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LATEST NEWS ON FRAISE, THE NEW FRAGMENT IN-FLIGHT SEPARATOR AT INFN- LNS

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Radioactive Ions Beams (RIBs) have been produced at Laboratori Nazionali del Sud (LNS-INFN) since 2001 by means of the In-Flight fragmentation method [1-3]. With the upgrade of the laboratory thanks to the ambitious and massive upgrade project (POTLNS) the extraction technique of the K800 Superconducting Cyclotron will be improved and one of the goals is to deliver light and medium masses nuclei with a power up to ≈ 10 kW. This project opens further perspectives to produce RIBs. A dedicated facility of a new fragment separator FRAISE (FRAGMENT In-FIGHT SEPARATOR) is on the way, to exploit the primary beams, with a power of ≈ 3 -4 kW, for the production of high-intensity and high-quality RIBs [1-3]. The high beam intensity achieved with FRAISE requires the use of diagnostics and tagging systems able to operate in a strong radioactive environment and in a wide intensity range. In the contributions will be present the status of the upgrade and some RIBs possibilities.

References

- [1] Russotto P. et al., Jour. of Phys. Conf. Ser., 1014 (2018) 012016 and references therein.
- [2] Russo A.D. et al., NIM B, 463 (2020) 418.
- [3] Martorana N.S., Il Nuovo Cimento 44 C (2021) 1.

Topic

Technical

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