

My work in 2016

11-1

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Purpose

- There are some magnets on KAGRA mirrors, so the environmental magnetic field will cause noise to the mirrors.
- We will measure the magnetic field in X-front cryostat from 12/5 to 12/9.
- Some conditions are different between this time and b-KAGRA, so I should calculate the magnetic field during b-KAGRA from the result of this experiment (the detail of the calculation is still being considered).
- We will calculate the noise by environmental magnetic field.

Measurement in Kashiwa

Flux meter (Mag13-MCL100)

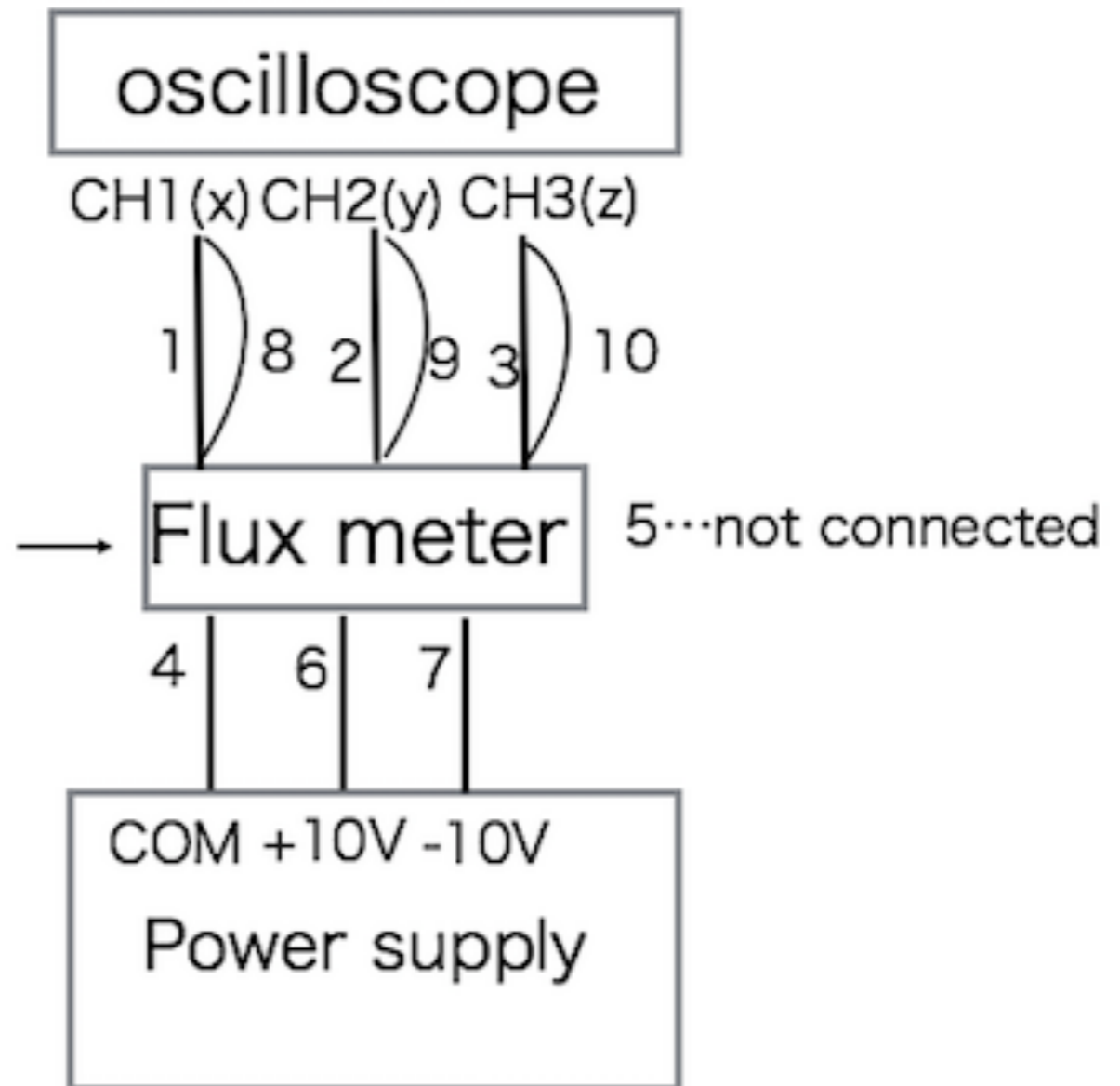
- Hayama-san gave me two flux meters (serial number 141,142)



