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The FRIB-LNS facility and the transfer and purification line for the radioactive ion beam at SPES

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At the end of the 2010, the optic of the extraction beam line of the superconducting cyclotron of LNS was strongly modified. The installation of news quadrupoles and of a cooled target allows to increase the production and collection efficiency of the radioactive ion beam produced in flight.
A short description of the new optic and of the achieved performances will be presented.
A new device, called high energy chopper, will be installed next year along the extraction line.
This new device will remove a large part of the spurious beam, reducing the amount of the of a factor 10, with a clear upgrade of the FRIB-LNS performances.
The new design of the transfer beam line of the radioactive ion beam for the project SPES will be also presented. The main feature of the High resolution mass separator and of the preliminary study on the RFQ beam cooler will be also presented.

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