

Report on PESP2008

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<http://conferences.jlab.org/pep2008/>

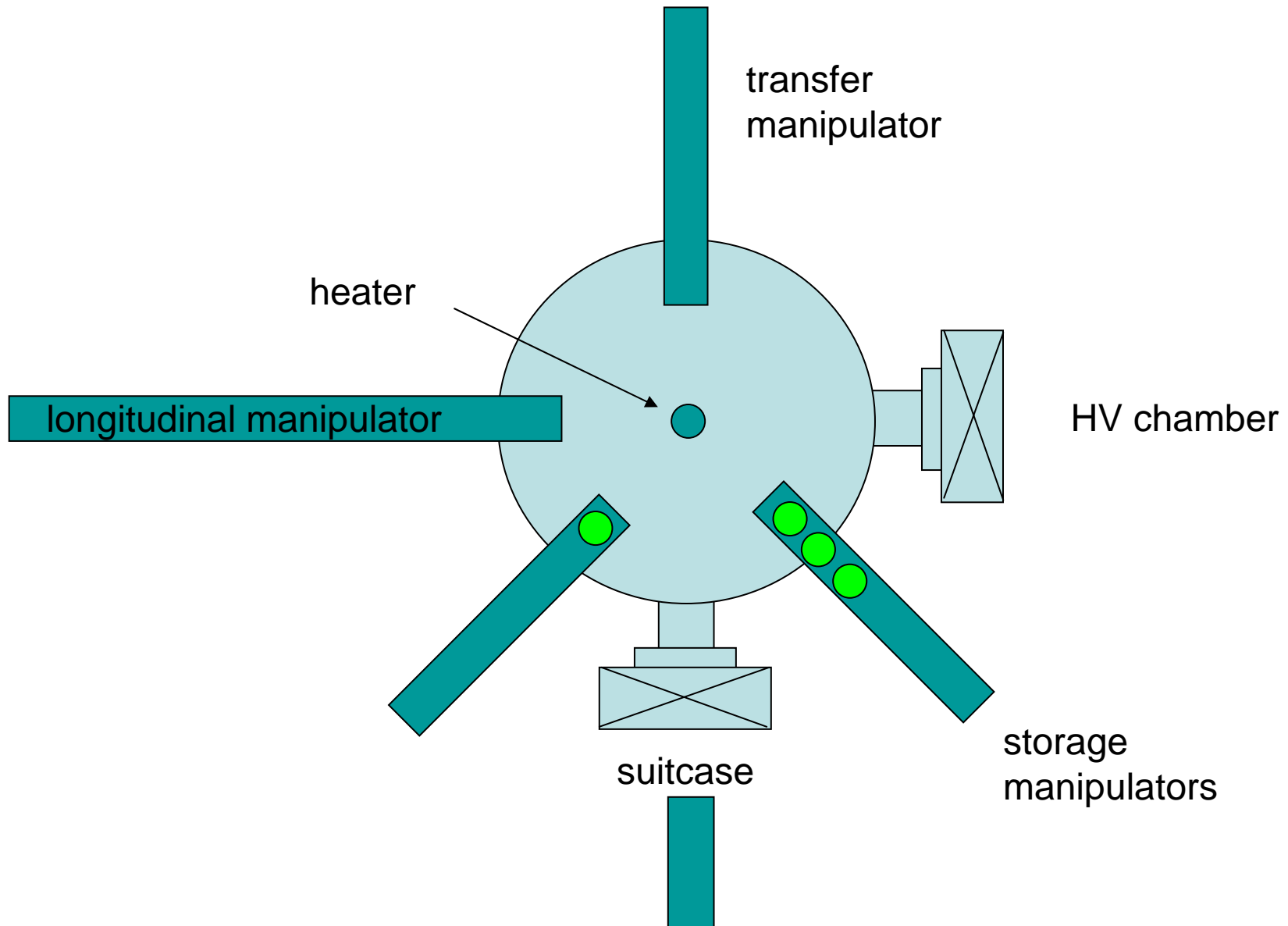
Participants : 84

(JLab 25、Cornell 6、Japan 8、
Daresbury 3、BNL、SLAC...)

