

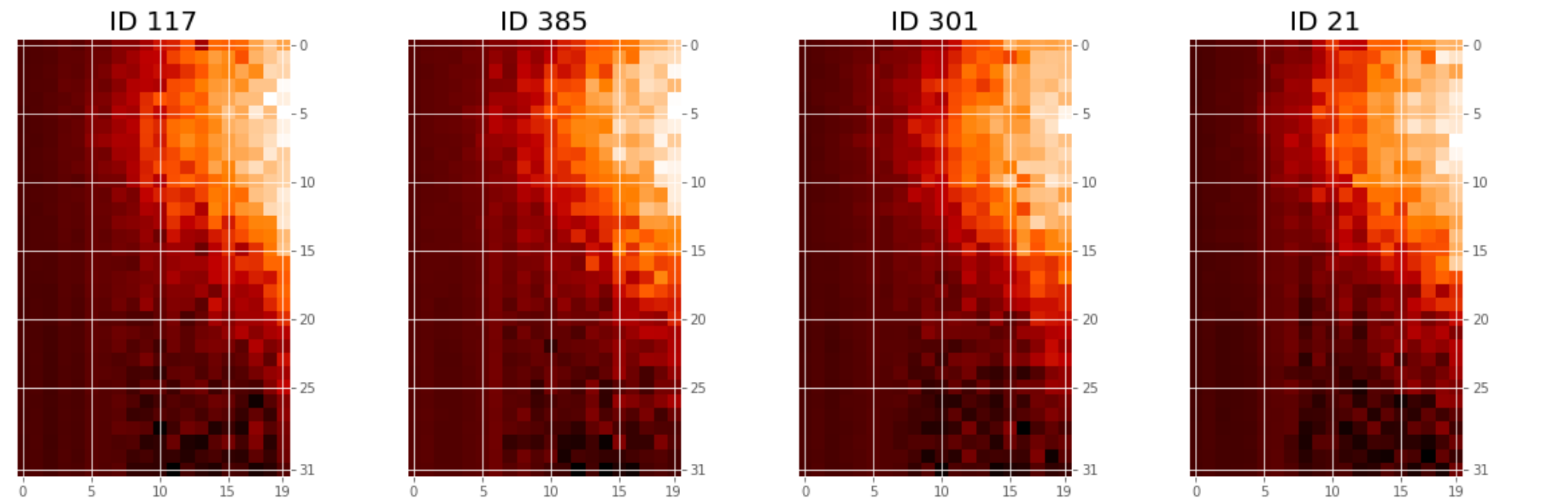
```
In [50]: runfile('D:/ISS/MTech2019/ISY5002/ISY5002-ISSM/ISSM_Assignment/ISSM_CA3/ISSM_CA3_GC_Test.py', wdir='D:/ISS/MTech2019/ISY5002/ISY5002-ISSM/ISSM_Assignment/ISSM_CA3')
Read train_data: (320, 32, 20, 20, 1)
Read train_lbl: (320,)
Read test_data: (80, 32, 20, 20, 1)
Read test_lbl: (80,)
```

pretrained autoencoder model

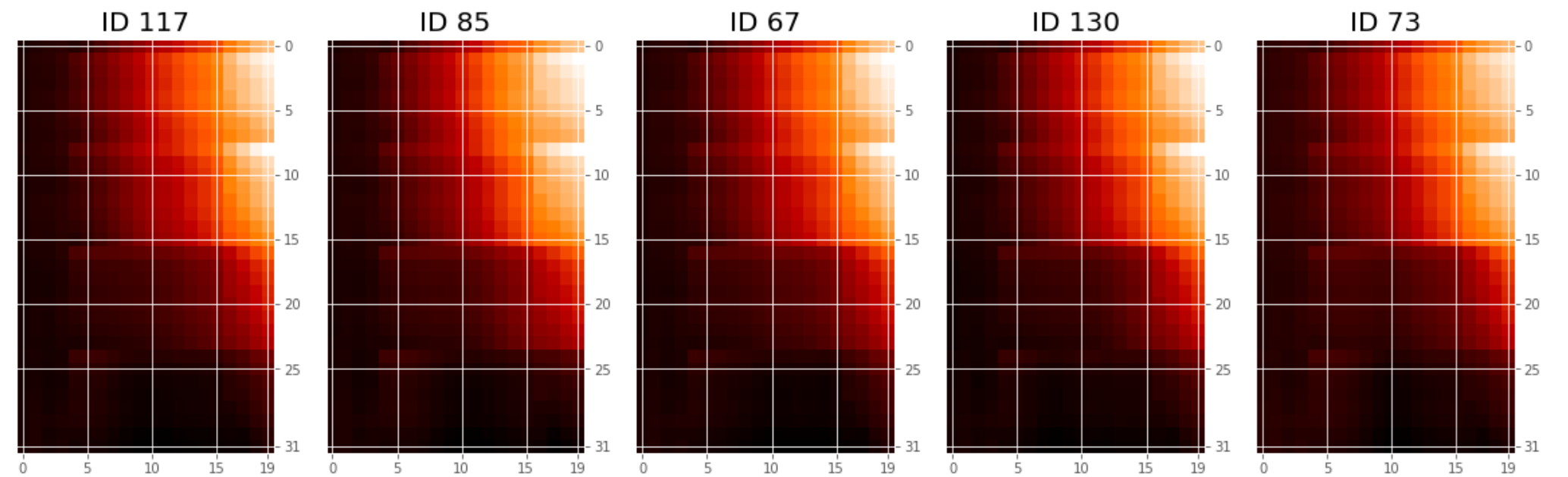
Layer (type)	Output Shape	Param #
=====		
input_21 (InputLayer)	(None, 32, 20, 20, 1)	0
-----		
conv3d_80 (Conv3D)	(None, 32, 20, 20, 16)	144
conv3d_81 (Conv3D)	(None, 16, 10, 20, 32)	4128
conv3d_82 (Conv3D)	(None, 8, 5, 20, 64)	16448
conv3d_83 (Conv3D)	(None, 4, 3, 20, 128)	65664
conv3d_transpose_80 (Conv3DT	(None, 8, 6, 21, 128)	131200
lambda_20 (Lambda)	(None, 8, 5, 20, 128)	0
-----		
conv3d_transpose_81 (Conv3DT	(None, 16, 10, 20, 64)	65600
conv3d_transpose_82 (Conv3DT	(None, 32, 20, 20, 32)	16416
conv3d_transpose_83 (Conv3DT	(None, 32, 20, 20, 1)	257
=====		
Total params: 299,857		
Trainable params: 299,857		
Non-trainable params: 0		

Test data, shape: (80, 32, 20, 20, 1)  
Decoded Test data, shape: (80, 32, 20, 20, 1)

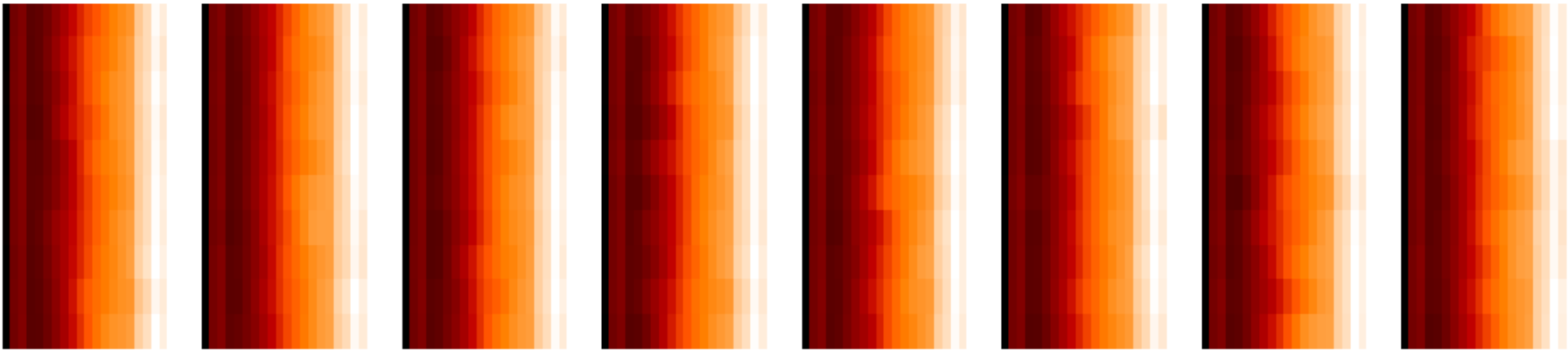
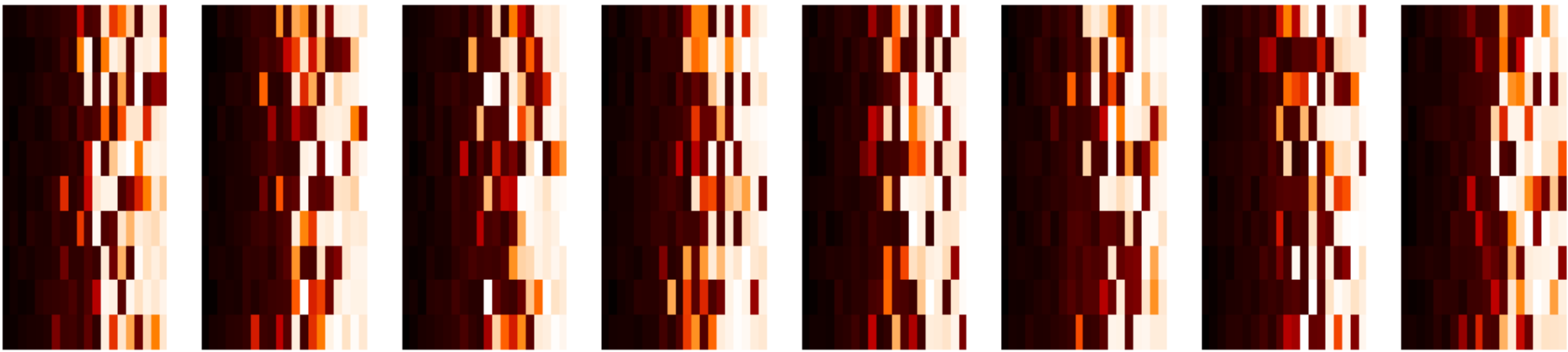
Test Data - Borad Temperature



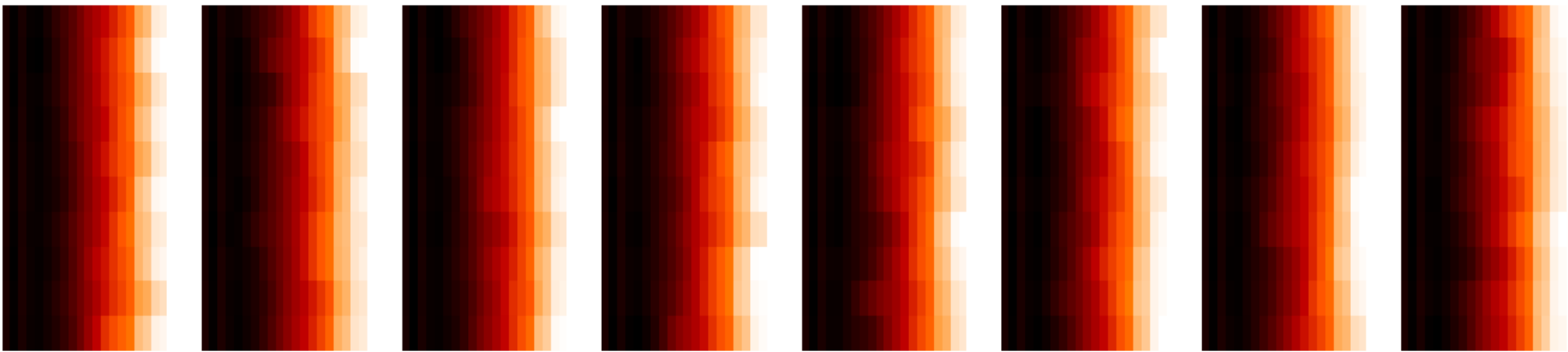
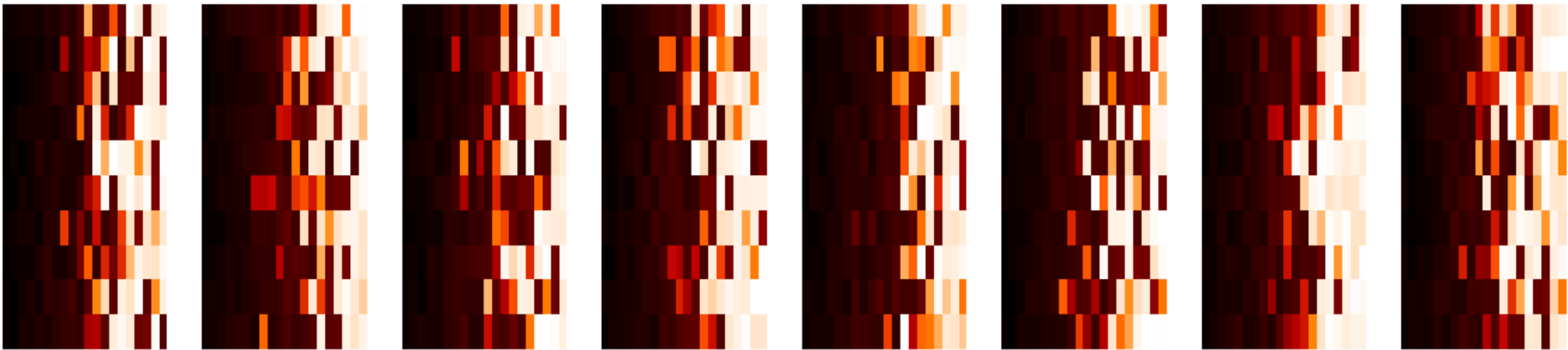
Encoded Test Data - Borad Temperature



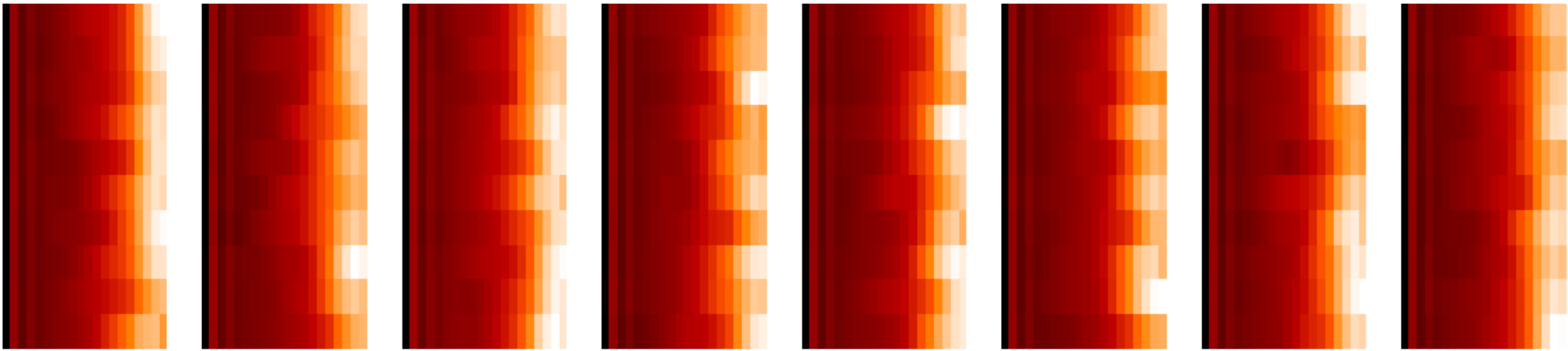
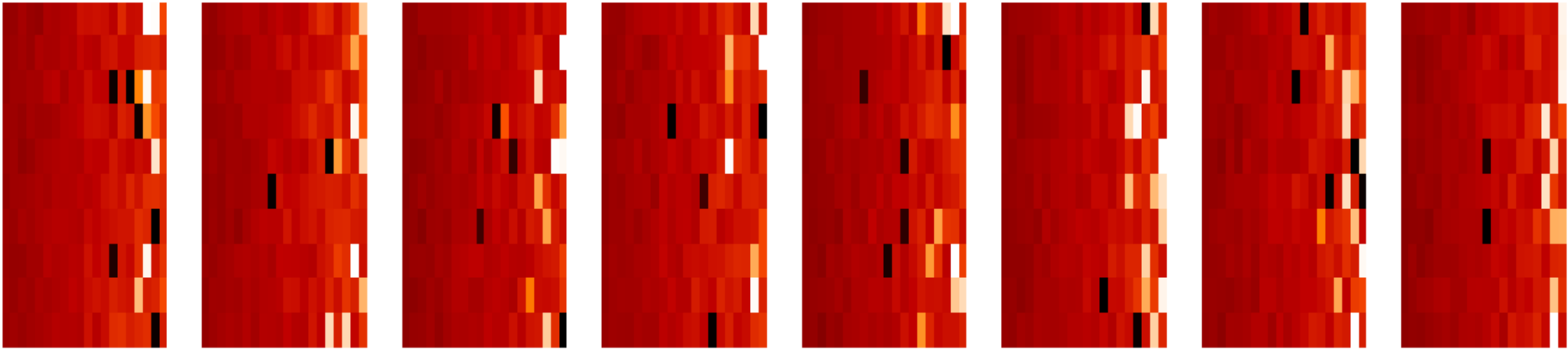
Training vs Encoded Data - Chip [0, 0] Temperature



