



Contribution ID: 698

Type: Parallel talk

## First observation and study of the $K^\pm \rightarrow \pi^\pm \pi^0 e^+ e^-$ decay with the NA48/2 experiment at CERN

*Thursday 11 July 2019 18:10 (20 minutes)*

The NA48/2 experiment at CERN reports the first observation of the  $K^\pm \rightarrow \pi^\pm \pi^0 e^+ e^-$  decay from an exposure of  $1.7 \times 10^{11}$  charged kaon decays recorded in 2003–2004. A sample of 4919 candidates with 4.9% background contamination allows the determination of the branching ratio in the full kinematic region. The study of the kinematic space shows evidence for a structure dependent contribution in agreement with predictions based on chiral perturbation theory. Several P- and CP-violating asymmetries are also evaluated.

**Authors:** CENCI, Patrizia (INFN Perugia (IT)); ANZIVINO, Giuseppina (INFN and University of Perugia)

**Presenter:** ANZIVINO, Giuseppina (INFN and University of Perugia)

**Session Classification:** Flavour Physics and CP Violation

**Track Classification:** Flavour Physics and CP Violation