

# **Opportunities and Ideas at the QCD Frontier**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# Trilogy of hadron event reconstruction at higgs factory

*Thursday, 10 April 2025 13:30 (50 minutes)*

**Presenter:** RUAN, Manqi (IHEP)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 3

Type: **not specified**

## Forward particle production in pA collision

*Wednesday, 9 April 2025 15:20 (40 minutes)*

**Presenter:** LIU, Xiaohui (Beijing Normal University)

**Session Classification:** QCD at Precision Frontier

Contribution ID: 4

Type: **not specified**

## 基于强子对撞实验的新 PDF 研究

*Tuesday, 8 April 2025 14:10 (40 minutes)*

**Presenter:** 杨, 思奇 (中国科学技术大学)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 5

Type: **not specified**

## **From boosted H→WW\* tagger to inclusively pre-trained jet models at the LHC**

*Thursday, 10 April 2025 11:10 (40 minutes)*

**Presenter:** 付, 大为 (北京大学)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 6

Type: **not specified**

## Fragmentation functions of charged hadrons at NNLO and constraints on proton PDFs

*Tuesday, 8 April 2025 13:30 (40 minutes)*

**Presenter:** SHEN, XiaoMin (Institute of Modern Physics (IMP), CAS)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 9

Type: **not specified**

## AI for discovery

*Thursday, 10 April 2025 09:00 (1 hour)*

**Presenter:** MA, Yan-Qing (Peking University)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 10

Type: **not specified**

## **Challenges and opportunities with jets, from small to large system**

*Thursday, 10 April 2025 16:10 (40 minutes)*

**Presenter:** MAO, Yaxian (Central China Normal University)

**Session Classification:** AI with jet tagging and reconstruction



Contribution ID: 11

Type: **not specified**

# The impact of data from future lepton colliders on light hadrons fragmentation functions

*Tuesday, 8 April 2025 16:00 (40 minutes)*

**Presenter:** Prof. 周, 斌 (SJTU)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 12

Type: **not specified**

## “Do you need a distance?” Optimal Transport for Jet Physics

*Thursday, 10 April 2025 10:30 (40 minutes)*

**Presenter:** 蔡, 恬吉 (SLAC)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 14

Type: **not specified**

## QCD challenges at LHC

*Tuesday, 8 April 2025 09:00 (1 hour)*

**Presenter:** SHAO, Dingyu (Fudan University)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 15

Type: **not specified**

## **Parton Spin Correlation in Higgs Decay: Tools and Challenges**

*Tuesday, 8 April 2025 10:30 (40 minutes)*

**Presenter:** 王, 一霖 (University of Science and Technology of China)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 16

Type: **not specified**

## Fragmentation Modeling in Hadronization

*Tuesday, 8 April 2025 11:10 (40 minutes)*

**Presenter:** LI, Haitao (Shandong University)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 17

Type: **not specified**

## Perturbative QCD precision calculation

**Presenter:** CHEN, Long (Shandong University)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 18

Type: **not specified**

## **Precise predictions on Higgs decays to bottom quarks and gluons**

*Tuesday, 8 April 2025 15:20 (40 minutes)*

**Presenter:** WANG, Jian (Shandong University)

**Session Classification:** QCD at High Energy Frontier, PDFs

Contribution ID: 19

Type: **not specified**

## Status and perspect on EEC

*Wednesday, 9 April 2025 09:00 (1 hour)*

**Presenter:** ZHU, HuaXing (Peking University)

**Session Classification:** QCD at Precision Frontier



Contribution ID: 20

Type: **not specified**

## Glueball & Exotic

*Wednesday, 9 April 2025 10:30 (40 minutes)*

**Presenter:** HUANG, Yanping (高能所)

**Session Classification:** QCD at Precision Frontier

Contribution ID: 21

Type: **not specified**

## QCD issues in hypo decay

*Wednesday, 9 April 2025 11:10 (40 minutes)*

**Presenter:** ZHOU, Xiaorong (University of Science and Technology of China)

**Session Classification:** QCD at Precision Frontier

Contribution ID: 22

Type: **not specified**

## **Determination of the Strong Coupling Constant from Inclusive Semi-leptonic B and D Meson Decays**

*Wednesday, 9 April 2025 13:30 (40 minutes)*

**Presenter:** CHE, Yuzhi (IHEP)

**Session Classification:** QCD at Precision Frontier

Contribution ID: 23

Type: **not specified**

## **Global analysis of fragmentation functions to light neutral hadrons**

*Wednesday, 9 April 2025 14:10 (40 minutes)*

**Presenter:** 刘, 重阳 (上海交通大学粒子物理与核物理研究所)

**Session Classification:** QCD at Precision Frontier

Contribution ID: 24

Type: **not specified**

## QCD relevant topics at LHASSO

*Thursday, 10 April 2025 14:20 (40 minutes)*

**Presenter:** ZHANG, Shoushan (Institute of High Energy Physics)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 25

Type: **not specified**

## **Jet origin identification at LHC energy**

*Thursday, 10 April 2025 15:30 (40 minutes)*

**Presenter:** ZHAO, Mingrui (China Institute of Atomic Energy)

**Session Classification:** AI with jet tagging and reconstruction

Contribution ID: 26

Type: **not specified**

## Lattice QCD

*Friday, 11 April 2025 09:00 (1 hour)*

**Presenter:** CHEN, Ying (高能所)

**Session Classification:** QCD Vacuum & Lattice QCD

Contribution ID: 27

Type: **not specified**

## Chiral Perturbation Theory with Axions

*Friday, 11 April 2025 10:30 (40 minutes)*

**Presenter:** GUO, Feng-Kun (ITP, CAS)

**Session Classification:** QCD Vacuum & Lattice QCD



Contribution ID: 28

Type: **not specified**

## **Bigbang-Proton: A general purpose scientific multitask learner**

*Friday, 11 April 2025 11:10 (40 minutes)*

**Presenter:** WU, Hengkui