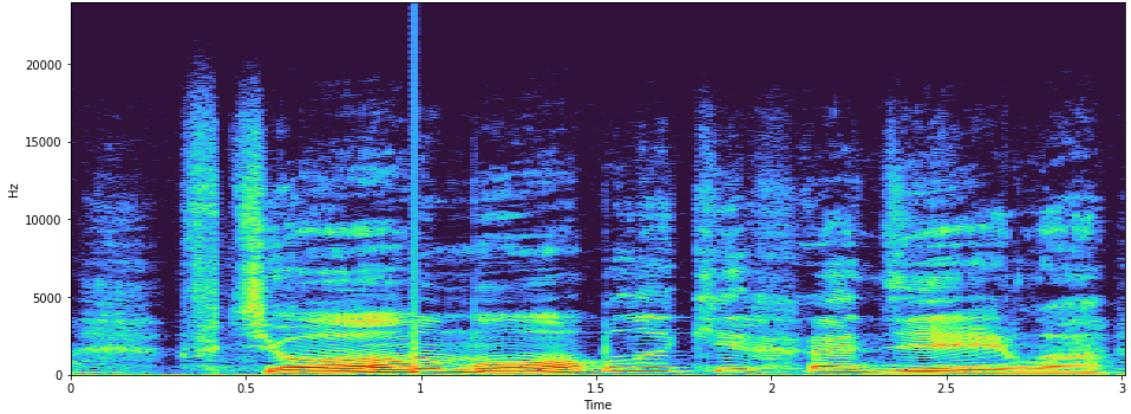
sh(106)

INFO : ./wavs/origin/0106.wav

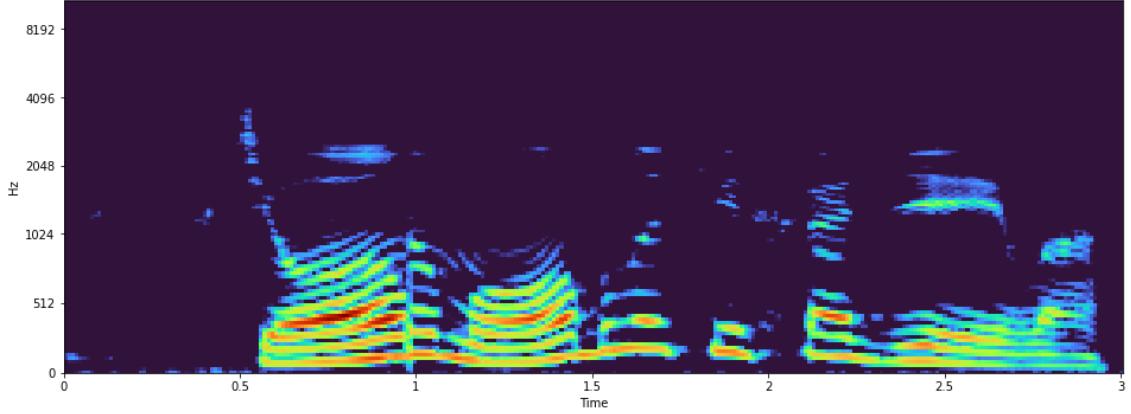
spectrogram (channel 0)



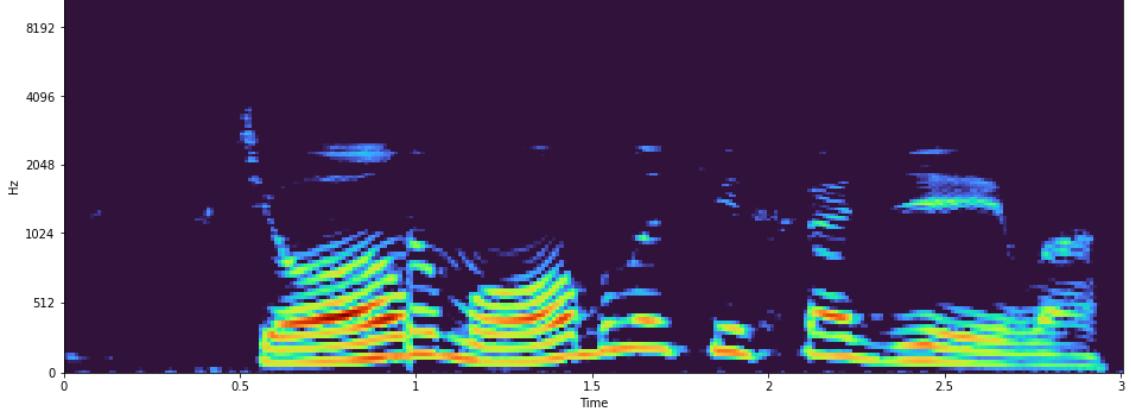
spectrogram (channel 1)



mel spectrogram (channel 0)



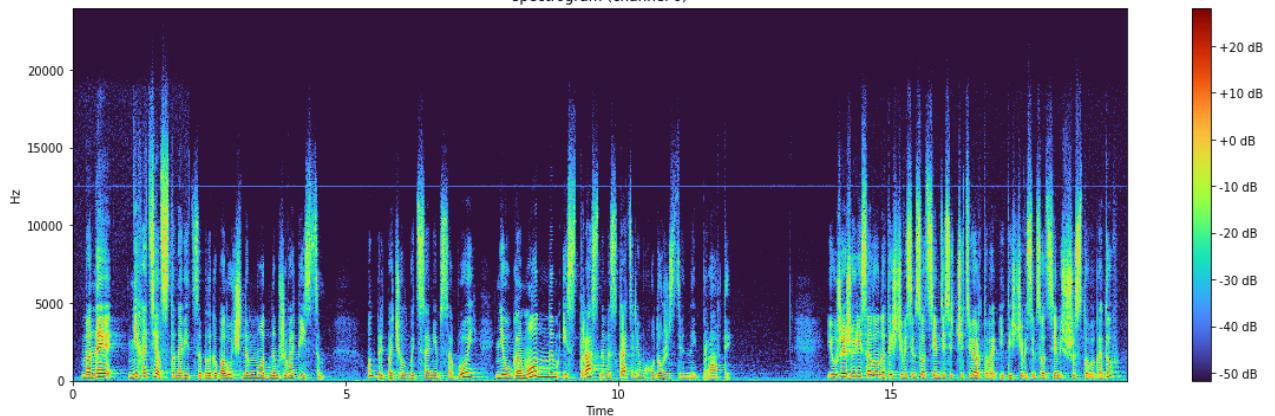
mel spectrogram (channel 1)



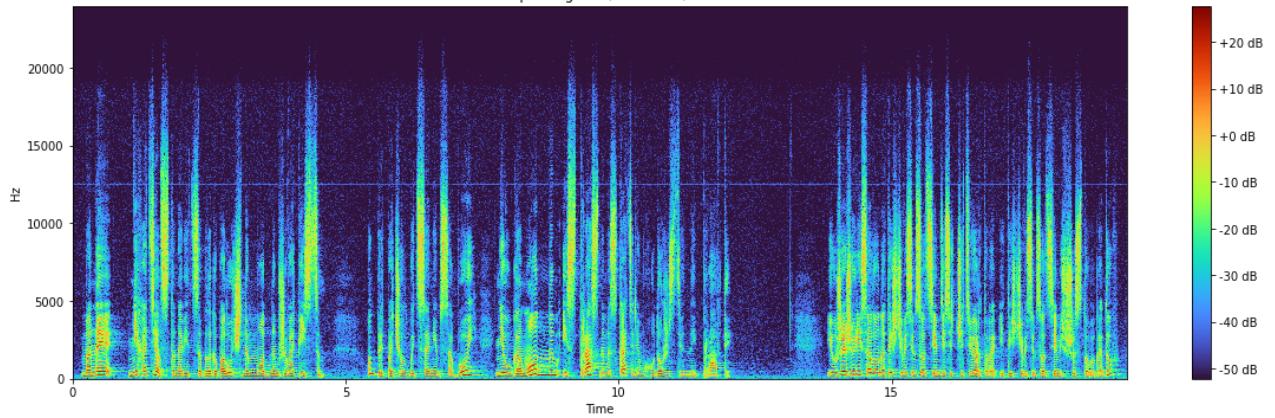
In [130... sh(107)

INFO : ../wavs/origin/0107.wav

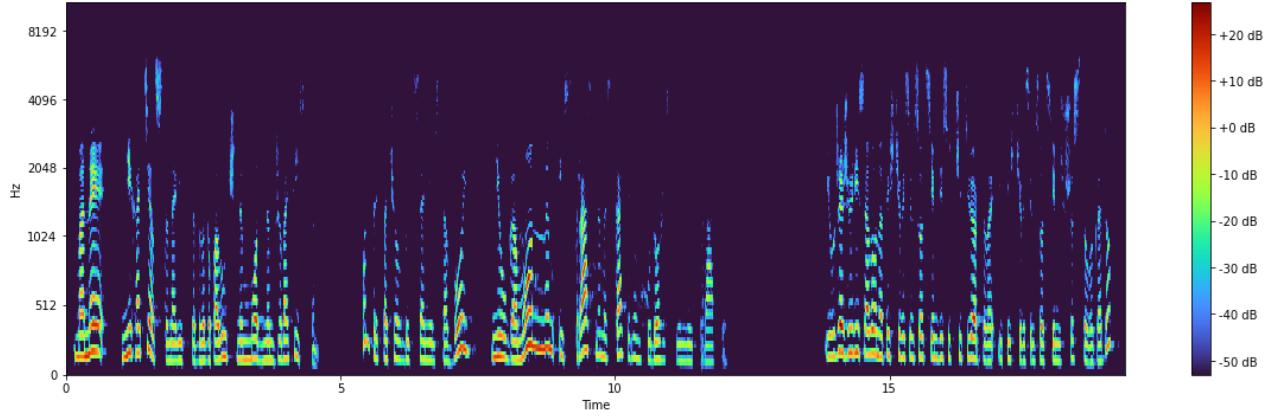
spectrogram (channel 0)



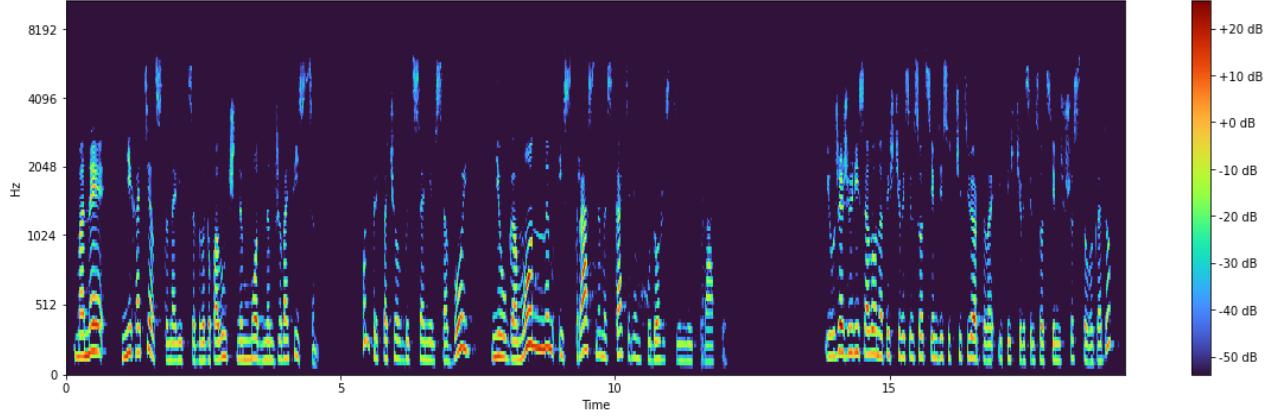
spectrogram (channel 1)



mel spectrogram (channel 0)



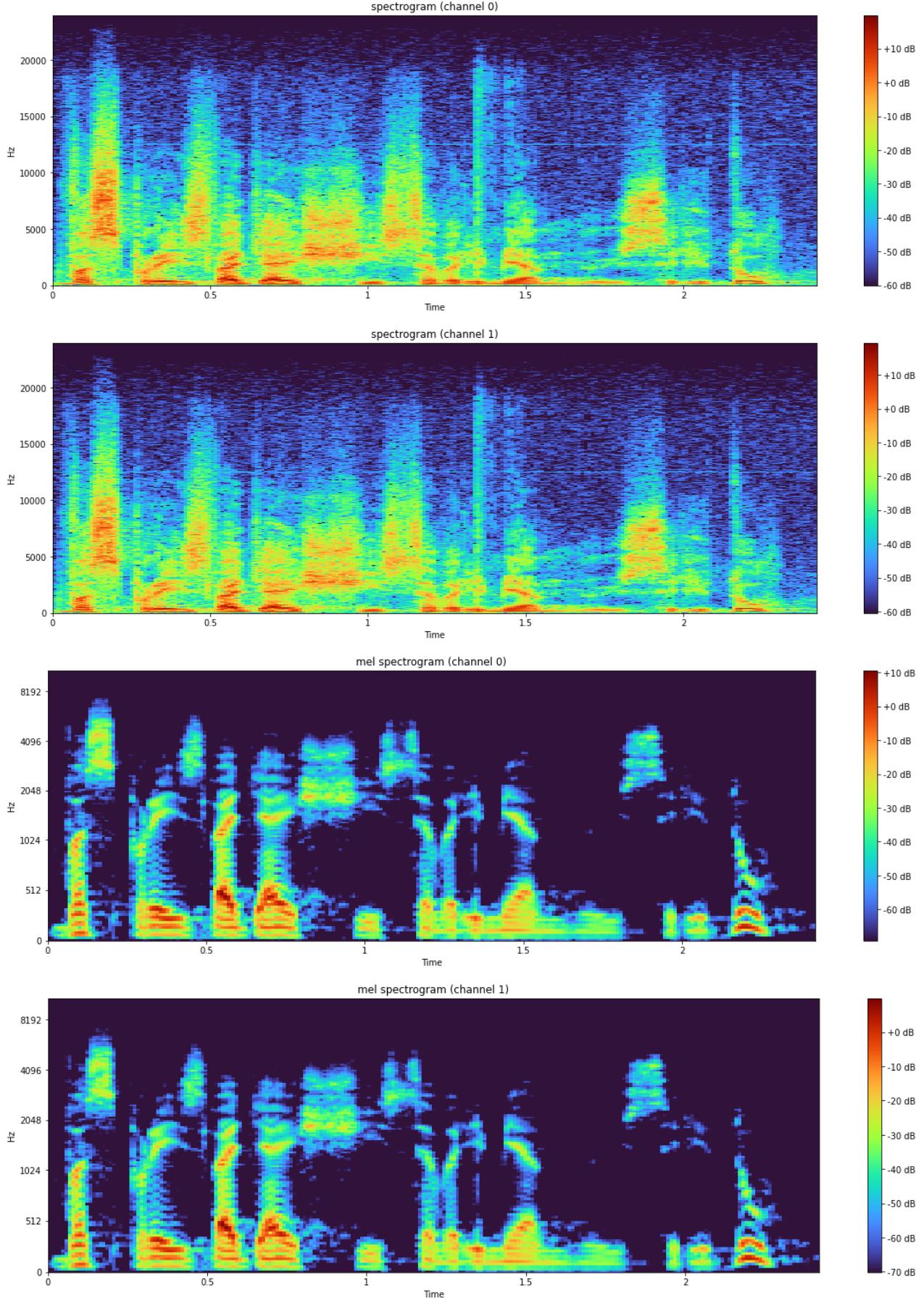
mel spectrogram (channel 1)



In [131...]

sh(108)

INFO : ./wavs/origin/0108.wav

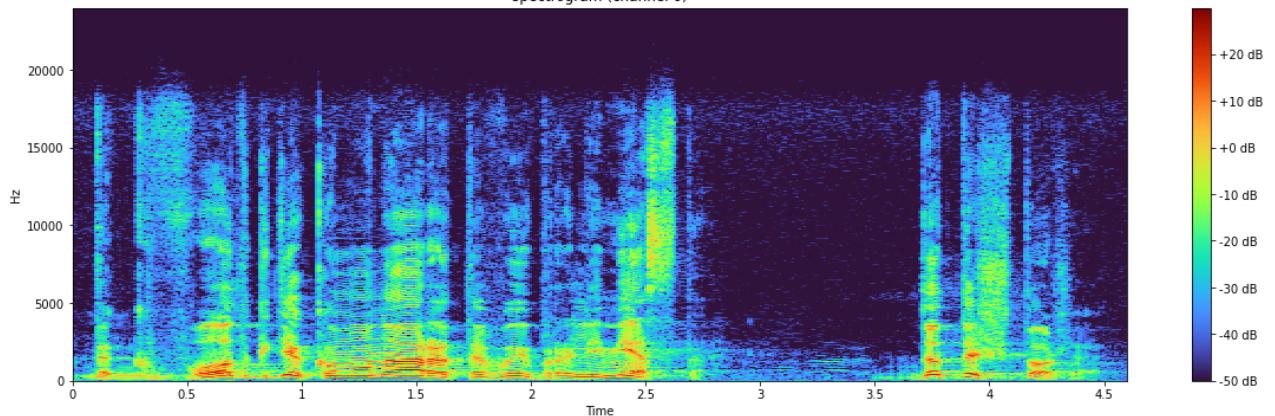


In [132...]

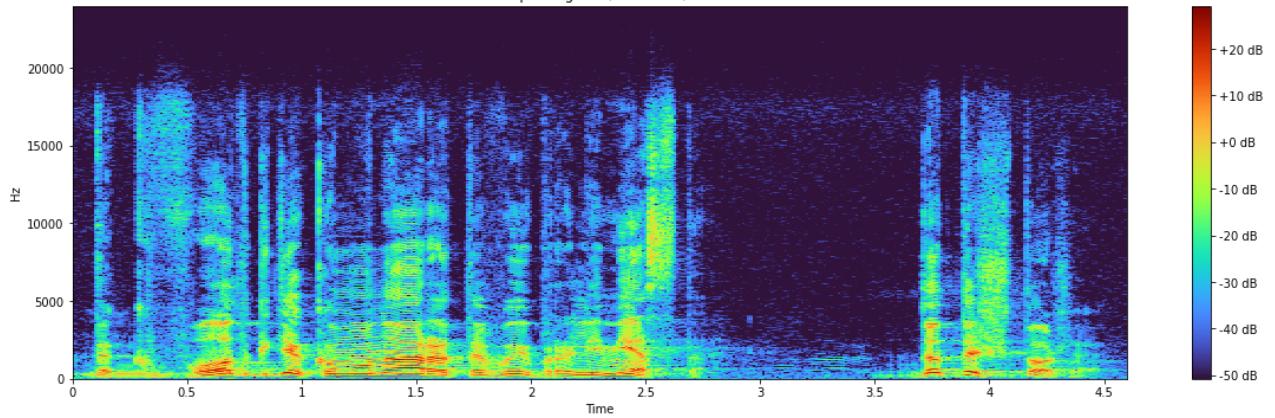
sh(109)

INFO : ./wavs/origin/0109.wav

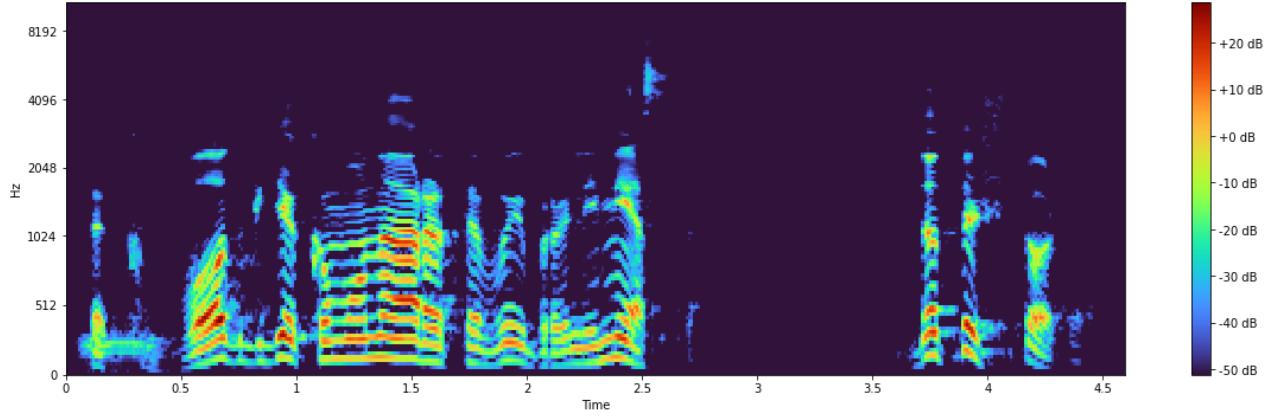
spectrogram (channel 0)



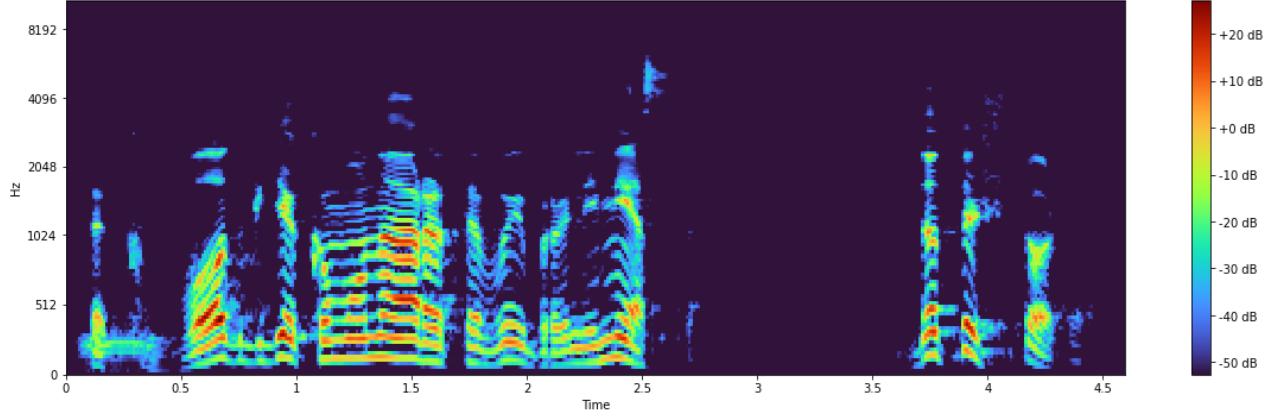
spectrogram (channel 1)



mel spectrogram (channel 0)



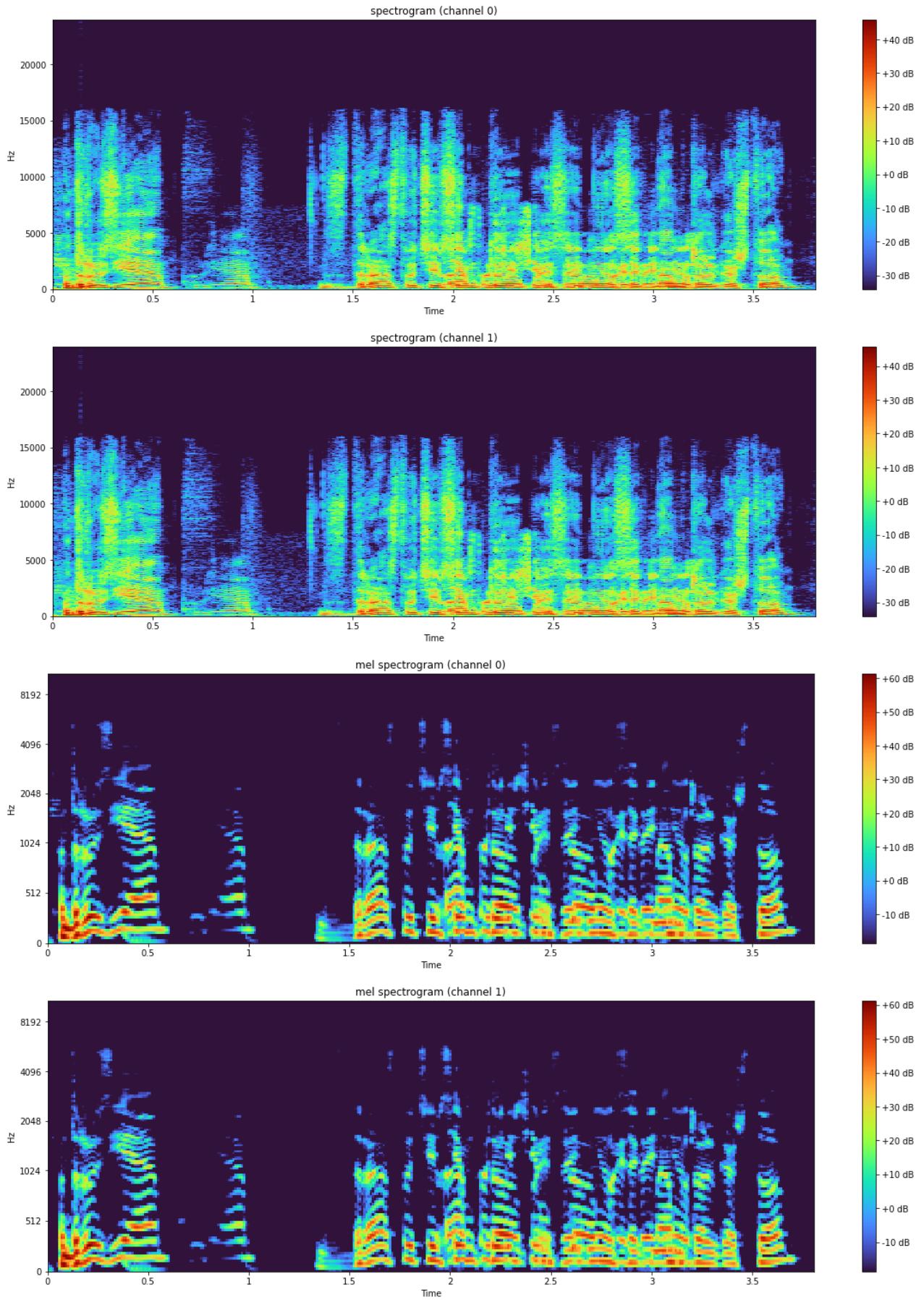
mel spectrogram (channel 1)



In [133...]

sh(110)

INFO : ./wavs/origin/0110.wav

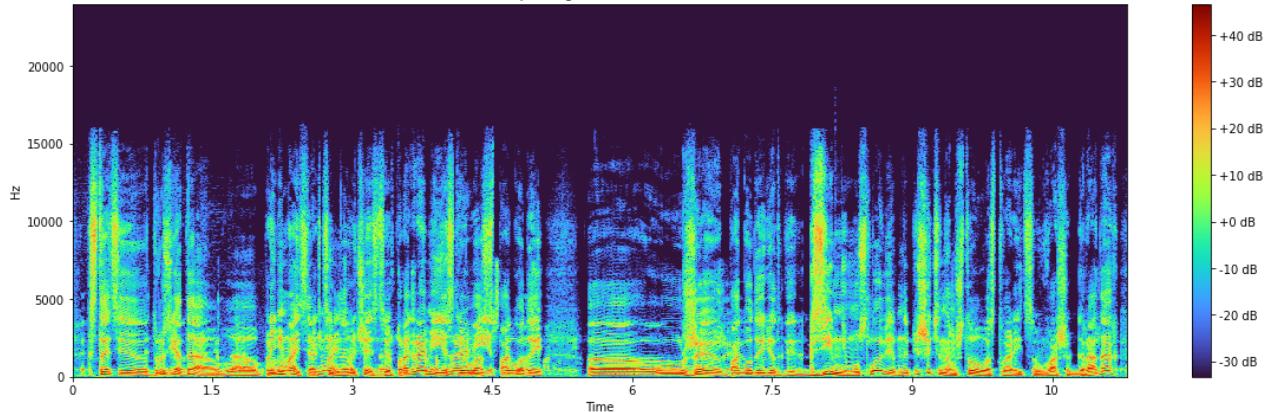


In [134...]

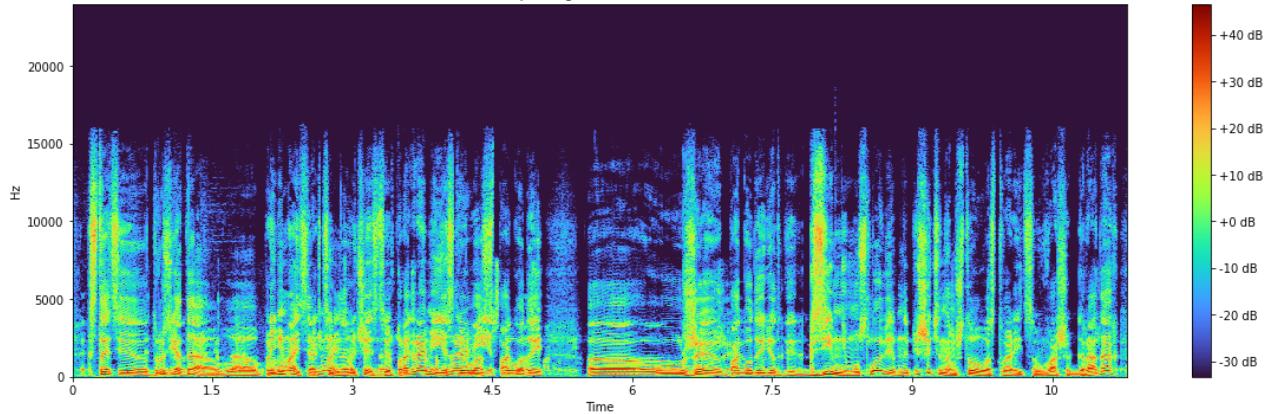
sh(111)

INFO : ./wavs/origin/0111.wav

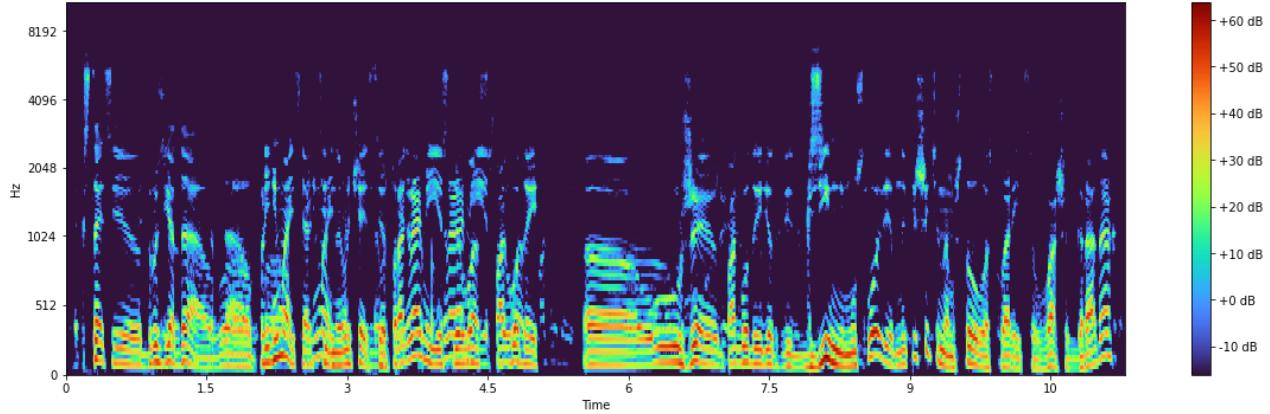
spectrogram (channel 0)



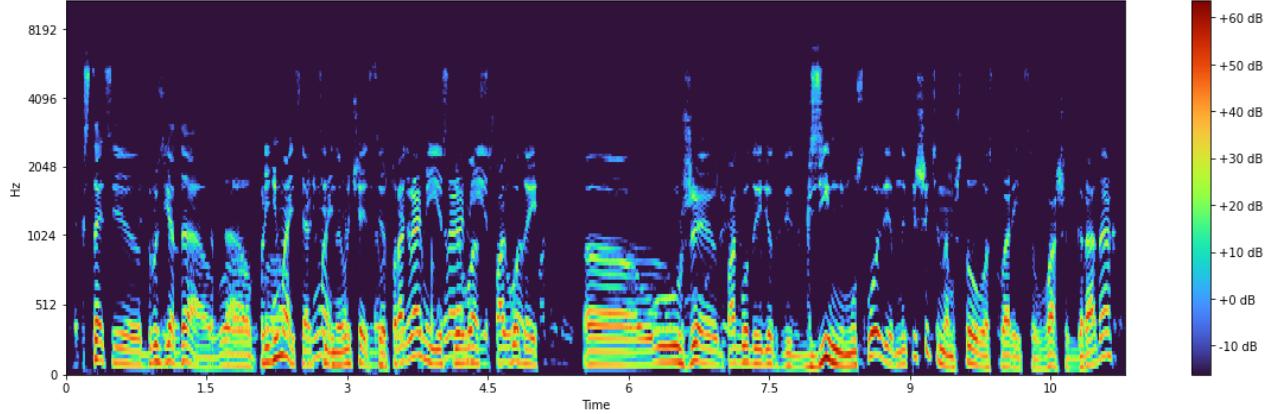
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

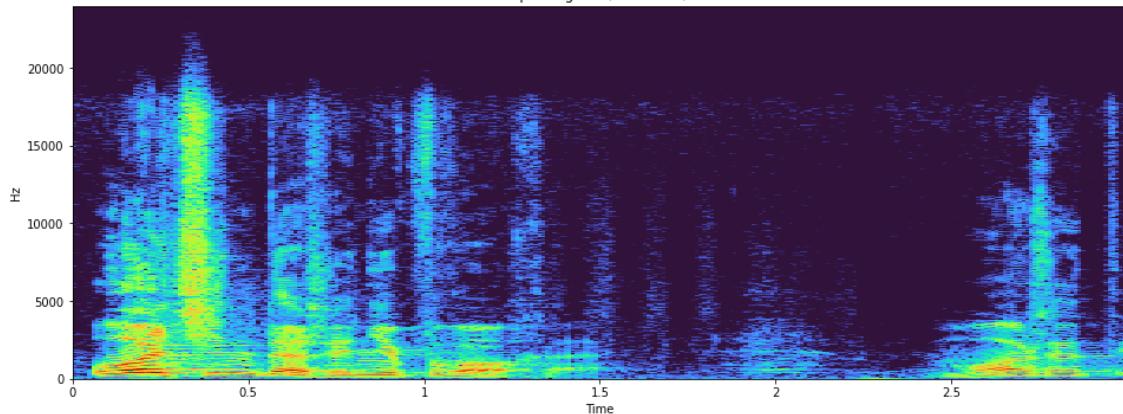


In [135...]

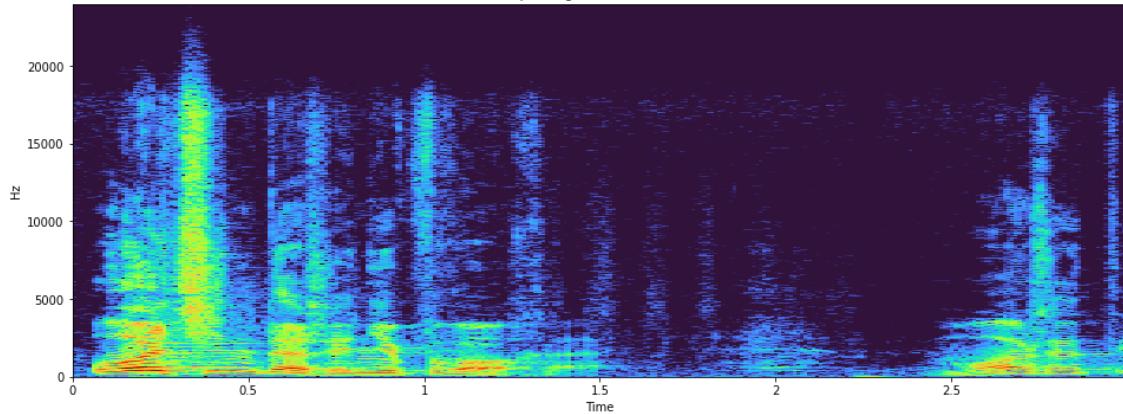
sh(112)

INFO : ./wavs/origin/0112.wav

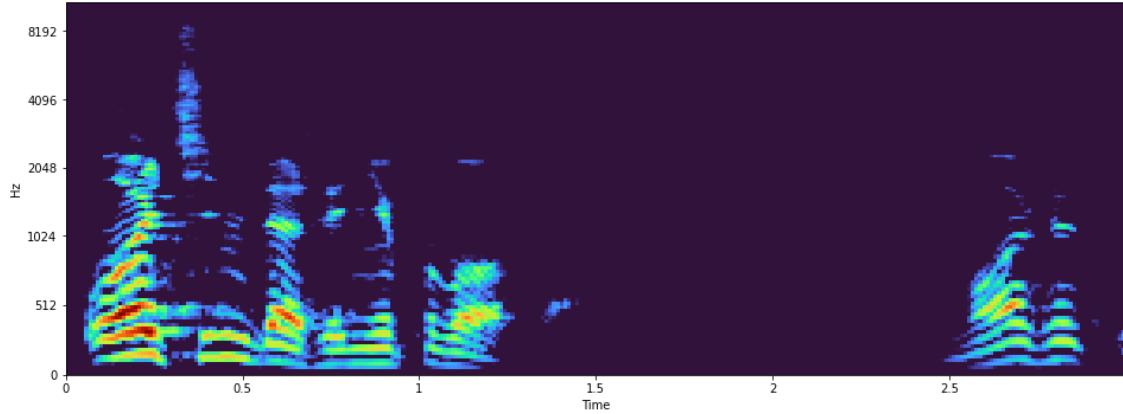
spectrogram (channel 0)



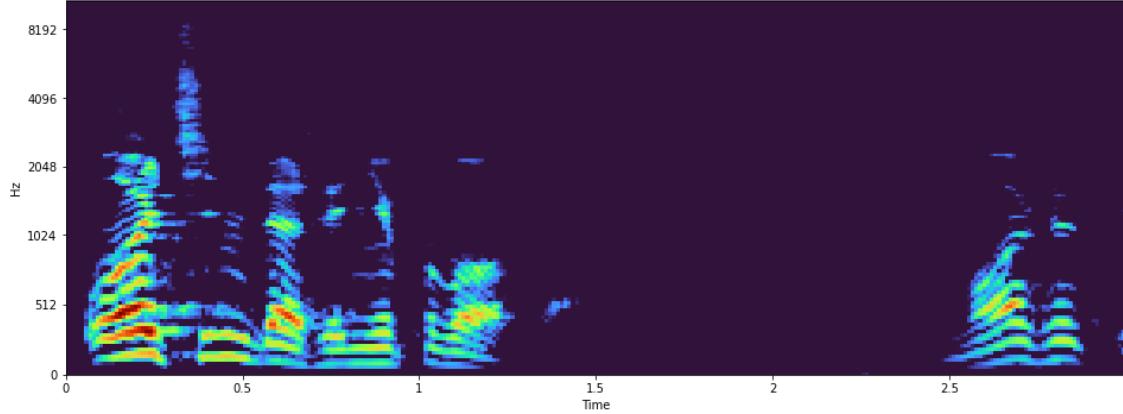
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

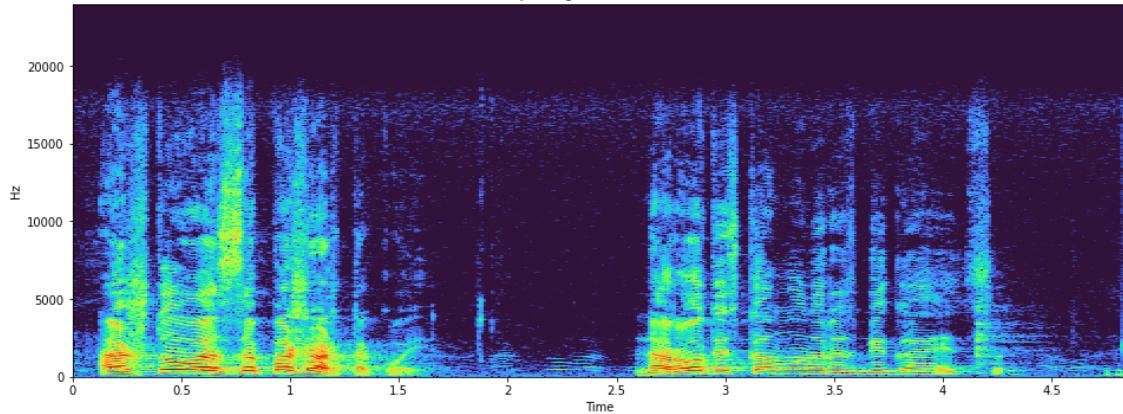


In [136...]

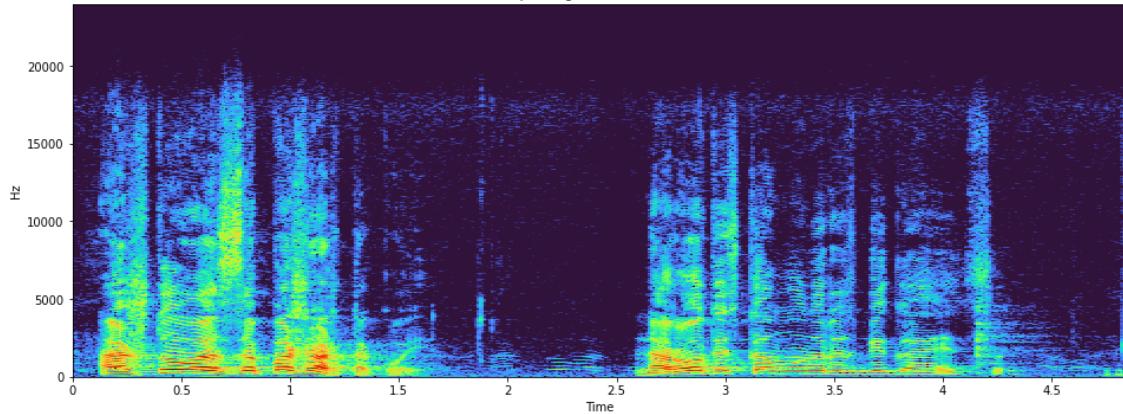
sh(113)

INFO : ./wavs/origin/0113.wav

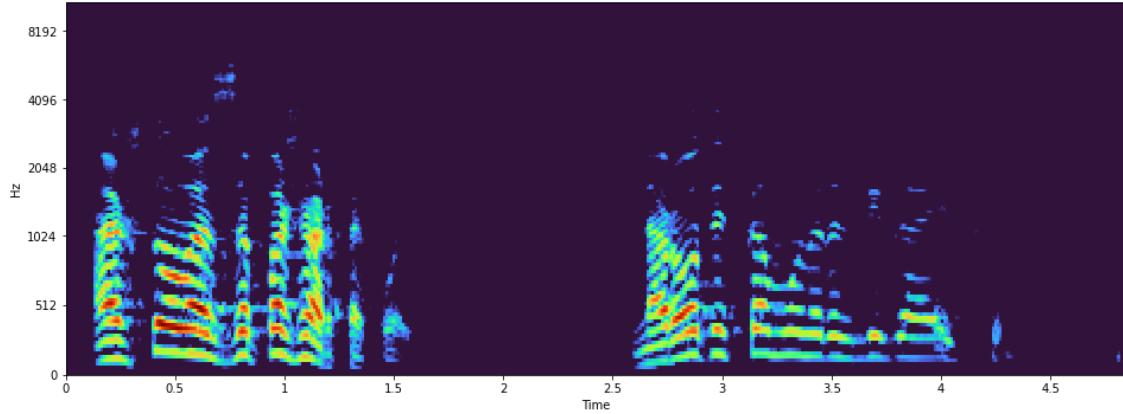
spectrogram (channel 0)



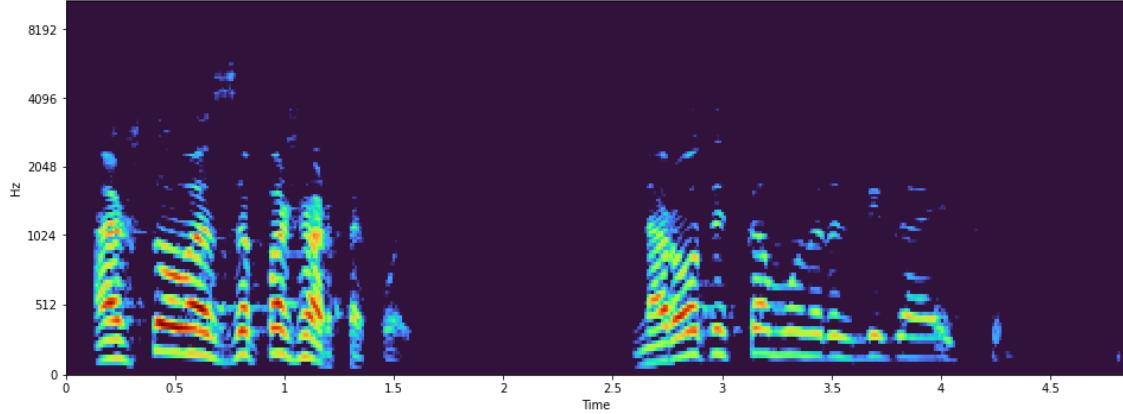
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

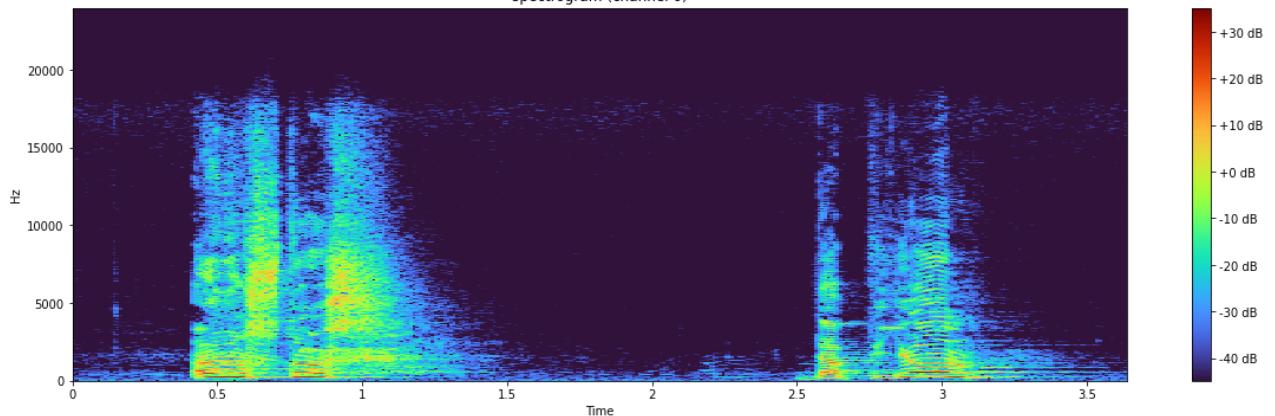


In [137...]

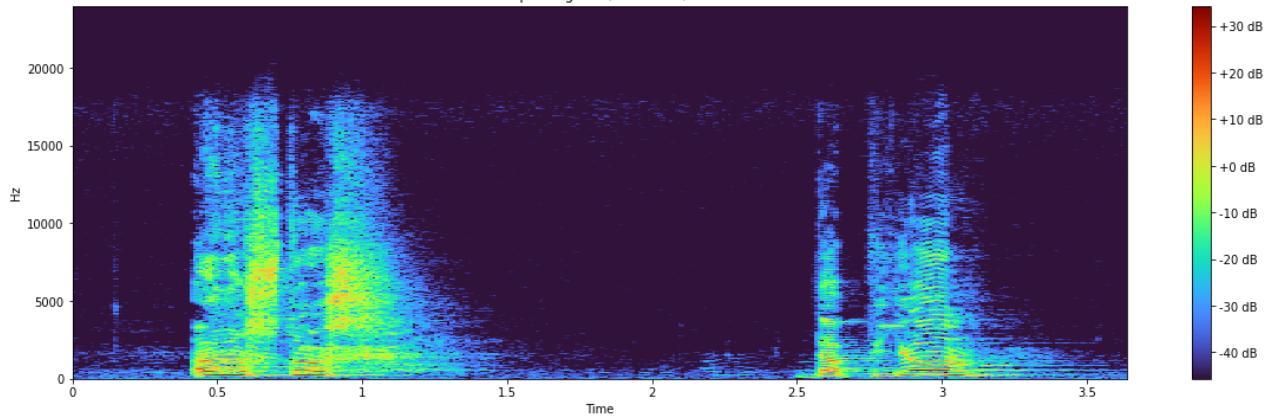
sh(114)

INFO : ./wavs/origin/0114.wav

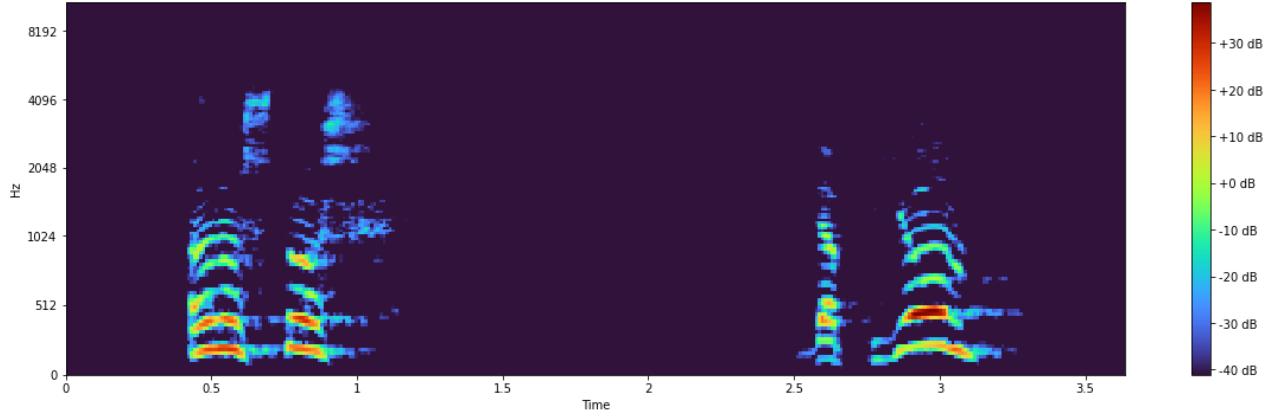
spectrogram (channel 0)



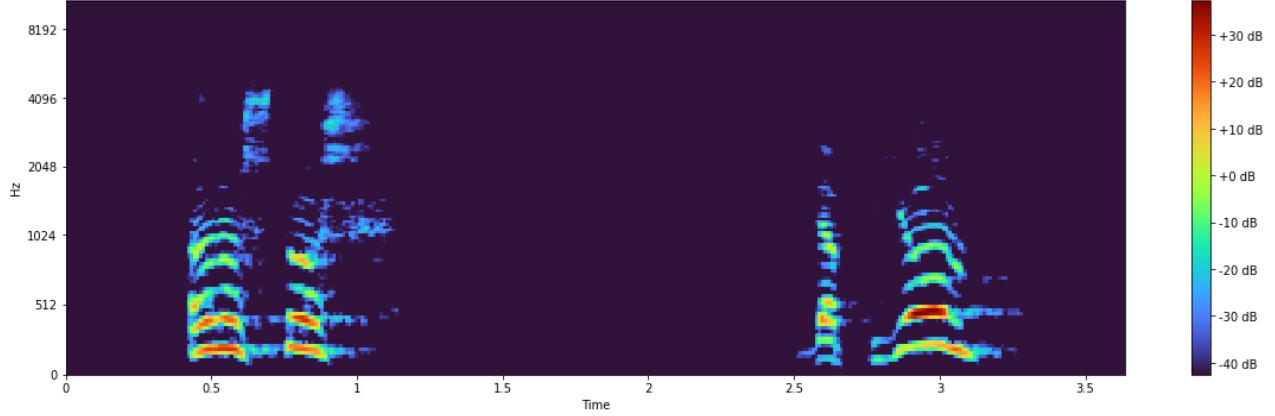
spectrogram (channel 1)



mel spectrogram (channel 0)



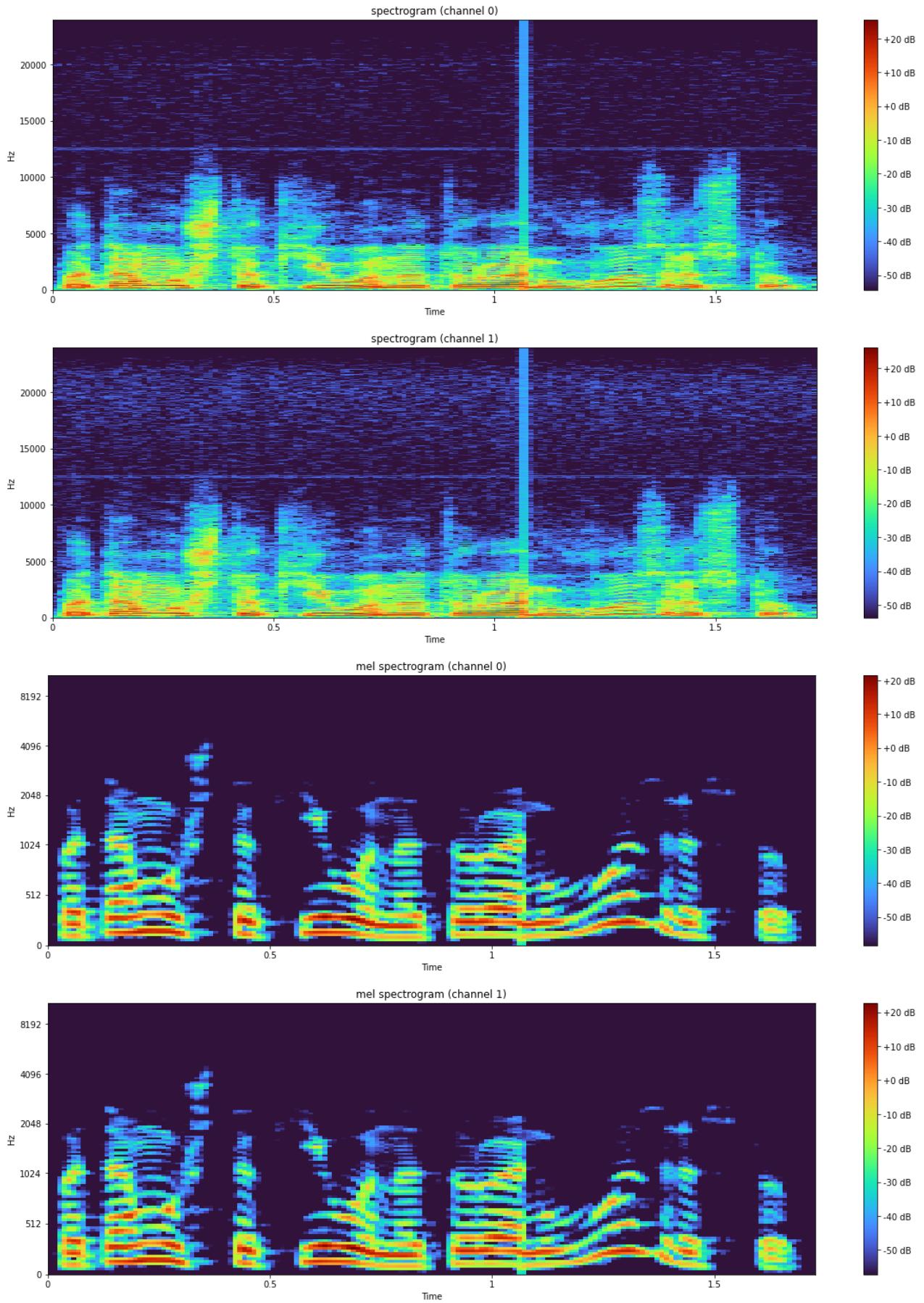
mel spectrogram (channel 1)



In [138...]

sh(115)

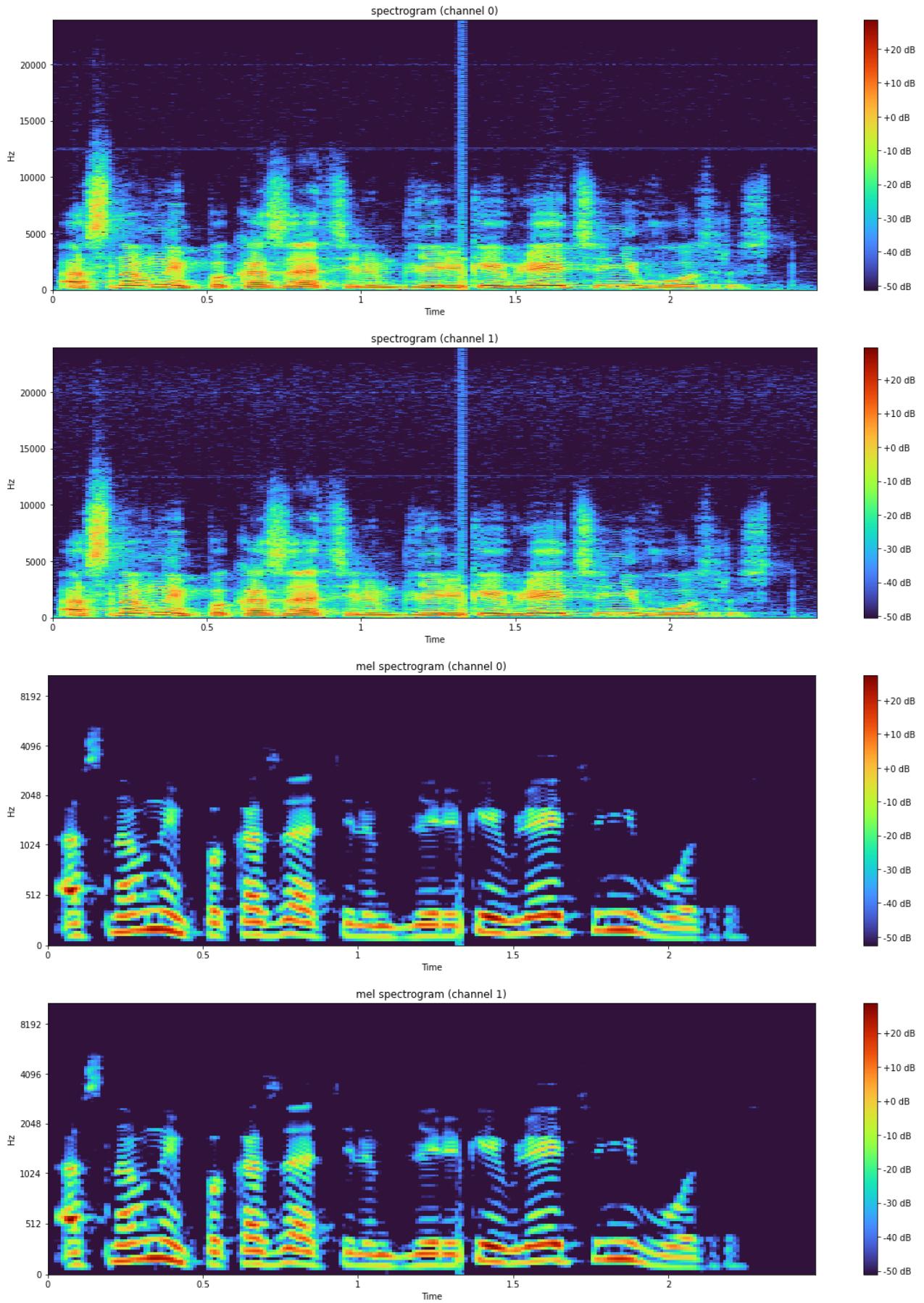
INFO : ./wavs/origin/0115.wav



In [139...]

sh(116)

INFO : ./wavs/origin/0116.wav

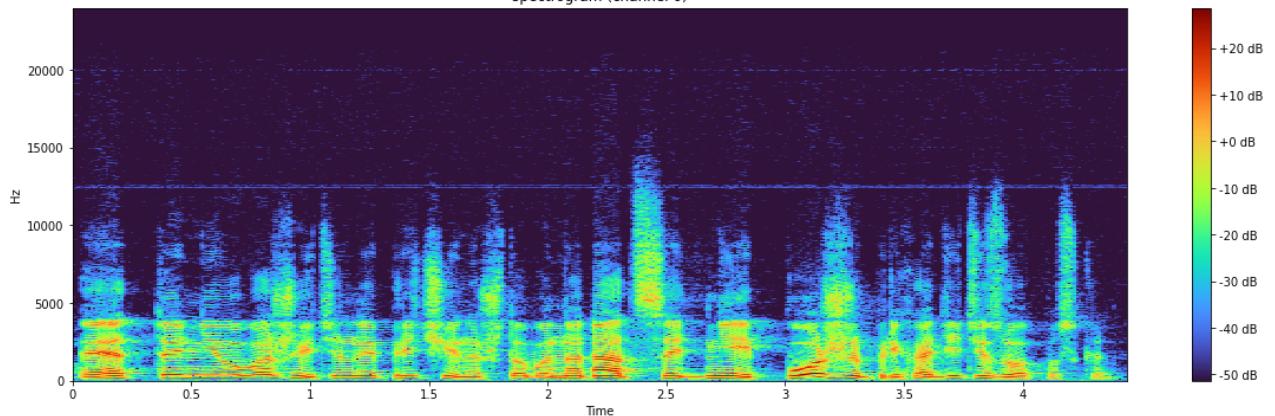


In [140...]

