



# WP4: Applications of Accelerators AccApplic

## Task 4 - High beam power proton and ion accelerators

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Goal : Determine the requirements for high power accelerator applications, in particular for Accelerator Driven Systems (ADS).

## Reliable High beam power

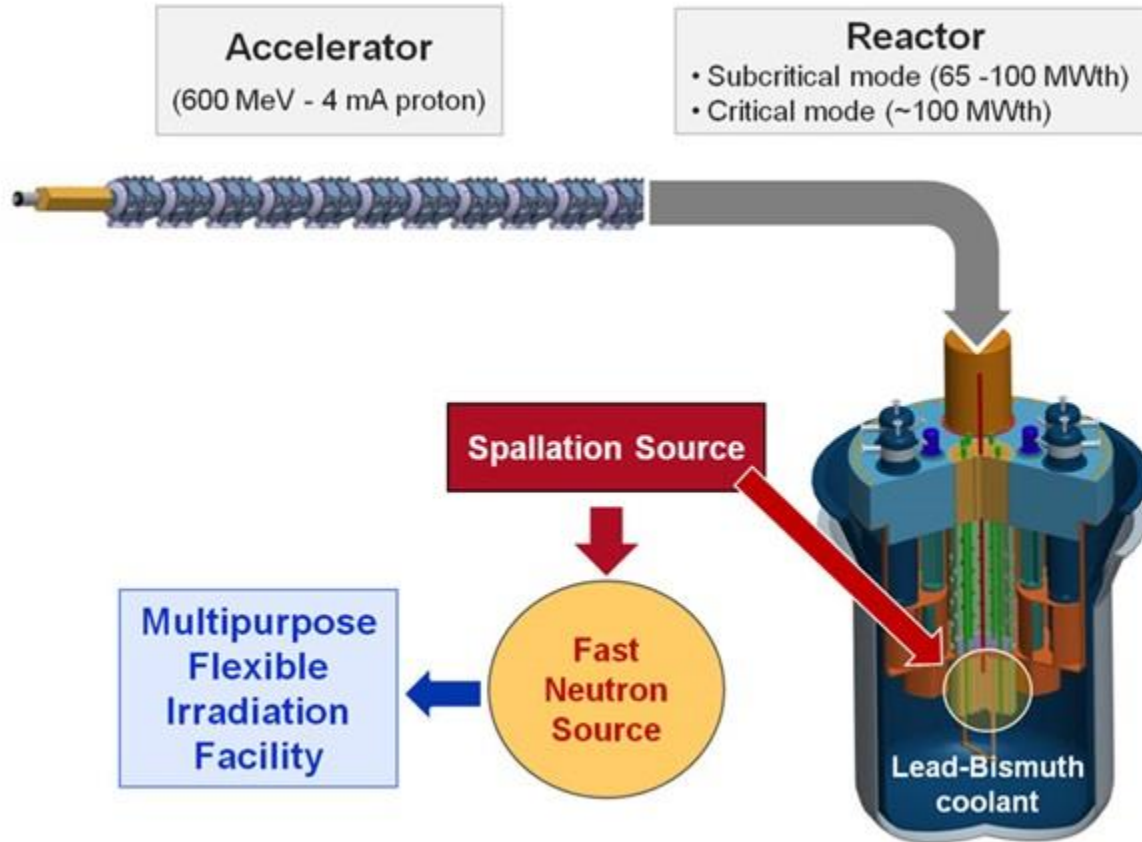
High current

High energy

High duty cycle (CW)

