



This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 730871.



Communication, Training and Outreach: report from WP2

21 April 2021, Session 3

WP Coordinator: Phil Burrows (Oxford)

Speaker: Daniela Antonio (CERN)

Summary of activities in Year 4

Task 1.2. Internal communication, dissemination (...) and monographs

- The great website migration of 2020
- Update the webpage '[Editorial Series on Accelerator Science and Technology](#)' (monographs)

Task 2.2. Communication and Outreach

- Conclusions from two Accelerator Communication and Outreach (ACO) workshops
- ARIES featured in two issues of **Accelerating News** and CERN institutional reports
- ARIES International Women's Day internal campaign
- In April 2021, ARIES will be featured on Earth Day CERN campaign

Task 2.3. Survey on accelerator training

- Conclusions from the survey on accelerator training

Task 2.4. E-learning course (MOOC)

- One lecture complete, four lectures progressing well



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Task 2.2. Communication and Outreach

Daniela Antonio (CERN)

ARIES featured @ H2020 Twitter

Article published in H2020 website, linked in Twitter
https://twitter.com/EU_H2020/status/1070316103832870912

Horizon 2020 @EU_H2020 Following

Portable tiny accelerators and more powerful superconductors for a cleaner environment?
 EU is investing €10m in [#ARIESProjectEU](#) [#ResearchInfrastructure](#) @CERN: science & industry developing new sophisticated technologies together

[youtube.com/watch?v=PBsFcf8ipbs](https://www.youtube.com/watch?v=PBsFcf8ipbs) [#H2020](#) [#ResearchImpactEU](#)



The ARIES project
 How can we push accelerator technology forward and improve our everyday lives in the process? The ARIES research project is there to provide answers: <https://www.youtube.com/watch?v=PBsFcf8ipbs>

1:56 PM · 5 Dec 2018

7 Retweets · 12 Likes

1 · 7 · 12 ·

Tweet your reply

Horizon 2020 @EU_H2020 · 5 Dec 2018

Next-gen [#particleaccelerator](#) technologies being developed in the [#ARIESProjectEU](#) will help physicists explore the universe, provide engineers with novel tools to combat pollution & enable doctors to treat cancer more effectively http://ec.europa.eu/research/infocentre/article_en.cfm?artid=49808&pk=... [#ResearchImpactEU](#) [#H2020](#)



CERN and CERN en français

6 · 8 ·

Horizon 2020 @EU_H2020	
Portable tiny accelerators and more powerful superconductors for a cleaner environment? EU is investing €10m in #ARIESProjectEU #ResearchInfrastructure @CERN: science & industry developing new sophisticated technologies together	
https://www.youtube.com/watch?v=PBsFcf8ipbs ... #H2020 #ResearchImpactEU	
Impressions	7,686
Media views	1
Total engagements	59
Detail expands	31
Likes	12
Retweets	7

Horizon 2020 @EU_H2020	
Next-gen #particleaccelerator technologies being developed in the #ARIESProjectEU will help physicists explore the universe, provide engineers with novel tools to combat pollution & enable doctors to treat cancer more effectively http://ec.europa.eu/research/infocentre/article_en.cfm?artid=49808&pk=... #ResearchImpactEU #H2020	
Impressions	5,324
Total engagements	66
Detail expands	29
Link clicks	9
Media engagements	8
Likes	8
Retweets	6

ARIES @ CERN Communication Channels



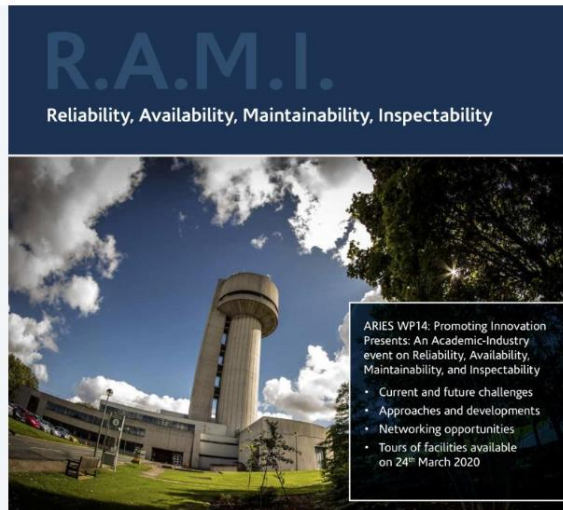
^ CERN Open Days 2019

CERN Social Media >



Join the **#ARIESProjectEU** workshop on reliability, availability, maintainability and inspectability (RAMI) of particle accelerators! The workshop provides a platform for experts from **#industry**, particle accelerator laboratories and academi ...visualizar mais

