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# Multiwaveband Variability of AGN

*Thursday, 8 December 2016 11:15 (30)*

Most of our understanding of the processes that power AGN has been gained not from single-epoch observations, but from monitoring over long periods and, usually, in more than waveband. In this talk I will describe the results of combined X-ray/UV/optical monitoring of Seyfert galaxies which have shown that UV/optical variability on short timescales is largely driven by reprocessing of high energy. However whether that emission is X-ray emission from the central corona or far-UV emission from the inner edge of the disc is unclear. I will also discuss combined X-ray and radio monitoring of ‘radio quiet AGN’, ie Seyferts. There is a very weak correlation, indicating that normal Seyferts are probably not the analogues of ‘soft state’ X-ray binaries but contain low luminosity synchrotron jets. I will also show the results of the more radio-loud LINER galaxies, where rapid, large amplitude, radio variability is seen which is also correlated with the X-ray emission. The perturbations which drive the X-ray variations may also propagate down the jet to drive the radio variability. If time permits I will indicate some similarities with the much more powerful blazars. I will try to suggest a few areas in which future multiband monitoring may be productive.

**Presenter(s)** : Dr. MCHARDY, Ian

**Session Classification** : Variability Methods