Portable PEM project

2019/7/16 Virgo-KAGRA PEM meeting

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Chromebook laptop PC

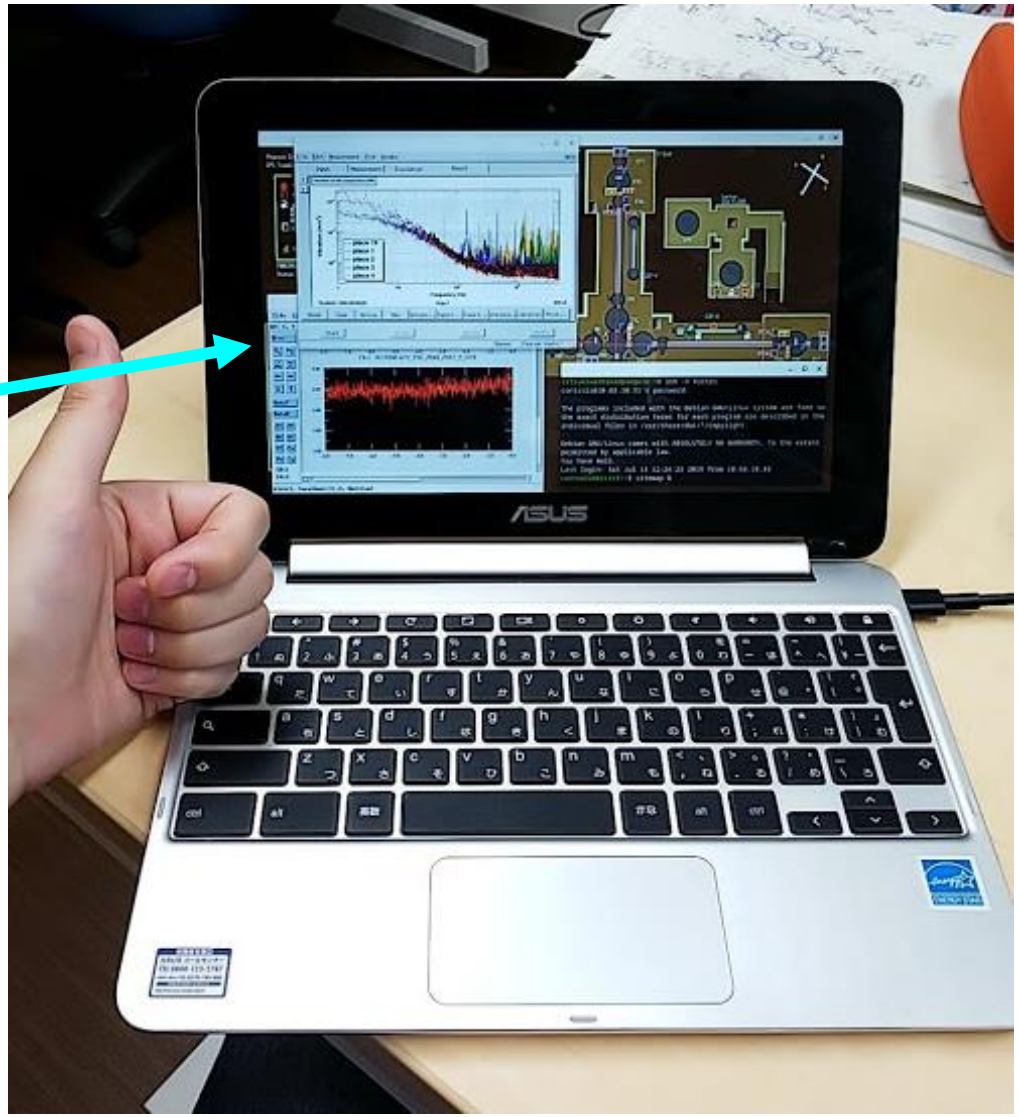
I introduced a Chromebook (ASUS Flip C101PA) for the underground work.

- Low cost (~ ¥40,000)
- Lightweight (890g)
- Compact (10 inch)
- fast boot time

- Clam-shell keyboard & touchpad
- SSH connection is available
  - ➢ MEDM, diaggui, dataviewer,…

- USB type-A port
- Android apps are available
  - Spectrum analyzer
  - Function generator
  - Serial communication
  - weather news
  - Earthquake news
  - etc.

