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Radio constraints of annihilating dark matter

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Radio observations of nearby galaxies can give stringent constraints for annihilating dark matter. If dark matter particles can annihilate, the high-energy electrons and positrons produced would emit strong synchrotron radiation (in radio waves) due to the strong magnetic field in galaxies. By using the observed radio fluxes emitted from nearby galaxies, we can constrain the annihilation cross sections and dark matter mass for different annihilation channels. In this talk, we report some good target objects for constraining annihilating dark matter and present the latest radio constraints based on the recent radio data.

Biography:

Chan, Man-Ho obtained his Bachelor degree, Master degree and Doctoral degree in physics from The Chinese University of Hong Kong. He also finished his second Doctoral degree in philosophy at Hong Kong Baptist University. He is now an Assistant Professor of Department of Science and Environmental Studies, The Education University of Hong Kong. His research interests include Astrophysics, Cosmology, Philosophy of Science and dialogue between Science and Religion.

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