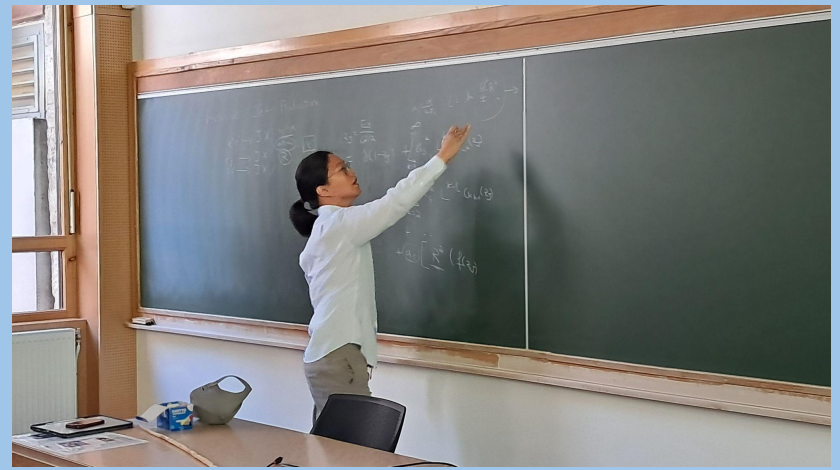
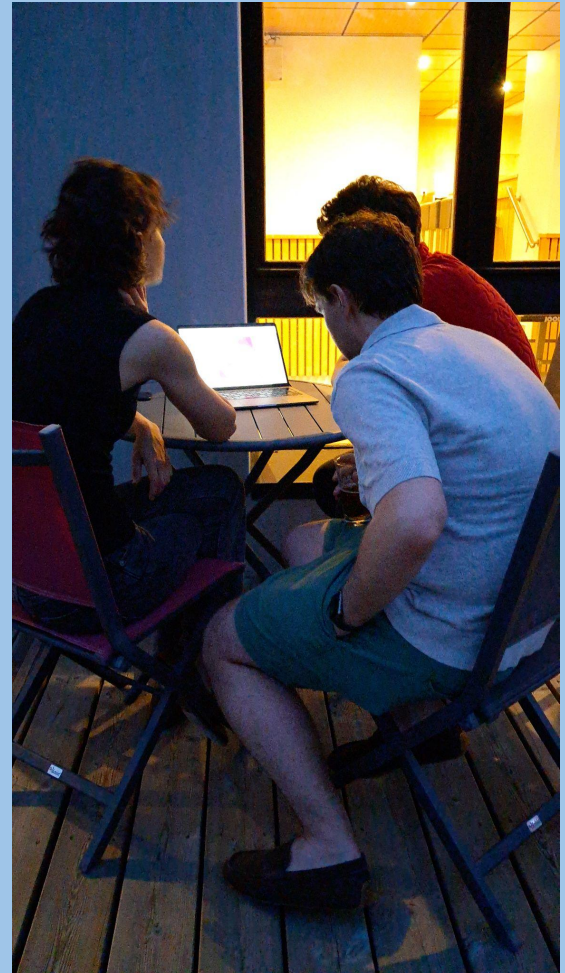


PhysTeV 2025 - session 1

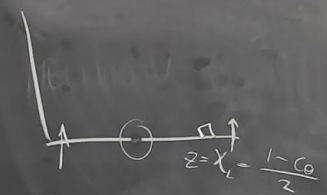
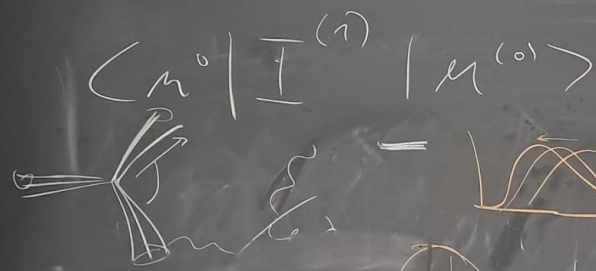
Goodbye!



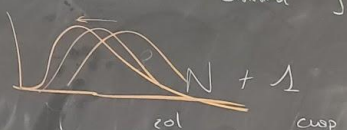




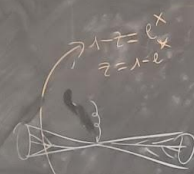




$$\frac{d\Gamma}{d\tau} \Big|_{\text{Smooth}} = \int d\ell \frac{d\sigma}{d\tau} \Big|_{\text{PS}} \left(\tau - \frac{\ell}{2} \right) S_{\text{Smooth}}(\ell)$$



$$\Delta \left(\frac{d\Gamma}{dx} \right) = \frac{\Omega_2}{Q z^{3/2} (1-z)} = \frac{\Omega_1}{Q (1-z)^{3/2}} e^{x/2}$$



