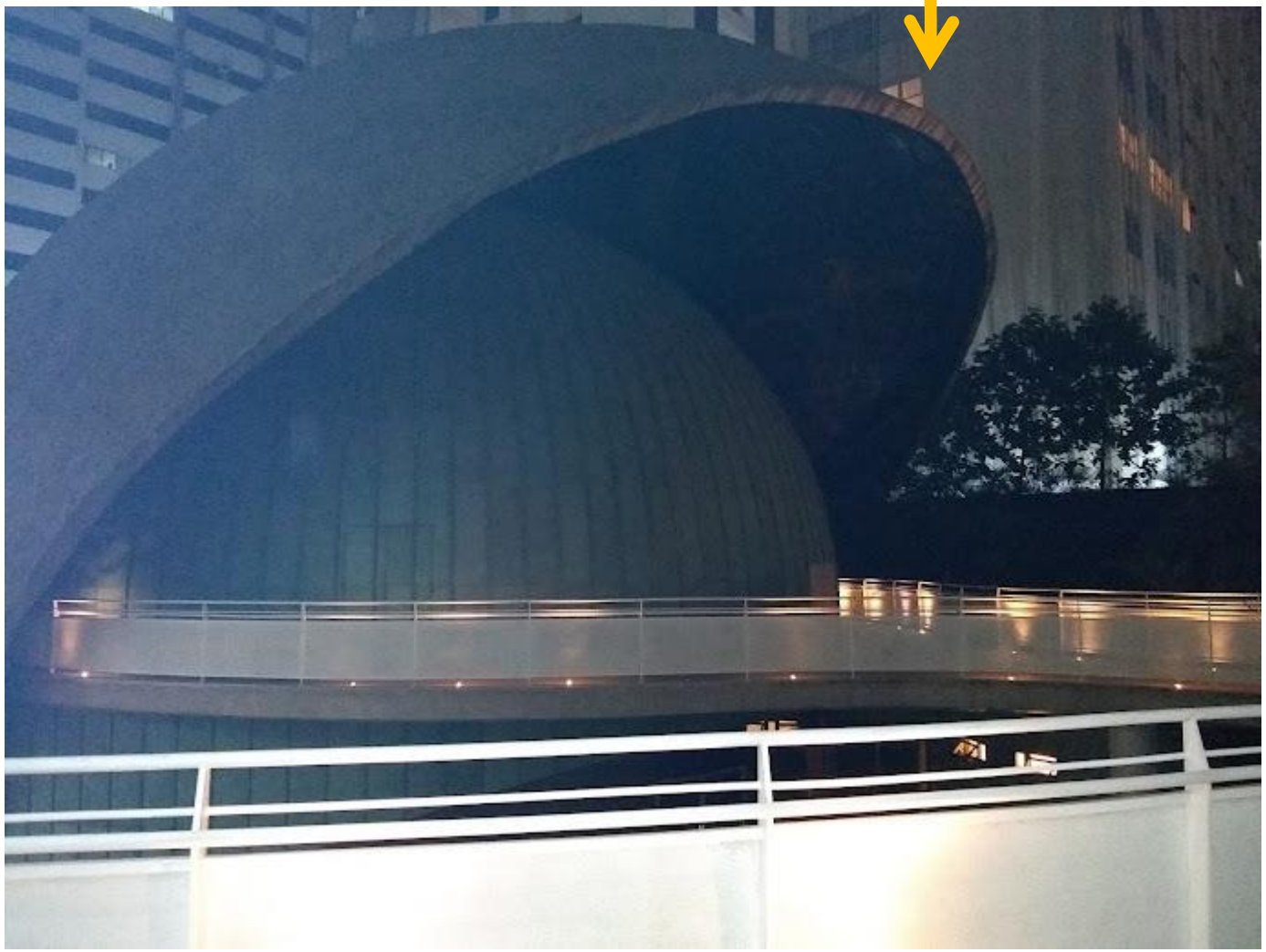
At the end of

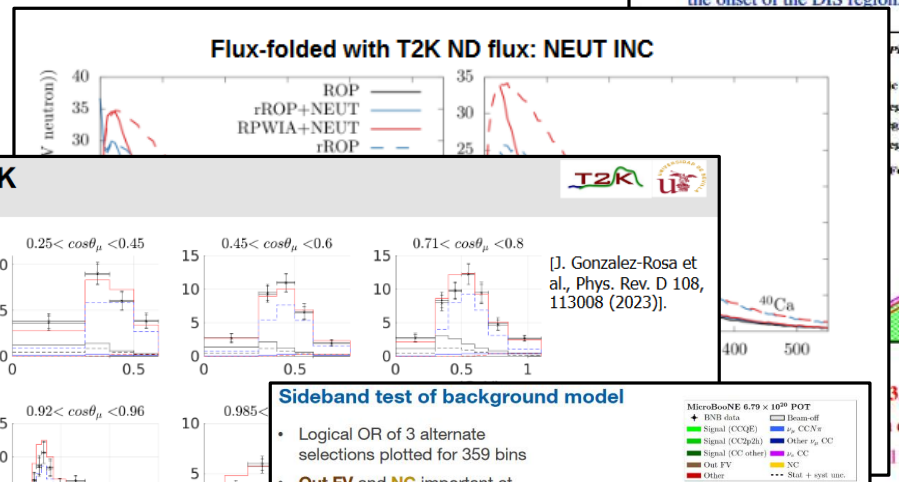
Natalie Jachowicz on behalf of the INC and the NuSTEC Board

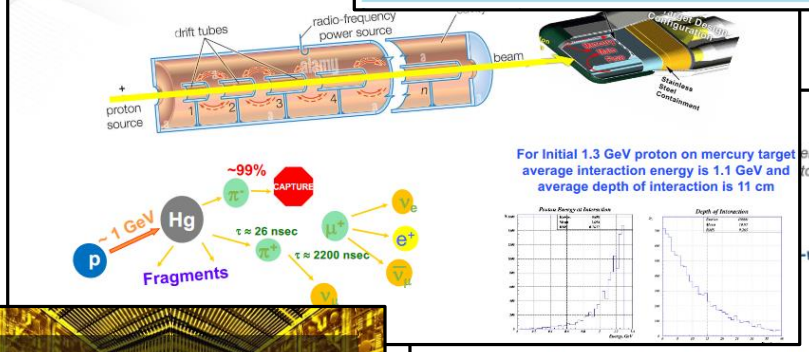
What happens if you lock up a bunch of neutrino physicists for one week

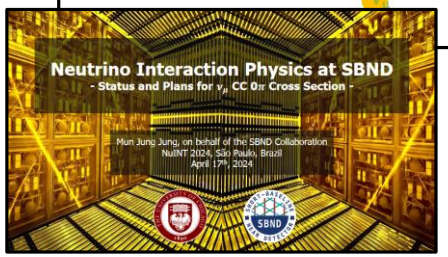
in here ?