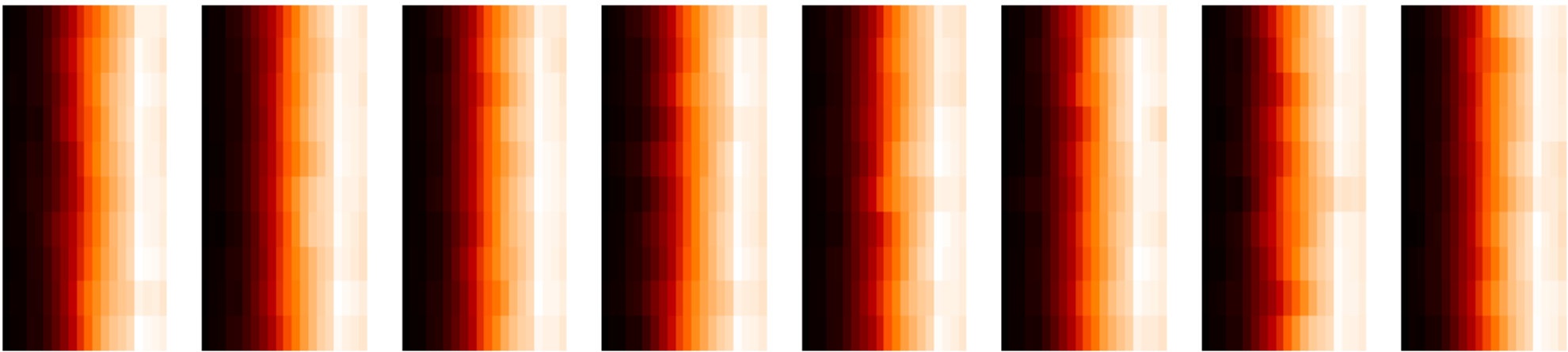
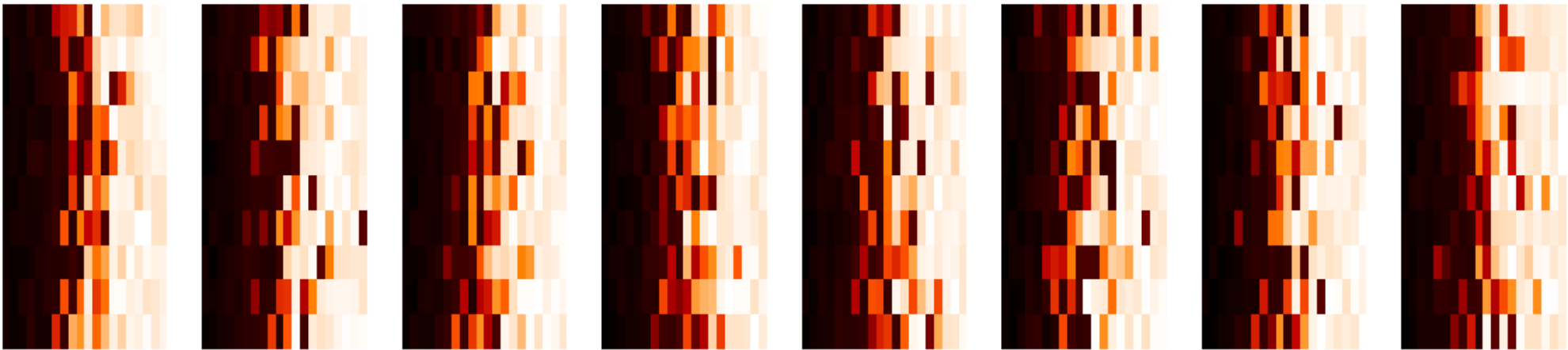
Training vs Encoded Data - Chip [0, 9] Temperature



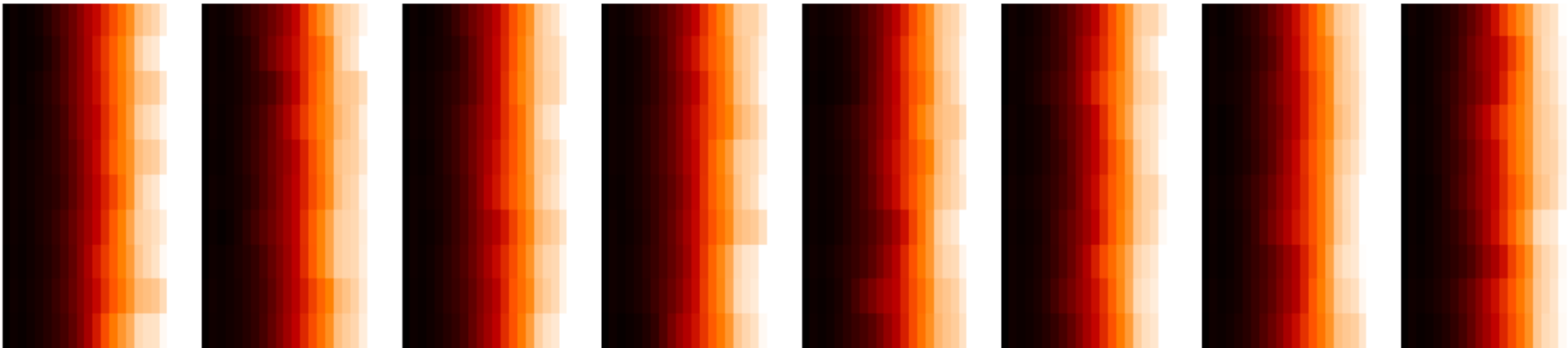
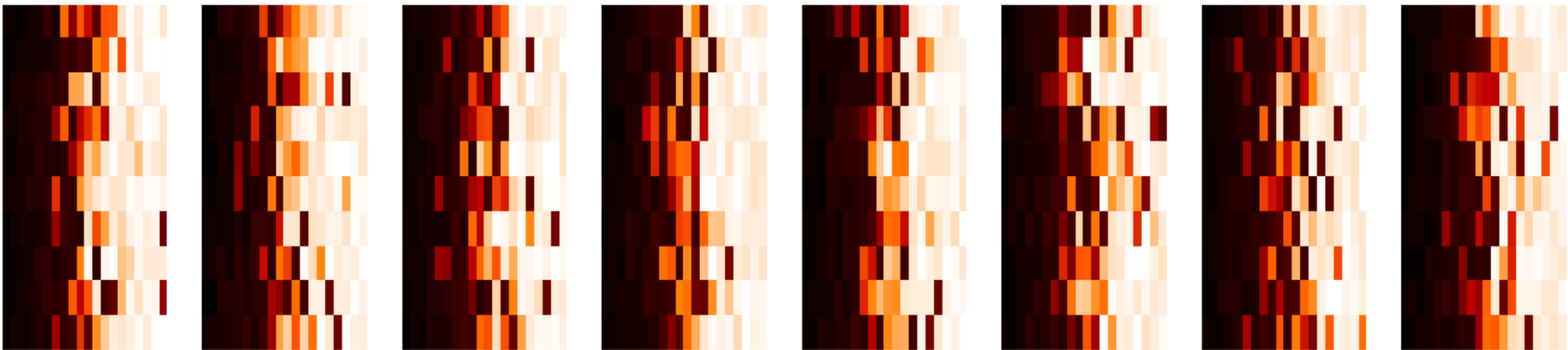
Training vs Encoded Data - Chip [0, 19] Temperature



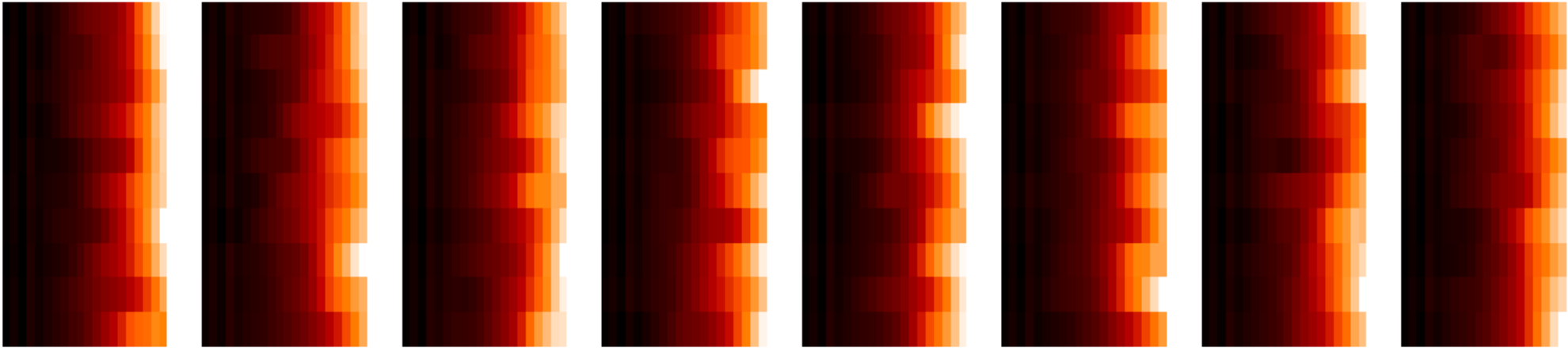
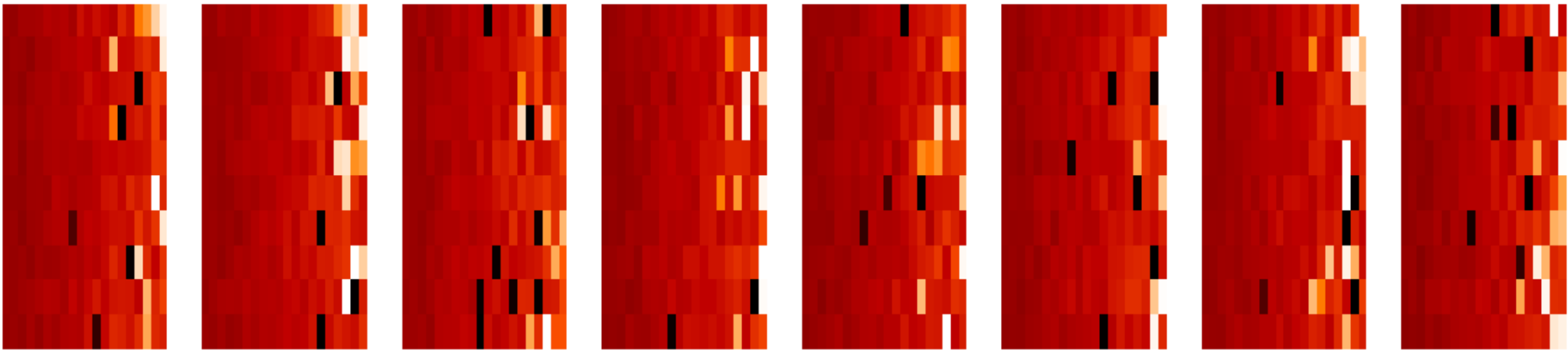
Training vs Encoded Data - Chip [7, 0] Temperature



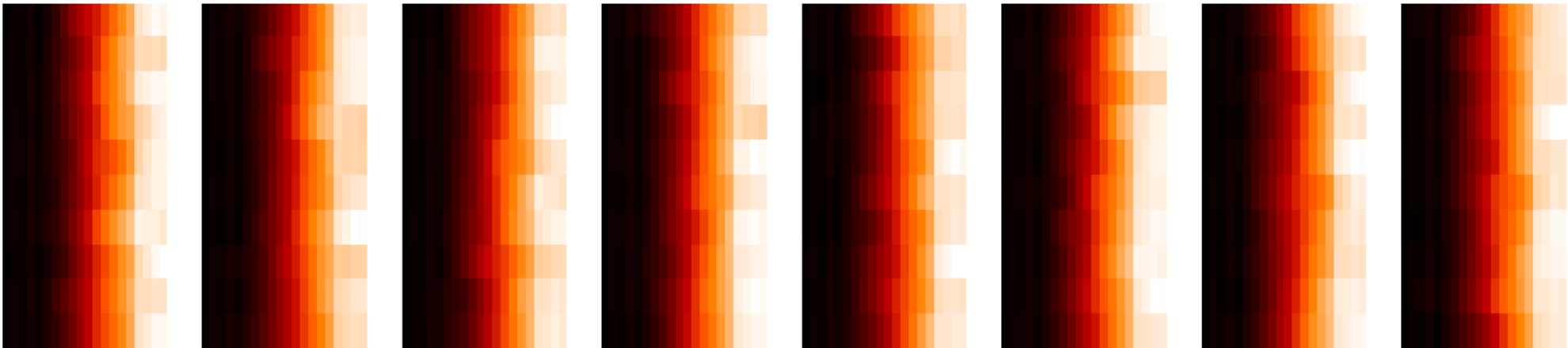
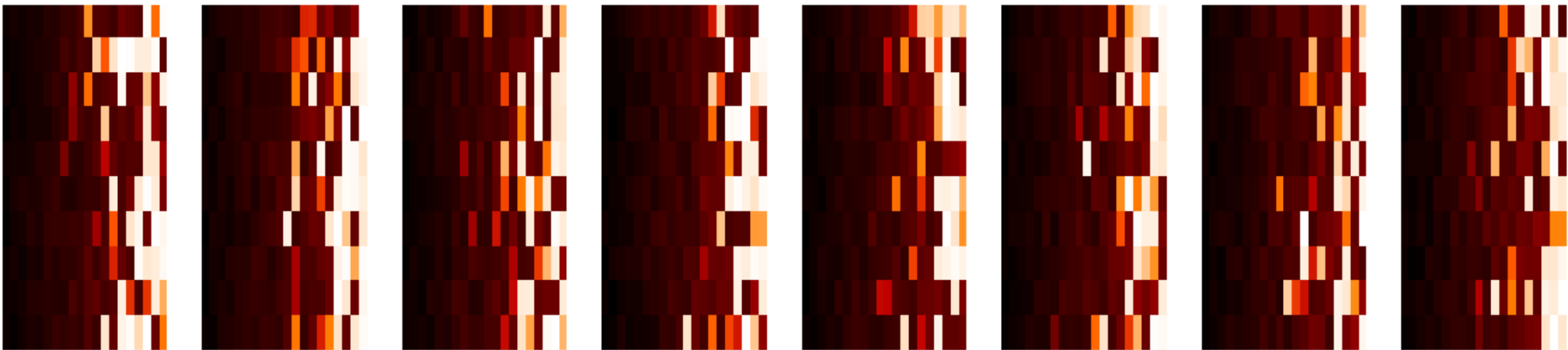
Training vs Encoded Data - Chip [7, 9] Temperature



