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
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3 Cavity Receiver
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3  Cavity Receiver

Heating Up Receiver 13.09.2017

Temperature [°C]

Time [hh:ss]
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!