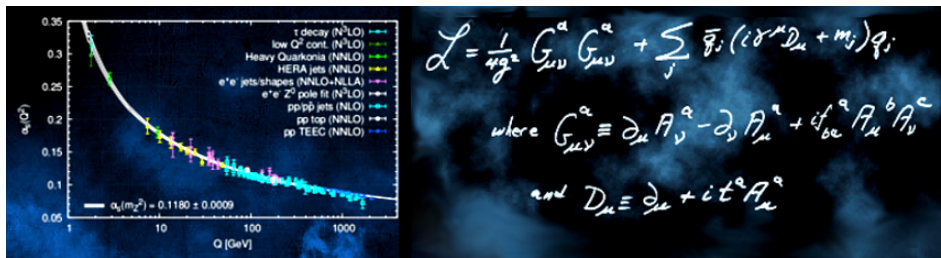


alphas-2024: Workshop on precision measurements of the QCD coupling constant



Report of Contributions

Contribution ID: 0

Type: **not specified**

Presentation of the workshop

Monday 5 February 2024 13:00 (15 minutes)

Summary

Presenters: D'ENTERRIA, David (CERN); ZANDERIGHI, Giulia (Max Planck Society (DE)); KLUTH, Stefan (Max Planck Society (DE))

Session Classification: Introduction and organisation

Contribution ID: 28

Type: **not specified**

Discussion on PDG averaging

Thursday 8 February 2024 11:00 (1 hour)

Summary

Authors: HUSTON, Joey (Michigan State University (US)); RABBERTZ, Klaus (KIT - Karlsruhe Institute of Technology (DE)); ZANDERIGHI, Giulia (Max Planck Society (DE))

Presenters: HUSTON, Joey (Michigan State University (US)); RABBERTZ, Klaus (KIT - Karlsruhe Institute of Technology (DE)); ZANDERIGHI, Giulia (Max Planck Society (DE))

Session Classification: Morning

Contribution ID: 74

Type: **not specified**

Renormalons and power corrections in e^+e^- annihilation in the three-jet region

Wednesday 7 February 2024 17:00 (30 minutes)

Summary

Presenter: NASON, Paolo (Universita & INFN, Milano-Bicocca (IT))

Session Classification: α_s from e^+e^- hadronic final states

Contribution ID: **81**

Type: **not specified**

Discussion: alpha_s from lattice QCD

Tuesday 6 February 2024 13:00 (30 minutes)

Session Classification: alpha_s: Lattice QCD

Contribution ID: **82**

Type: **not specified**

Discussion: alpha_s from PDFs & LHC data

Wednesday 7 February 2024 14:30 (30 minutes)

Session Classification: alpha_s at hadron colliders

Contribution ID: **83**

Type: **not specified**

Discussion: alpha_s from tau decays

Thursday 8 February 2024 18:00 (30 minutes)

Session Classification: alpha_s from tau decays

Contribution ID: 91

Type: **not specified**

RG improvement and alpha_s determination from relativistic sum rules

Monday 5 February 2024 13:45 (30 minutes)

Summary

Presenter: KHAN, Mohd Siddique Akbar Alam (Indian Institute of Science Bangalore)

Session Classification: alpha_s: Lattice QCD

Contribution ID: 92

Type: **not specified**

Extraction of α_S using energy of a static quark-antiquark pair within hyperasymptotic approximation

Monday 5 February 2024 14:15 (30 minutes)

Summary

Presenter: AYALA, Cesar

Session Classification: α_s : Lattice QCD

Contribution ID: 93

Type: **not specified**

Possible strategy to extract α_S using secondary Lund planes

Tuesday 6 February 2024 18:00 (30 minutes)

Summary

Presenter: BALDENEGRO BARRERA, Cristian (Sapienza Universita e INFN, Roma I (IT))

Session Classification: alpha_s at hadron colliders

Contribution ID: 94

Type: **not specified**

Extraction of the strong coupling with HERA and EIC inclusive data

Tuesday 6 February 2024 14:00 (30 minutes)

arxiv:2307.01183

Summary

Presenter: BARONTINI, ANDREA (Università degli studi di Milano)

Session Classification: alpha_s from DIS & PDFs

Contribution ID: 95

Type: **not specified**

Determination of the strong coupling from TEECs in multijet events at $\sqrt{s} = 13$ TeV with the ATLAS detector

Tuesday 6 February 2024 17:00 (30 minutes)

Summary

Presenter: BARREIRO ALONSO, Fernando (Universidad Autonoma de Madrid (ES))

Session Classification: alpha_s at hadron colliders

Contribution ID: 96

Type: **not specified**

Determining α_S from Thrust with Power Corrections

Wednesday 7 February 2024 16:30 (30 minutes)