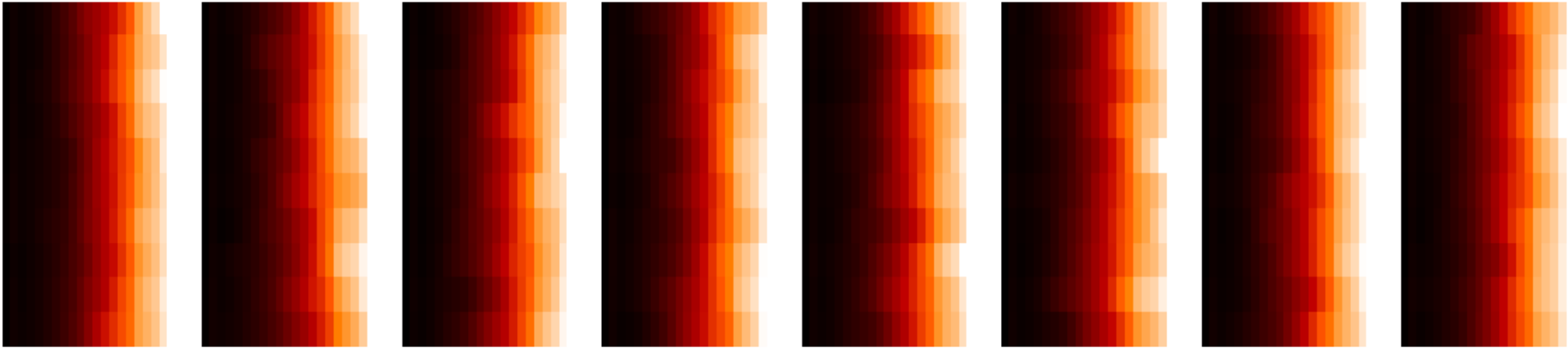
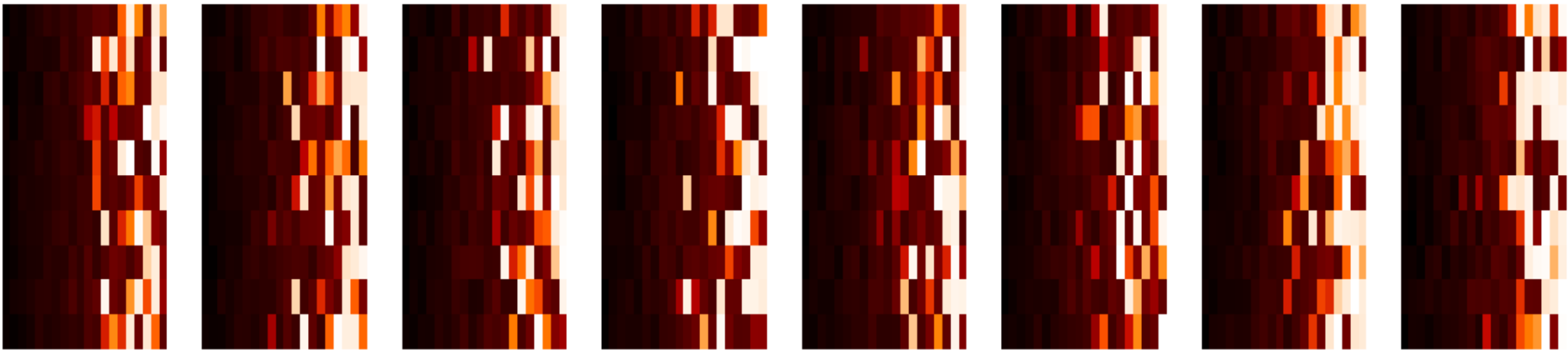
Training vs Encoded Data - Chip [7, 19] Temperature



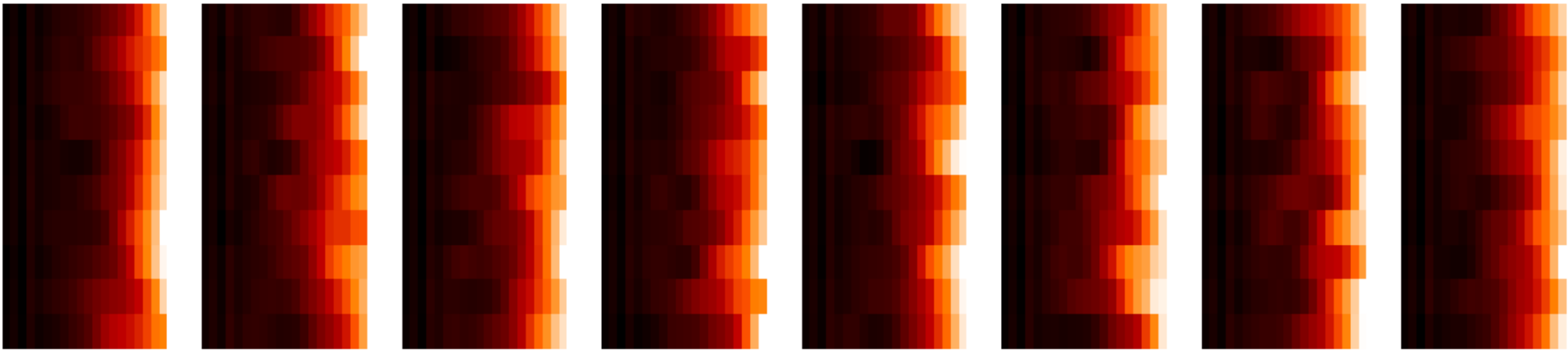
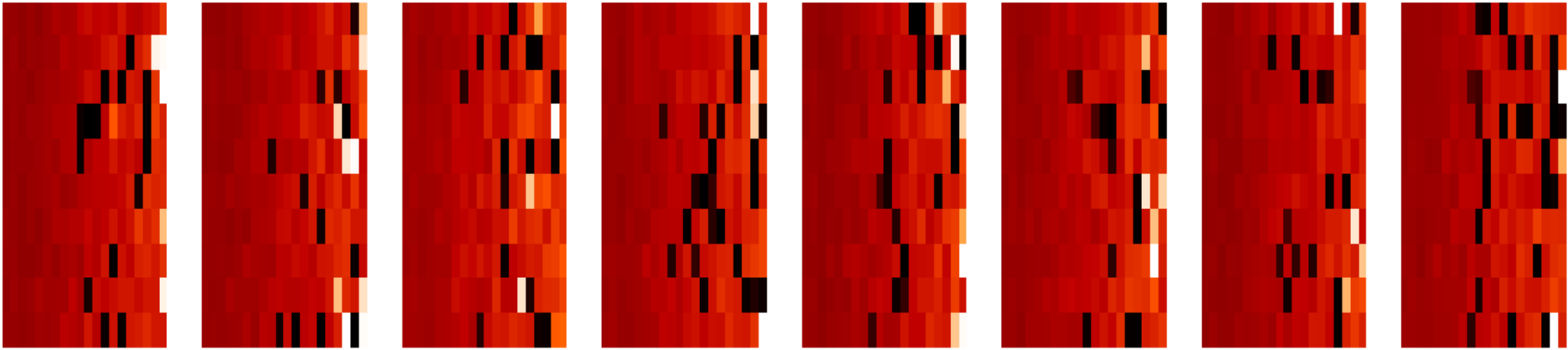
Training vs Encoded Data - Chip [15, 0] Temperature



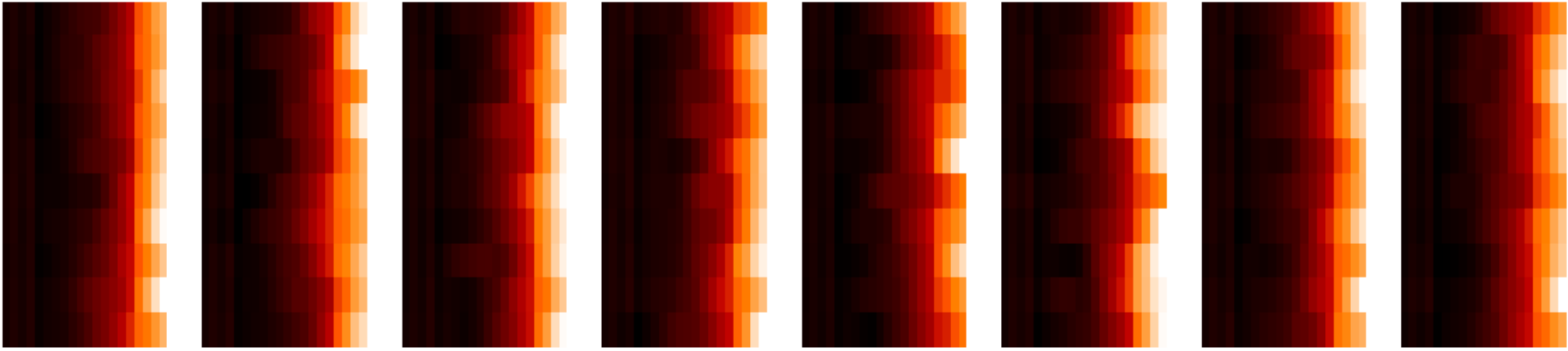
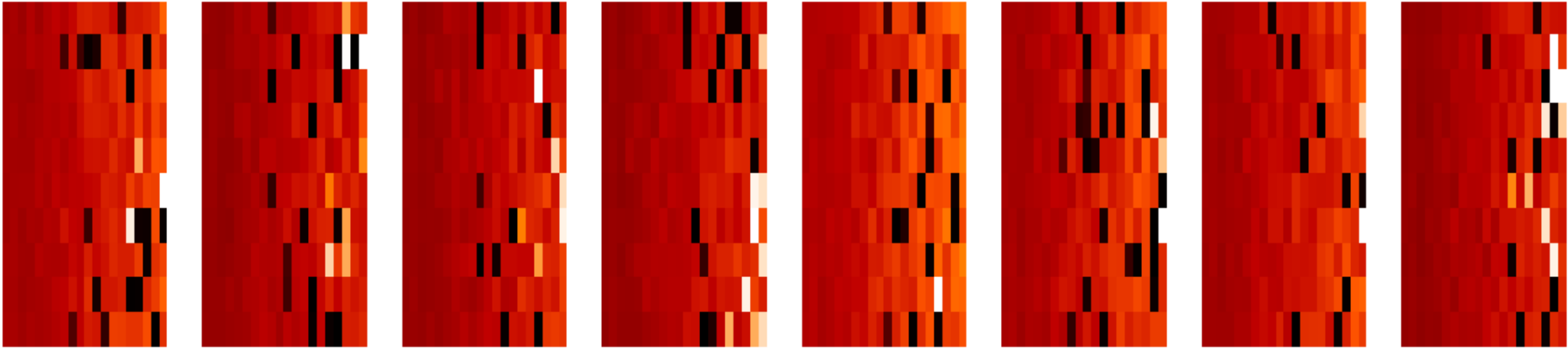
Training vs Encoded Data - Chip [15, 9] Temperature



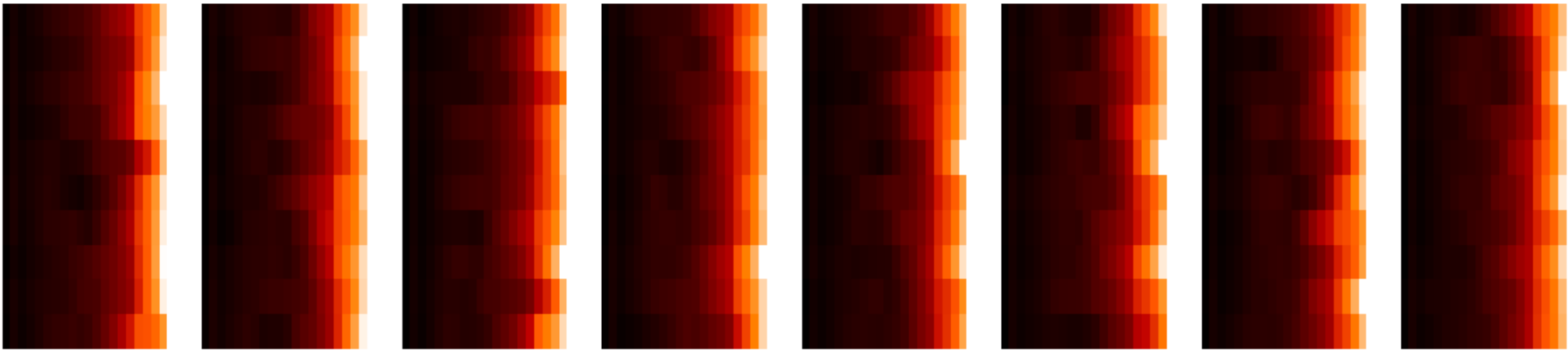
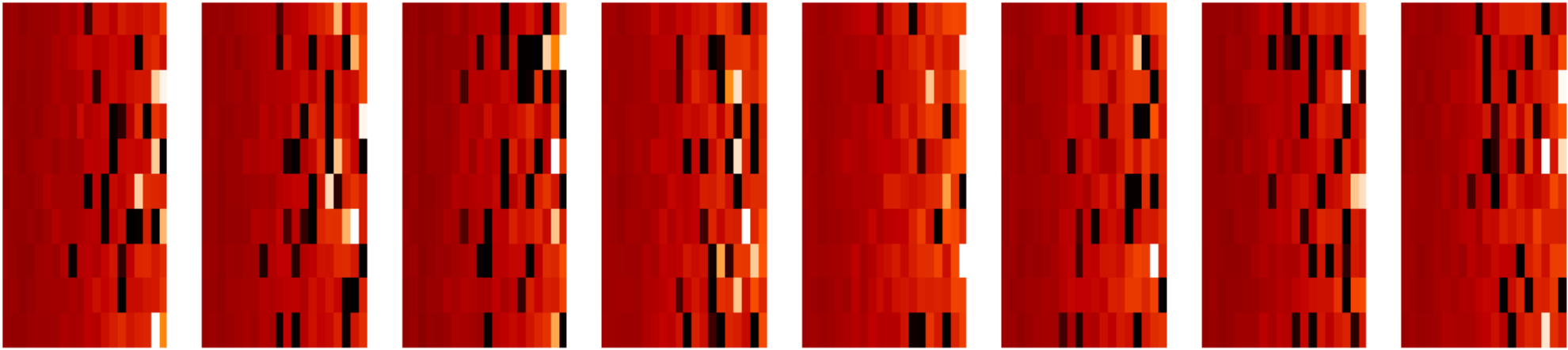
Training vs Encoded Data - Chip [15, 19] Temperature



