



cWB Hackathon Exercises IMBH Detection

- Given frame files for Livingston and Hanford, use cWB to determine how many coincident IMBH signals are present in the LH detector network
- Identify the loudest SNR signal detected and create its CED (what is its SNR?)
- Apply XGB, assign IFAR, report detections -> Detections have $IFAR > 1\text{yr}$ (What is the IFAR of the loudest detection?)
- Can you comment on the total mass of the detection?
- Follow-up 1 (Optional): Try to find the best matching template with PyCBC and minimize overlap - Compare cWB reconstructed waveform with best matching template
- Follow-up 2 (Optional): Use Bilby and perform PE on said loudest signal

Working directory:

`/home/tanmaya.mishra/O4/SEARCHES/OFFLINE/BBH/LH/BKG/O4_KXX_LH_frfiles_IUCAA_hackathon2`