

NUPECC

Nuclear Physics European
Collaboration Committee



- Founded **1988**
- Currently **28** members from **20** countries
- 3 meetings / year in different NuPECC countries

What is NUPECC ?

- NuPECC is an *Associated Committee* of the European Science Foundation (ESF).
- The Committee is supported by its Subscribing Institutions which are in general Member Organisations of the ESF involved in nuclear science and research or research facilities.
- The objective of NuPECC is to:
 - **strengthen European Collaboration in nuclear science** through the promotion of nuclear physics and its trans-disciplinary use and application in collaborative ventures between research groups within Europe and particularly those from countries linked to the ESF.
 - In pursuing this objective the Committee shall :
 - define a network of complementary facilities within Europe and encourage optimization of their usage;
 - **provide a forum for the discussion of the provision of future facilities and instrumentation;** and
 - **provide advice and make recommendations to the ESF and to other bodies** on the development, organization, and support of European nuclear research and of particular projects.

Forward Perspective

- One of the most important NuPECC activities has been the **periodic review and development of the field by producing long range plans (LRP). The last long range plan was published in 2004.** It formed the basis of the NuPECC Large-Scale Facilities Roadmap submitted to the European Strategy Forum on Research Infrastructures (ESFRI) in 2005.
- In 2006, ESFRI adopted the NuPECC priorities and identified FAIR and SPIRAL2 as the two top Nuclear Physics projects in Europe, together with three other projects from Astronomy, Astrophysics and Particle Physics. ESFRI reinforced this decision in their European Roadmap on Research Infrastructures Update in Dec. 2008.

NUPECC Long Range Plan

- NUPECC has now embarked on developing a new long range plan LRP2010 for nuclear physics in Europe which will **cover the next ten to fifteen years**.
- This will be done via a **bottom-up process involving the entire nuclear physics community in Europe**. Everyone with an interest in the future of European Nuclear Physics is cordially invited to contribute.

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Long Range Plan

- At the NuPECC meeting in Vienna 14-03-09 six main themes were identified:
- **Hadron Structure and Spectroscopy**
(**Ulrich Wiedner, *Guenther Rosner, Jochen Wambach***)
- **Phases of Strongly Interacting Matter**
(**Paolo Giubellino, *Jens Joergen Gaardhoeje, Thomas Peitzmann***)
- **Nuclear Structure and Dynamics**
(**Rauno Julin, *Angela Bracco, Maria Borge***)
- **Nuclear Astrophysics**
(**Brian Fulton, *Paul-Henri Heenen, Sotirios Harissopulos***)
- **Fundamental Interactions**
(**Nathal Severijns, *Eberhard Widmann, Klaus Jungmann***)
- **Nuclear Physics Tools and Applications**
(**Sylvie Leray, *Philippe Chomaz, Eugenio Nappi***),
- Six Working Groups (WGs) have been set up to discuss the future of each theme. Each WG has two NuPECC members but will be chaired by a prominent non-NuPECC expert in each field (names in bold). Together with the two NuPECC representatives there are about ten additional members in each WG.

Long Range Plan:

- *Scientific scope*
- Further develop the case for
- Using antiproton annihilation as a tool for hadron structure studies and spectroscopy
- Using radioactive ion beams for nuclear structure studies far off stability, applying
 - In-flight fragmentation and
 - Isotope Separator On-Line (ISOL) techniques
- **Building a new electron-nucleon/ion collider in Europe for nucleon structure studies or the investigation of the role of the glue in strongly interaction particles (hadrons)**
- Building new accelerators and equipment for astrophysical reaction studies
- Developing the applied aspects of Nuclear Physics

NUPECC Long Range Plan Timeline

Bottom-up process

- The anticipated timelines are as follows.
- 1. The six WGs meet separately in the summer of 2009 to develop their strategy, review their field, identify new projects to be supported and start outlining the content of their contribution to LRP2010.
- 2. The European NP community will discuss the initial deliberations of the various WGs at a **Scoping Workshop to take place at GSI Darmstadt in the first week of October 2009.**
- 3. In the following half-year, the WGs will refine their parts of LRP2010. The LRP2010 Steering Committee will formulate the more general aspects of the Long Range Plan and discuss them, together with the six main themes, at the 2010 NuPECC spring meeting.
- 4. The result of this debate will be presented and decided upon at a **Town Meeting open to the entire community in Madrid in June 2010.**
- 5. Final editing of LRP2010 will take place after the conference.
- 6. **Publication of LRP2010 is anticipated towards the end of 2010.**
- *The process above will be integrated into ESF's Forward Look mechanism and will, inter alia, advise ESF on which large-scale nuclear physics facilities in Europe should be upgraded or constructed. ESF in turn has been asked by ESFRI to advise them on the strategy to promote the European Research Area in the EU Framework 8 Programme, which will start in 2013.*

- NUPECC will follow closely the EIC initiatives
- EIC and Hadron Physics working group established.
- Best wishes for a productive workshop

