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The AISHa Ion Source at INFN-LNS

The Advanced Ion Source for Hadrontherapy (AISHa) is an ECR ion source operating at 18 GHz, developed with the aim of producing high intensity and low emittance highly charged ion beams for hadrontherapy purposes.
Due to its unique peculiarities, AISHa is a suitable choice for industrial and scientific applications.
In the framework of the INSpIRIT and IRPT projects, in collaboration with CNAO, new candidates for cancer treatment (including metal ion beams) are being developed.
Moreover, within the IONS experiment, AISHa will be the test-bench for the development of an innovative active plasma chamber designed to increase plasma confinement by changing plasma fluxes. OES technique will be also used to refine techniques of non-invasive plasma diagnostics.
Finally, a dedicated setup is under realization to provide impinging beams and detection systems for target production in nuclear physics experiments.

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