

MEC516/BME516: Fluid Mechanics I

Chapter 1: Introduction Vapor Pressure

All the course videos and pdf downloads at:
www.drdauidnaylor.net



**Toronto
Metropolitan
University**

Department of Mechanical
& Industrial Engineering

Chapter 1 Quiz Question

- Research assistant to check the calibration of a thermocouple by boiling water
- Day 1: Measured 100 °C
- Day 2: Measured 99.4 °C

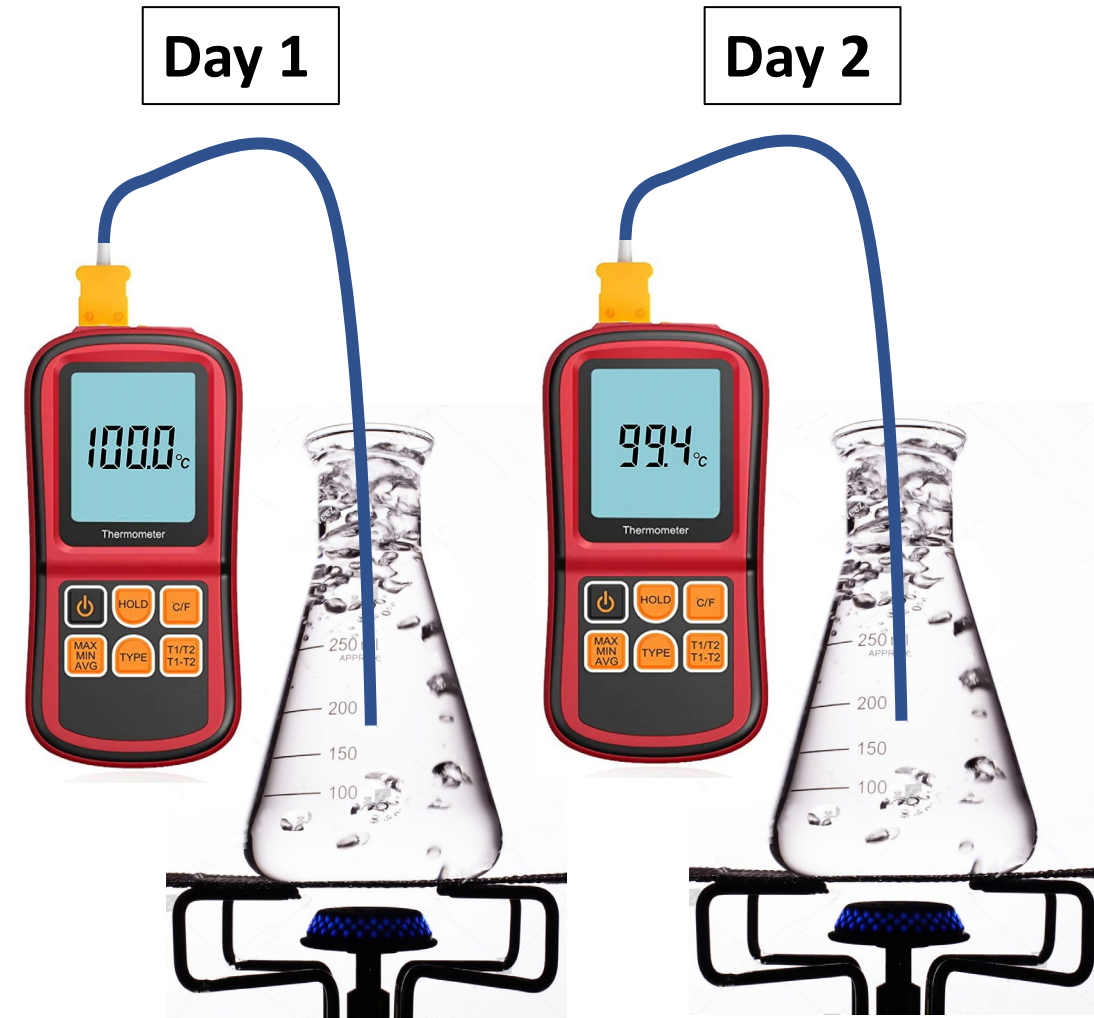


What likely caused the poor “repeatability”?