Visualizar tradução



APPLYING ACCELERATORS TO ENVIRONMENTAL CHALLENGES WITH ARIES

IGLUNA: BUILDING A DEMONSTRATOR MOON HABITAT IN ZERMATT

IGLUNA is an educational project aimed at investigating the realisation of a human habitat on the moon. 18 student teams from all over Europe, coordinated by the Swiss Space Center, built several technology demonstrators for this habitat and tested them in June 2019 in the extreme environment of the Matterhorn

glacier (Switzerland) at 3800 metres. CERN contributed to IGLUNA by hosting the Critical Design Review in IdeasSquare in January 2019 and by providing two high precision radiation-monitoring systems, developed to track on-site radiation levels, such as during the operation of CERN's accelerators. CROME and HEH-Monitors were deployed outside and inside the glacier to measure open-air high altitude cosmic rays and thick ice shielding capability.



CERN AND ESA COOPERATING ON RADIATION ENVIRONMENTS, TECHNOLOGIES AND FACILITIES

to improve sustainability its benefits society. In of-Concept ed activities, d by the es to reduce in oxides haunts of electron beam urements in pollutants. of installing accelerator nding to ARIES also mperature each a of samples, ling-up for e collider

The collaboration agreement between CERN and ESA, signed in July 2019, addresses the challenge of operating in harsh radiation environments found in both particle-physics facilities and outer space. This first protocol of the CERN-ESA Cooperation Framework concerns radiation environments, technologies and facilities with potential applications in both space systems and particle physics experiments or accelerators. Two projects related to radiation testing in CERN facilities for ESA space missions have already achieved important results. In October 2019, four more projects started, with the aim of addressing assessment strategies for commercial off-the-shelf (COTS), in-orbit technology demonstrators, development of radiation detectors, monitors and dosimeters and simulation tools for radiation effects. These activities will continue and, as new challenges emerge, they will be dealt with under the coordination of the CERN-ESA Committee on Radiation Issues.

^ CERN Institutional Reports

International Women's Day internal campaign

[View this email in your browser](#)

Programme: H2020 (Integrating Activity)

Grant Agreement No.: 730871

Project Coordinator: Maurizio Vretenar (CERN)



ARIES Women's Day Celebration

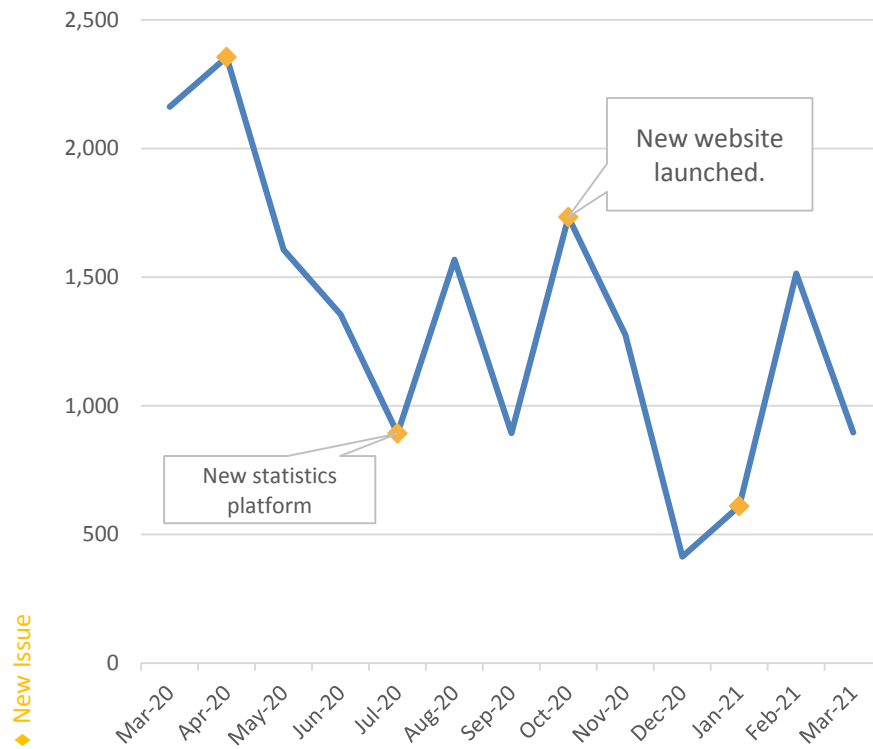
In February, we asked the ARIES community to contribute to a celebration of women in Science. Thank you to our colleagues for sharing the start of their scientific careers; read on for their amazing stories.

