



Module Test

——Force Transmission

——Temperature

——Single-end suspension

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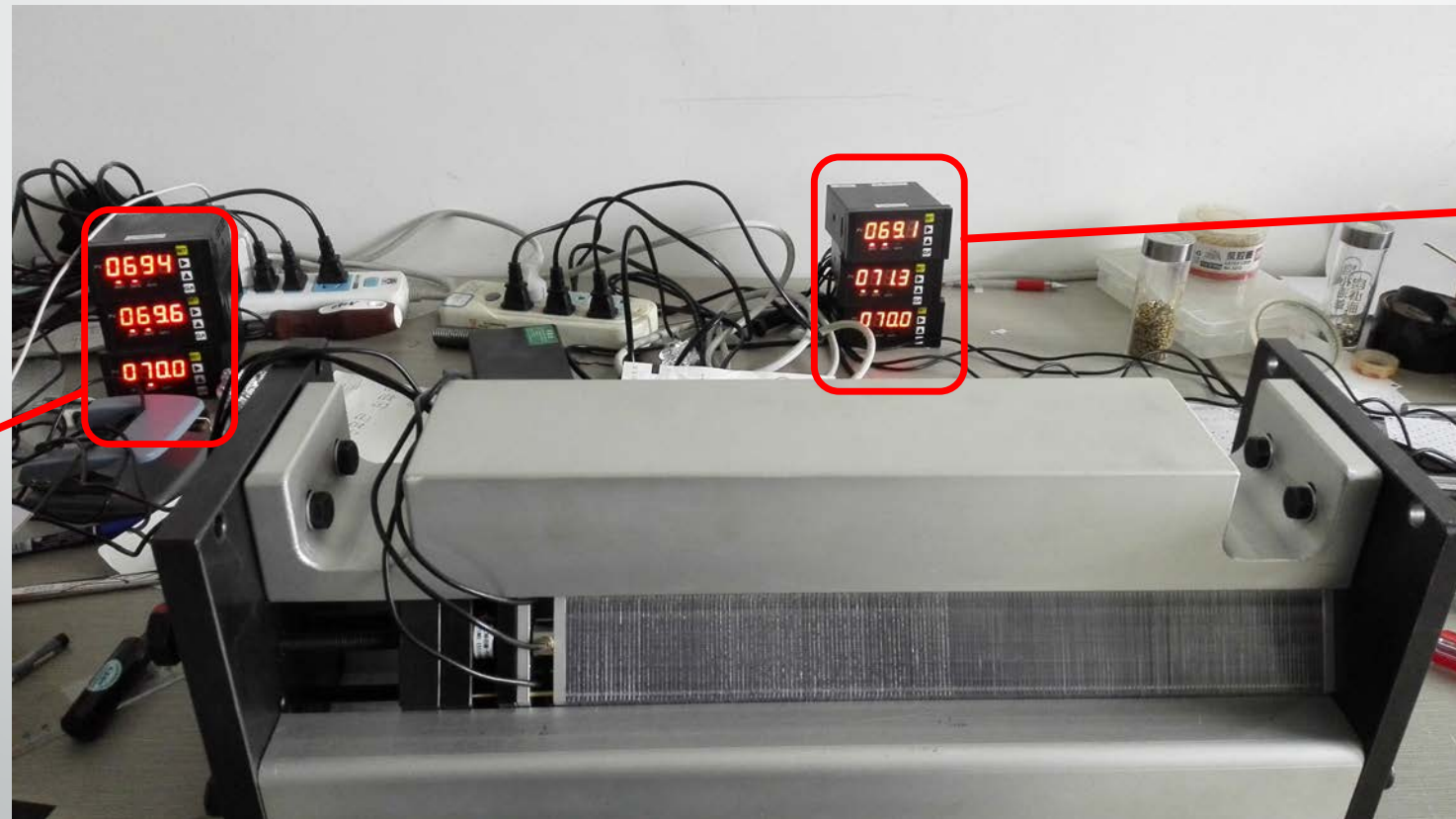
Apr. 07th, 2016

Test of force transmission

- On last week meeting, people had questions on the method we used to transfer force to rods
 - [Our method] We tightened the nuts and stopped when the readings of 3 sensors started to change
 - [Comments] People told us to stop to tighten the nut when just 1 sensor started to change
- We re-done the force transmission according to your comments this week

