

## **Status and Perspectives of a Reversed Field Pinch as a Pilot Neutron Source**

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Abstract:

Fusion-fission hybrid reactors are seen as a possible, mid-term, CO<sub>2</sub>-free energy source. Starting from the progress in understanding the reversed field pinch plasma confinement, a pilot neutron source with a configuration of  $R = 4$  m and  $a = 0.8$  m and a plasma current of up to 14 mega-ampère (MA) is proposed. A staged experimental approach, with increased complexity and investment, was identified to tackle the existing issues related to scientific and technological aspects and to test the D-T operation at reduced fusion power ( $P_{\text{fus}} \approx 30$  MW,  $Q \approx 0.4$ , continuous pulsed operation).