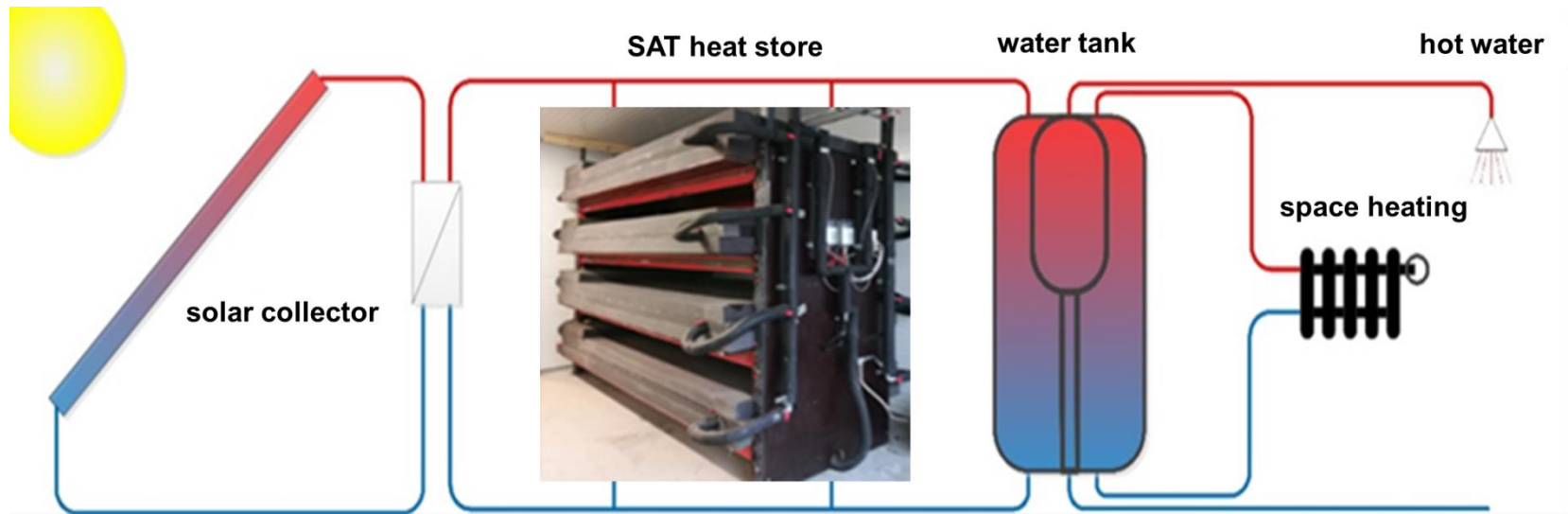


COMBINED SHORT- AND LONG-TERM HEAT STORAGE WITH SODIUM ACETATE TRIHYDRATE FOR SOLAR HEAT SUPPLY IN BUILDINGS



$$\frac{\partial T}{\partial t} = \frac{\lambda}{\rho c_p} \frac{\partial^2 T}{\partial x^2}$$