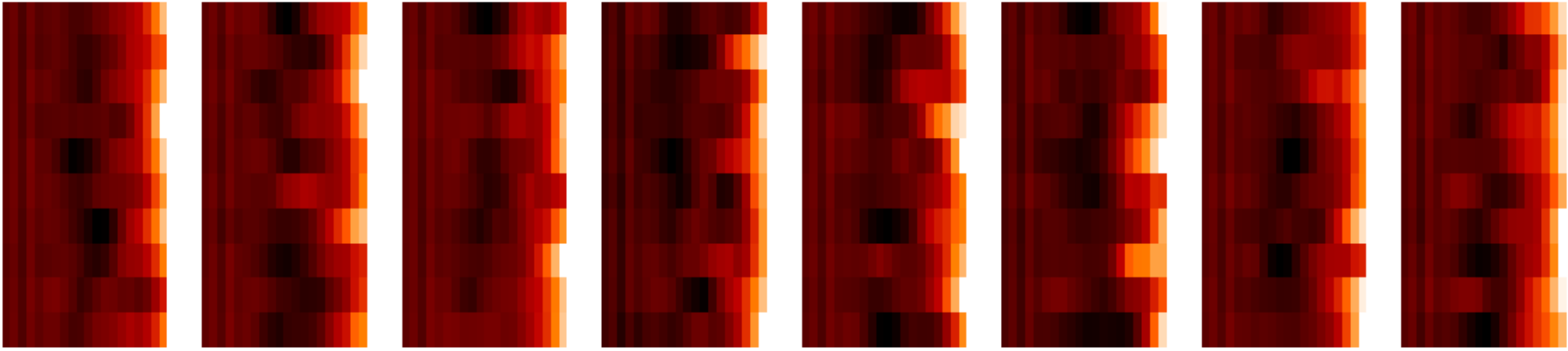
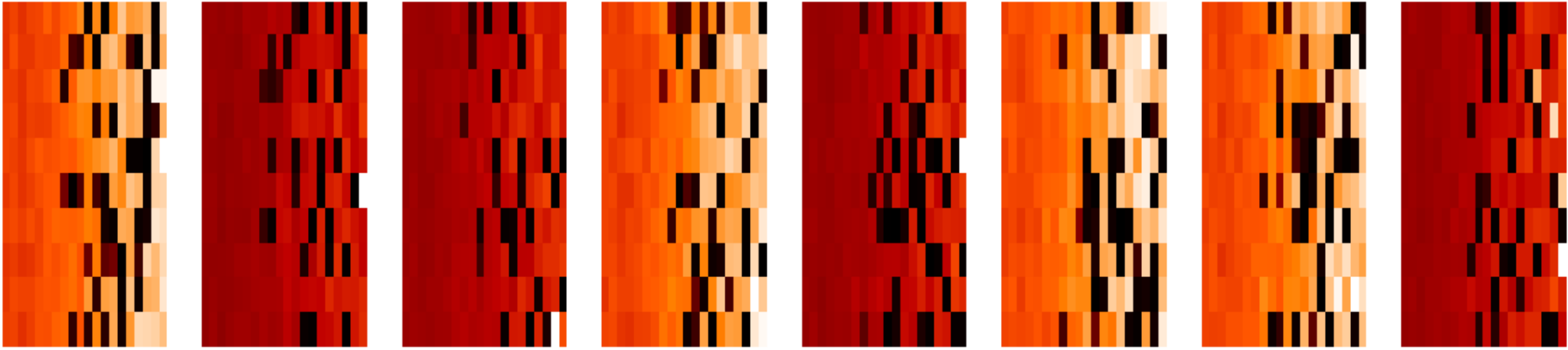
Training vs Encoded Data - Chip [23, 0] Temperature



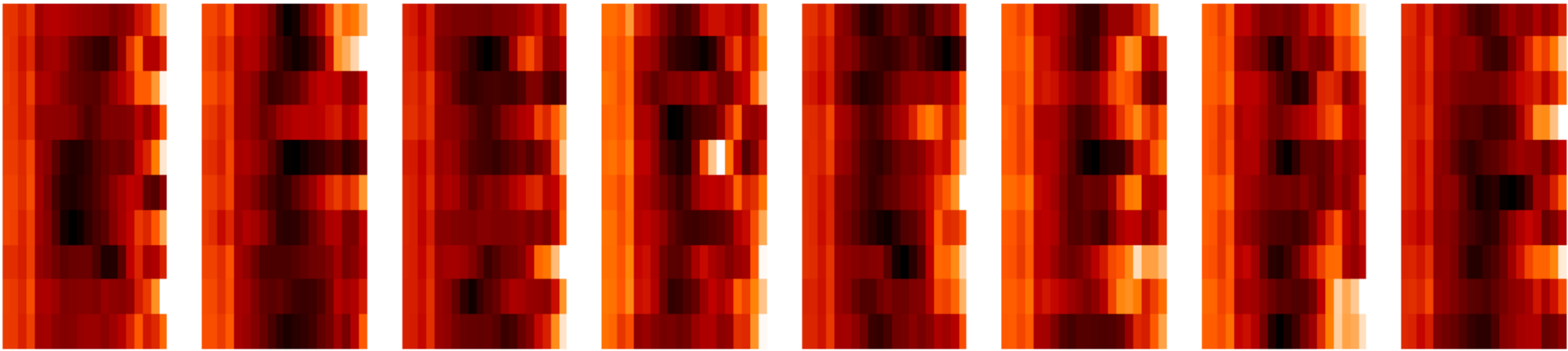
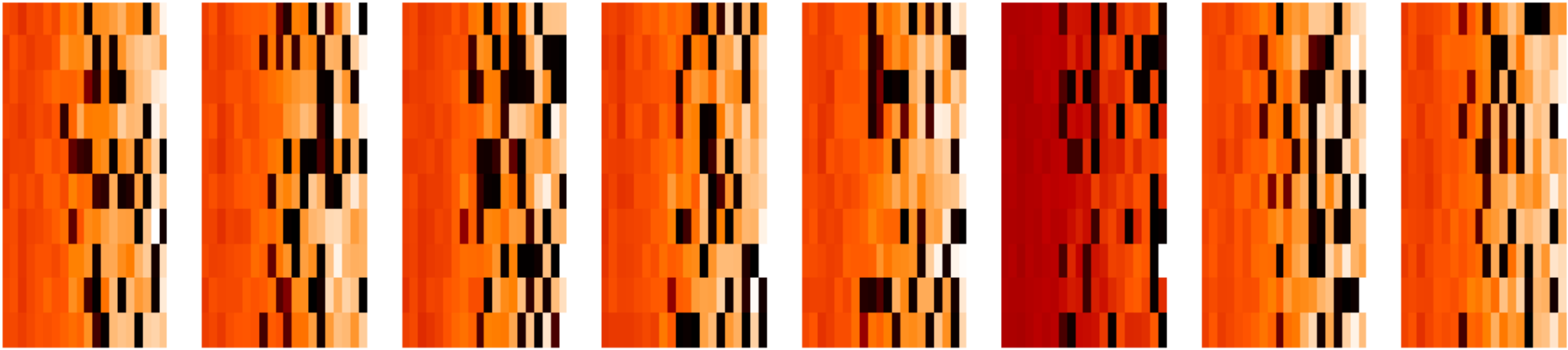
Training vs Encoded Data - Chip [23, 9] Temperature



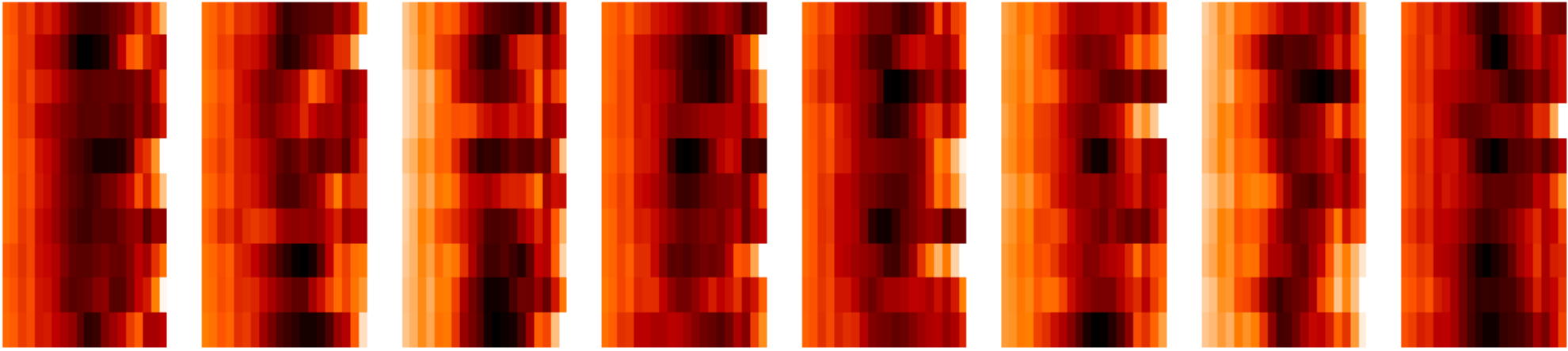
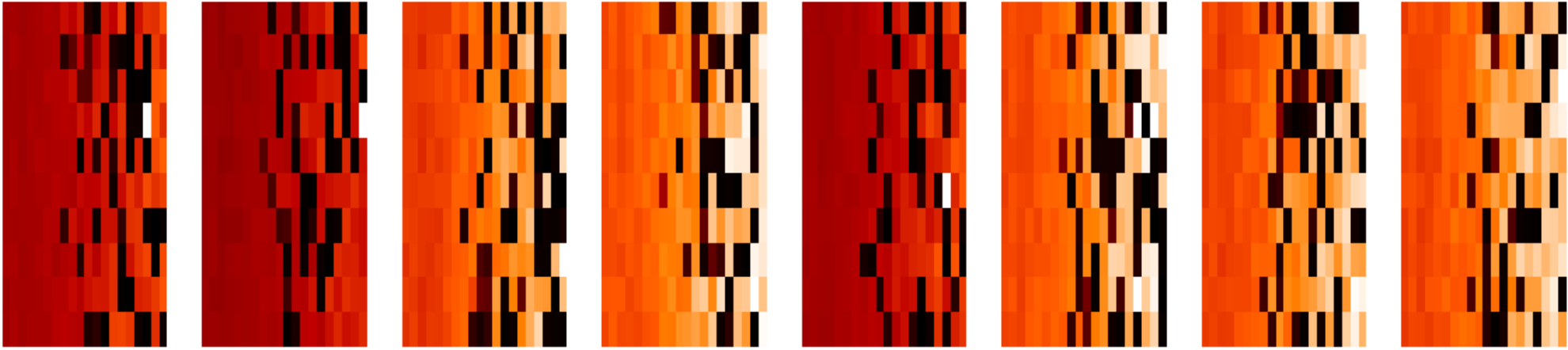
Training vs Encoded Data - Chip [23, 19] Temperature



Training vs Encoded Data - Chip [31, 0] Temperature

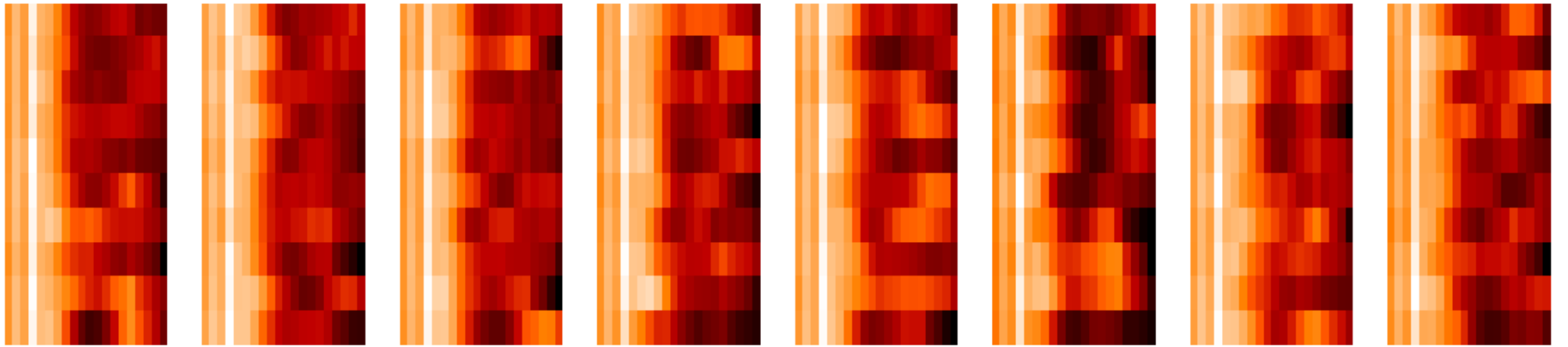
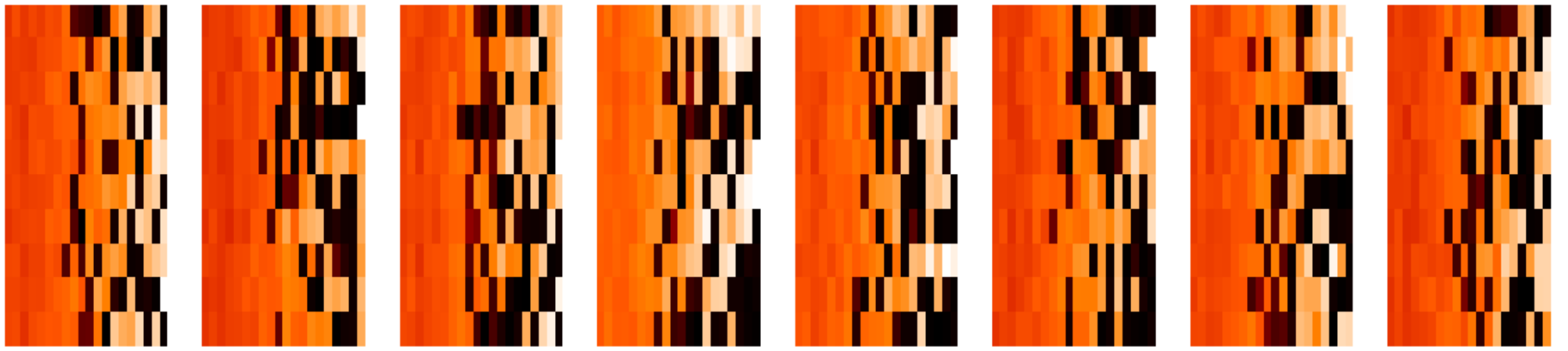