Extras

LRP Working Groups defined/1

- **Hadron Structure and Spectroscopy** [Ulrich Wiedner](#) [Guenther Rosner](#) [Jochen Wambach](#)
- **Working Group Members:**
 - [Constantia Alexandrou](#) (Cyprus)
 - [Mauro Anselmino](#) (Torino)
 - [Reinhard Beck](#) (Bonn)
 - [Mike Birse](#) (Manchester)
 - [Tullio Bressani](#) (Torino)
 - [Michel Guidal](#) (IPN Orsay)
 - [Thierry Hennino](#) (IPN Orsay)
 - [Frank Maas](#) (Mainz)
 - [Ulf Meissner](#) (Bonn and Jülich)
 - [Klaus Peters](#) (GSI Darmstadt)
 - [Andreas Schäfer](#) (Regensburg)
 - [Madeleine Soyeur](#) (Saclay)
 - [Antoni Szczurek](#) (Kraków)
 - [Marc Vanderhaeghen](#) (Mainz)
- **Phases of Strongly Interacting Matter** [Paolo Giubellino](#) [Jens Jørgen Gaardhøje](#) [Thomas Peitzmann](#)
- **Working Group Members:**
 - [U. Wiedemann](#) (Switzerland)
 - [R. Snellings](#) (The Netherlands)
 - [M. Petrovici](#) (Romania)
 - [J. Wessels](#) (Germany)
 - [A. Kugler](#) (Czech Republic)
 - [J.-Y. Ollitrault](#) (France)
 - [F. Gulminelli](#) (France)
 - [P. Senger](#) (Germany)
 - [J. Nystrand](#) (Norway)
 - [K. Redlich](#) (Poland)
 - [G. Cardella](#) (Italy)

LRP Working Groups defined/2

- **Nuclear Structure and Dynamics** [Rauno Julin](#) [Angela Bracco](#) [Maria Borge](#)
- **Working Group Members:**
 - [Navin Alahari](#) (France)
 - [Thomas Aumann](#) (Germany)
 - [Yorick Blumenfeld](#) (France)
 - [Peter Butler](#) (UK)
 - [Hans Fynbo](#) (Denmark)
 - [Andres Gadea](#) (Spain)
 - [Wolfram Korten](#) (France)
 - [Adam Maj](#) (Poland)
 - [Gerda Neyens](#) (Belgium)
 - [Thomas Nilsson](#) (Sweden)
 - [Robert Roth](#) (Germany)
 - [Patricia Roussel-Chomaz](#) (France)
 - [Christoph Scheidenberger](#) (Germany)
 - [Andrea Vitturi](#) (Italy)
 - [Dario Vretenar](#) (Croatia)
- **Nuclear Astrophysics** [Brian Fulton](#) [Paul-Henri Heenen](#) [Sotirios Harissopulos](#)
- **Working Group Members:**
 - [Nicholas Chamel](#) (Bruxelles)
 - [Zolt Fülöp](#) (Debrecen)
 - [Fairouz Hammache](#) (Orsay)
 - [Michael Heil](#) (GSI)
 - [Jordi José](#) (Barcelona)
 - [Francois de Oliveira](#) (GANIL)
 - [Paolo Prati](#) (Genova)
 - [Thomas Rauscher](#) (Basel)
 - [Stefano Romano](#) (Catania)
 - [Kerstin Sonnabend](#) (Darmstadt)
 - [Christof Vockenhuber](#) (Zürich)
 - [Phil Woods](#) (Edinburgh)

LRP Working Groups defined/3

- **Fundamental Interactions** [Nathal Severijns](#) [Eberhard Widmann](#) [Klaus Jungmann](#)
- **Working Group Members:**
 - [Roberto Calabrese](#) (University and INFN Ferrara)
 - [Guido Drexlin](#) (Universität und FZ Karlsruhe)
 - [Dezso Horvath](#) (KFKI Budapest)
 - [Klaus Kirch](#) (PSI Villigen)
 - [Krzystof Pachuki](#) (University of Warsaw)
 - [Fabrice Piquemal](#) (CENBG, IN2P3-CNRS et Université de Bordeaux)
 - [Stefan Schönert](#) (MPI-K Heidelberg)
 - [Rob Timmermans](#) (RU and KVI Groningen)
 - [Cristina Volpe](#) (IPN Orsay)
 - [Oliver Zimmer](#) (ILL Grenoble)
- **Nuclear Physics Tools and Applications** [Sylvie Leray](#) [Philippe Chomaz](#) [Eugenio Nappi](#)
- **Working Group Members:**
 - [José Benlliure](#) (University of Santiago de Compostela)
 - [Andrew Boston](#) (University of Liverpool)
 - [Marco Durante](#) (GSI Darmstadt)
 - [Santo Gammino](#) (INFN-LNS Catania)
 - [Joaquim Gomez Camacho](#) (CNAO Sevilla)
 - [Mark Huyse](#) (Leuven)
 - [Jan Kucera](#) (Nuclear Physics Institute Rez)
 - [Rolf Michel](#) (University of Hannover)
 - [Philippe Moretto](#) (CENBG Bordeaux)
 - [Christina Trautmann](#) (GSI Darmstadt)