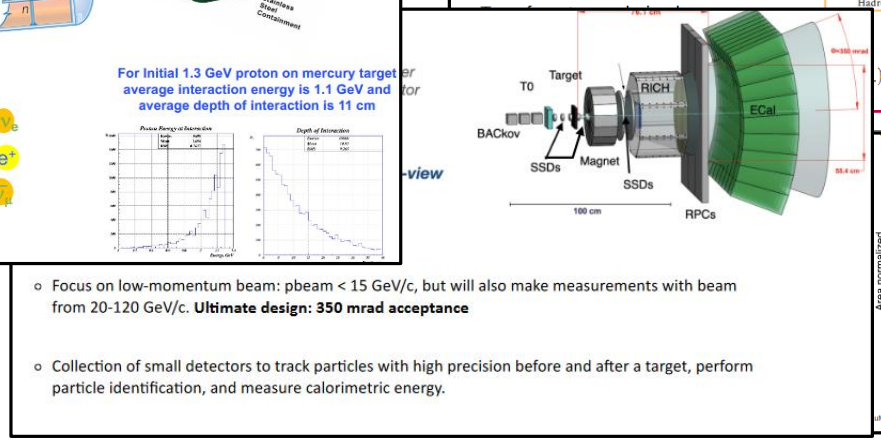


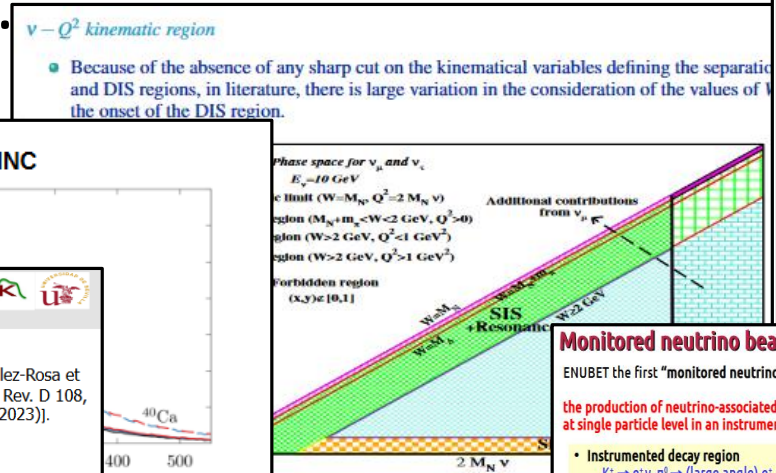
A lot of interesting talks ...

