



**Laboratório de Instrumentação e  
Física Experimental de Partículas**

## **LIP Seminar**

Thursday, 20 of May, 11h30

# Opportunities of light ion collisions at the LHC

**Wilke van der Schee**  
(CERN)

In this talk I will attempt to give a perspective on the physics opportunities of oxygen-oxygen and proton-oxygen collisions in the LHC Run 3. The cosmic-ray community argues for a short pO run during Run 3, because this is the unique time-window for LHCf to take data. In the heavy-ion community, the origin of collectivity in small collision systems remains a central question that begs a timely answer. In the talk I will briefly present the constraints from the accelerator. I will then highlight the opportunities on what we can learn about a hydrodynamic quark-gluon plasma (QGP) and about hard probes propagating through such a QGP. I will end with a brief summary on cosmic ray opportunities.

Much of the talk will be based on the workshop OppOrtunities at the LHC ([cern.ch/oatlhc](http://cern.ch/oatlhc)), as summarised in 2103.01939

**Location: Videoconference - Zoom**

**<https://indico.lip.pt/event/897/>**

**Connection details**

**URL: <https://videoconf-colibri.zoom.us/j/82345449841>**

**PIN: LIPSeminar**

*Or by phone:*

*Dial: +351 308 810 988 (Portugal Toll) or +351 211 202 618  
(Portugal Toll)*

*Meeting ID: 823 4544 9841*

*Or iPhone one-tap: 308810988,82345449841# or  
211202618,82345449841#*

*PIN for phones: 5506206082*