

First EP-NU Meeting

Albert De Roeck

Welcome

- **Welcome to the EP-NU group!**
- Most of you are transferred now to EP-NU. More on that later today.
- Plan a meeting on analysis & related tools/computing roughly every two weeks. Also occasion to bring up some interesting topics on physics (workshop reports, etc.). Are Thursday mornings ok? Then next meetings can be 2/2 and 16/2
- Invited are EP-NU members and invited friends/close collaborators (check with ADR)


EP-NU Meetings

- Topics in concert with the EP-NU mandate (see later)
- Including news eg on on manpower, opportunities, eg summer students or technical students, meetings etc.
- Typical topics
 - Discussion/reports on analysis & tools (reco/sim...) work ongoing/starting in the group.
 - Reports on meetings and workshops
 - Occasional, interesting new topics and developments. Can invite external speakers
 - Computing issues that affect us all..?
 - New members introducing themselves
 - Other ideas? Let me know!

Today's Agenda

EP-NU Group Meeting

 Thursday 19 Jan 2017, 11:30 → 13:00 Europe/Zurich

 4-1-021 (CERN)

11:30 → 11:35


Introduction ⌚ 5m

Speaker: Albert De Roeck (CERN)

11:35 → 11:55

Report on the NU-PHYS meeting ⌚ 20m

Speaker: Leigh Howard Whitehead (CERN)

 lhw_nuPhys2016.pdf

11:55 → 12:15

EP-NU activities ⌚ 20m

Speaker: Albert De Roeck (CERN)

EP-Nu Activities

We are a new group, and are still exploring in which directions to expand
We have however already some engagements and involvements which
we should honour of course.

But we should also discuss future developments

Neutrino Group in EP

From Manfred/Faculty Meeting

Established September 1st, 2016

Neutrino Group EP-NU (<https://ep-dep.web.cern.ch/organisation/nu>)

Interim Group Leader: MK

Deputy Group Leader: Albert De Roeck

Excerpt from the mandate (full mandate in backup slides):

- Act as focal point for the activities of the accelerator-based experimental neutrino community in Europe, in close connection with the activity in the TH Department.
- Coordinate contributions from EP-NU and other EP groups, such as the support groups (DT, ESE, SFT), to the Neutrino Platform projects.
- Coordinate, together with the Project Leader of the Neutrino Platform, CERN's participation in those experiments that CERN joins as a collaborating institute (currently ICARUS and DUNE).

Involvement of EP-NU

- Take over well defined work packages from the Neutrino Platform projects connected with ICARUS, ProtoDUNE-SP, ProtoDUNE-DP, DUNE, funding from Neutrino Platform MTP resources
- R&D projects for ProtoDUNEs and DUNE (event reconstruction, calibration, simulation, analysis)
- Physics studies
- Integrate personnel from Neutrino Platform into EP-NU,

News on people

- New people coming: (Almost) all people from the platform.
- One new graduate student coming for 6 months
- Boston Univ. abroad undergrad program: 2 students for 6-8 months. Arriving today. Want to work on LarTPC
- Two (presently) CMS people expressed interest to join in the Deep Learning effort for LarTPC reco/DUNE
- Should we ask for Technical students? Eg to help with the computing/DAQ/... Then we should write project proposals
- **Summer Students!** It is now time to think of asking for a summer student/prepare a project. (deadline start of February). Will send a mail with instructions
- Interest from research fellows (private contacts)!!
- LDs: have to pass through the committees. But we can encourage people to try so.
- Visitors...?