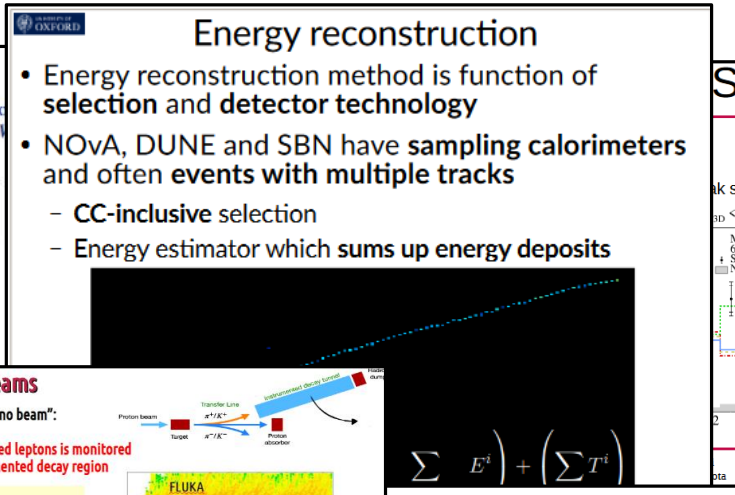


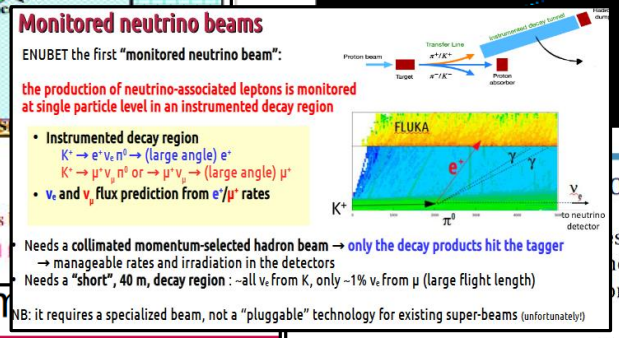


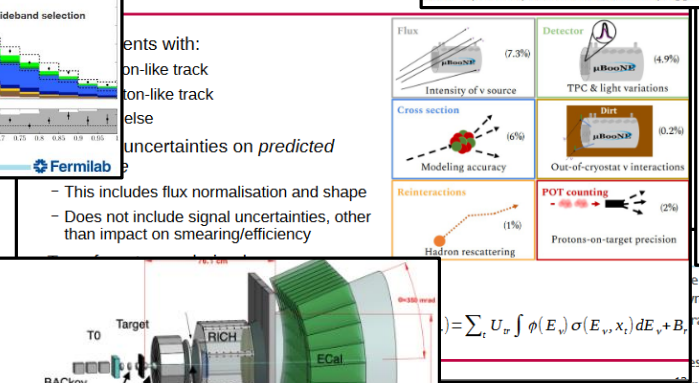


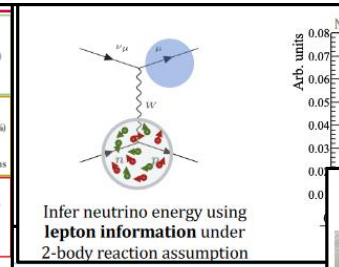


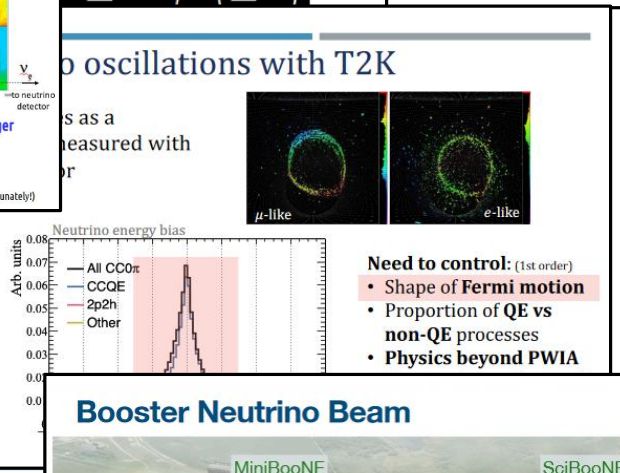


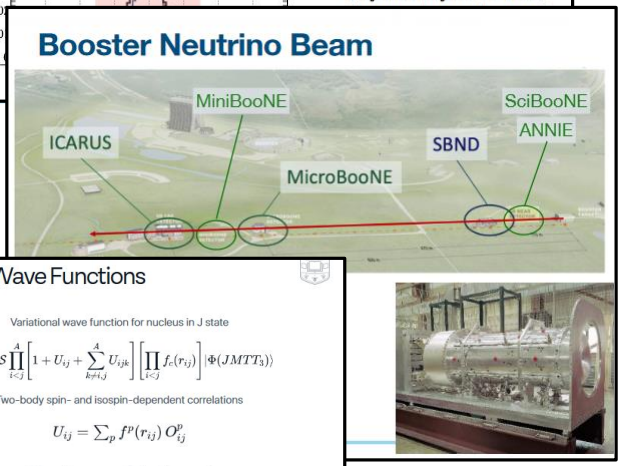


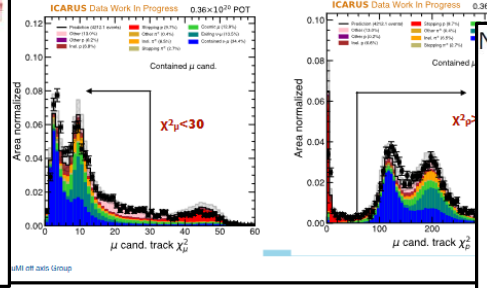




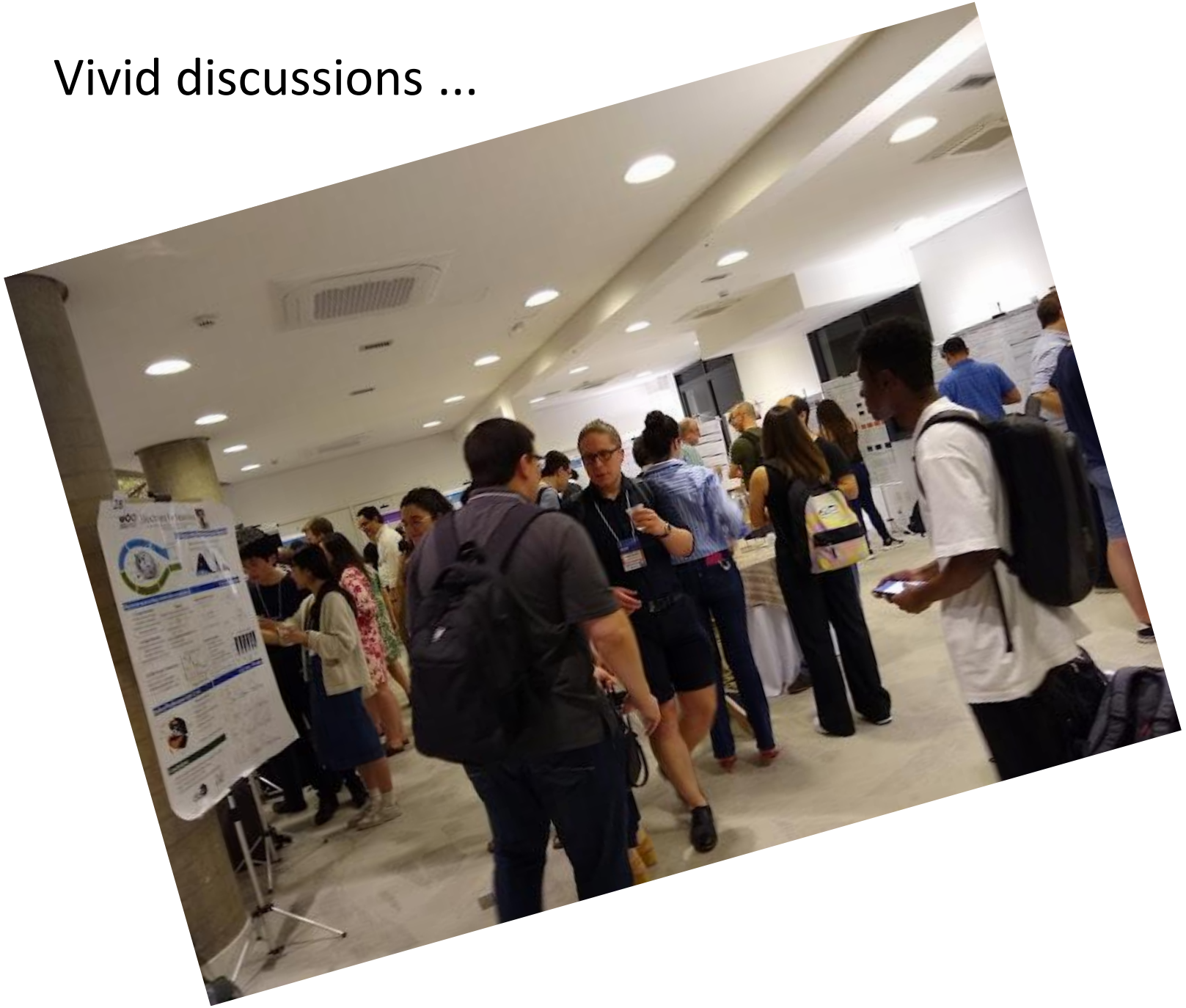






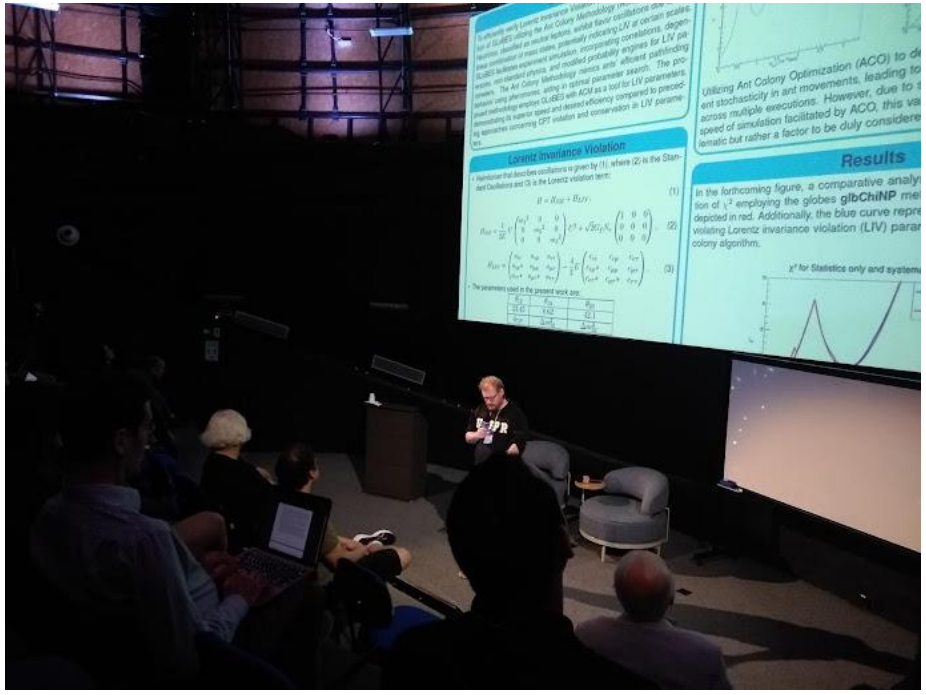


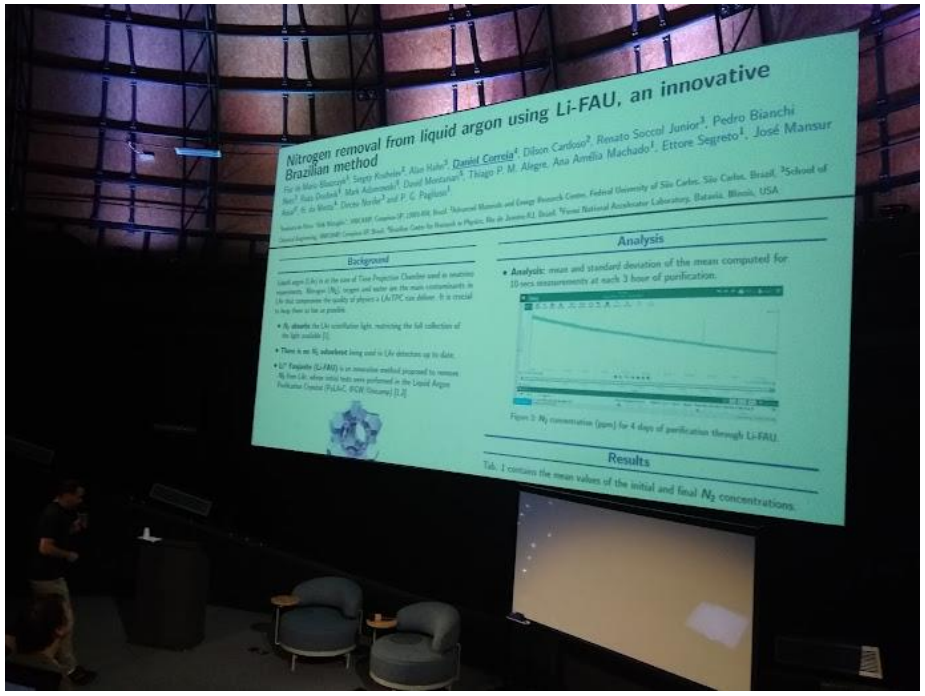
Vivid discussions ...