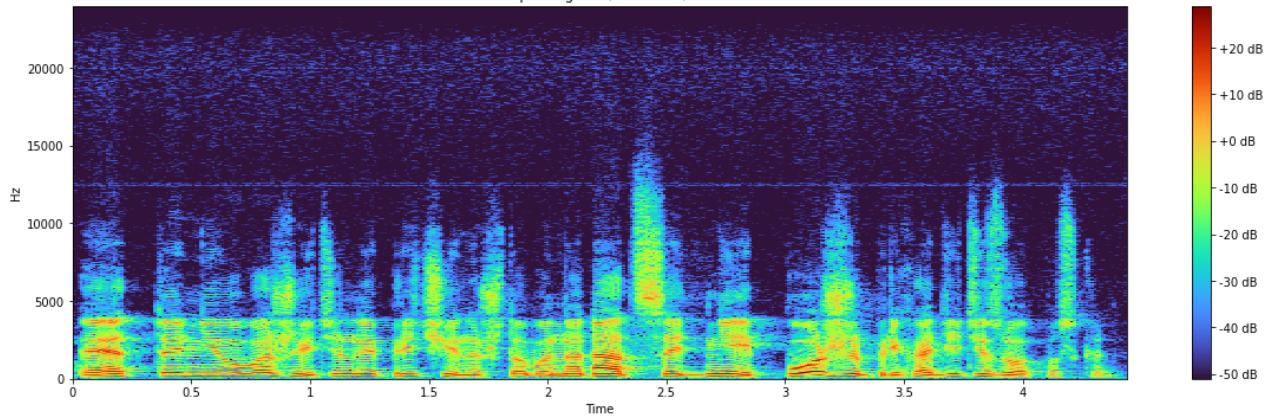
sh(117)

INFO : ./wavs/origin/0117.wav

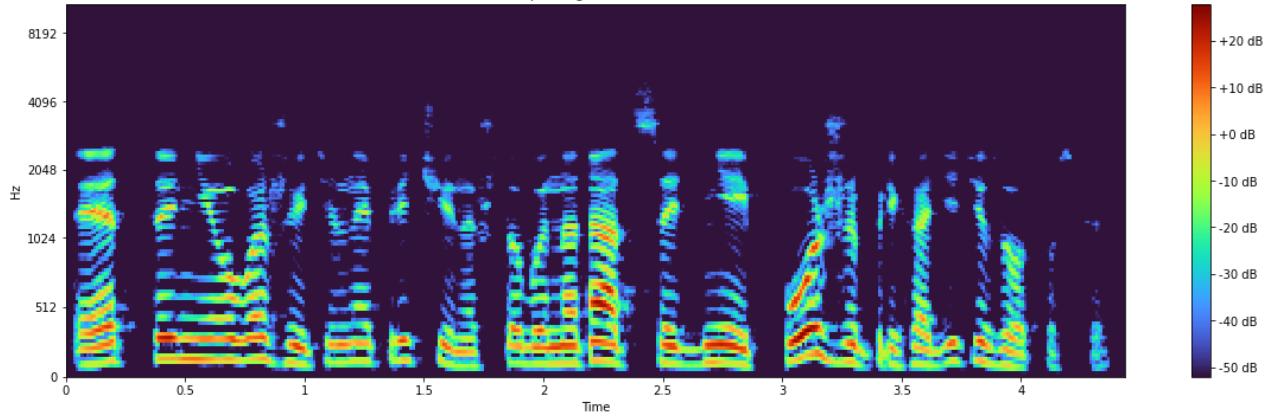
spectrogram (channel 0)



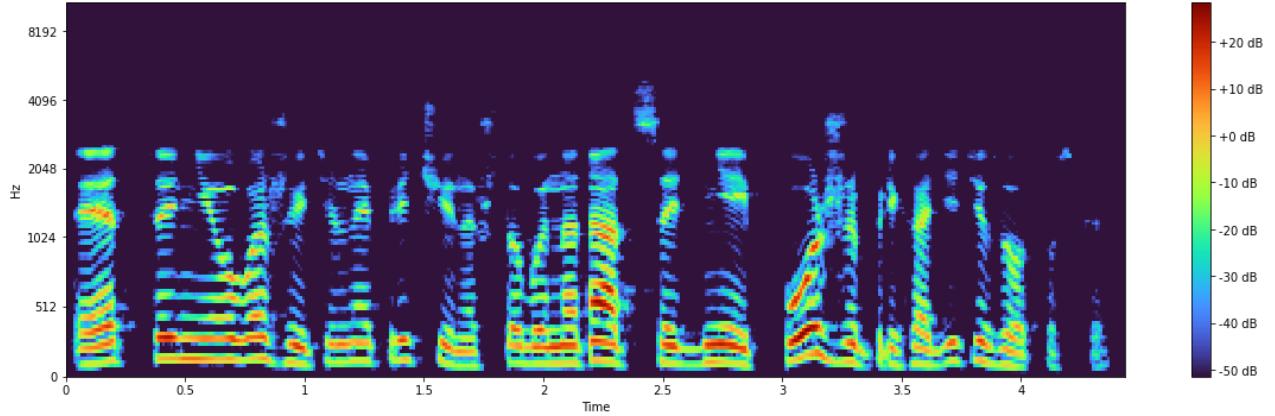
spectrogram (channel 1)



mel spectrogram (channel 0)



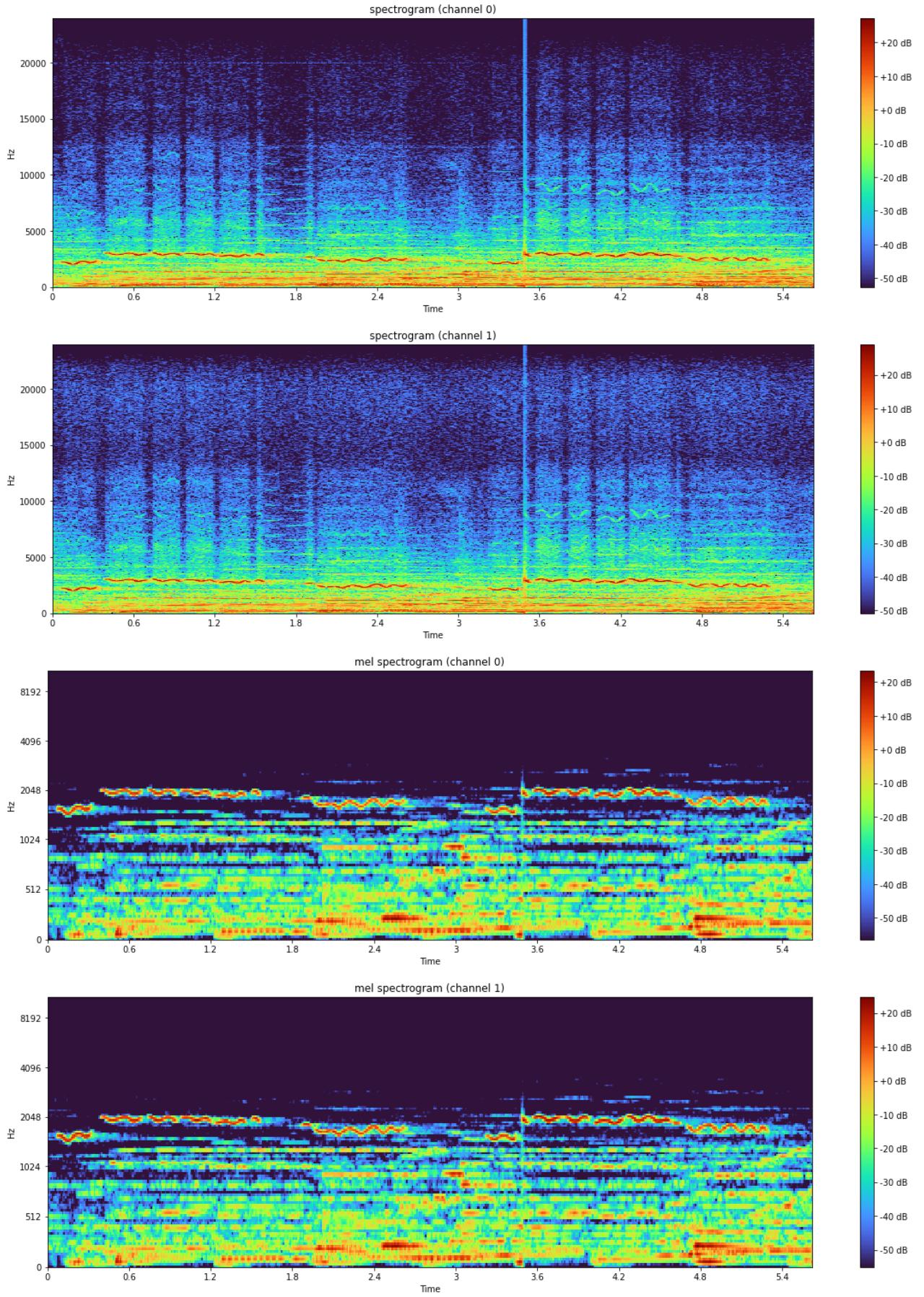
mel spectrogram (channel 1)



In [141...]

sh(118)

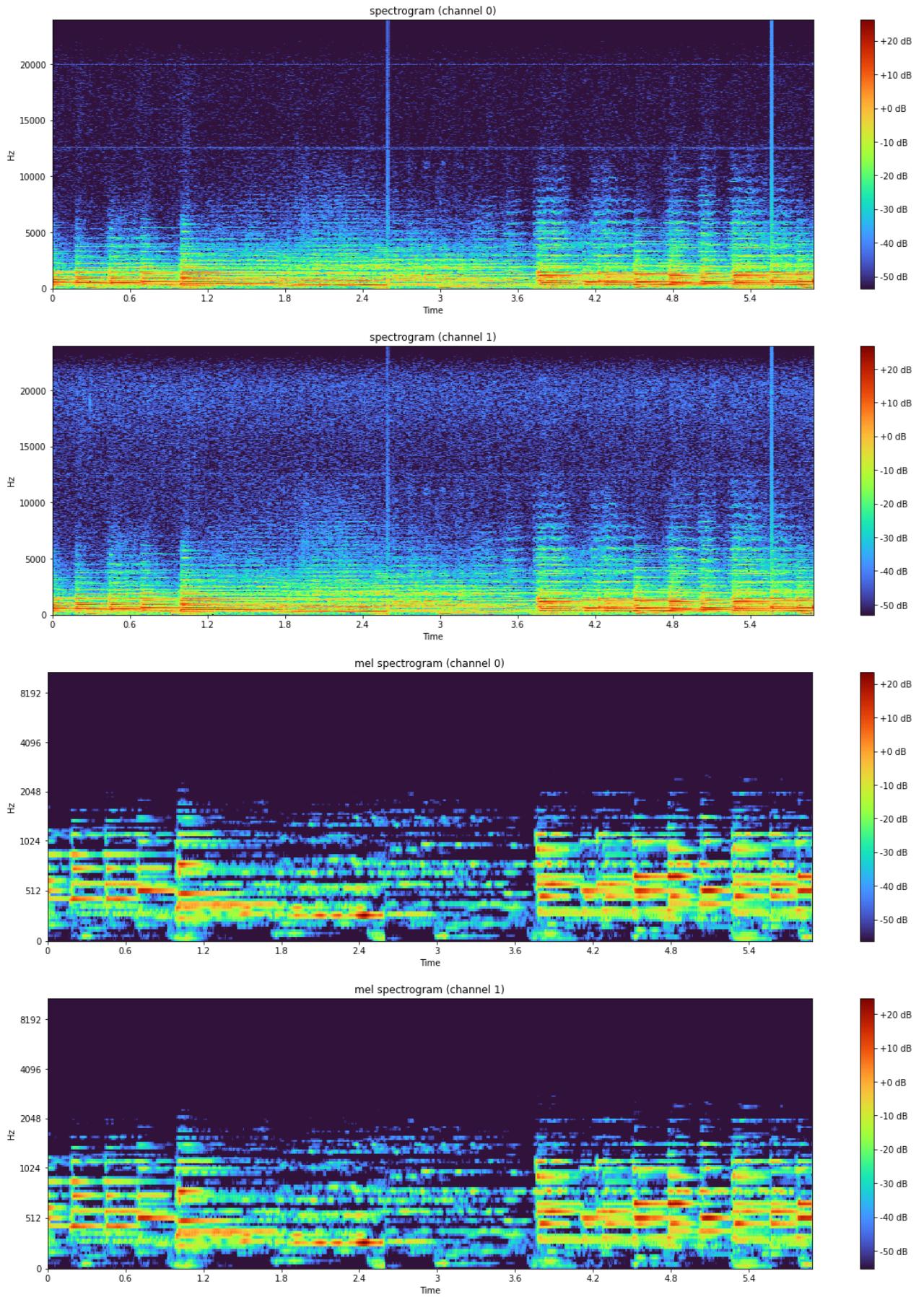
INFO : ./wavs/origin/0118.wav



In [142...]

sh(119)

INFO : ./wavs/origin/0119.wav

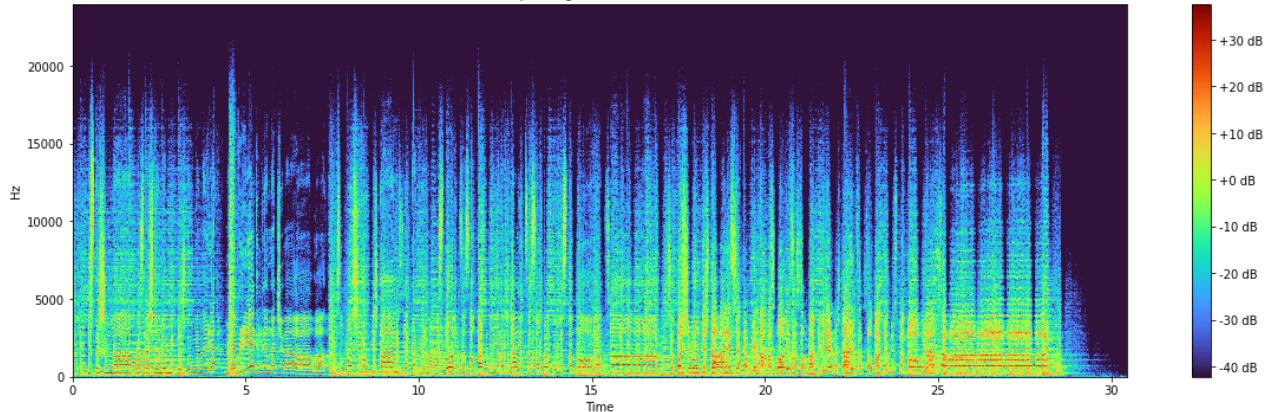


In [143...]

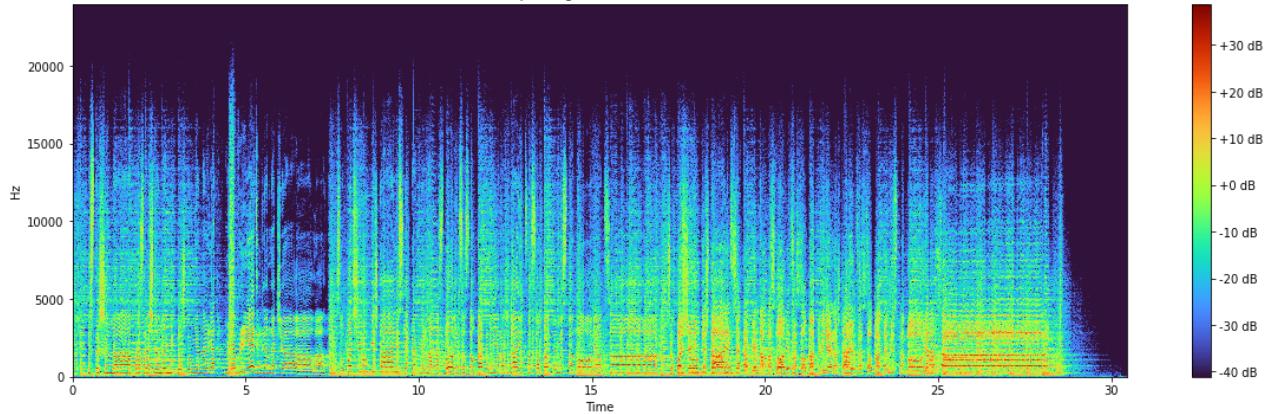
sh(120)

INFO : ./wavs/origin/0120.wav

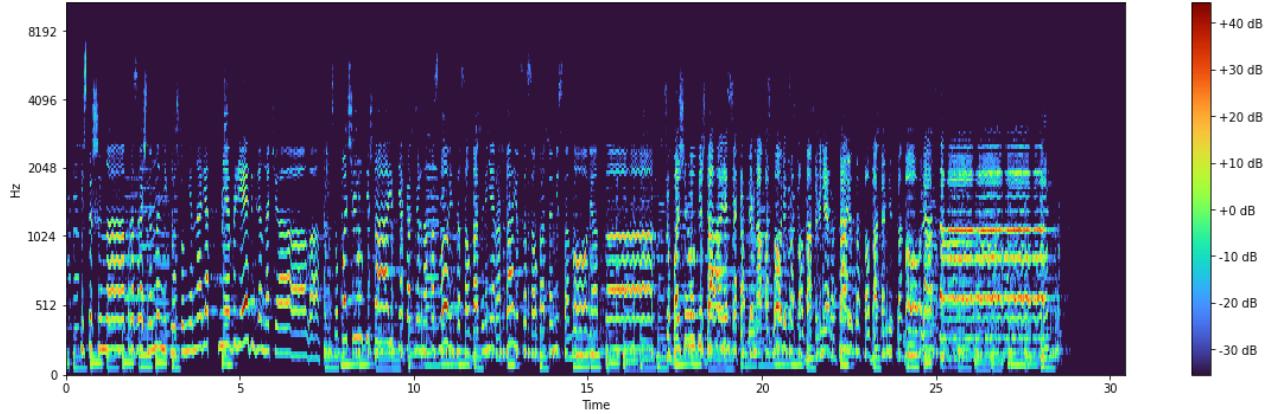
spectrogram (channel 0)



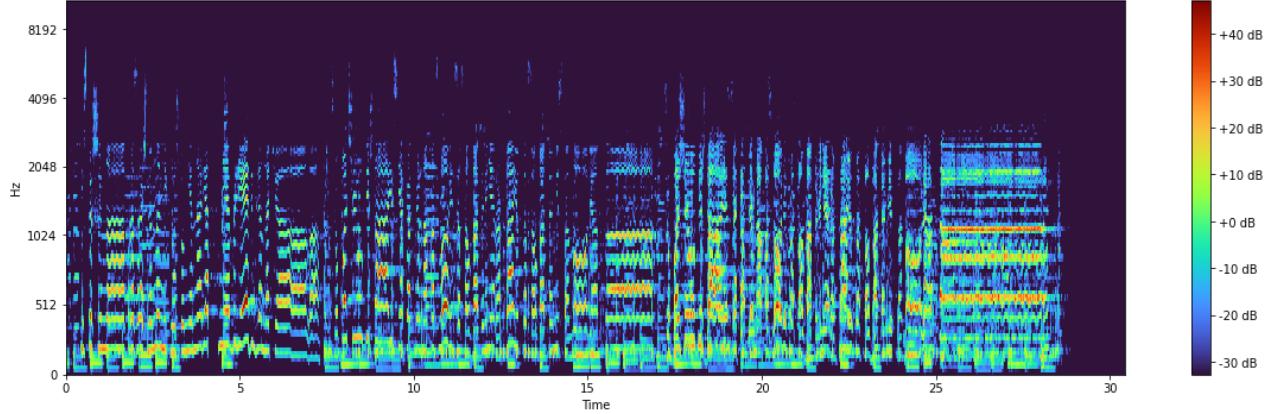
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

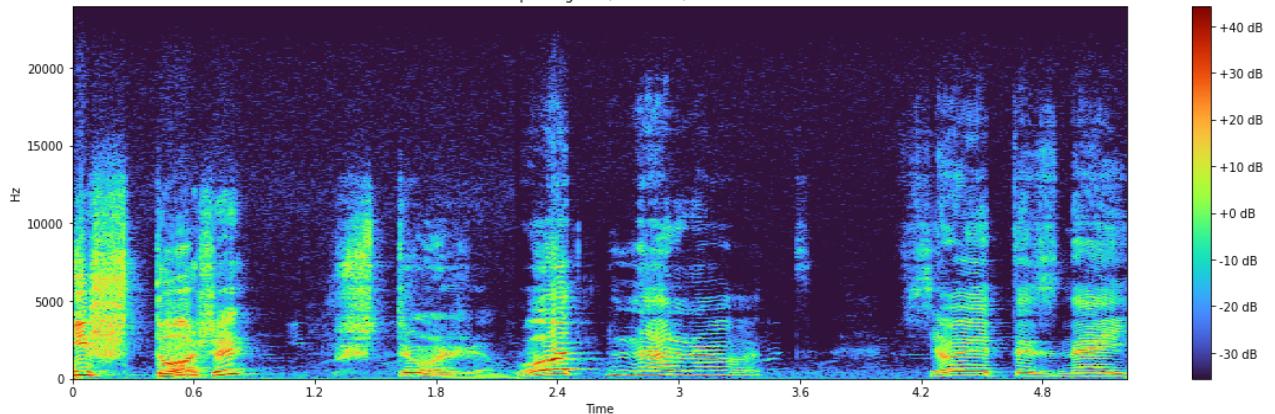


In [144...]

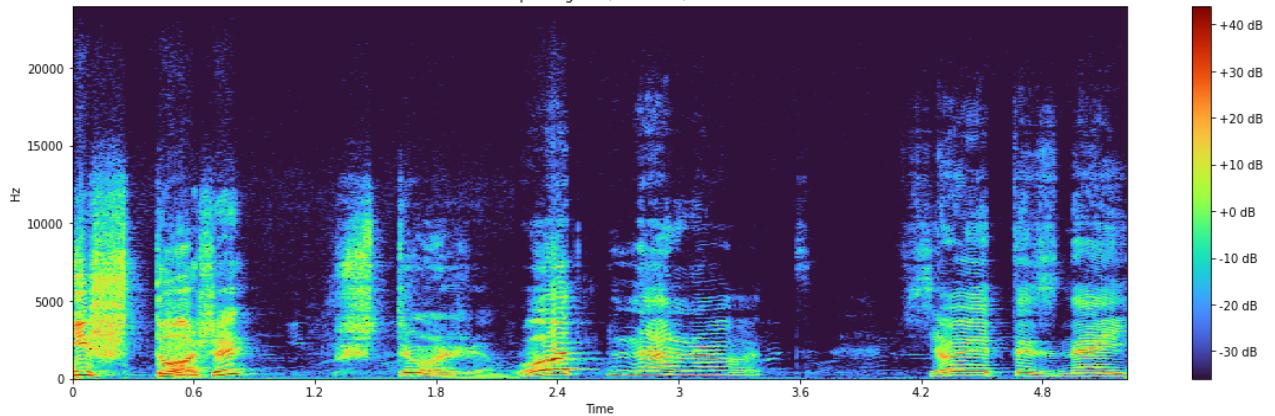
sh(121)

INFO : ./wavs/origin/0121.wav

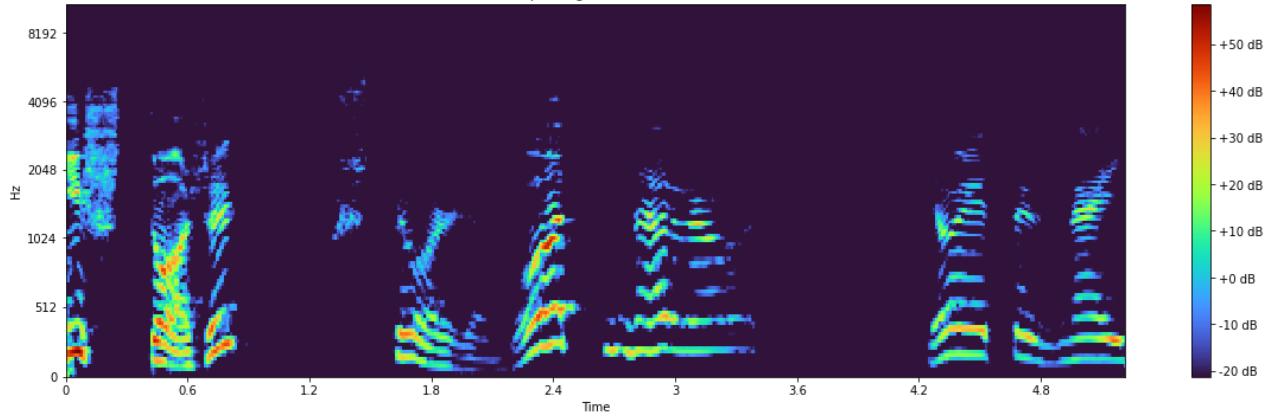
spectrogram (channel 0)



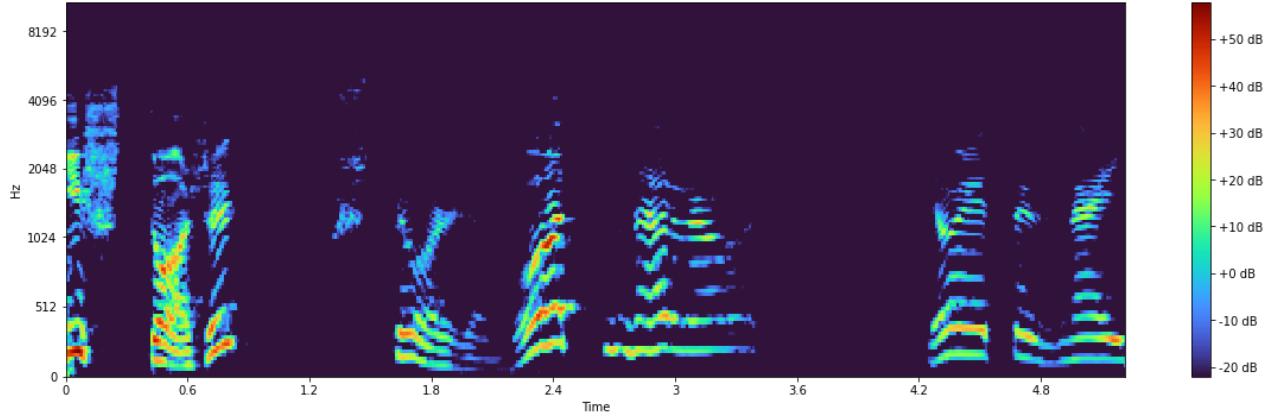
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

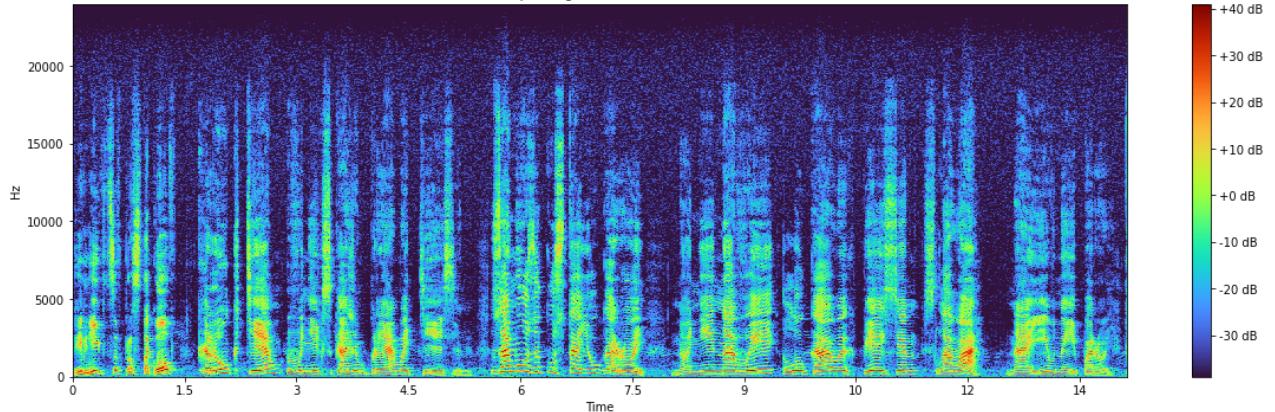


In [145...]

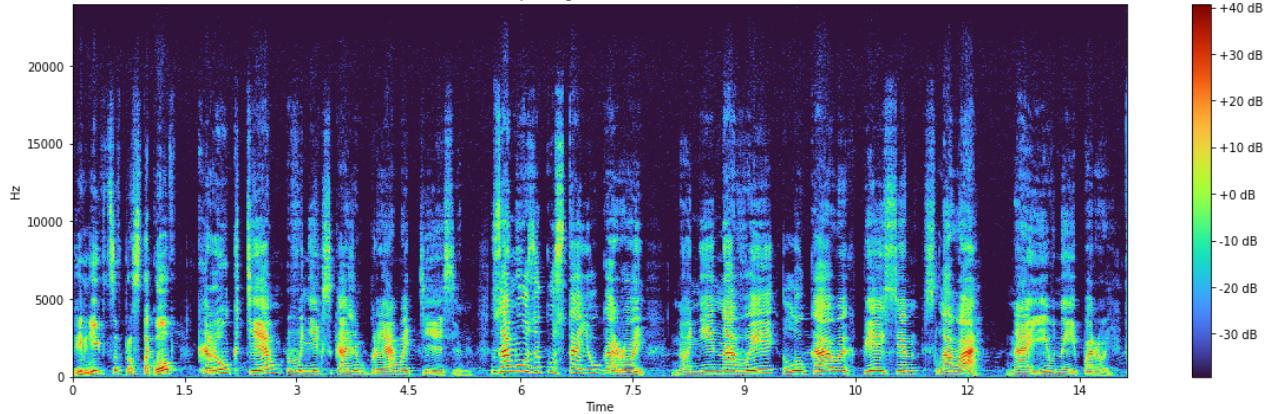
sh(122)

INFO : ./wavs/origin/0122.wav

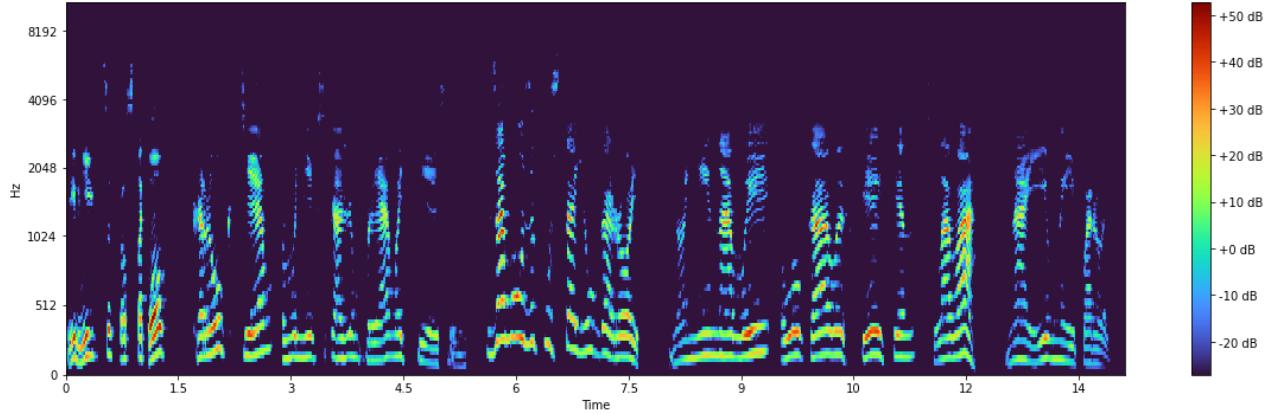
spectrogram (channel 0)



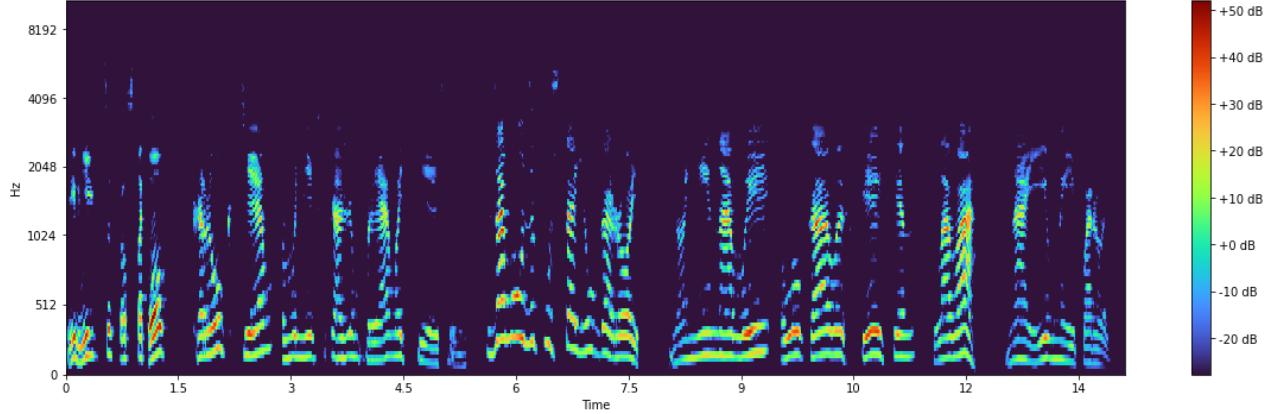
spectrogram (channel 1)



mel spectrogram (channel 0)



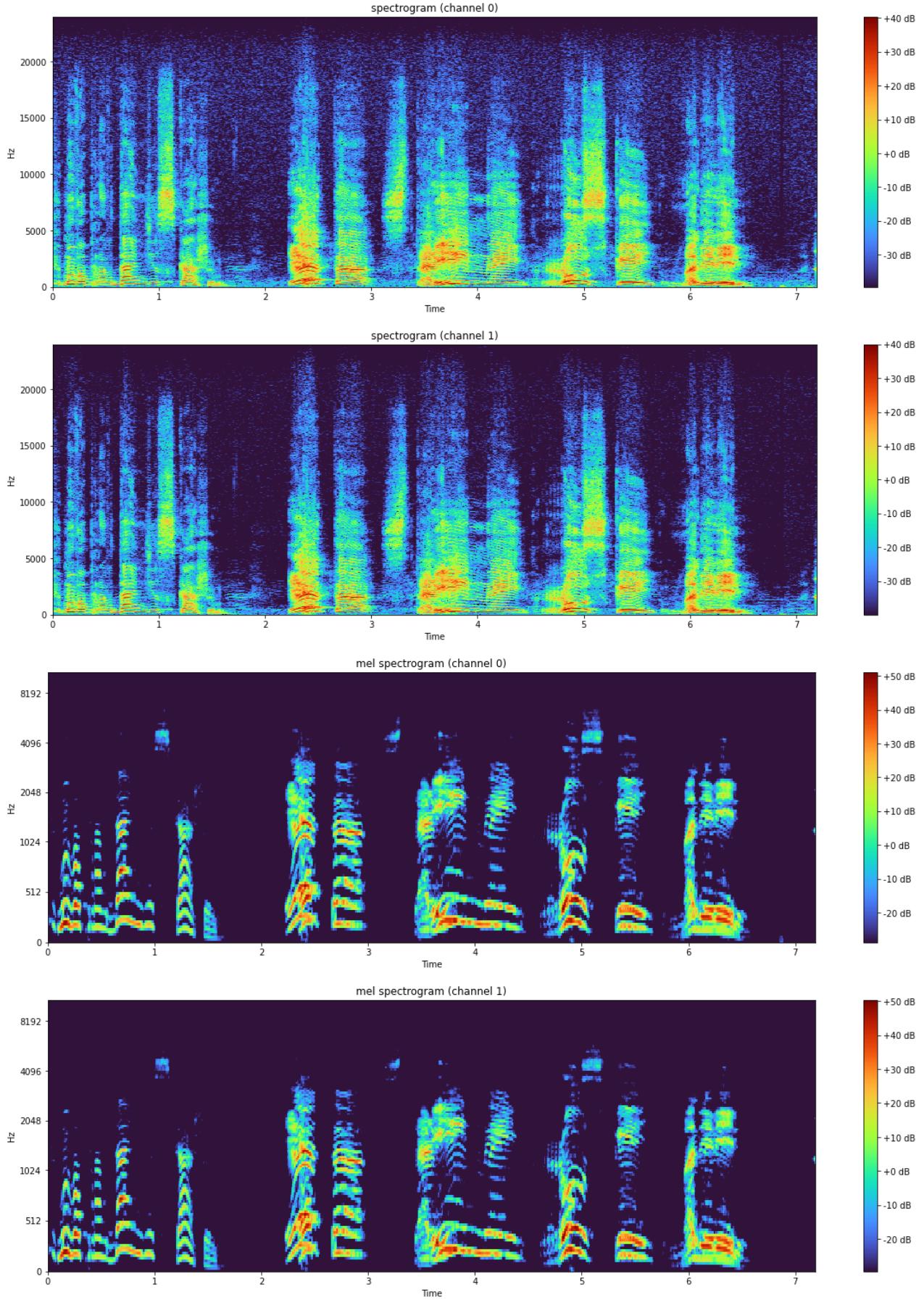
mel spectrogram (channel 1)



In [146...]

sh(123)

INFO : ./wavs/origin/0123.wav

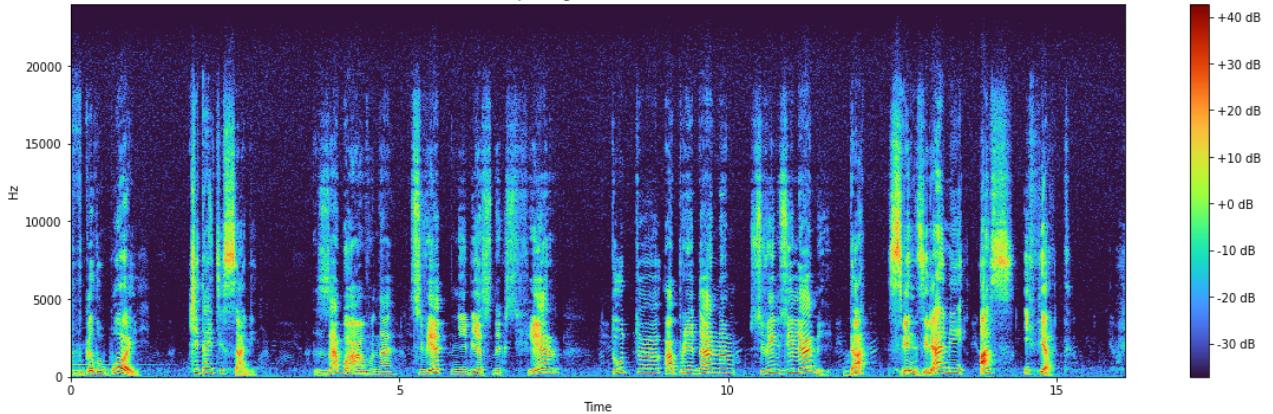


In [147...]

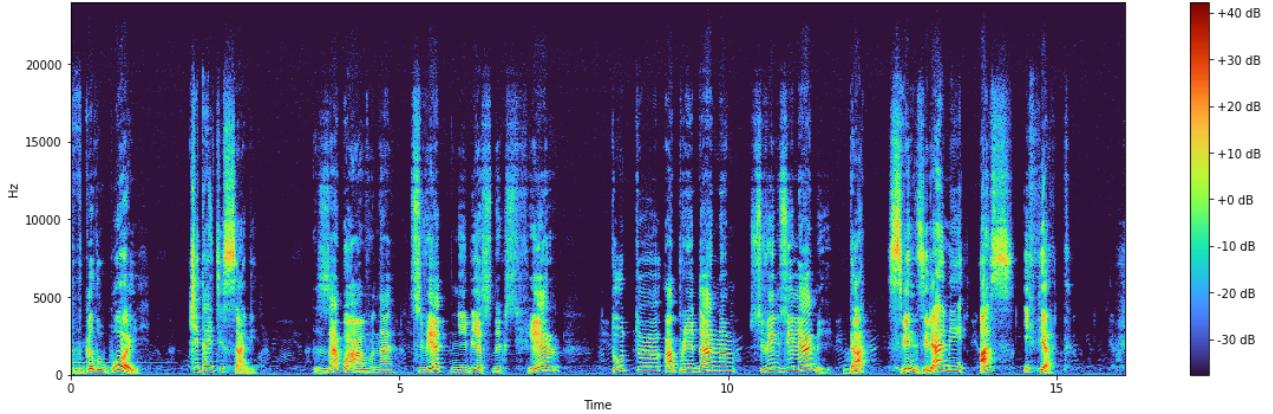
sh(124)

INFO : ./wavs/origin/0124.wav

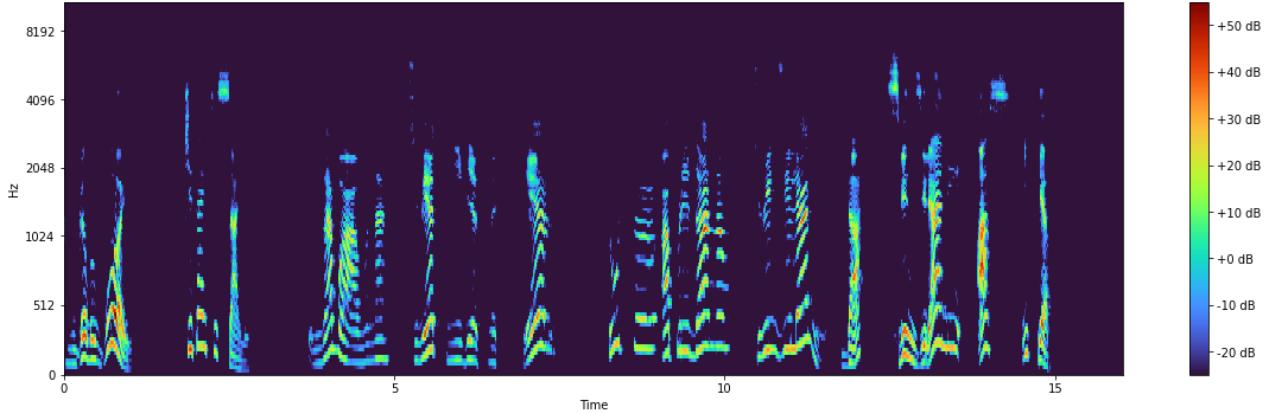
spectrogram (channel 0)



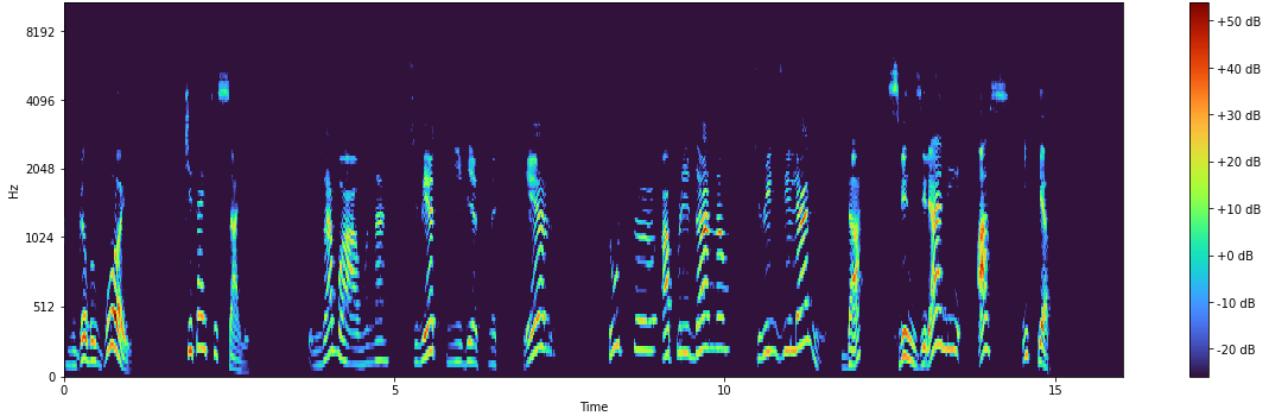
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

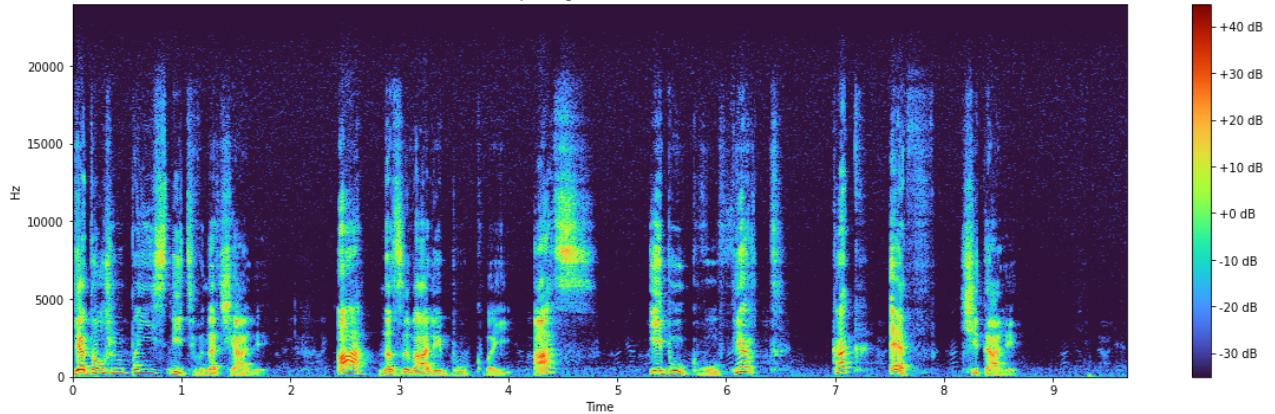


In [148...]

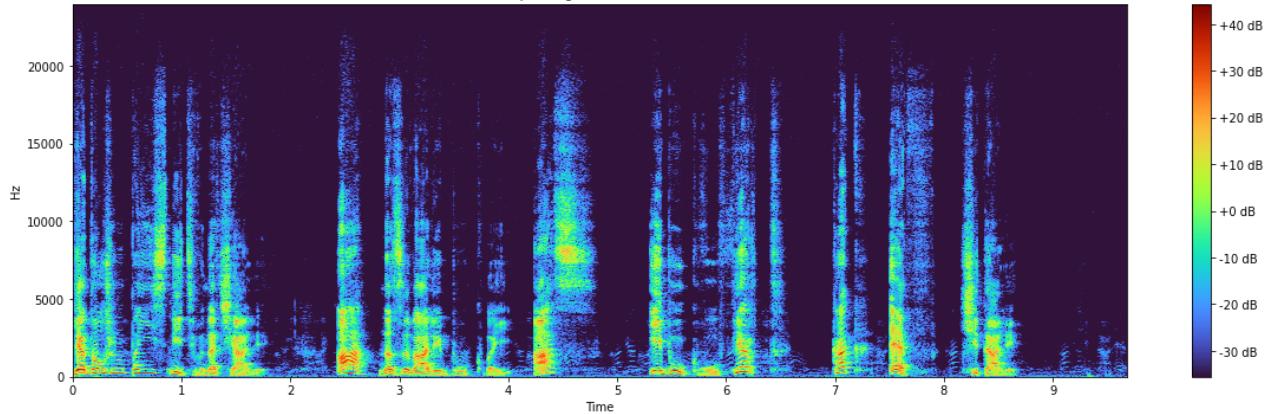
sh(125)

INFO : ./wavs/origin/0125.wav

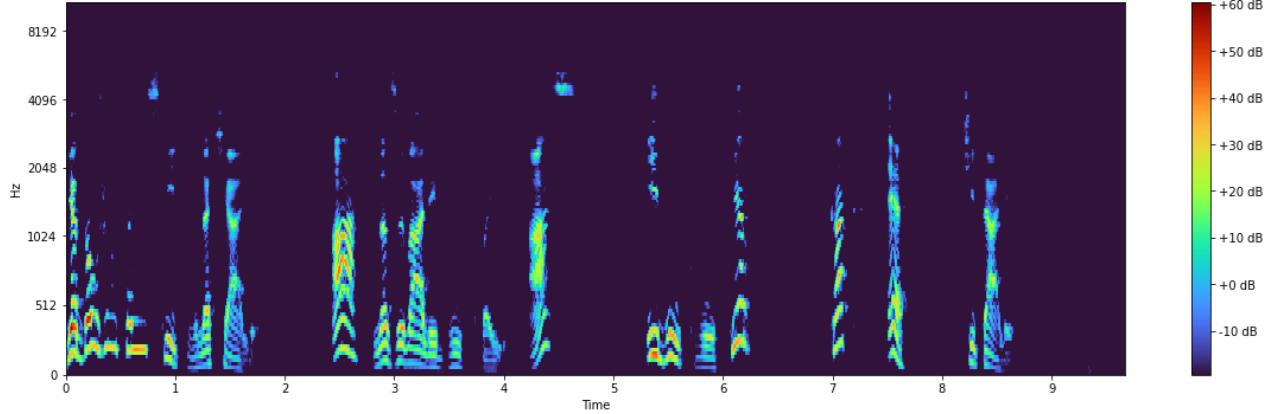
spectrogram (channel 0)



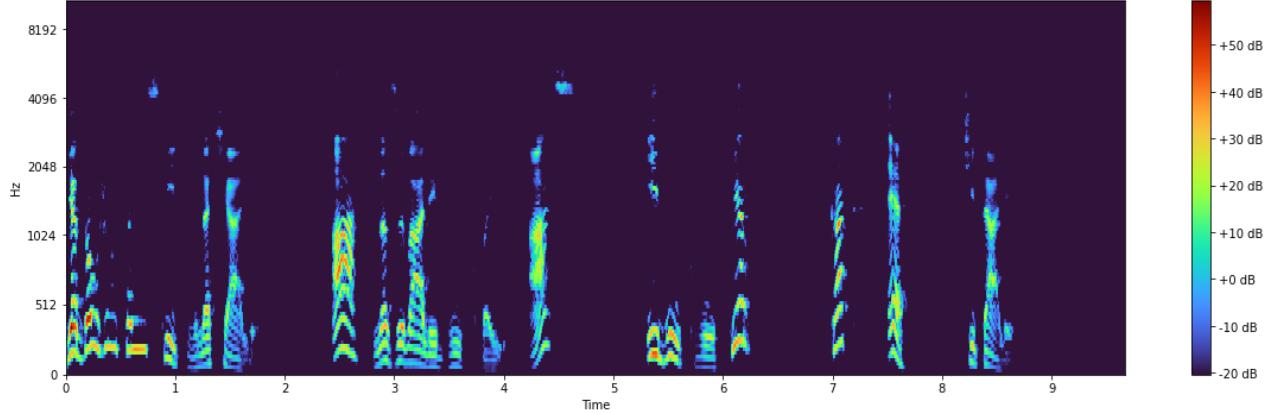
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

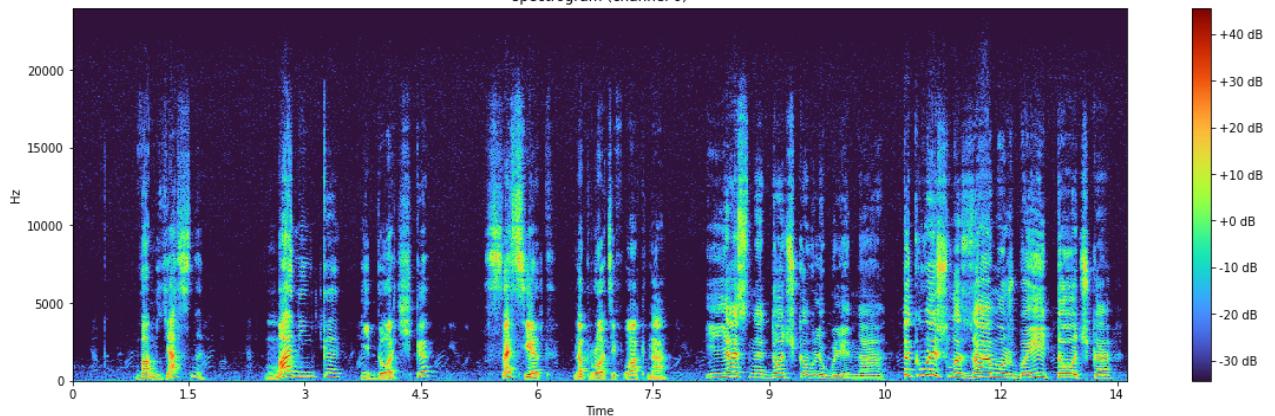


In [149...]

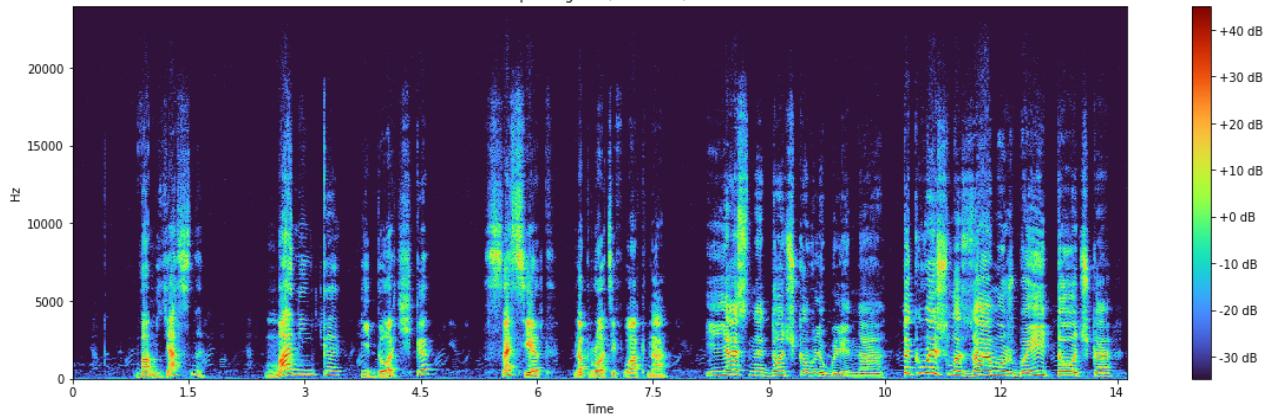
sh(126)

INFO : ./wavs/origin/0126.wav

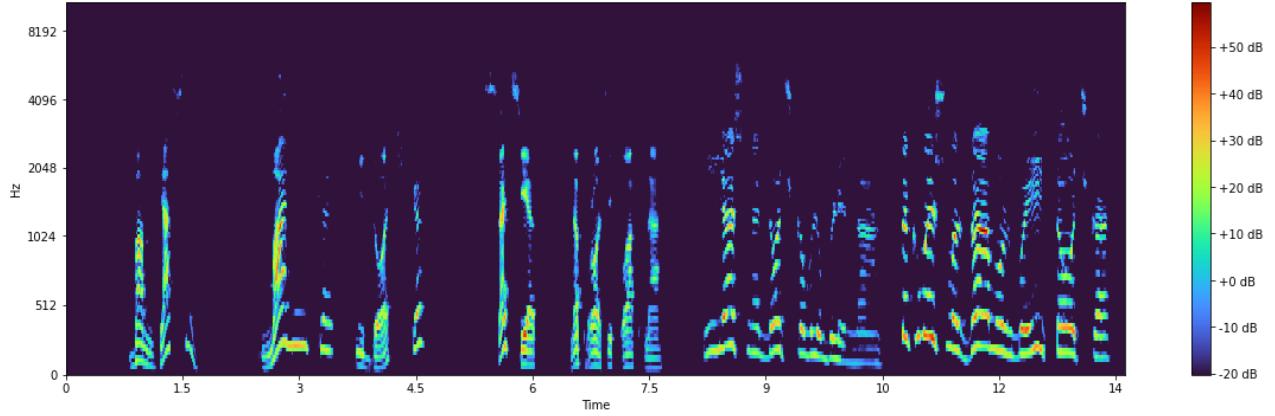
spectrogram (channel 0)



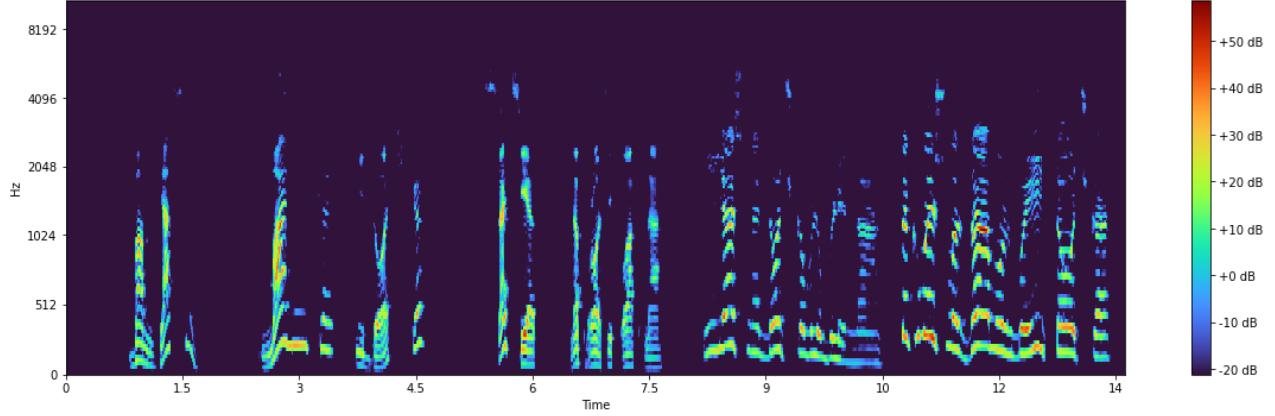
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

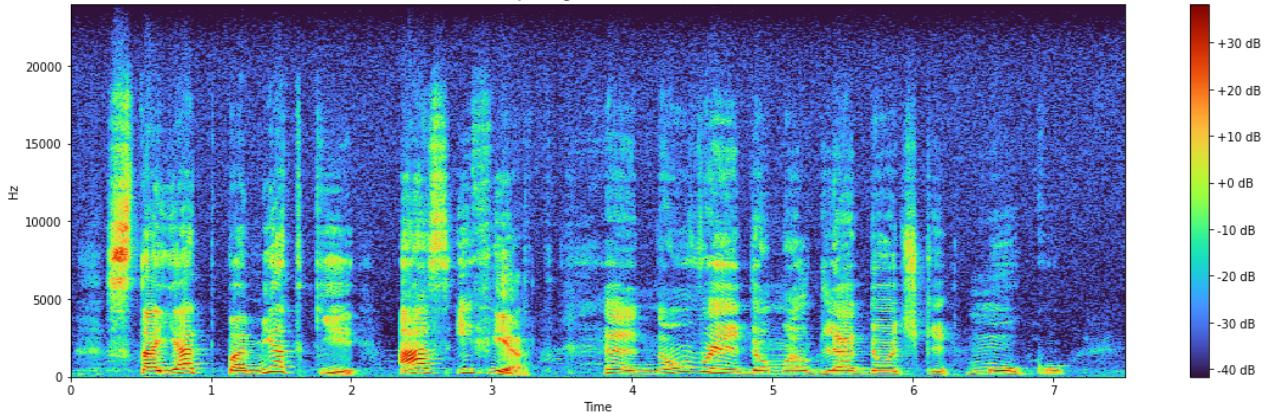


In [150...]

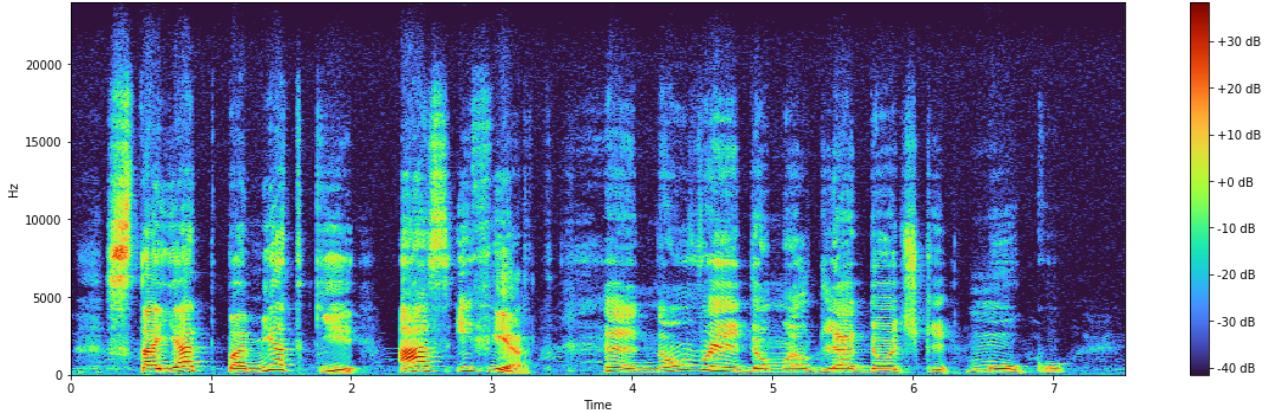
sh(127)

INFO : ../wavs/origin/0127.wav

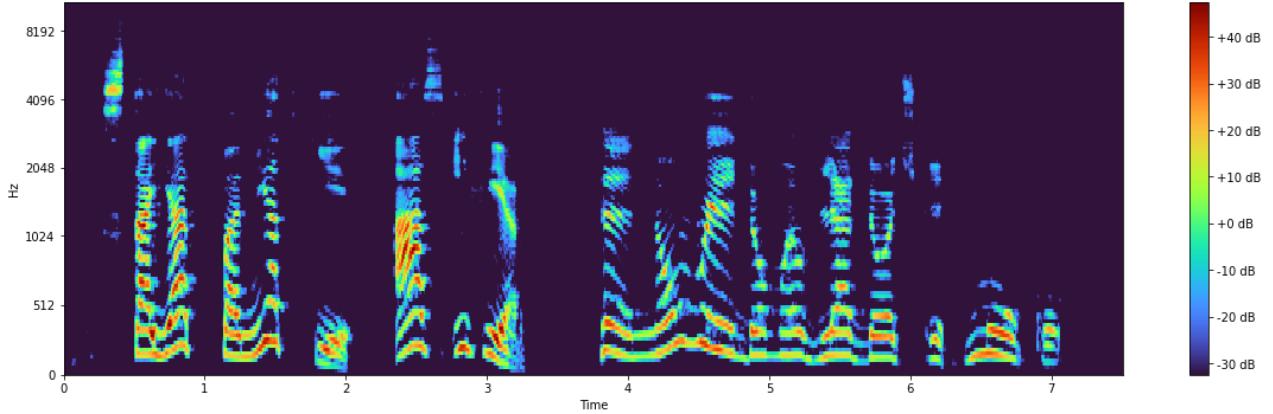
spectrogram (channel 0)



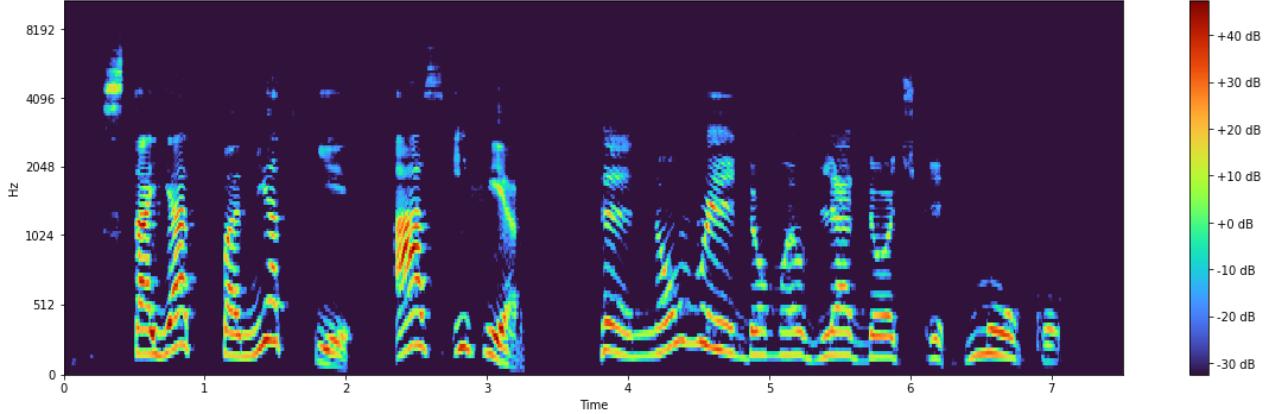
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

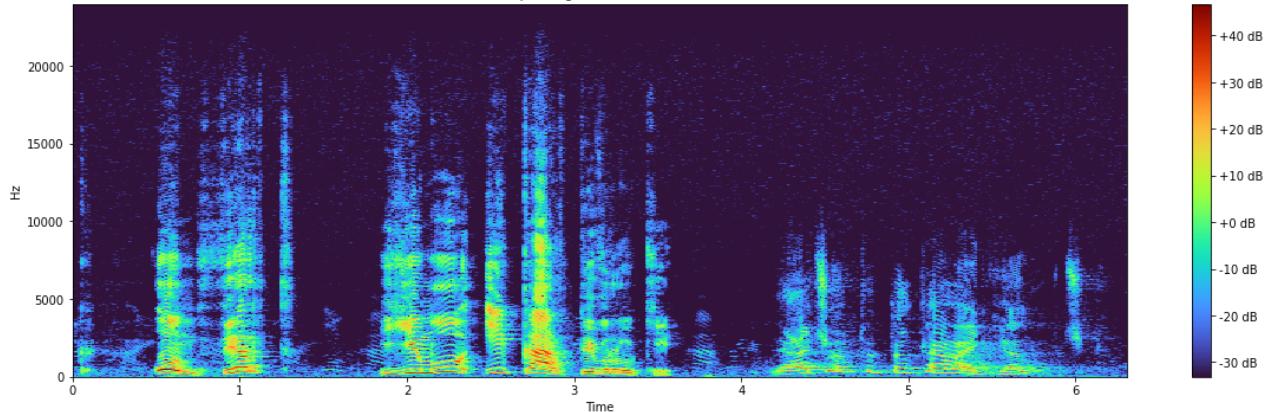


In [151...]