$$\int_a^b \epsilon \Theta^{\sqrt{17}} + \Omega \int \delta e^{i\pi} = -1$$

{2.7182818284} ∞ ∑ >> ≈ λ

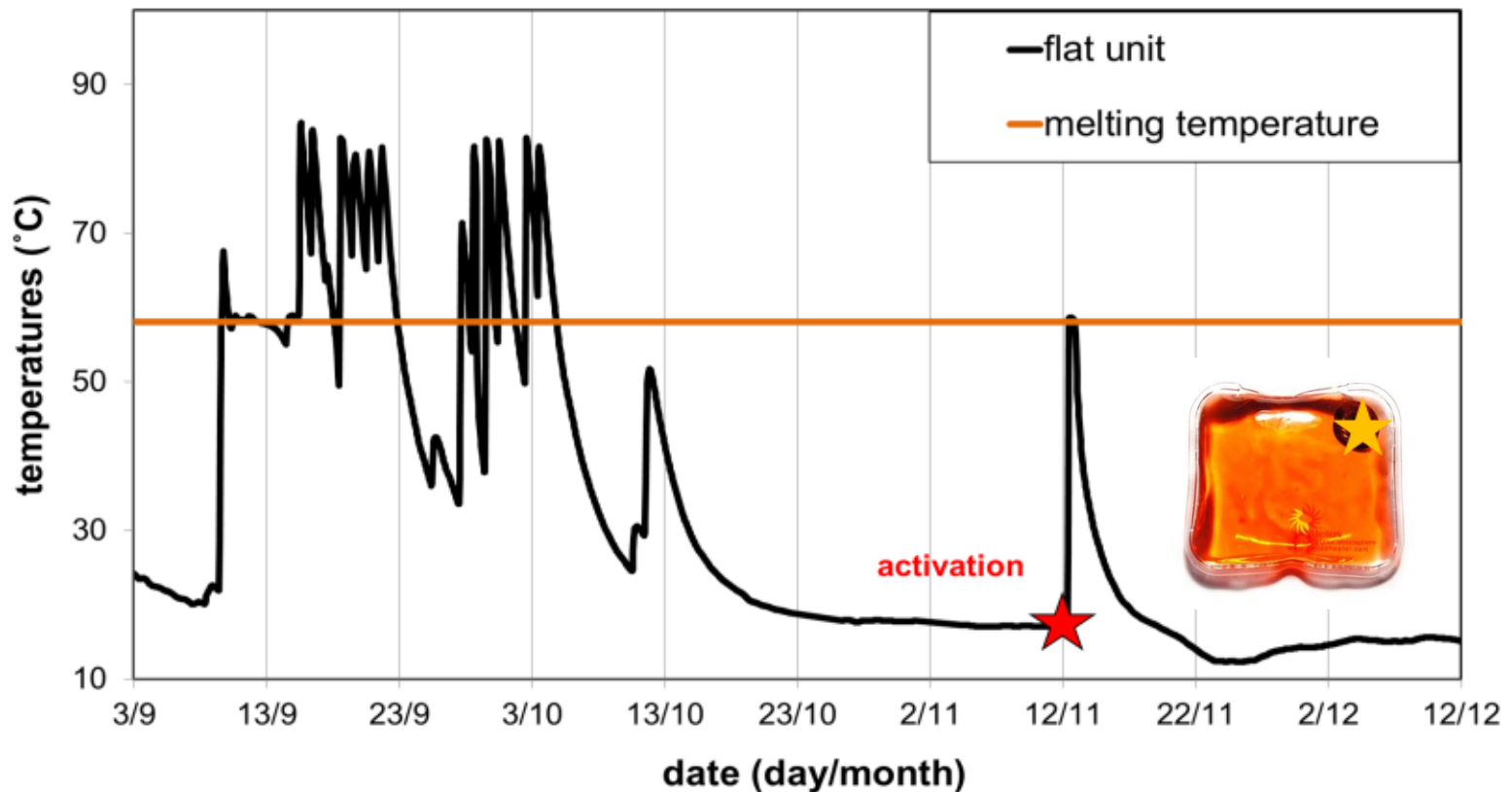
Gerald Englmaier¹

Christoph Moser², Simon Furbo¹, Hermann Schranzhofer², Jianhua Fan¹

¹Technical University of Denmark

²Graz University of Technology

System demonstration: proof of concept



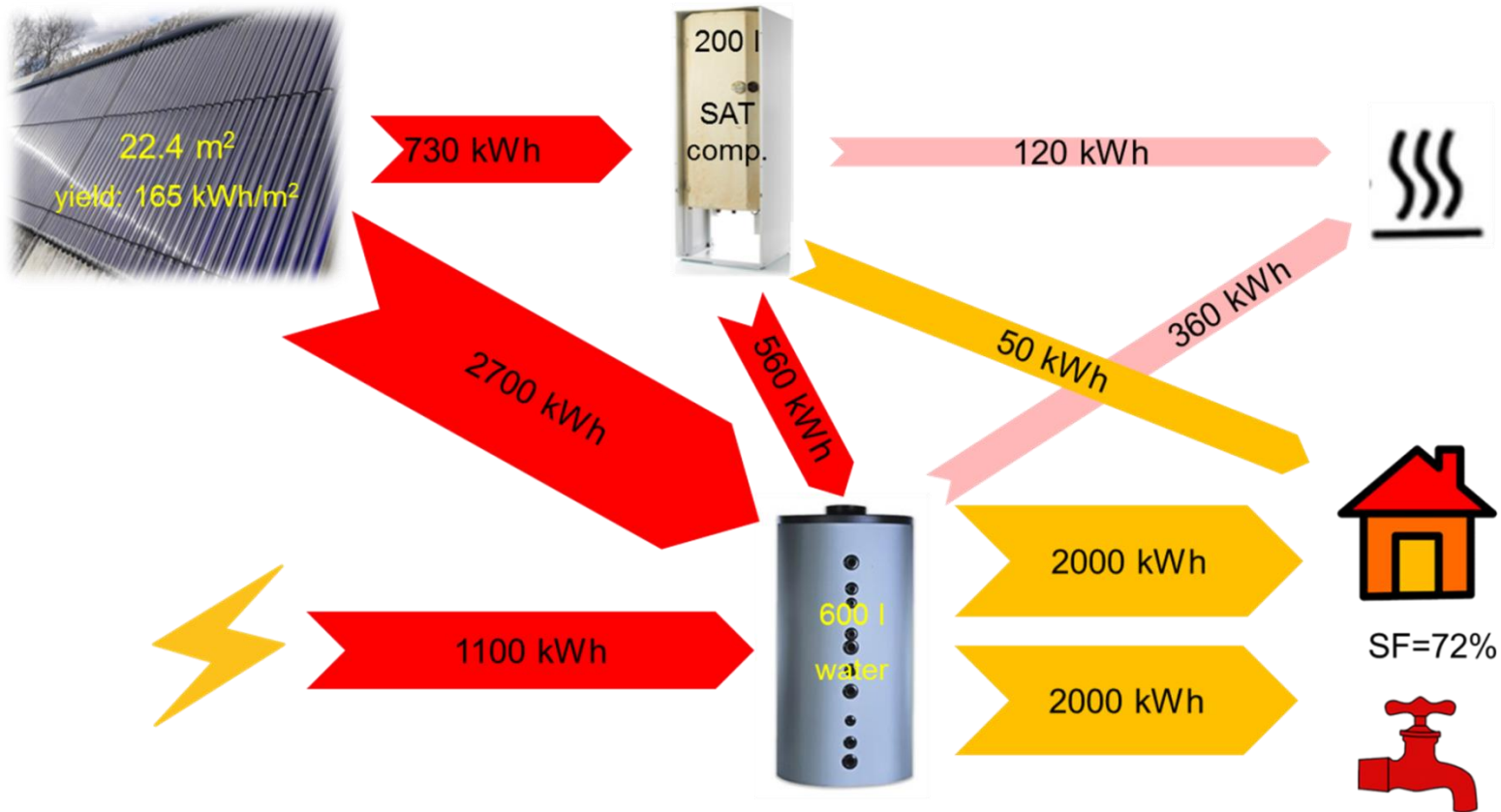
1 unit with 150 l SAT :

Full heat capacity: 27 kWh (20°C → 90°C)

Short term: 16 kWh (90°C → 20°C)

Long term: 11 kWh (58°C → 20°C)

Numerical simulation (location: Denmark)



Yearly heat flux (**supply**, **demand**, **loss**) in the solar combi-system



Flat unit design



Inexpensive design



Thank you for your attention!

Gerald Englmair

Email: gereng@byg.dtu.dk

DTU Civil Engineering
Department of Civil Engineering

Acknowledgements:

We would like to thank our partners at NILAN A/S
for the good collaboration.

The work was supported by the Sino Danish
Center (SDC) for Education and research.