

## GANIL SPIRAL2 Week – 26-30/11/2008 DESIR Meeting

Conv. : B. Blank, [blank@cenbg.in2p3.fr](mailto:blank@cenbg.in2p3.fr)

**The DESIR building** - J.C Thomas (GANIL), [thomasjc@ganil.fr](mailto:thomasjc@ganil.fr)  
(see file attached)

- definition of the different rooms to be checked and completed
- impact of the requirements of a green experimental area to be evaluated

**DESIR RFQ cooler SHIRAC** - F. Duval (LPC Caen), [duval@lpccaen.in2p3.fr](mailto:duval@lpccaen.in2p3.fr)

- objectives: good cooling and bunching efficiency for 1  $\mu\text{A}$ , few  $\pi$ .mm.mrad beams
- present status: first tests at CSNSM leading to a first design (5 kV RF field, 8-12 MHz, small radius of the cooling section)
- further developments: at LPC Caen, with a nA commercial ionization source, later with a ECR source for tests at 1  $\mu\text{A}$ ; new design with different radii for the cooling and trapping sections; implementation of a dedicated simulation tool for charge space effects viz cooling and bunching

**DESIR high-resolution separator** - T. Kurtukian – Nieto (CEN Bordeaux-Gradignan), [kurtukia@cenbg.in2p3.fr](mailto:kurtukia@cenbg.in2p3.fr)

- objectives: high mass resolution (DM/M  $\sim$  20000) and transmission for 1  $\mu\text{A}$ , 10  $\pi$ .mm.mrad RIBs
- first simulations of a CARIBU like HRS combining a large dispersion and small aberrations; promising but contamination by stable ions to be considered

**MLL trap at DESIR** - P. Thirolf (LMU Muenchen), [Peter.Thirolf@Physik.Uni-Muenchen.de](mailto:Peter.Thirolf@Physik.Uni-Muenchen.de)

- present status and expected performances described
- schedule: commissioning at Garching from 2008 to 2011, Physics program at the München Tandem in 2012-2013, then installation at DESIR
- would be of great interest for S3 as well (relevance of S3-DESIR connection)

**The LIRAT2 project** - J.C Thomas

- to start in 2008, RIB available early 2010
- looking for partners
- facility were to develop and to commission equipments and detectors to be used at DESIR

**Laser resonant ionisation to purify radioactive beams** - K. Flanagan (CERN), [Kieran.Flanagan@cern.ch](mailto:Kieran.Flanagan@cern.ch)

- objectives: beam purification factor of  $10^7$
- following the implementation of ISCOOL at ISOLDE, could be set at the entrance of the DESIR building
- requirements: 2 m long overlapping section at  $10^{-10}$  mbar, cooled and bunched beams, efficient neutralization in a charge exchange cell

### **Financial aspects – B. Blank**

- 1/3 of the DESIR building is financed
- the RFQ cooler-buncher is financed
- the HRS and the beam lines are not
- we should get the CEA involved in the project

### **Organisation of the DESIR collaboration – B. Blank**

- Representatives:
  - Spokesperson: B. Blank
  - GANIL liaison: J.C. Thomas
- Working groups conveners:
  - RFQ: G. Ban (LPC), [ban@lpccaen.in2p3.fr](mailto:ban@lpccaen.in2p3.fr)
  - HRS: B. Blank, in collaboration with the ANL
  - Off-line sources: F. Le Blanc (IPN Orsay), [leblanc@ipno.in2p3.fr](mailto:leblanc@ipno.in2p3.fr), in collaboration with GANIL
  - Physics & Instrumentation: P. Thirolf
  - S3 – DESIR connection: G. Neyens
  - DESIR building: J.C Thomas
  - DESIR safety: J.C Thomas
  - Control/Command: convener and tasks not yet defined, SPIRAL2 C/C presumably oriented towards the EPICS (Experimental Physics and Industrial Control System) standard

### **DESIR Proposal**

To be discussed in 2008, dead-line for submission in 2009

### **DESIR web page**

To be defined in 2008, may be handled within the SPIRAL2 preparatory phase program by the person in charge with the communication

### **SAC recommendations**

- scientific arguments to be given for the connection of the S3 and DESIR buildings via a beam line (study of refractory elements at high yields)
- DESIR technical report in 2009

### **S3-DESIR**

- S3 will produce exotic refractory beams, very short-lived isotopes and rather heavy elements
  - Gas cell with prepare ISOL beams
  - Same instrumentation needed as in DESIR
- coupling of S3 and DESIR

However, this needs a new layout of the facility! Discussions started already with management (letter of S3 and DESIR to directors, discussion with infrastructure people)

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### **Actions to be taken**

<b>Actions</b>	<b>When</b>	<b>Who</b>
precise definition of the scientific equipments to be installed at DESIR (elements of the devices, power consumption, required supplies, running modes, etc...)	early 2008	Working group conveners Experimental area coordinators
Precise definition of the building and of the HRS-RFQ cave	early 2008	Working group conveners
DESIR Safety report	early 2008	Working group convener
DESIR building/ rooms characteristics (see attached file)	Now	everybody
S3-DESIR connection	right now	DESIR and S3 representatives