Test of force transmission

- The compression force is set to ~200 KG (The compression process is omitted)
- Tighten each nut and stop immediately when the reading of any sensor starts to change



Readings of
outer sensors

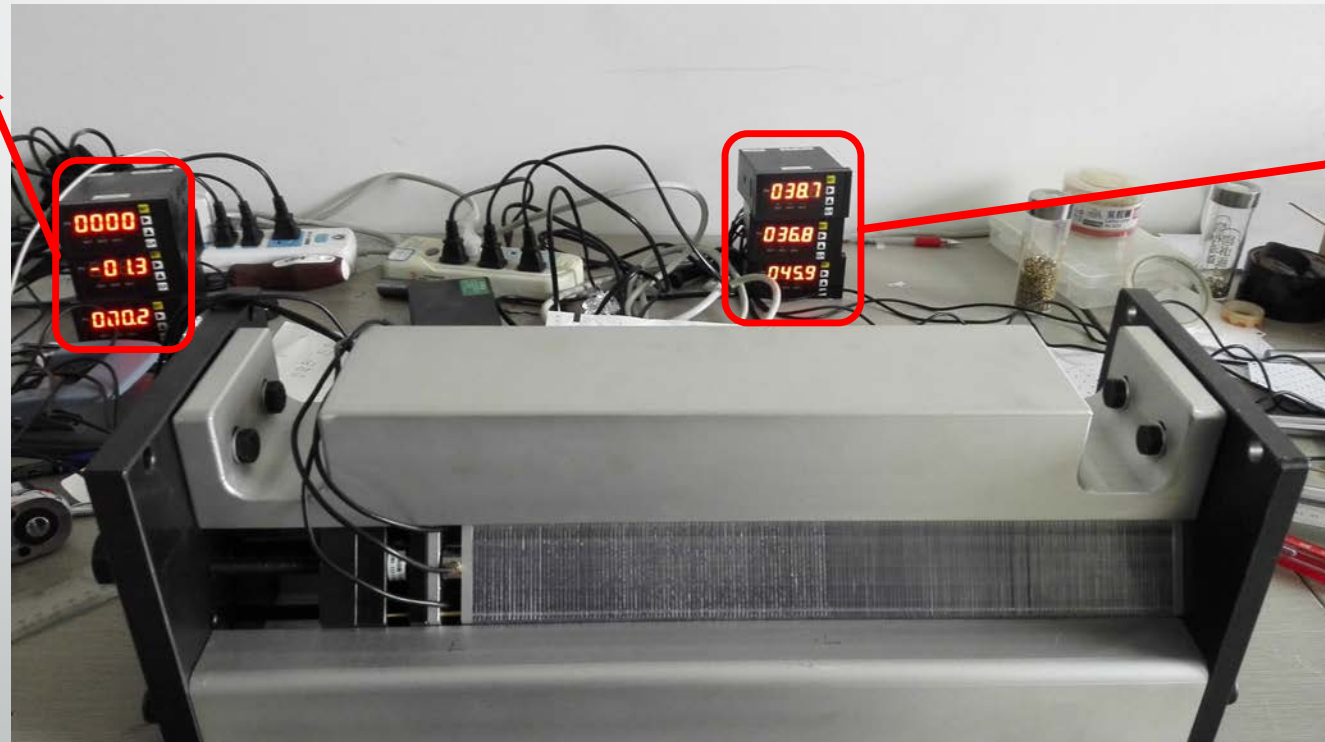
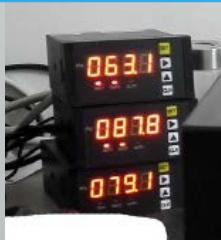
Readings of
inner sensors

Test of force transmission

- Release the compression force to zero
- The readings of sensors are far lower than 200 KG force, the pressure needs to be adjusted
- We tend to use the original method and only need to lower the pre-setting pressure < 200 KG

