Progress in LHC Repair Process

May 20, 2009 (HE32). We reproduce here a shortened version (excerpts) of CERN press release of April 30, 2009 entitled “Final LHC Magnet Goes Underground” (PR06.09). The full text can be found at www.cern.ch, click “Press Office”.

“Geneva, 30 April 2009. The 53rd and final replacement magnet for CERN’s large Hadron Collider (LHC) was lowered into the acceleratot tunnel today, marking the end of repair work above the ground following the accident in September last year that brought LHC operations to a halt. Underground, the magnets are being interconnected, and new systems installed to prevent similar accidents happening again. The LHC is scheduled to restart in autumn, and to run continuously until sufficient data have been accumulated for the LHC experiments to announce their results…..”

…..”In total 53 magnets were removed from Sector 3-4. Sixteen that sustained minimal damage were refurbished and put back into the tunnel. The remaining 37 were replaced by spares and will … be refurbished to provide spares for the future.”

“The LHC repair process can be divided into three parts. Firstly, the repair itself… is nearing completion with the installation of the last magnet today. Secondly, systems are being installed to monitor the LHC closely and ensure that similar accidents…cannot happen again. This work will continue into the summer. Finally, extra pressure valves are being installed to release helium in a safe and controlled manner should there be leak inside the LHC cryostat at any time in the machine’s projected 15-20 year operational lifetime.”

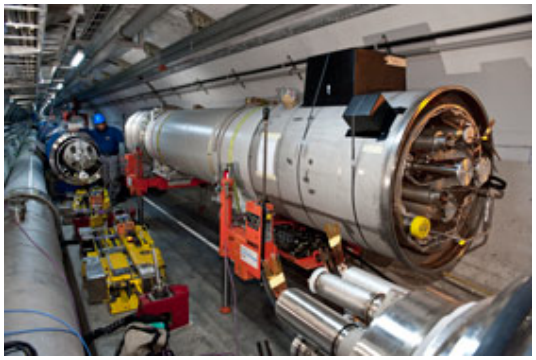

Fig. 1. A quadrupole magnet in the LHC tunnel