



Fyzikální ústav Akademie
věd České republiky
Institute of Physics of the
Czech Academy of Sciences

CELOÚSTAVNÍ SEMINÁŘ FZU COLLOQUIUM

14. 5. 2025 | 14:00

Dvořák Hall
FZU, Na Slovance 2, Praha 8

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Galactic black holes as sources of high-energy photons

Recently, the Large High Altitude Air Shower Observatory has detected more than 40 sources of photons with energies above 100 TeV. The charged particles producing these photons must have energies in the PeV range, near the knee of the cosmic ray spectrum. In this talk, I will discuss the possibility that some of the sources accelerating these particles to such energies are accreting black holes in binary systems. When such systems produce relativistic jets, they are called "microquasars". I will describe different physical scenarios for such objects, depending on the accretion rate to the black hole, and conclude that super-Eddington microquasars are the most likely accelerators of very high energy particles.