Readings of
outer sensors

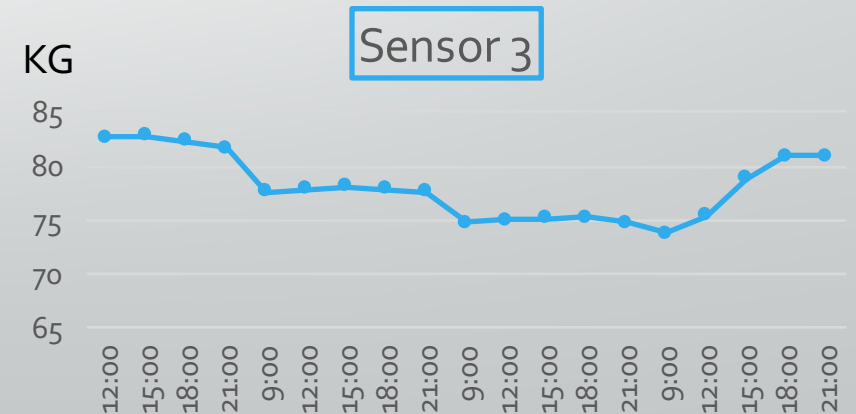
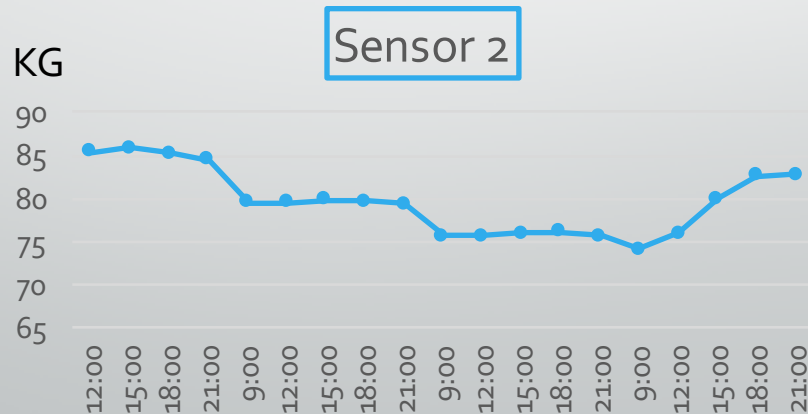
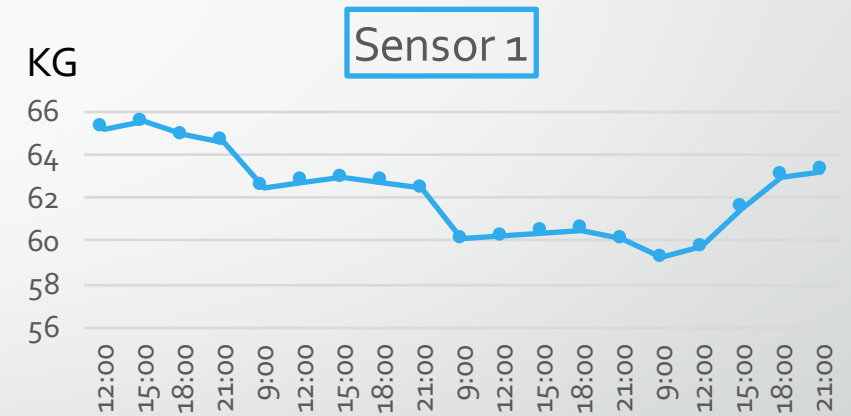
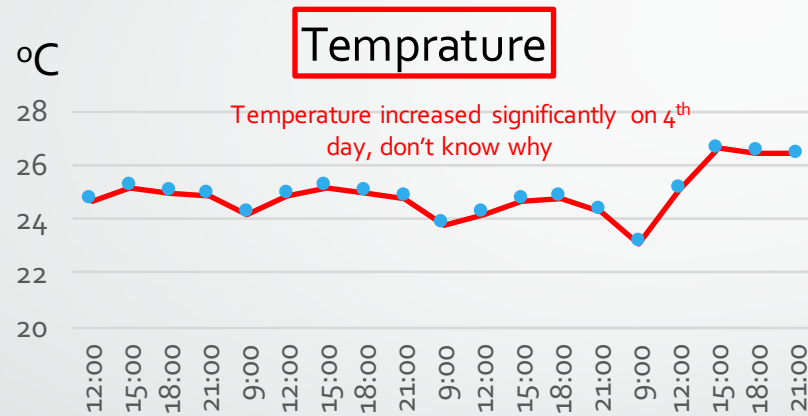
The force transmission
result with the original
method



Readings of
inner sensors

Test of force varying with temperature

- We monitoring the forces in brass rods varying with temperature for four days
- The force decreased steadily day by day
- The forces are affected by temperature



