WP4 Neutron

Kick-Off Meeting: summary

Alexander Ioffe

Jülich Centre for Neutron Science at MLZ,
Forschungszentrum Jülich GmbH, Garching, Germany

CREMLIN Kick-Off Meeting Moscow, 6th October 2015

Objectives

- Identify the research interests and needs of European and Russian partners in the PIK project
- Develop guidelines for a general instrumentation concept of PIK reactor in cooperation with international partners
- Develop the education and training program
- Help in the development of state-of-the-art supporting structures at the PIK reactor
    - Sample environment and supporting laboratories
    - User access system
    - Data management and storage

JÜLICH FORSCHUNGSZENTRUM

NRC "Kurchatov Institute"
Petersburg Nuclear Physics Institute

TECHNISCHE UNIVERSITÄT MÜNCHEN

WP4 NEUTRON: Partners

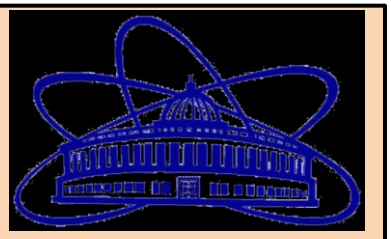
NEUTRONS FOR SCIENCE

EUROPEAN SPALLATION SOURCE

Helmholtz-Zentrum Geesthacht
Zentrum für Material- und Küstenforschung

Observer:

Joint Institute for Nuclear Research Dubna



Tasks

- ***Task 4.1 Mapping of user demands (HZG)***
- ***Task 4.2 Instrumentation Concept PIK (FZJ)***
- ***Task 4.3 Education and Training Programme (PNPI)***
- ***Task 4.4 Data management (ILL)***
- ***Task 4.5 User System (TUM)***

Discussed:

- Roadmap WP4
- Implementation of milestones & deliverables 2016
  - Workshop mapping on user demand (M9)
  - Education & Training Program (M6)
  - PIK instrumentation sub-committee structure (M9)

Schedule:

- start of PIK in the full power mode is expected in 2018

- development of user and instrumentation program should be realized in 2018–2020

- regular operations from 2020 on

Common understanding:

- CREMLIN proposal was submitted a year ago so that the suggested time-schedule has to be updated to match “the real world”
- avoid the conflict of interests & event collisions between CREMLIN WP4 planning and established neutron events schedule

Therefore:

- harmonize the schedules
- integrate CREMLIN activities into existing schedule of conferences & workshops in a possible extent

D4.1: Education&Training Programme (Month 6)

Integrate PIK Education&Training programme into PNPI workshops schedule:

- **organize the CREMLIN schools as satellite events of the exsisting series of workshops based at Gatchina**
- **integrate relevant European schools & workshops**

Workshop	Neutron Diffraction	PNPI School on Condensed Matter Physics	Neutron Spectroscopy	Large Scale Structures	PNPI School on Polarized Neutron Physics
Organized	PNPI NRC KI	PNPI NRC KI	PNPI NRC KI	PNPI NRC KI	PNPI NRC KI
Venue	Gatchina	Gatchina	Gatchina	Gatchina	Gatchina
Dates:	February, 2016	March, 2016	June, 2016	September, 2016	December, 2016
Participants	50	250	50	100	50
Speakers:	20	20	20	30	20

Task 4.1: Mapping of user demands

Aims:

- mapping the demands of the European user community for the PIK reactor
- mapping the demands of the Russian user community for the PIK reactor
- complement the existing European neutron research infrastructure
- integrate the international user facility PIK into the European neutron landscape

Workshop on user demand: material science

Mapping the needs of the European user community for PIK reactor

- focus on **materials science**
  → science field has to be narrowed to be able to get specific
- cover **diffraction** (strain, texture, phases), **SANS** (nanostructures)**, and imaging** (microstructure)
  → obtain user demands also for imaging, which is not yet foreseen at PIK
- focus on the **instrument suite**
  → including instruments transferred to PIK and new instruments to be built at PIK
- combine the workshop with the **German Neutron Scattering Conference** in order to reach more scientists than with an isolated workshop (Kiel, 20–21 September 2016)
- CREMLIN is focussed on Russian and European scientists, but workshop attendants from other countries will be welcomed
- attendance and presentations via video conference should be made possible

Workshop on user demand: BioSoft User Workshop

Mapping the needs of the Russian user community for PIK reactor

- focus on **bio- and biosoft**
  → science field has to be narrowed to be able to get specific - **biopolymers**
- cover **SANS** (above conventional ability), **atomic scale** (crystallography) and **inelastic scattering** (biosoft)
- focus on the **instrument suite**
  → including instruments transferred to PIK and new instruments to be built at PIK
- Combined with the **PNPI Workshop: SANS in biopolymers**
  in order to reach more scientists than with a separate workshop
  (26-27 May 2016, Peterhof)
- CREMLIN is focussed on Russian scientists, but workshop attendants from other countries will be welcomed
- attendance and presentations via video conference should be made possible

MS5: Structure of PIK Instrumentation Subcommittees (M9)

NSAC Sub Committees	CREMLIN Sub Committees
1. Diffraction	1. Diffractometry
2. Spectroscopy	2. Spectrometry
3. Large Scale Structure	3. Reflectometry
4. Fundamental Physics	4. SANS
5. Neutron Optics and Moderators	5. Fundamental Physics
6. Detector and Monitors	6. Supporting Structure
7. Data acquisition	*7. Neutron Optics and Moderators* NEW!

Aim: to integrate NSAC and CREMLIN sub-committees to avoid the parallel structure

➔ *Update of the CREMLIN sub-committees structure*

Thank you for attention!