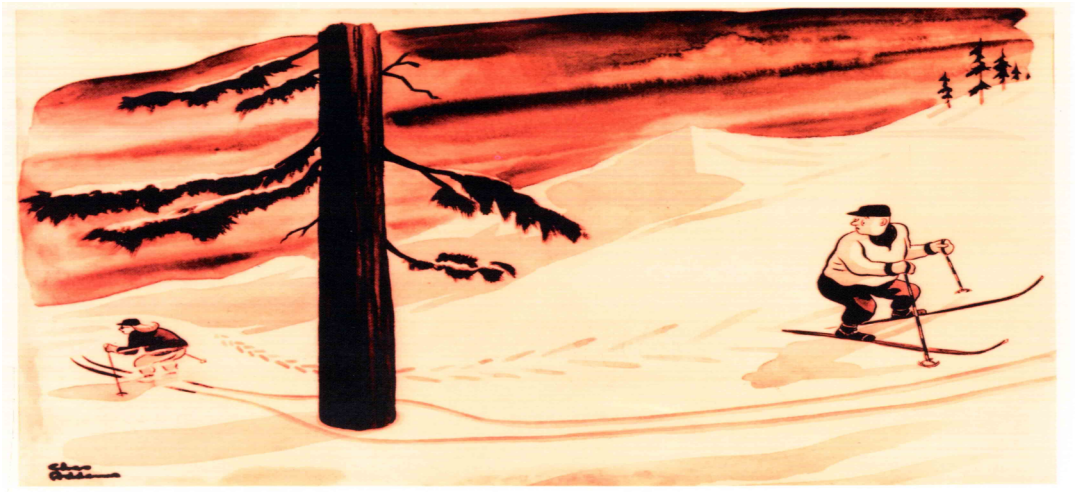
QUANTUM SEMINARS

Physics Dept. Theory Section, University of Trieste



Fabrizio Nesti

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Galactic Dark Matter Density in Galaxies, and a possible quantum degenerate scenario (I) and (II)

April 20th , 16.30 PM, Seminar Room 204 ICTP building.

I give an introduction to the distribution of dark matter in galaxies, from the largest, to our Milky Way, to the smaller ones. The observed regularities may be at the heart of the dark matter problem, and call for an understanding. I describe the hypothesis of quantum degenerate fermionic dark matter, and the resulting halo profiles.

April 27th , 16.30 PM, Seminar Room 204, ICTP building.

I discuss the determination of the dark matter density and profile in our galaxy. For smaller galaxies, I describe quantitatively the profiles following from the hypothesis of quantum degenerate fermionic dark matter, the resulting lower bound on the mass of the dark matter particle, and the quest for an upper bound.