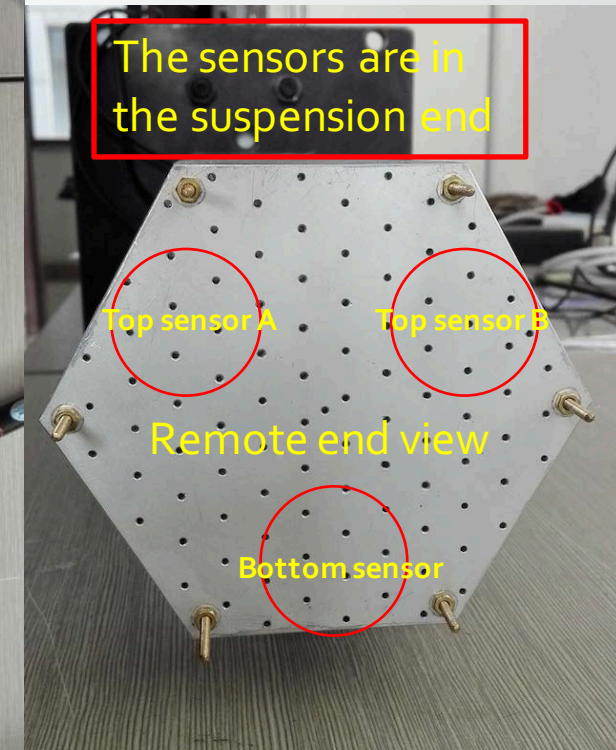
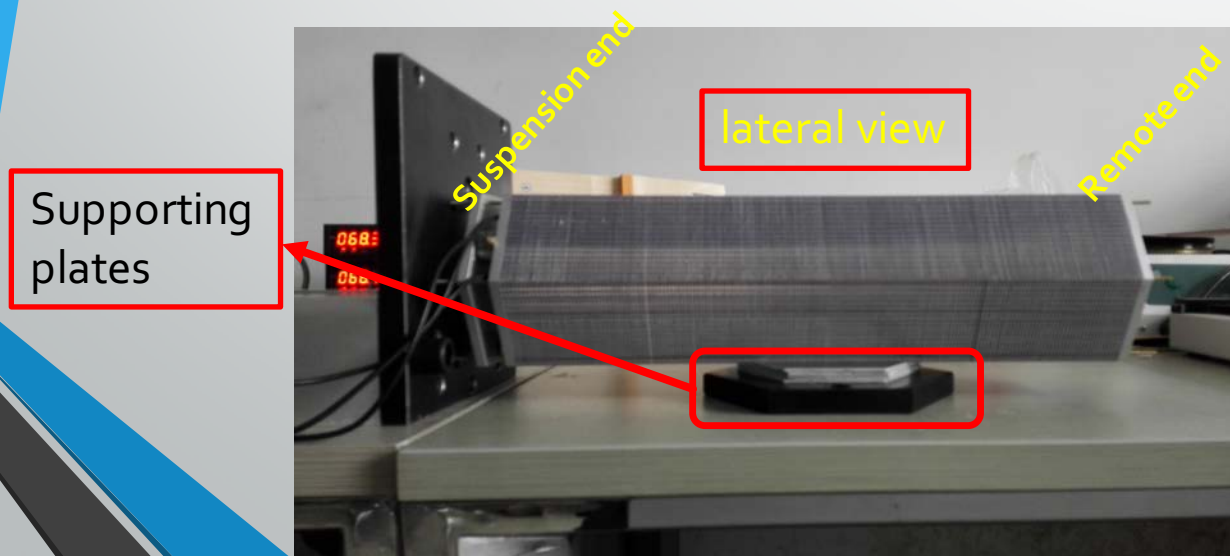
Test of Single-end suspension

- We test the single-end suspension this week with the exist module
- Before test, we put the module vertically, and adjust the force in each rod until the differences between any 2 sensors are less than 1 KG



