

# Studies of discrete symmetries in positronium decays using the J-PET tomograph

*Tuesday, 7 June 2022 09:00 (30 minutes)*

The Jagiellonian Positron Emission Tomograph (J-PET) is the first PET scanner based on plastic scintillators.

It is designed to measure momentum vectors and the polarisation of photons originating from the decays of positronium.

In combination with the newly invented positronium imaging method, J-PET enables the study of discrete symmetries

in positronium without the use of magnetic fields. We will present the latest results of P, T, CP, and CPT symmetry studies (Nature Communication 12, 5658 (2021)) as well as explain the method of positronium imaging (Science Advances 7, eabh4394 (2021)).

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**Session Classification:** Symmetries, hyperon and neutrino session