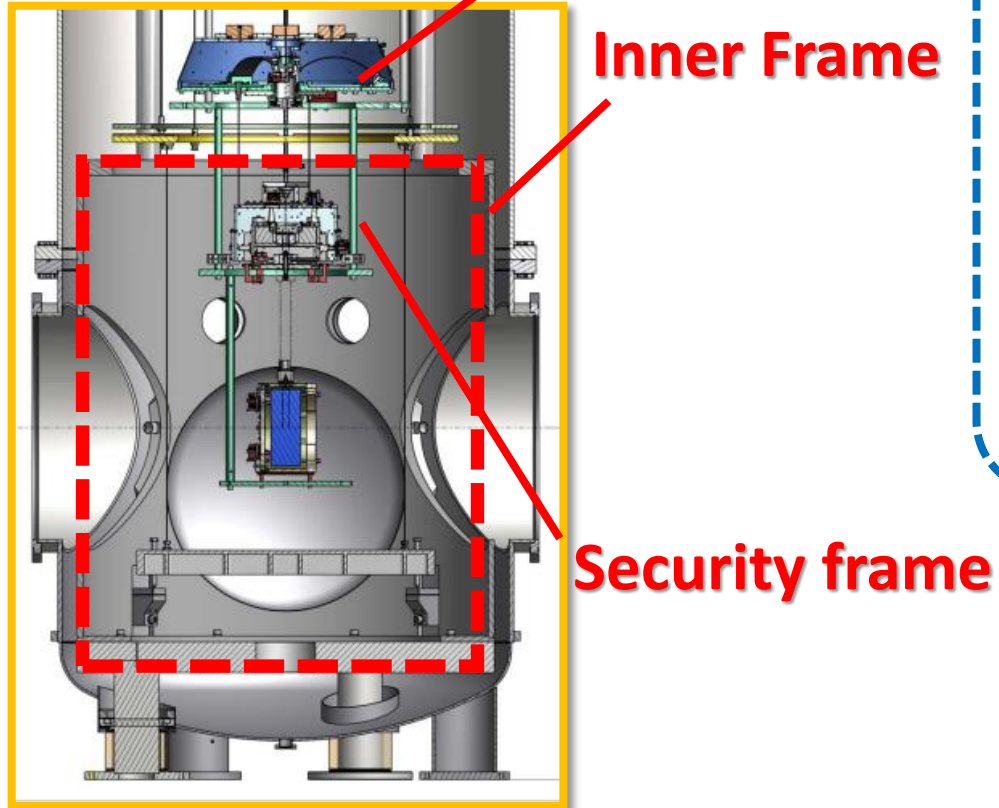


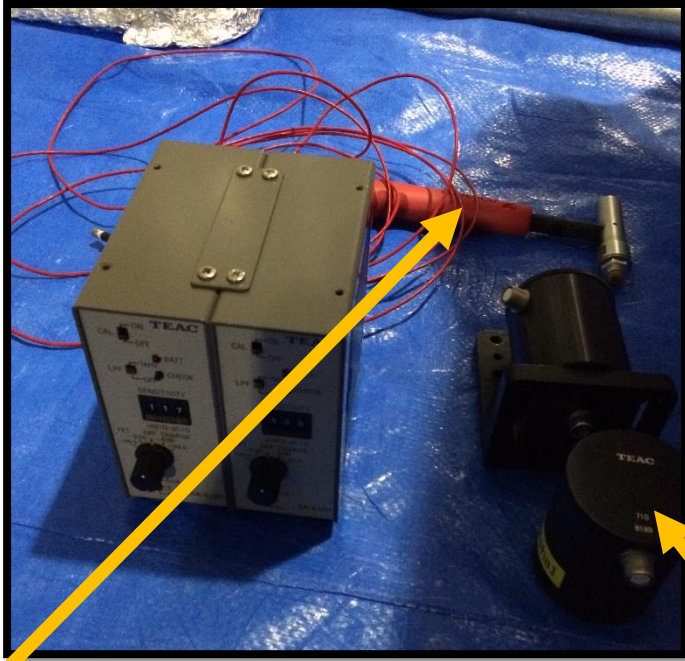
# **Hammering Test for PR Inner frame conducted on 15th December, 2015**

# Set up



- \* Hammering test for the PR SAS Inner frame is conducted. (Inner frame+ Suspension + Security frame)
- \* In this investigation, type Bpp suspension (~ 280 kg), its security frame and top plate sit on the inner frame.

## ❖ How to measure / Tools



Excitation source : Input

Accelerometer : Output

Amplitude :  $I_m$  [ Output / Input ]

## Spectra analyzer

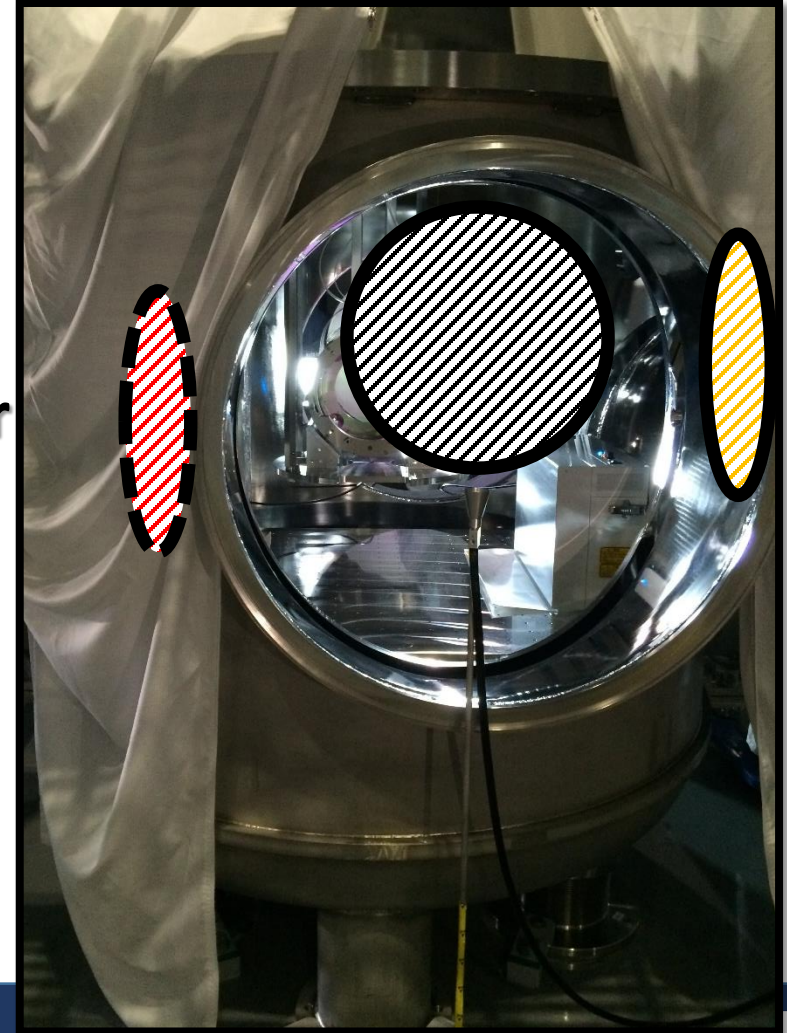
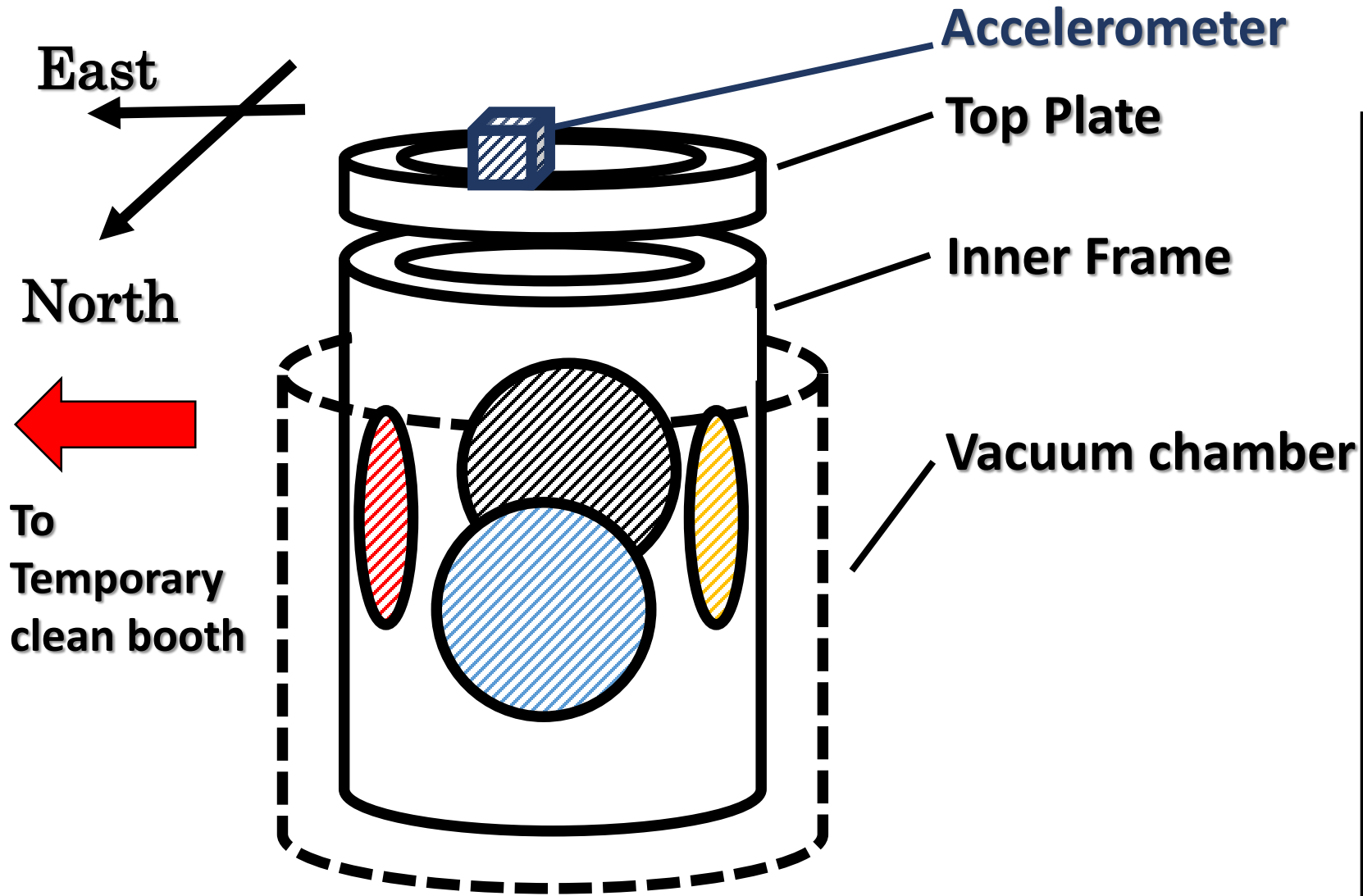