M.Sc. Carlotta Accettura



Read here: <http://cern.ch/go/Pzk9>

Newsletter: Accelerating News in Year 4



Accelerating News Most Read Articles, ARIES Highlighted

- 1 Bringing particle accelerators on ships
- 2 ISOLDE's new solenoid spectrometer
- 3 Discussing a future strategy for muon colliders
- 4 And the winners of the ARIES Proof-of-Concept fund are...
- 5 From laser alignment to laser communication
- 6 Synchrotrons on the frontline
- 7 How to access free of charge state-of-the-art accelerator testing facilities across Europe?
- 8 High-Precision Digitizer for High Luminosity LHC
- 9 A novel beam screen technology for FCC-hh
- 10 ARIES consortium produces world-class HTS tapes

Every issue of Accelerating News is followed by a peak in the visits to the website.

New statistics: main referrals are home.cern and LinkedIn.

TOP10 ARIES news on Accelerating News

Accelerating News Most Read Articles on ARIES	Date
1 Bringing Particle Accelerators on Ships	16-Jul-19
2 How to access free of charge state-of-the-art accelerator testing facilities across Europe?	03-Jul-18
3 And the winners of the ARIES Proof-of-Concept fund are...	03-Jul-18
4 Discussing a future strategy for muon colliders	08-Oct-18
5 Taking accelerators on board: Exploring uncharted waters with ARIES	11-Dec-17
6 Accelerator-Industry Co-Innovation Workshop	15-Mar-18
7 ARIES first annual meeting in Riga	03-Jul-18
8 HiRadMat: testing materials under high radiation	07-Dec-17
9 Workshop for extreme thermal management materials	08-Dec-17
10 High thermal performance materials	08-Oct-18

Highlights from the two ACO workshops

- **Best Practices**

- Establish goals and evaluate communication results;
- Communications team should have close links the project's management;
- Communication for accelerator R&D is never just about the accelerator.

- **Recommendations**

<http://cern.ch/go/dPZ7>

- Production of a targeted newsletter for key audience segments;
- Working with the major accelerator conferences to include communication;
- Provide supporting marketing and educational material;
- PCST-style mailing list to which any interested party could subscribe.

