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Oxygen Profile Evolution in NIF GDP Ablator Capsules¹ H. HUANG, D.M. HAAS, J.J. WU, R.B. STEPHENS, K.A. MORENO, A. NIKROO, General Atomics, J.D. SALMONSON, S.W. HAAN, M. STADERMANN, S.D. BHANDARKAR, Lawrence Livermore National Laboratory — CH capsules, produced in Glow Discharge Plasma (GDP) coating, pick up oxygen continuously and irreversibly during storage. The added x-ray opacity from this oxygen affects the shock velocity during target implosion, requiring compensation in the shock timing. We developed a radiography technique that non-destructively characterizes the oxygen profile and have used it to track the evolution of the oxygen profiles in storage. Modified storage protocols have reduced the amount of pickup, and our database allows anticipation of the oxygen profile at shot time. The impact on target implosion will be discussed.

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