Frequency

An vibration is introduced by hitting the inner frame using the excitation source, then resonance frequency and its amplitude are measured.

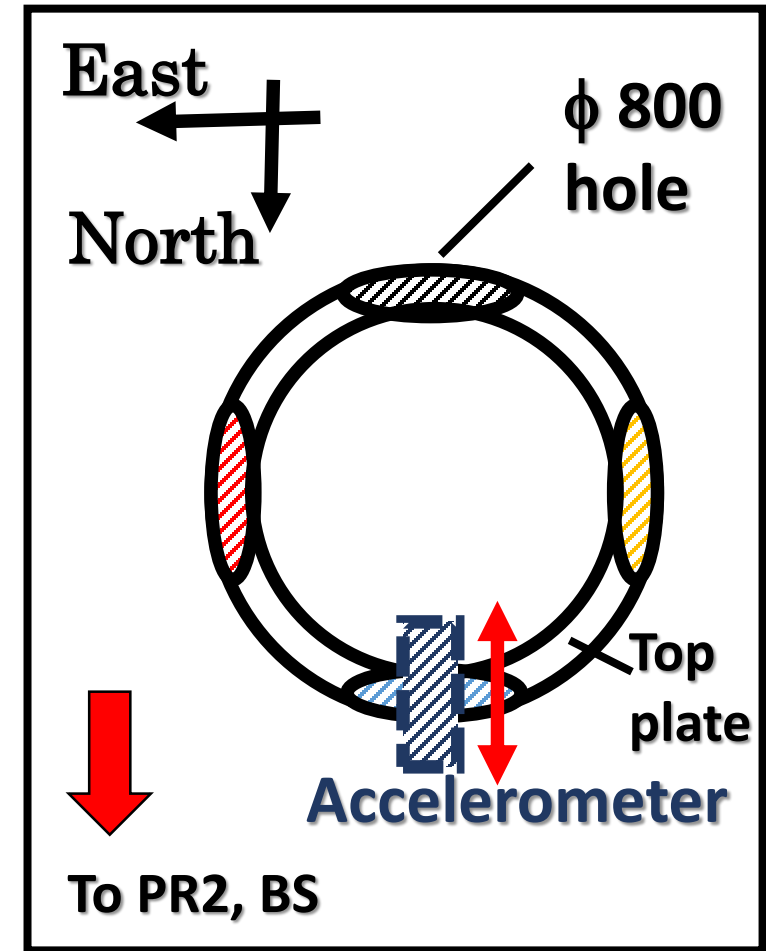
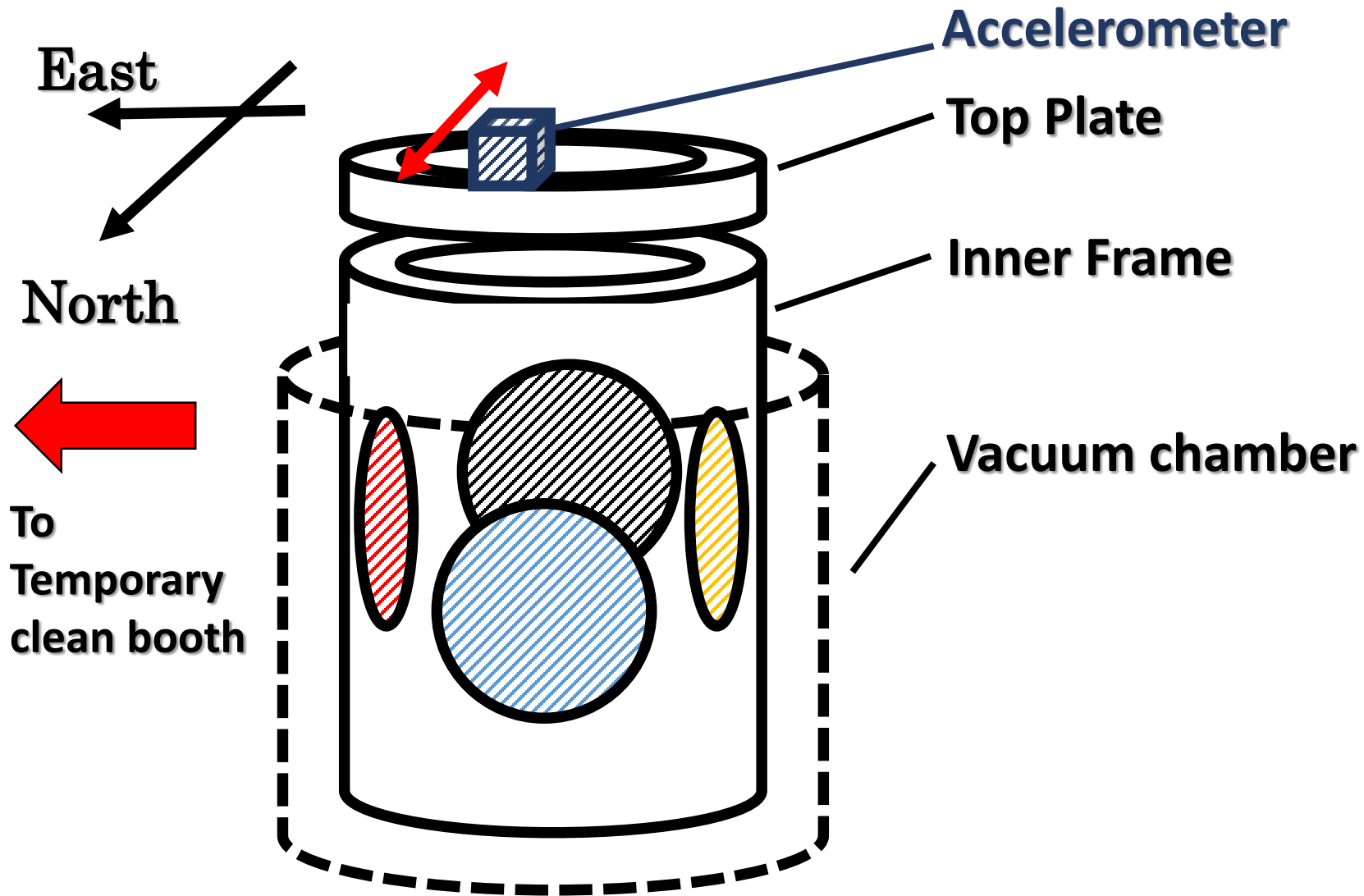
memo on 15th December, 2015

