



Institut national de physique nucléaire
et de physique des particules

www.in2p3.fr

A composite image showing particle tracks on the left and a cosmic nebula on the right. The particle tracks are colorful lines (yellow, orange, red) with small blue dots at their ends, set against a black background. The cosmic background is a colorful nebula with purple, pink, and blue hues, set against a black background with small white stars.

Sonder les infinis : des particules au cosmos

(Probe the infinites from particles to cosmos)

The “Congrès des deux infinis”

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IPPOG Meeting
Sofia, 2023/05/11



On behalf of a large organizing committee

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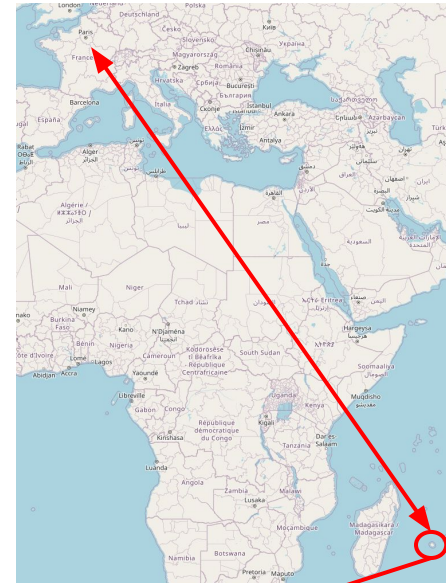


How all this started

- At CERN – where else? – ten years ago
 - Gérard Cavalli, physics teachers at Roland Garros high-school in Réunion, applied to the 2013 French Teacher Programme (FTP2013)
→ French island far away from European France



Gérard Cavalli





The following years...

- 1-2 colleagues of Gérard attended the FTP every year
 - Securing financing on their own – sponsorship, public funds
 - In Réunion, Gérard created the “trésor des deux infinis” (“two infinities treasure”), a network of teachers from many schools doing various educational activities with voluntary students – particle physics but not only
 - He also met many researchers in various labs: IN2P3, CERN, EGO, etc.
 - Contacts later used to organize school trips to France and beyond: scientific and cultural tours
- For some students their first trip to Europe
5th trip (after pandemic stop) took place in March

Voyage des Deux Infinis
Lycée Roland GARROS – LE TAMPON

Lycée Pierre Lagourgue – Le TAMPON

« Infiniment fascinant »

du samedi 11 mars au dimanche 19 mars 2023

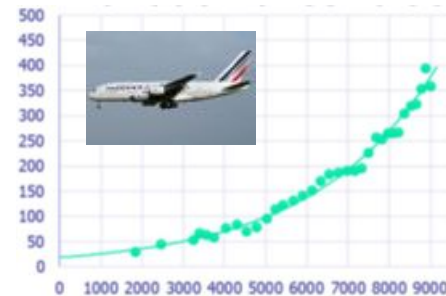
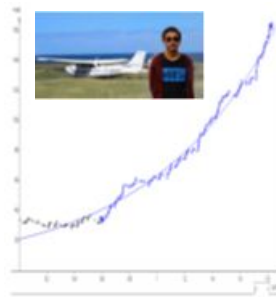
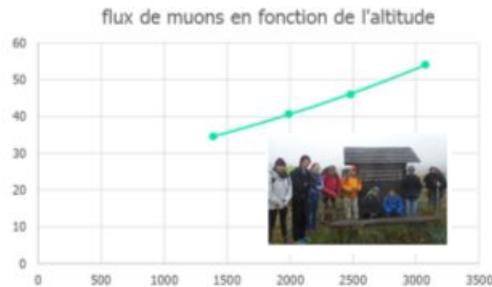
incluant la participation aux Masterclasses Internationales
le lundi 13 mars 2023 à Lyon et l'activité synchrotron@school

Logos: Sciences d'école, CERN, CNRS IN2P3 Les deux infinis, LAPP, LSM, and others.



