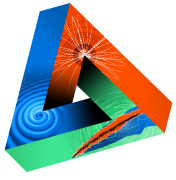


Expressions-of-Interest Kick-off meeting Introduction

Jorgen D'Hondt, Marek Lewitowicz, Teresa Montaruli

JENAS EoI meeting, August 26th, 2020, remote

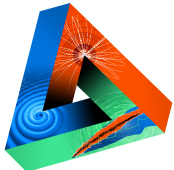


JENAS: synergies astroparticle, nuclear and particle physics

ApPEC-ECFA-NuPECC – Joint Seminar **(<https://jenas-2019.lal.in2p3.fr>)**

- ~230 registrations
- many posters and early-career researchers
- overall a very successful event, cfr. results of the post-evaluation survey among participants shows that above 98% found the meeting useful
- consensus to organize a JENAS every 2 years





JENAS: synergies astroparticle, nuclear and particle physics

Following JENAS 2019: Expressions-of-Interest from JENAS

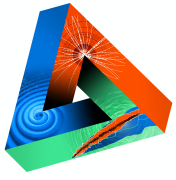
The JENAS2019 event at Orsay allowed astroparticle, nuclear and particle physics researchers to sniffle into each other's activities. The identified overlapping challenges might transform via joint programs into stronger opportunities to further our understanding of both the smallest and the largest structures in nature.

Being informed by the presentations and discussions and with a view to further explore topical synergies between our disciplines, we issue a call for novel Expressions-of-Interest (EoI). We seek bottom-up and community thoughts expressed in a non-binding EoI for further discussion within the APPEC, ECFA and NuPECC committees or consortia. These thoughts can revolve around potential synergies in technology, physics, organization and/or applications.

EoIs in the form of a brief letter are to be submitted to the chairs of the committees/consortia. In the letter you can elaborate on the synergy topic, the objectives, the initial thoughts and the potential communities involved. This letter is not the end of the process, but potentially the start of further communications on the expressed interest.

Within our committees/consortia and taking into account their respective roles in our communities, we will discuss and propose actions to further your thoughts.





Expressions-of-Interest (EoI) from JENAS

In total five EoIs have been received (#1, #2):

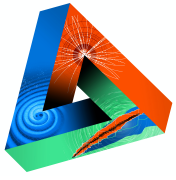
- **Machine Learning-Optimized Design of Particle Detector Layout for Future Scientific Experiments** (T. Dorigo et al.)

create a research network to share expertise for an integrated approach to detector designs from detector technology to reconstruction and analysis, ...

- **Initiative for Dark Matter in Europe and beyond: towards facilitating communication and result sharing in the Dark Matter community (iDMEu)**

(G. Lanfranchi et al., proposal via <https://indico.cern.ch/event/869195/overview>)

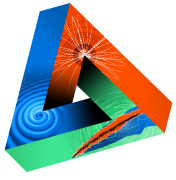
virtual forum across communities to exchange results, theory progress, develop common language/benchmarks, town meetings, ...



Expressions-of-Interest (EoI) from JENAS

In total five EoIs have been received (#3, #4, #5):

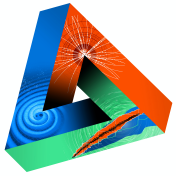
- **Gravitational Wave Probes of Fundamental Physics** (T. Galatyuk, P. Pani et al., <https://agenda.infn.it/e/GWFundPhys>)
foster synergies and strengthen the connections across disciplines to share expertise, ...
- **Nuclear Physics at the LHC** (L. Fabbietti, A. Kalweit et al.)
explore the unique opportunity for a multidisciplinary investigation of the hyperon-puzzle in neutron stars and to enable the search for dark matter in cosmic rays, ...
- **Storage Rings for the Search of Charged-Particle EDMs** (C. Carli, P. Lenisa, J. Pretz for the JEDI and CPEDM collaborations)
bring together technical and scientific expertise across disciplines towards a design of an all-electric precision storage ring which can store clockwise and counter-clockwise polarized hadron beams, ...



