

# LNGS SEMINAR SERIES

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## **Dark matter annihilation in small scale clumps**

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Small-scale clumps of dark matter are gravitationally bounded structures that have masses comparable to or lower than stellar masses and consist of noninteracting or weakly interacting dark matter particles. In this report, the current knowledge about the formation and evolution of such structures is shortly reviewed, various types of spectra of primordial cosmological perturbations are considered. Depending on the particular spectrum type, dark matter clumps may differ considerably in their formation processes and ultimate characteristics. The role of clumps in experiments on indirect detection of dark matter particles via their annihilation products is discussed. Some astrophysical problems and phenomena that are related to dark matter clumps are examined.

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FEBRUARY 2, 2015 – 2:30 PM  
LNGS - " B. PONTECORVO " ROOM