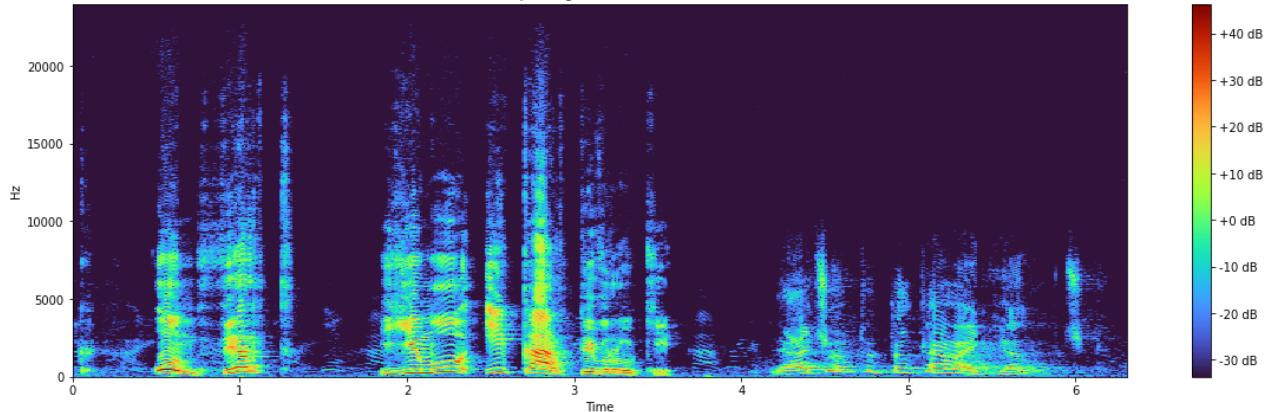
sh(128)

INFO : ./wavs/origin/0128.wav

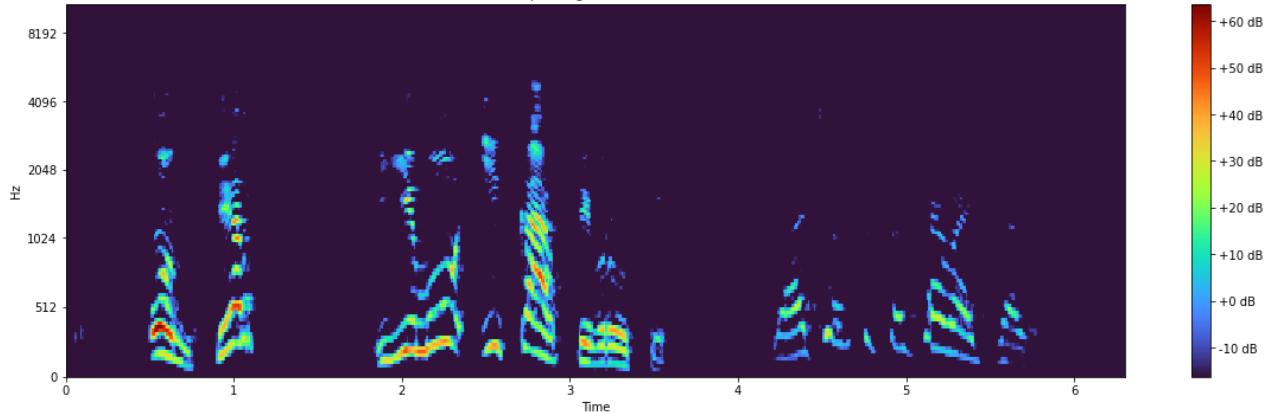
spectrogram (channel 0)



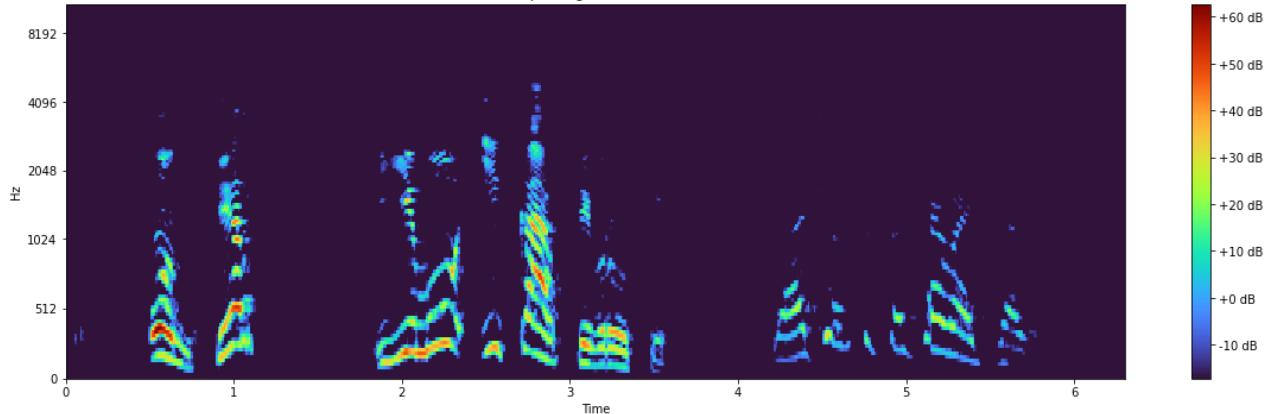
spectrogram (channel 1)



mel spectrogram (channel 0)



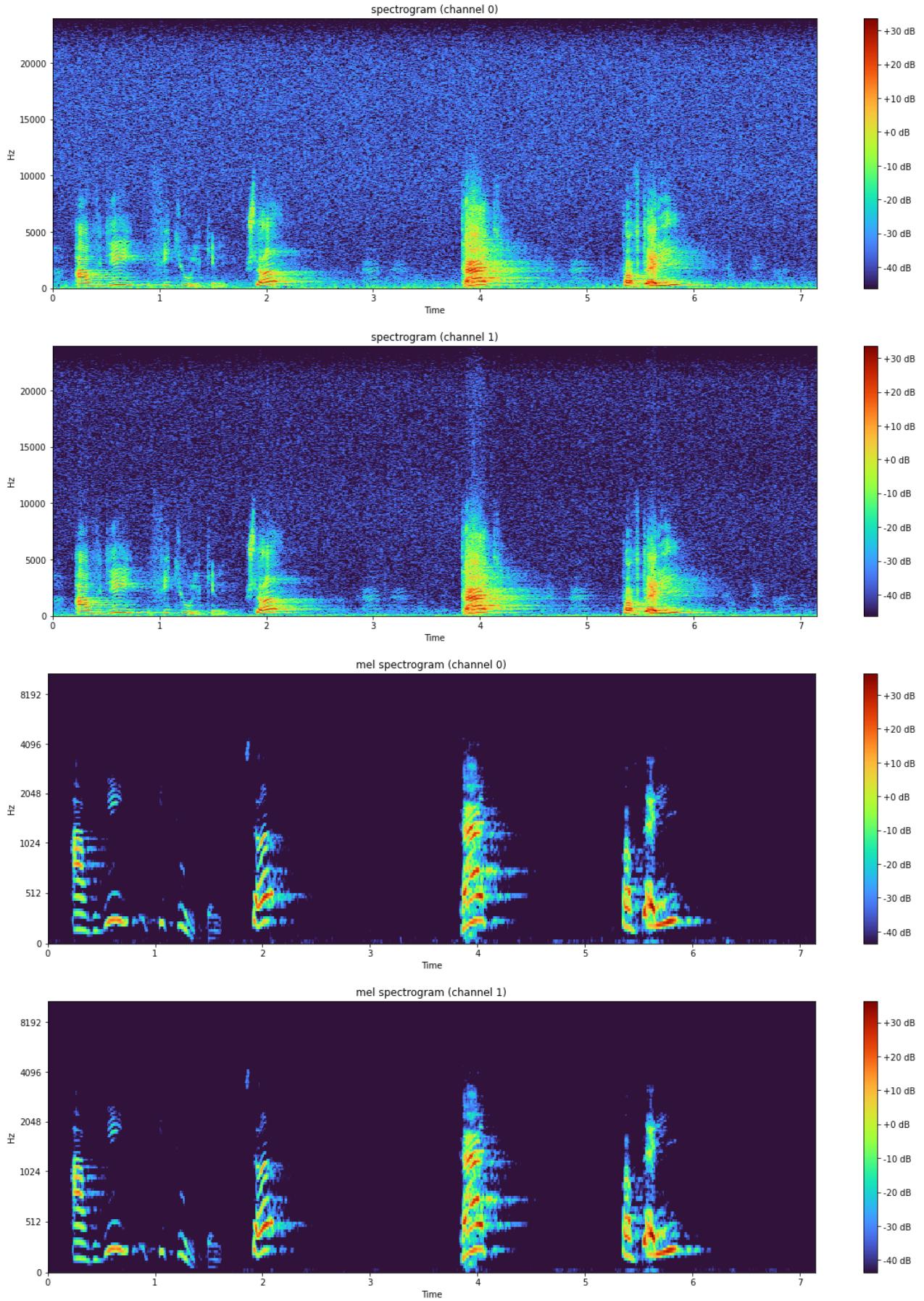
mel spectrogram (channel 1)



In [152...]

sh(129)

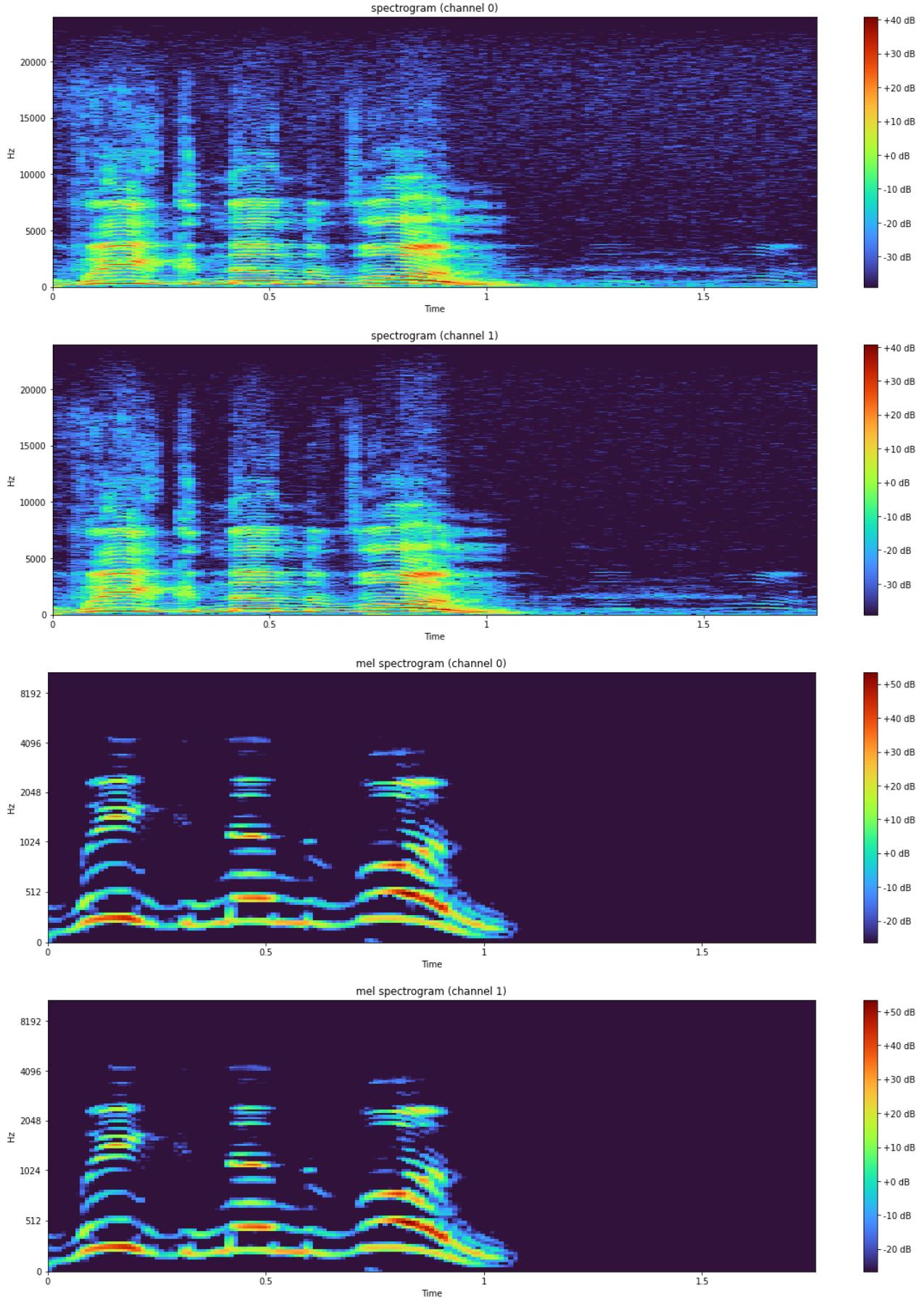
INFO : ./wavs/origin/0129.wav



In [153...]

sh(130)

INFO : ./wavs/origin/0130.wav

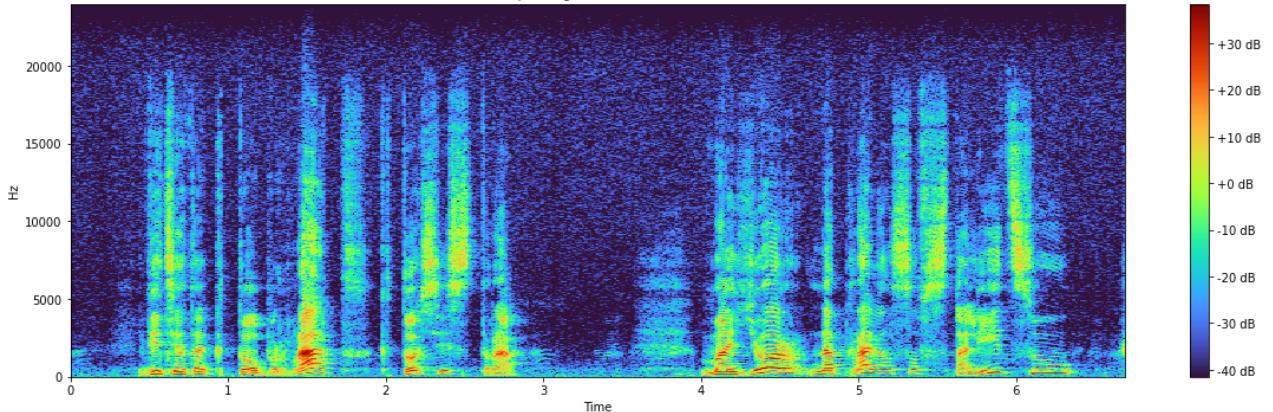


In [154...]

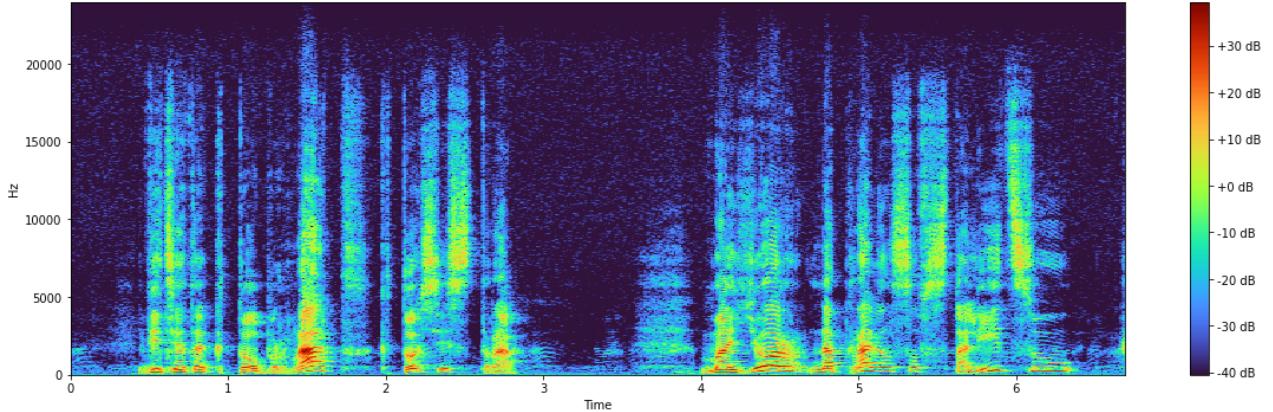
sh(131)

INFO : ./wavs/origin/0131.wav

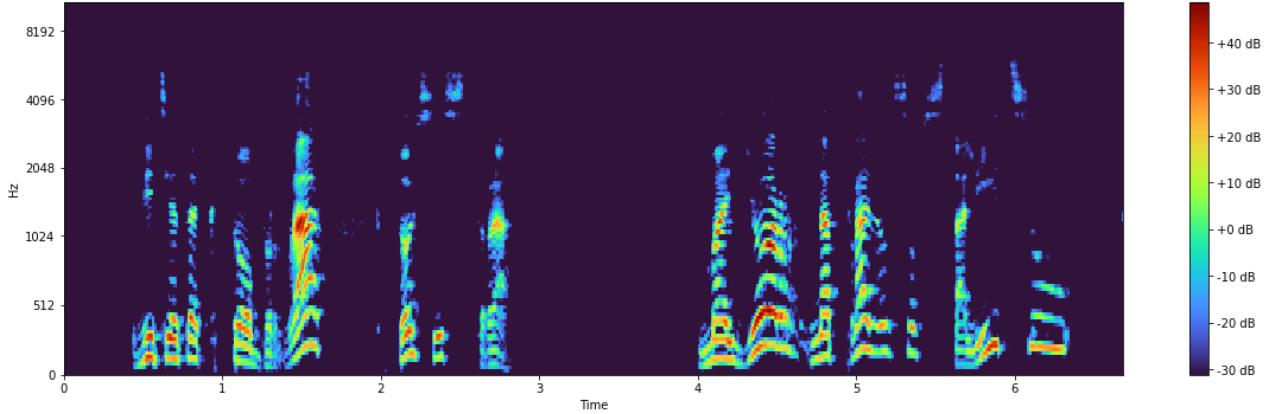
spectrogram (channel 0)



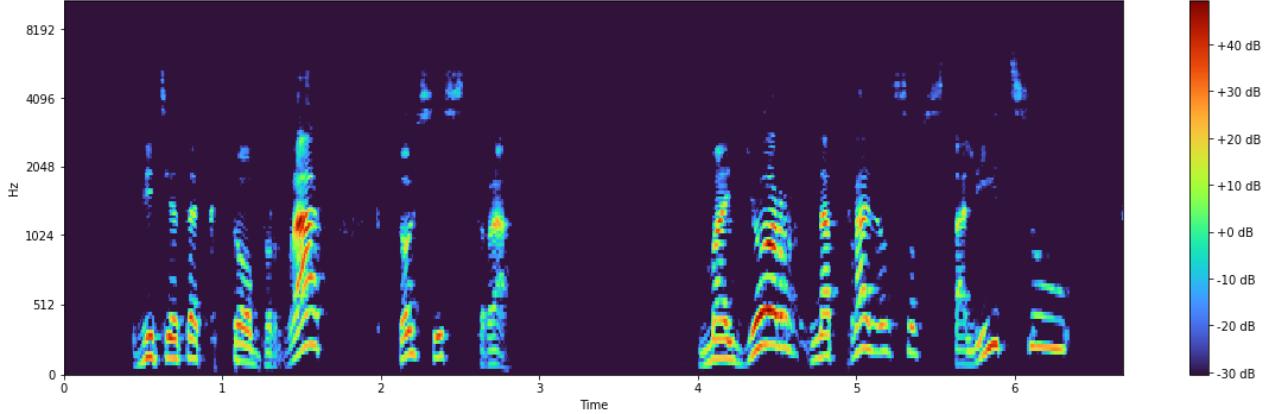
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

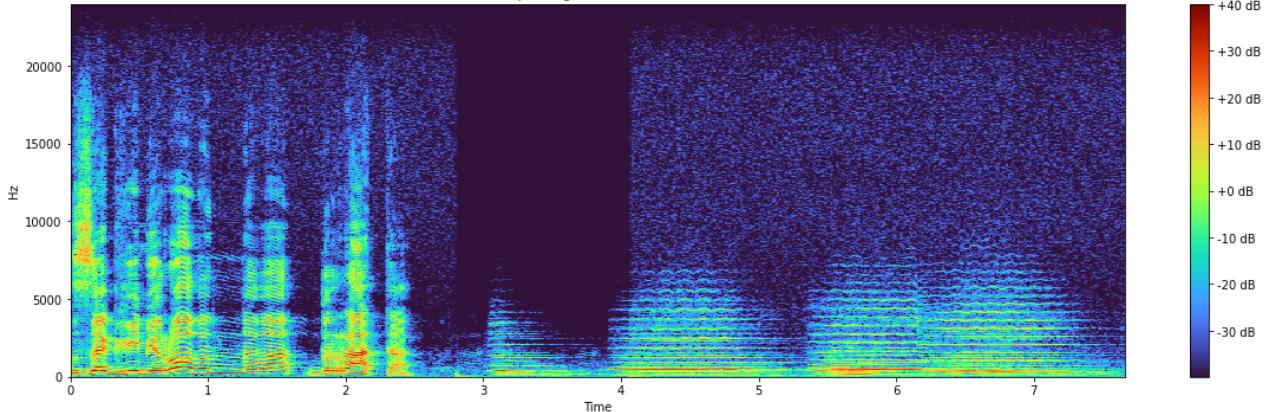


In [155...]

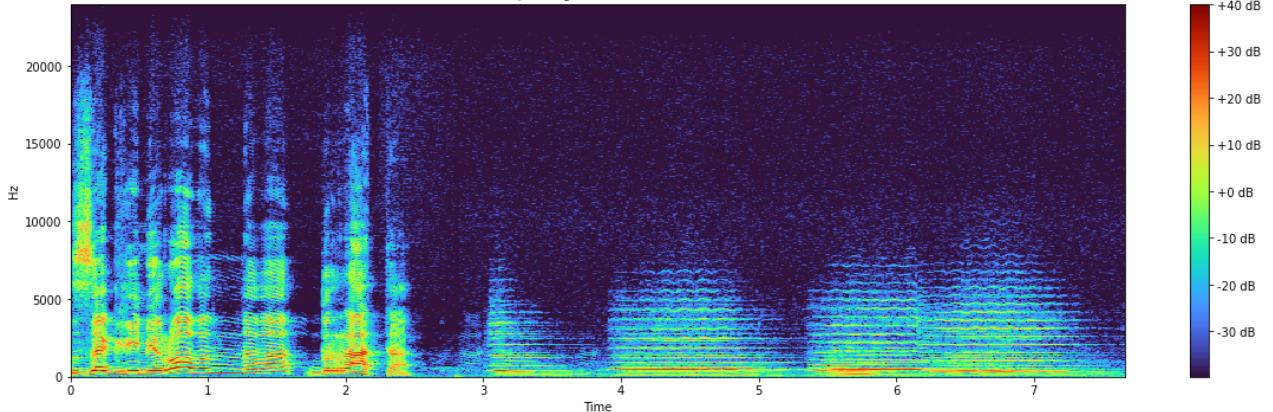
sh(132)

INFO : ./wavs/origin/0132.wav

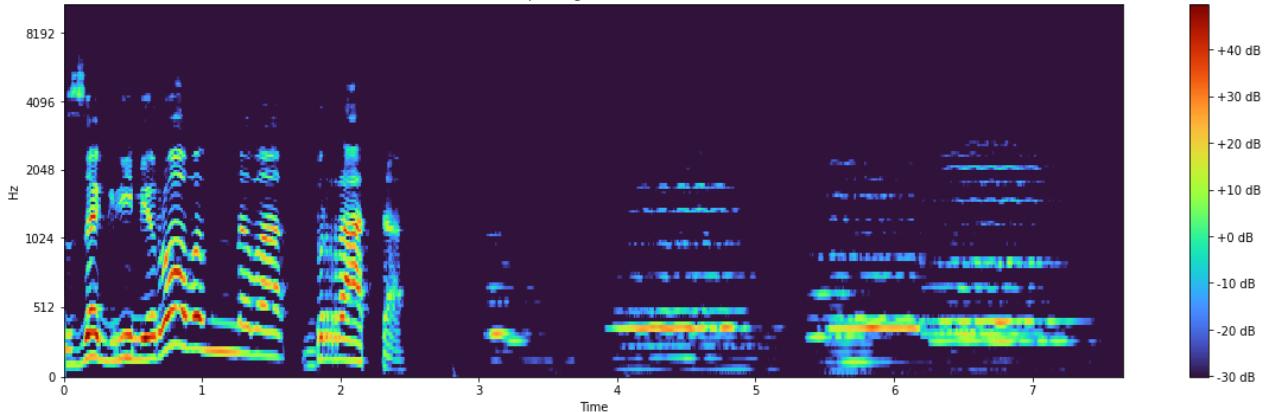
spectrogram (channel 0)



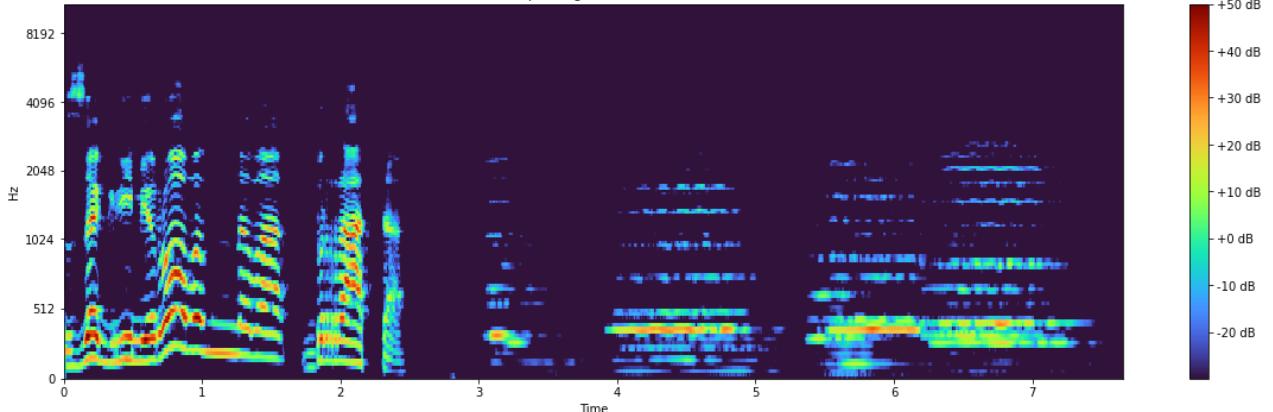
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

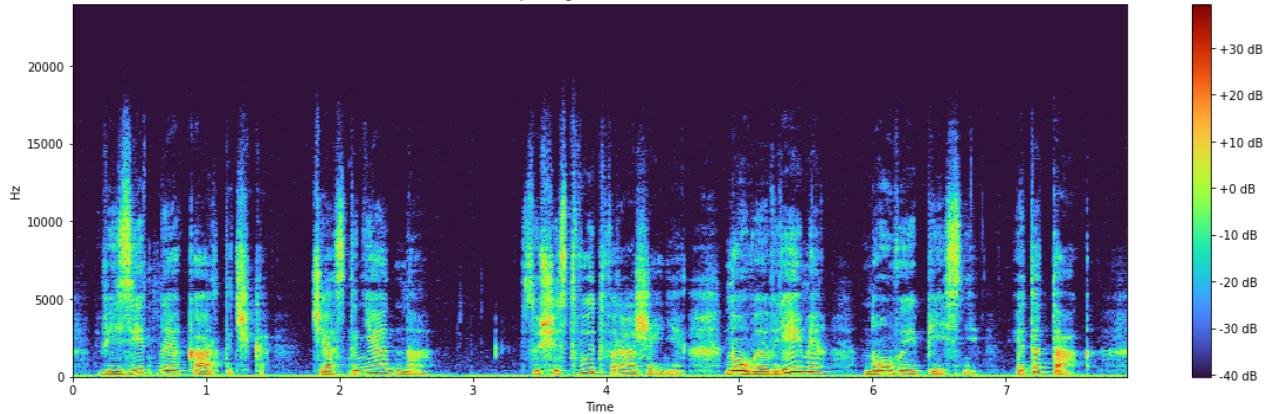


In [156...]

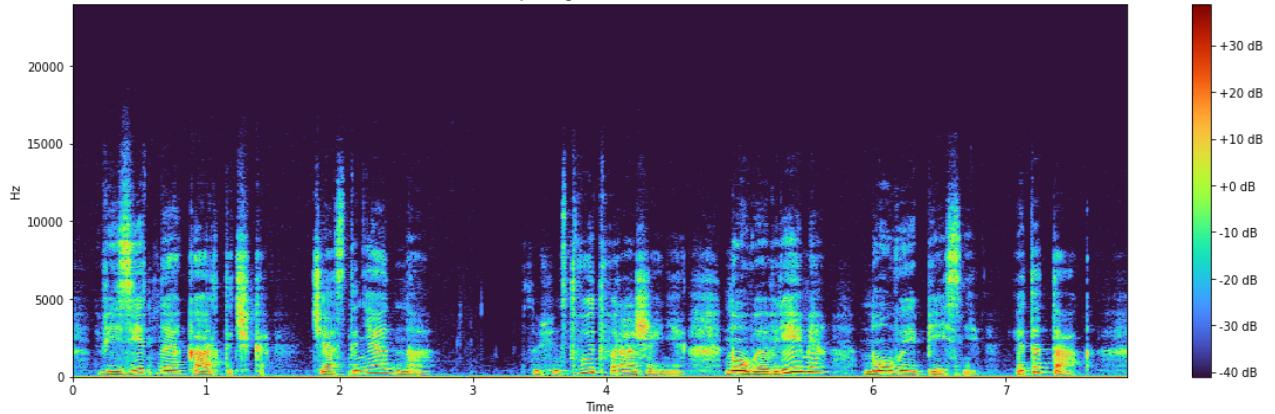
sh(133)

INFO : ./wavs/origin/0133.wav

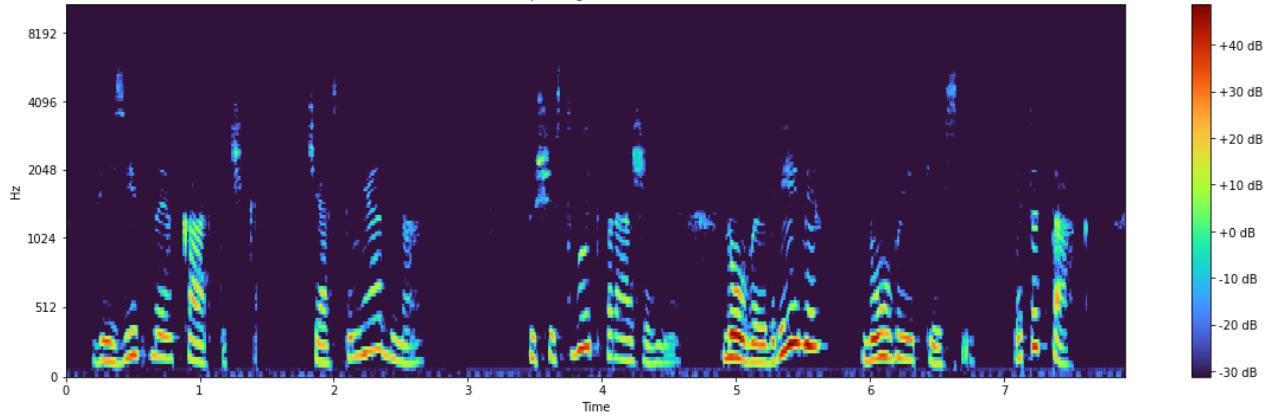
spectrogram (channel 0)



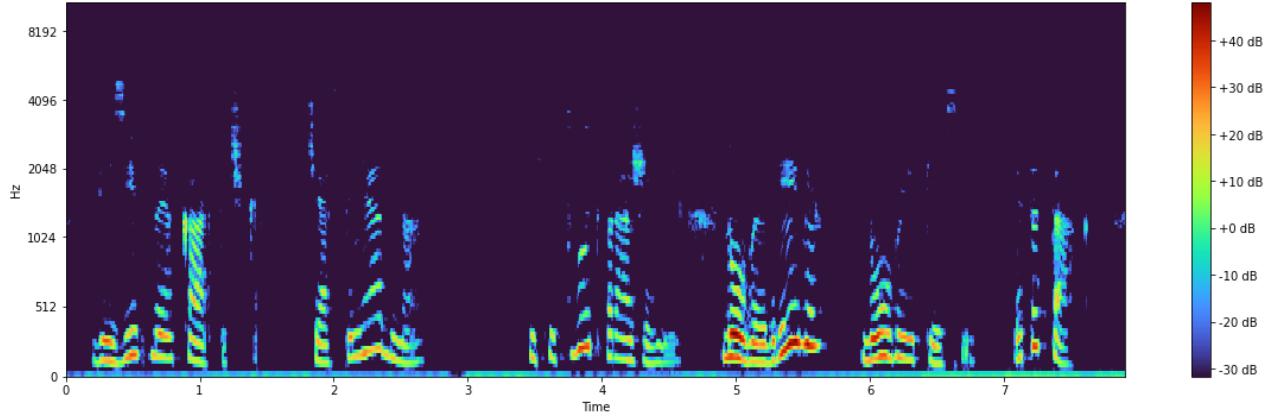
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

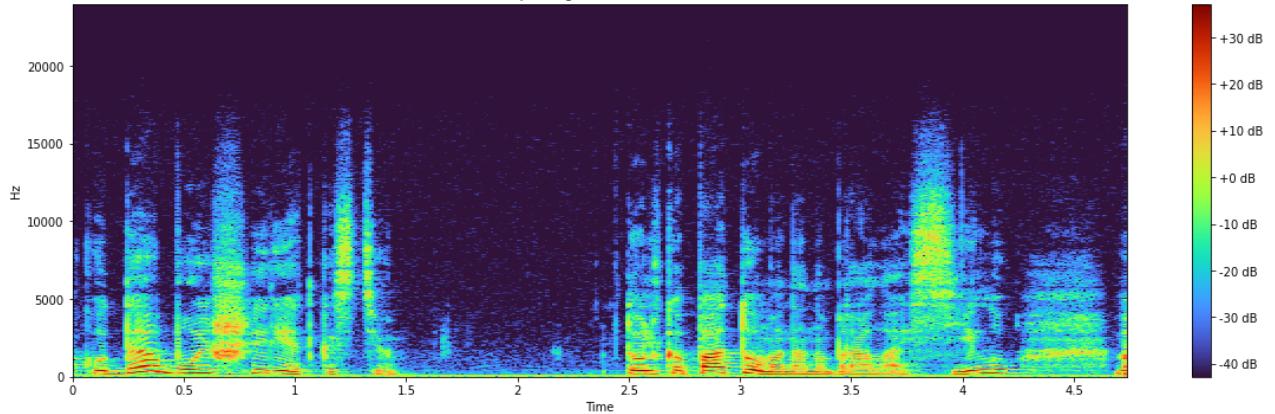


In [157...]

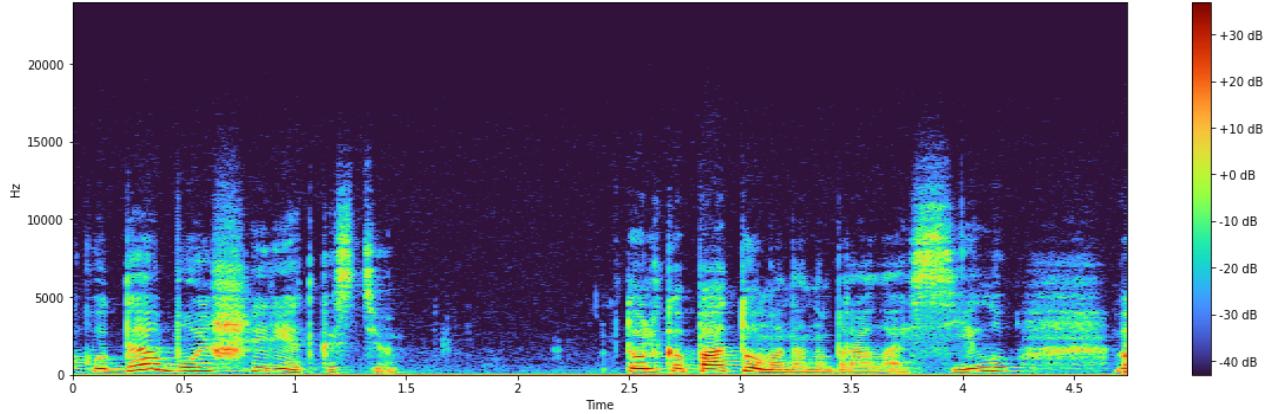
sh(134)

INFO : ./wavs/origin/0134.wav

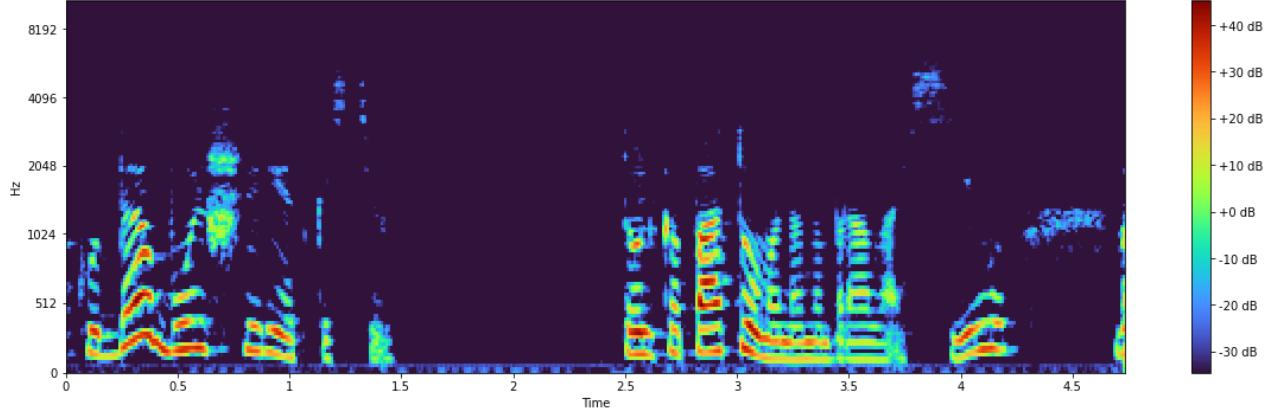
spectrogram (channel 0)



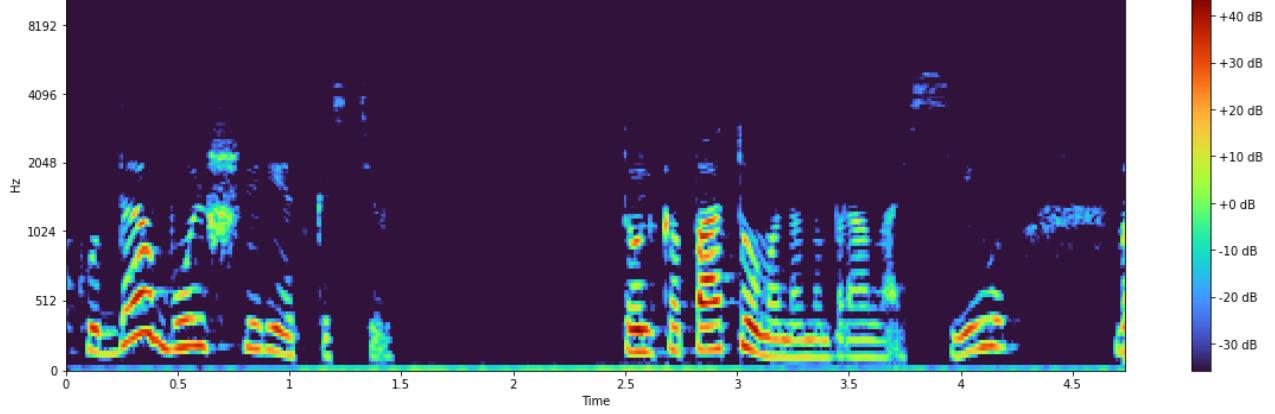
spectrogram (channel 1)



mel spectrogram (channel 0)



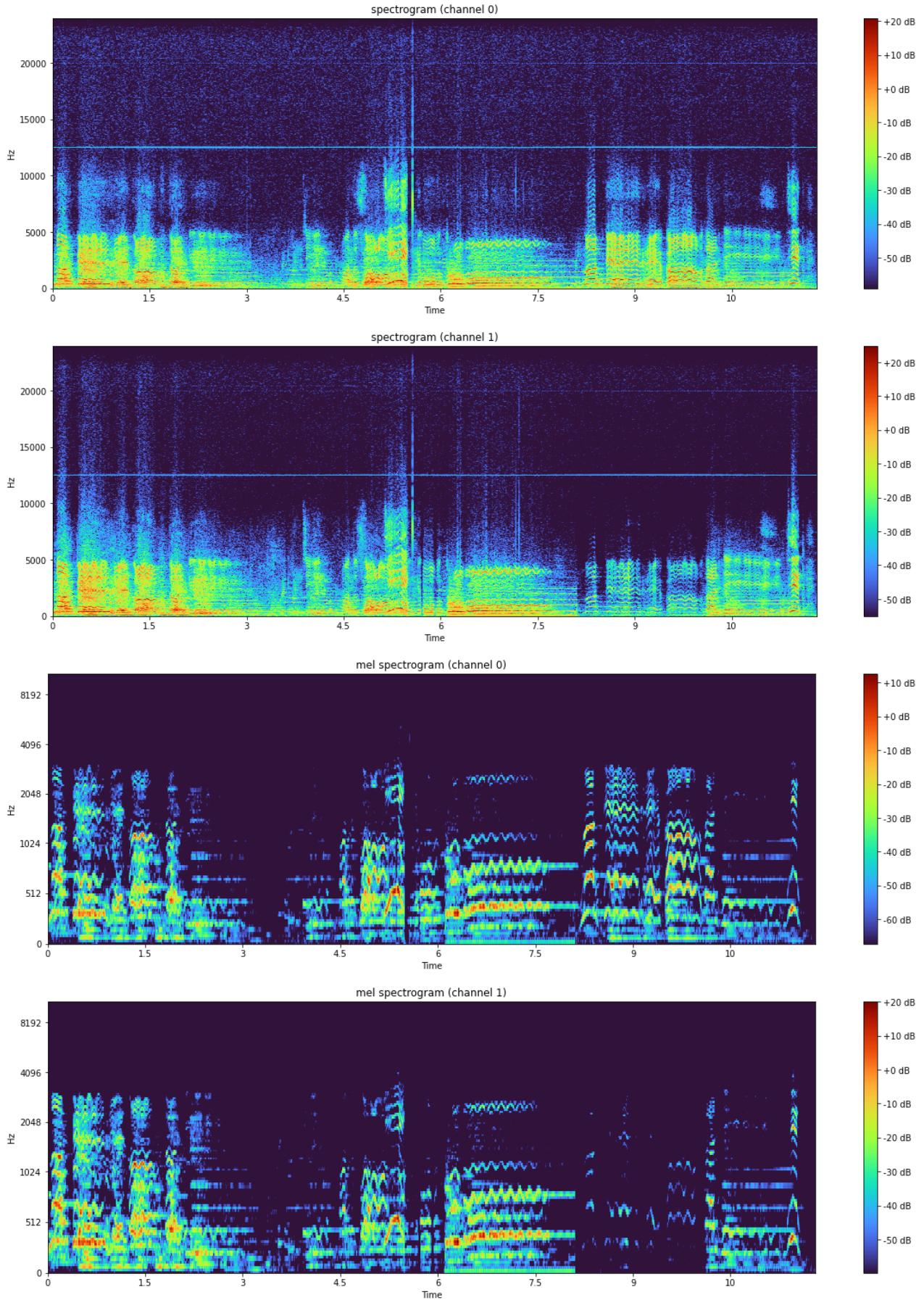
mel spectrogram (channel 1)



In [158...]

sh(135)

INFO : ./wavs/origin/0135.wav

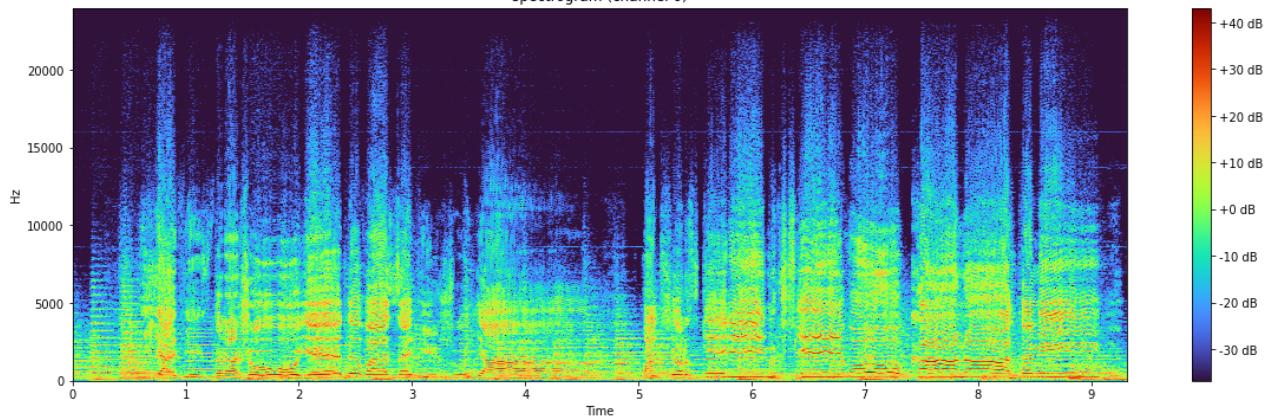


In [159...]

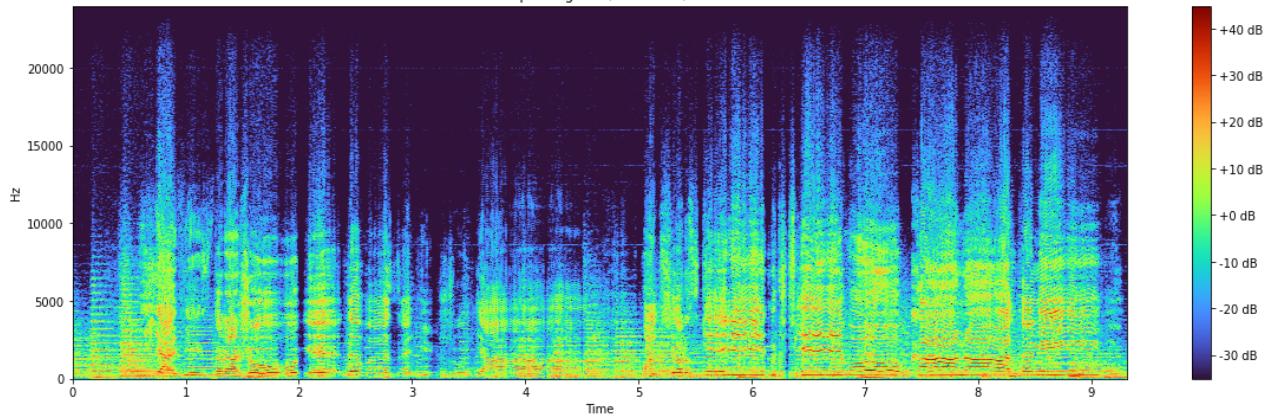
sh(136)

INFO : ./wavs/origin/0136.wav

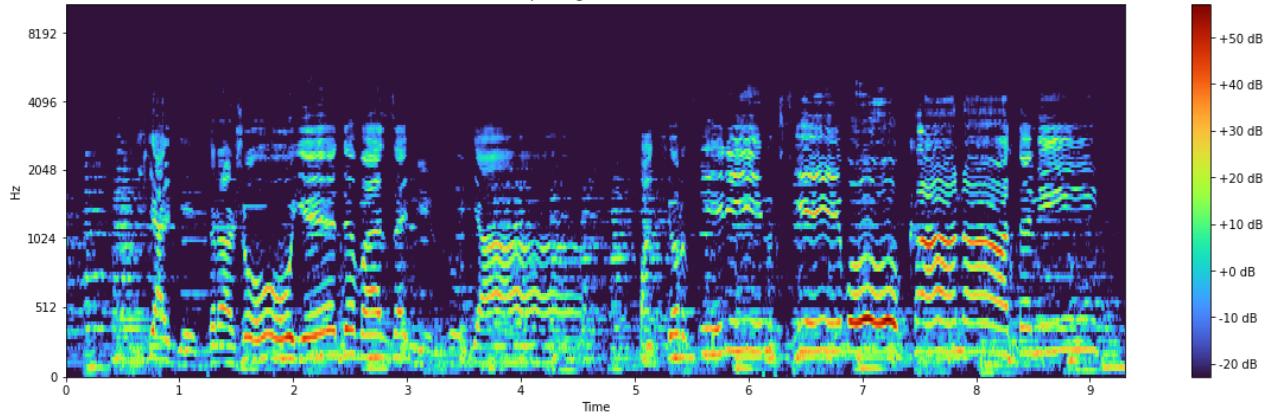
spectrogram (channel 0)



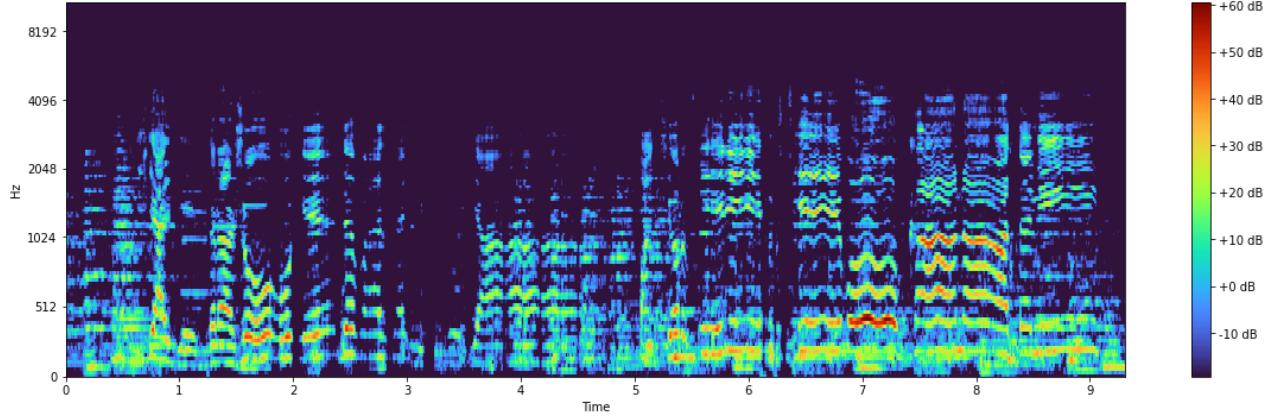
spectrogram (channel 1)



mel spectrogram (channel 0)



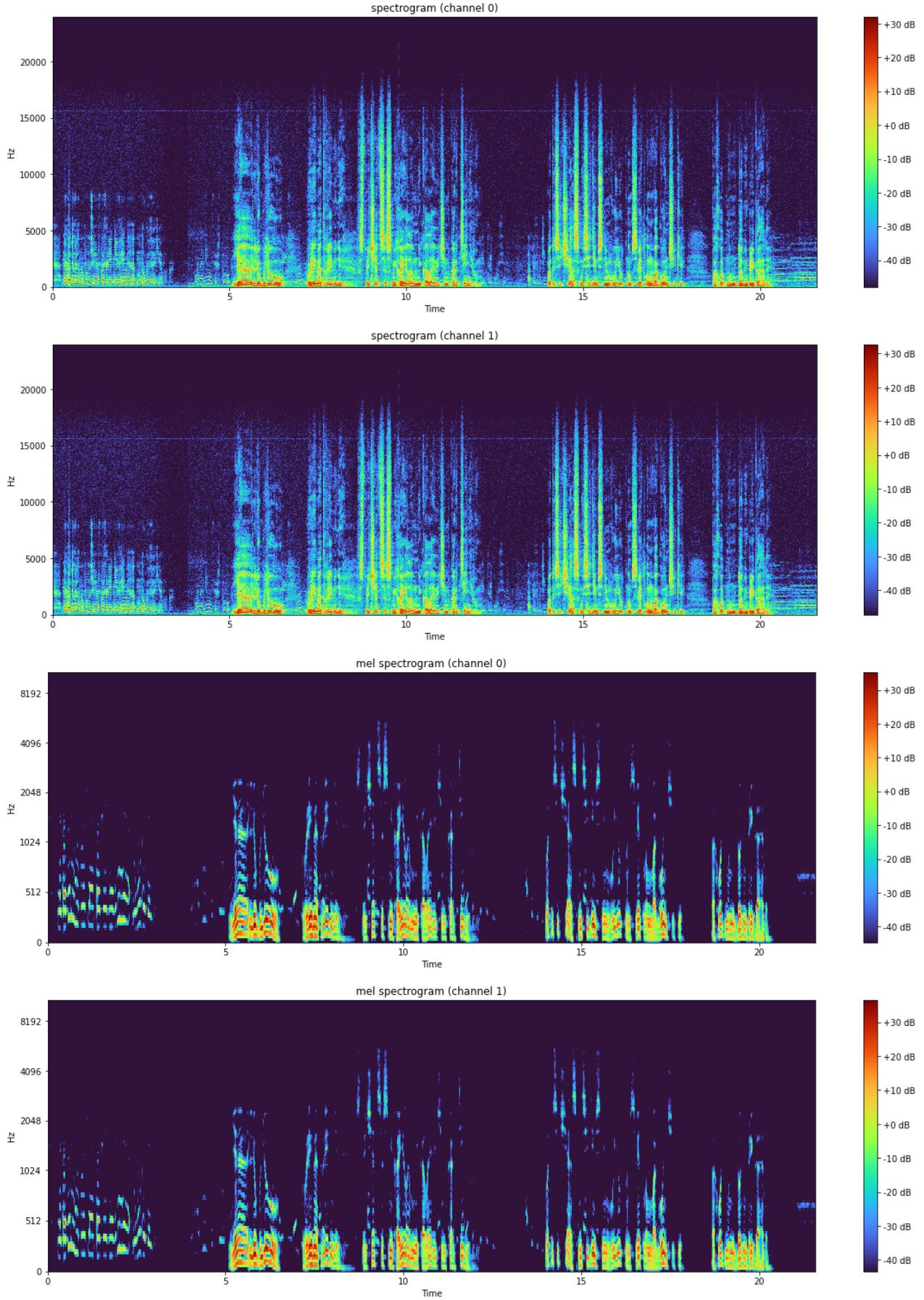
mel spectrogram (channel 1)



In [160...]

sh(137)

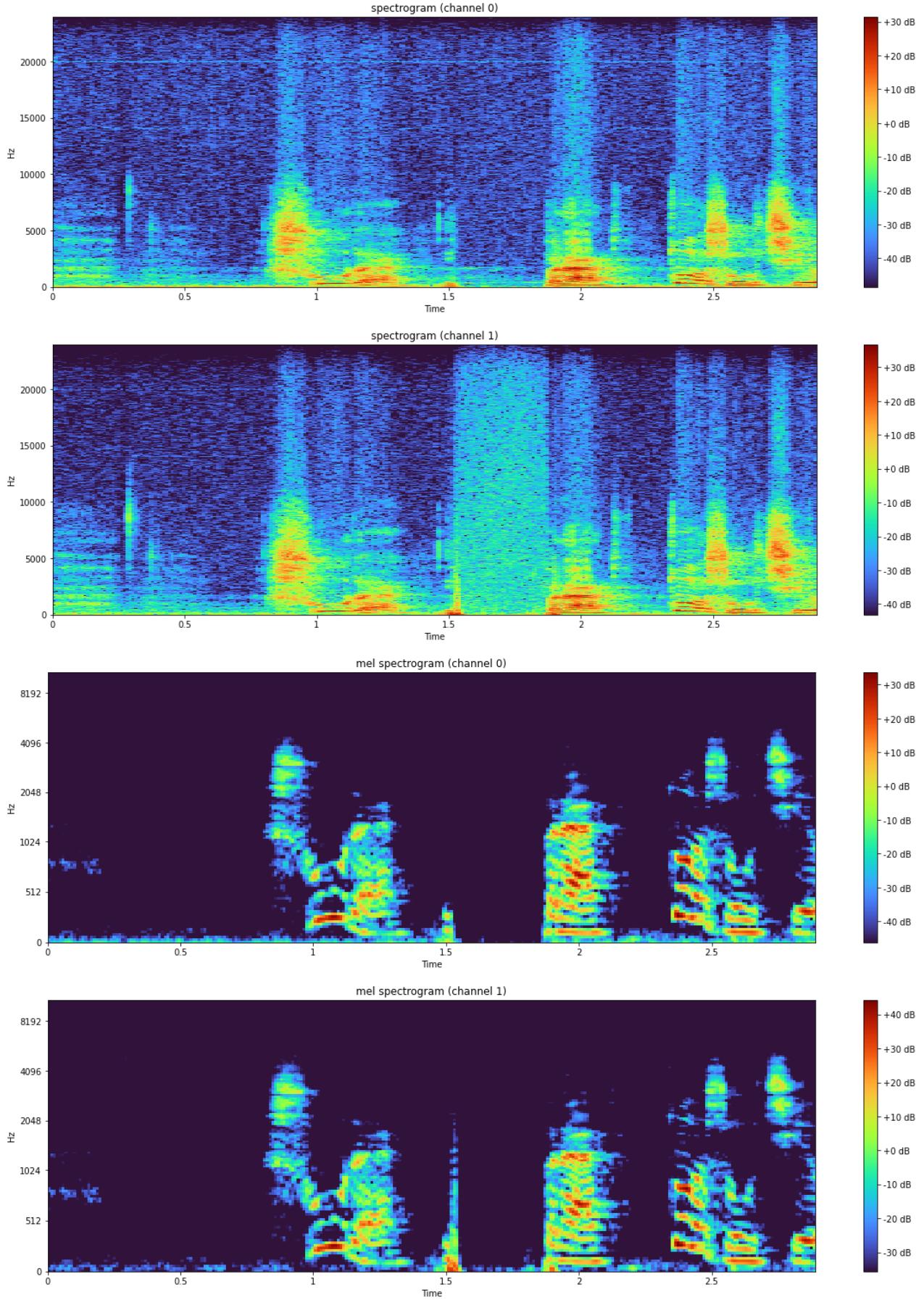
INFO : ./wavs/origin/0137.wav



In [161...]

sh(138)

INFO : ./wavs/origin/0138.wav

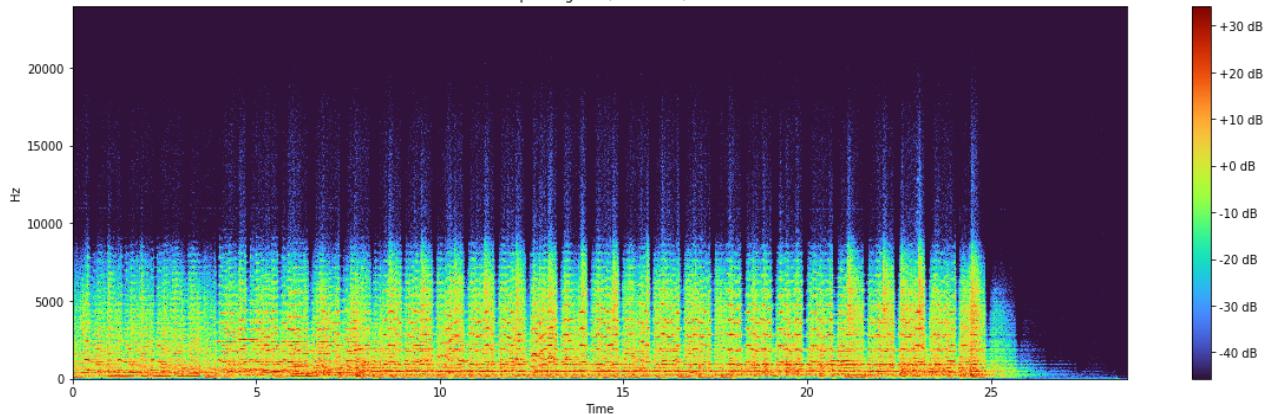


In [162...]