Expressions-of-Interest (EoI) from JENAS

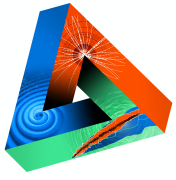
In general, these topics have been noted in the updated Strategy for particle physics. What can APPEC, ECFA and NuPECC offer to strengthen the synergies for an EoI topic:

- Supporting the **organization** of (tele-)gatherings across communities on the EoI topic (workshops, town meetings, platforms for continuous discussions, ...)
- Make **announcements** related to the EoI topic through our channels across the three disciplines
- Help with the **dissemination** of the activities and potential reports of the EoI topic (reports at APPEC, ECFA and/or NuPECC meetings, articles in our newsletters, ...)
- Link the project specific **website** on the APPEC, ECFA and/or NuPECC websites
- Help with **community wide calls** to seek collaborators, with calls for venues for specific events and with funding applications for the EoI topic
- Raise the **awareness** of the EoI topic in our scientific communities and to policy-making bodies
- Organize **dedicated sessions at the JENAS events** on the EoI topic



The path for APPEC, ECFA and NuPECC to help, chronologically

1. For the collection of Eol topics we have a **joint APPEC-ECFA-NuPECC task force**, and with all task force members together, we aim to obtain coverage for all Eol topics (list at <https://indico.cern.ch/event/949204/>)
2. The chairs of APPEC, ECFA and NuPECC will organize a **kick-off gathering** with the Eol proponents and the identified APPEC, ECFA and NuPECC task force members
3. The proponents will be asked to create (if not yet done) a **dedicated website for their project**, indicating the JENAS logo and the link to APPEC, ECFA and NuPECC
4. The Eols coordinators and the task force members connected to a topic will be invited to organise **follow-up topical meetings** with the objectives to come to a concrete plan
5. Report to our committees/consortia the **concrete plan** for consideration and endorsement
6. A dedicated APPEC-ECFA-NuPECC **Joint Activities website** is created indicating past and future JENAS events and the weblinks to the Eol websites (<http://www.nupecc.org/jenaa>)
7. Agree on a **communication line** between APPEC, ECFA and NuPECC for each of the Eol topics, e.g. initially through the members of the task forces

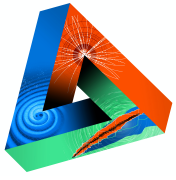


JENAS logo

The synergies are explored in the spirit of the JENAS events for which an adequate logo was designed by the local organisers of JENAS 2019.

In order to disseminate and strengthen the awareness of these synergies, please use this logo consistently in your efforts related to APPEC, ECFA and NuPECC.

The logos can be found on the indico page: <https://indico.cern.ch/event/949204/>

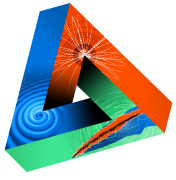


Financial support

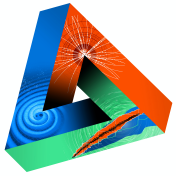
The General Assembly of APPEC confirmed its availability to provide financial support for activities related to JENAS Eols.

ECFA operates without an explicit budget, but on a case-by-case basis in-kind support could be explored at ECFA-related institutions.

Subject to the approval of NuPECC, limited financial support could be explored from within the NuPECC budget.



