

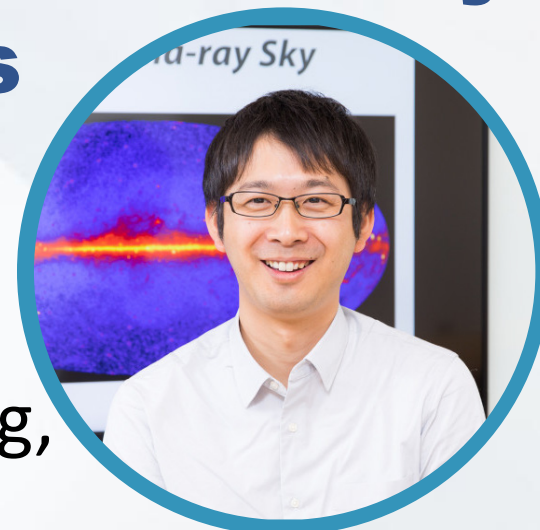


Non-thermal Coronal Magnetic Activity in Nearby Seyferts

Date: February 28, 2024 (Wednesday)

Time: 5:00 p.m.

Venue: CBC, LG1/F, Chow Yei Ching Building,
Main Campus, HKU



Prof. Yoshiyuki INOUE

Department of Earth and Space Science, Osaka University

Abstract:

Central supermassive black holes of active galactic nuclei (AGNs) host hot plasma with a temperature of 10^9 K, namely coronae. Like the Sun, black hole coronae are theoretically believed to be heated by their magnetic activity. However, such activity has not been observed yet. In this talk, Prof. Inoue will report the detection of coronal magnetic activity in nearby AGNs using ALMA (radio telescopes). The coronal magnetic fields are typically ~ 10 G on scales of ~ 40 Schwarzschild radii. The measured magnetic field is weaker than the theoretical expectation, requiring a new corona heating mechanism. Prof. Inoue will also discuss particle acceleration processes in the coronae of Seyferts, which may be the production sites of the high energy neutrinos seen by IceCube.

Biography:

Prof. Inoue received his PhD at Kyoto University, after which he did postdoc at Stanford and JAXA under the JSPS Research Fellowship for Research Abroad and the JAXA International Top Young Fellowship. Then he became a senior research scientist at RIKEN iTHEMS. Since September 2020, Prof. Inoue has been an associate professor at Osaka University. Prof. Inoue has won various prestigious grants and awards, including the 2017 Young Researcher Award from The Astronomical Society of Japan.

Anyone interested is welcome to attend!

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