Feb. ICEHAP Seminar

Feb. 27, Monday, 2:30pm, 2017 place: ICEHAP Office(Engineering Reserch Bldg 1, Room 609-1)

Prof. Chris Done

(University of Durham, UK and JSPS Fellow ISAS/JAXA)

"How to connect black hole binary observations with MRI simulations"

Abstract

Accretion onto black holes is ultimately enabled by the magnetic dynamo which transports angular momentum outwards, allowing material to accrete inwards. However, if we have to wait until we can do global radiative MHD calculations in full general relativity to understand this accretion flow then we will be waiting a long time.

I will describe instead how we can get answers faster by splitting the problem up, into issues which absolutely require MHD simulations and those where the fundamental physical processes are accessible with simpler hydrodynamics modelling.

In particular I will stress that we need full MHD to understand black hole accretion flows at low mass accretion rates and the highly relativistic jets which are seen from some supermassive black holes.

