

Installation and assembling of cryostat

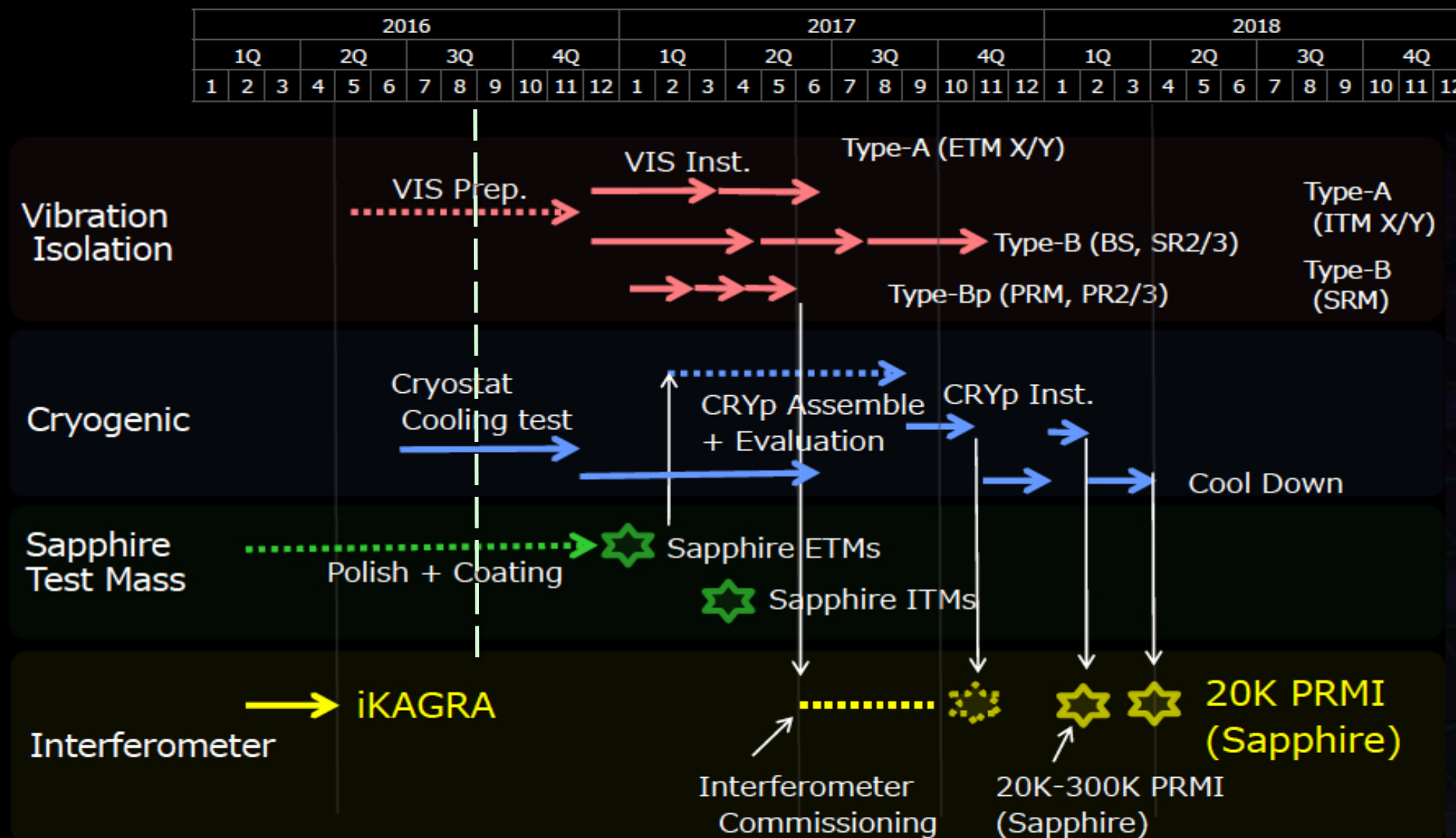
Aug. 26, 2016

KAGRA F2F meeting @Toyama

T. Suzuki

KEK

Plan for bKAGRA Phase-1



Installation and assembling of cryostats at both ends

