Radon diffusion in plastic bag

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New setup

- Two identical chambers : 600 cm^3 (6 cm internal diameter x 21 cm length)

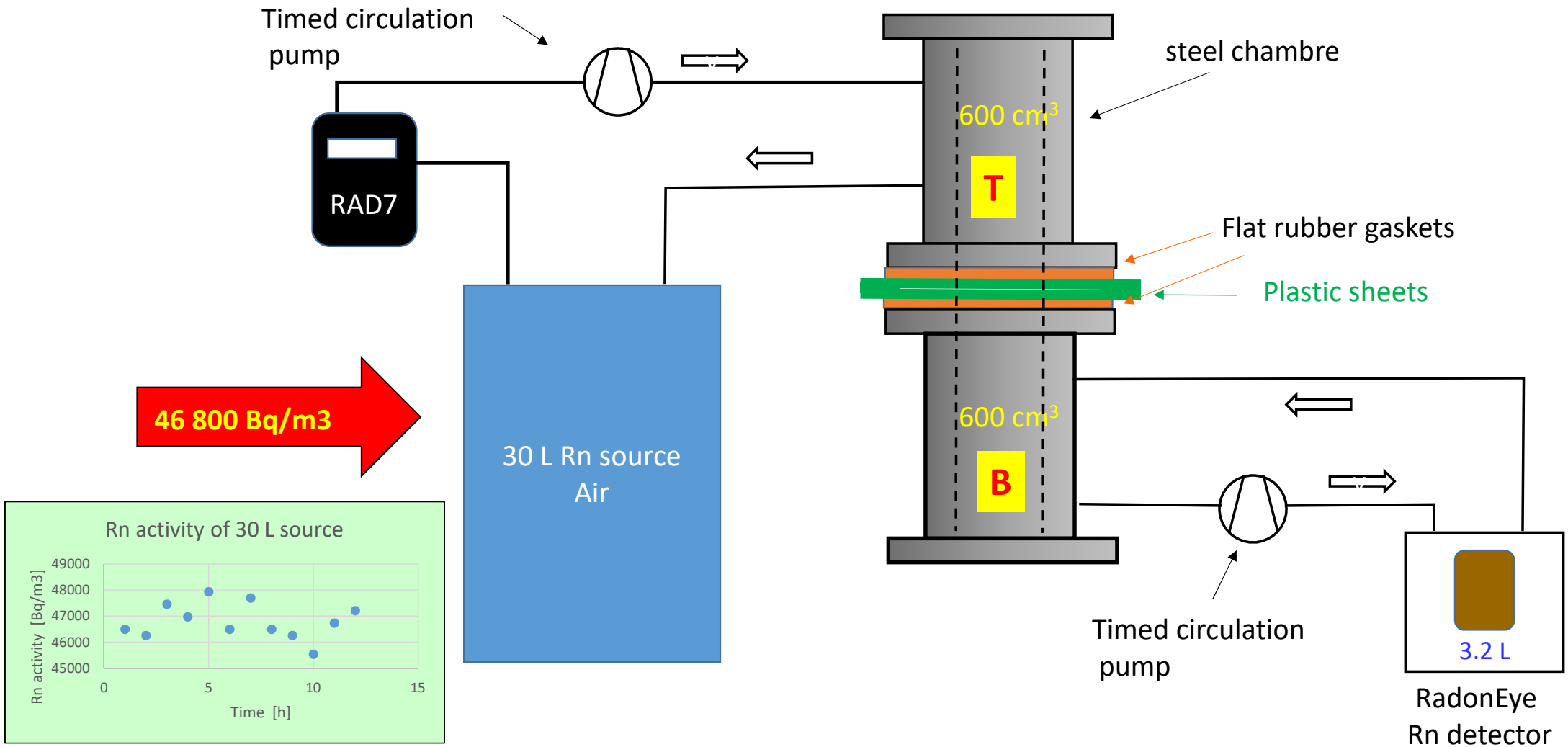
- Continuous monitoring of radon source (30 L air) => RAD 7 and LUCAS Cell
  → (46 800 Bq/m3) → Top chamber

- Continuous monitoring of radon in empty chamber → Botton chamber
  → Radon Eye commercial detector enclosed in 3.2 L container
  (20 Bq/m^3 background)