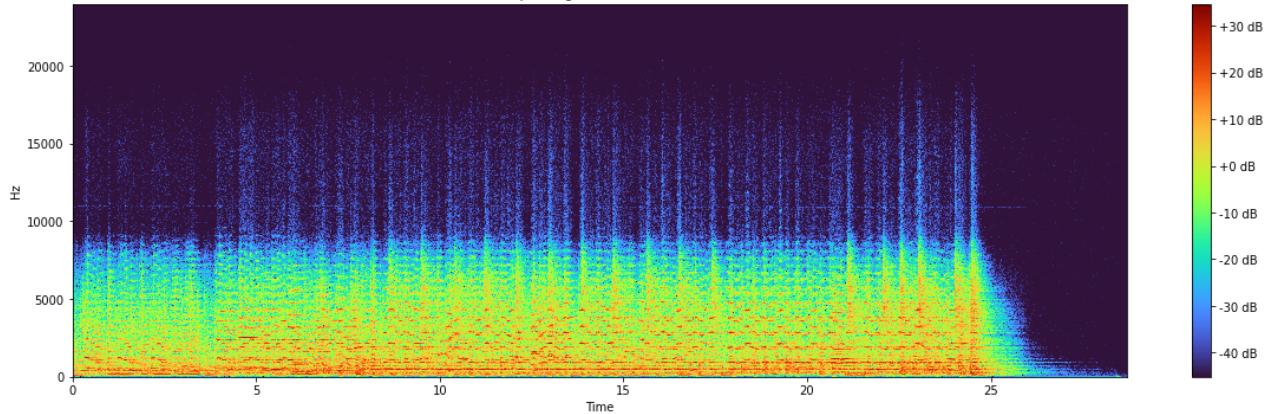
sh(139)

INFO : ./wavs/origin/0139.wav

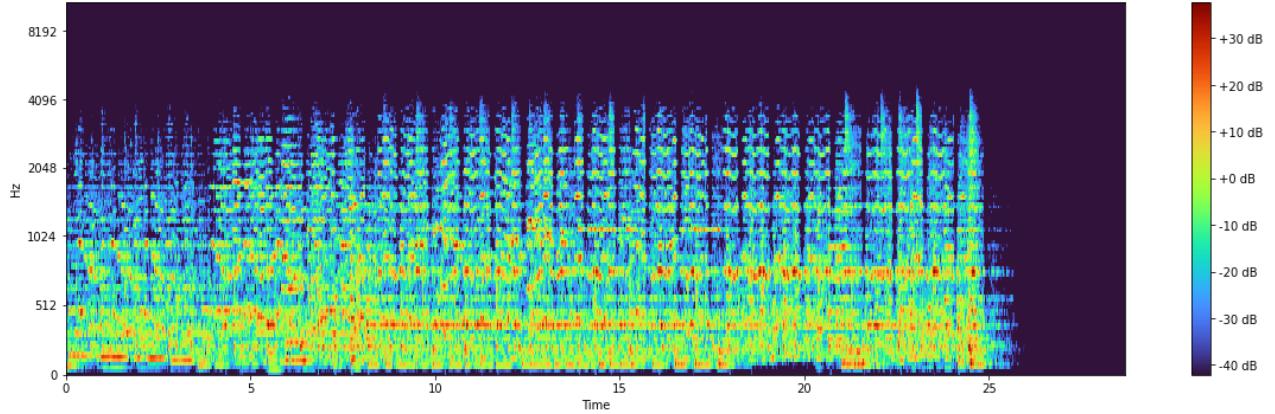
spectrogram (channel 0)



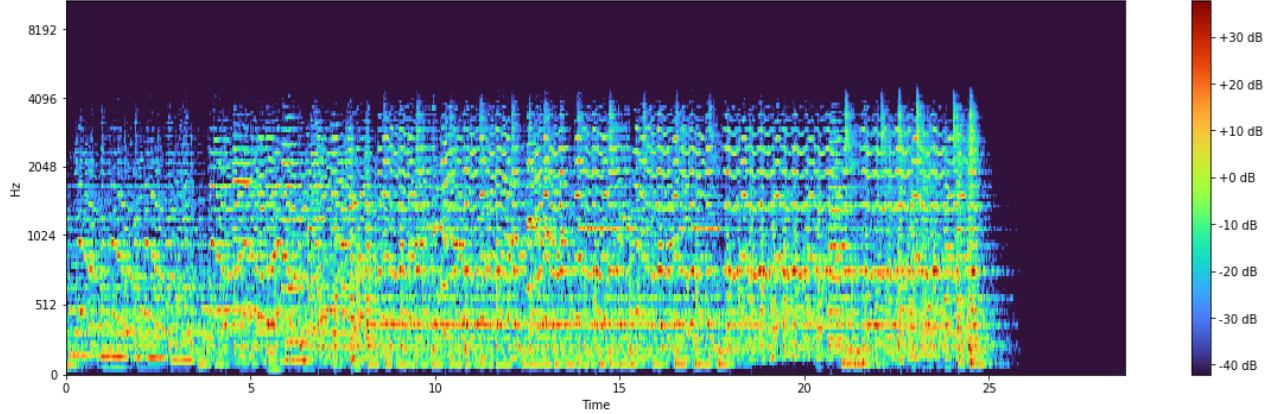
spectrogram (channel 1)



mel spectrogram (channel 0)



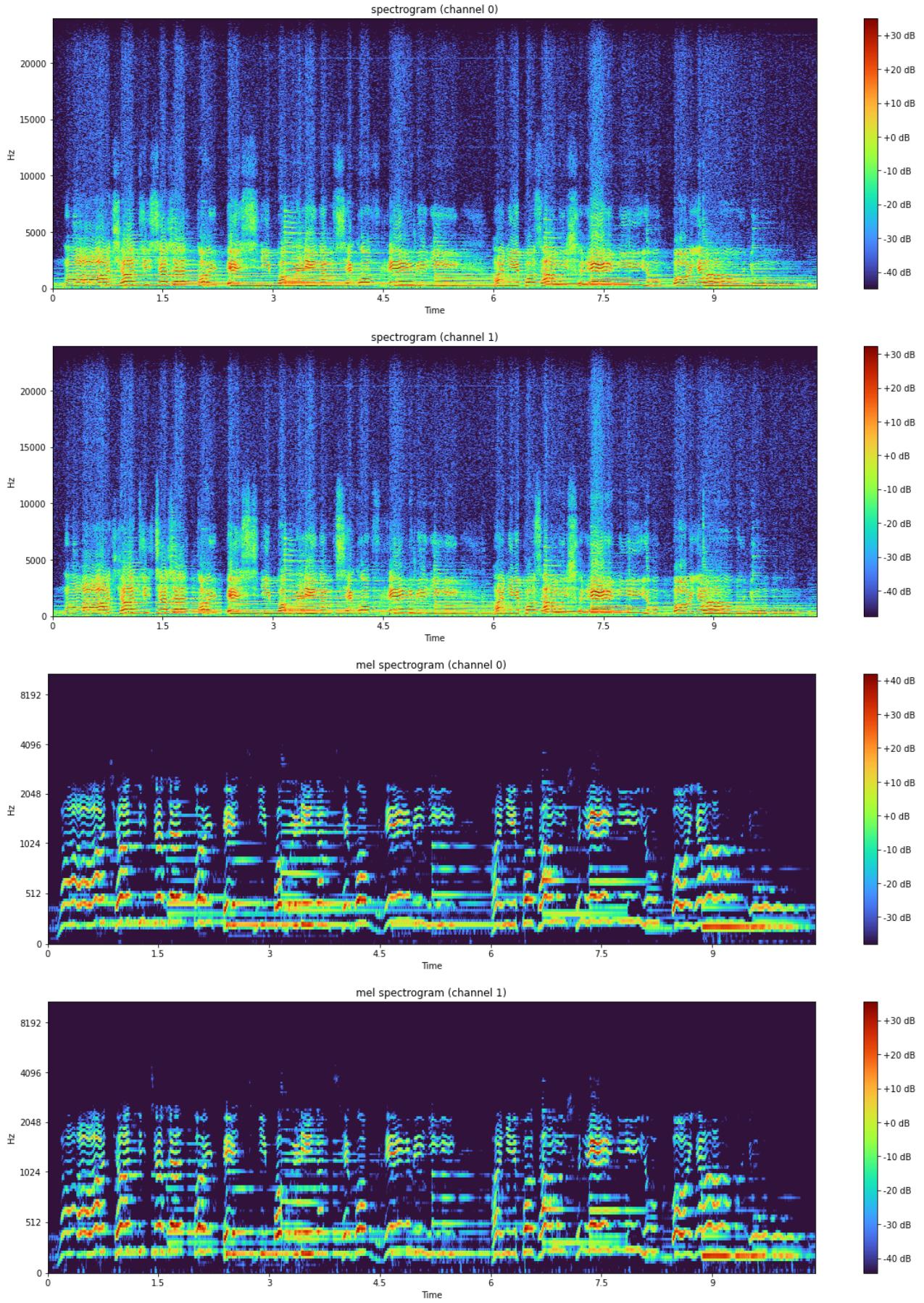
mel spectrogram (channel 1)



In [163...]

sh(140)

INFO : ./wavs/origin/0140.wav

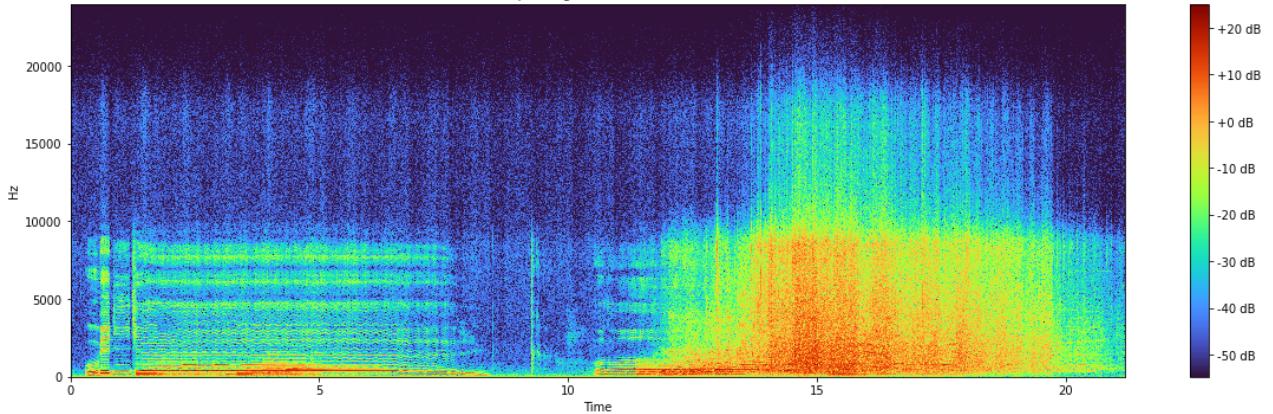


In [164...]

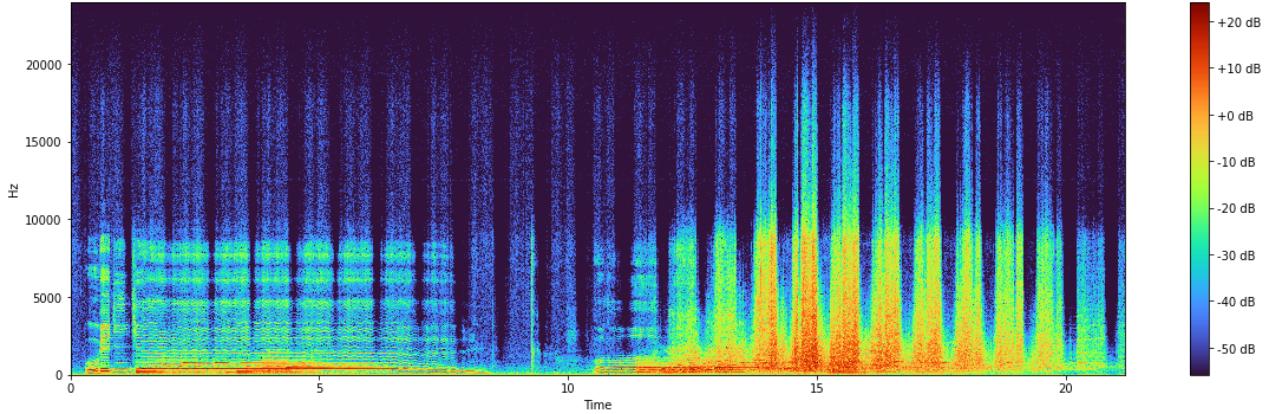
sh(141)

INFO : ./wavs/origin/0141.wav

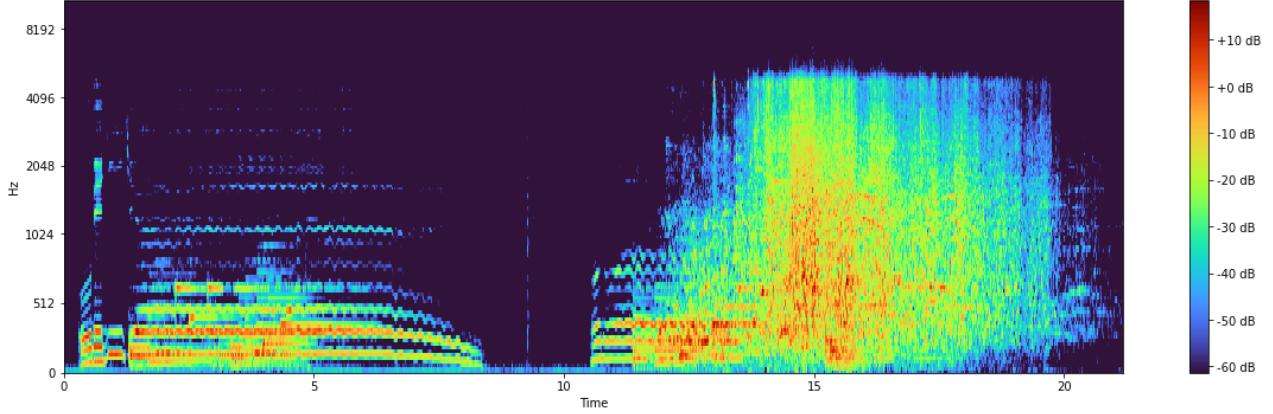
spectrogram (channel 0)



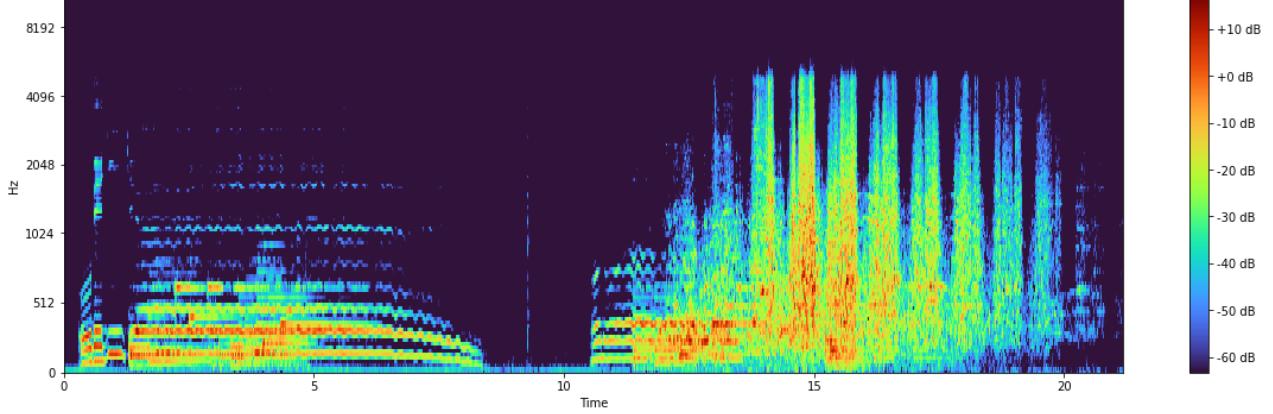
spectrogram (channel 1)



mel spectrogram (channel 0)



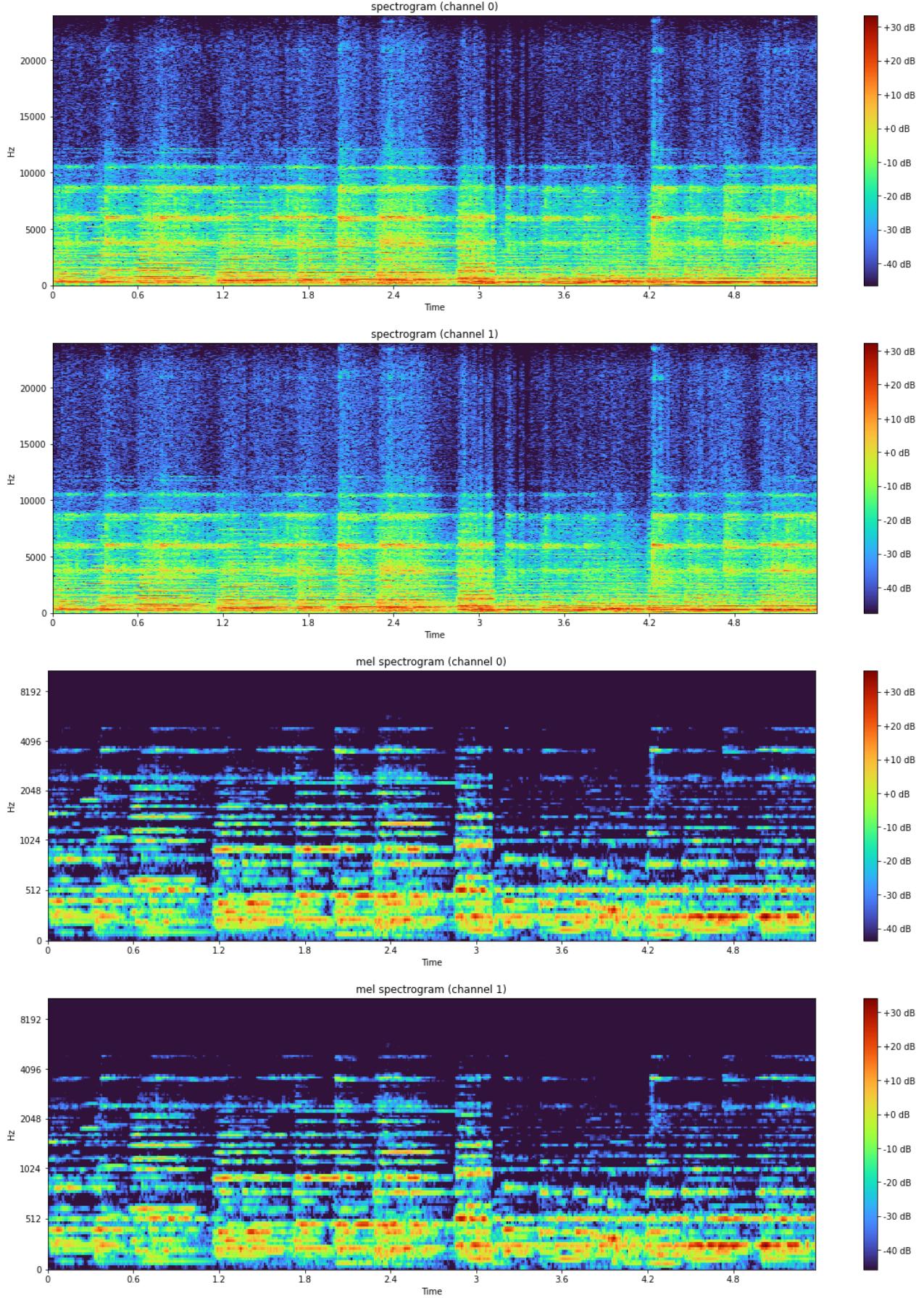
mel spectrogram (channel 1)



In [165...]

sh(142)

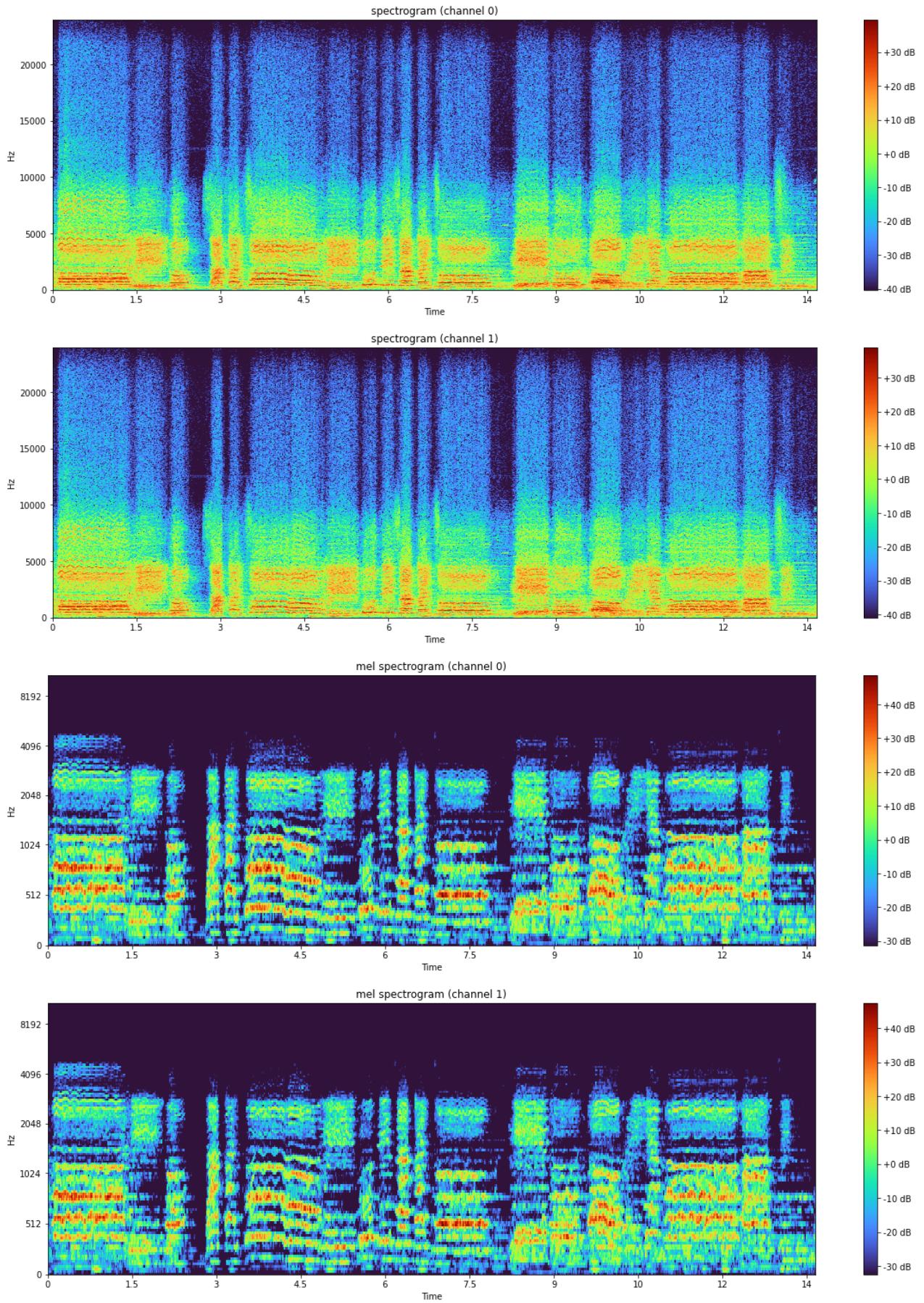
INFO : ./wavs/origin/0142.wav



In [166...]

sh(143)

INFO : ./wavs/origin/0143.wav

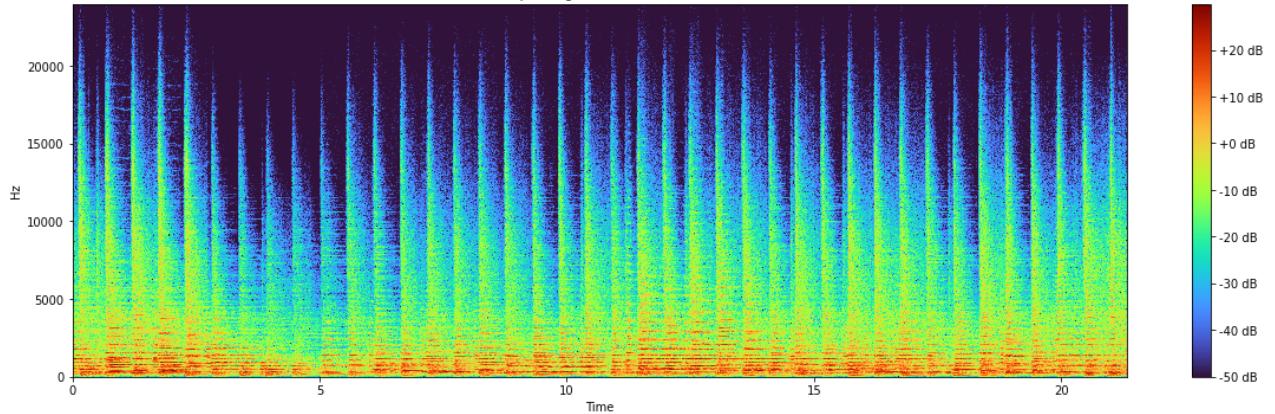


In [167...]

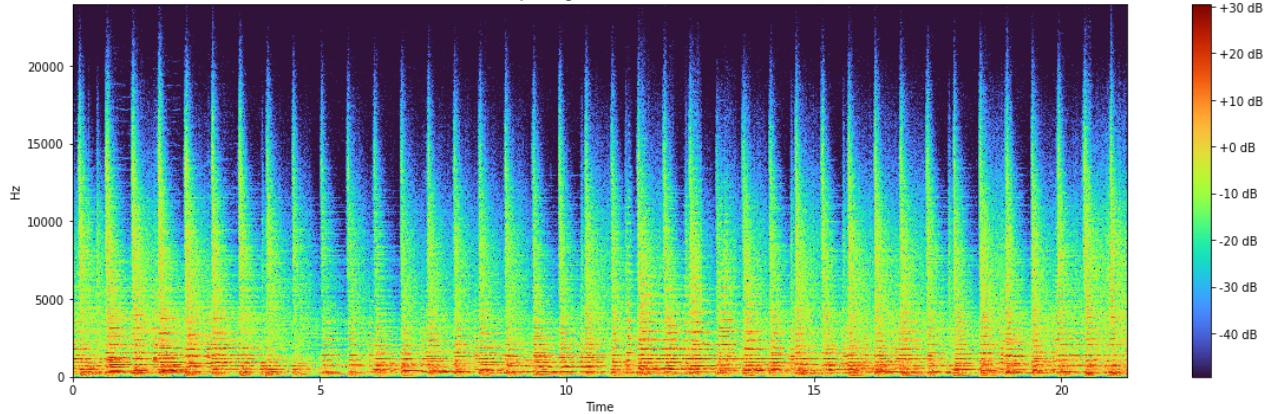
sh(144)

INFO : ./wavs/origin/0144.wav

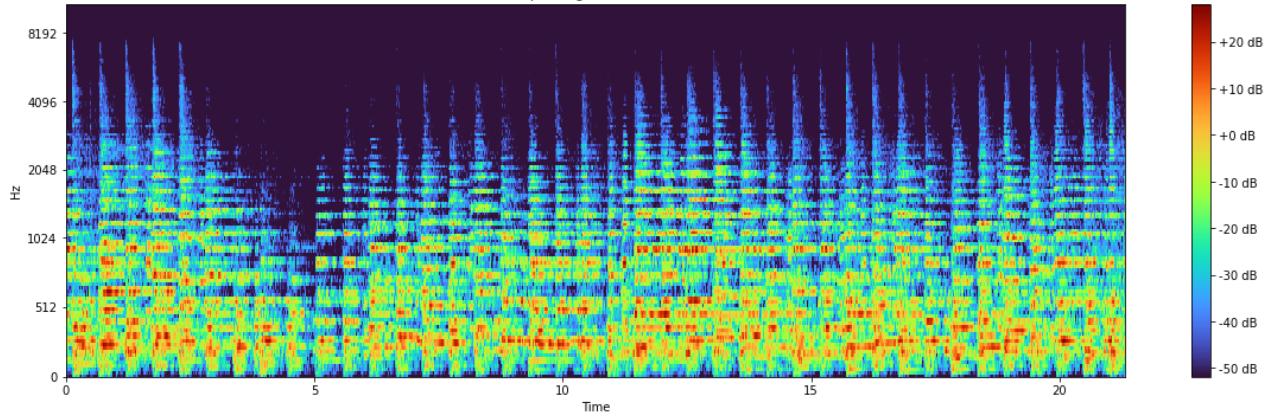
spectrogram (channel 0)



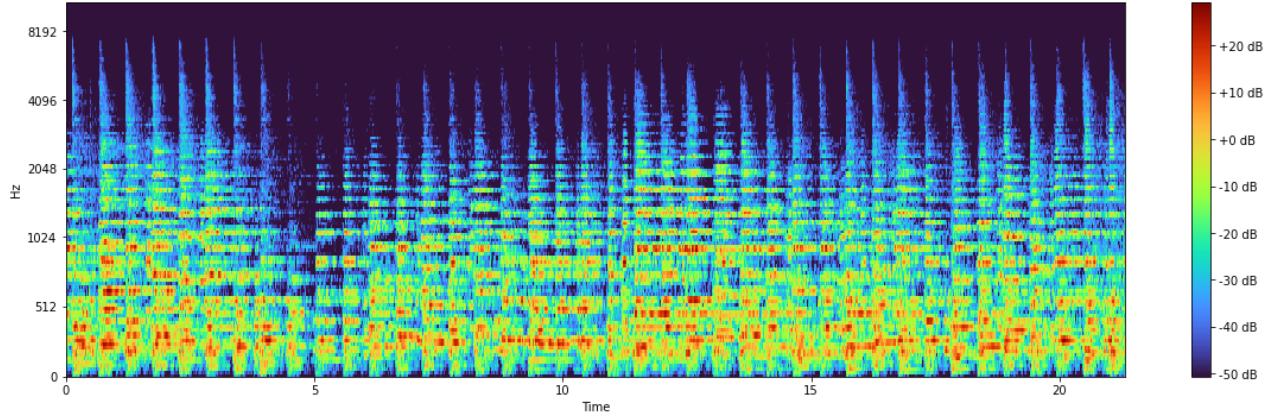
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

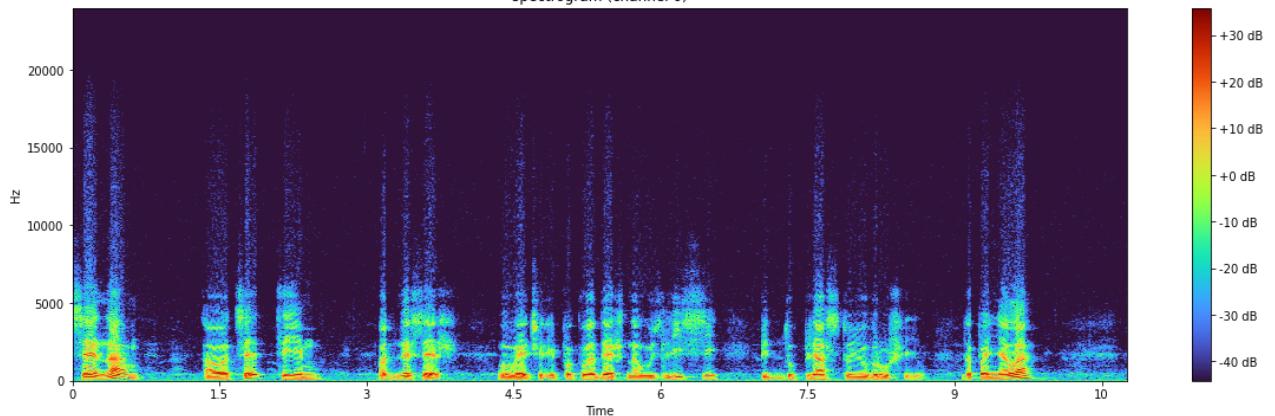


In [168...]

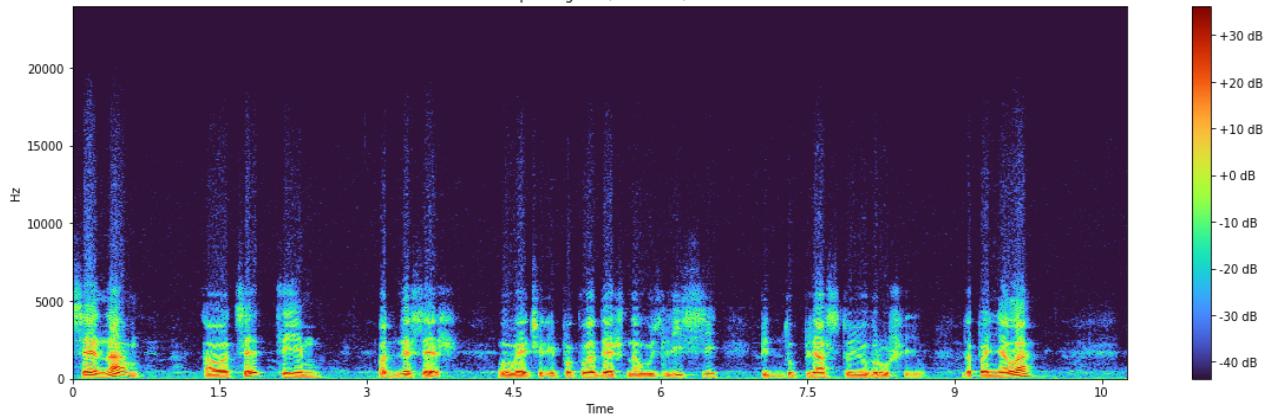
sh(145)

INFO : ./wavs/origin/0145.wav

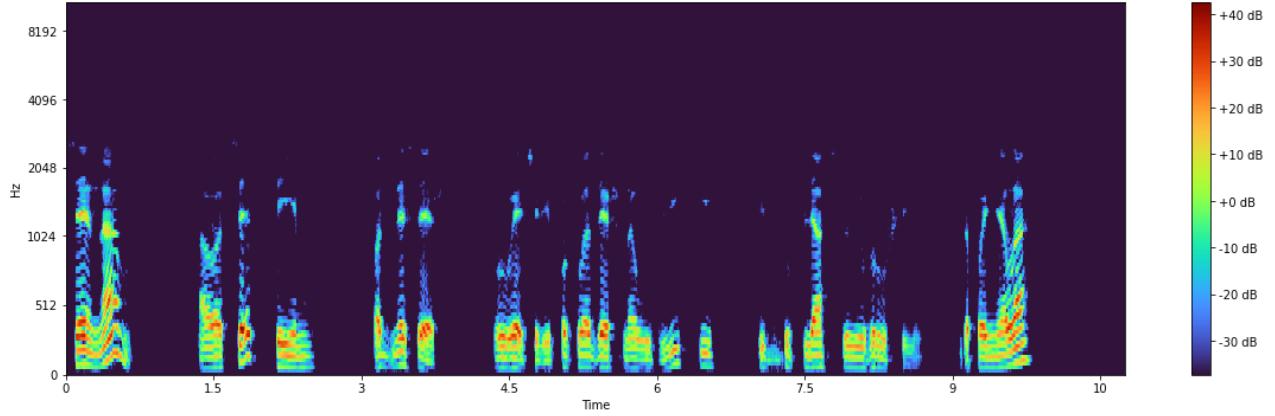
spectrogram (channel 0)



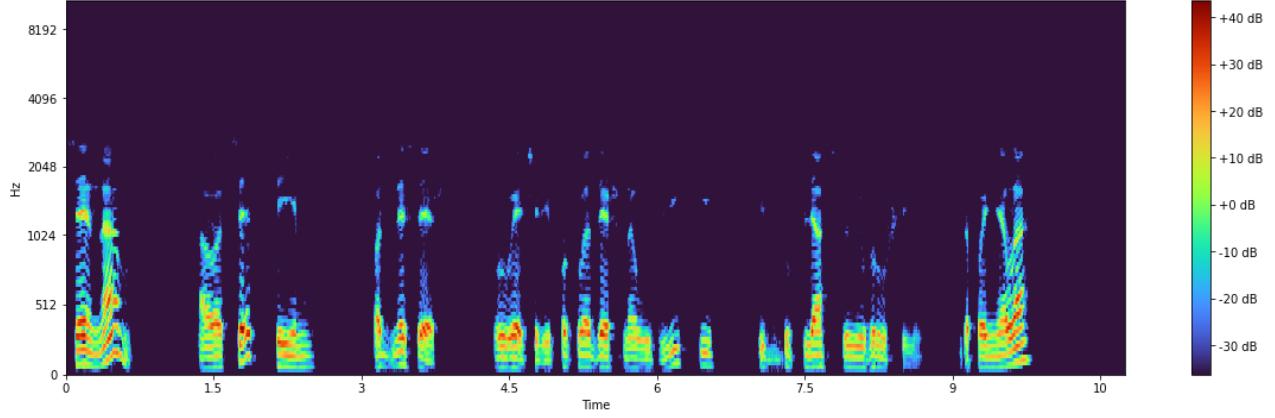
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

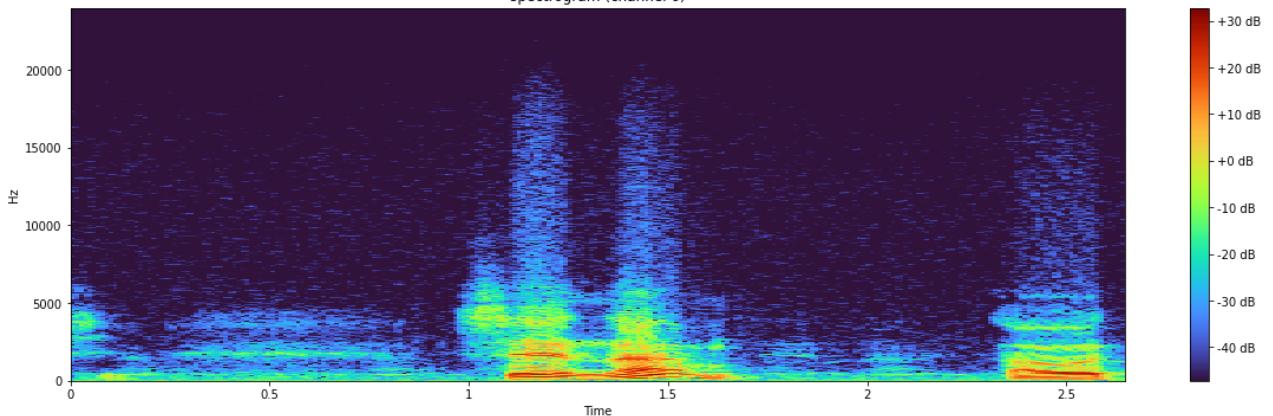


In [169...]

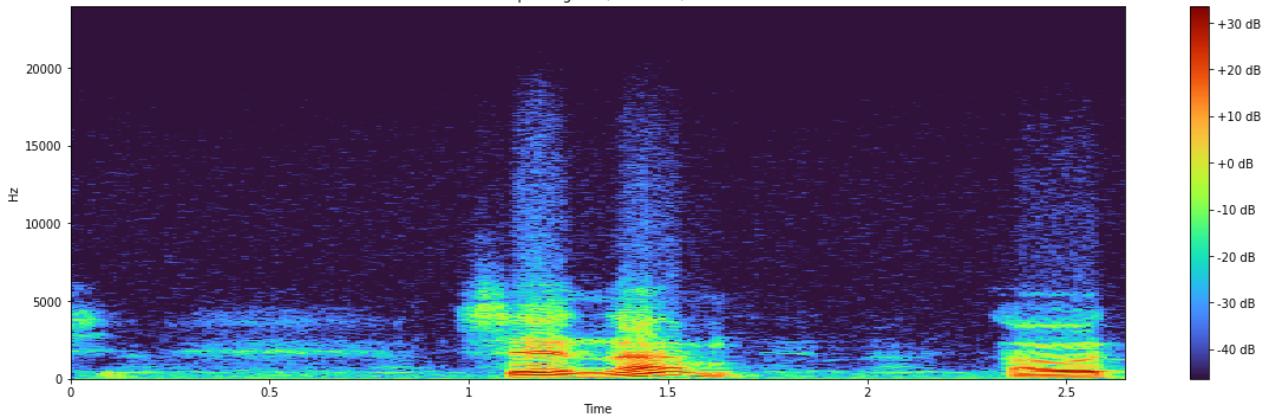
sh(146)

INFO : ./wavs/origin/0146.wav

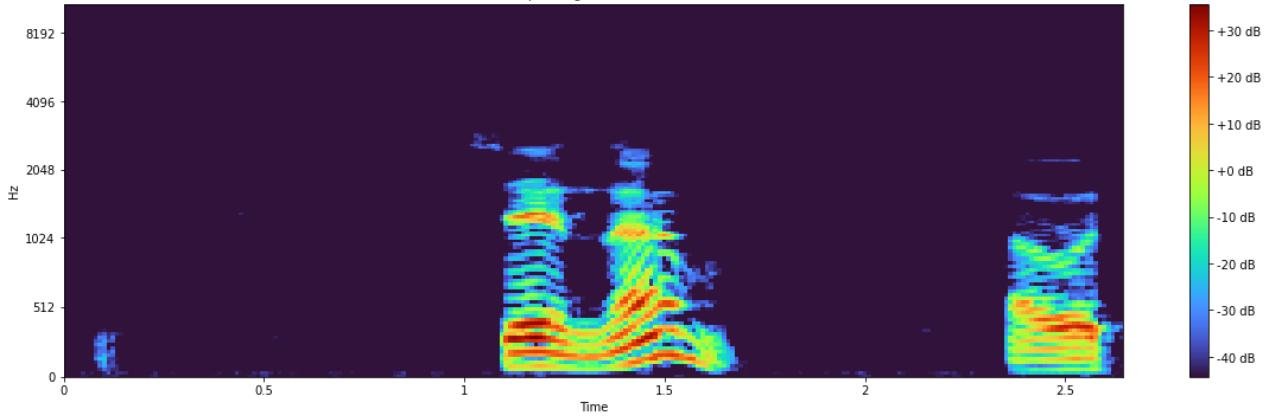
spectrogram (channel 0)



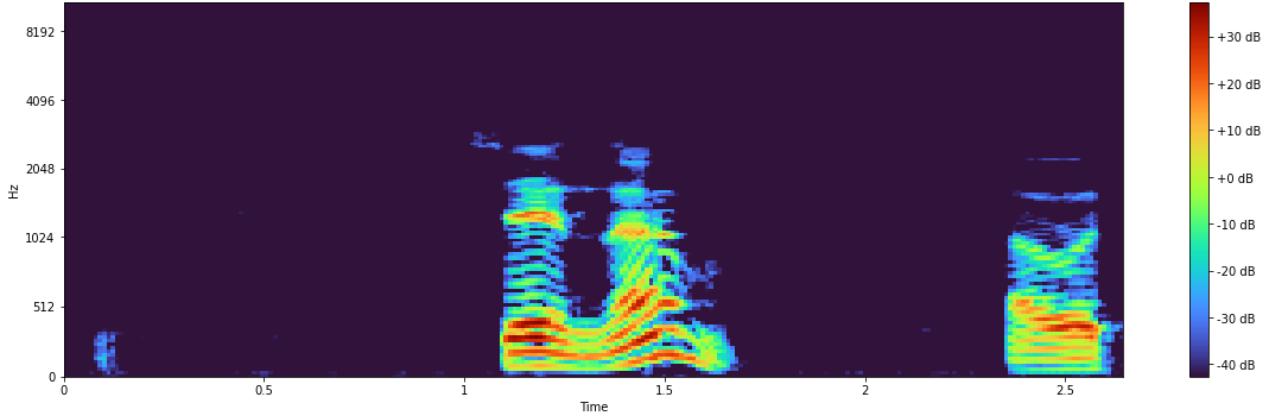
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

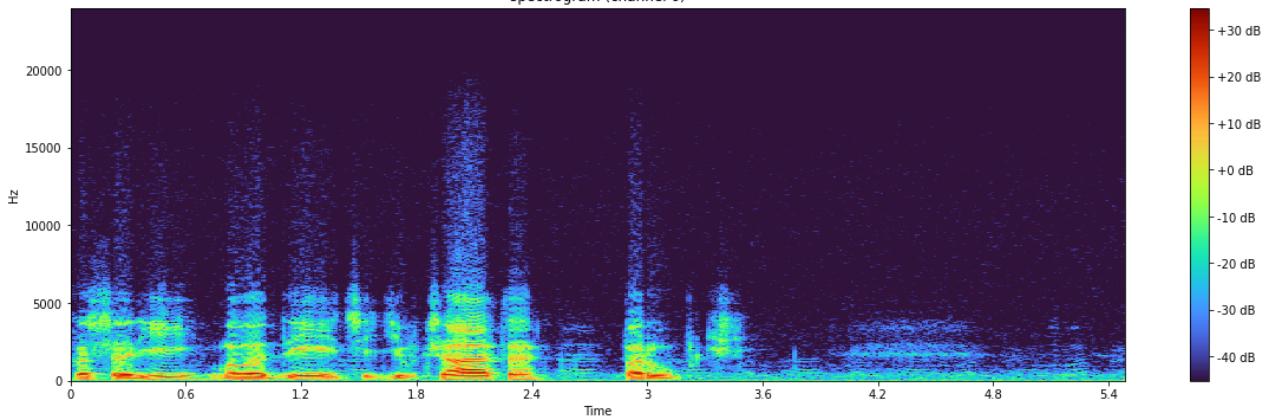


In [170...]

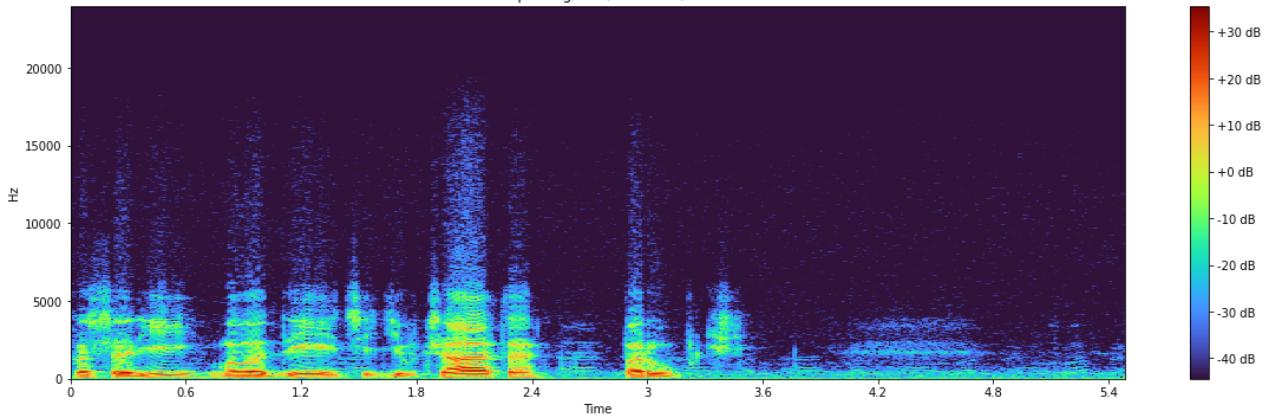
sh(147)

INFO : ./wavs/origin/0147.wav

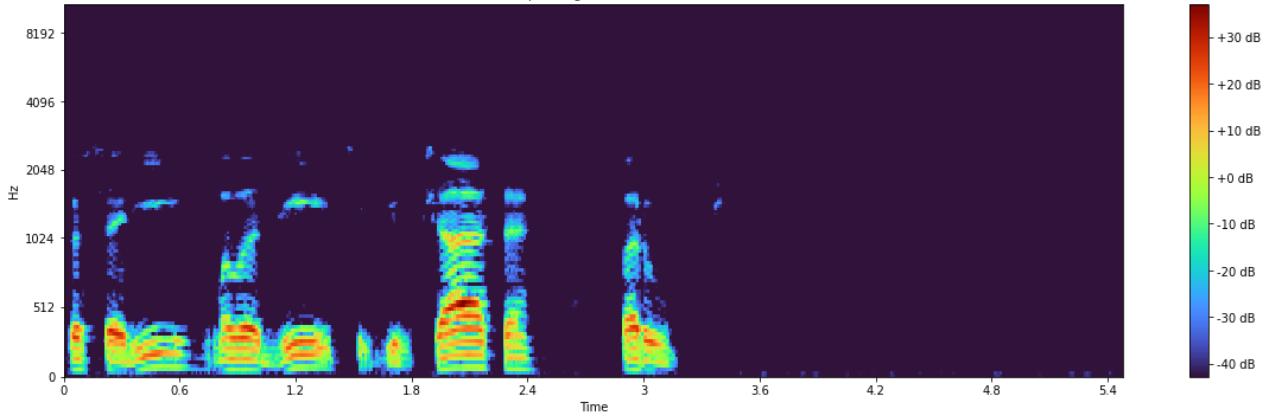
spectrogram (channel 0)



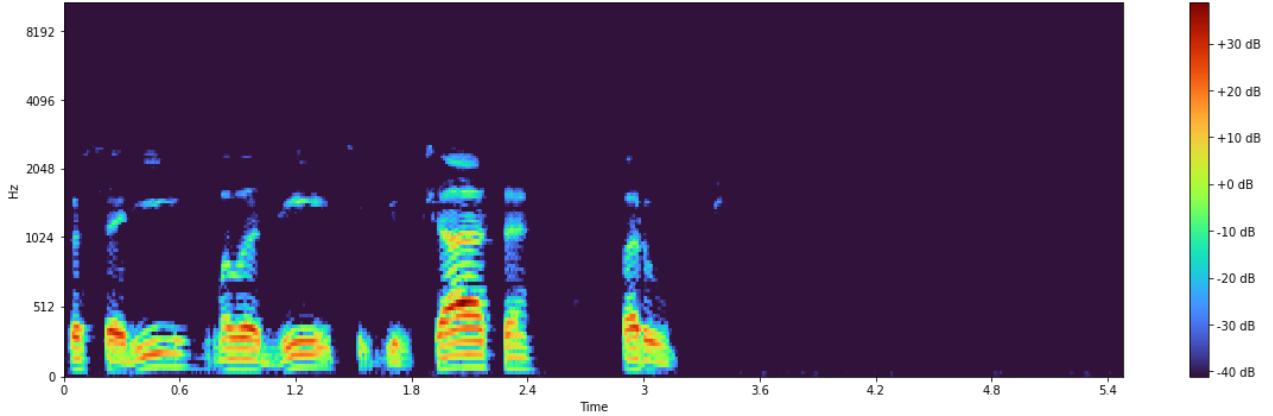
spectrogram (channel 1)



mel spectrogram (channel 0)



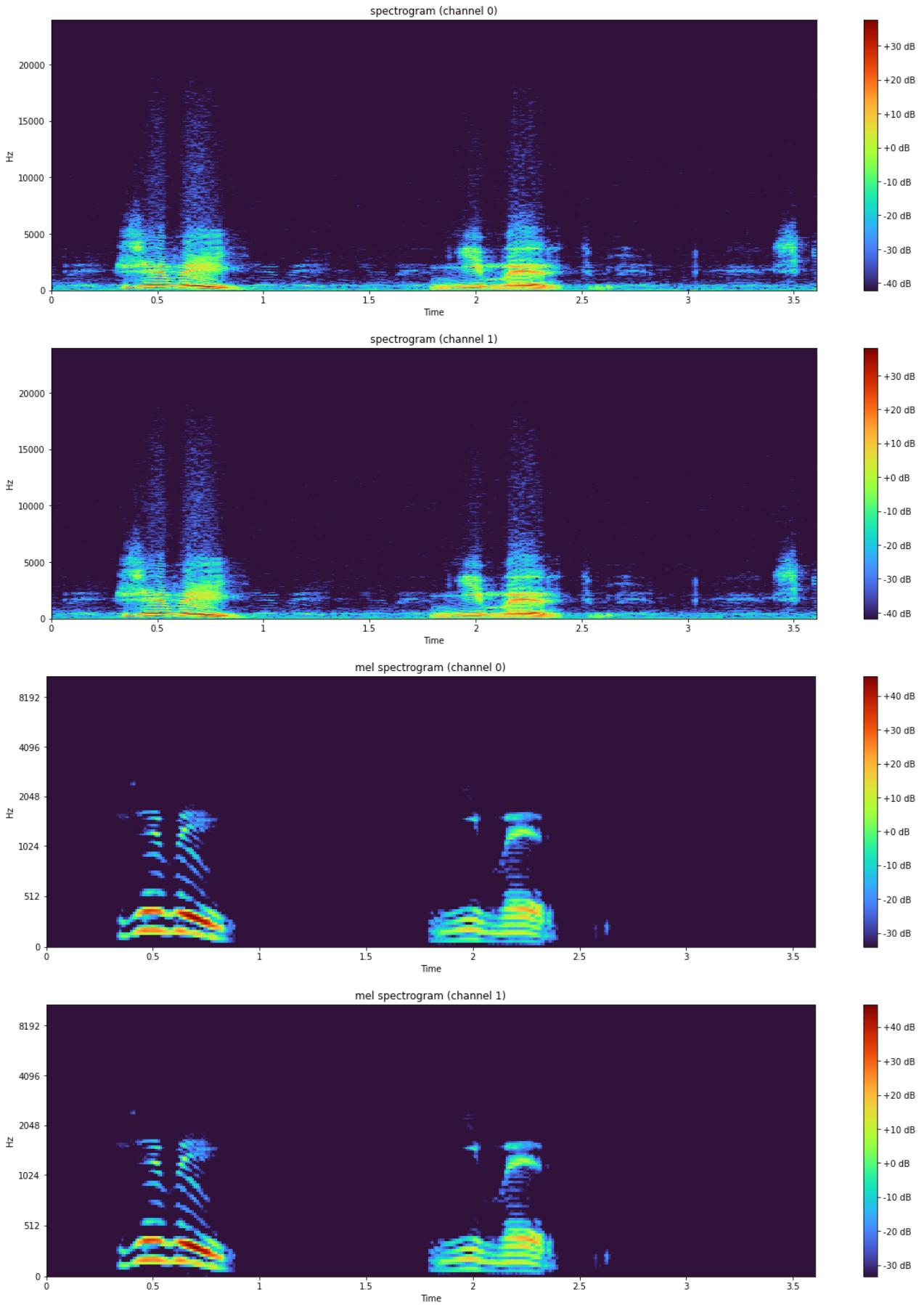
mel spectrogram (channel 1)



In [171...]

sh(148)

INFO : ./wavs/origin/0148.wav

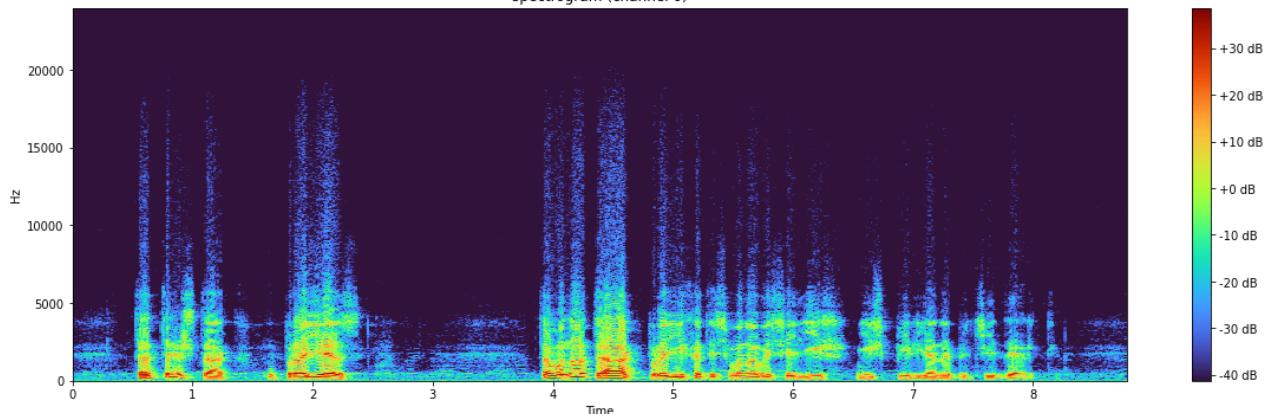


In [172...]

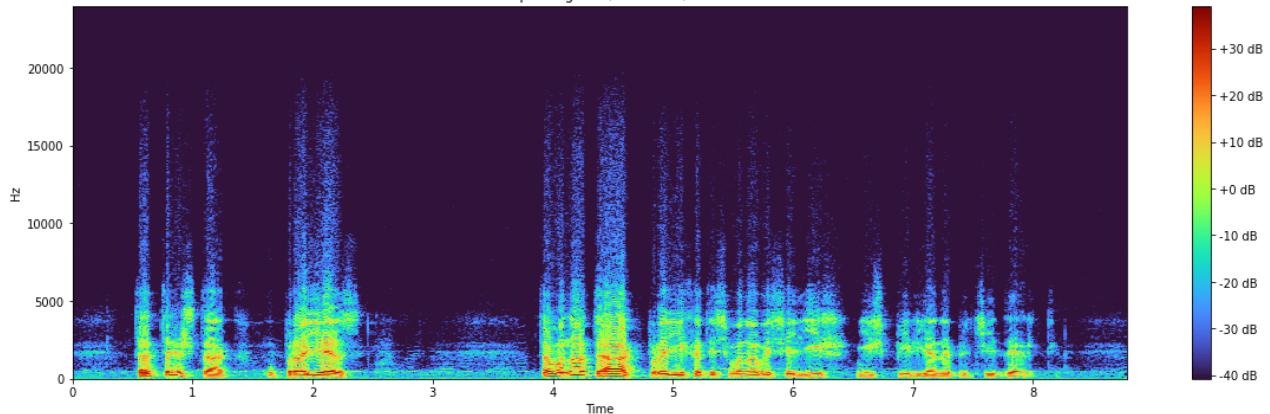
sh(149)

INFO : ./wavs/origin/0149.wav

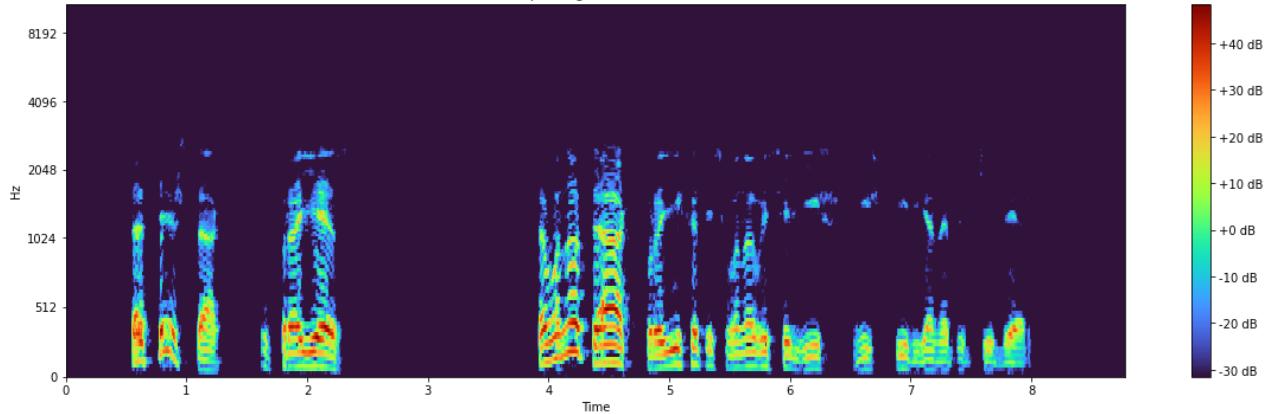
spectrogram (channel 0)



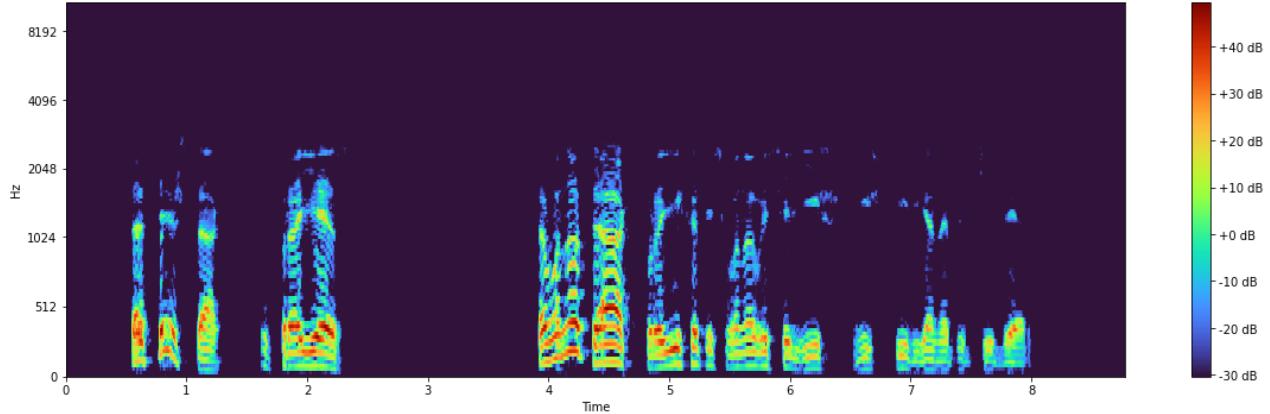
spectrogram (channel 1)



mel spectrogram (channel 0)



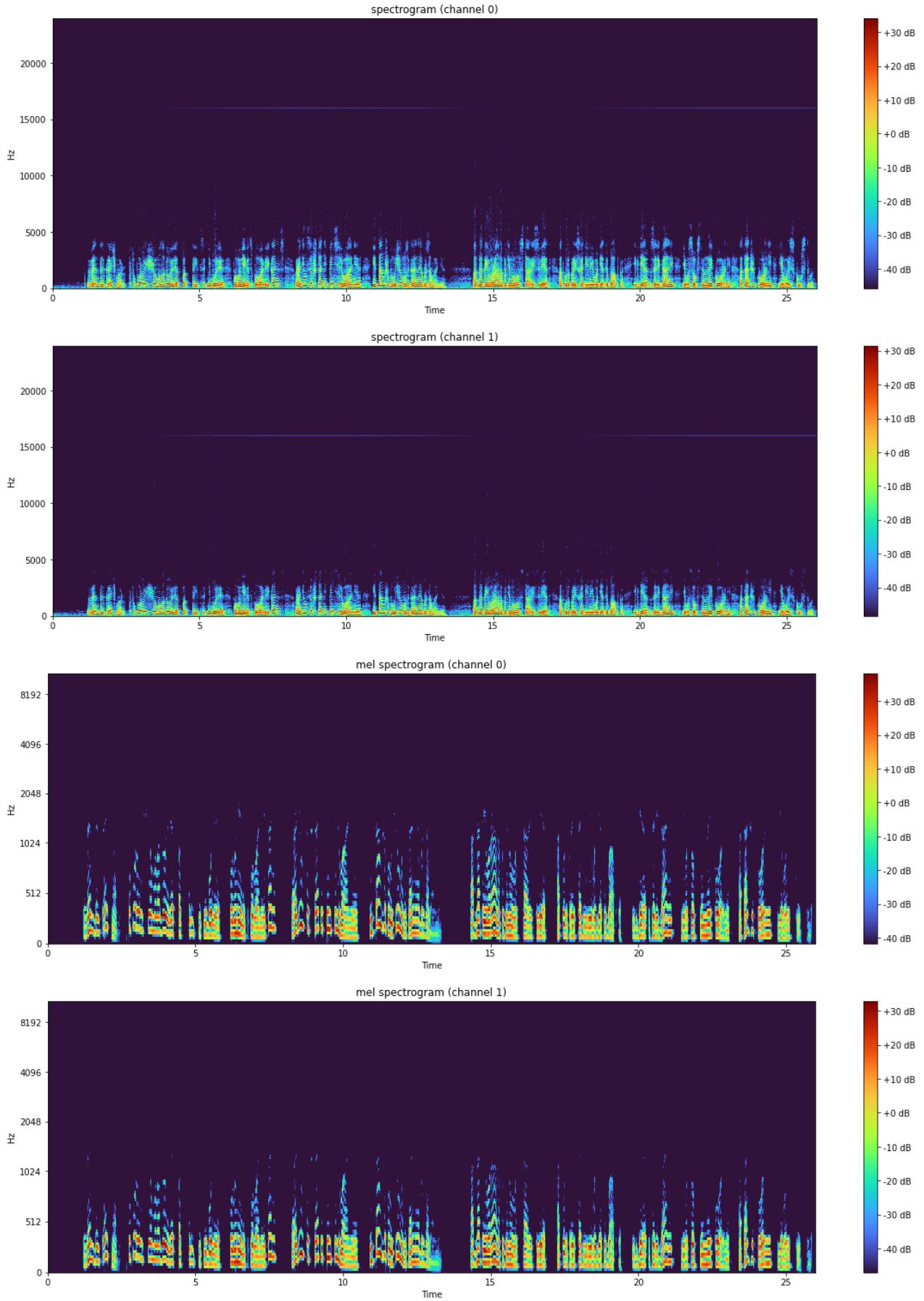
mel spectrogram (channel 1)



In [173...]

sh(150)

INFO : ./wavs/origin/0150.wav

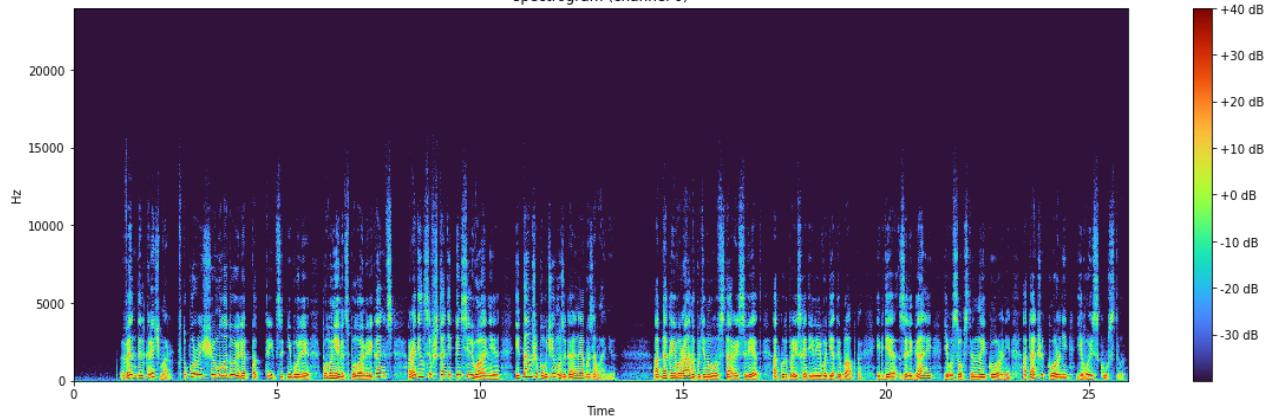


In [174...]