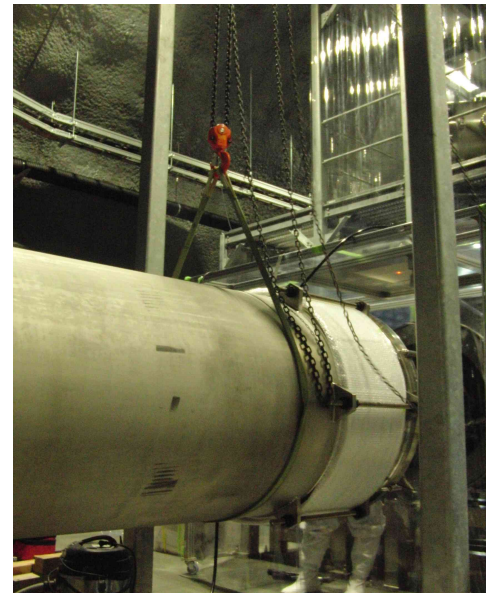
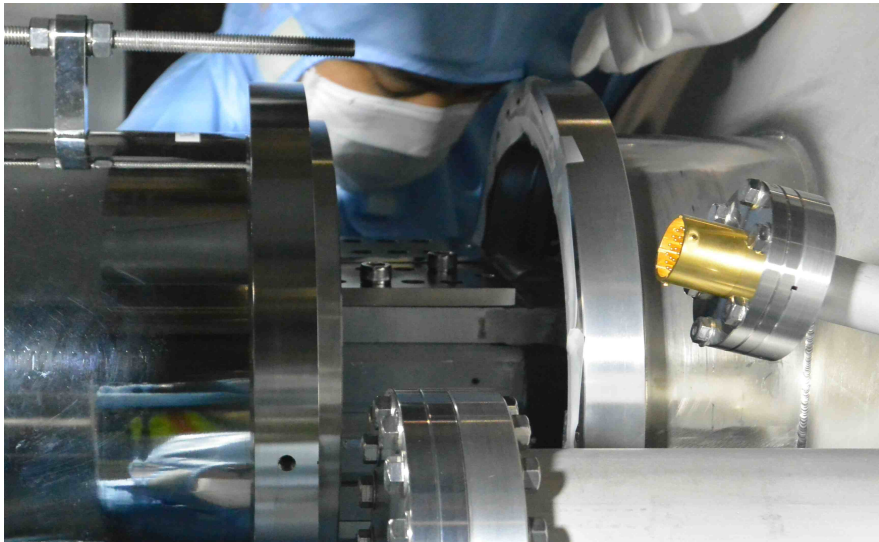
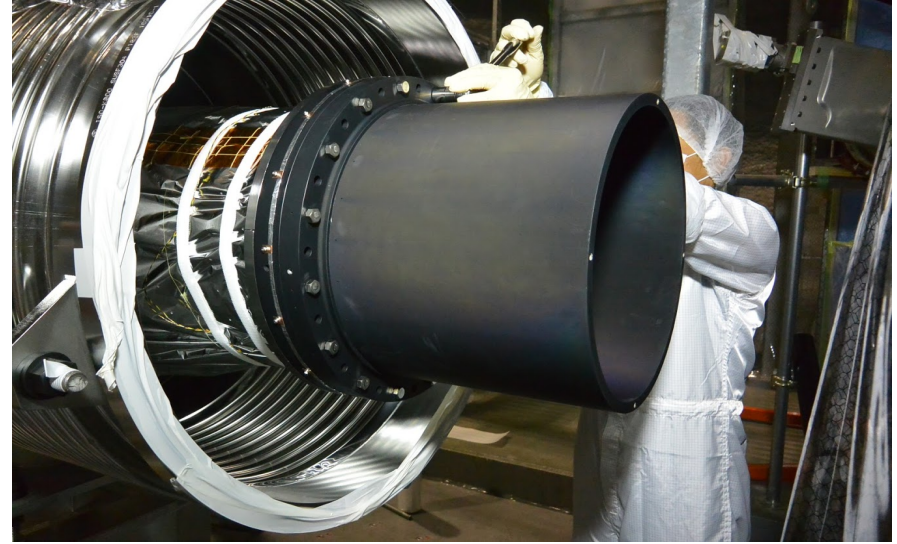
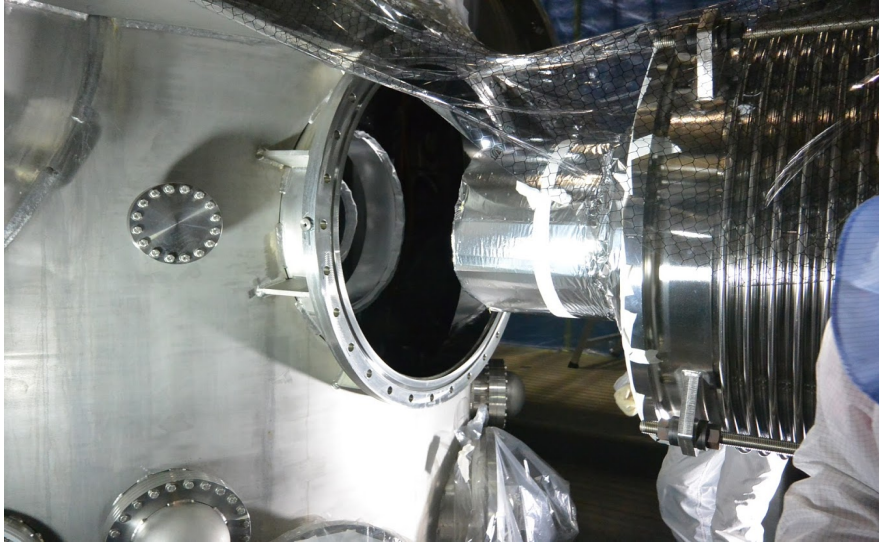
< Done >

