



Contribution ID: 90

Type: **Contributed Talk**

## Flavour Oscillations in Dense Baryonic Matter

*Tuesday, 28 June 2016 14:20 (20 minutes)*

The presence of strangeness non-conservation process  $K^0 \leftrightarrow \bar{K}^0$  during the hadronic stage of relativistic nucleus-nucleus collisions will be discussed, as a possible mechanism for the excessive sub-threshold production of double-strange hyperons observed recently by HADES collaboration. We explain, why such process could remain unnoticed in the spectra of neutral  $K_s^0$  mesons, and suggest to observe  $\Delta s = 2$  process in A+A and p+A interactions by careful experimental study of  $K^{*0}$  and  $\bar{K}^{*0}$  yields at  $\sqrt{s} < 15\text{GeV}/n$  collision energies. The excess of ( $K^0$  and  $K^{*0}$ ) over ( $\bar{K}^0$  and  $\bar{K}^{*0}$ ) mesons in the initial stage of hadronic gas expansion and non-zero baryonic density (generating sufficiently strong in-medium Kaon-nucleon potentials) are the necessary requirements for  $\Delta s = 2$  oscillation processes to occur within very short time scale of hadronic gas expansion. A possibility of similar heavy flavour non-conservation phenomena will be discussed for the case of sub-threshold  $D^0$  production in A+A collisions.

### **On behalf of collaboration:**

None

**Primary author:** FILIP, Peter (Slovak Academy of Sciences (SK))

**Presenter:** FILIP, Peter (Slovak Academy of Sciences (SK))

**Session Classification:** Strangeness Production