2022_03_28th
SNR 8 improvement
Mixed SNR

- 300K Training data
- 50 Epochs
- No Dropout
- Applied L2 Regularization:
  \[ = 10^{-5} \]
Time frequency plot of different detector

Gaussian background

https://s3.cern.ch/inspire-prod-files-3/3b78700cb140a11c4ed8c605113462d1
2011.13733

2011.13733 (PRD)

A CCSN time frequency plot
Time steam test

The current paper does not test on data streams.

We can also run the O3 data if we can make test on stream data.

It can also helps us know the latency of the model.

We can also probe which part of CCSN signal has a greater contribution to the detection model.
Conclusion

- We can make classification directly at time domain strain.
- The CCSN signal we use are purely from 3D simulations which stick to more realistic phenom.
- We can achieve a high accuracy detection at mixed SNR.
- I plan to test the performance and give its statistic performance.