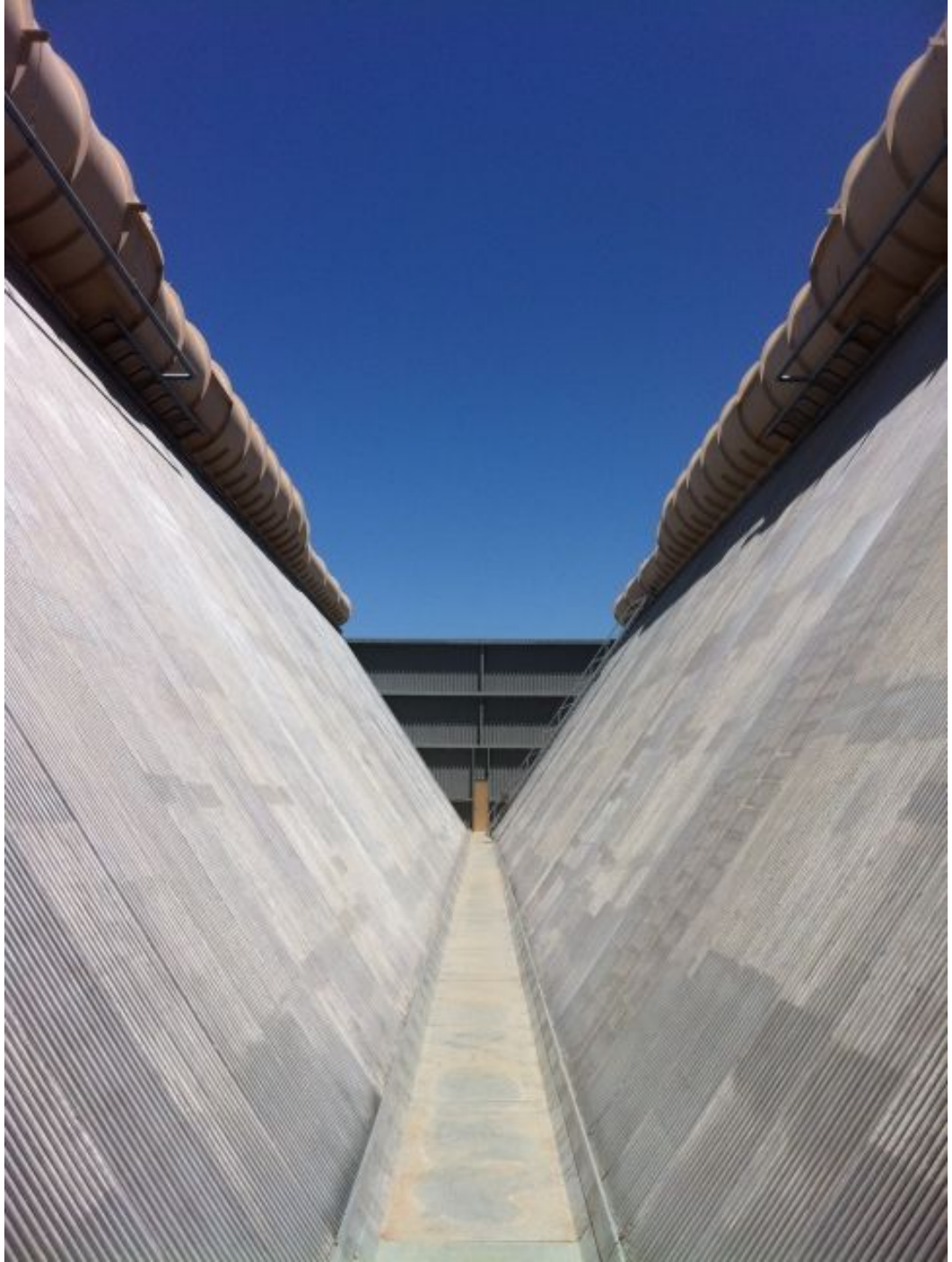
