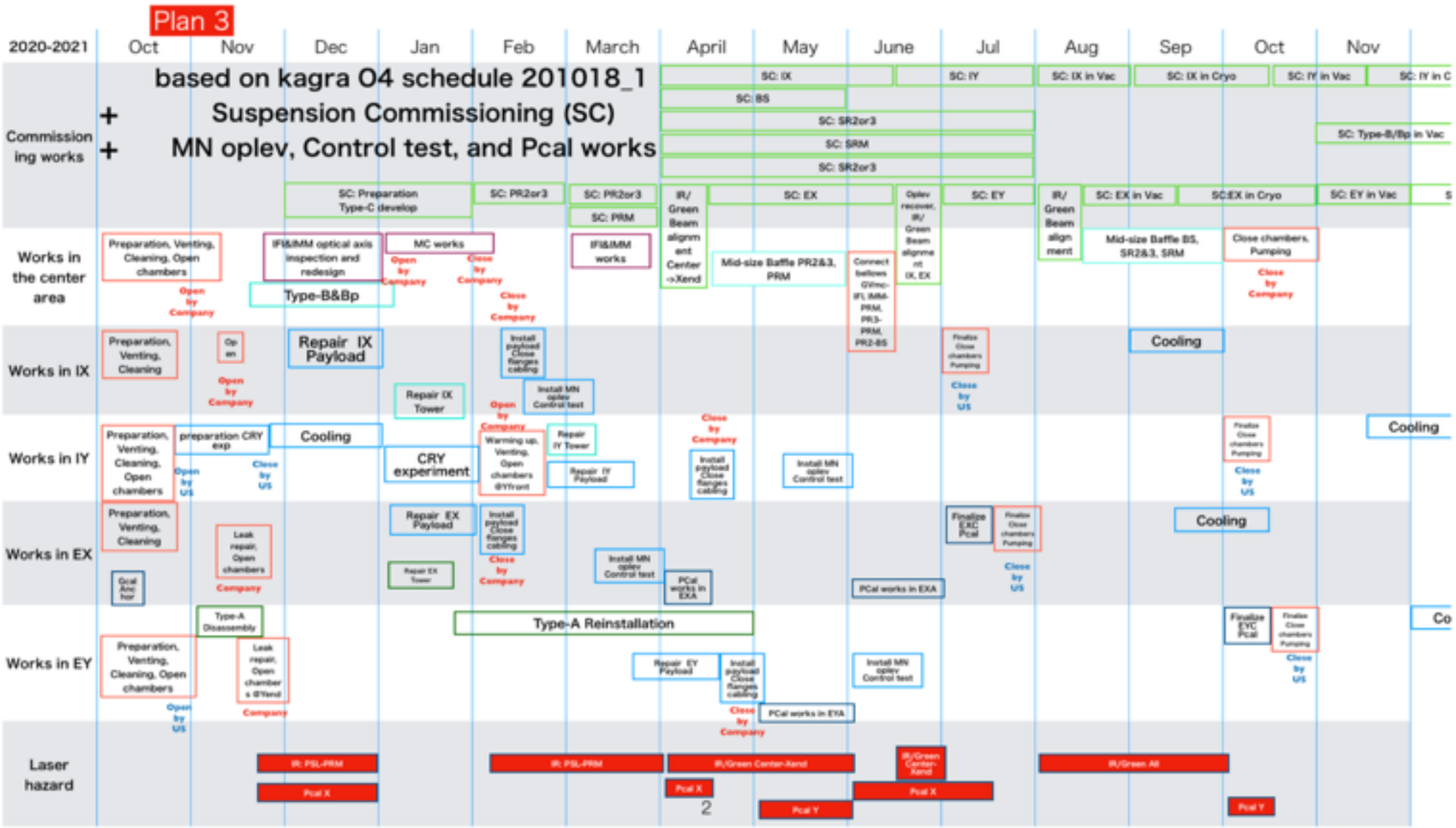
KAGRA detector status &
Update of the KAGRA PEM from last meeting

Virgo-KAGRA PEM meeting
2021-02-19
Takaaki Yokozawa

KAGRA detector status

- Suspension upgrade
  - PRs, BS, SRs, Type-As, IMC, IMM, …
  - Suspension commissioning IMC and IX from Mar.