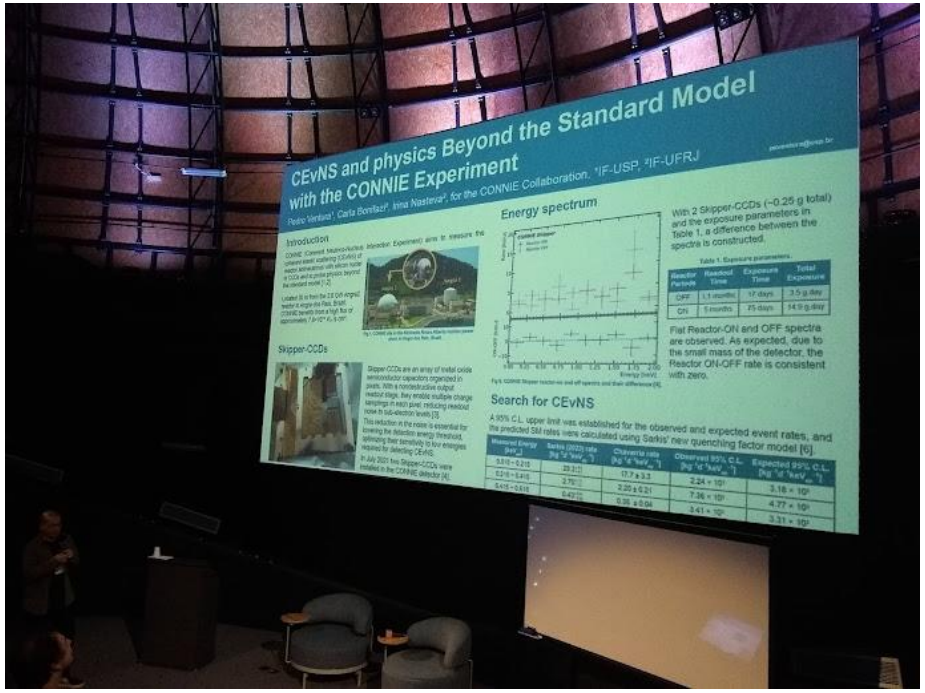


and a lot of best posters !

Three very best posters !

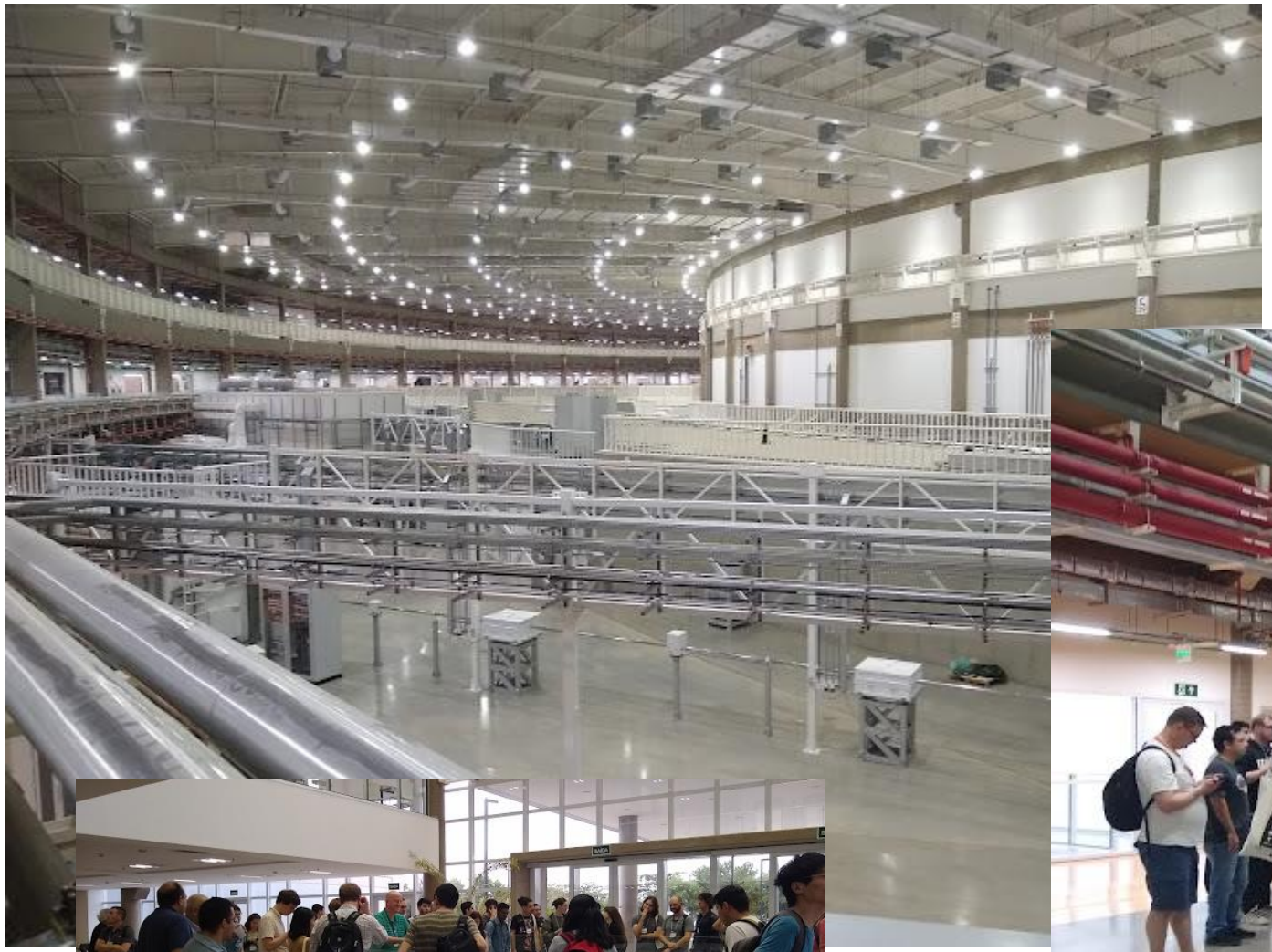






A very interesting excursion

LNLS
sirius
Brazilian Synchrotron
Light Laboratory



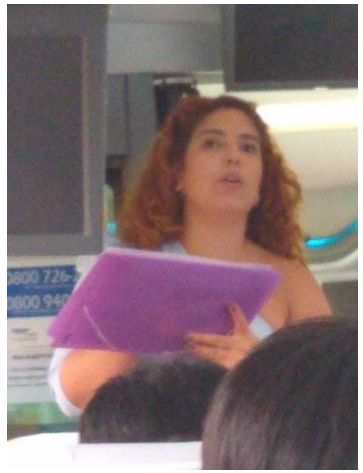
And more very important things ...

