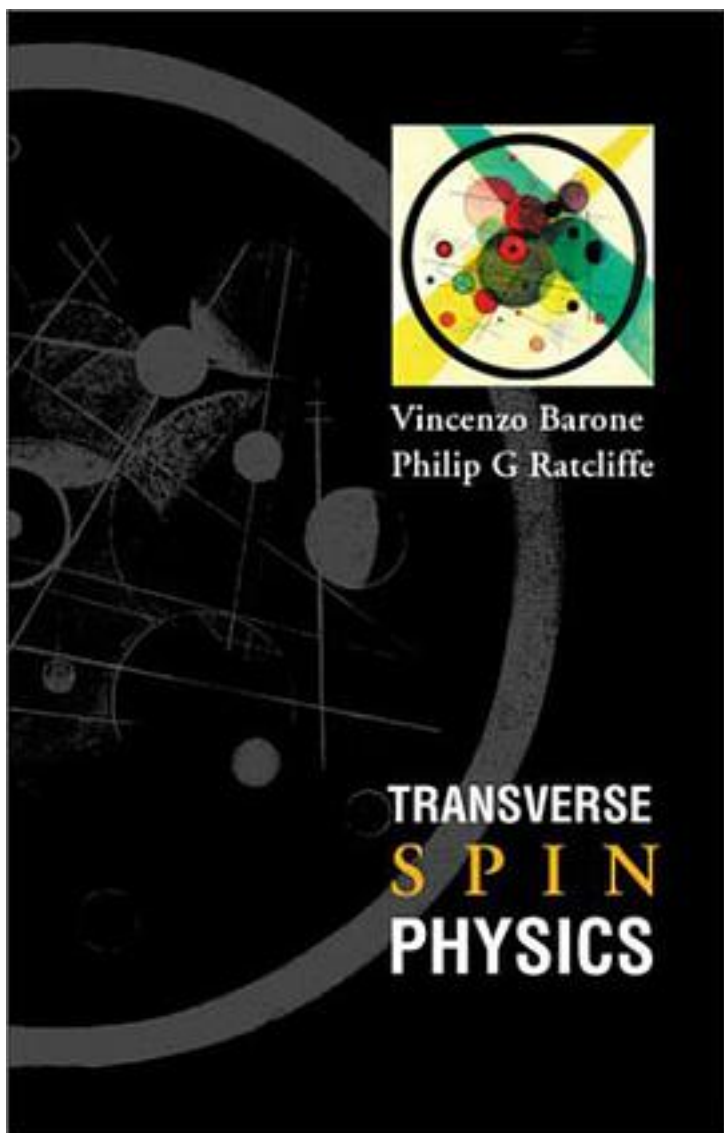


# 横向自旋物理学/TRANSVERSE SPIN PHYSICS



[横向自旋物理学/TRANSVERSE SPIN PHYSICS 下载链接1](#)

著者:Vincenzo Barone

出版者:World Scientific Publishing Company

出版时间:2003-03

装帧:Hardcover

isbn:9789812381019

This book deals with the theory and phenomenology of transverse spin effects in high-energy hadronic physics. Contrary to common past belief, it is now rather clear that these effects are far from irrelevant. A decade or so of intense theoretical work has shed much light on the subject and brought to the surface an entire class of new phenomena, which now await thorough experimental investigation. Over the next few years a number of experiments worldwide (at DESY, CERN and Brookhaven) will run with transversely polarised particles, providing data that will enrich our knowledge of the transverse spin structure of hadrons. It is therefore timely to assess the state of the art, and this is the principal aim of the book.

The outline of the book is as follows. After a few introductory remarks (Chapter 1), in the first part (Chapters 2-4) attention is directed to polarised deep inelastic scattering (DIS), particularly DIS on transversely polarised targets, which probes the transverse spin structure function  $g_2$ . This structure function is examined within the framework of the quark-parton model and its improvement via perturbative QCD. The existing data are reviewed and commented on (for completeness and comparison, a brief presentation of longitudinally polarised DIS and of the helicity structure of the proton is provided).

The second part of the book (Chapters 5-8) focuses on the transverse polarisation of quarks, the so-called "transversity". The partonic content and the QCD evolution of the transversity distributions are presented in detail. The phenomenology of transversity is then studied in the context of Drell-Yan processes and of semi-inclusive lepto- and hadroproduction. The interpretation of some recent data on single-spin asymmetries is discussed and, finally, the prospects for future measurements are reviewed.

作者介绍:

目录:

[横向自旋物理学/TRANSVERSE SPIN PHYSICS 下载链接1](#)

标签

spin

physics

评论

-----  
[横向自旋物理学/TRANSVERSE SPIN PHYSICS 下载链接1](#)

书评

-----  
[横向自旋物理学/TRANSVERSE SPIN PHYSICS 下载链接1](#)