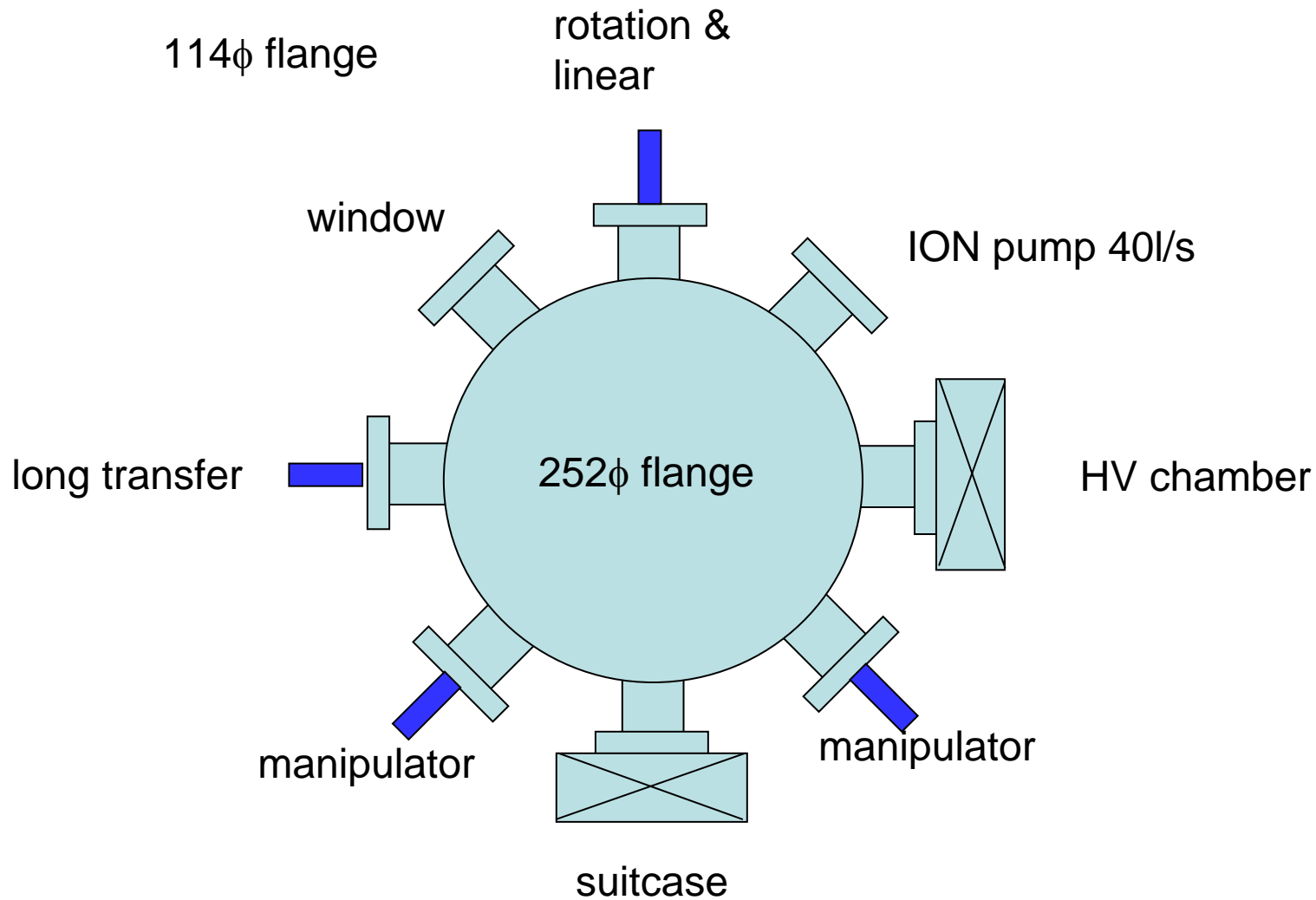
39talks、17posters

- Polarized guns
- Photocathodes
- DC High Voltage Guns
- High Voltage
- RF Guns
- Lasers
- Vacuum
- Applications