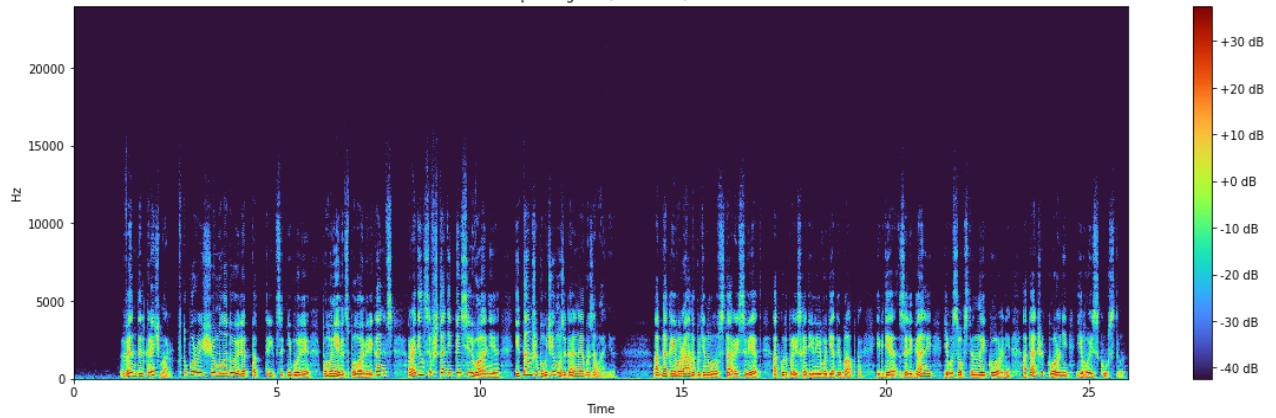
sh(151)

INFO : ./wavs/origin/0151.wav

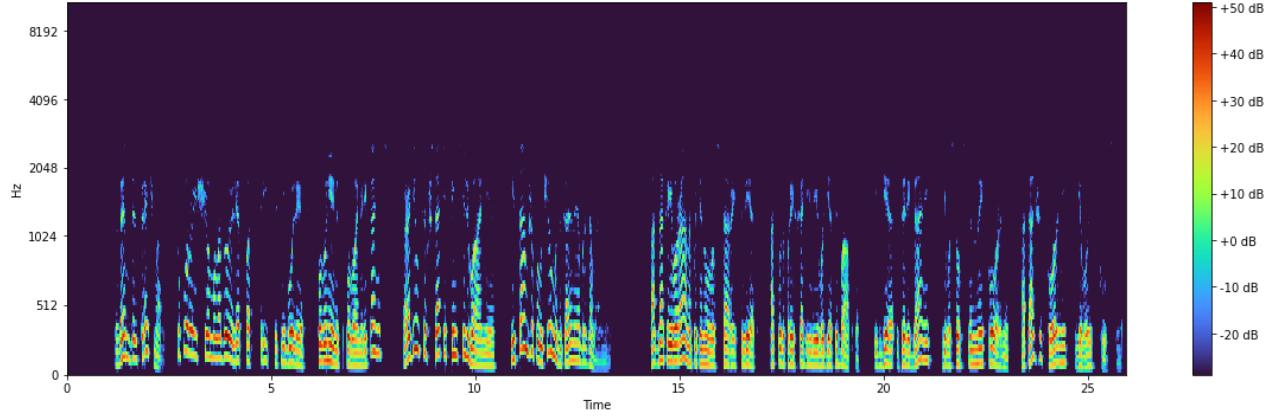
spectrogram (channel 0)



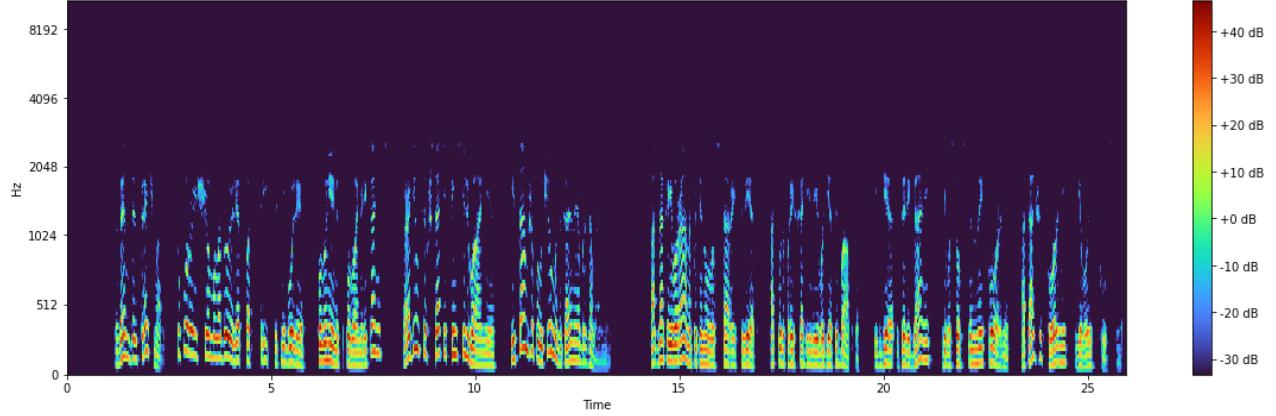
spectrogram (channel 1)



mel spectrogram (channel 0)



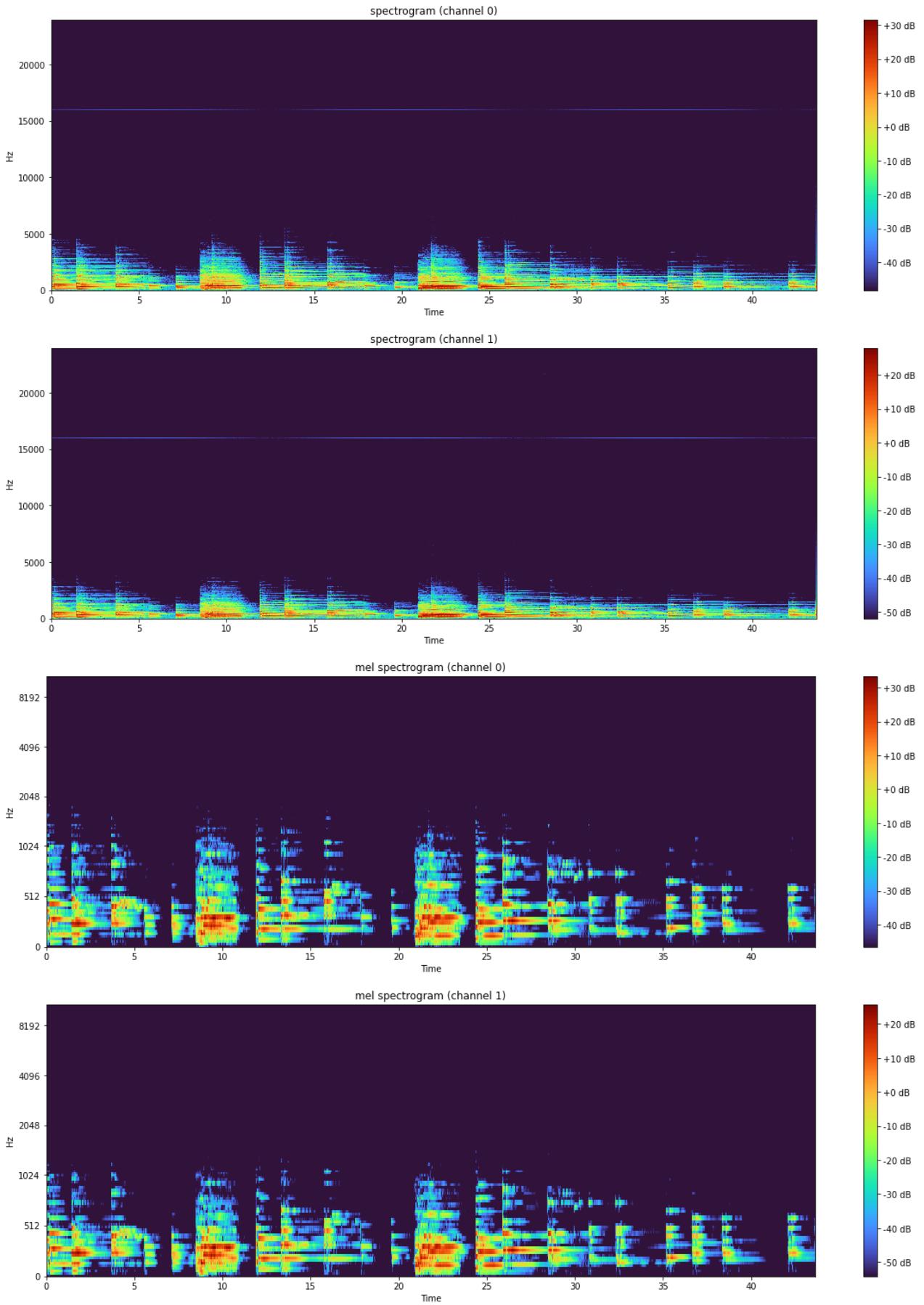
mel spectrogram (channel 1)



In [175...]

sh(152)

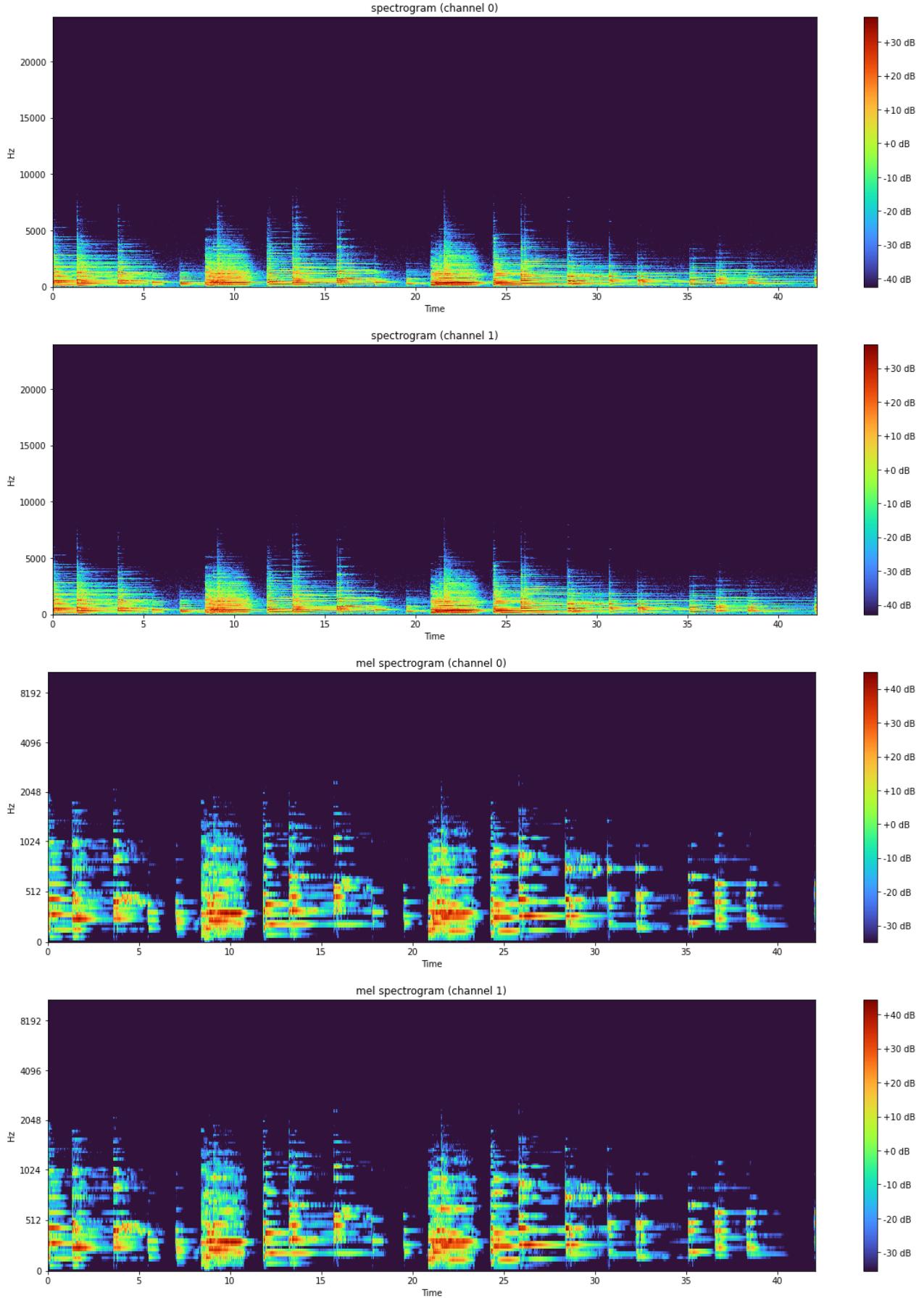
INFO : ./wavs/origin/0152.wav



In [176...]

sh(153)

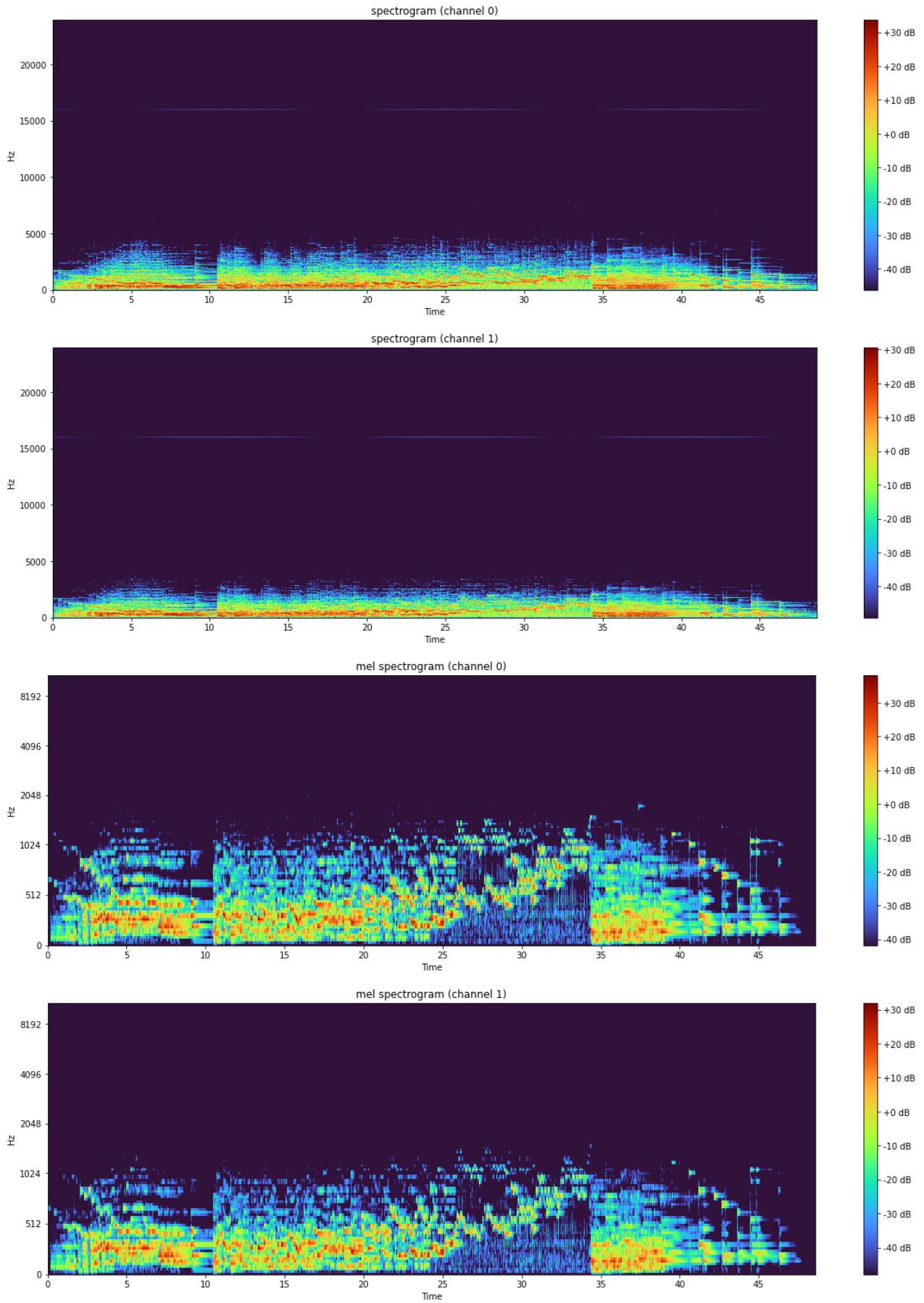
INFO : ./wavs/origin/0153.wav



In [177...]

sh(154)

INFO : ./wavs/origin/0154.wav

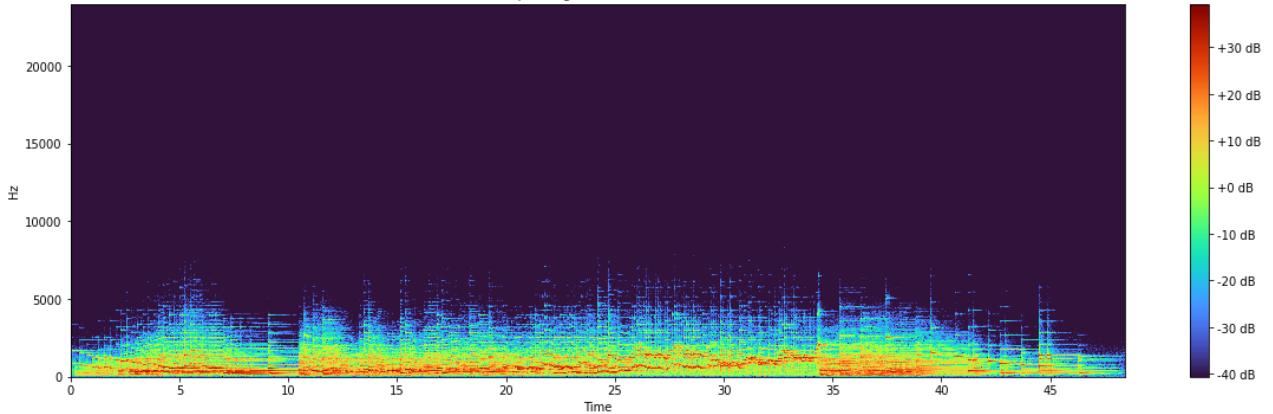


In [178...]

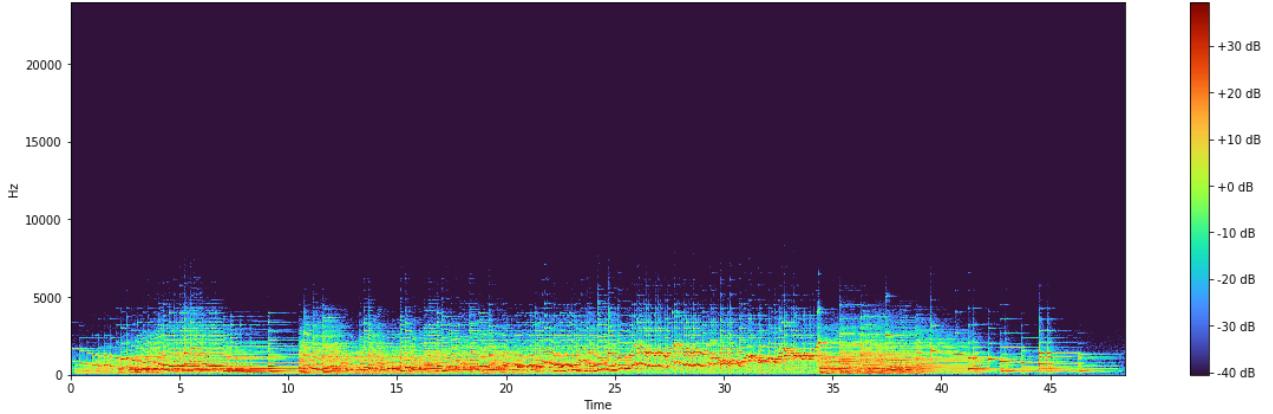
sh(155)

INFO : ./wavs/origin/0155.wav

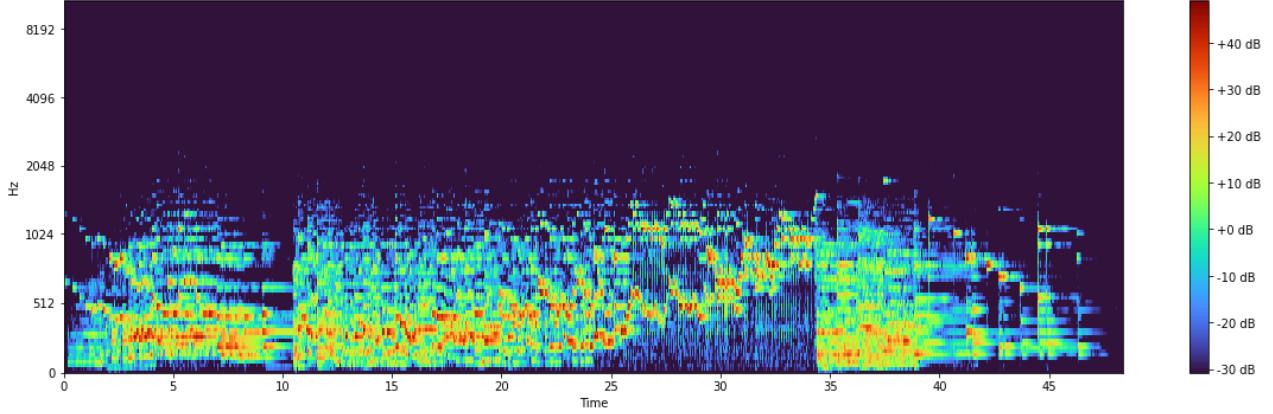
spectrogram (channel 0)



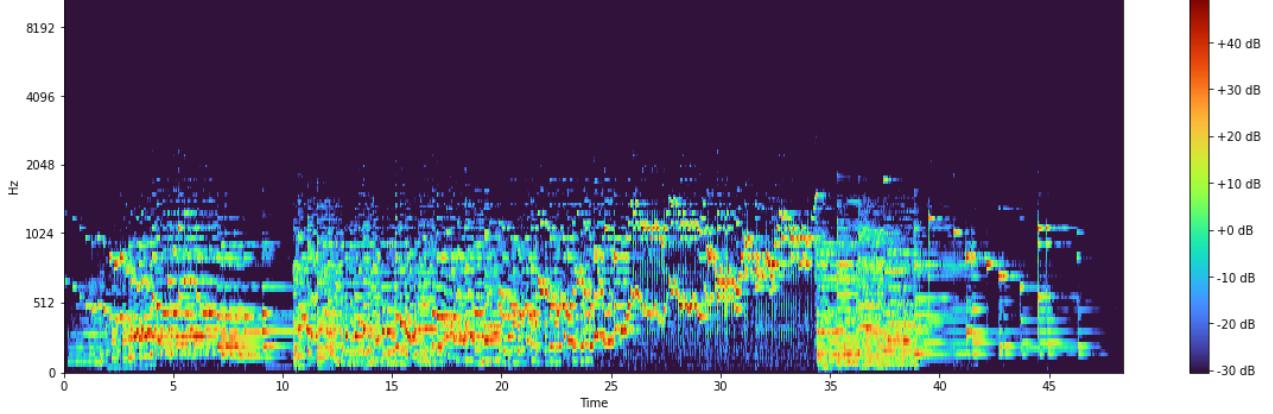
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

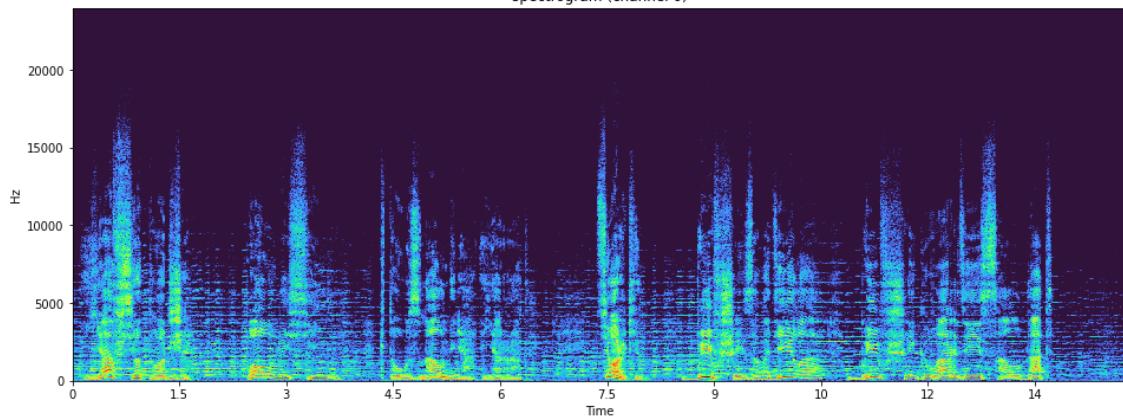


In [179...]

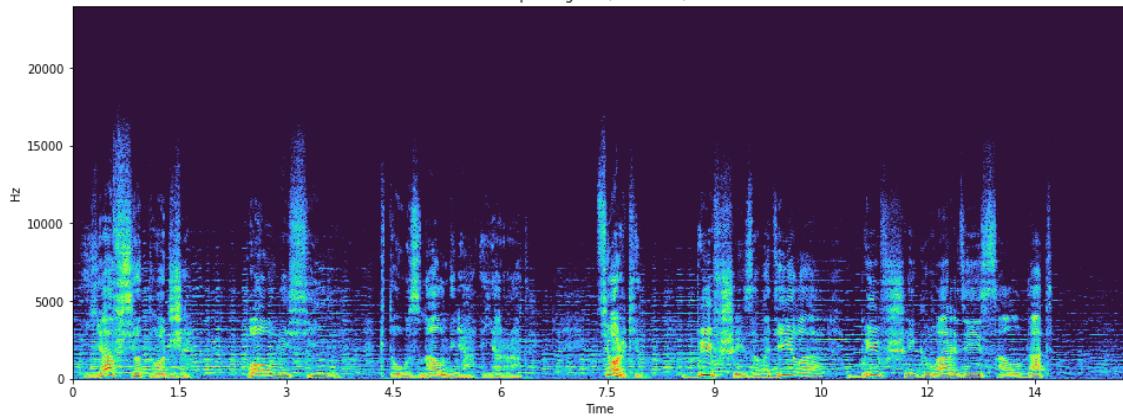
sh(156)

INFO : ./wavs/origin/0156.wav

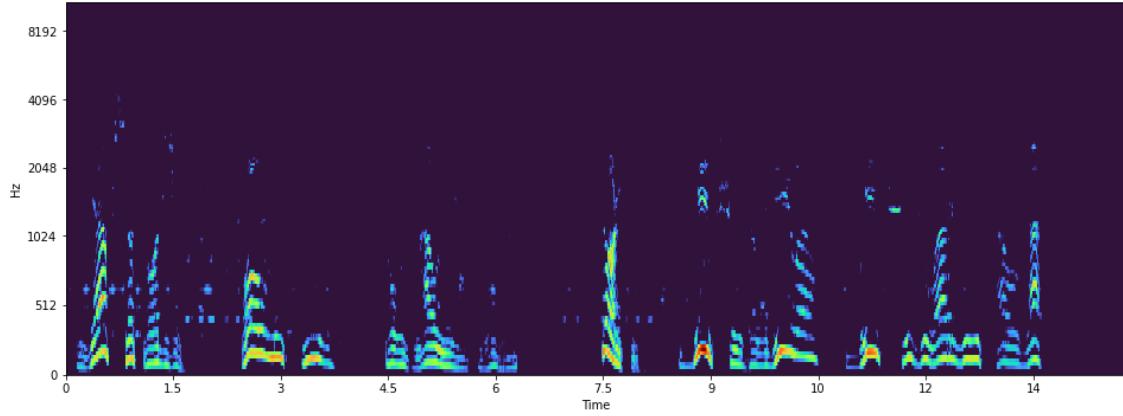
spectrogram (channel 0)



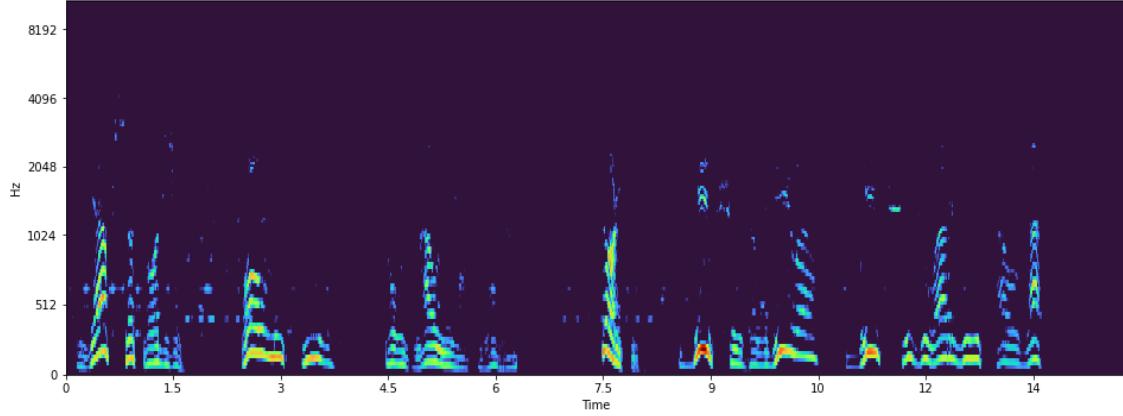
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

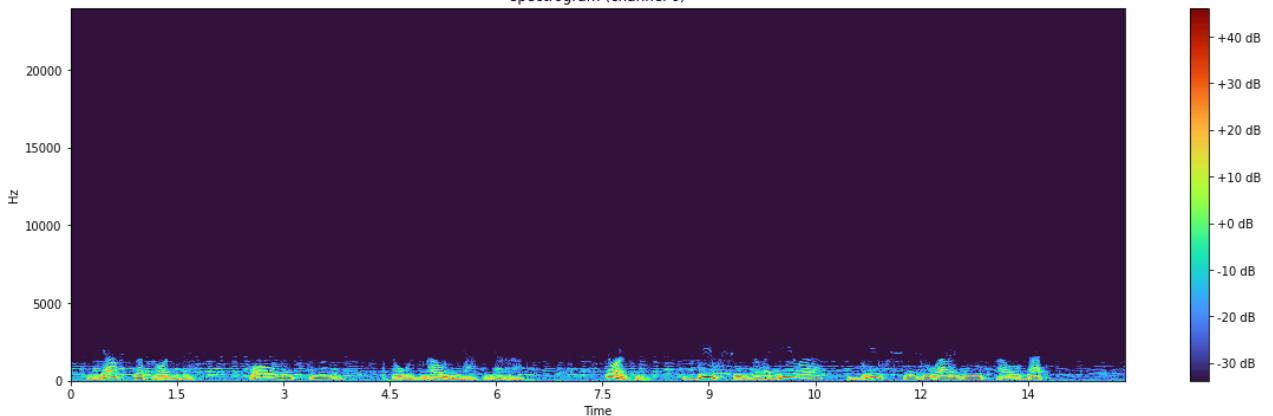


In [180...]

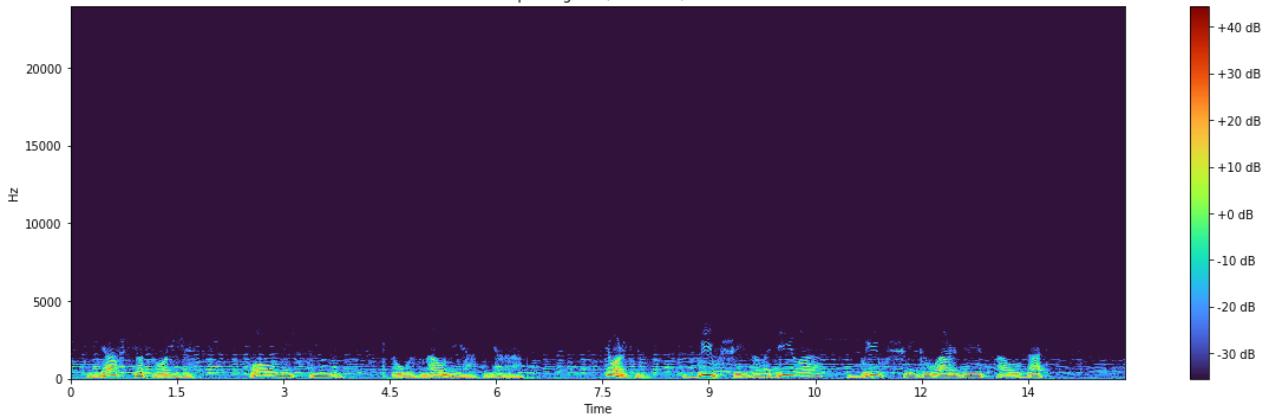
sh(157)

INFO : ./wavs/origin/0157.wav

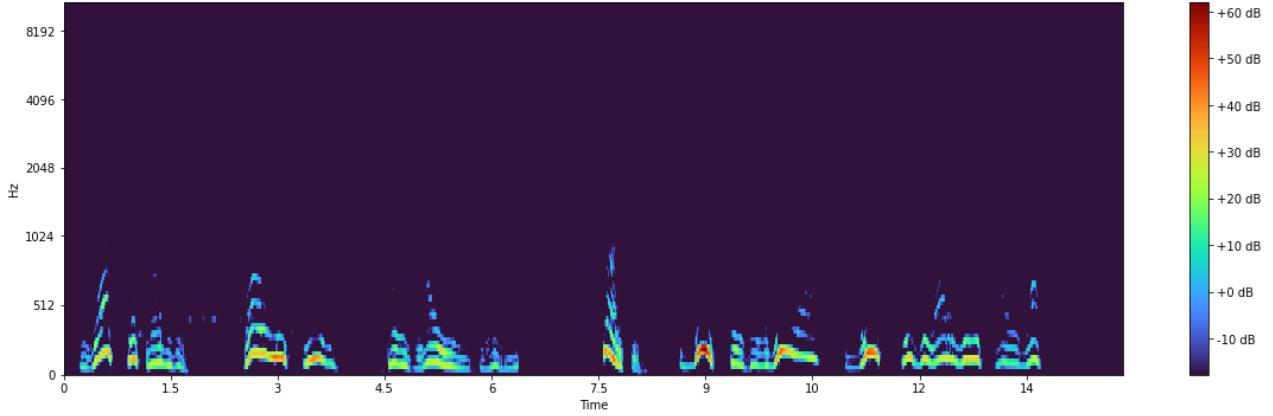
spectrogram (channel 0)



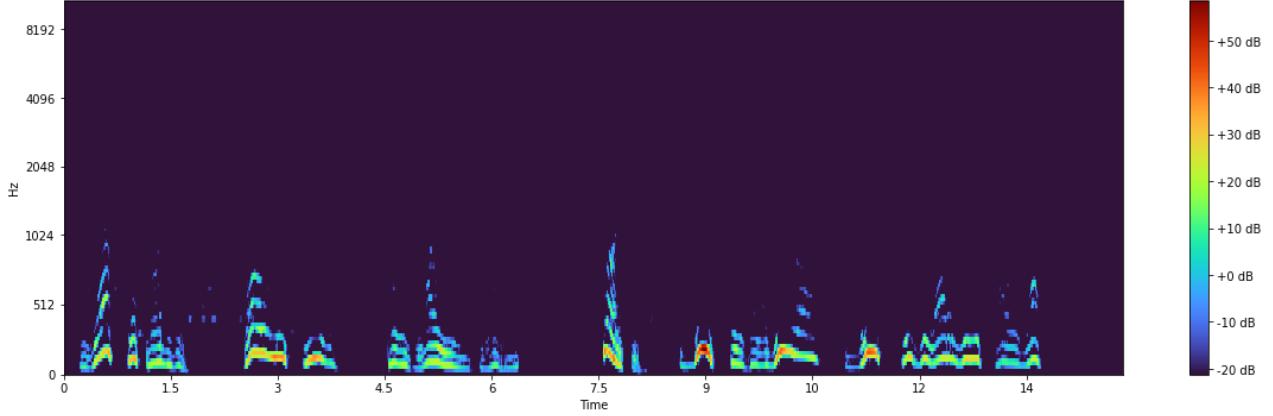
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

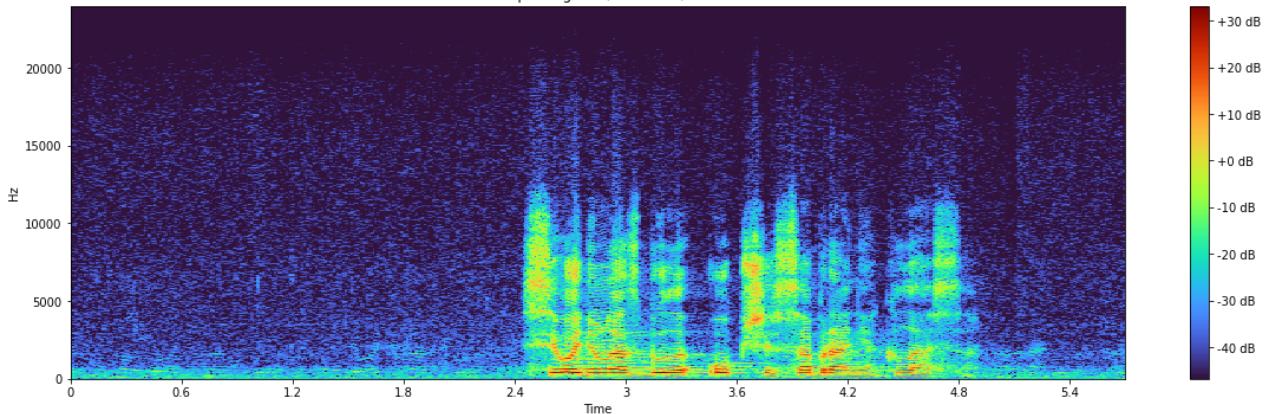


In [181...]

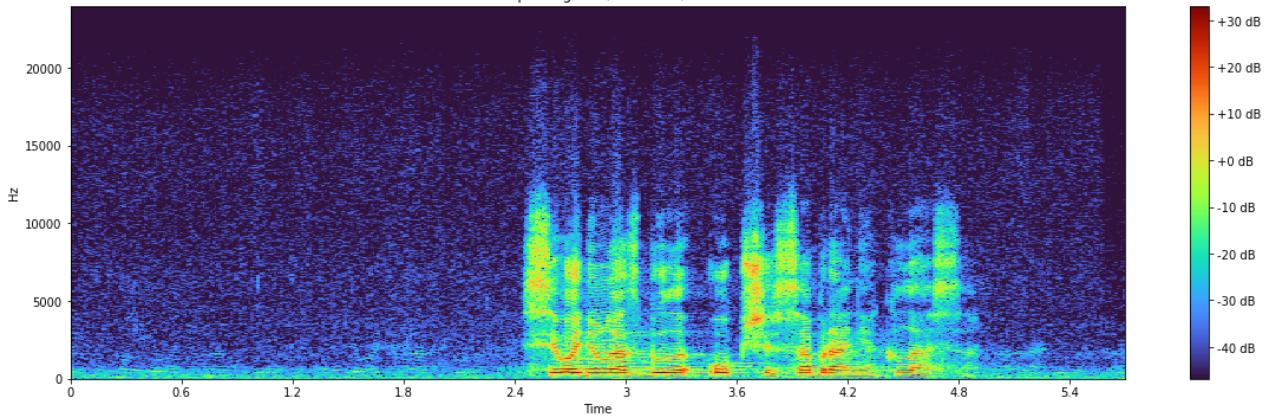
sh(158)

INFO : ./wavs/origin/0158.wav

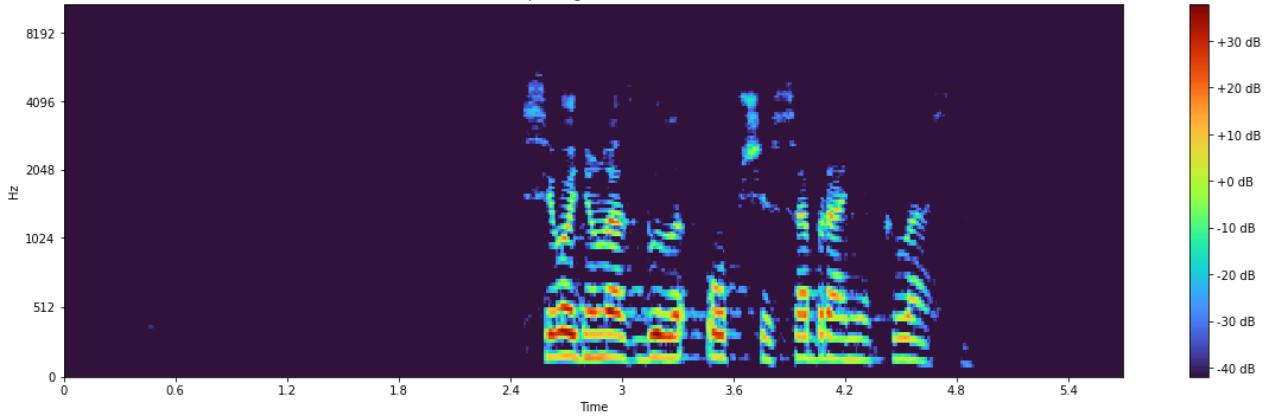
spectrogram (channel 0)



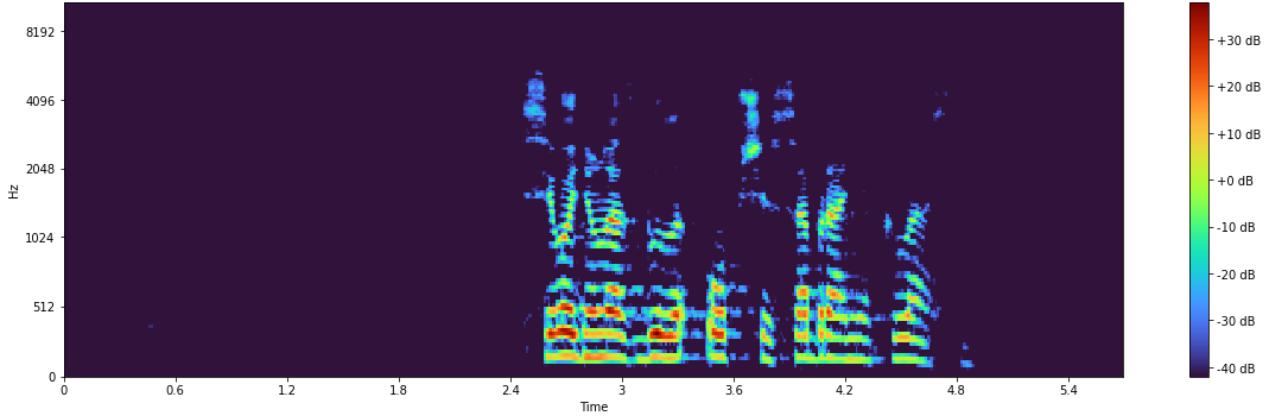
spectrogram (channel 1)



mel spectrogram (channel 0)



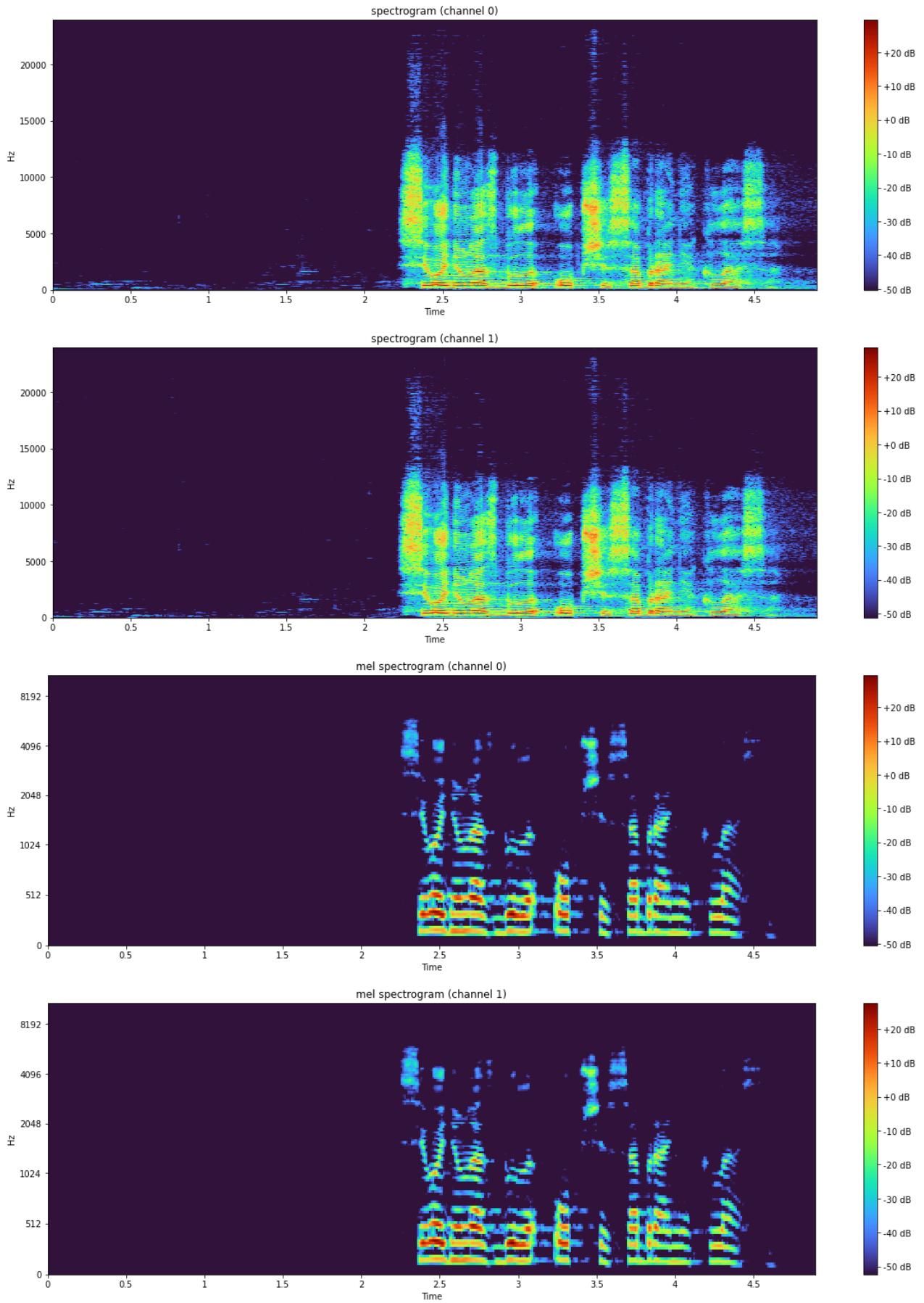
mel spectrogram (channel 1)



In [182...]

sh(159)

INFO : ./wavs/origin/0159.wav

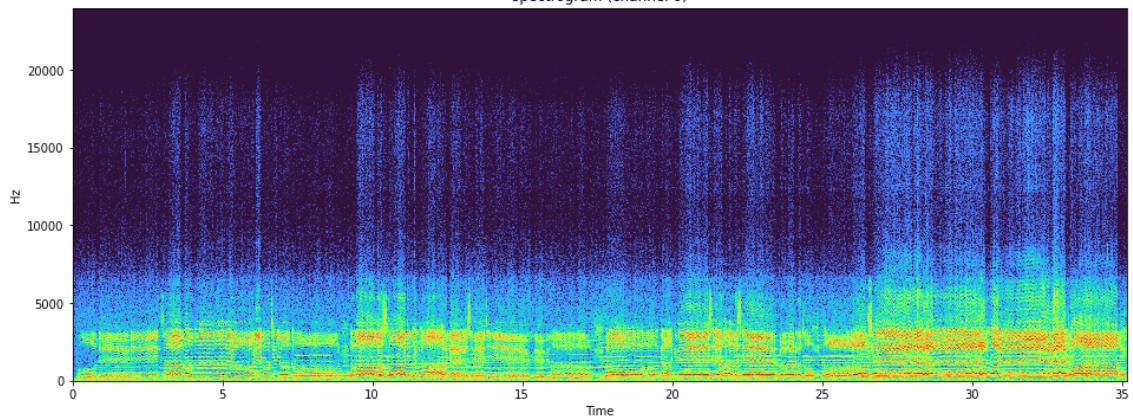


In [183...]

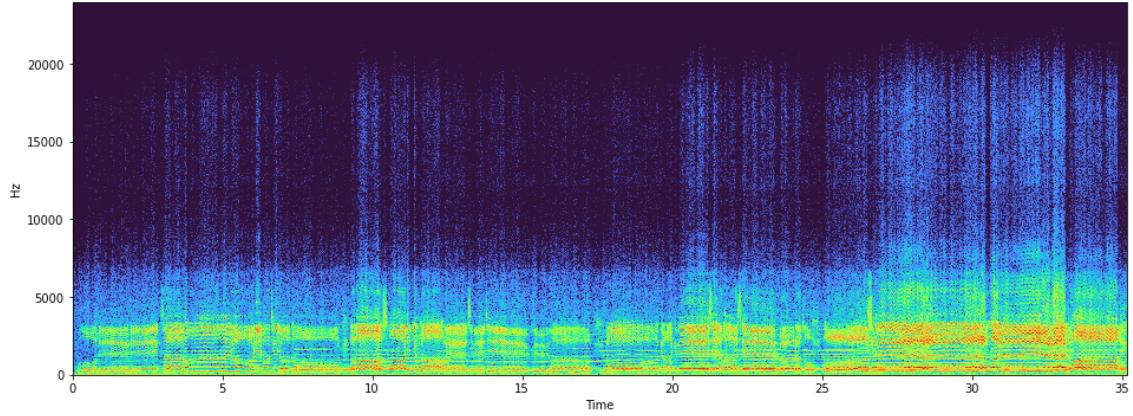
sh(160)

INFO : ./wavs/origin/0160.wav

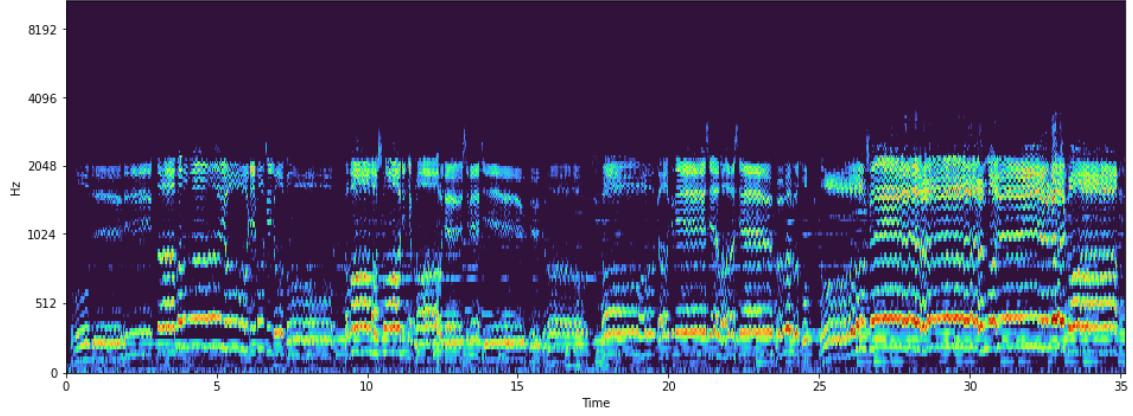
spectrogram (channel 0)



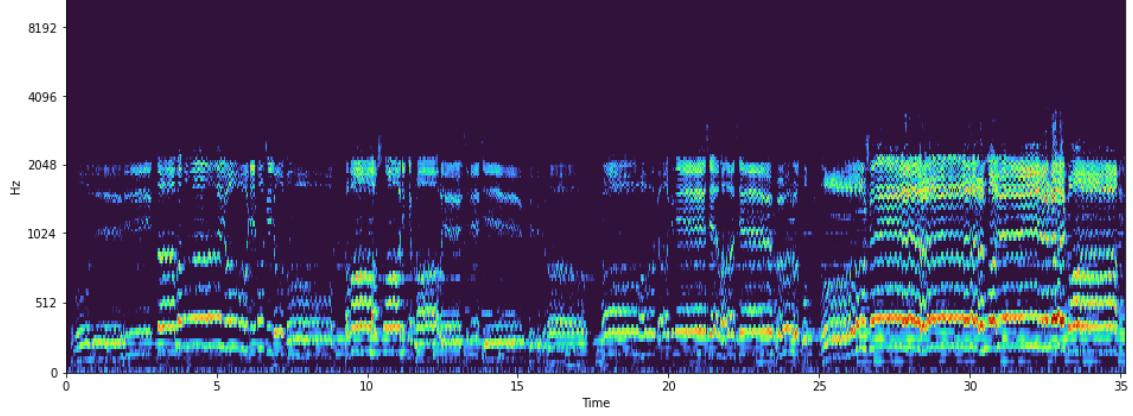
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

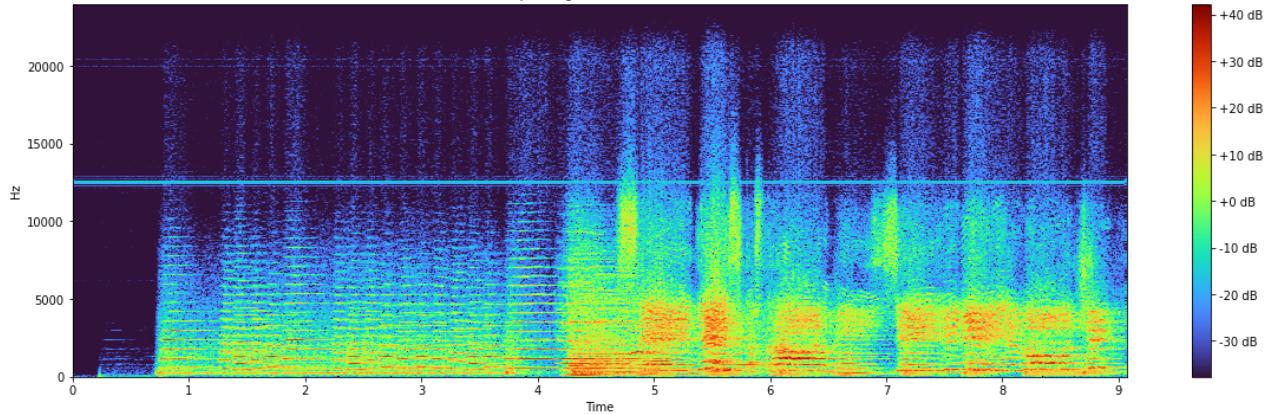


In [184...]

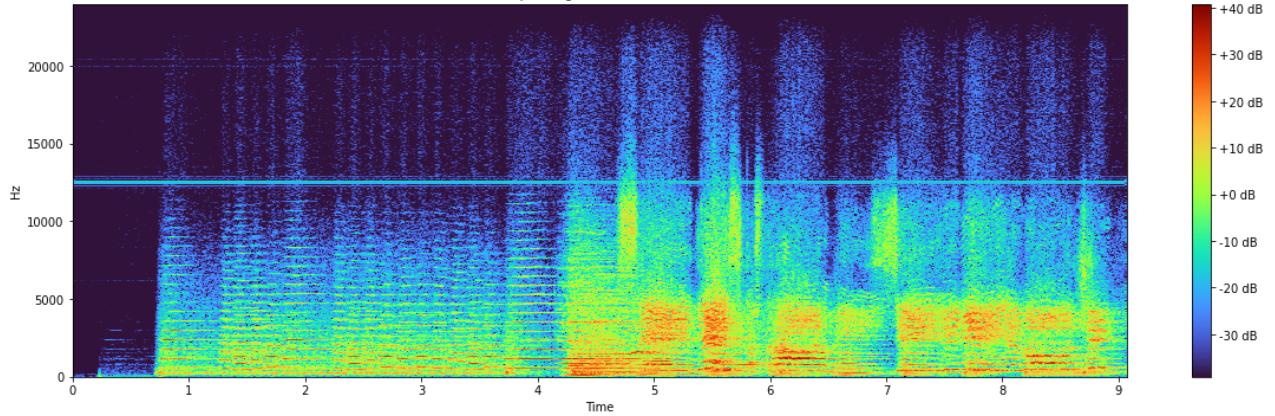
sh(161)

INFO : ./wavs/origin/0161.wav

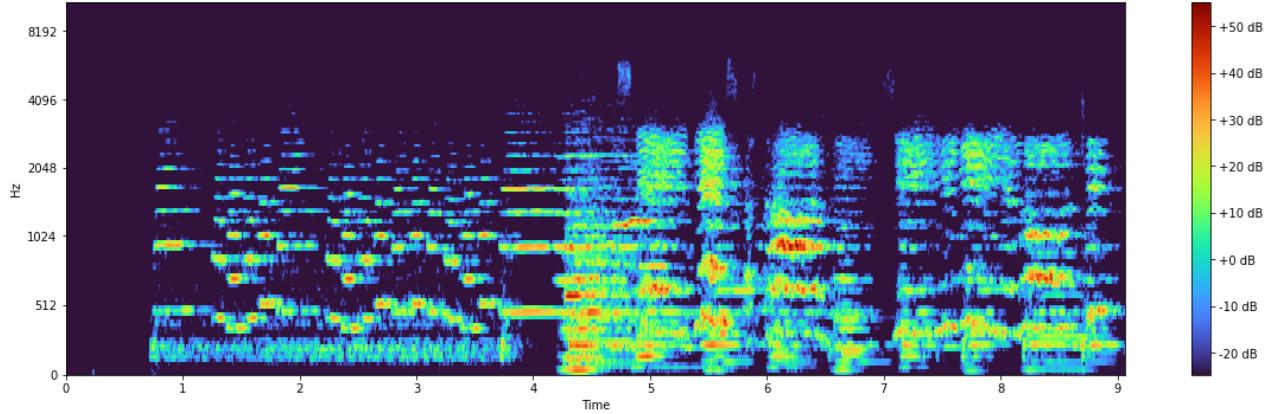
spectrogram (channel 0)



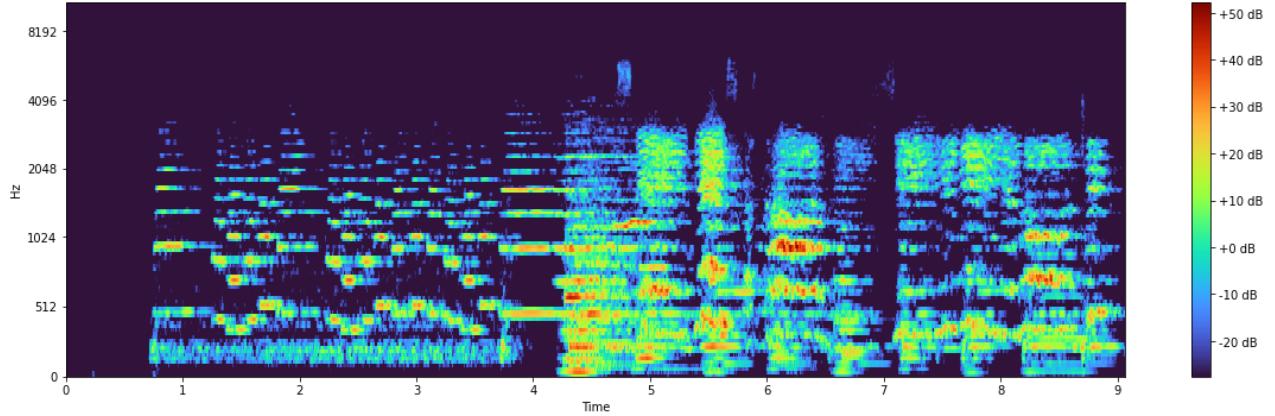
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

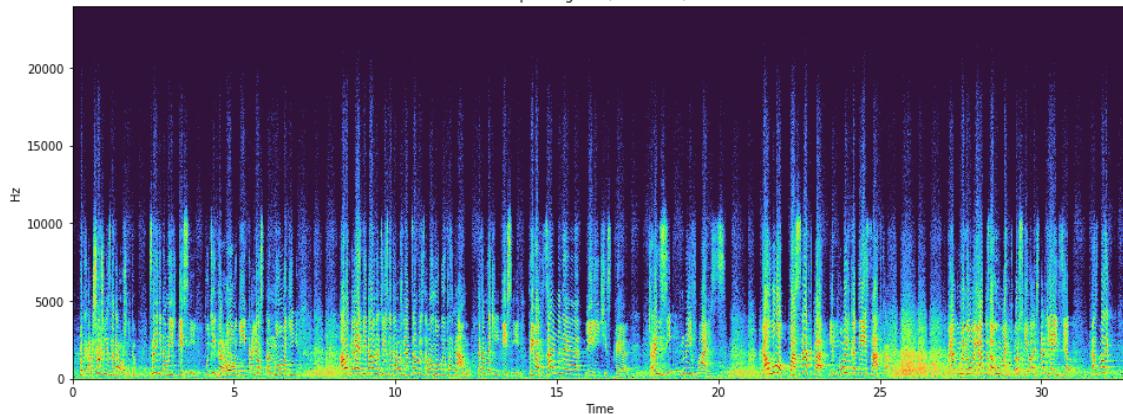


In [185...]