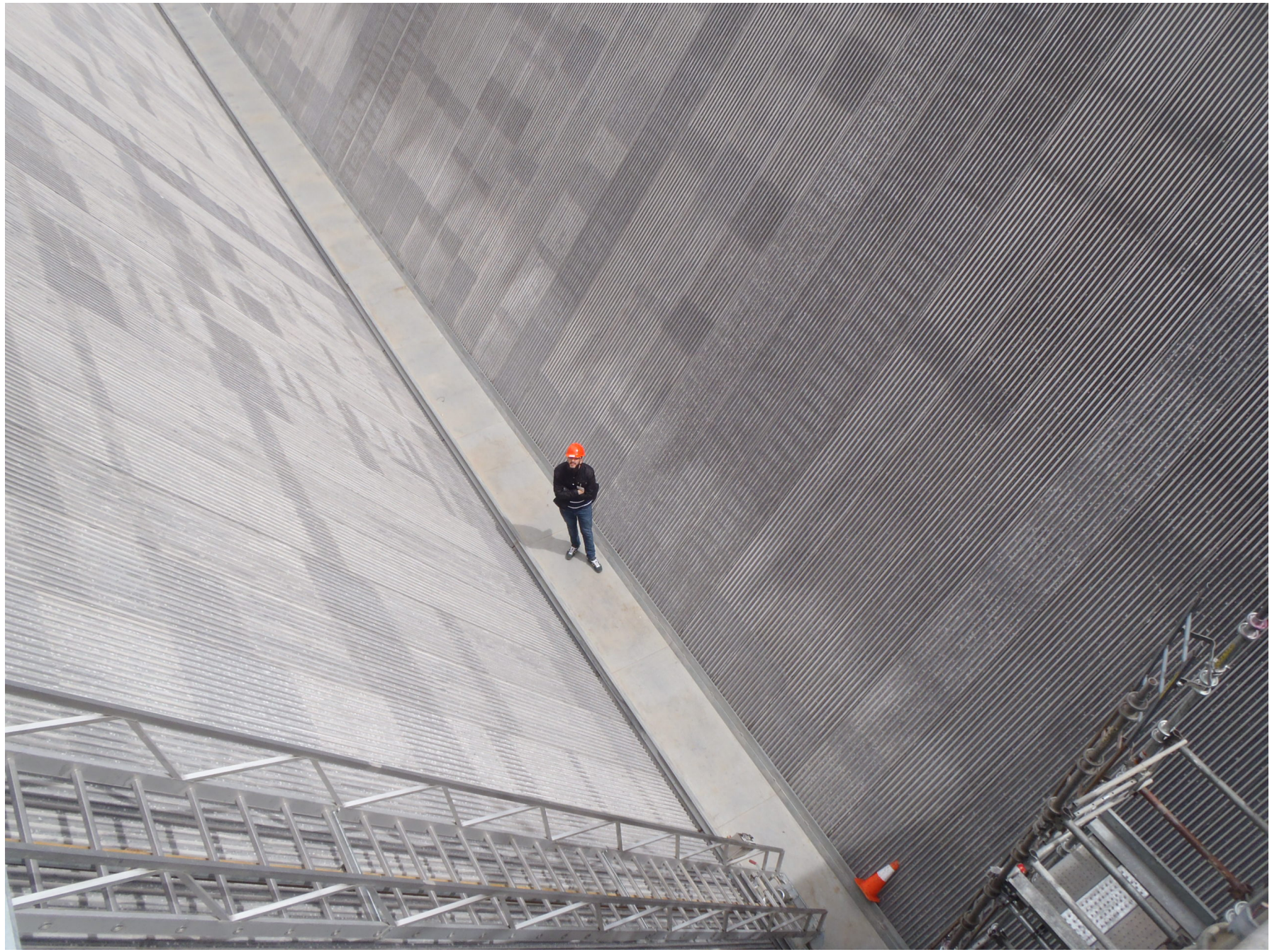
Air Inleakage with ACCs

