



X-ray laser boils water in record time

Researchers of German Centre for Free Electron Laser Science (CFEL) and the Swedish University Uppsala have developed the quickest method of boiling water. However for coffee this is not at all suitable. An energy rich x-ray lightning strikes the electrons of water molecules and destroys therefore the balance of electrical charge. The atoms immediately track down a strong repulsive power and begin to move with furious velocity, clarifies research leader Carl Caleman. The water becomes

heated to 100000°C in only 75 femtoseconds (1 femtosecond = 1×10^{-15} s) and in plasma – state of which as for example, meets with lightning on the earth. With that the atoms ionize, it generates at least partly charged gas. The picture shows the separation of hydrogen (white) and oxygen atoms (red) in a moment of $t = 69$ femtoseconds in 100000 C.

Source: VDI nachrichten,
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Chinese Moon Mission

China has started a transfer satellite which seems to be a very ambitious moon mission. The Chinese space travel agent is going to make a history. As the first space travel nation china has caught hold of the venture to and on the backside of the moon in which direction neither laser nor radio get through. In this year an unmanned rocket with a landing module should start. The goal is the Aitkin crater in the vicinity of South Pole. The region is specially worth as scientifically alluring. As for example that is based on the fact that on the ground of the crater water persists in a crystalline form.

In order to prepare the mission china has started relay satellites on board a carrier rocket

of type “Langer March 4C” in the direction of moon’s orbit. With its help the national space travel agency maintains the contact with the landing module.

Through its bound rotation the moon shows the earth always on the same side. The start is the decisive step with which china achieves its goal as the first nation to send a probe and to reconnoitre the earth conjugated side with a rover, says the project manager Zhang Lihua as per the state Chinese news agent Xinhua.

Source: VDI nachrichten 25 Mai 2018, Nr 21,
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