

Student projects

-Introduction-

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16 Oct 2022	
09:00	Prospects at LHC in Run-3 and HL-LHC - Sarah Marie Demers Konezny (Yale University (US)) () lecture_lhc_prospects.pdf
10:30	--- Coffee Break ---
11:00	Higgs & BSM Physics 3 - Ryuichiro Kitano (KEK) ()
12:30	--- Lunch + Free Time ---
14:30	Gravitational Waves - Jo van den Brand (Nikhef) ()
16:00	--- Coffee Break ---
16:30	Q & A Session - Fabiola Gianotti (CERN) ()
17:30	Discussion Session (until 19:00) ()
19:00	--- Dinner ---
20:00	Projects - You, the students ()

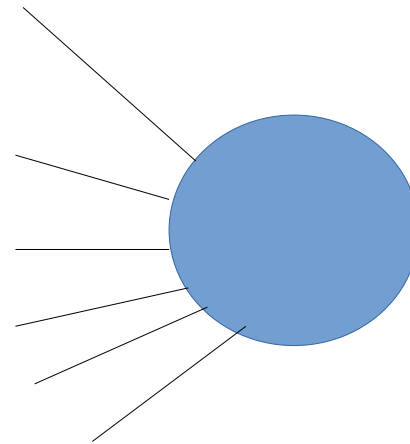
Each Discussion Group:

- Choose **one experimental paper** published in a refereed journal
- **Study and understand in detail:**
 - All aspects of the analysis described in the paper (trigger, selection, backgrounds, statistical analysis, systematic uncertainties, theoretical interpretation, ...)
 - Follow up references and make use of relevant public material
- **Prepare a 15 minute presentation of your group's study (+5 minute questions).**
 - Presented by **one** student from your group
- Order of talks will be random and there will be a vote to determine the winning presentation (1 vote per group)

- Better to choose a longer article than a short letter – **at least 10 pages of content**, not counting abstract, references and author list.
- Once you have chosen a paper, **let me know**.
- We can provide paper copies (for your group) of the paper you select.
- You can use some time during the discussion sessions to get organized, but most of the work should happen during free time.
- **Work as a team** to decide on a paper, plan and share the work, review progress regularly, combine the contributions, select a speaker, organize a rehearsal of the talk...
- It is a **student project**: the DL may guide occasionally, but it is up to **you as a team** to select the paper, share the work, monitor progress, etc.

Topics:

- 1) Searches at the LHC
- 2) Higgs measurements
- 3) QCD or Electroweak precision measurements
- 4) Flavour physics measurements
- 5) Heavy Ion measurements
- 6) Neutrino physics



Group A (2)

Group B (4)

Group C (6)

Group D (1)

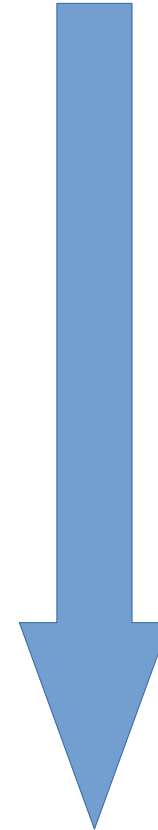
Group E (5)

Group F (3)

**Start:
Now**

**Paper choice:
Wednesday 11:00, the
latest.**

**Presentation:
Next Sunday, October 16,
at 20:00 after dinner**



Enjoy the projects!
Questions?