Andy Howell

ACCUG 2018

Colorado Springs, CO



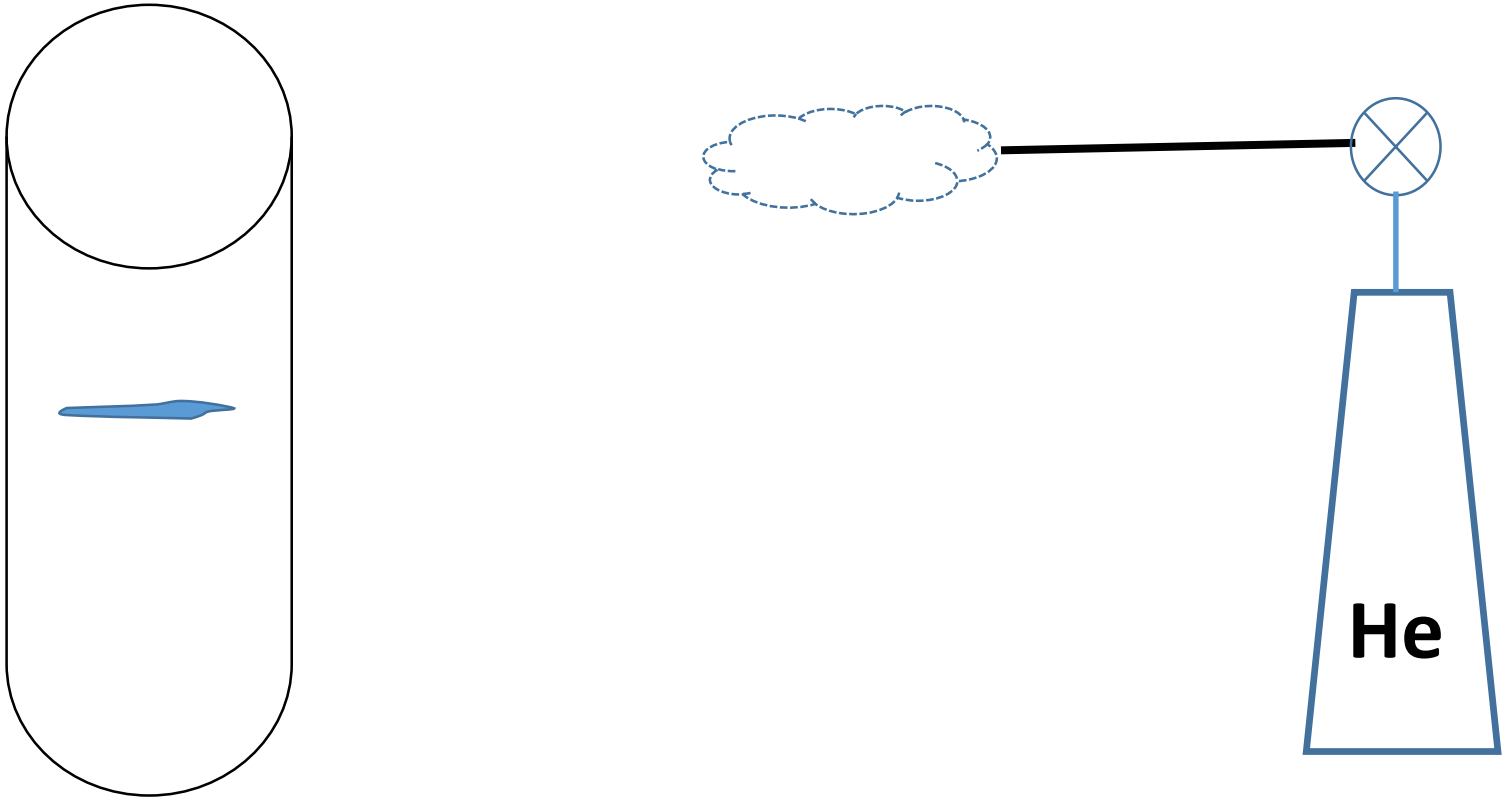


Air In-leakage into ACC vacuum

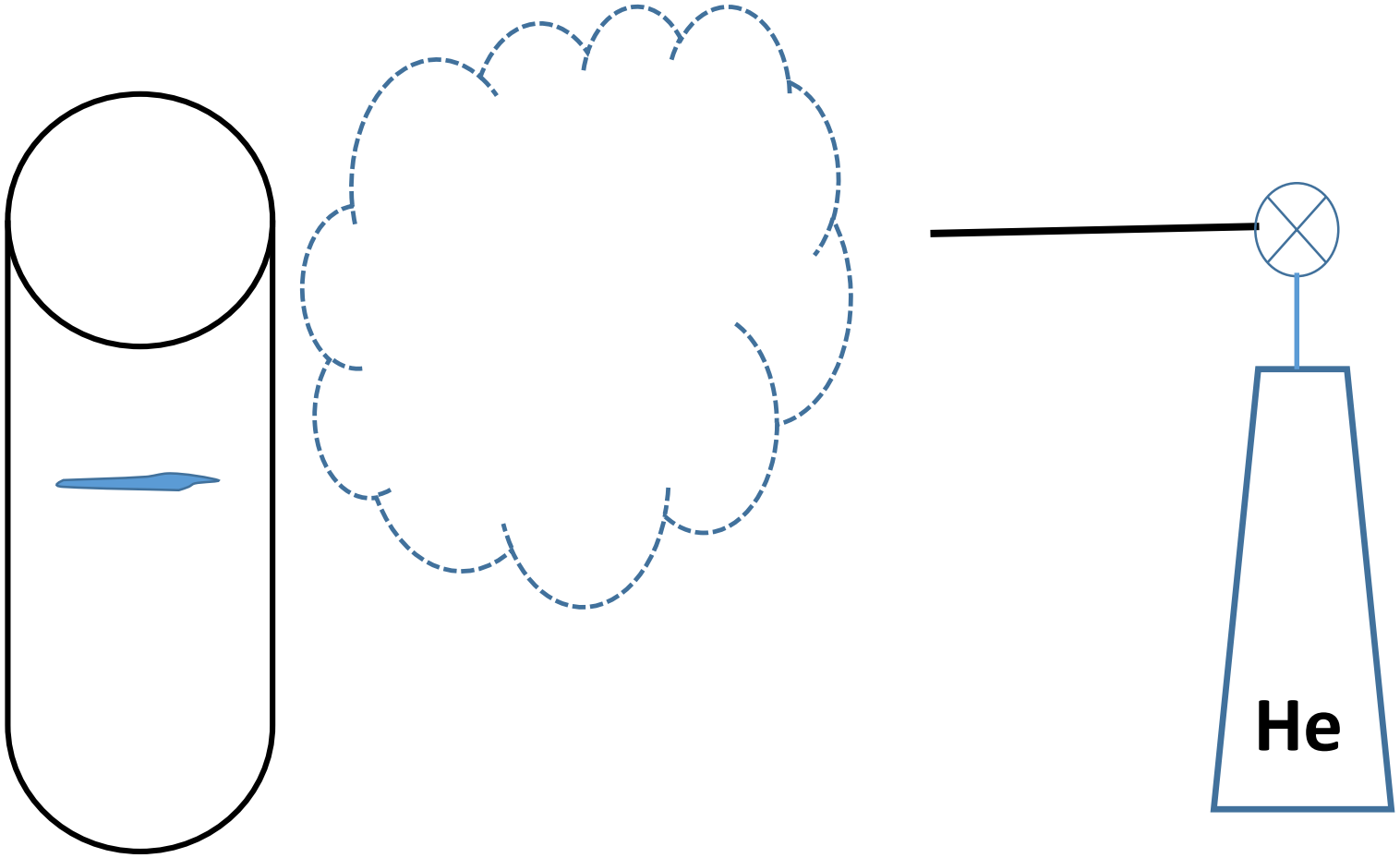
Air In-leakage into ACC vacuum

Air In-leakage into ACC vacuum

