ID de Contribution: **4** Type: **Non spécifié**

# LPSC contributions to the Emilie project

*mardi 22 mars 2016 09:30 (30 minutes)*

LPSC, Université Grenoble –Alpes, CNRS/IN2P3, Grenoble, France

In the frame of the Emilie project, in order to better understand the physics of the Charge Breeder process, the LPSC acted on several levers. First, the 1+N+ test bench was used to make experiments with 3 versions of the Phoenix Charge Breeder: LPSC, SPES and SPIRAL1. In parallel, two 1+ electron cyclotron resonance ion sources have been developed. The first is a hot (650℃) version of the 2.45 GHz COMIC source, which aims is to produce 1+ alkali ions and to study the atom ionization efficiency dependence with temperature (wall recycling). The second one is a new 5.8 GHz source able to produce stable low charge state ion beams. A roadmap for the future developments of the Charge Breeder has been defined at LPSC. First, an upgrade of the magnetic field configuration is considered in order to enhance the plasma confinement. This would possibly allow 18 GHz experiments. Second, the injection of several low charge state ions will be carried out to investigate further the ion capture process in the plasma, helped with new plasma diagnostics. The results of these experiments and developments will be presented together with the new development plan of the Charge Breeder.

**Author:** M. ANGOT, JULIEN (LPSC / CNRS)

**Co-auteurs:** Dr GALATÀ, Alessio (INFN-Laboratori Nazionali di Legnaro); M. PATTI, Gabriele (INFN); Dr KOIVISTO, Hannu (Department of Physics, University of Jyväskylä); CHOIŃSKI, Jarosław (University of Warsaw Heavy Ion Laboratory); M. JACOB, Josua (LPSC / CNRS); Dr MAUNOURY, Laurent (CNRS GANIL); M. STANDYLO, Lukasz (HIL, Warsaw University); Dr TARVAINEN, Olli (JYFL); M. SOLE, Patrick (LPSC / CNRS); Dr DELAHAYE, Pierre (GANIL); M. LAMY, Thierry (LPSC-CNRS); Dr THUILLIER, Thomas (LPSC / CNRS)

**Orateur:** M. ANGOT, JULIEN (LPSC / CNRS)

**Classification de Session:** EMILIE project