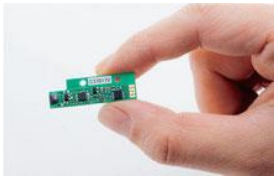
➢ **Portable PEM tool**



USB sensors + Android apps

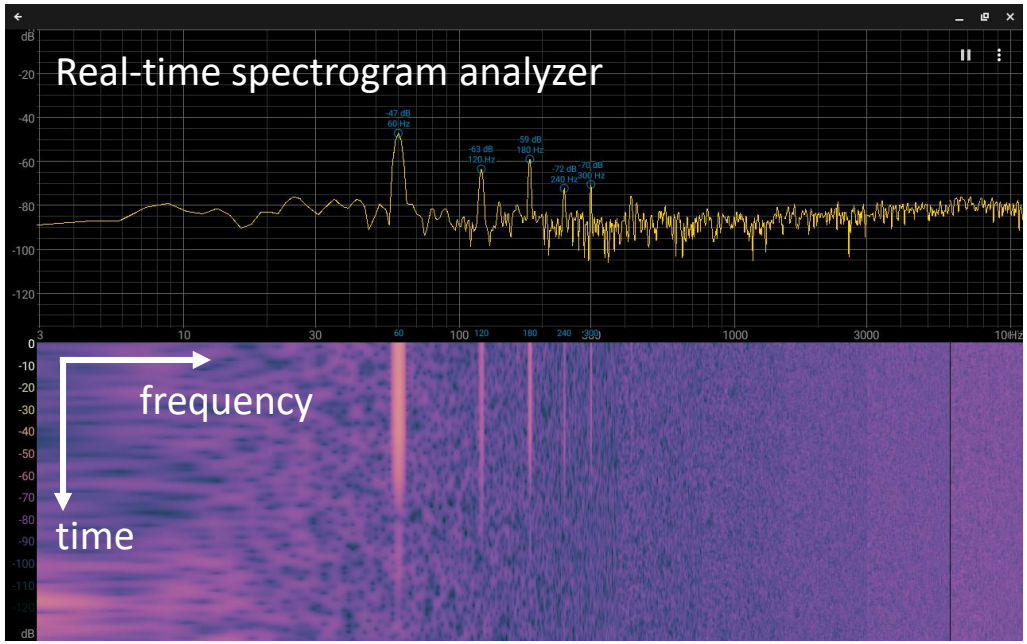
We have gotten

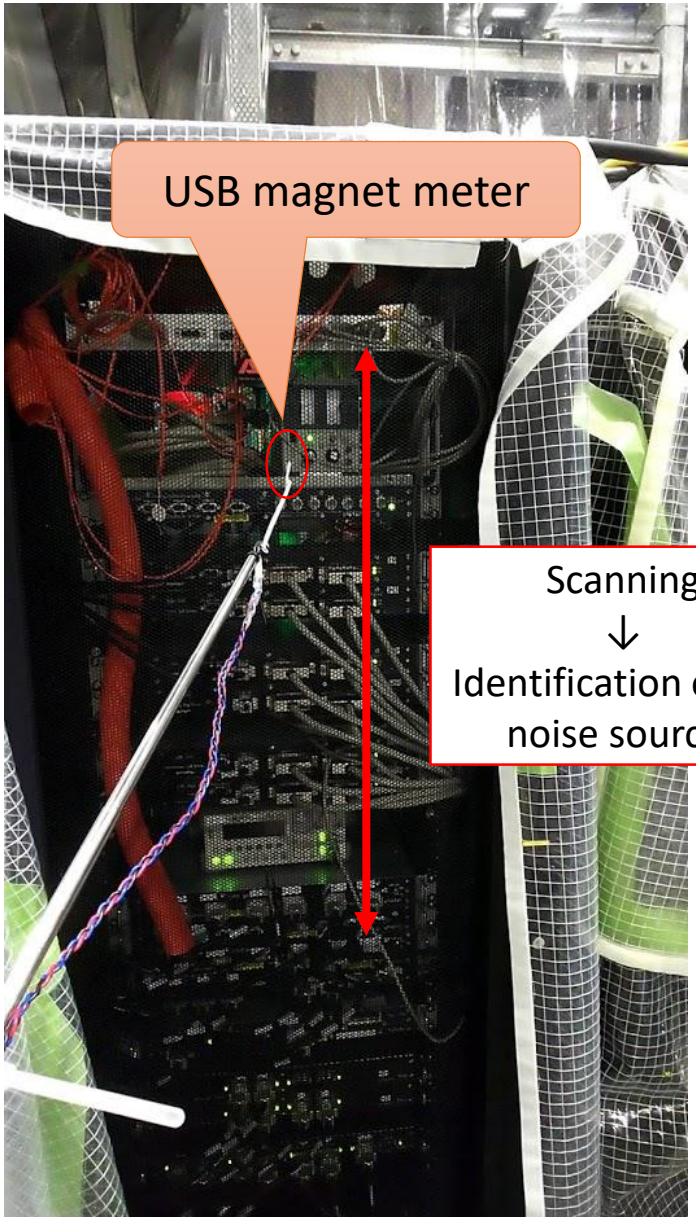
- USB microphones (2)
- USB accelerometers (2)
- USB magnetometer (1)



