

11 November 2010

Letter to the Editor Walter Babin,

The Galactic Centre and Black Holes:

The astronomer Doug Finkbeiner was the first in recognizing a mysterious energy structure of particles-radiation recently reported by NASA as a result a two years survey by the Fermi Gamma-ray Space Telescope. The picture shows a gigantic perpendicular double bubble projection of relativistic particles, gamma and X rays extending from the center of the Milky Way over 50,000 light-years (Video credit: NASA's Goddard Space Flight Center).

The scientific interpretations are diverse and include a role for black holes. It has been recognized that black holes show disk accretion and therefore something similar could occur at the edge of the super-massive central black hole of the galaxy. It is accepted that this one has subsisted for thousands of millions of years

I highlight that continuous change in no-equilibrium characterizes an open thermodynamic in which matter-energy enters and exits the system. Hence, matter and energy falling in a spiral in a black hole could decrease angular momentum by its transfer when ejecting particle radiation outside the disk accretion-black hole system. Therefore, the observed projection of the radiation structure to the outside plane of the galaxy allows no-equilibrium with the disk, hence, conferring thermodynamic openness, which allows the continuous growth of the black hole itself.

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