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Upgrading of the LNS Superconducting Cyclotron to deliver beam power higher than 2-5 kW

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The LNS Superconducting Cyclotron has been in operation for more than 20 years. To fulfil the demand of users aiming to study rare processes in Nuclear Physics, the beam power has to be increased up to 2⊠10 kW for ions with mass lower than 40 a.m.u.. Extraction by stripping has been envisaged as the best solution for this purpose.
To perform the extraction by stripping, a significant refurbishing operation of the Cyclotron is needed, including a new cryostat with new superconducting coils, a new extraction channel with a 60 mm vertical gap, additional penetrations to host new magnetic channels and new compensation bars.
A general description of the refurbishing project is presented.

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