Summary

Presenter: BENITEZ RATHGEB, MIGUEL ÁNGEL

Session Classification: α_s from e+e- hadronic final states

Contribution ID: 97

Type: **not specified**

3-loop hevy flavor Wilson coefficients to the unpolarized and polarized deep-inelastic scattering

Tuesday 6 February 2024 18:30 (30 minutes)

Summary

Presenter: Prof. BLUEMLEIN, Johannes

Session Classification: α_s from DIS & PDFs

Contribution ID: 99

Type: **not specified**

The QCD Coupling at all Scales from Light Front Holography

Wednesday 7 February 2024 18:30 (30 minutes)

Summary

Presenters: DEUR, Alexandre (Jefferson Lab); BRODSKY, Stanley J. (SLAC National Accelerator Laboratory, Stanford University)

Session Classification: α_s from e+e- hadronic final states

Contribution ID: **100**

Type: **not specified**

Measurement of α_s at CMS: status and prospects

Wednesday 7 February 2024 14:00 (30 minutes)

Summary

Presenter: CONNOR, Patrick (University Hamburg (DE))

Session Classification: alpha_s at hadron colliders

Contribution ID: **101**

Type: **not specified**

MSHT20aN3LO alphas

Tuesday 6 February 2024 15:00 (30 minutes)

Summary

Presenter: CRIDGE, Thomas (DESY)

Session Classification: alpha_s from DIS & PDFs

Contribution ID: **102**

Type: **not specified**

Charm mass effects in the Laplace-Borel sum rules for tau decay data

Thursday 8 February 2024 17:00 (30 minutes)

Summary

Presenter: CVETIC, Gorazd

Session Classification: α_s from tau decays

Contribution ID: **103**

Type: **not specified**

Determination of α_S from the Z-boson transverse-momentum distribution (CDF)

Wednesday 7 February 2024 13:00 (30 minutes)

Summary

Presenters: FERRERA, Giancarlo (Università degli Studi e INFN Milano (IT)); FERRERA, Giancarlo (University of Milan)

Session Classification: α_s at hadron colliders

Contribution ID: **104**

Type: **not specified**

Determination of α_S from azimuthal correlations among jets (CMS)

Tuesday 6 February 2024 16:30 (30 minutes)

Summary

Presenter: GIANNEIOS, Paris (Université Libre de Bruxelles (BE))

Session Classification: α_s at hadron colliders

Contribution ID: **107**

Type: **not specified**

Hadronic tau spectral function moments in the RF gluon condensate scheme

Thursday 8 February 2024 16:30 (30 minutes)

Summary

Presenter: HOANG, Andre

Session Classification: alpha_s from tau decays

Contribution ID: **109**

Type: **not specified**

Factorial Growth in pQCD and Implications for α_s

Monday 5 February 2024 15:15 (30 minutes)

Summary

Presenter: KRONFELD, Andreas

Session Classification: alpha_s: Lattice QCD

Contribution ID: 110

Type: **not specified**

Effect of Renormalon Scheme and Perturbative Scale Choices on α_s from e^+e^- event shapes

Wednesday 7 February 2024 18:00 (30 minutes)

Summary

Presenter: LEE, Christopher (LANL)

Session Classification: α_s from e^+e^- hadronic final states

Contribution ID: 111

Type: **not specified**

TUMQCD: alpha from 2+1+1 static potential

Monday 5 February 2024 14:45 (30 minutes)

Summary

Presenter: LEINO, Viljami

Session Classification: alpha_s: Lattice QCD

Contribution ID: 112

Type: **not specified**

Measurement of jet production in deep inelastic scattering and NNLO determination of the strong coupling at ZEUS

Tuesday 6 February 2024 14:30 (30 minutes)

DESY-23-129, arxiv:2309.02889

Summary

Presenter: LORKOWSKI, Florian (University of Zürich)

Session Classification: alpha_s from DIS & PDFs

Contribution ID: 113

Type: **not specified**

AlphaS determination from event shapes / the static potential

Wednesday 7 February 2024 16:00 (30 minutes)

Summary

Presenter: Prof. MATEU, VICENT (University of Salamanca)

Session Classification: alpha_s from e+e- hadronic final states

Contribution ID: 114

Type: **not specified**

Lambda_0 from the static force on the lattice with gradient flow

Monday 5 February 2024 16:15 (30 minutes)

Summary

Presenter: MAYER-STEUDTE, Julian

Session Classification: alpha_s: Lattice QCD

Contribution ID: 115

Type: **not specified**

Next-to-leading power correction to event shape variables.

