

GANIL

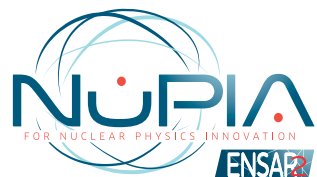
CAEN



GANIL
laboratoire commun CEA/DRF *spiral2* CNRS/IN2P3

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MISSIONS OF THE LABORATORY

- **GANIL – GRAND ACCÉLÉRATEUR NATIONAL D'IONS LOURDS – I.E. LARGE NATIONAL HEAVY-ION ACCELERATOR – IS ONE OF THE LARGE-SCALE INFRASTRUCTURE AVAILABLE FOR FRENCH, EUROPEAN AND INTERNATIONAL RESEARCH. GANIL IS ONE OF THE LARGE LABORATORIES IN THE WORLD FOR RESEARCH USING ION BEAMS: PHYSICS OF THE ATOM AND ITS NUCLEUS, CONDENSED MATTER, ASTROPHYSICS, RADIOTHERAPY... IN THIS CONTEXT, THE CIMAP AND LARIA LABORATORIES, WHOLLY OR PARTIALLY SITUATED ON THE GANIL SITE, HAVE AN ESSENTIAL ROLE.**
- **GANIL IS A HOST LABORATORY FOR A LARGE COMMUNITY OF USERS, 700 SCIENTISTS FROM MORE THAN 100 LABORATORIES AND INSTITUTIONS VISIT EACH YEAR.**

ACTIONS

Nuclear Fundamental Research:

- Structure and thermodynamic properties and reaction mechanisms of atomic nuclei.
- Evolution towards “exotic” nuclei – those furthest from stability.
- Nuclear astrophysics, fundamental properties of the nuclear forces.

Interdisciplinary Research:

- Atomic physics.
- Condensed-matter physics.
- Radiochemistry.
- Radiobiology.
- Production methods for medical radioisotopes.

Applied Research with GANIL beams:

- Irradiation of materials.
- Radiation resistance studies of electronic systems.
- Applications of track etching in polymers.

Technology Transfer:

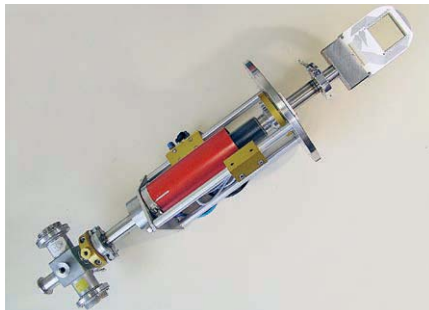
- Founding member of Normandie Incubation.
- Patenting and licensing for ion sources.
- Technologies to be transferred: beam profile monitors.

Services:

- Training courses.
- Workshops.
- Expertises : accelerator technologies, detectors.

KEY DATA (2016)

- **Staff:** 240 permanent staff (physicists, engineers, technicians, administrative).
- **Users:** 700 researchers from more than 100 laboratories and institutions from 30 countries.
- **Beam:** more than 10 000 hours/year (3-4 experiments can be performed in parallel).
- **Scientific Production:** 3 950 publications (144 publications in 2016), 286 theses awarded (4 theses in 2016), 30 scientific prizes, organization of 20 international conferences.
- **Developmental projects:** 2 EQUIPEX, 1 ERC, 6 ANR since 2007 – Coordination of large developmental european programs: EURISOL, ENSAR – 11 MoU (Memorandum of Understanding), 6 LIA (Laboratoire International Associé).



Beam profile monitors developed by GANIL

- Recognized as a Large-Scale European Research Infrastructure since 1995.
- 2000 visitors per year.



Radiobiology programs: holder for biological cell flasks
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