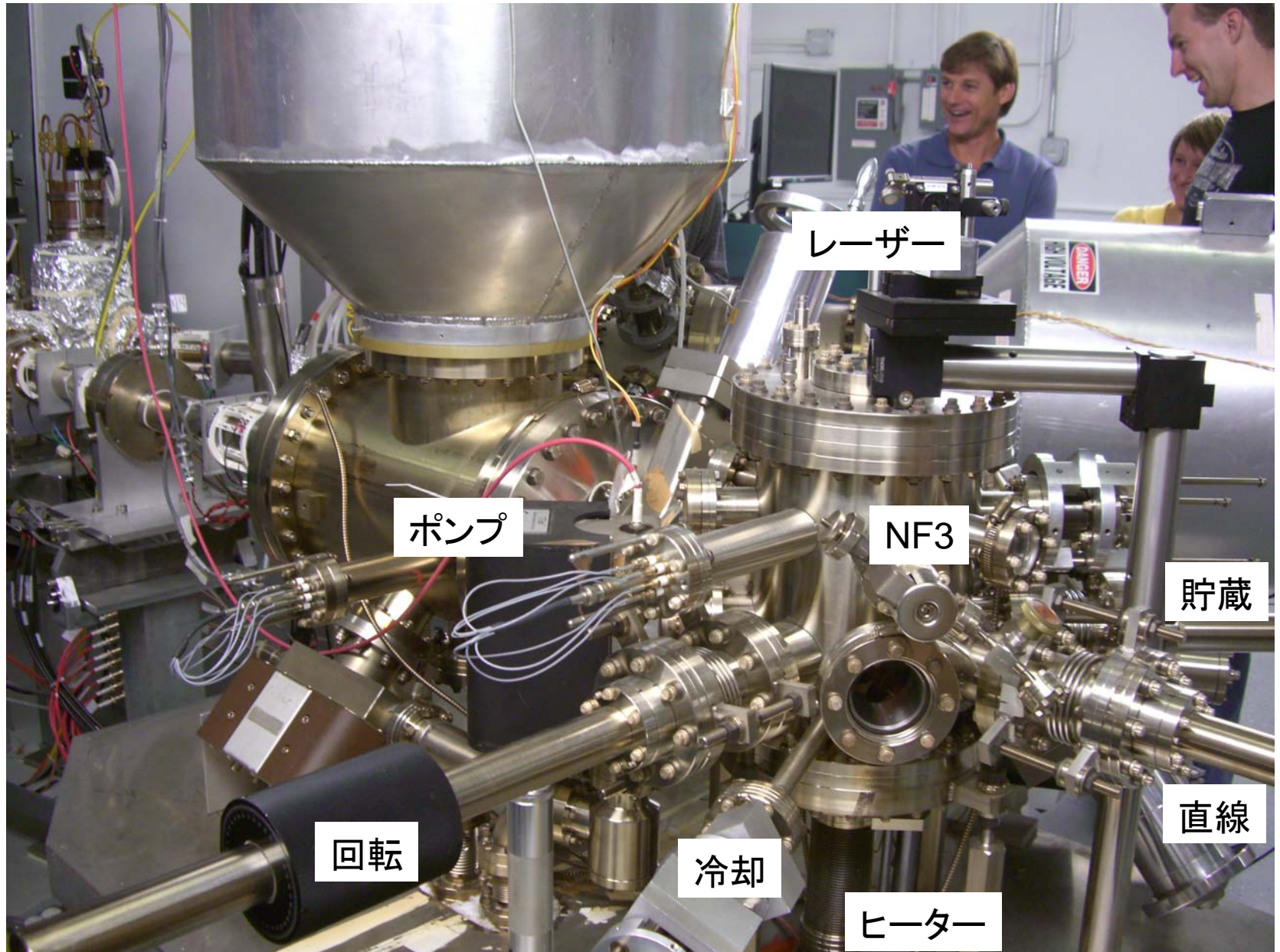
Injector and FEL 見学



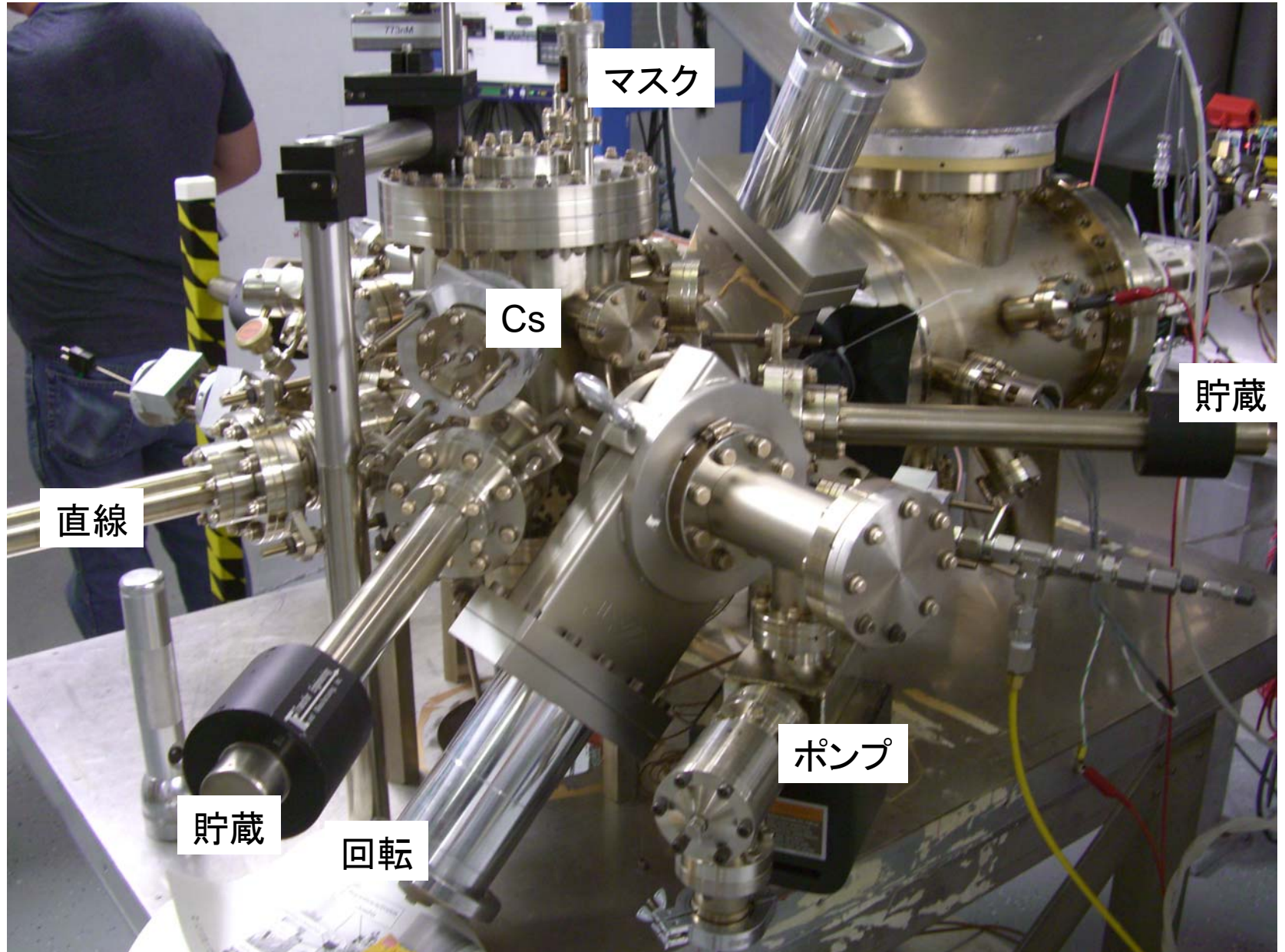