- IMC commissioning will start from March



KAGRA Seismic motion during O3GK

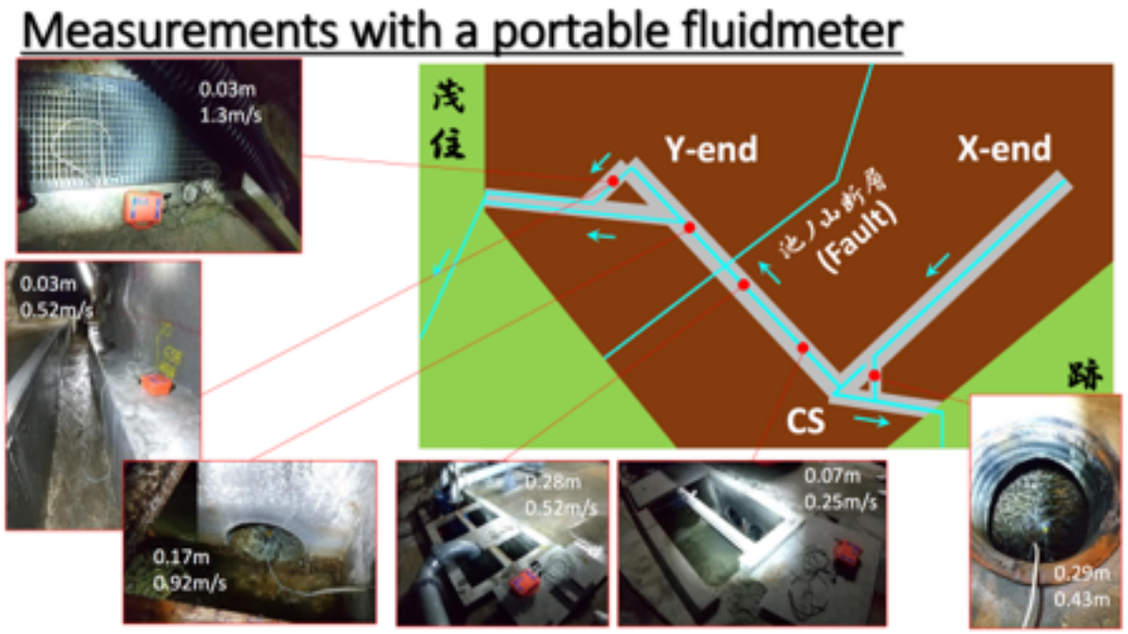
- Under discussion

- Call candidate for seismometer data analysis person
  - Seismic motion during O3GK
  - Turn over Fujikawa-san's analysis
  - Detail analysis for micro-seismic motion
  - Earthquake information
  - Some human activity(1-10 Hz) behavior
  - Self noise evaluation

KAGRA new PEMs

- Water fluid monitor

- Four magnetometers (MFS-06e)



Requirements

- Low noise magnetometers (NS & EW or X & Y, …)
- Quiet location:
  - Away from equipment, …
  - Priority: 2 below ground to give an as realistic as possible magnetic background measurement
  - Ideally: 4 magnetometers – 2 above ground & 2 below ground
    - Enable us to understand impact of underground facilities

Presentation by Kamiel at last October

Presentation by Washimi-san at last December

Future prospects

- Detector characterization
  - Updating daily summary pages
  - Line identification and characterization
    - Noise source
    - Time variance
    - Q value

- Environmental measurements (Near future)
  - Water fluid
  - Schumann resonance
  - Infrasound

- IMC commissioning
  - Noise budget and hunting
  - Stray light
  - Material eigen frequency
  - Picture