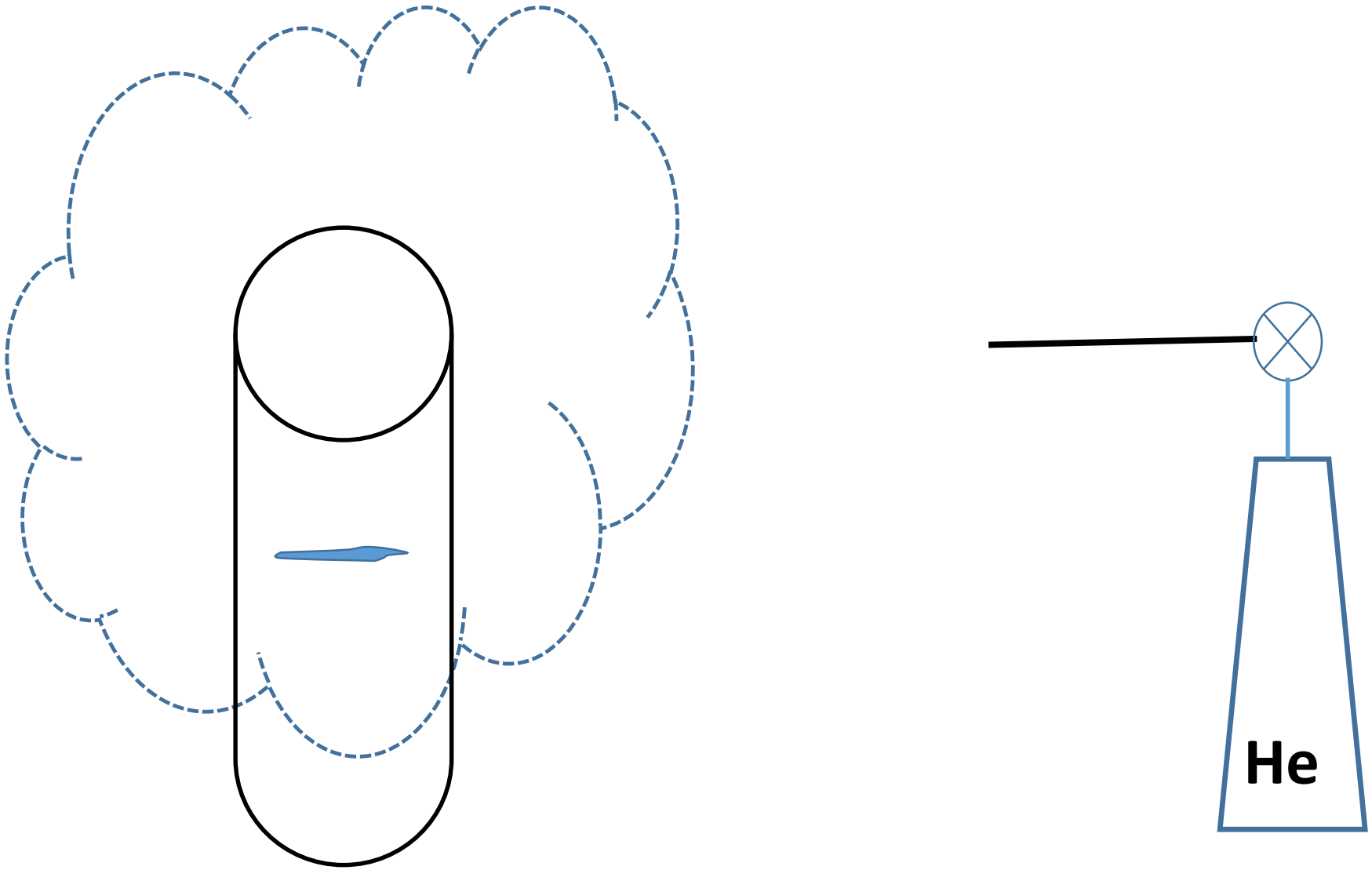
Helium Air Inleakage Testing: Indoor



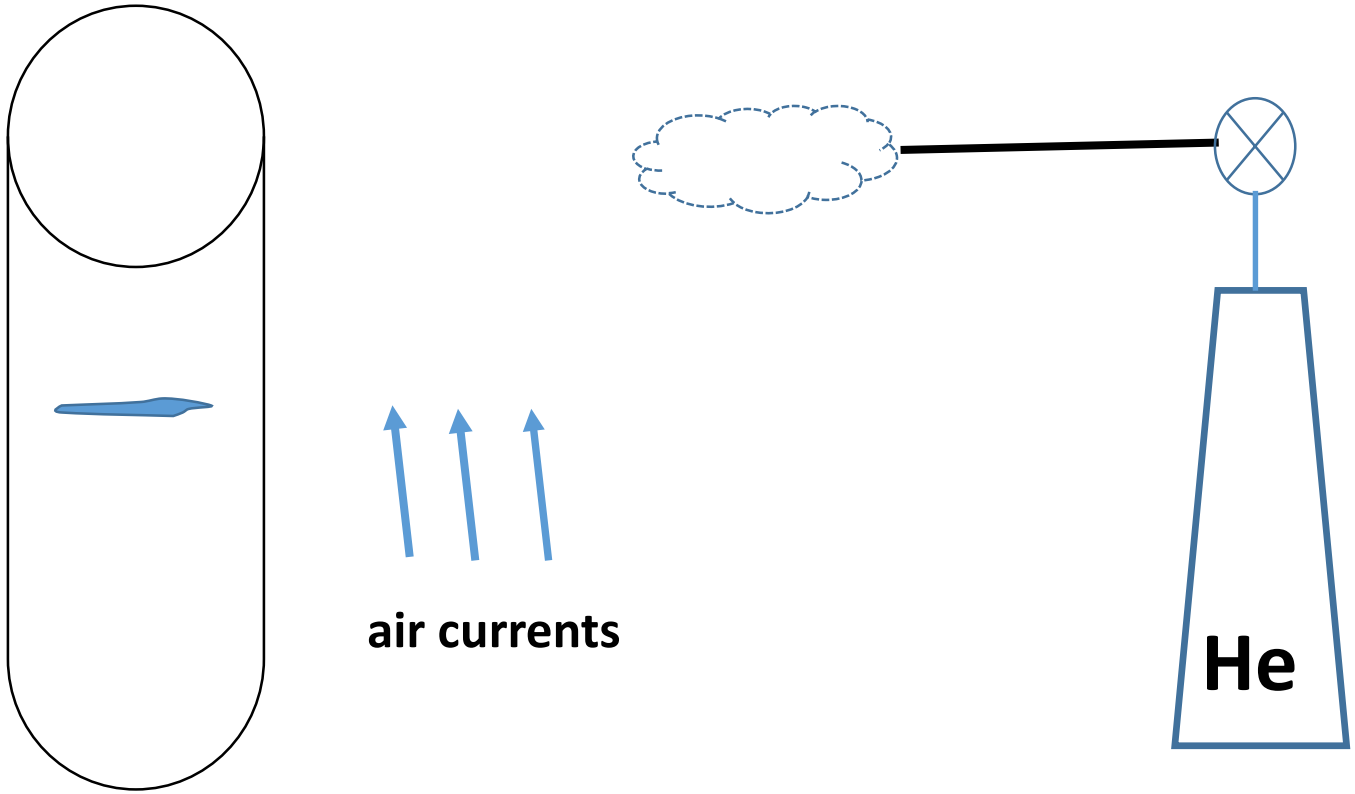
Helium Air Inleakage Testing: Indoor



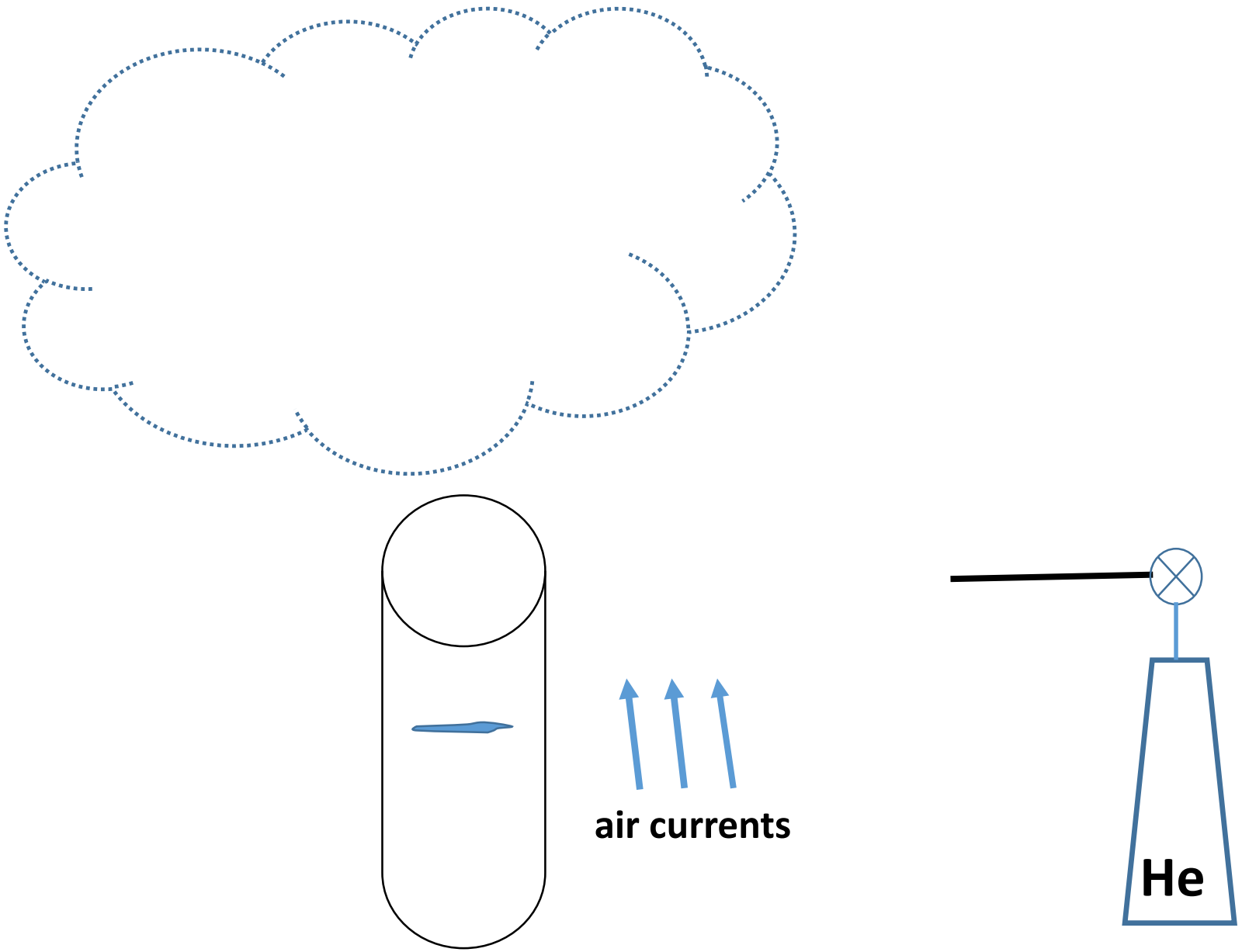
