Chair of Building Systems
Prof. Hansjürg Leibundgut

Technologien für emissionsfreie Gebäude

Prof. Dr. Hansjürg Leibundgut

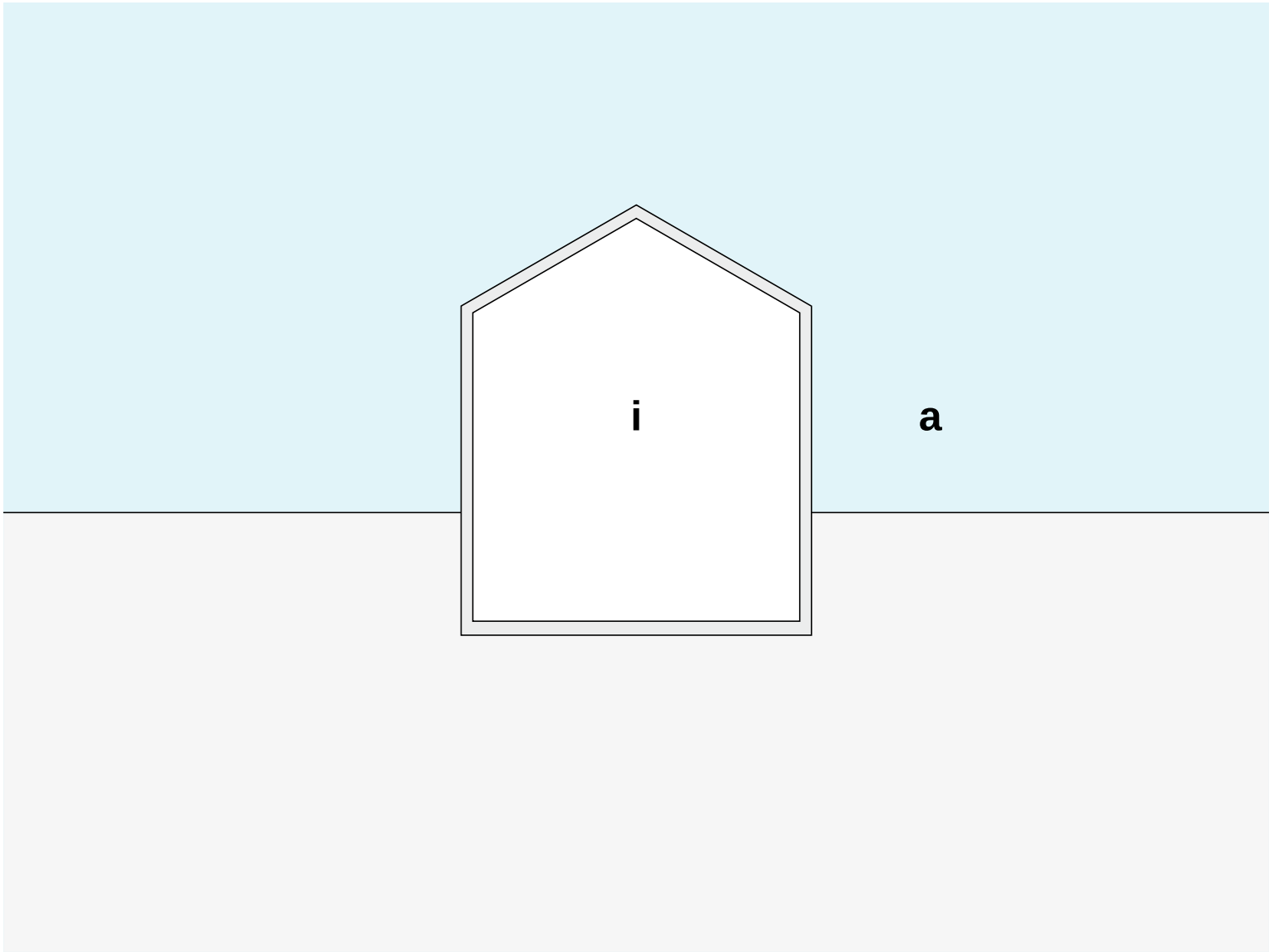
Zukunftsstädte: Technologie, Gesellschaft und Akteure des Wandels

13. September 2012

/ ITA
Institute of Technology in Architecture
Faculty of Architecture / ETH Zürich

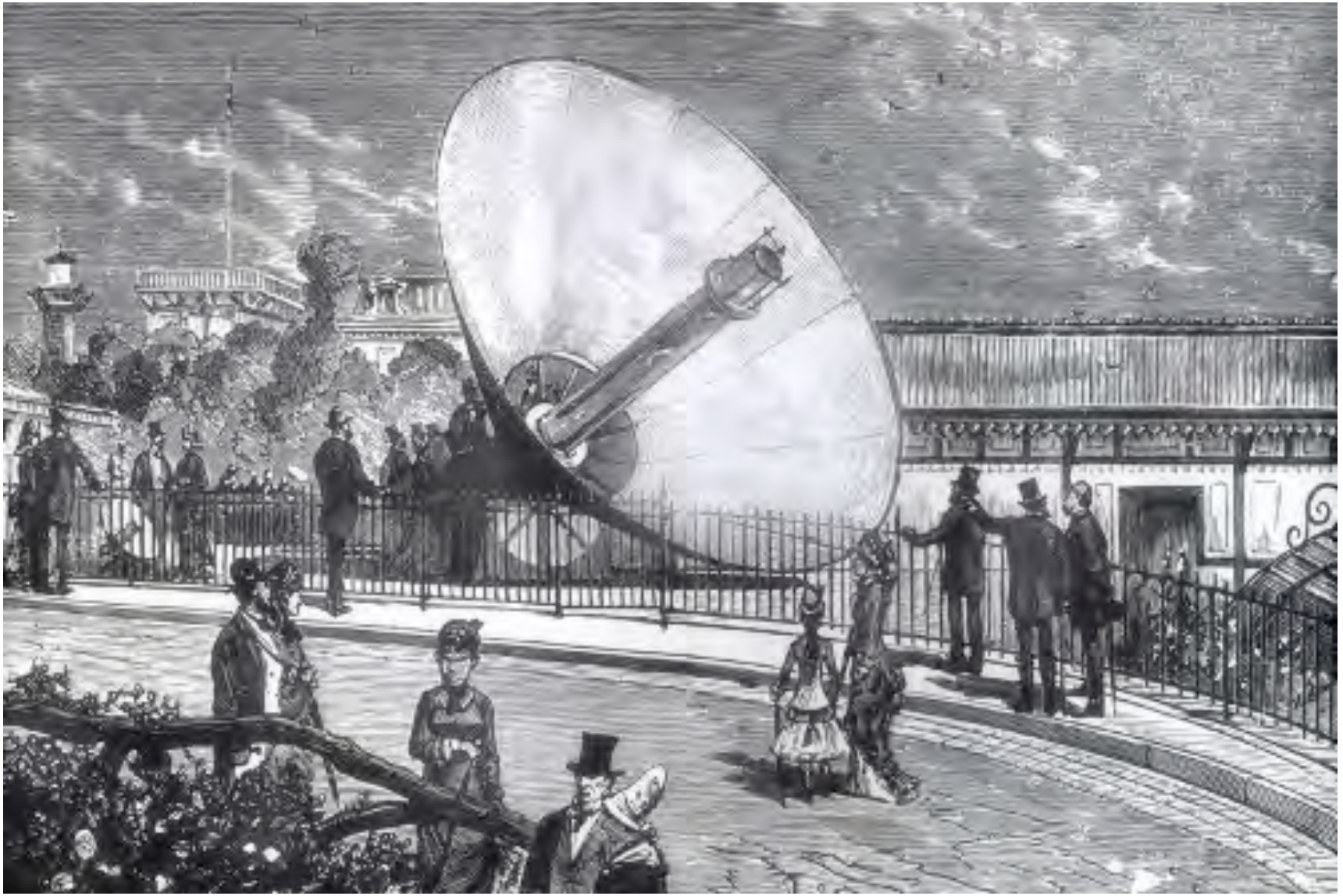
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Innenraum/Aussenraum