Thanks to (a non-exhaustive list) :

LOCAL ORGANIZING COMMITTEE

Anibal Bezerra (UNIFAL)
Ana Amélia Machado (UNICAMP)
Franciole Marinho (ITA)
Hélio da Motta (CBPF) - cochair
Irina Nasteva (UFRJ)
Humberto Neto (ICTP-SAIFR)
Laura Paulucci (UFABC)
Orlando Peres (UNICAMP) - cochair
Elisa Pomari (ICTP-SAIFR)
Norma Reggiani (Instituto Princípia)
Gustavo Valdiviesso (UNIFAL)

.. especially our chairs Helio and Orlando



and secretaries Thaissa and Sonia

..for an excellent organization !

Thanks to (a non-exhaustive list) : WORKING GROUP CONVENERS

Session1: Neutrino flux predictions and measurements

Katsuya Yonehara (Fermilab)

Laura Fields (Notre Dame University)

Megan Friend (KEK)

Session 2: Neutrino interaction generators

Yoshinari Hayato (ICRR, The University of Tokyo)

Julia Tena-Vidal (Tel Aviv University)

Pedro Machado (Fermilab)

Session 3: QE + 2p2h / 0-pi production

Stephen Dolan (CERN)

Joanna Sobczyk (Johannes Gutenberg University)

Saori Pastore (Washington University in Saint Louis)

Richard Gran (University of Minnesota Duluth)

Session 4: Pion Production/SIS/DIS

Minoo Kabirnezhad (Imperial College London)

Mohammad Sajjad Athar (Aligarh Muslim University)

Laura Munteanu (CERN)

Kirk Bays (Minnesota)

Session 5: Low-energy neutrino scattering

Bryce Littlejohn (Illinois Institute of Technology)

Maria Cristina Volpe (APC/CNRS)

Claudia Nones (CEA/IRFU)

Raimund Strauss (TUM)

Session 6: Charged lepton and pion scattering

Adi Ashkenazi (Tel Aviv University)

Camilo Mariani (Virginia Tech)

Artur Ankowski (Wroclaw)

Session 7: Impact of scattering uncertainties on measurements

Callum Wilkinson (Lawrence Berkeley National Laboratory)

Linda Cremonesi (Queen Mary University of London)

Luke Pickering (STFC UKRI)

Thanks to : (a non-exhaustive list) ... all speakers, poster presenters and chairs

Thanks to : (a non-exhaustive list) : all participants !

NuInt : a very incomplete and very biased timeline

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NuInt15, Osaka, Japan
NuInt17, Toronto, Canada
NuInt18, L'Aquila, Italy
NuInt22, Seoul, Korea
NuInt24, Sao Pa

Neutrino and anti-neutrino cross-sections and CP phase measurement #14

Y. Obayashi (KEK, Tsukuba) (2002)

Published in: *Nucl.Phys.B Proc.Suppl.* 112 (2002) 18-23 • Contribution to: NuInt 01, 18-23

DOI cite claim reference search 1 citation

Modeling deep inelastic cross-sections in the few GeV region #7

A. Bodek (Rochester U.), U.K. Yang (Chicago U., EFI) (Mar, 2002)

Published in: *Nucl.Phys.B Proc.Suppl.* 112 (2002) 70-76 • Contribution to: NuInt 01, 70-76 • e-Print: hep-ex/0203009 [hep-ex]

pdf DOI cite claim reference search 150 citations

A Study of nuclear effects in nu interactions with the NOMAD detector #9

NOMAD Collaboration • M. Veltri (Urbino U. and INFN, Florence) for the collaboration. (Feb, 2002)

Published in: *Nucl.Phys.B Proc.Suppl.* 112 (2002) 124-131 • Contribution to: NuInt 01, 124-131 • e-Print: hep-ex/0202038 [hep-ex]

pdf DOI cite claim reference search 7 citations

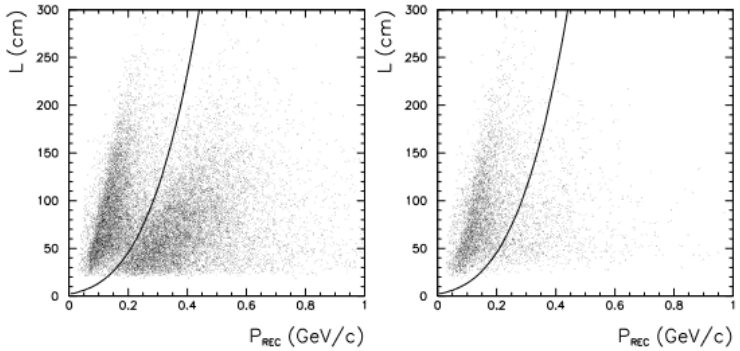

Figure 1. *Distributions of length vs. momentum for positive (left) and negative (right) backward going tracks selected as described in the text. The line indicates the position of the cut.*

Precise determination of the oscillation parameters: Need to understand low energy neutrino interactions #12

A. Para (Fermilab) (2002)

Published in: *Nucl.Phys.B Proc.Suppl.* 112 (2002) 9-14 • Contribution to: NuInt 01, 9-14

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MINERνA: a dedicated neutrino scattering experiment at NuMI

K. S. McFarland[a], *on behalf of the MINERνA collaboration*

[a]University of Rochester, Rochester, NY 14627 USA

MINERνA is a dedicated neutrino cross-section experiment planned for the near detector hall of the NuMI neutrino beam at Fermilab. I summarize the detector design and physics capabilities of the experiment.

MINERνA is a dedicated neutrino cross-section experiment planned for the NuMI beamline at

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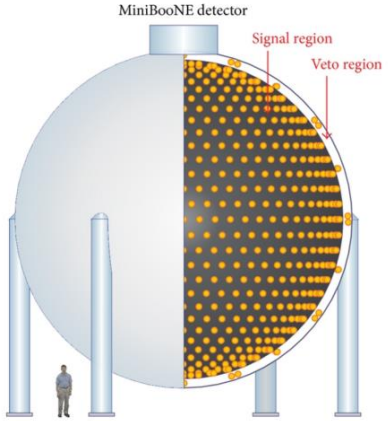
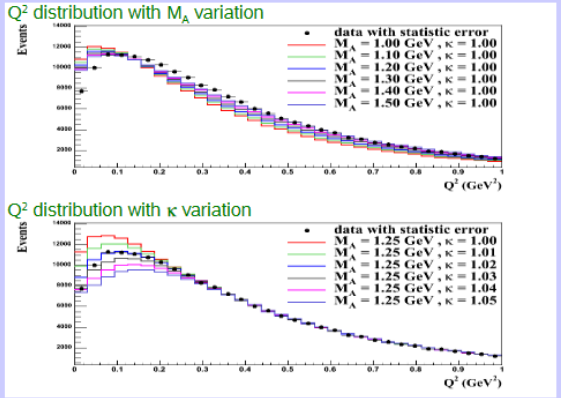


3. CCQE data-MC comparison

M_A and κ are simultaneously fit to the data

2% change of κ is sufficient to take account the data deficit at low Q^2 region



Conclusions / More discussion

Some very good neutrino data sets available now and upcoming

Experiments must start to provide proper
cross sections
differential cross sections
take advantage of statistics to bin in angle, pmu

Continue (accelerate) incorporation of
known nuclear physics
as well as uncertain nuclear physics effects
into understanding neutrino data and systematics

