

SIC

SP-AMS Inter-comparison Campaign

FMI – LU – ETH

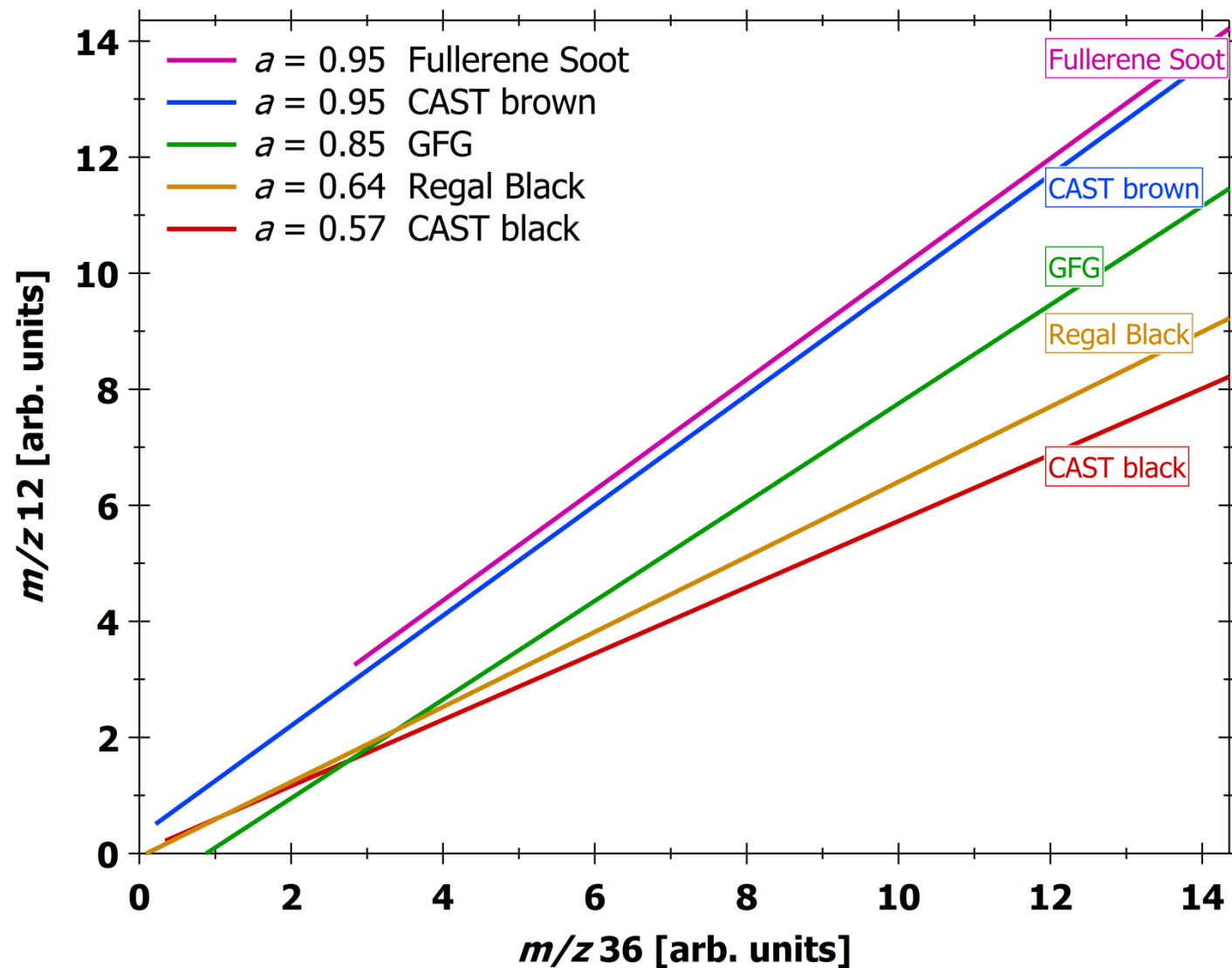
PSI – FHNW

06.03. – 22.03.2013

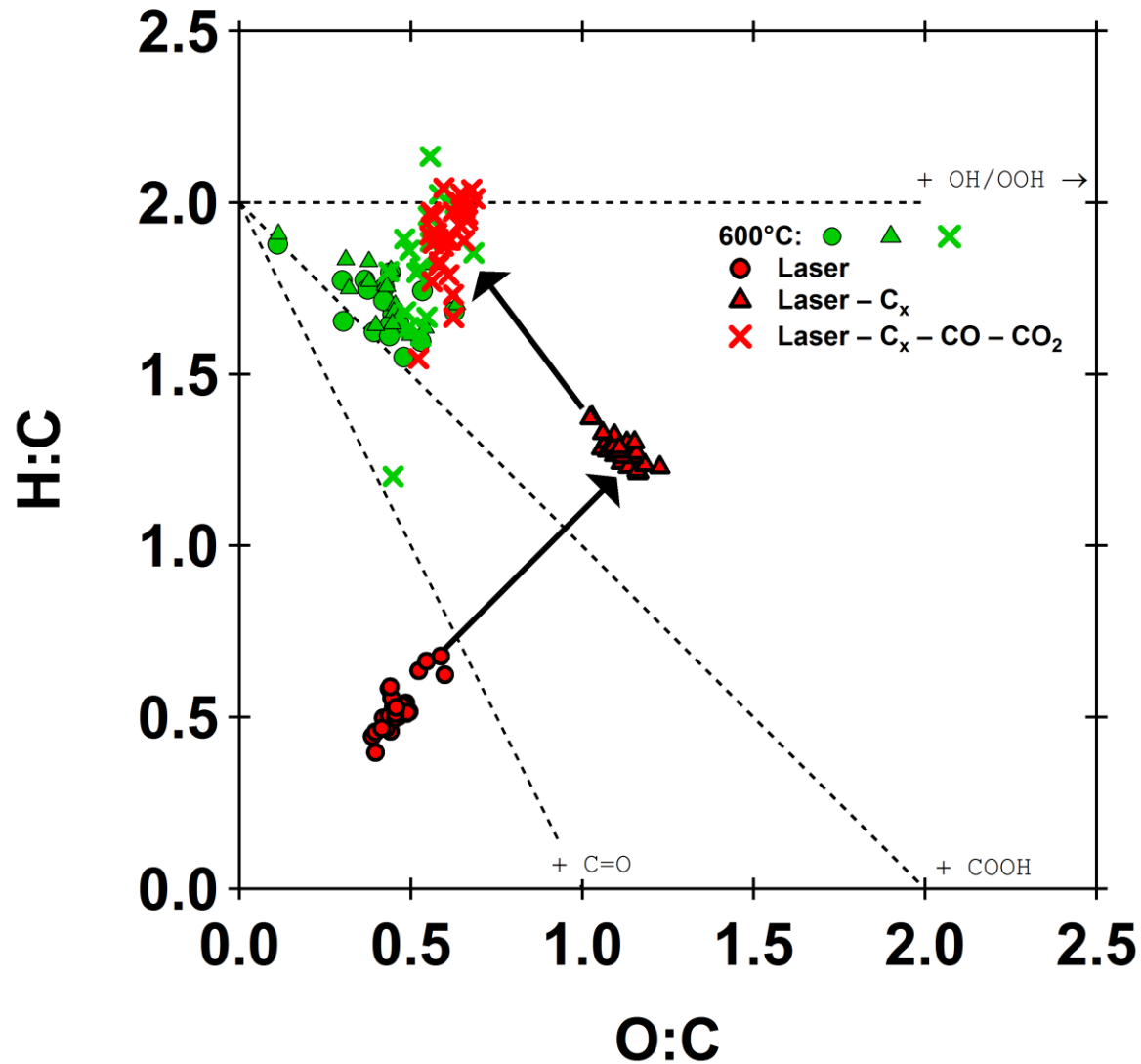
Points of Interest