Ans. (a) A change in the boiling point of water

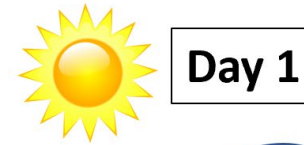
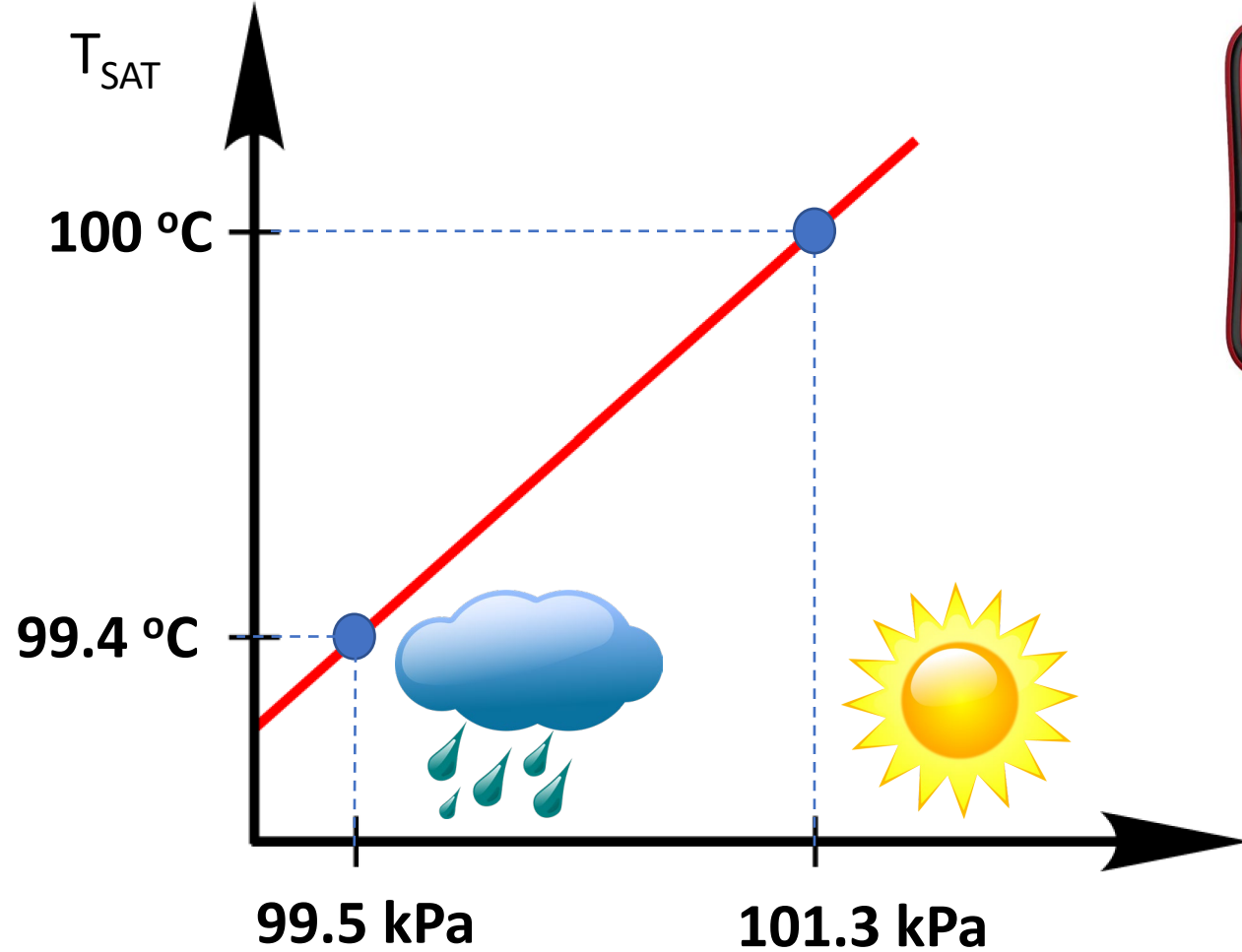
(b) Must be a poor-quality instrument