Low fault rate

# Accelerator Driven System

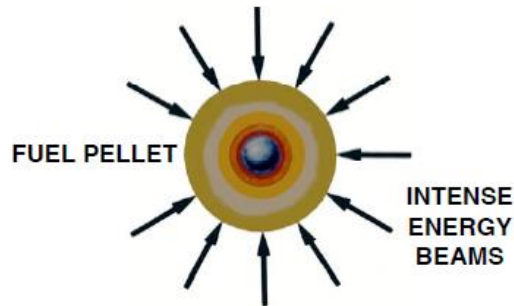


# Fusion

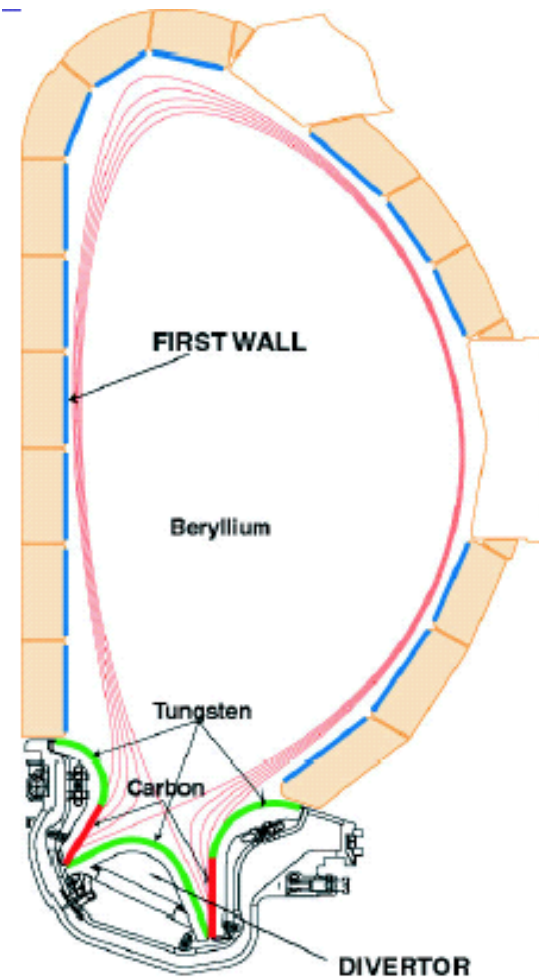
- Irradiation facility

The first wall of the reactor vessel shall absorb neutrons energy and breed tritium

- Beam for confinement



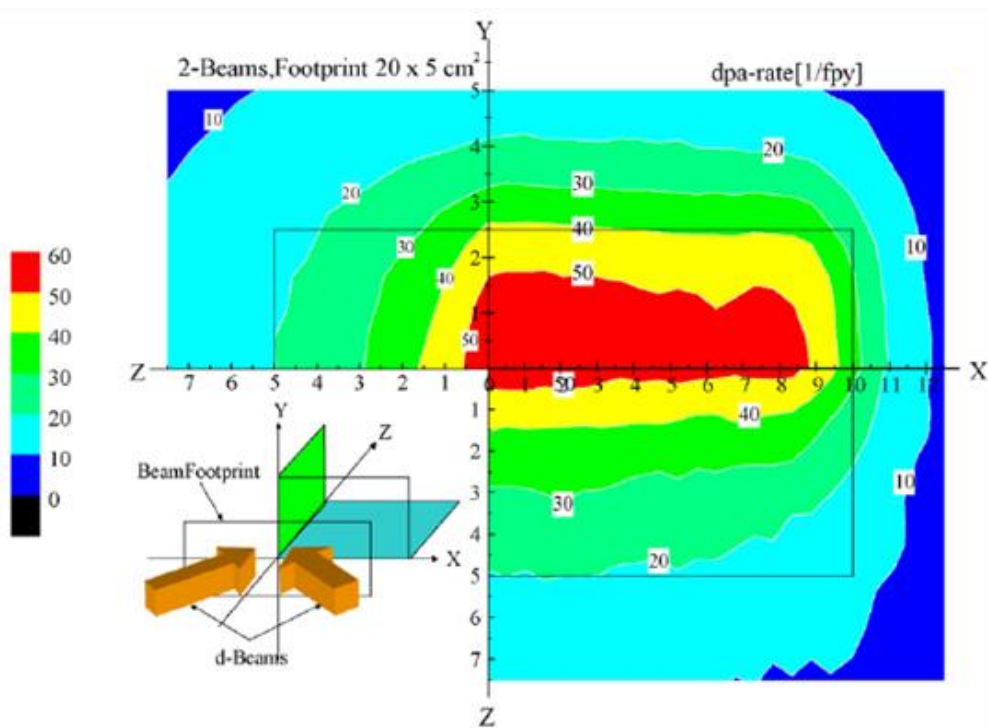
**INERTIAL CONFINEMENT**  
(High density for less than a billionth of a second)