Preparation



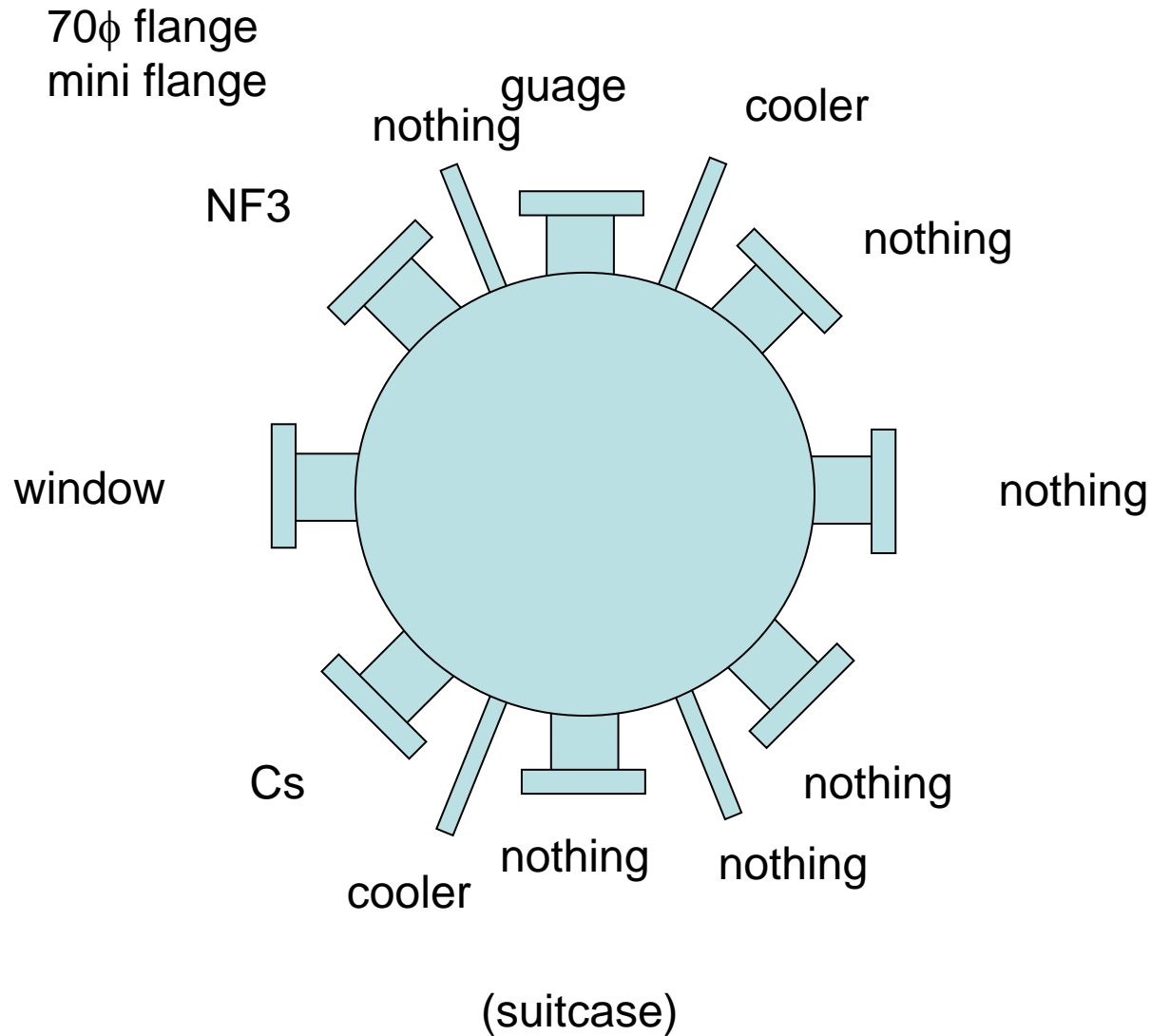
Preparation



Preparation



