



**Stephen Hancock**

**University of Bristol**

**Research Area: Astrophysics (Active Galaxies)**

**Project title:**

Investigating X-ray Reverberation in Active Galactic Nuclei: spectral and extended corona modelling

**Science/research area:**

Highly variable reverberation signatures from active galaxies are thought to be caused by delayed photons from an X-ray bright source reflecting from the accretion disc around the central black hole. Signals typically contain strong iron line emission originating from the innermost regions of the disc. The environment and geometry can be investigated via Fourier methods and spectral modelling. The origin of the source is still unknown and is currently widely debated to be a compact source, jet or corona which extends to enormous distances.

**About me:**

I grew up in Scotland and joined the Royal Air Force in 1987, handling and managing the air transport fleet at locations worldwide during peacetime and conflict. After a minor injury during the second Gulf War, I was declared unfit for combat operations and left the RAF after 22 years' service in 2009.

Afterwards, I worked in civil aviation and completed a degree in physics through the Open University in my spare time, then sought out a Masters in Astrophysics (by research) at the University of Bristol and moved directly onto a PhD upon completion.

This was challenging as I had no previous experience of coding or computer science, however I enjoy learning new concepts and researching deep field active galaxies. I hope to obtain a new career in a science-related industry role or academic research.

**Data Intensive Research Skills and Interests:**

Problem solving and automating large complex processes using a multi-lingual approach. Creating useable online documentation of replicable research widely available to the scientific community. For example see:

<http://www.star.bris.ac.uk/steff/xmmreverblags.html>

I live in Swindon and enjoy music festivals and getting out around the countryside with my wife who is an active trail runner. I am also a bassist/singer for an original Wiltshire-based rock-funk band.