Helium Air Inleakage Testing: Indoor



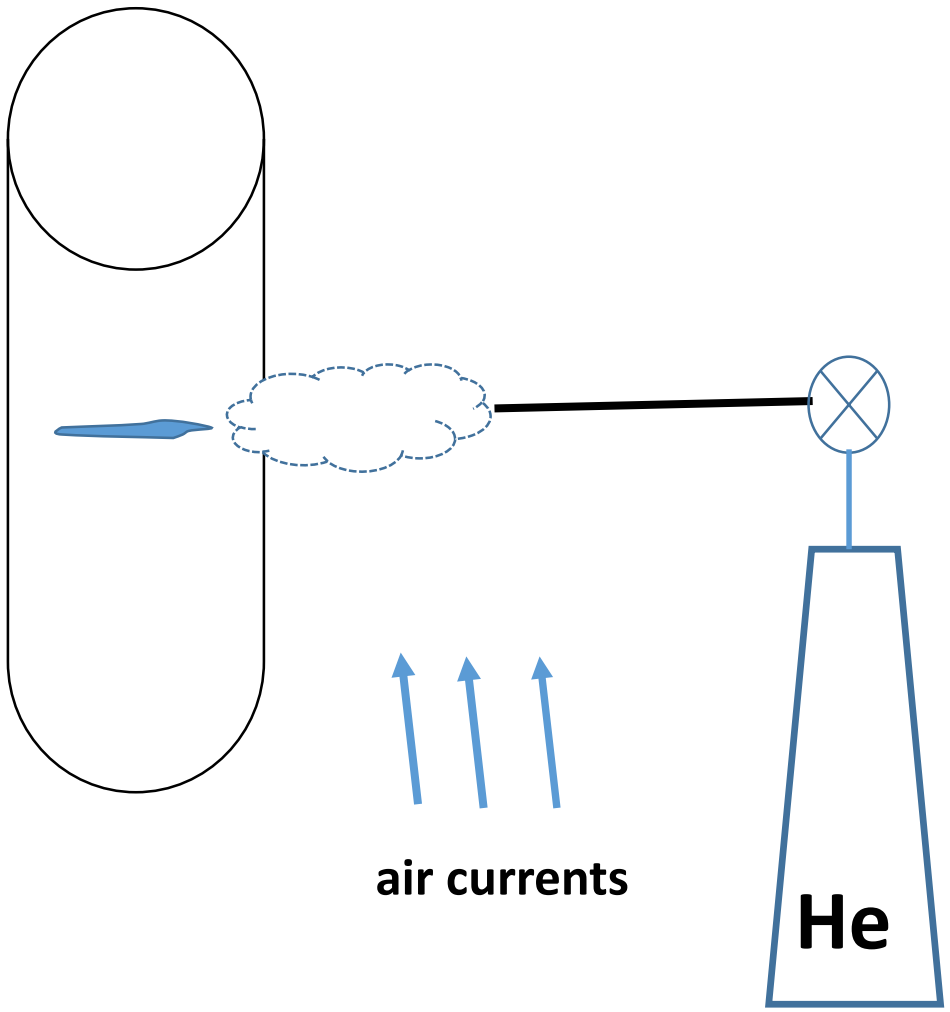
Helium Air Inleakage Testing: Outdoor



Helium Air Inleakage Testing: Outdoor (unsuccessful)



Helium Air Inleakage Testing: Outdoor (successful)



Air In-leakage at Unexpected Locations

Air In-leakage at Unexpected Locations

Air In-leakage at Unexpected Locations

Strategies for ACC Air Inleakage Testing

Helium:

- fans in the vicinity off
- still air
- plan on comprehensive access, get CLOSE to possible leaks

Alternatives:

- infrared
- acoustic
- other ???

Impact of Excess AIL on Plant Performance

Steam Blanketing

Sections of the ACC can be blocked by excess AIL and are not available for cooling

→ increased backpressure / increased fuel use

Heater Blanketing

Nitrogen blanketing of feedwater heaters / deaerators (if present)

Chemistry Control

Oxygen / carbon dioxide ingress