Training vs Encoded Data - Chip [31, 9] Temperature

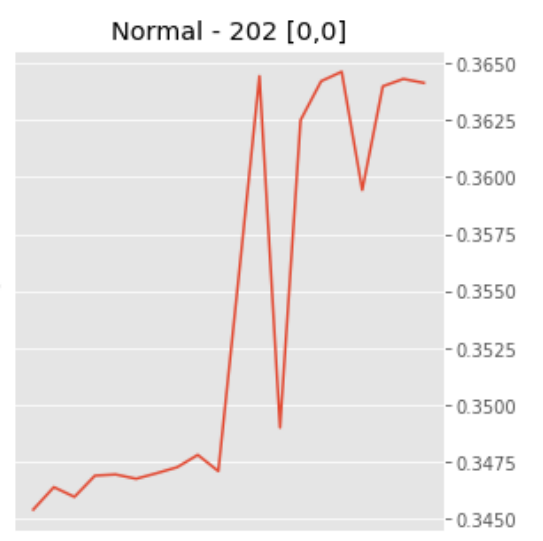
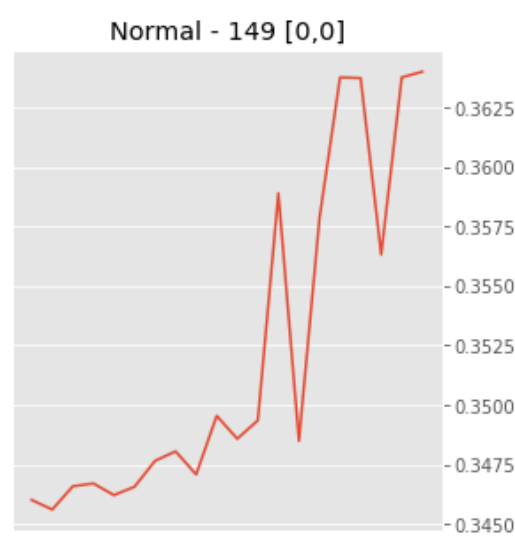
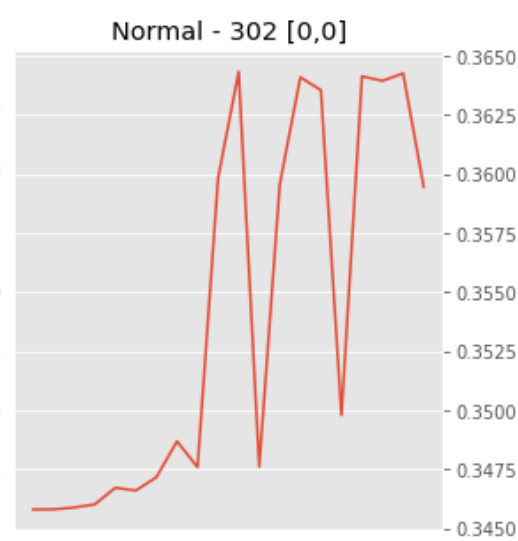
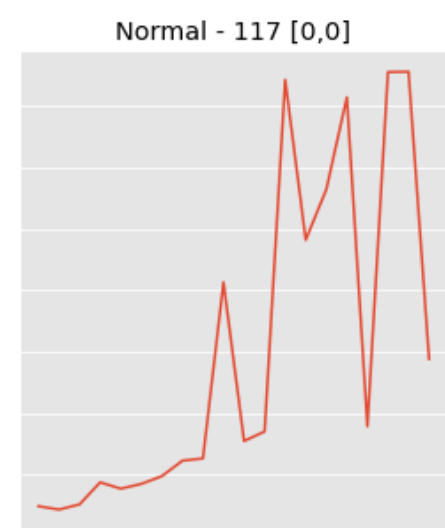
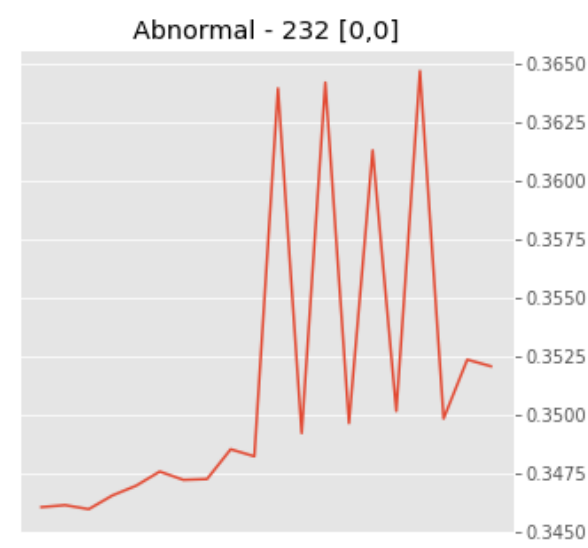
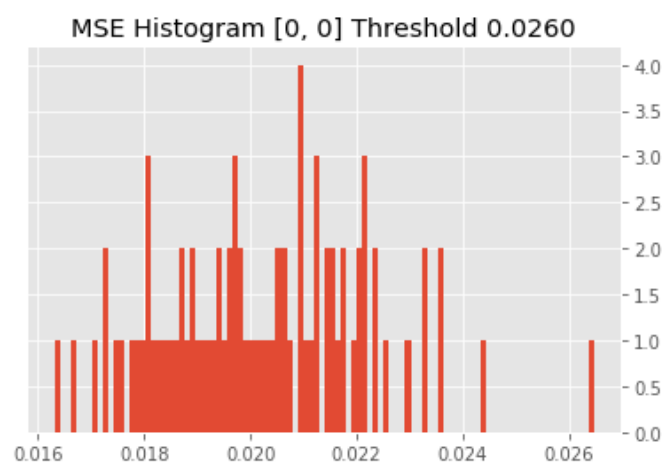


Training vs Encoded Data - Chip [31, 19] Temperature

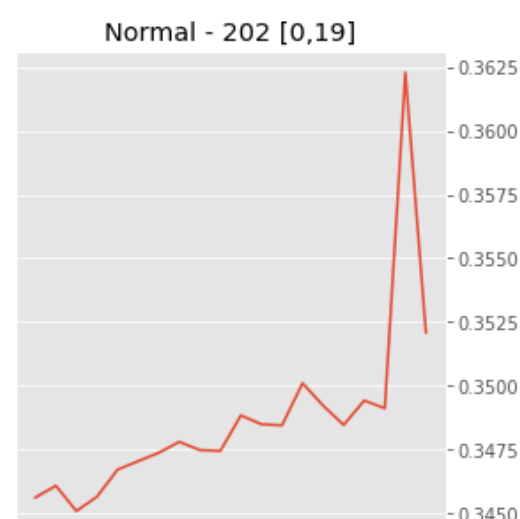
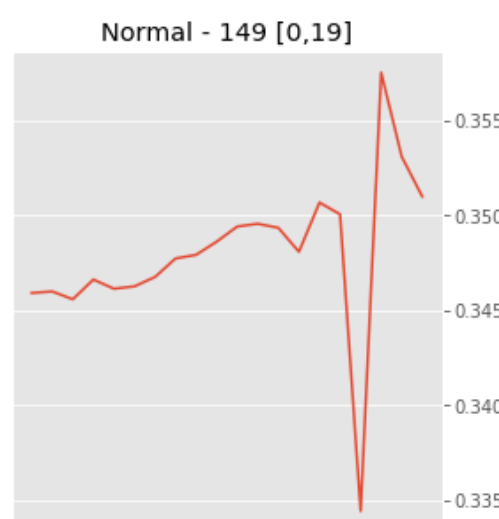
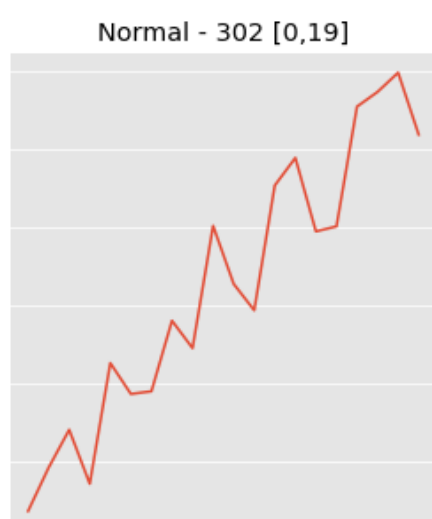
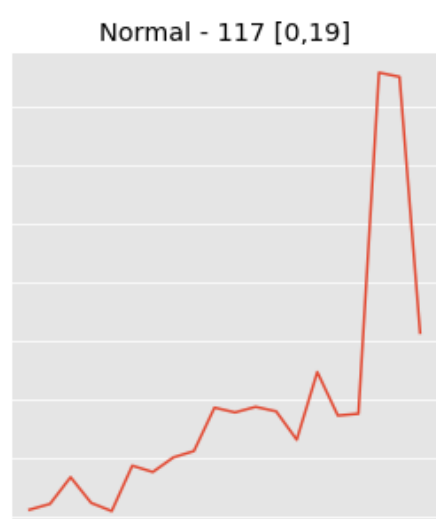
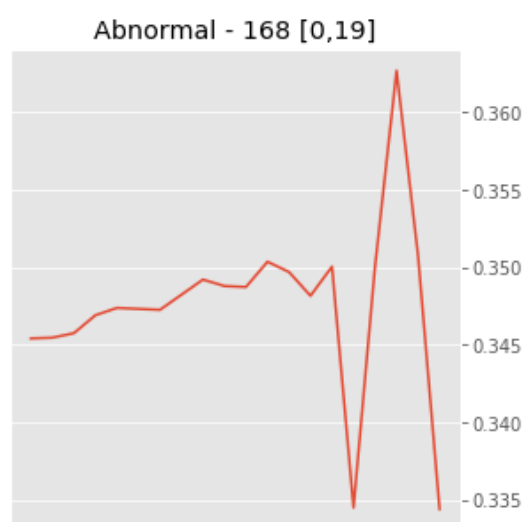
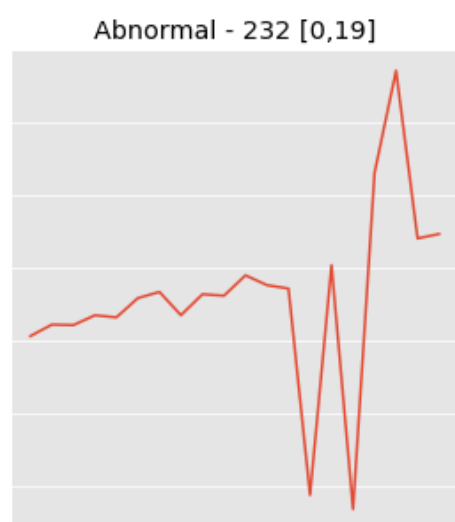
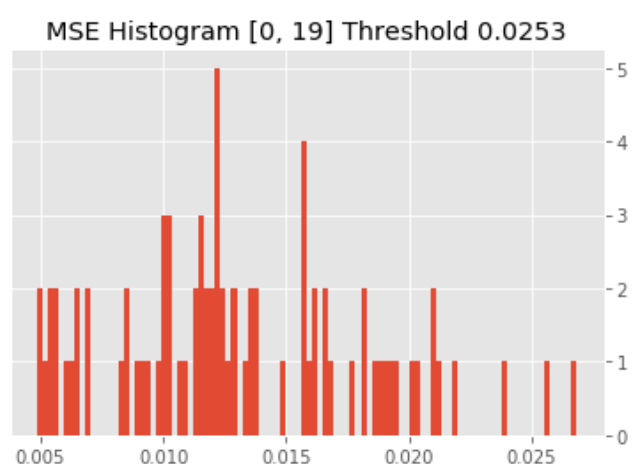
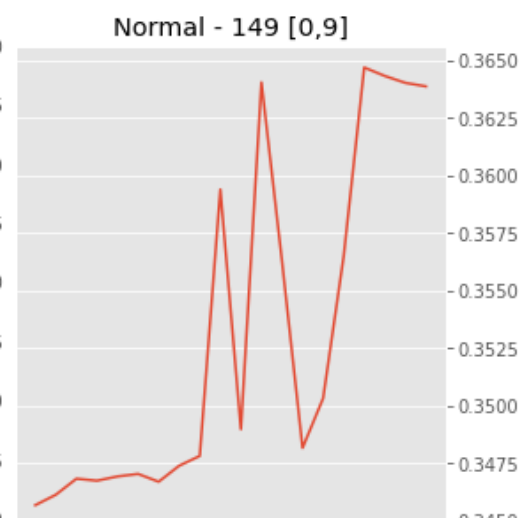
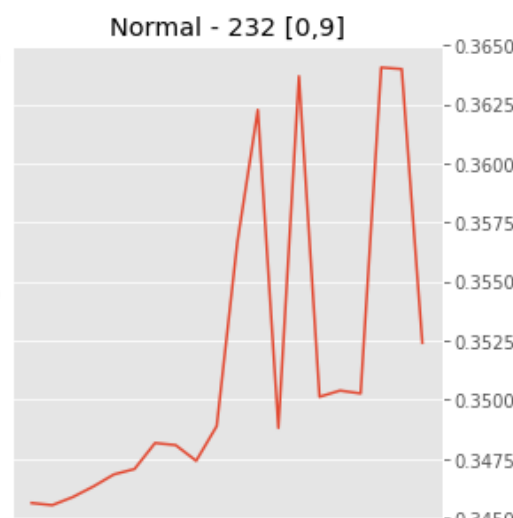
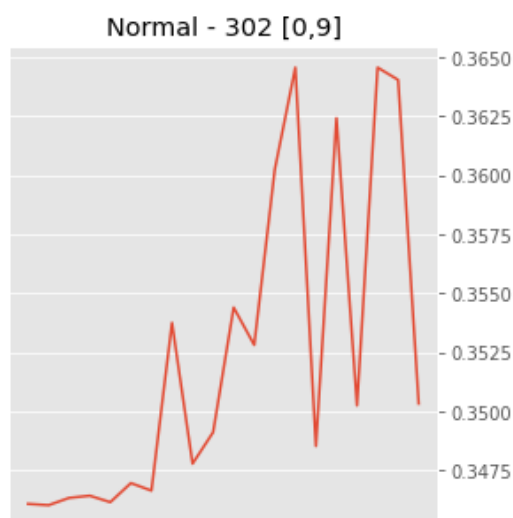
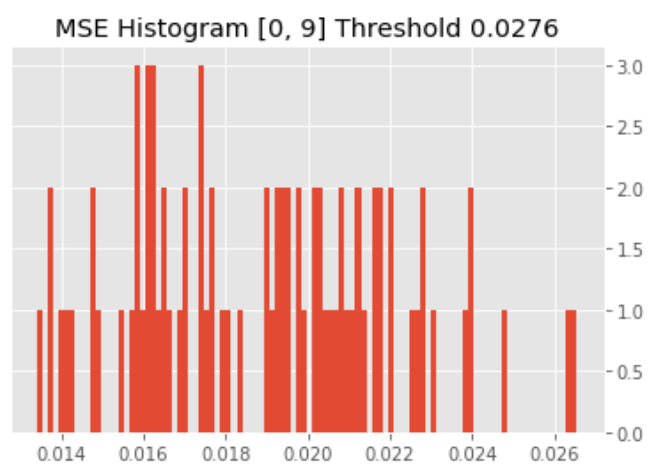




