"Rapid X-ray variability of quasars: the story so far”

Prof. Iossif Papadakis

Department of Physics, UoC

Abstract

It has been fifty years since the identification of the first Quasar, one of the most spectacular class of extragalactic objects in modern Astrophysics. One of the defining properties of Quasars and "Active Galactic Nuclei" (AGN) in general is that their emission is variable at all wavelengths. The variability amplitude increases and the time scale decrease as we move from the far-IR to the X-ray regime (for the so-called "radio-quiet" AGN). Intensive monitoring of AGN in the X-rays the last 30 years has revealed interesting results regarding the X-ray variability patterns in these objects. I will present an overview of these past results, as well as recent results, and I will discuss possible ways that X-ray variability studies can help us understand the physical mechanisms that operate in these objects.