第 1602 回 天文学教室談話会

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東京大学理学部 1 号館西棟 11 階 1109 号室 (天文学専攻会議室) にて

"Black holes: Einstein's gravity and rocket science!"

Chris Done (Durham University)

I will review how black holes went from a speculative extension of Einstein's gravity to a mainstream observational science via the development of rockets and X-ray astronomy at the start of the space age. I will show how we now use the X-rays from accreting black holes in our own galaxy to test General Relativity in the strong field limit, with observational evidence for the event horizon, last stable circular orbit and, most recently, Lense-Thirring precession as the origin of the strong, low frequency quasi-periodic oscillations seen in these systems. Not only does this solve the 25 year mystery of the nature of these signals, it also addresses more recent controversies over the nature and geometry of the accretion flow in this state.