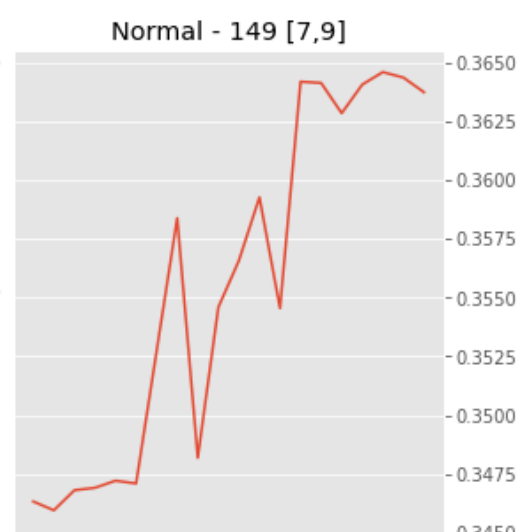
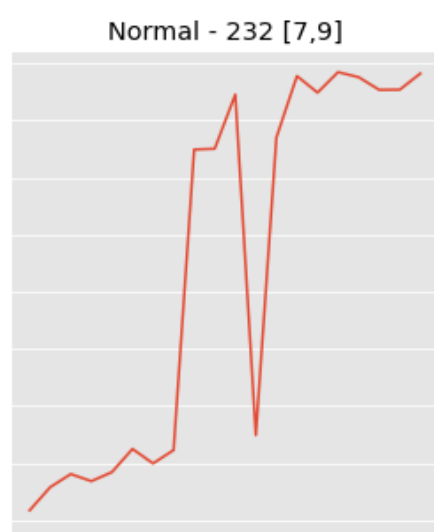
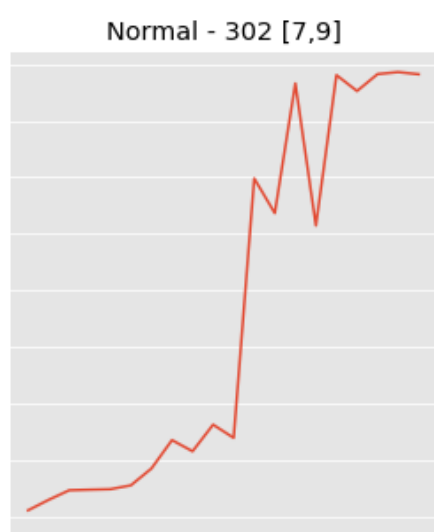
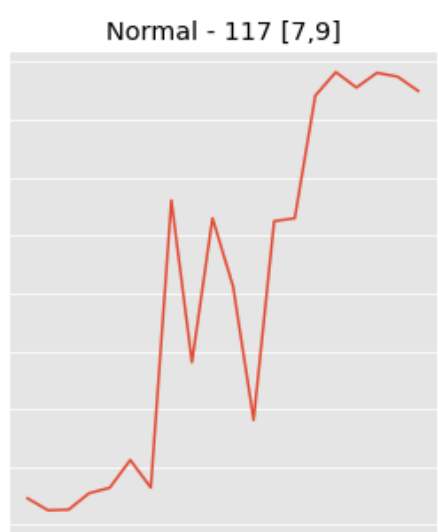
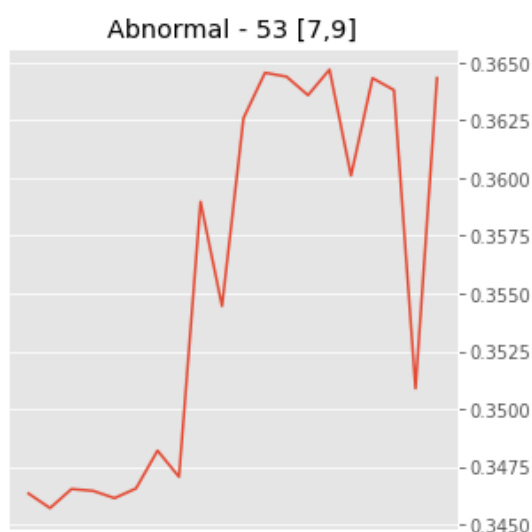
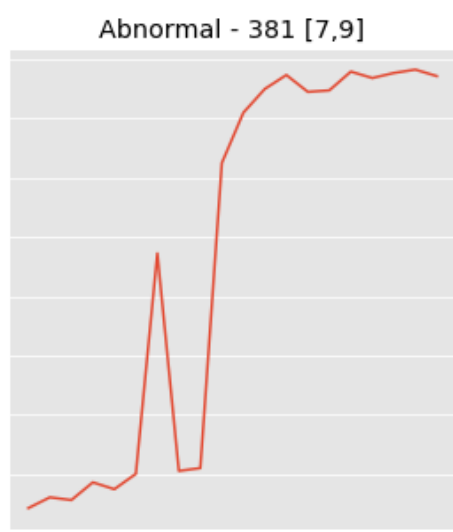
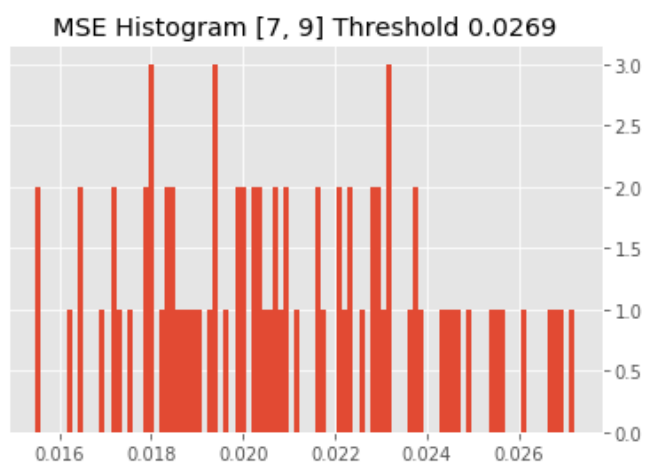
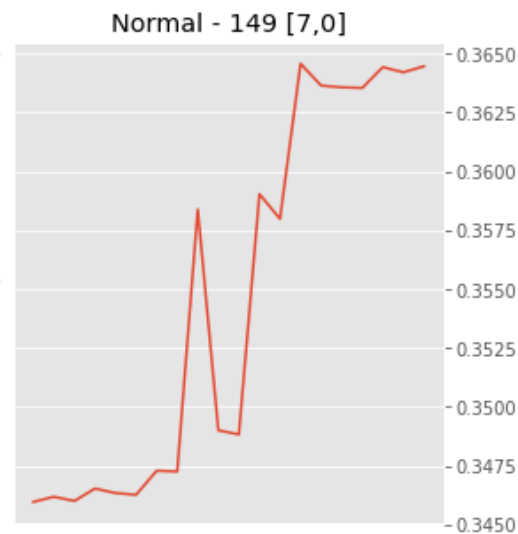
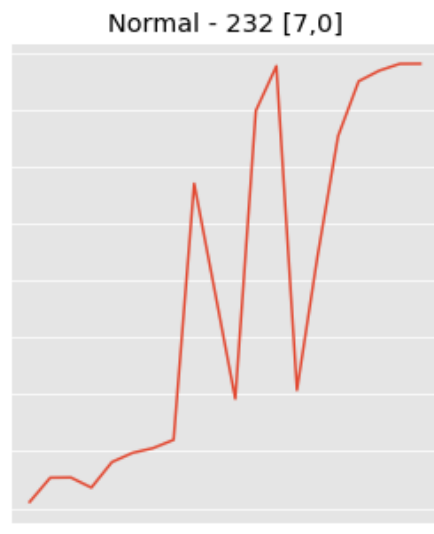
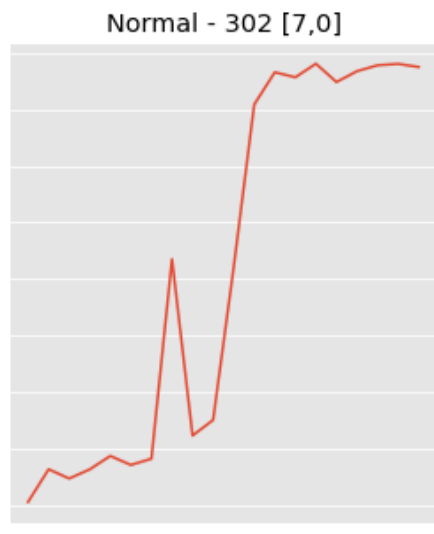
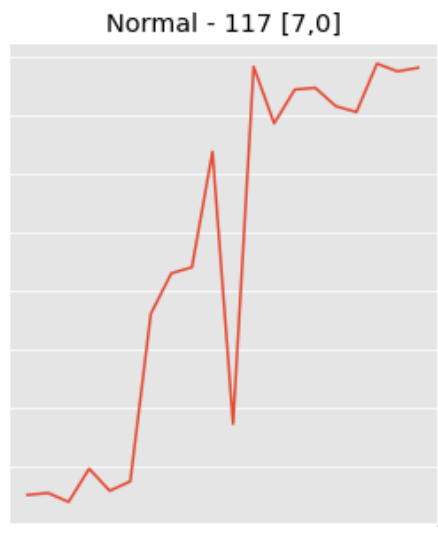
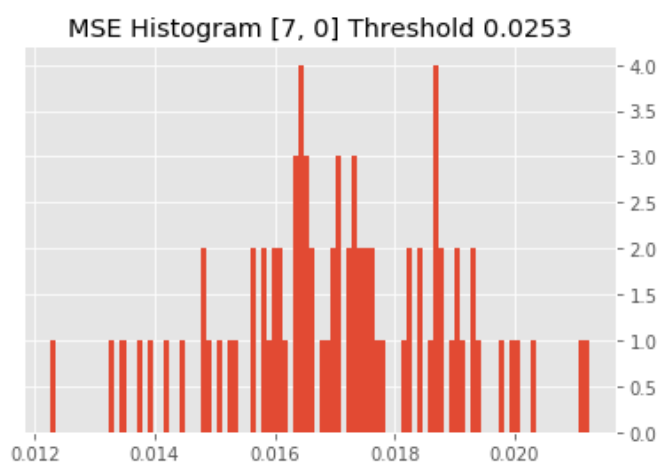
Read mse\_threshold: (32, 20)



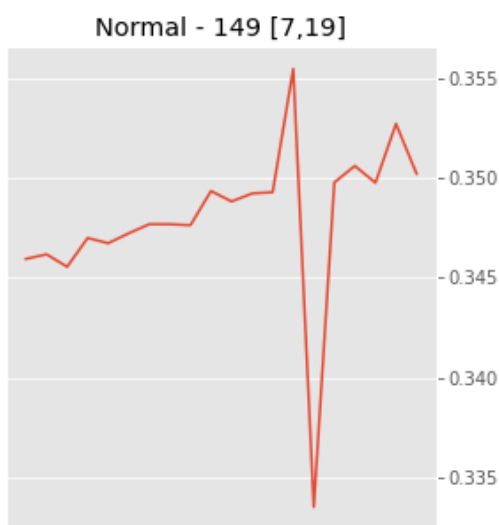
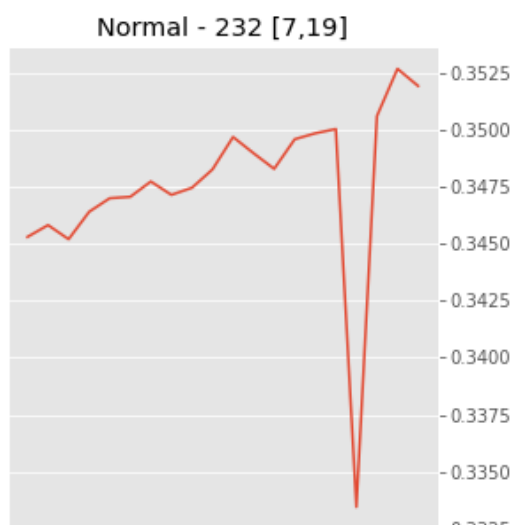
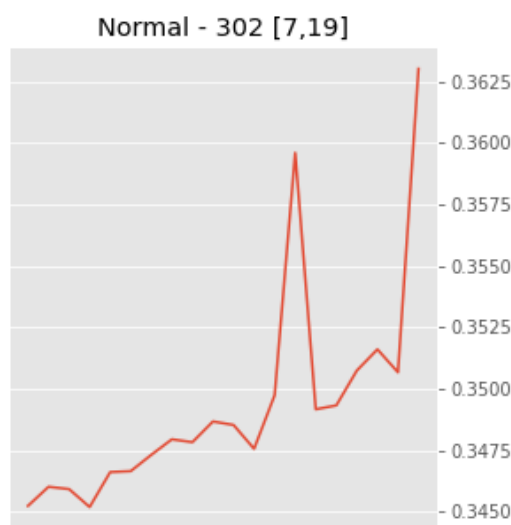
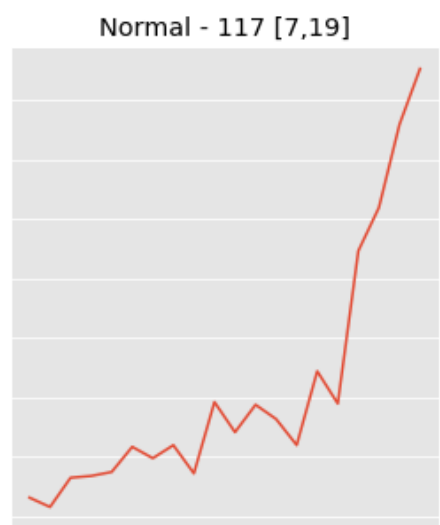
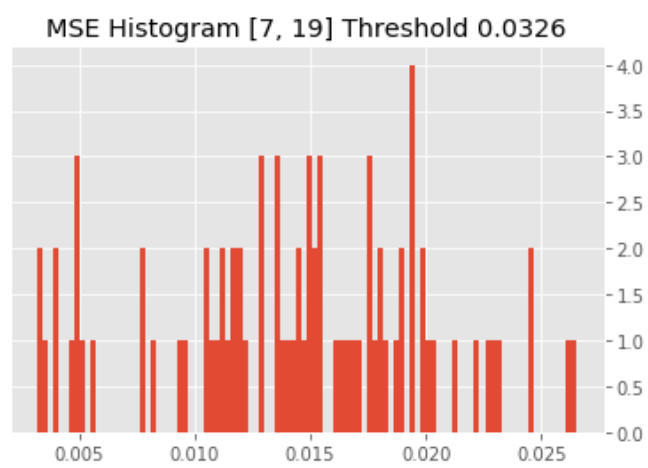
Abnormal chip not found at [0,9]



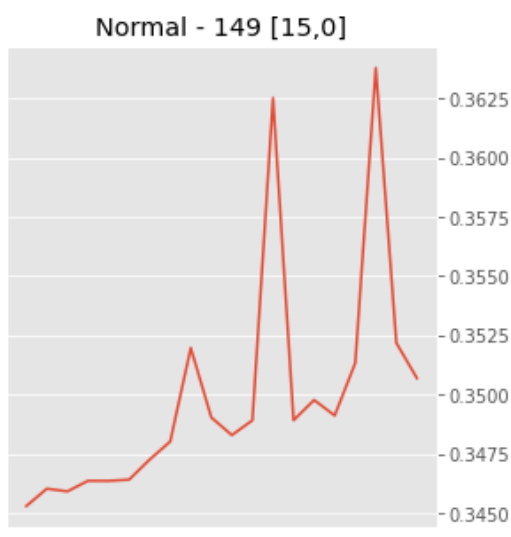
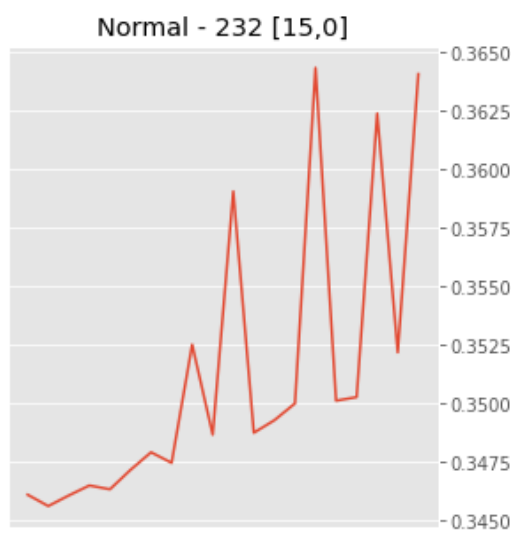
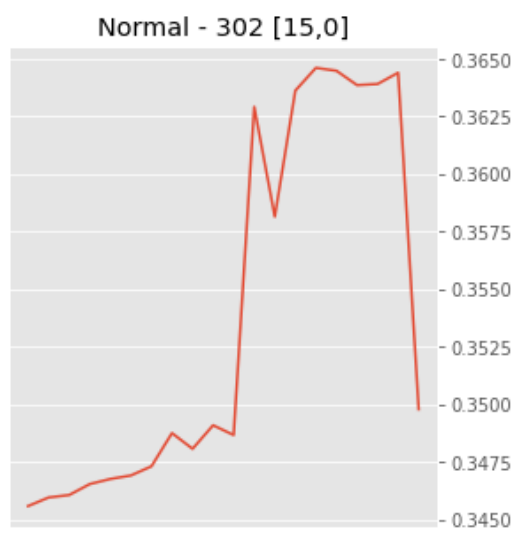
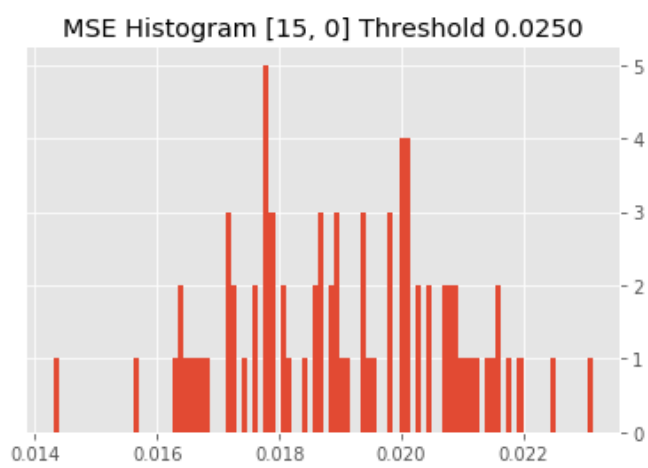
Abnormal chip not found at [7,0]



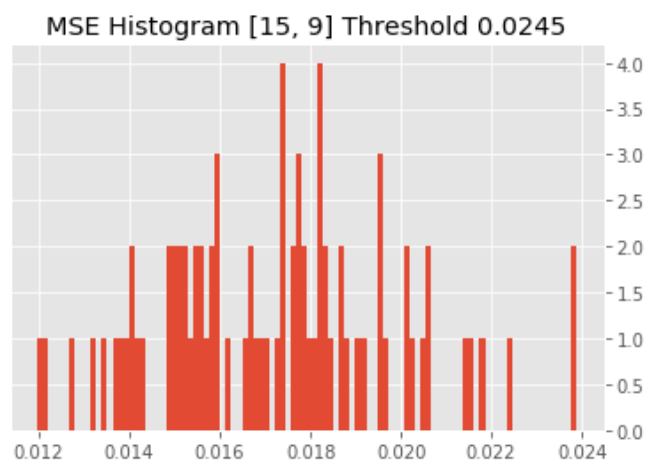
Abnormal chip not found at [7,19]

