



SCIENTIFIC PROGRAM

**NMDB Meeting 2025:
'Cosmic Ray studies with Neutron Detectors'**

Athens, 19 – 21 March 2025

**Seminar Room, Department of Physics,
Panepistimioupolis, Zografos**

Wednesday, 19 March 2025

09:30 - 10:00 Registration

Chair: H. Mavromichalaki

10:00 - 10:15	Welcome Address <ul style="list-style-type: none">• Prof. E. Nistazakis, Chairman of the Department of Physics• Prof. em. H. Mavromichalaki, Chair of the NMDB Meeting 2025
10:15 - 11:00	E.O. Flückiger: 'The Significance of Neutron Monitor Measurements over Time'
11:00 - 11:30	C.T. Steigies: 'The history and the current status of the Neutron Monitor DataBase'
11:30 - 11:45	Coffee break

Session 1: Cosmic Rays in the Heliosphere

Chair: M. Laurenza

11:45 - 12:15	K.-L. Klein: 'Observational evidence on the mechanism of relativistic particle acceleration in solar eruptions'
12:15 - 12:35	R. Bütikofer, E.O. Flückiger, L. Bäni: 'GLE alert and afterwards'
12:35 - 13:00	G. Exarhos, X. Moussas: 'The shape and extend of the heliosphere and CR modulation'
13:00 - 14:30	Lunch break

Session 2: Intense Events of 2024

Chair: N. Crosby

14:30 - 15:00	M. Laurenza: Neutron Monitors and Cosmic Ray Science
15:00 - 15:40	J. Rodriguez, B. Kress, A. Boudouridis: 'GOES Solar Energetic Particle Observations During the Ground Level Enhancements 74-76 of 2024' Discussion on GOES satellites
15:40 - 16:00	Coffee break

16:00 - 16:30	M. Abunina, A. Belov: 'Forbush decreases and Interplanetary disturbances'
16:30 - 17:00	A. Chilingarian: 'Solar events of the 25th activity cycle'

Thursday, 20 March 2025

Session 2: Intense Events of 2024

Chair: M. Gerontidou

10:00 - 10:30	A. Papaioannou, A. Anastasiadis, M. Dumbovic et al.: ‘High energy proton recordings during GLE74 on 11 May 2024’
10:30 - 10:50	S. Poluianov, A. Mishev, O. Kryakunova et al.: ‘GLE#75 caused by a solar energetic particle event on 8 June 2024’
10:50 - 11:10	M. Jarry, A.P. Rouillard, N. Talepbour et al.: ‘Modeling the solar event responsible for GLE74 in May 2024’
11:10 - 11:30	M. Schrön, L. Hertle, O. Pinazza et al.: ‘High latitude muon and neutron observation of the Forbush decrease during the May 2024 solar storms’
11:30 - 12:00	Coffee break

Session 3: Cosmic Rays and Space Weather effects

Chair: E.O. Flückiger

12:00 - 12:30	N. Crosby, M. Dierckxsens, E. De Donder: ‘Neutron Monitor Data as input to European projects: SWESNET and PECASUS’
12:30 - 12:50	M. Gerontidou, P. Paschalis, H. Mavromichalaki, et al.: ‘The response of the GLE Alert++ system to the unusual events of 2024’
12:50 - 13:10	B. Sargsyan: ‘Comparison of GLE event of 11 May 2024 and Magnetospheric effect 5 November 2023’
13:10 - 14:30	Lunch break