Holz als Energiespeicher

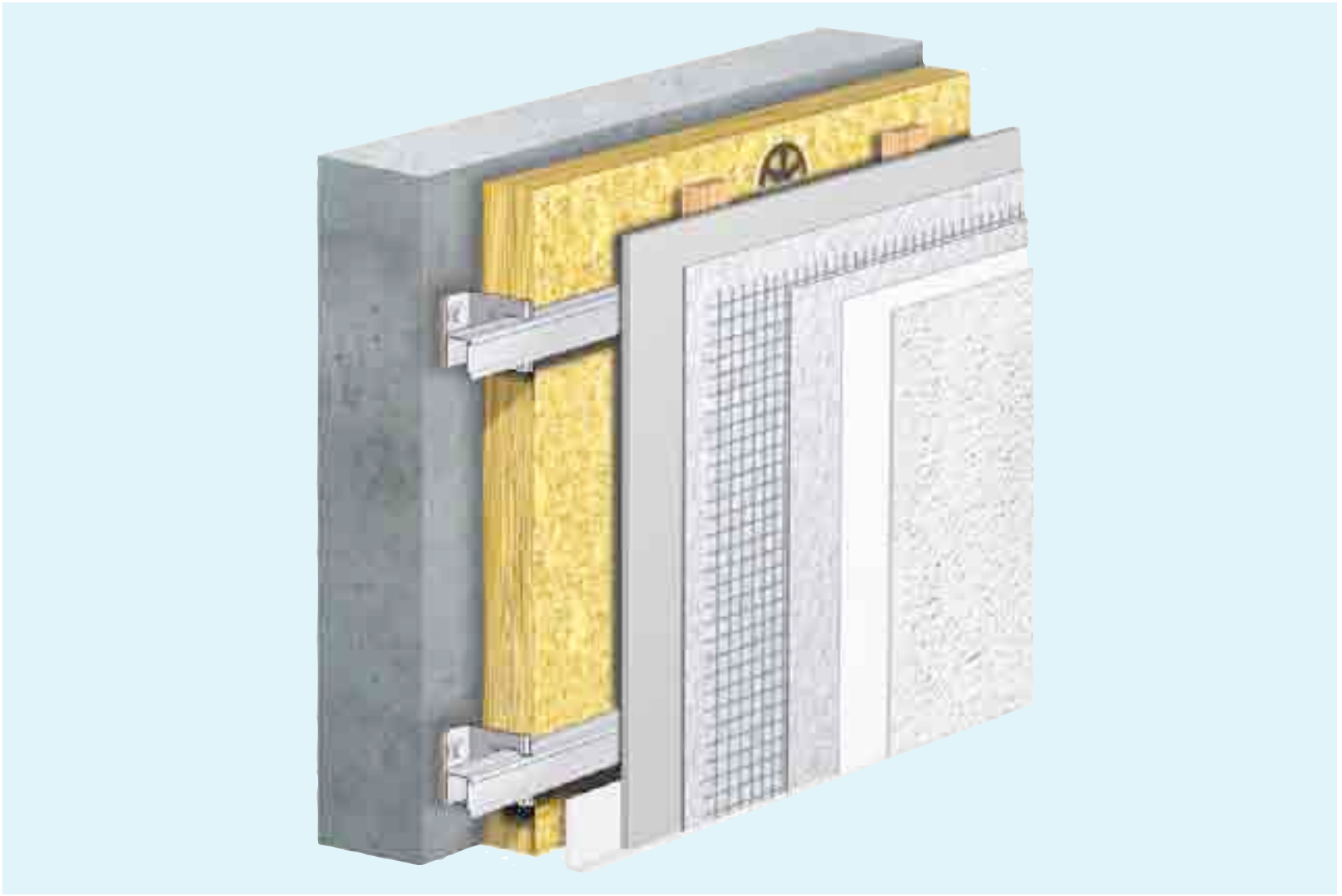
Solarer Dampferzeuger von A. Mouchot auf der Pariser Weltausstellung 1878



