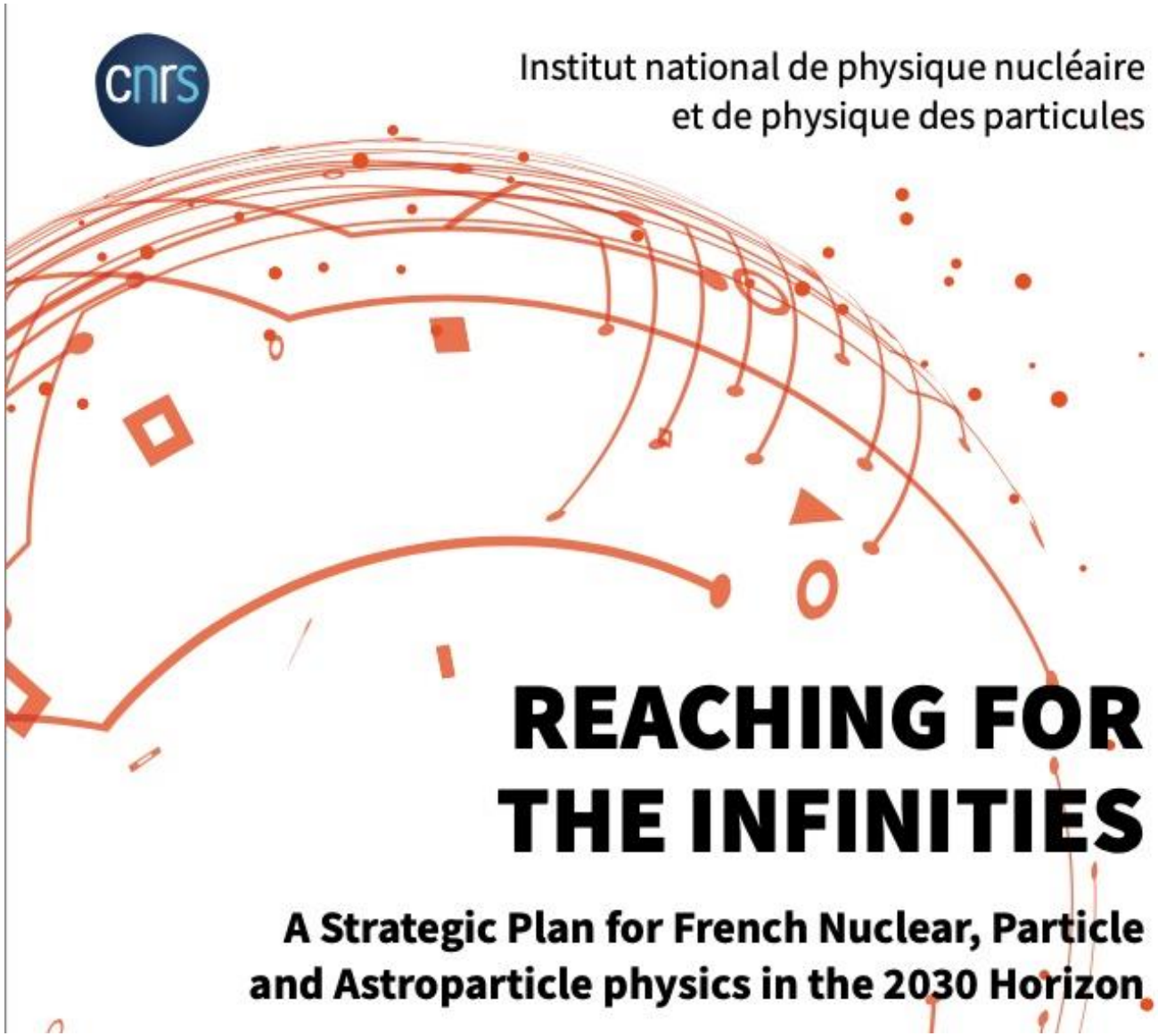
Institut national de physique nucléaire et de physique des particules

September 6, 2023 --- GANIL

Marcella Grasso

Scientific Director in charge of Nuclear Physics and Applications, IN2P3



Recent 'Prospective' exercise at IN2P3

December 2022: document with the French roadmap for Nuclear, Particle and Astroparticle physics, and associated technical developments and applications