- Installation of duct-shields and 80K cooler units
- Assembling 4K cooler units to each cryostat
- Connecting of $\phi 900$ cross-duct

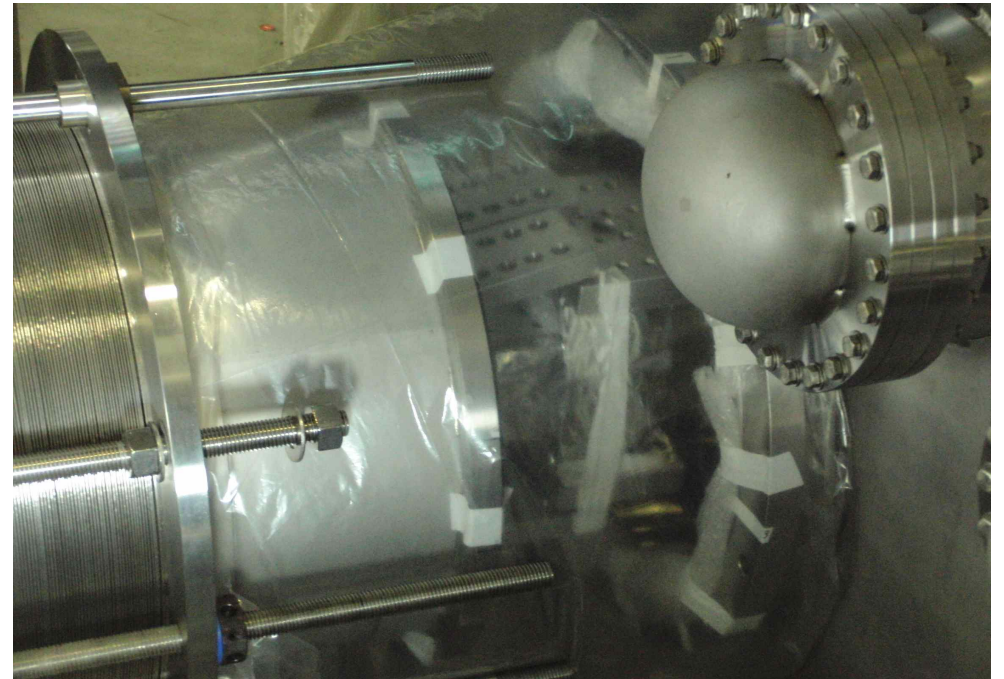
< In progress >

- Leak hunting, vacuum pumping
- Piping for cooling water.
- Piping for helium gas
- Cabling and DAQ for temperature monitor and compressors.

