

INTENSITY

frontier

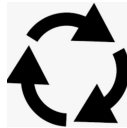
GDR-InF

<http://gdrintensityfrontier.in2p3.fr/>

Coordinateurs: Aoife Bharucha, Francesco Polci

CDG, 3 Novembre 2020

The GDR-InF organization



WORKING GROUPS AND CONVENERS

CP violation:

Christopher Smith, Jean-Francois Marchand, Stephanie Roccia
Rare, radiative and semi-leptonic B decays, Charm and Kaon Physics:

Diego Guadagnoli, Justine Serrano, Carla Marin-Benito

Heavy flavour production and spectroscopy:

Benjamin Audurier, Michael Winn*, Emi Kou

Interplay of quark and lepton flavour:

Ana Teixeira, Yasmine Amhis, Peter Stangl*

Future experiments:

Mark Goodsell, Stephane Monteil, Giulio Dujany

*Stepping down Dec 2020

* **New since Sept 2020**

COORDINATORS

Aoife Bharucha (CPT)
Francesco Polci (LPNHE)

CONSEIL DE GROUPEMENT

- Olivier Leroy (CPPM)
- Olivier Deschamps (LPC)
- Nazila Mahmoudi (IPNL)
- Stephane Lavignac (IPhT, CEA)
- Isabelle Ripp-Baudot (IPHC)
- Stephane T'Jampens (LAPP)
- Diego Guadagnoli (LAPTh)
- Christopher Smith (LPSC)
- Mark Goodsell (LPTHE)
- Jérôme Charles (CPT)
- Marie-Helene Schune, Sebastien Descotes-Genon (IJCLab)

- **Website:** <http://gdrintensityfrontier.in2p3.fr/>
- **Indico:** <https://indico.in2p3.fr/category/731/>
- **Mailing list:** <https://listserv.in2p3.fr/cgi-bin/wa?A0=GDR-INTENSITYFRONTIER-L>
- **Mattermost team (NEW):**
https://mattermost.web.cern.ch/signup_user_complete/?id=3ji4se88hbnsppas5yazz4p8y

PLEASE! INVITE YOUR LAB MEMBERS TO JOIN THE MATTERMOST AND BE ACTIVE ON IT!

In the “town square” of the mattermost team we can exchange news and informations.

You can advertise, for example, thesis defense, your latest article published, a recent article that you find interesting for the community, a position opening in your team, etc....whatever might be of interest for the GDR-InF members!

Specific channel can be used for dedicated discussions (ex: hands-on projects channels)

Some history and numbers



- August 2016: proposal by 61 senior physicists from 14 laboratories of IN2P3, INP, CEA as follow up of few CNRS PEPS-PTI projects
(Flagship measurements at LHCb, NouvPhysLHCb, Phenobas)
- Autumn 2016: Positive feedback from CoNRS 01
- January 2017: official birth of GDR-InF
- Since 2017: 22 events organised or co-organised
- Today:
 - People subscribed to the mailing list: 166
 - Active members (rough estimate): 120/130
 - Many young scientists (PhD students and postdocs)

Overview of the past 4 years



Since the community needs change over time, we adopted an evolving model making use of recurrent formats.

Full list of past and upcoming events is [here](#) , including:

- Intensity-Frontier lectures (7)
- Brainstorming meetings (1)
- Topical GDR-InF workshops (5)
- Supported workshop (5)
- GDR-InF annual meeting (4)

In addition:

- Stimulated discussions and/or provided feedback for **ESPP/prospectives nationales**
- Prepared a **photo exhibition** “grand-public” for 2021

BILAN 2020



Budget 2020

- We received the same budget as last year: 23k€
- We used ~3.3k€ to buy material that could be useful for future recordings and workshop in general:
 - iPad
 - Video-camera
 - Tripod
 - Microphone
 - Pointer
 - Memory card
- ~300 euros to complete the GDR-InF photo exposition (printing legends and panels)
- The rest has been given back to the institutes through the laboratories.

- Two cycles of lectures, online only (recording availables on indico):
 - **"Effective Field Theories Part I"**, by Adam Falkowski and Christoph Bobeth, 21st Sept-1st October 2020
 - **"FLAVIO"**, by Peter Stangl, 28th September 2020 (during the annual workshop)
- Workshops:
 - **b-baryon fest**, 5th-6th November, 2020 (online)
 - **Polarisation measurements in ee ep, pp and heavy-ions collisions** , (online), 14th-18th December, 2020
- Annual workshop (online)
- Finalization of GDR-InF photo exhibition: **WEBSITE**
- **Input for Plaque des GDRs** : being prepared by the IN2P3, should be available next year. We provided text and pictures for the GDR-InF.