Rik Gran@NuInt2007

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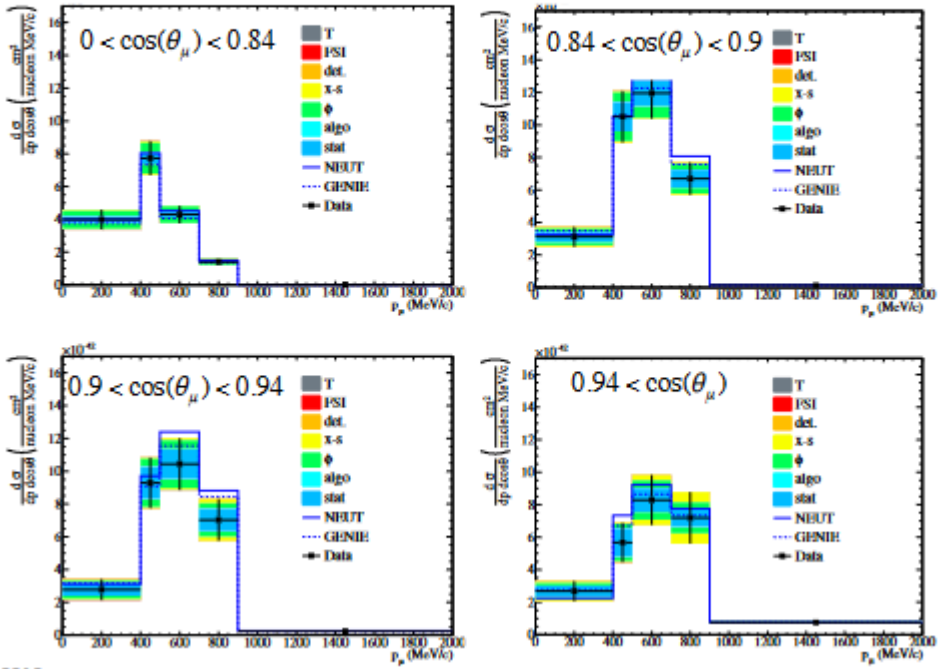
T2K

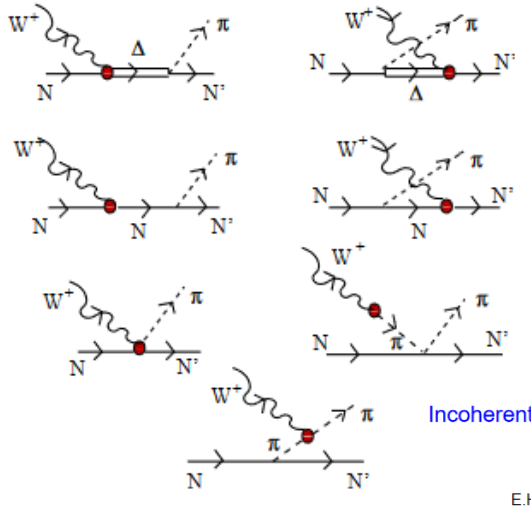
Differential Cross Section

ND280

*T: Target, **FSI**: Final State Interaction **det.**: detector, **x-s**: cross-section, **algo**: unfolding algorithm*



Oct-2012 A.Weber, NuInt2012 15



Incoherent one-pion production in neutrino-nucleus scattering

E.Hernández[1], J. Nieves[2], M.J. Vicente Vacas[3]

Eta Production

Charged current ν(anti-ν) induced eta production

$$\nu_e(k) + N(p) \to e^-(k') + N'(p') + \eta(p_\eta)$$
$$\bar{\nu}_e(k) + N(p) \to e^+(k') + N'(p') + \eta(p_\eta)$$

M. Sajjad Athar, NUINT 2012, Rio Oct 2012 47

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Considerable time for discussion is being planned into these sessions.

We invite you to attend NuInt12 to continue the study of these important interactions.

The call for abstracts is open
You can submit an abstract for reviewing.

Submit new abstract

Registration
You are registered for this event.

See details

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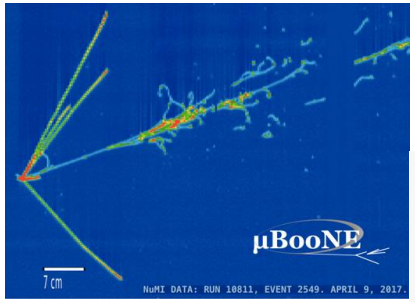
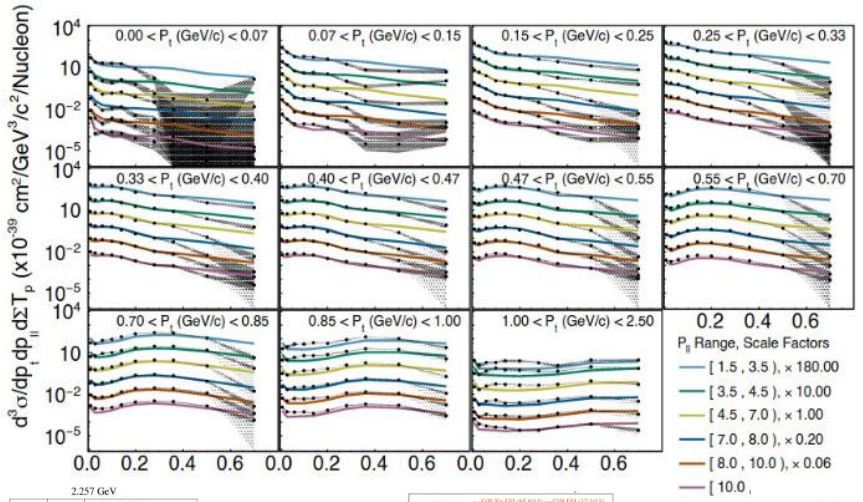
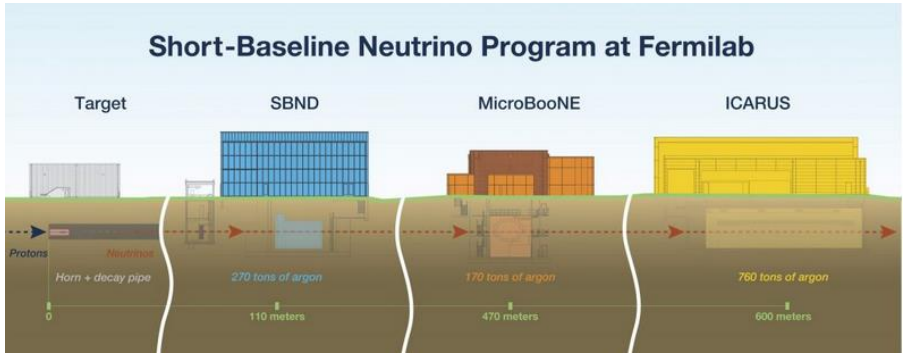
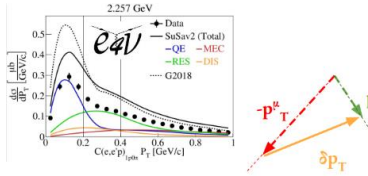


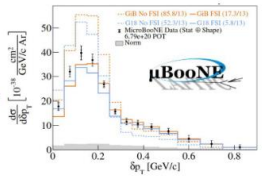
Fast Forward ...