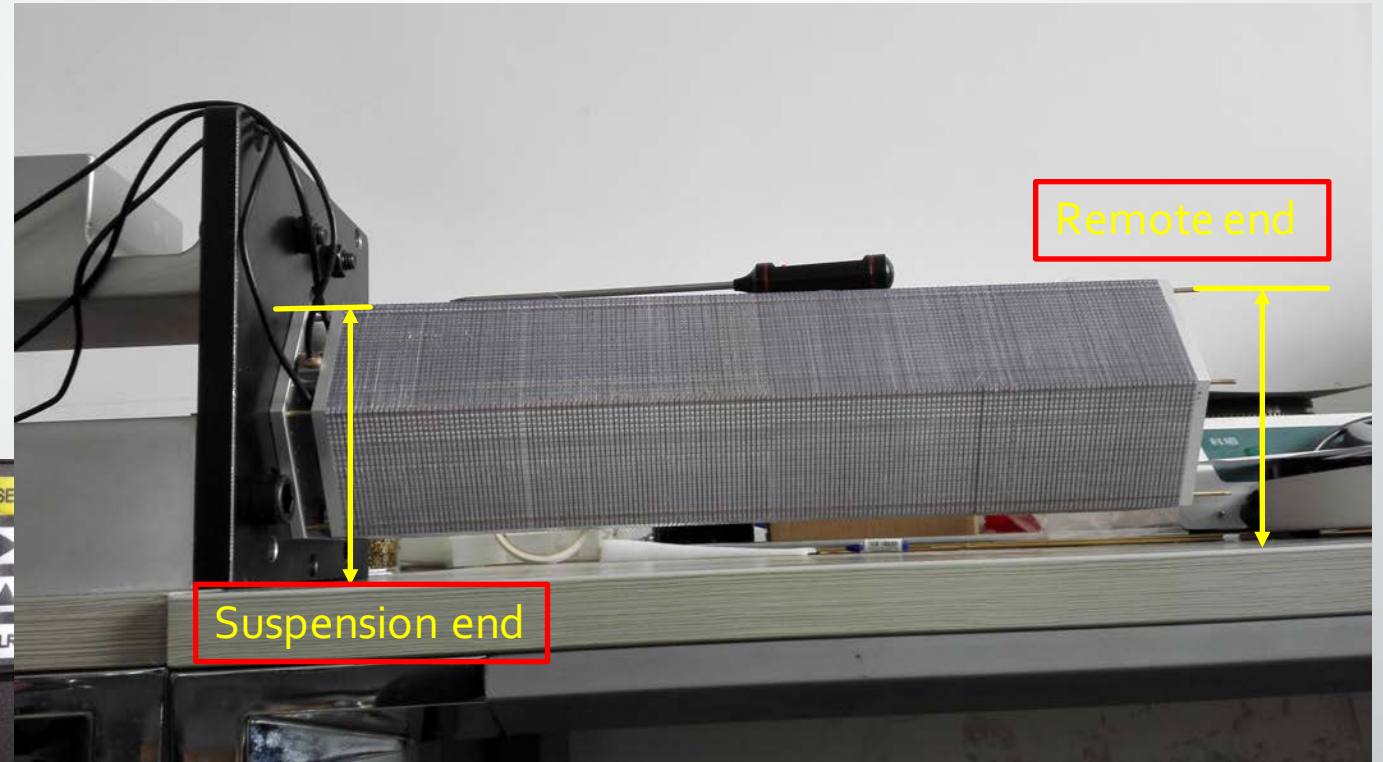
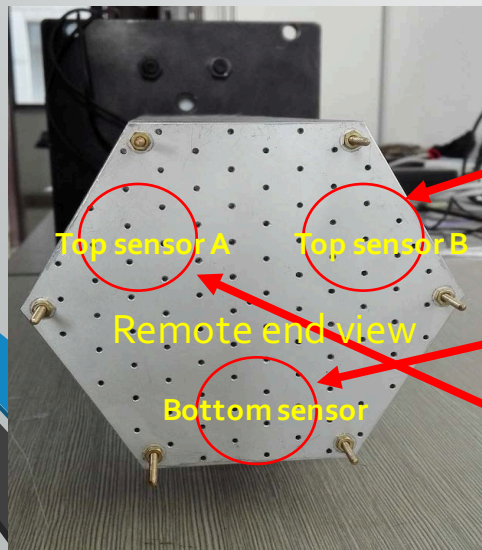
Test of Single-end suspension

- Put the module horizontally and assemble it with one end to the assembly tools.



