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Heavy Ions at the Grand Accélérateur National d'Ions Lourds (Ganil)

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GANIL/SPIRAL2 is one of the major nuclear physics facilities in the world with SPIRAL2 selected in the ESFRI list. The accelerator complex can deliver high-intensity light- and heavy-ion beams, ranging from protons up to 238U in the energy range between a few keV to 95 MeV/u, and a wide range of high intensity exotic beams produced either in flight with the LISE fragment separators or with the ISOL method at the SPIRAL-1 facility. A dedicated beam line is devoted to industrial applications, including a sample carrier system that has been adapted to industrial needs with CNES support.
The SPIRAL2 facility is composed of a superconducting LINAC accelerating beams from protons to heavy-ions with A/Q=3 in the energy range from 0.75 MeV/u to 14.5 MeV/u (up to 33 MeV for protons and 20 MeV/u for deuterons). The LINAC is used for the production of neutron beams as well. Continuous (up to 40 MeV) and quasi-monoenergetic spectra (up to 31 MeV) will be available for users in 2021. NFS will be a very powerful tool for physics and fundamental research as well as applications like the transmutation of nuclear waste, design of future fission and fusion reactors, nuclear medicine or test and development of new detectors and components.
GANIL-SPIRAL2 facilities and their performances will be presented, as well as the dedicated beamlines for radiation effect research activities.

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