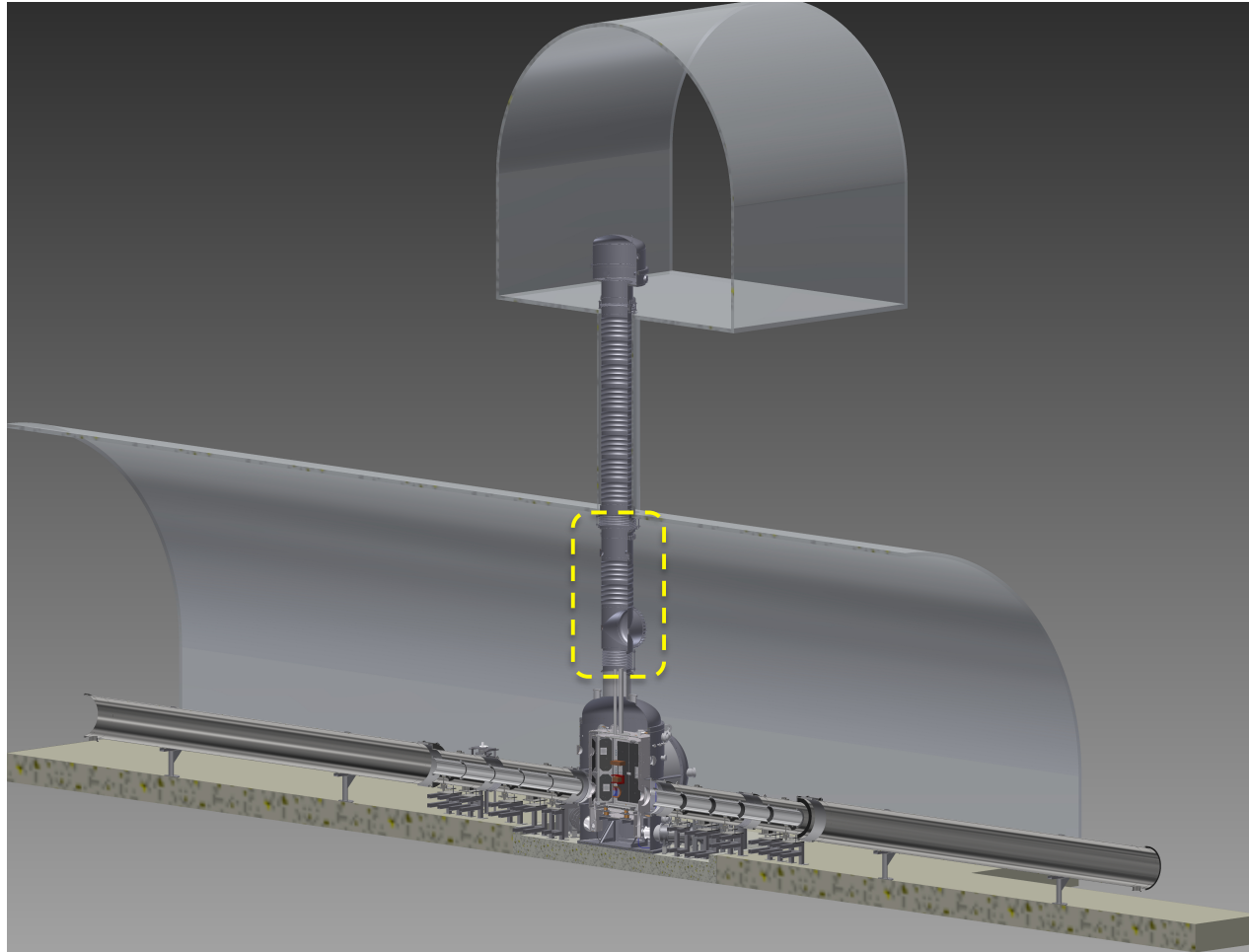
Installation of duct-shields and 80K cooler units