Test of Single-end suspension

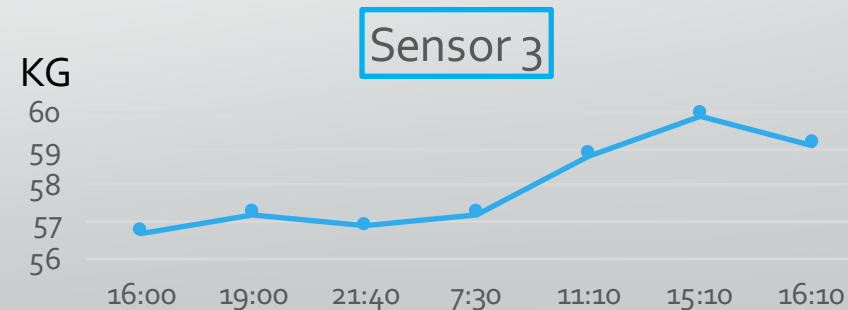
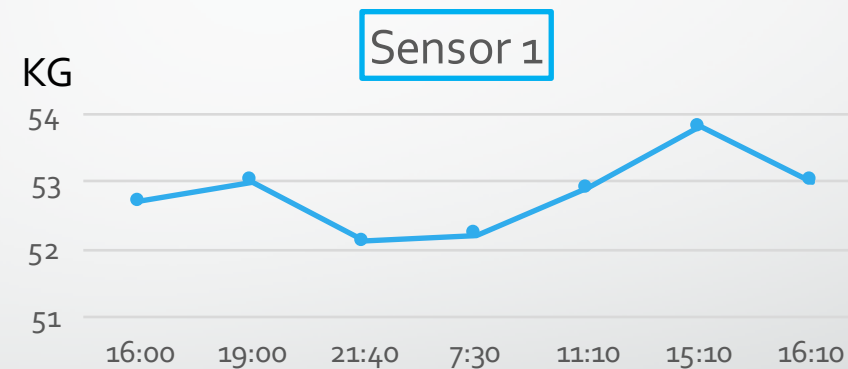
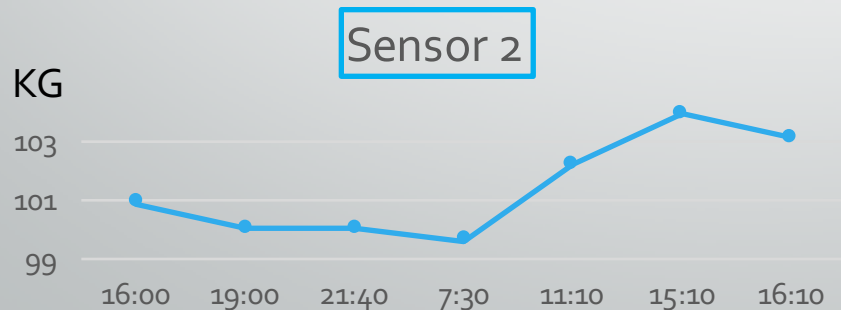
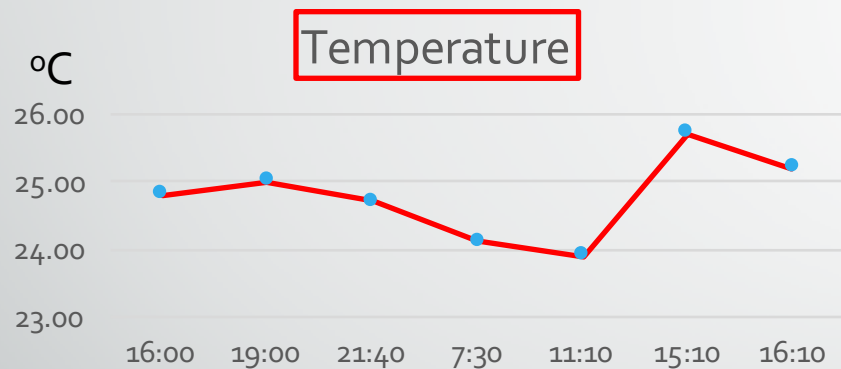
- Remove the supporting plates and hang the module with single-end
- The readings of sensors changed



The subsidence of remote end in last 24 hours is ~0.1 to 0.3 mm (this value need to be determined by More accurate measurement method)

Test of Single-end suspension

- 24 hours monitoring since last afternoon



The changes in the readings of 3 sensors begin to have the same trend after several hours hanging

Next to do

- The brass rods are good for hanging test till now
- We will redo the hanging test by rotating module along the axis of symmetry of it next week
- Fiber shaping and inserting
- Test the module with cosmic ray
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Thanks