
WG4: Prospective observables in QCD

May 27th 2024

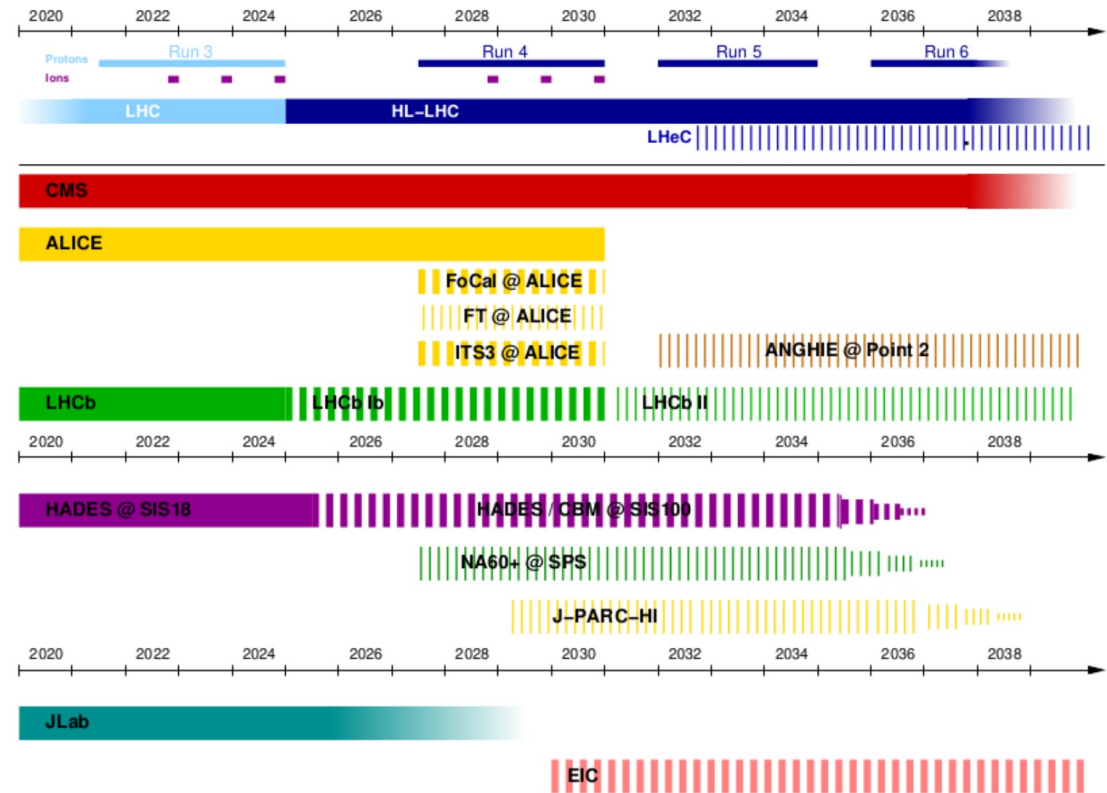
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Perspectives: what and where

Science drivers :

- Understanding the origin of the proton mass
- Mapping the structure of nucleons and nuclei
- Understanding the deconfined state of quarks and gluons
- Establishing the equation of state of strong interactions
- ...



Exciting perspectives !

What do we want to do in WG4 ?

WG4 : Prospective **observables** in QCD

We want to :

- ❑ Focus on **probes** : dileptons, photons, jets, ...
- ❑ Explore the potential of the different experiments for measuring these probes
- ❑ Explore their scientific interest (theoreticians needed)

WG4 is cross-cutting to the thematic WGs

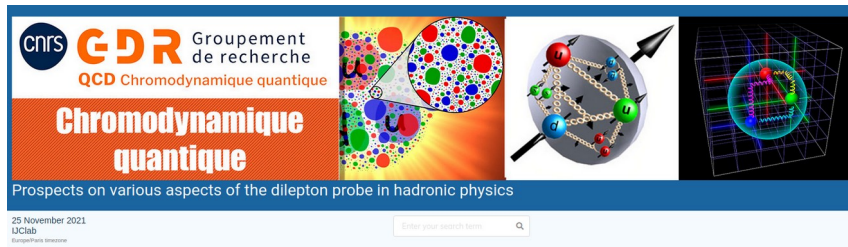
WG4 organization

Aiming at ~1 workshop per year focusing on a specific probe

→ We are welcoming suggestions where the needs of the community are

Examples:

2021: Workshop on dileptons



<https://indico.in2p3.fr/event/25089/>

- ~50 participants, mostly in person
- Bringing together different communities: Hadron structure, QGP, “cold QCD”, theory, ..

2022: Perspectives in QCD in 2030s

- <https://indico.in2p3.fr/event/26055/>
- 58 participants, attendance mostly in person
- **Focus on heavy flavours and quarkonia**
- First day: theory perspectives
- Second day: experimental opportunities
- **Extended time for round table discussions**

WG4: plans

- 2024 - ...
- Organization of one workshop.
 - Workshop on perspective 2030+, focus on EIC physics
- We applied to be host of the next European EIC Physics Summer School

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- ... but we did not get it :(