The observed dark matter (DM) abundance in the Universe can be fully accounted for by a
minimally coupled spectator scalar field that was light during inflation. In this scenario, dark
matter was produced during inflation by amplification of quantum fluctuations of the spectator
field. I will discuss the DM isocurvature perturbations that are unavoidably generated in such
scenarios and the circumstances under which they are not problematic for the viability of non-
thermal DM models. I will also discuss implications of DM isocurvature for structure formation,
showing that the model has interesting consequences that allow one to test the scenario.

Thursday, November 7
***Time: 2:00 PM ***
215 Sharp Lab

Sharp Laboratory is wheelchair accessible.
Please contact us at least one day prior to the scheduled seminar to request disability
accommodations. ph: (302)831-2661 / fx: (302)831-1637