



EDITORIAL

2024, a landmark year for OpenRadiation!

The year 2024 was an eventful one for the OpenRadiation project: Jean-François Bottollier-Depois, founder and first coordinator, retired, making way for a team that has maintained the project's momentum. In September, the application's compatibility with the latest smartphone system software was restored. This has enabled many contributors to re-post their measurements to the OpenRadiation site. Ongoing maintenance of the application has been put in place to avoid obsolescence, and even to allow it to evolve to meet new needs... Then, more recently, on December 9, the community got together for a day of exchanges, highlighting initiatives around the measurement of radioactivity.

Increased visibility and promising contacts...

The last quarter saw OpenRadiation's profile raised, both in France and internationally, with participation in the Fête de la science, the "Va Savoir" festival, the Journée nationale de la résilience, as well as prestigious conferences such as the European Radiation Protection Week and the International Congress on Radioecology. These events opened up new prospects for collaborations and applications, sometimes abroad. The presentation to the ICRP also generated a great deal of interest, with some members leaving with a detector in their pocket!

These actions have boosted the community: active contributors rose from 290 in June to 319 in December (+10%). The 800,000 mark was passed in October, and the million mark is within reach by 2025!

Setting course for 2025!

There's no shortage of projects: an enhanced application, a revamped Rium sensor, sensor assembly workshops in FabLabs, analysis of data obtained in Germany, and, why not, an evolution of the website based on your feedback.

A participatory project...It's important to remember that this is first and foremost a project for the contributors, whose expectations we need to take into account in order to develop this project with a truly participative and inclusive vision. But it's essential to collect as many measurements as possible. So, to your detectors!



IFFO-RME

For over 25 years, the **Institut Français des Formateurs Risques majeurs et Protection de l'Environnement** has been working in the field of education in the prevention of major natural and technological hazards, drawing on its network of resource people from the world of education, government departments and local authorities. Understanding phenomena is essential if people are to adopt the most appropriate protective behaviors. Radioactivity and nuclear risks are no exception to this rule. The **OpenRadiation** project is a way of giving meaning to the measurement of a phenomenon. It engages the individual personally by manipulating the sensor, and collectively through the collaborative map, which can prove invaluable in the event of a real event. IFFO-RME has been involved in the project from the outset, with a view to mobilizing the education sector through its network, which is regularly informed and trained in these subjects. **OpenRadiation's** future developments are numerous, in line with the needs and diversification of the communities involved!

My name is **Marc Roussel**, I'm 19 and I'm currently studying for a Computer Science degree at the IUT in Orsay. During my second year, in 2024, I had the opportunity to do an exciting internship at IRSN, where I worked on the **Cosmic On Air project**.

During this internship, I was involved in a number of areas:

Improving the website: I made changes to optimize its operation and attractiveness.

Development of a unique tool: I designed an application generating videos of solar activity, a real technical challenge that enabled me to develop my programming skills.

Creation of an educational video tutorial: I produced a video to accompany the new RiumApp application, exploring the tool in all its facets to provide clear and comprehensive instructions.

On the technical side, this internship pushed me to master new tools and programming languages, which wasn't always easy. But with perseverance and the support of the Cosmic On Air team, I was able to overcome these challenges.

Creating the video tutorial was also an outstanding experience. It was my first educational production, and I took great care to immerse myself in RiumApp's visual style, using its colors and aesthetics. My aim was to make the content as attractive as it was informative for users.

Beyond the technical aspect, this internship enabled me to develop my creativity, learn to take the initiative and deepen my knowledge of a fascinating subject: cosmic rays.

I have fond memories of this experience, both for the skills I acquired and for the exchanges I had with the team.

Working on **Cosmic On Air** has been a real adventure, and I hope I've helped move the project forward and promote its importance.

If the opportunity arises, I'd be delighted to continue collaborating, particularly on the measurement of cosmic radiation in aircraft.

