

**Anti-Radon Facility at Fréjus Laboratory
(Laboratoire Souterrain de Modane)
For NEMO 3**

Air flow 150 m³/h

Purification level : factor of 1000

Principle: decay of Radon in charcoal
(transit of Radon inside charcoal corresponds to 10 half-lives of Radon)

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Nemo 3 in the Anti-Radon tent

May 2004 : Tent surrounding the detector

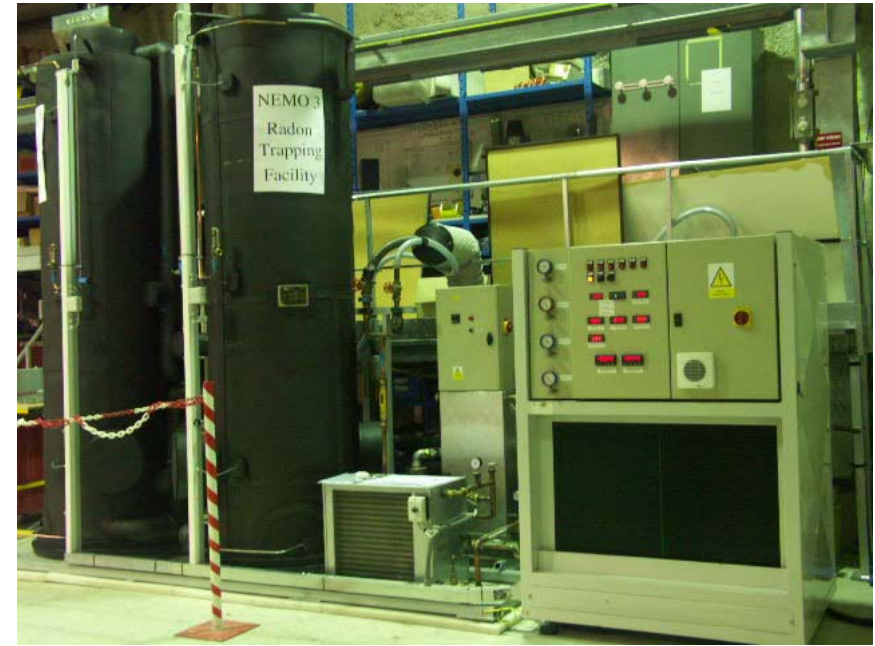
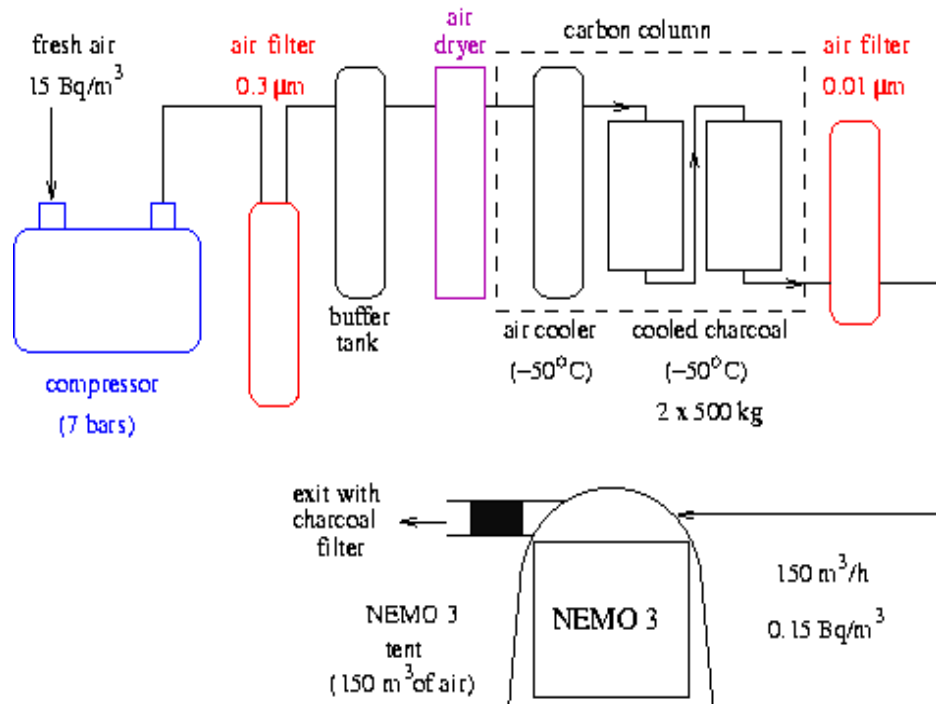


Anti-Radon Facility

Running since Oct. 4th, 2004
in Fréjus Underground Lab.

1 ton charcoal @ -50°C, 7 bars

Flux: 150 m³/h
Activity of ²²²Rn :
Before Facility = 15 Bq/m³
After Facility < 15 mBq/m³





Anti-Radon Facility inside the lab

Tanks of charcoal and cooling unit



Air-lock between tunnel and lab

On the left : compressor, air buffer and dryer of the Anti-Radon Facility

Radon level of air surrounding the detector Results

➤ A(Radon) in the lab..... ~15 Bq/m³



➤ A(Radon) in the tent surrounding the detector..... ~ 0.15 Bq/m³

air flux: 150 m³/h

**Activity of Radon surrounding the detector
has been reduced by a factor ~ 100 in the tent**

So, degasing and leaks remain in the tent,
but this level of purity is enough for NEMO 3 data taking