

Program

Welcome from the Dean of the School of Science of the National and Kapodistrian University of Athens Prof. Constantinos Varotsos

Welcome from the Chairman of the Faculty of Physics Prof. Nikolaos Tetradis

Welcome from the Principal Investigator of the Cosmic Ray Station of the University of Athens Em. Prof. Helen Christopoulou -Mavromichalaki

Solicited contributions from distinguished collaborators of the NMDB Project:

- * **Dr. Christian Steigies** - Christian-Albrechts-University of Kiel, Germany
- * **Prof. Erwin Flueckiger** - Physikalisches Institut, University of Bern, Switzerland
- * **Dr. Karl-Ludwig Klein** - Observatoire de Paris, France
- * **Dr. Rolf Buetikofer** - Physikalisches Institut, University of Bern, Switzerland
- * **Dr. Roger Pyle** - University of Delaware, USA
- * **Dr. Anatoly Belov** - IZMIRAN RAS, Russia
- * **Prof. Yu Yi** - Chungnam National University, South Korea
- * **Dr. Monica Laurenza** - INAF/IFSI, Roma, Italy
- * **Dr. Helena Krueger** - North-West University, South Africa
- * **Dr. Anna Belhaki** - IAASARS/National Observatory of Athens, Greece
- * **Dr. Manolis Georgoulis** - RCAM/Academy of Athens, Greece

More than **65** participants from **24** Institutes from **16** Countries represented 45 Neutron Monitor Stations all over the world will come to Athens on March 2017 to celebrate the 10 years of NMDB!

A.Ne.Mo.S

Athens Neutron Monitor Station (A.Ne.Mo.S.)

Scientific Organizing Committee (SOC)

Prof. E. Flueckiger (UBern, Switzerland)
Prof. K.-L. Klein (OBSParis, France)
Prof. H. Mavromichalaki (UoA, Greece)
Dr. C. T. Steiges (CAU, Germany)
Prof. I. Usoskin (UOulu, Finland)

Local Organizing Committee (LOC)

Helen Mavromichalaki (UoA, Greece)
Maria Gerontidou (UoA, Greece)
Maria – Christina Papailiou (UoA, Greece)
Evangelos Paouris (UoA, Greece)
Dimitra Lingri (UoA, Greece)
Anastasia Tezari (UoA, Greece)



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Variability of the Sun and Its Impacts (VarSITI)



National & Kapodistrian University of Athens
Faculty of Physics
Department of Nuclear & Particle Physics

Real – time database for high resolution
neutron monitor measurements



‘10 Years NMDB’ Workshop

2007 - 2017

Monday 20 - Tuesday 21 March 2017
Conference Hall ‘Aristotelis’
Wednesday 22 - Thursday 23 March 2017
Conference Room of Faculty of Physics

<http://www.nmdb.eu>
<http://cosray.phys.uoa.gr>

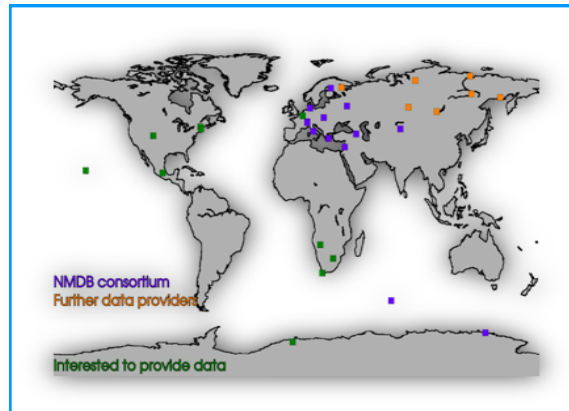


OVERVIEW

In 2007, twelve scientific groups from different countries, which specialized in neutron monitor technology and used it for their scientific research, joined efforts in organizing and implementing a great project funded by the European Union's 7th Framework Program as an e-Infrastructures project in the *Capacities* section. The ultimate goal of this effort was the creation of a **High Resolution Real Time Neutron Monitor Database (NMDB)**, as an effort to make the data of the worldwide neutron monitor network available to the public. Today, 10 years later, this specific project has been realized in the best possible way:

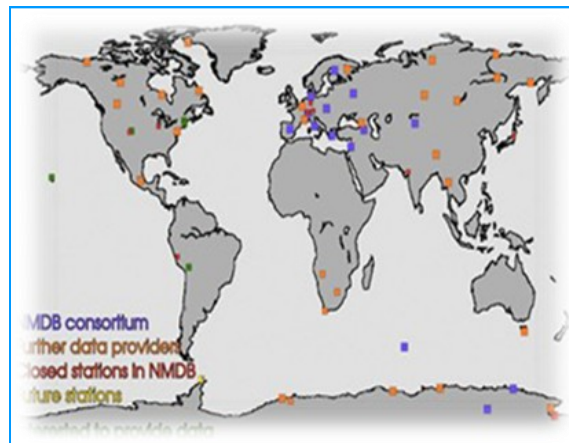
- * Neutron monitor stations are upgraded and synchronized (same resolution and common data format).
- * A centralized database with distributed database mirrors is built.
- * User tools for data provision, data representation and data retrieval are developed.
- * High resolution neutron monitor data (1min and 1hr) are collected and provided in real time and in a standard format, which allows researchers to use real time cosmic ray measurements for space weather predictions.
- * Historical data over several decades are also made available and easily accessed to the public, via user friendly applications.
- * Application tools using neutron monitors data are developed (GLE Alert, dosimetry calculations, cosmic ray characteristics outside the geomagnetosphere).
- * Public outreach information concerning cosmic ray physics and possible effects on humans,

technological systems and space - terrestrial environment as well as training material are available in <http://www.nmdb.eu> in 12 different languages.



NMDB 2009

During this collaboration, many meetings took place. Starting from 2007, the first NMDB Meeting (COST-724) was held in Athens on April 2 – 4 and later that year on September 28, the unofficial Kick-off Meeting also realized in Athens.



NMDB 2017

Many other meetings of the NMDB consortium followed (Paris Kickoff Meeting on January 17 –19, 2008; Košice Meeting on September 13, 2008; Kiel midterm Meeting on December 3 – 5, 2008) until December 3 – 5, 2009, when the NMDB Final Meeting was once more scheduled in Athens. Two years later, on March 11 – 13, 2011, NMDB Workshop on Data Quality was held in Athens. The next year, NMDB Meeting for Data Providers took place in Athens on 23 November 2012, followed by the Technical Meeting on 24 – 26 November 2012.

On September 14 – 19, 2011 the NMDB Training Course, entitled 'Cosmic rays and neutron monitors: A training course in science and applications', was held in the National & Kapodistrian University of Athens. During this course many students, researchers and engineers from all over the world had the opportunity to attend lectures and train on different applications concerning neutron monitor data.

The foundations of this collaboration were established in Athens in 2007. Therefore the celebration-event for the 10 years of successful and continuous operation of the NMDB project should be held nowhere else but in Athens, where applications already developed and presently executed, as well as future goals of the project will be presented.

Info: <http://cosray.phys.uoa.gr/index.php/workshops2/10-years-nmdb>
Contact: 10yearsNMDB@phys.uoa.gr