Preparation



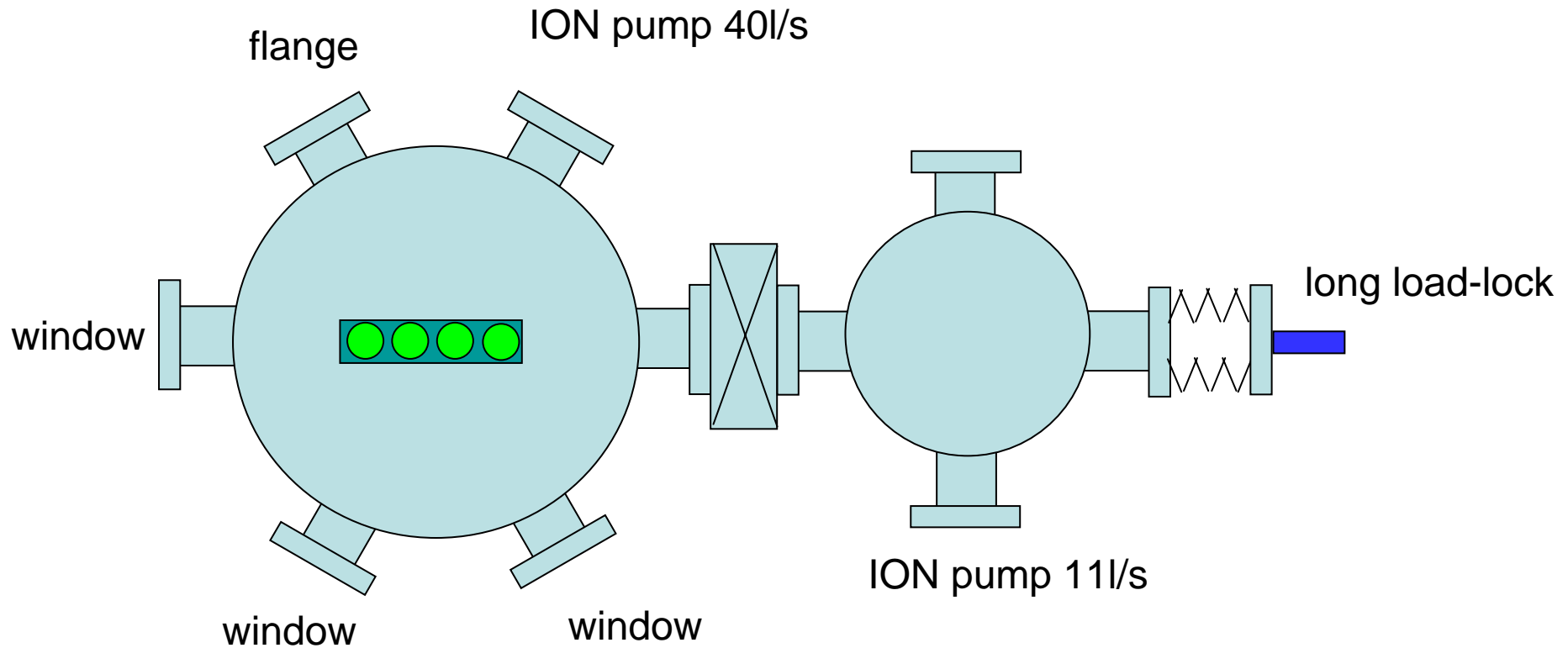
部品写真



部品写真

