Contribution ID : **52** Type : **Oral talk**

Search for structure dependent component and chiral axial anomaly in K+ -> e+ nu pi0 gamma decay

Wednesday, 28 October 2026 09:30 (15)

The high statistics search for structure dependent (SD) components of radiation in K+ -> e+ nu pi0 gamma decay is performed by the OKA collaboration. The 4-dimensional distribution of about 3000 events of the decay in the phase space area of E*(gamma)>30 MeV, Theta*(e-gamma)<20 degrees analysed. The total SD contribution to branching ratio (including interference) is measured to (3 +- 5.4)x10ˆ-6. As the measurement errors don't allow to claim the observation, we set the 90% CL upper limit of 10ˆ-5. This is in agreement with the Chiral Perturbation Theory (ChPT) predictions and is 5 times lower than the current PDG limit. For the first time the chiral axial anomaly (AA) contribution is measured separately to (0+-2.3)x10ˆ-6, < 3x10ˆ-6 90% CL.

Primary author(s) : KULIK, Alexei (Institute for Nuclear Research)

Presenter(s) : KULIK, Alexei (Institute for Nuclear Research)

Session Classification : High energy physics: experiment

Track Classification : High energy physics: experiment