

### 3rd General NMI3 meeting

Chilton, September 27, 2005

The meeting of the JRA8 working groups (WP1, WP2, WP3 and WP4) was held at the Rutheford Appleton Laboratory, Chilton, Didcot, UK on September 27th-28th, in the framework of the 3rd General NMI3 meeting:

#### Agenda:

1. Introduction (Cesare Bucci)
2. A framework for JRA developments (Philip King)
3. High field avalanche photo-diodes (Robert Scheuermann)
4.  $\mu$ SR using position-sensitive detectors (Toni Shiroka)
5. Analogue detection (Robert Scheuermann)
6. Instrument simulation (Tom Lancaster)
7. RF developments and in-situ AC-susceptometry (Stephen Cottrell)
8. Discussion
9. Summary and conclusions (Cesare Bucci)

#### Attending:

- S. Blundell (Oxford)
- C. Bucci (Parma)
- S. Cottrell (ISIS)
- R. De Renzi (Parma)
- D. Herlach (PSI)
- T. Lancaster (Oxford)
- P. King (ISIS)
- R. Scheuermann (PSI)
- T. Shiroka (Parma)

External observers attending the meeting: Uwe Filges and Heinz Heer (PSI).

Talks presented at this meeting:

- P.J.C. King (ISIS): A framework for JRA developments

PJCK reported on the current status of the  $\mu$ SR instrumentation in Europe and outlined the roadmap to future developments and improvements.

- R. Scheuermann (PSI): High-field avalanche photo-diodes

RS reported on the status of research toward high-speed, field-insensitive detectors, of which the avalanche photo-diodes represent the most promising application.

- T. Shiroka (Univ. Parma):  $\mu$ SR using position-sensitive detectors

TS reported about the possibility of using silicon detectors and scintillating fibers as position-sensitive detectors in muon spectroscopy for achieving better spatial resolution or higher detector segmentation.

- R. Scheuermann (PSI): Analogue detection

RS highlighted the importance of analogue detection technique in future high-rate experiments and its possible application in RF experiments.

- T. Lancaster (Univ. Oxford): Instrument simulation

TL summarized the results of simulations of  $\mu$ +SR experiment in high magnetic fields and their relevance for predicting the muon ensemble's spin and direction in different conditions.

- S. Cottrell (ISIS): RF developments and in-situ AC-susceptometry

SC described some recent developments (including flypast methods, RF techniques and AC susceptometry), which are best fitted to the pulsed nature of the ISIS facility.