

Minutes of the MATS/LASPEC Meeting at GSI

Date: 05.03.2014, 18:00 – 19:30

Participants: J. Äystö, M. Block, T. Dickel, S. Eliseev, C. Geppert, A. Herlert, A. Jokinen, Y. Litvinov, I. Moore, W. Nörtershäuser, Y. Novikov, W. Plass, D. Rodríguez, B. Rubio, C. Scheidenberger, P. Thirolf

(1) Report from the LEB Task force (Christopher Geppert)

The recent architect study of ion41 came up with additional cost of 8.3 M€ (2014) for the LEB building designed for the new S-shaped energy buncher. The size of the building for MATS and LaSpec is 30×13 m. If we get the Go! For the building we will have to approach the funding agencies in the 10 shareholder countries. Sweden has already indicated to contribute. The current roadmap foresees that work starts around 2017 and first experiments may be performed end of 2019 assuming all other FAIR buildings are finished.

Additional quadrupole triplets in the energy buncher might be required to get a better performance but might be included later in a staging approach. Simulations are ongoing.

(2) Status of the Gas Stopper TDR (Wolfgang Plass)

The current status of the gas stopper and the plans for the beamtime in fall 2014 were presented. It was pointed out that the efficiency of the gas cell is not a fixed number but depends on several parameters, e.g. beam purity. In order to serve LASPEC, the gas cell should be able to accept 10^7 ions/s. This is based on an estimated factor of $100\times$ unwanted contaminants in the beam, a conservative gas cell efficiency (stopping and extraction) of 10%, and a transmission efficiency of 10% from the gas cell to the collinear laser beamline(s) thus leading to a (minimum) ion rate of 1000/s for laser spectroscopy. This is the design goal of the cell and an important priority in the next FRS beam time in September will be to probe the current intensity limitations using fission fragments. Wolfgang Plass points out that the LEB hall should therefore have sufficient shielding to accept these intensities. This should be pointed out at the LEB task force meetings.

In order to think about other/new key nuclides, it was agreed to make comparisons between the performance of the new layout (S-shape) and the old layout (C-shape) according to production rates and beam purity. This comparison should be made with key nuclides already presented in the Technical Design Report of MATS-LaSpec Based on the results; an adaption of key nuclides for physics cases will be discussed.

The gas-cell TDR has been delayed due to beamtime preparations. It is now foreseen for end of 2014. No further information about technical solutions to raise the gas cell on the HV platform is available yet. This will be the topic of future discussions between the technical directors, the spokespersons and Wolfgang Plass.

(3) Construction MoU

A construction MoU is under preparation. The Resource Coordinator prepares it together with NUSTAR Resource Board members. A final draft version of the NUSTAR MoU is expected mid-2014. The spokespersons of the sub-collaborations are currently updating the annex part of the document and are approaching individual members for input.

(4) NUSTAR Week 2014

The NUSTAR week 2014 will be held at IFIC, Valencia, 22nd-26th of September (<http://webific.ific.uv.es/web/en/visitors>) and is organized by Berta Rubio and Dolores Cortina

(5) LASPEC Technical Director

Christopher Geppert is leaving the position of the Technical Director at April 1st. He has served LASPEC as a Technical Director for more than 7 years and this is highly appreciated by both collaborations. Zoran Andelkovic from GSI has been suggested as interim Technical Director until a new board will be elected in 2015. He is in close touch with Frank Herfurth and Christopher Geppert. He will also replace Christopher in the LEB task force.

Minutes taken by Wilfried Nörtershäuser