



MUSE Outreach & Dissemination status

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MUSE meeting, 22 July 2019

Outreach updates since December 2018 MUSE presentation

- ▶ **International Day of Women and Girls in Science 2019, LNF, February 11**
 - ▶ Dr. Raffaella Donghia, MUSE researcher, presented her experience, in Italian, titled “Donne in Scienza: Acceleratori, Particelle e Universo”
- ▶ **Liverpool Masterclasses, March 1 - March 31**

- ▶ **INSPIRE 2019, LNF, 24 April 2019**
 - ▶ International School on modern PhYsics and Research, Frascati National Laboratory
 - ▶ Dr. Raffaella Donghia, MUSE researcher, presented a contribution on her experience on Experimental Particle Physics

*My path into Particle physics:
Hunting muons!*

Raffaella Donghia
LNF-INFN
INSPIRE 2019 - International School on modern PhYsics and Research
April 2nd, 2019

INFN

MUSE

Outreach updates since December 2018 MUSE presentation

- ▶ **The age of precision: Watt's next?, June 4**
Cheltenham Science Festival, Cheltenham, UK
- ▶ Rebecca Chislett, MUSE collaborator, discussed how precise measurements in science are the key to advancing our understanding of the laws of nature discussing the muon anomaly

6.30–7.30pm

S012

The Age Of Precision: Watt's Next?

The Crucible
£8*

This year is the bicentenary of James Watt's death. Author **Simon Winchester** (*Exactly*) tells the stories of Watt and other unsung heroes who, through their pioneering advances in precision engineering, laid the foundations for the industrial revolution and the modern world. Jumping forwards to today, mind-bogglingly precise measurements in science are the key to advancing our understanding of the laws of nature. **Rebecca Chislett** explains how. Chaired by **Jeff Forshaw**.



Dissemination updates since December 2018 MUSE presentation

- ▶ talks and papers are reported on the MUSE web site
- ▶ <http://muse.lnf.infn.it/events/category/talks/>
- ▶ <http://muse.lnf.infn.it/paper/>

Tasks and Deliverables

Tasks

Task 5.1: MUSE Workshop day (ALL) At the same time as the MUSE annual general meeting, we will organize a one-day workshop. The target of the seminars and lectures given by the MUSE researchers will be university students in physics, engineering and computing science and, possibly, technical high school students at the last year. MUSE laboratories will be open for demonstrations.

Task 5.2: MUSE Open day (INFN, HZDR) The MUSE partners already take part in the “European Researchers Night” and “Night of Science”. To coincide with this event, all the MUSE laboratories at INFN and HZDR will be open to the general public to show and discuss the results of our research. We will prepare posters and brief interactive simulations on the computer.

Task 5.3: Annual Physics Meeting at LNF (INFN) The target of this three-day event is high school teachers and the goal is to give information on the recent advancements in the field of sub-nuclear and nuclear physics and detector developments. A special effort will be made to prepare experiments which involve the new detector components developed by the MUSE project.

Task 5.4: Coordination of UK outreach activities (UCL, LIV) Liverpool and UCL MUSE collaborators organize “masterclasses” for high-school students, with tour of the laboratory facilities and hands-on measurement using prototypes of the g-2 straw trackers, exhibits for the annual Royal Society Show and Big Bang Fair, dedicated work-experience placements for high-school students on detec-

tor development and high-level software.

Task 5.5: Summer School at Fermi National Accelerator Laboratory (ALL) The MUSE researchers seconded at FNAL will organize a three-day training on the MUSE research activities for all the students of the FNAL European Master Degree, organized by INFN and the University of Pisa. We will make an effort to give the students the opportunity to meet CAEN and PRISMA researchers and discuss the prospects of working on research and development in European private companies.

Task 5.6: Outreach web site (ALL) We will develop a public section of the web site with a detailed description of the MUSE project and with all the information for the general public. This work package foresees one secondment for each year, to coordinate the activities connected to the Summer School at FNAL.

Deliverables

D5.1 : MUSE @ HZDR open day [month 9] MUSE laboratories opened to the general public

D5.2: Annual Physics Meetings [month 22] Experiments prepared for the LNF three-day event for high school teachers

D5.3: Masterclasses [month 28] Masterclasses for high-school students, with tour of the laboratory facilities and hands-on measurement using prototypes of the g-2 straw trackers

D5.4: FNAL Summer School [month 44] Three-day training on the MUSE research activities for all the students of the FNAL European Master Degree

Plans for FNAL summer students training

Lectures, 12 August 2019 (tentative)

09:00 - 09:45	C. Polly	Overview of the Muon $g-2$ experiment at FNAL
09:45 - 10:30	B. Casey	The tracker of the Muon $g-2$ experiment at FNAL
10:30 - 10:45	break	
10:45 - 11:30	C. Stoughton	The kickers of the E989 experiment
11:30 - 12:15	TBD	How does E989 measure the muon precession frequency

Guided tours, days to be decided

- ▶ visit to the FNAL Muon $g-2$ experiment (details to be sorted out)
- ▶ visit to the Mu2e experiment (details to be worked out with Young Mu2e)