Chair: O. Kryakunova

14:30 - 15:00	D. Sapundjiev: Energy Sensitivity of a Neutron Monitor: A Monte Carlo Study
15:00 - 15:20	N. Shlyk, M. Abunina, A. Belov, et al.: ‘Selection of the Solar-Diurnal Anisotropy of Cosmic Rays by Local and Global Methods’
15:20 - 15:40	W. Mitthumsiri, D. Ruffolo, A. Sáiz, et al.: ‘Ground-based observations of temporal variation of cosmic ray spectrum during Forbush decreases’
15:40 - 16:00	A. Tarifeno-Saldivia, A. Quero, N. Mont-Geli and HENSA++: ‘Measurement of Cosmic-ray Neutrons with a High Efficiency Spectrometer’
16:00 - 16:20	E. Lavasa, J. Lang, A. Papaioannou, et al.: ‘Solar Energetic Particle transport during the GLE73 event on 28 October 2021’
17:00 – 21:00	Special Event: Visit to the Stavros Niarchos Foundation Cultural Center

Friday, 21 March 2025

Session 4: Cosmic Ray Detection Instrumentation

Chair: A. Chilingarian

10:00 - 10:30	J.J. Blanco , M.A. Hidalgo, D. Arrazola, et al.: ‘ CaLMA’s way, from the space to ground ’
10:30 - 10:50	L. Baeni, R. Bütikofer, E.O. Flückiger: ‘ Neutron Monitors at Jungfraujoch ’
10:50 - 11:10	T. Karapetyan: ‘ The Forbush decrease observed by the SEVAN particle detector network in the 25th solar activity cycle ’
11:10 - 11:30	A. Blanco, S-L Cayetano: ‘ miniTRASGO: A Compact RPC Tracker for Global Cosmic Ray and Space Weather ’
11:30 – 11:50	F. Smanis: ‘ ARTEMIS–JEAN LOUIS STEINBERG (ARTEMIS-IV/JLS) Multichannel Solar Radio Spectrograph Upgrading the Instrument & a Study of Type III Bursts ’
11:50 - 12:10	Coffee break

Chair: M. Abunina

12:10 - 12:30	J. Baláž, P. Bobík, J. Kubančák, et al.: ‘ Research of cosmic rays at the Lomnický štít observatory ’
12:30 - 12:50	S. Belov , V. Yanke: ‘ On the usability of small-scale scintillation muon telescopes ’
12:50 - 13:10	V. Bindi: ‘ HLEA and THIMON: Enhancing Neutron Monitor Data from the Summit of Haleakalā ’
13:10 - 14:30	Lunch break

Session 5: Databases and Catalogues

Chair: Blanco Avalos Juan Jose

14:30 - 14:50	S. Armatas , C. Bouratzis, A. Hillaris, et al.: ‘ The ARTEMIS-IV\JLS free access database (ARTDB): Off to a Good Start-With Room for Improvement ’
14:50 - 15:10	V.M. Nouvilas , B. Brusasco, G.C. Rosell, et al.: ‘ Neutron background monitoring for the IAXO-D0 detector ’
15:10 - 15:30	‘ NMDB Stations Report ’ Contribution from all NM operators
15:30 – 15:50	N. Fuller: ‘ The current Status of NEST ’

Chair: C.T. Steigies

15:50 - 16:20	Discussion
16:20 - 16:30	Closing

e-posters

Session 2: Intense Events of 2024

1. **R. Mawad, X. Moussas: ‘Sympathetic flares including multiples detected by the GOES in solar cycles 21–24’**
2. **M. Livada, H. Mavromichalaki: ‘The Severe Geomagnetic Storm G4 Observed on 10-11 October 2024’**

Session 3: Cosmic Rays and Space Weather effects

3. **O. Kryakunova, B. Seifullina, I. Tsepakina, et al.: ‘On solar sources of interplanetary disturbances before the high-energy magnetospheric electrons enhancements’**
4. **M. Papailiou, M. Abunina, H. Mavromichalaki, et al.: ‘Precursors of large Forbush decreases: The threshold value 0.8% of the equatorial anisotropy’**
5. **M. Gerontidou, E.N Proimou: ‘Statistical Analysis of GLE events’**

Session 4: Cosmic Ray Detection Instrumentation

6. **L. Hertle, S. Zacharias, N. Larsen, et al.: ‘Neutron Monitor based Approaches of the Incoming Flux Correction for Cosmic-Ray Neutron Sensing of Soil Moisture’**