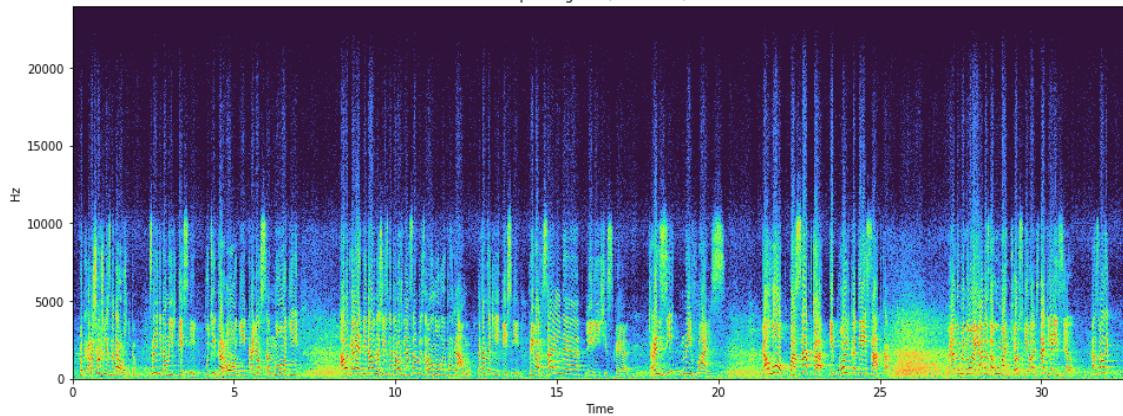
sh(162)

INFO : ./wavs/origin/0162.wav

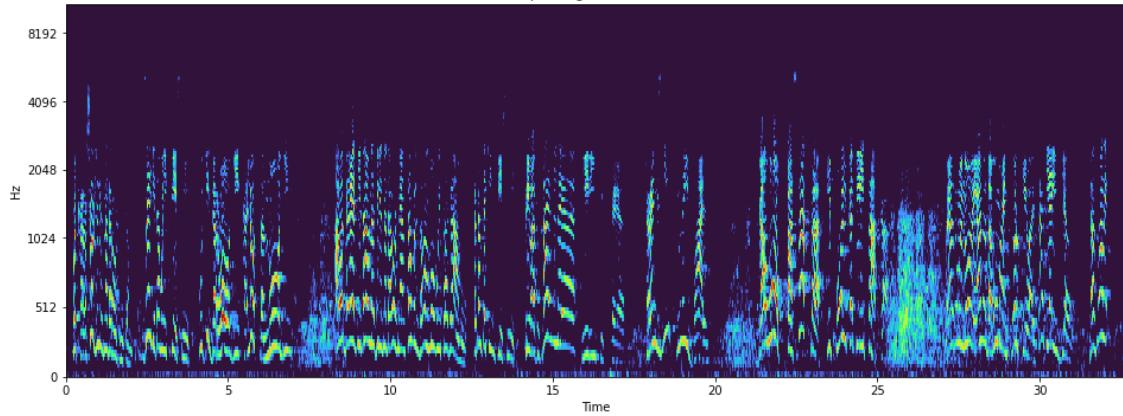
spectrogram (channel 0)



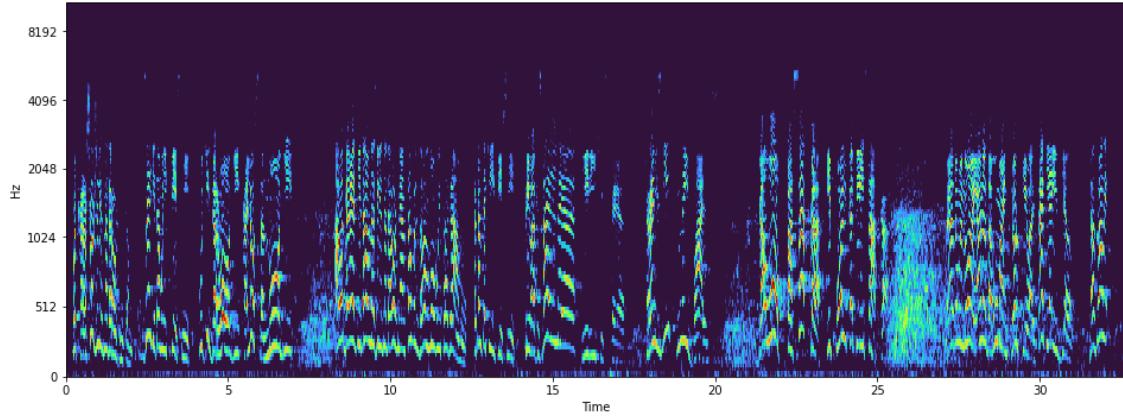
spectrogram (channel 1)



mel spectrogram (channel 0)



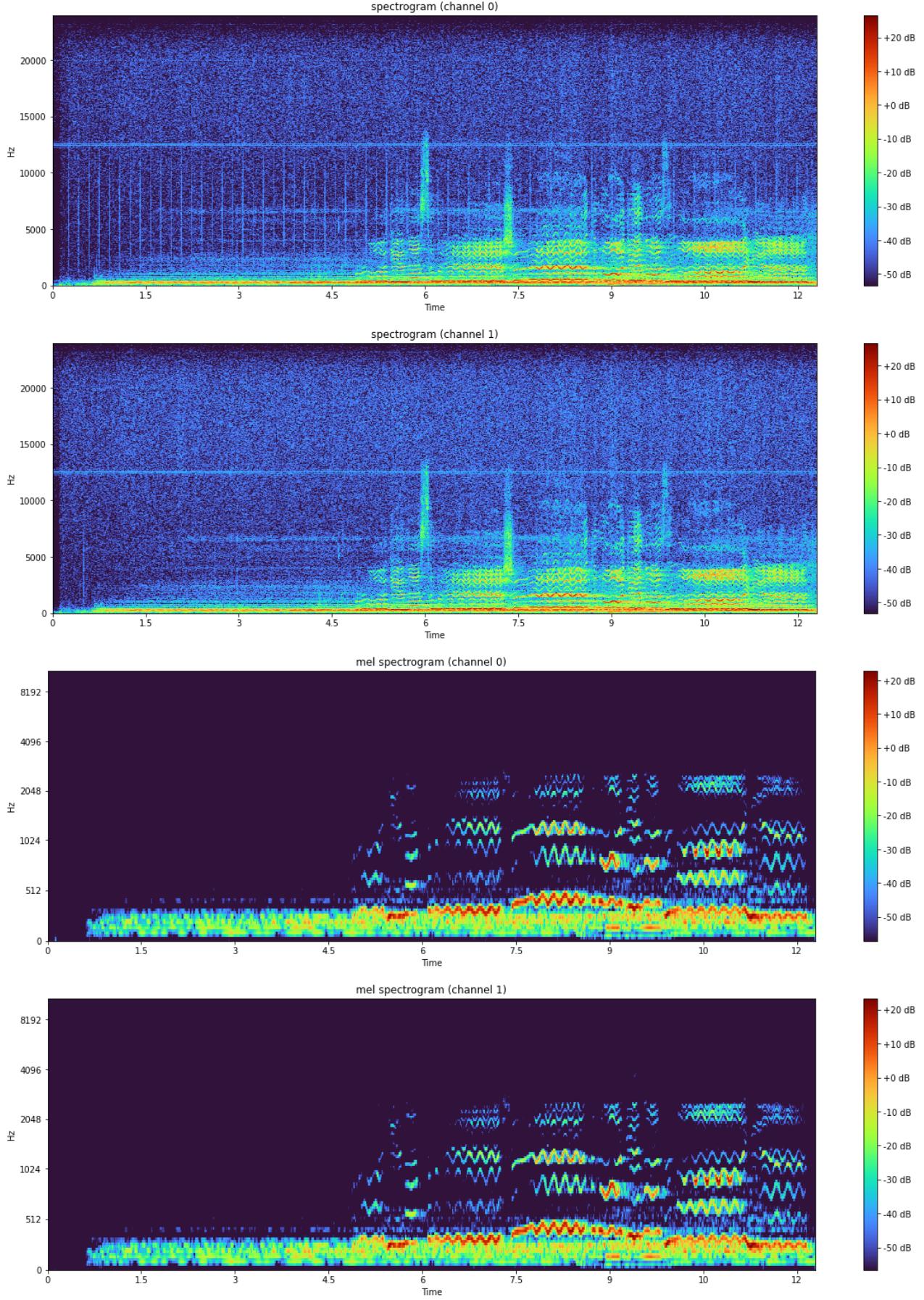
mel spectrogram (channel 1)



In [186...]

sh(163)

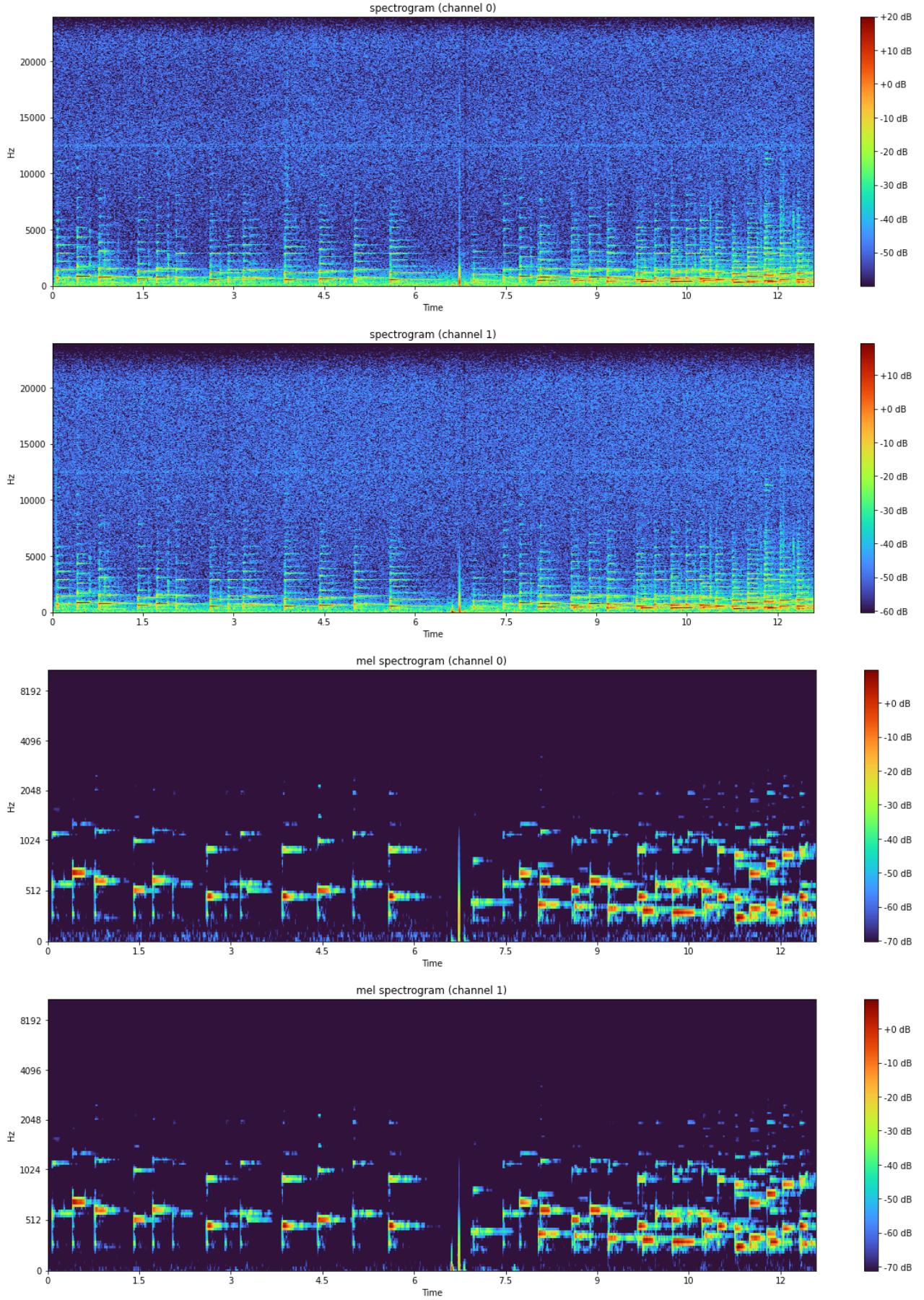
INFO : ./wavs/origin/0163.wav



In [187...]

sh(164)

INFO : ./wavs/origin/0164.wav

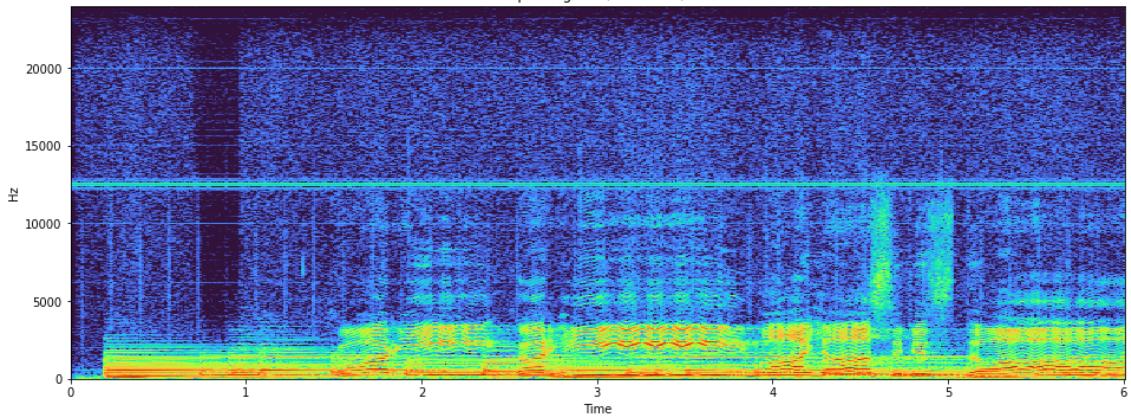


In [188...]

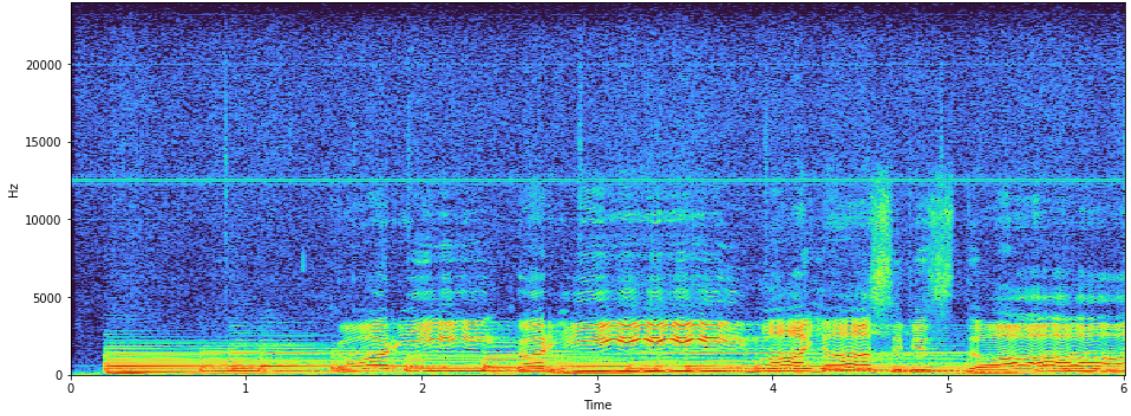
sh(165)

INFO : ../wavs/origin/0165.wav

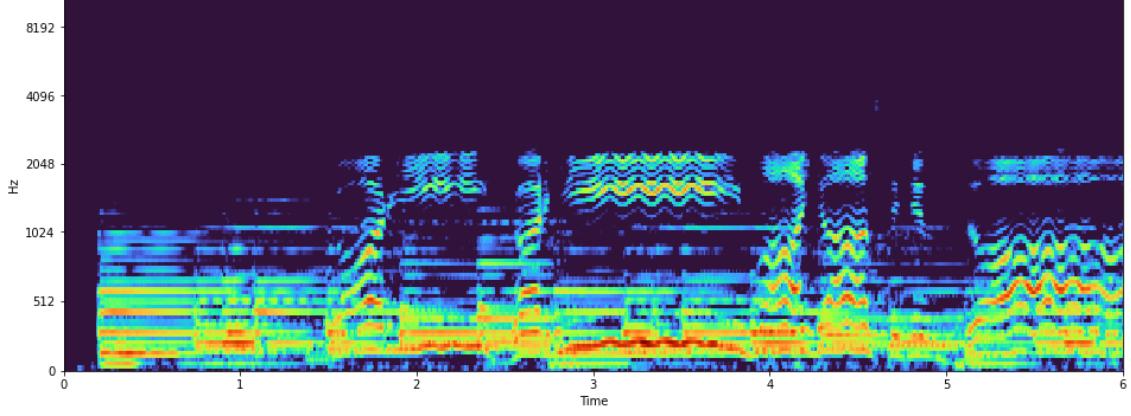
spectrogram (channel 0)



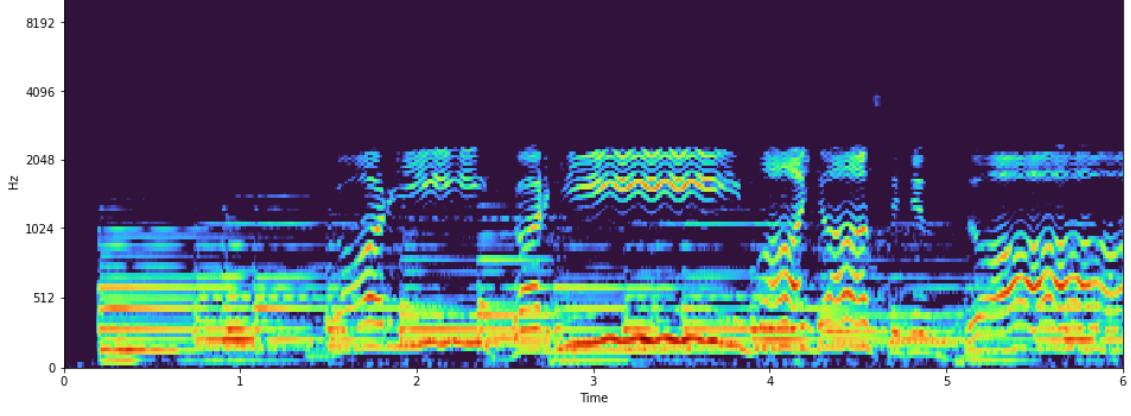
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

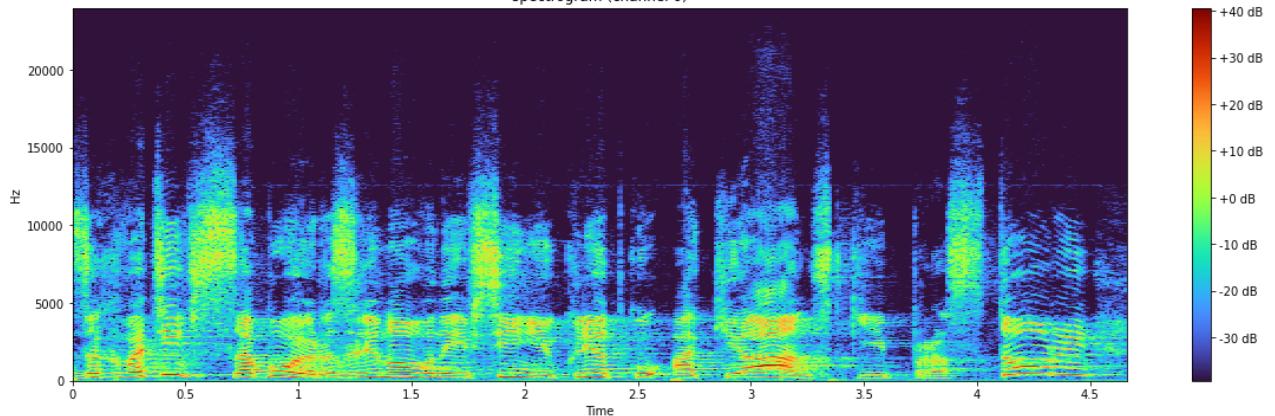


In [189...]

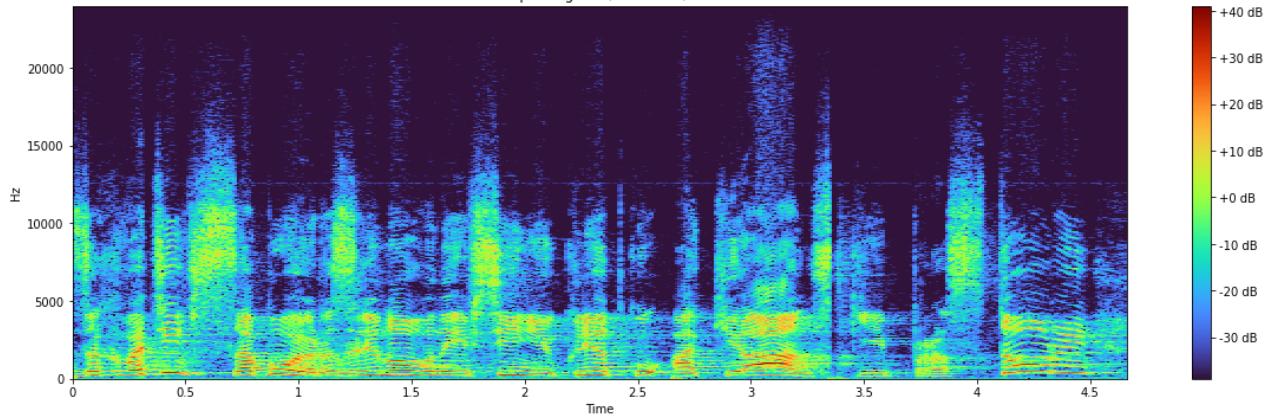
sh(166)

INFO : ./wavs/origin/0166.wav

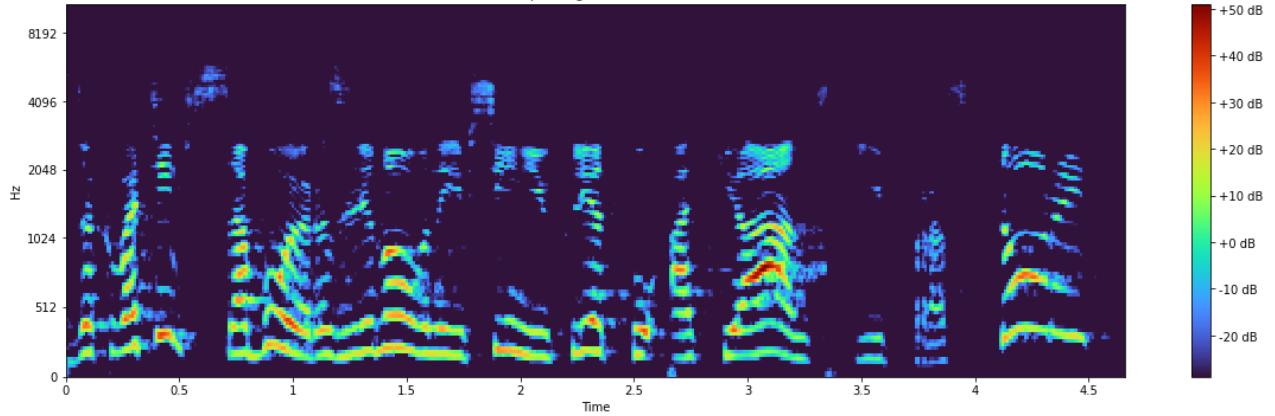
spectrogram (channel 0)



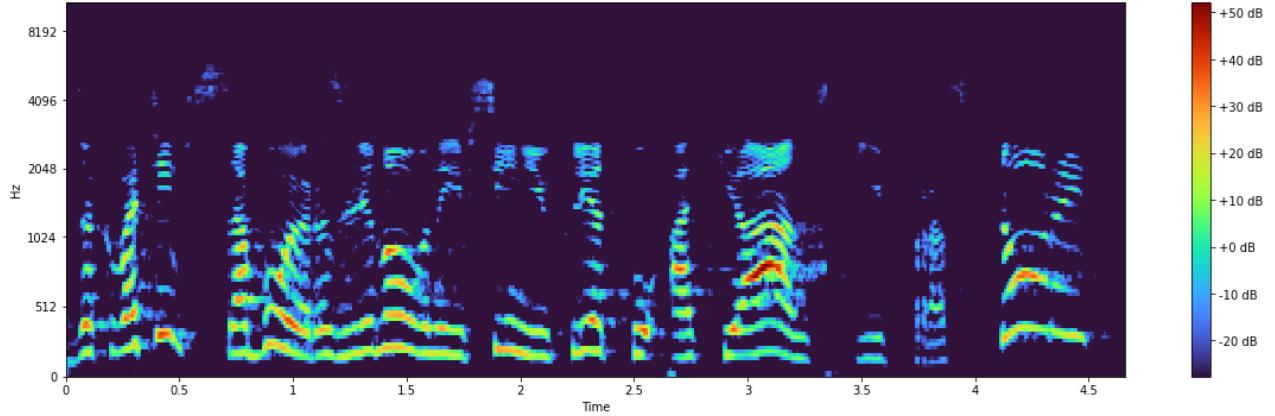
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

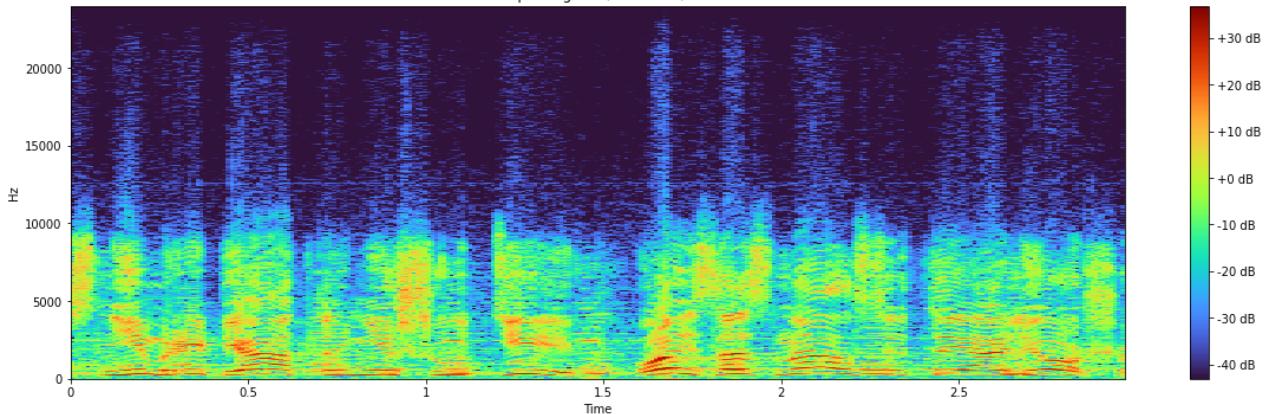


In [190...]

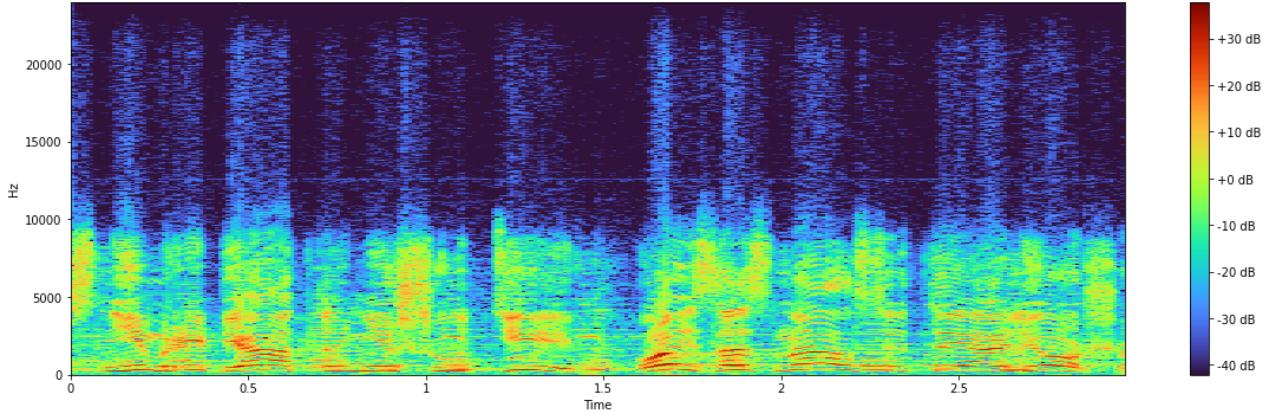
sh(167)

INFO : ./wavs/origin/0167.wav

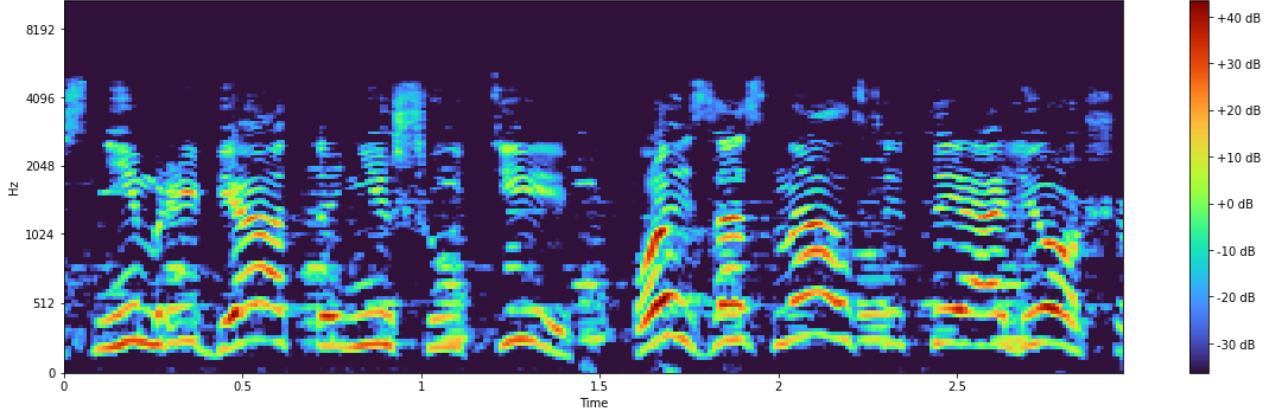
spectrogram (channel 0)



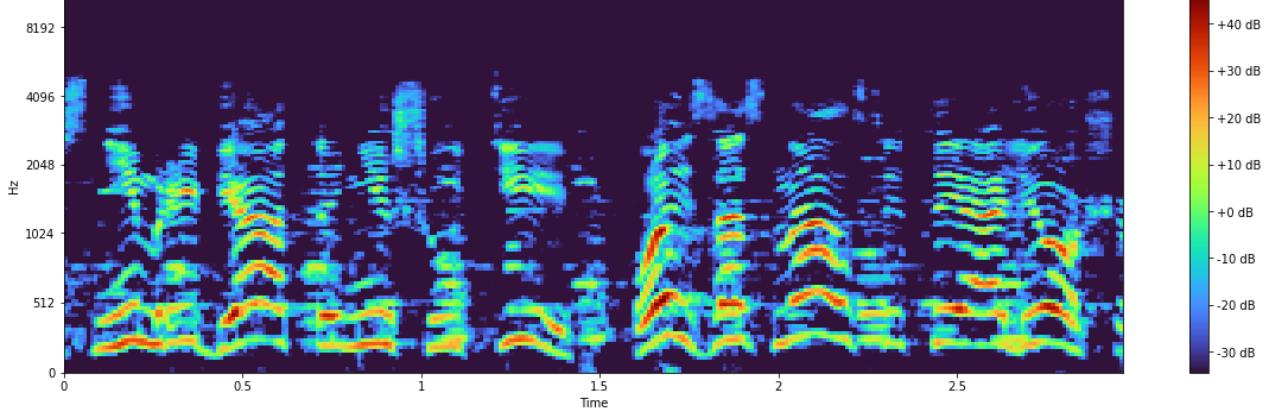
spectrogram (channel 1)



mel spectrogram (channel 0)



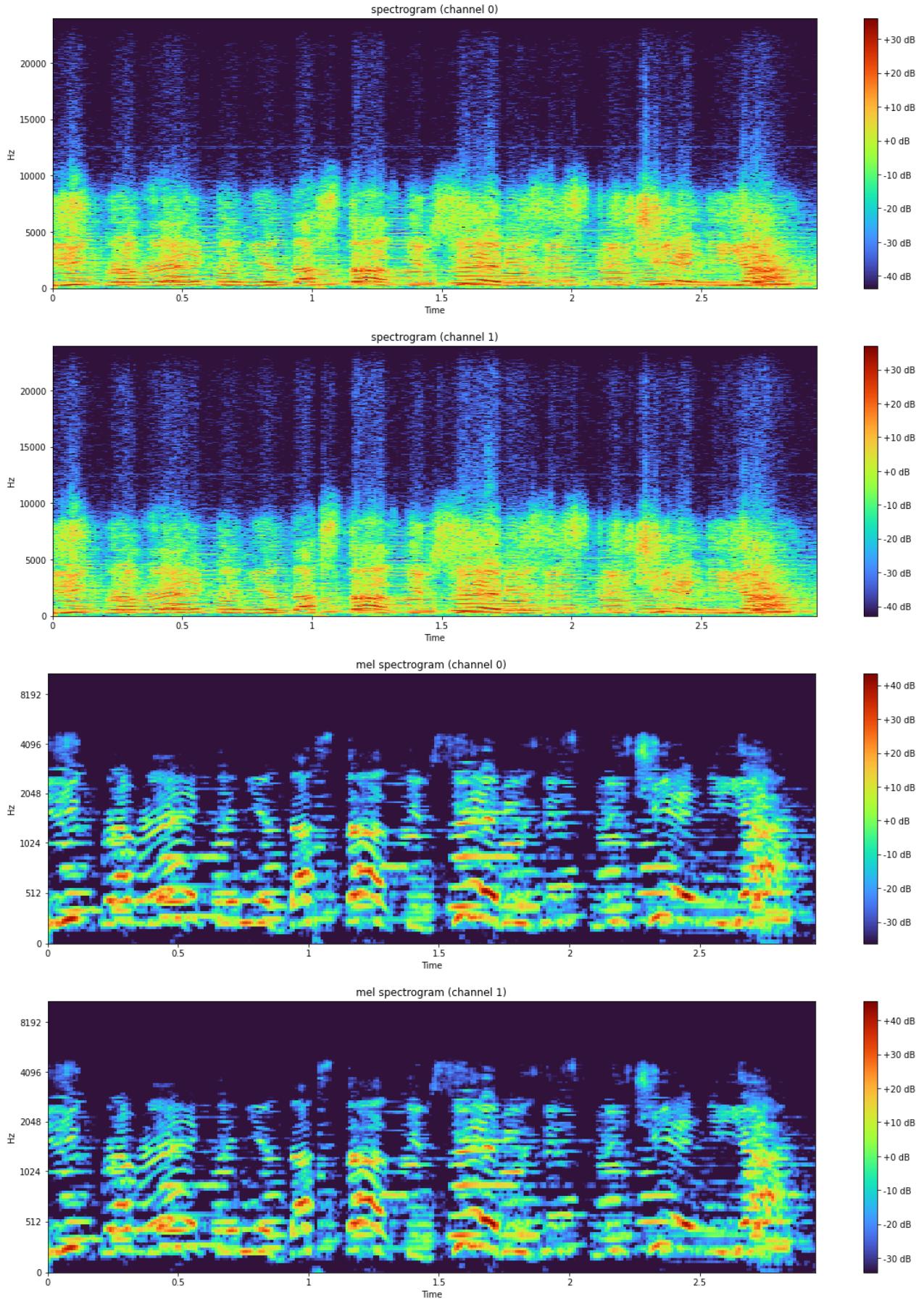
mel spectrogram (channel 1)



In [191...]

sh(168)

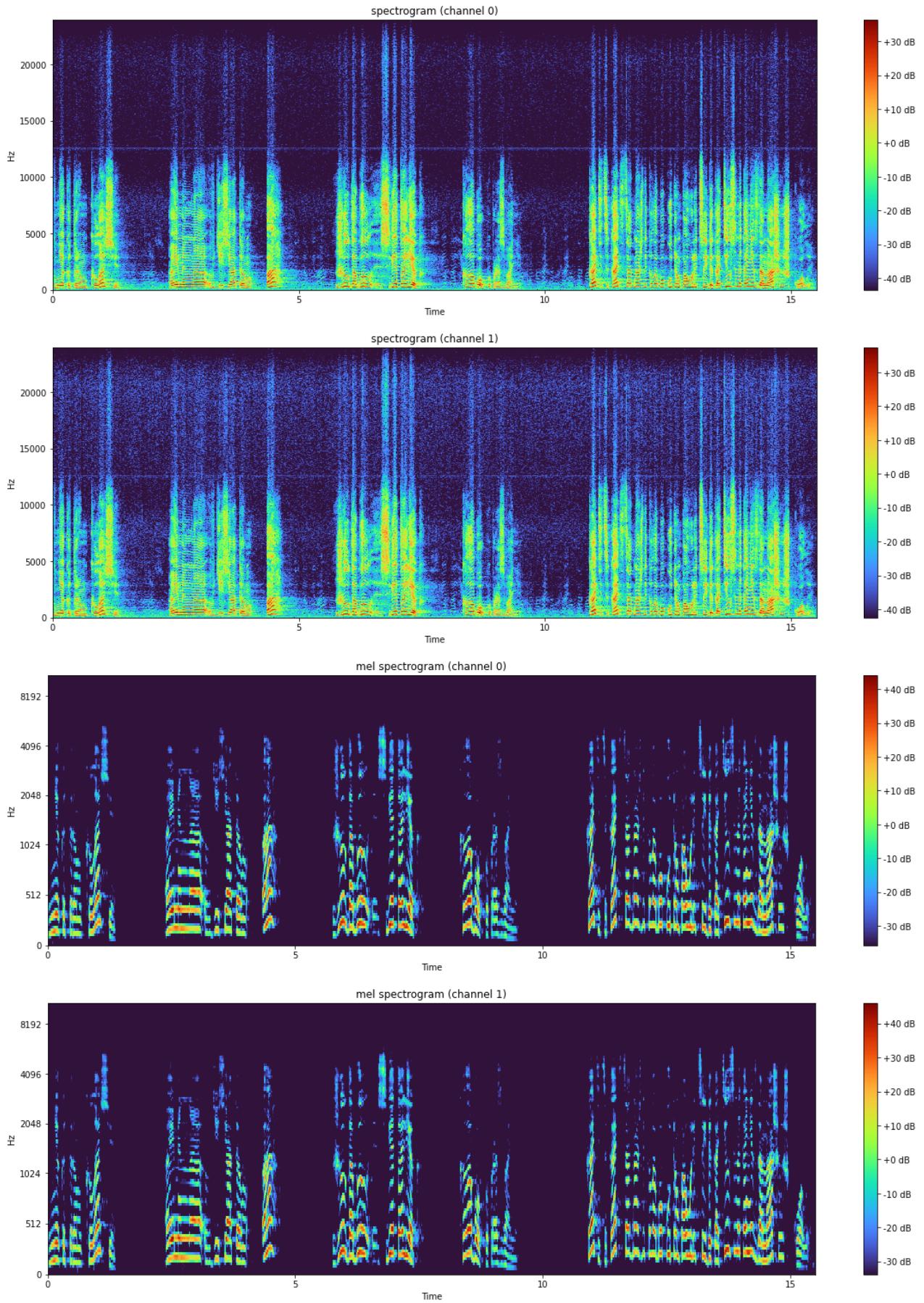
INFO : ./wavs/origin/0168.wav



In [192...]

sh(169)

INFO : ./wavs/origin/0169.wav

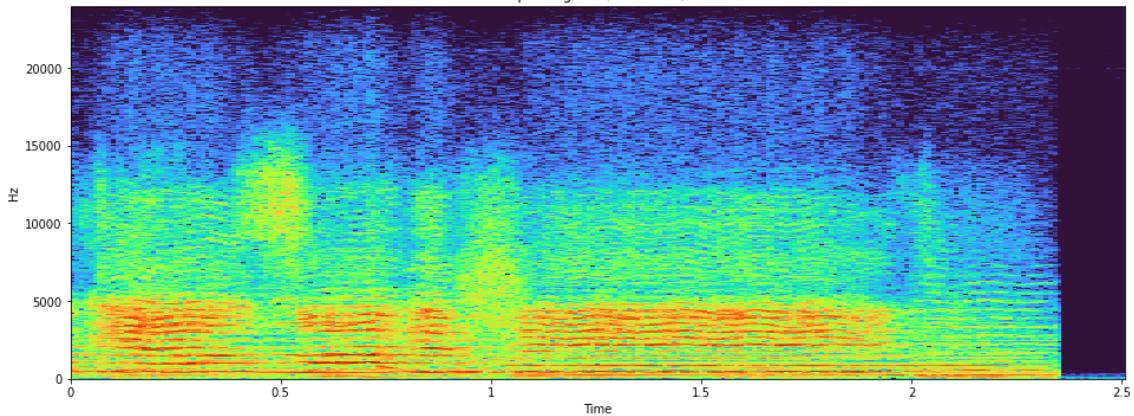


In [193...]

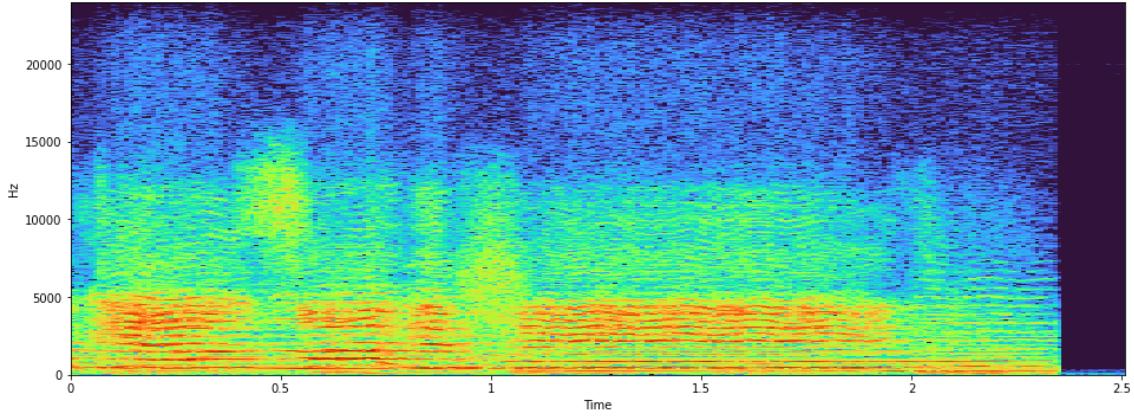
sh(170)

INFO : ./wavs/origin/0170.wav

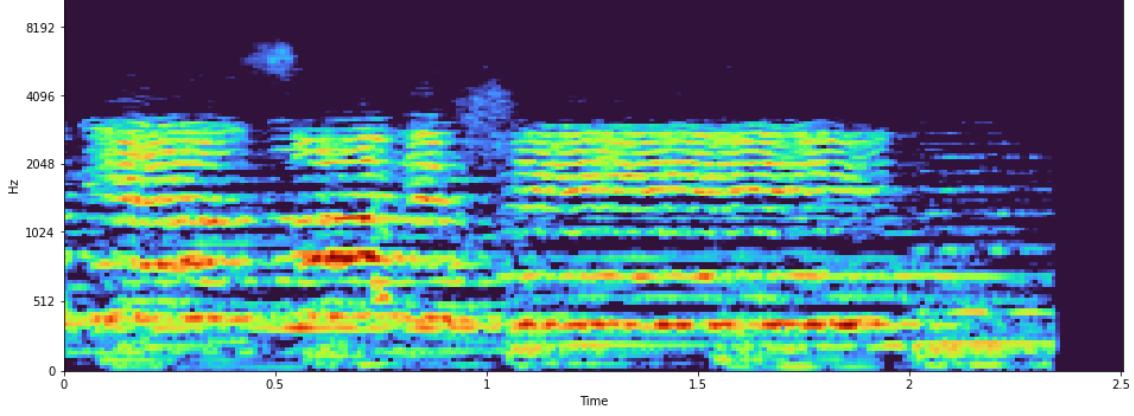
spectrogram (channel 0)



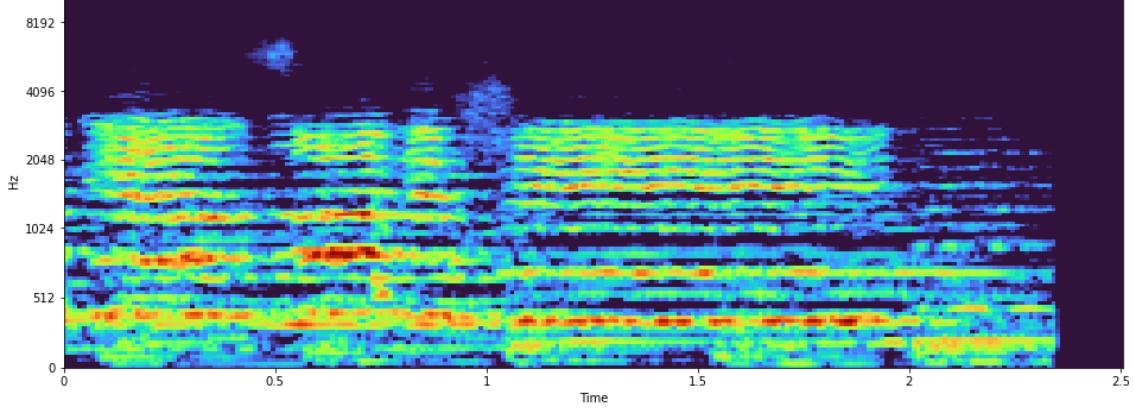
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

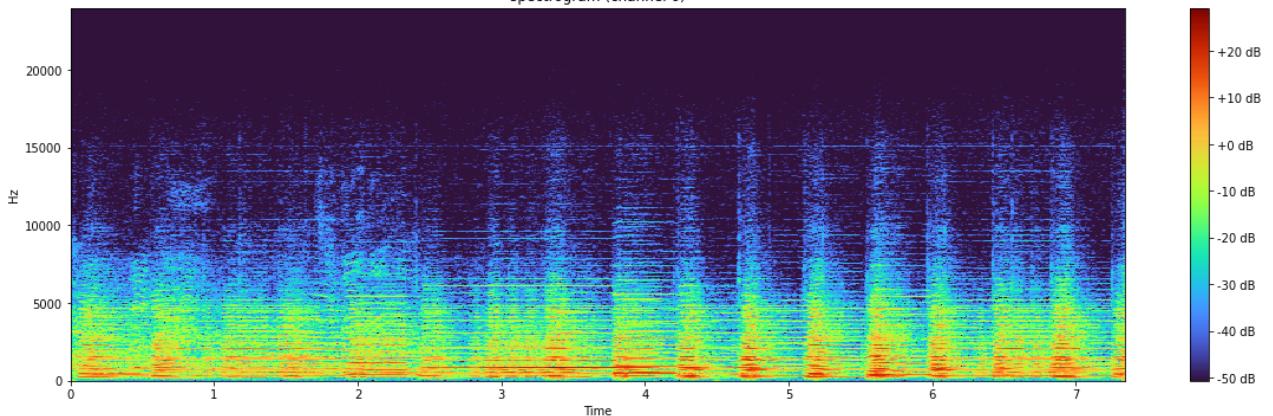


In [194...]

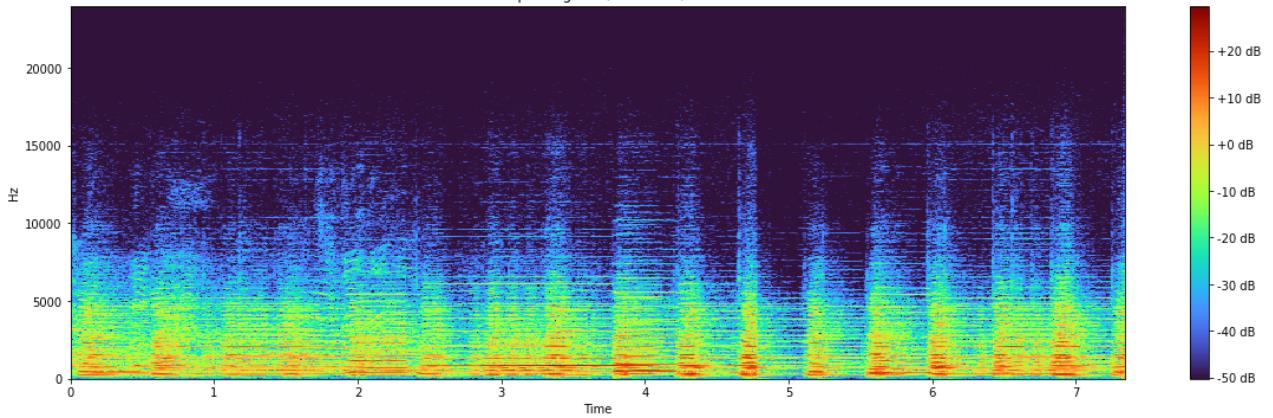
sh(171)

INFO : ./wavs/origin/0171.wav

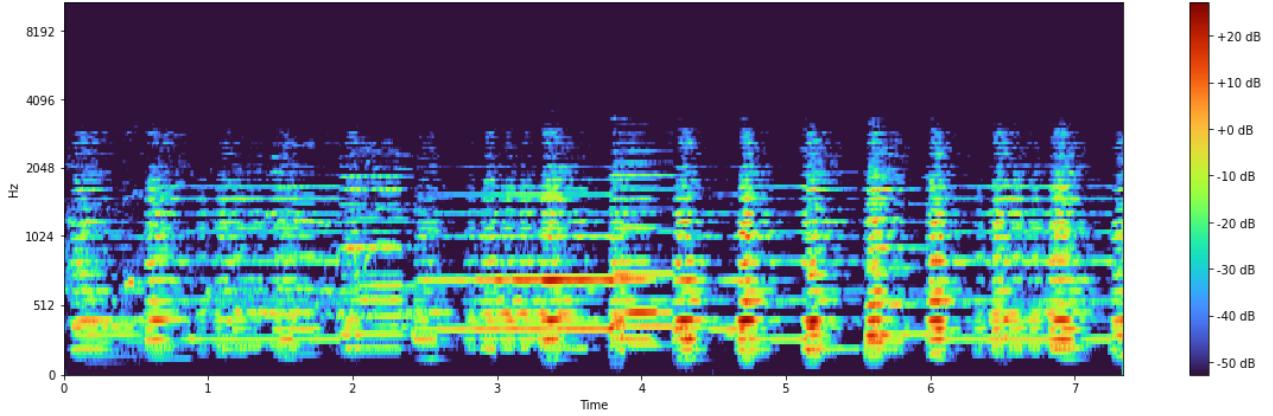
spectrogram (channel 0)



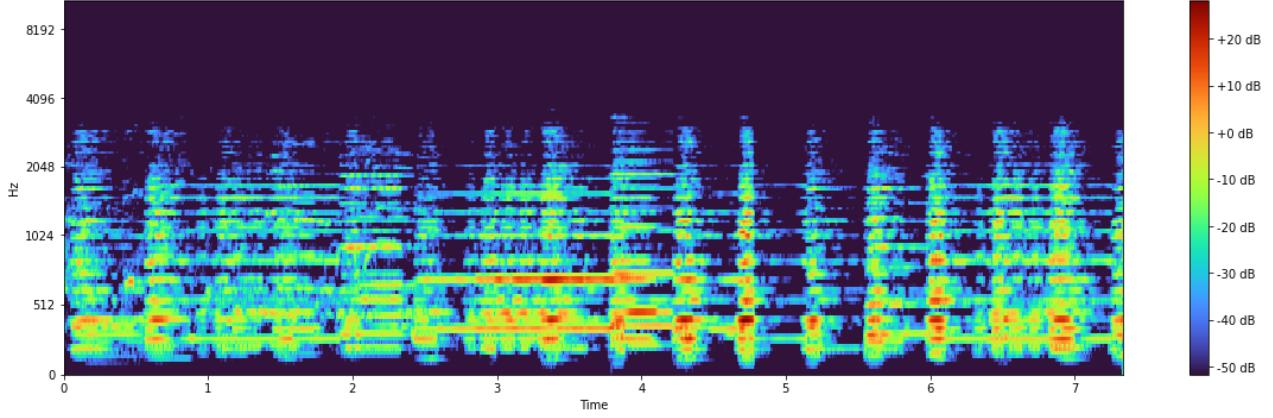
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

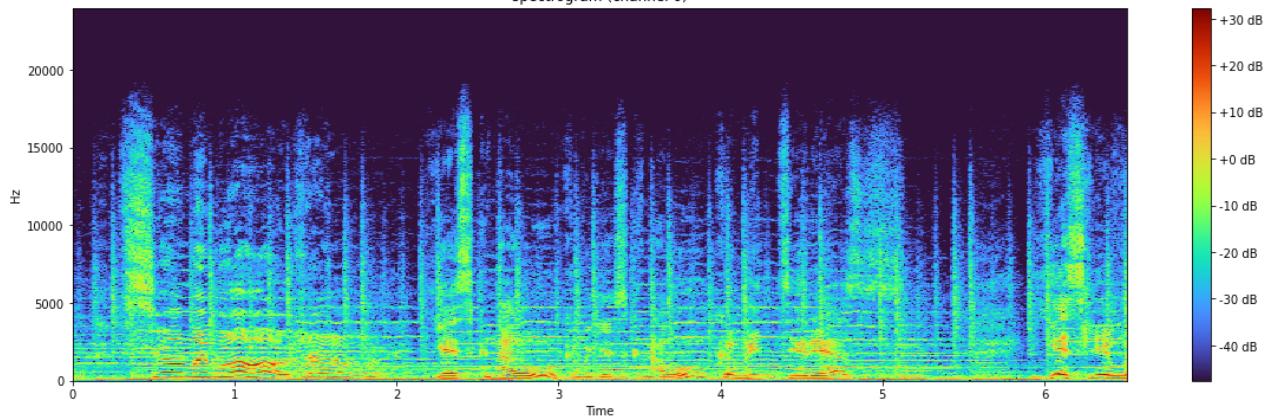


In [195...]

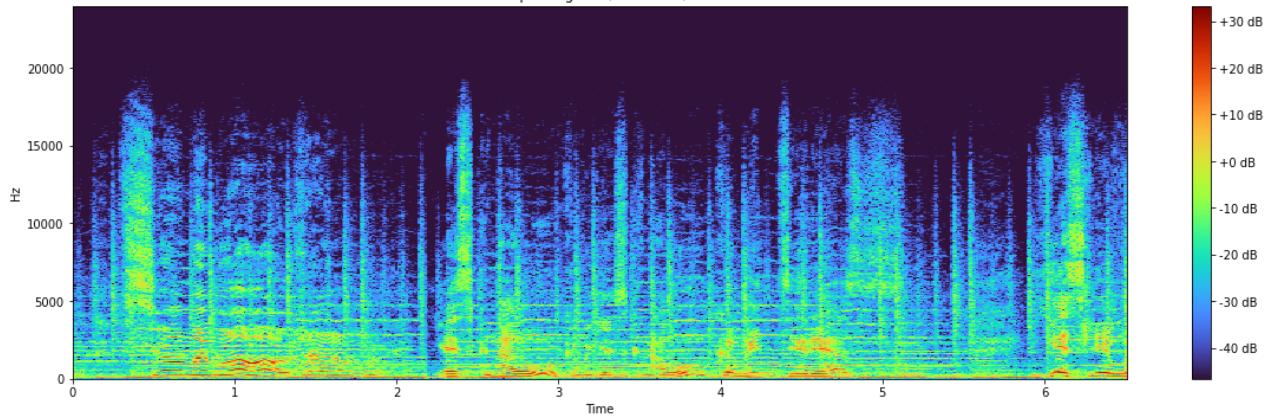
sh(172)

INFO : ./wavs/origin/0172.wav

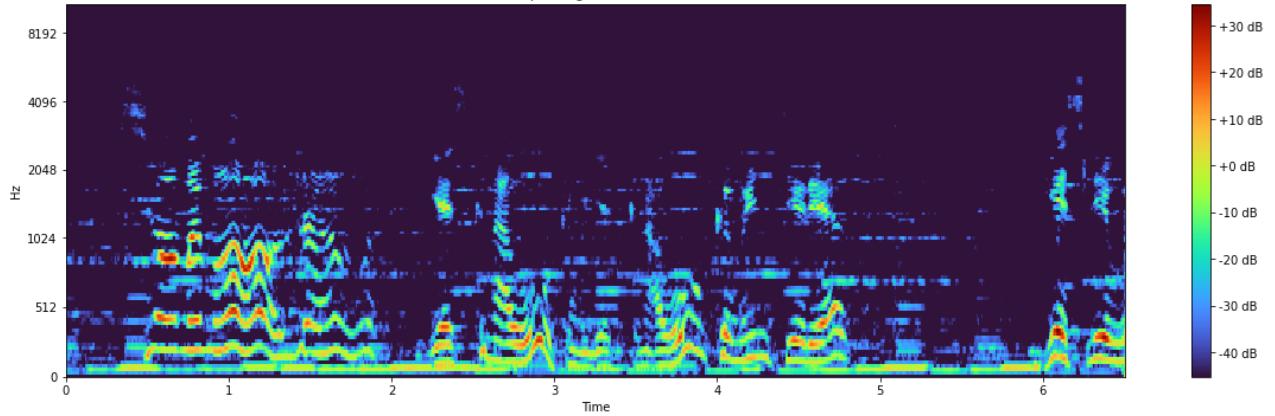
spectrogram (channel 0)



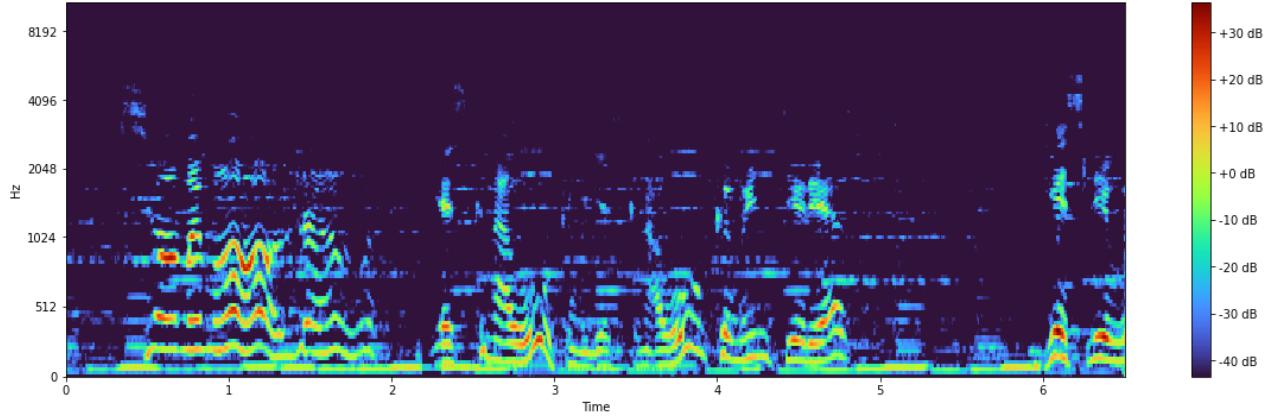
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

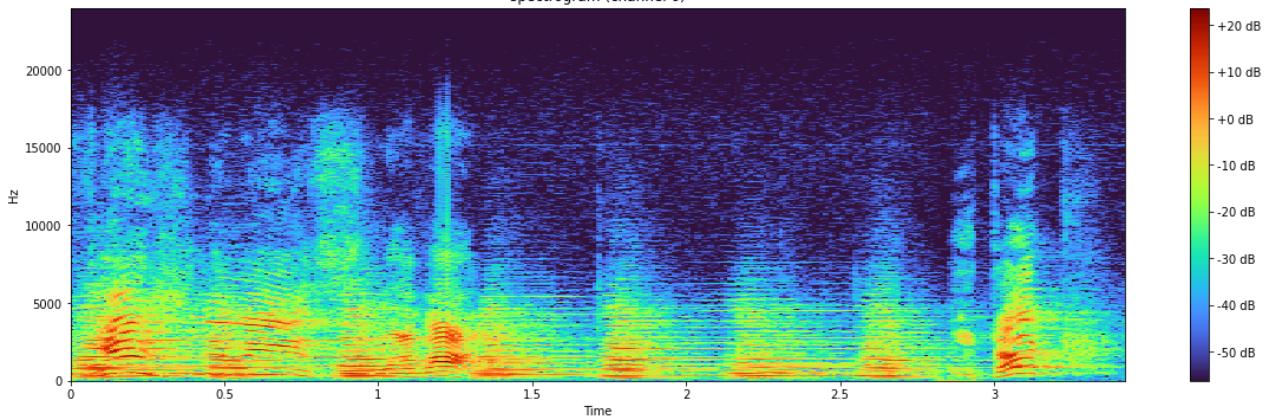


In [196...]

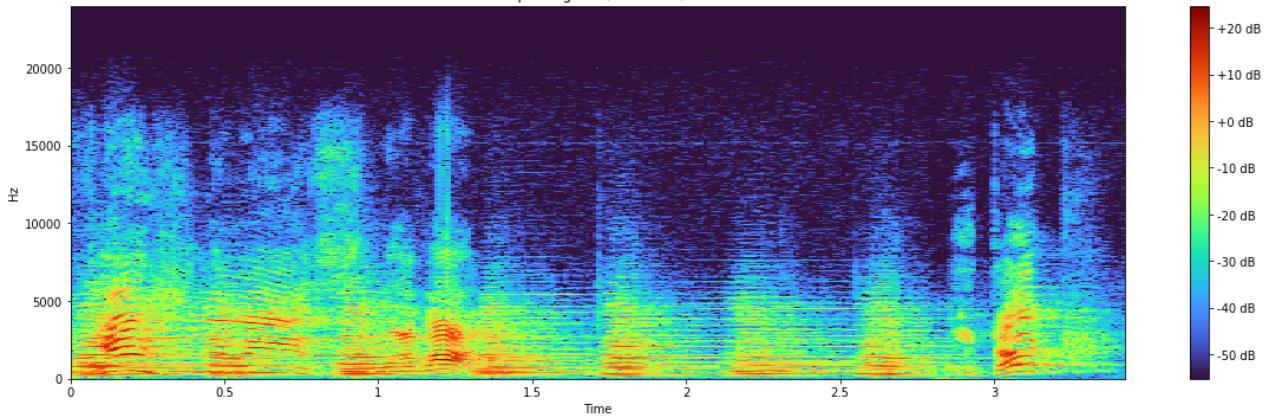
sh(173)

INFO : ./wavs/origin/0173.wav

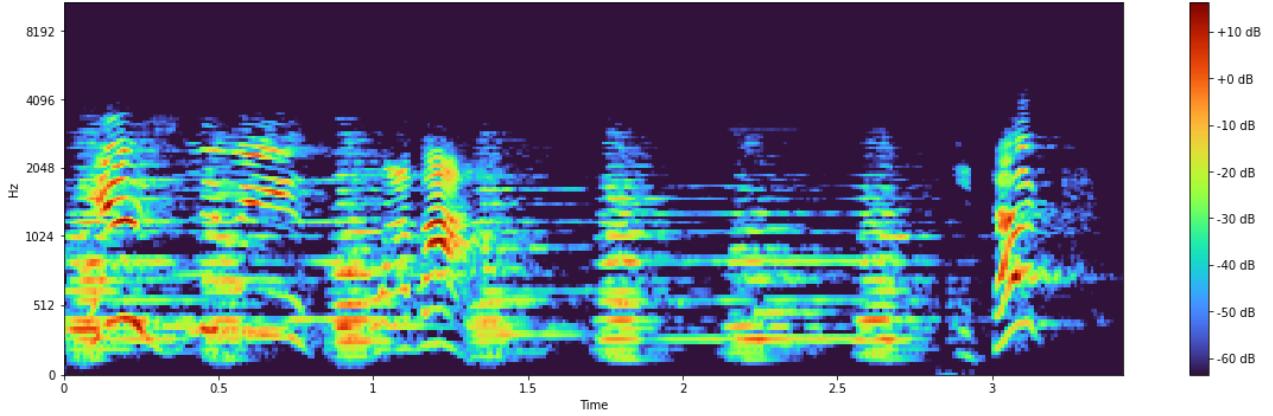
spectrogram (channel 0)



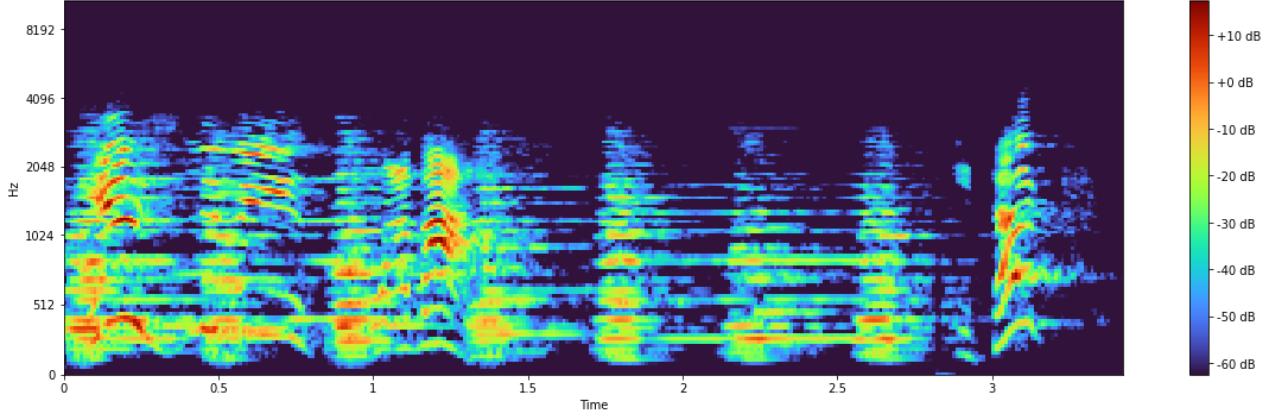
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

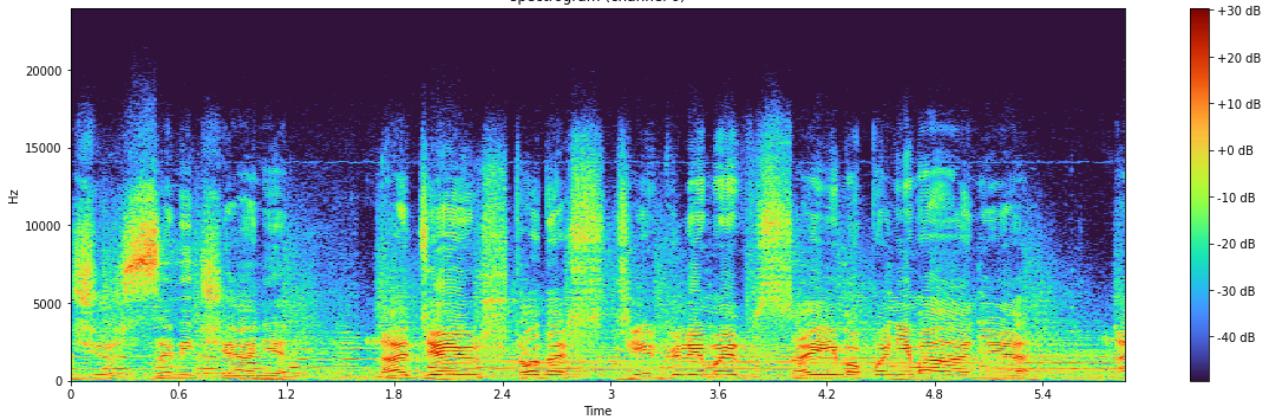


In [197...]