## ❖ How to measure / Setting

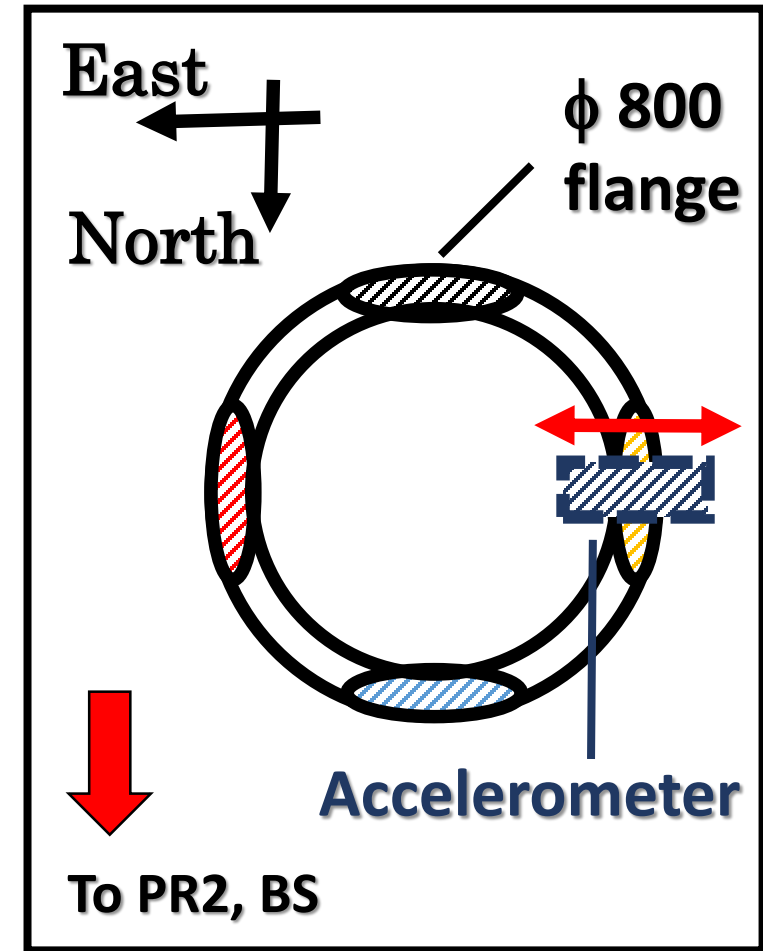
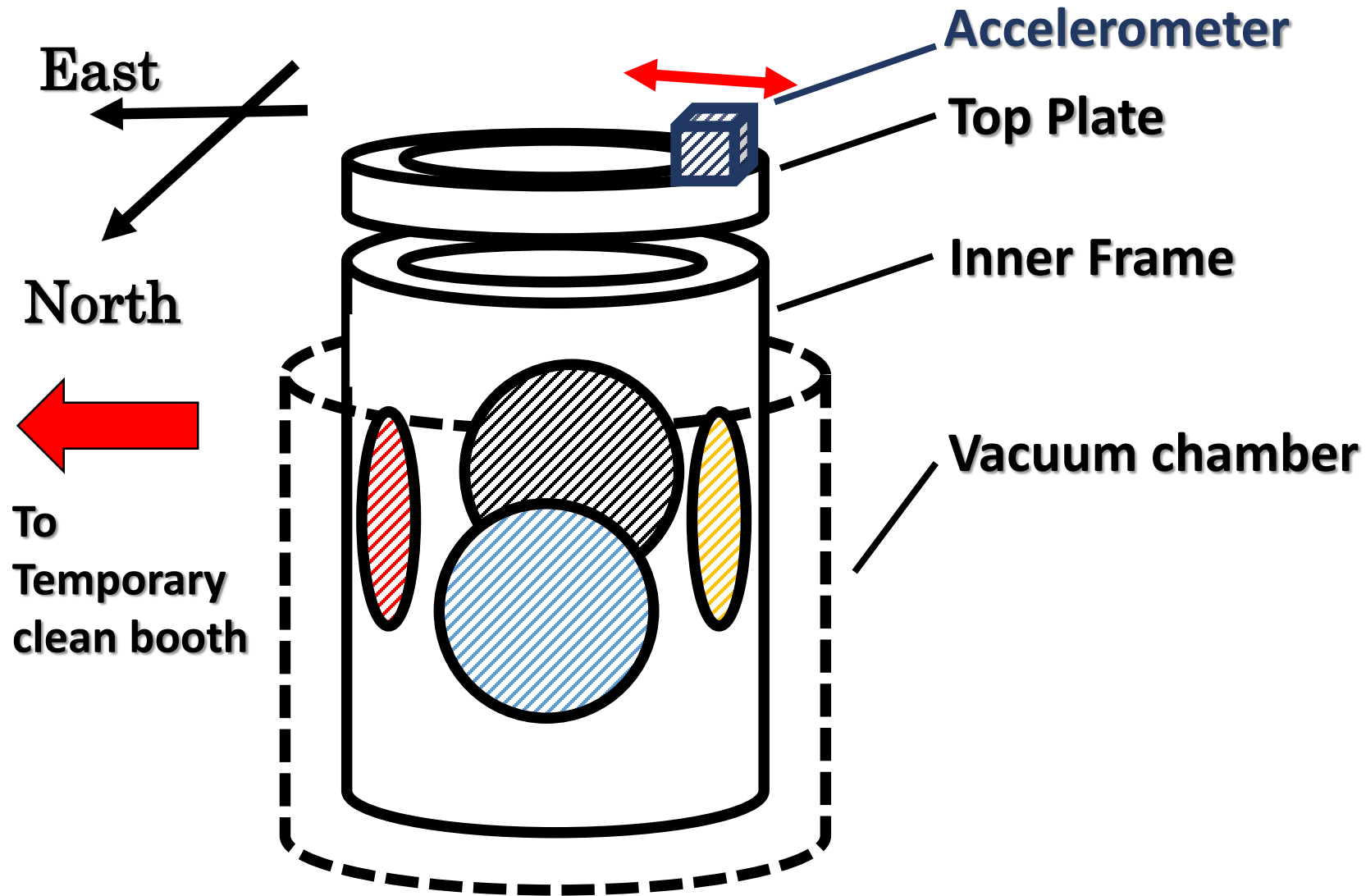




