



Contribution ID: 153

Type: **Talk**

## Laser Induced Nano Fusion

*Monday, 30 August 2021 11:00 (35 minutes)*

The recent revolution of lasers with increased power and shorter pulse length opens new possibilities for fusion for energy. Two ideas are taken from recent research. One is from high energy heavy ion research, that Quark Gluon Plasma (QGP) may burn (hadronize) simultaneously, i.e. across a hyper-surface with time-like normal, without Rayleigh-Taylor instabilities. The other new idea comes from nano-technology, that nano-antennas embedded in the target, may modify the laser light absorption in a way that this simultaneous ignition can be achieved. The experimental verification of these ideas are in progress at the Wigner R.C.P. at lower, mJ, energies. Amplification of laser light absorption is already verified. The verification of simultaneous transition in the whole volume is coming soon. Expectedly in November s Fall near 30 J short pulse laser will become available at ELI-APLS in Szeged, Hungary.

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

NAPLIFE Collaboration

### Is the speaker for that presentation defined?

Yes

### Details

Laszlo P. Csernai for the NAPLIFE Collaboration

### Internet talk

No

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**Session Classification:** Workshop on Laser Fusion, a spin-off from heavy-ion collisions