LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE

Séminaire LAL

Albert Stebbins
(Fermi National Accelerator Laboratory)

Mardi 12 février 2019 à 11h00

Fast Radio Bursts

On a human scale most astronomical sources are large and vary slowly. They must be large enough to produce enough light be to seen at astronomical distances and the light travel time across a large source limits the timescale for observable variations. Nevertheless in recent years extremely rapidly varying radio emission has been detected and found to be a common phenomena. The most extreme case has timescales as small as one nanosecond, inferred size smaller than one meter, peak luminosity exceeding that of the Sun, and is observed at a distance of 2kpc. More numerous and further away are Fast Radio Bursts (FRBs), originating at cosmological distances, lasting a millisecond and arriving at Earth a few times a minute. These events are the brightest sources known in terms of brightness temperature, yet the emission mechanism is uncertain. I will discuss some ideas for the origin of this emission and how these bright bursts could be used to augment gravitational wave and neutrino astronomy as well as the study of cosmological parameters and the intergalactic medium.

Salle 101 - Bât. 200, Orsay

Organisation :
Reisaburo Tanaka - Aurélien Martens - Joao Coelho - Thibaud Louis - Dimitris Varouchas (LAL) -
seminaires@lal.in2p3.fr - LAL web : http://www.lal.in2p3.fr
Indico: https://indico.lal.in2p3.fr/category/31/

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