

WG4: Prospective observables in QCD

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Sources

□ In the previous GdR, WG4 was directed by

- Cynthia HADJIDAKIS
- Cyrille MARQUET
- Béatrice RAMSTEIN

□ Useful input : GT03 – IN2P3 perspectives : Hadronic Physics - Understanding Strong Interaction

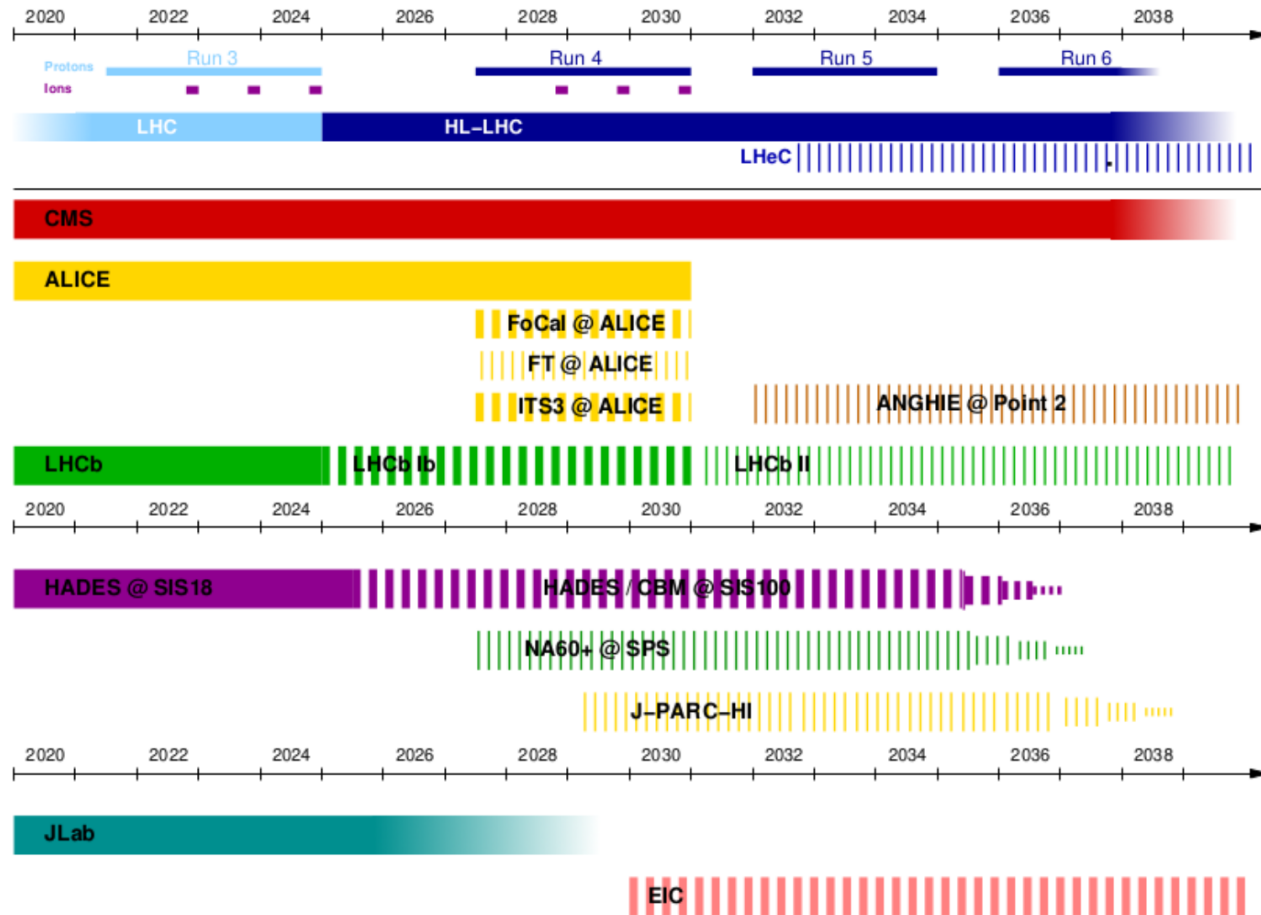
Report: <https://box.in2p3.fr/index.php/s/4AGQkZZPZoasTRR#pdfviewer>

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



Timeline of the main experiments



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 transversal to the thematic WG

WG4 organization

1 workshop per year focusing on a specific probe

→ Contact us if you want to propose a specific probe

We can also help to **organize discussions about observables**: contact us if

For **theorician** :

- ❑ You would like to **propose new observables**
- ❑ Looking for experimentalist to **evaluate the feasibility of your measurement**

For **experimentalist** :

- ❑ You can measure an observable
- ❑ Looking for theoreticians to **evaluate its scientific interest and make predictions**



WG4 in 2021 : Focus on dileptons

Workshop in september dedicated to dileptons

What can we learn from dileptons measurements ?



- ✓ LHC : ALICE / CMS / LHCb ?
- ✓ At JLAB and later at the EIC ?
- ✓ HADES ?
- ✓ **Theoreticians : what would you like us to measure with dileptons ?**

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