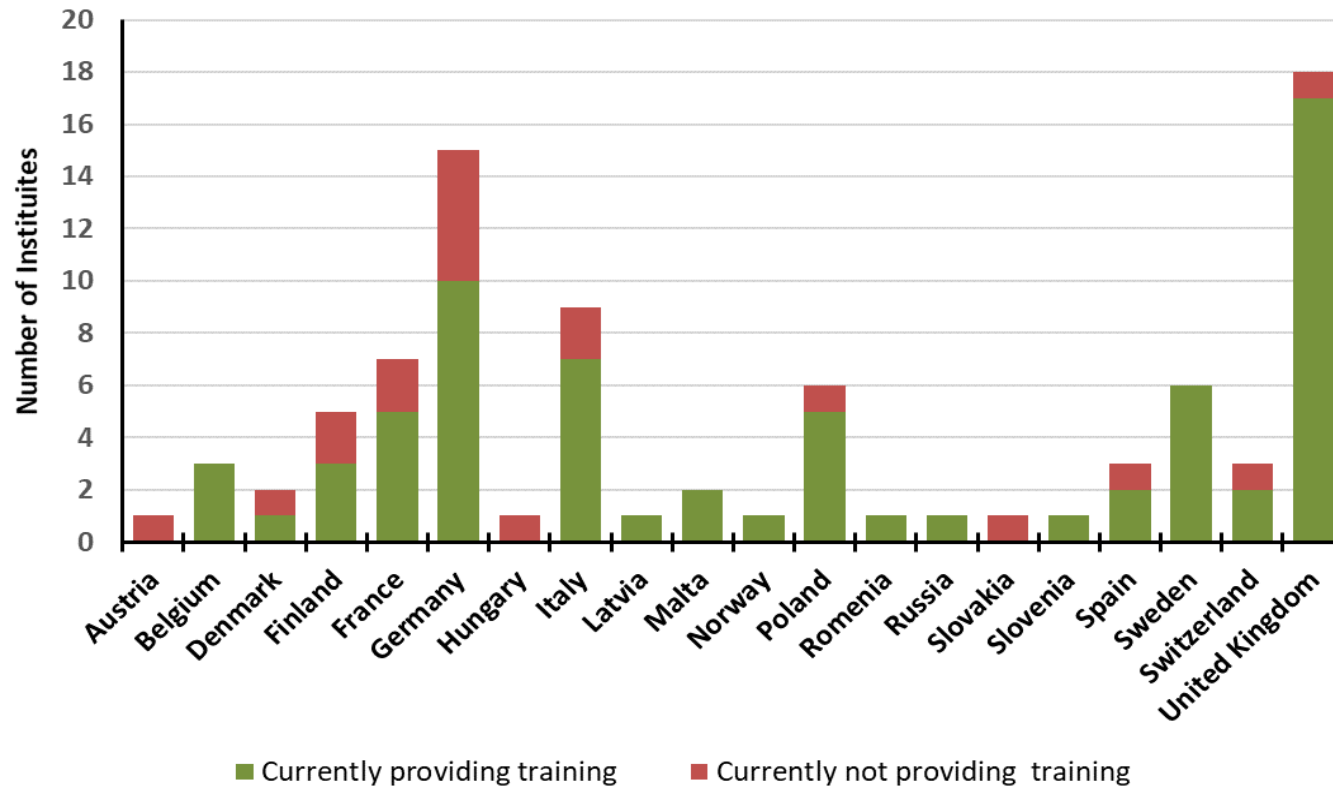
Read here: <http://cern.ch/go/dPZ7>



Task 2.3. Survey on accelerator training

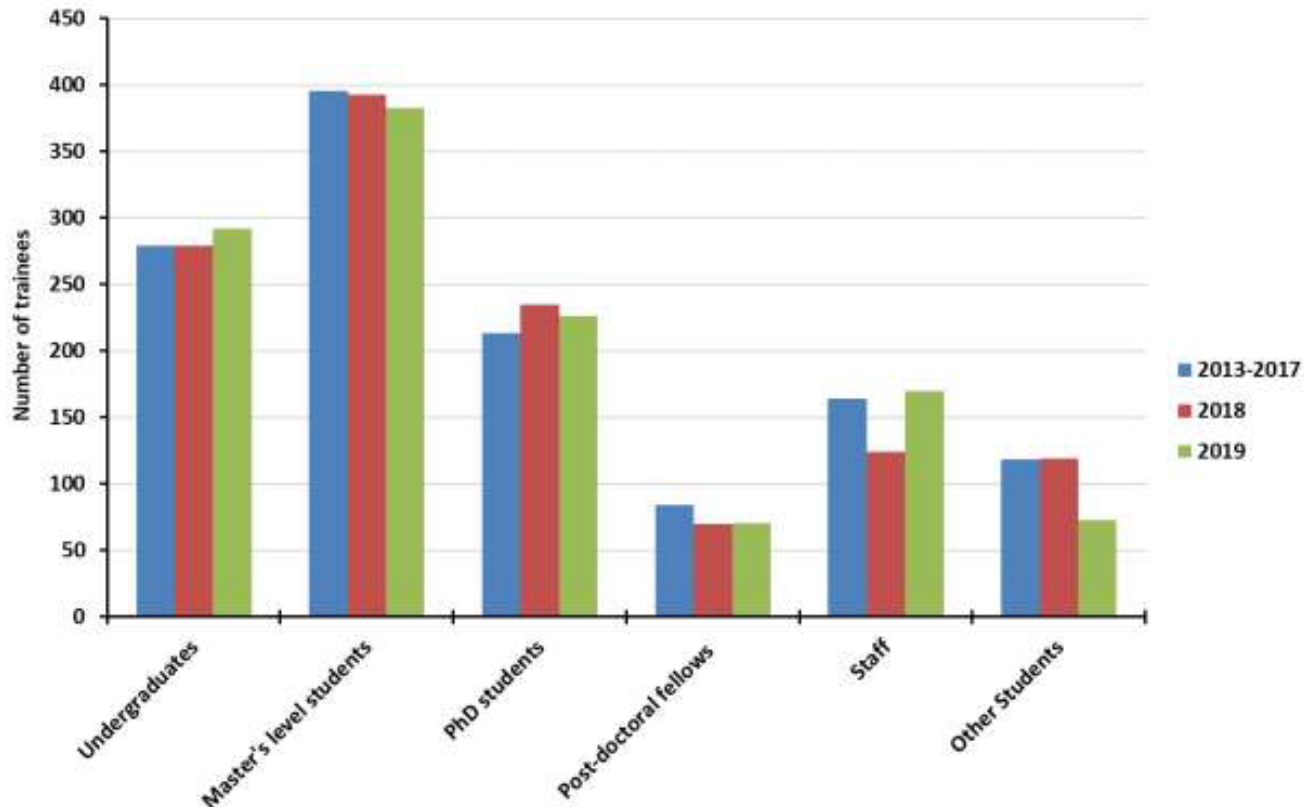
Rutambhara Yogi (ESS)