Educational activities in Réunion: some examples

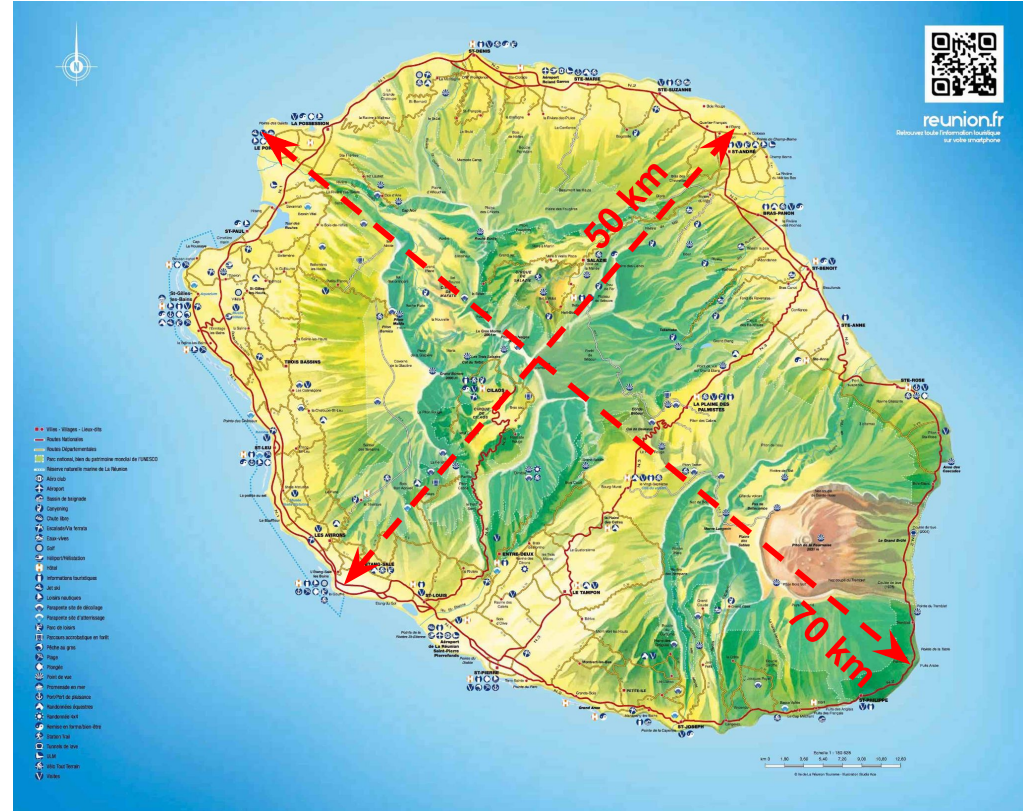
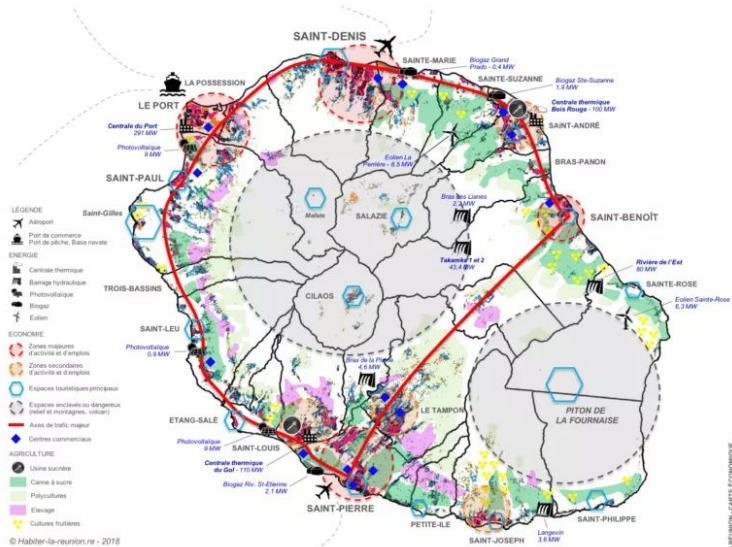
- Using the natural resources from Réunion as play areas for activities
 - Managed to get cosmic muon educational detectors shipped from France



- Students from Réunion winning scientific contests
 - 2017: HSSIP-France and Nuit des ondes gravitationnelles; 2018: S'Cool LAB Summer CAMP

Réunion island in a nutshell

- 2,512 km²,
860,000 inhabitants
(344 / km² – France: 106 / km²)
- Business map:





EDSU2022 and the “Congrès des deux infinis”

- World Summits on Exploring the Dark Side of the Universe
 - Series of conferences promoting interaction between cosmologists and particle physicists
→ 4th edition – Galapagos (2006) and Guadeloupe (2018, 2020)
 - 2022: Réunion island
- EDSU2022
 - O(100) registrants from the whole world, a third of them French-speaking, gathering for a week in a remote island
→ Unique trip for many participants
→ Uncommon concentration of researchers in the area



- How to best exploit this unique opportunity?
 - Le “Congrès des deux Infinis”
 - The “Congress of the two Infinities”



Programme (1/2)

- 8 public lectures
 - Including opening night of the yearly overseas science festival
→ With a Nobel Prize winner as patron: Michel Mayor (1st exoplanet, with Didier Queloz)
- More than 50 conferences in schools over 2 weeks: 2-16 November, 2022
 - Scientists would give their availability with a half-day granularity (before, during or after the EDSU2022 conference)
 - Organizers would then include them in the global schedule and deal with all the associated logistics
→ Including car transportation and back: Réunion (in)famous for its traffic jams!





