

**THE PHYSICS OF IONIZED GAS IN AGN:
TESTING PREDICTIONS FROM FIRST PRINCIPLES**

S. Bianchi

University of Roma Tre, Via della Vasca Navale 84, Rome, Italy

E-mail: bianchi@fis.uniroma3.it

The presence of ionized gas in Active Galactic Nuclei is revealed by the observed emission lines, which imply a wide range of ionization states, densities, geometries and kinematics. Dense, fast gas occurs on sub-pc scales (Broad Line Region), while slow tenuous gas appears at scales from pc to kpc (Narrow Line Region). Despite this varied phenomenology, very clear predictions can be derived from first principles, and directly compared to the observations.