Additional information



JENAS: synergies astroparticle, nuclear and particle physics

From the recent update of the Eur. Strategy for Particle Physics

*“There are **many synergies between particle physics and other fields of research**. Clear examples are nuclear and astroparticle physics, which address common fundamental questions and use common tools.”*

*“**Links between accelerator-based particle physics and closely related fields such as astroparticle physics and nuclear physics should be strengthened through the exchange of expertise and technology in areas of common interest and mutual benefit**. To further explore and enhance the synergies, a periodic joint seminar organised by APPEC, ECFA and NuPECC was recently established. For example, on the diverse topic of dark matter addressed with complementary experimental approaches, communication and results-sharing across communities is essential.”*

Extracts from the 2020 Strategy update

JENAS-2019
Joint ECFA-NuPECC-ApPEC Seminar
jointly organized by LAL, IPNO, IRFU and LPNHE

October 14-16, 2019
Auditorium Pierre Lehmann, bât. 200, Faculté d'Orsay

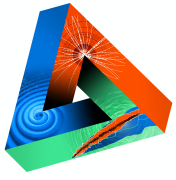
ECFA-NuPECC-ApPEC Organizing Board

ECFA
Jürgen Dittus, HEP/Univ. Universität Basel
Manfred Kramer, CERN
Carlos Lucas, IFIC/CSIC-Universidad de Valencia

NuPECC
Angela Bracco, INFN Milano/Università di Milano
Marek Lesiński, GANIL
Sven Hofmann, Stefan Meyer, Institut für Subnukleare Physik der RWTH/Universität Wien

ApPEC
Stan Benhabib, FNANP
Antonio Mastroianni, INFN
Teresa Montaña, University of Geneva

ECFA NuPECC APPEC
LAL IPNO IRFU LPNHE



JENAS: synergies astroparticle, nuclear and particle physics

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Extracts from the 2020 Strategy update

CALL FOR VENUES FOR THE JENAS 2021 EVENT

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 Joint ECFA-NuPECC-ApPEC Seminar
 jointly organized by LAL, IPNO, IRFU and LPNHE

October 14-16, 2019
 Auditorium Pierre Lehmann, bât. 200, Faculté d'Orsay

ECFA-NuPECC-ApPEC Organizing Board

ECFA
 Jürgen Dittus, DESY/Univ. Hamburg
 Manfred Kramer, DESY
 Carlos Lucas, IFIC/CSIC-Universidad de Valencia

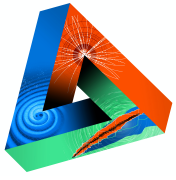
NuPECC
 Angela Bracco, INFN Milano/Università di Milano
 Marek Lesiński, GANIL
 Gerhard Wilms, Stefan Meyer Institut für Subnukleare Physik der RWTH/Universität Wien

ApPEC
 Stan Bellenheim, FNANL
 Antonio Mairani, INFN
 Teresa Murtola, University of Geneva

Local Organizing Board

ECFA NuPECC APPEC

IPNO LAL LPNHE



JENAS: synergies astroparticle, nuclear and particle physics

CALL FOR VENUES FOR THE JENAS 2021 EVENT

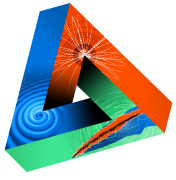
Following the successful first Joint APPEC-ECFA-NuPECC Seminar in Orsay (<https://jenas-2019.lal.in2p3.fr>), the chairs of APPEC, ECFA and NuPECC issue a call for venues for the second JENAS event to be organized in the autumn of 2021. The Joint Seminar is to inform our communities about each other's scientific, technological and organizational challenges and opportunities.

At this stage we launch an open call to receive proposals for venues for this 3-day meeting. **Proposals should be communicated to the three chairs of APPEC, ECFA & NuPECC, and reach us the latest on 21 September 2020.**

Shortly after, the organising board of JENAS2019 will proceed to select the venue for JENAS2021 (<https://jenas-2019.lal.in2p3.fr/organisingboard/>).

A proposal should contain information about the venue, the available dates in October-November 2021, the plenary meeting room to host 300 participants, a few additional rooms with 20 to 40 seats, the initial composition of the local organizing team, options for accommodation and potential transport, and the initial estimate of the participation fee.





JENAS: synergies astroparticle, nuclear and particle physics

Thank you for your sharing the synergy spirit and your efforts!

