News

Seminar Watch 2012

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Abstract

This is news about high energy physics adapted from viXra log (http://blog.vixra.org).

Key Words: seminar watch, 2012, LHC, ATLAS, CMS, HEP, ICHEP.

January 28, 2012: <u>Seminar Watch 2012</u>

The New Year is well under way and already ATLAS has released its <u>first conference note for 2012</u> updating the search for supersymmetry at 2/fb. They see a small excess of events, i.e. four where 1.7 ± 0.9 were expected. This is nothing that trial error cannot account for but it shows that the update to 5/fb still has a potential to produce ground-breaking results. CMS will be the first to provide that update with a <u>seminar scheduled for Tuesday</u> covering various searches including SUSY and exotica. We can rule out the possibility of anything really startling being announced, by the lack of rumours 9 but there can always be first tantalizing hints.



After that the next big events for HEP results are the <u>Aspen</u> conference from 11th February and <u>Moriond</u> from 3rd March. The latter is the most likely venue for further results at 5/fb to be presented. The official Higgs combination for the LHC should appear and final Higgs results from the Tevatron using their full dataset are also expected.

Meanwhile the LHC itself has already entered its hardware recommissioning phase at the end of the Winter shutdown with half of the eight cryogenics plants already <u>cooling down</u>. The running schedule for 2012 <u>is available</u> showing a start date of 11st March for beams. This is 17 days later than last year. By then they will have decided on the running parameters for next year. The main

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ones to consider are the energy, bunch spacing and beta*. This year hopes are running high that the centre of mass energy will go up from 7 TeV to 8TeV but this depends on the results of hardware tests. They will not want to take any risk. The bunch spacing could go down from 50ns to 25ns which would please the experiments because it reduces pile-up, but realistically I think this would require too much scrubbing and preparation. It may result in a much lower luminosity for the year. They would be better to stick to 50ns and be sure of a good clean run. A better squeeze with a lower beta* is a promising option for pushing the luminosity to higher levels without risking higher intensities. These matters will be discussed at Chamonix from 6th February. If that is too technical a summary session will be webcast on 15th February.

It is too soon to list all the conferences where new results may appear this year but the biannual <u>ICHEP meeting</u> deserves a special mention. This is the largest conference for HEP and this year it will take place in Melbourne from 4th July. By then they may have doubled the LHC dataset if everything has run very smoothly. Discovery potential rises another notch.

Reference

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1. http://blog.vixra.org/2012/01/28/seminar-watch-2012/