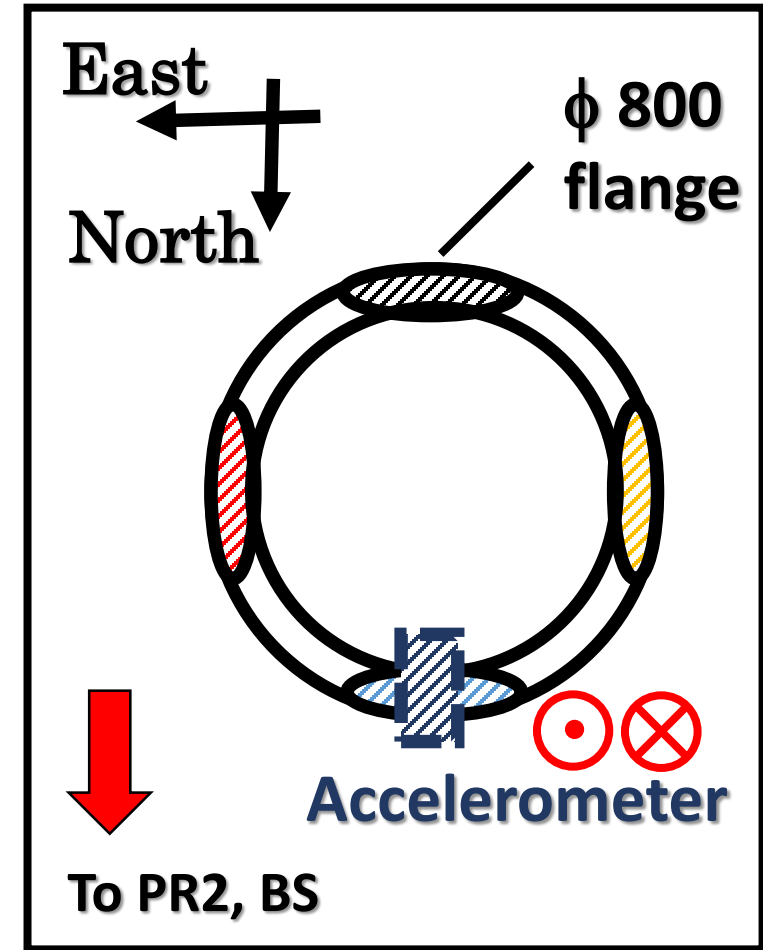
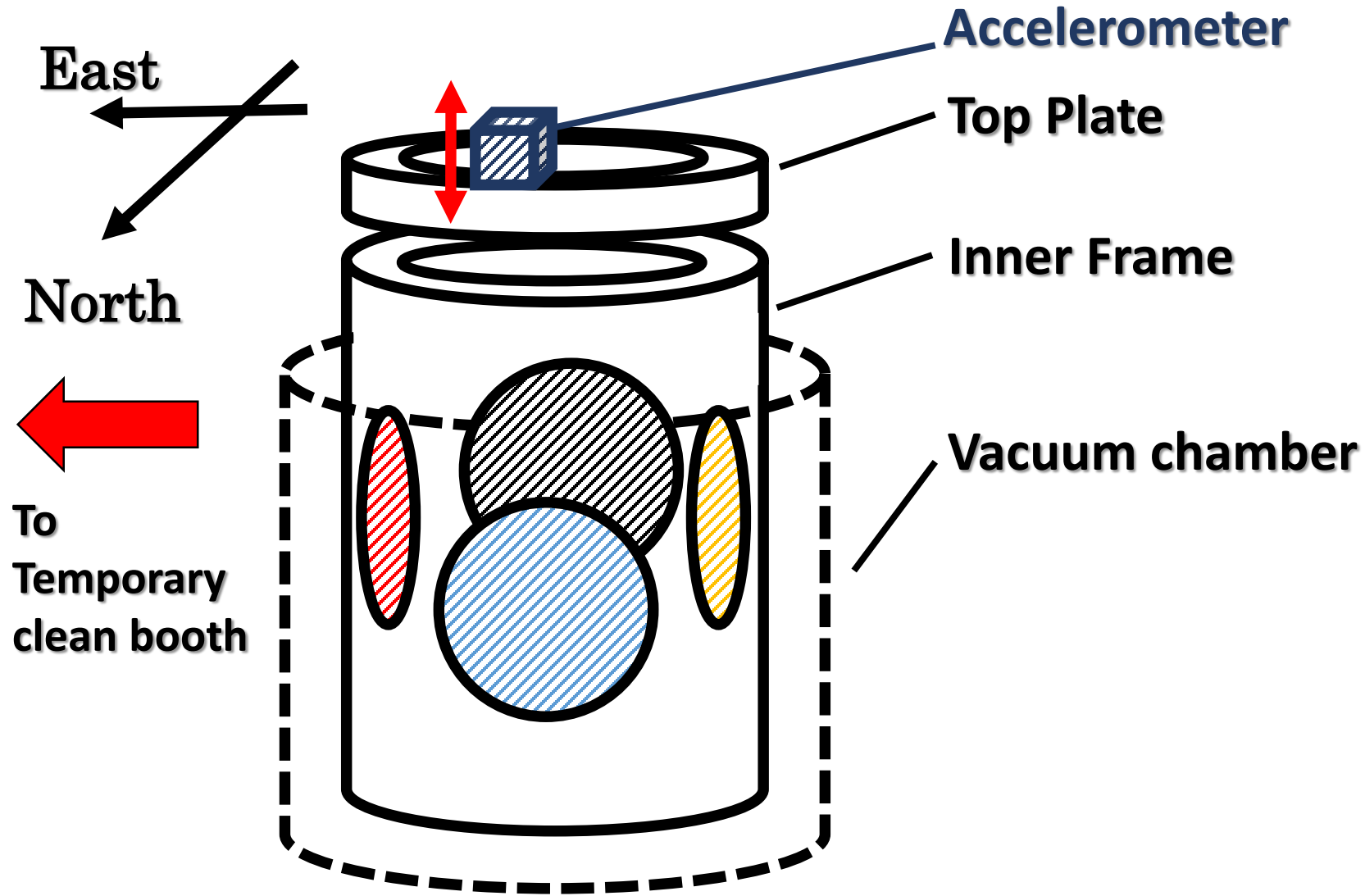
## ❖ How to measure / Setting ①