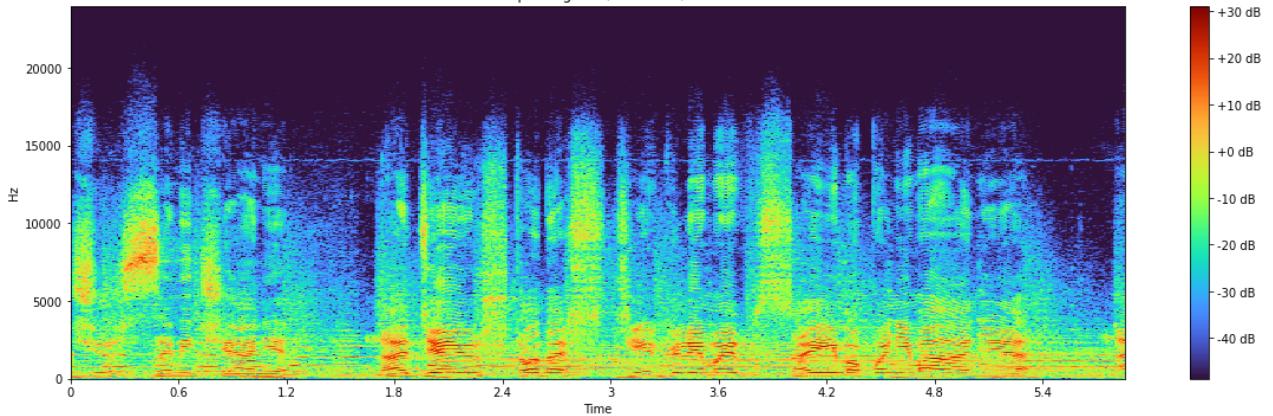
sh(174)

INFO : ./wavs/origin/0174.wav

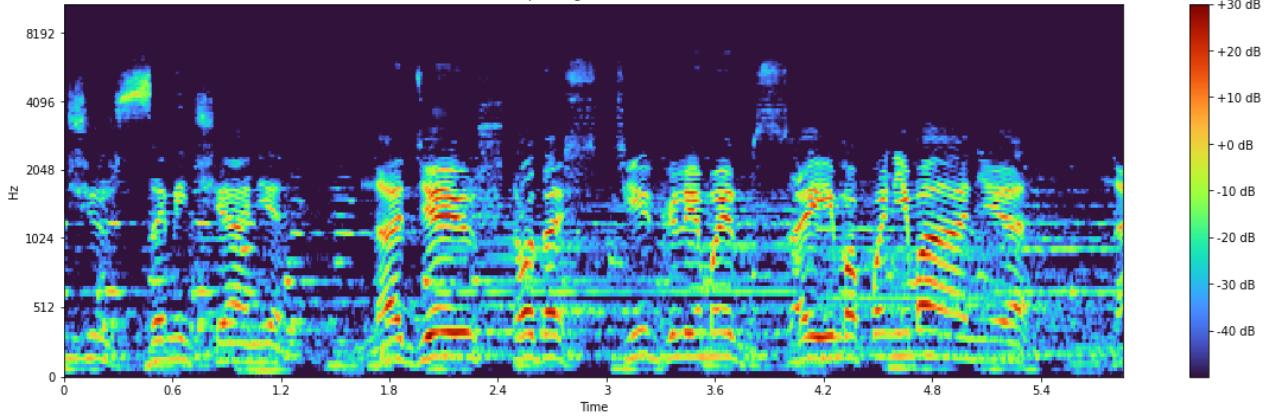
spectrogram (channel 0)



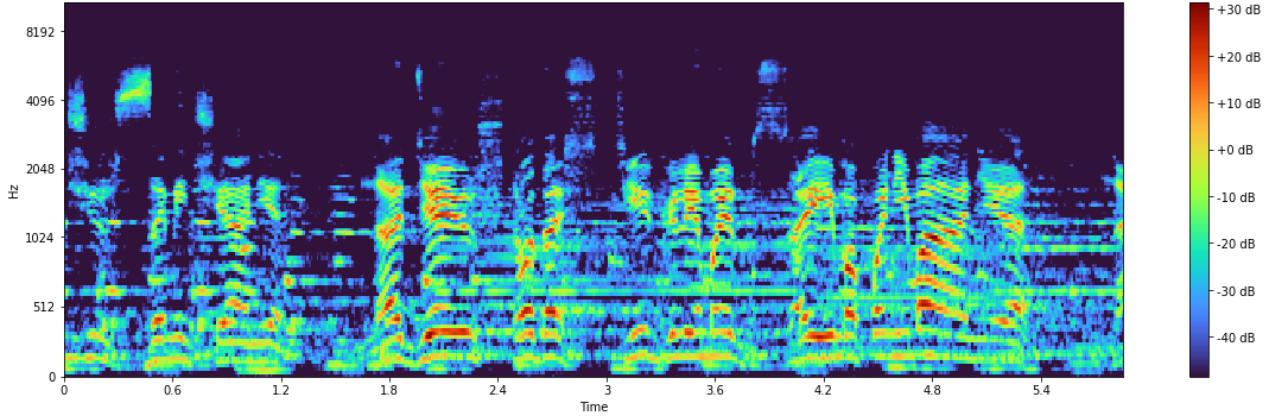
spectrogram (channel 1)



mel spectrogram (channel 0)



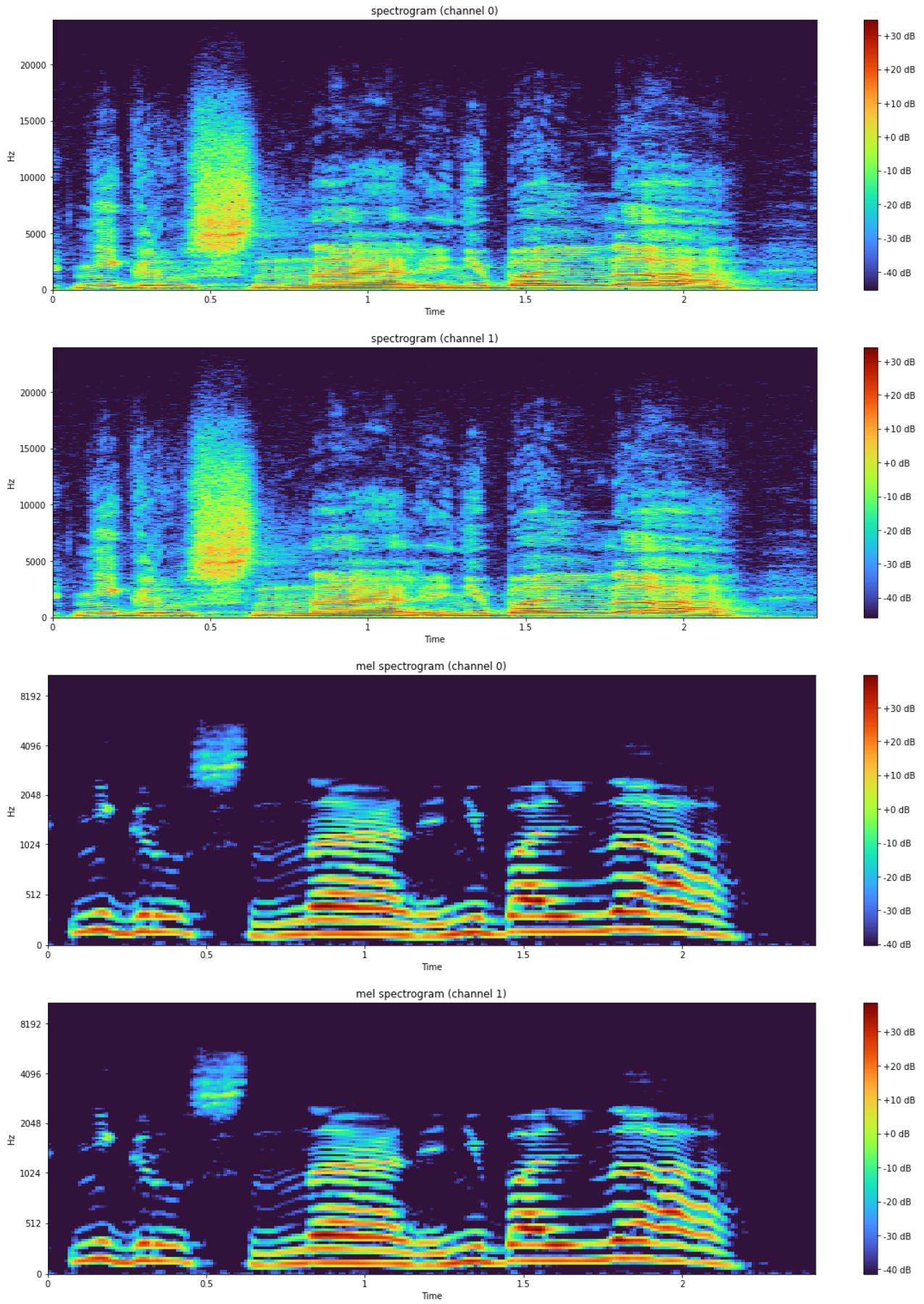
mel spectrogram (channel 1)



In [198...]

sh(175)

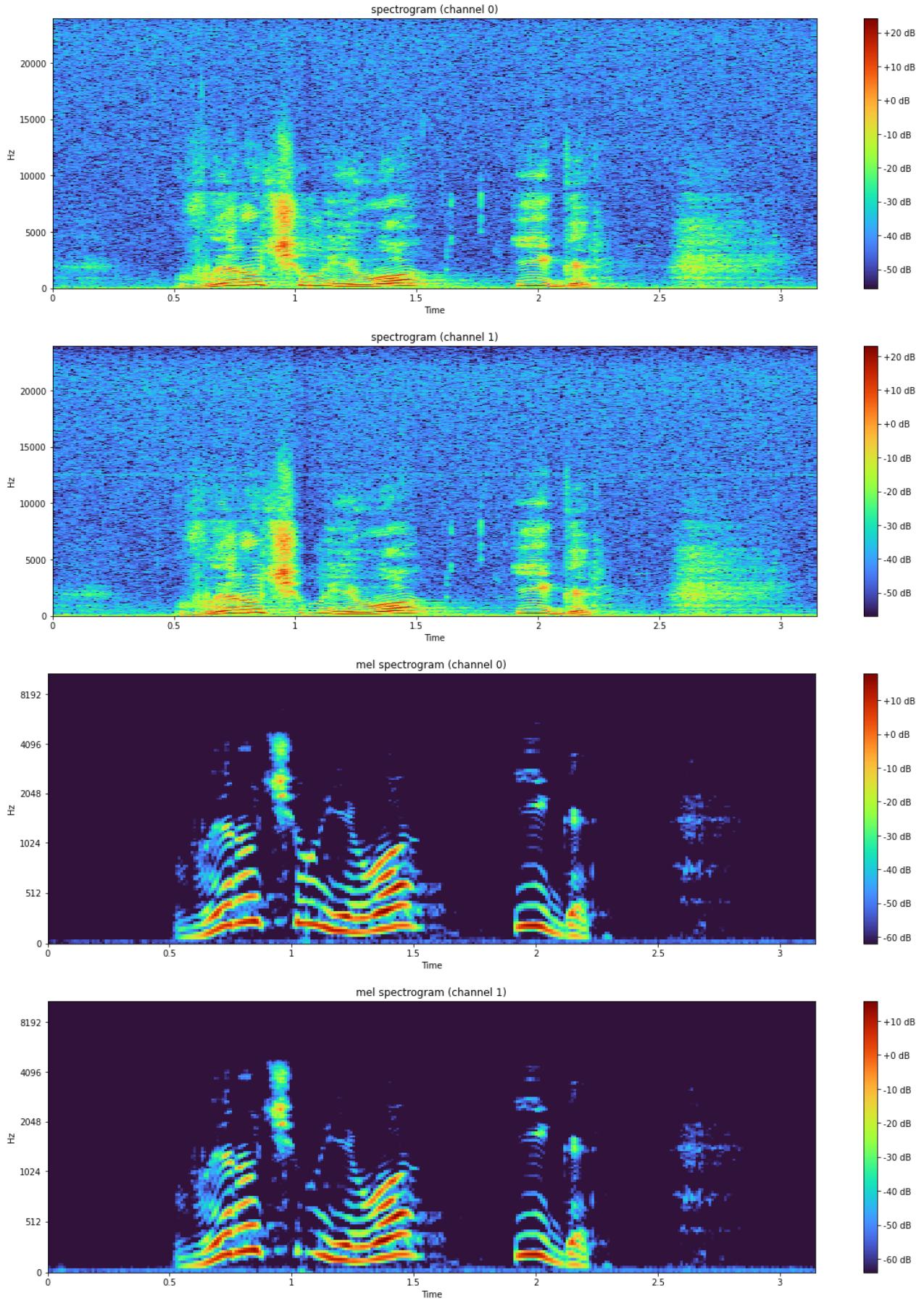
INFO : ../wavs/origin/0175.wav



In [199...]

sh(179)

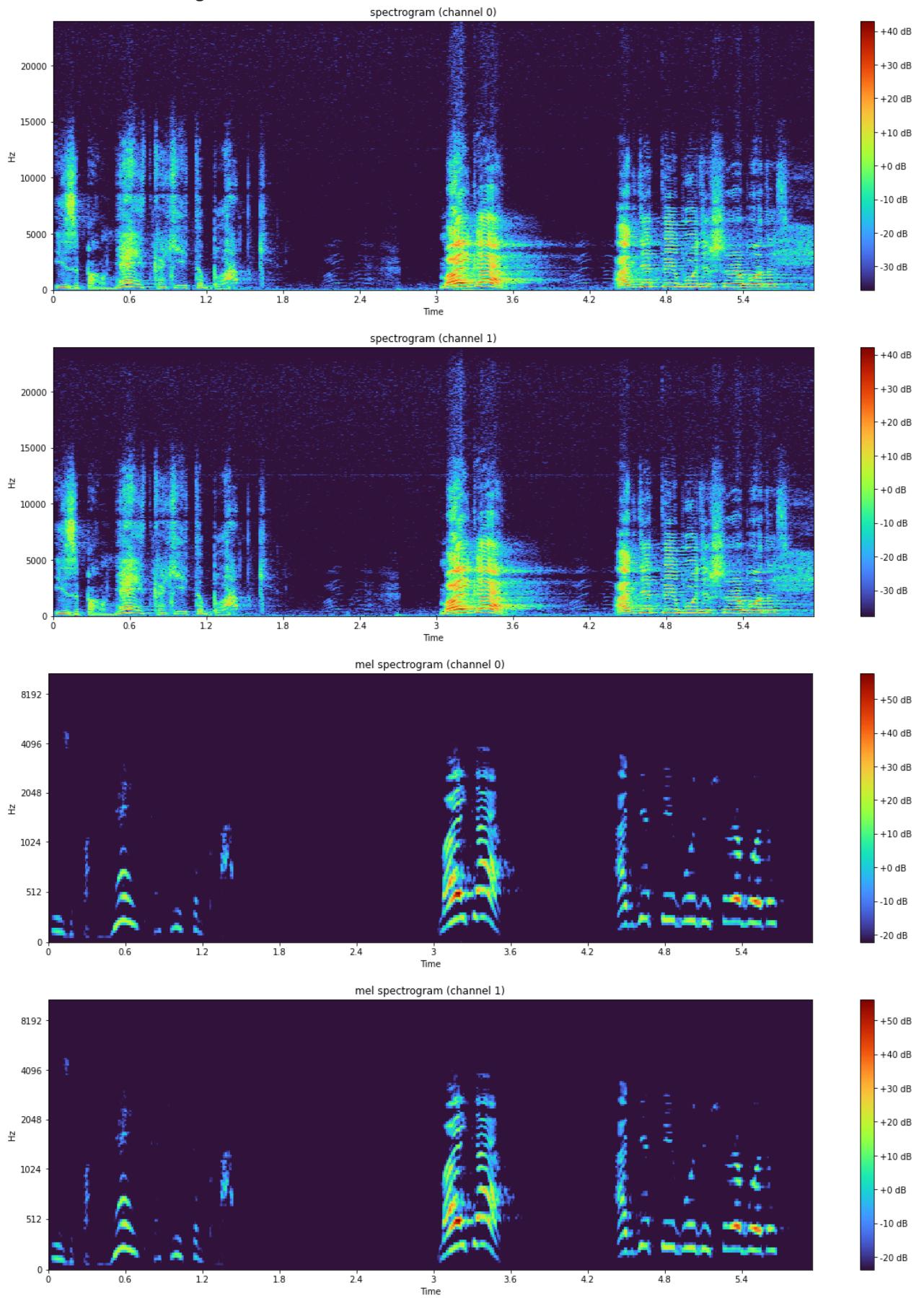
INFO : ./wavs/origin/0179.wav



In [200...]

sh(180)

INFO : ./wavs/origin/0180.wav

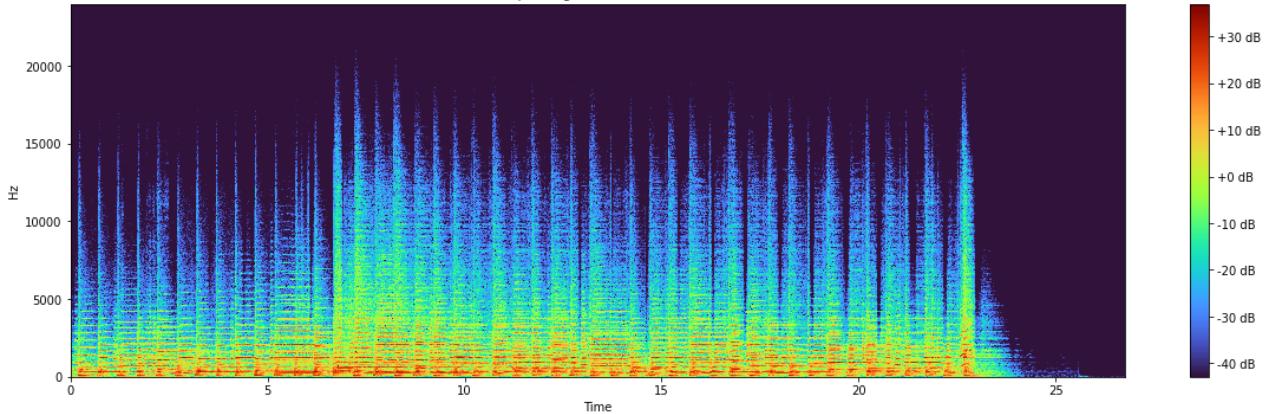


In [201...]

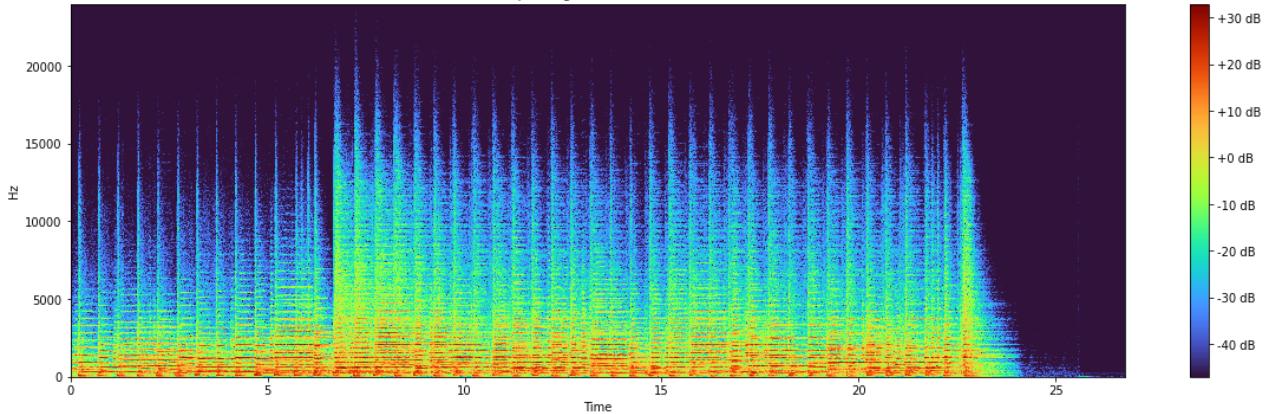
sh(181)

INFO : ./wavs/origin/0181.wav

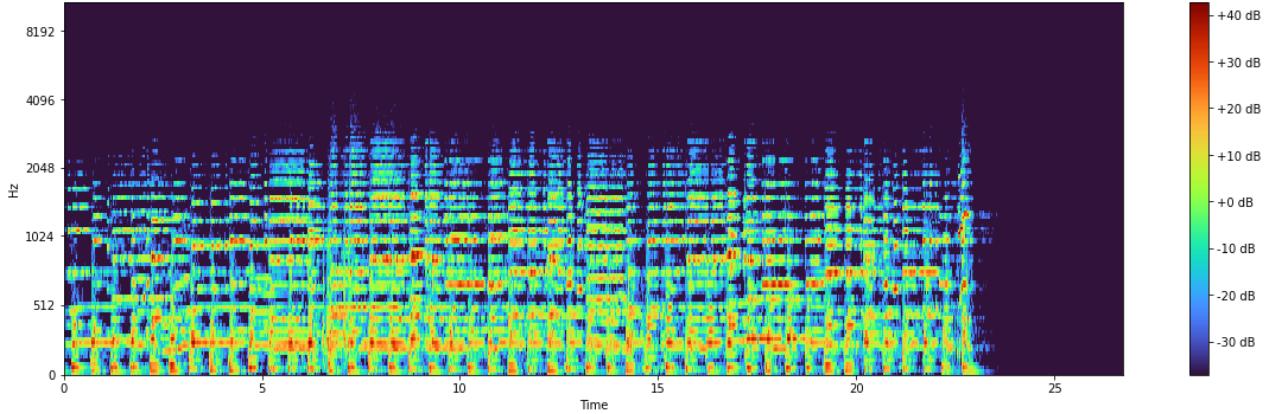
spectrogram (channel 0)



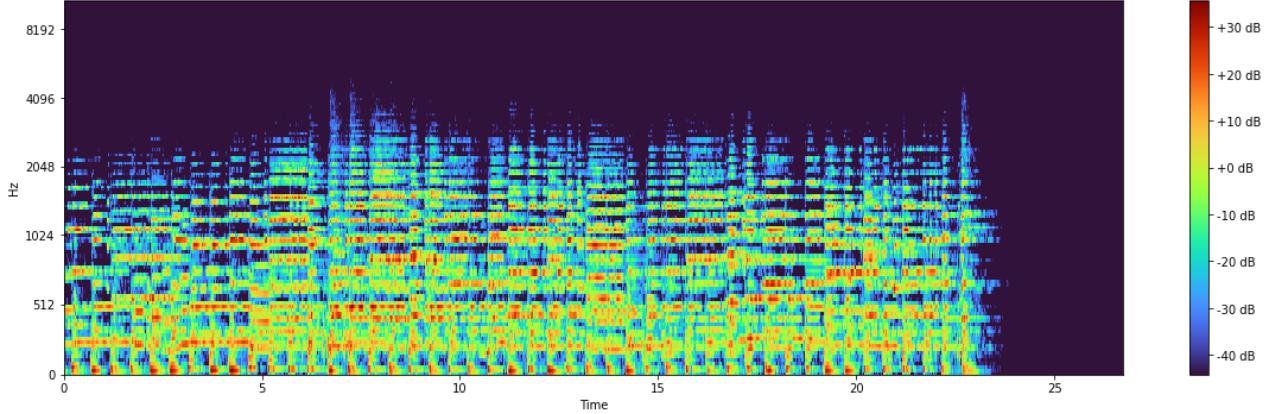
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

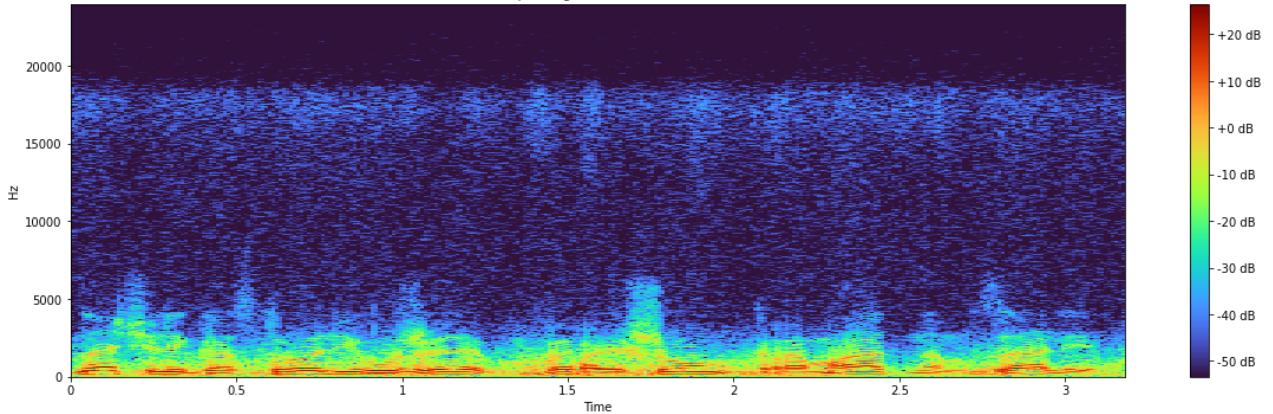


In [202...]

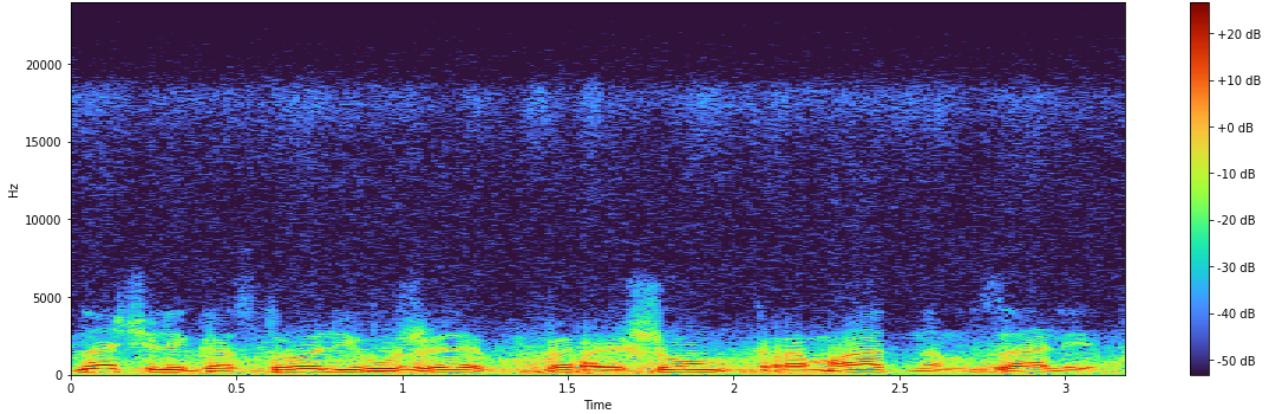
sh(184)

INFO : ./wavs/origin/0184.wav

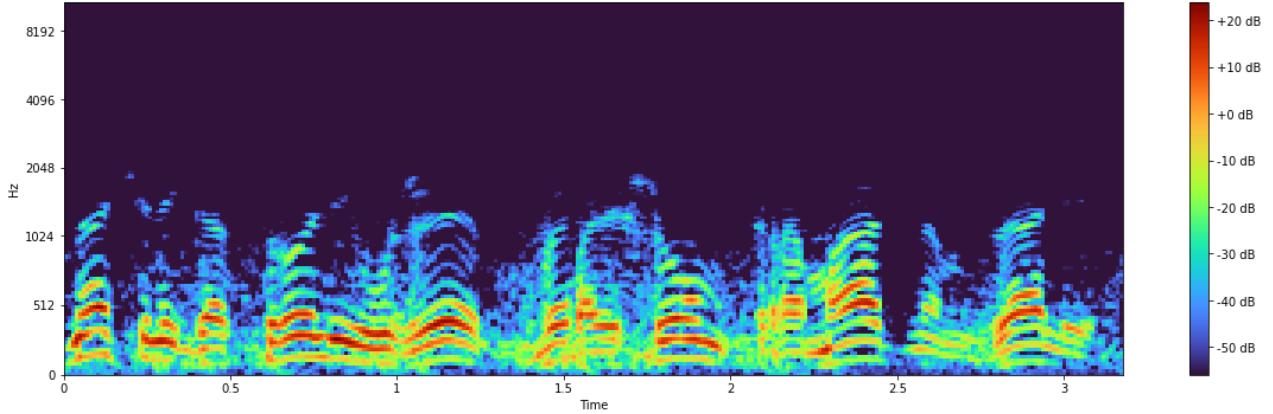
spectrogram (channel 0)



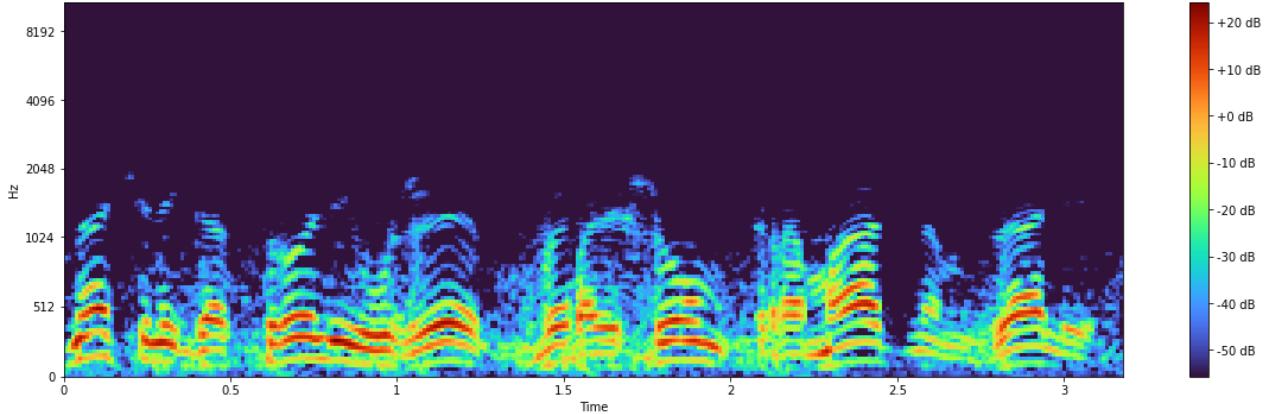
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

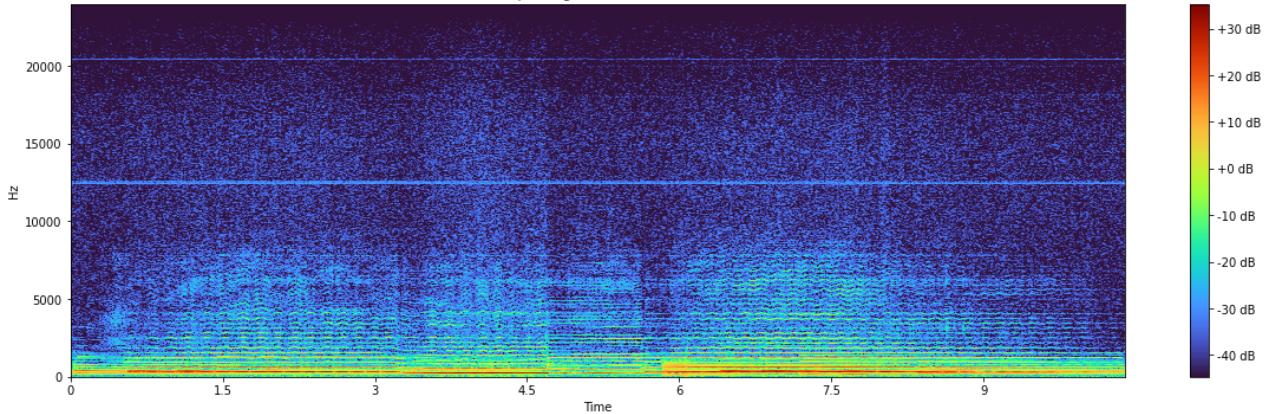


In [203...]

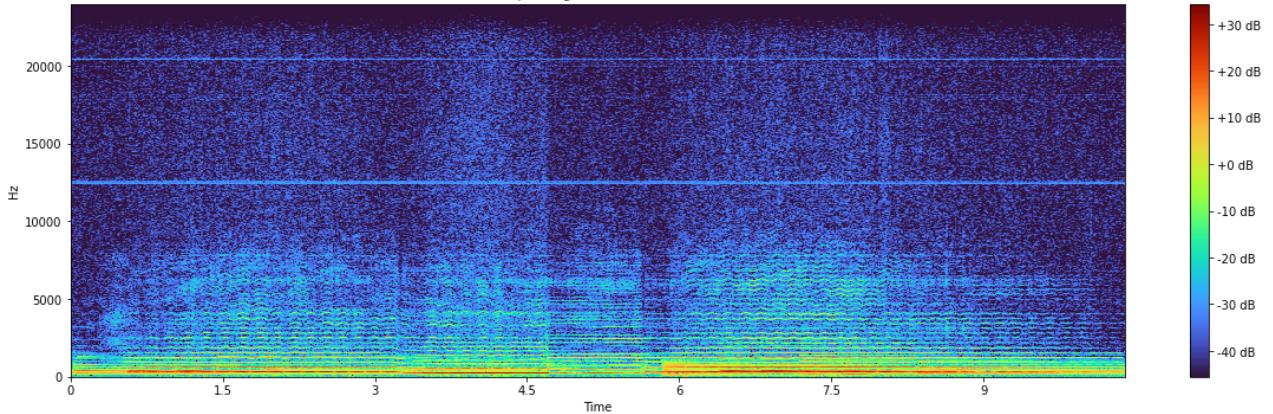
sh(185)

INFO : ./wavs/origin/0185.wav

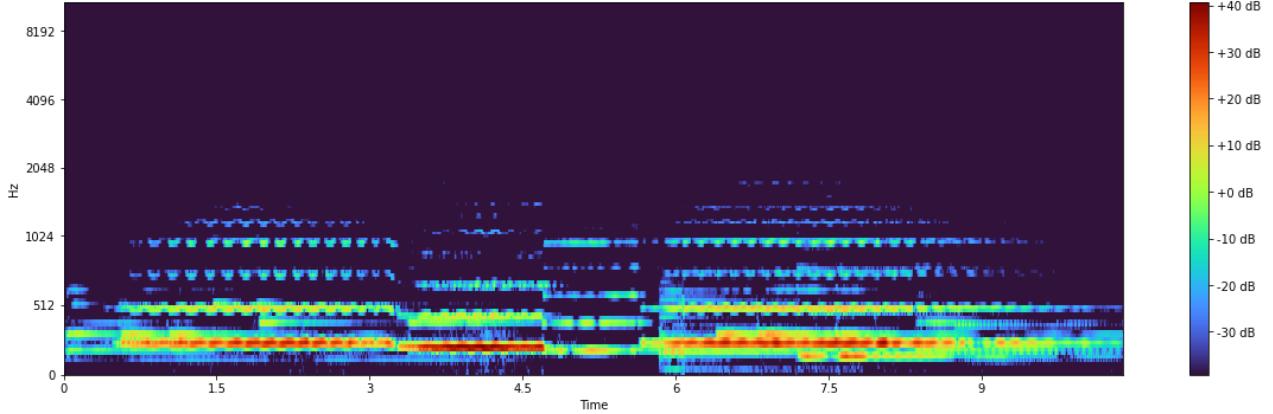
spectrogram (channel 0)



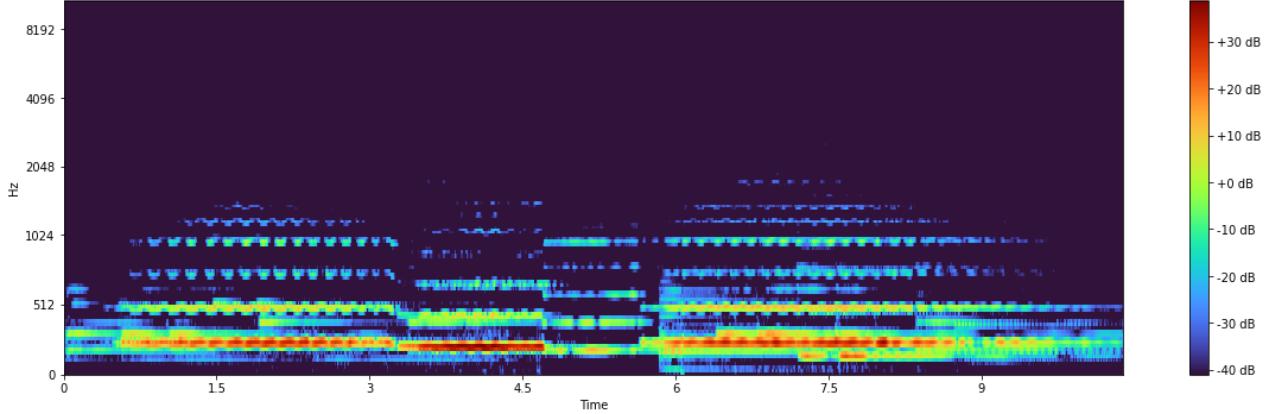
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

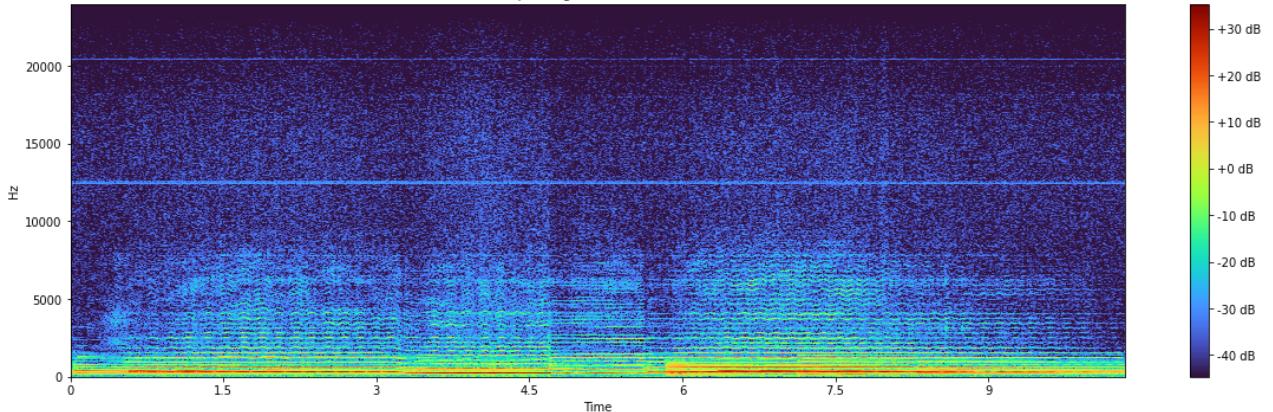


In [204...]

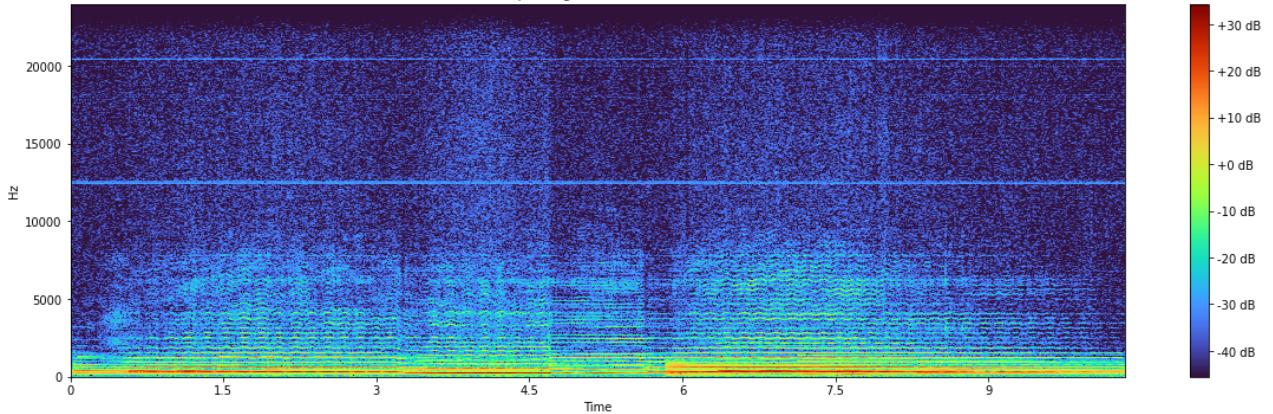
sh(186)

INFO : ./wavs/origin/0186.wav

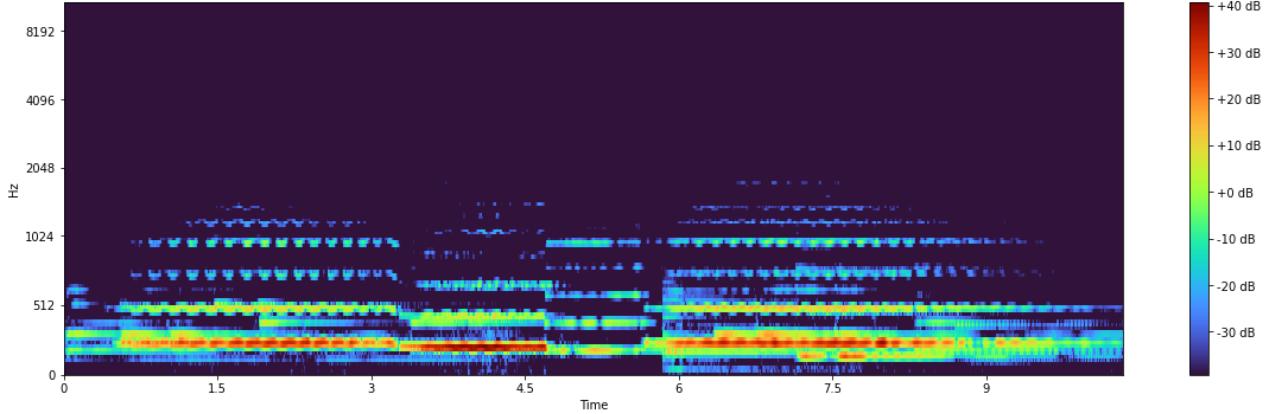
spectrogram (channel 0)



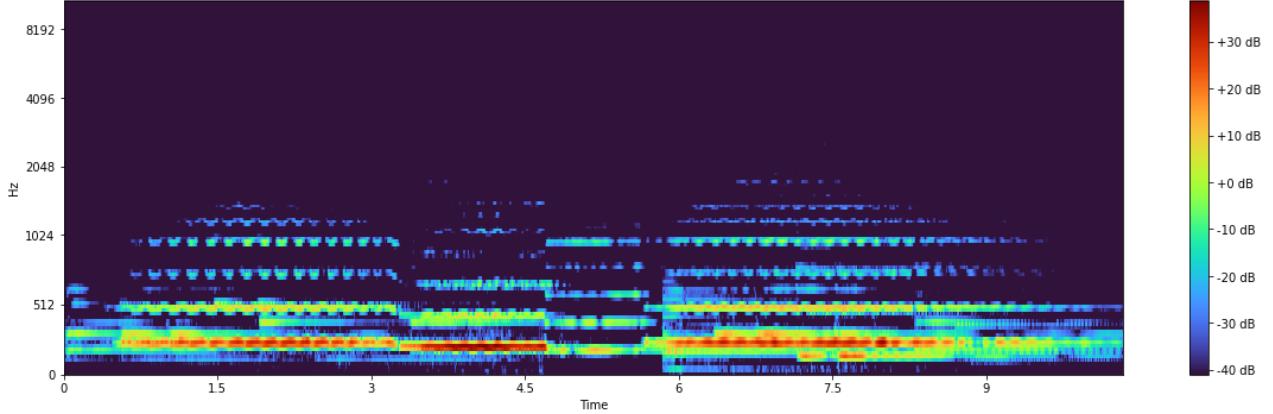
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

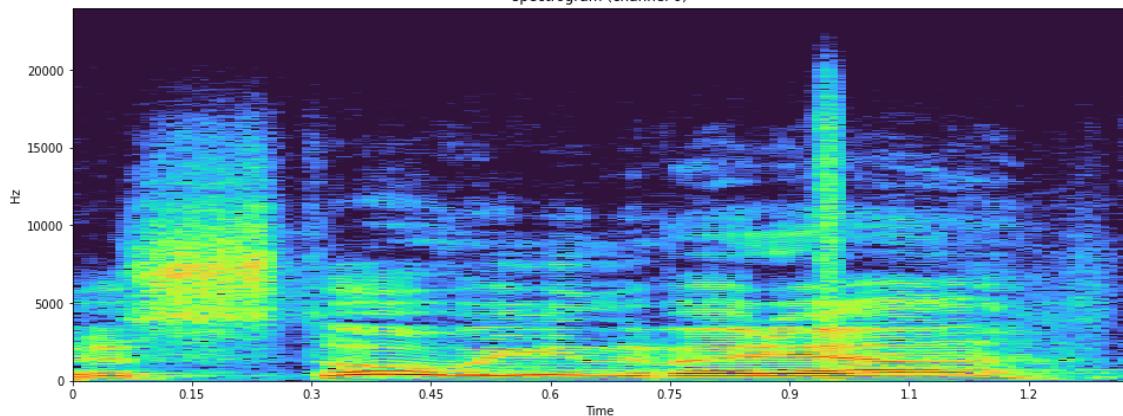


In [205...]

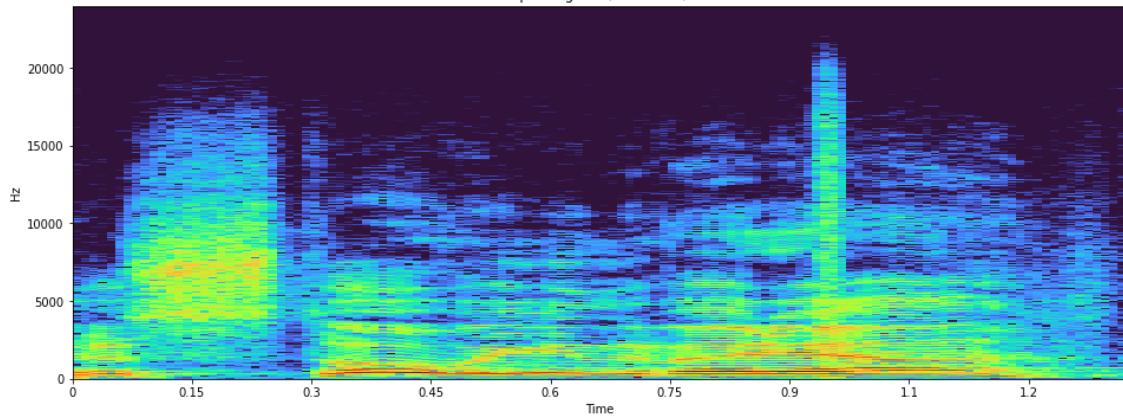
sh(187)

INFO : ./wavs/origin/0187.wav

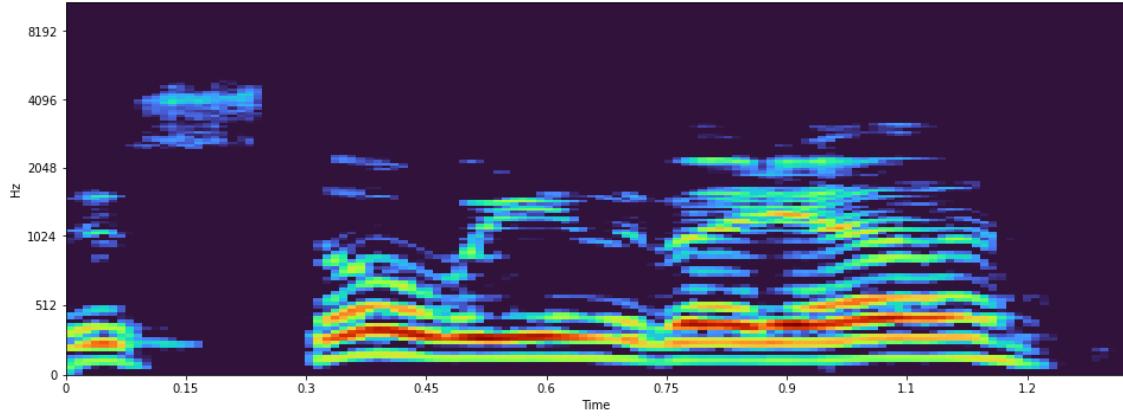
spectrogram (channel 0)



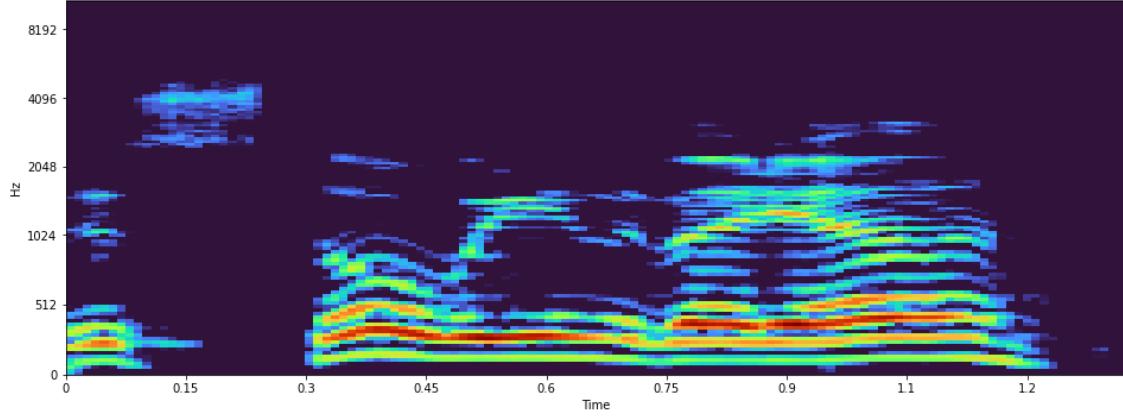
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

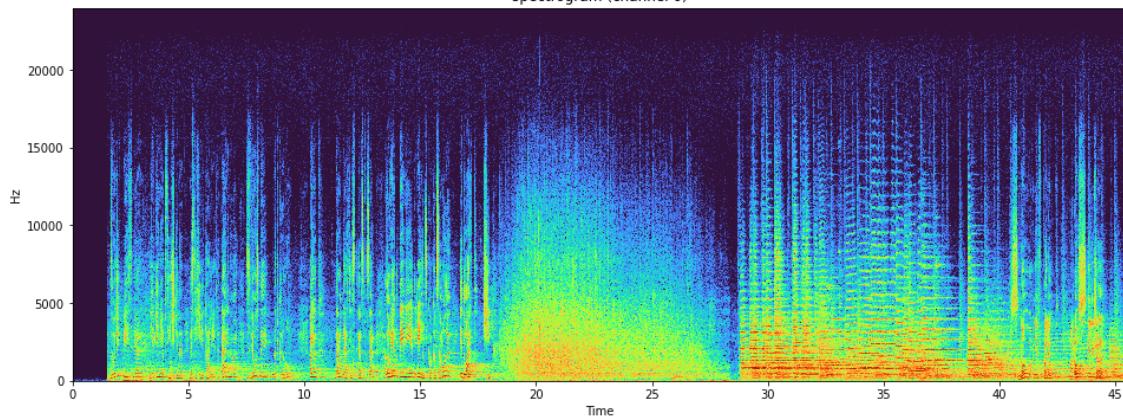


In [206...]

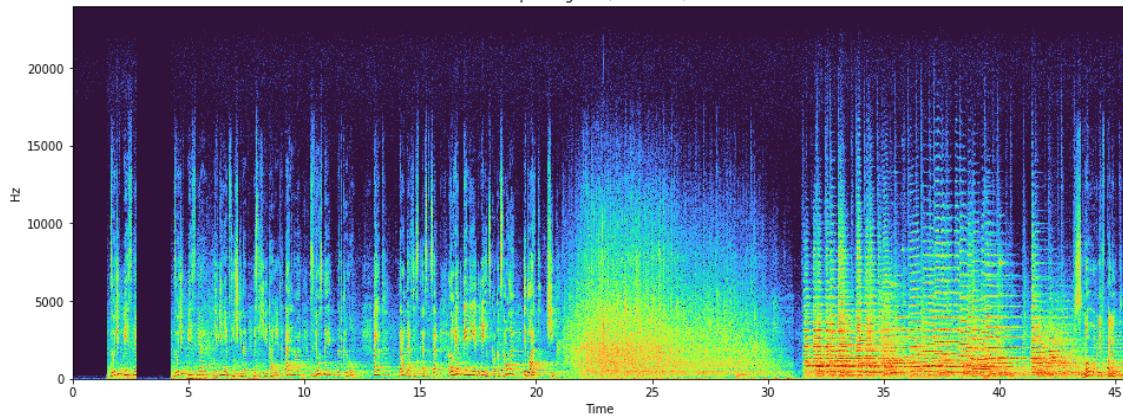
sh(188)

INFO : ./wavs/origin/0188.wav

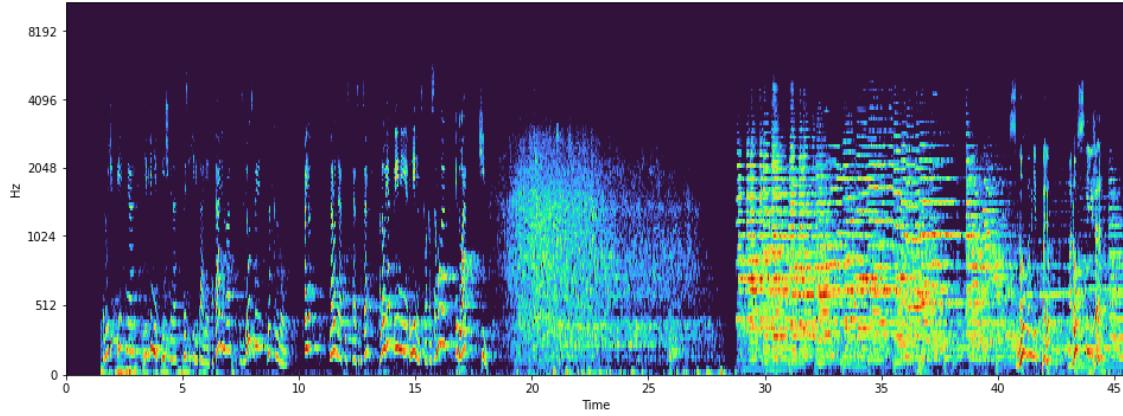
spectrogram (channel 0)



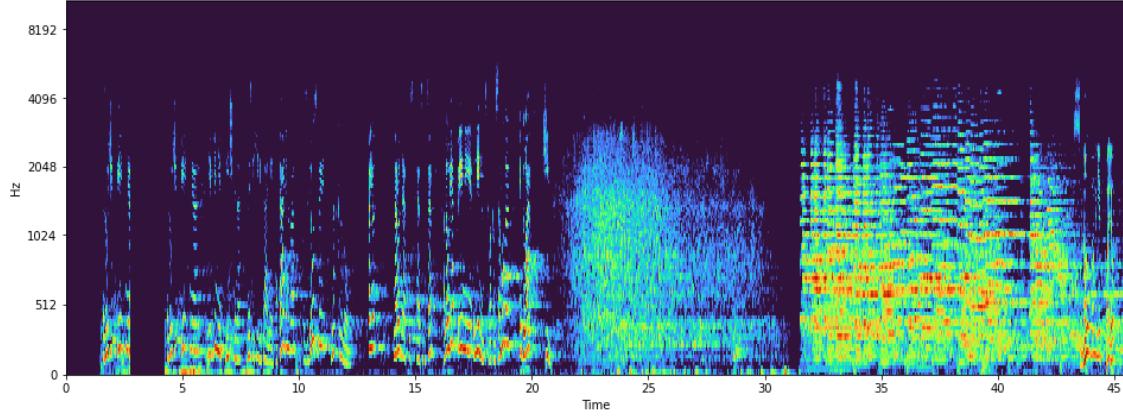
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

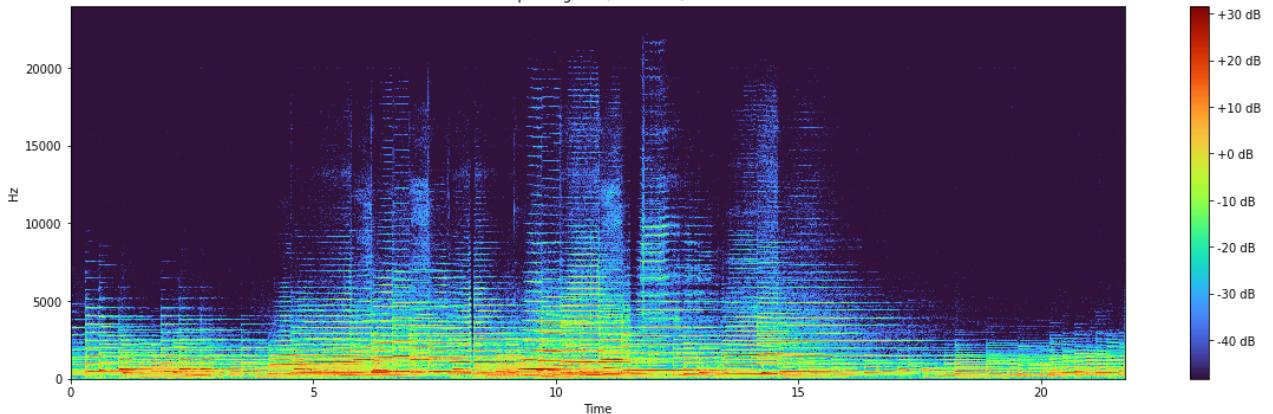


In [207...]

