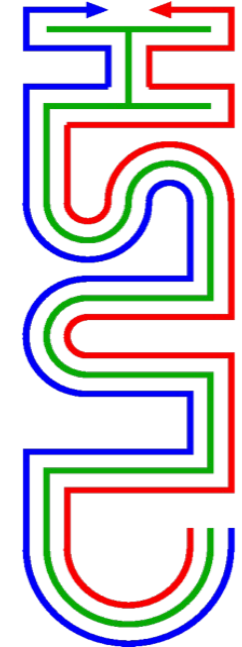


Holmganga: CLASH Workshop 2023

– Sumit Basu



LUND
UNIVERSITY



HOLMGANGA

26–30 Jun 2023 Helsingborg, Sweden

History



The term "holmganga" typically refers to an ancient Scandinavian practice of settling disputes through a duel or physical combat in an

island

Elite Hotel Marina Plaza, Helsingborg, Sweden (Close to sea)

~~physical combat~~
Physics discussions, logics, innovative ideas
→ dialogues, pen, pencil, paper & computer

- Vytautas Vislavicius
- Andreia Ramnath
- Jarkko Peuron
- Sumit Basu
- Adrian Fereydon Nassirpour

In HEP, we all have our own (strong) biases, weaknesses & strengths,
+ Some unknowns
+ Some areas where we dare to ask questions
+ Some hidden great ideas
+ ...

- Jet quenching
- Particle production & freeze-out
- Correlations & fluctuations
- CGC versus Lund strings

Rule of the Game

First Part:
Parallel Session

JET QUENCHING

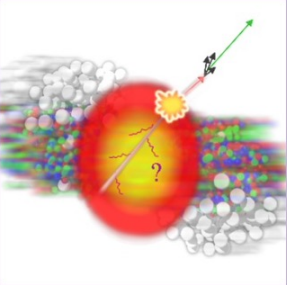


Diagram illustrating jet quenching. A central red sphere represents the collision point, with particles (represented by small spheres) and a jet quenching cone (indicated by a red arrow) shown. The diagram is labeled "JET QUENCHING".

PARTICLE PRODUCTION & FREEZE-OUT

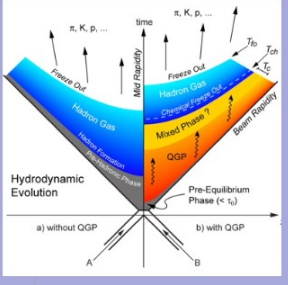


Diagram illustrating particle production and freeze-out. A 3D plot shows the evolution of particle production (represented by a blue and orange surface) and freeze-out stages (labeled "Freeze Out", "Hydrodynamic Evolution", "Mixed Phase?", "QGP", "Pre-Equilibrium Phase ($t < t_0$)", "beam stability"). The diagram is labeled "PARTICLE PRODUCTION & FREEZE-OUT".

CORRELATIONS & FLUCTUATIONS

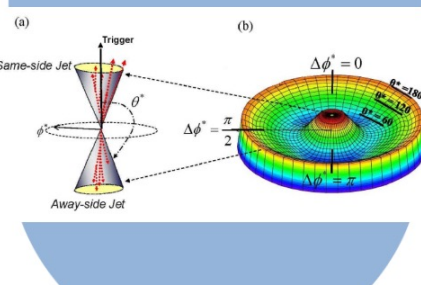


Diagram illustrating correlations and fluctuations. A 3D plot shows the evolution of particle production (represented by a blue and orange surface) and fluctuations (labeled "Same-side Jet", "Away-side Jet", "Trigger", "Mixed Phase?", "QGP", "Pre-Equilibrium Phase ($t < t_0$)", "beam stability"). The diagram is labeled "CORRELATIONS & FLUCTUATIONS".