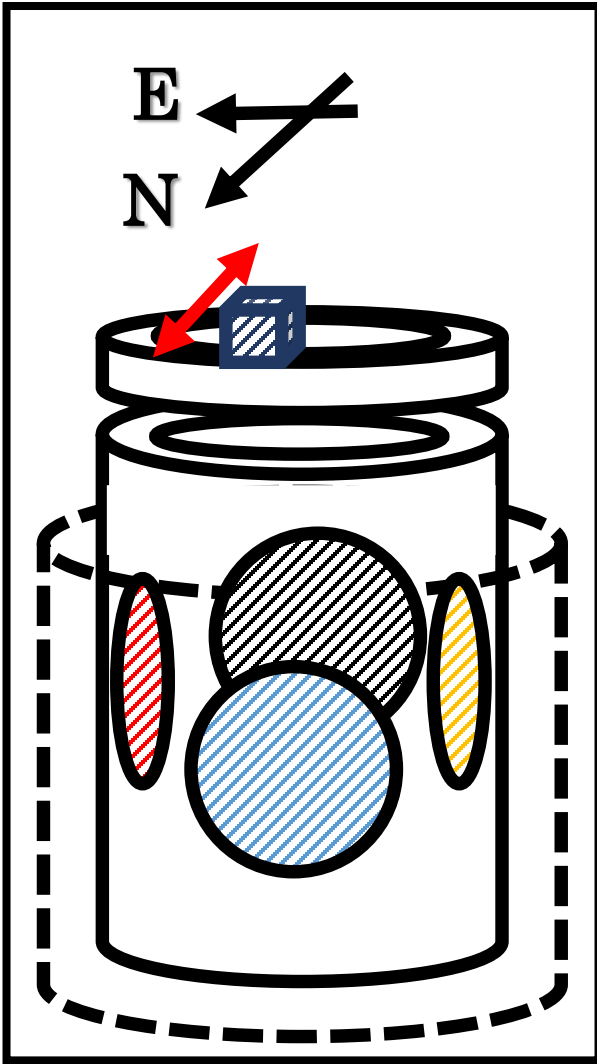
## ❖ How to measure / Setting ②



## ❖ How to measure / Setting ③



# ❖ How to measure / measurement



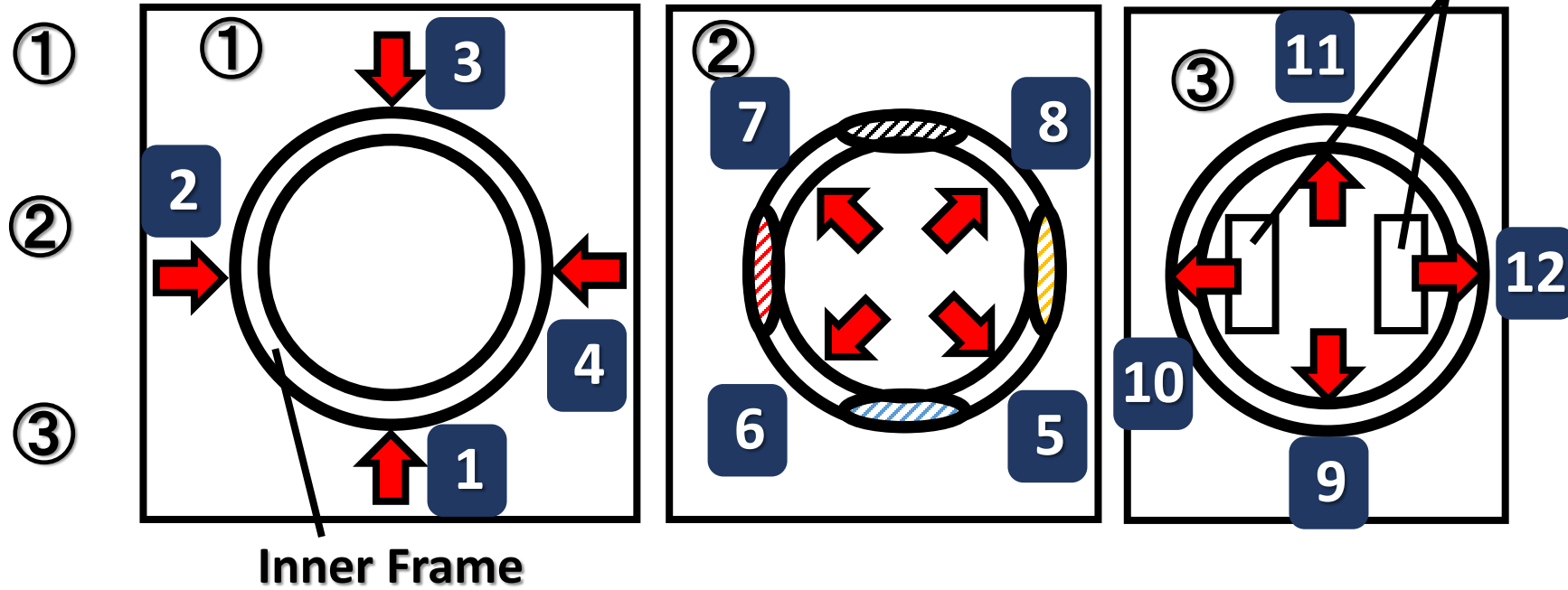
East

North

➡ :

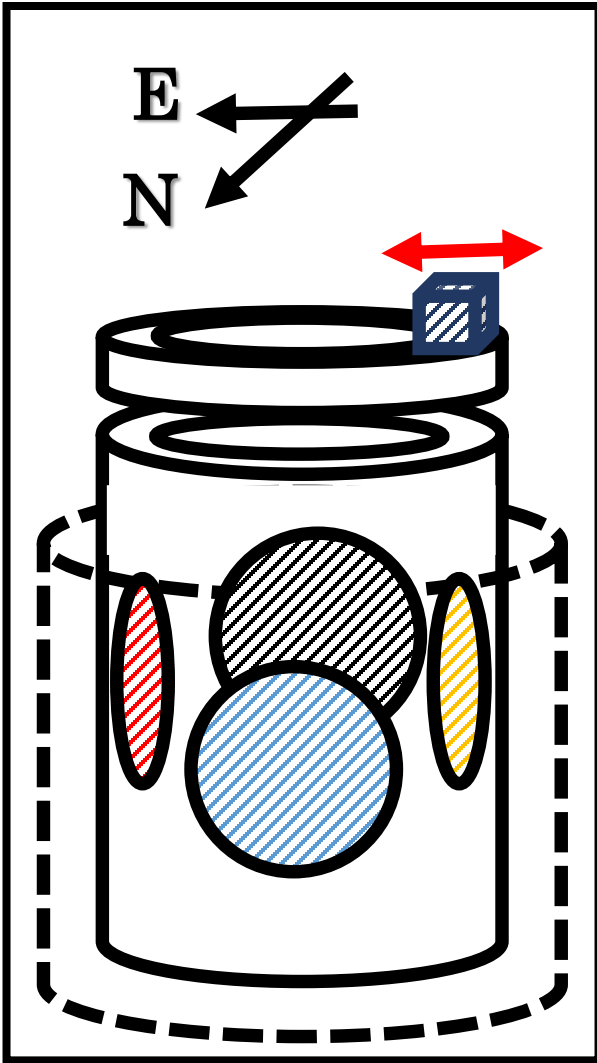
振動を加えた方向

以下の番号はExcel sheetに対応。





# ❖ How to measure / measurement



East

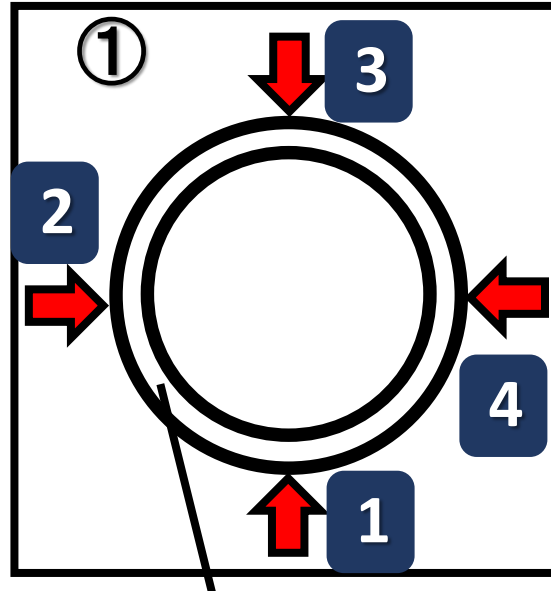
North

➡ :

