Workshop on SoNDe Application in Neutron Detection
17.-19. October 2016, Freising, Germany

An international workshop organized by the Jülich Centre for Neutron Science entitled

Workshop on SoNDe application – Neutron detection in research and industry

17th – 19th October 2016, Freising, VivaVita Conference Centre

SoNDe is a project for the development and construction of a high-flux capable neutron detector funded by the European Union within the Horizon 2020 framework. The development focuses on the following specifications:

- high-flux capability, capable of handling the peak-flux of up-to-date spallation sources (gain factor of 20 over current detectors)
- high-resolution of 3 mm by single-pixel technique, below by interpolation
- high detection efficiency of 80 % or more
- no beam stop necessary, thus enabling investigations with direct beam intensity
- strategic independence of ^{3}He
- time-of-flight (TOF) capability, necessary to exploit maximum flux, with a time resolution in the µs regime
- modularity, improving maintenance characteristics of today's neutron detectors

This project includes partners from France (Laboratoire Léon-Brillouin), Norway (IDEAS) and Sweden (ESS and Lund University) and Germany (Forschungszentrum Jülich).

This workshop will be dedicated to making the new SoNDe detector concept known within its various user communities. These range from basic research facilities to industry and security applications, where the detection of neutrons or Xrays is needed. During the workshop there will be both presentations by the developers as well as users and a hands-on session, where a working prototype can be examined in working conditions.

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The topics will include:

- General Concept
- High-Flux environments
- Harsh environments
- Time and spatial resolution
- Hands-on session with a prototype and guided reactor tour at FRM II - Garching

All topics will be covered by distinguished speakers.

The workshop is supported by:

Hamamatsu Photonics Deutschland GmbH
Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany

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and the European Commission (Grant 654124)

Europäische Kommission

Local Organizing Committee

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Jülich Centre for Neutron Science

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Agenda

Monday - 17th October 2016:

10.00 – 11.30 Arrival and registration (with coffee and tea)
11.30 – 12.00 Opening (Sebastian Jaksch)

12.00 – 13.00 Lunch

13.00 – 13:30 SoNDe: Project Overview, Scope and Goals (Sebastian Jaksch)
13:30 – 14:00 Fundamental Ideas and General Concept (Günter Kemmerling)
14:00 – 14:30 Characterization of the MaPMT (Hanno Perrey)

14:30 – 15:00 Coffeebreak

from 15.00 bus-transfer to JCNS Garching
from 15:45 guided reactortour at the JCNS in Garching
from 18.00 bus-transfer to Freising (Stops at Hotel Lerner and Hotel Bayerischer Hof)

Tuesday - 18th October 2016

09:00 – 10:30 Prototype presentation (Sebastian Jaksch)

10.30 – 11:00 Coffeebreak

11:00 – 11:30 The SoNDe Readout ASIC (Codin Gheorghe)
11:30 – 12:00 Control and Infrastructure Electronics (Ralf Engels)
12:00 – 12:30 Potential Applications (Sylvain Désert)

12:30 – 13:30 Lunch

13:30 – 14:00 Detectors at Large Scale Neutron Scattering Facilities (Kalliopi Kanaki)
14:00 – 14:30 Availability of SoNDe (Sebastian Jaksch)
14:30 – 15:15 State-of-the-Art ultra-sensitive Photodetectors from Hamamatsu Photonics (Christian Dille)
15:15 – 16:00 Coffee Break with Poster Presentations: Lanthanide-based Nanocomposite Solid State Neutron Detector (L. Claudia Gomez-Aguirre)

16:00 – 16:30 What is the scope of fast SANS detectors at ESS? (Henrich Frielinghaus)

from 16.30 social event reception, brewery-tour and conference dinner at the Bräustüberl Weihenstephan

Wednesday – 19th October

08.30 – 10.00 Discussion and Open Questions Session

10.00 – 10.30 Coffeebreak

10.30 – 11.30 summary and closing

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Venue

Viva Vita Conference Centre
Integrationsprojekt Freising gGmbH
Gartenstraße 57
85354 Freising

Tel.: 08161 4830-151
Fax: 08161 4830-150

E-Mai: info@vivavita-fs.de
web: www.integration-fs.de

Hotels

Hotel Gasthof Lerner

Vöttinger Straße 60
85354 Freising bei München
Telefon: +49 8161 91646
Fax: +49 8161 41404
E-Mail: info@gasthof-lerner.de

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Web: http://www.gasthof-lerner.de/en/index.php

Hotel Bayerischer Hof

Untere Hauptstraße 3
85354 Freising
Telefon: +49 8161 - 53 83-00
Fax: +49 8161 - 53 83-39
info@bayerischerhof-freising.de

Web: http://www.bayerischerhof-freising.de/hotel/?L=1

How to reach Freising:

Freising is about 30km north of Munich airport. It is connected by train and bus to the Munich public transportation system (MVV). Commuting time via public transportation from Munich airport is about 30 minutes. The journey to Freising requires a day ticket for the external area (Außenraum).

From Munich Airport with train

- Take the S1 in the direction of Munich main station (Hauptbahnhof) as far as Neufahrn (2 stops).
- At Neufahrn change trains to the opposite platform for the S1 to Freising station (Hauptbahnhof).

From Munich Airport by bus

- Take bus No. 635 from the airport (there are several stations at terminal 1 and 2) to Freising and go to the last stop, which is Freising station. The bus takes around 25 minutes and you can buy your ticket right at the bus driver.

How to reach the Conference Centre and the hotels from Freising main station:

From Freising main station to VivaVita Conference Centre

You can go by foot, which takes about 10 to 15 minutes

- Leave the station through the main entrance
- You are now on “Bahnhofsplatz” – turn left and follow the street “Bahnhofsplatz”
- Cross “Münchner Straße” and enter straight on “Saarstraße”

- Turn the second street left into “Gartenstraße” until number 57 “Viva Vita”

  Alternatively by bus

- Take bus 633 from Freising main station and drop off at “Gartenstraße”. This bus goes only once an hour!

From Freising main station to Gasthof Lerner

- Take bus no. 638 from Freising main station and drop off at “Bachstraße”. This station is located opposite of “Gasthof Lerner”. This bus goes every 12 to 15 minutes. It is not really advisable to go by foot as it takes around 30 minutes.

From Freising main station to Hotel Bayerischer Hof

You can go by foot, which takes around 10 minutes

- Leave the station through the main entrance
- You are now on “Bahnhofsplatz”, please cross the street and enter the pedestrian walkway in front of you
- Go straight ahead, cross “Münchner Straße” and enter the “Bahnhofstraße”
- Follow “Bahnhofstraße” until the end and turn right there into the “Obere Hauptstraße”
- Follow “Obere Hauptstraße” until you enter “Untere Hauptstraße”. Number 3 is Hotel Bayerischer Hof.

Alternatively by bus

- Take bus no. 620 or 630 from Freising station and drop off „Marienplatz“. Here follow “Untere Hauptstraße” until number 3 – Hotel Bayerischer Hof.

Further useful contacts

- **Central Taxi office Freising:** +49 8161 3666