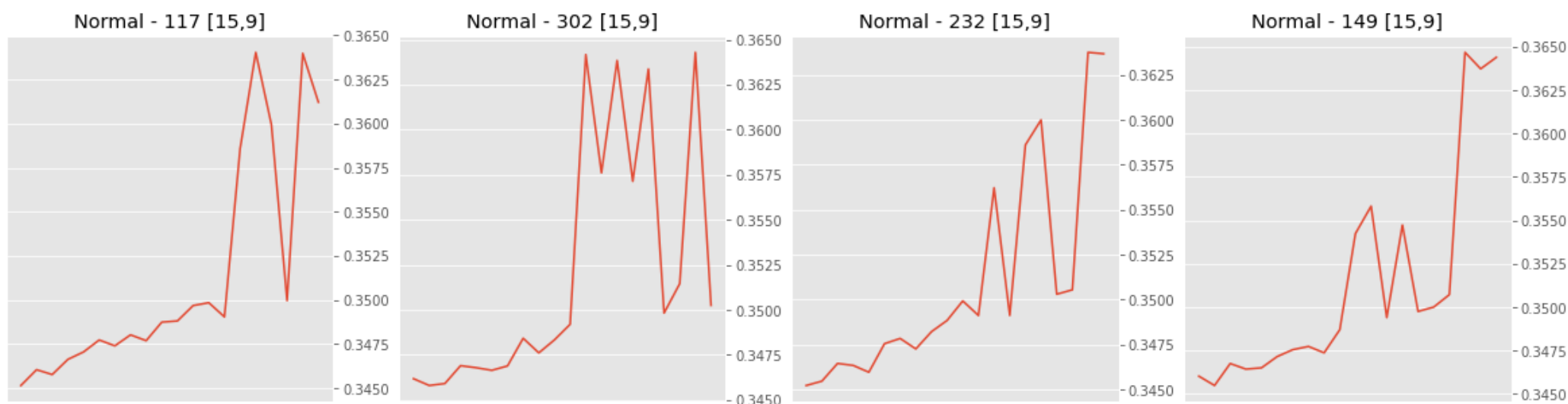


Abnormal chip not found at [15,0]

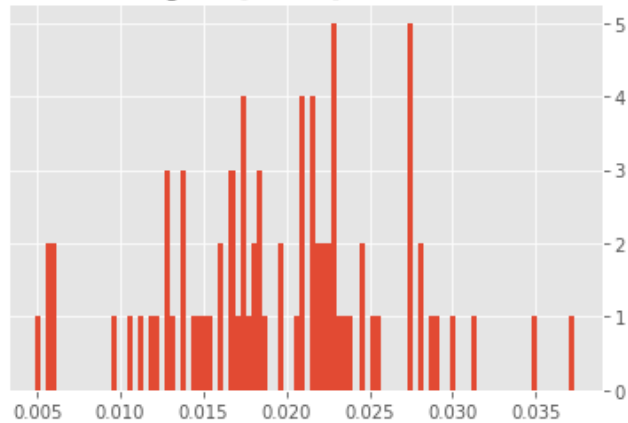


Abnormal chip not found at [15,9]

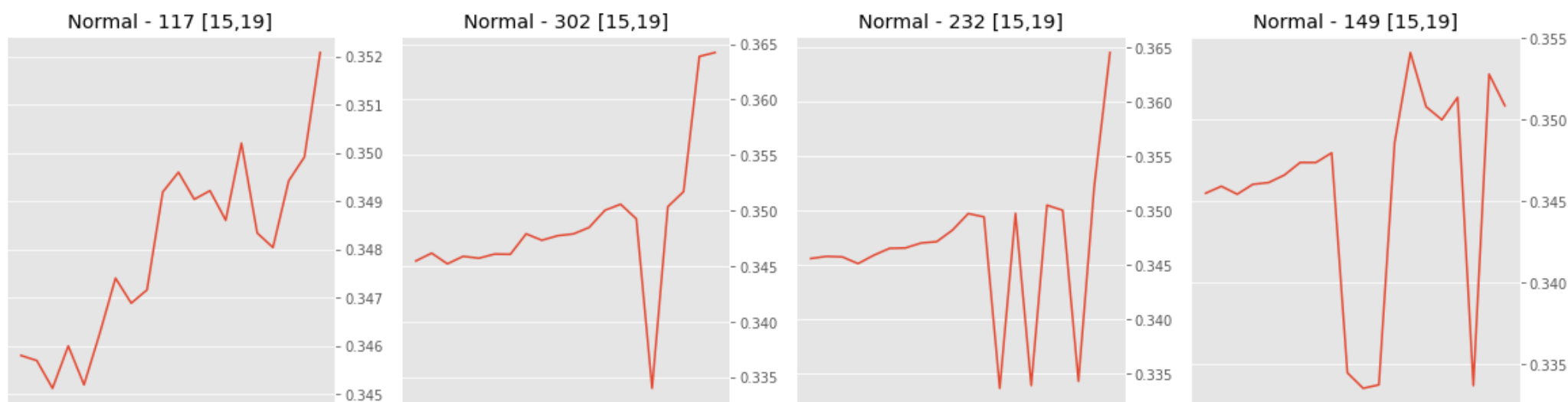
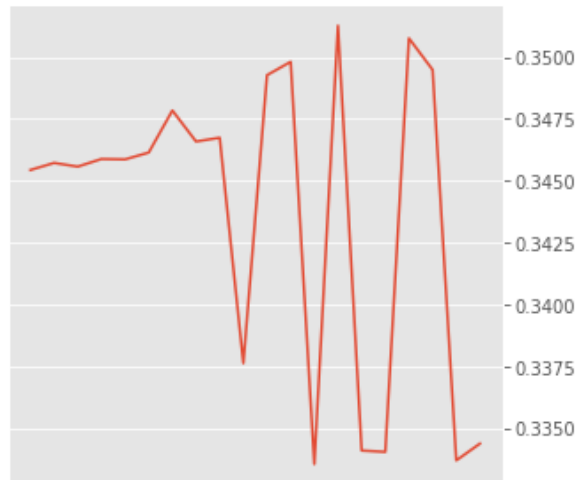




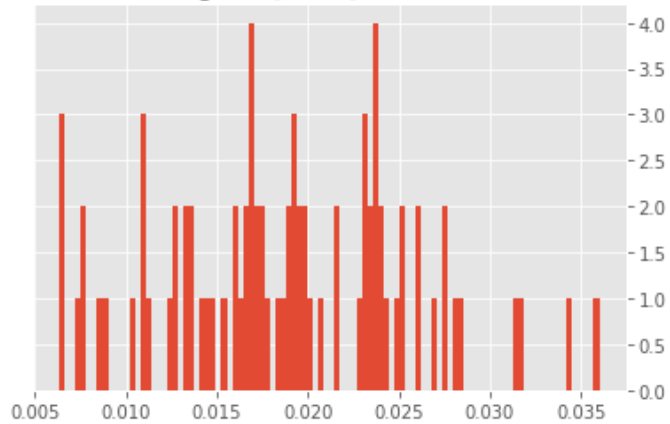
MSE Histogram [15, 19] Threshold 0.0365

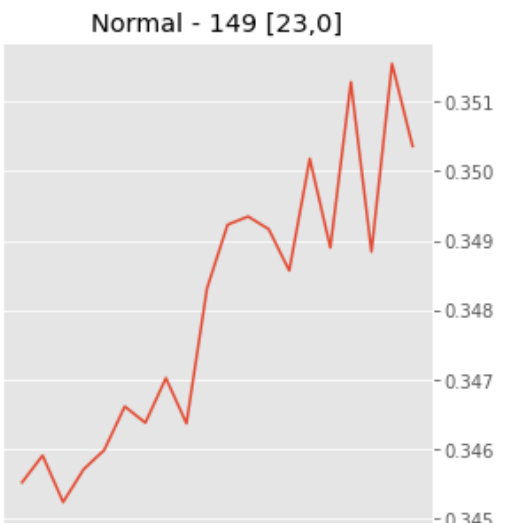
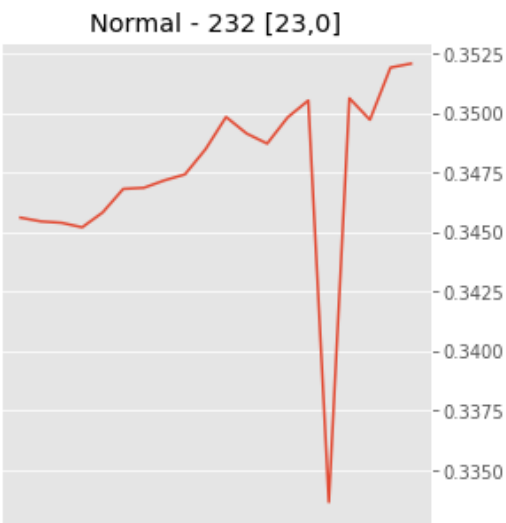
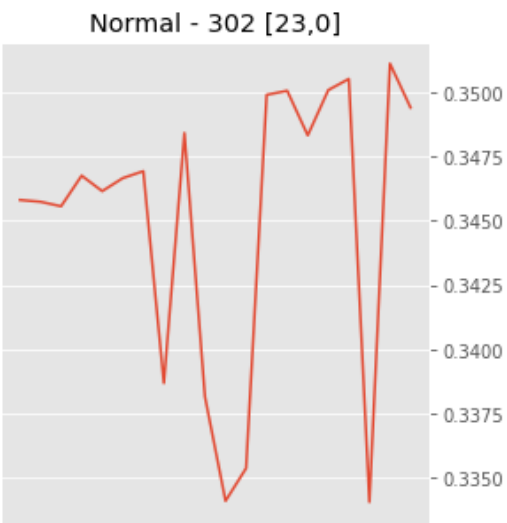
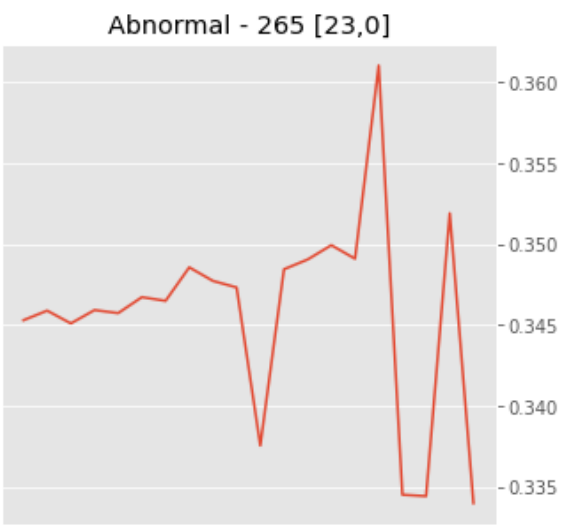


Abnormal - 181 [15,19]

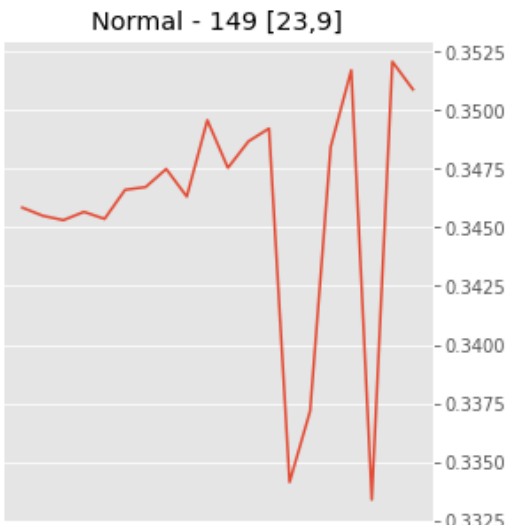
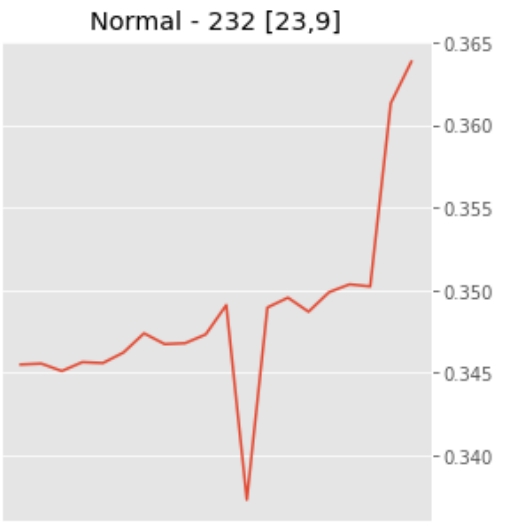
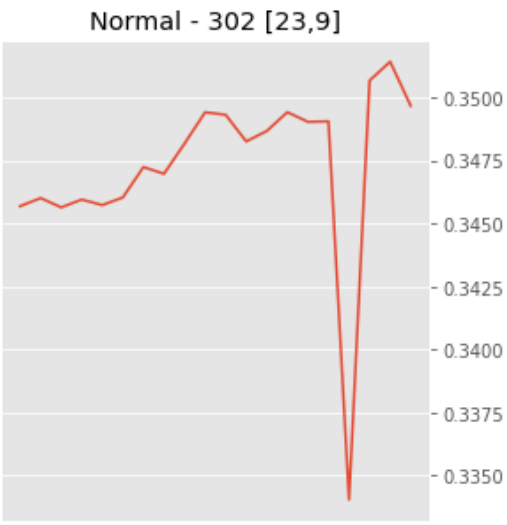
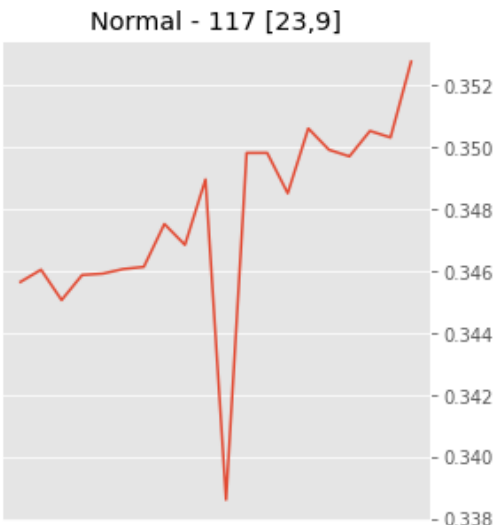
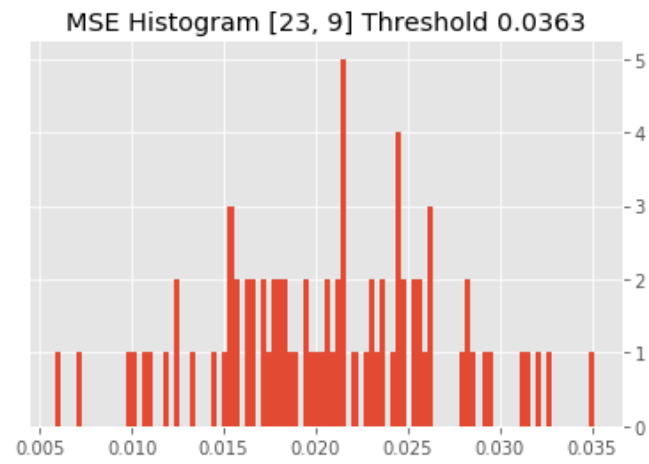