Science and projects at GANIL in the next decade and beyond

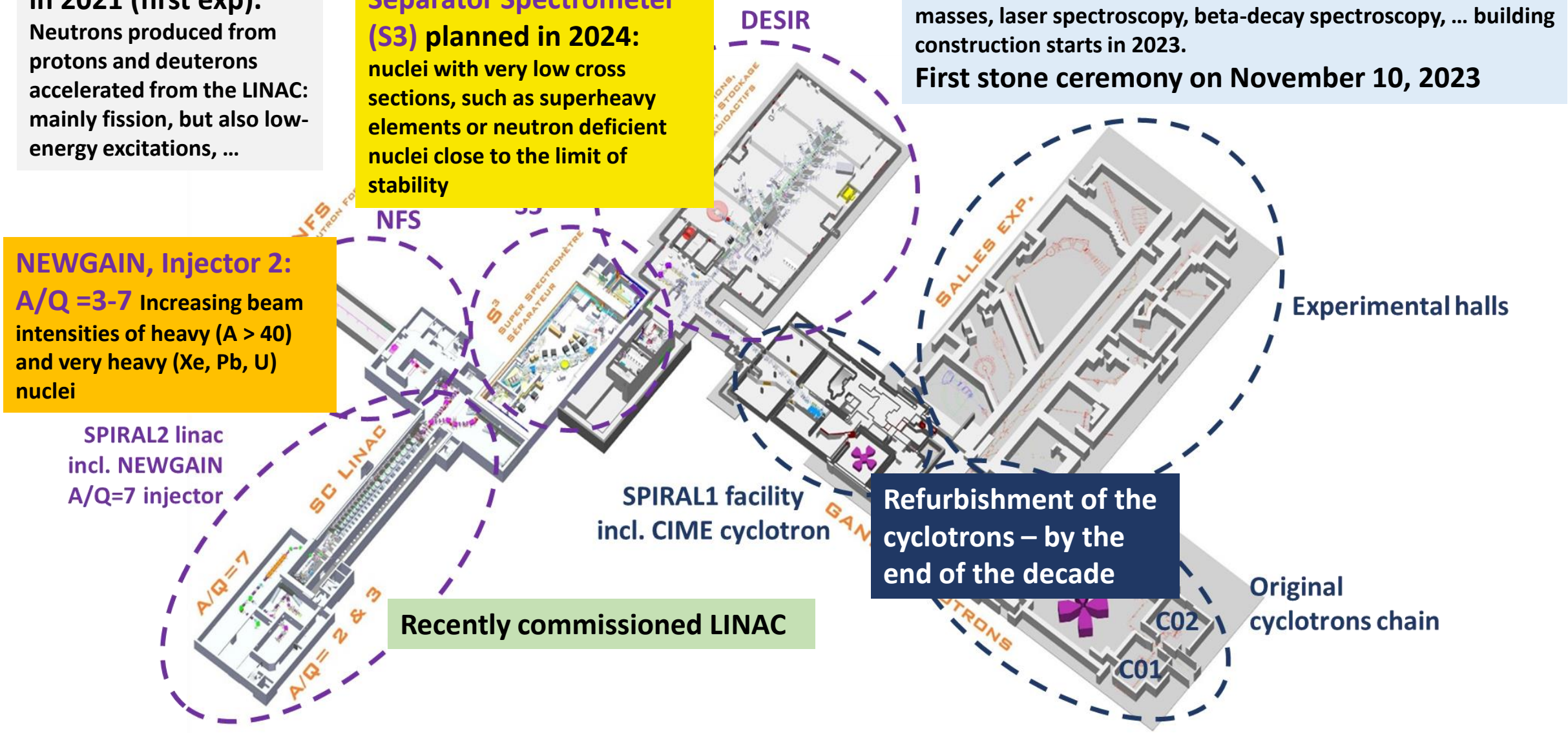
Before 2030

Neutrons for Science (NFS) started to work in 2021 (first exp).
Neutrons produced from protons and deuterons accelerated from the LINAC: mainly fission, but also low-energy excitations, …

Commissioning of the Super Separator Spectrometer (S3) planned in 2024:
nuclei with very low cross sections, such as superheavy elements or neutron deficient nuclei close to the limit of stability

DESIR in 2027-2028
unique opportunities in terms of selection of exotic nuclei and/or beam purity.
masses, laser spectroscopy, beta-decay spectroscopy, … building construction starts in 2023.
First stone ceremony on November 10, 2023

