

- **Experimental techniques used for detecting rare events in low background experiments**
- **Not necessarily limited to direct Dark Matter detection and neutrinoless double beta decay experiments**
 - **Solar neutrinos, Coherent neutrino scattering, ...**
- **Aim to cover all different detection techniques (Noble liquids, CCD, bolometers, gaseous detector, ...)**

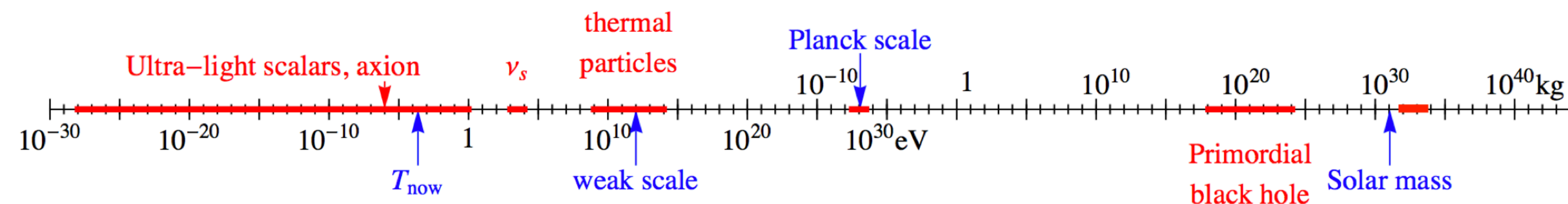
Conveners:

Romain Gaier (LPNHE)

Claudio Giganti (LPNHE)

Stefanos Marnieros (IJC-Lab)

- R&D towards the detection of (any type of) DM candidates or of $0\nu\beta\beta$ can be discussed in our WG
- DM: Nuclear recoils, Electronic recoils, Migdal, modulations, ...
- Directionality of Nuclear Recoils



- In order to make a discovery we need to control of background sources in the region of interest
 - Radioactivity of surroundings
 - Radioactivity of detector and shield materials
 - Choice of appropriate underground laboratory
- All these aspects will be discussed in our working group

- **Description of the observed signal → understand detector details**
 - **Background mitigation (material screening, deep underground laboratories, ..)**
 - **Background discrimination (reconstruction techniques)**
 - **Close connection with WP1 and WP4**
- **Calibration → necessary to extend the range of sensitivity of existing and proposed experiments**
 - **Present results obtained with dedicated calibration campaigns**
 - **External calibrations (quenching of NR)**
 - **Internal calibrations**
 - **Evaluate needs of calibration for future experiments**

- **Experimental design**
 - **Choice of location, materials, material transportation method has to be addressed from the beginning of experiment**
 - **Share existing expertise in the choice of technologies, detector components, selection of companies**
 - **Website in which we can collect existing experience in France**

1st GDR meeting WG3

- For this meeting we decided to avoid having review talks → many review talks in other WGs
- Give opportunity to students and postdoc to present their work on R&D
- Review talks will be organized starting from the next GDR
- If you are interested in presenting your work in our WG or there is something you would like to discuss please contact us!
- We hope to have active WG3 discussions not limited to the GDR meetings!

Agenda

WG3

17:00	Towards the DAMIC-M experiment (Georgios Papadopoulos) <i>Visioconference</i>	<i>Georgios PAPADOPOULOS</i> 16:50 - 17:10
	BINGO (Hawraa Khalife) <i>Visioconference</i>	<i>Hawraa Khalife</i> 17:10 - 17:30
	Directionality and 3D tracks in the (sub)keV range with the MIMAC detector (Cyprien Beaufort) <i>Visioconference</i>	<i>Cyprien Beaufort</i> 17:30 - 17:50
18:00	CROSS experiment: surface background rejection in bolometric 0n2b searches (Anastasiia Zolotarova) <i>Anastasiia Zolotarova</i>	
	Calibration of the XENON experiments (with Kr83m) (Maxime Pierre) <i>Visioconference</i>	<i>Maxime PIERRE</i> 18:10 - 18:30

Swapped