Wohnhaus im 19. Jahrhundert

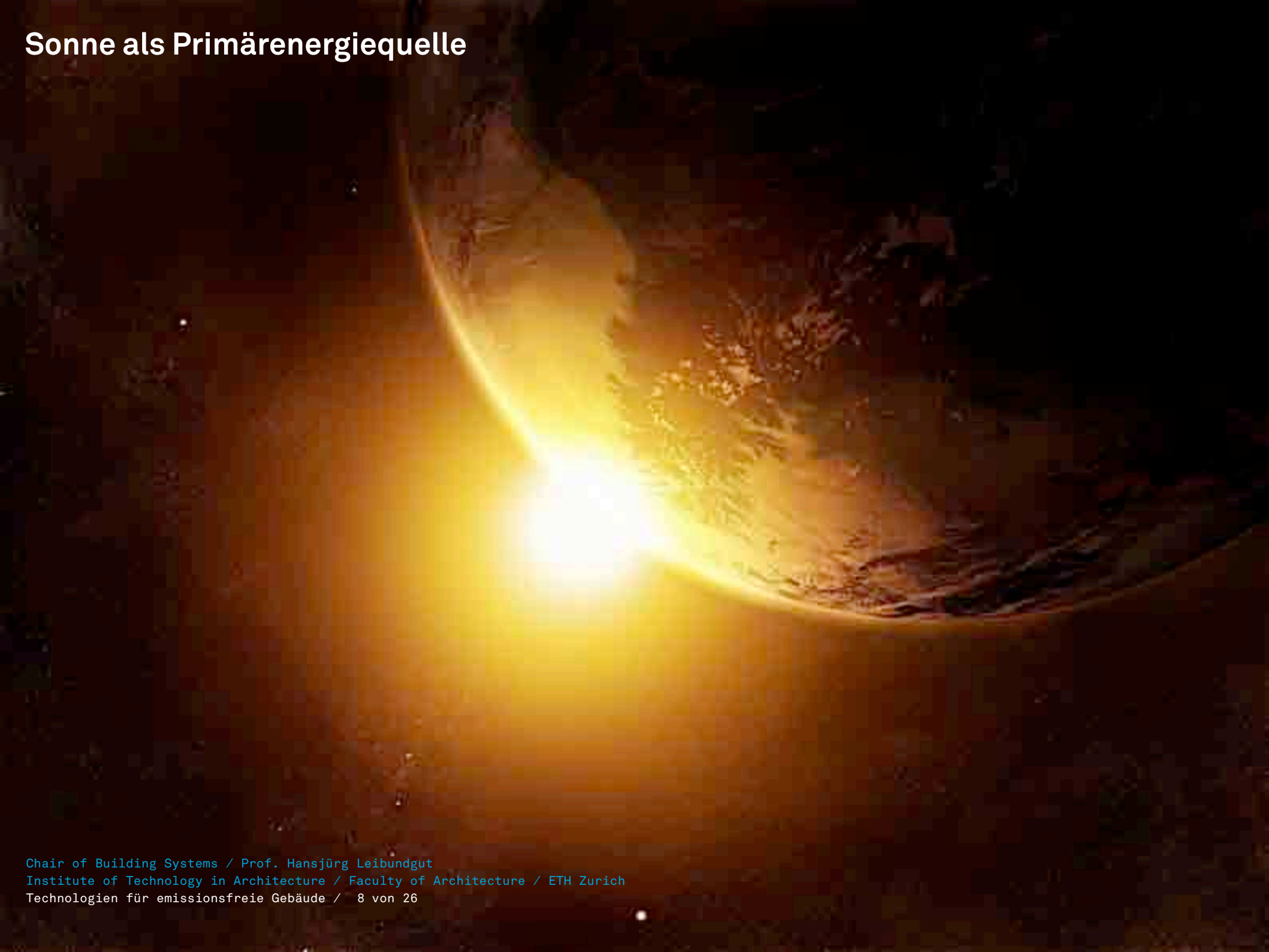
Wohnhaus der Moderne

Hochgedämmte Fassade

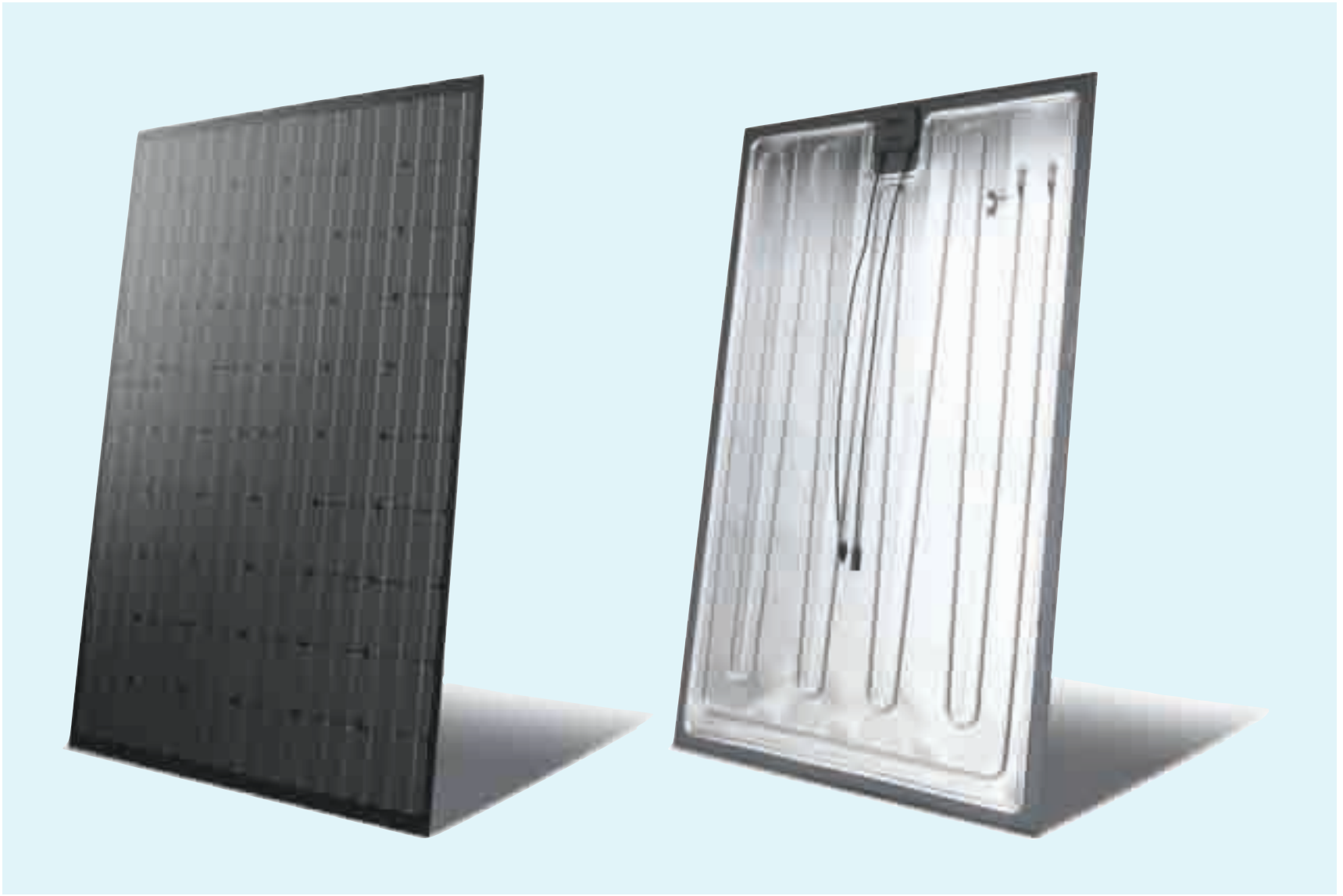