The country-wise distribution of institutes providing training



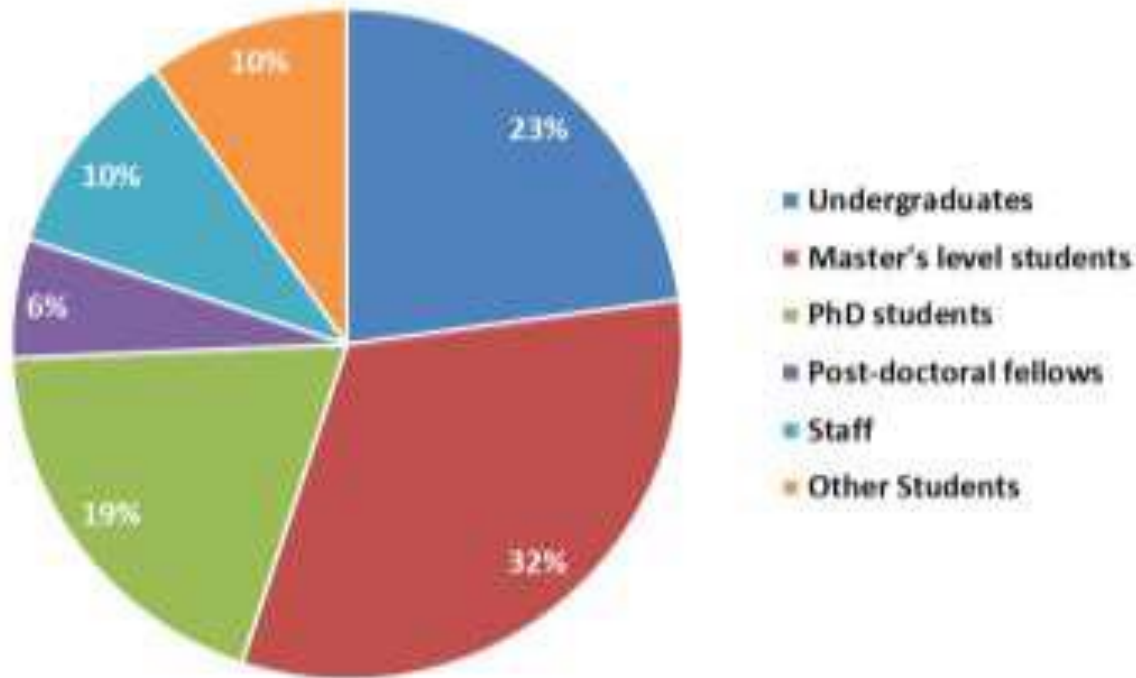
- The largest number of institutions are present in the UK (17), followed by Germany (10), and Italy (7).