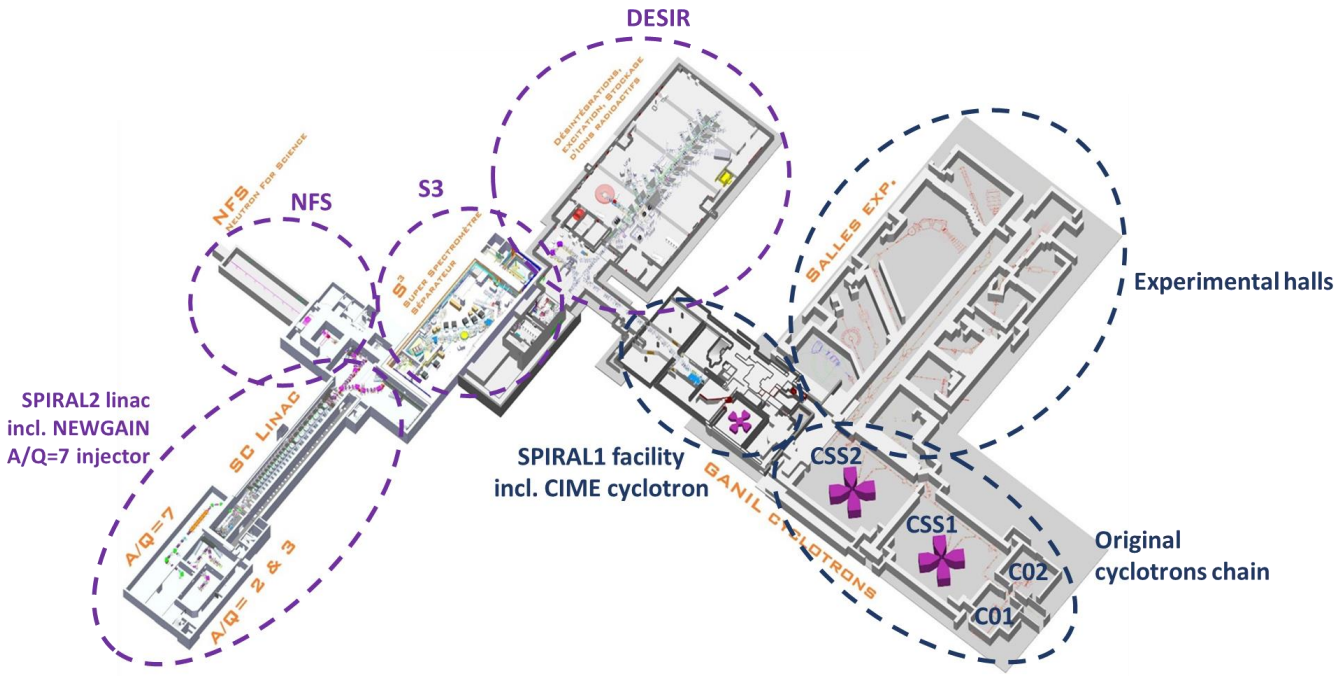
NEWGAIN, Injector 2: A/Q =3-7 Increasing beam intensities of heavy (A > 40) and very heavy (Xe, Pb, U) nuclei



Beyond 2030

International expert committee, chaired by Michel Spiro: vision for the future of GANIL (report provided to CNRS and CEA in December 2021)

Strategy to be defined based on different recommendations and options suggested by the expert committee: new building for production of neutron-rich exotic nuclei, production of radioisotopes, new reacceleration system -> from Coulomb barrier up to 100 MeV/nucleon, ….



On this basis, GANIL direction asked Hanna Franberg and Stéphane Grevy to prepare a document where a few possible scenarios are identified, with:
-the description of the physics cases associated with each step
-a budget estimation

CEA and IN2P3 will use this document to establish a strategy

Workshop Targets - Ion Sources

Why a workshop on targets and ion sources?

IN2P3 wishes to draw up an inventory of the skills available or missing within the institute, necessary to meet the needs of experiments and developments in the 5-10 years to come, and beyond

Sep 6

14:00 — **Workshop C&S : Physics objectives: Workshop C&S : Physics objectives**

Context. Science at GANIL in the next 5-10 years and beyond

Sep 7

09:00 — **Target for nuclear physics: Target for nuclear physics (02)**

14:00 — **Ion Source and Stable Beams: Ions sources and stable beams production (03)**

Sep 8

09:00 — **Target ion source: Target Ion source (04)**

Local Organizing Committee

Marie-Laure Abavent - GANIL

Pierre Delahaye - GANIL

Mickaël Dubois - GANIL

Scientific Organizing Committee

Maud Baylac - IN2P3

Rodolphe Clédassou - IN2P3

Rémi Cornat - IN2P3

Pierre Delahaye - GANIL

Gilles de France - GANIL

Marcella Grasso - IN2P3

Sébastien Incerti - IN2P3

Arnaud Lucotte - IN2P3

Christelle Stodel - GANIL

Thomas Thuillier - LPSC

Rodolphe Clédassou was the initiator of this idea

A great passion and enthusiasm for GANIL and the future of the facility
Thank you Rodolphe

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Thank you for your attention