CGC VS. LUND STRINGS

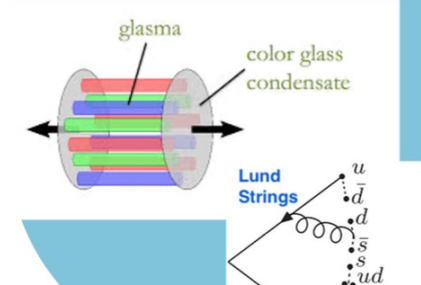
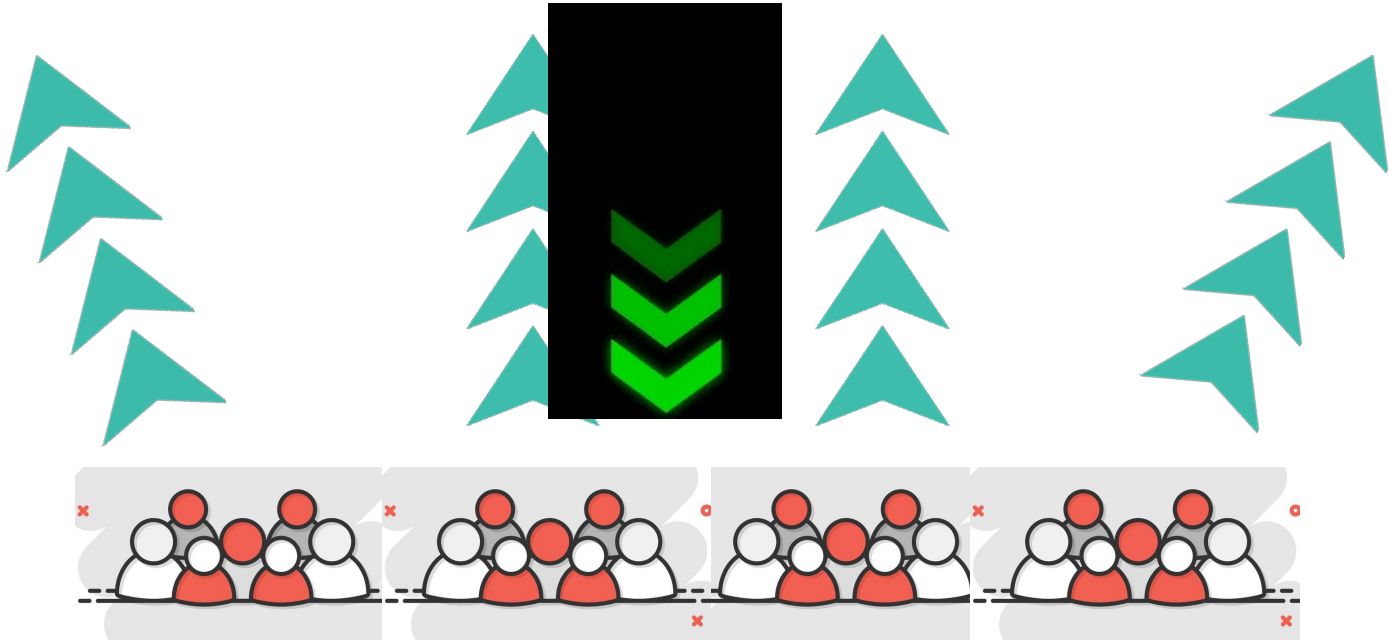


Diagram illustrating CGC vs. Lund strings. A cylinder represents the glasma and color glass condensate, with Lund strings (represented by a string of particles) shown. The diagram is labeled "CGC VS. LUND STRINGS".

Second Part:
Summary & Duels



Rule of the Game

First Part:
Parallel Session

Jet quenching

Particle production & freeze-out

Correlations & fluctuations

CGC versus Lund strings



- Will be convened by assigned convenors
- They could lead/trigger the discussions But not limited to only their materials/topics
- Participants are strongly encouraged to take part/engage
- Focus is to find good “clashing points”/two side view/Holmganga
- Please don't forget the Change my mind questions (in your conference kit folder)

→ Jarkko

Second Part:
Summary & Duels

- Each session convenor will summarize the main outcomes of the discussion (sessions)
- Any debatable ideas which came up during the discussion will be dueled over in a holmganga
- We also want to discuss the change my mind questions + new ideas/questions

What we expect

Other conference

- We promote our work through Talks/ poster
- Limited time for interactions on other works
- Afraid/shy to try challenging ideas stick to biases

Holmganga Conference

- Here we promote which is untold Some extreme ideas, views
- Full conference is open to discussion engaging debatable thoughts Afraid/shy to try challenging ideas
- Encourage to be clashy/ask questions Be a "Holmgangers" !!!

We want to jolt down the possible ideas, doubts and try to come with some write up after this workshop

→ Of course, with your help!!!

Hope that will be food for thoughts for upcoming 5-10 years for this field.

Possibilities for new collaborations for longer term to try some new ideas

→ Ask us!!! Lanyard (organizers)

→ Andy

Enjoy!!!