



Contribution ID: 333

Type: **Regular 15 minutes Oral Presentation**

## Status of the 16 T dipole development programme for a future hadron collider

*Thursday, August 31, 2017 9:15 AM (15 minutes)*

A next step of energy increase of hadron colliders beyond the LHC requires high-field superconducting magnets capable of providing a dipolar field in the range of 16 T in a 50 mm aperture with accelerator quality. These characteristics could meet the requirements for an upgrade of the LHC to twice the present beam energy (HE-LHC) or for a 100 TeV centre of mass energy Future Circular Collider (FCC). This paper summarizes the activities and plans for the development of these magnets, in particular within the 16 T Magnet Technology Program, the WP5 of the EuroCirCol, and the US Magnet Development Program.

### Submitters Country

Switzerland

**Primary author:** TOMMASINI, Davide (CERN)

**Co-authors:** ZLOBIN, Alexander (Fermilab); BALLARINO, Amalia (CERN); STENVALL, Antti Aleksis; ARJAN VERWEIJ (PROGRAM CHAIRMAN) (CERN); Dr CAIFFI, Barbara (INFN Sezione di Genova); BORDINI, Bernardo (CERN); AUCHMANN, Bernhard (CERN); SENATORE, Carmine (University of Geneva); LORIN, Clement (CEA/IRFU, Centre d'étude de Saclay Gif-sur-Yvette (FR)); SCHOERLING, Daniel (CERN); Dr ARBELAEZ, Diego (LBNL); ROCHEPAULT, Etienne (CERN); TODESCO, Ezio (CERN); WOLF, Felix Josef (TU Bergakademie Freiberg (DE)); TORAL, Fernando (Centro de Investigaciones Energéticas Medioambientales y Tecnológicas); SAVARY, Frederic (CERN); LACKNER, Friedrich (CERN); DE RIJK, Gijs (CERN); BAJAS, Hugo (CERN); NOVITSKI, Igor (FERMILAB); MUNILLA, Javier (CIEMAT); RIFFLET, Jean-Michel; PEREZ, Juan Carlos (CERN); BOTTURA, Luca (CERN); Dr BROWER, Lucas (LBNL); DHALLÉ, Marc (University of Twente); BUZIO, Marco (CERN); PRIOLI, Marco (CERN); DURANTE, Maria; JUCHNO, Mariusz (CERN); BAJKO, Marta (CERN); MARCHEVSKY, Maxim (Lawrence Berkeley National Lab. (US)); BENEDIKT, Michael (CERN); SEGRETI, Michel (CEA/Saclay); FERRACIN, Paolo (CERN); FABBRICATORE, Pasquale (Universita e INFN Genova (IT)); GAO, Peng (University of Twente); ORTWEIN, Rafal (CERN); WESSEL, Sander (University of Twente); CASPI, Shlomo (Lawrence Berkeley national laboratory USA); PRESTEMON, Soren (LBNL); FARINON, Stefania (Universita e INFN Genova (IT)); RUSSENSCHUCK, Stephan (CERN); GOURLAY, Stephen (LBNL); IZQUIERDO BERMUDEZ, Susana (CERN); MARTINEZ DE ALVARO, Teresa (ciemat); SALMI, Tina-Mari (Tampere University of Technology, Finland); OGITSU, Toru; Dr KASHIKHIN, Vadim (Fermilab); MARIANOZZI, Vittorio (University of Milan / INFN); BARZI, emanuela (Fermilab); BELLOMO, giovanni; SORBI, massimo (Milan University & INFN-LASA)

**Presenter:** TOMMASINI, Davide (CERN)

**Session Classification:** Thu-Mo-Or28

**Track Classification:** A1 - Superconducting Accelerator Magnets