«Grünes Dach»: Wald als Solarspeicher

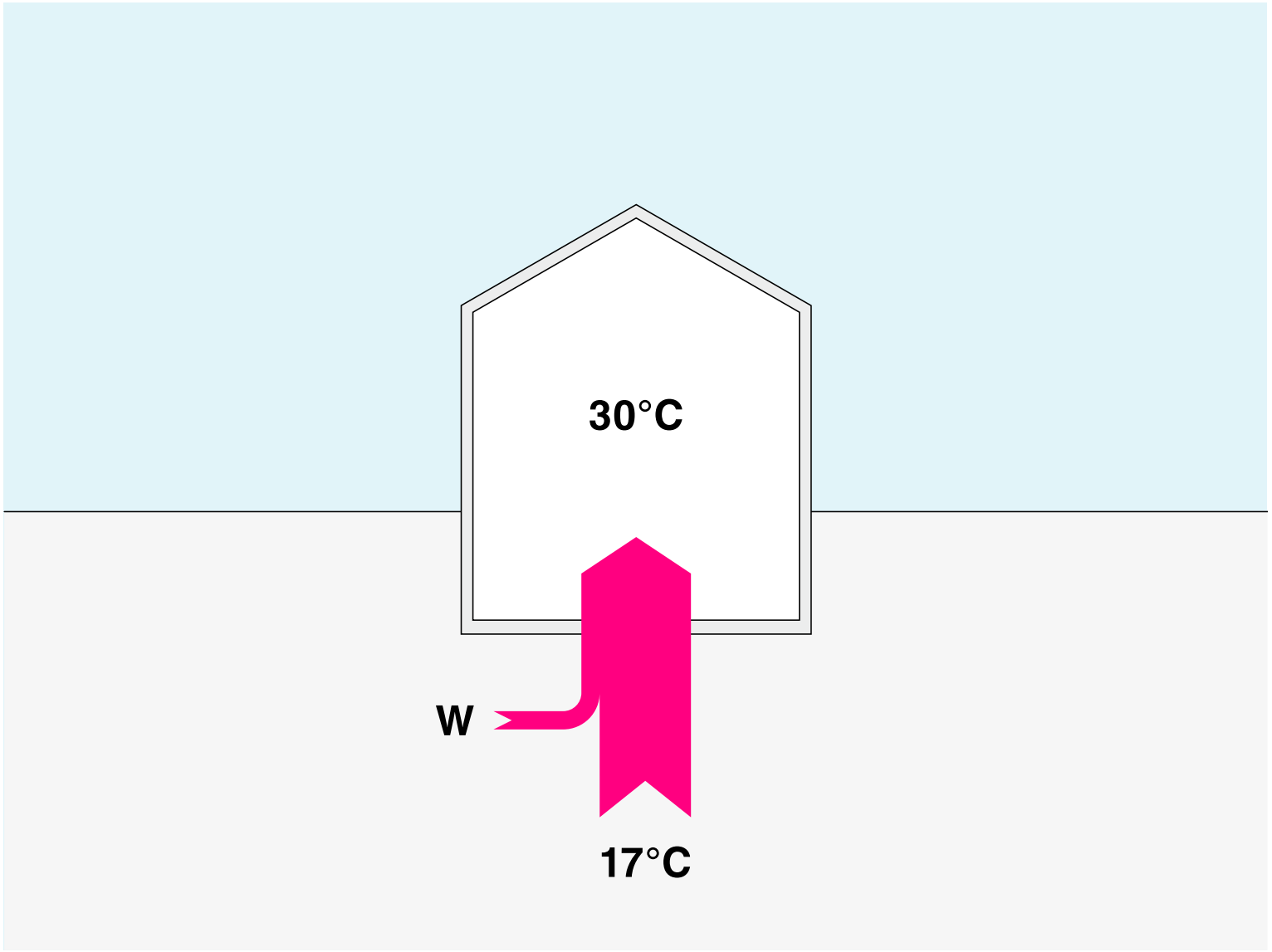
Sonne als Primärenergiequelle



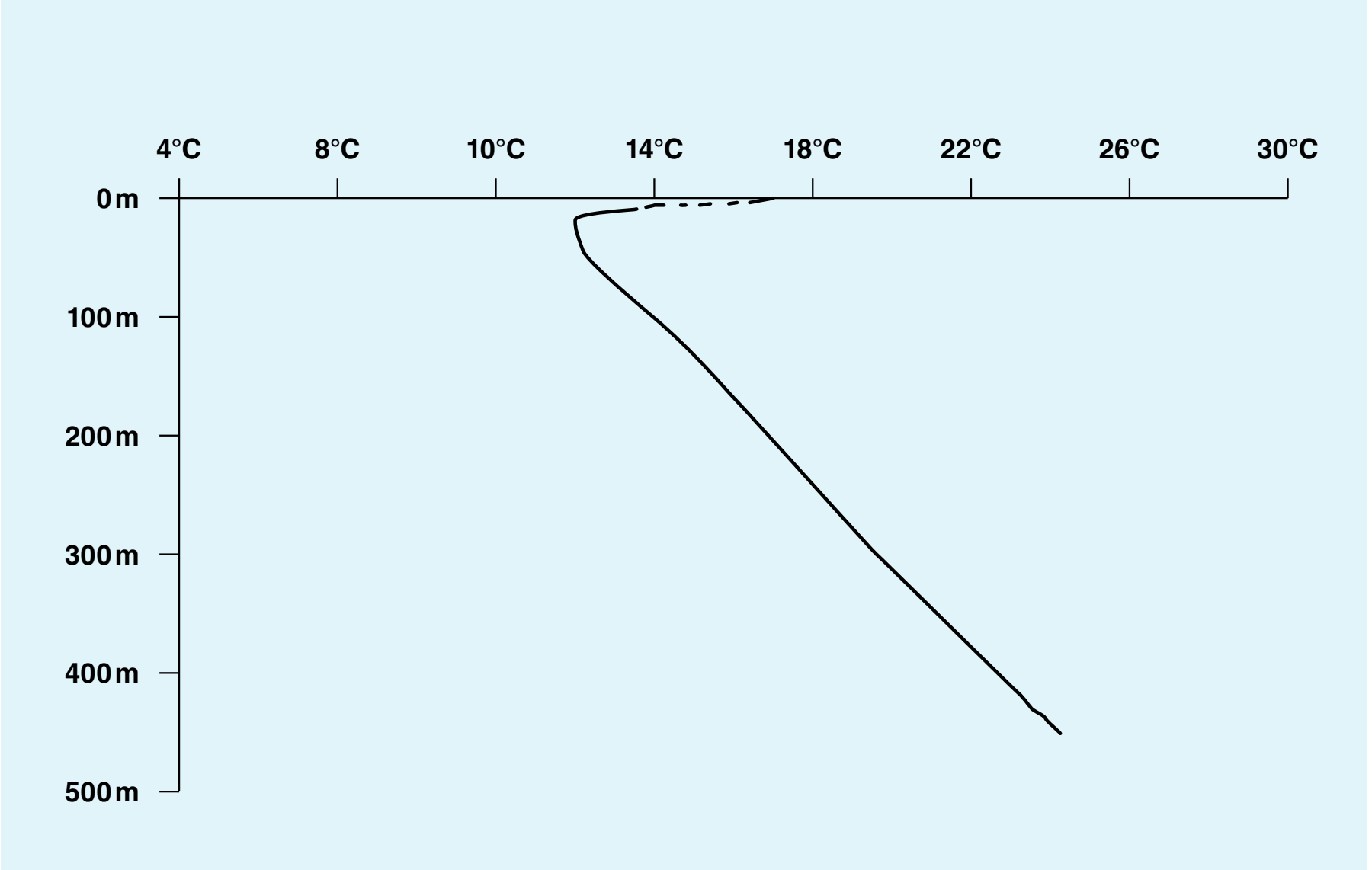
Hybridkollektor



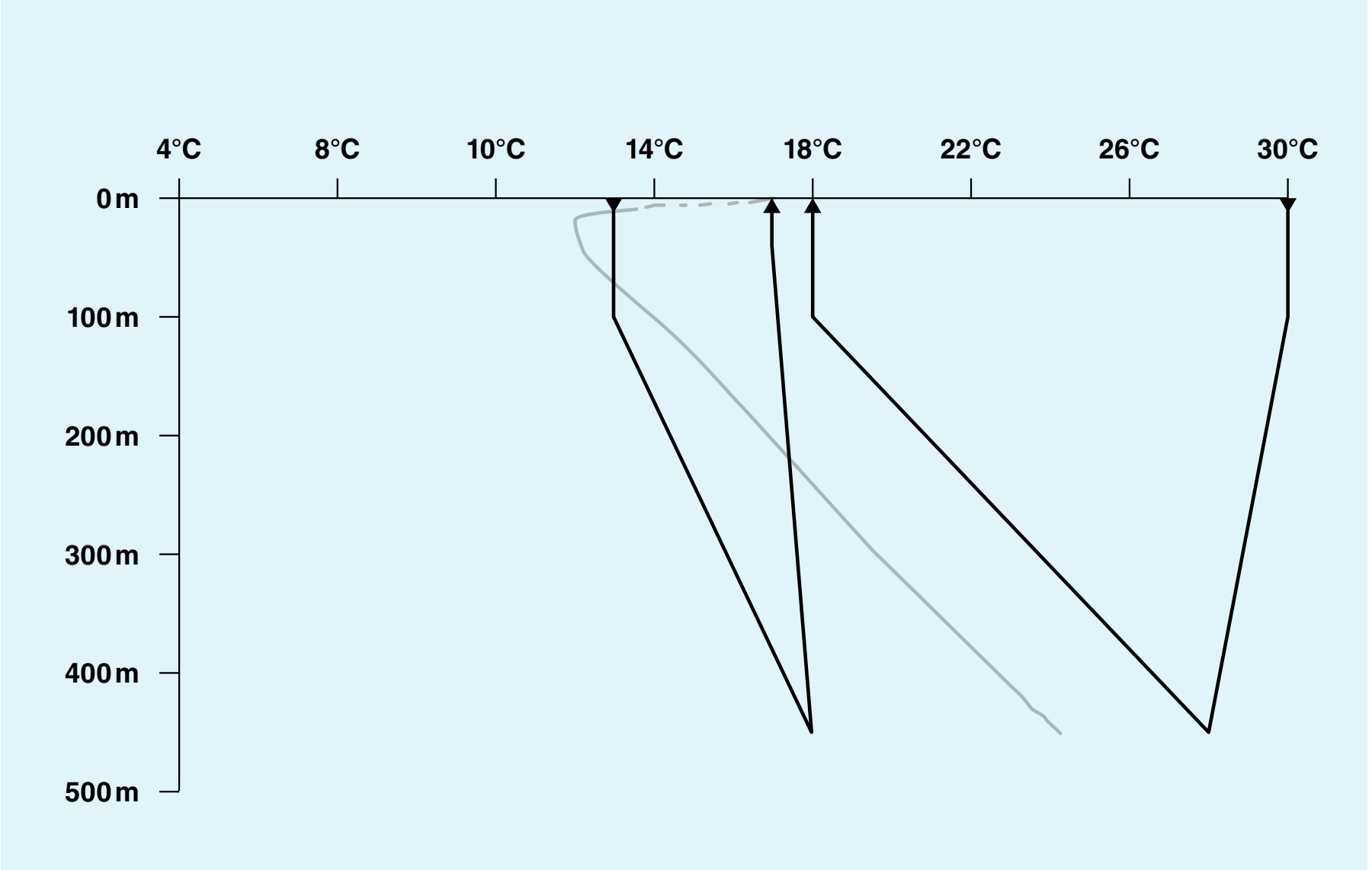
Schema Wärmepumpe



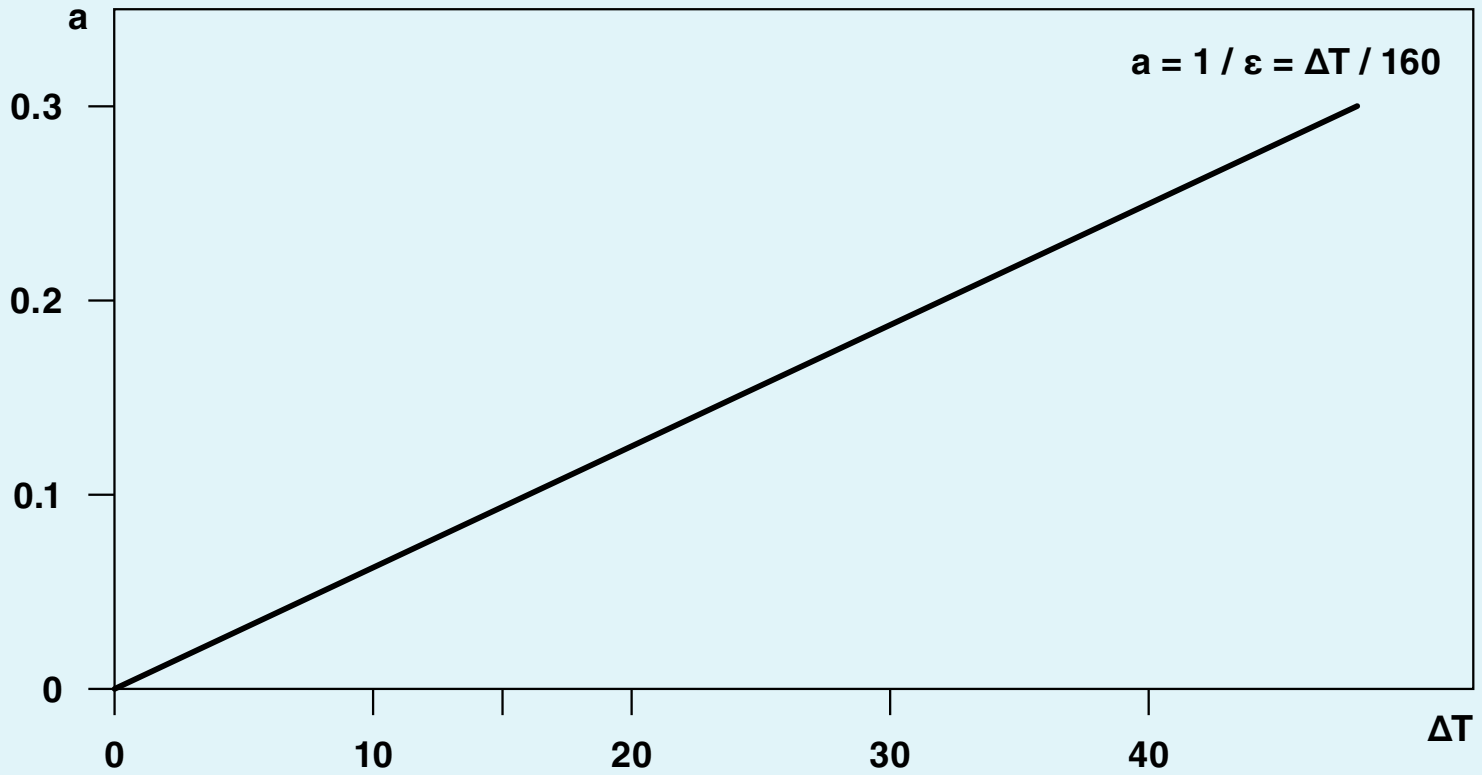
Temperaturprofil im Erdreich



Laden und Entladen des Erdspeichers