A rewarding experience at IRSN: testimonial from Marc, a student in the BUT Computer Science program



A look back at the 5th OpenRadiation event: A community committed to participatory science!



On December 9, enthusiasts, researchers, teachers and citizens gathered to celebrate the **5th edition of OpenRadiation Day**. It was a day marked by inspiring exchanges and an ever-enthusiastic mobilization around the collaborative measurement of radioactivity.

Inspiring testimonials to start the day:

The morning was marked by speeches from **Jacques Lochard**, expert in nuclear risk management, and **Éric Voinot**, Captain at SDIS de la Moselle. Jacques Lochard shared his experience in Japan, emphasizing that, "OpenRadiation has a role to play in helping local people make informed decisions about their lives." For his part, Éric Voinot presented the benefits of OpenRadiation for firefighters: "The application enables teams to be effectively trained by simulating radioactivity measurements in emergency situations using smartphones."

The presentation of the practical guide for citizens by Florence Gabillaud-Poillion (ASN) also served as a reminder that everyone can contribute to making radioactivity measurement more accessible.

Workshops to experiment together:

The afternoon took an interactive turn with three workshops:

A game immersing participants in nuclear post-accident management;

A workshop to learn how to interpret data;

A hands-on introduction to sensor assembly.

In a collaborative atmosphere, participants discovered how to transform technical tools into levers for awareness-raising and citizen action.

A promising dynamic for the future:

The day illustrated OpenRadiation's potential to unite people around a common goal: making science accessible and useful to all.



A new OpenRadiation application is now available!

After several weeks of hard work and testing, we're delighted to inform you that a new version of the Openradiation applications is now available on the App Store and Google Play since december. Depending on how you've set up your phone, either the new version will download automatically, or you'll need to download it yourself. Either way, we're counting on you to tell us what you think of the new version. If you encounter any problems, or if you're satisfied with it, don't hesitate to let us know! You can also rate the application directly on your favorite store.

The press is talking about it...

In a recent article in Nature Africa (October 2024), the Cosmic on Air project is highlighted as an innovative initiative combining science and citizenship. Supported by the ASNR and South African physicists, the project enables air passengers to collect essential measurement data on cosmic radiation during periods of peak solar activity. Thanks to the OpenRadiation application, it is possible to take serial measurements, with the phone in "airplane" measurement mode, while maintaining a Bluetooth connection with the sensor. These data, shared with the scientific community, help to model interactions between solar particles and cosmic rays, while refining predictions of doses received in flight. It's your turn to join a committed community! Take part in this project by downloading the OpenRadiation application and contribute to international research that sheds light on the links between solar activity and cosmic radiation.



OpenRadiation in the territories...



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An Atom Investigation village, organized by the Institut Français des Formateurs Risques Majeurs et Protection de l'Environnement (Iffo-RME), was held in Castelsarrasin on January 28. Labelled "national resilience day", the event brought together players actors in the nuclear and radiological risk field (ASNR, Anccli, CLI de Golfech, EDF, SDIS 82, etc.). Atom'Investigation villages aim to increase knowledge of nuclear risk, prepare the public for the occurrence of an accident and build collective resilience. On this occasion, an OpenRadiation animation was proposed, designed to introduce this participative participatory project and encourage the public to measure radioactivity. Taking your own measurements in your own environment gives you a better understanding of radioactivity, exposure levels and any associated risks.



We need your help!

We're looking for articles, testimonials and ideas about your experiences, projects or upcoming events.

How do you submit your contribution?

Articles should be between 300 and 500 words long.

You can also attach images to illustrate your points.

Please send your contributions to the following address: **openradiation@gmail.com** (with 'Newsletter contribution' in the subject line).

We look forward to reading your proposals and sharing them with the entire OpenRadiation community.

Thank you for your commitment and participation!



contact@openradiation.org



@OpenRadiation



www.openradiation.org



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