Press Release

CERN management confirms new LHC restart schedule

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Geneva, 9 February 2009. CERN[1] management today confirmed the restart schedule for the Large Hadron Collider (LHC) resulting from the recommendations from last week's Chamonix workshop. The new schedule foresees first beams in the LHC at the end of September this year, with collisions following in late October. A short technical stop has also been foreseen over the Christmas period. The LHC will then run through to autumn next year, ensuring that the experiments have adequate data to carry out their first new physics analyses and have results to announce in 2010. The new schedule also permits the possible collisions of lead ions in 2010.

In Chamonix there was consensus among all the technical specialists that the new schedule is tight but realistic.

"The schedule we have now is without a doubt the best for the LHC and for the physicists waiting for data," said CERN Director General Rolf Heuer. *"It is cautious, ensuring that all the necessary work is done on the LHC before we start up, yet it allows physics research to begin this year."*

This new schedule represents a delay of six weeks with respect to the previous schedule, which foresaw the LHC "cold at the beginning of July". The cause of this delay is due to several factors such as implementation of a new enhanced protection system for the busbar and magnet splices; installation of new pressure-relief valves to reduce the collateral damage in case of a repeat incident; application of more stringent safety constraints; and scheduling constraints associated with helium transfer and storage.

The enhanced protection system measures the electrical resistance in the cable joints (splices) and is much more sensitive than the system existing on 19 September.

The new pressure relief system has been designed in two phases. The first phase involves installation of relief valves on existing vacuum ports in the whole ring. Calculations have shown that in an incident similar to that of 19 September, the collateral damage would be minor with this first phase. The second phase involves adding additional relief valves on all the dipole magnets and would guarantee minor collateral damage (to the interconnects and super-insulation) in all worst cases over the life of the LHC.

The management has decided for 2009 to install the additional relief valves on four of the LHC's eight sectors, at the same time as repairs in the sector damaged last September and other consolidation work already foreseen. The dipoles in the remaining four sectors will be equipped in 2010.

1. CERN, the European Organization for Nuclear Research, is the world's leading laboratory for particle physics. It has its headquarters in Geneva. At present, its Member States are Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom. India, Israel, Japan, the Russian Federation, the United States of America, Turkey, the European Commission and UNESCO have Observer status.