Trainee Numbers



- In 2018, 1220 students received training in accelerator science. Out of which 23% were undergraduates, 32% Master students, 19% PhD students, 5% post-doctoral fellows, 10% staff, and 10% other students. Most of training is provided at Master student level, while only a small fraction of training is provided to staff of accelerator laboratories

Relative proportion of trainee type 2018



- More or less same as TIARA survey on “Training and Education”, which was carried out in 2012.

MOOC development

- An online course about particle accelerators, i.e. ARIES MOOC (particle-accelerators.eu/)
- Nordic particle accelerator project (NPAP) MOOC (npap.eu/mooc)
- Cockcroft Institute Education Programme (www.cockcroft.ac.uk/lectures)
- MOOC from Poland (ekursy.okno.pw.edu.pl)
- Russian MOOC
- The MOOC duration varies from 20 hours to 100 hours. It has been developed by co-ordination between different institutes.



Task 2.4. E-learning course (MOOC)

Nicolas Delerue (CNRS)

Progress

- A difficult year for in-person meetings and recording
- **One lecture complete**
- Four progressing lectures well ... **see next slide ►**)
- Recording will be a challenge due to travel restrictions
- *The WP has been extended by 6 months, so all recording has to be done by the end of May*

Status

- **Introductory module**

- ☐ Introduction (Philippe Lebrun):

Meeting on 13th April 2021, almost ready for recording

- ☐ Electromagnetism (Vittorio Vaccaro):

Recording almost complete, some extra audio to be done

- ☐ Relativity (Elias Metral): **Complete**

- ☐ Applications (Angeles Faus-Golfe):

Waiting for a date for the teachers to be available for recording...

- **Advanced module**

- ☐ RF (Graeme Burt):

Final meeting before recording on 23rd April



5. Wrapping up...

WP2: Activities for 2021

- **Accelerating News**
 - Continue to source and publish articles from the ARIES community
 - Revise and update editorial strategy for Accelerating News
- **ARIES survey on accelerator training**
 - A full presentation on the results is planned for the next in-person meeting
- **ARIES MOOC**
 - All remaining recording to be done by the end of May.



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Thank you!

Scope & Activities for WP2 – a refresher

- **Task 2.2. Implement internal and external project communications and outreach activities**
 - News from the project will be circulated to members [via] Accelerating News.
 - The task will also monitor, via the network, **communication/outreach activities** across the European accelerator community. Best practice will be shared and disseminated via the network meetings and workshops, and actions for improving communications/outreach activities will be identified and promoted.
- **Task 2.3. Monitor provision for training in Europe and within a global context**
 - Promote sharing of resources and good practice in accelerator training throughout Europe. Assess the needs for, and promote, additional training activities.
- **Task 2.4 Produce an introductory e-learning course on accelerator science**

Milestones & Deliverables for WP2

Tasks

2.2	Internal and external project communications and outreach activities
2.3	Monitor provision for training in Europe and within a global context
2.4	Produce an introductory e-learning course on accelerator science

Deliverables

D2.1	E-learning course	2.4	M36	April 2020
D2.2	Final report on coordination of communication/outreach activities	2.2	M37	May 2020
D2.3	Final report on coordination of training activities	2.3	M39	July 2020

Milestones

We have a draft!

MS10	Project website launched	2.2	M6	Oct 2017
MS11	Meeting to agree MOOC platform and academic structure and content of e-learning course	2.4	M12	May 2018
MS12	Workshop on training activities in Europe in a global context	2.3	M24	April 2020