



UNIVERSITA' DEGLI STUDI DI PAVIA

DOTTORATO DI RICERCA IN FISICA

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Aula 102 "L. Giulotto", ore 16.00

Dipartimento di Fisica, via Bassi 6, Pavia

X-ray Vision of High T_c Superconductivity

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Abstract: Thirty years after its discovery, high T_c superconductivity remains one of the most puzzling issues in condensed matter physics. In the huge collective effort deployed to solve this and other mysteries typical of strongly correlated electron systems, X-rays spectroscopy has played a major role, particularly in the last years. I will present some of the important discoveries on high T_c superconductors obtained thanks to synchrotron radiation, from the development of new instrumentation and techniques to the implications on our understanding of their magnetic and electronic structure. In particular, I will briefly introduce resonant elastic and inelastic x-ray scattering and show a few significant results on orbital, spin and charge excitations, and on the elusive phenomenon of charge ordering in high T_c superconductors.