Noise hunting becomes very easily & quickly

➢ Working efficiency is much improved



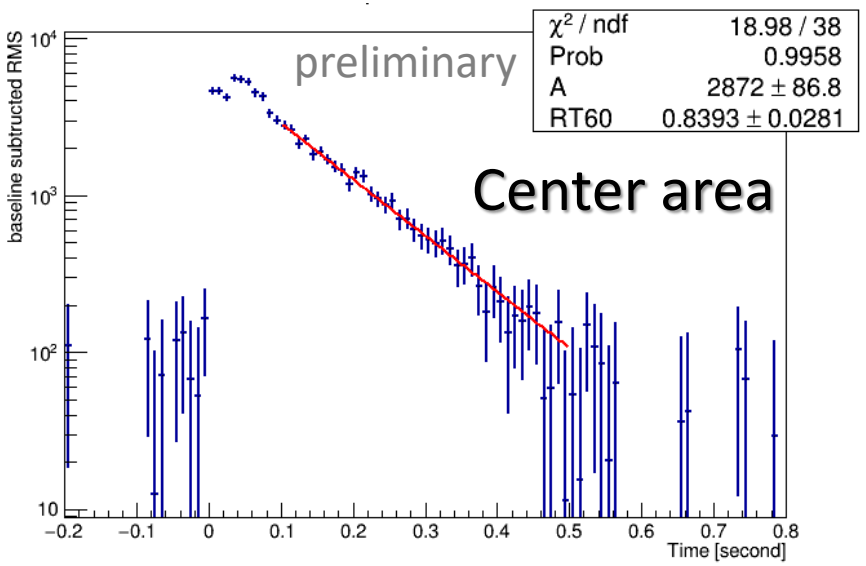


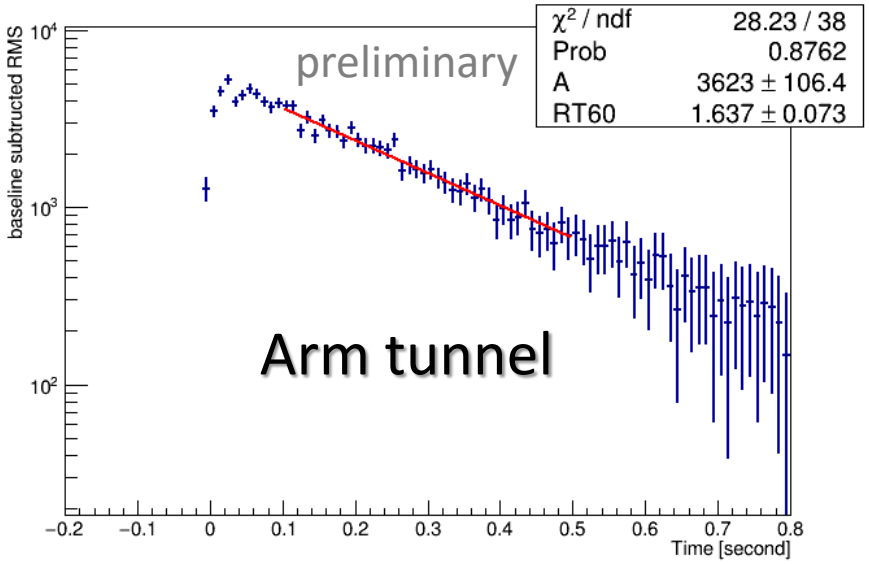
Reverberation time measurement

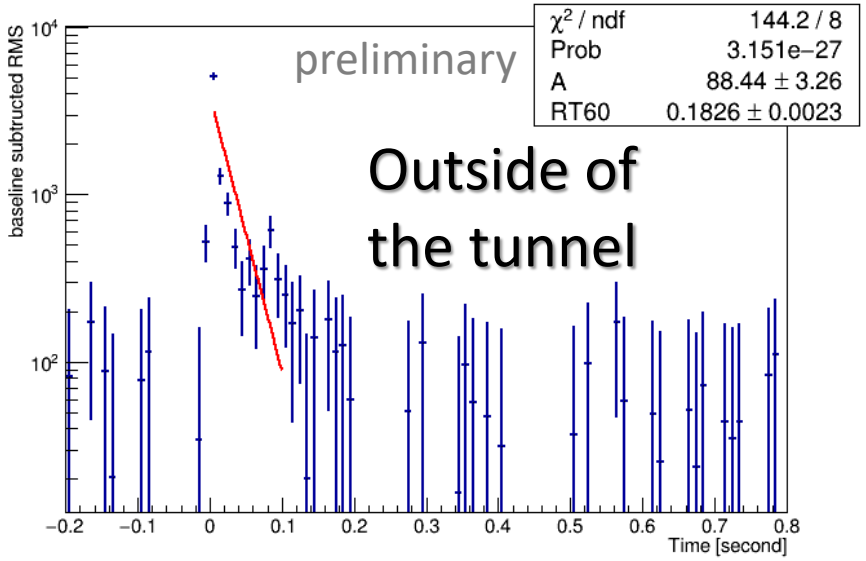
- The data is saved as an audio file (44kHz).
- This system is completely free from any limits about cabling, power supply, ADC, etc.

We can do the measurement anywhere!

➢ e.g. Reverberation time measurement







trip plan

I would like to visit Virgo for the practice of noise hunting.

About 2 weeks

- before the O3 joining of KAGRA : Aug.-Sept.
- during the commissioning term of Virgo : Oct.-Nov.

Constraints :

- TAUP2019 (Sep. 9-13)
- JPS (Sep.17-20)
- 2nd visiting of Virgo PEM member to KAGRA (Oct.?)