MSE Histogram [23, 0] Threshold 0.0346

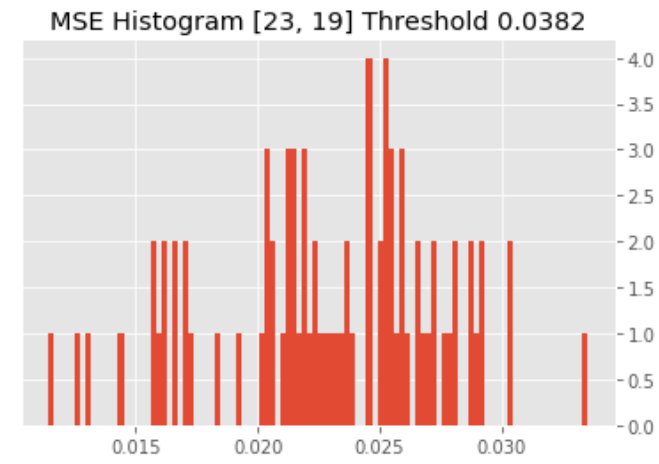


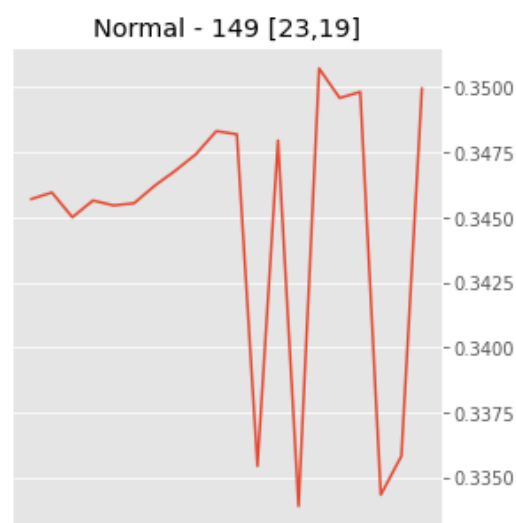
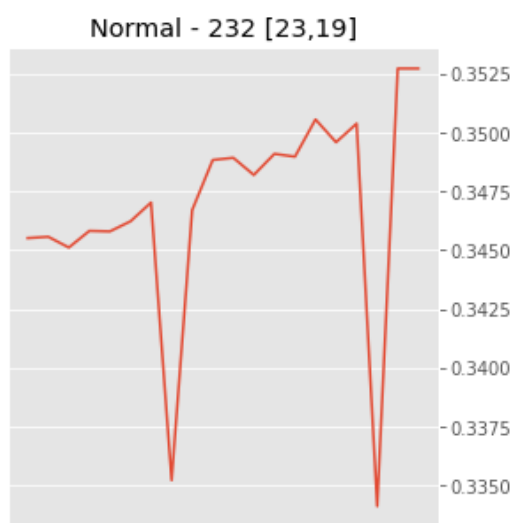
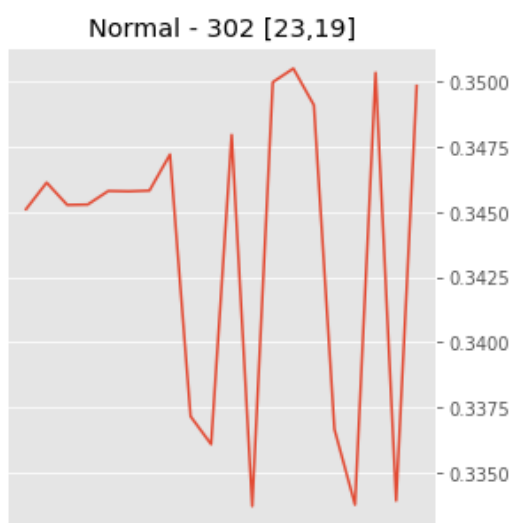
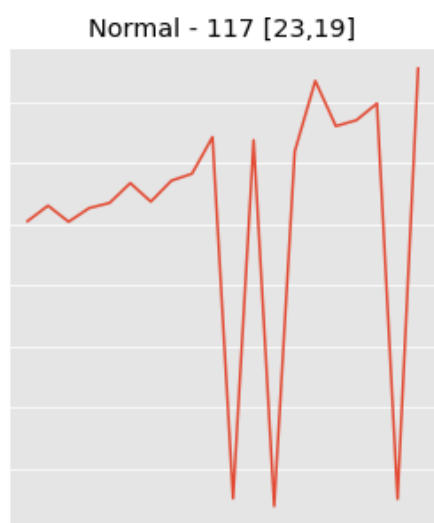


Abnormal chip not found at [23,9]

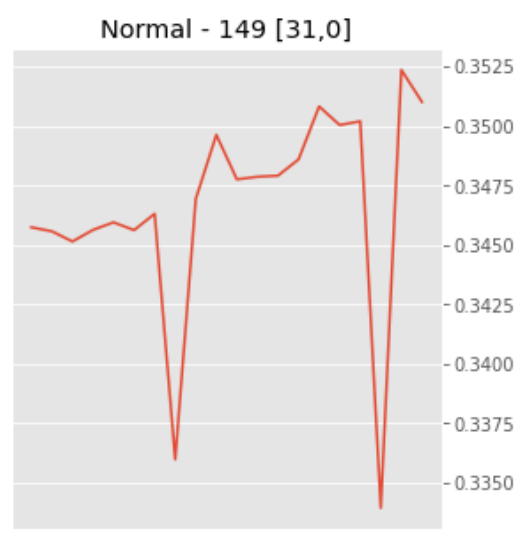
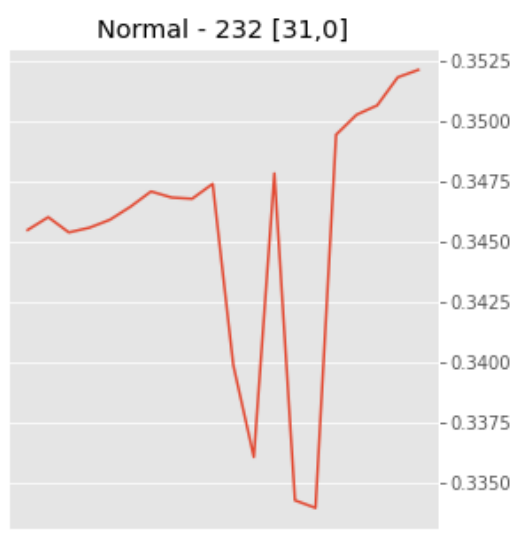
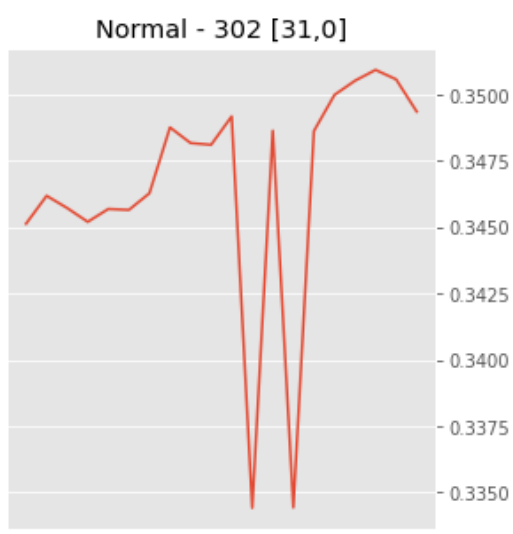
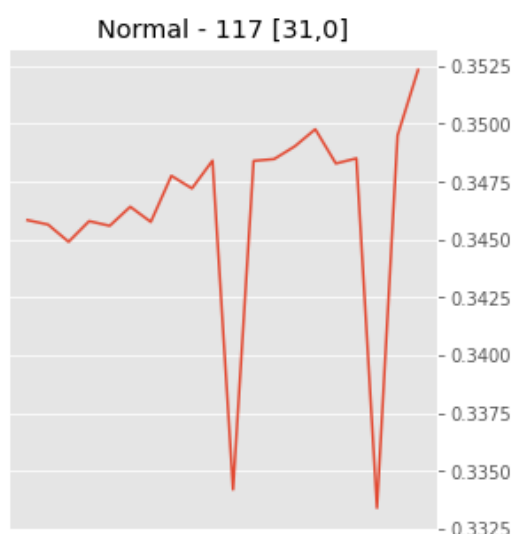
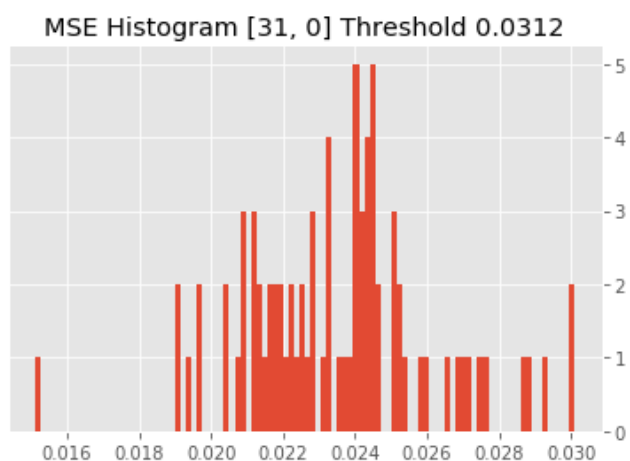


Abnormal chip not found at [23,19]

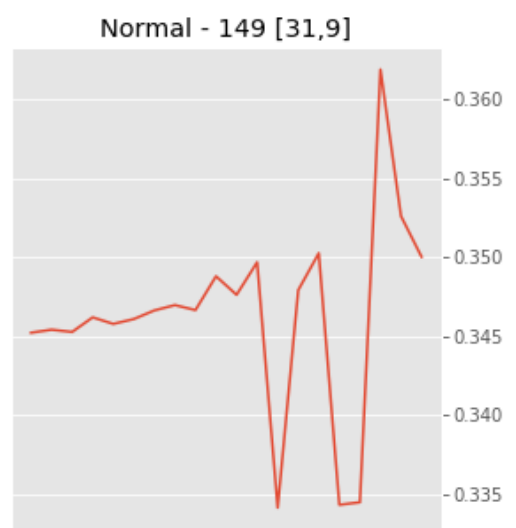
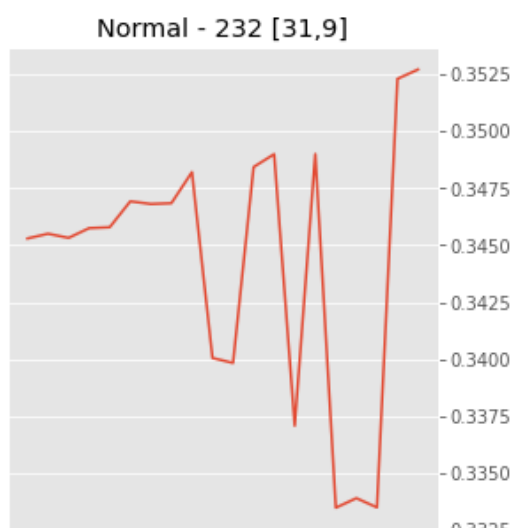
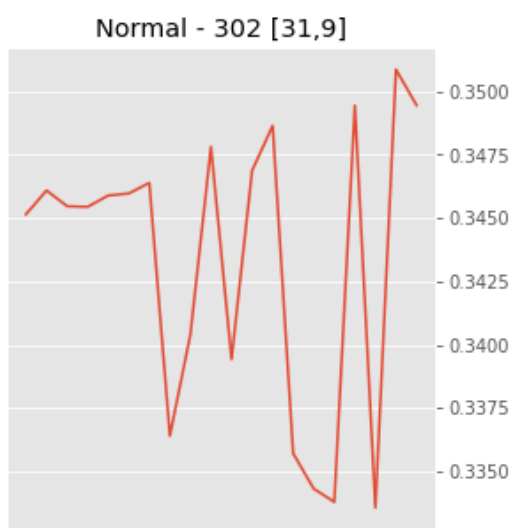
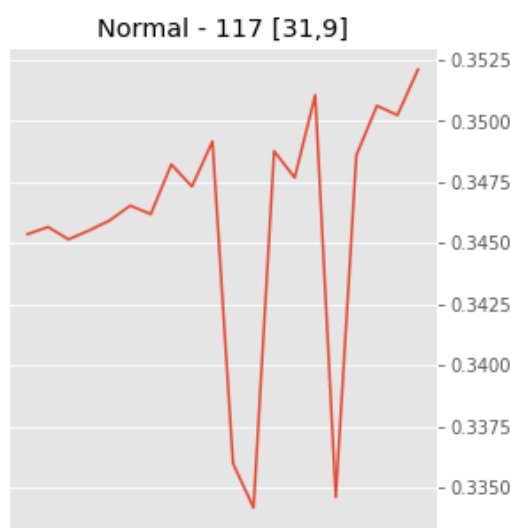
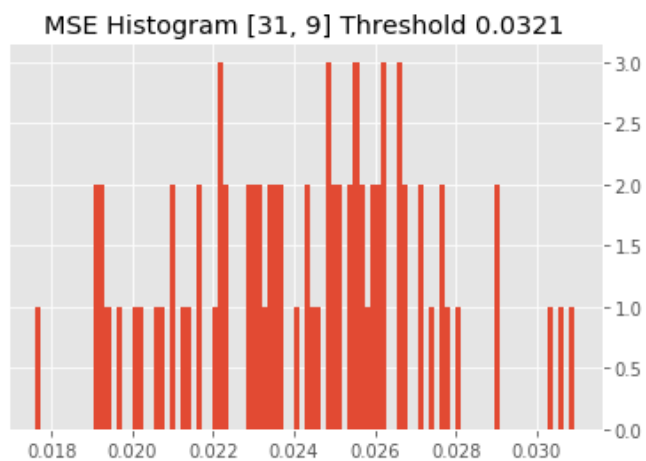




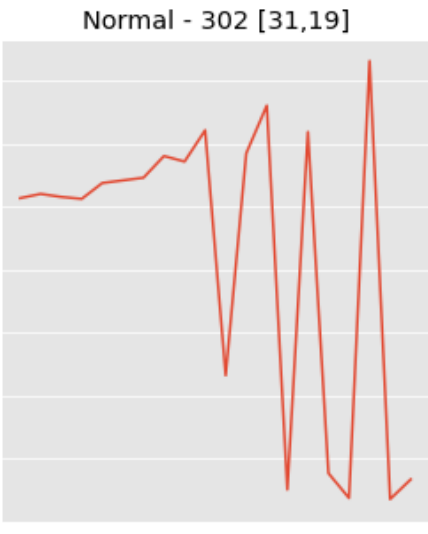
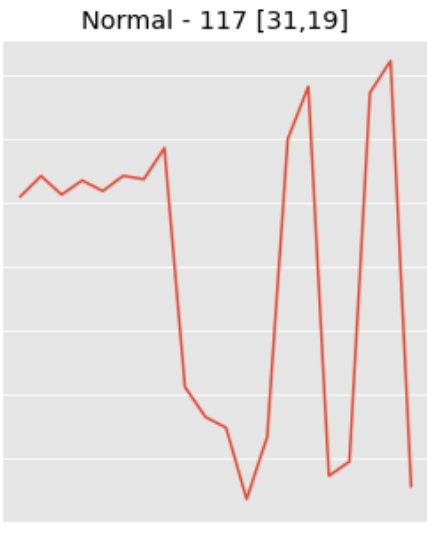
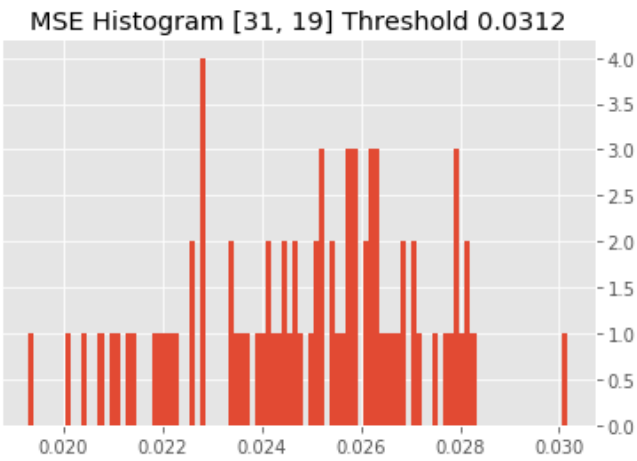
Abnormal chip not found at [31,0]



Abnormal chip not found at [31,9]



Abnormal chip not found at [31,19]



In [51]: