

Hot Stones Cooking with an ultralight membrane Solar Concentrator

Presentation held by

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1 History of hot stone cooking

- Popular cooking method in many cultures for centuries



1 History of hot stone cooking

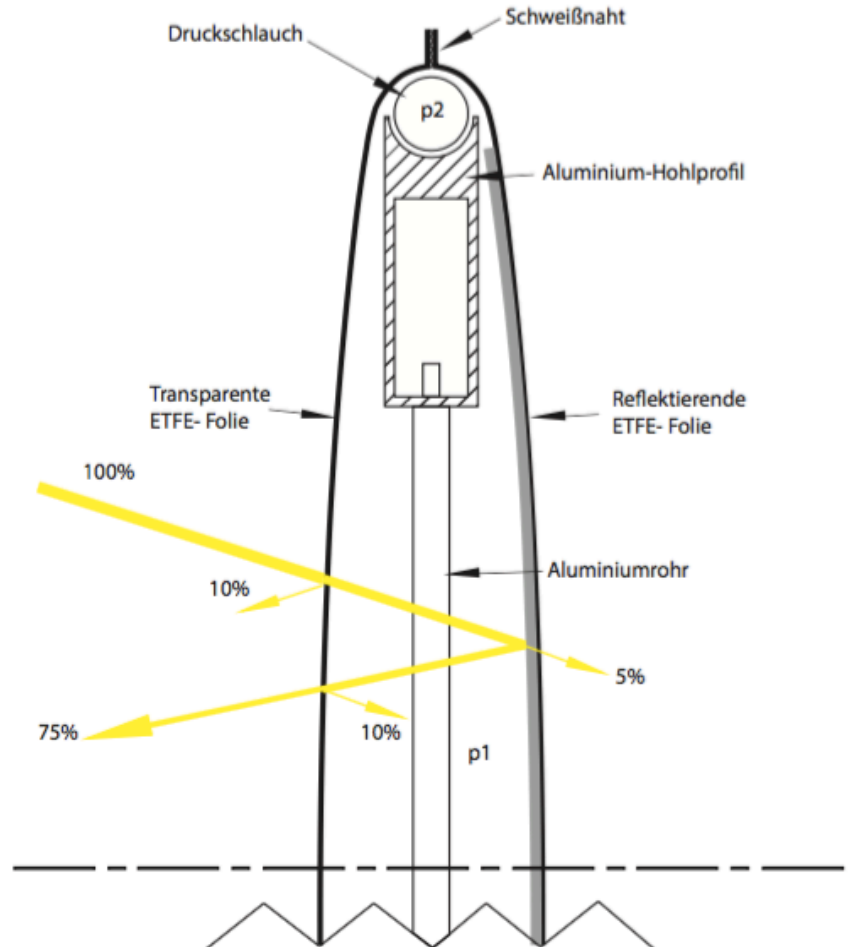
- Japanese Ishiyaki



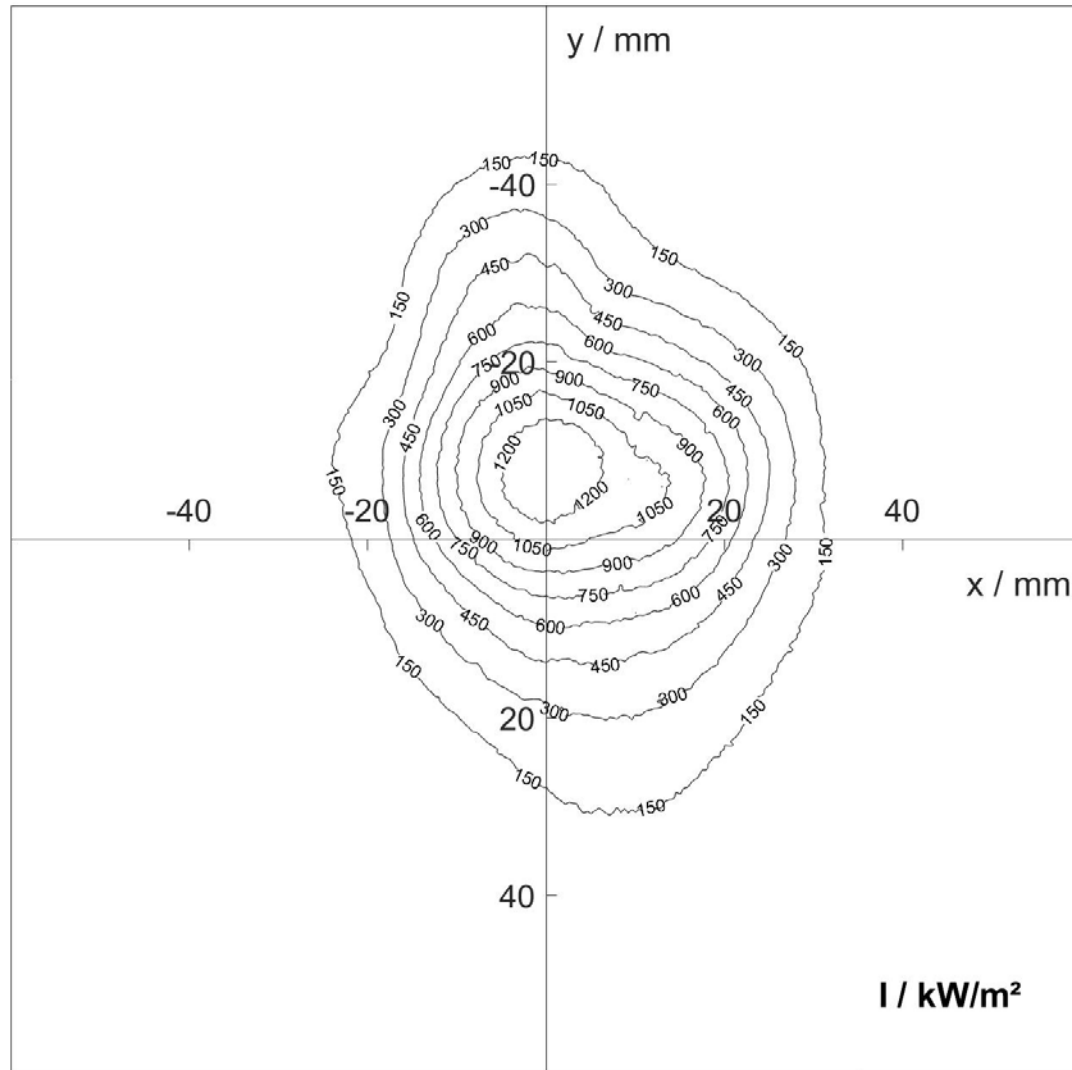
2 Membrane solar concentrator



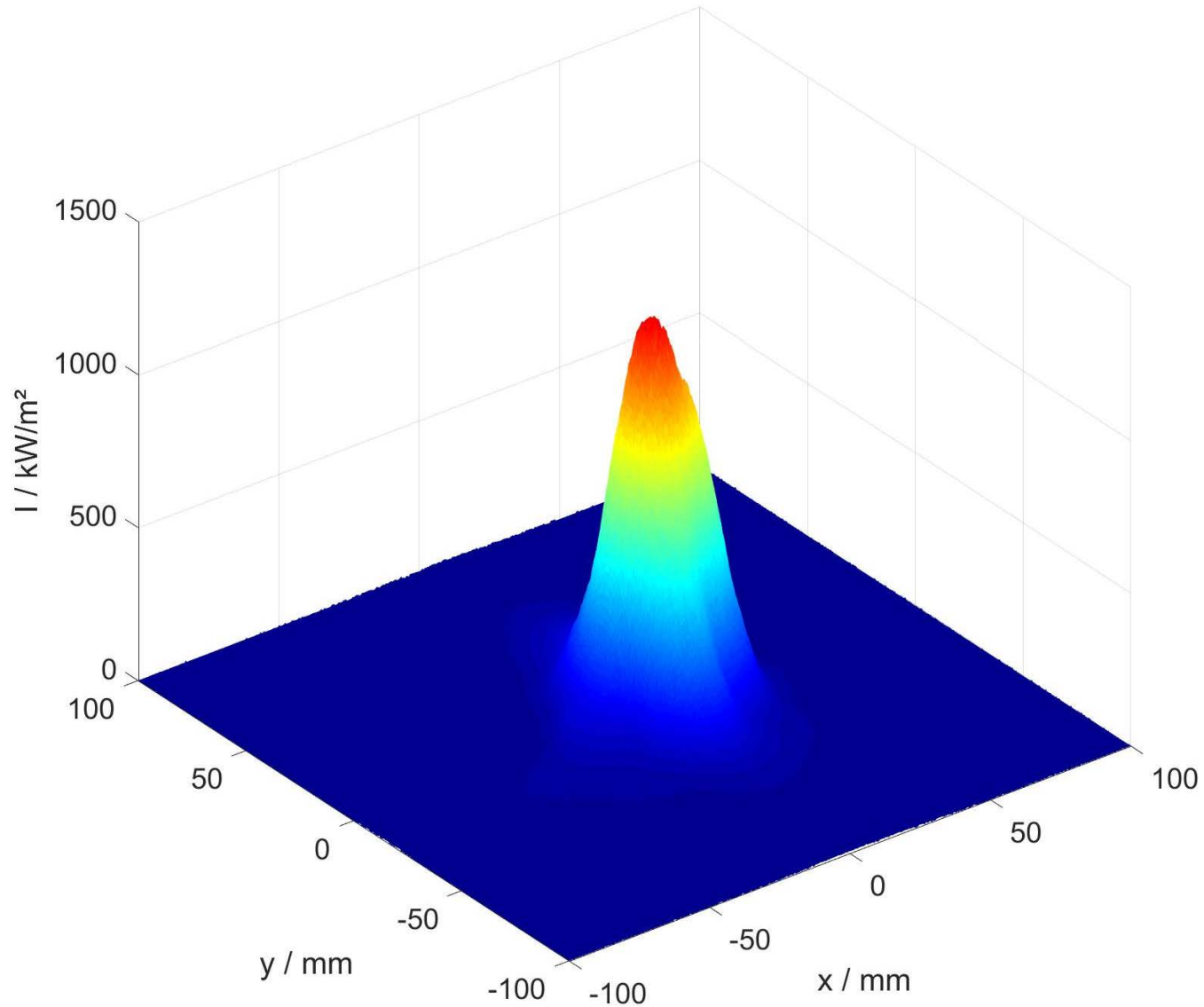
2 Membrane solar concentrator



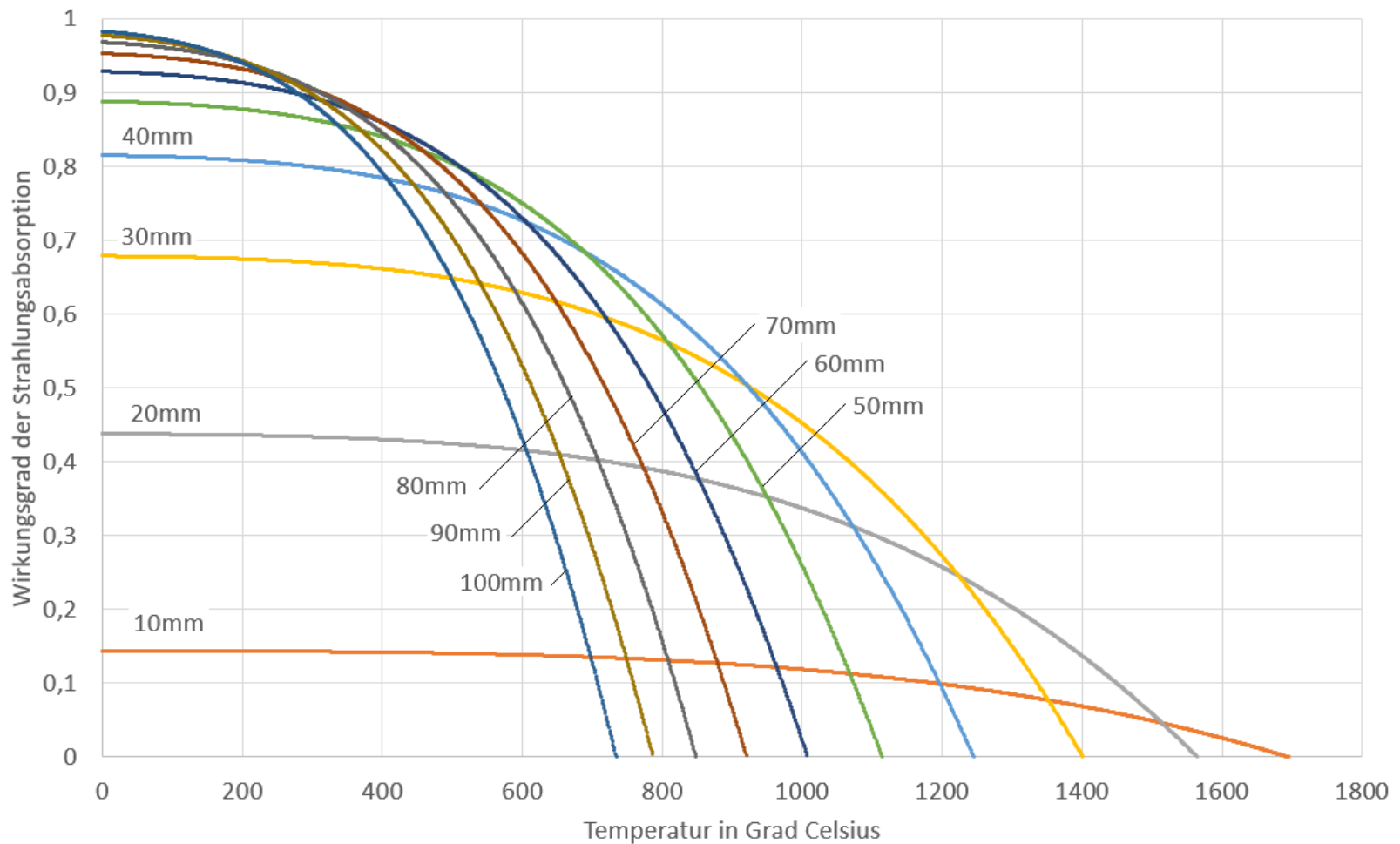
2 Membrane solar concentrator



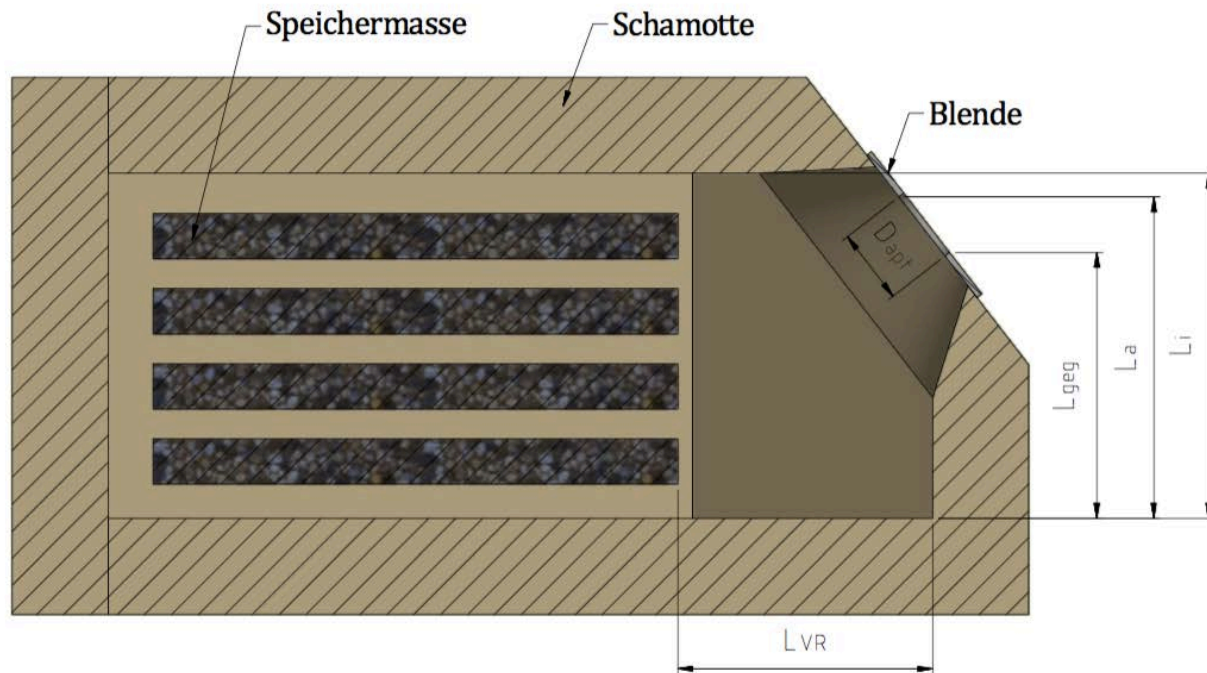
2 Membrane solar concentrator



2 Membrane solar concentrator



3 Cavity Receiver