Assembling 4K cooler units to each cryostat



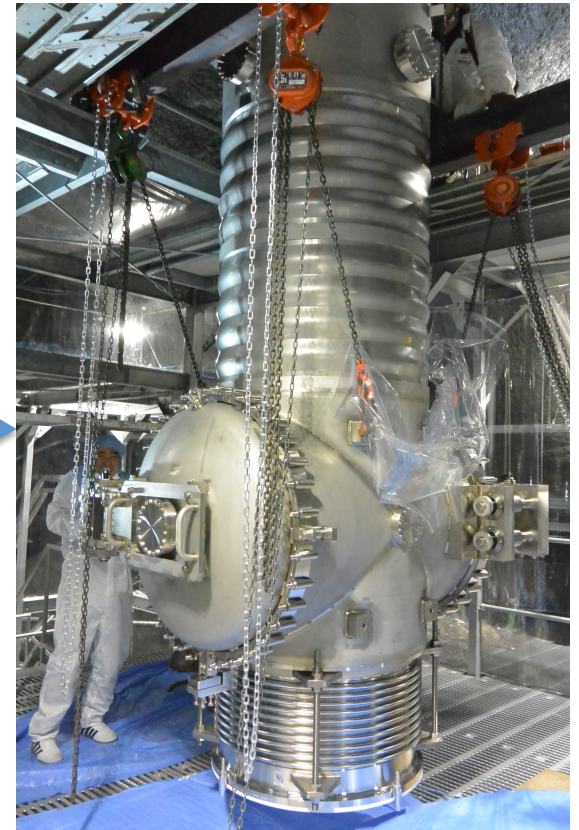
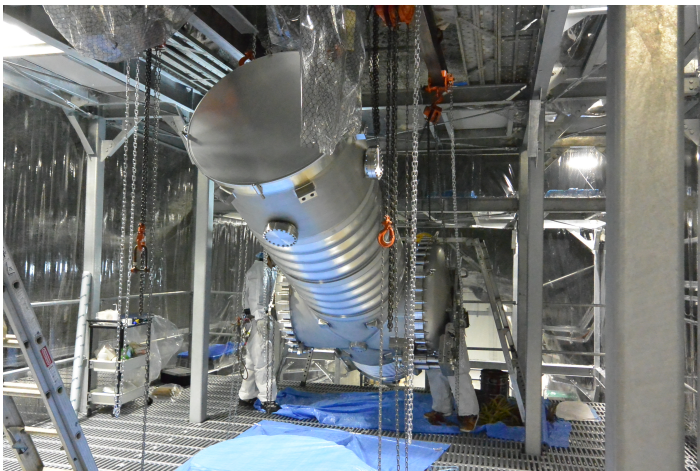
Connection of $\phi 900$ cross-duct at X and Y ends



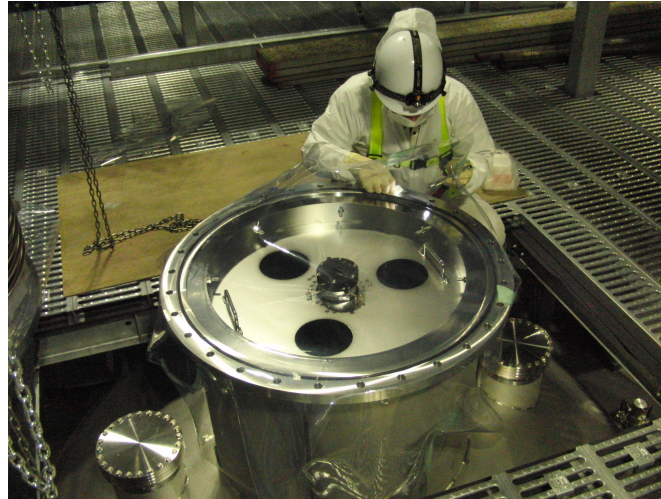
2016.07.08 – 2016.07.14

Kimura, Saito, Suzuki, Tomaru,
HOKUTO、MESCO、MIRAPRO

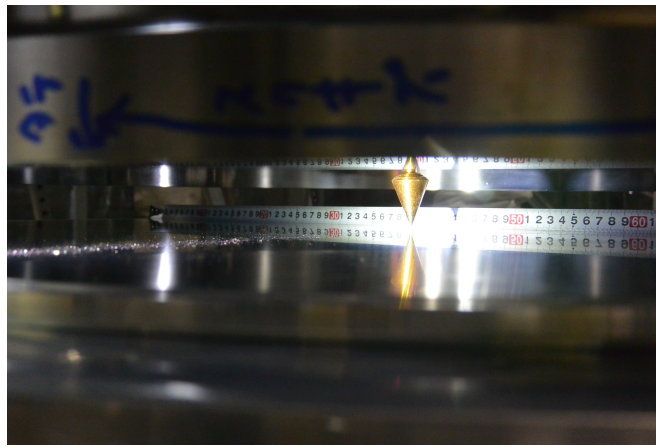
Lift and stand up the cross-tub at Y-end



Inspection of sealing surfaces, adjusting a position



Fine adjusting of vertical tube position by plumb-bob



Hang a plumb-bob from the top of the vertical tube.
Adjust a vertical tube within 2mm from the centre of the cryostat.

Connecting flanges

In progress



Leak hunting
volume $\sim 70 \text{ m}^3$
flanges ~ 100



Piping for cooling water

Several leaks were found in $10^{-7} \sim 10^{-9} \text{ Pa} \cdot \text{m}^3/\text{sec}$.
Leak hunting is going in today.