- 1) Reproducibility of MS
- 2) Refractory CO_x
- 3) Fragmentation

Five Soot Types

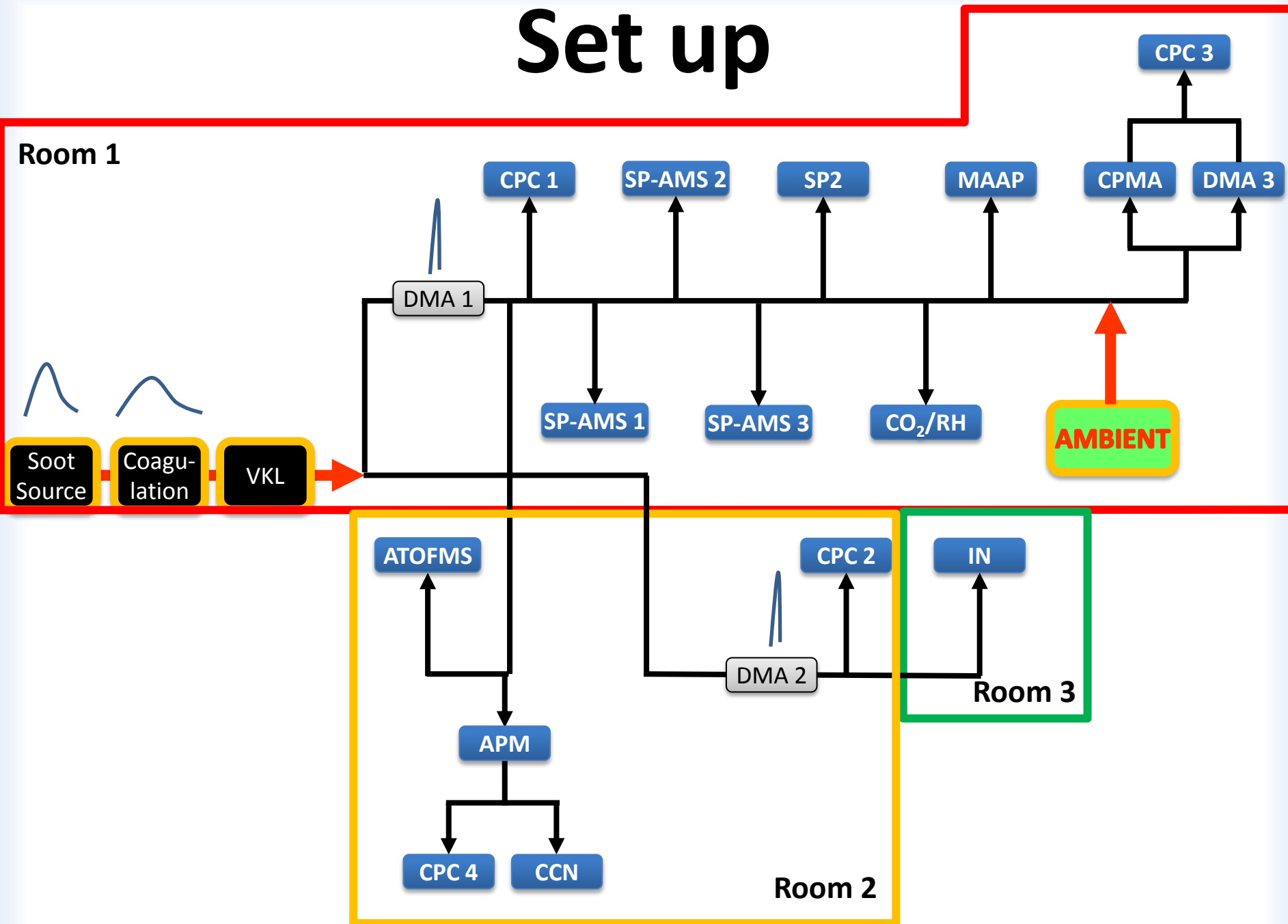


Regal Black



Set up

Room 1



Soot Types & Experiments

1. CAST “Black”

- Propane soot (C/O = 0.25)
~10% thermal OC¹

2. CAST “Brown”

- Propane soot (C/O = 0.41)
~30% thermal OC¹

3. PALAS spark-generated

- GFG soot; marketed as “diesel-like”

4. “Regal Black”