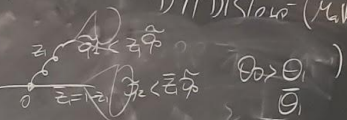
$$\begin{aligned} X &= \log(1-z) \\ dx &= \frac{dz}{1-z} \\ \frac{d\Gamma}{dx} &= \frac{d\Gamma}{dz} \left(\frac{dz}{dx} \right) \\ &= \frac{d\Gamma}{dz} \left(\frac{dx}{dz} \right)^{-1} = (1-z) \frac{d\Gamma}{dz} \end{aligned}$$

$$S(\ell) = \tilde{U}(\ell) e^{-\frac{\ell}{\Lambda}}$$

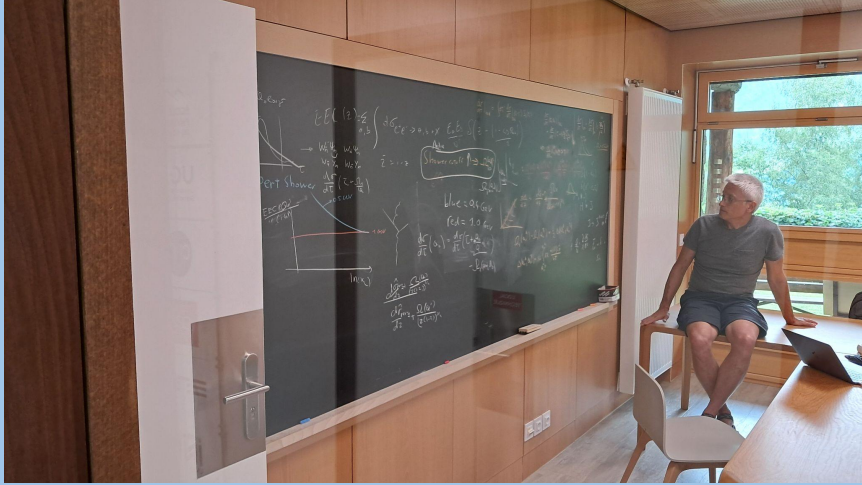
$$P^p \rightarrow H + H(\nu_{\mu})$$

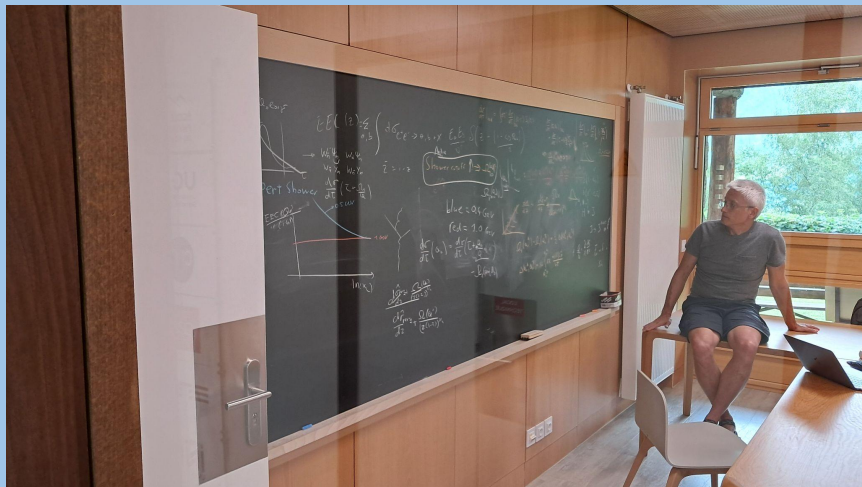
$$D/D \sim \frac{1}{2} \frac{q_1}{q_1 - q_2} \frac{1}{\Lambda_{\text{MKS}}}$$

$$\frac{q_1^2}{Q^2} = \frac{k^2}{z(1-z)^2} = \frac{Q^2}{z(1-z)}$$



	—	+	LOG	$\frac{k_c}{Q}$	α_{MKS}
CS	loc	loc	LL	A	k_L
PG	loc	global	NL	A	k_L
PL	loc	loc	NL	A	k_L
Asric/FHP	global	global	NL	B	k_L
\bar{Q} (HEMIGAT)	global	local	NL	B	θ











- A cloud to share your pictures will be available by today
[lyrics and song recording available there too]





FOR
IAN + KYLE



Lot of work and discussions!