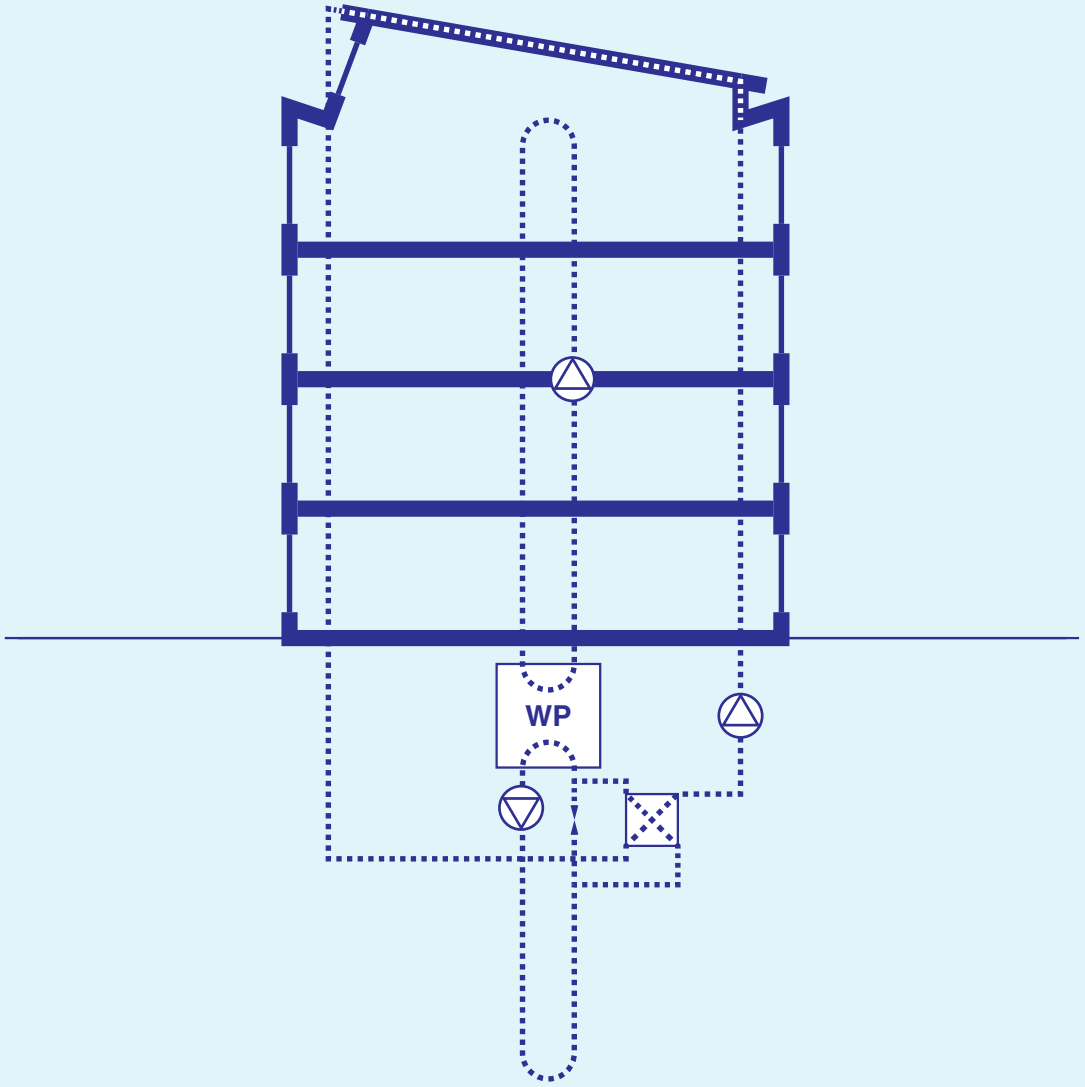


Stromanteil der WP

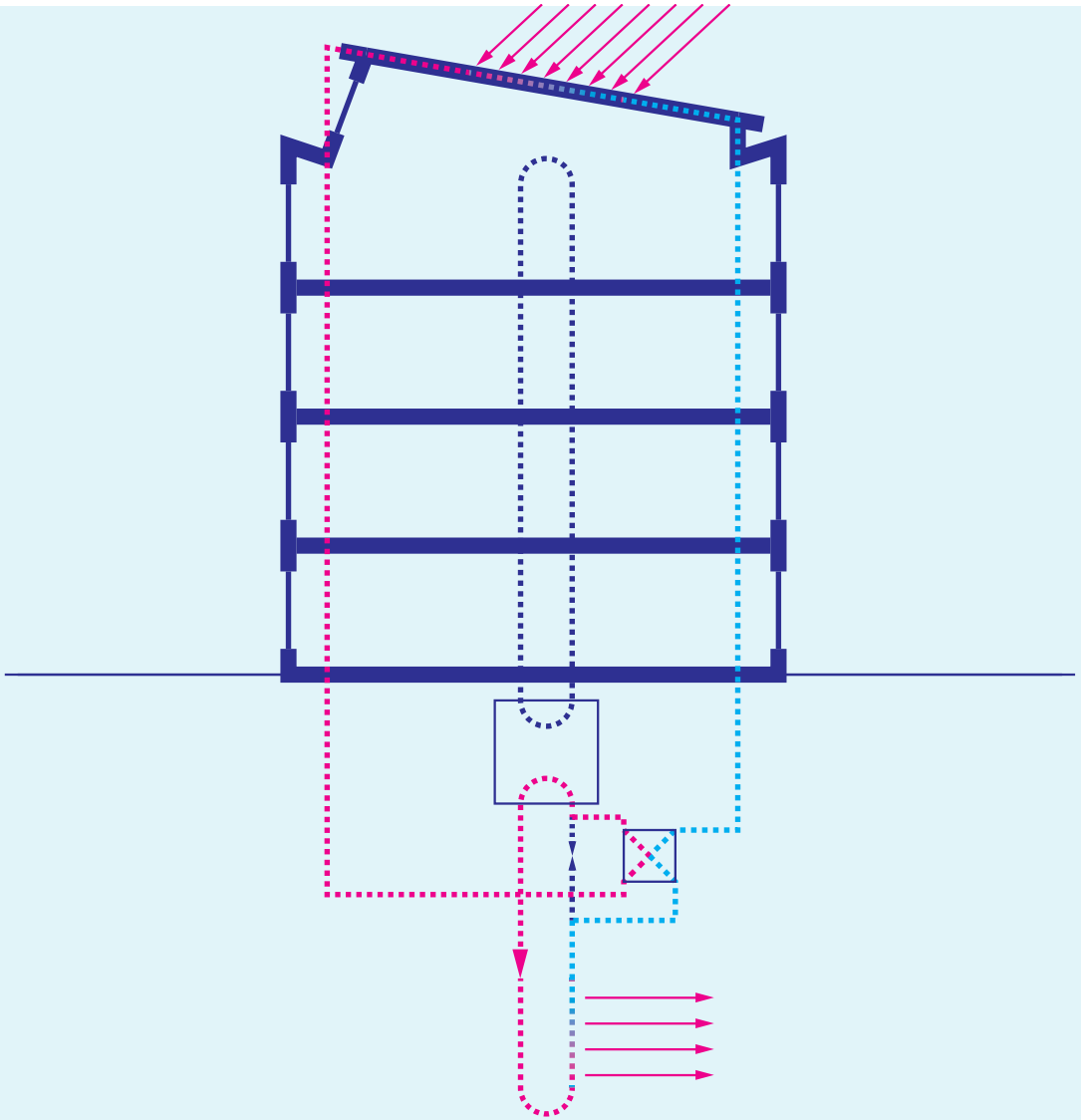


Sol²ergie (Energie solaire avec stockage au sol)