Connection

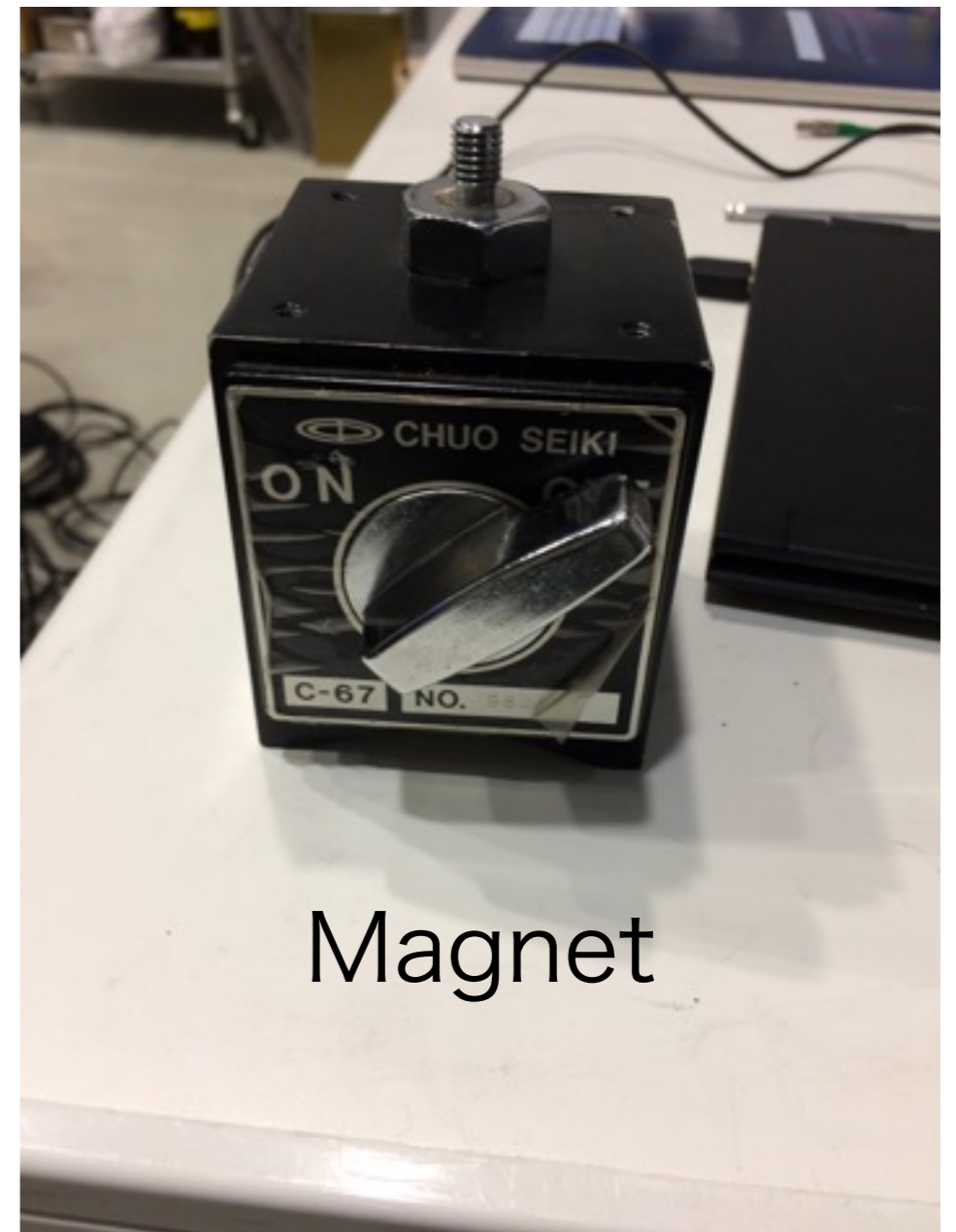
- 1 X output
- 2 Y output
- 3 Z output
- 4 Power ground
- 5 test
- 6 Power +12V supply
- 7 Power -12V supply
- 8 X ground
- 9 Y ground
- 10 Z ground

magnet



Measurement in Kashiwa

- When I used 141, the signal of all components (XYZ) of magnetic field changed depending on the position of the magnet.
- When I used 142, the signal didn't change.
- I'm asking Araya-san to ask to the company.



Magnet

My future tasks until 12/5

- I have many things to do until 12/5.
- I wrote my future tasks on the next page.

My future tasks until 12/5

• About flux meter

• Needed items

- know the principle of measurement

- purchase 20m cables

- make the jig for the calibration

- make jig for the flux meter

- calibrate it using Helmholtz coil

- make the transformation box

• About the space for the flux meter

- reserve the space for the flux meter

- make the pre-amplifier

- know the magnetic field from Luca's accelerometer (it has a coil)

- write the list of tools and machines we use in Kamioka and send them

• About measurement in Kamioka

- reserve ADC ports

- make the real time model

Future work

13日(日)	14日(月)	15日(火)	16日(水)	17日(木)	18日(金)	19日(土)
		reserve the space for the flux meter				
		know the magnetic field from Luca's accelerometer				
		ask someone to make the jig for the flux meter			write the list of the needed tools in Kamioka	
		to know the principle of measurement of the flux meter		make the pre-amplifier		
		reserve ADC port		make the jig for Calibrati...		
		purchase 20m cable	make the box			
20日(日)	21日(月)	22日(火)	23日(水)	24日(木)	25日(金)	26日(土)
	Calibration of flux meter (depends on KEK schedu...	send the tools to Kamioka	勤労感謝の日 go to Kamioka	make real time model		
27日(日)	28日(月)	29日(火)	30日(水)	1日(木)	2日(金)	3日(土)
	spare week (maybe make the real time model)					