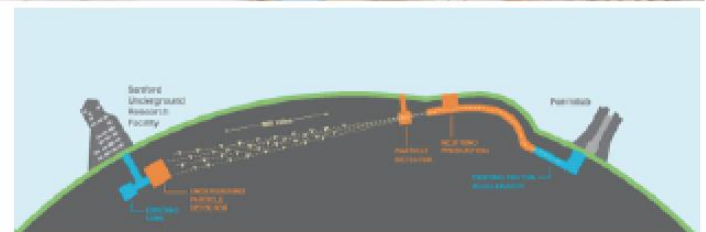
Upcoming events

- We have a **common EP/TH meeting on 20/2.** Meeting meant to find communalities/synergies between our work and their expertise. Input on topics welcome!
- Theory Institute 27/3-31/3. Program under discussion in TH.
- Academic training on neutrino physics in March by Stefania and Pilar in March
- And...

DUNE Collaboration Meeting

CERN, 23 - 26 January 2017

<http://indico.cern.ch/event/581652/>



DUNE Collaboration meeting

- Next week @CERN !!
- Expect like 250 participants. Lot's of work
 - Participate if you can. Registration fee and dinner will be covered, but you have to register for both
- Key issue: making sure vidyo & rooms work all right
 - Can use some help in checking the rooms at the start of the parallel meetings (4 parallel meetings each day on Tuesday and Wednesday) Some of you are already in these meetings or even organizing them
- Note that the DUNE week starts on Sunday with the ND detector pre-meeting. Could be of interest for us

Projects: Initial discussion

- **DUNE:** Activities at several levels
 - **ProtoDUNE SP** We have some ongoing activities on reconstruction/simulation/physics/ computing
 - **ProtoDUNE DP?** Do we have an involvement?
 - **Physics TDR of DUNE:** will need manpower.
 - **DUNE Near Detector?** See below.
- **ICARUS:** Data analysis in 2018? SB planning meetings
- **LOI high pressure TPCs.** (EP-DE now also on board)
 - ND for Dune?: meeting in a few days@ CERN/workshop FNAL
 - T2K upgrade? Following meetings/new fellows/Stefania interested. Should we explore this option?
- Workshop with TH on precision/systematics of NDs and neutrino scattering processes?