Wednesday 7 February 2024 17:30 (30 minutes)

Summary

Presenter: Mr MISHRA, Shubham (IIT Hyderabad)

Session Classification: α_s from e+e- hadronic final states

Contribution ID: **116**

Type: **not specified**

Power corections and alpha_S from e+e- -> hadrons

Thursday 8 February 2024 14:30 (30 minutes)

Summary

Presenter: NARISON, Stephan

Session Classification: alpha_s from e+e- hadronic final states

Contribution ID: 117

Type: **not specified**

Strong coupling constant from multiplicity ratio of QCD gluon and quark jets

Thursday 8 February 2024 13:00 (30 minutes)

Summary

Presenter: Dr PÉREZ-RAMOS, Redamy (IPSA/LPTHE)

Session Classification: α_s from e+e- hadronic final states

Contribution ID: **118**

Type: **not specified**

alpha_S from tau decay

Thursday 8 February 2024 16:00 (30 minutes)

Summary

Presenter: PERIS, Santi

Session Classification: alpha_s from tau decays

Contribution ID: 119

Type: **not specified**

Lattice determination of the strong coupling constant from moments of quarkonium correlators

Monday 5 February 2024 17:15 (30 minutes)

Summary

Presenter: PETRECZKY, Peter

Session Classification: alpha_s: Lattice QCD

Contribution ID: 120

Type: **not specified**

Violations of quark-hadron duality in low-energy determinations of the strong coupling

Thursday 8 February 2024 17:30 (30 minutes)

Summary

Presenter: PICH, Antonio

Session Classification: α_s from tau decays

Contribution ID: 121

Type: **not specified**

The complete EM Euclidean Adler function and its interplay with α_s and α_{QED}

Thursday 8 February 2024 13:30 (30 minutes)

Summary

Presenter: RODRIGUEZ SANCHEZ, Antonio

Session Classification: α_s from e+e- hadronic final states

Contribution ID: 122

Type: **not specified**

Reliably determination of the QCD coupling from Ruds measurements

Thursday 8 February 2024 14:00 (30 minutes)

Summary

Presenter: SHEN, Jian-Ming

Session Classification: α_s from e+e- hadronic final states

Contribution ID: 123

Type: **not specified**

Determination of α_s in 2+1 flavor lattice QCD from gradient flow

Monday 5 February 2024 16:45 (30 minutes)

Summary

Presenter: SHU, Hai-Tao

Session Classification: α_s : Lattice QCD

Contribution ID: 124

Type: **not specified**

FLAG working group on alpha_S

Monday 5 February 2024 18:15 (30 minutes)

Summary

Presenter: SINT, Stefan (Trinity College Dublin)

Session Classification: alpha_s: Lattice QCD

Contribution ID: 126

Type: **not specified**

Measurement of α_S from energy correlators in jets (CMS)

Tuesday 6 February 2024 17:30 (30 minutes)

Summary

Presenter: XIAO, Meng (ZJU - Zhejiang University (CN))

Session Classification: α_s at hadron colliders

Contribution ID: 127

Type: **not specified**

Discussion: alpha_S from e+e- to hadronic final states

Thursday 8 February 2024 15:00 (30 minutes)

Summary

Session Classification: alpha_s from e+e- hadronic final states

Contribution ID: 128

Type: **not specified**

Determination of the strong coupling constant via the Drell Yan process (ATLAS)

Wednesday 7 February 2024 13:30 (30 minutes)

Summary

Presenter: SCHOTT, Matthias (CERN / University of Mainz)

Session Classification: alpha_s at hadron colliders

Contribution ID: **129**

Type: **not specified**

Accurate determination of the strong coupling

Monday 5 February 2024 13:15 (30 minutes)

Summary

Presenter: RAMOS MARTINEZ, Alberto (Univ. of Valencia and CSIC (ES))

Session Classification: alpha_s: Lattice QCD

Contribution ID: 130

Type: **not specified**

On the heavy quark correlator moments method

Monday 5 February 2024 17:45 (30 minutes)

Summary

Presenter: SOMMER, Rainer Paul (DESY)

Session Classification: alpha_s: Lattice QCD

Contribution ID: 131

Type: **not specified**

Perspectives on measurements of α_s from spin structure functions

Tuesday 6 February 2024 13:30 (30 minutes)

Summary

Presenter: DEUR, Alexandre (Jefferson Lab)

Session Classification: α_s from DIS & PDFs

Contribution ID: 132

Type: **not specified**

alphas and NNPDF fits

Tuesday 6 February 2024 16:00 (30 minutes)

Summary

Presenter: DEL DEBBIO, Luigi (The University of Edinburgh (GB))

Session Classification: alpha_s from DIS & PDFs