(c) A change in the room temperature



Effect of Atmospheric Pressure

Boiling Point
of Water



Day 1



Day 2

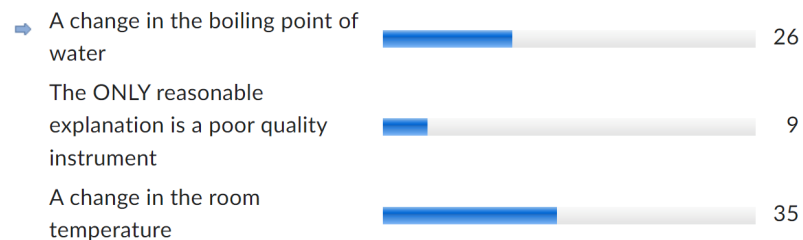


Question 7

A student wants to calibrate a thermocouple. So, she boils water in an open beaker and measures the liquid temperature as 100.0 °C. A few days later she repeats the measurement with exactly the same physical setup, the same instrument, in the same location. This time she gets 99.5°C. What could cause this poor "repeatability" of the measurement?



Average Grade: 37%

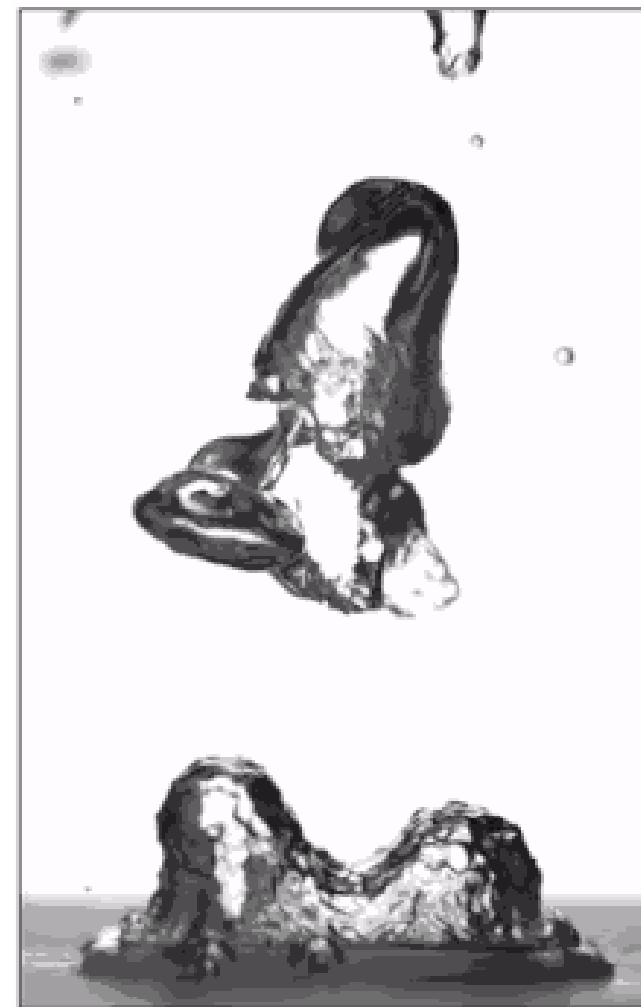


END NOTES

- All the videos (and pdf downloads) for this course available at: www.drdauidnaylor.net
- Presentation prepared and delivered by Professor David Naylor

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Boiling on a superhydrophobic surface

GIF Credit: Purdue University
<https://www.purdue.edu>