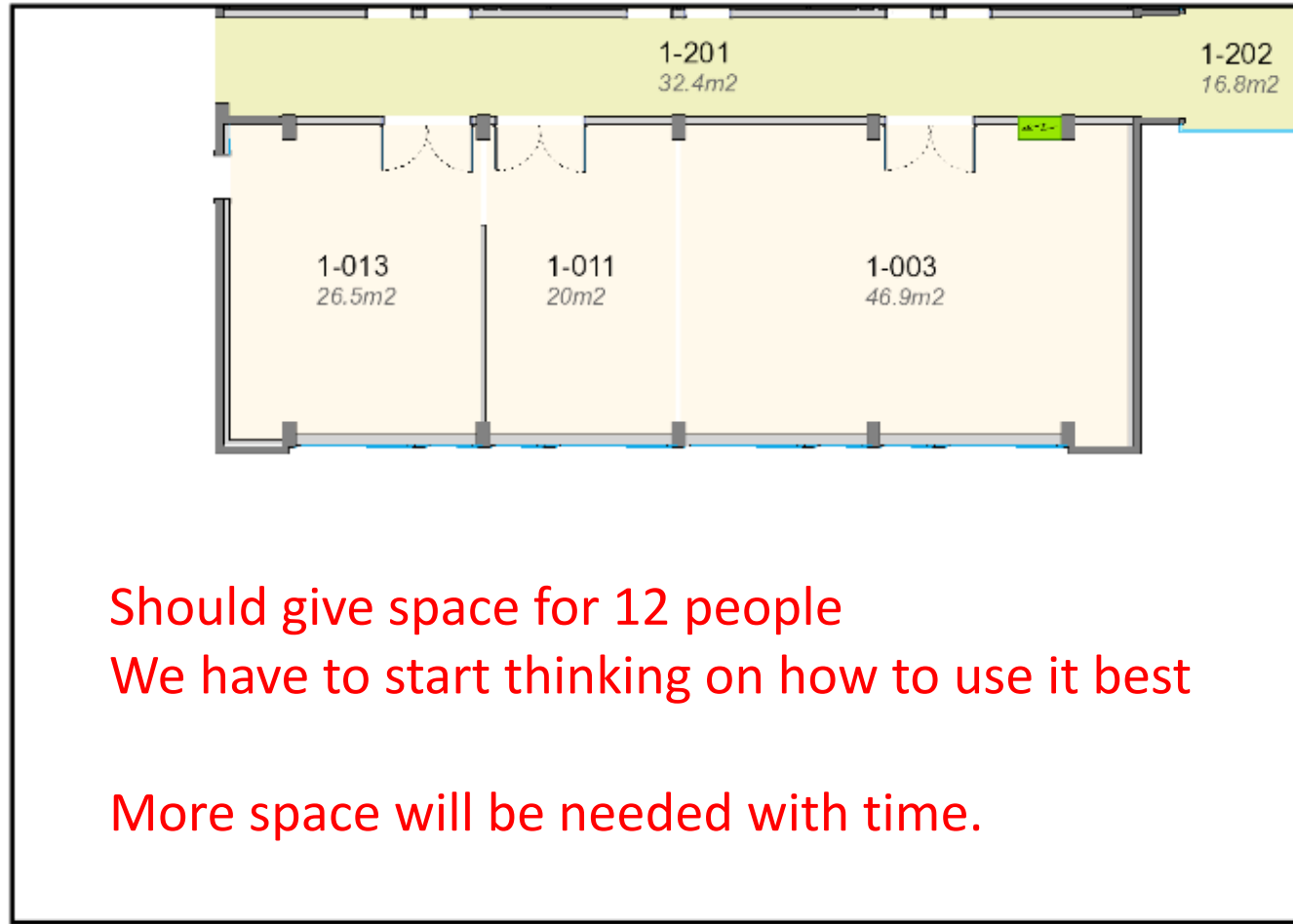
New Room/area

Building 58 - Floor 1

CERN Geographic Information System



- Grid and aids - other
- ISB
- Feasibility
- Lines
- at the entrance
- structure
- closure
- closure of loggia
- escalator
- cauld
- trunk
- viaduct
- potholes
- overhead cables
- barriers, ramparts
- bridge
- mobility
- ventilation
- structure
- drains
- Surfaces
- Drains
- Viaduct
- Barrière ramparts
- Bridge
- Cover
- Coverage
- Maintenance
- Passage
- Insulation technique
- Mobility
- Floored
- Structure métallique
- Ventilation
- Vide
- Rooms
- Corridor
- Technical room
- Store
- IT
- Storage
- Sanitary / Cloakroom
- Roofing / Terrace
- Tunnel
- Surface zone
- Technical garage
- Other room



Should give space for 12 people
We have to start thinking on how to use it best

More space will be needed with time.

Mandate EP-NU

The EP Neutrino group works in close collaboration with the Project Leader of the Neutrino Platform. Its main tasks are:

- Act as focal point for the activities of the accelerator-based experimental neutrino community in Europe, in close connection also with the activity in the TH Department.
- Participate in accelerator-based neutrino projects in Japan and in the US, with activities including: simulation studies of planned experiments, in particular those supported by the Neutrino Platform (both short- and long-baseline) with the aim of optimising their physics potential; development of reconstruction techniques (e.g. for data from liquid-argon TPC's) in preparation for their physics exploitation; engagement in physics studies of measurements that can be performed in these experiments.
- Contribute to the analyses of test-beam data from detector prototypes tested at the Neutrino Platform.

Mandate EP-NU cont.

