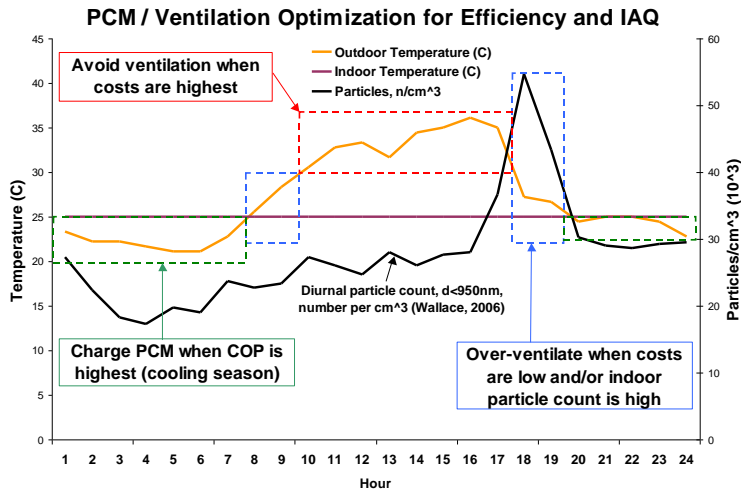


# Building Thermal Systems - PCM Integration and Ventilation Management

Steve Bourne

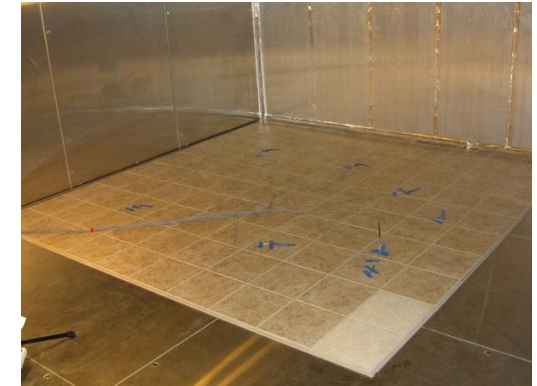
- Develop models/guidelines for:
  - Incorporating PCMs into building elements
  - Intelligent, time-based ventilation management
- Goals:
  - Shift peak energy use
  - Minimize HVAC energy costs



PCM and ventilation optimization requires temporal consideration for both IAQ and external environmental conditions.



Extensive University of Texas thermal test facilities, including the thermal test chamber at the Pickle Research Center and the thermal façade test chamber at the School of Architecture, allow for testing and validation of both PCM and ventilation models.



Incorporating PCM-based thermal storage directly into building components - such as drywall, flooring, or architectural panels - can reduce peak energy use by shifting demand to off-peak hours.