Programme (2/2)

- 2 university seminars
- 3 school contests from August to October 2022
 - School year starts early in Réunion compared to mainland France
 - Primary schools / middle schools / high schools
 - Common theme: “discover, explore and understand the Universe”
- 1 meeting between delegates from participating high-schools and Michel Mayor
 - Each school represented by 1 member of the board, 1 teacher, 2 students (1 boy and 1 girl)
- 1 2-day training about observational astronomy for primary school teachers
 - Les Makes Observatory
 - Theme: “Southern celestial heritage and light pollution in Réunion”
- 1 round table about “women in science”



Summary map

● Pins

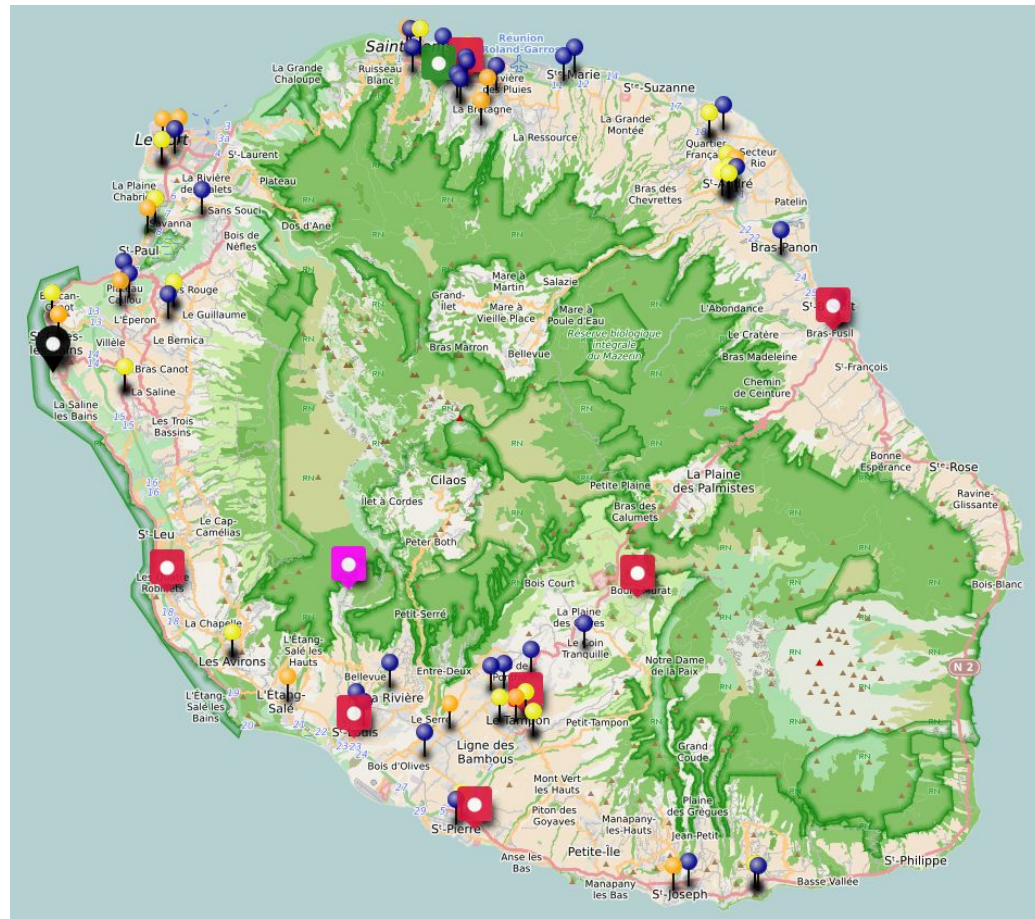
- Blue: conferences in schools
- Orange: contest for primary schools
- Yellow: contest for middle/high schools

● Squares

- Red: public lectures
- Purple: Les Makes observatory
- Green: meeting place between Michel Mayor and students

● Black drop: EDSU location

- Village de Corail: lagoon protected by coral reef





A huge success

- 4,000 students attending conferences in schools
 - 30+ different speakers in total
- 2,000 spectators in public events
- 500 students participated to the different contests
- Dedicated Indico page to gather all tasks: <https://indico.in2p3.fr/event/28485>





What's next?

- A unique event
 - Hard to gather the three main ingredients
 - A motivated team of teachers
 - Building this new project on years of experience, and with a lot of momentum
 - A territory with its own identity
 - Small enough to be fully covered
 - Large enough to offer some diversity – Réunion at the crossroads of many cultures
 - An international conference
 - Large fraction of participants speaking the local language
- Could become a example or an inspiration for others
 - More work than for a regular conference
 - But also more possibilities of funding
 - Including from sources which would not normally support scientific events
 - Mitigate carbon footprint of the conference
 - Scientists had more than a professional talk to offer



One last word

- Organizers happy to discuss/advise anyone willing to try something similar
 - See contact details on page #2

Thanks for your attention!

Questions?