3 Cavity Receiver



3 Cavity Receiver



3 Cavity Receiver



3 Cavity Receiver

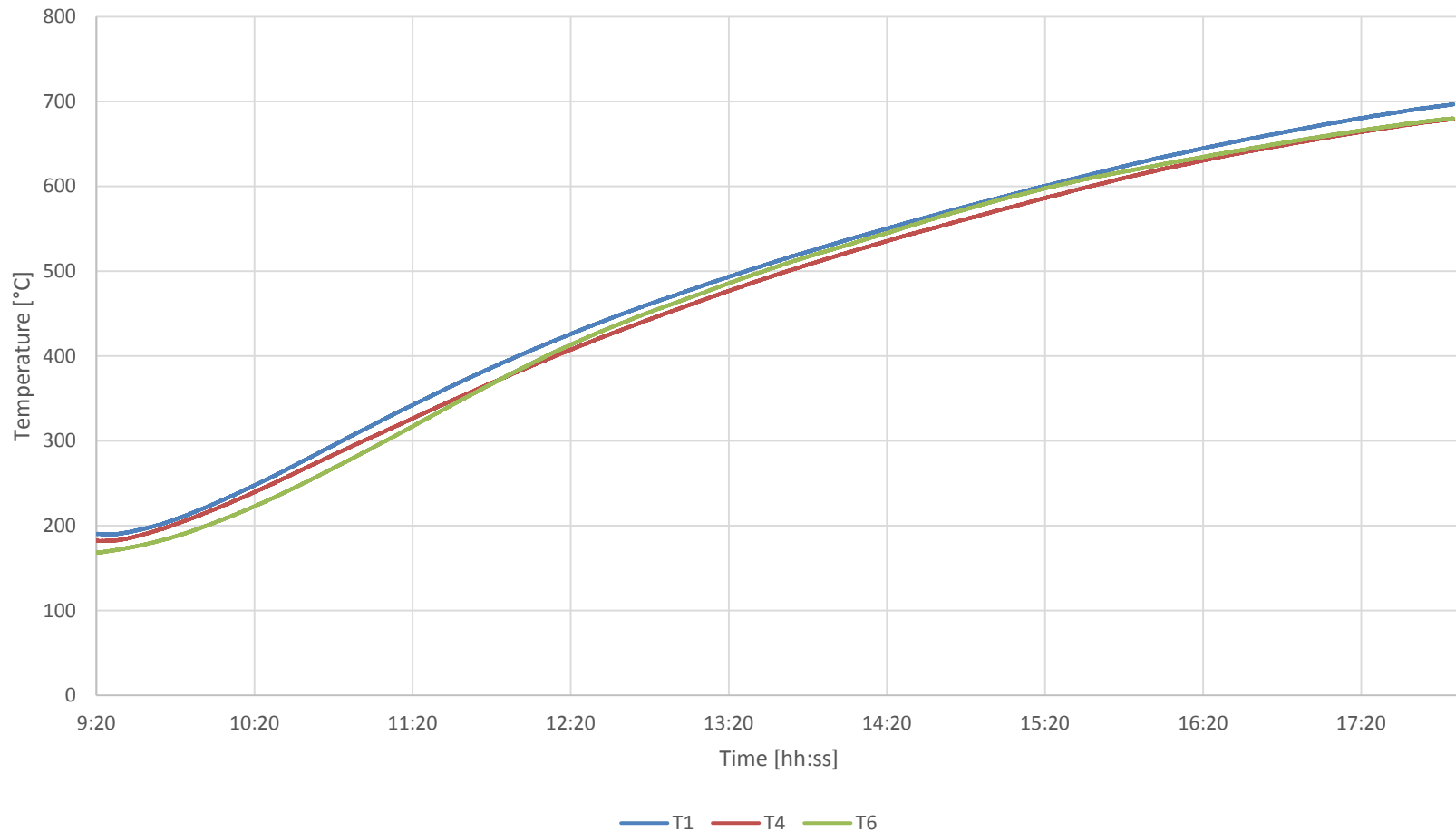


3 Cavity Receiver



3 Cavity Receiver

Heating Up Receiver 13.09.2017



4 Hot Stone Cooking

- Ways of cooking with hot stones:
 - In the receiver.
 - On the stone
 - Immersion

4 Hot Stone Cooking: In the Receiver

- The well insulated receiver is used as an baking oven.
- The aperture of the receiver is closed with an insulating cover
- Stones don't have to be moved



4 Hot Stone Cooking: Direct on the stone

- Ca. 30 min Cooking time per plate 10 kg Granite from 400 °C to 200°C



4 Hot Stone Cooking: Immersion

- Most efficient
- A 10 kg and 200°C stone can cook 2,5 liters of water
- Keeps food warm for a while



Outlook



- Technology Transfer to commercialization partner:
 - Prototype duplication
 - Application specific optimization of reflector and cavity production

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Thank you for your attention!