09:30-10:30	main auditorium	introductory talks	J. Huston + R. Poncelet		
10:30-11:00		coffee break			
11:00-12:00	main auditorium	introductory talks	S. Ferrario Ravasio + J. Roloff		
14:30-15:30	main auditorium	roundtable/brainstorming			
16:30-17:30	main auditorium	jet substructure (h23 js survey reloaded)	S. Ferrario Ravasio, D. Reichelt, A. Siodmok		
19:00-19:30	bar	welcome drinks			
19:30-20:30	restaurant	dinner			
Wednesday 18					
9:00-10:00	main auditorium	Intro Flavour labelling	R. Poncelet	Arnd	
10:00-12:00	main auditorium	Theory uncertainties - TNPs	R. Poncelet	Presentations by Frank, Tom, Rene	
10:30-11:00		coffee break			
14:00-15:30	library	Theory uncertainties - TNPs	R. Röntsch	Rest of presentation by Frank + talks by Rene and Tom	
14:30-16:00	main auditorium	Tuning UEPS & hadronization	C Hays	overview of topics for discussion + summary of cms tunes: https://indico.cern.ch/event/1560353/	
16:30-18:00	main auditorium	Negative weights	A. Siodmok / J. Andersen	intro by Andersen	
Thursday 19					
9:00-9:30	main auditorium	Intro Amplitudes	A. v. Manteuffel		
9:30-10:30	main auditorium	Jet substructure resummation	R. Poncelet	Presentation by Terry and Kyle	
10:30-11:00		coffee break			
11:00-12:00	main auditorium	Amplitudes: user requirements	A. v. Manteuffel	Intro by Raoul Röntsch	
12:00-12:30	library	Tuning: input data & comparisons to generator	C Hays		
14:30-16:00	main auditorium	Flavour labelling, part II	Ulla Blumenschein		
16:00-17:00	main auditorium	Amplitudes: Interpolation	A. v. Manteuffel	Intro by Matthias Kerner	
17:00-18:30	main auditorium	Parton shower and hadronization uncertainties	A. Grohsjean	Presentation by Betsy/Josh and Andrea	
Friday 20					
9:00-10:30	main auditorium	Higgs + jet merging systematics	Joey Huston, Daniel Reichelt		
9:30-11:00	QCD room	Amplitudes: user requirements	R. Röntsch		
10:30-11:00		coffee break			
11:00-12:00	main auditorium	polarized multiboson production	S. Bhattacharya + E. Re, R. Poncelet and M. M	intro by Saptaparna	
11:00-12:00	QCD room	Flavour labelling, follow up, definition of what to work on	A. Behring, U. Blumenschein		
14:30-15:00	library	Variable radius jet discussion	J. Roloff, D. Reichelt	Presentation by T Samal	
15:00-16:00	main auditorium	QCD corrections to PDFs	Joey Huston	Presentations by Andy Buckley & Boris	
16:00-17:30	main auditorium	Tuning: A14 and eigenvalues	C Hays	https://indico.cern.ch/event/1561295/	
Saturday 21					
10:30-11:00		coffee break			
10:30-11:30	main auditorium	wishlist discussion, comments/questions LHC	Joey Huston		
11:30-12:00	main auditorium	FCC-ee and LEP alphas	S. Ferrario Ravasio, D. Reichelt, A. Siodmok		
14:30-16:00	main auditorium	tbar threshold effects/toponium	A. Grohsjean		
16:00-17:30	library	wishlist discussion	R. Röntsch		
17:30-19:00	library	hadronisation for event shapes at ee	Ferraro, Hoang, Vita		
Sunday 22					
day off					
Monday 23					
9:30-10:30	main auditorium	alpha_s precision measurements	Ulla	Stefano will prepare some slides	
10:30-11:00		coffee break			
10:45-12:00	main auditorium	alpha_s precision measurements	Ulla		
11:30-12:30	library	action items on parton shower uncertainties	A. Grohsjean		
14:00-16:00	main auditorium	PDF profiling/fitting in sin2theta measurements	Ulla		
14:00-15:00	library	Tuning	C Hays	https://indico.cern.ch/event/1561639/	discussion with Peter Skands
15:00-16:00	library	Jet substructure chat	Jennifer		
16:00-17:00	main auditorium	hadronisation uncertainties	Boris & Joerg		

- stay in touch with the conveners!
- (if needed) dedicated mailing lists
- Mattermost: good to keep the initial momentum
- Discussions → work → “agreements”: let’s make sure all relevant people (participants, but also rest of the community) are kept informed

What's next? (1)

Ample freedom to publish work that started, or was boosted, during your stay in LH:

- By the end of the summer: **short document** summarizing the discussions that took place in Les Houches.
- through the conveners, each “project” can contribute at this stage by preparing a ~ 1-page long section.
- once ready, such document will be sent to arxiv, and it will “stay alive” for updates when needed

What's next? (2)

- If you work on something that gets published in a journal, please acknowledge PhysTeV in your paper, and let us know. The previous document can be updated accordingly, if needed.
- For work that is not suited for publication in a journal (which can be the case for some studies kicked-off here), you can either send it to arxiv acknowledging PhysTeV, or it can be included in the previous document, after the first “general” part.
- I'd like to give it another try with [SciPost Physics Community Reports](#)
The editor was very supportive, but inputs and will from all of us are needed.

Thanks

- Thanks to Dominique, Véronique, Virginie at LAPTh in Annecy
- Thanks to Elsa, Isabel, Marina, Patrick here at the Ecole...

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R. Poncelet, R. Röntsch, A. von Manteuffel, U. Blumenschein, J. Huston, A. C. Marini, S. Ferrario Ravasio, D. Reichelt, A. Siodmok, A. Grohsjean, C. Hays, J. Roloff

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- Thanks to Cédric for all the organization (and mutual support!)
- Thanks to the conveners for their great work
- Thanks to all of you for your enthusiasm!

See you in 2027!!

14 June / 2 July [TBC]