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# Outcome from Chamonix: Better in the long run

Last week, the Chamonix workshop once again proved its worth as a place where all the stakeholders in the LHC can come together, take difficult decisions and reach a consensus on important issues for the future of particle physics. The most important decision we reached last week is to run the LHC for 18 to 24 months at a collision energy of 7 TeV (3.5 TeV per beam). After that, we'll go into a long shutdown in which we'll do all the necessary work to allow us to reach the LHC's design collision energy of 14 TeV for the next run. This means that when beams go back into the LHC later this month, we'll be entering the longest phase of accelerator operation in CERN's history, scheduled to take us into summer or autumn 2011.

What led us to this conclusion? Firstly, the LHC is unlike any previous CERN machine. Because it is a cryogenic facility, each run is accompanied by lengthy cool-down and warm-up phases. For that reason, CERN's traditional 'run through summer and shutdown for winter' operational model had already been brought into question. Furthermore, we've known for some time that work is needed to prepare the LHC for running at energies significantly higher than the 7 TeV collision energy we've chosen for the first physics run. The latest data show that while we can run the LHC at 7 TeV without risk to the machine, running it at higher energy would require more work in the tunnel. These facts led us to a simple choice: run for a few months now and programme successive short shutdowns to step up in energy, or run for a long time now and schedule a single long shutdown before allowing 14 TeV (7 TeV per beam).

A long run now is the right decision for the LHC and for the experiments. It gives the machine people the time necessary to prepare carefully for the work that's needed before allowing 14 TeV. And for the experiments, 18 to 24 months will bring enough data across all the potential discovery areas to firmly establish the LHC as the world's foremost facility for high-energy particle physics.

I'd like to invite you all to the summary of the Chamonix workshop on Friday 5 February at 14:00 in the Main auditorium. See:

<http://indico.cern.ch/conferenceDisplay.py?confId=83135>

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