## Abstract Submitted for the 4CF11 Meeting of The American Physical Society

Evolution of Magnetic Domain Morphology in Co/Pt Thin Films ANDREW WESTOVER, KARINE CHESNEL, YANPING CAI, Brigham Young University, OLAV HELLWIG, Hitachi Global Storage — Co/Pt thin films are important materials due to their property of exerting perpendicular magnetic anisotropy. On a microscopic scale Co/Pt thin films form into magnetic domains, with magnetic moments directed perpendicularly into or out of the films. Using In-Situ Magnetic Force Microscopy we observed that as a uniform magnetic field of increasing intensity is applied to the sample, the initial labyrinthine domain pattern slowly shrinks, eventually forming a bubble state and finally completely saturating. As the magnetic field is released domains begin to nucleate, and then spread out from the nucleation sites, eventually returning to a labyrinthine state. In addition we observed that if the external magnetic field is released before saturation is achieved, that the remnant domain pattern changes according to the domain morphology of the sample

before the magnetic field was released.

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