Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

Observational Constraints for the Galactic Dynamo in the Milky Way[1] JO-ANNE BROWN, University of Calgary — Magnetic fields are an important constituent of the interstellar medium, but unlike gas, dust and cosmic rays, they do not radiate, and consequently cannot be observed directly. Instead, observers identify *signatures* of the field in an effort to piece together its topology. Determining key parameters such as the number and location of magnetic field *reversals* (regions of magnetic shear where the field is observed to reverse directions by roughly 180° with radius), the pitch angle of the magnetic field, and its scale height, are critical in order to determine the most likely models of how the field originally formed and how it is evolving. In this talk, I will review which parameters of the field are approaching general consensus, and which remain highly contentious, and what this means (from an observational perspective) for the dynamo theory of the Galactic magnetic field.

[1]Natural Sciences and Engineering Research Council of Canada

Jo-Anne Brown
University of Calgary

Date submitted: 15 Jul 2011 Electronic form version 1.4