



Contribution ID: 1527

Type: Poster

Excessive double strange baryon production due to strangeness oscillation in p+A and A+A collisions

Saturday 6 August 2016 18:00 (2 hours)

Production of double-strange Ξ^- baryons at sub-threshold energies has been observed (by HADES experiment) to be unexpectedly enhanced, compared to theoretical estimates. We suggest, oscillation of neutral kaons can be affected due to high baryonic density in a specific way, which may result in the oscillation length 5-10 fm. This allows for the strangeness violation process $K^0(\bar{s}d) \rightarrow \bar{K}^0(s, \bar{d})$ to occur within the volume of dense hadronic medium, and additional double strange baryons can be created via $(\Sigma^0, \Lambda) + \bar{K}^0$ strangeness exchange interactions. The significance of this process is not accounted for properly, if global strangeness conservation in proton-nucleus and nucleus-nucleus collisions is assumed.

Author: FILIP, Peter (Slovak Academy of Sciences (SK))

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

Session Classification: Poster Session

Track Classification: Heavy Ions