The annual meeting 2020



A *virtual event this year, spanning 3 weeks, consisting of:*

- Seminars by invited speakers
 - Young researchers sessions
 - “Hands-on” projects
 - Lectures
 - Coffee discussions
-
- It was definitely needed, and worked quite well, thanks to the fact that we are already an established community.
 - We have definitely been missing real interactions and a totally virtual format would not work on the long term. In particular, difficult to settle an informal and friendly atmosphere for newcomers.
 - It allowed to experiment paths to be further pursued.

What is your feedback?

“Hands on “ projects

Purpose: share knowledge on concrete topics, and maybe start collaborations.

- EDMs in the SMEFT, EDM calculations (coordinator: Mark Goodsell)
- GPU and vectorization: basis on CUDA and TensorFlow (coordinators: Anton Poluektov, Dorothea Vom Bruch)
- Combination and interpretation of experimental results (coordinators: Jérôme Charles, Julien Cogan)
- FLAVIO (coordinator: Peter Stangl)

A first experiment for us.

Outcome different depending on the project.

Some could continue over time...to be followed up.

Discussion with IN2P3/INP representative



Present: Reynald Pain, Patrice Verdier, Laurent Vacavant, Laurent Lellouch

We received a very good feedback on the GDR-InF.

This feedback was confirmed after a **presentation at the “Conseil des directeurs des Unité IN2P3 (3/11/2020).**

One of the comments: *“Nous sommes extrêmement satisfaits du fonctionnement de ce GDR, le gros challenge pour le renouvellement c'est de faire au moins aussi bien !! ”*

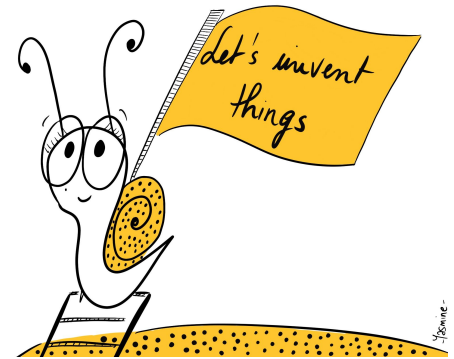
PLAN 2021



Backup plan:



- Reinforce relations between **theory and experiment**
- Facilitate **collaborations between labs**
- Favour the emergence of **common projects**
- Provide **visibility** for the French intensity frontier community
- Promote the **young generation** of physicists working in the field
- Discuss the **future experiments probing the intensity frontier**



- 1) ARE WE CORRECTLY PURSUING OUR GOALS?
- 2) WHAT SHOULD WE MOSTLY FOCUS ON FOR NEXT YEAR?

Activities foreseen for 2021

- The full agenda is to be finalized with conveners, but we already foresee:
 - Lectures EFT part II
 - Axions++ : Axions And Other Light Particles, LPSC Grenoble,
 - Photo exhibition sessions (<http://gdrintensityfrontier.in2p3.fr/ExpoPhoto/>)
 - Annual meeting
 - Other proposals to come (your suggestions are welcome)
- For the **annual workshop** we might want to try a mixed format:
 - keep it extended on 3 weeks, like this year
 - Have an initial or final session in presence

This should allow to profit of the advantages of this year format (ex: projects, invitation of people from far abroad), plus the advantage of meeting together

- We should finally have **photo exhibition** sessions (couple already planned, more to come)
- Report on the current GDR-InF and work towards renewing it.

TOWARDS THE FUTURE



GDRs will become scientific networks, rather than “virtual labs”. They will:

- participate in designing the physics strategy (not much change for us...)
- take care of the “animation scientifique”
- Promote outreach

Procedures are still uncertain, but it seems that:

- GDRs will need approval only by the director of the institute;
- most probably advice from the IN2P3 conseil scientifique will be requested

A brief report on the actions of the GDR-InF will have to be written in 2021.

A few pages will also have to be written to propose the next GDR plans: this should include some (very minor for the first renewal) changes in the scientific perimeter.

Main questions:

- 1) Do we want to renew the GDR-InF? As an IRN (international research network)?
- 2) Who will the next coordinators of the GDR or IRN be?

SOME HOMEWORK



- Subscribe to and use the **mattermost channel**
- Check and update the **members list (we'll send you mails to check for your lab)**.
Ensure that newcomers in your laboratory are subscribed to the mailing list (at least)
- Send us proposals from you and/or your lab for:
 - **next year activities**
 - the **next cycle of GDR/IRN**
 - the **coordination team of the next GDR/IRN**



JOYEUSES FETES