

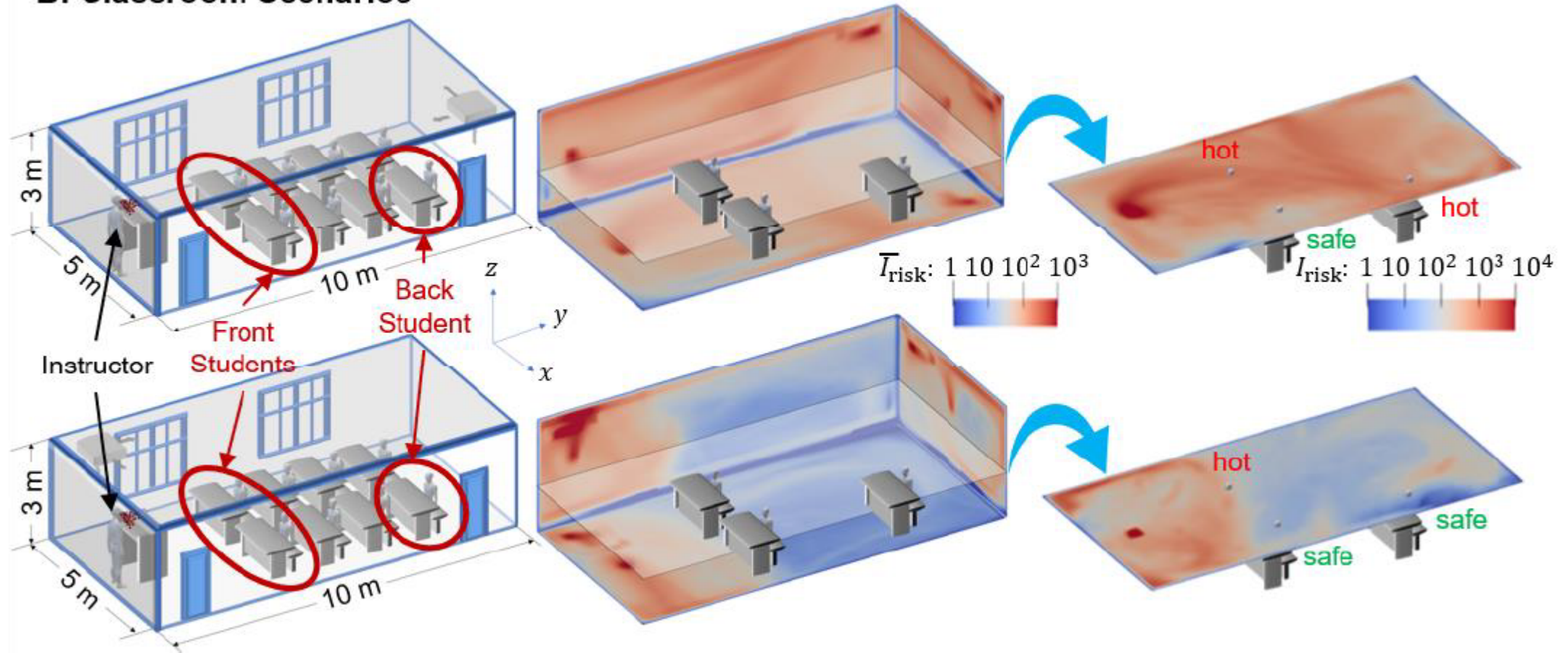
Question

- What about the news story last night about aerosols traveling to the back of a classroom where the air vents are located- traveling from the teacher across all of the students?

Risk assessment of airborne transmission of COVID-19 by asymptomatic individuals under different practical settings

- Aim: Quantify the exhaled particles from normal respiratory behaviors and their transport under elevator, small classroom, and supermarket settings to evaluate the risk of inhaling potentially virus-containing particles
- Methods: *Simulation study* using 8 volunteers
- Link to Study:
<https://arxiv.org/ftp/arxiv/papers/2007/2007.03645.pdf>

B: Classroom Scenarios



A small classroom setting with a simulated asymptomatic instructor and the ceiling ventilation system located in the back and front of the classroom

- Results: The design of ventilation is critical for reducing the risk of particle encounters
- Inappropriate design can significantly limit the efficiency of particle removal, create local hot spots with orders of magnitude higher risks, and enhance particle deposition causing surface contamination