

LEPP Journal Club

Friday, February 10, 2012. 4:00 pm (3:45 refreshments)
301 Physical Sciences Building



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**Search for narrow
resonances decaying
to $\mu^+\mu^-$ & e^+e^- with CMS**

Many models of new physics beyond the Standard Model, e.g. grand unified theories, predict extra high-mass dilepton resonances, possibly at the TeV scale. I describe the results of a search with the CMS detector for such resonances in the $\mu^+\mu^-$ & e^+e^- mass spectra, highlighting the experimental challenges and the differences between the two channels. The search was conducted using 1.1 fb^{-1} of pp collision data delivered by the LHC at $\sqrt{s} = 7 \text{ TeV}$ in the first half of 2011. The results of the resonant peak search and exclusion limits for a few benchmark models are included.