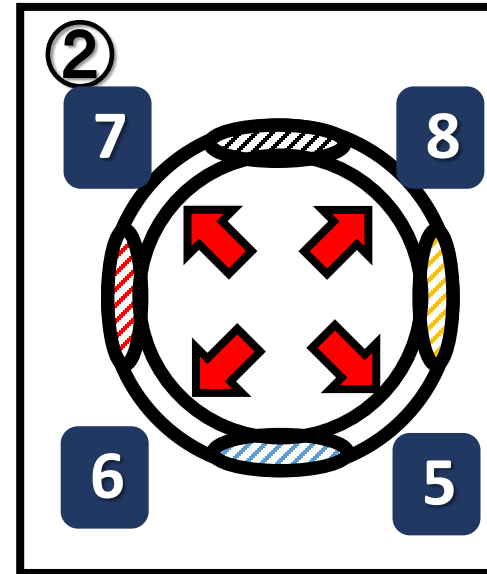
振動を加えた方向

以下の番号はExcel sheetに対応。

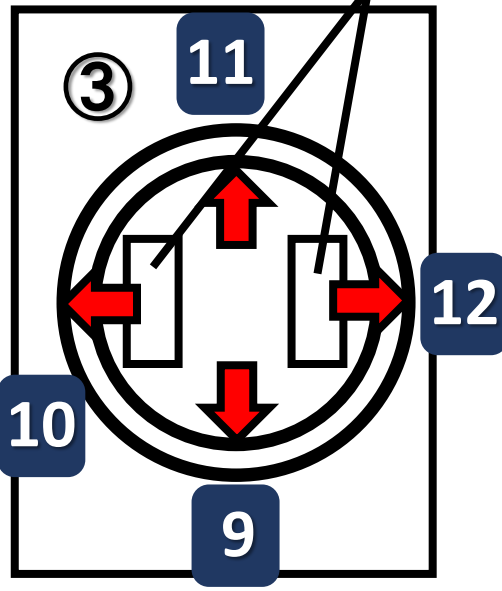
①



②

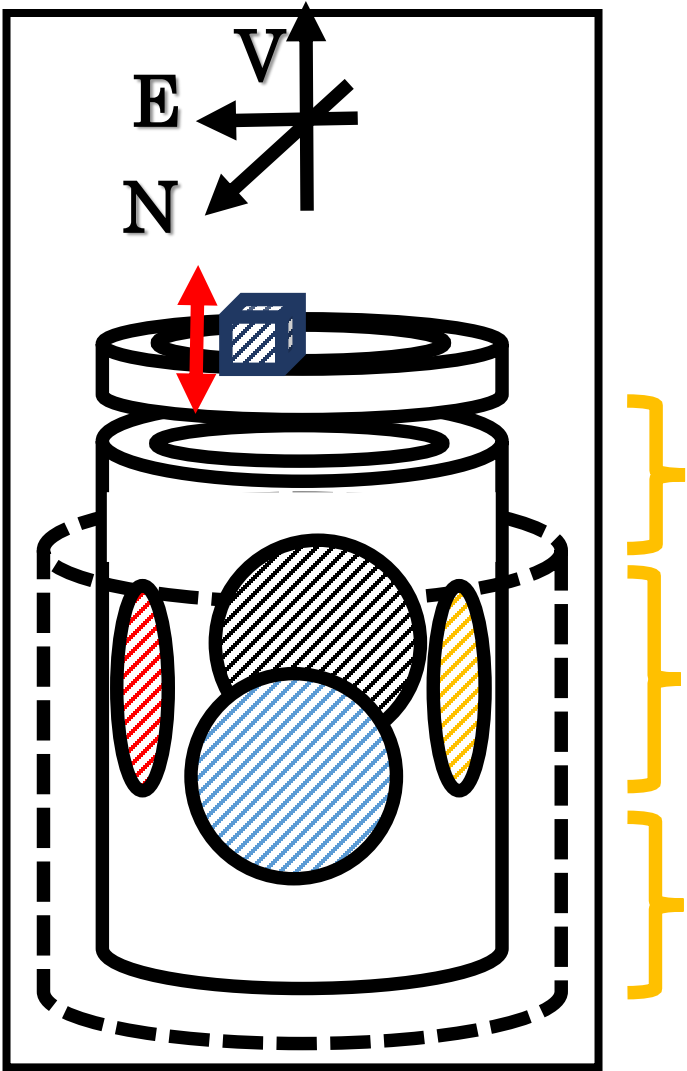


③



Inner Frame

# ❖ How to measure / measurement

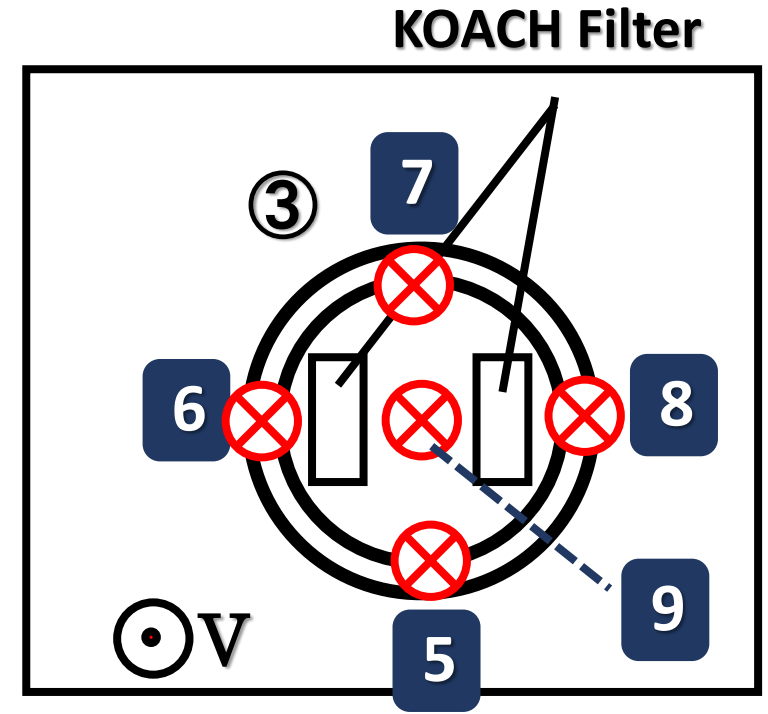
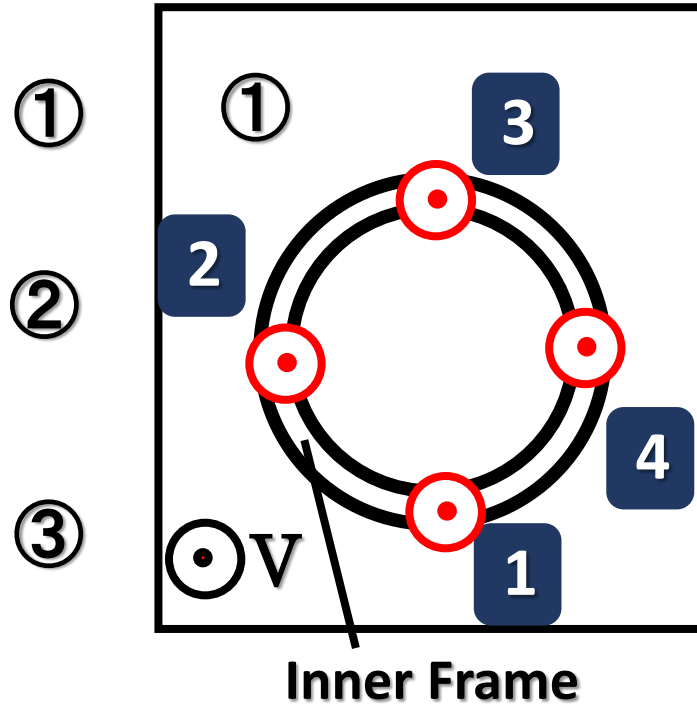


Vertical

:

