

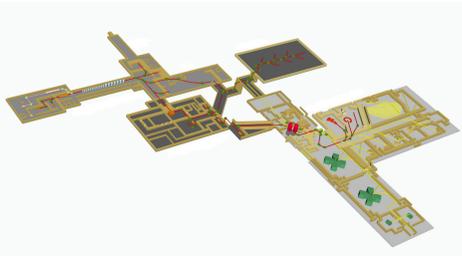
## GANIL-SPIRAL2

### Mission Statement

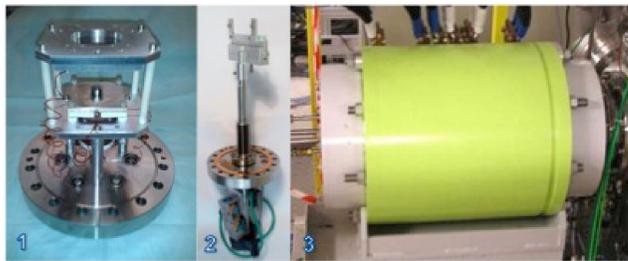
SPIRAL2 is a new infrastructure for the study of fundamental nuclear physics and multidisciplinary research at GANIL. It is as large as the current GANIL facility and will complete its existent installations with new exceptional beams and instruments. SPIRAL2 is currently under construction.



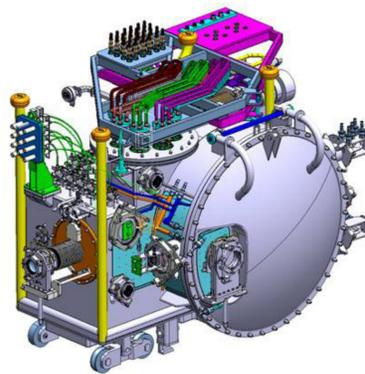
JMEnguerrand@GANIL



### Challenges and Highlights



1) and 2) beam diagnostics – 3) V2 ion source  
JLVignet@GANIL – CPeaucelle@CNRS



Production module with connectors  
JLVignet@GANIL – YHuguet@GANIL



1) AGATA triple cryostat – 2) ERBSS neutron detector  
AGATA Collaboration – Esposito@INFN

#### Ion sources and beam diagnostics

Development and realisation of improved ion source prototypes and beam diagnostics for SPIRAL2 (GANIL) and FAIR (GSI):

- Common device for non-intercepting bunch shape measurement
- New prototype of high performance ECR

#### Tools for radioactive nuclear beam environment

Definition of common strategies, concepts, system designs and related tooling for SPIRAL2(GANIL) and FAIR(GSI) with respect to high-radiation areas.

Increase of the experimental running time by an efficient maintenance concept  
Reduction of the radioactive waste management of the facilities.

#### Detectors and DAQ

Development of innovative electronics and algorithms for the new advanced European gamma-ray tracking (AGATA, EXOGAM2, PARIS) and neutron arrays/detectors (ERBSS, NEDA) in a close collaboration between the RI projects ELI (INFN, IFIN-HH), FAIR (GSI) and SPIRAL2 (GANIL). Tests of electronics and calibration/post-processing ERBSS.

### Facts and Figures



#### Time line of Construction and Operation

Construction Phase 1: in progress, scheduled until end of 2014  
Commissioning Phase 1: end of 2014 to mid-2015  
Operation Phase 1: starting mid-2015  
Design study Phase 2: in progress until 2015  
Construction Phase 2: scheduled in 2015  
Budget Construction: 210 M€ + 40 M€ for detectors

#### Contact

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#### Member countries

France

#### International partners

Belgium  
Bulgaria  
Canada  
CERN  
Czech Republic  
Germany  
Hungary  
Italy  
India  
Israel  
Japan  
Poland  
Romania  
Russia  
Spain  
Sweden  
Turkey  
UK  
USA.