MONITORING AND ANALYSIS MAGDAS DATA DURING IONOSPHERIC EVENTS

Thesis is presented in partial fulfillment for the award of the Bachelor of Engineering (Honors) in Electrical Engineering

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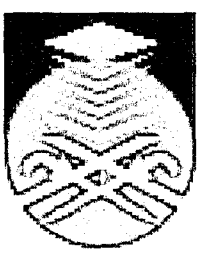

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MAY 2009

ACKNOWLEDGEMENT

First and foremost, I would like to state my greatest gratitude to ALLAH S.W.T that gives me an opportunity to be able to complete my final year project and thesis.

I would like to express my deeply sense of gratitude and appreciation to my project supervisor, Ms. Noor Hafizah Binti Abdul Aziz for the consistent help and guidance as well as prevision of her valuable time, encourage and patient in completing this project.

Thousand thanks to and my MAGDAS/TEC advisor Mr. Mohamad Huzaimy bin Jusoh for helping me and guide me throughout completion of my final project. Besides, special thanks to Mr. Hideaki Kawano from SERC Kyushu University, Japan for helping me and giving me information about MAGDAS.

Thanks to Mrs. Suzi Seroja and Mrs. Husna for their willingness to evaluate my project presentation.

Last but not least, thanks to my family, research assistant Ms. Faizatul, friends and anybody who involved directly or in directly for their support, understanding, help and advice.

Thank you.

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ABSTRACT

Phenomena such as explosions on the sun create storms of radiation, fluctuating magnetic fields and swarms of energetic particles which travel through solar wind. At the moment they arrive at earth, they interact in complex ways with earth magnetic field. Some space weather storms can damage satellites, disable electric power grids and disrupt cell phone communication systems. This project focuses on monitoring and analysis Magnetic Data Acquisition System (MAGDAS) data during ionospheric events such as geomagnetic storms, Sudden Ionospheric disturbance (SID) and Travelling Ionospheric Disturbance (TID). The raw data is taken from MAGDAS unit at Ashibetsu Japan which supplied by Space Environment Research Center (SERC) Kyushu University, Japan. The data is then analyzed using MATLAB program. The variations of ionospheric events are based on Kp index from 13 – 17 April 2006.

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