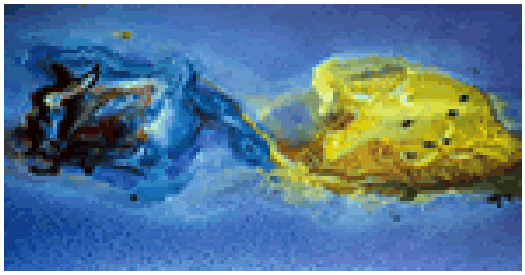

Contribution ID: **23** Type: **Talk**

CANCELLED - Mass shift of charmonium states in $\bar{p}A$ collision

Sunday 5 August 2018 16:50 (20 minutes)

The masses of the low lying charmonium states, namely, the J/Ψ, $\Psi(3686)$, and $\Psi(3770)$ are shifted downwards due to the second order Stark effect. In $\bar{p}$ + Au collisions at $6 - 10$˜GeV we study their in\,-\,medium propagation. The time evolution of the spectral functions of these charmonium states is studied with a Boltzmann\,-\,Uehling\,-\,Uhlenbeck (BUU) type transport model. We show that their in\,-\,medium mass shift can be observed in the dilepton spectrum. Therefore, by observing the dileptonic decay channel of these low lying charmonium states, especially for $\Psi(3686)$, we can gain information about the magnitude of the gluon condensate in nuclear matter. This measurement could be performed at the upcoming PANDA experiment at FAIR.

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Session Classification: Heavy quarks

Track Classification: C: Heavy quarks