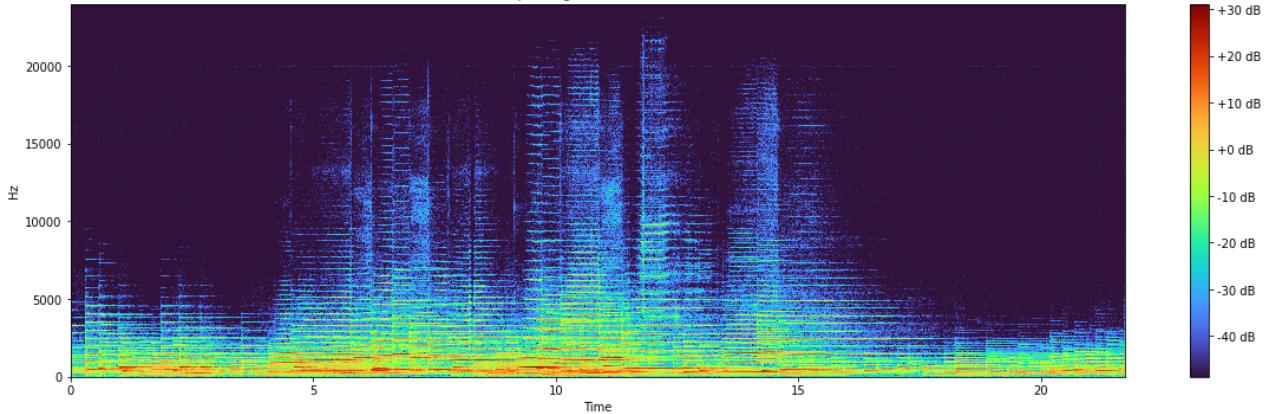
sh(189)

INFO : ./wavs/origin/0189.wav

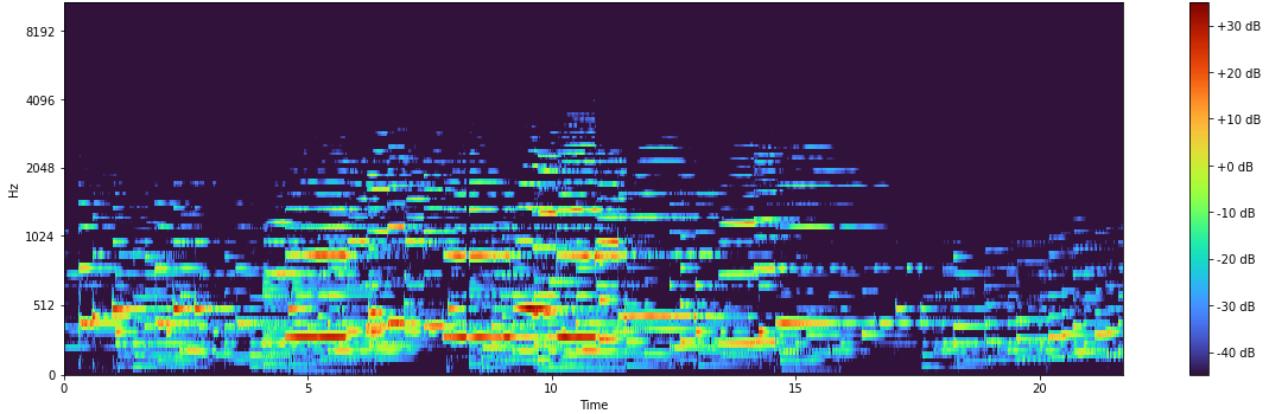
spectrogram (channel 0)



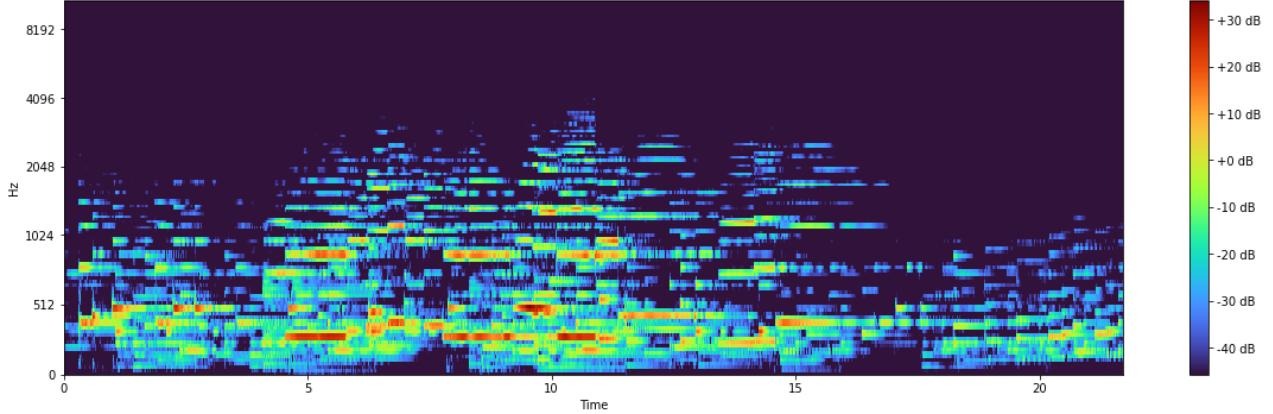
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

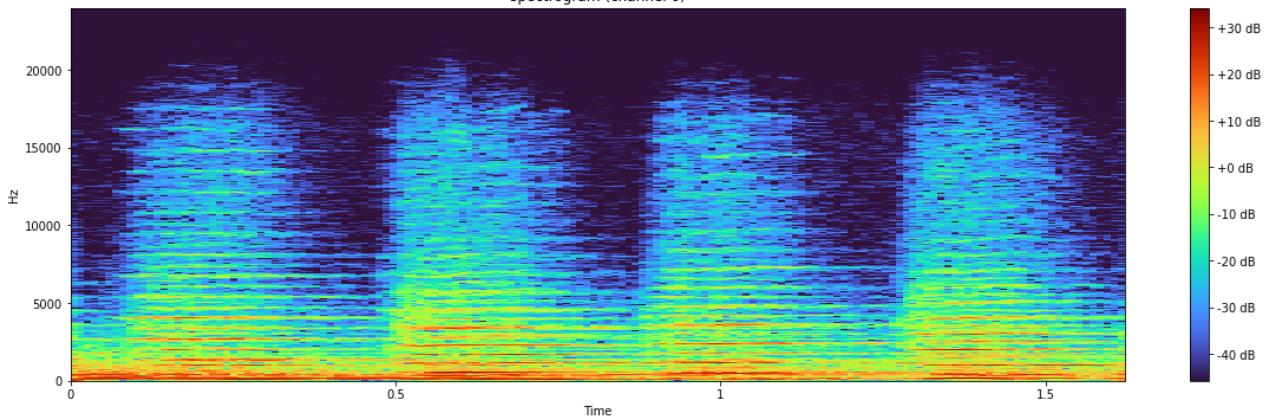


In [208...]

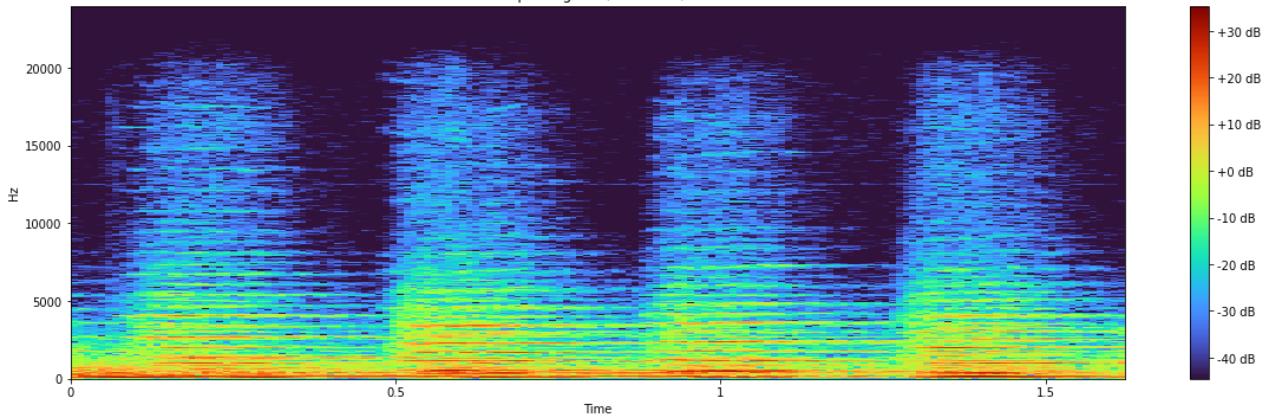
sh(190)

INFO : ./wavs/origin/0190.wav

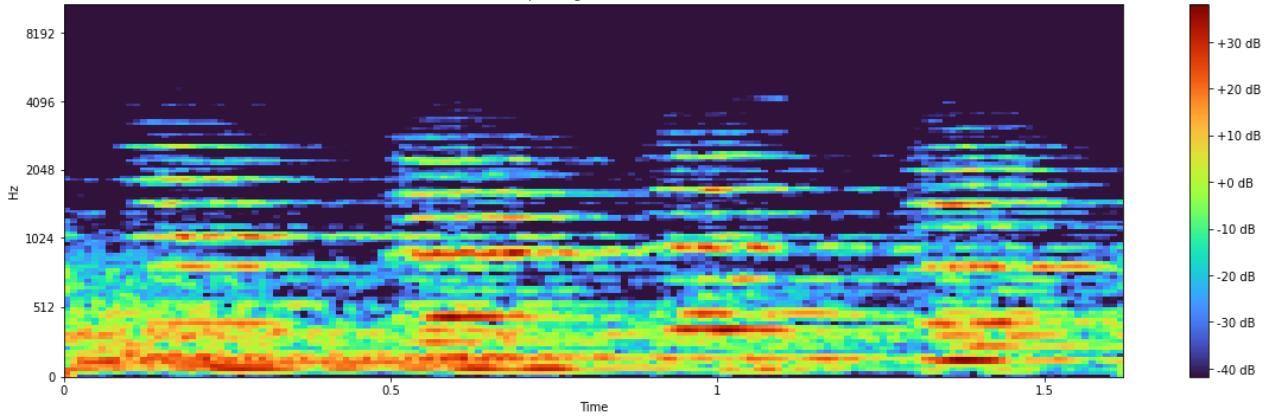
spectrogram (channel 0)



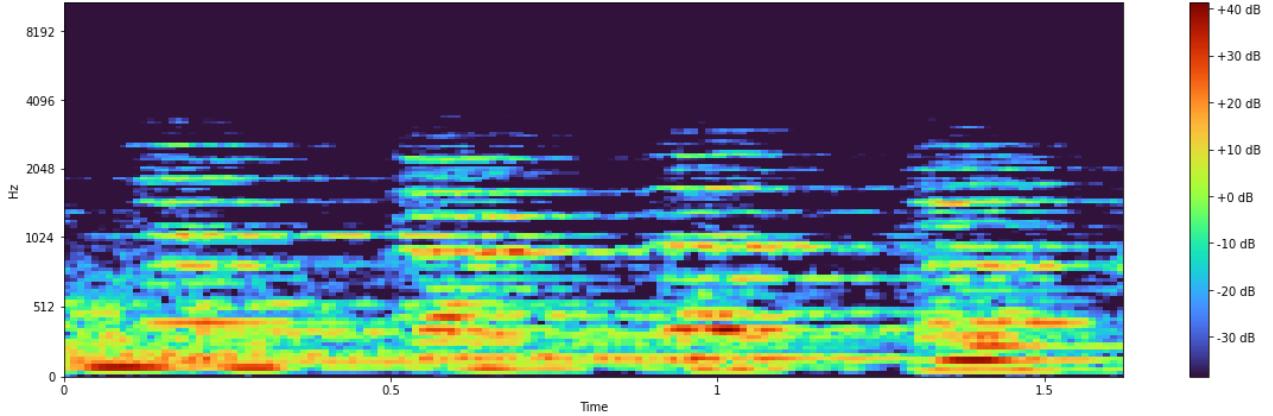
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

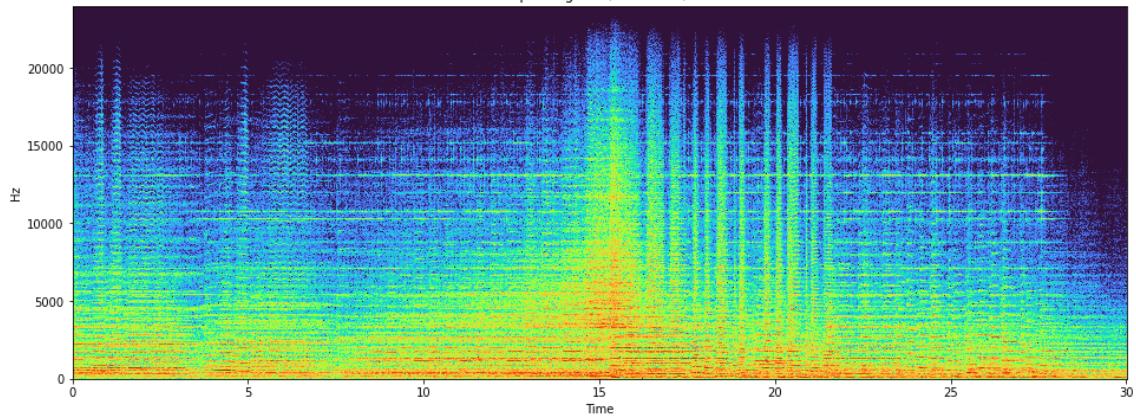


In [209...]

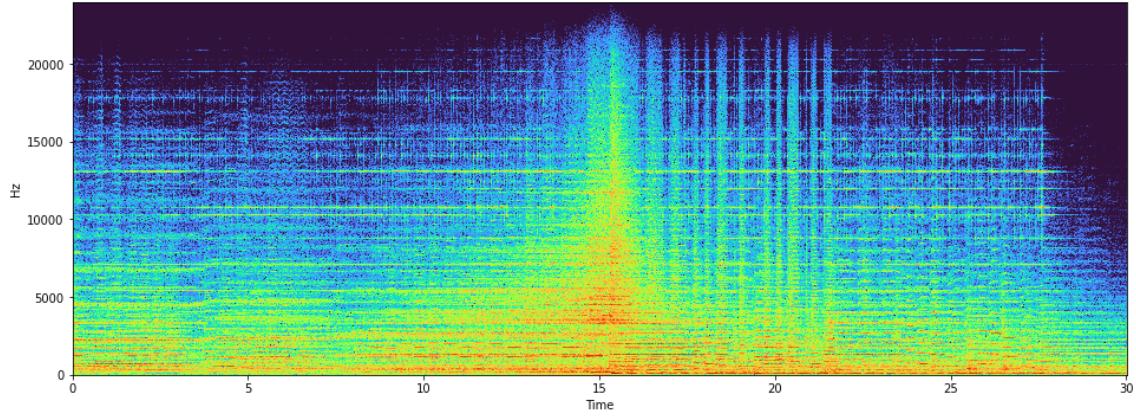
sh(191)

INFO : ./wavs/origin/0191.wav

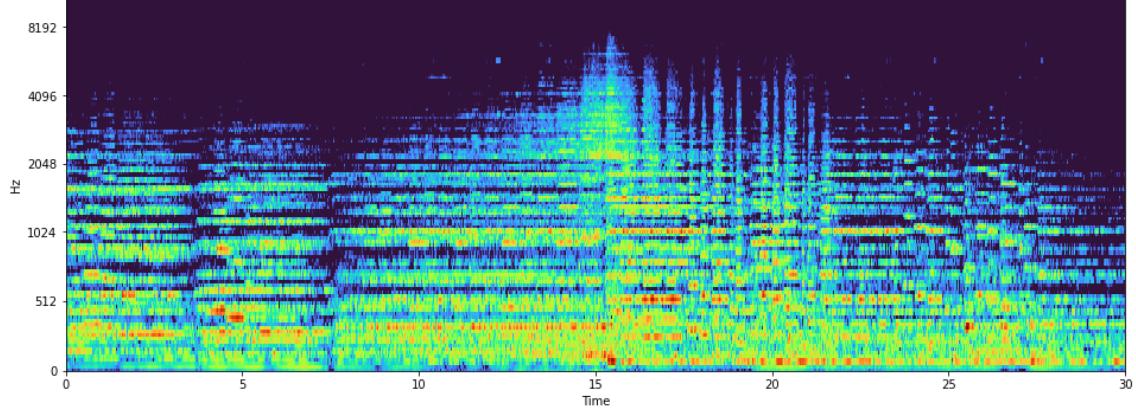
spectrogram (channel 0)



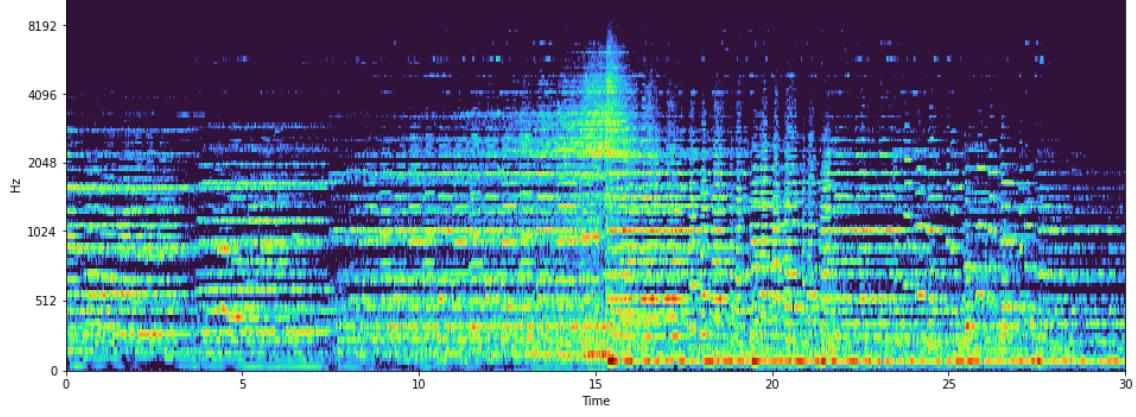
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

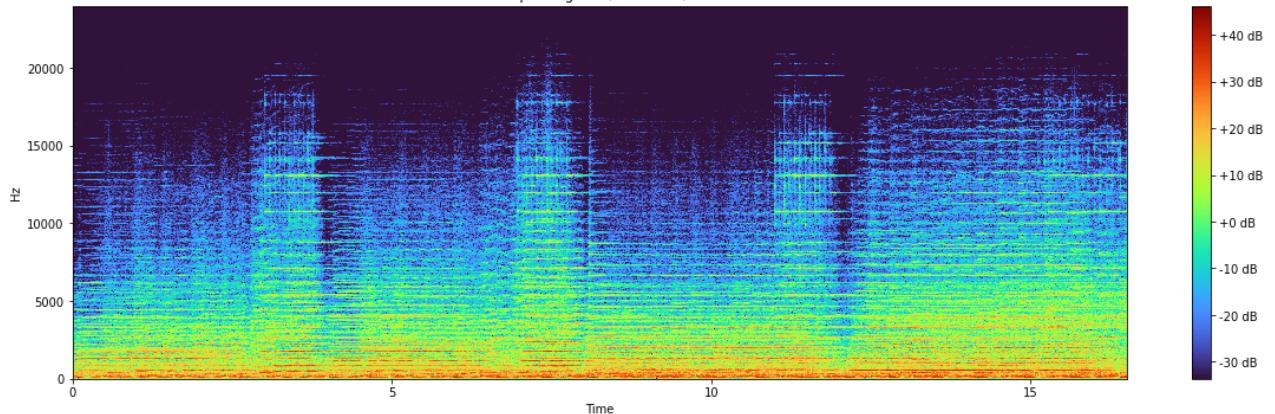


In [210...]

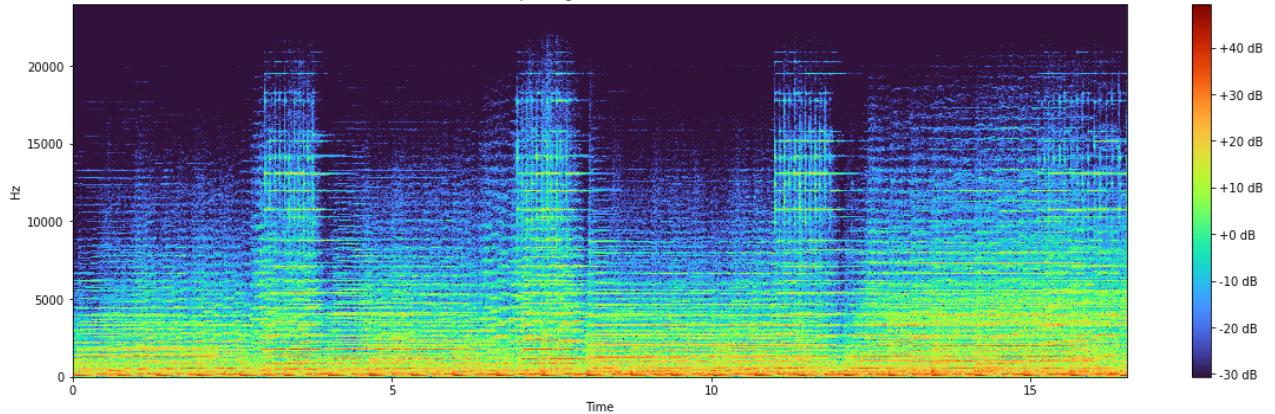
sh(192)

INFO : ./wavs/origin/0192.wav

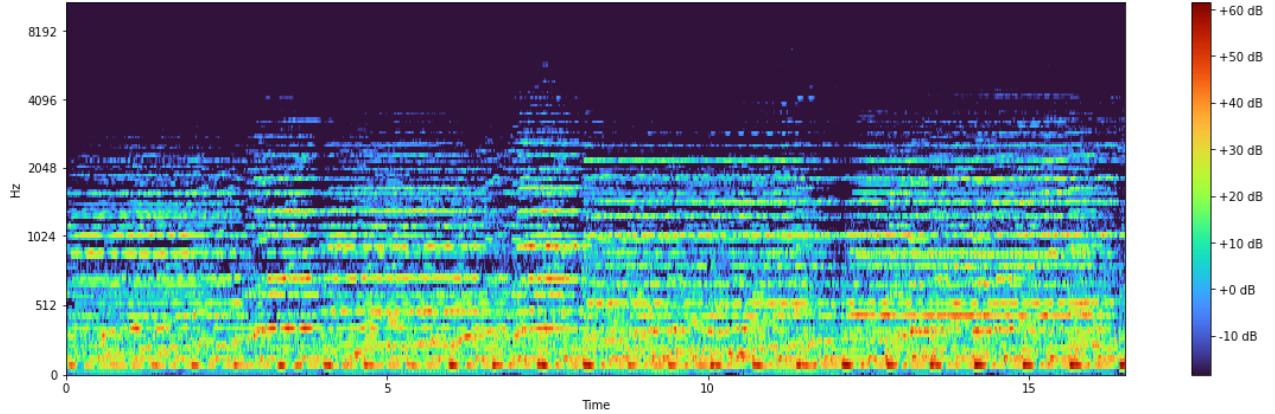
spectrogram (channel 0)



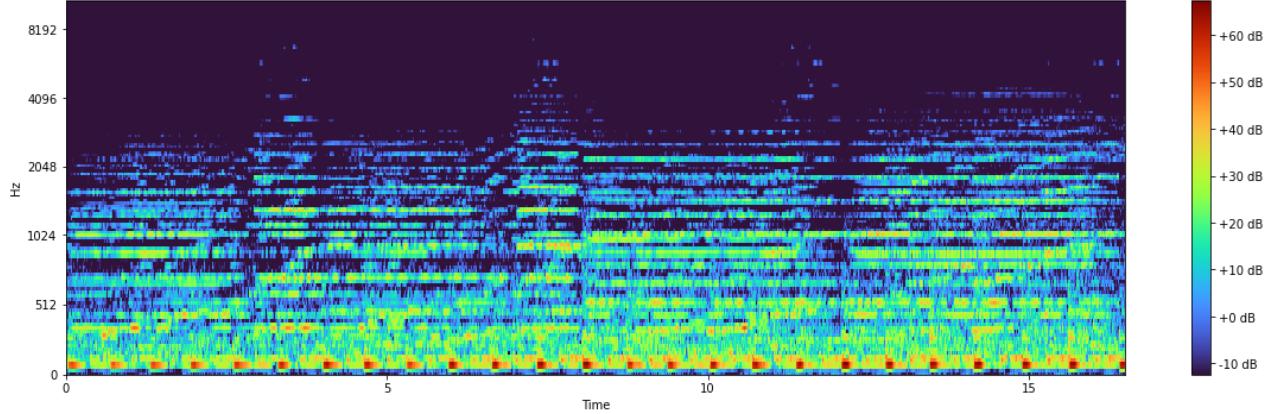
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

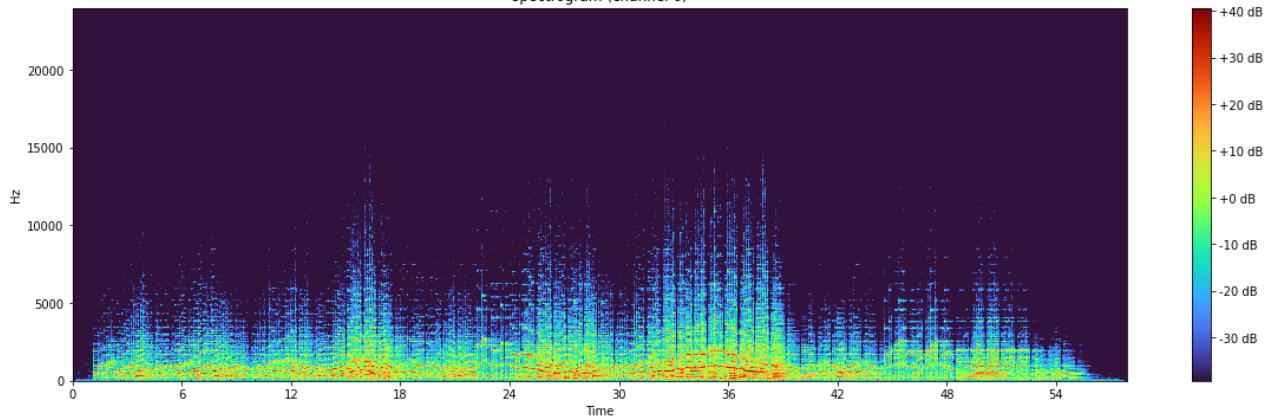


In [211...]

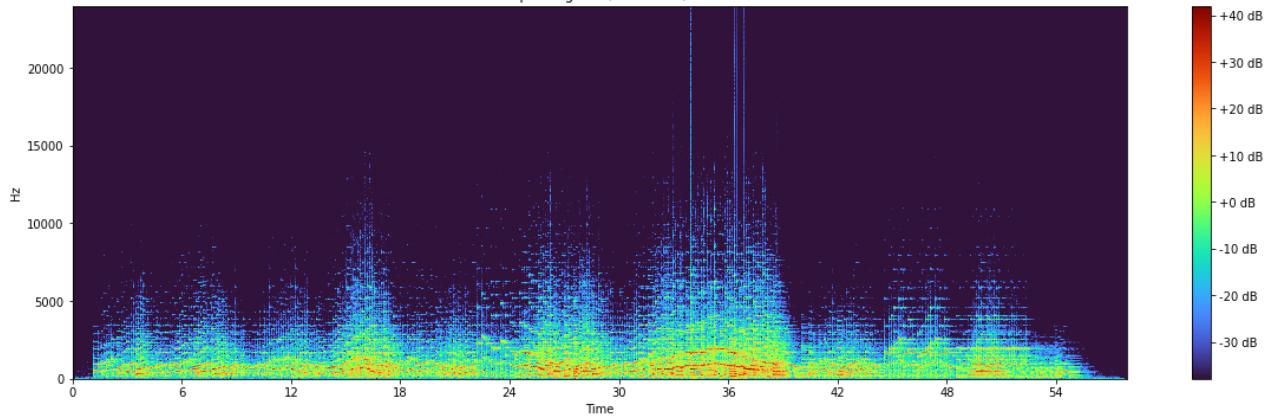
sh(193)

INFO : ./wavs/origin/0193.wav

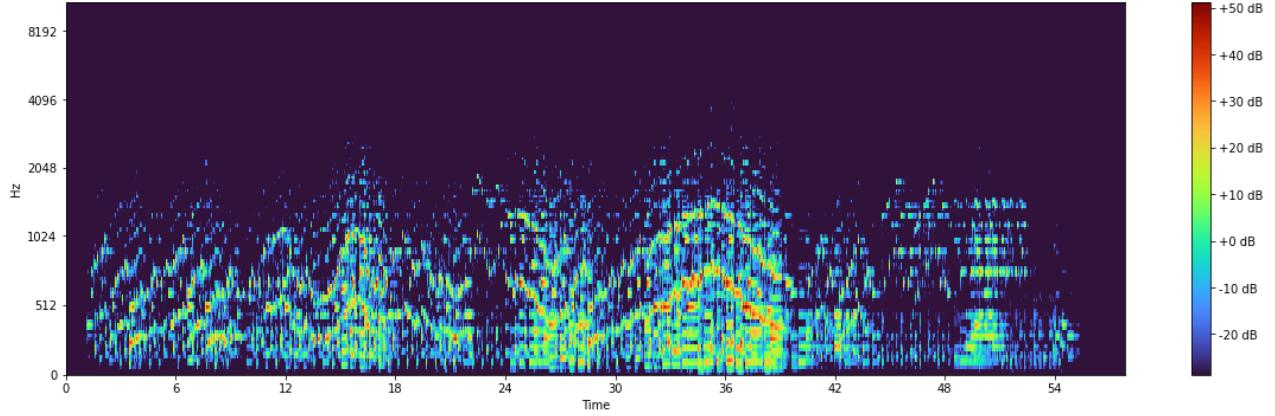
spectrogram (channel 0)



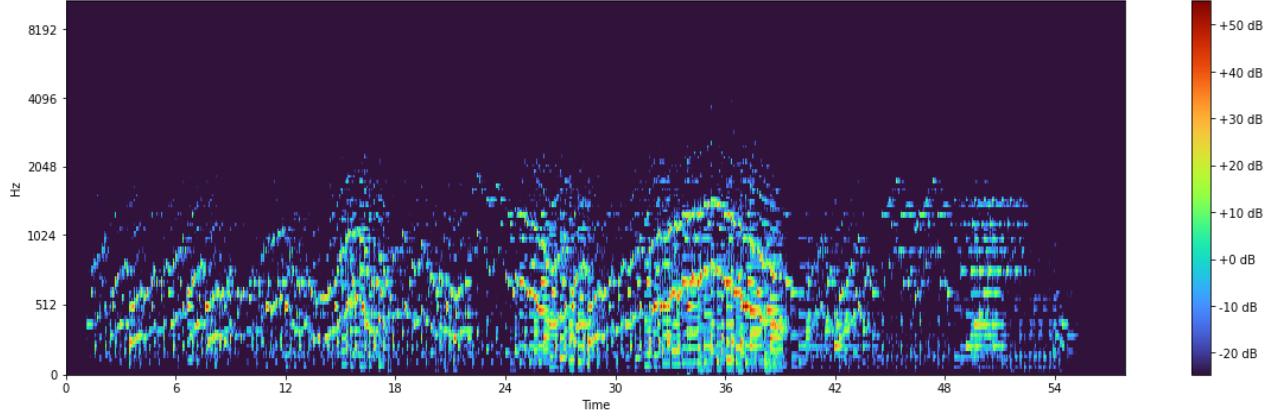
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

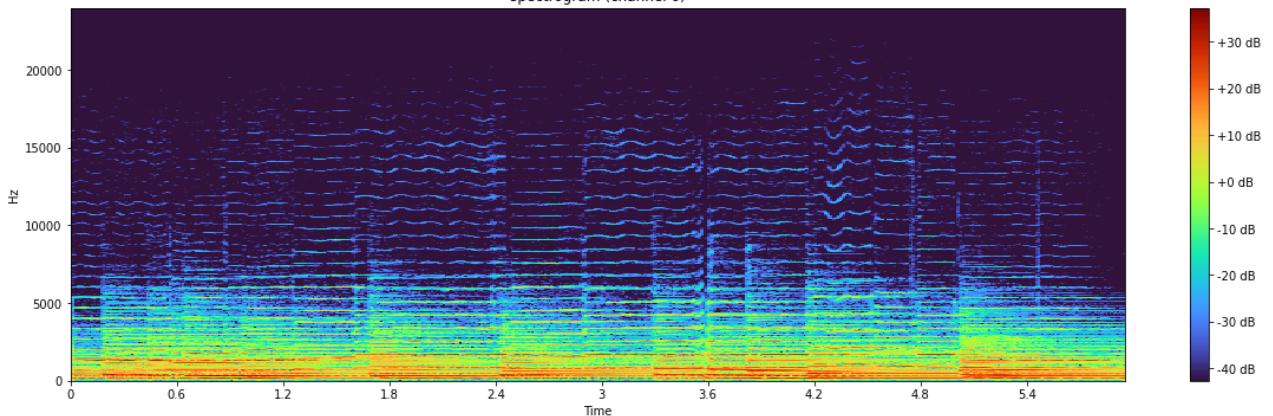


In [212...]

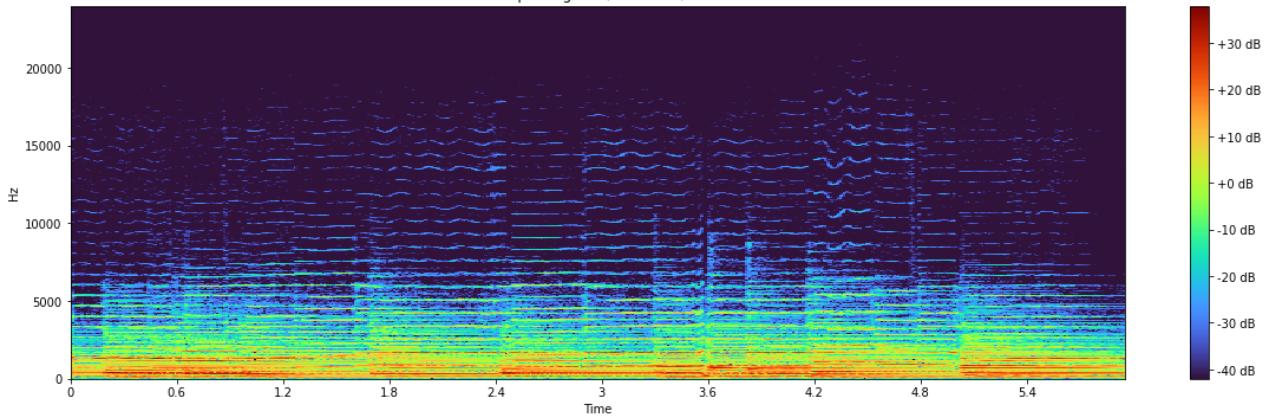
sh(194)

INFO : ./wavs/origin/0194.wav

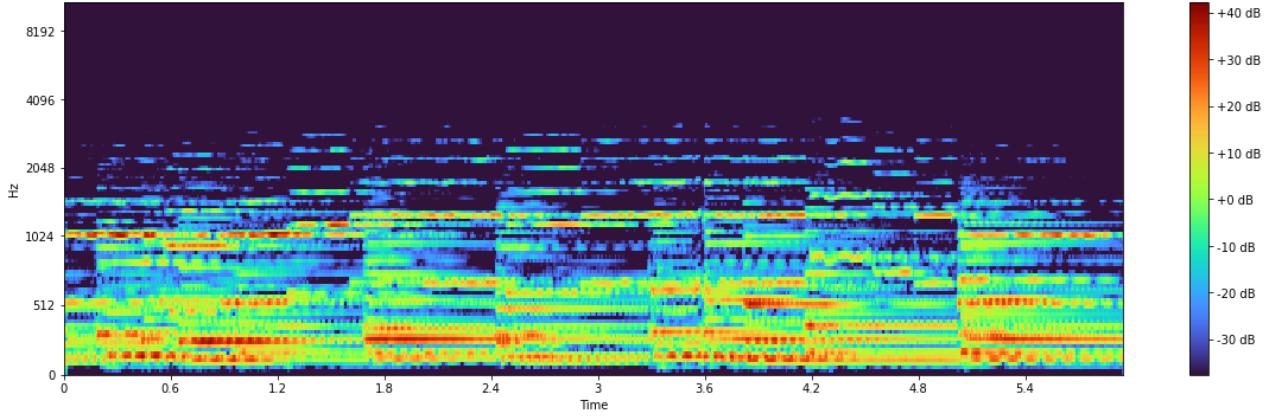
spectrogram (channel 0)



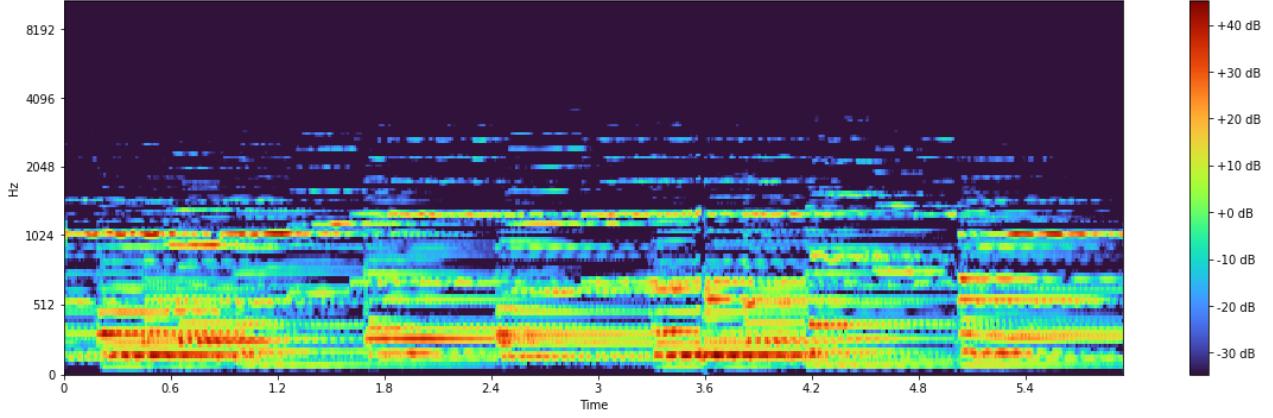
spectrogram (channel 1)



mel spectrogram (channel 0)



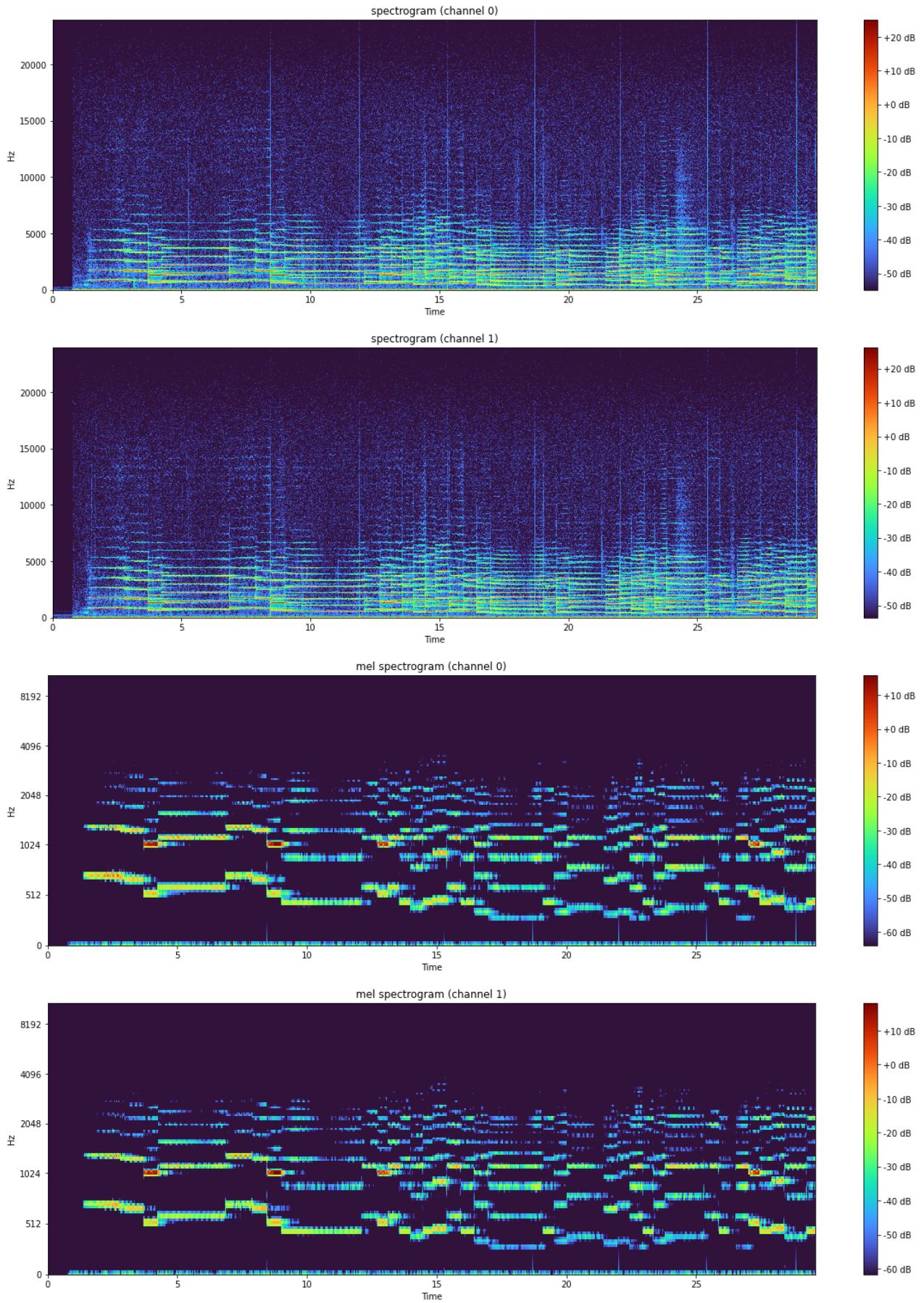
mel spectrogram (channel 1)



In [213...]

sh(195)

INFO : ./wavs/origin/0195.wav

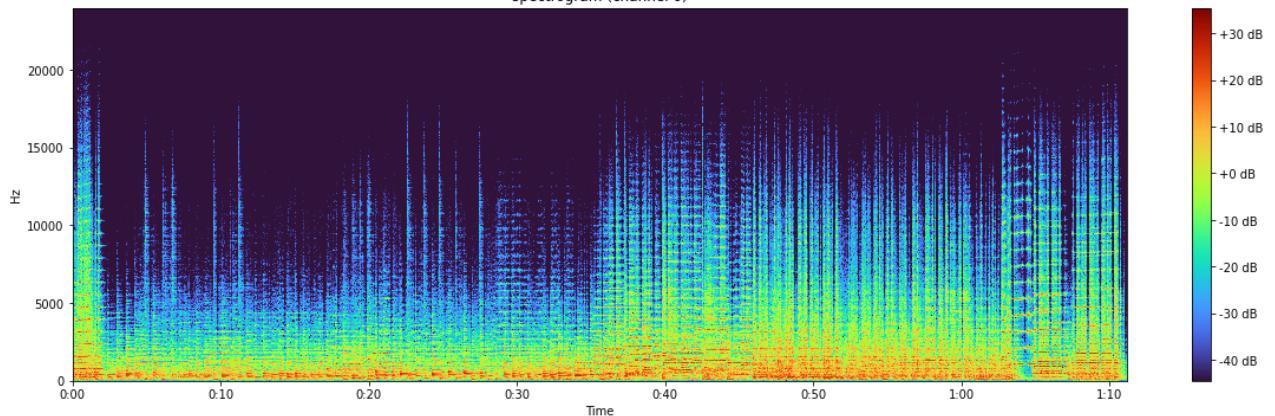


In [214...]

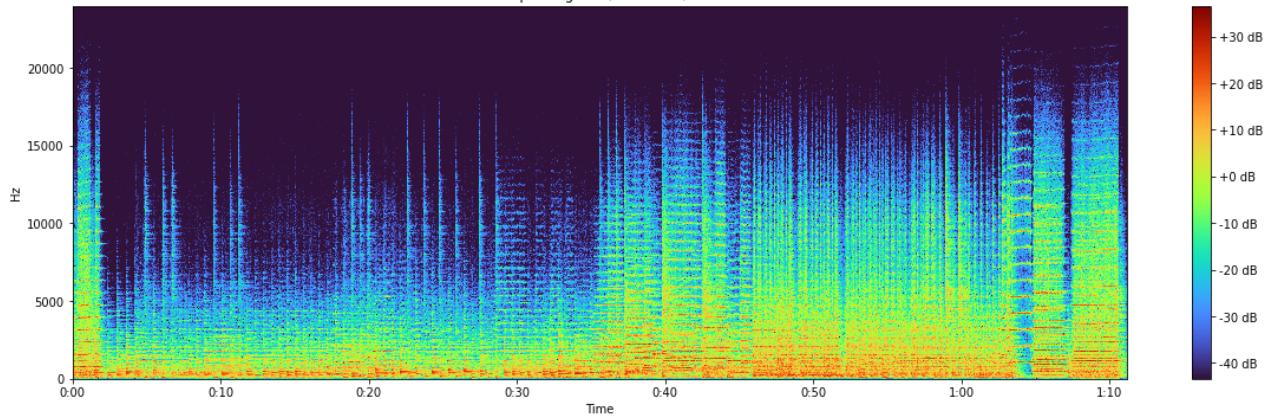
sh(196)

INFO : ./wavs/origin/0196.wav

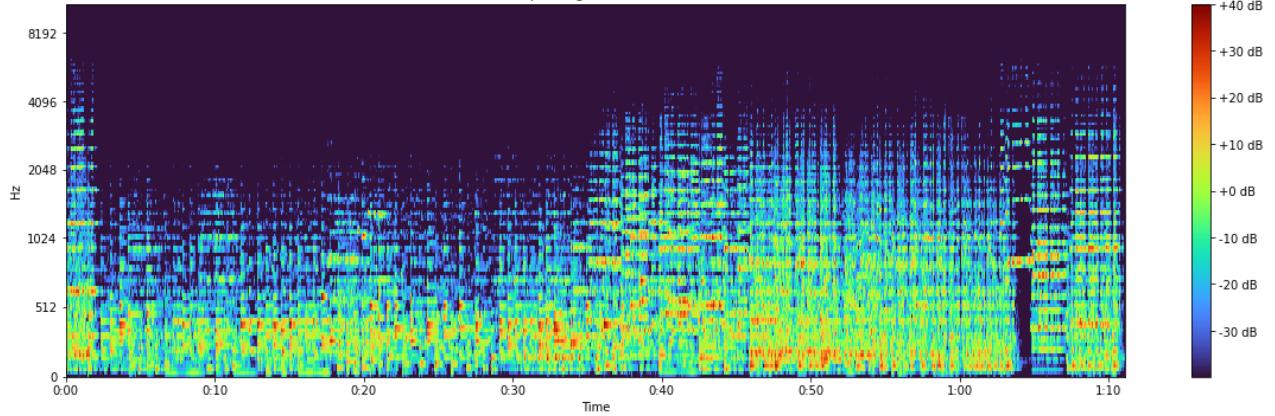
spectrogram (channel 0)



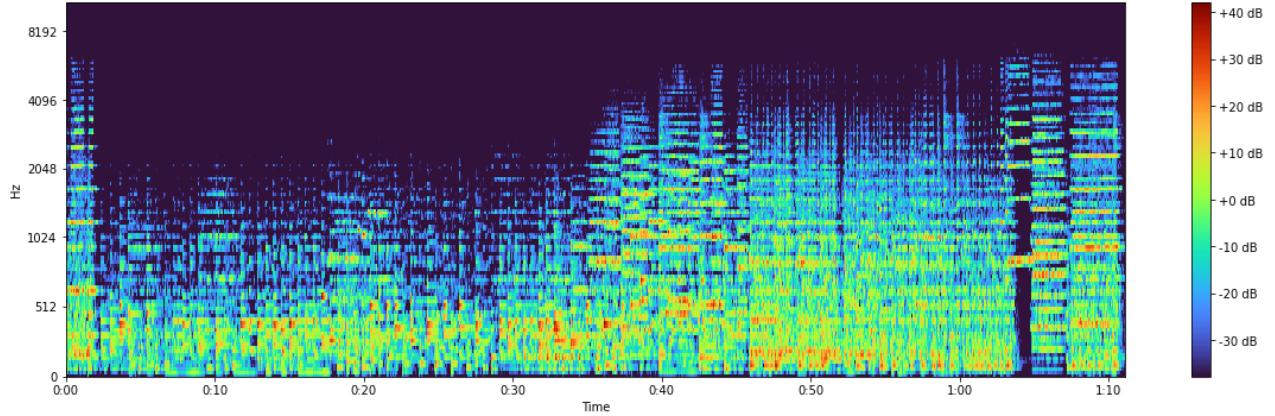
spectrogram (channel 1)



mel spectrogram (channel 0)



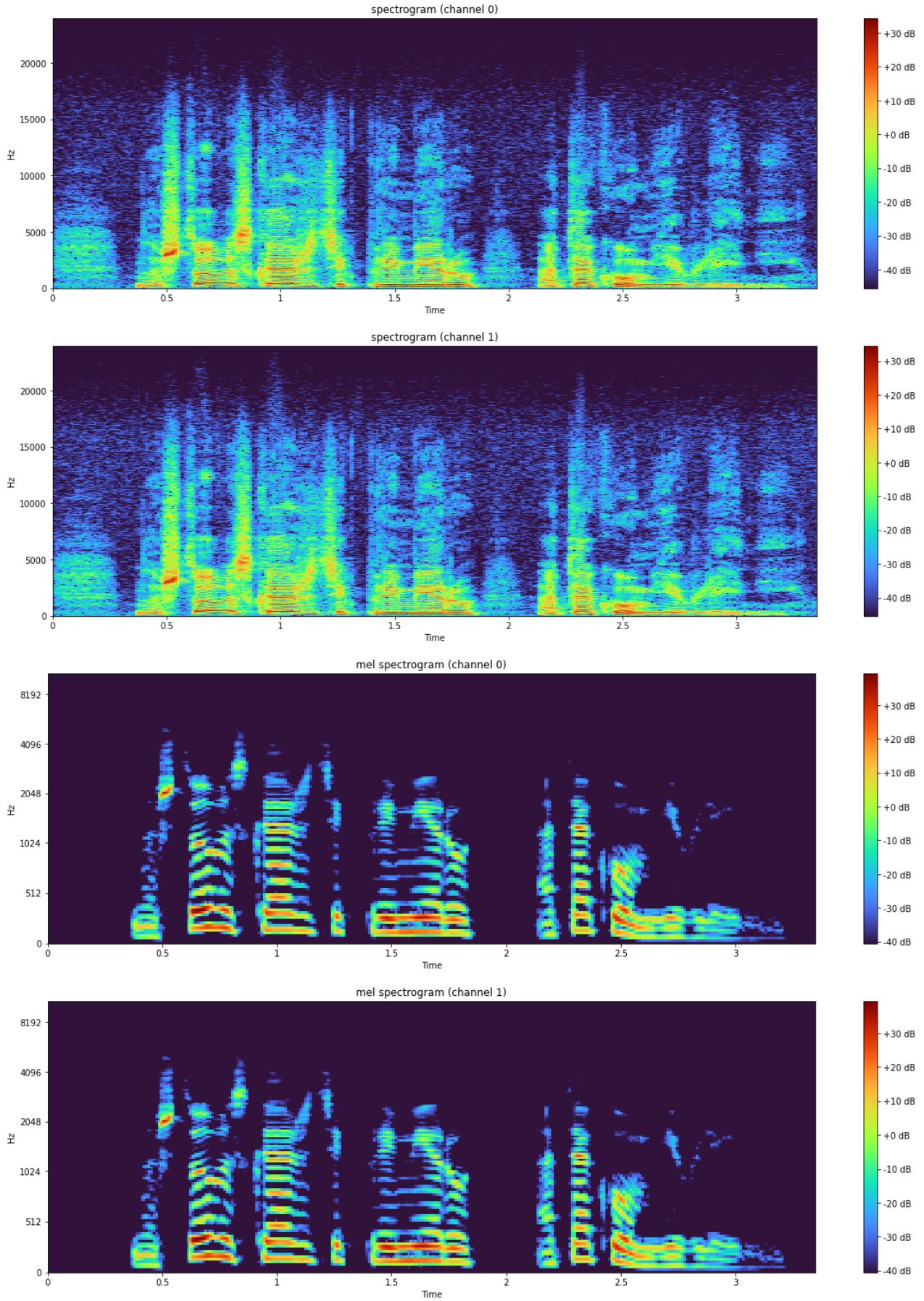
mel spectrogram (channel 1)



In [215...]

sh(197)

INFO : ./wavs/origin/0197.wav

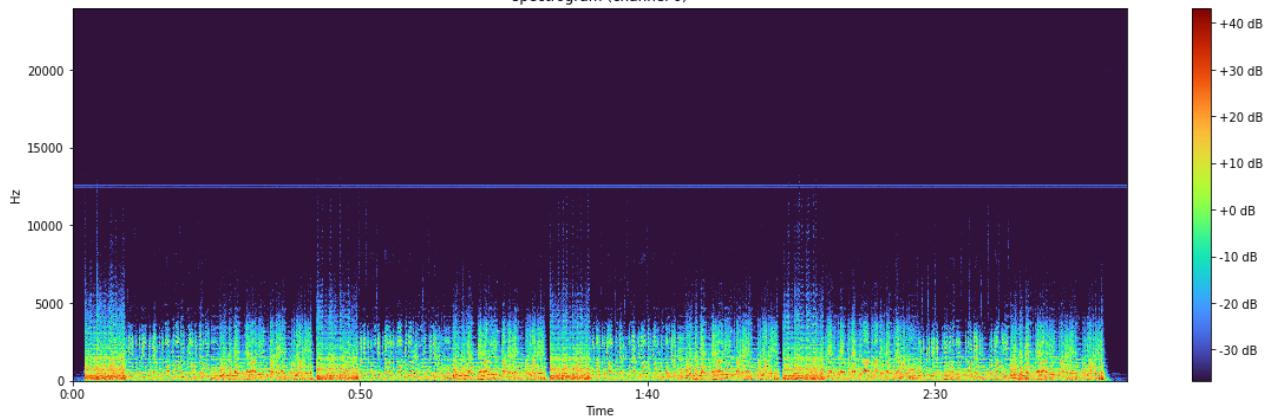


In [216...]

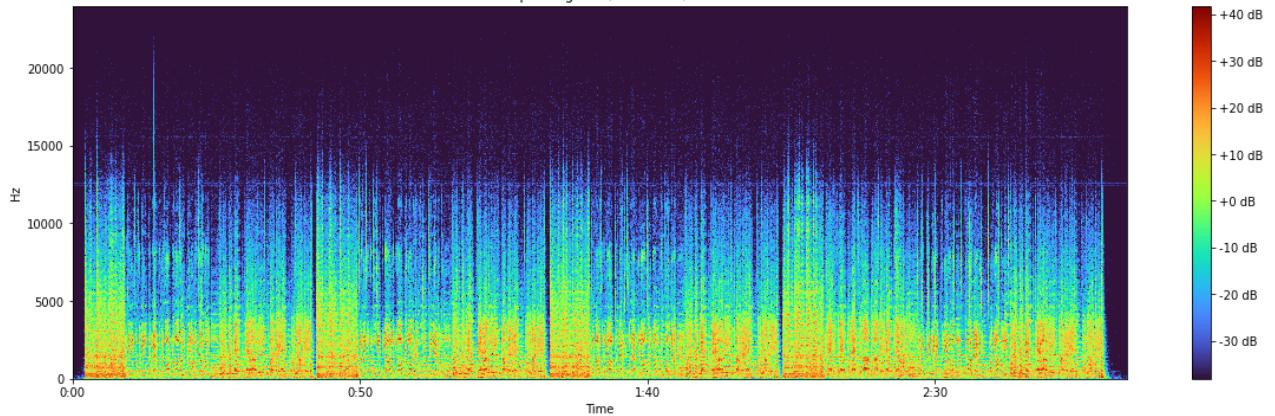
sh(198)

INFO : ./wavs/origin/0198.wav

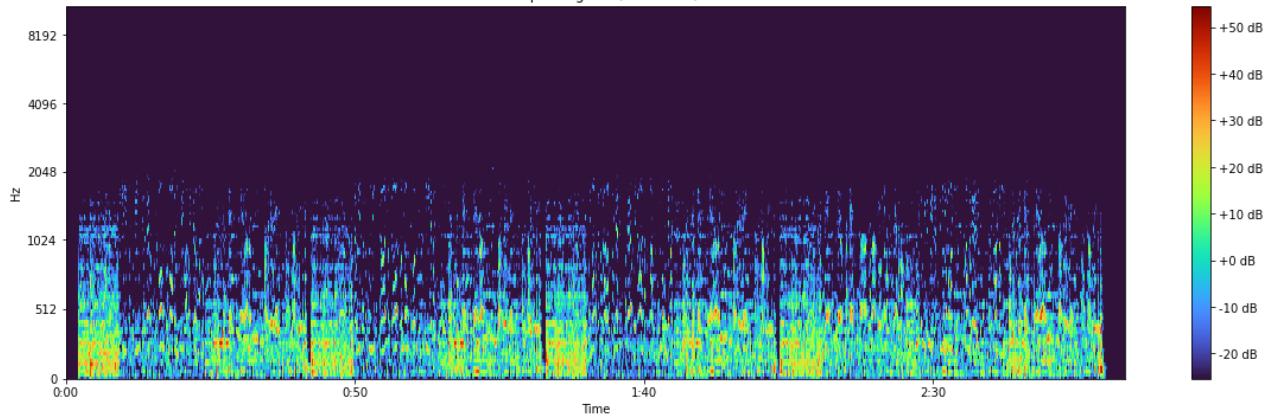
spectrogram (channel 0)



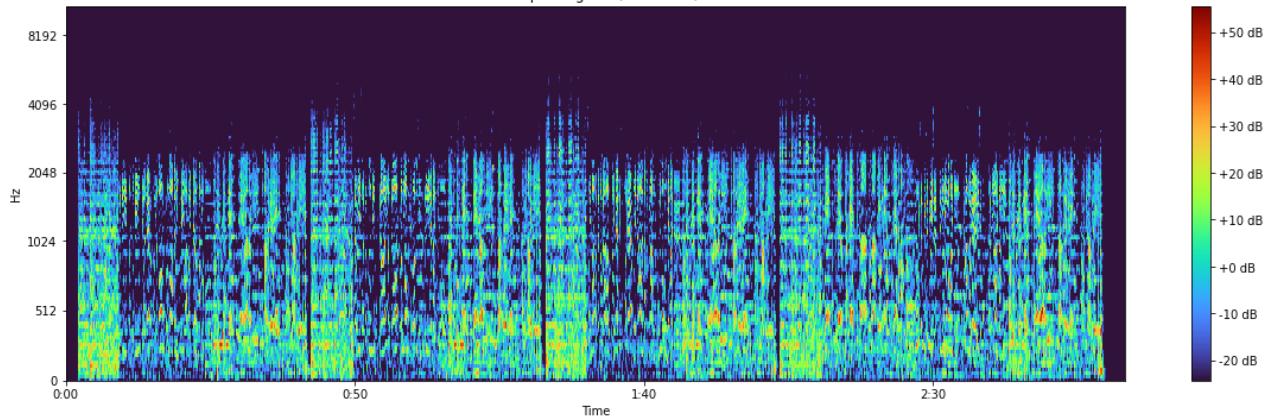
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)

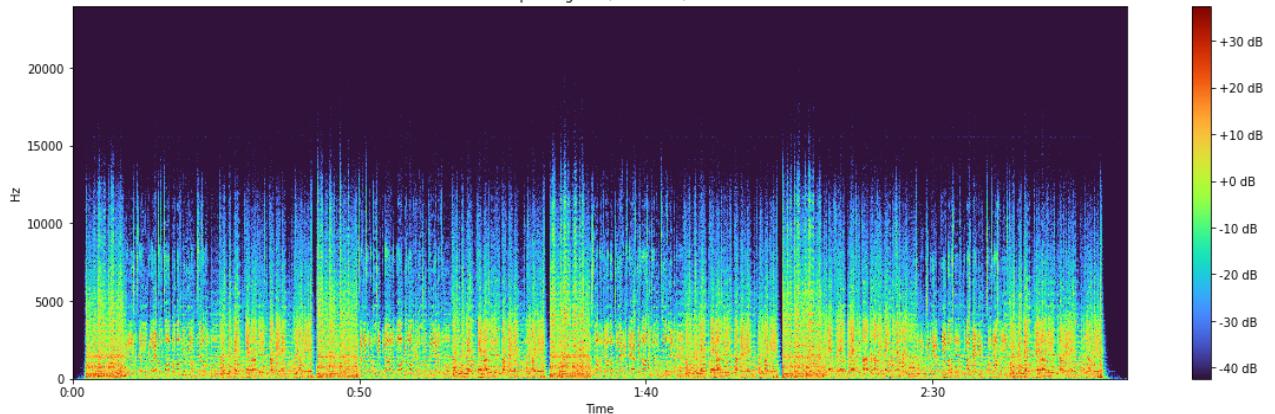


In [217...]

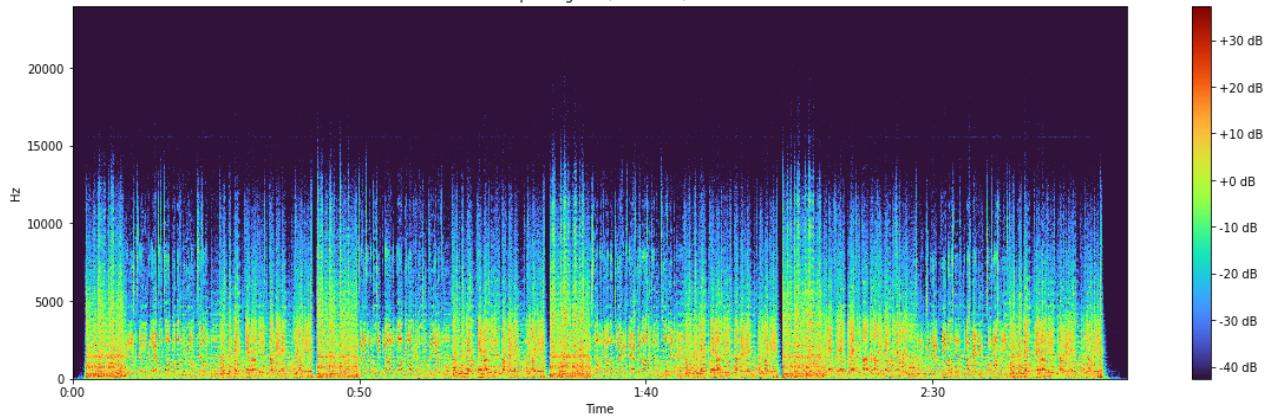
sh(199)

INFO : ./wavs/origin/0199.wav

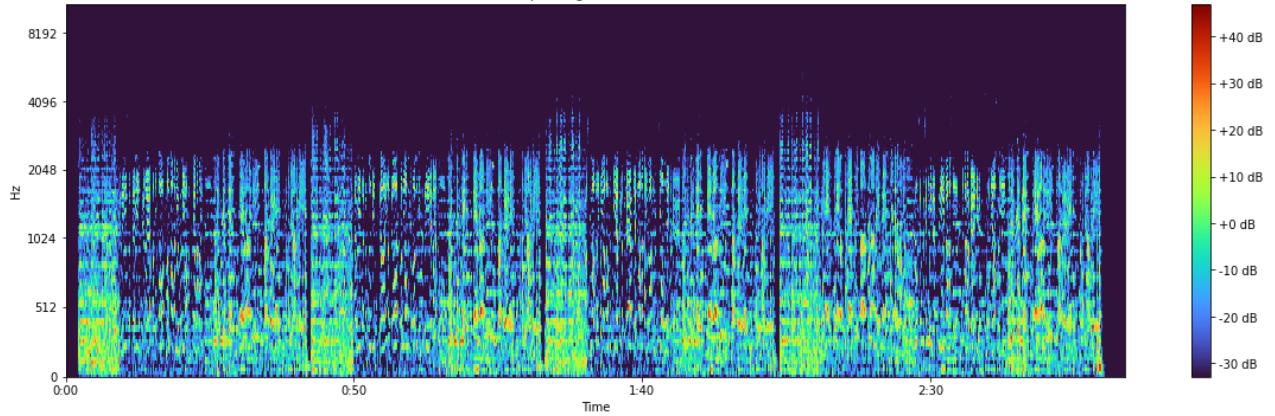
spectrogram (channel 0)



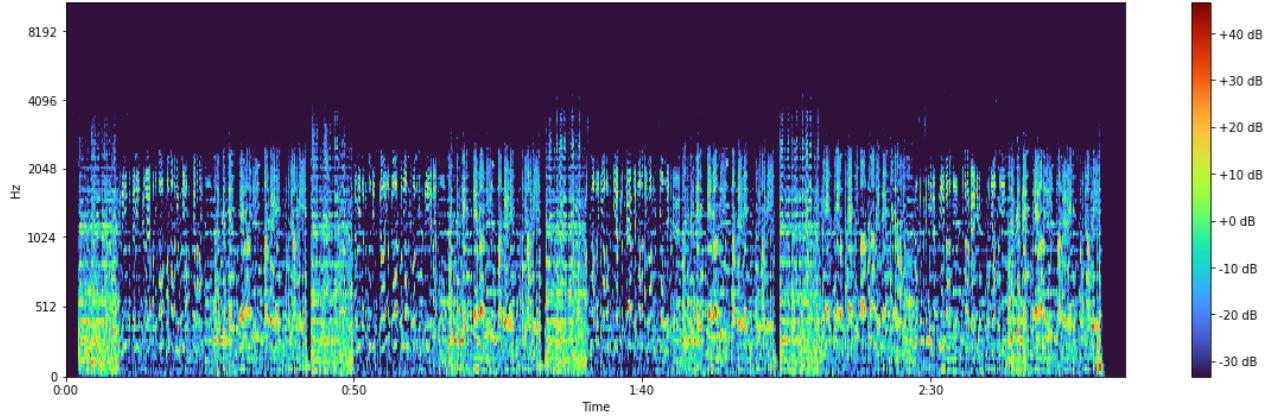
spectrogram (channel 1)



mel spectrogram (channel 0)



mel spectrogram (channel 1)



In [218...]

sh(200)

INFO : ./wavs/origin/0200.wav