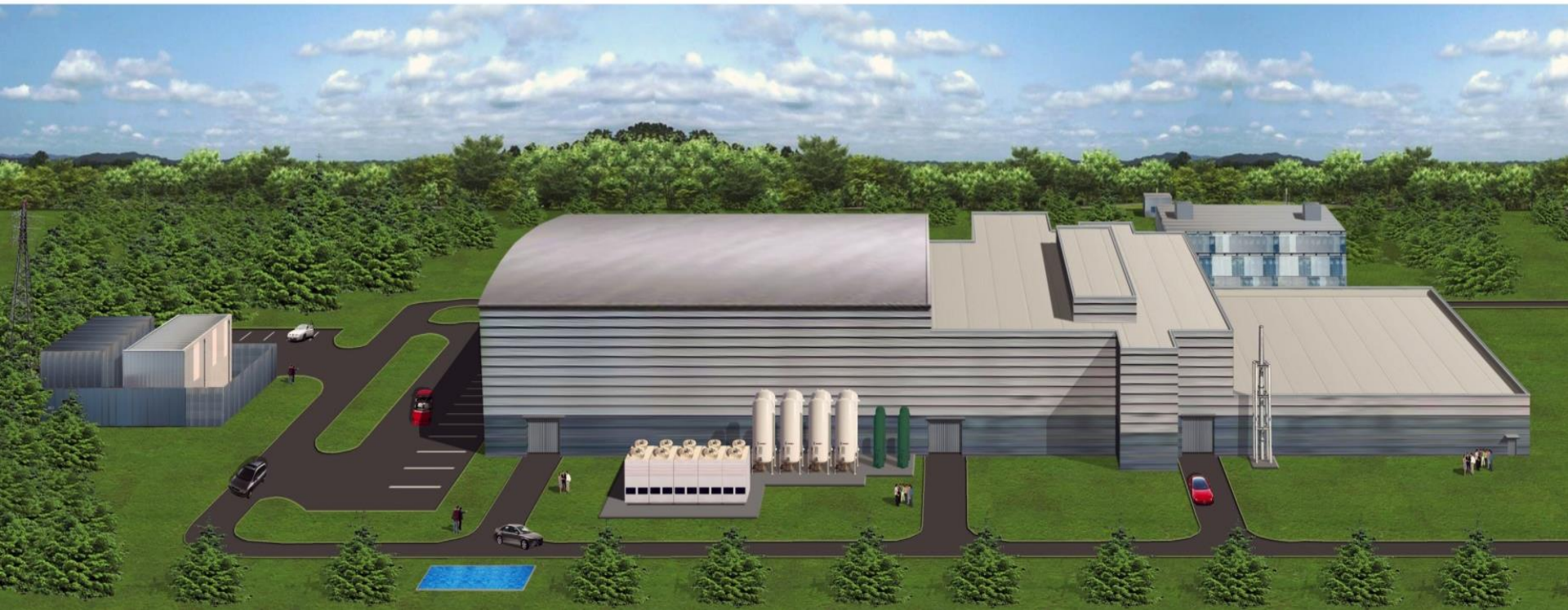
# IFMIF

and its 2 x 5 MW superconducting deuteron LINACs

by Juan Knaster  
(on behalf of IFMIF family)



IFMIF is a neutron source tailor-designed to provide  
adequate flux  
and  
suitable energy  
to simulate the neutronic conditions in a fusion power plant



# Accelerator-Driven Inertial Confinement



**NDCX-II @ LNBL  
Induction Linac**

Li ions, 1.25 MeV, 50nC, 38A, 8.6J/cm<sup>2</sup>

# Today's program

- Very diversified topics
- Get ideas for future organisation/ meetings