

Seminarium Astrofizyczne

wtorek 10.05.2022 godz. **13:00 (unusual time start)**
ul. Pasteura 7; sala 404

transmitted also on line

<https://www.gotomeet.me/NCBJmeetings/seminarium-astrofizyczne>

Password: AstroSemi

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Star formation in the outer Galaxy: what is the impact of the environment on protostars?

Star formation is ubiquitous in the Galaxy, but the physical and chemical conditions in star-forming sites might differ as a function of Galactocentric radius. For example, due to the negative metallicity gradient, the abundance of molecules and dust, and the efficiency of gas cooling is expected to decrease in the outer Galaxy. Recent infrared surveys revealed star formation sites in the Outer Galaxy in a wide range of environments. The CMa-1224 region in Canis Major at a distance of 1 kpc is a star-forming region hosting a few hundred low- to intermediate-mass young stellar object (YSO) candidates and showing evidence for the presence of outflows traced by the CO and the Spitzer 4.5 μm emission.

Here, I will present the results of the infrared studies aimed at characterizing the gas accretion onto YSOs, gas cooling, and magnetic fields using data from NASA IRTF and SOFIA. I will also present the study of gas kinematics along the filaments in CMa-1224 using low-J CO lines from APEX and ARO antennas. By comparing to other YSOs in star-forming regions in the Galaxy and YSOs in the Magellanic Clouds, I will discuss the possible impact of metallicity on star formation as revealed in the outer Galaxy.

Serdecznie zapraszam,

Agnieszka Majczyna