

Conceptual Design of the Cryogenic System for the Large Hadron Collider (LHC), V. BENDA, A. BEZAGUET, J. CASAS-CUBILLOS, S. CLAUDET, W. ERDT, P. LEBRUN, G. RIDDONE, V. SERGO, L. SERIO, L. TAVIAN, B. VULLIERME, R. VAN WEELDEREN and U. WAGNER, CERN - The high-field superconducting magnets to be installed on the 26.7 km circumference of the Large Hadron Collider at CERN will operate below 1.9 K in pressurized superfluid helium, thus requiring the development and implementation of a cryogenic system unprecedented in size, refrigeration capacity and complexity. After recalling the basic features of LHC cryogenics, which allow to make full use of the peculiar properties of superfluid helium as a technical coolant for accelerator devices, we present recent updates in performance requirements and changes in architecture of the system, discuss their technical impact, and review the status of development of the key technologies involved.