

# **New Generation of Research Accelerator Facilities for Driver Issues of Heavy Ion IFE**

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The new generation of heavy ion accelerator facilities based on powerful linacs and large synchrotron rings appear to be efficient tools for investigations into the physics of high-brightness beams generation related to the development of Heavy Ion Driver for IFE.

This presentation outlines recent achievements in high power linear accelerator injection chains, rapid cycling superconducting magnets of large synchrotron rings, ultra-high dynamic vacuum technologies, efficient accumulation and cooling of intense heavy ion beams.

Considerations are focused on new largest heavy ion drivers - mega-science projects NICA and FAIR being under construction – Nuclotron-based Ion Collider Facility in Dubna and the Facility for Antiproton and Ion Research in Darmstadt. Both will provide worldwide unique accelerator and experimental facilities allowing for a large variety of unprecedented fore-front research in beam physics, high energy density physics and applied science.

**Reference:** <http://nica.jinr.ru/>  
[www.fair-center.eu](http://www.fair-center.eu)