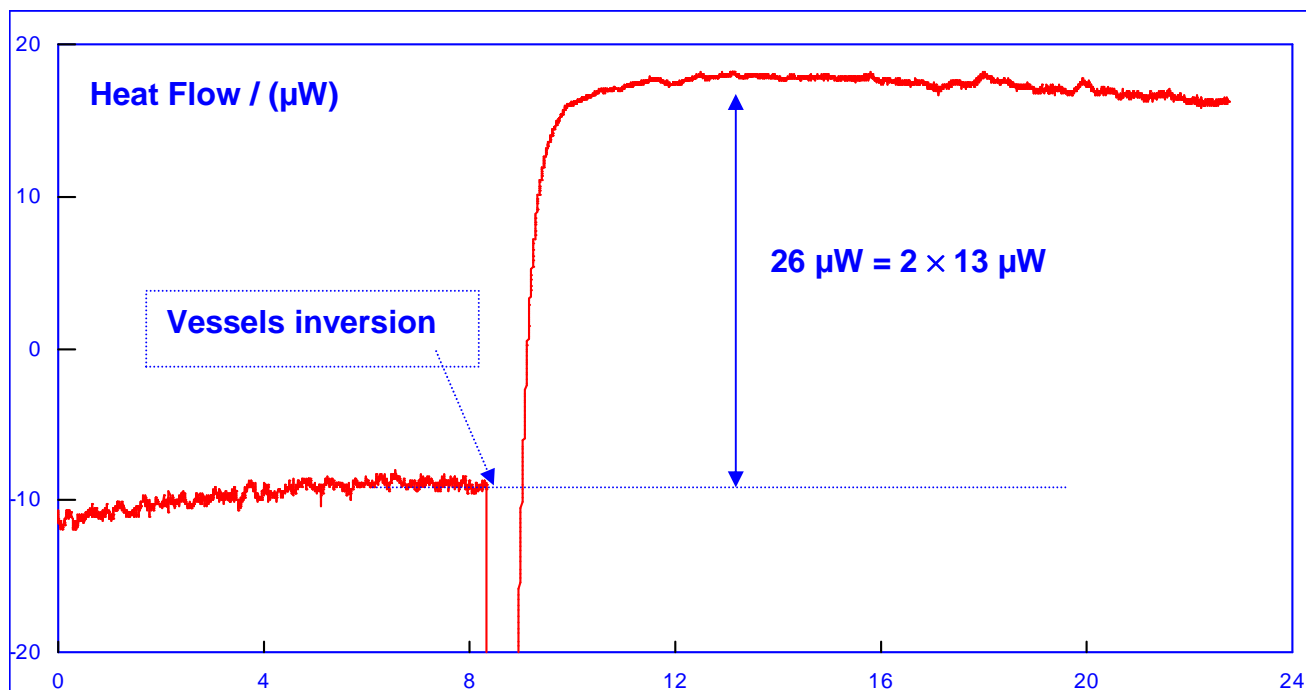


Self discharge of batteries



Experimental

- Standard vessel in stainless steel.
- Available space for the sample inside the vessel :
 - - diameter : 32.7 mm.
 - - height : 111.2 mm.
 - - volume : 93.3 ml.
- Sample : 6 watch batteries of Li-I type.
- Atmosphere : air
- Isotherm at 27.4°C during 24 hours.

Instrument MS80
 20°C to 200°C



Conclusion

- During the first 8 hours, the MS80 monitors the heat flow dissipated by the batteries. After this time, the two vessels (measure and reference) are inverted. After another 4 hours the heat flow is stable again.
- The deviation of heat flow before, and after the inversion ($26 \mu\text{W}$) is twice as high as the heat flow dissipated by the 6 batteries :

$$13 \mu\text{W} \quad (= 26 \mu\text{W} / 2)$$
- Each battery dissipates an average heat flow of $2.2 \mu\text{W}$ ($= 13 \mu\text{W} / 6$).

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