

Thesis Title Magnetic Field Model of Milky Way Galaxy

Author Mr. Wichean Kriwattanawong

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Examining Committee

Dr. Nuanwan Sanguansak	Chairman
Asst. Prof. Sumith Niparaks	Member
Assoc. Prof. Boonrucksar Soonthornthum	Member

Abstract

The magnetic field of Milky Way Galaxy is investigated by several methods. There are two considerable field models. First, Bisymmetric Spiral Model is investigated in the field component, which parallel to the line of sight. The other, Synchrotron Emission Model is investigated in the field component, which perpendicular to the line of sight. In this work, the adapted model is mixing the dominant characteristics of the magnetic field from both of models. The model is tested by the brightness temperature, the outcomes of the synchrotron emission from the cosmic ray electrons, traveled through the galactic magnetic field. We compare the model with the 408 MHz all sky survey done by Haslam et al. in 1982 after separation of its thermal component. The result shows that the model gives quite good fit in almost galactic longitude due to the sinusoidal component from Bisymmetric Spiral Model which pulls up the field in the spiral arm region and also gives some offset value of the field in the interarm region.

