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Three Years of SPIRAL2 SC LINAC Operation at GANIL : Challenges and futur

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GANIL (Grand Accélérateur National d'Ions Lourds) started the operation of the SPIRAL2 superconducting linac in 2022. Experiments in the Neutron For Science (NFS) room, specific beam dynamics studies, and various technical improvements are carried out during its operation in the second half of each year, after the run of the cyclotrons in the first half. In 2024, a first period of parallel operation between the linac and the cyclotrons was successfully performed. So far, most experiments in the NFS area have been performed using Xe^+ beams, and in some cases with $^4\text{He}^{2+}$ and Xe^+ , at energies ranging from 7 to 33 MeV/A. Linac tunings with $^{18}\text{O}^{6+}$ and $^{40}\text{Ar}^{14+}$ ion beams, at energies between 5 and 14.5 MeV/A, were also carried out. In 2024, the first milestone was reached for the Super Separator Spectrometer (S^3) experimental area, with the successful delivery of a $^{40}\text{Ar}^{14+}$ beam up to the first target station in the room. The paper presents a summary of the beam time distribution during the third year of operation, preliminary results of specific studies on cavity failure recovery, and the future plans of GANIL.

Footnotes

Funding Agency

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Yes

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