- Organize workshops to bring the community together, in close collaboration with the CERN TH neutrino group.
- Coordinate contributions from EP-NU and other EP groups, such as the support groups (DT, ESE, SFT), to the Neutrino Platform projects. Each activity shall be defined in a work package containing a reasonably detailed description of the work, as well as a clear definition of the deliverables. The resources required for the execution of the work packages (both for material and personnel) shall be reported in detail; they are accounted for in the Neutrino Platform budget line of the MTP.
- Coordinate, together with the Project Leader of the Neutrino Platform, CERN's participation in those experiments that CERN joins as a collaborating institute (currently ICARUS and DUNE). CERN will be represented in the collaboration's governing bodies by a member of the EP group, the Project Leader of the Neutrino Platform, or both, depending on the nature of the body.

Mandate of the EP-Nu group

- Act as beacon and attraction pole for the activities of the accelerator-based experimental neutrino community
- Support a group for experimental neutrino physics at CERN to participate in accelerator based neutrino experiments worldwide
- Contribute to the analyses of test-beam data from detector prototypes tested at the Neutrino Platform.
- Organize workshops to bring the community together, in particular in close collaboration with the TH neutrino group at CERN.
- Coordinate contributions from EP-NU and other EP groups, such as -the support groups (DT, ESE, SFT), to the Neutrino Platform projects.
- The EP Neutrino group should work in close collaboration with the project leader of the Neutrino Platform and be ~~connect~~ closely connected with the activity in the Theory Department.
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- Together with the Project Leader of the Neutrino Platform, the EP neutrino group will coordinate the CERN participation in those experiments that CERN joins as a collaborating institute (ICARUS and DUNE at this time). The representation of CERN will be represented in the collaboration ~~will be executed~~ by a member of the EP group, the Project Leader of the Neutrino Platform, or both, depending on the nature of the body. In particular, a member of the EP group will participate in the Collaboration Boards to represent of CERN's interests as a collaborating institute. Participation of CERN as a collaborating institute in other experiments that use the Neutrino Platform may be considered on a case-by-case basis, but would require separate agreement by the CERN management.

- The scope of the group will cover topics such as ~~perform~~ simulation studies of planned experiments in the worldwide neutrino programme, in particular those participating in the Neutrino Platform (both short- and long-baseline), with the aim of optimising their physics potential. Develop reconstruction techniques (e.g. for data from liquid-argon TPCs) to prepare for the physics exploitation. Develop analysis tools and contribute to the analysis frameworks of the experiments. Engage in physics studies on measurements that can be performed in these experiments In future this group can also play a role in the trigger studies and computing challenges for the experiments

Varia

- Summer students-> group this is the time to collect our Summer Student projects for the 2017 season.
- Technical students (eg computing and software)
- Fellows: was contacted/T2K?
- Hosting of visitors. Need organization with Marzio? Mores space?

Summer Students

- CERN EP department has been allocated a quota of 94 Member State (MS) students (+3 for TH department) for the 2017 Summer Students program (there will also be a comparable number of Non-Member State (NMS) students, projects that are not allocated MS students may be assigned students from this group). CMS is likely to receive some 25 (MS) + 25 (NMS) students. In order to ensure that the EP department provides an adequate number of good supervisors, CERN Users are encouraged to participate in the supervision of Summer Students. Supervisors are expected to be resident at CERN for most of the duration of the projects, in particular for the first weeks, and are responsible for organizing adequate replacement supervision when absent from CERN for more than a few days. CERN Users are encouraged to propose projects for summer students; for administrative reasons, they are asked to provide the name of a Staff Member as alternative contact. It is possible to foresee more than one student per project, although given the expected oversubscription of students, this should be considered very exceptional. Administration and financing of the summer students is taken care of by the HR department.

Summer Students

- Please find below instructions on submitting proposals for summer student projects for the summer of 2017. When submitting your proposal, please fill all fields - start the description of your project (at least 5 lines) with the word CMS! - indicate the type of computing training (if any) that may be beneficial for the prospective student - specify the approximate ratio of physics/engineering/computing content of the project (as percentages) - indicate the expected training value to the student of the project proposal - indicate the computing skills required
- You can submit your request using the Project Proposal form available on the Web via <http://hrapps.cern.ch/auth/f?p=112:1>