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Type: **Talk**

## **Intense Hadron Beams for Research into Heavy Ion Nuclear Physics**

This presentation outlines ongoing activities on development of heavy ion accelerator facilities, providing high-brightness beams capable of generating intense beams of stable isotopes and radioactive ions. Manifested facilities goals is pushing the “intensity” and the “precision frontiers” to the extremes when accelerating full range of ion beam species from p+ to U to highest beam intensities and luminosities.

Consideration is focused on the 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.

Generation of “precision beams”, sophisticated beam manipulation methods-stochastic and electron cooling of ion beams, also applicable to the secondary radioactive beams of exotic nuclei is under discussion.

Overview of the rapid progress in development of heavy ion accelerator facilities in JINR is presented. Dubna accelerators are capable of generating high-brightness intense beams of heavy ions and protons for basic research and for various applications. Construction of new generation of heavy ion accelerator facilities is progressing well and forefront accelerator technologies are under development in JINR for low energy as well as for relativistic heavy ion and proton beams.

### **Is this abstract from experiment?**

Yes

### **Name of experiment and experimental site**

JINR

### **Is the speaker for that presentation defined?**

Yes

### **Details**

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### **Internet talk**

Maybe

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