

## 5th International workshop on heavy quark production in heavy-ion collisions



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### Heavy-quarkonium suppression in p-A collisions from parton energy loss

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The effects of parton energy loss in cold nuclear matter on heavy-quarkonium suppression in p-A collisions are discussed. It is shown from first principles that at large quarkonium energy  $E$  in the nucleus rest frame, the medium-induced energy loss is proportional to  $E$ . Using this result, a phenomenological model depending on a single free parameter is able to reproduce  $J/\psi$  and Upsilon suppression data in a broad  $x_F$ -range and at various center-of-mass energies. These results strongly support energy loss as the dominant effect in heavy-quarkonium suppression in p-A collisions. Predictions for  $J/\psi$  and Upsilon suppression in p-Pb collisions at the LHC are presented.

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