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## Studies of Terahertz interactions with plasma for particle accelerators

*Monday, September 16, 2019 7:00 PM (1 hour)*

In this talk, I will discuss a diagnostic method for the electron plasma density and temperature based on the exploitation of wideband THz pulses. I will present the model accompanying the diagnostic method showing its utility to characterize the plasma density and temperature profile along a symmetry axis. This diagnostic is particularly interesting for plasma-acceleration schemes or laser-produced plasma. I will also briefly discuss the possibility to use high-intensity THz pulse to excite in the linear regime a high gradient plasma wakefield that can be exploited for Laser Wakefield Acceleration (LWFA).

Finally, I will present the THz research activities at "Sapienza" University of Rome.

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