

GDR Deep Underground Physics (DU ϕ /DUPhy)

Kick-off Meeting
31 May – 2nd June 2021

GDR DU ϕ aims to federate the French community of underground experiments, associated with the physics of rare events.

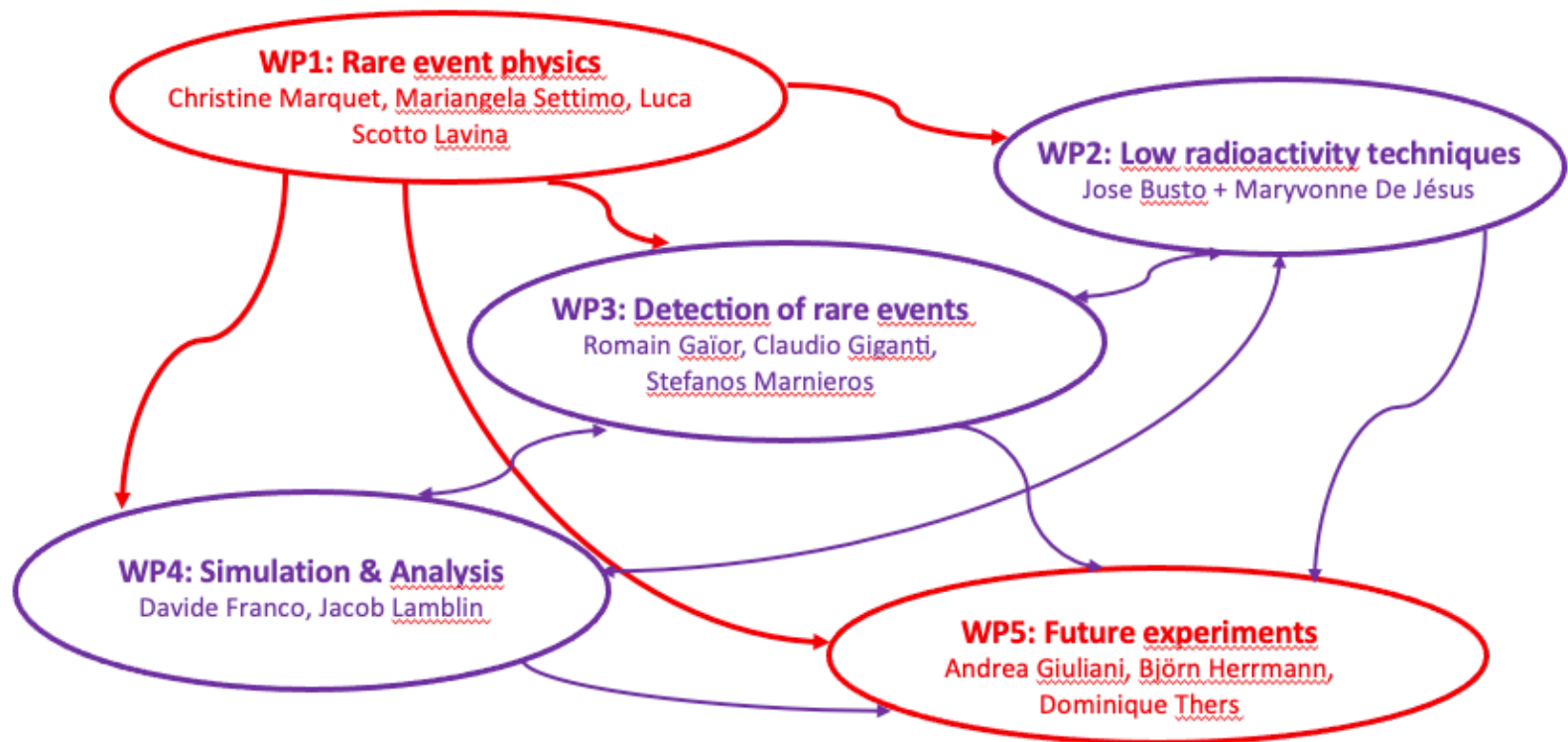
The goal is to pool our expertise to reinforce relations between theorists and experimentalists, to develop new synergies and collaborations.

GDR DU ϕ missions:

- facilitate the development and access of new players to European underground platforms (LSM, LNGS, LSC, BUL...),
- provide visibility for the French underground physics community,
- favour the emergence of new collaborations with new projects,
- promote the young generation of researchers working in the field
- Initiate reflections on the needs of future experiments in this area.

Through multi-thematic exchanges, the GDR Du ϕ goal is to define a strategy, both **scientific** and **technological**, for 3rd generation projects in DULs to study BSM physics.

In particular, but not only, the properties of neutrinos (via neutrinoless double beta decay searches) and the identification of dark matter nature (via direct detection experiments), thanks to five work packages (WP)



Connected topics outside DULs (theory/exp.)

Nuclear astrophysics and
nuclear physics; Other dark
matter searches (indirect
detection and accelerators);
Study of gravitational waves;
Other studies of neutrino
properties;
BSM physics (proton decay...)

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Topics associated with rare event physics in deep underground labs:

Experimental searches in
particular neutrinos ($\beta\beta 0\nu$)
and DDDM;
Theoretical searches in
astroparticles, particle and
nuclear physics

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Other topics in DULs and/or technologies associated with LRTs/rare events (theory/exp)

Energy, biology,
radioactivity and
environment, ultra-low
radioactivity
requirements... 2

Agenda: reviews, talks and discussions

Monday: WP1 and WP3

Welcome (Corinne Augier)

Visioconference

13:30 WP1 session - Rare event physics: WP1 (1) - Chair: Ch. Marquet

Visioconference

Break

Visioconference

WP1 session - Rare event physics: WP1 (2) - Chair: M. Settimo

Visioconference

WP3 session - Detection of rare events: WP3 (1) - Chair: R. Gaier

Visioconference

Break

Visioconference

WP3 session - Detection of rare events: WP3 (2) - Chair: R. Gaïor

Visioconference

Tuesday: WP2 and WP4

WP2 session - Low radioactivity techniques: WP2 (1) - Chair: M. De Jesus

Visioconference

Break

Visioconference

WP2 session - Low radioactivity techniques: WP2 (2) - Chair: M. De Jesus

Visioconference

WP2 session - Low radioactivity techniques: Discussion - Chair: J. Busto

Visioconference

Break

Visioconference

WP4 session - Simulation & Analysis: WP4 - Chair: J. Lamblin

Visioconference

**Wednesday: Underground science,
DULs, WP5 and general discussion**

Underground Science and DULs: Chair: C.Augier

Visioconference

WP5 session - Future experiments: WP5 (1) - Chair: D. Thers

Visioconference

Break

Visioconference

WP5 session - Future experiments: WP5 (2) - Chair: B. Herrmann

Visioconference

Break

Visioconference

General discussion: All

Visioconference

18:30