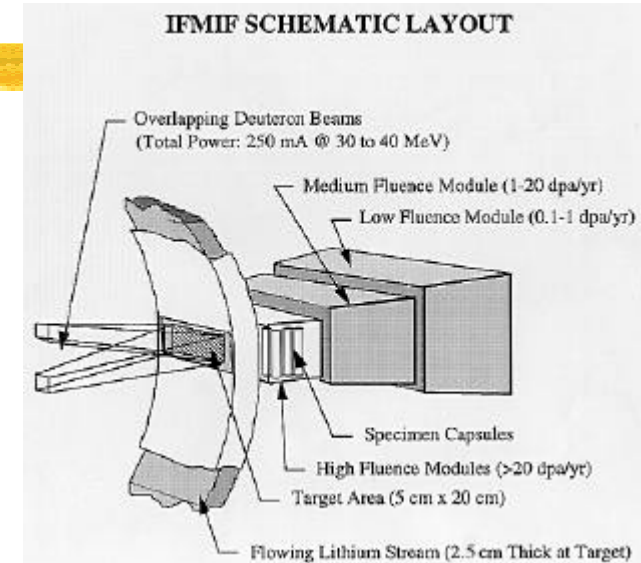


# Description

## IFMIF : accelerator-based D-Li neutron source

- ☒ production of an intense flux of high energy neutrons
- ☒ sufficient irradiation volume for realistic testing of materials and components up to about a full lifetime of their anticipated use in DEMO and beyond.
- ☒ Must survive exposure to damage from neutrons with energy spectrum peaked near 14 MeV with annual doses of ~20 dpa (displacement per atoms), and total fluences of ~200 dpa.



Neutron Flux	$\geq 2 \text{ MW/m}^2$ ( @ $500 \text{ cm}^3$ )
Operation Availability	70 %
D <sup>+</sup> Beam Current	250 mA (CW, 2 x 125 mA)
D <sup>+</sup> Energy	40 MeV
D <sup>+</sup> Beam Size	200 mm (width) x 50 mm (height)
Li Jet Thickness	19, 25 mm (resp. for 32, 40 MeV D <sup>+</sup> )
Li Jet Width	260 mm
Li Jet Velocity	10-20 m/s

Test facility	97.5%
Target facility	95.0%
Accelerator	88.0%
Conventional	99.5%
Central CS	99.5%
<b>Total (product)</b>	<b>80.7%</b>
<b>online/year</b>	<b>70%</b>