- Carbon black (calibration)²

5. Fullerene-enriched soot

- C₆₀ and C₇₀ (~5 and 1%) enriched graphitic soot.³

6. Hematite

1. Size Selection

- 200 nm – 350 nm – 500 nm

2. Thermodenuding

- 250 °C

3. Furnace

- 1400 °C

4. Argon

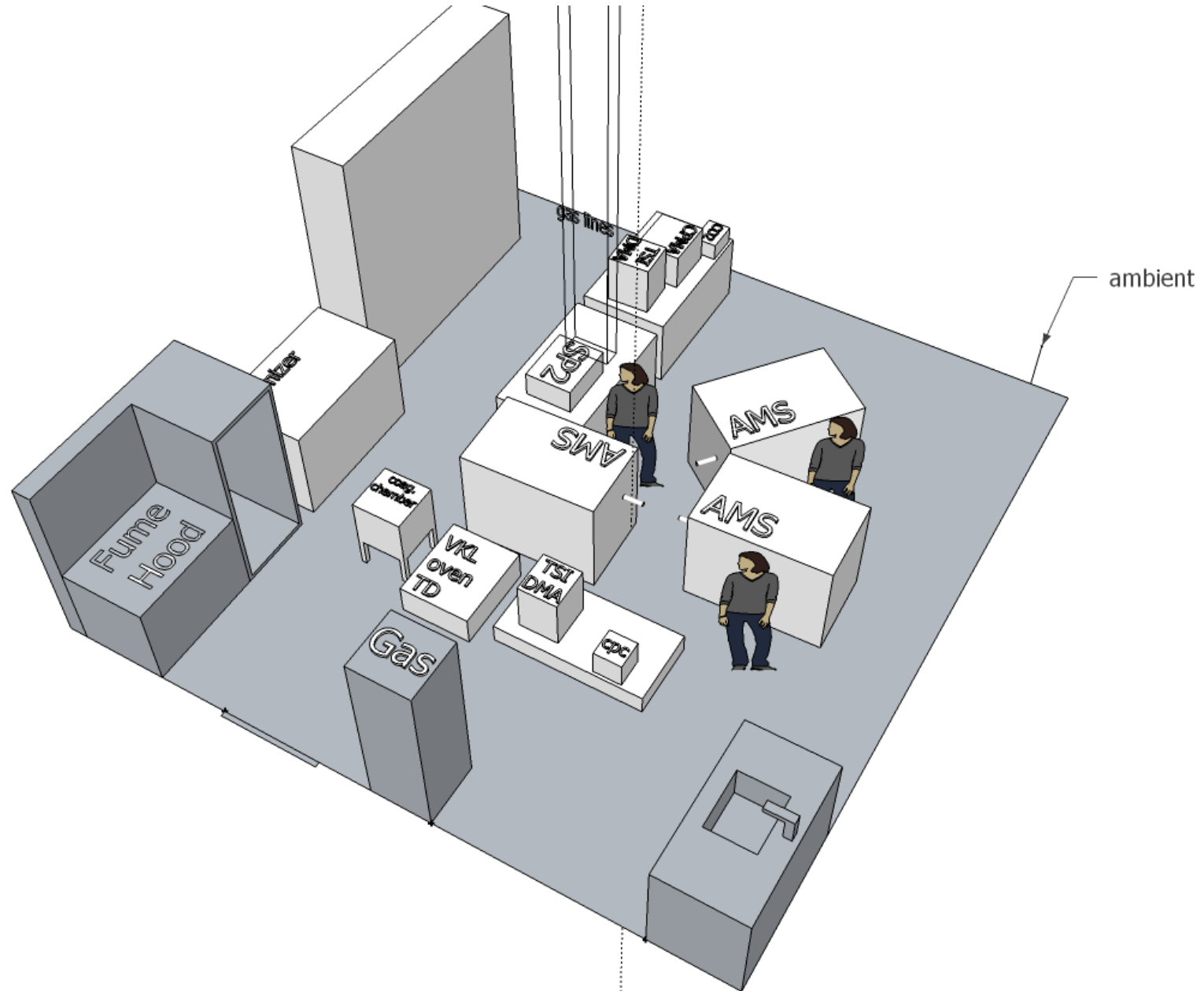
- CO_x

5. Laser Power Drop

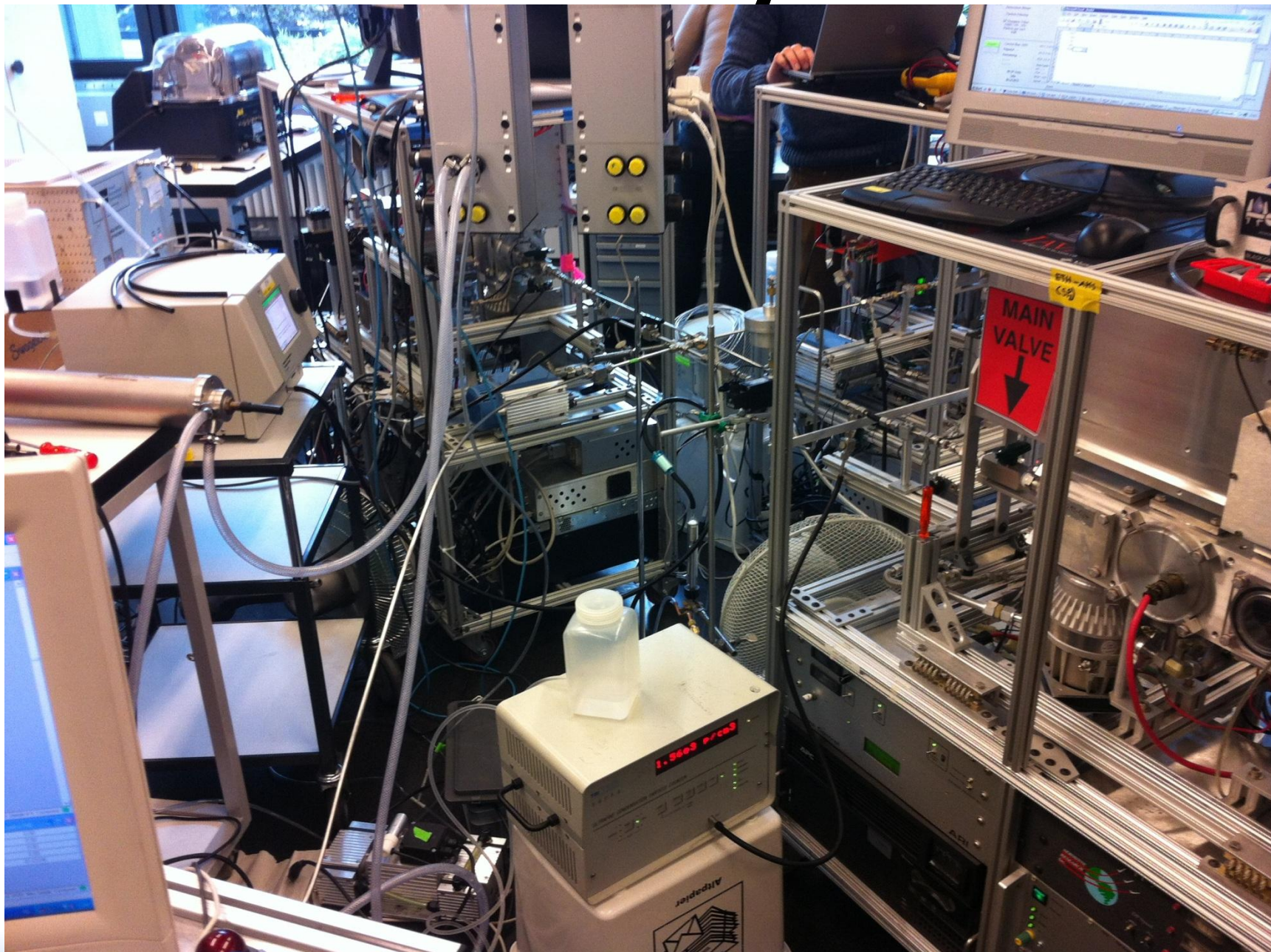
- Influence on Ms
- Internal Calibration

6. More...

Sketch Room 1



Reality



Room 1 Line Set-Up