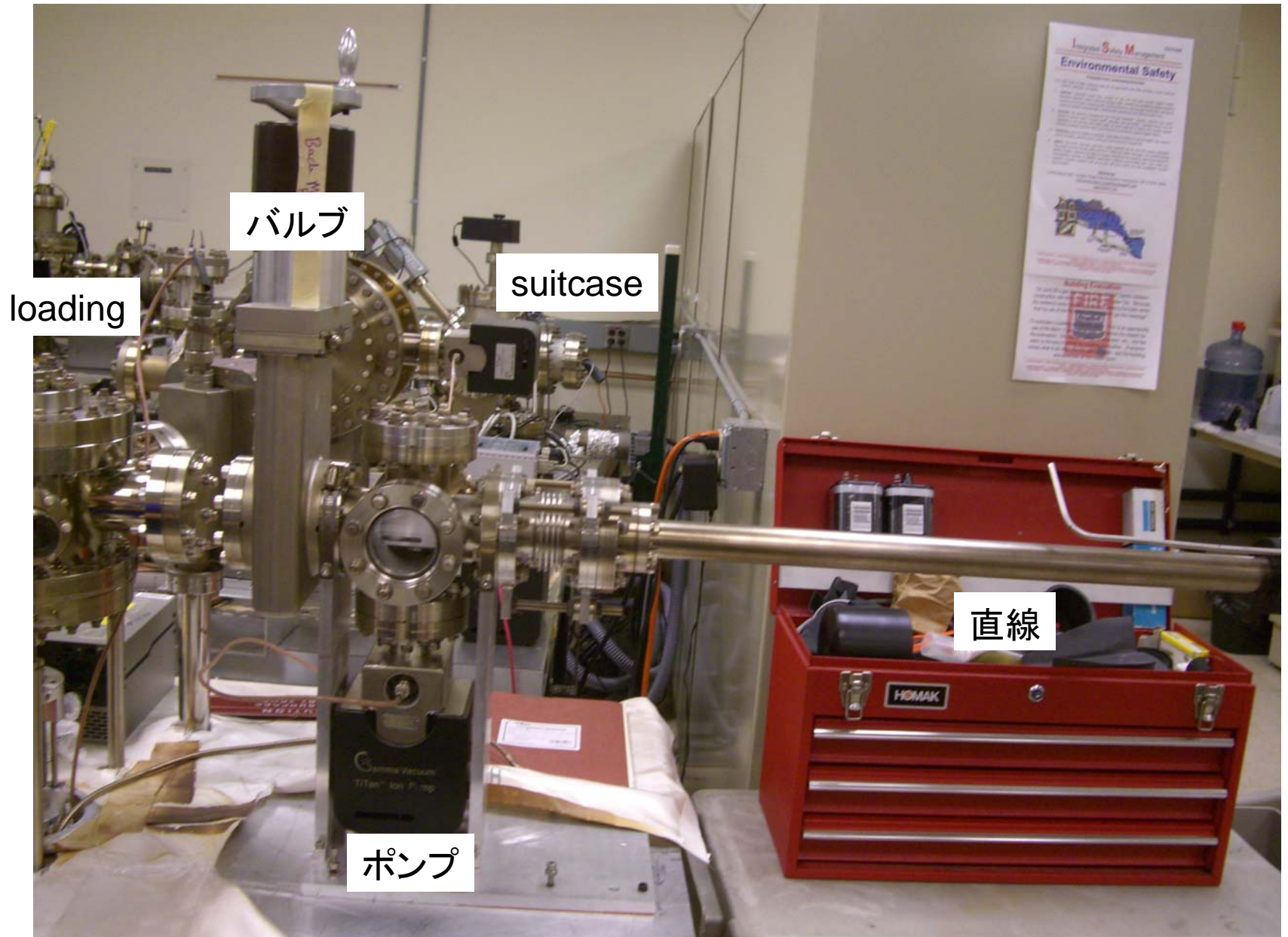


Suitcase

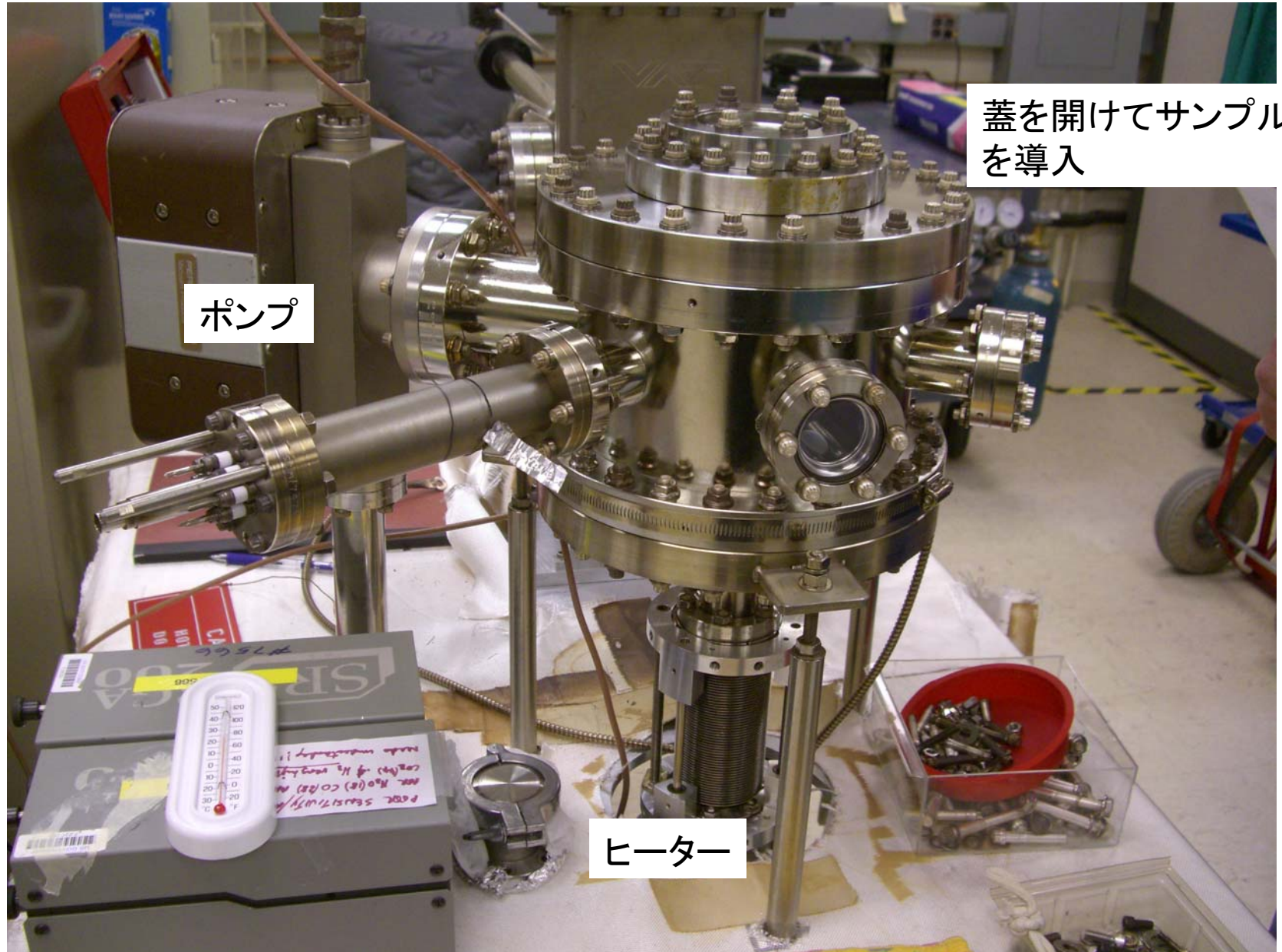


252 ϕ flange?

