

Submitting to International Workshop on Hydrogen in Materials & Vacuum Systems

Hydrogen and Its Desorption in RHIC and RHIC Injectors*

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Hydrogen is the dominating gas specie in room temperature, ultrahigh vacuum systems of particle accelerators and storage rings. The vacuum requirements of these machines will be illustrated using the beam vacuum systems of RHIC and RHIC injectors as examples. The observation of rapid hydrogen desorption in both baked and unbaked RHIC beam vacuum envelopes will be presented in the context of beam intensity, ESD and direct beam loss. A RHIC experiment using an atomic hydrogen jet to measure beam polarization will also be described.

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