- Tight system : new soft rubber gaskets

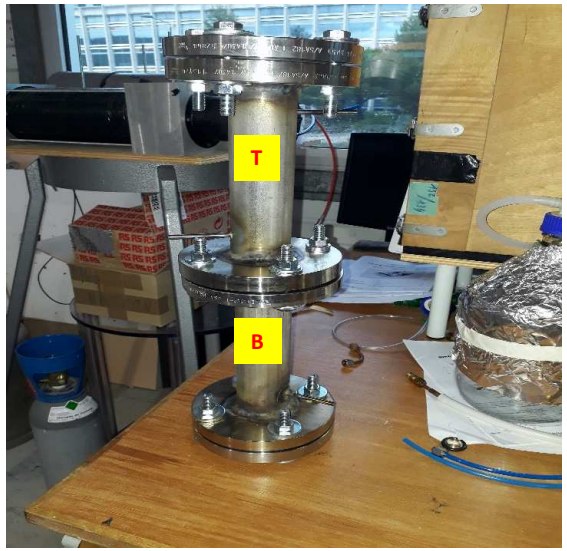
- Thermo welded multi sheets

Two 600 cm^3 chamber separated with plastic sheet

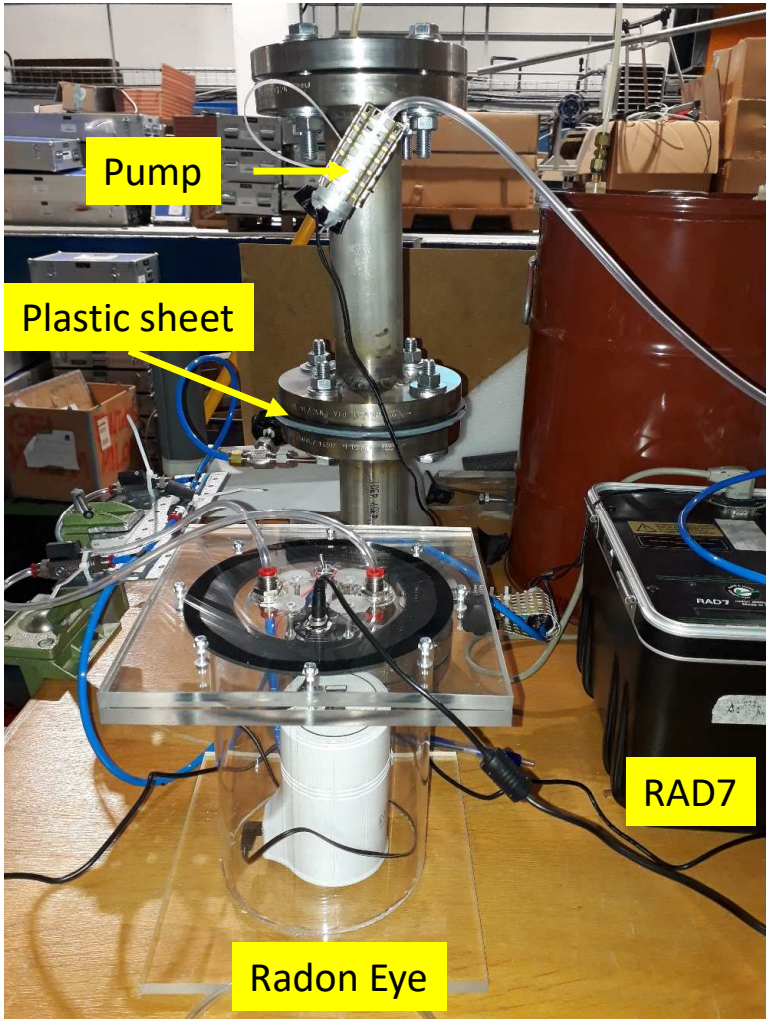


Single chamber

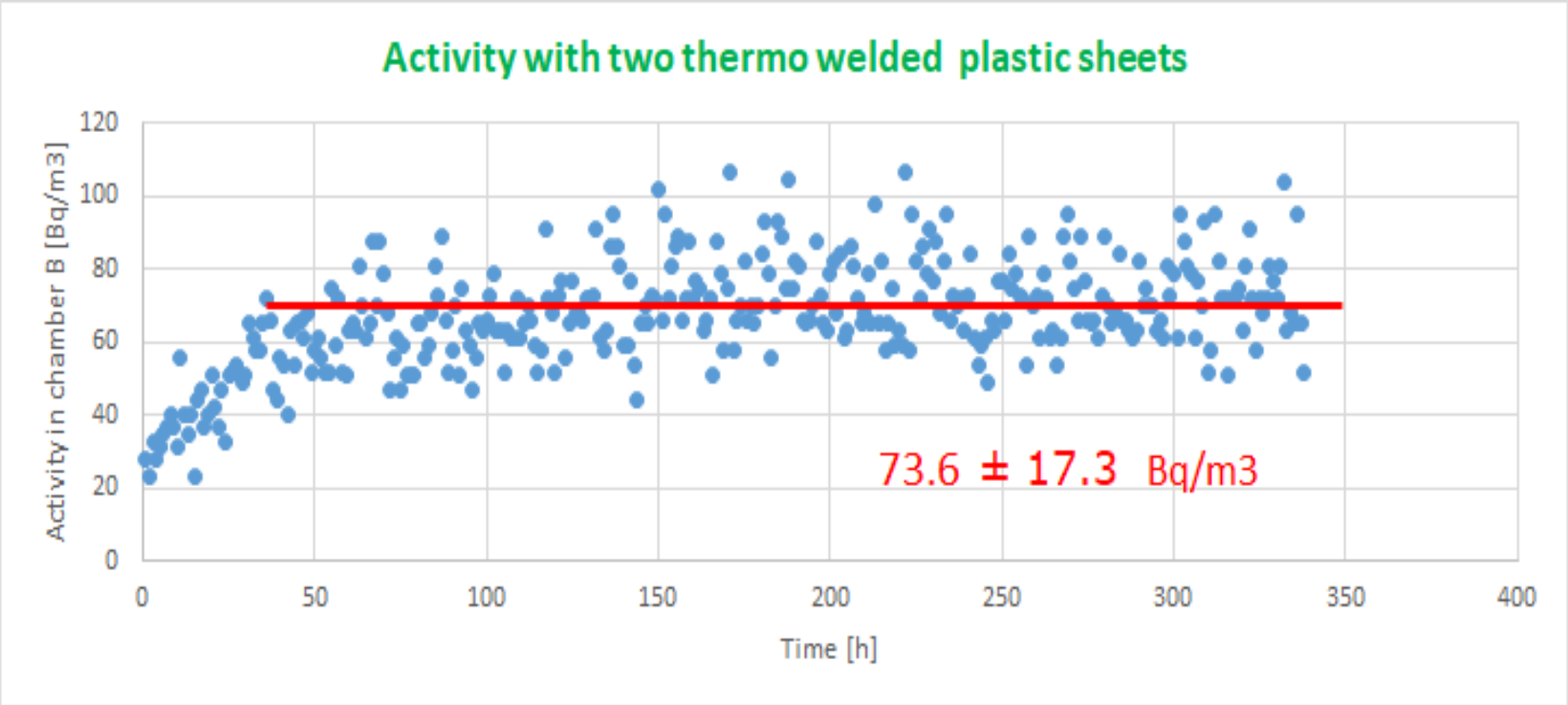
Bi-chamber



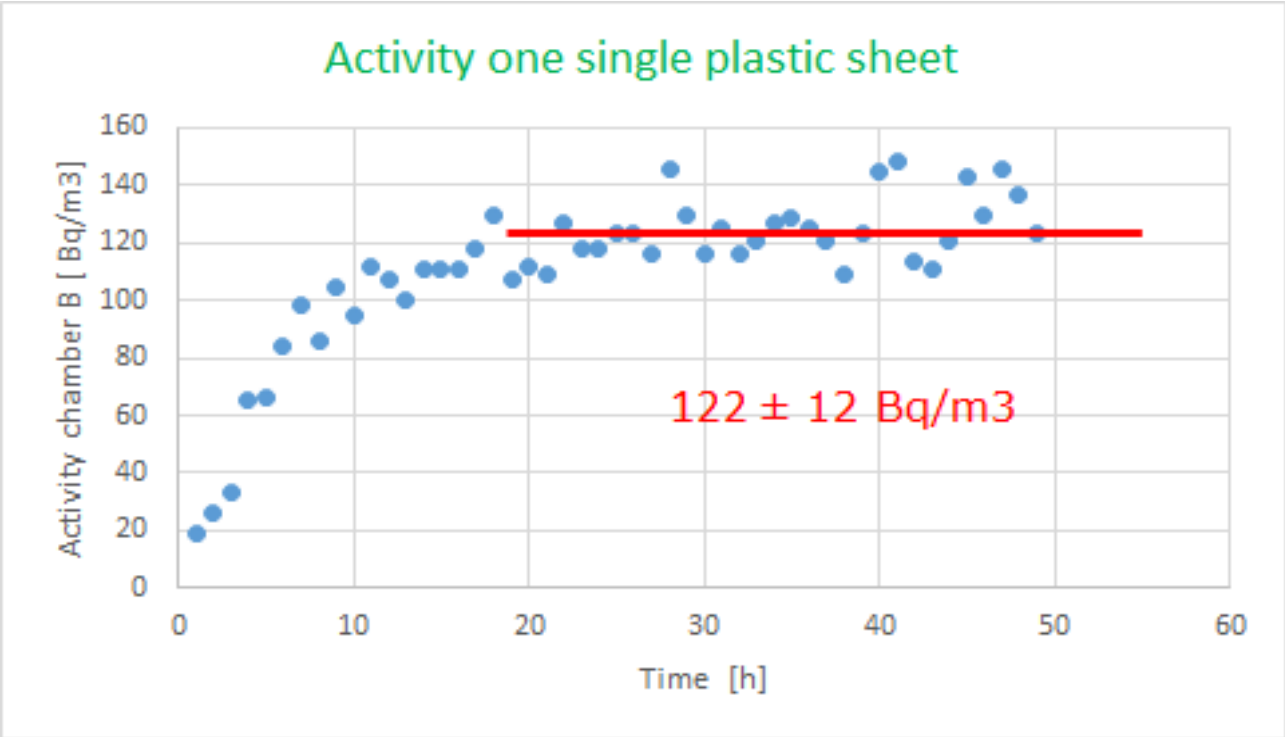
Experimental setup



Activity in botton chamber with 2 thermo-welded sheets



Activity in botton chamber and 1 single sheet



Radon transparency

$$\theta = \frac{Activity\ \ in\ the\ B\ chamber}{Activity\ in\ the\ A\ chamber}$$

- *Two sheets : θ = 7.25 x 10^{-3}*
- *One sheet : θ = 13.8 x 10^{-3}*

28 cm^2

In future => transparency for 3 thickness plastic sheet

END