

Editorial

Néstor Armesto^{1,a}, Carlos Pajares^{1,b}, Carlos A. Salgado^{1,c}, Urs A. Wiedemann^{2,d}

¹Departamento de Física de Partículas and IGFAE, Facultade de Física, Campus Sur, Universidade de Santiago de Compostela, 15706 Santiago de Compostela, Spain

²PH-TH Department, CERN, 1211 Geneva 23, Switzerland

Published online: 11 June 2009
© Springer-Verlag / Società Italiana di Fisica 2009

This special issue of the *The European Journal of Physics C* is devoted to hard and electromagnetic probes in ultrarelativistic nuclear collisions. Hard QCD processes have been recognized since long as ideal tools for characterizing the medium created in heavy-ion collisions.

In the last years, the extended kinematic reach at RHIC has moved this subject to the central focus of experimental and theoretical investigation. The imminent LHC program will increase their relevance even further. Moreover, electromagnetic probes are expected to be directly determined by the properties of this medium.

This volume collects refereed research papers from participants of the third International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions, held at Illa da Toxa (Galicia, Spain) in June 8–14th 2008, which is the main conference in the field of hard and electromagnetic processes in heavy-ion physics.

The volume presents the most recent results on hard and electromagnetic probes in high-energy heavy-ion collisions: particles produced at high transverse momentum,

both one-particle inclusive measurements or correlations and reconstructed jets; open and hidden heavy-flavor production; photon and dilepton production; and initial state effects in the nuclear wave function. Of qualitative novelty, the very first measurements and analysis of jets in heavy-ion collisions—a challenging measurement in such high-multiplicity environment—are presented here.

We wish to thank the other conference organizers: Federico Antinori, Jorge Casalderrey-Solana, David d'Enterria, Elena G. Ferreiro, Carlos Lourenço, Ginés Martínez, and José Guilherme Milhano, who were instrumental in shaping the scientific program, which is also reflected in this special issue. The conference acknowledges the support of: Centro Nacional de Física de Partículas, Astropartículas y Nuclear of Spain; Xunta de Galicia; Ministerio de Ciencia y Tecnología of Spain; CERN; IN2P3; INFN; and Instituto Galego de Física de Altas Enerxías. Last but not least, we would like to thank EPJ C for their invitation to the participants of this conference to submit original research papers to this special volume.

^a e-mail: nestor.armesto@usc.es

^b e-mail: pajares@fpaxp1.usc.es

^c e-mail: carlos.salgado@usc.es

^d e-mail: urs.wiedemann@cern.ch