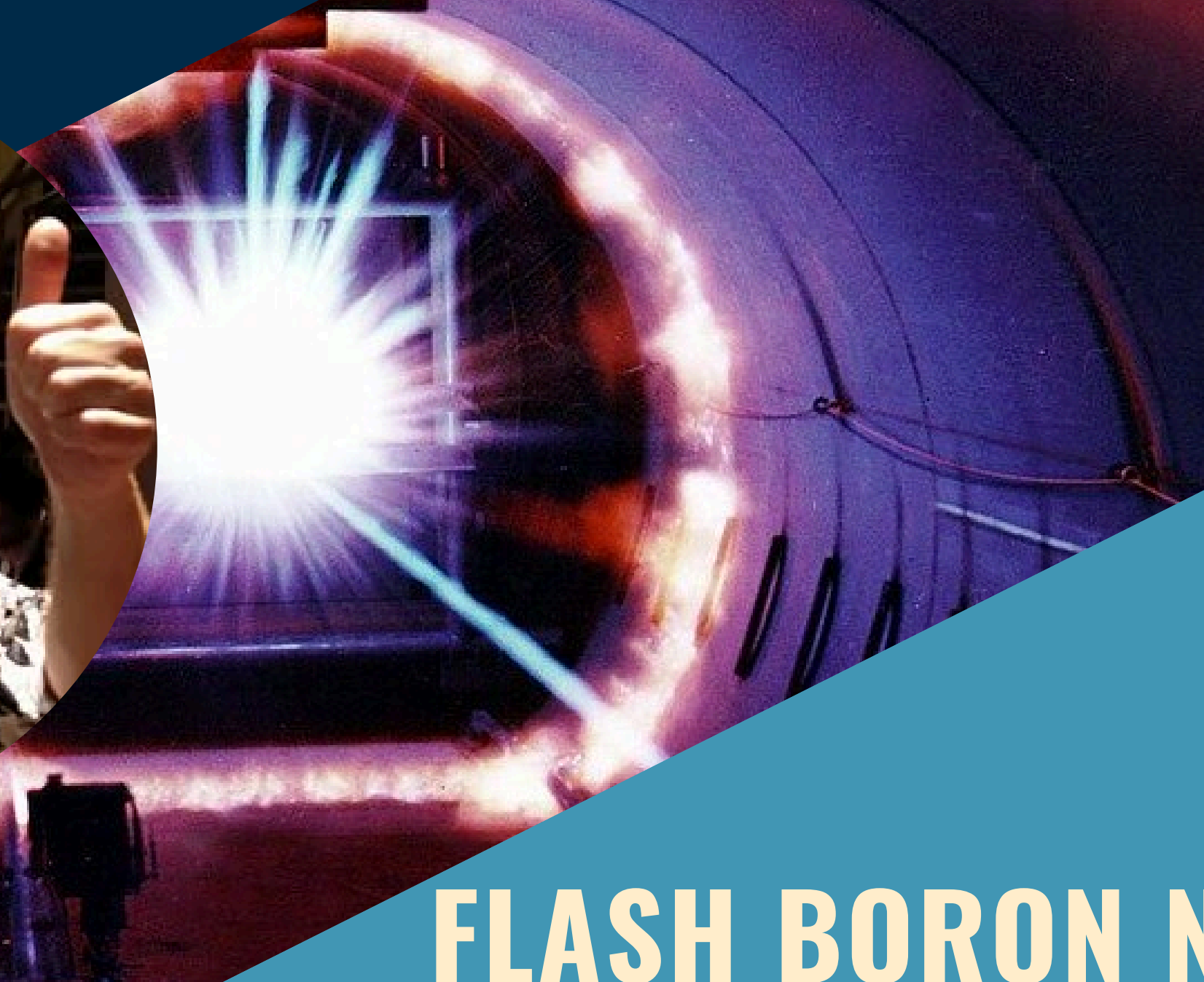




**KLAUS  
SPÖRH**



# **FLASH BORON NEUTRON CAPTURE -THERAPY (BNCT) DRIVEN BY A HIGH-POWER LASER SYSTEM**

We present the development of a new therapy for solid cancer treatment by a synergy of immunotherapy and radiologic Boron Neutron Capture Therapy (BNCT) based on our recent patents. Herein, immunocompetent cells are used as nanorobots to selectively deliver in-vitro loaded boron nanoparticles. We propose the development of a new therapy for cancer treatment by a synergy of immunotherapy and radiologic Boron Neutron Capture Therapy (BNCT) performed in synchronous mode. Herein, their forte is in the compactification and the ability to deliver high yields of neutron pulses, potentially even enabling Flash Neutron Therapy in the future. The way forward is paved by high repetition rate fiberglass lasers and the pulse compression technique in which the ELI-NP team is at the forefront of research. As BNCT is the only radiological treatment that scales linearly with the ability to deliver high payloads of boron attached to the malignant cells, it will allow full body BNCT treatment with acceptable doses in which metastases and even niche cancer cells spread around the body can be treated. The pathway and needs for a future integrated multidisciplinary center are sketched.

**ESPRESSO SEMINARS**

**15 MAGGIO 2025 | ORE 11:00**

**AULA AZZURRA - LNS**