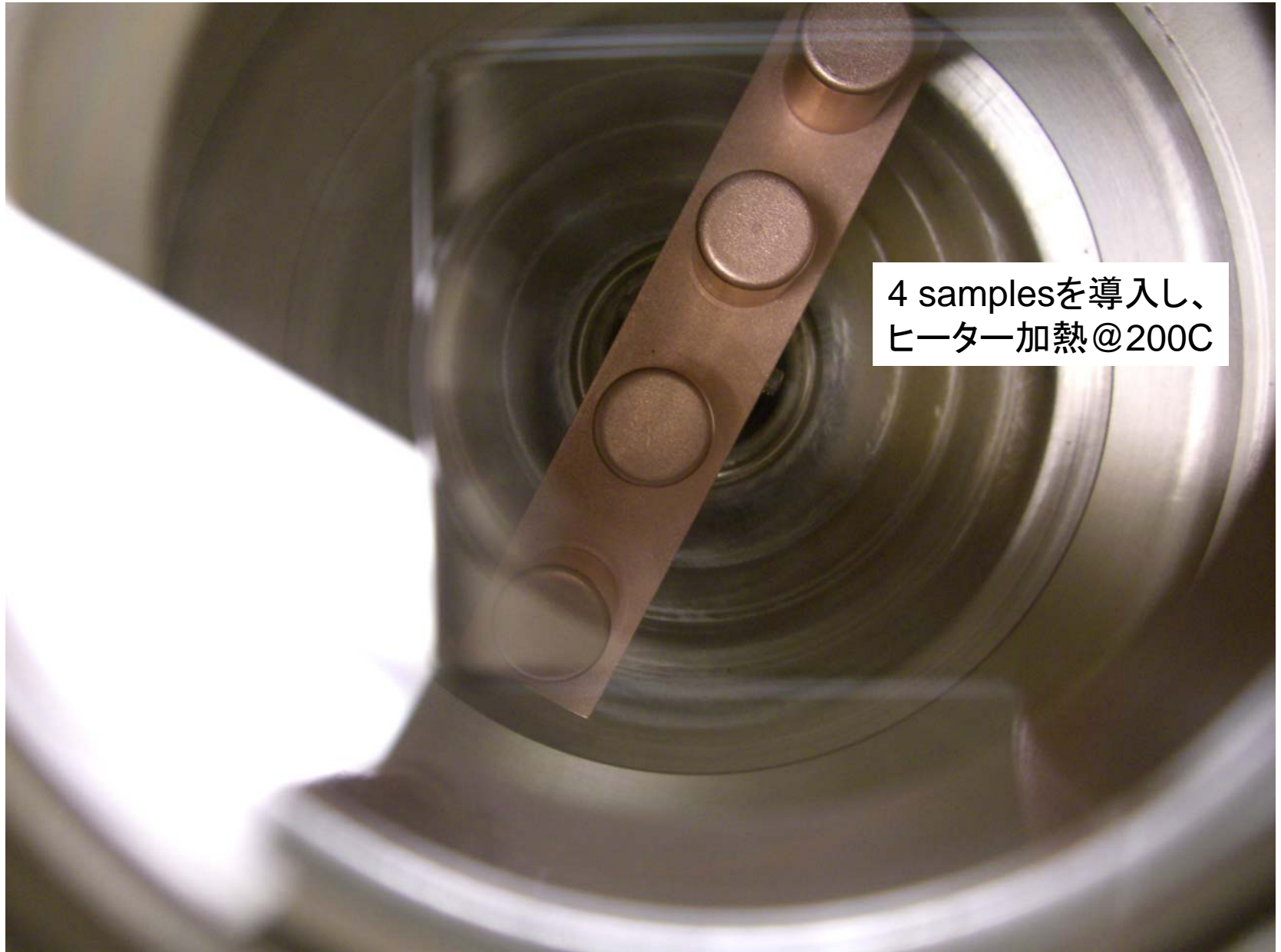
Loading



Loading

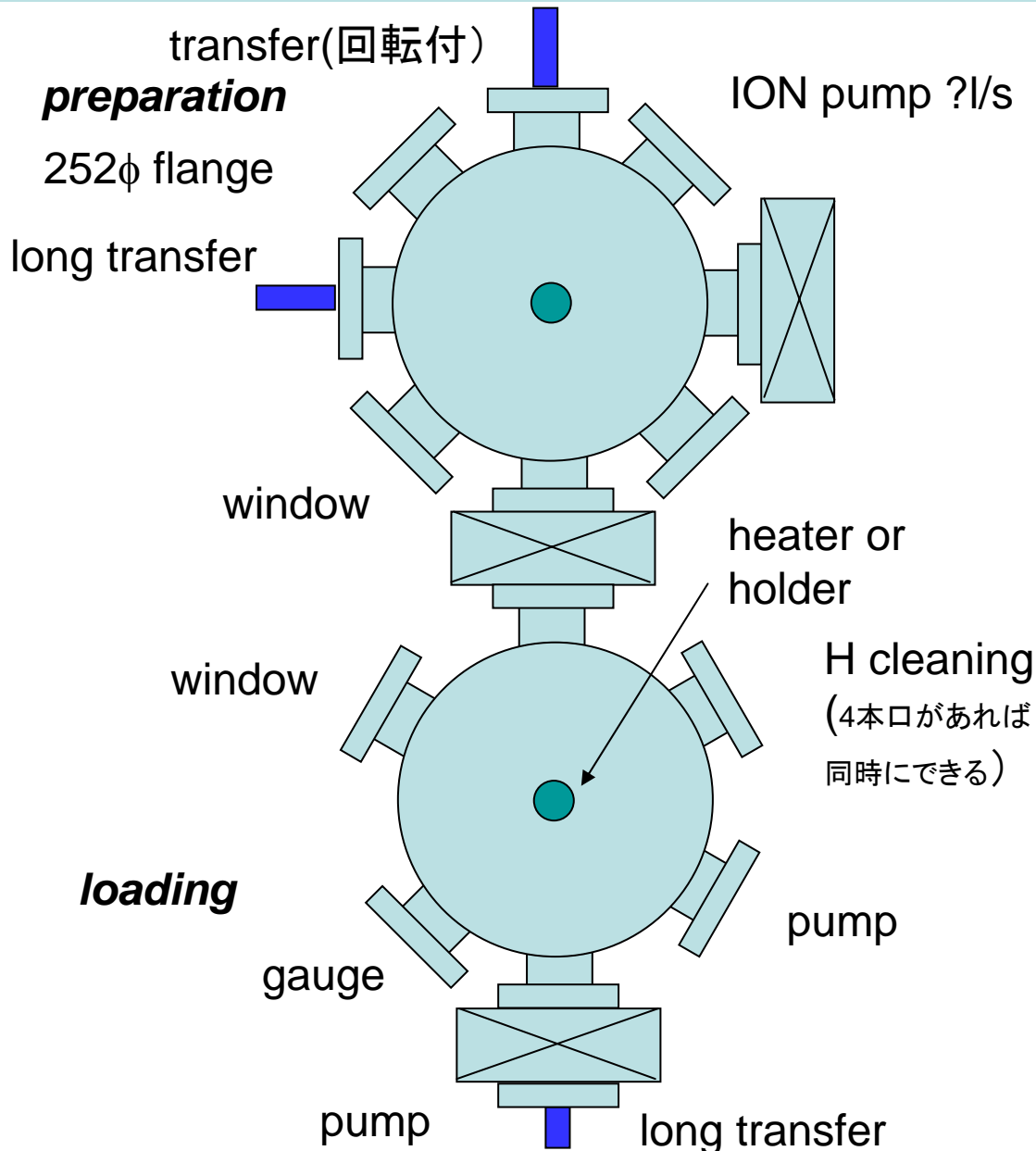


Sample holder



4 samplesを導入し、
ヒーター加熱@200C

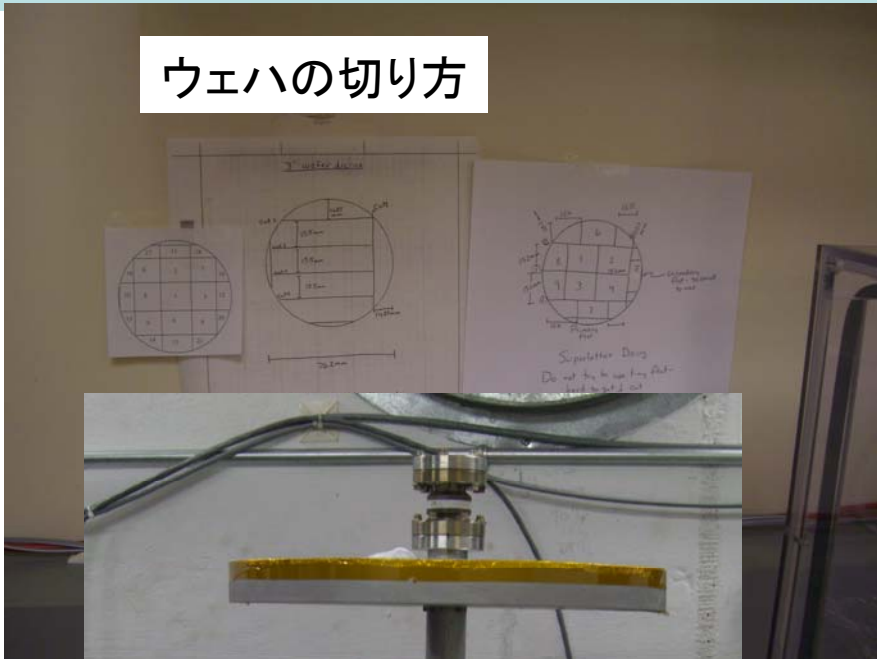
Loading and preparation 案 (Jlabタイプ)



- puckの設計
(固定法、横or縦)
- 拡張性の確保
(多重puck、multi-alkali, CsTe)
- load-lockの方式
- ポンプの種類
(turboも150-200Cでベーキングする？
Ion pumpは500l/sも必要？)
- **loading**はTi or SUS
(preparation程超高真空必要ない。
Tiで作る必要性は何か？)
- heaterの方式
(セラミックヒーター、RFヒーター、
IRランプは裏から当てる必要)

その他

ウェハの切り方



GaAs準備容器



水素洗浄容器



SF6ガス貯蔵袋



C. Sinclair

2×10^6 C/cm²が現時点の最高記録。
QE10%、1.8mm diam. 520nm laser
100mA、200hr. (8日)が限界。

残留ガスの源: H, methane outgassing
Cornell H₂ outgassing measurement

1. 400C for 96hr.
2. outgassing measurement
3. exposure to air for 8 hr.
4. bakeout to 150-250C

Park et al., JVST A 26 1166 (2008).

1. 400C for 96hr not under vacuum without risk of leak
2. bakeout to 150C
3. thick walls limit the outgassing (3mm以下、10-15mmだと100倍)

Methane outgassing source

1. titanium in the plates of getter ion pumps
2. hot filaments
3. 30倍のダメージ効果