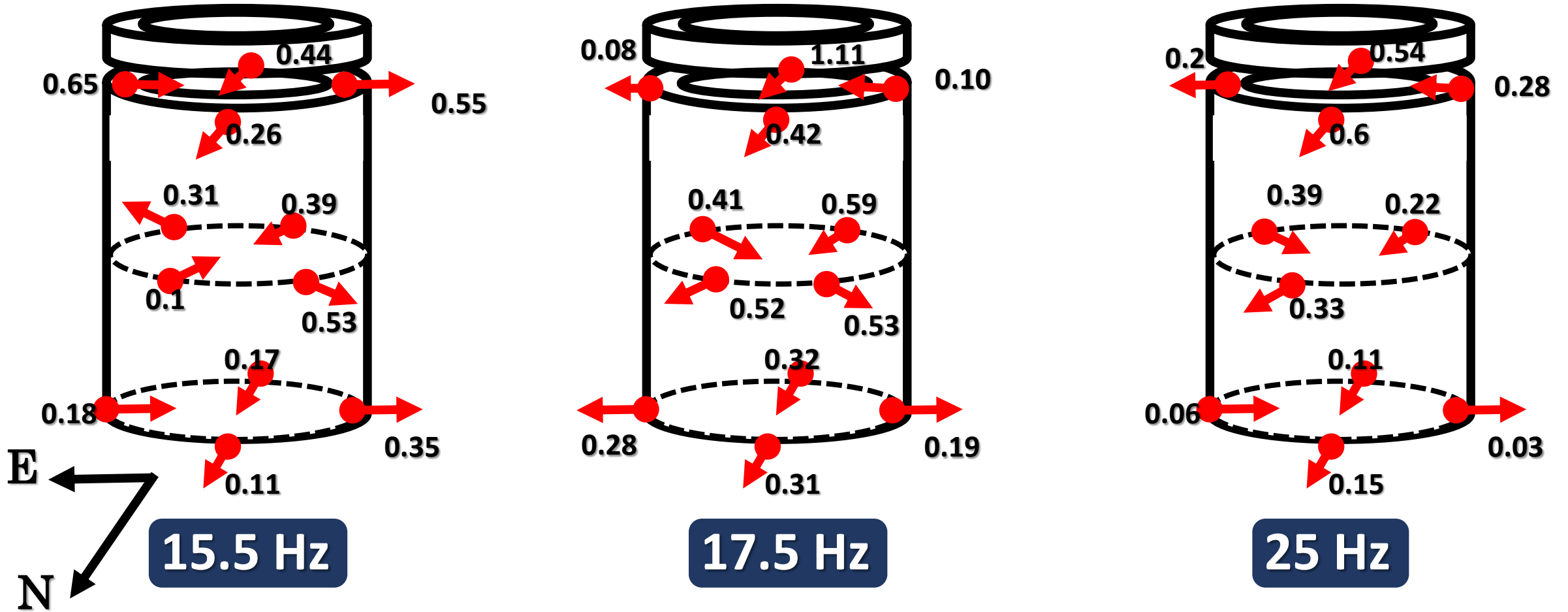
振動を加えた方向

以下の番号はExcel sheetに対応。

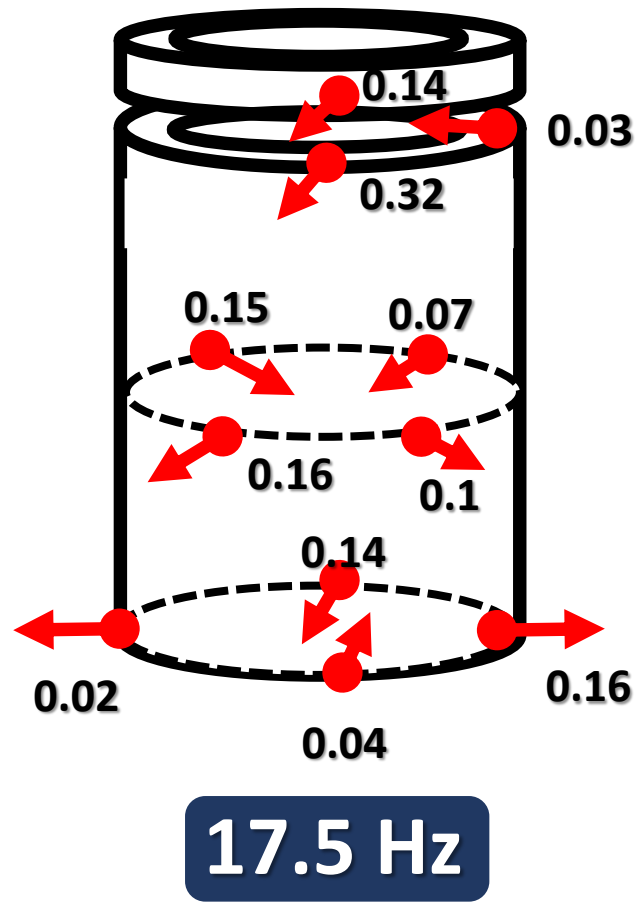
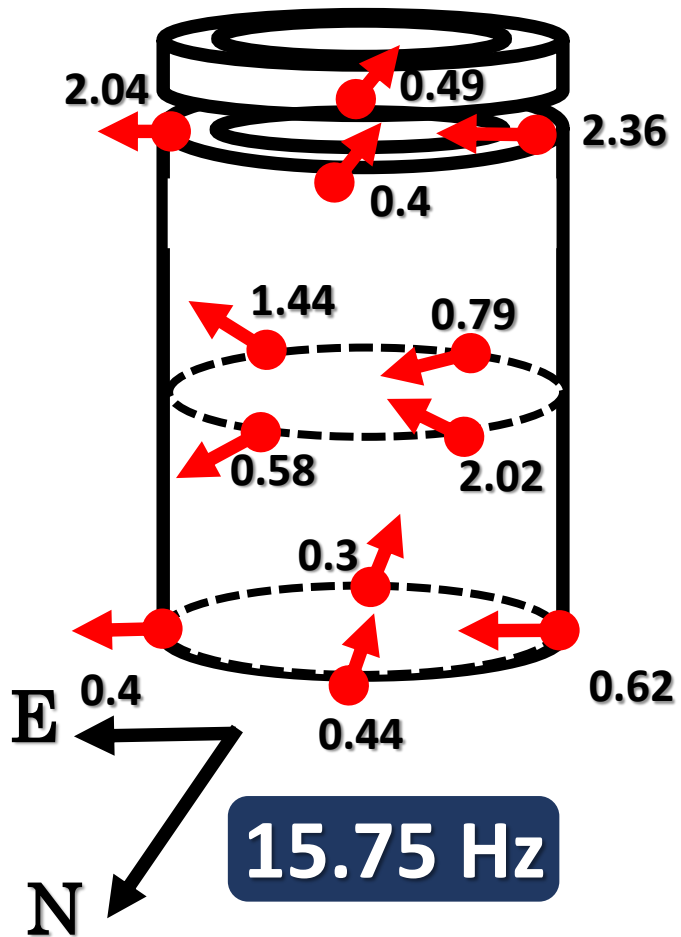


# Result

## ❖ Result / setting 1 : Horizontal① (N-S)

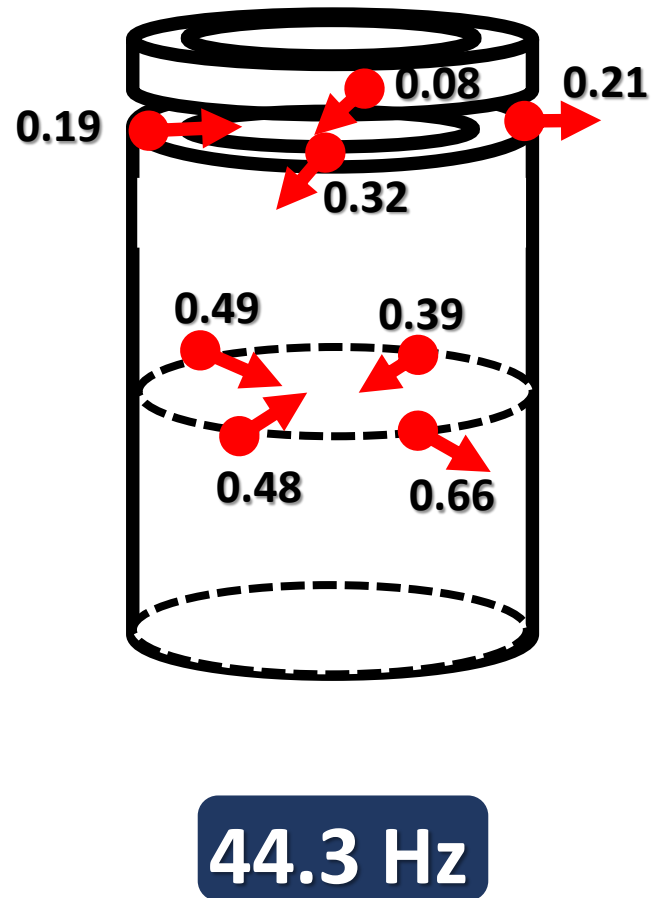
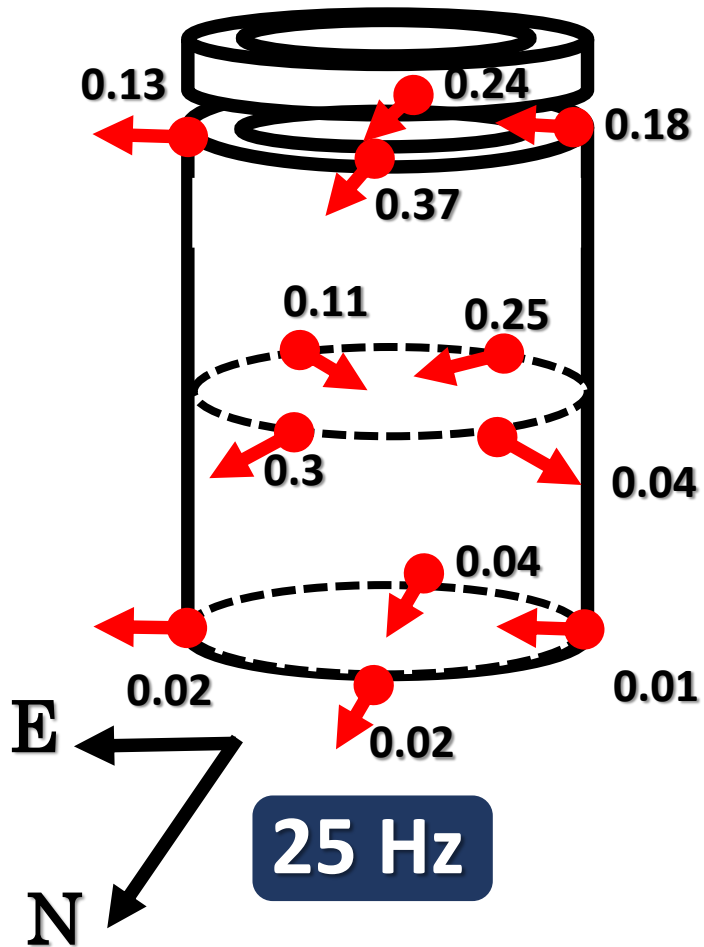