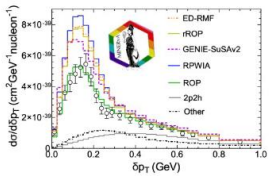
MINERvA

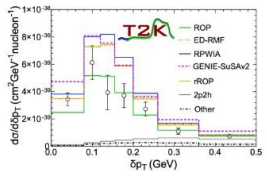


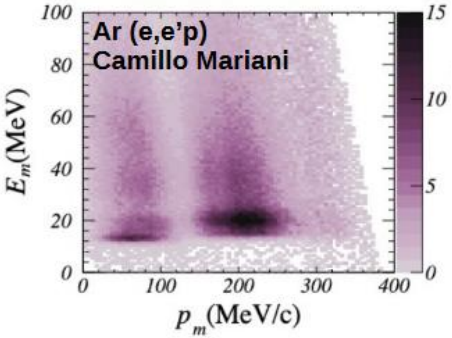




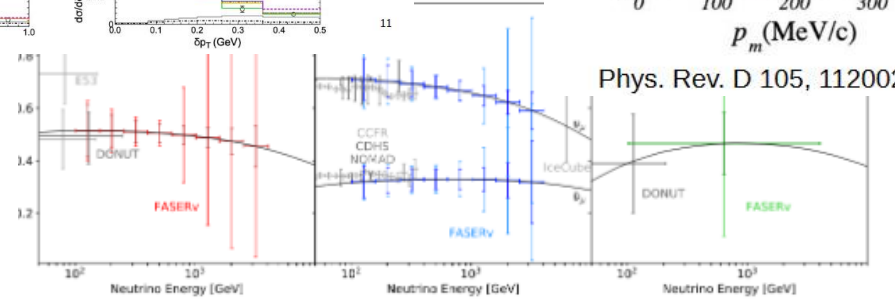


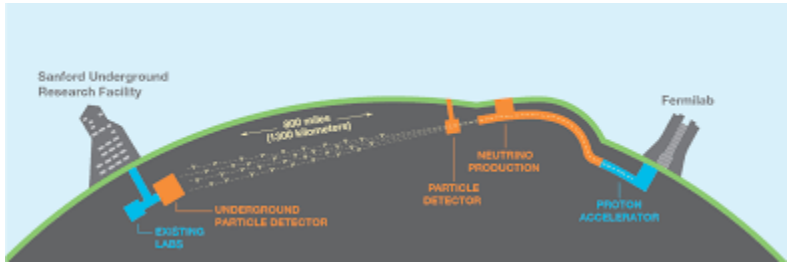


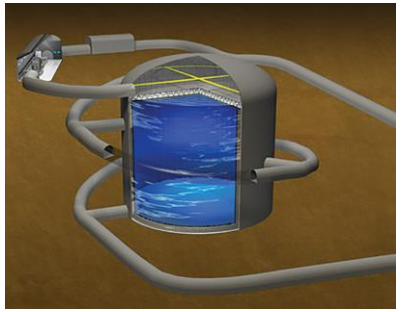




Phys. Rev. D 105, 112002, (2022)







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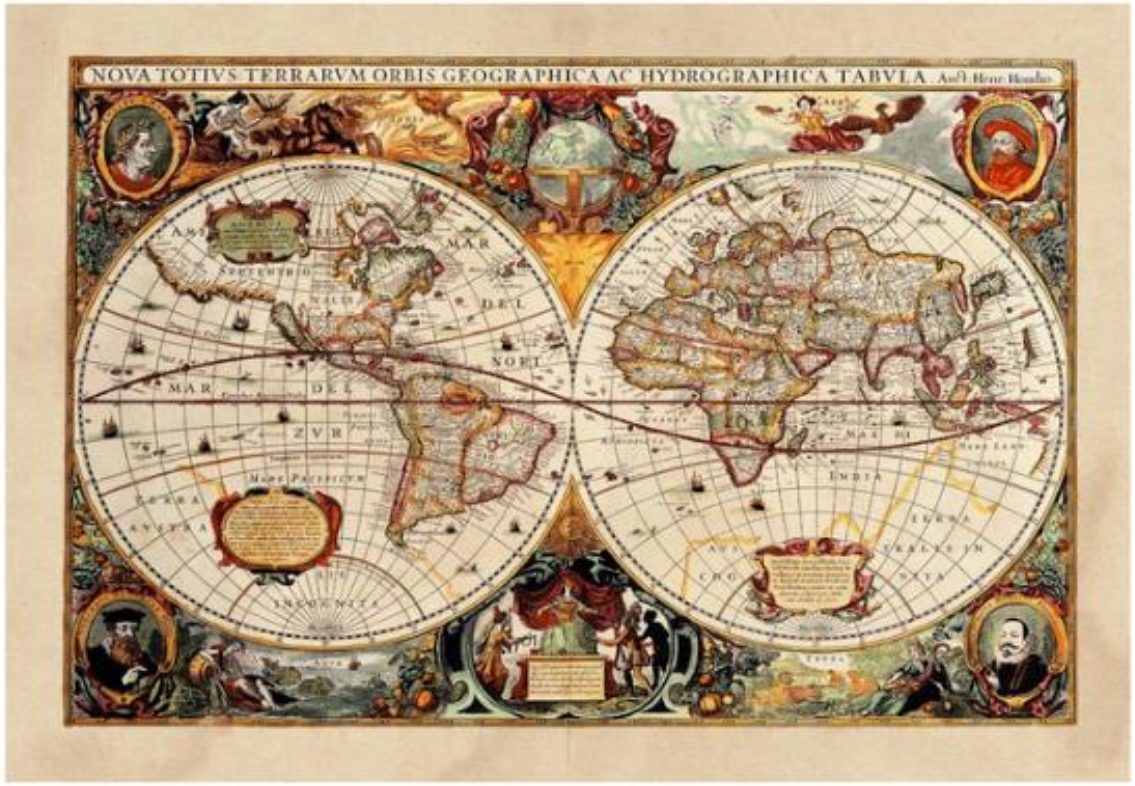
- All in all, the present knowledge of neutrino interactions appears to be still comparable to the knowledge of the geography of North America around 1650



