Contribution ID: **181** Type: **oral**

Unveiling the Origin of the Fermi/eRosita Bubbles

Friday, 29 July 2022 14:30 (30 minutes)

The newly launched eRosita X-ray satellite revealed two gigantic bubbles above and below the Galactic center. The "eRosita bubbles" bare a remarkable resemblance to the Fermi bubbles detected in gamma rays, suggesting a common origin. The physical origin of these giant Galactic bubbles has been hotly debated. Using 3D magnetohydrodynamic simulations including relevant cosmic-ray physics, we show that the multi-wavelength observational data of the gamma-ray/X-ray bubbles as well as the microwave haze could be simultaneously explained by a single event of jet activity of Sgr A* about 2.6 million years ago. I will highlight some of the important constraints derived from our simulations and discuss the implications of the results on galaxy-scale AGN feedback in general.

Primary author: YANG, Hsiang-Yi Karen (National Tsing Hua University)

Co-authors: Prof. RUSZKOWSKI, Mateusz (University of Michigan); Prof. ZWEIBEL, Ellen (University of Wisoncin-Madison)

Presenter: YANG, Hsiang-Yi Karen (National Tsing Hua University)

Session Classification: Invited highlights

Track Classification: invited highlight