## ❖ Result / setting 2 : Horizontal② (E-W)

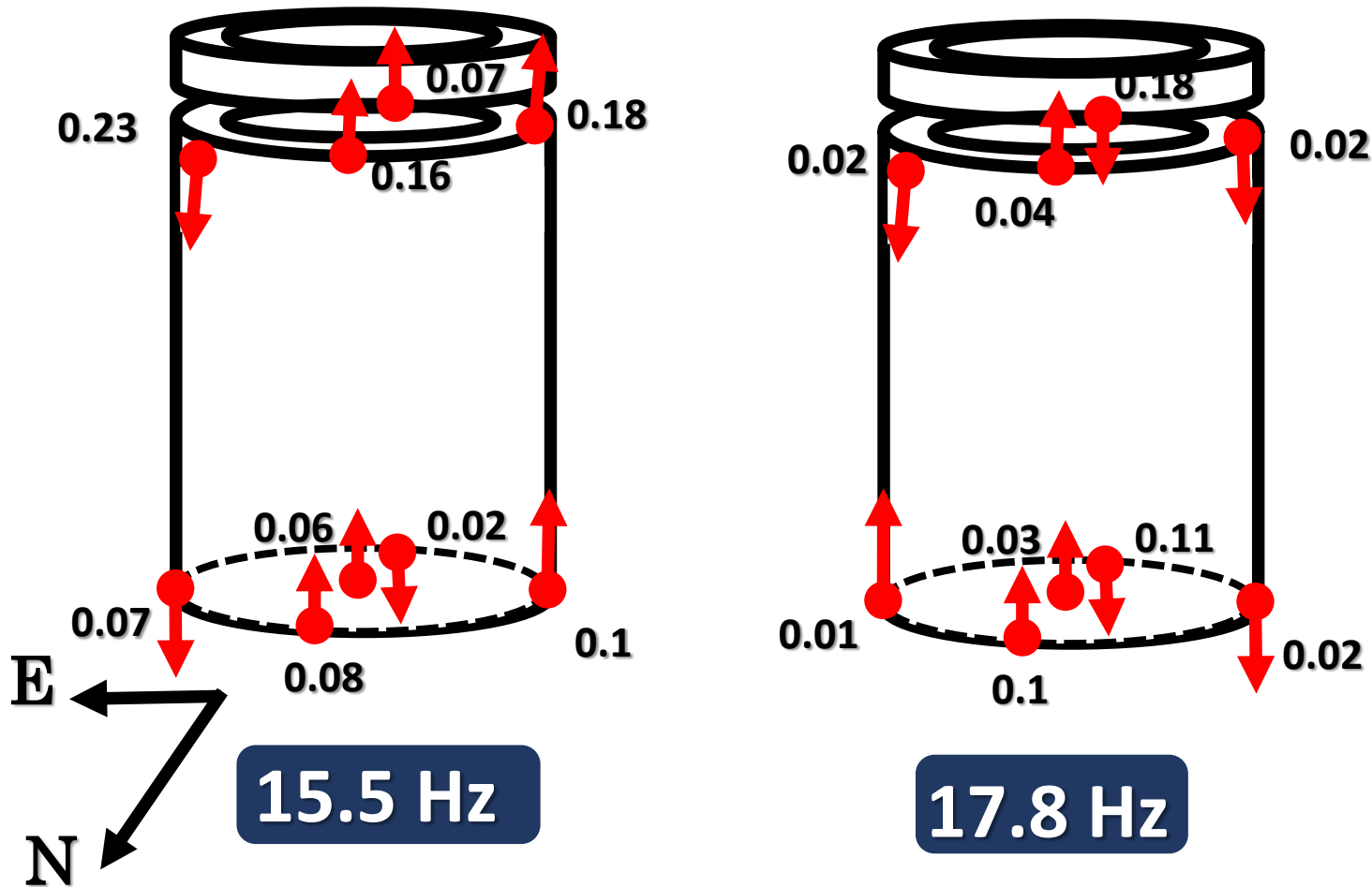




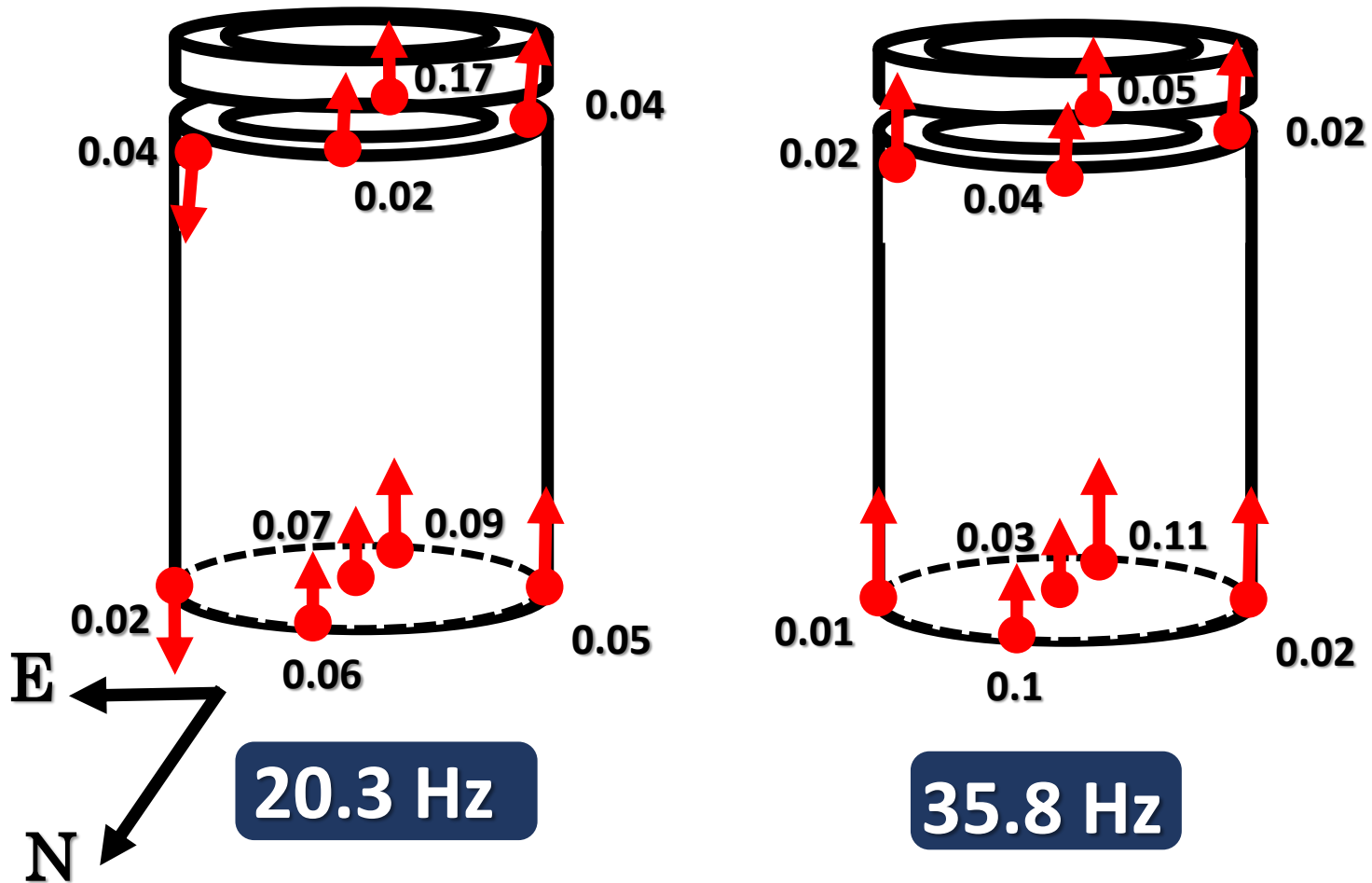
## ❖ Result / setting 2 : Horizontal② (E-W)



## ❖ Result / setting 3 : Vertical



## ❖ Result / setting 3 : Vertical



## ❖ Conclusion

**\* Resonance frequency of the PR3 inner frame (+ Top plate)**

→ 1st : 15.6 Hz  
2nd : 17.5 Hz  
3rd : 25.5 Hz  
4th : 38.5 Hz  
.....

(\* Designed lowest frequency is ~ 20 Hz.)

**>> The lowest resonance frequency seems to be lower than its prediction.**

[Note]

In this investigation, some other components such as suspension and security frame are added, other than the inner frame. Hence, if more precise frequencies are required, this investigation should be conducted with using only the inner frame.