Omar Benhar @ NuInt22

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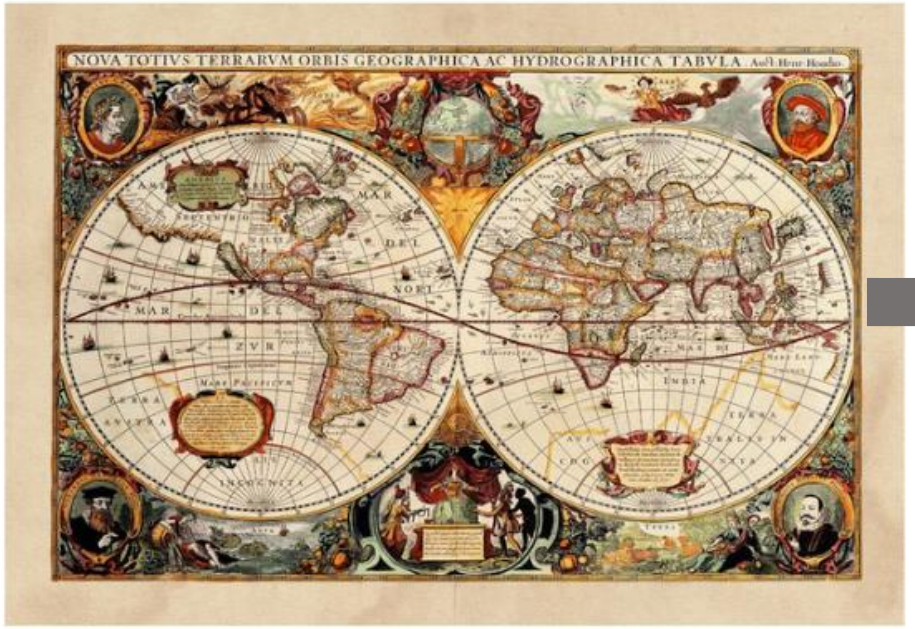
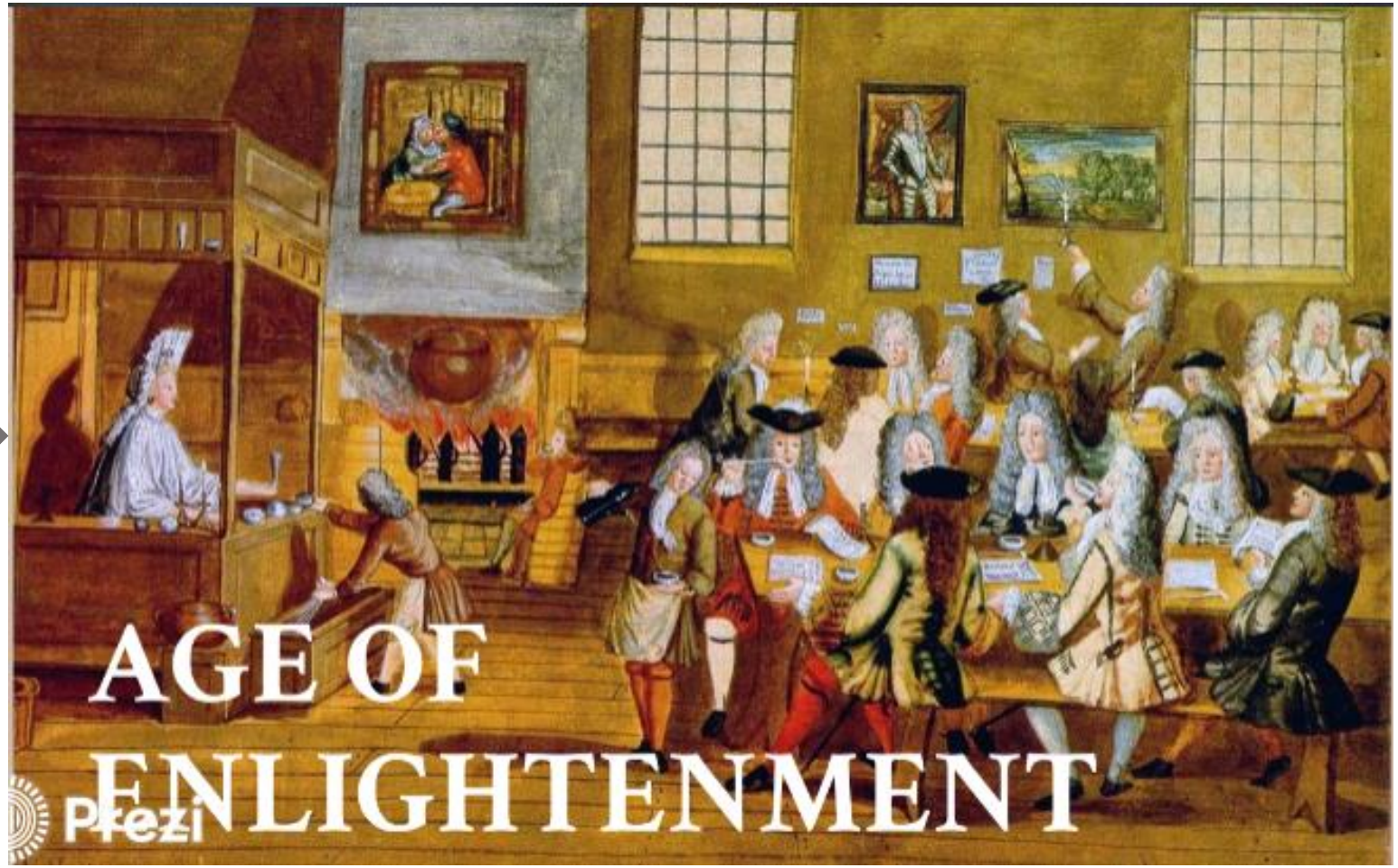




That calls for ...

NuInt 2025

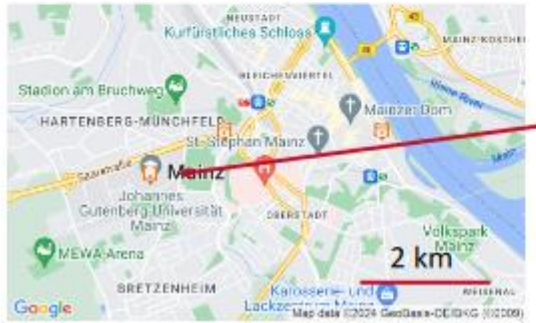
Mainz, Germany

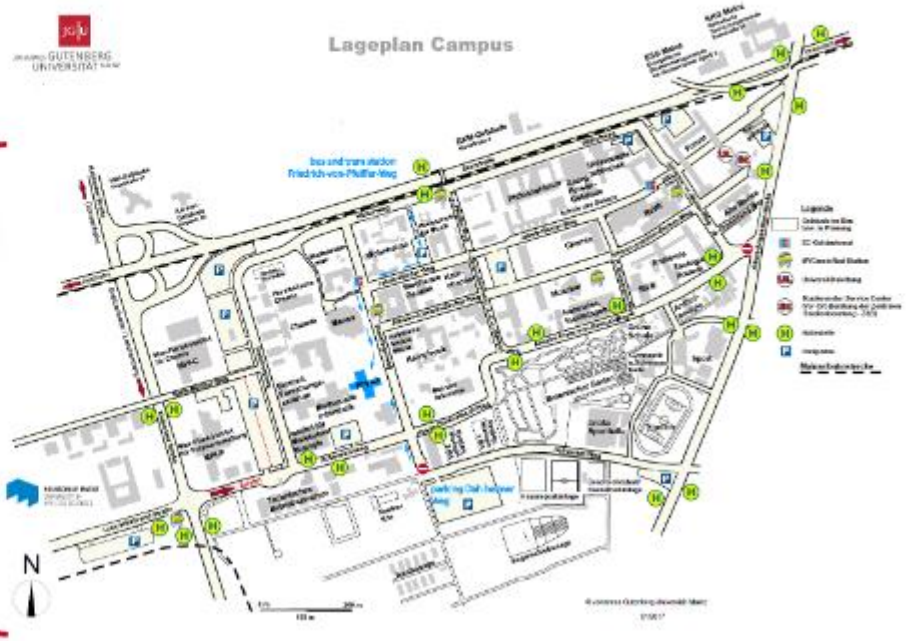
JOHANNES GUTENBERG UNIVERSITÄT MAINZ

JG|U

The JGU Campus

- Venue is located on JGU Campus.
- 10 min public transport from city centre (hotels) or 40 min walk
- We will provide public transport passes for participants.





➢ Early fall 2025 – before the semester starts (end of October)

The Team

Sonja

Luca

Lukas*

Joachim

Asia

Alfons

Sonja Bacca, Luca Doria, Lukas Koch, Joachim Kopp, Asia Sobczyk, Alfons Weber (Chair)

Excursions

- Many options are possible
  - Wine tasting in old monastery with/without dinner
  - Boat trip on river Rhine (can be combined with the above)
  - Visit of KATRIN experiment in Karlsruhe (tbc)
- Tours of local facilities
  - TRIGA nuclear reactor
  - MESA/MAMI accelerators
- Gutenberg Museum & Roman Ship Museum
  - Local transport ticket allows free entry to most museums






& hope to see you in Mainz at NuInt2025 !