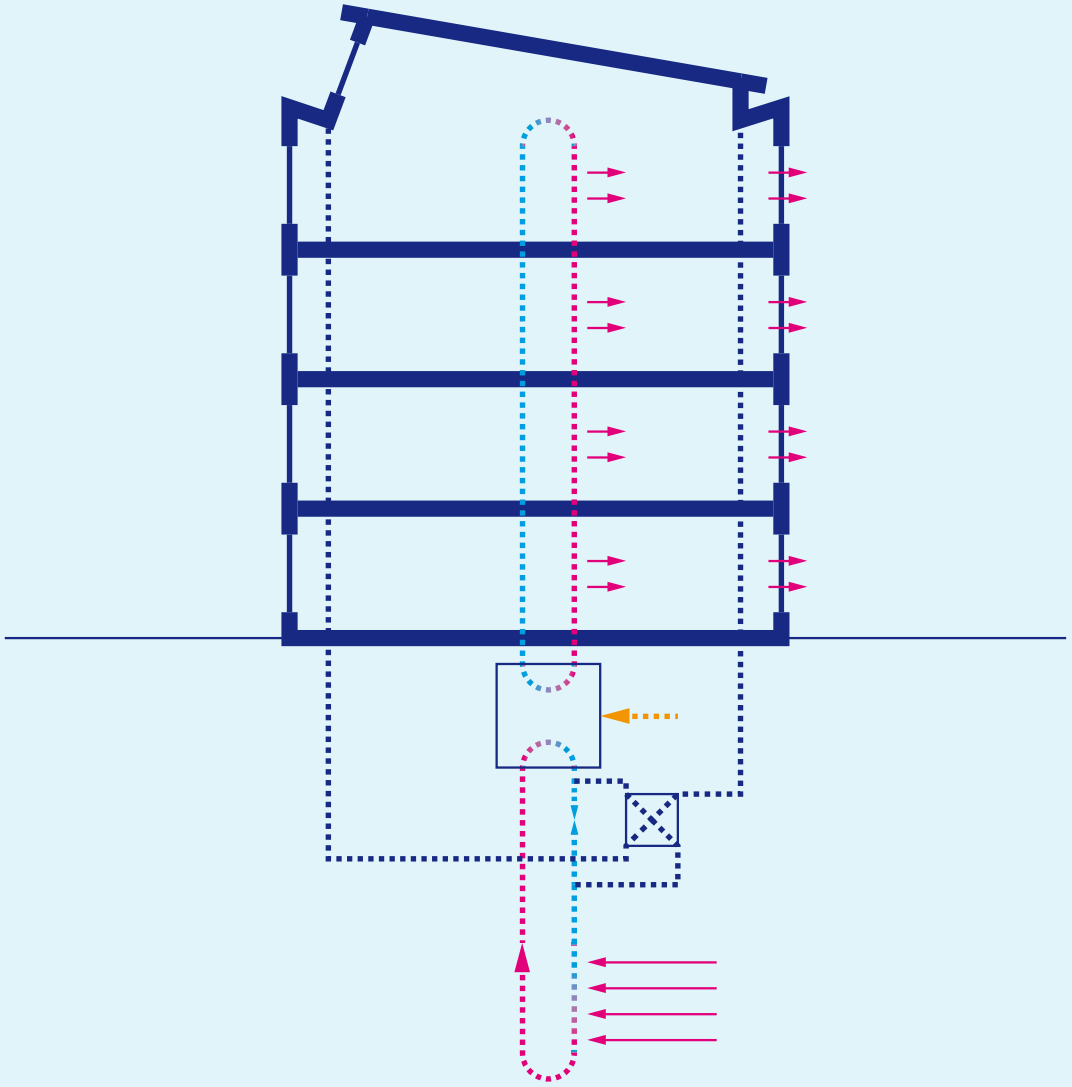
Sol²ergie: System

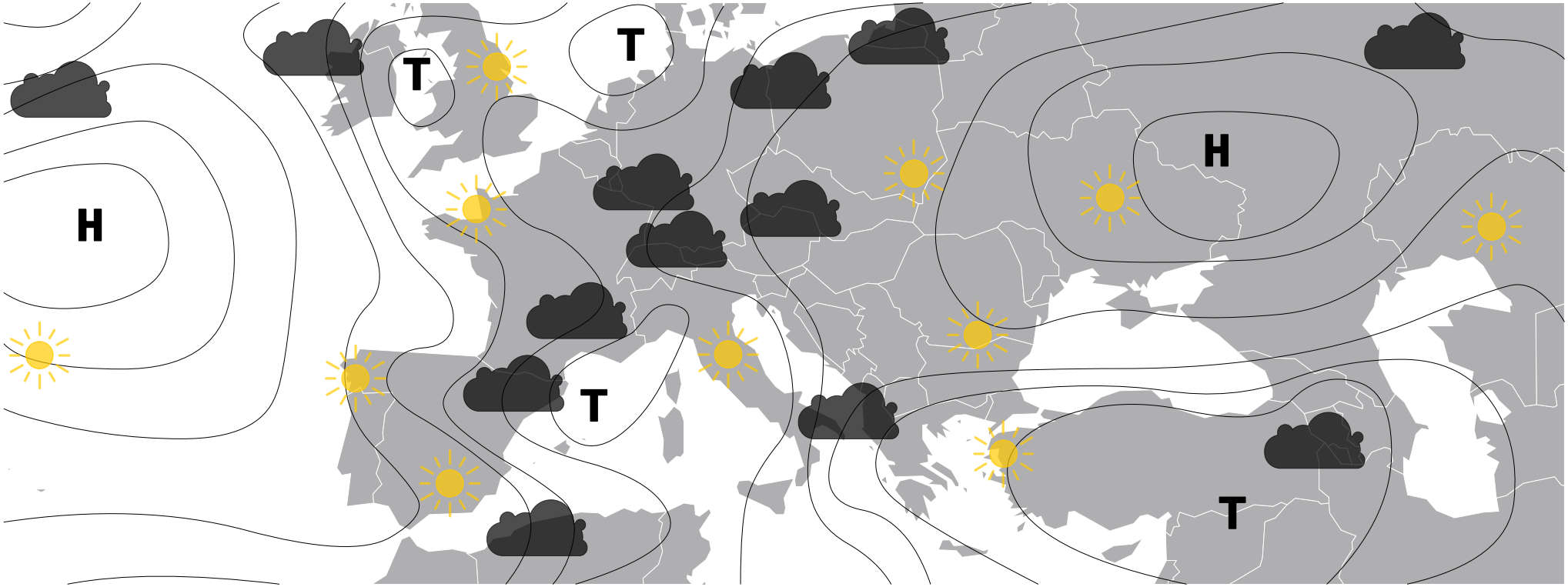


Sol²ergie: Beladen



Sol²ergie: Entladen

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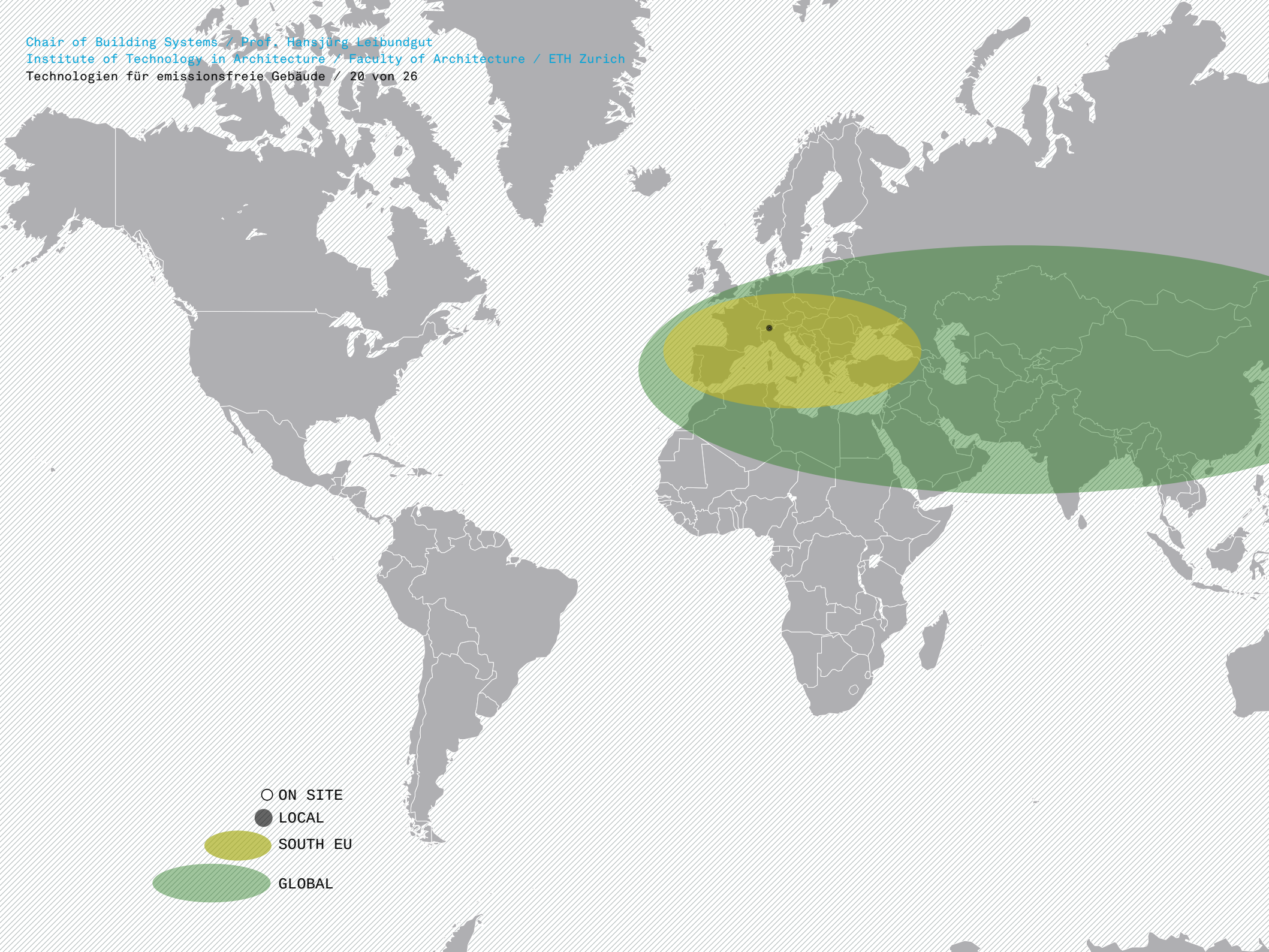
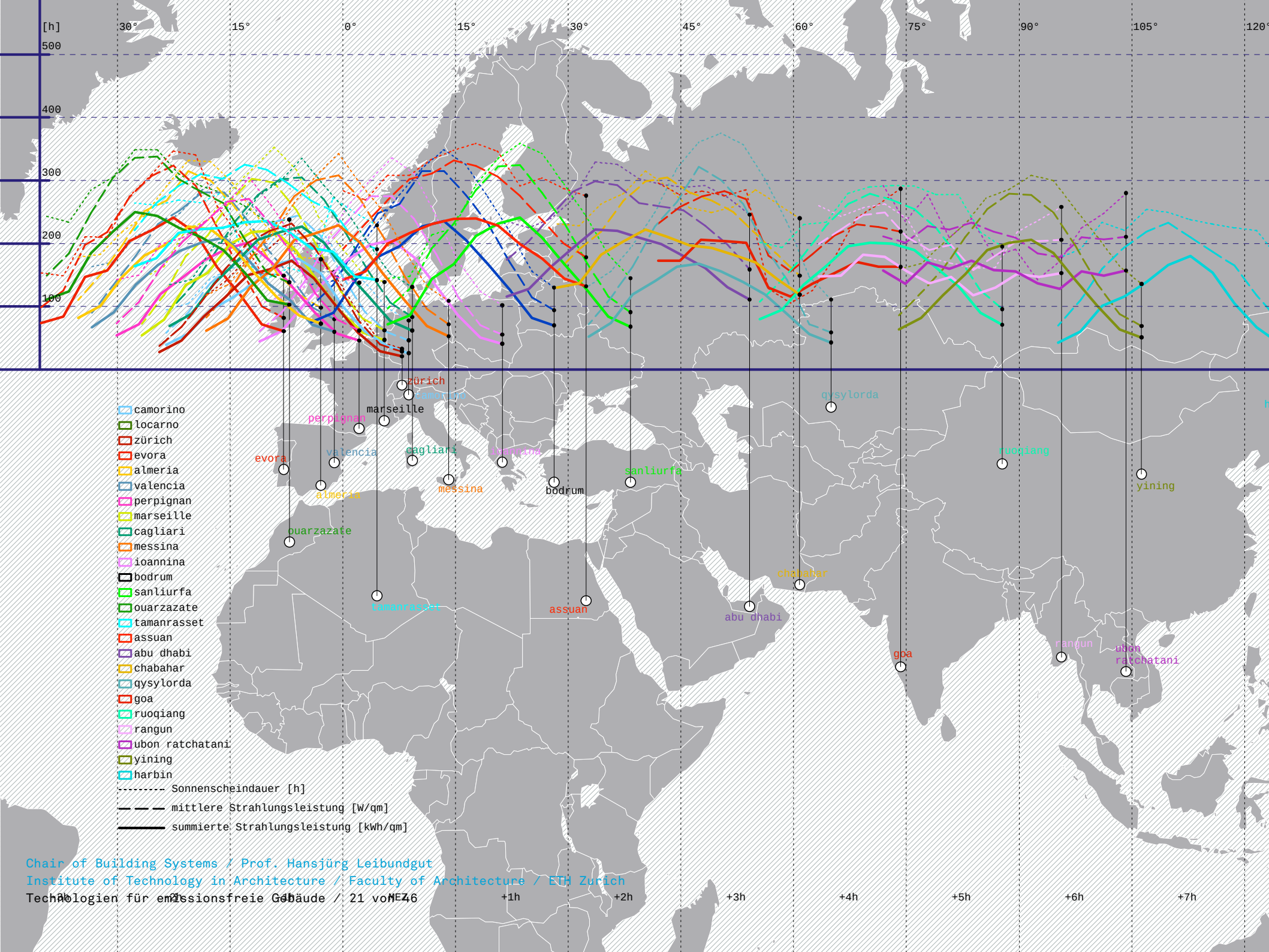

ON SITE
LOCAL
SOUTH EU
GLOBAL



Chair of Building Systems / Prof. Hansjürg Leibundgut
Institute of Technology in Architecture / Faculty of Architecture / ETH Zurich

Atomkraftwerke in Europa

Sol²ergie

- einfache Lüftung
- einfache Fassade
- einfache Hydraulik
- einfache Steuerung

→ einfach elegant

Dachlandschaft der Stadt Bern

Haus B35 in Zürich

www.viaGialla.ch

www.busy.arch.ethz.ch