

## Studies of exotic quarkonium states at CMS

*Wednesday, 5 December 2012 14:30 (30 minutes)*

Using large data samples of di-muon events, CMS has performed detailed measurements in the field of exotic quarkonium production. We will present very recent result on the X(3872) exotic state, in the  $J/\psi \pi \pi$  decay channel, based on ~6500 events, collected at  $\sqrt{s} = 7$  TeV, and covering unprecedentedly high values of  $p_T$ . The cross-section ratio w.r.t. the  $\psi(2S)$  will be given differentially in  $p_T$ , as well as  $p_T$  integrated. For the first time at the LHC the fraction of X(3872) coming from B hadron decays has been established. We finish with a measurement of the di-pion mass spectrum to establish details of the nature of the decay. Having opened the field for studies on exotic quarkonium, we will report detailed measurements from one more exotic state.

**Primary author:** Dr FANFANI, Alessandra (University and INFN Bologna)

**Presenter:** Dr FANFANI, Alessandra (University and INFN Bologna)

**Session Classification:** Parallel Session VII: BSM, SUSY, Exotics