

## GANIL/SPIRAL2 facility – Status and Future

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The first phase of the SPIRAL 2 facility [1], a major extension of the GANIL accelerator complex, is now in its final stage of development and will be completed in 2015.

On December 2014, a first protons beam was produced after the ion source at an intensity of 6,8 mAe in pulsed mode. This first success sets SPIRAL2 on its path forward for delivering the highest beam intensity for light ions, up to energy of 40 MeV with a beam current up to 5 mAe and for heavy ions with beam currents up to 1 mAe and maximum energy 14.5 MeV/u. The next phases for the full operation of the SPIRAL2 Phase 1 comprises, in the coming months, the acceleration of light and heavy ions through all the accelerator components to reach the nominal energy. Two new experimental halls Neutron For Science and S3 will allow for a new class of experiments with a high flux of fast neutron and high intensity heavy ion beams, respectively.

Simultaneously, an important upgrade of the current SPIRAL1 ISOL facility will be accomplished by 2016/2017 allowing for production and acceleration of RIB of isotopes of about 20 light and medium light elements.

A dedicated new experimental hall called DESIR used for experiments with low energy RIB provided by SPIRAL1 and S3 is currently in the detailed design phase.

An ambitious scientific program at GANIL/SPIRAL2 imposes a use of the most efficient and innovative detection systems as a new separator/spectrometer S3, the upgraded magnetic spectrometer VAMOS, the  $4\pi$  Gamma array EXOGAM2, charged particle detectors like ACTAR-TPC, FAZIA and GASPARD as well as the European gamma ray tracking array AGATA that will stay at GANIL until end of 2018.

A short-term scientific program as well as future operation modes of the GANIL/SPIRAL2 complex as a multiuser facility will be presented.

### REFERENCES

[1] <http://pro.ganil-spiral2.eu/>

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